Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
n22,σ1°.15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*MAN **01** 00:21:48.4, 7.92N×127.66E, h17km, mb4.6, ML3.5, MS3.4*
*IDC **01** 00:21:53.7±5.6, 7.81N×127.74E, h55km±49km, mb3.8/9, mbtmp4.1/10, ML4.0/1, MS3.0/1, Error ellipse: s-maj=39.3km s-min=14.0km az=70.0*
*NEIC **01** 00:21:54.4±1.7, 7.78N±0.10×127.5E±0.1, h55km±7km, mb4.4/26, Error ellipse: s-maj=15.5km s-min=12.7km az=130.0*

ISC 01 00:21:50.5±2.1, 7.84N±0.04×127.61E±0.07, h26km±14km, n68, σ1.34/82, mb4.4/21, 10C-10D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.29**	**286**	⇓*eP*	**Pn**	**00 22 10.5**	**-2.3**
BIPH				*i* S	**Sn**	**00 22 25.9**	**-3.3**
MATI	**Mati**	**1.61**	**237**	⇓*eP*	**Pn**	**00 22 16.4**	**-0.9**
DAV	**Davao City (W)**	**2.16**	**249**	P	**Pb**	**00 22 29.9**	**+1.0**
	45nm,0.3s,baz=250,slow=4.3,SNR=7.8						
DAV				S	**Sb**	**00 22 56.1**	**+0.9**
	292nm,0.3s,baz=252,slow=22,SNR=25						
	111nm,0.4s						
DAV	**Davao City (W)**	**2.16**	**249**	Pn	**Pb**	**00 22 28.5**	**-0.4**
DAV				Sn	**Sn**	**00 22 50.8**	**+0.2**
BUTP	**Butuan**	**2.27**	**300**	⇓*eP*	**Pn**	**00 22 26.4**	**+0.1**
BUTP				*e*S	**Sn**	**00 22 53.3**	**-0.1**
GLSP	**General Luna,**	**2.43**	**323**	⇓*eP*	**Pn**	**00 22 26.8**	**-1.7**
GLSP				*e*S	**Sn**	**00 22 54.8**	**-2.6**
BUKP	**Musuan**	**2.53**	**271**	⇑*iP*	**Pn**	**00 22 30.9**	**+1.1**
BUKP				*i* S	Sn	00 22 51.1	-8.8
DDMP	**Don Marcelino,**	**2.55**	**228**	⇓*eP*	**Pn**	**00 22 30.7**	**+0.5**
DDMP				*e*S	**Sn**	**00 23 00.0**	**-0.4**
KCP	**Kidapawan**	**2.63**	**252**	⇓*iP*	**Pn**	**00 22 32.6**	**+1.2**
KCP				*i* S	**Sn**	**00 23 02.7**	**+0.1**
SCPH	**Surigao**	**2.85**	**313**	⇑*eP*	**Pn**	**00 22 36.3**	**+1.9**
SCPH				*i* S	**Sn**	**00 23 05.9**	**-2.0**
CGP	**Cagayan de Oro**	**2.96**	**282**	⇓*eP*	Pb	00 22 51.9	+9.4
CGP				*e*S	**Sn**	**00 23 10.6**	**+0.3**
SKMP	**Bagumbayan, Su**	**3.32**	**247**	⇓*eP*	**Pb**	**00 22 46.7**	**-1.9**
SKMP				*e*S	**Sn**	**00 23 18.8**	**-0.5**
CTBH	**Cotabato--PC H**	**3.39**	**260**	⇑*iP*	**Pn**	**00 22 42.9**	**+1.1**
MSLP	**Maasin**	**3.55**	**310**	⇑*eP*	**Pn**	**00 22 45.2**	**+1.2**
MSLP				*e*S	**Sn**	**00 23 28.3**	**+3.3**
MSLP	**Maasin**	**3.55**	**310**	⇓*eP*	Pn	00 22 48.8	+4.9
MSLP				*e*S	**Sn**	**00 23 28.4**	**+3.3**
GHBP	**Garcia Hernand**	**3.71**	**299**	⇑*iP*	**Pn**	**00 22 46.3**	**+0.2**
GHBP				*i* S	**Sn**	**00 23 30.7**	**+1.7**
TABP	**Talibon, Bohol**	**3.94**	**305**	⇑*iP*	**Pn**	**00 22 48.5**	**-0.7**
TABP				*i* S	**Sn**	**00 23 35.6**	**+1.0**
TBP	**Tagbilaran**	**4.14**	**297**	*e*P	**Pn**	**00 22 52.4**	**+0.3**
TBP				*i* S	**Sn**	**00 23 40.2**	**+0.5**
LSIP	**Lazi, Siquijor**	**4.14**	**288**	⇑*iP*	**Pn**	**00 22 51.8**	**-0.3**
LSIP				*i* S	**Sn**	**00 23 38.2**	**-1.5**
PAGZ	**Pagadian**	**4.19**	**270**	⇑*iP*	**Pn**	**00 22 53.9**	**+1.1**
LLP	**Lapu-Lapu**	**4.37**	**305**	*e*P	**Pn**	**00 22 54.6**	**-0.6**
LLP				*e*S	**Sn**	**00 23 47.4**	**+2.2**
CNOP	**Candoni, Negro**	**5.30**	**292**	⇑*eP*	**Pn**	**00 23 08.8**	**+0.8**
CNOP				*i* S	**Sn**	**00 24 08.3**	**+0.1**
CNP	**Catarman**	**5.48**	**328**	⇓*eP*	**Pn**	**00 23 11.6**	**+1.2**
CNP				*e*S	**Sn**	**00 24 08.5**	**-4.1**
JCNP	**Jose Panganiba**	**8.03**	**323**	⇑*eP*	Pn	00 23 36.7	-8.7
JCNP				*i* S		00 23 59.0	
GTOI	**Gorontalo**	**8.50**	**213**	P	**Pn**	**00 23 52.2**	**+0.3**
GTOI				S		00 24 01.7	
LUWI	**Luwuk**	**10.05**	**209**	P	Pn	00 24 09.5	-3.8
APSI	**Ampana**	**10.53**	**215**	P	Pn	00 24 13.3	-6.5
SBUM	**Sibu**	**16.23**	**252**	P	**P**	**00 25 40.2**	**+0.4**
TPUB	**Ta-pu**	**16.78**	**337**	Pn	**Pn**	**00 25 43.7**	**0.0**
TPUB				IAmb	IAmb	00 25 46.9	
	comp=Z,13nm,0.5s						
GUMO	**Guam**	**17.89**	**70**	LR	LR	00 30 42.5	
	comp=Z,51nm,21.3s,baz=230,slow=30						
KNMB	**Chin-men Tao**	**18.74**	**333**	P	**Pn**	**00 26 07.9**	**0.0**
MTN	**Manton Dam**	**20.84**	**170**	P	**P**	**00 26 31.0**	**+0.6**
KNRA	**Kununurra**	**23.39**	**177**	P	**P**	**00 26 57.3**	**0.0**
KNRA				IAmb	IAmb	00 26 58.1	
	comp=Z,8.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**25.84**	**184**	P	**P**	**00 27 19.7**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=18,slow=9.4,SNR=1.8						
	comp=Z,1.4nm,0.9s						
WB0	**Warramunga Arr**	**28.23**	**166**	P	**P**	**00 27 40.3**	**-1.1**
WRA	**Warramunga Arr**	**28.39**	**167**	P	**P**	**00 27 41.7**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=348,slow=10,SNR=11						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**28.39**	**167**	P	**P**	**00 27 43.8**	**+0.9**
WB2	**Warramunga Arr**	**28.39**	**167**	P	**P**	**00 27 42.0**	**-0.9**
ASAR	**Alice Springs**	**31.91**	**169**	P	**P**	**00 28 13.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=18,slow=12,SNR=6.4						
ASAR				PcP	**PcP**	**00 31 04.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=354,slow=2.4,SNR=4.6						
	comp=Z,0.4nm,0.4s						
MORW	**Morawa**	**38.35**	**196**	P	**P**	**00 29 08.8**	**-0.6**
MORW				IAmb	IAmb	00 29 13.9	
	comp=Z,7.6nm,0.9s						
FORT	**Forrest**	**38.40**	**179**	P	**P**	**00 29 09.3**	**-0.5**
BBOO	**Buckleboo**	**41.21**	**169**	P	**P**	**00 29 32.8**	**-0.4**
BBOO				IAmb	IAmb	00 29 40.5	
	comp=Z,8.4nm,1.0s						
ULN	**Ulaanbaatar**	**43.55**	**340**	P	**P**	**00 29 53.9**	**+1.7**
ULN				IAmb	IAmb	00 29 54.3	
	comp=Z,7.4nm,0.7s						
SONM	**Songino Array**	**43.75**	**339**	P	**P**	**00 29 54.7**	**+0.9**
	comp=Z,4.5nm,0.9s,baz=155,slow=9.0,SNR=19						
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**43.75**	**339**	P	**P**	**00 29 54.9**	**+1.1**
SONM				IAmb	IAmb	00 29 56.2	
	comp=Z,5.8nm,1.1s						
MK31	**Makanchi Array**	**54.76**	**323**	P	**P**	**00 31 18.0**	**+0.1**
MKAR	**Makanchi Array**	**54.76**	**323**	P	**P**	**00 31 18.2**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=119,slow=8.1,SNR=20						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**54.76**	**323**	P	**P**	**00 31 18.0**	**+0.1**
MAKZ	**Makanchi**	**54.95**	**323**	P	**P**	**00 31 19.4**	**+0.1**
MAKZ				IAmb	IAmb	00 31 32.7	
	comp=Z,2.5nm,1.0s						
TARG	**Taragay, Kyrgy**	**55.36**	**316**	P	**P**	**00 31 21.3**	**-1.5**
TARG				IAmb	IAmb	00 31 31.4	
	comp=Z,3.8nm,1.0s						
NIL	**Nilore**	**56.20**	**305**	P	**P**	**00 31 27.8**	**-0.7**
ZAA0	**Zalesovo Array**	**57.38**	**332**	P	**P**	**00 31 37.4**	**+1.0**
ZAA0				IAmb	IAmb	00 31 37.9	
	comp=Z,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**57.38**	**332**	P	**P**	**00 31 36.5**	**0.0**
	comp=Z,2.1nm,0.7s,baz=137,slow=7.0,SNR=8.8						
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**57.38**	**332**	P	**P**	**00 31 37.0**	**+0.6**
KURBB	**Kurchatov Arra**	**58.82**	**326**	P	**P**	**00 31 46.6**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=126,slow=6.3,SNR=23						
	comp=Z,1.8nm,0.7s						
KBL	**Kabul**	**59.81**	**305**	P	**P**	**00 31 52.4**	**-1.7**
KBL				IAmb	IAmb	00 31 53.5	
	comp=Z,2.7nm,0.6s						
GAR	**Garm**	**59.87**	**311**	P	**P**	**00 31 53.1**	**-1.1**
KK31	**Karatay Array**	**60.90**	**315**	P	**P**	**00 32 00.4**	**-0.7**
KK31				IAmb	IAmb	00 32 01.1	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**60.90**	**315**	P	**P**	**00 32 00.6**	**-0.5**
KKAR				IAmb	IAmb	00 32 01.2	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**60.90**	**315**	P	**P**	**00 32 00.7**	**-0.4**
NRIK	**Noril'sk**	**66.69**	**346**	P	**P**	**00 32 39.0**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=139,slow=5.1,SNR=6.1						
	comp=Z,2.8nm,0.5s						
RAYN	**Ar Rayn**	**79.71**	**292**	P	**P**	**00 33 55.4**	**-1.2**
GURO	**Guroymak-BITLI**	**81.73**	**308**	P	**P**	**00 34 07.1**	**-0.1**
GURO				IAmb	IAmb	00 34 08.2	
	comp=Z,5.7nm,1.0s						
BMAR	**Burnt Mountain**	**81.98**	**23**	P	**P**	**00 34 10.6**	**+2.7**
CTGM	**Chitina Glacie**	**83.72**	**29**	P	**P**	**00 34 19.9**	**+2.8**
CTGM				IAmb	IAmb	00 34 36.8	
	comp=Z,3.2nm,1.0s						
VOI	**Vohitsoka**	**84.46**	**247**	P	**P**	**00 34 20.2**	**-1.4**
VNDA	**Vanda**	**87.36**	**173**	P	**P**	**00 34 34.9**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=328,slow=5.0,SNR=11						
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**122.38**	**291**	PKP	**PKPdf**	**00 40 43.7**	**-0.7**
	comp=Z,13nm,0.6s,baz=91,slow=2.2,SNR=5.1						

IDC 01 00:26:41.3±5.4, 2.27S×140.74E, h0km, mb3.7/3, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=117.4km s-min=59.6km az=150.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.64**	**199**	P	Pn	00 31 01.2	+0.1
	0.5nm,0.3s,baz=25,slow=12,SNR=23						
	2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.61**	**222**	P	P	00 31 32.7	-0.4
	1.1nm,0.5s,baz=37,slow=9.8,SNR=6.3						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**22.27**	**197**	P	P	00 31 40.3	+0.1
	2.4nm,0.6s,baz=25,slow=11,SNR=24						
	2.4nm,0.6s						
VNDA	**Vanda**	**76.04**	**175**	P	P	00 38 30.1	0.0
	0.6nm,0.6s,baz=332,slow=7.6,SNR=7.0						
	0.6nm,0.6s						

*BJI **01** 00:32:59.2±0.0, 23.61S×174.73W, h9km, mb5.5/57, mB6.0/65, Ms5.7/75, Ms7 5.4/73*
*MOS **01** 00:33:00.5±2.1, 23.63S×175.13W, h10km, mb5.5/31, MS5.5/30, Error ellipse: s-maj=8.4km s-min=7.0km az=86.0*
*NEIC **01** 00:33:00.7, 23.70S×174.92W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.98; $M_{\theta\theta}$0.38; $M_{\phi\phi}$-1.36; $M_{r\theta}$1.53; $M_{\theta\phi}$0.04; $M_{\phi r}$1.64; Fault plane solution: $M_0$2.55000×10^{17} NP1:ϕ_s35.32000°, δ79.14000°, λ110.14000°. NP2:ϕ_s152.52000°, δ22.77000°, λ29.13000°. Principal axes: T 2.6821, Plg52.0000°, Azm328.0000°; N -0.2826, Plg20.0000°, Azm211.0000°; P -2.3995, Plg31.0000°, Azm109.0000°;*
*NEIC **01** 00:33:00.7±1.9, 23.68S±0.07×174.93W±0.09, h10km±1km, mb5.3/192, Ms_20 5.7/387, Mwb5.5/34, Mww5.6 Error ellipse: s-maj=15.6km s-min=10.3km az=119.0*
*IDC **01** 00:33:02.0±0.4, 23.49S×175.57W, h0km, mb4.8/29, mbtmp4.8/31, ML5.0/2, MS5.4/60, Error ellipse: s-maj=16.5km s-min=12.6km az=114.0*
*NOU **01** 00:33:03.3, 23.82S×174.71W, h45km, ML5.7/69, Tonga Islands Region*
*NEIC **01** 00:33:05, 23.71S×174.81W, h18km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.79; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-2.05; $M_{r\theta}$0.93; $M_{\theta\phi}$-0.90; $M_{\phi r}$2.41; Fault plane solution: $M_0$3.71000×10^{17} NP1:ϕ_s23.00000°, δ67.00000°, λ87.00000°. NP2:ϕ_s210.00000°, δ23.00000°, λ96.00000°. Principal axes: T 3.8465, Plg68.0000°, Azm288.0000°; N -0.2932, Plg2.0000°, Azm24.0000°; P -3.5533, Plg22.0000°, Azm115.0000°;*
*GCMT **01** 00:33:07.6±0.1, 23.80S±0.01×175.03W±0.01, h19km, MW5.6/171, Moment Tensor Solution. s141,c274; s171,c339; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.55±.03; $M_{\theta\theta}$-0.56±.02; $M_{\phi\phi}$-1.99±.03; $M_{r\theta}$0.92±.06; $M_{\theta\phi}$-0.96±.02; $M_{\phi r}$1.90±.06; Best double couple: $M_0$3.28200×10^{17} NP1:ϕ_s26.00000°, δ65.00000°, λ90.00000°. NP2:ϕ_s207.00000°, δ25.00000°, λ91.00000°. Principal axes: T 3.3190, Plg70.0000°, Azm295.0000°; N -0.0740, Plg0.0000°, Azm26.0000°; P -3.2450, Plg20.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 00:33:01.6±0.4, 23.79S±0.04×175.03W±0.04, h14km±2km, h14km:pP-P, n1135, σ2.15/956, mb5.3/167, MS5.7/293, 88C-32D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**6.02**	**205**	P	**Pn**	**00 34 27.2**	**-3.1**
RIZ				S	**Sn**	**00 35 35.8**	**-3.2**
RAO	**Raoul Island**	**6.02**	**205**	Pn	**Pn**	**00 34 33.6**	**+3.3**
	100nm,0.3s,baz=210,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**00 35 38.4**	**-0.6**
	82nm,0.3s,baz=288,slow=20,SNR=3.6						
	285nm,0.2s						
RAO	**Raoul Island**	**6.02**	**205**	Pn	**Pn**	**00 34 31.3**	**+1.0**
RAO					**Sn**	**00 35 41.9**	**+2.8**
GLKZ	**Green Lake**	**6.03**	**205**	P	**Pn**	**00 34 29.7**	**-0.8**
GLKZ				S	**Sn**	**00 35 36.7**	**-2.6**
LKBA	**Tubou, Lakemba**	**6.56**	**327**	P	**Pn**	**00 34 40.1**	**+2.3**
NIUE	**Niue**	**6.68**	**46**	P	**Pn**	**00 34 35.9**	**-3.5**
	baz=6.1,SNR=24						
NIUE				S	Sn	00 35 44.0	-11
	baz=6.1						
NIUE	**Niue**	**6.68**	**46**		**Pn**	**00 34 36.2**	**-3.2**
NIUE	**Niue**	**6.68**	**46**	P	**Pn**	**00 34 35.9**	**-3.5**
TAVE	**Taveuni**	**8.40**	**326**	P	**Pn**	**00 35 05.8**	**+2.8**
MSVF	**Nonsavu**	**8.84**	**312**	Pn	**Pn**	**00 35 10.7**	**+1.5**
	2.3nm,0.3s,baz=142,slow=13,SNR=47						
MSVF				LR	LR	00 38 12.9	
	comp=Z,41μm,19.5s,baz=99,slow=38						
MSVF	**Nonsavu**	**8.84**	**312**	P	**Pn**	**00 35 11.7**	**+2.5**
AFI	**Afiamalu**	**10.30**	**18**	Pn	**Pn**	**00 35 26.4**	**-2.7**
	12nm,0.3s,baz=358,slow=9.9,SNR=13						
AFI				Sn	Sn	00 37 13.5	-11
	5.6nm,0.3s,baz=221,slow=19,SNR=2.2						
AFI	**Afiamalu**	**10.30**	**18**	P	**Pn**	**00 35 27.5**	**-1.7**
RAR	**Rarotonga**	**14.34**	**83**	Pn	**Pn**	**00 36 24.0**	**-0.2**
	13nm,0.3s,baz=270,slow=7.7,SNR=30						
RAR				LR	LR	00 41 35.8	
	comp=Z,16μm,18.6s,baz=268,slow=35						
RAR	**Rarotonga**	**14.34**	**83**	Pn	**Pn**	**00 36 22.9**	**-1.4**
RAR	**Rarotonga**	**14.34**	**83**	P	**Pn**	**00 36 22.9**	**-1.4**
RAR	**Rarotonga**	**14.34**	**83**	P	**Pn**	**00 36 21.0**	**-3.3**
MXZ	**Matakaoa Point**	**14.87**	**201**		**P**	**00 36 37.2**	**0.0**
WMGZ	**Waiomatatini S**	**15.07**	**200**	P	**Pn**	**00 36 32.8**	**-1.3**
HAZ	**Te Kaha**	**15.22**	**202**	P	Pn	00 36 29.4	-6.7
MARNC	**Mare, Loyalty**	**15.81**	**275**		**Pn**	**00 36 44.9**	**+1.0**
MARNC	**Mare, Loyalty**	**15.81**	**275**	P	**P**	**00 36 48.3**	**+0.6**
URZ	**Urewera**	**15.90**	**203**	Pn	**P**	**00 36 48.4**	**-0.2**
	1.9nm,0.3s,baz=346,slow=1.6,SNR=8.6						
URZ				Sn	Sn	00 39 29.0	-12
	2.8nm,0.3s,baz=294,slow=20,SNR=5.6						
	8.2nm,0.6s						
URZ	**Urewera**	**15.90**	**203**	Pn	**Pn**	**00 36 46.6**	**+1.6**
PINNC	**Pines Island,**	**16.15**	**271**		**Pn**	**00 36 48.8**	**+0.4**
PINNC	**Pines Island,**	**16.15**	**271**	P	**P**	**00 36 53.0**	**+1.5**
FUNA	**Funafuti**	**16.15**	**339**		**Pn**	**00 36 46.7**	**-1.7**
FUNA				IAmb	IAmb	00 36 51.4	
	comp=Z,254nm,1.2s						
FUNA	**Funafuti**	**16.15**	**339**	P	**Pn**	**00 36 47.2**	**-1.2**
RTV	**Rentapao**	**16.57**	**288**	P	**P**	**00 36 56.9**	**+0.7**
LIFNC	**LIFOU**	**16.68**	**277**		**Pn**	**00 36 55.5**	**+0.5**
LIFNC				IAmb	IAmb	00 37 02.0	
	comp=Z,214nm,1.1s						
LIFNC	**LIFOU**	**16.68**	**277**	P	**P**	**00 36 59.1**	**+1.7**
OUENC	**Ouen Island, N**	**16.73**	**271**		**Pn**	**00 36 56.7**	**+0.9**
OUENC	**Ouen Island, N**	**16.73**	**271**	P	**P**	**00 36 58.9**	**+0.9**
YATNC	**Mamie plateau,**	**16.74**	**272**	P	**P**	**00 36 59.8**	**+1.7**
DVP	**Devils Point**	**16.81**	**288**	P	**P**	**00 36 58.9**	**+0.1**
BKZ	**Black Stump Fm**	**16.93**	**203**	Pn	**Pn**	**00 36 58.4**	**+0.2**
ONTNC	**Ouen Toro**	**17.11**	**271**		**P**	**00 37 02.1**	**0.0**
ONTNC				IAmb	IAmb	00 37 09.6	
	comp=Z,487nm,2.0s						
ONTNC	**Ouen Toro**	**17.11**	**271**	P	**P**	**00 37 03.6**	**+1.5**
DZM	**Mont Dzumac**	**17.15**	**272**	*e*Pn	**Pn**	**00 37 02.0**	**+0.9**
	comp=Z,472nm,1.6s						
DZM				*e*LR	LR	00 41 05.2	
	comp=Z,14μm,23.8s						
DZM	**Mont Dzumac**	**17.15**	**272**	Pn	**Pn**	**00 37 01.4**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=83,slow=18,SNR=20						
DZM				LR	LR	00 42 15.5	
	comp=Z,8μm,21.1s,baz=102,slow=33						
DZM	**Mont Dzumac**	**17.15**	**272**		**Pn**	**00 37 01.6**	**+0.5**
DZM	**Mont Dzumac**	**17.15**	**272**	P	**P**	**00 37 04.5**	**+1.8**
KWHZ	**Kaweka Forest**	**17.18**	**203**	P	**Pn**	**00 37 02.7**	**+1.3**
KWHZ				S	Sn	00 39 59.3	-13
OTVZ	**Oturere**	**17.24**	**205**	P	**P**	**00 37 04.6**	**+0.9**
OTVZ				S	Sn	00 40 06.2	-7.6
SNVZ	**South Ngauruho**	**17.27**	**205**	P	**Pn**	**00 37 04.4**	**+1.8**
SNVZ				S	Sn	00 40 03.5	-11
NOUC	**Port Laguerre**	**17.27**	**272**	P	**Pn**	**00 37 03.8**	**+1.3**
BHHZ	**Black Hill Sta**	**17.37**	**204**	P	**Pn**	**00 37 02.4**	**-1.3**
BHHZ				S	Sn	00 40 02.5	-14
PXZ	**Pawanui**	**17.58**	**201**	P	**Pn**	**00 37 06.3**	**+0.2**
PXZ				S	Sn	00 40 07.1	-15
BFZ	**Birch Farm**	**18.37**	**201**	P	**P**	**00 37 15.5**	**-0.5**
BFZ	**Birch Farm**	**18.37**	**201**	P	**P**	**00 37 12.1**	**-3.8**
BFZ				S	Sn	00 40 23.6	-17
BFZ	**Birch Farm**	**18.37**	**201**	P	**P**	**00 37 13.9**	**-2.0**
MRZ	**Mangatainoka R**	**18.58**	**203**	P	**P**	**00 37 15.2**	**-3.1**
MRZ				S	Sn	00 40 25.9	-20
HOWZ	**Holdsworth Sta**	**18.81**	**203**	P	**P**	**00 37 19.5**	**-1.3**
HOWZ				S	Sn	00 40 30.2	-21
TMWZ	**Te Maipa**	**18.87**	**202**	P	**P**	**00 37 20.4**	**-1.0**
TMWZ				S	Sn	00 40 36.9	-16
TRWZ	**Traveller**	**19.20**	**202**	P	**P**	**00 37 24.0**	**-1.0**
TRWZ				S	Sn	00 40 40.5	-20
DUWZ	**D'Urville Isla**	**19.33**	**206**	P	**P**	**00 37 24.0**	**-2.5**
DUWZ				S	Sn	00 40 46.3	-18
MSWZ	**Moikau Station**	**19.36**	**203**	P	**P**	**00 37 26.6**	**-0.3**
KOUNC	**Koumac, New Ca**	**19.42**	**276**	P	**Pn**	**00 37 32.7**	**+3.9**
SNZO	**South Karori**	**19.47**	**204**	P	**P**	**00 37 27.9**	**0.0**
PLWZ	**Palliser**	**19.50**	**202**	P	**P**	**00 37 28.6**	**+0.3**
TUWZ	**Tuamarina**	**19.86**	**205**	P	**P**	**00 37 31.1**	**-1.2**
NNZ	**Nelson**	**19.90**	**206**	P	**P**	**00 37 30.3**	**-2.4**
QRZ	**Quartz Range**	**19.94**	**209**	P	**P**	**00 37 34.3**	**+1.1**
THZ	**Tophouse**	**20.55**	**206**	P	**P**	**00 37 38.8**	**-1.1**
KHZ	**Kahutara**	**20.86**	**204**	P	**P**	**00 37 41.5**	**-1.6**
LTZ	**Lake Taylor**	**21.66**	**206**	P	**P**	**00 37 53.0**	**+1.1**
LTZ					**S**	**00 41 52.4**	**+1.1**
OXZ	**Oxford**	**22.21**	**206**	P	**P**	**00 37 57.0**	**-0.6**
OXZ					**PcP**	**00 41 51.5**	**-2.5**
MQZ	**McQueen's Vall**	**22.30**	**204**	P	**P**	**00 37 58.6**	**+0.1**
MQZ					**PcP**	**00 41 51.2**	**-2.9**
RPZ	**Rata Peaks**	**22.93**	**207**	P	**P**	**00 38 03.2**	**-2.2**
	comp=Z,4.9nm,0.5s,baz=27,slow=4.5,SNR=2.2						
RPZ				S	S	00 42 04.2	-11
	comp=Z,10nm,0.7s,baz=270,slow=20,SNR=2.5						
RPZ				LR	LR	00 47 03.2	
	comp=Z,23μm,19.4s,baz=22,slow=37						
RPZ	**Rata Peaks**	**22.93**	**207**	P	**P**	**00 38 04.1**	**-1.2**
RPZ				IAMs_20	IAMs_20	00 46 52.4	
	comp=Z,23μm,20.0s						
FOZ	**Fox Glacier**	**23.31**	**209**	P	**P**	**00 38 09.6**	**+0.4**
FOZ				IAmb	IAmb	00 38 31.0	
	comp=Z,147nm,1.7s						
TBI	**Tubuai**	**23.44**	**94**	*e*P	**P**	**00 38 09.3**	**-1.3**
	comp=Z,2μm,18.5s						
TBI				*e*LQ	LQ	00 42 52.3	
	comp=Z,27μm,13.5s						
TBI				*e*LR	LR	00 43 50.9	
	comp=Z,14μm,22.2s						
TBI	**Tubuai**	**23.44**	**94**	*e*T	T	01 03 13.2	
	comp=Z,6.7nm,0.3s						
LBZ	**Lake Benmore**	**23.84**	**207**	P	**P**	**00 38 15.0**	**+0.6**
LBZ				IAMs_20	IAMs_20	00 47 29.5	
	comp=Z,31μm,18.0s						
LHI	**Lord Howe Isla**	**24.16**	**246**	P	**P**	**00 38 15.6**	**-1.9**
ODZ	**Otahua Downs**	**24.20**	**205**	P	**P**	**00 38 18.2**	**+0.5**
PAE	**Paea**	**24.55**	**80**	*e*T	T	01 04 15.0	
	comp=Z,3.3nm,0.3s						
PPT2	**Papeete2**	**24.58**	**80**	*e*P	**P**	**00 38 22.6**	**+1.1**
	comp=Z,84nm,1.2s						
PPT2				*e*LQ	LQ	00 43 21.7	
	comp=Z,21μm,14.0s						
PPT2				*e*LR	LR	00 44 22.9	
	comp=Z,15μm,22.2s						
PPT	**Papeete**	**24.59**	**80**	LR	LR	00 46 09.3	
	comp=Z,11μm,20.4s,baz=265,slow=32						
WKZ	**Wanaka**	**24.69**	**208**	P	**P**	**00 38 22.2**	**0.0**
WKZ				IAMs_20	IAMs_20	00 49 06.9	
	comp=Z,24μm,18.0s						
TIAR	**Tiarei**	**24.80**	**80**	*e*P	**P**	**00 38 23.7**	**+0.3**
	comp=Z,26nm,1.2s						
MLZ	**Mavora Lakes**	**25.51**	**208**	P	**P**	**00 38 30.2**	**+0.6**
MLZ				IAMs_20	IAMs_20	00 49 30.5	
	comp=Z,23μm,18.0s						
WHZ	**Wether Hill Ro**	**26.00**	**208**	P	**P**	**00 38 34.6**	**+0.6**
WHZ				IAmb	IAmb	00 38 53.7	
	comp=Z,42nm,0.9s						
DCZ	**Deep Cove**	**26.01**	**209**	P	**P**	**00 38 34.6**	**+0.5**
DCZ				IAMs_20	IAMs_20	00 49 32.9	
	comp=Z,19μm,18.0s						
PYZ	**Puysegur Point**	**26.76**	**209**	IAMs_20	IAMs_20	00 49 56.7	
	comp=Z,19μm,18.0s						
TARA	**Tarawa**	**27.60**	**333**	P	**P**	**00 38 45.5**	**-3.2**
HNR	**Honiara**	**27.84**	**297**	LR	LR	00 49 49.9	
	comp=Z,109μm,18.4s,baz=148,slow=37						
HNR	**Honiara**	**27.84**	**297**	P

baz=41,SNR=5.7
COEN Coen 40.61 276 P **P 00 40 39.6 -1.7**
COEN IAmb IAmb 00 40 54.5
comp=Z,47nm,1.0s
COEN Coen 40.61 276 P **P 00 40 39.7 -1.7**
JOHN Johnston Islan 40.63 8 IAms_20 IAms_20 00 55 46.6
comp=Z,10μm,21.0s
HTT Hallett 41.27 246 P **P 00 40 45.6 -1.1**
baz=42,SNR=9.0
HTT Hallett 41.27 246 P **P 00 40 45.9 -0.8**
LCRK Leigh Creek 41.90 250 P **P 00 40 51.2 -0.6**
QIS Mount Isa 42.00 265 P **P 00 40 50.7 -2.0**
baz=42,SNR=6.3
QIS Mount Isa 42.00 265 P **P 00 40 50.9 -1.9**
BBOO Buckleboo 43.67 247 P **P 00 41 04.3 -1.9**
OOD Oodnadatta 44.32 254 P **P 00 41 10.9 -0.5**
MULG Mulgathing 45.50 250 P **P 00 41 19.0 -1.8**
AS31 Alice Springs 46.53 259 P **P 00 41 28.1 -1.0**
ASAR Alice Springs 46.53 259 P **P 00 41 27.1 -2.0**
comp=Z,15nm,0.9s,baz=94,slow=8.1,SNR=56
ASAR S **S 00 48 11.2 -6.2**
comp=Z,1.3nm,0.7s,baz=95,slow=14,SNR=4.7
ASAR LR LR 01 00 52.2
comp=Z,12μm,18.4s,baz=114,slow=36
comp=Z,15nm,0.9s
ASAR Alice Springs 46.53 259 P **P 00 41 27.5 -1.6**
ASAR Alice Springs 46.53 259 P **P 00 41 27.5 -1.6**
WR0 Warramunga Arr 46.76 264 P **P 00 41 29.0 -1.9**
WR0 IAmb IAmb 00 41 40.7
comp=Z,22nm,1.0s
WB2 Warramunga Arr 46.94 264 P **P 00 41 29.6 -2.7**
baz=47
WB2 Warramunga Arr 46.94 264 IAmb IAmb 00 41 43.4
comp=Z,30nm,0.8s
WRAB Tennant Creek 46.94 264 P **P 00 41 30.0 -2.3**
WRAB IAmb IAmb 00 41 51.0
comp=Z,36nm,0.9s
WRAB Tennant Creek 46.94 264 IAms_20 IAms_20 01 00 49.0
comp=Z,9μm,19.0s
WRAB Tennant Creek 46.94 264 P **P 00 41 30.0 -2.3**
WRAB pmax pmax
comp=Z,36nm,1.0s
WRAB MLR MLR
comp=Z,10μm,19.0s
WRAB Tennant Creek 46.94 264 P **P 00 41 29.5 -2.8**
WB0 Warramunga Arr 46.94 265 P **P 00 41 28.8 -3.5**
WRA Warramunga Arr 46.95 264 P **P 00 41 28.7 -3.7**
comp=Z,16nm,0.9s,baz=101,slow=7.9,SNR=62
WRA S **S 00 48 16.4 -7.0**
comp=Z,4.0nm,1.0s,baz=104,slow=14,SNR=7.7
WRA LR LR 01 01 01.0
comp=Z,10μm,18.7s,baz=104,slow=36
WRA Warramunga Arr 46.95 264 P **P 00 41 29.7 -2.7**
WRA Warramunga Arr 46.95 264 P **P 00 41 29.7 -2.7**
FORT Forrest 50.60 249 P **P 00 42 01.4 +1.1**
FORT IAmb IAmb 00 42 14.1
comp=Z,54nm,0.8s
FORT Forrest 50.60 249 P **P 00 41 59.2 -1.1**
KDU Kakadu 50.82 273 P **P 00 41 59.7 -2.3**
baz=51,SNR=9.9
KDU Kakadu 50.82 273 P **P 00 41 59.7 -2.3**
WRKA Warakurna 51.29 256 P **P 00 42 02.1 -3.5**
baz=52,SNR=34
WRKA Warakurna 51.29 256 P **P 00 42 02.8 -2.8**
MIDW Midway 51.75 357 IAms_20 IAms_20 01 02 46.7
comp=Z,6μm,19.0s
MTN Manton Dam 51.99 272 P **P 00 42 09.2 -1.7**
KNRA Kununurra 53.24 268 P **P 00 42 17.4 -2.7**
baz=54,SNR=10
KNRA Kununurra 53.24 268 P **P 00 42 18.7 -1.4**
KNRA IAmb IAmb 00 42 34.3
comp=Z,37nm,0.9s
KNRA Kununurra 53.24 268 P **P 00 42 18.7 -1.4**
SAUI Saumlaki 53.64 278 P **P 00 42 21.5 -1.6**
SAUI Saumlaki 53.64 278 P **P 00 42 18.8 -4.3**
comp=Z,164nm,1.1s
SAUI Saumlaki 53.64 278 P **P 00 42 22.4 -0.7**
GUMO Guam 54.01 309 LR LR 01 04 43.2
comp=Z,1μm,18.0s,baz=142,slow=36
GUMO Guam 54.01 309 P **P 00 42 24.4 -1.3**
GUMO Guam 54.01 309 P **P 00 42 24.4 -1.3**
GUMO pmax pmax
comp=Z,159nm,1.3s
SBA Scott Base 54.81 185 P **P 00 42 31.3 +0.7**
SBA IAmb IAmb 00 43 16.4
comp=Z,88nm,1.5s
SBA Scott Base 54.81 185 P **P 00 42 31.3 +0.7**
SBA pmax pmax
comp=Z,88nm,1.5s
VNDA Vanda 54.91 186 P P 00 42 37.1 +5.7
comp=Z,6.4nm,1.0s,baz=7.0,slow=7.8,SNR=13
VNDA LR LR 01 01 49.6
comp=Z,2μm,20.8s,baz=20,slow=31
comp=Z,6.4nm,1.0s
VNDA Vanda 54.91 186 P **P 00 42 33.0 +1.6**
VNDA Vanda 54.91 186 P **P 00 42 33.1 +1.6**
VNDA pmax pmax
comp=Z,18nm,1.0s
FAKI Fak Fak 54.94 284 P **P 00 42 32.0 -0.5**
FAKI Fak Fak 54.94 284 P P 00 42 26.8 -5.8
comp=Z,3μmcomp=Z,1μmcomp=Z,47nm,2.0s
FITZ Fitzroy Crossi 55.37 264 S **S 00 50 12.9 -7.0**
comp=Z,2.4nm,1.1s,baz=277,slow=9.9,SNR=3.7
FITZ LR LR 01 06 10.3
comp=Z,6μm,18.3s,baz=114,slow=36
FITZ Fitzroy Crossi 55.37 264 P **P 00 42 34.9 -0.7**
baz=56,SNR=11
FITZ Fitzroy Crossi 55.37 264 P **P 00 42 34.1 -1.5**
FITZ Fitzroy Crossi 55.37 264 P **P 00 42 35.3 -0.3**
BNDI Bandanaira 56.33 281 P **P 00 42 38.3 -4.3**
comp=Z,165nm,1.4s
BNDI Bandanaira 56.33 281 P **P 00 42 41.1 -1.5**
SIJI Sorong 56.75 286 LR LR 01 07 30.3
comp=Z,3μm,19.5s,baz=118,slow=37
MSAI Masohi 57.72 282 P **P 00 42 49.8 -2.6**
comp=Z,7.0nm,0.6s
RPN Rapa Nui 58.81 108 LR LR 01 02 23.2
comp=Z,2μm,20.0s,baz=258,slow=30
KLBR Kellerberrin 59.21 246 P **P 00 43 01.7 -0.9**
baz=60,SNR=6.6
SOEI Soe 59.38 273 IAms_20 IAms_20 01 09 17.6
comp=Z,7μm,20.0s
SOEI Soe 59.38 273 P **P 00 43 04.0 -0.1**
comp=Z,2μmcomp=Z,194nm,1.0s
SOEI Soe 59.38 273 P **P 00 43 04.2 +0.1**
NWAO Narrogin (SRO) 59.41 245 LR LR 01 08 16.7
comp=Z,4μm,18.2s,baz=302,slow=36
NWAO Narrogin (SRO) 59.41 245 IAms_20 IAms_20 01 08 05.4
comp=Z,5μm,18.0s
MEEK Meekatharra 59.49 252 P **P 00 43 03.2 -1.4**
baz=60,SNR=4.2
BATI Baumata 59.76 272 LR LR 01 09 44.4
comp=Z,9μm,18.6s,baz=155,slow=37
MBWA Marble Bar 59.86 259 P **P 00 43 06.1 -1.2**
MBWA IAmb IAmb 00 43 21.2
comp=Z,16nm,0.8s
MBWA Marble Bar 59.86 259 IAms_20 IAms_20 01 08 35.6
comp=Z,5μm,18.0s
BLDU Ballidu 60.28 247 P **P 00 43 09.1 -0.9**
baz=61,SNR=9.6
SANI Sanana 60.92 281 P P 00 43 09.6 -5.0
comp=Z,1μmcomp=Z,38nm,1.1s
SANI Sanana 60.92 281 P **P 00 43 13.3 -1.3**
comp=Z,39nm,1.1s
TNTI Ternate 60.96 285 P **P 00 43 14.5 -0.4**
MORW Morawa 61.17 249 P **P 00 43 14.9 -1.2**
baz=62,SNR=5.1
MMRI Maumere 61.65 273 P **P 00 43 16.8 -2.7**
comp=Z,2μmcomp=Z,69nm,1.2s
MMRI Maumere 61.65 273 P **P 00 43 19.4 -0.1**
CASY Casey 62.20 206 P **P 00 43 23.0 +0.6**
LUWI Luwuk 64.25 281 P **P 00 43 35.8 -1.0**
LUWI Luwuk 64.25 281 P P 00 43 49.3 +12
GTOI Gorontalo 64.77 283 P **P 00 43 37.7 -2.5**
comp=Z,335nmcomp=Z,15nm,0.8s
BNSI Bone 65.25 276 P P 00 43 53.0 +10
JCJ Chichijima 65.32 318 LR LR 01 08 30.6
comp=Z,4μm,20.1s,baz=125,slow=33
APSI Ampana 65.32 281 P P 00 43 56.0 +12
KAPI Kappang 65.33 276 LR LR 01 12 04.8
comp=Z,2μm,19.4s,baz=108,slow=36
KAPI Kappang 65.33 276 P **P 00 43 42.4 -1.5**
KAPI IAmb IAmb 00 44 14.9
comp=Z,20nm,1.1s
KAPI Kappang 65.33 276 P **P 00 43 42.4 -1.5**
KAPI pmax pmax
comp=Z,19nm,1.1s
KAPI MLR MLR
comp=Z,2μm,18.0s
DAV Davao City (W) 65.55 290 LR LR 01 11 33.0
comp=Z,828nm,18.9s,baz=120,slow=36
MRSI Marisa 65.66 282 P P 00 43 56.6 +11
PLAI Plampang 65.66 271 P **P 00 43 44.5 -1.5**
SPSI Sidrap Palu 65.74 277 P P 00 43 56.6 +10
QSPA South Pole Qui 66.30 180 P **P 00 43 53.8 +4.4**
comp=Z,13nm,0.9s,baz=11,slow=1.0,SNR=30
QSPA LR LR 01 08 54.2
comp=Z,5μm,20.4s,baz=34,slow=32
comp=Z,13nm,0.9s
QSPA South Pole Qui 66.30 180 P **P 00 43 53.2 +3.7**
QSPA South Pole Qui 66.30 180 IAms_20 IAms_20 01 10 35.5
comp=Z,4μm,20.0s
MPSI Mapaga 67.43 281 P **P 00 43 55.4 -1.9**
comp=Z,914nmcomp=Z,41nm,1.0s
JHJ Hawijo jima 2 71.11 321 LR LR 01 16 06.2
comp=Z,1μm,18.0s,baz=138,slow=37
TGY Tagaytay City 73.02 294 LR LR 01 15 13.3
comp=Z,2μm,19.5s,baz=178,slow=35
JYT Yasato 73.16 323 P **P 00 44 30.5 -1.3**
JYT IAmb IAmb 00 44 38.2
comp=Z,30nm,0.9s
JMM Marumori 74.05 325 P **P 00 44 36.2 -0.9**
JGF Kuroka 74.29 321 P **P 00 44 36.8 -1.8**
JGF IAmb IAmb 00 44 43.7
comp=Z,46nm,1.7s
INU Inuyama 74.31 321 P **P 00 44 37.4 -1.2**
JOW Kunigami 74.37 309 LR LR 01 15 00.5
comp=Z,3μm,19.5s,baz=118,slow=34
JOW Kunigami 74.37 309 P **P 00 44 38.5 -0.7**
MJAR Matsushiro Arr 74.48 322 P **P 00 44 39.4 -0.3**
comp=Z,3.1nm,0.6s,baz=152,slow=6.2,SNR=8.3
MJAR LR LR 01 16 35.0
comp=Z,2μm,18.5s,baz=140,slow=35
comp=Z,3.1nm,0.6s
MAJO Matsushiro 74.48 322 P **P 00 44 38.9 -0.8**
MAJO IAmb IAmb 00 45 04.2
comp=Z,31nm,1.4s
MAJO Matsushiro 74.48 322 P **P 00 44 38.9 -0.8**
MAJO pmax pmax
comp=Z,31nm,1.4s
MAJO Matsushiro 74.48 322 P **P 00 44 40.3 +0.6**
MJB9 Matsu-Tunnel 74.49 322 P **P 00 44 39.3 -0.4**
MJB9 IAmb IAmb 00 45 04.2
comp=Z,31nm,1.4s
JMN Monobe 75.06 318 IAmb IAmb 00 44 45.8
comp=Z,53nm,1.3s
ADK Adak 75.36 359 P **P 00 44 43.9 -0.4**
ADK Adak 75.36 359 P **P 00 44 43.9 -0.4**
ADK pmax pmax
comp=Z,215nm,1.5s
JSD Sado 75.53 324 P **P 00 44 45.5 -0.1**
JSD IAmb IAmb 00 44 48.7
comp=Z,16nm,0.8s
LEM Lembang 75.72 269 LR LR 01 18 39.5
comp=Z,3μm,19.1s,baz=144,slow=36
JSU Suzuyama 75.78 314 P **P 00 44 46.1 -1.2**
JSU IAmb IAmb 00 44 49.3
comp=Z,45nm,1.4s
BELA Belgrano 2 75.94 172 P **P 00 44 48.1 +0.5**
BELA IAmb IAmb 00 45 11.2
comp=Z,25nm,1.1s
ERM Erimo 76.04 329 IAms_20 IAms_20 01 12 21.4
comp=Z,3μm,21.0s
ERM Erimo 76.04 329 *de*P **P 00 44 47.0 -1.4**
ERM pmax pmax
comp=Z,49nm,1.6s
JTM Tenmabayashi 76.11 327 P **P 00 44 48.7 -0.2**
JTM IAmb IAmb 00 45 08.0
comp=Z,60nm,1.2s
JHS Saijyo 76.38 318 P **P 00 44 50.0 -0.6**
JHS IAmb IAmb 00 45 05.6
comp=Z,68nm,1.4s
KUR Kuril'sk 76.56 334 *c iP* **P 00 44 51.9 +0.6**
KUR S **S 00 54 40.3 +3.4**
KUR pmax pmax
comp=Z,2μm,4.1s
KUR MLR MLR
comp=Z,1μm,19.0s
SHEM Shemya Is, Ala 76.78 353 LR LR 01 15 33.0
comp=Z,5μm,19.1s,baz=150,slow=33
SMY Shemya 76.78 353 P **P 00 44 51.3 -1.1**
SMY Shemya 76.78 353 P **P 00 44 51.3 -1.1**
SMY pmax pmax
comp=Z,493nm,1.8s
PMSA Palmer Station 77.18 156 LR LR 01 12 29.0
comp=Z,1μm,20.6s,baz=230,slow=30
TWG Pinlang 77.46 302 IAms_20 IAms_20 01 15 06.1
comp=Z,3μm,20.0s
JEW Eniwo 77.48 329 P **P 00 44 55.8 -0.8**
YULB Yu-li 77.59 303 IAms_20 IAms_20 01 14 49.8
comp=Z,4μm,20.0s
NACB Ninganchiao 77.78 303 P **P 00 44 57.8 -0.9**
TPUB Ta-pu 78.06 302 P **P 00 44 58.8 -1.5**
TPUB IAms_20 IAms_20 01 15 36.2
comp=Z,4μm,20.0s
TPUB Ta-pu 78.06 302 P **P 00 44 58.9 -1.4**
SSLB Suanglung 78.07 303 P **P 00 44 59.8 -0.5**
SSLB IAms_20 IAms_20 01 15 16.4
comp=Z,4μm,20.0s
YHNB Yeheng 78.22 304 P **P 00 45 01.1 -0.1**
YHNB IAms_20 IAms_20 01 15 46.4
comp=Z,5μm,21.0s
TATO Taipei 78.30 304 IAms_20 IAms_20 01 16 00.3
comp=Z,4μm,20.0s
CIS Catalina Islan 78.36 45 P P 00 45 05.7 +4.0
baz=231
SKR Severo-Kuril's 78.41 342 *d iP* **P 00 45 04.2 +2.7**
SKR *e* 00 45 13.3
SKR *i* S **S 00 55 00.4 +3.7**
SKR pmax pmax
comp=Z,36nm,1.1s
SKR pmax pmax
comp=Z,800nm,10.9s
SKR MLR MLR
comp=Z,2μm,18.0s
SAO San Andreas Ge 78.60 41 IAms_20 IAms_20 01 18 49.5
comp=Z,3μm,18.0s
LPIG La Paz 78.78 57 LR LR 01 14 14.5
comp=Z,5μm,18.8s,baz=226,slow=31
SLBS Sierra La Lagu 78.84 58 IAms_20 IAms_20 01 13 26.2
comp=Z,5μm,20.0s
109C Camp Elliot, M 78.90 47 IAms_20 IAms_20 01 14 19.6
comp=Z,4μm,19.0s
109C Camp Elliot, M 78.90 47 P P 00 45 09.0 +4.3
baz=232
PPBI Pangkal Pinang 78.91 273 P P 00 45 11.5 +6.3
DECC Green Verdugo 78.94 45 P P 00 45 09.6 +4.6
baz=231
PASC Pasadena Art C 78.98 45 IAms_20 IAms_20 01 14 20.7
comp=Z,3μm,20.0s
KASI Kota Agung 79.09 269 P P 00 45 17.4 +11
HOPS Hopland Field 79.14 39 IAms_20 IAms_20 01 15 04.6
comp=Z,3μm,19.0s
ARVC Arvin 79.17 44 P P 00 45 10.0 +3.9
baz=231
MURC Murrieta 79.28 46 P P 00 45 11.4 +4.5
baz=232
MONP2 Monument Peak 79.36 47 P P 00 45 12.1 +4.6
baz=233
MAW Mawson 79.40 199 P **P 00 45 11.1 +4.2**
comp=Z,11nm,0.9s,baz=160,slow=6.1,SNR=13
MAW LR LR 01 19 57.2
comp=Z,6μm,19.0s,baz=116,slow=35
comp=Z,11nm,0.9s
MAW Mawson 79.40 199 P **P 00 45 09.5 +2.6**
baz=80,SNR=8.7
IKP In-Ko-Pah, Jac 79.43 47 P P 00 45 11.8 +4.1
baz=233
VES Vestal, Richgr 79.46 43 P **P 00 45 10.9 +3.2**
baz=230
EDW2 Edwards Air Fo 79.55 45 P **P 00 45 11.6 +3.3**
baz=231
ISA Isabella, Lake 79.73 44 P **P 00 45 07.1 -2.2**
ISA IAmb IAmb 00 45 30.3
comp=Z,43nm,1.4s
ISA Isabella, Lake 79.73 44 P **P 00 45 07.1 -2.2**
ISA pmax pmax
comp=Z,43nm,1.4s
ISA Isabella, Lake 79.73 44 P P 00 45 13.3 +4.0
baz=231
PFO Pinyon Flats O 79.77 46 P **P 00 45 13.4 +3.7**
comp=Z,5.2nm,1.1s,baz=229,slow=5.9,SNR=4.8
PFO LR LR 01 15 25.4
comp=Z,4μm,19.1s,baz=260,slow=32
comp=Z,5.2nm,1.1s
PFO Pinyon Flats O 79.77 46 P **P 00 45 05.9 -3.7**
PFO Pinyon Flats O 79.77 46 IAms_20 IAms_20 01 14 52.6
comp=Z,5μm,20.0s
PFO Pinyon Flats O 79.77 46 P P 00 45 15.1 +5.5
baz=232
TPFO Pinon Flats 79.77 46 P P 00 45 14.3 +4.7
baz=232
SDPT Sand Point 79.80 8 P P 00 45 15.2 +6.2
baz=193
SWSC Sam W. Stewart 79.81 47 P P 00 45 15.1 +5.5
baz=233
PET Petropavlovsk 79.84 344 *e*P **P 00 45 11.4 +2.1**
PET *e*S **S 00 55 12.5 +0.6**
PET *e*PS **PnS 00 55 56.6 -0.4**
PET *e*PPS PPS 00 56 13.1
PET pmax pmax
comp=Z,1μm,10.1s
PET pmax pmax
comp=Z,1μm,13.3s
PET pmax pmax
comp=Z,59nm,1.7s
PET MLR MLR
comp=Z,2μm,17.0s
PET MLR MLR
comp=Z,2μm,19.0s
JCC Jacoby Creek, 79.85 37 P **P 00 45 05.7 -3.9**
JCC IAmb IAmb 00 46 24.0
comp=Z,47nm,1.2s
JCC IAms_20 IAms_20 01 15 15.3
comp=Z,3μm,19.0s
YSS Yuzh-Sakhalins 80.06 332 P **P 00 45 09.7 -0.9**
YSS Yuzh-Sakhalins 80.06 332 *oe*P **P 00 45 12.0 +1.3**
YSS *e* 00 45 17.0
YSS *e* 00 48 10.1
YSS *e*S **S 00 55 16.7 +2.2**
YSS *e* 00 55 35.4
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=Z,2μm,4.8s
YSS smax smax
comp=N,2μm,12.1s
YSS smax smax
comp=E,900nm,8.9s
YSS MLR MLR
comp=N,1μm,17.0s
YSS Yuzh-Sakhalins 80.06 332 P **P 00 45 09.4 -1.3**
CMB Columbia Colle 80.07 41 P **P 00 45 09.1 -2.0**
CMB Columbia Colle 80.07 41 P **P 00 45 09.1 -2.0**
CMB pmax pmax
comp=Z,17nm,1.2s
KRPM Rodgers 80.08 37 P **P 00 45 09.1 -2.0**
LRMC Laurel Mtn Rad 80.12 44 P P 00 45 16.6 +5.1
baz=231
PEA0B Petropavlovsk- 80.16 344 P **P 00 45 09.9 -1.2**
PEA0B Petropavlovsk- 80.16 344 P **P 00 45 09.9 -1.2**
PEA0B pmax pmax
comp=Z,326nm,1.9s
PETK Petropavlovsk- 80.16 344 P **P 00 45 11.8 +0.7**
comp=Z,36nm,0.9s,baz=93,slow=7.4,SNR=19
PETK LR LR 01 19 09.4
comp=Z,2μm,18.8s,baz=159,slow=35
comp=Z,36nm,0.9s
PETK Petropavlovsk- 80.16 344 P **P 00 45 10.6 -0.5**
MG01 Puerto William 80.24 146 P **P 00 45 09.0 -2.7**
BELC Belle Mtn. Jos 80.31 46 P P 00 45 18.2 +5.6
baz=233
AFDM Forest Hills D 80.32 40 P **P 00 45 09.9 -2.5**
KRMB Red Mountain 80.40 36 P **P 00 45 09.6 -3.2**
KRMB IAmb IAmb 00 46 11.7
comp=Z,40nm,1.5s
BC3 Big Chuckawall 80.47 47 P P 00 45 18.4 +5.1
baz=233,SNR=5.7
CWC Cottonwood Cre 80.47 43 P P 00 45 18.2 +4.8
baz=231
QZH Quanzhou 80.50 303 ⇑ *i*P **P 00 45 12.8 -0.8**
QZH S **S 00 55 14.6 -5.4**
QZH sS **SKSac 00 55 35.1 +3.6**
QZH pmax pmax
comp=Z,860nm,8.5s
QZH LR LR
comp=Z,1μm,20.4s
QZH LR LR
comp=Z,1μm,18.0s
QZH LR LR
comp=Z,2μm,20.4s
GLA Glamis 80.53 48 P **P 00 45 11.6 -2.0**
GLA Glamis 80.53 48 P **P 00 45 11.6 -2.0**
GLA pmax pmax
comp=Z,18nm,1.1s
GLA Glamis 80.53 48 P P 00 45 19.0 +5.4
baz=234
GSC Goldstone, Bar 80.58 45 P **P 00 45 12.0 -1.9**
GSC Goldstone, Bar 80.58 45 P **P 00 45 12.0 -1.9**
GSC pmax pmax
comp=Z,36nm,1.7s
GSC Goldstone, Bar 80.58 45 P P 00 45 19.4 +5.5
baz=232,SNR=5.2
HEC Hector,Ludlow 80.59 45 P P 00 45 19.1 +5.1
baz=232
PIX Pinacate 80.60 50 P **P 00 45 12.3 -1.7**
MDPB Devils Postpil 80.60 42 P **P 00 45 11.9 -2.3**
MPMC Manual Prospec 80.60 44 P P 00 45 20.1 +6.0
baz=231,SNR=7.2
OMMB Old Mammoth Mi 80.64 42 P **P 00 45 12.0 -2.5**
MLAC Mammoth, Mammo 80.75 42 P P 00 45 20.5 +5.6
baz=230
QSM Queen of Sheba 80.94 44 P **P 00 45 14.9 -0.8**
QSM IAmb IAmb 00 45 36.5
comp=Z,33nm,1.4s
IRM Iron Mountain 80.97 47 P P 00 45 21.3 +5.4
baz=233,SNR=11
GMRC Granite Mounta 81.01 46 P P 00 45 21.8 +5.5
baz=233,SNR=6.1
CHGN Chignik 81.01 9 P **P 00 45 19.1 +3.6**
baz=195
BLYC Blythe 81.15 47 P **P 00 45 16.2 -0.6**
BLYC IAmb IAmb 00 46 03.4
comp=Z,36nm,1.6s
KSRS Korea Array 81.16 317 P **P 00 45 17.6 +0.8**
comp=Z,5.3nm,0.9s,baz=133,slow=5.6,SNR=19
KSRS LR LR 01 17 27.9
comp=Z,2μm,20.1s,baz=140,slow=33
comp=Z,5.3nm,0.9s
KSAR Wonju Array Be 81.18 317 P **P 00 45 16.4 -0.5**
KSAR Wonju Array Be 81.18 317 P **P 00 45 16.4 -0.5**
YBH Yreka Blue Hor 81.20 37 P **P 00 45 19.8 +2.8**
comp=Z,2.8nm,0.9s,baz=38,slow=5.1,SNR=7.3
YBH LR LR 01 16 12.5
comp=Z,2μm,19.9s,baz=238,slow=32
comp=Z,2.8nm,0.9s
YBH Yreka Blue Hor 81.20 37 P **P 00 45 15.7 -1.3**
YBH IAmb IAmb 00 46 03.7
comp=Z,33nm,1.6s
YBH IAms_20 IAms_20 01 16 01.1
comp=Z,3μm,20.0s
YBH Yreka Blue Hor 81.20 37 P **P 00 45 15.7 -1.3**
YBH pmax pmax
comp=Z,33nm,1.6s
GWY Greenwater Val 81.20 44 P **P 00 45 15.8 -1.5**
PNTR Pine Nut 81.22 40 P **P 00 45 15.9 -1.5**
PNTR IAmb IAmb 00 45 38.2
comp=Z,37nm,1.2s
TUQ Turquoise Moun 81.23 45 P P 00 45 23.0 +5.6
baz=233
LCH Last Change Ra 81.24 43 P **P 00 45 15.7 -1.7**
FURC Furnace Creek, 81.25 44 P P 00 45 22.3 +5.0
baz=232
GRAC Grapevine Rang 81.26 43 P **P 00 45 15.4 -2.1**
GRAC Grapevine Rang 81.26 43 P P 00 45 23.0 +5.6
baz=231
214A Organ Pipe Nat 81.28 50 P **P 00 45 14.8 -2.8**
214A IAmb IAmb 00 45 50.3
comp=Z,69nm,2.0s
214A Organ Pipe Nat 81.28 50 P P 00 45 22.6 +5.0
baz=235
SHOC Shoshone, Teco 81.28 45 P P 00 45 22.0 +4.5
baz=232
BEKR Beckworth 81.28 39 P **P 00 45 15.5 -2.1**
VCNR Virginia City 81.33 40 P **P 00 45 15.6 -2.3**
LHV Little Huntoon 81.35 42 P **P 00 45 16.4 -1.4**
LHV IAmb IAmb 00 46 04.3
comp=Z,49nm,1.4s

YERR	**Yerington**	**81.37**	**41**	P	**P**	**00 45 17.4**	**-0.8**
YERR				IAmb	IAmb	00 45 38.8	
	comp=Z,24nm,1.1s						
TEY	**Ternei**	**81.45**	**328**	⇑*e*P	**P**	**00 45 18.8**	**+0.7**
TEY				*e*		00 55 19.9	
TEY				pmax	pmax		
	comp=Z,100nm,10.0s						
GMN	**Gold Mountain**	**81.52**	**43**	P	**P**	**00 45 19.4**	**+0.3**
GMN				IAmb	IAmb	00 45 39.7	
	comp=Z,26nm,1.3s						
RYN	**Ryan**	**81.58**	**41**	P	**P**	**00 45 17.4**	**-1.8**
RYN				IAmb	IAmb	00 46 04.4	
	comp=Z,30nm,1.5s						
NVAR	**Mina Array Bea**	**81.58**	**42**	P	**P**	**00 45 22.6**	**+3.3**
	comp=Z,2.5nm,0.7s,baz=220,slow=8.7,SNR=16						
NVAR				LR	LR	01 14 13.4	
	comp=Z,2μm,21.8s,baz=244,slow=30						
	comp=Z,2.5nm,0.7s						
NVAR	**Mina Array Bea**	**81.58**	**42**	P	**P**	**00 45 19.9**	**+0.6**
WCT	**Wildcat Mounta**	**81.61**	**44**	P	**P**	**00 45 19.6**	**+0.3**
HUMO	**Hull Mountain**	**81.66**	**36**	P	**P**	**00 45 19.1**	**-0.3**
HUMO				IAmb	IAmb	00 46 20.9	
	comp=Z,35nm,1.5s						
HUMO				IAMs_20	IAMs_20	01 16 25.3	
	comp=Z,3μm,20.0s						
NV11	**Mina Array Sit**	**81.67**	**42**	P	**P**	**00 45 17.6**	**-2.1**
NV11				IAmb	IAmb	00 45 41.1	
	comp=Z,26nm,1.1s						
PDMCI	**Parker Dam,Lak**	**81.73**	**47**	P	P	00 45 25.6	+5.7
	baz=234,SNR=5.7						
PAHR	**Pah Rah Range**	**81.75**	**40**	P	**P**	**00 45 18.2**	**-1.9**
PAHR				IAmb	IAmb	00 45 37.8	
	comp=Z,47nm,1.7s						
COYC	**Coyhaique**	**81.88**	**136**	P	**P**	**00 45 19.8**	**-0.8**
COYC				IAmb	IAmb	00 45 29.4	
	comp=Z,32nm,1.2s						
H03S2	**Juan Fernandez**	**81.88**	**123**	T	T	02 17 07.2	
	baz=245						
H03S1	**Juan Fernandez**	**81.89**	**123**	T	T	02 16 57.2	
	baz=245						
H03S3	**Juan Fernandez**	**81.90**	**123**	T	T	02 17 01.3	
	baz=245						
TPNV	**Topopah Spring**	**81.94**	**44**	P	**P**	**00 45 19.3**	**-1.9**
TPNV				IAmb	IAmb	00 45 39.1	
	comp=Z,32nm,1.4s						
TPNV				IAMs_20	IAMs_20	01 17 25.8	
	comp=Z,3μm,19.0s						
TPNV	**Topopah Spring**	**81.94**	**44**	P	**P**	**00 45 19.3**	**-1.9**
TPNV				pmax	pmax		
	comp=Z,32nm,1.5s						
TPNV	**Topopah Spring**	**81.94**	**44**	P	P	00 45 26.3	+5.1
	baz=232,SNR=6.8						
SII	**Sitkinak Islan**	**81.96**	**11**	P	**P**	**00 45 24.1**	**+3.5**
	baz=199						
INCN	**Inchon**	**81.98**	**317**	P	**P**	**00 45 21.3**	**+0.1**
INCN				IAmb	IAmb	00 45 57.4	
	comp=Z,24nm,0.8s						
INCN	**Inchon**	**81.98**	**317**	P	**P**	**00 45 21.3**	**+0.1**
INCN				pmax	pmax		
	comp=Z,24nm,0.9s						
INCN				MLR	MLR		
	comp=Z,2μm,19.0s						
TPH	**Tonopah**	**82.02**	**42**	P	**P**	**00 45 20.2**	**-1.4**
TPH	**Tonopah**	**82.02**	**42**	P	**P**	**00 45 20.2**	**-1.4**
TPH				pmax	pmax		
	comp=Z,146nm,1.3s						
H03N2	**Juan Fernandez**	**82.03**	**123**	T	T	02 17 21.5	
	baz=238,slow=74						
H03N3	**Juan Fernandez**	**82.03**	**123**	T	T	02 17 23.5	
	baz=238,slow=74						
H03N1	**Juan Fernandez**	**82.05**	**123**	T	T	02 17 05.1	
	baz=238,SNR=9.9						
KVN	**Kaiserville**	**82.10**	**41**	P	**P**	**00 45 19.6**	**-2.4**
KVN	**Kaiserville**	**82.10**	**41**	P	**P**	**00 45 19.6**	**-2.4**
KVN				pmax	pmax		
	comp=Z,22nm,1.3s						
V12A	**Nelson**	**82.10**	**45**	P	**P**	**00 45 20.9**	**-1.1**
V12A				IAmb	IAmb	00 45 43.1	
	comp=Z,28nm,1.4s						
SHPR	**Sheep Range**	**82.37**	**45**	P	**P**	**00 45 21.7**	**-1.7**
W13A	**Hualapai Mount**	**82.37**	**46**	P	**P**	**00 45 22.4**	**-1.1**
W13A				IAmb	IAmb	00 45 44.7	
	comp=Z,29nm,1.5s						
Q09A	**Carvers**	**82.52**	**42**	P	**P**	**00 45 22.9**	**-1.2**
Q09A				IAmb	IAmb	00 45 50.1	
	comp=Z,62nm,1.4s						
MOD	**Modoc Plateau**	**82.65**	**38**		**P**	**00 45 24.4**	**-0.4**
MOD				IAmb	IAmb	00 46 06.3	
	comp=Z,22nm,1.3s						
MOD				IAMs_20	IAMs_20	01 16 42.5	
	comp=Z,3μm,20.0s						
S11A	**Rachel**	**82.68**	**43**	P	**P**	**00 45 24.1**	**-1.0**
S11A				IAmb	IAmb	00 46 07.1	
	comp=Z,38nm,1.4s						
OHAK	**Old Harbor**	**82.75**	**12**	P	**P**	**00 45 24.2**	**-0.4**
OHAK	**Old Harbor**	**82.75**	**12**	P	**P**	**00 45 26.9**	**+2.3**
	baz=200						
K05A	**Summer Lake**	**82.86**	**37**	P	**P**	**00 45 24.4**	**-1.6**
K05A				IAmb	IAmb	00 45 47.3	
	comp=Z,54nm,1.2s						
HJU	**Haeju**	**82.89**	**317**	P	**P**	**00 45 26.3**	**+0.4**
HJU				sP	**PcP**	**00 45 33.1**	**+2.4**
HJU				S	**S**	**00 55 48.5**	**+4.3**
TUC	**Tucson**	**82.90**	**50**	P	**P**	**00 45 24.7**	**-1.5**
TUC				IAmb	IAmb	00 46 01.7	
	comp=Z,69nm,2.0s						
TUC	**Tucson**	**82.90**	**50**	P	**P**	**00 45 24.7**	**-1.5**
TUC				pmax	pmax		
	comp=Z,69nm,2.0s						
TUC	**Tucson**	**82.90**	**50**	P	**P**	**00 45 29.5**	**+3.3**
	baz=236						
HHU	**Hamhung**	**82.95**	**319**	P	**P**	**00 45 26.9**	**+0.8**
HHU				sP	**PcP**	**00 45 34.4**	**+3.5**
HHU				S	S	00 55 55.8	+11
PRN	**Pahroc Range**	**82.98**	**44**	P	**P**	**00 45 26.9**	**+0.3**
PRN				IAmb	IAmb	00 45 48.0	
	comp=Z,39nm,1.3s						
LL02	**Futaleuf**	**83.06**	**134**	P	**P**	**00 45 24.0**	**-2.9**
LL02				IAmb	IAmb	00 45 54.7	
	comp=Z,25nm,1.1s						
TYV	**Tymovskoe**	**83.17**	**335**	*e*P	**P**	**00 45 29.2**	**+2.2**
TYV				*e*S	**S**	**00 55 49.3**	**+2.9**
TYV				pmax	pmax		
	comp=Z,78nm,1.0s						
TYV				pmax	pmax		
	comp=Z,2μm,9.7s						
TYV				smax	smax		
	comp=N,2μm,10.9s						
TYV				smax	smax		
	comp=E,1μm,10.9s						
R11A	**Troy Canyon, C**	**83.21**	**43**	P	**P**	**00 45 26.5**	**-1.3**
R11A	**Troy Canyon, C**	**83.21**	**43**	P	P	00 45 32.0	+4.2
	baz=232,SNR=5.7						
USA0B	**Ussuriysk Arra**	**83.22**	**325**	P	**P**	**00 45 27.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**83.22**	**325**	P	**P**	**00 45 27.1**	**-0.3**
USA0B				pmax	pmax		
	comp=Z,69nm,1.1s						
USRK	**Ussuriysk Ar.**	**83.22**	**325**	P	**P**	**00 45 27.9**	**+0.5**
	comp=Z,39nm,0.9s,baz=160,slow=4.9,SNR=48						
USRK				LR	LR	01 20 22.8	
	comp=Z,1μm,19.0s,baz=127,slow=34						
	comp=Z,39nm,0.9s						
Q17K	**Contact Creek**	**83.29**	**10**	P	**P**	**00 45 29.5**	**+1.9**
	baz=198						
KDAK	**Kodiak Island**	**83.41**	**12**	P	**P**	**00 45 29.5**	**+1.4**
	comp=Z,8.7nm,1.2s,baz=176,slow=6.6,SNR=8.0						
KDAK				LR	LR	01 16 53.3	
	comp=Z,3μm,21.9s,baz=251,slow=32						
	comp=Z,8.7nm,1.2s						
KDAK	**Kodiak Island**	**83.41**	**12**	IAMs_20	IAMs_20	01 17 49.7	
	comp=Z,5μm,21.0s						
KDAK	**Kodiak Island**	**83.41**	**12**	P	**P**	**00 45 29.5**	**+1.4**
	baz=200						
H04A	**Detroit Lake**	**83.48**	**35**	P	**P**	**00 45 25.9**	**-2.9**
H04A				IAmb	IAmb	00 46 21.0	
	comp=Z,36nm,1.3s						
PYAG	**Pyongyang**	**83.49**	**318**	P	**P**	**00 45 29.8**	**+0.8**
BMN	**Battle Mountai**	**83.49**	**41**	P	**P**	**00 45 26.7**	**-2.5**
BMN				IAmb	IAmb	00 45 36.4	
	comp=Z,65nm,1.9s						
BMN	**Battle Mountai**	**83.49**	**41**	P	**P**	**00 45 26.7**	**-2.5**
BMN				pmax	pmax		
	comp=Z,65nm,1.9s						
COCO	**West Island**	**83.49**	**260**	IAMs_20	IAMs_20	01 21 58.8	
	comp=Z,3μm,18.0s						
PINE	**Pine Mountain**	**83.55**	**36**	P	**P**	**00 45 27.3**	**-2.1**
PINE				IAmb	IAmb	00 45 55.4	
	comp=Z,31nm,1.1s						
P16K	**Nushagak River**	**83.71**	**9**	P	**P**	**00 45 30.4**	**+0.8**
	baz=196						
SDSI	**Sungai Dareh**	**83.71**	**272**	P	P	00 45 42.4	+12
Q18K	**Katmai Hardscr**	**83.80**	**10**	P	**P**	**00 45 30.2**	**0.0**
	baz=198						
LCMT	**Little Creek M**	**83.91**	**45**	P	**P**	**00 45 30.6**	**-0.8**
WVOR	**Wild Horse Val**	**83.94**	**38**	P	**P**	**00 45 30.0**	**-1.4**
WVOR				IAmb	IAmb	00 46 13.0	
	comp=Z,20nm,1.1s						
WVOR				IAMs_20	IAMs_20	01 17 32.6	
	comp=Z,3μm,20.0s						
WVOR	**Wild Horse Val**	**83.94**	**38**	P	**P**	**00 45 30.0**	**-1.4**
WVOR				pmax	pmax		
	comp=Z,20nm,1.2s						
E03A	**Lebam**	**84.06**	**33**		**P**	**00 45 30.4**	**-1.3**
NJ2	**Nanjing**	**84.08**	**309**	⇑*i*P	**P**	**00 45 32.2**	**+0.1**
NJ2				pP	**PcP**	**00 45 35.6**	**-0.4**
NJ2				sP	**pwP**	**00 45 38.7**	**-7.6**
NJ2				SKS	**S**	**00 55 56.5**	**0.0**
NJ2				S	**SKKSac**	**00 56 01.7**	**+1.3**
NJ2				SS	**SS**	**01 01 24.4**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,1μm,7.6s						
NJ2				LR	LR		
	comp=Z,720nm,19.0s						
NJ2				LR	LR		
	comp=Z,830nm,17.1s						
NJ2				LR	LR		
	comp=Z,1μm,21.6s						
P17K	**Kvichak River**	**84.09**	**9**	P	**P**	**00 45 31.9**	**+0.4**
	baz=197						
CCUT	**Cedar City**	**84.14**	**45**	P	**P**	**00 45 31.6**	**-1.1**
CCUT				IAmb	IAmb	00 45 54.2	
	comp=Z,25nm,1.2s						
KNB	**Kanab**	**84.18**	**45**	P	**P**	**00 45 31.1**	**-1.7**
KNB	**Kanab**	**84.18**	**45**	P	**P**	**00 45 31.1**	**-1.7**
HOOD	**Mount Hood Mea**	**84.19**	**35**	P	**P**	**00 45 31.2**	**-1.4**
HOOD				IAmb	IAmb	00 46 32.4	
	comp=Z,16nm,0.8s						
U15A	**North Rim**	**84.19**	**46**		**P**	**00 45 30.9**	**-2.1**
U15A				IAmb	IAmb	00 46 08.4	
	comp=Z,44nm,1.2s						
Q20K	**Shuyak Island**	**84.22**	**12**	P	**P**	**00 45 34.5**	**+2.3**
	baz=201						
O16K	**Kokwok River B**	**84.24**	**9**	P	**P**	**00 45 34.2**	**+1.9**
	baz=195						
ZAIG	**Zacatecas**	**84.24**	**62**	P	**P**	**00 45 31.5**	**-2.0**
ZAIG				IAmb	IAmb	00 46 04.8	
	comp=Z,39nm,1.7s						
WUAZ	**Wupatki**	**84.28**	**47**	P	**P**	**00 45 31.6**	**-1.8**
WUAZ				IAmb	IAmb	00 45 41.4	
	comp=Z,67nm,1.7s						
WUAZ	**Wupatki**	**84.28**	**47**	P	P	00 45 39.1	+5.8
	baz=236						
LR03	**Panguipulli**	**84.29**	**131**	P	**P**	**00 45 32.6**	**-0.7**
Q19K	**Cape Douglas,**	**84.30**	**11**	P	**P**	**00 45 34.9**	**+2.2**
	baz=200						
SZCU	**Shurtz Canyon**	**84.35**	**45**	P	**P**	**00 45 31.9**	**-1.8**
SZCU				IAmb	IAmb	00 45 55.0	
	comp=Z,57nm,1.5s						
WISH	**Wishkah**	**84.35**	**32**	P	**P**	**00 45 31.1**	**-2.0**
WISH				IAmb	IAmb	00 45 56.0	
	comp=Z,31nm,1.1s						
PSUT	**Pine Spring**	**84.41**	**44**		**P**	**00 45 32.1**	**-1.9**
PSUT				IAmb	IAmb	00 45 41.6	
	comp=Z,47nm,1.8s						
TROLL	**Troll, Antarti**	**84.44**	**179**	PcP	**PcP**	**00 45 36.0**	**-1.2**
P18K	**Big Mountain,**	**84.47**	**10**	IAMs_20	IAMs_20	01 18 38.9	
	comp=Z,4μm,21.0s						
P18K	**Big Mountain,**	**84.47**	**10**	P	**P**	**00 45 35.5**	**+2.0**
	baz=198						
NLWA	**Neilton Lookou**	**84.49**	**32**	P	**P**	**00 45 31.6**	**-2.3**
NLWA				IAmb	IAmb	00 46 23.1	
	comp=Z,32nm,1.4s						
NLWA				IAMs_20	IAMs_20	01 19 12.3	
	comp=Z,4μm,20.0s						
I07A	**Izee**	**84.52**	**37**	P	**P**	**00 45 32.9**	**-1.4**
I07A				IAmb	IAmb	00 46 15.1	
	comp=Z,27nm,1.4s						
C03A	**Quillayute Air**	**84.55**	**31**	P	**P**	**00 45 32.3**	**-1.8**
O17K	**Koliganek Bris**	**84.55**	**9**	P	**P**	**00 45 35.5**	**+1.7**
	baz=196						
J08A	**Circle Bar Ran**	**84.62**	**38**	P	**P**	**00 45 35.5**	**+0.7**
J08A				IAmb	IAmb	00 46 16.3	
	comp=Z,51nm,1.6s						
SNAA	**Sanae**	**84.64**	**178**	PcP	**PcP**	**00 45 37.2**	**-0.8**
SNAA	**Sanae**	**84.64**	**178**	P	**P**	**00 45 37.8**	**+3.2**
	comp=Z,11nm,0.9s,baz=203,slow=3.1,SNR=22						
SNAA				LR	LR	01 19 01.6	
	comp=Z,4μm,20.8s,baz=197,slow=32						
	comp=Z,11nm,0.9s						
SNAA	**Sanae**	**84.64**	**178**	P	**P**	**00 45 35.7**	**+1.2**
SNAA				IAmb	IAmb	00 46 17.1	
	comp=Z,57nm,1.5s						
SNAA				IAMs_20	IAMs_20	01 24 03.0	
	comp=Z,4μm,18.0s						
SNAA	**Sanae**	**84.64**	**178**	P	**P**	**00 45 35.7**	**+1.2**
SNAA				pmax	pmax		
	comp=Z,57nm,1.5s						
SNAA				MLR	MLR		
	comp=Z,4μm,18.0s						
VNA3	**Neumayer Olymp**	**84.67**	**175**	PcP	**PcP**	**00 45 37.2**	**-0.9**
QIZ	**Qiongzhong**	**84.69**	**293**	P	**P**	**00 45 36.0**	**+0.4**
QIZ				pP	**pwP**	**00 45 45.2**	**-4.5**
QIZ				S	**S**	**00 56 01.3**	**-1.9**
QIZ				sS	**ScS**	**00 56 18.5**	**+4.1**
QIZ				SS	**SS**	**01 01 36.2**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,770nm,3.9s						
QIZ				LR	LR		
	comp=Z,480nm,16.7s						
QIZ				LR	LR		
	comp=Z,1μm,18.8s						
QIZ				LR	LR		
	comp=Z,2μm,20.1s						
X18A	**Snowflake**	**84.70**	**49**	P	**P**	**00 45 35.2**	**-0.3**
X18A				IAmb	IAmb	00 45 42.7	
	comp=Z,63nm,1.8s						
PKCU	**Pink Cliffs**	**84.76**	**45**	P	**P**	**00 45 35.9**	**0.0**
MDJ	**Mudanjiang**	**84.78**	**324**	P	**P**	**00 45 35.5**	**+0.1**
MDJ	**Mudanjiang**	**84.78**	**324**	P	**P**	**00 45 37.4**	**+2.0**
MDJ				S	**S**	**00 56 02.8**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,52nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2μm,7.6s						
MDJ				LR	LR		
	comp=Z,340nm,11.0s						
MDJ				LR	LR		
	comp=Z,650nm,15.3s						
MDJ				LR	LR		
	comp=Z,570nm,19.4s						
MDJ	**Mudanjiang**	**84.78**	**324**	P	**P**	**00 45 37.1**	**+1.7**
ELK	**Elko**	**84.87**	**41**	P	**P**	**00 45 39.1**	**+2.8**
	comp=Z,2.0nm,0.8s,baz=222,slow=4.8,SNR=9.6						
ELK				LR	LR	01 21 26.4	
	comp=Z,2μm,18.1s,baz=222,slow=34						
	comp=Z,2.0nm,0.8s						
ELK	**Elko**	**84.87**	**41**	P	**P**	**00 45 35.8**	**-0.5**
ELK				IAmb	IAmb	00 45 56.5	
	comp=Z,46nm,2.0s						
ELK				IAMs_20	IAMs_20	01 23 00.5	
	comp=Z,3μm,18.0s						
ELK	**Elko**	**84.87**	**41**	P	**P**	**00 45 35.8**	**-0.5**
ELK				pmax	pmax		
	comp=Z,46nm,2.0s						
ELK				MLR	MLR		
	comp=Z,3μm,18.0s						
SUJ	**Sinuiju**	**84.90**	**318**	P	**P**	**00 45 36.3**	**+0.2**
SUJ				sP	**PcP**	**00 45 43.1**	**+3.7**
SUJ				S	**S**	**00 56 04.4**	**+0.1**
O18K	**Koktuh Hills**	**84.91**	**10**	IAMs_20	IAMs_20	01 16 59.6	
	comp=Z,4μm,22.0s						
O18K	**Koktuh Hills**	**84.91**	**10**	P	**P**	**00 45 36.2**	**+0.5**
	baz=198						
GO06	**Curarrehue**	**84.92**	**131**	P	**P**	**00 45 36.2**	**-0.4**
GO06				IAmb	IAmb	00 45 51.7	
	comp=Z,24nm,1.2s						
N16K	**Nishlik Lake**	**85.00**	**8**	P	**P**	**00 45 38.2**	**+2.0**
	baz=195						
PLCA	**Paso Flores**	**85.03**	**132**	P	P	00 45 41.8	+4.7
	comp=Z,9.9nm,1.2s,baz=221,slow=5.6,SNR=5.6						
PLCA				LR	LR	01 18 13.4	
	comp=Z,1μm,18.5s,baz=243,slow=32						
	comp=Z,9.9nm,1.2s						
PLCA	**Paso Flores**	**85.03**	**132**	P	**P**	**00 45 34.7**	**-2.4**
PLCA				IAmb	IAmb	00 45 45.4	
	comp=Z,33nm,1.4s						
P19K	**Oil Pt**	**85.05**	**11**	P	**P**	**00 45 36.5**	**0.0**
P19K				IAmb	IAmb	00 46 49.7	
	comp=Z,34nm,1.0s						
P19K	**Oil Pt**	**85.05**	**11**	P	**P**	**00 45 37.3**	**+0.9**
	baz=200						
LON	**Longmire**	**85.08**	**34**	P	**P**	**00 45 35.7**	**-1.2**
LON				IAmb	IAmb	00 46 24.7	
	comp=Z,30nm,1.6s						
LON	**Longmire**	**85.08**	**34**	P	**P**	**00 45 35.7**	**-1.2**
LON				pmax	pmax		
	comp=Z,30nm,1.6s						
VNA2	**Neumayer--Watz**	**85.14**	**176**	PcP	**PcP**	**00 45 39.9**	**-0.3**
	baz=180,slow=3.0						
121A	**Cookes Peak, D**	**85.15**	**51**	P	**P**	**00 45 39.5**	**+1.6**
121A				IAmb	IAmb	00 46 29.9	
	comp=Z,42nm,1.5s						
121A	**Cookes Peak, D**	**85.15**	**51**	P	**P**	**00 45 39.4**	**+1.6**
	baz=238						
TLIG	**Tlapa**	**85.17**	**69**		**P**	**00 45 36.5**	**-1.6**
TLIG				IAmb	IAmb	00 46 09.6	
	comp=Z,62nm,1.7s						
W18A	**Petrified Fore**	**85.18**	**48**	P	**P**	**00 45 40.7**	**+2.8**
	baz=236						
CNPM	**China Poot**	**85.29**	**12**	IAMs_20	IAMs_20	01 17 18.5	
	comp=Z,5μm,22.0s						
HOM	**Homer**	**85.34**	**12**	IAMs_20	IAMs_20	01 19 23.7	
	comp=Z,4μm,21.0s						
HOM	**Homer**	**85.34**	**12**	P	**P**	**00 45 40.0**	**+2.2**
	baz=201						
VNA1	**Neumayer--Stat**	**85.36**	**176**	PcP	**PcP**	**00 45 40.4**	**-0.7**
O19K	**Port Alsworth**	**85.38**	**10**	P	**P**	**00 45 39.2**	**+1.2**
O19K				IAMs_20	IAMs_20	01 17 25.9	
	comp=Z,5μm,22.0s						
O19K	**Port Alsworth**	**85.38**	**10**	P	**P**	**00 45 39.4**	**+1.4**
	baz=199						
O20K	**Slope Mountain**	**85.56**	**11**	P	**P**	**00 45 40.7**	**+1.7**
	baz=200						
NVL	**N'lazarevskaya**	**85.58**	**182**	*e*P	P	00 45 45.5	+6.4
NVL				*e*S	**SKSac**	**00 56 01.2**	**-2.6**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
NVL				MLR	MLR		
	comp=Z,2μm,17.0s						
BRLK	**Bradley Lake**	**85.58**	**12**	IAMs_20	IAMs_20	01 17 36.7	
	comp=Z,4μm,22.0s						
BRSE	**Bradley Lake S**	**85.59**	**12**	P	**P**	**00 45 40.4**	**+1.3**
	baz=202						
N18K	**Kilae Creek**	**85.60**	**9**	IAMs_20	IAMs_20	01 21 26.7	
	comp=Z,3μm,20.0s						
N18K	**Kilae Creek**	**85.60**	**9**	P	**P**	**00 45 39.6**	**+0.5**
	baz=197						
EPT	**El Paso**	**85.67**	**53**	IAMs_20	IAMs_20	01 18 10.0	
	comp=Z,3μm,20.0s						
GRNR	**Gornyy**	**85.69**	**331**	⇓*i*P	**P**	**00 45 42.0**	**+2.2**
GRNR				*e*		00 56 06.3	
GRNR				pmax	pmax		
	comp=Z,30nm,1.3s						
GRNR				MLR	MLR		
	comp=E,440nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,790nm,18.0s						
GRNR				MLR	MLR		
	comp=N,630nm,17.0s						
N19K	**Bonanza Creek**	**85.94**	**10**	IAMs_20	IAMs_20	01 17 20.7	
	comp=Z,5μm,22.0s						
N19K	**Bonanza Creek**	**85.94**	**10**	P	**P**	**00 45 40.5**	**-0.5**
	baz=199						
DL2	**Dalian**	**86.00**	**316**	P	**P**	**00 45 42.3**	**+0.7**
DL2				SKS	**SKSac**	**00 56 01.2**	**-5.9**
DL2				S	**ScS**	**00 56 19.9**	**-4.4**
DL2				pmax	pmax		
	comp=Z,32nm,1.2s						
DL2				pmax	pmax		
	comp=Z,740nm,5.7s						
DL2				LR	LR		
	comp=Z,1μm,17.7s						
DL2				LR	LR		
	comp=Z,660nm,18.4s						
DL2				LR	LR		
	comp=Z,2μm,19.0s						
HAWA	**Hanford**	**86.01**	**35**	IAMs_20	IAMs_20	01 20 09.4	
	comp=Z,4μm,20.0s						
DUG	**Dugway, Tooele**	**86.03**	**43**	P	**P**	**00 45 40.9**	**-1.1**
	baz=234						
BBB	**Bella Bella**	**86.04**	**27**	P	**P**	**00 45 43.7**	**+2.2**
	comp=Z,6.1nm,0.9s,baz=225,slow=14,SNR=2.4						
BBB				LR	LR	01 20 40.3	
	comp=Z,2μm,18.1s,baz=239,slow=33						
	comp=Z,6.1nm,0.9s						
SEW	**Seward**	**86.17**	**13**	P	**P**	**00 45 42.0**	**0.0**
	baz=203						
Q23K	**Middleton Isla**	**86.22**	**14**	IAMs_20	IAMs_20	01 25 01.0	
	comp=Z,3μm,18.0s						
BMO	**Blue Mountains**	**86.22**	**37**	IAMs_20	IAMs_20	01 19 27.0	
	comp=Z,3μm,20.0s						
CAPN	**Captain Cook N**	**86.47**	**11**	IAMs_20	IAMs_20	01 17 24.6	
	comp=Z,4μm,21.0s						
CAPN	**Captain Cook N**	**86.47**	**11**	P	**P**	**00 45 42.7**	**-0.6**
	baz=202						
O22K	**Cooper Landing**	**86.47**	**12**	IAMs_20	IAMs_20	01 18 01.6	
	comp=Z,3μm,22.0s						
CNSH	**ChangSha**	**86.51**	**303**	⇑P	**P**	**00 45 45.0**	**+0.6**
CNSH				S	**SKSac**	**00 56 13.1**	**+2.3**
CNSH				pmax	pmax		
	comp=Z,900nm,4.2s						
CNSH				LR	LR		
	comp=Z,490nm,19.5s						
CNSH				LR	LR		
	comp=Z,1μm,21.6s						
CNSH				LR	LR		
	comp=Z,1μm,20.6s						
TXAR	**Lajitas Array**	**86.56**	**56**	P	P	00 45 48.9	+4.1
	comp=Z,7.8nm,1.0s,baz=211,slow=7.0,SNR=36						
TXAR				LR	LR	01 18 59.9	
	comp=Z,3μm,18.8s,baz=234,slow=32						
	comp=Z,7.8nm,1.0s						
CN2	**Changchun**	**86.57**	**321**	*e*P	**P**	**00 45 44.6**	**+0.3**
CN2				*es*P	PcP	00 45 51.0	+4.3
CN2				S	**S**	**00 56 20.3**	**-0.3**
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,1μm,19.0s						
CN2				LR	LR		
	comp=Z,2μm,19.0s						
CN2				LR	LR		
	comp=Z,2μm,19.0s						
Y22D	**IRIS PASSCAL I**	**86.58**	**50**	P	**P**	**00 45 41.4**	**-3.4**
	baz=238						
Y22F	**Passcal Instru**	**86.58**	**50**	P	**P**	**00 45 40.9**	**-3.9**
	baz=238						
LENM	**Lemitar**	**86.58**	**50**	P	**P**	**00 45 43.3**	**-1.6**
WHN	**Wuhan**	**86.59**	**305**	⇓P	**P**	**00 45 46.2**	**+1.5**
WHN				SKS	**SKSac**	**00 56 12.0**	**+0.

BNX				LR	LR		
	comp=Z,970nm,19.1s						
BNX				LR	LR		
	comp=Z,2μm,20.2s						
BNX				LR	LR		
	comp=Z,2μm,19.8s						
SPU	**Mount Spurr**	**86.69**	**11**	P	**P**	**00 45 44.1**	**-0.4**
KLR	**Kul'dur**	**86.75**	**328**	P	**P**	**00 45 45.3**	**+0.2**
	comp=Z,18nm,1.1s,baz=112,slow=5.0,SNR=20						
KLR				LR	LR	01 19 02.0	
	comp=Z,2μm,21.8s,baz=132,slow=32						
	comp=Z,18nm,1.1s						
KLR	**Kul'dur**	**86.75**	**328***c*	*i*P	**P**	**00 45 46.7**	**+1.6**
KLR				pmax	pmax		
	comp=Z,38nm,1.3s						
UBPT	**Khong Chiam**	**86.78**	**288**	P	**P**	**00 45 45.6**	**-0.4**
FIS	**Fire Island**	**86.99**	**12**	IAMs_20	IAMs_20	01 18 01.3	
	comp=Z,3μm,22.0s						
M19K	**Big River Lodg**	**86.99**	**10**	IAMs_20	IAMs_20	01 18 26.5	
	comp=Z,4μm,22.0s						
RC01	**Rabbit Creek A**	**87.03**	**12**	IAMs_20	IAMs_20	01 27 57.4	
	comp=Z,3μm,18.0s						
RC01	**Rabbit Creek A**	**87.03**	**12**	P	**P**	**00 45 47.0**	**+0.9**
	baz=203						
HIN	**Hinchinbrook I**	**87.06**	**14**	IAMs_20	IAMs_20	01 18 12.1	
	comp=Z,4μm,22.0s						
HLID	**Hailey**	**87.06**	**39**	P	**P**	**00 45 49.4**	**+2.4**
	baz=233						
V35K	**Ketchikan**	**87.07**	**23**	P	**P**	**00 45 45.4**	**-1.0**
	baz=219						
PWL	**Port Wells**	**87.09**	**13**	IAMs_20	IAMs_20	01 26 07.1	
	comp=Z,3μm,19.0s						
PWL	**Port Wells**	**87.09**	**13**	P	**P**	**00 45 47.0**	**+0.5**
	baz=204						
KAIM	**Kayak Island**	**87.11**	**15**	IAMs_20	IAMs_20	01 18 09.4	
	comp=Z,4μm,22.0s						
MVCO	**Mesa Verde**	**87.15**	**47**	P	**P**	**00 45 50.2**	**+2.6**
	baz=237						
U33K	**Whale Pass**	**87.16**	**22**	P	**P**	**00 45 48.6**	**+1.8**
	baz=218						
M20K	**Styx River**	**87.17**	**10**	P	**P**	**00 45 48.1**	**+1.2**
	baz=200						
L19K	**White Mountain**	**87.19**	**9**	IAMs_20	IAMs_20	01 18 32.7	
	comp=Z,3μm,22.0s						
L19K	**White Mountain**	**87.19**	**9**	P	**P**	**00 45 48.3**	**+1.4**
	baz=198						
SUA	**Susitna One**	**87.19**	**11**	P	**P**	**00 45 48.0**	**+0.9**
	baz=202						
SIT	**Sitka**	**87.19**	**20**	P	**P**	**00 45 48.5**	**+1.5**
	baz=216						
GAMB	**Gambell**	**87.31**	**1**	IAMs_20	IAMs_20	01 22 59.3	
	comp=Z,2μm,20.0s						
GAMB	**Gambell**	**87.31**	**1**	P	**P**	**00 45 49.3**	**+1.8**
	baz=183						
ANMO	**Albuquerque**	**87.36**	**50**	P	P	00 45 52.9	+4.2
	comp=Z,10nm,1.0s,baz=211,slow=4.4,SNR=26						
ANMO				LR	LR	01 19 37.5	
	comp=Z,6μm,19.4s,baz=248,slow=32						
	comp=Z,10nm,1.0s						
ANMO	**Albuquerque**	**87.36**	**50**	P	**P**	**00 45 50.3**	**+1.7**
	baz=238						
EYAK	**Cordova Ski Ar**	**87.36**	**14**	P	**P**	**00 45 48.7**	**+1.0**
	baz=206						
GLI	**Glacier Island**	**87.36**	**13**	IAMs_20	IAMs_20	01 18 23.3	
	comp=Z,4μm,22.0s						
GLI	**Glacier Island**	**87.36**	**13**	P	**P**	**00 45 49.1**	**+1.3**
	baz=205						
FID	**Port Fidalgo**	**87.38**	**14**	IAMs_20	IAMs_20	01 17 59.4	
	comp=Z,5μm,22.0s						
SUCK	**Suckling Hills**	**87.39**	**15**	IAMs_20	IAMs_20	01 18 39.8	
	comp=Z,3μm,20.0s						
PV11	**David Mesa, Pa**	**87.49**	**46**		**P**	**00 45 46.6**	**-2.7**
PSI	**Prapat**	**87.50**	**274**	LR	LR	01 27 11.4	
	comp=Z,1μm,18.4s,baz=124,slow=37						
HMT	**Hamilton**	**87.51**	**15**	IAMs_20	IAMs_20	01 25 23.0	
	comp=Z,4μm,20.0s						
TIA	**Tai'an**	**87.51**	**311**	⇓P	**P**	**00 45 50.8**	**+1.7**
TIA				S	**SKSac**	**00 56 20.3**	**+3.7**
TIA				pmax	pmax		
	comp=Z,54nm,1.1s						
TIA				pmax	pmax		
	comp=Z,1μm,7.3s						
TIA				LR	LR		
	comp=Z,810nm,19.1s						
TIA				LR	LR		
	comp=Z,590nm,16.2s						
TIA				LR	LR		
	comp=Z,1μm,21.1s						
SKT	**Skwentna**	**87.53**	**11**	P	**P**	**00 45 49.9**	**+1.3**
	baz=201						
BGLC	**Bering Glacier**	**87.55**	**15**	P	**P**	**00 45 50.6**	**+2.0**
	baz=209						
M22K	**Willow**	**87.57**	**12**	P	**P**	**00 45 50.3**	**+1.6**
	baz=203						
KNK	**Knik Glacier**	**87.57**	**12**	IAMs_20	IAMs_20	01 18 33.8	
	comp=Z,3μm,22.0s						
KNK	**Knik Glacier**	**87.57**	**12**	P	**P**	**00 45 49.6**	**+0.8**
	baz=204						
L20K	**Farewell, AK**	**87.61**	**10**	P	**P**	**00 45 50.2**	**+1.2**
	baz=199						
HWUT	**Hardware Ranch**	**87.62**	**42**	IAMs_20	IAMs_20	01 21 35.2	
	comp=Z,2μm,19.0s						
WRAK	**Wrangell Islan**	**87.67**	**22**	IAMs_20	IAMs_20	01 20 21.2	
	comp=Z,2μm,19.0s						
WRAK	**Wrangell Islan**	**87.67**	**22**	P	**P**	**00 45 51.7**	**+2.4**
	baz=218						
BERG	**Berg Lake**	**87.69**	**15**	IAMs_20	IAMs_20	01 18 27.8	
	comp=Z,4μm,22.0s						
MA2	**Magadan**	**87.69**	**343**	P	**P**	**00 45 50.7**	**+1.3**
	comp=Z,11nm,0.7s,baz=161,slow=7.0,SNR=4.0						
MA2				LR	LR	01 26 07.3	
	comp=Z,810nm,18.1s,baz=148,slow=36						
	comp=Z,11nm,0.7s						
SNH	**Sunshine Point**	**87.71**	**15**	IAMs_20	IAMs_20	01 24 48.3	
	comp=Z,4μm,19.0s						
TTA	**Tatalina**	**87.74**	**9**	P	**P**	**00 45 51.9**	**+2.3**
	baz=197						
S32K	**Killisnoo**	**87.76**	**21**	P	**P**	**00 45 51.2**	**+1.5**
	baz=216						
MESA	**MESA**	**87.93**	**16**	IAMs_20	IAMs_20	01 21 19.1	
	comp=Z,4μm,20.0s						
WAX	**Waxell Ridge**	**87.94**	**15**	IAMs_20	IAMs_20	01 18 25.5	
	comp=Z,4μm,22.0s						
SML	**Sawmill**	**87.96**	**12**	IAMs_20	IAMs_20	01 18 58.0	
	comp=Z,3μm,22.0s						
SML	**Sawmill**	**87.96**	**12**	P	**P**	**00 45 51.6**	**+0.9**
	baz=204						
BMRM	**Bremner River**	**87.99**	**14**	P	**P**	**00 45 52.8**	**+2.0**
	baz=208						
M23K	**Glacier View**	**88.06**	**13**	P	**P**	**00 45 52.4**	**+1.3**
	baz=205						
CMIG	**Matias Romero**	**88.12**	**71**	P	P	00 45 57.6	+5.2
	comp=Z,3.2nm,0.9s,baz=233,slow=12,SNR=3.0						
CMIG				LR	LR	01 16 22.0	
	comp=Z,2μm,20.1s,baz=238,slow=29						
	comp=Z,3.2nm,0.9s						
GSI	**Gunungsitoli**	**88.13**	**272**	P	**P**	**00 45 52.8**	**+0.2**
GSI	**Gunungsitoli**	**88.13**	**272**	P	**P**	**00 45 54.8**	**+2.2**
	comp=Z,13μmcomp=Z,99nm,1.0s						
GSI	**Gunungsitoli**	**88.13**	**272**	P	**P**	**00 45 54.5**	**+1.9**
YAH	**Yahtse**	**88.14**	**16**	IAMs_20	IAMs_20	01 23 16.5	
	comp=Z,4μm,19.0s						
CUT	**Chulitna**	**88.15**	**11**	P	**P**	**00 45 52.7**	**+1.2**
	baz=202						
PNL	**Peninsula**	**88.15**	**17**	P	**P**	**00 45 53.9**	**+2.2**
	baz=212						
KLU	**Klutina**	**88.17**	**14**	IAMs_20	IAMs_20	01 18 59.5	
	comp=Z,4μm,22.0s						
KLU	**Klutina**	**88.17**	**14**	P	**P**	**00 45 53.2**	**+1.5**
	baz=206						
SCM	**Sheep Creek Mo**	**88.18**	**13**	IAMs_20	IAMs_20	01 26 32.9	
	comp=Z,2μm,19.0s						
SCM	**Sheep Creek Mo**	**88.18**	**13**	P	**P**	**00 45 53.1**	**+1.4**
	baz=205						
ISLE	**Juniper Island**	**88.20**	**15**	IAMs_20	IAMs_20	01 18 22.3	
	comp=Z,4μm,22.0s						
TGL	**Tana Glacier**	**88.22**	**15**	IAMs_20	IAMs_20	01 18 44.7	
	comp=Z,4μm,22.0s						
PPLA	**Purkeypile**	**88.28**	**10**	P	**P**	**00 45 52.7**	**+0.4**
	baz=201						
PINM	**Pinnacle**	**88.29**	**17**	P	**P**	**00 45 54.4**	**+2.1**
	baz=211						
BCPM	**Bancas Point**	**88.33**	**17**	P	**P**	**00 45 49.9**	**-2.5**
BCPM				IAMs_20	IAMs_20	01 23 11.8	
	comp=Z,4μm,18.0s						
TABL	**Table Mountain**	**88.36**	**16**	IAMs_20	IAMs_20	01 21 34.4	
	comp=Z,4μm,20.0s						
ANM	**Nome**	**88.39**	**4**	IAMs_20	IAMs_20	01 21 56.6	
	comp=Z,3μm,21.0s						
ANM	**Nome**	**88.39**	**4**	P	**P**	**00 45 55.5**	**+2.9**
	baz=189						
K20K	**Telida**	**88.42**	**9**	P	**P**	**00 45 54.0**	**+1.2**
K20K				IAMs_20	IAMs_20	01 19 33.3	
	comp=Z,3μm,22.0s						
K20K	**Telida**	**88.42**	**9**	P	**P**	**00 45 54.3**	**+1.5**
	baz=199						
R32K	**Eaglecrest**	**88.43**	**20**	P	**P**	**00 45 53.7**	**+0.8**
	baz=216						
NEW	**Newport**	**88.47**	**34**	P	**P**	**00 45 56.8**	**+3.4**
	comp=Z,0.5nm,0.3s,baz=243,slow=5.9,SNR=4.3						
NEW				LR	LR	01 22 30.3	
	comp=Z,4μm,18.3s,baz=218,slow=34						
	comp=Z,0.5nm,0.3s						
NEW	**Newport**	**88.47**	**34**	P	**P**	**00 45 54.9**	**+1.4**
	baz=231						
VRDI	**Verde Repeater**	**88.48**	**15**	IAMs_20	IAMs_20	01 19 03.8	
	comp=Z,3μm,22.0s						
N25K	**Chitina, Valde**	**88.56**	**14**	IAMs_20	IAMs_20	01 18 47.8	
	comp=Z,3μm,22.0s						
N25K	**Chitina, Valde**	**88.56**	**14**	P	**P**	**00 45 55.8**	**+2.3**
	baz=208						
S22A	**4UR Ranch, Cre**	**88.56**	**47**	P	**P**	**00 45 56.0**	**+1.5**
	baz=238						
AHID	**Auburn Hatcher**	**88.56**	**41**	IAMs_20	IAMs_20	01 23 24.2	
	comp=Z,2μm,19.0s						
P29M	**Windy Craggy**	**88.58**	**18**	IAMs_20	IAMs_20	01 18 43.4	
	comp=Z,3μm,22.0s						
P29M	**Windy Craggy**	**88.58**	**18**	P	**P**	**00 45 54.6**	**+0.9**
	baz=214						
M24K	**Tolsona, Glenn**	**88.67**	**13**	IAMs_20	IAMs_20	01 19 25.7	
	comp=Z,3μm,22.0s						
M24K	**Tolsona, Glenn**	**88.67**	**13**	P	**P**	**00 45 54.6**	**+0.5**
	baz=206						
MCARA	**McCarthy VSAT**	**88.72**	**15**	IAMs_20	IAMs_20	01 19 01.1	
	comp=Z,3μm,22.0s						
MCARA	**McCarthy VSAT**	**88.72**	**15**	P	**P**	**00 45 53.7**	**-0.5**
	baz=209						
LOGN	**Logan Glacier**	**88.72**	**16**	IAMs_20	IAMs_20	01 19 00.1	
	comp=Z,4μm,22.0s						
CTG	**Chitna Glacier**	**88.76**	**16**	P	**P**	**00 45 54.4**	**-0.2**
	baz=210						
CTGM	**Chitina Glacie**	**88.76**	**16**	IAMs_20	IAMs_20	01 19 02.1	
	comp=Z,4μm,22.0s						
BARN	**Barnard Glacie**	**88.76**	**16**	IAMs_20	IAMs_20	01 19 02.2	
	comp=Z,4μm,22.0s						
WAT6	**Susitna Watana**	**88.78**	**12**	P	**P**	**00 45 55.1**	**+0.4**
	baz=205,SNR=8.0						
PLBC	**Pleasant Camp**	**88.83**	**19**	P	**P**	**00 45 52.5**	**-2.3**
	baz=215						
T35M	**Bob Quinn**	**88.84**	**23**	P	**P**	**00 45 52.4**	**-2.5**
	baz=220						
WAT1	**Susitna Watana**	**88.85**	**12**	P	**P**	**00 45 54.4**	**-0.5**
	baz=204						
O28M	**Mount Upton**	**88.88**	**16**	P	**P**	**00 45 55.6**	**+0.2**
	baz=211						
O20A	**White River Ci**	**88.90**	**45**	P	**P**	**00 45 53.9**	**-2.0**
	baz=237						
O29M	**Mount Kennedy**	**88.91**	**17**	P	**P**	**00 45 54.6**	**-0.8**
	baz=213						
REDW	**Red Top Meadow**	**89.05**	**41**	IAMs_20	IAMs_20	01 25 34.1	
	comp=Z,2μm,18.0s						
TRF	**Thorofare Moun**	**89.11**	**11**	P	**P**	**00 45 56.8**	**+0.5**
TRF				IAmb	IAmb	00 46 31.9	
	comp=Z,44nm,1.2s						
TRF	**Thorofare Moun**	**89.11**	**11**	P	**P**	**00 45 56.2**	**-0.1**
	baz=202,SNR=10.0						
SKAG	**Skagway**	**89.14**	**19**	P	**P**	**00 45 51.7**	**-4.5**
	baz=216						
HARP	**HAARP**	**89.14**	**13**	P	**P**	**00 45 56.2**	**0.0**
	baz=207						
SNOW	**Snow King Moun**	**89.17**	**41**	IAMs_20	IAMs_20	01 25 47.1	
	comp=Z,2μm,18.0s						
CHUM	**Lake Minchumin**	**89.18**	**10**	P	**P**	**00 45 55.4**	**-0.9**
	baz=201						
J20K	**Nowinta River**	**89.19**	**9**		**pP**	**00 45 56.2**	**-1.6**
J20K				IAMs_20	IAMs_20	01 19 22.5	
	comp=Z,3μm,22.0s						
J20K	**Nowinta River**	**89.19**	**9**	P	**P**	**00 45 56.0**	**-0.4**
	baz=199						
P30M	**Million Dollar**	**89.21**	**18**	P	**P**	**00 45 58.2**	**+1.5**
	baz=214						
SMCO	**Snowmass**	**89.22**	**46**	IAMs_20	IAMs_20	01 20 48.6	
	comp=Z,3μm,19.0s						
S34M	**Telegraph Cree**	**89.25**	**22**	P	**P**	**00 45 57.7**	**+0.9**
	baz=219						
MSO	**Missoula**	**89.29**	**37**	P	**P**	**00 45 58.7**	**+1.3**
	baz=233						
DHY	**Denali Highway**	**89.30**	**12**	IAMs_20	IAMs_20	01 30 48.5	
	comp=Z,2μm,18.0s						
DHY	**Denali Highway**	**89.30**	**12**	P	**P**	**00 45 59.2**	**+2.1**
	baz=205						
RND	**Reindeer**	**89.33**	**11**	P	**P**	**00 45 58.3**	**+1.2**
RND				IAMs_20	IAMs_20	01 20 00.1	
	comp=Z,4μm,22.0s						
RND	**Reindeer**	**89.33**	**11**	P	**P**	**00 45 58.3**	**+1.2**
RND				pmax	pmax		
	comp=Z,163nm,1.8s						
GCSA	**Galena City Sc**	**89.37**	**8**	P	**P**	**00 45 58.0**	**+0.8**
	baz=196						
833A	**Chaparral WMA,**	**89.37**	**59**	P	**P**	**00 46 00.3**	**+2.2**
	baz=242						
SDCO	**Great Sand Dun**	**89.46**	**48**	IAMs_20	IAMs_20	01 20 34.1	
	comp=Z,4μm,20.0s						
SDCO	**Great Sand Dun**	**89.46**	**48**	P	**P**	**00 45 58.1**	**-0.5**
	baz=239						
MSTX	**Muleshoe**	**89.49**	**52**	P	P	00 46 02.7	+4.0
	baz=241						
BW06	**Boulder Array**	**89.51**	**42**	P	**P**	**00 46 00.2**	**+1.5**
	baz=236						
PDAR	**Pinedale Array**	**89.51**	**42**	P	**P**	**00 46 01.0**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=194,slow=3.1,SNR=9.7						
PDAR				LR	LR	01 24 26.4	
	comp=Z,998nm,18.0s,baz=252,slow=34						
	comp=Z,1.2nm,0.8s						
YUK6	**Outpost Mounta**	**89.51**	**17**	P	**P**	**00 45 59.6**	**+1.3**
	baz=213						
PAX	**Paxson**	**89.59**	**13**	P	**P**	**00 45 58.3**	**-0.1**
PAX				IAmb	IAmb	00 46 28.9	
	comp=Z,44nm,1.7s						
PAX	**Paxson**	**89.59**	**13**	P	**P**	**00 45 58.3**	**-0.1**
PAX				pmax	pmax		
	comp=Z,44nm,1.7s						
PAX	**Paxson**	**89.59**	**13**	P	**P**	**00 45 56.6**	**-1.7**
	baz=207						
BPAW	**Bear Paw Mtn.**	**89.60**	**10**	P	**P**	**00 45 54.5**	**-3.8**
	baz=202						
MCK	**McKinley**	**89.61**	**11**	P	**P**	**00 45 59.5**	**+1.1**
MCK				IAmb	IAmb	00 46 28.9	
	comp=Z,43nm,1.2s						
MCK				IAMs_20	IAMs_20	01 19 35.7	
	comp=Z,4μm,22.0s						
MCK	**McKinley**	**89.61**	**11**	P	**P**	**00 45 59.5**	**+1.1**
MCK				pmax	pmax		
	comp=Z,43nm,1.2s						
MCK	**McKinley**	**89.61**	**11**	P	**P**	**00 45 58.5**	**+0.1**
	baz=204						
M26K	**Nabesna, AK**	**89.62**	**14**	IAMs_20	IAMs_20	01 19 44.8	
	comp=Z,2μm,22.0s						
M26K	**Nabesna, AK**	**89.62**	**14**	P	**P**	**00 45 54.0**	**-4.5**
	baz=209						
HYT	**Haines Junctio**	**89.64**	**17**	P	**P**	**00 45 59.6**	**+0.9**
	baz=214						
YUK3	**Moose Creek**	**89.68**	**16**	P	**P**	**00 45 58.7**	**-0.3**
	baz=211						
Q32M	**Nakina River**	**89.69**	**21**	P	**P**	**00 46 00.4**	**+1.3**
	baz=218						
P32M	**Atlin**	**89.73**	**20**	P	**P**	**00 45 57.8**	**-1.3**
	baz=217						
YUK4	**Talbot Arm**	**89.77**	**17**	P	**P**	**00 46 01.3**	**+1.8**
	baz=213						
HNS	**HongShan**	**89.78**	**311**	⇑P	**P**	**00 46 00.7**	**+0.9**
HNS				SKS	**SKSac**	**00 56 29.4**	**-0.7**
HNS				S	**SKKSac**	**00 56 46.1**	**+3.1**
HNS				sS	**ScS**	**00 56 58.8**	**+3.1**
HNS				SS	**SS**	**01 02 51.5**	**+2.3**
HNS				pmax	pmax		
	comp=Z,23nm,1.6s						
HNS				pmax	pmax		
	comp=Z,860nm,7.8s						
HNS				LR	LR		
	comp=Z,800nm,19.0s						
HNS				LR	LR		
	comp=Z,1μm,18.5s						
HNS				LR	LR		
	comp=Z,2μm,17.7s						
M27K	**Edge Creek, AK**	**89.84**	**15**	IAMs_20	IAMs_20	01 19 48.6	
	comp=Z,3μm,22.0s						
M27K	**Edge Creek, AK**	**89.84**	**15**	P	**P**	**00 46 00.6**	**+0.9**
	baz=210,SNR=13						
BOZ	**Bozeman (W)**	**89.87**	**39**	P	**P**	**00 45 56.9**	**-3.3**
	baz=235,SNR=7.8						
T25A	**Trinidad**	**89.90**	**49**	P	P	00 45 55.7	-5.0
	baz=240						
LYN	**LuoYang**	**89.95**	**308**	⇑P	**P**	**00 46 00.5**	**-0.1**
LYN				PP	**PP**	**00 49 31.0**	**-2.9**
LYN				SKS	**SKSac**	**00 56 30.0**	**-1.2**
LYN				S	**S**	**00 56 51.1**	**-2.0**
LYN				SS	**SS**	**01 02 57.6**	**+5.9**
LYN				pmax	pmax		
	comp=Z,40nm,1.6s						
LYN				pmax	pmax		
	comp=Z,960nm,5.9s						
LYN				LR	LR		
	comp=Z,1μm,18.6s						
LYN				LR	LR		
	comp=Z,550nm,22.1s						
LYN				LR	LR		
	comp=Z,1μm,19.6s						
O30N	**Mendenhall**	**89.99**	**18**	P	**P**	**00 46 00.1**	**-0.2**
	baz=215						
DLBC	**Dease Lake**	**90.03**	**22**	P	**P**	**00 46 03.4**	**+2.8**
	comp=Z,3.0nm,0.8s,baz=231,slow=5.1,SNR=4.7						
DLBC				LR	LR	01 19 40.0	
	comp=Z,2μm,21.7s,baz=257,slow=31						
	comp=Z,3.0nm,0.8s						
DLBC	**Dease Lake**	**90.03**	**22**	P	**P**	**00 46 01.3**	**+0.8**
	baz=220						
JCT	**Junction City**	**90.05**	**57**	P	P	00 45 55.6	-5.6
	baz=242						
L26K	**Log Cabin Wild**	**90.09**	**14**	IAMs_20	IAMs_20	01 20 22.3	
	comp=Z,4μm,22.0s						
BVCY	**Beaver Creek**	**90.13**	**15**	P	**P**	**00 45 59.7**	**-1.2**
	baz=211						
ENH	**Enshi**	**90.14**	**303**	P	**P**	**00 46 01.5**	**-0.2**
BJI	**Beijing**	**90.15**	**314**	P	**P**	**00 46 02.3**	**+0.9**
BJI				sP	**pwP**	**00 46 15.9**	**+0.3**
BJI				SKS	**SKSac**	**00 56 30.7**	**-1.4**
BJI				S	**S**	**00 56 53.9**	**-0.8**
BJI				pmax	pmax		
	comp=Z,22nm,2.4s						
BJI				pmax	pmax		
	comp=Z,900nm,7.3s						
BJI				LR	LR		
	comp=Z,150nm,18.4s						
BJI				LR	LR		
	comp=Z,540nm,16.6s						
BJI				LR	LR		
	comp=Z,1μm,16.5s						
KVTX	**Kingsville**	**90.20**	**60**	IAMs_20	IAMs_20	01 24 38.1	
	comp=Z,2μm,18.0s						
WHY	**Whitehorse**	**90.25**	**19**	P	**P**	**00 46 02.4**	**+0.9**
	baz=216						
K24K	**Donnelly Dome**	**90.27**	**13**	P	**P**	**00 46 03.8**	**+2.2**
	baz=206,SNR=6.5						
N30M	**Aishikik Lake**	**90.28**	**17**	P	**P**	**00 46 02.0**	**+0.3**
	baz=214						
Q24A	**Divide**	**90.32**	**47**	P	**P**	**00 45 59.4**	**-3.3**
	baz=239						
NEA2	**Nenana**	**90.38**	**11**	P	**P**	**00 46 00.9**	**-1.0**
	baz=204						
MLSI	**Meulaboh, Aceh**	**90.39**	**274**	P	**P**	**00 46 05.3**	**+2.1**
	comp=Z,32nm,1.0s						
RIDG	**Independent Ri**	**90.40**	**13**	IAMs_20	IAMs_20	01 20 33.6	
	comp=Z,4μm,22.0s						
RIDG	**Independent Ri**	**90.40**	**13**	P	**P**	**00 46 03.2**	**+1.1**
	baz=207						
ISCO	**Idaho Springs**	**90.44**	**46**	IAMs_20	IAMs_20	01 21 30.9	
	comp=Z,3μm,20.0s						
ISCO	**Idaho Springs**	**90.44**	**46**	P	**P**	**00 46 02.7**	**-0.5**
	baz=239						
WRH	**Wood River Hil**	**90.44**	**11**	P	**P**	**00 46 01.9**	**-0.3**
WRH				IAMs_20	IAMs_20	01 20 24.6	
	comp=Z,4μm,22.0s						
I21K	**Tanana**	**90.45**	**10**	IAMs_20	IAMs_20	01 20 25.0	
	comp=Z,3μm,22.0s						
I21K	**Tanana**	**90.45**	**10**	P	**P**	**00 46 02.4**	**+0.2**
	baz=201						
R33M	**Jennings River**	**90.45**	**21**	P	**P**	**00 46 02.8**	**+0.2**
	baz=220						
L27K	**Beaver Creek,**	**90.46**	**14**	IAMs_20	IAMs_20	01 20 23.1	
	comp=Z,3μm,22.0s						
L27K	**Beaver Creek,**	**90.46**	**14**	P	**P**	**00 46 03.5**	**+1.1**
	baz=210,SNR=5.0						
BCAR	**Beaver Creek A**	**90.47**	**14**	P	**P**	**00 46 03.5**	**+1.1**
DOT	**Dot Lake**	**90.48**	**13**	P	**P**	**00 46 02.1**	**-0.4**
DOT				IAmb	IAmb	00 46 42.4	
	comp=Z,14nm,1.0s						
P33M	**Teslin, Yukon**	**90.50**	**20**	P	**P**	**00 46 03.6**	**+0.9**
	baz=218						
MLY	**Manley**	**90.50**	**10**	P	**P**	**00 46 02.0**	**-0.6**
MLY				IAmb	IAmb	00 47 15.6	
	comp=Z,41nm,1.9s						
MLY				IAMs_20	IAMs_20	01 20 05.4	
	comp=Z,3μm,22.0s						
MLY	**Manley**	**90.50**	**10**	P	**P**	**00 46 03.2**	**+0.6**
	baz=202						
HDA	**Harding Lake**	**90.59**	**12**	P	**P**	**00 46 02.0**	**-1.0**
HDA				IAmb	IAmb	00 46 33.6	
	comp=Z,24nm,1.2s						
HDA				IAMs_20	IAMs_20	01 32 15.7	
	comp=Z,2μm,19.0s						
HDA	**Harding Lake**	**90.59**	**12**	P	**P**	**00 46 01.3**	**-1.6**
	baz=205						
GYA	**Guiyang**	**90.65**	**299**	⇓*i*P	**P**	**00 46 05.9**	**+1.6**
GYA				SKS	**SKSac**	**00 56 36.9**	**+1.0**
GYA				S	**ScS**	**00 57 03.2**	**-0.5**
GYA				pmax	pmax		
	comp=Z,23nm,1.6s						
GYA				pmax	pmax		
	comp=Z,900nm,7.6s						
GYA				LR	LR		
	comp=Z,470nm,16.7s						
GYA				LR	LR		
	comp=Z,650nm,20.9s						
GYA				LR	LR		
	comp=Z,1μm,21.2s						
CCB	**Clear Creek Bu**	**90.65**	**11**	P	**P**	**00 46 04.1**	**+0.9**
CCB				IAmb	IAmb	00 46 27.4	
	comp=Z,41nm,1.5s						
CCB				IAMs_20	IAMs_20	01 20 54.2	
	comp=Z,3μm,22.0s						
N31M	**Braeburn, Yuko**	**90.66**	**18**	IAMs_20	IAMs_20	01 28 13.4	
	comp=Z,2μm,19.0s						
N31M	**Braeburn, Yuko**	**90.66**	**18**	P	**P**	**00 46 03.8**	**+0.4**
	baz=215						
AMTX	**Amarillo**	**90.72**	**52**	P	**P**	**00 46 06.3**	**+1.9**
	baz=241						
M29M	**Somme Creek**	**90.74**	**16**	P	**P**	**00 46 03.1**	**-0.8**
	baz=213						
H21K	**Melozitna Rive**	**90.78**	**9**	I

RLMT	**Red Lodge**	90.98	40	P	P		00 45 59.8	-5.7
	baz=237							
J25K	**Salcha River,**	91.08	12	P	P		**00 46 05.5**	**+0.2**
J25K				IAmb	IAmb		00 46 36.0	
	comp=Z,35nm,1.5s							
J25K				IAMs_20	IAMs_20		01 30 01.5	
	comp=Z,2µm,18.0s							
J25K	**Salcha River,**	91.08	12	P	P		**00 46 04.7**	**-0.6**
	baz=207,SNR=7.3							
POKR	**Poker Plat Res**	91.15	11	IAMs_20	IAMs_20		01 20 46.3	
	comp=Z,4µm,22.0s							
POKR	**Poker Plat Res**	91.15	11	P	P		**00 46 03.9**	**-1.6**
	baz=205							
ABTX	**Abilene, Hawle**	91.16	55	P	P		**00 46 04.8**	**-1.6**
	baz=242							
N32M	**Quiet Lake**	91.17	19	P	P		**00 46 05.0**	**-0.8**
	baz=218							
H22K	**Ishtalitna Cre**	91.21	9	P	P		**00 46 07.0**	**+1.2**
	baz=202							
K27K	**Chicken**	91.25	14	IAMs_20	IAMs_20		01 20 57.9	
	comp=Z,3µm,22.0s							
K27K	**Chicken**	91.25	14	P	P		00 45 59.3	-6.7
	baz=210							
K22A	**Casper**	91.33	43	P	P		**00 46 05.2**	**-1.9**
	baz=238							
J26L	**Joseph Creek**	91.34	13	P	P		**00 46 05.4**	**-1.1**
J26L				IAmb	IAmb		00 46 38.2	
	comp=Z,34nm,1.2s							
J26L				IAMs_20	IAMs_20		01 20 51.4	
	comp=Z,4µm,22.0s							
J26L	**Joseph Creek**	91.34	13	P	P		**00 46 03.6**	**-2.9**
	baz=208,SNR=16							
L29M	**L29M**	91.39	16	P	P		**00 46 08.3**	**+1.6**
	baz=213,SNR=12							
G21K	**Allakaket**	91.49	8	P	P		**00 46 06.6**	**-0.4**
	baz=200							
TIY	**Taiyuan**	91.51	311	⇑*i*P	P		**00 46 10.1**	**+2.2**
TIY				SKS	SKSac		**00 56 42.2**	**+2.0**
TIY				pmax	pmax			
	comp=Z,670nm,6.9s							
TIY				LR	LR			
	comp=Z,640nm,19.1s							
TIY				LR	LR			
	comp=Z,870nm,18.6s							
TIY				LR	LR			
	comp=Z,1µm,19.6s							
M31M	**Drury Creek, Y**	91.63	18	IAMs_20	IAMs_20		01 23 55.0	
	comp=Z,3µm,19.0s							
M31M	**Drury Creek, Y**	91.63	18	P	P		**00 46 05.5**	**-2.4**
	baz=216							
ZEA	**Zeya**	91.84	330	*e*P	P		**00 46 10.6**	**+1.7**
ZEA				*e*			00 56 46.8	
ZEA				*e*S	S		**00 57 11.8**	**+2.3**
ZEA				pmax	pmax			
	comp=N,10.0nm,0.4s							
ZEA				pmax	pmax			
	comp=E,10.0nm,0.4s							
ZEA				pmax	pmax			
	comp=Z,20nm,1.2s							
ZEA				pmax	pmax			
	comp=E,100nm,6.4s							
ZEA				pmax	pmax			
	comp=N,100nm,6.3s							
ZEA				pmax	pmax			
	comp=Z,400nm,11.0s							
ZEA				smax	smax			
	comp=Z,500nm,7.9s							
ZEA				smax	smax			
	comp=E,800nm,9.3s							
ZEA				smax	smax			
	comp=N,1µm,11.9s							
PRP	**Porcupine Dome**	91.86	12	P	P		**00 46 09.6**	**+0.6**
PRP				IAmb	IAmb		00 46 43.7	
	comp=Z,24nm,1.3s							
PRP				IAMs_20	IAMs_20		01 29 10.1	
	comp=Z,3µm,19.0s							
PRP	**Porcupine Dome**	91.86	12	P	P		**00 46 08.8**	**-0.1**
	baz=207,SNR=7.6							
DAWY	**Dawson**	91.89	15	P	P		**00 46 09.5**	**+0.5**
	baz=212							
435B	**Jarrell**	91.89	57	P	P		**00 46 08.1**	**-1.7**
	baz=243							
RDOG	**Red Dog Mine**	92.01	5	IAMs_20	IAMs_20		01 32 28.3	
	comp=Z,4µm,21.0s							
RDOG	**Red Dog Mine**	92.01	5	P	P		**00 46 05.7**	**-3.7**
	baz=191							
KSCO	**Kaye Shedlock'**	92.05	48	P	P		00 46 05.1	-5.4
	baz=241							
EGAK	**Eagle**	92.10	14	IAMs_20	IAMs_20		01 28 24.3	
	comp=Z,2µm,19.0s							
EGAK	**Eagle**	92.10	14	P	P		**00 46 06.0**	**-3.9**
	baz=211							
TRQA	**Tornquist**	92.11	133	IAMs_20	IAMs_20		01 20 25.2	
	comp=Z,3µm,20.0s							
I26K	**Coal Creek Min**	92.14	13	IAMs_20	IAMs_20		01 28 57.4	
	comp=Z,3µm,20.0s							
I26K	**Coal Creek Min**	92.14	13	P	P		**00 46 10.7**	**+0.6**
	baz=209,SNR=5.1							
K29M	**Barlow Dome**	92.15	16	P	P		**00 46 10.1**	**-0.2**
	baz=214,SNR=6.1							
F21K	**Alatna River**	92.16	8	P	P		**00 46 11.1**	**+0.9**
	baz=200							
G23K	**Bananza Creek**	92.18	10	P	P		**00 46 07.0**	**-3.3**
	baz=203							
XLT	**XiLinHaoTe**	92.22	318	*e*P	P		**00 46 12.4**	**+1.3**
XLT				pP	pwP		00 46 20.0	-5.2
XLT				sP	PcP		00 46 25.2	+13
XLT				SKS	SKSac		**00 56 42.6**	**-1.4**
XLT				S	S		**00 57 14.6**	**+1.0**
XLT				pmax	pmax			
	comp=Z,22nm,1.2s							
XLT				pmax	pmax			
	comp=Z,370nm,5.5s							
XLT				LR	LR			
	comp=Z,1µm,20.6s							
XLT				LR	LR			
	comp=Z,2µm,22.7s							
XAN	**Xi'an**	92.30	306	⇑P	P		**00 46 13.4**	**+1.8**
XAN				SKS	SKSac		**00 56 44.6**	**-0.2**
XAN				S	ScS		**00 57 18.9**	**+2.0**
XAN				pmax	pmax			
	comp=Z,41nm,1.3s							
XAN				pmax	pmax			
	comp=Z,870nm,7.5s							
XAN				LR	LR			
	comp=Z,920nm,20.4s							
XAN				LR	LR			
	comp=Z,2µm,20.8s							
XAN				LR	LR			
	comp=Z,3µm,20.5s							
EGMT	**Eagleton**	92.30	38	IAMs_20	IAMs_20		01 23 08.9	
	comp=Z,3µm,20.0s							
EGMT	**Eagleton**	92.30	38	P	P		**00 46 07.6**	**-3.8**
	baz=236							
WHTX	**Lake Whitney,**	92.52	56	P	P		**00 46 11.0**	**-1.7**
	baz=244							
NNA	**Nana**	92.57	104	LR	LR		01 19 50.0	
	comp=Z,3µm,19.3s,baz=224,slow=30							
NNA	**Nana**	92.57	104	IAMs_20	IAMs_20		01 19 45.8	
	comp=Z,3µm,19.0s							
G24K	**Hadweenzic Riv**	92.58	11	P	P		**00 46 12.2**	**0.0**
	baz=205							
F22K	**John River**	92.61	9	P	P		**00 46 12.3**	**+0.1**
	baz=201							
I27K	**Kandik River**	92.71	13	P	P		**00 46 12.2**	**-0.6**
	baz=210							
FYU	**Fort Yukon**	92.85	11	IAMs_20	IAMs_20		01 22 00.3	
	comp=Z,2µm,22.0s							
MMPY	**Sheldon Lake,**	92.86	19	P	P		**00 46 14.4**	**+0.9**
	baz=219							
G25K	**Bearman Lake**	92.88	11	P	P		**00 46 15.2**	**+1.8**
	baz=206							
HKT	**Hockley**	92.88	59	IAMs_20	IAMs_20		01 22 32.1	
	comp=Z,3µm,20.0s							
ATAH	**Atahualpa**	93.19	99	LR	LR		01 19 02.4	
	comp=Z,3µm,20.9s,baz=251,slow=30							
I29M	**Ogilvie Camp,**	93.23	15	IAMs_20	IAMs_20		01 22 19.4	
	comp=Z,3µm,22.0s							
I29M	**Ogilvie Camp,**	93.23	15	P	P		**00 46 16.8**	**+1.6**
	baz=213							
F24K	**Squaw Lake**	93.26	10	P	P		**00 46 14.1**	**-1.1**
	baz=205							
KMI	**Kunming**	93.27	296	⇑P	P		**00 46 18.2**	**+1.6**
KMI				sP	pwP		00 46 31.2	+0.4
KMI				SKS	SKSac		**00 56 47.3**	**-3.7**
KMI				S	S		**00 57 21.5**	**-2.6**
KMI				pmax	pmax			
	comp=Z,32nm,1.3s							
KMI				pmax	pmax			
	comp=Z,600nm,7.2s							
KMI				LR	LR			
	comp=Z,300nm,19.0s							
KMI				LR	LR			
	comp=Z,820nm,21.3s							
KMI				LR	LR			
	comp=Z,1µm,20.2s							
H27K	**Steamboat Moun**	93.27	13	P	P		**00 46 17.0**	**+1.6**
	baz=210							
OGNE	**Ogallala**	93.38	47	P	P		**00 46 14.6**	**-1.9**
	baz=241							
G26K	**Porcupine Rive**	93.46	12	P	P		**00 46 18.2**	**+2.1**
	baz=208							
E23K	**Chandalar**	93.48	9	P	P		**00 46 18.0**	**+1.7**
	baz=203							
LAO	**LASA Array**	93.61	40	P	P		**00 46 18.6**	**+1.2**
	baz=239							
RSSD	**Black Hills**	93.64	43	IAMs_20	IAMs_20		01 24 01.5	
	comp=Z,3µm,20.0s							
RSSD	**Black Hills**	93.64	43	P	P		**00 46 19.2**	**+1.4**
	baz=240							
E24K	**Your Creek**	93.67	10	P	P		**00 46 13.2**	**-3.9**
	baz=204							
F25K	**Christian Rive**	93.70	11	P	P		**00 46 15.6**	**-1.7**
	baz=207							
G27K	**Doyon Strip**	93.75	13	P	P		**00 46 17.5**	**-0.1**
	baz=210							
CMAR	**Chiang Mai Arr**	93.78	288	P	P		**00 46 20.2**	**+1.4**
	comp=Z,27nm,1.1s,baz=128,slow=3.0,SNR=63							
CMAR				LR	LR		01 27 23.0	
	comp=Z,549nm,20.3s,baz=120,slow=35							
	comp=Z,27nm,1.1s							
CHTO	**Chiang Mai**	93.92	289	P	P		**00 46 19.4**	**0.0**
CHTO	**Chiang Mai**	93.92	289	P	P		**00 46 19.4**	**0.0**
CHTO				pmax	pmax			
	comp=Z,51nm,1.3s							
CHTO				MLR	MLR			
	comp=Z,800nm,20.0s							
CHTO	**Chiang Mai**	93.92	289	P	P		**00 46 21.3**	**+1.9**
TOLK	**Toolik Lake Re**	94.03	9	IAMs_20	IAMs_20		01 23 03.6	
	comp=Z,2µm,22.0s							
TOLK	**Toolik Lake Re**	94.03	9	P	P		**00 46 17.7**	**-1.1**
	baz=203							
F26K	**Sheenjek River**	94.05	11	P	P		**00 46 18.3**	**-0.6**
	baz=208							
D23K	**Nanushuk River**	94.17	9	P	P		**00 46 19.5**	**+0.1**
	baz=202							
E25K	**Arctic Village**	94.18	11	P	P		**00 46 17.8**	**-1.7**
	baz=207							
OK025	**Westminster Rd**	94.20	53	IAMs_20	IAMs_20		01 23 55.7	
	comp=Z,3µm,20.0s							
BOAB	**BOACO BROADBAND**	94.36	78	IAMs_20	IAMs_20		01 24 19.9	
	comp=Z,2µm,18.0s							
EPYK	**Eagle Plains**	94.44	15	P	P		**00 46 21.7**	**+1.0**
	baz=215							
HOPE	**Hope Point**	94.45	157	*i*P	P		**00 46 22.4**	**+1.2**
BTO	**Baotou**	94.53	312	P	P		**00 46 23.0**	**+1.2**
BTO				S	S		**00 57 41.4**	**+7.2**
BTO				LR	LR			
	comp=Z,4µm,18.6s							
BTO				LR	LR			
	comp=Z,3µm,24.1s							
OK049	**E0420 Rd and N**	94.59	52	IAMs_20	IAMs_20		01 23 36.0	
	comp=Z,4µm,20.0s							
D24K	**Happy Valley**	94.61	9	P	P		**00 46 20.3**	**-1.1**
	baz=204							
PZH	**PanZhiHua**	94.66	297	P	P		**00 46 23.0**	**+0.2**
PZH				SKS	SKSac		**00 56 56.9**	**-1.4**
PZH				S	ScS		**00 57 37.1**	**0.0**
PZH				pmax	pmax			
	comp=Z,20nm,1.1s							
PZH				pmax	pmax			
	comp=Z,480nm,8.0s							
PZH				LR	LR			
	comp=Z,540nm,18.8s							
PZH				LR	LR			
	comp=Z,530nm,18.2s							
PZH				LR	LR			
	comp=Z,770nm,18.0s							
LVC	**Limon Verde**	94.69	117	LR	LR		01 23 08.7	
	comp=Z,1µm,18.1s,baz=266,slow=32							
LVC	**Limon Verde**	94.69	117	IAMs_20	IAMs_20		01 22 57.6	
	comp=Z,2µm,18.0s							
OK050	**Pawnee Station**	94.82	52	IAMs_20	IAMs_20		01 23 44.0	
	comp=Z,4µm,19.0s							
OK034	**N. Norfolk Rd.**	94.84	53	IAMs_20	IAMs_20		01 24 02.8	
	comp=Z,4µm,20.0s							
OK048	**Pawnee Station**	94.85	52	IAMs_20	IAMs_20		01 23 41.0	
	comp=Z,4µm,20.0s							
CD2	**Chengdu**	94.86	302	P	P		**00 46 23.4**	**-0.1**
CD2				pP	pwP		00 46 36.0	-1.7
CD2				SKS	SKSac		**00 56 55.9**	**-3.1**
CD2				S	S		**00 57 37.0**	**-0.4**
CD2				SS	SS		**01 04 05.3**	**+2.7**
CD2				LR	LR			
	comp=Z,4µm,9.3s							
OK046	**Pawnee Station**	94.87	52	IAMs_20	IAMs_20		01 23 54.5	
	comp=Z,4µm,20.0s							
OK045	**Pawnee Station**	94.88	52	IAMs_20	IAMs_20		01 23 55.7	
	comp=Z,4µm,20.0s							
OK044	**Pawnee Station**	94.94	52	IAMs_20	IAMs_20		01 23 58.3	
	comp=Z,4µm,20.0s							
OK051	**E0350 and S346**	94.97	52	IAMs_20	IAMs_20		01 23 58.1	
	comp=Z,4µm,20.0s							
OK047	**Pawnee, Statio**	95.04	52	IAMs_20	IAMs_20		01 24 00.8	
	comp=Z,4µm,20.0s							
G30M	**tAoh Zraii Nji**	95.06	14	P	P		**00 46 25.6**	**+2.1**
	baz=215							
A21K	**Barrow**	95.72	6	IAMs_20	IAMs_20		01 26 07.4	
	comp=Z,4µm,22.0s							
YAK	**Yakutsk**	96.19	337	LR	LR		01 24 44.2	
	comp=Z,560nm,21.8s,baz=90,slow=32							
MIAR	**Mount Ida**	96.55	55	P	P		**00 46 29.9**	**-1.1**
	baz=246							
INK	**Inuvik**	96.74	14	P	P		00 46 35.4	+4.4
	comp=Z,2.2nm,1.0s,baz=270,slow=7.1,SNR=2.0							
INK				LR	LR		01 24 29.5	
	comp=Z,2µm,21.8s,baz=208,slow=32							
INK	**Inuvik**	96.74	14	P	P		**00 46 31.5**	**+0.4**
	baz=218							
LZH	**Lanzhou**	96.94	306	⇑P	P		**00 46 33.3**	**+0.3**
LZH				SKS	SKSac		**00 57 11.0**	**+1.0**
LZH				sS	ScS		00 58 05.5	+10
LZH				pmax	pmax			
	comp=Z,26nm,1.6s							
LZH				pmax	pmax			
	comp=Z,370nm,8.6s							
LZH				LR	LR			
	comp=Z,980nm,17.9s							
LZH				LR	LR			
	comp=Z,1µm,16.8s							
LZH				LR	LR			
	comp=Z,2µm,20.3s							
VBMS	**Vicksburg**	97.97	58	IAMs_20	IAMs_20		01 26 19.7	
	comp=Z,2µm,20.0s							
ECSD	**EROS Data Cent**	98.22	46	P	Pdif		00 46 38.7	+0.2
	baz=245							
LPAZ	**La Paz**	98.28	112	LR	LR		01 23 26.4	
	comp=Z,1µm,19.4s,baz=205,slow=31							
YKA	**Yellowknife Ar**	98.36	24	P	Pdif		00 46 41.5	+2.9
	comp=Z,1.3nm,0.8s,baz=207,slow=6.1,SNR=3.6							
	comp=Z,1.3nm,0.8s							
ULN	**Ulaanbaatar**	99.64	318	⇓*i*P	Pdif		**00 46 45.9**	**+1.1**
ULN				pmax	pmax			
	comp=Z,10.0nm,1.6s							
SCIA	**State Center**	99.77	49	IAMs_20	IAMs_20		01 26 41.8	
	comp=Z,3µm,20.0s							
C36M	**Paulatuk**	99.81	16	IAMs_20	IAMs_20		01 30 40.2	
	comp=Z,3µm,19.0s							
SONM	**Songino Array**	100.03	318	P	Pdif		**00 46 47.9**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=90,slow=6.2,SNR=3.7							
SONM				PP	PP		**00 50 50.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=123,slow=5.3,SNR=1.6							
SONM				LR	LR		01 30 12.3	
	comp=Z,507nm,19.1s,baz=103,slow=34							
	comp=Z,0.7nm,0.7s							
BRAL	**Brewton**	100.31	61	IAMs_20	IAMs_20		01 28 41.8	
	comp=Z,2µm,20.0s							
LRAL	**Lakeview Retre**	101.03	59	IAMs_20	IAMs_20		01 28 55.8	
	comp=Z,2µm,19.0s							
MACC	**Macarena, Meta**	101.10	93	*e*P	PKiKP		**00 51 16.4**	**-0.8**
GTA	**Gaotai**	101.17	308	*e*P	Pdif		**00 46 53.7**	**+1.9**
GTA				pP	pwP		00 47 02.1	-4.0
GTA				SKS			00 57 28.2	
GTA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
GTA				pmax	pmax			
	comp=Z,200nm,10.5s							
GTA				LR	LR			
	comp=Z,680nm,19.6s							
GTA				LR	LR			
	comp=Z,880nm,20.7s							
GTA				LR	LR			
	comp=Z,1µm,19.3s							
A36M	**Sachs Harbour**	101.38	14	IAMs_20	IAMs_20		01 30 01.6	
	comp=Z,3µm,20.0s							
JFWS	**Jewell Farm**	102.18	48	IAMs_20	IAMs_20		01 28 15.7	
	comp=Z,3µm,20.0s							
TIXI	**Tiksi**	102.63	344	IAMs_20	IAMs_20		01 30 13.0	
	comp=Z,3µm,20.0s							
EYMN	**Ely**	103.16	43	IAMs_20	IAMs_20		01 27 11.4	
	comp=Z,2µm,21.0s							
COWI	**Conover**	104.03	46	IAMs_20	IAMs_20		01 26 50.7	
	comp=Z,3µm,22.0s							
TZTN	**Tazewell**	104.89	56	IAMs_20	IAMs_20		01 29 43.8	
	comp=Z,2µm,20.0s							
PALK	**Pallekele**	105.92	271	IAMs_20	IAMs_20		01 36 34.4	
	comp=Z,2µm,19.0s							
NHSC	**New Hope**	106.45	61	IAMs_20	IAMs_20		01 31 44.4	
	comp=Z,3µm,19.0s							
SDV	**Santo Domingo**	106.66	87	IAMs_20	IAMs_20		01 26 25.0	
	comp=Z,2µm,22.0s							
BLA	**Blacksburg**	107.48	57	IAMs_20	IAMs_20		01 31 16.5	
	comp=Z,2µm,20.0s							
M53A	**WI Miller and**	108.47	52	IAMs_20	IAMs_20		01 31 48.4	
	comp=Z,2µm,20.0s							
CNNC	**Cliffs of the**	108.88	59	IAMs_20	IAMs_20		01 33 47.8	
	comp=Z,2µm,19.0s							
CBN	**Corbin Frederi**	110.08	56	IAMs_20	IAMs_20		01 37 30.1	
	comp=Z,2µm,18.0s							
WMQ	**Urumqi**	111.14	310	PKP	PKiKP		**00 51 33.9**	**-1.0**
WMQ				AMB	AMB			
	comp=Z,240nm,5.7s							
WMQ				LR	LR			
	comp=Z,440nm,19.9s							
WMQ				LR	LR			
	comp=Z,1µm,21.9s							
WMQ				LR	LR			
	comp=Z,2µm,21.9s							
HYBB	**Hyderabad (bro**	111.50	280	*e*PKiKP	PKiKP		**00 51 34.7**	**-1.7**
HYBB				*es*PKiKP	sPKiKP		**00 51 39.8**	**+1.4**
HYBB				*e*PP	PP		**00 52 16.3**	**-1.2**
HYBB				*e*SKSac	SKSac		**00 58 16.6**	**-0.8**
ZALV	**Zalesovo Beam**	114.77	320	PKP	PKiKP		**00 51 42.0**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=166,slow=1.4,SNR=5.2							
ZALV	**Zalesovo Beam**	114.77	320	PKIKP	PKiKP		**00 51 42.0**	**+0.6**
FFD	**Franklin Falls**	115.42	52	IAMs_20	IAMs_20		01 36 58.4	
	comp=Z,3µm,20.0s							
MKAR	**Makanchi Array**	115.44	312	PKP	PKiKP		**00 51 44.0**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=60,slow=3.2,SNR=6.5							
MKAR	**Makanchi Array**	115.44	312		PKiKP		**00 51 43.8**	**+0.8**
MAKZ	**Makanchi**	115.66	312		PKiKP		**00 51 43.8**	**+0.4**
MAKZ	**Makanchi**	115.66	312	PKIKP	PKiKP		**00 51 43.8**	**+0.4**
MAKZ				MLR	MLR			
	comp=Z,900nm,20.0s							
KURK	**Kurchatov**	118.27	316	IAMs_20	IAMs_20		01 42 20.0	
	comp=Z,1µm,19.0s							
KURK	**Kurchatov**	118.27	316	PKIKP	PKiKP		**00 51 48.9**	**+0.6**
KURBB	**Kurchatov Arra**	118.32	316	PKP	PKiKP		**00 51 48.9**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=95,slow=2.0,SNR=9.0							
KURBB				PP	PP		**00 53 01.7**	**-3.1**
	comp=Z,0.9nm,1.0s,baz=89,slow=7.1,SNR=2.1							
KSH	**Kashi**	119.00	303	PKP	PKiKP		**00 51 53.4**	**+3.1**
KSH				PP	PP		**00 53 09.9**	**-0.2**
KSH				AMB	AMB			
	comp=Z,340nm,7.0s							
KSH				LR	LR			
	comp=Z,810nm,17.9s							
KSH				LR	LR			
	comp=Z,830nm,19.6s							
KSH				LR	LR			
	comp=Z,960nm,20.3s							
SCHQ	**Schefferville**	119.52	39	PKP	PKiKP		**00 51 53.8**	**+3.2**
	comp=Z,4.2nm,0.8s,baz=230,slow=7.9,SNR=2.7							
MSEY	**Mahe Island**	123.24	247	IAMs_20	IAMs_20		01 41 58.6	
	comp=Z,2µm,19.0s							
BVAR	**Borovoye Array**	123.36	319	PKP	PKiKP		**00 51 59.1**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=115,slow=3.2,SNR=8.1							
BRVK	**Borovoye**	123.42	319	*i* PKIKP	PKiKP		**00 51 58.6**	**+0.3**
ILULI	**Ilulissat**	123.86	21	IAMs_20	IAMs_20		01 44 25.9	
	comp=Z,2µm,19.0s							
BOSA	**Boshof**	124.35	202	PKP	PKiKP		**00 52 03.0**	**+1.7**
	comp=Z,7.6nm,1.0s,baz=74,slow=4.4,SNR=3.1							
SFJD	**Kangerlussuaq**	124.91	23	IAMs_20	IAMs_20		01 46 47.6	
	comp=Z,2µm,19.0s							
NRS	**Narsarsuaq**	129.35	29	IAMs_20	IAMs_20		01 59 04.1	
	comp=Z,2µm,19.0s							
ARU	**Arti**	129.46	325	IAMs_20	IAMs_20		01 45 31.9	
	comp=Z,2µm,22.0s							
ARU	**Arti**	129.46	325	*i* PKIKP	PKiKP		**00 52 11.4**	**+1.1**
ARU							00 54 21.0	
ARU							00 59 19.5	
ARU				MLR	MLR			
	comp=Z,2µm,22.0s							
RCBR	**Riachuelo**	130.44	121	IAMs_20	IAMs_20		01 50 48.0	
	comp=Z,2µm,18.0s							
ARCES	**ARCESS Array B**	132.62	350	PKP	PKiKP		**00 52 16.4**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=329,slow=1.0,SNR=4.7							
GEYT	**Alibeck**	132.84	300	PKP	PKiKP		**00 52 18.0**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=214,slow=1.1,SNR=6.2							
PRGR	**Permogore**	133.18	335	*e*PKIKP	PKiKP		**00 52 16.7**	**-0.9**
PRGR				pmax	pmax			
	comp=Z,12nm,1.0s							
LSZ	**Lusaka**	135.03	213	IAMs_20	IAMs_20		01 51 27.2	
	comp=Z,2µm,19.0s							
KLMR	**Klimovskoe**	135.98	336	*e*PKIKP	PKPdf		**00 52 18.3**	**-3.4**
KLMR				*e*			00 55 02.5	
KLMR				pmax	pmax			
	comp=Z,37nm,2.1s							
KLMR				MLR	MLR			
	comp=Z,925nm,16.0s							
KLMR	**Klimovskoe**	135.98	336	*e*PKPdf	PKPdf		**00 52 18.3**	**-3.4**
KLMR				AMP			00 52 27.1	
	comp=Z,37nm,2.1s							
KLMR				*e*PP	PP		**00 55 02.6**	**+1.9**
KLMR				LQ	LQ		01 37 11.4	
KLMR				LR	LR		01 46 39.1	
KLMR				AMP			01 49 23.3	
	comp=Z,925nm,15.7s							
BELG	**Belogornoye**	136.87	323	⇓*e*PKIKP	PKPdf		**00 52 20.5**	**-3.1**
BELG				*i*			00 52 26.9	
KIBK	**Kibwezi**	138.65	236	IAMs_20	IAMs_20		01 51 07.7	
	comp=Z,1µm,19.0s							
FINES	**FINESS Array B**	139.68	344	PKP	PKPdf		**00 52 29.0**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=95,slow=1.7,SNR=6.1							
KMBO	**Kilima Mbogo**	140.03	236	PKP	PKiKP		**00 52 32.8**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=180,slow=5.1,SNR=3.4							
KMBO	**Kilima Mbogo**	140.03	236	IAMs_20	IAMs_20		01 52 48.8	
	comp=Z,1µm,19.0s							
M

comp=Z,1.2nm,0.8s,baz=15,slow=4.5,SNR=3.2
ZEI Tsey 142.75 310 *i* PKIKP **PKiKP 00 52 38.1 +0.1**
ZEI pmax pmax
comp=Z,7.0nm,1.3s
RAYN Ar Rayn 142.96 278 IAMs_20 IAMs_20 01 55 43.3
comp=Z,1μm,20.0s
RAYN Ar Rayn 142.96 278 ⇑PKIKP 00 52 31.8
comp=Z,1.4nm,0.9s,baz=4.8,slow=2.6,SNR=1.8
KBZ Khabaz 143.14 312 PKP **PKiKP 00 52 38.1 -0.3**
comp=Z,1.4nm,0.9s,baz=90,slow=0.5,SNR=6.6
KIV Kislovodsk 143.20 312 IAMs_20 IAMs_20 02 01 36.3
comp=Z,1μm,19.0s
KIV Kislovodsk 143.20 312 *i* PKIKP **PKPdf 00 52 33.9 -1.6**
KIV *e* 00 55 41.5
KIV *e*SS SS 01 14 18.3 -7.5
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,914nm,24.0s
NEY Neytrino 143.42 311 ⇑*i*PKIKP **PKPdf 00 52 36.5 +0.5**
ANKE Ethiopia-Afar 143.95 253 *e*P **PKPdf 00 52 39.4 +1.4**
ANKE *e*S **PP 00 55 52.8 +1.1**
LODK Lodwar 144.34 240 IAMs_20 IAMs_20 02 09 20.4
comp=Z,1μm,18.0s
LODK Lodwar 144.34 240 *e*P **PKPdf 00 52 39.4 +1.0**
LODK *e*P **PKiKP 00 52 43.4 +1.4**
AAE Adis Abeba 144.53 251 *e*P **PKiKP 00 52 41.4 -1.3**
AAE *e*S **PP 00 55 56.4 +1.3**
FURI Furi 144.54 251 IAMs_20 IAMs_20 01 57 40.5
comp=Z,1μm,19.0s
FURI Furi 144.54 251 *e*P **PKiKP 00 52 43.3 +0.6**
FURI *e*S **PP 00 56 01.2 +6.1**
IIGN Ignalina 144.77 339 *e*P **PKPdf 00 52 38.8 +1.0**
MNK Minsk 144.88 337 *i* PKIKP **PKPdf 00 52 39.4 +1.5**
MNK *i* 00 55 57.7
MNK *i* PPP PPP 00 59 10.2
MNK *i* 00 59 46.0
MNK *i* SS SS 01 14 45.6 +2.3
MNK *i* SSS SSS 01 20 12.0
MNK pmax pmax
comp=N,23nm,0.8s
MNK pmax pmax
comp=Z,35nm,1.1s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK MLR MLR
comp=N,958nm,21.0s
MNK MLR MLR
comp=Z,1μm,20.0s
MNK MLR MLR
comp=E,73nm,19.0s
MNK Minsk 144.88 337 *i* PKP **PKPdf 00 52 39.4 +1.5**
comp=E,2.0nm,1.1s
MNK *i* PKP **PKPdf 00 52 39.4 +1.5**
comp=N,23nm,0.8s
MNK *i* PKP **PKPdf 00 52 39.4 +1.5**
comp=Z,35nm,1.1s,baz=218
MNK *i* PP **PP 00 55 57.8 +2.5**
MNK *i* PPP PPP 00 59 10.3
MNK *i* SKS **SKSdf 00 59 46.0 -0.7**
MNK *i* SS **SS 01 14 45.7 +2.4**
MNK *i* SSS SSS 01 20 12.0
MNK *i* LR LR 01 51 30.8
MNK *i* LRM MLR 01 57 39.7
comp=N,958nm,21.0s
MNK *i* LRM MLR 01 57 56.2
comp=Z,1μm,20.4s
MNK *i* LRM MLR 01 58 06.4
comp=E,73nm,19.1s
NACGM Naroch 144.95 338 ⇑*e*PKP **PKiKP 00 52 39.8 -2.1**
baz=36
SOC Sochi 145.34 313 *ce*PKIKP **PKPbc 00 52 38.5 -0.4**
SOC *e* 00 55 58.7
SOC *e*SS SS 01 14 48.3 -1.7
SOC pmax pmax
comp=Z,46nm,1.4s
SOC MLR MLR
comp=Z,1μm,22.0s
PABE Paberze 145.35 341 *e*P **PKiKP 00 52 40.4 -2.3**
HOMB Homborsund 145.46 357 *e*P **PKPdf 00 52 39.8 +1.0**
BORU Boraas 145.72 353 *e*P **PKPbc 00 52 39.2 -0.4**
ANN Anapa 146.30 316 *i* PKP2 **PKPbc 00 52 41.8 0.0**
ANN pmax pmax
comp=Z,104nm,1.2s
FABU Falkenberg 146.35 352 *e*P **PKPbc 00 52 41.0 -0.6**
DEL Delary 146.71 351 *e*P **PKPab 00 52 43.0 -0.8**
AKASG Malin Array Be 147.21 331 PKPbc **PKPbc 00 52 44.3 0.0**
comp=Z,16nm,0.9s,baz=40,slow=3.7,SNR=43
AKBB Malin Array Si 147.21 331 ⇑*i*PKP2 **PKPab 00 52 45.0 -1.0**
BJUU Bjuv 147.21 352 *e*P **PKPab 00 52 44.6 -1.2**
MUD Monsted U'grnd 147.23 356 *e*P **PKiKP 00 52 46.5 0.0**
LUNU Lund 147.59 351 *e*P **PKiKP 00 52 47.0 -0.2**
SIM Simferopol' 148.27 319 *e*PKP2 **PKiKP 00 52 48.1 -0.9**
SIM pmax pmax
comp=Z,40nm,1.0s
RGN Rugen 148.65 351 IAMs_20 IAMs_20 01 55 41.9
comp=Z,1μm,20.0s
GKP Gorka Klasztor 149.13 346 *e*PKPbc **PKiKP 00 52 50.9 +0.4**
GKP Gorka Klasztor 149.13 346 *e*P **PKPab 00 52 51.7 -1.8**
BEL Belsk 149.48 341 *e*PKPbc **PKiKP 00 52 52.3 +1.0**
PURM Purcari 149.75 325 ⇑P **PKiKP 00 52 52.1 +0.1**
KIS Kishinev 149.98 326 *e*PKP **PKiKP 00 52 52.0 -0.5**
KIS *e*L L 02 00 41.0
KIS LRM MLR 02 04 57.0
comp=Z,450nm,22.0s
KIS Kishinev 149.98 326 *e*PKP2 **PKiKP 00 52 52.0 -0.5**
MILM Milestii Mici 150.04 326 ⇑P **PKPdf 00 52 48.0 +1.3**
MILM Milestii Mici 150.04 326 *e*PKHKP PKPpre 00 52 48.0
MILM pmax pmax
comp=Z,800nm,4.4s
LVV L'vov 150.04 335 *e*PKP2 **PKiKP 00 52 53.3 +0.8**
IAS Iasi 150.48 328 ⇑P **PKPab 00 53 00.8 +1.5**
RUE Ruedersdorf 150.57 349 *e*P **PKiKP 00 52 55.1 +1.7**
VASR Vaslui 150.74 327 ⇑P **PKiKP 00 52 55.3 +1.2**
BRTR Keskin Array B 151.07 310 PKPbc **PKiKP 00 52 55.7 +0.5**
comp=Z,11nm,1.0s,baz=140,slow=4.0,SNR=20
VLDR Vladesti 151.14 325 ⇑P **PKiKP 00 52 57.1 +2.2**
TLCR 151.18 324 ⇓P **PKiKP 00 52 56.4 +1.4**
TLCR 151.18 324 ⇓PKIKP **PKiKP 00 52 56.4 +1.4**
OJC Ojcow 151.19 340 *e*PKPbc **PKPbc 00 52 52.3 -2.1**
BURAR Bucovina Array 151.26 331 ⇑P **PKiKP 00 52 55.2 -0.1**
BURAR Bucovina Array 151.26 331 ⇑PKIKP **PKiKP 00 52 55.2 -0.1**
BUR01 Bucovina Ar. S 151.26 331 ⇓P **PKiKP 00 52 57.0 +1.8**
GHRR 151.34 326 ⇑P **PKiKP 00 52 56.2 +0.9**
BIZ Bicaz 151.35 329 ⇑P **PKPbc 00 52 51.8 -3.0**
TESR Tescani 151.40 328 ⇑P **PKiKP 00 52 56.4 +1.0**
JURR Jurilovca 151.41 323 ⇑P **PKiKP 00 52 57.1 +1.6**
KOLS Kolonicke sedl 151.44 336 *e*PKIKP **PKiKP 00 52 57.1 +1.6**
CFR Carcaliu 151.55 324 ⇓P **PKPbc 00 52 54.3 -1.0**
CFR Carcaliu 151.55 324 ⇓PKIKP **PKPbc 00 52 54.3 -1.0**
ANTO Ankara 151.59 311 ⇑P **PKiKP 00 52 57.5 +1.3**
ANTO Ankara 151.59 311 ⇑PKIKP **PKiKP 00 52 57.5 +1.3**
KSP Ksiaz 151.60 345 *e*PKPbc **PKiKP 00 52 57.7 +2.0**
TPGR Topolog 151.60 323 ⇑P **PKiKP 00 52 58.1 +2.2**
UZH Uzhgorod 151.68 335 *e*PKIKP **PKiKP 00 52 56.7 +0.8**
UZH *e* 00 53 01.0
CRVS Cervenica-Dubn 151.76 337 *e*PKIKP **PKiKP 00 52 57.8 +1.7**
VRI Vrincioaia 151.81 327 ⇑P **PKiKP 00 52 57.5 +1.1**
VRI Vrincioaia 151.81 327 ⇑PKIKP **PKiKP 00 52 57.5 +1.1**
CLL Collm 151.84 349 IAMs_20 IAMs_20 02 08 02.2
comp=Z,1μm,19.0s
CLL Collm 151.84 349 *e*PKIKP **PKPbc 00 52 53.0 -2.8**
CLL *e* 00 52 57.0
CLL *i* 00 53 00.8
CLL pmax pmax
comp=Z,78nm,2.7s
CLL MLR MLR
comp=Z,1μm,19.1s
CLL Collm 151.84 349 *e*(PKPdf) **PKPbc 00 52 53.0 -2.8**
comp=Z,78nm,2.7s
CLL *e*PKPbc **PKiKP 00 52 57.0 +0.8**
comp=Z,28nm,1.0s
CLL *i* x x 00 53 00.8
comp=Z,34nm,1.0s
CLL *e*PKPab **sPKPab 00 53 05.0 -1.8**
comp=Z,23nm,0.9s
CLL *i* x x 00 53 11.6
comp=Z,50nm,1.0s
CLL *e*SKPdf **SKPdf 00 56 25.0 +2.6**
CLL *e*PP **PP 00 56 36.0 +0.4**
CLL *ex* x 00 56 57.0
CLL *ex* x 01 00 42.0
CLL *e*PPPP 01 02 00.0
CLL *e*SKKSac **SKKSac 01 03 30.0 +3.7**
CLL *e*PSKS 01 06 54.0
CLL *ex* x 01 08 29.0
CLL *e*PPS PPS 01 09 30.0
CLL *ex* x 01 12 12.0
CLL *e*SS **SS 01 16 04.0 +3.0**
CLL *e*PSPS 01 17 09.0
CLL *ex* x 01 20 06.0
CLL *e*SSS SSS 01 21 24.0
CLL *e*SSSS 01 25 36.0
CLL *ex* x 01 29 48.0
CLL LmV 02 07 00.0
comp=Z,1μm,19.1s
CLL LmH 02 09 00.0
comp=N,600nm,20.0s
CLL LmH 02 09 00.0
comp=E,500nm,19.4s
TIRR Tirgusor 151.86 323 ⇓P **PKPbc 00 52 54.2 -1.9**
TIRR Tirgusor 151.86 323 ⇓PKIKP **PKPbc 00 52 54.2 -1.9**
PLOR Plostina 151.86 327 ⇑P **PKiKP 00 52 58.0 +1.5**
PLOR Plostina 151.86 327 ⇑PKIKP **PKiKP 00 52 58.0 +1.5**
OSTC Ostas 151.88 345 ⇑*e*PKP **PKiKP 00 52 58.2 +1.8**
OSTC AMS AMS 02 06 10.0
comp=E,1μm,17.5s
CHVC Chvalec 151.89 345 ⇑*e*PKP **PKiKP 00 52 58.3 +1.9**
CHVC AMS AMS 02 08 10.0
comp=E,1μm,16.3s
GHAJ Ghor Haditha 151.92 292 IAMs_20 IAMs_20 02 04 48.2
comp=Z,962nm,20.0s
BMR Baia Mare 151.96 333 ⇑P **PKiKP 00 52 57.7 +1.1**
BMR Baia Mare 151.96 333 ⇑PKIKP **PKiKP 00 52 57.7 +1.1**
HARR Harsova 151.98 324 ⇑P **PKPbc 00 52 55.2 -1.1**
HARR Harsova 151.98 324 ⇑PKIKP **PKPbc 00 52 55.2 -1.1**
UPC Upice 151.98 345 *e*PKIKP **PKiKP 00 52 58.5 +2.0**
UPC *e*SS SS 01 15 58.6 -4.1
UPC MLR MLR
comp=Z,1μm,18.0s
UPC Upice 151.98 345 ⇑*e*PKP **PKiKP 00 52 58.5 +2.0**
UPC *e*SS SS 01 15 58.6 -4.1
UPC AMS AMS 02 08 30.0
comp=Z,1μm,18.0s
TRPA Tarpa 151.99 334 ⇑P **PKiKP 00 52 57.8 +1.2**
TRPA Tarpa 151.99 334 P **PKiKP 00 52 58.4 +1.9**
OKC Ostrava-Krasne 152.03 342 *e*PKIKP **PKiKP 00 52 59.6 +3.0**
OKC MLR MLR
comp=Z,1μm,18.3s
OKC Ostrava-Krasne 152.03 342 ⇑*e*PKP **PKiKP 00 52 59.6 +3.0**
OKC AMS AMS 02 06 10.0
comp=Z,1μm,18.3s
MFTR Murfatlar 152.03 322 ⇑P **PKiKP 00 52 58.1 +1.3**
ARCR ARCALIA 152.05 331 ⇑P **PKiKP 00 53 00.6 +3.9**
DPC Dobruska-Polom 152.05 344 *e*PKIKP **PKiKP 00 52 58.6 +1.9**
DPC MLR MLR
comp=Z,1μm,19.8s
DPC Dobruska-Polom 152.05 344 ⇑*e*PKP **PKiKP 00 52 58.6 +1.9**
DPC AMS AMS 02 06 20.0
comp=Z,1μm,19.8s
BRG Berggiesshubel 152.08 348 *i* PKP **PKiKP 00 52 58.6 +1.9**
BRG Amp 00 53 03.7
comp=Z,21nm,0.8s
BRG *ex* x 00 53 13.2
BRG Amp 00 53 14.5
comp=Z,45nm,1.0s
BRG Berggiesshubel 152.08 348 PP PP 00 56 37.0 0.0
BRG Berggiesshubel 152.08 348 *i* PKIKP **PKiKP 00 52 58.6 +1.9**
BRG 00 56 37.0
BRG pmax pmax
comp=Z,21nm,0.8s
COVR Voineasa-Covas 152.09 327 ⇓P **PKiKP 00 52 58.2 +1.2**
OZUR 152.12 328 ⇑P **PKiKP 00 52 59.5 +2.5**
KRLC Kraliky 152.19 344 *e*PKIKP **PKiKP 00 52 58.7 +1.7**
KRLC MLR MLR
comp=Z,1μm,20.2s
KRLC Kraliky 152.19 344 ⇑*e*PKP **PKiKP 00 52 58.7 +1.7**
KRLC AMS AMS 02 15 10.0
comp=Z,1μm,20.2s
LANS Liptovska Anna 152.23 339 *e*PKIKP **PKiKP 00 52 59.7 +2.6**
MORC Moravsky Berou 152.25 342 ⇑P **PKiKP 00 52 58.2 +1.0**
MORC Moravsky Berou 152.25 342 ⇑PKIKP **PKiKP 00 52 58.2 +1.0**
MORC Moravsky Berou 152.25 342 *e*PKP **PKPdf 00 52 50.1 0.0**
PVCC Panska Ves 152.28 347 *e*PKIKP **PKiKP 00 52 58.9 +1.8**
PVCC MLR MLR
comp=Z,1μm,16.8s
PVCC Panska Ves 152.28 347 ⇑*e*PKP **PKiKP 00 52 58.9 +1.8**
PVCC AMS AMS 02 05 50.0
comp=Z,1μm,16.8s
DOPR Dopca 152.40 328 ⇑P **PKiKP 00 52 59.5 +2.0**
ISR Istrita 152.42 326 ⇑P **PKiKP 00 52 59.8 +2.1**
ISR Istrita 152.42 326 ⇑PKIKP **PKiKP 00 52 59.8 +2.1**
MLR Muntele Rosu 152.47 327 ⇑P **PKiKP 00 52 59.8 +1.9**
MLR Muntele Rosu 152.47 327 IAMs_20 IAMs_20 02 06 52.0
comp=Z,1μm,20.0s
MLR Muntele Rosu 152.47 327 ⇑PKIKP **PKiKP 00 52 59.8 +1.9**
MAUC Maruska 152.54 342 ⇑*e*PKP **PKiKP 00 52 59.9 +2.1**
MAUC AMS AMS 02 11 30.0
comp=Z,3μm,18.3s
MESR Meseseni 152.60 333 ⇑P **PKiKP 00 52 58.7 +0.8**
CJR Cluj-Napoca 152.67 331 ⇑P **PKiKP 00 53 00.0 +1.9**
CJR Cluj-Napoca 152.67 331 ⇑PKIKP **PKiKP 00 53 00.0 +1.9**
SECR 152.72 326 ⇑P **PKiKP 00 53 01.5 +3.2**
JAWL J.Aulia 152.73 257 *i* P **PKiKP 00 53 01.8 +2.6**
PRU Pruhonice 152.80 346 *e*PKIKP **PKiKP 00 53 00.0 +1.8**
PRU *e*SS SS 01 16 07.4 -4.3
PRU MLR MLR
comp=Z,2μm,18.2s
PRU Pruhonice 152.80 346 ⇑*e*PKP **PKiKP 00 53 00.0 +1.8**
PRU *e*SS SS 01 16 07.4 -4.3
PRU AMS AMS 02 09 10.0
comp=Z,2μm,18.2s
GOPC GO Pecny, Ondr 152.82 346 AMS AMS 02 10 30.0
comp=Z,2μm,17.6s
LTVH Ltavrtes, Hu 152.84 334 ⇑P **PKiKP 00 52 59.8 +1.5**
LTVH Ltavrtes, Hu 152.84 334 P **PKiKP 00 52 59.8 +1.5**
VRAC Vranov 152.94 343 *e*PKP **PKPbc 00 52 55.3 -3.1**
VOIR 152.95 328 ⇑P **PKPbc 00 52 57.3 -1.3**
VOIR 152.95 328 ⇑PKIKP **PKPbc 00 52 57.3 -1.3**
NKC Novy Kostel 152.97 349 *e*PKIKP **PKiKP 00 53 00.6 +2.0**
NKC *e*SS SS 01 16 15.7 +2.2
NKC MLR MLR
comp=Z,2μm,19.2s
NKC Novy Kostel 152.97 349 ⇑*e*PKP **PKiKP 00 53 00.6 +2.0**
NKC *e*SKKS 01 03 38.1
NKC *e*SS **SS 01 16 15.7 +2.2**
NKC AMS AMS 02 09 30.0
comp=Z,2μm,19.2s
CSS Mathiatis 152.98 301 IAMs_20 IAMs_20 02 05 12.1
comp=Z,1μm,20.0s
DRGR 152.99 333 ⇑P **PKPbc 00 52 56.6 -2.0**
DRGR 152.99 333 ⇑PKIKP **PKPbc 00 52 56.6 -2.0**
VYHS Vyhne 153.01 339 *e*PKIKP **PKiKP 00 53 00.4 +1.7**
JAVC Velka Javorina 153.04 341 *e*PKP **PKPbc 00 52 57.0 -1.7**
PSZ Piszkesteto 153.15 337 ⇓P **PKPab 00 53 08.5 -2.0**
ARR Arges 153.20 328 ⇑P **PKPdf 00 52 54.4 +2.7**
KRUC Moravsky 153.22 343 *e*PKP **PKPdf 00 52 54.1 +2.6**
MEM Membach 153.22 359 *d*PKP **PKPab 00 53 05.3 -5.3**
TREC Trest 153.23 345 AMS AMS 02 07 00.0
comp=Z,2μm,18.8s
BTNL Ternell 153.24 358 *d*PKP **PKPab 00 53 14.8 +4.1**
BSTI Sart Tilman 153.25 359 *d*PKP **PKPab 00 53 15.9 +5.2**
BCLA Clavier 153.42 360 *d*PKP **PKPab 00 53 13.1 +1.6**
BGES Gesves 153.45 360 *d*PKP **PKPab 00 53 12.5 +0.9**
BGES *dx* x 00 53 27.8
RAZG Razgrad 153.49 323 ⇑P **PKiKP 00 53 00.8 +0.9**
BMRD Maredsous 153.54 0 *d*PKP **PKPab 00 53 08.6 -3.3**
LOT Lotru 153.55 329 ⇑P **PKPbc 00 52 59.2 -0.8**
MODS Modra-Piesok 153.60 341 *e*PKIKP **PKPbc 00 52 56.0 -3.9**
MODS *e* 00 53 02.1
DEV Deva 153.61 331 ⇑P **PKiKP 00 53 00.2 +0.2**
DEV Deva 153.61 331 ⇑PKIKP **PKiKP 00 53 00.2 +0.2**
HUMR Humele 153.63 327 ⇑P **PKPab 00 53 08.7 -3.9**
RCHB Rochefort 153.68 360 *d*PKP **PKiKP 00 53 03.7 +3.7**
DOU Dourbes 153.74 1 *d*PKP **PKPab 00 53 09.8 -3.1**
KHC Kasperske Hory 153.81 347 *e*PKIKP **PKPdf 00 52 54.5 +2.1**
KHC *e* 00 53 01.4
KHC *e* 00 56 44.5
KHC *e*SS SS 01 16 19.0 -3.8
KHC MLR MLR
comp=Z,2μm,18.7s
KHC Kasperske Hory 153.81 347 *e*PKPDF **PKPdf 00 52 54.5 +2.1**
KHC ⇑*e*PKP **sPKPbc 00 53 01.4 -1.0**
KHC *e*PP **PP 00 56 44.5 -2.4**
KHC *e*SS SS 01 16 19.0 -3.8
KHC AMS AMS 02 06 50.0
comp=Z,2μm,18.7s
SIRR Siria 153.84 333 ⇑P **PKPbc 00 52 56.3 -4.1**
CKRC Cesky Krumlov 153.95 346 AMS AMS 02 08 30.0
comp=Z,2μm,20.1s
SZH Strazhica 154.00 323 *e*P PKPab 00 53 25.9 +12
GZR Gura Zlata 154.05 330 ⇓P **PKiKP 00 53 01.1 +0.1**
GZR Gura Zlata 154.05 330 ⇓PKIKP **PKiKP 00 53 01.1 +0.1**
GEC2 GERESS Array S 154.06 347 **PKPbc 00 52 58.1 -2.9**
GERES GERESS Array B 154.06 347 PKP **PKPdf 00 52 54.6 +1.8**
comp=Z,1.1nm,0.9s,baz=90,slow=0.5,SNR=6.6
GERES PKPbc **sPKPbc 00 53 02.8 -0.2**
comp=Z,3.4nm,0.9s,baz=66,slow=3.3,SNR=12
ISP Isparta 154.08 309 IAMs_20 IAMs_20 02 13 23.8
comp=Z,1μm,21.0s
JMB Yambol 154.15 321 *e*P **PKPab 00 53 15.3 +0.4**
WLF Walferdange 154.16 358 *d*PKP **PKPab 00 53 19.2 +4.6**
CSKK Cskako 154.19 339 P **PKiKP 00 53 04.1 +2.9**
MRWI Hamdab 154.24 264 *i* P **PKPbc 00 52 58.2 -3.9**
MRWI *i* 00 53 07.9
baz=308,slow=10
MRWI *i* S 00 59 55.3
BZS Buzias 154.38 332 ⇓P **PKPdf 00 52 50.5 -2.8**
BZS Buzias 154.38 332 ⇓PKIKP **PKPdf 00 52 50.5 -2.8**
CONA Conrad Observa 154.40 343 *e*P **PKPdf 00 52 55.8 +2.4**
comp=Z,11nm,1.4s
SOP Sopron 154.43 342 P **PKPab 00 53 12.3 -3.5**
EGYH Egyhazaskeszo 154.44 340 P **PKPab 00 53 11.4 -4.5**
MPLH Magyarpolny 154.59 340 P **PKiKP 00 53 07.8 +5.8**
HERR Herculane 154.60 330 ⇑P **PKiKP 00 53 02.2 +0.1**
STU Stuttgart 154.84 353 IAMs_20 IAMs_20 02 08 21.5
comp=Z,2μm,20.0s
MOA Molln 154.87 345 *e*P **PKPdf 00 52 55.5 +1.5**
comp=Z,5.2nm,1.7s
MOA *e*P **sPKPab 00 53 27.1 +7.3**
comp=Z,18nm,1.1s
ELL Elmali 154.97 307 PKPab **PKPab 00 53 17.6 -1.1**
ELL Elmali 154.97 307 PKP2 **PKPab 00 53 17.7 -1.1**
MORH Mrgy, Hungar 155.05 337 ⇑P **PKPdf 00 52 56.4 +2.2**
KDZ Kurdzhali 155.34 321 *e*P **PKPab 00 53 23.8 +3.8**
BFO Black Forest 155.37 355 IAMs_20 IAMs_20 02 03 24.1
comp=Z,1μm,21.0s
BLKB Belogradchik 155.43 328 ⇑P **PKPdf 00 52 56.1 +1.2**
PLD Plovdiv 155.45 323 *e*P **PKPab 00 53 23.8 +3.4**
FRGS Fruska Gora 155.50 334 ⇑P PKPdf 00 53 05.2 +10
RZN Rozhen 155.72 322 *e*P **PKPab 00 53 25.1 +3.3**
KBA Koelnbreinsper 155.81 346 *e*P **PKPdf 00 52 58.5 +3.0**
comp=Z,6.2nm,1.1s
VTS Vitosha 155.88 326 ⇑P **PKPdf 00 52 59.1 +3.5**
VTS Vitosha 155.88 326 ⇑PKIKP **PKPdf 00 52 59.1 +3.5**
VTS Vitosha 155.88 326 *e*P **PKPab 00 53 26.1 +3.7**
RETA Reutte 155.90 350 *e*P **PKPdf 00 52 58.8 +3.4**
comp=Z,2.6nm,0.8s
RETA *e*P **sPKPab 00 53 31.0 +6.7**
comp=Z,14nm,1.4s
WATA Walderalm 155.92 349 *e*P **PKPdf 00 52 57.6 +2.1**
comp=Z,3.0nm,1.2s
WATA *e*P **PKPab 00 53 20.8 -1.6**
comp=Z,12nm,1.4s
WATA *e*P **sPKPab 00 53 31.0 +6.6**
comp=Z,18nm,1.4s
WTTA Wattenberg 155.98 349 *e*P **PKPdf 00 52 59.5 +3.8**
comp=Z,10nm,1.5s
WTTA *e*P **PKPab 00 53 20.9 -1.7**
comp=Z,11nm,1.4s
WTTA *e*P **sPKPab 00 53 32.1 +7.4**
comp=Z,26nm,1.3s
MOTA Moosalm 155.99 350 *e*P **PKPdf 00 52 57.4 +1.7**
comp=Z,4.6nm,1.1s
MOTA *i* P **sPKPab 00 53 31.6 +6.9**
comp=Z,17nm,1.2s
OBKA Obir 156.05 344 *e*P **PKPdf 00 52 58.6 +2.9**
comp=Z,4.4nm,1.0s
SQTA Sankt Quirin 156.09 349 *e*P **PKPdf 00 52 58.0 +2.3**
comp=Z,8.7nm,1.8s
SQTA *e*P **sPKPab 00 53 32.1 +6.9**
comp=Z,14nm,1.3s
DAVA Damuels 156.23 352 *i* P **PKPdf 00 52 58.4 +2.4**
comp=Z,4.4nm,1.1s
DAVA *e*P **sPKPab 00 53 32.8 +7.0**
comp=Z,16nm,1.1s
DIVS Divibare 156.29 332 PKPdf **PKPdf 00 52 57.9 +1.9**
ABTA Abfaltersbach 156.30 347 *e*P **PKPdf 00 52 57.1 +1.1**
comp=Z,7.2nm,1.1s
MMB Musomiste 156.33 323 *e*P **PKPab 00 53 27.4 +3.1**
FETA Feichten 156.36 350 *e*P **PKPdf 00 52 58.5 +2.4**
comp=Z,4.8nm,1.2s
FETA *e*P **PKPab 00 53 21.7 -2.7**
comp=Z,14nm,1.3s
KKB Krupnik 156.49 324 *e*P **PKPab 00 53 28.2 +3.3**
FUORN Ofenpass-Fuorn 156.83 351 PKPdf **PKPdf 00 52 57.8 +0.9**
FUORN IAMs_20 IAMs_20 02 11 32.1
comp=Z,1μm,18.0s
STIP Stip 157.09 325 *e*P **PKPab 00 53 29.8 +2.3**
TUE Stuetta 157.10 352 IAMs_20 IAMs_20 02 16 53.1
comp=Z,1μm,19.0s
VAY Valandovo 157.15 324 *e*P **PKPab 00 53 28.9 +1.2**
SKO Skopje 157.27 327 *e*P **PKPab 00 53 31.2 +3.0**
KARP Karpathos 157.49 306 IAMs_20 IAMs_20 02 10 42.5
comp=Z,894nm,21.0s
PDG Podgorica 157.95 331 IAMs_20 IAMs_20 02 10 19.3
comp=Z,1μm,20.0s
OHR Ohrid 158.23 326 *e*P **PKPab 00 53 35.0 +2.6**
TIR Tirane 158.51 328 IAMs_20 IAMs_20 02 06 46.7
comp=Z,2μm,22.0s
PMOZ Porto Moniz, M 158.54 60 *e*PKPdf **PKPdf 00 53 00.5 +1.3**
PMOZ Porto Moniz, M 158.54 60 *e*LR LR 01 54 38.4
comp=Z,866nm,20.0s
BNI Bardonecchia 158.74 357 IAMs_20 IAMs_20 02 07 22.4
comp=Z,2μm,20.0s
PGAV Gavieira, Arco 158.78 28 *e*PKPdf **PKPdf 00 53 05.9 +6.7**
PGAV Gavieira, Arco 158.78 28 *e*SS SS 01 17 19.4 +2.3
PGAV Gavieira, Arco 158.78 28 *e*LR LR 01 53 17.5
comp=Z,2μm,20.0s
PMAR Madeira 158.80 60 *e*PKPdf **PKPdf 00 52 59.8 +0.1**
PMPST Porto Santo, M 159.14 59 *e*PKPdf PKPdf 00 52 49.5 -10
VLC Villacollemand 159.20 349 IAMs_20 IAMs_20 02 12 37.1
comp=Z,2μm,20.0s
POLO Lamas de Olo 159.47 28 *e*PKPdf **PKPdf 00 53 06.4 +6.3**
POLO Lamas de Olo 159.47 28 *e*SS SS 01 17 24.7 +0.3
MVO Moncorvo 159.97 27 *e*PKPdf **PKPdf 00 53 04.2 +3.6**
MVO Moncorvo 159.97 27 *e*SS SS 01 17 42.7 +13
MVO Moncorvo 159.97 27 *e*LR LR 01 54 20.0
comp=Z,2μm,20.0s
PCAS Casmilo, Conde 160.20 32 *e*PKPdf **PKPdf 00 53 04.2 +3.4**
PCAS Casmilo, Conde 160.20 32 *e*SS SS 01 17 36.4 +4.3
MTE Manteigas 160.37 30 *e*PKPdf **PKPdf 00 53 04.2 +3.1**
MTE Manteigas 160.37 30 *e*SS SS 01 17 47.2 +13
MTE Manteigas 160.37 30 *e*LR LR 01 56 11.0
comp=Z,2μm,22.0s
PSBE So Bento 160.47 33 *e*PKPdf **PKPdf 00 53 08.1 +6.9**
PSBE So Bento 160.47 33 *e*SS SS 01 17 40.4 +5.3
PMAFR Mafra 160.63 35 *e*PKPdf **PKPdf 00 53 02.4 +1.1**
PMAFR Mafra 160.63 35 *e*SS SS 01 17 48.6 +12
LIS Lisbon 160.88 36 *e*PKPdf **PKPdf 00 52 59.8 -1.7**
LIS IAMs_20 IAMs_20 02 01 01.4
comp=Z,4μm,11.5s
LIS Lisbon 160.88 36 *e*PKIKP **PKPdf 00 52 59.8 -1.7**
PMTG Montargil 161.09 33 *e*PKPdf **PKPdf 00 53 08.6 +6.8**
PMRV Marv??o 161.22 31 *e*PKPdf **PKPdf 00 53 02.1 +0.1**
PMRV Marv??o 161.22 31 *e*SS SS 01 17 40.7 -2.1
PMRV Marv??o 161.22 31 *e*LR LR 01 56 04.8
comp=Z,3μm,20.0s
PESTR Estremoz 161.56 32 *e*PKPdf **PKPdf 00 53 02.8 +0.5**
PESTR Estremoz 161.56 32 *e*SS SS 01 17 54.3 +7.8
EVO Evora 161.61 34 *e*PKPdf **PKPdf 00 53 09.4 +7.0**
PNCL Nicolau / Gran 161.65 36 *e*PKPdf **PKPdf 00 53 04.7 +2.3**
PNCL Nicolau / Gran 161.65 36 *e*SS SS 01 17 48.6 +1.1
TIP Timpagrande 161.69 330 ⇑P **PKPab 00 53 44.3 -3.3**
TIP Timpagrande 161.69 330 **PKPab 00 53 47.2 -0.4**
MESJ Messejana 162.02 36 *e*PKPdf **PKPdf 00 53 01.0 -1.8**
MESJ IAMs_20 IAMs_20 02 02 11.7
comp=E,2μm,20.8s
MESJ Messejana 162.02 36 *e*PKPdf **PKPdf 00 53 10.0 +7.2**
MESJ Messejana 162.02 36 *e*PKIKP **PKPdf 00 53 01.0 -1.8**
PBEJ Beja 162.07 35 *e*PKPdf **PKPdf 00 53 09.1 +6.2**
MORF Marmelete 162.17 38 *e*PKPdf **PKPdf 00 53 01.2 -1.8**
MORF IAMs_20 IAMs_20 02 01 26.6
comp=Z,3μm,19.1s
MORF Marmelete 162.17 38 *e*PKPdf PKPdf 00 53 12.8 +10
MORF Marmelete 162.17 38 *e*PKIKP **PKPdf 00 53 01.2 -1.8**
PFVI Vila Bisbo 162.19 39 *e*PKPdf **PKPdf 00 53 10.1 +7.1**
PFVI Vila Bisbo 162.19 39 *e*SS SS 01 18 08.4 +15
PCVE Castro Verde 162.27 36 *e*PKPdf **PKPdf 00 53 07.5 +4.4**
PCVE Castro Verde 162.27 36 *e*SS SS 01 18 13.5 +20

PBAR	**Barrancos**	**162.37**	**33**	*e*PKPdf	**PKPdf**	**00 53 08.8**	**+5.7**
PBAR	**Barrancos**	**162.37**	**33**	*e*SS	SS	01 18 06.8	+12
ESDC	**Sonseca Array**	**162.45**	**23**	PKP	**PKPdf**	**00 53 06.3**	**+3.1**
	comp=Z,0.8nm,0.9s,baz=351,slow=2.8,SNR=6.1						
ESDC				PKPab	**sPKPab**	**00 53 52.1**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=331,slow=2.7,SNR=5.4						
PVAQ	**Vaqueiros**	**162.61**	**36**	*e*PKPdf	**PKPdf**	**00 53 07.7**	**+4.3**
PVAQ	**Vaqueiros**	**162.61**	**36**	*e*SS	SS	01 17 52.0	-5.5
PVAQ	**Vaqueiros**	**162.61**	**36**	*e*LR	LR	01 54 52.4	
	comp=Z,2μm,20.0s						
KEST	**Kesra**	**167.51**	**343**	PKPab	**PKPab**	**00 54 11.6**	**-1.6**
	comp=Z,8.0nm,1.1s,baz=39,slow=4.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**168.97**	**163**	PKP	**PKPdf**	**00 53 11.9**	**+2.7**
	comp=Z,13nm,0.6s,baz=185,slow=0.4,SNR=5.1						
TORD				PKPab	**sPKPab**	**00 54 24.9**	**+2.8**
	comp=Z,13nm,0.6s,baz=182,slow=2.7,SNR=5.1						

WEL 01 01:31:51.1±1.0, 37°S±9°×18°0W±°, h33km, M3.4/12, ML3.8/15, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=163.3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.69**	**254**	P	Pn	01 32 17.5	-0.7
MXZ				S	Sn	01 32 39.3	+0.6
WMGZ	**Waiomatatini S**	**1.69**	**245**	P	Pn	01 32 18.6	+0.3
WMGZ				S	Sn	01 32 37.6	-1.2
PUZ	**Puketiti**	**1.91**	**240**	P	Pn	01 32 22.4	+1.0
PUZ				S	Sn	01 32 46.6	+2.2
PKGZ	**Pakihiroa**	**1.96**	**246**	P	Pn	01 32 21.9	-0.2
PKGZ				S	Sn	01 32 46.8	+1.1
HAZ	**Te Kaha**	**2.14**	**252**	P	Pn	01 32 24.9	+0.4
HAZ				S	Sn	01 32 51.0	+1.1
CNGZ	**Carnagh Statio**	**2.17**	**231**	P	Pn	01 32 25.6	+0.6
RUGZ	**Raukumara Rang**	**2.29**	**248**	P	Pn	01 32 26.8	+0.2
TKGZ	**Te Karaka**	**2.38**	**236**	P	Pn	01 32 27.3	-0.4
TKGZ				S	Sn	01 32 57.6	+1.8
MWZ	**Matawai**	**2.54**	**241**	P	Pn	01 32 30.2	+0.1
MWZ				S	Sn	01 33 00.2	+0.3
MHGZ	**Mahia Peninsul**	**2.80**	**223**	P	Pn	01 32 33.8	+0.2
URZ	**Urewera**	**2.81**	**245**	P	Pn	01 32 33.9	+0.2
URZ				S	Sn	01 33 06.9	+0.6
KNZ	**Kokohu**	**2.84**	**227**	P	Pn	01 32 33.3	-0.8
KNZ				S	Sn	01 33 08.3	+1.1
MTHZ	**Maungataniwha**	**3.27**	**237**	P	Pn	01 32 40.0	0.0
MTHZ				S	Sn	01 33 18.9	+1.1
ARHZ	**Aropaoanui**	**3.40**	**230**	P	Pn	01 32 41.7	-0.1
ARHZ				S	Sn	01 33 22.3	+1.3
NMHZ	**Naumai**	**3.42**	**234**	P	Pn	01 32 42.7	+0.6
NMHZ				S	Sn	01 33 22.7	+1.1
BKZ	**Black Stump Fm**	**3.66**	**235**	P	Pn	01 32 45.1	-0.4
BKZ				S	Sn	01 33 27.6	+0.1
KWHZ	**Kaweka Forest**	**3.85**	**232**	P	Pn	01 32 47.5	-0.6
KWHZ				S	Sn	01 33 32.0	-0.3
BHHZ	**Black Hill Sta**	**4.12**	**234**	P	Pn	01 32 51.5	-0.2
BHHZ				S	Sn	01 33 37.7	-1.1
CTZ	**Chatham Island**	**7.00**	**162**	P	Pn	01 33 31.4	+0.2
CTZ				S	Sn	01 34 47.0	-2.7

*IDC **01** 01:35:41.2±1.0, 5°40N×73°80W, h156km±8km, mb3.8/2, mbtmp4.2/3, Error ellipse: s-maj=48.9km s-min=12.7km az=128.0*
*RSNC **01** 01:35:42.7±1.0, 5°27N×73°72W, h150km±3km, ML3.2*
ISC 01 01:35:41.2±0.9, 5°29N±0°03×73°72W±0°04, h162km±6km, n36, σ1§29/59, 4C-3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.50**	**315⇑**	*i*P	**Pn**	**01 36 04.0**	**0.0**
SPBC				*e*S	**Sn**	**01 36 20.1**	**-1.5**
SPBC				*i*		01 36 21.7	
	comp=Z,670nm,0.3s						
CHIC	**Chingaza**	**0.66**	**181**	*e*P	**Pn**	**01 36 05.2**	**-0.1**
CHIC				*e*S	**Sn**	**01 36 21.9**	**-1.9**
CHIC				*i*		01 36 24.9	
	comp=Z,339nm,0.6s						
ROSC	**El Rosal**	**0.75**	**233**	P	**Pn**	**01 36 06.8**	**+1.0**
	comp=Z,457nm,0.4s,baz=89,slow=5.3,SNR=192						
ROSC				S	**Sn**	**01 36 23.9**	**-0.7**
	comp=Z,482nm,0.5s,baz=27,slow=22,SNR=10						
ROSC	**El Rosal**	**0.75**	**233⇑**	*i*P	**Pn**	**01 36 06.8**	**+1.0**
ROSC				*e*S	**Sn**	**01 36 25.1**	**+0.5**
ROSC				*i*		01 36 28.2	
	comp=Z,487nm,0.3s						
RUSC	**La Rusia**	**0.86**	**47⇓**	*i*P	**Pn**	**01 36 07.3**	**+0.7**
RUSC				*e*S	**Sn**	**01 36 25.7**	**-0.5**
RUSC				*i*		01 36 28.3	
	comp=Z,190nm,0.4s						
VILC	**Villavicencio,**	**1.18**	**179**	*e*P	**Pn**	**01 36 08.5**	**-0.3**
VILC				*e*S	**Sn**	**01 36 28.7**	**-1.3**
NORC	**Norcasia**	**1.18**	**283**	*e*P	**Pn**	**01 36 08.7**	**0.0**
NORC				*e*S	**Sn**	**01 36 28.6**	**-1.2**
NORC				*i*		01 36 30.6	
	comp=Z,237nm,0.3s						
BARC	**Barichara**	**1.39**	**22**	*e*P	**Pn**	**01 36 11.0**	**+0.1**
BARC				*e*S	**Sn**	**01 36 32.8**	**-1.0**
BARC				*i*		01 36 40.0	
	comp=Z,210nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.44**	**329**	*e*P	**Pn**	**01 36 10.7**	**-0.4**
PTBC				*e*S	**Sn**	**01 36 32.5**	**-1.7**
PTBC				*i*		01 36 47.9	
	comp=Z,167nm,0.6s						
GUY2C	**Guyana, Caldas**	**1.64**	**268**	*e*P	**Pn**	**01 36 13.8**	**+0.1**
GUY2C				*e*S	**Sn**	**01 36 40.3**	**+1.7**
GUY2C				*i*		01 36 46.3	
	comp=Z,58nm,0.3s						
BRRC	**Barranca, Sant**	**1.80**	**0**	*e*P	**Pn**	**01 36 15.9**	**+1.1**
BRRC				*e*S	**Sn**	**01 36 40.9**	**0.0**
BRRC				*i*		01 36 44.8	
	comp=Z,133nm,0.4s						
ANIL	**Santa Ana**	**1.86**	**245⇑**	*e*P	**Pn**	**01 36 15.9**	**+0.1**
ANIL				*e*S	**Sn**	**01 36 41.7**	**-0.8**
ANIL				*i*		01 36 47.9	
	comp=Z,214nm,0.2s						
PTGC	**Puerto Gaitan,**	**1.92**	**125⇓**	*i*P	**Pn**	**01 36 16.3**	**+0.2**
PTGC				*e*S	**Sn**	**01 36 41.1**	**-2.0**
PTGC				*i*		01 36 43.9	
	comp=Z,138nm,0.3s						
HELC	**Santa Helena**	**2.01**	**296⇑**	*e*P	**Pn**	**01 36 18.0**	**+0.4**
HELC				*e*S	**Sn**	**01 36 44.7**	**-0.9**
HELC				*i*		01 36 47.0	
	comp=Z,172nm,0.4s						
TAMC	**Tame, Arauca**	**2.23**	**59**	*e*P	**Pn**	**01 36 21.0**	**+1.3**
TAMC				*e*S	**Sn**	**01 36 49.3**	**-0.2**
TAMC				*i*		01 36 51.3	
	comp=Z,75nm,0.4s						
PAMC	**Pamplona, Colo**	**2.27**	**26**	*e*P	**Pn**	**01 36 21.3**	**+0.7**
PAMC				*e*S	**Sn**	**01 36 51.8**	**+0.6**
PAMC				*i*		01 36 54.1	
	comp=Z,78nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.35**	**284**	*e*P	**Pn**	**01 36 22.1**	**+0.8**
CBOC				*e*S	**Sn**	**01 36 52.3**	**0.0**
CBOC				*i*		01 36 59.3	
	comp=Z,29nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.46**	**333**	*e*P	**Pn**	**01 36 21.6**	**-0.9**
ZARC				*e*S	**Sn**	**01 36 52.9**	**-1.5**
ZARC				*i*		01 36 59.0	
	comp=Z,98nm,0.3s						
PLMC	**San Jos del P**	**2.59**	**262**	*e*P	**Pn**	**01 36 25.2**	**+1.2**
PLMC				*i*		01 37 00.3	
	comp=Z,24nm,0.3s						
YOTC	**Yotoco, Valle**	**2.93**	**244**	*e*P	**Pn**	**01 36 28.1**	**-0.2**
OCAC	**Ocana**	**2.95**	**8**	*e*P	**Pn**	**01 36 29.7**	**+1.1**
OCAC				*e*S	**Sn**	**01 37 05.2**	**-0.2**
OCAC				*i*		01 37 12.2	
	comp=Z,168nm,0.5s						
DBBC	**Dabeiba**	**3.01**	**305**	*e*P	**Pn**	**01 36 30.6**	**+1.3**
UREC	**San Jos de Ur**	**3.04**	**324**	*e*P	**Pn**	**01 36 28.2**	**-1.3**
UREC				*e*S	**Sn**	**01 37 04.4**	**-2.7**
UREC				*i*		01 37 06.2	
	comp=Z,88nm,0.2s						
BETC	**Betania**	**3.12**	**214**	*e*P	**Pn**	**01 36 30.3**	**-0.2**
MACC	**Macarena, Meta**	**3.13**	**182⇓**	*e*P	**Pn**	**01 36 30.1**	**-0.7**
MACC				*e*S	**Sn**	**01 37 06.3**	**-3.0**
MACC				*i*		01 37 10.8	
	comp=Z,39nm,0.5s						
GARC	**Garzon, Huila**	**3.56**	**210**	*e*P	**Pn**	**01 36 36.0**	**-0.3**
GARC				*i*		01 37 49.1	
	comp=Z,44nm,0.3s						
POPC	**Popayan, Colom**	**4.03**	**227**	*e*P	**Pn**	**01 36 43.3**	**+0.9**
FLOC	**Florencia**	**4.16**	**208**	*e*P	**Pn**	**01 36 44.4**	**+0.5**
ARGC	**Ariguani, Magd**	**4.56**	**353**	*e*S	**Sn**	**01 37 42.5**	**+0.2**
SDV	**Santo Domingo**	**4.70**	**40**	P	**Pn**	**01 36 51.9**	**+0.9**
	comp=Z,10.0nm,0.3s,baz=246,slow=12,SNR=9.6						
SDV				S	**Sn**	**01 37 44.7**	**-0.9**
	comp=Z,32nm,0.6s,baz=275,slow=18,SNR=18						
BBAC	**Balboa, Cauca**	**4.79**	**227**	*e*P	**Pn**	**01 36 54.2**	**+1.8**
SJCC	**San Jacinto, C**	**4.80**	**342**	*e*P	**Pn**	**01 36 50.7**	**-1.6**
SJCC				*i*		01 37 46.7	
	comp=Z,35nm,0.5s						
CRJC	**Cerrejon, Guaj**	**5.75**	**8**	*e*P	**Pn**	**01 37 04.2**	**-0.6**
CRJC				*e*S	**Sn**	**01 38 05.5**	**-4.9**
CRJC				*i*		01 38 09.9	
	comp=Z,20nm,0.2s						
SIV	**San Ignacio**	**24.57**	**150**	P	**P**	**01 40 48.0**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=328,slow=15,SNR=2.0						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.63**	**78**	P	**P**	**01 47 03.8**	**+0.6**
	comp=Z,13nm,0.6s,baz=274,slow=8.3,SNR=1.7						
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**149.07**	**239**	PKPbc	**PKPbc**	**01 55 11.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.7,SNR=2.0						

*IDC **01** 01:58:34.9±6.3, 20°5S±0°4×178°8W±0°2, h400km, n6, σ1§08/6, mb3.3/3, Fiji Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.05**	**312**	P	**Pn**	**01 59 47.5**	**-0.1**
	14nm,0.9s,baz=134,slow=14,SNR=6.8						
ASAR	**Alice Springs**	**43.78**	**257**	P	**P**	**02 06 03.0**	**-0.4**
	0.9nm,0.6s,baz=96,slow=7.4,SNR=12						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**43.85**	**262**	P	**P**	**02 06 04.6**	**+0.7**
	2.4nm,0.9s,baz=90,slow=8.2,SNR=31						
	2.4nm,0.9s						
TXAR	**Lajitas Array**	**87.69**	**58**	P	**P**	**02 10 40.1**	**+0.3**
	0.3nm,0.8s,baz=198,slow=5.5,SNR=3.5						
	0.3nm,0.8s						
AKASG	**Malin Array Be**	**142.65**	**330**	PKP	**PKPdf**	**02 17 19.5**	**-1.4**
	0.6nm,0.5s,baz=34,slow=3.4,SNR=4.2						
BRTR	**Keskin Array B**	**146.28**	**312**	PKPbc	**PKPbc**	**02 17 30.6**	**+0.9**
	0.5nm,0.9s,baz=141,slow=4.1,SNR=4.1						

*IDC **01** 02:12:33.2±1.9, 0°01N×125°82E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=168.2km s-min=26.0km az=64.0*
*DJA **01** 02:12:38.0±0.5, 0°N±5°×12°6E±°, h10km, M3.4/7, MLv3.4/7*
ISC 01 02:12:40.0±1.3, 0°2N±0°1×125°92E±0°07, h44km, n11, σ1§55/13, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.77**	**117**	P	**Pn**	**02 13 08.4**	**+0.2**
KMSI	**Cibinong**	**1.98**	**282**	P	**Pn**	**02 13 11.2**	**+0.1**
SANI	**Sanana**	**2.20**	**178**	P	**Pn**	**02 13 13.9**	**-0.2**
SANI				S	**Sn**	**02 13 42.2**	**+2.0**
GTOI	**Gorontalo**	**2.95**	**279**	P	**Pn**	**02 13 25.6**	**+1.2**
GTOI				S	**Sn**	**02 14 00.5**	**+1.9**
LUWI	**Luwuk**	**3.37**	**249**	P	**Pn**	**02 13 30.2**	**0.0**
APSI	**Ampana**	**4.41**	**256**	P	**Pn**	**02 13 43.9**	**-0.5**
MSAI	**Masohi**	**4.61**	**139**	P	**Pn**	**02 13 48.9**	**+1.8**
EDFI	**Ende, Flores**	**9.81**	**205**	P	**Pn**	**02 14 58.9**	**+0.2**
WRA	**Warramunga Arr**	**21.62**	**158**	P	**P**	**02 17 23.8**	**-2.8**
	0.7nm,0.5s,baz=336,slow=10,SNR=15						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**24.93**	**162**	P	**P**	**02 17 57.4**	**-1.9**
	0.3nm,0.5s,baz=344,slow=7.8,SNR=8.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**60.04**	**327**	P	**P**	**02 22 42.5**	**0.0**
	0.4nm,0.4s,baz=126,slow=7.4,SNR=5.5						
	0.4nm,0.4s						

*MOS **01** 02:33:02.0±1.0, 13°11S×167°14E, h214km, mb5.3/34, MS4.4/4, Error ellipse: s-maj=8.5km s-min=7.0km az=114.6*
*NEIC **01** 02:33:02.4±1.6, 13°11S±0°04×167°20E±0°08, h206km±4km, mb5.1/209, Error ellipse: s-maj=12.3km s-min=4.1km az=69.0*
*IDC **01** 02:33:03.2±0.4, 13°17S×167°22E, h218km±3km, mb4.7/44, mbtmp5.2/46, Error ellipse: s-maj=7.4km s-min=6.4km az=158.0*
*NOU **01** 02:33:05.1, 13°18S×167°11E, h225km, ML5.0/106, Vanuatu Islands*
*GCMT **01** 02:33:05.4±0.1, 13°19S±0°01×167°11E±0°01, h224km, MW5.4/152, Moment Tensor Solution. s118,c192; s152,c249; Duration: 1§2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.98±.02; $M_{\theta\theta}$-0.25±.02; $M_{\phi\phi}$-0.73±.02; $M_{r\theta}$0.34±.02; $M_{\theta\phi}$0.51±.02; $M_{\phi r}$-1.29±.02; Best double couple: $M_0$1.67900×10^{17} NP1:ϕ_s162.00000°, δ72.00000°, λ99.00000°. NP2:ϕ_s314.00000°, δ20.00000°, λ64.00000°. Principal axes: T 1.6750, Plg62.0000°, Azm86.0000°; N 0.0070, Plg9.0000°, Azm339.0000°; P -1.6820, Plg26.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 02:33:03.5±0.3, 13°24S±0°04×167°22E±0°04, h225km±2km, h226km:pP-P, n1131, σ1§34/1194, mb5.1/189, 67C-58D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**4.56**	**168**	P	**Pn**	**02 34 15.0**	**+1.9**
RTV	**Rentapao**	**4.67**	**166**	P	**Pn**	**02 34 17.9**	**+3.4**
LIFNC	**LIFOU**	**7.50**	**180**	Pn	**Pn**	**02 34 48.6**	**-1.7**
LIFNC	**LIFOU**	**7.50**	**180**	P	**Pn**	**02 34 51.1**	**+0.8**
KOUNC	**Koumac, New Ca**	**7.79**	**201**	Pn	**Pn**	**02 34 55.4**	**+1.3**
KOUNC	**Koumac, New Ca**	**7.79**	**201**	P	**Pn**	**02 34 56.8**	**+2.7**
MARNC	**Mare, Loyalty**	**8.23**	**175**	Pn	**Pn**	**02 34 59.7**	**0.0**
MARNC	**Mare, Loyalty**	**8.23**	**175**	P	**Pn**	**02 35 00.4**	**+0.7**
	3.2nm,1.1s						
YATNC	**Mamie plateau,**	**8.78**	**182**	P	**Pn**	**02 35 09.0**	**+2.2**
DZM	**Mont Dzumac**	**8.81**	**185**	*e*Pn	**Pn**	**02 35 07.3**	**0.0**
	199nm,1.1s						
DZM				*e*Sn	**S**	**02 36 47.5**	**+0.6**
	306nm,1.5s						
DZM				*e*LR	LR	02 37 10.0	
	comp=Z,1μm,25.4s						
DZM	**Mont Dzumac**	**8.81**	**185**	P	**Pn**	**02 35 09.1**	**+1.8**
	50nm,0.9s,baz=309,slow=1.4,SNR=31						
DZM				S	**S**	**02 36 45.6**	**-1.2**
	12nm,0.4s,baz=17,slow=19,SNR=0.9						
DZM	**Mont Dzumac**	**8.81**	**185**	Pn	**Pn**	**02 35 08.5**	**+1.2**
DZM	**Mont Dzumac**	**8.81**	**185**	P	**Pn**	**02 35 09.7**	**+2.4**
NOUC	**Port Laguerre**	**8.86**	**186**	P	**Pn**	**02 35 10.0**	**+2.2**
ONTNC	**Ouen Toro**	**9.05**	**185**	Pn	**Pn**	**02 35 11.3**	**+1.0**
ONTNC	**Ouen Toro**	**9.05**	**185**	P	**Pn**	**02 35 12.4**	**+2.2**
	205nm,1.0s						
OUENC	**Ouen Island, N**	**9.13**	**182**	Pn	**Pn**	**02 35 12.6**	**+1.3**
OUENC	**Ouen Island, N**	**9.13**	**182**	P	**Pn**	**02 35 13.3**	**+1.9**
PINNC	**Pines Island,**	**9.32**	**179**	Pn	**Pn**	**02 35 14.6**	**+0.8**
PINNC	**Pines Island,**	**9.32**	**179**	P	**Pn**	**02 35 16.0**	**+2.2**
	290nm,1.3s						
MSVF	**Nonsavu**	**11.35**	**115**	P	**P**	**02 35 43.5**	**-1.0**
	48nm,0.9s,baz=270,slow=7.5,SNR=21						
MSVF	**Nonsavu**	**11.35**	**115**	Pn	**P**	**02 35 47.3**	**+2.8**
MSVF	**Nonsavu**	**11.35**	**115**	*e*P	**P**	**02 35 44.1**	**-0.4**
MSVF	**Nonsavu**	**11.35**	**115**	P	**P**	**02 35 44.8**	**+0.3**
FUNA	**Funafuti**	**12.66**	**69**		**Pn**	**02 35 56.3**	**+0.2**
FUNA	**Funafuti**	**12.66**	**69**	P	**P**	**02 36 00.7**	**+1.7**
	968nm,1.0s						
TAVE	**Taveuni**	**12.91**	**107**	P	**P**	**02 36 02.3**	**+0.6**
FUTU	**Fugatoga**	**14.28**	**96**	P	**P**	**02 36 21.4**	**+4.4**
	228nm,1.2s						
LKBA	**Tubou, Lakemba**	**14.33**	**112**	P	**P**	**02 36 20.3**	**+2.8**
	3.4nm,1.3s						
TARA	**Tarawa**	**15.56**	**22**	P	**P**	**02 36 29.9**	**-1.3**
TARA	**Tarawa**	**15.56**	**22**	P	**Pn**	**02 36 33.4**	**+1.8**
	117nm,1.3s						
RABL	**Rabaul**	**17.38**	**300**	P	**P**	**02 36 50.2**	**-0.9**
KRVT	**Keravat (AS076**	**17.43**	**299**	P	**P**	**02 36 52.4**	**+0.7**
	73nm,0.5s,baz=137,slow=11,SNR=4.7						
KRVT				S	**S**	**02 40 04.0**	**+2.7**
	100nm,0.8s,baz=158,slow=19,SNR=1.5						
RK1H	**Rockhampton Ha**	**18.80**	**235**	P	**Pn**	**02 37 08.1**	**-1.6**
	208nm,0.9s						
EIDS	**Eidsvold**	**19.41**	**229**	P	**P**	**02 37 14.8**	**+1.9**
	baz=20,SNR=78						
EIDS	**Eidsvold**	**19.41**	**229**	P	**P**	**02 37 14.4**	**+1.5**
EIDS	**Eidsvold**	**19.41**	**229**	P	**Pn**	**02 37 15.0**	**-1.9**
PMG	**Port Moresby**	**20.03**	**279**	P	**P**	**02 37 20.0**	**+0.3**
	114nm,0.8s,baz=83,slow=6.1,SNR=5.1						
PMG				S	**S**	**02 40 54.7**	**+2.2**
	8.9nm,0.7s,baz=108,slow=20,SNR=1.9						
PMG				ScP	**ScP**	**02 44 43.0**	**+2.4**
	6.1nm,0.5s,baz=9.5,slow=6.1,SNR=3.9						
	114nm,0.8s						
PMG	**Port Moresby**	**20.03**	**279**	P	**P**	**02 37 19.3**	**-0.4**
PMG				ScP	**ScP**	**02 44 42.4**	**+1.8**
PMG	**Port Moresby**	**20.03**	**279**	P	**P**	**02 37 20.6**	**+0.9**
AFI	**Afiamalu**	**20.43**	**94**	P	**P**	**02 37 25.1**	**+1.1**
	306nm,0.9s,baz=235,slow=2.8,SNR=40						
	306nm,0.9s						
AFI	**Afiamalu**	**20.43**	**94**	P	**P**	**02 37 23.8**	**-0.2**
AFI	**Afiamalu**	**20.43**	**94**	P	**P**	**02 37 23.8**	**-0.2**
AFI				pmax	pmax		
	comp=Z,342nm,0.9s						
AFI	**Afiamalu**	**20.43**	**94**	P	**P**	**02 37 25.0**	**+1.0**
	comp=Z,424nm,1.0s						
CTA	**Charters Tower**	**21.20**	**248**	P	**P**	**02 37 32.4**	**+0.4**
	comp=Z,136nm,0.8s,baz=73,slow=11,SNR=113						
CTA				S	**S**	**02 41 14.2**	**+1.0**
	comp=Z,7.9nm,0.9s,baz=90,slow=20,SNR=2.0						
CTA				ScP	**ScP**	**02 44 45.4**	**+2.0**
	comp=Z,14nm,0.9s,baz=344,slow=2.3,SNR=8.1						
	comp=Z,136nm,0.8s						
CTA	**Charters Tower**	**21.20**	**248**	P	**P**	**02 37 32.9**	**+0.9**
CTAO	**Charters Tower**	**21.20**	**248**	P	**P**	**02 37 31.3**	**-0.6**
CTAO				ScP	**ScP**	**02 44 44.3**	**+0.9**
CTAO	**Charters Tower**	**21.20**	**248**	P	**P**	**02 37 32.8**	**+0.8**
RMQ	**Roma**	**21.76**	**230**	P	**P**	**02 37 38.9**	**+1.5**
	baz=22,SNR=353						
RMQ	**Roma**	**21.76**	**230**	P	**P**	**02 37 39.5**	**+2.1**
PATS	**Pohnpei**	**21.82**	**336**	P	**P**	**02 37 38.2**	**+0.1**
	baz=22,SNR=12						
PATS	**Pohnpei**	**21.82**	**336**	P	**P**	**02 37 37.4**	**-0.6**
PATS	**Pohnpei**	**21.82**	**336**	P	**P**	**02 37 38.1**	**+0.1**
	comp=Z,315nm,1.4s						
ARMA	**Armidale**	**22.35**	**218**	P	**P**	**02 37 44.5**	**+1.6**
	baz=22,SNR=23						
ARMA	**Armidale**	**22.35**	**218**	P	**P**	**02 37 44.6**	**+1.6**
ARMA	**Armidale**	**22.35**	**218**	P	**P**	**02 37 45.1**	**+2.1**
MTSU	**Mount Surprise**	**22.57**	**255**	P	**P**	**02 37 46.3**	**+1.3**
	baz=23,SNR=153						
MTSU	**Mount Surprise**	**22.57**	**255**	P	**P**	**02 37 46.2**	**+1.1**
	comp=Z,150nm,1.1s						
MANU	**Manus Island**	**22.58**	**298**	P	**P**	**02 37 44.7**	**-0.4**
MANU				IAmb	IAmb	02 37 46.4	
	comp=Z,57nm,1.0s						
OUZ	**Omahuta**	**22.63**	**166**	P	**P**	**02 37 46.9**	**+1.6**
OUZ	**Omahuta**	**22.63**	**166**	P	**P**	**02 37 48.0**	**+2.7**
NIUE	**Niue**	**22.69**	**108**	P	**P**	**02 37 47.2**	**+1.1**
	baz=23,SNR=8.3						
NIUE	**Niue**	**22.69**	**108**	P	**P**	**02 37 46.8**	**+0.7**
NIUE	**Niue**	**22.69**	**108**	P	**P**	**02 37 49.2**	**+3.1**
	comp=Z,616nm,1.3s						
COEN	**Coen**	**23.38**	**265**	P	**P**	**02 37 53.6**	**+1.2**
	baz=23,SNR=53						
COEN	**Coen**	**23.38**	**265**	P	**P**	**02 37 52.8**	**+0.4**
COEN				ScP	**ScP**	**02 44 49.9**	**+0.8**
COEN	**Coen**	**23.38**	**265**	P	**P**	**02 37 54.2**	**+1.8**
NTLH	**Newcastle Hard**	**24.16**	**213**	P	**P**	**02 38 01.6**	**+2.3**
	comp=Z,217nm,0.9s						
MGCD	**Mangrove Creek**	**24.72**	**214**	P	**P**	**02 38 06.4**	**+2.1**
	baz=25,SNR=9.3						
MGCD	**Mangrove Creek**	**24.72**	**214**	P	**P**	**02 38 06.7**	**+2.4**
RIV	**Riverview**	**25.17**	**213**	P	**P**	**02 38 10.7**	**+2.3**
	baz=25,SNR=3.2						
QLP	**Quilpie**	**25.30**	**235**	P	**P**	**02 38 10.6**	**+0.9**
	baz=25,SNR=29						
QLP	**Quilpie**	**25.30**	**235**	P	**P**	**02 38 10.8**	**+1.1**
HIZ	**Hauiti**	**26.07**	**166**	P	**P**	**02 38 17.7**	**+1.3**
HIZ				IAmb	IAmb	02 38 20.7	
	comp=Z,62nm,1.0s						
HIZ	**Hauiti**	**26.07**	**166**	P	**P**	**02 38 19.8**	**+3.4**
	comp=Z,273nm,1.5s						
URZ	**Urewera**	**26.43**	**162**	P	**P**	**02 38 21.6**	**+2.1**
	comp=Z,34nm,0.8s,baz=84,slow=2.3,SNR=14						
URZ				PcP	**PcP**	**02 41 38.6**	**-0.2**
	comp=Z,17nm,0.8s,baz=78,slow=3.3,SNR=4.0						
	comp=Z,34nm,0.8s						
URZ	**Urewera**	**26.43**	**162**	P	**P**	**02 38 21.9**	**+2.4**
CMSA	**Cobar Meteorol**	**26.89**	**224**	P	**P**	**02 38 24.2**	**+0.5**
	baz=27,SNR=51						
CMSA	**Cobar Meteorol**	**26.89**	**224**	P	**P**	**02 38 24.5**	**+0.7**
BKZ	**Black Stump Fm**	**27.09**	**164**	P	**P**	**02 38 27.4**	**+1.8**
CNB	**Canberra Magne**	**27.26**	**213**	P	**P**	**02 38 28.6**	**+1.5**
	baz=27,SNR=34						
CNB	**Canberra Magne**	**

comp=Z,81nm,1.0s,baz=85,slow=9.2,SNR=313
WRA pP **pP** 02 39 53.9 -1.8
comp=Z,23nm,0.9s,baz=85,slow=9.1,SNR=4.5
WRA PP **PP** 02 40 31.6 +3.5
comp=Z,23nm,1.0s,baz=80,slow=10,SNR=8.8
WRA S **S** 02 44 02.3 -4.3
comp=Z,6.6nm,0.9s,baz=81,slow=15,SNR=9.2
WRA ScP **ScP** 02 45 17.8 +1.7
comp=Z,37nm,1.1s,baz=81,slow=3.4,SNR=28
WRA PKiKP **PKiKP** 02 49 20.4 -1.2
comp=Z,2.4nm,1.0s,baz=349,slow=0.4,SNR=6.6
comp=Z,81nm,1.0s
WRA Warramunga Arr 32.17 254 P **P** 02 39 09.1 -1.5
WRA PcP **PcP** 02 41 53.5 -0.4
WRA S **S** 02 44 03.7 -2.9
WRA ScP **ScP** 02 45 17.7 +1.7
WRA Warramunga Arr 32.17 254 *i* P **P** 02 39 09.6 -0.9
WRA pmax pmax
comp=Z,80nm,1.0s
ARPS Mount Arapiles 32.64 220 P **P** 02 39 15.6 +1.2
baz=33,SNR=6.6
ARPS Mount Arapiles 32.64 220 P **P** 02 39 15.6 +1.2
comp=Z,75nm,0.9s
HTT Hallett 32.67 227 P **P** 02 39 15.5 +0.8
baz=33,SNR=47
HTT Hallett 32.67 227 P **P** 02 39 16.0 +1.2
OOD Oodnadatta 32.77 239 P **P** 02 39 16.0 +0.4
AS31 Alice Springs 33.18 247 P **P** 02 39 18.7 -0.6
AS31 IAmb IAmb 02 39 19.8
comp=Z,33nm,0.7s
AS31 S **S** 02 44 19.5 -2.7
AS31 ScP **ScP** 02 45 20.0 +0.5
ASAR Alice Springs 33.18 247 P **P** 02 39 18.8 -0.6
comp=Z,67nm,0.6s,baz=76,slow=9.1,SNR=819
ASAR PcP **PcP** 02 41 55.2 -1.5
comp=Z,4.8nm,0.6s,baz=78,slow=2.9,SNR=6.1
ASAR S **S** 02 44 19.9 -2.4
comp=Z,18nm,1.1s,baz=76,slow=16,SNR=16
ASAR ScP **ScP** 02 45 21.1 +1.5
comp=Z,41nm,0.9s,baz=84,slow=3.4,SNR=46
ASAR PKiKP **PKiKP** 02 49 20.4 -1.9
comp=Z,1.2nm,1.0s,baz=105,slow=1.4,SNR=5.2
comp=Z,67nm,0.6s
WHYH Whyalla 33.45 229 P **P** 02 39 22.1 +0.7
comp=Z,110nm,0.8s
TWOA Tennyson Woods 33.76 225 P **P** 02 39 24.4 +0.3
comp=Z,95nm,0.8s
KDU Kakadu 33.85 267 P **P** 02 39 25.1 0.0
baz=34,SNR=55
KDU Kakadu 33.85 267 P **P** 02 39 25.2 +0.1
BBOO Buckleboo 34.47 230 P **P** 02 39 30.6 +0.4
baz=35,SNR=43
BBOO Buckleboo 34.47 230 P **P** 02 39 29.9 -0.4
BBOO Buckleboo 34.47 230 P **P** 02 39 30.6 +0.4
MULG Mulgathing 34.98 236 P **P** 02 39 34.3 -0.3
MTN Manton Dam 35.14 266 P **P** 02 39 36.8 +0.6
baz=35,SNR=5.9
MTN Manton Dam 35.14 266 P **P** 02 39 35.4 -0.7
MTN IAmb IAmb 02 39 38.6
comp=Z,82nm,1.0s
MTN S **S** 02 44 51.0 -1.4
MTN ScP **ScP** 02 45 25.7 -0.9
MTN Manton Dam 35.14 266 P **P** 02 39 36.4 +0.2
comp=Z,131nm,1.5s
SAUI Saumlaki 35.66 275 P **P** 02 39 40.0 -0.6
FAKI Fak Fak 36.06 283 P **P** 02 39 44.7 +0.7
KNRA Kununurra 37.29 261 P **P** 02 39 54.2 0.0
baz=37,SNR=88
KNRA Kununurra 37.29 261 P **P** 02 39 53.9 -0.4
KNRA Kununurra 37.29 261 P **P** 02 39 54.3 0.0
SIJI Sorong 37.67 286 P **P** 02 39 57.8 +0.3
comp=Z,32nm,0.7s,baz=82,slow=6.5,SNR=24
comp=Z,32nm,0.7s
BNDI Bandanaira 37.83 280 P **P** 02 39 59.5 +0.6
comp=Z,5μmcomp=Z,365nm,0.9s
BNDI Bandanaira 37.83 280 P **P** 02 39 59.4 +0.6
comp=Z,363nm,0.7s
WRKA Warakurna 38.47 246 P **P** 02 40 04.1 -0.1
baz=38,SNR=333
WRKA Warakurna 38.47 246 P **P** 02 40 04.2 +0.1
MSAI Masohi 39.09 281 P P 02 40 15.8 +6.5
FORT Forrest 40.03 238 P **P** 02 40 17.1 +0.3
baz=40,SNR=44
FORT Forrest 40.03 238 P **P** 02 40 16.8 -0.1
FORT Forrest 40.03 238 P **P** 02 40 17.2 +0.3
FITZ Fitzroy Crossi 40.26 258 P **P** 02 40 19.2 +0.3
comp=Z,24nm,0.7s,baz=78,slow=5.5,SNR=104
FITZ ScP **ScP** 02 45 47.9 +2.0
comp=Z,21nm,1.2s,baz=128,slow=12,SNR=5.8
comp=Z,24nm,0.7s
FITZ Fitzroy Crossi 40.26 258 P **P** 02 40 18.9 0.0
baz=40,SNR=69
FITZ Fitzroy Crossi 40.26 258 P **P** 02 40 18.4 -0.5
FITZ ScP **ScP** 02 45 46.5 +0.6
FITZ Fitzroy Crossi 40.26 258 P **P** 02 40 19.6 +0.6
NLAI Namlea 40.87 280 P **P** 02 40 24.9 +0.9
comp=Z,86nm,1.0s
LBMI Labuha 41.28 284 P **P** 02 40 28.1 +0.8
comp=Z,746nmcomp=Z,45nm,1.3s
PPT Papeete 41.81 102 P **P** 02 40 33.5 +1.9
comp=Z,40nm,0.9s,baz=233,slow=15,SNR=3.2
comp=Z,40nm,0.9s
PPT2 Papeete2 41.81 102 *e*P **P** 02 40 33.4 +1.8
comp=Z,72nm,22.8s
PPT2 Papeete2 41.81 102 *e*LR LR 02 52 27.1
comp=Z,215nm,25.2s
SOEI Soe 42.20 270 IAmb IAmb 02 40 53.9
comp=Z,46nm,0.8s
SOEI Soe 42.20 270 P **P** 02 40 36.5 +1.6
comp=Z,1μmcomp=Z,61nm,0.9s
SOEI Soe 42.20 270 P **P** 02 40 36.5 +1.6
comp=Z,62nm,0.9s
TBI Tubuai 42.20 110 *e*P **P** 02 40 36.4 +1.8
comp=Z,125nm,25.5s
TBI *e*pP **pP** 02 41 21.2 +0.1
TBI Tubuai 42.20 110 *e*LR LR 02 52 37.5
comp=Z,221nm,25.8s
SANI Sanana 42.27 282 P **P** 02 40 35.4 0.0
comp=Z,688nmcomp=Z,47nm,1.1s
SANI Sanana 42.27 282 P **P** 02 40 35.4 0.0
comp=Z,47nm,1.1s
BATI Baumata 42.72 269 P **P** 02 40 40.5 +1.5
comp=Z,126nm,0.5s,baz=146,slow=1.2,SNR=32
BATI ScP **ScP** 02 45 59.7 +3.9
comp=Z,15nm,0.4s,baz=286,slow=9.7,SNR=4.9
comp=Z,126nm,0.5s
BATI Baumata 42.72 269 P **P** 02 40 40.7 +1.7
comp=Z,1μmcomp=Z,138nm,0.9s
MIDW Midway 43.83 20 P **P** 02 40 48.4 +0.9
BBSI Bau Bau 44.66 276 P **P** 02 40 55.0 +0.6
comp=Z,35nm,1.4s
EDFI Ende, Flores 44.87 271 P **P** 02 40 55.4 -0.8
comp=Z,471nmcomp=Z,34nm,0.9s
LUWI Luwuk 45.64 282 P **P** 02 41 02.0 -0.1
LUWI IAmb IAmb 02 41 03.6
comp=Z,69nm,1.1s
LUWI ScP **ScP** 02 46 07.3 -0.5
PSA00 Pilbara Seismi 45.81 253 P **P** 02 41 03.2 -0.2
PSA00 IAmb IAmb 02 41 05.2
comp=Z,100nm,1.1s
PSA00 ScP **ScP** 02 46 08.2 -0.2
PSA00 Pilbara Seismi 45.81 253 P **P** 02 41 04.0 +0.6
MBWA Marble Bar 45.91 253 P **P** 02 41 04.2 +0.1
MBWA IAmb IAmb 02 41 06.0
comp=Z,134nm,1.1s
MBWA Marble Bar 45.91 253 P **P** 02 41 04.8 +0.7
MBWA Marble Bar 45.91 253 P **P** 02 41 03.5 -0.6
MBWA pP **pP** 02 41 50.9 -0.7
GTOI Gorontalo 45.94 284 P **P** 02 41 05.7 +1.3
comp=Z,6.5nm,0.9s
BSSI Bau Bau, Buton 46.54 274 P **P** 02 41 09.6 +0.5
comp=Z,395nmcomp=Z,28nm,1.7s
APSI Ampana 46.75 281 P **P** 02 41 12.1 +1.4
comp=Z,391nmcomp=Z,33nm,1.5s
JCJ Chichijima 46.89 329 P **P** 02 41 11.2 -0.2
comp=Z,82nm,0.6s,baz=272,slow=21,SNR=6.3
comp=Z,82nm,0.6s
JCJ Chichijima 46.89 329 P **P** 02 41 11.3 -0.2
comp=Z,180nm,1.0s
MRSI Marisa 46.90 283 P P 02 41 26.3 +14
BKSI Bulukumba 47.08 275 P **P** 02 41 13.4 +0.2
BNSI Bone 47.30 276 P **P** 02 41 15.8 +0.8
comp=Z,482nmcomp=Z,47nm,0.9s
MEEK Meekatharra 47.33 246 P **P** 02 41 15.5 +0.5
baz=47,SNR=84
MEEK Meekatharra 47.33 246 P **P** 02 41 16.0 +0.9

KAPI Kappang 47.51 275 P **P** 02 41 16.0 -0.5
KAPI ScP **ScP** 02 46 15.7 +0.1
KAPI Kappang 47.51 275 *d i*P **P** 02 41 16.7 +0.2
KAPI pmax pmax
comp=Z,52nm,1.0s
KAPI Kappang 47.51 275 P **P** 02 41 17.3 +0.8
comp=Z,58nm,1.3s
KAPI Kappang 47.51 275 P **P** 02 41 16.0 -0.5
KAPI pP **pP** 02 42 05.8 +1.7
SPSI Sidrap Palu 47.74 277 P **P** 02 41 18.0 -0.3
comp=Z,3μmcomp=Z,32nm,1.1s
TOLI2 Tolitoli 48.20 284 P **P** 02 41 20.9 -0.9
TOLI2 ScP **ScP** 02 46 19.9 +1.3
TOLI2 Tolitoli 48.20 284 P **P** 02 41 21.7 -0.2
comp=Z,18nm,0.8s
PLAI Plampang 48.67 270 P **P** 02 41 25.5 +0.1
comp=Z,1μmcomp=Z,84nm,1.1s
PLAI Plampang 48.67 270 P **P** 02 41 25.5 +0.1
OPA Opana 48.67 45 P **P** 02 41 24.9 -0.4
OPA Opana 48.67 45 P **P** 02 41 24.9 -0.4
OPA pmax pmax
comp=Z,264nm,1.1s
MPSI Mapaga 48.80 282 P **P** 02 41 25.9 -0.5
comp=Z,910nmcomp=Z,34nm,1.2s
KLBR Kellerberrin 48.80 240 P **P** 02 41 26.4 +0.2
baz=49,SNR=4.6
KLBR Kellerberrin 48.80 240 P **P** 02 41 26.4 +0.2
POHA Pohakuloa 49.19 49 P **P** 02 41 29.8 +0.3
comp=Z,135nm,1.2s
NWAO Narrogin (SRO) 49.48 238 P **P** 02 41 31.2 -0.2
comp=Z,52nm,0.8s,baz=305,slow=7.6,SNR=14
comp=Z,52nm,0.8s
NWAO Narrogin (SRO) 49.48 238 P **P** 02 41 31.2 -0.2
baz=50,SNR=11
NWAO P **P** 02 41 31.2 -0.2
baz=50,SNR=11
NWAO Narrogin (SRO) 49.48 238 P **P** 02 41 31.1 -0.2
BLDU Ballidu 49.52 241 P **P** 02 41 31.8 +0.1
TWSI Taliwang, Sumb 49.55 270 P **P** 02 41 32.1 -0.1
comp=Z,739nmcomp=Z,56nm,1.4s
MORW Morawa 49.88 243 P **P** 02 41 34.7 +0.3
baz=50,SNR=9.7
MORW Morawa 49.88 243 P **P** 02 41 34.4 0.0
MORW IAmb IAmb 02 41 35.9
comp=Z,73nm,0.9s
MORW Morawa 49.88 243 P **P** 02 41 34.9 +0.5
MUN Mundaring 50.16 239 P **P** 02 41 36.7 +0.2
baz=50
GIRL Giralia 51.05 252 P **P** 02 41 44.8 +1.6
baz=51,SNR=5.9
GIRL Giralia 51.05 252 P **P** 02 41 44.2 +1.0
IGBI Denpasar 51.23 269 P **P** 02 41 45.6 +0.9
comp=Z,135nm,1.0s
SRBI Singaraja 51.29 270 P **P** 02 41 45.9 +0.7
comp=Z,84nm,1.5s
JAGI Jajag, Banyuwa 52.26 269 IAmb IAmb 02 41 52.2
comp=Z,40nm,1.0s
JOW Kunigami 54.93 317 P **P** 02 42 12.5 +1.1
comp=Z,30nm,0.6s,baz=167,slow=9.0,SNR=12
comp=Z,30nm,0.6s
JOW Kunigami 54.93 317 P **P** 02 42 11.1 -0.4
JOW IAmb IAmb 02 42 13.3
comp=Z,38nm,0.6s
JOW Kunigami 54.93 317 P **P** 02 42 12.9 +1.5
PCJI Pacitan 55.20 269 P **P** 02 42 14.3 +0.7
comp=Z,131nm,0.8s
JYT Yasato 55.43 333 IAmb IAmb 02 42 15.9
comp=Z,54nm,0.9s
UGM Wanagama 55.89 269 P **P** 02 42 19.3 +0.7
INU Inuyama 56.16 330 P **P** 02 42 19.2 -0.8
INU IAmb IAmb 02 42 21.1
comp=Z,78nm,1.5s
INU Inuyama 56.16 330 P **P** 02 42 20.9 +0.9
comp=Z,34nm,1.3s
INU Inuyama 56.16 330 P **P** 02 42 18.6 -1.3
JGF Kuroka 56.20 331 P **P** 02 42 19.5 -0.8
JGF IAmb IAmb 02 42 20.9
comp=Z,18nm,0.6s
DRV Dumont d'Urvil 56.38 193 P **P** 02 42 17.8 -3.2
DRV pP **pP** 02 43 10.4 -0.5
JMM Marumori 56.56 335 IAmb IAmb 02 42 24.2
comp=Z,38nm,1.0s
MJAR Matsushiro Arr 56.57 332 P **P** 02 42 21.9 -1.0
comp=Z,24nm,1.0s,baz=162,slow=7.1,SNR=34
MJAR ScP **ScP** 02 46 57.5 +3.1
comp=Z,1.2nm,0.4s,baz=166,slow=3.9,SNR=5.1
comp=Z,24nm,1.0s
MAJO Matsushiro 56.57 332 P **P** 02 42 22.4 -0.5
MAJO IAmb IAmb 02 42 23.5
comp=Z,52nm,1.1s
MAJO Matsushiro 56.57 332 *c i*P **P** 02 42 22.4 -0.5
MAJO pmax pmax
comp=Z,60nm,1.4s
MAJO Matsushiro 56.57 332 P **P** 02 42 22.6 -0.3
comp=Z,47nm,1.0s
MAJO Matsushiro 56.57 332 pP pP 02 43 17.1 +4.4
MJB9 Matsu-Tunnel 56.58 332 IAmb IAmb 02 42 23.4
comp=Z,49nm,1.1s
JSU Suzuyama 56.77 322 IAmb IAmb 02 42 25.7
comp=Z,58nm,1.1s
JSD Sado 57.78 333 IAmb IAmb 02 42 32.8
comp=Z,71nm,1.1s
JHS Saijyo 57.86 327 IAmb IAmb 02 42 33.2
comp=Z,32nm,0.7s
JTM Tenmabayashi 58.96 337 IAmb IAmb 02 42 40.5
comp=Z,40nm,0.9s
ERM Erimo 59.28 339 P **P** 02 42 41.8 +0.3
TJN Taejon 62.04 324⇓ *e*P **P** 02 43 01.9 +1.7
KSRS Korea Array 62.49 325 P **P** 02 43 03.1 -0.1
comp=Z,11nm,1.0s,baz=141,slow=6.9,SNR=22
KSRS PcP **PcP** 02 43 40.9 +0.6
comp=Z,2.3nm,0.7s,baz=132,slow=5.4,SNR=4.4
comp=Z,11nm,1.0s
KSAR Wonju Array Be 62.50 325 P **P** 02 43 03.4 +0.1
KSAR Wonju Array Be 62.50 325 P **P** 02 43 03.4 +0.1
YSS Yuzh-Sakhalins 63.81 342 P **P** 02 43 12.6 +0.9
YSS Yuzh-Sakhalins 63.81 342 *e*P **P** 02 43 12.6 +0.9
YSS *e* 02 45 36.7
YSS *e*S **S** 02 51 28.2 -0.1
YSS pmax pmax
comp=Z,400nm,3.5s
YSS pmax pmax
comp=Z,110nm,1.1s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzh-Sakhalins 63.81 342 P **P** 02 43 13.1 +1.5
comp=Z,133nm,1.3s
YSS Yuzh-Sakhalins 63.81 342 P **P** 02 43 12.1 +0.5
YSS pP **PcP** 02 43 52.6 +7.2
TEY Ternei 64.30 336⇑ *e*P **P** 02 43 14.7 -0.1
TEY pmax pmax
comp=Z,100nm,2.1s
TEY pmax pmax
comp=N,10.0nm,1.6s
TEY pmax pmax
comp=E,10.0nm,1.6s
TEY pmax pmax
comp=Z,20nm,1.6s
VNDA Vanda 64.34 181 P **P** 02 43 15.6 +0.9
comp=Z,18nm,1.2s,baz=359,slow=6.5,SNR=37
comp=Z,18nm,1.2s
VNDA Vanda 64.34 181 P **P** 02 43 14.2 -0.5
SKR Severo-Kuril's 64.39 352 *e*P **P** 02 43 10.6 -4.7
SKR pmax pmax
comp=Z,100nm,8.0s
SKR pmax pmax
comp=Z,89nm,0.9s
NJ2 Nanjing 64.59 315⇓ *i*P **P** 02 43 17.9 +0.9
SBA Scott Base 64.62 180 P **P** 02 43 18.3 +1.8
SBA IAmb IAmb 02 43 19.8
comp=Z,62nm,1.1s
SBA Scott Base 64.62 180 P **P** 02 43 18.3 +1.8
SBA pmax pmax
comp=Z,62nm,1.1s
SBA Scott Base 64.62 180 P **P** 02 43 16.7 +0.2
QIZ Qiongzhong 64.98 298 P **P** 02 43 19.1 -0.8
QIZ pP **pP** 02 44 08.4 -1.5
QIZ S **S** 02 51 46.7 +2.9
QIZ sS **sS** 02 53 11.3 -1.9
AMKA Amchitka 65.20 8 P **P** 02 43 21.3 +0.8
USRK Ussuriysk Ar. 65.55 333 P **P** 02 43 24.2 +1.3
comp=Z,21nm,0.8s,baz=140,slow=6.2,SNR=53
USRK PcP **PcP** 02 43 53.5 +0.8
comp=Z,8.0nm,0.9s,baz=143,slow=2.8,SNR=4.1
comp=Z,21nm,0.8s
USRK Ussuriysk Ar. 65.55 333 P **P** 02 43 22.9 0.0

USRK PcP **PcP** 02 43 52.9 +0.2
SHEM Shemya Is, Ala 65.97 5 P **P** 02 43 25.8 +0.4
comp=Z,29nm,0.3s,baz=80,slow=1.2,SNR=6.1
comp=Z,29nm,0.3s
ADK Adak 66.34 11 P **P** 02 43 28.1 +0.3
ADK Adak 66.34 11 P **P** 02 43 28.1 +0.3
ADK pmax pmax
comp=Z,200nm,1.2s
ADK Adak 66.34 11 P **P** 02 43 29.6 +1.8
comp=Z,174nm,2.5s
CCD Concordia, Ant 66.34 191 P **P** 02 43 27.7 -0.4
PET Petropavlovsk 66.40 354 P **P** 02 43 28.2 +0.1
PET Petropavlovsk 66.40 354 *e*P **P** 02 43 28.7 +0.5
PET pmax pmax
comp=Z,118nm,1.5s
PET Petropavlovsk 66.40 354 P **P** 02 43 27.7 -0.5
PEA0B Petropavlovsk- 66.58 354 P **P** 02 43 29.5 +0.2
PEA0B Petropavlovsk- 66.58 354 P **P** 02 43 29.5 +0.2
PEA0B pmax pmax
comp=Z,162nm,1.3s
PETK Petropavlovsk- 66.58 354 P **P** 02 43 29.6 +0.2
comp=Z,44nm,0.8s,baz=167,slow=6.0,SNR=76
comp=Z,44nm,0.8s
MDJ Mudanjiang 66.95 332 P **P** 02 43 31.6 -0.3
MDJ IAmb IAmb 02 43 34.0
comp=Z,45nm,1.0s
MDJ Mudanjiang 66.95 332 P **P** 02 43 32.6 +0.7
MDJ S **S** 02 52 09.5 +2.9
MDJ ScS **SKiKP** 02 53 09.2 +0.3
MDJ Mudanjiang 66.95 332 P **P** 02 43 33.2 +1.3
comp=Z,53nm,1.3s
TYV Tymovskoe 67.34 343 *e*P **P** 02 43 34.4 +0.3
TYV *e*S **S** 02 52 09.0 -2.0
TYV pmax pmax
comp=Z,200nm,2.6s
TYV pmax pmax
comp=Z,50nm,1.4s
TYV smax smax
comp=N,600nm,5.6s
TYV smax smax
comp=E,400nm,5.6s
TIA Tai'an 68.20 318 *e*P **P** 02 43 39.6 -0.3
CN2 Changchun 68.35 329 *e*P **P** 02 43 41.4 +0.8
CN2 *e*sP sP 02 44 57.4 +1.0
CN2 *e*S **S** 02 52 23.9 +0.6
BNX BinXian 68.82 331⇑⇑P **P** 02 43 43.2 -0.2
BNX PcP **PcP** 02 44 05.4 -1.0
BNX pP **pP** 02 44 33.4 -1.8
BNX S **S** 02 52 28.0 -0.6
BNX ScS **ScS** 02 53 18.3 -3.5
BNX BinXian 68.82 331 sS sS 02 53 57.7 -1.6
BNX BinXian 68.82 331 SS SS 02 56 55.8 -3.1
NIKH Nikolski High 69.08 15 P **P** 02 43 44.3 -0.6
baz=205
GRNR Gornyy 69.19 340⇑ *i*P **P** 02 43 47.2 +1.6
GRNR *e*S **S** 02 52 35.6 +2.8
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=N,20nm,1.2s
GRNR pmax pmax
comp=Z,80nm,1.3s
GRNR smax smax
comp=E,4.0nm,0.7s
GRNR MLR MLR
comp=E,300nm,17.0s
GRNR MLR MLR
comp=N,180nm,13.0s
GRNR MLR MLR
comp=Z,150nm,15.0s
PSI Prapat 69.60 278 P **P** 02 43 48.5 -0.6
comp=Z,12nm,0.8s,baz=138,slow=4.0,SNR=11
comp=Z,12nm,0.8s
KLR Kul'dur 69.63 336 *c i*P **P** 02 43 49.1 +0.7
KLR pmax pmax
comp=Z,78nm,1.6s
ENH Enshi 70.39 309 P **P** 02 43 53.1 -0.4
ENH IAmb IAmb 02 43 54.4
comp=Z,64nm,1.3s
LYN LuoYang 70.41 314⇑⇑P **P** 02 43 52.5 -0.9
LYN pP pP 02 44 43.6 -1.6
LYN S **S** 02 52 45.3 -2.3
HNS HongShan 70.47 318⇑⇑P **P** 02 43 54.2 +0.5
HNS S **S** 02 52 48.7 +0.5
UNV Unalaska Valle 70.48 16 P **P** 02 43 52.2 -1.2
baz=207
GYA Guiyang 70.84 304⇓ *i*P **P** 02 43 57.1 +0.8
GYA pP pP 02 44 46.9 -1.1
GYA S **S** 02 52 54.8 +1.6
GYA SKS **ScS** 02 53 38.3 -0.6
BJT Baijiatuau 71.08 321 P **P** 02 43 57.5 +0.2
BJT IAmb IAmb 02 43 59.0
comp=Z,47nm,1.5s
BJT Baijiatuau 71.08 321 P **P** 02 43 57.5 +0.2
BJT pmax pmax
comp=Z,47nm,1.5s
BJI Beijing 71.08 321 P **P** 02 43 57.7 +0.4
BJI PcP **PcP** 02 44 17.2 +1.1
BJI S **S** 02 52 55.9 +0.7
BJI ScS **ScS** 02 53 43.4 +3.5
TIY Taiyuan 72.14 317⇓⇓P **P** 02 44 05.3 +1.5
TIY S **S** 02 53 11.2 +3.6
TIY Taiyuan 72.14 317 SS SS 02 57 42.6 -7.7
FALS False Pass 72.24 17 P **P** 02 44 04.0 +0.2
baz=210
SPIA Saint Paul Isl 72.60 13 P **P** 02 44 06.2 +0.2
baz=203
XAN Xi'an 72.66 312⇑⇑P **P** 02 44 07.2 +0.3
XAN pP pP 02 44 57.6 -1.5
XAN S **S** 02 53 12.2 -1.3
XLT XiLinHaoTe 73.48 324⇑ *i*P **P** 02 44 12.2 +0.7
XLT pP pP 02 45 02.0 -2.1
XLT sP sP 02 45 25.0 -3.0
XLT S **S** 02 53 21.8 -0.6
XLT XiLinHaoTe 73.48 324 sS sS 02 55 02.8 +8.9
KMI Kunming 73.49 301⇑⇑P **P** 02 44 13.3 +1.1
KMI pP pP 02 45 06.1 +2.0
KMI S **S** 02 53 26.0 +2.4
SDPT Sand Point 73.54 19 P **P** 02 44 11.1 -0.4
baz=213
MA2 Magadan 73.78 351 P **P** 02 44 12.5 -0.3
comp=Z,24nm,0.8s,baz=157,slow=6.6,SNR=11
comp=Z,24nm,0.8s
MA2 Magadan 73.78 351 P **P** 02 44 12.4 -0.4
MA2 IAmb IAmb 02 44 13.8
comp=Z,56nm,1.1s
MA2 Magadan 73.78 351 *c i*P **P** 02 44 12.1 -0.7
MA2 pmax pmax
comp=Z,83nm,2.5s
MA2 Magadan 73.78 351 P **P** 02 44 13.3 +0.5
comp=Z,58nm,1.3s
CM31 Chiang Mai Arr 74.31 294 P **P** 02 44 16.8 +0.1
CMAR Chiang Mai Arr 74.31 294 P **P** 02 44 18.4 +1.5
comp=Z,12nm,0.8s,baz=121,slow=4.3,SNR=46
CMAR pP **pP** 02 45 09.3 +0.8
comp=Z,4.7nm,0.9s,baz=116,slow=4.1,SNR=2.8
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 74.31 294 P **P** 02 44 17.6 +0.8
CMAR Chiang Mai Arr 74.31 294 *i* P **P** 02 44 18.3 +1.5
CMAR pmax pmax
comp=Z,13nm,0.8s
CHTO Chiang Mai 74.43 294 P **P** 02 44 17.5 0.0
CHTO Chiang Mai 74.43 294 P **P** 02 44 17.5 0.0
CHTO Chiang Mai 74.43 294 P **P** 02 44 18.5 +1.0
comp=Z,12nm,1.0s
HHC Hu-ho-hao-te 74.43 319 *e*P **P** 02 44 18.1 +1.0
HHC S **S** 02 53 35.2 +2.0
S14K Fog Glacier 74.61 18 P **P** 02 44 15.6 -2.2
baz=214
PZH PanZhiHua 74.86 302 P **P** 02 44 20.6 +0.6
PZH pP **pP** 02 45 14.5 +2.5
PZH S **S** 02 53 37.7 -0.9
ZEA Zeya 74.92 337 *e*P **P** 02 44 20.7 +1.2
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA pmax pmax
comp=Z,100nm,7.0s
HIA Hailar 74.98 330 P **P** 02 44 20.3 +0.3
HIA IAmb IAmb 02 44 21.5
comp=Z,89nm,1.5s
HIA Hailar 74.98 330 *c i*P **P** 02 44 20.3 +0.3
HIA pmax pmax

comp=Z,65nm,1.5s
CHGN Chignik 74.98 19 P P 02 44 17.5 -2.2
baz=215
CD2 Chengdu 75.07 307 eP P 02 44 21.2 +0.2
BTO Baotou 75.28 319 eP P 02 44 23.5 +1.5
BTO S S 02 53 42.3 -0.3
CHIR Chirikof Islan 75.52 21 P P 02 44 21.7 -1.2
baz=217
SII Sitkinak Islan 76.59 21 P P 02 44 28.6 -0.3
SII Sitkinak Islan 76.59 21 P P 02 44 28.6 -0.3
baz=219
SII Sitkinak Islan 76.59 21 P P 02 44 29.1 +0.2
comp=Z,246nm,1.0s
R17K Ugashik Creek 76.72 19 P P 02 44 28.6 -0.9
baz=216
QSPA South Pole Qui 76.78 180 P P 02 44 30.8 +0.7
SEY Seymchan 76.81 353 P P 02 44 29.9 -0.1
comp=Z,58nm,1.0s,baz=156,slow=12,SNR=56
comp=Z,58nm,1.0s
LZH Lanzhou 77.29 312 eP P 02 44 35.0 +1.5
LZH pP pwP 02 45 29.8 +1.0
LZH sP sP 02 45 59.1 +8.8
P16K Nushagak River 77.36 18 P P 02 44 32.4 -0.7
baz=215
Q17K Contact Creek 77.38 19 P P 02 44 32.4 -1.0
baz=217,SNR=8.6
OHAK Old Harbor 77.42 21 P P 02 44 33.2 -0.3
baz=219
Q16K King Salmon 77.48 18 P P 02 44 33.3 -0.5
baz=216,SNR=8.3
O16K Kokwok River B 77.80 17 P P 02 44 33.8 -1.7
baz=215
P17K Kvichak River 77.96 18 P P 02 44 34.7 -1.7
baz=216
Q18K Katmai Hardscr 77.97 19 P P 02 44 35.6 -1.0
baz=218,SNR=9.5
KDAK Kodiak Island 78.10 21 P P 02 44 35.9 -1.3
baz=220
O17K Koliganek Bris 78.24 18 P P 02 44 36.3 -1.6
baz=216
N16K Nishlik Lake 78.34 16 P P 02 44 38.3 -0.2
baz=214
GAMB Gambell 78.47 9 P P 02 44 38.7 -0.4
baz=201
P18K Big Mountain, 78.49 19 P P 02 44 38.1 -1.3
baz=217
Q19K Cape Douglas, 78.63 20 P P 02 44 39.2 -0.9
baz=219
Q20K Shuyak Island 78.80 20 P P 02 44 40.8 -0.2
baz=220
O18K Koktuh Hills 78.87 18 P P 02 44 40.4 -1.0
baz=217
N18K Kilae Creek 79.33 17 P P 02 44 43.7 -0.2
baz=216
P19K Oil Pt 79.33 19 P P 02 44 43.2 -0.7
baz=219
O19K Port Alsworth 79.41 18 P P 02 44 43.2 -1.1
baz=218
HOM Homer 79.85 20 P P 02 44 46.4 -0.2
baz=221
N19K Bonanza Creek 79.85 18 P P 02 44 45.5 -1.3
baz=218
O20K Slope Mountain 79.85 19 P P 02 44 45.2 -1.6
baz=220
BRSE Bradley Lake S 80.21 20 P P 02 44 48.0 -0.6
baz=221
ANM Nome 80.33 12 P P 02 44 49.7 +0.5
baz=207
YAK Yakutsk 80.60 343 P P 02 44 51.4 +0.8
comp=Z,22nm,0.6s,baz=97,slow=1.2,SNR=14
comp=Z,22nm,0.6s
YAK Yakutsk 80.60 343 P P 02 44 50.3 -0.4
YAK Yakutsk 80.60 343 eP P 02 44 50.2 -0.4
YAK eS S 02 54 36.6 -1.6
YAK e*SS sS 02 56 18.1 +6.1
YAK eSS SS 02 59 52.2 -4.4
YAK pmax pmax
comp=Z,137nm,1.1s
YAK pmax pmax
comp=N,37nm,1.0s
YAK pmax pmax
comp=E,17nm,1.0s
YAK smax smax
comp=E,44nm,2.1s
YAK smax smax
comp=N,32nm,1.4s
M19K Big River Lodg 80.74 17 P P 02 44 51.9 +0.4
baz=218
TNA Tin City 80.76 10 P P 02 44 51.1 -0.2
baz=204
L19K White Mountain 80.83 17 P P 02 44 51.6 -0.3
baz=217
N20K Mount Spurr 80.85 19 P P 02 44 50.1 -1.9
baz=220
SPCR Spurr Chakacha 80.85 19 P P 02 44 50.6 -1.5
baz=220
CAPN Captain Cook N 80.85 19 P P 02 44 52.0 0.0
baz=221
ULN Ulaanbaatar 80.91 324 P P 02 44 52.5 -0.4
ULN IAmb IAmb 02 44 54.6
comp=Z,62nm,1.1s
ULN Ulaanbaatar 80.91 324c iP P 02 44 53.1 +0.3
ULN pmax pmax
comp=Z,60nm,1.0s
SEW Seward 80.92 20 P P 02 44 51.1 -1.3
baz=223
M20K Styx River 81.10 18 P P 02 44 52.6 -0.8
baz=219
O22K Cooper Landing 81.10 20 P P 02 44 53.1 -0.2
baz=222
TTA Tatalina 81.11 16 P P 02 44 53.5 0.0
baz=216
SONM Songino Array 81.28 323 P P 02 44 55.1 +0.4
comp=Z,7.0nm,0.5s,baz=141,slow=6.2,SNR=69
SONM PKKPbc PKKPbc 03 03 28.8 -2.1
comp=Z,1.2nm,0.7s,baz=285,slow=2.8,SNR=6.4
comp=Z,7.0nm,0.5s
SONM Songino Array 81.28 323 IAmb IAmb 02 44 56.4
comp=Z,53nm,1.4s
L20K Farewell, AK 81.34 17 P P 02 44 54.4 -0.2
baz=218
SUA Susitna One 81.51 19 P P 02 44 55.5 -0.1
SUA Susitna One 81.51 19 P P 02 44 54.6 -1.0
baz=221
Q23K Middleton Isla 81.52 22 P P 02 44 54.1 -1.4
baz=226
RC01 Rabbit Creek A 81.55 20 P P 02 44 55.4 -0.3
baz=222
GTA Gaotai 81.61 314 ⇓P P 02 44 58.1 +1.4
GTA sP PcP 02 45 03.9 +2.0
SKT Skwentna 81.66 18 P P 02 44 55.5 -0.8
baz=220
PWL Port Wells 81.85 20 P P 02 44 56.9 -0.3
baz=224
M22K Willow 81.92 19 P P 02 44 56.5 -1.0
baz=222
K20K Telida 81.98 17 P P 02 44 58.1 +0.2
baz=218
PMR Palmer 82.12 19 P P 02 44 58.7 +0.1
PMR Palmer 82.12 19 P P 02 44 58.7 +0.1
PMR pmax pmax
comp=Z,73nm,0.9s
PMR Palmer 82.12 19 P P 02 44 57.9 -0.7
baz=223,SNR=6.6
PPLA Purkeypile 82.16 18 P P 02 44 57.5 -1.5
baz=220
KNK Knik Glacier 82.21 20 P P 02 44 58.9 -0.2
baz=223
GLI Glacier Island 82.28 21 P P 02 44 58.8 -0.7
baz=225
CUT Chulitna 82.36 19 P P 02 44 58.6 -1.3
baz=222
GCSA Galena City Sc 82.37 15 P P 02 44 58.8 -1.0
baz=215
EYAK Cordova Ski Ar 82.52 21 P P 02 45 00.3 -0.4
baz=226,SNR=6.3
SML Sawmill 82.54 20 P P 02 45 00.5 -0.4
baz=224
KAIM Kayak Island 82.57 22 P P 02 45 00.9 -0.1
baz=227,SNR=13
CAST Castle Rocks 82.59 17 P P 02 45 00.1 -1.0
baz=220,SNR=8.5
J20K Nowinta River 82.61 16 P P 02 45 00.9 -0.2
baz=216
M23K Glacier View 82.73 20 P P 02 45 01.1 -0.7
baz=224
CHUM Lake Minchumin 82.89 17 P P 02 45 01.0 -1.5
baz=220

SCM Sheep Creek Mo 82.89 20 P P 02 45 02.1 -0.6
SCM Sheep Creek Mo 82.89 20 P P 02 45 02.1 -0.6
SCM pmax pmax
comp=Z,152nm,0.8s
SCM Sheep Creek Mo 82.89 20 P P 02 45 02.4 -0.3
baz=224
KMPM Mount Pierce 82.90 46 IAmb IAmb 02 45 05.4
comp=Z,70nm,1.3s
KCPM Cahto Peak 82.99 47 P P 02 45 04.1 +0.3
HOPS Hopland Field 83.08 47 IAmb IAmb 02 45 05.7
comp=Z,96nm,1.4s
KMRM Mail Ridge 83.11 46 P P 02 45 04.4 +0.1
KMRM IAmb IAmb 02 45 06.4
comp=Z,49nm,1.1s
BOD Bodaibo 83.12 334 eP P 02 45 03.3 -0.5
BOD pmax pmax
comp=Z,68nm,1.5s
KLU Klutina 83.12 21 P P 02 45 03.3 -0.6
baz=226
TRF Thorofare Moun 83.14 18 P P 02 45 02.7 -1.4
baz=222
WAT1 Susitna Watana 83.22 19 P P 02 45 03.5 -0.8
baz=223
BMRM Bremner River 83.22 21 P P 02 45 03.6 -0.8
baz=227
MAW Mawson 83.24 202 P P 02 45 05.4 +1.1
comp=Z,9.1nm,0.8s,baz=105,slow=5.5,SNR=12
comp=Z,9.1nm,0.8s
MAW Mawson 83.24 202 P P 02 45 05.6 +1.2
baz=83,SNR=8.4
MAW Mawson 83.24 202 P P 02 45 04.7 +0.3
MAW Mawson 83.24 202 P P 02 45 04.7 +0.3
MAW pmax pmax
comp=Z,7.0nm,1.3s
KRPM Rodgers 83.27 45 IAmb IAmb 02 45 07.4
comp=Z,82nm,1.3s
WAT6 Susitna Watana 83.29 19 P P 02 45 04.4 -0.4
baz=224
KHMM Horse Mountain 83.36 45 IAmb IAmb 02 45 07.8
comp=Z,28nm,1.0s
BPAW Bear Paw Mtn. 83.43 17 P P 02 45 03.8 -1.6
baz=221
M24K Tolsona, Glenn 83.47 20 P P 02 45 05.3 -0.3
baz=225
KRMB Red Mountain 83.50 45 P P 02 45 07.0 +0.6
KRMB IAmb IAmb 02 45 08.4
comp=Z,57nm,1.4s
SNCC San Nicolas Is 83.63 54 P P 02 45 06.0 -1.1
baz=250
N25K Chitina, Valde 83.66 21 P P 02 45 06.0 -0.6
baz=227
MESA MESA 83.67 23 P P 02 45 06.4 -0.4
baz=229
MCK McKinley 83.76 18 P P 02 45 06.0 -1.0
baz=223,SNR=11
DHY Denali Highway 83.77 19 P P 02 45 06.2 -1.0
baz=224
DIB Dawson Inlet, 83.78 32 P P 02 45 07.7 +0.4
DIB IAmb IAmb 02 45 08.3
comp=Z,69nm,1.1s
SCZ2 Santa Cruz Isl 83.80 53 P P 02 45 07.4 -0.5
baz=250
SBC Santa Barbara 83.90 53 P P 02 45 08.6 +0.2
baz=250
HG4B Hotspring 83.97 33 IAmb IAmb 02 45 09.7
comp=Z,91nm,1.5s
PKM Mcpherson Peak 83.98 52 P P 02 45 08.3 -0.7
baz=249
I21K Tanana 83.98 16 P P 02 45 08.2 +0.1
I21K Tanana 83.98 16 P P 02 45 08.6 +0.5
baz=220,SNR=14
SMMC Simmler 83.99 52 P P 02 45 08.7 -0.2
baz=249
HARP HAARP 84.01 20 P P 02 45 07.7 -0.6
baz=226
GOMU GeErMu 84.02 309 P P 02 45 10.4 +1.0
GOMU pP pwP 02 46 07.7 +2.0
MCARA McCarthy VSAT 84.07 22 P P 02 45 07.8 -0.7
baz=228
H21K Melozitna Rive 84.13 16 P P 02 45 08.7 -0.2
baz=219,SNR=5.6
MLY Manley 84.21 17 P P 02 45 09.1 -0.2
MLY Manley 84.21 17 P P 02 45 08.7 -0.6
baz=221,SNR=8.8
PINM Pinnacle 84.27 24 P P 02 45 09.0 -0.8
baz=231
PAX Paxson 84.31 20 P P 02 45 09.1 -0.8
baz=226
ZAK Zakamensk 84.32 325 eP P 02 45 10.2 0.0
ZAK pmax pmax
comp=Z,60nm,1.3s
PNL Peninsula 84.34 24 P P 02 45 08.8 -1.2
baz=232
NEA2 Nenana 84.36 17 P P 02 45 08.5 -1.5
baz=223,SNR=7.3
YBH Yreka Blue Hor 84.40 45 P P 02 45 10.9 +0.1
comp=Z,22nm,1.1s,baz=177,slow=3.1,SNR=17
comp=Z,22nm,1.1s
YBH Yreka Blue Hor 84.40 45 IAmb IAmb 02 45 12.7
comp=Z,30nm,1.1s
CTG Chitna Glacier 84.41 23 P P 02 45 09.4 -1.1
baz=230,SNR=8.2
ORV Oroville 84.42 47 IAmb IAmb 02 45 12.1
comp=Z,36nm,1.4s
SIT Sitka 84.51 28 P P 02 45 10.5 -0.3
baz=236
CIS Catalina Islan 84.56 54 P P 02 45 11.4 -0.4
baz=250
AFDM Forest Hills D 84.57 48 IAmb IAmb 02 45 12.9
comp=Z,55nm,1.5s
HUMO Hull Mountain 84.58 44 IAmb IAmb 02 45 13.5
comp=Z,44nm,1.4s
G21K Allakaket 84.63 15 P P 02 45 11.5 +0.1
baz=218,SNR=11
I23K Minto, Yukon-K 84.68 17 P P 02 45 10.9 -0.6
baz=222
H22K Ishtalitna Cre 84.69 16 P P 02 45 12.0 +0.3
baz=220
O28M Mount Upton 84.72 23 P P 02 45 11.5 -0.7
baz=231,SNR=7.9
OSI Osito Audit: C 84.73 53 P P 02 45 12.2 -0.4
baz=250
LSA Lhasa 84.73 302 P P 02 45 13.0 -0.2
LSA Lhasa 84.73 302 P P 02 45 13.0 -0.2
LSA pmax pmax
comp=Z,14nm,0.7s
M26K Nabesna, AK 84.75 21 P P 02 45 11.6 -0.5
baz=228,SNR=6.2
K24K Donnelly Dome 84.79 19 P P 02 45 11.6 -0.6
baz=226
VOG Valley Oaks Go 84.81 51 P P 02 45 12.4 -0.4
baz=250
ARVC Arvin 84.82 52 P P 02 45 12.7 -0.3
baz=250
HDA Harding Lake 84.86 18 P P 02 45 12.0 -0.5
baz=225
VES Vestal, Richgr 84.87 52 P P 02 45 12.0 -1.1
baz=250,SNR=7.0
DECC Green Verdugo 84.91 53 P P 02 45 12.0 -1.5
baz=250
TCOL CIGO, UAF Yank 84.92 18 P P 02 45 11.7 -1.0
baz=224,SNR=5.8
COLA College 84.92 18 P P 02 45 12.1 -0.6
COLA College 84.92 18 P P 02 45 12.1 -0.6
COLA pmax pmax
comp=Z,113nm,0.9s
COLA College 84.92 18 P P 02 45 11.3 -1.4
baz=224
P29M Windy Craggy 84.98 25 P P 02 45 13.1 -0.2
baz=233
U33K Whale Pass 85.01 29 P P 02 45 12.6 -0.7
baz=238
RIDG Independent Ri 85.04 19 P P 02 45 12.8 -0.7
baz=226
L26K Log Cabin Wild 85.05 20 P P 02 45 13.5 0.0
baz=228
O29M Mount Kennedy 85.05 24 P P 02 45 13.0 -0.7
baz=232
S32K Killisnoo 85.08 27 P P 02 45 13.4 -0.2
baz=236
M27K Edge Creek, AK 85.12 21 P P 02 45 13.5 -0.5
baz=229
ILAR Eielson Array 85.13 18 P P 02 45 13.2 -0.6
comp=Z,51nm,0.6s,baz=238,slow=5.4,SNR=12
ILAR pP pP 02 46 07.3 -0.6
comp=Z,11nm,0.9s,baz=238,slow=6.5,SNR=3.0
ILAR PKKP PKKPdf 03 03 13.3 -1.2
comp=Z,1.2nm,0.9s,baz=277,slow=1.0,SNR=4.8

ILAR PKPPKP P'P'df 03 11 20.5 -4.5
comp=Z,0.6nm,0.9s,baz=264,slow=0.8,SNR=4.2
comp=Z,51nm,0.6s
ILAR Eielson Array 85.13 18 P P 02 45 13.4 -0.4
H23K Yukon River 85.14 16 P P 02 45 13.8 0.0
baz=222
F21K Alatna River 85.19 14 P P 02 45 14.2 +0.1
baz=218,SNR=8.4
POKR Poker Plat Res 85.22 18 P P 02 45 13.1 -1.2
baz=224
YUK3 Moose Creek 85.25 22 P P 02 45 14.5 -0.3
baz=231
ISA Isabella, Lake 85.27 52 P P 02 45 14.8 -0.5
baz=250,SNR=8.8
V35K Ketchikan 85.32 30 P P 02 45 14.6 -0.3
baz=239
BEKR Beckworth 85.35 47 IAmb IAmb 02 45 17.1
comp=Z,38nm,1.3s
EDW2 Edwards Air Fo 85.38 53 P P 02 45 15.9 +0.1
baz=250,SNR=8.7
GRNB Grenville Isla 85.40 32 IAmb IAmb 02 45 16.9
comp=Z,34nm,1.1s
ELS Elsinore Mount 85.42 54 P P 02 45 15.5 -0.6
109C Camp Elliot, M 85.43 55 P P 02 45 15.2 -0.8
baz=251
BFSC Mount Baldy Ra 85.43 53 P P 02 45 15.9 -0.3
baz=251,SNR=7.3
PLBC Pleasant Camp 85.44 25 P P 02 45 15.3 -0.1
baz=234,SNR=6.6
G22K Bettles 85.45 15 P P 02 45 15.4 0.0
baz=220,SNR=17
T33K Petersburg 85.47 28 P P 02 45 15.7 +0.1
baz=238
J25K Salcha River, 85.48 19 P P 02 45 15.0 -0.7
baz=226,SNR=11
SCRK Sand Creek 85.48 19 P P 02 45 15.2 -0.6
baz=227
RUBB Prince Rupert 85.49 31 IAmb IAmb 02 45 17.1
comp=Z,42nm,1.5s
BVCY Beaver Creek 85.52 22 P P 02 45 14.9 -0.9
baz=230
YUK6 Outpost Mounta 85.53 23 P P 02 45 15.5 -0.7
baz=233
WAKR Walker 85.53 49 IAmb IAmb 02 45 18.4
comp=Z,42nm,1.3s
WRAK Wrangell Islan 85.54 29 P P 02 45 15.6 -0.4
baz=239
R32K Eaglecrest 85.56 27 P P 02 45 15.4 -0.6
baz=236
BBB Bella Bella 85.57 34 P P 02 45 15.9 -0.3
comp=Z,17nm,1.1s,baz=281,slow=4.5,SNR=6.1
BBB pP pP 02 46 09.6 -0.6
comp=Z,19nm,1.1s,baz=170,slow=11,SNR=3.0
comp=Z,17nm,1.1s
MURC Murrieta 85.58 54 P P 02 45 15.8 -1.1
baz=251
P30M Million Dollar 85.59 25 P P 02 45 15.6 -0.7
baz=234
L27K Beaver Creek, 85.60 21 P P 02 45 15.2 -1.0
baz=229
H24K Noodor Dome 85.61 17 P P 02 45 15.1 -1.1
baz=224
YUK4 Talbot Arm 85.66 23 P P 02 45 16.3 -0.5
baz=232
G23K Bananza Creek 85.67 16 P P 02 45 17.0 +0.5
baz=222
MLAC Mammoth, Mammo 85.67 50 P P 02 45 17.5 0.0
baz=250
C03A Quillayute Air 85.73 39 P P 02 45 17.0 -0.1
F22K John River 85.73 15 P P 02 45 17.3 +0.6
baz=220
E03A Lebam 85.77 40 IAmb IAmb 02 45 19.0
comp=Z,62nm,1.2s
HYT Haines Junctio 85.79 24 P P 02 45 16.7 -0.6
baz=233
LRMC Laurel Mtn Rad 85.82 52 P P 02 45 17.5 -0.6
baz=251
CWC Cottonwood Cre 85.84 51 P P 02 45 17.9 -0.3
baz=250
SKAG Skagway 85.88 26 IAmb IAmb 02 45 19.8
comp=Z,42nm,1.4s
SKAG Skagway 85.88 26 P P 02 45 17.5 -0.1
baz=235
H04A Detroit Lake 85.91 42 IAmb IAmb 02 45 19.1
comp=Z,38nm,1.4s
NLWA Neilton Lookou 85.92 39 IAmb IAmb 02 45 20.0
comp=Z,70nm,1.7s
TIN Tinemaha, Big 85.93 51 P P 02 45 18.4 -0.2
baz=250
MONP2 Monument Peak 85.97 55 P P 02 45 18.8 -0.2
baz=252,SNR=7.5
J26L Joseph Creek 85.98 19 P P 02 45 18.5 +0.4
baz=228
PAHR Pah Rah Range 86.00 48 IAmb IAmb 02 45 20.3
comp=Z,42nm,1.4s
COLD Coldfoot 86.01 15 P P 02 45 18.8 +0.7
baz=221,SNR=6.4
BBRC Big Bear Solar 86.02 54 P P 02 45 18.4 -0.8
baz=251
K05A Summer Lake 86.03 45 IAmb IAmb 02 45 20.7
comp=Z,58nm,1.4s
LHV Little Huntoon 86.13 49 IAmb IAmb 02 45 21.3
comp=Z,28nm,1.3s
CBB Campbell River 86.14 37 IAmb IAmb 02 45 20.8
comp=Z,49nm,1.4s
IKP In-Ko-Pah, Jac 86.15 55 P P 02 45 19.2 -0.5
baz=252
K27K Chicken 86.15 20 P P 02 45 18.3 -0.5
baz=229
RRX Edison Barstow 86.15 53 P P 02 45 19.5 -0.1
baz=251
MPMC Manual Prospec 86.16 52 P P 02 45 19.3 -0.5
baz=251,SNR=9.5
PFO Pinyon Flats O 86.17 54 P P 02 45 19.8 0.0
comp=Z,3.1nm,0.7s,baz=243,slow=5.0,SNR=6.6
comp=Z,3.1nm,0.7s
PFO Pinyon Flats O 86.17 54 P P 02 45 19.1 -0.8
baz=252
TPFO Pinon Flats 86.17 54 P P 02 45 19.4 -0.4
baz=252
DSP Deep Springs 86.23 50 IAmb IAmb 02 45 21.7
comp=Z,53nm,1.6s
RYN Ryan 86.25 49 P P 02 45 20.0 -0.2
NVAR Mina Array Bea 86.34 49 P P 02 45 21.1 +0.5
comp=Z,3.6nm,0.8s,baz=234,slow=7.4,SNR=27
NVAR pP pP 02 46 14.7 +0.1
comp=Z,5.2nm,1.0s,baz=231,slow=7.4,SNR=5.6
NVAR PKKPbc PKKPbc 03 03 17.9 -0.6
comp=Z,0.6nm,0.6s,baz=66,slow=3.1,SNR=5.5
NVAR PKPPKP P'P'df 03 11 22.5 -1.8
comp=Z,0.6nm,0.7s,baz=108,slow=3.4,SNR=4.3
comp=Z,3.6nm,0.8s
G24K Hadweenzic Riv 86.35 16 P P 02 45 19.3 -0.5
baz=224,SNR=5.2
PINE Pine Mountain 86.40 44 IAmb IAmb 02 45 22.5
comp=Z,40nm,1.4s
B04A Port Angeles 86.42 39 IAmb IAmb 02 45 22.4
comp=Z,84nm,1.7s
GSC Goldstone, Bar 86.44 53 IAmb IAmb 02 45 22.6
comp=Z,50nm,1.7s
GSC Goldstone, Bar 86.44 53 P P 02 45 20.5 -0.6
baz=251,SNR=6.8
NV11 Mina Array Sit 86.45 49 P P 02 45 19.9 -1.2
NV11 IAmb IAmb 02 45 22.6
comp=Z,46nm,1.6s
SWSC Sam W. Stewart 86.49 55 P P 02 45 21.2 0.0
baz=252,SNR=6.8
GRAC Grapevine Rang 86.56 51 IAmb IAmb 02 45 23.2
comp=Z,50nm,1.5s
GRAC Grapevine Rang 86.56 51 P P 02 45 21.7 +0.1
baz=251,SNR=6.9
P32M Atlin 86.63 26 P P 02 45 21.6 +0.2
baz=237
I26K Coal Creek Min 86.65 19 P P 02 45 20.7 -0.5
baz=228
HEC Hector,Ludlow 86.65 53 P P 02 45 21.5 -0.6
baz=252
BELC Belle Mtn. Jos 86.66 54 P P 02 45 22.0 -0.2
baz=252,SNR=12
PGC Sidney 86.70 38 IAmb IAmb 02 45 23.2
comp=Z,63nm,1.5s
WHY Whitehorse 86.75 25 P P 02 45 20.5 -1.5
baz=236
FURC Furnace Creek, 86.77 52 P P 02 45 22.2 -0.3
baz=251,SNR=5.7
G25K Bearman Lake 86.78 17 P P 02 45 21.8 0.0
baz=225
E23K Chandalar 86.79 15 P P 02 45 22.2 +0.2

baz=222
F24K Squaw Lake 86.83 16 P P 02 45 22.9 +0.7
baz=224
S34M Telegraph Cree 86.88 28 P P 02 45 21.7 -0.8
baz=239,SNR=9.5
Q32M Nakina River 86.92 27 P P 02 45 21.3 -1.6
baz=238
TAPN Taplejung 86.92 299 eP P 02 45 24.1 +0.3
L29M L29M 86.93 22 P P 02 45 22.0 -0.8
baz=233
EGAK Eagle 86.94 20 P P 02 45 21.6 -1.0
baz=230
BC3 Big Chuckawall 86.98 55 P P 02 45 23.3 -0.4
baz=252,SNR=10
SHOC Shoshone, Teco 87.04 52 P P 02 45 23.2 -0.7
baz=252,SNR=5.0
ODAN Odare 87.06 298 eP P 02 45 24.1 -0.3
DAWY Dawson 87.08 21 P P 02 45 23.3 -0.1
baz=232
E24K Your Creek 87.09 15 P P 02 45 23.4 0.0
baz=223
TUQ Turquoise Moun 87.17 53 P P 02 45 24.0 -0.6
baz=252,SNR=11
GMRC Granite Mounta 87.17 53 P P 02 45 24.1 -0.5
baz=252,SNR=9.1
D23K Nanushuk River 87.21 14 P P 02 45 24.5 +0.6
baz=221,SNR=10
TOLK Toolik Lake Re 87.23 15 P P 02 45 24.1 0.0
baz=222
GLA Glamis 87.30 55 IAmb IAmb 02 45 27.2
comp=Z,37nm,1.3s
GLA Glamis 87.30 55 P P 02 45 25.1 0.0
baz=252
I27K Kandik River 87.33 19 P P 02 45 25.0 +0.4
baz=229
P33M Teslin, Yukon 87.35 26 P P 02 45 24.6 -0.2
baz=238
IRM Iron Mountain 87.38 54 P P 02 45 25.3 -0.2
baz=252,SNR=16
TPNV Topopah Spring 87.39 51 P P 02 45 25.4 -0.3
baz=251,SNR=11
WVOR Wild Horse Val 87.48 45 IAmb IAmb 02 45 27.6
comp=Z,75nm,1.6s
F25K Christian Rive 87.49 16 P P 02 45 24.4 -1.0
baz=226
G26K Porcupine Rive 87.57 17 P P 02 45 25.3 -0.3
baz=227
DLBC Dease Lake 87.65 28 P P 02 45 25.4 -0.9
comp=Z,8.3nm,1.0s,baz=249,slow=14,SNR=6.4
comp=Z,8.3nm,1.0s
DLBC Dease Lake 87.65 28 P P 02 45 25.8 -0.5
DLBC Dease Lake 87.65 28 P P 02 45 26.3 0.0
baz=240
KNGR Kungurtug, Tuv 87.72 323 d iP P 02 45 27.1 +0.3
KNGR pmax pmax
comp=Z,23nm,1.1s
R33M Jennings River 87.72 27 P P 02 45 26.6 -0.1
baz=239
BLYC Blythe 87.75 55 IAmb IAmb 02 45 29.1
comp=Z,32nm,1.3s
RAMN Ramite 87.76 298 eP P 02 45 27.6 -0.2
comp=Z,16nm,0.5s
H27K Steamboat Moun 87.77 18 P P 02 45 27.5 +0.8
baz=230
D24K Happy Valley 87.80 14 P P 02 45 26.4 -0.3
baz=223
BMN Battle Mountai 87.80 48 IAmb IAmb 02 45 29.1
comp=Z,39nm,1.4s
A21K Barrow 87.83 11 P P 02 45 26.9 +0.1
baz=215
LTY Liberty 87.87 40 IAmb IAmb 02 45 28.8
comp=Z,69nm,1.9s
E25K Arctic Village 87.88 16 P P 02 45 26.9 -0.2
baz=226
C23K Itkillik River 87.89 13 P P 02 45 27.9 +0.9
baz=221
J08A Circle Bar Ran 87.91 45 P P 02 45 27.9 -0.1
J08A IAmb IAmb 02 45 29.4
comp=Z,35nm,1.3s
F26K Sheenjek River 87.98 17 P P 02 45 27.8 +0.2
baz=227
S11A Rachel 87.99 51 IAmb IAmb 02 45 30.0
comp=Z,27nm,1.3s
G27K Doyon Strip 88.11 18 P P 02 45 29.4 +1.2
baz=229
BELA Belgrano 2 88.20 175 P P 02 45 28.0 -0.6
PDMCI Parker Dam,Lak 88.22 54 P P 02 45 29.4 0.0
baz=253,SNR=6.3
C24K Franklin Bluff 88.25 14 P P 02 45 29.0 +0.3
baz=223
I29M Ogilvie Camp, 88.25 20 P P 02 45 28.7 -0.2
baz=232
G08A Pilot Rock 88.26 43 IAmb IAmb 02 45 30.9
comp=Z,45nm,1.4s
HAWA Hanford 88.28 42 IAmb IAmb 02 45 31.1
comp=Z,86nm,1.8s
JIRN Jiri 88.31 299 eP P 02 45 30.1 -0.4
R11A Troy Canyon, C 88.33 50 P P 02 45 29.8 -0.3
baz=252,SNR=13
LLLB Lillooet 88.42 37 IAmb IAmb 02 45 31.4
comp=Z,46nm,1.6s
PRN Pahroc Range 88.44 51 IAmb IAmb 02 45 32.5
comp=Z,58nm,1.5s
TIXI Tiksi 88.51 349 P P 02 45 29.4 -0.5
comp=Z,9.4nm,0.8s,baz=89,slow=22,SNR=5.1
comp=Z,9.4nm,0.8s
TIXI Tiksi 88.51 349 P P 02 45 29.7 -0.2
TIXI Tiksi 88.51 349 c iP P 02 45 29.2 -0.7
TIXI pmax pmax
comp=Z,22nm,1.7s
D25K Kavik River 88.52 15 P P 02 45 29.8 -0.4
baz=225
214A Organ Pipe Nat 88.61 57 P P 02 45 31.9 +0.5
baz=254
GUN Gumba 88.64 299 eP P 02 45 32.0 0.0
comp=Z,18nm,0.6s
W13A Hualapai Mount 88.65 54 IAmb IAmb 02 45 33.5
comp=Z,31nm,1.5s
D08A Wollman Farm, 88.91 41 IAmb IAmb 02 45 34.0
comp=Z,66nm,1.8s
PKI Pulchoki 88.95 299 eP P 02 45 32.8 -0.6
comp=Z,57nm,1.0s
PKIN Phulchoki 88.96 299 eP P 02 45 33.2 -0.2
E27K Coleen River 89.02 17 P P 02 45 32.3 -0.2
baz=229
B08A Colville Reser 89.11 40 IAmb IAmb 02 45 34.4
comp=Z,58nm,1.6s
BMO Blue Mountains 89.21 44 IAmb IAmb 02 45 35.2
comp=Z,54nm,1.6s
DMN Daman 89.22 298 eP P 02 45 34.1 -0.5
E09A Wood Farm, Sta 89.22 42 IAmb IAmb 02 45 35.2
comp=Z,50nm,1.6s
C26K Camden Bay 89.31 15 P P 02 45 34.4 +0.7
baz=226
ELK Elko 89.33 48 P P 02 45 34.8 -0.1
comp=Z,3.7nm,0.7s,baz=243,slow=4.6,SNR=21
ELK pP pP 02 46 30.3 +1.3
comp=Z,13nm,1.0s,baz=224,slow=5.1,SNR=9.7
comp=Z,3.7nm,0.7s
ELK Elko 89.33 48 P P 02 45 34.8 -0.1
ELK IAmb IAmb 02 45 36.3
comp=Z,33nm,1.6s
EPYK Eagle Plains 89.38 20 P P 02 45 34.4 +0.2
baz=234
C27K Jago River 89.41 15 P P 02 45 34.1 -0.1
baz=227
C09A Chrisman Ranch 89.58 41 IAmb IAmb 02 45 36.8
comp=Z,26nm,1.4s
PSUT Pine Spring 89.68 50 IAmb IAmb 02 45 38.0
comp=Z,34nm,1.7s
LCMT Little Creek M 89.70 52 IAmb IAmb 02 45 38.2
comp=Z,48nm,1.7s
GKN Gorkha 89.72 299 eP P 02 45 35.8 -1.0
MFID Camas Ranch 89.75 45 IAmb IAmb 02 45 37.9
comp=Z,52nm,1.8s
G30M tAoh Zraii Nji 89.90 19 P P 02 45 34.7 -1.9
baz=234
KNB Kanab 90.03 52 IAmb IAmb 02 45 40.0
comp=Z,38nm,1.5s
PLID Pearl Lake 90.16 44 IAmb IAmb 02 45 39.5
comp=Z,46nm,1.7s
U15A North Rim 90.27 53 IAmb IAmb 02 45 41.3
comp=Z,58nm,1.7s
TUC Tucson 90.36 57 P P 02 45 39.6 0.0
TUC Tucson 90.36 57 P P 02 45 39.6 0.0
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC Tucson 90.36 57 P P 02 45 39.7 0.0
baz=255
NEW Newport 90.47 40 P P 02 45 39.0 -0.7
comp=Z,3.9nm,0.8s,baz=241,slow=4.5,SNR=8.3
NEW pP pP 02 46 34.4 +0.6
comp=Z,22nm,0.9s,baz=239,slow=3.8,SNR=18
comp=Z,3.9nm,0.8s
NEW Newport 90.47 40 IAmb IAmb 02 45 40.7
comp=Z,38nm,1.9s
NEW Newport 90.47 40 P P 02 45 38.4 -1.3
baz=251,SNR=6.9
PKCU Pink Cliffs 90.54 52 IAmb IAmb 02 45 43.1
comp=Z,70nm,1.8s
KOLN Koldanda 90.55 298 eP P 02 45 39.5 -1.2
DANN Dangsing 90.56 299 eP P 02 45 39.5 -1.4
comp=Z,20nm,0.7s
WUAZ Wupatki 90.74 54 IAmb IAmb 02 45 43.3
comp=Z,53nm,2.0s
WUAZ Wupatki 90.74 54 P P 02 45 41.6 +0.1
baz=254
HLID Hailey 90.78 45 IAmb IAmb 02 45 43.1
comp=Z,23nm,1.6s
HLID Hailey 90.78 45 P P 02 45 41.5 +0.1
baz=253,SNR=12
MTPU Mount Pierson 90.80 51 IAmb IAmb 02 45 44.2
comp=Z,35nm,1.8s
DUG Dugway, Tooele 90.94 49 P P 02 45 41.9 -0.3
DUG IAmb IAmb 02 45 43.6
comp=Z,23nm,1.6s
DUG Dugway, Tooele 90.94 49 P P 02 45 41.9 -0.3
DUG pmax pmax
comp=Z,23nm,1.6s
DUG Dugway, Tooele 90.94 49 P P 02 45 41.3 -0.8
baz=254,SNR=8.7
PYUN Piuthan 91.16 298 eP P 02 45 42.5 -1.1
HVU Hansel Valley 91.41 47 IAmb IAmb 02 45 45.9
comp=Z,36nm,1.5s
INK Inuvik 91.50 19 PKiKP PKiKP 02 50 33.5 -0.7
comp=Z,1.5nm,0.9s,baz=78,slow=2.9,SNR=4.2
INK Inuvik 91.50 19 P P 02 45 45.0 +1.1
baz=237
SPUT South Promonto 91.52 48 IAmb IAmb 02 45 46.4
comp=Z,24nm,1.6s
WMQ Urumqi 91.66 315 eP P 02 45 45.6 +0.3
Q16A Castle Valley 91.81 51 IAmb IAmb 02 45 48.3
comp=Z,27nm,1.8s
W18A Petrified Fore 91.93 55 P P 02 45 46.7 -0.3
baz=255
JLU Jordanelle 92.05 49 P P 02 45 48.0 +0.5
MSO Missoula 92.06 42 P P 02 45 47.6 +0.4
baz=253
WRGLY Wrigley 92.70 25 P P 02 45 50.7 +1.2
baz=246
WALA Waterton Lakes 92.74 40 IAmb IAmb 02 45 51.8
comp=Z,34nm,1.8s
121A Cookes Peak, D 92.87 57 P P 02 45 50.9 -0.5
baz=256
BOZ Bozeman (W) 93.26 44 P P 02 45 52.6 -0.2
baz=255
MVCO Mesa Verde 93.42 53 P P 02 45 52.8 -1.0
baz=256
DGZ Jazzator, Alta 93.50 320 c iP P 02 45 53.1 -0.7
DGZ pmax pmax
comp=Z,28nm,0.9s
BW06 Boulder Array 93.98 47 P P 02 45 54.9 -1.3
baz=256
PDAR Pinedale Array 93.98 47 P P 02 45 55.5 -0.7
comp=Z,0.5nm,0.5s,baz=204,slow=2.9,SNR=6.4
PDAR pP pwP 02 46 53.2 -1.0
comp=Z,1.3nm,1.0s,baz=241,slow=3.1,SNR=3.1
PDAR PKKP PKKPdf 03 02 58.0 -0.5
comp=Z,0.9nm,0.7s,baz=91,slow=6.4,SNR=8.7
comp=Z,0.5nm,0.5s
O20A White River Ci 94.31 50 P P 02 45 57.3 -0.5
baz=256
TROLL Troll, Antarti 94.33 185 P P 02 45 57.2 -0.1
ANMO Albuquerque 94.50 55 P P 02 45 58.7 -0.1
ANMO Albuquerque 94.50 55 ⇓ iP P 02 45 58.5 -0.3
ANMO pmax pmax
comp=Z,9.0nm,2.9s
ANMO Albuquerque 94.50 55 P P 02 45 57.5 -1.3
baz=257
RLMT Red Lodge 94.75 45 P P 02 45 59.0 -0.7
baz=256
S22A 4UR Ranch, Cre 94.83 53 P P 02 45 59.7 -0.7
baz=257
C36M Paulatuk 95.01 19 P P 02 45 58.3 -1.7
baz=246
SNAA Sanae 95.02 183 P P 02 45 59.8 -0.6
SNAA Sanae 95.02 183 PKKP 03 02 53.7
comp=Z,0.3nm,0.6s,baz=311,slow=4.0,SNR=4.7
SNAA Sanae 95.02 183 P P 02 45 59.7 -0.6
SNAA Sanae 95.02 183 P P 02 45 59.7 -0.6
SNAA pmax pmax
comp=Z,30nm,1.2s
EGMT Eagleton 95.12 42 P P 02 46 00.8 -0.4
baz=256
TX31 Lajitas Ar. Si 95.61 61 IAmb IAmb 02 46 05.6
comp=Z,19nm,1.6s
TXAR Lajitas Array 95.61 61 P P 02 46 03.6 -0.2
comp=Z,0.5nm,0.7s,baz=217,slow=6.0,SNR=7.8
TXAR pP pP 02 46 58.9 +0.7
comp=Z,1.1nm,0.9s,baz=228,slow=4.2,SNR=2.3
TXAR PP PP 02 49 55.9 -2.6
comp=Z,2.3nm,1.1s,baz=280,slow=5.4,SNR=9.3
TXAR PKKP PKKPbc 03 02 53.7 -0.7
comp=Z,0.4nm,0.5s,baz=90,slow=2.9,SNR=7.3
comp=Z,0.5nm,0.7s
VNA3 Neumayer Olymp 95.69 181 P P 02 46 03.0 -0.3
A36M Sachs Harbour 95.77 17 P P 02 46 02.4 -1.0
baz=245
SDCO Great Sand Dun 95.86 53 P P 02 46 04.3 -0.7
baz=258
VNA2 Neumayer--Watz 95.96 182 P P 02 46 04.5 0.0
baz=175,slow=4.0
MK31 Makanchi Array 96.10 317 P P 02 46 05.7 +0.1
MK31 Makanchi Array 96.10 317 P P 02 46 05.7 +0.1
MK31 pmax pmax
comp=Z,45nm,1.4s
MKAR Makanchi Array 96.10 317 P P 02 46 06.2 +0.7
comp=Z,10nm,0.6s,baz=89,slow=6.4,SNR=124
MKAR pP pP 02 46 59.2 -1.2
comp=Z,2.8nm,0.9s,baz=107,slow=7.0,SNR=2.7
MKAR PKiKP PKiKP 02 50 42.6 -0.3
comp=Z,1.0nm,0.5s,baz=229,slow=1.3,SNR=15
MKAR PKKPbc PKKPbc 03 02 51.6 -2.2
comp=Z,2.7nm,0.8s,baz=277,slow=2.3,SNR=18
comp=Z,10nm,0.6s
MKAR Makanchi Array 96.10 317 i P P 02 46 05.6 0.0
MKAR pmax pmax
comp=Z,11nm,0.6s
K22A Casper 96.13 48 P P 02 46 04.6 -1.4
baz=258
ZAA0 Zalesovo Array 96.17 324 P P 02 46 04.8 -0.8
ZALV Zalesovo Beam 96.17 324 P P 02 46 05.0 -0.7
comp=Z,11nm,0.8s,baz=108,slow=4.8,SNR=39
ZALV PKiKP PKiKP 02 50 42.4 -0.3
comp=Z,1.0nm,0.6s,baz=169,slow=2.7,SNR=4.6
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 96.17 324 i P P 02 46 04.8 -0.8
ZALV pmax pmax
comp=Z,11nm,0.7s
N23A Red Feather La 96.18 50 P P 02 46 05.3 -1.1
baz=258
ISCO Idaho Springs 96.20 51 P P 02 46 05.6 -0.9
baz=258
YKA Yellowknife Ar 96.25 27 P P 02 46 04.7 -1.1
comp=Z,8.2nm,0.9s,baz=250,slow=4.7,SNR=12
comp=Z,8.2nm,0.9s
VNA1 Neumayer--Stat 96.26 182 P P 02 46 05.7 -0.1
MAKZ Makanchi 96.31 316 P P 02 46 06.2 -0.3
MAKZ Makanchi 96.31 316 P P 02 46 06.2 -0.3
MAKZ pmax pmax
comp=Z,45nm,1.3s
Q24A Divide 96.38 52 P P 02 46 06.8 -0.6
baz=258
NRIK Noril'sk 98.67 339 P Pdif 02 46 16.0 -0.5
comp=Z,10nm,0.8s,baz=98,slow=4.2,SNR=11
comp=Z,10nm,0.8s
NRIK Noril'sk 98.67 339 P Pdif 02 46 15.6 -0.9
NRIK Noril'sk 98.67 339 c iP Pdif 02 46 15.5 -1.0
NRIK pmax pmax
comp=Z,37nm,1.5s
KURK Kurchatov 99.24 320 P Pdif 02 46 18.5 -1.0
KURBB Kurchatov Arra 99.28 320 P Pdif 02 46 18.5 -1.2
comp=Z,0.8nm,0.3s,baz=110,slow=3.4,SNR=9.5
KURBB PKiKP PKiKP 02 50 48.2 -0.1
comp=Z,0.7nm,0.3s,baz=84,slow=1.7,SNR=5.1
comp=Z,0.8nm,0.3s
BVAR Borovoye Array 104.56 322 Pdiff Pdif 02 46 42.9 -0.2
comp=Z,1.9nm,0.9s,baz=104,slow=4.7,SNR=7.3
BVAR PKiKP PKiKP 02 50 57.5 -0.4
comp=Z,1.6nm,0.6s,baz=114,slow=1.8,SNR=9.1
WVT Waverly 109.69 56 P PKiKP 02 51 08.9 +1.0
baz=268
L44A Lake County Fo 109.75 50 P PKiKP 02 51 09.1 +1.3
baz=270
SFIN Lafayette 110.36 52 P PKiKP 02 51 10.4 +1.3
baz=270
ARU Arti 111.24 326 PKiKP PKiKP 02 51 10.1 -0.1
comp=Z,9.4nm,0.5s,baz=304,slow=0.9,SNR=21
ARU Arti 111.24 326 i PKIKP PKiKP 02 51 09.9 -0.3
ARU 02 51 54.4
AKTO Aktyubinsk 112.32 319 PKiKP PKiKP 02 51 12.8 +0.4
comp=Z,4.9nm,0.6s,baz=98,slow=2.1,SNR=28
NEEM North Greenlan 112.91 8 eP PKiKP 02 51 12.8 -0.4
GEYT Alibeck 113.04 306 PKiKP PKiKP 02 51 13.9 -0.4
comp=Z,4.0nm,0.7s,baz=252,slow=3.0,SNR=12
SPITS Spitsbergen Ar 113.46 354 PKiKP PKiKP 02 51 13.7 -0.3
comp=Z,11nm,0.8s,baz=112,slow=8.2,SNR=5.1
KMSC Kings Mountain 114.97 57 P PKiKP 02 51 17.4 -0.7
baz=271
M53A WI Miller and 115.19 50 P PKiKP 02 51 17.4 -0.8
baz=275
UPNV Upernavik 115.35 13 eP PKPdf 02 51 17.7 +0.1
KIRV Kirov 115.58 329 PKiKP PKiKP 02 51 18.5 +0.1
comp=Z,18nm,0.4s,baz=65,slow=1.1,SNR=15
KIRV Kirov 115.58 329 c iPKIKP PKPdf 02 51 18.2 -0.2
BLA Blacksburg 115.64 55 P PKPdf 02 51 18.6 -0.7
baz=273
PRGR Permogore 116.33 333 ePKIKP PKPdf 02 51 18.1 -1.7
PRGR pmax pmax
comp=Z,14nm,0.6s
DAG Danmarks Havn 116.39 2 eP PKPdf 02 51 18.3 -1.2
SSPA Standing Stone 117.36 51 P PKPdf 02 51 21.4 -1.0
baz=276
LVZ Lovozero 117.38 342 ⇓ iPKIKP PKiKP 02 51 22.1 +0.3
LPAZ La Paz 117.92 117 PKP PKPdf 02 51 24.6 -0.3
comp=Z,3.9nm,0.7s,baz=32,slow=1.8,SNR=18
LPAZ La Paz 117.92 117 PKPdf PKPdf 02 51 24.3 -0.7
APA Apatity 117.96 342 ⇓ iPKIKP PKPdf 02 51 21.8 -1.0
APA i 02 52 37.0
APA pmax pmax
comp=Z,16nm,1.0s
BELG Belogornoye 118.33 323 PKP PKiKP 02 51 24.2 +0.3
comp=Z,90nm,0.9s,baz=293,slow=0.7,SNR=26
BELG Belogornoye 118.33 323 c iPKIKP PKPdf 02 51 23.3 -0.6
HAMF Hammerfest 118.40 347 IAmb IAmb 02 51 22.6
comp=Z,60nm,0.9s
HAMF ePKPdf PKPdf 02 51 22.7 -0.8
SUMG Summit 118.78 9 PKPdf PKPdf 02 51 23.9 -0.9
SUMG Summit 118.78 9 PKIKP PKPdf 02 51 23.9 -0.9
SUMG Summit 118.78 9 eP PKPdf 02 51 24.5 -0.3
ARA0 ARCESS Array S 118.81 346 ePKPdf PKPdf 02 51 24.1 -0.3
ARA0 IAmb IAmb 02 51 25.1
comp=Z,23nm,0.6s
ARCES ARCESS Array B 118.81 346 PKP PKPdf 02 51 23.7 -0.7
comp=Z,13nm,0.4s,baz=84,slow=2.0,SNR=129
ARCES PKKPbc PKKPab 03 01 39.5 -3.4
comp=Z,7.4nm,0.8s,baz=193,slow=2.5,SNR=10
ILULI Ilulissat 119.03 15 eP PKPdf 02 51 24.2 -0.5
KLMR Klimovskoe 119.34 334 ePKIKP PKPdf 02 51 23.8 -1.8
KLMR pmax pmax
comp=Z,66nm,1.5s
KLMR Klimovskoe 119.34 334 ePKPdf PKPdf 02 51 23.9 -1.7
KLMR AMP 02 51 26.6
comp=Z,66nm,1.5s
KTK1 Kautokeino 119.74 346 ePKPdf PKPdf 02 51 25.5 -0.7
KTK1 IAmb IAmb 02 51 26.0
comp=Z,29nm,1.1s
ITQB Itaqui 119.94 136 PKPdf PKPdf 02 51 27.2 -0.6
JETT Jettan, Norway 119.96 347 ePKPdf PKPdf 02 51 26.1 -0.6
TRO Tromso 120.21 348 ePKPdf PKPdf 02 51 26.1 -0.9
TRO IAmb IAmb 02 51 26.9
comp=Z,23nm,0.7s
PAL Palisades 120.30 50 P PKPdf 02 51 27.6 -0.4
baz=279
MAK Makhachkala 120.59 312 eP Pdif 02 47 50.7 -3.9
MAK i 02 51 28.5
MAK e 02 52 23.1
MAK e 02 52 58.7
MAK e 02 58 02.3
MAK pmax pmax
comp=Z,48nm,0.5s
L61B Northampton 120.96 48 P PKPdf 02 51 29.1 -0.2
baz=281
SCHQ Schefferville 121.09 33 PKP PKPdf 02 51 27.4 -1.7
comp=Z,2.5nm,0.5s,baz=297,slow=4.5,SNR=5.1
CPUP Villa Florida 121.49 132 PKP PKPdf 02 51 30.3 -0.5
comp=Z,10.0nm,0.8s,baz=294,slow=1.9,SNR=26
GROC Groznyy 121.77 313 i PKIKP PKiKP 02 51 31.5 +0.5
GROC e 02 52 51.3
GROC e 02 53 06.3
GROC pmax pmax
comp=Z,60nm,0.7s
VRH Novokhopyorsk 122.18 323 ePKIKP PKPdf 02 51 31.0 -0.4
VRH pmax pmax
comp=Z,70nm,0.6s
DY2G Dye2 122.31 15 eP PKPdf 02 51 30.9 -0.6
STEI Steigen 122.38 348 ePKPdf PKPdf 02 51 30.6 -0.7
STEI IAmb IAmb 02 51 31.4
comp=Z,30nm,0.7s
NUUK Nuuk 122.43 19 eP PKPdf 02 51 31.4 0.0
SCO Scoresbysund 122.51 4 eP PKiKP 02 51 31.6 0.0
MOS Moscow 122.59 329 i PKIKP PKPdf 02 51 30.9 -1.1
MOS pmax pmax
comp=Z,60nm,0.9s
VALR Valaam 122.60 337 d iPKIKP PKiKP 02 51 33.0 +1.0
PKME Peaks-kenny Pk 122.72 44 P PKPdf 02 51 31.9 -0.7
baz=285
FAUS Fauske 122.83 347 ePKPdf PKPdf 02 51 31.8 -0.4
GNI Garni 123.16 309 PKP PKiKP 02 51 35.2 +1.1
comp=Z,16nm,0.8s,baz=326,slow=2.0,SNR=8.2
GNI Garni 123.16 309 PKPdf PKiKP 02 51 34.3 +0.3
GNI Garni 123.16 309 c iPKIKP PKiKP 02 51 34.1 0.0
GNI pmax pmax
comp=Z,54nm,1.7s
ZEI Tsey 123.22 313 i PKIKP PKPdf 02 51 33.2 -0.7
ZEI pmax pmax
comp=Z,16nm,1.0s
GOF Gofitskoye 123.25 315 ⇑ ePKIKP PKiKP 02 51 34.1 +0.2
LPSR Galich'ya Gora 123.26 325 ePKIKP PKPdf 02 51 32.6 -0.8
LPSR pmax pmax
comp=Z,90nm,1.3s
OBN Obninsk 123.42 329 PKP PKiKP 02 51 33.7 -0.1
comp=Z,7.1nm,0.5s,baz=78,slow=3.1,SNR=9.9
OBN Obninsk 123.42 329 d iPKIKP PKPdf 02 51 33.4 -0.2
OBN i 02 52 30.0
OBN e 02 53 18.6
OBN pmax pmax
comp=Z,76nm,1.3s
VORR Voronezh 123.47 324 ePKIKP PKiKP 02 51 34.6 +0.5
VORR pmax pmax
comp=Z,83nm,1.4s
VSR Storozhevoye 123.67 323 ePKIKP PKPdf 02 51 33.5 -0.7
VSR pmax pmax
comp=Z,50nm,0.6s
KBZ Khabaz 123.70 314 PKP PKPdf 02 51 34.1 -0.4
comp=Z,8.0nm,0.8s,baz=100,slow=1.5,SNR=14
KBZ Khabaz 123.70 314 ⇓ iPKIKP PKiKP 02 51 34.8 0.0
PUL Pulkovo 123.78 335 ⇓ iPKIKP PKiKP 02 51 34.5 +0.1
KIV Kislovodsk 123.78 314 ⇑ P PKiKP 02 51 35.6 +0.5
KIV Kislovodsk 123.78 314 PKPdf PKiKP 02 51 35.0 -0.1
KIV Kislovodsk 123.78 314 ePKIKP PKiKP 02 51 35.1 -0.1
KIV pmax pmax
comp=Z,20nm,1.1s
NEY Neytrino 123.94 313 c iPKIKP PKiKP 02 51 37.0 +1.4
KONS Konsvik 124.04 348 ePKPdf PKPdf 02 51 34.3 -0.2
KONS IAmb IAmb 02 51 35.3
comp=Z,56nm,1.2s
MOR8 Moi Rana 124.04 347 ePKPdf PKPdf 02 51 33.6 -1.0
MOR8 IAmb IAmb 02 51 34.5
comp=Z,30nm,1.1s
RAYN Ar Rayn 124.07 290 PKPdf PKPdf 02 51 35.9 0.0
RAYN Ar Rayn 124.07 290 PKIKP PKPdf 02 51 35.9 0.0
BATG Bathurst New B 124.27 41 PKPdf PKPdf 02 51 35.2 -0.3
FINES FINESS Array B 124.33 339 PKP PKPdf 02 51 34.9 -0.2
comp=Z,33nm,0.9s,baz=42,slow=2.5,SNR=46
SUR Sutherland 124.41 215 PKP PKiKP 02 51 37.2 +0.3
comp=Z,16nm,1.0s,baz=207,slow=0.3,SNR=3.4
BOSA Boshof 124.47 221 PKP PKiKP 02 51 36.9 -0.1
comp=Z,16nm,0.9s,baz=171,slow=1.9,SNR=16
BOSA Boshof 124.47 221 PKPdf PKPdf 02 51 36.6 -0.1
MEF Metsahovi 125.77 338 eP PKiKP 02 51 38.4 0.0

NSS	Namsos	125.99 347		IAmb	IAmb	02 51 37.7	
	comp=Z,599nm,2.5s						
NSS			e	PKPdf	PKPdf	02 51 37.8	-0.5
VSU	Vasula	126.05 336	ce	PKIKP	PKPdf	02 51 38.1	-0.4
VSU	Vasula	126.05 336	e	P	PKPdf	02 51 38.4	-0.1
RAF	Rauma	126.11 340	e	P	PKPdf	02 51 37.1	-1.5
AQDB	Aquidauana	126.12 128		PKPdf	PKPdf	02 51 39.3	-0.6
KOPT	Kop Dagi	126.36 310		PKPdf	PKiKP	02 51 40.6	0.0
LBTB	Lobatse	126.65 225		PKP	PKPdf	02 51 39.5	-1.5
	comp=Z,8.3nm,0.8s,baz=121,slow=4.9,SNR=11						
MTSE	Matsula	127.02 337	e	P	PKiKP	02 51 41.3	+0.4
MATP	Matopo	127.40 231		PKP	PKPdf	02 51 42.5	0.0
	comp=Z,15nm,1.0s,baz=197,slow=3.1,SNR=8.3						
GBN	Guysborough	127.88 42		PKPdf	PKPdf	02 51 42.1	-0.3
MNK	Minsk	128.00 331	i	PKIKP	PKiKP	02 51 43.4	+0.4
MNK			i			02 52 39.9	
MNK			i			02 53 02.5	
MNK			i			02 53 48.8	
MNK			i	PPP	PPP	02 56 34.8	
MNK			i			02 58 33.7	
MNK			i	SP	SP	03 03 32.1	+1.4
MNK			i	PS	PS	03 03 57.6	-0.2
MNK			i	SS	SS	03 10 45.0	+2.2
MNK			i	SSS	SSS	03 15 31.3	
MNK				pmax	pmax		
	comp=Z,48nm,1.0s						
MNK				pmax	pmax		
	comp=N,37nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.2s						
MNK				MLR	MLR		
	comp=N,872nm,14.0s						
MNK				MLR	MLR		
	comp=E,6.0nm,13.0s						
MNK				MLR	MLR		
	comp=Z,40nm,15.0s						
MNK	Minsk	128.00 331	i	PKP	PKiKP	02 51 43.4	+0.4
	comp=E,4.0nm,1.2s						
MNK			i	PKP	PKiKP	02 51 43.4	+0.4
	comp=N,37nm,0.8s						
MNK			i	PKP	PKiKP	02 51 43.4	+0.4
	comp=Z,48nm,1.0s,baz=234						
MNK			i	pPKP	pPKPdf	02 52 40.0	+0.3
MNK			i	sPKP		02 53 02.6	
MNK			i	PP	PP	02 53 48.8	+0.9
MNK			i	PPP	PPP	02 56 34.8	
MNK			i	SKS	SKSdf	02 58 33.7	+1.3
MNK			i	SP	SP	03 03 32.2	+1.5
MNK			i	PS	PS	03 03 57.7	-0.2
MNK			i	SS	SS	03 10 45.0	+2.2
MNK			i	SSS	SSS	03 15 31.3	
MNK			i	LRM	MLR	03 47 37.0	
	comp=N,872nm,14.1s						
MNK			i	LRM	MLR	03 47 59.4	
	comp=E,6.0nm,13.4s						
MNK			i	LRM	MLR	03 48 03.1	
	comp=Z,40nm,15.3s						
BORG	Borgarnes	128.22 5		PKP	PKiKP	02 51 43.4	+0.2
	comp=Z,12nm,1.0s,baz=220,slow=2.4,SNR=3.5						
IIGN	Ignalina	128.24 333	e	P	PKiKP	02 51 44.4	+1.0
NACGM	Naroch	128.27 332	⇑e	PKP	PKiKP	02 51 43.8	+0.2
	baz=52						
KMBO	Kilima Mbogo	128.38 258		PKP	PKiKP	02 51 46.5	+1.1
	comp=Z,2.8nm,0.6s,baz=60,slow=4.6,SNR=9.3						
KMBO	Kilima Mbogo	128.38 258		PKPdf	PKiKP	02 51 45.3	-0.1
VSVD	Vaisvydziai	128.83 334	e	P	PKPdf	02 51 44.0	+0.1
PABE	Paberze	129.13 334	e	P	PKPdf	02 51 44.6	+0.1
NB2	NORSAR Subarra	129.18 345		PKPdf	PKPdf	02 51 43.9	-0.6
	comp=Z,39nm,1.4s,baz=31,slow=1.9						
NB2	NORSAR Subarra	129.18 345		PKPdf	PKPdf	02 51 43.9	-0.6
	baz=31,slow=1.9						
NOA	NORSAR Array B	129.18 345		PKP	PKPdf	02 51 44.7	+0.2
	comp=Z,15nm,0.9s,baz=32,slow=2.0,SNR=24						
SIM	Simferopol'	129.25 318	i	PKIKP	PKPdf	02 51 44.3	-0.8
SIM				pmax	pmax		
	comp=Z,17nm,0.9s						
HFS	Hagfors	129.29 343		PKP	PKPdf	02 51 44.9	+0.2
	comp=Z,16nm,0.8s,baz=90,slow=4.7,SNR=22						
NC602	NORSAR Array S	129.36 345	e	PKPdf	PKPdf	02 51 44.7	-0.1
NC602				IAmb	IAmb	02 51 46.7	
	comp=Z,29nm,1.2s						
AKASG	Malin Array Be	129.48 327		PKP	PKPdf	02 51 45.6	+0.3
	comp=Z,7.9nm,0.5s,baz=52,slow=2.4,SNR=44						
AKASG				SKPab	SKPbc	02 54 47.7	+2.0
	comp=Z,4.6nm,0.8s,baz=46,slow=4.7,SNR=13						
AKASG	Malin Array Be	129.48 327		PKPdf	PKPdf	02 51 44.8	-0.6
AKBB	Malin Array Si	129.48 327		PKPdf	PKPdf	02 51 44.4	-0.9
AKBB	Malin Array Si	129.48 327		PKIKP	PKPdf	02 51 44.4	-0.9
LSZ	Lusaka	130.54 236		SKPbc	SKPab	02 54 53.0	+1.8
	comp=Z,28nm,0.9s,baz=124,slow=3.0,SNR=30						
LSZ	Lusaka	130.54 236		PKP	PKiKP	02 51 49.3	-0.1
LSZ	Lusaka	130.54 236		PKIKP	PKiKP	02 51 49.3	-0.1
KONO	Kongsberg	130.79 345	c	PKIKP	PKiKP	02 51 49.0	+0.5
KONO				pmax	pmax		
	comp=Z,32nm,1.3s						
BR131	Keskin Array S	131.50 312	c	PKIKP	PKPdf	02 51 48.7	-1.0
BRTR	Keskin Array B	131.50 312		PKP	PKPdf	02 51 49.7	0.0
	comp=Z,4.5nm,0.7s,baz=144,slow=4.5,SNR=30						
BRTR				SKPbc	SKPab	02 54 55.4	+0.8
	comp=Z,4.0nm,0.7s,baz=114,slow=4.1,SNR=14						
MILM	Milestii Mici	131.68 322	⇓	P	PKPdf	02 51 49.4	-0.2
MILM	Milestii Mici	131.68 322	⇓	PKIKP	PKPdf	02 51 49.4	-0.2
ANTO	Ankara	132.06 312	⇑	P	PKPdf	02 51 50.8	+0.1
ANTO	Ankara	132.06 312		PKPdf	PKPdf	02 51 50.2	-0.5
ANTO				SKPbc	SKPab	02 54 57.9	+1.1
ANTO	Ankara	132.06 312	⇑	PKIKP	PKPdf	02 51 50.8	+0.1
VLDR	Vladesti	132.65 322	⇓	P	PKiKP	02 51 52.5	-0.2
LVV	L'vov	132.72 328	i	PKIKP	PKPdf	02 51 51.2	-0.3
TPGR	Topolog	132.93 320	⇑	P	PKPdf	02 51 52.4	+0.3
CFR	Carcaliu	132.95 321	⇑	P	PKPdf	02 51 52.2	+0.2
CFR	Carcaliu	132.95 321	⇑	PKIKP	PKPdf	02 51 52.2	+0.2
BEL	Belsk	132.99 332	e	PKPdf	PKPdf	02 51 52.1	+0.2
TESR	Tescani	133.16 323	⇓	P	PKPdf	02 51 52.8	+0.3
BIZ	Bicaz	133.25 324	⇓	P	PKiKP	02 51 53.8	-0.1
HARR	Harsova	133.31 320	⇑	P	PKiKP	02 51 53.6	-0.4
HARR	Harsova	133.31 320	⇑	PKIKP	PKiKP	02 51 53.6	-0.4
BURAR	Bucovina Array	133.38 325	⇑	P	PKiKP	02 51 54.1	-0.1
BURAR	Bucovina Array	133.38 325	⇑	PKIKP	PKiKP	02 51 54.1	-0.1
VRI	Vrincioaia	133.45 322	⇑	P	PKPdf	02 51 53.3	+0.2
VRI	Vrincioaia	133.45 322	⇑	PKIKP	PKPdf	02 51 53.3	+0.2
GKP	Gorka Klasztor	133.50 336	e	PKPdf	PKPdf	02 51 52.9	0.0
GKP	Gorka Klasztor	133.50 336	e	P	PKiKP	02 51 53.5	-0.6
PLOR	Plostina	133.51 322	⇓	P	PKPdf	02 51 52.9	-0.3
PLOR	Plostina	133.51 322	⇓	PKIKP	PKPdf	02 51 52.9	-0.3
COVR	Voineasa-Covas	133.78 322	⇑	P	PKPdf	02 51 52.8	-0.9
MLR	Muntele Rosu	134.12 322	⇑	P	PKPdf	02 51 54.6	+0.1
MLR	Muntele Rosu	134.12 322		PKP	PKPdf	02 51 54.0	-0.5
	comp=Z,7.4nm,0.8s,baz=5.2,slow=2.0,SNR=15						
MLR				SKPbc	SKPab	02 55 05.4	-0.3
	comp=Z,22nm,1.4s,baz=345,slow=6.3,SNR=5.9						
MLR	Muntele Rosu	134.12 322		PKIKP	PKPdf	02 51 54.0	-0.5
KOLS	Kolonicke sedl	134.17 328	e	PKIKP	PKiKP	02 51 55.7	0.0
DOPR	Dopca	134.19 323	⇓	P	PKiKP	02 51 55.3	-0.5
SECR		134.28 322	⇑	P	PKPdf	02 51 55.0	+0.3
BMR	Baia Mare	134.29 326	⇓	P	PKPdf	02 51 54.8	+0.2
BMR	Baia Mare	134.29 326	⇓	PKIKP	PKPdf	02 51 54.8	+0.2
UZH	Uzhgorod	134.35 328	e	PKIKP	PKPdf	02 51 54.0	-0.6
PRD	Provadia	134.37 319	e	P	PKiKP	02 51 57.3	+1.1
TRPA	Tarpa	134.53 327	⇓	P	PKiKP	02 51 56.1	-0.2
TRPA	Tarpa	134.53 327		PKP	PKPdf	02 51 55.3	+0.4
OJC	Ojcow	134.55 331	e	PKPdf	PKPdf	02 51 53.5	-1.5
CRVS	Cervenica-Dubn	134.60 329	e	PKIKP	PKPdf	02 51 55.4	+0.3
VOIR		134.68 323	⇓	P	PKiKP	02 51 57.0	+0.1
VOIR		134.68 323	⇓	PKIKP	PKiKP	02 51 57.0	+0.1
MBAR	Mbarara	134.73 256		SKPbc	SKPab	02 55 07.7	-1.8
	baz=83,slow=4.3						
MBAR	Mbarara	134.73 256		PKPdf	PKPdf	02 51 56.7	+0.1
MBAR	Mbarara	134.73 256	c	PKIKP	PKiKP	02 51 58.3	+0.2
MBAR				pmax	pmax		
	comp=Z,15nm,1.3s						
CBBR	Cluj-Babes-Bol	134.79 325	⇑	P	PKiKP	02 51 57.0	0.0
CJR	Cluj-Napoca	134.80 325	⇓	P	PKPdf	02 51 56.1	+0.5
NIE	Niedzica	134.84 330	e	PKPdf	PKPdf	02 51 56.2	+0.6
BDFB	Brasilia	134.85 128		PKP	PKPdf	02 51 56.6	-0.1
	comp=Z,13nm,0.7s,baz=183,slow=2.7,SNR=20						
BDFB	Brasilia	134.85 128		PKPdf	PKPdf	02 51 56.1	-0.6
MESR	Meseseni	134.90 326	⇑	P	PKiKP	02 51 57.0	-0.2
ARR	Arges	134.96 323	⇓	P	PKiKP	02 51 56.9	-0.6
HUMR	Humele	135.21 322	⇑	P	PKPdf	02 51 56.5	+0.1
DRGR		135.24 325	⇑	P	PKPdf	02 51 57.2	+0.7
DRGR		135.24 325	⇑	PKIKP	PKPdf	02 51 57.2	+0.7
LOT	Lotru	135.42 323	⇑	P	PKiKP	02 51 58.0	-0.5
LANS	Liptovska Anna	135.43 330	e	PKIKP	PKiKP	02 51 57.6	-0.7
RUE	Ruedersdorf	135.46 337	e	P	PKiKP	02 51 58.0	-0.1
DEV	Deva	135.67 324	⇑	P	PKPdf	02 51 57.8	+0.6
DEV	Deva	135.67 324	⇑	PKIKP	PKPdf	02 51 57.8	+0.6
KSP	Ksiaz	135.69 334	e	PKPdf	PKPdf	02 51 57.5	+0.5
MORC	Moravsky Berou	135.91 332	⇓	P	PKiKP	02 51 58.5	-0.7
MORC	Moravsky Berou	135.91 332	⇓	PKIKP	PKiKP	02 51 58.5	-0.7
MORC	Moravsky Berou	135.91 332	e	PKP	PKPdf	02 51 57.5	-0.1
MORC			e			02 55 09.5	
OSTC	Ostas	135.93 334	e	PKPDF	PKiKP	02 51 58.6	-0.6
OSTC			e	SKP		02 55 10.5	
CHVC	Chvalec	135.98 334	e	PKPDF	PKiKP	02 51 58.7	-0.6
CHVC			e	SKP		02 55 10.9	
TSUM	Tsumeb	136.02 223		PKP	PKPdf	02 51 58.2	-0.6
	baz=151,slow=5.7						
TSUM				SKPbc	SKPbc	02 55 11.5	+2.1
	comp=Z,5.1nm,0.8s,baz=266,slow=13,SNR=5.4						
GZR	Gura Zlata	136.03 324	⇓	P	PKPdf	02 51 58.2	+0.2
GZR	Gura Zlata	136.03 324	⇓	PKIKP	PKPdf	02 51 58.2	+0.2
PSZ	Piszkesteto	136.03 328	⇑	P	PKiKP	02 51 59.0	-0.6
PSZ	Piszkesteto	136.03 328	⇑	PKIKP	PKiKP	02 51 59.0	-0.6
PSZ	Piszkesteto	136.03 328		PKP	PKiKP	02 51 58.8	-0.7
KRLC	Kraliky	136.04 333	e	PKIKP	PKPdf	02 51 58.2	+0.4
KRLC	Kraliky	136.04 333	e	PKPDF	PKPdf	02 51 58.2	+0.4
KRLC			e	SKP		02 55 10.8	
DPC	Dobruska-Polom	136.04 333	e	PKIKP	PKPdf	02 51 58.5	+0.7
DPC	Dobruska-Polom	136.04 333	e	PKPDF	PKPdf	02 51 58.5	+0.7
DPC			e	SKP		02 55 11.0	
UPC	Upice	136.06 334	e	PKIKP	PKiKP	02 51 58.7	-0.8
UPC	Upice	136.06 334	e	PKPDF	PKiKP	02 51 58.7	-0.8
MAUC	Maruska	136.06 331	e	PKPDF	PKPdf	02 51 58.6	+0.7
MAUC			e	SKP		02 55 11.4	
SIRR	Siria	136.14 326	⇑	P	PKiKP	02 51 59.2	-0.6
VYHS	Vyhne	136.18 330	e	PKIKP	PKPdf	02 51 57.7	-0.4
SRE	Strehaia	136.20 323	⇓	P	PKiKP	02 51 59.9	0.0
SRE	Strehaia	136.20 323	⇓	PKIKP	PKiKP	02 51 59.9	0.0
JAVC	Velka Javorina	136.49 331	e	PKP	PKiKP	02 52 00.3	-0.2
JAVC			e			02 55 12.7	
HERR	Herculane	136.53 323	⇓	P	PKPdf	02 51 59.1	+0.3
BZS	Buzias	136.56 325	⇑	P	PKPdf	02 51 58.6	-0.2
BZS	Buzias	136.56 325	⇑	PKIKP	PKPdf	02 51 58.6	-0.2
RDO	Rodhopi	136.56 317		P	PKPdf	02 51 57.4	-1.6
BRG	Berggiesshubel	136.65 335	e	PKP	PKPdf	02 51 49.0	-10
BRG				Amp		02 51 50.9	
	comp=Z,5.3nm,1.1s						
BRG			e	x	x	02 51 59.4	
BRG				Amp		02 52 01.8	
	comp=Z,31nm,0.9s						
BRG			e	x	x	02 52 21.6	
BRG				Amp		02 52 22.9	
	comp=Z,5.5nm,1.2s						
BRG			e	x	x	02 52 58.1	
BRG				Amp		02 52 59.1	
	comp=Z,8.5nm,1.2s						
BRG				SKP		02 55 12.4	
BRG				Amp		02 55 14.5	
	comp=Z,8.1nm,1.2s						
BRG	Berggiesshubel	136.65 335	e	PKHKP	PKPpre	02 51 48.9	
BRG			e			02 51 59.3	
BRG			e			02 52 58.1	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,31nm,0.9s						
PVCC	Panska Ves	136.65 335	e	PKIKP	PKiKP	02 52 00.0	-0.7
PVCC	Panska Ves	136.65 335	e	PKPDF	PKiKP	02 52 00.0	-0.7
PVCC			e	SKP		02 55 12.6	
VRAC	Vranov	136.67 332	⇑	P	PKPdf	02 51 59.8	+0.9
VRAC	Vranov	136.67 332		PKP	PKPdf	02 51 59.0	+0.1
	comp=Z,4.7nm,0.7s,baz=62,slow=1.8,SNR=8.4						
VRAC				SKPbc	SKPbc	02 55 11.2	+1.0
	comp=Z,1.8nm,0.4s,baz=53,slow=5.6,SNR=3.6						
VRAC	Vranov	136.67 332	⇑	PKIKP	PKPdf	02 51 59.8	+0.9
VRAC	Vranov	136.67 332	e	PKP	PKPdf	02 51 59.0	+0.1
CLL	Collm	136.68 337	i	PKIKP	PKPdf	02 51 58.6	-0.3
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	136.68 337	e	PKPpre	PKPpre	02 51 49.0	
CLL			i	PKPdf	PKPdf	02 51 58.6	-0.3
	comp=Z,11nm,1.1s						
CLL			i	PKiKP	PKiKP	02 52 00.4	-0.3
	comp=Z,25nm,0.9s						
CLL			e	PP	PP	02 54 43.0	-0.2
CLL			i	SKPbc	SKPbc	02 55 12.5	+2.4
	comp=Z,35nm,2.0s						
CLL			i	SKPab	SKPab	02 55 18.5	+2.0
	comp=Z,17nm,1.3s						
CLL			e	PKSbc	PKSbc	02 55 33.0	+0.1
CLL			e	(PKSab)		02 55 39.0	
CLL			e	PPP	PPP	02 57 44.0	
CLL			e	(SKKSac)		03 01 10.0	
BUD	Budapest	136.76 329		PKP	PKiKP	02 52 01.5	+0.5
SMOL	Smolenice	136.85 331	e	PKIKP	PKiKP	02 52 00.3	-0.8
SRO	Srobarova	136.90 329	e	PKIKP	PKiKP	02 52 00.4	-0.8
PRK	Paraskevi	136.94 314		P	PKPdf	02 52 00.0	+0.3
KRUC	Moravsky	136.94 332	e	PKP	PKPdf	02 51 59.8	+0.4
KRUC			e			02 55 13.0	
MDVR	Moldovita	137.00 324	⇑	P	PKPdf	02 52 00.4	+0.6
MODS	Modra-Piesok	137.02 331	e	PKIKP	PKPdf	02 51 59.9	+0.3
GOPC	GO Pecny, Ondr	137.03 334	e	PKIKP	PKPdf	02 52 00.3	+0.7
GOPC	GO Pecny, Ondr	137.03 334	e	PKPDF	PKPdf	02 52 00.3	+0.7
PRU	Pruhonice	137.07 334	e	PKIKP	PKPdf	02 52 00.2	+0.6
PRU	Pruhonice	137.07 334	e	PKPDF	PKPdf	02 52 00.2	+0.6
BLKB	Belogradchik	137.09 322	⇓	P	PKPdf	02 52 00.2	+0.2
TREC	Trest	137.18 333	e	PKIKP	PKPdf	02 52 00.4	+0.5
TREC	Trest	137.18 333	e	PKPDF	PKPdf	02 52 00.4	+0.5
ZST	Bratislava	137.22 331	e	PKIKP	PKPdf	02 52 00.7	+0.7
CSKK	Cskako	137.23 329		PKP	PKPdf	02 52 00.7	+0.6
VTS	Vitosha	137.30 320	⇑	P	PKPdf	02 52 00.1	-0.4
VTS	Vitosha	137.30 320	⇑	PKIKP	PKPdf	02 52 00.1	-0.4
VTS	Vitosha	137.30 320	e	P	PKPdf	02 52 00.1	-0.4
EKA	Eskdalemuir Ar	137.34 352		PKhKP	PKPpre	02 51 49.2	
	comp=Z,1.2nm,0.6s,baz=356,slow=2.6,SNR=5.0						
EKA				PKP	PKPdf	02 51 59.9	-0.1
	comp=Z,1.8nm,0.5s,baz=352,slow=1.3,SNR=7.5						
EKA				SKPbc	SKPbc	02 55 12.3	+0.4
	comp=Z,1.0nm,0.7s,baz=351,slow=1.7,SNR=3.6						
THAS	Thassos island	137.37 317		P	PKPdf	02 51 55.9	-4.6
MMB	Musomiste	137.53 319	e	P	PKPdf	02 51 59.9	-0.9
NVR	Nevrokopi	137.56 318		P	PKPdf	02 51 59.5	-1.4
EGYH	Egyhazaskeszo	137.66 330		PKP	PKiKP	02 52 03.5	+0.7
BOVS	Bovan	137.67 322	⇑	P	PKPdf	02 52 00.3	-0.6
MPLH	Magyarpolny	137.72 329		PKP	PKPdf	02 52 01.3	+0.4
NKC	Novy Kostel	137.75 336	e	PKIKP	PKiKP	02 52 03.5	+0.6
NKC	Novy Kostel	137.75 336	e	PKPDF	PKiKP	02 52 03.5	+0.6
MORH	Mrgy, Hungar	137.80 327	⇓	P	PKiKP	02 52 02.2	-0.9
MORH	Mrgy, Hungar	137.80 327		PKP	PKPdf	02 52 01.0	-0.1
FRGS	Fruska Gora	137.84 325	⇓	P	PKPdf	02 52 01.2	-0.1
FRGS	Fruska Gora	137.84 325	e	P	PKPdf	02 52 01.0	-0.3
SOP	Sopron	137.85 330		PKP	PKiKP	02 52 02.1	-1.0
RONA	Rosalia, Austr	137.96 331	i	P	PKPdf	02 52 01.8	+0.4
	comp=Z,10nm,0.9s						
RONA			e	P	PKiKP	02 52 04.3	+0.8
	comp=Z,24nm,0.6s,SNR=16						
CONA	Conrad Observa	138.00 331	i	P	PKPdf	02 52 02.0	+0.4
	comp=Z,6.5nm,0.7s						
CONA			i	P	PKiKP	02 52 04.4	+0.8
	comp=Z,23nm,0.6s,SNR=10						
CKRC	Cesky Krumlov	138.05 333	e	PKPpre	PKPpre	02 51 52.7	
CKRC			e	PKPDF	PKPdf	02 52 02.4	+0.9
CKRC			e	SKP		02 55 16.7	
KHC	Kasperske Hory	138.13 334	e	PKHKP	PKPpre	02 51 54.6	
KHC			e			02 52 02.3	
KHC	Kasperske Hory	138.13 334	e	PKPpre	PKPpre	02 51 54.6	
KHC			e	PKPDF	PKPdf	02 52 02.3	+0.6
KHC			e	SKP		02 55 17.0	
KNT	Kendrikon	138.28 319		P	PKPdf	02 51 54.4	-7.8
GERES	GERESS Array B	138.30 334		PKhKP	PKPpre	02 51 52.1	
	comp=Z,1.6nm,0.8s,baz=42,slow=4.2,SNR=12						
GERES				PKP	PKPdf	02 52 02.2	+0.1
	comp=Z,11nm,0.8s,baz=37,slow=3.3,SNR=20						
GERES				SKP		02 55 17.0	
	comp=Z,2.0nm,0.8s,baz=40,slow=2.3,SNR=6.5						
TEKS	Tekeris	138.38 325	e	P	PKPdf	02 51 59.6	-2.7
DIVS	Divibare	138.39 324	e	P	PKPdf	02 51 53.3	-9.1
PAIG	Paliouri	138.39 317		P	PKPdf	02 51 58.9	-3.5
VAY	Valandovo	138.41 319	e	P	PKPdf	02 52 01.6	-0.8
STIP	Stip	138.46 320	e	P	PKPdf	02 51 54.4	-8.0
ARSA	Arzberg	138.65 331	i	P	PKPdf	02 52 02.9	+0.2
	comp=Z,7.1nm,1.2s						
ARSA			e	P	PKiKP	02 52 05.0	+0.1
	comp=Z,18nm,1.3s,SNR=5.7						
GRFO	Grafenberg	138.66 336			PKPdf	02 52 02.7	+0.1
GRFO	Grafenberg	138.66 336		PKIKP	PKPdf	02 52 02.7	+0.1
GRG	Griva	138.71 319		P	PKPdf	02 52 01.2	-1.8
MOA	Molln	138.80 332	i	P	PKPdf	02 52 02.8	-0.1
	comp=Z,8.5nm,1.3s						
MOA			i	P	PKiKP	02 52 05.5	+0.3
	comp=Z,10nm,0.6s						
KOGS	Kog	138.86 329	i	PKPdf	PKPdf	02 52 02.7	-0.4
BBLS	Lazići	138.87 324	e	P	PKPdf	02 52 03.1	-0.2
HAPS	Han Pijesak,Bl	138.99 325	e	P	PKPdf	02 51 56.2	-7.3
NEO	Neokhori	139.00 316		P	PKPdf	02 52 02.2	-1.4
RUDO	Rudo	139.04 324	e	P	PKPdf	02 51 53.2	-10
LIT	Litokhoron	139.10 317		P	PKPdf	02 51 54.8	-8.9
A052A	Srbac	139.12 327	e	P	PKPdf	02 52 01.0	-2.5
PTL	Penteli	139.16 314		P	PKPdf	02 52 02.6	-1.3
BIOA	Bad Ischl, Aus	139.20 333	i	P	PKPdf	02 52 03.6	0.0
	comp=Z,15nm,1.2s						
BIOA			i	P	PKiKP	02 52 06.1	+0.1
	comp=Z,11nm,0.8s,SNR=7.1						
SOKA	Soboth	139.29 330	i	P	PKPdf	02 52 04.1	+0.2
	comp=Z,16nm,1.5s						
SOKA			i	P	PKiKP	02 52 06.4	+0.1
	comp=Z,31nm,1.4s,SNR=6.4						
VLY	Voula,Athens	139.30 314		P	PKPdf	02 52 02.6	-1.5
KZN	Kozani	139.46 318		P	PKPdf	02 52 03.6	-0.8
LKR	Lokris	139.47 315		P	PKPdf	02 52 02.0	-2.4
A051A	Mrakovica	139.51 327	e	P	PKPdf	02 51 56.8	-7.6
BLY	Banja Luka	139.53 327	e	P	PKPdf	02 51 56.9	-7.4
PHP	Peshkopia	139.55 321		P	PKPdf	02 51 58.1	-6.4
IDI	Anoyia	139.59 310	⇓	P	PKPdf	02 52 05.6	+0.8
OHR	Ohrid	139.65 320	e	P	PKPdf	02 51 59.2	-5.6
THL	Klokotos Trika	139.69 317		P	PKPdf	02 52 03.3	-1.4
CRES	Cresnjev	139.69 329	e	P	PKPdf	02 51 56.3	-8.3
CRES	Cresnjev	139.69 329	i	PKPdf	PKPdf	02 52 04.5	-0.1
BTNL	Ternell	139.69 341	d	PKiKP	PKiKP	02 52 07.4	+0.5
MEM	Membach	139.71 342	d	PKPdf	PKPdf	02 52 04.6	+0.1
MEM			d	PKiKP	PKiKP	02 52 07.3	+0.4
KBA	Koelnbreinsper	139.79 332	i	P	PKPdf	02 52 05.0	0.0
	comp=Z,3.5nm,0.7s						
KBA			i	P	PKiKP	02 52 07.1	-0.3
	comp=Z,22nm,1.0s,SNR=5.8						
PDG	Podgorica	139.83 322	⇑	P	PKPdf	02 52 04.6	-0.3
BSTI	Sart Tilman	139.87 342	d	PKPdf	PKPdf	02 52 05.3	+0.6
BSTI			d	PKiKP	PKiKP	02 52 07.6	+0.4
KBN	Korca	139.92 319		P	PKPdf	02 52 04.7	-0.6
BHOU	Houvegnez	139.93 341	d	PKPdf	PKPdf	02 52 05.5	+0.6
BHOU			d	PKiKP	PKiKP	02 52 08.1	+0.7
BRY	Bratogost	139.96 324	e	P	PKPdf	02 51 56.4	-9.0
KRND	KRANIDI	139.97 313		P	PKPdf	02 52 00.6	-4.7
MYKA	Terra Mystica	139.99 332	i	P	PKPdf	02 52 05.1	-0.1
	comp=Z,8.4nm,1.3s						
MYKA			e	P	PKiKP	02 52 07.4	-0.3
	comp=Z,14nm,0.9s,SNR=5.2						
SRKY	Kupres RS	139.99 326	e	P	PKPdf	02 52 03.5	-1.8
DRME	Dracevica, Mon	140.02 322	e	P	PKPdf	02 52 02.5	-2.8
BOJS	Bojanci	140.02 329	e	P	PKPdf	02 51 58.6	-6.6
A050A	Klekovaca	140.06 327	e	P	PKPdf	02 51 57.7	-7.7
BCLA	Clavier	140.09 342	d	PKPdf	PKPdf	02 52 05.3	+0.1
BCLA			d	PKiKP	PKiKP	02 52 07.8	+0.2
EVR	Evrytania	140.15 316		P	PKPdf	02 52 03.2	-2.6
BGES	Gesves	140.19

PCAS	Casmilo, Conde	153.03 353	*e*PKPdf	PKPdf	02 52 27.4	+0.4
PCAS	Casmilo, Conde	153.03 353	*e*PKPbc	PKiKP	02 52 35.0	+0.3
PCBR	Castelo Branco	153.09 351	*e*PKPdf	PKPdf	02 52 27.7	+0.6
PCBR	Castelo Branco	153.09 351	*e*PKPbc	PKiKP	02 52 35.3	+0.5
PCBR	Castelo Branco	153.09 351	*e*PKPab	PKPab	02 52 46.9	0.0
BART	Pico Bartolome	153.18 22	*e*PKP	PKPbc	02 52 31.4	-3.6
PMRV	Marv??o	153.48 351	*e*PKPdf	PKPdf	02 52 28.3	+0.6
PMRV	Marv??o	153.48 351	*e*PKPbc	PKiKP	02 52 36.1	+0.5
PSBE	So Bento	153.59 353	*e*PKPbc	PKiKP	02 52 36.4	+0.5
PMTG	Montargil	153.96 352	*e*PKPdf	PKPdf	02 52 28.9	+0.5
PMTG	Montargil	153.96 352	*e*PKPbc	PKiKP	02 52 36.8	+0.2
PMTG	Montargil	153.96 352	*e*PKPab	PKPab	02 52 51.0	+0.4
PESTR	Estremoz	154.06 351	*e*PKPdf	PKPdf	02 52 27.9	-0.7
PESTR	Estremoz	154.06 351	*e*PKPbc	PKiKP	02 52 37.1	+0.3
PESTR	Estremoz	154.06 351	*e*PKPab	PKPab	02 52 51.8	+0.7
PESTR	Estremoz	154.06 351		PKPdf	02 52 27.1	-1.5
PESTR				PKPbc	02 52 36.3	-0.5
PESTR				PKPab	02 52 50.7	-0.4
PMAFR	Mafra	154.20 354	*e*PKPbc	PKiKP	02 52 37.6	+0.5
EVO	Evora	154.46 351	*e*PKPdf	PKPdf	02 52 28.9	-0.2
EVO	Evora	154.46 351	*e*PKPbc	PKPbc	02 52 36.8	-0.8
EVO	Evora	154.46 351	*e*PKPab	PKPab	02 52 50.5	-2.3
PBAR	Barrancos	154.65 349	*e*PKPdf	PKPdf	02 52 29.6	+0.3
PBAR	Barrancos	154.65 349	*e*PKPbc	PKiKP	02 52 38.1	+0.1
PBAR	Barrancos	154.65 349	*e*PKPab	PKPab	02 52 54.7	+1.1
PBEJ	Beja	154.93 351	*e*PKPdf	PKPdf	02 52 30.7	+0.9
PBEJ	Beja	154.93 351	*e*PKPbc	PKiKP	02 52 39.6	+1.0
PBEJ	Beja	154.93 351	*e*PKPab	PKPab	02 52 56.2	+1.4
PNCL	Nicolau / Gran	154.94 352	*e*PKPdf	PKPdf	02 52 29.8	+0.1
PNCL	Nicolau / Gran	154.94 352	*e*PKPbc	PKiKP	02 52 39.2	+0.6
PNCL	Nicolau / Gran	154.94 352	*e*PKPab	PKPab	02 52 56.3	+1.5
MESJ	Messejana	155.17 351	*e*PKPdf	PKPdf	02 52 29.8	-0.3
MESJ	Messejana	155.17 351	*e*PKPdf	PKPdf	02 52 31.0	+0.9
MESJ	Messejana	155.17 351	*e*PKPbc	PKPdf	02 52 40.0	+10
MESJ	Messejana	155.17 351	*e*PKPab	PKPab	02 52 57.2	+1.4
PCVE	Castro Verde	155.34 351	*e*PKPdf	PKPdf	02 52 30.8	+0.5
PCVE	Castro Verde	155.34 351	*e*PKPab	PKPab	02 52 58.2	+1.6
PVAQ	Vaqueiros	155.51 350	*e*PKPdf	PKPdf	02 52 31.2	+0.7
PVAQ	Vaqueiros	155.51 350	*e*PKPab	PKPab	02 52 57.6	+0.3
PTEO	Sao Teotonio	155.53 352	*e*PKPab	PKPab	02 52 59.0	+1.7
MORF	Marmelete	155.75 352	*e*PKPdf	PKPdf	02 52 30.5	-0.4
MORF	Marmelete	155.75 352	*e*PKPdf	PKPdf	02 52 31.8	+0.9
MORF	Marmelete	155.75 352	*e*PKPab	PKPab	02 52 59.8	+1.4
PFVI	Vila Bisbo	155.94 352	*e*PKPab	PKPab	02 53 00.3	+1.1
TAM	Tamanrasset	160.19 301	PKPdf	PKPdf	02 52 35.7	-1.2
TAM	Tamanrasset	160.19 301	PKIKP	PKPdf	02 52 35.7	-1.2
PMAR	Madeira	160.24 10	*e*PKPbc	PKPdf	02 52 38.1	+1.4
TOA0	Torodi Ar. Sit	165.90 271		PKPdf	02 52 40.7	-1.6
TORD	Torodi Ar. Bea	165.90 271	PKP	PKPdf	02 52 42.6	+0.3
	comp=Z,18nm,0.8s,baz=6.9,slow=0.9,SNR=5.3					
TORD			PKPab	PKPab	02 53 43.5	-0.1
	comp=Z,16nm,0.6s,baz=92,slow=3.6,SNR=5.3					
KIC	Kosan Boka	169.54 230⇑	*e*PKIKP	PKPdf	02 52 44.0	-1.0
	comp=Z,17nm,1.0s					
LIC	Lamto	169.66 228⇑	*e*PKIKP	PKPdf	02 52 44.0	-1.0
	comp=Z,55nm,1.1s					
DBIC	Dimbokro	169.83 231	PKP	PKPdf	02 52 44.2	-0.9
	comp=Z,14nm,1.0s,baz=186,slow=0.6,SNR=9.0					
DBIC			PKPab	PKPab	02 54 02.3	+1.5
	comp=Z,3.6nm,0.8s,baz=187,slow=7.2,SNR=4.1					
DBIC	Dimbokro	169.83 231		PKPdf	02 52 43.4	-1.7
TIC	Toumodi	169.93 230⇑	*e*PKIKP	PKPdf	02 52 44.1	-1.1
	comp=Z,32nm,1.0s					
KOWA	Kowa	171.40 279		PKPdf	02 52 44.1	-1.7

*IDC **01** 02:41:43.8±2.1, 63°.07N×149°.32W, h76km±23km, mb3.7/6, mbtmp4.0/10, MS3.4/1, Error ellipse: s-maj=36.4km s-min=22.8km az=125.0*

*AEIC **01** 02:41:44±1.0, 63°.06N±0°.03×149°.10W±0°.07, h74km±5km, ML3.7, ML3.9/186(NEIC), Error ellipse: s-maj=4.4km s-min=4.2km az=83.0*

*NEIC **01** 02:41:44.7±1.1, 63°.06N±0°.03×149°.04W±0°.06, h75km±3km, Error ellipse: s-maj=4.4km s-min=3.3km az=218.0*

*ANF **01** 02:41:45.2±0.1, 63°.07N×149°.10W, h67km±2km, ML4.0/112, ML4.0/112, Error ellipse: s-maj=1.1km s-min=0.9km az=105.0*

ISC 01 02:41:44.2±0.7, **63°.07N**±0°.03×**149°.07W**±0°.03, **h79**km±5km, **n365**, σ0°**89**/363, **mb4.1**/6, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT1	**Susitna Watana**	**0.34**	**135**		**Pn**	**02 41 56.4**	**-0.3**
WAT1					**Sn**	**02 42 05.3**	**-0.7**
WAT1	**Susitna Watana**	**0.34**	**135**	P	**Pn**	**02 41 56.5**	**-0.3**
	baz=314						
WAT1				S	**Sn**	**02 42 05.2**	**-0.8**
	baz=314						
RND	**Reindeer**	**0.35**	**16**		**Pn**	**02 41 57.2**	**+0.3**
RND				Sn	**Sn**	**02 42 03.4**	**-2.8**
MCK	**McKinley**	**0.67**	**5**		**Pn**	**02 42 00.2**	**+0.7**
MCK					**Sn**	**02 42 11.3**	**+0.4**
MCK	**McKinley**	**0.67**	**5**	IAML		02 42 11.7	
	comp=E,4μm,0.6s						
MCK	**McKinley**	**0.67**	**5**	P	**Pn**	**02 42 00.2**	**+0.7**
	baz=186,SNR=361						
MCK				S	**Sn**	**02 42 11.3**	**+0.4**
	baz=186						
TRF	**Thorofare Moun**	**0.67**	**305**		**Pn**	**02 42 00.1**	**+0.4**
TRF	**Thorofare Moun**	**0.67**	**305**		**Sn**	**02 42 12.0**	**+0.8**
TRF	**Thorofare Moun**	**0.67**	**305**	P	**Pn**	**02 42 00.2**	**+0.5**
	baz=125,SNR=244						
TRF				S	**Sn**	**02 42 11.5**	**+0.3**
	baz=125						
DHY	**Denali Highway**	**0.77**	**89**		**Pn**	**02 42 00.7**	**-0.1**
DHY	**Denali Highway**	**0.77**	**89**		**Sn**	**02 42 13.0**	**0.0**
DHY	**Denali Highway**	**0.77**	**89**	P	**Pn**	**02 42 00.7**	**-0.1**
	baz=270,SNR=250						
DHY				S	**Sn**	**02 42 12.8**	**-0.3**
	baz=270						
WAT6	**Susitna Watana**	**0.78**	**128**		**Pn**	**02 42 00.4**	**-0.5**
WAT6	**Susitna Watana**	**0.78**	**128**	P	**Pn**	**02 42 00.6**	**-0.3**
	baz=309,SNR=604						
WAT6				S	**Sn**	**02 42 12.2**	**-1.1**
	baz=309						
CUT	**Chulitna**	**0.87**	**220**		**Pn**	**02 42 01.6**	**-0.1**
CUT				IAML		02 42 15.1	
	comp=N,9μm,0.4s						
CUT				IAML		02 42 15.2	
	comp=E,7μm,0.6s						
CUT	**Chulitna**	**0.87**	**220**		**Sn**	**02 42 14.3**	**-0.3**
CUT	**Chulitna**	**0.87**	**220**	P	**Pn**	**02 42 01.7**	**+0.1**
	baz=39,SNR=144						
CUT				S	**Sn**	**02 42 14.1**	**-0.5**
	baz=39						
KTH	**Kantishna Hill**	**0.97**	**301**		**Pn**	**02 42 03.5**	**+0.6**
KTH					**Sn**	**02 42 17.4**	**+0.6**
BWN	**Browne**	**1.12**	**351**		**Pn**	**02 42 05.3**	**+0.6**
BWN				IAML		02 42 20.4	
	comp=E,2μm,0.6s						
BWN	**Browne**	**1.12**	**351**		**Sn**	**02 42 20.1**	**+0.1**
SML	**Sawmill**	**1.31**	**165**	Pn	**Pn**	**02 42 07.1**	**-0.1**
SML				IAML		02 42 28.8	
	comp=E,1μm,0.4s						
SML				IAML		02 42 28.0	
	comp=N,2μm,0.4s						
SML	**Sawmill**	**1.31**	**165**	P	**Pn**	**02 42 07.1**	**-0.1**
	baz=345,SNR=613						
SML				S	**Sn**	**02 42 25.4**	**+0.9**
	baz=345						
BPAW	**Bear Paw Mtn.**	**1.34**	**321**	Pn	**Pn**	**02 42 07.9**	**+0.4**
BPAW	**Bear Paw Mtn.**	**1.34**	**321**	P	**Pn**	**02 42 07.9**	**+0.4**
	baz=140,SNR=529						
BPAW				S	**Sn**	**02 42 24.2**	**-0.8**
	baz=140						
CAST	**Castle Rocks**	**1.41**	**286**		**Pn**	**02 42 08.2**	**-0.1**
CAST	**Castle Rocks**	**1.41**	**286**		**Sn**	**02 42 25.7**	**-0.8**
CAST	**Castle Rocks**	**1.41**	**286**	P	**Pn**	**02 42 08.3**	**0.0**
	baz=104,SNR=38						
CAST				S	**Sn**	**02 42 25.4**	**-1.1**
	baz=104						
M22K	**Willow**	**1.41**	**201**		**Pn**	**02 42 08.4**	**+0.1**
M22K	**Willow**	**1.41**	**201**	P	**Pn**	**02 42 08.3**	**0.0**
	baz=20,SNR=37						
M22K				S	**Sn**	**02 42 28.1**	**+1.7**
	baz=20						
M23K	**Glacier View**	**1.43**	**153**		**Pn**	**02 42 08.5**	**-0.1**
M23K	**Glacier View**	**1.43**	**153**	P	**Pn**	**02 42 08.5**	**-0.1**
	baz=334,SNR=823						
PPLA	**Purkeypile**	**1.44**	**264**		**Pn**	**02 42 09.6**	**+0.8**
PPLA	**Purkeypile**	**1.44**	**264**		**Sn**	**02 42 28.1**	**+0.8**
PPLA	**Purkeypile**	**1.44**	**264**	P	**Pn**	**02 42 09.6**	**+0.8**
	baz=82,SNR=177						
PPLA				S	**Sn**	**02 42 27.9**	**+0.6**
	baz=82						
WRH	**Wood River Hil**	**1.47**	**17**		**Pn**	**02 42 09.5**	**+0.4**
WRH	**Wood River Hil**	**1.47**	**17**		**Sn**	**02 42 27.4**	**-0.5**
SCM	**Sheep Creek Mo**	**1.48**	**146**		**Pn**	**02 42 09.6**	**+0.2**
SCM				IAML		02 42 32.6	
	comp=N,3μm,0.8s						
SCM				IAML		02 42 32.7	
	comp=E,2μm,0.8s						
SCM	**Sheep Creek Mo**	**1.48**	**146**	P	**Pn**	**02 42 09.5**	**+0.2**
	baz=327,SNR=596						
PMR	**Palmer**	**1.48**	**181**		**Pn**	**02 42 09.5**	**+0.3**
PMR				IAML		02 42 31.0	
	comp=E,2μm,0.3s						
PMR				IAML		02 42 32.1	
	comp=N,2μm,0.5s						
PMR	**Palmer**	**1.48**	**181**	P	**Pn**	**02 42 09.5**	**+0.3**
	baz=0.9,SNR=135						
PMR				S	**Sn**	**02 42 29.4**	**+1.2**
	baz=0.9						
NEA2	**Nenana**	**1.53**	**0**		**Pn**	**02 42 10.1**	**+0.3**
NEA2					**Sn**	**02 42 28.3**	**-0.9**
NEA2	**Nenana**	**1.53**	**0**	IAML		02 42 29.8	
	comp=E,981nm,0.6s						
NEA2	**Nenana**	**1.53**	**0**	P	**Pn**	**02 42 10.1**	**+0.3**
	baz=180,SNR=127						
NEA2				S	**Sn**	**02 42 28.2**	**-1.0**
	baz=180						
PS10	**TAPS Pump St10**	**1.54**	**75**		**Pn**	**02 42 11.5**	**+1.5**
SKT	**Skwentna**	**1.58**	**227**		**Pn**	**02 42 10.6**	**0.0**
SKT	**Skwentna**	**1.58**	**227**	IAML		02 42 31.1	
	comp=N,2μm,0.5s						
SKT				IAML		02 42 34.4	
	comp=E,2μm,0.3s						
SKT	**Skwentna**	**1.58**	**227**	P	**Pn**	**02 42 10.6**	**0.0**
	baz=45,SNR=200						
SKT				S	**Sn**	**02 42 30.2**	**-0.4**
	baz=45						
HDA	**Harding Lake**	**1.64**	**34**		**Pn**	**02 42 11.8**	**+0.5**
HDA					**Sn**	**02 42 31.5**	**-0.4**
HDA	**Harding Lake**	**1.64**	**34**	IAML		02 42 32.9	
	comp=N,1μm,0.6s						
HDA	**Harding Lake**	**1.64**	**34**	P	**Pn**	**02 42 11.8**	**+0.5**
	baz=216,SNR=523						
HDA				S	**Sn**	**02 42 31.5**	**-0.4**
	baz=216						
HDA				S	**Sn**	**02 42 31.5**	**-0.4**
	baz=216						
PAX	**Paxson**	**1.65**	**92**		**Pn**	**02 42 12.5**	**+1.1**
PAX	**Paxson**	**1.65**	**92**	P	**Pn**	**02 42 12.6**	**+1.1**
	baz=275,SNR=410						
K24K	**Donnelly Dome**	**1.65**	**62**		**Pn**	**02 42 12.8**	**+1.3**
K24K	**Donnelly Dome**	**1.65**	**62**	P	**Pn**	**02 42 12.9**	**+1.3**
	baz=245,SNR=295						
M24K	**Tolsona, Glenn**	**1.65**	**125**		**Pn**	**02 42 12.4**	**+0.9**
M24K	**Tolsona, Glenn**	**1.65**	**125**	P	**Pn**	**02 42 13.0**	**+1.4**
	baz=307,SNR=1000						
CHUM	**Lake Minchumin**	**1.67**	**301**		**Pn**	**02 42 12.1**	**+0.4**
CHUM	**Lake Minchumin**	**1.67**	**301**	P	**Pn**	**02 42 12.2**	**+0.6**
	baz=118,SNR=145						
CHUM				S	**Sn**	**02 42 31.8**	**-0.6**
	baz=118						
CCB	**Clear Creek Bu**	**1.68**	**19**		**Pn**	**02 42 11.6**	**-0.2**
CCB				IAML		02 42 32.2	
	comp=E,797nm,0.6s						
KNK	**Knik Glacier**	**1.69**	**170**		**Pn**	**02 42 12.7**	**+0.7**
KNK	**Knik Glacier**	**1.69**	**170**	P	**Pn**	**02 42 12.7**	**+0.7**
	baz=350,SNR=904						
PS08	**TAPS Pump Stn8**	**1.78**	**33**		**Pn**	**02 42 13.7**	**+0.5**
SUA	**Susitna One**	**1.79**	**207**		**Pn**	**02 42 13.7**	**+0.2**
SUA				IAML		02 42 40.0	
	comp=N,2μm,1.1s						
SUA				IAML		02 42 42.0	
	comp=E,2μm,0.5s						
SUA	**Susitna One**	**1.79**	**207**	P	**Pn**	**02 42 14.1**	**+0.6**
	baz=25						
SUA				S	**Sn**	**02 42 36.0**	**+0.4**
	baz=25						
TCOL	**CIGO, UAF Yank**	**1.89**	**16**		**Pn**	**02 42 14.7**	**+0.1**
TCOL	**CIGO, UAF Yank**	**1.89**	**16**	P	**Pn**	**02 42 15.1**	**+0.6**
	baz=197,SNR=19						
TCOL				S	**Sn**	**02 42 36.9**	**-0.7**
	baz=197						
COLA	**College**	**1.89**	**16**		**Pn**	**02 42 14.7**	**+0.1**
COLA	**College**	**1.89**	**16**	P	**Pn**	**02 42 15.2**	**+0.6**
	baz=197						
COLA				S	**Sn**	**02 42 37.2**	**-0.4**
	baz=197						
HARP	**HAARP**	**1.92**	**109**	P	**Pn**	**02 42 16.5**	**+1.4**
	baz=292,SNR=74						
MDM	**Murphy Dome**	**1.93**	**11**		**Pn**	**02 42 15.3**	**+0.1**
MDM				IAML		02 42 38.3	
	comp=E,674nm,0.7s						
PS11	**TAPS Pump St11**	**1.94**	**119**		**Pn**	**02 42 16.9**	**+1.6**
IL31		**1.96**	**29**		**Pn**	**02 42 15.2**	**-0.3**
ILAR	**Eielson Array**	**1.96**	**29**	P	**Pn**	**02 42 15.5**	**-0.1**
	comp=E,95nm,0.4s,baz=210,slow=14,SNR=1464						
ILAR				S	**Sn**	**02 42 36.8**	**-2.6**
	comp=E,87nm,0.3s,baz=216,slow=22,SNR=13						
FIS	**Fire Island**	**2.01**	**196**		**Pn**	**02 42 17.8**	**+1.6**
RC01	**Rabbit Creek A**	**2.01**	**189**		**Pn**	**02 42 17.0**	**+0.7**
RC01	**Rabbit Creek A**	**2.01**	**189**	P	**Pn**	**02 42 17.0**	**+0.7**
	baz=8.6,SNR=243						
RIDG	**Independent Ri**	**2.02**	**69**		**Pn**	**02 42 17.3**	**+1.0**
RIDG				IAML		02 42 46.7	
	comp=N,1μm,0.6s						
RIDG				IAML		02 42 48.9	
	comp=E,1μm,0.5s						
RIDG	**Independent Ri**	**2.02**	**69**	P	**Pn**	**02 42 17.6**	**+1.2**
	baz=252,SNR=589						
STLK	**Strandline Lak**	**2.04**	**221**		**Pn**	**02 42 17.0**	**+0.3**
I23K	**Minto, Yukon-K**	**2.09**	**357**		**Pn**	**02 42 17.4**	**+0.2**
I23K	**Minto, Yukon-K**	**2.09**	**357**	P	**Pn**	**02 42 17.9**	**+0.7**
	baz=177,SNR=45						
I23K				S	**Sn**	**02 42 41.5**	**-0.9**
	baz=177						
MLY	**Manley**	**2.10**	**340**		**Pn**	**02 42 17.9**	**+0.5**
MLY	**Manley**	**2.10**	**340**	P	**Pn**	**02 42 17.9**	**+0.5**
	baz=159,SNR=71						
MLY				S	**Sn**	**02 42 42.0**	**-0.8**
	baz=159						
KLU	**Klutina**	**2.16**	**136**		**Pn**	**02 42 18.6**	**+0.3**
KLU	**Klutina**	**2.16**	**136**	IAML		02 42 51.5	
	comp=N,1μm,0.4s						
KLU				IAML		02 42 52.0	
	comp=E,1μm,0.4s						
KLU	**Klutina**	**2.16**	**136**	P	**Pn**	**02 42 18.6**	**+0.3**
	baz=318,SNR=663						
POKR	**Poker Plat Res**	**2.18**	**19**		**Pn**	**02 42 19.1**	**+0.6**
POKR	**Poker Plat Res**	**2.18**	**19**	IAML		02 42 44.8	
	comp=E,459nm,1.0s						
POKR	**Poker Plat Res**	**2.18**	**19**	P	**Pn**	**02 42 19.1**	**+0.6**
	baz=200,SNR=18						
POKR				S	**Sn**	**02 42 43.8**	**-0.7**
	baz=200						
M20K	**Styx River**	**2.23**	**239**		**Pn**	**02 42 19.2**	**0.0**
M20K				IAML		02 42 46.6	
	comp=N,1μm,0.5s						
M20K				IAML		02 42 48.3	
	comp=E,632nm,0.4s						
M20K	**Styx River**	**2.23**	**239**	P	**Pn**	**02 42 19.5**	**+0.2**
	baz=56						
PWL	**Port Wells**	**2.25**	**171**		**Pn**	**02 42 19.7**	**+0.3**
PWL	**Port Wells**	**2.25**	**171**	IAML		02 42 54.0	
	comp=E,1μm,0.7s						
PWL				IAML		02 42 55.5	
	comp=N,1μm,0.5s						
PWL	**Port Wells**	**2.25**	**171**	P	**Pn**	**02 42 19.9**	**+0.5**
	baz=351,SNR=118						
J25K	**Salcha River,**	**2.25**	**45**		**Pn**	**02 42 19.8**	**+0.3**
J25K	**Salcha River,**	**2.25**	**45**	IAML		02 42 47.4	
	comp=N,398nm,0.7s						
J25K				IAML		02 42 50.8	
	comp=E,576nm,0.5s						
J25K	**Salcha River,**	**2.25**	**45**	P	**Pn**	**02 42 20.0**	**+0.5**
	baz=228,SNR=188						
SPCG	**Spurr Capps Gl**	**2.26**	**219**		**Pn**	**02 42 20.5**	**+0.8**
PS07	**TAPS Pump Stn7**	**2.27**	**8**		**Pn**	**02 42 20.8**	**+1.1**
K20K	**Telida**	**2.28**	**279**		**Pn**	**02 42 20.1**	**+0.3**
K20K	**Telida**	**2.28**	**279**	P	**Pn**	**02 42 20.2**	**+0.3**
	baz=95,SNR=23						
L20K	**Farewell, AK**	**2.29**	**257**		**Pn**	**02 42 20.1**	**+0.1**
L20K	**Farewell, AK**	**2.29**	**257**	P	**Pn**	**02 42 20.1**	**+0.1**
	baz=73,SNR=80						
SPCP	**Crater Peak Br**	**2.32**	**220**		**Pn**	**02 42 21.6**	**+1.1**
DOT	**Dot Lake**	**2.33**	**73**		**Pn**	**02 42 21.3**	**+0.8**
JPK	**Jack Peak**	**2.33**	**149**		**Pn**	**02 42 20.5**	**-0.1**
SPU	**Mount Spurr**	**2.36**	**218**		**Pn**	**02 42 21.0**	**0.0**
VMT	**TAPS Tl Valdez**	**2.37**	**146**		**Pn**	**02 42 20.9**	**0.0**
N20K	**Mount Spurr**	**2.39**	**220**	P	**Pn**	**02 42 22.0**	**+0.7**
	baz=37,SNR=59						
SPCR	**Spurr Chakacha**	**2.39**	**220**	P	**Pn**	**02 42 22.4**	**+1.0**
	baz=37,SNR=43						
GLI	**Glacier Island**	**2.39**	**156**		**Pn**	**02 42 21.1**	**-0.2**
GLI	**Glacier Island**	**2.39**	**156**	IAML		02 42 59.9	
	comp=E,994nm,0.5s						
GLI	**Glacier Island**	**2.39**	**156**	P	**Pn**	**02 42 21.1**	**-0.2**
	baz=338,SNR=335						
CKL	**Chakachamna La**	**2.43**	**221**		**Pn**	**02 42 22.6**	**+0.6**
MENT	**Mentasta**	**2.44**	**91**		**Pn**	**02 42 22.6**	**+0.5**
MENT				IAML		02 42 59.4	
	comp=N,1μm,0.5s						
MENT				IAML		02 43 03.9	
	comp=E,1μm,0.5s						
SCRK	**Sand Creek**	**2.45**	**66**		**Pn**	**02 42 22.8**	**+0.6**
SCRK	**Sand Creek**	**2.45**	**66**	IAML		02 42 55.8	
	comp=N,427nm,0.4s						
SCRK				IAML		02 42 55.9	
	comp=E,387nm,0.3s						
SCRK	**Sand Creek**	**2.45**	**66**	P	**Pn**	**02 42 22.8**	**+0.6**
	baz=250,SNR=555						
I21K	**Tanana**	**2.47**	**330**		**Pn**	**02 42 22.9**	**+0.6**
I21K	**Tanana**	**2.47**	**330**	P	**Pn**	**02 42 23.0**	**+0.6**
	baz=148,SNR=53						
DIV	**Divide**	**2.49**	**140**		**Pn**	**02 42 22.5**	**-0.2**
CAPN	**Captain Cook N**	**2.51**	**204**		**Pn**	**02 42 25.9**	**+3.0**
CAPN	**Captain Cook N**	**2.51**	**204**	P	**Pn**	**02 42 25.5**	**+2.6**
	baz=22,SNR=6.1						
J20K	**Nowinta River**	**2.52**	**298**		**Pn**	**02 42 23.6**	**+0.6**
J20K	**Nowinta River**	**2.52**	**298**	P	**Pn**	**02 42 23.7**	**+0.6**
	baz=114,SNR=70						
N25K	**Chitina, Valde**	**2.55**	**123**		**Pn**	**02 42 24.6**	**+1.0**
N25K	**Chitina, Valde**	**2.55**	**123**	IAML		02 43 01.9	
	comp=E,551nm,0.7s						
N25K				IAML		02 43 04.9	
	comp=N,502nm,0.5s						
N25K	**Chitina, Valde**	**2.55**	**123**	P	**Pn**	**02 42 24.3**	**+0.7**
	baz=307,SNR=155						
L26K	**Log Cabin Wild**	**2.61**	**88**		**Pn**	**02 42 25.6**	**+1.3**
L26K	**Log Cabin Wild**	**2.61**	**88**	P	**Pn**	**02 42 25.5**	**+1.3**
	baz=273,SNR=349						
O22K	**Cooper Landing**	**2.62**	**187**		**Pn**	**02 42 25.4**	**+1.1**
O22K	**Cooper Landing**	**2.62**	**187**	P	**Pn**	**02 42 25.2**	**+0.8**
	baz=6.4,SNR=22						
SLKM	**Skilak Lake**	**2.63**	**193**		**Pn**	**02 42 25.3**	**+0.7**
FID	**Port Fidalgo**	**2.63**	**151**		**Pn**	**02 42 24.4**	**-0.1**
FID	**Port Fidalgo**	**2.63**	**151**	IAML		02 43 05.9	
	comp=N,878nm,0.3s						
FID				IAML		02 43 14.2	
	comp=E,755nm,0.4s						
M19K	**Big River Lodg**	**2.73**	**247**		**Pn**	**02 42 26.1**	**+0.2**
M19K				IAML		02 43 01.6	
	comp=N,261nm,0.3s						
M19K	**Big River Lodg**	**2.73**	**247**	P	**Pn**	**02 42 25.9**	**0.0**
	baz=62						
H23K	**Yukon River**	**2.77**	**356**		**Pn**	**02 42 27.2**	**+0.7**
H23K	**Yukon River**	**2.77**	**356**	P	**Pn**	**02 42 27.2**	**+0.7**
	baz=176,SNR=32						
L19K	**White Mountain**	**2.82**	**254**		**Pn**	**02 42 27.0**	**-0.1**
L19K	**White Mountain**	**2.82**	**254**	P	**Pn**	**02 42 27.0**	**-0.1**
	baz=69,SNR=59						
H24K	**Noodor Dome**	**2.83**	**10**		**Pn**	**02 42 28.0**	**+0.8**
H24K	**Noodor Dome**	**2.83**	**10**	P	**Pn**	**02 42 28.0**	**+0.8**
	baz=191,SNR=40						
J26L	**Joseph Creek**	**2.83**	**57**		**Pn**	**02 42 28.2**	**+0.9**
J26L	**Joseph Creek**	**2.83**	**57**	IAML		02 43 03.9	
	comp=E,504nm,0.3s						
J26L				IAML		02 43 04.5	
	comp=N,692nm,0.4s						
J26L	**Joseph Creek**	**2.83**	**57**	P	**Pn**	**02 42 28.2**	**+0.9**
	baz=242,SNR=379						
M26K	**Nabesna, AK**	**2.88**	**101**		**Pn**	**02 42 29.2**	**+1.3**
M26K	**Nabesna, AK**	**2.88**	**101**	IAML		02 43 15.9	
	comp=E,388nm,0.4s						
M26K				IAML		02 43 17.1	
	comp=N,419nm,0.8s						
M26K	**Nabesna, AK**	**2.88**	**101**	P	**Pn**	**02 42 28.8**	**+0.9**
	baz=286,SNR=28						
PRP	**Porcupine Dome**	**2.90**	**31**		**Pn**	**02 42 29.0**	**+0.7**
PRP	**Porcupine Dome**	**2.90**	**31**	IAML		02 43 06.0	
	comp=N,293nm,0.5s						
PRP				IAML		02 43 06.0	
	comp=E,326nm,0.8s						
PRP	**Porcupine Dome**	**2.90**	**31**	P	**Pn**	**02 42 28.9**	**+0.7**
	baz=214,SNR=96						
HIN	**Hinchinbrook I**	**2.95**	**154**		**Pn**	**02 42 28.7**	**-0.2**
HIN	**Hinchinbrook I**	**2.95**	**154**	IAML		02 43 16.2	
	comp=E,619nm,0.6s						
HIN				IAML		02 43 19.1	
	comp=N,522nm,0.6s						
GLB	**Gilahina Butte

BRLK				IAML		02 43 27.6
	comp=N,493nm,0.7s					
BRLK				IAML		02 43 37.7
	comp=E,372nm,0.6s					
BRSE	**Bradley Lake S**	**3.44**	**194**		**Pn**	**02 42 36.1 +0.7**
BRSE	**Bradley Lake S**	**3.44**	**194**	P	**Pn**	**02 42 36.2 +0.8**
	baz=13,SNR=9.1					
O20K	**Slope Mountain**	**3.45**	**211**		**Pn**	**02 42 36.5 +0.8**
O20K	**Slope Mountain**	**3.45**	**211**	P	**Pn**	**02 42 37.0 +1.4**
	baz=28,SNR=12					
H25K	**Birch Creek**	**3.50**	**22**		**Pn**	**02 42 37.4 +1.1**
H25K	**Birch Creek**	**3.50**	**22**	P	**Pn**	**02 42 37.4 +1.1**
	baz=205,SNR=32					
IM03		**3.55**	**327**		**Pn**	**02 42 37.6 +0.7**
HMT	**Hamilton**	**3.57**	**138**		**Pn**	**02 42 36.8 -0.5**
IVE	**Iliamna Volcan**	**3.60**	**213**		**Pn**	**02 42 39.0 +1.2**
PTPK	**Patty Peak**	**3.63**	**118**		**Pn**	**02 42 39.1 +0.8**
HOM	**Homer**	**3.64**	**201**		**Pn**	**02 42 39.7 +1.5**
HOM	**Homer**	**3.64**	**201**	P	**Pn**	**02 42 39.5 +1.3**
	baz=19					
SVW2	**Sparrevohn**	**3.65**	**240**		**Pn**	**02 42 38.5 +0.2**
G23K	**Bananza Creek**	**3.68**	**354**		**Pn**	**02 42 39.6 +0.9**
G23K	**Bananza Creek**	**3.68**	**354**	P	**Pn**	**02 42 39.5 +0.8**
	baz=173,SNR=98					
G24K	**Hadweenzic Riv**	**3.71**	**10**		**Pn**	**02 42 40.0 +0.9**
G24K	**Hadweenzic Riv**	**3.71**	**10**	P	**Pn**	**02 42 40.1 +1.0**
	baz=191,SNR=41					
CNPM	**China Poot**	**3.71**	**197**		**Pn**	**02 42 39.0 -0.1**
NICHA	**Nichawak Mount**	**3.74**	**137**		**Pn**	**02 42 39.6 0.0**
TGL	**Tana Glacier**	**3.75**	**125**		**Pn**	**02 42 39.6 -0.2**
BALM	**Baldy**	**3.77**	**120**		**Pn**	**02 42 40.1 +0.1**
PS05	**TAPS Pump Stn5**	**3.82**	**350**		**Pn**	**02 42 42.2 +1.6**
O19K	**Port Alsworth**	**3.82**	**223**		**Pn**	**02 42 40.9 +0.3**
O19K				IAML		02 43 51.8
	comp=N,283nm,0.4s					
O19K				IAML		02 43 55.8
	comp=E,252nm,0.5s					
O19K	**Port Alsworth**	**3.82**	**223**	P	**Pn**	**02 42 40.9 +0.3**
	baz=39					
KHIT	**Khitrov Hills**	**3.82**	**131**		**Pn**	**02 42 41.1 +0.3**
KIAG	**Kiagna River**	**3.83**	**121**		**Pn**	**02 42 40.6 -0.3**
BVCY	**Beaver Creek**	**3.83**	**96**	P	**Pn**	**02 42 41.5 +0.6**
	baz=283					
GCSA	**Galena City Sc**	**3.84**	**299**	P	**Pn**	**02 42 41.6 +0.8**
	baz=113					
KAIM	**Kayak Island**	**3.86**	**143**		**Pn**	**02 42 40.6 -0.6**
KAIM	**Kayak Island**	**3.86**	**143**	IAML		02 43 48.8
	comp=N,250nm,0.6s					
KAIM				IAML		02 43 49.9
	comp=E,228nm,0.8s					
KAIM	**Kayak Island**	**3.86**	**143**	P	**Pn**	**02 42 40.6 -0.6**
	baz=327,SNR=7.7					
FYU	**Fort Yukon**	**3.87**	**23**		**Pn**	**02 42 42.2 +0.9**
FYU				IAML		02 43 39.0
	comp=N,176nm,1.0s					
FYU				IAML		02 43 44.3
	comp=E,127nm,0.9s					
Q23K	**Middleton Isla**	**3.88**	**159**	P	**Pn**	**02 42 42.0 +0.5**
	baz=341					
EGAK	**Eagle**	**3.89**	**60**		**Pn**	**02 42 42.2 +0.7**
EGAK	**Eagle**	**3.89**	**60**	IAML		02 43 51.5
	comp=E,194nm,0.7s					
EGAK				IAML		02 44 01.4
	comp=E,160nm,0.8s					
EGAK	**Eagle**	**3.89**	**60**	P	**Pn**	**02 42 42.4 +0.8**
	baz=247,SNR=46					
GRIN	**Grindle Hills**	**3.92**	**133**		**Pn**	**02 42 42.2 +0.3**
G25K	**Bearman Lake**	**3.92**	**17**		**Pn**	**02 42 42.9 +1.0**
G25K	**Bearman Lake**	**3.92**	**17**	P	**Pn**	**02 42 42.9 +1.0**
	baz=200,SNR=21					
SUCK	**Suckling Hills**	**3.93**	**138**		**Pn**	**02 42 41.9 -0.3**
SUCK	**Suckling Hills**	**3.93**	**138**	IAML		02 43 42.2
	comp=E,351nm,0.6s					
G21K	**Allakaket**	**3.94**	**333**		**Pn**	**02 42 43.0 +0.7**
G21K	**Allakaket**	**3.94**	**333**	P	**Pn**	**02 42 43.0 +0.7**
	baz=149,SNR=25					
WAX	**Waxell Ridge**	**3.96**	**129**		**Pn**	**02 42 42.7 +0.1**
P19K	**Oil Pt**	**3.97**	**212**	Pn	**Pn**	**02 42 43.4 +0.7**
P19K				IAML		02 43 38.2
	comp=E,337nm,0.7s					
P19K				IAML		02 43 52.1
	comp=N,269nm,0.6s					
P19K	**Oil Pt**	**3.97**	**212**	P	**Pn**	**02 42 43.6 +0.8**
	baz=28,SNR=6.1					
G22K	**Bettles**	**4.00**	**346**		**Pn**	**02 42 44.5 +1.4**
G22K	**Bettles**	**4.00**	**346**	P	**Pn**	**02 42 44.0 +1.0**
	baz=164,SNR=48					
N18K	**Kilae Creek**	**4.02**	**236**	Pn	**Pn**	**02 42 42.7 -0.7**
N18K	**Kilae Creek**	**4.02**	**236**	P	**Pn**	**02 42 43.4 0.0**
	baz=50,SNR=23					
BARN	**Barnard Glacie**	**4.03**	**117**		**Pn**	**02 42 43.5 -0.1**
BARN				IAML		02 43 46.5
	comp=N,134nm,0.6s					
BARN				IAML		02 43 53.2
	comp=E,153nm,0.9s					
YUK2	**White River**	**4.04**	**105**		**Pn**	**02 42 45.2 +1.6**
BGLC	**Bering Glacier**	**4.05**	**134**	P	**Pn**	**02 42 44.5 +0.8**
	baz=319					
I27K	**Kandik River**	**4.12**	**49**		**Pn**	**02 42 45.5 +0.7**
I27K	**Kandik River**	**4.12**	**49**	P	**Pn**	**02 42 45.6 +0.9**
	baz=235,SNR=32					
SNH	**Sunshine Point**	**4.15**	**132**		**Pn**	**02 42 45.4 +0.2**
SNH	**Sunshine Point**	**4.15**	**132**	IAML		02 43 51.4
	comp=N,191nm,0.9s					
SNH				IAML		02 43 54.3
	comp=E,262nm,0.8s					
COLD	**Coldfoot**	**4.20**	**354**		**Pn**	**02 42 47.0 +1.2**
COLD	**Coldfoot**	**4.20**	**354**	P	**Pn**	**02 42 47.0 +1.2**
	baz=173,SNR=46					
BAGL	**Bagley Icefiel**	**4.21**	**125**		**Pn**	**02 42 45.6 -0.2**
YUK3	**Moose Creek**	**4.21**	**104**	P	**Pn**	**02 42 47.4 +1.3**
	baz=292,SNR=19					
CTG	**Chitna Glacier**	**4.21**	**117**	P	**Pn**	**02 42 46.6 +0.6**
	baz=303,SNR=9.2					
CTGM	**Chitina Glacie**	**4.21**	**117**		**Pn**	**02 42 46.7 +0.6**
CTGM	**Chitina Glacie**	**4.21**	**117**	IAML		02 43 53.1
	comp=N,132nm,0.6s					
O18K	**Koktuh Hills**	**4.37**	**225**		**Pn**	**02 42 48.4 +0.2**
O18K	**Koktuh Hills**	**4.37**	**225**	IAML		02 44 04.3
	comp=E,69nm,0.4s					
O18K				IAML		02 44 16.1
	comp=N,81nm,1.0s					
O18K	**Koktuh Hills**	**4.37**	**225**	P	**Pn**	**02 42 48.3 +0.2**
	baz=40,SNR=6.5					
YAH	**Yahtse**	**4.42**	**125**		**Pn**	**02 42 48.9 0.0**
YAH	**Yahtse**	**4.42**	**125**	IAML		02 43 58.2
	comp=E,232nm,0.8s					
LOGN	**Logan Glacier**	**4.43**	**117**		**Pn**	**02 42 49.6 +0.6**
LOGN				IAML		02 43 56.2
	comp=E,87nm,0.6s					
LOGN				IAML		02 44 00.3
	comp=N,120nm,0.8s					
DAWY	**Dawson**	**4.44**	**73**		**Pn**	**02 42 49.9 +0.8**
DAWY	**Dawson**	**4.44**	**73**	IAML		02 44 03.6
	comp=N,98nm,0.6s					
DAWY				IAML		02 44 04.1
	comp=E,117nm,0.8s					
DAWY	**Dawson**	**4.44**	**73**	P	**Pn**	**02 42 49.9 +0.8**
	baz=261,SNR=234					
MESA	**MESA**	**4.47**	**127**		**Pn**	**02 42 49.2 -0.5**
MESA	**MESA**	**4.47**	**127**	P	**Pn**	**02 42 49.8 +0.2**
	baz=314,SNR=8.9					
G26K	**Porcupine Rive**	**4.49**	**28**		**Pn**	**02 42 50.2 +0.5**
G26K	**Porcupine Rive**	**4.49**	**28**	P	**Pn**	**02 42 50.1 +0.4**
	baz=212,SNR=26					
F24K	**Squaw Lake**	**4.49**	**6**		**Pn**	**02 42 51.1 +1.3**
F24K	**Squaw Lake**	**4.49**	**6**	P	**Pn**	**02 42 51.0 +1.3**
	baz=187,SNR=21					
H27K	**Steamboat Moun**	**4.53**	**42**		**Pn**	**02 42 50.7 +0.4**
H27K	**Steamboat Moun**	**4.53**	**42**	P	**Pn**	**02 42 51.0 +0.6**
	baz=229,SNR=37					
F21K	**Alatna River**	**4.56**	**338**		**Pn**	**02 42 51.9 +1.2**
F21K	**Alatna River**	**4.56**	**338**	P	**Pn**	**02 42 51.8 +1.1**
	baz=154,SNR=29					
TABL	**Table Mountain**	**4.60**	**121**		**Pn**	**02 42 51.1 -0.3**
TABL	**Table Mountain**	**4.60**	**121**	IAML		02 44 00.5
	comp=E,106nm,1.2s					
TABL				IAML		02 44 03.1
	comp=N,112nm,0.7s					
F22K	**John River**	**4.64**	**345**	P	**Pn**	**02 42 52.9 +1.1**
	baz=162					
Q19K	**Cape Douglas,**	**4.71**	**210**		**Pn**	**02 42 52.8 -0.1**
Q19K	**Cape Douglas,**	**4.71**	**210**	P	**Pn**	**02 42 53.2 +0.4**
	baz=26					
P18K	**Big Mountain,**	**4.74**	**222**	P	**Pn**	**02 42 53.7 +0.5**
	baz=36					
BM03	**Burnt Mountain**	**4.75**	**21**		**Pn**	**02 42 54.0 +0.7**
F25K	**Christian Rive**	**4.76**	**16**		**Pn**	**02 42 54.3 +0.8**
F25K	**Christian Rive**	**4.76**	**16**	P	**Pn**	**02 42 54.3 +0.8**
	baz=199,SNR=14					
SYI	**Shuyak Island**	**4.76**	**201**		**Pn**	**02 42 53.4 0.0**
Q20K	**Shuyak Island**	**4.76**	**201**	P	**Pn**	**02 42 53.8 +0.4**
	baz=18					
O28M	**Mount Upton**	**4.79**	**115**		**Pn**	**02 42 54.6 +0.5**
O28M	**Mount Upton**	**4.79**	**115**	P	**Pn**	**02 42 54.9 +0.8**
	baz=302					
CHX	**Chaix Hills**	**4.85**	**125**		**Pn**	**02 42 54.9 +0.1**
G27K	**Doyon Strip**	**4.90**	**37**		**Pn**	**02 42 55.7 +0.4**
G27K	**Doyon Strip**	**4.90**	**37**	P	**Pn**	**02 42 55.5 +0.2**
	baz=223,SNR=30					
M29M	**Somme Creek**	**4.92**	**93**		**Pn**	**02 42 56.2 +0.6**
M29M	**Somme Creek**	**4.92**	**93**	P	**Pn**	**02 42 56.2 +0.6**
	baz=282,SNR=27					
SAMH	**Samovar Hills**	**4.94**	**123**		**Pn**	**02 42 56.4 +0.5**
L29M	**L29M**	**4.97**	**85**		**Pn**	**02 42 57.0 +0.6**
L29M	**L29M**	**4.97**	**85**	P	**Pn**	**02 42 56.9 +0.6**
	baz=274,SNR=64					
J29M	**Klondike Camp**	**5.01**	**69**	P	**Pn**	**02 42 58.5 +1.6**
	baz=259					
E23K	**Chandalar**	**5.01**	**358**	P	**Pn**	**02 42 58.3 +1.4**
	baz=177,SNR=9.8					
E24K	**Your Creek**	**5.03**	**2**	P	**Pn**	**02 42 58.3 +1.2**
	baz=183					
F26K	**Sheenjek River**	**5.08**	**22**	P	**Pn**	**02 42 58.8 +1.0**
	baz=206,SNR=17					
O17K	**Koliganek Bris**	**5.08**	**233**	P	**Pn**	**02 42 58.0 +0.3**
	baz=46					
PINM	**Pinnacle**	**5.16**	**121**	P	**Pn**	**02 42 59.0 0.0**
	baz=309					
YUK4	**Talbot Arm**	**5.18**	**105**	P	**Pn**	**02 43 00.3 +1.0**
	baz=293					
I29M	**Ogilvie Camp,**	**5.23**	**59**	IAML		02 44 20.9
	comp=N,60nm,0.5s					
I29M				IAML		02 44 30.4
	comp=E,49nm,0.7s					
I29M	**Ogilvie Camp,**	**5.23**	**59**	P	**Pn**	**02 43 00.4 +0.6**
	baz=249,SNR=24					
K29M	**Barlow Dome**	**5.24**	**76**	P	**Pn**	**02 43 00.5 +0.4**
	baz=267,SNR=48					
E25K	**Arctic Village**	**5.27**	**14**	P	**Pn**	**02 43 01.6 +1.2**
	baz=198,SNR=15					
P17K	**Kvichak River**	**5.28**	**226**	P	**Pn**	**02 43 01.1 +0.7**
	baz=39					
N16K	**Nishlik Lake**	**5.29**	**245**	P	**Pn**	**02 43 01.0 +0.3**
	baz=56,SNR=8.4					
Q18K	**Katmai Hardscr**	**5.30**	**216**	P	**Pn**	**02 43 01.5 +0.6**
	baz=31					
O16K	**Kokwok River B**	**5.57**	**235**	P	**Pn**	**02 43 04.8 +0.4**
	baz=47					
KDAK	**Kodiak Island**	**5.58**	**200**	P	**Pn**	**02 43 03.8 -0.8**
	comp=E,4.8nm,0.2s,baz=71,slow=6.5,SNR=139					
KDAK				S	**Sn**	**02 44 01.4 -5.9**
	comp=E,23nm,0.4s,baz=327,slow=22,SNR=9.8					
KDAK	**Kodiak Island**	**5.58**	**200**	Pn	**Pn**	**02 43 04.4 -0.2**
KDAK	**Kodiak Island**	**5.58**	**200**	P	**Pn**	**02 43 03.8 -0.8**
	baz=17					
TOLK	**Toolik Lake Re**	**5.60**	**358**	P	**Pn**	**02 43 06.5 +1.7**
	baz=178,SNR=8.6					
O29M	**Mount Kennedy**	**5.71**	**114**	P	**Pn**	**02 43 07.5 +1.0**
	baz=304					
Q16K	**King Salmon**	**5.76**	**223**	P	**Pn**	**02 43 08.3 +1.3**
	baz=37					
PNL	**Peninsula**	**5.77**	**122**	P	**Pn**	**02 43 07.5 +0.4**
	baz=310					
N30M	**Aishikik Lake**	**5.82**	**101**	P	**Pn**	**02 43 08.7 +0.7**
	baz=291					
Q17K	**Contact Creek**	**5.87**	**218**	P	**Pn**	**02 43 09.1 +0.5**
	baz=32					
HYT	**Haines Junctio**	**5.90**	**107**	P	**Pn**	**02 43 09.9 +0.8**
	baz=297					
P16K	**Nushagak River**	**5.93**	**231**	P	**Pn**	**02 43 10.4 +1.1**
	baz=43					
D23K	**Nanushuk River**	**5.96**	**354**	P	**Pn**	**02 43 11.8 +2.1**
	baz=173					
MAYO	**Mayo, Yukon**	**5.96**	**79**	Pn	**Pn**	**02 43 09.9 +0.2**
E27K	**Coleen River**	**5.99**	**28**	P	**Pn**	**02 43 10.7 +0.5**
	baz=214,SNR=7.4					
D24K	**Happy Valley**	**6.11**	**1**	P	**Pn**	**02 43 13.4 +1.7**
	baz=181					
OHAK	**Old Harbor**	**6.23**	**202**	P	**Pn**	**02 43 13.0 -0.5**
	baz=18					
EPYK	**Eagle Plains**	**6.24**	**53**	P	**Pn**	**02 43 13.8 +0.2**
	baz=244,SNR=5.9					
D25K	**Kavik River**	**6.37**	**9**	P	**Pn**	**02 43 16.4 +1.0**
	baz=191,SNR=12					
N31M	**Braeburn, Yuko**	**6.40**	**98**	P	**Pn**	**02 43 16.5 +0.6**
	baz=290					
P29M	**Windy Craggy**	**6.45**	**117**	P	**Pn**	**02 43 17.1 +0.7**
	baz=307,SNR=7.1					
P30M	**Million Dollar**	**6.49**	**112**	P	**Pn**	**02 43 17.7 +0.6**
	baz=302					
R17K	**Ugashik Creek**	**6.54**	**217**	P	**Pn**	**02 43 18.2 +0.5**
	baz=31					
O30N	**Mendenhall**	**6.55**	**105**	P	**Pn**	**02 43 18.4 +0.6**
	baz=296					
C24K	**Franklin Bluff**	**6.68**	**1**	P	**Pn**	**02 43 20.8 +1.3**
	baz=182					
G30M	**tAoh Zraii Nji**	**6.70**	**49**	P	**Pn**	**02 43 20.5 +0.7**
	baz=240,SNR=8.1					
C23K	**Itkillik River**	**6.82**	**355**	P	**Pn**	**02 43 23.5 +2.0**
	baz=174,SNR=6.8					
M31M	**Drury Creek, Y**	**6.82**	**91**	P	**Pn**	**02 43 22.8 +1.2**
	baz=284,SNR=11					
C27K	**Jago River**	**6.92**	**16**	P	**Pn**	**02 43 24.9 +2.0**
	baz=201					
PLBC	**Pleasant Camp**	**7.11**	**115**	P	**Pn**	**02 43 25.7 +0.3**
	baz=306					
WHY	**Whitehorse**	**7.13**	**103**	P	**Pn**	**02 43 26.3 +0.5**
	baz=296					
FARO	**Faro, Yukon**	**7.29**	**90**	P	**Pn**	**02 43 28.6 +0.6**
	baz=284,SNR=5.2					
F31M	**Tsiigehtchic**	**7.77**	**49**	P	**Pn**	**02 43 35.0 +0.6**
	baz=243					
MMPY	**Sheldon Lake,**	**8.16**	**85**	P	**Pn**	**02 43 40.2 +0.5**
	baz=281					
CHGN	**Chignik**	**8.27**	**219**	P	**Pn**	**02 43 41.2 0.0**
	baz=31					
INK	**Inuvik**	**8.27**	**44**	P	**Pn**	**02 43 42.3 +1.1**
	comp=E,7.7nm,0.7s,baz=246,slow=23,SNR=40					
INK				S	**Sn**	**02 45 09.8 -3.0**
	comp=E,3.1nm,0.6s,baz=277,slow=18,SNR=2.0					
INK				LR	LR	02 47 21.0
	comp=E,249nm,18.1s,baz=47,slow=40					
INK	**Inuvik**	**8.27**	**44**	Pn	**Pn**	**02 43 41.2 0.0**
INK	**Inuvik**	**8.27**	**44**	P	**Pn**	**02 43 42.6 +1.4**
	baz=238,SNR=6.8					
A21K	**Barrow**	**8.78**	**344**	P	**Pn**	**02 43 49.3 +1.2**
	baz=157					
S32K	**Kilisnoo**	**9.12**	**121**	P	**Pn**	**02 43 53.9 +1.1**
	baz=314					
Q32M	**Nakina River**	**9.13**	**109**	P	**Pn**	**02 43 53.3 +0.2**
	baz=304					
SIT	**Sitka**	**9.13**	**125**	P	**Pn**	**02 43 53.4 +0.4**
	baz=317					
SDPT	**Sand Point**	**9.69**	**222**	P	**Pn**	**02 44 01.1 +0.5**
	baz=32					
CHNA	**Chernabura Isl**	**9.88**	**218**	P	**Pn**	**02 44 04.2 +1.1**
	baz=29					
C36M	**Paulatuk**	**11.81**	**47**	P	**Pn**	**02 44 28.9 -0.5**
	baz=250					
YKA	**Yellowknife Ar**	**15.67**	**77**	P	**Pn**	**02 45 20.7 +0.8**
	comp=E,0.8nm,0.5s,baz=284,slow=13,SNR=7.5					
ARCES	**ARCESS Array B**	**47.62**	**3**	P	**P**	**02 50 10.7 -0.8**
	comp=E,2.5nm,0.8s,baz=355,slow=7.2,SNR=4.7					
	comp=E,2.5nm,0.8s					
FINES	**FINESS Array B**	**55.75**	**3**	P	**P**	**02 51 11.9 -0.1**
	comp=E,2.2nm,0.8s,baz=14,slow=8.5,SNR=7.9					
	comp=E,2.2nm,0.8s					
EKA	**Eskdalemuir Ar**	**58.99**	**22**	P	**P**	**02 51 35.4 +0.5**
	comp=E,0.4nm,0.3s,baz=332,slow=5.3,SNR=9.4					
	comp=E,0.4nm,0.3s					
BVAR	**Borovoye Array**	**60.18**	**334**	P	**P**	**02 51 43.0 -0.2**
	comp=E,1.1nm,0.8s,baz=37,slow=3.6,SNR=2.6					
	comp=E,1.1nm,0.8s					
MKAR	**Makanchi Array**	**63.16**	**323**	P	**P**	**02 52 02.3 -0.9**
	comp=E,0.6nm,0.4s,baz=36,slow=6.3,SNR=7.6					
	comp=E,0.6nm,0.4s					
AKTO	**Aktyubinsk**	**64.83**	**341**	P	**P**	**02 52 13.9 -0.2**
	comp=E,1.1nm,0.4s,baz=51,slow=11,SNR=2.0					
	comp=E,1.1nm,0.4s					

CNRM ***01*** *03:20:26.1, 36.°56N×1.°67E, h0km, ml3.1*

CRAAG ***01*** *03:20:27.2, 36.°42N×1.°70E, Ml3.2*
LDG ***01*** *03:20:28.2±0.2, 36.°40N×1.°72E, h10km, Ml3.2/10, Error ellipse: s-maj=4.7km s-min=2.1km az=153.0*
MDD ***01*** *03:20:28.3±0.6, 36.°42N×1.°64E, h7km±9km, Mb4.0/24, M_mb3.3/24, Error ellipse: s-maj=9.3km s-min=2.8km az=146.0*
INMG ***01*** *03:20:28.1±1.1, 36.°31N×1.°75E, h31km, ML2.3, Error ellipse: s-maj=5.9km s-min=3.4km az=137.0*
ISC 01 03:20:27.7±1.0, 36.°57N±0.°05×1.°68E±0.°05, h14km, n68, σ1§95/95, 19C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.30**	**204**	P	**Pg**	**03 20 33.1**	**-0.9**
ECHA	**Ech Chlef**	**0.49**	**212**	P	**Pg**	**03 20 36.6**	**-0.8**
EANR	**'Ain N'Sour**	**0.78**	**218**	P	**Pb**	**03 20 42.8**	**-0.2**
OJBR	**Djebel Berber**	**1.46**	**228**	P	**Sg**	**03 21 18.0**	**+3.1**
ODJA	**Bouhanifia**	**1.93**	**231**	P	Pg	03 21 12.0	+7.2
CART	**Cartagena**	**2.38**	**296**	P	**Pn**	**03 21 05.3**	**-0.9**
CART				S	**Sn**	**03 21 32.4**	**-2.8**
CART	**Cartagena**	**2.38**	**296**	P	**Pn**	**03 21 06.3**	**+0.1**
EIBI	**Ibiza**	**2.47**	**354**	Pn	**Pn**	**03 21 09.1**	**+1.6**
EIBI			⇑	*i*Vmb_V		03 21 10.5	
	1μm,SNR=10						
EIBI				Sn	**Sn**	**03 21 37.5**	**0.0**
EMUR	**La Murta**	**2.66**	**299**	Pn	**Pn**	**03 21 10.1**	**-0.1**
EMUR			⇑	*i*Vmb_V		03 21 18.6	
	239nm,SNR=3.8						
EMUR				Sn	**Sn**	**03 21 41.5**	**-0.7**
AFON	**Font Roja**	**2.74**	**321**	Pn	**Pn**	**03 21 12.4**	**+1.0**
AFON			⇑	*i*Vmb_V		03 21 17.1	
	236nm,SNR=2.8						
AFON				Sn	**Sn**	**03 21 44.3**	**0.0**
EZAR	**Zarzadilla de**	**3.00**	**297**	Pn	**Pn**	**03 21 14.0**	**-0.9**
EZAR				Sn	**Sn**	**03 21 48.8**	**-1.8**
ENIJ	**Nijar**	**3.15**	**279**	Pn	**Pn**	**03 21 15.9**	**-1.0**
ENIJ			⇑	*i*Vmb_V		03 21 19.0	
	204nm,SNR=2.1						
ENIJ				Sn	**Sn**	**03 21 50.2**	**-4.1**
ETOB	**Tobarra**	**3.30**	**310**	Pn	**Pn**	**03 21 20.5**	**+1.5**
ETOB			⇑	*i*Vmb_V		03 21 22.5	
	147nm,SNR=3.1						
ETOB				Sn	**Sn**	**03 21 59.2**	**+1.2**
ETOS	**Mallorca**	**3.32**	**15**	Pn	**Pn**	**03 21 20.1**	**+0.9**
ETOS			⇑	*i*Vmb_V		03 21 23.6	
	375nm,SNR=2.6						
ETOS				Sn	**Sn**	**03 21 56.8**	**-1.6**
ECOL	**Islas Columbre**	**3.42**	**347**	Pn	**Pn**	**03 21 22.0**	**+1.5**
ECOL				Sn	**Sn**	**03 22 00.8**	**0.0**
ECHE	**Chera**	**3.67**	**326**	Pn	**Pn**	**03 21 25.8**	**+1.7**
ECHE			⇑	*i*Vmb_V		03 21 29.9	
	268nm,SNR=3.9						
ECHE				Sn	**Sn**	**03 22 09.4**	**+2.2**
EBER	**Berja**	**3.69**	**276**	Pn	**Pn**	**03 21 23.6**	**-0.9**
EBER			⇑	*i*Vmb_V		03 21 24.9	
	209nm,SNR=2.7						
EBER				Sn	**Sn**	**03 22 05.2**	**-2.7**
TAF	**Taforalt**	**3.77**	**244**	P	**Pn**	**03 21 24.4**	**-1.0**
MAHO	**Mahon**	**3.90**	**31**	S	**Sn**	**03 22 12.9**	**+0.3**
EQES	**Quesada**	**3.99**	**289**	Pn	**Pn**	**03 21 29.9**	**+1.3**
EQES			⇑	*i*Vmb_V		03 21 37.1	
	196nm,SNR=3.7						
EQES				Sn	**Sn**	**03 22 16.3**	**+1.1**
JBK	**JBK**	**4.12**	**239**	P	**Pn**	**03 21 30.5**	**0.0**
EMOS	**Mosqueruela**	**4.15**	**337**	Pn	**Pn**	**03 21 32.8**	**+2.0**
EMOS				Sn	**Sn**	**03 22 18.7**	**-0.5**
ELGU	**Los Guajares,**	**4.28**	**276**	Pn	**Pn**	**03 21 32.1**	**-0.3**
ELGU			⇑	*i*Vmb_V		03 21 33.5	
	197nm,SNR=3.8						
ELGU				Sn	**Sn**	**03 22 19.5**	**-2.7**
ERTA	**Horta de San J**	**4.51**	**347**	Pn	**Pn**	**03 21 37.8**	**+2.2**
ERTA			⇑	*i*Vmb_V		03 21 38.7	
	129nm,SNR=2.0						
ERTA				Sn	**Sn**	**03 22 26.9**	**-0.9**
EGOR	**Sierra Gorda,**	**4.68**	**278**	Pn	**Pn**	**03 21 39.7**	**+1.6**
EGOR			⇑	*i*Vmb_V		03 21 43.5	
	73nm,SNR=1.8						
EGOR				Sn	**Sn**	**03 22 30.6**	**-1.6**
EPOB	**Poblet**	**4.80**	**355**	Pn	**Pn**	**03 21 41.3**	**+1.6**
EPOB			⇑	*i*Vmb_V		03 21 43.7	
	129nm,SNR=2.4						
EPOB				Sn	**Sn**	**03 22 34.5**	**-0.6**
AKLM	**AKL**	**4.97**	**247**	P	**Pn**	**03 21 42.0**	**+0.1**
FIGM	**Figuig**	**5.05**	**210**	P	**Pn**	**03 21 42.7**	**-0.4**
ETOR	**Torete**	**5.15**	**327**	Pn	**Pn**	**03 21 48.5**	**+3.9**
ETOR			⇑	*i*Vmb_V		03 21 54.6	
	63nm,SNR=1.1						
ETOR				Sn	**Sn**	**03 22 46.0**	**+2.2**
EMIJ	**Mijas**	**5.20**	**272**	Pn	**Pn**	**03 21 43.8**	**-1.3**
EMIJ			⇑	*i*Vmb_V		03 21 45.0	
	102nm,SNR=1.5						
EMIJ				Sn	**Sn**	**03 22 39.1**	**-5.7**
EADA	**Adamuz**	**5.24**	**290**	Pn	**Pn**	**03 21 46.0**	**+0.4**
EADA			⇑	*i*Vmb_V		03 21 49.1	
	79nm,SNR=1.8						
EADA				Sn	**Sn**	**03 22 44.9**	**-0.9**
PAB	**San Pablo**	**5.61**	**304**	Pn	**Pn**	**03 21 51.1**	**+0.2**
PAB			⇑	*i*Vmb_V		03 21 55.7	
	63nm,SNR=1.5						
PAB				Sn	**Sn**	**03 22 53.9**	**-1.2**
ECAB	**El Cabril**	**5.86**	**287**	Pn	**Pn**	**03 21 53.6**	**-0.5**
ECAB			⇑	*i*

QUIF	**Quistinic**	**11.89**	**344**	*e*Pn	**Pn**	**03 23 17.3**	**+0.5**
FLN	**La Foliniere**	**12.29**	**353**	*e*Pn	**Pn**	**03 23 22.5**	**+0.3**

SSNC 01 03:27:36.4±1.0, 19°.93N×74°.44W, h13km±9km, MD2.1, ML0.5, MW2.3, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.31**	**38**	*e*P	Pg	03 27 41.4	-1.5
MASC				*e*S	Sg	03 27 46.9	-0.3
MASC				IAML		03 27 47.3	
	comp=E,7.1nm,0.1s						
MASC				IAML		03 27 47.4	
	comp=N,4.7nm,0.1s						
MASC	**Masc**	**0.31**	**38**	*e*P	Pg	03 27 42.7	-0.2
MASC				*e*S	Sg	03 27 46.7	-0.4
MASC				IAML		03 27 47.3	
	comp=E,6.8nm,0.2s						
MASC				IAML		03 27 47.4	
	comp=N,4.5nm,0.1s						
GTBY	**Guantanamo Bay**	**0.64**	**270**	*e*P	Pg	03 27 47.6	-1.2
GTBY				*e*S	Sg	03 27 56.1	-1.1
GTBY	**Guantanamo Bay**	**0.64**	**270**	*e*P	Pg	03 27 46.8	-2.0
GTBY				*e*S	Sg	03 27 56.1	-1.1
RCC	**Rio Carpintero**	**1.19**	**273**	*e*P	Pn	03 27 56.3	-2.4
RCC				*e*S	Sb	03 28 10.1	-4.0
RCC	**Rio Carpintero**	**1.19**	**273**	*e*P	Pn	03 27 56.4	-2.3
RCC				*e*S	Sb	03 28 10.2	-3.9

IDC 01 03:56:08.4±2.0, 4°.49S×145°.94E, h0km, mb3.3/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=137.2km s-min=28.3km az=124.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.07**	**215**	P	P	04 00 32.5	-0.2
	0.1nm,0.3s,baz=39,slow=11,SNR=8.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**22.33**	**210**	P	P	04 01 07.9	-0.1
	0.2nm,0.6s,baz=30,slow=15,SNR=4.7						
	0.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.03**	**234**	P	P	04 01 25.5	+0.2
	0.6nm,0.5s,baz=38,slow=12,SNR=6.2						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**84.52**	**23**	P	P	04 08 43.1	0.0
	0.6nm,0.6s,baz=251,slow=5.2,SNR=5.3						
	0.6nm,0.6s						

*KOLA **01** 03:58:21.7, 67°.79N×19°.88E, h0km, ML2.3*
*IDC **01** 03:58:22.8±1.1, 67°.86N×20°.46E, h0km, mbtmp3.2/4, ML2.3/4, Error ellipse: s-maj=17.8km s-min=6.4km az=122.0*
*HEL **01** 03:58:23.0±0.0, 67°.82N×20°.20E, h1km, ML2.0, ML2.4(UPP), Confirmed Induced event*
*BER **01** 03:58:25.2±2.2, 67°.86N×20°.38E, h0km±9km, ML2.1, Confirmed Induced event*
ISC 01 03:58:22.0±0.7, 67°.80N±0°.02×20°.27E±0°.02, h0km, n44, σ1§00/69, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.26**	**275**	*i* P	**Pg**	**03 58 27.1**	**+0.2**
RATU				*i* S	**Sg**	**03 58 30.2**	**-0.1**
KOVU	**Salmi**	**0.42**	**354**	*i* P	**Pg**	**03 58 30.1**	**0.0**
NIKU	**Nikkaluokta**	**0.47**	**278**	*i* P	**Pg**	**03 58 30.9**	**-0.1**
DUNU	**Dundret**	**0.69**	**170**	*i* P	**Pg**	**03 58 35.7**	**+0.5**
LANU	**Lannavaara**	**0.69**	**68**	*e*P	**Pg**	**03 58 35.8**	**+0.5**
LANU				*e*S	**Sg**	**03 58 45.0**	**+0.8**
MASU	**Masugnsbyn**	**0.75**	**117**	*i* P	**Pg**	**03 58 37.0**	**+0.7**
SALU	**Saltoluokta**	**0.80**	**239**	*i* P	**Pg**	**03 58 37.2**	**-0.1**
KIF	**Kilpisjarvi**	**1.22**	**9**	*e*P	**Pg**	**03 58 45.2**	**-0.2**
KIF				*e*S	**Sg**	**03 59 01.8**	**+0.6**
KIF	**Kilpisjarvi**	**1.22**	**9**	*e*P	**Pg**	**03 58 45.0**	**-0.4**
KIF				*e*S	**Sg**	**03 59 01.3**	**+0.1**
KIF				MSG		03 59 05.1	
	comp=Z,22nm,0.1s						
PAJU	**Pajala**	**1.35**	**124**	*e*P	**Pg**	**03 58 47.4**	**-0.4**
HEF	**Hetta**	**1.41**	**63**	*e*P	**Pn**	**03 58 48.5**	**-0.4**
HEF				*e*S	**Sg**	**03 59 06.8**	**-0.4**
HEF	**Hetta**	**1.41**	**63**	*e*P	**Pn**	**03 58 48.4**	**-0.4**
HEF				*e*S	**Sg**	**03 59 06.6**	**-0.6**
HEF				MSG		03 59 12.1	
	comp=Z,8.6nm,0.1s						
ERTU	**Ertsjaerv**	**1.46**	**148**	*e*P	**Pn**	**03 58 49.3**	**-0.3**
ERTU				*e*S	**Sg**	**03 59 09.2**	**+0.3**
KLF	**Kolari**	**1.53**	**110**	*e*P	**Pn**	**03 58 50.6**	**+0.1**
KTK1	**Kautokeino**	**1.64**	**41**	*e*P	**Pn**	**03 58 52.3**	**+0.3**
KTK1				*e*S	**Sb**	**03 59 14.2**	**+0.1**
KTK1				IAML		03 59 17.6	
	comp=Z,17nm,0.4s						
KTK1	**Kautokeino**	**1.64**	**41**	*e*P	**Pn**	**03 58 52.1**	**+0.1**
KTK1				*e*SN	**Sg**	**03 59 15.0**	**+0.5**
HARU	**Harads**	**1.67**	**170**	*e*P	**Pn**	**03 58 52.8**	**+0.3**
JETT	**Jettan, Norway**	**1.76**	**2**	*e*P	**Pn**	**03 58 54.2**	**+0.4**
JETT				*e*S	**Sn**	**03 59 15.6**	**-1.3**
JETT				IAML		03 59 19.4	
	comp=Z,65nm,0.5s						
TRO	**Tromso**	**1.90**	**346**	*e*P	**Pn**	**03 58 56.3**	**+0.7**
TRO				*e*S	**Sn**	**03 59 19.8**	**-0.4**
TRO				IAML		03 59 25.4	
	comp=Z,17nm,0.2s						
TRO	**Tromso**	**1.90**	**346**	*e*P	**Pn**	**03 58 56.3**	**+0.7**
TRO				*e*SG	**Sb**	**03 59 21.4**	**-0.4**
STEI	**Steigen**	**1.91**	**276**	*e*P	**Pn**	**03 58 56.9**	**+1.2**
STEI				*e*S	**Sb**	**03 59 22.8**	**+0.8**
STEI				IAML		03 59 24.7	
	comp=Z,27nm,0.4s						
STEI	**Steigen**	**1.91**	**276**	*e*PG	**Pn**	**03 58 57.1**	**+1.4**
STEI				*e*SG	**Sb**	**03 59 22.4**	**+0.4**
FAUS	**Fauske**	**1.96**	**260**	*e*P	**Pn**	**03 58 57.7**	**+1.3**
FAUS				*e*S	**Sb**	**03 59 23.7**	**+0.3**
FAUS				IAML		03 59 27.2	
	comp=Z,31nm,0.4s						
KALU	**Kalix**	**2.30**	**147**	*e*P	**Pn**	**03 59 02.8**	**+1.6**
TOF	**Tornio**	**2.35**	**135**	*e*P	**Pn**	**03 59 03.7**	**+1.9**
TOF				*e*SB	**Sb**	**03 59 35.5**	**+0.8**
TOF				MSG		03 59 39.9	
	comp=Z,7.0nm,0.2s						
SGF	**Sodankyl**	**2.42**	**96**	*e*PB	**Pb**	**03 59 05.6**	**-0.8**
SGF				*e*SB	**Sb**	**03 59 36.9**	**+0.2**
SGF				MSG		03 59 41.7	
	comp=Z,7.5nm,0.2s						
RNF	**Rovaniemi**	**2.54**	**116**	*e*PB	**Pb**	**03 59 07.0**	**-1.3**
RNF				*e*SB	**Sb**	**03 59 40.9**	**+0.8**
LOF	**Lofoten**	**2.56**	**281**	*e*P	**Pn**	**03 59 06.3**	**+1.7**
LOF				*e*S	**Sn**	**03 59 37.1**	**+0.7**
LOF				IAML		03 59 43.9	
	comp=Z,22nm,0.4s						
ARA0	**ARCESS Array S**	**2.59**	**45**	*e*P	**Pn**	**03 59 06.2**	**+1.2**
ARA0				*e*		03 59 38.5	
ARA0				IAML		03 59 45.2	
	comp=Z,9.3nm,0.5s						
ARA0	**ARCESS Array S**	**2.59**	**45**	*e*P	**Pn**	**03 59 06.8**	**+1.8**
ARCES	**ARCESS Array B**	**2.59**	**45**	Pn	**Pn**	**03 59 05.8**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=235,slow=14,SNR=97						
ARCES				Lg	Lg	03 59 40.2	
	comp=Z,2.4nm,0.3s,baz=226,slow=26,SNR=14						
	comp=Z,1.5nm,0.2s						
ARCES	**ARCESS Array B**	**2.59**	**45**	P	**Pn**	**03 59 06.3**	**+1.2**
ARCES				S	**Sn**	**03 59 38.0**	**+0.8**
MOR8	**Moi Rana**	**2.82**	**237**	*e*P	**Pn**	**03 59 08.8**	**+0.6**
MOR8				*e*S	**Sn**	**03 59 39.6**	**-3.2**
MOR8				IAML		03 59 47.5	
	comp=Z,28nm,0.5s						
KONS	**Konsvik**	**3.08**	**248**	*e*P	**Pn**	**03 59 12.8**	**+0.9**
HAMF	**Hammerfest**	**3.10**	**22**	*e*P	**Pn**	**03 59 13.7**	**+1.6**
KEV	**Kevo**	**3.14**	**48**	*e*P	**Pn**	**03 59 13.1**	**+0.5**
KEV				*e*		03 59 52.7	
STOK	**Stokkvaagen**	**3.20**	**246**	*e*P	**Pn**	**03 59 15.1**	**+1.7**
BURU	**Burvik**	**3.27**	**172**	*e*P	**Pn**	**03 59 16.3**	**+2.0**
HUSU	**Husum**	**4.50**	**186**	*e*P	**Pn**	**03 59 32.8**	**+1.5**
APA0	**Apatity Array**	**4.85**	**86**	P	**Pn**	**03 59 36.0**	**-0.1**
APA0				S	**Sn**	**04 00 32.7**	**-0.2**
TERR	**Teriberka**	**5.63**	**69**	P	**Pn**	**03 59 47.2**	**+0.4**
TERR				S	**Sn**	**04 00 51.9**	**-0.2**
FINES	**FINESS Array B**	**6.85**	**156**	Pn	**Pn**	**04 00 05.3**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=7.9						
FINES				Sn	**Sn**	**04 01 22.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=345,slow=22,SNR=2.3						
FINES				Lg	Lg	04 01 57.8	
	comp=Z,0.4nm,0.3s,baz=343,slow=28,SNR=3.0						
	comp=Z,3.5nm,0.8s						
NOA	**NORSAR Array B**	**7.83**	**214**	Pn	**Pn**	**04 00 17.2**	**+0.2**
	baz=25,slow=12,SNR=1.7						
NOA				Lg	Lg	04 02 28.7	
	baz=67,slow=16,SNR=2.1						
	comp=Z,0.9nm,0.9s						
HFS	**Hagfors**	**8.22**	**204**	Pn	**Pn**	**04 00 22.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=14,slow=14,SNR=12						
HFS				Sn	**Sn**	**04 01 53.5**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=31,slow=28,SNR=2.0						
HFS				Lg	Lg	04 02 41.1	
	comp=Z,0.2nm,0.3s,baz=21,slow=25,SNR=1.5						
	comp=Z,1.6nm,0.8s						

*HVO **01** 04:05:29.9±0.7, 18°.82N±0°.05×156°.29W±0°.04, h44km±9km, Error ellipse: s-maj=8.1km s-min=3.0km az=144.0*
NEIC 01 04:05:29.1±0.6, 18°.90N±0°.04×156°.24W±0°.04, h50km±7km, ML2.9/40, Md2.5/15(HVO), Error ellipse: s-maj=7.1km s-min=4.4km az=133.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPH	**Captain Cook**	**0.66**	**27**		Pn	04 05 42.5	0.0
KHU	**Kahuku**	**0.69**	**59**		Pn	04 05 42.9	0.0
KHU					Sn	04 05 52.8	-0.1
KHU	**Kahuku**	**0.69**	**59**	IAML		04 05 53.0	
	comp=E,406nm,0.2s						
KHLU	**Kahalu`u**	**0.77**	**25**		Sn	04 05 53.8	-0.7
KHLU	**Kahalu`u**	**0.77**	**25**		Pn	04 05 43.7	-0.1
KHLU	**Kahalu`u**	**0.77**	**25**	IAML		04 05 52.3	
	comp=E,149nm,2.1s						
MWH	**Moku'aweowe**	**0.84**	**46**		Sn	04 05 56.3	-0.7
MWH	**Moku'aweowe**	**0.84**	**46**		Pn	04 05 45.0	-0.3
MWH	**Moku'aweowe**	**0.84**	**46**	IAML		04 05 48.6	
	comp=E,339nm,2.9s						
HTC	**Hot Caves**	**0.87**	**67**		Pn	04 05 45.1	0.0
HUH	**Hualalai**	**0.87**	**26**		Pn	04 05 46.0	+0.6
HUH	**Hualalai**	**0.87**	**26**	IAML		04 05 48.8	
	comp=E,261nm,3.1s						
AIN	**Ainahou**	**0.88**	**57**		Pn	04 05 45.4	0.0
AIN					Sn	04 05 57.0	-0.3
AIN	**Ainahou**	**0.88**	**57**	IAML		04 05 57.4	
	comp=N,413nm,1.6s						
MLOA	**Mauna Loa Obse**	**0.89**	**45**		Sn	04 05 57.2	-0.8
MLOA	**Mauna Loa Obse**	**0.89**	**45**		Pn	04 05 45.7	-0.1
MLOA	**Mauna Loa Obse**	**0.89**	**45**	IAML		04 05 49.5	
	comp=E,197nm,2.2s						
MLOA				IAML		04 05 49.8	
	comp=N,269nm,3.1s						
HLP	**Hilina Pali**	**0.97**	**66**		Pn	04 05 46.5	0.0
HLP					Sn	04 05 59.1	-0.1
HLP	**Hilina Pali**	**0.97**	**66**	IAML		04 06 02.8	
	comp=N,432nm,2.0s						
HLP				IAML		04 06 04.9	
	comp=E,552nm,3.6s						
HMH	**Humu'ula Sheep**	**1.00**	**45**		Pn	04 05 47.8	+0.6
HMH				IAML		04 06 01.3	
	comp=N,482nm,0.3s						
HMH	**Humu'ula Sheep**	**1.00**	**45**		Sn	04 06 01.1	+0.7
HMH	**Humu'ula Sheep**	**1.00**	**45**	IAML		04 05 57.2	
	comp=E,196nm,3.5s						
MLH	**Mauna Loa**	**1.00**	**54**	IAML		04 06 21.8	
	comp=N,245nm,3.0s						
WRMHI	**West Rim**	**1.02**	**60**		Pn	04 05 47.0	-0.3
KKO	**Keanakako`i**	**1.05**	**61**	IAML		04 06 01.2	
	comp=E,503nm,1.2s						
UWB	**Uwekahuna B**	**1.05**	**60**	IAML		04 06 03.3	
	comp=E,219nm,1.3s						
UWB				IAML		04 06 18.1	
	comp=N,294nm,1.8s						
SBLHI	**Steaming Bluff**	**1.06**	**60**	IAML		04 06 15.9	
	comp=N,457nm,0.9s						
SBLHI				IAML		04 06 27.4	
	comp=E,409nm,0.7s						
HATHI	**Halema'uma'u T**	**1.06**	**60**	IAML		04 06 18.1	
	comp=N,522nm,0.7s						
PUH	**Pauahi**	**1.08**	**64**	IAML		04 06 27.4	
	comp=N,232nm,1.7s						
POHA	**Pohakuloa**	**1.09**	**38**	Pn	Pn	04 05 47.5	-0.8
KHLH	**Kahului Airpor**	**2.00**	**355**	Pn	Pn	04 06 00.5	+0.1
KHLH				IAML		04 06 27.9	
	comp=E,97nm,3.7s						
KHLH				IAML		04 06 49.3	
	comp=N,81nm,1.9s						
KEKH	**Kekaha**	**4.47**	**314**		Pn	04 06 32.2	-2.3

*NEIC **01** 04:09:52.0±1.5, 53°.44N±0°.07×163°.35W±0°.06, h10km±2km, mb3.9/15, ML3.5/26(AEIC), Error ellipse: s-maj=12.7km s-min=4.6km az=164.0*
*IDC **01** 04:09:52.3±1.2, 53°.78N×163°.55W, h0km, mb4.1/22, mbtmp4.1/23, ML3.8/1, MS3.6/6, Error ellipse: s-maj=33.2km s-min=16.3km az=176.0*
*AEIC **01** 04:09:55±2.1, 53°.44N±0°.09×163°.40W±0°.08, h27km±7km, Error ellipse: s-maj=12.8km s-min=6.5km az=163.0*
ISC 01 04:09:55.2±0.6, 53°.49N±0°.07×163°.40W±0°.06, h29km, n118, σ1§29/102, mb4.3/31, MS3.7/4, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**1.18**	**350**		**Pn**	**04 10 15.2**	**-0.4**
ISLZ	**Isanotski Laza**	**1.25**	**352**		**Pn**	**04 10 16.4**	**-0.4**
ISLZ					**Sb**	**04 10 34.2**	**+0.3**
WESP	**Westdahl Peak**	**1.27**	**323**		**Pn**	**04 10 16.4**	**-0.6**
WESP					**Sb**	**04 10 34.2**	**-0.3**
SSLS	**Shishaldin Sou**	**1.27**	**344**		**Pn**	**04 10 16.8**	**-0.2**
WESN	**West Dahl Nort**	**1.29**	**328**		**Pn**	**04 10 17.0**	**-0.2**
WECS	**Westdahl Cape**	**1.32**	**323**		**Pn**	**04 10 17.3**	**-0.4**
WECS					**Sn**	**04 10 33.5**	**-0.9**
FALS	**False Pass**	**1.37**	**360**		**Pn**	**04 10 18.0**	**-0.3**
FALS	**False Pass**	**1.37**	**360**		**Sn**	**04 10 35.9**	**+0.5**
AKSA	**Akutan Strait**	**1.51**	**296**		**Pn**	**04 10 19.7**	**-0.5**
AKUT	**Akutan**	**1.55**	**296**	Pn	**Pn**	**04 10 20.0**	**-0.7**
ZRO	**Akutan Zero**	**1.64**	**293**		**Pn**	**04 10 21.6**	**-0.4**
AKLV	**Akutan Long Va**	**1.66**	**295**		**Pn**	**04 10 21.6**	**-0.7**
AKMO	**Akutan Morgan**	**1.66**	**292**		**Pn**	**04 10 21.9**	**-0.4**
AKRB	**Akutan Reef Bi**	**1.71**	**293**		**Pn**	**04 10 22.8**	**-0.2**
DT1	**Dutton Round H**	**1.75**	**22**		**Pn**	**04 10 23.6**	**+0.1**
UNV	**Unalaska Valle**	**1.88**	**282**		**Pn**	**04 10 22.9**	**-2.4**
MNAT	**Makushin Natee**	**1.99**	**283**		**Pn**	**04 10 26.2**	**-0.7**
MTBL	**Makushin Table**	**2.00**	**285**		**Pn**	**04 10 26.9**	**-0.2**
MGOD	**Makushin Gods**	**2.09**	**280**		**Pn**	**04 10 28.0**	**-0.2**
MCIR	**Makushin Cirqu**	**2.12**	**284**		**Pn**	**04 10 28.7**	**-0.1**
SDPT	**Sand Point**	**2.53**	**41**	Pn	**Pn**	**04 10 34.4**	**+0.2**
OKTU	**Okmok Mt. Tuli**	**2.78**	**270**		**Pn**	**04 10 38.1**	**+0.4**
OHAK	**Old Harbor**	**6.87**	**53**	Pn	**Pn**	**04 11 32.1**	**-1.7**
KDAK	**Kodiak Island**	**7.48**	**51**	Pn	**Pn**	**04 11 40.7**	**-1.4**
	1.5nm,0.3s,baz=223,slow=7.4,SNR=14						
	4.3nm,0.5s						
KDAK	**Kodiak Island**	**7.48**	**51**	Pn	**Pn**	**04 11 41.2**	**-1.0**
CNPM	**China Poot**	**9.04**	**43**	Pn	**Pn**	**04 12 03.7**	**+0.2**
BRLK	**Bradley Lake**	**9.32**	**43**	Pn	**Pn**	**04 12 06.3**	**-1.1**
SEW	**Seward**	**10.11**	**43**	Pn	**Pn**	**04 12 17.5**	**-0.6**
RC01	**Rabbit Creek A**	**10.60**	**39**	Pn	**Pn**	**04 12 25.5**	**+0.7**
PWL	**Port Wells**	**11.00**	**42**		**Pn**	**04 12 29.0**	**-1.3**
GLI	**Glacier Island**	**11.51**	**43**	Pn	**Pn**	**04 12 37.6**	**+0.3**
HIN	**Hinchinbrook I**	**11.51**	**46**		**Pn**	**04 12 36.2**	**-1.2**
SML	**Sawmill**	**11.57**	**38**	Pn	**Pn**	**04 12 36.2**	**-2.1**
FID	**Port Fidalgo**	**11.70**	**45**	Pn	**Pn**	**04 12 37.4**	**-2.5**
SCM	**Sheep Creek Mo**	**11.96**	**39**		**Pn**	**04 12 42.3**	**-1.3**
RAGM	**Ragged Mountai**	**12.31**	**48**	Pn	**Pn**	**04 12 47.6**	**-0.7**
KLU	**Klutina**	**12.32**	**42**		**Pn**	**04 12 46.0**	**-2.4**
HMT	**Hamilton**	**12.47**	**49**		**Pn**	**04 12 48.3**	**-2.3**
N25K	**Chitina, Valde**	**12.92**	**44**	Pn	**Pn**	**04 12 55.0**	**-1.7**
WAX	**Waxell Ridge**	**13.16**	**50**	Pn	**Pn**	**04 12 58.4**	**-1.5**
GLB	**Gilahina Butte**	**13.17**	**45**		**Pn**	**04 12 60.0**	**-0.1**
MLY	**Manley**	**13.22**	**24**	Pn	**Pn**	**04 13 00.7**	**-0.1**
PAX	**Paxson**	**13.34**	**38**	Pn	**Pn**	**04 13 00.9**	**-1.5**
SHEM	**Shemya Is, Ala**	**13.53**	**276**	LR	LR	04 17 59.8	
	comp=Z,112nm,21.8s,baz=74,slow=36						
M26K	**Nabesna, AK**	**13.98**	**42**		**Pn**	**04 13 09.7**	**-1.4**
ILAR	**Eielson Array**	**14.07**	**30**	Pn	**Pn**	**04 13 11.9**	**-0.3**
	0.1nm,0.3s,baz=223,slow=12,SNR=4.8						
DOT	**Dot Lake**	**14.26**	**37**	Pn	**Pn**	**04 13 12.7**	**-2.2**
M27K	**Edge Creek, AK**	**14.41**	**43**	Pn	**Pn**	**04 13 14.2**	**-2.8**
SCRK	**Sand Creek**	**14.49**	**36**	Pn	**Pn**	**04 13 18.4**	**+0.3**
J26L	**Joseph Creek**	**14.96**	**35**	Pn	**Pn**	**04 13 23.6**	**-0.7**
COLD	**Coldfoot**	**15.19**	**20**	IAmb	IAmb	04 13 32.9	
	comp=Z,10nm,1.0s						
I26K	**Coal Creek Min**	**15.60**	**33**	IAmb	IAmb	04 13 44.3	
	comp=Z,13nm,1.5s						
EGAK	**Eagle**	**15.95**	**36**	Pn	**Pn**	**04 13 35.5**	**-1.8**
DAWY	**Dawson**	**16.22**	**40**	IAmb	IAmb	04 13 46.3	
	comp=Z,5.8nm,0.6s						
TOLK	**Toolik Lake Re**	**16.53**	**18**	IAmb	IAmb	04 13 51.0	
	comp=Z,20nm,1.4s						
N31M	**Braeburn, Yuko**	**16.75**	**51**	IAmb	IAmb	04 14 14.7	
	comp=Z,7.6nm,0.8s						
MAYO	**Mayo, Yukon**	**17.41**	**44**	Pn	**Pn**	**04 13 53.4**	**-2.3**
M31M	**Drury Creek, Y**	**17.59**	**49**	IAmb	IAmb	04 14 23.6	
	comp=Z,9.5nm,0.8s						
FARO	**Faro, Yukon**	**18.07**	**49**	IAmb	IAmb	04 14 21.2	
	comp=Z,6.3nm,0.7s						
EPYK	**Eagle Plains**	**18.37**	**35**	P	**P**	**04 14 04.8**	**-2.5**
EPYK				IAmb	IAmb	04 14 11.8	
	comp=Z,8.4nm,0.8s						
DLBC	**Dease Lake**	**19.19**	**62**	LR	LR	04 21 48.3	
	comp=Z,78nm,18.9s,baz=295,slow=37						
DLBC	**Dease Lake**	**19.19**	**62**	P	**P**	**04 14 12.4**	**-4.0**
DLBC				IAmb	IAmb	04 14 35.1	
	comp=Z,10nm,1.4s						
INK	**Inuvik**	**20.45**	**32**	P	**P**	**04 14 28.4**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=227,slow=11,SNR=9.7						
	comp=Z,1.5nm,0.6s						
BBB	**Bella Bella**	**21.23**	**79**	LR	LR	04 21 10.1	
	comp=Z,59nm,18.2s,baz=265,slow=32						
PETK	**Petropavlovsk-**	**23.06**	**285**	P	**P**	**04 14 57.5**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=86,slow=12,SNR=19						
	comp=Z,3.4nm,0.5s						
A36M	**Sachs Harbour**	**24.74**	**27**	P	**P**	**04 15 13.3**	**-0.3**
YKA	**Yellowknife Ar**	**26.76**	**51**	P	**P**	**04 15 35.1**	**+3.2**
	comp=Z,1.1nm,0.6s,baz=272,slow=9.7,SNR=5.6						
PAHR	**Pah Rah Range**	**32.68**	**97**	P	**P**	**04 16 21.7**	**-3.1**
TIXI	**Tiksi**	**33.67**	**328**	LR	LR	04 32 09.2	
	comp=Z,108nm,18.0s,baz=351,slow=40						
PDAR	**Pinedale Array**	**36.67**	**85**	P	**P**	**04 17 02.3**	**+3.0**
	comp=Z,0.4nm,0.8s,baz=344,slow=7.8,SNR=2.1						
	comp=Z,0.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**40.71**	**226**	T	T	05 01 13.3	
	baz=26,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**40.72**	**226**	T	T	05 01 15.6	
	baz=26,slow=76,SNR=32						
H11N1	**WAKE ISLAND Hy**	**40.73**	**226**	T	T	05 01 18.1	
	baz=26,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**41.88**	**225**	T	T	05 02 51.0	
	baz=26,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**41.89**	**225**	T	T	05 02 43.2	
	baz=26,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**41.90**	**225**	T	T	05 02 45.8	
	baz=26,slow=76,SNR=50						
FRB	**Frobisher Bay**	**45.92**	**38**	LR	LR	04 40 23.4	
	comp=Z,98nm,18.6s,baz=238,slow=40						
SUMG	**Summit**	**48.59**	**19**	*i* P	**P**	**04 18 36.0**	**+0.2**
KSRS	**Korea Array**	**48.82**	**280**	P	**P**	**04 18 37.9**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=56,slow=6.9,SNR=6.5						
	comp=Z,1.8nm,0.9s						
TXAR	**Lajitas Array**	**49.17**	**95**	P	**P**	**04 18 42.1**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=309,slow=6.9,SNR=5.3						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**53.77**	**303**	P	**P**	**04 19 14.8**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=46,slow=8.3,SNR=10						
	comp=Z,2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**58.95**	**320**	P	**P**	**04 19 50.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=42,slow=6.8,SNR=4.1						
	comp=Z,0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**63.96**	**321**	P	**P**	**04 20 24.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=38,slow=6.5,SNR=10						
	comp=Z,0.8nm,0.3s						
BVAR	**Borovoye Array**	**64.80**	**327**	P	**P**	**04 20 31.4**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=44,slow=7.0,SNR=12						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**65.17**	**355**	P	**P**	**04 20 30.6**	**-2.2**
	comp=Z,4.0nm,0.9s,baz=305,slow=6.7,SNR=6.6						
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**65.17**	**336**	P	**P**	**04 20 32.7**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=342,slow=21,SNR=3.4						
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**65.57**	**317**	P	**P**	**04 20 34.9**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=52,slow=6.5,SNR=6.9						
	comp=Z,0.8nm,0.7s						
NB2	**NORSAR Subarra**	**65.74**	**3**	P	**P**	**04 20 37.1**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=358,slow=6.2						
NOA	**NORSAR Array B**	**65.74**	**3**

comp=Z,4.9nm,0.4s
BRG Berggiesshubel 1.49 246 Pg Pb 04 10 46.4 +0.3
BRG Sg Sn 04 11 06.0 +0.2
BRG Amp 04 11 06.3
comp=Z,5.9nm,0.3s
PRU Pruhonice 1.80 214 *e*SG Sb 04 11 14.5 0.0
CLL Collm 1.94 266 *e*Pg Pb 04 10 54.0 +0.1
CLL *e*Sg Sb 04 11 19.0 +0.3
MORC Moravsky Berou 1.95 151 *e*PN Pn 04 10 52.3 +0.2
MORC *e*SG Sn 04 11 17.8 +0.5
NKC Novy Kostel 2.63 243 *e*SG Sg 04 11 43.1 +1.0
comp=Z,3.8nm,0.5s
KHC Kasperske Hory 2.86 215 *e*PG Pb 04 11 11.0 +1.4
KHC *e*SN Sn 04 11 38.8 -0.9
KHC *e*SG Sb 04 11 46.9 +1.8

*IDC **01** 04:13:58.4±1.3,24°.14S×175°.40W,h0km,mb4.0/4, mbtmp4.1/5,ML5.1/1,MS3.7/2,Error ellipse: s-maj=46.9km s-min=31.6km az=2.0*
ISC 01 04:14:03.1±1.2,24°.1S±0°.2×175°.5W±0°.2,h28km,n7, σ1§26/7,mb3.9/4,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.77**	**315**	Pn	**Pn**	**04 16 07.9**	**-0.3**
	0.6nm,0.3s,baz=142,slow=11,SNR=8.8						
MSVF				LR	LR	04 19 08.1	
	comp=Z,336nm,18.3s,baz=129,slow=35 19nm,0.8s						
ASAR	**Alice Springs**	**46.10**	**260**	P	**P**	**04 22 25.2**	**+0.1**
	1.1nm,0.8s,baz=94,slow=8.2,SNR=9.7 1.1nm,0.8s						
WRA	**Warramunga Arr**	**46.54**	**265**	P	**P**	**04 22 27.1**	**-1.5**
	1.4nm,0.8s,baz=89,slow=6.1,SNR=17 1.4nm,0.8s						
TXAR	**Lajitas Array**	**87.04**	**56**	P	**P**	**04 26 46.0**	**-0.4**
	0.4nm,0.9s,baz=210,slow=5.2,SNR=3.2 0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**04 27 18.8**	**+1.9**
	1.1nm,0.3s,baz=130,slow=4.1,SNR=4.8						
CMAR				LR	LR	05 09 11.2	
	comp=Z,44nm,20.3s,baz=110,slow=35 1.1nm,0.3s						
AKASG	**Malin Array Be**	**147.28**	**331**	PKPbc	**PKPdf**	**04 33 41.6**	**+0.2**
	0.9nm,0.6s,baz=36,slow=4.0,SNR=2.3						
TORD	**Torodi Ar. Bea**	**168.78**	**166**	PKPab	**PKPab**	**04 35 18.0**	**-0.5**
	13nm,0.6s,baz=204,slow=3.2,SNR=5.1						

*IDC **01** 04:15:30.2±1.8,36°.08N×6°.49E,h0km,mb3.1/2, mbtmp3.2/4,ML3.1/2,MS2.8/4,Error ellipse: s-maj=32.6km s-min=23.8km az=160.0*
*CRAAG **01** 04:15:31.2,36°.17N×6°.62E,Ml3.5*
*CNRM **01** 04:15:38.8,36°.09N×5°.99E,h0km*
ISC 01 04:15:32.4±1.4,36°.17N±0°.07×6°.64E±0°.04,h8km±12km, n23,σ1§13/20,mb3.4/3,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASM	**Ain Smara**	**0.15**	**305**	P	**Pg**	**04 15 35.4**	**-0.2**
CTEI	**Djebel Teioual**	**0.22**	**240**	P	**Pg**	**04 15 36.7**	**-0.2**
CKFL	**Kef-Lekhel**	**0.23**	**16**	P	**Pg**	**04 15 36.8**	**-0.4**
ABSA	**Djebel Ababsia**	**0.69**	**81**	P	**Pb**	**04 15 47.3**	**+0.6**
DFRA	**Djebel Bou Aff**	**0.72**	**301**	P	**Pg**	**04 15 47.4**	**+1.1**
CMAH	**Djebel Manchou**	**0.77**	**54**	P	**Pg**	**04 15 47.6**	**+0.3**
SET	**Setif**	**1.00**	**272**	P	**Pn**	**04 15 54.0**	**+1.1**
AKET	**Djebel Ketaf**	**2.24**	**268**	P	**Pn**	**04 16 09.7**	**-0.2**
KEST	**Kesra**	**2.24**	**101**	Pn	**Pn**	**04 16 09.4**	**-0.5**
	10nm,0.3s,baz=215,slow=4.5,SNR=135						
KEST				Sn	**Sb**	**04 16 40.2**	**-0.9**
	2.6nm,0.3s,baz=267,slow=12,SNR=5.7 68nm,0.6s						
ADJB	**Djebel Djouab**	**2.59**	**271**	P	**Pn**	**04 16 14.8**	**0.0**
CART	**Cartagena**	**6.29**	**285**	P	**Pn**	**04 17 06.0**	**+0.6**
FIGM	**Figuig**	**7.69**	**241**	P	**Pn**	**04 17 24.9**	**+0.1**
JBK	**JBK**	**7.75**	**259**	P	**Pn**	**04 17 25.8**	**0.0**
ESDC	**Sonseca Array**	**9.08**	**296**	Pn	**Pn**	**04 17 41.8**	**-2.0**
	baz=104,slow=13,SNR=2.4 0.4nm,0.6s						
MDT	**Midelt**	**9.87**	**253**	P	**Pn**	**04 17 55.2**	**+0.5**
MD31	**MD31**	**9.97**	**254**	P	**Pn**	**04 17 56.9**	**+0.9**
DAVOX	**Davos/Dischmat**	**10.87**	**12**	LR	LR	04 22 21.4	
	comp=Z,75nm,19.8s,baz=260,slow=37						
VRAC	**Vranov**	**15.01**	**26**	LR	LR	04 25 30.4	
	comp=Z,30nm,18.5s,baz=223,slow=40						
BRTR	**Keskin Array B**	**21.55**	**72**	P	**P**	**04 20 24.4**	**+2.1**
	1.5nm,0.9s,baz=270,slow=8.5,SNR=6.3 1.5nm,0.9s						
AKASG	**Malin Array Be**	**21.78**	**41**	P	**P**	**04 20 24.0**	**-0.6**
	0.2nm,0.4s,baz=237,slow=11,SNR=1.9 0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**23.36**	**192**	P	**P**	**04 20 38.9**	**-2.5**
	1.0nm,0.7s,baz=11,slow=11,SNR=14						
EIL	**Elat**	**24.58**	**97**	LR	LR	04 32 07.7	
	comp=Z,25nm,18.5s,baz=327,slow=40						
NOA	**NORSAR Array B**	**25.06**	**5**	LR	LR	04 31 20.4	
	comp=Z,18nm,18.5s,baz=200,slow=38						

*DSN **01** 04:19:13.6±1.5,27°.92N×58°.34E,h10km,ML3.8/4,Error ellipse: s-maj=48.9km s-min=10.0km az=141.0*
*IDC **01** 04:19:14.6±2.5,27°.98N×57°.83E,h0km,mb4.1/3, mbtmp4.1/4,ML3.8/1,Error ellipse: s-maj=64.4km s-min=30.9km az=75.0*
*TEH **01** 04:19:16.5,27°.94N×57°.93E,h13km,ML3.8*
*OMAN **01** 04:19:20.9±0.3,27°.73N×58°.10E,h27km±14km,mb5.6/1, ml3.4/15,Error ellipse: s-maj=20.1km s-min=2.9km az=16.0*
ISC 01 04:19:16.1±1.5,27°.93N±0°.03×57°.97E±0°.04,h13km±11km, n68,σ1§88/86,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.23**	**275**	*e*Pg	**Pb**	**04 19 21.7**	**-0.5**
KHNJ				*e*Sg	**Sb**	**04 19 25.0**	**-1.3**
KHNJ				*e*		04 19 28.6	
	comp=Z,6μm,0.3s						
KBAM	**BAM**	**1.28**	**19**	*e*Pg	**Pn**	**04 19 40.3**	**+0.5**
KBAM				*e*Sg	**Sn**	**04 19 57.2**	**+0.4**
KBAM				*e*		04 20 02.2	
	comp=Z,19μm,0.2s						
IBND	**Bandar-abas**	**1.35**	**250**	*e*Pg	**Pg**	**04 19 41.9**	**-0.2**
IBND				*e*Sg	**Sg**	**04 20 00.2**	**+0.5**
IBND				*e*		04 20 18.2	
	comp=Z,30μm,0.5s						
NGRK	**Negar Kerman**	**2.02**	**328**	*e*Pn	**Pn**	**04 19 51.1**	**+0.8**
NGRK				*e*		04 20 26.2	
	comp=Z,10μm,0.2s						
JASK	**Jask - Hormozg**	**2.06**	**183**	*e*Pn	**Pn**	**04 19 52.2**	**+1.8**
JASK				*e*		04 20 40.5	
	comp=Z,4μm,0.9s						
JASK	**Jask - Hormozg**	**2.06**	**183**	P	**Pb**	**04 19 52.5**	**-0.9**
	SNR=7.2						
KRBR	**Kerman**	**2.30**	**333**	*e*Pn	**Pn**	**04 19 55.6**	**+1.5**
TVBK	**TV Kerman**	**2.31**	**333**	*e*Pn	**Pb**	**04 19 56.1**	**-1.7**
TVBK				*e*		04 20 01.2	
	comp=Z,20μm,0.2s						
SHME	**Shamm**	**2.48**	**221**	*e*Pn	**Pn**	**04 19 57.5**	**+1.2**
SHME	**Shamm**	**2.48**	**221**	P	**Pn**	**04 19 57.6**	**+1.4**
SHME				S	**Sn**	**04 20 28.6**	**+2.1**
SHME	**Shamm**	**2.48**	**221**	P	**Pn**	**04 19 57.6**	**+1.4**
SHME				S	**Sb**	**04 20 30.3**	**-0.7**
BANOM	**Banah**	**2.49**	**217**	*e*Pn	**Pn**	**04 19 57.3**	**+0.9**
BANOM	**Banah**	**2.49**	**217**	P	**Pn**	**04 19 57.6**	**+1.2**
BANOM				S	**Sn**	**04 20 27.7**	**+1.0**
BANOM	**Banah**	**2.49**	**217**	P	**Pn**	**04 19 57.4**	**+0.9**
BANOM				S	**Sb**	**04 20 31.8**	**+0.4**
KHGB	**Koh Gabri**	**2.76**	**332**	*e*Pn	**Pb**	**04 20 03.1**	**-2.4**
KHGB				*e*		04 20 47.8	
	comp=Z,4μm,0.4s						
ZHDN	**Zahedan**	**2.90**	**59**	*e*		04 20 11.6	
	comp=Z,4μm,0.3s						
ZHDN				*e*Pn	**Pn**	**04 20 05.1**	**+3.0**
ZHSF	**Zahedan**	**2.98**	**55**	*e*Pn	**Pb**	**04 20 07.8**	**-1.4**
MASF	**Masafi**	**3.02**	**213**	P	**Pn**	**04 20 05.7**	**+2.0**
MASF				S	**Sn**	**04 20 41.5**	**+1.7**
MSFE	**Esma-Masafi**	**3.03**	**213**	*e*Pn	**Pn**	**04 20 06.9**	**+3.1**
MSFE	**Esma-Masafi**	**3.03**	**213**	P	**Pn**	**04 20 05.0**	**+1.2**
LAR1	**LAR**	**3.19**	**266**	*e*Pn	**Pn**	**04 20 07.8**	**+1.7**
CHBR	**Chabahar**	**3.23**	**135**	*e*Pn	**Pn**	**04 20 09.1**	**+2.5**
UOSS	**Minazif**	**3.37**	**208**	*e*Pn	**Pn**	**04 20 10.8**	**+2.4**
UOSS	**Minazif**	**3.37**	**208**	P	**Pn**	**04 20 10.6**	**+2.1**
UOSS	**Minazif**	**3.37**	**208**	P	**Pn**	**04 20 07.9**	**-0.5**
HATD	**Hatta, Dubai**	**3.50**	**208**	*e*Pn	**Pn**	**04 20 12.5**	**+2.2**
HATD	**Hatta, Dubai**	**3.50**	**208**	P	**Pn**	**04 20 13.6**	**+3.2**
FAQ	**Al Faqa, Dubai**	**3.82**	**214**	*e*Pn	**Pn**	**04 20 16.0**	**+1.3**
FAQ	**Al Faqa, Dubai**	**3.82**	**214**	P	**Pn**	**04 20 15.9**	**+1.2**
FAQ	**Al Faqa, Dubai**	**3.82**	**214**	P	**Pn**	**04 20 15.0**	**+0.3**
NGCH	**Negor - Chabah**	**3.82**	**131**	*e*Pn	**Pn**	**04 20 17.5**	**+2.8**
NGCH	**Negor - Chabah**	**3.82**	**131**	P	**Pn**	**04 20 17.8**	**+3.1**
NHDN	**Nehbandan**	**3.90**	**27**	*e*Pn	**Pn**	**04 20 18.6**	**+2.7**
SRVN	**Saravan**	**3.96**	**97**	*e*Pn	**Pn**	**04 20 20.7**	**+3.9**
SOHO	**SOHO**	**3.99**	**199**	P	**Pn**	**04 20 17.7**	**+0.6**
SOHO				S	**Sn**	**04 21 02.4**	**-1.3**
ASUD	**Al Ashush, Dub**	**4.05**	**216**	*e*Pn	**Pn**	**04 20 20.5**	**+2.6**
ASUD	**Al Ashush, Dub**	**4.05**	**216**	P	**Pn**	**04 20 20.7**	**+2.8**
ASUD				S	**Sn**	**04 21 07.6**	**+2.3**
BSRN	**Basiran**	**4.15**	**14**	*e*Pn	**Pn**	**04 20 21.8**	**+2.5**
IBAF	**Bafgh**	**4.20**	**331**	*e*Pn	**Pn**	**04 20 23.1**	**+3.0**
ESRB	**Sir Abu**	**4.30**	**232**	*e*Pn	**Pn**	**04 20 21.0**	**-0.2**
HOQ	**Hoqain**	**4.37**	**188**	*e*Pn	**Pn**	**04 20 22.0**	**-0.3**
HOQ	**Hoqain**	**4.37**	**188**	P	**Pn**	**04 20 22.1**	**-0.1**
HOQ				S	**Sn**	**04 21 10.6**	**-2.5**
BIDO	**Bidbid**	**4.39**	**178**	P	**Pn**	**04 20 23.6**	**+1.0**
IMEH	**Mehriz**	**4.52**	**321**	*e*Pn	**Pn**	**04 20 26.9**	**+2.4**
IKOO	**Kooshah**	**4.57**	**11**	*e*Pn	**Pn**	**04 20 27.6**	**+2.4**
WSAR	**Wadi Sarin**	**4.71**	**173**	Pn	**Pn**	**04 20 28.5**	**+1.5**
	comp=Z,3.8nm,0.3s,baz=332,slow=6.4,SNR=22						
WSAR				Sn	**Sn**	**04 21 20.1**	**-1.4**
	comp=Z,7.8nm,0.3s,baz=202,slow=8.5,SNR=7.9 comp=Z,8.8nm,0.4s						
WSAR	**Wadi Sarin**	**4.71**	**173**	P	**Pn**	**04 20 28.5**	**+1.5**
WSAR				S	**Sn**	**04 21 19.6**	**-1.9**
ARQ	**Araqi**	**4.75**	**196**	P	**Pn**	**04 20 29.6**	**+2.0**
	SNR=13						
ARQ				S	**Sn**	**04 21 22.9**	**+0.3**
SMDO	**Samad**	**4.85**	**179**	P	**Pn**	**04 20 29.6**	**+0.6**
ITEG	**Tejag**	**5.00**	**8**	*e*Pn	**Pn**	**04 20 33.7**	**+2.7**
TPRV	**Parvadeh(Tabas**	**5.20**	**348**	*e*Pn	**Pn**	**04 20 36.3**	**+2.5**
BSY	**Bisya**	**5.21**	**188**	P	**Pn**	**04 20 37.1**	**+3.3**
BSY				S	**Sn**	**04 21 34.8**	**+0.9**
YZKH	**Yazd**	**5.32**	**328**	*e*Pn	**Pn**	**04 20 37.4**	**+2.0**
WBK	**Wadi Bani Khal**	**5.37**	**170**	*e*Pn	**Pn**	**04 20 37.3**	**+1.2**
WBK	**Wadi Bani Khal**	**5.37**	**170**	P	**Pn**	**04 20 37.2**	**+1.2**
	SNR=27						
WBK				S	**Sn**	**04 21 36.6**	**-1.3**
JMDO	**Jabal Madar**	**5.54**	**179**	P	**Pn**	**04 20 41.1**	**+2.8**
JMDO				S	**Sn**	**04 21 40.7**	**-1.2**
MZWR	**Madinat Zayed**	**5.55**	**222**	P	**Pn**	**04 20 40.0**	**+1.6**
MZWR				S	**Sn**	**04 21 42.0**	**-0.1**
AFRZ	**Afriz**	**5.55**	**9**	*e*Pn	**Pn**	**04 20 40.8**	**+2.2**
AHBU	**AHRAM**	**5.95**	**281**	*e*Pn	**Pn**	**04 20 46.5**	**+2.6**
SHRT	**Shahrakht**	**6.04**	**19**	*e*Pn	**Pn**	**04 20 48.0**	**+2.8**
IRAM	**Ramesheh**	**6.20**	**310**	*e*Pn	**Pn**	**04 20 49.3**	**+1.7**
IRAM				*e*		04 22 05.5	
	comp=Z,199nm,0.4s						
KLNJ	**Kolanjah**	**6.35**	**300**	*e*Pn	**Pn**	**04 20 50.7**	**+1.0**
KLNJ				*e*		04 22 07.4	
	comp=Z,836nm,0.4s						
NASN	**Na'in**	**6.59**	**319**	*e*Pn	**Pn**	**04 20 55.1**	**+2.1**
IBRJ	**Brojen**	**7.04**	**306**	*e*Pn	**Pn**	**04 21 00.6**	**+1.4**
IPIR	**Pirpir**	**7.74**	**309**	*e*Pn	**Pn**	**04 21 10.4**	**+1.6**
BRTR	**Keskin Array B**	**23.31**	**207**	P	**P**	**04 24 23.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=113,slow=9.6,SNR=4.0 comp=Z,0.7nm,0.8s						
ARCES	**ARCESS Array B**	**45.67**	**345**	P	**P**	**04 27 35.8**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=122,slow=6.8,SNR=3.9 comp=Z,2.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**54.27**	**266**	P	**P**	**04 28 41.4**	**-1.0**
	comp=Z,13nm,0.6s,baz=62,slow=7.2,SNR=5.3 comp=Z,13nm,0.6s						

*IDC **01** 04:22:23.2±0.7,23°.84S×82°.47E,h0km,mb4.1/11, mbtmp4.1/11,MS4.0/15,Error ellipse: s-maj=24.5km s-min=18.7km az=61.0*
*NEIC **01** 04:22:25.4±1.2,23°.9S±0°.1×82°.5E±0°.2,h10km±1km, mb4.6/20,Error ellipse: s-maj=27.2km s-min=20.7km az=230.0*
ISC 01 04:22:24.9±0.6,23°.9S±0°.1×82°.5E±0°.1,h10km,n57, σ0§68/38,mb4.5/21,MS4.0/15,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.79**	**328**	T	T	04 45 50.5	
	baz=151,slow=74,SNR=166						
H08S1	**Diego Carcia H**	**18.80**	**328**	T	T	04 45 53.1	
	baz=151,slow=74,SNR=109						
H08S3	**Diego Garcia H**	**18.81**	**328**	T	T	04 45 57.1	
	baz=151,slow=74,SNR=140						
LEM	**Lembang**	**29.47**	**59**	LR	LR	04 38 25.6	
	comp=Z,286nm,19.7s,baz=320,slow=33						
H01W3	**Cape Leeuwin H**	**29.54**	**119**	T	T	04 59 15.4	
	baz=284,slow=75,SNR=22						
H01W2	**Cape Leeuwin H**	**29.54**	**119**	T	T	04 59 14.9	
	baz=284,slow=75,SNR=22						
H01W1	**Cape Leeuwin H**	**29.56**	**119**	T	T	04 59 16.3	
	baz=284,slow=75,SNR=29						
PSI	**Prapat**	**30.97**	**33**	LR	LR	04 38 09.1	
	comp=Z,164nm,20.4s,baz=216,slow=31						
PALK	**Pallekele**	**31.02**	**357**	LR	LR	04 38 33.7	
	comp=Z,222nm,19.0s,baz=294,slow=31						
TOLI2	**Tolitoli**	**44.71**	**62**	P	**P**	**04 30 37.5**	**-1.0**
TOLI2				IAmb	IAmb	04 30 39.1	
	comp=Z,8.4nm,1.0s						
ASAR	**Alice Springs**	**46.81**	**101**	P	**P**	**04 30 54.9**	**-0.3**
	comp=Z,7.7nm,0.9s,baz=263,slow=6.8,SNR=58						
ASAR				LR	LR	04 49 06.6	
	comp=Z,968nm,19.6s,baz=108,slow=34 comp=Z,7.7nm,0.9s						
AS31	**Alice Springs**	**46.81**	**101**	P	**P**	**04 30 55.0**	**-0.2**
MTN	**Manton Dam**	**47.23**	**86**	P	**P**	**04 30 59.5**	**+1.0**
WRA	**Warramunga Arr**	**48.03**	**96**	P	**P**	**04 31 05.0**	**+0.3**
	comp=Z,8.0nm,0.9s,baz=260,slow=8.0,SNR=48 comp=Z,8.0nm,0.9s						
WRA	**Warramunga Arr**	**48.03**	**96**	P	**P**	**04 31 04.5**	**-0.2**
WB2	**Warramunga Arr**	**48.04**	**96**	P	**P**	**04 31 03.8**	**-1.0**
WRAB	**Tennant Creek**	**48.04**	**96**	P	**P**	**04 31 04.4**	**-0.4**
KMBO	**Kilima Mbogo**	**49.30**	**291**	LR	LR	04 46 55.5	
	comp=Z,75nm,20.0s,baz=58,slow=30						
BOSA	**Boshof**	**51.16**	**252**	P	**P**	**04 31 27.4**	**-1.1**
	comp=Z,3.6nm,0.9s,baz=104,slow=12,SNR=4.1						
BOSA				LR	LR	04 48 36.5	
	comp=Z,112nm,20.4s,baz=128,slow=31 comp=Z,3.6nm,0.9s						
LBTB	**Lobatse**	**51.49**	**256**	LR	LR	04 49 25.6	
	comp=Z,207nm,20.0s,baz=127,slow=32						
LSZ	**Lusaka**	**51.63**	**269**	LR	LR	04 50 26.0	
	comp=Z,95nm,18.4s,baz=140,slow=33						
WSAR	**Wadi Sarin**	**52.27**	**332**	LR	LR	04 49 07.2	
	comp=Z,152nm,21.2s,baz=208,slow=31						
ATD	**Arta Tunnel**	**52.37**	**308**	LR	LR	04 51 07.5	
	comp=Z,162nm,18.8s,baz=178,slow=33						
ATD	**Arta Tunnel**	**52.37**	**308**	P	**P**	**04 31 38.4**	**+0.8**
ATD				IAmb	IAmb	04 31 52.6	
	comp=Z,11nm,0.9s						
SUR	**Sutherland**	**54.42**	**246**	LR	LR	04 50 48.5	
	comp=Z,223nm,18.8s,baz=137,slow=31						
RAYN	**Ar Rayn**	**59.26**	**320**	P	**P**	**04 32 26.6**	**-0.3**
RAYN				IAmb	IAmb	04 32 46.6	
	comp=Z,7.0nm,0.9s						
KBL	**Kabul**	**59.50**	**347**	P	**P**	**04 32 28.8**	**+0.3**
KBL				IAmb	IAmb	04 32 48.5	
	comp=Z,6.3nm,0.9s						
TSUM	**Tsumeb**	**60.12**	**261**	LR	LR	04 54 37.1	
	comp=Z,117nm,20.6s,baz=151,slow=32						
TROLL	**Troll, Antarti**	**64.39**	**200**	P	**P**	**04 33 01.0**	**0.0**
VNDA	**Vanda**	**64.54**	**166**	P	**P**	**04 33 02.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=276,slow=5.7,SNR=5.4 comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**64.54**	**166**	P	**P**	**04 33 03.0**	**+1.4**
VNDA				IAmb	IAmb	04 33 20.7	
	comp=Z,4.6nm,1.4s						
NRN	**Naryn**	**65.27**	**355**	P	**P**	**04 33 06.8**	**-0.3**
TARG	**Taragay, Kyrgy**	**65.43**	**356**	P	**P**	**04 33 10.0**	**+1.7**
GEYT	**Alibeck**	**65.62**	**339**	P	**P**	**04 33 09.2**	**0.0**
GEYT				IAmb	IAmb	04 33 28.8	
	comp=Z,4.3nm,0.9s						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**04 33 13.0**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=277,slow=1.6,SNR=12 comp=Z,3.4nm,0.7s						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**04 33 12.3**	**-0.5**
JOW	**Kunigami**	**67.06**	**44**	LR	LR	04 59 44.7	
	comp=Z,144nm,20.5s,baz=242,slow=33						
KK31	**Karatay Array**	**67.57**	**351**	P	**P**	**04 33 21.0**	**-0.4**
KK31				IAmb	IAmb	04 33 40.8	
	comp=Z,4.7nm,1.0s						
KKAR	**Karatay Array**	**67.57**	**351**	P	**P**	**04 33 21.0**	**-0.4**
EIL	**Elat**	**70.17**	**317**	LR	LR	05 00 57.6	
	comp=Z,142nm,19.7s,baz=315,slow=33						
MK31	**Makanchi Array**	**70.35**	**360**	P	**P**	**04 33 38.4**	**-0.3**
MKAR	**Makanchi Array**	**70.35**	**360**	P	**P**	**04 33 38.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=165,slow=5.0,SNR=7.0 comp=Z,0.9nm,0.8s						
MAKZ	**Makanchi**	**70.36**	**360**	P	**P**	**04 33 38.2**	**-0.6**
MAKZ				IAmb	IAmb	04 33 57.3	
	comp=Z,3.3nm,0.9s						
KURBB	**Kurchatov Arra**	**74.26**	**357**	P	**P**	**04 34 01.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=182,slow=5.9,SNR=4.9 comp=Z,0.4nm,0.5s						
KSAR	**Wonju Array Be**	**74.45**	**36**	P	**P**	**04 34 04.2**	**+0.8**
SONM	**Songino Array**	**74.56**	**16**	P	**P**	**04 34 03.5**	**-0.3**
ABKAR	**Akbulak array**	**75.55**	**345**	P	**P**	**04 34 10.1**	**+0.8**
BVAR	**Borovoye Array**	**77.31**	**353**	P	**P**	**04 34 18.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=131,slow=6.1,SNR=4.5 comp=Z,0.4nm,0.5s						
BRVK	**Borovoye**	**77.36**	**352**	P	**P**	**04 34 20.1**	**+0.6**
BRVK				IAmb	IAmb	04 34 42.1	
	comp=Z,5.0nm,1.4s						
ZAA0	**Zalesovo Array**	**77.54**	**1**	P	**P**	**04 34 20.6**	**0.0**
ZAA0				IAmb	IAmb	04 34 39.1	
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**77.54**	**1**	P	**P**	**04 34 19.8**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=189,slow=5.6,SNR=7.5 comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**77.54**	**1**	P	**P**	**04 34 21.2**	**+0.7**
BRTR	**Keskin Array B**	**78.00**	**324**	P	**P**	**04 34 23.8**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=134,slow=5.3,SNR=6.7 comp=Z,1.5nm,0.8s						
BRTR	**Keskin Array B**	**78.00**	**324**	P	**P**	**04 34 23.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**81.49**	**34**	LR	LR	05 07 53.0	
	comp=Z,109nm,21.2s,baz=113,slow=34						
TORD	**Torodi Ar. Bea**	**87.06**	**286**	P	**P**	**04 35 10.9**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=99,slow=5.2,SNR=4.7						
AKASG	**Malin Array Be**	**87.87**	**329**	P	**P**	**04 35 14.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=129,slow=4.2,SNR=4.0 comp=Z,0.5nm,0.6s						

*MOS **01** 04:25:42.4±0.9,23°.59S×179°.99W,h521km,mb5.4/42, MS4.5/4,Error ellipse: s-maj=8.4km s-min=7.2km az=118.8*
*NEIC **01** 04:25:43.5±1.6,23°.57S±0°.08×179°.95W±0°.09, h522km±4km,mb5.3/475,Error ellipse: s-maj=12.3km s-min=12.1km az=151.0*
*NOU **01** 04:25:43.1,23°.66S×179°.82W,h529km,ML5.2/114,South of Fiji Islands*
*BJI **01** 04:25:43.1±0.0,23°.22S×179°.61W,h529km,mb5.1/72, mB5.3/55*
*IDC **01** 04:25:43.2±0.4,23°.57S×179°.95W,h520km±4km,mb4.9/32, mbtmp5.7/36,Error ellipse: s-maj=7.3km s-min=6.6km az=26.0*
*GCMT **01** 04:25:47.5±0.1,23°.69S±0°.01×179°.85W±0°.01, h541km,MW5.8/154,Moment Tensor Solution. s154,c288; Duration: 2s0 Moment tensor: Scale 10^{17} Nm; M_{rr}1.34±.06; $M_{\theta\theta}$-2.44±.10; $M_{\phi\phi}$1.10±.09; $M_{r\theta}$-1.25±.09; $M_{\theta\phi}$-3.70±.09; $M_{\phi r}$-5.89±.08; Best double couple: $M_0$7.37700×10^{17} NP1:ϕ_s197.00000°,δ84.00000°, λ56.00000°. NP2:ϕ_s98.00000°,δ34.00000°,λ169.00000°. Principal axes: T 7.4360, Plg41.0000°, Azm75.0000°; N -0.1200, Plg33.0000°, Azm201.0000°; P -7.3170, Plg31.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 01 04:25:43.6±0.2,23°.59S±0°.03×179°.90W±0°.03, h533km±2km,h534km:pP-P,n1558,σ1§32/1606,mb5.3/371, 103C-66D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.43**	**11**	P	**P**	**04 27 16.9**	**+0.5**
RAO	**Raoul Island**	**5.91**	**163**	P	**P**	**04 27 20.2**	**-0.3**
	3μm,0.3s,baz=86,slow=5.6,SNR=48						
RAO				S	**S**	**04 28 37.3**	**-2.4**
	2μm,0.4s,baz=77,slow=22,SNR=6.1						
RAO	**Raoul Island**	**5.91**	**163**	P	**P**	**04 27 18.9**	**-1.6**
RAO	**Raoul Island**	**5.91**	**163**	P	**P**	**04 27 20.1**	**-0.3**
MSVF	**Nonsavu**	**6.14**	**341**	P	**P**	**04 27 22.9**	**0.0**
	396nm,0.6s,baz=195,slow=4.4,SNR=298						
MSVF				S	**S**	**04 28 42.5**	**-1.5**
	152nm,0.8s,baz=218,slow=19,SNR=0.5						
MSVF	**Nonsavu**	**6.14**	**341**	P	**P**	**04 27 22.5**	**-0.4**
MSVF	**Nonsavu**	**6.14**	**341**	P	**P**	**04 27 23.0**	**0.0**
TAVE	**Taveuni**	**6.85**	**360**	P	**P**	**04 27 30.9**	**+1.2**
FUTU	**Fugatoga**	**9.39**	**11**	P	**P**	**04 27 55.2**	**

RAGZ Rawiri 15.03 188 P P 04 28 51.8 -1.8
MUGZ Murupara 15.11 190 P P 04 28 49.7 -4.7
PRRZ Plateau Road 15.19 191 P P 04 28 52.7 -2.5
RIGZ Rimuhau 15.20 187 P P 04 28 53.0 -2.3
RTZ Ruatahuna 15.21 189 P P 04 28 52.7 -2.8
SNGZ Shannon Statio 15.32 188 P P 04 28 52.7 -3.9
RAHZ Arahi 15.49 189 P P 04 28 56.3 -2.0
KNZ Kokohu 15.52 187 P P 04 28 57.2 -1.4
HIZ Hauiti 15.53 196 P P 04 28 58.4 -0.3
MHGZ Mahia Peninsul 15.62 186 P P 04 28 57.8 -1.9
WHHZ Waihua 15.63 188 P P 04 28 58.1 -1.6
NMHZ Naumai 15.71 189 P P 04 28 58.1 -2.5
BKZ Black Stump Fm 15.82 190 P P 04 28 57.6 -4.2
ETVZ East Tongariro 15.94 193 P P 04 28 58.4 -4.6
OTVZ Oturere 15.97 193 P P 04 28 59.9 -3.5
MCHZ McNeill Hill 16.06 190 P P 04 29 01.7 -2.4
KWHZ Kaweka Forest 16.09 190 P P 04 29 01.4 -3.0
BHHZ Black Hill Sta 16.21 191 P P 04 29 00.5 -5.1
CKHZ Cape Kidnapper 16.22 188 P P 04 29 04.1 -1.5
KAHZ Kahuranaki 16.38 189 P P 04 29 05.0 -2.2
PXZ Pawanui 16.61 189 P P 04 29 06.5 -2.9
BFZ Birch Farm 17.34 190 P P 04 29 12.9 -3.3
MRZ Mangatainoka R 17.44 192 P P 04 29 12.5 -4.5
HOWZ Holdsworth Sta 17.68 192 P P 04 29 16.4 -2.9
TMWZ Te Maipa 17.82 190 P P 04 29 18.5 -2.0
SNZO South Karori 18.23 193 P P 04 29 23.1 -1.2
QRZ Quartz Range 18.32 199 P P 04 29 23.9 -1.2
QRZ Quartz Range 18.32 199 P P 04 29 25.0 -0.1
TKNZ Takaka Hill 18.39 197 P P 04 29 23.9 -1.9
NNZ Nelson 18.45 196 P P 04 29 24.7 -1.6
TUWZ Tuamarina 18.52 195 P P 04 29 24.8 -2.0
RAR Rarotonga 18.76 87 P P 04 29 29.0 -0.4
67nm,0.8s,baz=244,slow=11,SNR=9.8
RAR Rarotonga 18.76 87 P P 04 29 28.3 -1.1
RAR Rarotonga 18.76 87 P P 04 29 29.6 +0.2
THZ Tophouse 19.09 197 P P 04 29 29.9 -2.2
KHZ Kahutara 19.55 195 P P 04 29 34.3 -1.9
LTZ Lake Taylor 20.21 197 P P 04 29 40.6 -1.7
LTZ Lake Taylor 20.21 197 P P 04 29 40.1 -2.2
LHI Lord Howe Isla 20.23 242 P P 04 29 44.0 +1.4
baz=20,SNR=5.9
LHI Lord Howe Isla 20.23 242 P P 04 29 43.0 +0.4
LHI Lord Howe Isla 20.23 242 P P 04 29 44.3 +1.7
RPZ Rata Peaks 21.41 198 P P 04 29 52.1 -1.0
84nm,0.6s,baz=20,slow=0.8,SNR=41
RPZ S S 04 33 09.4 -5.4
24nm,0.5s,baz=357,slow=17,SNR=2.3
RPZ ScP ScP 04 36 21.9 +1.0
29nm,0.6s,baz=261,slow=2.0,SNR=7.0
84nm,0.6s
RPZ Rata Peaks 21.41 198 P P 04 29 52.3 -0.8
ODZ Otahua Downs 22.74 198 P P 04 30 03.5 -1.6
HNR Honiara 23.86 303 P P 04 30 13.8 -1.5
6μm,0.8s,baz=225,slow=1.9,SNR=4.0
HNR Honiara 23.86 303 P P 04 30 16.5 +1.1
TARA Tarawa 25.76 343 P P 04 30 31.3 -1.0
ARMA Armidale 26.21 249 P P 04 30 37.4 +1.2
baz=26,SNR=101
ARMA Armidale 26.21 249 P P 04 30 36.6 +0.4
ARMA Armidale 26.21 249 P P 04 30 37.2 +1.0
EIDS Eidsvold 26.45 260 P P 04 30 38.6 +0.4
baz=26,SNR=250
EIDS Eidsvold 26.45 260 P P 04 30 37.9 -0.3
EIDS Eidsvold 26.45 260 P P 04 30 38.6 +0.4
RK1H Rockhampton Ha 27.13 264 P P 04 30 45.2 +1.0
MGCD Mangrove Creek 27.16 243 P P 04 30 45.7 +1.4
baz=27,SNR=13
MGCD Mangrove Creek 27.16 243 P P 04 30 45.5 +1.1
SYDH Sydney Hard Ro 27.59 242 P P 04 30 49.3 +1.2
TBI Tubuai 27.90 96 eP P 04 30 52.8 +1.9
626nm,1.3s
RMQ Roma 28.50 258 P P 04 30 57.4 +1.3
baz=28,SNR=87
RMQ Roma 28.50 258 P P 04 30 57.5 +1.3
PAE Paea 28.95 84 eP P 04 30 59.5 -0.6
80nm,1.3s
PAE epP pP 04 32 23.8 -2.8
36nm,1.3s
PAE Paea 28.95 84 eT T 04 58 21.9
8.5nm,0.3s
PPT2 Papeete2 28.98 84 eP P 04 31 00.8 +0.3
323nm,1.2s
PPT2 eLR LR 04 39 11.6
comp=Z,797nm,13.8s
PPT2 Papeete2 28.98 84 eT T 04 58 21.0
7.2nm,0.3s
PPT Papeete 28.98 84 P P 04 31 00.9 +0.4
229nm,0.9s,baz=78,slow=1.9,SNR=20
PPT ScP ScP 04 36 45.1 +1.7
88nm,1.0s,baz=110,slow=2.2,SNR=5.3
229nm,0.9s
PPTF Pamatai, Papee 28.99 84 P P 04 31 00.7 +0.1
PPTF Pamatai, Papee 28.99 84 P P 04 31 01.3 +0.8
CNB Canberra Magne 29.08 239 P P 04 31 02.2 +1.0
baz=29,SNR=43
CNB Canberra Magne 29.08 239 P P 04 31 02.2 +1.0
TIAR Tiarei 29.20 84 eP P 04 31 02.5 +0.2
56nm,1.0s
TIAR epP pP 04 32 26.0 -2.9
26nm,1.3s
TVO Taravao 29.22 84 eP P 04 31 02.2 -0.3
99nm,0.8s
TVO epP pP 04 32 26.0 -3.1
67nm,1.3s
CAN Canberra 29.37 239 P P 04 31 03.2 -0.5
CAN Canberra 29.37 239 P P 04 31 03.2 -0.5
CAN pmax pmax
comp=Z,162nm,0.9s
CAN Canberra 29.37 239 P P 04 31 04.6 +0.9
MILA Mila 29.74 236 P P 04 31 07.8 +0.9
baz=30,SNR=10
MEH Mehetia 30.27 85 eP P 04 31 12.5 +0.9
comp=Z,134nm,1.3s
CMSA Cobar Meteorol 31.41 248 P P 04 31 21.4 +0.1
baz=31,SNR=24
CMSA Cobar Meteorol 31.41 248 P P 04 31 21.3 +0.1
VAH Vaihoa 31.50 81 eP P 04 31 21.9 -0.2
comp=Z,200nm,1.2s
CTA Charters Tower 31.56 270 P P 04 31 22.8 +0.1
comp=Z,403nm,0.4s,baz=94,slow=9.8,SNR=1846
CTA PcP PcP 04 33 59.9 +0.8
comp=Z,22nm,0.7s,baz=110,slow=5.8,SNR=3.2
CTA S S 04 35 53.3 -0.7
comp=Z,13nm,1.1s,baz=200,slow=22,SNR=15
CTA ScP ScP 04 36 55.6 +3.7
comp=Z,25nm,0.8s,baz=105,slow=4.6,SNR=9.7
comp=Z,403nm,0.4s
CTA Charters Tower 31.56 270 P P 04 31 23.0 +0.3
CTAO Charters Tower 31.56 270 P P 04 31 22.8 +0.1
CTAO Charters Tower 31.56 270 P P 04 31 22.8 +0.1
CTAO pmax pmax
comp=Z,459nm,0.5s
CTAO Charters Tower 31.56 270 P P 04 31 22.9 +0.3
CTAO Charters Tower 31.56 270 P P 04 31 22.1 -0.6
CTAO sP PcP 04 33 59.4 +0.4
QLP Quilpie 32.55 257 P P 04 31 30.8 -0.1
baz=32,SNR=49
QLP Quilpie 32.55 257 P P 04 31 31.2 +0.2
TOO Toolangi 32.69 237 P P 04 31 32.4 +0.4
baz=33,SNR=80
TOO Toolangi 32.69 237 P P 04 31 32.5 +0.5
TOO IAmb IAmb 04 31 34.1
comp=Z,94nm,0.8s
TOO Toolangi 32.69 237 P P 04 31 32.5 +0.4
TOO pmax pmax
comp=Z,94nm,0.8s
TOO Toolangi 32.69 237 P P 04 31 32.4 +0.4
MOO Moorlands 33.10 227 P P 04 31 36.5 +1.1
baz=33,SNR=5.8
MOO Moorlands 33.10 227 P P 04 31 36.1 +0.7
RABL Rabaul 33.15 301 P P 04 31 35.6 -0.6
KRVT Keravat (AS076 33.19 301 P P 04 31 36.1 -0.4
comp=Z,208nm,0.5s,baz=13,slow=2.3,SNR=9.2
comp=Z,208nm,0.5s
TAU Tasmania Unive 33.21 227 P P 04 31 36.1 -0.2
TAU IAmb IAmb 04 31 37.8
comp=Z,74nm,0.8s
TAU Tasmania Unive 33.21 227 P P 04 31 36.1 -0.2
TAU pmax pmax
comp=Z,74nm,0.8s
TAU Tasmania Unive 33.21 227 P P 04 31 36.9 +0.6
GEXS Deakin Univers 33.77 236 P P 04 31 42.3 +1.2
MTSU Mount Surprise 33.81 272 P P 04 31 41.8 0.0
baz=34,SNR=368

MTSU Mount Surprise 33.81 272 P P 04 31 42.0 +0.2
BRAT Ballarat 33.88 237 P P 04 31 43.3 +1.2
PMG Port Moresby 34.48 289 P P 04 31 47.2 -0.1
comp=Z,372nm,0.9s,baz=93,slow=5.3,SNR=128
PMG ScP ScP 04 37 05.4 +3.2
comp=Z,20nm,0.8s,baz=87,slow=3.6,SNR=12
comp=Z,372nm,0.9s
PMG Port Moresby 34.48 289 P P 04 31 47.0 -0.3
PMG Port Moresby 34.48 289 P P 04 31 47.0 -0.3
PMG pmax pmax
comp=Z,545nm,1.2s
PMG Port Moresby 34.48 289 P P 04 31 47.3 -0.1
PMG Port Moresby 34.48 289 P P 04 31 47.1 -0.3
PMG Port Moresby 34.48 289 P P 04 31 45.8 -1.6
PMG sP PcP 04 34 08.3 +0.8
STKA Stephens Creek 34.92 248 P P 04 31 51.4 +0.5
comp=Z,54nm,0.5s,baz=93,slow=9.4,SNR=48
comp=Z,54nm,0.5s
STKA Stephens Creek 34.92 248 P P 04 31 51.2 +0.4
baz=35,SNR=33
STKA Stephens Creek 34.92 248 P P 04 31 50.3 -0.6
STKA Stephens Creek 34.92 248 P P 04 31 50.3 -0.6
STKA pmax pmax
comp=Z,31nm,1.1s
STKA Stephens Creek 34.92 248 P P 04 31 51.1 +0.2
ARPS Mount Arapiles 35.35 239 P P 04 31 54.5 +0.2
baz=35,SNR=24
ARPS Mount Arapiles 35.35 239 P P 04 31 54.2 -0.2
INKA Innaminka 35.60 255 P P 04 31 57.5 +0.9
COEN Coen 36.15 279 P P 04 32 01.3 0.0
baz=36,SNR=82
COEN Coen 36.15 279 P P 04 32 01.4 +0.1
COEN Coen 36.15 279 P P 04 32 01.7 +0.4
PATS Pohnpei 36.98 322 P P 04 32 08.4 +0.3
baz=37,SNR=15
PATS Pohnpei 36.98 322 P P 04 32 08.0 -0.1
PATS Pohnpei 36.98 322 P P 04 32 08.3 +0.3
HTT Hallett 37.28 245 P P 04 32 10.3 -0.2
baz=37,SNR=56
HTT Hallett 37.28 245 P P 04 32 10.2 -0.2
QIS Mount Isa 37.56 267 P P 04 32 12.1 -0.7
baz=38,SNR=30
QIS Mount Isa 37.56 267 P P 04 32 12.3 -0.5
TWOA Tennyson Woods 37.71 243 P P 04 32 13.6 -0.2
LCRK Leigh Creek 37.77 250 P P 04 32 14.4 0.0
MANU Manus Island 38.25 299 P P 04 32 17.4 -1.1
MANU IAmb IAmb 04 32 19.4
comp=Z,54nm,0.6s
WHYH Whyalla 38.38 246 P P 04 32 19.3 0.0
BBOO Buckleboo 39.65 247 P P 04 32 28.7 -0.9
baz=40,SNR=140
BBOO Buckleboo 39.65 247 P P 04 32 28.6 -0.9
BBOO Buckleboo 39.65 247 P P 04 32 28.7 -0.9
OOD Oodnadatta 40.08 254 P P 04 32 33.4 +0.3
TAOE Nuku Hiva Isla 40.73 76 eP P 04 32 38.7 +0.2
comp=Z,607nm,1.1s
TAOE Nuku Hiva Isla 40.73 76 P P 04 32 39.2 +0.6
TAOE Nuku Hiva Isla 40.73 76 P P 04 32 38.2 -0.3
RKT Rikitea 41.12 99 eP P 04 32 41.7 +0.2
comp=Z,81nm,1.2s
MULG Mulgathing 41.36 250 P P 04 32 43.0 -0.3
AS31 Alice Springs 42.17 260 IAmb IAmb 04 32 51.7
comp=Z,65nm,0.7s
ASAR Alice Springs 42.17 260 P P 04 32 49.7 -0.1
comp=Z,202nm,0.9s,baz=98,slow=7.2,SNR=680
ASAR ScP ScP 04 37 34.9 +3.1
comp=Z,95nm,0.9s,baz=108,slow=4.0,SNR=38
ASAR S S 04 38 29.2 -2.2
comp=Z,10nm,0.6s,baz=96,slow=16,SNR=9.5
comp=Z,202nm,0.9s
ASAR Alice Springs 42.17 260 P P 04 32 49.1 -0.7
WB2 Warramunga Arr 42.50 266 P P 04 32 51.2 -1.3
baz=42
WRAB Tennant Creek 42.51 266 P P 04 32 51.2 -1.2
WRAB Tennant Creek 42.51 266 deP P 04 32 51.4 -1.1
WRAB pmax pmax
comp=Z,354nm,1.3s
WRAB Tennant Creek 42.51 266 P P 04 32 51.6 -0.9
WRAB Tennant Creek 42.51 266 P P 04 32 50.5 -2.0
WRAB pP pP 04 34 28.5 +1.5
WRAB sP sP 04 35 25.7 -0.6
WRA Warramunga Arr 42.52 266 P P 04 32 52.0 -0.6
comp=Z,152nm,0.5s,baz=90,slow=5.9,SNR=3237
WRA PcP PcP 04 34 34.7 +1.6
comp=Z,24nm,1.0s,baz=85,slow=5.8,SNR=7.3
WRA ScP ScP 04 37 36.9 +3.7
comp=Z,48nm,0.9s,baz=100,slow=4.2,SNR=26
WRA S S 04 38 32.5 -4.0
comp=Z,28nm,0.8s,baz=98,slow=13,SNR=14
comp=Z,152nm,0.5s
WRA Warramunga Arr 42.52 266 iP P 04 32 51.4 -1.2
WRA pmax pmax
comp=Z,83nm,0.4s
GENI Genyem 43.89 292 P P 04 33 03.8 +0.5
comp=Z,4μmcomp=Z,7μmcomp=Z,437nm,1.1s
WAKE Wake Island 44.59 342 P P 04 33 08.2 -0.3
WAKE Wake Island 44.59 342 P P 04 33 08.7 +0.2
H11N3 WAKE ISLAND Hy 44.93 342 P P 04 33 11.8 +0.9
baz=192,slow=11,SNR=9.8
H11N1 WAKE ISLAND Hy 44.93 342 P P 04 33 12.2 +1.3
baz=192,slow=11,SNR=6.2
H11N2 WAKE ISLAND Hy 44.95 342 P P 04 33 11.4 +0.4
baz=192,slow=11,SNR=6.2
KDU Kakadu 46.35 275 P P 04 33 20.8 -1.3
baz=46,SNR=110
KDU Kakadu 46.35 275 P P 04 33 21.0 -1.1
FORT Forrest 46.50 249 P P 04 33 22.0 -1.0
baz=46,SNR=250
FORT Forrest 46.50 249 P P 04 33 22.3 -0.8
FORT Forrest 46.50 249 P P 04 33 22.3 -0.8
WRKA Warakurna 46.99 257 P P 04 33 26.1 -0.8
baz=47,SNR=224
WRKA Warakurna 46.99 257 P P 04 33 26.3 -0.6
MTN Manton Dam 47.52 274 P P 04 33 29.7 -1.3
baz=47,SNR=44
MTN Manton Dam 47.52 274 P P 04 33 29.2 -1.8
MTN IAmb IAmb 04 33 30.9
comp=Z,219nm,1.4s
MTN Manton Dam 47.52 274 P P 04 33 29.9 -1.1
SRPI Serui, Papua 47.62 290 P P 04 33 32.4 +0.7
comp=Z,11μmcomp=Z,307nm,1.2s
KNRA Kununurra 48.78 269 P P 04 33 39.7 -0.6
baz=49,SNR=179
KNRA Kununurra 48.78 269 P P 04 33 39.9 -0.4
KNRA Kununurra 48.78 269 P P 04 33 40.0 -0.4
PUH Pauahi 49.03 31 P P 04 33 41.9 -0.3
SAUI Saumlaki 49.20 280 P P 04 33 43.2 -0.3
SAUI Saumlaki 49.20 280 P P 04 33 45.6 +2.1
comp=Z,9μmcomp=Z,423nm,0.8s
POHA Pohakuloa 49.21 31 P P 04 33 44.6 +0.9
HON Honolulu 49.48 27 P P 04 33 45.7 +0.4
HON Honolulu 49.48 27 P P 04 33 45.7 +0.4
HON pmax pmax
comp=Z,522nm,1.2s
KIP Kipapa 49.56 27 P P 04 33 47.4 +1.5
KIP Kipapa 49.56 27 P P 04 33 47.1 +1.2
OPA Opana 49.80 27 P P 04 33 47.9 +0.2
OPA Opana 49.80 27 P P 04 33 47.9 +0.2
OPA pmax pmax
comp=Z,169nm,0.8s
DRV Dumont d'Urvil 49.86 200 P P 04 33 46.6 -0.9
DRV pP pP 04 35 28.3 +1.6
GUMO Guam 50.52 313 P P 04 33 52.5 -0.6
comp=Z,197nm,0.6s,baz=154,slow=11,SNR=23
comp=Z,197nm,0.6s
GUMO Guam 50.52 313 P P 04 33 52.2 -0.9
GUMO Guam 50.52 313 P P 04 33 52.2 -0.9
GUMO pmax pmax
comp=Z,278nm,0.8s
GUMO Guam 50.52 313 P P 04 33 52.9 -0.2
FAKI Fak Fak 50.58 287 P P 04 33 52.8 -0.8
FAKI Fak Fak 50.58 287 P P 04 33 52.7 -0.9
comp=Z,3μmcomp=Z,3μmcomp=Z,160nm,1.1s
FAKI Fak Fak 50.58 287 P P 04 33 53.1 -0.5
FITZ Fitzroy Crossi 50.94 265 ScP ScP 04 38 11.2 +2.6
comp=Z,34nm,1.2s,baz=93,slow=7.4,SNR=8.3
FITZ S S 04 40 32.5 -1.0
comp=Z,4.6nm,0.8s,baz=51,slow=22,SNR=12
FITZ Fitzroy Crossi 50.94 265 P P 04 33 55.7 -0.5
baz=51,SNR=260
FITZ Fitzroy Crossi 50.94 265 P P 04 33 56.0 -0.2
FITZ Fitzroy Crossi 50.94 265 P P 04 33 56.2 0.0
MIDW Midway 51.57 3 P P 04 33 59.8 -0.6
MIDW IAmb IAmb 04 34 02.2
comp=Z,85nm,0.7s

SIJI Sorong 52.42 288 P P 04 34 06.7 -0.3
comp=Z,288nm,0.5s,baz=80,slow=12,SNR=16
comp=Z,288nm,0.5s
MSAI Masohi 53.32 284 P P 04 34 13.4 0.0
comp=Z,27nm,0.5s
AAI Ambon 53.82 283 P P 04 34 18.9 +2.0
comp=Z,6μmcomp=Z,168nm,0.9s
SBA Scott Base 54.69 183 P P 04 34 24.2 +2.3
SBA IAmb IAmb 04 34 26.4
comp=Z,107nm,0.9s
SBA Scott Base 54.69 183 P P 04 34 24.2 +2.3
SBA pmax pmax
comp=Z,107nm,1.0s
SBA Scott Base 54.69 183 P P 04 34 23.4 +1.4
SBA pP pwP 04 36 10.8 +2.8
VNDA Vanda 54.69 185 P P 04 34 23.5 +1.5
comp=Z,12nm,0.8s,baz=1.2,slow=7.9,SNR=52
VNDA PcP PcP 04 35 16.8 +0.2
comp=Z,12nm,0.6s,baz=3.9,slow=3.3,SNR=9.8
VNDA ScP ScP 04 38 25.8 +1.9
comp=Z,10nm,0.7s,baz=357,slow=3.5,SNR=9.9
comp=Z,12nm,0.8s
VNDA Vanda 54.69 185 P P 04 34 22.9 +0.9
SOEI Soe 54.91 275 P P 04 34 25.7 +1.0
comp=Z,3μmcomp=Z,8μmcomp=Z,527nm,1.3s
NLAI Namlea 55.00 283 P P 04 34 24.9 -0.3
comp=Z,2μmcomp=Z,170nm,1.2s
KLBR Kellerberrin 55.19 247 P P 04 34 25.8 -0.6
baz=55,SNR=24
KLBR Kellerberrin 55.19 247 P P 04 34 25.7 -0.6
MEEK Meekatharra 55.28 253 P P 04 34 25.8 -1.3
baz=55,SNR=37
MEEK Meekatharra 55.28 253 P P 04 34 25.9 -1.2
BATI Baumata 55.29 274 P P 04 34 28.7 +1.4
comp=Z,3μmcomp=Z,155nm,0.6s
PSA00 Pilbara Seismi 55.30 259 P P 04 34 26.7 -0.6
PSA00 Pilbara Seismi 55.30 259 P P 04 34 25.8 -1.4
NWAO Narrogin (SRO) 55.44 245 P P 04 34 27.5 -0.5
baz=55,SNR=13
NWAO P P 04 34 27.5 -0.5
baz=55,SNR=13
NWAO Narrogin (SRO) 55.44 245 P P 04 34 27.6 -0.4
NWAO IAmb IAmb 04 34 29.3
comp=Z,176nm,1.2s
NWAO Narrogin (SRO) 55.44 245 P P 04 34 27.6 -0.4
NWAO pmax pmax
comp=Z,176nm,1.3s
NWAO Narrogin (SRO) 55.44 245 P P 04 34 27.7 -0.4
NWAO Narrogin (SRO) 55.44 245 P P 04 34 27.6 -0.4
MBWA Marble Bar 55.51 260 P P 04 34 27.8 -0.9
MBWA IAmb IAmb 04 34 29.7
comp=Z,204nm,1.0s
MBWA Marble Bar 55.51 260 P P 04 34 28.0 -0.7
MBWA Marble Bar 55.51 260 P P 04 34 27.2 -1.5
MBWA pP pP 04 36 11.4 +0.8
LBMI Labuha 55.83 286 P P 04 34 31.9 +0.9
comp=Z,2μmcomp=Z,181nm,1.0s
BLDU Ballidu 56.22 248 P P 04 34 32.7 -0.8
baz=56,SNR=54
BLDU Ballidu 56.22 248 P P 04 34 32.7 -0.8
MUN Mundaring 56.43 246 P P 04 34 34.6 -0.3
baz=56,SNR=13
MUN Mundaring 56.43 246 P P 04 34 34.6 -0.3
SANI Sanana 56.52 284 P P 04 34 34.7 -1.0
comp=Z,3μmcomp=Z,196nm,1.1s
SANI Sanana 56.52 284 P P 04 34 35.4 -0.3
TNTI Ternate 56.62 288 P P 04 34 36.0 -0.5
TNTI IAmb IAmb 04 34 38.0
comp=Z,208nm,1.0s
TNTI Ternate 56.62 288 P P 04 34 36.1 -0.3
comp=Z,4μmcomp=Z,243nm,1.2s
MORW Morawa 57.06 250 P P 04 34 38.6 -0.6
baz=57,SNR=44
MORW Morawa 57.06 250 P P 04 34 38.8 -0.5
MORW IAmb IAmb 04 34 40.5
comp=Z,214nm,1.1s
MORW Morawa 57.06 250 P P 04 34 38.8 -0.5
MMRI Maumere 57.18 275 P P 04 34 41.0 +0.7
comp=Z,3μmcomp=Z,5μmcomp=Z,312nm,1.0s
MMRI Maumere 57.18 275 P P 04 34 40.2 -0.1
EDFI Ende, Flores 57.64 275 P P 04 34 42.7 -0.8
comp=Z,2μmcomp=Z,163nm,1.1s
CCD Concordia, Ant 59.04 195 P P 04 34 52.5 +0.1
KMSI Cibinong 59.50 286 P P 04 34 57.7 +1.7
comp=Z,120nm,0.6s
BSSI Bau Bau, Buton 59.75 277 P P 04 34 57.8 +0.2
comp=Z,1μmcomp=Z,77nm,1.3s
LUWI Luwuk 59.84 283 P P 04 34 58.3 +0.1
comp=Z,321nm,1.3s
GIRL Giralia 60.07 257 P P 04 35 00.4 +0.8
baz=60,SNR=17
GIRL Giralia 60.07 257 P P 04 35 00.2 +0.6
GIRL Giralia 60.07 257 P P 04 35 00.3 +0.7
BKSI Bulukumba 60.41 278 P P 04 35 01.0 -1.0
comp=Z,2μmcomp=Z,201nm,1.1s
CASY Casey 60.42 206 P P 04 35 00.9 -0.3
CASY IAmb IAmb 04 35 02.4
comp=Z,77nm,0.8s
BNSI Bone 60.80 278 P P 04 35 03.6 -1.0
comp=Z,2μmcomp=Z,118nm,1.6s
KAPI Kappang 60.87 278 P P 04 35 04.7 -0.3
KAPI Kappang 60.87 278 P P 04 35 04.7 -0.3
KAPI pmax pmax
comp=Z,434nm,2.0s
KAPI Kappang 60.87 278 P P 04 35 04.7 -0.3
KAPI Kappang 60.87 278 P P 04 35 03.6 -1.4
APSI Ampana 60.90 283 P P 04 35 05.4 +0.2
comp=Z,2μmcomp=Z,180nm,0.9s
PLAI Plampang 61.19 273 P P 04 35 06.4 -0.8
comp=Z,5μmcomp=Z,501nm,1.1s
PLAI Plampang 61.19 273 P P 04 35 06.6 -0.6
MRSI Marisa 61.27 284 P P 04 35 06.6 -1.0
comp=Z,2μmcomp=Z,91nm,1.2s
SPSI Sidrap Palu 61.29 279 P P 04 35 06.4 -1.4
comp=Z,5μmcomp=Z,79nm,0.9s
DAV Davao City (W) 61.33 293 P P 04 35 07.8 -0.2
comp=Z,167nm,0.4s,baz=48,slow=13
comp=Z,167nm,0.4s
TTSI Tana Toraja 61.63 280 P P 04 35 10.2 +0.2
comp=Z,1μmcomp=Z,69nm,1.1s
TWSI Taliwang, Sumb 62.05 273 P P 04 35 12.1 -0.6
comp=Z,3μmcomp=Z,176nm,1.3s
JCJ Chichijima 62.30 322 P P 04 35 13.8 -0.2
JCJ Chichijima 62.30 322 P P 04 35 14.1 +0.1
TOLI2 Tolitoli 62.59 284 P P 04 35 14.6 -1.6
TOLI2 Tolitoli 62.59 284 P P 04 35 15.2 -1.0
MPSI Mapaga 63.02 283 P P 04 35 17.9 -1.1
comp=Z,3μmcomp=Z,254nm,1.0s
RPN Rapa Nui 63.10 110 P P 04 35 20.5 +1.1
comp=Z,89nm,0.7s,baz=288,slow=3.9,SNR=7.0
comp=Z,89nm,0.7s
RPN Rapa Nui 63.10 110 P P 04 35 20.6 +1.3
RPN Rapa Nui 63.10 110 P P 04 35 20.6 +1.3
RPN pmax pmax
comp=Z,296nm,1.3s
IGBI Denpasar 63.61 272 P P 04 35 23.6 +0.8
comp=Z,6μmcomp=Z,386nm,1.3s
SRBI Singaraja 63.82 272 P P 04 35 24.6 +0.5
comp=Z,3μmcomp=Z,248nm,1.0s
JAGI Jajag, Banyuwa 64.65 272 P P 04 35 28.0 -1.4
JAGI Jajag, Banyuwa 64.65 272 P P 04 35 28.7 -0.7
comp=Z,2μmcomp=Z,189nm,1.0s
JAGI Jajag, Banyuwa 64.65 272 P P 04 35 28.7 -0.7
ABJI Asem Bagus 64.83 272 P P 04 35 31.3 +0.8
comp=Z,2μmcomp=Z,172nm,1.2s
SMKI Samarinda 65.09 281 P P 04 35 34.9 +2.7
comp=Z,11μmcomp=Z,270nm,0.8s
KMMI Kalianget 65.36 273 P P 04 35 34.0 +0.2
comp=Z,4μmcomp=Z,355nm,1.2s
QSPA South Pole Qui 66.49 180 P P 04 35 41.6 +1.4
comp=Z,172nm,0.8s,baz=9.2,slow=0.8,SNR=258
QSPA S S 04 43 51.1 +2.5
comp=Z,6.7nm,1.1s,baz=174,slow=22,SNR=22
comp=Z,172nm,0.8s
QSPA South Pole Qui 66.49 180 P P 04 35 40.9 +0.7
QSPA South Pole Qui 66.49 180 P P 04 35 39.9 -0.3
QSPA pP pwP 04 37 32.5 +1.1
MTKI Muara Teweh, K 66.97 280 P P 04 35 44.3 +0.4
PWJI Pagerwojo 66.97 271 P P 04 35 43.4 -0.5
comp=Z,148nm,1.1s
TBJI Tambak Boyo 67.39 272 P P 04 35 48.2 +1.8
comp=Z,3μmcomp=Z,193nm,1.3s
PCJI Pacitan 67.48 271 P P 04 35 47.0 0.0
comp=Z,7μmcomp=Z,656nm,0.7s
NGJI Ngawi 67.53 272 P P 04 35 49.7 +2.4
comp=Z,167nm,0.9s

UGM	Wanagama	68.19	271	P	P	04 35 50.5 -0.9
UGM	Wanagama	68.19	271	P	P	04 35 52.0 +0.6
	comp=Z,288nm,0.8s					
UGM	Wanagama	68.19	271	P	P	04 35 51.2 -0.2
JHJ2	Mitsune	68.22	324	P	P	04 35 52.1 +1.0
YOGI	Yogyakarta	68.43	271	P	P	04 35 54.3 +1.5
	comp=Z,206nm,0.9s					
SMRI	Semarang	68.59	272	P	P	04 35 53.7 -0.1
SMRI	Semarang	68.59	272	P	P	04 35 55.4 +1.6
	comp=Z,166nm,1.3s					
KKM	Kota Kinabalu	68.90	287	P	P	04 35 55.7 -0.1
KKM	Kota Kinabalu	68.90	287	P	P	04 35 55.8 +0.1
PBKI	Pangkalan Bun	69.17	276	P	P	04 35 59.0 +1.7
	comp=Z,572nm,1.1s					
JYT	Yasato	70.44	327	IAmb	IAmb	04 36 06.9
	comp=Z,103nm,1.0s					
STKI	Sintang	70.49	279	P	P	04 36 05.8 +0.7
	comp=Z,130nm,0.8s					
JCJI	Jatiwangi	70.79	271	P	P	04 36 07.8 +0.9
	comp=Z,405nm,0.8s					
SBUM	Sibu	70.83	282	P	P	04 36 07.1 -0.1
SBUM				IAmb	IAmb	04 36 09.4
	comp=Z,109nm,1.4s					
JOW	Kunigami	70.85	312	P	P	04 36 07.5 +0.5
LEM	Lembang	71.26	271	P	P	04 36 10.3 +0.4
	comp=Z,265nm,0.9s,baz=89,slow=4.3,SNR=35					
	comp=Z,265nm,0.9s					
JMM	Marumori	71.42	328	IAmb	IAmb	04 36 12.8
	comp=Z,67nm,1.2s					
INU	Inuyama	71.43	324	IAmb	IAmb	04 36 12.8
	comp=Z,62nm,1.0s					
JGF	Kuroka	71.43	324	IAmb	IAmb	04 36 12.5
	comp=Z,191nm,1.9s					
CNJI	Cibinong	71.53	270	P	P	04 36 09.9 -1.3
	comp=Z,2μmcomp=Z,209nm,0.8s					
MJAR	Matsushiro Arr	71.70	326	P	P	04 36 11.8 +0.1
	comp=Z,56nm,1.0s,baz=160,slow=5.9,SNR=53					
	comp=Z,56nm,1.0s					
MAJO	Matsushiro	71.70	326	P	P	04 36 12.0 +0.2
MAJO				IAmb	IAmb	04 36 14.0
	comp=Z,65nm,0.9s					
MAJO	Matsushiro	71.70	326	*d iP*	P	04 36 11.9 +0.2
MAJO				pmax	pmax	
	comp=Z,76nm,1.0s					
MAJO	Matsushiro	71.70	326	P	P	04 36 11.5 -0.2
MJB9	Matsu-Tunnel	71.70	326	IAmb	IAmb	04 36 14.0
	comp=Z,66nm,0.9s					
JMN	Monobe	72.00	321	IAmb	IAmb	04 36 16.8
	comp=Z,114nm,1.2s					
TNG	Tangerang	72.40	271	P	P	04 36 21.7 +5.4
TNG				P	P	04 36 17.2 +0.9
	comp=Z,23μmcomp=Z,1μm,0.5s					
JSD	Sado	72.81	327	IAmb	IAmb	04 36 21.8
	comp=Z,76nm,1.2s					
YOJ	Yonaguni jima	73.12	307	P	P	04 36 20.1 -0.1
YOJ	Yonaguni jima	73.12	307	P	P	04 36 20.1 -0.1
YOJ				pmax	pmax	
	comp=Z,503nm,1.4s					
YOJ	Yonaguni jima	73.12	307	P	P	04 36 20.8 +0.6
TWG	Pinlang	73.61	304	IAmb	IAmb	04 36 23.0
	comp=Z,49nm,0.8s					
ERM	Erimo	73.68	332	P	P	04 36 22.7 -0.2
ERM	Erimo	73.68	332	P	P	04 36 22.7 -0.2
ERM				pmax	pmax	
	comp=Z,55nm,1.0s					
TPUB	Ta-pu	74.22	305	P	P	04 36 25.2 -1.3
TPUB	Ta-pu	74.22	305	P	P	04 36 25.4 -1.1
SSLB	Suanglung	74.25	305	IAmb	IAmb	04 36 27.4
	comp=Z,153nm,1.1s					
SSLB	Suanglung	74.25	305	P	P	04 36 26.2 -0.5
PPBI	Pangkal Pinang	74.44	274	P	P	04 36 28.8 +0.8
	comp=Z,9μmcomp=Z,107nm,1.2s					
YHNB	Yeheng	74.45	306	IAmb	IAmb	04 36 29.6
	comp=Z,86nm,0.8s					
YHNB	Yeheng	74.45	306	P	P	04 36 28.1 +0.3
KUR	Kuril'sk	74.53	337	*d iP*	P	04 36 28.3 +0.6
KUR				S	S	04 45 23.7 +3.9
KUR				MLR	MLR	
	comp=Z,200nm,17.0s					
TATO	Taipei	74.54	307	P	P	04 36 28.1 -0.1
KLI	Kotabumi	74.55	271	P	P	04 36 28.9 +0.3
	comp=Z,114nm,0.4s					
KASI	Kota Agung	74.62	271	P	P	04 36 28.6 -0.4
	comp=Z,2μmcomp=Z,246nm,1.0s					
ADK	Adak	75.20	2	P	P	04 36 31.5 +0.2
ADK	Adak	75.20	2	P	P	04 36 31.5 +0.2
ADK				pmax	pmax	
	comp=Z,150nm,0.7s					
ADK	Adak	75.20	2	P	P	04 36 31.7 +0.4
LWLI	Liwa	75.22	271	P	P	04 36 32.8 +0.3
	comp=Z,131nm,1.1s					
DSRI	Dabo	76.54	275	P	P	04 36 40.1 +0.4
	comp=Z,2μmcomp=Z,48nm,1.2s					
QZH	Quanzhou	76.68	305	⇓*iP*	P	04 36 41.0 +0.9
QZH				S	S	04 45 44.3 +0.5
QZH				pmax	pmax	
	comp=Z,58nm,1.2s					
QZH				pmax	pmax	
	comp=Z,500nm,4.8s					
BELA	Belgrano 2	76.73	173	P	P	04 36 39.0 -0.5
BELA				IAmb	IAmb	04 36 41.4
	comp=Z,65nm,0.7s					
NIKH	Nikolski High	76.85	7	P	P	04 36 40.6 +0.3
	baz=190,SNR=5.4					
JMBI	JAMBI	76.94	274	P	P	04 36 44.9 +3.1
	comp=Z,3μmcomp=Z,182nm,1.4s					
KSI	Kapahiang	77.10	272	P	P	04 36 42.7 -0.1
	comp=Z,284nm,0.9s					
TPRI	Tanjung Pinang	77.16	277	P	P	04 36 44.6 +1.6
MASI	Maura Aman, Be	77.62	272	P	P	04 36 45.8 +0.2
	comp=Z,3μmcomp=Z,260nm,1.1s					
TJN	Taejon	77.69	319	⇓*eP*	P	04 36 47.0 +1.7
YSS	Yuzh-Sakhalins	77.90	335	P	P	04 36 46.4 +0.2
YSS				IAmb	IAmb	04 36 50.1
	comp=Z,162nm,1.1s					
YSS	Yuzh-Sakhalins	77.90	335	*κeP*	P	04 36 48.0 +1.8
YSS				*e*		04 36 53.1
YSS				*eS*	S	04 45 56.7 +1.0
YSS				pmax	pmax	
	comp=Z,130nm,1.1s					
YSS				smax	smax	
	comp=N,2μm,5.9s					
YSS				smax	smax	
	comp=E,500nm,7.7s					
YSS				MLR	MLR	
	comp=Z,200nm,15.0s					
UNV	Unalaska Valle	77.98	8	P	P	04 36 46.9 +0.5
	baz=193					
MAW	Mawson	78.07	200	P	P	04 36 48.1 +1.2
	comp=Z,110nm,1.0s,baz=132,slow=7.0,SNR=106					
	comp=Z,110nm,1.0s					
MAW	Mawson	78.07	200	P	P	04 36 47.9 +1.0
	baz=78,SNR=92					
MAW	Mawson	78.07	200	P	P	04 36 47.6 +0.7
MAW	Mawson	78.07	200	P	P	04 36 47.6 +0.7
MAW				pmax	pmax	
	comp=Z,22nm,0.9s					
KSRS	Korea Array	78.07	320	P	P	04 36 48.0 +0.6
	comp=Z,23nm,0.8s,baz=137,slow=5.8,SNR=69					
	comp=Z,23nm,0.8s					
KSRS	Korea Array	78.07	320	P	P	04 36 48.0 +0.6
MYKOM	Kota Tinggi	78.13	277	P	P	04 36 48.4 +0.1
MYKOM				IAmb	IAmb	04 36 50.3
	comp=Z,92nm,0.9s					
KS19	Wonju Array Si	78.14	320	P	P	04 36 48.0 +0.3
PET	Petropavlovsk	78.54	347	*eP*	P	04 36 50.3 +0.8
PET				*e*PP*	pwP	04 38 46.6 -0.2
PET				*eS*	S	04 46 04.0 +1.8
PET				*eSP*	SPn	04 46 49.5 +1.0
PET				pmax	pmax	
	comp=Z,56nm,0.7s					
PET				pmax	pmax	
	comp=Z,300nm,12.7s					
PET				MLR	MLR	
	comp=Z,300nm,13.0s					
PET				MLR	MLR	
	comp=Z,200nm,13.0s					
PEA0B	Petropavlovsk-	78.82	346	P	P	04 36 51.7 +0.7
PEA0B				IAmb	IAmb	04 36 53.4
	comp=Z,75nm,0.8s					
PEA0B	Petropavlovsk-	78.82	346	*deP*	P	04 36 51.7 +0.7
PETK	Petropavlovsk-	78.82	346	P	P	04 36 51.9 +0.9
	comp=Z,66nm,0.8s,baz=150,slow=6.3,SNR=52					
	comp=Z,66nm,0.8s					
INCN	Inchon	78.86	319	P	P	04 36 52.2 +0.6
INCN				IAmb	IAmb	04 36 54.7
	comp=Z,84nm,1.1s					
INCN	Inchon	78.86	319	P	P	04 36 52.2 +0.6
INCN				pmax	pmax	
	comp=Z,84nm,1.1s					
TEY	Ternei	78.98	330	*ceP*	P	04 36 52.7 +0.7
TEY				pmax	pmax	
	comp=Z,100nm,4.2s					
SDSI	Sungai Dareh	79.24	274	P	P	04 36 53.3 -0.9
	comp=Z,26nm,1.3s					
FALS	False Pass	79.40	10	P	P	04 36 54.3 +0.3
	baz=195					
HJU	Haeju	79.76	319	P	P	04 36 57.5 +1.2
HJU				sP	sP	04 39 45.8 +2.6
HJU				S	S	04 46 15.4 -0.1
UGL	Uglegorsk	79.91	336	*eP*	P	04 36 58.8 +2.0
UGL				*eS*	S	04 46 14.8 -1.6
UGL				pmax	pmax	
	comp=Z,240nm,0.9s					
UGL				smax	smax	
	comp=E,1μm,7.0s					
UGL				smax	smax	
	comp=N,2μm,6.0s					
HHU	Hamhung	79.96	322	P	P	04 36 57.9 +0.6
HHU				sP	sP	04 39 39.6 -4.7
HHU				S	S	04 46 15.7 -1.7
CHNA	Chernabura Isl	80.03	12	P	P	04 36 57.3 0.0
	baz=199					
BKNI	Bangkinang	80.10	275	P	P	04 36 58.4 -0.3
BKNI				IAmb	IAmb	04 37 00.1
	comp=Z,116nm,0.9s					
SDPT	Sand Point	80.36	11	P	P	04 36 59.7 +0.7
	baz=198					
NJ2	Nanjing	80.53	311	⇓*iP*	P	04 37 01.9 +1.4
NJ2				pP	pP	04 38 54.3 +0.8
NJ2				PP	PP	04 40 09.8 -4.1
NJ2				S	S	04 46 26.3 +2.8
NJ2				pmax	pmax	
	comp=Z,67nm,1.0s					
NJ2				pmax	pmax	
	comp=Z,170nm,3.5s					
QIZ	Qiongzhong	80.55	295	P	P	04 37 01.4 +0.5
QIZ				pP	pP	04 38 55.2 +1.3
QIZ				sP	sP	04 39 49.2 +1.2
QIZ				PP	PP	04 40 13.9 -0.4
QIZ				S	S	04 46 24.1 -0.2
QIZ				sS	sS	04 49 51.9 +3.8
QIZ				pmax	pmax	
	comp=Z,450nm,4.5s					
USA0B	Ussuriysk Arra	80.56	327	P	P	04 37 01.4 +1.1
USA0B				IAmb	IAmb	04 37 03.9
	comp=Z,89nm,1.1s					
USA0B	Ussuriysk Arra	80.56	327	P	P	04 37 01.5 +1.1
USA0B				pmax	pmax	
	comp=Z,89nm,1.2s					
USRK	Ussuriysk Ar.	80.56	327	P	P	04 37 02.0 +1.7
	comp=Z,51nm,0.9s,baz=134,slow=3.8,SNR=39					
	comp=Z,51nm,0.9s					
SNCC	San Nicolas Is	80.63	48	P	P	04 37 01.5 +0.4
	baz=234					
SPIA	Saint Paul Isl	80.86	5	P	P	04 37 02.9 +1.3
	baz=189					
SCZ2	Santa Cruz Isl	81.00	47	P	P	04 37 03.7 +0.8
	baz=234					
SCI2	San Clemente I	81.14	48	P	P	04 37 04.3 +0.7
	baz=234					
TYV	Tymovskoe	81.16	337	*eP*	P	04 37 04.8 +1.5
TYV				*eS*	S	04 46 26.9 -2.2
TYV				pmax	pmax	
	comp=Z,400nm,2.9s					
TYV				pmax	pmax	
	comp=Z,54nm,1.2s					
TYV				smax	smax	
	comp=N,1μm,7.1s					
TYV				smax	smax	
	comp=E,1μm,7.1s					
SBC	Santa Barbara	81.21	47	P	P	04 37 04.9 +1.0
	baz=234					
SISI	Saibi	81.23	272	P	P	04 37 06.6 +2.0
	comp=E,34nm,1.1s					
PKM	Mcpherson Peak	81.41	46	P	P	04 37 06.5 +1.2
	baz=234,SNR=8.7					
S14K	Fog Glacier	81.42	11	P	P	04 37 05.0 +0.4
	baz=199					
CIS	Catalina Islan	81.48	48	P	P	04 37 06.4 +0.9
	baz=235					
SAO	San Andreas Ge	81.48	44	IAmb	IAmb	04 37 08.3
	comp=Z,70nm,0.9s					
SMMC	Simmler	81.54	46	P	P	04 37 06.7 +0.9
	baz=233,SNR=6.8					
BBGB	Big Mountain B	81.62	44	IAmb	IAmb	04 37 10.5
	comp=Z,87nm,1.0s					
CHGN	Chignik	81.64	12	IAmb	IAmb	04 37 07.3
	comp=Z,132nm,1.0s					
CHGN	Chignik	81.64	12	P	P	04 37 06.1 +0.5
	baz=200					
BCW	Bitter Crk WRg	81.70	46	IAmb	IAmb	04 37 09.4
	comp=Z,102nm,0.8s					
FMP	Fort Macarthur	81.74	48	P	P	04 37 06.5 -0.2
	baz=235					
CHIR	Chirikof Islan	81.76	14	P	P	04 37 06.9 +0.7
	baz=202					
IPM	Ipoh	81.81	279	IAmb	IAmb	04 37 09.4
	comp=Z,92nm,0.7s					
IPM	Ipoh	81.81	279	P	P	04 37 07.9 +0.3
SUJ	Sinuiju	81.83	320	P	P	04 37 07.8 +0.8
SUJ				sP	sP	04 39 55.7 +1.3
SUJ				S	S	04 46 35.2 -1.1
HOPS	Hopland Field	81.85	41	IAmb	IAmb	04 37 09.9
	comp=Z,68nm,0.9s					
GDXM	Geysers	81.91	42	IAmb	IAmb	04 37 11.7
	comp=Z,98nm,1.6s					
MG05	Puerto Natales	81.92	143	P	P	04 37 07.8 +0.4
MG05				IAmb	IAmb	04 37 10.0
	comp=Z,43nm,0.7s					
OSI	Osito Audit: C	81.97	47	P	P	04 37 08.7 +0.7
	baz=234					
KCPM	Cahto Peak	81.99	40	IAmb	IAmb	04 37 10.9
	comp=Z,62nm,0.9s					
GO10	Punta Arenas	82.00	145	IAmb	IAmb	04 37 11.3
	comp=Z,68nm,1.0s					
DECC	Green Verdugo	82.02	47	P	P	04 37 08.7 +0.5
	baz=234					
MDJ	Mudanjiang	82.06	326	P	P	04 37 09.1 +1.0
MDJ				IAmb	IAmb	04 37 11.5
	comp=Z,64nm,0.9s					
MDJ	Mudanjiang	82.06	326	P	P	04 37 09.8 +1.7
MDJ				S	S	04 46 37.4 -1.1
MDJ				sS	sS	04 50 03.2 +1.6
MDJ				pmax	pmax	
	comp=Z,46nm,1.0s					
MDJ				pmax	pmax	
	comp=Z,670nm,9.0s					
PASC	Pasadena Art C	82.08	47	IAmb	IAmb	04 37 10.8
	comp=Z,55nm,0.8s					
109C	Camp Elliot, M	82.08	49	P	P	04 37 09.4 +0.9
	baz=235,SNR=8.5					
ARVC	Arvin	82.20	46	P	P	04 37 09.9 +0.9
	baz=234,SNR=18					
GO09	Cerro Castillo	82.20	143	IAmb	IAmb	04 37 11.8
	comp=Z,151nm,1.9s					
TKX	Tecate	82.25	50	P	P	04 37 10.5 +1.1
KMRM	Mail Ridge	82.25	40	IAmb	IAmb	04 37 13.6
	comp=Z,155nm,1.1s					
ESJX	Sierra Juarez	82.40	50	IAmb	IAmb	04 37 14.6
	comp=Z,72nm,1.2s					
MURC	Murrieta	82.42	48	P	P	04 37 11.3 +1.0
	baz=235,SNR=15					
JCC	Jacoby Creek,	82.45	39	IAmb	IAmb	04 37 14.3
	comp=Z,108nm,1.4s					
VES	Vestal, Richgr	82.45	46	P	P	04 37 11.1 +0.9
	baz=234,SNR=38					
BFSC	Mount Baldy Ra	82.47	48	P	P	04 37 11.6 +1.0
	baz=235,SNR=18					
KULM	Kulim	82.48	279	P	P	04 37 10.5 -0.5
KULM				IAmb	IAmb	04 37 13.1
	comp=Z,73nm,0.9s					
LPIG	La Paz	82.49	60	P	P	04 37 12.3 +1.6
	comp=Z,75nm,0.8s,baz=343,slow=2.4,SNR=12					
	comp=Z,75nm,0.8s					
VOG	Valley Oaks Go	82.54	45	P	P	04 37 11.3 +0.6
	baz=234					
MONP2	Monument Peak	82.56	49	P	P	04 37 12.6 +1.4
	baz=236,SNR=40					
SLBS	Sierra La Lagu	82.58	60	P	P	04 37 12.2 +0.9
SLBS				IAmb	IAmb	04 37 14.1
	comp=Z,76nm,0.7s					
EDW2	Edwards Air Fo	82.61	47	P	P	04 37 12.7 +1.4
	baz=235,SNR=31					
RMX	La Rumorosa	82.64	50	IAmb	IAmb	04 37 14.3
	comp=Z,54nm,0.9s					
IKP	In-Ko-Pah, Jac	82.64	50	P	P	04 37 13.0 +1.5
	baz=236,SNR=19					
KHMM	Horse Mountain	82.66	39	IAmb	IAmb	04 37 14.9
	comp=Z,98nm,1.2s					
KRPM	Rodgers	82.67	39	IAmb	IAmb	04 37 14.7
	comp=Z,82nm,0.9s					
CNSH	ChangSha	82.69	305	⇑P	P	04 37 13.7 +2.1
CNSH				S	SKSac	04 46 41.2 -1.1
CNSH				pmax	pmax	
	comp=Z,45nm,1.5s					
ISA	Isabella, Lake	82.75	46	IAmb	IAmb	04 37 14.4
	comp=Z,85nm,0.8s					
ISA	Isabella, Lake	82.75	46	P	P	04 37 13.4 +1.6
	baz=234,SNR=70					
SII	Sitkinak Islan	82.75	14	P	P	04 37 11.8 +0.4
SII				IAmb	IAmb	04 37 12.9
	comp=Z,74nm,0.7s					
YUH	Yuha Desert	82.77	50	IAmb	IAmb	04 37 15.8
	comp=Z,73nm,1.2s					
DL2	Dalian	82.80	318	P	P	04 37 11.7 -0.2
DL2				pP	pP	04 39 06.4 +0.6
DL2				S	SKSac	04 46 40.2 -2.3
DL2				pmax	pmax	
	comp=Z,33nm,0.8s					
DL2				pmax	pmax	
	comp=Z,370nm,6.9s					
MG01	Puerto William	82.86	147	P	P	04 37 13.0 +1.0
MG01				IAmb	IAmb	04 37 14.7
	comp=Z,212nm,1.9s					
WHN	Wuhan	82.89	308	⇑P	P	04 37 14.1 +1.5
WHN				pP	pP	04 39 06.3 -0.2
WHN				SKS	SKSac	04 46 41.5 -1.9
WHN				S	S	04 46 46.3 -0.9
WHN				pmax	pmax	
	comp=Z,190nm,1.0s					
WHN				pmax	pmax	
	comp=Z,1μm,2.6s					
CMB	Columbia Colle	82.92	43	IAmb	IAmb	04 37 14.8
	comp=Z,70nm,0.8s					
PFO	Pinyon Flats O	82.94	49	P	P	04 37 14.3 +1.3
	comp=Z,16nm,0.7s,baz=251,slow=3.1,SNR=29					
	comp=Z,16nm,0.7s					
PFO	Pinyon Flats O	82.94	49	P	P	04 37 13.7 +0.8
PFO	Pinyon Flats O	82.94	49	P	P	04 37 13.7 +0.8
PFO				pmax	pmax	
	comp=Z,45nm,1.1s					
PFO	Pinyon Flats O	82.94	49	P	P	04 37 14.2 +1.3
	baz=236,SNR=20					
TPFO	Pinon Flats	82.94	49	P	P	04 37 14.0 +1.0
	baz=236,SNR=18					
KRMB	Red Mountain	82.97	39	IAmb	IAmb	04 37 16.1
	comp=Z,52nm,0.9s					
BBRC	Big Bear Solar	82.99	48	P	P	04 37 14.7 +1.4
	baz=235					
R16K	Pilot Point	82.99	12	P	P	04 37 13.8 +1.4
	baz=201					
SWSC	Sam W. Stewart	83.02	50	P	P	04 37 14.9 +1.7
	baz=236,SNR=32					
CPBX	Cerro Prieto	83.08	50	IAmb	IAmb	04 37 19.0
	comp=Z,85nm,1.0s					
AFDM	Forest Hills D	83.11	42	IAmb	IAmb	04 37 16.2
	comp=Z,64nm,0.9s					
ORV	Oroville	83.16	42	IAmb	IAmb	04 37 16.0
	comp=Z,55nm,0.9s					
LRMC	Laurel Mtn Rad	83.17	47	P	P	04 37 15.4 +1.4
	baz=235,SNR=22					
KSXB	Camp Six Broad	83.19	39	IAmb	IAmb	04 37 17.0
	comp=Z,53nm,0.9s					
RRX	Edison Barstow	83.28	47	P	P	04 37 15.7 +1.2
	baz=235					
R17K	Ugashik Creek	83.29	12	P	P	04 37 14.5 +0.6
	baz=202					
CWC	Cottonwood Cre	83.46	46	P	P	04 37 16.6 +1.0
	baz=234					
GRNR	Gornyy	83.46	334	⇓*iP*	P	04 37 15.9 +0.9
GRNR				*e*		04 39 08.0
GRNR				*eS*	S	04 46 49.0 -3.1
GRNR				pmax	pmax	
	comp=Z,20nm,1.1s					
GRNR				smax	smax	
	comp=N,3.0nm,0.6s					
SNY	Shenyang	83.47	321	⇓P	P	04 37 16.4 +1.2
SNY				sP	sP	04 40 01.6 -1.4
SNY				PP	PP	04 40 35.6 -1.9
SNY				S	S	04 46 43.9 -8.5
SNY				pmax	pmax	
	comp=N,78nm,0.8s					
SNY				pmax	pmax	
	comp=N,570nm,6.1s					
BELC	Belle Mtn. Jos	83.47	49	P	P	04 37 17.0 +1.3
	baz=236,SNR=43					
MDPB	Devils Postpil	83.51	44	IAmb	IAmb	04 37 19.3
	comp=Z,81nm,1.1s					
OHAK	Old Harbor	83.56	14	P	P	04 37 15.7 +0.5
	baz=204					
KEBM	Edson Butte	83.60	38	IAmb	IAmb	04 37 20.8
	comp=Z,122nm,1.2s					
MPMC	Manual Prospec	83.63	46	P	P	04 37 17.5 +1.0
	baz=235,SNR=54					
GSC	Goldstone, Bar	83.65	47	IAmb	IAmb	04 37 18.7
	comp=Z,53nm,0.8s					
GSC	Goldstone, Bar	83.65	47	P	P	04 37 17.6 +1.2
	baz=235,SNR=40					
BC3	Big Chuckawall	83.66	49	P	P	04 37 18.1 +1.6
	baz=236,SNR=34					
GSI	Gunungsitoli	83.66	274	P	P	04 37 17.1 +0.2
GSI	Gunungsitoli	83.66	274	P	P	04 37 18.5 +1.6
	comp=Z,3μmcomp=Z,184nm,1.1s					
GSI	Gunungsitoli	83.66	274	P	P	04 37 18.0 +1.1
EMB	Emerald Bay	83.66	43	IAmb	IAmb	04 37 19.3
	comp=Z,108nm,1.5s					
MLAC	Mammoth, Mammo	83.66	44	P	P	04 37 17.7 +1.1
	baz=234,SNR=6.6					
CN2	Changchun	83.69	324	⇑P	P	04 37 17.1 +0.8
CN2				*e*sP	sP	04 40 07.0 +2.8
CN2				S	S	04 46 54.9 +0.2
CN2				pmax	pmax	
	comp=Z,30nm,0.9s					
CN2				pmax	pmax	
	comp=Z,600nm,4.0s					
HEC	Hector,Ludlow	83.70	48	P	P	04 37 17.8 +1.1
	baz=236,SNR=74					
TIN	Tinemaha, Big	83.72	45	P	P	04 37 18.0 +1.2
	baz=234,SNR=25					
GLA	Glamis	83.76	50	P	P	04 37 19.2 +2.2
	baz=237,SNR=26					
YBH	Yreka Blue Hor	83.80	39	P	P	04 37 18.9 +2.0
	comp=Z,34nm,0.8s,baz=194,slow=1.5,SNR=86					
	comp=Z,34nm,0.8s					
WAKR	Walker	83.80	43	IAmb	IAmb	04 37 19.9
	comp=Z,62nm,0.9s					
MPK	Martis Peak	83.90	42	IAmb	IAmb	04 37 20.3
	comp=Z,115nm,1.0s					
PIX	Pinacate	83.93	52	P	P	04 37 18.9 +1.2
BNX	BinXian	83.96	326	⇓P	P	04 37 17.9 +0.4
BNX				pP	pP	04 39 11.7 -0.2
BNX				sP	sP	04 40 06.3 +0.8
BNX				SKS	SKSac	04 46 48.2 -1.4
BNX				S	ScS	04 47 03.3 -2.7
BNX				pmax	pmax	
	comp=Z,70nm,0.9s					
BNX				pmax	pmax	
	comp=Z,400nm,7.3s					
Q17K	Contact Creek	83.97	12	P	P	04 37 17.6 +0.1
	baz=202					
DSP	Deep Springs	84.07	45	IAmb	IAmb	04 37 22.0
	comp=Z,83nm,1.4s					
TIA	Tai'an	84.08	314	⇓P	P	04 37 19.1 +0.7
TIA				S	SKSac	04 46 50.6 -0.3
TIA				pmax	pmax	
	comp=Z,130nm,1.2s					
TIA				pmax	pmax	
	comp=Z,520nm,3.6s					
VCNR	Virginia City	84.14	43	IAmb	IAmb	04 37 22.4
	comp=Z,100nm,1.5s					
GMRC	Granite Mounta	84.14	48	P	P	04 37 20.1 +1.2
	baz=236,SNR=46					
IRM	Iron Mountain	84.15	49	P	P	04 37 20.3 +1.5
	baz=236,SNR=64					
HUMO	Hull Mountain	84.21	38	IAmb	IAmb	04 37 23.2
	comp=Z,77nm,1.2s					
Q16K	King Salmon	84.21	12	P	P	04 37 18.8 +0.4
	baz=201,SNR=14					

YERR	Yerington	84.21	43	IAmb	IAmb	04 37 21.9	
	comp=Z,56nm,0.9s						
KDAK	Kodiak Island	84.23	14	P	P	04 37 19.1	+0.5
KDAK	Kodiak Island	84.23	14	P	P	04 37 19.1	+0.5
KDAK				pmax	pmax		
	comp=Z,27nm,1.0s						
KDAK	Kodiak Island	84.23	14	P	P	04 37 19.0	+0.5
	baz=205						
LHV	Little Huntoon	84.24	44	IAmb	IAmb	04 37 21.8	
	comp=Z,44nm,0.9s						
GRAC	Grapevine Rang	84.25	46	IAmb	IAmb	04 37 23.0	
	comp=Z,109nm,1.2s						
GRAC	Grapevine Rang	84.25	46	P	P	04 37 20.9	+1.6
	baz=235,SNR=29						
FURC	Furnace Creek,	84.28	46	P	P	04 37 20.6	+1.3
	baz=235,SNR=13						
KLR	Kul'dur	84.31	331	*d iP*	P	04 37 20.5	+1.3
KLR				pmax	pmax		
	comp=Z,97nm,2.5s						
TUQ	Turquoise Moun	84.32	48	P	P	04 37 21.2	+1.4
	baz=236,SNR=34						
SHOC	Shoshone, Teco	84.35	47	P	P	04 37 21.0	+1.3
	baz=236,SNR=20						
BLYC	Blythe	84.36	50	P	P	04 37 20.3	+0.5
BLYC				IAmb	IAmb	04 37 22.6	
	comp=Z,55nm,0.8s						
113A	Mohawk Valley,	84.36	51	IAmb	IAmb	04 37 23.8	
	comp=Z,165nm,1.7s						
DBO	Dodson Butte	84.37	38	IAmb	IAmb	04 37 22.6	
	comp=Z,46nm,0.9s						
KCSI	Kotacane, Aceh	84.38	276	P	P	04 37 21.0	+0.6
	comp=Z,1µmcomp=Z,44nm,1.3s						
RYN	Ryan	84.45	44	IAmb	IAmb	04 37 23.9	
	comp=Z,72nm,1.5s						
NVAR	Mina Array Bea	84.47	44	P	P	04 37 21.6	+1.0
	comp=Z,21nm,0.7s,baz=224,slow=8.1,SNR=106						
NVAR				PKKPbc	PKKPbc	04 55 29.9	+1.0
	comp=Z,0.8nm,0.7s,baz=47,slow=4.0,SNR=6.5						
NVAR				PKPPKP	P'P'df	05 03 29.9	-3.0
	comp=Z,0.4nm,0.8s,baz=163,slow=0.9,SNR=2.6						
	comp=Z,21nm,0.7s						
NVAR	Mina Array Bea	84.47	44	P	P	04 37 20.7	+0.1
Q18K	Katmai Hardscr	84.50	13	P	P	04 37 20.2	+0.1
	baz=203,SNR=24						
PAHR	Pah Rah Range	84.55	42	IAmb	IAmb	04 37 24.2	
	comp=Z,88nm,1.5s						
NV11	Mina Array Sit	84.57	44	IAmb	IAmb	04 37 25.1	
	comp=Z,58nm,1.2s						
214A	Organ Pipe Nat	84.61	52	P	P	04 37 23.0	+1.8
	baz=238,SNR=48						
TROLL	Troll, Antarti	84.64	181	P	P	04 37 20.1	-0.7
P17K	Kvichak River	84.73	12	P	P	04 37 21.0	0.0
	baz=202,SNR=9.8						
SRIT	Nakonsritamara	84.79	282	P	P	04 37 23.5	+1.1
SRIT				IAmb	IAmb	04 37 25.8	
	comp=Z,71nm,0.8s						
O16K	Kokwok River B	84.80	11	P	P	04 37 20.8	-0.6
	baz=200,SNR=5.1						
PDMCI	Parker Dam,Lak	84.92	49	P	P	04 37 24.4	+1.8
	baz=237,SNR=34						
TPNV	Topopah Spring	84.95	46	P	P	04 37 24.1	+1.2
	baz=236,SNR=41						
SNAA	Sanae	84.97	179	P	P	04 37 21.3	-1.0
SNAA	Sanae	84.97	179	P	P	04 37 21.9	-0.4
SNAA	Sanae	84.97	179	P	P	04 37 21.9	-0.4
SNAA				pmax	pmax		
	comp=Z,22nm,0.8s						
Q20K	Shuyak Island	85.02	14	P	P	04 37 22.9	+0.5
	baz=205,SNR=6.2						
Q19K	Cape Douglas,	85.04	13	IAmb	IAmb	04 37 24.2	
	comp=Z,103nm,0.9s						
Q19K	Cape Douglas,	85.04	13	P	P	04 37 22.6	0.0
	baz=204,SNR=7.1						
COYC	Coyhaique	85.06	138	P	P	04 37 23.2	0.0
COYC				IAmb	IAmb	04 37 26.5	
	comp=Z,52nm,0.7s						
P18K	Big Mountain,	85.15	12	IAmb	IAmb	04 37 25.0	
	comp=Z,46nm,0.7s						
P18K	Big Mountain,	85.15	12	P	P	04 37 22.8	-0.3
	baz=203						
O17K	Koliganek Bris	85.15	11	P	P	04 37 25.9	+2.9
	baz=201						
VNA3	Neumayer Olymp	85.17	177	P	P	04 37 22.6	-0.6
BUCK	Buck Mountain	85.20	37	P	P	04 37 24.5	+0.7
AY01	Puyuhuapi	85.26	137	P	P	04 37 24.8	+0.7
AY01				IAmb	IAmb	04 37 27.0	
	comp=Z,152nm,1.9s						
MOD	Modoc Plateau	85.31	40	IAmb	IAmb	04 37 27.8	
	comp=Z,42nm,0.8s						
Q09A	Carvers	85.42	44	IAmb	IAmb	04 37 27.2	
	comp=Z,33nm,0.8s						
K05A	Summer Lake	85.47	39	IAmb	IAmb	04 37 28.0	
	comp=Z,56nm,0.8s						
N16K	Nishlik Lake	85.52	10	P	P	04 37 25.8	+1.0
	baz=199,SNR=8.6						
NVL	N'lazarevskaya	85.53	184	⇓*iP*	P	04 37 24.6	-0.3
NVL				*e*PP	pP	04 39 20.6	+0.4
NVL				*e*		04 40 16.7	
NVL				*e*PPP	PPP	04 42 53.4	
NVL				*i* S	SKSac	04 47 02.9	+3.9
NVL				pmax	pmax		
	comp=Z,57nm,1.1s						
O18K	Koktuh Hills	85.58	12	P	P	04 37 25.0	-0.2
	baz=203,SNR=20						
VNA2	Neumayer--Watz	85.59	178	P	P	04 37 24.9	-0.3
	baz=184,slow=5.0						
S11A	Rachel	85.68	46	IAmb	IAmb	04 37 28.8	
	comp=Z,30nm,0.7s						
P19K	Oil Pt	85.79	13	P	P	04 37 26.4	+0.3
P19K	Oil Pt	85.79	13	P	P	04 37 26.1	-0.1
	baz=204,SNR=13						
VNA1	Neumayer--Stat	85.83	177	P	P	04 37 26.1	-0.3
VNA1				S	S	04 47 17.3	+2.7
VNA1	Neumayer--Stat	85.83	177	pP	pP	04 39 27.4	+5.7
MLSI	Meulaboh, Aceh	85.92	276	P	P	04 37 28.6	+0.7
	comp=Z,122nm,0.9s						
H04A	Detroit Lake	85.95	37	IAmb	IAmb	04 37 29.5	
	comp=Z,61nm,1.3s						
PRN	Pahroc Range	86.00	46	IAmb	IAmb	04 37 31.0	
	comp=Z,57nm,1.0s						
O19K	Port Alsworth	86.07	12	P	P	04 37 27.2	-0.2
	baz=203,SNR=29						
PINE	Pine Mountain	86.10	38	IAmb	IAmb	04 37 31.1	
	comp=Z,65nm,0.8s						
CNPM	China Poot	86.11	14	IAmb	IAmb	04 37 29.1	
	comp=Z,65nm,0.9s						
HOM	Homer	86.14	14	P	P	04 37 28.4	+0.6
	baz=206,SNR=5.9						
R11A	Troy Canyon, C	86.18	45	P	P	04 37 29.5	+0.7
	baz=236,SNR=32						
N18K	Kilae Creek	86.22	12	P	P	04 37 27.9	-0.3
	baz=202						
TUC	Tucson	86.26	52	P	P	04 37 30.5	+1.3
TUC				IAmb	IAmb	04 37 32.9	
	comp=Z,68nm,0.8s						
TUC	Tucson	86.26	52	P	P	04 37 30.5	+1.3
TUC				pmax	pmax		
	comp=Z,68nm,0.9s						
TUC	Tucson	86.26	52	P	P	04 37 31.3	+2.1
	baz=239						
MA2	Magadan	86.31	346	P	P	04 37 28.1	-0.5
MA2				IAmb	IAmb	04 37 30.9	
	comp=Z,70nm,0.8s						
MA2	Magadan	86.31	346	*c iP*	P	04 37 28.3	-0.3
MA2				pmax	pmax		
	comp=Z,122nm,1.3s						
O20K	Slope Mountain	86.31	13	P	P	04 37 28.4	-0.3
	baz=205,SNR=9.8						
BMN	Battle Mountai	86.32	43	IAmb	IAmb	04 37 31.5	
	comp=Z,38nm,0.8s						
HNS	HongShan	86.36	313	⇓P	P	04 37 31.0	+1.7
HNS				pP	pP	04 39 22.1	-2.4
HNS				SKS	SKSac	04 47 04.0	-0.8
HNS				S	ScS	04 47 25.8	-0.4
HNS				pmax	pmax		
	comp=Z,56nm,1.3s						
HNS				pmax	pmax		
	comp=Z,530nm,4.2s						
LYN	LuoYang	86.36	310	⇑*iP*	P	04 37 31.1	+1.6
LYN				pP	pwP	04 39 29.1	-1.0
LYN				SKS	SKSac	04 47 02.2	-2.8
LYN				S	SKKSac	04 47 17.2	+2.2
LYN				sS	sS	04 50 50.4	+3.6
LYN				SS	SS	04 53 20.2	+3.3
LYN				pmax	pmax		
	comp=Z,50nm,1.5s						
LYN				pmax	pmax		
	comp=Z,400nm,12.0s						
LL02	Futaleuf	86.36	136	IAmb	IAmb	04 37 32.5	
	comp=Z,52nm,0.8s						
E03A	Lebam	86.39	35	IAmb	IAmb	04 37 32.0	
	comp=Z,65nm,1.0s						
BRLK	Bradley Lake	86.40	14	P	P	04 37 29.4	+0.3
BRLK				IAmb	IAmb	04 37 30.3	
	comp=Z,59nm,1.0s						
BRSE	Bradley Lake S	86.42	14	P	P	04 37 29.6	+0.4
	baz=207,SNR=11						
N19K	Bonanza Creek	86.61	12	P	P	04 37 29.3	-0.8
	baz=203,SNR=9.7						
WVOR	Wild Horse Val	86.62	41	IAmb	IAmb	04 37 34.3	
	comp=Z,148nm,1.6s						
WISH	Wishkah	86.65	35	IAmb	IAmb	04 37 34.9	
	comp=Z,55nm,1.1s						
GYA	Guiyang	86.67	301	⇑*iP*	P	04 37 33.2	+1.9
GYA				pP	pP	04 39 25.2	-1.6
GYA				PP	PP	04 41 02.5	-1.1
GYA				SKS	SKSac	04 47 06.7	-0.8
GYA				S	S	04 47 22.6	-1.6
GYA				pmax	pmax		
	comp=Z,23nm,1.2s						
HG4B	Hotspring	86.69	28	IAmb	IAmb	04 37 33.1	
	comp=Z,45nm,0.9s						
C03A	Quillayute Air	86.78	34	IAmb	IAmb	04 37 35.6	
	comp=Z,76nm,1.1s						
DIB	Dawson Inlet,	86.82	26	IAmb	IAmb	04 37 35.1	
	comp=Z,46nm,0.9s						
H02S1	DAWSON INLET T	86.82	26	P	P	04 37 32.4	+1.3
	SNR=22						
BJT	Baijiatuau	86.86	316	P	P	04 37 32.3	+0.6
BJT	Baijiatuau	86.86	316	P	P	04 37 32.3	+0.6
BJT				pmax	pmax		
	comp=Z,279nm,2.0s						
BJI	Beijing	86.87	316	P	P	04 37 32.5	+0.8
BJI				pP	pP	04 39 24.8	-2.3
BJI				sP	sP	04 40 25.0	+4.5
BJI				SKS	SKSac	04 47 06.1	-1.7
BJI				S	ScS	04 47 29.7	-0.7
BJI				sS	sS	04 50 52.4	+0.7
BJI				pmax	pmax		
	comp=Z,31nm,0.8s						
BJI				pmax	pmax		
	comp=Z,540nm,4.2s						
LCMT	Little Creek M	87.00	47	IAmb	IAmb	04 37 35.1	
	comp=Z,34nm,0.8s						
SEW	Seward	87.04	15	IAmb	IAmb	04 37 33.4	
	comp=Z,31nm,0.8s						
SEW	Seward	87.04	15	P	P	04 37 31.6	-0.3
	baz=208,SNR=17						
I07A	Izee	87.10	39	IAmb	IAmb	04 37 36.0	
	comp=Z,78nm,0.9s						
LL04	Puerto Octay	87.10	134	P	P	04 37 33.4	+0.4
CCUT	Cedar City	87.21	47	IAmb	IAmb	04 37 36.4	
	comp=Z,32nm,0.9s						
J08A	Circle Bar Ran	87.27	40	IAmb	IAmb	04 37 37.2	
	comp=Z,99nm,1.1s						
KNB	Kanab	87.29	48	IAmb	IAmb	04 37 36.7	
	comp=Z,40nm,0.9s						
O22K	Cooper Landing	87.31	14	P	P	04 37 33.2	0.0
	baz=208,SNR=16						
GAMB	Gambell	87.31	4	P	P	04 37 34.0	+0.8
	baz=188						
B04A	Port Angeles	87.40	34	IAmb	IAmb	04 37 37.4	
	comp=Z,45nm,0.9s						
PSUT	Pine Spring	87.41	46	IAmb	IAmb	04 37 38.9	
	comp=Z,38nm,1.2s						
N20K	Mount Spurr	87.41	13	P	P	04 37 33.0	-0.8
	baz=205,SNR=8.9						
SPCR	Spurr Chakacha	87.41	13	P	P	04 37 33.2	-0.7
	baz=205,SNR=6.4						
SZCU	Shurtz Canyon	87.42	47	IAmb	IAmb	04 37 37.3	
	comp=Z,28nm,0.8s						
LON	Longmire	87.45	36	IAmb	IAmb	04 37 36.3	
	comp=Z,27nm,0.8s						
WUAZ	Wupatki	87.49	49	IAmb	IAmb	04 37 38.8	
	comp=Z,58nm,1.3s						
WUAZ	Wupatki	87.49	49	P	P	04 37 36.5	+1.5
	baz=239,SNR=30						
M19K	Big River Lodg	87.63	12	P	P	04 37 34.5	-0.3
	baz=203						
LR03	Panguipulli	87.76	133	P	P	04 37 37.4	+1.3
CBB	Campbell River	87.76	32	IAmb	IAmb	04 37 38.3	
	comp=Z,57nm,0.9s						
L19K	White Mountain	87.80	11	IAmb	IAmb	04 37 37.6	
	comp=Z,62nm,0.9s						
L19K	White Mountain	87.80	11	P	P	04 37 35.8	+0.2
	baz=203,SNR=24						
PGC	Sidney	87.81	34	P	P	04 37 36.3	+0.5
PGC				IAmb	IAmb	04 37 38.7	
	comp=Z,70nm,0.9s						
RC01	Rabbit Creek A	87.85	14	P	P	04 37 35.8	0.0
	baz=208,SNR=46						
M20K	Styx River	87.85	12	P	P	04 37 35.1	-0.9
	baz=204,SNR=8.3						
MOIG	Morelia	87.94	68	IAmb	IAmb	04 37 40.8	
	comp=Z,79nm,1.1s						
BBB	Bella Bella	87.95	29	IAmb	IAmb	04 37 38.9	
	comp=Z,50nm,0.9s						
F07A	Phinny Hill Vi	87.95	37	IAmb	IAmb	04 37 39.0	
	comp=Z,42nm,0.9s						
SUA	Susitna One	87.96	14	P	P	04 37 36.2	-0.3
	baz=207						
PWL	Port Wells	87.97	15	P	P	04 37 36.3	-0.1
	baz=209,SNR=70						
X18A	Snowflake	87.99	51	IAmb	IAmb	04 37 39.9	
	comp=Z,32nm,0.7s						
HIN	Hinchinbrook I	88.01	16	IAmb	IAmb	04 37 37.8	
	comp=Z,35nm,0.9s						
TIY	Taiyuan	88.05	313	⇑*iP*	P	04 37 40.3	+2.9
TIY				pP	pP	04 39 34.7	+1.6
TIY				sP	sP	04 40 22.8	-3.6
TIY				SKS	SKSac	04 47 15.6	+0.5
TIY				S	ScS	04 47 41.7	+1.2
TIY				pmax	pmax		
	comp=Z,73nm,0.8s						
G08A	Pilot Rock	88.13	38	IAmb	IAmb	04 37 40.1	
	comp=Z,62nm,0.9s						
ZAIG	Zacatecas	88.14	64	P	P	04 37 39.0	+0.6
ZAIG				IAmb	IAmb	04 37 41.9	
	comp=Z,33nm,0.9s						
KAIM	Kayak Island	88.14	17	IAmb	IAmb	04 37 39.7	
	comp=Z,60nm,1.0s						
KAIM	Kayak Island	88.14	17	P	P	04 37 37.7	+0.5
	baz=212,SNR=13						
CRAG	Craig	88.25	25	P	P	04 37 38.5	+0.7
	baz=222						
L20K	Farewell, AK	88.25	12	P	P	04 37 37.4	-0.4
	baz=204,SNR=11						
MTPU	Mount Pierson	88.26	47	IAmb	IAmb	04 37 41.9	
	comp=Z,43nm,0.8s						
SKT	Skwentna	88.26	13	P	P	04 37 36.5	-1.2
	baz=206,SNR=13						
GLI	Glacier Island	88.28	15	P	P	04 37 37.7	-0.1
	baz=210,SNR=87						
TTA	Tatalina	88.29	11	P	P	04 37 38.1	+0.2
	baz=202,SNR=7.1						
FID	Port Fidalgo	88.32	16	IAmb	IAmb	04 37 39.5	
	comp=Z,40nm,0.9s						
EYAK	Cordova Ski Ar	88.33	16	IAmb	IAmb	04 37 39.3	
	comp=Z,35nm,0.8s						
EYAK	Cordova Ski Ar	88.33	16	P	P	04 37 38.4	+0.4
	baz=211,SNR=27						
M22K	Willow	88.36	14	P	P	04 37 38.0	-0.1
M22K				IAmb	IAmb	04 37 40.0	
	comp=Z,49nm,0.8s						
M22K	Willow	88.36	14	P	P	04 37 38.0	-0.1
	baz=207,SNR=26						
LTY	Liberty	88.38	36	IAmb	IAmb	04 37 40.6	
	comp=Z,39nm,0.8s						
TCRU	Three Creeks R	88.38	46	IAmb	IAmb	04 37 43.3	
	comp=Z,29nm,0.9s						
PLCA	Paso Flores	88.41	134	P	P	04 37 40.1	+0.9
	comp=Z,3.8nm,0.7s,baz=239,slow=5.2,SNR=26						
PLCA				pP	pP	04 39 36.4	+0.7
	comp=Z,12nm,1.2s,baz=245,slow=5.0,SNR=6.3						
PLCA				PKKPbc	PKKPbc	04 55 18.7	-0.4
	comp=Z,2.3nm,0.8s,baz=235,slow=4.2,SNR=6.1						
PLCA				PKPPKP	P'P'df	05 03 24.1	-3.5
	comp=Z,1.8nm,0.9s,baz=315,slow=4.3,SNR=4.0						
	comp=Z,3.8nm,0.7s						
PLCA	Paso Flores	88.41	134	P	P	04 37 39.7	+0.4
PLCA				IAmb	IAmb	04 37 43.4	
	comp=Z,81nm,1.9s						
PLCA	Paso Flores	88.41	134	P	P	04 37 39.7	+0.4
PLCA				pmax	pmax		
	comp=Z,81nm,1.9s						
KNK	Knik Glacier	88.42	15	IAmb	IAmb	04 37 40.2	
	comp=Z,65nm,0.9s						
KNK	Knik Glacier	88.42	15	P	P	04 37 38.7	+0.1
	baz=209,SNR=45						
PMR	Palmer	88.43	14	P	P	04 37 38.5	0.0
	baz=208,SNR=34						
W18A	Petrified Fore	88.44	50	IAmb	IAmb	04 37 43.7	
	comp=Z,52nm,1.2s						
W18A	Petrified Fore	88.44	50	P	P	04 37 40.7	+1.2
	baz=240,SNR=12						
RAGM	Ragged Mountai	88.47	17	IAmb	IAmb	04 37 40.3	
	comp=Z,47nm,1.1s						
HMT	Hamilton	88.53	17	IAmb	IAmb	04 37 41.5	
	comp=Z,46nm,0.7s						
121A	Cookes Peak, D	88.57	54	IAmb	IAmb	04 37 43.2	
	comp=Z,32nm,0.8s						
121A	Cookes Peak, D	88.57	54	P	P	04 37 41.8	+1.7
	baz=241						
BGLC	Bering Glacier	88.62	17	P	P	04 37 40.6	+1.2
	baz=213						
XAN	Xi'an	88.62	308	⇓P	P	04 37 41.4	+1.3
XAN				pP	pP	04 39 36.2	+0.2
XAN				sP	sP	04 40 29.4	+0.1
XAN				SKS	SKSac	04 47 17.1	-1.5
XAN				S	ScS	04 47 45.3	-0.1
XAN				pmax	pmax		
	comp=Z,100nm,0.9s						
XAN				pmax	pmax		
	comp=Z,550nm,3.8s						
SIT	Sitka	88.64	23	P	P	04 37 40.8	+1.2
	baz=220						
V35K	Ketchikan	88.73	25	P	P	04 37 41.4	+1.4
	baz=223,SNR=16						
B06A	Marblemount	88.73	35	IAmb	IAmb	04 37 42.4	
	comp=Z,39nm,0.8s						
U33K	Whale Pass	88.73	24	P	P	04 37 41.2	+1.2
	baz=222,SNR=10						
BERG	Berg Lake	88.73	17	P	P	04 37 40.4	+0.4
BERG				IAmb	IAmb	04 37 42.2	
	comp=Z,55nm,0.9s						
E08A	Dider Farm, El	88.79	37	IAmb	IAmb	04 37 43.4	
	comp=Z,43nm,1.1s						
SML	Sawmill	88.80	14	IAmb	IAmb	04 37 51.3	
	comp=Z,23nm,0.8s						
SML	Sawmill	88.80	14	P	P	04 37 40.0	-0.4
	baz=209,SNR=12						
DIV	Divide	88.82	16	IAmb	IAmb	04 37 42.2	
	comp=Z,50nm,1.0s						
MFID	Camas Ranch	88.87	41	P	P	04 37 41.7	+0.5
CUT	Chulitna	88.91	13	P	P	04 37 40.5	-0.2
	baz=207,SNR=11						
M23K	Glacier View	88.93	15	P	P	04 37 40.9	0.0
	baz=209,SNR=16						
PPLA	Purkeypile	88.96	12	P	P	04 37 40.2	-1.0
	baz=205						
BMRM	Bremner River	88.98	16	IAmb	IAmb	04 37 42.6	
	comp=Z,46nm,0.9s						
BMRM	Bremner River	88.98	16	P	P	04 37 41.6	+0.4
	baz=212,SNR=20						
DUG	Dugway, Tooele	88.99	45	IAmb	IAmb	04 37 45.1	
	comp=Z,35nm,1.3s						
DUG	Dugway, Tooele	88.99	45	P	P	04 37 42.7	+0.8
	baz=238,SNR=28						
SEY	Seymchan	88.99	348	⇑*eP*	P	04 37 41.3	+0.2
SEY				pmax	pmax		
	comp=Z,46nm,0.8s						
K20K	Telida	89.03	11	IAmb	IAmb	04 37 42.4	
	comp=Z,33nm,1.0s						
K20K	Telida	89.03	11	P	P	04 37 41.2	0.0
	baz=204,SNR=13						
MESA	MESA	89.04	18	P	P	04 37 42.1	+0.5
	baz=214,SNR=23						
SCM	Sheep Creek Mo	89.06	15	P	P	04 37 41.8	+0.3
	baz=210,SNR=39						
KLU	Klutina	89.10	16	P	P	04 37 42.1	+0.4
	baz=211,SNR=16						
XLT	XiLinHaoTe	89.11	319	*eP*	P	04 37 43.0	+0.8
XLT				pP	pP	04 39 39.3	+1.1
XLT				sP	sP	04 40 33.7	+2.2
XLT				SKS	SKSac	04 47 18.2	-2.9
XLT				S	SKKSac	04 47 40.1	+4.7
XLT				sS	sS	04 51 16.1	+2.4
XLT				SS	SS	04 53 52.3	-4.1
XLT				pmax	pmax		
	comp=Z,43nm,1.2s						
XLT				pmax	pmax		
	comp=Z,190nm,4.9s						
KMI	Kunming	89.20	298	⇓P	P	04 37 44.7	+1.4
KMI				pP	pP	04 39 41.2	+1.5
KMI				PP	PP	04 41 23.3	-0.4
KMI				SKS	SKSac	04 47 23.3	+0.6
KMI				S	S	04 47 47.5	-0.4
KMI				pmax	pmax		
	comp=Z,55nm,1.6s						
KMI				pmax	pmax		
	comp=Z,380nm,3.5s						
D08A	Wollman Farm,	89.21	37	P	P	04 37 42.9	+0.4
D08A				IAmb	IAmb	04 37 44.9	
	comp=Z,46nm,0.9s						
S32K	Killisnoo	89.22	23	P	P	04 37 42.8	+0.5
	baz=221						
WRAK	Wrangell Islan	89.25	24	IAmb	IAmb	04 37 45.2	
	comp=Z,55nm,0.9s						
WRAK	Wrangell Islan	89.25	24	P	P	04 37 43.8	+1.4
	baz=223,SNR=11						
TGL	Tana Glacier	89.27	17	IAmb	IAmb	04 37 44.7	
	comp=Z,46nm,1.0s						
ISLE	Juniper Island	89.28	18	IAmb	IAmb	04 37 44.7	
	comp=Z,53nm,0.9s						
TLIG	Tlapa	89.29	71	P	P	04 37 44.6	+1.0
TLIG				IAmb	IAmb	04 37 46.5	
	comp=Z,32nm,0.7s						
E09A	Wood Farm, Sta	89.32	37	IAmb	IAmb	04 37 45.0	
	comp=Z,31nm,0.9s						
NLU	North Lily Min	89.34	45	IAmb	IAmb	04 37 46.9	
	comp=Z,93nm,1.8s						
TNA	Tin City	89.34	5	P	P	04 37 43.3	+0.7
	baz=191						
PNL	Peninsula	89.36	19	P	P	04 37 43.6	+0.7
	baz=217,SNR=17						
Q16A	Castle Valley	89.39	47	IAmb	IAmb	04 37 47.9	
	comp=Z,52nm,0.9s						
EFI	East Falkland	89.42	148	P	P	04 37 44.1	+0.5
EFI				IAmb	IAmb	04 37 45.8	
	comp=Z,30nm,0.7s						
EFI	East Falkland	89.42	148	P	P	04 37 44.1	+0.5
EFI				pmax	pmax		
	comp=Z,30nm,0.7s						
CAST	Castle Rocks	89.45	12	IAmb	IAmb	04 37 44.0	
	comp=Z,56nm,0.9s						
CAST	Castle Rocks	89.45	12	P	P	04 37 42.0	-1.3
	baz=205,SNR=53						
PCA	Pinnacle	89.46	19	IAmb	IAmb	04 37 45.4	
	comp=Z,37nm,0.9s						
PINM	Pinnacle	89.46	19	P	P	04 37 43.8	+0.4
	baz=216,SNR=12						
TABL	Table Mountain	89.48	18	IAmb	IAmb	04 37 45.8	
	comp=Z,49nm,0.8s						
ZEA	Zeya	89.48	332	*eP*	P	04 37 45.8	+2.2
ZEA				*e*		04 48 58.6	
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
VRDI	Verde Repeater	89.50	17	IAmb	IAmb	04 37 45.3	
	comp=Z,25nm,1.0s						
CM31	Chiang Mai Arr	89.50	290	P	P	04 37 47.9	+3.4
CMAR	Chiang Mai Arr	89.50

	comp=Z,28nm,1.0s						
N25K	**Chitina, Valde**	**89.53**	**16**	P	**P**	**04 37 44.2**	**+0.5**
	baz=212,SNR=27						
M24K	**Tolsona, Glenn**	**89.57**	**15**	IAmb	IAmb	04 37 46.4	
	comp=Z,55nm,1.4s						
M24K	**Tolsona, Glenn**	**89.57**	**15**	P	**P**	**04 37 44.4**	**+0.5**
	baz=211						
GLB	**Gilahina Butte**	**89.59**	**16**	IAmb	IAmb	04 37 45.9	
	comp=Z,24nm,0.9s						
WAT6	**Susitna Watana**	**89.61**	**14**	P	**P**	**04 37 43.8**	**-0.4**
	baz=209,SNR=17						
CHTO	**Chiang Mai**	**89.65**	**291**	P	**P**	**04 37 46.1**	**+0.9**
CHTO	**Chiang Mai**	**89.65**	**291**	P	**P**	**04 37 46.1**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHTO	**Chiang Mai**	**89.65**	**291**	P	**P**	**04 37 47.4**	**+2.2**
WAT1	**Susitna Watana**	**89.65**	**14**	P	**P**	**04 37 44.1**	**-0.2**
	baz=209						
MPU	**Maple Canyon**	**89.66**	**46**	IAmb	IAmb	04 37 47.8	
	comp=Z,41nm,0.8s						
PLID	**Pearl Lake**	**89.72**	**40**	IAmb	IAmb	04 37 48.3	
	comp=Z,30nm,1.1s						
MCARA	**McCarthy VSAT**	**89.75**	**17**	IAmb	IAmb	04 37 46.9	
	comp=Z,45nm,1.0s						
MCARA	**McCarthy VSAT**	**89.75**	**17**	P	**P**	**04 37 45.1**	**+0.5**
	baz=214,SNR=21						
B08A	**Colville Reser**	**89.77**	**36**	IAmb	IAmb	04 37 46.5	
	comp=Z,23nm,0.9s						
J20K	**Nowinta River**	**89.77**	**11**	P	**P**	**04 37 45.0**	**+0.3**
	baz=204,SNR=8.2						
KTH	**Kantishna Hill**	**89.80**	**13**	IAmb	IAmb	04 37 45.9	
	comp=Z,41nm,0.8s						
HLID	**Hailey**	**89.81**	**41**	P	**P**	**04 37 46.6**	**+1.0**
HLID				IAmb	IAmb	04 37 48.1	
	comp=Z,30nm,0.8s						
HLID	**Hailey**	**89.81**	**41**	P	**P**	**04 37 47.2**	**+1.6**
	baz=237,SNR=28						
CHUM	**Lake Minchumin**	**89.83**	**12**	P	**P**	**04 37 44.1**	**-0.9**
	baz=205,SNR=7.5						
LOGN	**Logan Glacier**	**89.84**	**18**	IAmb	IAmb	04 37 47.4	
	comp=Z,36nm,0.9s						
TRF	**Thorofare Moun**	**89.84**	**13**	P	**P**	**04 37 44.4**	**-0.8**
	baz=207,SNR=38						
LLLB	**Lillooet**	**89.84**	**33**	IAmb	IAmb	04 37 47.3	
	comp=Z,26nm,0.9s						
P29M	**Windy Craggy**	**89.84**	**20**	IAmb	IAmb	04 37 47.4	
	comp=Z,27nm,1.1s						
P29M	**Windy Craggy**	**89.84**	**20**	P	**P**	**04 37 45.8**	**+0.6**
	baz=218,SNR=8.2						
BARN	**Barnard Glacie**	**89.85**	**18**	IAmb	IAmb	04 37 47.6	
	comp=Z,44nm,1.0s						
R32K	**Eaglecrest**	**89.85**	**22**	P	**P**	**04 37 46.1**	**+0.9**
	baz=221						
CTG	**Chitna Glacier**	**89.86**	**18**	P	**P**	**04 37 45.9**	**+0.6**
	baz=215,SNR=28						
CTGM	**Chitina Glacie**	**89.86**	**18**	IAmb	IAmb	04 37 47.5	
	comp=Z,40nm,0.9s						
SRU	**San Rafael Swe**	**89.93**	**47**	P	**P**	**04 37 47.1**	**+0.8**
SRU	**San Rafael Swe**	**89.93**	**47**	P	**P**	**04 37 47.1**	**+0.8**
SRU				pmax	pmax		
	comp=Z,105nm,0.9s						
O28M	**Mount Upton**	**90.02**	**18**	P	**P**	**04 37 46.6**	**+0.3**
	baz=216,SNR=25						
HARP	**HAARP**	**90.06**	**15**	P	**P**	**04 37 46.4**	**+0.3**
	baz=212,SNR=6.7						
RND	**Reindeer**	**90.10**	**13**	IAmb	IAmb	04 37 47.7	
	comp=Z,49nm,0.9s						
O29M	**Mount Kennedy**	**90.12**	**19**	P	**P**	**04 37 47.2**	**+0.6**
	baz=217,SNR=9.6						
DHY	**Denali Highway**	**90.13**	**14**	P	**P**	**04 37 46.4**	**-0.2**
	baz=210						
PLBC	**Pleasant Camp**	**90.15**	**21**	P	**P**	**04 37 47.3**	**+0.8**
	baz=219,SNR=7.2						
TX32	**Lajitas Array**	**90.19**	**58**	IAmb	IAmb	04 37 50.4	
	comp=Z,38nm,0.8s						
TXAR	**Lajitas Array**	**90.19**	**58**	P	**P**	**04 37 49.5**	**+1.8**
	comp=Z,36nm,0.7s,baz=213,slow=6.5,SNR=421						
TXAR				pP	**pwP**	**04 39 46.5**	**-1.5**
	comp=Z,1.7nm,1.0s,baz=232,slow=6.7,SNR=2.2						
TXAR				PP	**PP**	**04 41 31.6**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=237,slow=4.2,SNR=3.5						
TXAR				PKKP	**PKKPbc**	**04 55 15.5**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=90,slow=3.2,SNR=19						
TXAR				PKPPKP	**P'P'df**	**05 03 26.0**	**+2.8**
	comp=Z,0.4nm,0.9s,baz=114,slow=4.0,SNR=4.1						
	comp=Z,36nm,0.7s						
HHC	**Hu-ho-hao-te**	**90.27**	**315**	*e*P	**P**	**04 37 49.4**	**+1.7**
HHC				pP	pP	04 39 41.8	-2.1
HHC				SKS	**SKSac**	**04 47 25.1**	**-2.8**
HHC				S	**ScS**	**04 48 00.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,71nm,0.8s						
HHC				pmax	pmax		
	comp=Z,580nm,4.5s						
BPAW	**Bear Paw Mtn.**	**90.28**	**12**	P	**P**	**04 37 48.6**	**+1.5**
	baz=206						
ML02	**Panimavida**	**90.29**	**130**	IAmb	IAmb	04 37 50.1	
	comp=Z,24nm,0.9s						
MVCO	**Mesa Verde**	**90.35**	**49**	P	**P**	**04 37 49.1**	**+0.8**
	baz=240,SNR=8.6						
MCK	**McKinley**	**90.37**	**13**	P	**P**	**04 37 47.3**	**-0.2**
MCK				IAmb	IAmb	04 37 49.1	
	comp=Z,22nm,1.0s						
MCK	**McKinley**	**90.37**	**13**	P	**P**	**04 37 47.3**	**-0.2**
MCK				pmax	pmax		
	comp=Z,22nm,1.0s						
MCK	**McKinley**	**90.37**	**13**	P	**P**	**04 37 47.1**	**-0.4**
	baz=208,SNR=13						
P18A	**Preston Nutter**	**90.38**	**46**	IAmb	IAmb	04 37 50.6	
	comp=Z,34nm,0.8s						
T35M	**Bob Quinn**	**90.45**	**25**	P	**P**	**04 37 49.4**	**+1.3**
	baz=224,SNR=5.9						
P30M	**Million Dollar**	**90.47**	**20**	P	**P**	**04 37 49.2**	**+1.0**
	baz=219						
PAX	**Paxson**	**90.48**	**15**	P	**P**	**04 37 47.7**	**-0.4**
	baz=211,SNR=7.2						
SKAG	**Skagway**	**90.49**	**21**	P	**P**	**04 37 48.7**	**+0.6**
	baz=220						
HWUT	**Hardware Ranch**	**90.53**	**44**	IAmb	IAmb	04 37 50.7	
	comp=Z,37nm,0.7s						
PV10	**Paradox Valley**	**90.56**	**48**	IAmb	IAmb	04 37 52.7	
	comp=Z,34nm,0.9s						
PV13	**Radium Mtn., P**	**90.60**	**48**	IAmb	IAmb	04 37 52.3	
	comp=Z,24nm,1.2s						
M26K	**Nabesna, AK**	**90.61**	**16**	P	**P**	**04 37 48.9**	**+0.3**
	baz=214,SNR=12						
PV23	**Carpenter Ridg**	**90.61**	**48**	IAmb	IAmb	04 37 51.9	
	comp=Z,37nm,0.8s						
PZH	**PanZhiHua**	**90.61**	**299**	P	**P**	**04 37 50.3**	**+0.6**
PZH				pP	**pP**	**04 39 43.9**	**-2.0**
PZH				sP	**sP**	**04 40 41.5**	**+2.4**
PZH				SKS	**SKSac**	**04 47 28.7**	**-1.8**
PZH				S	**S**	**04 47 59.9**	**-0.5**
PZH				sS	**sS**	**04 51 28.9**	**0.0**
PZH				pmax	pmax		
	comp=Z,40nm,1.2s						
PZH				pmax	pmax		
	comp=Z,250nm,3.5s						
BWN	**Browne**	**90.65**	**13**	IAmb	IAmb	04 37 49.8	
	comp=Z,62nm,1.5s						
YUK6	**Outpost Mounta**	**90.70**	**19**	P	**P**	**04 37 49.8**	**+0.4**
	baz=218						
ANMO	**Albuquerque**	**90.70**	**52**	P	**P**	**04 37 50.6**	**+0.6**
ANMO				IAmb	IAmb	04 37 52.1	
	comp=Z,25nm,0.9s						
ANMO	**Albuquerque**	**90.70**	**52**	*c iP*	**P**	**04 37 50.9**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,37nm,1.2s						
ANMO	**Albuquerque**	**90.70**	**52**	P	**P**	**04 37 51.1**	**+1.1**
	baz=242						
YUK3	**Moose Creek**	**90.77**	**18**	P	**P**	**04 37 50.3**	**+0.6**
	baz=216,SNR=52						
S34M	**Telegraph Cree**	**90.79**	**24**	P	**P**	**04 37 51.1**	**+1.5**
	baz=224,SNR=21						
HYT	**Haines Junctio**	**90.86**	**19**	P	**P**	**04 37 50.5**	**+0.5**
	baz=218,SNR=7.0						
M27K	**Edge Creek, AK**	**90.86**	**17**	IAmb	IAmb	04 37 51.8	
	comp=Z,27nm,0.9s						
M27K	**Edge Creek, AK**	**90.86**	**17**	P	**P**	**04 37 50.5**	**+0.5**
	baz=214,SNR=26						
MENT	**Mentasta**	**90.88**	**16**	IAmb	IAmb	04 37 51.3	
	comp=Z,16nm,0.7s						
NEW	**Newport**	**90.90**	**36**	P	**P**	**04 37 50.4**	**0.0**
	baz=235,SNR=10.0						
PV15	**Paradox Valley**	**90.92**	**48**	IAmb	IAmb	04 37 53.0	
	comp=Z,25nm,0.8s						
YUK4	**Talbot Arm**	**90.93**	**19**	P	**P**	**04 37 51.3**	**+0.9**
	baz=217,SNR=5.2						
CD2	**Chengdu**	**90.99**	**303**	P	**P**	**04 37 53.1**	**+1.9**
CD2				pP	pP	04 39 49.5	+1.9
CD2				sP	sP	04 40 44.1	+3.5
CD2				SKS	**SKSac**	**04 47 30.5**	**-1.8**
CD2				S	**S**	**04 48 02.3**	**-1.0**
CD2				sS	sS	04 51 32.6	+0.5
L26K	**Log Cabin Wild**	**91.04**	**16**	P	**P**	**04 37 51.0**	**+0.4**
	baz=213,SNR=6.8						
I21K	**Tanana**	**91.07**	**11**	P	**P**	**04 37 51.5**	**+0.9**
	baz=206,SNR=8.1						
K24K	**Donnelly Dome**	**91.12**	**14**	P	**P**	**04 37 51.0**	**+0.1**
	baz=211,SNR=20						
P32M	**Atlin**	**91.12**	**22**	P	**P**	**04 37 51.8**	**+0.7**
	baz=222						
BTO	**Baotou**	**91.15**	**314**	*e*P	**P**	**04 37 54.3**	**+2.5**
BTO				S	**S**	**04 48 00.0**	**-4.4**
Q32M	**Nakina River**	**91.15**	**23**	P	**P**	**04 37 52.7**	**+1.3**
	baz=223,SNR=7.4						
MLY	**Manley**	**91.17**	**12**	P	**P**	**04 37 50.1**	**-1.1**
	baz=207,SNR=9.0						
BVCY	**Beaver Creek**	**91.18**	**17**	P	**P**	**04 37 51.7**	**+0.4**
	baz=215,SNR=8.3						
WRH	**Wood River Hil**	**91.20**	**13**	IAmb	IAmb	04 37 52.7	
	comp=Z,17nm,0.7s						
BO02	**Sierra Bellavi**	**91.22**	**129**	P	**P**	**04 37 52.9**	**+0.5**
BO02				IAmb	IAmb	04 37 55.7	
	comp=Z,97nm,1.9s						
O30N	**Mendenhall**	**91.25**	**20**	P	**P**	**04 37 52.4**	**+0.7**
	baz=220,SNR=5.4						
RIDG	**Independent Ri**	**91.28**	**15**	P	**P**	**04 37 51.6**	**-0.2**
	baz=212,SNR=6.2						
RDMU	**Red Mountain**	**91.30**	**46**	IAmb	IAmb	04 37 54.4	
	comp=Z,35nm,0.7s						
MT01	**Popeta**	**91.34**	**128**	IAmb	IAmb	04 37 54.8	
	comp=Z,36nm,0.8s						
H21K	**Melozitna Rive**	**91.36**	**11**	P	**P**	**04 37 51.9**	**-0.1**
	baz=205						
HDA	**Harding Lake**	**91.39**	**14**	IAmb	IAmb	04 37 54.1	
	comp=Z,21nm,0.7s						
HDA	**Harding Lake**	**91.39**	**14**	P	**P**	**04 37 51.6**	**-0.6**
	baz=210,SNR=17						
DOT	**Dot Lake**	**91.39**	**15**	P	**P**	**04 37 51.7**	**-0.6**
CCB	**Clear Creek Bu**	**91.41**	**13**	IAmb	IAmb	04 37 55.0	
	comp=Z,13nm,0.6s						
AHID	**Auburn Hatcher**	**91.43**	**43**	IAmb	IAmb	04 37 56.4	
	comp=Z,45nm,0.9s						
L27K	**Beaver Creek,**	**91.46**	**16**	P	**P**	**04 37 53.1**	**+0.5**
	baz=214,SNR=14						
CLN7	**Carlsbad 7**	**91.48**	**55**	P	**P**	**04 37 53.2**	**-0.2**
N30M	**Aishikik Lake**	**91.48**	**19**	P	**P**	**04 37 53.1**	**+0.4**
	baz=219						
I23K	**Minto, Yukon-K**	**91.54**	**12**	P	**P**	**04 37 52.7**	**0.0**
	baz=208						
WHY	**Whitehorse**	**91.55**	**20**	P	**P**	**04 37 53.7**	**+0.6**
	baz=220,SNR=6.5						
MT09	**Talagante**	**91.57**	**128**	IAmb	IAmb	04 37 56.7	
	comp=Z,14nm,0.8s						
DLBC	**Dease Lake**	**91.58**	**24**	P	**P**	**04 37 54.1**	**+0.8**
	baz=225,SNR=8.6						
TCOL	**CIGO, UAF Yank**	**91.60**	**13**	P	**P**	**04 37 52.3**	**-0.8**
	baz=209						
COLA	**College**	**91.60**	**13**	P	**P**	**04 37 52.8**	**-0.3**
COLA				IAmb	IAmb	04 37 56.0	
	comp=Z,23nm,0.7s						
COLA	**College**	**91.60**	**13**	P	**P**	**04 37 52.8**	**-0.3**
COLA				pmax	pmax		
	comp=Z,23nm,0.7s						
COLA	**College**	**91.60**	**13**	P	**P**	**04 37 52.3**	**-0.8**
	baz=209						
SCRK	**Sand Creek**	**91.69**	**15**	P	**P**	**04 37 53.8**	**+0.1**
	baz=213,SNR=18						
ILAR	**Eielson Array**	**91.72**	**14**	P	**P**	**04 37 53.0**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=225,slow=5.4,SNR=40						
ILAR				pP	**pwP**	**04 39 53.5**	**-0.1**
	comp=Z,4.6nm,1.0s,baz=231,slow=5.7,SNR=6.1						
ILAR				PKiKP	**PKiKP**	**04 42 39.4**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=296,slow=1.9,SNR=2.6						
ILAR				PKKP	**PKKPdf**	**04 55 08.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=352,slow=2.5,SNR=6.7						
	comp=Z,5.4nm,0.7s						
ILAR	**Eielson Array**	**91.72**	**14**	P	**P**	**04 37 52.9**	**-0.8**
S22A	**4UR Ranch, Cre**	**91.77**	**49**	IAmb	IAmb	04 37 57.7	
	comp=Z,30nm,0.8s						
S22A	**4UR Ranch, Cre**	**91.77**	**49**	P	**P**	**04 37 56.3**	**+1.3**
	baz=241,SNR=54						
H22K	**Ishtalitna Cre**	**91.82**	**11**	P	**P**	**04 37 54.1**	**0.0**
	baz=206,SNR=9.4						
M29M	**Somme Creek**	**91.86**	**18**	P	**P**	**04 37 55.1**	**+0.6**
	baz=218,SNR=27						
MSO	**Missoula**	**91.88**	**39**	P	**P**	**04 37 54.9**	**-0.1**
	baz=237,SNR=6.0						
P33M	**Teslin, Yukon**	**91.89**	**21**	P	**P**	**04 37 55.2**	**+0.6**
	baz=222,SNR=12						
REDW	**Red Top Meadow**	**91.90**	**43**	IAmb	IAmb	04 37 58.6	
	comp=Z,40nm,1.1s						
POKR	**Poker Plat Res**	**91.90**	**13**	P	**P**	**04 37 55.3**	**+0.8**
	baz=210						
TPAW	**Teton Pass**	**91.90**	**43**	P	**P**	**04 37 55.8**	**+0.4**
TPAW				IAmb	IAmb	04 37 59.7	
	comp=Z,58nm,1.7s						
N31M	**Braeburn, Yuko**	**91.90**	**20**	P	**P**	**04 37 54.0**	**-0.7**
	baz=220,SNR=7.7						
J25K	**Salcha River,**	**91.91**	**14**	P	**P**	**04 37 54.5**	**-0.2**
	baz=211,SNR=14						
R33M	**Jennings River**	**91.93**	**23**	P	**P**	**04 37 55.7**	**+0.8**
	baz=224,SNR=6.4						
O20A	**White River Ci**	**91.96**	**47**	IAmb	IAmb	04 37 57.4	
	comp=Z,18nm,0.8s						
O20A	**White River Ci**	**91.96**	**47**	P	**P**	**04 37 56.2**	**+0.5**
	baz=241,SNR=16						
SNOW	**Snow King Moun**	**92.01**	**43**	IAmb	IAmb	04 37 59.2	
	comp=Z,42nm,1.2s						
G21K	**Allakaket**	**92.03**	**10**	P	**P**	**04 37 55.3**	**+0.3**
	baz=204						
H23K	**Yukon River**	**92.10**	**12**	P	**P**	**04 37 55.6**	**+0.1**
	baz=208						
PEL	**Peldehue**	**92.11**	**128**	IAmb	IAmb	04 37 58.5	
	comp=Z,20nm,0.7s						
IMW	**Indian Meadow**	**92.12**	**42**	IAmb	IAmb	04 37 59.9	
	comp=Z,44nm,1.4s						
K27K	**Chicken**	**92.20**	**16**	P	**P**	**04 37 56.3**	**+0.4**
	baz=214						
J26L	**Joseph Creek**	**92.23**	**15**	IAmb	IAmb	04 37 58.3	
	comp=Z,29nm,0.9s						
J26L	**Joseph Creek**	**92.23**	**15**	P	**P**	**04 37 56.4**	**+0.3**
	baz=213,SNR=38						
CMIG	**Matias Romero**	**92.30**	**72**	P	**P**	**04 37 57.2**	**-0.3**
	comp=Z,11nm,0.9s,baz=269,slow=7.3,SNR=10						
	comp=Z,11nm,0.9s						
SMCO	**Snowmass**	**92.36**	**48**	IAmb	IAmb	04 37 59.5	
	comp=Z,19nm,0.8s						
BW06	**Boulder Array**	**92.41**	**44**	IAmb	IAmb	04 37 59.8	
	comp=Z,19nm,0.8s						
BW06	**Boulder Array**	**92.41**	**44**	P	**P**	**04 37 58.1**	**+0.4**
	baz=240,SNR=32						
PD31	**Pinedale Array**	**92.41**	**44**	IAmb	IAmb	04 38 00.2	
	comp=Z,18nm,0.9s						
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**04 37 58.2**	**+0.5**
	comp=Z,15nm,0.8s,baz=210,slow=3.9,SNR=98						
PDAR				PP	PP	04 41 39.0	-9.4
	comp=Z,0.6nm,0.7s,baz=245,slow=3.8,SNR=2.7						
PDAR				PKKP	**PKKPdf**	**04 55 06.0**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=95,slow=5.8,SNR=6.4						
PDAR				SKKPbc	SKKPbc	04 57 57.9	-2.2
	comp=Z,0.2nm,0.4s,baz=67,slow=5.0,SNR=4.6						
	comp=Z,15nm,0.8s						
H24K	**Noodor Dome**	**92.44**	**13**	P	**P**	**04 37 57.5**	**+0.5**
	baz=209						
YHL	**Hebgen Lake**	**92.46**	**42**	IAmb	IAmb	04 38 03.0	
	comp=Z,19nm,1.1s						
L29M	**L29M**	**92.49**	**18**	P	**P**	**04 37 58.2**	**+0.9**
	baz=218,SNR=33						
YMR	**Madison River**	**92.50**	**42**	IAmb	IAmb	04 38 01.7	
	comp=Z,12nm,0.7s						
N32M	**Quiet Lake**	**92.50**	**21**	P	**P**	**04 37 58.1**	**+0.7**
	baz=222						
BOZ	**Bozeman (W)**	**92.58**	**41**	P	**P**	**04 37 58.2**	**0.0**
BOZ	**Bozeman (W)**	**92.58**	**41**	P	**P**	**04 37 58.3**	**0.0**
BOZ				pmax	pmax		
	comp=Z,13nm,0.9s						
BOZ	**Bozeman (W)**	**92.58**	**41**	P	**P**	**04 37 59.2**	**+1.0**
	baz=239,SNR=24						
H17A	**Grant Village**	**92.60**	**42**	P	**P**	**04 38 00.5**	**+1.9**
	baz=239,SNR=14						
PRP	**Porcupine Dome**	**92.65**	**14**	P	**P**	**04 37 58.8**	**+0.6**
	baz=211,SNR=8.7						
SDCO	**Great Sand Dun**	**92.70**	**50**	IAmb	IAmb	04 38 00.9	
	comp=Z,19nm,0.8s						
SDCO	**Great Sand Dun**	**92.70**	**50**	P	**P**	**04 38 00.0**	**+0.8**
	baz=242,SNR=37						
G22K	**Bettles**	**92.73**	**11**	P	**P**	**04 37 58.5**	**+0.2**
	baz=206						
G23K	**Bananza Creek**	**92.80**	**11**	P	**P**	**04 37 59.0**	**+0.3**
	baz=207						
M31M	**Drury Creek, Y**	**92.88**	**20**	P	**P**	**04 37 59.0**	**-0.1**
	baz=221,SNR=5.7						
DAWY	**Dawson**	**92.91**	**17**	IAmb	IAmb	04 38 01.0	
	comp=Z,21nm,0.9s						
DAWY	**Dawson**	**92.91**	**17**	P	**P**	**04 37 59.6**	**+0.3**
	baz=217,SNR=23						
MSTX	**Muleshoe**	**92.95**	**54**	IAmb	IAmb	04 38 03.9	
	comp=Z,42nm,1.2s						
MSTX	**Muleshoe**	**92.95**	**54**	P	**P**	**04 38 00.7**	**+0.5**
	baz=244						
I26K	**Coal Creek Min**	**93.00**	**15**	P	**P**	**04 37 59.7**	**+0.1**
	baz=213						
EGAK	**Eagle**	**93.04**	**16**	IAmb	IAmb	04 38 01.7	
	comp=Z,23nm,0.8s						
EGAK	**Eagle**	**93.04**	**16**	P	**P**	**04 38 00.0**	**+0.3**
	baz=215,SNR=17						
WALA	**Waterton Lakes**	**93.11**	**37**	P	**P**	**04 38 00.9**	**+0.3**
833A	**Chaparral WMA,**	**93.12**	**61**	IAmb	IAmb	04 38 03.9	
	comp=Z,40nm,1.1s						
833A	**Chaparral WMA,**	**93.12**	**61**	P	**P**	**04 38 01.6**	**+0.6**
	baz=245						
F22K	**John River**	**93.15**	**10**	P	**P**	**04 38 00.9**	**+0.7**
	baz=205						
T25A	**Trinidad**	**93.19**	**51**	IAmb	IAmb	04 38 02.9	
	comp=Z,15nm,0.8s						
T25A	**Trinidad**	**93.19**	**51**	P	**P**	**04 38 01.4**	**0.0**
	baz=243,SNR=14						
WTLY	**Watson Lake, Y**	**93.21**	**23**	P	**P**	**04 38 00.3**	**-0.4**
	baz=226						
FARO	**Faro, Yukon**	**93.22**	**20**	P	**P**	**04 38 00.5**	**-0.1**
	baz=222						
COLD	**Coldfoot**	**93.23**	**11**	P	**P**	**04 38 00.9**	**+0.3**
	baz=207						
H25K	**Birch Creek**	**93.23**	**13**	P	**P**	**04 38 01.3**	**+0.8**
	baz=211						
K29M	**Barlow Dome**	**93.24**	**17**	P	**P**	**04 38 00.9**	**+0.1**
	baz=218,SNR=23						
CO03	**El Pedregal**	**93.25**	**126**	IAmb	IAmb	04 38 03.3	
	comp=Z,20nm,0.7s						
LZH	**Lanzhou**	**93.26**	**308**	‖P	**P**	**04 38 00.4**	**-1.2**
LZH				pP	pP	04 40 00.4	+2.3
LZH				sP	sP	04 40 56.4	+5.2
LZH				PP	**PP**	**04 41 55.7**	**+0.7**
LZH				SKS	**SKSac**	**04 47 44.0**	**-0.8**
LZH				S	**ScS**	**04 48 26.3**	**+2.2**
LZH				sS	sS	04 51 53.2	-0.1
LZH				pmax	pmax		
	comp=Z,55nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,5.1s						
G24K	**Hadweenzic Riv**	**93.28**	**12**	P	**P**	**04 38 01.5**	**+0.7**
	baz=210						
RWWY	**Rawlins**	**93.40**	**46**	IAmb	IAmb	04 38 03.3	
	comp=Z,14nm,0.8s						
MAYO	**Mayo, Yukon**	**93.50**	**18**	P	**P**	**04 38 03.0**	**+1.1**
	baz=220,SNR=11						
Q24A	**Divide**	**93.51**	**49**	IAmb	IAmb	04 38 05.3	
	comp=Z,26nm,0.9s						
Q24A	**Divide**	**93.51**	**49**	P	**P**	**04 38 03.1**	**+0.2**
	baz=242						
J29M	**Klondike Camp**	**93.53**	**17**	IAmb	IAmb	04 38 07.6	
	comp=Z,26nm,0.8s						
ISCO	**Idaho Springs**	**93.58**	**48**	P	**P**	**04 38 03.4**	**+0.2**
ISCO	**Idaho Springs**	**93.58**	**48**	P	**P**	**04 38 03.4**	**+0.2**
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ISCO	**Idaho Springs**	**93.58**	**48**	P	**P**	**04 38 03.3**	**+0.2**
	baz=242,SNR=5.8						
G25K	**Bearman Lake**	**93.61**	**13**	P	**P**	**04 38 02.1**	**-0.1**
	baz=211						
I27K	**Kandik River**	**93.61**	**15**	P	**P**	**04 38 02.6**	**+0.2**
	baz=215						
JCT	**Junction City**	**93.71**	**58**	IAmb	IAmb	04 38 05.0	
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**93.71**	**58**	P	**P**	**04 38 03.8**	**+0.1**
	baz=245						
RLMT	**Red Lodge**	**93.77**	**42**	P	**P**	**04 38 04.0**	**+0.2**
	baz=240,SNR=9.2						
N23A	**Red Feather La**	**93.86**	**47**	IAmb	IAmb	04 38 08.3	
	comp=Z,16nm,1.0s						
N23A	**Red Feather La**	**93.86**	**47**	P	**P**	**04 38 04.8**	**+0.4**
	baz=242,SNR=10						
WAPA	**Wapiti River**	**93.91**	**30**	IAmb	IAmb	04 38 06.1	
	comp=Z,17nm,0.8s						
F24K	**Squaw Lake**	**93.91**	**12**	P	**P**	**04 38 04.3**	**+0.5**
	baz=209						
E23K	**Chandalar**	**94.08**	**11**	P	**P**	**04 38 05.2**	**+0.6**
	baz=208						
BRLDA	**Berland Lookou**	**94.13**	**32**	IAmb	IAmb	04 38 07.3	
	comp=Z,18nm,0.8s						
H27K	**Steamboat Moun**	**94.15**	**15**	P	**P**	**04 38 05.0**	**+0.2**
	baz=215,SNR=6.5						
MMPY	**Sheldon Lake,**	**94.17**	**20**	P	**P**	**04 38 05.2**	**+0.2**
	baz=224,SNR=6.7						
AMTX	**Amarillo**	**94.17**	**54**	P	**P**	**04 38 05.3**	**-0.4**
	baz=244						
I29M	**Ogilvie Camp,**	**94.23**	**16**	P	**P**	**04 38 05.0**	**-0.2**
	baz=218,SNR=9.0						
G26K	**Porcupine Rive**	**94.25**	**13**	P	**P**	**04 38 05.3**	**+0.1**
	baz=213						
E24K	**Your Creek**	**94.29**	**11**	P	**P**	**04 38 05.4**	**-0.1**
	baz=209						
K22A	**Casper**	**94.31**	**45**	IAmb	IAmb	04

baz=211
G30M tAoh Zraii Nji 96.03 16 P P 04 38 13.2 -0.1
baz=220
A21K Barrow 96.04 7 P P 04 38 13.9 +0.7
baz=202
WHTX Lake Whitney, 96.17 58 P P 04 38 14.8 +0.1
baz=246
WMOK Wichita Mounta 96.27 55 P P 04 38 15.2 0.0
baz=246
LAO LASA Array 96.39 42 IAmb IAmb 04 38 17.7
comp=Z,12nm,0.8s
LAO LASA Array 96.39 42 P P 04 38 15.7 +0.2
baz=242
C27K Jago River 96.52 12 P P 04 38 15.6 +0.2
baz=213
OGNE Ogallala 96.53 48 P P 04 38 16.0 -0.3
baz=244
C26K Camden Bay 96.54 12 P P 04 38 16.0 +0.5
baz=212
ULN Ulaanbaatar 96.55 320 P P 04 38 16.6 +0.4
ULN IAmb IAmb 04 38 18.4
comp=Z,29nm,1.7s
ULN Ulaanbaatar 96.55 320 P P 04 38 16.6 +0.4
ULN pmax pmax
comp=Z,29nm,1.7s
ULN Ulaanbaatar 96.55 320 P P 04 38 16.7 +0.4
RSSD Black Hills 96.59 45 P P 04 38 16.3 -0.3
RSSD IAmb IAmb 04 38 18.2
comp=Z,9.1nm,0.8s
RSSD Black Hills 96.59 45 P P 04 38 16.3 -0.3
RSSD pmax pmax
comp=Z,9.0nm,0.9s
RSSD Black Hills 96.59 45 P P 04 38 16.3 -0.3
baz=244
HKT Hockley 96.63 60 P P 04 38 18.2 +1.4
HKT IAmb IAmb 04 38 20.1
comp=Z,16nm,1.4s
HKT Hockley 96.63 60 P P 04 38 18.2 +1.4
HKT pmax pmax
comp=Z,16nm,1.5s
SONM Songino Array 96.93 319 P P 04 38 18.2 +0.2
comp=Z,2.1nm,0.6s,baz=133,slow=4.1,SNR=12
SONM pP pP 04 40 14.9 +0.2
comp=Z,1.5nm,0.8s,baz=123,slow=7.1,SNR=2.1
SONM PP PP 04 42 16.4 -6.3
comp=Z,3.8nm,0.9s,baz=130,slow=5.3,SNR=7.2
SONM PKKPbc **PKKPbc 04 54 57.1 -0.7**
comp=Z,1.7nm,0.5s,baz=259,slow=2.8,SNR=6.8
comp=Z,2.1nm,0.6s
SONM Songino Array 96.93 319 P P 04 38 17.9 0.0
SONM IAmb IAmb 04 38 20.0
comp=Z,12nm,1.3s
SONM Songino Array 96.93 319 P P 04 38 17.9 0.0
SONM pmax pmax
comp=Z,12nm,1.3s
F31M Tsiigehtchic 97.01 16 P Pdif 04 38 17.9 +0.3
baz=222
WRGLY Wrigley 97.19 22 P P 04 38 19.2 +0.7
baz=230
CBKS Cedar Bluff 97.24 51 P P 04 38 20.3 +0.9
baz=246
FNO Franklin 97.51 55 IAmb IAmb 04 38 24.6
comp=Z,28nm,1.4s
GTA Gaotai 97.57 310 ⇓P **P 04 38 23.5 +2.5**
GTA SKS **SKSac 04 48 05.4 -1.6**
GTA S **S 04 49 04.5 +4.6**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,81nm,5.8s
INK Inuvik 97.71 16 P Pdif 04 38 20.3 -0.4
comp=Z,6.1nm,0.8s,baz=226,slow=3.7,SNR=14
comp=Z,6.1nm,0.8s
INK Inuvik 97.71 16 P P 04 38 21.0 +0.2
baz=222
DGMT Dagmar 98.42 41 P P 04 38 25.6 +1.1
baz=244
K31A O'Neill 99.46 48 Pdif **Pdif 04 38 29.9 +0.7**
MIAR Mount Ida 100.15 57 P **Pdif 04 38 34.0 +1.6**
baz=248
ECSD EROS Data Cent 101.33 47 P Pdif 04 38 37.8 +0.3
baz=248
A36M Sachs Harbour 102.31 15 P Pdif 04 38 42.7 +1.7
baz=230
LPAZ La Paz 102.47 114 P **Pdif 04 38 47.8 +3.8**
comp=Z,1.3nm,0.8s,baz=307,slow=5.1,SNR=6.2
LPAZ PKKPbc **PKKPbc 04 54 40.1 -1.9**
comp=Z,1.0nm,0.3s,baz=90,slow=4.0,SNR=4.8
TAPN Taplejung 102.47 294 *eP* **PKiKP 04 43 01.1 -0.3**
comp=Z,24nm,0.9s
CCM Cathedral Cave 103.14 54 P **Pdif 04 38 47.4 +1.8**
baz=250
RAMN Ramite 103.26 294 *eP* **PKiKP 04 43 03.3 +0.5**
comp=Z,12nm,0.6s
JIRN Jiri 103.84 294 *eP* **PKiKP 04 43 03.7 -0.3**
GUN Gumba 104.18 294 *eP* **PKiKP 04 43 04.8 +0.2**
SPMN Marine on St. 104.41 47 P **Pdif 04 38 53.1 +2.0**
baz=251
PKI Pulchoki 104.47 294 *eP* **PKiKP 04 43 04.6 -0.5**
PKIN Phulchoki 104.48 294 *eP* **PKiKP 04 43 05.2 +0.1**
comp=Z,8.6nm,0.5s
CPUP Villa Florida 105.53 128 PKKPbc PKKPbc 04 54 32.1 -0.4
comp=Z,1.0nm,0.9s,baz=315,slow=5.7,SNR=2.9
DANN Dangsing 106.10 294 *eP* **PKiKP 04 43 07.8 -0.3**
PYUN Piuthan 106.66 294 *eP* **PKiKP 04 43 09.4 +0.4**
TKL Tuckaleechee C 108.11 58 PKiKP **PKiKP 04 43 10.4 -0.8**
comp=Z,1.9nm,0.8s,baz=315,slow=5.7,SNR=3.7
P49A Miami Univ. Ec 108.45 54 P **PKiKP 04 43 11.6 -0.1**
baz=254
ZSN Zaisan 110.43 314 *i* PKIKP **PKiKP 04 43 14.6 -0.6**
ZSN Zaisan 110.43 314 *e*PKiKP **PKiKP 04 43 14.7 -0.6**
baz=314
SDV Santo Domingo 111.12 89 PKiKP **PKiKP 04 43 16.7 -1.1**
comp=Z,2.3nm,0.3s,baz=0.0,slow=6.1,SNR=3.7
ZALV Zalesovo Beam 111.77 321 PKiKP **PKiKP 04 43 16.3 -1.2**
comp=Z,7.5nm,0.7s,baz=153,slow=1.5,SNR=26
ZALV SKP 04 46 03.3
comp=Z,2.2nm,0.7s,baz=133,slow=1.7,SNR=3.6
ZALV PKKPbc **PKKPbc 04 54 12.1 -1.4**
comp=Z,2.0nm,0.6s,baz=270,slow=3.4,SNR=7.4
MK31 Makanchi Array 112.01 313 *i* PKIKP **PKiKP 04 43 17.3 -1.0**
MKAR Makanchi Array 112.01 313 Pdiff **Pdif 04 39 27.1 +2.2**
comp=Z,1.4nm,0.7s,baz=101,slow=5.6,SNR=11
MKAR PKiKP **PKiKP 04 43 17.8 -0.5**
comp=Z,7.7nm,0.7s,baz=72,slow=2.0,SNR=41
MKAR PP PP 04 44 04.0 -8.7
comp=Z,2.3nm,0.8s,baz=86,slow=8.8,SNR=4.5
MKAR SKP 04 46 04.1
comp=Z,2.8nm,0.7s,baz=90,slow=2.4,SNR=5.7
MKAR PKKPbc **PKKPbc 04 54 12.4 -0.1**
comp=Z,1.7nm,0.7s,baz=290,slow=3.6,SNR=9.1
MKAR PKKPab **PKKPab 04 54 22.6 +1.3**
comp=Z,3.0nm,0.7s,baz=274,slow=4.1,SNR=14
MKAR SKKPbc SKKPbc 04 57 01.8 -5.6
comp=Z,1.6nm,0.8s,baz=278,slow=3.6,SNR=6.6
MAKZ Makanchi 112.22 313 PKiKP **PKiKP 04 43 16.7 -2.0**
NRIK Noril'sk 112.74 337 ⇓*i* PKIKP **PKiKP 04 43 19.3 +0.4**
SHLS Shalkode 113.28 308 *i* PKIKP **PKiKP 04 43 19.5 -1.4**
SHLS Shalkode 113.28 308 *e*PKiKP **PKiKP 04 43 19.5 -1.4**
baz=308
PDGK Podgornoye 113.29 309 PKIKP **PKiKP 04 43 18.7 -2.3**
UZB Uzynbulak 113.59 308 *i* PKIKP **PKiKP 04 43 21.3 -0.2**
UZB Uzynbulak 113.59 308 *e*PKiKP **PKiKP 04 43 21.4 -0.2**
baz=308
KPKS Kokpek 113.89 309 *i* PKIKP **PKiKP 04 43 20.7 -1.3**
KPKS Kokpek 113.89 309 *e*PKiKP **PKiKP 04 43 20.8 -1.3**
baz=309
MDOK Medeo 115.01 308 *e*PKIKP **PKPdf 04 43 23.3 -1.0**
MDOK Medeo 115.01 308 *e*PKP **PKPdf 04 43 23.3 -1.0**
baz=308
KURK Kurchatov 115.04 317*c i*PKIKP **PKiKP 04 43 25.0 +1.1**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURBB Kurchatov Arra 115.09 316 PKIKP **PKPdf 04 43 22.7 -1.3**
CHKK Chushkaly 115.17 309 *e*PKIKP **PKPdf 04 43 23.1 -1.3**
CHKK Chushkaly 115.17 309 *e*PKP **PKPdf 04 43 23.1 -1.3**
baz=309
KSH Kashi 115.17 304 PKP **PKiKP 04 43 25.9 +1.2**
KSH SKKS 04 50 39.5
NRN Naryn 115.49 306 PKPdf **PKPdf 04 43 24.8 -0.7**
NRN Naryn 115.49 306 PKIKP **PKPdf 04 43 24.8 -0.7**
KUU Kurty 115.64 309 *e*PKIKP **PKPdf 04 43 23.7 -1.6**
KUU *e* 04 44 36.2
KUU Kurty 115.64 309 *e*PKP **PKPdf 04 43 23.7 -1.6**
baz=309
KUU *e*PP **PP 04 44 36.2 -1.9**
baz=309
VOI Vohitsoka 115.89 229 P **PKPdf 04 43 26.2 -0.5**
TKM2 Tokmak 2 116.03 308 P **PKPdf 04 43 25.7 -0.6**
SNR=14
TKM2 Tokmak 2 116.03 308 PKIKP **PKPdf 04 43 24.8 -1.6**
CHMS Chumysh 116.65 308 P **PKPdf 04 43 26.8 -0.5**
SNR=7.2
UCH Uchtor 116.71 307 P **PKiKP 04 43 28.1 +0.1**
SNR=16
AAK Ala-Archa 116.79 307⇑*i* PKIKP **PKiKP 04 43 27.8 0.0**
AAK pmax pmax
comp=Z,10.0nm,1.0s
AAK Ala-Archa 116.79 307 P **PKiKP 04 43 27.9 0.0**
AAK Ala-Archa 116.79 307 PKiKP **PKiKP 04 43 27.7 0.0**
SGDS Sogindy 116.80 308 *e*PKIKP **PKPdf 04 43 26.7 -0.9**
SGDS Sogindy 116.80 308 *e*PKP **PKPdf 04 43 26.7 -0.9**
baz=308
PAL Palisades 116.84 55 P **PKPdf 04 43 27.2 -0.5**
baz=261
LONY Lake Ozonia 116.85 51 P **PKPdf 04 43 27.4 -0.2**
baz=263
USP Ospenovka 116.87 308 P **PKPdf 04 43 27.5 -0.3**
SNR=18
EKS2 Erkin-Say 117.31 307 P **PKPdf 04 43 28.7 -0.1**
SNR=8.1
BTLS Baital 117.42 310 *e*PKIKP **PKPdf 04 43 27.7 -0.9**
BTLS Baital 117.42 310 *e*PKP **PKPdf 04 43 27.8 -0.9**
baz=310
L61B Northampton 117.95 53 P **PKPdf 04 43 29.3 -0.5**
baz=263
SJG San Juan 118.32 81 PKP **PKPdf 04 43 30.4 -0.8**
comp=Z,12nm,0.6s,baz=51,slow=1.2,SNR=7.2
LBNH Lisbon 118.70 51 P **PKiKP 04 43 31.3 0.0**
baz=264
BRZS Berezniki 118.77 315 *e*PKIKP **PKPdf 04 43 29.8 -1.3**
BRZS Berezniki 118.77 315 *e*PKP **PKPdf 04 43 29.9 -1.3**
baz=315
HRV Adam Dziewonsk 118.78 53 P **PKPdf 04 43 31.2 -0.1**
baz=264
OTUK Ortayu 118.89 313 PKIKP **PKPdf 04 43 30.3 -1.1**
BDFB Brasília 118.91 125 PKP **PKPdf 04 43 32.0 -0.6**
comp=Z,8.2nm,0.7s,baz=214,slow=4.0,SNR=16
BDFB PKKPbc **PKKPbc 04 53 50.9 +2.0**
comp=Z,4.2nm,0.8s,baz=115,slow=2.0,SNR=6.1
BDFB Brasília 118.91 125 PKPdf **PKPdf 04 43 30.9 -1.7**
BDFB Brasília 118.91 125 PKIKP **PKPdf 04 43 32.0 -0.6**
KK31 Karatay Array 119.75 307 PKPdf **PKPdf 04 43 32.9 -0.4**
KK31 Karatay Array 119.75 307 PKIKP **PKPdf 04 43 32.9 -0.4**
KKAR Karatay Array 119.75 307 PKPdf **PKPdf 04 43 31.9 -1.3**
KKAR Karatay Array 119.75 307 PKIKP **PKPdf 04 43 32.0 -1.3**
KBL Kabul 119.78 297 PKPdf **PKPdf 04 43 33.8 0.0**
KBL Kabul 119.78 297 PKIKP **PKPdf 04 43 33.8 0.0**
KBL Kabul 119.78 297 P **PKiKP 04 43 34.2 +0.3**
IUG Iuzhnay 120.01 306 *e*PKIKP **PKPdf 04 43 32.7 -1.2**
IUG *e* 04 45 06.0
IUG Iuzhnay 120.01 306 *e*PKP **PKPdf 04 43 32.8 -1.2**
baz=306
IUG *e*PP **PP 04 45 06.1 -2.0**
baz=306
BVAR Borovoye Array 120.27 319 PKP **PKPdf 04 43 33.7 -0.2**
comp=Z,12nm,0.5s,baz=110,slow=1.1,SNR=56
BVAR PP **PP 04 45 12.5 +3.1**
comp=Z,3.1nm,0.9s,baz=104,slow=5.0,SNR=3.8
BVAR SKP 04 46 20.5
comp=Z,1.6nm,0.5s,baz=179,slow=0.8,SNR=4.1
BRVK Borovoye 120.33 319 PKPdf **PKPdf 04 43 33.7 -0.3**
BRVK Borovoye 120.33 319*c i*PKIKP **PKPdf 04 43 33.4 -0.6**
BRVK pmax pmax
comp=Z,28nm,1.3s
BRVK Borovoye 120.33 319 P **PKPdf 04 43 33.5 -0.5**
E62A Clayton Lake 120.57 49 **PKPdf 04 43 33.7 -1.0**
PKME Peaks-Kenny Pk 120.66 50 P **PKPdf 04 43 34.5 -0.4**
baz=267
SUR Sutherland 120.93 200 PKPdf **PKPdf 04 43 35.4 -0.8**
SUR Sutherland 120.93 200 P **PKPdf 04 43 36.2 0.0**
NEEM North Greenlan 120.95 11 *eP* **PKPdf 04 43 34.3 -0.6**
NOR Nord 121.52 3 *eP* **PKPdf 04 43 35.0 -0.6**
UPNV Upernavik 122.13 17 *eP* **PKPdf 04 43 35.7 -1.2**
SCHQ Schefferville 122.18 39 PKP **PKPdf 04 43 36.3 -1.2**
comp=Z,8.5nm,0.7s,baz=315,slow=3.4,SNR=7.0
SCHQ PKKPbc **PKKPab 04 53 36.3 -0.1**
comp=Z,2.7nm,0.6s,baz=157,slow=2.4,SNR=5.2
BOSA Boshof 122.71 206 PKP **PKiKP 04 43 40.3 +0.4**
comp=Z,15nm,0.7s,baz=162,slow=2.2,SNR=39
BOSA PKKPab **PKKPbc 04 53 34.8 -0.8**
comp=Z,2.8nm,0.6s,baz=360,slow=4.4,SNR=5.6
BOSA Boshof 122.71 206 PKPdf **PKPdf 04 43 39.3 -0.3**
HAL Halifax 124.68 51 PKPdf **PKPdf 04 43 41.4 -1.2**
HAL Halifax 124.68 51 PKIKP **PKPdf 04 43 41.4 -1.2**
SPA0 Spitsbergen Ar 124.82 356 *eP* **PKPdf 04 43 41.3 -0.7**
SPA0 IAmb IAmb 04 43 43.5
comp=Z,48nm,0.8s
ILULI Ilulissat 125.24 20 *eP* **PKPdf 04 43 41.9 -1.1**
SFJD Kangerlussuaq 126.46 22 *eP* **PKPdf 04 43 44.6 -0.7**
SUMG Summit 126.56 14 PKPdf **PKPdf 04 43 44.8 -1.1**
SUMG Summit 126.56 14 PKIKP **PKPdf 04 43 44.8 -1.1**
SUMG Summit 126.56 14 *i* P **PKPdf 04 43 45.0 -0.9**
ARU Arti 126.69 324 PKPdf **PKPdf 04 43 45.7 -0.4**
ARU Arti 126.69 324 *i* PKIKP **PKPdf 04 43 46.2 +0.1**
ARU 04 45 48.7
ARU 04 50 06.7
MHTO MHTO 126.70 279 P **PKiKP 04 43 47.6 -0.1**
DQM DQM 126.82 278 P **PKiKP 04 43 49.1 +1.1**
JMDO Jabal Madar 126.91 281 P **PKiKP 04 43 48.7 +0.5**
AB31 Akbulak array 127.06 315 *i* PKIKP **PKPdf 04 43 46.6 -0.4**
SMDO Samad 127.11 282 P **PKiKP 04 43 49.6 +0.9**
BIDO Bidbid 127.14 282 P **PKiKP 04 43 49.0 +0.4**
NUUK Nuuk 127.31 26 *eP* **PKiKP 04 43 47.7 +0.1**
BSY Bisya 127.80 281 P **PKPdf 04 43 49.0 -0.3**
HOQ Hoqain 127.89 282 P **PKPdf 04 43 48.7 -0.8**
DBG Daneborg 128.11 7 *eP* **PKPdf 04 43 48.4 0.0**
AKTO Aktyubinsk 128.14 316 PKP **PKPdf 04 43 49.2 +0.2**
comp=Z,18nm,0.7s,baz=102,slow=2.5,SNR=51
AKTO SKPab SKPab 04 46 19.9
comp=Z,2.9nm,0.6s,baz=77,slow=6.1,SNR=5.4
DY2G Dye2 128.22 22 *eP* **PKPdf 04 43 48.0 -1.0**
DMTO DMTO 128.59 274 P **PKiKP 04 43 51.3 -0.3**
ICESG Greenland Ices 128.66 17 *eP* **PKPdf 04 43 49.7 -0.2**
SOHO SOHO 128.70 283 P **PKPdf 04 43 50.6 -0.4**
SOHO SOHO 128.70 283 *i* PKPdf **PKPdf 04 43 49.9 -1.1**
SNR=12
GEYT Alibeck 128.89 300 PKP **PKiKP 04 43 51.5 -0.2**
comp=Z,21nm,0.8s,baz=253,slow=1.5,SNR=23
GEYT PP **PP 04 46 04.2 -2.5**
comp=Z,2.3nm,0.6s,baz=318,slow=4.2,SNR=4.4
GEYT SKPab SKPab 04 46 24.1
comp=Z,16nm,1.0s,baz=116,slow=3.4,SNR=9.8
GEYT Alibeck 128.89 300 PKPdf **PKPdf 04 43 51.2 +0.3**
UOSS Minazif 129.15 284 **PKPdf 04 43 50.9 -0.9**
UOSS Minazif 129.15 284 P **PKiKP 04 43 52.3 -0.3**
UOSS Minazif 129.15 284 *i* PKPdf **PKPdf 04 43 51.3 -0.5**
SNR=6.9
HATD Hatta, Dubai 129.19 284 P **PKPdf 04 43 52.1 +0.2**
HATD Hatta, Dubai 129.19 284 *i* PKiKP **PKPdf 04 43 51.7 -0.2**
SNR=8.2
RBK Rabkut 129.21 274 P **PKiKP 04 43 52.8 -0.2**
MSFE Esma-Masafi 129.26 284 *i* PKiKP **PKiKP 04 43 52.8 -0.1**
SNR=7.3
MASF Masafi 129.27 284 P **PKiKP 04 43 53.1 +0.2**
ALNE Al Ain 129.38 282 P **PKiKP 04 43 53.1 +0.1**
SHME Shamm 129.40 285 P **PKiKP 04 43 53.2 +0.2**
SHME Shamm 129.40 285 PKiKP **PKPdf 04 43 52.4 +0.2**
DOK Doka 129.59 275 P **PKPdf 04 43 53.0 +0.3**
NAZ Nazwa, Dubai 129.64 284 P **PKiKP 04 43 53.8 +0.3**
NAZ Nazwa, Dubai 129.64 284 PKiKP **PKiKP 04 43 53.3 -0.2**
FAQ Al Faqa, Dubai 129.66 283 P **PKPdf 04 43 53.1 +0.3**
FAQ Al Faqa, Dubai 129.66 283 *i* PKiKP **PKPdf 04 43 53.1 +0.3**
SNR=10
WHFO Wadi Hawf 129.72 274 P **PKPdf 04 43 53.0 -0.1**
ASUD Al Ashush, Dub 129.87 283 P **PKPdf 04 43 52.2 -0.9**
ASUD Al Ashush, Dub 129.87 283 *i* PKPdf **PKPdf 04 43 52.4 -0.7**
SNR=8.5
ABTO Aybut 130.00 273 P **PKPdf 04 43 54.1 +0.4**
KIRV Kirov 130.71 328 SKPbc **SKPab 04 46 28.7 +0.1**
comp=Z,40nm,0.5s,baz=90,slow=0.6,SNR=5.3
KIRV Kirov 130.71 328*d i*PKIKP **PKiKP 04 43 54.3 -0.3**
HAMF Hammerfest 130.96 350 *eP* **PKPdf 04 43 54.0 +0.2**
PRGR Permogore 131.04 333 *e*PKIKP **PKPdf 04 43 53.5 -0.7**
PRGR 04 45 56.2
PRGR *e* 04 46 27.1
PRGR pmax pmax
comp=Z,24nm,0.9s
KEV Kevo 131.14 348 **PKPdf 04 43 54.6 +0.4**
KEV Kevo 131.14 348 PKIKP **PKPdf 04 43 54.6 +0.4**
ISOG Isortoq, Green 131.17 20 *eP* **PKiKP 04 43 54.9 -0.5**
MZR Muzera 131.21 281 P **PKiKP 04 43 56.6 -0.2**
MZR Muzera 131.21 281 *i* PKiKP **PKPdf 04 43 56.0 +0.2**
SNR=7.9
APA Apatity 131.43 344⇓*i* PKIKP **PKPdf 04 43 53.2 -1.6**
APA *i* 04 46 24.8
APA pmax pmax
comp=Z,12nm,0.8s
ARA0 ARCESS Array S 131.61 348 *eP* **PKPdf 04 43 54.8 -0.3**
ARA0 IAmb IAmb 04 43 57.1
comp=Z,28nm,0.9s
ARCES ARCESS Array B 131.61 348 PKhKP PKPpre 04 43 43.9
comp=Z,4.5nm,0.9s,baz=346,slow=2.5,SNR=10
ARCES PKP **PKPdf 04 43 55.0 -0.1**
comp=Z,26nm,0.7s,baz=17,slow=1.3,SNR=31
ARCES SKPbc **SKPbc 04 46 31.2 +0.2**
comp=Z,15nm,0.8s,baz=28,slow=3.3,SNR=6.9
KTK1 Kautokeino 132.47 349 *eP* **PKPdf 04 43 57.2 +0.5**
TRO Tromso 132.59 351 *eP* **PKPdf 04 43 56.0 -0.9**
LSZ Lusaka 132.60 218 **PKPdf 04 43 58.5 -0.3**
LSZ Lusaka 132.60 218 PKIKP **PKPdf 04 43 58.5 -0.3**
KLMR Klimovskoe 133.94 334 *e*PKHKP PKPpre 04 43 51.9
KLMR *e* 04 46 37.7
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 133.94 334 *e*PKPdf PKPpre 04 43 51.9
KLMR AMP 04 44 01.2
comp=Z,15nm,0.9s
KLMR *e*PP **PP 04 46 37.7 +0.1**
BELG Belogornoye 133.96 321 SKPbc **SKPbc 04 46 39.9 +0.6**
comp=Z,21nm,0.5s,baz=357,slow=1.3,SNR=6.8
BELG Belogornoye 133.96 321*de*PKIKP **PKPdf 04 43 59.7 -0.2**
RCBR Riachuelo 134.29 125 **PKPdf 04 44 02.3 +0.4**
RCBR Riachuelo 134.29 125 PKIKP **PKPdf 04 44 02.3 +0.4**
STEI Steigen 134.68 352 *eP* **PKPdf 04 44 00.6 -0.3**
KIBK Kibwezi 134.96 240 P **PKPdf 04 44 03.1 -0.1**
KMBO Kilima Mbogo 136.32 241 PKhKP PKPpre 04 43 57.4
comp=Z,1.2nm,0.5s,baz=185,slow=4.6,SNR=4.1
KMBO PKP **PKiKP 04 44 08.3 +0.6**
comp=Z,9.3nm,0.9s,baz=61,slow=6.2,SNR=10
KMBO SKPbc **SKiKP 04 46 51.7 -1.7**
comp=Z,11nm,0.9s,baz=80,slow=4.1,SNR=14
KMBO Kilima Mbogo 136.32 241 PKPdf **PKPdf 04 44 03.4 -2.5**
KMBO Kilima Mbogo 136.32 241 P **PKPdf 04 44 06.6 +0.7**
KMBO Kilima Mbogo 136.32 241 *i* PKiKP **PKPdf 04 44 06.3 +0.4**
SNR=6.3
MAK Makhachkala 136.55 308 *eP* **Pdif 04 41 12.4 -1.7**
MAK *e* 04 46 55.5
MAK *e*PPP PPP 04 49 58.0
MAK *e* 04 50 29.4
MAK *e*SS SS 05 04 20.2 +4.6
MOS Moscow 137.71 329 *e*PKIKP **PKPdf 04 44 06.8 0.0**
MOS *e* 04 46 58.3
MOS pmax pmax
comp=Z,50nm,1.0s
GROC Groznyy 137.73 309 *e*PKIKP **PKPdf 04 44 08.3 +1.0**
GROC *e* 04 47 02.9
GROC pmax pmax
comp=Z,75nm,0.6s
VRH Novokhopyorsk 137.80 322 *e*PKIKP **PKPdf 04 44 07.4 +0.3**
VRH pmax pmax
comp=Z,40nm,0.7s
FINES FINESS Array B 138.19 342 PKhKP PKPpre 04 43 58.5
comp=Z,2.0nm,0.3s,baz=42,slow=3.8,SNR=17
FINES PKP **PKPdf 04 44 07.6 +0.1**
comp=Z,9.0nm,0.6s,baz=82,slow=2.6,SNR=15
FINES SKPbc **SKPbc 04 46 52.7 +1.0**
comp=Z,14nm,0.7s,baz=90,slow=3.8,SNR=8.3
FINES SKKPbc **SKKPbc 04 55 36.0 -3.7**
comp=Z,1.6nm,0.6s,baz=264,slow=1.4,SNR=7.0
RAYN Ar Rayn 138.51 279 PKPdf **PKPdf 04 44 08.7 -0.7**
RAYN Ar Rayn 138.51 279 PKIKP **PKPdf 04 44 08.7 -0.7**
RAYN Ar Rayn 138.51 279 *i* PKiKP **PKPdf 04 44 09.9 +0.5**
SNR=6.8
OBN Obninsk 138.56 329⇑*e*PKIKP **PKPdf 04 44 09.1 +0.7**
OBN *e*SS SS 05 04 40.7 +3.0
OBN pmax pmax
comp=Z,50nm,1.5s
LPSR Galich'ya Gora 138.70 325 *e*PKIKP **PKPdf 04 44 07.5 -1.2**
LPSR pmax pmax
comp=Z,20nm,1.2s
VORR Voronezh 139.00 323 *e*PKIKP **PKPdf 04 44 06.9 -2.4**
VORR pmax pmax
comp=Z,60nm,0.4s
GNI Garni 139.10 305*ce*PKIKP **PKPdf 04 44 09.0 -1.1**
GNI Garni 139.10 305 PKPdf **PKPdf 04 44 09.0 -1.1**
ZEI Tsey 139.18 309 *i* PKIKP **PKPdf 04 44 10.9 +0.7**
ZEI pmax pmax
comp=Z,14nm,0.9s
VSR Storozhevoye 139.23 323 *e*PKIKP **PKPdf 04 44 09.7 -0.1**
VSR pmax pmax
comp=Z,30nm,1.1s
KBZ Khabaz 139.65 310 PKhKP PKPpre 04 44 03.1
comp=Z,4.4nm,0.8s,baz=149,slow=2.1,SNR=9.3
KBZ SKPbc **SKPbc 04 46 56.8 +0.6**
comp=Z,2.7nm,0.6s,baz=103,slow=5.3,SNR=4.7
KIV Kislovodsk 139.74 311 *e*PKIKP **PKPdf 04 44 09.9 -1.2**
KIV *e*PP **PP 04 47 10.5 -3.7**
KIV *e*SS SS 05 04 48.6 -4.1
KIV pmax pmax
comp=Z,15nm,1.0s
KIV Kislovodsk 139.74 311 PKPdf **PKPdf 04 44 08.5 -2.6**
VSU Vasula 140.32 338⇑*i* PKIKP **PKPdf 04 44 12.1 +0.6**
LODK Lodwar 140.47 245 PKPpre 04 44 07.3
DOMB Dombas 141.09 353 *eP* **PKPdf 04 44 07.3 -5.6**
DOMB IAmb IAmb 04 44 12.6
comp=Z,17nm,0.8s
AKN Aaknes 141.15 355 *eP* **PKPdf 04 44 08.5 -4.4**
AKN IAmb IAmb 04 44 13.1
comp=Z,41nm,0.9s
MBAR Mbarara 141.73 235 PKPdf **PKPdf 04 44 12.8 -2.9**
MBAR Mbarara 141.73 235 PKIKP **PKPdf 04 44 12.8 -2.9**
MBAR Mbarara 141.73 235 P **PKPdf 04 44 13.4 -2.2**
NB2 NORSAR Subarra 141.79 351 PKP **PKPdf 04 44 09.4 -4.8**
comp=Z,3.5nm,0.6s,baz=16,slow=3.2
NOA NORSAR Array B 141.79 351 PKhKP PKPpre 04 44 10.0
comp=Z,26nm,0.8s,baz=16,slow=4.7,SNR=70
NOA SKPbc **SKiKP 04 47 02.2 -0.6**
comp=Z,4.0nm,0.7s,baz=14,slow=4.2,SNR=8.0
FOO Floro 141.87 356 *eP* **PKPdf 04 44 09.9 -4.2**
FOO IAmb IAmb 04 44 11.1
comp=Z,57nm,1.1s
NC602 NORSAR Array S 142.04 351 *eP* **PKPdf 04 44 10.0 -4.6**
NC602 IAmb IAmb 04 44 11.8
comp=Z,42nm,0.8s
HYA Hoyanger 142.22 355 *eP* **PKPdf 04 44 12.2 -2.6**
HYA IAmb IAmb 04 44 12.7
comp=Z,23nm,0.9s
HFS Hagfors 142.26 349 PKhKP PKPpre 04 44 11.5
comp=Z,55nm,0.4s,baz=68,slow=3.9,SNR=64
HFS SKPbc **SKPbc 04 47 03.0 +0.6**
comp=Z,11nm,0.8s,baz=70,slow=1.7,SNR=5.2
HFS SKKPbc **SKKPab 04 55 21.8 -0.5**
comp=Z,2.9nm,0.7s,baz=123,slow=5.3,SNR=5.6
SUE Sulen 142.42 356 *eP* **PKPdf 04 44 11.7 -3.4**
SUE IAmb IAmb 04 44 14.8
comp=Z,149nm,1.3s
SKAR Skarslia 142.50 353 *eP* **PKPdf 04 44 12.4 -3.0**
SKAR IAmb IAmb 04 44 14.2
comp=Z,42nm,0.9s
MARD Mardin 142.65 301 PKPdf **PKPdf 04 44 14.2 -2.4**
ISAL Salakas 142.73 336 *eP* **PKPdf 04 44 14.0 -1.9**
MNK Minsk 142.81 333 *i* PKIKP **PKPdf 04 44 15.0 -1.0**
MNK *i* 04 47 31.5
MNK *i* 04 50 34.1
MNK *i* PPP PPP 04 50 46.7
MNK *i* SS SS 05 05 28.4 +1.9
MNK *i* SSS SSS 05 10 59.6
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK pmax pmax
comp=Z,104nm,0.8s
MNK pmax pmax
comp=N,56nm,0.9s
MNK MLR MLR
comp=N,1μm,19.0s
MNK MLR MLR
comp=Z,42nm,15.0s
MNK MLR MLR
comp=E,3.0nm,1.0s
MNK Minsk 142.81 333 *i* PKP **PKPdf 04 44 15.0 -1.0**
comp=E,3.0nm,0.8s
MNK *i* PKP **PKPdf 04 44 15.0 -1.0**
comp=N,56nm,0.9s

MNK			*i* PKP	**PKPdf**	04 44 15.0	-1.0
	comp=Z,104nm,0.8s,baz=225					
MNK			*i* pPKP	**pPKPdf**	04 46 19.8	-0.6
MNK			*i* PP	**PP**	04 47 31.6	-0.1
MNK			*i* SKS	**SKSdf**	04 50 34.1	-0.9
MNK			*i* PPP	PPP	04 50 46.8	
MNK			*i* SKKS	**SKKSdf**	04 59 51.0	-3.3
MNK			*i* SS	**SS**	05 05 28.4	+2.0
MNK			*i* SSS	SSS	05 10 59.7	
MNK			*i* LRM	MLR	05 47 54.3	
	comp=N,1μm,19.2s					
MNK			*i* LRM	MLR	05 48 30.4	
	comp=Z,42nm,15.3s					
MNK			*i* LRM	MLR	05 48 39.0	
	comp=E,3.0nm,0.8s					
IIGN	**Ignalina**	**142.86 335**	*eP*	**PKPdf**	**04 44 13.7**	**-2.4**
OSL	**Oslo**	**142.92 351**	*eP*	**PKPdf**	**04 44 13.3**	**-2.7**
OSL			IAmb	IAmb	04 44 15.2	
	comp=Z,90nm,0.8s					
ASK	**Askoy**	**142.96 356**	*eP*	**PKPdf**	**04 44 14.1**	**-2.0**
NACGM	**Naroch**	**142.97 334**	⇑*i* PKP	**PKPdf**	**04 44 13.8**	**-2.5**
	comp=Z,180nm,0.9s,baz=42					
ANN	**Anapa**	**143.01 314**	*d i* PKIKP	PKPbc	04 44 14.6	-0.1
ANN			*e*		04 46 16.8	
ANN			*e*		04 47 04.5	
ANN			*e*		04 47 29.8	
ANN			*e*		04 50 36.6	
ANN			pmax	pmax		
	comp=Z,208nm,0.8s					
ANN			pmax	pmax		
	comp=N,37nm,0.7s					
ANN			pmax	pmax		
	comp=E,27nm,0.8s					
ANN			MLR	MLR		
	comp=Z,497nm,17.0s					
BER	**Bergen**	**143.05 356**	*eP*	PKPab	04 44 14.0	+0.2
BER			IAmb	IAmb	04 44 15.8	
	comp=Z,123nm,0.7s					
VSVD	**Vaisvydziai**	**143.21 338**	*eP*	PKPbc	04 44 15.4	+0.4
KONO	**Kongsberg**	**143.35 352**	PKPdf	PKPab	04 44 14.6	-0.4
KONO	**Kongsberg**	**143.35 352**	⇑PKIKP	PKPbc	04 44 15.6	+0.3
KONO	**Kongsberg**	**143.35 352**	*eP*	PKPab	04 44 14.9	-0.1
KONO			IAmb	IAmb	04 44 16.8	
	comp=Z,188nm,0.8s					
ODD1	**Odda**	**143.42 354**	*eP*	PKPab	04 44 15.4	0.0
LRW	**Lerwick**	**143.47 1**	*eP*	PKPab	04 44 15.3	-0.1
PABE	**Paberze**	**143.57 337**	*eP*	PKPbc	04 44 16.2	+0.1
PBUR	**Paburge**	**143.85 339**	*eP*	PKPab	04 44 17.0	0.0
BLS5	**Blasjo**	**143.92 354**	*eP*	PKPab	04 44 17.3	0.0
BLS5			IAmb	IAmb	04 44 19.6	
	comp=Z,151nm,1.2s					
KMY	**Karmoy**	**144.22 355**	*eP*	PKPbc	04 44 18.1	+0.1
AKASG	**Malin Array Be**	**144.76 328**	PKP	PKPbc	04 44 19.9	-0.1
	comp=Z,116nm,0.7s,baz=43,slow=4.3,SNR=208					
AKASG			pPKP	pPKPdf	04 46 25.2	+1.2
	comp=Z,3.6nm,0.6s,baz=42,slow=3.8,SNR=2.5					
AKASG			SKPbc	**SKiKP**	**04 47 09.6**	**+0.5**
	comp=Z,15nm,0.7s,baz=47,slow=2.9,SNR=14					
HOMB	**Homborsund**	**144.83 352**	*eP*	**PKPdf**	**04 44 19.5**	**0.0**
HOMB			IAmb	IAmb	04 44 21.5	
	comp=Z,146nm,0.9s					
SNART	**Snartemo**	**144.91 353**	*eP*	**PKPdf**	**04 44 19.6**	**0.0**
SNART			IAmb	IAmb	04 44 22.2	
	comp=Z,152nm,0.9s					
BIGH	**Upper Bighouse**	**145.01 4**	*eP*	**PKPbc**	**04 44 20.2**	**-0.3**
SIM	**Simferopol'**	**145.10 316**	*i* PKIKP	**PKPbc**	**04 44 21.0**	**-0.2**
SIM			pmax	pmax		
	comp=Z,210nm,0.8s					
LEWI	**Lewis, Hebride**	**145.12 6**	*eP*	**PKPdf**	**04 44 19.7**	**-0.3**
MLA1	**Latheron**	**145.23 3**	*eP*	**PKPbc**	**04 44 20.8**	**-0.4**
OVD	**Ostervraa, Den**	**145.52 350**	*eP*	**PKPbc**	**04 44 22.6**	**+0.7**
KAC	**Achnashellach**	**145.90 5**	*eP*	**PKPbc**	**04 44 23.1**	**0.0**
GOET	**G??ttrup**	**145.94 351**	*eP*	**PKPab**	**04 44 24.8**	**-0.2**
MCD	**Coleburn Disti**	**145.96 3**	*eP*	**PKPbc**	**04 44 22.6**	**-0.7**
KPL	**Plockton**	**146.03 6**	*eP*	**PKPbc**	**04 44 22.9**	**-0.6**
BZK	**Bozkurt**	**146.41 311**	⇓P	**PKPbc**	**04 44 23.9**	**-1.1**
MUD	**Monsted U'grnd**	**146.51 351**	*eP*	**PKPbc**	**04 44 25.0**	**+0.2**
BSD	**Bornholm Skovb**	**146.65 344**	*eP*	**PKPbc**	**04 44 24.9**	**-0.3**
BSD	**Bornholm Skovb**	**146.65 344**	*eP*	**PKPbc**	**04 44 25.5**	**+0.3**
DRUM	**Mains of Drumt**	**146.66 3**	*eP*	**PKPbc**	**04 44 24.6**	**-0.6**
COP	**Copenhagen**	**146.68 347**	*eP*	**PKPbc**	**04 44 25.6**	**+0.3**
EDU	**Dundee**	**147.00 3**	*eP*	**PKPbc**	**04 44 26.0**	**-0.1**
INVG	**Invergeldie, C**	**147.06 4**	*eP*	**PKPbc**	**04 44 25.9**	**-0.4**
LAWE	**Loch Awe, Argy**	**147.12 6**	*eP*	**PKPbc**	**04 44 26.2**	**-0.2**
KIS	**Kishinev**	**147.23 323**	⇑*i* PKP	**PKPbc**	**04 44 26.6**	**-0.4**
	comp=Z,190nm,1.2s					
KIS	**Kishinev**	**147.23 323**	*c i* PKIKP	**PKPbc**	**04 44 26.6**	**-0.4**
KIS			pmax	pmax		
	comp=Z,190nm,1.2s					
MILM	**Milestii Mici**	**147.28 322**	⇑P	**PKPbc**	**04 44 27.2**	**0.0**
MILM	**Milestii Mici**	**147.28 322**	*c i* PKIKP	**PKPbc**	**04 44 26.6**	**-0.6**
MILM			*i*		04 44 31.0	
MILM			pmax	pmax		
	comp=Z,46nm,0.5s					
BR131	**Keskin Array S**	**147.46 308**	P	**PKPbc**	**04 44 26.7**	**-1.4**
BRTR	**Keskin Array B**	**147.46 308**	PKP	**PKPdf**	**04 44 25.1**	**+0.4**
	comp=Z,18nm,0.7s,baz=130,slow=1.9,SNR=27					
BRTR			PKPbc	**PKPbc**	**04 44 28.5**	**+0.4**
	comp=Z,17nm,0.7s,baz=138,slow=4.2,SNR=49					
BRTR			pPKPbc	**pPKPdf**	**04 46 29.6**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=107,slow=2.5,SNR=5.8					
EDI	**Edinburgh**	**147.62 3**	*eP*	**PKPbc**	**04 44 27.5**	**-0.2**
BEL	**Belsk**	**147.63 336**	*e* PKPbc	**PKPbc**	**04 44 28.4**	**+0.5**
PGBU	**Glenifferbraes**	**147.64 5**	*eP*	**PKPbc**	**04 44 27.6**	**-0.2**
GKP	**Gorka Klasztor**	**147.65 341**	*e* PKPbc	**PKPbc**	**04 44 28.2**	**+0.3**
GKP	**Gorka Klasztor**	**147.65 341**	*eP*	**PKiKP**	**04 44 28.7**	**-0.7**
ESY	**Stoneypath**	**147.65 3**	*eP*	**PKPbc**	**04 44 27.5**	**-0.3**
MMAI	**Mount Meron Ar**	**147.66 295**	pPKPbc	pPKPbc	04 46 31.5	+0.4
	comp=Z,13nm,0.8s,baz=46,slow=4.2,SNR=5.1					
EBL	**Broad Law**	**147.78 3**	*eP*	**PKPbc**	**04 44 28.1**	**-0.1**
LVV	**L'vov**	**147.82 330**	*i* PKP2	**PKPbc**	**04 44 28.3**	**-0.2**
LVV			MLR	MLR		
	comp=N,800nm,24.0s					
LVV			MLR	MLR		
	comp=E,1μm,24.0s					
VASR	**Vaslui**	**148.01 323**	⇑P	**PKiKP**	**04 44 30.0**	**-0.4**
ANTO	**Ankara**	**148.03 308**	⇑P	**PKPbc**	**04 44 29.8**	**+0.4**
ANTO	**Ankara**	**148.03 308**		**PKPdf**	**04 44 27.1**	**+1.6**
ANTO	**Ankara**	**148.03 308**	PKHKP	**PKPdf**	**04 44 27.1**	**+1.6**
EKA	**Eskdalemuir Ar**	**148.21 4**	PKP	**PKPdf**	**04 44 24.8**	**-0.4**
	comp=E,15nm,0.5s,baz=336,slow=2.8,SNR=95					
EKA			PKPbc	**PKPbc**	**04 44 29.0**	**-0.2**
	comp=E,15nm,0.5s,baz=340,slow=2.9,SNR=59					
EKA			pPKPbc	**pPKPdf**	**04 46 30.4**	**+0.6**
	comp=E,4.3nm,0.7s,baz=356,slow=2.7,SNR=4.9					
CLGH	**Cloghs, Cushen**	**148.21 7**	*eP*	**PKPbc**	**04 44 29.5**	**+0.2**
ESK	**Eskdalemuir**	**148.22 4**	*eP*	**PKPbc**	**04 44 28.9**	**-0.4**
ESK	**Eskdalemuir**	**148.22 4**		**PKPbc**	**04 44 28.4**	**-0.9**
ESK	**Eskdalemuir**	**148.22 4**	PKHKP	**PKPbc**	**04 44 28.4**	**-0.9**
TLCR		**148.25 320**	⇑P	**PKPbc**	**04 44 29.6**	**-0.1**
TLCR		**148.25 320**	⇑PKHKP	**PKPbc**	**04 44 29.6**	**-0.1**
VLDR	**Vladesti**	**148.31 321**	⇑P	**PKPbc**	**04 44 30.2**	**+0.3**
NEWG	**New Galloway**	**148.35 5**	*eP*	**PKPbc**	**04 44 29.0**	**-0.6**
JURR	**Jurilovca**	**148.44 319**	⇓P	**PKPbc**	**04 44 30.5**	**+0.3**
SCTR	**Scanteiesti**	**148.46 321**	⇑P	**PKPbc**	**04 44 30.6**	**+0.4**
GHRR		**148.56 322**	⇓P	**PKiKP**	**04 44 32.6**	**+1.1**
CFR	**Carcaliu**	**148.66 320**	⇓P	**PKPbc**	**04 44 31.1**	**+0.4**
CFR	**Carcaliu**	**148.66 320**	⇓PKP2	**PKPbc**	**04 44 31.1**	**+0.4**
TPGR	**Topolog**	**148.66 320**	⇑P	**PKPbc**	**04 44 31.0**	**+0.2**
TESR	**Tescani**	**148.71 324**	⇑P	**PKPdf**	**04 44 26.6**	**+0.2**
BURAR	**Bucovina Array**	**148.76 326**	⇓P	**PKiKP**	**04 44 32.8**	**+0.7**
BURAR	**Bucovina Array**	**148.76 326**	⇓PKP2	**PKiKP**	**04 44 32.8**	**+0.7**
EDMD	**Edmundbyers**	**148.77 2**	*eP*	**PKPbc**	**04 44 30.4**	**-0.2**
PANC	**Panciu**	**148.82 322**	⇑P	**PKiKP**	**04 44 32.5**	**+0.4**
TIRR	**Tirgusor**	**148.89 319**	⇑P	**PKPbc**	**04 44 31.2**	**-0.1**
TIRR	**Tirgusor**	**148.89 319**	⇑PKHKP	**PKPbc**	**04 44 31.2**	**-0.1**
MDUB	**Mudurnu**	**148.93 310**	PKPbc	**PKPbc**	**04 44 30.2**	**-1.5**
ODBI	**Odobesti**	**148.94 322**	⇑P	**PKiKP**	**04 44 33.1**	**+0.8**
KESW	**Keswick, Cumbr**	**148.95 4**	*eP*	**PKPbc**	**04 44 31.1**	**-0.1**
MFTR	**Murfatlar**	**149.03 318**	⇑P	**PKiKP**	**04 44 32.8**	**+0.2**
HARR	**Harsova**	**149.05 320**	⇑P	**PKiKP**	**04 44 32.3**	**-0.3**
HARR	**Harsova**	**149.05 320**	⇑PKHKP	**PKiKP**	**04 44 32.3**	**-0.3**
VRI	**Vrincioaia**	**149.06 322**	⇑P	**PKiKP**	**04 44 32.3**	**-0.3**
VRI	**Vrincioaia**	**149.06 322**	⇑PKHKP	**PKiKP**	**04 44 32.3**	**-0.3**
PLOR	**Plostina**	**149.12 323**	⇑P	**PKPbc**	**04 44 31.4**	**-0.5**
PLOR	**Plostina**	**149.12 323**	⇑PKHKP	**PKPbc**	**04 44 31.4**	**-0.5**
H07N1	**FLORES T-PHASB**	**149.15 51**	*e* PKP	**PKPbc**	**04 44 31.7**	**-0.5**
CVDA	**Cernavoda**	**149.18 319**	⇓P	**PKiKP**	**04 44 33.0**	**+0.1**
H07S1	**FLORES T-PHASB**	**149.21 52**	*e* PKP	**PKPbc**	**04 44 31.7**	**-0.6**
KOLS	**Kolonicke sedl**	**149.25 331**	*e* PKHKP	**PKPdf**	**04 44 27.8**	**+0.7**
WIM	**Isle of Man**	**149.28 5**	*eP*	**PKPbc**	**04 44 31.9**	**-0.1**
OJC	**Ojcow**	**149.30 335**	*e* PKPbc	**PKPbc**	**04 44 30.8**	**-1.3**
RUE	**Ruedersdorf**	**149.32 344**	*eP*	**PKiKP**	**04 44 33.1**	**+0.2**
COVR	**Voineasa-Covas**	**149.37 323**	⇑P	**PKPbc**	**04 44 32.6**	**+0.2**
PSN	**Preselentsi**	**149.44 318**	*eP*	**PKiKP**	**04 44 34.5**	**+1.1**
OZUR		**149.44 324**	⇑P	**PKPbc**	**04 44 32.8**	**+0.1**
UZH	**Uzhgorod**	**149.46 330**	⇑*i* PKHKP	**PKPbc**	**04 44 32.0**	**-0.5**
UZH			*i*		04 44 40.0	
ARCR	**ARCALIA**	**149.56 326**	⇓P	**PKiKP**	**04 44 33.7**	**+0.1**
BMR	**Baia Mare**	**149.58 328**	⇑P	**PKiKP**	**04 44 33.5**	**-0.1**
BMR	**Baia Mare**	**149.58 328**	⇑PKHKP	**PKiKP**	**04 44 33.5**	**-0.1**
ISR	**Istrita**	**149.61 321**	⇓P	**PKiKP**	**04 44 33.7**	**-0.2**
ISR	**Istrita**	**149.61 321**	⇓PKHKP	**PKiKP**	**04 44 33.7**	**-0.2**
CRVS	**Cervenica-Dubn**	**149.63 332**	*e* PKHKP	**PKiKP**	**04 44 28.2**	**-5.5**
HPK	**Haverah Park**	**149.65 2**	*eP*	**PKiKP**	**04 44 33.2**	**-0.4**
TRPA	**Tarpa**	**149.71 330**	⇑P	**PKPbc**	**04 44 33.3**	**+0.2**
MLR	**Muntele Rosu**	**149.73 323**	⇑P	**PKPdf**	**04 44 29.8**	**+1.7**
MLR	**Muntele Rosu**	**149.73 323**	PKP	**PKPdf**	**04 44 27.3**	**-0.9**
	comp=E,4.2nm,0.3s,baz=2.1,slow=2.5,SNR=9.4					
MLR			PKPbc	**PKPbc**	**04 44 32.4**	**-1.0**
	comp=E,26nm,0.7s,baz=82,slow=7.1,SNR=29					
DOPR	**Dopca**	**149.74 324**	⇑P	**PKiKP**	**04 44 34.0**	**0.0**
LEHL	**Lehliu**	**149.83 320**	⇑P	**PKiKP**	**04 44 34.7**	**+0.5**
SECR		**149.93 322**	⇑P	**PKiKP**	**04 44 34.6**	**+0.1**
DSB	**Dublin**	**149.99 8**	PKPdf	**PKPdf**	**04 44 27.2**	**-0.9**
KSP	**Ksiaz**	**150.03 339**	*e* PKPbc	**PKiKP**	**04 44 34.5**	**0.0**
WPS	**Cemaes, Angles**	**150.03 6**	*eP*	**PKPbc**	**04 44 33.3**	**-0.4**
SULR		**150.04 321**	⇑P	**PKiKP**	**04 44 34.8**	**+0.2**
WME	**Myndd Eilian**	**150.06 5**	*eP*	**PKPbc**	**04 44 33.5**	**-0.2**
WLF1	**Llynfaes**	**150.15 5**	*eP*	**PKPbc**	**04 44 33.6**	**-0.4**
ISK	**Istanbul-Kandi**	**150.15 313**	P	**PKPbc**	**04 44 34.5**	**+0.1**
YRC	**Rhoscolyn**	**150.18 6**	*eP*	**PKPbc**	**04 44 32.9**	**-1.1**
CBBR	**Cluj-Babes-Bol**	**150.18 327**	⇑P	**PKiKP**	**04 44 34.7**	**-0.2**
LMK	**Market Rasen**	**150.18 1**	*eP*	**PKPbc**	**04 44 33.8**	**-0.3**
PRD	**Provadia**	**150.18 318**	*eP*	**PKiKP**	**04 44 36.6**	**+1.6**
CJR	**Cluj-Napoca**	**150.19 326**	⇑P	**PKiKP**	**04 44 35.0**	**0.0**
CJR	**Cluj-Napoca**	**150.19 326**	⇑PKIKP	**PKiKP**	**04 44 35.0**	**0.0**
MESR	**Meseseni**	**150.21 328**	⇑P	**PKiKP**	**04 44 35.6**	**+0.7**
OKC	**Ostrava-Krasne**	**150.24 336**	*e* PKIKP	**PKiKP**	**04 44 34.9**	**0.0**
OKC	**Ostrava-Krasne**	**150.24 336**	⇑*e* PKP	**PKiKP**	**04 44 34.9**	**0.0**
OKC			*e* PKPAB	**PKPab**	**04 44 44.5**	**+1.7**
VOIR		**150.25 323**	⇑P	**PKPbc**	**04 44 32.2**	**-2.5**
VOIR		**150.25 323**	⇑PKIKP	**PKPbc**	**04 44 32.2**	**-2.5**
LANS	**Liptovska Anna**	**150.28 334**	*e* PKIKP	**PKPdf**	**04 44 30.0**	**+1.3**
OSTC	**Ostas**	**150.31 339**	⇑*e* PKP	**PKiKP**	**04 44 35.6**	**+0.5**
OSTC			*e* PKPAB	**PKPab**	**04 44 45.9**	**+2.7**
OSTC			*e* pPKP	**pPKPab**	**04 46 42.1**	**+0.5**
CHVC	**Chvalec**	**150.33 339**	⇑*e* PKP	**PKiKP**	**04 44 35.1**	**0.0**
MTUR	**Matau**	**150.38 323**	⇑P	**PKPbc**	**04 44 34.0**	**-1.0**
MTUR	**Matau**	**150.38 323**	⇑PKIKP	**PKPbc**	**04 44 34.0**	**-1.0**
UPC	**Upice**	**150.41 339**	*e* PKIKP	**PKiKP**	**04 44 35.3**	**0.0**
UPC	**Upice**	**150.41 339**	⇑*e* PKP	**PKiKP**	**04 44 35.3**	**0.0**
DPC	**Dobruska-Polom**	**150.45 339**	*e* PKIKP	**PKiKP**	**04 44 35.6**	**+0.2**
DPC	**Dobruska-Polom**	**150.45 339**	⇑*e* PKP	**PKiKP**	**04 44 35.6**	**+0.2**
DPC			*e* PKPAB	**PKPab**	**04 44 45.5**	**+1.7**
DPC			*e* pPKP	**pPKPab**	**04 46 43.9**	**+1.7**
MORC	**Moravsky Berou**	**150.51 337**	⇑P	**PKiKP**	**04 44 35.4**	**-0.1**
MORC	**Moravsky Berou**	**150.51 337**	⇑PKIKP	**PKiKP**	**04 44 35.4**	**-0.1**
MORC	**Moravsky Berou**	**150.51 337**	*e* PKP	**PKPdf**	**04 44 29.2**	**+0.1**
MORC			*e*		04 44 35.5	
RAZG	**Razgrad**	**150.52 319**	⇑P	**PKiKP**	**04 44 36.0**	**+0.3**
KRLC	**Kraliky**	**150.53 338**	*e* PKIKP	**PKiKP**	**04 44 35.6**	**0.0**
KRLC	**Kraliky**	**150.53 338**	⇑*e* PKP	**PKiKP**	**04 44 35.6**	**0.0**
KRLC			*e* pPKP	**pPKPab**	**04 46 43.2**	**+0.7**
ARR	**Arges**	**150.53 323**	⇓P	**PKiKP**	**04 44 36.6**	**+0.9**
LTVH	**Ltavrtes, Hu**	**150.55 329**	⇓P	**PKiKP**	**04 44 36.2**	**+0.6**
DRGR		**150.58 327**	⇑P	**PKPbc**	**04 44 35.4**	**0.0**
DRGR		**150.58 327**	⇑PKIKP	**PKPbc**	**04 44 35.4**	**0.0**
CLL	**Collm**	**150.59 343**	⇑*e* PKIKP	**PKPdf**	**04 44 30.0**	**+0.9**
CLL			*i*		04 44 44.5	
CLL			pmax	pmax		
	comp=Z,163nm,0.8s					
CLL			pmax	pmax		
	comp=Z,51nm,0.8s					
CLL	**Collm**	**150.59 343**	*e* PKPdf	**PKPdf**	**04 44 30.0**	**+0.9**
CLL			⇑*i* PKPbc	**PKiKP**	**04 44 35.4**	**-0.2**
	comp=Z,163nm,0.8s					
CLL			⇓*i* PKPab	**PKPab**	**04 44 44.5**	**+0.2**
	comp=Z,51nm,0.8s					
CLL			*e* pPKPbc	**pPKPbc**	**04 46 39.0**	**+0.4**
CLL			*e* pPKPab	**pPKPab**	**04 46 43.0**	**+0.4**
CLL			*es* PKPab	**sPKPab**	**04 47 34.0**	**-1.3**
CLL			*e* PKSdf	**PKSdf**	**04 48 07.0**	**+3.5**
CLL			*e* PP	**PP**	**04 48 19.0**	**+2.5**
CLL			*e* SKKSac	SKKSac	04 54 14.0	0.0
CLL			*e* SKSP		04 57 41.0	
CLL			*e* PSKS		04 58 35.0	
CLL			*e* SPP	SPP	05 00 18.0	
CLL			*ex*	x	05 00 50.0	
CLL			*es* PSKS		05 01 14.0	
CLL			*e* pSPP		05 02 54.0	
CLL			*e* SS	**SS**	**05 06 48.0**	**-4.8**
CLL			*e* PSPS		05 07 42.0	
CLL			*es* SS		05 10 18.0	
CLL			*ex*	x	05 11 24.0	
CLL			*e* SSS	SSS	05 12 36.0	
CLL			*ex*	x	05 16 00.0	
CLL			*e* SSSS		05 16 42.0	
CLL			*ex*	x	05 23 54.0	
FOEL	**Foel Wylfa**	**150.64 4**	*eP*	**PKPbc**	**04 44 34.1**	**-1.1**
BRG	**Berggiesshubel**	**150.72 342**	*i* PKIKP	**PKiKP**	**04 44 35.9**	**+0.1**
BRG			*e*		04 44 43.9	
BRG			SS	SS	04 46 39.3	
BRG			SS	SS	05 06 56.0	+1.6
BRG			pmax	pmax		
	comp=Z,97nm,1.0s					
BRG			pmax	pmax		
	comp=Z,31nm,1.0s					
BRG	**Berggiesshubel**	**150.72 342**	⇓*e* PKPf		04 44 29.8	
BRG	**Berggiesshubel**	**150.72 342**	Amp		04 44 31.6	
	comp=Z,7.4nm,0.9s					
BRG	**Berggiesshubel**	**150.72 342**	⇑*i* PKP	**PKiKP**	**04 44 36.0**	**+0.1**
BRG	**Berggiesshubel**	**150.72 342**	Amp		04 44 37.6	
	comp=Z,97nm,1.0s					
BRG	**Berggiesshubel**	**150.72 342**	*ex*	x	04 44 43.9	
BRG	**Berggiesshubel**	**150.72 342**	Amp		04 44 48.6	
	comp=Z,31nm,1.0s					
BRG	**Berggiesshubel**	**150.72 342**	pPKP	pPKPdf	04 46 39.4	+5.3
BRG	**Berggiesshubel**	**150.72 342**	Amp		04 46 41.3	
	comp=Z,7.1nm,0.9s					
BRG	**Berggiesshubel**	**150.72 342**	*ex*	x	04 46 43.9	
BRG	**Berggiesshubel**	**150.72 342**	Amp		04 46 46.1	
	comp=Z,30nm,1.1s					
MAUC	**Maruska**	**150.74 336**	⇑*e* PKP	**PKiKP**	**04 44 36.4**	**+0.4**
MAUC			*e* pPKP	**pPKPab**	**04 46 44.1**	**+0.7**
PVCC	**Panska Ves**	**150.85 341**	*e* PKIKP	**PKiKP**	**04 44 36.4**	**+0.3**
PVCC	**Panska Ves**	**150.85 341**	⇑*e* PKP	**PKiKP**	**04 44 36.4**	**+0.3**
HUMR	**Humele**	**150.86 322**	⇓P	**PKiKP**	**04 44 36.6**	**+0.2**
LOT	**Lotru**	**150.94 324**	⇓P	**PKPbc**	**04 44 36.0**	**-0.3**
SZH	**Strazhica**	**151.04 319**	*eP*	**PKPab**	**04 44 46.1**	**-0.4**
VYHS	**Vyhne**	**151.05 334**	*e* PKIKP	**PKPdf**	**04 44 28.9**	**-1.0**
VYHS			*e*		04 44 47.5	
PSZ	**Piszkesteto**	**151.06 332**	⇑P	**PKPbc**	**04 44 35.6**	**-0.8**
PSZ	**Piszkesteto**	**151.06 332**	⇑PKIKP	**PKPbc**	**04 44 35.6**	**-0.8**
JMB	**Yambol**	**151.08 317**	*eP*	**PKPbc**	**04 44 36.3**	**-1.2**
DEV	**Deva**	**151.11 326**	⇓P	**PKiKP**	**04 44 36.8**	**0.0**
DEV	**Deva**	**151.11 326**	⇓PKIKP	**PKiKP**	**04 44 36.8**	**0.0**
JAVC	**Velka Javorina**	**151.22 336**	*e* PKP	**PKPdf**	**04 44 31.5**	**+1.3**
JAVC			*e*		04 44 38.0	
VRAC	**Vranov**	**151.24 337**	⇑P	**PKiKP**	**04 44 37.3**	**+0.3**
VRAC	**Vranov**	**151.24 337**	PKP	**PKPdf**	**04 44 29.7**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=232,slow=0.8,SNR=5.9					
VRAC			PKPbc	**PKPbc**	**04 44 36.6**	**0.0**
	comp=Z,15nm,0.8s,baz=338,slow=1.1,SNR=17					
VRAC			PKPab	**PKPab**	**04 44 48.2**	**+1.1**
	comp=Z,55nm,0.9s,baz=52,slow=3.0,SNR=12					
VRAC	**Vranov**	**151.24 337**	*e* PKP	**PKPdf**	**04 44 30.2**	**0.0**
VRAC			*e*		04 44 36.7	
VRAC			*e*		04 44 47.5	
PCED	**Cedros**	**151.30 52**	*e* PKP	**PKiKP**	**04 44 37.7**	**+0.2**
EDRB	**Edirne**	**151.30 316**	P	**PKPbc**	**04 44 36.7**	**-0.3**
CALA	**Caldeira**	**151.31 52**	*e* PKP	**PKiKP**	**04 44 37.5**	**-0.1**
GOPC	**GO Pecny, Ondr**	**151.32 340**	*e* PKIKP	**PKPbc**	**04 44 37.0**	**+0.1**
GOPC	**GO Pecny, Ondr**	**151.32 340**	⇑*e* PKP	**PKPbc**	**04 44 37.0**	**+0.1**
GOPC			*e* pPKP	**pPKPab**	**04 46 45.2**	**-0.5**
PRU	**Pruhonice**	**151.33 340**	*e* PKIKP	**PKiKP**	**04 44 37.2**	**0.0**
PRU	**Pruhonice**	**151.33 340**	⇑*e* PKP	**PKiKP**	**04 44 37.2**	**0.0**
PRU			*e* pPKP	**pPKPab**	**04 46 45.2**	**-0.5**
SIRR	**Siria**	**151.46 328**	⇑P	**PKiKP**	**04 44 38.2**	**+0.6**
GZR	**Gura Zlata**	**151.50 325**	⇑P	**PKPbc**	**04 44 37.4**	**-0.1**
GZR	**Gura Zlata**	**151.50 325**	⇑PKIKP	**PKPbc**	**04 44 37.4**	**-0.1**
KRUC	**Moravsky**	**151.52 337**	*e* PKP	**PKPdf**	**04 44 30.6**	**0.0**
KRUC			*e*		04 44 37.3	
KRUC			*e*		04 44 48.9	
PCAN	**Candelaria**	**151.52 52**	*e* PKP	**PKiKP**	**04 44 38.1**	**+0.2**
ELMS	**Elmsett, Ipswi**	**151.54 359**	*eP*	**PKPbc**	**04 44 37.0**	**-0.2**
MCH1	**Michaelchurch**	**151.54 4**	*eP*	**PKPbc**	**04 44 36.7**	**-0.5**
PICO	**Pico**	**151.55 52**	*e* PKP	**PKiKP**	**04 44 38.5**	**+0.4**
SMOL	**Smolenice**	**151.59 335**	*e* PKIKP	**PKiKP**	**04 44 37.8**	**0.0**
ROSA	**Rosais**	**151.59 51**	*e* PKP	**PKPbc**	**04 44 37.9**	**+0.1**
ROSA	**Rosais**	**151.59 51**		**PKPbc**	**04 44 37.2**	**-0.7**
TREC	**Trest**	**151.63 339**	*e* PKIKP	**PKiKP**	**04 44 37.9**	**+0.1**
TREC	**Trest**	**151.63 339**	⇑*e* PKP	**PKiKP**	**04 44 37.9**	**+0.1**
KSL	**Kastellorizon**	**151.65 303**	P	**PKPbc**	**04 44 36.9**	**-1.1**
PGRA	**Graciosa**	**151.65 51**	*e* PKP	**PKPbc**	**04 44 38.0**	**+0.1**
MONM	**Monmouth**	**151.71 4**	*eP*	**PKPbc**	**04 44 37.1**	**-0.5**
NKC	**Novy Kostel**	**151.71 343**	*e* PKIKP	**PKiKP**	**04 44 38.6**	**+0.6**
NKC			*e*		04 44 49.6	
NKC	**Novy Kostel**	**151.71 343**	⇑*e* PKP	**PKiKP**	**04 44 38.6**	**+0.6**
NKC			*e* PKPAB	**PKPab**	**04 44 49.6**	**+0.5**
PMAN	**Manadas**	**151.74 51**	*e* PKP	**PKiKP**	**04 44 38.4**	**0.0**
SRE	**Strehaia**	**151.76 324**	⇑P	**PKiKP**	**04 44 39.1**	**+0.9**
SRE	**Strehaia**	**151.76 324**	⇑PKIKP	**PKiKP**	**04 44 39.1**	**+0.9**
MODS	**Modra-Piesok**	**151.76 335**	*e* PKIKP	**PKPdf**	**04 44 31.7**	**+0.7**
SRO	**Srobarova**	**151.81 334**	*e* PKIKP	**PKiKP**	**04 44 38.4**	**+0.2**
SRO			*e*		04 44 50.3	
STRD	**Stroud**	**151.81 3**	*eP*	**PKPbc**	**04 44 37.4**

INET ***01*** *04:39:21.2±2.4, 14°.11N×94°.30W, h10km, ML5.1, MW4.0*
GCG ***01*** *04:39:28.8±1.5, 14°.13N×93°.72W, h74km±95km, MD4.8*
IDC ***01*** *04:39:33.7±0.8, 14°.90N×92°.69W, h0km, mb4.2/15, mbtmp4.2/17, ML4.1/2, MS4.2/33, Error ellipse: s-maj=33.3km s-min=12.9km az=49.0*
MEX ***01*** *04:39:34.3±0.6, 14°.23N×93°.34W, h8km±32km, MD4.7*
NEIC ***01*** *04:39:34.5±2.2, 14°.38N±0°.06×93°.19W±0°.04, h10km±1km, mb4.5/133, Md4.7/35(MEX), Error ellipse: s-maj=10.4km s-min=6.5km az=162.0*
GCMT ***01*** *04:39:34.5±0.6, 14°.27N±0°.03×93°.60W±0°.04, h31km±1km, MW5.1/60, Moment Tensor Solution. s22,c26; s60,c76; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.03±.41; Mθθ-3.39±.24; Mφφ-0.63±.27; Mrθ1.61±.28; Mrφ2.78±.16; Mθφ-1.17±.30; Best double couple: M=4.98800×10^16 NP1:φs124.00000°, δ57.00000°, λ93.00000°. NP2: φs299.00000°, δ33.00000°, λ86.00000°. Principal axes: T 4.4480, Plg78.0000°, Azm44.0000°; N 1.0820, Plg2.0000°, Azm303.0000°; P -5.5280, Plg12.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
UCR ***01*** *04:39:40.6±0.7, 14°.02N×92°.77W, h19km±999km, ML4.4, mb4.5(NEIC)*
SNET ***01*** *04:39:40.3±1.2, 13°.95N×92°.61W, h0km±999km, ML4.7*
ISC 01 04:39:33.9±1.6, 14°.34N±0°.05×93°.26W±0°.04, h14km±9km, n398, σ1°53/361, mb4.5/64, MS4.3/34, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.12**	**59**		**Pg**	**04 39 54.2**	**-1.2**
THIG					**Sb**	**04 40 08.3**	**-1.1**
THIG		**1.12**	**59**	*e*P	**Pg**	**04 39 54.2**	**-1.2**
THIG				*e*S	**Sb**	**04 40 08.3**	**-1.1**
PATR	**El Naranjo**	**1.26**	**52**	*e*P	**Pb**	**04 39 56.0**	**-1.6**
PATR				*i* S	**Sn**	**04 40 13.4**	**-0.8**
CHUJ	**Union Juarez**	**1.34**	**56**	*e*P	**Pn**	**04 39 57.5**	**-1.0**
CHUJ				*e*S	**Sg**	**04 40 15.3**	**-2.0**
PAVE	**Pavencul**	**1.35**	**51**	*e*P	**Pn**	**04 39 57.5**	**-1.1**
PAVE				*e*S	**Sn**	**04 40 16.1**	**-0.3**
RTAL	**Retalhuleu**	**1.53**	**83**	Pn	**Pn**	**04 39 60.0**	**-0.8**
STG3	**Santiaguito 3,**	**1.68**	**77**	*e*P	**Pn**	**04 40 02.7**	**-0.3**
STG3				*e*S	**Sg**	**04 40 31.1**	**+3.1**
HUEH	**Huehuetenango**	**1.96**	**60**		**Pn**	**04 40 07.8**	**+0.9**
HUEH	**Huehuetenango**	**1.96**	**60**	*e*P	**Pn**	**04 40 07.9**	**+0.9**
CCIG	**Comitan**	**2.21**	**29**		**Pb**	**04 40 12.2**	**-1.7**
CCIG	**Comitan**	**2.21**	**29**	*e*P	**Pb**	**04 40 12.6**	**-1.3**
CCIG				*e*S	**Sb**	**04 40 40.9**	**-0.3**
FUG	**Fuego 3**	**2.34**	**87**	*e*P	**Pn**	**04 40 11.8**	**-0.5**
PCG	**Pacaya**	**2.57**	**89**	*e*P	**Pn**	**04 40 15.4**	**0.0**
NBG	**Las Nubes**	**2.83**	**85**	*e*P	**Pn**	**04 40 20.5**	**+1.5**
NBG				*e*S	**Sb**	**04 40 59.0**	**-0.2**
UXUV	**UXUV**	**3.08**	**344**	*e*P	**Pn**	**04 40 23.6**	**+1.3**
UXUV				*e*S	**Sn**	**04 41 00.5**	**+1.6**
HUIG	**Huatulco**	**3.10**	**298**		**Pn**	**04 40 20.4**	**-2.0**
HUIG					Sn	04 40 52.0	-7.3
HUIG	**Huatulco**	**3.10**	**298**	*e*P	**Pn**	**04 40 20.4**	**-2.0**
HUIG				*e*S	Sn	04 40 52.0	-7.3
CMIG	**Matias Romero**	**3.15**	**330**	Pn	**Pn**	**04 40 23.2**	**+0.1**
	16nm,0.3s,baz=173,slow=12,SNR=140						
CMIG				Sn	**Sn**	**04 41 01.5**	**+0.8**
	56nm,0.3s,baz=92,slow=15,SNR=5.8						
CMIG				LR	LR	04 41 17.4	
	comp=Z,704nm,21.3s,baz=286,slow=34						
	121nm,0.7s						
SLOZ	**Alcaldia de Sa**	**3.38**	**95**	*e*P	**Pn**	**04 40 25.8**	**-0.7**
NUBE	**Las Nubes**	**3.40**	**97**	*e*P	**Pn**	**04 40 26.0**	**-0.8**
NUBE	**Las Nubes**	**3.40**	**97**	*e*P	**Pn**	**04 40 26.0**	**-0.8**
MRL	**Marmol**	**3.54**	**78**	*e*P	**Pn**	**04 40 29.8**	**+1.1**
CEVE	**Cerro Verde**	**3.56**	**98**	*e*P	**Pn**	**04 40 28.4**	**-0.7**
CEVE				IAML		04 41 25.0	
	comp=Z,3μm,0.6s						
CEVE	**Cerro Verde**	**3.56**	**98**	*e*P	**Pn**	**04 40 28.4**	**-0.7**
CEVE				IAML		04 41 25.0	
	comp=Z,3μm,0.6s						
MTO3	**Montecristo**	**3.78**	**89**		**Pn**	**04 40 31.2**	**-0.8**
MTO3	**Montecristo**	**3.78**	**89**	*e*P	**Pn**	**04 40 31.3**	**-0.8**
CEDA	**San Andres**	**3.79**	**98**	*e*P	**Pn**	**04 40 31.1**	**-0.8**
CEDA				IAML		04 41 31.6	
	comp=Z,2μm,0.7s						
CEDA	**San Andres**	**3.79**	**98**	*e*P	**Pn**	**04 40 31.1**	**-0.8**
CEDA				IAML		04 41 31.6	
	comp=Z,2μm,0.7s						
ESQI	**Esquipulas**	**3.80**	**86**		**Pn**	**04 40 31.8**	**-0.4**
SNET	**Serv Nac Est T**	**3.96**	**99**		**Pn**	**04 40 34.4**	**0.0**
SNET	**Serv Nac Est T**	**3.96**	**99**	*e*P	**Pn**	**04 40 34.1**	**-0.3**
NEUV	**Arroyo Zacate**	**4.15**	**324**	*e*P	**Pn**	**04 40 36.3**	**-0.6**
PETF	**Flores**	**4.15**	**51**		**Pn**	**04 40 37.5**	**+0.6**
PETF	**Flores**	**4.15**	**51**	*e*P	**Pn**	**04 40 38.1**	**+1.1**
SJTE	**Alcalda de S**	**4.19**	**99**	*e*P	**Pn**	**04 40 37.2**	**-0.4**
SJTE	**Alcalda de S**	**4.19**	**99**	*e*P	**Pn**	**04 40 37.2**	**-0.4**
PAVA	**Las Pavas**	**4.24**	**98**	*e*P	**Pn**	**04 40 37.9**	**-0.4**
PAVA	**Las Pavas**	**4.24**	**98**	*e*P	**Pn**	**04 40 37.9**	**-0.4**
OXIG	**Oaxaca**	**4.31**	**310**		**Pn**	**04 40 41.6**	**+2.3**
OXIG					**Sn**	**04 41 29.1**	**-0.4**
VHO	**Vista Hermosa**	**4.31**	**310**	*e*P	**Pn**	**04 40 41.6**	**+2.3**
VHO				*i* S	**Sn**	**04 41 29.1**	**-0.4**
COEG	**Centro de Oper**	**4.31**	**99**	*e*P	**Pn**	**04 40 38.5**	**-0.7**
COEG	**Centro de Oper**	**4.31**	**99**	*e*P	**Pn**	**04 40 38.5**	**-0.7**
COEB	**Comit de Eme**	**4.67**	**100**	*e*P	**Pn**	**04 40 43.1**	**-1.0**
COEB	**Comit de Eme**	**4.67**	**100**	*e*P	**Pn**	**04 40 43.1**	**-1.0**
YOIG	**Yosondua**	**4.83**	**302**		**Pn**	**04 40 47.8**	**+1.3**
YOIG					**Sn**	**04 41 40.5**	**-2.0**
YOIG	**Yosondua**	**4.83**	**302**	*e*P	**Pn**	**04 40 47.8**	**+1.3**
YOIG				*i* S	**Sn**	**04 41 40.5**	**-2.0**
PNIG	**Pinotepa**	**5.12**	**294**		**Pn**	**04 40 49.6**	**-0.7**
PNIG					**Sn**	**04 41 44.0**	**-5.3**
PNIG	**Pinotepa**	**5.12**	**294**	*e*P	**Pn**	**04 40 49.6**	**-0.7**
PNIG				*e*S	**Sn**	**04 41 44.0**	**-5.3**
TXIG	**Tlaxiaco**	**5.22**	**304**		**Pn**	**04 40 54.0**	**+2.1**
TXIG					**Sn**	**04 41 52.4**	**+0.4**
TXIG	**Tlaxiaco**	**5.22**	**304**	*e*P	**Pn**	**04 40 54.0**	**+2.1**
TXIG				*i* S	**Sn**	**04 41 52.4**	**+0.4**
TOIG	**Toxpalan**	**5.23**	**316**		**Pn**	**04 40 53.6**	**+1.8**
TOIG					**Sn**	**04 41 57.8**	**+5.8**
TOIG	**Toxpalan**	**5.23**	**316**	*e*P	**Pn**	**04 40 53.6**	**+1.8**
TOIG				*e*S	**Sn**	**04 41 57.8**	**+5.8**
HLIG	**Huajuapan de L**	**5.58**	**309**		**Pn**	**04 41 00.4**	**+3.6**
HLIG					**Sn**	**04 42 07.3**	**+6.5**
HLIG	**Huajuapan de L**	**5.58**	**309**	*e*P	**Pn**	**04 41 00.4**	**+3.6**
HLIG				*e*S	**Sn**	**04 42 07.3**	**+6.5**
TGUH	**Tegucigalpa,Un**	**5.81**	**92**	Pn	**Pn**	**04 41 01.0**	**+1.1**
FTIG	**Fresnillo de T**	**5.88**	**308**		**Pn**	**04 41 03.3**	**+2.6**
FTIG					**Sn**	**04 42 08.2**	**+0.1**
FTIG	**Fresnillo de T**	**5.88**	**308**	*e*P	**Pn**	**04 41 03.3**	**+2.6**
FTIG				*e*S	**Sn**	**04 42 08.2**	**+0.1**
MGIG	**Malinaltepec**	**5.92**	**300**		**Pn**	**04 41 03.1**	**+1.7**
MGIG					**Sn**	**04 42 05.9**	**-3.3**
MGIG	**Malinaltepec**	**5.92**	**300**	*e*P	**Pn**	**04 41 03.1**	**+1.7**
MGIG				*e*S	**Sn**	**04 42 05.9**	**-3.3**
TLIG	**Tlapa**	**6.03**	**303**		**Pn**	**04 41 06.3**	**+3.5**
TLIG	**Tlapa**	**6.03**	**303**	*e*P	**Pn**	**04 41 05.0**	**+2.1**
TLIG				*e*S	**Sn**	**04 42 09.6**	**-2.2**
CRIN	**San Cristobal**	**6.25**	**104**		**Pn**	**04 41 06.1**	**+0.1**
CRIN	**San Cristobal**	**6.25**	**104**	*e*P	**Pn**	**04 41 05.7**	**-0.3**
CRIN				*e*S	Sn	04 42 27.2	+10
CNGN	**Cerro Negro**	**6.64**	**105**		**Pn**	**04 41 12.7**	**+1.5**
CNGN	**Cerro Negro**	**6.64**	**105**	*e*P	**Pn**	**04 41 10.1**	**-1.1**
CNGN				*e*S	**Sn**	**04 42 35.4**	**+8.6**
MOMN	**Momotombo**	**6.81**	**106**	*e*P	**Pn**	**04 41 13.3**	**-0.3**
MGAN	**Managua**	**7.17**	**107**	*e*P	**Pn**	**04 41 18.3**	**-0.1**
MATN	**Matagalpa**	**7.27**	**100**		**Pn**	**04 41 21.2**	**+1.3**
MATN	**Matagalpa**	**7.27**	**100**	*e*P	**Pn**	**04 41 18.0**	**-1.8**
TEIG	**Tepich**	**7.54**	**38**	Pn	**Pn**	**04 41 22.8**	**-0.8**
BOAB	**BOACO BROADBAN**	**7.62**	**103**		**Pn**	**04 41 25.7**	**+1.0**
BOAB	**BOACO BROADBAN**	**7.62**	**103**	*e*P	**Pn**	**04 41 24.7**	**+0.1**
ACON	**Acoyapa**	**8.22**	**106**		**Pn**	**04 41 32.9**	**0.0**
HZTE	**Horizontes, Gu**	**8.30**	**115**		**Pn**	**04 41 34.9**	**+0.9**
ORTG	**Ortega, Santa**	**8.58**	**117**		**Pn**	**04 41 39.1**	**+1.1**
DUNO	**Dulce Nombre,**	**8.69**	**118**		**Pn**	**04 41 40.6**	**+1.3**
MOIG	**Morelia**	**9.26**	**306**	Pn	**Pn**	**04 41 51.2**	**+3.9**
COVE	**Coope Vega, Sa**	**9.37**	**112**	Pn	**Pn**	**04 41 49.6**	**+1.0**
RIMA	**Rio Macho**	**10.25**	**115**		**Pn**	**04 42 01.3**	**+0.4**
SRBA	**San Rafael, Bu**	**10.94**	**117**		**Pn**	**04 42 10.8**	**+0.5**
BRU2	**Volcan**	**11.73**	**117**		**Pn**	**04 42 21.4**	**+0.2**
SOR	**Soroa**	**12.85**	**48**		**Pn**	**04 42 35.7**	**-0.5**
833A	**Chaparral WMA,**	**15.04**	**339**	Pn	**Pn**	**04 43 07.6**	**+1.5**
833A				IAmb	IAmb	04 43 33.5	
	comp=Z,20nm,0.8s						
833A	**Chaparral WMA,**	**15.04**	**339**	P	**Pn**	**04 43 06.5**	**+0.4**
	baz=156						
735A	**Kenedy**	**15.05**	**344**	Pn	**Pn**	**04 43 09.3**	**+3.1**
735A				IAmb	IAmb	04 43 18.1	
	comp=Z,12nm,0.8s						
HKT	**Hockley**	**15.72**	**352**	Pn	**Pn**	**04 43 16.3**	**+1.4**
435B	**Jarrell**	**16.84**	**347**	Pn	**Pn**	**04 43 29.4**	**0.0**
435B				IAmb	IAmb	04 43 42.3	
	comp=Z,43nm,1.3s						
435B	**Jarrell**	**16.84**	**347**	P	**Pn**	**04 43 29.8**	**+0.4**
	baz=165						
JCT	**Junction City**	**17.16**	**341**		**Pn**	**04 43 34.4**	**+1.0**
JCT	**Junction City**	**17.16**	**341**	P	**Pn**	**04 43 33.6**	**+0.2**
	baz=158						
NATX	**Nacogdoches**	**17.39**	**356**		**P**	**04 43 38.1**	**+0.6**
NATX	**Nacogdoches**	**17.39**	**356**	P	**Pn**	**04 43 36.3**	**0.0**
	baz=175						
DWPF	**Disney Wildern**	**17.57**	**37**	P	**Pn**	**04 43 36.2**	**-2.3**
	baz=221						
BRAL	**Brewton**	**17.69**	**18**	Pn	**Pn**	**04 43 38.9**	**-1.1**
BRAL				IAmb	IAmb	04 43 44.8	
	comp=Z,68nm,1.1s						
BRAL	**Brewton**	**17.69**	**18**	P	**Pn**	**04 43 39.5**	**-0.5**
	baz=200						
TXAR	**Lajitas Array**	**17.76**	**329**	P	**Pn**	**04 43 42.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=148,slow=15,SNR=20						
TXAR				LR	LR	04 51 33.1	
	comp=Z,267nm,18.5s,baz=146,slow=41						
	comp=Z,4.4nm,0.8s						
TXAR	**Lajitas Array**	**17.76**	**329**		**P**	**04 43 42.7**	**+1.0**
TX31	**Lajitas Ar. Si**	**17.76**	**329**		**Pn**	**04 43 42.2**	**+1.2**
TX31				IAmb	IAmb	04 43 47.1	
	comp=Z,69nm,1.3s						
TX32	**Lajitas Array**	**17.76**	**329**		**P**	**04 43 43.2**	**+1.5**
VBMS	**Vicksburg**	**17.97**	**8**	P	**Pn**	**04 43 42.8**	**-0.7**
	baz=188						
WHTX	**Lake Whitney,**	**17.99**	**348**		**P**	**04 43 45.0**	**+0.9**
WHTX	**Lake Whitney,**	**17.99**	**348**	P	**Pn**	**04 43 43.9**	**+0.2**
	baz=166						
352A	**Blakely**	**18.69**	**23**	P	**Pn**	**04 43 53.0**	**+0.7**
ABTX	**Abilene, Hawle**	**19.11**	**343**	P	**P**	**04 43 56.8**	**+0.3**
	baz=160						
TIGA	**Tifton**	**19.19**	**26**	P	**P**	**04 43 57.0**	**-0.3**
TIGA	**Tifton**	**19.19**	**26**	P	**P**	**04 43 55.9**	**-1.5**
	baz=209						
ZARC	**Zaragoza, Cauc**	**19.30**	**109**	*e*P	**P**	**04 43 57.8**	**-0.8**
LRAL	**Lakeview Retre**	**19.46**	**16**	P	**P**	**04 44 01.1**	**+0.7**
	baz=198						
CCAR	**Cane Creek**	**19.54**	**4**	P	**P**	**04 44 00.4**	**-0.7**
CCAR				IAmb	IAmb	04 44 04.8	
	comp=Z,53nm,1.5s						
Y45A	**Yeager Farm, C**	**19.73**	**9**	IAmb	IAmb	04 44 33.1	
	comp=Z,26nm,1.0s						
GUY2C	**Guyana, Caldas**	**19.81**	**115**	*e*P	**P**	**04 44 04.7**	**-0.1**
NORC	**Norcasia**	**20.09**	**114**	*e*P	**P**	**04 44 08.2**	**+0.8**
MIAR	**Mount Ida**	**20.12**	**359**	P	**P**	**04 44 08.1**	**+0.6**
	baz=179						
POPC	**Popayan, Colom**	**20.14**	**124**	*e*P	**P**	**04 44 06.1**	**-2.0**
X37A	**Clayton**	**20.25**	**355**	P	**P**	**04 44 09.1**	**+0.2**
OTAV	**Otavalo**	**20.27**	**132**	P	**P**	**04 44 09.2**	**-0.6**
UALR	**University of**	**20.36**	**2**	P	**P**	**04 44 10.9**	**+0.8**
UALR				IAmb	IAmb	04 44 19.1	
	comp=Z,24nm,1.2s						
OXF	**Oxford**	**20.38**	**9**	P	**P**	**04 44 11.5**	**+1.2**
	baz=190						
X34A	**Smith Ranch, M**	**20.59**	**349**	P	**P**	**04 44 13.8**	**+1.2**
X34A				IAmb	IAmb	04 44 41.4	
	comp=Z,14nm,0.8s						
ROSC	**El Rosal**	**20.91**	**115**	P	**P**	**04 44 17.3**	**+0.7**
	comp=Z,31nm,0.9s,baz=140,slow=6.8,SNR=9.3						
	comp=Z,31nm,0.9s						
ROSC	**El Rosal**	**20.91**	**115**	P	**P**	**04 44 15.1**	**-1.5**
ROSC	**El Rosal**	**20.91**	**115**	*e*P	Pn	04 44 19.1	0.0
WMOK	**Wichita Mounta**	**20.91**	**347**	P	**P**	**04 44 16.4**	**+0.2**
	baz=164						
GOGA	**Godfrey**	**20.97**	**23**	IAmb	IAmb	04 44 23.5	
	comp=Z,37nm,1.5s						
GOGA	**Godfrey**	**20.97**	**23**	P	**P**	**04 44 16.0**	**-0.7**
	baz=207						
FPAL	**Fort Paine**	**21.27**	**18**	P	**P**	**04 44 19.0**	**-1.0**
PORT	**Chimborazo Vol**	**21.27**	**136**	P	**P**	**04 44 20.9**	**+0.2**
PORT				IAmb	IAmb	04 44 38.8	
	comp=Z,32nm,1.1s						
MSTX	**Muleshoe**	**21.36**	**338**	IAmb	IAmb	04 44 36.7	
	comp=Z,20nm,0.9s						
MSTX	**Muleshoe**	**21.36**	**338**	P	**P**	**04 44 22.0**	**+0.9**
	baz=154						
OK025	**Westminster Rd**	**21.47**	**351**	P	**P**	**04 44 22.1**	**+0.1**
FCAR	**Ozark Folk Cen**	**21.48**	**3**	P	**P**	**04 44 22.4**	**+0.2**
FLOC	**Florencia**	**21.53**	**125**	*e*P	**P**	**04 44 23.1**	**+0.2**
RUSC	**La Rusia**	**21.55**	**111**	*e*P	**P**	**04 44 24.0**	**+0.4**
TUL1	**Leonard**	**21.60**	**354**	P	**P**	**04 44 23.7**	**+0.2**
	baz=173						
OK031	**S. Brethren Rd**	**21.76**	**352**	IAmb	IAmb	04 44 28.5	
	comp=Z,15nm,0.9s						
OK034	**N. Norfolk Rd.**	**21.80**	**352**	IAmb	IAmb	04 44 28.3	
	comp=Z,17nm,0.7s						
AMTX	**Amarillo**	**21.82**	**341**	P	**P**	**04 44 26.1**	**+0.2**
AMTX	**Amarillo**	**21.82**	**341**	P	**P**	**04 44 25.7**	**-0.3**
	baz=157						
NHSC	**New Hope**	**22.15**	**30**	P	**P**	**04 44 29.3**	**-0.1**
NHSC	**New Hope**	**22.15**	**30**	P	**P**	**04 44 26.5**	**-2.9**
	baz=215						
OK046	**Pawnee Station**	**22.21**	**352**	IAmb	IAmb	04 44 32.8	
	comp=Z,22nm,1.0s						
WVT	**Waverly**	**22.24**	**12**	P	**P**	**04 44 30.2**	**-0.1**
WVT	**Waverly**	**22.24**	**12**	P	**P**	**04 44 29.4**	**-0.9**
	baz=194						
319A	**Douglas**	**22.43**	**322**	IAmb	IAmb	04 44 49.6	
	comp=Z,20nm,1.1s						
121A	**Cookes Peak, D**	**22.44**	**326**	P	**P**	**04 44 34.8**	**+2.1**
	baz=140						
T35A	**Sooner Cattle**	**22.67**	**353**	IAmb	IAmb	04 45 04.6	
	comp=Z,22nm,1.4s						
MACC	**Macarena, Meta**	**22.68**	**121**	*e*P	**P**	**04 44 37.5**	**+2.2**
OK032	**Salt Plains WL**	**22.80**	**350**	IAmb	IAmb	04 44 37.0	
	comp=Z,13nm,0.8s						
SDV	**Santo Domingo**	**22.81**	**101**	P	**P**	**04 44 35.0**	**-1.8**
	comp=Z,6.2nm,0.4s,baz=319,slow=5.2,SNR=5.9						
	comp=Z,6.2nm,0.4s						
SDV	**Santo Domingo**	**22.81**	**101**	P	**P**	**04 44 35.2**	**-1.6**
SDV				IAmb	IAmb	04 44 47.9	
	comp=Z,35nm,1.3s						
TKL	**Tuckaleechee C**	**22.88**	**20**	P	**P**	**04 44 36.2**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=192,slow=18,SNR=3.8						
TKL				LR	LR	04 54 43.2	
	comp=Z,410nm,20.2s,baz=208,slow=41						
KAN13	**South Haven SW**	**22.89**	**351**		**P**	**04 44 37.1**	**-0.2**
KAN13				IAmb	IAmb	04 44 37.6	
	comp=Z,15nm,0.6s						
PTGC	**Puerto Gaitan,**	**23.13**	**114**	*e*P	**P**	**04 44 38.9**	**-1.0**
Y22D	**iRIS PASSCAL I**	**23.22**	**330**	P	**P**	**04 44 41.5**	**+0.6**
	baz=144						
Y22F	**Passcal Instru**	**23.22**	**330**	P	**P**	**04 44 41.5**	**+0.6**
	baz=144						
S39A	**Bolivar**	**23.26**	**360**	IAmb	IAmb	04 44 41.9	
	comp=Z,13nm,0.6s						
KMSC	**Kings Mountain**	**23.33**	**25**	P	**P**	**04 44 40.8**	**-1.0**
	baz=210						
CCM	**Cathedral Cave**	**23.69**	**4**	P	**P**	**04 44 43.2**	**-2.0**
CCM				IAmb	IAmb	04 44 44.8	
	comp=Z,23nm,1.2s						
CCM	**Cathedral Cave**	**23.69**	**4**	P	**P**	**04 44 43.7**	**-1.6**
	baz=184						
ANMO	**Albuquerque**	**23.72**	**332**	P	**P**	**04 44 47.0**	**+1.1**
	comp=Z,2.4nm,0.5s,baz=142,slow=11,SNR=17						
ANMO				LR	LR	04 55 59.0	
	comp=Z,168nm,19.4s,baz=129,slow=42						
	comp=Z,2.4nm,0.5s						
ANMO	**Albuquerque**	**23.72**	**332**	P	**P**	**04 44 46.2**	**+0.3**
ANMO	**Albuquerque**	**23.72**	**332**	P	**P**	**04 44 46.9**	**+1.1**
	baz=146						
TZTN	**Tazewell**	**23.76**	**20**	P	**P**	**04 44 45.1**	**-0.9**
	baz=204						
R40A	**Maddies Statio**	**23.87**	**2**	IAmb	IAmb	04 44 49.1	
	comp=Z,6.3nm,0.6s						
TUC	**Tucson**	**24.00**	**321**	P	**P**	**04 44 49.8**	**+1.4**
TUC	**Tucson**	**24.00**	**321**	P	**P**	**04 44 49.4**	**+1.0**
	baz=134						
WCI	**Wyandotte Cave**	**24.58**	**13**	P	**P**	**04 44 53.1**	**-0.5**
	baz=196						
T25A	**Trinidad**	**24.79**	**338**	P	**P**	**04 44 56.8**	**+1.1**
	baz=153						
CNNC	**Cliffs of the**	**24.99**	**31**	P	**P**	**04 44 55.6**	**-1.7**

BFO	**Black Forest**	**154.46**	**347**	PKPdf	**PKPdf**	**04 44 34.2**	**-0.6**
BFO				PKPbc	**PKiKP**	**04 44 43.2**	**-0.5**
BFO				PKPab	**PKPab**	**04 45 01.0**	**+0.2**
BFO	**Black Forest**	**154.46**	**347**	PKIKP	**PKPdf**	**04 44 34.2**	**-0.6**
BFO				PKP	**PKPab**	**04 45 01.0**	**+0.2**
SKO	**Skopje**	**154.47**	**321**	*i* P	**PKPbc**	**04 44 44.7**	**+0.8**
PSMA	**Santa Maria**	**154.54**	**53**	*e*PKP	**PKPdf**	**04 44 36.8**	**+1.5**
MYKA	**Terra Mystica**	**154.56**	**338**	*i* P	**PKPdf**	**04 44 35.3**	**+0.2**
	comp=Z,4.6nm,0.8s						
MYKA				*e*P	**PKPbc**	**04 44 44.5**	**+0.4**
	comp=Z,7.5nm,0.7s						
MYKA				*i* P	**PKPab**	**04 45 01.5**	**+0.1**
	comp=Z,18nm,0.8s						
WATA	**Walderalm**	**154.59**	**342**	*e*P	**PKPdf**	**04 44 34.7**	**-0.5**
	comp=Z,13nm,1.2s						
WATA				*i* P	**PKPbc**	**04 44 44.6**	**+0.4**
	comp=Z,6.3nm,0.5s						
WATA				*i* P	**PKPab**	**04 45 02.6**	**+1.0**
	comp=Z,30nm,0.9s						
WTTA	**Wattenberg**	**154.64**	**341**	*e*P	**PKPdf**	**04 44 35.1**	**-0.3**
	comp=Z,20nm,1.3s,SNR=6.5						
WTTA				*e*P	**PKPbc**	**04 44 44.7**	**+0.4**
	comp=Z,25nm,1.2s						
WTTA				*i* P	**PKPab**	**04 45 02.9**	**+1.0**
	comp=Z,19nm,0.6s						
KYMI	**Kymi, Euboea I**	**154.66**	**312**	P	**PKPab**	**04 45 01.9**	**-0.2**
RETA	**Reutte**	**154.68**	**343**	*e*P	**PKPdf**	**04 44 32.0**	**-3.2**
	comp=Z,3.9nm,0.8s						
RETA				*e*P	**PKPab**	**04 45 02.4**	**+0.5**
	comp=Z,24nm,0.7s,SNR=8.3						
MOTA	**Moosalm**	**154.71**	**342**	*e*P	**PKPdf**	**04 44 34.9**	**-0.5**
	comp=Z,16nm,1.1s						
MOTA				*i* P	**PKPab**	**04 45 03.1**	**+1.0**
	comp=Z,36nm,1.0s						
MOTA				*e*P	**pPKPbc**	**04 46 47.8**	**-0.5**
	comp=Z,11nm,1.4s						
SQTA	**Sankt Quirin**	**154.80**	**342**	*e*P	**PKPdf**	**04 44 35.1**	**-0.4**
	comp=Z,10nm,1.0s						
SQTA				*i* P	**PKPab**	**04 45 03.5**	**+1.1**
	comp=Z,28nm,0.9s						
ABTA	**Abfaltersbach**	**154.83**	**340**	*e*P	**PKPdf**	**04 44 34.7**	**-0.7**
	comp=Z,23nm,1.2s,SNR=8.8						
ABTA				*e*P	**PKPab**	**04 45 02.7**	**+0.2**
	comp=Z,27nm,1.1s						
LIT	**Litokhoron**	**154.95**	**316**	P	**PKPab**	**04 45 03.8**	**+0.5**
DAVA	**Damuels**	**155.09**	**344**	*e*P	**PKPdf**	**04 44 36.1**	**+0.2**
	comp=Z,12nm,0.9s,SNR=5.4						
DAVA				*e*P	**PKPab**	**04 45 03.7**	**-0.1**
	comp=Z,44nm,0.8s,SNR=9.4						
FETA	**Feichten**	**155.11**	**343**	*e*P	**PKPdf**	**04 44 36.0**	**0.0**
	comp=Z,18nm,1.0s,SNR=7.7						
FETA				*e*P	**PKPab**	**04 45 04.9**	**+1.0**
	comp=Z,15nm,0.9s						
PHP	**Peshkopia**	**155.23**	**322**	P	PKPdf	04 44 45.8	+10
KZN	**Kozani**	**155.28**	**318**	P	**PKPab**	**04 45 04.8**	**0.0**
OHR	**Ohrid**	**155.38**	**320**	*i* P	**PKPdf**	**04 44 38.5**	**+2.1**
LKR	**Lokris**	**155.40**	**313**	P	**PKPdf**	**04 44 43.4**	**+7.0**
DAVOX	**Davos/Dischmat**	**155.56**	**344**	PKP	**PKPdf**	**04 44 36.6**	**0.0**
	comp=Z,6.4nm,0.7s,baz=41,slow=5.0,SNR=11						
DAVOX				PKPbc	PKPbc	04 44 46.4	
	comp=Z,17nm,0.8s,baz=21,slow=8.1,SNR=12						
DAVOX				PKPab	**PKPab**	**04 45 06.8**	**+0.9**
	comp=Z,50nm,0.8s,baz=15,slow=3.1,SNR=21						
CTI	**Castel Tesino**	**155.72**	**340**	PKPdf	**PKPdf**	**04 44 35.9**	**-0.8**
CTI					**PKPab**	**04 45 06.

baz=217
214A **Organ Pipe Nat** 25.04 318 P **P** 04 44 58.4 +0.5
214A IAmb IAmb 04 45 08.8
comp=Z,12nm,1.4s
214A **Organ Pipe Nat** 25.04 318 P **P** 04 44 59.1 +1.3
baz=130
CBKS **Cedar Bluff** 25.04 348 P **P** 04 44 57.3 -0.5
baz=165
P40A **Paris** 25.12 2 IAmb IAmb 04 44 57.0
comp=Z,9.3nm,0.7s
P38A **Dawn** 25.19 360 IAmb IAmb 04 45 01.0
comp=Z,9.3nm,0.6s
BAUV **El Baul** 25.26 99 P **P** 04 44 57.7 -2.3
W18A **Petrified Fore** 25.46 327 P **P** 04 45 03.6 +1.8
baz=140
BLA **Blacksburg** 25.49 24 P **P** 04 45 01.2 -0.7
baz=210
SDCO **Great Sand Dun** 25.72 337 P **P** 04 45 05.1 +0.8
SDCO **Great Sand Dun** 25.72 337 P **P** 04 45 05.7 +1.4
baz=151
KSCO **Kaye Shedlock'** 25.93 343 P **P** 04 45 06.2 +0.2
baz=158
ATAH **Atahualpa** 25.94 144 P **P** 04 45 10.8 +4.3
comp=Z,8.7nm,1.0s,baz=303,slow=7.1,SNR=4.1
ATAH LR LR 04 53 18.1
comp=Z,333nm,20.4s,baz=305,slow=32
comp=Z,8.7nm,1.0s
P49A **Miami Univ. Ec** 26.20 15 P **P** 04 45 07.4 -0.8
baz=199
S22A **4UR Ranch, Cre** 26.25 335 IAmb IAmb 04 45 35.0
comp=Z,11nm,1.2s
S22A **4UR Ranch, Cre** 26.25 335 P **P** 04 45 09.6 +0.6
baz=149
SJG **San Juan** 26.29 78 LR LR 04 55 04.3
comp=Z,435nm,20.4s,baz=244,slow=36
HDIL **Hopedale** 26.35 7 P **P** 04 45 09.9 +0.4
baz=188
SFIN **Lafayette** 26.50 11 P **P** 04 45 11.3 +0.4
baz=193
MVCO **Mesa Verde** 26.52 332 IAmb IAmb 04 45 20.0
comp=Z,13nm,1.1s
MVCO **Mesa Verde** 26.52 332 P **P** 04 45 13.0 +1.6
baz=145
WUAZ **Wupatki** 26.64 326 P **P** 04 45 14.0 +1.5
baz=138
Q24A **Divide** 26.68 339 P **P** 04 45 12.0 -1.0
baz=153
P52A **Corning** 27.03 19 P **P** 04 45 15.1 -0.7
baz=204
GLA **Glamis** 27.05 317 P **P** 04 45 16.8 +0.8
baz=128
BGNE **Belgrade** 27.30 352 P **P** 04 45 18.2 0.0
baz=169
ACSO **Alum Creek Sta** 27.32 17 P **P** 04 45 18.7 +0.3
baz=202
PDMCI **Parker Dam,Lak** 27.41 320 P **P** 04 45 20.1 +0.8
baz=131
PV13 **Radium Mtn., P** 27.44 333 IAmb IAmb 04 45 49.1
comp=Z,12nm,1.2s
SCIA **State Center** 27.47 0 P **P** 04 45 18.8 -0.8
baz=180
SMCO **Snowmass** 27.54 337 P **P** 04 45 21.8 +1.1
SMCO IAmb IAmb 04 45 28.8
comp=Z,16nm,1.3s
ISCO **Idaho Springs** 27.59 339 P **P** 04 45 21.4 +0.3
baz=153
OGNE **Ogallala** 27.59 346 P **P** 04 45 21.2 +0.3
baz=161
SWSC **Sam W. Stewart** 27.63 316 P **P** 04 45 21.7 +0.5
baz=126
PV23 **Carpenter Ridg** 27.77 333 IAmb IAmb 04 45 52.0
comp=Z,11nm,1.0s
BC3 **Big Chuckawall** 27.83 318 P **P** 04 45 24.5 +1.4
baz=128
IRM **Iron Mountain** 27.95 319 P **P** 04 45 25.9 +1.8
baz=129
L44A **Lake County Fo** 28.12 8 P **P** 04 45 25.6 +0.1
baz=191
BELC **Belle Mtn. Jos** 28.40 318 P **P** 04 45 29.7 +1.4
baz=128
TPFO **Pinon Flats** 28.47 316 P **P** 04 45 29.4 +0.5
baz=126
PFO **Pinyon Flats O** 28.47 316 LR LR 04 57 06.3
comp=Z,259nm,18.4s,baz=118,slow=37
PFO **Pinyon Flats O** 28.47 316 P **P** 04 45 30.1 +1.2
baz=126
KNB **Kanab** 28.53 326 IAmb IAmb 04 45 41.0
comp=Z,7.0nm,1.1s
JFWS **Jewell Farm** 28.59 5 P **P** 04 45 30.0 +0.3
baz=186
GMRC **Granite Mounta** 28.68 319 P **P** 04 45 32.2 +1.5
baz=129
O20A **White River Ci** 28.86 336 P **P** 04 45 33.4 +1.1
baz=148
SZCU **Shurtz Canyon** 29.10 326 IAmb IAmb 04 45 37.9
comp=Z,14nm,1.5s
ECSD **EROS Data Cent** 29.43 355 IAmb IAmb 04 45 58.6
comp=Z,17nm,1.5s
ECSD **EROS Data Cent** 29.43 355 P **P** 04 45 35.9 -1.3
baz=173
K22A **Casper** 30.44 340 P **P** 04 45 46.8 +0.5
baz=154
MPMC **Manual Prospec** 30.64 319 P **P** 04 45 48.5 +0.4
baz=128
SPMN **Marine on St.** 30.79 1 P **P** 04 45 47.6 -1.5
baz=180
DUG **Dugway, Tooele** 30.93 330 P **P** 04 45 52.2 +1.7
baz=141
TCUT **Toone Canyon** 31.01 333 IAmb IAmb 04 45 60.0
comp=Z,7.0nm,0.9s
R11A **Troy Canyon, C** 31.02 325 P **P** 04 45 53.3 +1.9
baz=134
RSSD **Black Hills** 31.08 345 P **P** 04 45 52.1 +0.2
baz=159
PDAR **Pinedale Array** 31.62 337 P **P** 04 45 57.1 +0.4
comp=Z,0.6nm,0.7s,baz=160,slow=9.0,SNR=4.8
PDAR PcP **PcP** 04 48 47.7 -1.2
comp=Z,0.3nm,0.6s,baz=120,slow=3.6,SNR=2.4
PDAR LR LR 05 01 59.1
comp=Z,182nm,19.6s,baz=138,slow=43
comp=Z,0.6nm,0.7s
PDAR **Pinedale Array** 31.62 337 P **P** 04 45 58.1 +1.3
HVU **Hansel Valley** 32.15 332 IAmb IAmb 04 46 30.0
comp=Z,11nm,1.5s
AHID **Auburn Hatcher** 32.23 335 IAmb IAmb 04 46 07.5
comp=Z,15nm,1.4s
NV11 **Mina Array Sit** 32.56 322 IAmb IAmb 04 46 16.8
comp=Z,10nm,1.4s
SADO **Sadowa** 32.62 19 LR LR 05 00 57.2
comp=Z,564nm,19.2s,baz=204,slow=40
NVAR **Mina Array Bea** 32.65 322 P **P** 04 46 08.1 +2.2
comp=Z,2.0nm,0.7s,baz=131,slow=8.5,SNR=14
NVAR PcP **PcP** 04 48 51.1 -0.7
comp=Z,0.6nm,0.7s,baz=187,slow=4.5,SNR=3.0
comp=Z,2.0nm,0.7s
NVAR **Mina Array Bea** 32.65 322 P **P** 04 46 06.4 +0.6
LOHW **Long Hollow** 32.74 336 IAmb IAmb 04 46 09.1
comp=Z,5.4nm,0.8s
MOOW **Moose Ponds** 32.91 336 IAmb IAmb 04 46 20.1
comp=Z,4.4nm,0.9s
FXWY **Fox Creek** 32.93 336 IAmb IAmb 04 46 13.8
comp=Z,9.6nm,1.4s
KVN **Kaiserville** 32.93 323 IAmb IAmb 04 46 23.5
comp=Z,7.2nm,1.4s
IMW **Indian Meadow** 33.11 336 IAmb IAmb 04 46 14.2
comp=Z,7.3nm,1.3s
H17A **Grant Village** 33.39 337 IAmb IAmb 04 46 23.8
comp=Z,7.4nm,1.1s
H17A **Grant Village** 33.39 337 P **P** 04 46 13.7 +1.4
baz=148
RLMT **Red Lodge** 33.55 339 IAmb IAmb 04 46 15.7
comp=Z,11nm,1.4s
RLMT **Red Lodge** 33.55 339 P **P** 04 46 13.7 0.0
baz=151
YMR **Madison River** 33.77 337 IAmb IAmb 04 46 33.1
comp=Z,6.9nm,0.9s
YHH **Holmes Hill** 33.83 337 IAmb IAmb 04 46 29.3
comp=Z,9.8nm,1.3s
B35A **Bob, Littlefor** 33.92 359 IAmb IAmb 04 46 15.5
comp=Z,3.6nm,0.6s
AGMN **Agassiz Nation** 33.93 357 P **P** 04 46 15.4 -1.1
baz=175
YHL **Hebgen Lake** 34.01 337 IAmb IAmb 04 46 30.6
comp=Z,12nm,1.4s
LAO **LASA Array** 34.03 344 P **P** 04 46 17.9 +0.3
baz=157
BOZ **Bozeman (W)** 34.81 337 P **P** 04 46 25.0 +0.6
baz=147

WVOR **Wild Horse Val** 35.54 327 IAmb IAmb 04 46 42.1
comp=Z,5.9nm,1.1s
J08A **Circle Bar Ran** 36.10 328 IAmb IAmb 04 46 37.4
comp=Z,5.8nm,0.7s
PLID **Pearl Lake** 36.20 332 IAmb IAmb 04 46 43.4
comp=Z,9.8nm,1.2s
EGMT **Eagleton** 36.27 341 P **P** 04 46 36.6 -0.2
baz=152
MSO **Missoula** 36.72 336 P **P** 04 46 40.4 -0.5
baz=145
NEW **Newport** 39.16 335 LR LR 05 06 21.2
comp=Z,416nm,19.1s,baz=144,slow=41
EDM **Edmonton** 41.93 342 P **P** 04 47 24.3 +0.2
EDM IAmb IAmb 04 47 24.5
comp=Z,14nm,0.8s
BRLDA **Berland Lookou** 43.95 340 P **P** 04 47 40.9 +0.3
BRLDA IAmb IAmb 04 47 52.1
comp=Z,7.3nm,1.0s
RPN **Rapa Nui** 44.08 201 LR LR 05 01 13.6
comp=Z,383nm,19.0s,baz=339,slow=29
SCHQ **Schefferville** 45.34 21 LR LR 05 09 05.2
comp=Z,806nm,18.1s,baz=242,slow=40
BBB **Bella Bella** 46.87 331 LR LR 05 11 06.6
comp=Z,258nm,18.4s,baz=195,slow=41
AC02 **Maricunga** 47.17 150 P **P** 04 48 05.8 -1.0
YKA **Yellowknife Ar** 50.42 347 P **P** 04 48 30.4 -0.4
comp=Z,5.4nm,0.6s,baz=156,slow=7.4,SNR=21
comp=Z,5.4nm,0.6s
T35M **Bob Quinn** 50.97 335 P **P** 04 48 36.8 +1.8
baz=131
WRAK **Wrangell Islan** 51.49 333 P **P** 04 48 40.2 +1.4
baz=128
DLBC **Dease Lake** 51.85 336 LR LR 05 12 28.8
comp=Z,306nm,18.1s,baz=163,slow=38
DLBC **Dease Lake** 51.85 336 P **P** 04 48 42.1 +0.4
DLBC IAmb IAmb 04 48 49.9
comp=Z,11nm,1.4s
DLBC **Dease Lake** 51.85 336 P **P** 04 48 42.9 +1.2
baz=132
TAOE **Nuku Hiva Isla** 51.91 246 *e*S **S** 04 56 04.8 -0.8
comp=Z,116nm,21.8s
TAOE *e*LR LR 05 03 46.2
comp=Z,189nm,25.1s
FRB **Frobisher Bay** 52.27 14 LR LR 05 13 02.6
comp=Z,281nm,18.8s,baz=186,slow=39
WTLY **Watson Lake, Y** 52.55 338 P **P** 04 48 46.7 -0.1
WTLY **Watson Lake, Y** 52.55 338 P **P** 04 48 47.7 +0.9
baz=135
R33M **Jennings River** 52.86 337 P **P** 04 48 50.3 +1.1
baz=132
WRGLY **Wrigley** 53.22 343 P **P** 04 48 53.2 +1.6
baz=142
TGTN **Hyland Airport** 53.38 340 P **P** 04 48 54.2 +1.3
baz=136
CPUP **Villa Florida** 53.43 139 P **P** 04 48 57.9 +4.2
comp=Z,1.9nm,0.9s,baz=308,slow=6.1,SNR=4.2
CPUP LR LR 05 11 31.0
comp=Z,167nm,18.7s,baz=287,slow=36
comp=Z,1.9nm,0.9s
P32M **Atlin** 54.05 336 P **P** 04 48 57.1 -0.8
baz=129
N32M **Quiet Lake** 54.81 338 P **P** 04 49 04.3 +0.9
baz=130
PLBC **Pleasant Camp** 55.04 335 P **P** 04 49 06.3 +1.3
baz=126
MMPY **Sheldon Lake,** 55.16 340 P **P** 04 49 07.5 +1.7
baz=133
RKT **Rikitea** 55.25 228 *e*T T 05 48 30.3
comp=Z,3.6nm,0.3s
FARO **Faro, Yukon** 55.61 339 P **P** 04 49 09.9 +0.8
baz=131
O30N **Mendenhall** 55.72 336 P **P** 04 49 10.3 +0.4
baz=127
M31M **Dry Creek, Y** 55.97 338 P **P** 04 49 12.8 +1.1
baz=130
N31M **Braeburn, Yuko** 56.03 337 P **P** 04 49 11.9 -0.3
baz=128
HYT **Haines Junctio** 56.31 336 P **P** 04 49 15.3 +1.1
baz=125
PNL **Peninsula** 56.43 334 P **P** 04 49 14.2 -0.8
baz=123
N30M **Aishikik Lake** 56.52 336 P **P** 04 49 16.5 +0.8
baz=126
YUK6 **Ouzoost Mounta** 56.72 336 P **P** 04 49 17.8 +0.5
baz=125
PINM **Pinnacle** 57.03 334 P **P** 04 49 16.8 -2.5
baz=122
YUK4 **Talbot Arm** 57.06 336 P **P** 04 49 17.1 -2.6
baz=125
M29M **Somme Creek** 57.62 337 P **P** 04 49 24.2 +0.6
baz=125
L29M **L29M** 57.89 338 P **P** 04 49 24.7 -0.6
baz=126
CTG **Chitna Glacier** 57.95 335 P **P** 04 49 25.1 -0.7
baz=122
YUK3 **Moose Creek** 58.02 336 P **P** 04 49 25.0 -1.4
baz=123
K29M **Barlow Dome** 58.11 339 P **P** 04 49 24.0 -3.0
baz=127
PLCA **Paso Flores** 58.70 160 P **P** 04 49 34.5 +3.2
comp=Z,3.4nm,1.0s,baz=17,slow=14,SNR=4.0
comp=Z,3.4nm,1.0s
MCARA **McCarthy VSAT** 58.86 335 P **P** 04 49 33.1 +1.1
baz=120
M27K **Edge Creek, AK** 58.90 336 P **P** 04 49 35.0 +2.5
baz=122
DAWY **Dawson** 58.91 338 P **P** 04 49 34.1 +1.7
baz=125
F31M **Tsiigehtchic** 59.24 343 P **P** 04 49 34.9 +0.4
baz=133
L27K **Beaver Creek,** 59.26 337 P **P** 04 49 35.2 +0.4
baz=122
M26K **Nabesna, AK** 59.37 336 P **P** 04 49 35.6 0.0
baz=120
Q23K **Middleton Isla** 59.40 332 P **P** 04 49 35.2 -0.5
baz=116
SFJD **Kangerlussuaq** 59.57 18 LR LR 05 17 05.9
comp=Z,701nm,18.3s,baz=238,slow=38
EYAK **Cordova Ski Ar** 59.63 333 P **P** 04 49 38.1 +0.8
baz=117
N25K **Chitina, Valde** 59.63 334 IAmb IAmb 04 49 39.2
comp=Z,5.3nm,0.9s
N25K **Chitina, Valde** 59.63 334 P **P** 04 49 39.1 +1.6
baz=118
INK **Inuvik** 59.77 344 LR LR 05 20 05.0
comp=Z,238nm,18.5s,baz=156,slow=41
INK **Inuvik** 59.77 344 P **P** 04 49 37.6 -0.6
baz=133
K27K **Chicken** 59.87 337 P **P** 04 49 38.4 -0.6
baz=122
EGAK **Eagle** 59.95 338 P **P** 04 49 38.9 -0.6
baz=124
KLU **Klutina** 60.13 334 P **P** 04 49 41.2 +0.3
baz=117
RES **Resolute Bay** 60.35 359 LR LR 05 18 53.8
comp=Z,220nm,18.1s,baz=206,slow=40
SCRK **Sand Creek** 60.56 337 P **P** 04 49 44.7 +0.8
SCRK IAmb IAmb 04 49 50.9
comp=Z,8.9nm,1.4s
SCRK **Sand Creek** 60.56 337 P **P** 04 49 45.1 +1.2
baz=120
PAX **Paxson** 60.64 336 P **P** 04 49 44.0 -0.4
PAX IAmb IAmb 04 49 50.3
comp=Z,7.1nm,1.3s
PAX **Paxson** 60.64 336 P **P** 04 49 45.0 +0.6
baz=118
J26L **Joseph Creek** 60.67 338 P **P** 04 49 45.5 +0.9
baz=121
RIDG **Independent Ri** 60.77 336 P **P** 04 49 44.5 -0.7
baz=119
H27K **Steamboat Moun** 60.89 340 P **P** 04 49 44.6 -1.3
baz=124
I26K **Coal Creek Min** 60.95 338 P **P** 04 49 46.7 +0.4
baz=122
K24K **Donnelly Dome** 61.16 336 P **P** 04 49 48.5 +0.6
baz=118
G27K **Doyon Strip** 61.26 340 P **P** 04 49 48.1 -0.4
baz=124
WAT6 **Susitna Watana** 61.39 335 P **P** 04 49 50.1 +0.6
baz=116,SNR=5.6
J25K **Salcha River,** 61.40 337 P **P** 04 49 49.4 -0.1
baz=119
DHY **Denali Highway** 61.46 335 P **P** 04 49 50.2 +0.2
baz=116
PMR **Palmer** 61.56 333 P **P** 04 49 50.3 -0.2
baz=114
RC01 **Rabbit Creek A** 61.63 333 P **P** 04 49 50.1 -0.9
baz=113

KDAK **Kodiak Island** 61.79 328 P **P** 04 49 50.9 -1.2
baz=109
HDA **Harding Lake** 61.90 337 P **P** 04 49 51.8 -1.0
baz=118
PRP **Porcupine Dome** 61.91 338 P **P** 04 49 53.3 +0.3
PRP IAmb IAmb 04 49 59.3
comp=Z,5.5nm,1.1s
PRP **Porcupine Dome** 61.91 338 P **P** 04 49 53.5 +0.5
baz=120
E27K **Coleen River** 62.02 342 P **P** 04 49 54.9 +1.2
baz=125
G26K **Porcupine Rive** 62.04 340 P **P** 04 49 54.0 +0.4
baz=122
IL31 **** 62.05 337 P **P** 04 49 53.7 0.0
ILAR **Eielson Array** 62.05 337 P **P** 04 49 53.3 -0.5
comp=Z,1.0nm,0.6s,baz=164,slow=4.4,SNR=18
comp=Z,1.0nm,0.6s
SUA **Susitna One** 62.22 333 P **P** 04 49 55.0 -0.1
baz=112
CCB **Clear Creek Bu** 62.34 337 IAmb IAmb 04 50 01.6
comp=Z,3.3nm,1.1s
MCK **McKinley** 62.38 335 P **P** 04 49 56.4 +0.3
baz=115
H25K **Birch Creek** 62.38 339 P **P** 04 49 57.0 +1.0
baz=120
F26K **Sheenjek River** 62.56 341 P **P** 04 49 55.5 -1.7
baz=122
G25K **Bearman Lake** 62.73 339 P **P** 04 49 58.0 -0.3
baz=120
SKT **Skwentna** 62.77 333 P **P** 04 49 58.9 +0.3
baz=112
TRF **Thorofare Moun** 62.81 335 P **P** 04 49 59.6 +0.4
baz=114
H24K **Noodor Dome** 62.92 338 P **P** 04 50 00.5 +0.9
baz=117
F25K **Christian Rive** 62.99 340 P **P** 04 50 01.6 +1.5
baz=120
I23K **Minto, Yukon-K** 63.16 337 P **P** 04 50 02.1 +1.0
baz=115
G24K **Hadweenzic Riv** 63.18 339 P **P** 04 50 00.6 -0.7
baz=118
E25K **Arctic Village** 63.24 341 P **P** 04 50 02.9 +1.2
baz=121
Q18K **Katmai Hardscr** 63.28 329 P **P** 04 50 02.4 +0.2
baz=107
BPAW **Bear Paw Mtn.** 63.36 335 P **P** 04 50 03.5 +0.9
baz=113
M20K **Styx River** 63.44 333 P **P** 04 50 02.1 -1.1
baz=110
C27K **Jago River** 63.47 342 P **P** 04 50 03.1 -0.1
baz=123
H23K **Yukon River** 63.52 338 P **P** 04 50 03.2 -0.4
baz=116
CAST **Castle Rocks** 63.54 335 P **P** 04 50 03.1 -0.7
baz=112
Q17K **Contact Creek** 63.61 328 P **P** 04 50 04.3 -0.1
baz=106
MLY **Manley** 63.64 336 P **P** 04 50 04.6 +0.2
MLY **Manley** 63.64 336 P **P** 04 50 04.3 -0.1
baz=114
N19K **Bonanza Creek** 63.69 331 P **P** 04 50 05.1 +0.2
baz=108
L20K **Farewell, AK** 63.97 333 P **P** 04 50 06.9 +0.2
baz=110
PPT2 **Papeete2** 63.97 242 *e*S **S** 04 58 42.0 -1.5
comp=Z,90nm,23.5s
PPT2 **Papeete2** 63.97 242 *e*LR LR 05 09 20.5
comp=Z,97nm,21.8s
M19K **Big River Lodg** 64.00 333 P **P** 04 50 07.1 +0.3
baz=109
G23K **Bananza Creek** 64.08 338 P **P** 04 50 07.2 -0.1
baz=116
D25K **Kavik River** 64.11 342 P **P** 04 50 07.0 -0.5
baz=120
H22K **Ishtalitna Cre** 64.24 337 P **P** 04 50 07.9 -0.4
baz=114
K20K **Telida** 64.36 334 P **P** 04 50 09.1 -0.1
baz=110
COLD **Coldfoot** 64.37 339 P **P** 04 50 09.1 -0.1
baz=116
E23K **Chandalar** 64.54 340 P **P** 04 50 10.5 +0.1
baz=116
J20K **Nowinta River** 64.67 335 P **P** 04 50 10.5 -0.7
baz=110
TOLK **Toolik Lake Re** 64.79 340 P **P** 04 50 12.1 +0.2
baz=117
C24K **Franklin Bluff** 65.02 342 P **P** 04 50 13.5 +0.3
baz=118
TTA **Tatalina** 65.05 333 P **P** 04 50 13.2 -0.5
baz=108
F22K **John River** 65.19 339 P **P** 04 50 14.0 -0.4
baz=114
D23K **Nanushuk River** 65.30 340 P **P** 04 50 15.7 +0.6
baz=116
F21K **Alatna River** 65.54 338 P **P** 04 50 17.9 +1.2
baz=112,SNR=6.9
C23K **Itkillik River** 65.66 341 P **P** 04 50 17.0 -0.4
baz=116
TBI **Tubuai** 66.51 236 *e*LR LR 05 10 32.0
comp=Z,231nm,42.5s
BORG **Borgarnes** 69.44 26 LR LR 05 20 05.9
comp=Z,167nm,21.2s,baz=279,slow=35
NIKH **Nikolski High** 70.01 321 P **P** 04 50 46.6 +1.4
baz=92
JMIC **Jan Mayen** 74.84 20 LR LR 05 24 48.2
comp=Z,328nm,19.6s,baz=269,slow=37
EKA **Eskdalemuir Ar** 78.40 36 P **P** 04 51 30.9 -3.2
comp=Z,0.8nm,0.7s,baz=282,slow=5.4,SNR=5.4
comp=Z,0.8nm,0.7s
SPITS **Spitsbergen Ar** 80.00 11 LR LR 05 31 25.9
comp=Z,244nm,18.0s,baz=210,slow=39
ESDC **Sonseca Array** 80.46 51 P **P** 04 51 42.4 -3.3
comp=Z,1.2nm,0.8s,baz=282,slow=6.6,SNR=9.0
ESDC LR LR 05 22 04.2
comp=Z,196nm,21.7s,baz=339,slow=32
comp=Z,1.2nm,0.8s
MDT **Midelt** 81.26 58 P **P** 04 51 48.3 -1.9
comp=Z,1.1nm,0.7s,baz=255,slow=6.3,SNR=2.3
MDT LR LR 05 22 08.3
comp=Z,126nm,20.3s,baz=0.0,slow=32
comp=Z,1.1nm,0.7s
NOA **NORSAR Array B** 84.43 28 P **P** 04 52 04.9 -1.1
comp=Z,0.7nm,0.6s,baz=296,slow=5.2,SNR=3.6
NOA LR LR 05 28 01.2
comp=Z,162nm,21.3s,baz=290,slow=35
comp=Z,0.7nm,0.6s
HFS **Hagfors** 85.89 29 LR LR 05 28 22.6
comp=Z,149nm,21.5s,baz=285,slow=34
ARCES **ARCESS Array B** 86.20 18 P **P** 04 52 13.2 -1.4
comp=Z,1.6nm,0.6s,baz=289,slow=3.7,SNR=8.6
ARCES LR LR 05 30 52.8
comp=Z,182nm,19.6s,baz=280,slow=36
comp=Z,1.6nm,0.6s
DBIC **Dimbokro** 86.83 84 LR LR 05 27 59.7
comp=Z,73nm,20.9s,baz=358,slow=34
FINES **FINESS Array B** 90.71 25 LR LR 05 32 47.4
comp=Z,61nm,21.9s,baz=272,slow=36
AKASG **Malin Array Be** 98.11 33 LR LR 05 40 26.5
comp=Z,74nm,18.0s,baz=49,slow=38
URZ **Urewera** 98.44 233 LR LR 05 26 41.8
comp=Z,60nm,20.7s,baz=70,slow=28
OBN **Obninsk** 98.93 27 LR LR 05 37 01.5
comp=Z,42nm,21.5s,baz=352,slow=35
MLR **Muntele Rosu** 99.08 38 LR LR 05 41 37.3
comp=Z,106nm,18.1s,baz=303,slow=38
HHC **Hu-ho-hao-te** 120.46 338 *e*P **PKPdf** 04 58 25.2 -0.4
WMQ **Urumqi** 122.12 359 *e*P **PKPdf** 04 58 28.7 +0.1
WRA **Warramunga Arr** 134.29 256 PKhKP PKPpre 04 58 50.8
comp=Z,0.3nm,0.6s,baz=86,slow=2.5,SNR=6.1
PZH **PanZhiHua** 136.86 340 PKP **PKPdf** 04 58 54.9 -2.3
CMAR **Chiang Mai Arr** 145.26 339 PKP **PKPbc** 04 59 11.0 -0.9
comp=Z,2.1nm,0.4s,baz=347,slow=4.3,SNR=12

ISK ***01*** *04:48:29.6, 42°.31N×40°.95E, h12km, ML2.8/6*
TIF ***01*** *04:48:29.7, 42°.36N×40°.97E, h40km±2km*
MOS ***01*** *04:48:30.3±0.0, 42°.51N×41°.04E, h4km, MPVA3.5*
DDA ***01*** *04:48:30.3±0.0, 42°.20N×40°.87E, h7km±4km, ML2.6*
ISC 01 04:48:28.6±1.2, 42°.41N±0°.02×40°.98E±0°.03, h7km±10km, n32, σ0°.90/57, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.97**	**146**	P	**Pg**	**04 48 48.1**	**+0.9**
BATM				S	**Sg**	**04 49 01.4**	**+1.7**
DOMR	**Dombai**	**1.00**	**28**	*i* Pg	**Pb**	**04 48 48.2**	**-0.2**
DOMR				*i* Sg	**Sb**	**04 49 00.4**	**-1.3**
ARXR	**Arkhyz**	**1.17**	**11**	*e*Pg	**Pn**	**04 48 51.8**	**+0.3**

ARXR			*i* Sg		**Sb**	**04 49 06.4**	**-0.3**
DBOC	**Borcka**	**1.18 154**	P		**Pg**	**04 48 51.0**	**-0.4**
DBOC			S		**Sg**	**04 49 06.2**	**-0.4**
DBOC			*i* AML		AML	04 49 07.0	
	comp=E,221nm,0.1s						
VSLR	**Vesyoloye**	**1.26 327**	*i* Pg		**Pg**	**04 48 53.5**	**+0.7**
VSLR			*e*Sg		**Sn**	**04 49 11.1**	**+1.4**
CHOM	**Cayeli-Rize**	**1.32 187**	PN		**Pn**	**04 48 53.1**	**-0.4**
CHOM			SN		**Sb**	**04 49 10.1**	**-0.8**
DBAD	**Bademkaya**	**1.49 159**	P		**Pn**	**04 48 55.7**	**-0.2**
DBAD			S		**Sn**	**04 49 13.8**	**-1.9**
DBAD			*i* AML		AML	04 49 17.0	
	comp=E,47nm,0.5s						
TKB	**Tkibuli**	**1.50 92**	P		**Pn**	**04 48 56.1**	**+0.2**
TKB			S		**Sb**	**04 49 15.8**	**-0.1**
DAGI	**Agillar**	**1.51 152**	P		**Pn**	**04 48 55.8**	**-0.3**
DAGI			S		**Sn**	**04 49 14.3**	**-1.6**
ABS	**Abastumani**	**1.52 115**	P		**Pn**	**04 48 56.5**	**+0.2**
ABS			S		**Sn**	**04 49 16.5**	**+0.2**
NEY	**Neytrino**	**1.53 56**	*i* Pg		**Pn**	**04 48 57.1**	**+0.6**
NEY			*e*Sg		**Sn**	**04 49 17.0**	**+0.2**
KTUT	**Trabzon**	**1.69 213**	PN		**Pn**	**04 48 58.0**	**-0.4**
GUZR	**Guzeripl'**	**1.70 339**	*e*Pg		**Pb**	**04 49 00.6**	**+0.4**
GUZR			*e*Sg		**Sg**	**04 49 23.8**	**+0.5**
MACK	**Trabzon**	**1.72 212**	P		**Pn**	**04 48 58.7**	**-0.3**
MACK			S		**Sn**	**04 49 20.4**	**-0.8**
MACK			*i* AML		AML	04 49 27.0	
	comp=Z,53nm,0.1s						
MACK			*i* AML		AML	04 49 27.0	
	comp=N,124nm,0.3s						
MACK			*i* AML		AML	04 49 28.0	
	comp=E,99nm,0.2s						
AHMR	**Akhmetovskaya**	**1.75 2**	*e*Pg		**Pg**	**04 49 01.7**	**-0.3**
AHMR			*e*Sg		**Sg**	**04 49 24.3**	**-0.4**
SHA1	**Shidzhatmaz**	**1.81 42**	*e*Pg		**Pb**	**04 49 02.2**	**+0.1**
SHA1			*e*Sg		**Sg**	**04 49 25.2**	**-1.6**
ONI	**Oni**	**1.84 84**	PN		**Pn**	**04 49 01.9**	**+1.3**
ONI			SN		**Sb**	**04 49 25.9**	**+0.1**
ONI	**Oni**	**1.84 84**	P		**Pn**	**04 49 01.9**	**+1.3**
ONI			S		**Sn**	**04 49 24.4**	**+0.2**
LZRR	**Lazarevskoye**	**1.92 323**	*e*Pg		**Pb**	**04 49 04.2**	**+0.4**
LZRR			*e*Sg		**Sg**	**04 49 30.0**	**-0.3**
KBZ	**Khabaz**	**1.93 46**	*e*Pg		**Pb**	**04 49 04.1**	**+0.1**
KBZ			*e*Sg		**Sb**	**04 49 27.5**	**-0.8**
KIV	**Kislovodsk**	**1.99 38**	PN		**Pb**	**04 49 05.5**	**+0.4**
KIV	**Kislovodsk**	**1.99 38**	*i* Pg		**Pb**	**04 49 05.7**	**+0.5**
KIV			*i* Sg		**Sg**	**04 49 30.5**	**-1.9**
KIV0	**Kislovodsk Arr**	**1.99 39**	*i* Pg		**Pb**	**04 49 05.7**	**+0.5**
KIV0			*i* Sg		**Sg**	**04 49 30.9**	**-1.7**
BKRG	**Bakuriani**	**2.00 108**	P		Pn	04 49 00.0	-3.0
BKRG			S		**Sb**	**04 49 31.7**	**+1.1**
ALIG	**Mtskhetisjvari**	**2.01 98**	P		**Pn**	**04 49 03.5**	**+0.5**
ALIG			S		**Sn**	**04 49 27.9**	**-0.4**
AZMN	**Azmana**	**2.04 122**	P		**Pn**	**04 49 02.8**	**-0.8**
AZMN			S		**Sn**	**04 49 29.7**	**+0.4**
BEYR	**Belyy Ugol+**	**2.09 39**	*e*Pg		**Pb**	**04 49 06.1**	**-0.7**
BEYR			*i* Sg		**Sg**	**04 49 34.0**	**-1.7**
AKH	**Akhalkalaki**	**2.13 117**	PN		**Pn**	**04 49 05.7**	**+1.0**
AKH	**Akhalkalaki**	**2.13 117**	P		Pn	04 49 00.0	-4.7
AKH			S		**Sb**	**04 49 35.6**	**+1.4**
GOYR	**Goytkh**	**2.17 328**	*e*Pg		**Pb**	**04 49 08.9**	**+0.7**
GOYR			*e*Sg		**Sb**	**04 49 35.8**	**+0.4**
ESPY	**Espiye-Giresun**	**2.25 229**	PN		**Pn**	**04 49 06.3**	**+0.1**
DMNI	**Dmanisi**	**2.63 113**	P		Pn	04 49 00.0	-12
DMNI			S		**Sb**	**04 49 50.0**	**+1.3**

IDC **01** *04:50:09.1±3.2,30.28S×177.61W,h0km,mb3.5/2,*
mbtmp3.5/2,Error ellipse: s-maj=66.6km s-min=24.2km
az=100.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.05**	**345**	Pn	Pn	04 50 31.9	+0.8
	128nm,0.3s,baz=346,slow=22,SNR=14						
RAO				Sn	Sn	04 50 45.9	-0.6
	602nm,0.3s,baz=29,slow=23,SNR=15						
ASAR	**Alice Springs**	**43.45**	**267**	P	P	04 58 13.4	-0.6
	0.2nm,0.4s,baz=104,slow=7.4,SNR=4.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.43**	**272**	P	P	04 58 22.1	+0.2
	0.3nm,0.3s,baz=110,slow=8.0,SNR=16						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc	PKPbc	05 09 46.0	-1.3
	3.8nm,0.9s,baz=29,slow=3.2,SNR=4.7						

IDC **01** *04:52:38.1±1.5,6.58S×103.57E,h0km,mb4.0/6,*
mbtmp4.0/7,ML4.1/1,Error ellipse: s-maj=66.4km
s-min=18.5km az=52.0
ISC 01 04:52:43.7±1.4,6.5S±0.2×103.7E±0.2,h35km,n14,
σ0.60/10,mb4.0/6,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**3.91**	**95**	Pn	**Pn**	**04 53 41.6**	**+0.1**
	14nm,0.3s,baz=286,slow=18,SNR=4.6						
	28nm,0.4s						
H01W3	**Cape Leeuwin H**	**29.86**	**163**	T	T	05 29 54.5	
	baz=341,slow=76,SNR=3.2						
H01W2	**Cape Leeuwin H**	**29.87**	**163**	T	T	05 29 56.2	
	baz=341,slow=76,SNR=3.7						
H01W1	**Cape Leeuwin H**	**29.87**	**163**	T	T	05 29 51.7	
	baz=341,slow=76,SNR=3.4						
H08S2	**Diego Garcia H**	**30.98**	**266**	T	T	05 31 46.9	
	baz=88,SNR=3.4						
H08S3	**Diego Garcia H**	**30.99**	**266**	T	T	05 31 43.5	
	baz=88,slow=74,SNR=4.3						
H08S1	**Diego Garcia H**	**31.00**	**266**	T	T	05 31 42.4	
	baz=88,slow=74,SNR=3.7						
WRA	**Warramunga Arr**	**32.62**	**117**	P	**P**	**04 59 11.4**	**-1.0**
	1.2nm,0.7s,baz=285,slow=12,SNR=15						
WRA				PcP	**PcP**	**05 01 57.7**	**-0.6**
	0.3nm,0.4s,baz=299,slow=2.3,SNR=4.7						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**33.68**	**124**	P	**P**	**04 59 21.8**	**+0.1**
	0.8nm,0.5s,baz=308,slow=8.1,SNR=16						
ASAR				PcP	**PcP**	**05 02 00.5**	**-0.7**
	0.8nm,0.8s,baz=283,slow=3.9,SNR=5.6						
	0.8nm,0.5s						
STKA	**Stephens Creek**	**43.45**	**131**	P	**P**	**05 00 44.3**	**+0.8**
	2.1nm,0.5s,baz=292,slow=6.0,SNR=5.4						
	2.1nm,0.5s						
SONM	**Songino Array**	**54.14**	**2**	P	**P**	**05 02 05.4**	**0.0**
	1.3nm,0.9s,baz=178,slow=9.9,SNR=5.3						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**56.35**	**342**	P	**P**	**05 02 21.4**	**+0.1**
	0.7nm,0.5s,baz=148,slow=8.8,SNR=9.2						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**62.27**	**348**	P	**P**	**05 03 02.1**	**+0.2**
	1.1nm,0.4s,baz=160,slow=4.7,SNR=5.3						
	1.1nm,0.4s						
TXAR	**Lajitas Array**	**145.62**	**45**	PKPbc	**PKPab**	**05 12 19.8**	**+0.1**
	1.3nm,0.6s,baz=260,slow=1.0,SNR=22						

MEX **01** *04:54:12.0±0.6, 14.16N×93.19W,h5km,MD4.0*
GCG **01** *04:54:13.0±0.5, 14.88N×93.23W,h50km±31km,MD3.9*
ISC 01 04:54:05.6±2.5,14.12N±0.10×93.33W±0.07,h14km±12km,
n10,σ0.99/19,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.29**	**53**	*e*P	**Pg**	**04 54 31.7**	**+1.2**
THIG				*i* S	**Sg**	**04 54 48.1**	**+0.8**
PATR	**El Naranjo**	**1.45**	**47**	*e*P	**Pg**	**04 54 33.2**	**-0.4**
PATR				*e*S	**Sb**	**04 54 50.8**	**-0.2**
CHUJ	**Union Juarez**	**1.52**	**50**	*e*P	**Pg**	**04 54 34.8**	**-0.2**
CHUJ				*e*S	**Sn**	**04 54 52.0**	**-0.5**
PAVE	**Pavencul**	**1.54**	**46**	*e*P	**Pg**	**04 54 34.8**	**-0.5**
PAVE				*e*S	**Sn**	**04 54 52.8**	**-0.1**
STG3	**Santiaguito 3,**	**1.80**	**71**	*e*P	**Pg**	**04 54 40.0**	**-0.2**
STG3				*e*S	**Sb**	**04 55 00.5**	**-0.5**
FUG	**Fuego 3**	**2.43**	**82**	*e*P	**Pb**	**04 54 48.9**	**-0.3**
FUG				*e*S	**Sb**	**04 55 18.5**	**-0.7**
CCIG	**Comitan**	**2.44**	**28**	*e*P	**Pb**	**04 54 50.2**	**+0.8**
CCIG				*i* S	**Sb**	**04 55 18.7**	**-0.7**
PCG	**Pacaya**	**2.65**	**84**	*e*P	**Pb**	**04 54 53.4**	**+0.3**
PCG				*e*S	**Sb**	**04 55 25.0**	**-0.6**
UXUV	**UXUV**	**3.28**	**346**	*e*P	**Pb**	**04 55 01.6**	**-2.0**
UXUV				*e*S	**Sn**	**04 55 36.9**	**+1.5**
TOIG	**Toxpalan**	**5.34**	**318**	*e*P	Pn	04 55 32.6	+7.4
TOIG				*e*S	**Sn**	**04 56 28.4**	**+1.8**

AEIC **01** *04:54:43±2.6,62.21N±0.02×141.63W±0.07,h11km±6km,*
ML3.4,ML3.6/151(NEIC),Error ellipse: s-maj=4.8km
s-min=3.2km az=69.0
ANF **01** *04:54:44.9±0.1,62.18N×141.63W,h0km,ML3.8/80,*
ML3.8/81,Error ellipse: s-maj=1.7km s-min=1.5km
az=55.0
NEIC **01** *04:54:44.7±2.0,62.17N±0.02×141.67W±0.05,h10km,*
Error ellipse: s-maj=4.5km s-min=2.7km az=219.0
ISC 01 04:54:44.8±1.0,62.17N±0.02×141.62W±0.02,h8km±9km,
n262,σ1.34/248,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M27K	**Edge Creek, AK**	**0.22**	**327**		**Pg**	**04 54 49.3**	**0.0**
M27K				IAML		04 54 52.5	
	comp=E,9μm,0.6s						
M27K	**Edge Creek, AK**	**0.22**	**327**	P	**Pg**	**04 54 49.3**	**0.0**
	baz=148,SNR=1000						
M27K				S	**Sg**	**04 54 52.1**	**-0.3**
	baz=148						
BVCY	**Beaver Creek**	**0.43**	**55**		**Pg**	**04 54 53.8**	**+0.6**
BVCY					**Sg**	**04 54 59.8**	**+1.0**
BVCY	**Beaver Creek**	**0.43**	**55**	P	**Pg**	**04 54 53.8**	**+0.6**
	baz=237,SNR=124						
YUK2	**White River**	**0.53**	**136**		**Pg**	**04 54 55.2**	**+0.2**
YUK2					**Sg**	**04 55 03.0**	**+0.9**
YUK3	**Moose Creek**	**0.68**	**125**		**Pg**	**04 54 57.7**	**-0.1**
YUK3					**Sg**	**04 55 07.1**	**+0.4**
YUK3	**Moose Creek**	**0.68**	**125**	P	**Pg**	**04 54 57.8**	**-0.1**
	baz=307,SNR=444						
M26K	**Nabesna, AK**	**0.68**	**290**		**Pg**	**04 54 57.3**	**-0.7**
M26K	**Nabesna, AK**	**0.68**	**290**		**Sg**	**04 55 06.4**	**-0.4**
M26K	**Nabesna, AK**	**0.68**	**290**	P	**Pg**	**04 54 57.3**	**-0.7**
	baz=109,SNR=372						
M26K				S	**Sg**	**04 55 07.3**	**+0.4**
	baz=109						
L27K	**Beaver Creek,**	**0.90**	**354**	Pg	**Pb**	**04 55 01.9**	**-0.7**
L27K				IAML		04 55 17.0	
	comp=E,2μm,0.4s						
L27K				IAML		04 55 17.1	
	comp=N,2μm,0.4s						
L27K	**Beaver Creek,**	**0.90**	**354**	P	**Pb**	**04 55 01.9**	**-0.7**
	baz=174,SNR=765						
L27K				S	**Sb**	**04 55 14.8**	**0.0**
	baz=174						
BC03		**0.90**	**355**		**Pb**	**04 55 01.4**	**-1.2**
BCAR	**Beaver Creek A**	**0.90**	**355**	Pg	**Pb**	**04 55 01.9**	**-0.8**
MCARA	**McCarthy VSAT**	**1.03**	**221**		**Pb**	**04 55 04.2**	**-0.7**
MCARA				IAML		04 55 23.4	
	comp=E,2μm,0.8s						
MCARA				IAML		04 55 23.4	
	comp=N,2μm,0.7s						
MCARA	**McCarthy VSAT**	**1.03**	**221**		**Sb**	**04 55 18.1**	**-0.5**
MCARA	**McCarthy VSAT**	**1.03**	**221**	P	**Pb**	**04 55 04.2**	**-0.7**
	baz=39,SNR=264						
MCARA				S	**Sb**	**04 55 18.1**	**-0.5**
	baz=39						
PTPK	**Patty Peak**	**1.07**	**203**		**Pb**	**04 55 04.8**	**-0.7**
PTPK					**Sb**	**04 55 19.2**	**-0.6**
BARN	**Barnard Glacie**	**1.11**	**181**		**Pb**	**04 55 05.5**	**-0.9**
BARN	**Barnard Glacie**	**1.11**	**181**		**Sb**	**04 55 20.6**	**-0.5**
L26K	**Log Cabin Wild**	**1.17**	**318**		**Pn**	**04 55 06.4**	**-1.1**
L26K	**Log Cabin Wild**	**1.17**	**318**	P	**Pn**	**04 55 06.5**	**-1.1**
	baz=136,SNR=1000						
L26K				S	**Sn**	**04 55 24.0**	**+0.2**
	baz=136						
BALM	**Baldy**	**1.19**	**197**		**Pb**	**04 55 06.8**	**-0.8**
BALM					**Sb**	**04 55 22.9**	**-0.4**
CTG	**Chitna Glacier**	**1.22**	**174**	P	**Pn**	**04 55 07.4**	**-0.9**
	baz=354,SNR=260						
CTGM	**Chitina Glacie**	**1.22**	**173**		**Pn**	**04 55 07.3**	**-1.0**
CTGM				IAML		04 55 29.0	
	comp=N,861nm,0.4s						
MENT	**Mentasta**	**1.24**	**309**		**Pn**	**04 55 07.8**	**-0.7**
GLB	**Gilahina Butte**	**1.27**	**236**		**Pn**	**04 55 07.9**	**-1.0**
GLB	**Gilahina Butte**	**1.27**	**236**		**Sb**	**04 55 25.2**	**-0.4**
VRDI	**Verde Repeater**	**1.29**	**224**		**Pn**	**04 55 08.6**	**-0.6**
VRDI				IAML		04 55 30.6	
	comp=N,851nm,0.7s						
VRDI				IAML		04 55 31.0	
	comp=E,702nm,0.9s						
VRDI	**Verde Repeater**	**1.29**	**224**		**Sb**	**04 55 25.7**	**-0.5**
WACK	**Wrangell Chich**	**1.29**	**263**		**Pn**	**04 55 08.5**	**-0.8**
KIAG	**Kiagna River**	**1.30**	**196**		**Pn**	**04 55 08.8**	**-0.6**
LOGN	**Logan Glacier**	**1.38**	**167**		**Pn**	**04 55 10.5**	**0.0**
M29M	**Somme Creek**	**1.50**	**78**		**Pn**	**04 55 12.6**	**+0.5**
M29M	**Somme Creek**	**1.50**	**78**	P	**Pn**	**04 55 12.6**	**+0.5**
	baz=261,SNR=142						
N25K	**Chitina, Valde**	**1.52**	**249**		**Pn**	**04 55 12.0**	**-0.4**
N25K	**Chitina, Valde**	**1.52**	**249**	P	**Pn**	**04 55 12.2**	**-0.2**
	baz=66,SNR=129						
TGL	**Tana Glacier**	**1.54**	**203**		**Pb**	**04 55 13.3**	**-0.2**
TGL	**Tana Glacier**	**1.54**	**203**	IAML		04 55 33.8	
	comp=N,556nm,0.5s						
TGL				IAML		04 55 35.6	
	comp=E,658nm,0.6s						
O28M	**Mount Upton**	**1.56**	**153**		**Pn**	**04 55 13.6**	**+0.5**
O28M	**Mount Upton**	**1.56**	**153**	P	**Pn**	**04 55 13.9**	**+0.8**
	baz=334,SNR=182						
ISLE	**Juniper Island**	**1.61**	**193**		**Pn**	**04 55 14.1**	**+0.5**
ISLE				IAML		04 55 38.7	
	comp=E,680nm,0.7s						
ISLE				IAML		04 55 40.6	
	comp=N,806nm,0.7s						
YUK4	**Talbot Arm**	**1.64**	**119**	P	**Pn**	**04 55 14.6**	**+0.5**
	baz=298,SNR=124						
HARP	**HAARP**	**1.67**	**279**		**Pn**	**04 55 14.9**	**+0.7**
HARP	**HAARP**	**1.67**	**279**	P	**Pn**	**04 55 15.0**	**+0.7**
	baz=96,SNR=109						
HARP				S	**Sb**	**04 55 37.4**	**+0.5**
	baz=96						
BAGL	**Bagley Icefiel**	**1.70**	**188**		**Pb**	**04 55 16.1**	**-0.1**
TABL	**Table Mountain**	**1.75**	**172**		**Pb**	**04 55 17.0**	**-0.3**
TABL	**Table Mountain**	**1.75**	**172**	IAML		04 55 46.3	
	comp=E,414nm,0.9s						
TABL				IAML		04 55 51.3	
	comp=N,362nm,0.9s						
PS11	**TAPS Pump St11**	**1.81**	**269**		**Pb**	**04 55 18.6**	**+0.4**
YAH	**Yahtse**	**1.81**	**182**		**Pb**	**04 55 18.2**	**-0.2**
YAH	**Yahtse**	**1.81**	**182**	IAML		04 55 48.6	
	comp=E,334nm,0.5s						
YAH				IAML		04 55 48.8	
	comp=N,319nm,0.6s						
BARK	**Barkley Ridge**	**1.82**	**194**		**Pb**	**04 55 18.0**	**-0.4**
WAX	**Waxell Ridge**	**1.83**	**200**		**Pb**	**04 55 18.2**	**-0.3**
DOT	**Dot Lake**	**1.86**	**324**		**Pn**	**04 55 17.6**	**+0.7**
L29M	**L29M**	**1.87**	**58**		**Pn**	**04 55 17.7**	**+0.6**
L29M	**L29M**	**1.87**	**58**	P	**Pn**	**04 55 17.6**	**+0.6**
	baz=242,SNR=295						
BMRM	**Bremner River**	**1.87**	**231**		**Pn**	**04 55 17.7**	**+0.5**
BMRM	**Bremner River**	**1.87**	**231**	P	**Pn**	**04 55 17.6**	**+0.5**
	baz=48,SNR=39						
K27K	**Chicken**	**1.88**	**354**	P	**Pn**	**04 55 17.1**	**0.0**
	baz=174						
KHIT	**Khitrov Hills**	**1.90**	**205**		**Pb**	**04 55 19.5**	**-0.3**
PAX	**Paxson**	**1.96**	**296**		**Pn**	**04 55 18.5**	**+0.2**
PAX	**Paxson**	**1.96**	**296**	P	**Pn**	**04 55 18.5**	**+0.2**
	baz=112,SNR=64						
YUK6	**Outpost Mounta**	**1.99**	**127**		**Pn**	**04 55 20.2**	**+1.4**
YUK6	**Outpost Mounta**	**1.99**	**127**	P	**Pn**	**04 55 20.7**	**+1.8**
	baz=310,SNR=58						
MESA	**MESA**	**2.01**	**185**		**Pb**	**04 55 22.0**	**+0.4**
MESA	**MESA**	**2.01**	**185**	IAML		04 55 59.6	
	comp=N,624nm,0.9s						
MESA	**MESA**	**2.01**	**185**	P	**Pb**	**04 55 21.7**	**+0.1**
	baz=4.2,SNR=71						
BERG	**Berg Lake**	**2.05**	**210**		**Pb**	**04 55 22.2**	**0.0**
BERG	**Berg Lake**	**2.05**	**210**	IAML		04 55 52.6	
	comp=N,492nm,0.7s						
GRIN	**Grindle Hills**	**2.07**	**204**		**Pb**	**04 55 22.7**	**+0.1**
SNH	**Sunshine Point**	**2.08**	**197**		**Pb**	**04 55 22.9**	**+0.1**
SNH	**Sunshine Point**	**2.08**	**197**	IAML		04 55 55.1	
	comp=N,367nm,0.7s						
SNH				IAML		04 55 56.2	
	comp=E,463nm,0.8s						
SAMH	**Samovar Hills**	**2.09**	**168**		**Pb**	**04 55 23.5**	**+0.6**
SCRK	**Sand Creek**	**2.11**	**330**		**Pn**	**04 55 20.5**	**+0.1**
SCRK	**Sand Creek**	**2.11**	**330**	IAML		04 55 54.4	
	comp=E,390nm,0.6s						
SCRK	**Sand Creek**	**2.11**	**330**	P	**Pn**	**04 55 20.6**	**+0.1**
	baz=148,SNR=213						
M24K	**Tolsona, Glenn**	**2.14**	**270**	Pn	**Pn**	**04 55 20.1**	**-0.8**
M24K	**Tolsona, Glenn**	**2.14**	**270**	P	**Pn**	**04 55 21.9**	**+1.1**
	baz=86,SNR=31						
KLU	**Klutina**	**2.15**	**253**		**Pn**	**04 55 22.1**	**+1.1**
KLU	**Klutina**	**2.15**	**253**	P	**Pn**	**04 55 22.2**	**+1.1**
	baz=69,SNR=54						
KLU				S	**Sb**	**04 55 51.4**	**+0.5**
	baz=69						
DAWY	**Dawson**	**2.15**	**27**		**Pn**	**04 55 21.3**	**+0.3**
DAWY	**Dawson**	**2.15**	**27**	IAML		04 55 53.9	
	comp=E,583nm,0.5s						
DAWY	**Dawson**	**2.15**	**27**	P	**Pn**	**04 55 21.4**	**+0.3**
	baz=209,SNR=166						
RIDG	**Independent Ri**	**2.16**	**318**		**Pn**	**04 55 21.5**	**+0.5**
RIDG	**Independent Ri**	**2.16**	**318**	IAML		04 55 59.3	
	comp=N,597nm,0.8s						
RIDG	**Independent Ri**	**2.16**	**318**	P	**Pn**	**04 55 21.3**	**+0.3**
	baz=136,SNR=113						
PCA	**Pinnacle**	**2.18**	**162**		**Pb**	**04 55 24.1**	**-0.5**
PINM	**Pinnacle**	**2.19**	**162**	P	**Pb**	**04 55 24.6**	**0.0**
	baz=343,SNR=98						
GOAT	**Goat Mountain**	**2.19**	**225**		**Pb**	**04 55 24.0**	**-0.6**
BGLC	**Bering Glacier**	**2.21**	**202**	P	**Pb**	**04 55 25.4**	**+0.4**
	baz=20						
DIV	**Divide**	**2.24**	**244**		**Pb**	**04 55 24.5**	**-1.0**
HMT	**Hamilton**	**2.24**	**216**		**Pb**	**04 55 24.8**	**-0.7**
NICHA	**Nichawak Mount**	**2.25**	**211**		**Pb**	**04 55 25.2**	**-0.4**
N30M	**Aishikik Lake**	**2.27**	**106**		**Pn**	**04 55 23.1**	**+0.5**
N30M	**Aishikik Lake**	**2.27**	**106**	P	**Pn**	**04 55 23.1**	**+0.5**
	baz=290,SNR=46						
RAGM	**Ragged Mountai**	**2.32**	**221**		**Pb**	**04 55 25.9**	**-1.0**
RAGM	**Ragged Mountai**	**2.32**	**221**	IAML		04 56 04.1	
	comp=E,457nm,0.6s						
SUCK	**Suckling Hills**	**2.35**	**207**		**Pb**	**04 55 26.9**	**-0.5**
SUCK	**Suckling Hills**	**2.35**	**207**	IAML		04 56 04.9	
	comp=E,265nm,1.1s						
SUCK				IAML		04 56 12.5	
	comp=N,190nm,1.4s						
O29M	**Mount Kennedy**	**2.38**	**141**		**Pb**	**04 55 26.6**	**-1.4**
O29M	**Mount Kennedy**	**2.38**	**141**	P	**Pb**	**04 55 26.6**	**-1.4**
	baz=323,SNR=46						
HYT	**Haines Junctio**	**2.39**	**123**	Pg	**Pn**	**04 55 26.6**	**+2.3**
HYT				IAML		04 56 04.4	
	comp=E,242nm,0.8s						
HYT				IAML		04 56 05.6	
	comp=N,314nm,0.8s						
HYT	**Haines Junctio**	**2.39**	**123**	P	**Pn**	**04 55 26.3**	**+1.9**
	baz=306,SNR=53						
J26L	**Joseph Creek**	**2.50**	**340**		**Pn**	**04 55 26.0**	**+0.3**
J26L	**Joseph Creek**	**2.50**	**340**	IAML		04 56 03.8	
	comp=E,432nm,0.3s						
J26L				IAML		04 56 05.6	
	comp=N,391nm,0.4s						
J26L	**Joseph Creek**	**2.50**	**340**	P	**Pn**	**04 55 26.1**	**+0.3**
	baz=159,SNR=148						
K24K	**Donnelly Dome**	**2.51**	**313**		**Pn**	**04 55 26.8**	**+0.9**
K24K	**Donnelly Dome**	**2.51**	**313**	P	**Pn**	**04 55 26.6**	**+0.8**
	baz=129,SNR=96						
K29M	**Barlow Dome**	**2.51**	**46**		**Pn**	**04 55 26.6**	**+0.7**
K29M	**Barlow Dome**	**2.51**	**46**	P	**Pn**	**04 55 26.7**	**+0.7**
	baz=230,SNR=56						
EYAK	**Cordova Ski Ar**	**2.57**	**233**		**Pb**	**04 55 29.4**	**-1.6**
EYAK	**Cordova Ski Ar**	**2.57**	**233**	P	**Pb**	**04 55 29.0**	**-2.0**
	baz=49,SNR=44						
EGAK	**Eagle**	**2.62**	**4**		**Pn**	**04 55 28.8**	**+1.4**
EGAK	**Eagle**	**2.62**	**4**	IAML		04 56 13.6	
	comp=N,278nm,0.7s						
EGAK				IAML		04 56 19.4	
	comp=N,334nm,0.8s						
EGAK	**Eagle**	**2.62**	**4**	P	**Pn**	**04 55 28.8**	**+1.4**
	baz=185,SNR=38						
JPK	**Jack Peak**	**2.63**	**247**		**Pn**	**04 55 29.5**	**+2.0**
KAIM	**Kayak Island**	**2.63**	**212**		**Pb**	**04 55 30.2**	**-1.9**
KAIM	**Kayak Island**	**2.63**	**212**	IAML		04 56 20.1	
	comp=E,137nm,1.0s						
KAIM	**Kayak Island**	**2.63**	**212**	P	**Pb**	**04 55 30.3**	**-1.8**
	baz=30,SNR=14						
SCM	**Sheep Creek Mo**	**2.71**	**265**		**Pn**	**04 55 31.4**	**+2.7**
SCM	**Sheep Creek Mo**	**2.71**	**265**	P	**Pn**	**04 55 31.1**	**+2.3**
	baz=80,SNR=18						
FID	**Port Fidalgo**	**2.73**	**241**		**Pb**	**04 55 31.9**	**-1.9**
FID	**Port Fidalgo**	**2.73**	**241**	IAML		04 56 15.7	
	comp=E,140nm,0.5s						
PNL	**Peninsula**	**2.74**	**156**		**Pb**	**04 55 31.9**	**-2.0**
PNL	**Peninsula**	**2.74**	**156**	P	**Pb**	**04 55 32.6**	**-1.4**
	baz=338,SNR=30						
J29M	**Klondike Camp**	**2.76**	**32**		**Pn**	**04 55 27.2**	**-2.2**
DHY	**Denali Highway**	**2.81**	**291**	Pn	**Pn**	**04 55 28.7**	**-1.4**
DHY	**Denali Highway**	**2.81**	**291**	P	**Pn**	**04 55 31.6**	**+1.5**
	baz=106,SNR=29						
N31M	**Braeburn, Yuko**	**2.85**	**101**	P	**Pn**	**04 55 32.0**	**+1.4**
	baz=287						
WAT6	**Susitna Watana**	**2.88**

WHY	Whitehorse	3.58 112	IAML		04 56 41.7	
	comp=N,116nm,0.8s					
WHY			IAML		04 56 47.7	
	comp=E,102nm,0.6s					
WHY	Whitehorse	3.58 112	P	Pn	04 55 41.6	+1.0
	baz=298					
PMR	Palmer	3.60 264	P	Pn	04 55 43.1	+2.3
	baz=77,SNR=6.1					
MCK	McKinley	3.69 298	Pn	Pn	04 55 40.3	-1.8
MCK			IAML		04 56 49.8	
	comp=N,133nm,1.7s					
MCK			IAML		04 56 52.5	
	comp=E,76nm,0.9s					
MCK	McKinley	3.69 298	P	Pn	04 55 43.9	+1.8
	baz=112					
WRH	Wood River Hil	3.72 311	IAML		04 56 47.8	
	comp=N,72nm,0.7s					
WRH			IAML		04 56 48.8	
	comp=E,76nm,0.8s					
CCB	Clear Creek Bu	3.73 314		Pn	04 55 40.9	-1.6
CCB			IAML		04 56 43.2	
	comp=E,86nm,0.6s					
CCB			IAML		04 56 49.0	
	comp=N,59nm,0.6s					
PLBC	Pleasant Camp	3.75 134	P	Pn	04 55 44.5	+1.6
	baz=319					
PRP	Porcupine Dome	3.78 334		Pn	04 55 42.9	-0.5
PRP	Porcupine Dome	3.78 334	P	Pn	04 55 44.4	+1.0
	baz=151,SNR=20					
FARO	Faro, Yukon	3.88 85		Pn	04 55 44.7	+0.1
FARO	Faro, Yukon	3.88 85	P	Pn	04 55 45.9	+1.2
	baz=273					
COLA	College	3.89 317		Pn	04 55 42.7	-2.1
COLA	College	3.89 317	P	Pn	04 55 44.9	+0.1
	baz=131					
TCOL	CIGO, UAF Yank	3.89 317	P	Pn	04 55 44.8	0.0
	baz=131					
POKR	Poker Plat Res	3.93 321	Pn	Pn	04 55 43.5	-1.9
POKR			IAML		04 56 53.1	
	comp=N,121nm,1.1s					
POKR	Poker Plat Res	3.93 321	P	Pn	04 55 45.8	+0.4
	baz=136					
RC01	Rabbit Creek A	4.02 258	P	Pn	04 55 48.9	+2.2
	baz=71					
M22K	Willow	4.04 268	Pn	Pn	04 55 44.5	-2.3
M22K			IAML		04 56 57.5	
	comp=E,114nm,0.8s					
M22K			IAML		04 56 57.5	
	comp=N,92nm,1.8s					
M22K	Willow	4.04 268	P	Pn	04 55 48.5	+1.7
	baz=80					
CUT	Chulitna	4.05 277	P	Pn	04 55 48.5	+1.6
	baz=89					
MDM	Murphy Dome	4.07 316	IAML		04 56 55.5	
	comp=E,103nm,1.0s					
MDM			IAML		04 56 55.7	
	comp=N,119nm,1.0s					
H27K	Steamboat Moun	4.08 1		Pn	04 55 48.5	+1.1
H27K	Steamboat Moun	4.08 1	P	Pn	04 55 48.6	+1.2
	baz=181,SNR=8.1					
SKAG	Skagway	4.11 129	Pn	Pn	04 55 46.4	-1.4
SKAG			IAML		04 57 01.7	
	comp=N,62nm,0.8s					
SKAG			IAML		04 57 04.6	
	comp=E,66nm,0.8s					
SKAG	Skagway	4.11 129	P	Pn	04 55 48.7	+0.9
	baz=314					
NEA2	Nenana	4.14 309	Pn	Pn	04 55 45.3	-2.9
NEA2			IAML		04 57 00.8	
	comp=E,47nm,1.2s					
NEA2			IAML		04 57 00.9	
	comp=N,47nm,0.9s					
TRF	Thorofare Moun	4.18 292		Pn	04 55 52.2	+3.3
TRF	Thorofare Moun	4.18 292	IAML		04 57 01.8	
	comp=E,61nm,1.0s					
TRF			IAML		04 57 04.4	
	comp=N,77nm,1.6s					
TRF	Thorofare Moun	4.18 292	P	Pn	04 55 52.0	+3.0
	baz=104					
N32M	Quiet Lake	4.20 100	P	Pn	04 55 49.2	+0.1
	baz=288					
SEW	Seward	4.33 245	Pn	Pn	04 55 48.9	-1.9
SEW	Seward	4.33 245	P	Pn	04 55 52.0	+1.2
	baz=58					
SUA	Susitna One	4.39 265	P	Pn	04 55 54.0	+2.3
	baz=76					
KTH	Kantishna Hill	4.48 292	IAML		04 57 19.0	
	comp=E,66nm,1.5s					
KTH			IAML		04 57 22.2	
	comp=N,69nm,1.8s					
H25K	Birch Creek	4.50 338	P	Pn	04 55 54.9	+1.7
	baz=154,SNR=12					
I23K	Minto, Yukon-K	4.56 314		Pn	04 55 51.6	-2.4
I23K			IAML		04 57 08.7	
	comp=E,56nm,1.0s					
I23K			IAML		04 57 13.0	
	comp=N,51nm,0.7s					
I23K	Minto, Yukon-K	4.56 314	P	Pn	04 55 54.8	+0.8
	baz=127					
H24K	Noodor Dome	4.59 326	IAML		04 57 14.7	
	comp=N,75nm,1.4s					
H24K	Noodor Dome	4.59 326	P	Pn	04 55 55.7	+1.2
	baz=140,SNR=9.0					
G27K	Doyon Strip	4.66 360	P	Pn	04 55 56.4	+1.0
	baz=180,SNR=9.8					
SKT	Skwentna	4.67 272	P	Pn	04 55 58.2	+2.7
	baz=83					
P33M	Teslin, Yukon	4.69 111		Pn	04 55 55.9	0.0
P33M			IAML		04 57 16.4	
	comp=E,37nm,0.8s					
P33M			IAML		04 57 20.3	
	comp=N,63nm,1.2s					
P33M	Teslin, Yukon	4.69 111	P	Pn	04 55 56.4	+0.6
	baz=299					
EPYK	Eagle Plains	4.72 25	P	Pn	04 55 57.0	+0.7
	baz=209					
MMPY	Sheldon Lake,	4.84 80	P	Pn	04 55 58.8	+0.9
	baz=269					
G26K	Porcupine Rive	4.89 350	P	Pn	04 55 59.7	+1.2
	baz=168,SNR=5.5					
PPLA	Purkeypile	4.95 283	P	Pn	04 56 02.3	+2.8
	baz=94					
CAST	Castle Rocks	4.96 289	IAML		04 57 29.7	
	comp=N,29nm,3.1s					
CAST	Castle Rocks	4.96 289	P	Pn	04 56 02.1	+2.5
	baz=100					
MLY	Manley	4.98 309	Pn	Pn	04 55 57.7	-2.1
MLY			IAML		04 57 30.6	
	comp=E,26nm,0.8s					
MLY			IAML		04 57 31.1	
	comp=N,24nm,1.3s					
MLY	Manley	4.98 309	P	Pn	04 56 00.0	+0.2
	baz=121					
G25K	Bearman Lake	5.00 339	P	Pn	04 56 01.6	+1.6
	baz=155,SNR=8.8					
H23K	Yukon River	5.06 320	IAML		04 57 34.2	
	comp=E,47nm,1.2s					
H23K	Yukon River	5.06 320	P	Pn	04 56 01.9	+1.0
	baz=133,SNR=11					
BRSE	Bradley Lake S	5.07 245	P	Pn	04 56 02.7	+1.7
	baz=57					
SPU	Mount Spurr	5.07 263	Pn	Pn	04 55 57.9	-3.1
G24K	Hadweenzic Riv	5.21 333	P	Pn	04 56 03.8	+0.9
	baz=148,SNR=11					
G30M	tAoh Zraii Nji	5.36 23	P	Pn	04 56 05.1	+0.1
	baz=208					
M20K	Styx River	5.43 272	Pn	Pn	04 56 03.6	-2.5
M20K	Styx River	5.43 272	P	Pn	04 56 08.2	+2.2
	baz=82					
HOM	Homer	5.50 247	P	Pn	04 56 09.1	+2.2
	baz=58					
I21K	Tanana	5.51 308	P	Pn	04 56 09.3	+2.2
	baz=118					
F26K	Sheenjek River	5.65 350	P	Pn	04 56 10.3	+1.3
	baz=168,SNR=9.8					
H22K	Ishtalitna Cre	5.68 315	P	Pn	04 56 10.4	+1.0
	baz=127,SNR=8.3					
F25K	Christian Rive	5.71 344	P	Pn	04 56 10.4	+0.6
	baz=161,SNR=9.5					
L20K	Farewell, AK	5.72 279	P	Pn	04 56 11.9	+1.9
	baz=88,SNR=5.1					
O20K	Slope Mountain	5.73 253	P	Pn	04 56 13.1	+3.0
	baz=64					
G23K	Bananza Creek	5.83 325	P	Pn	04 56 12.1	+0.7
	baz=138					
K20K	Telida	5.84 287	P	Pn	04 56 14.2	+2.6
	baz=96					
F24K	Squaw Lake	6.00 336	P	Pn	04 56 15.4	+1.7
	baz=151,SNR=17					
M19K	Big River Lodg	6.02 273	P	Pn	04 56 16.3	+2.3
	baz=82					
J20K	Nowinta River	6.02 295	P	Pn	04 56 16.5	+2.5
	baz=104					
E27K	Coleen River	6.04 0	P	Pn	04 56 14.9	+0.6
	baz=180,SNR=6.7					
H21K	Melozitna Rive	6.04 310	P	Pn	04 56 15.7	+1.3
	baz=120					
L19K	White Mountain	6.20 276	Pn	Pn	04 56 15.2	-1.4
L19K	White Mountain	6.20 276	P	Pn	04 56 18.8	+2.3
	baz=84					
E25K	Arctic Village	6.20 346	P	Pn	04 56 17.7	+1.1
	baz=163,SNR=6.7					
COLD	Coldfoot	6.26 328	Pn	Pn	04 56 16.6	-0.8
COLD	Coldfoot	6.26 328	P	Pn	04 56 18.5	+1.2
	baz=140,SNR=5.0					
F31M	Tsiigehtchic	6.26 29	P	Pn	04 56 17.1	-0.2
	baz=216					
N19K	Bonanza Creek	6.31 263	P	Pn	04 56 19.2	+1.1
	baz=72					
G22K	Bettles	6.39 323	P	Pn	04 56 19.3	+0.2
	baz=134					
IMAR	Indian Mountai	6.55 311	Pn	Pn	04 56 20.7	-0.5
E24K	Your Creek	6.59 337	P	Pn	04 56 23.4	+1.4
	baz=151,SNR=17					
G21K	Allakaket	6.75 315	P	Pn	04 56 25.7	+1.7
	baz=125,SNR=8.7					
E23K	Chandalar	6.80 334	P	Pn	04 56 27.0	+2.2
	baz=147,SNR=10					
F22K	John River	6.99 325	P	Pn	04 56 28.5	+1.2
	baz=135					
INK	Inuvik	7.03 25	P	Pn	04 56 28.4	+0.6
	baz=213					
F21K	Alatna River	7.17 320	P	Pn	04 56 29.9	0.0
	baz=129					
TOLK	Toolik Lake Re	7.29 336	P	Pn	04 56 33.4	+1.9
	baz=149,SNR=7.1					
D25K	Kavik River	7.44 347	P	Pn	04 56 35.8	+2.2
	baz=163,SNR=9.1					
C27K	Jago River	7.54 354	P	Pn	04 56 37.0	+2.2
	baz=173					
D24K	Happy Valley	7.61 340	P	Pn	04 56 37.4	+1.6
	baz=154					
D23K	Nanushuk River	7.78 335	P	Pn	04 56 40.6	+2.5
	baz=147					
Q17K	Contact Creek	8.11 247	P	Pn	04 56 43.8	+1.1
	baz=55,SNR=5.4					
C23K	Itkillik River	8.51 339	P	Pn	04 56 51.1	+3.0
	baz=150					

*NOU **01** 05:00:09.2, 38.51S×175.61E, h192km, MLv4.0/9, North Island, New Zealand*
*WEL **01** 05:00:13.4±0.6, 39°S±3°×17°6E±°, h152km±5km, M3.0/69, ML2.6/6, MLv3.0/69, Error ellipse: s-maj=0.0km s-min=0.0km az=96.5*
ISC 01 05:00:09.0±1.6, **38.62S**±0.05×**175.67E**±0.05, **h187**km±9km, **n141**, σ1§57/146, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	Wairara	0.10	153	P	Pn	05 00 34.7	+1.1
KUTZ	Kaahu Road	0.17	42	P	Pn	05 00 34.7	+1.0
RATZ	Rangitukua	0.26	163	P	Pn	05 00 34.8	+1.0
TLZ	Tolley Road	0.31	340	P	Pn	05 00 34.8	+0.9
TLZ				S	Sn	05 00 52.3	-0.9
KATZ	Kakaramea	0.36	177	P	Pn	05 00 35.4	+1.2
WPRZ	Whakapapatarin	0.40	76	P	Pn	05 00 35.0	+0.9
HATZ	Hinemaiaia	0.43	130	P	Pn	05 00 34.6	+0.3
KRVZ	Karewarewa	0.48	183	P	Pn	05 00 35.8	+1.3
NTVZ	North Tongarir	0.48	180	P	Pn	05 00 36.0	+1.4
TWVZ	Taurewa	0.49	202	P	Pn	05 00 35.8	+1.3
TMVZ	Te Maari	0.50	177	P	Pn	05 00 36.0	+1.4
WTVZ	West Tongariro	0.50	187	P	Pn	05 00 36.0	+1.4
NNVZ	North Ngauruho	0.52	185	P	Pn	05 00 36.1	+1.3
ETVZ	East Tongariro	0.52	177	P	Pn	05 00 36.2	+1.5
ALRZ	Allen Road	0.53	84	P	Pn	05 00 35.4	+0.8
HRRZ	Handcock Road	0.53	65	P	Pn	05 00 35.7	+1.0
OTVZ	Oturere	0.54	181	P	Pn	05 00 36.3	+1.4
NGZ	Ngauruhoe	0.56	186	P	Pn	05 00 36.3	+1.4
SNVZ	South Ngauruho	0.57	183	P	Pn	05 00 36.4	+1.4
MRHZ	Matea Rd	0.62	111	P	Pn	05 00 35.9	+0.8
MRHZ				S	Sn	05 00 52.5	-2.8
FWVZ	Far West T-bar	0.64	188	P	Pn	05 00 36.8	+1.4
TUVZ	Tukino	0.65	181	P	Pn	05 00 37.0	+1.6
HIZ	Hauiti	0.65	279	P	Pn	05 00 36.5	+1.3
HIZ	Hauiti	0.65	279	P	Pn	05 00 36.6	+1.4
WHVZ	Whangaehu Hut	0.67	186	P	Pn	05 00 37.0	+1.5
TRVZ	Turoa	0.69	188	P	Pn	05 00 37.3	+1.7
WNVZ	Wahianoa	0.71	185	P	Pn	05 00 37.3	+1.6
PKVZ	Pokaka	0.72	201	P	Pn	05 00 37.2	+1.6
MTVZ	Mangateitei	0.78	192	P	Pn	05 00 37.4	+1.7
MOVZ	Moawhango	0.79	176	P	Pn	05 00 37.4	+1.4
KMRZ	Kaimai	0.80	15	P	Pn	05 00 37.0	+0.9
BKZ	Black Stump Fm	0.84	131	P	Pn	05 00 37.7	+1.4
BKZ	Black Stump Fm	0.84	131	P	Pn	05 00 37.7	+1.4
MUGZ	Murupara	0.87	81	P	Pn	05 00 37.0	+0.5
VRZ	Vera Road	0.88	234	P	Pn	05 00 38.3	+1.8
TOZ	Tahuroa Road	0.90	351	P	Pn	05 00 37.8	+1.1
BHHZ	Black Hill Sta	0.92	161	P	Pn	05 00 38.3	+1.5
BHHZ				S	Sn	05 00 56.5	-2.1
MTHZ	Maungataniwha	0.94	105	P	Pn	05 00 38.3	+1.3
MTHZ				S	Sn	05 00 56.5	-2.1
KWHZ	Kaweka Forest	0.99	144	P	Pn	05 00 39.1	+1.8
TGRZ	Tauranga	1.00	28	P	Pn	05 00 38.2	+0.9
NMHZ	Naumai	1.00	119	P	Pn	05 00 39.7	+2.3
RTZ	Ruatahuna	1.02	90	P	Pn	05 00 38.8	+1.2
OPRZ	Ohinepanea	1.04	42	P	Pn	05 00 38.4	+0.8
RAHZ	Arahi	1.14	106	P	Pn	05 00 40.4	+2.0
RAHZ				S	Sn	05 00 60.0	-1.2
MCHZ	McNeill Hill	1.15	136	P	Pn	05 00 41.0	+2.6
MHEZ	Mangahewa	1.15	246	P	Pn	05 00 40.8	+2.4
URZ	Urewera	1.18	73	P	Pn	05 00 39.4	+0.7
URZ	Urewera	1.18	73	P	Pn	05 00 39.8	+1.1
ARHZ	Aropaoanui	1.22	122	P	Pn	05 00 41.1	+2.2
WAZ	Wanganui	1.25	205	P	Pn	05 00 41.4	+2.1
DREZ	Durham Road	1.28	243	P	Pn	05 00 41.8	+2.3
LREZ	Lake Rotokare	1.30	229	P	Pn	05 00 42.3	+2.7
WHHZ	Waihua	1.30	111	P	Pn	05 00 41.7	+2.0
SNGZ	Shannon Statio	1.31	98	P	Pn	05 00 41.6	+1.8
PNHZ	Pukenui	1.36	163	P	Pn	05 00 42.2	+2.0
PREZ	Palmer Road	1.38	238	P	Pn	05 00 43.0	+2.6
NEZ	North Egmont	1.39	242	P	Pn	05 00 43.0	+2.5
PKE	Pukeiti	1.44	246	P	Pn	05 00 43.2	+2.3
TSZ	Takapari Road	1.46	171	P	Pn	05 00 43.1	+2.1
KHEZ	Kahui Hut	1.46	242	P	Pn	05 00 43.6	+2.4
MWZ	Matawai	1.48	80	P	Pn	05 00 42.5	+1.2
KAHZ	Kahuranaki	1.50	142	P	Pn	05 00 43.9	+2.4
CKHZ	Cape Kidnapper	1.51	134	P	Pn	05 00 44.0	+2.5
NBEZ	Newall Road No	1.55	245	P	Pn	05 00 44.3	+2.4
WPHZ	Waipukurau	1.56	158	P	Pn	05 00 44.2	+2.2
MKAZ	Moumakai	1.56	345	P	Pn	05 00 43.5	+1.4
OHWZ	Ohakea	1.61	190	P	Pn	05 00 45.1	+2.6
KNZ	Kokohu	1.61	105	P	Pn	05 00 44.4	+1.9
RIGZ	Rimuhau	1.64	94	P	Pn	05 00 44.6	+1.8
PXZ	Pawanui	1.69	147	P	Pn	05 00 45.4	+2.2
RUGZ	Raukumara Rang	1.71	68	P	Pn	05 00 43.8	+0.2
TKGZ	Te Karaka	1.71	85	P	Pn	05 00 45.8	+2.3
DVHZ	Dannevirke	1.72	167	P	Pn	05 00 45.4	+1.8
AWAZ	Awhitu Peninsu	1.75	332	P	Pn	05 00 45.7	+1.7
ETAZ	East Tamaki Re	1.76	340	P	Pn	05 00 45.6	+1.5
POWZ	Post Office Ro	1.77	178	P	Pn	05 00 45.9	+1.9
PRHZ	Porangahau	1.81	156	P	Pn	05 00 46.6	+2.2
MHGZ	Mahia Peninsul	1.82	108	P	Pn	05 00 46.9	+2.3
KUZ	Kuautunu	1.87	1	P	Pn	05 00 46.5	+1.4
HAZ	Te Kaha	1.87	63	P	Pn	05 00 45.6	+0.5
WIAZ	Waiheke Island	1.87	347	P	Pn	05 00 46.7	+1.5
WTAZ	Waiatarua	1.90	332	P	Pn	05 00 47.5	+2.1
ANWZ	Angora Road	1.94	162	P	Pn	05 00 48.1	+2.4
MBAZ	Motutapu North	1.95	341	P	Pn	05 00 47.6	+1.7
PRWZ	Pori Road	1.95	173	P	Pn	05 00 47.9	+2.1
CNGZ	Carnagh Statio	1.99	87	P	Pn	05 00 48.5	+2.2
PKGZ	Pakihiroa	2.03	70	P	Pn	05 00 48.4	+1.6
RVAZ	Riverhead Bore	2.04	334	P	Pn	05 00 48.6	+1.7
MRZ	Mangatainoka R	2.04	182	P	Pn	05 00 48.5	+1.7
PUZ	Puketiti	2.10	76	P	Pn	05 00 49.1	+1.5
BFZ	Birch Farm	2.11	168	P	Pn	05 00 49.5	+2.0
BFZ	Birch Farm	2.11	168	P	Pn	05 00 49.8	+2.2
TIWZ	Tintock	2.16	176	P	Pn	05 00 49.9	+1.7
OGWZ	Otaki Gorge	2.23	190	P	Pn	05 00 50.7	+1.8
HOWZ	Holdsworth Sta	2.28	183	P	Pn	05 00 50.9	+1.4
WMGZ	Waiomatatini S	2.30	71	P	Pn	05 00 51.0	+1.2
KIW	Kapiti Island	2.32	194	P	Pn	05 00 51.3	+1.4
CPWZ	Castlepoint	2.33	170	P	Pn	05 00 52.3	+2.3
MXZ	Matakaoa Point	2.33	64	P	Pn	05 00 51.7	+1.6
GRZ	Great Barrier	2.37	356	P	Pn	05 00 52.3	+1.7
TMWZ	Te Maipa	2.49	176	P	Pn	05 00 53.4	+1.5
CAW	Cannon Point	2.53	190	P	Pn	05 00 53.7	+1.4
MTW	Mount Morrison	2.54	183	P	Pn	05 00 53.7	+1.2
DUWZ	D'Urville Isla	2.56	211	P	Pn	05 00 54.1	+1.4
WEL	Wellington	2.75	194	P	Pn	05 00 56.2	+1.4
PAWZ	Paruwai Farm	2.77	184	P	Pn	05 00 56.3	+1.2
TRWZ	Traveller	2.78	180	P	Pn	05 00 56.6	+1.4
SNZO	South Karori	2.79	195	P	Pn	05 00 56.5	+1.2
TCW	Tory Channel	2.80	202	P	Pn	05 00 56.8	+1.3
MSWZ	Moikau Station	2.81	187	P	Pn	05 00 56.8	+1.1
PLWZ	Palliser	2.96	186	P	Pn	05 00 58.4	+0.9
TUWZ	Tuamarina	3.11	205	P	Pn	05 01 00.1	+1.0
NNZ	Nelson	3.14	213	P	Pn	05 01 00.4	+0.9
TKNZ	Takaka Hill	3.19	220	P	Pn	05 01 00.9	+0.7
QRZ	Quartz Range	3.28	227	P	Pn	05 01 01.7	+0.5
QRZ	Quartz Range	3.28	227	P	Pn	05 01 02.3	+1.1
CMWZ	Cape Campbell	3.32	199	P	Pn	05 01 03.5	+1.8
BSWZ	Blackbirch Sta	3.39	203	P	Pn	05 01 03.8	+1.3
MRNZ	Matariki Terra	3.57	218	P	Pn	05 01 05.3	+0.6
THZ	Tophouse	3.79	213	P	Pn	05 01 08.5	+0.9
KHZ	Kahutara	4.13	203	P	Pn	05 01 12.9	+1.2
KHZ	Kahutara	4.13	203	P	Pn	05 01 13.1	+1.3
DSZ	Denniston Nort	4.30	222	P	Pn	05 01 15.1	+1.0
GVZ	Greta Valley S	4.78	204	P	Pn	05 01 20.9	+0.7
LTZ	Lake Taylor	4.90	211	P	Pn	05 01 22.0	+0.3
AMCZ	Amberley	5.10	206	P	Pn	05 01 24.5	+0.3
INZ	Inchbonnie	5.21	215	P	Pn	05 01 26.0	+0.3
OXZ	Oxford	5.45	209	P	Pn	05 01 28.7	-0.1
OKCZ	Okains Bay	5.47	200	P	Pn	05 01 29.3	+0.3
MQZ	McQueen's Vall	5.57	203	P	Pn	05 01 29.8	-0.5
AKCZ	Akaroa Harbour	5.65	201	P	Pn	05 01 31.3	-0.1
RACZ	Rakaia	5.76	206	P	Pn	05 01 32.4	-0.3
WACZ	Wakanui South	6.05	207	P	Pn	05 01 36.4	-0.1
RPZ	Rata Peaks	6.17	213	P	Pn	05 01 38.8	+0.6
RPZ	Rata Peaks	6.17	213	P	Pn	05 01 39.4	+1.2
ARCZ	Arundel	6.31	211	P	Pn	05 01 40.1	+0.1
FOZ	Fox Glacier	6.61	220	P	Pn	05 01 44.6	+0.7
TMZ	Timaru	6.74	210	P	Pn	05 01 45.7	0.0
LBZ	Lake Benmore	7.08	214	P	Pn	05 01 50.5	+0.4
ODZ	Otahua Downs	7.44	209	P	Pn	05 01 55.0	+0.3
ODZ	Otahua Downs	7.44	209	P	Pn	05 01 55.6	+0.9

*JMA **01** 05:05:13.0±0.2, 24°N±3°×122.5E±0.6, h49km±1km, MV2.3/8, NW OFF ISHIGAKIJIMA IS*
*TAP **01** 05:05:13.1, 24.22N×122.55E, h41km, ML3.1, D*
ISC 01 05:05:13.2±0.9, **24.20N**±0.02×**122.53E**±0.02, **h30**km±10km, **n69**, σ1§07/135, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	56	P	Pb	05 05 23.0	+0.1
JYNG				eS	Sb	05 05 30.2	+0.7
YOJ	Yonaguni jima	0.51	59	P	Pb	05 05 23.9	+0.1
	baz=51						
YOJ				S	Sb	05 05 31.5	+0.4
	baz=51						
YOJ	Yonaguni jima	0.51	59	P	Pb	05 05 23.8	0.0
YOJ				eS	Sb	05 05 31.1	+0.1
TWC	Suao	0.74	303	P	Pb	05 05 27.7	0.0
	baz=301						
TWC				i S	Sb	05 05 37.7	+0.1
	baz=301						
EGS		0.84	320	i P	Pb	05 05 28.6	-0.8
	baz=326						
EGS				S	Sb	05 05 40.9	+0.4
	baz=326						
NACB	Ninganchiao	0.86	269	eP	Pn	05 05 30.9	+1.6
	baz=253						
NACB				S	Sb	05 05 41.2	+0.5
	baz=253						
TWD	Chiawan	0.86	262	eP	Pb	05 05 29.4	-0.3
	baz=248						
TWD				i S	Sb	05 05 40.8	-0.1
	baz=248						
NTC	Toucheng	0.91	316	P	Pb	05 05 30.2	-0.4
	baz=325						
NTC				S	Sb	05 05 43.2	+0.8
	baz=325						
TEYL	Yanliau Villag	0.92	249	P	Pb	05 05 30.2	-0.4
	baz=239						
TEYL				eS	Sb	05 05 43.0	+0.6
	baz=239						
TWE	Neicheng	0.94	304	eP	Pb	05 05 31.2	+0.1
	baz=309						
TWE				i S	Sb	05 05 43.9	+0.6
	baz=309						
TWB1	Santiao Chiao	0.95	329	i P	Pb	05 05 30.1	-1.0
	baz=327						
TWB1				S	Sb	05 05 42.2	-1.1
	baz=327						
LATG	Datong	0.98	290	P	Pb	05 05 31.4	-0.3
	baz=276						
LATG				S	Sb	05 05 45.0	+0.6
	baz=276						
ETM	Tongmen	0.98	256	P	Pb	05 05 30.7	-0.9
	baz=254						
ETM				S	Sb	05 05 43.2	-1.0
	baz=254						
ENTT	Nioudou	0.98	297	P	Pb	05 05 30.8	-1.0
	baz=294						
ENTT				eS	Sb	05 05 43.1	-1.4
	baz=294						
TIPB	Shuangxi	1.00	320	P	Pn	05 05 31.1	-0.3
	baz=329						
TIPB				S	Sb	05 05 43.8	-1.2
	baz=329						
FUSB	Fushanzhiwuyua	1.03	303	P	Pn	05 05 32.3	+0.6
	baz=313						
FUSB				S	Sn	05 05 46.9	+1.8
	baz=313						
SXI1	Grass Mountain	1.07	326	P	Pn	05 05 32.0	-0.3
	baz=335						
SXI1				eS	Sb	05 05 45.1	-2.0
	baz=335						
IRIF	Iriomote-Funau	1.10	83	P	Pn	05 05 32.2	-0.4
IRIF				eS	Sb	05 05 46.3	-1.4
WFSB	Wu-fen Shan	1.10	322	P	Pn	05 05 32.7	0.0
	baz=320						
WFSB				S	Sb	05 05 46.7	-1.1
	baz=320						
EGFH	Guangfu	1.14	243	P	Pn	05 05 33.0	-0.2
	baz=241						
EGFH				S	Sb	05 05 47.5	-1.4
	baz=241						
YHNB	Yeheng	1.15	294	P	Pn	05 05 34.1	+0.7
	baz=278						

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TWT                                  i S          Sn   05 05 51.3 +0.8
     baz=270
CHGB Renai                1.25 264   P            Pn   05 05 35.4 +0.5
     baz=250
CHGB                                 S            Sn   05 05 50.8 -0.1
     baz=250
TDCB Techi                1.26 273  eP            Pn   05 05 36.2 +1.3
     baz=270
TDCB                                 i S          Sn   05 05 51.5 +0.6
     baz=270
OWD  Renai                1.26 259   P            Pn   05 05 35.0  0.0
     baz=257
OWD                                  S            Sn   05 05 50.7 -0.4
     baz=257
YM01 YM01                 1.29 317   P            Pn   05 05 35.3  0.0
     baz=315
YM01                                 S            Sn   05 05 51.2 -0.3
     baz=315
EHY  Hungye               1.30 238   P            Pn   05 05 35.2 -0.3
     baz=249
EHY                                  S            Sn   05 05 51.6 -0.3
     baz=249
YM08 YM08                 1.31 319   P            Pn   05 05 35.3 -0.2
     baz=317
YM08                                 S            Sn   05 05 52.1 +0.2
     baz=317
WUSB Renai                1.31 261  eP            Pn   05 05 36.3 +0.7
     baz=259
WUSB                                 i S          Sn   05 05 52.4 +0.2
     baz=259
ECBN Changbin             1.32 229   P            Pn   05 05 34.4 -1.3
     baz=227
ECBN                                 S            Sn   05 05 50.8 -1.6
     baz=227
VWDT VWDT                 1.35 251  eP            Pn   05 05 36.7 +0.7
     baz=249
VWDT                                 S            Sn   05 05 53.2 +0.3
     baz=249
JKRS Kuro-shima           1.35  88   P            Pn   05 05 36.6 +0.6
JKRS                                eS            Sn   05 05 53.8 +0.8
NFF  Wufeng Townshi       1.36 289   P            Pn   05 05 36.7 +0.4
     baz=286
NFF                                 eS            Sn   05 05 53.4  0.0
     baz=286
YULB Yu-li                1.39 235  eP            Pn   05 05 36.5 -0.1
     baz=247
YULB                                 S            Sn   05 05 52.8 -1.2
     baz=247
EYUL Yuli                 1.40 233   P            Pn   05 05 36.7 -0.1
     baz=221
EYUL                                 S            Sn   05 05 54.0 -0.2
     baz=221
TWF1 Yuli                 1.41 234   P            Pn   05 05 36.9  0.0
     baz=246
TWF1                                 S            Sn   05 05 54.0 -0.5
     baz=246
WHP  Taichung City        1.45 273  eP            Pn   05 05 39.6 +2.0
     baz=271
WHP                                  S            Sn   05 05 56.9 +1.3
     baz=271
JIJ  Ishigaki jima        1.48  83   P            Pn   05 05 37.5 -0.3
JIJ                                  S            Sn   05 05 55.6 -0.6
PCYT Pengchaiyu           1.48 344   P            Pn   05 05 37.7 -0.2
     baz=343
PCYT                                 S            Sn   05 05 56.4 +0.1
     baz=343
WCS  Beigang Elemen       1.49 265   P            Pn   05 05 39.2 +1.3
     baz=255
WCS                                  S            Sn   05 05 56.5 +0.1
     baz=255
SSLB Suanglung            1.50 254   P            Pn   05 05 38.8 +0.6
     baz=253
SSLB                                 S            Sn   05 05 57.0 +0.3
     baz=253
FULB Fuli                 1.51 229   P            Pn   05 05 38.1 -0.2
     baz=228
FULB                                 S            Sn   05 05 56.7 -0.3
     baz=228
SMLT Sun Moon Lake        1.53 258   P            Pn   05 05 39.5 +0.9
     baz=256
SMLT                                 S            Sn   05 05 58.0 +0.5
     baz=256
CHKT Chengkung            1.53 225  i S            Sn   05 05 55.2 -2.2
     baz=223
YUS  Yu-Shan              1.61 244   P            Pn   05 05 40.9 +0.8
     baz=242
YUS                                  S            Sn   05 06 00.0 -0.1
     baz=242
EDH  Donghe               1.66 223   P            Pn   05 05 39.9 -0.5
     baz=214
EDH                                  S            Sn   05 05 59.0 -1.6
     baz=214
WWF  Wufeng               1.68 265   P            Pn   05 05 41.8 +1.1
     baz=263
WWF                                 eS            Sn   05 06 03.1 +1.9
     baz=263
ALS  Alishan              1.72 247   P            Pn   05 05 42.9 +1.4
     baz=245
ALS                                 eS            Sn   05 06 04.1 +1.5
     baz=245
LDUT Ludao                1.81 213   P            Pn   05 05 41.4 -0.9
     baz=212
LDUT                                 S            Sn   05 06 02.1 -2.1
     baz=212
LONT Longtian             1.82 225   P            Pn   05 05 42.4 -0.2
     baz=235
LONT                                 S            Sn   05 06 04.2 -0.4
     baz=235
TWGBT Beinan              1.92 224   P            Pn   05 05 43.5 -0.3
     baz=233
TWGBT                                S            Sn   05 06 06.4 -0.6
     baz=233
TPUB Ta-pu                1.96 243   P            Pn   05 05 46.5 +2.0
     baz=242
TPUB                                eS            Sn   05 06 11.0 +2.9
     baz=242
WTP  Ta-pu                2.00 242   P            Pn   05 05 47.1 +2.0
     baz=240
WTP                                  S            Sn   05 06 11.7 +2.6
     baz=240
CHN1 Nanshi               2.10 242  eP            Pn   05 05 49.1 +2.7
     baz=240
CHN1                                 S            Sn   05 06 14.4 +3.0
     baz=240
LAY  Lan-yu               2.33 203   P            Pn   05 05 49.4 -0.2
     baz=202
LAY                                  S            Sn   05 06 15.8 -1.5
     baz=202
MASBT Mashibuluo          2.35 228   P            Pn   05 05 50.6 +0.8
     baz=223
MASBT                                S            Sn   05 06 18.4 +0.6
     baz=223
SCZT Fangliau             2.53 224  eP            Pn   05 05 55.6 +3.3
     baz=218
SCZT                                eS            Sn   05 06 25.6 +3.5
     baz=218
PHUB P'eng-hu             2.79 256   P            Pn   05 05 56.7 +0.8
     baz=254
PHUB                                 S            Sn   05 06 29.2 +0.5
     baz=254
VWUC VWUC                 2.92 286  eP            Pn   05 05 57.0 -0.6
     baz=284
VCHM Qimei                3.01 252  eP            Pn   05 05 58.7 -0.2
     baz=249
VCHM                                 S            Sn   05 06 33.6 -0.4
     baz=249
XPSS Dashiqiu             3.45 323  eP            Pn   05 06 04.7 -0.2
     baz=320
XPSS                                eS            Sn   05 06 44.0 -0.7
     baz=320
```

RSNC ***01*** *05:15:50.8±1.0, 6°.81N×73°.15W, h147km±4km, ML3.3*
IDC ***01*** *05:15:56.0±4.3, 6°.39N×74°.16W, h197km±21km, mb2.5/2, mbtmp3.0/2, Error ellipse: s-maj=136.0km s-min=32.0km az=71.0*

ISC 01 05:15:49.3±0.9, 6°.84N±0°.03×73°.11W±0°.04, h155km±6km, n40, σ1§38/68, 1C-4D, Northern Colombia

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
BARC Barichara            0.26 196   iP              Pn   05 16 10.5  -0.1
BARC                                eS              Sn   05 16 25.7  -1.1
BARC                                 i                   05 16 26.8
     comp=Z,625nm,0.2s
PAMC Pamplona, Colo       0.64  40  eP              Pn   05 16 13.3 +0.8
PAMC                                eS              Sn   05 16 30.3 +0.1
PAMC                                 i                   05 16 32.4
     comp=Z,443nm,0.6s
BRRC Barranca, Sant       0.65 294  eP              Pn   05 16 12.3 +0.4
BRRC                                eS              Sn   05 16 29.5 +0.2
BRRC                                 i                   05 16 33.6
     comp=Z,332nm,0.1s
RUSC La Rusia             0.94 178  iP              Pn   05 16 14.4  -0.2
RUSC                                eS              Sn   05 16 33.3  -0.7
RUSC                                 i                   05 16 34.3
     comp=Z,270nm,0.3s
PTBC PUERTO BERRIO,       1.37 257  eP              Pn   05 16 17.0  -0.9
PTBC                                eS              Sn   05 16 38.2  -1.6
PTBC                                 i                   05 16 41.2
     comp=Z,204nm,0.2s
TAMC Tame, Arauca         1.37 107  iP              Pn   05 16 18.9 +0.9
TAMC                                eS              Sn   05 16 40.5 +0.6
OCAC Ocana                1.40 352  eP              Pn   05 16 18.6 +0.1
OCAC                                eS              Sn   05 16 40.5  -0.2
OCAC                                 i                   05 16 43.9
     comp=Z,426nm,0.2s
SPBC San Pablo de B       1.52 219  eP              Pn   05 16 19.2  -0.3
SPBC                                eS              Sn   05 16 41.3  -1.4
SPBC                                 i                   05 16 46.3
     comp=Z,418nm,0.2s
ZARC Zaragoza, Cauc       1.85 291  eP              Pn   05 16 22.8  -0.2
ZARC                                eS              Sn   05 16 48.6  -0.3
ZARC                                 i                   05 16 55.3
     comp=Z,221nm,0.4s
NORC Norcasia             2.16 234  eP              Pn   05 16 26.4  -0.3
NORC                                eS              Sn   05 16 54.9  -0.5
NORC                                 i                   05 16 57.1
     comp=Z,147nm,0.2s
CHIC Chingaza             2.28 196  eP              Pn   05 16 28.4   0.0
CHIC                                eS              Sn   05 16 57.6  -1.0
CHIC                                 i                   05 17 01.5
     comp=Z,157nm,0.6s
ROSC El Rosal             2.32 211   P              Pn   05 16 30.5 +1.6
     comp=Z,102nm,0.3s,baz=295,slow=1.7,SNR=132
ROSC                                 S              Sn   05 16 57.1  -2.4
     comp=Z,269nm,0.4s,baz=131,slow=18,SNR=12
ROSC El Rosal             2.32 211  eP              Pn   05 16 30.4 +1.4
ROSC                                eS              Sn   05 16 59.5   0.0
ROSC                                 i                   05 17 04.4
     comp=Z,264nm,0.5s
HELC Santa Helena         2.49 255  eP              Pn   05 16 31.2 +0.4
HELC                                eS              Sn   05 17 01.8  -1.0
HELC                                 i                   05 17 08.6
     comp=Z,116nm,0.3s
UREC San Jos de Ur        2.56 291  eP              Pn   05 16 30.4  -1.0
UREC                                eS              Sn   05 17 02.4  -1.6
UREC                                 i                   05 17 13.3
     comp=Z,128nm,0.2s
LL1C La Loma 1 Cana       2.72 351  eP              Pn   05 16 35.0 +1.7
GUY2C Guyana, Caldas      2.76 234  eP              Pn   05 16 34.9 +0.6
GUY2C                               eS              Sn   05 17 10.9 +1.9
GUY2C                                i                   05 17 16.8
     comp=Z,120nm,0.3s
VILC Villavicencio,       2.77 192  eP              Pn   05 16 33.9  -0.3
VILC                                eS              Sn   05 17 08.6  -0.3
VILC                                 i                   05 17 11.2
     comp=Z,225nm,0.4s
PTGC Puerto Gaitan,       2.80 160  eP              Pn   05 16 33.5  -0.9
PTGC                                eS              Sn   05 17 07.0  -2.3
PTGC                                 i                   05 17 12.0
     comp=Z,150nm,0.3s
CBOC Ciudad Bolivar       3.04 252  eP              Pn   05 16 38.4 +0.8
CBOC                                eS              Sn   05 17 15.4 +0.5
CBOC                                 i                   05 17 18.7
     comp=Z,34nm,0.2s
DBBC Dabeiba              3.08 273  eP              Pn   05 16 38.4 +0.5
ARGC Ariguani, Magd       3.20 340  eP              Pn   05 16 40.6 +1.2
ARGC                                eS              Sn   05 17 17.5  -0.8
ARGC                                 i                   05 17 29.1
     comp=Z,30nm,0.2s
ANIL Santa Ana            3.26 224  eP              Pn   05 16 41.0 +0.5
ANIL                                eS              Sn   05 17 20.4 +0.3
SJCC San Jacinto, C       3.66 326  eP              Pn   05 16 44.1  -1.2
SJCC                                eS              Sn   05 17 25.9  -3.1
SJCC                                 i                   05 17 32.6
     comp=Z,43nm,0.6s
PLMC San Jos del P        3.69 239  eP              Pn   05 16 46.1 +0.2
PLMC                                eS              Sn   05 17 30.0 +0.3
PLMC                                 i                   05 17 32.1
     comp=Z,39nm,0.2s
CRJC Cerrejon, Guaj       4.16   3  eP              Pn   05 16 50.7  -1.1
CRJC                                eS              Sn   05 17 38.3  -2.3
CRJC                                 i                   05 17 45.7
     comp=Z,84nm,0.4s
YOTC Yotoco, Valle        4.29 229  eP              Pn   05 16 53.0  -0.7
GUVC San Jose del G       4.30 174  eP              Pn   05 16 53.0  -0.6
GUVC                                eS              Sn   05 17 41.5  -2.2
GUVC                                 i                   05 17 47.7
     comp=Z,55nm,0.2s
SMRC Santa Marta, M       4.43 346  eP              Pn   05 16 55.2  -0.2
SMRC                                eS              Sn   05 17 43.8  -3.1
SMRC                                 i                   05 17 47.1
     comp=Z,38nm,0.2s
MACC Macarena, Meta       4.72 189  eP              Pn   05 16 57.5  -1.7
MACC                                eS              Sn   05 17 50.0  -3.8
MACC                                 i                   05 17 52.2
     comp=Z,17nm,0.2s
URIC Uribia, Colomb       4.95  13  eP              Pn   05 17 01.2  -1.0
URIC                                 i                   05 18 01.3
     comp=Z,7.1nm,0.4s
GARC Garzon, Huila        5.20 207  eP              Pn   05 17 04.6  -1.1
POPC Popayan, Colom       5.56 220  eP              Pn   05 17 10.2  -0.2
FLOC Florencia            5.81 206  eP              Pn   05 17 12.8  -0.8
BBAC Balboa, Cauca        6.32 221  eP              Pn   05 17 21.4 +0.8
BBAC                                eS              Sn   05 18 30.6  -1.4
BBAC                                 i                   05 18 37.4
     comp=Z,3.7nm,0.3s
GCUF Volcan Galeras       7.00 217  eP              Pn   05 17 30.7 +0.9
TXAR Lajitas Array       36.45 312   P               P   05 22 38.6  -0.9
     comp=Z,0.1nm,0.5s,baz=134,slow=10,SNR=4.4
     comp=Z,0.1nm,0.5s
PDAR Pinedale Array      48.07 324   P               P   05 24 13.5   0.0
     comp=Z,0.1nm,0.4s,baz=146,slow=10,SNR=2.1
     comp=Z,0.1nm,0.4s
ASAR Alice Springs       149.13 234  PKPbc          PKPdf 05 35 18.1 +2.1
     comp=Z,0.5nm,1.0s,baz=129,slow=3.7,SNR=2.5
WRA  Warramunga Arr      150.35 241  PKPbc          PKPdf 05 35 22.1 +4.1
     comp=Z,0.5nm,1.1s,baz=105,slow=2.5,SNR=4.8
```

ASRS 01 05:18:19.9±0.2, 51°N±1°×90°.7E±1°.0, h5km, MLh3.1/16, Error ellipse: s-maj=3.1km s-min=1.6km az=151.3, confirmed, Tuva-Buryatia-Mongolia border region

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
CUR  Chagan-Uzun          1.57 256   Pg              Pg   05 18 50.9 +0.9
CUR                                 Sg              Sg   05 19 10.5 +0.1
SLNR Muhor-Tarhata,       1.62 244   Pg              Pg   05 18 52.0 +1.0
SLNR                                Sg              Sg   05 19 12.9 +1.0
ULGR Ulagan, Altay        1.76 275   Pg              Pg   05 18 56.1 +2.5
ULGR                                Sg              Sg   05 19 18.7 +2.4
CHBI Chibit, Altay        2.06 266   Pg              Pg   05 19 01.5 +2.1
CHBI                                Sg              Sg   05 19 28.6 +2.4
DGZ  Jazzator, Alta       2.26 250   Pg              Pg   05 19 03.3  0.0
DGZ                                 Sg              Sg   05 19 32.6  0.0
DJO  Djoy, Khakassi       2.29   8   Pg              Pg   05 19 06.5 +2.6
DJO                                 Sg              Sg   05 19 37.6 +4.0
DJOS Djoyskaya Sosn       2.33  10   Pg              Pg   05 19 06.3 +1.8
DJOS                                Sg              Sg   05 19 37.6 +2.9
CERR Cheremushki          2.39  10   Pg              Pg   05 19 08.6 +3.0
CERR                                Sg              Sg   05 19 40.8 +4.2
ARTR Artybash             2.51 302   Pg              Pg   05 19 08.4 +0.3
ARTR                                Sg              Sg   05 19 43.1 +2.4
KZLR Kyzyl                2.65  62   Sg              Sg   05 19 46.5 +1.6
ARDR Aradan               2.68  38   Pg              Pg   05 19 12.0 +0.8
ARDR                                Sg              Sg   05 19 48.1 +2.2
ERNS Erzin                2.86  93   Pg              Pg   05 19 13.4  -1.3
ERNS                                Sg              Sg   05 19 51.0  -0.6
TASR Tashtagol            2.86 323   Pg              Pg   05 19 15.7 +1.0
TASR                                Sg              Sg   05 19 52.7 +1.0
GALT Gorno-Altaysk,       3.33 298   Sg              Sg   05 20 08.0 +1.3
LUZB Luzhba, Kemero       3.35 341   Pg              Pg   05 19 24.1 +0.1
LUZB                                Sg              Sg   05 20 10.7 +3.3
UKR  Ust'-Kan             3.80 279   Pg              Pg   05 19 32.2  -0.4
UKR                                 Sg              Sg   05 20 21.3  -0.5
ELT  Eltsovka             3.91 317   Pg              Pg   05 19 33.6  -1.1
ELT                                 Sg              Sg   05 20 25.9 +0.7
KNGR Kungurtug, Tuv       4.34  86   Sg              Sg   05 20 42.8 +3.4
MINR Mina                 4.88  24   Pg              Pg   05 19 54.5 +1.1
MINR                                Sg              Sg   05 21 00.8 +4.2
GZLN Zheleznogorsk        6.16  16   Sg              Sg   05 21 41.1 +3.7
```

IDC 01 06:07:33.2±2.3, 6°.70S×129°.78E, h0km, mb3.4/1, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=80.8km s-min=30.1km az=77.0, Banda Sea

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
FITZ Fitzroy Crossi       12.03 199   Pn              Pn   06 10 27.2 +1.2
     0.1nm,0.3s,baz=18,slow=10,SNR=12
FITZ                                Sn              Sn   06 12 27.4  -14
     0.3nm,0.3s,baz=301,slow=23,SNR=6.8
     1.2nm,0.8s
WRA  Warramunga Arr       13.89 162   Pn              Pn   06 10 50.3  -1.2
     0.4nm,0.3s,baz=340,slow=13,SNR=28
WRA                                 Sn              Sn   06 13 10.8  -16
     0.3nm,0.3s,baz=330,slow=22,SNR=4.4
     0.5nm,0.5s
ASAR Alice Springs        17.33 167   P               Pn   06 11 36.6  -0.1
     0.1nm,0.3s,baz=341,slow=9.2,SNR=10
ASAR                                 S              Sn   06 14 36.9  -13
     0.3nm,0.7s,baz=344,slow=26,SNR=4.3
     0.4nm,0.6s
MKAR Makanchi Array       67.86 327   P               P   06 18 33.4   0.0
     0.2nm,0.4s,baz=132,slow=7.9,SNR=2.4
     0.2nm,0.4s
```

KRSC 01 06:12:20.0±1.9, 49°.45N×156°.79E, h42km±30km, ML3.7, Kuril Islands

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
SKR  Severo-Kuril's       1.31 341   P               Pn   06 12 42.8 +1.0
SKR                                  S              Sn   06 12 58.1 +0.1
ASAK Asacha               3.02  13   P               Pn   06 13 09.4 +4.1
MTVR Mutnovka             3.16  16   P               Pn   06 13 11.4 +4.1
MTVR                                 S              Sn   06 13 48.5 +4.6
RUS  Russkaya             3.18  19   P               Pn   06 13 11.1 +3.7
RUS                                  S              Sn   06 13 47.9 +3.9
GRL  Gorelyy              3.21  14   P               Pn   06 13 12.4 +4.4
GRL                                  S              Sn   06 13 50.4 +5.4
AVH  Avacha               4.01  17   P               Pn   06 13 23.7 +4.8
KOK  Koryaka              4.02  16   P               Pn   06 13 24.1 +5.1
SDLR Sedlovina            4.05  18   P               Pn   06 13 23.5 +4.0
KRX  Arik                 4.08  16   P               Pn   06 13 24.4 +4.4
GNL  Ganaly               4.31   9   P               Pn   06 13 25.7 +2.6
MKZ  Mys Kozlova          5.95  29   P               Pn   06 13 48.8 +3.3
```

INET ***01*** *06:13:04.3±1.3, 13°.20N×88°.15W, h15km±9km, MW3.3*
SNET ***01*** *06:13:06.3±1.2, 13°.23N×87°.73W, h142km±6km, ML2.7*

ISC 01 06:13:05.9±2.5, 13°.0N±0°.1×87°.74W±0°.09, h142km±18km, n13, σ0§47/21, Near coast of Nicaragua

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
CNCH Conchagua            0.30 343  eP              Pn   06 13 25.1  -0.5
CNCH                                eS              Sn   06 13 40.9 +0.1
LCND La Caada             0.35 336  eP              Pn   06 13 25.2  -0.4
LCND                                eS              Sn   06 13 41.1 +0.3
LCND                                IAML                 06 13 50.0
     comp=Z,90nm,0.2s
PACA Pacayal              0.74 311  eP              Pn   06 13 28.2 +0.2
COEB Comit de Eme         0.92 304  eP              Pn   06 13 29.9 +0.5
CNGN Cerro Negro          1.13 115  eP              Pn   06 13 31.0  -0.1
CNGN                                eS              Sn   06 13 51.2 +0.9
TGUH Tegucigalpa,Un       1.16  23  eP              Pn   06 13 31.5   0.0
SCLA Alcaldia de Sa       1.20 307  eP              Pn   06 13 31.7  -0.1
SCLA                                eS              Sn   06 13 51.0  -0.5
COEG Centro de Oper       1.28 300  eP              Pn   06 13 32.6   0.0
COEG                                eS              Sn   06 13 53.4 +0.5
COEG                                IAML                 06 14 02.7
     comp=Z,66nm,0.2s
MOMN Momotombo            1.30 116  eP              Pn   06 13 32.4  -0.4
COPN Copaltepe            1.38 125  eP              Pn   06 13 33.3  -0.2
SJTE Alcalda de S         1.38 297  eP              Pn   06 13 33.7   0.0
SJTE                                eS              Sn   06 13 54.6  -0.3
SJTE                                IAML                 06 14 02.4
     comp=Z,50nm,0.2s
PMON Piamonte             1.69 296  eP              Pn   06 13 37.3 +0.3
PMON                                eS              Sn   06 14 01.5 +0.5
JAYA Jayaque - finc       1.79 292  eP              Pn   06 13 38.3 +0.1
JAYA                                eS              Sn   06 14 02.1  -0.9
JAYA                                IAML                 06 14 08.6
     comp=Z,185nm,0.2s
```

IDC 01 06:13:43.7±1.5, 25°.81N×97°.11E, h0km, mb3.4/3, mbtmp3.4/3, MS3.3/1, Error ellipse: s-maj=98.3km s-min=20.3km az=70.0, Myanmar-China border region

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
CMAR Chiang Mai Arr       7.51 167   Pg              Pg   06 16 02.5  -5.2
     1.4nm,0.3s,baz=338,slow=16,SNR=9.1
CMAR                                 Lg              Lg   06 17 43.1
     0.4nm,0.3s,baz=333,slow=32,SNR=5.6
MKAR Makanchi Array       24.03 334   P               P   06 19 00.8 +0.5
     0.3nm,0.5s,baz=148,slow=9.4,SNR=4.7
     0.3nm,0.5s
ZALV Zalesovo Beam        29.56 345   P               P   06 19 49.8  -0.1
     0.5nm,0.3s,baz=158,slow=9.3,SNR=1.6
     0.5nm,0.3s
JHJ  Hachijo jima 2       37.66  69   LR              LR  06 39 12.8
     comp=Z,41nm,18.4s,baz=81,slow=41
ASAR Alice Springs        60.73 141   P               P   06 23 56.6  -0.6
     0.2nm,0.6s,baz=324,slow=6.3,SNR=4.6
     0.2nm,0.6s
```

NEIC ***01*** *06:43:37.2±1.9, 25°.04S±0°.10×179°.9W±0°.2, h487km±11km, mb4.2/16, Error ellipse: s-maj=21.7km s-min=13.1km az=73.0*
IDC ***01*** *06:43:39.0±2.1, 24°.81S×179°.88E, h497km±18km, mb3.5/10, mbtmp4.4/12, Error ellipse: s-maj=35.6km s-min=14.7km az=154.0*

ISC 01 06:43:38.4±0.6, 24°.9S±0°.1×180°.00E±0°.09, h501km, n37, σ1§16/39, mb4.2/17, South of Fiji Islands

```
Code Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC     h m s     ISC
MSVF Nonsavu              7.38 345   P               P   06 45 28.1  -0.6
     14nm,0.6s,baz=159,slow=8.9,SNR=17
MSVF Nonsavu              7.38 345   P               P   06 45 28.2  -0.5
NIUE Niue                 11.01  60   P               P   06 46 04.7  -1.8
PINNC Pines Island,       11.72 279   P               P   06 46 15.3 +1.2
DZM  Mont Dzumac          12.76 280   P               P   06 46 25.6 +0.5
     3.1nm,0.8s,baz=11,slow=24,SNR=15
DZM  Mont Dzumac          12.76 280   P               P   06 46 26.2 +1.0
BFZ  Birch Farm           16.02 190   P               P   06 46 56.9  -2.1
CMWZ Cape Campbell        17.45 195   P               P   06 47 11.2  -2.2
EIDS Eidsvold             26.16 263   P               P   06 48 32.6 +0.4
EIDS                                IAmb            IAmb 06 48 34.2
     comp=Z,10nm,1.0s
CTA  Charters Tower       31.50 272   P               P   06 49 19.2 +0.5
     comp=Z,16nm,0.7s,baz=101,slow=10.0,SNR=35
     comp=Z,16nm,0.7s
CTAO Charters Tower       31.50 272   P               P   06 49 18.3  -0.5
STKA Stephens Creek       34.35 249   P               P   06 49 43.0 +0.1
     comp=Z,2.3nm,0.4s,baz=95,slow=12,SNR=8.2
     comp=Z,2.3nm,0.4s
STKA Stephens Creek       34.35 249   P               P   06 49 42.0  -0.9
PMG  Port Moresby         34.84 290   P               P   06 49 47.0  -0.1
     comp=Z,8.4nm,0.7s,baz=120,slow=10,SNR=5.1
     comp=Z,8.4nm,0.7s
COEN Coen                 36.29 281   P               P   06 49 60.0 +0.8
COEN                                IAmb            IAmb 06 50 00.5
     comp=Z,12nm,1.0s
BBOO Buckleboo            39.05 248   P               P   06 50 20.4  -1.2
AS31 Alice Springs        41.88 262   P               P   06 50 44.3  -0.1
AS31                                IAmb            IAmb 06 50 45.6
     comp=Z,3.2nm,1.1s
ASAR Alice Springs        41.88 262   P               P   06 50 44.1  -0.3
     comp=Z,2.5nm,0.4s,baz=95,slow=7.5,SNR=44
     comp=Z,2.5nm,0.4s
WR0  Warramunga Arr       42.16 267   P               P   06 50 45.8  -0.9
WR0                                 IAmb            IAmb 06 50 46.4
     comp=Z,7.4nm,1.0s
WRAB Tennant Creek        42.34 267   P               P   06 50 47.2  -0.8
WRAB                                IAmb            IAmb 06 50 48.1
     comp=Z,11nm,0.8s
```

WRA	Warramunga Arr	42.35	267	P	P	06 50 47.4	-0.7
	comp=Z,7.7nm,0.7s,baz=102,slow=7.8,SNR=77						
WRA				ScP	ScP	06 55 36.2	+3.1
	comp=Z,1.9nm,1.0s,baz=94,slow=4.2,SNR=9.6						
WRA				S	S	06 56 32.3	-0.5
	comp=Z,2.1nm,1.0s,baz=105,slow=14,SNR=10						
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	42.35	267	P	P	06 50 47.2	-1.0
FORT	Forrest	45.96	250	P	P	06 51 15.1	-0.9
FITZ	Fitzroy Crossi	50.76	266	P	P	06 51 52.2	+0.3
	comp=Z,10.0nm,0.8s,baz=136,slow=4.8,SNR=18						
	comp=Z,10.0nm,0.8s						
FITZ	Fitzroy Crossi	50.76	266	P	P	06 51 52.0	+0.1
FITZ				IAmb	IAmb	06 51 53.4	
	comp=Z,12nm,0.9s						
VNDA	Vanda	53.36	185	P	P	06 52 11.7	+1.9
PSA00	Pilbara Seismi	54.98	260	P	P	06 52 20.6	-1.5
MBWA	Marble Bar	55.20	261	P	P	06 52 22.3	-1.4
MBWA				IAmb	IAmb	06 52 45.3	
	comp=Z,24nm,1.4s						
QSPA	South Pole Qui	65.16	180	P	P	06 53 30.0	+0.7
QSPA				IAmb	IAmb	06 53 57.1	
	comp=Z,5.7nm,1.4s						
MJAR	Matsushiro Arr	72.74	326	P	P	06 54 14.6	-0.6
	comp=Z,1.4nm,0.3s,baz=173,slow=4.9,SNR=4.0						
	comp=Z,1.4nm,0.3s						
KSRS	Korea Array	79.03	320	P	P	06 54 50.2	+0.2
	comp=Z,0.8nm,0.5s,baz=134,slow=5.9,SNR=5.0						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	85.49	44	P	P	06 55 23.1	-0.1
	comp=Z,0.2nm,0.5s,baz=232,slow=7.4,SNR=2.7						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	90.97	58	P	P	06 55 50.8	+2.0
	comp=Z,0.5nm,0.8s,baz=212,slow=6.8,SNR=7.9						
	comp=Z,0.5nm,0.8s						
AKASG	Malin Array Be	145.82	326	PKPbc	PKPdf	07 02 20.3	+1.0
	comp=Z,0.9nm,0.5s,baz=44,slow=4.3,SNR=5.8						
BRTR	Keskin Array B	148.18	306	PKPbc	PKPbc	07 02 27.2	-0.6
	comp=Z,0.9nm,0.8s,baz=163,slow=5.2,SNR=3.7						
BURAR	Bucovina Array	149.81	325	PKPbc	PKiKP	07 02 32.7	+0.6
CLL	Collm	151.83	343	*e*PKPbc	PKPbc	07 02 36.0	+0.2

IDC 01 06:43:56.4±1.7, 0°.98S×130°.27E, h0^{km}, mb3.4/2, mbtmp3.3/3, ML3.2/1, MS2.7/1, Error ellipse: s-maj=28.7km s-min=13.4km az=168.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	1.01	84	Pg	Pg	06 44 14.3	-1.5
	14nm,0.3s,baz=232,slow=22,SNR=28						
SIJI				Lg	Lg	06 44 31.1	
	39nm,0.3s,baz=130,slow=21,SNR=27						
WRA	Warramunga Arr	19.27	168	P	P	06 48 21.5	-1.3
	0.1nm,0.3s,baz=352,slow=11,SNR=5.7						
	0.4nm,0.7s						
ASAR	Alice Springs	22.83	171	P	P	06 49 02.3	+1.0
	1.5nm,0.8s,baz=356,slow=10,SNR=16						
	1.5nm,0.8s						
JOW	Kunigami	27.71	356	LR	LR	07 01 33.1	
	comp=Z,14nm,18.4s,baz=324,slow=38						
MKAR	Makanchi Array	63.41	325	P	P	06 54 28.2	+0.3
	0.2nm,0.6s,baz=111,slow=7.9,SNR=2.0						
	0.2nm,0.6s						

*JMA **01** 06:44:59.0±0.1, 40°.4N±0°.3×142°.1E±0°.7, h50^{km}, MV3.9/40, NE OFF IWATE PREF*
JMA Felt II J1 at NE OFF IWATE PREF .
*NIED **01** 06:44:59.0, 40°.36N×142°.08E, h50^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.18; $M_{\theta\theta}$1.28; $M_{\phi\phi}$-3.46; $M_{r\theta}$1.31; $M_{\theta\phi}$-0.95; $M_{r\phi}$2.31; Fault plane solution: $M_0$4.02000×10^{14} NP1: ϕ_s163.00000°, δ30.00000°, λ48.00000°. NP2:ϕ_s30.00000°, δ68.00000°, λ111.00000°.*
*IDC **01** 06:45:02.4±6.3, 40°.33N×142°.06E, h92^{km}±47^{km}, mb3.5/7, mbtmp3.8/9, MS3.4/2 Error ellipse: s-maj=75.4km s-min=24.7km az=73.0*

ISC 01 06:44:58.1±1.4, 40°.39N±0°.05×142°.2E±0°.1, h51^{km}±9^{km}, n21, σ1^{s}11/27, mb3.8/7, 13D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.38	241	*i* P	Pn	06 45 08.4	+0.3
JKEN				S	Sn	06 45 15.0	-0.3
JANG	Nango	0.48	268	⇓*i*P	Pn	06 45 09.5	+0.2
JANG				⇓S	Sn	06 45 16.7	-0.5
JTH	Tanohata	0.50	206	*i* P	Pn	06 45 09.7	+0.3
JTH				S	Sn	06 45 17.3	-0.3
JKZ	Kuzumaki	0.75	237	⇓*i*P	Pn	06 45 12.9	+0.3
JKZ				⇓S	Sn	06 45 22.5	-0.6
JARK	Aomorirokkasho	0.86	316	⇓*i*P	Pn	06 45 14.3	+0.3
JARK				⇓S	Sn	06 45 25.1	-0.4
JTM	Tenmabayashi	0.91	296	⇓*i*P	Pn	06 45 14.8	+0.1
JTM				⇓S	Sn	06 45 26.2	-0.7
JOM	Ohasama	1.13	216	⇓*i*P	Pn	06 45 18.0	+0.4
JOM				⇓S	Sn	06 45 31.4	-0.6
JAH	Hinai	1.17	261	⇓*i*P	Pn	06 45 18.5	+0.3
JAH				⇓S	Sn	06 45 32.8	-0.4
JOT	Ohata	1.29	320	⇓*i*P	Pn	06 45 20.1	+0.3
JRG	Rokugo	1.53	230	*i* P	Pn	06 45 23.8	+0.7
MJAR	Matsushiro Arr	4.93	220	P	Pn	06 46 12.9	+3.2
	3.0nm,0.5s,baz=28,slow=13,SNR=13						
USRK	Ussuriysk Ar.	8.44	300	P	Pn	06 47 01.4	+3.7
	5.0nm,0.7s,baz=94,slow=16,SNR=5.9						
SONM	Songino Array	26.54	298	P	P	06 50 31.1	-0.1
	0.3nm,0.4s,baz=106,slow=9.1,SNR=2.1						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	40.15	309	P	P	06 52 28.9	+0.1
	1.6nm,0.5s,baz=96,slow=5.6,SNR=5.3						
	1.6nm,0.5s						
MKAR	Makanchi Array	42.90	299	P	P	06 52 51.5	0.0
	0.9nm,0.7s,baz=87,slow=9.8,SNR=11						
	0.9nm,0.7s						
BVAR	Borovoye Array	48.79	310	LR	LR	07 15 36.0	
	comp=Z,23nm,21.9s,baz=320,slow=38						
KAPI	Kappang	49.65	210	LR	LR	07 12 00.7	
	comp=Z,74nm,21.9s,baz=128,slow=33						
WRA	Warramunga Arr	60.46	188	P	P	06 55 01.9	-0.7
	0.2nm,0.6s,baz=6.9,slow=7.6,SNR=1.8						
	0.2nm,0.6s						
FINES	FINESS Array B	66.12	332	P	P	06 55 38.9	-0.7
	3.1nm,1.0s,baz=25,slow=11,SNR=4.6						
	3.1nm,1.0s						
NOA	NORSAR Array B	71.32	337	P	P	06 56 12.6	+0.6
	1.1nm,0.8s,baz=49,slow=6.2,SNR=1.3						
	1.1nm,0.8s						
AKASG	Malin Array Be	72.00	322	P	P	06 56 16.3	0.0
	0.5nm,0.5s,baz=47,slow=6.0,SNR=4.6						
	0.5nm,0.5s						

IDC 01 06:56:28.9±49.0, 22°.68S×172°.55W, h0^{km}, mb3.9/3, mbtmp3.9/3, MS2.7/1, Error ellipse: s-maj=941.2km s-min=184.8km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	10.11	297	LR	LR	07 02 50.2	
	comp=Z,40nm,18.7s,baz=22,slow=38						
STKA	Stephens Creek	41.52	247	P	P	07 04 16.9	-1.3
	0.6nm,0.4s,baz=79,slow=10,SNR=4.2						
	0.6nm,0.4s						
ASAR	Alice Springs	48.99	258	P	P	07 05 17.6	-0.1
	0.6nm,0.4s,baz=96,slow=7.6,SNR=15						
	0.6nm,0.4s						
WRA	Warramunga Arr	49.34	263	P	P	07 05 21.0	+0.6
	1.3nm,0.4s,baz=100,slow=6.9,SNR=48						
	1.3nm,0.4s						

*SOME **01** 07:02:40.7, 39°.70N×70°.68E, h5^{km}*
*KRNET **01** 07:02:40.5±0.1, 39°.06N×71°.53E, h14^{km}, mb3.0*
*NNC **01** 07:02:47.7±4.3, 39°.51N×71°.42E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=33.8km s-min=18.9km az=0.0*

ISC 01 07:02:41.9±1.4, 39°.19N±0°.07×71°.45E±0°.04, h5^{km}±9^{km}, n25, σ2^{s}25/34, 11C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.40	43	⇑*i*P	Pg	07 02 49.7	0.0
	baz=27						
DRK				⇑*i*S	Sg	07 02 56.7	+1.7
	baz=27						
GAR	Garm	0.90	258	⇑*i*P	Pb	07 02 58.4	-1.7
	baz=67						
GAR				⇑*i*S	Sg	07 03 11.5	+0.6
	baz=67						
BTK	Batken	1.00	331	⇓*i*P	Pg	07 03 02.3	+1.3
	baz=31						
BTK				⇓*i*S	Sn	07 03 17.7	+0.5
	baz=31						
OHH	Osh	1.69	37	⇓*i*P	Pb	07 03 13.0	-0.4
	baz=33						
OHH				⇓*i*S	Sg	07 03 37.0	+1.0
	baz=33						
CHGR	Chuyangaron	1.86	254	⇓*i*P	Pb	07 03 15.4	-1.1
	baz=59						
CHGR				⇓*i*S	Sg	07 03 41.2	-0.6
	baz=59						
TRKS	Terek-Say	2.35	354	⇓*i*P	Pn	07 03 22.7	+1.4
	baz=54						
TRKS				⇓*i*S	Sb	07 03 54.5	+0.2
	baz=54						
ARK	Arkit	2.64	8	⇑*i*P	Pb	07 03 27.8	-1.9
	baz=7.0						
ARK				⇑*i*S	Sb	07 04 02.1	-0.3
	baz=7.0						
IUG	Iuzhnay	3.15	340	Pg	Pb	07 03 38.1	-0.3
	262nm,0.4s						
IUG				Lg	Lg	07 04 19.7	
	42nm,0.4s						
AML	Almayashu	3.40	29	P	Pb	07 03 41.9	-1.0
	SNR=8.3						
MRKS	Merke	3.80	20	*e*P	Pb	07 03 47.2	-2.3
	3.3nm,0.5s						
MRKS				*e*S	Sb	07 04 35.2	-0.6
	22nm,0.1s						
MRKS	Merke	3.80	20	Pg	Pb	07 03 47.2	-2.3
	3.3nm,0.5s						
MRKS				Lg	Lg	07 04 35.2	
	22nm,0.5s						
UCH	Uchtor	3.83	37	P	Pb	07 03 47.6	-2.5
	SNR=12						
UCH	Uchtor	3.83	37	⇑*i*P	Pn	07 03 43.8	+1.9
	baz=35						
UCH				⇑*i*S	Sn	07 04 29.8	+2.3
	baz=35						
KK31	Karatay Array	3.98	350	Pn	Pb	07 03 48.2	-4.2
	1.5nm,0.3s,baz=174,slow=12,SNR=33						
KK31				⇑Lg	Lg	07 04 50.5	
	4.0nm,0.4s,baz=169,slow=24,SNR=4.0						
AAK	Ala-Archa	4.15	33	P	Pb	07 03 52.0	-3.4
	SNR=6.6						
USP	Ospenovka	4.68	28	P	Pb	07 03 58.1	-6.3
	SNR=5.8						
TKM2	Tokmak 2	4.87	39	P	Pb	07 04 01.0	-6.8
	SNR=6.7						
TKM2	Tokmak 2	4.87	39	⇓Pn	Pb	07 04 00.7	-7.1
	1.9nm,0.5s						
TKM2				⇑Pg	Pg	07 04 14.3	-0.9
	3.1nm,0.6s						
TKM2				⇓Sn	Sn	07 04 56.3	+3.4
	6.6nm,0.8s						
TKM2				⇑Lg	Lg	07 05 15.4	
	2.4nm,0.6s						
KST	Kastek	5.14	40	*e*P	Pg	07 04 16.8	-3.6
	1.8nm,0.4s						
KST				*e*S	Sg	07 05 26.6	-0.5
	5.2nm,0.7s						
KST	Kastek	5.14	40	Pg	Pg	07 04 16.8	-3.6
	1.8nm,0.4s						
KST				Lg	Lg	07 05 26.6	
	5.2nm,0.7s						
DGS	Degeres	5.20	37	*e*P	Pg	07 04 17.0	-4.4
	2.4nm,0.1s						
DGS				*e*S	Sg	07 05 26.9	-1.9
	7.5nm,0.8s						
DGS	Degeres	5.20	37	Pg	Pg	07 04 17.0	-4.4
	2.4nm,0.6s						
DGS				Lg	Lg	07 05 26.9	
	7.5nm,0.8s						
KRBS	Karabastau	5.51	34	*e*P	Pb	07 04 22.2	+3.6
	1.4nm,0.4s						
KRBS				*e*S	Sg	07 05 35.8	-3.0
	2.6nm,0.5s						
KRBS	Karabastau	5.51	34	Pg	Pb	07 04 22.2	+3.6
	1.4nm,0.4s						
KRBS				Lg	Lg	07 05 35.7	
	2.6nm,0.5s						
AB31	Akbulak array	13.00	324	P	Pn	07 05 47.4	+0.3
	0.3nm,0.4s,baz=135,slow=11,SNR=15						

*JMA **01** 07:05:20.7±0.2, 36°.1N±0°.8×137°.2E±0°.9, h270^{km}±1^{km}, MV3.2/36, NORTHERN GIFU PREF*
*IDC **01** 07:05:20.3±0.5, 36°.08N×137°.15E, h270^{km}±7^{km}, mb3.3/9, mbtmp3.9/12, Error ellipse: s-maj=23.8km s-min=9.5km az=65.0*

ISC 01 07:05:20.4±0.7, 36°.09N±0°.06×137°.12E±0°.06, h271^{km}±6^{km}, n28, σ0^{s}56/34, mb3.4/9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	0.58	212	P	Pn	07 05 56.1	+0.2
JKG	Kaga	0.66	287	P	Pn	07 05 56.7	+0.6
JKG				*e*S	S	07 06 24.6	+0.3
MAT	Matsushiro	0.99	62	*e*P	Pn	07 05 58.0	+0.5
MAT				*e*S	S	07 06 26.7	-0.2
MJAR	Matsushiro Arr	0.99	63	P	Pn	07 05 57.9	+0.4
	52nm,0.6s,baz=246,slow=6.7,SNR=81						
MJAR				S	S	07 06 26.9	0.0
	30nm,0.9s,baz=255,slow=12,SNR=25						
JYN	Shimob	1.30	116	*e*P	Pn	07 05 59.3	-0.1
JSZ	Suzu	1.37	8	P	Pn	07 06 00.1	+0.5
JRY	Ryogami san	1.45	92	*e*P	Pn	07 06 00.5	+0.2
JWT	Wachi	1.61	241	*e*P	Pn	07 06 01.8	+0.3
JWT				*e*S	S	07 06 33.0	-1.0
JIE	Ise	1.73	191	P	Pn	07 06 03.1	+0.7
JIE				*e*S	S	07 06 35.5	-0.2
JHG	Hegura jima	1.76	355	P	Pn	07 06 03.4	+0.9
JOD2	Odawara 2	1.81	117	*e*P	Pn	07 06 03.3	+0.3
JAG	Ashikaga	1.92	79	P	Pn	07 06 03.7	-0.2
JSD	Sado	2.15	25	P	Pn	07 06 06.3	+0.5
JWY	Kouya	2.24	214	*e*P	Pn	07 06 07.4	+0.5
JNS	Sasagawa	2.47	45	*e*P	Pn	07 06 09.2	+0.5
JOI	OKI	3.13	275	*e*P	Pn	07 06 15.6	+0.1
JHJ	Hachijo jima 2	3.69	143	P	Pn	07 06 22.0	+0.3
	28nm,0.4s,baz=329,slow=19,SNR=18						
JHJ				S	S	07 07 11.2	+0.7
	51nm,0.3s,baz=66,slow=23,SNR=7.5						
KSRS	Korea Array	7.50	283	P	Pn	07 07 08.7	+1.2
	2.6nm,0.8s,baz=99,slow=13,SNR=8.9						
KLR	Kul'dur	13.71	345	P	Pn	07 08 23.0	-1.1
	0.9nm,0.5s,baz=148,slow=15,SNR=1.9						
SONM	Songino Array	25.51	307	P	P	07 10 23.9	-0.5
	0.5nm,0.5s,baz=118,slow=9.0,SNR=2.3						
	0.5nm,0.5s						
ZALV	Zalesovo Beam	40.02	313	P	P	07 12 29.5	+0.5
	0.5nm,0.3s,baz=100,slow=7.9,SNR=2.1						
	0.5nm,0.3s						
MKAR	Makanchi Array	41.69	302	P	P	07 12 43.1	+0.3
	1.0nm,0.5s,baz=88,slow=10,SNR=14						
	1.0nm,0.5s						
KURBB	Kurchatov Arra	43.86	308	P	P	07 12 60.0	-0.1
	0.9nm,0.4s,baz=86,slow=8.2,SNR=22						
	0.9nm,0.4s						
ILAR	Eielson Array	52.13	32	P	P	07 14 02.8	0.0
	0.4nm,0.9s,baz=256,slow=7.3,SNR=2.8						
	0.4nm,0.9s						
WRA	Warramunga Arr	55.79	183	P	P	07 14 29.1	-0.6
	2.7nm,0.3s,baz=359,slow=7.6,SNR=121						
	2.7nm,0.3s						
ASAR	Alice Springs	59.51	183	P	P	07 14 55.2	-0.3
	1.4nm,0.3s,baz=357,slow=5.6,SNR=47						
	1.4nm,0.3s						
FINES	FINESS Array B	68.00	331	P	P	07 15 50.4	+0.3
	1.1nm,0.3s,baz=59,slow=5.0,SNR=10.0						
	1.1nm,0.3s						
BRTR	Keskin Array B	76.84	310	P	P	07 16 43.4	+0.6
	0.6nm,0.7s,baz=37,slow=7.6,SNR=2.3						
	0.6nm,0.7s						

WEL 01 07:10:17.2±0.9, 46°S±4°×16°7E±°, h65^{km}±8^{km}, M3.3/11, ML3.5/13, MLv3.3/11, Error ellipse: s-maj=0.0km s-min=0.0km az=99.8, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.30	34	P	Pn	07 10 29.0	+1.1
DCZ				S	Sn	07 10 38.4	+2.8
PYZ	Puysegur Point	0.48	200	P	Pn	07 10 30.6	+1.1
PYZ				S	Sn	07 10 40.4	+2.0
WHZ	Wether Hill Ro	0.74	105	P	Pn	07 10 33.4	+1.1
WHZ				S	Sn	07 10 45.8	+2.4
MLZ	Mavora Lakes	0.91	68	P	Pn	07 10 35.4	+1.0
MLZ				S	Sn	07 10 49.2	+2.1
MSZ	Milford Sound	1.26	35	P	Pn	07 10 39.2	+0.4
MSZ				S	Sn	07 10 56.0	+1.0
APZ	The Paps	1.34	147	P	Pn	07 10 40.8	+0.8
APZ				S	Sn	07 10 58.5	+1.3
WKZ	Wanaka	1.73	60	P	Pn	07 10 46.0	+0.9
WKZ				S	Sn	07 11 06.4	+0.2
EAZ	Earnscleugh	1.75	75	P	Pn	07 10 46.0	+0.6
EAZ				S	Sn	07 11 07.1	+0.4
SYZ	Scrubby Hill	1.75	119	P	Pn	07 10 45.7	+0.3
SYZ				S	Sn	07 11 07.0	+0.3
TUZ	Tuapeka	1.91	98	P	Pn	07 10 48.0	+0.4
TUZ				S	Sn	07 11 09.7	-0.9
JCZ	Jackson Bay	2.11	40	P	Pn	07 10 50.7	+0.4
HHSZ	Highcliff Hill	2.58	95	P	Pn	07 10 56.5	-0.2
LBZ	Lake Benmore	2.67	61	P	Pn	07 10 56.7	-1.1
ODZ	Otahua Downs	2.71	77	P	Pn	07 10 57.3	-1.1
FOZ	Fox Glacier	3.00	45	P	Pn	07 11 01.3	-1.1
TMZ	Timaru	3.19	67	P	Pn	07 11 03.2	-1.7
ARCZ	Arundel	3.50	61	P	Pn	07 11 07.0	-2.3
RPZ	Rata Peaks	3.56	57	P	Pn	07 11 08.3	-1.7
WACZ	Wakanui South	3.92	65	P	Pn	07 11 13.4	-1.6
OXZ	Oxford	4.37	59	P	Pn	07 11 20.7	-0.3
MQZ	McQueen's Vall	4.55	66	P	Pn	07 11 21.5	-2.1

*IDC **01** 07:40:20.3±0.6, 34°.60N×141°.51E, h0^{km}, mb4.0/18, mbtmp4.0/23, ML3.2/4, MS3.1/10, Error ellipse: s-maj=17.1km s-min=13.6km az=80.0*
*JMA **01** 07:40:20.9±0.6, 35°N±2°×14°2E±°, h42^{km}±2^{km}, MV3.6/33, FAR SE OFF BOSO PEN*
*NIED **01** 07:40:20.9, 34°.51N×141°.63E, h42^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.33; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$0.98; $M_{r\theta}$0.69; $M_{\theta\phi}$2.24; $M_{r\phi}$0.09; Fault plane solution: $M_0$2.61000×10^{15} NP1: ϕ_s347.00000°, δ74.00000°, λ178.00000°. NP2: ϕ_s77.00000°, δ89.00000°, λ16.00000°.*
*NEIC **01** 07:40:21.7±1.5, 34°.65N±0°.05×141°.83E±0°.10, h21^{km}±7^{km}, mb4.2/12 Error ellipse: s-maj=11.9km s-min=7.4km az=108.0*

ISC 01 07:40:23.1±0.5, 34°.63N±0°.05×141°.67E±0°.06, h27^{km}, n75, σ1^{s}49/70, mb4.0/24, MS2.8/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.57	273	*e*P	Pb	07 40 32.3	-1.9
BSO1				*e*X		07 40 39.0	
BSO3	Boso 3	0.97	281	*e*P	Pn	07 40 38.6	-2.1
BSO4	Boso 4	1.15	289	*e*P	Pn	07 40 41.6	-1.8
KTR	Katsuura	1.23	295	*e*P	Pn	07 40 42.6	-1.9
CHOJ	Chosi	1.26	328	*e*P	Pn	07 40 44.0	-1.0
CHOJ				*e*S	Sb	07 41 01.6	-0.6
JKUC	kamogawauchiur	1.32	294	*e*P	Pn	07 40 43.6	-2.2
JSMT	Sammumatsuo	1.43	316	*e*P	Pb	07 40 47.0	-2.0
JIM2	Oshima 3	1.85	273	*e*P	Pn	07 40 51.0	-2.1
JYT	Yasato	2.00	323		Pn	07 40 54.8	-0.4
JHJ2	Mitsune	2.16	226	Pn	Pn	07 40 56.8	-0.5
JHJ	Hachijo jima 2	2.17	227	Pn	Pn	07 40 57.0	-0.6
	145nm,0.3s,baz=73,slow=19,SNR=36						
JHJ				Sn	Sn	07 41 22.8	-0.7
	267nm,0.3s,baz=243,slow=23,SNR=9.7						
	255nm,0.3s						
JMM	Marumori	3.31	348	Pn	Pn	07 41 12.0	-1.1
MJAR	Matsushiro Arr	3.41	305	Pn	Pn	07 41 13.4	-1.0
	1.8nm,0.3s,baz=115,slow=8.1,SNR=41						
MJAR				Sn	Sn	07 41 53.8	-0.2
	1.3nm,0.3s,baz=92,slow=25,SNR=7.3						
MJAR				LR	LR	07 42 44.8	
	comp=Z,325nm,18.0s,baz=104,slow=44						
	5.4nm,0.3s						
MAJO	Matsushiro	3.41	305		Pn	07 41 15.0	+0.4
MJB9	Matsu-Tunnel	3.41	305		Pn	07 41 14.5	0.0
JGF	Kuroka	3.67	287		Pn	07 41 19.0	+0.9
INU	Inuyama	3.89	282		Pn	07 41 21.9	+0.8
JSD	Sado	4.38	322	Pn	Pn	07 41 27.3	-0.5
JTM	Tenmabayashi	6.17	356	Pn	Pn	07 41 51.5	-0.9
JHS	Saijyo	7.05	275		Pn	07 42 06.1	+1.6
ERM	Erimo	7.47	9		Pn	07 42 08.1	-2.1
JCJ	Chichijima	7.52	176	Pn	Pn	07 42 10.2	-0.8
	43nm,0.3s,baz=311,slow=20,SNR=11						
JCJ				Sn	Sn	07 43 30.6	-4.8
	1.5nm,0.3s,baz=289,slow=23,SNR=1.0						
JCJ				LR	LR	07 44 30.2	
	comp=Z,71nm,21.4s,baz=116,slow=33						
JCJ	Chichijima	7.52	176	Pn	Pn	07 42 10.8	-0.2
KSRS	Korea Array	11.48	288	Pn	Pn	07 43 05.0	-0.2
	0.1nm,0.3s,baz=104,slow=14,SNR=4.6						
KSRS				LR	LR	07 48 00.3	
	comp=Z,337nm,18.9s,baz=100,slow=40						
	1.1nm,0.7s						
USA0B	Ussuriysk Arra	12.13	325	Pn	Pn	07 43 13.5	-0.6
USRK	Ussuriysk Ar.	12.13	325	Pn	Pn	07 43 12.1	-2.0
	0.3nm,0.3s,baz=154,slow=11,SNR=6.1						
USRK				LR	LR	07 46 54.7	
	comp=Z,66nm,21.6s,baz=135,slow=33						
	3.4nm,0.6s						
USRK	Ussuriysk Ar.	12.13	325	Pn	Pn	07 43 13.6	-0.5
JOW	Kunigami	13.89	240	LR	LR	07 49 12.0	
	comp=Z,96nm,18.9s,baz=76,slow=39						
JOW	Kunigami	13.89	240	Pn	Pn	07 43 38.4	+0.3
PEA0B	Petropavlovsk-	21.70	27	P	P	07 45 08.9	-2.9
PETK	Petropavlovsk-	21.70	27	LR	LR	07 55 10.9	
	comp=Z,36nm,18.6s,baz=204,slow=41						
KNMB	Chin-men Tao	22.60	250	P	P	07 45 22.2	+0.6
MA2	Magadan	25.67	11	LR	LR	07 58 22.4	
	comp=Z,76nm,18.2s,baz=198,slow=42						
H11N2	WAKE ISLAND Hy	26.80	117	T	T	08 14 08.9	
	baz=309,slow=75,SNR=33						
H11N1	WAKE ISLA

HDA IAmb IAmb 07 49 27.6
comp=Z,3.6nm,1.1s
ILAR Eielson Array 51.43 31 P P 07 49 27.6 +2.2
comp=Z,0.7nm,0.8s,baz=268,slow=6.3,SNR=6.8
comp=Z,0.7nm,0.8s
BVAR Borovoye Array 52.36 314 P P 07 49 34.0 +1.4
comp=Z,0.5nm,0.4s,baz=79,slow=15,SNR=2.6
comp=Z,0.5nm,0.4s
KK31 Karatay Array 54.54 302 P P 07 49 49.4 +0.7
KK31 IAmb IAmb 07 50 02.6
comp=Z,1.8nm,0.9s
KKAR Karatay Array 54.54 302 P P 07 49 49.2 +0.5
WRAB Tennant Creek 54.70 188 P P 07 49 49.5 -0.5
WRA Warramunga Arr 54.71 188 P P 07 49 50.6 +0.6
comp=Z,2.6nm,0.6s,baz=1.6,slow=7.5,SNR=58
comp=Z,2.6nm,0.6s
WRA Warramunga Arr 54.71 188 P P 07 49 50.8 +0.7
INK Inuvik 56.44 26 P P 07 50 04.3 +2.4
comp=Z,0.9nm,0.5s,baz=296,slow=8.8,SNR=1.5
comp=Z,0.9nm,0.5s
ARU Arti 58.31 320 P P 07 50 16.2 +0.9
comp=Z,1.5nm,0.3s,baz=45,slow=10.0,SNR=3.4
comp=Z,1.5nm,0.3s
AS31 Alice Springs 58.44 188 P P 07 50 17.9 +1.4
AS31 IAmb IAmb 07 50 37.5
comp=Z,2.1nm,1.4s
ASAR Alice Springs 58.44 188 P P 07 50 17.6 +1.0
comp=Z,1.8nm,0.7s,baz=359,slow=5.3,SNR=24
ASAR PcP PcP 07 51 08.6 +1.5
comp=Z,0.7nm,0.8s,baz=8.9,slow=6.6,SNR=1.7
comp=Z,1.8nm,0.7s
ASAR Alice Springs 58.44 188 P P 07 50 17.8 +1.2
AKTO Aktyubinsk 60.45 313 P P 07 50 31.9 +1.7
comp=Z,2.4nm,0.6s,baz=56,slow=7.5,SNR=4.6
comp=Z,2.4nm,0.6s
FINES FINESS Array B 71.04 333 P P 07 51 39.0 +0.8
comp=Z,6.0nm,1.0s,baz=47,slow=8.6,SNR=2.4
comp=Z,6.0nm,1.0s
NVAR Mina Array Bea 76.27 53 P P 07 52 12.0 +2.3
comp=Z,0.1nm,0.4s,baz=323,slow=6.9,SNR=2.7
comp=Z,0.1nm,0.4s
AKASG Malin Array Be 76.33 323 P P 07 52 09.6 +0.1
comp=Z,0.6nm,0.4s,baz=49,slow=6.3,SNR=5.3
comp=Z,0.6nm,0.4s
NOA NORSAR Array B 76.48 338 P P 07 52 10.8 +0.5
comp=Z,0.3nm,0.5s,baz=34,slow=4.8,SNR=2.0
comp=Z,0.3nm,0.5s
PDAR Pinedale Array 79.21 45 P P 07 52 28.5 +2.4
comp=Z,2.1nm,1.3s,baz=311,slow=5.5,SNR=1.9
comp=Z,2.1nm,1.3s
TXAR Lajitas Array 91.42 53 P P 07 53 29.9 +2.7
comp=Z,0.5nm,1.0s,baz=316,slow=2.5,SNR=3.8
comp=Z,0.5nm,1.0s
LPAZ La Paz 147.66 63 PKPbc **PKiKP 08 00 07.3 -1.2**
comp=Z,0.6nm,0.5s,baz=5.3,slow=12,SNR=2.8

MAN 01 07:46:58.2, 16.12N×119.99E, h30km, mb4.3, ML3.1, MS2.9, 1C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.27**	**344**	⇓*eP*	Pn	07 47 07.0	+0.8
BOLP				*eS*	Sn	07 47 12.9	+1.6
SCZP	**Santa Cruz**	**0.35**	**192**	⇓*eP*	Pn	07 47 07.9	+0.5
SCZP				*eS*	Sn	07 47 15.2	+1.9
SMPP	**San Manuel, Pa**	**0.67**	**87**	⇓*eP*	Pb	07 47 11.0	-0.4
SMPP				*eS*	Sb	07 47 18.4	-2.0
SAMP	**Sagada Mountai**	**1.29**	**42**	⇓*eP*	Pb	07 47 21.2	-0.8
SAMP				*eS*	Sn	07 47 36.8	+0.2
BALP	**Baler**	**1.57**	**104**	⇓*eP*	Pb	07 47 29.2	+2.5
BALP				*eS*	Sb	07 47 45.2	-1.1
MACP	**Maragondon, Ca**	**1.98**	**159**	⇓*eP*	Pb	07 47 34.8	+1.2
MACP				*eS*	Sb	07 47 58.7	+0.8
APYP	**Conner**	**2.11**	**35**	⇑*iP*	Pb	07 47 39.0	+3.2
APYP				*i* S	Sb	07 48 01.1	-0.5

*IDC **01** 07:53:25.6±3.4, 36.20N×120.60W, h0km, mbtmp3.0/3, ML3.5/3, Error ellipse: s-maj=47.6km s-min=22.7km az=106.0*
*NCEDC **01** 07:53:29.4±2.0, 36.24N±0.01×120.36W±0.02, h11km±4km, Mwr3.5/3, ML3.5/84(NEIC), Error ellipse: s-maj=2.2km s-min=1.8km az=67.0*
*NEIC **01** 07:53:29.5±1.7, 36.27N±0.02×120.32W±0.02, h19km±3km, Error ellipse: s-maj=2.8km s-min=2.2km az=120.0*
*NEIC **01** 07:53:29.4, 36.24N×120.35W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.17; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-1.18; $M_{r\theta}$0.12; $M_{\phi\theta}$1.36; $M_{\phi r}$-0.50; Fault plane solution: $M_0$2.37000×10^{14} NP1:ϕ_s309.83000°, δ39.95000°, λ79.02000°. NP2:ϕ_s144.03000°, δ50.92000°, λ99.07000°. Principal axes: T 2.2408, Plg81.0000°, Azm100.0000°; N 0.2478, Plg7.0000°, Azm318.0000°; P -2.4886, Plg6.0000°, Azm228.0000°;*
*ANF **01** 07:53:30.5±0.4, 36.15N×120.23W, h12km±2km, ML3.7/35 Error ellipse: s-maj=2.5km s-min=1.6km az=116.0*
ISC 01 07:53:29.0±0.9, 36.24N±0.02×120.35W±0.02, h18km±3km, n253, $\sigma_0$996/261, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARM	**Anticline Ridg**	**0.01**	**21**		**Pg**	**07 53 32.0**	**-0.2**
PDRM	**Domengine Ranc**	**0.10**	**351**		**Pg**	**07 53 33.0**	**+0.2**
PJUM	**Juniper Ridge**	**0.20**	**268**		**Pg**	**07 53 34.3**	**+0.3**
PWMM	**Westland Maint**	**0.23**	**29**		**Pg**	**07 53 35.8**	**+1.4**
PSMM	**Smith Mountain**	**0.26**	**230**		**Pb**	**07 53 35.9**	**+0.8**
PSMM					**Sb**	**07 53 41.4**	**+2.3**
CTM	**Castle Mountai**	**0.30**	**178**		**Pb**	**07 53 36.6**	**+0.7**
PPTM	**Peach Tree Val**	**0.33**	**247**		**Pb**	**07 53 36.8**	**+0.4**
PHPM	**Hope Ranch**	**0.33**	**219**		**Pb**	**07 53 36.8**	**+0.4**
PKD	**Bear Valley Ra**	**0.33**	**208**		**Pb**	**07 53 36.9**	**+0.5**
PSTM	**Stockdale Moun**	**0.33**	**203**		**Pb**	**07 53 37.1**	**+0.7**
PVCM	**Vineyard Canyo**	**0.35**	**206**		**Pb**	**07 53 37.4**	**+0.6**
PHFM	**Heflinger Ranc**	**0.36**	**187**		**Pb**	**07 53 37.8**	**+0.9**
PMPB	**Monarch Peak**	**0.37**	**267**		**Pb**	**07 53 37.4**	**+0.4**
PMPB	**Monarch Peak**	**0.37**	**267**	IAML		07 53 45.5	
PMPB	comp=N,6μm,0.6s			IAML		07 53 45.5	
	comp=E,11μm,0.9s						
PSRM	**Scobie Ranch**	**0.38**	**172**		**Pb**	**07 53 38.2**	**+0.9**
PHAM	**Harlan Ranch**	**0.40**	**186**		**Pb**	**07 53 38.5**	**+0.9**
GHC	**Gold Hill**	**0.40**	**181**		**Pb**	**07 53 38.3**	**+0.7**
PPO	**Portuguese Can**	**0.43**	**211**		**Pb**	**07 53 38.9**	**+0.9**
PCMM	**Cholame Hills**	**0.43**	**187**		**Pb**	**07 53 39.1**	**+0.9**
PWKM	**Work Ranch**	**0.44**	**197**		**Pb**	**07 53 39.2**	**+0.9**
PSNM	**Stone Corral**	**0.45**	**174**		**Pb**	**07 53 38.9**	**+0.5**
PMRM	**Maxey Ranch**	**0.46**	**168**		**Pb**	**07 53 39.3**	**+0.7**
PKLM	**Kerr Lake**	**0.46**	**179**		**Pb**	**07 53 39.4**	**+0.8**
PSAM	**San Ardo**	**0.48**	**244**		**Pb**	**07 53 39.2**	**+0.2**
PAGB	**Antelope Grade**	**0.51**	**171**		**Pb**	**07 53 40.0**	**+0.6**
THIS	**South End of C**	**0.52**	**169**		**Pb**	**07 53 40.2**	**+0.7**
TCHL	**Shandon**	**0.55**	**184**		**Pb**	**07 53 41.1**	**+1.1**
BMSM	**Mercy Hot Spri**	**0.55**	**320**		**Pb**	**07 53 40.8**	**+0.6**
TRAM	**Private Proper**	**0.56**	**174**		**Pb**	**07 53 41.0**	**+0.7**
LRV	**Little Rabbit**	**0.57**	**289**		**Pb**	**07 53 40.9**	**+0.5**
PTRM	**Twissleman Ran**	**0.59**	**169**		**Pb**	**07 53 41.5**	**+0.7**
PANM	**San Antonio Re**	**0.64**	**225**		**Pb**	**07 53 42.2**	**+0.5**
BBGB	**Big Mountain B**	**0.65**	**302**		**Pb**	**07 53 42.5**	**+0.6**
BBGB	**Big Mountain B**	**0.65**	**302**	IAML		07 54 00.8	
	comp=N,4μm,0.5s						
PCCM	**Crazy Canyon**	**0.68**	**258**		**Pb**	**07 53 42.7**	**+0.5**
BAVM	**Antelope Valle**	**0.69**	**307**		**Pb**	**07 53 42.7**	**+0.3**
PHSB	**Hesperia Broad**	**0.70**	**235**		**Pb**	**07 53 43.1**	**+0.4**
BPIM	**Pinnacles**	**0.71**	**291**		**Pb**	**07 53 42.9**	**+0.1**
RAMR	**Ramage Ranch**	**0.73**	**215**		**Pb**	**07 53 43.8**	**+0.6**
BSGM	**Shirttail Gulc**	**0.75**	**284**		**Pb**	**07 53 43.6**	**0.0**
BVL	**Bear Valley**	**0.76**	**297**		**Pb**	**07 53 44.2**	**+0.5**
VOG	**Valley Oaks Go**	**0.79**	**83**		**Pg**	**07 53 43.8**	**-0.5**
VOG	**Valley Oaks Go**	**0.79**	**83**	P	**Pg**	**07 53 43.9**	**-0.5**
	baz=265,SNR=27						
VOG				S	**Sg**	**07 53 55.0**	**+0.2**
	baz=265						
BLDC	**Black Mountain**	**0.83**	**213**		**Pb**	**07 53 45.6**	**+0.7**
BLDC	**Black Mountain**	**0.83**	**213**		**Pb**	**07 53 45.6**	**+0.7**
PHCM	**Hearst Castle**	**0.85**	**230**		**Pb**	**07 53 45.9**	**+0.5**
YEG	**Yeguas Mountai**	**0.86**	**158**		**Pb**	**07 53 45.8**	**+0.4**
BLRM	**Lewis Ranch**	**0.86**	**300**		**Pn**	**07 53 46.6**	**+0.4**
BJOM	**Mount Johnson**	**0.87**	**297**		**Pb**	**07 53 45.7**	**+0.1**
PAPM	**Alder Peak**	**0.88**	**249**		**Pb**	**07 53 46.2**	**+0.4**
BSMM	**Soledad Missio**	**0.88**	**280**		**Pb**	**07 53 46.1**	**+0.3**
PTAM	**Tassajara Cree**	**0.89**	**199**		**Pb**	**07 53 46.5**	**+0.6**
RCTC	**Rector, Farmer**	**0.90**	**85**		**Pg**	**07 53 45.5**	**-0.9**
BJCM	**Johnson Can.**	**0.90**	**291**		**Pb**	**07 53 46.1**	**+0.1**
PCBM	**Cambria**	**0.92**	**219**		**Pb**	**07 53 47.2**	**+0.8**
SCZ	**Santa Cruz**	**0.92**	**293**		**Pb**	**07 53 46.5**	**0.0**
ARDC	**Alexander Ranc**	**0.93**	**214**		**Pb**	**07 53 47.1**	**+0.6**
EFD	**Emergency Oper**	**0.96**	**199**		**Pb**	**07 53 47.4**	**+0.3**
SMMC	**Simmler**	**0.96**	**163**		**Pg**	**07 53 47.1**	**-0.7**
SMMC	**Simmler**	**0.96**	**163**	P	**Pg**	**07 53 47.2**	**-0.5**
	baz=342,SNR=111						
SMMC				S	**Sg**	**07 53 59.4**	**-1.0**
	baz=342						
BSLM	**Silva Ranch**	**0.97**	**304**		**Pn**	**07 53 48.2**	**+0.5**
HAST	**Hastings Reser**	**0.98**	**279**		**Pb**	**07 53 47.8**	**+0.2**
CARC	**Carrizo Plain**	**1.01**	**156**		**Pg**	**07 53 47.9**	**-0.7**
LSDC	**Los Osos Digit**	**1.02**	**203**		**Pb**	**07 53 48.5**	**+0.4**
MRHM	**Rocky Hill**	**1.02**	**87**		**Pg**	**07 53 47.2**	**-1.6**
SAO	**San Andreas Ge**	**1.03**	**301**		**Pb**	**07 53 48.6**	**+0.3**
BSRM	**Salinas Radio**	**1.04**	**295**		**Pb**	**07 53 48.5**	**+0.1**
BAPM	**Anderson Peak**	**1.05**	**267**		**Pn**	**07 53 49.2**	**+0.3**
FRP	**Fremont Peak**	**1.05**	**300**		**Pb**	**07 53 48.9**	**+0.1**
DPD	**Davis Peak**	**1.06**	**200**		**Pb**	**07 53 49.2**	**+0.4**
BCH	**Branch Mountai**	**1.07**	**168**		**Pg**	**07 53 49.0**	**-0.8**
PACP	**Pacheco Peak**	**1.08**	**316**		**Pn**	**07 53 50.2**	**+0.9**
VPDC	**Valencia Peak**	**1.08**	**203**		**Pg**	**07 53 49.3**	**-0.7**
BPCNC	**Pine Canyon**	**1.08**	**288**		**Pg**	**07 53 49.2**	**-0.8**
HSFM	**Saint Francis**	**1.09**	**302**		**Pn**	**07 53 50.2**	**+0.8**
SLD	**San Luis Dam**	**1.09**	**320**		**Pb**	**07 53 49.4**	**+0.1**
DCD	**Diablo Creek**	**1.10**	**202**		**Pg**	**07 53 49.3**	**-1.0**
VES	**Vestal, Richgr**	**1.10**	**111**		**Pg**	**07 53 48.8**	**-1.4**
VES	**Vestal, Richgr**	**1.10**	**111**	P	**Pg**	**07 53 48.8**	**-1.4**
	baz=292,SNR=382						
VES				S	**Sg**	**07 54 02.7**	**-1.9**
	baz=292						
HPCM	**Pacheco Lake**	**1.11**	**318**		**Pb**	**07 53 49.8**	**+0.1**
CRGC	**Crocker Grade**	**1.11**	**153**		**Pg**	**07 53 49.4**	**-1.2**
HFEM	**San Felipe**	**1.13**	**312**		**Pb**	**07 53 50.2**	**+0.3**
HBTM	**San Juan Bauti**	**1.15**	**303**		**Pn**	**07 53 51.2**	**+1.1**
BPOM	**Post Ranch**	**1.15**	**270**		**Pg**	**07 53 50.0**	**-1.2**
MYLM	**Yosemite Lake**	**1.15**	**357**		**Pg**	**07 53 49.8**	**-1.4**
HELL	**Mitchell Peak,**	**1.16**	**67**		**Pg**	**07 53 49.9**	**-1.5**
ANZ	**Anzar Road**	**1.19**	**303**		**Pg**	**07 53 51.3**	**-0.8**
HTUM	**Tustin Road**	**1.20**	**300**		**Pb**	**07 53 50.6**	**-0.5**
CSR	**Chase Ranch**	**1.23**	**306**		**Pb**	**07 53 51.2**	**-0.5**
HCOM	**Corn Cob Canyo**	**1.27**	**301**		**Pb**	**07 53 51.0**	**-0.9**
SPG2	**Springville 2**	**1.28**	**91**		**Pn**	**07 53 51.4**	**-0.6**
HMOM	**Monterey**	**1.32**	**287**		**Pn**	**07 53 52.4**	**-0.1**
MBUM	**Mount Bullion**	**1.34**	**9**		**Pn**	**07 53 53.0**	**0.0**
PMLM	**Mount Lospe**	**1.35**	**189**		**Pn**	**07 53 53.2**	**+0.2**
CMPM	**Mikes Peak**	**1.36**	**325**		**Pn**	**07 53 53.0**	**-0.2**
KCC	**Kaiser Creek**	**1.36**	**37**		**Pn**	**07 53 53.4**	**+0.2**
JELB	**Ellicott, Sant**	**1.38**	**301**		**Pn**	**07 53 53.3**	**0.0**
CADM	**Anderson Res.**	**1.38**	**312**		**Pn**	**07 53 53.4**	**0.0**
PKM	**Mcpherson Peak**	**1.41**	**162**		**Pn**	**07 53 54.8**	**+0.8**
PKM	**Mcpherson Peak**	**1.41**	**162**	P	**Pn**	**07 53 54.5**	**+0.6**
	baz=342,SNR=28						
PKM				S	**Sb**	**07 54 13.1**	**+0.4**
	baz=342						
JLAB	**Laurel Hill**	**1.44**	**310**		**Pn**	**07 53 54.2**	**0.0**
MAGC	**SCE Magundon P**	**1.45**	**127**		**Pn**	**07 53 53.5**	**-0.8**
ARN	**Arnold Ranch**	**1.46**	**320**		**Pn**	**07 53 54.9**	**+0.4**
JTGM	**Trout Gulch Ro**	**1.46**	**303**		**Pb**	**07 53 55.8**	**+0.2**
CCOB	**Coro Ranch Numb**	**1.48**	**314**		**Pn**	**07 53 55.1**	**+0.5**
BCW	**Bitter Crk WRg**	**1.50**	**149**		**Pn**	**07 53 55.0**	**-0.1**
BCW	**Bitter Crk WRg**	**1.50**	**149**	IAML		07 54 23.5	
	comp=E,927nm,0.4s						
BCW				IAML		07 54 40.4	
	comp=N,853nm,0.9s						
COSM	**Mount Oso**	**1.51**	**327**		**Pn**	**07 53 55.0**	**-0.2**
AMC	**Almaden**	**1.52**	**308**		**Pn**	**07 53 55.5**	**+0.3**
MHC	**Mount Hamilton**	**1.52**	**317**		**Pn**	**07 53 55.5**	**+0.2**
CMMM	**Mount Mocho**	**1.53**	**323**		**Pn**	**07 53 56.2**	**+0.8**
JRGM	**Rodeo Gulch Ro**	**1.53**	**302**		**Pn**	**07 53 54.5**	**-0.8**
FIGC	**Figueroa Mtn.**	**1.53**	**169**		**Pn**	**07 53 56.3**	**+0.8**
WASM	**Alta Sierra Ca**	**1.54**	**108**		**Pn**	**07 53 55.8**	**+0.1**
CMLM	**Mount Lewis**	**1.62**	**320**		**Pn**	**07 53 57.3**	**+0.5**
ISA	**Isabella, Lake**	**1.62**	**110**		**Pn**	**07 53 57.2**	**+0.5**
ISA	**Isabella, Lake**	**1.62**	**110**	P	**Pn**	**07 53 57.3**	**+0.5**
	baz=291,SNR=298						
ISA				S	**Sn**	**07 54 17.7**	**+0.4**
	baz=291						
JJOM	**Saint Joseph's**	**1.63**	**307**		**Pn**	**07 53 56.7**	**0.0**
WLHM	**Little Horse**	**1.65**	**92**		**Pn**	**07 53 58.1**	**+0.8**
ARVC	**Arvin**	**1.66**	**131**		**Pn**	**07 53 57.1**	**0.0**
ARVC	**Arvin**	**1.66**	**131**	P	**Pn**	**07 53 57.2**	**0.0**
	baz=312,SNR=56						
ARVC				S	**Sn**	**07 54 18.5**	**+0.5**
	baz=312						
CALM	**Calaveras Res.**	**1.68**	**317**		**Pn**	**07 53 57.9**	**+0.4**
TEJ	**El Tejon**	**1.68**	**126**		**Pn**	**07 53 57.3**	**-0.2**
JBNB	**Ben Lomond Mou**	**1.70**	**302**		**Pn**	**07 53 58.8**	**+0.9**
MRDM	**Red Cones**	**1.71**	**37**		**Pn**	**07 53 59.4**	**+1.3**
JSGM	**Saratoga Golf**	**1.72**	**308**		**Pn**	**07 53 58.9**	**+0.9**
MDPB	**Devils Postpil**	**1.73**	**36**		**Pn**	**07 53 59.7**	**+1.3**
MDPB	**Devils Postpil**	**1.73**	**36**	IAML		07 54 27.5	
	comp=N,577nm,0.6s						
MDPB				IAML		07 54 28.8	
	comp=E,501nm,0.6s						
SYP	**Santa Ynez Pea**	**1.73**	**170**		**Pn**	**07 53 59.0**	**+0.7**
MMPM	**Mammoth Pass**	**1.73**	**37**		**Pn**	**07 53 59.9**	**+1.4**
SCHCA	**Scheelite**	**1.74**	**49**		**Pn**	**07 54 00.2**	**+1.7**
MMSM	**Mammoth Summit**	**1.75**	**37**		**Pn**	**07 54 00.3**	**+1.6**
OMMB	**Old Mammoth Mi**	**1.75**	**38**		**Pn**	**07 54 00.1**	**+1.4**
OMMB	**Old Mammoth Mi**	**1.75**	**38**	IAML		07 54 25.0	
	comp=N,522nm,0.7s						
OMMB				IAML		07 54 25.2	
	comp=E,481nm,0.6s						
MCUB	**Copperopolis B**	**1.75**	**353**		**Pn**	**07 53 58.8**	**+0.3**
MINS	**Minaret Summit**	**1.75**	**36**		**Pn**	**07 54 00.2**	**+1.4**
MLIM	**Lincoln Peak**	**1.76**	**37**		**Pn**	**07 54 00.4**	**+1.5**
JSCM	**Stevens Creek**	**1.77**	**307**		**Pn**	**07 53 58.5**	**-0.2**
JSJM	**St Joseph**	**1.78**	**309**		**Pn**	**07 53 59.8**	**+1.0**
MDYM	**Dry Creek**	**1.78**	**37**		**Pb**	**07 54 01.0**	**-0.3**
RYS	**Reyes Peak**	**1.79**	**153**		**Pn**	**07 54 00.0**	**+0.9**
WENL	**Wente Vineyard**	**1.79**	**321**		**Pn**	**07 53 59.9**	**+0.9**
MLCM	**Laurel Creek C**	**1.79**	**39**		**Pn**	**07 54 00.9**	**+1.7**
WORM	**Onyx Ranch**	**1.79**	**107**		**Pn**	**07 54 00.3**	**+1.3**
MMLB	**Mammoth Lakes**	**1.79**	**37**		**Pb**	**07 54 01.3**	**-0.2**
CMB	**Columbia Colle**	**1.80**	**359**		**Pn**	**07 53 59.9**	**+0.7**
CMB	**Columbia Colle**	**1.80**	**359**	IAML		07 54 29.2	
	comp=E,204nm,0.8s						
CMB				IAML		07 54 29.9	
	comp=N,245nm,0.7s						
MDCM	**Deadman Creek**	**1.81**	**35**		**Pn**	**07 54 01.1**	**+1.6**
RCCR	**Rock Creek Can**	**1.81**	**46**		**Pn**	**07 54 01.2**	**+1.7**
MGPM	**Gravel Pit**	**1.81**	**39**		**Pb**	**07 54 01.3**	**-0.4**
MTUM	**Tungsten Hills**	**1.82**	**52**		**Pn**	**07 54 01.4**	**+1.8**
MCVM	**Convict Lake**	**1.82**	**42**		**Pn**	**07 54 01.4**	**+1.7**
MEMM	**East Mammoth H**	**1.82**	**38**		**Pb**	**07 54 01.6**	**-0.4**
WMD		**1.82**	**48**		**Pn**	**07 54 01.3**	**+1.9**
MCBM	**Casa Benchmark**	**1.82**	**39**		**Pb**	**07 54 01.7**	**-0.3**
MCSM	**Casa Diablo Ho**	**1.83**	**39**		**Pb**	**07 54 01.7**	**-0.4**
CVLM	**Vallecito**	**1.83**	**320**		**Pn**	**07 54 00.3**	**+0.8**
CWC	**Cottonwood Cre**	**1.84**	**83**		**Pn**	**07 54 01.4**	**+1.4**
CWC	**Cottonwood Cre**	**1.84**	**83**	P	**Pn**	**07 54 01.3**	**+1.4**
	baz=265						
CWC				S	**Sn**	**07 54 24.4**	**+1.6**
	baz=265						
MLAC	**Mammoth, Mammo**	**1.85**	**41**		**Pb**	**07 54 02.0**	**-0.3**
MLAC	**Mammoth, Mammo**	**1.85**	**41**	P	**Pb**	**07 54 02.0**	**-0.3**
	baz=222,SNR=84						
MLAC				S	**Sb**	**07 54 26.6**	**+1.4**
	baz=222						
MDRNC	**Doe Ridge**	**1.85**	**40**		**Pb**	**07 54 02.1**	**-0.3**
JFP	**Foothills Park**	**1.86**	**308**		**Pn**	**07 54 00.4**	**+0.5**
SBC	**Santa Barbara**	**1.86**	**164**	P	**Pn**	**07 54 00.9**	**+1.0**
	baz=344						
JSFB	**Stanford Teles**	**1.87**	**309**		**Pn**	**07 54 00.9**	**+0.8**
CNIC	**Niles Canyon**	**1.89**	**317**		**Pn**	**07 54 00.7**	**+0.4**
TIN	**Tinemaha, Big**	**1.89**	**64**		**Pb**	**07 54 02.5**	**-0.5**
TIN	**Tinemaha, Big**	**1.89**	**64**	P	**Pb**	**07 54 02.6**	**-0.5**
	baz=245,SNR=240						
TIN				S	**Sb**	**07 54 26.7**	**+0.4**
	baz=245						
JRSC	**Jasper Ridge**	**1.91**	**308**		**Pn**	**07 54 00.8**	**+0.1**
BGH	**Bear Gulch**	**1.94**	**305**		**Pn**	**07 54 01.5**	**+0.4**
MFBM	**Five Bridges**	**1.95**	**52**		**Pb**	**07 54 03.8**	**-0.2**
ORC	**Owens River**	**1.95**	**44**		**Pb**	**07 54 03.6**	**-0.4**
CMOB	**Morgan Territo**	**1.96**	**324**		**Pg**	**07 54 05.9**	**-0.7**
POCCA	**Poleta Canyon**	**2.00**	**55**		**Pb**	**07 54 04.7**	**-0.4**
MCDM	**Chidago Canyon**	**2.01**	**49**		**Pb**	**07 54 04.8**	**-0.3**
WNMM	**Nine Mile Cany**	**2.02**	**100**		**Pn**	**07 54 04.1**	**+2.0**
LUL	**Lundy Lake**	**2.04**	**27**		**Pb**	**07 54 04.9**	**-0.8**
BENR	**Benton**	**2.05**	**43**		**Pn**	**07 54 05.0**	**+2.2**
MRCM	**Red Rock Canyo**	**2.06**	**45**		**Pb**	**07 54 05.5**	**-0.5**
JCHM	**Cahill Ridge**	**2.07**	**309**		**Pn**	**07 54 04.6**	**+1.8**
CGO	**Cerro Gordo**	**2.08**	**81**		**Pb**	**07 54 05.7**	**-0.6**
OSI	**Osito Audit: C**	**2.09**	**140**	P	**Pn**	**07 54 04.0**	**+0.8**
	baz=321,SNR=22						
OSI				S	**Sn**	**07 54 29.1**	**+0.3**
	baz=321						
WCSM	**Coso Springs S**	**2.10**	**95**		**Pb**	**07 54 06.0**	**-0.6**
BDM	**Black Diamond**	**2.10**	**325**		**Pn**	**07 54 03.7**	**+0.5**
MLNR	**Milner Canyon**	**2.10**	**49**		**Pb**	**07 54 05.9**	**-0.8**
CCAC	**Calif City Air**	**2.18**	**119**		**Pn**	**07 54 05.4**	**+0.9**
BKS	**Berkeley--Byer**	**2.23**	**318**		**Pn**	**07 54 05.7**	**+0.7**
CTAM	**Taylor**	**2.23**	**324**		**Pn**	**07 54 01.5**	**-3.5**
LRMC	**Laurel Mtn Rad**	**2.29**	**108**	P	**Pn**	**07 54 07.0**	**+0.9**
	baz=290,SNR=35						
LRMC				S	**Sn**	**07 54 34.8**	**+0.9**
	baz=290						
CPIM	**Pinole Ridge**	**2.30**	**320**		**Pn**	**07 54 07.2**	**+1.2**
SCZ2	**Santa Cruz Isl**	**2.31**	**165**	P	**Pn**	**07 54 07.7**	**+1.6**
	baz=345						
SCZ2				S	**Sn**	**07 54 33.8**	**-0.3**
	baz=345						
MPMC	**Manual Prospec**	**2.32**	**94**	P	**Pn**	**07 54 07.2**	**+0.8**
	baz=275,SNR=253						
MPMC				Sb	**Sb**	**07 54 39.9**	**+1.1**
	baz=275						
EDW2	**Edwards Air Fo**	**2.35**	**124**	P	**Pn**	**07 54 07.4**	**+0.7**
	baz=306,SNR=33						
EDW2				S	**Sn**	**07 54 36.0**	**+0.9**
	baz=306						
OAT	**Oat Mountain**	**2.36**	**143**		**Pn**	**07 54 08.6**	**+1.6**
WAKR	**Walker**	**2.38**	**18**		**Pb**	**07 54 10.1**	**-1.3**
WAKR	**Walker**	**2.38**	**18**	IAML		07 54 44.0	
	comp=N,301nm,0.7s						
WAKR				IAML		07 54 46.5	
	comp=E,293nm,0.7s						
LCH	**Last Change Ra**	**2.39**	**65**		**Pn**	**07 54 08.8**	**+1.5**
LHV	**Little Huntoon**	**2.49**	**36**		**Pn**	**07 54 11.6**	**+3.0**
LHV	**Little Huntoon**	**2.49**	**36**	IAML		07 54 56.0	
	comp=N,250nm,1.0s						
LHV				IAML		07 55 05.2	
	comp=E,244nm,1.0s						
GRAC	**Grapevine Rang**	**2.52**	**72**		**Pb**	**07 54 13.5**	**-0.1**
GRAC	**Grapevine Rang**	**2.52**	**72**	Pb	**Pb**	**07 54 13.7**	**0.0**
	baz=254,SNR=76						
CCCA	**Chr Cany lake**	**2.52**	**105**		**Pn**	**07 54 10.4**	**+1.3**
DECC	**Green Verdugo**	**2.58**	**140**	P	**Pn**	**07 54 10.4**	**+0.6**
	baz=321						
NOLM	**Olema**	**2.66**	**313**		**Pn**	**07 54 11.0**	**+0.1**
GMN	**Gold Mountain**	**2.70**	**66**		**Pn**	**07 54 12.8**	**+1.1**
GMN				IAML		07 55 02.0	
	comp=E,158nm,0.6s						
GMN				IAML		07 55 03.0	
	comp=N,217nm,0.7s						
PASC	**Pasadena Art C**	**2.72**	**139**		**Pn**	**07 54 12.6**	**+0.8**
PASC				IAML		07 54 54.0	
	comp=E,96nm,0.5s						
NVAR	**Mina Array Bea**	**2.73**	**36**	Pn	**Pn**	**07 54 14.1**	**+2.0**
	comp=E,8.3nm,0.3s,baz=216,slow=13,SNR=110						
NVAR				Lg	Lg	07 54 55.5	
	comp=E,10nm,0.3s,baz=220,slow=30,SNR=4.0						
	comp=E,22n

Y14A	Wickenburg	6.44	109		Pn	07 55 03.6	+0.6
DUG	Dugway, Tooele	7.13	54	P	Pn	07 55 14.6	+2.1
	baz=239						
PDAR	Pinedale Array	10.58	49	Pn	Pn	07 56 05.0	+5.1
	comp=N,0.1nm,0.3s,baz=209,slow=14,SNR=4.9						
PDAR				Lg	Lg	07 59 06.8	
	baz=215,slow=7.7,SNR=1.6						
	comp=N,0.6nm,0.8s						
TXAR	Lajitas Array	15.62	111	Pn	P	07 57 12.4	0.0
	baz=298,slow=13,SNR=3.0						
	comp=N,0.1nm,0.4s						

*JMA **01** 08:00:34.8±0.2, 35°.7N±0°.7×12°.9E±°, h18km, MV2.7/6, S KOREAN PENINSULA REG*
*KMA **01** 08:00:43.9±99.0, 35°.79N×128°.71E, h34km±99km, Error ellipse: s-maj=10.0km s-min=2.1km az=273.0*
ISC 01 08:00:35.2±1.1, 35°.71N±0°.06×129°.04E±0°.07, h10km, n9, σ0.49/12, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTU	Tsushima	1.22	166	eP	Pn	08 00 57.4	-0.8
JTU				eS	Sb	08 01 13.9	-0.1
JTSM	Tsushimamitsus	1.39	168	eP	Pn	08 01 00.1	-0.6
JTSM				eS	Sn	08 01 18.6	-0.5
KSJEU	Jeongeup	1.73	264	P	Pg	08 01 08.4	0.0
	SNR=11						
KSKWJ	Gwangju	1.76	253	P	Pg	08 01 09.0	0.0
	SNR=11						
BOSB	Boseong-gun	1.77	238	P	Pb	08 01 08.4	+0.8
	SNR=19						
KSCEA	Cheonan	1.82	308	P	Pb	08 01 08.8	+0.2
	SNR=5.7						
JHGM	Hagimishima	1.95	118	eP	Pn	08 01 08.9	+0.6
JHGM				eS	Sn	08 01 32.9	+0.1
JII	Iki	1.99	163	eP	Pn	08 01 08.9	+0.1
SEHB	SEOHWA	2.63	346	P	Pb	08 01 22.3	-0.1
	SNR=15						

*IDC **01** 08:01:11.7±0.7, 34°.53N×141°.55E, h0km, mb4.0/11, mbtmp4.1/16, ML3.3/4, MS3.7/15, Error ellipse: s-maj=18.8km s-min=14.4km az=103.0*
*NIED **01** 08:01:13.4, 34°.60N×141°.56E, h38km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr1.00; Mθθ-4.36; Mφφ3.36; Mrθ0.99; Mθφ4.77; Mφr0.50; Fault plane solution: M0 6.24000×1015 NP1: φs340.00000°, δ79.00000°, λ176.00000°. NP2: φs71.00000°, δ86.00000°, λ11.00000°.*
*JMA **01** 08:01:13.4±0.5, 35°N±1°×14°.2E±°, h38km±1km, MV3.8/34, FAR SE OFF BOSO PEN*
ISC 01 08:01:15.0±0.6, 34°.54N±0°.04×141°.48E±0°.07, h27km, n47, σ1.9/61/34, mb4.0/11, MS4.0/9, 1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.43	285	P	Pn	08 01 23.7	-1.2
BSO3	Boso 3	0.84	288	P	Pb	08 01 29.9	-0.9
BSO4	Boso 4	1.04	296	P	Pb	08 01 33.0	-1.2
JKUC	kamogawauchiur	1.22	301	P	Pn	08 01 34.9	-1.4
JKUC				eS	Sn	08 01 50.7	-1.2
CHOJ	Chosi	1.26	336	P	Pn	08 01 35.0	-1.8
JMKN	Mikurajimanish	1.69	248	P	Pn	08 01 43.3	+0.5
JIM2	Oshima 3	1.70	276	eP	Pn	08 01 42.1	-0.7
JHJ2	Mitsune	1.99	225	P	Pb	08 01 48.6	-1.9
JHJ	Hachijo jima 2	2.00	225	Pn	Pn	08 01 47.8	+0.8
	100nm,0.3s,baz=65,slow=22,SNR=23						
JHJ				Sn	Sb	08 02 14.3	-1.0
	174nm,0.3s,baz=80,slow=21,SNR=5.9						
	214nm,0.3s						
JOD2	Odawara 2	2.09	291	P	Pn	08 01 47.6	-0.7
MJAR	Matsushiro Arr	3.33	308	Pn	Pn	08 02 05.5	+0.2
	2.5nm,0.3s,baz=113,slow=9.1,SNR=65						
MJAR				Sn	Sn	08 02 47.8	+3.8
	1.9nm,0.3s,baz=142,slow=16,SNR=3.4						
MJAR				LR	LR	08 02 58.3	
	comp=Z,227nm,19.2s,baz=90,slow=32						
	9.7nm,0.3s						
MAJO	Matsushiro	3.33	308	P	Pn	08 02 05.7	+0.4
INU	Inuyama	3.75	284	P	Pn	08 02 12.9	+1.8
JCJ	Chichijima	7.45	175	Pn	Pn	08 03 01.5	-0.4
	67nm,0.4s,baz=290,slow=10,SNR=6.0						
JCJ				Sn	Sn	08 04 22.6	-2.9
	31nm,0.3s,baz=280,slow=22,SNR=7.0						
JCJ				LR	LR	08 06 30.2	
	comp=Z,520nm,18.4s,baz=93,slow=43						
JCJ	Chichijima	7.45	175	P	Pn	08 03 03.6	+1.7
KSRS	Korea Array	11.36	289	Pn	Pn	08 03 59.3	+3.8
	baz=101,slow=14						
KSRS				LR	LR	08 08 51.8	
	comp=Z,694nm,19.2s,baz=95,slow=40						
USRK	Ussuriysk Ar.	12.11	326	Pn	Pn	08 04 04.6	-1.1
	0.3nm,0.3s,baz=130,slow=12,SNR=4.8						
USRK				LR	LR	08 08 15.4	
	comp=Z,133nm,21.8s,baz=131,slow=35						
	4.5nm,0.7s						
JOW	Kunigami	13.71	239	LR	LR	08 10 04.2	
	comp=Z,201nm,18.8s,baz=144,slow=39						
BNX	BinXian	15.49	320	P	P	08 04 53.2	-2.5
KLR	Kul'dur	16.34	337	Pn	Pn	08 05 01.1	-1.3
	0.2nm,0.3s,baz=156,slow=15,SNR=2.2						
KLR				LR	LR	08 11 44.1	
	comp=Z,261nm,18.6s,baz=148,slow=39						
	0.8nm,0.4s						
GUMO	Guam	21.09	171	P	P	08 05 55.7	-1.6
	62nm,1.0s,baz=79,slow=10,SNR=1.3						
	62nm,1.0s						
MA2	Magadan	25.78	11	LR	LR	08 18 23.8	
	comp=Z,139nm,18.3s,baz=204,slow=40						
H11N2	WAKE ISLAND Hy 26.91	117		T	T	08 35 13.2	
	baz=309,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy 26.91	117		T	T	08 35 11.1	
	baz=309,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy 26.92	117		T	T	08 35 03.0	
	baz=309,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy 27.53	119		T	T	08 36 02.2	
	baz=312,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy 27.54	119		T	T	08 35 56.5	
	baz=312,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy 27.55	119		T	T	08 35 56.1	
	baz=312,slow=75,SNR=15						
SONM	Songino Array	29.28	308	P	P	08 07 15.9	+0.8
	1.9nm,0.6s,baz=99,slow=9.3,SNR=7.1						
	1.9nm,0.6s						
SHEM	Shemya Is, Ala	29.44	42	LR	LR	08 16 33.7	
	comp=Z,38nm,19.8s,baz=150,slow=31						
CMAR	Chiang Mai Arr	40.98	258	P	P	08 08 56.1	+0.4
	0.8nm,0.3s,baz=51,slow=7.4,SNR=1.4						
	0.8nm,0.3s						
MKAR	Makanchi Array	45.52	304	LR	LR	08 29 23.7	
	comp=Z,206nm,19.6s,baz=110,slow=37						
KURBB	Kurchatov Arra	47.60	310	LR	LR	08 30 45.9	
	comp=Z,168nm,18.7s,baz=124,slow=37						
ILAR	Eielson Array	51.58	31	P	P	08 10 19.4	+0.9
	1.1nm,0.8s,baz=263,slow=6.6,SNR=10						
	1.1nm,0.8s						
AAK	Ala-Archa	51.75	300	LR	LR	08 32 28.4	
	comp=Z,152nm,18.9s,baz=138,slow=36						
WRA	Warramunga Arr	54.61	188	P	P	08 10 42.2	+1.0
	3.4nm,0.8s,baz=6.2,slow=7.6,SNR=12						
	3.4nm,0.8s						
INK	Inuvik	56.58	26	P	P	08 10 56.4	+1.5
	1.5nm,0.8s,baz=247,slow=7.7,SNR=2.4						
	1.5nm,0.8s						
ASAR	Alice Springs	58.34	188	P	P	08 11 08.9	+1.2
	1.1nm,0.7s,baz=9.2,slow=7.3,SNR=12						
	1.1nm,0.7s						
AKTO	Aktyubinsk	60.39	313	LR	LR	08 39 14.4	
	comp=Z,155nm,18.1s,baz=82,slow=38						
AFI	Afiamalu	65.52	129	LR	LR	08 35 36.2	
	comp=Z,48nm,21.6s,baz=281,slow=32						
GNI	Garni	73.25	307	LR	LR	08 47 39.1	
	comp=Z,116nm,18.2s,baz=88,slow=38						
NVAR	Mina Array Bea	76.44	53	P	P	08 13 03.5	+0.9
	0.7nm,0.8s,baz=285,slow=4.6,SNR=3.5						
	0.7nm,0.8s						
FRB	Frobisher Bay	79.18	13	LR	LR	08 51 58.5	
	comp=Z,92nm,18.4s,baz=36,slow=38						
PDAR	Pinedale Array	79.38	45	P	P	08 13 18.6	-0.2
	0.2nm,0.6s,baz=318,slow=3.6,SNR=2.4						
	0.2nm,0.6s						
BRTR	Keskin Array B	80.55	312	P	P	08 13 27.5	+2.5
	2.2nm,0.8s,baz=88,slow=6.0,SNR=2.0						
	2.2nm,0.8s						
TXAR	Lajitas Array	91.59	52	P	P	08 14 21.3	+1.5
	0.2nm,0.6s,baz=321,slow=2.3,SNR=4.2						
	0.2nm,0.6s						
LPAZ	La Paz	147.84	63	PKPbc	PKPab	08 20 58.6	-2.7
	0.7nm,0.5s,baz=0.0,slow=9.1,SNR=5.0						

*IDC **01** 08:04:32.2±0.3, 34°.87N×73°.64E, h0km, mb5.1/46, mbtmp5.1/54, ML4.7/6, MS4.3/70, Error ellipse: s-maj=8.8km s-min=8.1km az=15.0*
*MOS **01** 08:04:34.1±1.1, 34°.92N×73°.69E, h21km, mb5.5/71, MS4.6/21, Error ellipse: s-maj=4.6km s-min=2.8km az=97.9*
*NEIC **01** 08:04:34.3±1.7, 34°.91N±0°.06×73°.68E±0°.08, h10km±1km, mb5.4/160, Ms_20 4.7/49, Error ellipse: s-maj=11.2km s-min=10.2km az=139.0*
*GCMT **01** 08:04:35.3±0.2, 34°.82N±0°.01×73°.54E±0°.01, h17km, MW5.1/123, Moment Tensor Solution. s84, c125; s123, c204; Duration: 0 Moment tensor: Scale 1016Nm; Mrr4.29±.15; Mθθ-1.06±.13; Mφφ-3.24±.12; Mrθ1.11±.40; Mθφ-4.42±.10; Mφr1.47±.32; Best double couple: M0:5.79700×1016 NP1:φs37.00000°, δ54.00000°, λ89.00000°. NP2:φs219.00000°, δ36.00000°, λ91.00000°. Principal axes: T 4.5910, Plg81.0000°, Azm303.0000°; N 2.4020, Plg1.0000°, Azm38.0000°; P -7.0030, Plg9.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **01** 08:04:36.0±0.0, 34°.90N×73°.70E, h40km, mb5.2/72, mB5.3/54, ML5.1/3, Ms5.0/74, Ms7 4.8/68*
*NNC **01** 08:04:45.0±5.3, 35°.32N×73°.62E, h94km±49km, mb5.0, mpv5.3, Error ellipse: s-maj=41.4km s-min=34.6km az=152.0*
ISC 01 08:04:36.3±0.5, 34°.90N±0°.03×73°.68E±0°.03, h27km±3km, n1109, σ1.972/1193, mb5.4/263, MS4.6/127, 70C-37D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.28	196	P	Pn	08 04 58.8	+0.3
NIL	Nilore	1.29	196		Pn	08 04 57.0	-1.7
NIL	Nilore	1.29	196	P	Pn	08 04 57.0	-1.7
CEP	Cherat	1.81	234	P	Pn	08 05 07.2	+1.3
JMU	Jammu	2.40	155	eP	Pb	08 05 17.2	-1.6
JMU				eP	Pb	08 05 17.3	-1.6
JMU				eS	Sb	08 05 49.8	+1.8
THW	Thamme Wali	2.65	218	P	Pn	08 05 19.5	+2.2
THN	Thein Dam	2.99	145	eP	Pb	08 05 26.2	-2.7
THN				i x	x	08 05 29.8	
KBL	Kabul	3.83	266	Pn	Pn	08 05 34.6	+0.8
KBL	Kabul	3.83	266	P	Pn	08 05 34.6	+0.8
KBL	Kabul	3.83	266	P	Pn	08 05 37.0	+3.2
	SNR=598						
BHK	Bhakra	4.16	146	eP	Pn	08 05 41.8	+3.7
BHK				eS	Sn	08 06 30.3	+4.4
SMLA	Simla	4.77	141	eP	Pn	08 05 49.6	+3.3
SMLA				eS	Sn	08 06 43.6	+2.9
SMLA				IAML		08 06 47.1	
	comp=E,5μm,0.4s						
SMLA				IAML		08 06 47.7	
	comp=N,2μm,0.5s						
GAR	Garm	4.90	328		Pn	08 05 49.7	+1.4
KSH	Kashi	4.96	21	Pn	Pn	08 05 48.5	-0.7
KSH				sP	Pb	08 05 59.1	-3.4
KSH				Sn	Sn	08 06 44.2	-1.5
CHGR	Chuyangaron	5.22	317	Pn	Pn	08 05 53.9	+1.2
CHGR	Chuyangaron	5.22	317	P	Pn	08 05 53.9	+1.2
BTK	Batken	5.63	337		Pn	08 06 00.8	+2.4
BTK	Batken	5.63	337	P	Pn	08 06 00.8	+2.4
DDI	Dehra Dun	5.87	140	eP	Pn	08 06 04.7	+3.1
NRN	Naryn	6.78	15		Pn	08 06 16.1	+1.8
NRN	Naryn	6.78	15	P	Pn	08 06 16.1	+1.8
NDI	New Delhi	6.89	153	eP	Pn	08 06 18.0	+2.4
NDI				ex	x	08 07 34.0	
ARLS	Aral	6.97	4	P	Pn	08 06 19.3	+2.5
KHET	Khetri	7.04	164	eP	Pn	08 06 17.8	+0.1
AML	Almayashu	7.22	0	P	Pn	08 06 23.1	+2.6
	SNR=276						
SONA	Sohna	7.24	155	eP	Pn	08 06 21.0	+0.7
TAS	Tashkent	7.29	333	Pn	Pn	08 06 22.9	+2.0
TAS	Tashkent	7.29	333	P	Pn	08 06 23.0	+2.0
UCH	Uchtor	7.35	5	P	Pn	08 06 25.2	+3.0
	SNR=325						
TARG	Taragay, Kyrgy	7.55	24	Pn	Pn	08 06 26.2	+1.2
TARG	Taragay, Kyrgy	7.55	24	P	Pn	08 06 26.2	+1.2
ULHL	Ulahol	7.61	15	P	Pn	08 06 29.3	+3.7
	SNR=34						
PTH	Pithoragarh	7.69	132	eP	Pn	08 06 26.5	-0.2
PTH				ex	x	08 06 26.5	
EKS2	Erkin-Say	7.75	1	P	Pn	08 06 30.7	+3.2
	SNR=270						
AAK	Ala-Archa	7.75	4	P	Pn	08 06 30.8	+3.3
	SNR=47						
AAK	Ala-Archa	7.75	4	Pn	Pn	08 06 30.4	+2.9
	comp=N,13nm,0.3s,baz=189,slow=11,SNR=62						
AAK				Sn	Sn	08 07 57.2	+2.7
	comp=N,8.2nm,0.3s,baz=190,slow=12,SNR=2.0						
AAK				Lg	Lg	08 08 43.7	
	baz=1.6,slow=16						
AAK				LR	LR	08 09 47.1	
	comp=N,4μm,19.7s,baz=191,slow=40						
	comp=N,86nm,0.7s						
AAK	Ala-Archa	7.75	4	Pn	Pn	08 06 29.9	+2.3
AAK	Ala-Archa	7.75	4	Pn	Pn	08 06 30.7	+3.2
LGTI	Lohaghat	7.78	132	eP	Pn	08 06 27.5	-0.2
IUG	Iuzhnay	7.78	340	eP	Pn	08 06 28.5	+0.7
IUG				eS	Sn	08 07 55.8	+0.7
IUG	Iuzhnay	7.78	340	eP	Pn	08 06 28.5	+0.7
	baz=340						
IUG				eS	Sn	08 07 55.8	+0.7
	baz=340						
KBK	Karagaybulak	7.81	7	P	Pn	08 06 31.7	+3.4
	SNR=53						
CHM	Chimkent	8.07	338	P	Pn	08 06 35.4	+3.7
CHM				S	Sn	08 07 59.8	-2.2
CHMS	Chumysh	8.13	6	P	Pn	08 06 35.7	+3.1
	SNR=45						
CHMS	Chumysh	8.13	6	⇓P	Pn	08 06 35.5	+2.9
	comp=N,236nm,1.2s						
CHMS				⇓S	Sn	08 07 59.9	-3.8
	comp=N,143nm,0.8s						
TKM2	Tokmak 2	8.15	10	P	Pn	08 06 36.0	+3.0
	SNR=248						
TKM2	Tokmak 2	8.15	10	P	Pn	08 06 36.0	+3.0
TKM2				S	Sn	08 08 03.8	-0.5
TKM2	Tokmak 2	8.15	10	⇑P	Pn	08 06 36.0	+3.0
	comp=N,152nm,0.6s						
TKM2				⇓S	Sn	08 08 04.3	0.0
	comp=N,238nm,0.7s						
DZA	Taraz	8.19	348	eP	Pn	08 06 34.4	+1.0
DZA				eS	Sn	08 08 04.8	-0.2
DZA	Taraz	8.19	348	eP	Pn	08 06 34.4	+1.0
	baz=348						
DZA				eS	Sn	08 08 04.8	-0.2
	baz=348						
JASL	Jaisalmer	8.30	197	eP	Pn	08 06 35.4	+0.5
USP	Ospenovka	8.38	4	P	Pn	08 06 38.2	+2.2
	SNR=49						
AJM	Ajmer	8.43	174	eP	Pn	08 06 38.0	+1.2
KK31	Karatay Array	8.56	344	Pn	Pn	08 06 39.9	+1.5
KK31	Karatay Array	8.56	344	i P	Pn	08 06 40.1	+1.7
KK31				eS	Sn	08 08 13.4	-0.6
KK31	Karatay Array	8.56	344	⇓P	Pn	08 06 40.2	+1.7
	comp=N,108nm,0.5s,baz=164,slow=13,SNR=1569						
KK31				⇑S	Sn	08 08 13.8	-0.3
	comp=N,322nm,0.6s,baz=169,slow=22,SNR=9.0						
KKAR	Karatay Array	8.56	344		Pn	08 06 39.4	+1.0
KKAR	Karatay Array	8.56	344	P	Pn	08 06 39.4	+1.0
SGDS	Sogindy	8.57	5	eP	Pn	08 06 38.7	0.0
SGDS	Sogindy	8.57	5	eP	Pn	08 06 38.7	0.0
	baz=4.8						
MDOK	Medeo	8.66	17	P	Pn	08 06 42.4	+2.5
MDOK	Medeo	8.66	17	eP	Pn	08 06 39.9	0.0
	baz=17						
MDOK	Medeo	8.66	17	⇑P	Pn	08 06 42.4	+2.5
	comp=N,76nm,0.9s						
MDOK				⇑S	Sn	08 08 08.6	-8.2
	comp=N,214nm,1.0s						
AAA	Alma-Ata	8.67	16	eP	Pn	08 06 40.1	+0.1
AAA	Alma-Ata	8.67	16	eP	Pn	08 06 40.2	+0.1
	baz=16						
SATY	Saty	8.94	23	eP	Pn	08 06 44.8	+1.0
SATY	Saty	8.94	23	eP	Pn	08 06 44.8	+1.0
	baz=23						
ZHN	Zhinishke	9.05	23	eP	Pn	08 06 43.8	-1.4
ZHN	Zhinishke	9.05	23	eP	Pn	08 06 43.9	-1.4
	baz=23						
KUU	Kurty	9.21	12	eP	Pn	08 06 47.5	+0.1
KUU	Kurty	9.21	12	eP	Pn	08 06 47.6	+0.1
	baz=12						
UZB	Uzynbulak	9.22	25	eP	Pn	08 06 48.2	+0.5
UZB	Uzynbulak	9.22	25	eP	Pn	08 06 48.2	+0.5
	baz=25						
CHKK	Chushkaly	9.30	15	eP	Pn	08 06 49.8	+1.2
CHKK	Chushkaly	9.30	15	eP	Pn	08 06 49.8	+1.2
	baz=15						
SHLS	Shalkode	9.39	27	eP	Pn	08 06 53.0	+3.1
SHLS				pmax	pmax		
	comp=Z,38nm,1.5s						
SHLS	Shalkode	9.39	27	eP	Pn	08 06 53.1	+3.1
	comp=Z,38nm,1.5s,baz=29						
KPKS	Kokpek	9.39	23	eP	Pn	08 06 51.0	+1.1
KPKS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KPKS	Kokpek	9.39	23	eP	Pn	08 06 51.1	+1.1
	comp=Z,8.8nm,0.5s,baz=23						
HRA	Herat	9.44	270		Pn	08 06 51.5	+0.8
PDGK	Podgornoye	9.55	26	P	Pn	08 06 54.3	+2.2
PDGK				S	Sn	08 08 39.6	+1.0
PDGK	Podgornoye	9.55	26	⇑P	Pn	08 06 54.4	+2.2
	comp=Z,129nm,0.8s						
PDGK				⇓S	Sn	08 08 38.0	-0.6
	comp=Z,364nm,1.1s						
BTLS	Baital	10.13	1	eP	Pn	08 06 59.4	-0.6
BTLS				pmax	pmax		
	comp=Z,12nm,0.9s						
BTLS	Baital	10.13	1	eP	Pn	08 06 59.5	-0.6
	comp=Z,12nm,0.9s,baz=1.6						
JHNI	Jhansi	10.30	155	eP	Pn	08 07 01.5	-0.8
PYUN	Piuthan	10.44	128	ePn	Pn	08 07 03.6	-0.9
PYUN				eSn	Sn	08 08 57.7	-3.0
	comp=Z,848nm,0.6s						
PYUN	Piuthan	10.44	128	ePn	Pn	08 07 03.5	-0.9
PYUN				eSn	Sn	08 08 56.6	-4.1
	comp=Z,2μm,0.6s						
DANN	Dangsing	10.79	124	ePn	Pn	08 07 07.9	-1.4
DANN				eSn	Sn	08 09 05.1	-4.2
	comp=Z,450nm,0.5s						
DANN	Dangsing	10.79	124	ePn	Pn	08 07 08.1	-1.2
DANN				eSn	Sn	08 09 04.7	-4.6
	comp=Z,1μm,0.6s						
KOLN	Koldanda	11.06	127	ePn	Pn	08 07 11.5	-1.4
KOLN				eSn	Sn	08 09 11.4	-4.5
	comp=Z,244nm,0.7s						
KOLN	Koldanda	11.06	127	ePn	Pn	08 07 12.0	-0.9
KOLN				eSn	Sn	08 09 11.8	-4.1
VLK	Valmikinagar	11.54	128	eP	Pn	08 07 20.2	+0.9
GKN	Gorkha	11.60	123	ePn	Pn	08 07 19.2	-1.1
GKN				eSn	Sn	08 09 24.1	-5.0
	comp=Z,380nm,0.4s						
GKN	Gorkha	11.60	123	ePn	Pn	08 07 19.3	-1.1
GKN				eSn	Sn	08 09 24.1	-5.0
	comp=Z,2μm,0.6s						
ALBI	Allahabad	11.86	141	eP	Pn	08 07 22.2	-1.6
BHPL	Bhopal	12.07	163	eP	Pn	08 07 24.6	-1.9
BHPL				eS	Sn	08 09 34.4	-5.9
BHUJ	Bhuj	12.12	198	ex	Pn	08 07 26.1	-1.2
BHUJ				eS	Sn	08 09 33.2	-8.4
DMN	Daman	12.17	124	ePn	Pn	08 07 26.7	-1.5
DMN				eSn	Sn	08 09 38.6	-4.6
	comp=Z,982nm,0.7s						
DMN	Daman	12.17	124	ePn	Pn	08 07 27.0	-1.2
DMN				eSn	Sn	08 09 38.0	-5.2
	comp=Z,960nm,0.7s						
KKN	Kakani	12.18	122	ePn	Pn	08 07 26.6	-1.7
KKN				eSn	Sn	08 09 38.2	-5.1
	comp=Z,253nm,0.8s						
KKN	Kakani	12.18	122	ePn	Pn	08 07 26.4	-1.9
KKN				eSn	Sn	08 09 36.8	-6.5
PKIN	Phulchoki	12.39	123	ePn	Pn	08 07 29.6	-1.7
PKIN				eSn	Sn	08 09 43.3	-5.3
PKIN	Phulchoki	12.39	123	ePn	Pn	08 07 29.6	-1.7
PKIN				eSn	Sn	08 09 43.3	-5.3
	comp=Z,2μm,0.9s						
PKI	Pulchoki	12.41	123	ePn	Pn	08 07 29.5	-2.0
PKI				eSn	Sn	08 09 43.0	-6.0
PKI	Pulchoki	12.41	123	ePn	Pn	08 07 29.5	-2.0
GUN	Gumba	12.53	120	ePn	Pn	08 07 31.1	-2.1
GUN				eSn	Sn	08 09 46.6	-5.4
GUN	Gumba	12.53	120	ePn	Pn	08 07 31.6	-1.6
GUN				eSn	Sn	08 09 46.6	-5.4
	comp=Z,1μm,0.9s						
GEYT	Alibeck	12.90	288	Pn	Pn	08 07 35.6	-2.2
	comp=Z,3.8nm,0.3s,baz=116,slow=10,SNR=25						
GEYT				Sn	Sn	08 09 56.3	-4.2
	comp=Z,2.0nm,0.3s,baz=138,slow=18,SNR=2.1						
GEYT				LR	LR	08 13 04.7	
	comp=Z,932nm,18.7s,baz=134,slow=40						
	comp=Z,32nm,0.6s						
GEYT	Alibeck	12.90	288		Pn	08 07 35.8	-2.1
GYA0B	ALIBECK ARRAY	12.90	288		Pn	08 07 35.8	-2.1
JIRN	Jiri	12.90	121	ePn	Pn	08 07 35.9	-2.3
JIRN				eSn	Sn	08 09 54.7	-6.3
	comp=Z,115nm,0.3s						
JIRN	Jiri	12.90	121	ePn	Pn	08 07 36.7	-1.5
JIRN				eSn	Sn	08 09 54.8	-6.3
	comp=Z,1μm,0.8s						
JBP	Jabalpur	12.92	153	eP	Pn	08 07 34.5	-3.7
JBP				⇓ex	x	08 09 53.0	
OTUK	Ortayu	13.37	356	P	Pn	08 07 43.3	-0.9
OTUK	Ortayu	13.37	356	⇑P	Pn	08 07 43.4	-0.9
	comp=Z,167nm,1.4s						
MAKZ	Makanchi	13.44	25		Pn	08 07 45.4	+0.1
MAKZ	Makanchi	13.44	25	P	Pn	08 07 45.4	+0.1
MK31	Makanchi Array	13.54	26		Pn	08 07 47.0	+0.4
MK31	Makanchi Array	13.54	26	i P	Pn	08 07 47.9	+1.3
MK31	Makanchi Array	13.54	26	⇓P	Pn	08 07 47.5	+0.9
	comp=Z,19nm,0.7s,baz=205,slow=13,SNR=254						
MKAR	Makanchi Array	13.54	26	Pn	Pn	08 07 46.0	-0.6
	comp=Z,1.5nm,0.3s,baz=198,slow=14,SNR=82						
MKAR				Lg	Lg	08 11 48.0	
	comp=Z,0.5nm,0.3s,baz=296,slow=36,SNR=1.3						
	comp=Z,10.0nm,0.6s						
MKAR	Makanchi Array	13

baz=358
BOK Bokaro 15.34 133 *ex* **Pn 08 08 05.7 -5.3**
LSA Lhasa 15.65 104 Pn 08 08 12.6 -2.9
LSA Lhasa 15.65 104 P **Pn 08 08 12.8 -2.7**
LSA LR LR
comp=Z,430nm,7.5s
LSA LR LR
comp=Z,870nm,8.2s
LSA LR LR
comp=Z,1μm,8.9s
LSA Lhasa 15.65 104 P **Pn 08 08 12.6 -2.9**
LSA pmax pmax
comp=Z,73nm,0.9s
LSA Lhasa 15.65 104 P **Pn 08 08 13.1 -2.4**
LSA Lhasa 15.65 104 P **P 08 08 19.8 +0.4**
KURBB Kurchatov Arra 16.11 11 Pn **Pn 08 08 18.1 -2.6**
comp=Z,0.7nm,0.3s,baz=201,slow=12,SNR=42
KURBB Sn **S 08 11 28.3 -3.0**
baz=207,slow=20
KURBB Lg Lg 08 13 05.8
comp=Z,0.1nm,0.3s,baz=216,slow=34,SNR=1.6
KURBB LR LR 08 14 47.2
comp=Z,3μm,19.4s,baz=174,slow=38
comp=Z,14nm,0.7s
KURBB Kurchatov Arra 16.11 11 P **Pn 08 08 18.5 -2.2**
KURBB Kurchatov Arra 16.11 11 ⇑P **Pn 08 08 18.5 -2.2**
comp=Z,325nm,1.3s
KURK Kurchatov 16.21 11 Pn 08 08 20.1 -2.0
KURK IAmb IAmb 08 08 27.0
comp=Z,312nm,1.1s
KURK Kurchatov 16.21 11 P **Pn 08 08 20.1 -2.0**
KURK pmax pmax
comp=Z,312nm,1.2s
KURK Kurchatov 16.21 11 P **Pn 08 08 17.3 -4.7**
POO Poona 16.30 179 *eP* **P 08 08 26.3 +0.1**
JASK Jask - Hormozg 16.33 241 P **Pn 08 08 24.4 +0.7**
GOMU GeErMu 17.25 80 P **Pn 08 08 35.1 -0.6**
GOMU S **Sn 08 11 45.4 -1.5**
GOMU pmax pmax
comp=Z,25nm,0.9s
GOMU pmax pmax
comp=Z,350nm,6.6s
GOMU LR LR
comp=Z,5μm,15.2s
GOMU LR LR
comp=Z,1μm,14.6s
GOMU LR LR
comp=Z,1μm,16.2s
BANOM Banah 17.44 244 P **P 08 08 41.9 +3.1**
BANOM Banah 17.44 244 Pn **P 08 08 38.9 +0.1**
SHME Shamm 17.48 244 P **P 08 08 42.1 +2.9**
KAD Karad 17.52 178 *eP* **Pn 08 08 38.9 +0.1**
WSAR Wadi Sarin 17.52 232 P **Pn 08 08 38.0 -0.7**
comp=Z,11nm,0.7s,baz=75,slow=12,SNR=1.7
WSAR S Sn 08 11 40.4 -13
comp=Z,8.8nm,0.9s,baz=92,slow=10,SNR=1.4
WSAR LR LR 08 16 53.9
comp=Z,1μm,21.4s,baz=70,slow=42
WSAR Wadi Sarin 17.52 232 P **P 08 08 43.3 +3.5**
AB31 Akbulak array 17.56 329 P **Pn 08 08 36.5 -2.5**
AB31 Akbulak array 17.56 329 ⇓P **Pn 08 08 36.5 -2.5**
comp=Z,47nm,0.5s,baz=141,slow=12,SNR=701
ABKAR Akbulak array 17.56 329 Pn 08 08 37.2 -1.8
WBK Wadi Bani Khal 17.76 230 P **P 08 08 43.4 +1.1**
SNR=5.1
WBK P **P 08 08 43.4 +1.1**
SNR=5.1
GUWA GUWAHATI 17.76 114 *eP* **Pn 08 08 41.1 -0.5**
GUWA IAmb IAmb 08 08 47.9
comp=Z,124nm,1.1s
RAGD RAYAGADA 17.84 148 *eP* **Pn 08 08 41.2 -1.4**
MASF Masafi 17.86 243 P **P 08 08 45.6 +2.1**
DGZ Jazzator, Alta 17.91 30*c iP* **Pn 08 08 42.6 -0.9**
DGZ pmax pmax
comp=Z,578nm,1.4s
HYBB Hyderabad (bro 17.94 165 *eP* **P 08 08 44.9 +0.5**
HYBB *es*P **sP 08 08 57.7 +1.1**
HYBB *eS* S 08 12 27.3 +18
HYBB IVMs_BB IVMs_BB 08 16 14.7
comp=Z,5μm,7.4s
SMDO Samad 18.03 233 P **P 08 08 48.1 +2.7**
SMDO P **P 08 08 48.1 +2.7**
BWNR Bhubaneshwar 18.06 141 *eP* **Pn 08 08 44.7 -0.6**
UOSS Minazif 18.08 241 P **P 08 08 50.0 +4.1**
UOSS Minazif 18.08 241 Pn **Pn 08 08 44.4 -1.2**
HOQ Hoqain 18.17 236 P **P 08 08 50.0 +3.1**
HOQ P **P 08 08 50.0 +3.1**
HATD Hatta, Dubai 18.21 241 P **P 08 08 52.1 +4.9**
HATD P **P 08 08 52.1 +4.9**
HATD Hatta, Dubai 18.21 241 Pn **P 08 08 49.4 +2.1**
SHL Shillong 18.25 116 *ex* **Pn 08 08 45.2 -2.6**
SHL IAmb IAmb 08 08 57.0
comp=Z,63nm,0.9s
BVA0 Borovoye Array 18.27 354 *i* P **Pn 08 08 45.9 -1.8**
BVA0 Borovoye Array 18.27 354 ⇑P **Pn 08 08 45.9 -1.8**
comp=Z,197nm,1.4s,baz=163,slow=12,SNR=73
BVAR Borovoye Array 18.27 354 P **Pn 08 08 45.9 -1.9**
comp=Z,6.1nm,0.3s,baz=156,slow=9.8,SNR=52
BVAR S **S 08 12 13.9 -1.3**
comp=Z,21nm,1.0s,baz=164,slow=22,SNR=3.6
BVAR Lg Lg 08 14 16.1
baz=207,slow=16
BVAR LR LR 08 16 03.3
comp=Z,2μm,21.7s,baz=171,slow=38
comp=Z,40nm,0.7s
BRVK Borovoye 18.32 353 P **P 08 08 46.9 -1.3**
BRVK IAmb IAmb 08 08 50.4
comp=Z,454nm,1.6s
BRVK Borovoye 18.32 353*ce*P **P 08 08 47.0 -1.1**
BRVK pmax pmax
comp=Z,239nm,1.3s
BRVK Borovoye 18.32 353 P **P 08 08 47.1 -1.1**
BRVK P **P 08 08 47.1 -1.1**
SOHO SOHO 18.35 239 P **Pn 08 08 52.4 +3.5**
SOHO P **Pn 08 08 52.4 +3.5**
SOHO SOHO 18.35 239 P **Pn 08 08 49.9 +1.0**
NAZ Nazwa, Dubai 18.45 242 P **Pn 08 08 53.6 +3.5**
JMDO Jabal Madar 18.48 232 P **Pn 08 08 54.0 +3.5**
SNR=7.9
JMDO P **Pn 08 08 54.0 +3.5**
SNR=7.9
FAQ Al Faqa, Dubai 18.64 242 P **Pn 08 08 54.4 +1.9**
FAQ Al Faqa, Dubai 18.64 242 P **Pn 08 08 53.0 +0.5**
ZIRO ZIRO 18.73 108 *eP* **Pn 08 08 55.0 +1.2**
ZIRO IAmb IAmb 08 09 01.0
BSY Bisya 18.81 234 P **Pn 08 08 58.1 +3.6**
SNR=6.3
BSY P **Pn 08 08 58.1 +3.6**
SNR=6.3
ITAN ITANAGAR 18.82 109 *eP* **Pn 08 08 57.0 +2.5**
ARQ Araqi 18.87 237 P **Pn 08 08 59.3 +4.0**
SNR=15
ARQ P **Pn 08 08 59.3 +4.0**
SNR=15
ASUD Al Ashush, Dub 18.91 242 Pn **Pn 08 08 57.2 +1.6**
ALNE Al Ain 18.95 240 P **Pn 08 08 59.7 +3.5**
AJN Ajban 19.20 243 P **Pn 08 09 00.4 +1.3**
AKTO Aktyubinsk 19.27 328 P **P 08 08 59.0 +0.3**
comp=Z,97nm,0.5s,baz=131,slow=11,SNR=160
AKTO S **Sn 08 12 24.4 -11**
comp=Z,20nm,0.8s,baz=118,slow=15,SNR=2.5
AKTO Lg Lg 08 14 43.2
comp=Z,0.4nm,0.3s,baz=184,slow=19,SNR=1.4
AKTO Aktyubinsk 19.27 328 ⇑P **P 08 08 58.7 0.0**
comp=Z,109nm,0.6s
GOA Goa 19.32 180 *eP* **Pn 08 09 03.0 +2.3**
GOA IAmb IAmb 08 09 12.8
comp=Z,32nm,0.7s
MHTO MHTO 19.58 229 P **Pn 08 09 04.9 +1.2**
MHTO P **Pn 08 09 04.9 +1.2**
MOKO MOKOCHONG 19.84 110 *eP* **Pn 08 09 06.8 -0.2**
MOKO IAmb IAmb 08 09 08.9
comp=Z,271nm,1.2s
BRDH Bariadhala 19.87 123 P **P 08 09 05.7 +0.3**
comp=Z,11nm,0.3s,baz=285,slow=19,SNR=5.0
BRDH S S 08 12 36.1 -12
comp=Z,60nm,0.4s,baz=317,slow=19,SNR=1.7
BRDH LR LR 08 18 52.6
comp=Z,1μm,19.0s,baz=294,slow=43
comp=Z,40nm,0.3s
IMP Imphal 20.20 114 *eP* Pn 08 09 12.2 +1.0
IMP IAmb IAmb 08 09 16.8
comp=Z,53nm,0.8s
UMZA Um Al Zommool 20.23 238 P Pn 08 09 10.7 -0.6
LKRN Lenkeran, Azer 20.28 288 P Pn 08 09 13.3 +1.4

MZWR Madinat Zayed 20.48 242 P Pn 08 09 13.8 -0.5
JRN Qarnain Island 20.57 247 P Pn 08 09 17.1 +1.8
ZAA0 Zalesovo Array 20.59 19 P **P 08 09 12.2 -0.9**
ZAA0 IAmb IAmb 08 09 14.3
comp=Z,152nm,0.9s
ZAA0 Zalesovo Array 20.59 19 ⇑P **P 08 09 12.8 -0.3**
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 20.59 19 P **P 08 09 12.7 -0.4**
comp=Z,110nm,0.6s,baz=212,slow=11,SNR=402
ZALV S **S 08 12 57.5 -4.3**
comp=Z,8.6nm,0.7s,baz=195,slow=11,SNR=1.8
comp=Z,110nm,0.6s
ZALV Zalesovo Beam 20.59 19 P **P 08 09 12.2 -0.9**
ZALV Zalesovo Beam 20.59 19 *i* **P 08 09 12.6 -0.5**
ZALV pmax pmax
comp=Z,111nm,0.6s
DQM DQM 20.64 228 P Pn 08 09 15.8 -0.3
DQM P Pn 08 09 15.8 -0.3
GHWR Ruwais 21.10 244 P **P 08 09 20.3 +1.6**
MZR Muzera 21.24 241 P **P 08 09 21.7 +1.4**
GTA Gaotai 21.28 70 ⇑P **P 08 09 22.3 +1.5**
GTA S **S 08 13 14.6 -1.4**
GTA pmax pmax
comp=Z,170nm,1.1s
GTA pmax pmax
comp=Z,780nm,8.0s
GTA LR LR
comp=Z,2μm,13.8s
GTA LR LR
comp=Z,1μm,13.8s
GTA LR LR
comp=Z,1μm,12.7s
SHMA Al-Shehemyia 21.53 251 P **P 08 09 22.9 -0.5**
SEKA Sheki 21.74 295 P **P 08 09 27.5 +1.9**
MNGR Mingechevir, A 21.76 294 P **P 08 09 28.7 +2.9**
MAK Makhachkala 21.83 299 *eP* **P 08 09 27.5 +1.0**
MAK *eS* **S 08 13 28.5 +2.1**
MAK pmax pmax
comp=Z,137nm,1.2s
MAK MLR MLR
comp=Z,2μm,10.0s
SLWR Sila 21.93 246 P **P 08 09 28.1 +0.5**
ZKTA Zakatala 22.23 296 P **P 08 09 33.8 +3.0**
GANJ Ganja 22.33 293 P **P 08 09 34.9 +3.0**
MDRS Chennai 22.53 163 *eP* **P 08 09 37.5 +3.3**
NAX Nakhchivan 22.86 289 P **P 08 09 40.8 +3.2**
GROC Groznyy 23.11 299 *eP* **P 08 09 40.9 +0.9**
GROC *e* 08 10 06.3
GROC *e* 08 13 30.1
GROC *e*S **S 08 13 49.9 +0.4**
GROC pmax pmax
comp=Z,318nm,1.0s
SHAO Shalim 23.25 228 P **P 08 09 42.6 +1.0**
GNI Garni 23.49 291 P **P 08 09 45.1 +1.1**
comp=Z,66nm,0.7s,baz=9.9,slow=1.2,SNR=18
GNI S **S 08 13 57.7 +1.6**
comp=Z,3.3nm,0.3s,baz=75,slow=22,SNR=1.2
comp=Z,66nm,0.7s
GNI Garni 23.49 291 P **P 08 09 44.4 +0.4**
GNI Garni 23.49 291*ce*P **P 08 09 46.5 +2.4**
GNI pmax pmax
comp=Z,271nm,1.7s
GNI Garni 23.49 291 P **P 08 09 46.4 +2.4**
GNI Garni 23.49 291 P **P 08 09 45.3 +1.3**
DOK Doka 23.75 232 P **P 08 09 47.5 +0.9**
DOK P **P 08 09 47.5 +0.9**
ARU Arti 23.88 339 P **P 08 09 48.0 +0.6**
comp=Z,57nm,0.5s,baz=152,slow=5.6,SNR=80
ARU S **S 08 14 02.1 +0.4**
comp=Z,3.1nm,0.3s,baz=109,slow=23,SNR=1.3
ARU LR LR 08 20 21.6
comp=Z,672nm,21.9s,baz=143,slow=40
comp=Z,57nm,0.5s
ARU Arti 23.88 339 P **P 08 09 46.8 -0.6**
ARU IAmb IAmb 08 09 49.4
comp=Z,112nm,1.0s
ARU Arti 23.88 339*c iP* **P 08 09 47.8 +0.4**
ARU PPP PPP 08 10 25.3
ARU S **S 08 14 05.2 +3.5**
ARU SS **SnSn 08 14 47.7 +5.7**
ARU pmax pmax
comp=Z,203nm,1.5s
ARU MLR MLR
comp=Z,2μm,11.0s
DMTO DMTO 23.90 229 P **P 08 09 49.1 +1.2**
PCHI Peechi 24.38 174 *eP* **P 08 09 54.1 +1.8**
PCHI *eS* **S 08 14 14.6 +4.3**
ZEI Tsey 24.40 298 *eP* **P 08 09 53.9 +1.2**
ZEI pmax pmax
comp=Z,21nm,0.8s
WHFO Wadi Hawf 24.50 231 P **P 08 09 54.5 +1.1**
WHFO P **P 08 09 54.5 +1.1**
RBK Rabkut 24.53 230 P **P 08 09 54.9 +1.1**
LZH Lanzhou 24.55 78 ⇑P **P 08 09 55.5 +1.5**
LZH pP sP 08 10 04.9 -2.1
LZH sP pP 08 10 09.6 +6.5
LZH S **S 08 14 13.5 +0.3**
LZH sS sS 08 14 25.5 -2.7
LZH SS **SnSn 08 15 01.6 +2.7**
LZH pmax pmax
comp=Z,100nm,1.5s
LZH pmax pmax
comp=Z,1μm,4.4s
LZH LR LR
comp=Z,3μm,16.8s
LZH LR LR
comp=Z,2μm,15.8s
LZH LR LR
comp=Z,2μm,16.8s
ONI Oni 24.70 297 P **P 08 09 55.5 +0.3**
ONI Oni 24.70 297 P **P 08 09 55.5 +0.3**
ONI pmax pmax
comp=Z,36nm,0.8s
KARS Kars 24.78 292 P **P 08 09 58.0 +2.0**
KARS Kars 24.78 292 P **P 08 09 58.0 +2.0**
KARS pmax pmax
comp=Z,259nm,1.0s
KOD Kodaikanal 24.79 171 *eP* **P 08 09 57.4 +0.9**
ABTO Aybut 25.22 231 P **P 08 10 01.3 +1.3**
KBZ Khabaz 25.28 300 P **P 08 10 00.2 -0.1**
comp=Z,7.7nm,0.7s,baz=123,slow=6.2,SNR=9.1
KBZ S S 08 14 41.4 +17
comp=Z,1.6nm,0.4s,baz=24,slow=19,SNR=1.2
comp=Z,7.7nm,0.7s
KBZ Khabaz 25.28 300*ce*P **P 08 09 59.7 -0.6**
KBZ pmax pmax
comp=Z,12nm,0.9s
NEY Neytrino 25.33 299 *i* P **P 08 10 02.1 +1.1**
GOF Gofitskoye 25.44 303⇑*eP* **P 08 10 04.7 +2.9**
SHA1 Shidzhatmaz 25.45 300 *i* P **P 08 10 03.1 +0.9**
KVAR Kislovodsk Arr 25.46 300 P **P 08 10 02.4 +0.3**
comp=Z,2.3nm,0.4s,baz=90,slow=20,SNR=2.2
KVAR LR LR 08 21 49.0
comp=Z,569nm,18.4s,baz=221,slow=41
comp=Z,2.3nm,0.4s
KIV Kislovodsk 25.47 300 P **P 08 10 01.6 -0.6**
KIV Kislovodsk 25.47 300 *eP* **P 08 10 03.3 +1.1**
KIV *eS* **S 08 14 30.1 +2.4**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,843nm,15.0s
PZH PanZhiHua 25.48 101 P **P 08 10 03.6 +1.2**
PZH pP **sP 08 10 16.5 +1.2**
PZH S **S 08 14 25.7 -2.5**
PZH pmax pmax
comp=Z,90nm,1.3s
PZH pmax pmax
comp=Z,400nm,3.5s
PZH LR LR
comp=Z,1μm,13.0s
PZH LR LR
comp=Z,1μm,12.0s
PZH LR LR
comp=Z,1μm,14.5s
BELG Belogornoye 25.50 321 P **P 08 10 01.9 -0.3**
comp=Z,249nm,0.9s,baz=171,slow=0.7,SNR=52
BELG S **S 08 14 33.4 +5.7**
comp=Z,12nm,0.8s,baz=219,slow=21,SNR=1.1
comp=Z,249nm,0.9s
BELG Belogornoye 25.50 321 *i* **P 08 10 02.1 -0.1**
BELG pmax pmax
comp=Z,30nm,0.9s
CD2 Chengdu 25.52 90 P **P 08 10 03.8 +1.1**
CD2 pP sP 08 10 13.7 -1.9

CD2 sP pP 08 10 20.2 +8.5
CD2 S **S 08 14 28.3 -0.3**
CD2 LR LR
comp=Z,4μm,4.4s
GURO Guroymak-BITLI 25.56 288 P **P 08 10 03.6 +0.5**
MOY Mondy 25.79 41 *eP* **P 08 10 07.0 +2.0**
MOY *e* 08 15 55.3
MOY pmax pmax
comp=Z,260nm,1.9s
ZAK Zakamensk 26.48 45 *eP* **P 08 10 12.4 +1.1**
ZAK pmax pmax
comp=Z,82nm,1.6s
MARD Mardin 26.62 285 P **P 08 10 12.1 -0.6**
KMI Kunming 26.90 103 ⇑P **P 08 10 15.6 +0.2**
KMI pP pP 08 10 24.3 -0.2
KMI sP sP 08 10 28.7 +0.4
KMI S **S 08 14 43.4 -7.5**
KMI sS sS 08 15 08.1 +2.2
KMI pmax pmax
comp=Z,13nm,1.1s
KMI pmax pmax
comp=Z,290nm,4.8s
KMI LR LR
comp=Z,1μm,8.9s
KMI LR LR
comp=Z,840nm,10.5s
KMI LR LR
comp=Z,1μm,11.2s
RAYN Ar Rayn 26.99 253 P **P 08 10 15.3 -0.7**
RAYN Ar Rayn 26.99 253 P **P 08 10 15.3 -0.7**
RAYN pmax pmax
comp=Z,20nm,1.0s
RAYN Ar Rayn 26.99 253 P **P 08 10 16.1 +0.1**
RAYN Ar Rayn 26.99 253 P **P 08 10 15.7 -0.3**
SONM Songino Array 27.52 52 P **P 08 10 21.4 +0.6**
comp=Z,32nm,0.9s,baz=252,slow=9.6,SNR=94
SONM PcP **PcP 08 13 37.5 -0.8**
comp=Z,9.7nm,1.3s,baz=251,slow=4.4,SNR=1.9
SONM LR LR 08 21 57.2
comp=Z,535nm,20.7s,baz=250,slow=38
comp=Z,32nm,0.9s
SONM Songino Array 27.52 52 P **P 08 10 21.6 +0.9**
SONM IAmb IAmb 08 10 23.8
comp=Z,58nm,1.1s
SONM Songino Array 27.52 52 P **P 08 10 21.6 +0.9**
SONM pmax pmax
comp=Z,58nm,1.1s
CHTO Chiang Mai 27.54 119 P **P 08 10 20.9 -0.1**
CHTO Chiang Mai 27.54 119 P **P 08 10 20.9 -0.1**
CHTO Chiang Mai 27.54 119 P **P 08 10 17.3 -3.7**
CHTO P **P 08 10 17.3 -3.7**
SOC Sochi 27.54 299 *eP* **P 08 10 18.9 -1.9**
SOC *e* 08 11 04.2
SOC *eS* **S 08 14 59.4 -0.8**
SOC *e*SSS SSS 08 16 28.6
SOC pmax pmax
comp=Z,15nm,0.7s
SOC MLR MLR
comp=Z,532nm,16.0s
DGPR DIGLIPUR 27.77 136 *eP* **P 08 10 24.9 +2.0**
DGPR IAmb IAmb 08 10 29.9
comp=Z,47nm,0.6s
CM31 Chiang Mai Arr 27.77 120 P **P 08 10 23.9 +0.9**
CM31 IAmb IAmb 08 10 35.2
comp=Z,105nm,1.1s
CMAR Chiang Mai Arr 27.77 120 P **P 08 10 23.5 +0.5**
comp=Z,15nm,0.9s,baz=299,slow=8.8,SNR=33
comp=Z,15nm,0.9s
CMAR Chiang Mai Arr 27.77 120 P **P 08 10 23.0 -0.1**
CMAR Chiang Mai Arr 27.77 120*ce*P **P 08 10 23.8 +0.8**
CMAR pmax pmax
comp=Z,6.0nm,0.4s
IRK Irkutsk 27.84 42 *eP* **P 08 10 24.7 +1.3**
IRK *e* 08 16 46.8
IRK pmax pmax
comp=Z,114nm,2.1s
ULN Ulaanbaatar 27.96 52 P **P 08 10 25.1 +0.4**
ULN IAmb IAmb 08 10 27.4
comp=Z,49nm,1.1s
ULN Ulaanbaatar 27.96 52 P **P 08 10 25.1 +0.4**
ULN pmax pmax
comp=Z,49nm,1.2s
ULN MLR MLR
comp=Z,500nm,19.0s
ULN Ulaanbaatar 27.96 52 P **P 08 10 17.7 -7.0**
ULN P **P 08 10 17.7 -7.0**
VRH Novokhopyorsk 28.18 315 *eP* **P 08 10 26.1 -0.3**
VRH pmax pmax
comp=Z,30nm,0.6s
VRH MLR MLR
comp=Z,2μm,12.0s
PALK Pallekele 28.24 165 P **P 08 10 26.7 -0.6**
comp=Z,5.6nm,0.8s,baz=267,slow=15,SNR=1.5
PALK LR LR 08 21 11.5
comp=Z,1μm,18.1s,baz=98,slow=35
comp=Z,5.6nm,0.8s
PALK Pallekele 28.24 165 IAMs_20 IAMs_20 08 21 48.3
comp=Z,3μm,19.0s
KIRV Kirov 28.64 333 P **P 08 10 31.4 +1.1**
comp=Z,62nm,0.6s,baz=129,slow=3.9,SNR=31
KIRV S **S 08 15 17.9 +0.8**
comp=Z,6.0nm,0.5s,baz=228,slow=22,SNR=1.2
KIRV LR LR 08 21 43.3
comp=Z,605nm,19.9s,baz=137,slow=36
comp=Z,62nm,0.6s
XAN Xi'an 28.98 81 ⇑P **P 08 10 34.5 +0.8**
XAN pP sP 08 10 45.1 -1.6
XAN S **S 08 15 23.4 +0.3**
XAN pmax pmax
comp=Z,80nm,1.3s
XAN pmax pmax
comp=Z,300nm,3.8s
XAN LR LR
comp=Z,630nm,12.4s
XAN LR LR
comp=Z,1μm,14.1s
XAN LR LR
comp=Z,1μm,10.0s
BTO Baotou 29.15 68 *eP* **P 08 10 35.9 +0.6**
BTO S **S 08 15 27.5 +1.7**
BTO LR LR
comp=Z,4μm,8.4s
BTO LR LR
comp=Z,3μm,11.6s
ANN Anapa 29.32 301 *eP* **P 08 10 36.4 -0.1**
ANN *e**PP **pP 08 10 43.8 -1.9**
ANN *eS* **S 08 15 28.7 +0.6**
ANN pmax pmax
comp=Z,19nm,0.7s
ANN MLR MLR
comp=Z,2μm,14.0s
ANN MLR MLR
comp=N,446nm,13.0s
ANN MLR MLR
comp=E,1μm,15.0s
GYA Guiyang 29.49 97⇑*iP* **P 08 10 38.6 +0.2**
GYA pP pP 08 10 47.5 0.0
GYA PP **PnPn 08 11 35.9 +2.9**
GYA S **S 08 15 29.8 -1.6**
GYA pmax pmax
comp=E,18nm,1.0s
GYA pmax pmax
comp=E,260nm,4.9s
GYA LR LR
comp=E,600nm,10.7s
GYA LR LR
comp=E,930nm,10.3s
GYA LR LR
comp=E,1μm,11.4s
VSR Storozhevoye 29.68 314 *eP* **P 08 10 38.0 -1.7**
VSR pmax pmax
comp=Z,50nm,1.6s
VSR MLR MLR
comp=Z,850nm,9.0s
VORR Voronezh 29.82 315 *eP* **P 08 10 41.6 +0.7**
VORR pmax pmax
comp=Z,52nm,2.0s
LPSR Galich'ya Gora 30.32 316 *eP* **P 08 10 44.4 -0.9**
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR MLR MLR
comp=Z,1μm,15.0s
HHC Hu-ho-hao-te 30.32 67 *eP* **P 08 10 47.1 +1.5**
HHC S **S 08 15 44.6 +0.4**
HHC pmax pmax
comp=Z,32nm,0.7s

HHC pmax pmax
comp=Z,490nm,5.0s
HHC LR LR
comp=Z,2μm,11.4s
HHC LR LR
comp=Z,2μm,12.7s
HHC LR LR
comp=Z,2μm,12.1s
ENH Enshi 30.42 89 P **P 08 10 47.3 +0.8**
ENH IAmb IAmb 08 10 55.2
comp=Z,61nm,0.8s
TIY Taiyuan 31.21 73 ⇓P **P 08 10 55.5 +2.0**
TIY S **S 08 15 53.8 -4.3**
TIY pmax pmax
comp=Z,130nm,7.5s
TIY LR LR
comp=Z,360nm,11.3s
TIY LR LR
comp=Z,800nm,10.8s
TIY LR LR
comp=Z,670nm,10.6s
MMAI Mount Meron Ar 31.68 278 P **P 08 10 57.4 -0.2**
comp=Z,1.1nm,0.5s,baz=68,slow=12,SNR=3.0
MMAI LR LR 08 25 48.2
comp=Z,547nm,19.3s,baz=302,slow=40
LYN LuoYang 31.75 79⇑*i*P **P 08 10 59.4 +1.3**
LYN pmax pmax
comp=Z,40nm,1.3s
LYN pmax pmax
comp=Z,340nm,4.9s
LYN LR LR
comp=Z,890nm,10.3s
LYN LR LR
comp=Z,730nm,11.5s
LYN LR LR
comp=Z,760nm,14.1s
ILGA Ilgaz 31.89 293 P **P 08 10 59.1 -0.4**
ILGA IAmb IAmb 08 11 05.0
comp=Z,63nm,1.1s
BR131 Keskin Array S 32.02 291 P **P 08 11 00.6 0.0**
BR131 Keskin Array S 32.02 291 P **P 08 11 00.6 0.0**
BR131 pmax pmax
comp=Z,17nm,0.9s
BR131 Keskin Array S 32.02 291 P **P 08 11 01.1 +0.4**
SNR=10.0
BRTR Keskin Array B 32.02 291 P **P 08 11 01.4 +0.7**
comp=Z,7.2nm,0.7s,baz=103,slow=8.6,SNR=33
BRTR PcP **PcP 08 13 49.6 -0.4**
comp=Z,2.3nm,0.6s,baz=120,slow=4.7,SNR=2.5
comp=Z,7.2nm,0.7s
BRTR Keskin Array B 32.02 291 P **P 08 11 00.3 -0.3**
BRTR Keskin Array B 32.02 291*ce*P **P 08 11 01.5 +0.9**
BRTR pmax pmax
comp=Z,8.0nm,0.7s
PRGR Permogore 32.13 335 *e*P **P 08 10 59.7 -1.5**
PRGR *e* 08 13 48.0
PRGR pmax pmax
comp=Z,110nm,0.9s
MOS Moscow 32.27 321 *e*P **P 08 11 01.8 -0.6**
MOS *e*S **S 08 16 15.2 +1.1**
MOS pmax pmax
comp=Z,124nm,1.1s
MOS MLR MLR
comp=Z,2μm,15.0s
MOS MLR MLR
comp=E,1μm,14.0s
OBN Obninsk 32.57 320 ⇑P **P 08 11 05.5 +0.5**
OBN Obninsk 32.57 320 LR LR 08 27 05.4
comp=E,111nm,18.1s,baz=122,slow=42
OBN Obninsk 32.57 320 P **P 08 11 04.9 -0.1**
OBN Obninsk 32.57 320*d i*P **P 08 11 05.7 +0.7**
OBN *e* 08 12 18.0
OBN *e*S **S 08 16 19.6 +0.9**
OBN pmax pmax
comp=Z,101nm,0.6s
OBN MLR MLR
comp=Z,752nm,16.0s
EIL Elat 33.01 272 P **P 08 11 08.9 -0.4**
comp=Z,14nm,1.2s,baz=24,slow=10,SNR=2.7
EIL LR LR 08 24 59.8
comp=Z,276nm,20.9s,baz=112,slow=37
comp=Z,14nm,1.2s
HNS HongShan 33.04 73 ⇑P **P 08 11 11.6 +2.2**
HNS S **S 08 16 25.6 -0.9**
HNS pmax pmax
comp=Z,25nm,1.0s
HNS pmax pmax
comp=Z,310nm,5.3s
HNS LR LR
comp=Z,1μm,17.1s
HNS LR LR
comp=Z,800nm,12.8s
CIT Chita 33.11 46 *e*P **P 08 11 11.2 +1.2**
CIT *e* 08 11 15.5
CIT pmax pmax
comp=Z,134nm,1.6s
XLT XiLinHaoTe 33.66 62 *e*P **P 08 11 17.2 +2.3**
XLT pP sP 08 11 30.0 +2.1
XLT S **S 08 16 38.3 +2.1**
XLT sS sS 08 16 55.2 +3.9
XLT ScP **ScP 08 17 36.4 -0.8**
XLT pmax pmax
comp=Z,48nm,1.2s
XLT pmax pmax
comp=Z,250nm,3.9s
XLT LR LR
comp=Z,2μm,16.8s
XLT LR LR
comp=Z,1μm,14.3s
XLT LR LR
comp=Z,2μm,15.6s
BJT Baijiatuau 33.87 69 P **P 08 11 18.0 +1.4**
BJT IAmb IAmb 08 11 20.0
comp=Z,30nm,0.9s
BJT Baijiatuau 33.87 69 P **P 08 11 18.0 +1.4**
BJT pmax pmax
comp=Z,30nm,0.9s
BJT MLR MLR
comp=Z,600nm,20.0s
BJI Beijing 33.88 68 P **P 08 11 18.7 +2.0**
BJI S **S 08 16 44.9 +5.5**
BJI pmax pmax
comp=Z,33nm,0.9s
BJI LR LR
comp=Z,250nm,10.6s
BJI LR LR
comp=Z,670nm,11.9s
BJI LR LR
comp=Z,940nm,12.2s
KLMR Klimovskoe 33.94 331 *e*P **P 08 11 15.4 -1.6**
KLMR *e* 08 12 26.5
KLMR pmax pmax
comp=Z,142nm,1.5s
KLMR MLR MLR
comp=Z,938nm,12.0s
KLMR Klimovskoe 33.94 331 *e*P **P 08 11 15.4 -1.6**
KLMR AMP 08 11 18.4
comp=Z,142nm,1.5s
KLMR *e*PP **PnPn 08 12 26.6 -3.6**
KLMR LQ LQ 08 22 50.2
KLMR LQ LQ 08 22 50.2
KLMR LR LR 08 24 59.1
KLMR AMP 08 25 26.4
comp=Z,938nm,12.1s
WHN Wuhan 34.33 86 ⇑P **P 08 11 22.4 +1.7**
WHN S **S 08 16 47.3 +0.8**
WHN pmax pmax
comp=Z,230nm,1.1s
WHN LR LR
comp=Z,4μm,16.4s
WHN LR LR
comp=Z,2μm,10.5s
WHN LR LR
comp=Z,2μm,14.2s
UBPT Khong Chiam 34.57 116 P **P 08 11 23.2 +0.3**
TIA Tai'an 35.15 75 ⇑P **P 08 11 29.3 +1.5**
TIA pmax pmax
comp=Z,26nm,1.5s
TIA LR LR
comp=Z,420nm,14.3s
TIA LR LR
comp=Z,540nm,13.7s
TIA LR LR
comp=Z,860nm,14.1s
BOD Bodaibo 35.27 37 *e*P **P 08 11 28.4 -0.1**
BOD pmax pmax
comp=Z,35nm,1.3s
ELL Elmali 35.31 286 P **P 08 11 29.5 +0.2**
ELL Elmali 35.31 286 P **P 08 11 29.5 +0.2**
ELL pmax pmax
comp=Z,164nm,0.7s
NRIK Noril'sk 35.35 8 P **P 08 11 29.9 +0.9**
comp=Z,67nm,1.0s,baz=201,slow=6.7,SNR=46
comp=Z,67nm,1.0s
NRIK Noril'sk 35.35 8 P **P 08 11 29.2 +0.2**
NRIK Noril'sk 35.35 8*ce*P **P 08 11 30.1 +1.1**
NRIK pmax pmax
comp=Z,149nm,1.2s
MILM Milestii Mici 35.51 304 ⇑P **P 08 11 30.6 0.0**
MILM Milestii Mici 35.51 304*d i*P **P 08 11 33.5 +2.8**
MILM pmax pmax
comp=Z,80nm,1.1s
AKASG Malin Array Be 35.65 310 P **P 08 11 31.0 -0.8**
comp=Z,7.1nm,0.6s,baz=80,slow=7.2,SNR=36
AKASG PP **PP 08 12 54.3 +1.4**
comp=Z,11nm,0.8s,baz=84,slow=9.8,SNR=5.9
AKASG LR LR 08 29 19.6
comp=Z,323nm,19.1s,baz=88,slow=42
comp=Z,7.1nm,0.6s
AKASG Malin Array Be 35.65 310 P **P 08 11 30.5 -1.3**
AKASG Malin Array Be 35.65 310 P **P 08 11 30.5 -1.3**
AKASG pmax pmax
comp=Z,25nm,1.1s
AKBB Malin Array Si 35.65 310 P **P 08 11 31.0 -0.8**
AKBB IAmb IAmb 08 11 33.9
comp=Z,78nm,1.6s
AKBB Malin Array Si 35.65 310 P **P 08 11 31.0 -0.8**
AKBB pmax pmax
comp=Z,78nm,1.7s
AKAS Kas 35.65 285 P **P 08 11 32.9 +0.7**
QIZ Qiongzhong 35.67 107 P **P 08 11 34.0 +1.6**
QIZ S **S 08 17 06.6 -0.8**
QIZ LR LR
comp=Z,550nm,10.8s
QIZ LR LR
comp=Z,720nm,12.7s
QIZ LR LR
comp=Z,840nm,9.7s
TPGR Topolog 35.72 300 ⇑P **P 08 11 33.5 +0.9**
CFR Carcaliu 35.92 301 ⇑P **P 08 11 34.1 -0.2**
ATD Arta Tunnel 36.40 238 P **P 08 11 39.2 +0.4**
comp=Z,3.3nm,0.3s,baz=94,slow=13,SNR=9.8
ATD LR LR 08 28 20.2
comp=Z,375nm,21.8s,baz=55,slow=39
comp=Z,3.3nm,0.3s
ATD Arta Tunnel 36.40 238 P **P 08 11 39.7 +1.0**
VRI Vrincioaia 36.92 302 ⇑P **P 08 11 44.5 +1.7**
VRI Vrincioaia 36.92 302 P **P 08 11 44.5 +1.7**
PLOR Plostina 36.97 302 ⇑P **P 08 11 44.1 +0.8**
PLOR Plostina 36.97 302 P **P 08 11 44.0 +0.8**
ISR Istrita 37.05 301 ⇑P **P 08 11 46.2 +2.2**
RAZG Razgrad 37.13 298 ⇓P **P 08 11 45.9 +1.3**
MNK Minsk 37.17 316 *i* P **P 08 11 46.0 +1.3**
MNK *i* 08 13 11.0
MNK *i* PPP PPP 08 13 27.5
MNK *i* 08 14 05.5
MNK *i* S **S 08 17 32.0 +2.5**
MNK *i* SSS SSS 08 20 26.0
MNK *i* 08 21 58.6
MNK pmax pmax
comp=Z,41nm,0.8s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=N,26nm,0.9s
MNK MLR MLR
comp=N,2μm,22.0s
MNK MLR MLR
comp=E,374nm,20.0s
MNK MLR MLR
comp=Z,636nm,19.0s
MNK Minsk 37.17 316 *i* P **P 08 11 46.0 +1.3**
comp=E,7.0nm,0.9s
MNK *i* P **P 08 11 46.0 +1.3**
comp=N,26nm,0.9s
MNK *i* P **P 08 11 46.0 +1.3**
comp=Z,41nm,0.8s,baz=283
MNK *i* PP **PnPn 08 13 11.1 +1.0**
MNK *i* PPP PPP 08 13 27.5
MNK *i* S **S 08 17 32.0 +2.5**
MNK *i* SS **SS 08 20 09.0 -3.5**
MNK *i* SSS SSS 08 20 26.0
MNK *i* LQ LQ 08 24 18.3
MNK *i* LR LR 08 26 19.8
MNK *i* LRM MLR 08 28 04.9
comp=N,2μm,21.9s
MNK *i* LRM MLR 08 28 05.5
comp=E,374nm,20.0s
MNK *i* LRM MLR 08 28 32.6
comp=Z,636nm,19.3s
COVR Voineasa-Covas 37.28 302 ⇓P **P 08 11 46.7 +0.8**
BIZ Bicaz 37.37 304 ⇓P **P 08 11 47.0 +0.5**
MLR Muntele Rosu 37.47 301 ⇑P **P 08 11 48.8 +1.2**
MLR Muntele Rosu 37.47 301 P **P 08 11 47.6 0.0**
MLR IAmb IAmb 08 11 55.7
comp=Z,62nm,0.7s
MLR Muntele Rosu 37.47 301 P **P 08 11 47.6 0.0**
MLR pmax pmax
comp=Z,62nm,0.7s
PUL Pulkovo 37.47 325*ce*P **P 08 11 48.9 +1.7**
PUL pmax pmax
comp=Z,142nm,0.6s
NJ2 Nanjing 37.55 81⇑*i*P **P 08 11 49.7 +1.4**
NJ2 pmax pmax
comp=Z,25nm,0.7s
NJ2 LR LR
comp=Z,1μm,22.6s
NJ2 LR LR
comp=Z,510nm,21.2s
NJ2 LR LR
comp=Z,680nm,22.7s
ALN Alexandroupoli 37.69 294 P **P 08 11 49.7 +0.4**
ALN Alexandroupoli 37.69 294 P **P 08 11 49.2 -0.1**
ALN Alexandroupoli 37.69 294 P **P 08 11 49.7 +0.4**
ALN pmax pmax
comp=Z,26nm,1.1s
KARP Karpathos 37.73 285 P **P 08 11 49.7 -0.1**
KARP IAmb IAmb 08 11 57.3
comp=Z,117nm,0.9s
KARP Karpathos 37.73 285 P **P 08 11 51.5 +1.7**
DOPR Dopca 37.85 302 ⇓P **P 08 11 51.1 +0.4**
NACGM Naroch 37.88 317⇓*e*P **P 08 11 51.5 +0.8**
baz=102
BURAR Bucovina Array 37.99 305 ⇓P **P 08 11 52.0 +0.1**
BURAR Bucovina Array 37.99 305 P **P 08 11 52.0 +0.1**
BUR08 Bucovina Ar. S 38.00 305 P **P 08 11 51.3 -0.7**
RDO Rodhopi 38.04 294 P **P 08 11 51.5 -0.8**
VOIR 38.10 301 ⇓P **P 08 11 53.2 +0.3**
SMTH Samothraki Isl 38.13 293 P **P 08 11 54.2 +1.1**
IIGN Ignalina 38.29 317 *e*P **P 08 11 55.9 +1.7**
ISAL Salakas 38.39 318 *e*P **P 08 11 56.8 +1.8**
ARR Arges 38.40 301 ⇑P **P 08 11 56.1 +0.8**
APE Apeiranthos 38.70 288 ⇓P **P 08 11 59.2 +1.3**
APE Apeiranthos 38.70 288 P **P 08 11 59.2 +1.3**
VSU Vasula 38.79 322 *e*P **P 08 11 59.3 +0.9**
LVV L'vov 38.86 308 *e*P **P 08 11 58.0 -1.1**
LVV *e* 08 13 29.1
LVV *e*S **S 08 17 53.1 -2.3**
LVV pmax pmax
comp=Z,70nm,1.6s
LVV MLR MLR
comp=Z,600nm,15.0s
LVV MLR MLR
comp=N,300nm,13.0s
LOT Lotru 39.00 301 ⇑P **P 08 12 00.4 -0.1**
MPEP Malo Peshtene 39.15 298 *e*P **P 08 12 03.0 +1.4**
NVR Nevrokopi 39.27 295 P **P 08 12 01.6 -1.1**
PABE Paberze 39.58 317 P **P 08 12 04.5 -0.5**
PABE IAmb IAmb 08 12 09.6
comp=Z,48nm,0.7s
PABE Paberze 39.58 317 *e*P **P 08 12 05.9 +0.9**
VTS Vitosha 39.59 297 ⇑P **P 08 12 05.8 +0.4**
VTS Vitosha 39.59 297 P **P 08 12 04.7 -0.8**
VTS Vitosha 39.59 297 P **P 08 12 04.7 -0.8**
VTS pmax pmax
comp=Z,16nm,0.8s
VTS Vitosha 39.59 297 *e*P **P 08 12 07.1 +1.6**
IDI Anoyia 39.59 285 ⇓P **P 08 12 06.6 +1.1**
IDI Anoyia 39.59 285 LR LR 08 31 47.2
comp=Z,77nm,18.4s,baz=99,slow=41
IDI Anoyia 39.59 285 P **P 08 12 05.8 +0.3**
PAIG Paliouri 39.61 292 P **P 08 12 05.7 +0.2**
PSI Prapat 39.62 138 P **P 08 12 06.7 +0.7**
comp=Z,7.6nm,0.3s,baz=329,slow=6.1,SNR=4.6
comp=Z,7.6nm,0.3s
VSVD Vaisvydziai 39.69 318 *e*P **P 08 12 06.8 +1.0**
DRGR 39.69 303 ⇑P **P 08 12 07.2 +0.9**
DRGR 39.69 303 P **P 08 12 07.1 +0.9**
GZR Gura Zlata 39.70 301 ⇑P **P 08 12 06.3 0.0**
RPSI Rantau Prapat 39.71 138 P **P 08 12 06.7 +0.1**
SSE Sheshan 39.74 82 P **P 08 12 08.6 +2.0**
SSE S **S 08 18 07.5 -1.3**
SSE pmax pmax
comp=Z,23nm,1.0s
SSE pmax pmax
comp=Z,190nm,3.1s
SSE LR LR
comp=Z,230nm,13.1s
SSE LR LR
comp=Z,250nm,12.4s
LVZ Lovozero 39.75 338 P **P 08 12 05.9 -0.4**
LVZ IAmb IAmb 08 12 11.0
comp=Z,61nm,0.7s
LVZ IAMs_20 IAMs_20 08 27 57.8
comp=Z,2μm,18.0s
LVZ Lovozero 39.75 338*ce*P **P 08 12 07.6 +1.2**
LVZ pmax pmax
comp=Z,86nm,1.0s
KKB Krupnik 39.79 296 *e*P **P 08 12 07.1 +0.1**
TRPA Tarpa 39.80 305 ⇓P **P 08 12 08.4 +1.5**
TRPA Tarpa 39.80 305 P **P 08 12 08.1 +1.2**
PTL Penteli 39.80 290 P **P 08 12 07.4 +0.3**
BLKB Belogradchik 39.90 298 ⇑P **P 08 12 08.8 +0.9**
APA Apatity 39.95 337⇓*i*P **P 08 12 07.9 0.0**
APA pmax pmax
comp=Z,19nm,0.7s
UZH Uzhgorod 39.96 306⇑*i*P **P 08 12 07.0 -1.3**
UZH *e* 08 12 13.0
UZH *e*S **S 08 18 07.0 -4.8**
UZH *e* 08 21 35.0
KOLS Kolonicke sedl 39.98 307 *e*P **P 08 12 09.8 +1.3**
KOLS *e* 08 13 46.5
KNT Kendrikon 40.02 295 P **P 08 12 08.3 -0.6**
FINES FINESS Array B 40.02 327 P **P 08 12 08.6 0.0**
comp=Z,27nm,0.6s,baz=110,slow=9.1,SNR=119
FINES PP **PP 08 13 39.7 -1.0**
comp=Z,16nm,0.8s,baz=119,slow=12,SNR=3.2
FINES LR LR 08 31 13.1
comp=Z,230nm,19.9s,baz=106,slow=40
comp=Z,27nm,0.6s
FINES FINESS Array B 40.02 327 P **P 08 12 08.7 +0.1**
FINES FINESS Array B 40.02 327 P **P 08 12 08.7 +0.1**
GSI Gunungsitoli 40.16 141 P **P 08 12 10.8 +0.5**
GSI IAmb IAmb 08 12 22.4
comp=Z,48nm,0.9s
GSI Gunungsitoli 40.16 141 P P 08 12 22.7 +12
IMMV Iera Moni Meta 40.27 286 P **P 08 12 12.2 +1.1**
MTSE Matsula 40.33 322 *e*P **P 08 12 12.3 +1.1**
GRG Griva 40.42 294 P **P 08 12 11.3 -0.9**
MEF Metsahovi 40.43 324 *e*P **P 08 12 13.3 +1.3**
CN2 Changchun 40.44 61 *e*P **P 08 12 12.7 +0.4**
CN2 pP sP 08 12 23.7 -1.7
CN2 S **S 08 18 16.9 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,800nm,11.0s
CN2 LR LR
comp=Z,1μm,12.0s
SIRR Siria 40.44 303 ⇑P **P 08 12 13.6 +1.2**
LIT Litokhoron 40.49 293 P **P 08 12 12.4 -0.4**
LIT Litokhoron 40.49 293 P **P 08 12 11.9 -0.9**
LIT Litokhoron 40.49 293 P **P 08 12 12.4 -0.4**
LIT pmax pmax
comp=Z,21nm,1.1s
MDVR Moldovita 40.49 300 ⇓P **P 08 12 13.9 +1.1**
BZS Buzias 40.50 302 ⇓P **P 08 12 14.0 +1.2**
CRVS Cervenica-Dubn 40.52 307 *e*P **P 08 12 17.3 +4.4**
CRVS *e* 08 13 52.7
BOVS Bovan 40.60 298 ⇓P **P 08 12 14.2 +0.5**
TYRN Tyrnavos 40.75 292 P **P 08 12 14.3 -0.6**
VLI Veliai 40.80 288 P **P 08 12 13.9 -1.5**
KTHA Kythira Island 40.81 287 P **P 08 12 15.5 0.0**
KTHR Kythira 40.85 287 P **P 08 12 17.6 +1.7**
THL Klokotos Trika 40.94 292 P **P 08 12 15.4 -1.1**
KZN Kozani 40.99 293 P **P 08 12 16.5 -0.6**
SERG Sergoula 41.12 291 P **P 08 12 18.2 +0.1**
EVR Evrytania 41.22 291 P **P 08 12 18.9 0.0**
LAKA Lakka 41.22 290 P **P 08 12 17.3 -1.6**
KPRO Kipourio 41.36 293 P **P 08 12 20.1 0.0**
PVO Paravola 41.49 291 P **P 08 12 18.4 -2.6**
ZEA Zeya 41.57 46 *e*P **P 08 12 23.7 +2.2**
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.8s
ZEA MLR MLR
comp=N,500nm,15.0s
ZEA MLR MLR
comp=Z,600nm,13.0s
PSZ Piszkesteto 41.57 305 ⇓P **P 08 12 21.8 +0.1**
PSZ Piszkesteto 41.57 305 P **P 08 12 21.6 -0.1**
PSZ Piszkesteto 41.57 305 P **P 08 12 21.6 -0.1**
PSZ pmax pmax
comp=Z,15nm,0.9s
PSZ Piszkesteto 41.57 305 P **P 08 12 22.5 +0.8**
BNX BinXian 41.66 58 ⇑P **P 08 12 23.8 +1.5**
BNX pmax pmax
comp=Z,75nm,1.0s
DIVS Divibare 41.78 299 P **P 08 12 22.8 -0.7**
DIVS Divibare 41.78 299 *e*P **P 08 12 23.4 -0.1**
FRGS Fruska Gora 41.81 301 ⇑P **P 08 12 23.6 0.0**
FRGS Fruska Gora 41.81 301 *e*P **P 08 12 22.9 -0.7**
RAF Rauma 41.90 325 *e*P **P 08 12 23.4 -0.7**
LSK Leskovik 41.91 293 P **P 08 12 24.2 -0.3**
TEKS Tekeris 42.07 300 *e*P **P 08 12 24.5 -1.2**
LKD2 Lefkada island 42.12 291 P **P 08 12 25.8 -0.4**
BBLS Lazići 42.23 299 *e*P **P 08 12 23.5 -3.6**
VYHS Vyhne 42.26 306 *e*P **P 08 12 29.9 +2.7**
SSLB Suanglung 42.33 92 IAMs_20 IAMs_20 08 30 08.2
comp=Z,707nm,19.0s
INCN Inchon 42.35 70 P **P 08 12 29.3 +1.2**
INCN IAmb IAmb 08 12 30.5
comp=Z,79nm,1.1s
INCN Inchon 42.35 70 P **P 08 12 29.3 +1.2**
INCN pmax pmax
comp=Z,79nm,1.2s
MORH Mrgy, Hungar 42.53 303 ⇓P **P 08 12 30.1 +0.7**
MORH Mrgy, Hungar 42.53 303 P **P 08 12 29.5 +0.1**
PDG Podgorica 42.53 297 ⇑P **P 08 12 29.7 +0.2**
PDG Podgorica 42.53 297 P **P 08 12 28.7 -0.8**
DRME Dracevica, Mon 42.62 297⇓*i*P **P 08 12 29.5 -0.7**
UPM Unac-Piva 42.68 298 *e*P **P 08 12 30.1 -0.8**
NACB Ninganchiao 42.69 91 IAMs_20 IAMs_20 08 33 27.7
comp=Z,656nm,19.0s
YULB Yu-li 42.79 92 P **P 08 12 32.4 +0.6**
YULB IAMs_20 IAMs_20 08 30 22.3
comp=Z,794nm,21.0s
BKNI Bangkinang 42.84 137 P **P 08 12 32.0 -0.2**
TWG Pinlang 42.86 93 P **P 08 12 34.2 +1.9**
MAUC Maruska 42.89 307 *e*P **P 08 12 33.5 +1.1**
KOVH Kovagotottos 42.92 303 P **P 08 12 32.2 -0.3**
BRY Bratogost 42.99 298 *e*P **P 08 12 32.4 -1.0**
JAVC Velka Javorina 43.02 307 *e*P **P 08 12 35.2 +1.8**
MORC Moravsky Berou 43.07 308 ⇓P **P 08 12 34.6 +0.8**
MORC Moravsky Berou 43.07 308 P **P 08 12 33.2 -0.6**
MORC Moravsky Berou 43.07 308 P **P 08 12 33.2 -0.6**
MORC pmax pmax
comp=Z,13nm,0.7s
MORC Moravsky Berou 43.07 308 *e*P **P 08 12 34.5 +0.7**
HCY Herceg Novi 43.09 297 *e*P **P 08 12 33.5 -0.5**
TJN Taejon 43.18 72*ce*P **P 08 12 36.0 +1.2**
MPLH Magyarpolny 43.21 304 P **P 08 12 38.7 +3.8**
KS19 Wonju Array Si 43.30 70 P **P 08 12 36.8 +1.0**
MODS Modra-Piesok 43.30 306 *e*P **P 08 12 36.4 +0.7**
MODS *e* 08 14 23.0
MDJ Mudanjiang 43.31 60 P **P 08 12 37.1 +1.3**
MDJ IAmb IAmb 08 12 39.5
comp=Z,81nm,1.1s

MDJ IAMs_20 IAMs_20 08 32 07.6
comp=Z,990nm,22.0s
MDJ Mudanjiang 43.31 60 P **P** **08 12 37.6 +1.8**
MDJ pmax pmax
comp=Z,67nm,1.9s
MDJ pmax pmax
comp=Z,480nm,11.6s
KSAR Wonju Array Be 43.33 70 P **P** **08 12 36.3 +0.3**
KSAR Wonju Array Be 43.33 70 P **P** **08 12 36.3 +0.3**
KSRS Korea Array 43.35 70 P **P** **08 12 36.9 +0.7**
comp=Z,17nm,1.0s,baz=275,slow=7.2,SNR=68
KSRS PcP **PcP** **08 14 24.6 0.0**
comp=Z,5.4nm,0.9s,baz=276,slow=3.8,SNR=5.5
KSRS LR LR 08 33 24.1
comp=Z,293nm,18.7s,baz=290,slow=40
comp=Z,17nm,1.0s
ARA0 ARCESS Array S 43.45 338 *e*P **P** **08 12 37.6 +1.0**
ARA0 IAmb IAmb 08 12 38.8
comp=Z,90nm,0.8s
ARCES ARCESS Array B 43.45 338 P **P** **08 12 37.4 +0.7**
comp=Z,54nm,0.6s,baz=112,slow=8.5,SNR=217
ARCES LR LR 08 32 06.3
comp=Z,1μm,19.6s,baz=120,slow=38
comp=Z,54nm,0.6s
KRLC Kraliky 43.55 308 *e*P **P** **08 12 38.6 +0.9**
KRLC *e*S **SS** **08 22 15.9 -3.9**
KRLC MLR MLR
comp=Z,700nm,13.2s
KRLC Kraliky 43.55 308 *e*P **P** **08 12 38.6 +0.9**
KRLC *e*SS SS 08 22 15.9 -3.9
KRLC AMS AMS 08 34 20.0
comp=Z,700nm,13.2s
STON Ston 43.60 298 *e*P **P** **08 12 37.1 -1.0**
VRAC Vranov 43.70 307 ⇓P **P** **08 12 39.8 +0.9**
VRAC Vranov 43.70 307 *e*P **P** **08 12 39.6 +0.7**
BLY Banja Luka 43.70 301 *e*P **P** **08 12 37.0 -2.0**
DPC Dobruska-Polom 43.83 309 *e*P **P** **08 12 40.6 +0.6**
DPC MLR MLR
comp=Z,700nm,14.9s
DPC Dobruska-Polom 43.83 309 *e*P **P** **08 12 40.6 +0.6**
DPC AMS AMS 08 34 10.0
comp=Z,700nm,14.9s
KRUC Moravsky 43.85 307 *e*P **P** **08 12 41.0 +1.0**
A051A Mrakovica 43.87 301 *e*P **P** **08 12 40.7 +0.3**
OSTC Ostas 43.90 309 *e*P **P** **08 12 41.4 +1.0**
OSTC *e*SS SS 08 22 32.9 +6.4
KTK1 Kautokeino 43.95 336 *e*P **P** **08 12 41.0 +0.4**
KTK1 IAmb IAmb 08 12 42.0
comp=Z,68nm,0.7s
CHVC Chvalec 44.00 309 *e*P **P** **08 12 41.9 +0.6**
CHVC AMS AMS 08 34 20.0
comp=Z,700nm,14.1s
RONA Rosalia, Austr 44.01 305 *e*P **P** **08 12 41.8 +0.4**
comp=Z,14nm,1.3s
UPC Upice 44.03 309 *e*P **P** **08 12 42.5 +1.0**
UPC *e*S **SS** **08 22 27.2 -1.9**
UPC MLR MLR
comp=Z,900nm,19.1s
UPC Upice 44.03 309 *e*P **P** **08 12 42.5 +1.0**
UPC *e*SS SS 08 22 27.2 -1.9
UPC AMS AMS 08 34 20.0
comp=Z,900nm,19.1s
YAK Yakutsk 44.03 34 P **P** **08 12 41.9 +0.6**
comp=Z,8.4nm,0.4s,baz=263,slow=10.0,SNR=1.7
YAK PcP **PcP** **08 14 26.3 -0.1**
comp=Z,11nm,0.3s,baz=254,slow=0.6,SNR=2.0
YAK LR LR 08 32 16.7
comp=Z,638nm,19.9s,baz=269,slow=38
comp=Z,8.4nm,0.4s
YAK Yakutsk 44.03 34 IAMs_20 IAMs_20 08 32 06.2
comp=Z,825nm,18.0s
YAK Yakutsk 44.03 34*ce*P **P** **08 12 42.5 +1.2**
YAK pmax pmax
comp=Z,86nm,1.7s
A050A Klekovaca 44.20 300 *e*P **P** **08 12 42.7 -0.4**
CONA Conrad Observa 44.28 305 *e*P **P** **08 12 43.8 +0.1**
comp=Z,23nm,0.9s,SNR=14
KLR Kul'dur 44.35 53 P **P** **08 12 44.8 +0.7**
comp=Z,12nm,0.9s,baz=282,slow=9.1,SNR=31
KLR LR LR 08 33 15.7
comp=Z,1μm,18.8s,baz=272,slow=39
comp=Z,12nm,0.9s
KLR Kul'dur 44.35 53*ce*P **P** **08 12 45.2 +1.1**
KLR pmax pmax
comp=Z,53nm,1.7s
TREC Trest 44.43 307 *e*P **P** **08 12 46.4 +1.7**
TREC Trest 44.43 307 *e*P **P** **08 12 46.4 +1.7**
HAMF Hammerfest 44.51 339 *e*P **P** **08 12 46.2 +1.2**
HAMF IAmb IAmb 08 12 51.7
comp=Z,148nm,0.7s
ARSA Arzberg 44.57 304 *i* P **P** **08 12 46.1 +0.2**
comp=Z,10nm,1.0s
BSD Bornholm Skovb 44.68 316 *e*P **P** **08 12 46.3 -0.3**
MATE Matera 44.73 295 ⇑P **P** **08 12 47.7 +0.5**
CRES Cresnjev 44.78 302 *e*P **P** **08 12 47.7 +0.1**
GOPC GO Pecny, Ondr 44.84 308 *e*SS SS 08 22 50.7 +5.7
PERS Pernice 44.91 304 *i* P **P** **08 12 49.2 +0.6**
PVCC Panska Ves 44.95 309 *e*SS SS 08 22 55.7 +8.8
PVCC AMS AMS 08 33 40.0
comp=Z,600nm,14.4s
BOJS Bojanci 44.96 302 *e*P **P** **08 12 48.8 -0.2**
SOKA Soboth 44.97 304 *e*P **P** **08 12 49.1 -0.1**
comp=Z,27nm,0.8s,SNR=17
PRU Pruhonice 44.99 308 *e*P **P** **08 12 50.2 +1.0**
PRU MLR MLR
comp=Z,700nm,15.7s
PRU Pruhonice 44.99 308 *e*P **P** **08 12 50.2 +1.0**
PRU AMS AMS 08 34 30.0
comp=Z,700nm,15.7s
TIP Timpagrande 45.01 293 ⇑P **P** **08 12 49.4 -0.1**
TIP Timpagrande 45.01 293 P **P** **08 12 48.9 -0.6**
USRK Ussuriysk Ar. 45.07 60 P **P** **08 12 50.3 +0.4**
comp=Z,9.7nm,0.8s,baz=274,slow=6.8,SNR=14
USRK LR LR 08 32 56.2
comp=Z,530nm,18.2s,baz=270,slow=38
comp=Z,9.7nm,0.8s
USRK Ussuriysk Ar. 45.07 60 P **P** **08 12 50.1 +0.3**
JETT Jettan, Norway 45.09 337 *e*P **P** **08 12 50.5 +0.8**
JETT IAmb IAmb 08 12 56.0
comp=Z,82nm,0.8s
CKRC Cesky Krumlov 45.23 307 *e*P **P** **08 12 52.0 +0.8**
CKRC AMS AMS 08 35 20.0
comp=Z,500nm,16.1s
DEL Delary 45.32 318 *i* P **P** **08 12 53.0 +1.4**
OBKA Obir 45.32 304 *e*P **P** **08 12 52.1 +0.2**
OBKA Obir 45.32 304 *e*P **P** **08 12 51.9 0.0**
comp=Z,17nm,1.2s
BRG Berggiesshubel 45.32 310 *i* P **P** **08 12 52.6 +0.8**
BRG Amp 08 12 54.1
comp=Z,13nm,0.9s
BRG *ex* x 08 13 28.3
BRG Amp 08 13 30.6
comp=Z,9.8nm,0.9s
BRG Berggiesshubel 45.32 310 SS SS 08 22 51.0 -2.7
BRG Amp 08 34 13.0
comp=E,0.3nm,15.2s
BRG Amp 08 34 14.0
comp=N,0.4nm,16.3s
BRG Amp 08 34 17.0
comp=Z,0.8nm,15.7s
BRG Berggiesshubel 45.32 310 *i* P **P** **08 12 52.6 +0.8**
BRG S **S** **08 19 29.0 -1.7**
BRG SS **SS** **08 22 51.0 -2.7**
BRG pmax pmax
comp=Z,13nm,0.9s
BRG MLR MLR
comp=N,367nm,16.3s
BRG MLR MLR
comp=Z,797nm,15.7s
MOA Molln 45.36 305 *i* P **P** **08 12 51.7 -0.5**
comp=Z,22nm,1.3s
CEY Cerknica 45.51 302 *e*P **P** **08 12 52.8 -0.6**
LUNU Lund 45.53 316 *i* P **P** **08 12 54.0 +0.7**
CUC Castrocucco 45.53 294 P **P** **08 12 53.5 -0.1**
CUC IAmb IAmb 08 12 58.8
comp=Z,43nm,0.9s
CRNS Crni Vrh 45.57 303 *i* P **P** **08 12 54.4 +0.5**
TRO Tromso 45.61 336 *e*P **P** **08 12 54.6 +0.9**
TRO IAmb IAmb 08 12 55.5
comp=Z,35nm,0.8s
GEC2 GERESS Array S 45.63 307 P **P** **08 12 55.0 +0.5**
GERES GERESS Array B 45.63 307 P **P** **08 12 54.7 +0.3**
comp=Z,2.5nm,0.7s,baz=81,slow=8.2,SNR=16
GERES PP **PP** **08 14 40.5 -0.7**
comp=Z,2.5nm,0.9s,baz=70,slow=8.7,SNR=3.6
GERES LR LR 08 35 31.4
comp=Z,177nm,18.7s,baz=60,slow=41
comp=Z,2.5nm,0.7s
HFS Hagfors 45.66 323 LR LR 08 31 45.0
comp=Z,423nm,18.6s,baz=97,slow=36
KHC Kasperske Hory 45.69 307 P **P** **08 12 54.0 -0.8**
KHC Kasperske Hory 45.69 307 P **P** **08 12 54.0 -0.8**
KHC pmax pmax
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 45.69 307 *e*P **P** **08 12 56.0 +1.2**
KHC AMS AMS 08 35 20.0
comp=Z,900nm,9.0s
BIOA Bad Ischl, Aus 45.80 305 *i* P **P** **08 12 55.5 -0.2**
comp=Z,9.5nm,0.9s
CLL Collm 45.89 310 P **P** **08 12 56.0 -0.2**
CLL Collm 45.89 310 *i* P **P** **08 12 56.3 0.0**
CLL *i* 08 13 02.2
CLL *e*S **S** **08 19 36.0 -2.8**
CLL pmax pmax
comp=Z,18nm,1.5s
CLL Collm 45.89 310 *i* P **P** **08 12 56.3 0.0**
comp=Z,18nm,1.5s
CLL *i* sP **pP** **08 13 02.2 -3.5**
CLL *e*PP **PP** **08 14 43.0 -0.8**
CLL *i* x x 08 14 51.5
CLL *i* x x 08 15 00.6
CLL *e*PPP PPP 08 15 29.0
CLL *e*S **S** **08 19 36.0 -2.8**
CLL *e*x x 08 20 12.0
CLL *e*SS **SS** **08 23 00.0 -3.3**
CLL *e*SSS SSS 08 23 54.0
MYKA Terra Mystica 45.92 304 *e*P **P** **08 12 55.8 -0.9**
comp=Z,7.0nm,0.8s
BORU Boraas 45.97 319 *e*P **P** **08 12 57.5 +0.7**
PRED Cave del Predi 46.00 304 P **P** **08 12 56.9 -0.4**
KBA Koelnbreinsper 46.07 304 *e*P **P** **08 12 56.8 -1.1**
comp=Z,7.3nm,0.6s
FAUS Fauske 46.22 333 *e*P **P** **08 12 59.9 +1.3**
FAUS IAmb IAmb 08 13 00.0
comp=Z,81nm,1.0s
PAOL Paolisi 46.24 296 P **P** **08 12 58.4 -0.9**
MOR8 Moi Rana 46.27 331 *e*P **P** **08 12 59.1 0.0**
MOR8 IAmb IAmb 08 12 59.7
comp=Z,84nm,0.7s
NKC Novy Kostel 46.32 309 AMS AMS 08 35 50.0
comp=Z,700nm,13.6s
STEI Steigen 46.38 334 *e*P **P** **08 13 00.2 +0.3**
STEI IAmb IAmb 08 13 01.7
comp=Z,63nm,1.1s
MASI Maura Aman, Be 46.38 139 P **P** **08 13 01.7 +1.2**
comp=Z,151nm,0.9s
TIXI Tiksi 46.46 21 P **P** **08 13 00.7 +0.3**
comp=Z,41nm,0.7s,baz=90,slow=23,SNR=20
TIXI LR LR 08 33 43.4
comp=Z,2μm,19.1s,baz=183,slow=38
comp=Z,41nm,0.7s
TIXI Tiksi 46.46 21 P **P** **08 13 00.2 -0.3**
TIXI Tiksi 46.46 21*ce*P **P** **08 13 00.9 +0.5**
TIXI pmax pmax
comp=Z,60nm,1.0s
CLUD Cludinico 46.47 304 P **P** **08 13 01.1 +0.1**
ABTA Abfaltersbach 46.68 304 *e*P **P** **08 13 02.2 -0.5**
comp=Z,10nm,0.9s
NC405 NORSAR Array S 46.73 324 P **P** **08 13 02.5 -0.2**
NC602 NORSAR Array S 46.78 323 *e*P **P** **08 13 02.6 -0.5**
NC602 IAmb IAmb 08 13 03.6
comp=Z,62nm,1.2s
KONS Konsvik 46.86 331 *e*P **P** **08 13 04.4 +0.7**
KONS IAmb IAmb 08 13 07.5
comp=Z,48nm,1.0s
NC303 NORSAR Array S 46.90 324 P **P** **08 13 03.9 -0.1**
NB2 NORSAR Subarra 46.96 324 P **P** **08 13 04.4 -0.2**
comp=Z,232nm,2.0s,baz=94,slow=7.9
NB2 NORSAR Subarra 46.96 324 P **P** **08 13 04.4 -0.2**
baz=94,slow=7.9
NOA NORSAR Array B 46.96 324 P **P** **08 13 03.2 -1.4**
comp=Z,28nm,0.8s,baz=96,slow=7.6,SNR=59
NOA PP **PP** **08 14 55.3 +0.2**
comp=Z,3.1nm,0.7s,baz=94,slow=9.3,SNR=3.3
NOA LR LR 08 35 23.9
comp=Z,264nm,18.2s,baz=95,slow=39
comp=Z,28nm,0.8s
LOF Lofoten 47.05 334 *e*P **P** **08 13 05.6 +0.5**
LOF IAmb IAmb 08 13 08.0
comp=Z,249nm,1.8s
JOW Kunigami 47.06 84 P **P** **08 13 06.8 +1.0**
comp=Z,12nm,0.4s,baz=286,slow=7.6,SNR=11
JOW LR LR 08 34 26.9
comp=Z,397nm,20.0s,baz=43,slow=38
comp=Z,12nm,0.4s
OSL Oslo 47.14 322 *e*P **P** **08 13 06.1 +0.2**
OSL IAmb IAmb 08 13 12.9
comp=Z,39nm,0.8s
WTTA Wattenberg 47.20 305 *e*P **P** **08 13 06.5 -0.4**
comp=Z,21nm,0.8s
WATA Walderalm 47.23 305 *e*P **P** **08 13 06.3 -0.7**
comp=Z,20nm,1.3s
MURB Monte Urbino 47.26 299 P **P** **08 13 07.8 +0.6**
LODK Lodwar 47.35 237 P **P** **08 13 10.3 +2.1**
SNR=8.0
BJO1 Bjornoya 47.44 343 *e*P **P** **08 13 09.1 +1.0**
BJO1 IAmb IAmb 08 13 10.2
comp=Z,70nm,0.7s
SQTA Sankt Quirin 47.49 305 *e*P **P** **08 13 08.5 -0.6**
comp=Z,13nm,0.9s
MOTA Moosalm 47.54 305 *i* P **P** **08 13 08.8 -0.6**
comp=Z,17nm,1.0s,SNR=9.1
KONO Kongsberg 47.69 322*ce*P **P** **08 13 10.8 +0.6**
KONO pmax pmax
comp=Z,28nm,0.7s
KONO Kongsberg 47.69 322 *e*P **P** **08 13 09.9 -0.3**
RETA Reutte 47.75 305 *e*P **P** **08 13 10.4 -0.6**
comp=Z,18nm,1.1s
FETA Feichten 47.85 305 *e*P **P** **08 13 11.3 -0.6**
comp=Z,16nm,0.8s
MUD Monsted U'grnd 47.92 318 *e*P **P** **08 13 13.6 +1.5**
DOMB Dombas 48.06 325 *e*P **P** **08 13 13.2 +0.2**
DOMB IAmb IAmb 08 13 14.6
comp=Z,170nm,1.9s
SBUM Sibu 48.20 123 P **P** **08 13 15.9 +1.2**
SALO Salr 48.22 303 P **P** **08 13 15.0 +0.4**
HOMB Homborsund 48.25 320 *e*P **P** **08 13 15.4 +0.9**
SKAR Skarslia 48.37 323 *e*P **P** **08 13 17.6 +2.1**
DAVA Damuels 48.38 305 *e*P **P** **08 13 15.4 -0.6**
comp=Z,45nm,0.7s,SNR=23
DAVOX Davos/Dischmat 48.46 305 LR LR 08 37 41.5
comp=Z,330nm,18.7s,baz=81,slow=41
KKM Kota Kinabalu 48.55 116 P **P** **08 13 18.4 +0.9**
SNART Snartemo 48.93 320 *e*P **P** **08 13 20.7 +0.9**
SNART Snartemo 48.93 320 *e*P **P** **08 13 20.5 +0.7**
ODD1 Odda 49.20 322 *e*P **P** **08 13 23.0 +1.1**
HSPB Hornsund (broa 49.24 345 *e*P **P** **08 13 23.3 +1.4**
HSPB IAmb IAmb 08 13 24.9
comp=Z,55nm,0.9s
STKI Sintang 49.45 126 P **P** **08 13 26.5 +2.2**
comp=Z,24nm,0.5s
KMBO Kilima Mbogo 49.45 231 P **P** **08 13 25.6 +1.0**
comp=Z,10nm,0.8s,baz=26,slow=9.1,SNR=21
KMBO LR LR 08 36 36.6
comp=Z,304nm,18.6s,baz=70,slow=39
comp=Z,10nm,0.8s
KMBO Kilima Mbogo 49.45 231 P **P** **08 13 25.4 +0.8**
KMBO Kilima Mbogo 49.45 231 P **P** **08 13 25.4 +0.8**
KMBO pmax pmax
comp=Z,24nm,1.1s
KMBO Kilima Mbogo 49.45 231 P **P** **08 13 26.2 +1.7**
KMBO P **P** **08 13 26.2 +1.7**
KMBO Kilima Mbogo 49.45 231 P **P** **08 13 26.3 +1.7**
SPB2 Spitsbergen Ar 49.54 347 P **P** **08 13 25.1 +0.8**
SPA0 Spitsbergen Ar 49.55 347 *e*P **P** **08 13 26.1 +1.9**
SPA0 IAmb IAmb 08 13 30.2
comp=Z,59nm,0.8s
SPITS Spitsbergen Ar 49.55 347 LR LR 08 38 50.0
comp=Z,338nm,21.6s,baz=78,slow=42
KASI Kota Agung 49.59 138 P **P** **08 13 23.0 -2.3**
comp=Z,38nm,0.5s
BER Bergen 49.84 323 *e*P **P** **08 13 27.8 +1.1**
BER IAmb IAmb 08 13 43.8
comp=Z,475nm,2.2s
KIBK Kibwezi 49.88 230 P **P** **08 13 29.0 +1.3**
KIBK IAMs_20 IAMs_20 08 37 17.1
comp=Z,453nm,18.0s
KIBK Kibwezi 49.88 230 P **P** **08 13 29.4 +1.8**
SNR=6.6
ASK Askoy 49.90 323 *e*P **P** **08 13 28.0 +0.9**
ASK IAmb IAmb 08 13 43.0
comp=Z,3μm,2.7s
SENIN Lac Senin/Sane 50.29 304 P **P** **08 13 29.8 -0.8**
SENIN IAmb IAmb 08 13 38.9
comp=Z,26nm,0.7s
BTNL Ternell 50.29 310 *d*P **P** **08 13 30.9 +0.6**
comp=Z,8.8nm,1.1s
WLF Walferdange 50.43 309 P **P** **08 13 31.7 +0.4**
WLF Walferdange 50.43 309 *d*P **P** **08 13 32.4 +1.0**
comp=Z,13nm,0.9s
KBS Kingsbay 50.65 347*ce*P **P** **08 13 34.6 +2.0**
KBS pmax pmax
comp=Z,56nm,0.9s
KBS Kingsbay 50.65 347 *e*P **P** **08 13 34.2 +1.6**
KBS IAmb IAmb 08 13 34.8
comp=Z,54nm,0.8s
KBS Kingsbay 50.65 347 *i* P **P** **08 13 34.1 +1.5**
MYLDM Lahad Datu 50.82 115 P **P** **08 13 36.4 +1.7**
MYLDM IAmb IAmb 08 13 52.5
comp=Z,62nm,1.1s
LPL La Plagne 50.85 303 *e*P **P** **08 13 34.6 -0.3**
LPL pmax pmax
comp=Z,40nm,1.0s
BMRD Maredsous 51.20 310 *d*P **P** **08 13 38.1 +1.0**
comp=Z,11nm,1.0s
BMRD *d*PcP **PcP** **08 14 50.7 -1.4**
DOU Dourbes 51.34 310 *d*P **P** **08 13 38.9 +0.7**
MAJO Matsushiro 51.51 68 P **P** **08 13 39.7 0.0**
MAJO IAmb IAmb 08 13 41.3
comp=Z,50nm,0.9s
MAJO Matsushiro 51.51 68 P **P** **08 13 39.7 0.0**
MAJO pmax pmax
comp=Z,50nm,1.0s
MJAR Matsushiro Arr 51.52 68 P **P** **08 13 39.9 +0.2**
comp=Z,30nm,0.9s,baz=291,slow=9.1,SNR=61
MJAR LR LR 08 36 19.0
comp=Z,253nm,20.2s,baz=291,slow=37
comp=Z,30nm,0.9s
KEST Kesra 51.62 291 P **P** **08 13 41.0 +0.4**
comp=Z,16nm,0.6s,baz=20,slow=7.9,SNR=23
comp=Z,16nm,0.6s
KEST Kesra 51.62 291 P **P** **08 13 40.9 +0.3**
KEST IAmb IAmb 08 13 45.2
comp=Z,106nm,1.6s
KEST Kesra 51.62 291 P **P** **08 13 41.3 +0.6**
SNR=9.4
KEST P **P** **08 13 41.3 +0.6**
SNR=9.4
YSS Yuzh-Sakhalins 51.98 54 P **P** **08 13 43.5 +0.5**
YSS IAmb IAmb 08 13 45.0
comp=Z,53nm,1.0s
YSS IAMs_20 IAMs_20 08 38 22.8
comp=Z,920nm,18.0s
YSS Yuzh-Sakhalins 51.98 54*ce*P **P** **08 13 44.3 +1.3**
YSS pmax pmax
comp=Z,56nm,1.0s
JEW Eniwo 52.08 60 P **P** **08 13 44.5 +0.7**
JTM Tenmabayashi 52.37 62 P **P** **08 13 46.5 +0.5**
LEM Lembang 52.42 136 LR LR 08 36 56.6
comp=Z,260nm,21.9s,baz=309,slow=37
JYT Yasato 53.13 68 P **P** **08 13 51.5 -0.2**
JYT IAmb IAmb 08 13 52.9
comp=Z,86nm,1.0s
MBAR Mbarara 53.43 238 LR LR 08 39 18.8
comp=Z,252nm,19.4s,baz=28,slow=39
MBAR Mbarara 53.43 238 P **P** **08 13 54.6 +0.3**
MBAR Mbarara 53.43 238*ce*P **P** **08 13 56.1 +1.8**
MBAR pmax pmax
comp=Z,45nm,2.5s
MBAR Mbarara 53.43 238 P **P** **08 13 54.7 +0.3**
ERM Erimo 53.52 60 IAMs_20 IAMs_20 08 38 26.8
comp=Z,618nm,20.0s
CAF Calviac 54.20 304 *e*P **P** **08 13 59.2 -0.2**
CAF pmax pmax
comp=Z,7.0nm,0.6s
DRUM Mains of Drumt 54.27 319 *e*P **P** **08 13 59.5 -0.1**
DRUM IAmb IAmb 08 14 03.0
comp=Z,472nm,2.4s
MA2 Magadan 54.29 38 P **P** **08 14 00.5 +0.7**
comp=Z,16nm,0.7s,baz=282,slow=8.9,SNR=9.5
MA2 LR LR 08 38 25.4
comp=Z,273nm,22.0s,baz=271,slow=37
comp=Z,16nm,0.7s
MA2 Magadan 54.29 38 P **P** **08 14 00.1 +0.3**
MA2 IAmb IAmb 08 14 02.3
comp=Z,78nm,1.4s
MA2 Magadan 54.29 38*ce*P **P** **08 14 01.2 +1.4**
MA2 pmax pmax
comp=Z,87nm,1.7s
BBKI Banjar Baru 54.30 126 P **P** **08 14 02.3 +1.8**
HPK Haverah Park 54.36 315 *e*P **P** **08 14 00.1 -0.3**
HPK IAmb IAmb 08 14 01.2
comp=Z,109nm,1.5s
EDMD Edmundbyers 54.38 316 *e*P **P** **08 14 00.0 -0.5**
EDMD IAmb IAmb 08 14 03.0
comp=Z,58nm,1.3s
ESY Stoneypath 54.52 318 *e*P **P** **08 14 01.2 -0.4**
SEY Seymchan 54.54 33 P **P** **08 14 02.6 +1.0**
comp=Z,43nm,0.9s,baz=268,slow=8.4,SNR=67
comp=Z,43nm,0.9s
SEY Seymchan 54.54 33*ce*P **P** **08 14 03.6 +2.0**
SEY pmax pmax
comp=Z,116nm,1.7s
MCD Coleburn Disti 54.55 320 *e*P **P** **08 14 01.6 -0.1**
EBL Broad Law 54.79 318 *e*P **P** **08 14 03.8 +0.3**
EDI Edinburgh 54.84 318 *e*P **P** **08 14 03.0 -0.9**
JMIC Jan Mayen 54.92 337 LR LR 08 38 16.6
comp=Z,214nm,19.0s,baz=58,slow=37
EKA Eskdalemuir Ar 54.95 317 LR LR 08 39 22.7
comp=Z,341nm,19.2s,baz=84,slow=38
ESK Eskdalemuir 54.98 317 *e*P **P** **08 14 03.8 -1.0**
ESK IAmb IAmb 08 14 06.8
comp=Z,368nm,2.5s
LFF La Frestale 55.09 304 *e*P **P** **08 14 05.5 -0.4**
LFF pmax pmax
comp=Z,54nm,1.6s
MPSI Mapaga 55.11 118 P **P** **08 14 08.4 +2.1**
comp=Z,51nm,1.2s
TOLI2 Tolitoli 55.22 117 P **P** **08 14 08.1 +0.9**
TOLI2 IAmb IAmb 08 14 17.1
comp=Z,24nm,0.9s
EAB Aberfoyle 55.42 318 *e*P **P** **08 14 08.0 0.0**
NEWG New Galloway 55.59 317 *e*P **P** **08 14 08.9 -0.3**
MCH1 Michaelchurch 55.62 313 *e*P **P** **08 14 08.4 -1.1**
MCH1 IAmb IAmb 08 14 09.7
comp=Z,60nm,1.0s
KAC Achnashellach 55.65 320 *e*P **P** **08 14 09.1 -0.6**
NOR Nord 55.77 350 *i* P **P** **08 14 11.8 +1.6**
NOR IAmb IAmb 08 14 12.2
comp=Z,127nm,1.6s
LLW Llanuwychllyn 55.80 314 *e*P **P** **08 14 10.5 -0.4**
KPL Plockton 55.87 320 *e*P **P** **08 14 10.7 -0.6**
LAWE Loch Awe, Argy 55.98 319 *e*P **P** **08 14 11.8 -0.2**
LAWE IAmb IAmb 08 14 16.0
comp=Z,40nm,1.1s
MRSI Marisa 56.50 117 P **P** **08 14 17.8 +1.5**
comp=Z,1μmcomp=Z,149nm,0.9s
DAG Danmarks Havn 56.87 344 ⇑*i*P **P** **08 14 19.1 +1.0**
DAG IAmb IAmb 08 14 19.9
comp=Z,42nm,0.8s
APSI Ampana 57.23 118 P **P** **08 14 24.3 +2.8**
comp=Z,826nmcomp=Z,54nm,1.6s
TTSI Tana Toraja 57.41 121 P **P** **08 14 26.7 +4.0**
comp=Z,993nmcomp=Z,17nm,0.8s
KMSI Cibinong 57.95 115 P **P** **08 14 27.8 +1.2**
comp=Z,204nm,0.5s
JCJ Chichijima 58.23 77 LR LR 08 43 14.9
comp=Z,99nm,18.5s,baz=94,slow=40
KAPI Kappang 58.76 123 LR LR 08 42 44.6
comp=Z,172nm,20.1s,baz=298,slow=39
CART Cartagena 58.77 296 P **P** **08 14 31.3 -0.7**
CART IAmb IAmb 08 14 35.9
comp=Z,43nm,0.8s
CART Cartagena 58.77 296 P **P** **08 14 32.2 +0.1**
ABPO Ambohimpanom 59.22 209 P **P** **08 14 35.8 +0.4**
ABPO IAmb IAmb 08 14 44.5
comp=Z,31nm,1.1s
ABPO Ambohimpanom 59.22 209 P **P** **08 14 35.8 +0.4**
ABPO pmax pmax
comp=Z,31nm,1.2s
PETK Petropavlovsk- 59.60 44 P **P** **08 14 37.4 -0.2**
comp=Z,4.9nm,1.0s,baz=232,slow=1.6,SNR=6.6
PETK LR LR 08 42 23.6
comp=Z,468nm,18.9s,baz=284,slow=38
comp=Z,4.9nm,1.0s
TAM Tamanrasset 59.89 278 P **P** **08 14 39.9 -0.3**

TAM IAmb IAmb 08 14 45.5
comp=Z,28nm,1.4s
TAM Tamanrasset 59.89 278 P **P 08 14 39.9 -0.3**
TAM pmax pmax
comp=Z,28nm,1.4s
ESBB Sonseca Array 60.14 300 P **P 08 14 40.9 -0.6**
ESBB IAmb IAmb 08 14 42.3
comp=Z,20nm,0.8s
ESDC Sonseca Array 60.14 300 P **P 08 14 40.5 -1.0**
comp=Z,17nm,0.8s,baz=57,slow=7.1,SNR=125
ESDC PKP2bc 08 44 14.1
comp=Z,1.3nm,1.1s,baz=316,slow=4.1,SNR=6.0
comp=Z,17nm,0.8s
ESDC Sonseca Array 60.14 300 P **P 08 14 40.3 -1.2**
TNTI Ternate 60.37 112 P **P 08 14 44.2 +0.8**
TNTI Ternate 60.37 112 P **P 08 14 44.5 +1.1**
comp=Z,2µmcomp=Z,143nm,1.1s
PAB San Pablo 60.46 300 P **P 08 14 43.2 -0.6**
PAB IAmb IAmb 08 14 44.7
comp=Z,46nm,1.4s
PAB San Pablo 60.46 300 P **P 08 14 43.2 -0.6**
PAB pmax pmax
comp=Z,45nm,1.4s
PAB San Pablo 60.46 300 P **P 08 14 43.9 +0.1**
BORG Borgarnes 61.07 331 LR LR 08 40 49.8
comp=Z,231nm,19.8s,baz=74,slow=36
FIGM Figuig 61.14 291 P **P 08 14 49.0 +0.4**
SANI Sanana 61.18 116 P **P 08 14 48.3 -0.6**
comp=Z,1µmcomp=Z,90nm,1.4s
JBK JBK 61.22 293 P **P 08 14 50.0 +0.8**
PBRG Braganca 61.28 303 *eP* **P 08 14 51.8 +2.5**
comp=Z,23nm,1.7s
LBMI Labuha 61.39 113 P **P 08 14 50.9 +0.6**
comp=Z,724nmcomp=Z,39nm,1.1s
MVO Moncorvo 61.73 302 *eP* **P 08 14 52.9 +0.6**
comp=Z,50nm,1.3s
VOI Vohitsoka 61.99 208 P **P 08 14 55.3 +1.1**
VOI IAmb IAmb 08 15 05.4
comp=Z,63nm,1.2s
VOI Vohitsoka 61.99 208 P **P 08 14 54.9 +0.6**
SNR=8.7
VOI Vohitsoka 61.99 208 P **P 08 14 56.0 +1.7**
AKLM AKL 62.12 294 P **P 08 14 56.0 +0.9**
POLO Lamas de Olo 62.18 303 *eP* **P 08 14 55.7 +0.3**
comp=Z,13nm,1.9s
PCAB Cabril 62.20 303 *eP* **P 08 14 56.3 +0.8**
comp=Z,54nm,1.5s
PGAV Gavieira, Arco 62.27 303 *eP* **P 08 14 56.4 +0.4**
comp=Z,42nm,1.1s
MTE Manteigas 62.39 302 *eP* **P 08 14 57.7 +0.9**
comp=Z,67nm,1.4s
MTE Manteigas 62.39 302 P **P 08 14 56.7 -0.1**
MTE IAmb IAmb 08 14 58.2
comp=Z,30nm,0.8s
PVIS Viseu 62.51 302 *eP* **P 08 14 58.3 +0.7**
comp=Z,58nm,1.2s
PCBR Castelo Branco 62.57 301 *eP* **P 08 14 58.7 +0.8**
comp=Z,33nm,1.3s
PMRV Marv??o 62.67 301 *eP* **P 08 14 59.1 +0.5**
comp=Z,38nm,1.3s
EDFI Ende, Flores 62.77 124 P **P 08 14 55.9 -3.7**
comp=Z,8.6nm,0.7s
PBAR Barrancos 62.93 299 *eP* **P 08 15 00.9 +0.5**
comp=Z,80nm,1.3s
PESTR Estremoz 63.04 300 *eP* **P 08 15 01.4 +0.3**
comp=Z,43nm,1.2s
PESTR Estremoz 63.04 300 P **P 08 15 00.1 -1.0**
PESTR Estremoz 63.04 300 P **P 08 15 01.0 -0.1**
NEEM North Greenlan 63.05 348 *i P* **P 08 15 02.6 +1.8**
NEEM IAmb IAmb 08 15 03.0
comp=Z,89nm,0.7s
PCAS Casmilo, Conde 63.20 302 *eP* **P 08 15 02.8 +0.7**
comp=Z,39nm,1.9s
LCRM LCR 63.22 294 P **P 08 15 04.0 +1.4**
SUMG Summit 63.27 342 P **P 08 15 03.0 +0.5**
SUMG Summit 63.27 342 P **P 08 15 03.0 +0.5**
SUMG pmax pmax
comp=Z,88nm,1.6s
SUMG Summit 63.27 342 *i P* **P 08 15 04.2 +1.6**
SUMG IAmb IAmb 08 15 05.4
comp=Z,17nm,0.7s
MDT Midelt 63.40 293 P **P 08 15 04.4 +0.7**
PMTG Montargil 63.41 300 *eP* **P 08 15 03.9 +0.4**
comp=Z,35nm,1.8s
EVO Evora 63.48 300 *eP* **P 08 15 04.6 +0.6**
comp=Z,44nm,1.4s
PBEJ Beja 63.59 299 *eP* **P 08 15 05.3 +0.6**
comp=Z,36nm,1.1s
PSBE So Bento 63.63 301 *eP* **P 08 15 05.8 +0.8**
comp=Z,99nm,1.8s
PVAQ Vaqueiros 63.74 299 *eP* **P 08 15 06.2 +0.4**
comp=Z,72nm,1.5s
PVAQ Vaqueiros 63.74 299 P **P 08 15 05.3 -0.5**
PVAQ IAmb IAmb 08 15 06.7
comp=Z,14nm,0.8s
PVAQ Vaqueiros 63.74 299 P **P 08 15 06.1 +0.4**
PCVE Castro Verde 63.88 299 *eP* **P 08 15 07.3 +0.7**
comp=Z,49nm,1.7s
MESJ Messejana 63.92 299 *eP* **P 08 15 07.3 +0.4**
MESJ IAmb IAmb 08 15 08.4
comp=Z,30nm,1.0s
MESJ Messejana 63.92 299 *eP* **P 08 15 07.5 +0.6**
comp=Z,58nm,1.2s
MESJ Messejana 63.92 299 *eP* **P 08 15 07.3 +0.4**
PACT Alcochete 63.97 300 *eP* **P 08 15 08.3 +1.1**
comp=Z,179nm,1.7s
PNCL Nicolau / Gran 64.03 300 *eP* **P 08 15 08.5 +0.9**
comp=Z,50nm,1.6s
PMAFR Mafra 64.20 301 *eP* **P 08 15 09.5 +0.7**
comp=Z,111nm,1.9s
SWI Sorong 64.40 111 P **P 08 15 11.2 +0.9**
comp=Z,2µmcomp=Z,49nm,1.3s
PTEO Sao Teotonio 64.41 299 *eP* **P 08 15 10.8 +0.7**
comp=Z,72nm,1.5s
BATI Baumata 65.17 124 LR LR 08 47 03.5
comp=Z,312nm,21.1s,baz=292,slow=39
SOEI Soe 65.26 123 P **P 08 15 15.1 -0.9**
SOEI Soe 65.26 123 P **P 08 15 16.1 +0.1**
comp=Z,896nmcomp=Z,88nm,1.0s
ICESG Greenland Ices 65.50 339 *eP* **P 08 15 18.4 +1.4**
ICESG IAmb IAmb 08 15 24.4
comp=Z,33nm,0.8s
LSZ Lusaka 65.98 229 LR LR 08 44 41.2
comp=Z,221nm,20.1s,baz=49,slow=36
LSZ Lusaka 65.98 229 P **P 08 15 21.4 +0.8**
LSZ IAmb IAmb 08 15 22.5
comp=Z,16nm,0.9s
LSZ Lusaka 65.98 229 P **P 08 15 21.4 +0.8**
LSZ pmax pmax
comp=Z,16nm,0.9s
SRHM Skhour des Reh 66.04 294 P **P 08 15 24.1 +3.2**
TULEG Thule 66.37 351 *i P* **P 08 15 23.4 +1.3**
FAKI Fak Fak 66.47 112 P **P 08 15 23.5 -0.2**
FAKI IAmb IAmb 08 15 32.6
comp=Z,29nm,1.0s
FAKI Fak Fak 66.47 112 P **P 08 15 25.3 +1.6**
comp=Z,33nm,1.1s
OUK Oukaimeden 66.60 293 P **P 08 15 26.0 +1.2**
GUMO Guam 67.00 89 LR LR 08 45 25.2
comp=Z,94nm,19.5s,baz=308,slow=37
UPNV Upernavik 67.23 346 *eP* **P 08 15 29.3 +1.6**
UPNV IAmb IAmb 08 15 29.5
comp=Z,118nm,1.4s
TTIG Tnine Tigouga, 67.34 292 P **P 08 15 30.0 +0.7**
TOA0 Torodi Ar. Sit 67.89 271 P **P 08 15 31.8 -1.0**
TOA0 Torodi Ar. Sit 67.89 271 P **P 08 15 31.9 -0.9**
SNR=23
TOA0 P **P 08 15 31.9 -0.9**
SNR=23
TORD Torodi Ar. Bea 67.89 271 P **P 08 15 31.5 -1.2**
comp=Z,50nm,0.8s,baz=40,slow=5.3,SNR=10
TORD LR LR 08 48 28.8
comp=Z,507nm,18.4s,baz=17,slow=39
comp=Z,50nm,0.8s
TORD Torodi Ar. Bea 67.89 271 P **P 08 15 31.9 -0.9**
A21K Barrow 68.28 15 P **P 08 15 32.6 -1.7**
baz=317
ILULI Ilulissat 68.62 342 P **P 08 15 35.8 -0.6**
ILULI Ilulissat 68.62 342 P **P 08 15 35.8 -0.6**
ILULI pmax pmax
comp=Z,100nm,1.5s
ILULI Ilulissat 68.62 342 *eP* **P 08 15 37.6 +1.2**
ILULI IAmb IAmb 08 15 38.6
comp=Z,28nm,0.8s
SHEM Shemya Is, Ala 68.80 40 LR LR 08 48 36.4
comp=Z,241nm,18.1s,baz=285,slow=38

GAMB Gambell 69.02 26 P **P 08 15 37.4 -1.6**
baz=307
RDOG Red Dog Mine 69.05 20 P **P 08 15 38.0 -1.2**
baz=313
DY2G Dye2 69.09 338 *eP* **P 08 15 41.1 +1.4**
TNA Tin City 69.19 23 P **P 08 15 39.6 -0.5**
baz=309
SFJD Kangerlussuaq 70.02 340 LR LR 08 46 24.8
comp=Z,202nm,19.1s,baz=45,slow=36
SFJD Kagerlussuaq 70.02 340 *eP* **P 08 15 47.1 +2.0**
RES Resolute Bay 70.43 357 LR LR 08 48 00.8
comp=Z,301nm,20.4s,baz=11,slow=37
ANM Nome 70.66 23 P **P 08 15 49.5 +0.4**
baz=312
C23K Itkillik River 70.72 15 P **P 08 15 50.6 +1.2**
baz=323,SNR=17
MBWA Marble Bar 70.85 135 P **P 08 15 51.4 +0.6**
SMPI Sarmi 70.91 107 P **P 08 15 53.4 +2.0**
C24K Franklin Bluff 71.21 14 P **P 08 15 53.4 +1.1**
baz=324
PSA00 Pilbara Seismi 71.24 135 P **P 08 15 53.0 -0.1**
D23K Nanushuk River 71.40 15 P **P 08 15 54.7 +1.2**
baz=323,SNR=16
D24K Happy Valley 71.65 15 P **P 08 15 54.8 -0.2**
baz=324
C26K Camden Bay 71.79 13 P **P 08 15 57.1 +1.3**
baz=327
KOWA Kowa 71.86 275 LR LR 08 51 45.4
comp=Z,256nm,18.0s,baz=119,slow=39
KOWA Kowa 71.86 275 P **P 08 15 56.7 -0.5**
KOWA IAmb IAmb 08 16 05.4
comp=Z,26nm,0.7s
TOLK Toolik Lake Re 71.90 15 P **P 08 15 57.9 +1.2**
TOLK Toolik Lake Re 71.90 15 P **P 08 15 56.8 +0.2**
baz=324,SNR=39
D25K Kavik River 72.01 14 P **P 08 15 58.1 +0.8**
baz=326,SNR=21
F21K Alatna River 72.12 17 P **P 08 15 58.3 +0.3**
baz=321,SNR=28
FITZ Fitzroy Crossi 72.19 128 LR LR 08 52 59.0
comp=Z,78nm,18.3s,baz=295,slow=40
F22K John River 72.22 17 P **P 08 15 58.7 +0.2**
baz=322,SNR=25
C27K Jago River 72.26 13 P **P 08 15 59.9 +1.2**
baz=328,SNR=12
E23K Chandalar 72.37 16 P **P 08 15 59.7 +0.2**
baz=324,SNR=18
KNRA Kununurra 72.53 124 P **P 08 16 02.1 +1.1**
KNRA IAmb IAmb 08 16 03.3
comp=Z,44nm,0.7s
A36M Sachs Harbour 72.58 6 P **P 08 16 01.7 +1.2**
A36M IAMs_20 IAMs_20 08 49 06.1
comp=Z,525nm,22.0s
A36M Sachs Harbour 72.58 6 P **P 08 16 01.0 +0.5**
baz=344,SNR=10
E24K Your Creek 72.60 15 P **P 08 16 01.9 +1.1**
baz=325,SNR=22
G21K Allakaket 72.67 18 P **P 08 16 01.1 -0.1**
baz=321
G22K Bettles 72.84 17 P **P 08 16 02.2 0.0**
baz=322
COLD Coldfoot 72.90 16 P **P 08 16 03.2 +0.6**
COLD IAmb IAmb 08 16 04.8
comp=Z,49nm,0.8s
COLD Coldfoot 72.90 16 P **P 08 16 03.5 +0.9**
baz=323,SNR=32
IMAR Indian Mountai 73.02 18 P **P 08 16 03.4 +0.1**
GCSA Galena City Sc 73.11 20 P **P 08 16 04.8 +1.0**
baz=319
E25K Arctic Village 73.18 14 P **P 08 16 04.7 +0.5**
baz=327,SNR=14
F24K Squaw Lake 73.19 15 P **P 08 16 05.4 +1.1**
baz=325,SNR=14
G23K Bananza Creek 73.36 17 P **P 08 16 06.3 +0.9**
baz=324,SNR=26
H21K Melozitna Rive 73.52 18 P **P 08 16 06.1 -0.1**
H21K IAmb IAmb 08 16 08.5
comp=Z,54nm,1.1s
H21K Melozitna Rive 73.52 18 P **P 08 16 06.8 +0.5**
baz=322,SNR=24
F25K Christian Rive 73.61 15 P **P 08 16 08.0 +1.3**
baz=327,SNR=32
SPIA Saint Paul Isl 73.69 31 P **P 08 16 08.4 +1.1**
baz=310
H22K Ishtalitna Cre 73.69 18 P **P 08 16 08.2 +1.0**
baz=323,SNR=12
F26K Sheenjek River 73.83 14 P **P 08 16 09.1 +1.0**
baz=328,SNR=14
E27K Coleen River 73.89 13 P **P 08 16 09.4 +0.9**
baz=330,SNR=20
G24K Hadweenzic Riv 73.96 16 P **P 08 16 10.1 +1.3**
baz=326,SNR=31
I21K Tanana 74.11 18 P **P 08 16 09.8 +0.2**
I21K IAmb IAmb 08 16 12.1
comp=Z,32nm,0.9s
I21K Tanana 74.11 18 P **P 08 16 10.9 +1.2**
baz=322,SNR=10
H23K Yukon River 74.20 17 P **P 08 16 10.8 +0.6**
H23K IAmb IAmb 08 16 13.0
comp=Z,41nm,0.8s
H23K Yukon River 74.20 17 P **P 08 16 11.5 +1.3**
baz=324,SNR=31
G25K Bearman Lake 74.21 15 P **P 08 16 11.6 +1.4**
baz=327,SNR=25
J20K Nowinta River 74.32 20 P **P 08 16 12.4 +1.5**
baz=321,SNR=22
G26K Porcupine Rive 74.54 14 P **P 08 16 13.1 +1.0**
baz=329,SNR=9.6
MLY Manley 74.55 18 P **P 08 16 12.8 +0.5**
MLY IAmb IAmb 08 16 14.5
comp=Z,31nm,0.9s
MLY Manley 74.55 18 P **P 08 16 13.2 +0.9**
baz=323,SNR=19
H24K Noodor Dome 74.58 16 P **P 08 16 13.3 +0.8**
H24K IAmb IAmb 08 16 15.1
comp=Z,30nm,0.8s
H24K Noodor Dome 74.58 16 P **P 08 16 13.7 +1.2**
baz=326,SNR=25
H25K Birch Creek 74.69 15 P **P 08 16 14.7 +1.7**
baz=327,SNR=9.4
TTA Tatalina 74.74 21 P **P 08 16 14.5 +1.0**
TTA IAmb IAmb 08 16 16.2
comp=Z,76nm,1.6s
TTA Tatalina 74.74 21 P **P 08 16 14.5 +1.0**
TTA pmax pmax
comp=Z,77nm,1.6s
TTA Tatalina 74.74 21 P **P 08 16 14.6 +1.1**
baz=320
I23K Minto, Yukon-K 74.79 17 P **P 08 16 14.5 +0.9**
I23K IAmb IAmb 08 16 16.2
comp=Z,57nm,1.1s
I23K Minto, Yukon-K 74.79 17 P **P 08 16 14.9 +1.2**
baz=324,SNR=26
K20K Telida 74.98 20 P **P 08 16 15.8 +1.0**
baz=321,SNR=22
LBTB Lobatse 75.01 224 LR LR 08 50 48.5
comp=Z,115nm,18.1s,baz=38,slow=37
CHUM Lake Minchumin 75.05 19 P **P 08 16 16.3 +1.2**
baz=322,SNR=9.2
G27K Doyon Strip 75.08 14 P **P 08 16 16.7 +1.4**
baz=331,SNR=29
INK Inuvik 75.11 10 P **P 08 16 16.2 +0.8**
comp=Z,32nm,0.5s,baz=345,slow=5.6,SNR=90
INK LR LR 08 52 15.4
comp=Z,241nm,21.4s,baz=322,slow=38
comp=Z,32nm,0.5s
INK Inuvik 75.11 10 P **P 08 16 16.3 +0.9**
INK IAmb IAmb 08 16 17.6
comp=Z,48nm,0.7s
INK Inuvik 75.11 10 P **P 08 16 16.3 +0.9**
INK pmax pmax
comp=Z,48nm,0.7s
INK Inuvik 75.11 10 P **P 08 16 16.2 +0.8**
baz=337,SNR=34
MDM Murphy Dome 75.22 17 P **P 08 16 17.2 +1.0**
MDM IAmb IAmb 08 16 18.4
comp=Z,76nm,1.1s
BPAW Bear Paw Mtn. 75.23 19 P **P 08 16 17.0 +0.8**
baz=323,SNR=17
C36M Paulatuk 75.24 6 P **P 08 16 16.8 +0.7**
C36M Paulatuk 75.24 6 P **P 08 16 16.3 +0.2**
baz=345,SNR=24
POKR Poker Plat Res 75.28 17 P **P 08 16 17.1 +0.6**
POKR IAMs_20 IAMs_20 08 54 24.7
comp=Z,519nm,18.0s
POKR Poker Plat Res 75.28 17 P **P 08 16 17.6 +1.0**
baz=326,SNR=14

NEA2 Nenana 75.32 18 P **P 08 16 17.6 +0.9**
baz=325,SNR=25
TCOL CIGO, UAF Yank 75.38 17 P **P 08 16 17.9 +0.9**
baz=326,SNR=24
COLA College 75.39 17 *c i P* **P 08 16 17.4 +0.4**
COLA pmax pmax
comp=Z,92nm,0.9s
COLA College 75.39 17 P **P 08 16 18.0 +0.9**
baz=326
PRP Porcupine Dome 75.39 16 P **P 08 16 18.4 +1.2**
baz=328,SNR=22
CAST Castle Rocks 75.48 19 P **P 08 16 18.7 +1.0**
baz=323,SNR=68
H27K Steamboat Moun 75.62 14 P **P 08 16 19.7 +1.3**
baz=331,SNR=28
L19K White Mountain 75.66 21 P **P 08 16 20.1 +1.3**
baz=321,SNR=7.3
KTH Kantishna Hill 75.69 19 P **P 08 16 18.7 -0.2**
TSUM Tsumeb 75.69 234 LR LR 08 51 52.2
comp=Z,241nm,19.6s,baz=138,slow=38
IL31 75.70 17 P **P 08 16 18.3 -0.5**
IL31 IAmb IAmb 08 16 20.2
comp=Z,40nm,1.0s
ILAR Eielson Array 75.70 17 P **P 08 16 18.6 -0.3**
comp=Z,25nm,0.9s,baz=317,slow=4.3,SNR=122
ILAR PP PP 08 19 09.2 +1.1
comp=Z,8.0nm,1.1s,baz=321,slow=7.5,SNR=8.1
ILAR LR LR 08 52 20.7
comp=Z,233nm,21.4s,baz=294,slow=38
comp=Z,25nm,0.9s
ILAR Eielson Array 75.70 17 P **P 08 16 19.3 +0.4**
ILAR Eielson Array 75.70 17 P **P 08 16 19.3 +0.4**
L20K Farewell, AK 75.72 21 P **P 08 16 20.1 +1.0**
baz=321,SNR=7.4
N16K Nishlik Lake 75.72 24 P **P 08 16 20.5 +1.4**
baz=318,SNR=8.7
PPLA Purkeypile 75.87 20 P **P 08 16 20.5 +0.5**
baz=323,SNR=15
F31M Tsiigehtchic 75.88 11 P **P 08 16 20.7 +0.9**
baz=337,SNR=23
G30M tAoh Zraii Nji 75.91 12 P **P 08 16 20.7 +0.6**
baz=335,SNR=23
TRF Thorofare Moun 75.94 19 P **P 08 16 20.8 +0.3**
baz=324,SNR=10
HDA Harding Lake 75.99 17 P **P 08 16 20.2 -0.4**
HDA IAmb IAmb 08 16 21.4
comp=Z,52nm,1.3s
HDA Harding Lake 75.99 17 P **P 08 16 19.9 -0.7**
baz=327,SNR=19
M19K Big River Lodg 76.02 21 P **P 08 16 20.2 -0.5**
baz=321
MCK McKinley 76.06 18 P **P 08 16 21.0 0.0**
baz=325,SNR=15
I26K Coal Creek Min 76.09 15 P **P 08 16 21.4 +0.3**
I26K IAmb IAmb 08 16 23.4
comp=Z,30nm,0.8s
I26K Coal Creek Min 76.09 15 P **P 08 16 22.1 +1.0**
baz=330
I27K Kandik River 76.15 14 P **P 08 16 22.5 +1.0**
baz=331,SNR=22
J25K Salcha River, 76.19 16 P **P 08 16 21.6 -0.2**
J25K IAmb IAmb 08 16 23.1
comp=Z,24nm,0.7s
J25K IAMs_20 IAMs_20 08 53 28.6
comp=Z,471nm,19.0s
J25K Salcha River, 76.19 16 P **P 08 16 21.9 +0.1**
baz=328,SNR=29
RND Reindeer 76.35 18 P **P 08 16 22.3 -0.4**
RND IAmb IAmb 08 16 23.9
comp=Z,59nm,1.1s
RND Reindeer 76.35 18 P **P 08 16 22.3 -0.4**
RND pmax pmax
comp=Z,59nm,1.1s
EPYK Eagle Plains 76.38 12 P **P 08 16 23.0 +0.2**
baz=335,SNR=11
M20K Styx River 76.41 21 P **P 08 16 23.7 +0.6**
baz=322,SNR=6.0
N18K Kilae Creek 76.50 23 P **P 08 16 23.7 +0.1**
baz=320,SNR=5.3
O16K Kokwok River B 76.61 24 P **P 08 16 24.8 +0.7**
baz=318,SNR=10
J26L Joseph Creek 76.69 16 P **P 08 16 25.4 +0.8**
baz=329,SNR=45
K24K Donnelly Dome 76.78 17 P **P 08 16 25.4 +0.3**
baz=328,SNR=34
SKT Skwentna 76.79 20 P **P 08 16 24.5 -0.6**
SKT IAMs_20 IAMs_20 08 54 51.6
comp=Z,550nm,18.0s
SKT Skwentna 76.79 20 P **P 08 16 25.3 +0.2**
baz=323,SNR=36
CUT Chulitna 76.80 19 P **P 08 16 24.9 -0.2**
baz=324,SNR=8.8
O17K Koliganek Bris 76.81 24 P **P 08 16 26.5 +1.3**
baz=319
DBIC Dimbokro 76.82 269 P **P 08 16 25.6 -0.4**
comp=Z,20nm,0.7s,baz=60,slow=6.4,SNR=24
DBIC LR LR 08 53 31.6
comp=Z,499nm,20.0s,baz=63,slow=38
comp=Z,20nm,0.7s
DBIC Dimbokro 76.82 269 P **P 08 16 25.1 -1.0**
DBIC IAmb IAmb 08 16 34.0
comp=Z,34nm,0.8s
DBIC Dimbokro 76.82 269 P **P 08 16 25.1 -1.0**
DBIC pmax pmax
comp=Z,34nm,0.9s
N19K Bonanza Creek 76.84 22 P **P 08 16 26.8 +1.2**
baz=321,SNR=6.2
KIC Kosan Boka 76.90 269⇑ *eP* **P 08 16 26.1 -0.4**
comp=Z,33nm,0.6s
WAT1 Susitna Watana 76.91 18 P **P 08 16 25.6 -0.2**
baz=326
EGAK Eagle 76.97 15 P **P 08 16 26.9 +0.8**
baz=331,SNR=20
TIC Toumodi 76.97 269⇑ *eP* **P 08 16 26.4 -0.5**
comp=Z,67nm,0.7s
DHY Denali Highway 77.00 18 P **P 08 16 26.2 -0.3**
DHY IAmb IAmb 08 16 28.6
comp=Z,39nm,0.7s
DHY Denali Highway 77.00 18 P **P 08 16 26.6 +0.1**
baz=326,SNR=40
I29M Ogilvie Camp, 77.01 13 P **P 08 16 26.8 +0.4**
baz=334,SNR=27
NIKH Nikolski High 77.04 33 P **P 08 16 26.3 -0.3**
baz=312
SCRK Sand Creek 77.05 16 P **P 08 16 26.4 -0.3**
SCRK IAmb IAmb 08 16 28.8
comp=Z,29nm,0.7s
SCRK IAMs_20 IAMs_20 08 53 54.4
comp=Z,455nm,18.0s
SCRK Sand Creek 77.05 16 P **P 08 16 27.2 +0.5**
baz=329,SNR=31
RIDG Independent Ri 77.06 17 P **P 08 16 26.9 +0.2**
baz=328,SNR=11
P16K Nushagak River 77.06 25 P **P 08 16 26.4 -0.3**
baz=319
LIC Lamto 77.21 269⇑ *eP* **P 08 16 27.8 -0.5**
comp=Z,75nm,0.6s
N20K Mount Spurr 77.22 21 P **P 08 16 27.7 +0.1**
baz=323,SNR=5.3
SPCR Spurr Chakacha 77.22 21 P **P 08 16 27.7 0.0**
baz=323
WAT6 Susitna Watana 77.32 18 P **P 08 16 28.2 -0.1**
baz=326,SNR=11
O18K Koktuh Hills 77.36 23 P **P 08 16 30.2 +1.8**
baz=321,SNR=11
M22K Willow 77.37 20 P **P 08 16 28.2 -0.1**
baz=324,SNR=12
O19K Port Alsworth 77.37 22 P **P 08 16 29.1 +0.7**
baz=321
SUA Susitna One 77.43 20 P **P 08 16 28.8 0.0**
SUA IAmb IAmb 08 16 30.4
comp=Z,31nm,0.6s
SUA Susitna One 77.43 20 P **P 08 16 29.1 +0.2**
baz=324
K27K Chicken 77.43 15 P **P 08 16 29.2 +0.6**
K27K IAmb IAmb 08 16 31.3
comp=Z,51nm,1.1s
K27K Chicken 77.43 15 P **P 08 16 29.5 +0.8**
baz=331
P17K Kvichak River 77.46 24 P **P 08 16 31.0 +2.1**
baz=320
UNV Unalaska Valle 77.49 32 P **P 08 16 29.8 +0.6**
baz=313
PAX Paxson 77.56 17 P **P 08 16 29.8 +0.2**
PAX IAmb IAmb 08 16 31.4
comp=Z,41nm,0.8s
PAX Paxson 77.56 17 P **P 08 16 29.8 +0.2**

PAX pmax pmax
comp=Z,41nm,0.8s
PAX Paxson 77.56 17 P **P 08 16 30.2 +0.6**
baz=328,SNR=49
GHO Glory Hole Cre 77.68 19 P **P 08 16 30.5 +0.3**
P18K Big Mountain, 77.71 23 P **P 08 16 31.1 +0.7**
P18K Big Mountain, 77.71 23 P **P 08 16 30.5 +0.1**
baz=321
PMR Palmer 77.77 19 P **P 08 16 30.0 -0.6**
PMR IAmb IAmb 08 16 32.2
comp=Z,27nm,0.7s
PMR Palmer 77.77 19 P **P 08 16 30.0 -0.6**
PMR pmax pmax
comp=Z,27nm,0.7s
PMR Palmer 77.77 19 P **P 08 16 31.1 +0.5**
baz=325,SNR=33
Q16K King Salmon 77.79 24 P **P 08 16 31.1 +0.3**
baz=320,SNR=6.8
SML Sawmill 77.81 19 P **P 08 16 30.9 0.0**
SML Sawmill 77.81 19 P **P 08 16 31.2 +0.3**
baz=326,SNR=43
J29M Klondike Camp 77.84 14 P **P 08 16 31.8 +0.7**
J29M IAmb IAmb 08 16 33.4
comp=Z,37nm,0.8s
J29M Klondike Camp 77.84 14 P **P 08 16 31.9 +0.7**
baz=334
CAPN Captain Cook N 77.87 21 P **P 08 16 32.0 +0.8**
baz=324
DAWY Dawson 77.96 14 P **P 08 16 31.7 0.0**
DAWY IAmb IAmb 08 16 33.6
comp=Z,40nm,0.8s
DAWY Dawson 77.96 14 P **P 08 16 32.4 +0.7**
baz=333,SNR=34
BOSA Boshof 77.98 222 P **P 08 16 32.5 +0.2**
comp=Z,13nm,0.7s,baz=22,slow=5.6,SNR=33
BOSA LR LR 08 52 11.9
comp=Z,140nm,19.4s,baz=17,slow=37
comp=Z,13nm,0.7s
M23K Glacier View 77.98 19 P **P 08 16 32.4 +0.6**
baz=326,SNR=46
O20K Slope Mountain 77.99 22 P **P 08 16 32.2 +0.2**
baz=323
RC01 Rabbit Creek A 78.02 20 P **P 08 16 32.1 +0.1**
baz=325,SNR=14
L26K Log Cabin Wild 78.02 16 P **P 08 16 32.6 +0.6**
baz=330,SNR=14
SCM Sheep Creek Mo 78.05 19 P **P 08 16 32.7 +0.4**
baz=327,SNR=25
KNK Knik Glacier 78.10 19 P **P 08 16 33.2 +0.7**
baz=326,SNR=28
M24K Tolsona, Glenn 78.12 18 P **P 08 16 33.5 +0.9**
baz=328,SNR=29
HARP HAARP 78.12 17 P **P 08 16 33.6 +1.0**
baz=328,SNR=63
P19K Oil Pt 78.14 22 P **P 08 16 33.1 +0.3**
baz=322
L27K Beaver Creek, 78.33 16 P **P 08 16 34.9 +1.1**
baz=331,SNR=18
BCAR Beaver Creek A 78.34 16 P **P 08 16 34.3 +0.5**
Q18K Katmai Hardscr 78.36 24 P **P 08 16 34.5 +0.4**
baz=321
Q17K Contact Creek 78.36 24 P **P 08 16 34.3 +0.2**
baz=320
O22K Cooper Landing 78.52 20 IAms_20 IAms_20 08 55 50.3
comp=Z,417nm,21.0s
O22K Cooper Landing 78.52 20 P **P 08 16 35.1 +0.3**
baz=325,SNR=5.7
K29M Barlow Dome 78.53 14 P **P 08 16 35.8 +0.9**
baz=334,SNR=47
Q19K Cape Douglas, 78.58 23 P **P 08 16 34.9 -0.3**
baz=322
PWL Port Wells 78.59 20 P **P 08 16 35.8 +0.6**
baz=326,SNR=19
HOM Homer 78.62 22 P **P 08 16 35.6 +0.2**
baz=323
M26K Nabesna, AK 78.64 16 P **P 08 16 36.1 +0.6**
baz=330,SNR=16
R17K Ugashik Creek 78.67 25 P **P 08 16 36.1 +0.4**
baz=320
KLU Klutina 78.70 18 P **P 08 16 37.1 +1.2**
baz=328,SNR=22
BRSE Bradley Lake S 78.83 21 P **P 08 16 36.6 +0.1**
baz=324,SNR=5.2
NWAO Narrogin (SRO) 78.88 144 LR LR 08 49 30.3
comp=Z,126nm,21.9s,baz=126,slow=34
NWAO Narrogin (SRO) 78.88 144 P **P 08 16 37.0 -0.1**
SDPT Sand Point 78.90 28 P **P 08 16 38.3 +1.4**
baz=317
SEW Seward 78.91 20 P **P 08 16 37.1 +0.2**
baz=325,SNR=13
GLI Glacier Island 78.92 19 P **P 08 16 36.6 -0.4**
GLI IAmb IAmb 08 16 38.8
comp=Z,38nm,0.8s
GLI IAms_20 IAms_20 08 55 33.8
comp=Z,423nm,18.0s
GLI Glacier Island 78.92 19 P **P 08 16 37.0 +0.1**
baz=327,SNR=28
M27K Edge Creek, AK 78.94 16 P **P 08 16 38.5 +1.3**
baz=331,SNR=32
N25K Chitina, Valde 78.94 18 P **P 08 16 38.1 +0.9**
baz=329,SNR=30
CHGN Chignik 78.97 27 P **P 08 16 38.6 +1.3**
baz=319
MAYO Mayo, Yukon 79.06 13 P **P 08 16 38.3 +0.5**
MAYO Mayo, Yukon 79.06 13 P **P 08 16 38.7 +1.0**
baz=336,SNR=17
L29M L29M 79.07 14 P **P 08 16 39.1 +1.3**
baz=334,SNR=46
BVCY Beaver Creek 79.11 16 P **P 08 16 39.1 +1.0**
baz=332,SNR=19
Q20K Shuyak Island 79.23 23 P **P 08 16 39.0 +0.3**
baz=323
GLB Gilahina Butte 79.28 17 IAms_20 IAms_20 08 56 26.3
comp=Z,397nm,20.0s
WRA Warramunga Arr 79.29 123 P **P 08 16 39.7 +0.1**
comp=Z,13nm,0.8s,baz=320,slow=4.6,SNR=80
WRA PKKPbc **PKKPbc 08 35 30.7 +1.1**
comp=Z,0.6nm,0.5s,baz=124,slow=2.2,SNR=21
WRA LR LR 08 59 23.7
comp=Z,76nm,18.1s,baz=292,slow=42
comp=Z,13nm,0.8s
WRA Warramunga Arr 79.29 123 P **P 08 16 40.2 +0.6**
WRA Warramunga Arr 79.29 123 P **P 08 16 40.2 +0.6**
WRAB Tennant Creek 79.29 123 *ce*P **P 08 16 40.7 +1.1**
WRAB pmax pmax
comp=Z,21nm,0.7s
BMRM Bremner River 79.49 18 P **P 08 16 40.8 +0.7**
baz=329,SNR=21
MCARA McCarthy VSAT 79.52 17 P **P 08 16 41.3 +1.0**
baz=330,SNR=18
EYAK Cordova Ski Ar 79.55 19 P **P 08 16 41.6 +1.2**
baz=328,SNR=26
M29M Somme Creek 79.60 15 P **P 08 16 42.0 +1.2**
baz=334,SNR=41
CHNA Chernabura Isl 79.62 28 P **P 08 16 41.3 +0.4**
baz=318
YUK3 Moose Creek 79.77 16 P **P 08 16 42.6 +0.7**
baz=332,SNR=30
KDAK Kodiak Island 79.83 23 LR LR 08 54 00.3
comp=Z,272nm,21.4s,baz=13,slow=37
KDAK Kodiak Island 79.83 23 *c i*P **P 08 16 43.3 +1.3**
KDAK pmax pmax
comp=Z,105nm,1.0s
KDAK Kodiak Island 79.83 23 P **P 08 16 43.0 +1.0**
baz=323
OHAK Old Harbor 80.05 24 P **P 08 16 44.4 +1.2**
baz=322,SNR=9.4
SII Sitkinak Islan 80.27 25 P **P 08 16 45.9 +1.4**
baz=322
CTG Chitna Glacier 80.28 16 P **P 08 16 45.6 +1.0**
baz=331,SNR=24
Q23K Middleton Isla 80.34 19 P **P 08 16 45.5 +0.8**
baz=328
WAX Waxell Ridge 80.37 17 P **P 08 16 45.7 +0.7**
KAIM Kayak Island 80.43 18 P **P 08 16 45.8 +0.6**
baz=329,SNR=7.4
LOGN Logan Glacier 80.49 16 IAms_20 IAms_20 08 55 53.2
comp=Z,410nm,20.0s
YUK4 Talbot Arm 80.55 15 P **P 08 16 46.4 +0.3**
baz=334,SNR=26
BGLC Bering Glacier 80.55 18 P **P 08 16 47.0 +1.2**
baz=330
M31M Drury Creek, Y 80.62 13 P **P 08 16 46.5 +0.3**
M31M IAmb IAmb 08 16 48.3
comp=Z,37nm,1.0s
M31M Drury Creek, Y 80.62 13 P **P 08 16 47.1 +0.9**
baz=337,SNR=27
O28M Mount Upton 80.72 16 P **P 08 16 48.2 +1.1**
baz=332,SNR=9.8
MMPY Sheldon Lake, 80.77 11 P **P 08 16 48.5 +1.4**
baz=340,SNR=9.4
N30M Aishikik Lake 80.77 14 P **P 08 16 48.6 +1.5**
baz=335,SNR=20
FARO Faro, Yukon 80.78 12 P **P 08 16 48.0 +0.9**
FARO Faro, Yukon 80.78 12 P **P 08 16 48.0 +0.9**
baz=338,SNR=20
TABL Table Mountain 80.79 17 IAms_20 IAms_20 08 57 14.3
comp=Z,334nm,19.0s
MESA MESA 80.83 17 P **P 08 16 48.7 +1.1**
baz=331,SNR=12
YUK6 Outpost Mounta 80.97 15 P **P 08 16 49.6 +1.2**
baz=334,SNR=16
N31M Braeburn, Yuko 81.01 14 P **P 08 16 48.8 +0.5**
N31M IAmb IAmb 08 16 50.6
comp=Z,66nm,0.9s
N31M Braeburn, Yuko 81.01 14 P **P 08 16 49.4 +1.1**
baz=336,SNR=25
WRGLY Wrigley 81.25 8 P **P 08 16 50.7 +1.2**
baz=346,SNR=11
HYT Haines Junctio 81.26 15 P **P 08 16 51.2 +1.4**
baz=334,SNR=52
PCA Pinnacle 81.30 16 P **P 08 16 51.4 +1.4**
PINM Pinnacle 81.31 16 P **P 08 16 51.3 +1.3**
baz=332,SNR=18
O29M Mount Kennedy 81.50 16 P **P 08 16 51.7 +0.6**
baz=334,SNR=9.5
ASAR Alice Springs 81.55 126 P **P 08 16 52.3 +0.6**
comp=Z,10nm,0.7s,baz=309,slow=5.2,SNR=91
ASAR PKKPbc **PKKPbc 08 35 25.9 +1.2**
comp=Z,0.6nm,0.7s,baz=126,slow=2.6,SNR=8.3
ASAR LR LR 08 58 51.5
comp=Z,102nm,18.7s,baz=315,slow=40
comp=Z,10nm,0.7s
O30N Mendenhall 81.60 14 P **P 08 16 52.7 +1.2**
baz=336,SNR=21
N32M Quiet Lake 81.83 13 P **P 08 16 52.9 +0.2**
baz=338
PNL Peninsula 81.89 16 P **P 08 16 54.2 +1.2**
baz=333,SNR=12
BBTS Babate 81.94 282 LR LR 08 58 32.8
comp=Z,297nm,19.1s,baz=60,slow=40
WHY Whitehorse 81.95 14 P **P 08 16 53.7 +0.3**
baz=337,SNR=12
P30M Million Dollar 82.02 15 P **P 08 16 54.6 +0.9**
baz=335
PMG Port Moresby 82.06 107 P **P 08 16 55.1 +0.6**
comp=Z,14nm,0.8s,baz=305,slow=6.7,SNR=10.0
comp=Z,14nm,0.8s
PMG Port Moresby 82.06 107 P **P 08 16 54.6 +0.1**
PMG IAmb IAmb 08 19 53.8
comp=Z,27nm,0.9s
PMG Port Moresby 82.06 107 *ce*P **P 08 16 55.9 +1.4**
PMG pmax pmax
comp=Z,26nm,1.0s
TGTN Hyland Airport 82.27 10 P **P 08 16 56.3 +1.3**
baz=342,SNR=13
P29M Windy Craggy 82.29 16 P **P 08 16 55.9 +0.8**
baz=334,SNR=5.9
YKA Yellowknife Ar 82.72 4 P **P 08 16 57.4 +0.2**
comp=Z,12nm,0.5s,baz=345,slow=5.2,SNR=80
YKA PP **PP 08 20 06.8 +0.5**
comp=Z,0.8nm,0.6s,baz=284,slow=25,SNR=3.7
comp=Z,12nm,0.5s
PLBC Pleasant Camp 82.75 15 P **P 08 16 58.8 +1.4**
baz=336,SNR=28
P33M Teslin, Yukon 82.75 13 P **P 08 16 58.0 +0.4**
baz=338,SNR=48
KRVT Keravat (AS076 82.93 100 LR LR 08 52 36.4
comp=Z,91nm,21.2s,baz=98,slow=35
SKAG Skagway 82.96 14 P **P 08 17 00.0 +1.5**
SKAG IAmb IAmb 08 17 01.4
comp=Z,50nm,1.0s
SKAG Skagway 82.96 14 P **P 08 16 59.6 +1.1**
baz=336,SNR=14
P32M Atlin 83.16 14 P **P 08 17 00.2 +0.5**
baz=338,SNR=7.5
SUR Sutherland 83.32 223 P **P 08 17 01.8 +0.9**
comp=Z,6.4nm,0.8s,baz=29,slow=13,SNR=2.1
SUR LR LR 08 53 55.8
comp=Z,148nm,20.7s,baz=30,slow=36
comp=Z,6.4nm,0.8s
WTLY Watson Lake, Y 83.54 11 P **P 08 17 01.8 +0.2**
WTLY IAmb IAmb 08 17 03.5
comp=Z,25nm,1.0s
WTLY Watson Lake, Y 83.54 11 P **P 08 17 02.0 +0.4**
baz=342,SNR=9.5
R33M Jennings River 83.85 12 P **P 08 17 04.2 +0.8**
baz=340,SNR=18
Q32M Nakina River 84.02 13 P **P 08 17 05.1 +0.8**
baz=339,SNR=5.9
FLDN Fort Liard 84.16 9 P **P 08 17 05.7 +1.0**
baz=346,SNR=5.4
R32K Eaglecrest 84.22 15 P **P 08 17 06.3 +1.3**
baz=337,SNR=5.3
SCHQ Schefferville 84.40 338 P **P 08 17 05.4 -0.7**
comp=Z,13nm,0.9s,baz=42,slow=5.1,SNR=7.1
comp=Z,13nm,0.9s
SCHQ Schefferville 84.40 338 P **P 08 17 06.0 -0.1**
SCHQ IAmb IAmb 08 17 07.3
comp=Z,16nm,0.9s
DLBC Dease Lake 84.92 12 LR LR 09 01 37.8
comp=Z,174nm,18.6s,baz=288,slow=40
DLBC Dease Lake 84.92 12 P **P 08 17 09.1 +0.4**
DLBC IAmb IAmb 08 17 11.2
comp=Z,24nm,1.0s
DLBC Dease Lake 84.92 12 P **P 08 17 09.6 +1.0**
baz=341,SNR=9.5
S32K Killisnoo 84.95 15 P **P 08 17 10.3 +1.6**
baz=337
SIT Sitka 85.17 15 P **P 08 17 11.1 +1.3**
baz=336
S34M Telegraph Cree 85.22 13 P **P 08 17 11.1 +1.1**
baz=340,SNR=20
T35M Bob Quinn 86.26 13 P **P 08 17 16.7 +1.4**
baz=340
WRAK Wrangell Islan 86.39 14 P **P 08 17 17.3 +1.4**
baz=339
HILA High Level 86.47 6 P **P 08 17 16.5 +0.2**
U33K Whale Pass 86.51 15 P **P 08 17 17.7 +1.2**
baz=338
CTA Charters Tower 87.89 116 P **P 08 17 23.4 -0.3**
comp=Z,10nm,1.1s,baz=331,slow=4.6,SNR=14
CTA LR LR 09 00 30.7
comp=Z,80nm,21.9s,baz=264,slow=38
comp=Z,10nm,1.1s
CTAO Charters Tower 87.89 116 P **P 08 17 24.1 +0.4**
CTAO IAmb IAmb 08 17 25.5
comp=Z,58nm,1.8s
CTAO Charters Tower 87.89 116 P **P 08 17 24.1 +0.4**
CTAO pmax pmax
comp=Z,58nm,1.8s
FFC Flin Flon 90.66 357 P **P 08 17 36.4 +0.2**
FFC IAmb IAmb 08 17 38.3
comp=Z,33nm,0.9s
FFC Flin Flon 90.66 357 P **P 08 17 36.4 +0.2**
FFC pmax pmax
comp=Z,33nm,0.9s
BBB Bella Bella 91.21 13 LR LR 09 04 12.7
comp=Z,204nm,18.1s,baz=336,slow=39
EDM Edmonton 92.03 4 P **P 08 17 43.0 +0.3**
EDM Edmonton 92.03 4 P **P 08 17 43.0 +0.3**
EDM pmax pmax
comp=Z,90nm,1.3s
STKA Stephens Creek 92.09 128 P **P 08 17 43.7 +0.7**
comp=Z,1.0nm,0.4s,baz=320,slow=6.4,SNR=4.4
STKA LR LR 09 07 39.4
comp=Z,92nm,18.1s,baz=264,slow=41
comp=Z,1.0nm,0.4s
STKA Stephens Creek 92.09 128 *i*P **P 08 17 44.1 +1.1**
HNR Honiara 92.29 100 LR LR 09 01 44.2
comp=Z,548nm,18.1s,baz=296,slow=37
LBNH Lisbon 95.25 336 P **P 08 17 57.0 -0.6**
baz=28
LONY Lake Ozonia 95.77 338 P **P 08 17 59.5 -0.4**
baz=26
EYMN Ely 96.47 350 P **P 08 18 02.3 -0.8**
baz=12
NEW Newport 96.65 7 LR LR 09 06 50.4
comp=Z,466nm,18.7s,baz=1.0,slow=39
NEW Newport 96.65 7 P **P 08 18 03.8 -0.1**
baz=351
AGMN Agassiz Nation 96.65 353 P **P 08 18 03.3 -0.6**
AGMN IAmb IAmb 08 18 05.3
comp=Z,12nm,1.1s
AGMN Agassiz Nation 96.65 353 P **P 08 18 03.3 -0.6**
baz=8.6
HRV Adam Dziewonsk 96.66 335 P **P 08 18 01.4 -2.6**
baz=28
SADO Sadowa 96.96 341 LR LR 09 02 24.7
comp=Z,190nm,18.3s,baz=12,slow=36
DGMT Dagmar 96.98 359 P **P 08 18 06.1 +0.7**
DGMT Dagmar 96.98 359 P **P 08 18 05.8 +0.4**
baz=1.8
L61B Northampton 97.09 336 P Pdif 08 18 06.3 +0.2
baz=27
EGMT Eagleton 97.39 2 P **P 08 18 06.3 -1.1**
EGMT IAmb IAmb 08 18 10.1
comp=Z,23nm,1.4s
EGMT Eagleton 97.39 2 P **P 08 18 07.1 -0.3**
baz=357
BINY Binghamton 98.39 338 P **P 08 18 11.8 -0.1**
baz=25
LAO LASA Array 98.79 360 Pdif 08 18 14.4 +0.8
LAO LASA Array 98.79 360 P Pdif 08 18 14.9 +1.2
baz=0.1
BOZ Bozeman (W) 99.73 4 P **Pdif 08 18 17.5 -0.5**
baz=356
RLMT Red Lodge 100.31 2 P **Pdif 08 18 20.7 +0.1**
baz=358
ECSD EROS Data Cent 101.24 353 P **Pdif 08 18 25.5 +1.0**
baz=8.1
RSSD Black Hills 101.33 358 P **Pdif 08 18 25.7 +0.5**
baz=1.9
LOHW Long Hollow 101.76 3 IAms_20 IAms_20 09 09 35.7
comp=Z,344nm,19.0s
PDAR Pinedale Array 102.65 2 P **Pdif 08 18 31.2 +0.1**
comp=Z,0.3nm,0.7s,baz=100,slow=3.7,SNR=2.4
PDAR PKiKP **PKiKP 08 22 51.4 -0.6**
comp=Z,0.7nm,0.7s,baz=55,slow=3.4,SNR=4.1
NVAR Mina Array Bea 106.20 10 PKiKP **PKiKP 08 22 56.4 -2.1**
comp=Z,0.1nm,0.4s,baz=282,slow=4.5,SNR=2.7
OK051 E0350 and S346 108.41 352 IAms_20 IAms_20 08 53 20.8
comp=Z,231nm,19.0s
PLAL Pickwick Lake 108.42 344 IAms_20 IAms_20 08 58 53.1
comp=Z,178nm,18.0s
OK031 S. Brethren Rd 108.96 352 IAms_20 IAms_20 09 09 40.2
comp=Z,266nm,21.0s
JCT Junction City 114.68 354 P PKPdf 08 23 14.7 +0.2
baz=5.9
TXAR Lajitas Array 116.06 357 PKP **PKiKP 08 23 17.2 0.0**
comp=Z,0.7nm,0.8s,baz=211,slow=1.1,SNR=10
TXAR PP **PP 08 24 17.0 -3.5**
comp=Z,1.5nm,0.9s,baz=25,slow=5.0,SNR=4.2
TXAR PKKPbc **PKKPbc 08 33 47.0 -0.1**
comp=Z,0.4nm,0.9s,baz=187,slow=6.4,SNR=4.3
TROLL Troll, Antarti 117.31 199 PKPdf **PKiKP 08 23 19.2 +0.9**
SNAA Sanae 118.66 201 IAms_20 IAms_20 09 13 44.8
comp=Z,159nm,22.0s
VNA2 Neumayer--Watz 119.73 202 PKPdf **PKiKP 08 23 23.7 +0.9**
baz=18,slow=3.0
VNA1 Neumayer--Stat 119.91 202 PKPdf **PKiKP 08 23 24.3 +1.2**
VNA3 Neumayer Olymp 120.54 202 PKPdf **PKiKP 08 23 24.8 +0.3**
VNDA Vanda 123.38 165 PKP **PKPdf 08 23 28.4 -1.2**
comp=Z,1.6nm,0.9s,baz=279,slow=5.2,SNR=9.0
VNDA PP **PP 08 25 08.8 -2.6**
comp=Z,0.6nm,0.8s,baz=269,slow=4.8,SNR=3.1
ROSC El Rosal 130.31 316 PKP **PKPdf 08 23 44.4 -0.9**
comp=Z,5.9nm,0.4s,baz=42,slow=22,SNR=2.7
CPUP Villa Florida 137.33 268 PKP **PKPdf 08 23 56.3 -1.3**
comp=Z,1.6nm,0.6s,baz=44,slow=3.7,SNR=3.7
CPUP PP **PP 08 26 41.9 -1.4**
comp=Z,1.6nm,0.8s,baz=156,slow=1.0,SNR=4.0
LPAZ La Paz 141.19 289 PKP **PKPdf 08 24 04.2 -1.4**
comp=Z,0.8nm,0.5s,baz=49,slow=3.1,SNR=3.9
TCA Tanti 145.05 264 *e*P **PKPbc 08 24 09.5 -1.4**
CYA Choya 145.10 269 *e*P **PKPbc 08 24 09.7 -1.3**
MRA San Martin 146.27 262 *e*P **PKPbc 08 24 14.5 -0.1**
APLL PUNTA DE LOS L 146.35 266 *e*P **PKPbc 08 24 14.7 -0.1**
ACLC CERRO LA CRUZ 146.38 268 *e*P **PKPbc 08 24 15.4 +0.3**
ACHE Chepes 146.69 265 *e*P **PKPbc 08 24 15.8 -0.2**
AVFE Valle Fertil 147.19 266 *e*P **PKPbc 08 24 16.3 -1.0**
ACDV Cuesta del Vie 148.41 268 *e*P **PKPbc 08 24 19.7 -1.0**
ACCO Cerro Coronel 148.49 267 *e*P **PKPbc 08 24 20.0 -1.1**
AROD Rodeo 148.69 268 *e*P **PKPbc 08 24 22.3 +0.7**
ASAL Salagasta 148.86 263 *e*P **PKPdf 08 24 19.6 +1.9**
ARCO CERRO ARCO 149.00 263 *e*P **PKiKP 08 24 23.1 -0.4**
RTLS Leoncito 149.03 265 *e*P **PKPbc 08 24 20.6 -1.8**
PLCA Paso Flores 151.28 248 PKPbc **PKiKP 08 24 28.0 +0.2**
comp=Z,7.2nm,1.0s,baz=125,slow=3.3,SNR=3.0

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*NEIC **01** 08:05:13.7±1.2,58°.8S±0°.1×26°.2W±0°.2,h136km±6km, mb4.6/39,Error ellipse: s-maj=16.0km s-min=14.0km az=199.0*
*IDC **01** 08:05:16.1±4.5,58°.73S×26°.18W,h158km±43km,mb4.0/10, mbtmp4.5/12,MS3.1/8,Error ellipse: s-maj=15.9km s-min=15.4km az=19.0*
ISC 01 08:05:14.6±0.5,58°.83S±0°.07×26°.22W±0°.08,h150km,n75, σ1930/66,**mb4.5/26,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.27**	**304**	**Pn**	**Pn**	**08 06 57.0**	**-1.2**
VNA1	**Neumayer--Stat**	**14.03**	**155**	P	**P**	**08 08 29.3**	**-0.2**
VNA1				S	**Sn**	**08 10 55.7**	**-5.8**
VNA3	**Neumayer Olymp**	**14.20**	**158**	P	**P**	**08 08 31.1**	**-0.4**
VNA3				S	Sn	08 10 56.8	-8.9
VNA2	**Neumayer--Watz**	**14.43**	**155**	P	**P**	**08 08 33.9**	**-0.1**
baz=313,slow=14							
ESPZ	**Base Esperanza**	**15.46**	**240**	Pn	**Pn**	**08 08 44.1**	**-0.1**
SNAA	**Sanae**	**16.00**	**153**	P	**P**	**08 08 56.3**	**+4.8**
SNAA	**Sanae**	**16.00**	**153**	P	**P**	**08 08 51.4**	**0.0**
34nm,1.2s,baz=298,slow=9.6,SNR=21							
SNAA				LR	LR	08 13 16.9	
comp=Z,45nm,21.8s,baz=12,slow=30							
SNAA	**Sanae**	**16.00**	**153**	P	**P**	**08 08 51.5**	**0.0**
TROLL	**Troll, Antarti**	**17.54**	**150**	P	Pn	08 09 16.9	+7.3
PMSA	**Palmer Station**	**18.60**	**235**	P	**Pn**	**08 09 22.1**	**+0.1**
30nm,0.9s,baz=69,slow=7.8,SNR=4.8							
PMSA	**Palmer Station**	**18.60**	**235**	P	**Pn**	**08 09 22.2**	**+0.1**
BELA	**Belgrano 2**	**19.34**	**185**	P	**P**	**08 09 27.5**	**-0.3**
EFI	**East Falkland**	**19.36**	**278**	P	**P**	**08 09 28.7**	**+0.4**
EFI				IAmb	IAmb	08 09 39.6	
comp=Z,54nm,1.4s							
MG02	**Cerro Sombrero**	**24.56**	**265**	P	**P**	**08 10 20.2**	**+0.1**
MG05	**Puerto Natales**	**26.86**	**265**	P	**P**	**08 10 40.2**	**-0.5**
MG05				IAmb	IAmb	08 10 53.5	
comp=Z,20nm,1.1s							
GO09	**Cerro Castillo**	**27.00**	**266**	P	**P**	**08 10 41.4**	**-0.7**
GO09				IAmb	IAmb	08 11 09.3	
comp=Z,14nm,1.2s							
TRQA	**Tornquist**	**30.96**	**296**	P	**P**	**08 11 18.1**	**+0.7**
QSPA	**South Pole Qui**	**31.41**	**180**	P	**P**	**08 11 22.1**	**+1.0**
comp=Z,4.9nm,0.7s,baz=202,slow=2.1,SNR=41							
QSPA				LR	LR	08 25 04.7	
comp=Z,31nm,18.4s,baz=193,slow=38							
comp=Z,4.9nm,0.7s							
QSPA	**South Pole Qui**	**31.41**	**180**	P	**P**	**08 11 22.5**	**+1.4**
QSPA				IAmb	IAmb	08 11 24.5	
comp=Z,20nm,1.4s							
LL07	**Hotel Espejo d**	**33.05**	**278**	P	**P**	**08 11 37.0**	**+1.6**
PLCA	**Paso Flores**	**33.08**	**283**	P	**P**	**08 11 36.5**	**+0.6**
comp=Z,1.3nm,0.6s,baz=97,slow=5.5,SNR=5.4							
PLCA				pP	**pwP**	**08 12 08.5**	**-2.5**
comp=Z,3.3nm,1.0s,baz=116,slow=12,SNR=4.4							
PLCA				LR	LR	08 25 01.7	
comp=Z,44nm,20.0s,baz=131,slow=36							
comp=Z,1.3nm,0.6s							
PLCA	**Paso Flores**	**33.08**	**283**	P	**P**	**08 11 36.2**	**+0.4**
GO06	**Curarrehue**	**34.41**	**284**	P	**P**	**08 11 46.4**	**-1.0**
GO06				IAmb	IAmb	08 12 01.4	
comp=Z,8.1nm,1.5s							
LR04	**Corral**	**35.18**	**281**	P	**P**	**08 11 53.5**	**-0.3**
MAW	**Mawson**	**37.62**	**141**	P	**P**	**08 12 15.4**	**+1.3**
comp=Z,2.2nm,0.5s,baz=229,slow=8.9,SNR=10							
MAW				LR	LR	08 27 30.2	
comp=Z,45nm,18.4s,baz=242,slow=35							
comp=Z,2.2nm,0.5s							
MAW	**Mawson**	**37.62**	**141**		**P**	**08 12 15.1**	**+0.9**
BO02	**Sierra Bellavi**	**37.80**	**290**	P	**P**	**08 12 15.8**	**-0.4**
BO02				IAmb	IAmb	08 12 30.7	
comp=Z,15nm,1.2s							
GO05	**Hualá**	**38.19**	**288**	P	**P**	**08 12 18.9**	**-0.5**
GO05				IAmb	IAmb	08 12 28.7	
comp=Z,12nm,1.1s							
BO04	**La Punta**	**38.36**	**291**	P	**P**	**08 12 21.6**	**+0.7**
BO04				IAmb	IAmb	08 12 28.3	
comp=Z,15nm,1.2s							
MT09	**Talagante**	**38.72**	**290**	P	**P**	**08 12 24.1**	**+0.1**
MT09				IAmb	IAmb	08 12 41.5	
comp=Z,28nm,1.4s							

MT01	Popeta	38.78	290	P	P	08 12 24.6	+0.3
MT01				IAmb	IAmb	08 12 42.0	
	comp=Z,26nm,1.5s						
CPUP	Villa Florida	39.06	313	LR	LR	08 29 40.2	
	comp=Z,25nm,18.8s,baz=162,slow=38						
MT02	Curacav	39.21	291	P	P	08 12 28.6	+0.7
TRCB	Terra Rica	40.63	321	P	P	08 12 39.7	0.0
TRCB				IAmb	IAmb	08 13 05.2	
	comp=Z,7.4nm,0.7s						
CO02	Combarbal	40.83	293	P	P	08 12 42.0	+0.6
CO02				IAmb	IAmb	08 13 10.5	
	comp=Z,37nm,1.5s						
SUR	Sutherland	40.96	71	P	P	08 12 43.2	+0.7
	comp=Z,4.4nm,0.8s,baz=214,slow=8.4,SNR=5.8						
SUR				LR	LR	08 26 08.9	
	comp=Z,44nm,20.1s,baz=132,slow=31						
	comp=Z,4.4nm,0.8s						
SUR	Sutherland	40.96	71	P	P	08 12 42.6	+0.1
AC05	El Transito	42.46	295	P	P	08 12 55.2	+0.5
AC05				IAmb	IAmb	08 13 18.4	
	comp=Z,9.7nm,0.9s						
LCO	Las Campanas	42.51	295	P	P	08 12 56.1	+0.8
LCO				IAmb	IAmb	08 13 20.2	
	comp=Z,22nm,1.5s						
SOE	Somerset East	43.06	76	P	P	08 12 59.1	-0.3
SOE				IAmb	IAmb	08 13 21.8	
	comp=Z,25nm,1.2s						
SBA	Scott Base	43.33	184	P	P	08 13 03.8	+2.9
VNDA	Vanda	43.81	183	P	P	08 13 07.0	+2.2
	comp=Z,3.9nm,0.7s,baz=187,slow=6.4,SNR=35						
	comp=Z,3.9nm,0.7s						
VNDA	Vanda	43.81	183	P	P	08 13 06.9	+2.1
VNDA				IAmb	IAmb	08 13 07.9	
	comp=Z,5.4nm,0.8s						
BOSA	Boshof	46.23	72	P	P	08 13 24.4	-0.3
	comp=Z,9.7nm,0.6s,baz=214,slow=7.2,SNR=37						
	comp=Z,9.7nm,0.6s						
BOSA	Boshof	46.23	72		P	08 13 24.2	-0.3
BOSA				IAmb	IAmb	08 13 25.2	
	comp=Z,13nm,0.7s						
LVC	Limon Verde	47.18	301	LR	LR	08 35 17.4	
	comp=Z,12nm,18.3s,baz=176,slow=38						
LBTB	Lobatse	49.39	70	P	P	08 13 48.5	-0.4
LBTB				IAmb	IAmb	08 13 49.6	
	comp=Z,9.7nm,0.6s						
POGA	Pongola	50.51	78	P	P	08 13 56.7	-0.5
POGA				IAmb	IAmb	08 14 23.8	
	comp=Z,27nm,1.5s						
H10S2	ASCENSION HYDR	50.54	15	T	T	09 08 48.9	
	baz=32,slow=74,SNR=5.4						
H10S3	ASCENSION HYDR	50.55	15	T	T	09 08 46.9	
	baz=188,slow=74,SNR=5.0						
PB16	IPOC Station P	51.20	303	P	P	08 14 03.0	-0.1
H10N1	ASCENSION HYDR	51.66	15	T	T	09 10 13.2	
	baz=181,slow=71,SNR=3.3						
H10N3	ASCENSION HYDR	51.66	15	T	T	09 10 09.7	
	baz=181,slow=71,SNR=4.1						
H10N2	ASCENSION HYDR	51.68	15	T	T	09 10 13.8	
	baz=181,slow=71,SNR=7.6						
LPAZ	La Paz	52.43	306	P	P	08 14 12.7	+0.4
	comp=Z,0.7nm,0.4s,baz=192,slow=9.3,SNR=8.3						
	comp=Z,0.7nm,0.4s						
LPAZ	La Paz	52.43	306	P	P	08 14 12.2	0.0
NNA	Nana	60.06	299	LR	LR	08 39 35.5	
	comp=Z,17nm,21.1s,baz=154,slow=34						
DBIC	Dimbokro	67.51	23	P	P	08 15 54.2	0.0
	comp=Z,1.5nm,0.3s,baz=180,slow=3.9,SNR=7.0						
	comp=Z,1.5nm,0.3s						
DBIC	Dimbokro	67.51	23	P	P	08 15 54.3	0.0
DBIC				IAmb	IAmb	08 15 59.0	
	comp=Z,14nm,1.4s						
MCRA	Macar, Loja	68.20	300	P	P	08 15 59.0	+0.3
TOA0	Torodi Ar. Sit	75.25	28	P	P	08 16 40.6	-0.1
TOA0				IAmb	IAmb	08 16 51.3	
	comp=Z,9.2nm,0.9s						
TORD	Torodi Ar. Bea	75.25	28	P	P	08 16 41.3	+0.7
	comp=Z,4.9nm,0.4s,baz=198,slow=6.0,SNR=1.5						
	comp=Z,4.9nm,0.4s						
STKA	Stephens Creek	89.06	170	P	P	08 17 53.9	+1.5
	comp=Z,2.2nm,0.5s,baz=144,slow=14,SNR=4.3						
	comp=Z,2.2nm,0.5s						
FINES	FINESS Array B	126.60	28	PKP	PKiKP	08 23 58.1	-0.6
	comp=Z,2.9nm,0.8s,baz=153,slow=1.3,SNR=9.4						
ARCES	ARCESS Array B	133.33	22	PKP	PKPdf	08 24 10.2	-0.7
	comp=Z,3.6nm,0.9s,baz=209,slow=2.5,SNR=7.6						
MKAR	Makanchi Array	137.23	74	PKhKP	PKPpre	08 24 06.9	
	comp=Z,0.4nm,0.7s,baz=174,slow=1.9,SNR=1.9						
YKA	Yellowknife Ar	138.56	315	PKP	PKPdf	08 24 20.3	-0.4
	comp=Z,1.5nm,0.6s,baz=136,slow=1.8,SNR=5.2						
ZALV	Zalesovo Beam	143.06	67	PKhKP	PKPpre	08 24 23.9	
	comp=Z,1.6nm,0.4s,baz=230,slow=5.3,SNR=6.3						
P33M	Teslin, Yukon	144.51	304	PKPdf	PKPdf	08 24 32.1	+0.5
C36M	Paulatuk	145.46	322	PKPdf	PKPab	08 24 33.8	0.0
FARO	Faro, Yukon	145.73	307	PKPdf	PKPab	08 24 33.9	-1.1
DAWY	Dawson	148.99	308	PKPbc	PKiKP	08 24 43.4	-1.0
BCAR	Beaver Creek A	149.61	306	PKPbc	PKiKP	08 24 45.0	-0.7
SONM	Songino Array	150.28	91	PKPbc	PKiKP	08 24 47.3	-0.4
	comp=Z,5.2nm,1.0s,baz=216,slow=3.7,SNR=10						
ILAR	Eielson Array	152.30	308	PKPbc	PKPbc	08 24 49.7	-1.2
	comp=Z,0.4nm,0.5s,baz=147,slow=3.3,SNR=5.0						

*IDC **01** 08:06:28.4±1.4, 34°.62N×141°.72E, h0km, mb3.7/4, mbtmp3.8/9, ML3.0/4, Error ellipse: s-maj=31.0km s-min=18.8km az=73.0*
*JMA **01** 08:06:30.4±0.7, 35°N±2°×14°2E±°, h40km±2km, MV3.3/31, FAR SE OFF BOSO PEN*

ISC 01 08:06:31.8±1.0, 34°.61N±0°.06×141°.63E±0°.09, h27km, n22, σ1§69/20, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.54	275	P	Pb	08 06 41.5	-1.0
BSO1				eX		08 06 48.0	
BSO3	Boso 3	0.94	282	P	Pn	08 06 48.0	-1.0
BSO4	Boso 4	1.13	290	P	Pn	08 06 50.6	-1.1
CHOJ	Chosi	1.26	330	P	Pn	08 06 52.6	-1.0
JKUC	kamogawauchiur	1.30	295	P	Pn	08 06 52.5	-1.7
JKUC				eS	Sn	08 07 09.2	-1.5
JIM2	Oshima 3	1.82	274	P	Pn	08 07 00.6	-0.8
JHJ	Hachijo jima 2	2.14	226	Pn	Pn	08 07 05.8	+0.1
	33nm,0.3s,baz=260,slow=7.2,SNR=8.4						
JHJ				Sn	Sn	08 07 31.2	-0.2
	49nm,0.3s,baz=86,slow=23,SNR=6.7						
	64nm,0.3s						
JOD2	Odawara 2	2.19	288	P	Pn	08 07 05.5	-0.9
MJAR	Matsushiro Arr	3.39	306	Pn	Pn	08 07 22.5	-0.5
	1.5nm,0.3s,baz=225,slow=57,SNR=18						
MJAR				Sn	Sn	08 08 05.5	+3.2
	0.7nm,0.3s,baz=79,slow=20,SNR=6.5						
	4.2nm,0.3s						
JCJ	Chichijima	7.51	176	Pn	Pn	08 08 18.4	-1.1
	33nm,0.4s,baz=279,slow=19,SNR=5.2						
JCJ				Sn	Sn	08 09 39.9	-3.8
	4.8nm,0.3s,baz=319,slow=20,SNR=1.9						
KSRS	Korea Array	11.46	288	Pn	Pn	08 09 16.4	+2.8
	0.1nm,0.3s,baz=93,slow=14,SNR=2.5						
	0.9nm,0.6s						
USRK	Ussuriysk Ar.	12.13	325	Pn	Pn	08 09 21.7	-1.0
	0.2nm,0.3s,baz=130,slow=14,SNR=3.1						
	2.8nm,0.7s						
PETK	Petropavlovsk-	21.73	27	P	P	08 11 21.0	+0.2
	2.2nm,0.9s,baz=216,slow=7.4,SNR=1.4						
	2.2nm,0.9s						
H11N2	WAKE ISLAND Hy	26.82	117	T	T	08 40 24.6	
	baz=310						
H11N1	WAKE ISLAND Hy	26.83	117	T	T	08 40 31.7	
	baz=310						
H11N3	WAKE ISLAND Hy	26.84	117	T	T	08 40 32.0	
	baz=310						
H11S1	WAKE ISLAND Hy	27.46	119	T	T	08 41 24.0	
	baz=312						
H11S3	WAKE ISLAND Hy	27.46	119	T	T	08 41 23.8	
	baz=312						
H11S2	WAKE ISLAND Hy	27.47	119	T	T	08 41 23.0	
	baz=312						
KURBB	Kurchatov Arra	47.66	310	P	P	08 15 06.3	+0.7
	1.3nm,0.4s,baz=78,slow=7.5,SNR=1.6						
	1.3nm,0.4s						
WRA	Warramunga Arr	54.69	188	P	P	08 15 59.7	+1.1
	0.6nm,0.7s,baz=1.7,slow=7.5,SNR=9.4						
	0.6nm,0.7s						
ASAR	Alice Springs	58.42	188	P	P	08 16 26.1	+1.0
	0.3nm,0.6s,baz=2.6,slow=5.6,SNR=4.7						
	0.3nm,0.6s						

IDC 01 08:12:42.6±4.0, 53°.51N×90°.88E, h0km, mbtmp3.6/3, ML3.0/3, Error ellipse: s-maj=36.4km s-min=33.9km az=173.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.63	279	I		08 38 40.0	
	baz=90,slow=332,SNR=2.6						
ZALV	Zalesovo Beam	3.63	279	Pn	Pn	08 13 42.2	+2.2
	3.0nm,0.3s,baz=94,slow=15,SNR=11						
ZALV				Lg	Lg	08 14 34.3	
	3.8nm,0.3s,baz=97,slow=25,SNR=7.6						
	6.1nm,0.3s						
KURBB	Kurchatov Arra	8.14	254	Pn	Pn	08 14 40.9	-1.1
	0.2nm,0.3s,baz=62,slow=14,SNR=1.6						
KURBB				Sn	Sn	08 16 13.0	-1.6
	0.1nm,0.3s,baz=67,slow=24,SNR=4.7						
KURBB				Lg	Lg	08 17 00.8	
	0.1nm,0.3s,baz=68,slow=35,SNR=4.1						
	3.1nm,0.7s						
MKAR	Makanchi Array	8.69	223	Pn	Pn	08 14 50.6	+1.0
	0.3nm,0.3s,baz=38,slow=13,SNR=2.2						
MKAR				Lg	Lg	08 17 18.0	
	baz=34,slow=32						
	2.1nm,0.7s						
SONM	Songino Array	11.36	114	Lg	Lg	08 18 50.2	
	0.3nm,0.3s,baz=309,slow=30,SNR=8.6						

*ISU **01** 08:13:11, 40°.96N×71°.01E, h5km*
*SOME **01** 08:13:12.7, 41°.18N×71°.15E, h15km*
*KRNET **01** 08:13:12.0±0.1, 41°.04N×71°.06E, h17km, mb4.2*
*MOS **01** 08:13:12.1±1.0, 41°.06N×71°.01E, h10km, mb4.3/1, Error ellipse: s-maj=9.4km s-min=5.7km az=74.8*
MOS Felt (III) at Tengi, Kok-Tash; (II-III) at Sumsar, Kara-Unkur, Besh-Tash.
*NNC **01** 08:13:15.1±1.4, 41°.24N×71°.16E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=12.3km s-min=4.0km az=10.0*

ISC 01 08:13:11.2±1.1, 41°.12N±0°.02×71°.12E±0°.02, h4km±9km, n103, σ1§94/157, 22C-25D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.41	2	⇑iP	Pb	08 13 20.6	-0.7
	baz=12						
TRKS				⇑eS	Sb	08 13 26.7	-1.3
	baz=12						
TRKS	Terek-Say	0.41	2	i PG	Pb	08 13 20.6	-0.7
TRKS				eS	Sb	08 13 26.7	-1.3
NAM	Namangan	0.42	107	P	Pg	08 13 21.5	+2.1
NAM				S	Sb	08 13 29.4	+1.4
MINT	Mingtut	0.66	190	P	Pg	08 13 22.9	-0.9
FRG	Fergana	0.89	146	P	Pb	08 13 29.5	+0.2
FRG				S	Sb	08 13 41.7	+0.1
CHMI	Chimion	0.90	160	P	Pb	08 13 29.0	-0.4
CHMG	Chimgan	0.94	298	P	Pb	08 13 29.6	-0.7
CHMG				S	Sg	08 13 43.8	+2.2
CHRV	Charvak	1.03	301	P	Pb	08 13 31.5	-0.1
BTK	Batken	1.08	193	⇓eP	Pb	08 13 30.7	-1.8
	baz=91						
BTK				⇓eS	Sb	08 13 44.3	-2.7
	baz=91						
BTK	Batken	1.08	193	ePG	Pb	08 13 30.7	-1.8
BTK				eS	Sb	08 13 44.3	-2.7
TSTA	Tashata	1.16	117	P	Pn	08 13 34.4	+0.1
TSTA				S	Sg	08 13 51.2	+2.8
YBZ	Yangibazar	1.18	280	P	Pn	08 13 33.5	-1.0
YBZ				S	Sb	08 13 49.8	+0.1
IUG	Iuzhnay	1.32	322	ePG	Pn	08 13 34.4	-2.1
IUG				e		08 13 53.6	
IUG	Iuzhnay	1.32	322	eP	Pg	08 13 37.4	+0.9
	963nm,0.3s						
IUG				eS	Sg	08 13 55.4	+1.9
	2μm,0.4s						
IUG	Iuzhnay	1.32	322	ePn	Pn	08 13 34.4	-2.1
	baz=325						
IUG				ePg	Pb	08 13 36.2	-0.4
	baz=325						
IUG				eLg	Lg	08 13 53.7	
	baz=325						
IUG	Iuzhnay	1.32	322	P	Pg	08 13 37.4	+0.9
	5μm,0.4s						
IUG				S	Sg	08 13 55.4	+1.9
	2μm,0.4s						
OHH	Osh	1.39	115	⇑eP	Pn	08 13 37.9	+0.4
	baz=11						
OHH				⇑iS	Sb	08 13 56.5	+0.5
	baz=11						
OHH	Osh	1.39	115	ePG	Pn	08 13 37.9	+0.4
OHH				i S	Sb	08 13 56.5	+0.5
TAS	Tashkent	1.40	279	⇑eP	Pn	08 13 37.1	-0.4
	baz=83						
TAS				⇑eS	Sn	08 13 55.3	-1.1
	baz=83						
TAS	Tashkent	1.40	279	ePG	Pn	08 13 37.1	-0.4
TAS				eS	Sn	08 13 55.3	-1.1
TAS	Tashkent	1.40	279	P	Pn	08 13 38.0	+0.5
TAS				S	Sb	08 13 57.0	+1.0
NZBK	Nazarbek	1.52	275	P	Pn	08 13 40.2	+1.0
NZBK				S	Sg	08 14 01.5	+1.5
DRK	Karamyk	1.71	162	⇓eP	Pn	08 13 42.7	+0.6
	baz=59						
DRK				⇓iS	Sn	08 14 04.5	-0.1
	baz=59						
DZA	Taraz	1.78	5	ePN	Pg	08 13 46.1	+0.7
DZA				e		08 14 11.6	
DZA	Taraz	1.78	5	eP	Pg	08 13 46.8	+1.4
	632nm,0.3s						
DZA				eS	Sg	08 14 11.8	+3.3
	2μm,0.3s						
DZA	Taraz	1.78	5	ePg	Pg	08 13 46.2	+0.7
	baz=8.2						
DZA				eLg	Lg	08 14 11.7	
	baz=8.2						
KK31	Karatay Array	2.04	347	PN	Pg	08 13 49.7	-0.6
KK31				LG	Lg	08 14 18.4	
KK31	Karatay Array	2.04	347	Pg	Pg	08 13 49.7	-0.6
	76nm,0.3s,baz=152,slow=16,SNR=422						
KK31				⇑Lg	Lg	08 14 18.4	
	126nm,0.3s,baz=160,slow=27,SNR=24						
KKAR	Karatay Array	2.04	347	⇑eP	Pb	08 13 49.3	+0.4
	baz=49						
KKAR				⇑eS	Sg	08 14 16.7	0.0
	baz=49						
KKAR	Karatay Array	2.04	347	ePN	Pb	08 13 49.3	+0.4
KKAR				eS	Sg	08 14 16.7	0.0
AML	Almayashu	2.18	61	P	Pg	08 13 53.6	+0.6
	SNR=13						
AML	Almayashu	2.18	61	i PN	Pb	08 13 51.7	+0.2
AML				eS	Sg	08 14 20.6	-0.6
GAR	Garm	2.20	197	⇓eP	Pn	08 13 49.3	+0.6
	baz=96						
GAR				⇓eS	Sn	08 14 16.8	+0.4
	baz=96						
GAR	Garm	2.20	197	ePN	Pn	08 13 49.1	+0.4
GAR				eS	Sn	08 14 16.4	0.0
MRKS	Merke	2.26	43	eP	Pg	08 13 55.0	+0.4
	147nm,0.4s						
MRKS				eS	Sg	08 14 25.7	+1.8
	1μm,0.4s						
MRKS	Merke	2.26	43	Pg	Pg	08 13 55.0	+0.4
	147nm,0.4s						
MRKS				Lg	Lg	08 14 25.7	
	1μm,0.4s						
EKS2	Erkin-Say	2.51	51	P	Pg	08 13 59.7	+0.3
	SNR=16						
EKS2	Erkin-Say	2.51	51	⇓eP	Pb	08 13 56.5	-0.5
	baz=50						
EKS2				⇓eS	Sb	08 14 28.4	+0.1
	baz=50						
EKS2	Erkin-Say	2.51	51	ePN	Pb	08 13 56.5	-0.5
EKS2				eS	Sb	08 14 28.4	+0.1
ARLS	Aral	2.52	72	⇑eP	Pb	08 13 56.3	-0.8
	baz=71						
ARLS				⇑eS	Sb	08 14 28.1	-0.4
	baz=71						
ARLS	Aral	2.52	72	ePN	Pb	08 13 56.3	-0.8
ARLS				eS	Sb	08 14 28.1	-0.4
DZI	Dzhizak	2.70	250	P	Sg	08 14 35.6	-2.5
UCH	Uchtor	2.77	65	P	Pg	08 14 04.2	-0.1
	SNR=8.8						
UCH	Uchtor	2.77	65	⇓eP	Pb	08 14 00.1	-1.5
	baz=64						
UCH				⇓iS	Sb	08 14 34.8	-1.3
	baz=64						
UCH	Uchtor	2.77	65	ePN	Pb	08 14 00.1	-1.5
UCH				i S	Sb	08 14 34.8	-1.3
CHGR	Chuyangaron	2.88	212	⇓eP	Pn	08 13 58.6	+0.6
	baz=12						
CHGR				⇓eS	Sn	08 14 32.8	-0.4
	baz=12						
CHGR	Chuyangaron	2.88	212	ePN	Pn	08 13 58.6	+0.6
CHGR				eS	Sn	08 14 32.8	-0.4
AAK	Ala-Archa	2.94	58	P	Pg	08 14 07.2	-0.3
	SNR=12						
AAK	Ala-Archa	2.94	58	⇓eP	Pb	08 14 02.3	-2.0
	baz=57						
AAK				⇓eS	Sb	08 14 38.6	-2.1
	baz=57						
AAK	Ala-Archa	2.94	58	ePN	Pb	08 14 02.3	-2.0
AAK				eS	Sb	08 14 38.6	-2.1
FRU1	Bishkek	3.12	56	⇓eP	Pb	08 14 04.7	-2.5
	baz=55						
FRU1				⇓eS	Sb	08 14 43.0	-2.6
	baz=55						
FRU1	Bishkek	3.12	56	ePN	Pb	08 14 04.7	-2.5
FRU1				eS	Sb	08 14 43.0	-2.6
KBK	Karagaybulak	3.25	60	P	Pg	08 14 13.2	-0.2
	SNR=5.4						
KBK	Karagaybulak	3.25	60	⇑eP	Pb	08 14 06.5	-3.0
	baz=60						
KBK				⇑eS	Sb	08 14 45.9	-3.5
	baz=60						
CHMS	Chumysh	3.29	54	P	Pg	08 14 13.6	-0.8
	SNR=6.4						
CHMS	Chumysh	3.29	54	⇓eP	Pb	08 14 06.9	-3.3
	baz=53						
CHMS				⇓iS	Sb	08 14 46.9	-3.8
	baz=53						
CHMS	Chumysh	3.29	54	ePN	Pb	08 14 06.9	-3.3
CHMS	Chumysh	3.29	54	⇓Pg	Pg	08 14 13.4	-0.9
	17nm,0.5s						
CHMS				⇑Lg	Lg	08 14 56.3	
	134nm,0.5s						
USP	Ospenovka	3.30	48	P	Pg	08 14 13.2	-1.3
	SNR=5.8						
USP	Ospenovka	3.30	48	⇑eP	Pb	08 14 07.4	-3.0
	baz=48						
USP				⇑eS	Sb	08 14 47.2	-3.8
	baz=48						
USP	Ospenovka	3.30	48	ePN	Pb	08 14 07.4	-3.0
TKM2	Tokmak 2	3.79	60	P	Pg	08 14 21.7	-2.1
	SNR=6.8						
TKM2	Tokmak 2	3.79	60	⇑eP	Pn	08 14 14.0	+3.4
	baz=59						
TKM2				⇑eS	Sb	08 14 59.1	-6.1
	baz=59						
TKM2	Tokmak 2	3.79	60	ePN	Pn	08 14 14.0	+3.4
TKM2	Tokmak 2	3.79	60	⇑Pg	Pg	08 14 23.2	-0.7
	8.8nm,0.3s						
TKM2				⇑Lg	Lg	08 15 11.0	
	73nm,0.4s						
ULHL	Ulahol	4.00	72	⇓eP	Pn	08 14 16.8	+3.3
	baz=71						
ULHL				⇓iS	Sn	08 15 03.8	+2.9
	baz=71						
DGS	Degeres	4.06	57	eP	Pg	08 14 27.5	-1.4
	14nm,0.3s						
DGS				eS	Sg	08 15 21.3	-0.2
	171nm,0.5s						
DGS	Degeres	4.06	57	Pg	Pg	08 14 27.5	-1.4
	14nm,0.3s						
DGS				Lg	Lg	08 15 21.3	
	171nm,0.5s						
KST	Kastek	4.08	60	eP	Pg	08 14 28.1	-1.4
	13nm,0.3s						
KST				eS	Sg	08 15 21.9	-0.5
	165nm,0.3s						
KST	Kastek	4.08	60	Pg	Pg	08 14 28.1	-1.4
	13nm,0.7s						
KST				Lg	Lg	08 15 21.9	
	204nm,0.7s						
KRBS	Karabastau	4.24	51	eP	Pg	08 14 30.6	-1.9
	10nm,0.3s						
KRBS				eS	Sg	08 15 26.4	-1.1
	102nm,0.6s						
KRBS	Karabastau	4.24	51	Pg	Pg	08 14 30.6	-1.9
	22nm,0.4s						
KRBS				Lg	Lg	08 15 26.4	
	102nm,0.6s						
MTBS	Maitube	4.43	61	eP	Pg	08 14 34.3	-1.8
	9.2nm,0.4s						
MTBS				eS	Sg	08 15 32.3	-1.2
	114nm,0.5s						
MTBS	Maitube	4.43	61	Pg	Pg	08 14 34.3	-1.8
	9.2nm,0.4s						
MTBS				Lg	Lg	08 15 32.3	
	114nm,0.5s						
BTLS	Baital	4.47	28	eP	Pg	08 14 35.4	-1.5
	15nm,0.6s						
BTLS				eS	Sg	08 15 34.1	-0.7
	11nm,0.6s						
BTLS	Baital	4.47	28	ePg	Pg	08 14 36.1	-0.7
	baz=29						
BTLS				eLg	Lg	08 15 34.2	
	baz=29						
BTLS	Baital	4.47	28	Pg	Pg	08 14 35.3	-1.5
	15nm,0.6s						
BTLS				Lg	Lg	08 15 34.1	
	11nm,0.6s						
IZV	Izvestkoviy	4.51	63	eP	Pg	08 14 35.4	-2.3
	0.1nm,0.1s						
IZV				eS	Sg	08 15 34.7	-1.5
	56nm,0.4s						
IZV	Izvestkoviy	4.51	63	Pg	Pg	08 14 35.4	-2.3
	0.1nm,0.1s						
IZV				Lg	Lg	08 15 34.7	
	56nm,0.4s						
TNSS	Tian-Shan	4.74	64	ePg	Pg	08 14 44.5	+2.4
	baz=65						
TNSS				eLg	Lg	08 15 49.6	
	baz=65						
KUU	Kurty	4.75	53	eP	Pg	08 14 39.4	-2.8
	12nm,0.6s						
KUU				eS	Sg	08 15 41.2	-2.6
	84nm,0.5s						
KUU	Kurty	4.75	53	ePg	Pg	08 14 41.5	-0.8
	baz=53						
KUU				eLg	Lg	08 15 41.1	
	baz=53						
KUU	Kurty	4.75	53	Pg	Pg	08 14 39.4	-2.8
	12nm,0.6s						
KUU				Lg	Lg	08 15 41.2	
	84nm,0.5s						
KNDC	Almaty	4.82	62	⇓Pg	Pg	08 14 44.4	+0.8
	37nm,0.5s						
KNDC				⇓Lg	Lg	08 15 44.7	
	164nm,0.7s						
MDOK	Medeo	4.86	63	eP	Pg	08 14 42.6	-1.7
	23nm,0.8s						
MDOK				eS	Sg	08 15 46.6	-0.6
	43nm,0.1s						
MDOK	Medeo	4.86	63	ePg	Pg	08 14 41.7	-2.6
	baz=64						
MDOK				eLg	Lg	08 15 45.7	
	baz=64						
MDOK	Medeo	4.86	63	Pg	Pg	08 14 41.7	-2.6
	38nm,1.0s						
MDOK				Pg	Pb	08 14 42.6	+5.6
	23nm,0.8s						
MDOK				⇑Lg	Lg	08 15 45.7	
	72nm,0.6s						
MDOK				Lg	Lg	08 15 46.6	
	43nm,0.7s						
KTBS	Karatobe	4.87	56	eP	Pg	08 14 41.8	-2.6
	18nm,0.6s						
KT

CHKK				*e*S		**Sg**	**08 15 53.7**	**-2.1**
	54nm,0.5s							
CHKK	**Chushkaly**	**5.13**	**56**	Pg		**Pg**	**08 14 46.8**	**-2.6**
	9.1nm,0.4s							
CHKK				Lg		Lg	08 15 53.7	
	54nm,0.5s							
PDGK	**Podgornoye**	**6.59**	**68**	⇓Pg		**Pg**	**08 15 19.8**	**+2.3**
	19nm,1.2s							
PDGK				⇓Lg		Lg	08 16 39.4	
	35nm,0.8s							
BRVK	**Borovoye**	**11.96**	**358**	*i* P		**Pn**	**08 16 04.7**	**+2.3**
BRVK				pmax		pmax		
	comp=Z,12nm,1.1s							
DGZ	**Jazzator, Alta**	**14.29**	**48**	*i* P		**Pn**	**08 16 37.2**	**+2.8**
DGZ				pmax		pmax		
	comp=Z,24nm,1.1s							
ARU	**Arti**	**17.37**	**336***c*	*i* P		**P**	**08 17 14.7**	**-1.0**
ARU				S		**Sn**	**08 20 30.2**	**+2.3**
ARU				pmax		pmax		
	comp=Z,20nm,1.1s							
KIV	**Kislovodsk**	**21.10**	**287**	*e*P		**P**	**08 17 51.9**	**-4.9**
KIV				pmax		pmax		
	comp=Z,9.0nm,1.1s							
ULN	**Ulaanbaatar**	**26.33**	**63**	*i* P		**P**	**08 18 48.7**	**+0.5**
OBN	**Obninsk**	**26.66**	**313**	*e*P		**P**	**08 18 46.6**	**-4.3**
KLMR	**Klimovskoe**	**27.60**	**326**	*e*P		**P**	**08 19 03.7**	**+4.5**
KLMR	**Klimovskoe**	**27.60**	**326**	*e*P		**P**	**08 19 03.8**	**+4.5**
KLMR				AMP			08 19 05.6	
	comp=Z,43nm,1.8s							
PZH	**PanZhiHua**	**29.14**	**110**	P		P	08 19 18.2	+4.7

SSNC 01 08:14:36.3±1.8, 19°.63N×73°.12W, h7^{km}±16^{km}, MD2.6, ML1.5, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**1.18**	**297**	*e*P		Pg	08 14 55.6	-3.4
MASC				*e*S		Sg	08 15 10.3	-4.1
MASC				IAML			08 15 13.1	
	comp=E,11nm,0.3s							
MASC				IAML			08 15 13.5	
	comp=N,9.6nm,0.2s							
GTBY	**Guantanamo Bay**	**1.90**	**279**	*e*P		Pn	08 15 06.7	-2.5
GTBY				*e*S		Sn	08 15 29.8	-3.6
RCC	**Rio Carpintero**	**2.46**	**279**	*e*P		Pn	08 15 13.6	-3.2
RCC				*e*S		Sn	08 15 43.0	-4.1
RCC				*e*Sg		Sb	08 15 45.8	-5.5

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*FUNV **01** 08:16:41.4, 11°.71N×70°.38W, h12^{km}, MW3.6*

ISC 01 08:16:40.7±1.7, 11°.73N±0°.09×70°.50W±0°.03, h31^{km}±14^{km}, n29, σ1°48/38, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DABV	**Dabajuro**	**0.81**	**189**	*e*P		**Pb**	**08 16 56.2**	**-0.2**
SIQV	**Siquisique**	**1.27**	**147**	*e*P		**Pn**	**08 17 03.3**	**+0.8**
SIQV				*e*S		**Sn**	**08 17 19.2**	**+0.7**
URIC	**Uribia, Colomb**	**1.46**	**269**	*i*		**Sb**	**08 17 25.5**	**+0.1**
	comp=Z,832nm,0.2s							
URIC	**Uribia, Colomb**	**1.46**	**269**	*e*P		**Pn**	**08 17 05.5**	**+0.5**
URIC	**Uribia, Colomb**	**1.46**	**269**	*e*S		**Sn**	**08 17 23.8**	**+0.7**
JACV	**Jacura**	**1.76**	**111**	*e*P		**Pn**	**08 17 10.1**	**+0.9**
JACV				*e*S		**Sn**	**08 17 30.7**	**+0.1**
CURV	**Curarigua**	**1.79**	**163**	*e*P		**Pb**	**08 17 12.3**	**-0.6**
CURV				*e*S		**Sn**	**08 17 32.0**	**+0.8**
CRJC	**Cerrejon, Guaj**	**2.44**	**253**	*e*S		**Sn**	**08 17 46.9**	**-0.5**
CRJC	**Cerrejon, Guaj**	**2.44**	**253**	*e*P		**Pn**	**08 17 18.1**	**-0.5**
MAPV	**Macapo**	**2.76**	**133**	*e*P		**Pn**	**08 17 23.4**	**+0.6**
MAPV				*e*S		**Sn**	**08 17 54.6**	**-0.6**
TURV	**Turiamo**	**2.91**	**116**	*e*P		**Pn**	**08 17 24.8**	**-0.1**
TURV				*e*S		**Sn**	**08 17 57.2**	**-1.6**
BENV	**Beln**	**3.35**	**121**	*e*P		**Pn**	**08 17 31.7**	**+0.6**
BENV				*e*S		**Sn**	**08 18 08.4**	**-1.5**
BAUV	**El Baul**	**3.68**	**139**	*e*P		**Pn**	**08 17 36.2**	**+0.6**
BAUV				*e*S		**Sn**	**08 18 15.9**	**-2.0**
SMRC	**Santa Marta, M**	**3.69**	**262**	*e*P		**Pn**	**08 17 36.4**	**+0.7**
SMRC				*i*			08 18 28.6	
	comp=Z,48nm,0.3s							
ARGC	**Ariguani, Magd**	**4.12**	**244**	*e*P		**Pn**	**08 17 41.9**	**+0.3**
ARGC				*e*S		**Sn**	**08 18 25.8**	**-3.0**
ARGC				*i*			08 18 41.2	
	comp=Z,28nm,0.4s							
OCAC	**Ocana**	**4.44**	**219**	*e*P		**Pn**	**08 17 46.6**	**+0.5**
PAMC	**Pamplona, Colo**	**4.87**	**207**	*e*P		**Pn**	**08 17 51.4**	**-0.9**
SJCC	**San Jacinto, C**	**4.94**	**249**	*e*P		**Pn**	**08 17 54.7**	**+1.7**
SJCC				*i*			08 18 59.6	
	comp=Z,20nm,0.5s							
BRRC	**Barranca, Sant**	**5.58**	**215**	*e*P		**Pn**	**08 18 03.8**	**+2.1**
BARC	**Barichara**	**5.75**	**208**	*e*P		**Pn**	**08 18 05.5**	**+1.2**
BARC				*i*			08 20 05.4	
	comp=Z,36nm,0.8s							
ZARC	**Zaragoza, Cauc**	**6.01**	**226**	*e*P		**Pn**	**08 18 05.2**	**-2.4**
ZARC				*i*			08 19 20.5	
	comp=Z,18nm,0.5s							
RUSC	**La Rusia**	**6.33**	**204**	*e*P		**Pn**	**08 18 13.2**	**+0.7**
UREC	**San Jos de Ur**	**6.34**	**232**	*e*P		**Pn**	**08 18 12.2**	**+0.1**
UREC				*e*S		**Sn**	**08 19 23.1**	**-0.5**
UREC				*i*			08 19 30.5	
	comp=Z,13nm,0.3s							
PTBC	**PUERTO BERRIO,**	**6.46**	**217**	*e*P		**Pn**	**08 18 13.2**	**-0.7**
SPBC	**San Pablo de B**	**6.99**	**211**	*e*P		**Pn**	**08 18 21.5**	**+0.3**
HELC	**Santa Helena**	**7.41**	**222**	*e*P		**Pn**	**08 18 31.5**	**+4.3**
CHIC	**Chingaza**	**7.74**	**205**	*e*P		**Pn**	**08 18 33.0**	**+1.3**
CBOC	**Ciudad Bolivar**	**7.97**	**224**	*e*P		**Pn**	**08 18 37.8**	**+3.0**
GUY2C	**Guyana, Caldas**	**8.05**	**217**	*e*P		**Pn**	**08 18 38.0**	**+1.9**

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*IDC **01** 08:17:05.7±1.5, 5°.19S×151°.85E, h62^{km}±6^{km}, mb3.6/7, mbtmp3.9/8, MS4.2/2, Error ellipse: s-maj=48.6km s-min=7.2km az=117.0*

ISC 01 08:17:05.9±1.5, 5°.2S±0°.2×151°.9E±0°.3, h70^{km}, n12, σ1°41/16, mb3.9/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.89**	**7**	P		**Pn**	**08 17 23.7**	**+0.7**
	846nm,0.3s,baz=242,slow=2.3,SNR=172							
KRVT				S		**Sn**	**08 17 35.6**	**-0.1**
	4μm,0.3s,baz=179,slow=23,SNR=28							
PMG	**Port Moresby**	**6.30**	**228**	P		**Pn**	**08 18 37.5**	**+1.2**
	4.4nm,0.5s,baz=0.0,slow=10,SNR=1.8							
PMG				S		**Sn**	**08 19 48.2**	**+1.2**
	21nm,0.6s,baz=117,slow=23,SNR=7.5							
WRA	**Warramunga Arr**	**22.52**	**228**	P		**P**	**08 21 59.8**	**-0.4**
	3.9nm,0.6s,baz=51,slow=10.0,SNR=30							
WRA				pP		**pP**	**08 22 13.3**	**-1.6**
	6.3nm,0.8s,baz=53,slow=9.9,SNR=13							
WRA				PcP		**PcP**	**08 25 52.9**	**+1.1**
	0.6nm,0.7s,baz=48,slow=2.0,SNR=5.8							
	3.9nm,0.6s							
ASAR	**Alice Springs**	**25.27**	**222**	P		**P**	**08 22 26.4**	**+0.6**
	3.1nm,0.7s,baz=52,slow=8.9,SNR=22							
ASAR				pP		**pP**	**08 22 41.1**	**-1.2**
	5.4nm,0.8s,baz=57,slow=9.3,SNR=14							
	3.1nm,0.7s							
FITZ	**Fitzroy Crossi**	**28.70**	**241**	P		**P**	**08 22 56.1**	**-0.5**
	1.9nm,0.6s,baz=58,slow=7.5,SNR=9.0							
FITZ				pP		**pP**	**08 23 10.2**	**-3.4**
	6.4nm,0.8s,baz=89,slow=8.4,SNR=8.2							
	1.9nm,0.6s							
JHJ	**Hachijo jima 2**	**39.80**	**344**	LR		LR	08 39 21.0	
	comp=Z,248nm,20.2s,baz=285,slow=34							
SONM	**Songino Array**	**66.19**	**328**	P		**P**	**08 27 47.6**	**+1.3**
	0.5nm,0.5s,baz=151,slow=6.8,SNR=3.5							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**80.04**	**319**	P		**P**	**08 29 06.6**	**-1.4**
	0.3nm,0.8s,baz=117,slow=5.0,SNR=2.3							
	0.3nm,0.8s							
ZALV	**Zalesovo Beam**	**80.99**	**327**	P		**P**	**08 29 13.9**	**+1.1**
	0.8nm,0.5s,baz=124,slow=6.5,SNR=2.6							
	0.8nm,0.5s							
ILAR	**Eielson Array**	**82.85**	**22**	P		**P**	**08 29 22.4**	**0.0**
	0.4nm,0.5s,baz=240,slow=5.4,SNR=5.5							
	0.4nm,0.5s							
ELK	**Elko**	**95.51**	**50**	LR		LR	09 08 33.2	
	comp=Z,173nm,20.5s,baz=1.0,slow=32							
TORD	**Torodi Ar. Bea**	**149.58**	**287**	PKPbc		**PKPbc**	**08 36 48.3**	**-0.1**
	13nm,0.6s,baz=82,slow=2.5,SNR=5.1							

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*IDC **01** 08:20:15.4±0.8, 28°.29N×56°.44E, h0^{km}, mb4.0/18, mbtmp4.0/20, ML3.7/2, Error ellipse: s-maj=18.4km s-min=17.4km az=82.0*

*TEH **01** 08:20:16.4, 28°.30N×56°.57E, h8^{km}, ML3.7*

ISC 01 08:20:16.6±0.5, 28°.26N±0°.03×56°.53E±0°.04, h10^{km}, n83, σ2°14/84, mb3.9/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.80**	**179**	*e*Pg		**Pn**	**08 20 34.0**	**0.0**
IBND				*e*			08 21 08.8	
	comp=Z,66μm,0.8s							
GENO	**Geno**	**0.91**	**201**	*e*Pg		**Pn**	**08 20 36.3**	**+0.7**
GENO				*e*			08 20 41.0	
	comp=Z,32μm,0.3s							
KHNJ	**Kahnooj**	**1.08**	**106**	*e*Pg		**Pn**	**08 20 37.6**	**-0.3**
NGRK	**Negar Kerman**	**1.39**	**7**	*e*Pg		**Pg**	**08 20 42.5**	**-0.9**
NGRK				*e*			08 21 10.1	
	comp=Z,10μm,0.3s							
KRBR	**Kerman**	**1.73**	**7**	*e*Pn		**Pg**	**08 20 48.9**	**-1.0**
TVBK	**TV Kerman**	**1.74**	**7**	*e*Pn		**Pg**	**08 20 48.8**	**-1.2**
TVBK				*e*			08 20 55.0	
	comp=Z,13μm,0.6s							
CHMN	**Cheshme madani**	**1.83**	**29**	*e*Pn		**Pb**	**08 20 49.9**	**-0.5**
CHMN				*e*			08 21 30.0	
	comp=Z,6μm,0.5s							
KBAM	**BAM**	**1.90**	**62**	*e*Pn		**Pb**	**08 20 51.0**	**-0.5**
KBAM				*e*			08 21 26.0	
	comp=Z,7μm,0.3s							
LAR1	**LAR**	**2.00**	**253**	*e*Pn		**Pg**	**08 20 54.7**	**-0.2**
KHGB	**Koh Gabri**	**2.11**	**359**	*e*Pn		**Pb**	**08 20 54.6**	**-0.6**
KHGB				*e*			08 21 05.6	
	comp=Z,7μm,0.7s							
SHME	**Shamm**	**2.23**	**189**	*e*Pn		**Pn**	**08 20 55.5**	**+1.9**
SHME	**Shamm**	**2.23**	**189**	Pn		**Pn**	**08 20 55.3**	**+1.7**
BANOM	**Banah**	**2.33**	**185**	*e*Pn		**Pb**	**08 20 57.8**	**-1.0**
BANOM	**Banah**	**2.33**	**185**	Pn		**Pn**	**08 20 57.3**	**+2.3**
BANOM				Sb		**Sg**	**08 21 31.6**	**0.0**
JHRM	**Jahrom**	**2.62**	**276**	*e*Pn		**Pb**	**08 21 01.6**	**-2.0**
MSFE	**Esma-Masafi**	**2.90**	**187**	*e*Pn		**Pn**	**08 21 06.0**	**+3.1**
MSFE	**Esma-Masafi**	**2.90**	**187**	Pn		**Pn**	**08 21 00.0**	**-2.9**
UOSS	**Minazif**	**3.31**	**185**	*e*Pn		**Pn**	**08 21 11.1**	**+2.6**
UOSS	**Minazif**	**3.31**	**185**	Pn		**Pn**	**08 21 04.3**	**-4.2**
NAZ	**Nazwa, Dubai**	**3.35**	**194**	*e*Pn		**Pn**	**08 21 11.5**	**+2.5**
NAZ	**Nazwa, Dubai**	**3.35**	**194**	Pn		**Pn**	**08 21 10.6**	**+1.6**
IBAF	**Bafgh**	**3.43**	**346**	*e*Pn		**Pn**	**08 21 13.1**	**+2.8**
HATD	**Hatta, Dubai**	**3.44**	**186**	*e*Pn		**Pn**	**08 21 13.3**	**+3.1**
HATD	**Hatta, Dubai**	**3.44**	**186**	Pn		**Pn**	**08 21 11.5**	**+1.2**
IMEH	**Mehriz**	**3.54**	**332**	*e*Pn		**Pb**	**08 21 15.2**	**-4.3**
IMEH				*e*			08 21 37.1	
	comp=Z,754nm,0.4s							
FAQ	**Al Faqa, Dubai**	**3.60**	**194**	*e*Pn		**Pn**	**08 21 14.9**	**+2.5**
FAQ	**Al Faqa, Dubai**	**3.60**	**194**	Pn		**Pn**	**08 21 13.7**	**+1.3**
ASUD	**Al Ashush, Dub**	**3.77**	**197**	*e*Pn		**Pn**	**08 21 18.1**	**+3.3**
ASUD	**Al Ashush, Dub**	**3.77**	**197**	Pn		**Pn**	**08 21 17.5**	**+2.6**
ZHDN	**Zahedan**	**3.92**	**72**	*e*Pn		**Pn**	**08 21 19.5**	**+2.4**
ZHSF	**Zahedan**	**3.96**	**69**	*e*Pn		**Pb**	**08 21 21.8**	**-4.8**
ALNE	**Al Ain**	**4.24**	**190**	*e*Pn		**Pn**	**08 21 23.0**	**+1.7**
ALNE	**Al Ain**	**4.24**	**190**	Pn		**Pn**	**08 21 22.0**	**+0.7**
BSRN	**Basiran**	**4.33**	**31**	*e*Pn		**Pn**	**08 21 24.8**	**+2.2**
ICHK	**Chekchek**	**4.38**	**336**	*e*Pn		**Pn**	**08 21 26.1**	**+2.7**
ICHK				*e*			08 21 46.4	
	comp=Z,763nm,0.8s							
CHBR	**Chabahar**	**4.41**	**126**	*e*Pn		**Pn**	**08 21 26.2**	**+2.6**
YZKH	**Yazd**	**4.45**	**338**	*e*Pn		**Pn**	**08 21 27.6**	**+3.4**
NGCH	**Negor - Chabah**	**5.03**	**124**	*e*Pn		**Pn**	**08 21 34.4**	**+2.3**
IRAM	**Ramesheh**	**5.05**	**316**	*e*Pn		**Pn**	**08 21 35.5**	**+2.9**
KLNJ	**Kolanjah**	**5.10**	**304**	*e*Pn		**Pn**	**08 21 36.3**	**+2.9**
SRVN	**Saravan**	**5.26**	**98**	*e*Pn		**Pn**	**08 21 38.8**	**+3.3**
WSAR	**Wadi Sarin**	**5.34**	**159**	Pn		**Pn**	**08 21 37.4**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=338,slow=9.7,SNR=21							
WSAR				Sn		**Sn**	**08 22 36.4**	**-1.7**
	comp=Z,4.1nm,0.3s,baz=67,slow=15,SNR=4.8							
	comp=Z,7.0nm,0.4s							
TKDS	**Koohdasht(Taba**	**5.37**	**5**	*e*Pn		**Pn**	**08 21 38.8**	**+1.9**
TABS	**Tabas**	**5.40**	**5**	*e*Pn		Pn	08 21 41.5	+4.2
ANAR	**Anarak**	**5.48**	**335**	*e*Pn		**Pn**	**08 21 41.2**	**+2.8**
NASN	**Na'in**	**5.55**	**326**	*e*Pn		**Pn**	**08 21 42.5**	**+2.9**
AFRZ	**Afriz**	**5.58**	**22**	*e*Pn		**Pn**	**08 21 42.5**	**+2.7**
UMZA	**Um Al Zommool**	**5.66**	**193**	*e*Pn		**Pn**	**08 21 42.1**	**+1.4**
IGAR	**Gharneh**	**5.67**	**318**	*e*Pn		**Pn**	**08 21 43.3**	**+2.2**
TNSJ	**Nastanj**	**5.69**	**1**	*e*Pn		**Pn**	**08 21 43.4**	**+2.1**
IBRJ	**Brojen**	**5.84**	**310**	*e*Pn		**Pn**	**08 21 46.9**	**+3.4**
IBRJ				*e*			08 21 51.5	
	comp=Z,564nm,0.4s							
IZEF	**Zefreh**	**5.87**	**323**	*e*Pn		**Pn**	**08 21 46.3**	**+2.3**
MZR	**Muzera**	**5.91**	**208**	*e*Pn		**Pn**	**08 21 45.9**	**+1.6**
MZR	**Muzera**	**5.91**	**208**	Pn		**Pn**	**08 21 45.1**	**+0.8**
SHRT	**Shahrakht**	**6.27**	**30**	*e*Pn		**Pn**	**08 21 50.8**	**+1.6**
IPIR	**Pirpir**	**6.57**	**314**	*e*Pn		**Pn**	**08 21 56.2**	**+2.6**
SHRO	**Shahrood**	**7.72**	**357**	*e*Pn		**Pn**	**08 22 11.8**	**+2.5**
KHMZ	**Khomeyn**	**7.85**	**316**	*e*Pn		**Pn**	**08 22 14.1**	**+3.0**
DAMV	**Damavand**	**8.31**	**333**	*e*Pn		**Pn**	**08 22 20.0**	**+2.6**
ASAO	**Ashtian**	**8.38**	**320**	*e*Pn		**Pn**	**08 22 21.0**	**+2.6**
CHTH	**Charan**	**8.90**	**330**	*e*Pn		**Pn**	**08 22 28.5**	**+3.0**
MRVT	**Maraveh tapeh**	**9.38**	**358**	*e*Pn		**Pn**	**08 22 34.7**	**+2.7**
GEYT	**Alibeck**	**9.74**	**7**	Pn		**Pn**	**08 22 38.4**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=215,slow=14,SNR=2.7							
	comp=Z,0.7nm,0.4s							
RAYN	**Ar Rayn**	**10.99**	**247**	Pn		**Pn**	**08 22 52.1**	**-1.9**
BRTR	**Keskin Array B**	**22.10**	**307**	P		**P**	**08 25 12.9**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=122,slow=12,SNR=6.4							
	comp=Z,1.4nm,0.8s							
AKTO	**Aktyubinsk**	**22.18**	**3**	P		**P**	**08 25 13.8**	**+1.1**
	comp=Z,4.3nm,0.5s,baz=170,slow=12,SNR=10							
	comp=Z,4.3nm,0.5s							
BELG	**Belogornoye**	**25.01**	**347**	P		**P**	**08 25 41.0**	**+0.5**
	comp=Z,4.1nm,0.5s,baz=135,slow=2.9,SNR=2.9							
	comp=Z,4.1nm,0.5s							
BVAR	**Borovoye Array**	**26.79**	**19**	P		**P**	**08 25 56.7**	**0.0**
	comp=Z,1.1nm,0.6s,baz=199,slow=8.5,SNR=4.6							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**27.37**	**41**	P		**P**	**08 26 02.7**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=225,slow=8.9,SNR=8.4							
	comp=Z,0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**27.87**	**31**	P		**P**	**08 26 06.5**	**+0.2**
	comp=Z,2.0nm,0.2s,baz=230,slow=8.6,SNR=1.9							
	comp=Z,2.0nm,0.2s							
AKASG	**Malin Array Be**	**30.47**	**325**	P		**P**	**08 26 29.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=136,slow=8.5,SNR=2.1							
	comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**32.96**	**31**	P		**P**	**08 26 51.5**	**+0.2**
	comp=Z,5.4nm,0.3s,baz=236,slow=9.6,SNR=22							
	comp=Z,5.4nm,0.3s							
GERES	**GERESS Array B**	**38.65**	**314**	P		**P**	**08 27 39.8**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=108,slow=9.4,SNR=4.6							
	comp=Z,0.7nm,0.8s							
KHC	**Kasperske Hory**	**38.81**	**314**	*e*P		**P**	**08 27 41.4**	**-0.2**
FINES	**FINESS Array B**	**38.88**	**337**	P		**P**	**08 27 41.3**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=147,slow=11,SNR=4.0							
	comp=Z,3.0nm,0.8s							
SONM	**Songino Array**	**43.02**	**49**	P		**P**	**08 28 16.9**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=243,slow=9.8,SNR=4.3							
	comp=Z,0.9nm,0.8s							
NOA	**NORSAR Array B**	**44.49**	**330**	P		**P**	**08 28 26.2**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=119,slow=8.3,SNR=1.8							
	comp=Z,0.8nm,0.8s							
ARCES	**ARCESS Array B**	**45.03**	**345**	P		**P**	**08 28 32.0**	**0.0**
	comp=Z,2.9nm,0.9s,baz=133,slow=7.9,SNR=4.6							
	comp=Z,2.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**53.03**	**265**	P		**P**	**08 29 33.3**	**-0.8**
	comp=Z,11nm,0.5s,baz=63,slow=7.0,SNR=5.1							
	comp=Z,11nm,0.5s							
KSRS	**Korea Array**	**59.39**	**61**	P		**P**	**08 30 18.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=283,slow=7.8,SNR=2.0							
	comp=Z,0.6nm,0.3s							
BOSA	**Boshof**	**63.99**	**211**	P		**P**	**08 30 50.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=29,slow=11,SNR=1.5							
	comp=Z,1.3nm,0.6s							
WRA	**Warramunga Arr**	**89.11**	**113**	P		**P**	**08 33 14.7**	**+2.1**
	comp=Z,0.2nm,0.7s,baz=320,slow=3.9,SNR=2.1							
	comp=Z,0.2nm,0.7s							
ASAR	**Alice Springs**	**90.64**	**117**	P		**P**	**08 33 21.7**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=328,slow=3.3,SNR=2.0							
	comp=Z,0.2nm,0.7s							

IDC 01 08:36:40.6±13.0, 24°.00S×178°.96W, h577^{km}±116^{km}, mb2.8/4, mbtmp3.9/5, Error ellipse: s-maj=301.0km s-min=106.7km az=89.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.84**	**335**	P		P	08 38 28.3	0.0
	6.5nm,0.5s,baz=159,slow=14,SNR=14							
CTA	**Charters Tower**	**32.43**	**270**	P		P	08 42 24.8	+0.3
	1.2nm,0.3s,baz=87,slow=9.6,SNR=2.0							
	1.2nm,0.3s							
STKA	**Stephens Creek**	**35.57**	**248**	P		P	08 42 49.4	-1.2
	1.0nm,0.5s,baz=104,slow=4.2,SNR=1.9							
	1.0nm,0.5s							
ASAR	**Alice Springs**	**42.96**	**260**	P		P	08 43 50.0	0.0
	0.2nm,0.4s,baz=96,slow=7.5,SNR=8.2							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**43.35**	**266**	P		P	08 43 53.1	0.0
	0.7nm,0.5s,baz=100,slow=8.1,SNR=20							
	0.7nm,0.5s							

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*IDC **01** 08:47:08.7±1.3, 2°.51N×95°.07E, h0^{km}, mb3.9/7, mbtmp3.9/9, ML4.2/2, MS3.3/5, Error ellipse: s-maj=45.9km s-min=18.0km az=53.0*

ISC 01 08:47:09.0±1.0, 2°.5N±0°.2×94°.96E±0°.09, h10^{km}, n20, σ3°25/12, mb3.9/7, MS3.2/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.97**	**86**	Pn		**Pn**	**08 48 11.6**	**+1.5**
	11nm,0.3s,baz=317,slow=9.8,SNR=24							
PSI				Sn		**Sn**	**08 48 51.6**	**-5.1**
	3.6nm,0.3s,baz=342,slow=7.7,SNR=3.9							
	18nm,0.3s							
PALK	**Pallekele**	**14.96**	**289**	Sn		**Sn**	**08 53 19.7**	**-7.1**
	0.7nm,0.3s,baz=202,slow=20,SNR=1.2							
PALK				LR		LR	08 55 01.7	
	comp=Z,70nm,18.8s,baz=177,slow=31							
CMAR	**Chiang Mai Arr**	**16.30**	**14**	Pn		**P**	**08 51 01.4**	**+0.2**
	0.4nm,0.3s,baz=206,slow=11,SNR=23							
	2.3nm,0.5s							
H08S2	**Diego Garcia H**	**24.59**	**246**	T		T	09 18 08.4	
	baz=66,slow=75,SNR=5207							
H08S3	**Diego Garcia H**	**24.60**	**246**	T		T	09 18 09.1	
	baz=66,slow=75,SNR=5443							
H08S1	**Diego Garcia H**	**24.61**	**246**	T		T	09 18 10.3	
	baz=66,slow=75,SNR=3851							
DAV	**Davao City (W)**	**30.83**	**80**	LR		LR	09 08 36.8	
	comp=Z,43nm,19.7s,baz=12,slow=42							
FITZ	**Fitzroy Crossi**	**36.52**	**125**	P		**P**	**08 54 14.6**	**-0.4**
	2.3nm,0.9s,baz=317,slow=12,SNR=2.5							
	2.3nm,0.9s							
H01W3	**Cape Leeuwin H**	**41.35**	**156**	T		T	09 38 53.7	
	baz=331,slow=76,SNR=201							
H01W2	**Cape Leeuwin H**	**41.36**	**156**	T		T	09 38 54.7	
	baz=331,slow=76,SNR=226							
H01W1	**Cape Leeuwin H**	**41.36**	**156**	T		T	09 38 47.7	
	baz=331,slow=76,SNR=261							
WRA	**Warramunga Arr**	**44.63**	**122**	P		**P**	**08 55 22.4**	**+0.2**
	6.4nm,1.3s,baz=300,slow=9.2,SNR=22							
WRA				PcP		**PP**	**08 57 05.7**	**-0.7**
	0.1nm,0.3s,baz=302,slow=3.1,SNR=1.8							
	6.4nm,1.3s							
MKAR	**Makanchi Array**	**45.44**	**348**	P		**P**	**08 55 30.3**	**+2.1**
	0.5nm,0.4s,baz=163,slow=8.8,SNR=7.8							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**45.98**	**127**	P		**P**	**08 55 33.1**	**+0.3**
	0.7nm,0.4s,baz=295,slow=7.8,SNR=24							
	0.7nm,0.4s							
KSRS	**Korea Array**	**46.08**	**37**	LR		LR	09 18 02

GENI	Genyem	1.48 243	P	Pn	09 20 02.5	-0.2
SMPI	Sarmi	2.78 268	P	Pn	09 20 19.7	-0.9
WAMI	Wamena	3.39 235	P	Pb	09 20 40.4	+4.1
FAKI	Fak Fak	9.29 264	Pn	Pn	09 21 49.1	-1.0
SIJI	Sorong	10.28 276	LR	LR	09 25 46.1	
	comp=Z,70nm,19.1s,baz=86,slow=36					
COEN	Coen	12.08 172	Pn	Pn	09 22 25.8	-2.5
KDU	Kakadu	13.94 219	P	Pn	09 22 51.2	-2.5
MTN	Manton Dam	14.93 223	Pn	Pn	09 23 05.1	-2.3
MTN	Manton Dam	14.93 223	P	Pn	09 23 05.1	-2.3
GUMO	Guam	15.77 12	LR	LR	09 28 53.6	
	comp=Z,89nm,19.5s,baz=202,slow=36					
MTSU	Mount Surprise	16.35 170	P	Pn	09 23 27.6	+1.7
DAV	Davao City (W)	18.22 299	LR	LR	09 30 27.0	
	comp=Z,25nm,18.7s,baz=145,slow=36					
KNRA	Kununurra	18.56 222	P	P	09 23 50.6	-2.5
QIS	Mount Isa	18.62 186	P	P	09 23 53.8	0.0
CTA	Charters Tower	18.65 166	P	P	09 23 54.0	-0.1
	0.1nm,0.3s,baz=327,slow=8.8,SNR=5.9					
CTA		LR	LR		09 30 51.6	
	comp=Z,134nm,18.2s,baz=348,slow=36					
	3.1nm,0.8s					
CTAO	Charters Tower	18.65 166	P	P	09 23 51.6	-2.5
GTOI	Gorontalo	18.65 278	P	P	09 23 57.2	+3.0
	202nm19nm,1.1s					
LUWI	Luwuk	18.73 272	P	P	09 23 54.3	-0.8
LUWI		IAmb	IAmb		09 24 05.1	
	comp=Z,24nm,0.5s					
SOEI	Soe	18.81 245	P	P	09 23 53.8	-2.3
SOEI	Soe	18.81 245	P	P	09 23 56.8	+0.7
	comp=Z,28nm,1.0s					
SOEI	Soe	18.81 245	P	P	09 23 56.6	+0.5
WB0	Warramunga Arr	19.05 201	P	P	09 23 56.9	-1.7
WB0		IAmb	IAmb		09 24 00.7	
	comp=Z,32nm,0.9s					
WR0	Warramunga Arr	19.18 200	P	P	09 23 59.6	-0.3
WR0		IAmb	IAmb		09 24 01.8	
	comp=Z,20nm,0.7s					
WRAB	Tennant Creek	19.22 201	P	P	09 23 59.2	-1.2
WRAB		IAmb	IAmb		09 24 02.7	
	comp=Z,21nm,0.8s					
WRAB	Tennant Creek	19.22 201	P	P	09 23 59.8	-0.6
WB2	Warramunga Arr	19.23 201	P	P	09 23 58.5	-1.9
WB2		IAmb	IAmb		09 24 02.4	
	comp=Z,20nm,0.8s					
WRA	Warramunga Arr	19.23 201	P	P	09 23 59.6	-1.0
	comp=Z,1.1nm,0.3s,baz=25,slow=12,SNR=18					
WRA		PcP	PcP		09 28 23.8	-0.2
	comp=Z,0.4nm,0.6s,baz=16,slow=6.0,SNR=2.3					
WRA		LR	LR		09 31 57.8	
	comp=Z,372nm,20.0s,baz=7.5,slow=39					
	comp=Z,15nm,0.7s					
WRA	Warramunga Arr	19.23 201	P	P	09 23 58.6	-2.0
BATI	Baumata	19.53 244	P	P	09 24 05.0	+1.1
	comp=Z,6.3nm,0.3s,baz=68,slow=2.4,SNR=4.8					
	comp=Z,23nm,0.6s					
APSI	Ampana	19.86 273	P	P	09 24 09.6	+2.1
	comp=Z,539nmcomp=Z,22nm,0.9s					
EDFI	Ende, Flores	20.84 250	P	P	09 24 18.3	+0.1
	comp=Z,287nmcomp=Z,3.6nm,1.0s					
BSSI	Bau Bau, Buton	21.36 258	P	P	09 24 28.0	+4.2
	comp=Z,16nm,0.8s					
BNSI	Bone	21.49 263	P	P	09 24 31.7	+6.5
TTSI	Tana Toraja	21.68 267	P	P	09 24 35.6	+8.4
SPSI	Sidrap Palu	21.79 264	P	P	09 24 30.5	+2.2
	comp=Z,32nm,1.3s					
KAPI	Kappang	21.91 261	LR	LR	09 35 04.5	
	comp=Z,43nm,18.3s,baz=119,slow=42					
FITZ	Fitzroy Crossi	22.37 223	P	P	09 24 33.3	-1.3
	comp=Z,3.4nm,0.8s,baz=28,slow=12,SNR=8.1					
FITZ		LR	LR		09 32 42.3	
	comp=Z,109nm,20.9s,baz=45,slow=35					
	comp=Z,3.4nm,0.8s					
FITZ	Fitzroy Crossi	22.37 223	P	P	09 24 33.7	-0.9
AS31	Alice Springs	22.83 198	P	P	09 24 38.1	-1.4
ASAR	Alice Springs	22.83 198	P	P	09 24 38.3	-1.2
	comp=Z,7.6nm,0.8s,baz=28,slow=11,SNR=18					
	comp=Z,7.6nm,0.8s					
ASAR	Alice Springs	22.83 198	P	P	09 24 37.5	-2.0
RK1H	Rockhampton Ha	23.06 158	P	P	09 24 45.8	+4.1
	comp=Z,19nm,1.1s					
MYLDM	Lahad Datu	24.03 287	P	P	09 24 50.0	-1.4
MYLDM		IAmb	IAmb		09 24 59.7	
	comp=Z,12nm,0.9s					
QLP	Quilpie	24.66 174	P	P	09 25 00.0	+2.9
EIDS	Eidsvold	25.08 159	P	P	09 24 58.6	-2.2
EIDS		IAmb	IAmb		09 25 14.9	
	comp=Z,14nm,1.0s					
EIDS	Eidsvold	25.08 159	P	P	09 25 04.8	+3.9
RMQ	Roma	25.41 165	P	P	09 25 07.4	+3.6
INKA	Innaminka	25.69 182	P	P	09 25 08.1	+1.8
OOD	Oodnadatta	26.32 192	P	P	09 25 14.0	+1.9
BBKI	Banjar Baru	26.66 266	P	P	09 25 15.5	+0.1
STKA	Stephens Creek	29.80 180	P	P	09 25 43.0	-0.2
	comp=Z,1.5nm,0.8s,baz=4.4,slow=13,SNR=1.8					
STKA		LR	LR		09 38 58.9	
	comp=Z,80nm,19.1s,baz=15,slow=39					
	comp=Z,1.5nm,0.8s					
BBOO	Buckleboo	31.15 189	P	P	09 25 54.1	-1.0
BBOO		IAmb	IAmb		09 26 04.6	
	comp=Z,16nm,1.1s					
FORT	Forrest	31.40 203	P	P	09 25 54.6	-2.7
H11S3	WAKE ISLAND Hy	32.03 50	T	T	09 59 39.3	
	baz=231,slow=75,SNR=20					
H11S2	WAKE ISLAND Hy	32.05 50	T	T	09 59 42.0	
	baz=231,slow=75,SNR=7.1					
H11S1	WAKE ISLAND Hy	32.05 50	T	T	09 59 40.8	
	baz=231,slow=75,SNR=10					
NJ2	Nanjing	40.03 329	*e*P	P	09 27 10.5	-0.8
KSAR	Wonju Array Be	41.15 343	P	P	09 27 20.5	0.0
KSRS	Korea Array	41.15 344	P	P	09 27 20.9	+0.4
	comp=Z,0.8nm,0.7s,baz=165,slow=10,SNR=5.7					
	comp=Z,0.8nm,0.7s					
ERM	Erimo	43.76 2	P	P	09 27 42.3	+0.7
HNS	HongShan	46.34 330	⇑P	P	09 28 02.9	+0.6
CMAR	Chiang Mai Arr	46.49 298	P	P	09 28 03.2	-0.6
	comp=Z,0.5nm,0.3s,baz=108,slow=4.7,SNR=4.7					
CMAR		PcP	PcP		09 29 39.2	+0.8
	comp=Z,1.0nm,0.3s,baz=150,slow=2.0,SNR=5.2					
	comp=Z,0.5nm,0.3s					
XAN	Xi'an	47.09 322	P	P	09 28 08.2	-0.1
XAN		pP	pwP		09 28 17.1	+2.1
BJT	Baijiatuau	47.74 334	P	P	09 28 13.7	+0.5
BJT		IAmb	IAmb		09 28 22.4	
	comp=Z,4.7nm,0.9s					
KLR	Kul'dur	51.64 352	P	P	09 28 42.9	+0.1
	comp=Z,3.7nm,1.0s,baz=171,slow=3.7,SNR=8.3					
	comp=Z,3.7nm,1.0s					
PETK	Petropavlovsk-	56.49 12	P	P	09 29 18.8	+0.7
	comp=Z,3.4nm,0.9s,baz=132,slow=4.8,SNR=4.8					
	comp=Z,3.4nm,0.9s					
SONM	Songino Array	58.24 333	P	P	09 29 31.0	+0.2
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=4.2					
SONM		PcP	PcP		09 30 20.9	-1.1
	comp=Z,0.4nm,0.4s,baz=145,slow=5.3,SNR=2.5					
	comp=Z,0.3nm,0.4s					
SONM	Songino Array	58.24 333	P	P	09 29 31.0	+0.2
MK31	Makanchi Array	70.89 321	P	P	09 30 53.5	+0.1
MK31		IAmb	IAmb		09 30 54.9	
	comp=Z,6.2nm,1.1s					
MKAR	Makanchi Array	70.89 321	P	P	09 30 53.7	+0.3
	comp=Z,3.6nm,0.9s,baz=115,slow=8.1,SNR=22					
	comp=Z,3.6nm,0.9s					
MKAR	Makanchi Array	70.89 321	P	P	09 30 53.2	-0.2
MAKZ	Makanchi	71.09 321	P	P	09 30 54.3	-0.3
MAKZ		IAmb	IAmb		09 30 56.0	
	comp=Z,6.6nm,1.0s					
ZAA0	Zalesovo Array	72.68 329	P	P	09 31 03.4	-0.5
ZALV	Zalesovo Beam	72.68 329	P	P	09 31 02.9	-1.1
	comp=Z,3.0nm,0.8s,baz=112,slow=5.9,SNR=9.8					
	comp=Z,3.0nm,0.8s					
ZALV	Zalesovo Beam	72.68 329	P	P	09 31 03.1	-0.8
NIL	Nilore	73.10 306	P	P	09 31 06.0	-1.0
NIL		IAmb	IAmb		09 31 08.1	
	comp=Z,8.3nm,1.0s					
KURK	Kurchatov	74.69 324	P	P	09 31 15.7	-0.1
KURK		IAmb	IAmb		09 31 16.8	
	comp=Z,10nm,1.1s					
KURBB	Kurchatov Arra	74.71 324	P	P	09 31 15.8	-0.1
	comp=Z,3.2nm,1.0s,baz=112,slow=5.4,SNR=15					
	comp=Z,3.2nm,1.0s					
VNDA	Vanda	76.33 176	P	P	09 31 25.8	+1.0
	comp=Z,0.4nm,0.8s,baz=318,slow=8.1,SNR=2.5					
	comp=Z,0.4nm,0.8s					
VNDA	Vanda	76.33 176	P	P	09 31 27.2	+2.4
KK31	Karatay Array	77.53 315	P	P	09 31 31.4	-0.8
KKAR	Karatay Array	77.53 315	P	P	09 31 31.7	-0.6
NRIK	Noril'sk	79.76 343	P	P	09 31 43.3	-0.6
	comp=Z,1.6nm,0.4s,baz=103,slow=4.5,SNR=2.5					
	comp=Z,1.6nm,0.4s					
BVAR	Borovoye Array	80.27 325	P	P	09 31 46.6	-0.4
	comp=Z,2.4nm,0.8s,baz=101,slow=7.7,SNR=13					
	comp=Z,2.4nm,0.8s					
CNPM	China Poot	80.32 28	P	P	09 31 47.3	+0.1
CNPM		IAmb	IAmb		09 31 48.1	
	comp=Z,11nm,1.1s					
BRVK	Borovoye	80.34 325	P	P	09 31 47.4	0.0
BRVK		IAmb	IAmb		09 31 48.6	
	comp=Z,6.2nm,1.1s					
M22K	Willow	81.61 27	IAmb	IAmb	09 32 02.6	
	comp=Z,8.1nm,1.0s					
PMR	Palmer	82.00 27	IAmb	IAmb	09 31 56.5	
	comp=Z,7.8nm,1.0s					
KNK	Knik Glacier	82.25 27	P	P	09 31 57.4	0.0
SML	Sawmill	82.43 27	P	P	09 31 58.4	0.0
GLI	Glacier Island	82.71 28	P	P	09 31 58.4	-1.4
RND	Reindeer	82.72 25	P	P	09 31 59.5	-0.4
I23K	Minto, Yukon-K	83.10 23	P	P	09 32 01.2	-0.5
DHY	Denali Highway	83.25 26	P	P	09 32 02.2	-0.5
CCB	Clear Creek Bu	83.56 24	P	P	09 32 03.3	-0.8
IL31		83.97 24	P	P	09 32 04.9	-1.3
IL31			IAmb	IAmb	09 32 06.1	
	comp=Z,6.5nm,1.1s					
ILAR	Eielson Array	83.97 24	P	P	09 32 04.8	-1.4
	comp=Z,3.2nm,0.8s,baz=255,slow=4.9,SNR=23					
	comp=Z,3.2nm,0.8s					
GLB	Gilahina Butte	84.40 28	P	P	09 32 08.8	+0.2
GLB		IAmb	IAmb		09 32 09.5	
	comp=Z,4.1nm,1.0s					
J25K	Salcha River,	84.55 24	P	P	09 32 08.7	-0.5
J25K		IAmb	IAmb		09 32 09.4	
	comp=Z,7.3nm,1.1s					
DOT	Dot Lake	84.85 26	IAmb	IAmb	09 32 12.0	
	comp=Z,5.6nm,1.0s					
L27K	Beaver Creek,	85.68 26	P	P	09 32 14.7	-0.3
K27K	Chicken	85.79 25	IAmb	IAmb	09 32 17.4	
	comp=Z,5.7nm,1.0s					
DAWY	Dawson	86.96 26	IAmb	IAmb	09 32 22.7	
	comp=Z,4.0nm,0.8s					
QSPA	South Pole Qui	88.02 180	P	P	09 32 25.8	-0.6
QSPA		IAmb	IAmb		09 32 36.9	
	comp=Z,4.4nm,1.1s					
NVAR	Mina Array Bea	99.19 52	P	Pdif	09 33 18.8	+0.3
	comp=Z,0.2nm,0.7s,baz=266,slow=9.5,SNR=1.9					
	comp=Z,0.2nm,0.7s					
ROSC	El Rosal	144.14 84	PKP	PKPab	09 39 12.2	+0.8
	comp=Z,11nm,0.8s,baz=161,slow=12,SNR=5.6					
DBIC	Dimbokro	146.12 279	PKPbc	PKPdf	09 39 16.9	+0.3
	comp=Z,4.0nm,0.7s,baz=123,slow=4.4,SNR=5.0					
CPUP	Villa Florida	146.54 148	PKPbc	PKPdf	09 39 17.4	+0.4
	comp=Z,2.5nm,0.8s,baz=195,slow=4.2,SNR=5.5					

IDC ***01*** *09:26:13.8±3.0, 25°.33N×123°.46E, h159km±34km, mb3.4/9, mbtmp3.8/10, Error ellipse: s-maj=29.1km s-min=19.8km az=65.0*

JMA ***01*** *09:26:14.7±0.2, 25°.N±2°.×123°.2E±0°.6, h144km±3km, MV3.9/15, NW OFF ISHIGAKIJIMA IS*

ISC 01 09:26:12.9±0.7, 25°.28N±0°.10×123°.22E±0°.05, h146km±9km, n27, σ1$20/41, mb3.5/9, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.84	193	P	Pn	09 26 36.4	+0.4
YOJ	Yonaguni jima	0.84	193	P	Pn	09 26 36.4	+0.4
YOJ				S	Sn	09 26 52.7	-0.8
JYNG	Yonagunijimaku	0.86	197	*i* P	Pn	09 26 36.5	+0.4
JYNG				S	Sn	09 26 52.9	-0.9
IRIF	Iriomote-Funau	1.05	154	*i* P	Pn	09 26 37.7	-0.1
IRIF				S	Sn	09 26 55.7	-0.9
JISG	Ishigakijimahi	1.21	125	*i* P	Pn	09 26 39.7	+0.6
JISG				S	Sn	09 26 58.8	-0.4
JIJ	Ishigaki jima	1.24	137	*i* P	Pn	09 26 39.7	+0.2
JIJ				S	Sn	09 26 57.9	-1.9
JKRS	Kuro-shima	1.26	145	*i* P	Pn	09 26 40.1	+0.4
JKRS				S	Sn	09 26 58.8	-1.4
HATJ	Hateruma jima	1.33	156	P	Pn	09 26 40.5	+0.1
HATJ				S	Sn	09 27 00.3	-1.1
JTJ	Tarama	1.49	115	*i* P	Pn	09 26 43.0	+1.0
JTJ				S	Sn	09 27 04.2	-0.1
YHNB	Yeheng	1.78	250	P	Pn	09 26 46.9	+1.6
JIRB	Irabujima	1.83	104	P	Pn	09 26 47.1	+1.4
JIRB				S	Sn	09 27 11.7	+0.7
JIKM	Ikemajima	1.87	101	P	Pn	09 26 48.1	+1.8
JIKM				S	Sn	09 27 12.4	+0.6
JMJ2	Miyako jima3	1.99	105	*i* P	Pn	09 26 49.3	+1.7
JMJ2				S	Sn	09 27 14.8	+0.6
JOGS	Gusukube	2.05	104	P	Pn	09 26 50.1	+1.8
JOGS				S	Sn	09 27 16.3	+0.7
SSLB	Suanglung	2.54	235	P	Pn	09 26 54.8	+0.4
TPUB	Ta-pu	3.08	231	P	Pn	09 27 01.4	+0.2
JOW	Kunigami	4.80	70	P	Pn	09 27 23.5	-0.1
	21nm,0.3s,baz=96,slow=29,SNR=6.9						
JOW				S	Sn	09 28 14.2	-4.5
	14nm,0.2s,baz=138,slow=21,SNR=1.3						
KSRS	Korea Array	12.78	17	P	P	09 29 13.7	-1.0
	2.3nm,0.6s,baz=198,slow=12,SNR=7.0						
CMAR	Chiang Mai Arr	23.51	258	P	P	09 31 10.6	+0.8
	0.8nm,0.4s,baz=56,slow=8.8,SNR=6.7						
	0.8nm,0.4s						
SONM	Songino Array	26.14	334	P	P	09 31 34.8	+1.3
	0.4nm,0.5s,baz=123,slow=5.3,SNR=2.0						
	0.4nm,0.5s						
MKAR	Makanchi Array	38.87	314	P	P	09 33 25.0	+1.0
	2.2nm,0.5s,baz=100,slow=11,SNR=10.0						
MKAR				PcP	PcP	09 35 30.9	-1.1
	0.2nm,0.5s,baz=93,slow=2.9,SNR=2.3						
	2.2nm,0.5s						
KURBB	Kurchatov Arra	42.49	318	P	P	09 33 53.7	+0.1
	0.9nm,0.7s,baz=98,slow=9.2,SNR=5.4						
	0.9nm,0.7s						
WRA	Warramunga Arr	46.24	165	P	P	09 34 23.6	0.0
	0.4nm,0.4s,baz=347,slow=8.7,SNR=5.9						
	0.4nm,0.4s						
BVAR	Borovoye Array	48.02	320	P	P	09 34 37.5	+0.4
	0.5nm,0.5s,baz=116,slow=10,SNR=3.7						
	0.5nm,0.5s						
FINES	FINESS Array B	71.43	330	P	P	09 37 16.7	-0.4
	2.5nm,0.9s,baz=56,slow=5.2,SNR=3.4						
	2.5nm,0.9s						
BRTR	Keskin Array B	74.01	307	P	P	09 37 32.5	-0.4
	0.5nm,0.5s,baz=69,slow=7.9,SNR=2.8						
	0.5nm,0.5s						
NOA	NORSAR Array B	78.11	333	P	P	09 37 55.2	-0.4
	0.7nm,0.9s,baz=39,slow=6.3,SNR=1.7						
	0.7nm,0.9s						

BJI ***01*** *09:37:57.0±0.0, 12°.50S×166°.50E, h62km, mb5.2/47, mB5.0/25, Ms5.3/8, Ms7 5.1/8*

GCMT ***01*** *09:37:57.8±0.3, 12°.41S±0°.03×166°.22E±0°.02, h44km±1km, MW5.0/55, Moment Tensor Solution. s55,c58; s51,c69; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.43±.21; Mθθ-0.23±.14; Mφφ-3.20±.12; Mrθ0.12±.11; Mrφ0.51±.09; Mθφ0.88±.11; Best double couple: M0 3.47100×10^16 NP1:φs355.00000°, δ52.00000°, λ95.00000°. NP2: φs167.00000°, δ38.00000°, λ84.00000°. Principal axes: T 3.5530, Plg82.0000°, Azm291.0000°; N -0.1640, Plg4.0000°, Azm172.0000°; P -3.3890, Plg7.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *09:37:59.8±1.3, 12°.53S±0°.07×166°.53E±0°.09, h67km±6km, mb4.8/106 Error ellipse: s-maj=12.2km s-min=10.7km az=88.0*

IDC ***01*** *09:38:00.2±2.4, 12°.52S×166°.51E, h75km±21km, mb4.5/29, mbtmp4.8/32, MS3.9/35, Error ellipse: s-maj=13.0km s-min=11.2km az=66.0*

NOU ***01*** *09:38:01.1, 12°.43S×166°.26E, h59km, mb5.1/62, Santa Cruz Islands*

ISC 01 09:37:58.9±0.4, 12°.53S±0°.04×166°.52E±0°.05, h65km±3km, h65km:pP-P, n281, σ1$31/255, mb4.9/102, 6C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	5.42	163	P	Pn	09 39 23.5	+6.4
RTV	Rentapao	5.55	161	P	Pn	09 39 25.9	+6.9
HNR	Honiara	7.15	295	P	Pn	09 39 40.6	-0.3
	7μm,0.7s,baz=23,slow=7.7,SNR=9.3						
HNR		LR	LR		09 42 40.2		
	comp=Z,15μm,21.2s,baz=150,slow=39						
HNR	Honiara	7.15	295	Pn	Pn	09 39 41.1	+0.2
LIFNC	LIFOU	8.23	175	Pn	Pn	09 39 55.8	+0.1
KOUNC	Koumac, New Ca	8.26	195	Pn	Pn	09 39 56.5	+0.4
KOUNC				Sn	Sn	09 41 26.0	-2.0
KOUNC	Koumac, New Ca	8.26	195	P	Pn	09 39 56.8	+0.7
MARNC	Mare, Loyalty	9.02	171	Pn	Pn	09 40 07.7	+1.1
MARNC	Mare, Loyalty	9.02	171	P	Pn	09 40 07.8	+1.3
YATNC	Mamie plateau,	9.49	178	P	Pn	09 40 14.5	+1.6
DZM	Mont Dzumac	9.49	180	*e*Pn	Pn	09 40 11.9	-1.1
	77nm,0.9s						
DZM				*e*Sn	Sn	09 41 55.8	-2.5
	216nm,0.8s						
DZM	Mont Dzumac	9.49	180	P	Pn	09 40 13.3	+0.2
	11nm,0.4s,baz=32,slow=19,SNR=58						
DZM				S	Sn	09 42 00.1	+1.8
	14nm,0.5s,baz=261,slow=22,SNR=1.1						
DZM		LR	LR		09 43 37.2		
	comp=Z,1μm,21.0s,baz=25,slow=36						
DZM	Mont Dzumac	9.49	180	P	Pn	09 40 15.1	+2.0
NOUC	Port Laguerre	9.53	181	P	Pn	09 40 16.6	+3.2
ONTNC	Ouen Toro	9.73	180		Pn	09 40 16.7	+0.6
ONTNC	Ouen Toro	9.73	180	P	Pn	09 40 19.6	+3.4
OUENC	Ouen Island, N	9.84	178	Pn	Pn	09 40 18.4	+0.7
OUENC	Ouen Island, N	9.84	178	P	Pn	09 40 20.9	+3.2
PINNC	Pines Island,	10.07	175	Pn	Pn	09 40 22.0	+1.2
PINNC	Pines Island,	10.07	175	P	Pn	09 40 22.4	+1.6
MSVF	Nonsavu	12.28	116	P	Pn	09 40 54.0	+3.0
	18nm,1.1s,baz=334,slow=3.1,SNR=3.7						
MSVF		LR	LR		09 44 38.2		
	comp=Z,1μm,21.3s,baz=331,slow=32						
MSVF	Nonsavu	12.28	116	Pn	Pn	09 40 50.2	-0.8
FUNA	Funafuti	13.08	74	Pn	Pn	09 41 01.9	0.0
FUTU	Fugatoga	15.05	99	P	P	09 41 35.3	+3.5
TARA	Tarawa	15.18	25		Pn	09 41 30.5	+0.8
TARA	Tarawa	15.18	25	P	P	09 41 31.6	-1.8
LKBA	Tubou, Lakemba	15.23	114	P	P	09 41 37.2	+3.3
KRVT	Keravat (AS076	16.49	298	LR	LR	09 48 29.9	
	comp=Z,485nm,21.0s,baz=261,slow=38						
RK1H	Rockhampton Ha	18.66	232	P	Pn	09 42 13.8	+1.0
PMG	Port Moresby	19.26	277	P	Pn	09 42 20.4	+0.5
	13nm,0.8s,baz=38,slow=12,SNR=4.0						
PMG		LR	LR		09 49 01.9		
	comp=Z,466nm,21.9s,baz=126,slow=34						
PMG	Port Moresby	19.26	277	P	P	09 42 18.3	0.0
EIDS	Eidsvold	19.38	227	P	P	09 42 20.3	+0.8
EIDS		IAmb	IAmb		09 42 41.1		
	comp=Z,30nm,0.7s						
EIDS	Eidsvold	19.38	227	P	Pn	09 42 22.0	+0.7
CTA	Charters Tower	20.84	246	P	P	09 42 35.8	+0.2
	comp=Z,5.4nm,0.8s,baz=68,slow=15,SNR=5.1						
CTA		LR	LR		09 49 55.6		
	comp=Z,484nm,19.1s,baz=82,slow=34						
	comp=Z,5.4nm,0.8s						
CTA	Charters Tower	20.84	246	P	P	09 42 36.0	+0.5
CTAO	Charters Tower	20.84	246	P	P	09 42 35.0	-0.5
CTAO	Charters Tower	20.84	246	P	P	09 42 36.3	+0.8
PATS	Pohnpei	20.89	337	P	P	09 42 36.0	-0.1
PATS		IAmb	IAmb		09 43 04.7		
	comp=Z,68nm,1.0s						
AFI	Afiamalu	21.17	96	LR	LR	09 49 36.6	
	comp=Z,231nm,18.6s,baz=271,slow=33						
AFI	Afiamalu	21.17	96	P	P	09 42 39.1	-0.1
AFI		IAmb	IAmb		09 42 60.0		
	comp=Z,48nm,1.0s						
AFI	Afiamalu	21.17	96	P	P	09 42 41.9	+2.7
MANU	Manus Island	21.64	297	P	P	09 42 43.7	-0.5
MANU		IAmb	IAmb		09 42 56.1		
	comp=Z,57nm,0.8s						
RMQ	Roma	21.71	228	P	P	09 42 46.5	+1.7
RAO	Raoul Island	22.06	141	LR	LR	09 49 47.8	
	comp=Z,127nm,18.0s,baz=106,slow=32						
MTSU	Mount Surprise	22.12	253	P	P	09 42 50.3	+1.0
ARMA	Armidale	22.52	215	P	P	09 42 54.0	+0.5
ARMA		IAmb	IAmb		09 42 56.7		
	comp=Z,32nm,0.9s						
ARMA	Armidale	22.52	215	P	P	09 42 54.8	+1.3
COEN	Coen	22.77	264	P	P	09 42 55.7	-0.5
COEN	Coen	22.77	264	P	P	09 42 57.4	+1.2
QLP	Quilpie	25.17	233	P	P	09 43 19.4	+1.0
TOZ	Tahuroa Road	26.36	164	P	P	09 43 30.4	+1.4
HIZ	Hauiti	26.93	165	P	P	09 43 38.7	+4.6
CMSA	Cobar Meteorol	26.94	222	P	P	09 43 37.0	+2.6
QIS	Mount Isa	26.98	249	P	P	09 43 35.8	+1.0
MXZ	Matakaoa Point	27.07	159	P	P	09 43 37.7	+2.3
RUGZ	Raukumara Rang	27.22	160	P	P	09 43 38.8	+1.8
URZ	Urewera	27.31	162	P	P	09 43 38.4	+0.9
	comp=Z,5.9nm,0.4s,baz=320,slow=0.7,SNR=9.6						
URZ		LR	LR		09 52 42.1		
	comp=Z,344nm,21.6s,baz=44,slow=32						
	comp=Z,5.9nm,0.4s						
URZ	Urewera	27.31 162	P	P	09 43 38.7	+1.1
URZ				S	S	09 48 13.7	+1.2
PRRZ	Plateau Road	27.32	163	P	P	09 43 42.0	+4.4
WMGZ	Waiomatatini S	27.34	159	P	P	09 43 38.4	+0.6
PUZ	Puketiti	27.51	160	P	P	09 43 39.4	0.0
MRHZ	Matea Rd	27.64	163	P	P	09 43 42.9	+2.3
TKGZ	Te Karaka	27.71	161	P	P	09 43 42.7	+1.6
CNGZ	Carnagh Statio	27.87	160	P	P	09 43 44.3	+1.7
BKZ	Black Stump Fm	27.97	163	P	P	09 43 42.1	-1.4
KNZ	Kokohu	28.19	161	P	P	09 43 42.9	-2.4
INKA	Innaminka	28.46	234	P	P	09 43 48

BBOO	Buckleboo	34.41 229	P	P	09 44 40.9	+0.7
MTN	Manton Dam	34.51 266	P	P	09 44 41.2	0.0
MTN			IAmb	IAmb	09 44 42.6	
	comp=Z,16nm,0.9s					
MTN	Manton Dam	34.51 266	P	P	09 44 41.8	+0.5
KNRA	Kununurra	36.72 261	P	P	09 45 00.3	+0.1
KNRA	Kununurra	36.72 261	P	P	09 45 00.6	+0.4
SIJI	Sorong	36.81 286	P	P	09 45 01.1	0.0
	comp=Z,46nm,0.9s,baz=75,slow=7.1,SNR=29 comp=Z,46nm,0.9s					
FITZ	Fitzroy Crossi	39.76 257	P	P	09 45 25.7	0.0
	comp=Z,22nm,1.1s,baz=104,slow=7.7,SNR=9.3					
FITZ			LR	LR	10 01 24.4	
	comp=Z,244nm,19.4s,baz=86,slow=35 comp=Z,22nm,1.1s					
FITZ	Fitzroy Crossi	39.76 257	P	P	09 45 26.0	+0.3
FITZ			IAmb	IAmb	09 45 27.5	
	comp=Z,14nm,0.9s					
FITZ	Fitzroy Crossi	39.76 257	P	P	09 45 25.8	+0.1
FORT	Forrest	39.84 237	P	P	09 45 26.8	+0.5
NLAI	Namlea	40.07 280	P	P	09 45 31.0	+2.6
	comp=Z,4μmcomp=Z,25nm,1.1s					
LBMI	Labuha	40.45 284	P	P	09 45 34.0	+2.5
	comp=Z,602nmcomp=Z,29nm,1.5s					
SANI	Sanana	41.46 281	P	P	09 45 40.3	+0.4
	comp=Z,31nm,1.2s					
SANI	Sanana	41.46 281	P	P	09 45 40.2	+0.4
BATI	Baumata	42.05 269	P	P	09 45 45.0	+0.4
	comp=Z,17nm,0.3s,baz=100,slow=2.9,SNR=4.1					
BATI			LR	LR	10 02 42.1	
	comp=Z,257nm,20.2s,baz=146,slow=35 comp=Z,17nm,0.3s					
PPT	Papeete	42.62 102	LR	LR	10 01 04.1	
	comp=Z,100nm,19.1s,baz=290,slow=32					
PPT2	Papeete2	42.62 102	eSS	SS	09 55 22.6	+2.3
	comp=Z,173nm,29.5s					
PPT2			eLR	LR	09 57 45.2	
	comp=Z,756nm,29.0s					
TBI	Tubuai	43.09 111	eSS	SS	09 55 30.5	+1.4
	comp=Z,162nm,29.5s					
TBI			eLR	LR	09 57 56.8	
	comp=Z,367nm,31.5s					
EDFI	Ende, Flores	44.18 270	P	P	09 46 03.3	+1.3
	comp=Z,5.1nm,1.1s					
LUWI	Luwuk	44.83 281	P	P	09 46 07.1	0.0
LUWI			IAmb	IAmb	09 46 09.4	
	comp=Z,30nm,0.9s					
LUWI	Luwuk	44.83 281	P	P	09 46 09.1	+2.1
	comp=Z,4μmcomp=Z,40nm,0.8s					
LUWI	Luwuk	44.83 281	P	P	09 46 09.1	+2.1
	comp=Z,40nm,0.8s					
PSA00	Pilbara Seismi	45.38 252	P	P	09 46 11.9	+0.6
PSA00			IAmb	IAmb	09 46 13.7	
	comp=Z,29nm,1.1s					
PSA00			pP	pP	09 46 27.4	+1.2
PSA00	Pilbara Seismi	45.38 252	P	P	09 46 11.8	+0.5
MBWA	Marble Bar	45.46 253	P	P	09 46 12.7	+0.8
MBWA			IAmb	IAmb	09 46 14.3	
	comp=Z,30nm,1.0s					
MBWA	Marble Bar	45.46 253	P	P	09 46 12.7	+0.8
MBWA	Marble Bar	45.46 253	P	P	09 46 11.1	-0.9
MBWA			pP	pP	09 46 28.7	+1.9
BNSI	Bone	46.55 276	P	P	09 46 22.1	+1.5
	comp=Z,40nm,1.0s					
KAPI	Kappang	46.76 275	P	P	09 46 21.7	-0.5
	comp=Z,17nm,0.5s,baz=130,slow=16,SNR=6.3 comp=Z,17nm,0.5s					
KAPI	Kappang	46.76 275	P	P	09 46 21.4	-0.8
KAPI	Kappang	46.76 275	P	P	09 46 23.4	+1.1
KAPI	Kappang	46.76 275	P	P	09 46 21.9	-0.3
SPSI	Sidrap Palu	46.98 276	P	P	09 46 24.3	+0.4
	comp=Z,22nm,1.1s					
MEEK	Meekatharra	47.00 245	P	P	09 46 24.9	+0.9
MPSI	Mapaga	47.98 282	P	P	09 46 32.3	+0.6
	comp=Z,616nmcomp=Z,26nm,1.2s					
PLAI	Plampang	47.99 269	P	P	09 46 32.1	+0.3
	comp=Z,33nm,0.9s					
PLAI	Plampang	47.99 269	P	P	09 46 32.4	+0.6
TWSI	Taliwang, Sumb	48.88 269	P	P	09 46 39.2	+0.6
	comp=Z,29nm,1.0s					
NWAO	Narrogin (SRO)	49.29 237	P	P	09 46 41.8	+0.2
	comp=Z,42nm,1.1s,baz=170,slow=3.2,SNR=2.5					
NWAO			LR	LR	10 07 46.1	
	comp=Z,334nm,20.0s,baz=282,slow=36 comp=Z,42nm,1.1s					
MORW	Morawa	49.60 242	P	P	09 46 44.0	+0.1
MORW	Morawa	49.60 242	P	P	09 46 45.1	+1.1
MYLDM	Lahad Datu	50.86 287	P	P	09 46 53.7	+0.1
JAGI	Jajag, Banyuwa	51.58 269	P	P	09 46 58.8	-0.3
	comp=Z,68nm,0.9s					
JAGI	Jajag, Banyuwa	51.58 269	P	P	09 46 58.6	-0.5
ABJI	Asem Bagus	51.62 270	P	P	09 47 01.2	+1.9
	comp=Z,52nm,0.8s					
BBKI	Banjar Baru	51.88 275	P	P	09 47 03.1	+1.8
	comp=Z,5μmcomp=Z,19nm,0.8s					
JHJ	Hachijo jima 2	52.07 331	LR	LR	10 09 39.5	
	comp=Z,69nm,18.6s,baz=126,slow=36					
TAOE	Nuku Hiva Isla	52.47 92	eLR	LR	10 02 18.0	
	comp=Z,353nm,27.1s					
KKM	Kota Kinabalu	53.29 287	P	P	09 47 12.6	+0.7
JOW	Kunigami	53.95 317	P	P	09 47 17.2	+0.9
	comp=Z,39nm,0.6s,baz=162,slow=7.7,SNR=11 comp=Z,39nm,0.6s					
JOW	Kunigami	53.95 317	P	P	09 47 17.3	+0.9
JMN	Monobe	55.51 327	P	P	09 47 27.9	+0.3
MJAR	Matsushiro Arr	55.62 332	LR	LR	10 13 31.0	
	comp=Z,34nm,18.6s,baz=115,slow=38					
JSU	Suzuyama	55.79 323	P	P	09 47 29.2	-0.4
SBUM	Sibu	55.93 282	IAmb	IAmb	09 47 32.8	
	comp=Z,13nm,1.0s					
STKI	Sintang	55.99 279	P	P	09 47 33.4	+2.0
DRV	Dumont d'Urvil	56.92 192	P	P	09 47 35.3	-1.7
DRV			pP	pP	09 47 50.6	-2.7
DRV			sP	sP	09 47 58.4	-1.9
TPUB	Ta-pu	57.31 308	P	P	09 47 40.1	-0.4
YHNB	Yeheng	57.51 310	P	P	09 47 41.5	-0.5
YHNB	Yeheng	57.51 310	P	P	09 47 42.4	+0.4
LEM	Lembang	58.25 270	P	P	09 47 48.3	+0.8
	comp=Z,61nm,0.7s,baz=72,slow=4.9,SNR=9.6 comp=Z,61nm,0.7s					
KSRS	Korea Array	61.52 326	P	P	09 48 09.3	+0.2
	comp=Z,3.5nm,0.7s,baz=138,slow=6.9,SNR=14					
KSRS			LR	LR	10 13 09.2	
	comp=Z,48nm,19.4s,baz=95,slow=34 comp=Z,3.5nm,0.7s					
QIZ	Qiongzhong	64.05 298	P	P	09 48 25.5	-0.9
QIZ			pP	pP	09 48 42.8	+0.2
USA0B	Ussuriysk Arra	64.60 333	P	P	09 48 29.7	+0.2
USA0B			pP	pP	09 48 45.6	-0.3
USA0B			IAmb	IAmb	09 48 46.2	
	comp=Z,17nm,1.3s					
USRK	Ussuriysk Ar.	64.60 333	P	P	09 48 29.9	+0.4
	comp=Z,4.8nm,0.8s,baz=115,slow=5.7,SNR=5.5					
USRK			LR	LR	10 13 00.1	
	comp=Z,43nm,21.9s,baz=132,slow=32 comp=Z,4.8nm,0.8s					
USRK	Ussuriysk Ar.	64.60 333	P	P	09 48 29.9	+0.4
USRK			pP	pP	09 48 45.3	-0.6
VNDA	Vanda	65.04 181	P	P	09 48 31.9	-0.1
	comp=Z,3.4nm,0.8s,baz=358,slow=6.5,SNR=20					
VNDA			LR	LR	10 13 46.4	
	comp=Z,89nm,18.8s,baz=1.5,slow=33 comp=Z,3.4nm,0.8s					
VNDA	Vanda	65.04 181	P	P	09 48 31.0	-0.9
VNDA			pP	pP	09 48 51.1	+2.4
VNDA			sP	sP	09 48 57.0	+1.2
CASY	Casey	65.29 202	P	P	09 48 33.5	-0.2
SHEM	Shemya Is, Ala	65.31 5	LR	LR	10 13 48.7	
	comp=Z,66nm,20.1s,baz=280,slow=33					
SBA	Scott Base	65.33 180	P	P	09 48 34.8	+1.0
SBA			IAmb	IAmb	09 48 35.9	
	comp=Z,15nm,0.9s					
SBA	Scott Base	65.33 180	P	P	09 48 32.3	-1.5
SBA			pP	pP	09 48 48.2	-2.4
SDSI	Sungai Dareh	65.50 275	P	P	09 48 36.7	+0.7
	comp=Z,8.1nm,0.9s					
PETK	Petropavlovsk-	65.81 354	P	P	09 48 38.9	+1.8
	comp=Z,1.5nm,0.7s,baz=105,slow=4.4,SNR=4.4					
PETK			LR	LR	10 10 34.0	
	comp=Z,90nm,21.8s,baz=184,slow=30 comp=Z,1.5nm,0.7s					
CCD	Concordia, Ant	66.91 191	P	P	09 48 43.4	-1.1
CCD			pP	pP	09 49 01.7	+0.6
TIA	Tai'an	67.22 318	eP	P	09 48 46.0	-0.5
TIA			pmax	pmax		
	comp=Z,14nm,0.9s					
TIA			LR	LR		
	comp=Z,740nm,10.8s					
TIA			LR	LR		
	comp=Z,1μm,13.0s					
TIA			LR	LR		
	comp=Z,2μm,19.6s					
IPM	Ipoh	67.23 280	P	P	09 48 46.7	-0.3
IPM	Ipoh	67.23 280	P	P	09 48 48.5	+1.4
	comp=Z,42nm,1.2s					
KLR	Kul'dur	68.71 336	P	P	09 48 56.0	+0.4
	comp=Z,1.9nm,0.5s,baz=165,slow=5.3,SNR=5.3					
KLR			LR	LR	10 15 06.4	
	comp=Z,104nm,20.8s,baz=190,slow=32 comp=Z,1.9nm,0.5s					
ENH	Enshi	69.41 309	P	P	09 48 59.4	-1.0
LYN	LuoYang	69.42 314	⇑P	P	09 48 59.7	-0.6
LYN			pmax	pmax		
	comp=Z,30nm,0.8s					
HNS	HongShan	69.48 318	⇑P	P	09 49 01.4	+0.8
HNS			pmax	pmax		
	comp=Z,20nm,1.2s					
GSI	Gunungsitoli	69.77 276	P	P	09 49 02.3	-0.6
GSI	Gunungsitoli	69.77 276	P	P	09 49 04.6	+1.7
	comp=Z,61nm,0.9s					
GSI	Gunungsitoli	69.77 276	P	P	09 49 04.0	+1.1
GYA	Guiyang	69.87 304	⇑P	P	09 49 04.1	+0.6
GYA			pP	pP	09 49 18.9	-0.8
GYA			pmax	pmax		
	comp=Z,34nm,0.7s					
GYA			pmax	pmax		
	comp=Z,140nm,3.6s					
BJI	Beijing	70.10 321	P	P	09 49 04.7	+0.3
BJI			pmax	pmax		
	comp=Z,13nm,0.9s					
TIY	Taiyuan	71.16 317	eP	P	09 49 13.0	+2.0
MLSI	Meulaboh, Aceh	71.62 279	P	P	09 49 14.9	+0.7
	comp=Z,3μmcomp=Z,48nm,0.8s					
XAN	Xi'an	71.67 312	P	P	09 49 14.7	+0.6
XAN			pP	pP	09 49 29.8	-1.1
XAN			pmax	pmax		
	comp=Z,67nm,0.9s					
XAN	Xi'an	71.67 312	P	P	09 49 13.7	-0.4
XLT	XiLinHaoTe	72.50 324	eP	P	09 49 19.6	+0.7
XLT			pP	PcP	09 49 35.9	-0.4
XLT			PcP	pwP	09 49 37.5	-1.6
XLT			S	S	09 58 38.8	+0.5
XLT			pmax	pmax		
	comp=Z,23nm,0.8s					
XLT			pmax	pmax		
	comp=Z,120nm,4.5s					
KMI	Kunming	72.53 302	⇑P	P	09 49 21.2	+1.5
KMI			pP	pP	09 49 36.0	-0.1
KMI			pmax	pmax		
	comp=Z,54nm,1.1s					
KMI			pmax	pmax		
	comp=Z,100nm,3.5s					
MA2	Magadan	72.97 352	LR	LR	10 15 45.3	
	comp=Z,79nm,21.9s,baz=190,slow=31					
CM31	Chiang Mai Arr	73.40 294	P	P	09 49 25.8	+1.1
CMAR	Chiang Mai Arr	73.40 294	P	P	09 49 26.1	+1.5
	comp=Z,16nm,0.8s,baz=122,slow=4.5,SNR=44 comp=Z,16nm,0.8s					
CMAR	Chiang Mai Arr	73.40 294	P	P	09 49 25.5	+0.9
HHC	Hu-ho-hao-te	73.44 320	eP	P	09 49 25.7	+1.1
HHC			pmax	pmax		
	comp=Z,48nm,0.6s					
HHC			pmax	pmax		
	comp=Z,190nm,4.6s					
CHTO	Chiang Mai	73.52 294	P	P	09 49 26.1	+0.7
CHTO	Chiang Mai	73.52 294	P	P	09 49 26.2	+0.9
PZH	PanZhiHua	73.90 302	P	P	09 49 27.8	+0.2
PZH			pmax	pmax		
	comp=Z,30nm,1.0s					
PZH			pmax	pmax		
	comp=Z,90nm,4.2s					
CD2	Chengdu	74.10 307	P	P	09 49 29.1	+0.5
CD2			pP	pP	09 49 46.3	+1.4
CD2			S	S	09 58 58.3	+1.5
SEY	Seymchan	76.02 353	P	P	09 49 37.8	-1.1
	comp=Z,2.7nm,0.7s,baz=233,slow=20,SNR=5.6 comp=Z,2.7nm,0.7s					
LZH	Lanzhou	76.31 312	⇑P	P	09 49 42.8	+1.5
LZH			pP	pP	09 49 57.9	-0.3
LZH			pmax	pmax		
	comp=Z,85nm,1.5s					
LZH			pmax	pmax		
	comp=Z,310nm,6.2s					
LZH			LR	LR		
	comp=Z,12nm,18.6s					
QSPA	South Pole Qui	77.49 180	P	P	09 49 47.1	-0.4
QSPA			IAmb	IAmb	09 50 00.7	
	comp=Z,25nm,1.1s					
KDAK	Kodiak Island	77.67 21	LR	LR	10 16 52.8	
	comp=Z,164nm,21.5s,baz=230,slow=30					
YAK	Yakutsk	79.72 343	LR	LR	10 20 49.9	
	comp=Z,69nm,21.8s,baz=90,slow=32					
ULN	Ulaanbaatar	79.94 324	P	P	09 50 01.4	+0.3
ULN			IAmb	IAmb	09 50 02.4	
	comp=Z,18nm,0.7s					
SONM	Songino Array	80.30 324	P	P	09 50 02.9	-0.1
	comp=Z,5.6nm,0.6s,baz=139,slow=6.4,SNR=15					
SONM			LR	LR	10 23 38.1	
	comp=Z,40nm,21.5s,baz=140,slow=34 comp=Z,5.6nm,0.6s					
SONM	Songino Array	80.30 324	P	P	09 50 03.5	+0.5
SONM			IAmb	IAmb	09 50 06.2	
	comp=Z,6.4nm,0.8s					
GTA	Gaotai	80.62 314	⇑P	P	09 50 06.0	+1.0
GTA			pmax	pmax		
	comp=Z,21nm,1.0s					
GTA			pmax	pmax		
	comp=Z,92nm,6.5s					
GTA			LR	LR		
	comp=Z,870nm,15.3s					
GTA			LR	LR		
	comp=Z,870nm,18.2s					
GTA			LR	LR		
	comp=Z,940nm,19.6s					
KCPM	Cahto Peak	83.00 47	IAmb	IAmb	09 50 20.2	
	comp=Z,9.5nm,0.7s					
KMRM	Mail Ridge	83.11 46	IAmb	IAmb	09 50 21.4	
	comp=Z,7.7nm,0.9s					
MAW	Mawson	83.64 202	P	P	09 50 20.6	+0.5
	comp=Z,11nm,0.8s,baz=115,slow=5.2,SNR=14 comp=Z,11nm,0.8s					
MAW	Mawson	83.64 202	P	P	09 50 19.8	-0.3
LSA	Lhasa	83.78 302	IAmb	IAmb	09 50 24.6	
	comp=Z,13nm,0.7s					
YBH	Yreka Blue Hor	84.39 45	LR	LR	10 22 51.2	
	comp=Z,72nm,18.1s,baz=300,slow=32					
YBH	Yreka Blue Hor	84.39 45	P	P	09 50 26.4	+1.9
YBH			IAmb	IAmb	09 50 27.0	
	comp=Z,4.9nm,0.7s					
HDA	Harding Lake	84.39 18	P	P	09 50 24.5	+0.6
AFDM	Forest Hills D	84.61 48	IAmb	IAmb	09 50 27.4	
	comp=Z,5.4nm,0.6s					
IL31		84.67 18	P	P	09 50 23.8	-1.4
IL31			IAmb	IAmb	09 50 26.2	
	comp=Z,6.0nm,0.7s					
ILAR	Eielson Array	84.67 18	P	P	09 50 23.6	-1.6
	comp=Z,4.2nm,0.6s,baz=244,slow=4.9,SNR=25					
ILAR			LR	LR	10 23 57.6	
	comp=Z,86nm,18.6s,baz=240,slow=33 comp=Z,4.2nm,0.6s					
CMB	Columbia Colle	84.72 49	P	P	09 50 27.1	+0.9
BBB	Bella Bella	85.36 34	LR	LR	10 23 22.2	
	comp=Z,124nm,18.3s,baz=255,slow=32					
BEKR	Beckworth	85.37 48	IAmb	IAmb	09 50 31.4	
	comp=Z,5.5nm,0.6s					
K05A	Summer Lake	86.00 45	IAmb	IAmb	09 50 35.0	
	comp=Z,8.4nm,0.7s					
MOD	Modoc Plateau	86.12 46	IAmb	IAmb	09 50 35.1	
	comp=Z,4.2nm,0.7s					
RYN	Ryan	86.30 49	IAmb	IAmb	09 50 36.1	
	comp=Z,4.8nm,0.7s					
DSP	Deep Springs	86.31 51	IAmb	IAmb	09 50 36.4	
	comp=Z,5.5nm,0.7s					
PINE	Pine Mountain	86.35 44	IAmb	IAmb	09 50 36.6	
	comp=Z,4.7nm,0.8s					
NVAR	Mina Array Bea	86.40 50	P	P	09 50 35.6	+0.9
	comp=Z,3.0nm,0.7s,baz=234,slow=8.3,SNR=33 comp=Z,3.0nm,0.7s					
NV11	Mina Array Sit	86.51 50	IAmb	IAmb	09 51 02.4	
	comp=Z,7.7nm,1.4s					
KVN	Kaiserville	86.75 49	IAmb	IAmb	09 50 38.2	
	comp=Z,3.2nm,0.6s					
DLBC	Dease Lake	87.35 28	LR	LR	10 21 48.4	
	comp=Z,46nm,20.5s,baz=275,slow=30					
I07A	Izee	87.43 44	IAmb	IAmb	09 50 42.2	
	comp=Z,3.8nm,0.8s					
J08A	Circle Bar Ran	87.89 45	IAmb	IAmb	09 50 43.8	
	comp=Z,5.7nm,0.8s					
V12A	Nelson	88.20 53	P	P	09 50 42.9	-0.5
G08A	Pilot Rock	88.20 43	P	P	09 50 43.4	+0.2
LPIG	La Paz	88.94 65	LR	LR	10 22 50.9	
	comp=Z,40nm,20.6s,baz=276,slow=30					
BELA	Belgrano 2	88.96 176	P	P	09 50 44.9	-1.2
BELA			IAmb	IAmb	09 50 48.1	
	comp=Z,8.2nm,0.8s					
MFID	Camas Ranch	89.74 45	IAmb	IAmb	09 50 52.9	
	comp=Z,4.4nm,0.8s					
PSUT	Pine Spring	89.76 50	IAmb	IAmb	09 50 52.9	
	comp=Z,3.7nm,0.8s					
LCMT	Little Creek M	89.81 52	IAmb	IAmb	09 50 53.6	
	comp=Z,3.5nm,0.8s					
KNB	Kanab	90.13 52	IAmb	IAmb	09 50 55.0	
	comp=Z,3.6nm,0.9s					
WMQ	Urumqi	90.67 315	eP	P	09 50 54.7	0.0
WMQ			pmax	pmax		
	comp=Z,43nm,0.7s					
HLID	Hailey	90.76 46	IAmb	IAmb	09 50 57.6	
	comp=Z,3.3nm,0.7s					
MTPU	Mount Pierson	90.89 51	IAmb	IAmb	09 50 59.3	
	comp=Z,4.3nm,0.8s					
BGU	Big Grassy Mou	91.02 48	IAmb	IAmb	09 50 58.5	
	comp=Z,2.3nm,0.7s					
INK	Inuvik	91.05 19	LR	LR	10 26 54.4	
	comp=Z,103nm,19.6s,baz=267,slow=32					
HVU	Hansel Valley	91.44 48	IAmb	IAmb	09 51 26.8	
	comp=Z,4.1nm,1.0s					
PDAR	Pinedale Array	93.99 47	P	P	09 51 10.4	+0.1
	comp=Z,0.6nm,0.9s,baz=243,slow=2.7,SNR=3.6 comp=Z,0.6nm,0.9s					
TROLL	Troll, Antarti	94.98 185	P	P	09 51 13.1	-1.1
MK31	Makanchi Array	95.11 317	P	P	09 51 15.1	+0.1
MKAR	Makanchi Array	95.11 317	P	P	09 51 14.9	-0.2
	comp=Z,15nm,0.7s,baz=97,slow=6.3,SNR=18 comp=Z,15nm,0.7s					
ZALV	Zalesovo Beam	95.19 324	P	P	09 51 13.7	-1.5
	comp=Z,4.4nm,0.8s,baz=130,slow=4.1,SNR=4.2 comp=Z,4.4nm,0.8s					
MAKZ	Makanchi	95.33 317	P	P	09 51 15.8	-0.2
SNAA	Sanae	95.69 183	P	P	09 51 15.6	-1.8
SNAA	Sanae	95.69 183	P	P	09 51 16.4	-0.9
SNAA			IAmb	IAmb	09 51 16.6	
	comp=Z,2.9nm,0.9s					
TX31	Lajitas Ar. Si	95.87 61	P	P	09 51 20.1	+1.1
TX31			IAmb	IAmb	09 51 20.6	
	comp=Z,3.3nm,0.8s					
TXAR	Lajitas Array	95.87 61	P	P	09 51 19.8	+0.8
	comp=Z,1.0nm,0.7s,baz=224,slow=6.0,SNR=16 comp=Z,1.0nm,0.7s					
YKA	Yellowknife Ar	95.93 27	P	P	09 51 17.8	-0.6
	comp=Z,0.6nm,0.6s,baz=256,slow=5.2,SNR=4.6 comp=Z,0.6nm,0.6s					
VNA3	Neumayer Olymp	96.39 181	P	P	09 51 18.7	-1.8
ARCES	ARCESS Array B	117.95 345	PKP	PKPdf	09 56 36.5	-1.1
	comp=Z,2.7nm,0.5s,baz=74,slow=2.0,SNR=33					
ARCES			PKKPbc	PKKPbc	10 06 55.3	-5.3
	comp=Z,3.9nm,0.9s,baz=191,slow=1.2,SNR=8.1					
FINES	FINESS Array B	123.42 338	PKP	PKPdf	09 56 47.4	-1.0
	comp=Z,3.3nm,0.9s,baz=90,slow=5.7,SNR=5.6					
NB2	NORSAR Subarra	128.32 345	PKPdf	PKPdf	09 56 57.2	-0.7
	comp=Z,1.1nm,1.0s,baz=31,slow=1.9					
NOA	NORSAR Array B	128.32 345	PKP	PKPdf	09 56 56.7	-1.2
	comp=Z,0.8nm,0.6s,baz=30,slow=1.9,SNR=4.3					
AKASG	Malin Array Be	128.51 327	PKP	PKPdf	09 56 56.9	-1.5
	comp=Z,1.1nm,0.7s,baz=49,slow=1.2,SNR=1.7					
BRTR	Keskin Array B	130.51 312	PP	PP	09 59 13.8	-4.0
	comp=Z,1.0nm,0.8s,baz=102,slow=4.2,SNR=4.0					
CLL	Collm	135.76 336	ePKPdf	PKiKP	09 57 13.0	-0.7
CLL			ePKPdf	pPKPdf	09 57 29.0	-1.1
CLL			ePP	PP	09 59 51.0	+0.8
EKA	Eskdalemuir Ar	136.53 351	PKP	PKPdf	09 57 13.6	+0.1
	comp=Z,0.5nm,0.4s,baz=0.3,slow=2.1,SNR=6.3					
GERES	GERESS Array B	137.36 334	PKP	PKPdf	09 57 14.5	-0.8
	comp=Z,0.4nm,0.6s,baz=38,slow=5.0,SNR=3.6					
KEST	Kesra	149.04 322	PKPbc	PKPbc	09 57 39.0	-1.4
	comp=Z,15nm,0.7s,baz=8.4,slow=3.7,SNR=16					
PGAV	Gavieira, Arco	150.32 352	eLR	LR	10 37 30.7	
	comp=Z,291nm,20.0s					
POLO	Lamas de Olo	150.83 351	ePKPbc	PKPbc	09 57 44.2	-0.3
MVO	Moncorvo	150.91 350	ePKPbc	PKPbc	09 57 44.7	0.0
MVO	Moncorvo	150.91 350	eLR	LR	10 37 03.5	
	comp=Z,183nm,22.0s					
PVIS	Viseu	151.49 351	ePKPbc	PKPbc	09 57 44.9	-1.1
ESDC	Sonseca Array	151.68 344	PKPbc	PKPbc	09 57 45.9	-0.6
	comp=Z,2.3nm,0.8s,baz=359,slow=2.2,SNR=16					
ESDC			PKPab	PKPab	09 57 55.2	-0.1
	comp=Z,1.6nm,0.6s,baz=9.7,slow=3.7,SNR=7.8					
MTE	Manteigas	151.75 350	ePKPbc	PKPbc	09 57 46.4	-0.2
MTE	Manteigas	151.75 350	ePKPab	PKPab	09 57 55.6	+0.1
MTE	Manteigas	151.75 350	eLR	LR	10 38 02.0	
	comp=Z,277nm,18.0s					
PCBR	Castelo Branco	152.28 350	ePKPbc	PKPbc	09 57 47.5	-0.2
PMRV	Marv??o	152.67 350	ePKPbc	PKPbc	09 57 48.5	-0.1
PMRV	Marv??o	152.67 350	eLR	LR	10 38 11.4	
	comp=Z,256nm,20.0s					
PVAQ	Vaqueiros	154.69 349	eLR	LR	10 38 07.8	
	comp=Z,282nm,18.0s					
TORD	Torodi Ar. Bea	165.19 274	PKPab	PKPab	09 58 54.6	+0.2
	comp=Z,13nm,0.6s,baz=87,slow=4.9,SNR=5.1					
DBIC	Dimbokro	169.70 236	PKPab	PKPab	09 59 14.1	-0.2
	comp=Z,3.9nm,0.9s,baz=90,slow=2.5,SNR=4.9					
DBIC	Dimbokro	169.70 236	PKHKP	PKPab	09 59 14.1	-0.2
KOWA	Kowa	170.59 283	PKPab	PKPab	09 59 18.3	0.0
	comp=Z,5.5nm,0.7s,baz=95,slow=4.1,SNR=14					

BJI ***01*** *09:40:20.3±0.0, 34°.82N×141°.56E, h7km, mb4.6/56, mB4.8/38, Ms4.8/51, Ms7 4.5/47*
MOS ***01*** *09:40:21.3±1.1, 34°.78N×141°.49E, h10km, mb5.0/37, MS4.4/10, Error ellipse: s-maj=9.6km s-min=4.6km az=120.9*
IDC ***01*** *09:40:21.9±0.4, 34°.70N×141°.44E, h0km, mb4.5/31, mbtmp4.5/35, ML3.4/3, MS4.2/38, Error ellipse: s-maj=14.7km s-min=10.0km az=94.0*
NEIC ***01*** *09:40:22.8±1.1, 34°.73N±0°.05×141°.69E±0°.05, h10km±1km, mb4.9/75, Error ellipse: s-maj=9.1km s-min=7.0km az=152.0*
NIED ***01*** *09:40:23.6, 34°.63N×141°.55E, h35km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.43; $M_{\theta\theta}$-1.61; $M_{\phi\phi}$1.19; $M_{r\theta}$0.39; $M_{\theta\phi}$0.87; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.71000×10^{16} NP1: ϕ_s331.00000°, δ74.00000°, λ175.00000°. NP2: ϕ_s62.00000°, δ85.00000°, λ16.00000°.*
JMA ***01*** *09:40:23.6±0.5, 35°N±1°×14°2E±°, h35km±1km, MD4.8/33, MW4.7/33, FAR SE OFF BOSO PEN*

ISC 01 09:40:25.3±0.4, 34°.67N±0°.04×141°.59E±0°.04, h27km, n338, σ1§**80**/292**, mb4.8**/102**, MS4.4**/56**, 15C-5D, Off east coast of

TOK	**Tokyo**	**1.81 305**	A	A	09 40 53.4	
	comp=E,44nm,3.5s,comp=E,45nm,5.0s					
JMKN	**Mikurajimanish**	**1.83 246**	P	**Pn**	**09 40 53.2**	**-1.8**
JHYU	**Hitachinakayam**	**1.86 334**	A	A	09 40 54.5	
	comp=E,15nm,1.8s,comp=E,15nm,1.8s					
JTHY	**Toshimahigashi**	**1.91 266**	A	A	09 40 54.2	
	comp=E,16nm,5.9s,comp=E,16nm,6.1s					
JYT	**Yasato**	**1.93 324**	Pn	**Pn**	**09 40 55.3**	**-1.1**
JYT	**Yasato**	**1.93 324**	A	A	09 40 55.4	
	comp=E,7.0nm,0.5s,comp=E,8.0nm,3.6s					
JNIO	**Niijimaoohara**	**1.94 261**	A	A	09 40 54.7	
	comp=E,20nm,2.6s,comp=E,25nm,1.3s					
JSKK	**Shikinejimakit**	**2.00 261**	A	A	09 40 55.5	
	comp=E,19nm,1.4s,comp=E,14nm,2.2s					
JKO	**Kozu shima**	**2.09 257**	A	A	09 40 56.8	
	comp=E,21nm,2.1s,comp=E,16nm,2.1s					
JOD2	**Odawara 2**	**2.14 287**	A	A	09 40 57.9	
	comp=E,13nm,2.6s,comp=E,14nm,3.4s					
JHJ2	**Mitsune**	**2.14 224**		**Pn**	**09 40 59.1**	**-0.2**
JHTM	**Izuhatsuma**	**2.15 279**	A	A	09 40 57.8	
	comp=E,22nm,1.4s,comp=E,30nm,1.3s					
JHJ	**Hachijo jima 2**	**2.16 225**	Pn	**Pn**	**09 40 58.8**	**-0.7**
	103nm,0.3s,baz=72,slow=1.4,SNR=49					
JHJ			Sn	**Sn**	**09 41 24.2**	**-1.2**
	211nm,0.3s,baz=50,slow=20,SNR=15					
JHJ			LR	LR	09 42 03.0	
	comp=Z,1μm,21.5s,baz=56,slow=48					
	173nm,0.3s					
JHU	**Hanno**	**2.23 303**	A	A	09 40 59.4	
	comp=E,8.0nm,6.2s,comp=E,11nm,3.2s					
JIZS	**Izushimoda**	**2.24 272**	A	A	09 40 59.1	
	comp=E,5.0nm,1.1s,comp=E,6.0nm,2.4s					
JFNN	**Fujinakano**	**2.45 283**	A	A	09 41 02.2	
	comp=E,13nm,9.7s,comp=E,13nm,4.7s					
JAG	**Ashikaga**	**2.47 316**	A	A	09 41 03.1	
	comp=E,5.0nm,5.2s,comp=E,7.0nm,4.6s					
JFFD	**Fukushimafurud**	**2.56 341**	A	A	09 41 04.6	
	comp=E,10.0nm,6.5s,comp=E,8.0nm,5.2s					
JRY	**Ryogami san**	**2.58 302**	A	A	09 41 04.4	
	comp=E,5.0nm,8.3s,comp=E,5.0nm,5.2s					
JSB	**Shiboa**	**2.67 330**	A	A	09 41 06.0	
	comp=E,20nm,3.6s,comp=E,18nm,2.6s					
JSG	**Sagara**	**2.81 271**	A	A	09 41 07.2	
	comp=E,10.0nm,6.1s,comp=E,9.0nm,4.1s					
SHZ3	**Shizuoka 3**	**2.81 279**	A	A	09 41 07.4	
	comp=E,4.0nm,2.4s,comp=E,5.0nm,1.5s					
JKKS	**Kakegawashinom**	**2.97 273**	A	A	09 41 09.6	
	comp=E,7.0nm,4.9s,comp=E,8.0nm,7.3s					
JGK	**Kuni**	**3.06 309**	A	A	09 41 11.3	
	comp=E,5.0nm,8.3s,comp=E,9.0nm,3.2s					
JMM	**Marumori**	**3.26 349**	Pn	**Pn**	**09 41 12.8**	**-1.8**
MJAR	**Matsushiro Arr**	**3.33 305**	Pn	**Pn**	**09 41 15.3**	**-0.4**
	2.6nm,0.3s,baz=110,slow=9.8,SNR=123					
	47nm,0.7s					
MAJO	**Matsushiro**	**3.33 305**	Pn	**Pn**	**09 41 15.4**	**-0.3**
MAJO	**Matsushiro**	**3.33 305**	P	**Pn**	**09 41 15.4**	**-0.3**
MJB9	**Matsu-Tunnel**	**3.34 305**		**Pn**	**09 41 15.5**	**-0.3**
JYAR	**Yonezawaarcadi**	**3.44 341**	A	A	09 41 17.1	
	comp=E,12nm,3.7s,comp=E,8.0nm,4.8s					
JGF	**Kuroka**	**3.59 286**	Pn	**Pn**	**09 41 19.3**	**0.0**
JIZZ	**Izumozaki**	**3.69 322**	A	A	09 41 20.4	
	comp=E,17nm,4.3s,comp=E,17nm,3.6s					
JOU	**Okura**	**3.77 349**	A	A	09 41 21.8	
	comp=E,8.0nm,2.8s,comp=E,9.0nm,4.9s					
INU	**Inuyama**	**3.82 282**	Pn	**Pn**	**09 41 22.2**	**-0.1**
JOFO	**Osakifurukawao**	**3.96 352**	A	A	09 41 24.6	
	comp=E,39nm,3.9s,comp=E,24nm,3.3s					
JYA	**Atsumi**	**4.20 339**	A	A	09 41 27.8	
	comp=E,6.0nm,3.8s,comp=E,4.0nm,2.1s					
JSD	**Sado**	**4.31 322**	Pn	**Pn**	**09 41 28.4**	**-0.7**
JYYZ	**Yamagatayuza**	**4.54 343**	A	A	09 41 32.6	
	comp=E,18nm,7.5s,comp=E,22nm,2.5s					
JTM	**Tenmabayashi**	**6.12 356**		**Pn**	**09 41 52.6**	**-1.4**
JMN	**Monobe**	**6.46 264**		**Pn**	**09 42 00.8**	**+2.1**
JHS	**Saijyo**	**6.98 275**	Pn	**Pn**	**09 42 06.5**	**+0.7**
ERM	**Erimo**	**7.44 9**	Pn	**Pn**	**09 42 08.9**	**-3.1**
ERM	**Erimo**	**7.44 9**	P	**Pn**	**09 42 08.9**	**-3.1**
JCJ	**Chichijima**	**7.56 176**	Pn	**Pn**	**09 42 12.2**	**-1.6**
	44nm,0.3s,baz=308,slow=22,SNR=14					
JCJ			Sn	**Sn**	**09 43 32.0**	**-6.7**
	20nm,0.3s,baz=291,slow=21,SNR=1.6					
JCJ	**Chichijima**	**7.56 176**	Pn	**Pn**	**09 42 12.7**	**-1.2**
JEW	**Eniwo**	**8.16 359**		**Pn**	**09 42 18.6**	**-3.3**
NMR	**Nemuro--Hokkai**	**9.27 19**	*e*P	**Pn**	**09 42 32.8**	**-4.3**
RUSJ	**Misakicho**	**9.84 16**	P	**Pn**	**09 42 40.3**	**-4.6**
JSU	**Suzuyama**	**9.86 254**		**Pn**	**09 42 46.3**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**9.92 18**	P	**Pn**	**09 42 41.9**	**-4.1**
YUK			pmax	pmax		
	comp=Z,68nm,0.3s					
YUK			pmax	pmax		
	comp=N,37nm,0.4s					
YUK			pmax	pmax		
	comp=E,21nm,0.4s					
KSRS	**Korea Array**	**11.41 288**	Pn	**Pn**	**09 43 08.8**	**+2.4**
	comp=E,0.3nm,0.3s,baz=100,slow=14,SNR=40					
KSAR	**Wonju Array Be**	**11.44 288**	Pn	**Pn**	**09 43 04.3**	**-2.6**
KSAR	**Wonju Array Be**	**11.44 288**	P	**Pn**	**09 43 04.3**	**-2.6**
KS19	**Wonju Array Si**	**11.46 288**		**Pn**	**09 43 07.8**	**+0.6**
KUR	**Kuril'sk**	**11.59 23**	P	**Pn**	**09 43 05.9**	**-3.1**
KUR			MLR	MLR		
	comp=Z,1μm,12.0s					
USA0B	**Ussuriysk Arra**	**12.06 325**		**Pn**	**09 43 13.3**	**-2.1**
USA0B	**Ussuriysk Arra**	**12.06 325**	P	**Pn**	**09 43 13.3**	**-2.1**
USRK	**Ussuriysk Ar.**	**12.06 325**	Pn	**Pn**	**09 43 14.7**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=134,slow=12,SNR=27					
USRK			LR	LR	09 46 45.4	
	comp=Z,382nm,19.5s,baz=130,slow=32					
	comp=Z,18nm,0.7s					
USRK	**Ussuriysk Ar.**	**12.06 325**	Pn	**Pn**	**09 43 13.9**	**-1.5**
YSS	**Yuzh-Sakhalins**	**12.31 4**		**Pn**	**09 43 16.0**	**-2.6**
YSS	**Yuzh-Sakhalins**	**12.31 4**	*e*P	**Pn**	**09 43 15.9**	**-2.8**
YSS			*e*S	**Sn**	**09 45 29.6**	**-5.2**
YSS			pmax	pmax		
	comp=Z,40nm,0.6s					
YSS			smax	smax		
	comp=E,20nm,1.3s					
YSS			MLR	MLR		
	comp=E,2μm,15.0s					
YSS			MLR	MLR		
	comp=Z,2μm,15.0s					
YSS			MLR	MLR		
	comp=N,1μm,16.0s					
MDJ	**Mudanjiang**	**13.56 321**	P	**Pn**	**09 43 35.6**	**-0.2**
MDJ			pmax	pmax		
	comp=N,14nm,0.9s					
MDJ			pmax	pmax		
	comp=N,140nm,9.0s					
BNX	**BinXian**	**15.46 320**	⇓P	**Pn**	**09 43 58.1**	**-3.3**
BNX			pmax	pmax		
	comp=N,15nm,1.1s					
BNX			pmax	pmax		
	comp=N,160nm,5.2s					
SNY	**Shenyang**	**15.84 302**	⇓P	**Pn**	**09 44 06.6**	**+0.2**
SNY			pmax	pmax		
	comp=N,14nm,1.0s					
SNY			pmax	pmax		
	comp=N,200nm,9.1s					
SNY			LR	LR		
	comp=N,2μm,13.0s					
SNY			LR	LR		
	comp=N,990nm,14.9s					
SNY			LR	LR		
	comp=N,1μm,14.9s					
TYV	**Tymovskoe**	**16.21 2**	*e*P	**Pn**	**09 44 08.4**	**-2.6**
TYV			*e*S	**Sn**	**09 47 08.7**	**-1.1**
TYV			pmax	pmax		
	comp=Z,600nm,5.5s					
TYV			pmax	pmax		
	comp=Z,21nm,1.2s					
TYV			smax	smax		
	comp=E,400nm,4.4s					
KLR	**Kul'dur**	**16.27 336**	Pn	**Pn**	**09 44 07.9**	**-3.9**
	comp=E,0.2nm,0.3s,baz=128,slow=11,SNR=7.7					
KLR			LR	LR	09 50 53.7	
	comp=E,1μm,18.3s,baz=154,slow=39					
KLR	**Kul'dur**	**16.27 336**	*ce*P	**Pn**	**09 44 08.7**	**-3.1**
KLR			pmax	pmax		
	comp=Z,7.0nm,1.7s					
GRNR	**Gornyy**	**16.53 348**	⇓*i*P	**Pn**	**09 44 10.5**	**-4.6**
GRNR			*e*S	**Sn**	**09 47 13.2**	**-4.5**
GRNR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
GRNR			smax	smax		
	comp=N,5.0nm,0.5s					
GRNR			MLR	MLR		
	comp=N,710nm,17.0s					
GRNR			MLR	MLR		
	comp=E,790nm,17.0s					
GRNR			MLR	MLR		
	comp=Z,970nm,18.0s					
DL2	**Dalian**	**16.54 291**	P	**Pn**	**09 44 10.6**	**-4.7**
DL2			S	**Sn**	**09 47 16.5**	**-1.6**
DL2			pmax	pmax		
	comp=Z,36nm,1.5s					
DL2			pmax	pmax		
	comp=Z,270nm,5.4s					
DL2			LR	LR		
	comp=Z,3μm,15.3s					
DL2			LR	LR		
	comp=Z,1μm,21.6s					
DL2			LR	LR		
	comp=Z,2μm,16.4s					
SSE	**Sheshan**	**17.50 264**	P	**Pn**	**09 44 27.2**	**-0.3**
SSE			S	**S**	**09 47 45.7**	**-3.4**
SSE			pmax	pmax		
	comp=Z,100nm,4.0s					
SSE			LR	LR		
	comp=Z,1μm,18.0s					
SSE			LR	LR		
	comp=Z,670nm,18.0s					
NJ2	**Nanjing**	**19.17 269**	*e*P	**Pn**	**09 44 47.5**	**-0.3**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
NJ2			LR	LR		
	comp=Z,1μm,15.2s					
NJ2			LR	LR		
	comp=Z,610nm,15.2s					
NJ2			LR	LR		
	comp=Z,1μm,12.8s					
BJI	**Beijing**	**20.87 292**	P	**P**	**09 45 02.6**	**-2.6**
BJI			S	Sn	09 49 00.6	-2.1
BJI			pmax	pmax		
	comp=Z,5.0nm,0.6s					
BJI			LR	LR		
	comp=Z,140nm,12.2s					
BJI			LR	LR		
	comp=Z,700nm,13.1s					
BJI			LR	LR		
	comp=Z,600nm,12.3s					
ZEA	**Zeya**	**21.59 336**	*e*P	**P**	**09 45 10.0**	**-2.8**
ZEA			*e*S	S	09 48 57.1	-13
ZEA			pmax	pmax		
	comp=Z,100nm,4.3s					
ZEA			pmax	pmax		
	comp=N,40nm,0.8s					
ZEA			pmax	pmax		
	comp=E,20nm,0.9s					
ZEA			pmax	pmax		
	comp=Z,70nm,0.9s					
ZEA			smax	smax		
	comp=E,200nm,10.0s					
ZEA			smax	smax		
	comp=N,300nm,10.1s					
ZEA			MLR	MLR		
	comp=N,700nm,16.0s					
ZEA			MLR	MLR		
	comp=E,500nm,16.0s					
ZEA			MLR	MLR		
	comp=Z,900nm,16.0s					
PETK	**Petropavlovsk-**	**21.69 27**	LR	LR	09 55 02.4	
	comp=Z,199nm,18.7s,baz=206,slow=40					
XLT	**XiLinHaoTe**	**21.72 303**	*e*P	**P**	**09 45 13.8**	**-0.7**
XLT			pP	pP	09 45 17.8	-2.9
XLT			sP	sP	09 45 21.6	-1.9
XLT			S	**S**	**09 49 16.8**	**+3.3**
XLT			pmax	pmax		
	comp=Z,12nm,0.8s					
XLT			pmax	pmax		
	comp=Z,170nm,4.5s					
XLT			LR	LR		
	comp=Z,2μm,16.0s					
XLT			LR	LR		
	comp=Z,860nm,15.6s					
XLT			LR	LR		
	comp=Z,840nm,16.4s					
HNS	**HongShan**	**21.89 285**	⇑P	**P**	**09 45 12.8**	**-3.4**
HNS			S	**S**	**09 49 10.6**	**-6.0**
HNS			pmax	pmax		
	comp=Z,15nm,0.7s					
HNS			LR	LR		
	comp=Z,1μm,13.0s					
HNS			LR	LR		
	comp=Z,2μm,12.6s					
HNS			LR	LR		
	comp=Z,2μm,12.9s					
WHN	**Wuhan**	**23.29 267**	⇑P	**P**	**09 45 29.1**	**-1.8**
HHC	**Hu-ho-hao-te**	**24.46 294**	*e*P	**P**	**09 45 40.9**	**-1.2**
HHC			S	**S**	**09 49 57.6**	**-3.0**
HHC			pmax	pmax		
	comp=Z,34nm,0.8s					
HHC			pmax	pmax		
	comp=Z,250nm,5.5s					
HHC			LR	LR		
	comp=Z,860nm,14.6s					
HHC			LR	LR		
	comp=Z,1μm,13.3s					
HHC			LR	LR		
	comp=Z,1μm,14.0s					
BTO	**Baotou**	**25.61 293**	*e*P	**P**	**09 45 52.7**	**+0.2**
BTO			S	**S**	**09 50 24.5**	**+5.5**
BTO			LR	LR		
	comp=Z,4μm,16.3s					
BTO			LR	LR		
	comp=Z,3μm,16.1s					
MA2	**Magadan**	**25.64 11**	P	**P**	**09 45 52.8**	**+0.4**
	comp=Z,10nm,0.8s,baz=200,slow=11,SNR=7.5					
MA2			LR	LR	09 58 05.7	
	comp=Z,404nm,18.9s,baz=196,slow=42					
	comp=Z,10nm,0.8s					
MA2	**Magadan**	**25.64 11**	P	**P**	**09 45 51.3**	**-1.2**
MA2			IAmb	IAmb	09 46 18.4	
	comp=Z,23nm,0.9s					
H11N2	**WAKE ISLAND Hy**	**26.88 117**	T	T	10 14 21.8	
	baz=309,slow=76,SNR=48					
H11N1	**WAKE ISLAND Hy**	**26.88 117**	T	T	10 14 24.9	
	baz=309,slow=76,SNR=49					
H11N3	**WAKE ISLAND Hy**	**26.89 117**	T	T	10 14 25.9	
	baz=309,slow=76,SNR=45					
XAN	**Xi'an**	**26.92 278**	P	**P**	**09 46 01.2**	**-3.1**
XAN			pP	pP	09 46 05.6	-5.3
XAN			S	**S**	**09 50 35.4**	**-4.3**
XAN			pmax	pmax		
	comp=Z,19nm,1.2s					
XAN			LR	LR		
	comp=Z,2μm,21.2s					
XAN			LR	LR		
	comp=Z,1μm,21.4s					
XAN			LR	LR		
	comp=Z,1μm,16.9s					
ENH	**Enshi**	**27.37 270**	P	**P**	**09 46 07.6**	**-0.8**
ENH			IAmb	IAmb	09 46 10.9	
	comp=Z,16nm,0.8s					
H11S1	**WAKE ISLAND Hy**	**27.51 119**	T	T	10 15 11.9	
	baz=313,slow=74,SNR=11					
H11S3	**WAKE ISLAND Hy**	**27.51 119**	T	T	10 15 10.6	
	baz=313,slow=74,SNR=8.3					
H11S2	**WAKE ISLAND Hy**	**27.53 119**	T	T	10 15 18.2	
	baz=313,slow=74,SNR=28					
YAK	**Yakutsk**	**28.41 348**	P	**P**	**09 46 17.4**	**+0.2**
	comp=Z,9.3nm,0.4s,baz=206,slow=0.7,SNR=1.5					
YAK			LR	LR	09 58 36.6	
	comp=Z,1μm,18.3s,baz=172,slow=39					
	comp=Z,9.3nm,0.4s					
YAK	**Yakutsk**	**28.41 348**	P	**P**	**09 46 15.8**	**-1.4**
YAK	**Yakutsk**	**28.41 348**	*e*P	**P**	**09 46 21.5**	**+4.2**
YAK			*e**PP	**pwP**	**09 46 30.0**	**+0.3**
YAK			*e*		09 47 12.7	
YAK			*e*S	**S**	**09 51 06.6**	**+4.2**
YAK			*e*SS	**SnSn**	**09 52 24.5**	**+3.1**
YAK			pmax	pmax		
	comp=Z,26nm,0.9s					
YAK			pmax	pmax		
	comp=N,10.0nm,0.9s					
YAK			pmax	pmax		
	comp=E,3.0nm,0.9s					
YAK			pmax	pmax		
	comp=Z,68nm,2.5s					
YAK			pmax	pmax		
	comp=N,24nm,2.1s					
YAK			pmax	pmax		
	comp=E,32nm,2.3s					
YAK			smax	smax		
	comp=E,63nm,2.8s					
YAK			smax	smax		
	comp=N,141nm,2.8s					
YAK			MLR	MLR		
	comp=Z,830nm,15.0s					
YAK			MLR	MLR		
	comp=N,407nm,13.0s					
YAK			MLR	MLR		
	comp=E,412nm,14.0s					
ULN	**Ulaanbaatar**	**28.86 308**	P	**P**	**09 46 21.5**	**-0.2**
ULN	**Ulaanbaatar**	**28.86 308**	P	**P**	**09 46 21.5**	**-0.2**
ULN			pmax	pmax		
	comp=Z,11nm,1.2s					
SEY	**Seymchan**	**29.09 10**	P	**P**	**09 46 22.6**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=191,slow=6.2,SNR=5.6					
	comp=Z,2.1nm,0.8s					
SEY	**Seymchan**	**29.09 10**	*i* P	**P**	**09 46 24.6**	**+1.3**
SEY			pmax	pmax		
	comp=Z,2.0nm,0.9s					
SONM	**Songino Array**	**29.28 307**	P	**P**	**09 46 26.1**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=110,slow=8.4,SNR=18					
SONM			LR	LR	09 58 40.7	
	comp=Z,837nm,20.1s,baz=108,slow=38					
	comp=Z,4.1nm,0.7s					
SONM	**Songino Array**	**29.28 307**	P	**P**	**09 46 24.9**	**-0.5**
SONM	**Songino Array**	**29.28 307**	P	**P**	**09 46 24.9**	**-0.5**
SONM			pmax	pmax		
	comp=Z,7.0nm,0.8s					
BOD	**Bodaibo**	**29.63 330**	*e*P	**P**	**09 46 28.0**	**-0.1**
BOD			pmax	pmax		
	comp=Z,27nm,1.7s					
LZH	**Lanzhou**	**30.69 284**	*e*P	**P**	**09 46 37.3**	**-0.7**
LZH			sP	pP	09 46 43.8	-0.8
LZH			pmax	pmax		
	comp=Z,13nm,1.0s					
GYA	**Guiyang**	**31.05 264**	⇓*i*P	**P**	**09 46 45.1**	**+3.9**
GYA			pmax	pmax		
	comp=Z,100nm,9.7s					
GYA			LR	LR		
	comp=Z,910nm,18.0s					
ZAK	**Zakamensk**	**31.89 311**	*e*P	**P**	**09 46 48.7**	**+0.3**
ZAK			pmax	pmax		
	comp=Z,8.0nm,1.1s					
CD2	**Chengdu**	**31.90 274**	P	**P**	**09 46 46.8**	**-1.8**
CD2			pP	pP	09 46 50.7	-4.6
CD2			S	**S**	**09 51 59.7**	**+1.7**
CD2			sS	pS	09 52 04.9	-0.6
CD2			LR	LR		
	comp=Z,2μm,6.1s					
CD2			LR	LR		
	comp=Z,3μm,6.6s					
CD2			LR	LR		
	comp=Z,2μm,4.9s					
QIZ	**Qiongzhong**	**32.16 249**	P	**P**	**09 46 51.1**	**+0.2**
QIZ			S	**S**	**09 52 05.0**	**+3.0**
QIZ			LR	LR		
	comp=Z,550nm,16.1s					
QIZ			LR	LR		
	comp=Z,500nm,16.1s					
QIZ			LR	LR		
	comp=Z,250nm,14.1s					
KMI	**Kunming**	**34.82 265**	⇓P	**P**	**09 47 16.1**	**+1.8**
KMI			pmax	pmax		
	comp=Z,88nm,4.1s					
KMI			LR	LR		
	comp=Z,950nm,20.1s					
KMI			LR	LR		
	comp=Z,380nm,20.6s					
KMI			LR	LR		
	comp=Z,670nm,13.8s					
PZH	**PanZhiHua**	**35.08 268**	P	**P**	**09 47 15.9**	**-0.5**
PZH			S	**S**	**09 52 52.1**	**+4.6**
PZH			pmax	pmax		
	comp=Z,20nm,0.9s					
PZH			pmax	pmax		
	comp=Z,80nm,4.7s					
PZH			LR	LR		
	comp=Z,970nm,18.6s					
PZH			LR	LR		
	comp=Z,570nm,18.6s					
PZH			LR	LR		
	comp=Z,1μm,15.7s					
KNGR	**Kungurtug, Tuv**	**35.54 310**	*i* P	**P**	**09 47 19.8**	**-0.3**
KNGR			pmax	pmax		
	comp=Z,13nm,0.9s					
GOMU	**GeErMu**	**37.86 286**	P	**P**	**09 47 40.5**	**+0.2**
GOMU			pmax	pmax		
	comp=Z,8.0nm,1.4s					
GOMU			pmax	pmax		
	comp=Z,140nm,4.7s					
GOMU			LR	LR		
	comp=Z,310nm,15.7s					
GOMU			LR	LR		
	comp=Z,520nm,16.8s					
GOMU			LR	LR		
	comp=Z,580nm,18.8s					
CHTO	**Chiang Mai**	**40.91 259**	P	**P**	**09 48 04.8**	**-0.7**
CHTO	**Chiang Mai**	**40.91 259**	P	**P**	**09 48 04.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**41.09 258**	P	**P**	**09 48 05.8**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=49,slow=7.3,SNR=18					
CMAR			LR	LR	10 07 33.0	
	comp=Z,167nm,18.4s,baz=55,slow=40					
	comp=Z,2.4nm,0.7s					
CMAR	**Chiang Mai Arr**	**41.09 258**	P	**P**	**09 48 06.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**41.09 258**	*i* P	**P**	**09 48 06.0**	**-1.0**
CMAR			pmax	pmax		
	comp=Z,3.0nm,0.7s					
DGZ	**Jazzator, Alta**	**41.93 308**	*i* P	**P**	**09 48 13.4**	**-0.3**
DGZ			pmax	pmax		
	comp=Z,34nm,0.8s					
WMQ	**Urumqi**	**42.08 299**	*e*P	**P**	**09 48 16.4**	**+1.5**
WMQ			sP	sP	09 48 23.4	-0.8
WMQ			PP	**PP**	**09 49 49.1**	**-3.3**
WMQ			S	**S**	**09 54 32.8**	**+0.2**
WMQ			pmax	pmax		
	comp=Z,59nm,1.1s					
WMQ			LR	LR		
	comp=Z,2μm,16.3s					
WMQ			LR	LR		
	comp=Z,320nm,18.9s					
WMQ			LR	LR		
	comp=Z,260nm,21.5s					
ANM	**Nome**	**43.55 30**	P	**P**	**09 48 25.2**	**-1.3**
ANM	**Nome**	**43.55 30**	P	**P**	**09 48 25.2**	**-1.3**
ANM			pmax	pmax		
	comp=Z,136nm,1.4s					
ZAA0	**Zalesovo Array**	**43.64 314**	P	**P**	**09 48 26.5**	**-0.8**
ZALV	**Zalesovo Beam**	**43.64 314**	P	**P**	**09 48 27.1**	**-0.2**
	comp=Z,4.6nm,0.7s,baz=92,slow=7.1,SNR=16					
ZALV			PcP	**PcP**	**09 50 13.8**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=81,slow=3.3,SNR=3.6					
ZALV			LR	LR	10 07 32.3	
	comp=Z,147nm,18.0s,baz=102,slow=38					
	comp=Z,4.6nm,0.7s					
ZALV	**Zalesovo Beam**	**43.64 314**	P	**P**	**09 48 25.3**	**-2.0**
ZALV	**Zalesovo Beam**	**43.64 314**	*i* P	**P**	**09 48 27.2**	**-0.1**
ZALV			pmax	pmax		
	comp=Z,5.0nm,0.7s					
ZSN	**Zaisan**	**43.72 305**	*e*P	**P**	**09 48 27.1**	**-1.0**
ZSN	**Zaisan**	**43.72 305**	*e*P	**P**	**09 48 27.1**	**-1.0**
	baz=305					
BRDH	**Bariadhala**	**45.02 268**	LR	LR	10 07 57.5	
	comp=Z,529nm,18.4s,baz=82,slow=37					
NRIK	**Noril'sk**	**45.48 336**	P	**P**	**09 48 40.4**	**-1.4**
	comp=Z,7.7nm,0.8s,baz=107,slow=9.8,SNR=6.8					
NRIK			LR	LR	10 10 10.1	
	comp=Z,634nm,18.6s,baz=110,slow=39					
	comp=Z,7.7nm,0.8s					
NRIK	**Noril'sk**	**45.48 336**	P	**P**	**09 48 41.6**	**-0.2**
NRIK			IAmb	IAmb	09 49 07.9	
	comp=Z,8.7nm,0.9s					
NRIK	**Noril'sk**	**45.48 336**	*ce*P	**P**	**09 48 42.2**	**+0.4**
NRIK			pmax	pmax		
	comp=Z,8.0nm,0.8s					
MK31	**Makanchi Array**	**45.53 304**	P	**P**	**09 48 42.2**	**-0.4**
MK31			IAmb	IAmb	09 48 46.4	
	comp=Z,11nm,0.8s					
MK31	**Makanchi Array**	**45.53 304**	P	**P**	**09 48 42.2**	**-0.4**
MK31			pmax	pmax		
	comp=Z,11nm,0.8s					
MKAR	**Makanchi Array**	**45.53 304**	P	**P**	**09 48 42.8**	**+0.2**
	comp=Z,11nm,0.8s,baz=91,slow=9.6,SNR=49					
MKAR			LR	LR	10 09 16.6	
	comp=Z,498nm,18.2s,baz=102,slow=38					
	comp=Z,11nm,0.8s					
MKAR	**Makanchi Array**	**45.53 304**	P	**P**	**09 48 42.0**	**-0.5**
MKAR	**Makanchi Array**	**45.53 304**	*ce*P	**P**	**09 48 42.7**	**+0.2**

MKAR pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 45.74 304 P P 09 48 43.7 -0.5
MAKZ IAmb IAmb 09 48 48.2
comp=Z,11nm,0.8s
MAKZ Makanchi 45.74 304 P P 09 48 43.7 -0.5
MAKZ pmax pmax
comp=Z,11nm,0.8s
HNR Honiara 47.18 155 LR LR 10 06 49.3
comp=Z,2μm,20.9s,baz=344,slow=34
RAMN Ramite 47.36 276 *e*P **P 09 48 56.2 -1.3**
comp=Z,32nm,0.9s
JIRN Jiri 47.42 277 *e*P **P 09 48 57.4 -0.7**
comp=Z,45nm,0.8s
KURK Kurchatov 47.53 310 P **P 09 48 57.8 -0.3**
KURK Kurchatov 47.53 310 P **P 09 48 57.8 -0.3**
KURK pmax pmax
comp=Z,31nm,1.0s
GUN Gumba 47.58 278 *e*P **P 09 48 58.9 -0.4**
comp=Z,54nm,0.9s
KURBB Kurchatov Arra 47.60 310 LR LR 10 10 17.3
comp=Z,388nm,19.6s,baz=62,slow=38
KURBB Kurchatov Arra 47.60 310 P **P 09 48 58.3 -0.3**
BATI Baumata 47.76 204 P **P 09 49 00.5 +0.3**
comp=Z,17nm,0.5s,baz=27,slow=4.5,SNR=4.0
comp=Z,17nm,0.5s
PDGK Podgornoye 48.04 300 P **P 09 49 01.8 -0.6**
PKI Pulchoki 48.09 278 *e*P **P 09 49 02.0 -1.2**
comp=Z,26nm,0.9s
SHLS Shalkode 48.10 300 *e*P **P 09 48 59.4 -3.4**
SHLS Shalkode 48.10 300 *e*P **P 09 48 59.5 -3.4**
baz=300
PKIN Phulchoki 48.10 278 *e*P **P 09 49 02.0 -1.2**
comp=Z,20nm,0.8s
KKN Kakani 48.12 278 *e*P **P 09 49 01.8 -1.5**
MTN Manton Dam 48.28 194 P **P 09 49 04.2 -0.1**
COEN Coen 48.38 178 P **P 09 49 05.0 0.0**
COEN IAmb IAmb 09 49 25.0
comp=Z,12nm,0.9s
UZB Uzynbulak 48.41 300 *e*P **P 09 49 03.4 -1.9**
UZB Uzynbulak 48.41 300 *e*P **P 09 49 03.5 -1.9**
baz=300
GKN Gorkha 48.56 279 *e*P **P 09 49 06.0 -0.6**
KPKS Kokpek 48.59 300 *e*P **P 09 49 05.6 -1.0**
KPKS Kokpek 48.59 300 *e*P **P 09 49 05.6 -1.0**
baz=300
SATY Saty 48.87 300 *e*P **P 09 49 07.5 -1.3**
SATY Saty 48.87 300 *e*P **P 09 49 07.6 -1.3**
baz=300
DANN Dangsing 49.14 279 *e*P **P 09 49 10.7 -0.5**
comp=Z,67nm,0.8s
KOLN Koldanda 49.49 279 *e*P **P 09 49 13.1 -0.7**
TARG Taragay, Kyrgy 49.61 298 P **P 09 49 13.6 -1.2**
TARG IAmb IAmb 09 49 41.8
comp=Z,11nm,0.8s
TARG Taragay, Kyrgy 49.61 298 P **P 09 49 13.6 -1.2**
TARG pmax pmax
comp=Z,11nm,0.8s
CHKK Chushkaly 49.71 301 *e*P **P 09 49 13.8 -1.2**
CHKK Chushkaly 49.71 301 *e*P **P 09 49 13.9 -1.2**
baz=301
MDOK Medeo 49.82 300 *e*P **P 09 49 15.0 -1.0**
MDOK Medeo 49.82 300 *e*P **P 09 49 15.1 -1.0**
baz=300
PYUN Piuthan 49.86 279 *e*P **P 09 49 16.3 -0.3**
comp=Z,53nm,0.9s
KUU Kurty 50.16 301 *e*P **P 09 49 17.3 -1.1**
KUU Kurty 50.16 301 *e*P **P 09 49 17.4 -1.1**
baz=301
SML Sawmill 50.83 35 IAmb IAmb 09 49 53.6
comp=Z,13nm,0.9s
MDM Murphy Dome 50.85 31 IAmb IAmb 09 49 48.9
comp=Z,16nm,1.0s
PWL Port Wells 50.86 36 IAmb IAmb 09 49 41.0
comp=Z,9.6nm,0.9s
TKM2 Tokmak 2 50.91 300 *i* P **P 09 49 24.3 -0.1**
TKM2 pmax pmax
comp=Z,10.0nm,0.7s
BRZS Berezniki 51.40 310 *e*P **P 09 49 26.8 -0.9**
BRZS Berezniki 51.40 310 *e*P **P 09 49 26.9 -0.9**
baz=310
ILAR Eielson Array 51.42 31 P **P 09 49 29.1 +1.4**
comp=Z,2.5nm,0.9s,baz=270,slow=6.4,SNR=18
comp=Z,2.5nm,0.9s
SGDS Sogindy 51.47 301 *e*P **P 09 49 27.1 -1.2**
SGDS Sogindy 51.47 301 *e*P **P 09 49 27.2 -1.2**
baz=301
BTLS Baital 51.50 303 *e*P **P 09 49 27.0 -1.5**
BTLS Baital 51.50 303 *e*P **P 09 49 27.1 -1.5**
baz=303
KNRA Kununurra 51.53 196 P **P 09 49 29.9 +1.0**
KSH Kashi 51.53 296 P **P 09 49 32.9 +3.9**
KSH pmax pmax
comp=Z,9.0nm,0.6s
AAK Ala-Archa 51.77 300 LR LR 10 13 05.5
comp=Z,410nm,18.2s,baz=82,slow=38
AAK Ala-Archa 51.77 300 P **P 09 49 29.4 -1.4**
AAK Ala-Archa 51.77 300 P **P 09 49 29.4 -1.4**
AAK pmax pmax
comp=Z,8.0nm,1.1s
OTUK Ortayu 51.95 307 P **P 09 49 31.7 -0.2**
DIV Divide 52.09 36 P **P 09 49 32.9 +0.2**
DIV IAmb IAmb 09 50 04.2
comp=Z,19nm,1.1s
LEM Lembang 52.27 225 LR LR 10 12 10.7
comp=Z,79nm,21.5s,baz=48,slow=37
BRVK Borovoye 52.35 314 P **P 09 49 34.0 -0.7**
BRVK Borovoye 52.35 314*ce*P **P 09 49 35.5 +0.8**
BRVK pmax pmax
comp=Z,7.0nm,1.0s
RAGM Ragged Mountai 52.69 37 P **P 09 49 37.9 +0.8**
RAGM IAmb IAmb 09 49 56.5
comp=Z,13nm,1.0s
SCRK Sand Creek 52.71 32 P **P 09 49 35.9 -1.5**
VRDI Verde Repeater 53.20 36 P **P 09 49 41.0 -0.1**
VRDI IAmb IAmb 09 50 05.5
comp=Z,14nm,1.2s
MCARA McCarthy VSAT 53.39 35 IAmb IAmb 09 50 01.0
comp=Z,15nm,0.9s
K27K Chicken 53.55 32 IAmb IAmb 09 50 10.0
comp=Z,11nm,1.1s
M27K Edge Creek, AK 53.81 34 IAmb IAmb 09 50 03.6
comp=Z,11nm,1.1s
KK31 Karatay Array 54.46 302 P **P 09 49 49.6 -0.8**
KK31 IAmb IAmb 09 49 51.7
comp=Z,11nm,0.9s
KK31 Karatay Array 54.46 302 P **P 09 49 49.6 -0.8**
KK31 pmax pmax
comp=Z,11nm,1.0s
KKAR Karatay Array 54.46 302 P **P 09 49 50.2 -0.2**
KKAR IAmb IAmb 09 49 51.7
comp=Z,11nm,0.9s
KKAR Karatay Array 54.46 302 P **P 09 49 49.8 -0.6**
KKAR Karatay Array 54.46 302 P **P 09 49 49.8 -0.6**
KKAR pmax pmax
comp=Z,11nm,1.0s
WB0 Warramunga Arr 54.56 188 P **P 09 49 51.8 +0.5**
FITZ Fitzroy Crossi 54.62 199 P **P 09 49 54.0 +2.3**
comp=Z,6.2nm,0.8s,baz=27,slow=7.4,SNR=6.5
comp=Z,6.2nm,0.8s
CTA Charters Tower 54.63 175 P **P 09 49 52.6 +0.9**
comp=Z,3.0nm,1.0s,baz=332,slow=11,SNR=1.9
CTA LR LR 10 12 13.4
comp=Z,85nm,21.4s,baz=306,slow=35
comp=Z,3.0nm,1.0s
WRAB Tennant Creek 54.73 188 P **P 09 49 52.7 +0.2**
WRAB Tennant Creek 54.73 188 P **P 09 49 52.7 +0.2**
WRAB pmax pmax
comp=Z,31nm,1.2s
WRA Warramunga Arr 54.74 188 P **P 09 49 52.5 0.0**
comp=Z,3.1nm,0.4s,baz=1.3,slow=7.4,SNR=36
WRA LR LR 10 14 04.3
comp=Z,64nm,18.1s,baz=14,slow=37
comp=Z,3.1nm,0.4s
WRA Warramunga Arr 54.74 188 *i* P **P 09 49 53.2 +0.7**
WRA pmax pmax
comp=Z,3.0nm,0.4s
I29M Ogilvie Camp, 55.01 30 IAmb IAmb 09 50 13.4
comp=Z,19nm,1.4s
IUG Iuzhnay 55.08 301 *e*P **P 09 49 54.3 -0.7**
IUG Iuzhnay 55.08 301 *e*P **P 09 49 54.4 -0.7**
baz=301
EPYK Eagle Plains 55.51 29 IAmb IAmb 09 50 27.6
comp=Z,15nm,1.0s
GAR Garm 55.87 297 IAmb IAmb 09 50 02.7
comp=Z,14nm,0.8s

INK Inuvik 56.43 26 P **P 09 50 05.1 +1.0**
comp=Z,3.5nm,0.7s,baz=308,slow=5.7,SNR=7.3
comp=Z,3.5nm,0.7s
CHGR Chuyangaron 56.84 297 P **P 09 50 07.0 -0.6**
CHGR Chuyangaron 56.84 297 P **P 09 50 07.0 -0.6**
CHGR pmax pmax
comp=Z,41nm,0.7s
M31M Drury Creek, Y 57.29 34 IAmb IAmb 09 50 32.7
comp=Z,9.0nm,1.1s
WHY Whitehorse 57.41 36 P **P 09 50 11.5 +0.2**
WHY IAmb IAmb 09 50 39.5
comp=Z,26nm,1.6s
ARU Arti 58.24 320 P **P 09 50 16.8 -0.2**
ARU Arti 58.24 320*c i*P **P 09 50 16.9 -0.2**
ARU S **S 09 58 21.3 +4.2**
ARU SS **SS 10 02 09.4 +0.9**
ARU pmax pmax
comp=Z,19nm,0.8s
ARU MLR MLR
comp=Z,397nm,15.0s
AS31 Alice Springs 58.47 188 P **P 09 50 18.7 -0.3**
ASAR Alice Springs 58.47 188 P **P 09 50 19.3 +0.3**
comp=Z,2.2nm,0.9s,baz=12,slow=6.2,SNR=12
ASAR LR LR 10 13 01.2
comp=Z,67nm,21.4s,baz=1.0,slow=34
comp=Z,2.2nm,0.9s
P33M Teslin, Yukon 58.52 36 IAmb IAmb 09 50 41.2
comp=Z,8.7nm,1.0s
AB31 Akbulak array 59.59 311 P **P 09 50 25.9 -0.7**
ABKAR Akbulak array 59.59 311 P **P 09 50 26.1 -0.4**
ABKAR IAmb IAmb 09 50 35.7
comp=Z,7.6nm,0.8s
DZM Mont Dzumac 61.17 154 *e*LR LR 10 08 45.4
comp=Z,274nm,21.2s
DZM Mont Dzumac 61.17 154 P **P 09 50 39.3 +1.6**
comp=Z,3.9nm,1.0s,baz=9.7,slow=16,SNR=2.2
comp=Z,3.9nm,1.0s
PALK Pallekele 62.03 259 LR LR 10 19 56.1
comp=Z,166nm,19.3s,baz=145,slow=38
KIRV Kirov 62.23 324 LR LR 10 20 22.3
comp=Z,323nm,18.2s,baz=55,slow=39
KIRV Kirov 62.23 324*ce*P **P 09 50 45.1 +0.8**
SPITS Spitsbergen Ar 62.87 349 LR LR 10 22 28.6
comp=Z,373nm,18.2s,baz=6.5,slow=40
HRA Herat 63.62 295 P **P 09 50 54.1 -0.2**
HRA IAmb IAmb 09 50 56.3
comp=Z,6.8nm,0.8s
GEYT Alibeck 65.12 300 P **P 09 51 04.1 +0.3**
comp=Z,5.7nm,0.8s,baz=357,slow=6.1,SNR=8.1
GEYT LR LR 10 21 23.4
comp=Z,257nm,18.9s,baz=66,slow=38
comp=Z,5.7nm,0.8s
GEYT Alibeck 65.12 300 P **P 09 51 03.1 -0.8**
GEYT IAmb IAmb 09 51 10.7
comp=Z,7.5nm,0.9s
AFI Afiamalu 65.52 129 LR LR 10 19 29.8
comp=Z,94nm,19.2s,baz=287,slow=36
BELG Belogornoye 65.64 318 LR LR 10 22 35.9
comp=Z,450nm,18.4s,baz=61,slow=39
BELG Belogornoye 65.64 318 *i* P **P 09 51 05.5 -1.3**
BELG pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 65.78 30 P **P 09 51 07.7 +0.1**
comp=Z,2.3nm,1.0s,baz=298,slow=6.9,SNR=3.2
comp=Z,2.3nm,1.0s
KLMR Klimovskoe 65.84 328 *e*P P 09 51 02.7 -5.3
KLMR pmax pmax
comp=Z,43nm,2.1s
KLMR Klimovskoe 65.84 328 *e*P P 09 51 02.7 -5.3
KLMR AMP 09 51 19.3
comp=Z,43nm,2.1s
KLMR LQ LQ 10 12 20.0
KLMR LQ LQ 10 12 20.0
KLMR LR LR 10 14 29.4
STKA Stephens Creek 66.19 180 P **P 09 51 12.8 +2.3**
comp=Z,2.2nm,0.8s,baz=333,slow=14,SNR=2.4
comp=Z,2.2nm,0.8s
ARCES ARCESS Array B 66.26 340 P **P 09 51 10.2 -0.4**
comp=Z,5.6nm,1.0s,baz=50,slow=6.0,SNR=2.5
ARCES LR LR 10 26 43.6
comp=Z,292nm,18.1s,baz=52,slow=42
comp=Z,5.6nm,1.0s
WAPA Wapiti River 67.13 38 P **P 09 51 15.9 -0.6**
WAPA IAmb IAmb 09 51 36.5
comp=Z,8.4nm,0.9s
VRH Novokhopyorsk 69.44 319 *e*P **P 09 51 28.9 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 70.08 324 LR LR 10 24 50.3
comp=Z,73nm,19.4s,baz=72,slow=38
OBN Obninsk 70.08 324 *e*P **P 09 51 35.0 +0.3**
OBN pmax pmax
comp=Z,7.0nm,0.9s
LPSR Galich'ya Gora 70.22 321 *e*P **P 09 51 34.2 -1.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
B08A Colville Reser 70.42 44 P **P 09 51 36.5 -0.6**
B08A IAmb IAmb 09 51 57.1
comp=Z,8.4nm,1.1s
VORR Voronezh 70.55 320 *e*P **P 09 51 37.5 -0.2**
VSR Storozhevoye 70.81 319 *e*P **P 09 51 37.4 -1.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s
FINES FINESS Array B 70.98 333 P **P 09 51 40.5 +0.4**
comp=Z,6.0nm,0.8s,baz=38,slow=9.6,SNR=8.0
comp=Z,6.0nm,0.8s
FINES FINESS Array B 70.98 333*ce*P **P 09 51 39.9 -0.2**
FINES pmax pmax
comp=Z,6.0nm,0.8s
NWAO Narrogin (SRO) 71.02 202 P **P 09 51 41.5 +0.9**
comp=Z,19nm,1.0s,baz=63,slow=6.8,SNR=2.3
comp=Z,19nm,1.0s
C09A Chrisman Ranch 71.31 44 IAmb IAmb 09 51 50.9
comp=Z,6.2nm,0.8s
NEW Newport 71.73 44 P **P 09 51 44.7 -0.3**
NEW Newport 71.73 44 P **P 09 51 44.7 -0.3**
NEW pmax pmax
comp=Z,5.0nm,0.9s
ZEI Tsey 72.42 310 *e*P **P 09 51 48.4 -1.0**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 72.56 311 P **P 09 51 50.6 +0.7**
comp=Z,7.7nm,0.8s,baz=218,slow=1.2,SNR=14
KBZ LR LR 10 25 35.1
comp=Z,484nm,18.0s,baz=101,slow=38
comp=Z,7.7nm,0.8s
KBZ Khabaz 72.56 311*ce*P **P 09 51 50.7 +0.8**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KIV Kislovodsk 72.57 312 *e*P **P 09 51 51.5 +1.3**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,198nm,18.0s
SHA1 Shidzhatmaz 72.70 311 *i* P **P 09 51 50.9 -0.2**
GNI Garni 73.24 307 LR LR 10 26 58.9
comp=Z,340nm,19.7s,baz=73,slow=38
GNI Garni 73.24 307*ce*P **P 09 51 55.1 +0.8**
GNI pmax pmax
comp=Z,7.0nm,0.7s
BEKR Beckworth 74.17 52 P **P 09 51 59.1 -0.7**
BEKR IAmb IAmb 09 52 19.2
comp=Z,33nm,2.0s
MNK Minsk 74.54 326 *i* P **P 09 52 01.8 +0.4**
MNK *i* 09 52 16.1
MNK *i* 09 54 47.8
MNK *i* PPP PPP 09 56 33.2
MNK *i* S **S 10 01 37.3 +2.6**
MNK *i* 10 02 12.7
MNK *i* SS **SS 10 06 24.7 +4.0**
MNK pmax pmax
comp=E,3.0nm,0.7s
MNK pmax pmax
comp=N,38nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.6s
MNK MLR MLR
comp=N,467nm,20.0s
MNK MLR MLR
comp=Z,288nm,17.0s
MNK MLR MLR
comp=E,39nm,19.0s
MNK Minsk 74.54 326 *i* P **P 09 52 01.8 +0.4**
comp=E,3.0nm,0.7s
MNK *i* P **P 09 52 01.8 +0.4**
comp=N,38nm,0.9s
MNK *i* P **P 09 52 01.8 +0.4**
comp=Z,7.0nm,0.6s,baz=52
MNK *i* PcP **PcP 09 52 16.1 +0.4**
MNK *i* PP **PP 09 54 47.9 +0.4**
MNK *i* PPP PPP 09 56 33.2
MNK *i* S **S 10 01 37.4 +2.6**
MNK *i* SS SSS 10 09 46.6
MNK *i* LQ LQ 10 19 48.9
MNK *i* LR LR 10 23 33.0
MNK *i* LRM MLR 10 28 40.0
comp=N,467nm,19.5s
MNK *i* LRM MLR 10 28 44.2
comp=Z,288nm,16.9s
MNK *i* LRM MLR 10 28 50.1
comp=E,39nm,18.7s
SOC Sochi 74.59 312 *e*P **P 09 52 00.5 -1.4**
SOC *e*PPP PPP 09 56 32.5
SOC *e*S **S 10 01 36.6 +0.9**
SOC MLR MLR
comp=Z,362nm,18.0s
NACGM Naroch 74.78 327 *e*P **P 09 52 03.8 +1.0**
baz=51
ANN Anapa 75.28 314 *e*P P 09 52 14.7 +8.9
ANN MLR MLR
comp=Z,254nm,15.0s
AKASG Malin Array Be 76.26 323 P **P 09 52 11.4 +0.1**
comp=Z,5.1nm,0.6s,baz=47,slow=6.1,SNR=30
comp=Z,5.1nm,0.6s
AKASG Malin Array Be 76.26 323*ce*P **P 09 52 11.6 +0.3**
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKBB Malin Array Si 76.26 323 P **P 09 52 11.4 +0.1**
AKBB IAmb IAmb 09 52 12.2
comp=Z,9.7nm,0.7s
AKBB Malin Array Si 76.26 323*ce*P **P 09 52 11.8 +0.5**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
NVAR Mina Array Bea 76.30 53 P **P 09 52 14.8 +2.7**
comp=Z,1.7nm,0.6s,baz=294,slow=5.2,SNR=7.2
comp=Z,1.7nm,0.6s
BOZ Bozeman (W) 76.34 44 IAmb IAmb 09 52 37.9
comp=Z,11nm,1.5s
NC204 NORSAR Array S 76.38 338 P **P 09 52 12.2 +0.2**
NB2 NORSAR Subarra 76.42 338 P **P 09 52 12.3 +0.2**
comp=Z,1.6nm,0.6s,baz=40,slow=5.9
NOA NORSAR Array B 76.42 338 P **P 09 52 12.5 +0.4**
comp=Z,2.3nm,0.7s,baz=39,slow=5.8,SNR=12
NOA LR LR 10 29 45.2
comp=Z,446nm,18.8s,baz=15,slow=39
comp=Z,2.3nm,0.7s
MARD Mardin 77.38 307 P **P 09 52 17.2 -0.9**
SFJD Kangerlussuaq 78.23 5 LR LR 10 31 04.9
comp=Z,136nm,18.1s,baz=346,slow=39
RAR Rarotonga 78.66 126 LR LR 10 24 19.6
comp=Z,145nm,19.6s,baz=284,slow=34
PDAR Pinedale Array 79.22 45 P **P 09 52 29.9 +1.6**
comp=Z,0.5nm,0.6s,baz=285,slow=3.5,SNR=4.8
PDAR LR LR 10 27 05.9
comp=Z,41nm,19.4s,baz=320,slow=35
comp=Z,0.5nm,0.6s
BUR08 Bucovina Ar. S 80.25 322 P **P 09 52 33.2 -0.4**
BURAR Bucovina Array 80.26 322 P **P 09 52 33.3 -0.4**
BR131 Keskin Array S 80.53 312 P **P 09 52 35.8 +0.4**
BR131 Keskin Array S 80.53 312 P **P 09 52 35.8 +0.4**
BR131 pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 80.53 312 P **P 09 52 35.1 -0.2**
comp=Z,2.8nm,0.7s,baz=97,slow=3.6,SNR=12
comp=Z,2.8nm,0.7s
BRTR Keskin Array B 80.53 312*ce*P **P 09 52 36.2 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
CRVS Cervenica-Dubn 81.23 325 *e*P **P 09 52 41.0 +2.3**
MLR Muntele Rosu 81.29 320 LR LR 10 33 15.8
comp=Z,473nm,18.1s,baz=42,slow=39
RPZ Rata Peaks 82.50 159 LR LR 10 23 10.7
comp=Z,59nm,21.1s,baz=302,slow=31
VYHS Vyhne 82.75 326 *e*P **P 09 52 48.2 +1.4**
CLL Collm 83.22 330 *i* P **P 09 52 49.3 +0.2**
CLL pmax pmax
comp=Z,9.0nm,1.3s
CLL Collm 83.22 330 *i* P **P 09 52 49.3 +0.2**
comp=Z,9.0nm,1.3s
CLL *i* (PcP) **pP 09 52 54.8 -1.4**
CLL *i* x x 09 53 03.8
CLL *e*PP **PP 09 56 02.0 +2.1**
CLL *e*S **S 10 03 12.0 +4.5**
CLL *e*SS SS 10 08 48.0 +17
CLL *e*SSS SSS 10 11 54.0
PPT Papeete 83.45 116 LR LR 10 26 23.9
comp=Z,90nm,19.7s,baz=317,slow=33
PPT2 Papeete2 83.46 116 *e*LR LR 10 19 02.9
comp=Z,113nm,26.5s
MODS Modra-Piesok 83.56 326 *e*P **P 09 52 52.7 +1.8**
PRU Pruhonice 83.58 329 *e*P P 09 52 57.4 +6.5
PRU *ex* x 09 53 03.4
RONA Rosalia, Austr 84.50 326 *e*P **P 09 52 57.2 +1.4**
comp=Z,5.3nm,0.8s
CONA Conrad Observa 84.53 327 *i* P **P 09 52 57.2 +1.2**
comp=Z,3.4nm,0.8s
CKRC Cesky Krumlov 84.55 328 *e*P **P 09 52 57.1 +1.1**
CKRC *ex* x 09 53 02.1
KHC Kasperske Hory 84.63 329 P **P 09 52 56.1 -0.3**
KHC IAmb IAmb 09 53 03.7
comp=Z,4.2nm,0.8s
KHC Kasperske Hory 84.63 329 P **P 09 52 56.1 -0.3**
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 84.63 329 *e*P **P 09 52 57.1 +0.7**
KHC *ex* x 09 53 02.8
VTS Vitosha 84.66 319 P **P 09 52 58.1 +1.3**
VTS IAmb IAmb 09 53 04.7
comp=Z,7.2nm,0.8s
VTS Vitosha 84.66 319 P **P 09 52 58.1 +1.3**
VTS pmax pmax
comp=Z,7.0nm,0.8s
SDCO Great Sand Dun 84.79 47 IAmb IAmb 09 53 06.0
comp=Z,16nm,1.8s
GERES GERESS Array B 84.80 328 P **P 09 52 57.0 -0.3**
comp=Z,1.6nm,0.7s,baz=45,slow=4.5,SNR=14
comp=Z,1.6nm,0.7s
ARSA Arzberg 85.19 326 *i* P **P 09 52 58.9 -0.3**
comp=Z,2.9nm,0.8s
K31A O'Neill 85.35 40 P **P 09 53 02.9 +2.7**
EIL Elat 85.79 303 LR LR 10 36 02.8
comp=Z,125nm,19.8s,baz=91,slow=39
SOKA Soboth 85.84 326 *e*P **P 09 53 02.7 +0.2**
comp=Z,5.9nm,0.9s
ANMO Albuquerque 86.00 50*ce*P **P 09 53 03.7 0.0**
ANMO pmax pmax
comp=Z,5.0nm,2.5s
L34A Svendsen Farm, 87.06 39 P **P 09 53 08.4 -0.2**
TBI Tubuai 87.19 121 *e*LR LR 10 20 47.4
comp=Z,140nm,25.5s
SCHQ Schefferville 87.57 16 P **P 09 53 11.3 +0.5**
comp=Z,3.1nm,0.8s,baz=260,slow=19,SNR=1.7
comp=Z,3.1nm,0.8s
FDMO Fiordimonte 89.50 325 IAmb IAmb 09 53 28.2
comp=Z,9.1nm,0.8s
TXAR Lajitas Array 91.45 52 P **P 09 53 31.6 +2.1**
comp=Z,0.9nm,0.8s,baz=293,slow=2.7,SNR=7.2
comp=Z,0.9nm,0.8s
KEST Kesra 96.99 323 LR LR 10 41 57.6
comp=Z,144nm,18.2s,baz=211,slow=38
LPAZ La Paz 147.70 63 PKPbc **PKPbc 10 00 08.6 -0.2**
comp=Z,2.7nm,0.8s,baz=311,slow=4.1,SNR=8.7

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*IDC **01** 09:45:01.8±2.7,34°54N×141°60E,h0km,mb3.4/3,*
mbtmp3.6/6,ML3.4/3,Error ellipse: s-maj=65.5km
s-min=25.7km az=64.0
*JMA **01** 09:45:02.3±0.8,35°N±2°×14°2E±°,h36km,MV2.9/20,FAR*
SE OFF BOSO PEN
ISC 01 09:45:05.1±1.4,34°67N±0°08×141°5E±0°1,h27km,n12,
σ1°32/14,mb3.5/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.42**	**269**	P	**Pb**	**09 45 13.1**	**-0.7**
BSO3	**Boso 3**	**0.82**	**280**	P	**Pn**	**09 45 19.5**	**-1.1**
BSO4	**Boso 4**	**1.00**	**289**	P	**Pn**	**09 45 22.2**	**-1.1**
CHOJ	**Chosi**	**1.16**	**334**	*e*P	**Pn**	**09 45 24.0**	**-1.5**
JKUC	**kamogawauchiur**	**1.17**	**295**	P	**Pn**	**09 45 24.1**	**-1.5**
JKUC				*e*S	**Sn**	**09 45 40.5**	**-0.3**
JIM2	**Oshima 3**	**1.70**	**272**	*e*P	**Pn**	**09 45 32.0**	**-0.9**

JHJ	**Hachijo jima 2**	**2.10 223**	Pn		**Pn**	**09 45 38.1**	**-0.3**
	28nm,0.3s,baz=93,slow=23,SNR=2.4						
	50nm,0.3s						
MJAR	**Matsushiro Arr**	**3.27 306**	Pn		**Pn**	**09 45 54.5**	**0.0**
	0.5nm,0.3s,baz=105,slow=9.2,SNR=4.9						
MJAR			Sn		**Sn**	**09 46 32.4**	**-0.1**
	0.2nm,0.3s,baz=152,slow=14,SNR=2.5						
	1.6nm,0.3s						
JCJ	**Chichijima**	**7.57 175**	Pn		**Pn**	**09 46 51.7**	**-1.9**
	3.5nm,0.3s,baz=274,slow=19,SNR=1.4						
	44nm,0.8s						
MKAR	**Makanchi Array**	**45.46 304**	P		**P**	**09 53 24.4**	**+2.6**
	0.5nm,0.7s,baz=101,slow=7.5,SNR=1.7						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**54.73 188**	P		**P**	**09 54 31.7**	**-0.4**
	0.5nm,0.8s,baz=9.8,slow=7.8,SNR=6.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**58.46 188**	P		**P**	**09 54 59.1**	**+0.5**
	0.2nm,0.7s,baz=13,slow=13,SNR=2.3						
	0.2nm,0.7s						

*IDC **01** 09:57:14.2±1.1, 0°.57N×29°.76E, h0km, mb4.1/9, mbtmp4.1/10, ML3.9/1, MS3.4/7, Error ellipse: s-maj=29.0km s-min=11.9km az=60.0*
*EAF **01** 09:57:16.1±8.2, 0°.73N×29°.77E, h2km±70km*
ISC 01 09:57:16.6±1.3, 0°.49N±0°.05×29°.85E±0°.07, h19km±5km, n29, σ1§15/34, mb4.2/8, MS3.4/5, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIL	**Kilembe**	**0.33**	**150**	*eP*	**Pb**	**09 57 24.2**	**+0.2**
KIL				*eS*	**Sg**	**09 57 29.5**	**+0.7**
MBAR	**Mbarara**	**1.40**	**140**	Pg	**Pg**	**09 57 43.3**	**-0.5**
	2μm,0.3s,baz=300,slow=20,SNR=1150						
MBAR				Lg	Lg	09 58 01.4	
	8μm,0.3s,baz=24,slow=21,SNR=37						
MBAR				LR	LR	09 58 24.0	
	comp=Z,809nm,20.4s,baz=17,slow=46						
MBAR	**Mbarara**	**1.40**	**140**	*eP*	**Pg**	**09 57 43.3**	**-0.5**
MBAR				*eS*	**Sg**	**09 58 02.1**	**-0.1**
MBAR	**Mbarara**	**1.40**	**140**	*eP*	**Pg**	**09 57 43.3**	**-0.5**
MBAR				*eS*	**Sg**	**09 58 02.2**	**0.0**
MBAR	**Mbarara**	**1.40**	**140**	*eP*	**Pg**	**09 57 43.4**	**-0.5**
MBAR				*eS*	**Sn**	**09 58 00.2**	**+0.8**
MBAR	**Mbarara**	**1.40**	**140**	*eP*	**Sn**	**09 57 55.8**	**-3.6**
MBAR				*eS*	**Sg**	**09 58 02.3**	**+0.1**
ENT	**Entebbe**	**2.66**	**99**	*eP*	**Pn**	**09 57 59.2**	**+0.6**
ENT				*eS*	**Sn**	**09 58 31.9**	**+1.4**
LODK	**Lodwar**	**6.24**	**62**	*eP*	**Pn**	**09 58 47.2**	**-0.5**
LODK				*eS*	**Sn**	**09 59 59.2**	**+0.6**
LODK	**Lodwar**	**6.24**	**62**	*eP*	**Pn**	**09 58 46.6**	**-1.1**
LODK				*eS*	**Sn**	**09 59 57.7**	**-0.9**
LODK	**Lodwar**	**6.24**	**62**	*eP*	**Pn**	**09 58 47.2**	**-0.5**
LODK				*eS*	**Sn**	**09 59 58.6**	**0.0**
KMBO	**Kilima Mbogo**	**7.58**	**102**	Pn	**Pn**	**09 59 07.0**	**+0.6**
	1.8nm,0.3s,baz=278,slow=15,SNR=12						
KMBO				Sn	**Sn**	**10 00 31.2**	**-0.7**
	2.1nm,0.3s,baz=343,slow=16,SNR=5.8						
KMBO				Lg	Lg	10 01 05.4	
	4.7nm,0.3s,baz=254,slow=18,SNR=4.4						
	4.9nm,0.4s						
KMBO	**Kilima Mbogo**	**7.58**	**102**	*eP*	**Pn**	**09 59 07.4**	**+1.0**
KMBO				*eS*	**Sn**	**10 00 32.9**	**+0.9**
KMBO	**Kilima Mbogo**	**7.58**	**102**	*eP*	**Pn**	**09 59 06.1**	**-0.3**
KMBO				*eS*	**Sn**	**10 00 28.7**	**-3.2**
LSZ	**Lusaka**	**15.75**	**186**	LR	LR	10 07 02.8	
	comp=Z,189nm,19.7s,baz=331,slow=37						
ATD	**Arta Tunnel**	**16.94**	**49**	LR	LR	10 07 11.1	
	comp=Z,30nm,19.4s,baz=52,slow=35						
MATP	**Matopo**	**20.83**	**184**	P	**P**	**10 01 58.7**	**+1.4**
	1.1nm,0.8s,baz=308,slow=13,SNR=2.1						
	1.1nm,0.8s						
LBTB	**Lobatse**	**25.68**	**189**	LR	LR	10 11 53.0	
	comp=Z,116nm,19.2s,baz=22,slow=34						
BOSA	**Boshof**	**29.27**	**188**	LR	LR	10 15 19.0	
	comp=Z,128nm,19.4s,baz=15,slow=37						
TORD	**Torodi Ar. Bea**	**30.60**	**295**	P	**P**	**10 03 29.2**	**-0.4**
	13nm,0.6s,baz=109,slow=8.5,SNR=5.0						
	13nm,0.6s						
SUR	**Sutherland**	**33.79**	**194**	LR	LR	10 17 46.0	
	comp=Z,105nm,19.5s,baz=360,slow=36						
IDI	**Anoyia**	**34.93**	**353**	LR	LR	10 18 01.9	
	comp=Z,44nm,21.3s,baz=108,slow=36						
KOWA	**Kowa**	**36.26**	**294**	LR	LR	10 19 29.2	
	comp=Z,60nm,18.9s,baz=128,slow=37						
BRTR	**Keskin Array B**	**39.20**	**5**	P	**P**	**10 04 43.1**	**-0.7**
	0.5nm,0.4s,baz=174,slow=12,SNR=5.3						
	0.5nm,0.4s						
ARU	**Arti**	**60.38**	**18**	P	**P**	**10 07 25.1**	**+0.7**
	1.6nm,0.3s,baz=143,slow=20,SNR=4.1						
	1.6nm,0.3s						
BVAR	**Borovoye Array**	**62.24**	**26**	P	**P**	**10 07 37.8**	**+0.7**
	0.7nm,0.6s,baz=225,slow=4.0,SNR=4.8						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**64.72**	**32**	P	**P**	**10 07 54.3**	**+0.8**
	1.7nm,0.9s,baz=241,slow=6.6,SNR=11						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**64.86**	**37**	P	**P**	**10 07 55.6**	**+1.1**
	1.0nm,0.6s,baz=240,slow=4.8,SNR=11						
	1.0nm,0.6s						
ARCES	**ARCESS Array B**	**68.99**	**358**	P	**P**	**10 08 19.6**	**-0.8**
	3.1nm,0.9s,baz=176,slow=4.3,SNR=6.8						
	3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**69.75**	**31**	P	**P**	**10 08 25.7**	**+0.3**
	0.6nm,0.5s,baz=243,slow=6.5,SNR=3.7						
	0.6nm,0.5s						

*NEIC **01** 09:58:57.6±1.3, 23°.91S±0°.09×174°.81W±0°.07, h10km±2km, mb4.4/14, Error ellipse: s-maj=16.0km s-min=9.0km az=154.0*
*IDC **01** 09:59:01.2±0.8, 23°.55S×175°.58W, h0km, mb4.1/15, mbtmp4.1/17, ML3.7/2, Error ellipse: s-maj=28.6km s-min=18.7km az=139.0*
*NOU **01** 09:59:05.6, 23°.60S×174°.72W, h58km, mb4.7/10, Tonga Islands Region*
ISC 01 09:58:58.0±0.5, 23°.89S±0°.08×174°.83W±0°.07, h10km, n53, σ2§14/45, mb4.3/22, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.01**	**207**	Pn	**Pn**	**10 00 25.8**	**-1.2**
NIUE	**Niue**	**6.62**	**45**		**Pn**	**10 00 36.0**	**+0.6**
NIUE	**Niue**	**6.62**	**45**	P	**Pn**	**10 00 37.2**	**+1.8**
MSVF	**Nonsavu**	**9.05**	**311**	Pn	**Pn**	**10 01 08.5**	**-0.4**
	0.8nm,0.3s,baz=138,slow=15,SNR=8.2						
MSVF	**Nonsavu**	**9.05**	**311**		**Pn**	**10 01 08.4**	**-0.5**
MSVF	**Nonsavu**	**9.05**	**311**	P	**Pn**	**10 01 12.4**	**+3.5**
AFI	**Afiamalu**	**10.34**	**17**	Pn	**Pn**	**10 01 24.3**	**-2.3**
	3.6nm,0.3s,baz=247,slow=7.7,SNR=6.9						
AFI				Sn	Sn	10 03 11.0	-12
	1.3nm,0.3s,baz=251,slow=22,SNR=1.2						
AFI	**Afiamalu**	**10.34**	**17**	Pn	**Pn**	**10 01 24.8**	**-1.8**
AFI	**Afiamalu**	**10.34**	**17**	P	**Pn**	**10 01 26.0**	**-0.6**
RAR	**Rarotonga**	**14.16**	**82**	Pn	**P**	**10 02 22.6**	**-3.8**
	6.5nm,0.3s,baz=271,slow=8.3,SNR=15						
RAR	**Rarotonga**	**14.16**	**82**		**Pn**	**10 02 17.7**	**-1.1**
RAR	**Rarotonga**	**14.16**	**82**	P	**Pn**	**10 02 22.0**	**+3.2**
URZ	**Urewera**	**15.89**	**204**	Pn	**P**	**10 02 46.9**	**+1.5**
	0.8nm,0.3s,baz=61,slow=5.9,SNR=7.3						
URZ				Sn	Sn	10 05 26.1	-12
	0.1nm,0.3s,baz=59,slow=20,SNR=1.2						
	10nm,0.9s						
URZ	**Urewera**	**15.89**	**204**	Pn	**Pn**	**10 02 41.2**	**-0.5**
URZ				IAmb	IAmb	10 02 55.3	
	comp=Z,18nm,1.2s						
URZ	**Urewera**	**15.89**	**204**	P	**P**	**10 02 48.5**	**+3.1**
PINNC	**Pines Island,**	**16.34**	**271**	P	**P**	**10 02 53.5**	**+2.9**
YATNC	**Mamie plateau,**	**16.93**	**273**	P	**P**	**10 02 59.4**	**+2.2**
DZM	**Mont Dzumac**	**17.34**	**272**	Pn	**Pn**	**10 02 57.2**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=2.0						
	comp=Z,1.4nm,0.7s						
RPZ	**Rata Peaks**	**22.93**	**207**	P	**P**	**10 04 07.2**	**+4.9**
	comp=Z,6.3nm,0.9s,baz=40,slow=17,SNR=2.0						
	comp=Z,6.3nm,0.9s						
CTAO	**Charters Tower**	**36.21**	**268**	P	**P**	**10 06 00.8**	**-0.5**
CTAO				IAmb	IAmb	10 06 01.6	
	comp=Z,4.1nm,0.8s						
STKA	**Stephens Creek**	**39.12**	**248**	P	**P**	**10 06 25.4**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=69,slow=8.6,SNR=1.4						
	comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	**39.12**	**248**	P	**P**	**10 06 24.8**	**-1.0**
BBOO	**Buckleboo**	**43.80**	**247**	P	**P**	**10 07 01.4**	**-2.8**
AS31	**Alice Springs**	**46.70**	**259**	P	**P**	**10 07 26.1**	**-1.4**
ASAR	**Alice Springs**	**46.70**	**259**	P	**P**	**10 07 27.1**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=97,slow=6.8,SNR=19						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**46.70**	**259**	P	**P**	**10 07 26.2**	**-1.2**
WR0	**Warramunga Arr**	**46.94**	**264**	P	**P**	**10 07 28.5**	**-0.8**
WR0				IAmb	IAmb	10 07 34.7	
	comp=Z,2.5nm,0.9s						
WB2	**Warramunga Arr**	**47.11**	**264**	P	**P**	**10 07 29.1**	**-1.6**
WB2				IAmb	IAmb	10 07 31.9	
	comp=Z,4.1nm,0.9s						
WRAB	**Tennant Creek**	**47.12**	**264**	P	**P**	**10 07 29.9**	**-0.8**
WRAB				IAmb	IAmb	10 07 31.2	
	comp=Z,4.2nm,0.9s						
WB0	**Warramunga Arr**	**47.12**	**265**	P	**P**	**10 07 29.3**	**-1.4**
WRA	**Warramunga Arr**	**47.12**	**264**	P	**P**	**10 07 29.2**	**-1.6**
	comp=Z,2.5nm,0.6s,baz=96,slow=8.2,SNR=33						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**47.12**	**264**	P	**P**	**10 07 29.3**	**-1.5**
MTN	**Manton Dam**	**52.18**	**272**	P	**P**	**10 08 07.9**	**-1.4**
MTN				IAmb	IAmb	10 08 19.7	
	comp=Z,6.5nm,1.1s						
KNRA	**Kununurra**	**53.42**	**268**	P	**P**	**10 08 18.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**55.54**	**264**	P	**P**	**10 08 31.7**	**-2.2**
FITZ				IAmb	IAmb	10 08 59.7	
	comp=Z,2.8nm,1.1s						
SIJI	**Sorong**	**56.96**	**285**	P	**P**	**10 08 42.3**	**-1.8**
	comp=Z,5.3nm,0.7s,baz=79,slow=9.6,SNR=4.4						
	comp=Z,5.3nm,0.7s						
QSPA	**South Pole Qui**	**66.19**	**180**	P	**P**	**10 09 45.3**	**-0.5**
QSPA				IAmb	IAmb	10 09 53.9	
	comp=Z,3.4nm,0.9s						
MJAR	**Matsushiro Arr**	**74.67**	**322**	P	**P**	**10 10 38.5**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=114,slow=11,SNR=1.6						
	comp=Z,0.9nm,0.7s						
MAW	**Mawson**	**79.36**	**199**	P	P	10 11 09.8	+6.1
	comp=Z,4.3nm,0.9s,baz=123,slow=4.9,SNR=4.7						
	comp=Z,4.3nm,0.9s						
PETK	**Petropavlovsk-**	**80.31**	**344**	P	**P**	**10 11 11.1**	**+2.2**
	comp=Z,3.2nm,0.9s,baz=116,slow=6.6,SNR=1.4						
	comp=Z,3.2nm,0.9s						
KSRS	**Korea Array**	**81.36**	**317**	P	**P**	**10 11 16.6**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=124,slow=6.7,SNR=2.6						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**81.53**	**41**	P	P	10 11 21.6	+5.5
	comp=Z,0.8nm,0.8s,baz=225,slow=8.6,SNR=7.3						
	comp=Z,0.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**83.41**	**325**	P	**P**	**10 11 27.4**	**+1.9**
	comp=Z,2.9nm,0.7s,baz=167,slow=4.0,SNR=4.8						
	comp=Z,2.9nm,0.7s						
TROLL	**Troll, Antarti**	**84.34**	**179**	P	P	10 11 36.2	+6.1
SNAA	**Sanae**	**84.53**	**177**	P	P	10 11 37.2	+6.1
VNA3	**Neumayer Olymp**	**84.56**	**175**	P	P	10 11 36.6	+5.5
VNA2	**Neumayer--Watz**	**85.03**	**176**	P	P	10 11 39.3	+5.8
TXAR	**Lajitas Array**	**86.46**	**56**	P	P	10 11 47.8	+6.5
	comp=Z,0.6nm,0.7s,baz=217,slow=8.3,SNR=8.1						
	comp=Z,0.6nm,0.7s						
KLR	**Kul'dur**	**86.94**	**328**	P	**P**	**10 11 45.8**	**+2.7**
	comp=Z,0.5nm,0.4s,baz=141,slow=6.5,SNR=2.7						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**89.46**	**42**	P	P	10 12 00.2	+4.7
	comp=Z,0.4nm,0.7s,baz=152,slow=6.7,SNR=4.0						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**93.99**	**288**	P	**P**	**10 12 19.6**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=132,slow=3.5,SNR=6.3						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**147.39**	**331**	PKPbc	**PKiKP**	**10 18 44.5**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=39,slow=3.9,SNR=7.7						
CLL	**Collm**	**151.97**	**350**	*e*(PKPbc)	**PKPab**	**10 18 58.0**	**-4.4**

*IDC **01** 10:03:29.2±1.2, 34°.61N×141°.73E, h0km, mb3.5/6, mbtmp3.7/9, ML4.2/2, MS3.5/6, Error ellipse: s-maj=33.2km s-min=18.8km az=78.0*
*JMA **01** 10:03:32.3±0.5, 35°.N±1°.×14°.2E±°, h37km±1km, MV3.3/33, FAR SE OFF BOSO PEN*
ISC 01 10:03:32.8±0.9, 34°.53N±0°.04×141°.42E±0°.07, h27km, n29, σ1§56/22, mb3.6/6, MS3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.39**	**289**	P	**Pn**	**10 03 42.3**	**+0.1**
BSO1				*eX*		10 03 48.6	
BSO2	**Boso 2**	**0.59**	**292**	*eX*		10 03 56.2	
BSO3	**Boso 3**	**0.80**	**290**	*eP*	**Pn**	**10 03 48.9**	**+0.9**
BSO4	**Boso 4**	**1.00**	**298**	*eP*	**Pb**	**10 03 51.8**	**+0.3**
JKUC	**kamogawauchiur**	**1.19**	**302**	P	**Pb**	**10 03 53.7**	**-1.0**
JKUC				*eS*	**Sb**	**10 04 09.3**	**-0.3**
CHOJ	**Chosi**	**1.26**	**339**	*eP*	**Pb**	**10 03 53.8**	**-2.1**
JMYK	**Miyake Tsubota**	**1.62**	**254**	*eP*	**Pb**	**10 04 00.7**	**-1.3**
JMKN	**Mikurajimanish**	**1.64**	**248**	*eP*	**Pb**	**10 04 01.3**	**-1.2**
JIM2	**Oshima 3**	**1.65**	**277**	*eP*	**Pb**	**10 04 01.0**	**-1.6**
JHJ2	**Mitsune**	**1.94**	**224**	*eP*	**Pb**	**10 04 06.3**	**-1.3**
JHJ	**Hachijo jima 2**	**1.96**	**225**	Pn	**Pb**	**10 04 06.5**	**-1.3**
	75nm,0.3s,baz=16,slow=2.4,SNR=25						
JHJ				Sn	**Sb**	**10 04 32.6**	**+0.8**
	70nm,0.3s,baz=77,slow=22,SNR=8.6						
	153nm,0.4s						
MJAR	**Matsushiro Arr**	**3.30**	**308**	Pn	**Pn**	**10 04 24.1**	**+1.3**
	2.1nm,0.3s,baz=131,slow=9.9,SNR=16						
MJAR				Sn	**Sn**	**10 04 59.2**	**-1.9**
	0.5nm,0.3s,baz=139,slow=12,SNR=4.1						
JCJ	**Chichijima**	**7.44**	**175**	Pn	**Pn**	**10 05 20.1**	**+0.5**
	8.7nm,0.3s,baz=278,slow=22,SNR=8.3						
JCJ				Sn	**Sn**	**10 06 39.8**	**-3.4**
	6.9nm,0.3s,baz=282,slow=20,SNR=2.0						
	78nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**26.94**	**117**	T	T	10 37 26.7	
	baz=309,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**26.95**	**117**	T	T	10 37 21.4	
	baz=309,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hy**	**26.96**	**117**	T	T	10 37 26.6	
	baz=309,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**27.57**	**119**	T	T	10 38 10.9	
	baz=312,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**27.57**	**119**	T	T	10 38 14.8	
	baz=312,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**27.59**	**119**	T	T	10 38 12.2	
	baz=312,slow=75,SNR=14						
DAV	**Davao City (W)**	**30.99**	**212**	LR	LR	10 20 21.2	
	comp=Z,36nm,19.9s,baz=332,slow=32						
SIJI	**Sorong**	**36.48**	**197**	LR	LR	10 23 48.5	
	comp=Z,38nm,19.0s,baz=80,slow=33						
ZALV	**Zalesovo Beam**	**43.63**	**314**	P	**P**	**10 11 37.0**	**+2.2**
	0.4nm,0.4s,baz=90,slow=5.8,SNR=2.3						
ZALV				LR	LR	10 31 28.3	
	comp=Z,79nm,19.3s,baz=156,slow=38						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.49**	**304**	P	**P**	**10 11 51.1**	**+1.3**
	0.2nm,0.4s,baz=94,slow=9.7,SNR=2.3						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**47.58**	**310**	P	**P**	**10 12 06.9**	**+1.0**
	0.3nm,0.5s,baz=83,slow=7.6,SNR=2.8						
KURBB				LR	LR	10 34 07.9	
	comp=Z,98nm,18.9s,baz=83,slow=38						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**51.62**	**31**	P	**P**	**10 12 35.3**	**-1.3**
	0.5nm,1.0s,baz=270,slow=6.6,SNR=2.0						
	0.5nm,1.0s						
AAK	**Ala-Archa**	**51.72**	**300**	LR	LR	10 36 11.5	
	comp=Z,80nm,18.6s,baz=96,slow=38						
WRA	**Warramunga Arr**	**54.59**	**188**	P	**P**	**10 13 00.1**	**+1.2**
	1.1nm,0.6s,baz=0.8,slow=7.6,SNR=26						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**58.31**	**188**	P	**P**	**10 13 27.0**	**+1.6**
	0.4nm,0.5s,baz=359,slow=6.3,SNR=16						
	0.4nm,0.5s						
AKTO	**Aktyubinsk**	**60.37**	**313**	LR	LR	10 39 05.0	
	comp=Z,68nm,21.9s,baz=73,slow=35						

*SJA **01** 10:25:51.6±0.8, 29°.54S×72°.45W, h10km±4km, ML4.9, MW4.6*
*IDC **01** 10:25:56.6±0.5, 29°.67S×71°.82W, h0km, mb4.5/14, mbtmp4.4/18, ML4.4/4, MS4.1/21, Error ellipse: s-maj=19.0km s-min=16.0km az=87.0*
*NEIC **01** 10:25:57.3±1.7, 29°.63S±0°.01×72°.05W±0°.04, h10km±1km, mb4.9/87, Mwr4.7/70, Mwr4.8(GUC), Error ellipse: s-maj=6.8km s-min=2.9km az=286.0*
*VAO **01** 10:25:57.7±0.5, 29°.63S×71°.94W, h10km, mb4.7*
*NEIC **01** 10:25:57.9, 29°.66S×72°.02W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.22; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-1.12; $M_{r\theta}$0.12; $M_{\theta\phi}$0.22; $M_{\phi r}$-0.49; Fault plane solution: $M_0$1.29000×10^{16} NP1:ϕ_s348.71000°, δ33.52000°, λ90.86000°. NP2:ϕ_s167.68000°, δ56.49000°, λ89.43000°. Principal axes: T 1.3176, Plg79.0000°, Azm76.0000°; N -0.0513, Plg0.0000°, Azm168.0000°; P -1.2662, Plg11.0000°, Azm258.0000°;*
*GUC **01** 10:25:58.9±0.7, 29°.69S×72°.00W, h28km±14km, ML4.2*
*GCMT **01** 10:26:00.3±0.4, 29°.79S±0°.03×72°.29W±0°.04, h30km, MW5.0/79, Moment Tensor Solution. s26,c27; s79,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.99±.22; $M_{\theta\theta}$-0.55±.13; $M_{\phi\phi}$-3.44±.15; $M_{r\theta}$0.01±.14; $M_{\theta\phi}$0.48±.07; $M_{\phi r}$-1.26±.19; Best double couple: $M_0$3.95900×10^{16} NP1:ϕ_s173.00000°, δ54.00000°, λ93.00000°. NP2: ϕ_s349.00000°, δ36.00000°, λ86.00000°. Principal axes: T 4.1990, Plg81.0000°, Azm95.0000°; N -0.4780, Plg2.0000°, Azm352.0000°; P -3.7180, Plg9.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 10:25:56.3±0.6, 29°.68S±0°.02×72°.07W±0°.03, h6km±3km, h6km:pP-P, n272, σ1§53/275, mb4.9/52, MS4.2/21, 9C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.76**	**108**		**Pb**	**10 26 12.0**	**0.0**
CO05				Sg	**Sb**	**10 26 21.9**	**-0.7**
CO05	**La Serena**	**0.76**	**108**	⇓*i*P	**Pb**	**10 26 11.8**	**-0.1**
CO05				*i* S	**Sb**	**10 26 21.5**	**-1.1**
CO05				IAML		10 26 24.6	
	comp=E,33μm,0.2s						
CO06	**Fray Jorge**	**1.06**	**159**		**Pn**	**10 26 17.6**	**-0.2**
CO06				Sg	**Sb**	**10 26 31.0**	**-0.2**
CO06	**Fray Jorge**	**1.06**	**159**	*eP*	**Pb**	**10 26 17.2**	**+0.2**
CO06				*i* S	**Sb**	**10 26 30.8**	**-0.4**
CO06				IAML		10 26 36.9	
	comp=E,11μm,0.7s						
GO04	**Tololo Observa**	**1.21**	**114**		**Pn**	**10 26 19.6**	**-0.4**
GO04				Sg	**Sb**	**10 26 35.7**	**-0.1**
GO04	**Tololo Observa**	**1.21**	**114**	*eP*	**Pn**	**10 26 19.5**	**-0.4**
GO04				*i* S	**Sg**	**10 26 34.5**	**-0.7**
GO04	**Tololo Observa**	**1.21**	**114**	*eP*	**Pn**	**10 26 19.6**	**-0.4**
GO04				*eS*	**Sb**	**10 26 35.1**	**-0.6**
LCO	**Las Campanas**	**1.37**	**61**		**Pn**	**10 26 21.6**	**-0.8**
LCO				Sg	**Sg**	**10 26 38.6**	**-1.9**
LCO	**Las Campanas**	**1.37**	**61**	⇓*i*P	**Pn**	**10 26 21.5**	**-0.8**
LCO				*i* S	**Sg**	**10 26 39.6**	**-0.9**
LCO	**Las Campanas**	**1.37**	**61**	*eP*	**Pn**	**10 26 21.8**	**-0.5**
LCO				*eS*	**Sg**	**10 26 39.4**	**-1.0**
CO03	**El Pedregal**	**1.66**	**134**		**Pn**	**10 26 26.6**	**+0.4**
CO03	**El Pedregal**	**1.66**	**134**	*eP*	**Pb**	**10 26 26.7**	**-0.7**
CO03				*i* S	**Sn**	**10 26 47.5**	**-0.3**
CO03				IAML		10 26 56.2	
	comp=E,10μm,0.1s						
CO03	**El Pedregal**	**1.66**	**134**	*eP*	**Pb**	**10 26 26.8**	**-0.6**
CO03				*eS*	**Sn**	**10 26 47.8**	**-0.1**
CO03				IAML		10 26 53.8	
	comp=Z,5μm,0.6s						
AC04	**Llanos de Chal**	**1.71**	**31**	Pn	**Pn**	**10 26 25.6**	**-1.1**
AC04	**Llanos de Chal**	**1.71**	**31**	*eP*	**Pn**	**10 26 25.4**	**-1.3**
AC04				IAML		10 26 56.5	
	comp=N,4μm,0.7s						
AC04				IAML		10 27 02.2	
	comp=E,3μm,0.3s						
AC04	**Llanos de Chal**	**1.71**	**31**	*eP*	**Pn**	**10 26 25.4**	**-1.3**
AC04				*eS*	**Sn**	**10 26 47.4**	**-1.6**
CO01	**Juntas del Tor**	**1.74**	**100**		**Pb**	**10 26 28.1**	**-0.8**
CO01	**Juntas del Tor**	**1.74**	**100**	*eP*	**Pb**	**10 26 28.1**	**-0.8**
CO01				*i* S	**Sn**	**10 26 49.5**	**-0.5**
CO01				IAML		10 26 53.6	
	comp=N,5μm,0.4s						
CO01	**Juntas del Tor**	**1.74**	**100**	*eP*	**Pb**	**10 26 28.4**	**-0.5**
CO01				*eS*	**Sn**	**10 26 47.4**	**-2.7**
CO01				*eS*	**Sg**	**10 26 51.9**	**-0.5**
CO01				IAML		10 26 55.2	
	comp=Z,6μm,0.6s						
CO02	**Combarbal**	**1.77**	**149**		**Pb**	**10 26 28.7**	**-0.7**
CO02	**Combarbal**	**1.77**	**149**	⇑*i*P	**Pb**	**10 26 28.5**	**-0.9**
CO02				*i* S	**Sn**	**10 26 50.5**	**-0.3**
CO02	**Combarbal**	**1.77**	**149**	*eP*	**Pb**	**10 26 28.7**	**-0.7**
CO02				*eS*	**Sn**	**10 26 50.8**	**+0.1**
CO02				IAML		10 26 58.0	
	comp=Z,9μm,0.6s						
AC05	**El Transito**	**1

comp=Z,572nm,0.7s
AAGR Agrelo 4.38 142 *eP* **Pn 10 27 08.2 +4.7**
AAGR *eS* **Sg 10 28 14.9 -2.2**
LMEL Las Melosas 4.45 160 Pn 10 27 06.5 +2.0
ACLC CERRO LA CRUZ 4.47 88 *eS* **Sb 10 28 10.4 +0.8**
ACLC IAML 10 28 16.2
comp=Z,2µm,0.9s
BO04 La Punta 4.47 164 Pn 10 27 05.8 +1.1
BO04 La Punta 4.47 164⇑ *iP* **Pn 10 27 05.8 +1.1**
BO01 Tunca 4.77 170 Pn 10 27 09.2 +0.5
BO01 Tunca 4.77 170⇑ *iP* **Pn 10 27 09.2 +0.5**
BO01 Tunca 4.77 170 *eP* **Pn 10 27 09.3 +0.5**
BO01 *eS* **Sn 10 28 05.4 +1.0**
GO02 Mina Guanaco 5.01 27 *eP* **Pn 10 27 11.2 -1.3**
GO02 *eS* **Sn 10 28 10.3 -0.6**
BO02 Sierra Bellavi 5.21 168 Pn **Pn 10 27 15.7 +0.8**
PB14 IPOC Station P 5.25 17 Pn **Pn 10 27 12.8 -2.9**
GO05 Huala 5.31 179 Pn 10 27 15.4 -0.8
PB15 IPOC Station P 6.86 20 Pn 10 27 35.8 -1.9
H03N1 Juan Fernandez 6.94 236 T T 10 35 12.5
baz=65,slow=71,SNR=688
H03N2 Juan Fernandez 6.95 236 T T 10 35 02.9
baz=65,slow=71,SNR=592
H03N3 Juan Fernandez 6.95 236 T T 10 35 04.9
baz=65,slow=71,SNR=555
VA04 Juan Fernndez 6.98 234 Pn 10 27 37.4 -1.8
LVC Limon Verde 7.59 23 Pn **Pn 10 27 45.9 -2.1**
comp=Z,3.1nm,0.3s,baz=146,slow=7.8,SNR=30
LVC Sn **Sn 10 29 08.9 -5.6**
comp=Z,6.2nm,0.3s,baz=170,slow=12,SNR=3.7
LVC Lg Lg 10 29 41.6
comp=Z,11nm,0.3s,baz=171,slow=19,SNR=7.8
comp=Z,7.1nm,0.3s
LVC Limon Verde 7.59 23 Pn 10 27 45.5 -2.4
LVC Limon Verde 7.59 23 *eP* **Pn 10 27 45.7 -2.2**
PB02 IPOC Station P 8.56 14 Pn 10 27 57.8 -3.2
GO06 Curarrehue 9.89 177 Pn 10 28 18.5 -0.6
LR03 Panguipulli 9.93 181 Pn 10 28 20.1 +0.5
GO01 Chusmiza 10.31 15 Pn 10 28 21.8 -3.5
PLCA Paso Flores 11.10 174 Pn **Pn 10 28 36.3 +0.6**
comp=Z,1.3nm,0.3s,baz=331,slow=12,SNR=34
PLCA LR LR 10 33 29.5
comp=Z,610nm,18.3s,baz=350,slow=41
comp=Z,3.5nm,0.4s
PLCA Paso Flores 11.10 174 Pn 10 28 36.0 +0.3
PLCA Paso Flores 11.10 174 *eP* **Pn 10 28 36.2 +0.6**
PB12 IPOC Station P 11.13 9 Pn 10 28 32.7 -3.5
LL04 Puerto Octay 11.21 181 Pn 10 28 36.3 -0.8
PB16 IPOC Station P 11.54 12 Pn **Pn 10 28 46.4 +4.2**
TRQA Tornquist 11.83 138 Pn 10 28 45.6 0.0
ITQB Itaqui 13.43 94 Pn 10 29 07.0 -0.6
ITQB Itaqui 13.43 94 *eP* **Pn 10 29 07.2 -0.4**
CPUP Villa Florida 13.44 79 Pn **Pn 10 29 05.8 -1.9**
comp=Z,0.3nm,0.3s,baz=257,slow=12,SNR=5.5
CPUP Lg Lg 10 32 46.8
comp=Z,0.6nm,0.3s,baz=261,slow=4.8,SNR=3.3
comp=Z,1.4nm,0.5s
CPUP Villa Florida 13.44 79 Pn 10 29 06.8 -0.9
CPUP Villa Florida 13.44 79 *eP* **Pn 10 29 06.4 -1.3**
LPAZ La Paz 13.81 16 Pn **Pn 10 29 10.3 -3.1**
comp=Z,0.3nm,0.3s,baz=203,slow=5.3,SNR=6.6
LPAZ LR LR 10 35 19.0
comp=Z,646nm,18.4s,baz=192,slow=41
LPAZ La Paz 13.81 16 Pn 10 29 10.1 -3.3
LPAZ La Paz 13.81 16 *eP* **Pn 10 29 12.0 -1.4**
AZCA Azaras, Argent 14.19 87 *eP* **Pn 10 29 17.5 -0.4**
RODS Rosario do Sul 14.64 97 *eP* **Pn 10 29 23.2 -0.8**
AY01 Puyuhuapi 14.72 182 Pn **Pn 10 29 26.8 +1.8**
UNIS Unistalda (Bra 14.84 92 *eP* **Pn 10 29 25.3 -1.5**
BBRB Robore, Bolivi 15.94 47 *eP* **Pn 10 29 40.0 -1.4**
CRSM Crissiumal (Br 15.99 87 *eP* **Pn 10 29 41.4 -0.5**
PLTB Pedras Altas 16.02 102 Pn 10 29 39.8 -2.5
PLTB Pedras Altas 16.02 102 *eP* **Pn 10 29 42.1 -0.2**
CPSB Cacapava Do Su 16.15 97 *eP* **Pn 10 29 43.4 -0.6**
BBSD Serra de San D 16.27 43 *eP* **Pn 10 29 44.7 -1.0**
ANTJ Antonio Joao (16.35 66 *eP* **Pn 10 29 47.1 +0.4**
ALGR Alto Alegre (B 16.65 92 *eP* **Pn 10 29 49.3 -1.1**
MCR1 Marechal Candi 16.88 76 *eP* **Pn 10 29 52.5 -0.9**
SIV San Ignacio 16.97 39 Pn **Pn 10 29 51.5 -3.0**
comp=Z,0.1nm,0.3s,baz=221,slow=11,SNR=43
SIV LR LR 10 37 03.6
comp=Z,800nm,19.2s,baz=224,slow=40
comp=Z,5.8nm,0.8s
FRBT Francisco Belt 17.21 82 *eP* **Pn 10 29 56.8 -0.8**
AQDB Aquidauana 17.42 62 P **P 10 30 01.8 +0.4**
AQDB Aquidauana 17.42 62 *eP* **Pn 10 29 59.5 -0.5**
ITAB Concordia 17.70 87 P **P 10 30 04.2 -0.3**
ITAB Concordia 17.70 87 *eP* **Pn 10 30 03.6 0.0**
CNLB Canela 18.48 94 *eP* **Pn 10 30 13.4 +0.3**
PTLB Pontes e Lacer 18.50 43 *eP* **Pn 10 30 13.4 0.0**
TRCB Terra Rica 18.72 73 P **P 10 30 14.7 -1.1**
TRCB IAmb IAmb 10 30 22.9
comp=Z,40nm,0.7s
RPRD Ribas do Rio P 18.97 65 *eP* **P 10 30 18.3 -0.3**
VILB Vilhena 19.96 36 *eP* **P 10 30 29.2 -0.1**
TER01 Tubaro-SC 20.08 92 *eP* **P 10 30 30.8 +0.2**
SALV Santo Antonio 20.36 51 *eP* **P 10 30 33.2 -0.5**
PCMB Pacaembu 20.39 72 *eP* **P 10 30 33.6 -0.4**
ETMB Extrema 20.51 17 *eP* **P 10 30 35.6 +0.3**
C2SB Chapadao do Su 20.60 63 *eP* **P 10 30 37.0 +0.7**
GO09 Cerro Castillo 21.57 180 P **P 10 30 47.2 +0.7**
GO09 IAmb IAmb 10 31 01.9
comp=Z,55nm,1.4s
CZSB Cruzeiro do Su 21.85 358 *eP* **P 10 30 50.8 +1.1**
BB19B Bebedouro 22.90 73 *eP* **P 10 30 59.5 -1.6**
PDRB Porto dos Gac 22.96 42 *eP* **P 10 31 00.1 -1.5**
RCLB Rio Claro- Sao 23.17 78 *eP* **P 10 31 03.5 -0.4**
ATAH Atahualpa 23.21 344 P **P 10 31 07.9 +3.3**
comp=Z,4.3nm,0.8s,baz=166,slow=5.1,SNR=3.7
ATAH LR LR 10 39 06.2
comp=Z,139nm,18.2s,baz=205,slow=34
comp=Z,4.3nm,0.8s
VAO Valinhos 23.43 79 *eP* **P 10 31 05.6 -1.0**
CLDB Colider 24.09 42 *eP* **P 10 31 11.5 -1.4**
PARB Paraibuna 24.47 81 *eP* **P 10 31 15.2 -1.1**
IPMB Ipameri, GO 24.68 67 *eP* **P 10 31 17.4 -1.0**
TBTG Tabatinga, AM 25.44 5 *eP* **P 10 31 25.9 +0.8**
PMNB Patos De Minas 25.83 70 *eP* **P 10 31 28.5 -0.3**
SNDB Serra Nova Dou 26.14 52 *eP* **P 10 31 31.0 -0.5**
BDFB Brasilia 26.16 63 P **P 10 31 31.2 -0.6**
comp=Z,10nm,0.6s,baz=234,slow=8.6,SNR=13
BDFB LR LR 10 43 18.9
comp=Z,617nm,19.2s,baz=310,slow=40
comp=Z,10nm,0.6s
BDFB Brasilia 26.16 63 P **P 10 31 31.0 -0.8**
BDFB Brasilia 26.16 63 *eP* **P 10 31 31.2 -0.6**
VAS01 Vassouras-RJ 26.72 81 *eP* **P 10 31 37.0 +0.3**
NPGB Novo Progresso 27.47 38 *eP* **P 10 31 42.9 -0.5**
DIAM Diamantina, MG 28.24 73 *eP* **P 10 31 50.3 -0.2**
MACA Manacapuru-AM 28.50 24 *eP* **P 10 31 52.2 -0.4**
MC01 Montes Claros 28.81 70 *eP* **P 10 31 54.8 -0.7**
JANB Januaria 29.41 66 *eP* **P 10 32 00.2 -0.6**
ITTB Itaituba 29.55 35 *eP* **P 10 32 01.2 -0.7**
SJMB Sao Joao De Ma 30.13 76 *eP* **P 10 32 06.8 -0.4**
OTAV Otavalo 30.37 347 *eP* **P 10 32 10.4 +0.7**
SDBA SAO DESIDERIO 30.51 61 *eP* **P 10 32 09.9 -0.7**
SMTB Santa Maria do 30.90 53 *eP* **P 10 32 14.1 +0.1**
BBAC Balboa, Cauca 31.91 350 *eP* **P 10 32 25.7 +2.7**
RPN Rapa Nui 32.79 265 LR LR 10 41 53.2
comp=Z,263nm,19.4s,baz=176,slow=29
YOTC Yotoco, Valle 33.72 352 *eP* **P 10 32 43.3 +4.5**
BOAV Boa Vista 33.76 21 *eP* **P 10 32 39.2 +0.2**
GDU01 Guandu, BA 33.96 69 *eP* **P 10 32 40.0 -0.8**
CHIC Chingaza 34.15 357 *eP* **P 10 32 45.2 +2.4**
GUY2C Guyana, Caldas 34.85 354 *eP* **P 10 32 49.1 +0.2**
NORC Norcasia 35.15 355 *eP* **P 10 32 52.0 +1.0**
RUSC La Rusia 35.38 358 *eP* **P 10 32 55.1 +1.5**
TMAB Tom-Au,PA,Br 35.44 44 *eP* **P 10 32 53.6 0.0**
BARC Barichara 36.08 358 *eP* **P 10 33 02.1 +2.9**
PTBC PUERTO BERRIO, 36.09 356 *eP* **P 10 32 59.2 +0.1**
ZARC Zaragoza, Cauc 37.06 355 *eP* **P 10 33 08.3 +0.9**
UREC San Jos de Ur 37.37 354 *eP* **P 10 33 10.4 +0.5**
BAUV El Baul 38.60 6 P **P 10 33 20.4 +0.1**
BAUV IAmb IAmb 10 33 21.7
comp=Z,55nm,1.1s
MDP Montagnes des 39.29 32 P **P 10 33 25.0 -1.2**
comp=Z,12nm,0.9s,baz=197,slow=7.5,SNR=3.6
MDP LR LR 10 50 05.6
comp=Z,221nm,19.6s,baz=224,slow=37
comp=Z,12nm,0.9s
PCRV Puerto La Cruz 40.27 11 LR LR 10 51 59.9
comp=Z,228nm,19.6s,slow=39
RCBR Riachuelo 41.53 62 LR LR 10 52 25.3
comp=Z,550nm,18.8s,baz=344,slow=38
BELA Belgrano 2 51.13 170 P **P 10 34 59.8 +0.3**
BELA IAmb IAmb 10 35 01.5
comp=Z,8.0nm,0.9s
VNA3 Neumayer Olymp 53.37 159 P **P 10 35 17.3 +1.0**
VNA1 Neumayer--Stat 53.66 158 P **P 10 35 19.6 +1.2**
VNA2 Neumayer--Watz 54.01 158 P **P 10 35 21.9 +1.0**
baz=281,slow=7.0
SNAA Sanae 55.60 159 P **P 10 35 33.2 +0.7**
SNAA Sanae 55.60 159 LR LR 10 57 13.7
comp=Z,164nm,21.7s,baz=210,slow=34
SNAA Sanae 55.60 159 P **P 10 35 32.7 +0.2**
RKT Rikitea 56.13 261 *eT* T 11 36 28.9
comp=Z,2.2nm,0.3s
TROLL Troll, Antarti 57.31 159 P **P 10 35 45.6 +0.8**
X51A Calhoun 65.03 348 IAmb IAmb 10 36 51.5
comp=Z,16nm,1.0s
X48A Hartselle 65.34 346 IAmb IAmb 10 36 40.6
comp=Z,12nm,0.9s
JCT Junction City 65.40 334 IAmb IAmb 10 36 58.1
comp=Z,12nm,1.3s
CPCT Cooper Cave 65.84 349 IAmb IAmb 10 36 44.0
comp=Z,10nm,1.1s
TKL Tuckaleechee C 65.92 350 P **P 10 36 43.4 +0.3**
comp=Z,4.5nm,0.9s,baz=150,slow=9.2,SNR=4.7
comp=Z,4.5nm,0.9s
TXAR Lajitas Array 65.98 330 P **P 10 36 45.6 +1.9**
comp=Z,0.7nm,0.6s,baz=153,slow=9.0,SNR=12
comp=Z,0.7nm,0.6s
TX31 Lajitas Ar. Si 65.98 330 P **P 10 36 42.6 -1.1**
TX31 IAmb IAmb 10 37 01.5
comp=Z,8.7nm,1.0s
PLAL Pickwick Lake 66.07 346 IAmb IAmb 10 36 45.4
comp=Z,10nm,1.2s
V48A Smith Brothers 66.54 347 IAmb IAmb 10 39 12.2
comp=Z,12nm,0.7s
WVT Waverly 67.12 346 P **P 10 36 49.8 -0.9**
WVT IAmb IAmb 10 36 52.5
comp=Z,12nm,1.2s
ABTX Abilene, Hawle 67.26 335 IAmb IAmb 10 37 03.8
comp=Z,12nm,1.1s
T47A Sharon Grove 67.81 347 IAmb IAmb 10 36 56.9
comp=Z,18nm,1.1s
LCAR Lake Charles 67.82 343 IAmb IAmb 10 37 06.6
comp=Z,7.8nm,1.0s
VNDA Vanda 68.32 191 P **P 10 37 00.1 +2.2**
comp=Z,1.4nm,1.0s,baz=123,slow=2.2,SNR=6.6
comp=Z,1.4nm,1.0s
TBI Tubuai 68.36 255 *e*LR LR 10 57 39.2
comp=Z,118nm,28.8s
HHAR Hobbs 68.76 341 IAmb IAmb 10 37 12.4
comp=Z,6.7nm,0.8s
TUL1 Leonard 68.96 340 IAmb IAmb 10 37 13.6
comp=Z,7.2nm,0.8s
Q51A Peebles 69.16 351 IAmb IAmb 10 37 05.1
comp=Z,13nm,1.1s
MSTX Muleshoe 69.65 333 P **P 10 37 06.5 -0.3**
MSTX IAmb IAmb 10 37 32.3
comp=Z,7.9nm,1.0s
CCM Cathedral Cave 69.73 344 P **P 10 37 07.5 +0.5**
CCM IAmb IAmb 10 37 18.9
comp=Z,9.2nm,1.0s
R40A Maddies Statio 70.21 343 IAmb IAmb 10 37 20.9
comp=Z,10nm,0.9s
TIAR Tiarei 70.70 260 *e*T T 11 54 45.8
comp=Z,0.8nm,0.3s
PPT2 Papeete2 70.88 260 *e*LR LR 10 58 48.2
comp=Z,198nm,22.8s
PPT Papeete 70.89 260 LR LR 11 00 09.2
comp=Z,158nm,19.1s,baz=122,slow=29
LIC Lamto 73.48 73⇑ *iP* **P 10 37 30.3 +0.1**
comp=Z,9.2nm,0.5s
L40A Anamosa 73.54 345 IAmb IAmb 10 37 32.1
comp=Z,20nm,1.0s
TIC Toumodi 73.71 72⇑ *iP* **P 10 37 31.6 0.0**
comp=Z,7.7nm,0.5s
KIC Kosan Boka 73.79 73⇑ *iP* **P 10 37 32.3 +0.2**
comp=Z,7.0nm,0.6s
DBIC Dimbokro 73.86 72 P **P 10 37 32.9 +0.4**
comp=Z,8.9nm,0.6s,baz=231,slow=6.6,SNR=13
DBIC LR LR 11 08 12.1
comp=Z,122nm,18.2s,baz=331,slow=34
comp=Z,8.9nm,0.6s
DBIC Dimbokro 73.86 72 P **P 10 37 31.2 -1.3**
DBIC IAmb IAmb 10 37 33.3
comp=Z,11nm,0.7s
SDCO Great Sand Dun 74.02 333 IAmb IAmb 10 37 36.7
comp=Z,12nm,1.9s
ECSD EROS Data Cent 76.44 342 IAmb IAmb 10 37 58.2
comp=Z,12nm,0.8s
KNB Kanab 76.57 328 IAmb IAmb 10 38 48.9
comp=Z,10nm,1.4s
SUR Sutherland 76.96 120 LR LR 11 07 51.0
comp=Z,110nm,19.1s,baz=284,slow=33
O20A White River Ci 77.16 332 IAmb IAmb 10 38 03.3
comp=Z,7.9nm,1.1s
MAW Mawson 77.32 164 P **P 10 37 52.7 +1.3**
comp=Z,2.6nm,0.7s,baz=180,slow=3.1,SNR=3.8
MAW LR LR 11 13 16.5
comp=Z,155nm,18.7s,baz=231,slow=37
comp=Z,2.6nm,0.7s
MAW Mawson 77.32 164 P **P 10 37 51.9 +0.5**
P18A Preston Nutter 77.56 331 IAmb IAmb 10 38 17.2
comp=Z,6.4nm,1.1s
F36A Milaca 77.67 345 IAmb IAmb 10 40 20.5
comp=Z,33nm,1.9s
RAR Rarotonga 77.89 252 LR LR 11 03 47.2
comp=Z,116nm,20.6s,baz=146,slow=29
RWWY Rawlins 78.08 334 IAmb IAmb 10 38 09.3
comp=Z,17nm,1.1s
K22A Casper 78.65 335 IAmb IAmb 10 39 53.1
comp=Z,23nm,1.4s
KOWA Kowa 78.90 66 P **P 10 38 01.5 +0.5**
comp=Z,13nm,0.7s,baz=239,slow=5.2,SNR=29
comp=Z,13nm,0.7s
KOWA Kowa 78.90 66 P **P 10 38 00.6 -0.4**
KOWA IAmb IAmb 10 38 02.7
comp=Z,18nm,0.9s
RSSD Black Hills 79.05 337 P **P 10 38 01.3 -0.2**
HWUT Hardware Ranch 79.77 331 IAmb IAmb 10 38 17.1
comp=Z,6.2nm,0.8s
PDAR Pinedale Array 79.91 333 P **P 10 38 07.8 +1.5**
comp=Z,0.7nm,0.6s,baz=145,slow=5.4,SNR=7.7
comp=Z,0.7nm,0.6s
NVAR Mina Array Bea 80.34 325 P **P 10 38 10.7 +2.0**
comp=Z,0.3nm,0.6s,baz=137,slow=3.5,SNR=4.5
comp=Z,0.3nm,0.6s
ELK Elko 80.68 328 IAmb IAmb 10 40 40.2
comp=Z,14nm,1.8s
LAO LASA Array 82.05 337 IAmb IAmb 10 39 40.1
comp=Z,18nm,1.4s
BOSA Boshof 82.12 118 P **P 10 38 18.7 +0.3**
comp=Z,10nm,0.7s,baz=242,slow=4.8,SNR=18
comp=Z,10nm,0.7s
BOSA Boshof 82.12 118 P **P 10 38 18.8 +0.4**
BOSA IAmb IAmb 10 38 19.6
comp=Z,12nm,0.8s
TOA0 Torodi Ar. Sit 82.78 71 P **P 10 38 21.0 -0.8**
TORD Torodi Ar. Bea 82.78 71 P **P 10 38 22.4 +0.6**
comp=Z,15nm,0.6s,baz=255,slow=4.9,SNR=5.3
TORD LR LR 11 13 28.1
comp=Z,133nm,19.6s,baz=214,slow=34
comp=Z,15nm,0.6s
LBTB Lobatse 84.16 115 LR LR 11 11 00.5
comp=Z,126nm,18.7s,baz=254,slow=32
LBTB Lobatse 84.16 115 P **P 10 38 27.9 -1.0**
PLID Pearl Lake 84.48 330 IAmb IAmb 10 40 27.9
comp=Z,8.5nm,1.3s
URZ Urewera 86.54 227 LR LR 11 10 15.8
comp=Z,58nm,19.2s,baz=111,slow=31
WALA Waterton Lakes 86.83 334 IAmb IAmb 10 40 06.0
comp=Z,13nm,1.2s
RPZ Rata Peaks 86.90 220 LR LR 11 09 52.0
comp=Z,39nm,20.2s,baz=95,slow=30
MDT Midelt 89.13 51 P **P 10 38 54.5 +1.5**
comp=Z,1.8nm,1.0s,baz=232,slow=16,SNR=2.5
comp=Z,1.8nm,1.0s
LSZ Lusaka 91.18 108 LR LR 11 16 37.7
comp=Z,116nm,18.6s,baz=192,slow=33
AFI Afiamalu 91.42 253 LR LR 11 10 03.8
comp=Z,91nm,21.2s,baz=114,slow=29
WAPA Wapiti River 93.69 335 IAmb IAmb 10 39 25.5
comp=Z,8.7nm,0.9s
DZM Mont Dzumac 103.74 235 *e*LR LR 11 14 02.2
comp=Z,89nm,23.6s
ASAR Alice Springs 121.37 208 PKP **PKPdf 10 44 51.0 -0.3**
comp=Z,0.8nm,0.9s,baz=146,slow=1.7,SNR=5.7
ASAR PKKPbc **PKKPbc 10 54 51.0 -0.6**
comp=Z,0.3nm,0.8s,baz=296,slow=2.5,SNR=4.3
WRA Warramunga Arr 124.48 211 PKP **PKPdf 10 44 57.3 +0.1**
comp=Z,0.9nm,0.5s,baz=150,slow=1.7,SNR=24
FITZ Fitzroy Crossi 129.52 202 PKP **PKPdf 10 45 06.9 +0.1**
comp=Z,1.6nm,0.8s,baz=219,slow=8.4,SNR=3.6
ARU Arti 136.43 38 PKP **PKPdf 10 45 19.2 +0.6**
comp=Z,3.1nm,0.2s,baz=323,slow=20,SNR=5.6
BVAR Borovoye Array 144.04 39 PKP **PKPdf 10 45 31.9 -0.6**
comp=Z,2.1nm,0.6s,baz=325,slow=2.3,SNR=14
YAK Yakutsk 144.64 342 PKPdf **PKPab 10 45 31.5 -0.3**
KKAR Karatay Array 147.31 55 PKPab 10 45 42.0 -0.6
KKAR Karatay Array 147.31 55 PKPbc 10 45 41.7 +0.9
KURK Kurchatov 149.62 38 PKiKP 10 45 48.1 +0.6
KURK PKPab **sPKPab 10 45 53.6 +0.7**
EKS2 Erkin-Say 149.75 55 P **PKiKP 10 45 49.1 +0.8**
SNR=9.0
USP Ospenovka 150.11 54 P **PKiKP 10 45 49.7 +0.8**
SNR=7.6
AAK Ala-Archa 150.27 55 P **PKiKP 10 45 50.6 +1.2**
SNR=7.3
AAK Ala-Archa 150.27 55 PKiKP 10 45 50.5 +1.1
AAK PKPab **sPKPab 10 45 56.5 +0.4**
UCH Uchtor 150.39 56 P **PKiKP 10 45 51.4 +1.4**
SNR=17
ZALV Zalesovo Beam 150.52 28 PKPbc **PKiKP 10 45 50.0 +0.7**
comp=Z,49nm,0.7s,baz=302,slow=3.3,SNR=45
ZALV Zalesovo Beam 150.52 28 PKiKP 10 45 50.3 +1.0
ZALV PKPab **sPKPab 10 45 59.1 +2.6**
TKM2 Tokmak 2 150.98 54 P **PKiKP 10 45 51.9 +0.9**
SNR=10
NRN Naryn 151.66 57 PKPab **PKPab 10 46 02.0 +1.2**
KSH Kashi 152.05 61 PKPbc **PKiKP 10 45 54.3 +1.2**
KSH PP **PP 10 49 33.1 -1.3**
MKAR Makanchi Array 153.77 42 PKP **PKPdf 10 45 49.2 +0.8**
comp=Z,0.7nm,0.8s,baz=309,slow=0.9,SNR=5.4
MKAR PKPbc **pPKPbc 10 45 57.1 -0.1**
comp=Z,3.5nm,0.8s,baz=320,slow=2.7,SNR=20
MKAR Makanchi Array 153.77 42 PKPdf **PKPdf 10 45 48.3 -0.1**
MKAR **pPKPbc 10 45 57.1 -0.1**
MKAR PKPab **PKPab 10 46 06.5 -2.6**
MJAR Matsushiro Arr 153.80 293 PKPbc **PKiKP 10 45 58.2 +1.5**
comp=Z,0.6nm,0.6s,baz=154,slow=1.7,SNR=4.2
MJAR PKPab **sPKPab 10 46 12.0 +1.0**
comp=Z,2.6nm,0.8s,baz=113,slow=2.2,SNR=7.0
WMQ Urumqi 158.58 43 *eP* **PKPdf 10 45 55.5 +0.7**
SONM Songino Array 161.84 3 PKPab **PKPab 10 46 45.3 +1.4**
comp=Z,1.0nm,0.6s,baz=338,slow=4.1,SNR=4.4
CMAR Chiang Mai Arr 166.14 142 PKPab **PKPab 10 47 03.6 +0.1**
comp=Z,0.5nm,0.4s,baz=233,slow=5.0,SNR=4.6
HHC Hu-ho-hao-te 168.47 346 *eP* **PKPdf 10 45 59.4 -4.8**
PZH PanZhiHua 173.68 119 PKP **PKPdf 10 46 06.1 -1.3**

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*NEIC **01** 10:30:09.1±1.1, 40°.45N±0°.04×29°.56W±0°.07, h10km±1km, mb4.6/34, Error ellipse: s-maj=9.8km s-min=6.4km az=106.0*
*IDC **01** 10:30:09.3±0.9, 40°.73N×29°.36W, h0km, mb4.0/18, mbtmp4.0/19, ML4.0/1, MS3.7/32, Error ellipse: s-maj=24.8km s-min=16.1km az=12.0*
*SVSA **01** 10:30:11.1±1.1, 40°.71N×29°.40W, h10km, ML3.9(INMG), Error ellipse: s-maj=4.5km s-min=3.9km az=83.0*
ISC 01 10:30:09.8±0.5, 40°.50N±0°.06×29°.46W±0°.04, h14km, n119, σ1§53/103, mb4.5/33, MS3.7/32, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**1.50**	**238**	Pn	**Pn**	**10 30 34.5**	**-1.9**
H07N1				T	T	10 32 28.6	
SNR=4.2							
H07S1	**FLORES T-PHASE**	**1.75**	**231**	Pn	**Pn**	**10 30 37.9**	**-1.8**
H07S1	**FLORES T-PHASE**	**1.75**	**231**	*e*S	**Sn**	**10 31 00.1**	**-1.6**
H07S1				A	A	10 31 06.0	
22nm,0.3s							
SRBC	**Serra Branca**	**1.83**	**143**	*e*P	**Pn**	**10 30 39.7**	**-1.1**
SRBC				*e*S	**Sn**	**10 31 01.6**	**-2.1**
SRBC				A	A	10 31 02.6	
651nm,0.3s							
PGRA	**Graciosa**	**1.86**	**142**	*e*P	**Pn**	**10 30 40.2**	**-1.0**
PGRA				*e*S	**Sn**	**10 31 02.3**	**-2.2**
PGRA				A	A	10 31 11.1	
203nm,0.1s							
PCED	**Cedros**	**1.96**	**162**	*e*P	**Pn**	**10 30 42.8**	**+0.2**
PCED				*e*S	**Sn**	**10 31 05.6**	**-1.4**
PCED				A	A	10 31 07.3	
283nm,0.3s							
CALA	**Caldeira**	**2.00**	**163**	*e*S	**Sn**	**10 31 07.4**	**-0.8**
CALA				A	A	10 31 08.8	
982nm,0.2s							
ROSA	**Rosais**	**2.01**	**152**	*e*P	**Pn**	**10 30 42.7**	**-0.7**
ROSA				*e*S	**Sn**	**10 31 06.9**	**-1.4**
ROSA				A	A	10 31 09.1	
174nm,0.3s							
ROSA	**Rosais**	**2.01**	**152**		**Pn**	**10 30 43.1**	**-0.2**
PRIB2	**Ribeirinha**	**2.01**	**161**	*e*S	**Sn**	**10 31 07.1**	**-1.2**
PRIB2				A	A	10 31 09.3	
331nm,0.2s							
PFCBR	**Castelo Branco**	**2.06**	**163**	*e*S	**Sn**	**10 31 08.7**	**-0.7**
PFCBR				A	A	10 31 10.9	
208nm,0.3s							
HOR	**Horta**	**2.07**	**162**	*e*S	**Sn**	**10 31 08.8**	**-0.9**
HOR				A	A	10 31 11.5	
708nm,0.3s							
PMAN	**Manadas**	**2.15**	**150**	*e*P	**Pn**	**10 30 44.5**	**-0.7**
PMAN				*e*S	**Sn**	**10 31 09.5**	**-2.1**
PMAN				A	A	10 31 11.4	
165nm,0.3s							
PICO	**Pico**	**2.15**	**158**	*e*P	**Pn**	**10 30 45.5**	**+0.2**
PICO				A	A	10 31 13.1	
127nm,0.2s							
PCAN	**Candelaria**	**2.17**	**159**	*e*P	**Pn**	**10 30 45.9**	**+0.4**
PCAN				*e*S	**Sn**	**10 31 11.2**	**-1.0**
PCAN				A	A	10 31 16.6	
154nm,0.2s							
PPNO	**Prainha do Nor**	**2.23**	**155**	*e*P	**Pn**	**10 30 46.2**	**-0.2**
PID	**Ribeirinha**	**2.30**	**153**	*e*P	**Pn**	**10 30 47.2**	**-0.2**
PID				*e*S	**Sn**	**10 31 14.1**	**-1.4**
PID				A	A	10 31 22.5	
78nm,0.3s							
PTOPO	**Topo S. Jorge**	**2.35**	**145**	*e*P	**Pn**	**10 30 47.7**	**-0.3**
PTOPO				*e*S	**Sn**	**10 31 14.6**	**-2.1**
PTOPO				A	A	10 31 16.8	
76nm,0.1s							
PSBA	**Serra de Santa**	**2.39**	**136**	*e*P	**Pn**	**10 30 47.2**	**-1.4**
PAGU	**Agualva, Azore**	**2.47**	**134**	*e*P	**Pn**	**10 30 48.2**	**-1.4**
PAGU				*e*S	**Sn**	**10 31 16.2**	**-3.3**
PAGU				A	A	10 31 16.7	
320nm,0.2s							
ADH	**Angra Heroismo**	**2.52**	**136**	*e*P	**Pn**	**10 30 49.5**	**-0.8**
PSCM	**Serra do Cume**	**2.55**	**134**	*e*P	**Pn**	**10 30 49.5**	**-1.3**
PSET	**Sete Cidades**	**3.95**	**131**	*e*P	**Pn**	**10 31 09.3**	**-0.7**
PSET				*e*S	**Sn**	**10 31 52.5**	**-3.7**
PSET				A	A	10 31 52.9	
36nm,0.2s							
CMLA	**Cha da Macela**	**4.10**	**130**	*e*P	**Pn**	**10 31 11.4**	**-0.7**
CMLA				*e*S	**Sn**	**10 31 56.2**	**-3.7**
CMLA				A	A	10 32 06.7	
73nm,0.2s							
CMLA	**Cha da Macela**	**4.10**	**130**		**Pn**	**10 31 11.4**	**-0.7**
BART	**Pico Bartolome**	**4.30**	**128**	*e*P	**Pn**	**10 31 13.3**	**-1.6**
BART				*e*S	**Sn**	**10 32 00.8**	**-4.2**
BART				A	A	10 32 04.3	
28nm,0.3s							
PSMA	**Santa Maria**	**4.87**	**135**	*e*P	**Pn**	**10 31 22.1**	**-0.5**
PSMN	**Pico do Norte,**	**4.90**	**134**	*e*P	**Pn**	**10 31 22.5**	**-0.5**
PMOZ	**Porto Moniz, M**	**12.47**	**124**	*e*P	**Pn**	**10 33 11.0**	**+4.1**
69nm,1.2s							
PMOZ				*e*S	Sn	10 35 59.2	+34
PMOZ	**Porto Moniz, M**	**12.47**	**124**	Pn	**Pn**	**10 33 06.5**	**-0.4**
PMAR	**Madeira**	**12.71**	**124**	*e*P	**Pn**	**10 33 12.5**	**+2.2**
67nm,1.2s							
COI	**Coimbra**	**16.05**	**84**	Pn	**Pn**	**10 33 54.6**	**-0.4**
COI				IAmb	IAmb	10 34 07.9	
comp=Z,27nm,0.8s							
PTEO	**Sao Teotonio**	**16.38**	**94**	*e*P	**Pn**	**10 34 00.2**	**+0.9**
POLO	**Lamas de Olo**	**16.40**	**80**	*e*S	S	10 37 26.5	+13
PFVI	**Vila Bisbo**	**16.43**	**95**	Pn	**Pn**	**10 34 00.4**	**+0.5**
PFVI				IAmb	IAmb	10 34 28.3	
comp=Z,54nm,1.3s							
MTE	**Manteigas**	**16.68**	**83**	*e*P	P	10 34 14.2	+8.7
comp=Z,32nm,1.6s							
MTE				*e*S	S	10 38 05.8	+46
PCBR	**Castelo Branco**	**16.82**	**85**	*e*P	**P**	**10 34 08.1**	**+1.2**
comp=Z,40nm,1.6s							

PCVE Castro Verde 16.88 93 *eS* **S 10 37 19.7 -3.6**
PESTR Estremoz 16.91 88 *eP* **P 10 34 12.9 +4.9**
comp=Z,21nm,1.9s
PESTR *eS* S 10 38 18.1 +54
PVAQ Vaqueiros 17.19 93 P **Pn 10 34 09.0 -0.5**
ESDC Sonseca Array 19.51 84 P **Pn 10 34 37.6 -0.3**
comp=Z,0.1nm,0.3s,baz=290,slow=9.9,SNR=15
comp=Z,2.7nm,0.7s
MDT Midelt 21.32 103 P **P 10 34 58.3 +1.9**
comp=Z,1.3nm,0.8s,baz=336,slow=10.0,SNR=3.6
MDT LR LR 10 41 25.9
comp=Z,161nm,20.9s,baz=16,slow=32
comp=Z,1.3nm,0.8s
EKA Eskdalemuir Ar 22.85 41 P **P 10 35 10.2 -2.2**
comp=Z,1.3nm,0.7s,baz=247,slow=11,SNR=3.9
comp=Z,1.3nm,0.7s
GBN Guysborough 23.87 293 P **P 10 35 19.1 -3.5**
BORG Borgarnes 24.75 8 LR LR 10 42 24.1
comp=Z,142nm,21.4s,baz=297,slow=30
SCHQ Schefferville 28.57 313 LR LR 10 45 21.8
comp=Z,122nm,21.3s,baz=114,slow=32
DAVOX Davos/Dischmat 28.93 64 LR LR 10 46 11.3
comp=Z,104nm,18.4s,baz=263,slow=34
CESX Cesi 31.30 72 P **P 10 36 29.8 +0.4**
CESX IAmb IAmb 10 36 35.1
comp=Z,5.7nm,0.9s
KHC Kasperske Hory 31.37 59 *eP* **P 10 36 32.5 +2.6**
FDMO Fiordimonte 31.59 71 P **P 10 36 31.2 -0.8**
FDMO IAmb IAmb 10 36 32.8
comp=Z,6.2nm,0.7s
NOA NORSAR Array B 32.16 37 LR LR 10 47 25.3
comp=Z,55nm,20.8s,baz=5.0,slow=32
JMIC Jan Mayen 32.37 13 LR LR 10 46 43.2
comp=Z,90nm,19.8s,baz=282,slow=31
FRB Frobisher Bay 32.58 329 LR LR 10 45 39.4
comp=Z,99nm,20.4s,baz=2.0,slow=29
HFS Hagfors 33.02 39 LR LR 10 47 52.9
comp=Z,184nm,21.9s,baz=330,slow=32
KOWA Kowa 34.12 132 P **P 10 36 56.6 +2.4**
comp=Z,3.1nm,0.7s,baz=307,slow=6.6,SNR=4.0
KOWA LR LR 10 49 38.5
comp=Z,97nm,20.8s,baz=300,slow=34
comp=Z,3.1nm,0.7s
SADO Sadowa 36.34 294 LR LR 10 51 04.8
comp=Z,238nm,19.8s,baz=152,slow=35
TORD Torodi Ar. Bea 38.57 126 P **P 10 37 33.7 +1.5**
comp=Z,18nm,0.8s,baz=323,slow=7.3,SNR=5.1
comp=Z,18nm,0.8s
FINES FINESS Array B 39.23 39 LR LR 10 51 21.1
comp=Z,93nm,21.4s,baz=310,slow=33
ARCES ARCESS Array B 40.58 26 LR LR 10 51 25.5
comp=Z,59nm,19.5s,baz=338,slow=32
RDO Rodhopi 41.03 70 P **P 10 37 50.8 -1.7**
RDO IAmb IAmb 10 38 02.4
comp=Z,18nm,1.4s
AKASG Malin Array Be 41.30 55 P **P 10 37 54.2 -0.4**
comp=Z,1.5nm,0.7s,baz=276,slow=8.5,SNR=5.8
AKASG LR LR 10 54 26.3
comp=Z,162nm,18.5s,baz=326,slow=35
comp=Z,1.5nm,0.7s
TKL Tuckaleechee C 42.46 282 LR LR 10 54 25.0
comp=Z,119nm,19.4s,baz=62,slow=34
BRTR Keskin Array B 47.32 69 P **P 10 38 44.0 +0.9**
comp=Z,1.7nm,0.7s,baz=294,slow=5.9,SNR=4.8
comp=Z,1.7nm,0.7s
L34A Svendsen Farm, 49.16 295 P **P 10 38 56.2 -0.9**
BNN Bunyan 49.24 69 P **P 10 38 58.3 +0.3**
KIRV Kirov 51.09 41 LR LR 11 00 11.9
comp=Z,108nm,18.3s,baz=320,slow=36
BELG Belogornoye 52.00 49 LR LR 11 00 35.5
comp=Z,54nm,20.9s,baz=276,slow=35
KBZ Khabaz 52.19 61 P **P 10 39 22.2 +2.4**
comp=Z,3.2nm,0.9s,baz=301,slow=9.5,SNR=3.5
KBZ LR LR 11 00 55.1
comp=Z,36nm,20.4s,baz=3.5,slow=36
comp=Z,3.2nm,0.9s
Z35A Perchaven, San 53.48 285 P **P 10 39 30.2 +0.6**
ROSC El Rosal 53.64 241 LR LR 10 58 37.2
comp=Z,99nm,21.5s,baz=42,slow=32
AMTX Amarillo 55.96 289 P **P 10 39 47.4 -0.3**
AMTX IAmb IAmb 10 40 02.6
comp=Z,12nm,1.2s
ARU Arti 56.46 42 P **P 10 39 50.8 -0.1**
comp=Z,2.6nm,0.5s,baz=310,slow=4.0,SNR=5.9
ARU LR LR 11 03 02.4
comp=Z,56nm,19.3s,baz=242,slow=35
comp=Z,2.6nm,0.5s
ARU Arti 56.46 42 P **P 10 39 51.1 +0.3**
ARU IAmb IAmb 10 39 52.2
comp=Z,7.5nm,0.9s
JCT Junction City 56.77 284 P **P 10 39 53.4 -0.1**
JCT IAmb IAmb 10 40 00.3
comp=Z,13nm,1.5s
PDAR Pinedale Array 57.70 301 P **P 10 40 01.1 +0.9**
comp=Z,1.6nm,1.0s,baz=65,slow=8.4,SNR=4.0
PDAR LR LR 11 03 21.8
comp=Z,79nm,21.1s,baz=83,slow=35
comp=Z,1.6nm,1.0s
PDAR Pinedale Array 57.70 301 P **P 10 40 00.7 +0.5**
INK Inuvik 57.88 335 LR LR 11 02 41.9
comp=Z,70nm,19.1s,baz=356,slow=34
AKTO Aktyubinsk 58.75 48 P **P 10 40 07.8 +0.7**
comp=Z,3.5nm,0.8s,baz=307,slow=6.9,SNR=9.0
AKTO LR LR 11 04 37.1
comp=Z,60nm,20.2s,baz=312,slow=35
comp=Z,3.5nm,0.8s
HWUT Hardware Ranch 59.57 301 P **P 10 40 13.4 +0.3**
NEW Newport 59.86 309 LR LR 11 03 40.8
comp=Z,103nm,21.6s,baz=84,slow=34
NEW Newport 59.86 309 P **P 10 40 14.2 -0.7**
NEW IAmb IAmb 10 40 21.5
comp=Z,6.4nm,1.1s
TX31 Lajitas Ar. Si 60.23 285 P **P 10 40 16.5 -1.2**
TX31 IAmb IAmb 10 40 26.0
comp=Z,7.2nm,0.9s
TX32 Lajitas Array 60.23 285 P **P 10 40 17.6 -0.2**
TXAR Lajitas Array 60.23 285 P **P 10 40 20.1 +2.3**
comp=Z,1.4nm,0.8s,baz=70,slow=7.0,SNR=10.0
comp=Z,1.4nm,0.8s
ABKAR Akbulak array 60.40 49 P **P 10 40 18.2 -0.2**
TMUT Trail Mountain 60.46 298 IAmb IAmb 10 40 26.1
comp=Z,5.7nm,1.1s
CMIG Matias Romero 60.51 268 LR LR 11 04 12.0
comp=Z,85nm,20.3s,baz=43,slow=34
I29M Ogilvie Camp, 61.05 333 P **P 10 40 22.5 -0.1**
I29M IAmb IAmb 10 40 30.8
comp=Z,6.7nm,1.1s
NRIK Noril'sk 61.19 21 P **P 10 40 24.1 +0.5**
comp=Z,3.2nm,0.8s,baz=300,slow=6.3,SNR=4.7
comp=Z,3.2nm,0.8s
CCUT Cedar City 62.80 297 P **P 10 40 34.3 -0.9**
CCUT IAmb IAmb 10 40 42.4
comp=Z,6.6nm,1.3s
WVOR Wild Horse Val 63.70 304 IAmb IAmb 10 40 48.7
comp=Z,4.0nm,0.9s
BRVK Borovoye 64.03 41 P **P 10 40 43.6 +0.9**
BRVK IAmb IAmb 10 40 49.5
comp=Z,4.7nm,1.1s
BVAR Borovoye Array 64.11 41 P **P 10 40 43.6 +0.4**
comp=Z,0.9nm,0.6s,baz=298,slow=6.4,SNR=6.5
BVAR LR LR 11 08 01.9
comp=Z,82nm,18.1s,baz=293,slow=36
comp=Z,0.9nm,0.6s
ILAR Eielson Array 64.28 335 P **P 10 40 45.1 +0.9**
comp=Z,0.7nm,0.7s,baz=27,slow=9.5,SNR=4.9
comp=Z,0.7nm,0.7s
HDA Harding Lake 64.54 335 P **P 10 40 45.7 -0.2**
HDA IAmb IAmb 10 40 52.3
comp=Z,4.5nm,0.8s
GEYT Alibeck 65.08 61 P **P 10 40 49.8 -0.1**
YAH Yahtse 65.31 330 P **P 10 40 50.5 -0.8**
ATAH Atahualpa 65.33 235 LR LR 11 08 17.3
comp=Z,55nm,19.9s,baz=24,slow=35
NVAR Mina Array Bea 65.63 300 P **P 10 40 55.5 +1.8**
comp=Z,0.1nm,0.3s,baz=64,slow=4.1,SNR=2.5
comp=Z,0.1nm,0.3s
YBH Yreka Blue Hor 66.63 306 LR LR 11 09 45.1
comp=Z,44nm,18.0s,baz=57,slow=36
LPAZ La Paz 66.95 221 LR LR 11 07 19.5
comp=Z,115nm,18.3s,baz=28,slow=33
PFO Pinyon Flats O 67.06 295 LR LR 11 10 04.6
comp=Z,95nm,18.6s,baz=74,slow=36
LPIG La Paz 68.06 283 LR LR 11 09 23.7
comp=Z,64nm,20.5s,baz=52,slow=35
NNA Nana 68.17 231 LR LR 11 09 35.6
comp=Z,44nm,19.0s,baz=353,slow=35
KURK Kurchatov 69.58 40 P **P 10 41 18.5 +0.4**
KURK IAmb IAmb 10 41 28.1
comp=Z,4.5nm,0.9s
KK31 Karatay Array 69.90 50 P **P 10 41 20.4 +0.1**
KKAR Karatay Array 69.90 50 P **P 10 41 20.8 +0.5**
ZAA0 Zalesovo Array 70.34 35 P **P 10 41 23.1 +0.3**
ZALV Zalesovo Beam 70.34 35 P **P 10 41 22.5 -0.2**
comp=Z,1.7nm,0.6s,baz=302,slow=8.5,SNR=5.9
comp=Z,1.7nm,0.6s
MAKZ Makanchi 73.82 42 P **P 10 41 44.3 +0.5**
MK31 Makanchi Array 73.99 42 P **P 10 41 44.9 +0.1**
MKAR Makanchi Array 73.99 42 P **P 10 41 45.1 +0.3**
comp=Z,2.0nm,0.9s,baz=320,slow=5.2,SNR=17
comp=Z,2.0nm,0.9s
TARG Taragay, Kyrgy 74.96 48 P **P 10 41 50.7 -0.3**
TARG IAmb IAmb 10 41 53.3
comp=Z,7.5nm,1.5s
SONM Songino Array 83.72 28 P **P 10 42 38.7 +0.4**
comp=Z,1.0nm,0.4s,baz=322,slow=5.0,SNR=5.6
comp=Z,1.0nm,0.4s
SONM Songino Array 83.72 28 P **P 10 42 38.5 +0.2**
PETK Petropavlovsk- 86.56 356 LR LR 11 24 21.4
comp=Z,36nm,18.0s,baz=155,slow=38
VNDA Vanda 142.57 184 PKP **PKPdf 10 49 41.2 +0.2**
comp=Z,1.0nm,1.1s,baz=205,slow=1.4,SNR=2.9
WRA Warramunga Arr 155.27 39 PKPab **PKPab 10 50 26.9 -1.1**
comp=Z,0.4nm,0.8s,baz=343,slow=3.8,SNR=5.6
ASAR Alice Springs 158.15 45 PKPab **PKPab 10 50 40.9 +0.5**
comp=Z,0.9nm,0.9s,baz=329,slow=3.0,SNR=7.1

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*NNC **01** 10:50:54.5±0.6, 42°.65N×78°.70E, h0km, mb3.0, mpv3.1,*
Error ellipse: s-maj=4.3km s-min=2.1km az=168.0
*SOME **01** 10:50:54.6, 42°.62N×78°.67E, h10km*
*KRNET **01** 10:50:55.8±0.1, 42°.38N×78°.59E, mb2.3*
ISC 01 10:50:54.0±0.8, 42°.55N±0°.03×78°.68E±0°.02, h10km, n44,
σ1°36/86, 14C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.55**	**338**	*eP*	**Pg**	**10 51 03.7**	**-1.0**
	13nm,0.2s						
SATY				*eS*	**Sg**	**10 51 10.3**	**-1.6**
	161nm,0.1s						
SATY	**Saty**	**0.55**	**338**	P	**Pg**	**10 51 03.7**	**-1.0**
	13nm,0.2s						
SATY				S	**Sg**	**10 51 10.3**	**-1.6**
	161nm,0.2s						
ZHN	**Zhinishke**	**0.64**	**344**	*eP*	**Pg**	**10 51 05.4**	**-1.2**
	24nm,0.1s						
ZHN				*eS*	**Sg**	**10 51 13.3**	**-1.6**
	295nm,0.3s						
ZHN	**Zhinishke**	**0.64**	**344**	P	**Pg**	**10 51 05.4**	**-1.2**
	24nm,0.1s						
ZHN				S	**Sg**	**10 51 13.4**	**-1.6**
	295nm,0.3s						
UZB	**Uzynbulak**	**0.65**	**23**	*eP*	**Pg**	**10 51 05.4**	**-1.2**
	22nm,0.0s						
UZB				*eS*	**Sg**	**10 51 13.3**	**-1.8**
	68nm,0.1s						
UZB	**Uzynbulak**	**0.65**	**23**	P	**Pg**	**10 51 05.4**	**-1.2**
	22nm,0.1s						
UZB				S	**Sg**	**10 51 13.4**	**-1.8**
	68nm,0.1s						
SHLS	**Shalkode**	**0.84**	**43**	*eP*	**Pn**	**10 51 14.1**	**+2.1**
	10nm,0.2s						
SHLS				*eS*	**Sn**	**10 51 28.1**	**+3.7**
	14nm,0.1s						
SHLS	**Shalkode**	**0.84**	**43**	P	**Pn**	**10 51 14.1**	**+2.1**
	10nm,0.2s						
SHLS				S	**Sn**	**10 51 28.2**	**+3.7**
	14nm,0.2s						
KPKS	**Kokpek**	**0.92**	**0**	*eP*	**Pg**	**10 51 10.2**	**-1.4**
	67nm,0.0s						
KPKS				*eS*	**Sg**	**10 51 21.6**	**-2.0**
	47nm,0.1s						
KPKS	**Kokpek**	**0.92**	**0**	P	**Pg**	**10 51 10.2**	**-1.4**
	67nm,0.1s						
KPKS				S	**Sg**	**10 51 21.6**	**-2.0**
	48nm,0.4s						
PDGK	**Podgornoye**	**0.98**	**37**	⇑P	**Pg**	**10 51 11.2**	**-1.7**
	1.7nm,0.3s						
PDGK				⇑S	**Sg**	**10 51 23.3**	**-2.3**
	12nm,0.5s						
KURS	**Kuram**	**1.01**	**338**	*eP*	**Pg**	**10 51 12.2**	**-1.2**
	3.2nm,0.0s						
KURS				*eS*	**Sg**	**10 51 25.0**	**-1.6**
	8.2nm,0.1s						
KURS	**Kuram**	**1.01**	**338**	P	**Pg**	**10 51 12.2**	**-1.2**
	4.6nm,0.1s						
KURS				S	**Sg**	**10 51 25.0**	**-1.6**
	8.2nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.05**	**219**	⇑*eP*	**Pg**	**10 51 12.7**	**-1.5**
	baz=23						
TARG				⇑*eS*	**Sg**	**10 51 25.2**	**-2.6**
	baz=23						
KOTS	**Kotyrbulak**	**1.34**	**301**	*eP*	**Pb**	**10 51 18.8**	**-0.5**
	1.4nm,0.2s						
KOTS				*eS*	**Sb**	**10 51 36.2**	**-0.4**
	17nm,0.2s						
KOTS	**Kotyrbulak**	**1.34**	**301**	P	**Pb**	**10 51 18.8**	**-0.5**
	1.4nm,0.3s						
KOTS				S	**Sb**	**10 51 36.2**	**-0.4**
	17nm,0.3s						
MDOK	**Medeo**	**1.35**	**298**	*eP*	**Pn**	**10 51 18.7**	**-0.3**
	1.8nm,0.1s						
MDOK				*eS*	**Sb**	**10 51 36.2**	**-0.6**
	8.4nm,0.2s						
MDOK	**Medeo**	**1.35**	**298**	P	**Pn**	**10 51 17.6**	**-1.4**
	0.8nm,0.3s						
MDOK				Pg	**Pn**	**10 51 18.7**	**-0.3**
	2.6nm,0.2s						
MDOK				S	**Sb**	**10 51 35.9**	**-0.9**
	3.5nm,0.3s						
MDOK				Lg	Lg	10 51 36.2	
	5.2nm,0.4s						
KTMS	**Ketmen**	**1.52**	**53**	*eP*	**Pg**	**10 51 22.5**	**-0.7**
	1.7nm,0.1s						
KTMS				*eS*	**Sg**	**10 51 42.4**	**-0.5**
	8.5nm,0.0s						
KTMS	**Ketmen**	**1.52**	**53**	P	**Pb**	**10 51 21.3**	**-1.0**
	1.7nm,0.2s						
KTMS				S	**Sb**	**10 51 40.6**	**-1.1**
	8.2nm,0.2s						
IZV	**Izvestkoviy**	**1.60**	**288**	*eP*	**Pb**	**10 51 23.7**	**0.0**
	2.5nm,0.2s						
IZV				*eS*	**Sg**	**10 51 44.7**	**-0.7**
	12nm,0.1s						
IZV	**Izvestkoviy**	**1.60**	**288**	P	**Pb**	**10 51 23.7**	**0.0**
	2.5nm,0.2s						
IZV				S	**Sg**	**10 51 44.7**	**-0.7**
	12nm,0.5s						
MTBS	**Maitube**	**1.75**	**290**	*eP*	**Pb**	**10 51 26.2**	**-0.1**
	2.7nm,0.0s						
MTBS				*eS*	**Sb**	**10 51 49.1**	**+0.7**
	14nm,0.2s						
MTBS	**Maitube**	**1.75**	**290**	P	**Pb**	**10 51 26.2**	**-0.1**
	2.7nm,0.3s						
MTBS				S	**Sb**	**10 51 49.1**	**+0.7**
	14nm,0.5s						
ARXS	**Arharly**	**1.77**	**340**	*eP*	**Pb**	**10 51 26.1**	**-0.6**
	9.8nm,0.0s						
ARXS				*eS*	**Sb**	**10 51 48.8**	**-0.3**
	26nm,0.4s						
ARXS	**Arharly**	**1.77**	**340**	P	**Pb**	**10 51 25.8**	**-0.9**
	11nm,0.3s						
ARXS				S	**Sb**	**10 51 48.4**	**-0.6**
	26nm,0.4s						
CHKK	**Chushkaly**	**1.80**	**317**	*eP*	**Pb**	**10 51 26.6**	**-0.4**
	12nm,0.1s						
CHKK				*eS*	**Sb**	**10 51 49.7**	**+0.1**
	28nm,0.1s						
CHKK	**Chushkaly**	**1.80**	**317**	P	**Pb**	**10 51 26.8**	**-0.2**
	12nm,0.3s						
CHKK				S	**Sb**	**10 51 49.7**	**+0.1**
	28nm,0.2s						
ULHL	**Ulahol**	**1.83**	**261**	⇓*iP*	**Pg**	**10 51 28.5**	**-0.6**
	baz=66						
ULHL				⇓*iS*	**Sg**	**10 51 52.4**	**-0.5**
	baz=66						
KTBS	**Karatobe**	**1.87**	**309**	*eP*	**Pb**	**10 51 28.1**	**-0.1**
	8.0nm,0.0s						
KTBS				*eS*	**Sb**	**10 51 52.2**	**+0.5**
	40nm,0.3s						
KTBS	**Karatobe**	**1.87**	**309**	P	**Pb**	**10 51 28.1**	**-0.1**
	8.0nm,0.2s						
KTBS				S	**Sb**	**10 51 52.2**	**+0.5**
	40nm,0.3s						
DJR	**Jarkent**	**1.96**	**24**	*eP*	**Pb**	**10 51 29.2**	**-0.5**
	12nm,0.0s						
DJR				*eS*	**Sb**	**10 51 54.1**	**-0.2**
	38nm,0.2s						
DJR	**Jarkent**	**1.96**	**24**	P	**Pb**	**10 51 28.8**	**-1.0**
	12nm,0.2s						
DJR				S	**Sb**	**10 51 53.8**	**-0.5**
	42nm,0.3s						
KUU	**Kurty**	**2.17**	**309**	*eP*	**Pb**	**10 51 33.4**	**-0.1**
	4.2nm,0.0s						
KUU				*eS*	**Sb**	**10 52 01.3**	**+0.8**
	23nm,0.1s						
KUU	**Kurty**	**2.17**	**309**	Pg	**Pb**	**10 51 33.1**	**-0.3**
	3.7nm,0.3s						
KUU				Lg	Lg	10 52 01.3	
	23nm,0.1s						
DGS	**Degeres**	**2.25**	**289**	*eP*	**Pb**	**10 51 35.5**	**+0.8**
	4.7nm,0.1s						
DGS				*eS*	**Sg**	**10 52 05.0**	**-1.1**
	35nm,0.1s						
DGS	**Degeres**	**2.25**	**289**	Pg	**Pb**	**10 51 35.5**	**+0.8**
	4.9nm,0.3s						
DGS				Lg	Lg	10 52 05.0	
	35nm,0.7s						
NRN	**Naryn**	**2.29**	**242**	⇑*iP*	**Pb**	**10 51 35.3**	**-0.3**
	baz=45						
NRN				⇑*iS*	**Sb**	**10 52 04.3**	**+0.3**
	baz=45						
TKM2	**Tokmak 2**	**2.30**	**280**	⇑*iP*	**Pg**	**10 51 36.9**	**-1.2**
	baz=85						
TKM2				⇑*iS*	**Sg**	**10 52 06.7**	**-1.3**
	baz=85						
TKM2	**Tokmak 2**	**2.30**	**280**	⇑P	**Pg**	**10 51 41.8**	**+3.7**
	1.0nm,0.3s						
TKM2				⇑S	**Sg**	**10 52 06.9**	**-1.0**
	4.7nm,0.3s						
KRBS	**Karabastau**	**2.48**	**299**	*eP*	**Pb**	**10 51 38.9**	**+0.2**
	1.5nm,0.0s						
KRBS				*eS*	**Sb**	**10 52 10.7**	**+1.3**
	28nm,0.2s						
KRBS	**Karabastau**	**2.48**	**299**	Pg	**Pb**	**10 51 38.5**	**-0.2**
	2.7nm,0.2s						
KRBS				Lg	Lg	10 52 10.2	
	28nm,0.4s						
UCH	**Uchtor**	**3.10**	**265**	⇑*eP*	**Pb**	**10 51 47.5**	**-2.1**
	baz=69						
UCH				⇑*eS*	**Sb**	**10 52 25.2**	**-2.4**
	baz=69						
MK31	**Makanchi Array**	**4.96**	**30**	⇑Pn	**Pn**	**10 52 11.1**	**+2.5**
	0.1nm,0.3s,baz=214,slow=15,SNR=6.3						
MK31				⇑Sn	**Sn**	**10 53 07.9**	**+1.9**
	1.0nm,0.6s,baz=212,slow=25,SNR=4.2						
MK31				⇓Lg	Lg	10 53 25.5	
	0.2nm,0.3s,baz=215,slow=28,SNR=4.8						

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*IDC **01** 10:52:07.0±1.1, 41°.37N×29°.43W, h0km, mb3.8/6,*
mbtmp3.7/7, ML3.7/1, MS3.4/19, Error ellipse:
s-maj=41.5km s-min=22.0km az=162.0
*SVSA **01** 10:52:07.4±0.9, 40°.72N×29°.24W, h10km, ML3.5(INMG),*
Error ellipse: s-maj=6.1km s-min=3.5km az=87.0
ISC 01 10:52:05.4±0.8, 40°.53N±0°.07×29°.11W±0°.07, h10km, n41,
σ0°88/38, mb3.9/6, MS3.4/18, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.70**	**151**	*eP*	**Pn**	**10 52 35.0**	**-0.2**
SRBC				*eS*	**Sn**	**10 52 56.8**	**-0.2**
SRBC				A	A	10 52 59.7	
	146nm,0.3s						
PGRA	**Graciosa**	**1.73**	**150**	*eP*	**Pn**	**10 52 35.4**	**-0.2**
PGRA				*eS*	**Sn**	**10 52 57.2**	**-0.5**
PGRA				A	A	10 53 04.3	
	41nm,0.3s						
PCED	**Cedros**	**1.92**	**171**	*eP*	**Pn**	**10 52 38.6**	**+0.4**
PCED				*eS*	**Sn**	**10 53 01.6**	**-0.9**
PCED				A	A	10 53 03.0	
	161nm,0.3s						
ROSA	**Rosais**	**1.93**	**159**	*eP*	**Pn**	**10 52 38.9**	**+0.6**
ROSA				*eS*	**Sn**	**10 53 02.3**	**-0.2**
ROSA				A	A	10 53 04.9	
	103nm,0.3s						
CALA	**Caldeira**	**1.97**	**171**	*eS*	**Sn**	**10 53 03.0**	**-0.7**
CALA				A	A	10 53 04.7	
	588nm,0.2s						
H07S1	**FLORES T-PHASE**	**1.98**	**235**	Pn	**Pb**	**10 52 42.7**	**+1.1**
PFCBR	**Castelo Branco**	**2.03**	**171**	*eP*	**Pn**	**10 52 40.1**	**+0.5**
PFCBR				*eS*	**Sn**	**10 53 04.3**	**-0.7**
PFCBR				A	A	10 53 06.8	
	130nm,0.3s						
HOR	**Horta**	**2.03**	**169**	*eP*	**Pn**	**10 52 40.2**	**+0.5**
HOR				*eS*	**Sn**	**10 53 04.1**	**-1.0**
HOR				A	A	10 53 06.7	
	329nm,0.3s						
PMAN	**Manadas**	**2.05**	**157**	*eP*	**Pn**	**10 52 40.3**	**+0.4**
PMAN				*eS*	**Sn**	**10 53 04.6**	**-1.0**
PMAN				A	A	10 53 06.8	
	36nm,0.2s						
PICO	**Pico**	**2.09**	**165**	*eP*	**Pn**	**10 52 40.5**	**-0.1**
PICO				*eS*	**Sn**	**10 53 05.9**	**-0.8**
PICO				A	A	10 53 10.4	
	150nm,0.3s						
PCAN	**Candelaria**	**2.12**	**167**	*eP*	**Pn**	**10 52 41.3**	**+0.4**
PCAN				*eS*	**Sn**	**10 53 06.3**	**-1.0**
PCAN				A	A	10 53 19.7	
	88nm,0.1s						
PID	**Ribeirinha**	**2.22**	**160**	*eP*	**Pn**	**10 52 42.7**	**+0.4**
PID				*eS*	**Sn**	**10 53 09.1**	**-0.7**
PID				A	A	10 53 18.1	
	42nm,0.2s						
PSBA	**Serra de Santa**	**2.23**	**141**	*eP*	**Pn**	**10 52 42.7**	**+0.2**
PSBA				*eS*	**Sn**	**10 53 09.4**	**-0.7**
PSBA				A	A	10 53 12.1	
	76nm,0.3s						
CMLA	**Cha da Macela**	**3.92**	**134**	*eP*	**Pn**	**10 53 06.1**	**+0.4**
CMLA				*eS*	**Sn**	**10 53 50.5**	**-1.3**
CMLA				A	A	10 53 57.5	
	41nm,0.3s						
BART	**Pico Bartolome**	**4.11**	**131**	*eP*	**Pn**	**10 53 09.2**	**+0.8**
PSMA	**Santa Maria**	**4.70**	**137**	*eP*	**Pn**	**10 53 17.0**	**+0.6**
PSMN	**Pico do Norte,**	**4.73**	**137**	*eP*	**Pn**	**10 53 17.5**	**+0.7**
PSMN				*eS*	**Sn**	**10 54 10.0**	**-1.7**
PSMN				A	A	10 54 14.9	
	7.4nm,0.3s						
ESDC	**Sonseca Array**	**19.24**	**84**	P	**Pn**	**10 56 32.8**	**+2.0**
	baz=292,slow=10,SNR=4.6						
ESDC				LR	LR	11 02 45.2	
	comp=Z,157nm,19.8s,baz=334,slow=33						
	0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**22.65**	**40**	P	**P**	**10 57 04.9**	**-1.6**
	0.7nm,0.6s,baz=251,slow=8.9,SNR=2.4						
EKA				LR	LR	11 04 25.2	
	comp=Z,54nm,18.4s,baz=163,slow=33						
	0.7nm,0.6s						
BORG	**Borgarnes**	**24.68**	**8**	LR	LR	11 04 20.1	
	comp=Z,61nm,20.4s,baz=176,slow=31						
DAVOX	**Davos/Dischmat**	**28.67**	**64**	LR	LR	11 07 32.8	
	comp=Z,50nm,21.5s,baz=260,slow=32						
KEST	**Kesra**	**30.46**	**87**	LR	LR	11 09 47.1	
	comp=Z,70nm,20.9s,baz=192,slow=35						
NOA	**NORSAR Array B**	**31.97**	**36**	LR	LR	11 09 41.7	
	comp=Z,26nm,19.6s,baz=270,slow=34						
HFS	**Hagfors**	**32.83**	**39**	LR	LR	11 10 30.6	
	comp=Z,62nm,19.0s,baz=263,slow=34						
VRAC	**Vranov**	**33.09**	**59**	LR	LR	11 10 18.8	
	comp=Z,41nm,19.5s,baz=285,slow=33						
KOWA	**Kowa**	**33.94**	**133**	LR	LR	11 13 10.8	
	comp=Z,172nm,18.0s,baz=298,slow=36						
SADO	**Sadowa**	**36.58**	**294**	LR	LR	11 13 00.0	
	comp=Z,98nm,19.6s,baz=155,slow=35						
SJG	**San Juan**	**38.87**	**246**	LR	LR	11 10 44.9	
	comp=Z,31nm,21.7s,baz=70,slow=29						
FINES	**FINESS Array B**	**39.03**	**39**	LR	LR	11 13 50.3	
	comp=Z,50nm,18.5s,baz=70,slow=34						
TKL	**Tuckaleechee C**	**42.72**	**282**	LR	LR	11 14 20.5	
	comp=Z,44nm,20.9s,baz=106,slow=32						
ROSC	**El Rosal**	**53.89**	**241**	LR	LR	11 22 04.2	
	comp=Z,55nm,18.8s,baz=62,slow=33						
PDAR	**Pinedale Array**	**57.92**	**301**	P	**P**	**11 01 56.2**	**-1.8**
	0.9nm,0.9s,baz=70,slow=9.6,SNR=6.1						
PDAR				LR	LR	11 25 50.0	
	comp=Z,57nm,18.1s,baz=98,slow=35						
	0.9nm,0.9s						
TXAR	**Lajitas Array**	**60.48**	**285**	P	**P**	**11 02 15.4**	**-0.3**
	0.6nm,0.6s,baz=61,slow=7.4,SNR=9.4						
TXAR				LR	LR	11 26 50.3	
	comp=Z,37nm,20.0s,baz=51,slow=35						
	0.6nm,0.6s						

CMIG	Matias Romero	60.78	268	LR	LR	11 25 57.4
	comp=Z,33nm,19.9s,baz=50,slow=34					
ILAR	Eielson Array	64.37	335	LR	LR	11 29 40.2
	comp=Z,35nm,18.4s,baz=76,slow=36					
ZALV	Zalesovo Beam	70.16	35	P	P	11 03 18.6 +0.7
	0.8nm,0.5s,baz=316,slow=8.3,SNR=4.5					
	0.8nm,0.5s					
CPUP	Villa Florida	71.51	207	P	P	11 03 34.1 +7.9
	1.3nm,0.8s,baz=90,slow=16,SNR=2.9					
	1.3nm,0.8s					
MKAR	Makanchi Array	73.78	42	P	P	11 03 40.8 +1.0
	1.1nm,0.8s,baz=316,slow=6.9,SNR=9.6					
	1.1nm,0.8s					
BOSA	Boshof	85.29	134	LR	LR	11 42 53.1
	comp=Z,48nm,18.5s,baz=9.0,slow=35					
WRA	Warramunga Arr	155.07	39	PKPab	PKPab	11 12 23.3 -0.1
	0.4nm,0.9s,baz=344,slow=2.6,SNR=2.9					
ASAR	Alice Springs	157.93	45	PKPab	PKPab	11 12 36.1 +0.5
	0.4nm,0.8s,baz=294,slow=4.6,SNR=2.3					

BJI ***01*** *11:03:42.9±0.0, 34°.89N×141°.64E, h5km, mb4.4/31, mB4.7/16, Ms4.2/20, Ms7 4.0/17*
IDC ***01*** *11:03:43.9±0.6, 34°.59N×141°.49E, h0km, mb4.0/21, mbtmp4.0/27, ML3.1/5, MS3.6/16, Error ellipse: s-maj=16.8km s-min=13.2km az=105.0*
MOS ***01*** *11:03:45.2±1.2, 34°.69N×141°.61E, h19km, mb4.6/20, Error ellipse: s-maj=13.0km s-min=6.4km az=113.4*
JMA ***01*** *11:03:46.5±0.4, 35°.N±1°×14°.2E±°, h35km±1km, MV3.8/37, FAR SE OFF BOSO PEN*
NIED ***01*** *11:03:46.5, 34°.59N×141°.56E, h35km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.79; Mθθ-3.03; Mφφ2.24; Mrθ0.68; Mθφ3.72; Mφr-0.39; Fault plane solution: M0 4.61000×10^15 NP1: φs252.00000°, δ84.00000°, λ-5.00000°. NP2: φs343.00000°, δ85.00000°, λ-174.00000°.*
NEIC ***01*** *11:03:48.1±1.6, 34°.66N±0°.03×141°.68E±0°.10, h25km±5km, mb4.6/24 Error ellipse: s-maj=11.6km s-min=4.6km az=82.0*
ISC 01 11:03:48.0±0.4, 34°.64N±0°.04×141°.55E±0°.05, h27km, n141, σ1s56/135, mb4.3/49, MS3.8/25, 3C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.47	272	eP	Pb	11 03 56.7	-0.7
BSO3	Boso 3	0.87	281	i P	Pn	11 04 03.3	-0.9
BSO4	Boso 4	1.05	290	i P	Pn	11 04 06.2	-0.7
KTR	Katsuura	1.13	297	eP	Pn	11 04 07.1	-0.9
CHOJ	Chosi	1.21	332	eP	Pb	11 04 08.5	-1.7
JKUC	kamogawauchiur	1.22	296	P	Pn	11 04 08.2	-1.2
JKUC				eS	Sn	11 04 23.8	-1.2
JIM2	Oshima 3	1.74	273	P	Pn	11 04 15.4	-1.2
JMYK	Miyake Tsubota	1.75	251	eS	Sn	11 04 36.7	-1.2
JMKN	Mikurajimanish	1.78	246	i P	Pn	11 04 16.0	-1.0
JYT	Yasato	1.94	326		Pn	11 04 18.1	-1.0
JHJ2	Mitsune	2.09	224		Pn	11 04 21.0	-0.3
JHJ2	Mitsune	2.09	224	P	Pn	11 04 20.9	-0.3
JHJ	Hachijo jima 2	2.11	225	Pn	Pn	11 04 20.7	-0.8
	74nm,0.3s,baz=94,slow=5.3,SNR=24						
JHJ				Sn	Sn	11 04 46.2	-0.6
	388nm,0.3s,baz=37,slow=22,SNR=13						
	148nm,0.4s						
JMM	Marumori	3.28	350		Pn	11 04 35.6	-2.0
MJAR	Matsushiro Arr	3.32	306	Pn	Pn	11 04 37.5	-0.7
	1.2nm,0.3s,baz=117,slow=8.8,SNR=64						
MJAR				Sn	Sb	11 05 20.9	-5.2
	1.3nm,0.3s,baz=119,slow=16,SNR=2.6						
	9.7nm,0.4s						
MAJO	Matsushiro	3.32	306	Pn	Pn	11 04 38.3	+0.1
MAJO	Matsushiro	3.32	306	i P	Pn	11 04 38.7	+0.5
MJB9	Matsu-Tunnel	3.32	306		Pn	11 04 38.9	+0.6
JGF	Kuroka	3.56	287		Pn	11 04 42.1	+0.5
INU	Inuyama	3.79	282	Pn	Pn	11 04 45.5	+0.9
JSD	Sado	4.31	323	Pn	Pn	11 04 51.3	-0.4
JTM	Tenmabayashi	6.15	357		Pn	11 05 16.6	-0.5
JMN	Monobe	6.42	264		Pn	11 05 21.3	+0.5
JHS	Saijyo	6.94	275		Pn	11 05 31.8	+3.8
ERM	Erimo	7.48	9	Pn	Pn	11 05 31.8	-3.4
ERM	Erimo	7.48	9	P	Pn	11 05 31.8	-3.4
JCJ	Chichijima	7.54	176	Pn	Pn	11 05 32.4	-3.7
	52nm,0.3s,baz=284,slow=16,SNR=15						
JCJ				Sn	Sn	11 06 55.1	-5.5
	20nm,0.3s,baz=294,slow=21,SNR=1.9						
JCJ	Chichijima	7.54	176	Pn	Pn	11 05 35.4	-0.7
JEW	Eniwo	8.19	360		Pn	11 05 45.1	0.0
KSRS	Korea Array	11.38	288	Pn	Pn	11 06 29.1	+0.4
	0.2nm,0.3s,baz=98,slow=14,SNR=8.9						
KSRS				LR	LR	11 11 24.8	
	comp=Z,466nm,18.7s,baz=100,slow=40						
	1.6nm,0.8s						
USRK	Ussuriysk Ar.	12.07	325	Pn	Pn	11 06 37.9	-0.2
	0.1nm,0.3s,baz=147,slow=13,SNR=2.8						
USRK				Sn	Sn	11 08 49.7	-2.0
	0.2nm,0.3s,baz=142,slow=24,SNR=2.5						
	2.8nm,0.7s						
YSS	Yuzh-Sakhalins	12.34	4	eP	Pn	11 06 40.1	-1.7
KLR	Kul'dur	16.28	337	Pn	Pn	11 07 33.5	-1.2
	0.2nm,0.3s,baz=112,slow=14,SNR=2.0						
	0.6nm,0.4s						
NJ2	Nanjing	19.13	269	eP	P	11 08 08.6	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,330nm,17.1s						
NJ2				LR	LR		
	comp=E,350nm,19.0s						
NJ2				LR	LR		
	comp=Z,580nm,18.0s						
ZEA	Zeya	21.60	337	eP	P	11 08 35.3	-0.3
ZEA				e		11 08 42.6	
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
XLT	XiLinHaoTe	21.71	303	eP	P	11 08 33.4	-3.6
XLT				pP	pP	11 08 38.2	-4.9
XLT				sP	sP	11 08 40.8	-5.2
XLT				S	S	11 12 31.7	-4.2
XLT				sS	pS	11 12 42.6	-3.1
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,66nm,4.7s						
XLT				LR	LR		
	comp=Z,520nm,15.6s						
XLT				LR	LR		
	comp=Z,220nm,14.3s						
XLT				LR	LR		
	comp=Z,220nm,14.3s						
HHC	Hu-ho-hao-te	24.43	294	eP	P	11 09 03.1	-1.4
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.5s						
HHC				LR	LR		
	comp=Z,270nm,11.4s						
HHC				LR	LR		
	comp=Z,370nm,12.7s						
HHC				LR	LR		
	comp=Z,370nm,12.7s						
MA2	Magadan	25.68	11	P	P	11 09 16.2	+0.8
	comp=Z,2.6nm,0.5s,baz=185,slow=20,SNR=1.7						
MA2				LR	LR	11 21 46.2	
	comp=Z,93nm,18.3s,baz=206,slow=42						
	comp=Z,2.6nm,0.5s						
XAN	Xi'an	26.89	278	eP	P	11 09 29.7	+3.0
XAN				pP	sP	11 09 34.3	-1.2
XAN				S	S	11 14 07.8	+6.0
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				LR	LR		
	comp=Z,460nm,20.6s						
XAN				LR	LR		
	comp=Z,300nm,21.6s						
XAN				LR	LR		
	comp=Z,360nm,15.2s						
H11N2	WAKE ISLAND Hy	26.90	117	T	T	11 37 38.8	
	baz=309,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	26.91	117	T	T	11 37 45.9	
	baz=309,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	26.92	117	T	T	11 37 38.5	
	baz=309,slow=75,SNR=52						
H11S3	WAKE ISLAND Hy	27.53	119	T	T	11 38 29.2	
	baz=313,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	27.53	119	T	T	11 38 29.8	
	baz=313,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	27.55	119	T	T	11 38 36.1	
	baz=313,slow=76,SNR=30						
YAK	Yakutsk	28.43	348	LR	LR	11 22 26.7	
	comp=Z,153nm,18.4s,baz=89,slow=39						
SEY	Seymchan	29.12	10	P	P	11 09 47.1	+0.9
	comp=Z,0.4nm,0.3s,baz=187,slow=24,SNR=1.9						
	comp=Z,0.4nm,0.3s						
SONM	Songino Array	29.27	308	P	P	11 09 49.0	+1.1
	comp=Z,1.2nm,0.5s,baz=106,slow=10,SNR=5.0						
SONM				LR	LR	11 22 12.8	
	comp=Z,211nm,18.4s,baz=104,slow=38						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	29.27	308	P	P	11 09 48.9	+0.9
SONM	Songino Array	29.27	308	P	P	11 09 48.9	+0.9
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOD	Bodaibo	29.63	330	eP	P	11 09 52.0	+1.1
BOD				pmax	pmax		
	comp=Z,11nm,0.9s						
LZH	Lanzhou	30.66	284	eP	P	11 10 00.9	+0.5
LZH				pP	pP	11 10 05.3	-1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				LR	LR		
	comp=Z,460nm,16.8s						
LZH				LR	LR		
	comp=Z,260nm,17.5s						
LZH				LR	LR		
	comp=Z,310nm,18.9s						
GYA	Guiyang	31.01	264	⇓iP	P	11 10 05.6	+2.1
GYA				LR	LR		
	comp=Z,290nm,16.7s						
DAV	Davao City (W)	31.13	212	LR	LR	11 20 31.9	
	comp=Z,40nm,21.7s,baz=70,slow=32						
CD2	Chengdu	31.87	274	P	P	11 10 10.7	-0.2
PZH	PanZhiHua	35.04	268	P	P	11 10 39.5	+0.8
PZH				S	S	11 16 21.4	+12
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
PZH				LR	LR		
	comp=Z,690nm,20.1s						
PZH				LR	LR		
	comp=Z,350nm,19.6s						
PZH				LR	LR		
	comp=Z,380nm,18.6s						
GOMU	GeErMu	37.83	286	P	P	11 11 00.5	-2.2
GOMU				pP	pP	11 11 03.0	-6.6
GOMU				LR	LR		
	comp=Z,200nm,18.6s						
GOMU				LR	LR		
	comp=Z,120nm,19.3s						
GOMU				LR	LR		
	comp=Z,120nm,20.8s						
FAKI	Fak Fak	38.37	195	P	P	11 11 06.8	-0.1
FAKI				IAmb	IAmb	11 11 48.9	
	comp=Z,8.5nm,1.0s						
CMAR	Chiang Mai Arr	41.05	258	P	P	11 11 28.4	-0.9
	comp=Z,0.6nm,0.5s,baz=41,slow=7.9,SNR=5.5						
CMAR				LR	LR	11 30 04.9	
	comp=Z,21nm,19.2s,baz=290,slow=39						
	comp=Z,0.6nm,0.5s						
DGZ	Jazzator, Alta	41.92	308	i P	P	11 11 37.1	+0.8
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	Urumqi	42.06	299	eP	P	11 11 41.6	+4.2
WMQ				sP	sP	11 11 46.2	-0.8
WMQ				pmax	pmax		
	comp=Z,33nm,0.9s						
WMQ				LR	LR		
	comp=Z,300nm,17.9s						
ZALV	Zalesovo Beam	43.63	314	P	P	11 11 49.5	-0.4
	comp=Z,1.4nm,0.7s,baz=90,slow=5.9,SNR=5.8						
ZALV				PcP	PcP	11 13 36.4	-0.5
	comp=Z,0.6nm,0.4s,baz=64,slow=3.4,SNR=2.2						
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	43.63	314	P	P	11 11 50.2	+0.3
ZALV	Zalesovo Beam	43.63	314	i P	P	11 11 50.0	+0.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NRIK	Noril'sk	45.49	336	i P	P	11 12 07.3	+2.8
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MK31	Makanchi Array	45.52	304	P	P	11 12 05.4	+0.3
MK31	Makanchi Array	45.52	304	P	P	11 12 05.4	+0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	45.52	304	P	P	11 12 05.4	+0.3
	comp=Z,1.3nm,0.8s,baz=92,slow=10.0,SNR=11						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	45.52	304	P	P	11 12 05.6	+0.5
MKAR	Makanchi Array	45.52	304	i P	P	11 12 08.8	+3.7
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	Makanchi	45.73	304	P	P	11 12 08.8	+2.0
MAKZ	Makanchi	45.73	304	P	P	11 12 08.8	+2.0
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SOEI	Soe	47.09	204	P	P	11 12 18.3	+0.5
KURK	Kurchatov	47.52	310	P	P	11 12 20.7	0.0
KURK	Kurchatov	47.52	310	P	P	11 12 20.7	0.0
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURBB	Kurchatov Arra	47.59	310	LR	LR	11 33 18.8	
	comp=Z,110nm,19.9s,baz=4.6,slow=37						
MTN	Manton Dam	48.24	194	P	P	11 12 26.6	+0.1
ILAR	Eielson Array	51.47	31	P	P	11 12 51.5	+0.9
	comp=Z,0.8nm,0.6s,baz=255,slow=5.8,SNR=13						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	51.47	31	P	P	11 12 50.4	-0.2
KNRA	Kununurra	51.49	196	P	P	11 12 52.0	+0.8
BMAR	Burnt Mountain	52.39	28	P	P	11 12 59.6	+2.1
BCAR	Beaver Creek A	53.82	33	P	P	11 13 09.8	+1.6
KKAR	Karatay Array	54.44	302		P	11 13 13.4	+0.4
KKAR	Karatay Array	54.44	302	P	P	11 13 13.4	+0.4
WB0	Warramunga Arr	54.53	188	P	P	11 13 13.8	+0.1
WB0				IAmb	IAmb	11 13 24.1	
	comp=Z,7.5nm,0.8s						
FITZ	Fitzroy Crossi	54.58	199		P	11 13 15.7	+1.7
FITZ				IAmb	IAmb	11 13 24.2	
	comp=Z,4.6nm,0.9s						
CTA	Charters Tower	54.60	175	LR	LR	11 36 49.6	
	comp=Z,29nm,18.4s,baz=257,slow=36						
WRAB	Tennant Creek	54.70	188	P	P	11 13 15.1	+0.3
WRAB				IAmb	IAmb	11 13 22.7	
	comp=Z,12nm,1.2s						
WRAB	Tennant Creek	54.70	188	P	P	11 13 15.1	+0.3
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WR0	Warramunga Arr	54.70	188	P	P	11 13 14.8	-0.1
WR0				IAmb	IAmb	11 13 56.9	
	comp=Z,7.0nm,1.0s						
WB2	Warramunga Arr	54.70	188	P	P	11 13 14.8	-0.1
WB2				IAmb	IAmb	11 13 23.9	
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	54.71	188	P	P	11 13 14.4	-0.5
	comp=Z,1.3nm,0.4s,baz=2.9,slow=7.6,SNR=36						
WRA				LR	LR	11 35 55.5	
	comp=Z,59nm,18.8s,baz=348,slow=35						
	comp=Z,1.3nm,0.4s						
WRA	Warramunga Arr	54.71	188	P	P	11 13 14.9	0.0
WRA	Warramunga Arr	54.71	188	P	P	11 13 14.9	0.0
WRA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
DAWY	Dawson	54.77	32	P	P	11 13 16.0	+1.0
DAWY				IAmb	IAmb	11 13 23.9	
	comp=Z,7.4nm,1.4s						
INK	Inuvik	56.48	26	P	P	11 13 27.4	+0.3
	comp=Z,1.5nm,0.6s,baz=318,slow=6.5,SNR=5.0						
	comp=Z,1.5nm,0.6s						
INK	Inuvik	56.48	26	P	P	11 13 27.7	+0.6
INK				IAmb	IAmb	11 13 53.4	
	comp=Z,5.9nm,1.1s						
INK	Inuvik	56.48	26	P	P	11 13 27.7	+0.6
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARU	Arti	58.24	320	c iP	P	11 13 39.3	-0.4
ARU						11 15 45.9	
ARU				S	S	11 21 41.6	+1.9
ARU				SS	SS	11 25 33.7	+2.6
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AS31	Alice Springs	58.43	188	P	P	11 13 42.2	+0.9
ASAR	Alice Springs	58.43	188	P	P	11 13 41.4	0.0
	comp=Z,1.2nm,0.8s,baz=16,slow=14,SNR=15						
ASAR				LR	LR	11 39 46.0	
	comp=Z,42nm,18.1s,baz=349,slow=37						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	58.43	188	P	P	11 13 42.7	+1.3
ASAR	Alice Springs	58.43	188	P	P	11 13 42.7	+1.3
C36M	Paulatuk	59.56	24	P	P	11 13 49.0	+0.4
ABKAR	Akbulak array	59.58	311	P	P	11 13 49.1	0.0
AKTO	Aktyubinsk	60.37	313	LR	LR	11 41 00.2	
	comp=Z,55nm,20.6s,baz=48,slow=37						
KIRV	Kirov	62.23	324	LR	LR	11 43 54.8	
	comp=Z,122nm,18.1s,baz=251,slow=39						
EUNU	Eureka	62.54	8	P	P	11 14 08.8	0.0
EUNU				IAmb	IAmb	11 14 10.5	
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	66.16	180	LR	LR	11 42 14.8	
	comp=Z,48nm,20.3s,baz=205,slow=35						
STKA	Stephens Creek	66.16	180	P	P	11 14 33.8	+0.8
STKA	Stephens Creek	66.16	180	P	P	11 14 33.8	+0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ARCES	ARCESS Array B	66.28	340	P	P	11 14 33.5	+0.2
	comp=Z,8.2nm,1.1s,baz=76,slow=7.5,SNR=2.6						
ARCES				LR	LR	11 48 44.1	
	comp=Z,69nm,18.3s,baz=12,slow=41						
	comp=Z,8.2nm,1.1s						
FORT	Forrest	66.30	193	P	P	11 14 34.5	+0.7
OBN	Obninsk	70.08	324	eP	P	11 14 57.2	-0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	70.99	333	P	P	11 15 02.5	-0.3
	comp=Z,6.6nm,1.0s,baz=41,slow=4.4,SNR=3.2						
	comp=Z,6.6nm,1.0s						
KBZ	Khabaz	72.55	311	P	P	11 15 13.3	+0.8
	comp=Z,0.8nm,0.4s,baz=28,slow=5.7,SNR=3.6						
	comp=Z,0.8nm,0.4s						
KBZ	Khabaz	72.55	311	ceP	P	11 15 12.8	+0.3
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	Kislovodsk	72.56	312	eP	P	11 15 13.7	+0.9
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,40nm,18.0s						
SUMG	Summit	73.08	360	P	P	11 15 16.2	+0.5
SUMG				IAmb	IAmb	11 15 32.5	
	comp=Z,18nm,1.5s						
SUMG	Summit	73.08	360	P	P	11 15 16.2	+0.5
SUMG				pmax	pmax		
	comp=Z,18nm,1.5s						
SUMG	Summit	73.08	360	i P	P	11 15 13.0	-2.7
GNI	Garni	73.23	307	LR	LR	11 50 31.0	
	comp=Z,93nm,18.5s,baz=93,slow=38						
AKASG	Malin Array Be	76.26	323	P	P	11 15 32.9	-1.1
	comp=Z,1.4nm,0.5s,baz=48,slow=6.0,SNR=7.6						
	comp=Z,1.4nm,0.5s						
AKASG	Malin Array Be	76.26	323	i P	P	11 15 33.7	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	76.26	323	i P	P	11 15 34.0	0.0
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	Hagfors	76.32	336	P	P	11 15 34.5	+0.4
	comp=Z,2.1nm,0.8s,baz=64,slow=6.6,SNR=1.6						
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	76.35	53	P	P	11 15 36.8	+1.7
	comp=Z,0.5nm,0.7s,baz=281,slow=6.3,SNR=4.9						
	comp=Z,0.5nm,0.7s						
NC204	NORSAR Array S	76.40	338	P	P	11 15 34.0	-0.7
NB2	NORSAR Subarra	76.44	338	P	P	11 15 34.9	0.0
	comp=Z,0.5nm,0.6s,baz=41,slow=5.6						
NOA	NORSAR Array B	76.44	338	P	P	11 15 33.9	-1.0
	comp=Z,1.0nm,0.8s,baz=39,slow=5.7,SNR=4.1						
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	79.27	45	P	P	11 15 51.0	-0.3
	comp=Z,0.2nm,0.7s,baz=303,slow=5.3,SNR=2.2						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	79.27	45	P	P	11 15 50.8	-0.5
BRTR	Keskin Array B	80.53	312	P	P	11 15 58.2	+0.3
	comp=Z,0.7nm,0.7s,baz=90,slow=5.8,SNR=3.5						
	comp=Z,0.7nm,0.7s						
BRTR	Keskin Array B	80.53	312	ceP	P	11 15 59.9	+1.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SRU	San Rafael Swe	80.91	49	P	P	11 15 58.9	-1.2
SRU				IAmb	IAmb	11 16 08.6	
	comp=Z,3.6nm,0.9s						
SRU	San Rafael Swe	80.91	49	P	P	11 15 58.9	-1.2
SRU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PV13	Radium Mtn., P	82.55	48	P	P	11 16 08.0	-0.8
PV13				IAmb	IAmb	11 16 28.6	
	comp=Z,4.5nm,0.8s						
GERES	GERESS Array B	84.80	328	P	P	11 16 18.9	-1.1
	comp=Z,0.2nm,0.3s,baz=22,slow=4.3,SNR=3.9						
	comp=Z,0.2nm,0.3s						
ANMO	Albuquerque	86.05	50	LR	LR	11 57 30.7	
	comp=Z,17nm,18.4s,baz=50,slow=38						
TXAR	Lajitas Array	91.50	52	P	P	11 16 53.5	+1.1
	comp=Z,0.2nm,0.7s,baz=292,slow=2.8,SNR=2.9						
	comp=Z,0.2nm,0.7s						
LPAZ	La Paz	147.75	63	PKPbc	PKiKP	11 23 32.4	-1.1
	comp=Z,1.7nm,0.7s,baz=291,slow=5.6,SNR=7.2						

TRN 01 11:11:02.3, 13°.87N×60°.38W, h19km, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	Moule a Chique	0.57	253	eP	Pn	11 11 15.7	+0.4
MCLT				eS	Sn	11 11 24.6	+0.5
SLBI	Saint Lucia, B	0.59	285	eP	Pn	11 11 15.9	+0.2
SLBI				eS	Sn	11 11 25.7	+0.9
MPOM	Morne Pois Mar	0.73	321	eP	Pn	11 11 18.3	+0.6
MPOM				eS	Sn	11 11 29.7	+1.5
MVM	Montagne Vaucl	0.84	324	eP	Pn	11 11 19.8	+0.7
LPMF	Morne Lapointe	0.90	321	eP	Pn	11 11 20.6	+0.7
BIM	Bigot	0.93	314	eP	Pg	11 11 20.6	+0.3
BIM				eS	Sn	11 11 34.5	+1.4
TRMF	Trois Ilets	0.93	316	eP	Pg	11 11 21.2	+0.8
ZAM	Aeronautique	0.94	318	eP	Pg	11 11 21.1	+0.6
ILAM	Ilet Lapin Mar	1.01	332	eP	Pg	11 11 22.5	+0.4
BCHC	Barbados, Cave	1.04	135	eP	Pg	11 11 22.5	+0.1
SVB	Belmont	1.04	235	eP	Pg	11 11 22.4	0.0
SVB				eS	Sg	11 11 37.5	+1.4
BBGH	Gun Hill	1.08	132	eP	Pg	11 11 23.1	-0.2
BBGH	Gun Hill	1.08	132	e	Pg	11 11 24.8	+1.5
BBGH	Gun Hill	1.08	132	e	Pg	11 11 25.7	+2.4
FDF	Fort de France	1.13	319	eP	Pg	11 11 24.5	+0.1
FDF				eS	Sg	11 11 40.3	+1.1
BBSP	Saint Philip	1.18	130	e	Pg	11 11 29.3	+4.2
PML	Morne Lenard	1.19	319	eP	Pg	11 11 25.6	+0.2
GBMF	Grand Be	1.19	321	eP	Pg	11 11 25.5	+0.1
BAMF	Mor

*IDC **01** 11:17:09.9±2.5, 34°.65N×141°.53E, h0km, mb3.5/2, mbtmp3.4/4, ML2.7/2, MS2.9/1, Error ellipse: s-maj=43.5km s-min=28.1km az=57.0*
*JMA **01** 11:17:11.7±0.6, 35°N±2°×14°2E±°, h42km±2km, MV2.9/21, FAR SE OFF BOSO PEN*
ISC 01 11:17:12.7±1.5, 34°.60N±0°.05×141°.5E±0°.1, h27km, n17, σ1§35/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.44**	**277**	*i* P	**Pn**	**11 17 22.2**	**-0.5**
BSO1				*e*X		11 17 29.8	
BSO3	**Boso 3**	**0.84**	**284**	P	**Pb**	**11 17 28.4**	**-0.2**
BSO4	**Boso 4**	**1.03**	**292**	P	**Pb**	**11 17 31.1**	**-0.7**
BSO4				S	**Sb**	**11 17 44.9**	**-0.1**
JKUC	**kamogawauchiur**	**1.21**	**298**	P	**Pn**	**11 17 33.1**	**-0.7**
CHOJ	**Chosi**	**1.22**	**334**	*e*P	**Pb**	**11 17 33.3**	**-1.8**
CHOJ				*e*S	**Sb**	**11 17 49.4**	**-1.0**
JMKN	**Mikurajimanish**	**1.74**	**246**	*e*P	**Pn**	**11 17 41.8**	**+0.8**
JHJ	**Hachijo jima 2**	**2.06**	**225**	Pn	**Pb**	**11 17 47.0**	**-2.4**
	15nm,0.3s,baz=72,slow=20,SNR=5.6						
JHJ				Sn	**Sb**	**11 18 13.5**	**-1.0**
	27nm,0.3s,baz=68,slow=19,SNR=5.7						
	33nm,0.3s						
MJAR	**Matsushiro Arr**	**3.31**	**307**	Pn	**Pn**	**11 18 02.7**	**0.0**
	0.3nm,0.3s,baz=106,slow=8.2,SNR=6.8						
MJAR				Sn	**Sn**	**11 18 42.7**	**+1.5**
	0.3nm,0.3s,baz=114,slow=17,SNR=2.4						
	0.7nm,0.3s						
KSRS	**Korea Array**	**11.36**	**288**	LR	LR	11 24 28.9	
	comp=Z,57nm,20.1s,baz=105,slow=38						
H11N2	**WAKE ISLAND Hy**	**26.91**	**117**	T	T	11 51 07.4	
	baz=309,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**26.92**	**117**	T	T	11 51 08.5	
	baz=309,slow=75,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**26.93**	**117**	T	T	11 51 10.7	
	baz=309,slow=75,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**27.55**	**119**	T	T	11 52 04.1	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**27.55**	**119**	T	T	11 52 04.2	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**27.56**	**119**	T	T	11 51 59.3	
	baz=311						
WRA	**Warramunga Arr**	**54.67**	**188**	P	**P**	**11 26 40.8**	**+1.4**
	0.8nm,0.9s,baz=2.6,slow=7.5,SNR=7.5						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**58.40**	**188**	P	**P**	**11 27 07.5**	**+1.7**
	0.4nm,0.8s,baz=359,slow=5.7,SNR=5.5						
	0.4nm,0.8s						

*SJA **01** 11:25:03.9±1.0, 32°.11S×72°.73W, h10km, ML4.1, MW3.9*
*IDC **01** 11:25:07.8±0.6, 32°.05S×71°.86W, h0km, mb4.0/7, mbtmp4.0/11, ML4.2/4, MS3.5/5, Error ellipse: s-maj=21.8km s-min=17.5km az=133.0*
*VAO **01** 11:25:10.3±0.4, 32°.00S×71°.90W, h16km, mb4.3*
*GUC **01** 11:25:11.4±0.6, 32°.08S×71°.71W, h15km±5km, ML4.3*
*NEIC **01** 11:25:11.6±1.6, 32°.05S±0°.03×71°.95W±0°.09, h22km±5km, Error ellipse: s-maj=11.2km s-min=4.5km az=99.0*
ISC 01 11:25:09.8±1.6, 32°.04S±0°.02×71°.94W±0°.04, h14km±10km, n124, σ0§87/138, mb4.5/12, 6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.75**	**134**		**Pb**	**11 25 24.9**	**+0.3**
VA06	**Catapilco**	**0.75**	**134**	⇓*i* P	**Pb**	**11 25 25.0**	**+0.3**
VA06				*e*S	**Sb**	**11 25 34.9**	**+0.2**
VA06				IAML		11 25 39.1	
	comp=N,34μm,0.4s						
VA01	**Torpederas**	**1.01**	**166**		**Pb**	**11 25 29.3**	**+0.2**
VA01	**Torpederas**	**1.01**	**166**	*e*P	**Pb**	**11 25 29.4**	**+0.2**
VA01				IAML		11 25 47.6	
	comp=N,10μm,0.0s						
CO02	**Combarbal**	**1.15**	**44**		**Pb**	**11 25 31.8**	**+0.2**
CO02	**Combarbal**	**1.15**	**44**	⇓*i* P	**Pb**	**11 25 31.8**	**+0.2**
CO02				*e*S	**Sn**	**11 25 47.5**	**+0.1**
CO02				IAML		11 25 50.6	
	comp=E,18μm,0.3s						
ROC1	**El Roble**	**1.22**	**141**		**Pn**	**11 25 32.6**	**0.0**
ROC1	**El Roble**	**1.22**	**141**	*i* P	**Pb**	**11 25 32.8**	**0.0**
ROC1				*e*S	**Sg**	**11 25 48.9**	**-0.3**
ROCH	**El Roble**	**1.22**	**140**	⇓*i* P	**Pb**	**11 25 32.8**	**0.0**
ROCH				⇓*i* P	**Pb**	**11 25 32.8**	**0.0**
ROCH				*e*S	**Sn**	**11 25 48.4**	**-0.6**
ROCH				*e*S	**Sn**	**11 25 48.4**	**-0.6**
ROCH				IAML		11 25 52.1	
	comp=N,10μm,0.4s						
ROCH				IAML		11 25 52.5	
	comp=N,9μm,0.7s						
VA03	**San Esteban**	**1.38**	**122**	⇓*i* P	**Pb**	**11 25 35.1**	**-0.3**
VA03				*e*S	**Sb**	**11 25 53.0**	**+0.1**
VA03				IAML		11 25 57.4	
	comp=N,12μm,0.2s						
CO06	**Fray Jorge**	**1.39**	**11**		**Pn**	**11 25 34.6**	**-0.1**
CO06	**Fray Jorge**	**1.39**	**11**	*i* P	**Pn**	**11 25 34.5**	**-0.2**
CO06				*e*S	**Sn**	**11 25 52.2**	**-0.7**
CO06				IAML		11 25 58.0	
	comp=E,4μm,0.3s						
MT02	**Curacav**	**1.39**	**151**		**Pn**	**11 25 35.1**	**+0.2**
MT02	**Curacav**	**1.39**	**151**	*i* P	**Pb**	**11 25 35.4**	**-0.2**
MT02				*e*S	**Sb**	**11 25 53.3**	**+0.1**
PEL	**Peldehue**	**1.52**	**137**		**Pb**	**11 25 37.6**	**-0.4**
PEL	**Peldehue**	**1.52**	**137**	*i* P	**Pb**	**11 25 37.5**	**-0.4**
PEL				*e*S	**Sg**	**11 25 58.3**	**-0.7**
VA05	**Santo Domingo**	**1.64**	**171**	*e*P	**Pn**	**11 25 38.2**	**0.0**
VA05				*e*S	**Sg**	**11 26 01.9**	**-0.6**
VA05				IAML		11 26 09.4	
	comp=E,12μm,0.6s						
MT05	**Renca**	**1.69**	**144**	Pn	**Pb**	**11 25 40.0**	**-0.7**
MT05	**Renca**	**1.69**	**144**	⇓*i* P	**Pb**	**11 25 39.8**	**-0.8**
MT05				*e*S	**Sb**	**11 26 01.8**	**+0.1**
MT05				IAML		11 26 03.1	
	comp=E,11μm,0.5s						
MT03	**Universidad Ad**	**1.88**	**141**	*e*P	**Pn**	**11 25 42.8**	**+1.1**
MT03				*e*S	**Sb**	**11 26 08.2**	**+0.7**
MT03				IAML		11 26 14.9	
	comp=N,7μm,0.5s						
MT09	**Talagante**	**1.91**	**156**	*e*P	**Pb**	**11 25 43.7**	**-0.8**
MT09				*e*S	**Sb**	**11 26 07.1**	**-1.2**
MT09				IAML		11 26 17.3	
	comp=N,5μm,0.2s						
MT01	**Popeta**	**1.91**	**163**	*e*P	**Pn**	**11 25 42.5**	**+0.6**
MT01				*e*S	**Sb**	**11 26 08.1**	**-0.1**
MT01				IAML		11 26 16.4	
	comp=N,3μm,0.4s						
GO04	**Tololo Observa**	**2.10**	**28**		**Pn**	**11 25 44.6**	**-0.2**
GO04	**Tololo Observa**	**2.10**	**28**	*e*P	**Pn**	**11 25 45.3**	**+0.5**
GO04				*e*S	**Sg**	**11 26 17.1**	**-0.2**
GO04				IAML		11 26 20.3	
	comp=N,28μm,0.3s						
GO04	**Tololo Observa**	**2.10**	**28**	*i* P	**Pn**	**11 25 45.5**	**+0.7**
CO05	**La Serena**	**2.20**	**16**	*e*P	**Pn**	**11 25 46.5**	**+0.6**
CO05				*e*S	**Sb**	**11 26 18.8**	**+2.4**
CO05				IAML		11 26 25.7	
	comp=E,3μm,0.3s						
BO04	**La Punta**	**2.24**	**151**		**Pn**	**11 25 47.9**	**+1.3**
ARCO	**CERRO ARCO**	**2.66**	**108**	*i* P	**Pb**	**11 25 56.8**	**-0.6**
ARCO				*e*S	**Sg**	**11 26 34.4**	**-1.0**
ARCO				IAML		11 26 39.6	
	comp=Z,1μm,0.8s						
ASAL	**Salagasta**	**2.68**	**103**	*i* P	**Pb**	**11 25 57.5**	**-0.1**
ASAL				*e*S	**Sg**	**11 26 36.2**	**+0.1**
ASAL				IAML		11 26 37.3	
	comp=Z,831nm,1.0s						
AROD	**Rodeo**	**2.82**	**49**	*i* P	**Pb**	**11 25 58.3**	**-1.8**
AAGR	**Agrelo**	**2.82**	**113**	*i* P	**Pb**	**11 25 59.2**	**-0.9**
AAGR				*e*S	**Sg**	**11 26 42.5**	**+2.0**
AAGR				IAML		11 26 51.7	
	comp=Z,1μm,1.0s						
ACCO	**Cerro Coronel**	**2.85**	**60**	*i* P	**Pb**	**11 25 59.5**	**-1.2**
ACCO				*e*S	**Sb**	**11 26 37.9**	**+2.4**
ACCO				IAML		11 26 42.3	
	comp=Z,1μm,1.0s						
RTCV	**Cerro Valdivia**	**2.89**	**87**	*i* P	**Pn**	**11 25 57.5**	**+2.0**
RTCV				IAML		11 26 53.6	
	comp=Z,7.6nm,1.0s						
GO05	**Huala**	**2.96**	**180**		**Pn**	**11 25 56.0**	**-0.5**
RTLL	**Cerro Villicun**	**3.03**	**77**	*i* P	**Pb**	**11 26 00.7**	**-2.9**
ACDV	**Cuesta del Vie**	**3.05**	**53**	*i* P	**Pb**	**11 26 01.7**	**-2.3**
ACDV				IAML		11 27 07.2	
	comp=Z,657nm,1.0s						
AC05	**El Transito**	**3.50**	**25**		**Pn**	**11 26 05.2**	**+1.2**
AC04	**Llanos de Chal**	**3.89**	**11**	Pn	**Pn**	**11 26 08.8**	**-0.4**
AC02	**Maricunga**	**5.73**	**26**	Pn	**Pn**	**11 26 35.2**	**+0.2**
H03N1	**Juan Fernandez**	**6.04**	**255**	Pn	**Pn**	**11 26 39.2**	**+0.7**
	baz=110,slow=18						
H03N1				T	T	11 33 17.4	
	baz=84,slow=73						
H03N3	**Juan Fernandez**	**6.06**	**255**	Pn	**Pn**	**11 26 39.6**	**+0.8**
	baz=110,slow=18						
H03N3				T	T	11 33 08.9	
	baz=84,slow=73						
H03N2	**Juan Fernandez**	**6.06**	**255**	Pn	**Pn**	**11 26 39.2**	**+0.5**
	baz=110,slow=18						
H03N2				T	T	11 33 24.5	
	baz=84,slow=73						
H03S3	**Juan Fernandez**	**6.13**	**251**	Pn	**Pn**	**11 26 39.2**	**-0.5**
H03S3				T	T	11 33 42.3	
	baz=84						
H03S1	**Juan Fernandez**	**6.13**	**251**	Pn	**Pn**	**11 26 39.2**	**-0.5**
H03S1				T	T	11 33 24.7	
	baz=84						
H03S2	**Juan Fernandez**	**6.14**	**251**	Pn	**Pn**	**11 26 39.2**	**-0.7**
H03S2				T	T	11 33 26.4	
	baz=84						
PLCA	**Paso Flores**	**8.75**	**173**	Pn	**Pn**	**11 27 16.9**	**+0.9**
	comp=Z,1.5nm,0.3s,baz=340,slow=11,SNR=51						
PLCA				Lg	Lg	11 29 31.9	
	comp=Z,0.1nm,0.3s,baz=0.0,slow=17,SNR=1.6						
PLCA				LR	LR	11 30 42.8	
	comp=Z,271nm,21.6s,baz=354,slow=38						
	comp=Z,3.2nm,0.4s						
PLCA	**Paso Flores**	**8.75**	**173**	Pn	**Pn**	**11 27 17.1**	**+1.1**
PLCA	**Paso Flores**	**8.75**	**173**	*e*P	**Pn**	**11 27 16.4**	**+0.5**
LVC	**Limon Verde**	**9.77**	**17**	Pn	**Pn**	**11 27 32.5**	**+2.2**
	comp=Z,1.0nm,0.3s,baz=162,slow=8.2,SNR=2.9						
LVC				Sn	Sn	11 29 36.7	+17
	comp=Z,1.2nm,0.3s,baz=39,slow=12,SNR=3.9						
LVC	**Limon Verde**	**9.77**	**17**	*e*P	**Pn**	**11 27 29.6**	**-0.7**
TRQA	**Tornquist**	**10.13**	**129**		**Pn**	**11 27 35.9**	**+1.1**
ITQB	**Itaqui**	**13.37**	**84**	Pn	**Pn**	**11 28 20.9**	**+1.8**
ITQB	**Itaqui**	**13.37**	**84**	*e*P	**Pn**	**11 28 19.6**	**+0.5**
CPUP	**Villa Florida**	**13.96**	**70**	Pn	**Pn**	**11 28 26.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=243,slow=12,SNR=3.1						
CPUP				Sn	**Sn**	**11 31 00.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=297,slow=17,SNR=2.0						
CPUP				Lg	Lg	11 32 12.8	
	comp=Z,0.4nm,0.3s,baz=158,slow=17,SNR=3.6						
CPUP				LR	LR	11 34 05.7	
	comp=Z,153nm,21.5s,baz=274,slow=39						
	comp=Z,0.9nm,0.4s						
RODS	**Rosario do Sul**	**14.43**	**88**	*e*P	**Pn**	**11 28 33.9**	**+0.2**
UNIS	**Unistalda (Bra**	**14.83**	**83**	*e*P	**Pn**	**11 28 39.0**	**-0.1**
PLTB	**Pedras Altas**	**15.57**	**94**	*e*P	**Pn**	**11 28 49.1**	**+0.1**
CPSB	**Cacapava Do Su**	**15.91**	**89**	*e*P	**Pn**	**11 28 53.0**	**-0.4**
LPAZ	**La Paz**	**16.06**	**13**	Pn	**Pn**	**11 28 56.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=179,slow=9.2,SNR=8.5						
	comp=Z,2.7nm,0.7s						
LPAZ	**La Paz**	**16.06**	**13**	Pn	**Pn**	**11 28 56.5**	**+0.7**
LPAZ	**La Paz**	**16.06**	**13**	*e*P	**Pn**	**11 28 55.7**	**-0.2**
ALGR	**Alto Alegre (B**	**16.63**	**84**	*e*P	**Pn**	**11 29 03.1**	**+0.6**
ANTJ	**Antonio Joao (**	**17.34**	**59**	*e*P	**Pn**	**11 29 10.8**	**-0.7**
BBRB	**Robore, Bolivi**	**17.54**	**41**	*e*P	**Pn**	**11 29 14.0**	**+0.1**
ITAB	**Concordia**	**17.86**	**80**	*e*P	**Pn**	**11 29 18.0**	**0.0**
BBSD	**Serra de San D**	**18.00**	**37**	*e*P	**Pn**	**11 29 19.4**	**-0.3**
AQDB	**Aquidauana**	**18.54**	**56**	*e*P	**P**	**11 29 25.7**	**-0.4**
SIV	**San Ignacio**	**18.78**	**34**	P	**P**	**11 29 28.3**	**-0.5**
	baz=209,slow=12,SNR=14						
SIV				LR	LR	11 38 00.8	
	comp=Z,121nm,18.2s,baz=220,slow=41						
	comp=Z,3.3nm,0.7s						
PTLB	**Pontes e Lacer**	**20.22**	**38**	*e*P	**P**	**11 29 44.1**	**-0.3**
PCMB	**Pacaembu**	**21.14**	**66**	*e*P	**P**	**11 29 54.8**	**+0.4**
SALV	**Santo Antonio**	**21.82**	**46**	*e*P	**P**	**11 30 00.8**	**-1.0**
VILB	**Vilhena**	**21.84**	**32**	*e*P	**P**	**11 30 01.4**	**-0.6**
EFI	**East Falkland**	**22.10**	**157**	P	**P**	**11 30 06.0**	**+1.5**
EFI				IAmb	IAmb	11 30 08.3	
	comp=Z,39nm,1.2s						
ETMB	**Extrema**	**22.74**	**15**	*e*P	**P**	**11 30 12.2**	**+0.6**
PDRB	**Porto dos Gac**	**24.69**	**38**	*e*P	**P**	**11 30 29.7**	**-0.9**
IPMB	**Ipameri, GO**	**25.58**	**62**	*e*P	**P**	**11 30 37.2**	**-1.4**
CLDB	**Colider**	**25.80**	**39**	*e*P	**P**	**11 30 40.4**	**-0.2**
BDFB	**Brasilia**	**27.20**	**59**	P	**P**	**11 30 52.1**	**-1.3**
	comp=Z,8.2nm,0.6s,baz=230,slow=8.7,SNR=11						
	comp=Z,8.2nm,0.6s						
BDFB	**Brasilia**	**27.20**	**59**	P	**P**	**11 30 52.3**	**-1.1**
BDFB				IAmb	IAmb	11 30 54.5	
	comp=Z,15nm,0.9s						
BDFB	**Brasilia**	**27.20**	**59**	*e*P	**P**	**11 30 52.9**	**-0.5**
SNDB	**Serra Nova Dou**	**27.56**	**48**	*e*P	**P**	**11 30 55.6**	**-0.9**
NPGB	**Novo Progresso**	**29.28**	**35**	*e*P	**P**	**11 31 10.6**	**-1.2**
JANB	**Januaria**	**30.32**	**63**	*e*P	**P**	**11 31 20.4**	**-0.7**
MACA	**Manacapuru-AM**	**30.61**	**22**	*e*P	**P**	**11 31 23.6**	**0.0**
ITTB	**Itaituba**	**31.44**	**32**	*e*P	**P**	**11 31 31.1**	**+0.2**
SDBA	**SAO DESIDERIO**	**31.59**	**58**	*e*P	**P**	**11 31 31.3**	**-1.1**
SMTB	**Santa Maria do**	**32.28**	**50**	*e*P	**P**	**11 31 38.3**	**0.0**
GUA01	**Guaratinga, BA**	**32.92**	**70**	*e*P	**P**	**11 31 42.8**	**-1.1**
PRPB	**Parauapebas**	**33.00**	**43**	*e*P	**P**	**11 31 43.3**	**-1.3**
MALB	**Monte Alegre**	**34.34**	**33**	*e*P	**P**	**11 31 55.7**	**-0.5**
BOAV	**Boa Vista**	**35.92**	**20**	*e*P	**P**	**11 32 09.8**	**-0.1**
TMAB	**Tom-Au,PA,Br**	**37.07**	**42**	*e*P	**P**	**11 32 20.2**	**+0.4**
NBAN	**Anadia - AL**	**39.78**	**64**	*e*P	**P**	**11 32 41.2**	**-1.4**
BAUV	**El Baul**	**40.92**	**6**	P	**P**	**11 32 51.2**	**-0.6**
BAUV				IAmb	IAmb	11 33 00.2	
	comp=Z,25nm,1.3s						
MDP	**Montagnes des**	**41.25**	**30**	LR	LR	11 51 31.5	
	comp=Z,84nm,18.4s,baz=264,slow=38						
RCBR	**Riachuelo**	**42.56**	**60**	LR	LR	11 53 10.8	
	comp=Z,63nm,19.8s,baz=320,slow=40						
SNAA	**Sanae**	**53.37**	**158**	P	**P**	**11 34 29.0**	**+0.5**
SNAA	**Sanae**	**53.37**	**158**	P	**P**	**11 34 28.8**	**+0.3**
SNAA				IAmb	IAmb	11 34 37.4	
	comp=Z,3.8nm,0.9s						
TROLL	**Troll, Antarti**	**55.08**	**159**	P	**P**	**11 34 42.0**	**+1.0**
QSPA	**South Pole Qui**	**58.19**	**180**	P	**P**	**11 35 03.8**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=146,slow=1.3,SNR=14						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**58.19**	**180**	P	**P**	**11 35 04.0**	**+0.7**
QSPA				IAmb	IAmb	11 35 29.8	
	comp=Z,5.9nm,1.3s						
TXAR	**Lajitas Array**	**68.07**	**330**	P	**P**	**11 36 09.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=154,slow=9.0,SNR=6.6						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**68.07**	**330**	P	**P**	**11 36 09.4**	**+0.2**
DBIC	**Dimbokro**	**74.48**	**72**	P	**P**	**11 36 48.2**	**+0.1**
	comp=Z,7.6nm,0.6s,baz=244,slow=5.1,SNR=11						
	comp=Z,7.6nm,0.6s						
KOWA	**Kowa**	**79.75**	**66**	P	**P**	**11 37 17.6**	**-0.2**
KOWA				IAmb	IAmb	11 37 46.8	
	comp=Z,11nm,1.4s						
BOSA	**Boshof**	**80.91**	**118**	P	**P**	**11 37 23.5**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=239,slow=5.1,SNR=4.8						
	comp=Z,2.1nm,0.8s						
PDAR	**Pinedale Array**	**82.06**	**333**	P	**P**	**11 37 29.6**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=115,slow=4.3,SNR=2.2						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**82.33**	**325**	P	**P**	**11 37 32.7**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=154,slow=8.2,SNR=2.5						
	comp=Z,0.2nm,0.6s						
TOA0	**Torodi Ar. Sit**	**83.46**	**70**	P	**P**	**11 37 37.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**83.46**	**70**	P	**P**	**11 37 37.4**	**0.0**
	comp=Z,13nm,0.6s,baz=252,slow=4.8,SNR=5.2						
ASAR	**Alice Springs**	**119.35**	**207**	PKP	**PKPdf**	**11 43 58.2**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=136,slow=1.5,SNR=4.8						
WRA	**Warramunga Arr**	**122.51**	**210**	PKP	**PKPdf**	**11 44 04.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=159,slow=1.7,SNR=17						
H11S2	**WAKE ISLAND Hy**	**125.86**	**270**	T	T	14 03 19.2	
	baz=118,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**125.88**	**271**	T	T	14 03 23.0	
	baz=118,slow=75,SNR=31						
H11S3	**WAKE ISLAND Hy**	**125.88**	**270**	T	T	14 03 22.5	
	baz=118,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	**126.23**	**272**	T	T	14 03 34.3	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hy**	**126.24**	**272**	T	T	14 03 40.6	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**126.25**	**272**	T	T	14 03 40.1	
	baz=117,slow=74						
BVAR	**Borovoye Array**	**145.77**	**41**	PKPbc	**PKPab**	**11 44 48.9**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=330,slow=2.2,SNR=9.0						
KURBB	**Kurchatov Arra**	**151.36**	**41**	PKPbc	**PKPbc**	**11 45 03.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=304,slow=2.9,SNR=17						
ZALV	**Zalesovo Beam**	**152.51**	**30**	PKPbc	**PKPbc**	**11 45 05.5**	**+0.3**
	comp=Z,3.6nm,0.6s,baz=300,slow=3.4,SNR=14						
MKAR	**Makanchi Array**	**155.38**	**46**	PKPab	**PKPab**	**11 45 28.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=290,slow=3.7,SNR=9.4						
SONM	**Songino Array**	**164.17**	**4**	PKPab	**PKPab**	**11 46 06.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=9.5,slow=1.8,SNR=1.8						
PZH	**PanZhiHua**	**172.20**	**133**	PKP	**PKPdf**	**11 45 17.7**	**-1.1**

*IDC **01** 11:26:04.4±0.7, 2°.03N×127°.82E, h0km, mb3.8/12, mbtmp3.8/13, ML3.4/1, Error ellipse: s-maj=42.7km s-min=12.8km az=66.0*
*DJA **01** 11:26:07.7±0.4, 2°N±3°×12°8E±°, h10km, M3.8/9, mb4.0/2, MLv3.6/9*
ISC 01 11:26:06.4±0.6, 1°.99N±0°.05×127°.94E±0°.10, h10km, n24, σ1§95/26, mb3.7/11, 4D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**205**	P	**Pn**	**11 26 32.5**	**+1.4**
LBMI	**Labuha**	**2.64**	**189**	P	**Pb**	**11 26 52.4**	**-1.5**
SGSI	**Sangihe**	**2.94**	**305**	P	**Pn**	**11 26 53.8**	**+0.6**
KMSI	**Cibinong**	**4.20**	**251**	P	**Pn**	**11 27 11.9**	**+1.4**
SIJI	**Sorong**	**4.37**	**130**	Pn	**Pn**	**11 27 13.9**	**+0.9**
	2.0nm,0.3s,baz=145,slow=23,SNR=6.9						
SIJI				Sn	**Sn**	**11 28 07.8**	**+3.8**
	0.8nm,0.3s,baz=212,slow=23,SNR=1.3						
	4.1nm,0.3s						
SANI	**Sanana**	**4.46**	**206**	P	**Pn**	**11 27 15.7**	**+1.6**
DDMP	**Don Marcelino,**	**4.66**	**332**	⇓*e*P	**Pn**	**11 27 18.2**	**+1.3**
DDMP				*e*S	Sn	11 27 32.6	-38
GTOI	**Gorontalo**	**5.10**	**255**	P	**Pn**	**11 27 25.9**	**+2.9**
	0.0nm8.6nm,0.7s						
MATI	**Mati**	**5.21**	**341**	⇓*e*P	**Pn**	**11 27 29.1**	**+4.7**
MATI				*e*S	Sn	11 27 51.9	-33
SKMP	**Bagumbayan, Su**	**5.63**	**323**	⇓*e*P	Pn	11 27 37.3	+6.9
SKMP				*e*S	Sn	11 28 06.0	-29
BUKP	**Musuan**	**6.52**	**334**	⇓*e*P	**Pn**	**11 27 46.4**	**+3.9**
FITZ	**Fitzroy Crossi**	**20.08**	**186**	P	**P**	**11 30 40.9**	**+0.6**
	1.3nm,0.7s,baz=15,slow=7.9,SNR=5.9						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**22.68**	**164**	P	**P**	**11 31 08.8**	**+0.6**
	1.6nm,0.8s,baz=345,slow=11,SNR=6.2						
WRA				PcP	**PcP**	**11 34 59.9**	**-1.0**
	0.2nm,0.6s,baz=352,slow=2.2,SNR=1.0						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**26.15**	**168**	P	**P**	**11 31 41.4**	**+0.2**
	1.1nm,1.0s,baz=345,slow=6.9,SNR=16						
ASAR				PcP	**PcP**	**11 35 07.1**	**-1.4**
	0.3nm,0.7s,baz=353,slow=2.1,SNR=5.2						
	1.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**32.80**	**302**	P	**P**	**11 32 39.7**	**-0.5**
	0.3nm,0.3s,baz=135,slow=9.0,SNR=5.1						
	0.3nm,0.3s						
KSRS	**Korea Array**	**35.30**	**360**	P	**P**	**11 33 01.9**	**+0.3**
	0.5nm,0.5s,baz=184,slow=8.4,SNR=2.5						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**36.09**	**160**	P	**P**	**11 33 09.4**	**+0.9**
	3.3nm,0.7s,baz=333,slow=10,SNR=5.2						
	3.3nm,0.7s						
SONM	**Songino Array**	**49.33**	**341**	P	**P**	**11 34 55.3**	**-0.6**
	0.5nm,0.6s,baz=156,slow=7.4,SNR=2.5						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.67**	**325**	P	**P**	**11 36 09.5**	**-1.6**
	0.9nm,0.4s,baz=118,slow=8.0,SNR=13						
	0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**62.68**	**333**	P	**P**	**11 36 31.1**	**-0.2**
	0.6nm,0.5s,baz=133,slow=8.3,SNR=2.0						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**63.85**	**327**	P	**P**	**11 36 37.4**	**-1.7**
	0.9nm,0.5s,baz=129,slow=6.2,SNR=16						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**69.43**	**327**	P	**P**	**11 37 12.9**	**-1.9**
	0.6nm,0.7s,baz=134,slow=8.3,SNR=2.8						
	0.6nm,0.7s						
VNDA	**Vanda**	**81.56**	**173**	P	**P**	**11 38

	baz=290					
SSD	**Sandimen**	**1.48 292**	*e*P	Pn	11 27 43.4	+0.3
	baz=291					
SSD			*e*S	Sn	11 28 02.5	+0.3
	baz=291					
EHY	**Hungye**	**1.49 331**	*e*P	Pn	11 27 43.5	+0.2
	baz=330					
EHY			*e*S	Sb	11 28 02.9	-0.3
	baz=330					
STYH	**Taoyuan**	**1.57 308**	*e*P	Pn	11 27 44.4	+0.1
	baz=308					
STYH			*e*S	Sb	11 28 05.2	-0.3
	baz=308					
EGFH	**Guangfu**	**1.59 337**	*e*P	Pn	11 27 45.0	+0.3
	baz=336					
EGFH			*e*S	Sb	11 28 05.6	-0.5
	baz=336					
SCST	**Cishan**	**1.65 295**	*e*P	Pn	11 27 45.9	+0.5
	baz=294					
SCST			*e*S	Sn	11 28 06.8	+0.4
	baz=294					
SGST	**Jiashian**	**1.67 302**	*e*P	Pn	11 27 46.2	+0.5
	baz=301					
SGST			*e*S	Sb	11 28 07.6	-0.6
	baz=301					
YUS	**Yu-Shan**	**1.67 320**	*e*P	Pn	11 27 46.2	0.0
	baz=320					
YUS			*e*S	Sn	11 28 06.9	-0.8
	baz=320					
TWM1	**Shoushan**	**1.68 292**	*e*P	Pn	11 27 46.7	+0.7
	baz=291					
TWM1			*e*S	Sn	11 28 08.0	+0.6
	baz=291					
ESL	**Shilin**	**1.72 339**	*e*P	Pn	11 27 46.6	+0.1
	baz=338					
ESL			*e*S	Sn	11 28 08.5	+0.3
	baz=338					
WTP	**Ta-pu**	**1.73 307**	*e*P	Pn	11 27 47.0	+0.3
	baz=306					
WTP			*e*S	Sn	11 28 08.9	+0.3
	baz=306					
TPUB	**Ta-pu**	**1.75 309**	*e*P	Pb	11 27 48.3	-0.6
	baz=308					
TPUB			*e*S	Sb	11 28 10.3	-0.5
	baz=308					
CHN1	**Nanshi**	**1.76 304**	*e*P	Pn	11 27 47.6	+0.5
	baz=303					
CHN1			*e*S	Sn	11 28 09.7	+0.4
	baz=303					
WSSB	**Gushan**	**1.77 285**	*e*P	Pb	11 27 48.3	-0.9
	baz=284					
WSSB			*e*S	Sb	11 28 10.8	-0.5
	baz=284					
ALS	**Alishan**	**1.77 317**	*e*P	Pn	11 27 47.9	+0.4
	baz=317					
ALS			*e*S	Sb	11 28 11.0	-0.7
	baz=317					
VWDT	**VWDT**	**1.78 330**	P	Pn	11 27 47.7	+0.3
	baz=329					
VWDT			*e*S	Sb	11 28 10.8	-0.8
	baz=329					
SNST	**Tainan City**	**1.81 304**	*e*P	Pn	11 27 48.7	+1.1
	baz=303					
SNST			*e*S	Sb	11 28 12.1	-0.2
	baz=303					
TWK	**Hsinying**	**1.84 305**	*e*P	Pb	11 27 50.1	-0.3
	baz=305					
TWK			*e*S	Sn	11 28 12.2	+1.0
	baz=305					
WCKO	**Fanlu**	**1.86 312**	*e*P	Pn	11 27 49.0	+0.6
	baz=311					
WCKO			*e*S	Sn	11 28 12.7	+1.0
	baz=311					
SSLB	**Suanglung**	**1.91 326**	*e*P	Pn	11 27 49.4	+0.3
	baz=325					
SSLB			*e*S	Sn	11 28 13.4	+0.5
	baz=325					
TWD	**Chiawan**	**1.93 346**	*e*S	Sn	11 28 13.7	+0.4
	baz=345					
OWD	**Renai**	**1.94 334**	*e*P	Pn	11 27 50.2	+0.5
	baz=333					
OWD			*e*S	Sn	11 28 14.1	+0.1
	baz=333					
WUSB	**Renai**	**2.00 333**	*e*P	Pn	11 27 51.0	+0.5
	baz=332					
WUSB			*e*S	Sn	11 28 15.8	+0.4
	baz=332					
SMLT	**Sun Moon Lake**	**2.01 326**	*e*P	Pn	11 27 51.1	+0.5
	baz=326					
SMLT			*e*S	Sn	11 28 15.9	+0.3
	baz=326					
NACB	**Ninganchiao**	**2.02 346**	*e*S	Sn	11 28 15.8	+0.2
	baz=346					
CHGB	**Renai**	**2.04 335**	*e*P	Pn	11 27 51.5	+0.5
	baz=334					
CHGB			*e*S	Sn	11 28 16.8	+0.3
	baz=334					
TYC	**Yuchr**	**2.05 326**	*e*P	Pn	11 27 51.9	+0.9
	baz=325					
TYC			*e*S	Sn	11 28 16.7	+0.3
	baz=325					
WJS	**Zhushan**	**2.06 322**	*e*S	Sn	11 28 17.7	+1.1
	baz=321					
WDLH	**Douliu**	**2.07 316**	*e*P	Pb	11 27 52.9	-1.5
	baz=315					
WDLH			*e*S	Sn	11 28 18.5	+1.5
	baz=315					
WHF	**Hehuan Shan**	**2.08 338**	*e*S	Sn	11 28 17.0	-0.9
	baz=338					
TSCK	**Chigu Township**	**2.10 297**	*e*P	Pn	11 27 52.1	+0.5
	baz=296					
TSCK			*e*S	Sn	11 28 17.8	+0.2
	baz=296					
WNT	**Mingjian**	**2.12 322**	*e*P	Pn	11 27 52.9	+0.8
	baz=321					
WNT			*e*S	Sn	11 28 19.6	+1.3
	baz=321					
WCS	**Beigang Elemen**	**2.15 329**	*e*P	Pn	11 27 53.3	+0.9
	baz=328					
WCS			*e*S	Sn	11 28 20.2	+1.3
	baz=328					
FUSS	**Fushou**	**2.19 339**	*e*P	Pn	11 27 53.4	+0.3
	baz=338					
FUSS			*e*S	Sn	11 28 19.8	-0.4
	baz=338					
TDCB	**Techi**	**2.22 337**	*e*S	Sn	11 28 20.2	-0.6
	baz=336					
WHP	**Taichung City**	**2.33 333**	*e*P	Pn	11 27 55.4	+0.5
	baz=332					
WHP			*e*S	Sn	11 28 23.9	+0.6
	baz=332					
WRL	**Guolierlin Hig**	**2.33 317**	*e*S	Sn	11 28 23.7	+0.5
	baz=316					
TCU	**Taichung**	**2.34 326**	*e*S	Sn	11 28 24.1	+0.5
	baz=325					
LATG	**Datong**	**2.38 347**	*e*P	Pn	11 27 56.2	+0.6
	baz=346					
LATG			*e*S	Sn	11 28 24.5	-0.2
	baz=346					
YOJ	**Yonaguni jima**	**2.39 20**	*e*S	Sn	11 28 25.6	+0.8
	baz=19					
TWC	**Suao**	**2.41 354**	*e*P	Pn	11 27 56.4	+0.5
	baz=354					
TWC			*e*S	Sn	11 28 25.3	+0.2
	baz=354					
ENTT	**Nioudou**	**2.48 348**	*e*P	Pn	11 27 57.7	+0.8
	baz=348					
ENTT			*e*S	Sn	11 28 27.6	+0.7
	baz=348					
YHNB	**Yeheng**	**2.54 345**	*e*P	Pn	11 27 59.1	+1.2
	baz=344					
YHNB			*e*S	Sn	11 28 29.5	+0.7
	baz=344					
NSK	**Sanguang**	**2.56 344**	*e*P	Pn	11 27 58.6	+0.6
	baz=344					
NSK			*e*S	Sn	11 28 29.7	+0.7
	baz=344					
NFF	**Wufeng Townshi**	**2.58 339**	*e*P	Pn	11 27 59.2	+0.8
	baz=339					
NFF			*e*S	Sn	11 28 30.4	+0.7
	baz=339					
FUSB	**Fushanzhiwuyua**	**2.59 349**	*e*P	Pn	11 27 59.1	+0.6
	baz=349					
FUSB			*e*S	Sn	11 28 30.2	+0.4
	baz=349					
LIOB	**Emei**	**2.63 338**	*e*P	Pn	11 27 59.6	+0.6
	baz=337					
LIOB			*e*S	Sn	11 28 31.5	+0.7
	baz=337					
VCHM	**Qimei**	**2.68 292**	*e*P	Pn	11 28 00.8	+1.2
	baz=291					
VCHM			*e*S	Sn	11 28 32.3	+0.4
	baz=291					
PHUB	**P'eng-hu**	**2.69 299**	*e*P	Pn	11 28 00.5	+0.8
	baz=299					
PHUB			*e*S	Sn	11 28 32.3	+0.2
	baz=299					
PNG	**Penghu**	**2.72 300**	*e*P	Pn	11 28 00.8	+0.5
	baz=299					
PNG			*e*S	Sn	11 28 33.6	+0.6
	baz=299					
TIPB	**Shuangxi**	**2.77 354**	*e*P	Pn	11 28 02.2	+1.3
	baz=354					
TIPB			*e*S	Sn	11 28 34.8	+0.6
	baz=354					
SXI1	**Grass Mountain**	**2.88 356**	*e*P	Pn	11 28 03.2	+0.6
	baz=355					
SXI1			*e*S	Sn	11 28 37.3	+0.2
	baz=355					
YM01	**YM01**	**2.97 350**	*e*P	Pn	11 28 04.2	+0.5
	baz=350					
YM01			*e*S	Sn	11 28 38.5	-0.7
	baz=350					
VWUC	**VWUC**	**3.70 319**	*e*P	Pn	11 28 14.7	+1.0
	baz=318					
VWUC			*e*S	Sn	11 28 56.2	-0.9
	baz=318					

*NDI **01** 11:35:59.4±3.8, 30°.90N×88°.59E, h10km, ML4.1, mb4.2(NEIC)*
*IDC **01** 11:36:01.4±2.8, 31°.12N×88°.43E, h43km±27km, mb3.8/21, mbtmp4.1/23, ML3.8/2, MS3.5/16, Error ellipse: s-maj=17.2km s-min=12.2km az=44.0*
*NEIC **01** 11:36:01.6±2.4, 30°.98N±0°.09×88°.10E±0°.09, h35km±9km, mb4.2/23, Error ellipse: s-maj=13.6km s-min=10.2km az=194.0*

ISC 01 11:36:00.9±0.4, **31°.04N**±0°.05×**88°.29E**±0°.04, **h35**km, **n91**, σ2°32/88, **mb4.1**/25, **MS3.4**/13, **1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**2.81**	**118**				**Pn**	**11 36 48.1**	**+4.3**
LSA	**Lhasa**	**2.81**	**118**	P			**Pn**	**11 36 48.1**	**+4.3**
LSA				S			Sn	11 37 26.3	+10
SHL	**Shillong**	**6.31**	**149**	*e*P			**Pn**	**11 37 30.3**	**-1.2**
GOMU	**GeErMu**	**7.49**	**45**	P			Pn	11 37 43.6	-4.3
BRDH	**Bariadhala**	**8.85**	**159**	P			**Pn**	**11 38 06.2**	**-0.2**
	155nm,0.3s,baz=145,slow=21,SNR=6.1								
BRDH				S			**Sn**	**11 39 50.5**	**+5.6**
	80nm,0.4s,baz=185,slow=23,SNR=8.8								
SMLA	**Simla**	**9.54**	**273**	*e*P			**Pn**	**11 38 17.2**	**+1.5**
SMLA				*e*S			**Sn**	**11 40 02.3**	**+0.6**
SMLA					IAML			11 40 07.4	
	comp=E,85nm,1.4s								
SMLA					IAML			11 40 08.8	
	comp=N,61nm,0.6s								
BHK	**Bhakra**	**10.17**	**275**	*e*P			**Pn**	**11 38 21.5**	**-2.9**
BHK				*e*S			**Sn**	**11 40 17.6**	**+0.3**
THN	**Thein Dam**	**10.79**	**281**	*e*P			**Pn**	**11 38 37.2**	**+4.3**
THN				*e*S			**Sn**	**11 40 33.6**	**+1.2**
BHPL	**Bhopal**	**12.40**	**234**	*e*P			**Pn**	**11 38 53.9**	**-1.0**
BHPL				*e*S			**Sn**	**11 41 07.1**	**-4.9**
PZH	**PanZhiHua**	**12.64**	**108**	P			**Pn**	**11 38 57.8**	**-0.5**
PZH				S			**Sn**	**11 41 16.0**	**-1.8**
WMQ	**Urumqi**	**12.77**	**358**	*e*P			**Pn**	**11 38 58.4**	**-1.5**
NIL	**Nilore**	**12.98**	**286**	Pn			**Pn**	**11 39 01.8**	**-1.0**
KSH	**Kashi**	**13.13**	**313**	P			**Pn**	**11 39 07.3**	**+2.3**
CD2	**Chengdu**	**13.28**	**87**	P			**Pn**	**11 39 02.5**	**-4.4**
CD2				S			**Sn**	**11 41 29.8**	**-3.5**
TARG	**Taragay, Kyrgy**	**13.59**	**325**	Pn			**Pn**	**11 39 12.4**	**+0.9**
LZH	**Lanzhou**	**13.91**	**65**	*e*P			**Pn**	**11 39 14.8**	**-0.8**
LZH				pP			P	11 39 17.4	-5.9
CHTO	**Chiang Mai**	**15.53**	**139**	P			**P**	**11 39 41.8**	**+0.5**
CM31	**Chiang Mai Arr**	**15.82**	**140**	P			**P**	**11 39 45.6**	**+1.2**
CM31					IAmb		IAmb	11 39 52.4	
	comp=Z,32nm,0.9s								
CMAR	**Chiang Mai Arr**	**15.82**	**140**	P			**Pn**	**11 39 39.5**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=320,slow=13,SNR=16								
CMAR					LR		LR	11 46 36.6	
	comp=Z,97nm,18.2s,baz=305,slow=40								
	comp=Z,2.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**15.82**	**140**				**Pn**	**11 39 41.5**	**+0.5**
AAK	**Ala-Archa**	**15.97**	**320**	LR			LR	11 47 16.6	
	comp=Z,74nm,18.6s,baz=134,slow=42								
HYBB	**Hyderabad (bro**	**16.20**	**215**	*e*P			**P**	**11 39 47.9**	**-0.8**
MK31	**Makanchi Array**	**16.40**	**345**				**Pn**	**11 39 48.5**	**+0.2**
MK31					IAmb		IAmb	11 39 57.1	
	comp=Z,10.0nm,0.9s								
MKAR	**Makanchi Array**	**16.40**	**345**	P			**Pn**	**11 39 47.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=153,slow=16,SNR=9.6								
MKAR					LR		LR	11 47 07.5	
	comp=Z,262nm,18.1s,baz=163,slow=41								
	comp=Z,1.7nm,1.0s								
MKAR	**Makanchi Array**	**16.40**	**345**				**Pn**	**11 39 48.4**	**+0.2**
MAKZ	**Makanchi**	**16.48**	**345**	P			**Pn**	**11 39 50.1**	**+0.8**
KBL	**Kabul**	**16.55**	**287**				**Pn**	**11 39 48.8**	**-1.7**
KBL					IAmb		IAmb	11 39 53.3	
	comp=Z,25nm,0.8s								
GAR	**Garm**	**16.71**	**303**	P			**Pn**	**11 39 52.8**	**+0.5**
GAR					IAmb		IAmb	11 40 04.2	
	comp=Z,26nm,1.3s								
BTK	**Batken**	**16.80**	**307**	P			**Pn**	**11 39 54.0**	**+0.6**
BTK					IAmb		IAmb	11 40 02.9	
	comp=Z,8.6nm,0.7s								
CHGR	**Chuyangaron**	**17.43**	**301**				**Pn**	**11 40 01.4**	**+0.1**
CHGR					IAmb		IAmb	11 40 05.8	
	comp=Z,34nm,0.9s								
XAN	**Xi'an**	**17.65**	**75**	P			**P**	**11 40 06.6**	**+1.9**
XAN				pP			sP	11 40 18.9	-1.5
ENH	**Enshi**	**18.26**	**87**	P			**Pn**	**11 40 11.7**	**+0.2**
ENH					IAmb		IAmb	11 40 22.3	
	comp=Z,23nm,1.4s								
KK31	**Karatay Array**	**18.56**	**315**				**P**	**11 40 14.2**	**-0.5**
KKAR	**Karatay Array**	**18.56**	**315**	P			**P**	**11 40 14.2**	**-0.5**
KKAR	**Karatay Array**	**18.56**	**315**	P			**P**	**11 40 13.6**	**-1.1**
KKAR					IAmb		IAmb	11 40 18.6	
	comp=Z,3.5nm,1.1s								
LYN	**LuoYang**	**20.61**	**74**	*e*P			**P**	**11 40 38.5**	**+1.4**
LYN				S			Sn	11 44 33.2	+2.2
KURBB	**Kurchatov Arra**	**20.87**	**342**	P			**P**	**11 40 39.0**	**-0.8**
	comp=Z,12nm,0.8s,baz=155,slow=10,SNR=51								
KURBB					LR		LR	11 50 50.2	
	comp=Z,78nm,18.0s,baz=128,slow=43								
	comp=Z,12nm,0.8s								
KURK	**Kurchatov**	**20.93**	**343**	P			**P**	**11 40 41.7**	**+1.3**
KURK					IAmb		IAmb	11 40 47.6	
	comp=Z,15nm,1.1s								
SONM	**Songino Array**	**21.75**	**34**	P			**P**	**11 40 49.0**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=217,slow=11,SNR=12								
SONM					LR		LR	11 50 09.6	
	comp=Z,98nm,21.6s,baz=222,slow=39								
	comp=Z,2.1nm,0.7s								
SONM	**Songino Array**	**21.75**	**34**	P			**P**	**11 40 51.3**	**+2.0**
ULN	**Ulaanbaatar**	**22.09**	**35**	P			**P**	**11 40 54.3**	**+1.3**
ULN					IAmb		IAmb	11 41 00.1	
	comp=Z,6.2nm,1.1s								
UBPT	**Khong Chiam**	**22.21**	**131**	P			**P**	**11 40 54.7**	**+0.3**
HNS	**HongShan**	**22.71**	**67**	||P		**P**	**11 41 04.2**	**+4.7**
HNS				*e*S			Sn	11 45 16.0	-5.2
ZAA0	**Zalesovo Array**	**23.03**	**355**	P			**P**	**11 41 04.5**	**+1.8**
ZAA0					IAmb		IAmb	11 41 09.8	
	comp=Z,9.2nm,0.9s								
ZALV	**Zalesovo Beam**	**23.03**	**355**	P			**P**	**11 41 02.7**	**0.0**
	comp=Z,1.9nm,0.4s,baz=168,slow=9.0,SNR=17								
ZALV					LR		LR	11 51 09.5	
	comp=Z,140nm,18.5s,baz=22,slow=40								
	comp=Z,1.9nm,0.4s								
ZALV	**Zalesovo Beam**	**23.03**	**355**	P			**P**	**11 41 04.2**	**+1.5**
PCHI	**Peechi**	**23.23**	**211**	*e*P			**P**	**11 41 00.5**	**-4.5**
PCHI				*e*S			S	11 44 57.5	-17
PALK	**Pallekele**	**24.69**	**198**	LR			LR	11 51 34.4	
	comp=Z,104nm,18.3s,baz=152,slow=38								
SRIT	**Nakonsritamara**	**24.70**	**152**	P			**P**	**11 41 20.2**	**+1.4**
BVAR	**Borovoye Array**	**25.54**	**334**	P			**P**	**11 41 25.0**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=142,slow=12,SNR=1.7								
	comp=Z,0.9nm,0.7s								
BRVK	**Borovoye**	**25.60**	**334**	P			**P**	**11 41 29.0**	**+2.3**
BRVK					IAmb		IAmb	11 41 32.6	
	comp=Z,4.8nm,0.9s								
GEYT	**Alibeck**	**25.73**	**294**	P			**P**	**11 41 28.1**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=116,slow=11,SNR=2.0								
	comp=Z,1.1nm,0.4s								
ABKAR	**Akbulak array**	**28.04**	**319**	P			**P**	**11 41 49.2**	**+0.5**
ABKAR					IAmb		IAmb	11 41 58.5	
	comp=Z,4.5nm,1.1s								
AKTO	**Aktyubinsk**	**29.71**	**319**	P			**P**	**11 42 03.2**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=138,slow=12,SNR=2.0								
	comp=Z,1.2nm,0.5s								
PSI	**Prapat**	**29.83**	**158**	LR			LR	11 57 49.4	
	comp=Z,151nm,18.5s,baz=96,slow=44								
ARU	**Arti**	**32.78**	**329**	LR			LR	11 57 08.7	
	comp=Z,68nm,18.6s,baz=144,slow=39								
KSRS	**Korea Array**	**33.20**	**68**	P			**P**	**11 42 32.5**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=267,slow=8.2,SNR=5.1								
KSRS					LR		LR	11 57 06.1	
	comp=Z,41nm,18.1s,baz=315,slow=38								
	comp=Z,0.9nm,0.8s								
JOW	**Kunigami**	**35.11**	**87**	LR			LR	11 58 37.1	
	comp=Z,86nm,20.0s,baz=180,slow=39								
USRK	**Ussuriysk Ar.**	**36.60**	**56**	P			**P**	**11 43 02.7**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=193,slow=12,SNR=2.4								
	comp=Z,1.9nm,0.8s								
KLR	**Kul'dur**	**37.26**	**48**	P			**P**	**11 43 06.5**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=258,slow=9.3,SNR=1.6								
	comp=Z,0.3nm,0.3s								
NRIK	**Noril'sk**	**38.34**	**360**	LR			LR	12 00 17.2	
	comp=Z,119nm,18.0s,baz=162,slow=38								
YAK	**Yakutsk**	**40.88**	**28**	LR			LR	12 01 46.1	
	comp=Z,79nm,20.1s,baz=266,slow=38								
BRTR	**Keskin Array B**	**44.80**	**297**	P			**P**	**11 44 10.9**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=62,slow=3.4,SNR=2.7								
BRTR					LR		LR	12 04 47.9	
	comp=Z,58nm,19.1s,baz=116,slow=38								
	comp=Z,0.5nm,0.5s								
EIL	**Elat**	**45.67**	**283**	LR			LR	12 07 11.4	
	comp=Z,55nm,19.0s,baz=289,slow=41								
TIXI	**Tiksi**	**46.12**	**17**	LR			LR	12 03 30.9	
	comp=Z,44nm,18.9s,baz=182,slow=36								
AKASG	**Malin Array Be**	**47.42**	**312**	P			**P**	**11 44 32.0**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=83,slow=6.1,SNR=8.6								
	comp=Z,1.7nm,0.7s								
FINES	**FINESS Array B**	**50.04**	**326**	P			**P**	**11 44 51.8**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=111,slow=7.6,SNR=9.9								
	comp=Z,3.8nm,0.7s								
ARCES	**ARCESS Array B**	**51.80**	**337**	P			**P**	**11 45 03.9**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=98,slow=6.5,SNR=1.5								
	comp=Z,2.8nm,0.8s								
MORC	**Moravsky Berou**	**54.96**	**312**	*e*P			**P**	**11 45 32.6**	**+4.2**
JAVC	**Velka Javorina**	**55.01**	**310**	*e*P			P	11 45 33.9	+5.1
KRLC	**Kraliky**	**55.40**	**312**	*e*P			**P**	**11 45 34.4**	**+2.8**
VRAC	**Vranov**	**55.64**	**311**	*e*P			**P**	**11 45 37.5**	**+4.2**
DPC	**Dobruska-Polom**	**55.65**	**312**	*e*P			**P**	**11 45 37.7**	**+4.3**
OSTC	**Ostas**	**55.69**	**313**	*e*P			**P**	**11 45 37.6**	**+4.0**
CHVC	**Chvalec**	**55.78**	**313**	*e*P			**P**	**11 45 38.8**	**+4.5**
KRUC	**Moravsky**	**55.81**	**311**	*e*P			**P**	**11 45 38.7**	**+4.2**
BRG	**Berggiesshubel**	**57.06**	**313**	*e*P			**P**	**11 45 47.7**	**+4.4**
BRG					Amp			11 45 49.0	
	comp=Z,3.2nm,0.7s								
NB2	**NORSAR Subarra**	**57.20**	**326**	P			**P**	**11 45 43.9**	**-0.3**
	comp=Z,13nm,1.1s,baz=85,slow=7.4								
NOA	**NORSAR Array B**	**57.20**	**326**	P			**P**	**11 45 44.2**	**0.0**
	comp=Z,4.1nm,0.8s,baz=85,slow=7.2,SNR=13								
	comp=Z,4.1nm,0.8s								
CKRC	**Cesky Krumlov**	**57.20**	**311**	*e*P			**P**	**11 45 49.0**	**+4.6**
GERES	**GERESS Array B**	**57.59**	**311**	P			**P**	**11 45 47.7**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=77,slow=5.9,SNR=13								
	comp=Z,1.4nm,0.6s								
KHC	**Kasperske Hory**	**57.62**	**311**	*e*P			**P**	**11 45 51.1**	**+3.8**
KMBO	**Kilima Mbogo**	**58.02**	**246**	P			**P**	**11 45 52.5**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=0.0,slow=10,SNR=2.4								
	comp=Z,0.8nm,0.3s								
WRA	**Warramunga Arr**	**67.27**	**133**	P			**P**	**11 46 52.0**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=324,slow=6.4,SNR=86								
	comp=Z,6.4nm,0.8s								
ASAR	**Alice Springs**	**69.78**	**136**	P			**P**	**11 47 07.6**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=318,slow=5.9,SNR=57								
	comp=Z,4.4nm,0.8s								
ILAR	**Eielson Array**	**75.31**	**21**	P			**P**	**11 47 38.5**	**-1.7**
	comp=Z,0.7nm,0.9s,baz=281,slow=3.8,SNR=6.1								
	comp=Z,0.7nm,0.9s								
INK	**Inuvik**	**76.20**	**15**	P			**P**	**11 47 44.9**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=15,slow=4.7,SNR=3.3								
	comp=Z,2.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**80.47**	**280**	P			**P**	**11 48 09.6**	**0.0**
	comp=Z,13nm,0.6s,baz=48,slow=3.6,SNR=5.1								
YKA	**Yellowknife Ar**	**84.99**	**10**	P			**P**	**11 48 30.8**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=334,slow=4.3,SNR=6.1								
	comp=Z,2.1nm,0.9s								
TXAR	**Lajitas Array**	**118.89**	**12**	PKP			**PKPdf**	**11 54 43.5**	**-2.6**
	comp=Z,0.4nm,1.0s,baz=329,slow=1.1,SNR=3.8								
CPUP	**Villa Florida**	**149.55**	**270**	PKP			**PKPdf**	**11 55 39.6**	**-2.7**
	comp=Z,1.5nm,0.6s,baz=28,slow=13,SNR=2.1								
CPUP					PKPbc		**PKPbc**	**11 55 46.8**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=118,slow=2.5,SNR=3.9								

*NEIC **01** 11:55:11.1±0.8, 18°.3S±0°.2×178°.0W±0°.2, h559km±15km, mb4.4/25, Error ellipse: s-maj=27.4km s-min=21.7km az=151.0*
*IDC **01** 11:55:12.5±1.8, 18°.25S×178°.27W, h562km±16km, mb3.1/8, mbtmp4.1/10, Error ellipse: s-maj=44.4km s-min=14.0km az=148.0*

ISC 01 11:55:10.6±0.6, **18°.3S**±0°.1×**178°.02W**±0°.09, **h557**km, **n45**, σ1°23/49, **mb4.3**/22, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.78**	**278**	P			**P**	**11 56 32.3**	**+0.7**
	68nm,0.5s,baz=3.5,slow=21,SNR=84								
MSVF	**Nonsavu**	**3.78**	**278**	P			**P**	**11 56 31.6**	**0.0**
AFI	**Afiamalu**	**7.41**	**55**	P			**P**	**11 57 01.2**	**-1.8**
	18nm,0.3s,baz=174,slow=1.6,SNR=14								
AFI				S			**S**	**11 58 30.0**	**-4.9**
	17nm,0.8s,baz=276,slow=23,SNR=1.6								
AFI	**Afiamalu**	**7.41**	**55**	P			**P**	**11 57 01.2**	**-1.8**
NIUE	**Niue**	**7.71**	**97**	P			**P**	**11 57 05.8**	**0.0**
DZM	**Mont Dzumac**	**15.07**	**253**	P			**P**	**11 58 18.7**	**-2.1**
	3.5nm,0.6s,baz=69,

comp=Z,33nm,1.5s
FITZ Fitzroy Crossi 53.34 261 P P 12 03 39.0 +0.3
SOEI Soe 56.45 270 P P 12 04 01.6 +1.0
SOEI IAmb IAmb 12 04 02.5
comp=Z,14nm,0.6s
PSA00 Pilbara Seismi 58.18 256 P P 12 04 11.0 -1.1
PSA00 Pilbara Seismi 58.18 256 P P 12 04 11.0 -1.1
MBWA Marble Bar 58.35 256 P P 12 04 12.4 -0.9
MBWA IAmb IAmb 12 04 28.9
comp=Z,26nm,1.4s
MORW Morawa 60.68 246 P P 12 04 28.4 -0.3
UGM Wanagama 70.01 268 P P 12 05 26.9 -0.5
JHS Saijyo 70.42 319 P P 12 05 30.1 +0.8
JHS IAmb IAmb 12 05 51.5
comp=Z,16nm,1.4s
PETK Petropavlovsk- 74.13 345 P P 12 05 51.2 +0.9
comp=Z,2.6nm,0.8s,baz=119,slow=8.9,SNR=2.5
comp=Z,2.6nm,0.8s
KSRS Korea Array 75.23 318 P P 12 05 58.3 +1.6
comp=Z,0.2nm,0.3s,baz=139,slow=7.6,SNR=2.0
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 79.43 44 P P 12 06 21.8 +1.9
comp=Z,0.4nm,0.6s,baz=228,slow=8.5,SNR=5.4
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 85.88 57 P P 12 06 55.0 +2.7
comp=Z,0.4nm,0.7s,baz=220,slow=6.9,SNR=7.5
comp=Z,0.4nm,0.7s
ILAR Eielson Array 86.17 13 P P 12 06 53.0 +0.2
comp=Z,0.3nm,0.4s,baz=219,slow=4.4,SNR=5.8
comp=Z,0.3nm,0.4s
CMAR Chiang Mai Arr 89.36 290 P P 12 07 09.7 +0.9
comp=Z,0.3nm,0.3s,baz=118,slow=2.8,SNR=5.5
comp=Z,0.3nm,0.3s
BRTR Keskin Array B 145.31 315 PKPbc PKPbc 12 13 47.4 +0.4
comp=Z,0.5nm,0.5s,baz=46,slow=4.2,SNR=3.7
CLL Collm 145.91 348 *i* PKPbc **PKPbc 12 13 48.7 +0.7**
comp=Z,5.0nm,0.6s
CLL Lm MLR 12 17 00.0
comp=Z,100nm,21.0s
GERES GERESS Array B 148.07 345 PKPbc PKiKP 12 13 54.8 -0.5
comp=Z,0.9nm,0.6s,baz=9.5,slow=3.2,SNR=7.8
DAVOX Davos/Dischmat 150.84 349 PKPbc PKiKP 12 14 01.2 0.0
comp=Z,0.5nm,0.3s,baz=297,slow=5.6,SNR=5.6

*IDC **01** 12:00:58.2±0.9, 40°.72N×29°.28W, h0km, mb3.9/16, mbtmp3.8/17, MLL3.8/1, MS3.6/53, Error ellipse: s-maj=24.8km s-min=16.0km az=13.0*
*NEIC **01** 12:01:00.3±1.8, 40°.6N±0°.1×29°.3W±0°.2, h10km±1km, mb4.6/14, Error ellipse: s-maj=23.5km s-min=16.7km az=227.0*
*SVSA **01** 12:01:00.9±0.8, 40°.73N×29°.28W, h10km, ML3.7(INMG), Error ellipse: s-maj=6.2km s-min=4.1km az=83.0*
ISC 01 12:01:00.0±3.1, 40°.51N±0°.06×29°.29W±0°.07, h15km±19km, n100, σ1$30/73, mb4.2/25, MS3.6/53, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.75**	**146**	*eP*	**Pn**	**12 01 29.1**	**-0.8**
SRBC				*eS*	**Sn**	**12 01 50.8**	**-1.2**
SRBC				A	A	12 01 54.3	
	185nm,0.3s						
PGRA	**Graciosa**	**1.79**	**145**	*eP*	**Pn**	**12 01 29.8**	**-0.6**
PCED	**Cedros**	**1.93**	**166**	*eP*	**Pn**	**12 01 32.4**	**0.0**
PCED				*eS*	**Sn**	**12 01 55.4**	**-1.0**
PCED				A	A	12 02 00.3	
	122nm,0.3s						
ROSA	**Rosais**	**1.96**	**155**	*eP*	**Pn**	**12 01 32.4**	**-0.4**
ROSA				*eS*	**Sn**	**12 01 55.8**	**-1.3**
ROSA				A	A	12 01 58.2	
	45nm,0.2s						
ROSA	**Rosais**	**1.96**	**155**	Pn	**Pn**	**12 01 32.8**	**+0.1**
PFCBR	**Castelo Branco**	**2.03**	**167**	*eS*	**Sn**	**12 01 58.2**	**-0.6**
PFCBR				A	A	12 02 03.0	
	89nm,0.3s						
PMAN	**Manadas**	**2.09**	**153**	*eP*	**Pn**	**12 01 34.0**	**-0.5**
PICO	**Pico**	**2.11**	**161**	*eP*	**Pn**	**12 01 34.9**	**0.0**
PICO				*eS*	**Sn**	**12 02 00.3**	**-0.6**
PICO				A	A	12 02 02.6	
	78nm,0.3s						
PID	**Ribeirinha**	**2.25**	**156**	*eP*	**Pn**	**12 01 37.0**	**+0.2**
PAGU	**Agualva, Azore**	**2.38**	**136**	*eP*	**Pn**	**12 01 37.3**	**-1.2**
PAGU				*eS*	**Sn**	**12 02 05.4**	**-2.0**
PAGU				A	A	12 02 06.5	
	194nm,0.3s						
ADH	**Angra Heroismo**	**2.44**	**139**	*eP*	**Pn**	**12 01 38.7**	**-0.6**
PSCM	**Serra do Cume**	**2.46**	**136**	*eP*	**Pn**	**12 01 38.8**	**-0.9**
PSCM				*eS*	**Sn**	**12 02 07.4**	**-2.1**
PSCM				A	A	12 02 09.0	
	2μm,0.1s						
CMLA	**Cha da Macela**	**4.01**	**132**	*eP*	**Pn**	**12 01 59.6**	**-1.3**
CMLA				*eS*	**Sn**	**12 02 44.7**	**-2.9**
CMLA				A	A	12 02 52.8	
	46nm,0.3s						
CMLA	**Cha da Macela**	**4.01**	**132**	Pn	**Pn**	**12 02 00.7**	**-0.3**
BART	**Pico Bartolome**	**4.20**	**129**	*eP*	**Pn**	**12 02 03.0**	**-0.7**
BART				*eS*	**Sn**	**12 02 49.3**	**-3.3**
BART				A	A	12 02 51.3	
	6.7nm,0.2s						
PSMN	**Pico do Norte,**	**4.81**	**135**	*eP*	**Pn**	**12 02 11.8**	**-0.1**
PMOZ	**Porto Moniz, M**	**12.36**	**125**	*eP*	**Pn**	**12 03 59.0**	**+3.4**
	71nm,1.8s						
PMOZ				*eS*	Sn	12 06 50.0	+37
PGAV	**Gavieira, Arco**	**15.88**	**78**	*eP*	**Pn**	**12 04 44.8**	**+1.8**
PGAV				*eS*	S	12 09 04.9	+72
PMTG	**Montargil**	**16.25**	**88**	*eP*	**P**	**12 04 52.2**	**+1.4**
	39nm,1.5s						
MTE	**Manteigas**	**16.55**	**83**	*eP*	P	12 05 02.5	+8.4
	39nm,1.9s						
MTE				*eS*	S	12 09 07.9	+61
PCBR	**Castelo Branco**	**16.68**	**85**	*eP*	**P**	**12 04 57.0**	**+1.5**
	30nm,1.7s						
PESTR	**Estremoz**	**16.78**	**89**	*eS*	**S**	**12 08 12.6**	**+1.3**
PMRV	**Marv??o**	**16.82**	**87**	*eP*	**Pn**	**12 04 57.0**	**+2.0**
	30nm,1.6s						
PMRV				*eS*	S	12 09 18.3	+66
ESDC	**Sonseca Array**	**19.38**	**84**	P	**P**	**12 05 26.5**	**+1.2**
	0.1nm,0.3s,baz=286,slow=10,SNR=9.2						
ESDC				LR	LR	12 11 47.6	
	comp=Z,213nm,18.8s,baz=298,slow=34						
	0.9nm,0.7s						
ESDC	**Sonseca Array**	**19.38**	**84**	P	**Pn**	**12 05 28.0**	**+1.5**
MDT	**Midelt**	**21.19**	**103**	P	**P**	**12 05 46.1**	**+1.1**
	1.4nm,0.7s,baz=308,slow=7.3,SNR=3.7						
MDT				LR	LR	12 12 13.9	
	comp=Z,141nm,20.8s,baz=334,slow=32						
	1.4nm,0.7s						
EKA	**Eskdalemuir Ar**	**22.76**	**41**	P	**P**	**12 05 59.4**	**-2.2**
	1.3nm,0.7s,baz=239,slow=9.7,SNR=3.8						
EKA				LR	LR	12 13 11.4	
	comp=Z,124nm,18.7s,baz=178,slow=32						
	1.3nm,0.7s						
BORG	**Borgarnes**	**24.72**	**8**	LR	LR	12 13 12.9	
	comp=Z,117nm,19.9s,baz=183,slow=30						
BBTS	**Babate**	**28.05**	**153**	LR	LR	12 16 46.9	
	comp=Z,69nm,18.7s,baz=318,slow=34						
SCHQ	**Schefferville**	**28.66**	**313**	LR	LR	12 16 52.0	
	comp=Z,94nm,21.5s,baz=78,slow=33						
DAVOX	**Davos/Dischmat**	**28.80**	**64**	LR	LR	12 16 59.1	
	comp=Z,108nm,18.9s,baz=261,slow=34						
SFJD	**Kangerlussuaq**	**29.06**	**343**	LR	LR	12 15 50.1	
	comp=Z,90nm,18.5s,baz=116,slow=31						
KHC	**Kasperske Hory**	**31.24**	**59**	*eP*	**P**	**12 07 19.5**	**+0.5**
FRB	**Frobisher Bay**	**32.64**	**329**	LR	LR	12 18 13.1	
	comp=Z,45nm,18.2s,baz=27,slow=32						
HFS	**Hagfors**	**32.93**	**39**	LR	LR	12 19 12.5	
	comp=Z,98nm,19.8s,baz=256,slow=33						
VRAC	**Vranov**	**33.22**	**59**	LR	LR	12 20 09.3	
	comp=Z,74nm,18.2s,baz=244,slow=35						
KOWA	**Kowa**	**34.02**	**132**	P	**P**	**12 07 44.6**	**+1.0**
	0.9nm,0.3s,baz=313,slow=7.8,SNR=4.1						
KOWA				LR	LR	12 21 32.8	
	comp=Z,66nm,18.3s,baz=304,slow=36						
	0.9nm,0.3s						
SADO	**Sadowa**	**36.46**	**294**	LR	LR	12 22 13.2	
	comp=Z,175nm,18.5s,baz=78,slow=35						
TOA0	**Torodi Ar. Sit**	**38.46**	**126**	P	**P**	**12 08 23.6**	**+2.1**
TORD	**Torodi Ar. Bea**	**38.46**	**126**	P	**P**	**12 08 22.8**	**+1.3**
	3.9nm,1.1s,baz=329,slow=7.2,SNR=12						
TORD				LR	LR	12 22 43.6	
	comp=Z,107nm,19.2s,baz=208,slow=34						
SJG	**San Juan**	**38.73**	**246**	LR	LR	12 21 19.1	
	comp=Z,27nm,20.5s,baz=82,slow=31						
MNK	**Minsk**	**39.94**	**50**	*i* P	**P**	**12 08 32.0**	**-1.5**
	comp=E,4.0nm,0.7s						
MNK				*i* P	**P**	**12 08 32.0**	**-1.5**
	comp=N,27nm,0.9s						
MNK				*i* P	**P**	**12 08 32.0**	**-1.5**
	comp=Z,9.0nm,0.7s,baz=274						
MNK				*i* PP	**PP**	**12 10 04.7**	**-0.5**
MNK				*i* PPP	PPP	12 10 28.9	
MNK				*i* S	**S**	**12 14 40.0**	**+2.1**
MNK				*i* SS	**SnSn**	**12 17 39.5**	**+1.9**
MNK				*i* SSS	SSS	12 18 01.4	
MNK				*i* LR	LR	12 22 35.2	
MNK				*i* LRM	MLR	12 27 25.6	
	comp=N,512nm,21.3s						
MNK				*i* LRM	MLR	12 27 31.4	
	comp=E,15nm,18.1s						
MNK				*i* LRM	MLR	12 27 34.6	
	comp=Z,51nm,15.5s						
DBIC	**Dimbokro**	**40.16**	**140**	LR	LR	12 23 36.7	
	comp=Z,68nm,19.1s,baz=23,slow=34						
ARCES	**ARCESS Array B**	**40.51**	**26**	LR	LR	12 21 51.1	
	comp=Z,41nm,18.2s,baz=230,slow=31						
MDP	**Montagnes des**	**41.03**	**217**	LR	LR	12 21 07.0	
	comp=Z,46nm,21.4s,baz=268,slow=29						
AKASG	**Malin Array Be**	**41.18**	**55**	P	**P**	**12 08 42.2**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=274,slow=8.8,SNR=5.7						
	comp=Z,0.7nm,0.5s						
IDI	**Anoyia**	**42.51**	**79**	LR	LR	12 26 44.6	
	comp=Z,29nm,20.3s,baz=356,slow=36						
TKL	**Tuckaleechee C**	**42.59**	**282**	LR	LR	12 25 23.6	
	comp=Z,74nm,19.3s,baz=90,slow=34						
OBN	**Obninsk**	**44.87**	**48**	LR	LR	12 28 06.0	
	comp=Z,16nm,18.8s,baz=190,slow=36						
KLMR	**Klimovskoe**	**45.64**	**40**	*eP*	**P**	**12 09 17.3**	**-2.3**
KLMR				AMP		12 09 29.5	
	comp=Z,38nm,1.8s						
RCBR	**Riachuelo**	**46.51**	**189**	LR	LR	12 25 25.5	
	comp=Z,33nm,18.7s,baz=139,slow=31						
BRTR	**Keskin Array B**	**47.19**	**69**	P	**P**	**12 09 31.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=282,slow=6.2,SNR=6.0						
BRTR				LR	LR	12 31 30.3	
	comp=Z,30nm,18.0s,baz=302,slow=39						
	comp=Z,1.3nm,0.8s						
SDV	**Santo Domingo**	**48.33**	**241**	LR	LR	12 27 46.6	
	comp=Z,31nm,20.5s,baz=332,slow=33						
BELG	**Belogornoye**	**51.89**	**49**	LR	LR	12 32 14.6	
	comp=Z,28nm,18.2s,baz=190,slow=36						
KBZ	**Khabaz**	**52.06**	**61**	LR	LR	12 31 54.5	
	comp=Z,32nm,20.8s,baz=8.5,slow=36						
ROSC	**El Rosal**	**53.76**	**241**	LR	LR	12 29 59.0	
	comp=Z,72nm,21.8s,baz=356,slow=32						
GNI	**Garni**	**54.80**	**64**	LR	LR	12 35 47.5	
	comp=Z,24nm,18.1s,baz=318,slow=38						
ARU	**Arti**	**56.36**	**42**	P	**P**	**12 10 39.2**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=305,slow=7.0,SNR=7.0						
ARU				LR	LR	12 34 10.0	
	comp=Z,46nm,18.5s,baz=278,slow=35						
	comp=Z,1.3nm,0.3s						
ARU	**Arti**	**56.36**	**42**	P	**P**	**12 10 40.4**	**+0.2**
T25A	**Trinidad**	**56.95**	**293**	P	**P**	**12 10 46.1**	**+1.1**
T25A				IAmb	IAmb	12 10 46.7	
	comp=Z,6.0nm,1.2s						
WALA	**Waterton Lakes**	**57.70**	**309**	P	**P**	**12 10 49.6**	**-0.5**
PDAR	**Pinedale Array**	**57.82**	**301**	P	**P**	**12 10 50.1**	**-1.0**
	comp=Z,1.6nm,1.1s,baz=76,slow=6.7,SNR=6.0						
PDAR				LR	LR	12 34 54.5	
	comp=Z,72nm,19.4s,baz=72,slow=35						
	comp=Z,1.6nm,1.1s						
MOOW	**Moose Ponds**	**58.14**	**302**	P	**P**	**12 10 53.1**	**-0.2**
REDW	**Red Top Meadow**	**58.38**	**302**	P	**P**	**12 10 55.2**	**+0.2**
REDW				IAmb	IAmb	12 10 56.2	
	comp=Z,9.7nm,1.4s						
AKTO	**Aktyubinsk**	**58.64**	**48**	P	**P**	**12 10 56.4**	**0.0**
	comp=Z,2.0nm,0.7s,baz=107,slow=5.9,SNR=5.8						
AKTO				LR	LR	12 35 35.8	
	comp=Z,56nm,20.2s,baz=291,slow=36						
	comp=Z,2.0nm,0.7s						
ANMO	**Albuquerque**	**59.47**	**292**	LR	LR	12 35 02.7	
	comp=Z,54nm,21.1s,baz=62,slow=34						
HWUT	**Hardware Ranch**	**59.68**	**301**	P	**P**	**12 11 04.4**	**+0.4**
HWUT				IAmb	IAmb	12 11 05.2	
	comp=Z,4.2nm,0.9s						
TXAR	**Lajitas Array**	**60.36**	**285**	P	**P**	**12 11 09.1**	**+0.4**
	comp=Z,1.2nm,1.0s,baz=61,slow=6.6,SNR=10.0						
TXAR				LR	LR	12 37 44.2	
	comp=Z,63nm,18.2s,baz=47,slow=37						
	comp=Z,1.2nm,1.0s						
DUG	**Dugway, Tooele**	**61.20**	**300**	P	**P**	**12 11 14.4**	**0.0**
DUG				IAmb	IAmb	12 11 26.1	
	comp=Z,6.3nm,1.4s						
ELK	**Elko**	**62.51**	**301**	LR	LR	12 37 00.4	
	comp=Z,54nm,18.9s,baz=49,slow=35						
BRVK	**Borovoye**	**63.94**	**41**	P	**P**	**12 11 33.0**	**+0.7**
BRVK				IAmb	IAmb	12 11 34.5	
	comp=Z,8.0nm,1.4s						
BVAR	**Borovoye Array**	**64.01**	**41**	P	**P**	**12 11 32.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=305,slow=5.2,SNR=6.1						
BVAR				LR	LR	12 38 51.6	
	comp=Z,52nm,18.6s,baz=298,slow=36						
	comp=Z,0.5nm,0.5s						
BBB	**Bella Bella**	**64.04**	**317**	LR	LR	12 39 06.7	
	comp=Z,44nm,18.7s,baz=17,slow=36						
ILAR	**Eielson Array**	**64.33**	**335**	P	**P**	**12 11 34.6**	**0.0**
	comp=Z,0.3nm,0.8s,baz=57,slow=3.3,SNR=2.0						
	comp=Z,0.3nm,0.8s						
KVN	**Kaiserville**	**65.28**	**301**	P	**P**	**12 11 40.9**	**-0.6**
KVN				IAmb	IAmb	12 11 42.0	
	comp=Z,4.4nm,1.3s						
ATAH	**Atahualpa**	**65.45**	**236**	LR	LR	12 38 34.0	
	comp=Z,48nm,20.2s,baz=334,slow=34						
NVAR	**Mina Array Bea**	**65.75**	**301**	P	**P**	**12 11 44.7**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=38,slow=4.8,SNR=2.3						
	comp=Z,0.3nm,0.8s						
YBH	**Yreka Blue Hor**	**66.74**	**306**	LR	LR	12 39 20.3	
	comp=Z,51nm,21.3s,baz=61,slow=35						
LPAZ	**La Paz**	**67.05**	**221**	LR	LR	12 37 29.8	
	comp=Z,58nm,21.9s,baz=64,slow=33						
PFO	**Pinyon Flats O**	**67.18**	**295**	LR	LR	12 41 03.3	
	comp=Z,85nm,18.8s,baz=71,slow=36						
MBAR	**Mbarara**	**68.03**	**111**	LR	LR	12 40 51.3	
	comp=Z,60nm,18.1s,baz=336,slow=35						
LPIG	**La Paz**	**68.19**	**284**	LR	LR	12 42 52.0	
	comp=Z,42nm,18.4s,baz=98,slow=37						
NNA	**Nana**	**68.29**	**231**	LR	LR	12 40 03.4	
	comp=Z,29nm,20.7s,baz=348,slow=34						
ATD	**Arta Tunnel**	**69.04**	**93**	LR	LR	12 42 34.3	
	comp=Z,54nm,18.1s,baz=28,slow=36						
KURBB	**Kurchatov Arra**	**69.50**	**40**	P	**P**	**12 12 07.4**	**-0.4**
	comp=Z,2.6nm,1.0s,baz=314,slow=6.6,SNR=9.1						
	comp=Z,2.6nm,1.0s						
ZALV	**Zalesovo Beam**	**70.26**	**35**	P	**P**	**12 12 12.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=304,slow=11,SNR=4.3						
ZALV				LR	LR	12 42 18.4	
	comp=Z,29nm,19.4s,baz=204,slow=35						
	comp=Z,0.7nm,0.4s						
KDAK	**Kodiak Island**	**71.21**	**332**	LR	LR	12 39 15.7	
	comp=Z,89nm,18.4s,baz=232,slow=32						
AAK	**Ala-Archa**	**72.38**	**49**	LR	LR	12 44 10.3	
	comp=Z,49nm,19.9s,baz=328,slow=36						
TSUM	**Tsumeb**	**73.67**	**134**	LR	LR	12 43 03.3	
	comp=Z,33nm,18.3s,baz=317,slow=34						
MK31	**Makanchi Array**	**73.89**	**42**	P	**P**	**12 12 34.9**	**+0.6**
MK31				IAmb	IAmb	12 12 36.0	
	comp=Z,5.6nm,1.4s						
MKAR	**Makanchi Array**	**73.89**	**42**	P	**P**	**12 12 34.4**	**+0.1**
	comp=Z,1.8nm,1.0s,baz=313,slow=4.3,SNR=12						
MKAR				LR	LR	12 45 39.7	
	comp=Z,54nm,18.4s,baz=260,slow=36						
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**73.89**	**42**	P	**P**	**12 12 34.5**	**+0.2**
KSH	**Kashi**	**75.24**	**51**	P	**P**	**12 12 44.1**	**+1.7**
KSH				sP	pwP	12 12 51.2	+2.0
LSZ	**Lusaka**	**76.92**	**123**	LR	LR	12 45 26.4	
	comp=Z,88nm,18.8s,baz=231,slow=35						
MA2	**Magadan**	**80.28**	**360**	LR	LR	12 47 13.2	
	comp=Z,33nm,19.0s,baz=110,slow=35						
LBTB	**Lobatse**	**82.77**	**132**	LR	LR	12 50 30.1	
	comp=Z,42nm,18.0s,baz=335,slow=36						
SONM	**Songino Array**	**83.65**	**28**	P	**P**	**12 13 25.9**	**-2.2**
	comp=Z,0.8nm,0.7s,baz=322,slow=5.1,SNR=5.3						
	comp=Z,0.8nm,0.7s						
BOSA	**Boshof**	**85.37**	**134**	LR	LR	12 49 48.8	
	comp=Z,39nm,19.9s,baz=9.0,slow=34						
ASAR	**Alice Springs**	**158.05**	**45**	PKPab	**PKPab**	**12 21 29.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=317,slow=3.3,SNR=4.3						
EIDS	**Eidsvold**	**164.90**	**359**	PKPdf	**PKPdf**	**12 21 03.5**	**-0.1**
EIDS					**PKPab**	**12 21 59.8**	**+0.2**

*JMA **01** 12:16:19.6±0.6, 35°.N±1°.×14°.1E±°., h34km, MV2.4/21, FAR SE OFF BOSO PEN*
*IDC **01** 12:16:23.8±2.5, 33°.83N×139°.50E, h0km, mb3.2/3, mbtmp3.1/4, ML2.1/1, Error ellipse: s-maj=101.0km s-min=22.6km az=73.0*
ISC 01 12:16:21.4±1.6, 34°.66N±0°.09×141°.5E±0°.1, h35km, n9, σ1$30/11, mb3.2/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.41**	**270**	P	**Pn**	**12 16 28.7**	**-1.6**
BSO1				*eX*		12 16 34.8	
BSO3	**Boso 3**	**0.81**	**281**	P	**Pn**	**12 16 34.9**	**-1.1**
BSO4	**Boso 4**	**0.99**	**290**	*eP*	**Pn**	**12 16 37.8**	**-1.0**
CHOJ	**Chosi**	**1.16**	**334**	*eP*	**Pn**	**12 16 39.9**	**-1.2**
CHOJ				*eS*	**Sn**	**12 16 55.1**	**-0.6**
JKUC	**kamogawauchiur**	**1.16**	**296**	*eP*	**Pn**	**12 16 39.7**	**-1.4**
MJAR	**Matsushiro Ar**	**3.26**	**306**	Pn	**Pn**	**12 17 09.2**	**-0.8**
	0.3nm,0.3s,baz=157,slow=16,SNR=3.2						
MJAR				Sn	**Sn**	**12 17 49.1**	**+1.5**
	0.1nm,0.3s,baz=141,slow=12,SNR=5.1						
	1.4nm,0.4s						
MKAR	**Makanchi Array**	**45.45**	**304**	P	**P**	**12 24 38.3**	**+1.4**
	0.4nm,0.9s,baz=86,slow=7.4,SNR=2.6						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**54.72**	**188**	P	**P**	**12 25 47.7**	**+0.4**
	0.1nm,0.4s,baz=0.9,slow=7.4,SNR=11						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**58.45**	**188**	P	**P**	**12 26 13.6**	**-0.2**
	0.1nm,0.6s,baz=359,slow=6.6,SNR=1.3						
	0.1nm,0.6s						

*IDC **01** 12:24:50.0±1.3, 11°.84N×86°.62W, h0km, mb3.8/4, mbtmp3.8/5, MLL3.3/1, MS3.3/2, Error ellipse: s-maj=122.4km s-min=20.6km az=49.0*
*INET **01** 12:24:54.4±0.7, 11°.55N×86°.99W, h15km±7km, MW4.1*
*NEIC **01** 12:24:55.7±1.5, 11°.63N±0°.06×86°.97W±0°.07, h38km±17km, mb4.2/15, Error ellipse: s-maj=11.1km s-min=7.1km az=57.0*
*SNET **01** 12:24:56.4±1.1, 11°.67N×87°.16W, h22km±71km, ML3.9*
*UCR **01** 12:24:56.5±1.1, 11°.66N×87°.11W, h79km±43km, ML3.7, mb4.2(NEIC)*
ISC 01 12:24:55.5±1.3, 11°.59N±0°.05×86°.99W±0°.04, h42km±14km, n88, σ0$75/102, mb4.2/12, 2C-7D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.70**	**34** ‖	*eP*	**Pn**	**12 25 08.7**	**-0.3**
APYN	**Apoyeque**	**0.89**	**44** ‖	*eP*	**Pn**	**12 25 11.0**	**-0.7**
MASN	**Masaya**	**0.91**	**64**	*eP*	**Pn**	**12 25 11.4**	**-0.5**
MGAN	**Managua**	**0.91**	**53**	*eP*	**Pn**	**12 25 11.3**	**-0.6**
MGAN				*eP*	**Pn**	**12 25 11.3**	**-0.6**
MOMN	**Momotombo**	**0.92**	**28** ‖	*eP*	**Pn**	**12 25 11.6**	**-0.5**
CNGN	**Cerro Negro**	**0.94**	**17**	Pn	**Pn**	**12 25 11.0**	**-1.5**
CNGN	**Cerro Negro**	**0.94**	**17** ‖	*eP*	**Pn**	**12 25 10.9**	**-1.5**
TELN	**Telica**	**1.02**	**9**	*eP*	**Pn**	**12 25 13.1**	**-0.3**
CRIN	**San Cristobal**	**1.10**	**357**	Pn	**Pn**	**12 25 14.4**	**-0.2**
CRIN	**San Cristobal**	**1.10**	**357** ‖	*eP*	**Pn**	**12 25 14.4**	**-0.2**
CRIN				*eS*	**Sn**	**12 25 30.3**	**+1.6**
BRAN	**Las Pilas**	**1.28**	**29**	*eP*	Pn	12 25 10.6	-6.4
BOAB	**BOACO BROADBAN**	**.55**	**57**		**Pn**	**12 25 19.7**	**-0.9**
BOAB	**BOACO BROADBAN**	**.55**	**57** ‖	*eP*	**Pn**	**12 25 19.7**	**-0.9**
HZTE	**Horizontes, Gu**	**1.62**	**122**		**Pn**	**12 25 21.1**	**-0.6**
HZTE	**Horizontes, Gu**	**1.62**	**122**	*eP*	**Pn**	**12 25 21.1**	**-0.6**
MATN	**Matagalpa**	**1.69**	**38**	Pn	**Pn**	**12 25 22.2**	**-0.4**
MATN	**Matagalpa**	**1.69**	**38**	*eP*	**Pn**	**12 25 22.2**	**-0.4**
MATN				*eS*	**Sn**	**12 25 44.1**	**+1.0**
ACON	**Acoyapa**	**1.81**	**78**	Pn	**Pn**	**12 25 22.9**	**-1.4**
ACON	**Acoyapa**	**1.81**	**78** ‖	*eP*	**Pn**	**12 25 22.9**	**-1.4**
CNCH	**Conchagua**	**1.86**	**334** ‖	*eP*	**Pn**	**12 25 25.0**	**-0.1**
CNCH				*eS*	**Sn**	**12 25 48.8**	**+1.2**
CNCH				IAML		12 25 52.0	
	comp=Z,3μm,0.4s						
CNCH	**Conchagua**	**1.86**	**334** ‖	*eP*	**Pn**	**12 25 25.0**	**-0.1**
CNCH				*eS*	**Sn**	**12 25 48.8**	**+1.2**
CNCH				IAML		12 25 52.0	
	comp=Z,3μm,0.4s						
LCND	**La Caada**	**1.92**	**333**	*eP*	**Pn**	**12 25 25.4**	**-0.3**
LCND				*eS*	**Sn**	**12 25 48.6**	**-0.1**
LCND				IAML		12 25 53.9	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**1.92**	**333**	*eP*	**Pn**	**12 25 25.4**	**-0.3**
LCND				*eS*	**Sn**	**12 25 48.6**	**-0.1**
LCND				IAML		12 25 53.9	
	comp=Z,1μm,0.3s						
ORTG	**Ortega, Santa**	**1.94**	**129**	Pn	**Pn**	**12 25 25.1**	**-1.0**
RCON	**San Juan de Ri**	**2.05**	**23**	*eP*	**Pn**	**12 25 28.5**	**+0.9**
DUNO	**Dulce Nombre,**	**2.10**	**136**	Pn	**Pn**	**12 25 26.9**	**-1.4**
PACA	**Pacayal**	**2.27**	**325**	*eP*	**Pn**	**12 25 30.7**	**0.0**
PACA				IAML		12 26 03.9	
	comp=Z,5μm,0.4s						
PACA	**Pacayal**	**2.27**	**325**	*eP*	**Pn**	**12 25 30.7**	**0.0**
PACA				IAML		12 26 03.9	
	comp=Z,5μm,0.4s						
PACA	**Pacayal**	**2.27**	**325**	*eP*	**Pn

CMIG Matias Romero 9.40 306 Pn Pn 12 27 09.9 +1.4
comp=Z,0.3nm,0.3s,baz=36,slow=6.0,SNR=1.9
comp=Z,1.0nm,0.4s
Y49A Blount Mountai 22.17 1 P P 12 29 47.9 -0.1
Y49A IAmb IAmb 12 29 49.1
comp=Z,15nm,1.4s
OXF Oxford 22.92 355 P P 12 29 54.9 -1.0
OXF IAmb IAmb 12 30 01.6
comp=Z,8.2nm,0.8s
TXAR Lajitas Array 23.52 321 P P 12 30 02.0 0.0
comp=Z,1.7nm,0.6s,baz=143,slow=9.3,SNR=16
comp=Z,1.7nm,0.6s
TXAR Lajitas Array 23.52 321 P P 12 30 01.7 -0.3
TX31 Lajitas Ar. Si 23.52 321 P P 12 30 02.1 +0.1
TX32 Lajitas Array 23.52 321 P P 12 30 02.2 +0.2
TX32 IAmb IAmb 12 30 16.9
comp=Z,4.6nm,1.2s
CPCT Cooper Cave 23.86 5 P P 12 30 04.7 -0.3
CPCT IAmb IAmb 12 30 06.3
comp=Z,6.6nm,0.8s
X37A Clayton 24.13 343 P P 12 30 07.2 -0.4
X37A IAmb IAmb 12 30 08.6
comp=Z,5.8nm,0.8s
WMOK Wichita Mounta 25.42 337 P P 12 30 19.2 -0.1
SDCO Great Sand Dun 30.88 331 P P 12 31 09.2 +0.8
PV13 Radium Mtn., P 32.87 327 P P 12 31 26.1 +0.3
PV13 IAmb IAmb 12 31 36.9
comp=Z,4.6nm,1.5s
MDP Montagnes des 34.56 98 LR LR 12 48 43.5
comp=Z,31nm,18.9s,baz=250,slow=42
BW06 Boulder Array 36.74 332 P P 12 31 58.2 -0.9
BW06 IAmb IAmb 12 32 41.1
comp=Z,3.2nm,1.4s
PD31 Pinedale Array 36.74 332 P P 12 31 58.0 -1.1
PDAR Pinedale Array 36.74 332 P P 12 31 58.6 -0.4
comp=Z,0.8nm,0.5s,baz=132,slow=12,SNR=12
comp=Z,0.8nm,0.5s
PDAR Pinedale Array 36.74 332 P P 12 31 58.4 -0.7
HWUT Hardware Ranch 36.84 329 P P 12 31 59.7 -0.2
HWUT IAmb IAmb 12 32 00.5
comp=Z,2.9nm,0.9s
SIV San Ignacio 37.53 136 P P 12 32 05.6 -0.3
comp=Z,5.5nm,0.7s,baz=312,slow=8.5,SNR=26
comp=Z,5.5nm,0.7s
REDW Red Top Meadow 37.80 331 P P 12 32 08.0 -0.1
MOOW Moose Ponds 38.05 332 P P 12 32 09.5 -0.7
NVAR Mina Array Bea 38.64 319 P P 12 32 16.8 +1.5
comp=Z,0.2nm,0.6s,baz=134,slow=6.5,SNR=2.3
comp=Z,0.2nm,0.6s
SHEM Shemya Is, Ala 86.20 323 LR LR 13 16 56.0
comp=Z,25nm,19.5s,baz=238,slow=36
ASAR Alice Springs 139.36 247 PKP PKPdf 12 44 19.2 +0.1
comp=Z,0.2nm,0.6s,baz=109,slow=2.3,SNR=1.8
WRA Warramunga Arr 139.46 253 PKP PKPdf 12 44 19.6 +0.3
comp=Z,0.2nm,0.5s,baz=92,slow=1.8,SNR=2.4

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*IDC **01** 12:29:21.4±0.9, 52°.00N×170°.61W, h0km, mb3.7/14, mbtmp3.8/16, ML3.7/2, MS3.2/6, Error ellipse: s-maj=28.5km s-min=14.6km az=176.0*
*AEIC **01** 12:29:27±3.0, 52°.3N±0°.1×170°.62W±0°.05, h69km±8km, Error ellipse: s-maj=21.2km s-min=1.8km az=167.0*
*NEIC **01** 12:29:27.7±2.6, 52°.1N±0°.1×170°.4W±0°.1, h30km±19km, ML3.7(AEIC), Error ellipse: s-maj=22.5km s-min=8.6km az=161.0*
ISC 01 12:29:25.7±0.8, 51°.9N±0°.1×170°.46W±0°.07, h31km, n39, σ1§25/37, mb3.7/14, MS3.1/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.45**	**42**		**Pn**	**12 29 49.6**	**-0.2**
NIKH					**Sn**	**12 30 06.5**	**-1.2**
OKFG	**Magazine Ridge**	**2.17**	**45**		**Pn**	**12 29 58.4**	**-1.2**
OKFG					**Sn**	**12 30 26.0**	**+0.6**
MNAT	**Makushin Natee**	**3.03**	**48**		**Pn**	**12 30 11.7**	**+0.3**
MNAT					**Sn**	**12 30 48.4**	**+1.8**
UNV	**Unalaska Valle**	**3.09**	**49**		**Pn**	**12 30 12.2**	**0.0**
UNV					**Sn**	**12 30 48.5**	**+0.5**
AKUT	**Akutan**	**3.61**	**50**	Pn	**Pn**	**12 30 21.9**	**+2.5**
ADK	**Adak**	**3.86**	**272**		**Pn**	**12 30 24.3**	**+1.5**
KIWB	**Kanaga Island**	**4.15**	**272**		**Pn**	**12 30 28.4**	**+1.6**
SPIA	**Saint Paul Isl**	**5.29**	**1**	Pn	**Pn**	**12 30 42.9**	**+0.4**
AMKA	**Amchitka**	**6.40**	**269**	Pn	**Pn**	**12 30 58.6**	**+0.9**
SDPT	**Sand Point**	**6.87**	**56**	Pn	**Pn**	**12 31 05.1**	**+1.0**
OHAK	**Old Harbor**	**11.29**	**55**	Pn	**Pn**	**12 32 03.3**	**-1.4**
Q19K	**Cape Douglas,**	**11.84**	**47**	Pn	**Pn**	**12 32 13.3**	**+1.1**
KDAK	**Kodiak Island**	**11.85**	**53**	Pn	**Pn**	**12 32 10.3**	**-2.0**
0.9nm,0.3s,baz=281,slow=9.2,SNR=8.3							
N18K	**Kilae Creek**	**11.92**	**37**	Pn	**Pn**	**12 32 16.4**	**+3.1**
CNPM	**China Poot**	**13.22**	**47**	Pn	**Pn**	**12 32 30.2**	**-0.8**
SEW	**Seward**	**14.28**	**47**	Pn	**Pn**	**12 32 43.6**	**-1.9**
SUA	**Susitna One**	**14.39**	**41**	Pn	**Pn**	**12 32 46.9**	**-0.3**
ILAR	**Eielson Array**	**17.71**	**34**	P	**Pn**	**12 33 28.9**	**-0.8**
0.1nm,0.3s,baz=64,slow=36,SNR=2.8							
ILAR				LR	LR	12 41 08.2	
comp=Z,71nm,18.2s,baz=283,slow=40							
0.2nm,0.4s							
PETK	**Petropavlovsk-**	**19.34**	**286**	P	**P**	**12 33 47.3**	**-1.0**
1.9nm,0.3s,baz=92,slow=12,SNR=44							
6.7nm,0.5s							
SEY	**Seymchan**	**22.50**	**314**	P	**P**	**12 34 22.4**	**+0.2**
1.3nm,0.6s,baz=106,slow=10.0,SNR=4.0							
1.3nm,0.6s							
DLBC	**Dease Lake**	**23.70**	**58**	P	**P**	**12 34 34.0**	**-0.6**
2.9nm,0.8s,baz=269,slow=13,SNR=4.3							
2.9nm,0.8s							
INK	**Inuvik**	**24.10**	**33**	P	**P**	**12 34 37.1**	**-1.0**
2.6nm,0.4s,baz=247,slow=6.2,SNR=22							
INK				LR	LR	12 45 27.5	
comp=Z,100nm,18.2s,baz=297,slow=40							
2.6nm,0.4s							
YKA	**Yellowknife Ar**	**31.05**	**48**	P	**P**	**12 35 40.5**	**+0.1**
0.8nm,0.6s,baz=274,slow=7.2,SNR=7.2							
YKA				LR	LR	12 49 18.7	
comp=Z,43nm,18.1s,baz=316,slow=38							
0.8nm,0.6s							
YAK	**Yakutsk**	**32.98**	**311**	LR	LR	12 50 24.9	
comp=Z,29nm,19.5s,baz=84,slow=38							
H11S1	**WAKE ISLAND Hy**	**37.86**	**217**	T	T	13 17 40.9	
baz=23,slow=76,SNR=22							
H11S2	**WAKE ISLAND Hy**	**37.88**	**217**	T	T	13 17 22.6	
baz=23,slow=76,SNR=15							
H11S3	**WAKE ISLAND Hy**	**37.88**	**217**	T	T	13 17 27.1	
baz=23,slow=76,SNR=9.2							
NVAR	**Mina Array Bea**	**38.33**	**90**	P	**P**	**12 36 45.4**	**+1.7**
0.2nm,0.6s,baz=305,slow=3.2,SNR=2.3							
0.2nm,0.6s							
ELK	**Elko**	**38.84**	**84**	LR	LR	12 50 24.7	
comp=Z,39nm,21.2s,baz=322,slow=32							
PDAR	**Pinedale Array**	**41.15**	**78**	P	**P**	**12 37 08.9**	**+1.8**
0.3nm,0.5s,baz=293,slow=2.5,SNR=5.8							
0.3nm,0.5s							
KSRS	**Korea Array**	**44.79**	**276**	P	**P**	**12 37 36.5**	**+0.2**
0.9nm,0.9s,baz=76,slow=5.9,SNR=2.7							
0.9nm,0.9s							
SONM	**Songino Array**	**50.96**	**301**	P	**P**	**12 38 23.6**	**-0.6**
0.5nm,0.5s,baz=106,slow=8.3,SNR=4.0							
0.5nm,0.5s							
TXAR	**Lajitas Array**	**53.43**	**88**	P	**P**	**12 38 43.6**	**+0.9**
0.7nm,0.7s,baz=284,slow=4.5,SNR=11							
0.7nm,0.7s							
ARCES	**ARCESS Array B**	**58.31**	**353**	LR	LR	13 05 22.9	
comp=Z,9.3nm,19.7s,baz=236,slow=37							
MKAR	**Makanchi Array**	**63.63**	**313**	P	**P**	**12 39 52.0**	**-1.5**
0.4nm,0.5s,baz=52,slow=7.9,SNR=6.0							
0.4nm,0.5s							
FINES	**FINESS Array B**	**66.23**	**351**	P	**P**	**12 40 10.0**	**0.0**
4.8nm,1.0s,baz=19,slow=8.8,SNR=4.6							
4.8nm,1.0s							
NOA	**NORSAR Array B**	**67.40**	**359**	P	**P**	**12 40 17.4**	**-0.2**
0.2nm,0.5s,baz=4.2,slow=6.7,SNR=1.5							
0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**76.06**	**282**	P	**P**	**12 41 09.8**	**-0.4**
0.8nm,0.7s,baz=26,slow=7.0,SNR=6.1							
0.8nm,0.7s							
ASAR	**Alice Springs**	**89.58**	**229**	P	**P**	**12 42 19.9**	**-0.1**
1.3nm,0.8s,baz=35,slow=4.8,SNR=12							
1.3nm,0.8s							

IDC 01 12:30:10.9±2.2, 1°.90S×140°.60E, h0km, mb3.3/4, mbtmp3.4/5, ML3.4/1, MS3.1/1, Error ellipse: s-maj=72.0km s-min=30.9km az=89.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**18.90**	**163**	LR	LR	12 41 45.5	
comp=Z,56nm,18.6s,baz=264,slow=37							
WRA	**Warramunga Arr**	**18.95**	**198**	P	P	12 34 32.8	-1.0
0.1nm,0.3s,baz=18,slow=12,SNR=17							
0.3nm,0.4s							
FITZ	**Fitzroy Crossi**	**21.78**	**221**	P	P	12 35 05.6	+1.0
1.5nm,1.0s,baz=36,slow=8.7,SNR=1.7							
1.5nm,1.0s							
ASAR	**Alice Springs**	**22.59**	**196**	P	P	12 35 12.9	-0.3
0.5nm,0.9s,baz=28,slow=12,SNR=6.3							
0.5nm,0.9s							
MKAR	**Makanchi Array**	**70.32**	**322**	P	P	12 41 26.6	+0.1
0.4nm,0.9s,baz=101,slow=6.0,SNR=2.2							
0.4nm,0.9s							
VNDA	**Vanda**	**76.42**	**175**	P	P	12 42 02.0	+0.1
0.2nm,0.4s,baz=342,slow=6.4,SNR=1.5							
0.2nm,0.4s							

IDC 01 12:32:23.6±1.7, 1°.21S×127°.19E, h0km, mb3.3/2, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=36.5km s-min=28.0km az=56.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.09**	**85**	Pn	Pn	12 33 28.6	+1.1
1.5nm,0.3s,baz=220,slow=22,SNR=6.8							
SIJI				Sn	Sn	12 34 15.8	-0.4
0.4nm,0.3s,baz=245,slow=23,SNR=1.3							
3.1nm,0.3s							
WRA	**Warramunga Arr**	**19.89**	**160**	P	P	12 36 56.5	-0.3
0.1nm,0.3s,baz=344,slow=12,SNR=8.2							
0.3nm,0.5s							
ASAR	**Alice Springs**	**23.25**	**164**	P	P	12 37 33.0	+0.1
0.3nm,0.4s,baz=345,slow=12,SNR=10.0							
0.3nm,0.4s							
MKAR	**Makanchi Array**	**61.88**	**327**	P	P	12 42 44.6	-0.2
0.2nm,0.4s,baz=116,slow=6.6,SNR=2.9							
0.2nm,0.4s							

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*IDC **01** 12:44:18.6±1.0, 40°.86N×107°.47E, h0km, mb3.4/5, mbtmp3.5/7, ML3.5/2, MS3.0/2, Error ellipse: s-maj=36.8km s-min=17.4km az=63.0*
ISC 01 12:44:21.9±1.2, 40°.9N±0°.2×107°.4E±0°.2, h22km, n8, σ0§60/7, mb3.7/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**7.00**	**354**	Pn	**Pn**	**12 46 03.0**	**-0.2**
1.2nm,0.3s,baz=173,slow=14,SNR=26							
SONM				Lg	Lg	12 48 01.6	
2.1nm,0.3s,baz=172,slow=29,SNR=7.6							
SONM				LR	LR	12 49 13.5	
comp=Z,48nm,21.6s,baz=162,slow=42							
7.1nm,0.7s							
MKAR	**Makanchi Array**	**19.03**	**297**	P	**P**	**12 48 41.5**	**-0.8**
0.1nm,0.3s,baz=95,slow=14,SNR=5.8							
0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**20.01**	**318**	P	**P**	**12 48 53.5**	**+0.5**
0.3nm,0.3s,baz=96,slow=13,SNR=2.3							
0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**22.26**	**306**	P	**P**	**12 49 18.0**	**+0.7**
2.8nm,0.8s,baz=104,slow=12,SNR=14							
2.8nm,0.8s							
KAPI	**Kappang**	**47.04**	**163**	LR	LR	13 13 29.0	
comp=Z,40nm,19.8s,baz=116,slow=37							
ILAR	**Eielson Array**	**59.93**	**28**	P	**P**	**12 54 25.8**	**-0.1**
0.3nm,0.7s,baz=270,slow=3.6,SNR=3.5							
0.3nm,0.7s							
WRA	**Warramunga Arr**	**65.48**	**152**	P	**P**	**12 55 03.4**	**+0.1**
0.5nm,0.7s,baz=340,slow=7.3,SNR=7.7							
0.5nm,0.7s							
ASAR	**Alice Springs**	**68.77**	**154**	P	**P**	**12 55 24.1**	**0.0**
0.4nm,0.7s,baz=342,slow=6.3,SNR=7.5							
0.4nm,0.7s							

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*IDC **01** 12:50:43.2±1.6, 13°.12N×89°.37W, h0km, mb4.2/9, mbtmp4.2/10, ML3.9/1, MS3.4/12, Error ellipse: s-maj=36.8km s-min=33.0km az=17.0*
*GCG **01** 12:50:47.0±0.6, 12°.92N×90°.09W, h5km±6km, MD4.1*
*SNET **01** 12:50:47.7±1.1, 12°.92N×89°.90W, h14km±6km, ML4.5*
*INET **01** 12:50:50.3±0.8, 13°.01N×89°.73W, h7km±7km, MW4.1*
*NEIC **01** 12:50:51.8±2.4, 13°.05N±0°.07×89°.83W±0°.07, h42km±14km, mb4.4/28, Md4.5(SNET), Error ellipse: s-maj=12.0km s-min=8.5km az=45.0*
ISC 01 12:50:50.5±1.3, 12°.98N±0°.07×89°.85W±0°.05, h54km±11km, n110, σ1§40/107, mb4.3/16, MS3.4/12, 3C-14D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.87**	**14**	‖*eP*	**Pn**	**12 51 05.5**	**-1.4**
CEVE				IAML		12 51 23.6	
comp=Z,19μm,0.4s							
SBLS	**San Blas**	**0.88**	**14**	‖*iP*	**Pn**	**12 51 05.5**	**-1.5**
SNJE	**San Jose**	**0.91**	**15**	*eP*	**Pn**	**12 51 06.0**	**-1.4**
NUBE	**Las Nubes**	**0.92**	**4**	‖*iP*	**Pn**	**12 51 05.7**	**-1.7**
SNET	**Serv Nac Est T**	**0.92**	**40**		**Pn**	**12 51 06.0**	**-1.4**
SNET	**Serv Nac Est T**	**0.92**	**40**	‖*iP*	**Pn**	**12 51 06.1**	**-1.3**
SNET				*eS*	**Sn**	**12 51 16.9**	**+0.1**
SNET	**Serv Nac Est T**	**0.92**	**40**	*eP*	**Pn**	**12 51 06.1**	**-1.3**
CEDA	**San Andres**	**0.93**	**28**	*eP*	**Pn**	**12 51 06.3**	**-1.2**
BOQS	**Boqueron**	**0.93**	**36**	‖*iP*	**Pn**	**12 51 06.5**	**-1.1**
RTR	**El Retiro**	**0.93**	**12**	‖*iP*	**Pn**	**12 51 06.4**	**-1.2**
UEES	**Universidad Ev**	**0.94**	**39**	‖*iP*	**Pn**	**12 51 06.5**	**-1.2**
LFRS	**El Faro**	**1.00**	**50**	‖*eP*	**Pn**	**12 51 07.2**	**-1.2**
SJTE	**Alcalda de S**	**1.03**	**52**	‖*eP*	**Pn**	**12 51 07.9**	**-1.0**
SLOZ	**Alcaldia de Sa**	**1.04**	**3**	‖*iP*	**Pn**	**12 51 07.9**	**-1.1**
SLOZ				*eS*	**Sn**	**12 51 23.8**	**+1.2**
LFU	**La Fuente**	**1.05**	**43**	↑*iP*	**Pn**	**12 51 08.5**	**-0.5**
LBRS	**Las Brisas**	**1.09**	**46**	*eP*	**Pn**	**12 51 09.1**	**-0.5**
COEG	**Centro de Oper**	**1.14**	**56**	‖*eP*	**Pn**	**12 51 09.3**	**-0.9**
COEG				IAML		12 51 29.3	
comp=Z,7μm,0.5s							
PAVA	**Las Pavas**	**1.15**	**50**	‖*eP*	**Pn**	**12 51 10.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.30**	**57**	*eP*	**Pn**	**12 51 12.2**	**-0.2**
COEB	**Comit de Eme**	**1.38**	**68**	‖*eP*	**Pn**	**12 51 12.7**	**-0.9**
PQSS	**Presa 15 de Se**	**1.41**	**63**	*eP*	**Pn**	**12 51 13.3**	**-0.5**
P5NO	**Presa 5 de nov**	**1.46**	**47**	*iP*	**Pn**	**12 51 14.5**	**0.0**
MTO3	**Montecristo**	**1.49**	**19**		**Pn**	**12 51 15.1**	**0.0**
MTO3	**Montecristo**	**1.49**	**19**	‖*iP*	**Pn**	**12 51 15.1**	**0.0**
MTO3	**Montecristo**	**1.49**	**19**	*eP*	**Pn**	**12 51 15.1**	**0.0**
PACA	**Pacayal**	**1.56**	**72**	*eP*	**Pn**	**12 51 16.8**	**+0.8**
PACA	**Pacayal**	**1.56**	**72**	*eP*	**Pn**	**12 51 16.7**	**+0.7**
PCG	**Pacaya**	**1.58**	**332**	*eP*	**Pn**	**12 51 15.2**	**-1.2**
PCG				*eS*	**Sn**	**12 51 37.6**	**+1.6**
ESQI	**Esquipulas**	**1.65**	**17**		**Pn**	**12 51 17.5**	**+0.4**
ESQI	**Esquipulas**	**1.65**	**17**	↑*iP*	**Pn**	**12 51 17.5**	**+0.4**
NBG	**Las Nubes**	**1.67**	**343**	*eP*	**Pn**	**12 51 17.8**	**+0.1**
NBG				*eS*	**Sn**	**12 51 41.1**	**+3.0**
FUG	**Fuego 3**	**1.75**	**327**	*eP*	**Pn**	**12 51 16.7**	**-1.9**
FUG				*eS*	**Sn**	**12 51 41.2**	**+1.3**
CAHU	**Cacacuatique**	**1.78**	**64**	*iP*	**Pn**	**12 51 19.2**	**+0.1**
LCND	**La Caada**	**1.94**	**80**	‖*eP*	**Pn**	**12 51 21.0**	**0.0**
CNCH	**Conchagua**	**1.98**	**81**	*eP*	**Pn**	**12 51 21.1**	**-0.7**
MRL	**Marmol**	**2.09**	**4**	*eP*	**Pn**	**12 51 24.5**	**+1.1**
MRL				*eS*	**Sn**	**12 51 53.4**	**+5.0**
RTAL	**Retalhuleu**	**2.36**	**311**		**Pn**	**12 51 27.0**	**+0.1**
STG3	**Santiaguito 3,**	**2.40**	**316**	*eP*	**Pn**	**12 51 25.8**	**-1.7**
STG3				*eS*	**Sn**	**12 51 55.9**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.72**	**67**		**Pn**	**12 51 31.9**	**0.0**
CRIN	**San Cristobal**	**2.74**	**96**		**Pn**	**12 51 32.8**	**+0.7**
CRIN	**San Cristobal**	**2.74**	**96**	*eP*	**Pn**	**12 51 32.1**	**0.0**
HUEH	**Huehuetenango**	**2.82**	**326**		**Pn**	**12 51 34.1**	**+0.8**
CNGN	**Cerro Negro**	**3.11**	**98**		**Pn**	**12 51 37.0**	**-0.1**
CNGN	**Cerro Negro**	**3.11**	**98**	*eP*	**Pn**	**12 51 36.8**	**-0.3**
CNGN				*eS*	**Sn**	**12 52 12.7**	**-0.4**
COPN	**Copaltepe**	**3.28**	**104**	*eP*	**Pn**	**12 51 38.6**	**-0.7**
MOMN	**Momotombo**	**3.28**	**100**	*eP*	**Pn**	**12 51 38.4**	**-1.0**
MATN	**Matagalpa**	**3.82**	**90**		**Pn**	**12 51 46.7**	**-0.3**
MATN	**Matagalpa**	**3.82**	**90**	*eP*	**Pn**	**12 51 46.3**	**-0.7**
PETF	**Flores**	**3.91**	**360**		**Pn**	**12 51 49.5**	**+1.4**
PETF	**Flores**	**3.91**	**360**	*eP*	**Pn**	**12 51 49.1**	**+1.0**
CCIG	**Comitan**	**3.96**	**326**		**Pn**	**12 51 48.9**	**0.0**
BOAB	**BOACO BROADBAN**	**4.11**	**97**	Pn	**Pn**	**12 51 49.4**	**-1.4**
BOAB	**BOACO BROADBAN**	**4.11**	**97**	*eP*	**Pn**	**12 51 50.1**	**-0.8**
HZTE	**Horizontes, Gu**	**4.73**	**118**	Pn	**Pn**	**12 52 00.5**	**+1.1**
ORTG	**Ortega, Santa**	**5.03**	**121**		**Pn**	**12 52 04.3**	**+0.9**
DUNO	**Dulce Nombre,**	**5.15**	**124**		**Pn**	**12 52 05.6**	**+0.5**
JTS	**Las Juntas de**	**5.49**	**119**	Pn	**Pn**	**12 52 12.0**	**+2.2**
JACO	**JACO, Garabito**	**6.06**	**122**	Pn	**Pn**	**12 52 19.9**	**+2.3**
CMIG	**Matias Romero**	**6.35**	**311**	Pn	**Pn**	**12 52 20.6**	**-1.0**
comp=Z,2.4nm,0.3s,baz=108,slow=11,SNR=16							
CMIG				Sn	**Sn**	**12 53 36.4**	**+3.6**
comp=Z,2.1nm,0.3s,baz=146,slow=21,SNR=1.9							
comp=Z,14nm,0.7s							
RIMA	**Rio Macho**	**6.68**	**118**		**Pn**	**12 52 28.5**	**+2.3**
TEIG	**Tepich**	**7.36**	**12**	Pn	**Pn**	**12 52 36.7**	**+1.3**
SRBA	**San Rafael, Bu**	**7.38**	**120**	Pn	**Pn**	**12 52 37.6**	**+1.9**
WHTX	**Lake Whitney,**	**20.17**	**341**		**P**	**12 55 20.8**	**+0.3**
WHTX				IAmb	IAmb	12 55 21.8	
comp=Z,12nm,0.8s							
Z47A	**Carrollton**	**20.19**	**4**	P	**P**	**12 55 20.9**	**+0.2**
Z47A				IAmb	IAmb	12 55 27.5	
comp=Z,15nm,0.8s							
TX31	**Lajitas Ar. Si**	**20.72**	**324**		Pn	12 55 28.5	-1.0
TX31				IAmb	IAmb	12 55 29.9	
comp=Z,24nm,0.8s							
TX32	**Lajitas Array**	**20.72**	**324**	P	Pn	12 55 28.1	-1.4
TXAR	**Lajitas Array**	**20.72**	**324**	P	Pn	12 55 28.7	-0.8
comp=Z,7.6nm,0.8s,baz=149,slow=11,SNR=88							
TXAR				PcP	**PcP**	**12 59 36.4**	**+1.6**
comp=Z,0.9nm,0.9s,baz=148,slow=3.3,SNR=6.0							
comp=Z,7.6nm,0.8s							
TXAR	**Lajitas Array**	**20.72**	**324**	P	Pn	12 55 28.4	-1.0
OXF	**Oxford**	**21.44**	**1**	P	**P**	**12 55 35.8**	**+1.6**
BAUV	**El Baul**	**21.78**	**98**	P	**P**	**12 55 39.1**	**+1.1**
BAUV				IAmb	IAmb	12 55 40.7	
comp=Z,11nm,0.8s							
W45A	**Hickory Valley**	**22.09**	**1**	P	**P**	**12 55 42.6**	**+1.5**
ATAH	**Atahualpa**	**23.00**	**150**	LR	LR	13 04 01.4	
comp=Z,78nm,18.8s,baz=355,slow=35							
LCAR	**Lake Charles**	**23.02**	**357**	P	**P**	**12 55 51.6**	**+0.7**
TKL	**Tuckaleeches C**	**23.23**	**13**	P	**P**	**12 55 51.5**	**-1.6**
comp=Z,2.8nm,0.7s,baz=159,slow=4.8,SNR=4.3							
comp=Z,2.8nm,0.7s							
T45A	**Paducah**	**23.96**	**2**	P	**P**	**12 56 00.2**	**+0.4**
T47A	**Sharon Grove**	**24.03**	**5**	P	**P**	**12 56 00.0**	**-0.4**
S44A	**Carbondale**	**24.62**	**1**	P	**P**	**12 56 06.4**	**+0.6**
S39A	**Bolivar**	**24.80**	**353**	P	**P**	**12 56 06.9**	**-0.6**
S39A				IAmb	IAmb	12 56 08.2	
comp=Z,5.1nm,0.7s							
CCM	**Cathedral Cave**	**25.00**	**357**	P	**P**	**12 56 09.0**	**-0.3**
CCM				IAmb	IAmb	12 56 10.7	
comp=Z,9.4nm,0.9s							
121A	**Cookes Peak, D**	**25.47**	**323**	P	**P**	**12 56 15.9**	**+2.2**
121A				IAmb	IAmb	12 56 16.9	
comp=Z,7.4nm,0.8s							
WUAZ	**Wupatki**	**29.68**	**323**	P	**P**	**12 56 53.4**	**+1.9**
W13A	**Hualapai Mount**	**30.94**	**319**	P	**P**	**12 57 04.5**	**+1.8**
ECSD	**EROS Data Cent**	**31.19**	**351**	P	**P**	**12 57 03.3**	**-1.3**
ECSD				IAmb	IAmb	12 57 04.4	
comp=Z,9.6nm,1.1s							
PFO	**Pinyon Flats O**	**31.76**	**315**	LR	LR	13 11 29.6	
comp=Z,73nm,20.4s,baz=148,slow=39							
MTPU	**Mount Pierson**	**31.91**	**325**	P	**P**	**12 57 13.9**	**+2.5**
MTPU				IAmb	IAmb	12 57 15.0	
comp=Z,2.8nm,0.9s							
SPMN	**Marine on St.**	**32.23**	**356**	P	**P**	**12 57 11.9**	**-1.7**
CCUT	**Cedar City**	**32.24**	**324**	P	**P**	**12 57 15.7**	**+1.6**
SHPR	**Sheep Range**	**32.63**	**320**	P	**P**	**12 57 19.5**	**+2.0**
SADO	**Sadowa**	**32.98**	**14**	P	**P**	**12 57 17.8**	**-2.4**
comp=Z,9.6nm,0.8s,baz=260,slow=7.9,SNR=3.2							
SADO				LR	LR	13 11 43.7	
comp=Z,58nm,18.1s,baz=230,slow=38							
comp=Z,9.6nm,0.8s							
PDAR	**Pinedale Array**	**34.23**	**334**	P	**P**	**12 57 31.6**	**+0.2**
comp=Z,0.4nm,0.8s,baz=130,slow=8.4,SNR=2.7							
PDAR				PcP	**PcP**	**13 00 08.2**	**+1.0**
comp=Z,0.2nm,0.3s,baz=102,slow=6.0,SNR=7.3							
PDAR				LR	LR	13 14 26.6	
comp=Z,48nm,19.4s,baz=142,slow=42							
comp=Z,0.4nm,0.8s							
REDW	**Red Top Meadow**	**35.27**	**333**	P	**P**	**12 57 40.8**	**+0.4**
REDW				IAmb	IAmb	12 57 42.1	
comp=Z,4.0nm,0.8s							
ELK	**Elko**	**35.49**	**326**	LR	LR	13 16 06.3	
comp=Z,81nm,18.8s,baz=163,slow=43							
NVAR	**Mina Array Bea**	**35.78**	**320**	P	**P**	**12 57 47.0**	**+2.2**
comp=Z,8.0nm,0.8s,baz=136,slow=8.1,SNR=54							
NVAR				PcP	**PcP**	**13 00 13.3**	**+1.6**
comp=Z,0.8nm,0.7s,baz=125,slow=4.0,SNR=6.1							
NVAR				LR	LR	13 14 37.3	
comp=Z,93nm,19.3s,baz=134,slow=40							
comp=Z,8.0nm,0.8s							
NVAR	**Mina Array Bea**	**35.78**	**320**	P	**P**	**12 57 46.8**	**+2.0**
LHV	**Little Huntoon**	**35.80**	**320**	P	**P**	**12 57 47.4**	**+2.8**
KVN	**Kaiserville**	**36.04

NRN	**Naryn**	**13.33**	**306**	Pn	**Pn**	**13 14 32.2**	**-0.3**
MK31	**Makanchi Array**	**13.87**	**337**	Pn	**Pn**	**13 14 39.0**	**-0.6**
MKAR	**Makanchi Array**	**13.87**	**337**	Pn	**Pn**	**13 14 39.5**	**-0.1**
	0.1nm,0.3s,baz=150,slow=13,SNR=9.5						
MKAR				LR	LR	13 20 41.7	
	comp=Z,127nm,19.3s,baz=176,slow=40						
	2.3nm,1.0s						
MAKZ	**Makanchi**	**13.99**	**336**		**Pn**	**13 14 40.5**	**-0.7**
AAK	**Ala-Archa**	**14.89**	**309**	LR	LR	13 21 18.8	
	comp=Z,128nm,18.1s,baz=124,slow=40						
AAK	**Ala-Archa**	**14.89**	**309**	P	**Pn**	**13 14 57.2**	**+3.5**
XAN	**Xi'an**	**15.44**	**86**	*eP*	**Pn**	**13 15 00.5**	**-0.4**
XAN				S	**Sn**	**13 17 50.4**	**-1.6**
GAR	**Garm**	**16.69**	**292**	P	**Pn**	**13 15 18.9**	**+1.9**
GAR				IAmb	IAmb	13 15 25.1	
	comp=Z,14nm,1.2s						
KBL	**Kabul**	**17.52**	**277**	P	**Pn**	**13 15 26.0**	**-1.6**
KBL				IAmb	IAmb	13 15 30.0	
	comp=Z,7.2nm,0.6s						
CHGR	**Chuyangaron**	**17.53**	**290**	P	**Pn**	**13 15 27.0**	**-0.5**
CHGR				IAmb	IAmb	13 15 31.9	
	comp=Z,22nm,1.2s						
CMAR	**Chiang Mai Arr**	**17.56**	**152**	P	**Pn**	**13 15 26.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=327,slow=11,SNR=19						
CMAR				LR	LR	13 23 44.9	
	comp=Z,6.7nm,20.3s,baz=325,slow=43						
	comp=Z,2.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.56**	**152**	P	**Pn**	**13 15 27.1**	**-0.9**
KK31	**Karatay Array**	**17.73**	**306**	P	**Pn**	**13 15 30.3**	**+0.3**
KKAR	**Karatay Array**	**17.73**	**306**	P	**Pn**	**13 15 30.2**	**+0.3**
KKAR	**Karatay Array**	**17.73**	**306**		**Pn**	**13 15 29.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**18.08**	**63**	*eP*	**P**	**13 15 34.8**	**+0.1**
SONM	**Songino Array**	**18.14**	**37**	P	**P**	**13 15 36.0**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=209,slow=14,SNR=6.6						
SONM				LR	LR	13 22 14.2	
	comp=Z,14nm,19.4s,baz=45,slow=36						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**18.14**	**37**	P	**Pn**	**13 15 33.0**	**-2.0**
KURBB	**Kurchatov Arra**	**18.44**	**336**	P	**P**	**13 15 38.5**	**0.0**
	baz=151,slow=12,SNR=15						
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**18.49**	**336**	P	**P**	**13 15 36.6**	**-2.4**
HYBB	**Hyderabad (bro**	**19.81**	**215**	*eP*	**P**	**13 15 54.0**	**+0.2**
HYBB				*eS*	**Sn**	**13 19 39.3**	**+1.2**
ZAA0	**Zalesovo Array**	**20.03**	**351**	P	**P**	**13 15 53.4**	**-2.4**
ZAA0				IAmb	IAmb	13 16 01.7	
	comp=Z,9.2nm,0.8s						
ZALV	**Zalesovo Beam**	**20.03**	**351**	P	Pn	13 15 57.3	-0.3
	comp=Z,8.1nm,0.7s,baz=169,slow=11,SNR=32						
ZALV				LR	LR	13 24 27.4	
	comp=Z,42nm,21.0s,baz=170,slow=39						
	comp=Z,8.1nm,0.7s						
ZALV	**Zalesovo Beam**	**20.03**	**351**	P	**P**	**13 15 54.7**	**-1.1**
UBPT	**Khong Chiam**	**23.37**	**140**	P	**P**	**13 16 30.6**	**-1.1**
UBPT				IAmb	IAmb	13 16 35.2	
	comp=Z,24nm,1.1s						
BVAR	**Borovoye Array**	**23.48**	**329**	P	**P**	**13 16 33.8**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=116,slow=10,SNR=8.0						
BVAR				LR	LR	13 26 30.5	
	comp=Z,87nm,19.4s,baz=138,slow=39						
	comp=Z,1.0nm,0.7s						
BRVK	**Borovoye**	**23.54**	**329**	P	**P**	**13 16 32.7**	**-0.6**
GEYT	**Alibeck**	**26.16**	**287**	P	**P**	**13 16 58.4**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=108,slow=9.8,SNR=8.3						
GEYT				LR	LR	13 29 24.2	
	comp=Z,76nm,19.1s,baz=63,slow=41						
	comp=Z,2.3nm,0.6s						
GEYT	**Alibeck**	**26.16**	**287**	P	**P**	**13 16 57.6**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**26.16**	**287**	P	**P**	**13 16 58.2**	**+0.6**
GYA0B				IAmb	IAmb	13 17 06.5	
	comp=Z,9.5nm,1.1s						
KNMB	**Chin-men Tao**	**26.31**	**104**	P	**P**	**13 16 56.1**	**-2.8**
ABKAR	**Akbulak array**	**26.89**	**313**	P	**P**	**13 17 04.4**	**+0.5**
ABKAR	**Akbulak array**	**26.89**	**313**	P	**P**	**13 17 04.0**	**+0.1**
KSRS	**Korea Array**	**30.54**	**73**	P	**P**	**13 17 38.5**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=272,slow=8.3,SNR=2.6						
	comp=Z,0.6nm,0.7s						
ARU	**Arti**	**30.95**	**325**	LR	LR	13 31 30.7	
	comp=Z,99nm,21.7s,baz=146,slow=39						
ONI	**Oni**	**37.20**	**297**	P	**P**	**13 18 35.7**	**+1.2**
KBZ	**Khabaz**	**37.56**	**299**	P	**P**	**13 18 39.0**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=146,slow=3.6,SNR=2.4						
	comp=Z,1.3nm,0.5s						
MYLDM	**Lahad Datu**	**39.03**	**132**	P	**P**	**13 18 49.9**	**0.0**
MYLDM				IAmb	IAmb	13 18 55.6	
	comp=Z,15nm,1.1s						
BRTR	**Keskin Array B**	**44.92**	**294**	P	**P**	**13 19 38.5**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=91,slow=10,SNR=4.8						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**46.55**	**310**	P	**P**	**13 19 51.2**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=75,slow=6.4,SNR=10						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**48.32**	**325**	P	**P**	**13 20 04.5**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=166,slow=11,SNR=5.0						
	comp=Z,3.2nm,0.8s						
MLR	**Muntele Rosu**	**49.39**	**303**	P	**P**	**13 20 14.0**	**+1.1**
	comp=Z,6.7nm,0.9s,baz=179,slow=0.2,SNR=6.5						
	comp=Z,6.7nm,0.9s						
MLR	**Muntele Rosu**	**49.39**	**303**	P	**P**	**13 20 14.3**	**+1.4**
ARCES	**ARCESS Array B**	**49.52**	**335**	P	**P**	**13 20 15.0**	**+1.6**
	comp=Z,1.9nm,0.8s,baz=85,slow=5.1,SNR=5.8						
	comp=Z,1.9nm,0.8s						
MORC	**Moravsky Berou**	**54.10**	**310**	P	**P**	**13 20 48.6**	**+0.7**
MORC				IAmb	IAmb	13 20 49.8	
	comp=Z,4.2nm,1.0s						
MORC	**Moravsky Berou**	**54.10**	**310**	*eP*	**P**	**13 20 49.0**	**+1.1**
SOEI	**Soe**	**54.39**	**137**	P	**P**	**13 20 50.0**	**-0.4**
HFS	**Hagfors**	**54.43**	**323**	P	**P**	**13 20 51.1**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=89,slow=9.0,SNR=12						
	comp=Z,3.3nm,0.8s						
VRAC	**Vranov**	**54.81**	**310**	*eP*	**P**	**13 20 54.4**	**+1.4**
KRUC	**Moravsky**	**55.00**	**310**	*eP*	**P**	**13 20 55.5**	**+1.1**
NB2	**NORSAR Subarra**	**55.50**	**325**	P	**P**	**13 20 57.9**	**0.0**
	comp=Z,4.1nm,0.8s,baz=80,slow=7.4						
NOA	**NORSAR Array B**	**55.50**	**325**	P	**P**	**13 20 58.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=81,slow=7.1,SNR=4.7						
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**56.56**	**313**	*eP*	**P**	**13 21 06.0**	**+0.5**
GEC2	**GERESS Array S**	**56.77**	**310**	P	**P**	**13 21 06.1**	**-1.1**
GEC2				IAmb	IAmb	13 21 09.1	
	comp=Z,3.5nm,0.9s						
GERES	**GERESS Array B**	**56.77**	**310**	P	**P**	**13 21 07.3**	**+0.1**
	comp=Z,2.3nm,1.0s,baz=79,slow=6.9,SNR=12						
	comp=Z,2.3nm,1.0s						
GERES	**GERESS Array B**	**56.77**	**310**	P	**P**	**13 21 05.9**	**-1.3**
FDMO	**Fiordimonte**	**58.94**	**303**	P	**P**	**13 21 22.2**	**-0.2**
FDMO				IAmb	IAmb	13 21 27.8	
	comp=Z,8.9nm,1.3s						
DAVOX	**Davos/Dischmat**	**59.85**	**308**	P	**P**	**13 21 28.3**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=146,slow=8.8,SNR=2.5						
	comp=Z,1.1nm,0.3s						
WB0	**Warramunga Arr**	**68.21**	**135**	P	**P**	**13 22 25.1**	**+1.2**
WB0				IAmb	IAmb	13 22 26.8	
	comp=Z,4.5nm,0.9s						
WRAB	**Tennant Creek**	**68.31**	**135**	P	**P**	**13 22 24.4**	**-0.1**
WRA	**Warramunga Arr**	**68.31**	**135**	P	**P**	**13 22 25.0**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=325,slow=6.3,SNR=38						
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**68.31**	**135**	P	**P**	**13 22 24.7**	**+0.2**
WB2	**Warramunga Arr**	**68.32**	**135**	P	**P**	**13 22 24.4**	**-0.2**
WR0	**Warramunga Arr**	**68.44**	**135**	P	**P**	**13 22 24.3**	**-1.0**
WR0				IAmb	IAmb	13 22 58.9	
	comp=Z,9.8nm,1.5s						
ASAR	**Alice Springs**	**71.00**	**138**	P	**P**	**13 22 41.1**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=328,slow=7.0,SNR=24						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**71.00**	**138**	P	**P**	**13 22 42.7**	**+1.6**
PPLA	**Purkeypile**	**71.14**	**25**	P	**P**	**13 22 41.8**	**+0.2**
FRB	**Frobisher Bay**	**80.85**	**351**	P	**P**	**13 23 36.4**	**-0.3**
	comp=Z,24nm,1.0s,baz=117,slow=1.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**81.56**	**280**	P	**P**	**13 23 40.0**	**-1.3**
	comp=Z,13nm,0.6s,baz=56,slow=3.8,SNR=5.1						
CPUP	**Villa Florida**	**151.02**	**277**	PKPbc	**PKPbc**	**13 31 14.5**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=82,slow=3.6,SNR=6.2						

*BJI **01** 13:17:09.9±0.0,39°.91N×29°.99W,h10km,mb5.1/39, mB5.2/22,Ms5.0/22,Ms7 4.7/23*
*IDC **01** 13:17:15.7±0.4,40°.70N×29°.35W,h0km,mb4.5/41, mbtmp4.5/42,ML3.8/1,MS4.3/86,Error ellipse: s-maj=13.2km s-min=9.9km az=157.0*
*NEIC **01** 13:17:17.0±1.4,40°.78N±0°.09×29°.3W±0°.1,h10km±1km, mb5.2/458,Error ellipse: s-maj=16.2km s-min=13.4km az=209.0*
*MOS **01** 13:17:16.5±1.1,40°.64N×29°.43W,h22km,mb5.2/74, MS4.6/14,Error ellipse: s-maj=8.2km s-min=4.3km az=145.0*
*GCMT **01** 13:17:17.0±0.2,40°.93N±0°.02×29°.28W±0°.01,h12km, MW5.0/133,Moment Tensor Solution. s51,c56; s133,c207; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.60±.08; $M_{\theta\theta}$0.35±.08; $M_{\phi\phi}$3.25±.06; $M_{r\theta}$2.73±.37; $M_{\theta\phi}$0.24±.06; $M_{\phi r}$-0.48±.24; Best double couple: M_{o}=4.15700×10^{16} NP1:ϕ_s=338.00000°,δ54.00000°, λ-124.00000°. NP2:ϕ_s=207.00000°,δ48.00000°, λ-52.00000°. Principal axes: T 3.2850, Plg3.0000°, Azm92.0000°; N 1.7440, Plg27.0000°, Azm0.0000°; P -5.0290, Plg63.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*SVSA **01** 13:17:18.1±1.0,40°.73N×29°.30W,h10km,ML4.0(INMG) Error ellipse: s-maj=5.3km s-min=3.7km az=81.0*

ISC 01 13:17:16.0±0.9,40°.63N±0°.04×29°.37W±0°.03,h4km±5km, n979,σ1$72/859,mb5.2/326,MS4.4/117,34C-17D,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.89**	**147**	*eP*	**Pn**	**13 17 46.5**	**-2.5**
SRBC				*eS*	**Sn**	**13 18 07.9**	**-5.4**
SRBC				A	A	13 18 11.3	
	746nm,0.3s						
PGRA	**Graciosa**	**1.92**	**146**	*eP*	**Pn**	**13 17 46.8**	**-2.6**
PGRA				*eS*	**Sn**	**13 18 08.3**	**-5.7**
PGRA				A	A	13 18 15.7	
	203nm,0.3s						
PCED	**Cedros**	**2.06**	**165**	*eP*	**Pn**	**13 17 49.9**	**-1.5**
PCED				*eS*	**Sn**	**13 18 12.8**	**-4.7**
PCED				A	A	13 18 14.3	
	535nm,0.3s						
PCAPE	**Capelo, Faial**	**2.07**	**168**	*eS*	**Sn**	**13 18 13.2**	**-4.5**
PCAPE				A	A	13 18 16.7	
	481nm,0.2s						
ROSA	**Rosais**	**2.10**	**155**	*eP*	**Pn**	**13 17 49.2**	**-2.6**
ROSA				*eS*	**Sn**	**13 18 13.5**	**-4.8**
ROSA				A	A	13 18 18.8	
	226nm,0.3s						
ROSA	**Rosais**	**2.10**	**155**		**Pn**	**13 17 49.0**	**-2.8**
CALA	**Caldeira**	**2.11**	**166**	*eP*	**Pn**	**13 17 50.4**	**-1.7**
CALA				*eS*	**Sn**	**13 18 14.2**	**-4.6**
CALA				A	A	13 18 17.4	
	668nm,0.2s						
PFCBR	**Castelo Branco**	**2.16**	**166**	*eP*	**Pn**	**13 17 50.6**	**-2.1**
PFCBR				*eS*	**Sn**	**13 18 14.8**	**-5.2**
PFCBR				A	A	13 18 16.5	
	288nm,0.3s						
PMAN	**Manadas**	**2.23**	**153**	*eP*	**Pn**	**13 17 51.5**	**-2.1**
PMAN				*eS*	**Sn**	**13 18 16.4**	**-5.1**
PMAN				A	A	13 18 19.6	
	195nm,0.3s						
PICO	**Pico**	**2.25**	**161**	*eP*	**Pn**	**13 17 51.7**	**-2.3**
PICO				*eS*	**Sn**	**13 18 17.4**	**-4.8**
PICO				A	A	13 18 21.3	
	248nm,0.2s						
PCAN	**Candelaria**	**2.27**	**162**	*eP*	**Pn**	**13 17 52.2**	**-2.0**
PCAN				*eS*	**Sn**	**13 18 17.8**	**-4.8**
PCAN				A	A	13 18 19.8	
	352nm,0.2s						
PID	**Ribeirinha**	**2.39**	**156**	*eP*	**Pn**	**13 17 53.8**	**-2.1**
PID				*eS*	**Sn**	**13 18 20.5**	**-5.1**
PID				A	A	13 18 25.1	
	106nm,0.2s						
PSBA	**Serra de Santa**	**2.44**	**139**	*eP*	**Pn**	**13 17 53.7**	**-2.9**
PSBA				*eS*	**Sn**	**13 18 20.4**	**-6.4**
PSBA				A	A	13 18 21.0	
	107nm,0.1s						
PAGU	**Agualva, Azore**	**2.51**	**137**	*eP*	**Pn**	**13 17 54.5**	**-3.0**
PAGU				*eS*	**Sn**	**13 18 22.4**	**-6.1**
PAGU				A	A	13 18 24.3	
	594nm,0.2s						
ADH	**Angra Heroismo**	**2.57**	**139**	*eP*	**Pn**	**13 17 55.8**	**-2.5**
ADH				*eS*	**Sn**	**13 18 24.1**	**-5.9**
ADH				A	A	13 18 28.6	
	152nm,0.3s						
PSCM	**Serra do Cume**	**2.59**	**137**	*eP*	**Pn**	**13 17 55.8**	**-2.9**
PSCM				*eS*	**Sn**	**13 18 24.8**	**-5.8**
PSCM				A	A	13 18 28.6	
	270nm,0.1s						
PSET	**Sete Cidades**	**3.98**	**134**	*eP*	**Pn**	**13 18 15.3**	**-2.5**
PSET				*eS*	**Sn**	**13 18 58.7**	**-6.3**
PSET				A	A	13 19 03.1	
	45nm,0.2s						
CMLA	**Cha da Macela**	**4.13**	**133**	*eS*	**Sn**	**13 19 02.2**	**-6.5**
CMLA				A	A	13 19 06.8	
	91nm,0.3s						
CMLA	**Cha da Macela**	**4.13**	**133**		Pn	13 18 15.4	-4.5
CMLA	**Cha da Macela**	**4.13**	**133**	P	**Pn**	**13 18 18.3**	**-1.6**
BART	**Pico Bartolome**	**4.33**	**130**	*eP*	**Pn**	**13 18 20.2**	**-2.4**
BART				*eS*	**Sn**	**13 19 06.8**	**-6.8**
BART				A	A	13 19 15.2	
	19nm,0.2s						
PSMA	**Santa Maria**	**4.91**	**136**	*eP*	**Pn**	**13 18 28.8**	**-1.7**
PSMA				*eS*	**Sn**	**13 19 20.9**	**-6.9**
PSMA				A	A	13 19 21.2	
	24nm,0.3s						
PSMN	**Pico do Norte,**	**4.94**	**136**	*eP*	**Pn**	**13 18 28.9**	**-2.0**
PSMN				*eS*	**Sn**	**13 19 21.5**	**-7.0**
PSMN				A	A	13 19 35.3	
	8.7nm,0.3s						
PMOZ	**Porto Moniz, M**	**12.48**	**125**	*eP*	**Pn**	**13 20 15.0**	**+0.6**
	97nm,1.5s						
PMOZ				*eS*	**Sn**	**13 22 39.2**	**+5.2**
PMAR	**Madeira**	**12.72**	**124**	*eP*	**Pn**	**13 20 18.8**	**+1.0**
	128nm,1.7s						
PMAFR	**Mafra**	**15.53**	**90**	*eP*	**Pn**	**13 20 55.9**	**+0.2**
PMAFR				*eS*	**S**	**13 24 09.4**	**+5.3**
PMST	**Lisbon--Monsan**	**15.65**	**90**	*eP*	**Pn**	**13 20 59.2**	**+1.9**
	146nm,2.0s						
LIS	**Lisbon**	**15.69**	**90**	*eP*	**Pn**	**13 20 57.6**	**-0.1**
LIS				IAmb	IAmb	13 21 02.3	
	comp=Z,84nm,1.1s						
LIS	**Lisbon**	**15.69**	**90**	*eP*	**Pn**	**13 20 57.6**	**-0.1**
PSBE	**So Bento**	**15.79**	**87**	*eS*	**S**	**13 24 18.3**	**+8.9**
PGAV	**Gavieira, Arco**	**15.91**	**78**	*eP*	**Pn**	**13 21 02.3**	**+1.5**
	comp=Z,69nm,1.5s						
PGAV				*eS*	**S**	**13 24 14.8**	**+2.8**
PCAS	**Casmilo, Conde**	**15.92**	**85**	*eP*	**P**	**13 21 05.1**	**+0.5**
	comp=Z,118nm,1.5s						
PCAS				*eS*	**S**	**13 24 14.8**	**+2.7**
COI	**Coimbra**	**15.97**	**85**	*eP*	**P**	**13 21 06.7**	**+1.7**
	comp=Z,213nm,1.6s						
COI				*eS*	**S**	**13 24 15.4**	**+2.5**
COI	**Coimbra**	**15.97**	**85**		**P**	**13 21 04.4**	**-0.6**
COI				IAmb	IAmb	13 21 08.2	
	comp=Z,171nm,1.2s						
COI	**Coimbra**	**15.97**	**85**	P	**P**	**13 21 04.4**	**-0.6**
COI				pmax	pmax		
	comp=Z,171nm,1.2s						
PCAB	**Cabril**	**16.11**	**79**	*eP*	**P**	**13 21 08.3**	**+1.7**
	comp=Z,78nm,1.8s						
PVIS	**Viseu**	**16.29**	**83**	*eP*	**P**	**13 21 09.7**	**+1.0**
	comp=Z,137nm,1.7s						
POLO	**Lamas de Olo**	**16.30**	**80**	*eP*	**P**	**13 21 10.3**	**+1.5**
	comp=Z,38nm,1.6s						
POLO				*eS*	**S**	**13 24 24.2**	**+4.2**
PNCL	**Nicolau / Gran**	**16.31**	**92**	*eP*	**Pn**	**13 21 04.4**	**-1.3**
	comp=Z,71nm,1.7s						
PNCL				*eS*	**S**	**13 24 29.5**	**+10**
PMTG	**Montargil**	**16.31**	**89**	*eP*	**Pn**	**13 21 02.9**	**-2.9**
	comp=Z,128nm,1.6s						
PMTG				*eS*	**S**	**13 24 29.9**	**+10**
PTEO	**Sao Teotonio**	**16.32**	**94**	*eP*	**Pn**	**13 21 06.5**	**+0.6**
	comp=Z,115nm,2.0s						
PFVI	**Vila Bisbo**	**16.37**	**96**	*eS*	**S**	**13 24 29.8**	**+8.6**
PVRL	**Vila Real**	**16.37**	**81**	*eP*	**P**	**13 21 11.4**	**+1.9**
	comp=Z,101nm,1.5s						
MORF	**Marmelete**	**16.45**	**95**	*eP*	**Pn**	**13 21 07.6**	**0.0**
MORF				IAmb	IAmb	13 21 11.5	
	comp=Z,141nm,1.9s						
MORF				*eS*	**Sn**	**13 24 11.0**	**+0.5**
MORF	**Marmelete**	**16.45**	**95**	*eP*	**Pn**	**13 21 07.3**	**-0.3**
	comp=Z,74nm,1.8s						
MORF				*eS*	S	13 24 37.0	+14
MORF	**Marmelete**	**16.45**	**95**	*eP*	**Pn**	**13 21 07.6**	**0.0**
MORF				*eS*	**Sn**	**13 24 11.0**	**+0.5**
EVO	**Evora**	**16.59**	**90**	*eP*	**Pn**	**13 21 09.8**	**+0.4**
	comp=Z,90nm,1.9s						
MTE	**Manteigas**	**16.60**	**84**	*eP*	**P**	**13 21 13.0**	**+0.9**
	comp=Z,128nm,1.8s						
MTE				*eS*	S	13 24 42.4	+16
MTE	**Manteigas**	**16.60**	**84**		**Pn**	**13 21 05.6**	**-3.9**
MESJ	**Messejana**	**16.62**	**93**	*eP*	**Pn**	**13 21 09.7**	**0.0**
MESJ				IAmb	IAmb	13 21 16.8	
	comp=Z,114nm,1.9s						
MESJ	**Messejana**	**16.62**	**93**	*eP*	**Pn**	**13 21 08.5**	**-1.2**
	comp=Z,54nm,1.6s						
MESJ	**Messejana**	**16.62**	**93**	*eP*	**Pn**	**13 21 10.0**	**+0.3**
PCBR	**Castelo Branco**	**16.73**	**86**	*eP*	**P**	**13 21 14.0**	**+0.5**
	comp=Z,151nm,2.2s						
PCVE	**Castro Verde**	**16.81**	**93**	*eP*	**Pn**	**13 21 13.2**	**+1.0**
	comp=Z,69nm,1.6s						
PCVE				*eS*	S	13 25 00.1	+30
PBEJ	**Beja**	**16.84**	**92**	*eP*	**P**	**13 21 14.1**	**-0.6**
	comp=Z,48nm,1.6s						
PESTR	**Estremoz**	**16.84**	**89**	*eP*	**Pn**	**13 21 13.4**	**+0.9**
	comp=Z,46nm,1.7s						
PESTR				*eS*	**S**	**13 24 38.0**	**+7.2**
PESTR	**Estremoz**	**16.84**	**89**		**Pn**	**13 21 09.2**	**-3.3**
PMRV	**Marv??o**	**16.87**	**87**	*eP*	**P**	**13 21 15.2**	**+0.1**
	comp=Z,123nm,1.7s						
PMRV				*eS*	S	13 24 57.7	+26
MVO	**Moncorvo**	**16.90**	**81**	*eP*	**P**	**13 21 16.3**	**+0.9**
	comp=Z,91nm,1.6s						
MVO				*eS*	**S**	**13 24 35.1**	**+3.0**
PBRG	**Braganca**	**17.06**	**79**	*eP*	**P**	**13 21 19.6**	**+2.4**
	comp=Z,48nm,1.9s						
PVAQ	**Vaqueiros**	**17.12**	**94**	*eP*	**P**	**13 21 17.9**	**0.0**
	comp=Z,64nm,1.7s						
PVAQ				*eS*	**S**	**13 24 43.0**	**+6.4**
PVAQ	**Vaqueiros**	**17.12**	**94**	P	**P**	**13 21 17.5**	**-0.4**
PBAR	**Barrancos**	**17.43**	**91**	*eP*	**P**	**13 21 22.8**	**+1.6**
	comp=Z,54nm,1.6s						
PBAR				*eS*	**S**	**13 24 38.0**	**-4.7**
AVE	**Averroes**	**18.98**	**106**	P	**P**	**13 21 38.2**	**-0.1**
PAB	**San Pablo**	**19.16**	**85**	P	**P**	**13 21 40.4**	**0.0**
PAB	**San Pablo**	**19.16**	**85**	P	**P**	**13 21 40.4**	**0.0**
PAB				pmax	pmax		
	comp=Z,69nm,1.6s						
ESDC	**Sonseca Array**	**19.43**	**85**	P	**Pn**	**13 21 44.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=289,slow=10,SNR=25						
ESDC				LR	LR	13 28 05.8	
	comp=Z,2μm,18.6s,baz=263,slow=34						
	comp=Z,3.9nm,0.7s						
ESDC	**Sonseca Array**	**19.43**	**85**	P	**P**	**13 21 43.3**	**0.0**
ESBB	**Sonseca Array**	**19.43**	**85**	P	**P**	**13 21 43.5**	**+0.3**
MDT	**Midelt**	**21.28**	**104**	P	**P**	**13 22 04.7**	**+1.2**
	comp=Z,9.3nm,1.1s,baz=293,slow=10.0,SNR=13						
MDT				LR	LR	13 28 32.1	
	comp=Z,1μm,21.1s,baz=318,slow=32						
	comp=Z,9.3nm,1.1s						
DRLN	**Deer Lake**	**21.60**	**303**	P	**P**	**13 22 06.6**	**-0.1**
MFF	**Saint Martin d**	**21.91**	**64**	*eP*	**P**	**13 22 12.7**	**+2.7**
MFF				pmax	pmax		
	comp=Z,127nm,1.6s						
EKA	**Eskdalemuir Ar**	**22.71**	**41**	P	**P**	**13 22 18.0**	**-0.5**
	comp=Z,9.3nm,1.0s,baz=238,slow=7.3,SNR=13						
EKA				LR	LR	13 29 28.4	
	comp=Z,922nm,18.4s,baz=196,slow=32						
	comp=Z,9.3nm,1.0s						
CAF	**Calviac**	**23.39**	**69**	*eP*	**P**	**13 22 25.0**	**-0.6**
CAF				pmax	pmax		
	comp=Z,62nm,1.4s						
CLF	**Chambon-Foret**	**23.68**	**61**	P	**P**	**13 22 28.4**	**0.0**
GBN	**Guysborough**	**23.89**	**292**	P	**P**	**13 22 29.9**	**-0.6**
BORG	**Borgarnes**	**24.61**	**8**	LR	LR	13 29 30.8	
	comp=Z,946nm,20.4s,baz=188,slow=30						
SSB	**Saint Sauveur**	**25.13**	**68**	P	**P**	**13 22 42.4**	**+0.5**
SSB	**Saint Sauveur**	**25.13**	**68**	P	**P**	**13 22 42.4**	**+0.5**
SSB				pmax	pmax		
	comp=Z,37nm,1.5s						
HAL	**Halifax**	**25.38**	**290**	P	**P**	**13 22 43.7**	**-0.4**
HAL				IAmb	IAmb	13 23 01.2	
	comp=Z,84nm,1.4s						
HAL	**Halifax**	**25.38**	**290**	P	**P**	**13 22 43.7**	**-0.4**
HAL				pmax	pmax		
	comp=Z,84nm,1.4s						
DOU	**Dourbes**	**25.48**	**57**	*dP*	**P**	**13 22 45.6**	**+0.7**
	comp=Z,16nm,1.4s						
BMRD	**Maredsous**	**25.62**	**56**	*dP*	**P**	**13 22 46.8**	**+0.6**
	comp=Z,12nm,1.6s						
RCHB	**Rochefort**	**25.89**	**57**	*dP*	**P**	**13 22 49.0**	**+0.3**
	comp=Z,6.5nm,1.2s						
BCLA	**Clavier**	**25.98**	**56**	*dP*	**P**	**13 22 49.9**	**+0.4**
	comp=Z,14nm,1.3s						
WLF	**Walferdange**	**26.42**	**58**	P	**P**	**13 22 51.6**	**-1.9**
WLF				IAmb	IAmb	13 23 05.3	
	comp=Z,107nm,1.4

comp=Z,2.5nm,0.7s
KONO Kongsberg 30.76 39 *i* P **P 13 23 30.4 -1.7**
KONO pmax pmax
comp=Z,7.0nm,1.0s
CLUD Cludinico 30.89 65 P **P 13 23 32.2 -1.3**
CLL Collm 30.92 55 *i* P **P 13 23 34.1 +0.5**
CLL *i* 13 23 38.5
CLL *e*S **S 13 28 38.0 -0.2**
CLL pmax pmax
comp=Z,15nm,1.5s
CLL Collm 30.92 55 *i* P **P 13 23 34.1 +0.5**
comp=Z,15nm,1.5s
CLL *i* x x 13 23 38.5
comp=Z,31nm,1.8s
CLL *e*(PPPP) 13 24 49.0
CLL *e*S **S 13 28 38.0 -0.2**
CLL *e*(SS) 13 30 00.0
CLL *e*SSS SSS 13 30 36.0
KBA Koelnbreinsper 31.16 64 *e*P **P 13 23 36.5 +0.5**
comp=Z,46nm,1.2s,SNR=20
CESX Cesi 31.19 72 P **P 13 23 35.9 -0.2**
KHC Kasperske Hory 31.24 60 P **P 13 23 35.7 -0.8**
KHC Kasperske Hory 31.24 60 P **P 13 23 35.7 -0.8**
KHC pmax pmax
comp=Z,29nm,1.4s
KHC Kasperske Hory 31.24 60 *e*P **P 13 23 37.7 +1.2**
KHC *e*x x 13 23 44.0
KHC AMS AMS 13 34 10.0
comp=Z,600nm,17.5s
GEC2 GERESS Array S 31.32 60 P **P 13 23 35.5 -1.8**
GERES GERESS Array B 31.32 60 P **P 13 23 37.9 +0.6**
comp=Z,1.1nm,0.9s,baz=282,slow=6.7,SNR=11
GERES LR LR 13 35 08.8
comp=Z,530nm,19.2s,baz=249,slow=34
comp=Z,1.1nm,0.9s
GERES GERESS Array B 31.32 60 P **P 13 23 36.0 -1.3**
GERES GERESS Array B 31.32 60 P **P 13 23 36.0 -1.3**
BIOA Bad Ischl, Aus 31.32 62 *e*P **P 13 23 38.1 +0.8**
comp=Z,21nm,1.3s,SNR=8.4
MYKA Terra Mystica 31.40 64 *i* P **P 13 23 38.5 +0.5**
comp=Z,6.6nm,1.0s
FDMO Fiordimonte 31.48 71 P **P 13 23 36.9 -1.7**
BRG Berggiesshubel 31.49 56 *e*P **P 13 23 39.9 +1.2**
BRG Amp 13 23 41.5
comp=Z,11nm,1.3s
BRG *e*x x 13 23 47.5
BRG Amp 13 23 48.6
comp=Z,39nm,1.8s
BRG Amp 13 35 14.0
comp=N,0.4nm,15.2s
BRG Amp 13 35 14.0
comp=E,0.9nm,17.4s
BRG Amp 13 35 19.0
comp=Z,1.2nm,17.0s
BRG Berggiesshubel 31.49 56 *e*P **P 13 23 39.8 +1.2**
BRG *e* 13 23 47.4
BRG pmax pmax
comp=Z,11nm,1.3s
BRG MLR MLR
comp=N,352nm,15.2s
BRG MLR MLR
comp=E,920nm,17.4s
BRG MLR MLR
comp=Z,1μm,17.0s
NRCA Norcia 31.54 72 P **P 13 23 38.0 -1.2**
CKRC Cesky Krumlov 31.73 60 AMS AMS 13 34 50.0
comp=Z,500nm,16.6s
MOA Molln 31.74 62 *e*P **P 13 23 41.6 +0.8**
comp=Z,18nm,1.4s,SNR=6.7
CAMP Campotosto 31.81 72 P **P 13 23 40.5 -1.1**
CAMP IAmb IAmb 13 24 01.6
comp=Z,44nm,1.6s
PRU Pruhonice 31.86 58 *e*P **P 13 23 43.3 +1.4**
PRU MLR MLR
comp=Z,1μm,15.9s
PRU Pruhonice 31.86 58 *e*P **P 13 23 43.3 +1.4**
PRU AMS AMS 13 36 00.0
comp=Z,1μm,15.9s
PVCC Panska Ves 31.88 57 AMS AMS 13 35 40.0
comp=Z,2μm,17.2s
NB2 NORSAR Subarra 32.01 37 P **P 13 23 44.0 +0.9**
comp=Z,0.9nm,0.8s,baz=249,slow=10
NOA NORSAR Array B 32.01 37 P **P 13 23 43.8 +0.7**
comp=Z,5.3nm,1.2s,baz=28,slow=22,SNR=6.8
NOA LR LR 13 34 31.7
comp=Z,380nm,21.9s,baz=250,slow=32
comp=Z,5.3nm,1.2s
GOPC GO Pecny, Ondr 32.02 58 *e*P **P 13 23 45.4 +2.1**
GOPC MLR MLR
comp=Z,1μm,15.4s
GOPC GO Pecny, Ondr 32.02 58 *e*P **P 13 23 45.4 +2.1**
GOPC AMS AMS 13 36 40.0
comp=Z,1μm,15.4s
OBKA Obir 32.03 65 *i* P **P 13 23 43.2 -0.3**
comp=Z,19nm,0.9s
SOKA Soboth 32.35 64 *i* P **P 13 23 45.4 -0.9**
comp=Z,9.4nm,1.3s
TREC Trest 32.48 59 AMS AMS 13 38 00.0
comp=Z,600nm,14.4s
FRB Frobisher Bay 32.51 328 LR LR 13 33 22.0
comp=Z,340nm,22.0s,baz=128,slow=30
ARSA Arzberg 32.63 63 *e*P **P 13 23 48.5 -0.2**
comp=Z,14nm,1.4s,SNR=5.2
UPC Upice 32.80 57 *e*P **P 13 23 51.7 +1.5**
UPC MLR MLR
comp=Z,2μm,16.5s
UPC Upice 32.80 57 *e*P **P 13 23 51.7 +1.5**
UPC AMS AMS 13 36 10.0
comp=Z,2μm,16.5s
CONA Conrad Observa 32.80 62 *e*P **P 13 23 50.1 -0.2**
comp=Z,6.0nm,1.4s
CHVC Chvalec 32.83 57 *e*P **P 13 23 52.0 +1.6**
CHVC AMS AMS 13 36 00.0
comp=Z,2μm,17.4s
HFS Hagfors 32.87 39 LR LR 13 35 59.6
comp=Z,705nm,19.0s,baz=250,slow=34
OSTC Ostas 32.93 57 AMS AMS 13 36 10.0
comp=Z,2μm,16.2s
DPC Dobruska-Polom 33.00 57 *e*P **P 13 23 52.9 +0.9**
DPC MLR MLR
comp=Z,2μm,16.5s
DPC Dobruska-Polom 33.00 57 *e*P **P 13 23 52.9 +0.9**
DPC AMS AMS 13 36 20.0
comp=Z,2μm,16.5s
KRUC Moravsky 33.09 60 *e*P **P 13 23 52.9 +0.2**
VRAC Vranov 33.21 59 LR LR 13 36 37.0
comp=Z,505nm,18.6s,baz=270,slow=35
VRAC Vranov 33.21 59 *e*P **P 13 23 53.7 0.0**
KRLC Kraliky 33.30 58 *e*P **P 13 23 56.0 +1.4**
KRLC MLR MLR
comp=Z,1μm,16.8s
KRLC Kraliky 33.30 58 *e*P **P 13 23 56.0 +1.4**
KRLC AMS AMS 13 36 50.0
comp=Z,1μm,16.8s
ZST Bratislava 33.61 61 *e*P **P 13 23 56.9 -0.3**
MODS Modra-Piesok 33.72 61 *e*P **P 13 23 58.3 +0.1**
MODS pmax pmax
comp=Z,45nm,1.5s
MORC Moravsky Berou 33.80 58 P **P 13 23 57.4 -1.6**
MORC IAmb IAmb 13 24 08.2
comp=Z,40nm,1.7s
MORC Moravsky Berou 33.80 58 P **P 13 23 57.4 -1.6**
MORC pmax pmax
comp=Z,40nm,1.7s
MORC Moravsky Berou 33.80 58 *e*P **P 13 23 58.7 -0.3**
SMOL Smolenice 33.81 61 *e*P **P 13 23 59.0 +0.1**
SMOL pmax pmax
comp=Z,6.0nm,1.2s
VAE Valguarnera 33.88 81 LR LR 13 37 17.7
comp=Z,532nm,18.4s,baz=257,slow=36
JAVC Velka Javorina 33.94 60 *e*P **P 13 23 57.4 -2.8**
MPLH Magyarpolny 34.01 63 P **P 13 24 00.7 0.0**
MAUC Maruska 34.01 59 AMS AMS 13 38 30.0
comp=Z,1μm,15.6s
KOWA Kowa 34.15 132 LR LR 13 36 23.9
comp=Z,428nm,21.9s,baz=299,slow=34
KOWA Kowa 34.15 132 P **P 13 24 02.4 +0.2**
KOWA IAmb IAmb 13 24 14.2
comp=Z,60nm,1.7s
CUC Castrocucco 34.17 76 P **P 13 24 01.6 -0.6**
CUC IAmb IAmb 13 24 11.4
comp=Z,35nm,1.3s
OKC Ostrava-Krasne 34.19 58 AMS AMS 13 37 20.0
comp=Z,900nm,16.3s
TAM Tamanrasset 34.31 111 P **P 13 24 04.2 +0.4**
TAM IAmb IAmb 13 24 14.8
comp=Z,66nm,2.0s
TAM Tamanrasset 34.31 111 P **P 13 24 04.2 +0.4**
TAM pmax pmax
comp=Z,66nm,2.0s
SRO Srobarova 34.46 62 *e*P **P 13 24 05.2 +0.6**
KOVH Kovagotottos 34.53 65 P **P 13 24 05.9 +0.7**
VLDQ Val d'Or 34.70 299 P **P 13 24 07.7 +1.1**
VLDQ IAmb IAmb 13 24 14.0
comp=Z,75nm,2.0s
VYHS Vyhne 34.74 60 *e*P **P 13 24 07.8 +0.8**
VYHS pmax pmax
comp=Z,31nm,1.9s
MORH Mrgy, Hungar 34.88 64 ⇑P **P 13 24 07.7 -0.5**
MORH Mrgy, Hungar 34.88 64 P **P 13 24 07.8 -0.5**
K57A Scipio Center 34.92 289 P **P 13 24 07.2 -1.5**
K57A IAmb IAmb 13 24 11.6
comp=Z,53nm,1.4s
LANS Liptovska Anna 35.10 59 *e*P **P 13 24 11.9 +1.7**
LANS pmax pmax
comp=Z,8.0nm,1.4s
TIP Timpagrande 35.10 77 ⇓P P 13 24 21.3 +11
TIP Timpagrande 35.10 77 P **P 13 24 08.9 -1.4**
OJC Ojcow 35.23 57 P **P 13 24 09.0 -2.3**
OJC Ojcow 35.23 57 P **P 13 24 09.0 -2.3**
OJC pmax pmax
comp=Z,32nm,1.2s
KLNR Kaliningrad 35.44 50 *i* P **P 13 24 13.8 +0.8**
KLNR pmax pmax
comp=Z,92nm,1.2s
PSZ Piszkesteto 35.51 61 P **P 13 24 11.7 -2.0**
PSZ Piszkesteto 35.51 61 P **P 13 24 11.7 -2.0**
PSZ pmax pmax
comp=Z,37nm,1.5s
PSZ Piszkesteto 35.51 61 P **P 13 24 14.2 +0.5**
MMNY Mt. Morris Dam 35.92 290 P **P 13 24 16.7 -0.6**
MMNY IAmb IAmb 13 24 20.4
comp=Z,72nm,1.4s
DIVS Divibare 36.20 68 P **P 13 24 18.5 -1.3**
SADO Sadowa 36.35 293 LR LR 13 38 21.1
comp=Z,1μm,19.4s,baz=155,slow=35
CRVS Cervenica-Dubn 36.43 59 *e*P **P 13 24 22.9 +1.4**
CRVS pmax pmax
comp=Z,79nm,1.7s
SSPA Standing Stone 36.45 286 P **P 13 24 22.3 +0.6**
SSPA IAmb IAmb 13 24 24.6
comp=Z,54nm,1.5s
SSPA Standing Stone 36.45 286 P **P 13 24 22.1 +0.4**
baz=73
SIRR Siria 36.94 64 ⇓P **P 13 24 25.8 -0.1**
KOLS Kolonicke sedl 36.96 59 *e*P **P 13 24 27.7 +1.7**
KOLS pmax pmax
comp=Z,8.0nm,1.0s
UZH Uzhgorod 37.01 60 ⇓*i*P **P 13 24 24.8 -1.6**
UZH *i* 13 24 29.0
BZS Buzias 37.03 65 ⇑P **P 13 24 27.2 +0.5**
BZS Buzias 37.03 65 ⇑P **P 13 24 27.2 +0.5**
MDVR Moldovita 37.26 66 ⇑P **P 13 24 30.1 +1.4**
DRGR 37.56 63 ⇑P **P 13 24 30.5 -0.8**
DRGR 37.56 63 ⇑P **P 13 24 30.5 -0.8**
ERPA Erie 37.56 289 P **P 13 24 32.0 +0.7**
baz=74
HERR Herculane 37.73 66 ⇑P **P 13 24 34.2 +1.5**
GZR Gura Zlata 37.87 65 ⇑P **P 13 24 34.1 +0.1**
Q56A Snyder Ridge, 37.88 284 P **P 13 24 34.1 +0.1**
Q56A IAmb IAmb 13 24 42.0
comp=Z,77nm,1.7s
LVV L'vov 37.99 58 *e*P P 13 24 27.1 -7.7
LVV *e* 13 26 04.2
LVV *e*S **S 13 30 20.2 -7.1**
LVV pmax pmax
comp=Z,70nm,1.7s
LVV MLR MLR
comp=E,600nm,17.0s
LVV MLR MLR
comp=Z,700nm,17.0s
LVV MLR MLR
comp=N,300nm,16.0s
S57A Dark Hollow, R 38.13 282 P **P 13 24 36.1 0.0**
S57A IAmb IAmb 13 24 40.4
comp=Z,77nm,1.9s
MCWV Mont Chateau 38.17 286 P **P 13 24 35.8 -0.6**
MCWV IAmb IAmb 13 24 42.6
comp=Z,41nm,1.1s
MCWV Mont Chateau 38.17 286 P **P 13 24 37.2 +0.8**
baz=72
BLKB Belogradchik 38.20 68 ⇑P **P 13 24 38.2 +1.5**
M53A WI Miller and 38.24 289 P **P 13 24 36.1 -0.9**
baz=73
LOT Lotru 38.55 65 ⇑P **P 13 24 39.8 +0.1**
TOA0 Torodi Ar. Sit 38.58 126 P **P 13 24 40.3 +0.2**
TORD Torodi Ar. Bea 38.58 126 P **P 13 24 40.5 +0.4**
comp=Z,15nm,1.2s,baz=329,slow=5.5,SNR=27
TORD LR LR 13 38 51.0
comp=Z,418nm,21.2s,baz=5.5,slow=34
comp=Z,15nm,1.2s
SJG San Juan 38.72 246 LR LR 13 36 30.2
comp=Z,288nm,21.5s,baz=78,slow=30
VTS Vitosha 38.85 69 P **P 13 24 41.9 -0.4**
VTS Vitosha 38.85 69 P **P 13 24 41.9 -0.4**
VTS pmax pmax
comp=Z,15nm,1.2s
VTS Vitosha 38.85 69 *e*P **P 13 24 42.3 0.0**
KKB Krupnik 38.95 70 *e*P **P 13 24 44.1 +1.2**
O53A New Philadelph 38.98 287 P **P 13 24 43.1 -0.2**
O53A IAmb IAmb 13 24 46.8
comp=Z,61nm,1.4s
O53A New Philadelph 38.98 287 P **P 13 24 43.0 -0.2**
baz=72
FINES FINESS Array B 39.08 39 P **P 13 24 43.3 -0.4**
comp=Z,3.3nm,0.9s,baz=210,slow=11,SNR=4.2
FINES LR LR 13 39 21.9
comp=Z,611nm,19.8s,baz=256,slow=34
comp=Z,3.3nm,0.9s
BUR08 Bucovina Ar. S 39.08 61 P **P 13 24 43.3 -0.8**
BURAR Bucovina Array 39.10 61 ⇑P **P 13 24 45.4 +1.1**
BURAR Bucovina Array 39.10 61 P **P 13 24 43.8 -0.4**
BURAR Bucovina Array 39.10 61 ⇑P **P 13 24 45.4 +1.1**
ARR Arges 39.16 65 ⇑P **P 13 24 46.8 +2.1**
NACGM Naroch 39.25 49 *e*P **P 13 24 45.4 +0.1**
baz=272
P53A Whipple 39.35 286 P **P 13 24 45.2 -1.1**
BLA Blacksburg 39.42 282 P **P 13 24 47.0 0.0**
baz=68
VOIR 39.43 64 ⇑P **P 13 24 47.2 +0.2**
VOIR 39.43 64 ⇑P **P 13 24 47.2 +0.2**
O52A Adamsville 39.48 287 P **P 13 24 46.1 -1.2**
MMB Musomiste 39.49 71 *e*P **P 13 24 49.0 +1.5**
DOPR Dopca 39.54 63 ⇑P **P 13 24 49.0 +1.1**
N51A Ashland 39.62 288 P **P 13 24 48.4 -0.2**
N51A IAmb IAmb 13 24 51.7
comp=Z,90nm,1.4s
P52A Corning 39.85 286 P **P 13 24 50.9 +0.4**
P52A IAmb IAmb 13 24 57.0
comp=Z,77nm,1.4s
P52A Corning 39.85 286 P **P 13 24 50.5 +0.1**
baz=71,SNR=6.2
MNK Minsk 39.91 50 *i* P **P 13 24 50.4 -0.4**
MNK *i* 13 26 22.2
MNK *i* PPP PPP 13 26 45.5
MNK *i* S **S 13 30 56.2 +0.2**
MNK *i* SSS SSS 13 34 14.6
MNK *i* 13 34 57.8
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=Z,22nm,1.0s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=N,845nm,17.0s
MNK MLR MLR
comp=Z,1μm,19.0s
MNK MLR MLR
comp=E,170nm,18.0s
MNK Minsk 39.91 50 *i* P **P 13 24 50.4 -0.4**
comp=E,3.0nm,0.9s
MNK *i* P **P 13 24 50.4 -0.4**
comp=N,20nm,0.8s
MNK *i* P **P 13 24 50.4 -0.4**
comp=Z,22nm,1.0s,baz=274
MNK *i* PP **PP 13 26 22.3 0.0**
MNK *i* PPP PPP 13 26 45.5
MNK *i* S **S 13 30 56.3 +0.2**
MNK *i* SS **SnSn 13 33 54.0 -0.8**
MNK *i* SSS SSS 13 34 14.6
MNK *i* LR LR 13 37 48.5
MNK *i* LRM MLR 13 41 18.0
comp=N,845nm,17.4s
MNK *i* LRM MLR 13 41 32.2
comp=Z,1μm,18.7s
MNK *i* LRM MLR 13 41 45.1
comp=E,170nm,18.1s
MLR Muntele Rosu 40.03 64 ⇓P **P 13 24 53.3 +1.3**
MLR Muntele Rosu 40.03 64 P **P 13 24 51.8 -0.2**
comp=E,9.5nm,1.1s,baz=304,slow=9.4,SNR=8.1
MLR LR LR 13 41 38.0
comp=E,398nm,19.0s,baz=278,slow=37
comp=E,9.5nm,1.1s
MLR Muntele Rosu 40.03 64 P **P 13 24 51.3 -0.8**
MLR Muntele Rosu 40.03 64 P **P 13 24 51.3 -0.8**
MLR pmax pmax
comp=Z,17nm,1.2s
COVR Voineasa-Covas 40.12 63 ⇑P **P 13 24 56.7 +4.0**
R53A Hurricane 40.15 284 P **P 13 24 52.9 -0.1**
Q52A Bidwell 40.17 285 P **P 13 24 52.8 -0.4**
ACSO Alum Creek Sta 40.27 288 P **P 13 24 53.5 -0.5**
ACSO Alum Creek Sta 40.27 288 P **P 13 24 53.9 -0.1**
baz=71
DBIC Dimbokro 40.30 140 P **P 13 24 55.2 +0.9**
comp=Z,9.3nm,1.1s,baz=356,slow=6.8,SNR=3.3
DBIC LR LR 13 40 12.5
comp=Z,259nm,18.5s,baz=342,slow=34
comp=Z,9.3nm,1.1s
DBIC Dimbokro 40.30 140 ⇓P **P 13 24 56.5 +2.2**
PLOR Plostina 40.43 63 ⇑P **P 13 24 56.5 +1.2**
PLOR Plostina 40.43 63 ⇑P **P 13 24 56.5 +1.2**
ARCES ARCESS Array B 40.43 26 P **P 13 24 54.7 -0.2**
comp=Z,17nm,1.2s,baz=262,slow=8.2,SNR=5.6
comp=Z,17nm,1.2s
VRI Vrincioaia 40.48 63 ⇑P **P 13 24 56.9 +1.3**
VRI Vrincioaia 40.48 63 ⇑P **P 13 24 56.9 +1.3**
P51A Williamsport 40.58 287 P **P 13 24 55.4 -1.1**
P51A IAmb IAmb 13 24 59.3
comp=Z,74nm,1.4s
P51A Williamsport 40.58 287 P **P 13 24 58.2 +1.7**
baz=70,SNR=6.6
P51A P **P 13 24 58.2 +1.7**
baz=70,SNR=6.6
U54A Nelsons Funny 40.72 282 P **P 13 24 57.2 -0.5**
RDO Rodhopi 40.92 71 P **P 13 24 58.8 -0.5**
RDO IAmb IAmb 13 25 09.2
comp=Z,56nm,1.4s
Q51A Peebles 40.94 286 P **P 13 24 58.0 -1.5**
Q51A IAmb IAmb 13 25 02.5
comp=Z,72nm,1.5s
Q51A Peebles 40.94 286 P **P 13 25 01.0 +1.5**
baz=70,SNR=6.3
Q51A P **P 13 25 01.0 +1.5**
baz=70,SNR=6.3
MDP Montagnes des 41.09 217 LR LR 13 37 47.2
comp=Z,354nm,21.6s,baz=72,slow=30
AKASG Malin Array Be 41.16 56 P **P 13 25 00.1 -1.1**
comp=Z,3.6nm,0.8s,baz=276,slow=8.2,SNR=25
comp=Z,3.6nm,0.8s
AKASG Malin Array Be 41.16 56 *i* P **P 13 25 00.8 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 41.16 56 P **P 13 24 59.7 -1.5**
AKBB IAmb IAmb 13 25 09.6
comp=Z,58nm,1.5s
AKBB Malin Array Si 41.16 56 P **P 13 24 59.7 -1.5**
AKBB pmax pmax
comp=Z,58nm,1.5s
O49A Covington 41.27 288 P **P 13 25 00.8 -1.4**
O49A IAmb IAmb 13 25 08.5
comp=Z,146nm,2.0s
HARR Harsova 41.59 65 ⇑P **P 13 25 05.1 +0.3**
HARR Harsova 41.59 65 ⇑P **P 13 25 05.1 +0.3**
CFR Carcaliu 41.60 64 ⇓P **P 13 25 04.6 -0.3**
CFR Carcaliu 41.60 64 ⇓P **P 13 25 04.6 -0.3**
S51A Beattyville 41.61 284 P **P 13 25 04.6 -0.5**
MILM Milestii Mici 41.64 61 *e*P **P 13 25 04.0 -1.1**
MILM *e* 13 25 11.0
P49A Miami Univ. Ec 41.77 287 P **P 13 25 05.8 -0.5**
baz=70
V53A Saluda 41.78 281 P **P 13 25 06.2 -0.4**
V53A IAmb IAmb 13 25 13.8
comp=Z,76nm,1.9s
O48B Farmland 41.84 288 P **P 13 25 06.4 -0.5**
baz=70
SPITS Spitsbergen Ar 41.91 13 LR LR 13 38 10.1
comp=Z,155nm,18.3s,baz=172,slow=30
R50A Paris 41.92 285 P **P 13 25 06.5 -1.1**
TIRR Tirgusor 41.98 65 ⇑P **P 13 25 08.0 0.0**
TIRR Tirgusor 41.98 65 P **P 13 25 05.5 -2.5**
TIRR Tirgusor 41.98 65 P **P 13 25 05.5 -2.5**
TIRR pmax pmax
comp=Z,99nm,1.1s
TZTN Tazewell 41.99 283 P **P 13 25 07.8 -0.4**
baz=67
D41A Chassel 42.28 299 P **P 13 25 09.8 -0.6**
D41A IAmb IAmb 13 25 13.3
comp=Z,85nm,1.6s
V52A Sevierville 42.30 282 P **P 13 25 11.0 +0.2**
F42A Maple Grove Fa 42.32 297 P **P 13 25 09.3 -1.4**
TKL Tuckaleechee C 42.51 281 LR LR 13 41 31.9
comp=Z,603nm,19.5s,baz=79,slow=34
TKL Tuckaleechee C 42.51 281 P **P 13 25 12.2 -0.2**
TKL Tuckaleechee C 42.51 281 P **P 13 25 12.2 -0.2**
TKL pmax pmax
comp=Z,28nm,1.4s
R49A Shelbyville 42.53 286 P **P 13 25 12.4 -0.2**
R49A IAmb IAmb 13 25 19.2
comp=Z,73nm,1.7s
IDI Anoyia 42.55 79 P **P 13 25 12.0 -0.8**
comp=Z,6.3nm,0.8s,baz=189,slow=7.1,SNR=2.5
IDI LR LR 13 42 06.1
comp=Z,141nm,21.6s,baz=276,slow=35
comp=Z,6.3nm,0.8s
T50A Nancy 42.76 284 P **P 13 25 14.0 -0.5**
T50A Nancy 42.76 284 P **P 13 25 15.8 +1.4**
baz=67
T50A P **P 13 25 15.8 +1.4**
baz=67
V51A Loudon 42.88 282 P **P 13 25 13.4 -2.0**
COWI Conover 42.90 298 P **P 13 25 14.8 -0.7**
CPCT Cooper Cave 43.15 282 P **P 13 25 16.9 -0.7**
SFIN Lafayette 43.20 289 P **P 13 25 17.2 -0.7**
baz=70
BLO Bloomington 43.20 287 P **P 13 25 17.5 -0.5**
BLO Bloomington 43.20 287 P **P 13 25 17.5 -0.5**
BLO pmax pmax
comp=Z,31nm,1.2s
GOGA Godfrey 43.22 278 P **P 13 25 17.6 -0.6**
GOGA Godfrey 43.22 278 P **P 13 25 17.6 -0.6**
GOGA pmax pmax
comp=Z,38nm,1.7s
GOGA Godfrey 43.22 278 P **P 13 25 17.8 -0.3**
baz=64
WCI Wyandotte Cave 43.38 286 P **P 13 25 18.9 -0.5**
WCI Wyandotte Cave 43.38 286 P **P 13 25 18.9 -0.5**
WCI pmax pmax
comp=Z,44nm,1.6s
WCI Wyandotte Cave 43.38 286 P **P 13 25 20.7 +1.2**
baz=68
WCI Wyandotte Cave 43.38 286 P **P 13 25 19.1 -0.3**
baz=68
Y52A Lilburn 43.47 279 P **P 13 25 19.7 -0.5**
Y52A IAmb IAmb 13 25 27.2
comp=Z,101nm,2.0s
Y52A Lilburn 43.47 279 P **P 13 25 22.5 +2.3**
baz=64
Y52A P **P 13 25 22.5 +2.3**
baz=64
PCRV Puerto La Cruz 43.48 236 LR LR 13 40 29.2
comp=Z,321nm,19.8s,slow=32
U49A Red Boiling Sp 43.66 284 P **P 13 25 21.5 -0.2**
FCC Fort Churchill 43.70 317 P **P 13 25 20.3 -1.4**
FCC IAmb IAmb 13 25 24.6
comp=Z,56nm,1.4s
FCC Fort Churchill 43.70 317 P **P 13 25 20.3 -1.4**
FCC pmax pmax
comp=Z,56nm,1.5s
W50A Signal Mountai 43.84 282 P **P 13 25 22.5 -0.7**
W50A IAmb IAmb 13 25 26.4
comp=Z,71nm,1.8s
G40A Rib Lake 43.85 297 P **P 13 25 22.2 -1.0**
G40A IAmb IAmb 13 25 29.6
comp=Z,83nm,1.8s
EYMN Ely 44.00 301 P **P 13 25 23.4 -0.9**

EYMN IAmb IAmb 13 25 26.5
comp=Z,62nm,1.4s
EYMN Ely 44.00 301 P **P 13 25 24.5 +0.2**
baz=75,SNR=11
EYMN Ely 44.00 301 P **P 13 25 23.9 -0.3**
baz=75,SNR=11
CLTN Cedars of Leba 44.23 283 P **P 13 25 25.9 -0.4**
CLTN PP **PP 13 27 08.1 -1.1**
SWET Sewanee 44.30 282 P **P 13 25 27.2 +0.3**
E38A The Farm, Brul 44.38 299 P **P 13 25 26.7 -0.7**
E38A IAmb IAmb 13 25 29.7
comp=Z,76nm,1.4s
E38A The Farm, Brul 44.38 299 P **P 13 25 28.1 +0.7**
baz=74,SNR=10.0
T47A Sharon Grove 44.45 285 P **P 13 25 27.1 -0.9**
T47A PP **PP 13 27 08.1 -3.3**
T47A Sharon Grove 44.45 285 P **P 13 25 29.4 +1.4**
baz=66
L42A Oliver, Polo 44.48 292 P **P 13 25 27.0 -1.2**
L42A IAmb IAmb 13 25 30.7
comp=Z,40nm,1.2s
152A Waverly Hall 44.49 278 P **P 13 25 27.7 -0.7**
OLIL Olney 44.51 288 P **P 13 25 27.9 -0.5**
OLIL IAmb IAmb 13 25 34.9
comp=Z,65nm,1.5s
I40A Norwalk 44.54 295 P **P 13 25 28.5 -0.2**
I40A IAmb IAmb 13 25 35.3
comp=Z,85nm,1.8s
JFWS Jewell Farm 44.59 294 P **P 13 25 29.1 0.0**
baz=71
HDIL Hopedale 44.71 290 P **P 13 25 30.2 +0.1**
baz=69
V48A Smith Brothers 44.74 283 P **P 13 25 29.5 -0.9**
OBN Obninsk 44.83 48 P **P 13 25 29.8 -0.9**
comp=Z,3.7nm,0.4s,baz=283,slow=3.6,SNR=8.4
comp=Z,3.7nm,0.4s
OBN Obninsk 44.83 48 *ce*P **P 13 25 30.5 -0.3**
OBN *e* 13 27 13.3
OBN *i* S **S 13 32 08.6 +0.1**
OBN *i* SS **SS 13 35 22.6 -6.3**
OBN pmax pmax
comp=Z,63nm,1.7s
OBN MLR MLR
comp=Z,553nm,18.0s
RES Resolute Bay 44.84 340 P **P 13 25 29.3 -1.3**
comp=Z,25nm,0.9s,baz=118,slow=2.5,SNR=3.6
RES LR LR 13 42 58.4
comp=Z,80nm,18.1s,baz=54,slow=34
comp=Z,25nm,0.9s
Q44A Meyer Farm, Va 45.11 288 IAmb IAmb 13 25 35.9
comp=Z,30nm,1.1s
MOS Moscow 45.32 47 *e*P **P 13 25 34.0 -0.7**
MOS MLR MLR
comp=Z,1μm,16.0s
WVT Waverly 45.33 284 P **P 13 25 32.4 -2.6**
WVT IAmb IAmb 13 25 41.3
comp=Z,50nm,1.9s
WVT PP **PP 13 27 22.0 +1.2**
WVT Waverly 45.33 284 P **P 13 25 32.4 -2.6**
WVT 13 27 22.0
WVT pmax pmax
comp=Z,50nm,2.0s
WVT Waverly 45.33 284 P **P 13 25 36.0 +1.0**
baz=66
WVT Waverly 45.33 284 P **P 13 25 35.3 +0.3**
baz=66
B35A Bob, Littlefor 45.34 302 IAmb IAmb 13 25 37.1
comp=Z,55nm,1.4s
B35A Bob, Littlefor 45.34 302 P **P 13 25 35.2 +0.3**
baz=74,SNR=13
ROSB Rosrio 45.37 201 *e*P **P 13 25 36.9 +1.4**
KLMR Klimovskoe 45.59 40 *e*P **P 13 25 34.8 -1.9**
KLMR *e* 13 27 12.9
KLMR pmax pmax
comp=Z,68nm,1.6s
KLMR Klimovskoe 45.59 40 *e*P **P 13 25 34.9 -1.8**
KLMR AMP 13 25 38.7
comp=Z,68nm,1.6s
KLMR *e*PcP **PcP 13 27 13.0 -2.1**
KLMR LR LR 13 37 13.3
KLMR AMP 13 43 34.8
comp=Z,431nm,13.7s
SPMN Marine on St. 45.62 298 IAmb IAmb 13 25 39.8
comp=Z,44nm,1.2s
SPMN Marine on St. 45.62 298 P **P 13 25 38.2 +1.0**
baz=72,SNR=5.7
SPMN Marine on St. 45.62 298 P **P 13 25 37.6 +0.4**
baz=72,SNR=5.7
S44A Carbondale 45.75 287 P **P 13 25 39.3 +1.0**
baz=66
N41A Harden Midland 45.77 291 IAmb IAmb 13 25 41.1
comp=Z,33nm,1.0s
F36A Milaca 45.91 299 P **P 13 25 38.2 -1.3**
F36A IAmb IAmb 13 25 45.7
comp=Z,44nm,1.5s
F36A Milaca 45.91 299 P **P 13 25 39.9 +0.4**
baz=72,SNR=8.5
250A Grady 45.97 278 P **P 13 25 42.3 +2.2**
baz=62,SNR=5.6
PLAL Pickwick Lake 45.99 283 P **P 13 25 39.7 -0.6**
LRAL Lakeview Retre 46.03 280 P **P 13 25 41.4 +0.8**
baz=63
TMAB Tom-Au,PA,Br 46.09 206 *e*P **P 13 25 44.2 +3.1**
I37B Waseca 46.40 296 P **P 13 25 45.0 +1.5**
baz=71,SNR=8.1
K38A Parkersburg 46.43 294 P **P 13 25 43.9 +0.2**
K38A PcP **PcP 13 27 16.7 -1.7**
K38A PP **PP 13 27 31.6 -0.9**
BAUV El Baul 46.59 238 P **P 13 25 45.2 0.0**
RCBR Riachuelo 46.62 189 LR LR 13 41 44.9
comp=Z,201nm,18.6s,baz=139,slow=32
RCBR Riachuelo 46.62 189 *e*P **P 13 25 48.6 +3.2**
LPSR Galich'ya Gora 46.71 51 *e*P **P 13 25 45.9 +0.2**
LPSR pmax pmax
comp=Z,60nm,1.2s
AGMN Agassiz Nation 46.72 303 IAmb IAmb 13 25 47.7
comp=Z,24nm,1.2s
AGMN Agassiz Nation 46.72 303 P **P 13 25 46.7 +0.8**
baz=73,SNR=8.4
AGMN Agassiz Nation 46.72 303 P **P 13 25 45.8 -0.1**
baz=73,SNR=8.4
Z47A Carrollton 46.77 280 P **P 13 25 46.6 +0.3**
Z47A IAmb IAmb 13 25 48.6
comp=Z,41nm,1.3s
Z47A PcP **PcP 13 27 18.1 -1.6**
ILGA Ilgaz 46.77 68 IAmb IAmb 13 25 49.1
comp=Z,35nm,1.2s
SCIA State Center 47.00 294 P **P 13 25 48.5 +0.3**
baz=69
CCM Cathedral Cave 47.05 288 P **P 13 25 48.0 -0.6**
CCM IAmb IAmb 13 25 54.5
comp=Z,49nm,1.5s
CCM Cathedral Cave 47.05 288 P **P 13 25 48.0 -0.6**
CCM pmax pmax
comp=Z,49nm,1.5s
CCM Cathedral Cave 47.05 288 P **P 13 25 48.9 +0.3**
baz=66,SNR=9.1
CCM Cathedral Cave 47.05 288 P **P 13 25 48.5 -0.1**
baz=66
P40A Paris 47.05 290 IAmb IAmb 13 25 53.9
comp=Z,28nm,1.1s
P40A Paris 47.05 290 P **P 13 25 49.0 +0.5**
baz=67,SNR=7.2
VORR Voronezh 47.11 52 *e*P **P 13 25 46.6 -2.2**
VORR pmax pmax
comp=Z,70nm,0.4s
OXF Oxford 47.18 283 P **P 13 25 49.1 -0.5**
baz=64
OXF Oxford 47.18 283 P **P 13 25 50.3 +0.7**
baz=64
VSR Storozhevoye 47.20 53 *e*P **P 13 25 48.6 -0.9**
VSR pmax pmax
comp=Z,30nm,1.2s
BR131 Keskin Array S 47.21 69 *e*P **P 13 25 50.3 +0.3**
BRTR Keskin Array B 47.21 69 P **P 13 25 48.8 -1.2**
comp=Z,5.0nm,0.9s,baz=277,slow=5.3,SNR=18
BRTR PcP **PcP 13 27 22.2 +0.9**
comp=Z,0.6nm,0.6s,baz=306,slow=5.2,SNR=3.5
BRTR LR LR 13 46 37.8
comp=Z,109nm,18.2s,baz=289,slow=37
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 47.21 69 P **P 13 25 47.5 -2.4**
BRTR Keskin Array B 47.21 69 *i* P **P 13 25 50.5 +0.5**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BOAV Boa Vista 47.34 225 *e*P **P 13 25 53.5 +2.5**

N38A Joes South For 47.42 292 IAmb IAmb 13 25 56.7
comp=Z,35nm,1.2s
R40A Maddies Statio 47.70 289 P **P 13 25 53.7 +0.1**
baz=66,SNR=17
LCAR Lake Charles 47.80 285 IAmb IAmb 13 25 56.3
comp=Z,37nm,1.4s
LCAR Lake Charles 47.80 285 P **P 13 25 54.8 +0.4**
baz=65,SNR=8.2
MALB Monte Alegre 48.00 214 *e*P **P 13 25 58.2 +2.2**
ANN Anapa 48.01 62 *e*P **P 13 25 54.8 -1.1**
ANN *e**PP **sP 13 25 58.4 +1.8**
ANN *e*S **S 13 32 55.9 +1.5**
ANN pmax pmax
comp=Z,61nm,1.4s
ANN MLR MLR
comp=Z,445nm,16.0s
P38A Dawn 48.07 291 P **P 13 25 57.2 +0.7**
baz=67,SNR=5.3
SDV Santo Domingo 48.33 241 LR LR 13 42 44.4
comp=Z,126nm,21.6s,baz=34,slow=32
SDV Santo Domingo 48.33 241 *e*P **P 13 26 02.4 +3.4**
PRGR Permogore 48.39 38 *e*P **P 13 25 57.7 -0.9**
PRGR pmax pmax
comp=Z,83nm,2.1s
FCAR Ozark Folk Cen 48.59 286 IAmb IAmb 13 26 02.3
comp=Z,32nm,1.5s
FFC Flin Flon 48.68 313 P **P 13 26 00.2 -0.7**
FFC IAmb IAmb 13 26 03.6
comp=Z,37nm,1.5s
FFC Flin Flon 48.68 313 P **P 13 26 00.2 -0.7**
FFC pmax pmax
comp=Z,37nm,1.5s
ECSD EROS Data Cent 48.68 297 P **P 13 26 01.9 +0.7**
baz=69,SNR=18
ECSD EROS Data Cent 48.68 297 P **P 13 26 01.0 -0.2**
baz=69,SNR=18
S39A Bolivar 48.70 288 IAmb IAmb 13 26 07.0
comp=Z,29nm,1.1s
S39A Bolivar 48.70 288 P **P 13 26 01.8 +0.4**
baz=65,SNR=9.7
VRH Novokhopyorsk 48.75 52 *e*P **P 13 26 01.0 -0.5**
VRH pmax pmax
comp=Z,60nm,1.5s
WHAR Wooly Hollow 48.97 285 IAmb IAmb 13 26 04.5
comp=Z,36nm,1.4s
VBMS Vicksburg 49.05 281 P **P 13 26 04.2 +0.1**
baz=62
L34A Svendsen Farm, 49.17 295 P **P 13 26 02.4 -2.6**
MDND Maddock 49.25 303 P **P 13 26 05.2 -0.2**
baz=71
HHAR Hobbs 49.74 287 IAmb IAmb 13 26 12.1
comp=Z,40nm,1.5s
HHAR Hobbs 49.74 287 P **P 13 26 09.4 0.0**
baz=64
SOC Sochi 49.98 62 *e*P **P 13 26 09.5 -1.6**
SOC *e* 13 28 01.9
SOC *e*S **S 13 33 21.2 -1.0**
SOC *e*SSS SSS 13 38 18.1
SOC pmax pmax
comp=Z,10.0nm,0.7s
SOC MLR MLR
comp=Z,201nm,18.0s
U38A Gravette 50.00 287 P **P 13 26 10.2 -1.2**
U38A PcP **PcP 13 27 30.3 -1.1**
SUSD Miller 50.00 299 P **P 13 26 11.0 -0.3**
baz=68
PRPB Paraua pebas 50.22 207 *e*P **P 13 26 15.8 +2.6**
MIAR Mount Ida 50.25 285 P **P 13 26 14.0 +0.8**
baz=63,SNR=18
MIAR Mount Ida 50.25 285 P **P 13 26 13.0 -0.2**
baz=63,SNR=18
WLAR White Oak Lake 50.30 284 P **P 13 26 11.2 -2.4**
NBAN Anadia - AL 50.45 189 *e*P **P 13 26 18.0 +3.1**
KSU1 Kansas State U 50.47 292 IAmb IAmb 13 26 15.9
comp=Z,34nm,1.2s
KSU1 Kansas State U 50.47 292 P **P 13 26 14.6 -0.2**
baz=65
BGNE Belgrade 50.61 295 P **P 13 26 16.4 +0.5**
baz=66,SNR=5.8
BGNE Belgrade 50.61 295 P **P 13 26 15.8 -0.1**
baz=66,SNR=5.8
ITTB Itaituba 50.88 215 *e*P **P 13 26 20.1 +2.0**
KIRV Kirov 50.94 41 P **P 13 26 17.2 -0.9**
comp=Z,28nm,1.1s,baz=291,slow=8.2,SNR=18
KIRV LR LR 13 47 18.7
comp=Z,568nm,18.2s,baz=286,slow=36
comp=Z,28nm,1.1s
KIRV Kirov 50.94 41 *ce*P **P 13 26 17.8 -0.3**
TUL1 Leonard 51.25 287 IAmb IAmb 13 26 22.1
comp=Z,54nm,1.4s
TUL1 Leonard 51.25 287 P **P 13 26 21.1 +0.3**
baz=63,SNR=5.5
TUL1 Leonard 51.25 287 P **P 13 26 20.5 -0.3**
baz=63,SNR=5.5
T35A Sooner Cattle 51.33 289 **P 13 26 19.1 -2.3**
T35A IAmb IAmb 13 26 22.9
comp=Z,47nm,1.2s
T35B Sooner Cattle 51.33 289 P **P 13 26 21.4 0.0**
baz=64,SNR=8.4
X37A Clayton 51.55 286 P **P 13 26 23.4 +0.4**
baz=62,SNR=8.9
GOF Gofitskoye 51.64 59 *e*P **P 13 26 24.7 +1.1**
OK051 E0350 and S346 51.74 289 IAmb IAmb 13 26 29.7
comp=Z,62nm,1.3s
OK044 Pawnee Station 51.77 288 IAmb IAmb 13 26 26.4
comp=Z,62nm,1.3s
KIV Kislovodsk 51.83 61 *e*P **P 13 26 26.8 +1.7**
KIV pmax pmax
comp=Z,6.0nm,0.9s
OK045 Pawnee Station 51.83 289 P **P 13 26 23.4 -1.8**
OK045 IAmb IAmb 13 26 30.5
comp=Z,56nm,1.2s
OK048 Pawnee Station 51.86 289 IAmb IAmb 13 26 27.1
comp=Z,58nm,1.2s
BELG Belogornoye 51.86 49 P **P 13 26 24.6 -0.5**
comp=Z,49nm,1.2s,baz=93,slow=12,SNR=20
BELG LR LR 13 47 51.9
comp=Z,293nm,20.9s,baz=319,slow=35
comp=Z,49nm,1.2s
BELG Belogornoye 51.86 49 *i* P **P 13 26 25.6 +0.5**
BELG pmax pmax
comp=Z,16nm,1.3s
OK034 N. Norfolk Rd. 51.88 288 IAmb IAmb 13 26 30.5
comp=Z,43nm,1.1s
SHA1 Shidzhatmaz 51.89 61 *i* P **P 13 26 27.2 +1.4**
DGMT Dagmar 51.92 305 IAmb IAmb 13 26 27.8
comp=Z,49nm,1.3s
DGMT Dagmar 51.92 305 P **P 13 26 26.9 +1.2**
baz=69,SNR=6.0
DGMT Dagmar 51.92 305 P **P 13 26 25.6 -0.1**
baz=69,SNR=6.0
KAN13 South Haven SW 51.98 289 **P 13 26 24.4 -1.8**
KAN13 IAmb IAmb 13 26 28.0
comp=Z,49nm,1.3s
SMTB Santa Maria do 52.04 203 *e*P **P 13 26 29.3 +2.5**
KBZ Khabaz 52.06 61 P **P 13 26 27.2 +0.5**
comp=Z,16nm,1.3s,baz=303,slow=8.2,SNR=13
KBZ LR LR 13 48 22.0
comp=Z,216nm,19.8s,baz=330,slow=36
comp=Z,16nm,1.3s
KBZ Khabaz 52.06 61 *ce*P **P 13 26 27.2 +0.5**
KBZ pmax pmax
comp=Z,8.0nm,1.0s
OK049 E0420 Rd and N 52.13 289 IAmb IAmb 13 26 29.2
comp=Z,49nm,1.1s
MACA Manacapuru-AM 52.14 221 *e*P **P 13 26 30.1 +2.5**
KAN17 Caldwell West 52.17 290 **P 13 26 26.6 -1.1**
KAN17 IAmb IAmb 13 26 29.5
comp=Z,71nm,1.4s
R32A Long Quarter, 52.24 292 IAmb IAmb 13 26 29.6
comp=Z,62nm,1.5s
KAN10 Anthony SW Sta 52.37 290 **P 13 26 27.4 -1.8**
OK025 Westminster Rd 52.52 288 IAmb IAmb 13 26 35.7
comp=Z,30nm,0.9s
EIL Elat 52.66 81 LR LR 13 50 39.3
comp=Z,138nm,19.1s,baz=291,slow=38
FNO Franklin 52.72 287 IAmb IAmb 13 26 32.8
comp=Z,36nm,1.2s
YKA Yellowknife Ar 52.86 325 P **P 13 26 32.5 +0.2**
comp=Z,7.1nm,1.0s,baz=68,slow=6.9,SNR=13
YKA LR LR 13 46 27.4
comp=Z,209nm,19.4s,baz=90,slow=33
comp=Z,7.1nm,1.0s
YKA Yellowknife Ar 52.86 325 P **P 13 26 31.1 -1.2**
YKA PcP **PcP 13 27 39.0 -2.5**
ASF Jabal al Asfar 52.88 77 P **P 13 26 33.6 +0.6**
comp=Z,1.7nm,0.6s,baz=165,slow=5.4,SNR=3.8

comp=Z,1.7nm,0.6s
ONI Oni 52.89 62 P **P 13 26 30.9 -2.1**
ONI Oni 52.89 62 P **P 13 26 30.9 -2.1**
ONI pmax pmax
comp=Z,36nm,1.7s
ZEI Tsey 53.11 62 *e*P **P 13 26 35.0 +0.2**
ZEI pmax pmax
comp=Z,22nm,1.0s
NPGB Novo Progresso 53.13 213 *e*P **P 13 26 36.2 +1.3**
X34A Smith Ranch, M 53.34 287 IAmb IAmb 13 26 42.5
comp=Z,43nm,1.2s
OGNE Ogallala 53.47 296 P **P 13 26 37.3 0.0**
baz=64
RSSD Black Hills 53.49 300 P **P 13 26 36.9 -0.7**
RSSD Black Hills 53.49 300 P **P 13 26 36.9 -0.7**
RSSD pmax pmax
comp=Z,11nm,1.4s
RSSD Black Hills 53.49 300 P **P 13 26 37.0 -0.7**
baz=66
A36M Sachs Harbour 53.69 337 P **P 13 26 37.2 -1.1**
baz=70
ROSC El Rosal 53.77 241 P **P 13 26 40.9 +0.8**
comp=Z,3.4nm,0.3s,baz=153,slow=5.7,SNR=4.6
ROSC LR LR 13 47 30.0
comp=Z,487nm,20.8s,baz=55,slow=34
comp=Z,3.4nm,0.3s
LAO LASA Array 53.87 304 IAmb IAmb 13 26 46.7
comp=Z,46nm,1.1s
LAO LASA Array 53.87 304 P **P 13 26 41.6 +1.4**
baz=66,SNR=11
LAO LASA Array 53.87 304 P **P 13 26 39.3 -0.8**
baz=66,SNR=11
WMOK Wichita Mounta 53.96 288 P **P 13 26 41.3 +0.4**
baz=62,SNR=8.3
WMOK Wichita Mounta 53.96 288 P **P 13 26 41.3 +0.4**
baz=62,SNR=8.3
HKT Hockley 54.13 281 P **P 13 26 41.2 -0.9**
HKT IAmb IAmb 13 26 48.8
comp=Z,52nm,1.9s
HKT Hockley 54.13 281 P **P 13 26 41.2 -0.9**
HKT pmax pmax
comp=Z,52nm,1.9s
GROC Groznyy 54.20 61 *e*P **P 13 26 43.9 +1.4**
GROC pmax pmax
comp=Z,123nm,1.3s
WHTX Lake Whitney, 54.32 284 P **P 13 26 44.3 +0.8**
baz=60,SNR=9.1
WHTX Lake Whitney, 54.32 284 P **P 13 26 43.8 +0.3**
baz=60,SNR=9.1
SDBA SAO DESIDERIO 54.70 199 *e*P **P 13 26 48.3 +2.0**
KSCO Kaye Shedlock' 54.73 294 P **P 13 26 46.1 -0.5**
baz=63
GNI Garni 54.81 64 LR LR 13 51 56.9
comp=Z,117nm,18.4s,baz=303,slow=38
GNI Garni 54.81 64 *ce*P **P 13 26 48.2 +1.0**
GNI pmax pmax
comp=Z,33nm,1.7s
GDU01 Guandu, BA 54.90 192 *e*P **P 13 26 48.8 +1.1**
435B Jarrell 55.01 283 P **P 13 26 48.9 +0.3**
baz=59
MAK Makhachkala 55.43 60 *e*P P 13 26 45.5 -5.9
MAK *e* 13 28 50.4
MAK *e*S S 13 34 27.3 -9.3
MAK *e*SS **SS 13 38 24.0 +3.2**
MAK *e*SSS SSS 13 40 28.3
MAK pmax pmax
comp=Z,84nm,0.6s
MAK MLR MLR
comp=Z,316nm,17.0s
EGMT Eagleton 55.52 307 P **P 13 26 50.5 -1.6**
EGMT IAmb IAmb 13 26 54.4
comp=Z,36nm,1.2s
EGMT Eagleton 55.52 307 P **P 13 26 52.0 -0.1**
baz=65,SNR=8.1
ABTX Abilene, Hawle 55.61 286 IAmb IAmb 13 26 54.5
comp=Z,37nm,1.3s
ABTX Abilene, Hawle 55.61 286 P **P 13 26 52.8 -0.1**
baz=60,SNR=7.5
ABTX Abilene, Hawle 55.61 286 P **P 13 26 52.8 -0.1**
baz=60,SNR=7.5
K22A Casper 55.76 300 IAmb IAmb 13 26 56.1
comp=Z,44nm,1.2s
K22A Casper 55.76 300 P **P 13 26 54.4 +0.4**
baz=64,SNR=12
K22A Casper 55.76 300 P **P 13 26 54.1 0.0**
baz=64,SNR=12
AMTX Amarillo 55.99 289 P **P 13 26 56.2 +0.5**
baz=61,SNR=8.2
AMTX Amarillo 55.99 289 P **P 13 26 55.5 -0.2**
baz=61
SNDB Serra Nova Dou 56.14 206 *e*P **P 13 26 58.8 +2.1**
ARU Arti 56.32 42 P **P 13 26 57.0 -0.6**
comp=Z,7.2nm,0.7s,baz=297,slow=5.9,SNR=27
ARU LR LR 13 50 28.0
comp=Z,443nm,18.6s,baz=276,slow=35
comp=Z,7.2nm,0.7s
ARU Arti 56.32 42 P **P 13 26 56.7 -0.9**
ARU Arti 56.32 42 *d i*P **P 13 26 57.7 +0.2**
ARU 13 27 52.9
ARU S **S 13 34 50.7 +2.7**
ARU SS **SS 13 38 35.7 +1.6**
ARU pmax pmax
comp=Z,83nm,1.5s
WRGLY Wrigley 56.38 327 P **P 13 26 57.3 -0.5**
baz=66
ISCO Idaho Springs 56.43 296 P **P 13 26 58.4 -0.6**
baz=62
RLMT Red Lodge 56.45 303 IAmb IAmb 13 27 01.0
comp=Z,34nm,1.4s
RLMT Red Lodge 56.45 303 P **P 13 26 58.7 -0.3**
baz=64,SNR=10
ACON Acoyapa 56.48 256 P **P 13 26 58.8 -0.4**
CMC01 Camacan, BA 56.49 192 *e*P **P 13 27 01.6 +2.4**
Q24A Divide 56.50 295 IAmb IAmb 13 27 05.7
comp=Z,31nm,1.4s
Q24A Divide 56.50 295 P **P 13 26 59.4 -0.1**
baz=62
CLDB Colider 56.78 212 *e*P **P 13 27 03.0 +1.7**
BRU2 Volcan 56.78 251 P **P 13 27 02.3 +0.7**
JCT Junction City 56.81 284 IAmb IAmb 13 27 03.5
comp=Z,36nm,1.3s
JCT Junction City 56.81 284 P **P 13 27 01.6 +0.1**
baz=59,SNR=6.5
JCT Junction City 56.81 284 P **P 13 27 01.3 -0.3**
baz=59,SNR=6.5
T25A Trinidad 56.84 293 IAmb IAmb 13 27 05.2
comp=Z,40nm,1.3s
T25A Trinidad 56.84 293 P **P 13 27 01.9 0.0**
baz=61,SNR=8.6
PETF Flores 56.88 264 IAmb IAmb 13 27 04.7
comp=Z,62nm,1.7s
SRBA San Rafael, Bu 56.97 252 IAmb IAmb 13 27 10.3
comp=Z,38nm,1.3s
JANB Januaria 57.11 197 *e*P **P 13 27 04.9 +1.3**
YMP Mirror Lake Pl 57.19 303 P **P 13 27 03.8 -0.6**
YMP IAmb IAmb 13 27 10.5
comp=Z,38nm,1.2s
MSTX Muleshoe 57.22 289 IAmb IAmb 13 27 06.5
comp=Z,42nm,1.1s
MSTX Muleshoe 57.22 289 P **P 13 27 05.2 +0.8**
baz=60,SNR=9.3
MSTX Muleshoe 57.22 289 P **P 13 27 04.5 0.0**
baz=60,SNR=9.3
SDCO Great Sand Dun 57.32 294 P **P 13 27 06.3 +0.9**
baz=61,SNR=7.3
SDCO Great Sand Dun 57.32 294 P **P 13 27 05.6 +0.3**
baz=61,SNR=7.3
BRLDA Berland Lookou 57.35 316 IAmb IAmb 13 27 07.4
comp=Z,53nm,1.4s
WALA Waterton Lakes 57.58 309 P **P 13 27 06.0 -0.7**
WALA IAmb IAmb 13 27 08.3
comp=Z,48nm,1.3s
H17A Grant Village 57.61 303 P **P 13 27 07.4 +0.1**
baz=63
833A Chaparral WMA, 57.63 281 IAmb IAmb 13 27 08.8
comp=Z,41nm,1.4s
833A Chaparral WMA, 57.63 281 P **P 13 27 07.9 +0.6**
baz=58
833A Chaparral WMA, 57.63 281 P **P 13 27 07.2 -0.1**
baz=58
BW06 Boulder Array 57.70 301 P **P 13 27 07.1 -0.8**
baz=62,SNR=16
PD31 Pinedale Array 57.70 301 P **P 13 27 06.1 -1.8**
PDAR Pinedale Array 57.70 301 P **P 13 27 07.7 -0.3**
comp=Z,7.0nm,1.0s,baz=64,slow=6.8,SNR=41
PDAR LR LR 13 52 13.2
comp=Z,429nm,18.1s,baz=82,slow=36

comp=Z,7.0nm,1.0s
BOZ Bozeman (W) 57.74 305 P **P 13 27 07.7 -0.3**
baz=63,SNR=13
YMR Madison River 57.74 303 IAmb IAmb 13 27 14.7
comp=Z,44nm,1.4s
YFT Old Faithful 57.75 303 IAmb IAmb 13 27 15.8
comp=Z,38nm,1.4s
INK Inuvik 57.80 335 LR LR 13 49 47.2
comp=Z,242nm,18.4s,baz=103,slow=34
INK Inuvik 57.80 335 P **P 13 27 06.5 -1.3**
INK Inuvik 57.80 335 P **P 13 27 06.5 -1.3**
INK pmax pmax
comp=Z,22nm,1.4s
INK Inuvik 57.80 335 P **P 13 27 07.4 -0.4**
baz=61
YPP Pitchstone Pla 57.82 303 P **P 13 27 08.0 -0.8**
PDRB Porto dos Gac 57.82 212 *e*P **P 13 27 10.9 +2.2**
O20A White River Ci 58.06 298 IAmb IAmb 13 27 13.3
comp=Z,65nm,1.6s
O20A White River Ci 58.06 298 P **P 13 27 10.6 +0.2**
baz=61,SNR=8.9
LRM Limekiln Ridge 58.15 305 P **P 13 27 10.1 -0.9**
SNOW Snow King Moun 58.16 302 IAmb IAmb 13 27 13.5
comp=Z,31nm,1.3s
S22A 4UR Ranch, Cre 58.24 294 IAmb IAmb 13 27 15.1
comp=Z,30nm,1.6s
S22A 4UR Ranch, Cre 58.24 294 P **P 13 27 11.6 -0.2**
baz=61,SNR=11
REDW Red Top Meadow 58.27 302 IAmb IAmb 13 27 14.1
comp=Z,54nm,1.4s
TPAW Teton Pass 58.27 302 P **P 13 27 10.7 -1.2**
F31M Tsiigehtchic 58.30 334 P **P 13 27 10.7 -0.7**
baz=60,SNR=8.2
MSO Missoula 58.60 307 IAmb IAmb 13 27 16.1
comp=Z,23nm,1.2s
MSO Missoula 58.60 307 P **P 13 27 13.3 -0.7**
baz=62,SNR=10
BDFB Brasilia 58.60 201 P **P 13 27 15.7 +1.5**
comp=Z,6.4nm,0.9s,baz=21,slow=7.4,SNR=7.0
BDFB LR LR 13 48 53.9
comp=Z,335nm,19.9s,baz=15,slow=32
comp=Z,6.4nm,0.9s
BDFB Brasilia 58.60 201 P **P 13 27 15.1 +0.9**
BDFB IAmb IAmb 13 27 17.9
comp=Z,50nm,1.7s
BDFB Brasilia 58.60 201 P **P 13 27 15.1 +0.9**
BDFB pmax pmax
comp=Z,50nm,1.7s
BDFB Brasilia 58.60 201 *e*P **P 13 27 16.4 +2.2**
AKTO Aktyubinsk 58.61 48 P **P 13 27 14.2 +0.4**
comp=Z,12nm,1.0s,baz=301,slow=8.5,SNR=27
AKTO LR LR 13 52 03.9
comp=Z,350nm,20.1s,baz=299,slow=36
comp=Z,12nm,1.0s
AKTO Aktyubinsk 58.61 48 P **P 13 27 14.1 +0.3**
MC01 Montes Claros 58.63 196 *e*P **P 13 27 16.0 +1.7**
AHID Auburn Hatcher 58.71 301 IAmb IAmb 13 27 16.2
comp=Z,19nm,1.1s
NAN01 Guarapari, ES 59.03 192 *e*P **P 13 27 18.8 +1.8**
TGTN Hyland Airport 59.15 327 P **P 13 27 17.6 +0.1**
baz=61,SNR=7.8
PV07 Paradox Valley 59.15 296 P **P 13 27 17.6 -0.4**
G30M tAoh Zraii Nji 59.36 334 P **P 13 27 18.2 -0.7**
baz=58,SNR=8.3
ANMO Albuquerque 59.37 291 LR LR 13 51 20.0
comp=Z,466nm,21.6s,baz=64,slow=34
ANMO Albuquerque 59.37 291 P **P 13 27 19.6 0.0**
ANMO IAmb IAmb 13 27 26.8
comp=Z,34nm,1.9s
ANMO Albuquerque 59.37 291 P **P 13 27 19.6 0.0**
ANMO pmax pmax
comp=Z,34nm,1.9s
ANMO Albuquerque 59.37 291 P **P 13 27 21.5 +1.9**
baz=59,SNR=7.8
ANMO Albuquerque 59.37 291 P **P 13 27 19.6 0.0**
baz=59
PV11 David Mesa, Pa 59.38 296 IAmb IAmb 13 27 26.3
comp=Z,53nm,1.9s
HWUT Hardware Ranch 59.56 300 P **P 13 27 19.7 -1.1**
HWUT IAmb IAmb 13 27 26.7
comp=Z,42nm,1.3s
P18A Preston Nutter 59.65 298 IAmb IAmb 13 27 27.7
comp=Z,28nm,1.4s
MVCO Mesa Verde 59.66 295 P **P 13 27 21.8 +0.2**
baz=60,SNR=5.8
TCUT Toone Canyon 59.70 300 IAmb IAmb 13 27 28.0
comp=Z,51nm,1.8s
MMPY Sheldon Lake, 59.83 328 P **P 13 27 21.6 -0.6**
baz=59,SNR=8.2
NEW Newport 59.83 309 LR LR 13 51 20.7
comp=Z,493nm,20.7s,baz=64,slow=34
NEW Newport 59.83 309 P **P 13 27 21.9 -0.5**
NEW IAmb IAmb 13 27 23.7
comp=Z,30nm,1.2s
NEW Newport 59.83 309 P **P 13 27 21.9 -0.5**
NEW pmax pmax
comp=Z,30nm,1.2s
NEW Newport 59.83 309 P **P 13 27 22.6 +0.1**
baz=61,SNR=17
EPYK Eagle Plains 59.86 334 P **P 13 27 21.6 -0.7**
baz=57,SNR=11
OTAV Otavalo 59.92 241 P **P 13 27 23.3 -0.6**
OTAV IAmb IAmb 13 27 27.6
comp=Z,42nm,1.6s
OTAV Otavalo 59.92 241 P **P 13 27 23.3 -0.6**
OTAV pmax pmax
comp=Z,42nm,1.6s
OTAV Otavalo 59.92 241 *e*P **P 13 27 26.1 +2.2**
JLU Jordanelle 59.98 299 IAmb IAmb 13 27 29.1
comp=Z,25nm,1.5s
SJMB Sao Joao De Ma 60.04 193 *e*P **P 13 27 25.3 +1.3**
P17A Butcher Ranch, 60.06 298 IAmb IAmb 13 27 30.5
comp=Z,39nm,1.7s
WTLY Watson Lake, Y 60.07 325 P **P 13 27 23.2 -0.6**
WTLY IAmb IAmb 13 27 25.7
comp=Z,24nm,1.3s
WTLY Watson Lake, Y 60.07 325 P **P 13 27 23.8 0.0**
baz=60
DIAM Diamantina, MG 60.11 196 *e*P **P 13 27 26.8 +2.2**
LENM Lemitar 60.13 291 P **P 13 27 24.8 -0.1**
Y22F Passcal Instru 60.14 291 P **P 13 27 25.8 +1.0**
baz=59
Y22D IRIS PASSCAL I 60.14 291 P **P 13 27 25.3 +0.4**
baz=59
C27K Jago River 60.15 338 P **P 13 27 23.6 -0.6**
baz=53
Y22A Socorro 60.24 291 P **P 13 27 27.4 +1.9**
baz=59,SNR=9.8
AB31 Akbulak array 60.26 49 *i*P **P 13 27 25.0 -0.3**
ABKAR Akbulak array 60.26 49 IAmb IAmb 13 27 28.1
comp=Z,33nm,1.6s
TXAR Lajitas Array 60.27 285 P **P 13 27 25.9 +0.2**
comp=Z,11nm,1.1s,baz=79,slow=6.5,SNR=47
TXAR LR LR 13 54 11.2
comp=Z,392nm,18.2s,baz=56,slow=37
comp=Z,11nm,1.1s
TXAR Lajitas Array 60.27 285 P **P 13 27 25.6 -0.1**
TXAR Lajitas Array 60.27 285 P **P 13 27 25.6 -0.1**
TX31 Lajitas Ar. Si 60.27 285 P **P 13 27 26.5 +0.8**
baz=57,SNR=11
TX32 Lajitas Array 60.27 285 IAmb IAmb 13 27 28.3
comp=Z,46nm,1.6s
HVU Hansel Valley 60.27 301 IAmb IAmb 13 27 27.0
comp=Z,19nm,1.2s
C26K Camden Bay 60.31 339 P **P 13 27 24.9 -0.3**
baz=52
E27K Coleen River 60.40 337 P **P 13 27 25.2 -0.7**
baz=54,SNR=8.7
HLID Hailey 60.45 304 P **P 13 27 26.1 -0.8**
HLID Hailey 60.45 304 P **P 13 27 26.7 -0.2**
baz=60,SNR=9.3
TMUT Trail Mountain 60.46 298 IAmb IAmb 13 27 33.5
comp=Z,32nm,1.2s
VILB Vilhena 60.48 215 *e*P **P 13 27 29.7 +2.5**
CMIG Matias Romero 60.59 268 LR LR 13 51 08.5
comp=Z,447nm,20.4s,baz=52,slow=34
Q16A Castle Valley 60.63 298 IAmb IAmb 13 27 30.7
comp=Z,34nm,1.6s
ETMB Extrema 60.63 223 *e*P **P 13 27 29.0 +0.9**
PLID Pearl Lake 60.69 306 IAmb IAmb 13 27 30.1
comp=Z,31nm,1.2s
C09A Chrisman Ranch 60.73 309 P **P 13 27 27.9 -0.6**
FARO Faro, Yukon 60.86 329 P **P 13 27 29.4 +0.2**
baz=58
BGU Big Grassy Mou 60.86 300 IAmb IAmb 13 27 31.9
comp=Z,36nm,1.5s
IPMB Ipameri, GO 60.89 201 *e*P **P 13 27 31.2 +1.4**

I29M Ogilvie Camp, 60.97 333 P **P 13 27 30.0 +0.1**
baz=55,SNR=14
PMNB Patos De Minas 60.97 199 *e*P **P 13 27 32.4 +2.0**
NRIK Noril'sk 61.05 21 P **P 13 27 30.9 +0.6**
comp=Z,16nm,1.1s,baz=297,slow=4.8,SNR=12
NRIK LR LR 13 52 53.8
comp=Z,112nm,20.8s,baz=321,slow=35
comp=Z,16nm,1.1s
NRIK Noril'sk 61.05 21 P **P 13 27 29.7 -0.6**
NRIK IAmb IAmb 13 27 34.0
comp=Z,34nm,1.2s
NRIK Noril'sk 61.05 21 *c i*P **P 13 27 31.6 +1.3**
NRIK pmax pmax
comp=Z,37nm,1.4s
B08A Colville Reser 61.08 310 P **P 13 27 29.9 -1.0**
D25K Kavik River 61.08 339 P **P 13 27 30.8 +0.2**
baz=51
DUG Dugway, Tooele 61.08 300 IAmb IAmb 13 27 33.8
comp=Z,45nm,1.5s
DUG Dugway, Tooele 61.08 300 P **P 13 27 30.8 -0.4**
baz=60,SNR=21
MAYO Mayo, Yukon 61.09 331 P **P 13 27 30.4 -0.3**
baz=56
G27K Doyon Strip 61.23 335 P **P 13 27 31.2 -0.5**
baz=53,SNR=14
M31M Drury Creek, Y 61.28 329 IAmb IAmb 13 27 34.6
comp=Z,26nm,1.4s
M31M Drury Creek, Y 61.28 329 P **P 13 27 32.1 0.0**
baz=57,SNR=7.2
E09A Wood Farm, Sta 61.29 308 P **P 13 27 31.5 -0.8**
E09A IAmb IAmb 13 27 35.2
comp=Z,43nm,1.7s
SALV Santo Antonio 61.33 209 *e*P **P 13 27 34.5 +1.8**
N32M Quiet Lake 61.33 328 P **P 13 27 32.0 -0.4**
baz=57
R33M Jennings River 61.38 325 P **P 13 27 32.2 -0.6**
baz=58,SNR=5.3
LLLB Lilloet 61.40 314 IAmb IAmb 13 27 34.9
comp=Z,45nm,1.7s
PORT Chimborazo Vol 61.40 240 P **P 13 27 34.5 +0.3**
C24K Franklin Bluff 61.45 340 P **P 13 27 32.3 -0.6**
baz=49
F26K Sheenjek River 61.46 337 P **P 13 27 32.6 -0.6**
baz=52,SNR=5.2
DLBC Dease Lake 61.47 324 LR LR 13 51 48.2
comp=Z,171nm,20.0s,baz=96,slow=34
DLBC Dease Lake 61.47 324 IAmb IAmb 13 27 35.8
comp=Z,21nm,1.2s
DLBC Dease Lake 61.47 324 P **P 13 27 32.4 -1.0**
baz=58,SNR=6.6
H27K Steamboat Moun 61.54 335 P **P 13 27 32.4 -1.3**
baz=53,SNR=8.7
K29M Barlow Dome 61.55 331 P **P 13 27 33.3 -0.7**
baz=55,SNR=8.6
121A Cookes Peak, D 61.56 290 IAmb IAmb 13 27 41.7
comp=Z,20nm,1.2s
121A Cookes Peak, D 61.56 290 P **P 13 27 36.5 +1.9**
baz=58,SNR=6.7
121A Cookes Peak, D 61.56 290 P **P 13 27 34.0 -0.6**
baz=58,SNR=6.7
W18A Petrified Fore 61.59 293 P **P 13 27 33.5 -1.3**
baz=58
E25K Arctic Village 61.62 338 P **P 13 27 33.2 -1.0**
baz=51,SNR=6.6
P33M Teslin, Yukon 61.73 327 P **P 13 27 33.7 -1.5**
baz=57
MTPU Mount Pierson 61.76 297 IAmb IAmb 13 27 48.3
comp=Z,28nm,1.6s
G26K Porcupine Rive 61.81 336 P **P 13 27 34.2 -1.3**
baz=52,SNR=11
E08A Dider Farm, El 61.85 308 P **P 13 27 35.6 -0.4**
D24K Happy Valley 61.86 339 P **P 13 27 34.1 -1.7**
baz=49
C23K Itkillik River 61.87 340 P **P 13 27 35.0 -0.8**
baz=47
I27K Kandik River 61.94 334 P **P 13 27 35.1 -1.4**
baz=53,SNR=8.0
F25K Christian Rive 61.97 337 P **P 13 27 35.1 -1.6**
baz=50
X18A Snowflake 62.04 293 IAmb IAmb 13 27 44.4
comp=Z,24nm,1.5s
DAWY Dawson 62.10 332 IAmb IAmb 13 27 39.3
comp=Z,35nm,1.4s
DAWY Dawson 62.10 332 P **P 13 27 36.2 -1.4**
baz=54,SNR=13
Q32M Nahina River 62.18 325 P **P 13 27 37.4 -1.0**
baz=57
L29M L29M 62.20 331 P **P 13 27 36.9 -1.4**
baz=54,SNR=12
N31M Braeburn, Yuko 62.23 329 IAmb IAmb 13 27 40.2
comp=Z,34nm,1.4s
N31M Braeburn, Yuko 62.23 329 P **P 13 27 37.3 -1.1**
baz=55,SNR=6.3
S34M Telegraph Cree 62.25 324 P **P 13 27 37.7 -0.9**
baz=57
A21K Barrow 62.25 343 P **P 13 27 37.2 -1.1**
baz=43
PTLB Pontes e Lacer 62.27 213 *e*P **P 13 27 41.2 +2.2**
EGAK Eagle 62.29 333 IAmb IAmb 13 27 40.8
comp=Z,47nm,1.9s
EGAK Eagle 62.29 333 P **P 13 27 38.8 0.0**
baz=53
WHY Whitehorse 62.34 328 P **P 13 27 37.5 -1.7**
WHY IAmb IAmb 13 27 43.2
comp=Z,36nm,1.6s
WHY Whitehorse 62.34 328 P **P 13 27 38.2 -1.1**
baz=56,SNR=5.7
T35M Bob Quinn 62.35 323 P **P 13 27 38.6 -0.7**
baz=57
ELK Elko 62.40 301 LR LR 13 53 19.0
comp=Z,222nm,21.1s,baz=64,slow=35
ELK Elko 62.40 301 IAmb IAmb 13 27 45.9
comp=Z,42nm,1.7s
G08A Pilot Rock 62.40 307 P **P 13 27 37.8 -2.2**
G08A IAmb IAmb 13 27 41.3
comp=Z,27nm,1.9s
TOLK Toolik Lake Re 62.40 339 P **P 13 27 38.5 -1.1**
baz=48
LTY Liberty 62.41 310 IAmb IAmb 13 27 40.4
comp=Z,25nm,1.4s
D23K Nanushuk River 62.48 340 P **P 13 27 40.0 0.0**
baz=47,SNR=5.1
E24K Your Creek 62.48 338 P **P 13 27 39.7 -0.4**
baz=48,SNR=7.2
CZSB Cruzeiro do Su 62.49 230 *e*P **P 13 27 41.1 +0.4**
WUAZ Wupatki 62.52 294 IAmb IAmb 13 27 44.6
comp=Z,40nm,1.5s
WUAZ Wupatki 62.52 294 P **P 13 27 40.9 -0.1**
baz=58,SNR=12
SZCU Shurtz Canyon 62.60 297 IAmb IAmb 13 27 48.1
comp=Z,29nm,1.3s
I26K Coal Creek Min 62.63 334 P **P 13 27 40.4 -0.6**
baz=52
G25K Bearman Lake 62.64 336 P **P 13 27 41.1 +0.1**
baz=50,SNR=5.9
F24K Squaw Lake 62.68 338 P **P 13 27 40.5 -0.9**
baz=49
M29M Somme Creek 62.71 330 P **P 13 27 41.5 -0.2**
baz=54,SNR=8.9
KNB Kanab 62.72 297 IAmb IAmb 13 27 48.1
comp=Z,31nm,1.5s
N30M Aishihik Lake 62.76 329 P **P 13 27 41.9 -0.2**
baz=54,SNR=13
O30N Mendenhall 62.77 328 P **P 13 27 42.1 0.0**
baz=55,SNR=6.1
E23K Chandalar 62.81 339 P **P 13 27 41.9 -0.4**
baz=48
CCUT Cedar City 62.81 297 IAmb IAmb 13 27 45.3
comp=Z,22nm,1.2s
H25K Birch Creek 62.88 336 P **P 13 27 42.2 -0.4**
baz=50
C2SB Chapadao do Su 63.00 205 *e*P **P 13 27 47.1 +3.2**
HPIG 63.05 283 IAmb IAmb 13 27 47.2
comp=Z,27nm,1.7s
K27K Chicken 63.06 333 P **P 13 27 43.0 -1.0**
baz=52
G24K Hadweenzic Riv 63.10 337 P **P 13 27 43.6 -0.5**
baz=49,SNR=7.7
TLIG Tlapa 63.10 271 P **P 13 27 44.2 -0.8**
SKAG Skagway 63.20 327 P **P 13 27 44.4 -0.5**
baz=55
PRP Porcupine Dome 63.27 335 P **P 13 27 45.0 -0.5**
baz=50,SNR=10.0
J26L Joseph Creek 63.28 334 IAmb IAmb 13 27 47.8
comp=Z,30nm,1.9s
J26L Joseph Creek 63.28 334 P **P 13 27 44.5 -0.9**
baz=51
HYT Haines Junctio 63.30 329 P **P 13 27 45.5 -0.2**

HYT IAmb IAmb 13 27 47.9
comp=Z,22nm,1.4s
HYT Haines Junctio 63.30 329 P **P 13 27 44.9 -0.8**
baz=54,SNR=6.1
YUK4 Talbot Arm 63.44 329 P **P 13 27 45.7 -1.0**
baz=53,SNR=6.5
P30M Million Dollar 63.49 328 P **P 13 27 46.6 -0.3**
baz=54
COLD Coldfoot 63.54 338 IAmb IAmb 13 27 48.8
comp=Z,20nm,1.2s
COLD Coldfoot 63.54 338 P **P 13 27 46.9 -0.1**
baz=47,SNR=8.0
SIV San Ignacio 63.56 214 LR LR 13 51 50.0
comp=Z,79nm,21.8s,baz=66,slow=33
YUK6 Outpost Mounta 63.57 329 P **P 13 27 47.1 -0.5**
baz=53,SNR=9.5
L27K Beaver Creek, 63.58 332 P **P 13 27 47.6 +0.2**
baz=52
CBB Campbell River 63.61 314 IAmb IAmb 13 27 49.5
comp=Z,33nm,1.2s
PLBC Pleasant Camp 63.64 327 P **P 13 27 47.6 -0.2**
baz=54
SCRK Sand Creek 63.75 333 P **P 13 27 47.1 -1.5**
SCRK Sand Creek 63.75 333 P **P 13 27 48.6 -0.1**
baz=50,SNR=6.4
H24K Noodor Dome 63.79 336 IAmb IAmb 13 27 50.7
comp=Z,26nm,1.4s
H24K Noodor Dome 63.79 336 P **P 13 27 48.9 +0.1**
baz=48,SNR=6.4
J25K Salcha River, 63.80 334 IAmb IAmb 13 27 50.4
comp=Z,30nm,1.4s
J25K Salcha River, 63.80 334 P **P 13 27 49.5 +0.6**
baz=50,SNR=6.1
TUC Tucson 63.82 291 P **P 13 27 48.6 -0.9**
TUC Tucson 63.82 291 P **P 13 27 48.6 -0.9**
TUC pmax pmax
comp=Z,15nm,1.4s
TUC Tucson 63.82 291 P **P 13 27 50.2 +0.7**
baz=57
G23K Bananza Creek 63.84 338 P **P 13 27 49.2 +0.1**
baz=47
YUK3 Moose Creek 63.87 330 P **P 13 27 49.5 0.0**
baz=52,SNR=10
R11A Troy Canyon, C 63.88 299 P **P 13 27 50.0 0.0**
baz=58,SNR=6.2
BRVK Borovoye 63.89 42 P **P 13 27 49.1 -0.4**
BRVK IAmb IAmb 13 27 51.6
comp=Z,38nm,1.4s
BRVK Borovoye 63.89 42 *c e*P **P 13 27 49.5 0.0**
BRVK pmax pmax
comp=Z,41nm,1.7s
F22K John River 63.90 339 P **P 13 27 49.6 +0.2**
baz=45,SNR=9.0
BBB Bella Bella 63.90 317 LR LR 13 55 03.9
comp=Z,212nm,20.1s,baz=61,slow=36
RAYN Ar Rayn 63.91 81 P **P 13 27 48.6 -1.5**
RAYN IAmb IAmb 13 27 58.9
comp=Z,32nm,1.9s
RAYN Ar Rayn 63.91 81 P **P 13 27 48.7 -1.5**
RAYN pmax pmax
comp=Z,31nm,2.0s
BVAR Borovoye Array 63.96 41 P **P 13 27 50.6 +0.6**
comp=Z,4.5nm,1.0s,baz=294,slow=4.7,SNR=31
BVAR LR LR 13 55 08.6
comp=Z,408nm,18.5s,baz=294,slow=36
comp=Z,4.5nm,1.0s
S32K Killisnoo 64.03 325 P **P 13 27 50.5 +0.2**
baz=55
M27K Edge Creek, AK 64.03 331 IAmb IAmb 13 27 52.5
comp=Z,30nm,1.3s
M27K Edge Creek, AK 64.03 331 P **P 13 27 50.6 +0.1**
baz=51,SNR=9.4
O29M Mount Kennedy 64.03 328 P **P 13 27 50.8 +0.3**
baz=53
P29M Windy Craggy 64.10 328 IAmb IAmb 13 27 53.1
comp=Z,21nm,1.3s
P29M Windy Craggy 64.10 328 P **P 13 27 50.9 +0.1**
baz=53
G22K Bettles 64.12 338 P **P 13 27 51.4 +0.6**
baz=46
POKR Poker Plat Res 64.14 335 P **P 13 27 51.0 0.0**
baz=48
L26K Log Cabin Wild 64.14 332 IAmb IAmb 13 28 10.0
comp=Z,28nm,1.6s
L26K Log Cabin Wild 64.14 332 P **P 13 27 50.9 -0.1**
baz=50,SNR=5.7
ILAR Eielson Array 64.19 335 P **P 13 27 51.7 +0.3**
comp=Z,2.4nm,1.0s,baz=41,slow=4.5,SNR=14
ILAR LR LR 13 53 56.5
comp=Z,170nm,18.3s,baz=60,slow=34
comp=Z,2.4nm,1.0s
H23K Yukon River 64.31 337 IAmb IAmb 13 27 54.2
comp=Z,24nm,1.3s
H23K Yukon River 64.31 337 P **P 13 27 52.0 -0.2**
baz=47,SNR=6.0
MENT Mentasta 64.33 332 IAmb IAmb 13 27 54.8
comp=Z,39nm,1.8s
MCRA Macar, Loja 64.36 239 P **P 13 27 53.5 +0.3**
O28M Mount Upton 64.38 329 P **P 13 27 52.4 -0.6**
baz=52,SNR=6.5
PINE Pine Mountain 64.39 307 IAmb IAmb 13 27 56.1
comp=Z,21nm,1.3s
M26K Nabesna, AK 64.41 332 P **P 13 27 53.0 +0.1**
M26K IAmb IAmb 13 27 54.6
comp=Z,42nm,1.9s
M26K Nabesna, AK 64.41 332 P **P 13 27 52.2 -0.7**
baz=50
COLA College 64.43 335 P **P 13 27 52.5 -0.4**
baz=48
TCOL CIGO, UAF Yank 64.44 335 P **P 13 27 52.3 -0.6**
baz=48
F21K Alatna River 64.45 339 P **P 13 27 52.6 -0.5**
baz=44,SNR=5.3
HDA Harding Lake 64.45 335 IAmb IAmb 13 27 54.5
comp=Z,28nm,1.3s
HDA Harding Lake 64.45 335 P **P 13 27 51.9 -1.2**
baz=48,SNR=8.9
K24K Donnelly Dome 64.47 334 P **P 13 27 52.4 -0.9**
baz=49,SNR=5.8
W13A Hualapai Mount 64.47 295 IAmb IAmb 13 27 56.8
comp=Z,20nm,1.4s
MDM Murphy Dome 64.50 336 P **P 13 27 53.1 -0.3**
MDM IAmb IAmb 13 27 54.9
comp=Z,22nm,1.4s
CCB Clear Creek Bu 64.57 335 P **P 13 27 52.3 -1.5**
CCB IAmb IAmb 13 27 55.0
comp=Z,19nm,1.3s
LOGN Logan Glacier 64.66 330 IAmb IAmb 13 27 56.9
comp=Z,33nm,1.5s
CTG Chitna Glacier 64.70 330 P **P 13 27 54.9 -0.1**
baz=51,SNR=7.9
I23K Minto, Yukon-K 64.72 336 P **P 13 27 53.2 -1.5**
I23K Minto, Yukon-K 64.72 336 P **P 13 27 53.8 -0.9**
baz=47,SNR=9.5
BARN Barnard Glacie 64.77 330 IAmb IAmb 13 27 58.2
comp=Z,38nm,1.6s
V12A Nelson 64.80 296 IAmb IAmb 13 28 02.8
comp=Z,42nm,1.7s
H22K Ishtalitna Cre 64.81 337 P **P 13 27 55.6 +0.2**
baz=45
PAX Paxson 64.91 333 IAmb IAmb 13 27 58.0
comp=Z,29nm,1.5s
PAX Paxson 64.91 333 P **P 13 27 55.1 -1.1**
baz=49,SNR=7.6
K05A Summer Lake 64.94 306 P **P 13 27 55.2 -1.7**
GEYT Alibeck 64.95 61 P **P 13 27 56.8 0.0**
comp=Z,2.4nm,0.7s,baz=260,slow=8.9,SNR=7.2
GEYT LR LR 13 57 21.7
comp=Z,120nm,20.3s,baz=334,slow=37
comp=Z,2.4nm,0.7s
GEYT Alibeck 64.95 61 IAmb IAmb 13 27 59.9
comp=Z,30nm,1.7s
RCLB Rio Claro- Sao 64.96 199 *e*P **P 13 27 60.0 +3.1**
G21K Allakaket 64.97 339 P **P 13 27 56.1 -0.3**
baz=44
NEA2 Nenana 65.01 336 P **P 13 27 55.7 -1.0**
baz=47
MCARA McCarthy VSAT 65.07 331 IAmb IAmb 13 27 59.1
comp=Z,39nm,1.8s
MCARA McCarthy VSAT 65.07 331 P **P 13 27 57.2 0.0**
baz=50
TPNV Topopah Spring 65.08 298 P **P 13 27 58.1 +0.3**
baz=57
PDMCI Parker Dam,Lak 65.09 295 P **P 13 27 57.4 -0.3**
baz=56
TPH Tonopah 65.11 300 P **P 13 27 56.2 -1.9**
TPH Tonopah 65.11 300 P **P 13 27 56.2 -1.9**
TPH pmax pmax

comp=Z,115nm,1.3s
KVN Kaiserville 65.16 301 IAmb IAmb 13 27 59.7
comp=Z,24nm,1.2s
HARP HAARP 65.18 332 P **P** **13 27 57.9 0.0**
baz=49
MLY Manley 65.22 336 P **P** **13 27 58.1 -0.1**
baz=46
H21K Melozitna Rive 65.39 338 P **P** **13 27 57.6 -1.5**
baz=44
TGL Tana Glacier 65.40 330 IAmb IAmb 13 28 01.1
comp=Z,34nm,1.2s
MESA MESA 65.44 330 P **P** **13 27 57.7 -2.0**
baz=50
214A Organ Pipe Nat 65.45 292 P **P** **13 27 58.3 -1.8**
214A IAmb IAmb 13 28 03.0
comp=Z,22nm,1.4s
214A Organ Pipe Nat 65.45 292 P **P** **13 27 59.8 -0.3**
baz=56
ATAH Atahualpa 65.47 235 LR LR 13 54 29.9
comp=Z,265nm,21.8s,baz=12,slow=34
DHY Denali Highway 65.49 334 P **P** **13 27 58.9 -1.2**
DHY IAmb IAmb 13 28 42.1
comp=Z,26nm,1.6s
DHY Denali Highway 65.49 334 P **P** **13 27 58.5 -1.5**
baz=48
N25K Chitina, Valde 65.50 332 IAmb IAmb 13 28 34.5
comp=Z,30nm,1.8s
N25K Chitina, Valde 65.50 332 P **P** **13 27 60.0 -0.1**
baz=49
AQDB Aquidauana 65.55 207 IAmb IAmb 13 28 03.6
comp=Z,26nm,1.3s
AQDB Aquidauana 65.55 207 *e*P **P** **13 28 03.1 +2.5**
MCK McKinley 65.56 335 P **P** **13 27 59.5 -0.8**
baz=46
GMN Gold Mountain 65.56 299 IAmb IAmb 13 28 07.0
comp=Z,25nm,1.7s
WAX Waxell Ridge 65.61 330 IAmb IAmb 13 28 02.8
comp=Z,31nm,1.3s
NVAR Mina Array Bea 65.63 300 P **P** **13 28 01.6 +0.2**
comp=Z,1.8nm,1.0s,baz=61,slow=6.0,SNR=13
NVAR LR LR 13 57 07.6
comp=Z,228nm,18.2s,baz=61,slow=36
comp=Z,1.8nm,1.0s
PAHR Pah Rah Range 65.63 302 IAmb IAmb 13 28 03.2
comp=Z,22nm,1.5s
SHOC Shoshone, Teco 65.67 297 P **P** **13 28 01.1 -0.4**
baz=56
113A Mohawk Valley, 65.67 293 IAmb IAmb 13 28 07.9
comp=Z,28nm,1.6s
TUQ Turquoise Moun 65.69 297 P **P** **13 28 00.8 -0.9**
baz=56
M24K Tolsona, Glenn 65.73 333 P **P** **13 28 00.3 -1.2**
M24K Tolsona, Glenn 65.73 333 P **P** **13 28 00.6 -0.9**
baz=48,SNR=5.8
FURC Furnace Creek, 65.75 298 P **P** **13 28 02.1 +0.1**
baz=56,SNR=7.0
GWY Greenwater Val 65.78 298 P **P** **13 28 00.9 -1.5**
GWY IAmb IAmb 13 28 09.3
comp=Z,32nm,1.5s
GRAC Grapevine Rang 65.80 299 IAmb IAmb 13 28 08.7
comp=Z,28nm,1.2s
GRAC Grapevine Rang 65.80 299 P **P** **13 28 02.0 -0.4**
baz=56
LCH Last Change Ra 65.86 299 IAmb IAmb 13 28 05.4
comp=Z,41nm,1.6s
IRM Iron Mountain 65.86 295 P **P** **13 28 01.8 -0.9**
baz=56,SNR=8.0
LHV Little Huntoon 65.86 300 IAmb IAmb 13 28 04.5
comp=Z,18nm,1.3s
GMRC Granite Mounta 65.87 296 P **P** **13 28 02.2 -0.7**
baz=56
BMRM Bremner River 65.92 331 P **P** **13 28 01.9 -0.9**
baz=49,SNR=7.9
WAT6 Susitna Watana 65.95 334 P **P** **13 28 02.4 -0.7**
baz=47,SNR=7.4
BPAW Bear Paw Mtn. 65.95 336 IAmb IAmb 13 28 03.9
comp=Z,20nm,1.3s
BPAW Bear Paw Mtn. 65.95 336 P **P** **13 28 02.5 -0.3**
baz=45
BERG Berg Lake 65.97 330 IAmb IAmb 13 28 05.7
comp=Z,32nm,1.5s
KLU Klutina 66.05 332 P **P** **13 28 01.4 -2.2**
KLU IAmb IAmb 13 28 05.1
comp=Z,22nm,1.3s
KLU Klutina 66.05 332 P **P** **13 28 02.0 -1.6**
baz=48,SNR=5.1
WAT1 Susitna Watana 66.05 334 P **P** **13 28 02.0 -1.5**
baz=46
BEKR Beckworth 66.17 303 IAmb IAmb 13 28 11.0
comp=Z,42nm,1.7s
TRF Thorofare Moun 66.19 335 P **P** **13 28 03.2 -1.3**
TRF IAmb IAmb 13 28 05.7
comp=Z,37nm,1.4s
TRF Thorofare Moun 66.19 335 P **P** **13 28 02.8 -1.7**
baz=45
SUCK Suckling Hills 66.20 330 IAmb IAmb 13 28 07.0
comp=Z,34nm,1.3s
DIV Divide 66.24 332 IAmb IAmb 13 28 06.2
comp=Z,19nm,1.2s
GLA Glamis 66.25 294 P **P** **13 28 04.3 -1.1**
baz=56,SNR=6.5
SCM Sheep Creek Mo 66.32 333 P **P** **13 28 03.6 -1.8**
baz=47
BC3 Big Chuckawall 66.35 295 P **P** **13 28 05.7 -0.3**
baz=56
GSC Goldstone, Bar 66.36 297 P **P** **13 28 05.0 -1.0**
GSC Goldstone, Bar 66.36 297 P **P** **13 28 05.0 -1.0**
GSC pmax pmax
comp=Z,20nm,0.4s
MPMC Manual Prospec 66.40 298 P **P** **13 28 06.4 0.0**
baz=56,SNR=14
M23K Glacier View 66.49 333 P **P** **13 28 05.0 -1.3**
baz=47,SNR=5.9
CHUM Lake Minchumin 66.52 336 P **P** **13 28 04.9 -1.5**
baz=44
BELC Belle Mtn. Jos 66.53 295 P **P** **13 28 07.4 +0.1**
baz=56,SNR=7.8
OMMB Old Mammoth Mi 66.54 300 IAmb IAmb 13 28 10.6
comp=Z,25nm,1.6s
KAIM Kayak Island 66.54 330 P **P** **13 28 05.9 -0.8**
baz=49
CWC Cottonwood Cre 66.58 299 P **P** **13 28 07.7 +0.2**
baz=56
SML Sawmill 66.69 333 P **P** **13 28 06.6 -1.1**
baz=46,SNR=6.4
CAST Castle Rocks 66.78 336 IAmb IAmb 13 30 11.5
comp=Z,38nm,2.0s
CAST Castle Rocks 66.78 336 P **P** **13 28 07.1 -1.0**
baz=44
J20K Nowinta River 66.86 337 IAmb IAmb 13 28 09.9
comp=Z,16nm,1.2s
J20K Nowinta River 66.86 337 P **P** **13 28 08.5 -0.1**
baz=43
GLI Glacier Island 66.89 332 P **P** **13 28 08.4 -0.5**
baz=47
CUT Chulitna 66.92 334 P **P** **13 28 08.2 -0.8**
baz=45
TIXI Tiksi 66.96 7 LR LR 13 54 05.7
comp=Z,38nm,18.9s,baz=357,slow=33
SWSC Sam W. Stewart 66.99 294 P **P** **13 28 09.5 -0.5**
baz=55
KNK Knik Glacier 67.00 333 P **P** **13 28 07.5 -2.1**
KNK Knik Glacier 67.00 333 P **P** **13 28 08.9 -0.7**
baz=46,SNR=8.9
PFO Pinyon Flats O 67.07 295 LR LR 13 57 30.0
comp=Z,614nm,18.2s,baz=60,slow=36
PFO Pinyon Flats O 67.07 295 P **P** **13 28 09.2 -1.4**
PFO IAmb IAmb 13 28 13.3
comp=Z,21nm,1.4s
PFO Pinyon Flats O 67.07 295 P **P** **13 28 09.2 -1.4**
PFO pmax pmax
comp=Z,21nm,1.4s
PFO Pinyon Flats O 67.07 295 P **P** **13 28 10.1 -0.5**
baz=55
TPFO Pinon Flats 67.07 295 P **P** **13 28 09.8 -0.9**
baz=55
LPAZ La Paz 67.10 221 P **P** **13 28 12.2 +0.8**
comp=Z,10nm,1.2s,baz=31,slow=8.0,SNR=19
LPAZ LR LR 13 53 58.8
comp=Z,403nm,21.9s,baz=27,slow=33
comp=Z,10nm,1.2s
LPAZ La Paz 67.10 221 *e*P **P** **13 28 13.6 +2.2**
PMR Palmer 67.11 333 P **P** **13 28 09.8 -0.4**
baz=46,SNR=11
YUH Yuha Desert 67.24 294 IAmb IAmb 13 28 16.3
comp=Z,22nm,1.7s
ISA Isabella, Lake 67.28 298 IAmb IAmb 13 28 21.2
comp=Z,41nm,2.0s

PWL Port Wells 67.34 332 P **P** **13 28 11.4 -0.3**
baz=46,SNR=10
IKP In-Ko-Pah, Jac 67.37 294 P **P** **13 28 13.1 +0.6**
baz=55
MONP2 Monument Peak 67.45 295 P **P** **13 28 13.4 +0.3**
baz=55
P23K Montague Islan 67.61 331 P **P** **13 28 13.1 -0.3**
baz=46
SKT Skwentna 67.64 334 P **P** **13 28 13.1 -0.5**
baz=44,SNR=6.8
ELS Elsinore Mount 67.71 296 IAmb IAmb 13 28 16.9
comp=Z,31nm,1.6s
OTUK Ortayu 67.71 45 P **P** **13 28 14.5 +0.2**
SUA Susitna One 67.75 334 P **P** **13 28 14.2 -0.3**
baz=44
SLBS Sierra La Lagu 68.08 283 P **P** **13 28 16.1 -1.0**
SLBS IAmb IAmb 13 28 21.4
comp=Z,22nm,1.3s
LPIG La Paz 68.11 283 LR LR 13 58 51.4
comp=Z,373nm,18.4s,baz=55,slow=37
TIJ01 Guaruva-PR 68.11 199 *e*P **P** **13 28 18.4 +1.3**
MBAR Mbarara 68.13 111 LR LR 13 57 29.6
comp=Z,270nm,18.9s,baz=322,slow=35
M20K Styx River 68.23 335 P **P** **13 28 17.0 -0.4**
baz=43
SEW Seward 68.27 332 P **P** **13 28 16.9 -0.6**
SEW IAmb IAmb 13 28 19.1
comp=Z,18nm,1.3s
SEW Seward 68.27 332 P **P** **13 28 18.0 +0.4**
baz=45
NNA Nana 68.31 231 LR LR 13 56 08.6
comp=Z,158nm,21.8s,baz=12,slow=34
KCPM Cahto Peak 68.32 304 IAmb IAmb 13 28 23.3
comp=Z,18nm,1.2s
N20K Mount Spurr 68.43 334 P **P** **13 28 18.6 -0.1**
baz=43
SPCR Spurr Chakacha 68.43 334 P **P** **13 28 18.8 +0.2**
baz=43
M19K Big River Lodg 68.62 335 P **P** **13 28 19.8 0.0**
baz=42
LODK Lodwar 68.73 104 P **P** **13 28 20.1 -1.1**
LODK IAmb IAmb 13 28 32.2
comp=Z,30nm,1.6s
ATD Arta Tunnel 69.10 93 LR LR 14 00 15.2
comp=Z,145nm,18.7s,baz=356,slow=37
KURK Kurchatov 69.43 40 P **P** **13 28 24.4 -0.6**
KURK IAmb IAmb 13 28 27.1
comp=Z,32nm,1.2s
KURK Kurchatov 69.43 40 *ce*P **P** **13 28 25.4 +0.4**
KURK pmax pmax
comp=Z,41nm,1.7s
KURBB Kurchatov Arra 69.45 40 LR LR 13 58 43.4
comp=Z,306nm,19.4s,baz=285,slow=36
PB16 IPOC Station P 69.52 221 IAmb IAmb 13 28 29.4
comp=Z,35nm,1.5s
KK31 Karatay Array 69.76 50 *i* P **P** **13 28 27.0 -0.2**
ZAA0 Zalesovo Array 70.19 35 P **P** **13 28 28.7 -0.8**
ZAA0 IAmb IAmb 13 28 31.0
comp=Z,30nm,1.5s
ZALV Zalesovo Beam 70.19 35 P **P** **13 28 30.1 +0.5**
comp=Z,7.2nm,1.0s,baz=308,slow=7.3,SNR=22
ZALV PP **PP** **13 31 06.2 +2.0**
comp=Z,0.2nm,0.3s,baz=225,slow=1.9,SNR=3.6
ZALV LR LR 13 58 49.1
comp=Z,170nm,21.7s,baz=300,slow=36
comp=Z,7.2nm,1.0s
ITAB Concordia 70.75 201 P **P** **13 28 34.9 +1.7**
ITAB IAmb IAmb 13 28 36.8
comp=Z,42nm,1.3s
ITAB Concordia 70.75 201 *e*P **P** **13 28 36.3 +3.1**
PB08 IPOC Station P 70.88 220 IAmb IAmb 13 28 37.0
comp=Z,45nm,1.7s
CPUP Villa Florida 71.51 206 P **P** **13 28 38.5 +0.7**
comp=Z,2.6nm,0.9s,baz=24,slow=6.2,SNR=5.8
CPUP LR LR 13 57 22.9
comp=Z,94nm,20.2s,baz=30,slow=34
comp=Z,2.6nm,0.9s
CPUP Villa Florida 71.51 206 IAmb IAmb 13 28 40.8
comp=Z,53nm,1.8s
CPUP Villa Florida 71.51 206 *e*P **P** **13 28 39.9 +2.1**
O16K Kokwok River B 71.56 335 P **P** **13 28 36.8 -1.0**
baz=39
GAMB Gambell 71.73 343 P **P** **13 28 38.2 -0.5**
baz=29
BTK Batken 71.79 53 IAmb IAmb 13 28 42.4
comp=Z,52nm,1.8s
GAR Garm 72.13 54 P **P** **13 28 41.5 -0.4**
AAK Ala-Archa 72.35 49 LR LR 14 00 28.2
comp=Z,295nm,21.2s,baz=316,slow=36
AAK Ala-Archa 72.35 49 P **P** **13 28 42.7 -0.4**
AAK IAmb IAmb 13 28 46.6
comp=Z,49nm,1.9s
AAK Ala-Archa 72.35 49 P **P** **13 28 42.7 -0.4**
AAK pmax pmax
comp=Z,49nm,1.9s
CNLB Canela 72.39 200 *e*P **P** **13 28 45.6 +2.5**
TKM2 Tokmak 2 72.80 49 P **P** **13 28 46.2 +0.4**
LVC Limon Verde 72.88 218 LR LR 13 59 54.0
comp=Z,123nm,18.0s,baz=354,slow=35
LVC Limon Verde 72.88 218 *e*P **P** **13 28 48.3 +1.8**
KMBO Kilima Mbogo 73.18 107 P **P** **13 28 48.9 +0.4**
comp=Z,0.7nm,0.3s,baz=323,slow=9.9,SNR=6.1
KMBO LR LR 14 00 54.1
comp=Z,257nm,19.3s,baz=293,slow=36
comp=Z,0.7nm,0.3s
KMBO Kilima Mbogo 73.18 107 P **P** **13 28 47.9 -0.6**
KMBO Kilima Mbogo 73.18 107 P **P** **13 28 47.9 -0.6**
KMBO pmax pmax
comp=Z,28nm,1.7s
MDOK Medeo 73.46 47 P **P** **13 28 50.3 +0.7**
MAKZ Makanchi 73.67 42 P **P** **13 28 49.5 -1.2**
MAKZ IAmb IAmb 13 28 53.0
comp=Z,25nm,1.4s
MAKZ Makanchi 73.67 42 P **P** **13 28 49.5 -1.2**
MAKZ pmax pmax
comp=Z,25nm,1.4s
WSAR Wadi Sarin 73.80 73 P **P** **13 28 51.9 +0.1**
comp=Z,4.4nm,0.7s,baz=338,slow=2.6,SNR=3.8
WSAR LR LR 14 05 01.2
comp=Z,133nm,19.5s,baz=328,slow=39
comp=Z,4.4nm,0.7s
TSUM Tsumeb 73.80 134 LR LR 13 58 29.3
comp=Z,244nm,21.9s,baz=332,slow=34
MK31 Makanchi Array 73.84 42 *i* P **P** **13 28 51.2 -0.5**
MKAR Makanchi Array 73.84 42 P **P** **13 28 51.6 0.0**
comp=Z,11nm,1.1s,baz=320,slow=3.2,SNR=43
MKAR LR LR 14 02 06.8
comp=Z,469nm,18.5s,baz=316,slow=36
comp=Z,11nm,1.1s
MKAR Makanchi Array 73.84 42 *i* P **P** **13 28 51.7 0.0**
MKAR pmax pmax
comp=Z,12nm,1.1s
CPSB Cacapava Do Su 74.11 201 *e*P **P** **13 28 55.0 +1.9**
DGZ Jazzator, Alta 74.31 37 *i* P **P** **13 28 54.2 -0.3**
DGZ pmax pmax
comp=Z,16nm,1.2s
ITQB Itaqui 74.37 204 *e*P **P** **13 28 57.2 +2.5**
KIBK Kibwezi 74.59 107 P **P** **13 28 57.2 +0.7**
PDGK Podgornoye 74.69 46 P **P** **13 28 56.9 +0.1**
TARG Taragay, Kyrgy 74.82 48 IAmb IAmb 13 28 59.9
comp=Z,27nm,1.3s
KSH Kashi 75.21 50 P **P** **13 29 01.5 +1.6**
KSH sP pwP 13 29 08.5 +4.6
KSH pmax pmax
comp=Z,25nm,1.2s
KSH LR LR
comp=Z,380nm,16.8s
KSH LR LR
comp=Z,330nm,19.9s
KSH LR LR
comp=Z,560nm,18.9s
GO02 Mina Guanaco 75.38 217 IAmb IAmb 13 29 04.2
comp=Z,34nm,1.3s
PLTB Pedras Altas 75.44 201 *e*P **P** **13 29 03.5 +2.7**
YAK Yakutsk 76.30 10 P **P** **13 29 03.4 -2.0**
YAK Yakutsk 76.30 10 *e*P **P** **13 29 05.5 0.0**
YAK *e**PP **PcP** **13 29 17.7 +0.3**
YAK *e*S **S** **13 38 48.5 -1.8**
YAK *e**SS SKSac 13 39 04.6 -12
YAK *e* 13 39 20.0
YAK *e*SS **SS** **13 43 49.8 +7.0**
YAK *e*SSS SSS 13 47 04.4
YAK pmax pmax
comp=Z,31nm,1.1s
YAK pmax pmax
comp=N,16nm,1.1s

YAK pmax pmax
comp=E,8.0nm,1.0s
YAK smax smax
comp=E,65nm,3.3s
YAK smax smax
comp=N,48nm,3.5s
AC02 Maricunga 76.61 216 IAmb IAmb 13 29 13.0
comp=Z,63nm,1.8s
SEY Seymchan 76.78 359 *ce*P **P** **13 29 09.1 +0.9**
SEY pmax pmax
comp=Z,23nm,1.7s
LSZ Lusaka 77.04 123 LR LR 14 04 03.9
comp=Z,529nm,18.3s,baz=326,slow=36
BOD Bodaibo 77.23 19 *e*P **P** **13 29 10.0 -0.8**
BOD pmax pmax
comp=Z,66nm,1.5s
WMQ Urumqi 78.64 41 *e*P **P** **13 29 21.2 +2.1**
WMQ PcP **PcP** **13 29 30.3 +2.2**
WMQ pmax pmax
comp=Z,43nm,0.9s
WMQ LR LR
comp=Z,480nm,16.3s
WMQ LR LR
comp=Z,310nm,17.5s
WMQ LR LR
comp=Z,350nm,20.1s
IRK Irkutsk 79.13 27 *e*P **P** **13 29 21.0 -0.5**
IRK pmax pmax
comp=Z,53nm,2.1s
CO01 Juntas del Tor 79.75 215 IAmb IAmb 13 29 30.0
comp=Z,49nm,1.8s
MA2 Magadan 80.15 360 LR LR 14 02 34.0
comp=Z,37nm,19.8s,baz=8.5,slow=34
ZAK Zakamensk 80.32 29 *e*P **P** **13 29 27.4 -0.7**
ZAK pmax pmax
comp=Z,13nm,1.5s
ZON Zonda 80.50 213 IAmb IAmb 13 29 32.5
comp=Z,33nm,1.5s
MATP Matopo 81.10 126 LR LR 14 06 25.6
comp=Z,364nm,18.2s,baz=240,slow=36
LBTB Lobatse 82.90 132 LR LR 14 03 58.9
comp=Z,159nm,21.3s,baz=320,slow=34
SONM Songino Array 83.57 28 P **P** **13 29 46.1 +0.8**
comp=Z,6.2nm,1.1s,baz=321,slow=5.0,SNR=24
SONM PP **PP** **13 32 57.9 +1.1**
comp=Z,0.3nm,0.5s,baz=324,slow=9.2,SNR=3.6
SONM LR LR 14 09 55.0
comp=Z,118nm,18.3s,baz=307,slow=38
comp=Z,6.2nm,1.1s
SONM Songino Array 83.57 28 IAmb IAmb 13 29 47.0
comp=Z,24nm,1.4s
ULN Ulaanbaatar 83.78 28 P **P** **13 29 45.5 -1.0**
ULN IAmb IAmb 13 29 48.4
comp=Z,35nm,1.4s
ULN Ulaanbaatar 83.78 28 P **P** **13 29 45.5 -1.0**
ULN pmax pmax
comp=Z,35nm,1.5s
ZEA Zeya 83.87 14 *e*P **P** **13 29 48.1 +1.6**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
SHEM Shemya Is, Ala 84.82 346 LR LR 14 09 26.9
comp=Z,34nm,18.1s,baz=294,slow=37
BOSA Boshof 85.50 134 LR LR 14 07 57.3
comp=Z,248nm,18.1s,baz=346,slow=36
PETK Petropavlovsk- 86.44 356 LR LR 14 09 58.5
comp=Z,118nm,18.4s,baz=11,slow=37
GTA Gaotai 87.84 37 ⇓P **P** **13 30 06.4 -0.3**
GTA pP sP 13 30 10.9 +3.5
GTA sP pwP 13 30 13.7 +3.0
GTA pmax pmax
comp=Z,9.0nm,1.4s
GTA pmax pmax
comp=Z,82nm,5.8s
GTA LR LR
comp=Z,150nm,12.4s
GTA LR LR
comp=Z,200nm,15.3s
GTA LR LR
comp=Z,260nm,14.9s
KLR Kul'dur 88.98 12 LR LR 14 09 42.3
comp=Z,61nm,19.9s,baz=343,slow=35
KLR Kul'dur 88.98 12 *ce*P **P** **13 30 11.0 -0.7**
KLR pmax pmax
comp=Z,14nm,1.7s
PLCA Paso Flores 89.22 210 P **P** **13 30 12.5 -0.2**
comp=Z,3.1nm,1.1s,baz=52,slow=11,SNR=4.1
PLCA LR LR 14 08 57.9
comp=Z,85nm,21.5s,baz=18,slow=35
comp=Z,3.1nm,1.1s
XLT XiLinHaoTe 90.28 24 *e*P **P** **13 30 16.7 -1.3**
XLT pP sP 13 30 20.7 +1.9
XLT sP pwP 13 30 24.9 +2.9
XLT pmax pmax
comp=Z,16nm,0.9s
XLT pmax pmax
comp=Z,79nm,5.1s
HHC Hu-ho-hao-te 91.47 29 *e*P **P** **13 30 20.5 -3.1**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,110nm,4.3s
HHC LR LR
comp=Z,300nm,11.4s
HHC LR LR
comp=Z,150nm,14.0s
HHC LR LR
comp=Z,190nm,12.7s
BNX BinXian 91.53 16 ⇓P **P** **13 30 22.2 -1.5**
BNX pmax pmax
comp=Z,10.0nm,1.5s
BNX pmax pmax
comp=Z,93nm,4.2s
OPO Ambohidratompo 92.15 113 LR LR 14 11 08.4
comp=Z,176nm,18.9s,baz=178,slow=35
LZH Lanzhou 92.39 36 *e*P **P** **13 30 29.7 +1.6**
LZH pP pwP 13 30 34.6 +2.5
LZH sP sP 13 30 37.2 +8.4
LZH pmax pmax
comp=Z,22nm,1.5s
LZH LR LR
comp=Z,230nm,16.8s
LZH LR LR
comp=Z,230nm,15.8s
LZH LR LR
comp=Z,250nm,17.5s
CN2 Changchun 92.94 18 *e*P **P** **13 30 28.6 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
USRK Ussuriysk Ar. 93.90 13 P **P** **13 30 34.3 -0.3**
comp=Z,3.3nm,0.8s,baz=52,slow=3.4,SNR=9.1
comp=Z,3.3nm,0.8s
XAN Xi'an 96.34 34 *e*P **P** **13 30 45.6 -0.4**
XAN pmax pmax
comp=Z,9.0nm,0.9s
XAN LR LR
comp=Z,160nm,15.8s
XAN LR LR
comp=Z,210nm,15.1s
XAN LR LR
comp=Z,250nm,17.9s
BRDH Bariadhala 96.52 53 LR LR 14 20 22.6
comp=Z,368nm,18.3s,baz=274,slow=39
PZH PanZhiHua 99.24 43 P **Pdif** **13 30 56.1 -3.2**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.6s
KSRS Korea Array 99.55 18 P **Pdif** **13 30 58.8 -1.6**
comp=Z,1.3nm,0.9s,baz=335,slow=5.0,SNR=8.8
KSRS LR LR 14 16 59.8
comp=Z,44nm,20.1s,baz=310,slow=36
comp=Z,1.3nm,0.9s
NJ2 Nanjing 101.94 27 *e*P **Pdif** **13 31 06.6 -4.4**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
TAOE Nuku Hiva Isla 111.47 277 *e*SS SS 13 52 07.2 -0.9
comp=Z,58nm,26.2s
TAOE Nuku Hiva Isla 111.47 277 *e*LR LR 14 08 56.0
comp=Z,120nm,23.1s
PPT2 Papeete2 124.06 276 *e*LR LR 14 14 45.0
comp=Z,170nm,24.8s
TBI Tubuai 127.33 270 *e*LR LR 14 16 17.3
comp=Z,166nm,30.8s
VNDA Vanda 142.70 184 PKP **PKPdf** **13 36 47.6 -1.4**
comp=Z,1.9nm,1.1s,baz=268,slow=3.6,SNR=5.1
WRA Warramunga Arr 155.12 39 PKPab **PKPab** **13 37 34.8 -0.3**
comp=Z,0.9nm,0.8s,baz=341,slow=3.5,SNR=5.2

DZM	**Mont Dzumac**	**157.16 319**	*e*LR	LR	14 30 03.2	
	comp=Z,193nm,23.9s					
ASAR	**Alice Springs**	**158.00 45**	PKPab	**PKPab**	**13 37 47.5**	**+0.1**
	comp=Z,2.7nm,1.1s,baz=330,slow=4.6,SNR=9.7					
ASAR	**Alice Springs**	**158.00 45**		**PKPdf**	**13 37 12.3**	**-2.0**
ASAR				**PKPab**	**13 37 45.3**	**-2.2**
ASAR	**Alice Springs**	**158.00 45**	PKIKP	**PKPdf**	**13 37 12.3**	**-2.0**
ASAR					13 37 45.3	

*IDC **01** 13:28:22.9±1.1, 40°.72N×29°.33W, h0km, mb3.8/6, mbtmp3.7/7, MS3.6/8, Error ellipse: s-maj=41.4km s-min=19.8km az=17.0*
*SVSA **01** 13:28:23.8±1.1, 40°.75N×29°.47W, h10km, ML3.2(INMG), Error ellipse: s-maj=16.0km s-min=5.2km az=84.0*
ISC 01 13:28:24.4±0.8, 40°.47N±0°.08×29°.4W±0°.1, h14km, n27, σ0°.75/28, mb4.0/7, MS3.5/7, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.75**	**144**	*e*P	**Pn**	**13 28 52.9**	**-1.4**
SRBC				*e*S	**Sn**	**13 29 16.0**	**-0.4**
SRBC				A	A	13 29 17.1	
	241nm,0.2s						
PCED	**Cedros**	**1.90**	**164**	*e*P	**Pn**	**13 28 56.0**	**-0.4**
PCED				*e*S	**Sn**	**13 29 19.7**	**-0.4**
PCED				A	A	13 29 23.4	
	64nm,0.3s						
ROSA	**Rosais**	**1.94**	**153**	*e*P	**Pn**	**13 28 56.1**	**-0.9**
ROSA				*e*S	**Sn**	**13 29 21.2**	**0.0**
ROSA				A	A	13 29 22.2	
	58nm,0.3s						
CALA	**Caldeira**	**1.95**	**165**	*e*S	**Sn**	**13 29 20.8**	**-0.6**
CALA				A	A	13 29 23.7	
	252nm,0.2s						
PRIB2	**Ribeirinha**	**1.96**	**163**	*e*S	**Sn**	**13 29 20.9**	**-0.5**
PRIB2				A	A	13 29 22.4	
	261nm,0.3s						
PFCBR	**Castelo Branco**	**2.00**	**166**	*e*S	**Sn**	**13 29 22.8**	**+0.2**
PFCBR				A	A	13 29 23.6	
	40nm,0.2s						
HOR	**Horta**	**2.02**	**164**	*e*S	**Sn**	**13 29 22.5**	**-0.4**
HOR				A	A	13 29 23.9	
	226nm,0.2s						
PMAN	**Manadas**	**2.08**	**152**	*e*P	**Pn**	**13 28 58.0**	**-0.8**
PMAN				*e*S	**Sn**	**13 29 23.9**	**-0.5**
PMAN				A	A	13 29 24.8	
	44nm,0.2s						
PICO	**Pico**	**2.09**	**160**	*e*P	**Pn**	**13 28 58.9**	**-0.1**
PICO				*e*S	**Sn**	**13 29 24.9**	**0.0**
PICO				A	A	13 29 28.9	
	52nm,0.3s						
PCAN	**Candelaria**	**2.11**	**161**	*e*P	**Pn**	**13 28 59.1**	**-0.2**
PCAN				*e*S	**Sn**	**13 29 24.9**	**-0.4**
PCAN				A	A	13 29 32.5	
	95nm,0.3s						
PID	**Ribeirinha**	**2.23**	**154**	*e*P	**Pn**	**13 29 00.7**	**-0.3**
PID				*e*S	**Sn**	**13 29 28.4**	**0.0**
PID				A	A	13 29 31.2	
	47nm,0.2s						
PSMA	**Santa Maria**	**4.79**	**135**	*e*P	**Pn**	**13 29 35.5**	**-0.5**
PSMN	**Pico do Norte,**	**4.81**	**135**	*e*P	**Pn**	**13 29 35.9**	**-0.5**
ESDC	**Sonseca Array**	**19.43**	**84**	P	**Pn**	**13 32 51.7**	**+0.2**
	0.9nm,1.0s,baz=293,slow=10,SNR=3.5						
ESDC				LR	LR	13 38 30.0	
	comp=Z,187nm,20.6s,baz=270,slow=31						
MDT	**Midelt**	**21.23**	**103**	P	**P**	**13 33 12.2**	**+2.3**
	2.0nm,0.7s,baz=277,slow=8.1,SNR=3.6						
MDT				LR	LR	13 39 26.6	
	comp=Z,133nm,19.7s,baz=341,slow=31						
	2.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**22.82**	**41**	LR	LR	13 40 16.0	
	comp=Z,136nm,19.3s,baz=182,slow=32						
DAVOX	**Davos/Dischmat**	**28.86**	**64**	LR	LR	13 44 13.6	
	comp=Z,112nm,20.7s,baz=263,slow=33						
NOA	**NORSAR Array B**	**32.13**	**37**	LR	LR	13 45 01.0	
	comp=Z,58nm,19.4s,baz=220,slow=31						
HFS	**Hagfors**	**32.99**	**39**	LR	LR	13 45 38.7	
	comp=Z,137nm,20.3s,baz=216,slow=32						
SADO	**Sadowa**	**36.43**	**294**	LR	LR	13 49 48.3	
	comp=Z,101nm,18.3s,baz=162,slow=35						
TORD	**Torodi Ar. Bea**	**38.48**	**126**	P	**P**	**13 35 46.9**	**+0.8**
	13nm,0.6s,baz=340,slow=3.8,SNR=5.0						
MDP	**Montagnes des**	**40.96**	**217**	LR	LR	13 48 44.7	
	comp=Z,79nm,18.9s,baz=297,slow=30						
PDAR	**Pinedale Array**	**57.80**	**301**	P	**P**	**13 38 15.8**	**+0.4**
	0.9nm,0.8s,baz=64,slow=6.8,SNR=5.3						
	0.9nm,0.8s						
TXAR	**Lajitas Array**	**60.32**	**285**	P	**P**	**13 38 33.4**	**+0.5**
	0.7nm,0.6s,baz=68,slow=7.2,SNR=15						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**64.35**	**335**	P	**P**	**13 38 58.3**	**-0.9**
	0.3nm,0.6s,baz=44,slow=5.3,SNR=2.8						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**70.32**	**35**	P	**P**	**13 39 36.0**	**-1.2**
	1.1nm,0.7s,baz=295,slow=11,SNR=4.9						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**73.95**	**42**	P	**P**	**13 39 58.6**	**-0.5**
	1.4nm,0.9s,baz=319,slow=4.8,SNR=7.9						
	1.4nm,0.9s						

*MOS **01** 13:34:25.0±1.5, 34°.86N×141°.65E, h10km, mb4.6/10, Error ellipse: s-maj=12.1km s-min=6.7km az=105.3*
*IDC **01** 13:34:25.7±0.6, 34°.64N×141°.41E, h0km, mb3.9/16, mbtmp3.9/22, ML3.2/5, MS3.2/9, Error ellipse: s-maj=18.0km s-min=14.1km az=91.0*
*NIED **01** 13:34:27.5, 34°.63N×141°.52E, h38km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.21; $M_{\theta\theta}$-1.41; $M_{\phi\phi}$1.20; $M_{r\theta}$0.42; $M_{\theta\phi}$1.39; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.96000×10^{15} NP1: ϕ_s338.00000°, δ76.00000°, λ178.00000°. NP2: ϕ_s69.00000°, δ88.00000°, λ14.00000°.*
*JMA **01** 13:34:27.5±0.4, 35°.N±1°.×14°.2E±°, h38km±1km, MV3.6/36, FAR SE OFF BOSO PEN*
ISC 01 13:34:29.7±0.6, 34°.72N±0°.05×141°.43E±0°.07, h27km, n65, σ1°.59/57, mb4.0/24, MS3.5/6, 2C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.37**	**260**	*i*P	**Pb**	**13 34 37.3**	**-0.3**
BSO3	**Boso 3**	**0.76**	**277**	P	**Pb**	**13 34 43.6**	**-0.5**
BSO4	**Boso 4**	**0.93**	**287**	*i*P	**Pn**	**13 34 46.5**	**-0.4**
KTR	**Katsuura**	**1.01**	**295**	*e*P	**Pn**	**13 34 47.2**	**-0.9**
CHOJ	**Chosi**	**1.09**	**335**	P	**Pn**	**13 34 48.7**	**-0.4**
CHOJ				S	**Sn**	**13 35 03.5**	**+0.2**
JKUC	**kamogawauchiur**	**1.10**	**294**	P	**Pn**	**13 34 48.5**	**-0.8**
JIM2	**Oshima 3**	**1.64**	**271**	P	**Pn**	**13 34 56.0**	**-0.8**
JMKN	**Mikurajimanish**	**1.73**	**242**	P	**Pn**	**13 34 56.9**	**-1.0**
JYT	**Yasato**	**1.81**	**327**	P	**Pn**	**13 34 59.0**	**-0.1**
JHJ	**Hachijo jima 2**	**2.10**	**221**	Pn	**Pn**	**13 35 02.2**	**-0.9**
	66nm,0.3s,baz=80,slow=1.8,SNR=26						
JHJ				Sn	**Sn**	**13 35 28.4**	**+0.2**
	93nm,0.3s,baz=52,slow=20,SNR=7.7						
	132nm,0.3s						
MJAR	**Matsushiro Arr**	**3.19**	**306**	Pn	**Pn**	**13 35 18.6**	**+0.6**
	2.1nm,0.3s,baz=89,slow=28,SNR=109						
MJAR				Sn	**Sn**	**13 35 54.7**	**-0.5**
	0.7nm,0.3s,baz=124,slow=13,SNR=3.8						
MJAR				LR	LR	13 36 49.2	
	comp=Z,242nm,18.6s,baz=95,slow=44						
	6.1nm,0.4s						
MAJO	**Matsushiro**	**3.19**	**306**	*i*P	**Pn**	**13 35 18.4**	**+0.3**
ERM	**Erimo**	**7.41**	**10**	*i*P	**Pn**	**13 36 12.2**	**-3.8**
JCJ	**Chichijima**	**7.63**	**175**	Pn	**Pn**	**13 36 15.6**	**-3.4**
	56nm,0.6s,baz=263,slow=19,SNR=7.4						
NMR	**Nemuro--Hokkai**	**9.26**	**20**	*e*P	Pn	13 36 36.5	-4.9
NMR				*e*S	Sn	13 38 13.0	-12
RUSJ	**Misakicho**	**9.83**	**16**	*e*P	**Pn**	**13 36 46.1**	**-3.0**
RUSJ				*e*S	Sn	13 38 30.1	-8.4
YUK	**Yuzh-Kuril'sk**	**9.91**	**19**	*e*P	Pn	13 36 45.6	-4.7
YUK				*e*S	Sn	13 38 29.7	-11
YUK				pmax	pmax		
	comp=Z,56nm,0.6s						
YUK				pmax	pmax		
	comp=E,37nm,0.7s						
YUK				pmax	pmax		
	comp=N,54nm,0.5s						
KSRS	**Korea Array**	**11.26**	**288**	Pn	**Pn**	**13 37 08.6**	**-0.2**
	comp=N,0.1nm,0.3s,baz=104,slow=13,SNR=2.9						
	comp=N,1.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**11.94**	**325**	Pn	**Pn**	**13 37 18.4**	**+0.4**
	comp=N,0.3nm,0.3s,baz=154,slow=9.8,SNR=6.1						
	comp=N,3.8nm,0.6s						
YSS	**Yuzh-Sakhalins**	**12.26**	**4**	*e*P	**Pn**	**13 37 19.9**	**-2.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
JOW	**Kunigami**	**13.76**	**239**	LR	LR	13 42 46.2	
	comp=Z,44nm,21.5s,baz=87,slow=36						
KLR	**Kul'dur**	**16.16**	**337**	Pn	**Pn**	**13 38 15.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=180,slow=18,SNR=4.7						
KLR				LR	LR	13 44 57.1	
	comp=Z,113nm,18.1s,baz=152,slow=39						
	comp=Z,0.7nm,0.4s						
KLR	**Kul'dur**	**16.16**	**337**	*i*P	**Pn**	**13 38 11.2**	**-3.7**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZEA	**Zeya**	**21.48**	**337**	*i*P	**P**	**13 39 14.8**	**-1.2**
PETK	**Petropavlovsk-**	**21.71**	**27**	LR	LR	13 48 57.3	
	comp=Z,16nm,18.6s,baz=190,slow=40						
H11N2	**WAKE ISLAND Hy**	**27.02**	**117**	T	T	14 08 24.4	
	baz=309,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**27.03**	**117**	T	T	14 08 24.0	
	baz=309,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**27.04**	**117**	T	T	14 08 22.6	
	baz=309,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**27.66**	**119**	T	T	14 09 18.2	
	baz=312,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**27.66**	**119**	T	T	14 09 18.8	
	baz=312,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**27.67**	**119**	T	T	14 09 13.3	
	baz=312,slow=75,SNR=14						
YAK	**Yakutsk**	**28.33**	**348**	*i*P	**P**	**13 40 21.2**	**+0.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	**Ulaanbaatar**	**28.72**	**308**	*i*P	**P**	**13 40 26.8**	**+2.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SEY	**Seymchan**	**29.06**	**10**	*i*P	**P**	**13 40 27.4**	**0.0**
SEY				pmax	pmax		
	comp=Z,19nm,3.0s						
SONM	**Songino Array**	**29.14**	**307**	P	**P**	**13 40 28.6**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=114,slow=9.7,SNR=8.6						
	comp=Z,0.9nm,0.5s						
DAV	**Davao City (W)**	**31.15**	**212**	LR	LR	13 52 10.4	
	comp=Z,28nm,21.7s,baz=92,slow=34						
SIJI	**Sorong**	**36.66**	**197**	LR	LR	13 54 13.1	
	comp=Z,51nm,19.0s,baz=96,slow=32						
CMAR	**Chiang Mai Arr**	**40.97**	**258**	P	**P**	**13 42 10.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=55,slow=7.8,SNR=1.7						
	comp=Z,0.7nm,0.5s						
DGZ	**Jazzator, Alta**	**41.79**	**308**	*i*P	**P**	**13 42 17.5**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZALV	**Zalesovo Beam**	**43.51**	**314**	P	**P**	**13 42 30.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=86,slow=6.2,SNR=6.0						
ZALV				PcP	**PcP**	**13 44 18.2**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=65,slow=4.1,SNR=2.6						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**43.51**	**314**	*i*P	**P**	**13 42 32.2**	**+1.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**45.39**	**304**	*i*P	**P**	**13 42 45.9**	**+0.1**
MKAR	**Makanchi Array**	**45.39**	**304**	P	**P**	**13 42 45.7**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=89,slow=9.3,SNR=12						
	comp=Z,1.6nm,0.8s						
KURK	**Kurchatov**	**47.39**	**310**	*ce*P	**P**	**13 43 01.8**	**+0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ILAR	**Eielson Array**	**51.45**	**31**	P	**P**	**13 43 32.0**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=273,slow=6.3,SNR=5.1						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**54.77**	**188**	P	**P**	**13 43 56.2**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=1.0,slow=7.4,SNR=38						
	comp=Z,1.5nm,0.6s						
INK	**Inuvik**	**56.44**	**26**	P	**P**	**13 44 09.1**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=297,slow=7.1,SNR=3.4						
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**58.11**	**320**	*c*P	**P**	**13 44 20.4**	**-0.1**
ARU						13 46 24.1	
ARU				S	**S**	**13 52 14.8**	**-5.0**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ASAR	**Alice Springs**	**58.50**	**188**	P	**P**	**13 44 23.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=0.0,slow=5.5,SNR=28						
	comp=Z,0.6nm,0.5s						
OBN	**Obninsk**	**69.96**	**324**	*e*P	**P**	**13 45 41.8**	**+3.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	**FINESS Array B**	**70.87**	**333**	P	**P**	**13 45 44.7**	**+0.9**
	comp=Z,4.4nm,0.9s,baz=99,slow=9.0,SNR=2.2						
	comp=Z,4.4nm,0.9s						
KBZ	**Khabaz**	**72.42**	**311**	P	**P**	**13 45 54.1**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=240,slow=2.4,SNR=3.9						
	comp=Z,1.7nm,0.7s						
KBZ	**Khabaz**	**72.42**	**311**	*i*P	**P**	**13 45 54.0**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	**Kislovodsk**	**72.44**	**312**	*e*P	**P**	**13 45 55.5**	**+1.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	**Garni**	**73.10**	**307**	LR	LR	14 21 10.0	
	comp=Z,41nm,18.1s,baz=94,slow=38						
AKASG	**Malin Array Be**	**76.14**	**323**	P	**P**	**13 46 14.9**	**0.0**
	comp=Z,0.7nm,0.4s,baz=47,slow=5.6,SNR=6.9						
AKASG				LR	LR	14 23 33.2	
	comp=Z,33nm,20.8s,baz=28,slow=39						
	comp=Z,0.7nm,0.4s						
NB2	**NORSAR Subarra**	**76.32**	**338**	P	**P**	**13 46 15.6**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**76.32**	**338**	P	**P**	**13 46 16.5**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=39,slow=5.7,SNR=4.1						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**76.37**	**53**	P	**P**	**13 46 18.7**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=264,slow=5.8,SNR=6.1						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**80.39**	**312**	P	**P**	**13 46 40.0**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=154,slow=4.3,SNR=4.4						
BRTR				LR	LR	14 27 43.7	
	comp=Z,28nm,18.2s,baz=140,slow=40						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**80.39**	**312**	*i*P	**P**	**13 46 43.0**	**+4.0**
GERES	**GERESS Array B**	**84.68**	**328**	P	**P**	**13 47 01.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=32,slow=5.8,SNR=3.4						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**91.52**	**52**	P	**P**	**13 47 35.4**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=320,slow=2.7,SNR=2.7						
	comp=Z,0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**118.95**	**314**	PKP	**PKiKP**	**13 53 17.6**	**+1.1**
	comp=Z,13nm,0.6s,baz=146,slow=2.8,SNR=5.0						
LPAZ	**La Paz**	**147.80**	**63**	PKPbc	**PKPbc**	**13 54 13.7**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=25,slow=21,SNR=4.3						

IDC 01 13:51:33.7±2.6, 0°.70S×128°.19E, h0km, mb2.9/3, mbtmp3.0/3, MS3.3/1, Error ellipse: s-maj=203.5km s-min=29.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.05**	**163**	P	P	13 56 08.4	-0.2
	0.7nm,1.1s,baz=342,slow=12,SNR=2.3						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**23.49**	**167**	P	P	13 56 45.5	+0.1
	0.2nm,0.6s,baz=344,slow=12,SNR=4.3						
ASAR				LR	LR	14 07 35.8	
	comp=Z,72nm,18.8s,baz=315,slow=41						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**62.01**	**326**	P	P	14 01 55.9	0.0
	0.2nm,0.5s,baz=110,slow=7.1,SNR=2.1						
	0.2nm,0.5s						

*KRNET **01** 13:52:10.9±0.1, 42°.13N×78°.20E, h11km, mb2.1*
*SOME **01** 13:52:10.9, 42°.12N×78°.17E, h5km*
*NNC **01** 13:52:14.4±1.0, 42°.30N×78°.20E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=7.5km s-min=3.5km az=168.0*
ISC 01 13:52:12.0±1.1, 42°.17N±0°.03×78°.13E±0°.02, h10km±10km, n39, σ1°.59/70, 6C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.50**	**209**	⇑*i*P	**Pg**	**13 52 20.7**	**-1.2**
	baz=17						
TARG				⇑*i*S	**Sg**	**13 52 28.1**	**-0.5**
	baz=17						
ZHN	**Zhinishke**	**1.02**	**13**	*e*P	**Pn**	**13 52 32.1**	**-0.4**
	2.3nm,0.2s						
ZHN				*e*S	**Sn**	**13 52 47.8**	**+0.8**
	16nm,0.2s						
ZHN	**Zhinishke**	**1.02**	**13**	P	**Pg**	**13 52 30.0**	**-1.8**
	3.1nm,0.6s						
ZHN				S	**Sg**	**13 52 41.8**	**-3.3**
	7.8nm,0.4s						
UZB	**Uzynbulak**	**1.18**	**34**	*e*P	**Pb**	**13 52 32.7**	**-1.9**
	0.5nm,0.1s						
UZB				*e*S	**Sb**	**13 52 48.9**	**-1.0**
	2.9nm,0.3s						
UZB	**Uzynbulak**	**1.18**	**34**	P	**Pg**	**13 52 34.0**	**-0.7**
	0.6nm,0.2s						
UZB				S	**Sb**	**13 52 48.9**	**-1.0**
	1.9nm,0.4s						
MDOK	**Medeo**	**1.27**	**322**	*e*P	**Pn**	**13 52 35.6**	**-0.4**
	1.4nm,0.0s						
MDOK				*e*S	**Sn**	**13 52 53.7**	**+0.5**
	5.5nm,0.2s						
MDOK	**Medeo**	**1.27**	**322**	Pg	**Pg**	**13 52 36.8**	**+0.3**
	1.5nm,0.4s						
MDOK				Lg	Lg	13 52 53.9	
	5.7nm,0.5s						
KOTS	**Kotyrbulak**	**1.30**	**325**	*e*P	**Pn**	**13 52 35.5**	**-0.9**
	0.1nm,0.4s						
KOTS				*e*S	**Sb**	**13 52 53.9**	**+0.4**
	12nm,0.1s						
KOTS	**Kotyrbulak**	**1.30**	**325**	P	**Pg**	**13 52 37.6**	**+0.6**
	0.1nm,0.3s						
KOTS				S	**Sg**	**13 52 55.3**	**+1.4**
	12nm,0.3s						
KPKS	**Kokpek**	**1.36**	**17**	*e*P	**Pg**	**13 52 38.0**	**-0.1**
	0.9nm,0.2s						
KPKS				*e*S	**Sg**	**13 52 57.4**	**+1.6**
	3.1nm,0.2s						
KPKS	**Kokpek**	**1.36**	**17**	P	**Pb**	**13 52 36.8**	**-0.7**
	0.9nm,0.3s						
KPKS				S	**Sb**	**13 52 53.9**	**-1.2**
	3.6nm,0.3s						
SHLS	**Shalkode**	**1.39**	**44**	*e*P	**Pg**	**13 52 41.4**	**+2.6**
	3.4nm,0.2s						
SHLS				*e*S	**Sg**	**13 53 03.9**	**+7.0**
	8.1nm,0.1s						
SHLS	**Shalkode**	**1.39**	**44**	P	Pg	13 52 42.7	+3.9
	3.7nm,0.3s						
SHLS				S	**Sg**	**13 53 04.0**	**+7.1**
	4.5nm,0.5s						
ULHL	**Ulahol**	**1.40**	**274**	⇑*i*P	**Pg**	**13 52 38.8**	**-0.2**
	baz=75						
ULHL				⇑*i*S	**Sg**	**13 52 58.9**	**+1.7**
	baz=75						
MTBS	**Maitube**	**1.58**	**308**	*e*P	**Pb**	**13 52 41.5**	**+0.1**
	2.8nm,0.0s						
MTBS				*e*S	**Sg**	**13 53 03.6**	**+0.8**
	7.0nm,0.1s						
MTBS	**Maitube**	**1.58**	**308**	P	**Pg**	**13 52 42.6**	**+0.2**
	2.8nm,0.2s						
MTBS				S	**Sg**	**13 53 03.6**	**+0.8**
	6.9nm,0.2s						
NRN	**Naryn**	**1.75**	**246**	⇑*i*P	**Pg**	**13 52 45.2**	**-0.5**
	baz=48						
NRN				⇑*i*S	**Sg**	**13 53 09.4**	**+0.9**
	baz=48						
KST	**Kastek**	**1.82**	**299**	*e*P	**Pb**	**13 52 46.2**	**+0.7**
	2.6nm,0.0s						
KST				*e*S	**Sg**	**13 53 11.5**	**+0.9**
	28nm,0.1s						
KST	**Kastek**	**1.82**	**299**	P	**Pg**	**13 52 47.0**	**+0.1**
	2.1nm,0.4s						
KST				S	**Sg**	**13 53 11.3**	**+0.8**
	28nm,0.6s						
KTBS	**Karatobe**	**1.87**	**326**	*e*P	**Pb**	**13 52 46.9**	**+0.6**
	1.6nm,0.1s						
KTBS				*e*S	**Sg**	**13 53 12.2**	**-0.1**
	10nm,0.4s						
KTBS	**Karatobe**	**1.87**	**326**	P	**Pg**	**13 52 47.5**	**-0.4**
	1.6nm,0.3s						
KTBS				S	**Sg**	**13 53 12.1**	**-0.1**
	10nm,0.4s						
CHKK	**Chushkaly**	**1.88**	**334**	*e*P	**Pb**	**13 52 46.5**	**+0.1**
	0.6nm,0.1s						
CHKK				*e*S	**Sg**	**13 53 12.5**	**+0.1**
	9.2nm,0.1s						
CHKK	**Chushkaly**	**1.88**	**334**	P	**Pg**	**13 52 47.6**	**-0.5**
	4.7nm,0.6s						
CHKK				S	**Sg**	**13 53 12.5**	**+0.1**
	9.5nm,0.4s						
BLB	**Baldybastay**	**1.94**	**7**	*e*P	**Pb**	**13 52 47.6**	**+0.1**
	5.8nm,0.1s						
BLB				*e*S	**Sg**	**13 53 13.3**	**-1.1**
	5.6nm,0.1s						
BLB	**Baldybastay**	**1.94**	**7**	P	**Pg**	**13 52 48.0**	**-1.3**
	5.3nm,0.3s						
BLB				S	**Sg**	**13 53 13.4**	**-1.1**
	5.3nm,0.3s						
TKM2	**Tokmak 2**	**2.02**	**293**	⇓*i*P	**Pb**	**13 52 49.0**	**+0.1**
	baz=93						
TKM2				⇓*i*S	**Sg**	**13 53 17.7**	**+0.9**
	baz=93						
TKM2	**Tokmak 2**	**2.02**	**293**	⇓P	**Pg**	**13 52 50.6**	**0.0**
	1.0nm,0.3s						
TKM2				⇓S	**Sg**	**13 53 16.4**	**-0.4**
	8.4nm,0.4s						
DGS	**Degeres**	**2.04**	**302**	*e*P	**Pb**	**13 52 50.0**	**+0.7**
	1.6nm,0.3s						
DGS				*e*S	**Sg**	**13 53 17.7**	**+0.1**
	8.5nm,0.1s						
DGS	**Degeres**	**2.04**	**302**	Pg	**Pg**	**13 52 50.8**	**-0.4**
	1.6nm,0.5s						
DGS				Lg	Lg	13 53 17.8	
	8.2nm,0.4s						
ARXS	**Arharly**	**2.05**	**354**	*e*P	**Pb**	**13 52 49.5**	**+0.1**
	4.9nm,0.0s						
ARXS				*e*S	**Sg**	**13 53 17.0**	**-1.0**
	2.3nm,0.2s						
ARXS	**Arharly**	**2.05**	**354**	Pg	**Pg**	**13 52 50.2**	**-1.

NUBE	Las Nubes	1.24	80	eP	Pn	13 53 29.2	-0.6
NUBE				eS	Sn	13 53 46.0	+0.3
LOAL	Lomas de Alarc	1.26	75	eP	Pn	13 53 29.5	-0.4
LOAL				eS	Sb	13 53 47.0	-0.2
RTR	El Retiro	1.37	81	eP	Pn	13 53 31.4	-0.1
CEVE	Cerro Verde	1.38	84	eP	Pn	13 53 31.9	+0.1
CEVE				eS	Sb	13 53 50.3	-0.5
SBLS	San Blas	1.38	83	eP	Pn	13 53 31.8	0.0
JAYA	Jayaque - finc	1.54	91	eP	Pn	13 53 33.6	-0.4
JAYA				eS	Sn	13 53 53.2	0.0
JAYA				IAML		13 53 54.8	
	comp=Z,594nm,0.2s						
PMON	Piamonte	1.68	89	eP	Pn	13 53 35.1	-0.5
LFRS	El Faro	1.92	91	eP	Pn	13 53 39.2	+0.1
SJTE	Alcalda de S	1.98	92	eP	Pn	13 53 39.6	-0.2
SJTE				eS	Sn	13 54 03.7	0.0
COEG	Centro de Oper	2.10	91	eP	Pn	13 53 42.6	+1.1
COEG				eS	Sn	13 54 06.9	+0.2

AUST 01 14:43:50.7±1.7, 32°.91S×151°.29E, h3km±16km, Error ellipse: s-maj=20.0km s-min=7.3km az=113.0, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUKHS	Kincumber High	0.55	172	P	Pg	14 44 01.3	0.0
	baz=0.6						
AUKHS				S	Sg	14 44 09.5	+1.0
	baz=0.6						
AUTKS	The King's Sch	0.89	194	P	Pg	14 44 07.8	0.0
	baz=0.9						
AUTKS				S	Sg	14 44 19.6	+0.2
	baz=0.9						
RIV	Riverview	0.92	187	P	Pg	14 44 08.5	+0.1
	baz=0.9						
RIV				S	Sg	14 44 21.0	+0.6
	baz=0.9						
AUPHS	Peel High Scho	1.84	349	P	Pn	14 44 23.6	+0.6
	baz=1.8						
AUPHS				S	Sb	14 44 47.9	-0.4
	baz=1.8						
ARMA	Armidale	2.50	7	P	Pn	14 44 33.3	+1.0
	baz=2.5						
ARMA				S	Sn	14 45 03.3	-0.1
	baz=2.5						
AUUHS	Ulladulla High	2.54	195	P	Pn	14 44 33.3	+0.6
	baz=2.5						
CNB	Canberra Magne	2.88	213	P	Pn	14 44 38.3	+0.8
	baz=2.9						
AUMTS	Mt Stromlo	3.06	218	P	Pn	14 44 39.9	-0.1
	baz=3.1						

*JMA **01** 15:06:45.7±0.3, 43°.6N±0°.9×14°.7E±°, h6km±3km, MV3.6/30, E OFF HOKKAIDO*
*SKHL **01** 15:06:47.6±0.3, 43°.70N×147°.60E, h34km±3km, mb4.5/2*
ISC 01 15:06:43.6±3.0, 43°.68N±0°.10×147°.6E±0°.1, h1km±13km, n16, σ1§21/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.30	286	*i* P	Pg	15 07 09.0	+0.5
YUK				AMB	AMB	15 07 09.8	
	260nm,0.2s						
YUK				eS	Sg	15 07 25.0	-0.4
YUK				A	A	15 07 28.7	
	620nm,0.4s						
YUK				A	A	15 07 28.7	
	650nm,0.4s						
NEM2	Nemuro 2	1.38	257	eP	Pn	15 07 09.5	-0.6
NEM2				eS	Sg	15 07 26.4	-1.6
NMR	Nemuro--Hokkai	1.39	258	*i* P	Pn	15 07 09.8	-0.4
NMR				eS	Sg	15 07 26.8	-1.5
KUR	Kuril'sk	1.56	7	*i* P	Pn	15 07 13.0	+0.4
KUR				AMB	AMB	15 07 14.8	
	40nm,0.2s						
KUR				*i* S	Sn	15 07 32.0	-1.5
KUR				A	A	15 07 34.2	
	230nm,0.3s						
KUR				A	A	15 07 34.2	
	160nm,0.3s						
JRA	Rausu	1.81	279	eP	Pn	15 07 16.6	+0.7
JRA				eS	Sn	15 07 38.4	-1.1
JKHN	Kushirohamanak	1.87	252	eP	Pn	15 07 17.1	+0.3
JKHN				eS	Sn	15 07 39.9	-1.1
JNSB	Nemuroshibetsu	1.88	274	eP	Pn	15 07 17.6	+0.7
JNSB				eS	Sn	15 07 41.3	+0.1
JNK	Nakash	2.09	268	eP	Pn	15 07 20.0	+0.2
JNK				eS	Sn	15 07 45.6	-0.9
AKK	Akkeshi	2.11	253	eP	Pn	15 07 20.6	+0.5
AKK				eS	Sn	15 07 45.2	-1.8
JAK	Akkeshi	2.22	253	eP	Pn	15 07 22.0	+0.4
JAK				eS	Sn	15 07 49.2	-0.4
JTKR	Abashiri--Toko	2.68	277	eP	Pn	15 07 29.5	+1.6
JAR	Ashorobuto	2.81	263	eP	Pn	15 07 30.9	+1.2
JAR				eS	Sn	15 08 04.3	+0.1
JMP	Maruseppu	3.08	278	eP	Pn	15 07 35.2	+1.8
JCH	Churui	3.27	252	eP	Pn	15 07 37.1	+1.0
JCH				eS	Sn	15 08 15.1	-0.6
JFR	Furan	3.68	264	eP	Pn	15 07 44.0	+2.3
JNBK	Urakawa-nobuka	3.82	250	eP	Pn	15 07 45.1	+1.6

*NIED **01** 15:14:50.1, 41°.00N×142°.74E, h15km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.23; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-2.12; $M_{r\theta}$1.51; $M_{\theta\phi}$-0.25; $M_{\phi r}$1.51; Fault plane solution: $M_0$2.84000×10^{14} NP1: ϕ_s151.00000°, δ33.00000°, λ29.00000°. NP2:ϕ_s37.00000°, δ75.00000°, λ120.00000°.*
*JMA **01** 15:14:50.1±0.3, 41°.0N±0°.4×142°.7E±0°.7, h15km±3km, MV3.6/35, E OFF AOMORI PREF*
*IDC **01** 15:14:56.5±6.9, 41°.01N×142°.79E, h78km±52km, mb3.3/7, mbtmp3.6/10, ML2.4/3, MS2.9/3, Error ellipse: s-maj=73.2km s-min=19.3km az=73.0*
ISC 01 15:14:49.4±1.4, 41°.04N±0°.03×142°.66E±0°.04, h10km±9km, n36, σ0§94/36, mb3.4/7, 6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.98	268	⇓P	Pn	15 15 09.3	+0.1
JAHD	Aomorihigashid	1.03	283	⇓P	Pn	15 15 10.1	+0.3
JEM	Erimo	1.04	21	P	Pb	15 15 09.7	+0.2
JEM				S	Sb	15 15 23.8	+0.6
JANG	Nango	1.10	233	P	Pn	15 15 10.6	-0.3
JANG				eS	Sb	15 15 25.0	+0.1
JKEN	Kujiedanarisaw	1.11	221	P	Pg	15 15 10.6	0.0
JTM	Tenmabayashi	1.23	259	P	Pg	15 15 13.7	+0.6
JTM				eS	Sn	15 15 30.6	+1.1
JNBK	Urakawa-nobuka	1.24	3	P	Pg	15 15 13.4	+0.2
JNBK				eS	Sn	15 15 30.8	+1.3
JOT	Ohata	1.27	286	⇓*i* P	Pg	15 15 13.8	+0.1
JOT				⇓S	Sn	15 15 31.1	+1.0
JKB	Kayabe	1.49	305	⇓P	Pb	15 15 16.9	-0.2
JKB				⇓S	Sb	15 15 36.3	+0.3
JCH	Churui	1.66	18	P	Pn	15 15 18.9	+0.4
JCH				eS	Sn	15 15 40.2	+0.4
JIAM	Iburiatsuma	1.68	341	*i* P	Pg	15 15 21.4	-0.1
JIAM				eS	Sg	15 15 43.5	+0.3
JBT2	Biratori 2	1.75	353	eS	Sg	15 15 45.1	-0.5
JSR	Shiriuchi	1.76	287	P	Pb	15 15 21.9	+0.2
JSR				S	Sg	15 15 44.8	-1.1
JAH	Hinai	1.76	242	P	Pb	15 15 21.9	+0.1
JAH				S	Sb	15 15 44.3	+0.4
JOM	Ohasama	1.89	214	P	Pb	15 15 22.9	-1.0
JEW	Eniwo	2.01	334	P	Pb	15 15 25.9	-0.2
JEW				S	Sb	15 15 51.8	+0.6
JOMM	Oshimamatsumae	2.06	284	eS	Sb	15 15 51.9	-0.5
MJAR	Matsushiro Arr	5.68	219	P	Pn	15 16 17.7	+3.9
	0.1nm,0.3s,baz=36,slow=12,SNR=8.0						
	1.3nm,0.6s						
USRK	Ussuriysk Ar.	8.48	295	P	Pn	15 16 58.0	+5.8
	0.3nm,0.3s,baz=98,slow=14,SNR=3.3						
	3.9nm,0.7s						
KLR	Kul'dur	11.23	320	LR	LR	15 22 02.6	
	comp=Z,25nm,19.7s,baz=192,slow=38						
KSRS	Korea Array	11.98	257	P	Pn	15 17 47.6	+7.5
	0.1nm,0.3s,baz=62,slow=14,SNR=4.3						
	0.4nm,0.5s						
JCJ	Chichijima	13.92	182	LR	LR	15 24 05.7	
	comp=Z,32nm,21.0s,baz=106,slow=40						
SONM	Songino Array	26.59	297	P	P	15 20 28.2	+0.4
	0.3nm,0.4s,baz=89,slow=9.2,SNR=2.4						
	0.3nm,0.4s						
H11N2	WAKE ISLAND Hy	29.63	129	T	T	15 51 47.3	
	baz=322,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	29.64	129	T	T	15 52 05.6	
	baz=322,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	29.64	129	T	T	15 51 58.4	
	baz=322,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	30.47	130	T	T	15 53 29.5	
	baz=324,slow=76,SNR=8.6						
H11S3	WAKE ISLAND Hy	30.47	130	T	T	15 53 25.1	
	baz=324,slow=76,SNR=4.8						
H11S2	WAKE ISLAND Hy	30.48	130	T	T	15 53 28.1	
	baz=324,slow=76,SNR=5.4						
ZALV	Zalesovo Beam	40.04	309	P	P	15 22 24.0	-0.4
	1.0nm,0.5s,baz=80,slow=11,SNR=4.6						
	1.0nm,0.5s						
MKAR	Makanchi Array	42.93	299	P	P	15 22 48.0	-0.2
	0.6nm,0.7s,baz=83,slow=9.5,SNR=6.4						
	0.6nm,0.7s						
FITZ	Fitzroy Crossi	60.92	199	LR	LR	15 52 02.2	
	comp=Z,26nm,18.8s,baz=222,slow=36						
WRA	Warramunga Arr	61.16	189	P	P	15 25 02.4	-1.7
	0.1nm,0.4s,baz=6.2,slow=6.9,SNR=7.2						
	0.1nm,0.4s						
ASAR	Alice Springs	64.89	189	P	P	15 25 28.2	-0.7
	0.2nm,0.8s,baz=1.2,slow=7.9,SNR=2.0						
	0.2nm,0.8s						
FINES	FINESS Array B	65.73	332	P	P	15 25 33.1	-0.8
	1.4nm,0.6s,baz=66,slow=7.4,SNR=11						
	1.4nm,0.6s						
NOA	NORSAR Array B	70.87	337	P	P	15 26 05.5	-0.7
	0.8nm,0.8s,baz=42,slow=6.0,SNR=2.1						
	0.8nm,0.8s						

*TAP **01** 15:15:33.8, 22°.52N×121°.32E, h16km±1km, ML3.3, B*
*JMA **01** 15:15:34.7±0.5, 23°.N±2°.×12°.2E±°, h0km, TAIWAN REGION*
ISC 01 15:15:33.3±1.0, 22°.51N±0°.02×121°.35E±0°.02, h16km±8km, n79, σ0§93/117, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	Ludao	0.20	34	*i* P	Pb	15 15 39.3	+0.9
	baz=41						
LDUT				*i* S	Sb	15 15 43.3	+1.3
	baz=41						
ECL	Taimali	0.38	283	*i* P	Pb	15 15 41.8	+0.2
	baz=283						
ECL				*i* S	Sb	15 15 47.6	+0.4
	baz=283						
TWGBT	Beinan	0.40	321	⇓P	Pb	15 15 42.0	+0.1
	baz=323						
TWGBT				S	Sb	15 15 48.3	+0.6
	baz=323						
TWG	Pinlang	0.40	320	*i* P	Pb	15 15 42.1	+0.1
	baz=323						
TWG				S	Sb	15 15 47.9	-0.1
	baz=323						
LONT	Longtian	0.45	333	*i* P	Pb	15 15 42.8	0.0
	baz=335						
LONT				S	Sb	15 15 50.2	+1.1
	baz=335						
TAW	Tawu	0.45	250	*i* P	Pb	15 15 43.4	+0.6
	baz=247						
TAW				*i* S	Sb	15 15 49.1	-0.1
	baz=247						
TAWH	Dawu Township	0.46	249	P	Pg	15 15 41.6	-0.9
	baz=246						
TAWH				S	Sg	15 15 48.1	-0.7
	baz=246						
EDH	Donghe	0.46	355	*i* P	Pb	15 15 43.4	+0.4
	baz=358						
EDH				*i* S	Sb	15 15 50.4	+0.7
	baz=358						
EAST	Anshuo	0.48	255	*i* P	Pb	15 15 43.8	+0.4
	baz=252						
EAST				*i* S	Sb	15 15 50.7	+0.5
	baz=252						
LAY	Lan-yu	0.50	158	*i* P	Pb	15 15 44.7	+1.0
	baz=155						
LAY				*i* S	Sb	15 15 53.3	+2.5
	baz=155						
LYUB	Lan-yu	0.55	157	P	Pg	15 15 43.9	-0.3
	baz=154						
LYUB				eS	Sg	15 15 52.1	+0.6
	baz=154						
SLIU	Shizi	0.59	240	*i* P	Pb	15 15 45.4	+0.3
	baz=238						
SLIU				S	Sg	15 15 52.5	-0.3
	baz=238						
EHD	Haiduan	0.65	348	*i* P	Pg	15 15 45.0	-1.1
	baz=350						
EHD				S	Sb	15 15 55.9	+0.8
	baz=350						
MASBT	Mashibuluo	0.67	279	⇓P	Pb	15 15 46.6	0.0
	baz=278						
MASBT				S	Sg	15 15 55.1	-0.3
	baz=278						
SMST	Manzhou Townsh	0.68	224	P	Pg	15 15 46.9	+0.3
	baz=222						
SMST				S	Sb	15 15 56.5	+0.6
	baz=222						
TSMG	Majia	0.68	287	*i* P	Pg	15 15 46.7	0.0
	baz=286						
TSMG				*i* S	Sg	15 15 55.3	-0.4
	baz=286						
FULB	Fuli	0.69	356	*i* P	Pg	15 15 46.3	-0.5
	baz=357						
FULB				*i* S	Sg	15 15 56.2	+0.3
	baz=357						
SCZT	Fangliau	0.69	259	*i* P	Pb	15 15 47.1	+0.2
	baz=257						
SCZT				*i* S	Sn	15 15 57.6	-1.1
	baz=257						
SSD	Sandimen	0.70	290	*i* P	Pg	15 15 46.8	-0.3
	baz=289						
EYUL	Yuli	0.83	358	eP	Pg	15 15 50.1	+0.6
	baz=359						
EYUL				S	Sn	15 16 02.7	+0.4
	baz=359						
STYH	Taoyuan	0.84	321	P	Pb	15 15 48.7	-0.8
	baz=322						
STYH				S	Sn	15 16 02.1	-0.4
	baz=322						
SCST	Cishan	0.88	296	eP	Pn	15 15 51.2	+0.4
	baz=295						
SCST				eS	Sn	15 16 02.6	-0.7
	baz=295						
YULB	Yu-li	0.88	357	P	Pb	15 15 49.2	-1.0
	baz=358						
YULB				S	Sg	15 16 02.3	+0.3
	baz=358						
SGST	Jiashian	0.91	309	*i* P	Pb	15 15 50.4	-0.2
	baz=309						
SGST				S	Sn	15 16 03.5	-0.6
	baz=309						
TWM1	Shoushan	0.91	290	*i* P	Pn	15 15 52.1	+0.7
	baz=290						
WLCH	Liuqiu	0.91	260	P	Pb	15 15 49.9	-0.8
	baz=259						
HGSD	Ruisui	0.98	4	P	Pb	15 15 52.0	+0.1
	baz=5.0						
HGSD				S	Sn	15 16 07.4	+1.5
	baz=5.0						
CHN1	Nanshi	1.01	312	*i* P	Pn	15 15 53.5	+0.7
	baz=312						
CHN1				S	Sn	15 16 07.2	+0.5
	baz=312						
TPUB	Ta-pu	1.03	320	P	Pb	15 15 53.0	+0.3
	baz=320						
TPUB				eS	Sg	15 16 06.7	-0.1
	baz=320						
SHHT	Tainan City	1.06	299	P	Pg	15 15 55.0	+1.3
	baz=299						
SNST	Tainan City	1.06	312	P	Pg	15 15 54.4	+0.7
	baz=312						
TWK	Hsinying	1.10	314	*i* P	Pg	15 15 54.4	-0.1
	baz=314						
ALS	Alishan	1.12	333	P	Pb	15 15 54.0	-0.3
	baz=334						
WCKO	Fanlu	1.15	324	eP	Pn	15 15 54.6	-0.1
	baz=324						
EGFH	Guangfu	1.16	3	P	Pn	15 15 55.2	+0.4
	baz=4.0						
EGFH				S	Sg	15 16 12.7	+1.9
	baz=4.0						
VWDT	VWDT	1.25	351	eP	Pn	15 15 56.1	0.0
	baz=352						
SCLT	Jiali	1.26	302	eS	Sg	15 16 13.2	-0.7
	baz=302						
CHY	Chiayi	1.30	319	eP	Pb	15 15 57.6	+0.2
	baz=319						
SSLB	Suanglung	1.32	344	P	Pn	15 15 57.6	+0.5
	baz=345						
SSLB				S	Sg	15 16 16.2	+0.1
	baz=345						
TSCK	Chigu Township	1.33	299	eP	Pn	15 15 57.0	-0.1
	baz=298						
TSCK				eS	Sg	15 16 15.5	-0.7
	baz=298						
CHN8	Yiju	1.34	309	P	Pg	15 15 58.9	-0.2
	baz=309						
WDLH	Douliu	1.39	328	eP	Pg	15 15 59.7	-0.4
	baz=328						
WDLH				eS	Sg	15 16 18.3	0.0
	baz=328						
WJS	Zhushan	1.43	336	eP	Pb	15 15 59.6	+0.1
	baz=337						
SMLT	Sun Moon Lake	1.43	343	P	Pb	15 16 00.4	+0.9
	baz=344						
SMLT				S	Sb	15 16 18.5	+0.9
	baz=344						
WSL	Shuilin Townsh	1.45	314	P	Pn	15 15 59.1	+0.4
	baz=314						
WSL				S	Sb	15 16 18.1	+0.2
	baz=314						
OWD	Renai	1.45	354	P	Pn	15 15 59.1	+0.2
	baz=354						
TYC	Yuchr	1.46	342	*i* P	Pb	15 16 00.2	+0.2
	baz=343						
WUSB	Renai	1.49	352	P	Pn	15 15 58.9	-0.5
	baz=352						
WNT	Mingjian	1.49	336	*i* P	Pb	15 16 01.4	+0.8
	baz=336						
CHGB	Renai	1.55	354	eP	Pn	15 16 01.3	+0.9
	baz=354						
WCS	Beigang Elemen	1.59	345	eP	Pn	15 16 01.4	+0.6
	baz=346						
WRL	Guolierlin Hig	1.65	327	eP	Pn	15 16 02.1	+0.6
	baz=327						
WRL				eS	Sb	15 16 24.3	+0.5
	baz=327						
WTCT	Ta-ch'eng	1.67	324	eS	Sb	15 16 24.9	+0.5
	baz=324						
FUSS	Fushou	1.73	357	eP	Pn	15 16 03.3	+0.3
	baz=357						
WHP	Taichung City	1.80	348	eP	Pb	15 16 05.7	-0.2
	baz=348						
VCHM	Qimei	1.90	292	eP	Pn	15 16 05.3	+0.3
	baz=291						
PHUB	P'eng-hu	1.92	302	eP	Pn	15 16 05.5	+0.3
	baz=301						
PNG	Penghu	1.96	303	eP	Pn	15 16 06.3	+0.5
	baz=302						
NSY	Sanyi	1.97	344	eP	Pb	15 16 08.4	-0.4
	baz=344						
LATG	Datong	2.02	5	eP	Pn	15 16 07.8	+1.0
	baz=5.0						
NFF	Wufeng Townshi	2.12	354	eP	Pn	15 16 09.7	+1.5
	baz=354						
ENTT	Nioudou	2.13	5	eP	Pn	15 16 10.0	+1.9
	baz=6.0						
TWC	Suao	2.14	12	eP	Pn	15 16 10.0	+1.8
	baz=13						
LIOB	Emei	2.15	352	eP	Pn	15 16 10.0	+1.6
	baz=352						
YHNB	Yeheng	2.15	1	eP	Pn	15 16 09.1	+0.6
	baz=1.0						
NSK	Sanguang	2.16	0	eP	Pn	15 16 10.2	+1.6
	baz=1.0						
TWE	Neicheng	2.22	7	eP	Pb	15 16 12.1	-0.9
	baz=8.0						
FUSB	Fushanzhiwuyua	2.25	5	eP	Pn	15 16 11.2	+1.3
	baz=6.0						
YOJ	Yonaguni jima	2.47	38	P	Pn	15 16 13.0	+0.2
YOJ				eS	Sn	15 16 40.3	-2.3
TIPB	Shuangxi	2.49	10	eP	Pn	15 16 15.5	+2.3
	baz=10.0						
HATJ	Hateruma jima	2.73	55	P	Pn	15 16 16.2	-0.2
HATJ				eS	Sn	15 16 46.3	-2.8
IRIF	Iriomote-Funau	2.84	50	P	Pn	15 16 17.8	-0.2
JKRS	Kuro-shima	2.99	54	P	Pn	15 16 20.0	+0.1
JKRS				eS	Sn	15 16 52.3	-3.1
JIJ	Ishigaki jima	3.16	54	P	Pn	15 16 22.3	0.0
JIJ				eS	Sn	15 16 57.0	-2.7
JISG	Ishigakijimahi	3.41	52	*i* P	Pn	15 16 25.6	-0.2
JTJ	Tarama	3.74	55	P	Pn	15 16 30.3	+0.1
JTJ				S	Sn	15 17 11.8	-2.1
JIRB	Irabujima	4.20	56	P	Pn	15 16 36.5	0.0
JMJ2	Miyako jima3	4.27	58	P	Pn	15 16 37.7	+0.1
JIKM	Ikemajima	4.30	55	eP	Pn	15 16 37.9	-0.1

*IDC **01** 15:23:00.6±1.5, 6°.77S×127°.33E, h406km±20km, mb2.9/3, mbtmp3.5/7, Error ellipse: s-maj=25.8km s-min=19.4km az=76.0*
ISC 01 15:23:00.5±1.0, 6°.79S±0°.09×127°.4E±0°.1, h400km, n8, σ1§11/10, mb3.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.04	227	P	Pn	15 24 24.0	+1.1
	109nm,0.3s,baz=90,slow=5.1,SNR=43						
BATI				S	S	15 25 28.9	-1.0
	63nm,0.7s,baz=286,slow=18,SNR=11						
SIJI	Sorong	7.02	33	P	Pn	15 24 44.9	+0.5
	2.4nm,0.4s,baz=194,slow=17,SNR=2.7						
FITZ	Fitzroy Crossi	11.37	189	P	P	15 25 33.7	+0.5
	1.5nm,0.7s,baz=345,slow=6.0,SNR=7.1						
WRA	Warramunga Arr	14.69	153	P	P	15 26 10.2	+0.6
	0.3nm,0.3s,baz=335,slow=12,SNR=9.6						
WRA				S	S	15 28 44.7	-1.6
	0.4nm,0.5s,baz=333,slow=21,SNR=5.3						
ASAR	Alice Springs	17.89	160	P	P	15 26 44.9	+0.9
	0.2nm,0.3s,baz=340,slow=12,SNR=6.1						
MKAR	Makanchi Array	66.68	328	P	P	15 33 09.2	-0.6
	0.1nm,0.4s,baz=120,slow=8.5,SNR=2.1						
	0.1nm,0.4s						
ZALV	Zalesovo Beam	70.29	335	P	P	15 33 30.6	-1.1
	0.5nm,0.4s,baz=106,slow=9.1,SNR=2.0						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	71.02	329	P	P	15 33 35.3	-0.8
	0.4nm,0.6s,baz=135,slow=4.6,SNR=5.1						
	0.4nm,0.6s						

*SVSA **01** 15:24:56.7±0.5, 40°.85N×29°.46W, h10km, ML2.9(INMG), Error ellipse: s-maj=14.5km s-min=3.7km az=76.0*
*IDC **01** 15:24:57.6±1.5, 40°.65N×29°.43W, h0km, mb3.5/6, mbtmp3.5/7, ML3.6/1, MS3.3/33, Error ellipse: s-maj=46.4km s-min=28.4km az=6.0*
ISC 01 15:24:58.5±1.0, 40°.45N±0°.08×29°.4W±0°.1, h10km, n45, σ0§84/19, mb3.5/7, MS3.3/32, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	1.89	163	eP	Pn	15 25 30.1	-0.8
PCED				eS	Sn	15 25 55.1	+0.3
PCED				A	A	15 25 56.8	
	32nm,0.1s						
CALA	Caldeira	1.94	164	eS	Sn	15 25 56.5	+0.5
CALA				A	A	15 25 58.9	
	84nm,0.3s						
ROSA	Rosais	1.94	152	eP	Pn	15 25 30.5	-1.1
ROSA				eS	Sn	15 25 56.0	0.0
ROSA				A	A	15 25 58.3	
	22nm,0.3s						
PRIB2	Ribeirinha	1.95	162	eS	Sn	15 25 56.4	+0.3
PRIB2				A	A	15 25 59.1	
	220nm,0.3s						
PFCBR	Castelo Branco	1.99	164	eP	Pn	15 25 31.4	-0.9
PFCBR				eS	Sn	15 25 57.4	+0.2
PFCBR				A	A	15 25 59.5	
	16nm,0.2s						
PMAN	Manadas	2.07	150	eS	Sn	15 25 58.8	-0.5
PMAN				A	A	15 26 00.2	
	33nm,0.2s						
PCAN	Candelaria	2.10	160	eP	Pn	15 25 33.0	-0.8
PCAN				eS	Sn	15 26 00.4	+0.4
PCAN				A	A	15 26 01.7	
	27nm,0.1s						
ESDC	Sonseca Array	19.47	84	P	Pn	15 29 27.8	+1.1
	baz=270,slow=5.1,SNR=3.0						

ESDC LR LR 15 35 37.6
comp=Z,97nm,18.9s,baz=316,slow=33
0.7nm,0.8s
MDT Midelt 21.26 103 LR LR 15 36 13.0
comp=Z,60nm,19.1s,baz=345,slow=32
EKA Eskdalemuir Ar 22.86 41 LR LR 15 37 12.0
comp=Z,42nm,20.9s,baz=184,slow=32
BORG Borgarnes 24.79 8 LR LR 15 37 12.9
comp=Z,63nm,18.7s,baz=173,slow=30
SCHQ Schefferville 28.64 313 LR LR 15 40 23.7
comp=Z,60nm,19.5s,baz=113,slow=32
DAVOX Davos/Dischmat 28.90 64 LR LR 15 40 48.0
comp=Z,47nm,18.9s,baz=263,slow=33
GERES GERESS Array B 31.43 60 P **P 15 31 20.1 +0.1**
0.1nm,0.3s,baz=284,slow=4.0,SNR=3.6
0.1nm,0.3s
NOA NORSAR Array B 32.17 37 LR LR 15 42 23.8
comp=Z,15nm,21.5s,baz=240,slow=33
FRB Frobisher Bay 32.65 329 LR LR 15 41 26.5
comp=Z,33nm,18.4s,baz=294,slow=30
HFS Hagfors 33.03 39 LR LR 15 43 49.0
comp=Z,37nm,18.8s,baz=262,slow=34
VRAC Vranov 33.32 59 LR LR 15 44 18.5
comp=Z,30nm,18.4s,baz=270,slow=35
KOWA Kowa 34.05 132 LR LR 15 44 14.5
comp=Z,26nm,19.1s,baz=310,slow=34
SADO Sadowa 36.41 294 LR LR 15 46 04.8
comp=Z,76nm,19.4s,baz=167,slow=35
TORD Torodi Ar. Bea 38.49 126 P **P 15 32 22.6 +1.7**
0.7nm,1.1s,baz=305,slow=10,SNR=2.1
TORD LR LR 15 48 06.7
comp=Z,36nm,18.0s,baz=210,slow=36
MLR Muntele Rosu 40.13 64 LR LR 15 47 35.5
comp=Z,34nm,21.3s,baz=284,slow=34
AKASG Malin Array Be 41.29 55 LR LR 15 49 14.3
comp=Z,57nm,18.6s,baz=354,slow=35
TKL Tuckaleechee C 42.52 282 LR LR 15 49 17.0
comp=Z,25nm,21.8s,baz=54,slow=34
IDI Anoyia 42.60 79 LR LR 15 49 47.6
comp=Z,14nm,19.0s,baz=276,slow=35
BRTR Keskin Array B 47.29 69 P **P 15 33 30.5 -1.8**
0.4nm,0.7s,baz=288,slow=10,SNR=1.9
0.4nm,0.7s
PDAR Pinedale Array 57.78 301 LR LR 15 58 45.3
comp=Z,50nm,19.4s,baz=68,slow=35
AKTO Aktyubinsk 58.75 48 LR LR 15 59 46.3
comp=Z,22nm,19.5s,baz=331,slow=36
ANMO Albuquerque 59.41 292 LR LR 15 59 03.0
comp=Z,21nm,19.9s,baz=68,slow=34
NEW Newport 59.93 310 LR LR 16 00 14.5
comp=Z,43nm,18.4s,baz=69,slow=35
TXAR Lajitas Array 60.29 285 P **P 15 35 07.7 +0.1**
0.1nm,0.4s,baz=61,slow=10,SNR=3.6
TXAR LR LR 16 00 17.1
comp=Z,24nm,19.4s,baz=56,slow=35
0.1nm,0.4s
CMIG Matias Romero 60.56 268 LR LR 15 59 01.5
comp=Z,30nm,20.2s,baz=24,slow=34
ELK Elko 62.47 301 LR LR 16 03 06.1
comp=Z,29nm,18.1s,baz=21,slow=37
YBH Yreka Blue Hor 66.70 306 LR LR 16 02 46.1
comp=Z,37nm,19.9s,baz=54,slow=34
LPAZ La Paz 66.95 221 LR LR 16 02 42.8
comp=Z,20nm,20.2s,baz=354,slow=34
PFO Pinyon Flats O 67.13 295 LR LR 16 04 14.1
comp=Z,42nm,19.9s,baz=54,slow=35
MBAR Mbarara 68.08 111 LR LR 16 04 09.8
comp=Z,32nm,19.0s,baz=124,slow=34
LPIG La Paz 68.13 284 LR LR 16 03 52.2
comp=Z,22nm,21.7s,baz=44,slow=34
KURBB Kurchatov Arra 69.60 40 P **P 15 36 07.8 +0.2**
0.5nm,0.3s,baz=316,slow=6.6,SNR=2.6
0.5nm,0.3s
TSUM Tsumeb 73.69 134 LR LR 16 05 36.3
comp=Z,31nm,21.5s,baz=331,slow=33
MKAR Makanchi Array 73.99 42 P **P 15 36 34.1 0.0**
0.5nm,0.9s,baz=312,slow=6.9,SNR=3.6
0.5nm,0.9s
LBTB Lobatse 82.79 131 LR LR 16 13 07.5
comp=Z,18nm,18.2s,baz=20,slow=35
SONM Songino Array 83.75 28 P **P 15 37 27.9 +0.1**
0.2nm,0.4s,baz=328,slow=5.1,SNR=2.5
0.2nm,0.4s
BOSA Boshof 85.39 134 LR LR 16 13 47.1
comp=Z,32nm,19.2s,baz=14,slow=34
SUR Sutherland 86.05 139 LR LR 16 13 36.3
comp=Z,23nm,18.5s,baz=352,slow=34

*IDC **01** 15:51:38.9±0.8, 6°.73N×72°.94W, h162km±10km, mb3.0/2, mbtmp3.7/4, Error ellipse: s-maj=40.7km s-min=8.1km az=131.0*
*RSNC **01** 15:51:40.2±1.1, 6°.82N×73°.14W, h151km±4km, ML3.5, Mw3.6*
ISC 01 15:51:39.0±0.9, 6°.83N±0°.03×73°.12W±0°.04, h155km±6km, n35, σ1§51/65, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**195**	⇓*iP*	**Pn**	**15 52 00.4**	**+0.1**
BARC				*eS*	**Sn**	**15 52 15.7**	**-0.8**
BARC				*i*		15 52 16.4	
	comp=Z,892nm,0.3s						
BRRC	**Barranca, Sant**	**0.65**	**295**	⇑*iP*	**Pn**	**15 52 02.1**	**+0.5**
BRRC				*eS*	**Sn**	**15 52 19.5**	**+0.5**
BRRC				*i*		15 52 22.5	
	comp=Z,582nm,0.4s						
PAMC	**Pamplona, Colo**	**0.65**	**39**	*eP*	**Pn**	**15 52 03.2**	**+0.9**
PAMC				*eS*	**Sn**	**15 52 20.5**	**+0.5**
PAMC				*i*		15 52 23.2	
	comp=Z,289nm,0.4s						
RUSC	**La Rusia**	**0.94**	**178**	*eP*	**Pn**	**15 52 04.3**	**0.0**
RUSC				*eS*	**Sn**	**15 52 22.9**	**-0.7**
RUSC				*i*		15 52 24.0	
	comp=Z,267nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*eP*	**Pn**	**15 52 07.1**	**-0.4**
PTBC				*eS*	**Sn**	**15 52 28.1**	**-1.3**
PTBC				*i*		15 52 30.1	
	comp=Z,328nm,0.2s						
TAMC	**Tame, Arauca**	**1.38**	**107**	*eP*	**Pn**	**15 52 08.8**	**+1.1**
TAMC				*i*		15 52 29.6	
	comp=Z,201nm,0.3s						
TAMC				*eS*	**Sn**	**15 52 30.4**	**+0.8**
OCAC	**Ocana**	**1.41**	**352**	*eP*	**Pn**	**15 52 08.5**	**+0.3**
OCAC				*eS*	**Sn**	**15 52 31.1**	**+0.5**
OCAC				*i*		15 52 37.4	
	comp=Z,542nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**	*eP*	**Pn**	**15 52 09.4**	**+0.2**
SPBC				*eS*	**Sn**	**15 52 32.1**	**-0.1**
SPBC				*i*		15 52 35.8	
	comp=Z,570nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*eP*	**Pn**	**15 52 12.9**	**+0.2**
ZARC				*eS*	**Sn**	**15 52 38.1**	**-0.4**
ZARC				*i*		15 52 43.5	
	comp=Z,277nm,0.5s						
NORC	**Norcasia**	**2.15**	**234**	*eP*	**Pn**	**15 52 16.5**	**+0.3**
NORC				*eS*	**Sn**	**15 52 44.1**	**-0.8**
NORC				*i*		15 52 49.2	
	comp=Z,220nm,0.2s						
CHIC	**Chingaza**	**2.27**	**196**	*eP*	**Pn**	**15 52 18.5**	**+0.4**
CHIC				*eS*	**Sn**	**15 52 47.9**	**-0.3**
CHIC				*i*		15 52 53.0	
	comp=Z,160nm,0.5s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**15 52 20.2**	**+1.7**
	comp=Z,82nm,0.4s,baz=122,slow=20,SNR=72						
ROSC				S	**Sn**	**15 52 50.0**	**+1.0**
	comp=Z,354nm,0.3s,baz=52,slow=21,SNR=7.3						
ROSC	**El Rosal**	**2.31**	**211**	*eP*	**Pn**	**15 52 20.2**	**+1.7**
ROSC				*eS*	**Sn**	**15 52 50.6**	**+1.6**
ROSC				*i*		15 52 55.0	
	comp=Z,485nm,0.4s						
HELC	**Santa Helena**	**2.48**	**255**	*eP*	**Pn**	**15 52 21.6**	**+1.2**
HELC				*eS*	**Sn**	**15 52 55.0**	**+2.5**
HELC				*i*		15 53 00.5	
	comp=Z,169nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*eP*	**Pn**	**15 52 20.9**	**-0.2**
UREC				*eS*	**Sn**	**15 52 51.0**	**-2.7**
UREC				*i*		15 53 02.5	
	comp=Z,193nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*eP*	**Pn**	**15 52 25.8**	**+2.6**
LL1C				*eS*	**Sn**	**15 53 01.2**	**+3.9**
LL1C				*i*		15 53 07.3	
	comp=Z,475nm,0.5s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*eP*	**Pn**	**15 52 25.2**	**+1.3**
GUY2C				*eS*	**Sn**	**15 53 01.5**	**+3.0**
GUY2C				*i*		15 53 06.5	
	comp=Z,177nm,0.3s						
VILC	**Villavicencio,**	**2.76**	**192**	*eP*	**Pn**	**15 52 24.1**	**+0.4**
VILC				*eS*	**Sn**	**15 52 58.5**	**+0.1**
VILC				*i*		15 53 07.9	
	comp=Z,222nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*eP*	**Pn**	**15 52 23.6**	**-0.5**
PTGC				*eS*	**Sn**	**15 52 56.8**	**-2.0**
PTGC				*i*		15 52 59.6	
	comp=Z,121nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*eP*	**Pn**	**15 52 28.1**	**+0.9**
CBOC				*eS*	**Sn**	**15 53 02.6**	**-1.8**
CBOC				*i*		15 53 17.9	
	comp=Z,59nm,0.2s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**15 52 30.0**	**+0.7**
	comp=Z,46nm,0.3s,baz=210,slow=1.6,SNR=32						
SDV				S	**Sn**	**15 53 07.1**	**-1.0**
	comp=Z,33nm,0.4s,baz=64,slow=22,SNR=11						
ANIL	**Santa Ana**	**3.25**	**224**	*eP*	**Pn**	**15 52 31.6**	**+1.5**
ANIL				*eS*	**Sn**	**15 53 10.8**	**+1.1**
ANIL				*i*		15 53 18.6	
	comp=Z,327nm,0.3s						
PRAC	**Prado**	**3.56**	**210**	*eP*	**Pn**	**15 52 33.6**	**-0.2**
PRAC				*eS*	**Sn**	**15 53 15.9**	**-0.5**
PRAC				*i*		15 53 21.9	
	comp=Z,160nm,0.7s						
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*	**Pn**	**15 52 34.6**	**-0.5**
SJCC				*eS*	**Sn**	**15 53 15.2**	**-3.6**
SJCC				*i*		15 53 19.5	
	comp=Z,45nm,0.3s						
PLMC	**San Jos del P**	**3.69**	**239**	*eP*	**Pn**	**15 52 35.8**	**+0.4**
PLMC				*eS*	**Sn**	**15 53 20.8**	**+1.6**
PLMC				*i*		15 53 25.6	
	comp=Z,44nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*eP*	**Pn**	**15 52 40.7**	**-0.9**
CRJC				*eS*	**Sn**	**15 53 28.3**	**-2.1**
CRJC				*i*		15 53 31.4	
	comp=Z,60nm,0.4s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*eP*	**Pn**	**15 52 42.9**	**-0.3**
YOTC				*eS*	**Sn**	**15 53 35.6**	**+2.4**
SMRC	**Santa Marta, M**	**4.44**	**346**	*eP*	**Pn**	**15 52 45.7**	**+0.5**
SMRC				*eS*	**Sn**	**15 53 33.5**	**-3.2**
SMRC				*i*		15 53 38.4	
	comp=Z,29nm,0.2s						
GARC	**Garzon, Huila**	**5.19**	**207**	*eP*	**Pn**	**15 52 54.7**	**-0.6**
GARC				*eS*	**Sn**	**15 53 51.2**	**-3.6**
GARC				*i*		15 53 58.5	
	comp=Z,39nm,0.2s						
FLOC	**Florencia**	**5.80**	**206**	*eP*	**Pn**	**15 53 02.7**	**-0.5**
BBAC	**Balboa, Cauca**	**6.31**	**221**	*eP*	**Pn**	**15 53 10.9**	**+0.8**
BBAC				*eS*	**Sn**	**15 54 19.5**	**-2.0**
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**15 58 30.4**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=125,slow=9.5,SNR=3.8						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**16 01 50.5**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=136,slow=7.2,SNR=4.6						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPbc**	**16 11 08.8**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=129,slow=3.1,SNR=4.7						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**16 11 11.8**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=105,slow=2.9,SNR=8.2						

IDC 01 15:56:51.9±1.8, 0°.73N×122°.21E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=216.7km s-min=28.6km az=61.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.74**	**151**	P	P	16 02 05.6	-0.4
	0.3nm,0.8s,baz=326,slow=11,SNR=6.0						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**26.78**	**156**	P	P	16 02 34.3	+0.5
	0.1nm,0.5s,baz=336,slow=11,SNR=1.9						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**57.58**	**329**	P	P	16 06 43.4	-0.2
	0.1nm,0.4s,baz=129,slow=8.0,SNR=2.5						
	0.1nm,0.4s						

*IDC **01** 17:07:09.3±5.9, 37°.26N×72°.14E, h198km±50km, mbtmp3.7/6, Error ellipse: s-maj=65.7km s-min=38.3km az=148.0*
*NNC **01** 17:07:18.4±10.0, 37°.98N×72°.13E, h217km±129km, mb2.4, mpv3.5, Error ellipse: s-maj=112.5km s-min=48.6km az=3.0*
ISC 01 17:07:11.0±1.9, 37°.4N±0°.1×72°.1E±0°.1, h200km, n16, σ1§93/19, 2C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.85**	**14**	P	**Pn**	**17 08 25.6**	**+1.8**
	SNR=7.0						
UCH	**Uchtor**	**5.14**	**21**	P	**Pn**	**17 08 29.1**	**+1.5**
	SNR=10						
EKS2	**Erkin-Say**	**5.38**	**13**	P	**Pn**	**17 08 32.0**	**+1.8**
	SNR=12						
AAK	**Ala-Archa**	**5.51**	**19**	P	**Pn**	**17 08 34.1**	**+2.1**
	SNR=6.5						
AAK	**Ala-Archa**	**5.51**	**19**	P	**Pn**	**17 08 34.1**	**+2.1**
	6.3nm,0.4s,baz=191,slow=5.0,SNR=18						
AAK				S	**Sn**	**17 09 36.3**	**+0.1**
	9.5nm,0.4s,baz=315,slow=24,SNR=14						
KK31	**Karatay Array**	**5.79**	**348**	P	**Pn**	**17 08 37.2**	**+1.8**
	0.9nm,0.2s,baz=164,slow=11,SNR=43						
KK31				S	**Sn**	**17 09 39.4**	**-2.9**
	2.6nm,0.3s,baz=171,slow=22,SNR=21						
TKM2	**Tokmak 2**	**6.10**	**25**	P	**Pn**	**17 08 41.2**	**+1.5**
	SNR=8.0						
TKM2	**Tokmak 2**	**6.10**	**25**	⇓P	**Pn**	**17 08 41.0**	**+1.3**
	7.2nm,0.6s						
TKM2				⇑S	**Sn**	**17 09 45.6**	**-4.3**
	2.9nm,0.6s						
MKAR	**Makanchi Array**	**12.02**	**36**	P	**Pn**	**17 09 56.1**	**+0.1**
	0.2nm,0.4s,baz=212,slow=13,SNR=4.3						
KURBB	**Kurchatov Arra**	**13.97**	**17**	P	**Pn**	**17 10 20.1**	**-0.2**
	0.9nm,0.8s,baz=207,slow=8.8,SNR=7.6						
AB31	**Akbulak array**	**14.73**	**327**	P	**P**	**17 10 30.9**	**+0.3**
	0.4nm,0.6s,baz=138,slow=11,SNR=8.5						
BVAR	**Borovoye Array**	**15.63**	**356**	P	**Pn**	**17 10 42.5**	**+1.8**
	0.8nm,0.3s						
AKTO	**Aktyubinsk**	**16.44**	**327**	P	**Pn**	**17 10 51.5**	**+1.0**
	1.0nm,0.5s,baz=126,slow=10,SNR=5.0						
AKTO	**Aktyubinsk**	**16.44**	**327**	⇑P	**Pn**	**17 10 50.6**	**+0.2**
	0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**18.71**	**24**	P	**P**	**17 11 14.7**	**+0.5**
	4.5nm,0.3s,baz=211,slow=10.0,SNR=26						
TORD	**Torodi Ar. Bea**	**66.61**	**269**	P	**P**	**17 17 38.3**	**-1.9**
	13nm,0.6s,baz=56,slow=6.2,SNR=5.1						

WEL 01 17:11:55.8±0.3, 42°.5N±3°.×17°.4E±°, h11km±2km, M3.3/22, ML3.5/22, MLv3.3/22, Error ellipse: s-maj=0.0km s-min=0.0km az=159.3, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	**0.09**	**59**	P	Pg	17 11 59.1	+0.8
BSWZ				S	Sg	17 12 01.7	+1.5
CMWZ	**Cape Campbell**	**0.33**	**88**	P	Pb	17 12 03.7	0.0
CMWZ				S	Sb	17 12 09.9	+0.9
TUWZ	**Tuamarina**	**0.35**	**21**	P	Pb	17 12 03.7	-0.4
TUWZ				S	Sb	17 12 09.4	-0.3
NNZ	**Nelson**	**0.62**	**331**	P	Pb	17 12 08.2	-0.4
NNZ				S	Sb	17 12 17.0	-0.3
THZ	**Tophouse**	**0.65**	**269**	P	Pg	17 12 08.7	+0.2
THZ				S	Sg	17 12 17.4	+0.4
TCW	**Tory Channel**	**0.67**	**35**	P	Pg	17 12 08.7	+0.1
KHZ	**Kahutara**	**0.68**	**195**	P	Pg	17 12 09.2	+0.3
KHZ				S	Sb	17 12 18.8	-0.3
MRNZ	**Matariki Terra**	**0.84**	**295**	P	Pb	17 12 12.5	0.0
WEL	**Wellington**	**0.88**	**58**	P	Pb	17 12 13.3	+0.2
TKNZ	**Takaka Hill**	**0.95**	**320**	P	Pg	17 12 14.1	0.0
TKNZ				S	Sb	17 12 27.4	+0.6
DUWZ	**D'Urville Isla**	**0.96**	**7**	P	Pg	17 12 14.2	-0.2
DUWZ				S	Sb	17 12 27.9	+0.6
PLWZ	**Palliser**	**1.12**	**81**	P	Pb	17 12 16.7	-0.6
MSWZ	**Moikau Station**	**1.16**	**73**	P	Pb	17 12 17.3	-0.5
CAW	**Cannon Point**	**1.17**	**57**	P	Pb	17 12 17.6	-0.4
KIW	**Kapiti Island**	**1.24**	**44**	P	Pn	17 12 18.4	-0.7
PAWZ	**Paruwai Farm**	**1.30**	**74**	P	Pn	17 12 18.9	-1.0
QRZ	**Quartz Range**	**1.32**	**314**	P	Pb	17 12 20.7	0.0
GVZ	**Greta Valley S**	**1.33**	**204**	P	Pn	17 12 20.0	-0.3
OGWZ	**Otaki Gorge**	**1.41**	**49**	P	Pn	17 12 21.4	0.0
MTW	**Mount Morrison**	**1.43**	**66**	P	Pn	17 12 20.7	-1.0
DSZ	**Denniston Nort**	**1.48**	**270**	P	Pb	17 12 23.3	0.0
TRWZ	**Traveller**	**1.48**	**76**	P	Pn	17 12 21.2	-1.2
LTZ	**Lake Taylor**	**1.51**	**227**	P	Pn	17 12 23.1	+0.2
HOWZ	**Holdsworth Sta**	**1.57**	**57**	P	Pn	17 12 22.9	-0.7
AMCZ	**Amberley**	**1.64**	**210**	P	Pn	17 12 24.3	-0.3
TMWZ	**Te Maipa**	**1.72**	**68**	P	Pn	17 12 24.4	-1.3
MRZ	**Mangatainoka R**	**1.75**	**52**	P	Pn	17 12 25.6	-0.5
TIWZ	**Tintock**	**1.87**	**59**	P	Pn	17 12 27.0	-0.8
OHWZ	**Ohakea**	**1.94**	**37**	P	Pb	17 12 30.3	-0.9
INZ	**Inchbonnie**	**1.98**	**240**	P	Pn	17 12 30.4	+1.2
CPWZ	**Castlepoint**	**2.02**	**66**	P	Pg	17 12 36.4	+2.0
OXZ	**Oxford**	**2.02**	**219**	P	Pn	17 12 28.9	-1.0
OKCZ	**Okains Bay**	**2.03**	**195**	P	Pn	17 12 28.6	-1.4
POWZ	**Post Office Ro**	**2.03**	**48**	P	Pn	17 12 30.0	-0.1
PRWZ	**Pori Road**	**2.05**	**55**	P	Pn	17 12 29.5	-0.8
MOZ	**McQueen's Vall**	**2.11**	**203**	P	Pn	17 12 29.0	-2.1
BFZ	**Birch Farm**	**2.15**	**61**	P	Pn	17 12 29.9	-1.8
WAZ	**Wanganui**	**2.20**	**25**	P	Pn	17 12 32.8	+0.4
AKCZ	**Akaroa Harbour**	**2.21**	**196**	P	Pn	17 12 31.0	-1.4
RACZ	**Rakaia**	**2.31**	**211**	P	Pn	17 12 32.5	-1.3
DVHZ	**Dannevirke**	**2.32**	**52**	P	Pn	17 12 32.6	-1.5
LREZ	**Lake Rotokare**	**2.35**	**12**	P	Pb	17 12 38.4	+0.3
TSZ	**Takapari Road**	**2.37**	**45**	P	Pn	17 12 34.1	-0.6
ANWZ	**Angora Road**	**2.42**	**58**	P	Pn	17 12 33.8	-1.5
NBEZ	**Newall Road No**	**2.49**	**2**	P	Pb	17 12 39.4	-1.1
PKE	**Pukeiti**	**2.57**	**4**	P	Pb	17 12 41.0	-0.9
PNHZ	**Pukenui**	**2.60**	**46**	P	Pb	17 12 43.8	+1.3
WACZ	**Wakanui South**	**2.60**	**212**	P	Pn	17 12 36.7	-1.1
WVZ	**Waitaha Valley**	**2.60**	**239**	P	Pn	17 12 39.2	+1.3
WPHZ	**Waipukurau**	**2.64**	**51**	P	Pn	17 12 37.0	-1.3
VRZ	**Vera Road**	**2.74**	**16**	P	Pb	17 12 42.5	-2.3
PKVZ	**Pokaka**	**2.74**	**26**	P	Pb	17 12 45.4	+0.5
MOVZ	**Moawhango**	**2.79**	**33**	P	Pb	17 12 44.2	-1.5
RPZ	**Rata Peaks**	**2.80**	**225**	P	Pb	17 12 40.0	-0.5
WNVZ	**Wahianoa**	**2.80**	**30**	P	Pb	17 12 44.6	-1.4
TRVZ	**Turoa**	**2.81**	**29**	P	Pb	17 12 45.4	-0.6
WHVZ	**Whangaehu Hut**	**2.83**	**30**	P	Pb	17 12 44.2	-2.4
FWVZ	**Far West T-bar**	**2.84**	**29**	P	Pb	17 12 44.2	-2.6
BHHZ	**Black Hill Sta**	**2.86**	**38**	P	Pn	17 12 41.7	+0.2
TUVZ	**Tukino**	**2.87**	**31**	P	Pb	17 12 47.6	+0.4
KRHZ	**Kereru**	**2.89**	**44**	P	Pb	17 12 48.4	+1.0
ARCZ	**Arundel**	**2.90**	**220**	P	Pn	17 12 41.5	-0.5
NGZ	**Ngauruhoe**	**2.93**	**29**	P	Pb	17 12 48.9	+0.7
SNVZ	**South Ngauruho**	**2.94**	**30**	P	Pb	17 12 48.4	+0.1
OTVZ	**Oturere**	**2.97**	**30**	P	Pb	17 12 45.9	-2.9
TWVZ	**Taurewa**	**2.97**	**26**	P	Pb	17 12 48.9	+0.1
NNVZ	**North Ngauruho**	**2.98**	**29**	P	Pb	17 12 46.3	-2.7
WTVZ	**West Tongariro**	**2.98**	**28**	P	Pb	17 12 47.1	-1.9
GCSZ	**Gaunt Creek Bo**	**2.99**	**237**	P	Pb	17 12 44.7	+1.6
ETVZ	**East Tongariro**	**3.01**	**30**	P	Pb	17 12 48.9	-0.6
KRVZ	**Karewarewa**	**3.02**	**29**	P	Pb	17 12 48.7	-1.0
TMVZ	**Te Maari**	**3.02**	**30**	P	Pb	17 12 45.2	+1.5
NTVZ	**North Tongarir**	**3.03**	**29**	P	Pn	17 12 45.3	+1.5
KWHZ	**Kaweka Forest**	**3.08**	**42**	P	Pb	17 12 51.0	+0.3
KATZ	**Kakaramea**	**3.14**	**28**	P	Pb	17 12 52.3	+0.5
RATZ	**Rangitukua**	**3.27**	**28**	P	Pb	17 12 53.1	-0.8
TMZ	**Timaru**	**3.31**	**217**	P	Pn	17 12 47.3	-0.4
BKZ	**Black Stump Fm**	**3.32**	**40**	P	Pn	17 12 50.3	+2.6
HIZ	**Hauiti**	**3.35**	**15**	P	Pn	17 12 50.8	+2.7
WATZ	**Wairara**	**3.40**	**27**	P	Pb	17 12 54.2	-1.8
FOZ	**Fox Glacier**	**3.42**	**237**	P	Pn	17 12 50.2	+1.3
TLZ	**Tolley Road**	**3.68**	**22**	P	Pn	17 12 55.7	+3.0
LBZ	**Lake Benmore**	**3.72**	**224**	P	Pn	17 12 54.4	+1.2
ODZ	**Otahua Downs**	**4.00**	**214**	P	Pn	17 12 55.2	-1.8
TOZ	**Tahuroa Road**	**4.24**	**19**	P	Pn	17 13 03.4	+3.2
JCZ	**Jackson Bay**	**4.33**	**236**	P	Pn	17 13 03.3	+1.6
URZ	**Urewera**	**4.33**	**37**	P	Pn	17 13 03.1	+1.4
MARZ	**Manawahe**	**4.38**	**32**	P	Pn	17 13 07.2	+4.9
TKGZ	**Te Karaka**	**4.55**	**45**	P	Pn	17 13 07.5	+2.8
AWAZ	**Awhitu Peninsu**	**4.74**	**8**	P	Pn	17 13 09.7	+2.6
MKAZ	**Moumakai**	**4.77**	**13**	P	Pn	17 13 10.0	+2.4
ETAZ	**East Tamaki Re**	**4.88**	**11**	P	Pn	17 13 11.8	+2.6
RVAZ	**Riverhead Bore**	**5.02**	**7**	P	Pn	17 13 13.9	+2.9
WIAZ	**Waiheke Island**	**5.07**	**12**	P	Pn	17 13 14.0	+2.2

*IDC **01** 17:18:06.9±2.0, 3°.40N×124°.24E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=153.0km s-min=26.7km az=66.0*
*DJA **01** 17:18:45.6±0.9, 2°.N±7°.×12°.2E±°, h191km±18km, M4.2/7, mb4.2/6, mB4.7/5, MLv4.4/7, Mw(mB)3.9/5*
ISC 01 17:18:51.0±1.4, 2°.0N±0°.2×123°.0E±0°.2, h450km, n8, σ2§69/9, mb2.8/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**4.54**	**105**	P	**P**	**17 20 11.4**	**+0.4**
	0.3nm1µm56nm,0.6s						
SANI	**Sanana**	**5.01**	**143**	P	P	17 20 07.9	-7.6
	0.3nm862nm24nm,0.7s						
SANI				S	**S**	**17 21 21.0**	**-3.4**
	0.3nm862nm24nm,0.7s						
LBMI	**Labuha**	**5.21**	**120**	P	**P**	**17 20 18.0**	**+0.5**
	0.1nm926nm18nm,0.9s						
LBMI				S	**S**	**17 21 27.3**	**-0.6**
	0.1nm926nm18nm,0.9s						
NLAI	**Namlea**	**6.62**	**142**	P	**P**	**17 20 29.3**	**-2.5**
FITZ	**Fitzroy Crossi**	**20.14**	**173**	P	**P**	**17 22 56.5**	**+2.9**
	0.8nm,0.5s,baz=6.3,slow=9.2,SNR=1.8						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**24.48**	**153**	P	**P**	**17 23 34.8**	**+1.8**
	0.2nm,0.3s,baz=335,slow=10.0,SNR=13		

baz=27,SNR=32
IKP S **Sb** **17 23 39.6 -0.1**
baz=27
BELC Belle Mtn. Jos 0.73 342 Pb 17 23 30.4 +0.1
BELC Belle Mtn. Jos 0.73 342 P **Pb 17 23 30.4 +0.1**
baz=162,SNR=87
BELC S **Sb** **17 23 40.1 +0.1**
baz=162
RMX La Rumorosa 0.76 203 Pb 17 23 30.7 +0.1
RMX La Rumorosa 0.76 203 Sg 17 23 41.2 +0.3
RMX IAML 17 23 42.2
comp=N,426nm,0.2s
GLA Glamis 0.80 108 Pb 17 23 31.1 -0.2
GLA Glamis 0.80 108 Sg **Sg 17 23 42.0 -0.1**
GLA IAML 17 23 44.5
comp=N,429nm,0.8s
GLA Glamis 0.80 108 Pg **Pb 17 23 30.8 -0.5**
GLA Glamis 0.80 108 P **Pb 17 23 30.6 -0.7**
baz=289,SNR=103
GLA S **Sg** **17 23 42.2 +0.1**
baz=289
BZNA Buzz No.'s Pla 0.81 284 Pb 17 23 31.6 +0.1
EMSC East Mesa 0.84 132 Pb 17 23 32.1 +0.1
TPC Twentynine Pal 0.84 342 Pb 17 23 32.3 +0.1
EW2 E Wide Canyon 0.85 319 Pb 17 23 32.1 -0.1
CRY Cary Ranch 0.88 288 Pb 17 23 32.7 -0.1
CPBX Cerro Prieto 0.95 158 Pb 17 23 33.9 0.0
CPBX IAML 17 24 01.6
comp=E,299nm,0.5s
CPBX IAML 17 24 04.9
comp=N,268nm,0.8s
IRM Iron Mountain 0.98 30 P **Pb 17 23 34.5 0.0**
baz=209,SNR=109
IRM S **Sg** **17 23 47.8 -0.2**
baz=209
BAR Barrett 1.00 232 Pb 17 23 34.5 -0.3
BAR IAML 17 23 48.8
comp=E,290nm,0.2s
TKX Tecate 1.04 226 Pb 17 23 35.5 +0.1
BLYC Blythe 1.10 66 Pb 17 23 36.8 +0.3
BLYC Sg **Sn** **17 23 51.1 -0.2**
BLYC IAML 17 23 52.6
comp=E,292nm,0.5s
GUVIX Guadalupe Vict 1.14 151 Pg **Pg 17 23 38.3 +0.3**
GUVIX IAML 17 24 14.4
comp=N,286nm,0.5s
109C Camp Elliot, M 1.23 251 Pb 17 23 39.0 +0.4
109C Sg **Sn** **17 23 54.9 +0.6**
109C Camp Elliot, M 1.23 251 P **Pb 17 23 38.8 +0.2**
baz=70,SNR=19
109C S **Sn** **17 23 54.8 +0.6**
baz=70
CBX Cerro Bola 1.26 219 Pn 17 23 38.5 -0.3
CBX Sn **Sb** **17 23 54.9 -0.4**
CBX IAML 17 23 56.6
comp=N,182nm,0.3s
CBX IAML 17 23 57.6
comp=E,180nm,0.5s
MURC Murrieta 1.26 284 Pb 17 23 39.6 +0.4
MURC Murrieta 1.26 284 P **Pn 17 23 38.8 +0.1**
baz=103,SNR=22
MURC S **Sg** **17 23 56.7 -0.1**
baz=103
GORC Green Oak Ranc 1.27 264 Pn 17 23 38.2 -0.5
ESJX Sierra Juarez 1.31 188 Pn 17 23 38.8 -0.6
ESJX IAML 17 23 58.3
comp=E,97nm,0.1s
DANC Danby, Needles 1.36 12 Pg 17 23 42.6 +0.4
TJX Tijuana 1.36 235 Pn 17 23 40.1 0.0
BBRC Big Bear Solar 1.38 314 S **Sg 17 23 59.9 -0.7**
baz=134
ELS Elsinore Mount 1.46 284 Pn 17 23 41.0 -0.5
ELS IAML 17 24 09.2
comp=E,75nm,0.7s
GMRC Granite Mounta 1.48 2 Pg 17 23 44.2 -0.3
GMRC Granite Mounta 1.48 2 Pg **Pg 17 23 44.4 -0.1**
baz=182
HEC Hector,Ludlow 1.60 342 Pg **Pg 17 23 46.6 -0.2**
baz=161
CCX Cicese 1.63 209 Pn 17 23 43.6 -0.2
113A Mohawk Valley, 1.73 107 Pn 17 23 45.5 +0.3
GSC Goldstone, Bar 2.19 336 Pn 17 23 51.9 +0.4
GSC IAML 17 24 36.6
comp=E,55nm,0.8s
PASC Pasadena Art C 2.22 294 Pn **Pb 17 23 54.0 -1.6**
W13A Hualapai Mount 2.36 40 Pn 17 23 54.6 +0.6
Y14A Wickenburg 2.36 74 Pn 17 23 54.2 +0.3
EDW2 Edwards Air Fo 2.45 311 Pb **Pb 17 24 00.5 +0.9**
baz=129
V12A Nelson 2.53 16 Pn 17 23 55.2 -1.0
PIX Pinacate 2.59 132 Pn **Pn 17 23 55.6 -1.4**
CCAC Calif City Air 2.65 315 Pn 17 23 56.0 -1.8
CCAC IAML 17 24 41.6
comp=N,36nm,0.8s
CCAC IAML 17 24 42.3
comp=E,31nm,0.4s
214A Organ Pipe Nat 2.81 118 Pn 17 23 59.4 -0.5
GWY Greenwater Val 2.98 345 Pn 17 24 03.6 +1.1
SHPR Sheep Range 3.23 8 Pn **Pn 17 24 06.9 +0.9**
ISA Isabella, Lake 3.27 317 Pn **Pn 17 24 08.1 +1.7**
WCT Wildcat Mounta 3.56 348 Pn 17 24 12.6 +2.2
TPNV Topopah Spring 3.66 353 Pn 17 24 12.0 +0.1
TPNV IAML 17 25 18.7
comp=E,14nm,0.8s
TPNV IAML 17 25 26.8
comp=E,12nm,1.1s
PRN Pahroc Range 4.13 8 Pn 17 24 17.3 -1.0
LCH Last Change Ra 4.22 339 Pn 17 24 19.5 0.0
LCMT Little Creek M 4.22 28 Pn 17 24 21.4 +1.9
WUAZ Wupatki 4.22 57 Pn 17 24 18.4 -1.2
WUAZ IAML 17 25 39.1
comp=E,11nm,0.9s
WUAZ IAML 17 25 39.8
comp=E,10.0nm,0.7s
TUC Tucson 4.28 102 Pn 17 24 20.1 -0.2
S11A Rachel 4.33 360 Pn 17 24 19.1 -1.9
KNB Kanab 4.41 32 Pn **Pn 17 24 23.6 +1.5**
DSP Deep Springs 4.45 336 Pn **Pn 17 24 22.4 -0.1**
R11A Troy Canyon, C 5.04 1 Pn 17 24 29.6 -1.2
PSUT Pine Spring 5.44 16 Pn 17 24 35.2 -1.1

*NOU **01** 17:26:18.4, 10°.24S×161°.48E, h0km, mb4.5/9, Solomon Islands*
*NEIC **01** 17:26:22.0±1.5, 10°.25S±0°.07×161°.4E±0°.1, h57km±10km, mb4.2/11, Error ellipse: s-maj=15.5km s-min=9.5km az=73.0*
*IDC **01** 17:26:22.5±3.2, 10°.40S×161°.38E, h58km±23km, mb3.6/4, mbtmp4.0/6, ML3.9/2, MS2.8/2, Error ellipse: s-maj=36.3km s-min=18.5km az=57.0*
ISC 01 17:26:21.9±0.9, 10°.28S±0°.08×161°.46E±0°.10, h61km, n35, σ1§07/36, mb4.1/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.71 299**		P	**Pn**	**17 26 48.3**	**-1.2**
7μm,0.5s,baz=145,slow=7.8,SNR=47							
HNR				S	**Sn**	**17 27 11.1**	**+0.8**
35μm,0.3s,baz=165,slow=7.4,SNR=9.5							
HNR	**Honiara**	**1.71 299**		Pn	**Pn**	**17 26 48.2**	**-1.2**
HNR				Sn	**Sn**	**17 27 10.8**	**+0.4**
HNR	**Honiara**	**1.71 299**		P	**Pn**	**17 26 48.7**	**-0.8**
DVP	**Devils Point**	**9.87 139**		P	**Pn**	**17 28 41.2**	**0.0**
KOUNC	**Koumac, New Ca**	**10.57 165**			**Pn**	**17 28 50.7**	**-0.1**
KOUNC	**Koumac, New Ca**	**10.57 165**		P	**Pn**	**17 28 52.1**	**+1.3**
LIFNC	**LIFOU**	**11.83 153**		Pn	**Pn**	**17 29 06.6**	**-1.4**
LIFNC	**LIFOU**	**11.83 153**		P	**Pn**	**17 29 07.5**	**-0.4**
NOUC	**Port Laguerre**	**12.64 159**		P	**Pn**	**17 29 20.6**	**+1.6**
DZM	**Mont Dzumac**	**12.67 158**		P	**Pn**	**17 29 19.7**	**+0.3**
0.4nm,0.3s,baz=29,slow=8.5,SNR=16							
DZM				LR	LR	17 33 04.2	
comp=Z,57nm,19.7s,baz=55,slow=32							
2.0nm,0.5s							
DZM	**Mont Dzumac**	**12.67 158**		Pn	**Pn**	**17 29 18.9**	**-0.5**
DZM	**Mont Dzumac**	**12.67 158**		P	**Pn**	**17 29 20.8**	**+1.4**
MARNC	**Mare, Loyalty**	**12.81 151**		Pn	**Pn**	**17 29 21.7**	**+0.4**
ONTNC	**Ouen Toro**	**12.89 159**		Pn	**Pn**	**17 29 24.1**	**+1.8**
OUENC	**Ouen Island, N**	**13.13 158**		Pn	**Pn**	**17 29 26.2**	**+0.5**
PATS	**Pohnpei**	**17.29 349**			**Pn**	**17 30 19.2**	**-0.1**
PATS	**Pohnpei**	**17.29 349**		P	**P**	**17 30 21.1**	**+1.2**
CTA	**Charters Tower**	**17.61 235**		P	**Pn**	**17 30 23.8**	**+0.5**
0.4nm,0.3s,baz=60,slow=11,SNR=15							
7.8nm,0.8s							
CTA	**Charters Tower**	**17.61 235**		P	**P**	**17 30 25.2**	**+1.7**
CTAO	**Charters Tower**	**17.61 235**			**P**	**17 30 24.2**	**+0.7**
CTAO				IAmb	IAmb	17 30 28.6	
comp=Z,7.8nm,0.8s							
MTSU	**Mount Surprise**	**18.35 243**		P	**Pn**	**17 30 34.9**	**+2.5**
WB0	**Warramunga Arr**	**27.75 247**		P	**P**	**17 32 04.7**	**-0.5**
WB0				IAmb	IAmb	17 32 05.8	
comp=Z,3.6nm,0.9s							
WRAB	**Tennant Creek**	**27.84 247**		P	**P**	**17 32 05.4**	**-0.6**
WRAB				IAmb	IAmb	17 32 36.3	
comp=Z,14nm,1.5s							
WB2	**Warramunga Arr**	**27.84 247**		P	**P**	**17 32 05.9**	**0.0**
WB2				IAmb	IAmb	17 32 36.9	
comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**27.85 247**		P	**P**	**17 32 05.8**	**-0.2**
comp=Z,0.9nm,0.6s,baz=76,slow=9.2,SNR=10							
comp=Z,0.9nm,0.6s							
WRA	**Warramunga Arr**	**27.85 247**		P	**P**	**17 32 05.4**	**-0.7**
GUMO	**Guam**	**28.86 325**		LR	LR	17 45 22.0	
comp=Z,15nm,18.2s,baz=154,slow=39							
ASAR	**Alice Springs**	**29.45 240**		P	**P**	**17 32 19.6**	**-0.7**
comp=Z,0.5nm,0.8s,baz=66,slow=9.1,SNR=4.7							
comp=Z,0.5nm,0.8s							
KNRA	**Kununurra**	**32.29 257**		P	**P**	**17 32 44.0**	**-1.2**
BBOO	**Buckleboo**	**32.41 222**		P	**P**	**17 32 44.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**35.53 253**		P	**P**	**17 33 13.2**	**-0.3**
comp=Z,2.1nm,0.9s,baz=78,slow=9.7,SNR=2.8							
comp=Z,2.1nm,0.9s							
PSA00	**Pilbara Seismi**	**41.44 249**		P	**P**	**17 34 02.1**	**-0.9**
PSA00				IAmb	IAmb	17 34 03.3	
comp=Z,5.5nm,0.9s							
MAJO	**Matsushiro**	**51.45 336**		P	**P**	**17 35 20.8**	**-0.4**
MAJO				IAmb	IAmb	17 35 45.2	
comp=Z,5.3nm,1.2s							
SONM	**Songino Array**	**75.59 325**		P	**P**	**17 38 01.9**	**+1.5**
comp=Z,1.0nm,0.7s,baz=117,slow=5.0,SNR=5.1							
comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**75.59 325**		P	**P**	**17 38 01.4**	**+1.0**

*NOU **01** 17:34:07.7, 37°.96S×176°.48E, h232km, MLv4.2/8, North Island, New Zealand*
*WEL **01** 17:34:14.0±0.6, 38°.S±4°.×17°.6E±°, h175km±5km, M3.1/49, ML2.4/7, MLv3.1/49, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2*
ISC 01 17:34:08.8±1.9, 38°.05S±0°.07×176°.25E±0°.06, h215km±10km, n128, σ1§69/136, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMRZ	**Omania**	**0.11 119**		P	**Pn**	**17 34 38.0**	**+1.3**
OMRZ				S	**S**	**17 34 57.3**	**-1.4**
HSRZ	**Hossack Road**	**0.26 181**		P	**Pn**	**17 34 38.4**	**+1.5**
HSRZ				S	**S**	**17 34 58.6**	**-0.6**
GRRZ	**Galatos Road**	**0.32 201**		P	**Pn**	**17 34 38.7**	**+1.6**
OPRZ	**Ohinepanea**	**0.32 49**		P	**Pn**	**17 34 37.9**	**+0.8**
OPRZ				S	**S**	**17 34 56.3**	**-2.8**
KMRZ	**Kaimai**	**0.32 310**		P	**Pn**	**17 34 38.3**	**+1.2**
TGRZ	**Tauranga**	**0.32 1**		P	**Pn**	**17 34 38.0**	**+0.9**
TGRZ				S	**S**	**17 34 57.1**	**-2.1**
HRRZ	**Handcock Road**	**0.34 176**		P	**Pn**	**17 34 38.1**	**+1.0**
EDRZ	**Edgecumbe**	**0.39 98**		P	**Pn**	**17 34 38.4**	**+1.1**
PRRZ	**Plateau Road**	**0.46 166**		P	**Pn**	**17 34 38.8**	**+1.3**
WPRZ	**Whakapapatarin**	**0.47 188**		P	**Pn**	**17 34 39.0**	**+1.5**
KUTZ	**Kaahu Road**	**0.55 218**		P	**Pn**	**17 34 39.4**	**+1.6**
MUGZ	**Murupara**	**0.59 136**		P	**Pn**	**17 34 38.6**	**+0.8**
TLZ	**Tolley Road**	**0.63 244**		P	**Pn**	**17 34 39.7**	**+1.6**
TLZ				S	**S**	**17 35 00.8**	**-0.2**
TOZ	**Tahuroa Road**	**0.67 298**		P	**Pn**	**17 34 39.7**	**+1.4**
URZ	**Urewera**	**0.71 107**		P	**Pn**	**17 34 39.3**	**+0.9**
URZ				S	**S**	**17 34 59.0**	**-2.5**
WATZ	**Wairara**	**0.77 212**		P	**Pn**	**17 34 40.4**	**+1.7**
MRHZ	**Matea Rd**	**0.79 171**		P	**Pn**	**17 34 40.3**	**+1.4**
MRHZ				S	**S**	**17 35 00.4**	**-2.1**
RTZ	**Ruatahuna**	**0.80 135**		P	**Pn**	**17 34 40.4**	**+1.4**
RTZ				S	**S**	**17 35 00.5**	**-2.0**
RATZ	**Rangitukua**	**0.90 205**		P	**Pn**	**17 34 41.0**	**+1.5**
WIZ	**White Island**	**0.91 55**		P	**Pn**	**17 34 40.5**	**+1.0**
MTHZ	**Maungataniwha**	**0.92 150**		P	**Pn**	**17 34 41.3**	**+1.7**
MTHZ				S	**S**	**17 35 01.7**	**-2.0**
KATZ	**Kakaramea**	**1.02 205**		P	**Pn**	**17 34 42.3**	**+2.0**
MWZ	**Matawai**	**1.04 106**		P	**Pn**	**17 34 41.8**	**+1.4**
RAHZ	**Arahi**	**1.08 143**		P	**Pn**	**17 34 42.9**	**+2.3**
SNGZ	**Shannon Statio**	**1.12 131**		P	**Pn**	**17 34 43.1**	**+2.2**
BKZ	**Black Stump Fm**	**1.13 170**		P	**Pn**	**17 34 42.5**	**+1.6**
BKZ	**Black Stump Fm**	**1.13 170**		P	**Pn**	**17 34 42.4**	**+1.5**
NMHZ	**Naumai**	**1.13 157**		P	**Pn**	**17 34 43.6**	**+2.6**
RUGZ	**Raukumara Rang**	**1.13 86**		P	**Pn**	**17 34 41.6**	**+0.5**
NTVZ	**North Tongarir**	**1.14 203**		P	**Pn**	**17 34 42.8**	**+1.7**
KRVZ	**Karewarewa**	**1.14 204**		P	**Pn**	**17 34 42.8**	**+1.7**
TMVZ	**Te Maari**	**1.14 202**		P	**Pn**	**17 34 42.8**	**+1.7**
ETVZ	**East Tongariro**	**1.16 201**		P	**Pn**	**17 34 43.1**	**+1.8**
WTVZ	**West Tongariro**	**1.18 206**		P	**Pn**	**17 34 43.1**	**+1.7**
NNVZ	**North Ngauruho**	**1.19 205**		P	**Pn**	**17 34 43.3**	**+1.8**
HIZ	**Hauiti**	**1.19 247**		P	**Pn**	**17 34 43.2**	**+1.9**
HIZ	**Hauiti**	**1.19 247**		P	**Pn**	**17 34 43.4**	**+2.1**
OTVZ	**Oturere**	**1.20 202**		P	**Pn**	**17 34 43.5**	**+1.9**
TWVZ	**Taurewa**	**1.20 212**		P	**Pn**	**17 34 43.2**	**+1.7**
SNVZ	**South Ngauruho**	**1.23 203**		P	**Pn**	**17 34 43.5**	**+1.7**
NGZ	**Ngauruhoe**	**1.23 204**		P	**Pn**	**17 34 43.6**	**+1.8**
HAZ	**Te Kaha**	**1.25 77**		P	**Pn**	**17 34 42.5**	**+0.7**
WHHZ	**Waihua**	**1.28 143**		P	**Pn**	**17 34 44.3**	**+2.4**
MKAZ	**Moumakai**	**1.28 317**		P	**Pn**	**17 34 43.8**	**+1.7**
TUVZ	**Tukino**	**1.30 201**		P	**Pn**	**17 34 44.3**	**+2.0**
TKGZ	**Te Karaka**	**1.32 108**		P	**Pn**	**17 34 44.4**	**+2.2**
FWVZ	**Far West T-bar**	**1.32 204**		P	**Pn**	**17 34 44.1**	**+1.5**
WHVZ	**Whangaehu Hut**	**1.33 203**		P	**Pn**	**17 34 44.2**	**+1.5**
ARHZ	**Aropaoanui**	**1.34 154**		P	**Pn**	**17 34 44.9**	**+2.5**
RIGZ	**Rimuhau**	**1.35 119**		P	**Pn**	**17 34 44.9**	**+2.3**
TRVZ	**Turoa**	**1.36 204**		P	**Pn**	**17 34 44.8**	**+1.9**
WNVZ	**Wahianoa**	**1.37 202**		P	**Pn**	**17 34 44.6**	**+1.8**
KUZ	**Kuaotunu**	**1.37 342**		P	**Pn**	**17 34 44.2**	**+1.4**
KWHZ	**Kaweka Forest**	**1.38 174**		P	**Pn**	**17 34 44.9**	**+2.1**
MOVZ	**Moawhango**	**1.41 196**		P	**Pn**	**17 34 44.5**	**+1.4**
MCHZ	**McNeill Hill**	**1.43 166**		P	**Pn**	**17 34 45.8**	**+2.6**
BHHZ	**Black Hill Sta**	**1.44 186**		P	**Pn**	**17 34 44.9**	**+1.6**
PKGZ	**Pakihiroa**	**1.45 84**		P	**Pn**	**17 34 45.2**	**+1.8**
KNZ	**Kokohu**	**1.48 131**		P	**Pn**	**17 34 45.8**	**+2.3**
ETAZ	**East Tamaki Re**	**1.52 316**		P	**Pn**	**17 34 46.2**	**+2.3**
PUZ	**Puketiti**	**1.58 91**		P	**Pn**	**17 34 46.1**	**+1.6**
VRZ	**Vera Road**	**1.58 227**		P	**Pn**	**17 34 46.7**	**+2.3**
KRHZ	**Kereru**	**1.59 177**		P	**Pn**	**17 34 46.6**	**+2.0**
CNGZ	**Carnagh Statio**	**1.60 106**		P	**Pn**	**17 34 47.4**	**+2.8**
MHGZ	**Mahia Peninsul**	**1.70 131**		P	**Pn**	**17 34 48.3**	**+2.8**
MXZ	**Matakaoa Point**	**1.70 74**		P	**Pn**	**17 34 47.5**	**+2.0**
WMGZ	**Waiomatatini S**	**1.73 83**		P	**Pn**	**17 34 47.7**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.73 158**		P	**Pn**	**17 34 48.4**	**+2.7**
KAHZ	**Kahuranaki**	**1.81 165**		P	**Pn**	**17 34 49.2**	**+2.6**
PNHZ	**Pukenui**	**1.86 181**		P	**Pn**	**17 34 48.9**	**+1.9**
WAZ	**Wanganui**	**1.96 210**		P	**Pn**	**17 34 50.1**	**+2.1**
WPHZ	**Waipukurau**	**2.01 176**		P	**Pn**	**17 34 50.6**	**+2.1**
LREZ	**Lake Rotokare**	**2.02 225**		P	**Pn**	**17 34 51.2**	**+2.7**
TSZ	**Takapari Road**	**2.02 186**		P	**Pn**	**17 34 50.4**	**+1.9**
PXZ	**Pawanui**	**2.03 167**		P	**Pn**	**17 34 50.9**	**+2.3**
NEZ	**North Egmont**	**2.08 234**		P	**Pn**	**17 34 52.3**	**+3.1**
PKE	**Pukeiti**	**2.11 237**		P	**Pn**	**17 34 52.2**	**+2.7**
PRHZ	**Porangahau**	**2.23 172**		P	**Pn**	**17 34 52.8**	**+2.1**
DVHZ	**Dannevirke**	**2.24 182**		P	**Pn**	**17 34 52.5**	**+1.7**
OHWZ	**Ohakea**	**2.27 198**		P	**Pn**	**17 34 53.4**	**+2.4**
POWZ	**Post Office Ro**	**2.37 189**		P	**Pn**	**17 34 53.7**	**+1.6**
ANWZ	**Angora Road**	**2.41 176**		P	**Pn**	**17 34 54.7**	**+2.2**
PRWZ	**Pori Road**	**2.51 185**		P	**Pn**	**17 34 55.5**	**+1.9**
BFZ	**Birch Farm**	**2.62 180**		P	**Pn**	**17 34 56.5**	**+1.6**
BFZ	**Birch Farm**	**2.62 180**		P	**Pn**	**17 34 56.6**	**+1.7**
MRZ	**Mangatainoka R**	**2.66 191**		P	**Pn**	**17 34 56.6**	**+1.4**
TIWZ	**Tintock**	**2.73 186**		P	**Pn**	**17 34 57.7**	**+1.5**
CPWZ	**Castlepoint**	**2.85 181**		P	**Pn**	**17 34 59.5**	**+2.1**
OGWZ	**Otaki Gorge**	**2.88 197**		P	**Pn**	**17 34 59.1**	**+1.4**
HOWZ	**Holdsworth Sta**	**2.90 191**		P	**Pn**	**17 34 59.0**	**+1.1**
KIW	**Kapiti Island**	**2.99 200**		P	**Pn**	**17 35 00.0**	**+1.0**
TMWZ	**Te Maipa**	**3.06 185**		P	**Pn**	**17 35 01.1**	**+1.2**
MTW	**Mount Morrison**	**3.15 190**		P	**Pn**	**17 35 01.7**	**+0.8**
CAW	**Cannon Point**	**3.18 196**		P	**Pn**	**17 35 02.2**	**+1.0**
DUWZ	**D'Urville Isla**	**3.28 213**		P	**Pn**	**17 35 03.3**	**+0.9**
TRWZ	**Traveller**	**3.37 187**		P	**Pn**	**17 35 04.4**	**+1.0**
PAWZ	**Paruwai Farm**	**3.38 191**		P	**Pn**	**17 35 04.4**	**+0.8**
WEL	**Wellington**	**3.42 199**		P	**Pn**	**17 35 05.0**	**+1.0**
MSWZ	**Moikau Station**	**3.45 193**		P	**Pn**	**17 35 04.9**	**+0.6**
SNZO	**South Karori**	**3.46 200**		P	**Pn**	**17 35 05.5**	**+1.0**
TCW	**Tory Channel**	**3.50 205**		P	**Pn**	**17 35 05.8**	**+0.8**
OUZ	**Omahuta**	**3.54 322**		P	Pn	17 35 08.6	+3.0
PLWZ	**Palliser**	**3.59 192**		P	**Pn**	**17 35 06.7**	**+0.6**
TUWZ	**Tuamarina**	**3.81 207**		P	**Pn**	**17 35 09.3**	**+0.6**
NNZ	**Nelson**	**3.86 214**		P	**Pn**	**17 35 09.7**	**+0.4**
TKNZ	**Takaka Hill**	**3.92 219**		P	**Pn**	**17 35 10.3**	**+0.3**
QRZ	**Quartz Range**	**4.00 225**		P	**Pn**	**17 35 13.9**	**+2.9**
CMWZ	**Cape Campbell**	**4.01 202**		P	**Pn**	**17 35 12.7**	**+1.6**
BSWZ	**Blackbirch Sta**	**4.09 206**		P	**Pn**	**17 35 12.9**	**+0.8**
MRNZ	**Matariki Terra**	**4.29 218**		P	**Pn**	**17 35 14.9**	**+0.3**
THZ	**Tophouse**	**4.51 214**		P	**Pn**	**17 35 17.7**	**+0.3**
KHZ	**Kahutara**	**4.83 205**		P	**Pn**	**17 35 21.9**	**+0.7**
KHZ	**Kahutara**	**4.83 205**		P	**Pn**	**17 35 22.4**	**+1.2**
DSZ	**Denniston Nort**	**5.03 221**		P	**Pn**	**17 35 25.1**	**+1.3**
GVZ	**Greta Valley S**	**5.49 206**		P	**Pn**	**17 35 30.0**	**+0.4**
LTZ	**Lake Taylor**	**5.61 211**		P	**Pn**	**17 35 31.6**	**+0.3**
INZ	**Inchbonnie**	**5.94 217**		P	**Pn**	**17 35 35.9**	**+0.6**
OKCZ	**Okains Bay**	**6.16 202**		P	**Pn**	**17 35 38.6**	**+0.4**
OXZ	**Oxford**	**6.16 210**		P	**Pn**	**17 35 38.0**	**-0.3**
MQZ	**McQueen's Vall**	**6.27 205**		P	**Pn**	**17 35 38.8**	**-0.8**
AKCZ	**Akaroa Harbour**	**6.34 202**		P	**Pn**	**17 35 40.8**	**+0.3**
RPZ	**Rata Peaks**	**6.89 213**		P	**Pn**	**17 35 48.5**	**+0.9**
RPZ	**Rata Peaks**	**6.89 213**		P	**Pn**	**17 35 48.9**	**+1.3**
ARCZ	**Arundel**	**7.03 211**		P	**Pn**	**17 35 49.6**	**+0.3**
TMZ	**Timaru**	**7.46 210**		P	**Pn**	**17 35 55.1**	**+0.2**
LBZ	**Lake Benmore**	**7.80 214**		P	**Pn**	**17 35 60.0**	**+0.6**
ODZ	**Otahua Downs**	**8.15 209**		P	**Pn**	**17 36 04.4**	**+0.6**
ODZ	**Otahua Downs**	**8.15 209**		P	**Pn**	**17 36 05.1**	**+1.3**

*NEIC **01** 17:42:49.6±2.1, 23°.6S±0°.2×173°.9E±0°.1, h10km±2km, mb4.5/8, Error ellipse: s-maj=27.5km s-min=15.5km az=165.0*
*IDC **01** 17:43:04.6±3.9, 21°.75S×173°.06E, h90km±36km, mb3.3/3, mbtmp3.8/5, MS3.3/5, Error ellipse: s-maj=97.7km s-min=20.9km az=162.0*
*NOU **01** 17:43:24.3, 22°.51S×171°.42E, h147km, MLv4.1/11, Southeast of Loyalty Islands*
ISC 01 17:42:49.0±1.5, 23°.7S±0°.2×173°.9E±0°.2, h10km, n34, σ1§31/29, mb4.4/7, MS3.3/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.85 291**		Pn	**Pn**	**17 44 14.4**	**-1.4**
MARNC	**Mare, Loyalty**	**5.85 291**		P	**Pn**	**17 44 15.2**	**-0.7**
PINNC	**Pines Island,**	**6.04 279**			**Pn**	**17 44 19.1**	**+0.7**
PINNC	**Pines Island,**	**6.04 279**		P	**Pn**	**17 44 19.4**	**+1.0**
OUENC	**Ouen Island, N**	**6.62 280**			**Pn**	**17 44 26.1**	**-0.4**
OUENC	**Ouen Island, N**	**6.62 280**		P	**Pn**	**17 44 26.7**	**+0.2**
YATNC	**Mamie plateau,**	**6.67 283**		P	**Pn**	**17 44 27.2**	**+0.1**
LIFNC	**LIFOU**	**6.81 294**		Pn	**Pn**	**17 44 27.2**	**-1.9**
LIFNC	**LIFOU**	**6.81 294**		P	**Pn**	**17 44 27.8**	**-1.3**
ONTNC	**Ouen Toro**	**7.00 280**		Pn	**Pn**	**17 44 32.0**	**+0.4**
ONTNC	**Ouen Toro**	**7.00 280**		P	**Pn**	**17 44 34.8**	**+3.2**
DZM	**Mont Dzumac**	**7.06 282**		P	**Pn**	**17 44 32.0**	**-0.6**
12nm,0.4s,baz=125,slow=12,SNR=55							
DZM				S	Sn	17 45 43.3	-10
3.4nm,0.3s,baz=272,slow=23,SNR=1.3							
DZM	**Mont Dzumac**	**7.06 282**			**Pn**	**17 44 32.0**	**-0.6**
DZM	**Mont Dzumac**	**7.06 282**		P	**Pn**	**17 44 32.4**	**-0.2**
MSVF	**Nonsavu**	**7.07 34**		P	**Pn**	**17 44 33.6**	**+0.9**
3.0nm,0.4s,baz=222,slow=22,SNR=11							
MSVF				LR	LR	17 46 40.5	
comp=Z,156nm,18.6s,baz=213,slow=35							
MSVF	**Nonsavu**	**7.07 34**		Pn	**Pn**	**17 44 31.5**	**-1.2**
NOUC	**Port Laguerre**	**7.18 281**		P	**Pn**	**17 44 34.6**	**+0.5**
RTV	**Rentapao**	**7.78 318**		P	**Pn**	**17 44 44.4**	**+2.0**
DVP	**Devils Point**	**7.98 317**		P	**Pn**	**17 44 45.2**	**+0.1**
KOUNC	**Koumac, New Ca**	**9.44 287**			**Pn**	**17 45 05.1**	**-0.1**
RPZ	**Rata Peaks**	**20.12 186**		LR	LR	17 54 59.6	
comp=Z,73nm,18.6s,baz=328,slow=32							
TOO	**Toolangi**	**27.97 234**		P	**P**	**17 48 38.1**	**-1.8**
STKA	**Stephens Creek**	**29.65 247**		P	P	17 49 02.5	+7.6
0.6nm,0.4s,baz=79,slow=9.1,SNR=4.3							
0.6nm,0.4s							
BBOO	**Buckleboo**	**34.41 246**		P	**P**	**17 49 37.4**	**+0.7**
ASAR	**Alice Springs**	**36.55 262**		P	**P**	**17 49 58.1**	**+2.9**
0.7nm,0.7s,baz=79,slow=9.4,SNR=9.7							
ASAR				LR	LR	18 04 26.8	
comp=Z,52nm,18.2s,baz=164,slow=36							
0.7nm,0.7s							
WB2	**Warramunga Arr**	**36.83 268**		P	**P**	**17 49 58.7**	**+1.0**
WB0	**Warramunga Arr**	**36.83 268**		P	**P**	**17 49 58.7**	**+1.0**
WB0				IAmb	IAmb	17 50 12.3	
comp=Z,9.5nm,1.4s							
WRA	**Warramunga Arr**	**36.84 268**		P	**P**	**17 49 58.5**	**+0.8**
comp=Z,0.3nm,0.5s,baz=96,slow=8.3,SNR=12							
comp=Z,0.3nm,0

comp=Z,1.2nm,0.9s
QSPA South Pole Qui 77.53 180 P **P 17 55 56.8 -0.3**
L19K White Mountain 80.18 17 P **P 17 56 10.7 -0.6**
SKT Skwentna 81.01 18 P **P 17 56 15.1 -0.5**
SKT IAmb IAmb 17 56 27.6
comp=Z,9.5nm,1.4s
PWL Port Wells 81.22 20 P **P 17 56 17.1 +0.3**
PWL IAmb IAmb 17 56 17.4
comp=Z,4.8nm,0.8s
KNK Knik Glacier 81.58 20 P **P 17 56 18.7 0.0**
KNK IAmb IAmb 17 56 26.7
comp=Z,7.6nm,1.2s
SML Sawmill 81.91 20 P **P 17 56 20.4 0.0**
SML IAmb IAmb 17 56 22.5
comp=Z,6.9nm,1.2s
CAST Castle Rocks 81.94 17 P **P 17 56 20.3 -0.2**
SCM Sheep Creek Mo 82.26 20 P **P 17 56 22.5 +0.3**
HMT Hamilton 82.30 22 P **P 17 56 21.9 -0.5**
HMT IAmb IAmb 17 56 23.4
comp=Z,5.2nm,0.9s
KLU Klutina 82.50 21 P **P 17 56 24.1 +0.6**
KLU IAmb IAmb 17 56 24.4
comp=Z,5.5nm,1.1s
TRF Thorofare Moun 82.50 18 P **P 17 56 23.0 -0.5**
TRF IAmb IAmb 17 57 03.5
comp=Z,9.4nm,1.4s
BERG Berg Lake 82.54 22 P **P 17 56 22.7 -0.9**
BERG IAmb IAmb 17 56 29.2
comp=Z,8.7nm,0.9s
BMRM Bremner River 82.60 22 P **P 17 56 24.5 +0.5**
BMRM IAmb IAmb 17 56 42.9
comp=Z,6.9nm,1.2s
M24K Tolsona, Glenn 82.84 20 P **P 17 56 26.6 +1.3**
M24K IAmb IAmb 17 56 30.8
comp=Z,13nm,1.2s
N25K Chitina, Valde 83.04 21 P **P 17 56 26.4 +0.2**
N25K IAmb IAmb 17 56 29.6
comp=Z,9.6nm,1.4s
TGL Tana Glacier 83.11 22 P **P 17 56 26.6 -0.1**
TGL IAmb IAmb 17 57 02.0
comp=Z,11nm,1.4s
DHY Denali Highway 83.13 19 P **P 17 56 25.9 -0.9**
DHY IAmb IAmb 17 56 57.5
comp=Z,6.8nm,1.5s
VRDI Verde Repeater 83.19 22 P **P 17 56 27.1 -0.1**
GLB Gilahina Butte 83.20 21 P **P 17 56 27.0 -0.1**
IMAR Indian Mountai 83.48 15 P **P 17 56 29.4 +1.0**
TABL Table Mountain 83.54 23 P **P 17 56 28.5 -0.5**
TABL IAmb IAmb 17 56 30.2
comp=Z,3.8nm,0.7s
BARN Barnard Glacie 83.74 22 P **P 17 56 30.1 +0.1**
BARN IAmb IAmb 17 56 31.0
comp=Z,11nm,1.5s
CTGM Chitina Glacie 83.80 23 P **P 17 56 30.4 +0.1**
LOGN Logan Glacier 83.84 23 P **P 17 56 30.6 +0.1**
LOGN IAmb IAmb 17 57 09.7
comp=Z,6.0nm,1.3s
MAW Mawson 83.85 202 P **P 17 56 30.4 +0.1**
CCB Clear Creek Bu 84.12 18 P **P 17 56 31.3 -0.3**
CCB IAmb IAmb 17 56 31.6
comp=Z,3.2nm,0.6s
HDA Harding Lake 84.21 18 P **P 17 56 32.2 +0.2**
MDM Murphy Dome 84.22 18 P **P 17 56 31.9 -0.3**
MDM IAmb IAmb 17 56 32.5
comp=Z,3.4nm,0.8s
IL31 84.49 18 P **P 17 56 33.2 -0.1**
IL31 IAmb IAmb 17 56 33.9
comp=Z,3.8nm,0.6s
ILAR Eielson Array 84.49 18 P **P 17 56 33.0 -0.4**
comp=Z,3.0nm,0.6s,baz=245,slow=4.9,SNR=20
comp=Z,3.0nm,0.6s
ILAR Eielson Array 84.49 18 P **P 17 56 32.7 -0.7**
M27K Edge Creek, AK 84.50 21 P **P 17 56 33.9 +0.1**
M27K IAmb IAmb 17 56 47.7
comp=Z,9.0nm,1.4s
DOT Dot Lake 84.60 20 P **P 17 56 34.4 +0.4**
DOT IAmb IAmb 17 56 35.6
comp=Z,9.2nm,1.3s
J25K Salcha River, 84.84 19 P **P 17 56 35.5 +0.1**
SCRK Sand Creek 84.85 20 P **P 17 56 35.7 +0.3**
L27K Beaver Creek, 84.97 21 P **P 17 56 36.5 +0.6**
MKAR Makanchi Array 95.39 317 P **P 17 57 25.6 +0.4**
comp=Z,0.9nm,0.6s,baz=90,slow=6.6,SNR=11
comp=Z,0.9nm,0.6s
ARCES ARCESS Array B 118.02 346 PKP **PKPdf 18 02 45.2 -0.6**
comp=Z,2.0nm,0.8s,baz=64,slow=2.8,SNR=7.2
KEST Kesra 149.28 323 PKPbc **PKPbc 18 03 49.1 +0.1**
comp=Z,2.5nm,0.7s,baz=265,slow=1.5,SNR=3.5
ESDC Sonseca Array 151.75 345 PKPbc **PKPbc 18 03 54.7 +0.1**
comp=Z,1.2nm,0.9s,baz=17,slow=2.8,SNR=9.8

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*JMA **01** 17:57:47.5±0.5,35°N±2°×14°2E±°, h36km±2km, MV2.6/33, FAR SE OFF BOSO PEN*
*IDC **01** 17:57:51.4±8.1,34°43N×135°69E, h0km, mb3.2/2, mbtmp3.1/3, ML1.9/1, Error ellipse: s-maj=322.2km s-min=25.3km az=122.0*
ISC 01 17:57:49.3±1.8,34°62N±0°08×141°5E±0°1, h27km±3km, n11, σ1°17/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.45**	**275**	*i* P	**Pn**	**17 57 58.7**	**-0.8**
BSO3	**Boso 3**	**0.86**	**283**	P	**Pb**	**17 58 04.9**	**-0.5**
BSO4	**Boso 4**	**1.05**	**291**	P	**Pb**	**17 58 07.7**	**-0.9**
BSO4				*e*S	**Sb**	**17 58 22.5**	**+0.6**
KTR	**Katsuura**	**1.13**	**298**	*e*P	**Pb**	**17 58 10.2**	**+0.1**
CHOJ	**Chosi**	**1.21**	**333**	P	**Pb**	**17 58 09.7**	**-1.9**
JKUC	**kamogawauchiur**	**1.22**	**297**	P	**Pb**	**17 58 11.1**	**-0.5**
JKUC				S	**Sb**	**17 58 27.4**	**+0.4**
JIM2	**Oshima 3**	**1.73**	**274**	P	**Pn**	**17 58 17.0**	**-0.5**
JMKN	**Mikurajimanish**	**1.76**	**246**	P	**Pb**	**17 58 18.9**	**-1.9**
MJAR	**Matsushiro Arr**	**3.32**	**306**	Pn	**Pn**	**17 58 39.0**	**-0.4**
	0.2nm,0.3s,baz=265,slow=9.8,SNR=18						
MJAR				Sn	**Sn**	**17 59 18.7**	**+0.7**
	0.2nm,0.3s,baz=170,slow=14,SNR=5.0						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**54.69**	**188**	P	P	18 07 18.1	+2.1
	0.1nm,0.3s,baz=1.4,slow=7.5,SNR=11						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**58.41**	**188**	P	**P**	**18 07 44.2**	**+1.7**
	0.1nm,0.4s,baz=358,slow=5.6,SNR=1.5						
	0.1nm,0.4s						

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*INET **01** 18:00:05.6±0.3, 13°00N×87°59W, h141km±3km, MW3.2*
*SNET **01** 18:00:05.9±1.0, 12°99N×87°76W, h131km±6km, ML3.1*
ISC 01 18:00:05.1±2.2,13°0N±0°1×87°70W±0°07, h138km±15km, n15, σ0°55/23, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.40**	**333**	*e*P	**Pn**	**18 00 24.2**	**-0.4**
LCND				*e*S	**Sn**	**18 00 38.8**	**-0.7**
LCND				IAML		18 00 46.1	
comp=Z,172nm,0.4s							
CRIN	**San Cristobal**	**0.69**	**112**	*e*P	**Pn**	**18 00 26.8**	**+0.4**
CRIN				*e*S	**Sn**	**18 00 43.3**	**+0.9**
PACA	**Pacayal**	**0.79**	**310**	*e*P	**Pn**	**18 00 27.3**	**+0.1**
PACA				*e*S	**Sn**	**18 00 44.3**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.17**	**21**	*e*P	**Pn**	**18 00 30.4**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.17**	**21**	*e*P	**Pn**	**18 00 30.7**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.24**	**307**	*e*P	**Pn**	**18 00 31.4**	**+0.3**
SCLA				*e*S	**Sn**	**18 00 52.1**	**+1.1**
MOMN	**Momotombo**	**1.26**	**115**	*e*P	**Pn**	**18 00 30.6**	**-0.7**
MOMN				*e*S	**Sn**	**18 00 51.2**	**0.0**
COPN	**Copaltepe**	**1.33**	**125**	*e*P	**Pn**	**18 00 32.2**	**+0.2**
SJTE	**Alcalda de S**	**1.43**	**297**	*e*P	**Pn**	**18 00 33.1**	**0.0**
SJTE				*e*S	**Sn**	**18 00 54.0**	**-0.5**
LFRS	**El Faro**	**1.48**	**297**	*e*P	**Pn**	**18 00 33.6**	**0.0**
LFRS				*e*S	**Sn**	**18 00 54.8**	**-0.7**
PMON	**Piamonte**	**1.74**	**296**	*e*P	**Pn**	**18 00 37.0**	**+0.4**
JAYA	**Jayaque - finc**	**1.83**	**292**	*e*P	**Pn**	**18 00 37.4**	**-0.4**
JAYA				*e*S	**Sn**	**18 01 01.9**	**-0.9**
JAYA				IAML		18 01 06.3	
comp=Z,269nm,0.2s							
BOAB	**BOACO BROADBAN**	**2.05**	**104**	*e*P	**Pn**	**18 00 40.0**	**-0.2**
MTO3	**Montecristo**	**2.16**	**312**	*e*P	**Pn**	**18 00 42.0**	**+0.3**
NUBE	**Las Nubes**	**2.23**	**295**	*e*P	**Pn**	**18 00 43.1**	**+0.6**

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*IDC **01** 18:04:47.8±1.6, 34°45N×25°83E, h0km, mb3.8/4, mbtmp3.6/6, ML2.9/2, Error ellipse: s-maj=47.4km s-min=24.3km az=132.0*
*ATH **01** 18:04:49.4, 34°03N×26°07E, h20km±31km, ML2.7/2, Error ellipse: s-maj=31.6km s-min=3.4km az=0.0*
*THE **01** 18:04:50.8, 34°14N×26°11E, h2km±1km, ML2.4/6, Error ellipse: s-maj=2.9km s-min=1.3km az=149.0*
*GII **01** 18:04:52.8±0.2, 34°32N×26°48E, h40km*
ISC 01 18:04:51.9±1.2,34°11N±0°07×26°29E±0°05, h41km±16km, n37, σ1°47/57, mb4.0/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.00**	**357**	P	**Pn**	**18 05 09.1**	**-0.3**
ZKR				S	**Sn**	**18 05 23.4**	**+1.0**
298nm,0.5s							
ZKR	**Zakros**	**1.00**	**357**	P	**Pn**	**18 05 09.2**	**-0.3**
ZKR				S	**Sn**	**18 05 23.1**	**+0.7**
ZKR				AML	AML	18 05 27.9	
comp=N,446μm,0.4s							
ZKR				AML	AML	18 05 33.2	
comp=E,659μm,0.6s							
FRMA	**Ierapetra Chan**	**1.01**	**333**	P	**Pn**	**18 05 08.2**	**-1.3**
FRMA				S	**Sn**	**18 05 22.0**	**-0.6**
comp=E,170nm,0.5s							
FRMA	**Ierapetra Chan**	**1.01**	**333**	P	**Pn**	**18 05 08.3**	**-1.3**
STIA	**Sitia Lasithi**	**1.10**	**351**	P	**Pn**	**18 05 10.8**	**0.0**
STIA				S	**Sn**	**18 05 27.1**	**+2.3**
STIA	**Sitia Lasithi**	**1.10**	**351**	P	**Pn**	**18 05 10.9**	**0.0**
STIA				S	**Sn**	**18 05 26.1**	**+1.3**
STIA				AML	AML	18 05 30.5	
comp=N,815μm,0.8s							
STIA				AML	AML	18 05 31.3	
comp=E,620μm,0.6s							
SIVA	**Sivas**	**1.52**	**307**	P	**Pn**	**18 05 15.7**	**-0.9**
SIVA				S	**Sn**	**18 05 35.2**	**+0.1**
SIVA	**Sivas**	**1.52**	**307**	P	**Pn**	**18 05 15.1**	**-1.5**
KSTL	**Kastelli Herak**	**1.56**	**320**	P	**Pn**	**18 05 16.0**	**-1.1**
KARP	**Karpathos**	**1.60**	**26**	P	**Pn**	**18 05 20.1**	**+2.4**
KARP				S	**Sn**	**18 05 41.1**	**+3.9**
comp=E,92nm,0.6s							
KARP	**Karpathos**	**1.60**	**26**	P	**Pn**	**18 05 20.1**	**+2.4**
IDI	**Anoyia**	**1.65**	**316**	P	**Pn**	**18 05 17.1**	**-1.3**
IDI				S	**Sn**	**18 05 38.1**	**-0.2**
comp=E,68nm,0.6s							
IDI	**Anoyia**	**1.65**	**316**	P	**Pn**	**18 05 16.9**	**-1.4**
GVD	**Gavdhos**	**1.96**	**292**	P	**Pn**	**18 05 21.4**	**-1.2**
GVD				S	**Sn**	**18 05 45.3**	**-0.7**
comp=E,122nm,0.5s							
IMMV	**Iera Moni Meta**	**2.33**	**306**	P	**Pn**	**18 05 26.6**	**-1.1**
IMMV				S	**Sn**	**18 05 54.9**	**-0.2**
comp=E,75nm,0.9s							
APE	**Apeiranthos**	**3.01**	**348**	Pn	**Pn**	**18 05 35.1**	**-2.0**
APE				Sn	**Sn**	**18 06 09.8**	**-2.2**
CSS	**Mathiatis**	**5.87**	**80**	Pn	**Pn**	**18 06 15.4**	**-1.0**
CSS				Sn	**Sn**	**18 07 19.3**	**-3.1**
KZIT	**Kziot**	**7.56**	**113**	Sn	**Sn**	**18 08 04.0**	**+0.1**
SALP	**Salfit**	**7.74**	**103**	Pn	**Pn**	**18 06 42.5**	**+0.4**
SALP				Sn	**Sn**	**18 08 08.1**	**-0.4**
MMLI	**Mount Malkishu**	**7.83**	**100**	Sn	**Sn**	**18 08 09.4**	**-1.2**
NATI	**Neve Ativ**	**7.92**	**94**	Pn	**Pn**	**18 06 44.2**	**-0.2**
NATI				Sn	**Sn**	**18 08 11.5**	**-1.2**
YTIR	**Yattir**	**7.92**	**108**	Pn	**Pn**	**18 06 45.7**	**+1.1**
YTIR				Sn	**Sn**	**18 08 13.2**	**+0.2**
HMDT	**Nahal Hemdat**	**7.96**	**101**	Pn	**Pn**	**18 06 45.3**	**+0.3**
HMDT				Sn	**Sn**	**18 08 13.6**	**-0.2**
DSI	**Dead Sea**	**8.06**	**106**	Pn	**Pn**	**18 06 46.8**	**+0.4**
DSI				Sn	**Sn**	**18 08 15.9**	**-0.3**
BRTR	**Keskin Array B**	**8.12**	**44**	Pn	**Pn**	**18 06 50.3**	**+2.9**
baz=242,slow=11,SNR=1.6							
comp=E,0.5nm,0.9s							
KRMI	**Paran Flat**	**8.19**	**117**	Pn	**Pn**	**18 06 49.5**	**+1.3**
KRMI				Sn	**Sn**	**18 08 19.4**	**0.0**
PRNI	**Paran**	**8.28**	**115**	Sn	**Sn**	**18 08 21.9**	**+0.2**
ZFRI	**Zfri**	**8.31**	**113**	Sn	**Sn**	**18 08 21.5**	**-1.0**
HRFI	**Mount Harif**	**8.46**	**116**	Pn	**Pn**	**18 06 53.4**	**+1.5**
HRFI				Sn	**Sn**	**18 08 26.6**	**+0.5**
MBRI	**Mt Berech**	**8.50**	**118**	Pn	**Pn**	**18 06 53.5**	**+1.0**
MBRI				Sn	**Sn**	**18 08 28.0**	**+0.9**
EIL	**Elat**	**8.59**	**119**	Sn	**Sn**	**18 08 30.4**	**+1.1**
EIL				Sn	Sn	18 08 30.5	+1.2
AKASG	**Malin Array Be**	**16.72**	**6**	Pn	**Pn**	**18 08 40.5**	**-2.4**
comp=E,0.4nm,0.3s,baz=191,slow=11,SNR=2.6							
comp=E,0.3nm,0.5s							
FINES	**FINESS Array B**	**27.35**	**360**	P	**P**	**18 10 30.8**	**-1.9**
comp=E,4.0nm,1.0s,baz=171,slow=9.7,SNR=4.3							
comp=E,4.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**30.57**	**233**	P	**P**	**18 11 02.6**	**+0.9**
comp=E,13nm,0.6s,baz=43,slow=8.7,SNR=5.1							
ARCES	**ARCESS Array B**	**35.48**	**360**	P	**P**	**18 11 42.1**	**-1.9**
comp=E,1.9nm,0.7s,baz=172,slow=9.4,SNR=4.2							
comp=E,1.9nm,0.7s							
MKAR	**Makanchi Array**	**43.58**	**56**	P	**P**	**18 12 54.6**	**+2.7**
comp=E,0.3nm,0.5s,baz=269,slow=8.3,SNR=4.3							
comp=E,0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**45.06**	**45**	P	**P**	**18 13 04.8**	**+1.3**
comp=E,0.4nm,0.5s,baz=293,slow=12,SNR=2.0							
comp=E,0.4nm,0.5s							

MAN 01 18:05:20.3,12°32N×123°82E, h3km, mb4.2, ML3.0, MS2.6, 1C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.19**	**281**	||*i*P	Pg	18 05 24.1	+0.1
MMPH				*i* S	Sg	18 05 26.2	-0.3
CNP	**Catarman**	**0.85**	**77**	||*e*P	Pb	18 05 37.6	-0.1
CNP				*e*S	Sn	18 05 51.2	-0.9
PVCP	**Virac**	**1.31**	**15**	||*e*P	Pg	18 05 44.2	-1.3
PVCP				*e*S	Sn	18 06 04.5	+0.9
GUIM	**Jordan**	**2.07**	**216**	||*e*P	Pn	18 05 56.6	+0.6
GUIM				*e*S	Sn	18 06 23.0	+0.8
TABP	**Talibon, Bohol**	**2.27**	**167**	||*i*P	Pn	18 05 57.4	-1.3
TABP				*i* S	Sn	18 06 26.3	-1.0
BUKP	**Musuan**	**4.58**	**164**	||*i*P	Pg	18 06 49.1	+0.9
GSPH	**General Santos**	**6.29**	**170**	*e*P	Pn	18 07 01.0	+6.8

MAN 01 18:06:46.4,6°44N×126°49E, h45km, mb4.1, ML2.9, MS2.5, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.55**	**335**	||*e*P	Pn	18 06 59.6	+1.5
MATI				*e*S	Sn	18 07 09.8	+3.4
DDMP	**Don Marcelino,**	**0.84**	**247**	||*e*P	Pn	18 07 02.9	+1.0
DDMP				*e*S	Sn	18 07 14.8	+1.6
KCP	**Kidapawan**	**1.50**	**292**	||*e*P	Pn	18 07 11.8	+0.8
KCP				*i* S	Sn	18 07 30.6	+1.2
BIPH	**Bislig**	**1.74**	**356**	||*i*P	Pn	18 07 16.0	+1.9
BIPH				*i* S	Sn	18 07 36.9	+1.8
CGP	**Cagayan de Oro**	**2.68**	**318**	||*e*P	Pn	18 07 30.8	+3.7
CGP				*e*S	Sn	18 08 01.9	+3.6

IDC 01 18:14:15.4±5.3,12°66S×166°04E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=259.6km s-min=37.4km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.23**	**252**	P	P	18 20 36.8	-0.3
1.4nm,1.1s,baz=84,slow=9.0,SNR=7.1							
1.4nm,1.1s							
ASAR	**Alice Springs**	**32.36**	**246**	P	P	18 20 47.2	+0.3
0.3nm,0.8s,baz=74,slow=8.8,SNR=4.7							
0.3nm,0.8s							
ILAR	**Eielson Array**	**84.95**	**18**	P	P	18 26 52.1	0.0
0.4nm,0.6s,baz=237,slow=5.0,SNR=2.7							
0.4nm,0.6s							

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*NEIC **01** 18:14:51.0±1.6, 46°65N±0°09×152°8E±0°2, h35km±2km, mb4.4/3, Error ellipse: s-maj=28.4km s-min=6.7km az=117.0*
*JMA **01** 18:14:52.0±0.9, 47°N±6°×15°3E±°, h30km, MV4.0/12, KURILE ISLANDS REGION*
*SKHL **01** 18:14:52.5±0.5, 46°80N×153°10E, h62km±4km, mb4.7/3*
*MOS **01** 18:14:52.7±1.3, 46°81N×152°86E, h62km, mb4.3/1, Error ellipse: s-maj=15.1km s-min=8.0km az=62.6*
*IDC **01** 18:15:00.2±3.1, 46°94N×152°88E, h108km±27km, mb3.4/13, mbtmp3.8/16, MS3.1/12, Error ellipse: s-maj=21.7km s-min=14.6km az=133.0*

ISC 01 18:14:53.8±0.6,46°80N±0°07×152°95E±0°07, h56km, n79, σ2°08/72, mb3.7/14, MS3.2/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.87**	**248**	*e*PN	**Pn**	**18 15 52.1**	**+1.3**
KUR				*e*S	**Sn**	**18 16 37.3**	**+2.3**
KUR				pmax	pmax		
comp=Z,50nm,0.8s							
KUR				smax	smax		
comp=N,157nm,0.5s							
KUR				smax	smax		
comp=E,82nm,0.6s							
KUR	**Kuril'sk**	**3.87**	**248**	*e*P	**Pn**	**18 15 50.5**	**-0.3**
KUR				AMB	AMB	18 15 54.1	
comp=E,50nm,0.4s							
KUR				*e*S	**Sn**	**18 16 34.0**	**-1.0**
KUR				A	A	18 16 55.9	
comp=E,210nm,0.6s							
KUR				A	A	18 16 55.9	
comp=E,190nm,0.6s							
SKR	**Severo-Kuril's**	**4.41**	**27**	*e*PN	**Pn**	**18 16 01.1**	**+3.0**
SKR				*e*S	**Sn**	**18 16 45.4**	**-2.8**
SKR				smax	smax		
comp=E,116nm,0.6s							
SKR				smax	smax		
comp=N,81nm,0.6s							
SKR	**Severo-Kuril's**	**4.41**	**27**	*e*P	**Pn**	**18 15 56.8**	**-1.3**
SKR				AMB	AMB	18 16 03.5	
comp=N,70nm,0.6s							
SKR				*e*S	**Sn**	**18 16 44.6**	**-3.6**
SKR				A	A	18 16 48.2	
comp=N,60nm,0.3s							
SKR				A	A	18 16 48.2	
comp=N,130nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.71**	**244**	*e*PN	**Pn**	**18 16 16.1**	**+0.2**
YUK				*e*S	**Sn**	**18 17 24.9**	**+4.9**
YUK				pmax	pmax		
comp=Z,53nm,0.3s							
YUK				smax	smax		
comp=E,249nm,0.7s							
YUK				smax	smax		
comp=N,42nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.71**	**244**	*e*P	**Pn**	**18 16 16.9**	**+1.0**
YUK				AMB	AMB	18 16 20.0	
comp=N,110nm,0.5s							
YUK				*e*S	**Sn**	**18 17 20.2**	**+0.2**
YUK				A	A	18 17 43.0	
comp=N,240nm,0.7s							
YUK				A	A	18 17 43.0	
comp=N,130nm,0.7s							
RUSJ	**Misakicho**	**6.05**	**246**	PN	**Pn**	**18 16 21.6**	**+1.0**
RUSJ				S	**Sn**	**18 17 36.0**	**+7.5**
NEM2	**Nemuro 2**	**6.15**	**239**	*e*P	**Pn**	**18 16 21.1**	**-0.9**
NEM2				*e*S	**Sn**	**18 17 27.1**	**-3.8**
NMR	**Nemuro--Hokkai**	**6.16**	**239**	*e*PN	**Pn**	**18 16 20.9**	**-1.1**
NMR				*e*S	**Sn**	**18 17 32.9**	**+1.9**
NMR	**Nemuro--Hokkai**	**6.16**	**239**	*e*P	**Pn**	**18 16 21.3**	**-0.7**
NMR				*e*S	**Sn**	**18 17 28.4**	**-2.6**
JRA	**Rausu**	**6.21**	**245**	*e*P	**Pn**	**18 16 24.8**	**+2.0**
JNK	**Nakash**	**6.64**	**244**	*e*P	**Pn**	**18 16 30.0**	**+1.2**
JNK				*e*S	**Sn**	**18 17 42.9**	**-0.1**
AKK	**Akkeshi**	**6.89**	**240**	*e*P	**Pn**	**18 16 32.8**	**+0.7**
JTKR	**Abashiri--Toko**	**6.97**	**249**	*e*P	**Pn**	**18 16 35.4**	**+2.3**
JAK	**Akkeshi**	**6.99**	**240**	*e*P	**Pn**	**18 16 32.6**	**-0.8**
JAK				*e*S	**Sn**	**18 17 47.0**	**-4.4**
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	Pn	**Pn**	**18 16 29.9**	**-3.5**
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*PN	**Pn**	**18 16 34.5**	**+1.0**
YSS				*e*S	**Sn**	**18 17 51.7**	**+0.2**
YSS				pmax	pmax		
comp=Z,10.0nm,0.8s							
YSS				smax	smax		
comp=N,10.0nm,0.8s							
YSS				MLR	MLR		
comp=Z,300nm,16.0s							
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*P	**Pn**	**18 16 34.7**	**+1.2**
YSS				AMB	AMB	18 16 36.6	
comp=Z,10.0nm,0.6s							
YSS				*e*S	**Sn**	**18 17 51.7**	**+0.2**
YSS				A	A	18 18 03.1	
comp=Z,30nm,0.8s							
YSS				A	A	18 18 03.1	
comp=Z,20nm,0.8s							
PEA0B	**Petropavlovsk-**	**7.02**	**24**	Pn	**Pn**	**18 16 34.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**7.02**	**24**	PN	**Pn**	**18 16 34.1**	**+0.3**
PETK	**Petropavlovsk-**	**7.02**	**24**	P	Pn	18 16 39.0	+5.2
comp=Z,9.4nm,0.9s,baz=207,slow=6.0,SNR=10							
PETK				LR	LR	18 19 20.1	
comp=Z,49nm,18.4s,baz=177,slow=38							
PETK	**Petropavlovsk-**	**7.02**	**24**	Pn	**Pn**	**18 16 35.0**	**+1.2**
PETK	**Petropavlovsk-**	**7.02**	**24**	PN	**Pn**	**18 16 35.0**	**+1.2**
PET	**Petropavlovsk**	**7.23**	**28**	Pn	**Pn**	**18 16 38.1**	**+1.4**
JAR	**Ashorobuto**	**7.38**	**245**	*e*P	**Pn**	**18 16 40.2**	**+1.4**
JAR				*e*S	**Sn**	**18 18 02.3**	**+1.1**
JKK2	**Kamakawa 2**	**7.76**	**252**	*e*P	**Pn**	**18 16 46.8**	**+2.8**
JCH	**Churui**	**8.01**	**242**	*e*S	**Sn**	**18 18 12.1**	**-4.4**
ERM	**Erimo**	**8.48**	**239**	Pn	**Pn**	**18 16 53.8**	**-0.1**
ERM	**Erimo**	**8.48**	**239**	PN	**Pn**	**18 16 53.8**	**-0.1**
JNBK	**Urakawa-nobuka**	**8.57**	**242**	*e*P	**Pn**	**18 16 53.9**	**-1.2**
JTM	**Tenmabayashi**	**10.48**	**239**	Pn	Pn	18 17 16.1	-5.0
JANG	**Nango**	**10.49**	**236**	*e*S	Sn	18 19 03.8	-13
MA2	**Magadan**	**12.86**	**355**	LR	LR	18 22 58.8	
comp=Z,35nm,19.2s,baz=101,slow=38							
MA2	**Magadan**	**12.86**	**355**	Pn	**Pn**	**18 17 52.3**	**-1.3**
MA2	**Magadan**	**12.86**	**355**	PN	**Pn**	**18 17 52.3**	**-1.3**
MA2	**Magadan**	**12.86**	**355**	*e*P	**Pn**	**18 17 52.3**	**-1.3**
KLR	**Kul'dur**	**14.39**	**287**	LR	LR	18 23 48.6	
comp=Z,69nm,20.0s,baz=88,slow=37							
USRK	**Ussuriysk Ar.**	**14.92**	**268**	Pn	Pn	18 18 14.1	-7.1
USRK	**Ussuriysk Ar.**	**14.92**	**268**	P	Pn	18 18 14.1	-7.1
MAJO	**Matsushiro**	**15.02**	**232**	Pn	**Pn**	**18 18 19.3**	**-3.3**
MAJO	**Matsushiro**	**15.02**	**232**	P	**Pn**	**18 18 19.3**	**-3.3**
MJAR	**Matsushiro Arr**	**15.02**	**232**	P	**P**	**18 18 28.3**	**+1.4**
comp=Z,1.9nm,0.9s,baz=35,slow=8.9,SNR=8.3							
SEY	**Seymchan**	**16.17**	**359**	P	**P**	**18 18 39.4**	**0.0**
comp=Z,0.6nm,0.5s,baz=196,slow=14,SNR=5.1							
JHJ2	**Mitsune**	**16.95**	**221**	Pn	**Pn**	**18 18 42.1**	**-4.8**
JHJ2				IAmb	IAmb	18 18 51.9	
comp=Z,39nm,0.8s							
YAK	**Yakutsk**	**20.22**	**327**	LR	LR	18 26 47.0	
comp=Z,52nm,19.2s,baz=90,slow=35							
KSRS	**Korea Array**	**20.71**	**252**	P	Pn	18 19 31.3	-0.8
comp=Z,1.2nm,0.9s,baz=56,slow=11,SNR=5.9							
KSRS				LR	LR	18 26 13.5	
comp=Z,20nm,21.0s,baz=55,slow=32							
comp=Z,1.2nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**29.32**	**152**	T	T	18 52 13.5	
baz=340,slow=

comp=Z,1.1nm,0.8s,baz=35,slow=7.7,SNR=8.5
comp=Z,1.1nm,0.8s
AKTO Aktyubinsk 58.61 312 LR LR 18 51 32.4
comp=Z,41nm,18.5s,baz=25,slow=38
FINES FINESS Array B 63.95 335 P **P 18 25 20.0 -0.5**
comp=Z,1.9nm,0.6s,baz=48,slow=7.4,SNR=12
comp=Z,1.9nm,0.6s
PDAR Pinedale Array 64.81 54 P **P 18 25 27.8 +1.0**
comp=Z,0.6nm,0.6s,baz=300,slow=2.9,SNR=6.5
comp=Z,0.6nm,0.6s
NB2 NORSAR Subarra 68.14 341 P **P 18 25 47.0 -0.5**
comp=Z,1.3nm,0.6s,baz=27,slow=6.5
NOA NORSAR Array B 68.14 341 P **P 18 25 47.3 -0.2**
comp=Z,2.1nm,0.7s,baz=27,slow=6.3,SNR=10.0
NOA LR LR 18 58 35.4
comp=Z,14nm,18.8s,baz=295,slow=38
comp=Z,2.1nm,0.7s
WRA Warramunga Arr 68.53 199 P **P 18 25 50.3 0.0**
comp=Z,0.3nm,0.8s,baz=12,slow=6.3,SNR=2.3
comp=Z,0.3nm,0.8s
AKASG Malin Array Be 71.44 326 P **P 18 26 07.3 -0.6**
comp=Z,1.9nm,0.5s,baz=34,slow=6.1,SNR=8.5
comp=Z,1.9nm,0.5s
ASAR Alice Springs 72.22 198 P **P 18 26 14.1 +1.3**
comp=Z,0.4nm,0.8s,baz=5.8,slow=5.3,SNR=6.7
comp=Z,0.4nm,0.8s
CLL Collm 76.37 335 *e*P **P 18 26 36.0 -0.7**
TXAR Lajitas Array 77.56 60 P **P 18 26 44.7 +0.8**
comp=Z,0.5nm,0.7s,baz=294,slow=4.5,SNR=7.4
comp=Z,0.5nm,0.7s
BRTR Keskin Array B 78.28 317 P **P 18 26 48.4 +0.6**
comp=Z,0.6nm,0.8s,baz=57,slow=4.6,SNR=3.6
comp=Z,0.6nm,0.8s
GERES GERESS Array B 78.36 334 P **P 18 26 46.9 -1.1**
comp=Z,0.5nm,0.7s,baz=27,slow=9.0,SNR=4.1
comp=Z,0.5nm,0.7s
H03N2 Juan Fernandez 138.86 90 T T 21 09 30.5
baz=308,slow=77,SNR=8.4
H03N1 Juan Fernandez 138.88 90 T T 21 09 26.3
baz=308,slow=77,SNR=8.9
H03N3 Juan Fernandez 138.88 90 T T 21 09 14.6
baz=308,slow=77,SNR=7.9

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*IDC **01** 18:16:27.5±2.5, 3°.39N×126°.49E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=217.4km s-min=29.7km az=66.0*
*DJA **01** 18:16:30.6±1.5, 4°N±15°×12°7E±°, h59km±18km, M3.3/5, mb3.3/1, MLv3.3/5*
ISC 01 18:16:33.9±1.7, 3°.5N±0°.2×126°.7E±0°.2, h53km, n4, σ1§37/5, mb3.1/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.22**	**277**	P	**Pn**	**18 16 53.5**	**-1.1**
SGSI				S	**Sn**	**18 17 11.2**	**+1.1**
WRA	**Warramunga Arr**	**24.50**	**163**	P	**P**	**18 21 47.5**	**-0.8**
	0.5nm,0.8s,baz=341,slow=10,SNR=7.0						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**27.92**	**166**	P	**P**	**18 22 20.0**	**+0.7**
	0.2nm,0.7s,baz=345,slow=11,SNR=1.5						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**57.72**	**325**	P	**P**	**18 26 19.7**	**+0.4**
	0.2nm,0.6s,baz=113,slow=6.9,SNR=2.4						
	0.2nm,0.6s						

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*IDC **01** 18:30:06.0±1.9, 21°.56N×142°.96E, h278km±19km, mb3.3/6, mbtmp4.2/9, Error ellipse: s-maj=33.2km s-min=13.0km az=83.0*
ISC 01 18:30:07.3±1.0, 21°.7N±0°.1×143°.3E±0°.3, h300km, n12, σ0§95/14, mb3.8/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.47**	**350**	P	**Pn**	**18 31 30.2**	**-0.1**
	28nm,0.3s,baz=46,slow=23,SNR=16						
JCJ				S	**S**	**18 32 35.8**	**-1.3**
	58nm,0.4s,baz=269,slow=22,SNR=6.8						
JHJ	**Hachijo jima 2**	**11.80**	**346**	P	**Pn**	**18 32 47.4**	**+0.1**
	17nm,0.3s,baz=267,slow=23,SNR=14						
MJAR	**Matsushiro Arr**	**15.44**	**345**	P	**Pn**	**18 33 29.6**	**-1.2**
	1.3nm,0.3s,baz=154,slow=11,SNR=19						
KSRS	**Korea Array**	**20.57**	**323**	P	**P**	**18 34 23.4**	**-0.5**
	0.8nm,0.5s,baz=145,slow=9.0,SNR=8.8						
	0.8nm,0.5s						
KLR	**Kul'dur**	**28.97**	**344**	P	**P**	**18 35 40.4**	**+0.9**
	4.9nm,0.5s,baz=166,slow=7.0,SNR=16						
	4.9nm,0.5s						
WRA	**Warramunga Arr**	**42.28**	**193**	P	**P**	**18 37 31.4**	**-0.8**
	3.9nm,0.6s,baz=14,slow=8.4,SNR=82						
	3.9nm,0.6s						
ASAR	**Alice Springs**	**45.99**	**192**	P	**P**	**18 38 00.2**	**-1.2**
	1.1nm,0.7s,baz=18,slow=12,SNR=30						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**54.27**	**322**	PcP	**PcP**	**18 40 02.6**	**-0.1**
	0.9nm,0.4s,baz=116,slow=3.5,SNR=5.2						
MKAR	**Makanchi Array**	**54.76**	**313**	P	**P**	**18 39 08.1**	**+1.7**
	0.2nm,0.5s,baz=99,slow=9.8,SNR=2.5						
MKAR				PcP	**PcP**	**18 40 04.7**	**-0.2**
	0.2nm,0.4s,baz=72,slow=5.8,SNR=4.5						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**83.22**	**335**	P	**P**	**18 42 00.0**	**-0.1**
	0.7nm,0.4s,baz=79,slow=4.1,SNR=7.8						
	0.7nm,0.4s						
PLCA	**Paso Flores**	**145.69**	**131**	PKPbc	**PKPab**	**18 49 12.5**	**+0.3**
	3.2nm,0.6s,baz=249,slow=3.3,SNR=20						
LPAZ	**La Paz**	**149.86**	**85**	PKPbc	**PKiKP**	**18 49 25.3**	**+0.9**
	1.6nm,0.5s,baz=316,slow=1.8,SNR=7.5						

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*JMA **01** 18:31:50.2±0.2, 24°N±1°×122°.1E±0°.8, h41km±4km, MV2.2/11, TAIWAN REGION*
*TAP **01** 18:31:50.8, 23°.78N×122°.15E, h27km±1km, ML2.8, C*
ISC 01 18:31:50.3±1.0, 23°.75N±0°.02×122°.12E±0°.02, h33km±9km, n64, σ0§52/113, 3C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.49**	**284**	P	**Pb**	**18 32 01.1**	**+0.4**
	baz=284						
TEYL				*e*S	**Sn**	**18 32 09.2**	**+0.8**
	baz=284						
HWA	**Hwalien**	**0.52**	**296**	*i* P	**Pb**	**18 32 01.2**	**0.0**
	baz=292						
TEGC	**Jichi Village**	**0.53**	**266**	⇑*i* P	**Pn**	**18 32 01.7**	**+0.2**
	baz=263						
TEGC				*e*S	**Sn**	**18 32 10.2**	**+0.9**
	baz=263						
TWD	**Chiawan**	**0.58**	**305**	*i* P	**Pn**	**18 32 01.8**	**-0.4**
	baz=301						
TWD				*i* S	**Sb**	**18 32 10.1**	**-0.2**
	baz=301						
ETL	**Fush Village**	**0.61**	**312**	P	**Pn**	**18 32 02.3**	**-0.4**
	baz=308						
ETL				*e*S	**Sb**	**18 32 11.1**	**0.0**
	baz=308						
ETM	**Tongmen**	**0.61**	**291**	*i* P	**Pn**	**18 32 02.2**	**-0.5**
	baz=287						
ETM				*e*S	**Sb**	**18 32 11.1**	**0.0**
	baz=287						
ESL	**Shilin**	**0.63**	**276**	⇓*i* P	**Pn**	**18 32 02.4**	**-0.5**
	baz=273						
ESL				*e*S	**Sn**	**18 32 11.2**	**-0.7**
	baz=273						
EGFH	**Guangfu**	**0.64**	**263**	P	**Pn**	**18 32 02.8**	**-0.2**
	baz=261						
EGFH				*e*S	**Sb**	**18 32 12.5**	**+0.7**
	baz=261						
NACB	**Ninganchiao**	**0.64**	**312**	P	**Pn**	**18 32 02.6**	**-0.5**
	baz=308						
NACB				S	**Sn**	**18 32 11.3**	**-0.8**
	baz=308						
HGSD	**Ruisui**	**0.68**	**248**	P	**Pn**	**18 32 03.5**	**-0.2**
	baz=247						
HGSD				*e*S	**Sn**	**18 32 13.1**	**-0.1**
	baz=247						
ECBN	**Changbin**	**0.75**	**235**	*e*P	**Pn**	**18 32 03.9**	**-0.7**
	baz=234						
ECBN				*e*S	**Sn**	**18 32 14.0**	**-0.8**
	baz=234						
EHY	**Hungye**	**0.77**	**252**	P	**Pn**	**18 32 05.1**	**+0.2**
	baz=250						
EHY				*e*S	**Sb**	**18 32 15.9**	**+0.5**
	baz=250						
YULB	**Yu-li**	**0.83**	**245**	P	**Pn**	**18 32 06.2**	**+0.5**
	baz=244						
YULB				*e*S	**Sb**	**18 32 17.7**	**+0.5**
	baz=244						
EYUL	**Yuli**	**0.83**	**241**	P	**Pn**	**18 32 06.3**	**+0.5**
	baz=241						
EYUL				*e*S	**Sb**	**18 32 17.8**	**+0.5**
	baz=241						
TWF1	**Yuli**	**0.85**	**242**	P	**Pn**	**18 32 06.4**	**+0.4**
	baz=241						
TWF1				*e*S	**Sb**	**18 32 18.1**	**+0.4**
	baz=241						
WHF	**Hehuan Shan**	**0.87**	**297**	*e*P	**Pn**	**18 32 06.8**	**+0.1**
	baz=294						
WHF				*e*S	**Sn**	**18 32 18.7**	**+0.2**
	baz=294						
OWD	**Renai**	**0.88**	**284**	P	**Pn**	**18 32 06.7**	**+0.1**
	baz=281						
OWD				*e*S	**Sb**	**18 32 19.1**	**+0.2**
	baz=281						
TWC	**Suao**	**0.89**	**344**	*e*P	**Pb**	**18 32 07.0**	**-0.3**
	baz=342						
TWC				*e*S	**Sb**	**18 32 18.7**	**-0.2**
	baz=342						
VWDT	**VWDT**	**0.89**	**270**	⇓P	**Pb**	**18 32 07.3**	**-0.1**
	baz=269						
VWDT				*e*S	**Sb**	**18 32 19.3**	**+0.3**
	baz=269						
CHGB	**Renai**	**0.92**	**290**	*e*P	**Pn**	**18 32 07.4**	**+0.3**
	baz=287						
CHGB				*e*S	**Sb**	**18 32 20.6**	**+0.8**
	baz=287						
FULB	**Fuli**	**0.93**	**234**	P	**Pn**	**18 32 07.3**	**+0.1**
	baz=234						
FULB				*e*S	**Sn**	**18 32 19.5**	**+0.1**
	baz=234						
FUSS	**Fushou**	**0.94**	**302**	⇓*i* P	**Pn**	**18 32 07.9**	**+0.5**
	baz=299						
FUSS				*e*S	**Sn**	**18 32 20.1**	**+0.2**
	baz=299						
CHKT	**Chengkung**	**0.94**	**227**	*e*P	**Pn**	**18 32 06.6**	**-0.7**
	baz=226						
CHKT				*e*S	**Sn**	**18 32 18.4**	**-1.3**
	baz=226						
WUSB	**Renai**	**0.94**	**285**	⇓*i* P	**Pn**	**18 32 07.9**	**+0.5**
	baz=283						
WUSB				*e*S	**Sb**	**18 32 20.9**	**+0.4**
	baz=283						
LATG	**Datong**	**0.95**	**326**	*i* P	**Pn**	**18 32 08.0**	**+0.5**
	baz=323						
LATG				*e*S	**Sn**	**18 32 20.0**	**0.0**
	baz=323						
TWT	**Tachien**	**0.99**	**300**	*e*P	**Pb**	**18 32 09.4**	**+0.2**
	baz=297						
TDCB	**Techi**	**1.01**	**300**	*e*P	**Pb**	**18 32 09.1**	**-0.3**
	baz=298						
TDCB				*e*S	**Sb**	**18 32 22.2**	**-0.2**
	baz=298						
ENTT	**Nioudou**	**1.02**	**331**	*e*P	**Pn**	**18 32 08.3**	**0.0**
	baz=328						
ENTT				*e*S	**Sn**	**18 32 21.1**	**-0.4**
	baz=328						
EHD	**Haiduan**	**1.03**	**235**	*e*P	**Pn**	**18 32 07.7**	**-0.7**
	baz=234						
EHD				*e*S	**Sn**	**18 32 20.9**	**-0.8**
	baz=234						
JYNG	**Yonagunijimaku**	**1.03**	**47**	P	**Pn**	**18 32 09.0**	**+0.5**
JYNG				S	**Sn**	**18 32 21.7**	**-0.1**
ECS	**Chishang**	**1.05**	**232**	*e*P	**Pn**	**18 32 09.5**	**+0.7**
	baz=231						
ECS				*e*S	**Sb**	**18 32 23.6**	**+0.2**
	baz=231						
TWE	**Neicheng**	**1.05**	**337**	*e*P	**Pb**	**18 32 09.8**	**-0.2**
	baz=336						
TWE				*e*S	**Sb**	**18 32 24.0**	**+0.5**
	baz=336						
SSLB	**Suanglung**	**1.06**	**272**	*e*P	**Pn**	**18 32 09.7**	**+0.7**
	baz=270						
SSLB				*e*S	**Sn**	**18 32 23.3**	**+0.6**
	baz=270						
EDH	**Donghe**	**1.07**	**224**	*e*P	**Pn**	**18 32 09.0**	**-0.1**
	baz=224						
EDH				*e*S	**Sn**	**18 32 22.0**	**-0.9**
	baz=224						
YOJ	**Yonaguni jima**	**1.08**	**49**	P	**Pb**	**18 32 09.9**	**-0.7**
	baz=49						
YOJ				*e*S	**Sb**	**18 32 24.3**	**-0.1**
	baz=49						
WPL	**Puli Township**	**1.09**	**284**	*e*P	**Pb**	**18 32 10.4**	**-0.3**
	baz=282						
YUS	**Yu-Shan**	**1.10**	**257**	⇓*i* P	**Pn**	**18 32 10.7**	**+0.9**
	baz=255						
YUS				*e*S	**Sn**	**18 32 24.9**	**+0.7**
	baz=255						
FUSB	**Fushanzhiwuyua**	**1.11**	**335**	*e*P	**Pb**	**18 32 11.0**	**-0.2**
	baz=332						
FUSB				*e*S	**Sb**	**18 32 24.9**	**-0.5**
	baz=332						
SMLT	**Sun Moon Lake**	**1.12**	**277**	⇓*e*P	**Pb**	**18 32 10.9**	**-0.4**
	baz=275						
SMLT				*e*S	**Sb**	**18 32 25.8**	**+0.2**
	baz=275						
DPDB	**Guoxing**	**1.12**	**285**	*e*P	**Pb**	**18 32 11.1**	**-0.2**
	baz=283						
YHNB	**Yeheng**	**1.14**	**324**	*e*P	**Pn**	**18 32 10.8**	**+0.7**
	baz=321						
YHNB				*e*S	**Sn**	**18 32 25.0**	**+0.4**
	baz=321						
WCS	**Beigang Elemen**	**1.14**	**286**	*e*P	**Pn**	**18 32 10.2**	**+0.2**
	baz=284						
NSK	**Sanguang**	**1.15**	**323**	*e*P	**Pn**	**18 32 10.5**	**+0.2**
	baz=321						
NSK				*e*S	**Sn**	**18 32 24.6**	**-0.4**
	baz=321						
TYC	**Yuchr**	**1.16**	**278**	*e*P	**Pb**	**18 32 11.4**	**-0.5**
	baz=276						
ALS	**Alishan**	**1.23**	**259**	⇓*e*P	**Pb**	**18 32 12.9**	**-0.2**
	baz=258						
ALS				*e*S	**Sb**	**18 32 28.8**	**+0.1**
	baz=258						
LDUT	**Ludao**	**1.23**	**209**	⇑*e*P	**Pn**	**18 32 10.8**	**-0.4**
	baz=210						
LDUT				*e*S	**Sn**	**18 32 25.6**	**-1.0**
	baz=210						
LONT	**Longtian**	**1.23**	**227**	*e*P	**Pn**	**18 32 11.7**	**+0.4**
	baz=227						
LONT				*e*S	**Sn**	**18 32 27.1**	**+0.3**
	baz=227						
TIPB	**Shuangxi**	**1.25**	**348**	*e*P	**Pb**	**18 32 13.1**	**-0.2**
	baz=346						
TIPB				*e*S	**Sb**	**18 32 28.8**	**-0.3**
	baz=346						
TWB1	**Santiao Chiao**	**1.26**	**355**	*e*P	**Pb**	**18 32 12.6**	**-0.9**
	baz=354						
TWB1				*e*S	**Sn**	**18 32 27.9**	**+0.5**
	baz=354						
NFF	**Wufeng Townshi**	**1.27**	**314**	*e*P	**Pb**	**18 32 12.9**	**-0.8**
	baz=312						
WJS	**Zhushan**	**1.27**	**274**	*e*P	**Pb**	**18 32 14.0**	**+0.3**
	baz=272						
NHDH	**Xindian Distri**	**1.32**	**336**	*e*P	**Pb**	**18 32 14.4**	**-0.2**
	baz=334						
TWGBT	**Beinan**	**1.33**	**226**	*e*P	**Pn**	**18 32 13.5**	**+0.9**
	baz=226						
TWGBT				*e*S	**Sn**	**18 32 29.9**	**+0.7**
	baz=226						
TWG	**Pinlang**	**1.33**	**226**	*e*P	**Pn**	**18 32 13.0**	**+0.4**
	baz=226						
LIOB	**Emei**	**1.34**	**312**	*e*P	**Pb**	**18 32 15.4**	**+0.4**
	baz=310						
NSTT	**Nanjuang**	**1.34**	**311**	*e*P	**Pb**	**18 32 15.1**	**+0.2**
	baz=309						
NSTT				*e*S	**Sb**	**18 32 32.0**	**+0.2**
	baz=309						
TATO	**Taipei**	**1.35**	**335**	*e*P	**Pn**	**18 32 13.6**	**+0.8**
	baz=333						
SXI1	**Grass Mountain**	**1.36**	**351**	⇑*e*P	**Pb**	**18 32 14.2**	**-1.0**
	baz=349						
HATJ	**Hateruma jima**	**1.58**	**78**	P	**Pn**	**18 32 16.4**	**+0.4**
HATJ				*e*S	**Sn**	**18 32 35.6**	**+0.3**
IRIF	**Iriomote-Funau**	**1.59**	**68**	P	**Pn**	**18 32 16.9**	**+0.8**
IRIF				*e*S	**Sn**	**18 32 36.5**	**+0.9**
JKRS	**Kuro-shima**	**1.80**	**74**	P	**Pn**	**18 32 20.0**	**+0.9**
JKRS				*e*S	**Sn**	**18 32 41.3**	**+0.5**
JIJ	**Ishigaki jima**	**1.95**	**71**	P	**Pn**	**18 32 21.5**	**+0.3**
JIJ				S	**Sn**	**18 32 44.2**	**-0.4**
JISG	**Ishigakijimahi**	**2.17**	**67**	P	**Pn**	**18 32 24.4**	**+0.2**
JTJ	**Tarama**	**2.52**	**69**	S	**Sn**	**18 32 59.0**	**+0.4**

FUNV 01 18:47:46.0, 9°.08N×63°.34W, h6km, MW3.5, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAV	**Cumanacoa**	**1.17**	**336**	*e*P	Pg	18 48 07.6	-0.9
COAV				*e*S	Sg	18 48 24.1	+0.2
PRGV	**PARIAGUAN**	**1.33**	**256**	*e*P	Pn	18 48 10.1	-1.0
PRGV				*e*S	Sb	18 48 28.3	-0.3
CUMV	**Cumana_UDO**	**1.58**	**328**	*e*P	Pn	18 48 14.2	-0.4
CUMV				*e*S	Sn	18 48 34.8	-0.6
CRUV	**Carupano**	**1.59**	**4**	*e*P	Pn	18 48 13.3	-1.4
CRUV				*e*S	Sn	18 48 33.6	-1.9
PCRV	**Puerto La Cruz**	**1.68**	**311**	*e*P	Pn	18 48 15.7	-0.3
PCRV				*e*S	Sn	18 48 36.6	-1.2
MERV	**Las Mercedes**	**2.93**	**274**	*e*P	Pn	18 48 31.4	-1.7
MERV				*e*S	Sn	18 49 06.6	-1.9
CACV	**CAICARA DEL OR**	**3.51**	**245**	*e*P	Pn	18 48 34.2	-6.9
CACV				*e*S	Sn	18 49 09.5	-13
BENV	**Beln**	**4.29**	**282**	*e*P	Pn	18 48 50.5	-1.5
BENV				*e*S	Sn	18 49 37.5	-4.8
BAUV	**El Baul**	**4.65**	**269**	*e*P	Pn	18 48 55.1	-1.7
BAUV				*e*S	Sn	18 49 46.1	-4.9
MAPV	**Macapo**	**5.10**	**279**	*e*S	Sn	18 49 56.9	-5.5
PAYV	**Puerto Ayacuch**	**5.62**	**230**	*e*P	Pn	18 49 08.3	-1.8
PAYV				*e*S	Sn	18 50 09.3	-5.7

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*UCR **01** 18:48:57.0±1.7, 10°.76N×86°.61W, h0km±19km, MW4.1*
*INET **01** 18:48:57.7±0.6, 10°.88N×86°.69W, h15km, MW3.5*
*IDC **01** 18:48:58.4±19.0, 11°.90N×86°.00W, h0km, mb3.4/3, mbtmp3.4/3, MS3.1/1, Error ellipse: s-maj=345.2km s-min=237.4km az=177.0*
ISC 01 18:48:58.8±1.2, 10°.88N±0°.06×86°.68W±0°.06, h31km, n33, σ1§23/36, mb3.4/3, 2C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**1.08**	**99**	*e*P	**Pn**	**18 49 17.1**	**-0.7**
SAJU	**San Juanillo,**	**1.25**	**130**	*e*P	**Pn**	**18 49 18.2**	**-2.0**
GB1A	**Borinquen Arri**	**1.26**	**93**	⇑*e*P	**Pn**	**18 49 19.8**	**-0.7**
GB1A				*e*S	**Sb**	**18 49 36.9**	**-1.2**
COPN	**Copaltepe**	**1.30**	**4**	*e*P	**Pn**	**18 49 19.8**	**-1.1**
BUAI	**Buenos Aires**	**1.32**	**90**	*e*P	**Pn**	**18 49 20.3**	**-0.9**
MGAN	**Managua**	**1.33**	**19**	*e*P	**Pn**	**18 49 20.5**	**-0.8**
WILN	**Americas 2**	**1.36**	**21**	*e*P	**Pn**	**18 49 20.2**	**-1.5**
APYN	**Apoyeque**	**1.39**	**13**	*e*P	**Pn**	**18 49 21.1**	**-1.0**
COLC	**Colonia**	**1.47**	**98**	*e*P	**Pn**	**18 49 22.6**	**-0.6**
COLC				*e*S	**Sb**	**18 49 42.2**	**-1.7**
MESS	**Mesas**	**1.47**	**95**	*e*P	**Pn**	**18 49 22.7**	**-0.6**
MESS				*e*S	**Sb**	**18 49 44.3**	**+0.4**
CUI	**Cuipilapa**	**1.51**	**98**	⇑*e*P	**Pn**	**18 49 23.2**	**-0.6**
MOMN	**Momotombo**	**1.53**	**5**	*e*P	**Pn**	**18 49 23.2**	**-0.8**
HUEN		**1.53**	**19**	*e*P	**Pn**	**18 49 23.1**	**-1.0**
INDI	**Punta indio, G**	**1.53**	**131**	*e*P	**Pn**	**18 49 22.6**	**-1.5**
VMAR	**Armenia, Volca**	**1.53**	**92**	*e*P	**Pn**	**18 49 24.1**	**-0.1**
CNGN	**Cerro Negro**	**1.61**	**359**	*e*P	**Pn**	**18 49 23.0**	**-2.2**
ACAL	**Aguas Claras**	**1.64**	**98**	*e*P	**Pn**	**18 49 25.7**	**+0.1**
PTEN	**Parque Tenorio**	**1.67**	**95**	*e*P	**Pn**	**18 49 26.2**	**+0.2**
TEL3	**Telica 3**	**1.69**	**355**	*e*P	**Pn**	**18 49 25.2**	**-1.2**
TELN	**Telica**	**1.72**	**355**	*e*P	**Pn**	**18 49 26.4**	**-0.4**
VERA	**Finca Concepci**	**1.78**	**91**	*e*P	**Pn**	**18 49 27.6**	**+0.1**
JTS	**Las Juntas de**	**1.80**	**109**	*e*P	**Pn**	**18 49 27.3**	**-0.4**
ACON	**Acoyapa**	**1.83**	**54**	*e*P	**Pn**	**18 49 26.9**	**-1.3**
ACON				*e*S	**Sb**	**18 49 56.8**	**+2.5**
CRIN	**San Cristobal**	**1.85**	**349**	*e*P	**Pn**	**18 49 27.4**	**-1.1**
BOAB	**BOACO BROADBAN**	**.85**	**32**	*e*P	**Pn**	**18 49 27.3**	**-1.2**
LAFE	**Finca La Fe, P**	**2.04**	**121**	*e*P	**Pn**	**18 49 29.6**	**-1.4**
LCR2	**La Lucha 2**	**2.87**	**113**	*e*P	**Pn**	**18 49 44.3**	**+1.7**
RIMA	**Rio Macho**	**2.98**	**111**	*e*P	**Pn**	**18 49 45.9**	**+1.7**
PACA	**Pacayal**	**3.04**	**328**	*e*P	**Pn**	**18 49 45.5**	**+0.6**
TXAR	**Lajitas Array**	**24.26**	**322**	P	**P**	**18 54 13.3**	**-0.1**
	0.8nm,0.7s,baz=136,slow=10.0,SNR=12						
	0.8nm,0.7s						
LPAZ	**La Paz**	**32.64**	**145**	LR	LR	19 09 32.3	
	comp=Z,32nm,18.5s,baz=244,slow=37						
PDAR	**Pinedale Array**	**37.51**	**332**	P	**P**	**18 56 09.6**	**-0.6**
	0.4nm,0.7s,baz=122,slow=7.6,SNR=2.5						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**39.38**	**320**	P	**P**	**18 56 27.9**	**+1.9**
	0.5nm,0.8s,baz=130,slow=8.4,SNR=3.0						
	0.5nm,0.8s						

WEL 01 19:06:02.0±1.0, 37°S±5°×17°9E±°, h20km, M3.0/12, mB4.5/1, MLl3.3/19, MLv3.0/12, Mw(mB)3.6/1, Error ellipse: s-maj=0.0km s-min=0.0km az=91.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.78**	**229**	P	Pb	19 06 15.9	-1.0
MXZ				S	Sn	19 06 29.1	+0.1
WMGZ	**Waiomatatini S**	**0.92**	**213**	P	Pn	19 06 20.2	+0.4
PKGZ	**Pakihiroa**	**1.14**	**222**	P	Pn	19 06 22.6	-0.3
PKGZ				S	Sn	19 06 40.5	+2.5
HAZ	**Te Kaha**	**1.23**	**235**	P	Pn	19 06 22.5	-1.6
HAZ				S	Sn	19 06 43.6	+3.5
RUGZ	**Raukumara Rang**	**1.42**	**230**	P	Pb	19 06 28.0	+0.1
RUGZ				S	Sb	19 06 48.0	+2.3
CNGZ	**Carnagh Statio**	**1.58**	**205**	P	Pn	19 06 29.5	+0.6
MWZ	**Matawai**	**1.76**	**223**	P	Pn	19 06 31.8	+0.4
MWZ				S	Sb	19 06 54.7	-0.6
RIGZ	**Rimuhau**	**1.94**	**211**	P	Pn	19 06 33.8	-0.1
RIGZ				S	Sn	19 06 58.6	+0.9
URZ	**Urewera**	**1.95**	**231**	P	Pn	19 06 34.5	+0.5
URZ				S	Sb	19 06 60.0	-0.9
SNGZ	**Shannon Statio**	**2.19**	**217**	P	Pn	19 06 37.4	0.0
KNZ	**Kokohu**	**2.25**	**208**	P	Pn	19 06 36.6	-1.4
KNZ				S	Sn	19 07 03.8	-1.4
RTZ	**Ruatahuna**	**2.26**	**226**	P	Pn	19 06 39.3	+0.9
MUGZ	**Murupara**	**2.30**	**231**	P	Pn	19 06 39.1	+0.3
RAHZ	**Arahi**	**2.42**	**219**	P	Pn	19 06 41.1	+0.6
RAHZ				S	Sn	19 07 10.9	+1.3
MTHZ	**Maungataniwha**	**2.50**	**223**	P	Pn	19 06 42.3	+0.6
MTHZ				S	Sn	19 07 13.4	+1.7
KUZ	**Kuaotunu**	**2.68**	**276**	P	Pn	19 06 43.4	-0.7
KUZ				S	Sn	19 07 14.9	-1.1
TOZ	**Tahuroa Road**	**2.90**	**255**	P	Pn	19 06 47.6	+0.5
BKZ	**Black Stump Fm**	**2.92**	**223**	P	Pn	19 06 47.3	-0.1
MCHZ	**McNeill Hill**	**3.02**	**217**	P	Pn	19 06 48.3	-0.5
MCHZ				S	Sn	19 07 26.1	+1.8
MKAZ	**Moumakai**	**3.11**	**268**	P	Pn	19 06 50.5	+0.5
KWHZ	**Kaweka Forest**	**3.14**	**220**	P	Pn	19 06 49.4	-1.0
KWHZ				S	Sn	19 07 26.6	-0.8
KAHZ	**Kahuranaki**	**3.23**	**211**	P	Pn	19 06 50

comp=Z,218nm,18.1s,baz=12,slow=35
6.0nm,0.6s
DZM Mont Dzumac 8.05 178 Pn 19 08 41.2 -0.3
DZM Mont Dzumac 8.05 178 P **Pn 19 08 41.8 +0.3**
YATNC Mamie plateau, 8.07 175 P **Pn 19 08 42.5 +0.9**
NOUC Port Laguerre 8.08 179 P **Pn 19 08 43.1 +1.3**
ONTNC Ouen Toro 8.29 178 Pn **Pn 19 08 44.6 0.0**
ONTNC Ouen Toro 8.29 178 P **Pn 19 08 46.4 +1.8**
OUENC Ouen Island, N 8.42 175 Pn **Pn 19 08 46.6 +0.2**
PINNC Pines Island, 8.68 172 Pn **Pn 19 08 50.7 +0.8**
MSVF Nonsavu 12.07 110 LR LR 19 13 13.1
comp=Z,284nm,19.1s,baz=255,slow=33
PMG Port Moresby 19.11 282 LR LR 19 17 39.1
comp=Z,222nm,18.4s,baz=54,slow=34
CTA Charters Tower 19.94 250 LR LR 19 17 41.2
comp=Z,80nm,18.3s,baz=80,slow=33
RAO Raoul Island 21.20 138 LR LR 19 16 49.7
comp=Z,44nm,19.4s,baz=102,slow=29
AFI Afiamalu 21.45 92 LR LR 19 18 54.5
comp=Z,69nm,18.9s,baz=88,slow=34
STKA Stephens Creek 28.66 227 P **P 19 12 42.5 +1.2**
1.6nm,0.7s,baz=11,slow=8.2,SNR=5.0
1.6nm,0.7s
STKA Stephens Creek 28.66 227 P **P 19 12 42.6 +1.2**
RPZ Rata Peaks 29.93 173 LR LR 19 23 53.3
comp=Z,78nm,19.0s,baz=345,slow=34
WRA Warramunga Arr 30.94 255 P **P 19 13 00.9 -0.8**
0.4nm,0.7s,baz=85,slow=8.8,SNR=6.3
WRA LR LR 19 24 44.0
comp=Z,128nm,19.3s,baz=60,slow=35
0.4nm,0.7s
AS31 Alice Springs 31.91 248 P **P 19 13 09.9 -0.4**
ASAR Alice Springs 31.91 248 P **P 19 13 10.2 -0.1**
0.6nm,0.7s,baz=75,slow=9.4,SNR=11
0.6nm,0.7s
ASAR Alice Springs 31.91 248 P **P 19 13 11.0 +0.7**
RAR Rarotonga 33.24 107 LR LR 19 23 42.2
comp=Z,63nm,21.9s,baz=4.5,slow=31
GUMO Guam 34.54 322 LR LR 19 28 45.2
comp=Z,44nm,18.0s,baz=140,slow=38
SIJI Sorong 36.86 288 LR LR 19 30 04.8
comp=Z,80nm,18.1s,baz=114,slow=38
FITZ Fitzroy Crossi 39.07 258 LR LR 19 29 33.2
comp=Z,86nm,18.8s,baz=96,slow=35
PPT2 Papeete2 42.71 101 *e*LR LR 19 26 44.1
comp=Z,100nm,27.8s
TBI Tubuai 42.96 109 *e*LR LR 19 26 50.4
comp=Z,122nm,27.2s
DAV Davao City (W) 45.35 295 LR LR 19 32 31.1
comp=Z,16nm,20.8s,baz=159,slow=34
MJAR Matsushiro Arr 56.73 333 P **P 19 16 28.4 0.0**
0.4nm,0.5s,baz=165,slow=7.9,SNR=4.2
MJAR LR LR 19 37 08.4
comp=Z,13nm,21.7s,baz=163,slow=32
0.4nm,0.5s
MAJO Matsushiro 56.73 333 P **P 19 16 28.4 0.0**
MAJO IAmb IAmb 19 16 50.1
comp=Z,8.5nm,1.5s
KSRS Korea Array 62.50 326 P **P 19 17 09.2 +1.1**
comp=Z,0.5nm,0.8s,baz=128,slow=6.7,SNR=3.1
comp=Z,0.5nm,0.8s
VNDA Vanda 63.59 181 P **P 19 17 14.6 -0.2**
comp=Z,1.6nm,0.9s,baz=17,slow=7.8,SNR=5.9
comp=Z,1.6nm,0.9s
VNDA Vanda 63.59 181 P **P 19 17 14.7 -0.1**
VNDA IAmb IAmb 19 17 33.6
comp=Z,2.5nm,1.0s
SBA Scott Base 63.88 180 P **P 19 17 17.7 +1.0**
SBA IAmb IAmb 19 17 18.5
comp=Z,6.3nm,1.1s
QSPA South Pole Qui 76.05 180 P **P 19 18 31.3 -0.5**
QSPA IAmb IAmb 19 18 45.5
comp=Z,3.8nm,1.0s
KDAK Kodiak Island 79.16 21 LR LR 19 50 10.5
comp=Z,54nm,18.6s,baz=176,slow=33
J20K Nowinta River 83.61 16 P **P 19 19 12.9 +0.4**
RND Reindeer 84.58 19 P **P 19 19 16.1 -1.5**
ILAR Eielson Array 86.16 18 P **P 19 19 24.0 -1.3**
comp=Z,1.1nm,0.6s,baz=242,slow=5.0,SNR=8.1
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 95.90 317 P **P 19 20 11.8 +0.5**
comp=Z,0.2nm,0.6s,baz=101,slow=7.8,SNR=2.7
comp=Z,0.2nm,0.6s
ZALV Zalesovo Beam 96.13 324 P **P 19 20 11.0 -1.2**
comp=Z,0.6nm,0.6s,baz=98,slow=11,SNR=3.6
comp=Z,0.6nm,0.6s
ARCES ARCESS Array B 119.25 345 PKP **PKPdf 19 25 32.4 -0.8**
comp=Z,3.5nm,0.9s,baz=78,slow=1.7,SNR=8.6

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*IDC **01** 19:08:32.4±1.6, 1°.75N×128°.22E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=86.0km s-min=23.5km az=61.0*
*DJA **01** 19:08:36.7±0.4, 1°.N±2°×12°.8E±°, h10km, M3.6/9, mb4.1/1, MLv3.4/9*
ISC 01 19:08:37.5±1.3, 1°.6N±0°.1×128°.22E±0°.06, h35km, n9, σ1§40/12, mb3.3/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**226**	Pg	**Pn**	**19 08 55.6**	**-1.9**
TNTI				Sg	**Sn**	**19 09 11.0**	**-1.3**
LBMI	**Labuha**	**2.33**	**198**	P	**Pn**	**19 09 12.8**	**-0.5**
LBMI				S	**Sn**	**19 09 42.4**	**+1.6**
SIJI	**Sorong**	**3.91**	**129**	Pn	**Pn**	**19 09 34.5**	**-0.6**
	2.9nm,0.3s,baz=333,slow=21,SNR=11						
SIJI				Sn	**Sn**	**19 10 18.7**	**-1.1**
	0.5nm,0.3s,baz=203,slow=22,SNR=1.1						
	6.6nm,0.3s						
SANI	**Sanana**	**4.25**	**212**	P	**Pn**	**19 09 39.6**	**-0.2**
KMSI	**Cibinong**	**4.36**	**257**	P	**Pn**	**19 09 42.2**	**+1.0**
FAKI	**Fak Fak**	**6.03**	**138**	P	**Pn**	**19 10 04.7**	**+0.5**
WRA	**Warramunga Arr**	**22.23**	**165**	P	**P**	**19 13 31.3**	**0.0**
	0.8nm,0.7s,baz=341,slow=11,SNR=7.0						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**25.71**	**168**	P	**P**	**19 14 07.1**	**+2.5**
	0.6nm,0.8s,baz=348,slow=8.5,SNR=5.5						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**60.15**	**325**	P	**P**	**19 18 41.0**	**-0.6**
	0.3nm,0.5s,baz=119,slow=7.9,SNR=8.3						
	0.3nm,0.5s						

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*KRSC **01** 19:15:44.0±2.5, 50°.11N×157°.78E, h48km±38km, ML4.1*
*IDC **01** 19:15:54.9±11.0, 50°.95N×156°.34E, h107km±94km, mb3.2/4, mbtmp3.5/5, ML2.0/1, MS3.0/1, Error ellipse: s-maj=163.9km s-min=110.9km az=169.0*
ISC 01 19:15:41.1±3.1, 49°.8N±0°.2×157°.49E±0°.10, h59km±23km, n36, σ2§08/47, mb3.6/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.24**	**315**	*e*P	**Pn**	**19 16 03.1**	**+0.9**
SKR				*e*S	**Sn**	**19 16 16.0**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.04**	**10**	*e*P	**Pn**	**19 16 14.3**	**+1.3**
KDTR				*e*S	**Sn**	**19 16 35.3**	**-2.0**
ASAK	**Asacha**	**2.59**	**6**	*e*P	**Pn**	**19 16 22.2**	**+1.6**
ASAK				*e*S	**Sn**	**19 16 49.7**	**-1.3**
RUS	**Russkaya**	**2.71**	**13**	*e*P	**Pn**	**19 16 23.4**	**+1.3**
RUS				*e*S	**Sn**	**19 16 50.9**	**-2.7**
MTVR	**Mutnovka**	**2.71**	**9**	*e*P	**Pn**	**19 16 24.2**	**+1.8**
MTVR				*e*S	**Sn**	**19 16 52.3**	**-1.8**
GRL	**Gorelyy**	**2.77**	**7**	*e*P	**Pn**	**19 16 25.3**	**+2.2**
GRL				*e*S	**Sn**	**19 16 53.6**	**-1.9**
KRMR	**Karymshinskiy**	**3.05**	**7**	*e*P	**Pn**	**19 16 28.0**	**+1.2**
KRMR				*e*S	**Sn**	**19 17 02.3**	**+0.2**
APC	**Apacha**	**3.13**	**356**	*e*P	**Pn**	**19 16 29.8**	**+1.9**
APC				*e*S	**Sn**	**19 17 03.2**	**-0.8**
PET	**Petropavlovsk**	**3.30**	**12**	*e*P	**Pn**	**19 16 32.3**	**+2.1**
PET				*e*S	**Sn**	**19 17 06.4**	**-1.8**
PETK	**Petropavlovsk-**	**3.31**	**2**	P	**Pn**	**19 16 31.8**	**+1.5**
	1.9nm,0.3s,baz=183,slow=12,SNR=10						
	5.9nm,0.5s						
DALK	**Dalny**	**3.33**	**13**	*e*P	**Pn**	**19 16 32.5**	**+2.0**
DALK				*e*S	**Sn**	**19 17 06.6**	**-2.1**
UGLR	**Uglovaya**	**3.51**	**13**	*e*P	**Pn**	**19 16 35.6**	**+2.4**
AVH	**Avacha**	**3.55**	**12**	*e*P	**Pn**	**19 16 36.5**	**+2.8**
AVH				*e*S	**Sn**	**19 17 14.5**	**+0.1**
SMAR	**Somma**	**3.56**	**13**	*e*P	**Pn**	**19 16 35.4**	**+1.5**
SMAR				*e*S	**Sn**	**19 17 14.7**	**-0.1**
KOK	**Koryaka**	**3.56**	**11**	*e*P	**Pn**	**19 16 37.1**	**+3.2**
KOK				*e*S	**Sn**	**19 17 15.6**	**+0.8**
NLC	**Nalytchevo**	**3.56**	**18**	*e*P	**Pn**	**19 16 34.6**	**+0.8**
NLC				*e*S	**Sn**	**19 17 09.9**	**-4.7**
SDLR	**Sedlovina**	**3.58**	**14**	*e*P	**Pn**	**19 16 36.2**	**+2.0**
SDLR				*e*S	**Sn**	**19 17 12.8**	**-2.5**
KRER	**Koryakskii**	**3.59**	**12**	*e*P	**Pn**	**19 16 37.1**	**+2.7**
KRX	**Arik**	**3.63**	**11**	*e*P	**Pn**	**19 16 37.7**	**+2.8**
SPN	**Mys Shipunski**	**3.66**	**25**	*e*P	**Pn**	**19 16 37.6**	**+2.5**
SPN				*e*S	**Sn**	**19 17 15.2**	**-1.7**
GNL	**Ganaly**	**3.90**	**4**	*e*P	**Pn**	**19 16 41.2**	**+2.6**
GNL				*e*S	**Sn**	**19 17 24.4**	**+1.2**
KII	**Karymskiy**	**4.41**	**15**	*e*S	**Sn**	**19 17 36.0**	**+0.6**
MKZ	**Mys Kozlova**	**5.42**	**27**	*e*P	**Pn**	**19 17 00.7**	**+1.5**
MKZ				*e*S	**Sn**	**19 17 56.4**	**-3.8**
TUMR	**Tumrok**	**5.72**	**15**	*e*P	**Pn**	**19 17 06.4**	**+3.0**
KBTR	**Krutoberegovo**	**7.17**	**25**	*e*P	**Pn**	**19 17 24.7**	**+1.5**
H11N2	**WAKE ISLAND Hy 30.94**	**163**		T	T	19 55 42.7	
	baz=348,slow=76,SNR=3.6						
H11N3	**WAKE ISLAND Hy 30.95**	**163**		T	T	19 55 47.4	
	baz=348,slow=76,SNR=4.3						
H11N1	**WAKE ISLAND Hy 30.95**	**163**		T	T	19 55 47.9	
	baz=348,slow=76,SNR=2.7						
H11S1	**WAKE ISLAND Hy 32.09**	**163**		T	T	19 57 12.3	
	baz=348,slow=76,SNR=4.5						
H11S3	**WAKE ISLAND Hy 32.10**	**163**		T	T	19 57 10.5	
	baz=348,slow=76,SNR=6.5						
H11S2	**WAKE ISLAND Hy 32.11**	**163**		T	T	19 57 07.1	
	baz=348,slow=76,SNR=4.5						
SONM	**Songino Array**	**33.17**	**287**	P	**P**	**19 22 12.1**	**+0.3**
	0.2nm,0.4s,baz=86,slow=9.6,SNR=2.1						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**43.24**	**305**	P	**P**	**19 23 34.8**	**-1.4**
	0.3nm,0.4s,baz=75,slow=14,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.15**	**297**	P	**P**	**19 24 14.9**	**-0.1**
	0.4nm,0.3s,baz=61,slow=6.6,SNR=15						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**48.22**	**303**	P	**P**	**19 24 14.5**	**-0.9**
	0.5nm,0.5s,baz=57,slow=7.0,SNR=6.6						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**55.90**	**258**	LR	LR	19 51 24.4	
	comp=Z,12nm,18.6s,baz=265,slow=38						

WEL 01 19:21:22.3±1.6, 38°.5S±5°.5×17°.9E±°, h16km±7km, M3.6/48, ML3.9/56, MLv3.6/48, Error ellipse: s-maj=0.0km s-min=0.0km az=68.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.60**	**240**	P	Pn	19 21 36.2	-0.1
MXZ	**Matakaoa Point**	**0.61**	**266**	P	Pg	19 21 34.2	-0.3
MXZ				S	Sg	19 21 41.3	-1.3
PUZ	**Puketiti**	**0.85**	**229**	P	Pn	19 21 40.1	+0.4
PUZ				S	Sn	19 21 52.2	+0.3
PKGZ	**Pakihiroa**	**0.87**	**245**	P	Pn	19 21 39.8	-0.3
PKGZ				S	Sg	19 21 51.1	+0.2
HAZ	**Te Kaha**	**1.05**	**257**	P	Pb	19 21 42.2	0.0
HAZ				S	Sb	19 21 55.8	0.0
CNGZ	**Carnagh Statio**	**1.18**	**215**	P	Pg	19 21 45.9	+0.7
RUGZ	**Raukumara Rang**	**1.20**	**248**	P	Pb	19 21 44.7	0.0
MWZ	**Matawai**	**1.47**	**236**	P	Pn	19 21 48.7	+0.4
RIGZ	**Rimuhau**	**1.57**	**221**	P	Pb	19 21 50.4	-0.7
WHRZ	**Whale Island**	**1.70**	**258**	P	Pb	19 21 53.6	+0.4
URZ	**Urewera**	**1.72**	**244**	P	Pn	19 21 52.3	+0.7
SNGZ	**Shannon Statio**	**1.86**	**227**	P	Pn	19 21 54.0	+0.4
KNZ	**Kokohu**	**1.86**	**216**	P	Pn	19 21 53.6	0.0
MHGZ	**Mahia Peninsul**	**1.87**	**209**	P	Pn	19 21 54.6	+0.9
EDRZ	**Edgecumbe**	**1.94**	**252**	P	Pn	19 21 55.3	+0.6
RTZ	**Ruatahuna**	**1.98**	**236**	P	Pn	19 21 56.1	+0.8
MUGZ	**Murupara**	**2.06**	**242**	P	Pn	19 21 56.7	+0.5
RAHZ	**Arahi**	**2.10**	**228**	P	Pn	19 21 57.5	+0.7
WHHZ	**Waihua**	**2.13**	**222**	P	Pn	19 21 57.7	+0.6
RRRZ	**Republican Roa**	**2.19**	**247**	P	Pn	19 21 58.5	+0.5
MTHZ	**Maungataniwha**	**2.21**	**232**	P	Pn	19 21 59.0	+0.7
TGRZ	**Tauranga**	**2.25**	**264**	P	Pn	19 21 58.5	-0.3
KARZ	**Kaharoa**	**2.30**	**257**	P	Pn	19 21 59.8	+0.2
HSRZ	**Hossack Road**	**2.38**	**250**	P	Pn	19 22 01.7	+1.0
NMHZ	**Naumai**	**2.38**	**228**	P	Pn	19 22 01.3	+0.6
ARHZ	**Aropaoanui**	**2.39**	**223**	P	Pn	19 22 01.3	+0.5
ALRZ	**Allen Road**	**2.40**	**243**	P	Pn	19 22 01.2	+0.3
MRHZ	**Matea Rd**	**2.47**	**237**	P	Pn	19 22 02.2	+0.2
BKZ	**Black Stump Fm**	**2.61**	**230**	P	Pn	19 22 04.2	+0.3
CKHZ	**Cape Kidnapper**	**2.65**	**216**	P	Pn	19 22 04.3	-0.1
MCHZ	**McNeill Hill**	**2.68**	**223**	P	Pn	19 22 04.9	+0.1
KUZ	**Kuaotunu**	**2.79**	**285**	P	Pn	19 22 04.2	-2.1
KWHZ	**Kaweka Forest**	**2.82**	**227**	P	Pn	19 22 06.5	-0.3
TOZ	**Tahuroa Road**	**2.85**	**265**	P	Pn	19 22 06.8	-0.3
KAHZ	**Kahuranaki**	**2.85**	**216**	P	Pn	19 22 06.6	-0.6
KRHZ	**Kereru**	**3.00**	**224**	P	Pn	19 22 08.4	-0.9
KATZ	**Kakaramea**	**3.03**	**240**	P	Pn	19 22 10.2	+0.4
PXZ	**Pawanui**	**3.05**	**214**	P	Pn	19 22 08.5	-1.4
BHHZ	**Black Hill Sta**	**3.08**	**229**	P	Pn	19 22 09.9	-0.4
TMVZ	**Te Maari**	**3.10**	**238**	P	Pn	19 22 10.5	-0.1
ETVZ	**East Tongariro**	**3.10**	**238**	P	Pn	19 22 10.6	-0.1
NTVZ	**North Tongarir**	**3.10**	**238**	P	Pn	19 22 10.6	-0.2
KRVZ	**Karewarewa**	**3.13**	**239**	P	Pn	19 22 10.9	-0.2
OTVZ	**Oturere**	**3.15**	**237**	P	Pn	19 22 11.1	-0.2
MKAZ	**Moumakai**	**3.15**	**276**	P	Pn	19 22 11.1	-0.1
NNVZ	**North Ngauruho**	**3.16**	**238**	P	Pn	19 22 11.7	+0.1
GRZ	**Great Barrier**	**3.17**	**292**	P	Pn	19 22 11.4	-0.1
SNVZ	**South Ngauruho**	**3.17**	**237**	P	Pn	19 22 11.5	-0.3
NGZ	**Ngauruhoe**	**3.19**	**238**	P	Pn	19 22 12.0	0.0
MOVZ	**Moawhango**	**3.22**	**233**	P	Pn	19 22 11.9	-0.3
WHVZ	**Whangaehu Hut**	**3.26**	**236**	P	Pn	19 22 12.2	-0.7
FWVZ	**Far West T-bar**	**3.27**	**237**	P	Pn	19 22 13.2	+0.1
WPHZ	**Waipukurau**	**3.27**	**218**	P	Pn	19 22 12.0	-0.9
WNVZ	**Wahianoa**	**3.27**	**235**	P	Pn	19 22 12.7	-0.4
PNHZ	**Pukenui**	**3.28**	**222**	P	Pn	19 22 11.8	-1.4
PRHZ	**Porangahau**	**3.34**	**214**	P	Pn	19 22 12.4	-1.5
ETAZ	**East Tamaki Re**	**3.36**	**278**	P	Pn	19 22 13.8	-0.3
MTVZ	**Mangateitei**	**3.39**	**236**	P	Pn	19 22 14.5	-0.1
HIZ	**Hauiti**	**3.48**	**252**	P	Pn	19 22 17.0	+1.2
TSZ	**Takapari Road**	**3.52**	**223**	P	Pn	19 22 14.9	-1.4
AWAZ	**Awhitu Peninsu**	**3.56**	**276**	P	Pn	19 22 17.8	+0.9
ANWZ	**Angora Road**	**3.57**	**214**	P	Pn	19 22 16.2	-0.8
DVHZ	**Dannevirke**	**3.59**	**218**	P	Pn	19 22 15.7	-1.6
RVAZ	**Riverhead Bore**	**3.67**	**280**	P	Pn	19 22 18.0	-0.4
VRZ	**Vera Road**	**3.75**	**243**	P	Pn	19 22 20.4	+0.8
BFZ	**Birch Farm**	**3.85**	**214**	P	Pn	19 22 18.8	-2.1
POWZ	**Post Office Ro**	**3.86**	**221**	P	Pn	19 22 19.4	-1.5
PRWZ	**Pori Road**	**3.88**	**218**	P	Pn	19 22 19.9	-1.4
WAZ	**Wanganui**	**3.90**	**234**	P	Pn	19 22 22.2	+0.5
TIWZ	**Tintock**	**4.09**	**216**	P	Pn	19 22 22.5	-1.7
WCZ	**Waipu Caves**	**4.11**	**291**	P	Pn	19 22 24.5	0.0
PKE	**Pukeiti**	**4.34**	**246**	P	Pn	19 22 30.0	+2.4
OGWZ	**Otaki Gorge**	**4.48**	**221**	P	Pn	19 22 27.3	-2.2
OUZ	**Omahuta**	**4.98**	**296**	P	Pn	19 22 36.1	-0.3
CTZ	**Chatham Island**	**7.02**	**154**	P	Pn	19 23 07.1	+2.7

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*IDC **01** 19:26:32.1±3.2, 36°.99N×71°.65E, h92km±25km, mb3.6/11, mbtmp4.1/17, Error ellipse: s-maj=27.5km s-min=17.4km az=166.0*
*MOS **01** 19:26:35.7±0.8, 37°.32N×71°.74E, h131km, mb4.3/10, Error ellipse: s-maj=9.0km s-min=4.1km az=81.0*
*BJI **01** 19:26:35.5±0.0, 37°.51N×71°.52E, h127km, mb4.4/15, mB4.5/7*
*NEIC **01** 19:26:37.4±1.7, 37°.34N±0°.06×71°.59E±0°.10, h123km±4km, mb4.3/15, Error ellipse: s-maj=11.1km s-min=9.1km az=102.0*
*NNC **01** 19:26:38.1±3.1, 37°.53N×71°.41E, h108km±68km, mb4.0, mpv4.7, Error ellipse: s-maj=30.2km s-min=16.4km az=158.0*
ISC 01 19:26:34.7±0.4, 37°.27N±0°.04×71°.83E±0°.05, h100km, n159, σ2§25/169, mb4.2/22, 12C-11D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.10**	**326**		**Pn**	**19 27 10.8**	**+2.2**
GAR				Sn	**Sn**	**19 27 35.6**	**+1.0**
DRK	**Karamyk**	**2.21**	**359**		**Pn**	**19 27 14.0**	**+3.8**
CHGR	**Chuyangaron**	**2.52**	**304**		**Pn**	**19 27 15.2**	**+1.0**
CHGR	**Chuyangaron**	**2.52**	**304**	PN	**Pn**	**19 27 15.2**	**+1.0**
BTK	**Batken**	**2.89**	**345**	Pn	**Pn**	**19 27 22.6**	**+3.5**
BTK	**Batken**	**2.89**	**345**	PN	**Pn**	**19 27 22.6**	**+3.5**
CEP	**Cherat**	**3.44**	**179**	P	Pn	19 27 31.2	+4.7
CEP				S	**Sn**	**19 28 12.0**	**+5.5**
KBL	**Kabul**	**3.54**	**220**	Pn	**Pn**	**19 27 31.2**	**+3.3**
KBL	**Kabul**	**3.54**	**220**	PN	**Pn**	**19 27 31.2**	**+3.3**
CHCP	**Chirah Chowk**	**3.79**	**162**	P	**Pn**	**19 27 35.4**	**+4.3**
KSH	**Kashi**	**3.96**	**54**	P	**Pn**	**19 27 33.1**	**-0.3**
KSH				S	**Sn**	**19 28 15.0**	**-3.9**
KSH				smax	smax		
	comp=N,890nm,0.5s						
KSH				smax	smax		
	comp=E,730nm,0.5s						
THW	**Thamme Wali**	**4.47**	**181**	P	**Pn**	**19 27 42.9**	**+2.7**
TAS	**Tashkent**	**4.50**	**335**		**Pn**	**19 27 42.2**	**+1.6**
TAS	**Tashkent**	**4.50**	**335**	PN	**Pn**	**19 27 42.2**	**+1.6**
IUG	**Iuzhnay**	**5.06**	**345**	*d* iPN	**Pn**	**19 27 50.1**	**+1.8**
IUG	**Iuzhnay**	**5.06**	**345**	⇓*i*P	**Pn**	**19 27 50.2**	**+1.8**
	baz=343						
IUG				*i* S	**Sn**	**19 28 43.6**	**-2.0**
	baz=343						
AML	**Almayashu**	**5.06**	**16**	P	**Pn**	**19 27 51.4**	**+2.8**
	SNR=71						
JMU	**Jammu**	**5.20**	**150**	*e*P	**Pn**	**19 27 52.7**	**+2.6**
JMU				*e*S	**Sn**	**19 28 48.0**	**-0.8**
NRN	**Naryn**	**5.27**	**37**	Pn	**Pn**	**19 27 53.4**	**+2.1**
NRN	**Naryn**	**5.27**	**37**	PN	**Pn**	**19 27 53.4**	**+2.1**
UCH	**Uchtor**	**5.37**	**22**	P	**Pn**	**19 27 55.7**	**+3.0**
	SNR=26						
EKS2	**Erkin-Say**	**5.59**	**15**	P	**Pn**	**19 27 58.5**	**+3.0**
	SNR=22						
DZA	**Taraz**	**5.63**	**356**	*e*PN	**Pn**	**19 27 57.3**	**+1.4**
DZA	**Taraz**	**5.63**	**356**	*e*P	**Pn**	**19 27 57.4**	**+1.4**
	baz=356						
DZA				*e*S	**Sn**	**19 28 57.6**	**-1.6**
	baz=356						
AAK	**Ala-Archa**	**5.74**	**20**	P	**Pn**	**19 28 00.8**	**+3.2**
	SNR=74						
AAK	**Ala-Archa**	**5.74**	**20**	P	**Pn**	**19 28 00.8**	**+3.2**
	51nm,0.4s,baz=195,slow=5.0,SNR=192						
AAK				S	**Sn**	**19 29 02.0**	**-0.1**
	15nm,0.3s,baz=142,slow=22,SNR=13						
THN	**Thein Dam**	**5.79**	**145**	*e*P	**Pn**	**19 28 00.8**	**+2.6**
THN				*i* x	x	19 28 03.5	
THN				*e*S	**Sn**	**19 29 03.3**	**+0.2**
THN	**Thein Dam**	**5.79**	**145**	*e*P	**Pn**	**19 28 02.5**	**+4.4**
THN				*e*S	**Sn**	**19 29 04.0**	**+0.9**
KBK	**Karagaybulak**	**5.89**	**23**	P	**Pn**	**19 28 03.0**	**+3.3**
	SNR=16						
KK31	**Karatay Array**	**5.91**	**351**	Pn	**Pn**	**19 28 01.5**	**+1.7**
KK31	**Karatay Array**	**5.91**	**351**	PN	**Pn**	**19 28 01.7**	**+1.9**
KK31	**Karatay Array**	**5.91**	**351**	⇑P	**Pn**	**19 28 01.7**	**+1.9**
	23nm,0.3s,baz=176,slow=12,SNR=1617						
KK31				S	**Sn**	**19 29 03.3**	**-2.8**
	21nm,0.3s,baz=171,slow=21,SNR=18						
KKAR	**Karatay Array**	**5.91**	**351**	Pn	**Pn**	**19 28 01.5**	**+1.7**
KKAR	**Karatay Array**	**5.91**	**351**		**Pn**	**19 28 01.5**	**+1.7**
KKAR	**Karatay Array**	**5.91**	**351**	PN	**Pn**	**19 28 01.5**	**+1.7**
ULHL	**Ulahol**	**6.02**	**33**	P	**Pn**	**19 28 04.0**	**+2.6**
	SNR=16						
CHMS	**Chumysh**	**6.14**	**20**	P	**Pn**	**19 28 05.9**	**+2.9**
	SNR=38						
CHMS	**Chumysh**	**6.14**	**20**	PN	**Pn**	**19 28 05.7**	**+2.8**
CHMS	**Chumysh**	**6.14**	**20**	⇑P	**Pn**	**19 28 05.7**	**+2.8**
	53nm,0.7s						
CHMS				⇓S	**Sn**	**19 29 11.3**	**-0.5**
	24nm,0.6s						
USP	**Ospenovka**	**6.33**	**18**	P	**Pn**	**19 28 07.7**	**+2.3**
	SNR=14						
TKM2	**Tokmak 2**	**6.34**	**26**	P	**Pn**	**19 28 08.6**	**+2.8**
	SNR=37						
TKM2	**Tokmak 2**	**6.34**	**26**	PN	**Pn**	**19 28 08.7**	**+3.0**
TKM2	**Tokmak 2**	**6.34**	**26**	⇑P	**Pn**	**19 28 08.7**	**+3.0**
	35nm,0.6s						
TKM2				⇑S	**Sn**	**19 29 18.1**	**+1.3**
	18nm,0.7s						
TARG	**Taragay, Kyrgy**	**6.42**	**44**	Pn	**Pn**	**19 28 08.0**	**+1.0**
TARG	**Taragay, Kyrgy**	**6.42**	**44**	PN	**Pn**	**19 28 08.0**	**+1.0**
SGDS	**Sogindy**	**6.54**	**18**	*e*PN	**Pn**	**19 28 10.0**	**+1.7**
SGDS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SGDS	**Sogindy**	**6.54**	**18**	*e*P	**Pn**	**19 28 10.1**	**+1.7**
	comp=Z,3.6nm,0.3s,baz=19						
SGDS				*e*S	**Sn**	**19 29 21.6**	**+0.3**
	baz=19						
BHK	**Bhakra**	**6.96**	**146**	*e*S	**Sn**	**19 29 29.6**	**-2.3**
BHK				*e*P	**Sn**	**19 29 30.3**	**-1.6**
MDOK	**Medeo**	**7.11**	**33**	PN	**Pn**	**19 28 19.7**	**+3.5**
MDOK	**Medeo**	**7.11**	**33**	*e*P	**Pn**	**19 28 19.2**	**+3.0**
	baz=34						
MDOK	**Medeo**	**7.11**	**33**	⇓P	**Pn**	**19 28 19.8**	**+3.5**
	comp=Z,20nm,0.6s						
KNDC	**Almaty**	**7.12**	**32**	PN	**Pn**	**19 28 19.9**	**+3.7**
KNDC	**Almaty**	**7.12**	**32**	⇓P	**Pn**	**19 28 19.9**	**+3.7**
	comp=Z,39nm,0.4s						
KNDC				⇑S	**Sn**	**19 29 36.8**	**+1.1**
	comp=Z,25nm,0.8s						
KUU	**Kurty**	**7.45**	**26**	*e*PN	**Pn**	**19 28 21.7**	**+1.0**
KUU				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KUU	**Kurty**	**7.45**	**26**

PKIN Phulchoki 14.98 126 *eP* **Pn 19 29 58.8 -2.6**
PKI Pulchoki 14.99 126 *eP* **Pn 19 29 58.8 -2.8**
GUN Gumba 15.07 124 *eP* **Pn 19 29 59.8 -2.8**
comp=E,44nm,0.4s
JIRN Jiri 15.44 124 *eP* **Pn 19 30 05.0 -2.3**
comp=E,96nm,0.4s
BVAR Borovoye Array 15.79 357 P **Pn 19 30 10.6 -0.5**
comp=E,1.4nm,0.4s,baz=165,slow=12,SNR=15
BVAR S Sn 19 32 57.6 -8.0
comp=E,1.7nm,0.6s,baz=170,slow=25,SNR=6.4
BRVK Borovoye 15.82 357 Pn 19 30 11.6 0.0
BRVK Borovoye 15.82 357 P **Pn 19 30 11.8 +0.2**
BRVK Borovoye 15.82 357 ⇓P **Pn 19 30 11.8 +0.2**
comp=E,5.4nm,1.0s
RAMN Ramite 16.18 125 *eP* **Pn 19 30 13.8 -2.7**
comp=E,55nm,0.4s
AKTO Aktyubinsk 16.47 327 P **Pn 19 30 18.8 -0.7**
comp=E,3.8nm,0.3s,baz=138,slow=15,SNR=22
AKTO S Sn 19 33 10.8 -11
comp=E,2.4nm,0.5s,baz=156,slow=21,SNR=3.8
AKTO Aktyubinsk 16.47 327 ⇓P **Pn 19 30 19.6 +0.1**
comp=E,8.6nm,0.9s
TAPN Taplejung 16.66 122 *eP* **Pn 19 30 19.9 -2.5**
comp=E,23nm,0.3s
ODAN Odare 16.76 124 *eP* **Pn 19 30 21.2 -2.4**
comp=E,5.6nm,0.5s
DGZ Jazzator, Alta 16.77 37 *i* P **Pn 19 30 23.0 -0.4**
DGZ pmax pmax
comp=Z,7.0nm,0.5s
LSA Lhasa 17.78 109 P **P 19 30 37.6 +1.9**
LSA IAmb IAmb 19 30 38.8
comp=Z,10nm,0.8s
LSA Lhasa 17.78 109 P **P 19 30 37.6 +1.9**
LSA pmax pmax
comp=Z,10.0nm,0.8s
GOMU GeErMu 18.45 86 P **P 19 30 40.5 -2.4**
ZAA0 Zalesovo Array 18.94 24 P **P 19 30 48.0 +0.4**
ZAA0 IAmb IAmb 19 30 48.8
comp=Z,8.6nm,0.5s
ZALV Zalesovo Beam 18.94 24 P **P 19 30 47.9 +0.3**
comp=Z,8.0nm,0.3s,baz=214,slow=9.9,SNR=64
ZALV Zalesovo Beam 18.94 24 *i* P **P 19 30 48.2 +0.6**
ZALV pmax pmax
comp=Z,8.0nm,0.3s
ARU Arti 21.13 339 P **P 19 31 10.0 -1.3**
comp=Z,1.3nm,0.3s,baz=120,slow=20,SNR=2.6
comp=Z,1.3nm,0.3s
ARU Arti 21.13 339 P **P 19 31 10.6 -0.7**
ARU IAmb IAmb 19 31 17.5
comp=Z,16nm,1.5s
ARU Arti 21.13 339 *d i* P **P 19 31 11.6 +0.3**
ARU 19 31 40.1
ARU S **S 19 35 06.9 +6.4**
ARU pmax pmax
comp=Z,7.0nm,1.4s
GNI Garni 21.30 286 *ce* P 19 31 06.7 -6.7
GNI pmax pmax
comp=Z,11nm,1.0s
GTA Gaotai 22.02 76 ⇑P **P 19 31 23.8 +2.7**
GTA pmax pmax
comp=Z,10.0nm,0.8s
BELG Belogornoye 22.72 319 *i* P **P 19 31 26.9 -1.0**
BELG pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 22.85 295 *i* P **P 19 31 26.2 -3.2**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
SHA1 Shidzhatmaz 23.03 295 *i* P **P 19 31 27.9 -3.5**
SONM Songino Array 27.36 56 P **P 19 32 11.6 +1.2**
comp=Z,0.8nm,0.6s,baz=251,slow=7.8,SNR=6.5
comp=Z,0.8nm,0.6s
NRIK Noril'sk 33.25 10 *ce* P **P 19 33 02.0 +0.1**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
MNK Minsk 34.43 314 *i* P **P 19 33 11.8 -0.5**
MNK *i* 19 34 30.6
MNK *i* 19 35 43.8
MNK *i* S **S 19 38 35.5 +2.7**
MNK *i* 19 43 24.1
MNK pmax pmax
comp=N,18nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK MLR MLR
comp=Z,51nm,17.0s
MNK MLR MLR
comp=N,1μm,21.0s
MNK MLR MLR
comp=E,3.0nm,13.0s
MNK Minsk 34.43 314 *i* P **P 19 33 11.8 -0.5**
comp=E,2.0nm,1.0s
MNK *i* P **P 19 33 11.8 -0.5**
comp=N,18nm,0.9s
MNK *i* P **P 19 33 11.8 -0.5**
comp=Z,7.0nm,0.8s,baz=283
MNK *i* pP **pP 19 33 32.6 -3.5**
MNK *i* PP **PP 19 34 30.6 -1.4**
MNK *i* S **S 19 38 35.6 +2.7**
MNK *i* sS **sS 19 39 12.1 -1.8**
MNK *i* SS **SnSn 19 40 58.3 +4.6**
MNK *i* LQ LQ 19 45 24.0
MNK *i* LR LR 19 47 30.9
MNK *i* LRM MLR 19 48 38.8
comp=Z,51nm,17.2s
MNK *i* LRM MLR 19 48 48.1
comp=N,1μm,21.1s
MNK *i* LRM MLR 19 48 54.8
comp=E,3.0nm,13.4s
FINES FINESS Array B 37.22 325 P **P 19 33 36.3 +0.3**
comp=E,3.5nm,1.0s,baz=120,slow=9.7,SNR=7.2
comp=E,3.5nm,1.0s
FINES FINESS Array B 37.22 325 P **P 19 33 35.7 -0.3**
FINES FINESS Array B 37.22 325 *ce* P **P 19 33 36.2 +0.2**
FINES pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 40.69 337 P **P 19 34 05.5 +0.6**
comp=Z,1.4nm,0.4s,baz=112,slow=7.9,SNR=17
comp=Z,1.4nm,0.4s
ARCES ARCESS Array B 40.69 337 P **P 19 34 04.7 -0.2**
ARCES IAmb IAmb 19 34 28.7
comp=Z,3.5nm,1.0s
ARCES ARCESS Array B 40.69 337 P **P 19 34 04.7 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
GSI Gunungsitoli 42.95 140 P **P 19 34 25.1 +1.3**
GSI IAmb IAmb 19 34 46.6
comp=Z,11nm,1.0s
NC303 NORSAR Array S 44.11 323 P **P 19 34 32.5 -0.2**
NB2 NORSAR Subarra 44.17 323 P **P 19 34 32.9 -0.3**
comp=Z,0.6nm,0.6s,baz=93,slow=7.9
NOA NORSAR Array B 44.17 323 P **P 19 34 32.7 -0.5**
comp=Z,0.9nm,0.6s,baz=95,slow=7.8,SNR=5.3
comp=Z,0.9nm,0.6s
TIXI Tiksi 44.81 22 P **P 19 34 38.1 0.0**
TIXI Tiksi 44.81 22 P **P 19 34 38.1 0.0**
TIXI pmax pmax
comp=Z,19nm,1.3s
KONO Kongsberg 44.91 320 P **P 19 34 38.4 -0.6**
KONO IAmb IAmb 19 34 46.1
comp=Z,7.0nm,1.1s
KONO Kongsberg 44.91 320 P **P 19 34 38.4 -0.6**
KONO pmax pmax
comp=Z,7.0nm,1.1s
FUORN Ofenpass-Fuorn 45.67 302 P P 19 34 43.6 -2.0
ERM Erimo 53.67 61 *ce* P **P 19 35 45.5 -0.5**
ERM pmax pmax
comp=Z,13nm,1.0s
ESDC Sonseca Array 57.68 298 P P 19 36 11.4 -3.4
comp=Z,0.1nm,0.4s,baz=60,slow=7.5,SNR=1.7
comp=Z,0.1nm,0.4s
EUNU Eureka 62.29 356 P **P 19 36 46.5 +0.8**
TORD Torodi Ar. Bea 66.40 269 P P 19 37 10.4 -2.9
comp=Z,13nm,0.6s,baz=46,slow=4.5,SNR=5.1
TOLK Toolik Lake Re 70.01 15 P **P 19 37 34.4 -0.7**
TOLK IAmb IAmb 19 37 48.8
comp=Z,12nm,1.3s
IMAR Indian Mountai 71.24 18 P **P 19 37 41.9 -0.6**
H21K Melozitna Rive 71.73 18 P **P 19 37 45.5 -0.1**
BMAR Burnt Mountain 72.04 14 P **P 19 37 47.7 +0.3**
INK Inuvik 73.04 10 P **P 19 37 53.5 +0.3**
comp=Z,2.9nm,0.2s,baz=28,slow=9.9,SNR=3.2
comp=Z,2.9nm,0.2s
C36M Paulatuk 73.05 6 P **P 19 37 52.8 -0.4**
ILAR Eielson Array 73.86 16 P **P 19 37 58.2 +0.1**
comp=Z,0.2nm,0.4s,baz=340,slow=4.8,SNR=2.3
comp=Z,0.2nm,0.4s
DBIC Dimbokro 75.40 267 P **P 19 38 05.7 -2.1**
comp=Z,1.2nm,0.5s,baz=323,slow=5.1,SNR=1.3
comp=Z,1.2nm,0.5s
YKA Yellowknife Ar 80.44 3 P **P 19 38 34.6 -0.3**
comp=Z,1.2nm,0.5s,baz=351,slow=5.1,SNR=10
comp=Z,1.2nm,0.5s
WRA Warramunga Arr 81.84 123 P **P 19 38 40.9 -2.0**
comp=Z,0.2nm,0.7s,baz=331,slow=5.2,SNR=1.4
comp=Z,0.2nm,0.7s

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*IDC **01** 19:47:42.9±0.5, 8°.80S×74°.73W, h28km±3km, mb4.1/19, mbtmp4.3/25, ML3.9/6, MS3.8/30, Error ellipse: s-maj=15.8km s-min=11.3km az=71.0*
*ARE **01** 19:47:43±1.7, 8°.86S±0°.06×74°.96W±0°.06, h42km±4km, Error ellipse: s-maj=8.7km s-min=7.0km az=142.0*
*VAO **01** 19:47:44.8±0.6, 8°.80S×74°.65W, h36km±4km, mb5.0*
*NEIC **01** 19:47:44.9±1.2, 8°.82S±0°.04×74°.84W±0°.05, h44km±6km, mb4.9/104, ML4.9(ARE), Error ellipse: s-maj=9.3km s-min=3.5km az=127.0*
ISC 01 19:47:42.8±0.4, 8°.77S±0°.04×74°.76W±0°.05, h30km±2km, h30km:pP-P, n253, σ1°.03/252, mb4.8/86, MS3.9/26, 4C, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.80**	**212**	Pn		**Pn**		**19 48 40.5**	**+1.2**
	51nm,0.3s,baz=51,slow=6.7,SNR=30								
NNA				Sn		**Sn**		**19 49 24.1**	**+1.0**
	134nm,0.3s,baz=52,slow=7.0,SNR=4.8								
NNA				Lg		Lg		19 49 39.4	
	229nm,0.3s,baz=104,slow=20,SNR=10.0								
NNA				LR		LR		19 50 16.3	
	comp=Z,726nm,18.5s,baz=50,slow=40								
	149nm,0.3s								
NNA	**Nana**	**3.80**	**212**	Pn		**Pn**		**19 48 40.0**	**+0.6**
ATAH	**Atahualpa**	**3.95**	**294**	Pn		**Pn**		**19 48 42.9**	**+1.1**
	22nm,0.3s,baz=115,slow=4.2,SNR=59								
ATAH				Lg		Lg		19 49 45.1	
	121nm,0.3s,baz=110,slow=22,SNR=7.9								
ATAH				LR		LR		19 50 34.0	
	comp=Z,2μm,19.8s,baz=135,slow=43								
	93nm,0.3s								
BOSC	**San Juan Bosco**	**6.70**	**326**			**Pn**		**19 49 17.9**	**-1.5**
MCRA	**Macar, Loja**	**6.76**	**310**	Pn		**Pn**		**19 49 18.3**	**-1.8**
MCRA	**Macar, Loja**	**6.76**	**310**	*eP*		**Pn**		**19 49 19.2**	**-0.9**
ARNL	**Arenillas**	**7.40**	**314**			**Pn**		**19 49 27.2**	**-1.5**
PIAT	**Ana Tenorio**	**8.47**	**336**	*eP*		**Pn**		**19 49 44.3**	**+0.4**
ETMB	**Extrema**	**8.50**	**98**	*eP*		**Pn**		**19 49 45.5**	**+1.5**
ETMB				*eS*		**Sn**		**19 51 17.3**	**-1.6**
SLOR	**San Lorenzo -**	**8.81**	**335**			**Pn**		**19 49 50.2**	**+1.6**
PTLC	**Puerto Leguiza**	**8.88**	**360**	*eP*		**Pn**		**19 49 46.2**	**-3.0**
BONI	**La Bonita**	**9.57**	**343**	*eP*		Pn		19 50 05.5	+6.7
IMBA	**Imbabura, San**	**9.62**	**339**	Pn		**Pn**		**19 50 01.6**	**+1.9**
OTAV	**Otavalo**	**9.67**	**337**	Pn		**Pn**		**19 50 01.2**	**+0.8**
OTAV	**Otavalo**	**9.67**	**337**	*eP*		**Pn**		**19 50 03.6**	**+3.2**
LPAZ	**La Paz**	**9.88**	**140**	Pn		**Pn**		**19 50 04.3**	**+0.8**
	1.0nm,0.3s,baz=325,slow=7.4,SNR=18								
LPAZ				Lg		Lg		19 52 59.4	
	6.5nm,0.3s,baz=66,slow=20,SNR=3.9								
LPAZ				LR		LR		19 54 24.5	
	comp=Z,435nm,21.8s,baz=328,slow=41								
	4.2nm,0.4s								
LPAZ	**La Paz**	**9.88**	**140**	Pn		**Pn**		**19 50 04.5**	**+1.1**
LPAZ	**La Paz**	**9.88**	**140**	*eP*		**Pn**		**19 50 05.1**	**+1.6**
LPAZ				*eS*		**Sn**		**19 51 54.5**	**+0.7**
TULM	**Tulcn-Chalpat**	**9.89**	**342**			**Pn**		**19 50 04.5**	**+1.0**
GCUF	**Volcan Galeras**	**10.26**	**345**	*eP**		**Pn**		**19 50 11.2**	**+2.8**
FLOC	**Florencia**	**10.32**	**355**	*eP*		**Pn**		**19 50 12.2**	**+3.3**
CRUC	**La Cruz**	**10.50**	**348**	*eP*		Pn		19 50 18.0	+6.4
PB12	**IPOC Station P**	**10.69**	**157**	Pn		**Pn**		**19 50 13.4**	**-0.7**
PB16	**IPOC Station P**	**10.79**	**152**	Pn		**Pn**		**19 50 17.4**	**+1.5**
GARC	**Garzon, Huila**	**10.91**	**356**	*eP*		Pn		19 50 22.8	+5.6
BBAC	**Balboa, Cauca**	**11.00**	**347**	*eP*		**Pn**		**19 50 19.9**	**+1.5**
SAML	**Samuel**	**11.44**	**92**	Pn		**Pn**		**19 50 24.5**	**+0.2**
GO01	**Chusmiza**	**12.10**	**154**			**Pn**		**19 50 33.5**	**-0.3**
PB08	**IPOC Station P**	**12.54**	**155**			**Pn**		**19 50 38.7**	**-0.9**
VILC	**Villavicencio,**	**12.84**	**5**	*eP*		**Pn**		**19 50 45.9**	**+2.4**
PB02	**IPOC Station P**	**13.33**	**160**	Pn		**Pn**		**19 50 51.9**	**+1.7**
CHIC	**Chingaza**	**13.35**	**4**	*eP*		**Pn**		**19 50 50.8**	**+0.1**
ROSC	**El Rosal**	**13.52**	**2**	Pn		**Pn**		**19 50 55.6**	**+2.5**
	3.1nm,0.3s,baz=180,slow=19,SNR=3.6								
ROSC				LR		LR		19 56 51.5	
	comp=Z,299nm,19.4s,baz=224,slow=40								
	9.5nm,0.5s								
GUY2C	**Guyana, Caldas**	**13.91**	**357**	*eP*		**Pn**		**19 51 01.4**	**+2.9**
PB09	**IPOC Station P**	**14.00**	**158**			**Pn**		**19 51 00.7**	**+1.3**
CBOC	**Ciudad Bolivar**	**14.59**	**355**	*eP*		**P**		**19 51 14.8**	**+1.3**
PB06	**IPOC Station P**	**14.73**	**161**			**Pn**		**19 51 09.5**	**+0.2**
LVC	**Limon Verde**	**14.87**	**158**	Pn		**Pn**		**19 51 12.6**	**+1.3**
	0.2nm,0.3s,baz=329,slow=12,SNR=2.1								
LVC				LR		LR		19 57 29.7	
	comp=Z,140nm,18.4s,baz=330,slow=40								
	2.8nm,0.6s								
LVC	**Limon Verde**	**14.87**	**158**			**Pn**		**19 51 11.6**	**+0.3**
VILB	**Vilhena**	**14.89**	**108**	*eP*		**Pn**		**19 51 10.7**	**-0.7**
SIV	**San Ignacio**	**15.17**	**120**	Pn		**Pn**		**19 51 14.7**	**-0.4**
	0.9nm,0.3s,baz=292,slow=12,SNR=249								
SIV				Lg		Lg		19 55 41.1	
	1.0nm,0.3s,baz=189,slow=20,SNR=5.2								
SIV				LR		LR		19 57 25.0	
	comp=Z,676nm,18.8s,baz=274,slow=38								
PTBC	**PUERTO BERRIO,**	**15.21**	**1**	*eP*		**Pn**		**19 51 15.8**	**+0.2**
PB15	**IPOC Station P**	**15.23**	**161**			**P**		**19 51 17.7**	**-3.0**
BBSD	**Serra de San D**	**16.12**	**123**	*eP*		**Pn**		**19 51 27.0**	**-0.4**
PTLB	**Pontes e Lacer**	**16.65**	**115**	*eP*		**Pn**		**19 51 33.0**	**-1.1**
GO02	**Mina Guanaco**	**17.03**	**164**			**Pn**		**19 51 37.8**	**-1.4**
BBRB	**Robore, Bolivi**	**17.33**	**125**	*eP*		**Pn**		**19 51 42.1**	**-0.5**
AC01	**Pan de Azucar**	**17.73**	**168**			**Pn**		**19 51 46.7**	**-0.8**
PDRB	**Porto dos Gac**	**17.97**	**101**	*eP*		**P**		**19 51 51.6**	**+0.7**
BOAV	**Boa Vista**	**18.01**	**53**	*eP*		**Pn**		**19 51 51.6**	**+0.5**
SDV	**Santo Domingo**	**18.01**	**13**	**P**		**P**		**19 51 52.2**	**+0.7**
	1.9nm,0.3s,baz=206,slow=11,SNR=9.8								
SDV				LR		LR		19 59 47.5	
	comp=Z,176nm,18.9s,baz=187,slow=40								
	15nm,0.7s								
SDV	**Santo Domingo**	**18.01**	**13**	P		**Pn**		**19 51 52.1**	**+0.8**
SDV	**Santo Domingo**	**18.01**	**13**	*eP*		**P**		**19 51 52.4**	**+0.9**
SJCC	**San Jacinto, C**	**18.55**	**359**	*eP*		**P**		**19 51 57.2**	**0.0**
AC02	**Maricunga**	**18.75**	**164**			**P**		**19 51 59.0**	**-0.9**
CLDB	**Colider**	**18.80**	**98**	*eP*		**Pn**		**19 52 01.2**	**+0.5**
BAUV	**El Baul**	**18.82**	**21**	P		**P**		**19 52 00.1**	**-0.2**
BAUV				IAmb		IAmb		19 52 05.5	
	comp=Z,45nm,0.7s								
AC06	**Mina Casimiro**	**18.95**	**168**			**Pn**		**19 52 02.0**	**-0.5**
NPGB	**Novo Progresso**	**19.29**	**86**	*eP*		**P**		**19 52 06.2**	**+0.8**
ITTB	**Itaituba**	**19.40**	**78**	*eP*		**Pn**		**19 52 08.2**	**+0.3**
SMRC	**Santa Marta, M**	**19.81**	**2**	*eP*		**P**		**19 52 09.8**	**-1.3**
SALV	**Santo Antonio**	**19.92**	**113**	*eP*		**Pn**		**19 52 13.4**	**-0.6**
AC05	**El Transito**	**20.41**	**169**	P		**P**		**19 52 16.6**	**-1.0**
MURT	**Porto Murtinho**	**20.90**	**130**	*eP*		**P**		**19 52 22.6**	**-0.3**
PCRV	**Puerto La Cruz**	**21.35**	**28**	P		**P**		**19 52 29.6**	**+1.9**
	comp=Z,13nm,0.7s,baz=260,slow=4.6,SNR=9.5								
PCRV				LR		LR		20 01 50.7	
	comp=Z,429nm,19.6s,slow=40								
	comp=Z,13nm,0.7s								
CO01	**Juntas del Tor**	**21.55**	**169**	P		**P**		**19 52 29.6**	**-0.5**
AQDB	**Aquidauana**	**21.78**	**124**	P		**P**		**19 52 32.4**	**0.0**
AQDB	**Aquidauana**	**21.78**	**124**	*eP*		**P**		**19 52 32.6**	**+0.3**
ORTG	**Ortega, Santa**	**21.78**	**331**	P		**P**		**19 52 33.1**	**+0.6**
CO06	**Fray Jorge**	**21.99**	**173**	P		**P**		**19 52 33.9**	**-0.6**
CO06				IAmb		IAmb		19 52 47.3	
	comp=Z,38nm,1.3s								
CO03	**El Pedregal**	**22.29**	**171**	P		**P**		**19 52 37.8**	**-0.1**
CO03				IAmb		IAmb		19 52 52.1	
	comp=Z,66nm,1.8s								
ANTJ	**Antonio Joao (**	**22.33**	**128**	*eP*		**P**		**19 52 37.4**	**-0.9**
SNDB	**Serra Nova Dou**	**23.30**	**100**	*eP*		**P**		**19 52 48.5**	**+0.1**
C2SB	**Chapadao do Su**	**23.47**	**117**	*eP*		**P**		**19 52 50.9**	**+0.8**
CPUP	**Villa Florida**	**24.06**	**139**	P		**P**		**19 52 54.5**	**-1.0**
	comp=Z,9.5nm,0.9s,baz=313,slow=9.7,SNR=11								
CPUP				LR		LR		20 04 30.8	
	comp=Z,255nm,20.2s,baz=316,slow=42								
	comp=Z,9.5nm,0.9s								
CPUP	**Villa Florida**	**24.06**	**139**	P		**P**		**19 52 54.5**	**-1.0**
VA03	**San Esteban**	**24.20**	**171**	P		**P**		**19 52 56.4**	**-0.5**
ROC1	**El Roble**	**24.34**	**172**	P		**P**		**19 52 58.4**	**0.0**
TOSP	**Speyside**	**24.45**	**36**	P		**P**		**19 53 00.3**	**+1.1**
TOSP				IAmb		IAmb		19 53 25.0	
	comp=Z,71nm,1.3s								
GRGR	**Grenville**	**24.51**	**32**	P		**P**		**19 52 59.2**	**-0.5**
PRPB	**Parauapebas**	**24.86**	**86**	*eP*		**P**		**19 53 03.8**	**+0.7**
TRCB	**Terra Rica**	**25.40**	**126**	*eP*		**P**		**19 53 08.7**	**+0.8**
SVB	**Belmont**	**25.68**	**32**	P		**P**		**19 53 09.5**	**-0.9**
SVB				IAmb		IAmb		19 53 17.8	
	comp=Z,43nm,0.9s								
PCMB	**Pacaembu**	**25.97**	**122**	*eP*		**P**		**19 53 12.2**	**-0.8**
MDP	**Montagnes des**	**26.00**	**59**	LR		LR		20 03 57.3	
	comp=Z,370nm,19.3s,baz=250,slow=38								
BO02	**Sierra Bellavi**	**26.16**	**173**	P		**P**		**19 53 14.0**	**-0.6**
BO02				IAmb		IAmb		19 53 44.9	
	comp=Z,31nm,1.7s								
SMTB	**Santa Maria do**	**26.85**	**92**	*eP*		**P**		**19 53 21.6**	**+0.5**
ITQB	**Itaqui**	**26.86**	**143**	P		**P**		**19 53 20.7**	**-0.3**
ITQB	**Itaqui**	**26.86**	**143**	*eP*		**P**		**19 53 20.9**	**0.0**
BDFB	**Brasilia**	**27.00**	**107**	P		**P**		**19 53 23.6**	**+1.1**
	comp=Z,2.7nm,0.6s,baz=267,slow=16,SNR=5.4								
BDFB				LR		LR		20 04 38.0	
	comp=Z,661nm,19.8s,baz=311,slow=38								
	comp=Z,2.7nm,0.6s								
BDFB	**Brasilia**	**27.00**	**107**	P		**P**		**19 53 22.5**	**0.0**
BDFB				IAmb		IAmb		19 53 53.7	
	comp=Z,31nm,1.3s								
IPMB	**Ipameri, GO**	**27.37**	**112**	*eP*		**P**		**19 53 24.9**	**-0.8**
SJG	**San Juan**	**28.03**	**18**	P		**P**		**19 53 31.9**	**+0.4**
	comp=Z,24nm,0.5s,baz=169,slow=8.0,SNR=12								
SJG	**San Juan**	**28.03**	**18**	P		**P**		**19 53 31.2**	**-0.3**
SJG				IAmb		IAmb		19 53 35.6	
	comp=Z,32nm,0.7s								
HUMP	**Col San Antoni**	**28.15**	**18**	P		**P**		**19 53 32.9**	**+0.4**
ITAB	**Concordia**	**28.20**	**134**	P		**P**		**19 53 31.6**	**-1.4**
ITAB				IAmb		IAmb		19 53 48.9	
	comp=Z,44nm,1.3s								
ITAB	**Concordia**	**28.20**	**134**	*eP*		**P**		**19 53 34.1**	**+1.1**
GCPR	**Guaynabo City**	**28.23**	**18**	P		**P**		**19 53 33.3**	**0.0**
GCPR				IAmb		IAmb		19 53 38.7	
	comp=Z,24nm,0.7s								
CBYP	**Canovanas**	**28.27**	**18**	P		**P**		**19 53 33.6**	**-0.1**
CBYP				IAmb		IAmb		19 53 38.7	
	comp=Z,25nm,0.6s								
CPSB	**Cacapava Do Su**	**29.33**	**140**	*eP*		**P**		**19 53 42.5**	**-0.5**
PLTB	**Pedras Altas**	**30.17**	**142**	P		**P**		**19 53 49.7**	**-0.7**
PLTB				IAmb		IAmb		19 53 51.1	
	comp=Z,15nm,0.7s								
PLTB	**Pedras Altas**	**30.17**	**142**	*eP*		**P**		**19 53 49.9**	**-0.6**
JANB	**Januaria**	**30.42**	**105**	*eP*		**P**		**19 53 52.3**	**-0.6**
GO06	**Curarrehue**	**30.83**	**175**	P		**P**		**19 53 55.7**	**-0.6**
TRQA	**Tornquist**	**31.36**	**160**	P		**P**		**19 53 59.9**	**-1.0**
TEIG	**Tepich**	**31.73**	**335**	P		**P**		**19 54 04.1**	**-0.2**
TEIG				IAmb		IAmb		19 54 15.9	
	comp=Z,20nm,1.2s								
TEIG	**Tepich**	**31.73**	**335**	P		**P**		**19 54 04.0**	**-0.2**
TEIG				pP		**sP**		**19 54 15.9**	**-0.8**
PLCA	**Paso Flores**	**32.05**	**174**	P		**P**		**19 54 07.0**	**0.0**
	comp=Z,2.4nm,0.8s,baz=337,slow=10,SNR=8.9								
PLCA				PcP		**PcP**		**19 56 56.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=352,slow=4.4,SNR=5.2								
	comp=Z,2.4nm,0.8s								
PLCA	**Paso Flores**	**32.05**	**174**	P		**P**		**19 54 06.5**	**-0.6**
PLCA	**Paso Flores**	**32.05**	**174**	P		**P**		**19 54 06.4**	**-0.6**
PLCA				sP		**sP**		**19 54 24.1**	**+4.6**
LL04	**Puerto Octay**	**32.08**	**177**	P		**P**		**19 54 05.9**	**-1.3**
LL04				IAmb		IAmb		19 54 07.1	
	comp=Z,7.6nm,0.8s								
CMIG	**Matias Romero**	**32.50**	**322**	LR		LR		20 05 54.1	
	comp=Z,127nm,18.6s,baz=180,slow=34								
NBAN	**Anadia - AL**	**37.99**	**94**	*eP*		**P**		**19 54 57.9**	**-0.6**
NBAN				*epP*		**pP**		**19 55 07.3**	**0.0**
RCBR	**Riachuelo**	**38.64**	**88**	LR		LR		20 12 05.7	
	comp=Z,280nm,19.4s,baz=48,slow=38								
W50A	**Signal Mountai**	**44.85**	**348**	P		**P**		**19 55 54.2**	**-0.2**
EFI	**East Falkland**	**44.92**	**165**	P		**P**		**19 55 54.6**	**-0.1**
EFI				IAmb		IAmb		19 56 05.9	
	comp=Z,29nm,1.2s								
TKL	**Tuckaleechee C**	**45.00**	**350**	LR		LR		20 16 57.7	
	comp=Z,53nm,18.7s,baz=180,slow=39								
T59A	**Double "B" Far**	**45.57**	**357**	P		**P**		**19 56 00.6**	**+0.5**
T59A				IAmb		IAmb		19 56 02.0	
	comp=Z,12nm,0.8s								
V48A	**Smith Brothers**	**45.71**	**346**	P		**P**		**19 56 00.7**	**-0.5**
V48A				IAmb		IAmb		19 56 11.7	
	comp=Z,6.4nm,0.7s								
T57A	**Hurt**	**45.72**	**355**	P		**P**		**19 56 01.7**	**+0.4**
T57A				IAmb		IAmb		19 56 03.0	
	comp=Z,12nm,0.8s								
S57A	**Dark Hollow, R**	**46.45**	**355**	P		**P**		**19 56 07.7**	**+0.7**
S57A				IAmb		IAmb		19 56 19.0	
	comp=Z,11nm,0.7s								
R58B	**Mineral**	**46.58**	**357**	P		**P**		**19 56 08.3**	**+0.3**
R58B				IAmb		IAmb		19 56 10.1	
	comp=Z,7.7nm,0.8s								
WHAR	**Wooly Hollow**	**46.84**	**340**	P		**P**		**19 56 09.7**	**-0.5**
WHAR				IAmb		IAmb		19 56 50.4	
	comp=Z,8.7nm,1.2s								
TX32	**Lajitas Array**	**47.02**	**325**	P		**P**		**19 56 11.6**	**-0.2**
TXAR	**Lajitas Array**	**47.02**	**325**	P		**P**		**19 56 12.5**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=148,slow=8.5,SNR=22								
TXAR				pP		**sP**		**19 56 21.4**	**-2.9**
	comp=Z,4.2nm,0.8s,baz=150,slow=8.9,SNR=19								
TXAR				LR		LR		20 15 40.6	
	comp=Z,58nm,19.0s,baz=114,slow=36								
	comp=Z,1.3nm,0.6s								
TXAR	**Lajitas Array**	**47.02**	**325**	P		**P**		**19 56 12.2**	**+0.5**
X37A	**Clayton**	**47.33**	**337**	P		**P**		**19 56 14.0**	**0.0**
ABTX	**Abilene, Hawle**	**47.51**	**331**	P		**P**		**19 56 15.8**	**+0.4**
ABTX				IAmb		IAmb		19 56 27.5	
	comp=Z,16nm,0.8s								
HHAR	**Hobbs**	**48.31**	**339**	P		**P**		**19 56 20.9**	**-0.6**
X34A	**Smith Ranch, M**	**48.35**	**334**			**P**		**19 56 21.9**	**0.0**
MVL	**Millersville**	**48.54**	**358**	P		**P**		**19 56 23.7**	**+0.5**
SSPA	**Standing Stone**	**49.24**	**357**	P		**P**		**19 56 29.2**	**+

PD31 Pinedale Array 60.31 331 P **P** **19 57 48.4 -0.6**
PDAR Pinedale Array 60.31 331 P **P** **19 57 49.6 +0.6**
comp=Z,0.2nm,0.3s,baz=90,slow=4.6,SNR=3.7
comp=Z,0.2nm,0.3s
PDAR Pinedale Array 60.31 331 P **P** **19 57 48.7 -0.3**
HWUT Hardware Ranch 60.44 329 P **P** **19 57 49.6 -0.3**
HWUT IAmb IAmb 19 58 01.3
comp=Z,8.6nm,0.7s
ELK Elko 61.78 326 pP pP 19 58 07.8 -0.6
comp=Z,1.4nm,0.6s,baz=136,slow=7.6,SNR=5.4
NVAR Mina Array Bea 62.03 322 P **P** **19 58 01.4 +0.6**
comp=Z,0.9nm,0.8s,baz=120,slow=8.0,SNR=5.6
NVAR pP **pP** **19 58 10.2 0.0**
comp=Z,2.5nm,0.8s,baz=150,slow=6.8,SNR=12
comp=Z,0.9nm,0.8s
NVAR Mina Array Bea 62.03 322 P **P** **19 58 00.6 -0.2**
YHB Horse Butte 62.59 332 P **P** **19 58 05.2 +0.8**
YHB IAmb IAmb 19 58 17.3
comp=Z,8.3nm,0.8s
BOZ Bozeman (W) 63.42 332 P **P** **19 58 10.2 +0.3**
BOZ IAmb IAmb 19 58 22.3
comp=Z,13nm,1.4s
SCHQ Schefferville 63.71 5 P **P** **19 58 11.6 +0.2**
comp=Z,3.0nm,0.5s,baz=175,slow=11,SNR=3.0
SCHQ LR LR 20 26 51.1
comp=Z,33nm,19.4s,baz=122,slow=37
comp=Z,3.0nm,0.5s
I07A Izee 66.36 326 P **P** **19 58 29.4 +0.5**
I07A IAmb IAmb 19 58 41.3
comp=Z,10nm,0.9s
YBH Yreka Blue Hor 66.73 323 pP pP 19 58 41.1 +0.4
comp=Z,3.9nm,0.8s,baz=89,slow=8.9,SNR=7.6
MACI Morro de la Ar 67.20 54 P **P** **19 58 35.6 +0.9**
PMOZ Porto Moniz, M 68.61 50 P **P** **19 58 43.7 +0.3**
EDM Edmonton 69.91 336 P **P** **19 58 50.2 -0.8**
EDM IAmb IAmb 19 59 02.7
comp=Z,12nm,0.8s
LIC Lamto 71.09 80⇑ *e*P **P** **19 58 58.4 -0.5**
comp=Z,34nm,0.5s
TIC Toumodi 71.18 80⇑ *e*P **P** **19 58 58.9 -0.6**
comp=Z,56nm,0.6s
DBIC Dimbokro 71.34 80 P **P** **19 59 00.3 -0.2**
comp=Z,38nm,0.4s,baz=271,slow=5.2,SNR=119
DBIC LR LR 20 28 50.1
comp=Z,44nm,18.7s,baz=69,slow=35
DBIC Dimbokro 71.34 80 P **P** **19 59 00.2 -0.2**
DBIC Dimbokro 71.34 80 P **P** **19 58 59.6 -0.8**
DBIC pP **sP** **19 59 12.4 -1.0**
KIC Kosan Boka 71.39 80 *e*P **P** **19 59 00.0 -0.8**
comp=Z,75nm,0.4s
TBI Tubuai 72.58 248 *e*LR LR 20 21 17.3
comp=Z,105nm,36.8s
PPT2 Papeete2 73.00 254 *e*LR LR 20 21 28.7
comp=Z,128nm,27.2s
PPT Papeete 73.00 254 LR LR 20 25 14.1
comp=Z,64nm,18.9s,baz=75,slow=31
KOWA Kowa 73.85 72 LR LR 20 30 07.7
comp=Z,113nm,20.8s,baz=299,slow=34
KOWA Kowa 73.85 72 P **P** **19 59 15.1 -0.3**
VNA3 Neumayer Olymp 73.86 162 P **P** **19 59 14.9 +0.4**
VNA1 Neumayer--Stat 74.09 161 P **P** **19 59 16.7 +1.0**
VNA2 Neumayer--Watz 74.45 162 P **P** **19 59 18.2 +0.4**
baz=283,slow=5.0
SNAA Sanae 76.07 162 P **P** **19 59 27.7 +0.4**
SNAA Sanae 76.07 162 P **P** **19 59 27.1 -0.1**
SNAA IAmb IAmb 19 59 28.6
comp=Z,23nm,1.7s
MORF Marmelete 76.83 48 *e*P **P** **19 59 33.3 +1.2**
comp=Z,66nm,1.6s
PNCL Nicolau / Gran 77.22 48 *e*P **P** **19 59 35.4 +1.2**
YKA Yellowknife Ar 77.39 342 P **P** **19 59 34.6 0.0**
comp=Z,3.6nm,0.8s,baz=142,slow=6.0,SNR=13
YKA pP **pP** **19 59 43.2 -0.9**
comp=Z,2.3nm,0.5s,baz=145,slow=6.1,SNR=9.6
comp=Z,3.6nm,0.8s
PCVE Castro Verde 77.40 48 *e*P **P** **19 59 37.0 +1.7**
TROLL Troll, Antarti 77.79 162 P **P** **19 59 37.7 +0.8**
DY2G Dye2 77.88 11 *e*P **P** **19 59 37.7 +0.2**
PCAS Casmilo, Conde 77.97 46 *e*P **P** **19 59 39.2 +0.8**
comp=Z,24nm,2.2s
PESTR Estremoz 78.18 47 *e*P **P** **19 59 41.0 +1.4**
comp=Z,18nm,1.5s
MDT Midelt 78.41 54 P **P** **19 59 41.5 +0.4**
comp=Z,3.9nm,0.9s,baz=267,slow=6.3,SNR=7.5
MDT LR LR 20 30 58.7
comp=Z,85nm,21.6s,baz=305,slow=33
comp=Z,3.9nm,0.9s
PCBR Castelo Branco 78.62 46 *e*P **P** **19 59 42.2 +0.2**
comp=Z,16nm,1.7s
PVIS Viseu 78.65 45 *e*P **P** **19 59 42.6 +0.4**
comp=Z,18nm,1.8s
MTE Manteigas 78.78 46 *e*P **P** **19 59 43.5 +0.6**
comp=Z,20nm,1.9s
MTE Manteigas 78.78 46 P **P** **19 59 43.1 +0.1**
MTE IAmb IAmb 20 00 10.3
comp=Z,16nm,1.3s
TOA0 Torodi Ar. Sit 78.97 75 P **P** **19 59 43.9 -0.5**
TORD Torodi Ar. Bea 78.97 75 P **P** **19 59 44.0 -0.4**
comp=Z,19nm,0.7s,baz=282,slow=5.2,SNR=122
TORD LR LR 20 32 50.9
comp=Z,93nm,19.3s,baz=226,slow=34
comp=Z,19nm,0.7s
MVO Moncorvo 79.42 45 *e*P **P** **19 59 47.0 +0.6**
comp=Z,19nm,1.6s
PAB San Pablo 80.78 48 P **P** **19 59 53.7 -0.1**
PAB IAmb IAmb 20 00 08.1
comp=Z,16nm,1.4s
ESDC Sonseca Array 81.10 48 P **P** **19 59 55.8 +0.3**
comp=Z,3.7nm,0.9s,baz=255,slow=6.1,SNR=22
ESDC LR LR 20 31 09.5
comp=Z,54nm,21.8s,baz=249,slow=32
comp=Z,3.7nm,0.9s
ESDC Sonseca Array 81.10 48 P **P** **19 59 55.9 +0.3**
ESBB Sonseca Array 81.11 48 P **P** **19 59 56.0 +0.5**
ESBB IAmb IAmb 19 59 57.6
comp=Z,9.1nm,1.1s
QSPA South Pole Qui 81.35 180 P **P** **19 59 56.4 0.0**
TAM Tamanrasset 84.51 66 P **P** **20 00 13.4 -0.3**
TAM IAmb IAmb 20 00 15.7
comp=Z,8.1nm,0.8s
SUMG Summit 84.51 10 P **P** **20 00 13.3 +0.4**
SUMG IAmb IAmb 20 00 14.6
comp=Z,11nm,0.7s
SUMG Summit 84.51 10 *i*P **P** **20 00 13.9 +1.0**
M27K Edge Creek, AK 87.40 335 P **P** **20 00 27.4 +0.3**
M27K IAmb IAmb 20 00 29.1
comp=Z,11nm,1.2s
VRDI Verde Repeater 87.64 333 P **P** **20 00 27.7 -0.6**
VRDI IAmb IAmb 20 00 51.5
comp=Z,19nm,1.5s
BCAR Beaver Creek A 87.66 335 P **P** **20 00 28.8 +0.6**
L27K Beaver Creek, 87.67 335 P **P** **20 00 28.9 +0.6**
L27K IAmb IAmb 20 00 38.0
comp=Z,5.7nm,0.8s
VNDA Vanda 88.31 190 P **P** **20 00 31.5 +0.4**
comp=Z,0.9nm,0.9s,baz=104,slow=5.3,SNR=6.1
comp=Z,0.9nm,0.9s
VNDA Vanda 88.31 190 P **P** **20 00 31.1 +0.1**
VNDA IAmb IAmb 20 01 21.6
comp=Z,6.2nm,0.9s
KLU Klutina 88.84 333 P **P** **20 00 33.9 +0.1**
TSUM Tsumeb 89.35 109 LR LR 20 36 55.8
comp=Z,119nm,20.5s,baz=322,slow=33
SCM Sheep Creek Mo 89.59 333 P **P** **20 00 37.2 -0.2**
J25K Salcha River, 89.72 336 P **P** **20 00 38.1 +0.1**
SML Sawmill 90.03 333 P **P** **20 00 39.2 -0.2**
KEST Kesra 90.31 54 LR LR 20 40 00.4
comp=Z,50nm,20.9s,baz=286,slow=35
ILAR Eielson Array 90.39 336 P **P** **20 00 41.1 +0.2**
comp=Z,0.9nm,0.8s,baz=131,slow=4.7,SNR=5.4
ILAR pP **pP** **20 00 49.8 -0.8**
comp=Z,0.6nm,0.5s,baz=78,slow=4.9,SNR=4.4
comp=Z,0.9nm,0.8s
MDM Murphy Dome 90.99 336 P **P** **20 00 43.7 -0.1**
MOTA Moosalm 93.58 43 *i*P **P** **20 00 56.4 +0.1**
comp=Z,1.3nm,0.5s
SQTA Sankt Quirin 93.64 43 *e*P **P** **20 00 56.8 +0.3**
comp=Z,2.6nm,0.5s
CTI Castel Tesino 93.76 44 P **P** **20 00 57.0 -0.1**
CTI IAmb IAmb 20 00 57.7
comp=Z,4.1nm,0.8s
WATA Walderalm 93.90 43 *e*P **P** **20 00 57.8 0.0**
comp=Z,1.3nm,0.5s
WTTA Wattenberg 93.93 43 *e*P **P** **20 00 58.1 +0.1**
comp=Z,4.3nm,0.9s
ABTA Abfaltersbach 94.45 44 *i*P **P** **20 01 01.3 +1.0**
comp=Z,4.7nm,1.0s

BOSA Boshof 94.53 120 P **P** **20 01 01.4 +0.3**
comp=Z,3.5nm,1.0s,baz=301,slow=5.9,SNR=2.4
BOSA LR LR 20 41 10.9
comp=Z,70nm,18.8s,baz=192,slow=34
comp=Z,3.5nm,1.0s
AFI Afiamalu 94.65 255 LR LR 20 33 49.8
comp=Z,53nm,18.5s,baz=74,slow=29
CLUD Cludinico 94.66 44 P **P** **20 01 01.4 +0.2**
KBA Koelnbreinsper 95.06 43 *i*P **P** **20 01 03.8 +0.6**
comp=Z,2.0nm,0.7s
BIOA Bad Ischl, Aus 95.33 43 *e*P **P** **20 01 05.0 +0.8**
comp=Z,2.1nm,0.6s
CLL Collm 95.37 39 *e*P **P** **20 01 05.0 +0.8**
CLL *e*x x 20 01 10.0
CLL *e*x x 20 01 14.0
CLL *es*P **sP** **20 01 21.0 +3.6**
GERES GERESS Array B 95.52 42 P **P** **20 01 05.4 +0.3**
comp=Z,0.3nm,0.7s,baz=213,slow=4.6,SNR=3.7
comp=Z,0.3nm,0.7s
LBTB Lobatse 95.60 116 LR LR 20 41 15.3
comp=Z,67nm,19.1s,baz=185,slow=34
NOA NORSAR Array B 95.65 29 P **P** **20 01 06.2 +0.9**
comp=Z,0.9nm,0.7s,baz=256,slow=7.1,SNR=3.5
NOA LR LR 20 41 31.2
comp=Z,20nm,19.8s,baz=300,slow=34
comp=Z,0.9nm,0.7s
MOA Molln 95.77 43 *e*P **P** **20 01 07.1 +0.9**
comp=Z,3.5nm,1.0s
LSZ Lusaka 100.03 107 LR LR 20 45 13.5
comp=Z,76nm,18.8s,baz=203,slow=34
DZM Mont Dzumac 112.65 242 *e*LR LR 20 39 50.6
comp=Z,79nm,38.0s
STKA Stephens Creek 126.70 219 PKP **PKPdf** **20 06 43.5 -0.6**
comp=Z,2.4nm,0.7s,baz=106,slow=4.9,SNR=7.1
STKA pPKP **pPKPdf** **20 06 53.3 -0.7**
comp=Z,2.0nm,0.6s,baz=345,slow=2.7,SNR=2.4
ZALV Zalesovo Beam 132.04 16 PKP **PKPdf** **20 06 53.9 +0.4**
comp=Z,4.0nm,0.6s,baz=264,slow=2.0,SNR=19
KURBB Kurchatov Arra 132.78 23 PKP **PKiKP** **20 06 55.9 -0.2**
comp=Z,1.5nm,0.5s,baz=316,slow=2.8,SNR=5.3
ASAR Alice Springs 137.29 220 PKP **PKPdf** **20 07 03.9 -0.4**
comp=Z,1.3nm,0.5s,baz=119,slow=1.7,SNR=12
ASAR pPKP **pPKPdf** **20 07 13.2 -1.1**
comp=Z,1.4nm,0.6s,baz=130,slow=2.3,SNR=5.8
MKAR Makanchi Array 137.34 23 PKP **PKPdf** **20 07 03.9 +0.2**
comp=Z,2.2nm,0.8s,baz=340,slow=2.1,SNR=17
WRA Warramunga Arr 139.57 225 PKP **PKPdf** **20 07 08.2 -0.3**
comp=Z,1.7nm,0.5s,baz=120,slow=2.1,SNR=22
WRA pPKP **pPKPdf** **20 07 17.9 -0.5**
comp=Z,2.7nm,0.7s,baz=119,slow=2.1,SNR=7.8
SONM Songino Array 141.05 359 PKP **PKPdf** **20 07 10.6 +0.1**
comp=Z,1.2nm,0.7s,baz=297,slow=1.6,SNR=6.5
KSRS Korea Array 144.83 328 PKP **PKPab** **20 07 16.1 -0.2**
comp=Z,1.1nm,1.0s,baz=38,slow=2.8,SNR=6.7
FITZ Fitzroy Crossi 146.56 217 PKPbc **PKPbc** **20 07 22.1 -0.2**
comp=Z,6.7nm,0.7s,baz=188,slow=3.4,SNR=15
PZH PanZhiHua 162.05 10 PKP **PKPdf** **20 07 39.3 -2.9**
CMAR Chiang Mai Arr 168.59 32 PKP **PKPdf** **20 07 47.7 0.0**
comp=Z,0.8nm,0.5s,baz=290,slow=2.6,SNR=2.9
CMAR PKPab **PKPab** **20 08 58.2 +1.0**
comp=Z,1.9nm,0.8s,baz=312,slow=5.5,SNR=9.3

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*IDC **01** 19:52:05.3±0.4,27.°83S×176.°92W,h0km,mb4.9/22, mbtmp4.8/22,MS4.1/45,Error ellipse: s-maj=16.8km s-min=13.0km az=125.0*
*NEIC **01** 19:52:07.2±1.7,27.°81S±0.°07×176.°82W±0.°09,h10km±1km, mb5.1/95,Error ellipse: s-maj=15.9km s-min=9.8km az=125.0*
*MOS **01** 19:52:07.3±1.0,27.°82S×176.°93W,h20km,mb5.3/20, Error ellipse: s-maj=11.1km s-min=9.5km az=96.6*
*NOU **01** 19:52:08.1,28.°16S×176.°09W,h54km,mb5.1/61, Kermadec Islands Region*
*BJI **01** 19:52:11.7±0.0,27.°50S×176.°18W,h64km,mb5.3/33, mB5.3/16,Ms4.8/5,Ms7 4.6/3*
*GCMT **01** 19:52:12.2±0.3,27.°88S±0.°02×176.°52W±0.°02,h37km, MW5.0/84,Moment Tensor Solution. s60,c77; s84,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.92±.19; $M_{\theta\theta}$0.03±.14; $M_{\phi\phi}$-3.95±.12; $M_{r\theta}$0.83±.15; $M_{\theta\phi}$-0.35±.13; $M_{\phi r}$1.69±.12; Best double couple: $M_0$4.37600×10^{16} NP1:ϕ_s14.00000°,δ58.00000°,λ100.00000°. NP2: ϕ_s176.00000°,δ34.00000°,λ75.00000°. Principal axes: T 4.3930, Plg75.0000°, Azm312.0000°; N -0.0340, Plg8.0000°, Azm189.0000°; P -4.3580, Plg12.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 19:52:11.7±0.3,28.°10S±0.°04×176.°80W±0.°05,h49km, n623,σ1$60/573,mb5.1/112,MS4.2/50,41C-25D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.51**	**220**	Pn	**Pn**	**19 52 37.8**	**+1.5**
	4μm,0.3s,baz=94,slow=5.5,SNR=218						
RAO				Sn	**Sn**	**19 52 58.4**	**+3.6**
	17μm,0.3s,baz=74,slow=23,SNR=12						
RAO				LR	LR	19 53 08.6	
	comp=Z,2μm,18.8s,baz=32,slow=38						
RAO	**Raoul Island**	**1.51**	**220**	P	**Pn**	**19 52 38.5**	**+2.2**
RIZ	**Raoul Island**	**1.51**	**221**	P	**Pn**	**19 52 37.6**	**+1.3**
RIZ				S	**Sn**	**19 52 58.8**	**+4.0**
GLKZ	**Green Lake**	**1.52**	**220**	P	**Pn**	**19 52 38.0**	**+1.6**
GLKZ				S	**Sn**	**19 52 58.4**	**+3.4**
MXZ	**Matakaoa Point**	**10.29**	**202**	S	**Sn**	**19 56 25.3**	**-5.3**
WMGZ	**Waiomatatini S**	**10.49**	**201**	P	Pn	19 54 32.5	-6.9
WMGZ				S	**Sn**	**19 56 32.3**	**-3.1**
HAZ	**Te Kaha**	**10.65**	**204**	P	Pn	19 54 35.5	-6.0
HAZ				S	**Sn**	**19 56 36.2**	**-3.0**
PKGZ	**Pakihiroa**	**10.66**	**202**	P	Pn	19 54 33.8	-8.0
PKGZ				S	Sn	19 56 28.7	-11
PUZ	**Puketiti**	**10.77**	**201**	P	Pn	19 54 39.5	-3.7
PUZ				S	**Sn**	**19 56 37.8**	**-4.6**
WCZ	**Waipu Caves**	**10.84**	**222**	P	Pn	19 54 52.8	+8.7
NIUE	**Niue**	**10.97**	**37**	Pn	Pn	19 54 36.7	-9.3
NIUE	**Niue**	**10.97**	**37**	P	Pn	19 54 38.2	-7.8
CNGZ	**Carnagh Statio**	**11.16**	**201**	P	Pn	19 54 42.1	-6.4
CNGZ				S	**Sn**	**19 56 47.8**	**-4.1**
MWZ	**Matawai**	**11.25**	**203**	P	Pn	19 54 43.2	-6.6
MWZ				S	**Sn**	**19 56 50.2**	**-4.0**
URZ	**Urewera**	**11.34**	**205**	Pn	Pn	19 54 43.7	-7.2
	1.8nm,0.3s,baz=340,slow=4.7,SNR=13						
URZ				Sn	**Sn**	**19 56 52.4**	**-3.8**
	8.4nm,0.3s,baz=232,slow=21,SNR=9.2						
URZ	**Urewera**	**11.34**	**205**	P	Pn	19 54 43.8	-7.1
URZ				S	**Sn**	**19 56 53.2**	**-2.9**
MSVF	**Nonsavu**	**11.35**	**334**	**Pn**	**Pn**	**19 54 49.8**	**-1.5**
	2.0nm,0.3s,baz=152,slow=14,SNR=12						
MSVF				LR	LR	19 58 29.3	
	comp=Z,2μm,21.0s,baz=156,slow=35						
MSVF	**Nonsavu**	**11.35**	**334**	Pn	**Pn**	**19 54 51.0**	**-0.3**
MSVF	**Nonsavu**	**11.35**	**334**	P	**Pn**	**19 54 51.0**	**-0.3**
MSVF	**Nonsavu**	**11.35**	**334**	P	**Pn**	**19 54 53.0**	**+1.7**
RIGZ	**Rimuhau**	**11.51**	**202**	P	Pn	19 54 47.8	-5.5
RIGZ				S	**Sn**	**19 56 54.8**	**-5.6**
KNZ	**Kokohu**	**11.82**	**201**	P	Pn	19 54 51.6	-6.0
KNZ				S	Sn	19 57 01.9	-6.1
RAHZ	**Arahi**	**11.93**	**204**	P	Pn	19 54 53.2	-5.8
RAHZ				S	**Sn**	**19 57 05.2**	**-5.4**
MTHZ	**Maungataniwha**	**11.96**	**205**	P	Pn	19 54 53.0	-6.5
MTHZ				S	**Sn**	**19 57 06.2**	**-5.3**
NMHZ	**Naumai**	**12.19**	**204**	P	Pn	19 54 57.5	-5.1
NMHZ				S	**Sn**	**19 57 12.0**	**-5.1**
BKZ	**Black Stump Fm**	**12.37**	**205**	P	**Pn**	**19 55 03.4**	**-1.6**
BKZ				S	**Sn**	**19 57 16.6**	**-4.7**
BKZ	**Black Stump Fm**	**12.37**	**205**	P	**Pn**	**19 55 05.1**	**+0.1**
HIZ	**Hauiti**	**12.50**	**212**	P	**Pn**	**19 55 07.3**	**+0.4**
MCHZ	**McNeill Hill**	**12.54**	**204**	P	Pn	19 55 03.0	-4.3
MCHZ				S	Sn	19 57 19.1	-6.3
KWHZ	**Kaweka Forest**	**12.62**	**205**	P	**Pn**	**19 55 05.9**	**-2.5**
KWHZ				S	Sn	19 57 17.9	-10
SNVZ	**South Ngauruho**	**12.72**	**208**	P	Pn	19 55 06.6	-3.4
WPHZ	**Waipukurau**	**13.18**	**203**	P	**Pn**	**19 55 14.0**	**-2.1**
WPHZ				S	Sn	19 57 31.7	-9.3
DVHZ	**Dannevirke**	**13.48**	**204**	P	Pn	19 55 16.8	-3.4
DVHZ				S	Sn	19 57 35.9	-13
PRWZ	**Pori Road**	**13.78**	**204**	P	Pn	19 55 21.2	-3.1
PRWZ				S	Sn	19 57 43.1	-13
MRZ	**Mangatainoka R**	**14.01**	**205**	P	Pn	19 55 21.9	-5.5
MRZ				S	Sn	19 57 47.6	-14
CPWZ	**Castlepoint**	**14.01**	**202**	P	**Pn**	**19 55 24.7**	**-2.7**
CPWZ				S	Sn	19 57 51.6	-10
CAW	**Cannon Point**	**14.59**	**205**	P	Pn	19 55 31.5	-3.6
TRWZ	**Traveller**	**14.62**	**203**	P	Pn	19 55 31.7	-3.8
PAWZ	**Paruwai Farm**	**14.70**	**204**	P	Pn	19 55 32.4	-4.1
DUWZ	**D'Urville Isla**	**14.79**	**209**	P	**Pn**	**19 55 37.0**	**-0.7**
MSWZ	**Moikau Station**	**14.79**	**204**	P	**Pn**	**19 55 35.1**	**-2.7**
AFI	**Afiamalu**	**14.87**	**19**	Pn	Pn	19 55 27.6	-11
	7.6nm,0.3s,baz=165,slow=2.8,SNR=8.0						
AFI				Sn	Sn	19 58 05.5	-17
	5.8nm,0.3s,baz=71,slow=21,SNR=4.0						
SNZO	**South Karori**	**14.90**	**206**	P	**Pn**	**19 55 38.3**	**-0.9**
PLWZ	**Palliser**	**14.93**	**204**	P	**Pn**	**19 55 39.9**	**+0.4**
TCW	**Tory Channel**	**14.99**	**207**	P	**Pn**	**19 55 36.8**	**-3.5**
PINNC	**Pines Island,**	**15.24**	**287**		**Pn**	**19 55 42.0**	**-1.8**
MARNC	**Mare, Loyalty**	**15.26**	**292**		**Pn**	**19 55 41.9**	**-2.0**
MARNC	**Mare, Loyalty**	**15.26**	**292**	P	**P**	**19 55 49.1**	**+1.1**
NNZ	**Nelson**	**15.36**	**209**	P	**Pn**	**19 55 44.1**	**-1.1**
QRZ	**Quartz Range**	**15.43**	**212**	P	**Pn**	**19 55 44.9**	**-1.2**
QRZ	**Quartz Range**	**15.43**	**212**	P	**Pn**	**19 55 44.8**	**-1.2**
OUENC	**Ouen Island, N**	**15.83**	**287**	P	**Pn**	**19 55 50.5**	**-0.8**
OUENC	**Ouen Island, N**	**15.83**	**287**	P	**P**	**19 55 55.9**	**+1.5**
YATNC	**Mamie plateau,**	**15.94**	**289**	P	**P**	**19 55 57.1**	**+1.5**
ONTNC	**Ouen Toro**	**16.21**	**287**	P	**Pn**	**19 55 54.9**	**-1.1**
ONTNC	**Ouen Toro**	**16.21**	**287**	P	**P**	**19 56 00.9**	**+2.4**
LIFNC	**LIFOU**	**16.25**	**293**	P	**Pn**	**19 55 55.5**	**-1.1**
LIFNC				IAmb	IAmb	19 56 00.8	
	comp=Z,189nm,1.0s						
LIFNC	**LIFOU**	**16.25**	**293**	P	**P**	**19 55 59.8**	**+0.9**
DZM	**Mont Dzumac**	**16.31**	**288**	*e*Pn	**P**	**19 55 59.4**	**-0.4**
	comp=Z,105nm,1.1s						
DZM				*e*LR	LR	19 59 44.0	
	comp=Z,2μm,24.8s						
DZM	**Mont Dzumac**	**16.31**	**288**	Pn	**P**	**19 56 00.4**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=95,slow=16,SNR=29						
DZM				LR	LR	20 01 04.2	
	comp=Z,1μm,19.5s,baz=142,slow=33						
DZM	**Mont Dzumac**	**16.31**	**288**	P	**P**	**19 55 58.5**	**-1.3**
DZM	**Mont Dzumac**	**16.31**	**288**	P	**P**	**19 56 01.6**	**+1.8**
NOUC	**Port Laguerre**	**16.42**	**288**	P	**P**	**19 56 02.6**	**+1.7**
RAR	**Rarotonga**	**16.92**	**70**	Pn	**Pn**	**19 55 59.1**	**-5.9**
	comp=Z,3.1nm,0.3s,baz=278,slow=15,SNR=6.4						
RAR				Sn	Sn	19 58 52.3	-20
	comp=Z,3.3nm,0.3s,baz=66,slow=13,SNR=5.8						
RAR				LR	LR	20 00 10.2	
	comp=Z,386nm,20.8s,baz=310,slow=29						
RAR	**Rarotonga**	**16.92**	**70**	Pn	**Pn**	**19 55 58.4**	**-6.6**
RAR	**Rarotonga**	**16.92**	**70**	P	**Pn**	**19 55 58.4**	**-6.6**
RAR				pmax	pmax		
	comp=Z,72nm,1.1s						
RAR	**Rarotonga**	**16.92**	**70**	P	Pn	19 55 55.4	-10
RTV	**Rentapao**	**17.02**	**304**	P	**P**	**19 56 10.6**	**+3.1**
DVP	**Devils Point**	**17.24**	**304**	P	**P**	**19 56 12.7**	**+2.8**
RPZ	**Rata Peaks**	**18.39**	**209**	P	**P**	**19 56 19.8**	**-2.7**
	comp=Z,12nm,0.5s,baz=46,slow=5.9,SNR=10						
RPZ				Sn	Sn	19 59 33.0	-15
	comp=Z,1.6nm,0.3s,baz=278,slow=23,SNR=2.5						
RPZ	**Rata Peaks**	**18.39**	**209**	P	**P**	**19 56 21.2**	**-1.4**
	comp=Z,74nm,0.7s						
KOUNC	**Koumac, New Ca**	**18.79**	**289**		**P**	**19 56 26.1**	**-0.8**
KOUNC				IAmb	IAmb	19 56 34.0	
	comp=Z,173nm,1.3s						
KOUNC	**Koumac, New Ca**	**18.79**	**289**	P	**Pn**	**19 56 30.3**	**+2.4**
ODZ	**Otahua Downs**	**19.65**	**207**	P	**P**	**19 56 35.6**	**-0.6**
LHI	**Lord Howe Isla**	**21.21**	**255**	P	**P**	**19 56 52.5**	**-0.7**
TBI	**Tubuai**	**25.06**	**85**	*e*S	**S**	**20 01 51.6**	**-1.0**
	comp=Z,395nm,28.5s						
TBI				*e*LR	LR	20 03 51.8	
	comp=Z,1μm,24.5s						
TBI	**Tubuai**	**25.06**	**85**	*e*T	T	20 23 19.3	
	comp=Z,32nm,0.3s						
PAE	**Paea**	**27.09**	**73**	*e*T	T	20 25 48.2	
	comp=Z,26nm,0.3s						
PPT2	**Papeete2**	**27.12**	**73**	*e*S	**S**	**20 02 25.6**	**+0.1**
	comp=Z,164nm,26.8s						
PPT2				*e*LR	LR	20 04 49.5	
	comp=Z,798nm,24.0s						
PPT2	**Papeete2**	**27.12**	**73**	*e*T	T	20 25 52.4	
	comp=Z,16nm,0.3s						
PPT	**Papeete**	**27.14**	**73**	LR	LR	20 05 42.5	
	comp=Z,283nm,20.7s,baz=236,slow=30						
TVO	**Taravao**	**27.31**	**74**	*e*T	T	20 26 04.5	
	comp=Z,5.0nm,0.3s						
MEH	**Mehetia**	**28.28**	**75**	*e*T	T	20 27 10.7	
	comp=Z,14nm,0.2s						
HNR	**Honiara**	**28.70**	**306**	P	**P**	**19 58 02.3**	**-2.0**
	comp=Z,479nm,0.5s,baz=32,slow=2.6,SNR=3.7						
HNR				LR	LR	20 08 11.3	
	comp=Z,4μm,19.0s,baz=166,slow=34						
HNR	**Honiara**	**28.70**	**306**	P	**P**	**19 58 02.1**	**-2.2**
EIDS	**Eidsvold**	**28.77**	**268**	P	**P**	**19 58 04.3**	**-0.6**
CNB	**Canberra Magne**	**29.57**	**247**	P	**P**	**19 58 13.8**	**+1.8**
RK1H	**Rockhampton Ha**	**29.77**	**272**	P	**P**	**19 58 15.3**	**+1.5**
CAN	**Canberra**	**29.86**	**247**	P	**P**	**19 58 14.9**	**+0.3**
CAN				IAmb	IAmb	19 58 18.1	
	comp=Z,25nm,1.1s						
CAN	**Canberra**	**29.86**	**247**	P	**P**	**19 58 14.9**	**+0.3**
CAN				pmax	pmax		
	comp=Z,25nm,1.1s						
CAN	**Canberra**	**29.86**	**247**	P	**P**	**19 58 16.8**	**+2.2**
VAH	**Vaihoa**	**29.89**	**71**	*e*T	T	20 29 19.3	
	comp=Z,38nm,0.2s						
RMQ	**Roma**	**30.59**	**265**	P	**P**	**19 58 23.1**	**+2.1**
CMSA	**Cobar Meteorol**	**32.62**	**255**	P	**P**	**19 58 39.7**	**+0.9**
TOO	**Toolangi**	**32.88**	**244**	P	**P**	**19 58 41.0**	**-0.1**
TOO				IAmb	IAmb	19 59 50.3	
	comp=Z,106nm,2.0s						
TOO	**Toolangi**	**32.88**	**244**	P	**P**	**19 58 41.0**	**-0.1**
TOO				pmax	pmax		
	comp=Z,106nm,2.0s						
CTA	**Charters Tower**	**34.55**	**275**	LR	LR	20 11 28.5	
	comp=Z,644nm,19.4s,baz=97,slow=34						
CTA	**Charters Tower**	**34.55**	**275**	P	**P**	**19 58 56.6**	**+0.9**
CTAO	**Charters Tower**	**34.55**	**275**	P	**P**	**19 58 55.7**	**0.0**
CTAO				IAmb	IAmb	19 58 58.2	
	comp=Z,18nm,0.6s						
CTAO	**Charters Tower**	**34.55**	**275**	P	**P**	**19 58 55.7**	**0.0**
CTAO				pmax	pmax		
	comp=Z,17nm,0.6s						
CTAO	**Charters Tower**	**34.55**	**275**	P	**P**	**19 58 56.7**	**+1.0**
ARPS	**Mount Arapiles**	**35.74**	**245**	P	**P**	**19 59 06.9**	**+1.2**
STKA	**Stephens Creek**	**36.07**	**254**	P	**P**	**19 59 09.6**	**+0.9**
	comp=Z,4.4nm,0.6s,baz=101,slow=11,SNR=12						
STKA				LR	LR	20 12 20.9	
	comp=Z,476nm,20.2s,baz=66,slow=34						
	comp=Z,4.4nm,0.6s						
STKA	**Stephens Creek**	**36.07**	**254**	P	**P**	**19 59 08.8**	**+0.1**
STKA	**Stephens Creek**	**36.07**	**254**	P	**P**	**19 59 08.8**	**+0.1**
STKA				pmax	pmax		
	comp=Z,13nm,2.0

comp=Z,16nm,0.8s
WB2 Warramunga Arr 45.10 269 P **P** **20 00 22.1 -1.3**
WB2 IAmb IAmb 20 02 04.7
comp=Z,14nm,0.8s
WRAB Tennant Creek 45.11 269 P **P** **20 00 22.1 -1.3**
WRA Warramunga Arr 45.12 269 P **P** **20 00 22.0 -1.5**
comp=Z,8.7nm,0.5s,baz=110,slow=7.5,SNR=143
WRA PcP **PcP** **20 02 03.8 +0.3**
comp=Z,12nm,0.8s,baz=107,slow=3.7,SNR=14
WRA ScP **ScP** **20 05 57.8 +5.8**
comp=Z,0.6nm,0.7s,baz=112,slow=3.9,SNR=3.5
WRA LR LR 20 19 00.7
comp=Z,276nm,18.1s,baz=78,slow=36
comp=Z,8.7nm,0.5s
WRA Warramunga Arr 45.12 269 P **P** **20 00 21.4 -2.1**
WRA Warramunga Arr 45.12 269 P **P** **20 00 21.4 -2.1**
FORT Forrest 47.69 253 P **P** **20 00 41.9 -1.6**
GENI Genyem 48.22 294 P **P** **20 00 45.0 -2.8**
comp=Z,34nm,0.6s
WRKA Warakurna 48.85 260 P **P** **20 00 51.4 -1.2**
KDU Kakadu 49.60 277 P **P** **20 00 58.2 -0.2**
SMPI Sarmi 49.75 293 P **P** **20 00 54.9 -4.6**
comp=Z,3.8nm,0.8s
SBA Scott Base 50.40 184 P **P** **20 01 07.8 +4.2**
SBA IAmb IAmb 20 01 16.9
comp=Z,34nm,0.9s
SBA Scott Base 50.40 184 P **P** **20 01 07.8 +4.2**
SBA pmax pmax
comp=Z,34nm,0.9s
VNDA Vanda 50.48 186 P **P** **20 01 06.4 +2.2**
comp=Z,3.3nm,0.7s,baz=6.9,slow=4.6,SNR=16
VNDA LR LR 20 19 07.8
comp=Z,38nm,21.4s,baz=1.5,slow=32
comp=Z,3.3nm,0.7s
VNDA Vanda 50.48 186 P **P** **20 01 07.8 +3.6**
VNDA Vanda 50.48 186 P **P** **20 01 07.8 +3.6**
VNDA pmax pmax
comp=Z,6.0nm,0.9s
MTN Manton Dam 50.71 276 P **P** **20 01 05.7 -1.1**
MTN IAmb IAmb 20 02 24.4
comp=Z,22nm,0.6s
MTN Manton Dam 50.71 276 P **P** **20 01 07.4 +0.6**
KNRA Kununurra 51.62 272 P **P** **20 01 12.7 -0.9**
comp=Z,26nm,1.5s
FITZ Fitzroy Crossi 53.45 268 LR LR 20 23 33.2
comp=Z,286nm,18.6s,baz=103,slow=35
FITZ Fitzroy Crossi 53.45 268 P **P** **20 01 25.4 -1.7**
FITZ IAmb IAmb 20 01 27.1
comp=Z,10nm,0.9s
FITZ Fitzroy Crossi 53.45 268 P **P** **20 01 26.7 -0.4**
FAKI Fak Fak 54.58 288 P **P** **20 01 38.1 +2.7**
GUMO Guam 55.63 313 LR LR 20 22 40.8
comp=Z,121nm,20.7s,baz=158,slow=33
BNDI Bandanaira 55.73 285 P **P** **20 01 42.6 -1.0**
comp=Z,6μmcomp=Z,46nm,0.6s
KLBR Kellerberrin 56.11 249 P **P** **20 01 44.6 -1.6**
NWAO Narrogin (SRO) 56.21 248 LR LR 20 22 58.7
comp=Z,195nm,19.9s,baz=15,slow=33
MEEK Meekatharra 56.75 255 P **P** **20 01 51.7 +0.8**
comp=Z,29nm,2.2s
PSA00 Pilbara Seismi 57.31 261 P **P** **20 01 54.0 -0.9**
PSA00 IAmb IAmb 20 02 05.9
comp=Z,11nm,1.1s
PSA00 Pilbara Seismi 57.31 261 P **P** **20 01 53.8 -1.1**
PSA00 IAmb IAmb 20 02 10.0
comp=Z,42nm,1.4s
MBWA Marble Bar 57.55 262 P **P** **20 01 54.6 -2.0**
MBWA IAmb IAmb 20 02 06.0
comp=Z,36nm,1.2s
MBWA Marble Bar 57.55 262 P **P** **20 01 56.0 -0.6**
AAI Ambon 57.62 285 P **P** **20 01 56.5 -0.6**
comp=Z,19nm,0.5s
CASY Casey 57.66 207 P **P** **20 01 57.2 +0.7**
SOEI Soe 58.11 276 P **P** **20 01 57.6 -3.1**
comp=Z,23nm,0.9s
MORW Morawa 58.22 252 P **P** **20 01 59.4 -1.8**
MORW Morawa 58.22 252 P **P** **20 01 59.4 -1.8**
comp=Z,34nm,1.8s
BATI Baumata 58.44 275 LR LR 20 26 05.0
comp=Z,461nm,21.3s,baz=150,slow=35
BATI Baumata 58.44 275 P **P** **20 02 02.1 -0.8**
comp=Z,6.3nm,0.6s
NLAI Namlea 58.78 284 P **P** **20 02 03.7 -1.5**
comp=Z,60μmcomp=Z,110nm,1.5s
RPN Rapa Nui 59.06 106 LR LR 20 20 57.8
comp=Z,186nm,20.3s,baz=287,slow=29
LBMI Labuha 59.80 287 P **P** **20 02 10.7 -1.5**
comp=Z,12nm,0.5s
SANI Sanana 60.34 285 P **P** **20 02 13.9 -2.1**
comp=Z,29nm,0.7s
SANI Sanana 60.34 285 P **P** **20 02 14.9 -1.1**
MMRI Maumere 60.40 276 P **P** **20 02 14.5 -1.8**
MMRI IAmb IAmb 20 04 21.4
comp=Z,14nm,0.9s
MMRI Maumere 60.40 276 P **P** **20 02 11.8 -4.6**
comp=Z,8.7nm,0.7s
TNTI Ternate 60.67 288 P **P** **20 02 16.4 -1.8**
TNTI IAmb IAmb 20 02 33.6
comp=Z,12nm,0.8s
TNTI Ternate 60.67 288 P **P** **20 02 16.0 -2.2**
comp=Z,575nmcomp=Z,15nm,1.0s
EDFI Ende, Flores 60.83 276 P **P** **20 02 17.7 -1.7**
comp=Z,4.7nm,0.5s
BBSI Bau Bau 61.58 279 P **P** **20 02 25.2 +0.8**
comp=Z,11nm,1.0s
QSPA South Pole Qui 62.01 180 LR LR 20 26 32.4
comp=Z,74nm,20.0s,baz=44,slow=33
QSPA South Pole Qui 62.01 180 P **P** **20 02 28.2 +1.6**
QSPA IAmb IAmb 20 02 36.9
comp=Z,17nm,0.7s
BSSI Bau Bau, Buton 63.09 278 P **P** **20 02 33.5 -1.0**
comp=Z,6.7nm,0.7s
KMSI Cibinong 63.42 286 P P 20 02 31.1 -5.5
comp=Z,32nm,0.8s
BKSI Bulukumba 63.80 278 P **P** **20 02 36.9 -2.3**
comp=Z,14nm,0.7s
PLAI Plampang 64.24 274 P **P** **20 02 41.1 -1.0**
comp=Z,29nm,0.8s
PLAI Plampang 64.24 274 P **P** **20 02 42.8 +0.7**
BNSI Bone 64.25 279 P **P** **20 02 40.5 -1.6**
comp=Z,5.9nm,1.1s
KAPI Kappang 64.27 278 LR LR 20 32 05.5
comp=Z,104nm,18.5s,baz=120,slow=37
SPSI Sidrap Palu 64.76 279 P **P** **20 02 44.9 -0.5**
TWSI Taliwang, Sumb 65.07 273 P **P** **20 02 44.6 -2.9**
comp=Z,8.0nm,1.1s
MPSI Mapaga 66.78 284 P **P** **20 02 53.9 -4.6**
comp=Z,7.2nm,0.7s
SRBI Singaraja 66.83 273 P **P** **20 02 56.8 -2.0**
comp=Z,20nm,0.8s
JAGI Jajag, Banyuwa 67.60 272 P **P** **20 03 01.7 -2.0**
JAGI IAmb IAmb 20 03 03.9
comp=Z,25nm,0.9s
JAGI Jajag, Banyuwa 67.60 272 P **P** **20 03 01.6 -2.1**
comp=Z,29nm,0.9s
KMMI Kalianget 68.40 274 P **P** **20 03 07.6 -1.1**
comp=Z,40nm,1.0s
PWJI Pagerwojo 69.87 272 P **P** **20 03 15.3 -2.5**
comp=Z,37nm,0.7s
PCJI Pacitan 70.35 271 P **P** **20 03 19.2 -1.5**
comp=Z,73nm,1.0s
UGM Wanagama 71.05 271 P **P** **20 03 24.1 -1.0**
UGM Wanagama 71.05 271 P **P** **20 03 25.1 0.0**
BELA Belgrano 2 71.92 172 P **P** **20 03 29.9 +0.6**
BELA IAmb IAmb 20 03 42.8
comp=Z,11nm,1.0s
KKM Kota Kinabalu 72.87 287 P **P** **20 03 34.7 -1.3**
KKM IAmb IAmb 20 04 31.9
comp=Z,29nm,1.2s
JHJ2 Mitsune 73.49 323 P **P** **20 03 36.2 -2.9**
PMSA Palmer Station 73.93 156 LR LR 20 28 59.0
comp=Z,150nm,19.1s,baz=250,slow=30
LEM Lembang 74.11 271 P **P** **20 03 43.6 +0.1**
comp=Z,63nm,0.7s,baz=39,slow=3.4,SNR=18
LEM LR LR 20 36 30.4
comp=Z,256nm,19.0s,baz=128,slow=36
comp=Z,63nm,0.7s
SBUM Sibu 74.47 281 P **P** **20 03 45.0 -0.3**
SBUM IAmb IAmb 20 04 00.8
comp=Z,8.4nm,0.8s
MAW Mawson 74.82 200 P **P** **20 03 49.3 +2.9**
comp=Z,35nm,0.7s,baz=129,slow=7.3,SNR=73
MAW LR LR 20 35 50.5
comp=Z,104nm,20.4s,baz=137,slow=35
comp=Z,35nm,0.7s
MAW Mawson 74.82 200 P **P** **20 03 49.1 +2.7**
MAW IAmb IAmb 20 03 50.3
comp=Z,8.9nm,0.8s
MAW Mawson 74.82 200 P **P** **20 03 49.1 +2.7**
MAW pmax pmax
comp=Z,9.0nm,0.8s
JOW Kunigami 75.92 311 P **P** **20 03 53.5 +0.1**
comp=Z,9.2nm,0.4s,baz=194,slow=4.2,SNR=4.4
JOW LR LR 20 33 58.3
comp=Z,65nm,18.2s,baz=139,slow=33
comp=Z,9.2nm,0.4s
INU Inuyama 76.69 323 P **P** **20 03 56.4 -1.0**
INU IAmb IAmb 20 03 58.2
comp=Z,14nm,0.8s
JGF Kuroka 76.70 323 P **P** **20 03 55.7 -1.9**
JGF IAmb IAmb 20 03 57.5
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 76.97 324 P **P** **20 03 57.9 -1.2**
comp=Z,12nm,0.8s,baz=159,slow=5.9,SNR=52
MJAR LR LR 20 31 27.5
comp=Z,76nm,21.7s,baz=150,slow=31
comp=Z,12nm,0.8s
MAJO Matsushiro 76.97 324 P **P** **20 03 57.8 -1.3**
MAJO IAmb IAmb 20 03 59.0
comp=Z,17nm,0.7s
MAJO Matsushiro 76.97 324 P **P** **20 03 57.8 -1.3**
MAJO pmax pmax
comp=Z,17nm,0.7s
MAJO Matsushiro 76.97 324 P **P** **20 03 58.4 -0.7**
MJB9 Matsu-Tunnel 76.98 324 P **P** **20 03 58.4 -0.8**
MJB9 IAmb IAmb 20 04 00.0
comp=Z,17nm,0.7s
JMN Monobe 77.23 320 P **P** **20 03 59.3 -1.4**
JMN IAmb IAmb 20 04 01.8
comp=Z,16nm,1.0s
JSU Suzuyama 77.69 316 P **P** **20 04 01.8 -1.5**
JSD Sado 78.09 325 P **P** **20 04 04.4 -0.9**
JSD IAmb IAmb 20 04 10.6
comp=Z,12nm,0.6s
TWG Pinlang 78.44 304 P **P** **20 04 06.7 -0.9**
JHS Saijyo 78.58 320 P **P** **20 04 07.4 -0.7**
JHS IAmb IAmb 20 04 08.8
comp=Z,20nm,0.9s
H06S1 SOCORRO T 78.87 62 T T 21 31 21.4
SNR=3.8
JTM Tenmabayashi 78.89 329 P **P** **20 04 09.3 -0.3**
JTM IAmb IAmb 20 04 10.8
comp=Z,45nm,1.1s
ERM Erimo 78.95 331 *i* P **P** **20 04 09.8 -0.1**
ERM pmax pmax
comp=Z,25nm,1.0s
ADK Adak 79.64 0 P **P** **20 04 12.8 -0.5**
ADK Adak 79.64 0 P **P** **20 04 12.8 -0.5**
ADK pmax pmax
comp=Z,164nm,1.5s
TROLL Troll, Antarti 80.17 180 P **P** **20 04 18.0 +1.6**
SNAA Sanae 80.42 178 P **P** **20 04 19.3 +1.5**
SNAA Sanae 80.42 178 LR LR 20 37 06.3
comp=Z,78nm,20.8s,baz=200,slow=34
SNAA Sanae 80.42 178 P **P** **20 04 19.2 +1.5**
SNAA Sanae 80.42 178 P **P** **20 04 19.2 +1.5**
SNAA pmax pmax
comp=Z,6.0nm,0.7s
VNA3 Neumayer Olymp 80.52 176 P **P** **20 04 19.2 +1.0**
H03S2 Juan Fernandez 80.86 123 T T 21 34 29.3
SNR=130
H03S1 Juan Fernandez 80.87 123 T T 21 34 29.1
SNR=141
SHEM Shemya Is, Ala 80.87 354 LR LR 20 32 31.4
comp=Z,183nm,20.6s,baz=257,slow=30
H03S3 Juan Fernandez 80.88 123 T T 21 34 26.5
SNR=150
VNA2 Neumayer--Watz 80.97 176 P **P** **20 04 22.2 +1.6**
baz=174,slow=5.0
H03N3 Juan Fernandez 81.04 123 T T 21 34 37.9
baz=245,slow=72,SNR=4.7
H03N2 Juan Fernandez 81.04 123 T T 21 34 42.7
baz=245,slow=72,SNR=3.2
H03N1 Juan Fernandez 81.05 123 T T 21 34 38.3
baz=245,slow=72,SNR=5.1
VNA1 Neumayer--Stat 81.19 176 P **P** **20 04 23.1 +1.4**
MYKOM Kota Tinggi 81.45 277 P **P** **20 04 23.7 -0.3**
MYKOM IAmb IAmb 20 04 28.4
comp=Z,17nm,0.9s
LPIG La Paz 82.43 58 LR LR 20 35 40.5
comp=Z,92nm,18.2s,baz=231,slow=32
SRIG Santa Rosalia 82.89 54 P **P** **20 04 30.0 -1.3**
YSS Yuzh-Sakhalins 83.15 333 P **P** **20 04 32.3 +0.2**
YSS Yuzh-Sakhalins 83.15 333 *e*P **P** **20 04 32.9 +0.8**
YSS pmax pmax
comp=Z,60nm,1.0s
BKNI Bangkinang 83.23 274 P **P** **20 04 32.3 -1.1**
GO06 Curarrehue 83.29 131 P **P** **20 04 34.4 +0.9**
GO06 IAmb IAmb 20 05 05.6
comp=Z,31nm,2.0s
KSRS Korea Array 83.29 319 P **P** **20 04 33.2 +0.2**
comp=Z,3.1nm,0.8s,baz=140,slow=6.1,SNR=20
comp=Z,3.1nm,0.8s
PLCA Paso Flores 83.30 133 P **P** **20 04 35.5 +2.0**
comp=Z,3.8nm,0.8s,baz=231,slow=6.1,SNR=19
PLCA LR LR 20 33 02.3
comp=Z,104nm,20.9s,baz=270,slow=29
comp=Z,3.8nm,0.8s
PLCA Paso Flores 83.30 133 P **P** **20 04 34.6 +1.1**
PLCA IAmb IAmb 20 04 36.5
comp=Z,6.3nm,0.8s
PLCA Paso Flores 83.30 133 P **P** **20 04 34.6 +1.1**
PLCA pmax pmax
comp=Z,6.0nm,0.9s
KSAR Wonju Array Be 83.31 319 P **P** **20 04 32.6 -0.6**
KSAR Wonju Array Be 83.31 319 P **P** **20 04 32.6 -0.6**
KS19 Wonju Array Si 83.36 319 P **P** **20 04 32.8 -0.7**
KS19 IAmb IAmb 20 07 13.4
comp=Z,61nm,1.9s
MURC Murrieta 83.40 46 P **P** **20 04 33.0 -0.8**
baz=230
BFSC Mount Baldy Ra 83.51 46 P **P** **20 04 36.1 +1.6**
baz=230
PET Petropavlovsk 83.56 345 P **P** **20 04 33.5 -0.6**
EDW2 Edwards Air Fo 83.72 45 P **P** **20 04 36.3 +0.8**
baz=230
PEA0B Petropavlovsk- 83.86 345 P **P** **20 04 35.2 -0.4**
PEA0B Petropavlovsk- 83.86 345 P **P** **20 04 35.2 -0.4**
PEA0B pmax pmax
comp=Z,44nm,1.2s
PETK Petropavlovsk- 83.86 345 P **P** **20 04 35.0 -0.6**
comp=Z,21nm,0.8s,baz=112,slow=8.6,SNR=21
comp=Z,21nm,0.8s
PETK Petropavlovsk- 83.86 345 P **P** **20 04 35.0 -0.6**
PFO Pinyon Flats O 83.88 47 LR LR 20 33 03.8
comp=Z,118nm,21.5s,baz=228,slow=29
PFO Pinyon Flats O 83.88 47 P **P** **20 04 37.8 +1.4**
baz=231
CCAC Calif City Air 83.88 45 P **P** **20 04 35.5 -0.8**
CCAC IAmb IAmb 20 05 22.1
comp=Z,6.2nm,0.7s
ISA Isabella, Lake 83.93 44 P **P** **20 04 38.5 +2.0**
baz=229
EFI East Falkland 84.14 147 P **P** **20 04 39.1 +1.7**
EFI East Falkland 84.14 147 P **P** **20 04 39.1 +1.7**
EFI pmax pmax
comp=Z,119nm,1.8s
BELC Belle Mtn. Jos 84.42 47 P **P** **20 04 40.4 +1.2**
baz=231
BC3 Big Chuckawall 84.56 47 P **P** **20 04 41.7 +1.8**
baz=231
AFDM Forest Hills D 84.63 40 P **P** **20 04 39.4 -0.5**
CWC Cottonwood Cre 84.68 44 P **P** **20 04 41.0 +0.6**
baz=229
HEC Hector,Ludlow 84.73 46 P **P** **20 04 41.2 +0.5**
baz=231
GSC Goldstone, Bar 84.73 45 P **P** **20 04 41.8 +1.2**
baz=230
MPMC Manual Prospec 84.79 44 P **P** **20 04 42.2 +1.2**
baz=230
IRM Iron Mountain 85.07 47 P **P** **20 04 43.8 +1.5**
baz=231
WAKR Walker 85.22 42 P **P** **20 04 42.9 -0.2**
WAKR IAmb IAmb 20 04 45.6
comp=Z,12nm,1.2s
214A Organ Pipe Nat 85.27 50 P **P** **20 04 45.2 +1.9**
baz=233
GWY Greenwater Val 85.38 45 P **P** **20 04 43.8 -0.2**
SHOC Shoshone, Teco 85.45 45 P **P** **20 04 45.4 +1.3**
baz=231
NJ2 Nanjing 85.56 310 *e*P **P** **20 04 43.0 -1.7**
NJ2 pmax pmax
comp=Z,4.0nm,0.6s
YBH Yreka Blue Hor 85.58 37 P **P** **20 04 45.5 +0.8**
comp=Z,5.3nm,1.0s,baz=134,slow=3.6,SNR=7.0
YBH LR LR 20 39 01.4
comp=Z,28nm,18.1s,baz=208,slow=33
comp=Z,5.3nm,1.0s
GMN Gold Mountain 85.73 44 P **P** **20 04 45.0 -0.8**
USA0B Ussuriysk Arra 85.84 326 P **P** **20 04 45.8 0.0**
USA0B IAmb IAmb 20 04 47.3
comp=Z,22nm,1.1s
USA0B Ussuriysk Arra 85.84 326 P **P** **20 04 45.8 0.0**
USA0B pmax pmax
comp=Z,22nm,1.1s
USRK Ussuriysk Ar. 85.84 326 P **P** **20 04 46.1 +0.4**
comp=Z,16nm,0.9s,baz=155,slow=3.7,SNR=16
USRK LR LR 20 36 27.2
comp=Z,93nm,21.4s,baz=163,slow=31
comp=Z,16nm,0.9s
USRK Ussuriysk Ar. 85.84 326 P **P** **20 04 45.5 -0.3**
NVAR Mina Array Bea 85.84 42 P **P** **20 04 47.5 +1.2**
comp=Z,7.5nm,1.0s,baz=220,slow=8.4,SNR=28
NVAR PKKPbc **PKKPbc** **20 22 49.6 +1.2**
comp=Z,0.8nm,0.8s,baz=91,slow=6.5,SNR=4.6
NVAR LR LR 20 34 32.4
comp=Z,120nm,21.9s,baz=263,slow=30
comp=Z,7.5nm,1.0s
NVAR Mina Array Bea 85.84 42 P **P** **20 04 46.3 0.0**
BO02 Sierra Bellavi 86.25 128 P **P** **20 04 49.6 +1.2**
BO02 IAmb IAmb 20 04 50.8
comp=Z,11nm,0.9s
PSI Prapat 86.25 275 LR LR 20 45 11.9
comp=Z,149nm,19.1s,baz=128,slow=37
TPH Tonopah 86.26 43 P **P** **20 04 47.3 -1.0**
TPH Tonopah 86.26 43 P **P** **20 04 47.3 -1.0**
TPH pmax pmax
comp=Z,46nm,1.1s
Y14A Wickenburg 86.33 48 P **P** **20 04 47.9 -0.7**
TYV Tymovskoe 86.39 336 *e*P **P** **20 04 48.1 -0.2**
TYV *e*S S 20 15 10.5 -10
TYV pmax pmax
comp=Z,25nm,0.9s
TYV pmax pmax
comp=Z,300nm,3.9s
TYV smax smax
comp=N,100nm,3.3s
TYV smax smax
comp=E,300nm,3.3s
MT01 Popeta 86.40 127 P **P** **20 04 50.2 +1.2**
MT01 IAmb IAmb 20 06 19.7
comp=Z,41nm,1.5s
MT09 Talagante 86.63 127 P **P** **20 04 51.8 +1.4**
GSI Gunungsitoli 86.74 273 P **P** **20 04 51.2 +0.2**
GSI Gunungsitoli 86.74 273 P **P** **20 04 51.9 +0.9**
MDJ Mudanjiang 87.34 325 P **P** **20 04 52.5 -0.6**
MDJ Mudanjiang 87.34 325 P **P** **20 04 53.5 +0.4**
MDJ pmax pmax
comp=Z,25nm,0.8s
MDJ pmax pmax
comp=Z,140nm,4.8s
R11A Troy Canyon, C 87.42 44 P **P** **20 04 55.6 +1.7**
baz=231
BMN Battle Mountai 87.78 41 P **P** **20 04 55.6 0.0**
BMN IAmb IAmb 20 04 57.4
comp=Z,8.6nm,1.2s
BMN Battle Mountai 87.78 41 P **P** **20 04 55.6 0.0**
BMN pmax pmax
comp=Z,9.0nm,1.2s
WHN Wuhan 87.81 306 ⇓P **P** **20 04 56.3 +0.6**
KDAK Kodiak Island 87.94 13 LR LR 20 38 53.1
comp=Z,103nm,19.0s,baz=215,slow=32
WUAZ Wupatki 88.36 48 P **P** **20 04 58.1 -0.3**
WUAZ IAmb IAmb 20 05 01.3
comp=Z,14nm,1.4s
GRNR Gornyy 88.72 332 ⇑*i*P **P** **20 05 00.4 +0.8**
GRNR pmax pmax
comp=Z,20nm,0.8s
ELK Elko 89.14 42 P **P** **20 05 03.0 +1.0**
comp=Z,1.6nm,0.9s,baz=246,slow=3.4,SNR=4.6
ELK LR LR 20 36 56.6
comp=Z,129nm,21.4s,baz=240,slow=30
comp=Z,1.6nm,0.9s
ELK Elko 89.14 42 P **P** **20 05 02.1 0.0**
ELK Elko 89.14 42 P **P** **20 05 02.1 0.0**
ELK pmax pmax
comp=Z,7.0nm,1.6s
TIA Tai'an 89.19 312 ⇑P **P** **20 05 02.6 +0.5**
TIA pmax pmax
comp=Z,21nm,0.8s
BNX BinXian 89.23 325 P **P** **20 05 01.1 -1.0**
BNX pmax pmax
comp=Z,16nm,1.0s
BNX pmax pmax
comp=Z,89nm,5.1s
MTPU Mount Pierson 89.34 46 P **P** **20 05 03.1 -0.2**
MTPU IAmb IAmb 20 05 06.4
comp=Z,29nm,1.9s
KLR Kul'dur 89.59 329 P **P** **20 05 04.4 +0.7**
comp=Z,15nm,0.8s,baz=112,slow=3.2,SNR=46
KLR LR LR 20 44 09.8
comp=Z,60nm,18.4s,baz=208,slow=35
comp=Z,15nm,0.8s
KLR Kul'dur 89.59 329 *ce*P **P** **20 05 04.1 +0.4**
KLR pmax pmax
comp=Z,19nm,0.8s
CNPM China Poot 89.82 13 P **P** **20 05 04.7 +0.2**
G08A Pilot Rock 90.00 37 P **P** **20 05 06.2 +0.3**
G08A IAmb IAmb 20 05 07.8
comp=Z,16nm,1.1s
TXAR Lajitas Array 90.26 57 P **P** **20 05 08.9 +1.5**
comp=Z,2.4nm,1.0s,baz=206,slow=8.2,SNR=16
TXAR LR LR 20 36 14.7
comp=Z,72nm,21.9s,baz=237,slow=29
comp=Z,2.4nm,1.0s
TXAR Lajitas Array 90.26 57 P **P** **20 05 09.0 +1.5**
HAWA Hanford 90.43 36 P **P** **20 05 07.9 +0.2**
HAWA IAmb IAmb 20 05 09.8
comp=Z,21nm,1.4s
LENM Lemitar 90.53 51 P **P** **20 05 08.6 -0.1**
CMIG Matias Romero 91.04 71 LR LR 20 36 18.1
comp=Z,41nm,20.4s,baz=204,slow=29
ENH Enshi 91.18 304 P **P** **20 05 11.8 +0.2**
D08A Wollman Farm, 91.19 35 P **P** **20 05 11.5 +0.4**
D08A IAmb IAmb 20 05 13.2
comp=Z,11nm,0.9s
ANMO Albuquerque 91.32 51 P **P** **20 05 13.5 +1.2**
comp=Z,2.8nm,0.9s,baz=257,slow=4.6,SNR=7.0
ANMO LR LR 20 37 43.2
comp=Z,97nm,21.4s,baz=232,slow=30
comp=Z,2.8nm,0.9s
ANMO Albuquerque 91.32 51 P **P** **20 05 11.1 -1.3**
ANMO IAmb IAmb 20 05 14.7
comp=Z,8.5nm,1.4s
ANMO Albuquerque 91.32 51 P **P** **20 05 11.1 -1.3**
ANMO pmax pmax
comp=Z,9.0nm,1.4s
MA2 Magadan 91.36 344 LR LR 20 49 16.8
comp=Z,33nm,18.2s,baz=142,slow=38
HLID Hailey 91.38 40 P **P** **20 05 12.7 +0.2**
HNS HongShan 91.45 312 ⇑P **P** **20 05 13.3 +0.7**
HNS pmax pmax
comp=Z,19nm,0.9s
L19K White Mountain 91.68 10 P **P** **20 05 13.7 +0.6**
baz=199
U33K Whale Pass 91.73 23 P **P** **20 05 15.0 +1.6**
baz=218
EYAK Cordova Ski Ar 91.91 15 P **P** **20 05 14.6 +0.5**
baz=207
BJT Baijiatuau 92.02 315 P **P** **20 05 14.9 -0.3**
BJT IAmb IAmb 20 05 16.4
comp=Z,10nm,0.7s
BJT Baijiatuau 92.02 315 P **P** **20 05 14.9 -0.3**
BJT pmax pmax
comp=Z,10.0nm,0.7s
BJI Beijing 92.03 315 P **P** **20 05 15.4 +0.2**
BJI pmax pmax
comp=Z,14nm,0.7s
BCYI Bear Canyon 92.42 40 P **P** **20 05 17.2 0.0**
MESA MESA 92.49 17 P **P** **20 05 18.4 +1.2**
baz=210
BMRM Bremner River 92.54 15 P **P** **20 05 17.7 +0.5**
baz=208
S22A 4UR Ranch, Cre 92.62 48 P **P** **20 05 19.4 +1.0**
baz=236
KLU Klutina 92.71 14 P **P** **20 05 18.8 +0.8**
baz=207
ANM Nome 92.79 5 P **P** **20 05 20.3 +2.2**
baz=190

NEW Newport 92.90 35 LR LR 20 43 28.5
comp=Z,61nm,18.4s,baz=194,slow=33
NNA Nana 93.03 105 LR LR 20 36 50.1
comp=Z,27nm,19.1s,baz=206,slow=29
N25K Chitina, Valde 93.11 15 P **P 20 05 20.1 +0.3**
baz=208
CAST Castle Rocks 93.29 11 P **P 20 05 19.6 -1.0**
baz=202
WAT6 Susitna Watana 93.31 13 P **P 20 05 21.2 +0.4**
baz=206
CTG Chitna Glacier 93.32 16 P **P 20 05 21.4 +0.5**
baz=211
MSTX Muleshoe 93.36 53 P **P 20 05 22.2 +0.5**
baz=238
O28M Mount Upton 93.45 17 P **P 20 05 22.3 +0.6**
baz=212
XAN Xi'an 93.57 307 P P 20 05 17.6 -5.0
XAN pP PcP 20 05 23.2 +0.1
TRF Thorofare Moun 93.63 12 P **P 20 05 21.7 -0.5**
baz=203
CMAR Chiang Mai Arr 93.64 289 P **P 20 05 24.6 +1.4**
comp=Z,2.0nm,0.8s,baz=146,slow=3.2,SNR=16
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 93.64 289 P **P 20 05 23.6 +0.4**
J20K Nowinta River 93.68 10 P **P 20 05 22.1 -0.1**
baz=200
KMI Kunming 93.73 296 ⇓P **P 20 05 25.1 +1.4**
KMI pmax pmax
comp=Z,6.0nm,1.1s
PD31 Pinedale Array 93.75 43 P **P 20 05 23.3 -0.1**
PDAR Pinedale Array 93.75 43 P **P 20 05 23.7 +0.3**
comp=Z,1.9nm,0.9s,baz=223,slow=3.7,SNR=11
PDAR LR LR 20 39 48.0
comp=Z,88nm,21.3s,baz=252,slow=31
comp=Z,1.9nm,0.9s
PDAR Pinedale Array 93.75 43 P **P 20 05 22.9 -0.5**
CHTO Chiang Mai 93.81 289 P **P 20 05 24.3 +0.3**
CHTO Chiang Mai 93.81 289 P **P 20 05 24.3 +0.3**
S34M Telegraph Cree 93.82 23 P **P 20 05 23.8 +0.8**
baz=219
SEY Seymchan 93.99 346 P **P 20 05 23.9 +0.2**
comp=Z,8.0nm,0.7s,baz=144,slow=5.3,SNR=37
comp=Z,8.0nm,0.7s
SEY Seymchan 93.99 346 *ce*P **P 20 05 23.3 -0.4**
SEY pmax pmax
comp=Z,10.0nm,0.8s
ATAH Atahualpa 94.04 100 LR LR 20 38 04.4
comp=Z,173nm,21.6s,baz=229,slow=29
H17A Grant Village 94.09 41 P **P 20 05 26.6 +1.6**
baz=234
LVC Limon Verde 94.11 118 LR LR 20 38 25.5
comp=Z,106nm,22.0s,baz=233,slow=30
MCK McKinley 94.13 12 P **P 20 05 24.8 +0.4**
baz=204
M26K Nabesna, AK 94.17 15 P **P 20 05 25.3 +0.6**
baz=210
BOZ Bozeman (W) 94.20 40 P **P 20 05 24.6 -0.7**
BOZ Bozeman (W) 94.20 40 P **P 20 05 24.6 -0.7**
BOZ pmax pmax
comp=Z,5.0nm,1.1s
M27K Edge Creek, AK 94.39 16 P **P 20 05 27.0 +1.3**
baz=210
DLBC Dease Lake 94.60 23 LR LR 20 43 19.2
comp=Z,43nm,18.6s,baz=156,slow=33
ZEA Zeya 94.76 330 *e*P **P 20 05 27.7 +0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
K24K Donnelly Dome 94.81 13 P **P 20 05 28.2 +0.6**
baz=207
N23A Red Feather La 94.93 46 P **P 20 05 29.8 +0.9**
baz=237
R33M Jennings River 95.03 22 P **P 20 05 29.8 +1.0**
baz=220
HDA Harding Lake 95.12 13 P **P 20 05 28.5 -0.4**
HDA IAmb IAmb 20 08 01.7
comp=Z,36nm,2.0s
HDA Harding Lake 95.12 13 P **P 20 05 28.8 -0.1**
baz=206
PZH PanZhiHua 95.18 297 P **P 20 05 30.8 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,5.2s
HHC Hu-ho-hao-te 95.40 314 *e*P **P 20 05 32.8 +1.9**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.4s
ILAR Eielson Array 95.46 12 P **P 20 05 29.8 -0.6**
comp=Z,1.2nm,0.7s,baz=217,slow=5.6,SNR=13
comp=Z,1.2nm,0.7s
J25K Salcha River, 95.61 13 P **P 20 05 30.9 -0.3**
baz=208
H22K Ishtalitna Cre 95.71 10 P **P 20 05 33.1 +1.6**
baz=202
J26L Joseph Creek 95.88 14 P **P 20 05 32.7 +0.2**
J26L IAmb IAmb 20 05 33.9
comp=Z,4.4nm,0.8s
J26L Joseph Creek 95.88 14 P **P 20 05 33.3 +0.8**
baz=209
G21K Allakaket 95.97 9 P **P 20 05 34.0 +1.3**
baz=201
K29M Barlow Dome 96.71 16 P **P 20 05 37.1 +0.8**
baz=214
RSSD Black Hills 97.85 44 P **P 20 05 41.6 -0.4**
RSSD Black Hills 97.85 44 P **P 20 05 41.6 -0.4**
LPAZ La Paz 98.11 113 LR LR 20 40 44.0
comp=Z,73nm,21.6s,baz=246,slow=30
YAK Yakutsk 99.53 337 LR LR 20 43 40.0
comp=Z,44nm,21.8s,baz=88,slow=31
YAK Yakutsk 99.53 337 *ce*P **Pdif 20 05 48.6 -0.2**
YAK pmax pmax
comp=Z,5.0nm,0.7s
SONM Songino Array 102.14 318 P **Pdif 20 06 01.4 +0.4**
comp=Z,0.4nm,0.6s,baz=108,slow=5.2,SNR=3.7
SONM PP **PP 20 10 15.9 +2.2**
comp=Z,0.6nm,0.8s,baz=119,slow=5.2,SNR=4.0
SONM PKKPbc **PKKPbc 20 22 06.6 +1.3**
comp=Z,0.3nm,0.8s,baz=289,slow=4.4,SNR=3.8
WMQ Urumqi 112.62 309 *e*PKP **PKiKP 20 10 43.1 +0.5**
ZALV Zalesovo Beam 117.00 319 PKP **PKpdf 20 10 49.3 -1.3**
comp=Z,2.6nm,0.7s,baz=169,slow=0.4,SNR=10.0
MK31 Makanchi Array 117.08 311 *i* PKIKP **PKPdf 20 10 49.5 -1.5**
MKAR Makanchi Array 117.08 311 PKP **PKPdf 20 10 50.0 -1.0**
comp=Z,3.4nm,0.6s,baz=122,slow=0.7,SNR=32
NRIK Noril'sk 117.96 336 PKP **PKPdf 20 10 50.9 -1.1**
comp=Z,3.8nm,0.7s,baz=63,slow=5.9,SNR=4.3
NRIK Noril'sk 117.96 336 *i* PKIKP **PKPdf 20 10 50.8 -1.1**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
BOSA Boshof 119.78 202 PKP **PKPdf 20 10 56.8 -0.2**
comp=Z,6.1nm,1.0s,baz=157,slow=1.0,SNR=7.7
KURK Kurchatov 120.20 315 *c i* PKIKP **PKPdf 20 10 56.4 -0.4**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURBB Kurchatov Arra 120.24 314 PKP **PKPdf 20 10 56.0 -0.9**
comp=Z,6.1nm,0.8s,baz=103,slow=1.9,SNR=57
AAK Ala-Archa 121.68 305 *i* PKIKP **PKPdf 20 10 58.2 -2.0**
AAK pmax pmax
comp=Z,2.0nm,0.9s
LBTB Lobatse 122.96 204 PKPdf **PKPdf 20 11 03.9 +0.7**
LBTB Lobatse 122.96 204 PKIKP **PKPdf 20 11 03.9 +0.7**
DRK Karamyk 123.10 301 PKPdf **PKPdf 20 11 03.1 -0.1**
BTK Batken 123.95 301 PKPdf **PKPdf 20 11 04.2 -0.3**
BTK Batken 123.95 301 PKIKP **PKPdf 20 11 04.2 -0.3**
GAR Garm 124.14 300 PKPdf **PKPdf 20 11 04.8 -0.2**
KBL Kabul 124.25 294 PKPdf **PKPdf 20 11 05.6 +0.1**
KBL Kabul 124.25 294 PKIKP **PKPdf 20 11 05.6 +0.1**
KKAR Karatay Array 124.65 305 PKPdf **PKPdf 20 11 05.3 -0.4**
KKAR Karatay Array 124.65 305 PKPdf **PKPdf 20 11 05.2 -0.5**
KKAR Karatay Array 124.65 305 PKIKP **PKPdf 20 11 05.3 -0.4**
CHGR Chuyangaron 124.97 299 PKPdf **PKPdf 20 11 06.2 -0.3**
CHGR Chuyangaron 124.97 299 PKIKP **PKPdf 20 11 06.2 -0.3**
BRVK Borovoye 125.53 317 *c i* PKIKP **PKPdf 20 11 06.8 -0.2**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 131.95 322 PKPdf **PKPdf 20 11 19.3 +0.2**
ARU Arti 131.95 322 *i* PKIKP **PKPdf 20 11 18.5 -0.6**
ARU 20 13 39.6
ABKAR Abkulak array 132.17 312 PKPdf **PKPdf 20 11 19.5 -0.3**
GEYT Alibeck 133.49 297 PKP **PKiKP 20 11 24.1 +0.1**
comp=Z,3.1nm,0.6s,baz=241,slow=3.1,SNR=8.1
GEYT Alibeck 133.49 297 PKPdf **PKPdf 20 11 23.6 +0.9**
GYA0B ALIBECK ARRAY 133.49 297 PKPdf **PKPdf 20 11 23.6 +0.9**
KIRV Kirov 135.99 327 *c i* PKIKP **PKiKP 20 11 27.7 -0.5**
ARCES ARCESS Array B 136.56 349 PKP **PKPdf 20 11 27.4 0.0**
comp=Z,4.1nm,0.6s,baz=85,slow=1.3,SNR=13
ARCES ARCESS Array B 136.56 349 PKPdf **PKPdf 20 11 27.2 -0.2**
BELG Belogornoye 139.19 319 *i* PKIKP **PKPdf 20 11 31.3 -1.4**
BELG pmax pmax
comp=Z,4.0nm,1.0s
KLMR Klimovskoe 139.20 334 *e*PKIKP **PKPdf 20 11 27.8 -4.7**
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 139.20 334 *e*PKPdf **PKPdf 20 11 27.9 -4.6**
KLMR AMP 20 11 40.2
comp=Z,25nm,1.4s
H10S3 ASCENSION HYDR 139.32 152 T T 22 48 02.7
baz=206,slow=74,SNR=40
H10S2 ASCENSION HYDR 139.32 152 T T 22 48 05.6
baz=14,slow=74,SNR=7.4
H10N3 ASCENSION HYDR 140.39 152 T T 22 49 20.7
baz=204,slow=75,SNR=34
H10N1 ASCENSION HYDR 140.39 152 T T 22 49 34.5
baz=204,slow=75,SNR=46
H10N2 ASCENSION HYDR 140.41 152 T T 22 49 28.1
baz=204,slow=75,SNR=44
MBAR Mbarara 141.11 227 *c i* PKIKP **PKPdf 20 11 34.1 -3.6**
MBAR pmax pmax
comp=Z,3.0nm,1.7s
VRH Novokhopyorsk 143.03 319 *e*PKHKP PKPpre 20 11 34.0
VRH pmax pmax
comp=Z,10.0nm,0.9s
FINES FINESS Array B 143.32 342 PKhKP PKPpre 20 11 36.0
comp=Z,2.5nm,0.4s,baz=67,slow=3.7,SNR=26
OBN Obninsk 143.84 326 ⇓ *e*PKIKP PKPab 20 11 37.3 -0.7
OBN *e* 20 11 44.4
OBN *e* 20 14 52.9
OBN pmax pmax
comp=Z,16nm,1.0s
OBN MLR MLR
comp=Z,33nm,14.0s
LPSR Galich'ya Gora 143.97 323 *e*PKIKP PKPab 20 11 38.3 -0.3
LPSR pmax pmax
comp=Z,20nm,0.8s
ZEI Tsey 144.11 305 *i* PKIKP **PKPab 20 11 39.7 -0.1**
ZEI pmax pmax
comp=Z,12nm,1.0s
GOF Gofitskoye 144.22 309 ⇑ *e*PKIKP PKPbc 20 11 40.2 -0.1
GOF pmax pmax
comp=Z,34nm,0.6s
VORR Voronezh 144.25 321 *e*PKIKP **PKPab 20 11 39.0 -0.7**
VORR pmax pmax
comp=Z,30nm,0.5s
ONI Oni 144.47 305 PKPdf PKPbc 20 11 41.7 +0.5
ONI Oni 144.47 305 PKIKP PKPbc 20 11 41.7 +0.5
VSR Storozhevoye 144.48 321 *e*PKHKP PKPpre 20 11 38.5
VSR pmax pmax
comp=Z,40nm,0.7s
KBZ Khabaz 144.63 307 PKP PKPbc 20 11 41.8 +0.2
comp=Z,11nm,0.9s,baz=153,slow=1.7,SNR=22
KBZ Khabaz 144.63 307 *c i* PKIKP **PKPab 20 11 41.1 -0.3**
KIV Kislovodsk 144.73 307 ⇑P **PKPab 20 11 41.5 -0.4**
KIV Kislovodsk 144.73 307 PKPdf **PKPab 20 11 41.6 -0.4**
KIV Kislovodsk 144.73 307 *i* PKIKP **PKPab 20 11 41.8 -0.1**
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,35nm,25.0s
RAF Rauma 144.79 344 *e*P **PKPab 20 11 39.7 -1.7**
MEF Metsahovi 144.80 342 *e*P **PKPab 20 11 41.2 -0.3**
SHA1 Shidzhatmaz 144.80 307 *i* PKIKP **PKPab 20 11 41.0 -1.4**
KARS Kars 145.07 302 PKPdf **PKPdf 20 11 44.0 +0.2**
KARS Kars 145.07 302 PKIKP **PKPdf 20 11 44.0 +0.2**
GEVA Gevas 145.36 298 **PKPdf 20 11 45.0 +0.6**
MOL Molde 145.41 356 *e*P **PKPbc 20 11 42.3 -1.2**
MOL IAmb IAmb 20 11 42.5
comp=Z,39nm,0.8s
VSU Vasula 145.52 338 *i* PKIKP **PKPbc 20 11 42.8 -1.1**
VSU pmax pmax
comp=Z,251nm,0.8s
VSU Vasula 145.52 338 *e*P **PKPab 20 11 44.1 0.0**
AKN Aaknes 145.83 357 *e*P **PKPbc 20 11 44.9 0.0**
AKN IAmb IAmb 20 11 48.4
comp=Z,110nm,1.2s
DOMB Dombas 145.83 355 *e*P **PKPdf 20 11 44.3 0.0**
DOMB IAmb IAmb 20 11 45.8
comp=Z,94nm,1.5s
GURO Guroymak-BITLI 146.14 298 PKPbc **PKPab 20 11 47.5 0.0**
MTSE Matsula 146.22 341 *e*P **PKPbc 20 11 46.4 +0.3**
NC303 NORSAR Array S 146.42 353 PKPdf **PKPbc 20 11 46.1 -0.5**
NB2 NORSAR Subarra 146.62 353 PKP **PKPdf 20 11 46.2 +0.6**
comp=Z,8.4nm,0.8s,baz=14,slow=3.8
NOA NORSAR Array B 146.62 353 PKPbc **PKPdf 20 11 46.5 +0.9**
comp=Z,17nm,0.9s,baz=15,slow=2.4,SNR=43
NC602 NORSAR Array S 146.88 352 *e*P **PKPbc 20 11 47.3 -0.7**
NC602 IAmb IAmb 20 11 49.6
comp=Z,57nm,1.4s
SOC Sochi 146.91 308 *i* PKP2 **PKPdf 20 11 47.3 +0.7**
SOC *e*PPP PPP 20 18 27.4
SOC *e*SSS SSS 20 39 37.1
SOC pmax pmax
comp=Z,50nm,0.7s
SOC MLR MLR
comp=Z,58nm,19.0s
SUE Sulen 147.03 359 *e*P **PKPbc 20 11 48.0 -0.3**
SUE IAmb IAmb 20 11 51.4
comp=Z,45nm,1.0s
KOPT Kop Dagi 147.12 301 PKPbc **PKPbc 20 11 49.7 0.0**
SKAR Skarslia 147.24 355 *e*P **PKPbc 20 11 49.1 0.0**
SKAR IAmb IAmb 20 11 56.5
comp=Z,235nm,2.3s
MARD Mardin 147.24 296 PKPbc **PKPbc 20 11 50.2 +0.3**
KTUT Trabzon 147.48 303 ⇓P **PKPbc 20 11 50.7 +0.4**
OSL Oslo 147.75 353 *e*P **PKPbc 20 11 50.4 +0.1**
OSL IAmb IAmb 20 11 53.3
comp=Z,21nm,0.7s
ISAL Salakas 147.97 335 *e*P **PKPbc 20 11 52.1 +1.0**
MNK Minsk 148.08 333 *i* PKP2 **PKPbc 20 11 51.4 0.0**
MNK PP *i* 20 15 23.2
MNK *i* PPP PPP 20 18 41.1
MNK *i* 20 18 55.6
MNK *i* SS SS 20 34 26.6 +4.8
MNK *i* SSS SSS 20 40 01.4
MNK pmax pmax
comp=Z,68nm,0.9s
MNK pmax pmax
comp=N,35nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=Z,79nm,20.0s
MNK MLR MLR
comp=N,3μm,20.0s
MNK MLR MLR
comp=E,6.0nm,14.0s
MNK Minsk 148.08 333 *i* PKP **PKPbc 20 11 51.5 0.0**
comp=E,3.0nm,0.8s
MNK *i* PKP **PKPbc 20 11 51.5 0.0**
comp=N,35nm,0.8s
MNK *i* PKP **PKPbc 20 11 51.5 0.0**
comp=Z,68nm,0.9s,baz=225
MNK *i* pPKP **sPKPdf 20 12 06.6 -0.2**
MNK *i* PP **PP 20 15 23.2 +3.8**
MNK *i* PPP PPP 20 18 41.1
MNK *i* SKS **SKSdf 20 18 55.6 +3.2**
MNK *i* SS **SS 20 34 26.7 +4.9**
MNK *i* SSS SSS 20 40 01.5
MNK *i* LR LR 21 16 41.2
MNK *i* LRM MLR 21 17 46.5
MNK *i* LRM MLR 21 18 06.2
MNK *i* LRM MLR 21 18 18.8
comp=E,6.0nm,14.4s
IIGN Ignalina 148.10 335 *e*P **PKPbc 20 11 52.0 +0.5**
ANN Anapa 148.10 311 *c i* PKP2 **PKPbc 20 11 51.3 -0.5**
ANN pmax pmax
comp=Z,86nm,0.8s
ODD1 Odda 148.11 357 *e*P **PKPbc 20 11 50.6 -0.8**
KONO Kongsberg 148.15 354 PKPbc **PKPbc 20 11 51.2 -0.2**
KONO Kongsberg 148.15 354 ⇑PKP2 **PKPbc 20 11 51.3 -0.2**
KONO Kongsberg 148.15 354 *e*P **PKPbc 20 11 50.9 -0.6**
KONO IAmb IAmb 20 11 52.2
comp=Z,18nm,0.8s
NACGM Naroch 148.22 334 ⇑ *e*PKP **PKPbc 20 11 51.9 +0.2**
baz=43
VSVD Vaisvydziai 148.42 338 *e*P **PKPbc 20 11 52.4 +0.1**
STRU Stroemstad 148.58 352 *e*P **PKPbc 20 11 52.1 -0.5**
BLS5 Blasjo 148.60 357 *e*P **PKPbc 20 11 52.8 +0.1**
PABE Paberze 148.79 337 *e*P **PKPbc 20 11 53.8 +0.6**
KMY Karmoy 148.86 358 *e*P **PKPbc 20 11 53.5 +0.2**
PBUR Paburge 149.03 339 *e*P **PKPbc 20 11 54.3 +0.5**
HOMB Homborsund 149.61 354 *e*P **PKPbc 20 11 55.3 +0.2**
HOMB IAmb IAmb 20 11 56.0
comp=Z,34nm,0.8s
HOMB Homborsund 149.61 354 *e*P **PKPbc 20 11 55.3 +0.2**
SNART Snartemo 149.64 356 *e*P **PKPbc 20 11 55.8 +0.5**
SNART IAmb IAmb 20 12 01.0
comp=Z,286nm,1.7s
BORU Boraas 149.72 350 *e*P **PKPbc 20 11 55.3 -0.1**
AKASG Malin Array Be 150.04 326 PKPbc **PKPbc 20 11 56.0 -0.4**
comp=Z,22nm,0.7s,baz=45,slow=3.1,SNR=75
SIM Simferopol' 150.24 313 *i* PKP2 **PKPbc 20 11 56.8 -0.3**
SIM pmax pmax
comp=Z,53nm,1.1s
FABU Falkenberg 150.33 349 *e*P **PKPbc 20 11 56.0 -0.9**
BLEU Blekinge 150.40 346 *e*P **PKPbc 20 11 56.0 -1.1**
DEL Delary 150.64 348 *i* P **PKPbc 20 11 57.0 -0.7**
BNN Bunyan 150.87 300 PKPbc **PKPbc 20 11 58.2 -0.8**
BJUU Bjuv 151.17 349 *e*P **PKPbc 20 11 58.6 -0.4**
MUD Monsted U'grnd 151.34 353 *e*P **PKPbc 20 11 58.9 -0.4**
BZK Bozkurt 151.41 307 PKPbc **PKPbc 20 11 58.8 -1.2**
BSD Bornholm Skovb 151.70 346 *e*P **PKPbc 20 11 58.0 -2.2**
BSD Bornholm Skovb 151.70 346 *e*P **PKPbc 20 12 00.0 -0.2**
GHAJ Ghor Haditha 151.75 284 PKPbc **PKPbc 20 12 01.1 0.0**
BR131 Keskin Array S 152.33 303 PKPbc **PKPbc 20 12 01.6 -0.8**
BR131 Keskin Array S 152.33 303 PKIKP **PKPbc 20 12 01.6 -0.8**
BRTR Keskin Array B 152.33 303 PKP **PKPdf 20 11 56.8 +1.2**
comp=Z,6.1nm,0.9s,baz=352,slow=3.7,SNR=5.0
BRTR PKPbc **PKPbc 20 12 01.9 -0.4**
comp=Z,7.6nm,0.6s,baz=132,slow=4.0,SNR=32
MILM Milestii Mici 152.52 320 ⇑P **PKPbc 20 12 02.0 -0.3**
MILM Milestii Mici 152.52 320 ⇑PKIKP **PKPbc 20 12 02.0 -0.3**
GKP Gorka Klasztor 152.79 341 *e*P **PKPbc 20 12 00.4 -2.3**
BEL Belsk 152.87 336 *e*PKPbc **PKiKP 20 12 03.3 +0.2**
ANTO Ankara 152.92 303 ⇓P **PKPbc 20 12 03.6 0.0**
ANTO Ankara 152.92 303 PKPbc **PKPbc 20 12 03.5 0.0**
ANTO Ankara 152.92 303 ⇓PKIKP **PKPbc 20 12 03.6 0.0**
TLCR 153.46 317 ⇑P **PKPbc 20 12 04.5 +0.1**
TLCR 153.46 317 ⇑PKIKP **PKPbc 20 12 04.5 +0.1**
CSS Mathiatis 153.48 293 PKPbc **PKPbc 20 12 04.7 -0.2**
VLDR Vladesti 153.54 319 ⇓P **PKPbc 20 12 03.7 -0.9**
GHRR 153.81 320 ⇑P **PKiKP 20 12 05.8 +0.5**
TPGR Topolog 153.87 317 ⇑P **PKPbc 20 12 04.1 -1.4**
CFR Carcaliu 153.87 317 ⇑P **PKPbc 20 12 05.2 -0.1**
CFR Carcaliu 153.87 317 ⇑PKIKP **PKPbc 20 12 05.2 -0.1**
MDUB Mudurnu 153.89 306 PKPbc **PKPbc 20 12 04.2 -1.5**
MDUB PKPab **sPKPdf 20 12 17.4 +0.9**
TESR Tescani 153.97 321 ⇓P **PKPab 20 12 19.1 +0.1**
BIZ Bicaz 154.01 323 ⇑P **PKiKP 20 12 06.4 +0.7**
BUR08 Bucovina Ar. S 154.03 325 PKPbc **PKiKP 20 12 06.5 +0.7**
BURAR Bucovina Array 154.04 325 ⇑P **PKiKP 20 12 06.8 +1.0**
BURAR Bucovina Array 154.04 325 PKPbc **PKiKP 20 12 06.3 +0.5**
BURAR PKPab **PKPab 20 12 19.6 +0.1**
PANC Panciu 154.06 320 ⇓P **PKPab 20 12 20.4 +0.9**
ODBI Odobesti 154.18 319 ⇓P **PKPab 20 12 21.1 +1.2**
HARR Harsova 154.25 317 ⇑P **PKiKP 20 12 07.0 +0.8**
VRI Vrincioaia 154.31 320 ⇓P **PKPab 20 12 20.9 +0.4**
VRI Vrincioaia 154.31 320 ⇓PKP2 **PKPab 20 12 20.9 +0.4**
PLOR Plostina 154.36 320 ⇑P **PKPab 20 12 15.0 -5.8**
BISRR Bisoca 154.50 319 ⇓P **PKPab 20 12 22.7 +1.3**
KOLS Kolonicke sedl 154.53 330 *e*PKIKP **PKPdf 20 11 59.1 +0.9**
KOLS *e* 20 12 04.8
KOLS *e* 20 12 20.8
COVR Voineasa-Covas 154.62 320 ⇑P **PKPab 20 12 22.0 +0.1**
BORA Eskisehir 154.63 305 PKPab **PKPab 20 12 21.6 -0.6**
OZUR 154.70 321 ⇑P **PKPab 20 12 22.6 +0.4**
UZH Uzhgorod 154.74 329 *e*PKIKP **PKPdf 20 12 00.0 +1.5**
UZH *i* 20 12 11.0
CRVS Cervenica-Dubn 154.91 331 *e*PKP2 **PKPab 20 12 22.7 -0.2**
MLR Muntele Rosu 154.97 320 ⇑P **PKPab 20 12 23.7 +0.2**
MLR Muntele Rosu 154.97 320 ⇑PKP2 **PKPab 20 12 23.7 +0.2**
DOPR Dopca 155.00 321 ⇓P **PKiKP 20 12 08.4 +0.6**
TRPA Tarpa 155.00 328 ⇑P **PKPbc 20 12 07.6 0.0**
TRPA Tarpa 155.00 328 PKP **PKiKP 20 12 10.5 +2.9**
SECR 155.17 319 ⇓P **PKPab 20 12 24.7 +0.5**
OKC Ostrava-Krasne 155.46 336 *e*PKP2 **PKPab 20 12 25.8 +0.6**
OKC Ostrava-Krasne 155.46 336 *e*PKPAB **PKPab 20 12 25.8 +0.6**
OSTC Ostas 155.49 340 *e*PKPDF **PKPdf 20 12 00.0 +0.5**
OSTC *e*PKPAB **PKPab 20 12 26.0 +0.7**
CHVC Chvalec 155.51 340 *e*PKPAB **PKPab 20 12 25.5 +0.1**
VOIR 155.51 321 ⇓P PKPab 20 12 13.0 -13
LANS Liptovska Anna 155.53 334 *e*PKP2 **PKPab 20 12 26.5 +0.9**
DPC Dobruska-Polom 155.63 339 *e*PKP2 **PKPab 20 12 26.3 +0.3**
DPC Dobruska-Polom 155.63 339 *e*PKPAB **PKPab 20 12 26.3 +0.3**
CLL Collm 155.67 345 *i* PKPdif PKPdf 20 12 09.0 +9.3
comp=Z,9.0nm,1.2s
CLL *i* x x 20 12 14.6
CLL *i* PKPab **PKPab 20 12 25.2 -0.8**
comp=Z,16nm,0.7s
CLL *ex* x 20 12 43.0
CLL LmV 21 22 00.0
comp=Z,100nm,19.5s
KRLC Kraliky 155.73 338 *e*PKP2 **PKPab 20 12 26.3 -0.1**
KRLC Kraliky 155.73 338 *e*PKPAB **PKPab 20 12 26.3 -0.1**
ARR Arges 155.78 321 ⇑P **PKPdf 20 12 00.3 +0.1**
BRG Berggiesshubel 155.84 343 *e*PKP PKPdf 20 12 09.9 +10
BRG Amp 20 12 11.4
comp=Z,5.5nm,1.1s
BRG *i* x x 20 12 26.6
BRG Amp 20 12 27.3
comp=Z,10nm,0.8s
DRGR 155.86 326 ⇑P PKPdf 20 12 09.0 +8.8
DRGR 155.86 326 ⇑PKIKP PKPdf 20 12 09.0 +8.8
ELL Elmali 155.92 298 PKPab **PKPab 20 12 27.2 -0.7**
ELL Elmali 155.92 298 PKP2 **PKPab 20 12 27.2 -0.7**
MAUC Maruska 155.97 336 *e*PKPAB **PKPab 20 12 27.5 0.0**
HUMR Humele 156.09 319 ⇑P **PKPdf 20 12 08.0 +7.5**
SZH Strazhica 156.23 316 P PKPab 20 12 37.7 +8.9
VYHS Vyhne 156.31 333 *e*PKP2 **PKPab 20 12 29.0 +0.1**
PSZ Piszkesteto 156.33 331 ⇑P **PKPab 20 12 28.2 -0.9**
PSZ Piszkesteto 156.33 331 PKPab **PKPab 20 12 28.8 -0.3**
PSZ Piszkesteto 156.33 331 PKP2 **PKPab 20 12 28.8 -0.3**
VRAC Vranov 156.45 338 ⇑P **PKPab 20 12 29.6 +0.1**
VRAC Vranov 156.45 338 ⇑PKP2 **PKPab 20 12 29.6 +0.1**
PRU Pruhonice 156.48 341 *e*PKP2 **PKPab 20 12 29.5 -0.1**
PRU Pruhonice 156.48 341 *e*PKPAB **PKPab 20 12 29.5 -0.1**
NKC Novy Kostel 156.80 345 *e*PKP2 **PKPab 20 12 30.6 -0.4**
NKC Novy Kostel 156.80 345 *e*PKPAB **PKPab 20 12 30.6 -0.4**
MODS Modra-Piesok 157.00 335 *e*PKP2 **PKPab 20 12 32.3 +0.4**
SRO Srobarova 157.07 333 *e*PKP2 **PKPab 20 12 32.9 +0.7**
DIM Dimitrovgrad 157.11 313 P **PKPab 20 12 34.3 +1.7**
BZS Buzias 157.22 325 ⇓P **PKPab 20 12 32.4 -0.6**
BZS Buzias 157.22 325 ⇓PKP2 **PKPab 20 12 32.4 -0.6**
HERR Herculane 157.30 323 ⇓P PKPdf 20 12 12.5 +11
MPEP Malo Peshtene 157.50 318 P **PKPab 20 12 34.7 +0.4**
KHC Kasperske Hory 157.53 342 *e*PKIKP **PKPdf 20 12 05.6 +3.4**
KHC Kasperske Hory 157.53 342 *e*PKPDF **PKPdf 20 12 05.6 +3.4**
KHC *e*PKPAB **PKPab 20 12 33.7 -0.5**
CKRC Cesky Krumlov 157.60 340 *e*PKPDF **PKPdf 20 12 05.1 +2.8**
CKRC *e*PKPAB **PKPab 20 12 34.0 -0.5**
BCLA Clavier 157.65 356 *d*PKP **PKPab 20 12 33.4 -1.2**
BGES Gesves 157.70 357 *d*PKP **PKPab 20 12 33.7 -1.0**
GERES GERESS Array B 157.75 341 PKP **PKPdf 20 12 03.8 +1.2**
comp=Z,0.5nm,0.9s,baz=229,slow=1.2,SNR=5.4
GERES PKPab **PKPab 20 12 32.9 -2.3**
comp=Z,1.1nm,0.7s,baz=32,slow=6.3,SNR=6.1
BMRD Maredsous 157.79 357 *d*PKP **PKPab 20 12 34.5 -0.6**
CONA Conrad Observa 157.88 337 *i* P **PKPab 20 12 36.0 +0.1**
comp=Z,11nm,0.9s,SNR=6.7
RONA Rosalia, Austr 157.93 336 *i* P **PKPab 20 12 36.1 +0.1**
comp=Z,18nm,1.1s,SNR=6.9
BLKB Belogradchik 157.96 320 ⇓P **PKPab 20 12 36.9 +0.6**
VTS Vitosha 158.24 317 ⇓P **PKPab 20 12 38.3 +0.6**
VTS Vitosha 158.24 317 PKPab **PKPab 20 12 37.7 +0.1**
VTS Vitosha 158.24 317 ⇓PKP2 **PKPab 20 12 38.3 +0.6**
VTS Vitosha 158.24 317 P **PKPab 20 12 38.3 +0.6**
MOA Molln 158.48 339 *i* P **PKPab 20 12 38.2 -0.1**
comp=Z,8.8nm,1.1s
MMB Musomiste 158.50 314 P **PKPab 20 12 38.7 0.0**
ARSA Arzberg 158.58 337 *i* P **PKPab 20 12 38.6 -0.2**
comp=Z,4.7nm,0.8s
KKB Krupnik 158.75 315 P **PKPab 20 12 40.1 +0.3**
BIOA Bad Ischl, Aus 158.81 340 *i* P **PKPab 20 12 39.7 -0.1**
comp=Z,8.8nm,0.7s,SNR=6.8
DIVS Divibare 159.11 324 PKPdf **PKPdf 20 12 04.0 -0.4**
DIVS PKPab **PKPab 20 12 40.6 -0.7**
SOKA Soboth 159.25 337 *i* P **PKPab 20 12 41.2 -0.6**
comp=Z,10nm,1.0s,SNR=5.1
PERS Pernice 159.25 336 *i* PKPab **PKPab 20 12 41.0 -0.7**
KBA Koelnbreinsper 159.45 340 *i* P **PKPab 20 12 42.5 -0.2**

comp=Z,4.2nm,0.7s
OBKA Obir 159.56 337 *i* P **PKPab 20 12 42.9 -0.2**
comp=Z,7.2nm,0.8s
GOLS Golise 159.60 335 *i* PKPab **PKPab 20 12 42.5 -0.7**
WATA Walderalm 159.71 343 *i* P **PKPab 20 12 43.5 -0.3**
comp=Z,4.9nm,0.8s
MYKA Terra Mystica 159.76 339 *i* P **PKPab 20 12 43.0 -0.9**
comp=Z,10nm,1.1s
WTTA Wattenberg 159.76 343 *i* P **PKPab 20 12 43.8 -0.2**
comp=Z,9.7nm,0.6s
RETA Reutte 159.76 345 *i* P **PKPab 20 12 43.4 -0.5**
comp=Z,3.9nm,0.7s
MOTA Moosalm 159.81 344 *i* P **PKPab 20 12 43.7 -0.6**
comp=Z,12nm,1.1s
SQTA Sankt Quirin 159.91 344 *i* P **PKPab 20 12 44.1 -0.6**
comp=Z,3.7nm,0.9s
ABTA Abfaltersbach 159.99 341 *i* P **PKPab 20 12 44.1 -0.9**
comp=Z,6.3nm,0.8s
GBAS Gorenja Brezov 160.10 336 *i* PKPab **PKPab 20 12 44.4 -1.0**
DAVA Damuels 160.14 347 *i* P **PKPab 20 12 45.1 -0.6**
comp=Z,10.0nm,0.9s
FETA Feichten 160.21 345 *i* P **PKPab 20 12 44.9 -1.1**
comp=Z,5.8nm,1.3s
TIP Timpagrande 164.22 318 ⇑P **PKPab 20 13 02.9 -0.9**
TORD Torodi Ar. Bea 165.06 174 PKP **PKPdf 20 12 11.2 +0.1**
comp=Z,1.4nm,0.9s,baz=238,slow=1.1,SNR=6.2
TORD PKPab **PKPab 20 13 08.7 +1.0**
comp=Z,5.0nm,0.7s,baz=176,slow=3.2,SNR=10
ESDC Sonseca Array 167.02 25 PKP **PKPdf 20 12 12.2 +0.1**
comp=Z,1.1nm,1.0s,baz=330,slow=2.8,SNR=6.6
ESDC PKPab **PKPab 20 13 14.9 -1.1**
comp=Z,0.9nm,0.8s,baz=323,slow=3.7,SNR=7.1
KEST Kesra 170.77 327 PKPab **PKPab 20 13 32.0 -0.8**
comp=Z,4.1nm,0.8s,baz=308,slow=8.3,SNR=4.9

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*IDC **01** 20:06:35.7±2.2, 2°.32S×141°.18E, h0km, mb3.4/3, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=86.1km s-min=32.4km az=84.0*
*DJA **01** 20:06:37.8±1.3, 2°S±4°×14°1E±°, h10km, M4.1/4, mb4.5/1, MLv3.8/4*
ISC 01 20:06:37.6±1.4, 1°.96S±0°.09×140°.7E±0°.1, h10km, n8, σ2§60/11, mb3.4/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.81**	**219**	Pg	**Pg**	**20 06 52.1**	**-1.1**
GENI				Sg	**Sg**	**20 07 04.3**	**+0.5**
SMPI	**Sarmi**	**1.97**	**269**	P	**Pn**	**20 07 09.2**	**-1.8**
SMPI				S	**Sn**	**20 07 34.8**	**-0.9**
WAMI	**Wamena**	**2.74**	**226**	P	**Pn**	**20 07 23.2**	**+1.6**
WAMI				S	**Sn**	**20 07 57.5**	**+2.6**
WRA	**Warramunga Arr**	**18.92**	**199**	P	**P**	**20 10 55.5**	**-3.2**
	0.1nm,0.3s,baz=24,slow=12,SNR=6.2						
WRA				S	Sn	20 14 16.1	-15
	0.4nm,0.9s,baz=26,slow=22,SNR=2.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**22.55**	**196**	P	**P**	**20 11 35.2**	**-2.9**
	0.6nm,0.8s,baz=26,slow=11,SNR=3.6						
	0.6nm,0.8s						
GIRL	**Giralia**	**32.89**	**229**	P	**P**	**20 13 14.1**	**+2.0**
MKAR	**Makanchi Array**	**70.41**	**322**	P	**P**	**20 17 55.6**	**+3.6**
	0.2nm,0.7s,baz=111,slow=7.9,SNR=2.0						
	0.2nm,0.7s						
VNDA	**Vanda**	**76.36**	**175**	P	**P**	**20 18 24.4**	**-2.1**
	0.7nm,0.7s,baz=320,slow=5.2,SNR=4.3						
	0.7nm,0.7s						

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*IDC **01** 20:09:52.3±13.0, 8°.11S×111°.47E, h98km±113km, mb3.1/4, mbtmp3.7/6, ML3.9/2, MS3.6/1, Error ellipse: s-maj=158.1km s-min=26.3km az=56.0*
*DJA **01** 20:09:55.5±0.2, 8°S±4°×11°2E±°, h109km±3km, M3.9/16, mB4.9/4, mb4.0/12, MLv3.7/16, Mw(mB)4.2/4*
ISC 01 20:09:54.9±0.7, 8°.40S±0°.07×111°.63E±0°.05, h119km±8km, n40, σ1§65/47, mb3.3/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.41**	**24**	P	**Pn**	**20 10 12.7**	**+0.5**
PWJI				S	**Sn**	**20 10 24.8**	**-0.5**
PCJI	**Pacitan**	**0.49**	**295**	P	**Pn**	**20 10 13.7**	**+1.0**
PCJI				S	**Sn**	**20 10 26.7**	**+0.6**
UGM	**Wanagama**	**1.20**	**294**	P	**Pn**	**20 10 19.5**	**+0.6**
UGM				S	**Sn**	**20 10 36.6**	**-0.5**
UGM	**Wanagama**	**1.20**	**294**	P	**Pn**	**20 10 19.5**	**+0.6**
YOGI	**Yogyakarta**	**1.45**	**294**	P	**Pn**	**20 10 22.1**	**+0.5**
YOGI				S	**Sn**	**20 10 41.3**	**-0.7**
TBJI	**Tambak Boyo**	**1.59**	**8**	P	**Pn**	**20 10 24.0**	**+0.7**
TBJI				S	**Sn**	**20 10 45.1**	**+0.2**
SMRI	**Semarang**	**1.79**	**319**	P	**Pn**	**20 10 26.3**	**+0.6**
SMRI				S	**Sn**	**20 10 50.0**	**+0.8**
SMRI	**Semarang**	**1.79**	**319**	P	**Pn**	**20 10 26.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.49**	**92**	P	**Pn**	**20 10 35.7**	**+1.1**
JAGI				S	**Sn**	**20 11 05.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**2.49**	**92**	P	**Pn**	**20 10 36.1**	**+1.5**
BWJI	**Bawean**	**2.73**	**22**	P	**Pn**	**20 10 38.4**	**+0.7**
IGBI	**Denpasar**	**3.50**	**97**	P	**Pn**	**20 10 49.1**	**+1.4**
SRBI	**Singaraja**	**3.56**	**85**	P	**Pn**	**20 10 49.3**	**+0.8**
CNJI	**Cibinong**	**4.59**	**283**	P	**Pn**	**20 11 02.5**	**+0.2**
TWSI	**Taliwang, Sumb**	**5.20**	**94**	P	**Pn**	**20 11 11.0**	**+0.4**
	0.1nm5.0nm,0.4s						
SKJI	**Sukabumi**	**5.22**	**285**	P	**Pn**	**20 11 12.8**	**+2.0**
	0.3nm2μm56nm,0.6s						
PLAI	**Plampang**	**6.09**	**94**	P	**Pn**	**20 11 24.0**	**+1.4**
	0.1nm15nm,0.9s						
PLAI	**Plampang**	**6.09**	**94**	P	**Pn**	**20 11 24.6**	**+2.0**
XMI	**Christmas Isla**	**6.21**	**250**	P	**Pn**	**20 11 23.1**	**-1.0**
KLI	**Kotabumi**	**7.59**	**297**	P	**Pn**	**20 11 43.4**	**+0.5**
KASI	**Kota Agung**	**7.64**	**292**	P	**Pn**	**20 11 44.1**	**+0.6**
	0.2nm26nm,0.9s						
LWLI	**Liwa**	**8.24**	**294**	P	**Pn**	**20 11 53.0**	**+1.3**
	1μm28nm,0.9s						
BSSI	**Bau Bau, Buton**	**9.07**	**76**	P	**Pn**	**20 12 03.2**	**+0.3**
	9.3nm,0.9s						
MNAI	**Manna**	**9.51**	**294**	P	**Pn**	**20 12 07.4**	**-1.4**
TTSI	**Tana Toraja**	**9.73**	**57**	P	**Pn**	**20 12 12.3**	**+0.5**
	8.2nm,1.4s						
EDFI	**Ende, Flores**	**9.95**	**93**	P	**Pn**	**20 12 14.9**	**0.0**
	243nm10nm,0.5s						
MMRI	**Maumere**	**10.49**	**92**	P	**Pn**	**20 12 21.9**	**-0.2**
MMRI	**Maumere**	**10.49**	**92**	P	**Pn**	**20 12 22.4**	**+0.3**
	12nm,0.4s						
BATI	**Baumata**	**12.01**	**100**	P	**Pn**	**20 12 42.5**	**+0.2**
	2.6nm,0.3s,baz=280,slow=6.1,SNR=6.3						
BATI				S	**Sn**	**20 14 47.6**	**-7.0**
	2.4nm,0.3s,baz=238,slow=19,SNR=2.2						
	4.7nm,0.3s						
BATI	**Baumata**	**12.01**	**100**	P	**Pn**	**20 12 41.9**	**-0.4**
	4.9nm,1.0s						
SOEI	**Soe**	**12.55**	**97**	P	**Pn**	**20 12 49.8**	**+0.3**
	6.6nm,1.4s						
SOEI	**Soe**	**12.55**	**97**	P	**Pn**	**20 12 52.0**	**+2.5**
MBWA	**Marble Bar**	**14.90**	**149**	P	**Pn**	**20 13 20.1**	**+0.6**
SANI	**Sanana**	**15.62**	**67**	P	**P**	**20 13 29.6**	**-0.7**
	4.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**16.68**	**127**	P	**Pn**	**20 13 45.3**	**+3.6**
	0.1nm,0.3s,baz=319,slow=9.3,SNR=2.3						
	4.1nm,1.2s						
SIJI	**Sorong**	**20.94**	**70**	LR	LR	20 24 41.0	
	comp=Z,177nm,21.9s,baz=154,slow=42						
WRA	**Warramunga Arr**	**24.79**	**120**	P	**P**	**20 15 08.4**	**+2.5**
	0.3nm,0.6s,baz=294,slow=11,SNR=2.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**26.18**	**128**	P	**P**	**20 15 20.3**	**+1.8**
	0.3nm,0.6s,baz=304,slow=8.9,SNR=6.0						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**36.34**	**134**	P	**P**	**20 16 49.4**	**+1.9**
	2.1nm,1.0s,baz=324,slow=8.7,SNR=1.3						
	2.1nm,1.0s						
MKAR	**Makanchi Array**	**60.85**	**337**	P	**P**	**20 19 52.1**	**-2.6**
	0.2nm,0.3s,baz=156,slow=5.9,SNR=5.7						
	0.2nm,0.3s						

IDC 01 20:21:41.9±489.0, 36°.27N×6°.91E, h0km, Error ellipse: s-maj=205.6km s-min=53.8km az=100.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**2.01**	**103**	I		20 35 20.0	
	0.1nm,0.8s,baz=284,slow=305,SNR=2.0						
I26DE	**FREYUNG INFRAS**	**13.53**	**20**	I		21 45 10.0	
	baz=202,slow=324,SNR=1.9						
I43RU	**DUBNA INFRASON**	**28.83**	**35**	I		23 16 30.0	
	baz=239,slow=318,SNR=2.5						
I19DJ	**I19DJ**	**40.96**	**118**	I		00 43 40.0	
	baz=314,slow=319,SNR=0.9						

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*IDC **01** 20:23:55.4±1.3, 27°.62N×129°.53E, h0km, mb3.5/6, mbtmp3.5/6, MS3.7/4, Error ellipse: s-maj=31.8km s-min=21.4km az=102.0*
*JMA **01** 20:24:00.3±0.1, 27°.6N±1°.0×12°9E±°, h50km±3km, MV3.0/25, NEAR AMAMI-OSHIMA ISLAND*
ISC 01 20:23:59.0±1.3, 27°.48N±0°.03×129°.61E±0°.04, h27km±10km, n31, σ0§74/37, mb3.5/6, MS3.7/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshoma**	**0.66**	**298**	*i* P	**Pb**	**20 24 11.7**	**-0.3**
JTK				S	**Sb**	**20 24 20.2**	**-0.7**
JAMN	**Amaminishikomi**	**0.85**	**333**	*i* P	**Pn**	**20 24 14.6**	**-0.6**
JZK	**Kikaishima**	**0.89**	**21**	P	**Pb**	**20 24 16.5**	**+0.6**
JAM	**Amami Oshima**	**0.93**	**360**	*i* P	**Pn**	**20 24 15.9**	**-0.4**
JAM				S	**Sn**	**20 24 27.6**	**-1.1**
JOKE	**Okinoerabujima**	**0.93**	**263**	*i* P	**Pn**	**20 24 16.3**	**0.0**
JYRO	**Yoronjima**	**1.13**	**247**	P	**Pn**	**20 24 19.0**	**0.0**
JYRO				*e*S	**Sn**	**20 24 32.7**	**-0.8**
JOW	**Kunigami**	**1.35**	**242**	Pn	**Pn**	**20 24 21.9**	**-0.3**
	13nm,0.3s,baz=96,slow=14,SNR=14						
JOW				Sn	**Sb**	**20 24 41.4**	**+0.8**
	59nm,0.3s,baz=114,slow=23,SNR=7.5						
JOW	**Kunigami**	**1.35**	**242**	P	**Pn**	**20 24 22.2**	**+0.1**
JOW				*e*S	**Sn**	**20 24 39.0**	**-0.2**
JIH	**Iheya**	**1.53**	**254**	P	**Pn**	**20 24 24.7**	**+0.2**
JIH				*e*S	**Sn**	**20 24 42.6**	**-0.9**
JTAJ	**Takarajima**	**1.71**	**348**	P	**Pn**	**20 24 26.8**	**-0.2**
JNTH	**Nagotoyohara**	**1.71**	**236**	P	**Pn**	**20 24 27.1**	**+0.1**
JNTH				*e*S	**Sn**	**20 24 47.8**	**-0.2**
JKDJ	**Kitadaitoujima**	**2.14**	**135**	P	**Pn**	**20 24 32.7**	**-0.3**
JKDJ				S	**Sn**	**20 24 57.6**	**-1.1**
JMZ	**Minamidaito 2**	**2.19**	**139**	P	**Pn**	**20 24 33.2**	**-0.4**
JMZ				S	**Sn**	**20 24 58.0**	**-1.9**
JNN	**Nakanoshima**	**2.37**	**6**	P	**Pn**	**20 24 35.6**	**-0.4**
JKE	**Kume jima 2**	**2.77**	**246**	P	**Pn**	**20 24 41.8**	**+0.2**
JYAK	**Yakushimahirau**	**2.86**	**16**	P	**Pn**	**20 24 42.8**	**0.0**
JYAK				S	**Sn**	**20 25 16.4**	**0.0**
JKC	**Kuchinoerabu**	**3.02**	**10**	S	**Sn**	**20 25 19.9**	**-0.3**
JMTN	**Minamitane**	**3.12**	**21**	P	**Pn**	**20 24 46.5**	**+0.1**
JMTN				*e*S	**Sn**	**20 25 23.2**	**+0.5**
JTN	**Tanegashima 3**	**3.38**	**20**	P	**Pn**	**20 24 50.1**	**0.0**
JTN				*e*S	**Sn**	**20 25 29.5**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**34.92**	**95**	T	T	21 07 43.7	
	baz=290,slow=75,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**34.92**	**95**	T	T	21 07 48.2	
	baz=290,slow=75,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**34.94**	**95**	T	T	21 07 47.7	
	baz=290,slow=75,SNR=8.5						
MKAR	**Makanchi Array**	**41.64**	**311**	P	**P**	**20 31 43.7**	**-1.3**
	0.1nm,0.4s,baz=100,slow=8.1,SNR=2.5						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**47.36**	**174**	P	**P**	**20 32 31.6**	**+0.8**
	0.3nm,0.8s,baz=353,slow=8.3,SNR=2.0						
	0.3nm,0.8s						
NRIK	**Noril'sk**	**48.45**	**341**	LR	LR	20 56 09.2	
	comp=Z,56nm,18.5s,baz=127,slow=40						
ASAR	**Alice Springs**	**51.02**	**175**	P	**P**	**20 33 01.0**	**+2.2**
	0.1nm,0.6s,baz=11,slow=12,SNR=2.1						
	0.1nm,0.6s						
WSAR	**Wadi Sarin**	**63.49**	**284**	LR	LR	21 07 02.7	
	comp=Z,74nm,18.7s,baz=155,slow=41						
FINES	**FINESS Array B**	**72.38**	**331**	P	**P**	**20 35 22.4**	**+0.1**
	4.0nm,0.9s,baz=78,slow=6.4,SNR=7.1						
FINES				LR	LR	21 13 07.6	
	comp=Z,40nm,18.3s,baz=54,slow=41						
	4.0nm,0.9s						
BRTR	**Keskin Array B**	**77.24**	**308**	P	**P**	**20 35 51.2**	**+0.2**
	0.3nm,0.6s,baz=79,slow=7.5,SNR=2.3						
	0.3nm,0.6s						
HFS	**Hagfors**	**78.29**	**333**	LR	LR	21 10 51.9	
	comp=Z,42nm,21.7s,baz=19,slow=36						
NOA	**NORSAR Array B**	**78.74**	**334**	P	**P**	**20 35 58.5**	**-0.3**
	0.4nm,0.7s,baz=51,slow=5.6,SNR=2.1						
	0.4nm,0.7s						

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*IDC **01** 20:30:28.7±0.7, 1°.90S×140°.59E, h0km, mb4.0/12, mbtmp4.1/15, ML4.2/3, MS3.6/30, Error ellipse: s-maj=27.9km s-min=13.7km az=87.0*
*NEIC **01** 20:30:30.8±1.2, 1°.96S±0°.08×140°.5E±0°.1, h10km±1km, mb4.6/32, Error ellipse: s-maj=20.0km s-min=12.0km az=70.0*
*DJA **01** 20:30:33.2±1.5, 2°S±6°×14°0E±°, h10km, M4.2/3, MLv4.2/3*
ISC 01 20:30:31.1±0.5, 1°.82S±0°.05×140°.45E±0°.07, h10km, n84, σ1§67/64, mb4.3/24, MS3.6/25, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.82**	**200**	P	**Pg**	**20 30 46.7**	**-0.2**
GENI				S	**Sg**	**20 30 58.0**	**+0.4**
SMPI	**Sarmi**	**1.75**	**264**	P	**Pn**	**20 31 02.4**	**+0.9**
SMPI				S	**Sn**	**20 31 25.3**	**+1.5**
WAMI	**Wamena**	**2.69**	**220**	P	**Pn**	**20 31 17.7**	**+3.3**
WAMI				S	**Sn**	**20 31 50.6**	**+3.6**
FAKI	**Fak Fak**	**8.27**	**262**	Pn	**Pn**	**20 32 31.6**	**+0.4**
SIJI	**Sorong**	**9.23**	**276**	LR	LR	20 36 41.2	
	comp=Z,91nm,18.8s,baz=100,slow=40						
RABL	**Rabaul**	**11.93**	**102**	Pn	**Pn**	**20 33 25.4**	**+3.9**
COEN	**Coen**	**12.36**	**168**	Pn	**Pn**	**20 33 29.8**	**+2.5**
TNTI	**Ternate**	**13.33**	**281**	Pn	Pn	20 33 39.2	-1.4
MTN	**Manton Dam**	**14.32**	**220**	Pn	Pn	20 33 51.6	-2.5
GUMO	**Guam**	**15.93**	**16**	LR	LR	20 40 39.0	
	comp=Z,126nm,18.1s,baz=194,slow=38						
DAV	**Davao City (W)**	**17.27**	**301**	LR	LR	20 40 44.4	
	comp=Z,49nm,19.0s,baz=8.5,slow=35						
SOEI	**Soe**	**17.91**	**243**	P	**Pn**	**20 34 41.3**	**+0.6**
SOEI				IAmb	IAmb	20 35 02.2	
	comp=Z,57nm,1.1s						
KNRA	**Kununurra**	**17.95**	**219**		**Pn**	**20 34 39.5**	**-1.6**
KNRA				IAmb	IAmb	20 34 43.7	
	comp=Z,36nm,1.4s						
BATI	**Baumata**	**18.64**	**243**	P	**P**	**20 34 50.3**	**+1.0**
	comp=Z,2.5nm,0.3s,baz=75,slow=3.1,SNR=6.8						
	comp=Z,11nm,0.5s						
WB0	**Warramunga Arr**	**18.79**	**198**	P	**P**	**20 34 47.6**	**-3.2**
WR0	**Warramunga Arr**	**18.93**	**197**	P	**P**	**20 34 50.1**	**-2.3**
WRAB	**Tennant Creek**	**18.96**	**198**	P	**P**	**20 34 50.5**	**-2.3**
WRA	**Warramunga Arr**	**18.98**	**198**	P	**P**	**20 34 50.8**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=20,slow=11,SNR=38						
WRA				LR	LR	20 43 24.3	
	comp=Z,329nm,18.7s,baz=14,slow=41						
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**18.98**	**198**	P	**P**	**20 34 49.1**	**-3.8**
CTA	**Charters Tower**	**19.02**	**163**	P	**P**	**20 34 51.0**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=346,slow=9.2,SNR=4.8						
CTA				LR	LR	20 43 02.4	
	comp=Z,226nm,20.5s,baz=336,slow=40						
	comp=Z,3.2nm,0.9s						
CTAO	**Charters Tower**	**19.02**	**163**	P	**P**	**20 34 50.5**	**-2.9**
FITZ	**Fitzroy Crossi**	**21.75**	**221**	P	**P**	**20 35 21.4**	**-1.6**
	comp=Z,3.6nm,0.5s,baz=48,slow=9.1,SNR=16						
FITZ				LR	LR	20 43 54.9	
	comp=Z,64nm,21.8s,baz=36,slow=37						
	comp=Z,3.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.75**	**221**	P	**P**	**20 35 20.7**	**-2.2**
FITZ				IAmb	IAmb	20 35 31.4	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**22.62**	**196**	P	**P**	**20 35 30.3**	**-2.1**
ASAR	**Alice Springs**	**22.62**	**196**	P	**P**	**20 35 30.4**	**-1.9**
	comp=Z,5.0nm,0.5s,baz=28,slow=11,SNR=105						
ASAR				LR	LR	20 45 00.1	
	comp=Z,256nm,20.4s,baz=351,slow=39						
	comp=Z,5.0nm,0.5s						
ASAR	**Alice Springs**	**22.62**	**196**	P	**P**	**20 35 29.7**	**-2.7**
MYLDM	**Lahad Datu**	**23.00**	**288**	P	**P**	**20 35 39.0**	**+2.6**
EIDS	**Eidsvold**	**25.56**	**157**	P	**P**	**20 35 58.2**	**-2.2**
EIDS				IAmb	IAmb	20 36 09.9	
	comp=Z,13nm,0.6s						
MBWA	**Marble Bar**	**27.88**	**225**	P	**P**	**20 36 20.1**	**-1.3**
MBWA				IAmb	IAmb	20 36 30.4	
	comp=Z,30nm,1.5s						
JCJ	**Chichijima**	**28.80**	**3**	LR	LR	20 45 23.9	
	comp=Z,83nm,21.6s,baz=118,slow=31						
STKA	**Stephens Creek**	**29.91**	**178**	P	**P**	**20 36 37.2**	**-2.1**
	comp=Z,4.3nm,0.9s,baz=332,slow=11,SNR=4.4						
STKA				LR	LR	20 50 21.5	
	comp=Z,363nm,18.5s,baz=16,slow=40						
	comp=Z,4.3nm,0.9s						
STKA	**Stephens Creek**	**29.91**	**178**	P	**P**	**20 36 38.0**	**-1.3**
JOW	**Kunigami**	**30.81**	**338**	LR	LR	20 47 25.2	
	comp=Z,77nm,18.9s,baz=34,slow=33						
BBOO	**Buckleboo**	**31.10**	**187**	P	**P**	**20 36 47.6**	**-2.2**
FORT	**Forrest**	**31.10**	**201**	P	**P**	**20 36 48.1**	**-1.7**
DZM	**Mont Dzumac**	**32.31**	**130**	LR	LR	20 49 44.2	
	comp=Z,84nm,18.8s,baz=203,slow=36						
JHJ	**Hachijo jima 2**	**34.76**	**359**	LR	LR	20 48 20.5	
	comp=Z,119nm,20.4s,baz=166,slow=31						
NWAO	**Narrogin (SRO)**	**37.85**	**213**	LR	LR	20 54 57.1	
	comp=Z,263nm,20.7s,baz=80,slow=39						
MJAR	**Matsushiro Arr**	**38.22**	**357**	P	**P**	**20 37 50.8**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=182,slow=9.3,SNR=5.2						
MJAR				LR	LR	20 50 28.0	
	comp=Z,53nm,19.2s,baz=168,slow=31						
	comp=Z,1.0nm,0.7s						
KSAR	**Wonju Array Be**	**40.77**	**345**	P	**P**	**20 38 13.2**	**+0.7**
KSRS	**Korea Array**	**40.77**	**345**	P	**P**	**20 38 13.3**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=149,slow=9.8,SNR=6.4						
KSRS				LR	LR	20 53 11.6	
	comp=Z,60nm,19.7s,baz=170,slow=33						
	comp=Z,1.3nm,1.0s						
GSI	**Gunungsitoli**	**42.98**	**274**	P	**P**	**20 38 30.1**	**-0.9**
GSI				IAmb	IAmb	20 38 32.1	
	comp=Z,31nm,1.5s						
CMAR	**Chiang Mai Arr**	**45.53**	**298**	P	**P**	**20 38 51.5**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=123,slow=6.6,SNR=6.4						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.53**	**298**	P	**P**	**20 38 51.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**46.44**	**352**	LR	LR	20 55 14.8	
	comp=Z,76nm,21.5s,baz=178,slow=32						
BJT	**Baijiatuau**	**47.20**	**335**	P	**P**	**20 39 04.5**	**+0.4**
URZ	**Urewera**	**49.41**	**142**	LR	LR	20 58 10.9	
	comp=Z,63nm,21.9s,baz=42,slow=34						
KLR	**Kul'dur**	**51.40**	**353**	P	**P**	**20 39 35.2**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=160,slow=9.2,SNR=3.7						
KLR				LR	LR	20 59 18.4	
	comp=Z,49nm,18.1s,baz=246,slow=34						
	comp=Z,1.2nm,0.6s						
PETK	**Petropavlovsk-**	**56.61**	**12**	LR	LR	21 02 18.2	
	comp=Z,19nm,21.0s,baz=187,slow=34						
ULN	**Ulaanbaatar**	**57.41**	**334**	P	**P**	**20 40 20.6**	**+0.4**
ULN				IAmb	IAmb	20 40 22.5	
	comp=Z,4.1nm,1.1s						
SONM	**Songino Array**	**57.68**	**333**	LR	LR	21 03 18.2	
	comp=Z,60nm,21.0s,baz=122,slow=34						
MA2	**Magadan**	**61.75**	**6**	LR	LR	21 08 45.0	
	comp=Z,12nm,18.0s,baz=159,slow=37						
YAK	**Yakutsk**	**64.21**	**354**	LR	LR	21 08 31.6	
	comp=Z,34nm,18.3s,baz=88,slow=36						
YAK	**Yakutsk**	**64.21**	**354**	P	**P**	**20 41 06.2**	**+0.3**
MK31	**Makanchi Array**	**70.16**	**322**	P	**P**	**20 41 44.5**	**+0.4**
MK31				IAmb	IAmb	20 41 46.2	
	comp=Z,4.5nm,1.1s						
MKAR	**Makanchi Array**	**70.16**	**322**	P	**P**	**20 41 44.5**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=108,slow=7.5,SNR=17						
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	**70.16**	**322**	P	**P**	**20 41 44.1**	**0.0**
MAKZ	**Makanchi**	**70.36**	**322**	P	**P**	**20 41 45.4**	**+0.1**
MAKZ				IAmb	IAmb	20 41 47.3	
	comp=Z,8.1nm,1.1s						
ZALV	**Zalesovo Beam**	**72.06**	**329**	P	**P**	**20 41 54.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=123,slow=5.3,SNR=4.5						
ZALV				LR	LR	21 14 29.6	
	comp=Z,31nm,19.6s,baz=118,slow=37						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**72.06**	**329**	P	**P**	**20 41 54.2**	**-1.2**
KURK	**Kurchatov**	**74.00**	**324**	P	**P**	**20 42 07.0**	**0.0**
KURK				IAmb	IAmb	20 42 08.5	
	comp=Z,9.7nm,1.4s						
VNDA	**Vanda**	**76.51**	**175**	P	**P**	**20 42 20.1**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=332,slow=6.7,SNR=12						
VNDA				LR	LR	21 15 18.5	
	comp=Z,55nm,21.0s,baz=332,slow=35						
	comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**76.51**	**175**	P	**P**	**20 42 20.5**	**-0.4**
CHGR	**Chuyangaron**	**76.62**	**310**	P	**P**	**20 42 22.6**	**+0.2**
CHGR				IAmb	IAmb	20 42 24.7	
	comp=Z,8.3nm,0.9s						
KK31	**Karatay Array**	**76.72**	**315**	P	**P**	**20 42 22.5**	**-0.4**
KK31				IAmb	IAmb	20 42 23.8	
	comp=Z,5.9nm,1.4s						
KKAR	**Karatay Array**	**76.72**	**315**	P	**P**	**20 42 23.1**	**+0.2**
BRVK	**Borovoye**	**79.66**	**325**	P	**P**	**20 42 39.0**	**+0.1**
BRVK				IAmb	IAmb	20 42 40.5	
	comp=Z,3.5nm,0.9s						
L19K	**White Mountain**	**80.06**	**26**	P	**P**	**20 42 40.8**	**-0.1**
MAW	**Mawson**	**83.60**	**202**	LR	LR	21 17 36.4	
	comp=Z,37nm,18.8s,baz=317,slow=34						
ILAR	**Eielson Array**	**84.31**	**24**	P	P	20 43 01.1	-1.9

comp=Z,0.5nm,0.5s,baz=21,slow=7.1,SNR=6.0
comp=Z,0.5nm,0.5s
VNDA Vanda 51.90 186 P P 20 45 25.9 +1.6
VNDA IAmb IAmb 20 45 37.2
comp=Z,4.2nm,1.5s
FITZ Fitzroy Crossi 53.01 267 P P 20 45 34.4 +1.0
comp=Z,1.5nm,0.8s,baz=127,slow=10,SNR=1.9
comp=Z,1.5nm,0.8s
FITZ Fitzroy Crossi 53.01 267 P P 20 45 33.5 +0.2
QSPA South Pole Qui 63.48 180 P P 20 46 45.3 -0.3
QSPA IAmb IAmb 20 47 02.6
comp=Z,5.0nm,1.5s
MAW Mawson 76.03 200 P P 20 48 02.8 +0.5
comp=Z,2.2nm,0.6s,baz=139,slow=9.3,SNR=6.7
comp=Z,2.2nm,0.6s
MAW Mawson 76.03 200 P P 20 48 02.5 +0.2
H03S2 Juan Fernandez 82.10 124 T T 22 19 21.9
baz=242
H03S1 Juan Fernandez 82.11 124 T T 22 19 23.2
baz=242
H03S3 Juan Fernandez 82.12 124 T T 22 19 23.6
baz=242
NOA NORSAR Array B 145.10 353 PKP PKPbc 20 55 49.6 -1.7
comp=Z,0.2nm,0.5s,baz=14,slow=4.2,SNR=3.3
HFS Hagfors 145.64 350 PKPbc PKPdf 20 55 51.7 -0.7
comp=Z,1.1nm,0.5s,baz=25,slow=3.8,SNR=9.4
AKASG Malin Array Be 148.53 327 PKPbc PKPbc 20 56 00.6 -0.7
comp=Z,0.5nm,0.5s,baz=49,slow=2.1,SNR=4.2
MMAI Mount Meron Ar 150.93 291 PKPbc PKPbc 20 56 08.5 +0.7
comp=Z,1.1nm,0.6s,baz=114,slow=6.6,SNR=1.9
BRTR Keskin Array B 151.09 305 PKPbc PKPbc 20 56 08.4 +0.3
comp=Z,0.5nm,0.8s,baz=113,slow=3.7,SNR=3.3
TORD Torodi Ar. Bea 166.57 176 PKPab PKPab 20 57 21.8 -1.4
comp=Z,0.2nm,0.5s,baz=195,slow=4.2,SNR=1.4

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*KRSC **01** 20:44:59.3±1.7, 51.°12N×157.°68E, h122km±18km, ML3.9*
*IDC **01** 20:45:02.1±2.4, 51.°42N×156.°87E, h133km±21km, mb2.9/2, mbtmp3.4/3, Error ellipse: s-maj=42.3km s-min=22.0km az=145.0*
ISC 01 20:44:59.8±1.0, 51.°21N±0.°09×157.°3E±0.°1, h136km±7km, n37, σ1°67/43, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.76**	**37**	*e*P	**Pn**	**20 45 21.3**	**+0.2**
KDTR				*e*S	**Sn**	20 45 35.7	-1.6
SKR	**Severo-Kuril's**	**0.93**	**236**	*e*P	**Pn**	20 45 22.8	+0.2
SKR				*e*S	**Sn**	20 45 39.6	-0.2
ASAK	**Asacha**	**1.23**	**16**	*e*P	**Pn**	20 45 26.1	+0.7
MTVR	**Mutnovka**	**1.38**	**22**	*e*P	**Pn**	20 45 27.9	+0.8
MTVR				*e*S	**Sn**	20 45 48.5	+0.6
GRL	**Gorelyy**	**1.42**	**19**	*e*P	**Pn**	20 45 28.5	+1.0
GRL				*e*S	**Sn**	20 45 49.3	+0.6
RUS	**Russkaya**	**1.43**	**30**	*e*P	**Pn**	20 45 27.6	+0.2
RUS				*e*S	**Sn**	20 45 47.4	-1.1
APC	**Apacha**	**1.72**	**356**	*e*P	**Pn**	20 45 30.7	0.0
PETK	**Petropavlovsk-**	**1.91**	**7**	P	**Pn**	20 45 32.2	-0.8
	7.2nm,0.4s,baz=172,slow=12,SNR=70						
PETK				S	**Sn**	20 45 58.1	-0.4
	6.9nm,0.7s,baz=184,slow=19,SNR=6.4						
PET	**Petropavlovsk**	**1.99**	**24**	*e*P	**Pn**	20 45 34.5	+0.6
PET				*e*S	**Sn**	20 45 59.8	-0.2
DALK	**Dalny**	**2.02**	**25**	*e*P	**Pn**	20 45 35.0	+0.7
DALK				*e*S	**Sn**	20 45 59.8	-0.9
UGLR	**Uglovaya**	**2.20**	**24**	*e*P	**Pn**	20 45 38.3	+1.7
AVH	**Avacha**	**2.23**	**22**	*e*P	**Pn**	20 45 39.2	+2.3
AVH				*e*S	**Sn**	20 46 07.4	+1.9
KOK	**Koryaka**	**2.23**	**20**	*e*P	**Pn**	20 45 38.9	+1.9
KOK				*e*S	**Sn**	20 46 06.8	+1.3
SMAR	**Somma**	**2.25**	**23**	*e*P	**Pn**	20 45 38.7	+1.5
KRER	**Koryakskii**	**2.27**	**22**	*e*P	**Pn**	20 45 39.1	+1.6
KRER				*e*S	**Sn**	20 46 08.1	+1.6
SDLR	**Sedlovina**	**2.28**	**24**	*e*P	**Pn**	20 45 38.8	+1.3
KRX	**Arik**	**2.30**	**20**	*e*P	**Pn**	20 45 39.3	+1.5
NLC	**Nalytchevo**	**2.32**	**31**	*e*P	**Pn**	20 45 37.8	-0.1
NLC				*e*S	**Sn**	20 46 04.6	-2.6
SPN	**Mys Shipunski**	**2.51**	**40**	*e*P	**Pn**	20 45 41.2	+0.9
SPN				*e*S	**Sn**	20 46 09.3	-2.2
GNL	**Ganaly**	**2.52**	**8**	*e*P	**Pn**	20 45 41.2	+0.7
KII	**Karymskiy**	**3.11**	**24**	*e*P	**Pn**	20 45 49.2	+1.2
MKZ	**Mys Kozlova**	**4.28**	**37**	*e*P	**Pn**	20 46 03.5	+0.3
MKZ				*e*S	**Sn**	20 46 49.3	-3.3
TUMR	**Tumrok**	**4.42**	**21**	*e*P	**Pn**	20 46 07.7	+2.5
KBTR	**Krutoberegovo**	**5.97**	**31**	*e*P	**Pn**	20 46 26.2	+0.4
MJAR	**Matsushiro Arr**	**20.04**	**230**	P	**P**	**20 49 24.5**	**+2.4**
	1.5nm,0.7s,baz=19,slow=12,SNR=12						
H11N2	**WAKE ISLAND Hy**	**32.31**	**163**	T	T	21 25 21.2	
	baz=348,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**32.32**	**163**	T	T	21 25 22.3	
	baz=348,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**32.32**	**163**	T	T	21 25 22.4	
	baz=348,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**33.47**	**164**	T	T	21 26 43.3	
	baz=349,slow=76,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**33.48**	**164**	T	T	21 26 48.5	
	baz=349,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**33.48**	**164**	T	T	21 26 49.9	
	baz=349,slow=76,SNR=3.4						
MKAR	**Makanchi Array**	**47.44**	**296**	P	**P**	**20 53 19.9**	**-0.5**
	0.1nm,0.4s,baz=58,slow=8.1,SNR=3.4						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**72.96**	**64**	P	**P**	**20 56 18.1**	**+3.6**
	0.4nm,0.6s,baz=296,slow=4.8,SNR=6.6						
	0.4nm,0.6s						
CLL	**Collm**	**73.48**	**338**	*i* PKPbc	**P**	**20 56 13.7**	**-3.3**
CLL				*i* PKPab	**PcP**	**20 56 29.5**	**-2.9**
H03N2	**Juan Fernandez**	**135.93**	**89**	T	T	23 35 03.5	
	baz=315,slow=77,SNR=4.4						
H03N1	**Juan Fernandez**	**135.94**	**89**	T	T	23 35 01.5	
	baz=315,slow=77,SNR=5.6						
H03N3	**Juan Fernandez**	**135.94**	**89**	T	T	23 35 03.1	
	baz=315,slow=77,SNR=4.7						

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*IDC **01** 21:06:39.6±2.4, 6.°93S×131.°29E, h46km±28km, mb3.5/1, mbtmp4.2/6, ML4.2/5, MS3.2/2, Error ellipse: s-maj=46.0km s-min=24.6km az=91.0*
*DJA **01** 21:06:40.6±0.3, 7.°S±2.°×13.°1E±.°, h115km±5km, M4.1/11, mb4.0/11, mB5.0/3, MLv4.1/11, Mw(mB)4.3/3*
ISC 01 21:06:39.2±0.9, 6.°79S±0.°05×131.°28E±0.°08, h150km, n26, σ2°74/29, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.19**	**179**	P	**Pn**	**21 07 05.2**	**-0.5**
SAUI				S	**Sn**	21 07 22.9	-3.1
SAUI	**Saumlaki**	**1.19**	**179**	P	**Pn**	**21 07 05.2**	**-0.5**
BNDI	**Bandanaira**	**2.63**	**329**	P	**Pn**	21 07 23.0	+1.0
BNDI				S	**Sn**	21 07 52.2	-2.8
BNDI	**Bandanaira**	**2.63**	**329**	P	**Pn**	21 07 25.0	+3.0
FAKI	**Fak Fak**	**3.96**	**14**	P	**Pn**	21 07 40.7	+1.7
FAKI				S	**Sn**	21 08 24.0	-1.4
MSAI	**Masohi**	**4.14**	**325**	P	**Pn**	21 07 41.3	-0.1
SIJI	**Sorong**	**5.88**	**360**	P	**Pn**	21 08 05.5	+1.1
	8.8nm,0.3s,baz=55,slow=7.1,SNR=143						
SIJI				S	**Sn**	21 09 05.1	-5.8
	10.0nm,0.2s,baz=222,slow=23,SNR=1.9						
	23nm,0.2s						
KDU	**Kakadu**	**5.98**	**169**	P	**Pn**	21 08 07.6	+2.0
MTN	**Manton Dam**	**6.02**	**181**	P	**Pn**	21 08 08.5	+2.3
SANI	**Sanana**	**7.07**	**311**	P	**Pn**	21 08 23.5	+3.3
	0.0nm6.9nm,0.6s						
LBMI	**Labuha**	**7.18**	**328**	P	**Pn**	21 08 24.9	+3.2
	0.0nm9.9nm,0.5s						
SOEI	**Soe**	**7.54**	**247**	P	**Pn**	21 08 27.9	+1.3
	0.1nm16nm,0.9s						
SOEI	**Soe**	**7.54**	**247**	P	**Pn**	21 08 28.3	+1.7
BATI	**Baumata**	**8.27**	**245**	P	**Pn**	21 08 38.0	+1.7
	4.1nm,0.3s,baz=283,slow=0.9,SNR=10						
BATI				S	**Sn**	21 10 02.0	-6.3
	9.0nm,0.4s,baz=150,slow=7.5,SNR=2.2						
	9.7nm,0.3s						
BATI	**Baumata**	**8.27**	**245**	P	**Pn**	21 08 37.5	+1.3
	8.1nm,0.6s						
KNRA	**Kununurra**	**9.17**	**195**	P	**Pn**	21 08 49.1	+0.8
EDFI	**Ende, Flores**	**9.70**	**258**	P	**Pn**	21 08 57.9	+2.5
	1.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**12.52**	**206**	P	**Pn**	21 09 33.2	+1.0
	1.5nm,0.3s,baz=31,slow=10,SNR=58						
FITZ				S	Sn	21 11 40.4	-10
	5.0nm,0.3s,baz=275,slow=22,SNR=11						
	4.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.52**	**206**	P	**Pn**	21 09 33.9	+1.7
WRA	**Warramunga Arr**	**13.41**	**168**	P	**Pn**	**21 09 44.7**	**+1.0**
	0.9nm,0.3s,baz=346,slow=13,SNR=46						
WRA				S	Sn	21 12 00.4	-12
	0.4nm,0.4s,baz=357,slow=37,SNR=1.2						
	2.2nm,0.4s						
PLAI	**Plampang**	**13.53**	**261**	P	**P**	**21 09 50.0**	**+0.8**
TWSI	**Taliwang, Sumb**	**14.40**	**261**	P	**P**	**21 09 59.4**	**+0.6**
DAV	**Davao City (W)**	**14.89**	**337**	LR	LR	21 18 00.4	
	comp=Z,51nm,19.2s,baz=210,slow=45						
ASAR	**Alice Springs**	**16.97**	**172**	P	**Pn**	**21 10 31.9**	**+4.1**
	0.7nm,0.3s,baz=351,slow=12,SNR=40						
ASAR				S	**S**	**21 13 32.4**	**-4.2**
	0.7nm,0.7s,baz=359,slow=26,SNR=6.1						
	1.2nm,0.4s						
KRVT	**Keravat (AS076**	**20.79**	**84**	LR	LR	21 19 25.0	
	comp=Z,103nm,19.6s,baz=334,slow=37						
MKAR	**Makanchi Array**	**68.75**	**326**	P	P	21 17 39.6	+13
	0.4nm,0.3s,baz=120,slow=7.0,SNR=12						
	0.4nm,0.3s						

NNC 01 21:22:05.7±9.1, 37.°11N×70.°27E, h0km, mb3.5, mpv3.3, 3C-1D, Error ellipse: s-maj=121.6km s-min=63.1km az=119.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.99**	**2**	⇓P	Pn	21 23 35.3	-0.3
	1.0nm,0.3s,baz=180,slow=13,SNR=27						
KK31				⇑S	Sn	21 24 46.2	+1.4
	1.4nm,0.5s,baz=188,slow=23,SNR=5.9						
AB31	**Akbulak array**	**14.27**	**332**	⇑P	Pn	21 25 27.6	-1.3
	0.2nm,0.3s,baz=154,slow=11,SNR=16						
AKTO	**Aktyubinsk**	**15.96**	**330**	⇑P	P	21 25 53.5	-1.7
	1.0nm,0.8s						

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*PAS **01** 21:31:41.7±2.0, 33.°141N±0.°009×115.°62W±0.°01, h8km±3km, ML3.2/103, ML3.1/36(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=72.0*
*ANF **01** 21:31:41.1±0.2, 33.°14N×115.°62W, h6km±2km, ML3.1/18, Error ellipse: s-maj=1.7km s-min=1.3km az=135.0*
*NEIC **01** 21:31:41.6±1.6, 33.°13N±0.°01×115.°64W±0.°02, h20km±1km, Error ellipse: s-maj=2.3km s-min=1.5km az=98.0*
ISC 01 21:31:41.5±0.8, 33.°14N±0.°01×115.°64W±0.°02, h18km±2km, n99, σ0°74/127, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.12**	**154**		**Pb**	**21 31 44.5**	**+0.7**
WEMD					**Sg**	**21 31 47.5**	**-0.4**
ERRC	**Elmore Ranch**	**0.15**	**260**		**Pg**	**21 31 49.6**	**+3.8**
SWSC	**Sam W. Stewart**	**0.24**	**214**	P	**Pb**	**21 31 46.6**	**-0.5**
	baz=38						
SWSC				S	**Sb**	**21 31 49.1**	**-1.6**
	baz=38						
SUP	**Superstition M**	**0.24**	**219**		**Pb**	**21 31 46.7**	**-0.5**
SUP					**Sb**	21 31 50.5	-0.4
COK2	**Cook Ranch 2**	**0.30**	**194**		**Pb**	21 31 48.2	-0.1
COK2					**Sg**	21 31 53.4	+0.8
SALN	**Salton City**	**0.32**	**296**		**Pb**	21 31 48.7	0.0
SALN					**Sb**	21 31 54.4	+0.9
SNR	**Schaffner Ranc**	**0.33**	**148**		**Pg**	21 31 48.3	-0.2
SNR					**Sb**	21 31 54.0	+0.2
DREC	**Desert Rsrch C**	**0.37**	**154**		**Pb**	21 31 49.5	-0.2
DREC					**Sb**	21 31 56.2	+1.1
CRR	**Carrizo Plain**	**0.38**	**227**		**Pg**	21 31 49.2	-0.2
CRR					**Sb**	21 31 55.0	-0.2
WESC	**Westside Schoo**	**0.39**	**191**		**Pg**	21 31 49.6	0.0
WESC					**Sb**	21 31 56.3	+0.7
SGL	**Mount Signal**	**0.50**	**188**		**Pb**	21 31 51.0	-0.7
SLH	**Sleepy Hollow**	**0.52**	**276**		**Pg**	21 31 52.1	+0.1
SLH					**Sg**	21 31 59.6	+0.7
COA	**Coachella**	**0.52**	**122**		**Pb**	21 31 51.3	-0.7
BC3	**Big Chuckawall**	**0.54**	**17**		**Pb**	21 31 52.0	-0.4
BC3	**Big Chuckawall**	**0.54**	**17**	P	**Pb**	21 31 52.0	-0.4
	baz=195,SNR=26						
BC3				S	**Sb**	**21 31 59.5**	**-0.3**
	baz=195						
YUH	**Yuha Desert**	**0.55**	**206**	Pg	**Pb**	**21 31 52.0**	**-0.5**
YUH				IAML		21 32 06.3	
	comp=N,883nm,0.7s						
YUH	**Yuha Desert**	**0.55**	**206**		**Sb**	**21 31 59.5**	**-0.5**
HAY	**Hayfield**	**0.56**	**356**		**Pb**	**21 31 52.6**	**-0.2**
HAY					**Sg**	**21 32 01.1**	**+0.6**
CTW	**Cottonwood Mou**	**0.57**	**340**		**Pb**	**21 31 52.8**	**-0.1**
RUN	**Ruthven**	**0.58**	**107**		**Pb**	**21 31 52.2**	**-0.9**
RUN					**Sb**	**21 32 00.1**	**-0.9**
CTCC	**Cactus City**	**0.59**	**330**		**Pb**	**21 31 53.1**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.63**	**219**		**Pb**	**21 31 53.6**	**-0.4**
IKP					**Sb**	**21 32 02.2**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.63**	**219**	P	**Pb**	**21 31 53.6**	**-0.4**
	baz=40						
IKP				S	**Sb**	**21 32 02.2**	**-0.3**
	baz=40						
RMX	**La Rumorosa**	**0.65**	**214**		**Pb**	**21 31 54.3**	**-0.1**
RMX					**Sg**	**21 32 03.5**	**+0.3**
RMX	**La Rumorosa**	**0.65**	**214**	IAML		21 32 03.7	
	comp=N,823nm,0.1s						
RMX				IAML		21 32 04.6	
	comp=E,1μm,0.5s						
BORC	**Borrego Spring**	**0.66**	**281**		**Pb**	**21 31 54.2**	**-0.3**
BORC					**Sg**	**21 32 03.7**	**+0.3**
EMSC	**East Mesa**	**0.68**	**126**		**Pb**	**21 31 54.0**	**-0.8**
EMSC					**Sg**	**21 32 04.3**	**+0.2**
GLA	**Glamis**	**0.69**	**97**	Pg	**Pb**	**21 31 54.0**	**-1.0**
GLA				IAML		21 32 05.4	
	comp=E,1μm,0.5s						
GLA				IAML		21 32 11.8	
	comp=N,1μm,0.6s						
GLA	**Glamis**	**0.69**	**97**		**Sb**	**21 32 03.4**	**-0.8**
GLA	**Glamis**	**0.69**	**97**	P	**Pb**	**21 31 54.1**	**-1.0**
	baz=278						
GLA				S	**Sb**	**21 32 02.8**	**-1.4**
	baz=278						
MONP2	**Monument Peak**	**0.70**	**249**		**Pb**	**21 31 55.1**	**-0.2**
MONP2					**Sg**	**21 32 04.8**	**-0.1**
MONP2	**Monument Peak**	**0.70**	**249**	P	**Pb**	**21 31 55.2**	**-0.2**
	baz=70						
MONP2				S	**Sg**	**21 32 04.7**	**-0.1**
	baz=70						
CPBX	**Cerro Prieto**	**0.78**	**158**		**Pb**	**21 31 55.6**	**-0.9**
CPBX	**Cerro Prieto**	**0.78**	**158**		**Sg**	**21 32 06.8**	**-0.2**
XPFO	**Pion Flat**	**0.83**	**305**		**Pb**	**21 31 57.0**	**-0.4**
PFO	**Pinyon Flats O**	**0.83**	**305**		**Pb**	**21 31 56.9**	**-0.5**
PFO	**Pinyon Flats O**	**0.83**	**305**	Pg	**Pb**	**21 31 57.0**	**-0.5**
PFO				IAML		21 32 09.6	
	comp=N,529nm,0.8s						
PFO				IAML		21 32 10.0	
	comp=N,415nm,0.6s						
PFO	**Pinyon Flats O**	**0.83**	**305**	P	**Pb**	**21 31 56.9**	**-0.5**
	baz=124,SNR=12						
PFO				S	**Sg**	**21 32 08.9**	**+0.1**
	baz=124						
MATG	**Mataguay Scout**	**0.85**	**274**		**Pb**	**21 31 57.2**	**-0.5**
MATG					**Sg**	21 32 09.2	-0.1
FRD	**Ford Ranch, An**	**0.88**	**294**		**Pb**	21 31 57.9	-0.4
FRD					**Sb**	21 32 09.8	+0.1
FRD	**Ford Ranch, An**	**0.88**	**294**		**Pb**	21 31 57.9	-0.4
BELC	**Belle Mtn. Jos**	**0.91**	**341**		**Pb**	21 31 58.2	-0.6
BELC					**Sb**	21 32 10.9	+0.4
BELC	**Belle Mtn. Jos**	**0.91**	**341**	P	**Pb**	21 31 58.2	-0.6
	baz=160,SNR=13						
BELC				S	**Sb**	**21 32 11.0**	**+0.4**
	baz=160						
SNDA	**J Saunders Pla**	**0.91**	**297**		**Pb**	21 31 58.5	-0.4
BZNA	**Buzz No.'s Pla**	**0.93**	**292**		**Pb**	21 31 58.7	-0.5
DNR	**Dunn Ranch,Anz**	**0.93**	**297**		**Pb**	21 31 58.9	-0.3
BAR	**Barrett**	**0.98**	**242**		**Sb**	21 32 12.9	+0.3
BAR	**Barrett**	**0.98**	**242**	Pg	**Pn**	21 32 00.3	-0.1
BAR	**Barrett**	**0.98**	**242**	IAML		21 32 13.8	
	comp=E,697nm,0.2s						
BAR				IAML		21 32 13.9	
	comp=N,707nm,0.3s						
TKX	**Tecate**	**0.99**	**235**		**Pb**	21 32 00.1	-0.1
TKX	**Tecate**	**0.99**	**235**		**Sb**	21 32 13.2	+0.2
CRY	**Cary Ranch**	**1.01**	**295**		**Pb**	21 31 59.8	-0.8
TPC	**Twentynine Pal**	**1.02**	**341**		**Pg**	21 32 02.3	+0.9
EW2	**E Wide Canyon**	**1.02**	**321**		**Pb**	21 31 59.9	-0.8
PLM	**Palomar**	**1.04**	**282**		**Pb**	21 32 00.5	-0.7
IRM	**Iron Mountain**	**1.09**	**22**		**Pn**	21 32 01.9	-0.1
IRM					**Sg**	21 32 17.9	+0.7
IRM	**Iron Mountain**	**1.09**	**22**	P	**Pn**	21 32 01.9	-0.1
	baz=201,SNR=23						
IRM				S	**Sg**	**21 32 17.4**	**+0.3**
	baz=201						
BLYC	**Blythe**	**1.11**	**57**		**Pb**	**21 32 02.6**	**+0.4**
BLYC					**Sn**	**21 32 17.4**	**+0.3**
BLYC	**Blythe**	**1.11**	**57**	Pg	**Pb**	**21 32 02.5**	**+0.2**
BLAC	**Blackrock camp**	**1.11**	**326**		**Pn**	**21 32 01.6**	**-0.8**
ESJX	**Sierra Juarez**	**1.16**	**193**	Pg	**Pn**	**21 32 02.7**	**-0.3**
ESJX				IAML		21 32 24.9	
	comp=E,296nm,0.5s						
SDRC	**San Diego Road**	**1.17**	**250**		**Pb**	**21 32 03.0**	**-0.1**
SDRC					**Sb**	21 32 17.3	-0.6
CBX	**Cerro Bola**	**1.19**	**226**		**Sn**	**21 32 19.3**	**0.0**
CBX	**Cerro Bola**	**1.19**	**226**		**Pb**	**21 32 03.6**	**-0.1**
CBX	**Cerro Bola**	**1.19**	**226**	IAML		21 32 20.6	
	comp=E,439nm,0.6s						
CBX				IAML		21 32 21.4	
	comp=N,404nm,0.4s						
OLP	**Otay Lakes Par**	**1.21**	**244**		**Sg**	**21 32 20.1**	**-0.6**
109C	**Camp Elliot, M**	**1.25**	**259**		**Pb**	**21 32 04.7**	**+0.1**
109C				IAML		21 32 21.6	
	comp=N,582nm,0.4s						
109C				IAML		21 32 28.3	
	comp=E,386nm,0.3s						
CPE	**Camp Elliot**	**1.25**	**259**		**Sb**	**21 32 20.0**	**-0.5**
GTM	**Goat Mountain**	**1.29**	**333**		**Sb**	**21 32 21.8**	**+0.1**
TJX	**Tijuana**	**1.35**	**242**		**Pg**	**21 32 06.9**	**-0.6**
MURC	**Murrieta**	**1.38**	**290**	S	**Sg**	**21 32 26.0**	**-0.1**
	baz=109						
CCX	**Cicese**	**1.54**	**214**		**Pn**	**21 32 08.3**	**+0.3**
BBRC	**Big Bear Solar**	**1.54**	**317**	S	**Sg**	**21 32 30.6**	**-0.9**
	baz=136						
ELS	**Elsinore Mount**	**1.58**	**289**		**Pb**	**21 32 10.1**	**-0.1**
113A	**Mohawk Valley,**	**1.62**	**103**		**Pn**	**21 32 09.7**	**+0.5**
GMRC	**Granite Mounta**	**1.64**	**359**	Pg	**Pg**	**21 32 12.4**	**-0.7**
	baz=179						
CLTC	**Calectric**	**1.69**	**305**		**Sb**	**21 32 32.6**	**-0.4**
PDMCI	**Parker Dam,Lak**	**1.70**	**47**	S	**Sb**	**21 32 34.0**	**+0.6**
	baz=227						
HEC	**Hector,Ludlow**	**1.78**	**341**	Pg	**Pg**	**21 32 15.7**	**0.0**
	baz=160						
HEC				Sb	**Sg**	**21 32 38.6**	**-0.3**
	baz=160						
RRX	**Edison Barstow**	**2.06**	**327**	Sb	**Sg**	**21 32 47.3**	**-0.7**
	baz=146						
TUQ	**Turquoise Moun**	**2.30**	**354**	Pg	**Pg**	**21 32 24.7**	**-1.0**
	baz=174						
CIS	**Catalina Islan**	**2.34**	**277**	Pg	**Pg**	**21 32 26.2**	**-0.2**
	baz=96						
PASC	**Pasadena Art C**	**2.36**	**297**		**Pn**	**21 32 21.1**	**+1.8**
GSC	**Goldstone, Bar**	**2.36**	**336**	Pg	**Pg**	**21 32 26.4**	**-0.5**
	baz=155						
GSC				Sg	**Sg**	**21 32 58.3**	**+0.8**
	baz=155						
PIX	**Pinacate**	**2.43**	**130**		**Pn**	**21 32 21.3**	**+1.1**
W13A	**Hualapai Mount**	**2.44**	**36**		**Pn**	**21 32 22.5**	**+1.9**
EDW2	**Edwards Air Fo**	**2.61**	**312**	Pg	**Pg**	**21 32 32.0**	**+0.3**
	baz=131						
V12A	**Nelson**	**2.66**	**14**	Pn	**Pn**	**21 32 24.6**	**+1.0**
TOW	**Tower One**	**3.19**	**327**		**Pb**	**21 32 35.4**	**-2.2**
SHPR	**Sheep Range**	**3.38**	**7**	Pn	**Pn**	**21 32 33.6**	**+0.1**
BCW	**Bitter Crk WRg**	**3.61**	**301**		**Pn**	**21 32 37.8**	**+1.2**
BCW				IAML		21 33 38.6	
	comp=E,57nm,0.9s						
TUC	**Tucson**	**4.18**	**100**	IAML		21 34 12.5	
	comp=E,23nm,1.0s						
TUC	**Tucson**	**4.18**	**100**		**Pn**	**21 32 44.1**	**-0.3**
PRN	**Pahroc Range**	**4.28**	**6**		**Pn**	**21 32 46.9**	**+1.0**
LCMT	**Little Creek M**	**4.33**	**26**		**Pn**	**21 32 47.2**	**+0.6**
DSP	**Deep Springs**	**4.63**	**336**		**Pn**	**21 32 50.9**	**+0.4**
CCUT	**Cedar City**	**4.78**	**22**		**Pn**	**21 32 54.1**	**+1.3**
X18A	**Snowflake**	**4.93**	**72**		**Pn**	**21 32 56.1**	**+1.2**
PSUT	**Pine Spring**	**5.57**	**15**		**Pn**	**21 33 04.5**	**+0.8**

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*IDC **01** 22:01:22.7±0.8, 6.°76N×72.°91W, h164km±11km, mb3.0/2, mbtmp3.7/5, Error ellipse: s-maj=35.6km s-min=7.2km az=135.0*
*RSNC **01** 22:01:24.0±1.0, 6.°80N×73.°13W, h140km±4km, ML3.5, Mw3.8*
ISC 01 22:01:22.1±0.9, 6.°84N±0.°03×73.°08W±0.°04, h150km±6km, n33, σ1°50/60, 1C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**203**	⇓*i*P	**Pn**	**22 01 42.9**	**0.0**
BARC				*e*S	**Sn**	**22 01 57.4**	**-1.3**
BARC				*i*		22 01 58.7	
	comp=Z,1μm,0.2s						
PAMC	**Pamplona, Colo**	**0.62**	**37**	*i* P	**Pn**	**22 01 45.8**	**+1.1**
PAMC				*e*S	**Sn**	**22 02 02.6**	**+0.7**
PAMC				*i*		22 02 05.0	
	comp=Z,902nm,0.6s						
BRRC	**Barranca, Sant**	**0.69**	**293**	⇓*i*P	**Pn**	**22 01 44.8**	**+0.3**
BRRC				*e*S	**Sn**	**22 02 01.2**	**-0.4**
BRRC				*i*		22 02 02.7	
	comp=Z,533nm,0.2s						
RUSC	**La Rusia**	**0.94**	**180**

ANIL			*i*			22 03 00.1	
	comp=Z,222nm,0.3s						
PRAC	**Prado**	**3.59**	**210**	*eP*	**Pn**	**22 02 16.8**	**-0.3**
PRAC				*eS*	**Sn**	**22 02 58.5**	**-1.2**
PRAC				*i*		22 03 07.4	
	comp=Z,66nm,0.4s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*eP*	**Pn**	**22 02 18.0**	**-0.3**
SJCC				*eS*	**Sn**	**22 02 58.2**	**-3.7**
SJCC				*i*		22 03 03.1	
	comp=Z,63nm,0.6s						
PLMC	**San Jos del P**	**3.72**	**239**	*eP*	**Pn**	**22 02 18.9**	**0.0**
PLMC				*eS*	**Sn**	**22 03 01.0**	**-1.9**
PLMC				*i*		22 03 03.8	
	comp=Z,63nm,0.6s						
LCBC	**Los crdobas,**	**3.83**	**302**	*eP*	Pn	22 02 28.8	+8.7
LCBC				*eS*	**Sn**	**22 03 04.4**	**-0.8**
LCBC				*i*		22 03 08.3	
	comp=Z,61nm,0.5s						
YOTC	**Yotoco, Valle**	**4.32**	**229**	*eP*	**Pn**	**22 02 26.0**	**-0.6**
YOTC				*eS*	**Sn**	**22 03 16.9**	**0.0**
GARC	**Garzon, Huila**	**5.21**	**208**	*eP*	**Pn**	**22 02 39.3**	**+0.7**
GARC				*eS*	**Sn**	**22 03 35.0**	**-3.3**
PCRV	**Puerto La Cruz**	**8.98**	**68**	P	**Pn**	**22 03 29.0**	**+0.3**
	comp=Z,9.4nm,0.9s,baz=244,slow=4.0,SNR=6.7						
PCRV				S	**Sn**	**22 05 06.9**	**-1.5**
	comp=Z,7.3nm,0.8s,baz=11,slow=15,SNR=1.9						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**22 08 13.9**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=121,slow=8.9,SNR=3.7						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**22 11 34.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=114,slow=7.5,SNR=2.5						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	**22 20 52.5**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=116,slow=3.3,SNR=6.2						

*BJI **01** 22:07:50.4±0.0,52°.63N×162°.90W,h11km,mb5.2/73, mB5.1/52,Ms4.7/39,Ms7 4.4/40*
*IDC **01** 22:07:51.2±0.3,52°.64N×162°.89W,h0km,mb5.1/39, mbtmp5.0/41,ML4.4/2,MS3.8/71,Error ellipse: s-maj=12.3km s-min=8.7km az=176.0*
*MOS **01** 22:07:53.1±0.9,52°.61N×162°.84W,h22km,mb5.4/134, Error ellipse: s-maj=7.1km s-min=4.0km az=102.5*
*GCMT **01** 22:07:55.8±0.2,52°.70N±0°.01×162°.77W±0°.02,h17km, MW5.0/127,Moment Tensor Solution. s79,c99; s127,c217; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=4.33±.14; Mθθ3.41±.10; Mφφ0.92±.08; Mrθ-0.30±.23; Mθφ2.03±.06; Mrφ0.17±.23; Best double couple: Mo=4.45300×10^16^ NP1:φs=65.00000°,δ46.00000°, λ-84.00000°. NP2:φs=237.00000°,δ44.00000°, λ-96.00000°. Principal axes: T 4.5510, Plg1.0000°, Azm151.0000°; N -0.1940, Plg4.0000°, Azm241.0000°; P -4.3550, Plg86.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **01** 22:07:55.8±1.7,52°.72N±0°.06×162°.81W±0°.07,h28km±4km, mb5.3/312,ML4.9/12,Mww5.0,ML4.8(AEIC) Error ellipse: s-maj=9.1km s-min=6.2km az=172.0*
*NEIC **01** 22:07:55,52°.66N×162°.82W,h18km,Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16^Nm; Mrr=4.71; Mθθ2.86; Mφφ1.85; Mrθ0.31; Mθφ1.59; Mφr0.17; Fault plane solution: Mo=4.42000×10^16^ NP1: φs=234.00000°,δ47.00000°,λ-89.00000°. NP2:φs=53.00000°, δ43.00000°,λ-90.00000°. Principal axes: T 4.0392, Plg2.0000°, Azm324.0000°; N 0.6875, Plg1.0000°, Azm54.0000°; P -4.7266, Plg88.0000°, Azm156.0000°;*
*AEIC **01** 22:07:56±2.0,52°.75N±0°.07×162°.85W±0°.08,h40km±4km Error ellipse: s-maj=10.0km s-min=7.1km az=166.0*
ISC 01 22:07:55.3±0.4,52°.66N±0°.04×162°.74W±0°.03,h27km±2km, h27km:pP-P,n1563,σ1927/1600,mb5.3/369,MS4.0/92, 90C-82D,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**2.08**	**344**		**Pn**	**22 08 26.1**	**-2.2**
BRPK					**Sn**	**22 08 51.3**	**-2.1**
ISLZ	**Isanotski Laza**	**2.15**	**345**		**Pn**	**22 08 27.1**	**-2.4**
WESP	**Westdahl Peak**	**2.18**	**328**		**Pn**	**22 08 28.1**	**-1.8**
SSLS	**Shishaldin Sou**	**2.19**	**340**		**Pn**	**22 08 28.0**	**-2.0**
WESN	**West Dahl Nort**	**2.21**	**331**		**Pn**	**22 08 28.5**	**-1.7**
FALS	**False Pass**	**2.24**	**350**		**Pn**	**22 08 28.4**	**-2.2**
FALS	**False Pass**	**2.24**	**350**	P	**Pn**	**22 08 28.5**	**-2.0**
	baz=171,SNR=218						
SSBA	**Shishaldin**	**2.27**	**339**		**Pn**	**22 08 29.1**	**-2.0**
SSLN	**Shishaldin Nor**	**2.28**	**341**		**Pn**	**22 08 30.0**	**-1.2**
SSLN					**Sn**	**22 08 57.8**	**-0.6**
AKUT	**Akutan**	**2.34**	**310**	Pn	**Pn**	**22 08 30.4**	**-1.5**
AKUT				Sn	**Sn**	**22 08 57.0**	**-2.9**
AKUT				IAML		22 08 57.4	
	comp=E,6μm,0.8s						
AKUT				IAML		22 08 57.7	
	comp=N,7μm,0.6s						
ZRO	**Akutan Zero**	**2.41**	**308**		**Pn**	**22 08 31.3**	**-1.7**
AKMO	**Akutan Morgan**	**2.43**	**307**		**Pn**	**22 08 31.5**	**-1.7**
AKLV	**Akutan Long Va**	**2.44**	**309**		**Pn**	**22 08 31.8**	**-1.7**
DT1	**Dutton Round H**	**2.47**	**6**		**Pn**	**22 08 31.6**	**-2.1**
AKRB	**Akutan Reef Bi**	**2.48**	**308**		**Pn**	**22 08 32.3**	**-1.6**
UNV	**Unalaska Valle**	**2.55**	**299**	Pn	**Pn**	**22 08 32.9**	**-2.0**
UNV	**Unalaska Valle**	**2.55**	**299**	P	**Pn**	**22 08 33.0**	**-2.0**
	baz=115,SNR=109						
MNAT	**Makushin Natee**	**2.67**	**299**		**Pn**	**22 08 34.8**	**-1.7**
MTBL	**Makushin Table**	**2.70**	**301**		**Pn**	**22 08 35.6**	**-1.4**
HAG	**Hague Volcano**	**2.71**	**10**		**Pn**	**22 08 36.0**	**-1.0**
HAG	**Hague Volcano**	**2.71**	**10**	P	**Pn**	**22 08 36.1**	**-1.0**
MGOD	**Makushin Gods**	**2.73**	**296**		**Pn**	**22 08 36.0**	**-1.4**
PS4A	**Pavlof South-4**	**2.74**	**11**		**Pn**	**22 08 36.6**	**-0.9**
PVV	**Pavlof Volcano**	**2.78**	**11**		**Pn**	**22 08 37.0**	**-0.9**
MCIR	**Makushin Cirqu**	**2.81**	**299**		**Pn**	**22 08 37.4**	**-1.1**
CNBA	**Chernabura Isl**	**2.86**	**40**	Pn	**Pn**	**22 08 37.7**	**-1.4**
CNBA				Sn	**Sn**	**22 09 09.9**	**-2.7**
CHNA	**Chernabura Isl**	**2.87**	**39**	P	**Pn**	**22 08 38.2**	**-1.0**
	baz=224,SNR=8.1						
SDPT	**Sand Point**	**3.01**	**25**	Pn	**Pn**	**22 08 39.9**	**-1.2**
SDPT				Sn	**Sn**	**22 09 14.0**	**-2.2**
SDPT				IAML		22 09 16.4	
	comp=N,4μm,0.9s						
SDPT	**Sand Point**	**3.01**	**25**	P	**Pn**	**22 08 40.0**	**-1.1**
	baz=209,SNR=18						
OKTU	**Okmok Mt. Tuli**	**3.28**	**285**		**Pn**	**22 08 43.6**	**-1.3**
OKER	**Okmok East Rim**	**3.30**	**286**		**Pn**	**22 08 44.2**	**-1.1**
OKNC	**Okmok New Cone**	**3.34**	**286**		**Pn**	**22 08 44.5**	**-1.4**
OKSP	**Okmok Steeple**	**3.41**	**282**		**Pn**	**22 08 45.0**	**-1.7**
NIKH	**Nikolski High**	**3.72**	**277**	Pn	**Pn**	**22 08 49.1**	**-1.9**
NIKH	**Nikolski High**	**3.72**	**277**	P	**Pn**	**22 08 49.3**	**-1.7**
	baz=91,SNR=20						
CHGN	**Chignik**	**4.43**	**33**		**Pn**	**22 09 00.4**	**-0.4**
CHGN				IAML		22 09 51.0	
	comp=E,1μm,0.5s						
CHGN				IAML		22 09 52.3	
	comp=N,1μm,0.5s						
CHGN	**Chignik**	**4.43**	**33**	P	**Pn**	**22 09 00.1**	**-0.7**
	baz=218,SNR=15						
ANPB	**Aniakchak Plen**	**4.89**	**30**		**Pn**	**22 09 06.6**	**-0.5**
CHIR	**Chirikof Islan**	**5.24**	**50**	Pn	**Pn**	**22 09 09.9**	**-1.9**
CHIR				IAML		22 10 11.0	
	comp=E,412nm,1.7s						
CHIR	**Chirikof Islan**	**5.24**	**50**	P	**Pn**	**22 09 10.4**	**-1.4**
	baz=237						
R16K	**Pilot Point**	**5.74**	**29**	P	**Pn**	**22 09 17.4**	**-1.3**
	baz=214						
R17K	**Ugashik Creek**	**6.18**	**34**	P	**Pn**	**22 09 24.3**	**-0.4**
	baz=220,SNR=10						
SPIA	**Saint Paul Isl**	**6.26**	**319**		**Pn**	**22 09 25.1**	**-0.7**
SPIA	**Saint Paul Isl**	**6.26**	**319**	P	**Pn**	**22 09 24.8**	**-1.0**
	baz=133						
SII	**Sitkinak Islan**	**6.32**	**48**	Pn	**Pn**	**22 09 25.2**	**-1.5**
SII	**Sitkinak Islan**	**6.32**	**48**	P	**Pn**	**22 09 25.8**	**-0.9**
	baz=236						
Q17K	**Contact Creek**	**6.83**	**32**	P	**Pn**	**22 09 32.7**	**-1.0**
	baz=218						
ANCK	**Angle Creek**	**6.91**	**34**		**Pn**	**22 09 34.3**	**-0.5**
P16K	**Nushagak River**	**6.92**	**21**	P	**Pn**	**22 09 33.9**	**-0.9**
	baz=205						
Q16K	**King Salmon**	**6.94**	**27**	P	**Pn**	**22 09 34.7**	**-0.4**
	baz=213,SNR=10.0						
OHAK	**Old Harbor**	**7.11**	**46**	Pn	**Pn**	**22 09 35.7**	**-1.7**
OHAK	**Old Harbor**	**7.11**	**46**	P	**Pn**	**22 09 36.1**	**-1.3**
	baz=235						
O16K	**Kokwok River B**	**7.42**	**19**	P	**Pn**	**22 09 40.9**	**-0.8**
	baz=203,SNR=18						
Q18K	**Katmai Hardscr**	**7.42**	**33**	P	**Pn**	**22 09 41.1**	**-0.7**
	baz=220,SNR=6.8						
P17K	**Kvichak River**	**7.44**	**26**	P	**Pn**	**22 09 40.8**	**-1.2**
	baz=212,SNR=12						
KDAK	**Kodiak Island**	**7.75**	**44**	Pn	**Pn**	**22 09 44.3**	**-1.8**
	comp=E,4.1nm,0.3s,baz=216,slow=6.1,SNR=58						
KDAK				Sn	**Sn**	**22 11 05.5**	**-7.4**
	comp=E,8.3nm,0.3s,baz=343,slow=22,SNR=6.7						
	comp=E,16nm,0.4s						
KDAK	**Kodiak Island**	**7.75**	**44**		**Pn**	**22 09 44.2**	**-1.9**
KDAK	**Kodiak Island**	**7.75**	**44**	*i* P	**Pn**	**22 09 43.8**	**-2.4**
KDAK	**Kodiak Island**	**7.75**	**44**	P	**Pn**	**22 09 44.8**	**-1.4**
	baz=234						
O17K	**Koliganek Bris**	**7.79**	**22**	P	**Pn**	**22 09 45.8**	**-1.0**
	baz=207						
P18K	**Big Mountain,**	**7.95**	**29**		**Pn**	**22 09 47.9**	**-1.1**
P18K	**Big Mountain,**	**7.95**	**29**	P	**Pn**	**22 09 47.9**	**-1.1**
	baz=216						
Q19K	**Cape Douglas,**	**8.10**	**36**	Pn	**Pn**	**22 09 50.0**	**-1.1**
Q19K	**Cape Douglas,**	**8.10**	**36**	P	**Pn**	**22 09 49.9**	**-1.2**
	baz=224						
N16K	**Nishlik Lake**	**8.13**	**14**	P	**Pn**	**22 09 51.2**	**-0.3**
	baz=198,SNR=30						
GSTR	**Great Sitkin T**	**8.17**	**271**	Pn	**Pn**	**22 09 51.6**	**-0.5**
Q20K	**Shuyak Island**	**8.35**	**40**	P	**Pn**	**22 09 53.5**	**-1.0**
	baz=230						
ADK	**Adak**	**8.59**	**270**	Pn	**Pn**	**22 09 57.4**	**-0.4**
ADK	**Adak**	**8.59**	**270**	P	**Pn**	**22 09 57.3**	**-0.4**
P19K	**Oil Pt**	**8.78**	**33**	P	**Pn**	**22 10 00.0**	**-0.4**
	baz=222						
O19K	**Port Alsworth**	**8.87**	**28**	P	**Pn**	**22 10 01.3**	**-0.3**
	baz=216						
N18K	**Kilae Creek**	**8.88**	**22**	Pn	**Pn**	**22 10 00.3**	**-1.4**
N18K	**Kilae Creek**	**8.88**	**22**	P	**Pn**	**22 10 01.0**	**-0.7**
	baz=209,SNR=11						
KIWB	**Kanaga Island**	**8.88**	**271**		**Pn**	**22 10 00.9**	**-0.8**
O20K	**Slope Mountain**	**9.31**	**33**	P	**Pn**	**22 10 07.2**	**-0.5**
	baz=222						
SVW2	**Sparrevohn**	**9.31**	**22**		**Pn**	**22 10 07.1**	**-0.6**
N19K	**Bonanza Creek**	**9.34**	**26**	Pn	**Pn**	**22 10 07.5**	**-0.7**
N19K	**Bonanza Creek**	**9.34**	**26**	P	**Pn**	**22 10 07.9**	**-0.2**
	baz=213,SNR=12						
HOM	**Homer**	**9.34**	**37**	P	**Pn**	**22 10 06.1**	**-2.0**
	baz=227						
CNPM	**China Poot**	**9.41**	**38**	Pn	**Pn**	**22 10 07.0**	**-1.9**
RSO	**Redoubt South**	**9.56**	**31**		**Pn**	**22 10 10.8**	**-0.4**
BRLK	**Bradley Lake**	**9.70**	**38**		**Pn**	**22 10 10.7**	**-2.3**
BRSE	**Bradley Lake S**	**9.74**	**38**	P	**Pn**	**22 10 12.4**	**-1.0**
	baz=229						
M19K	**Big River Lodg**	**10.30**	**23**		**Pn**	**22 10 20.0**	**-1.1**
M19K	**Big River Lodg**	**10.30**	**23**	P	**Pn**	**22 10 20.6**	**-0.6**
	baz=210						
N20K	**Mount Spurr**	**10.30**	**30**	P	**Pn**	**22 10 21.2**	**0.0**
	baz=219,SNR=10						
SPCR	**Spurr Chakacha**	**10.30**	**30**	P	**Pn**	**22 10 21.3**	**+0.1**
	baz=219,SNR=7.4						
CAPN	**Captain Cook N**	**10.31**	**33**	P	**Pn**	**22 10 20.7**	**-0.6**
	baz=224						
SPU	**Mount Spurr**	**10.33**	**30**		**Pn**	**22 10 20.9**	**-0.7**
L19K	**White Mountain**	**10.44**	**21**	Pn	**Pn**	**22 10 21.4**	**-1.7**
L19K	**White Mountain**	**10.44**	**21**	P	**Pn**	**22 10 22.1**	**-1.0**
	baz=208,SNR=16						
SEW	**Seward**	**10.47**	**39**		**Pn**	**22 10 22.2**	**-1.2**
SEW	**Seward**	**10.47**	**39**	P	**Pn**	**22 10 22.7**	**-0.7**
	baz=231						
M20K	**Styx River**	**10.59**	**25**		**Pn**	**22 10 25.5**	**+0.2**
M20K	**Styx River**	**10.59**	**25**	P	**Pn**	**22 10 25.3**	**+0.1**
	baz=214						
O22K	**Cooper Landing**	**10.61**	**37**		**Pn**	**22 10 24.9**	**-0.5**
O22K	**Cooper Landing**	**10.61**	**37**	P	**Pn**	**22 10 25.7**	**+0.3**
	baz=229						
TTA	**Tatalina**	**10.90**	**16**		**Pn**	**22 10 27.7**	**-1.7**
TTA	**Tatalina**	**10.90**	**16**	P	**Pn**	**22 10 27.7**	**-1.7**
TTA	**Tatalina**	**10.90**	**16**	P	**Pn**	**22 10 28.4**	**-1.0**
	baz=203						
L20K	**Farewell, AK**	**10.92**	**22**	P	**Pn**	**22 10 29.3**	**-0.3**
	baz=210,SNR=23						
SUA	**Susitna One**	**10.96**	**32**		**Pn**	**22 10 28.1**	**-2.1**
SUA	**Susitna One**	**10.96**	**32**	P	**Pn**	**22 10 29.1**	**-1.1**
	baz=222,SNR=18						
RC01	**Rabbit Creek A**	**11.02**	**35**		**Pn**	**22 10 30.4**	**-0.7**
RC01	**Rabbit Creek A**	**11.02**	**35**	P	**Pn**	**22 10 30.5**	**-0.5**
	baz=226						
SKT	**Skwentna**	**11.12**	**28**	Pn	**Pn**	**22 10 31.7**	**-0.6**
SKT	**Skwentna**	**11.12**	**28**	P	**Pn**	**22 10 32.2**	**-0.1**
	baz=218,SNR=22						
AMKA	**Amchitka**	**11.14**	**271**	Pn	**Pn**	**22 10 31.1**	**-1.6**
P23K	**Montague Islan**	**11.23**	**43**	P	**Pn**	**22 10 32.7**	**-1.1**
	baz=236						
M22K	**Willow**	**11.37**	**32**	P	**Pn**	**22 10 34.4**	**-1.4**
	baz=223						
PWL	**Port Wells**	**11.38**	**38**		**Pn**	**22 10 33.4**	**-2.5**
PWL	**Port Wells**	**11.38**	**38**	P	**Pn**	**22 10 34.5**	**-1.4**
	baz=231,SNR=24						
PMR	**Palmer**	**11.59**	**34**		**Pn**	**22 10 36.7**	**-2.0**
PMR	**Palmer**	**11.59**	**34**	P	**Pn**	**22 10 36.7**	**-2.0**
PMR	**Palmer**	**11.59**	**34**	P	**Pn**	**22 10 37.5**	**-1.2**
	baz=226						
K20K	**Telida**	**11.65**	**20**		**Pn**	**22 10 37.4**	**-2.3**
K20K	**Telida**	**11.65**	**20**	P	**Pn**	**22 10 38.4**	**-1.3**
	baz=207,SNR=26						
PPLA	**Purkeypile**	**11.69**	**24**	Pn	**Pn**	**22 10 39.9**	**-0.3**
PPLA	**Purkeypile**	**11.69**	**24**	P	**Pn**	**22 10 40.5**	**+0.3**
	baz=214,SNR=22						
KNK	**Knik Glacier**	**11.70**	**36**		**Pn**	**22 10 38.5**	**-1.8**
KNK	**Knik Glacier**	**11.70**	**36**	P	**Pn**	**22 10 38.5**	**-1.8**
	baz=228,SNR=6.4						
CUT	**Chulitna**	**11.82**	**29**		**Pn**	**22 10 39.5**	**-2.4**
CUT	**Chulitna**	**11.82**	**29**	P	**Pn**	**22 10 39.7**	**-2.2**
	baz=220,SNR=5.5						
HIN	**Hinchinbrook I**	**11.82**	**43**		**Pn**	**22 10 40.4**	**-1.6**
GLI	**Glacier Island**	**11.87**	**40**		**Pn**	**22 10 40.4**	**-2.2**
GLI	**Glacier Island**	**11.87**	**40**	P	**Pn**	**22 10 40.5**	**-2.0**
	baz=234						
SML	**Sawmill**	**12.01**	**35**		**Pn**	**22 10 41.6**	**-3.0**
SML	**Sawmill**	**12.01**	**35**	P	**Pn**	**22 10 41.9**	**-2.7**
	baz=227						
ANM	**Nome**	**12.02**	**355**	P	**Pn**	**22 10 41.6**	**-3.0**
	baz=172						
FID	**Port Fidalgo**	**12.03**	**41**		**Pn**	**22 10 42.1**	**-2.7**
GAMB	**Gambell**	**12.09**	**341**	Pn	**Pn**	**22 10 45.7**	**+0.1**
GAMB	**Gambell**	**12.09**	**341**	P	**Pn**	**22 10 44.0**	**-1.5**
	baz=153						
CAST	**Castle Rocks**	**12.15**	**23**		**Pn**	**22 10 44.6**	**-1.9**
CAST	**Castle Rocks**	**12.15**	**23**	P	**Pn**	**22 10 45.4**	**-1.1**
	baz=213,SNR=27						
M23K	**Glacier View**	**12.21**	**36**	P	**Pn**	**22 10 45.0**	**-2.3**
	baz=229,SNR=31						
EYAK	**Cordova Ski Ar**	**12.22**	**43**	Pn	**Pn**	**22 10 44.9**	**-2.4**
EYAK	**Cordova Ski Ar**	**12.22**	**43**	P	**Pn**	**22 10 45.7**	**-1.7**
	baz=238,SNR=8.0						
J20K	**Nowinta River**	**12.38**	**18**	Pn	**Pn**	**22 10 47.5**	**-2.0**
J20K	**Nowinta River**	**12.38**	**18**	P	**Pn**	**22 10 47.5**	**-2.0**
	baz=206,SNR=23						
SCM	**Sheep Creek Mo**	**12.38**	**36**		**Pn**	**22 10 46.9**	**-2.8**
SCM	**Sheep Creek Mo**	**12.38**	**36**	P	**Pn**	**22 10 46.9**	**-2.8**
SCM	**Sheep Creek Mo**	**12.38**	**36**	P	**Pn**	**22 10 47.5**	**-2.2**
	baz=230,SNR=30						
KAIM	**Kayak Island**	**12.48**	**47**	Pn	**Pn**	**22 10 49.6**	**-1.3**
KAIM	**Kayak Island**	**12.48**	**47**	P	**Pn**	**22 10 50.1**	**-0.8**
	baz=243,SNR=8.6						
CHUM	**Lake Minchumin**	**12.49**	**22**	P	**Pn**	**22 10 51.5**	**+0.4**
	baz=211,SNR=39						
DIV	**Divide**	**12.53**	**41**		**Pn**	**22 10 49.9**	**-1.9**
KTH	**Kantishna Hill**	**12.55**	**25**		**Pn**	**22 10 50.0**	**-2.0**
RAGM	**Ragged Mountai**	**12.59**	**45**		**Pn**	**22 10 50.4**	**-2.1**
TRF	**Thorofare Moun**	**12.64**	**26**		**Pn**	**22 10 50.6**	**-2.6**
TRF	**Thorofare Moun**	**12.64**	**26**	P	**Pn**	**22 10 51.1**	**-2.1**
	baz=217						
WAT1	**Susitna Watana**	**12.66**	**31**	P	**Pn**	**22 10 50.9**	**-2.6**
	baz=223						
KLU	**Klutina**	**12.69**	**39**		**Pn**	**22 10 51.5**	**-2.3**
KLU	**Klutina**	**12.69**	**39**	P	**Pn**	**22 10 52.0**	**-1.9**
	baz=234,SNR=63						
HMT	**Hamilton**	**12.74**	**46**		**Pn**	**22 10 52.9**	**-1.6**
WAT6	**Susitna Watana**	**12.75**	**33**	P	**Pn**	**22 10 51.2**	**-3.5**
	baz=226,SNR=9.7						
SUCK	**Suckling Hills**	**12.83**	**47**		**Pn**	**22 10 54.8**	**-1.0**
BMRM	**Bremner River**	**12.92**	**43**		**Pn**	**22 10 55.3**	**-1.7**
BMRM	**Bremner River**	**12.92**	**43**	P	**Pn**	**22 10 55.5**	**-1.5**
	baz=238,SNR=7.3						
M24K	**Tolsona, Glenn**	**12.97**	**37**		**Pn**	**22 10 55.4**	**-2.4**
M24K	**Tolsona, Glenn**	**12.97**	**37**	P	**Pn**	**22 10 56.1**	**-1.7**
	baz=231,SNR=17						
BPAW	**Bear Paw Mtn.**	**12.99**	**23**	Pn	**Pn**	**22 10 56.2**	**-1.7**
BPAW	**Bear Paw Mtn.**	**12.99**	**23**	P	**Pn**	**22 10 56.7**	**-1.2**
	baz=214,SNR=25						
RND	**Reindeer**	**13.01**	**29**		**Pn**	**22 10 54.2**	**-4.0**
RND	**Reindeer**	**13.01**	**29**	P	**Pn**	**22 10 54.2**	**-4.0**
BERG	**Berg Lake**	**13.01**	**46**		**Pn**	**22 10 56.2**	**-2.0**
TNA	**Tin City**	**13.20**	**351**	P	**Pn**	**22 10 59.6**	**-1.2**
	baz=166						
DHY	**Denali Highway**	**13.21**	**32**	P	**Pn**	**22 10 57.8**	**-3.3**
	baz=225,SNR=12						
MCK	**McKinley**	**13.23**	**28**	P	**Pn**	**22 10 58.0**	**-3.3**
	baz=220						
N25K	**Chitina, Valde**	**13.27**	**40**	Pn	**Pn**	**22 11 00.0**	**-1.8**
N25K	**Chitina, Valde**	**13.27**	**40**	P	**Pn**	**22 10 60.0**	**-1.8**
	baz=236,SNR=23						
SNH	**Sunshine Point**	**13.30**	**48**		**Pn**	**22 11 01.9**	**-0.3**
WAX	**Waxell Ridge**	**13.41**	**47**		**Pn**	**22 11 02.7**	**-1.0**
HARP	**HAARP**	**13.53**	**37**	P	**Pn**	**22 11 03.2**	**-2.1**
	baz=232						
TGL	**Tana Glacier**	**13.56**	**45**		**Pn**	**22 11 04.2**	**-1.7**
I21K	**Tanana**	**13.70**	**19**		**Pn**	**22 11 05.6**	**-1.9**
I21K	**Tanana**	**13.70**	**19**	P	**Pn**	**22 11 06.2**	**-1.3**
	baz=209,SNR=7.5						
MESA	**MESA**	**13.70**	**48**		**Pn**	**22 11 07.4**	**-0.4**
MESA	**MESA**	**13.70**	**48**	P	**Pn**	**22 11 06.9**	**-0.9**
	baz=246						
PAX	**Paxson**	**13.78**	**35**	Pn	**Pn**	**22 11 05.8**	**-2.9**
PAX	**Paxson**	**13.78**	**35**	P	**Pn**	**22 11 05.9**	**-2.9**
PAX	**Paxson**	**13.78**	**35**	P	**Pn**	**22 11 05.8**	**-2.9**
	baz=230,SNR=35						
MCARA	**McCarthy VSAT**	**13.79**	**43**		**Pn**	**22 11 08.0**	**-0.8**
MCARA	**McCarthy VSAT**	**13.79**	**43**	P	**Pn**	**22 11 07.7**	**-1.1**
	baz=240,SNR=6.6						
MLY	**Manley**	**13.84**	**22**	P	**Pn**	**22 11 08.1**	**-1.4**
	baz=212,SNR=21						
YAH	**Yahtse**	**13.87**	**48**		**Pn**	**22 11 09.0**	**-1.1**
NEA2	**Nenana**	**13.88**	**25**	P	**Pn**	**22 11 08.5**	**-1.5**
	baz=217						
H21K	**Melozitna Rive**	**13.97**	**17**	P	**Pn**	**22 11 10.6**	**-0.6**
	baz=206,SNR=35						
SHEM	**Shemya Is, Ala**	**14.04**	**280**	LR	LR	22 16 37.5	
	comp=E,231nm,21.2s,baz=104,slow=38						
IMAR	**Indian Mountai**	**14.11**	**15**	Pn	**Pn**	**22 11 11.7**	**-1.4**
TABL	**Table Mountain**	**14.18**	**48**		**Pn**	**22 11 13.5**	**-0.8**
BARN	**Barnard Glacie**	**14.21**	**45**		**Pn**	**22 11 13.5**	**-1.3**
K24K	**Donnelly Dome**	**14.24**	**32**	P	**Pn**	**22 11 12.8**	**-2.2**
	baz=227,SNR=18						
I23K	**Minto, Yukon-K**	**14.26**	**23**	P	**Pn**	**22 11 12.0**	**-3.1**
	baz=215,SNR=12						
CTG	**Chitna Glacier**	**14.31**	**46**	P	**Pn**	**22 11 14.0**	**-2.0**
	baz=244,SNR=22						
CTGM	**Chitina Glacie**	**14.31**	**46**		**Pn**	**22 11 15.5**	**-0.6**
HDA	**Harding Lake**	**14.32**	**29**		Pn	22 11 11.0	-5.0
HDA	**Harding Lake**	**14.32**	**29**	P	Pn	22 11 11.2	-4.8
	baz=222,SNR=12						
M26K	**Nabesna, AK**	**14.34**	**39**	P	**Pn**	**22 11 14.9**	**-1.5**
	baz=236,SNR=42						
MDM	**Murphy Dome**	**14.39**	**25**		Pn	22 11 11.9	-5.1
LOGN	**Logan Glacier**	**14.40**	**47**		**Pn**	**22 11 16.0**	**-1.3**
TCOL	**CIGO, UAF Yank**	**14.42**	**26**	P	**Pn**	**22 11 12.6**	**-4.7**
	baz=219						
COLA	**College**	**14.42**	**26**		**Pn**	**22 11 13.1**	**-4.3**
COLA	**College**	**14.42**	**26**	*i* P	**Pn**	**22 11 13.6**	**-3.8**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
COLA	**College**	**14.42**	**26**	P	Pn	22 11 12.6	-4.8
	baz=219						
H22K	**Ishtalitna Cre**	**14.45**	**19**	P	**Pn**	**22 11 16.7**	**-1.1**
	baz=209,SNR=26						
PINM	**Pinnacle**	**14.46**	**50**	P	**Pn**	**22 11 17.7**	**-0.3**
	baz=249,SNR=15						
RIDG	**Independent Ri**	**14.50**	**33**		**Pn**	**22 11 15.8

N30M	Aishikik Lake	16.40	47	P	Pn	22 11 44.5	+1.1
	baz=249,SNR=19						
EGAK	Eagle	16.41	34		Pn	22 11 40.2	-3.2
EGAK	Eagle	16.41	34	P	Pn	22 11 42.0	-1.4
	baz=233,SNR=13						
FYU	Fort Yukon	16.42	25	Pn	Pn	22 11 41.7	-1.8
F24K	Squaw Lake	16.56	20	P	Pn	22 11 44.8	-0.6
	baz=214,SNR=9.7						
DAWY	Dawson	16.62	38		Pn	22 11 43.5	-2.7
DAWY				IAmb	IAmb	22 11 53.3	
	comp=Z,97nm,0.7s						
DAWY	Dawson	16.62	38	P	Pn	22 11 45.6	-0.6
	baz=238,SNR=34						
O30N	Mendenhall	16.63	50	P	Pn	22 11 46.8	+0.5
	baz=253,SNR=82						
L29M	L29M	16.63	41	P	Pn	22 11 46.8	+0.4
	baz=243,SNR=72						
SKAG	Skagway	16.66	55		Pn	22 11 46.2	-0.5
SKAG	Skagway	16.66	55	P	Pn	22 11 47.5	+0.8
	baz=258,SNR=17						
E23K	Chandalar	16.69	17	P	Pn	22 11 46.0	-1.0
	baz=209,SNR=45						
BESE	Bessie Mountai	16.75	58		Pn	22 11 45.9	-1.9
S32K	Killisnoo	16.77	62	P	P	22 11 50.0	0.0
	baz=266,SNR=9.1						
I27K	Kandik River	16.78	31	P	P	22 11 49.4	-0.8
	baz=230,SNR=27						
E24K	Your Creek	16.91	19	P	Pn	22 11 48.9	-1.0
	baz=211						
N31M	Braeburn, Yuko	17.00	48	P	Pn	22 11 51.6	+0.7
N31M	Braeburn, Yuko	17.00	48	P	Pn	22 11 51.6	+0.7
	baz=251,SNR=32						
G26K	Porcupine Rive	17.09	26	P	Pn	22 11 47.2	-4.7
	baz=223,SNR=7.3						
F25K	Christian Rive	17.12	23	P	Pn	22 11 48.5	-3.9
	baz=218,SNR=13						
WHY	Whitehorse	17.17	51	P	Pn	22 11 53.8	+0.6
WHY	Whitehorse	17.17	51	P	P	22 11 54.8	+0.2
	baz=255,SNR=48						
TOLK	Toolik Lake Re	17.21	16		Pn	22 11 53.0	-0.6
TOLK				IAmb	IAmb	22 11 57.5	
	comp=Z,263nm,1.1s						
TOLK	Toolik Lake Re	17.21	16	P	Pn	22 11 53.6	0.0
	baz=208,SNR=46						
H27K	Steamboat Moun	17.22	30	P	Pn	22 11 50.9	-2.8
	baz=228,SNR=15						
K29M	Barlow Dome	17.22	40	P	Pn	22 11 53.9	+0.1
	baz=242,SNR=46						
BMAR	Burnt Mountain	17.25	24	Pn	Pn	22 11 48.3	-5.7
J29M	Klondike Camp	17.27	37	P	P	22 11 56.1	+0.5
	baz=239						
D23K	Nanushuk River	17.32	15	P	Pn	22 11 54.2	-0.6
	baz=206,SNR=21						
P32M	Atlin	17.50	55	P	P	22 11 58.1	-0.1
	baz=260,SNR=32						
U33K	Whale Pass	17.52	67	P	P	22 11 59.9	+1.6
	baz=271						
CRAG	Craig	17.55	69	P	Pn	22 11 58.0	+0.3
CRAG	Craig	17.55	69	P	P	22 11 59.6	+1.0
	baz=274						
F26K	Sheenjek River	17.56	24	P	Pn	22 11 55.4	-2.4
	baz=220,SNR=11						
E25K	Arctic Village	17.56	22	P	Pn	22 11 54.9	-3.0
	baz=217,SNR=6.8						
G27K	Doyon Strip	17.58	28	P	Pn	22 11 57.0	-1.1
	baz=227,SNR=14						
I29M	Ogilvie Camp,	17.73	35	P	P	22 12 02.1	+1.5
	baz=236,SNR=78						
MAYO	Mayo, Yukon	17.75	41	P	P	22 12 02.9	+2.0
	baz=245,SNR=35						
D24K	Happy Valley	17.79	16	P	Pn	22 11 59.6	-1.0
	baz=209						
M31M	Drury Creek, Y	17.85	47	P	P	22 12 03.0	+0.9
M31M	Drury Creek, Y	17.85	47	P	P	22 12 04.2	+2.2
	baz=251,SNR=81						
WRAK	Wrangell Islan	17.95	66	P	P	22 12 04.7	+1.7
	baz=271						
P33M	Teslin, Yukon	18.06	53	P	P	22 12 04.4	0.0
P33M	Teslin, Yukon	18.06	53	P	P	22 12 06.5	+2.2
	baz=259,SNR=101						
C23K	Itkillik River	18.13	14	P	Pn	22 12 04.0	-0.8
	baz=204,SNR=15						
Q32M	Nakina River	18.13	58	P	P	22 12 07.5	+2.2
	baz=263,SNR=21						
N32M	Quiet Lake	18.14	50	P	P	22 12 07.4	+2.2
	baz=256						
DIB	Dawson Inlet,	18.19	76	P	P	22 12 06.5	+0.7
C24K	Franklin Bluff	18.32	16	P	P	22 12 05.3	-1.7
	baz=208						
FARO	Faro, Yukon	18.33	47	P	Pn	22 12 09.8	+2.5
	baz=252,SNR=82						
D25K	Kavik River	18.39	18	P	P	22 12 07.0	-0.8
	baz=213						
V35K	Ketchikan	18.41	69	P	Pn	22 12 10.4	+2.1
	baz=275,SNR=13						
E27K	Coleen River	18.57	25	P	Pn	22 12 10.8	+0.6
	baz=224,SNR=5.0						
S34M	Telegraph Cree	18.64	61	P	Pn	22 12 13.5	+2.4
	baz=268,SNR=27						
EPYK	Eagle Plains	18.84	33	P	Pn	22 12 13.3	-0.2
EPYK				IAmb	IAmb	22 12 15.8	
	comp=Z,161nm,0.7s						
EPYK	Eagle Plains	18.84	33	P	Pn	22 12 14.4	+0.9
	baz=236,SNR=86						
R33M	Jennings River	18.85	56	P	Pn	22 12 15.8	+2.0
	baz=263,SNR=25						
A21K	Barrow	18.93	6	P	P	22 12 13.6	-0.1
A21K				IAmb	IAmb	22 12 18.1	
	comp=Z,218nm,1.0s						
A21K	Barrow	18.93	6	P	P	22 12 13.7	0.0
	baz=192						
T35M	Bob Quinn	19.10	64	P	Pn	22 12 18.6	+1.9
	baz=271,SNR=47						
C26K	Camden Bay	19.17	19	P	P	22 12 16.2	-0.1
	baz=215						
C27K	Jago River	19.18	20	P	P	22 12 16.7	+0.2
	baz=217						
DLBC	Dease Lake	19.25	60	P	Pn	22 12 19.4	+0.8
	comp=Z,0.7nm,0.3s,baz=275,slow=10,SNR=35						
DLBC				PcP	PcP	22 16 39.5	+0.2
	comp=Z,5.3nm,0.9s,baz=173,slow=2.2,SNR=3.4						
DLBC				LR	LR	22 18 44.2	
	comp=Z,273nm,19.1s,baz=258,slow=34						
	comp=Z,17nm,0.8s						
DLBC	Dease Lake	19.25	60	P	Pn	22 12 19.0	+0.5
DLBC	Dease Lake	19.25	60	P	Pn	22 12 20.0	+1.4
	baz=267,SNR=18						
G30M	tAoh Zraii Nji	19.35	32	P	Pn	22 12 19.4	-0.2
	baz=235,SNR=118						
MMPY	Sheldon Lake,	19.37	47	P	Pn	22 12 20.1	+0.2
	baz=254,SNR=124						
GRNB	Grenville Isla	19.56	73		Pn	22 12 22.7	+0.5
WTLY	Watson Lake, Y	20.03	55	P	Pn	22 12 27.0	-0.7
WTLY	Watson Lake, Y	20.03	55	P	Pn	22 12 27.2	-0.6
	baz=264						
F31M	Tsiigehtchic	20.41	32	P	P	22 12 29.8	-0.1
	baz=238,SNR=20						
TGTN	Hyland Airport	20.49	51	P	Pn	22 12 32.4	-0.8
	baz=260,SNR=32						
INK	Inuvik	20.95	30	P	P	22 12 35.2	-0.5
	comp=Z,67nm,0.8s,baz=230,slow=12,SNR=22						
INK				S	S	22 16 21.4	-6.1
	comp=Z,1.6nm,0.2s,baz=209,slow=32,SNR=1.1						
INK				LR	LR	22 21 27.9	
	comp=Z,425nm,18.1s,baz=248,slow=39						
	comp=Z,67nm,0.8s						
INK	Inuvik	20.95	30	P	P	22 12 34.9	-0.8
INK				IAmb	IAmb	22 12 39.6	
	comp=Z,57nm,0.8s						
INK	Inuvik	20.95	30	P	P	22 12 34.9	-0.8
INK				pmax	pmax		
	comp=Z,57nm,0.8s						
INK	Inuvik	20.95	30	P	P	22 12 35.1	-0.5
	baz=236,SNR=24						
BBB	Bella Bella	21.01	77	P	P	22 12 37.7	+1.3
	comp=Z,29nm,0.9s,baz=286,slow=11,SNR=8.9						
BBB				PcP	PcP	22 16 41.3	-1.2
	comp=Z,9.2nm,0.9s,baz=349,slow=6.1,SNR=4.7						
BBB				LR	LR	22 18 40.1	
	comp=Z,388nm,18.9s,baz=284,slow=31						
	comp=Z,29nm,0.9s						
BBB	Bella Bella	21.01	77	P	P	22 12 37.0	+0.6
FLDN	Fort Liard	22.69	55	P	P	22 12 54.9	+0.4
	baz=268						
WRGLY	Wrigley	22.98	47	P	P	22 12 58.5	+1.1
	baz=261						
PET	Petropavlovsk	23.14	286	P	P	22 12 58.2	-0.9
PET				IAmb	IAmb	22 13 04.8	
	comp=Z,209nm,1.2s						
PET	Petropavlovsk	23.14	286	*e*P	P	22 12 59.7	+0.6
PET				*e*S	S	22 17 04.8	-3.8
PET				pmax	pmax		
	comp=Z,400nm,6.6s						
PET				pmax	pmax		
	comp=Z,209nm,1.2s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PEA0B	Petropavlovsk-	23.67	287	P	P	22 13 03.9	-0.5
PEA0B	Petropavlovsk-	23.67	287	*ce*P	P	22 13 04.6	+0.2
PETK	Petropavlovsk-	23.67	287	P	P	22 13 04.1	-0.3
	comp=Z,48nm,0.5s,baz=83,slow=12,SNR=139						
PETK				PcP	PcP	22 16 47.8	-0.2
	comp=Z,7.3nm,1.0s,baz=84,slow=4.5,SNR=3.8						
	comp=Z,48nm,0.5s						
PETK	Petropavlovsk-	23.67	287	P	P	22 13 03.8	-0.6
PETK	Petropavlovsk-	23.67	287	P	P	22 13 03.8	-0.6
C36M	Paulatuk	24.46	32	P	P	22 13 11.3	-0.3
C36M				IAmb	IAmb	22 13 13.2	
	comp=Z,97nm,1.2s						
C36M	Paulatuk	24.46	32	P	P	22 13 12.1	+0.6
	baz=247,SNR=9.9						
LLLB	Lillooet	25.20	78	P	P	22 13 19.7	+1.2
NLWA	Neilton Lookou	25.30	86	P	P	22 13 20.5	+1.2
A36M	Sachs Harbour	25.30	26	P	P	22 13 19.7	+0.6
A36M	Sachs Harbour	25.30	26	P	P	22 13 20.2	+1.1
	baz=240,SNR=20						
SKR	Severo-Kuril's	25.35	282	*e*P	P	22 13 10.9	-8.8
SKR				*e*S	S	22 17 44.8	+0.6
SKR				pmax	pmax		
	comp=Z,300nm,2.8s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
WAPA	Wapiti River	25.43	67	P	P	22 13 21.1	+0.6
WAPA				IAmb	IAmb	22 13 24.8	
	comp=Z,123nm,0.9s						
SEY	Seymchan	25.49	311	P	P	22 13 20.6	-0.3
	comp=Z,6.9nm,0.7s,baz=116,slow=8.8,SNR=15						
SEY				PcP	PcP	22 16 51.7	0.0
	comp=Z,11nm,0.8s,baz=112,slow=3.0,SNR=6.5						
	comp=Z,6.9nm,0.7s						
SEY	Seymchan	25.49	311	*ce*P	P	22 13 20.7	-0.2
SEY				pmax	pmax		
	comp=Z,61nm,1.5s						
HILA	High Level	26.06	59	P	P	22 13 26.2	0.0
MA2	Magadan	26.35	304	P	P	22 13 28.2	-0.5
	comp=Z,16nm,0.8s,baz=118,slow=8.9,SNR=5.0						
	comp=Z,16nm,0.8s						
MA2	Magadan	26.35	304	*i* P	P	22 13 29.3	+0.6
MA2				pmax	pmax		
	comp=Z,19nm,0.9s						
BRLDA	Berland Lookou	26.73	69	P	P	22 13 32.4	0.0
YKA	Yellowknife Ar	26.98	50	P	P	22 13 35.1	+0.7
	comp=Z,13nm,0.7s,baz=270,slow=10,SNR=57						
YKA				PcP	PcP	22 16 55.2	0.0
	comp=Z,3.6nm,0.8s,baz=282,slow=2.5,SNR=6.5						
YKA				LR	LR	22 25 49.6	
	comp=Z,178nm,19.5s,baz=268,slow=40						
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	26.98	50	P	P	22 13 34.6	+0.2
YKA	Yellowknife Ar	26.98	50	*ce*P	P	22 13 35.0	+0.7
YKA				pmax	pmax		
	comp=Z,15nm,0.7s						
H04A	Detroit Lake	27.63	90	P	P	22 13 40.9	+0.5
H04A				IAmb	IAmb	22 13 43.8	
	comp=Z,74nm,1.5s						
DBO	Dodson Butte	27.83	94	P	P	22 13 44.3	+2.0
HUMO	Hull Mountain	28.30	95	P	P	22 13 45.6	-0.8
HAWA	Hanford	28.39	85	P	P	22 13 47.3	+0.1
KMPM	Mount Pierce	28.89	99	P	P	22 13 53.3	+1.5
KMPM				IAmb	IAmb	22 13 55.8	
	comp=Z,33nm,0.9s						
YBH	Yreka Blue Hor	28.95	96	P	P	22 13 54.7	+2.4
	comp=Z,17nm,0.8s,baz=321,slow=5.5,SNR=41						
YBH				PcP	PcP	22 17 00.3	-0.3
	comp=Z,3.2nm,0.7s,baz=333,slow=4.5,SNR=6.4						
YBH				LR	LR	22 22 49.7	
	comp=Z,377nm,18.3s,baz=296,slow=31						
	comp=Z,17nm,0.8s						
YBH	Yreka Blue Hor	28.95	96	P	P	22 13 54.0	+1.7
YBH	Yreka Blue Hor	28.95	96	P	P	22 13 54.0	+1.7
YBH				pmax	pmax		
	comp=Z,19nm,0.8s						
NEW	Newport	28.99	80	P	P	22 13 54.0	+1.5
	comp=Z,16nm,0.9s,baz=301,slow=6.4,SNR=29						
NEW				PcP	PcP	22 17 00.7	+0.2
	comp=Z,2.2nm,0.6s,baz=299,slow=4.2,SNR=2.9						
NEW				LR	LR	22 23 15.7	
	comp=Z,252nm,18.2s,baz=308,slow=32						
	comp=Z,16nm,0.9s						
NEW	Newport	28.99	80	P	P	22 13 53.4	+0.9
NEW	Newport	28.99	80	P	P	22 13 53.4	+0.9
NEW				pmax	pmax		
	comp=Z,15nm,0.8s						
NEW	Newport	28.99	80	P	P	22 13 54.0	+1.5
	baz=296,SNR=16						
EDM	Edmonton	29.30	69	P	P	22 13 55.5	+0.3
EDM	Edmonton	29.30	69	P	P	22 13 55.5	+0.3
EDM				pmax	pmax		
	comp=Z,24nm,1.3s						
K05A	Summer Lake	29.48	93	P	P	22 13 57.8	+0.7
K05A				IAmb	IAmb	22 14 01.2	
	comp=Z,34nm,1.0s						
MOD	Modoc Plateau	30.31	94	P	P	22 14 06.1	+1.6
MOD				IAmb	IAmb	22 14 08.1	
	comp=Z,30nm,1.0s						
WALA	Waterton Lakes	30.56	77	P	P	22 14 06.7	+0.2
JTMT	Jette	30.92	79	P	P	22 14 10.5	+0.7
ORV	Oroville	31.00	98	P	P	22 14 11.2	+0.8
ORV	Oroville	31.00	98	P	P	22 14 11.2	+0.8
ORV				pmax	pmax		
	comp=Z,11nm,1.0s						
WVOR	Wild Horse Val	31.02	91	P	P	22 14 12.1	+1.5
WVOR	Wild Horse Val	31.02	91	P	P	22 14 12.1	+1.5
WVOR				pmax	pmax		
	comp=Z,24nm,1.1s						
BEKR	Beckworth	31.50	97	P	P	22 14 16.0	+1.1
MSO	Missoula	31.56	81	P	P	22 14 16.1	+0.7
MSO	Missoula	31.56	81	P	P	22 14 16.2	+0.9
	baz=299						
CMB	Columbia Colle	32.64	100	P	P	22 14 26.6	+1.7
CMB	Columbia Colle	32.64	100	P	P	22 14 26.6	+1.7
CMB				pmax	pmax		
	comp=Z,15nm,1.2s						
LRM	Limekiln Ridge	32.96	81	P	P	22 14 28.7	+0.9
HLID	Hailey	32.96	86	P	P	22 14 28.6	+0.8
HLID	Hailey	32.96	86	P	P	22 14 28.7	+0.9
	baz=304,SNR=8.7						
BMN	Battle Mountai	33.06	93	P	P	22 14 29.4	+0.8
BMN	Battle Mountai	33.06	93	P	P	22 14 29.4	+0.8
BMN				pmax	pmax		
	comp=Z,21nm,1.0s						
EGMT	Eagleton	33.49	76	P	P	22 14 32.4	+0.2
EGMT	Eagleton	33.49	76	P	P	22 14 32.4	+0.2
	baz=298,SNR=7.7						
BOZ	Bozeman (W)	33.57	81	P	P	22 14 33.3	+0.3
BOZ				IAmb	IAmb	22 14 36.6	
	comp=Z,44nm,1.8s						
BOZ	Bozeman (W)	33.57	81	P	P	22 14 33.3	+0.3
BOZ				pmax	pmax		
	comp=Z,44nm,1.8s						
BOZ	Bozeman (W)	33.57	81	P	P	22 14 33.9	+0.9
	baz=301,SNR=15						
NVAR	Mina Array Bea	33.64	97	P	P	22 14 36.1	+2.3
	comp=Z,23nm,0.8s,baz=296,slow=8.9,SNR=131						
NVAR				PcP	PcP	22 17 13.5	+0.2
	comp=Z,4.7nm,0.8s,baz=296,slow=2.8,SNR=9.2						
NVAR				ScP	ScP	22 20 57.2	+1.4
	comp=Z,0.3nm,0.5s,baz=273,slow=2.9,SNR=3.7						
NVAR				LR	LR	22 26 13.5	
	comp=Z,156nm,19.1s,baz=298,slow=33						
	comp=Z,23nm,0.8s						
NVAR	Mina Array Bea	33.64	97	P	P	22 14 35.5	+1.7
NV11	Mina Array Sit	33.73	97	P	P	22 14 35.7	+1.2
MLAC	Mammoth, Mammo	33.84	99	P	P	22 14 37.9	+2.4
	baz=311						
ELK	Elko	34.08	91	LR	LR	22 26 22.5	
	comp=Z,359nm,18.0s,baz=306,slow=32						
ELK	Elko	34.08	91	P	P	22 14 38.2	+0.7
ELK	Elko	34.08	91	P	P	22 14 38.2	+0.7
ELK				pmax	pmax		
	comp=Z,16nm,1.0s						
YHL	Hebgen Lake	34.23	82	P	P	22 14 39.8	+0.9
RES	Resolute Bay	34.35	26	LR	LR	22 31 13.7	
	comp=Z,186nm,18.0s,baz=232,slow=41						
VOG	Valley Oaks Go	34.37	101	P	P	22 14 41.1	+1.3
	baz=312						
TIXI	Tiksi	34.58	329	LR	LR	22 31 26.0	
	comp=Z,183nm,18.3s,baz=3.5,slow=41						
TIXI	Tiksi	34.58	329	P	P	22 14 41.0	-0.3
TIXI				IAmb	IAmb	22 14 44.1	
	comp=Z,19nm,0.8s						
TIXI	Tiksi	34.58	329	*ce*P	P	22 14 40.9	-0.3
TIXI				pmax	pmax		
	comp=Z,23nm,1.0s						
H17A	Grant Village	34.84	82	P	P	22 14 46.0	+1.9
	baz=303,SNR=6.0						
LKWY	Lake	34.85	82	P	P	22 14 45.6	+1.4
LKWY				IAmb	IAmb	22 14 49.3	
	comp=Z,18nm,0.8s						
LKWY	Lake	34.85	82	P	P	22 14 45.6	+1.4
LKWY				pmax	pmax		
	comp=Z,18nm,0.8s						
VES	Vestal, Richgr	34.88	101	P	P	22 14 45.6	+1.4
	baz=313,SNR=8.9						
IMW	Indian Meadow	34.89	83	P	P	22 14 45.5	+0.9
IMW				PcP	PcP	22 17 17.2	+0.3
YSS	Yuzh-Sakhalins	34.91	283	*e*P	P	22 14 44.6	+0.2
YSS				*e*S	S	22 20 17.0	+3.1
YSS				*e*SS	SnSn	22 22 27.0	-2.2
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
HVU	Hansel Valley	34.97	88	P	P	22 14 46.1	+1.0
HVU				IAmb	IAmb	22 14 48.6	
	comp=Z,66nm,2.0s						
HVU				PcP	PcP	22 17 17.4	+0.4
HVU	Hansel Valley	34.97	88	P	P	22 14 46.1	+1.0
HVU				PCP	PcP	22 17 17.4	+0.4
HVU				pmax	pmax		
	comp=Z,66nm,2.0s						
FFC	Flin Flon	35.06	62	P	P	22 14 45.9	+0.3
FFC	Flin Flon	35.06	62	P	P	22 14 45.9	+0.3
FFC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CWC	Cottonwood Cre	35.08	99	P	P	22 14 48.4	+2.3
	baz=312						
PKM	Mcpherson Peak	35.09	103	P	P	22 14 49.0	+2.7
	baz=314						
GRAC	Grapevine Rang	35.14	98	P	P	22 14 48.8	+2.3
	baz=311,SNR=5.2						
RLMT	Red Lodge	35.24	80	P	P	22 14 48.5	+1.0
RLMT				IAmb	IAmb	22 14 50.2	
	comp=Z,36nm,1.1s						
RLMT	Red Lodge	35.24	80	P	P	22 14 48.9	+1.4
	baz=302,SNR=19						
R11A	Troy Canyon, C	35.34	95	P	P	22 14 49.8	+1.4
R11A				IAmb	IAmb	22 14 51.5	
	comp=Z,39nm,1.0s						
R11A	Troy Canyon, C	35.34	95	P	P	22 14 50.2	+1.7
	baz=310,SNR=64						
ISA	Isabella, Lake	35.36	101	P	P	22 14 50.0	+1.5
ISA				IAmb	IAmb	22 14 51.3	
	comp=Z,29nm,1.2s						
ISA	Isabella, Lake	35.36	101	P	P	22 14 50.0	+1.5
ISA				pmax	pmax		
	comp=Z,29nm,1.2s						
ISA	Isabella, Lake	35.36	101	P	P	22 14 50.0	+1.5
	baz=313,SNR=9.0						
AHID	Auburn Hatcher	35.42	85	P	P	22 14 49.9	+0.9
SBC	Santa Barbara	35.46	104	P	P	22 14 50.6	+1.4
	baz=314						
ARVC	Arvin	35.51	102	P	P	22 14 51.2	+1.5
	baz=314						
MPMC	Manual Prospec	35.69	99	P	P	22 14 53.4	+1.9
	baz=312,SNR=25						
FURC	Furnace Creek,	35.79	98	P	P	22 14 54.2	+2.2
	baz=312,SNR=7.3						
HWUT	Hardware Ranch	35.80	87	P	P	22 14 53.0	+0.7
SCZ2	Santa Cruz Isl	35.82	104	P	P	22 14 54.1	+1.8
	baz=315						
TPNV	Topopah Spring	35.84	97	P	P	22 14 54.0	+1.4
TPNV				IAmb	IAmb	22 14 56.1	
	comp=Z,56nm,0.8s						
TPNV	Topopah Spring	35.84	97	P	P	22 14 54.1	+1.4
TPNV				pmax	pmax		
	comp=Z,56nm,0.8s						
TPNV	Topopah Spring	35.84	97	P	P	22 14 55.0	+2.3
	baz=311,SNR=30						
DUG	Dugway, Tooele	35.88	90	P	P	22 14 54.3	+1.3
DUG				IAmb	IAmb	22 14 56.2	
	comp=Z,46nm,1.4s						
DUG	Dugway, Tooele	35.88	90	P	P	22 14 54.3	+1.3
DUG				pmax	pmax		
	comp=Z,46nm,1.4s						
DUG	Dugway, Tooele	35.88	90	P	P	22 14 54.8	+1.8
	baz=308,SNR=25						
OSI	Osito Audit: C	35.93	102	P	P	22 14 55.0	+1.7
	baz=314						
LRMC	Laurel Mtn Rad	35.96	100	P	P	22 14 54.5	+0.8
	baz=313						
YAK	Yakutsk	36.01	312	LR	LR	22 30 31.8	
	comp=Z,266nm,20.3s,baz=89,slow=38						
YAK	Yakutsk	36.01	312	P	P	22 14 52.8	-0.8
YAK	Yakutsk	36.01	312	*e*P	P	22 14 53.1	-0.5
YAK				*e**PP	pP	22 15 01.0	+1.1
YAK				*e*		22 17 18.9	
YAK				*e*S	S	22 20 26.8	-3.6
YAK				*e*SS	SnSn	22 22 53.1	-2.3
YAK				pmax	pmax		
	comp=Z,56nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,18nm,1.0s						
YAK				smax	smax		
	comp=E,92nm,2.2s						
YAK				smax	smax		
	comp=N,83nm,2.3s						
YAK				MLR	MLR		
	comp=Z,456nm,17.0s						
YAK				MLR	MLR		
	comp=N,299nm,16.0s						
YAK				MLR	MLR		
	comp=E,341nm,18.0s						
EDW2	Edwards Air Fo	36.18	101	P	P	22 14 57.3	+1.9
	baz=314						
LAO	LASA Array	36.24	76	P	P	22 14 56.9	+1.0
LAO	LASA Array	36.24	76	P	P	22 14 57.1	+1.2
	baz=301						
EUNU	Eureka	36.29	17	P	P	22 14 57.3	+1.3
EUNU				IAmb	IAmb	22 15 20.9	
	comp=Z,107nm,1.9s						
BW06	Boulder Array	36.35	84	P	P	22 14 58.2	+1.1
	baz=305,SNR=11						
PD31	Pinedale Array	36.35	84	P	P	22 14 57.5	+0.4
PDAR	Pinedale Array	36.35	84	P	P	22 14 58.3	+1.2
	comp=Z,5.6nm,0.8s,baz=300,slow=4.2,SNR=56						
PDAR				PcP	PcP	22 17 20.6	-0.6
	comp=Z,1.3nm,0.8s,baz=5.7,slow=3.6,SNR=4.8						
PDAR				LR	LR	22 28 01.9	
	comp=Z,185nm,18.0s,baz=316,slow=33						
	comp=Z,5.6nm,0.8s						
PDAR	Pinedale Array	36.35	84	P	P	22 14 57.5	+0.4
SNCC	San Nicolas Is	36.41	105	P	P	22 14 58.5	+1.1

BFSC	Mount Baldy Ra	36.82	102	P		P	22 15 03.0 +1.9
	baz=314,SNR=6.2						
CIS	Catalina Islan	36.96	104	P		P	22 15 03.6 +1.5
	baz=315						
TUQ	Turquoise Moun	37.05	99	P		P	22 15 04.4 +1.4
	baz=313,SNR=6.2						
SCI2	San Clemente I	37.18	104	P		P	22 15 05.9 +2.0
	baz=316						
HEC	Hector,Ludlow	37.21	100	P		P	22 15 06.4 +2.1
	baz=313						
ERM	Erimo	37.34	276	P		P	22 15 05.2 0.0
ERM				IAmb		IAmb	22 15 06.2
	comp=Z,46nm,0.9s						
ERM	Erimo	37.34	276	*ce*P		P	22 15 04.8 -0.4
ERM				pmax		pmax	
	comp=Z,54nm,1.1s						
MURC	Murrieta	37.54	102	P		P	22 15 08.6 +1.6
	baz=315						
FCC	Fort Churchill	37.59	53	P		P	22 15 07.2 +0.1
FCC				IAmb		IAmb	22 15 08.6
	comp=Z,58nm,1.1s						
FCC	Fort Churchill	37.59	53	P		P	22 15 07.2 +0.1
FCC				pmax		pmax	
	comp=Z,58nm,1.1s						
GMRC	Granite Mounta	37.65	99	P		P	22 15 09.6 +1.6
	baz=313,SNR=26						
PFO	Pinyon Flats O	37.97	101	LR		LR	22 27 59.2
	comp=Z,237nm,19.3s,baz=268,slow=32						
PFO	Pinyon Flats O	37.97	101	P		P	22 15 11.7 +0.9
PFO	Pinyon Flats O	37.97	101	P		P	22 15 11.7 +0.9
PFO				pmax		pmax	
	comp=Z,24nm,1.2s						
PFO	Pinyon Flats O	37.97	101	P		P	22 15 12.5 +1.6
	baz=315,SNR=10						
PFO	Pinyon Flats O	37.97	101	P		P	22 15 11.3 +0.5
PFO				pP		sP	22 15 21.5 +1.7
BELC	Belle Mtn. Jos	37.98	101	P		P	22 15 12.0 +1.1
	baz=314,SNR=9.1						
TPFO	Pinon Flats	37.98	101	P		P	22 15 12.8 +1.9
	baz=315,SNR=11						
109C	Camp Elliot, M	38.10	103	P		P	22 15 13.6 +1.9
	baz=315						
K22A	Casper	38.26	82	P		P	22 15 13.4 +0.3
K22A	Casper	38.26	82	P		P	22 15 14.0 +0.9
	baz=305,SNR=11						
K22A	Casper	38.26	82	P		P	22 15 13.7 +0.5
	baz=305,SNR=11						
IRM	Iron Mountain	38.38	100	P		P	22 15 15.7 +1.6
	baz=314,SNR=17						
RWWY	Rawlins	38.40	84	P		P	22 15 14.9 +0.4
RWWY				IAmb		IAmb	22 15 16.6
	comp=Z,95nm,2.0s						
MONP2	Monument Peak	38.50	102	P		P	22 15 17.2 +1.8
	baz=315,SNR=5.2						
W13A	Hualapai Mount	38.50	97	P		P	22 15 16.8 +1.5
W13A				IAmb		IAmb	22 15 18.4
	comp=Z,42nm,0.8s						
BC3	Big Chuckawall	38.55	100	P		P	22 15 17.0 +1.4
	baz=314,SNR=7.5						
O20A	White River Ci	38.70	87	P		P	22 15 18.3 +1.3
	baz=308,SNR=34						
SWSC	Sam W. Stewart	38.84	102	P		P	22 15 19.4 +1.5
	baz=315,SNR=5.6						
IKP	In-Ko-Pah, Jac	38.86	102	P		P	22 15 20.3 +2.1
	baz=315,SNR=6.5						
PDMCI	Parker Dam,Lak	38.89	98	P		P	22 15 20.0 +1.7
	baz=314,SNR=8.9						
RSSD	Black Hills	38.91	78	P		P	22 15 18.6 -0.1
RSSD				PcP		PcP	22 17 28.6 -0.4
RSSD	Black Hills	38.91	78	P		P	22 15 19.1 +0.4
	baz=304,SNR=9.4						
RSSD	Black Hills	38.91	78	P		P	22 15 19.4 +0.7
	baz=304						
RSSD	Black Hills	38.91	78	P		P	22 15 18.2 -0.5
RSSD				pP		pP	22 15 26.0 +0.9
PV23	Carpenter Ridg	39.28	89	P		P	22 15 22.6 +0.7
GLA	Glamis	39.34	101	P		P	22 15 23.8 +1.6
	baz=315						
ESJX	Sierra Juarez	39.41	103	P		P	22 15 24.4 +1.5
MDND	Maddock	39.51	71	P		P	22 15 23.4 +0.1
	baz=302						
N23A	Red Feather La	39.64	84	P		P	22 15 25.3 +0.5
N23A				IAmb		IAmb	22 15 27.4
	comp=Z,104nm,1.9s						
N23A	Red Feather La	39.64	84	P		P	22 15 25.9 +1.0
	baz=307						
WUAZ	Wupatki	39.74	95	P		P	22 15 27.3 +1.6
WUAZ				IAmb		IAmb	22 15 28.9
	comp=Z,54nm,0.8s						
WUAZ	Wupatki	39.74	95	P		P	22 15 27.5 +1.8
	baz=312,SNR=39						
Y14A	Wickenburg	39.82	98	P		P	22 15 27.2 +1.0
KLR	Kul'dur	40.14	292	LR		LR	22 33 01.3
	comp=Z,88nm,18.4s,baz=39,slow=38						
KLR	Kul'dur	40.14	292	*ce*P		P	22 15 27.6 -1.0
KLR				pmax		pmax	
	comp=Z,21nm,1.3s						
MVCO	Mesa Verde	40.38	90	P		P	22 15 31.6 +0.5
MVCO	Mesa Verde	40.38	90	P		P	22 15 31.4 +0.4
	baz=311,SNR=7.8						
ZEA	Zeya	40.39	301	*e*P		P	22 15 29.8 -0.8
ZEA				*e*			22 15 33.1
ZEA				*e*			22 25 35.6
ZEA				pmax		pmax	
	comp=Z,20nm,0.9s						
ZEA				MLR		MLR	
	comp=E,100nm,13.0s						
ZEA				MLR		MLR	
	comp=Z,200nm,17.0s						
TULEG	Thule	40.42	21	P		P	22 15 30.5 -0.1
TULEG	Thule	40.42	21	*e*P		P	22 15 30.9 +0.3
TULEG				IAmb		IAmb	22 15 40.6
	comp=Z,249nm,1.5s						
H11N2	WAKE ISLAND Hy	40.43	227	T		T	22 58 42.5
	baz=28						
H11N3	WAKE ISLAND Hy	40.43	227	T		T	22 58 41.9
	baz=28						
H11N1	WAKE ISLAND Hy	40.44	227	T		T	22 58 44.2
	baz=28						
ISCO	Idaho Springs	40.51	85	P		P	22 15 33.1 +1.0
	baz=308						
W18A	Petrified Fore	41.00	94	P		P	22 15 37.8 +1.6
	baz=312,SNR=12						
S22A	4UR Ranch, Cre	41.05	88	P		P	22 15 37.9 +1.2
	baz=310,SNR=24						
Q24A	Divide	41.31	86	P		P	22 15 40.0 +1.3
	baz=309,SNR=6.5						
JMM	Marumori	41.32	272	P		P	22 15 37.6 -0.8
214A	Organ Pipe Nat	41.32	100	P		P	22 15 40.4 +1.8
	baz=315,SNR=27						
AGMN	Agassiz Nation	41.40	68	P		P	22 15 39.0 -0.1
	baz=302						
AGMN	Agassiz Nation	41.40	68	P		P	22 15 38.9 -0.1
	baz=302						
H11S1	WAKE ISLAND Hy	41.59	227	T		T	23 00 09.2
	baz=25						
H11S2	WAKE ISLAND Hy	41.60	227	T		T	23 00 10.7
	baz=25						
H11S3	WAKE ISLAND Hy	41.60	227	T		T	23 00 00.5
	baz=25						
SUSD	Miller	41.74	75	P		P	22 15 41.5 -0.4
	baz=305						
SDCO	Great Sand Dun	41.86	87	P		P	22 15 44.3 +1.1
SDCO	Great Sand Dun	41.86	87	P		P	22 15 44.9 +1.6
	baz=310,SNR=35						
SDCO	Great Sand Dun	41.86	87	P		P	22 15 44.9 +1.6
	baz=310,SNR=35						
OGNE	Ogallala	41.97	81	P		P	22 15 44.3 +0.4
OGNE	Ogallala	41.97	81	P		P	22 15 44.9 +1.1
	baz=308						
TUC	Tucson	42.29	98	P		P	22 15 47.8 +1.2
TUC				IAmb		IAmb	22 15 49.7
	comp=Z,34nm,0.9s						
TUC	Tucson	42.29	98	P		P	22 15 47.8 +1.2
TUC				pmax		pmax	
	comp=Z,34nm,1.0s						
TUC	Tucson	42.29	98	P		P	22 15 48.5 +1.9
	baz=315						
TUC	Tucson	42.29	98	P		P	22 15 47.3 +0.7
B35A	Bob, Littlefor	42.57	67	P		P	22 15 47.5 -1.0
	baz=303,SNR=7.3						
JYT	Yasato	42.74	271	P		P	22 15 49.8 -0.3
JYT				IAmb		IAmb	22 15 50.7
	comp=Z,46nm,0.9s						
JSD	Sado	42.75	274	P		P	22 15 49.3 -0.8
JSD				IAmb		IAmb	22 15 50.8
	comp=Z,44nm,0.7s						
USA0B	Ussuriysk Arra	42.76	286	P		P	22 15 49.2 -0.9
USA0B	Ussuriysk Arra	42.76	286	P		P	22 15 49.2 -0.9
USA0B				pmax		pmax	
	comp=Z,6.0nm,1.0s						
USRK	Ussuriysk Ar.	42.76	286	P		P	22 15 49.2 -0.9
	comp=Z,3.7nm,0.7s,baz=51,slow=7.3,SNR=13						
USRK				PcP		PcP	22 17 41.6 +0.5
	comp=Z,6.1nm,1.0s,baz=38,slow=3.4,SNR=6.8						
USRK				LR		LR	22 35 36.9
	comp=Z,67nm,18.3s,baz=117,slow=39						
	comp=Z,3.7nm,0.7s						
KSCO	Kaye Shedlock'	42.81	84	P		P	22 15 51.7 +1.0
KSCO				IAmb		IAmb	22 15 53.6
	comp=Z,134nm,1.5s						
KSCO	Kaye Shedlock'	42.81	84	P		P	22 15 52.6 +1.8
	baz=309,SNR=5.5						
KSCO	Kaye Shedlock'	42.81	84	P		P	22 15 52.2 +1.5
	baz=309,SNR=5.5						
T25A	Trinidad	42.92	87	P		P	22 15 52.7 +0.9
T25A				IAmb		IAmb	22 15 55.4
	comp=Z,101nm,1.1s						
T25A	Trinidad	42.92	87	P		P	22 15 53.3 +1.5
	baz=311,SNR=73						
ANMO	Albuquerque	43.12	91	LR		LR	22 31 57.5
	comp=Z,219nm,18.2s,baz=304,slow=34						
ANMO	Albuquerque	43.12	91	P		P	22 15 53.6 +0.3
ANMO	Albuquerque	43.12	91	*ce*P		P	22 15 54.5 +1.1
ANMO				pmax		pmax	
	comp=Z,25nm,1.3s						
ANMO	Albuquerque	43.12	91	P		P	22 15 54.6 +1.1
	baz=312,SNR=25						
ANMO	Albuquerque	43.12	91	P		P	22 15 54.4 +1.1
	baz=312						
Y22D	IRIS PASSCAL I	43.42	93	P		P	22 15 56.9 +1.1
Y22D				IAmb		IAmb	22 15 59.5
	comp=Z,102nm,1.2s						
Y22D	IRIS PASSCAL I	43.42	93	P		P	22 15 58.0 +2.2
	baz=313						
Y22F	Passcal Instru	43.42	93	P		P	22 15 57.6 +1.9
	baz=313						
Y22A	Socorro	43.49	93	P		P	22 15 58.7 +2.3
	baz=313,SNR=28						
ECSD	EROS Data Cent	43.53	74	P		P	22 15 55.5 -0.9
ECSD	EROS Data Cent	43.53	74	P		P	22 15 55.8 -0.6
	baz=306						
NEEM	North Greenlan	43.56	17	*i*P		P	22 15 57.1 +0.6
NEEM				IAmb		IAmb	22 15 57.8
	comp=Z,69nm,1.0s						
MJAR	Matsushiro Arr	43.74	273	P		P	22 15 58.1 -0.1
	comp=Z,14nm,0.7s,baz=42,slow=6.7,SNR=75						
MJAR				PcP		PcP	22 17 44.1 -0.5
	comp=Z,6.6nm,0.9s,baz=43,slow=2.3,SNR=6.6						
MJAR				LR		LR	22 32 36.6
	comp=Z,123nm,20.6s,baz=96,slow=34						
	comp=Z,14nm,0.7s						
MAJO	Matsushiro	43.74	273	P		P	22 15 57.7 -0.5
MAJO				IAmb		IAmb	22 15 59.2
	comp=Z,34nm,0.8s						
MAJO	Matsushiro	43.74	273	*d i*P		P	22 15 58.1 -0.1
MAJO				pmax		pmax	
	comp=Z,61nm,1.4s						
MAJO	Matsushiro	43.74	273	P		P	22 15 57.4 -0.8
MAJO				pP		pP	22 16 05.5 +0.9
319A	Douglas	43.86	97	P		P	22 15 59.9 +0.6
121A	Cookes Peak, D	43.95	95	P		P	22 16 01.0 +0.9
121A				IAmb		IAmb	22 16 03.1
	comp=Z,40nm,0.8s						
121A	Cookes Peak, D	43.95	95	P		P	22 16 01.6 +1.5
	baz=314,SNR=27						
121A	Cookes Peak, D	43.95	95	P		P	22 16 02.0 +1.9
	baz=314,SNR=27						
BGNE	Belgrade	44.01	78	P		P	22 16 00.4 0.0
BGNE				IAmb		IAmb	22 16 02.7
	comp=Z,28nm,0.8s						
BGNE	Belgrade	44.01	78	P		P	22 16 00.5 +0.2
	baz=308						
EYMN	Ely	44.05	66	P		P	22 16 00.1 -0.4
EYMN	Ely	44.05	66	P		P	22 15 59.9 -0.6
	baz=304,SNR=8.6						
EYMN	Ely	44.05	66	P		P	22 16 00.1 -0.4
	baz=304,SNR=8.6						
F36A	Milaca	44.08	70	P		P	22 16 00.3 -0.4
	baz=305						
MSHR	Mys Shultsa	44.20	284	*i* P		P	22 16 01.9 +0.2
MSHR				pmax		pmax	
	comp=Z,29nm,1.3s						
BNX	BinXian	44.52	290	⇓P		P	22 16 03.8 -0.4
BNX				pmax		pmax	
	comp=Z,14nm,1.0s						
BNX				pmax		pmax	
	comp=Z,130nm,8.5s						
HSIG		44.54	101	P		P	22 16 04.9 +0.3
HSIG				IAmb		IAmb	22 16 07.3
	comp=Z,45nm,1.7s						
CBKS	Cedar Bluff	44.68	82	P		P	22 16 05.4 -0.3
CBKS				IAmb		IAmb	22 16 08.6
	comp=Z,28nm,0.9s						
CBKS	Cedar Bluff	44.68	82	P		P	22 16 05.4 -0.3
CBKS				pmax		pmax	
	comp=Z,28nm,0.9s						
CBKS	Cedar Bluff	44.68	82	P		P	22 16 06.5 +0.9
	baz=310						
NOR	Nord	44.75	7	*i* P		P	22 16 06.2 +0.5
NOR				IAmb		IAmb	22 16 17.9
	comp=Z,27nm,1.0s						
E38A	The Farm, Brul	44.77	68	P		P	22 16 05.8 -0.5
	baz=305,SNR=5.9						
SPMN	Marine on St.	44.86	70	P		P	22 16 07.2 +0.1
	baz=306						
JGF	Kuroka	44.88	272	P		P	22 16 06.7 -0.7
JGF				IAmb		IAmb	22 16 09.0
	comp=Z,27nm,0.7s						
BOD	Bodaibo	44.91	311	*e*P		P	22 16 05.8 -1.4
BOD				pmax		pmax	
	comp=Z,64nm,1.4s						
SRIG	Santa Rosalia	45.03	104	P		P	22 16 08.9 +0.5
I37B	Waseca	45.23	72	P		P	22 16 09.9 -0.1
	baz=307,SNR=5.5						
INU	Inuyama	45.26	272	P		P	22 16 09.2 -1.1
INU	Inuyama	45.26	272	P		P	22 16 08.1 -2.2
KIDD	KIDD Seismic O	45.26	95	P		P	22 16 12.7 +2.2
	baz=315,SNR=8.2						
R32A	Long Quarter,	45.55	82	P		P	22 16 13.3 +0.8
	baz=310						
N35A	Tabor	45.84	77	P		P	22 16 15.3 +0.5
	baz=309						
MSTX	Muleshoe	46.02	89	P		P	22 16 16.2 -0.2
MSTX	Muleshoe	46.02	89	P		P	22 16 17.5 +1.1
	baz=313,SNR=16						
MSTX	Muleshoe	46.02	89	P		P	22 16 17.4 +0.9
	baz=313,SNR=16						
AMTX	Amarillo	46.06	88	P		P	22 16 16.9 +0.2
AMTX				IAmb		IAmb	22 16 18.9
	comp=Z,57nm,0.9s						
AMTX	Amarillo	46.06	88	P		P	22 16 17.0 +0.3
	baz=312,SNR=13						
AMTX	Amarillo	46.06	88	P		P	22 16 17.6 +0.9
	baz=312						
G40A	Rib Lake	46.32	69	P		P	22 16 18.4 -0.2
	baz=307,SNR=7.5						
FRB	Frobisher Bay	46.33	38	LR		LR	22 36 20.3
	comp=Z,167nm,19.2s,baz=292,slow=37						
KSU1	Kansas State U	46.37	79	P		P	22 16 18.7 -0.3
	baz=310						
COWI	Conover	46.43	67	P		P	22 16 19.0 -0.4
COWI	Conover	46.43	67	P		P	22 16 18.8 -0.6
	baz=306						
HTMS	Hat Mesa	46.52	91	P		P	22 16 21.1 +0.7
NUUG	Nuugaatsiaq	46.62	24	*e*P		P	22 16 21.0 +0.5
NUUG				IAmb		IAmb	22 16 26.1
	comp=Z,25nm,0.9s						
SCIA	State Center	46.62	74	P		P	22 16 20.6 -0.3
	baz=308						
U32A	Winter Ranch,	46.70	84			P	22 16 22.0 +0.3
U32A				IAmb		IAmb	22 16 23.4
	comp=Z,44nm,1.0s						
U32A	Winter Ranch,	46.70	84	P		P	22 16 22.7 +1.1
	baz=312,SNR=5.3						
HIA	Hailar	46.73	299	P		P	22 16 20.9 -0.9
HIA				IAmb		IAmb	22 16 24.1
	comp=Z,11nm,0.5s						
HIA	Hailar	46.73	299	*i* P		P	22 16 21.8 +0.1
HIA				pmax		pmax	
	comp=Z,10.0nm,0.9s						
CN2	Changchun	46.79	289	⇓P		P	22 16 21.8 -0.4
CN2				*es*P		pP	22 16 28.0 -0.6
CN2				*e*S		S	22 23 08.8 -1.7
CN2				pmax		pmax	
	comp=Z,20nm,0.7s						
CN2				pmax		pmax	
	comp=Z,200nm,5.0s						
CN2				LR		LR	
	comp=Z,200nm,16.0s						
CN2				LR		LR	
	comp=Z,100nm,16.0s						
CN2				LR		LR	
	comp=Z,200nm,16.0s						
I40A	Norwalk	46.91	70	P		P	22 16 22.8 -0.4
	baz=308						
KAN09	Caldwell North	47.04	82			P	22 16 24.3 0.0
KAN09				IAmb		IAmb	22 16 25.5
	comp=Z,45nm,1.2s						
F42A	Maple Grove Fa	47.20	67	P		P	22 16 25.6 +0.2
	baz=307						
E43A	Lone Tree Farm	47.46	66	P		P	22 16 26.3 -1.1
	baz=307						
L40A	Anamosa	47.69	73	P		P	22 16 28.8 -0.4
	baz=309						
JFWS	Jewell Farm	47.73	71	P		P	22 16 28.3 -1.2
	baz=308						
JFWS	Jewell Farm	47.73	71	P		P	22 16 28.3 -1.2
	baz=308						
T35B	Sooner Cattle	47.85	82	P		P	22 16 30.6 0.0
	baz=312,SNR=6.9						
JHS	Saijyo	47.86	275	P		P	22 16 31.1 +0.4
JHS				IAmb		IAmb	22 16 31.9
	comp=Z,23nm,0.8s						
P38A	Dawn	47.87	77	P		P	22 16 30.2 -0.5
	baz=310						
I42A	Draeger Farm,	47.89	69	P		P	22 16 30.5 -0.3
	baz=308,SNR=5.1						
WMOK	Wichita Mounta	47.93	85	P		P	22 16 31.5 +0.3
WMOK				IAmb		IAmb	22 16 33.0
	comp=Z,50nm,0.9s						
WMOK				PcP		PcP	22 17 58.8 -0.5
WMOK	Wichita Mounta	47.93	85	P		P	22 16 31.5 +0.3
WMOK				PCP		PcP	22 17 58.8 -0.5
WMOK				pmax		pmax	
	comp=Z,50nm,0.9s						
WMOK	Wichita Mounta	47.93	85	P		P	22 16 32.2 +0.9
	baz=313,SNR=50						
WMOK	Wichita Mounta	47.93	85	P		P	22 16 31.9 +0.7
	baz=313,SNR=50						
NRIK	Noril'sk	48.04	333	P		P	22 16 32.0 +0.4
	comp=Z,13nm,0.4s,baz=75,slow=9.3,SNR=21						
NRIK				S		S	22 23 29.2 +1.5
	comp=Z,0.9nm,0.4s,baz=241,slow=18,SNR=1.3						
NRIK				LR		LR	22 37 59.2
	comp=Z,176nm,21.0s,baz=30,slow=38						
	comp=Z,13nm,0.4s						
NRIK	Noril'sk	48.04	333	P		P	22 16 32.1 +0.4
NRIK				IAmb		IAmb	22 16 36.7
	comp=Z,74nm,1.4s						
NRIK	Noril'sk	48.04	333	*ce*P		P	22 16 31.7 +0.1
NRIK				pmax		pmax	
	comp=Z,31nm,1.1s						
JMN	Monobe	48.26	273	P		P	22 16 33.9 +0.1
JMN				IAmb		IAmb	22 16 35.3
	comp=Z,32nm,1.2s						
LPIG	La Paz	48.59	105	LR		LR	22 34 03.7
	comp=Z,78nm,18.3s,baz=358,slow=32						
KBS	Kingsbay	48.63	1	*ce*P		P	22 16 37.7 +1.6
KBS				pmax		pmax	
	comp=Z,55nm,0.9s						
KBS	Kingsbay	48.63	1	*e*P		P	22 16 37.6 +1.6
KBS				IAmb		IAmb	22 16 38.2
	comp=Z,72nm,1.0s						
KBS	Kingsbay	48.63	1	*e*P		P	22 16 37.4 +1.3
TX31	Lajitas Ar. Si	48.71	95	P		P	22 16 38.0 +0.7
TX31	Lajitas Ar. Si	48.71	95	P		P	22 16 39.2 +1.8
	baz=316,SNR=176						
TXAR	Lajitas Array	48.71	95	P		P	22 16 38.8 +1.4
	comp=Z,75nm,0.8s,baz=300,slow=5.6,SNR=586						
TXAR				PcP		PcP	22 18 02.7 +0.4
	comp=Z,5.1nm,0.5s,baz=243,slow=0.8,SNR=9.7						
TXAR				LR		LR	22 35 30.1
	comp=Z,116nm,18.1s,baz=294,slow=34						
	comp=Z,75nm,0.8s						
TXAR	Lajitas Array	48.71	95	P		P	22 16 37.9 +0.5
TXAR	Lajitas Array	48.71	95	P		P	22 16 37.9 +0.5
P40A	Paris	48.81	76	P		P	22 16 37.3 -0.7
	baz=310						
DAG	Danmarks Havn	48.84	10	*i* P		P	22 16 38.0 +0.3
DAG				IAmb		IAmb	22 16 38.8
	comp=Z,44nm,0.7s						
ABTX	Abilene, Hawle	48.84	88	P		P	22 16 38.8 +0.5
ABTX	Abilene, Hawle	48.84	88	P		P	22 16 39.0 +0.7
	baz=314,SNR=27						
ABTX	Abilene, Hawle	48.84	88	P		P	22 16 39.3 +1.0
	baz=314,SNR=27						
E46A	Sault Ste Mari	48.95	64	P		P	22 16 37.5 -1.4
	baz=308						
TUL1	Leonard	48.95	82	P		P	22 16 38.9 -0.1
TUL1				IAmb		IAmb	22 16 40.3
	comp=Z,33nm,1.1s						
TUL1	Leonard	48.95	82	P		P	22 16 39.0 -0.1
	baz=312,SNR=7.6						
TUL1	Leonard	48.95	82	P		P	22 16 39.0 -0.1
	baz=312,SNR=7.6						
SNY	Shenyang	49.09	288	⇓P		P	22 16 40.3 +0.3
SNY				PP		PP	22 18 36.5 +3.0
SNY				S		S	22 23 46.3 +3.2
SNY				pmax		pmax	
	comp=Z,43nm,1.1s						
SNY				pmax		pmax	
	comp=Z,190nm,5.5s						
SNY				LR		LR	
	comp=Z,180nm,16.1s						
SNY				LR		LR	
	comp=Z,320nm,19.7s						
SNY				LR		LR	
	comp=Z,260nm,19.0s						
SLBS	Sierra La Lagu	49.12	105	P		P	22 16 41.2 +0.6
SLBS				IAmb		IAmb	22 16 43.1
	comp=Z,42nm,1.7s						
HPIG		49.24	98	P		P	22 16 42.3 +0.7
HPIG				IAmb		IAmb	22 16 44.1
	comp=Z,38nm,1.5s						
HPIG				PcP		PcP	22 18 04.6 +0.2
SUMG	Summit	49.24	19	P		P	22 16 41.6 +0.3
SUMG	Summit	49.24	19	P		P	22 16 41.6 +0.3
SUMG				pmax		pmax	
	comp=Z,63nm,0.9s						
SUMG	Summit	49.24	19	*i* P		P	22 16 41.0 -0.3
SUMG				IAmb		IAmb	22 16 43.2
	comp=Z,61nm,0.9s						
KSRS	Korea Array	49.36	281	P		P	22 16 42.8 +0.7
	comp=Z,25nm,0.9s,baz=53,slow=7.2,SNR=100						
KSRS				PcP		PcP	22 18 04.7 +0.4
	comp=Z,3.8nm,0.8s,baz=61,slow=3.3,SNR=5.4						
KSRS				LR		LR	22 37 13.7
	comp=Z,37nm,20.6s,baz=65,slow=36						
	comp=Z,25nm,0.9s						
KS19	Wonju Array Si	49.36	281	P		P	22 16 42.6 +0.4
KS19				IAmb		IAmb	22 16 43.9
	comp=Z,36nm,0.9s						
KSAR	Wonju Array Be	49.39	281	P		P	22 16 42.4 0.0
KSAR	Wonju Array Be	49.39	281	P		P	22 16 42.4 0.0
SPA0	Spitsbergen Ar	49.42	0	*e*P		P	22 16 42.6 +0.5
SPA0				IAmb		IAmb	22 16 49.5
	comp=Z,299nm,1.9s						
SPITS	Spitsbergen Ar	49.42	0	LR		LR	22 37 48.4
	comp=Z,110nm,19.5s,baz=328,slow=36						
SPITS	Spitsbergen Ar	49.42	0	P		P	22 16 41.9 -0.3
SPITS				pmax		pmax	
	comp=Z,237nm,1.8s						
SPB2	Spitsbergen Ar	49.43	0	P		P	22 16 42.2 0.0
U38A	Gravette	49.44	81	P		P	22 16 42.3 -0.6
	baz=312,SNR=12						
R40A	Maddies Statio	49.49	77	P		P	22 16 41.6 -1.5
	baz=311,SNR=7.1						
L44

HHAR Hobbs 49.82 80 P **P 22 16 44.8 -0.9**
HHAR IAmb IAmb 22 16 45.9
comp=Z,24nm,1.4s
HHAR Hobbs 49.82 80 P **P 22 16 44.9 -0.8**
baz=312
X37A Clayton 50.09 83 P **P 22 16 48.3 +0.6**
baz=313,SNR=20
INCN Inchon 50.11 282 P **P 22 16 47.9 0.0**
INCN IAmb IAmb 22 16 49.2
comp=Z,45nm,1.0s
INCN Inchon 50.11 282 P **P 22 16 47.9 0.0**
INCN pmax pmax
comp=Z,45nm,1.0s
P43A Skaggs, Pawnee 50.23 74 P **P 22 16 48.1 -0.6**
baz=311,SNR=6.1
JCT Junction City 50.24 90 P **P 22 16 49.0 0.0**
JCT Junction City 50.24 90 P **P 22 16 49.0 0.0**
JCT pmax pmax
comp=Z,180nm,0.7s
JCT Junction City 50.24 90 P **P 22 16 49.3 +0.2**
baz=315,SNR=107
JCT Junction City 50.24 90 P **P 22 16 49.1 0.0**
baz=315,SNR=107
CCM Cathedral Cave 50.25 77 P **P 22 16 47.5 -1.4**
CCM IAmb IAmb 22 16 48.4
comp=Z,44nm,1.6s
CCM Cathedral Cave 50.25 77 P **P 22 16 47.5 -1.4**
CCM pmax pmax
comp=Z,44nm,1.7s
CCM Cathedral Cave 50.25 77 P **P 22 16 47.0 -2.0**
baz=312
SFJD Kangerlussuaq 50.27 28 LR LR 22 40 21.2
comp=Z,88nm,18.2s,baz=328,slow=39
SFJD Kangerlussuaq 50.27 28 P **P 22 16 49.5 +0.8**
SFJD IAmb IAmb 22 16 50.7
comp=Z,33nm,0.8s
SFJD Kangerlussuaq 50.27 28 P **P 22 16 49.5 +0.8**
SFJD pmax pmax
comp=Z,33nm,0.8s
SFJD Kangerlussuaq 50.27 28 *e*P **P 22 16 49.8 +1.2**
SFJD IAmb IAmb 22 16 50.4
comp=Z,32nm,0.8s
TJN Taejon 50.41 280 P **P 22 16 49.9 -0.3**
TJN Taejon 50.41 280 *ce*P **P 22 16 50.7 +0.6**
WHTX Lake Whitney, 50.61 87 P **P 22 16 52.4 +0.7**
WHTX Lake Whitney, 50.61 87 P **P 22 16 52.9 +1.2**
baz=314,SNR=24
WHTX Lake Whitney, 50.61 87 P **P 22 16 52.4 +0.7**
baz=314,SNR=24
DBG Daneborg 50.83 12 *i*P **P 22 16 53.3 +0.5**
DBG IAmb IAmb 22 16 53.8
comp=Z,30nm,0.9s
SFIN Lafayette 51.16 72 P **P 22 16 54.5 -1.2**
baz=311
MIAR Mount Ida 51.21 82 P **P 22 16 55.9 -0.3**
MIAR IAmb IAmb 22 16 57.4
comp=Z,26nm,1.1s
MIAR Mount Ida 51.21 82 P **P 22 16 55.9 -0.3**
MIAR pmax pmax
comp=Z,26nm,1.1s
MIAR Mount Ida 51.21 82 P **P 22 16 56.3 +0.1**
baz=313,SNR=14
MIAR Mount Ida 51.21 82 P **P 22 16 56.0 -0.2**
baz=313,SNR=14
VLDQ Val d'Or 51.52 59 P **P 22 16 56.2 -2.1**
237A Washetta, Mont 51.61 86 P **P 22 17 00.4 +1.2**
baz=315
ICESG Greenland Ices 51.62 23 *i*P **P 22 16 59.9 +0.7**
ICESG IAmb IAmb 22 17 00.4
comp=Z,47nm,0.9s
N47A Urbana 51.64 70 P **P 22 16 58.0 -1.3**
baz=311,SNR=5.5
N47A P **P 22 16 58.0 -1.3**
baz=311,SNR=5.5
OLIL Olney 51.66 74 P **P 22 16 58.8 -0.7**
baz=312,SNR=7.3
S44A Carbondale 51.67 76 P **P 22 16 58.6 -1.0**
baz=312
AAM Ann Arbor 51.88 68 P **P 22 16 59.3 -1.7**
baz=311
DY2G Dye2 51.88 27 *e*P **P 22 17 01.6 +0.6**
DY2G IAmb IAmb 22 17 05.0
comp=Z,40nm,1.2s
JSU Suzuyama 51.88 274 P **P 22 17 01.1 -0.2**
JSU IAmb IAmb 22 17 02.2
comp=Z,28nm,0.9s
833A Chaparral WMA, 52.03 92 P **P 22 17 03.6 +1.2**
baz=317,SNR=48
833A Chaparral WMA, 52.03 92 P **P 22 17 03.6 +1.2**
baz=317,SNR=48
O48B Farmland 52.36 71 P **P 22 17 03.1 -1.6**
baz=312
O48B Farmland 52.36 71 P **P 22 17 02.9 -1.8**
baz=312
SCHQ Schefferville 52.37 47 P **P 22 17 03.4 -1.2**
comp=Z,7.6nm,0.9s,baz=270,slow=7.7,SNR=7.5
SCHQ LR LR 22 40 27.8
comp=Z,212nm,19.3s,baz=179,slow=37
comp=Z,7.6nm,0.9s
NATX Nacogdoches 52.47 85 P **P 22 17 05.9 +0.2**
NATX Nacogdoches 52.47 85 P **P 22 17 06.8 +1.2**
baz=315,SNR=6.6
NATX Nacogdoches 52.47 85 P **P 22 17 05.8 +0.1**
baz=315,SNR=6.6
735A Kenedy 52.62 90 P **P 22 17 08.7 +2.0**
baz=316,SNR=11
IRK Irkutsk 52.71 309 *e*P **P 22 17 06.5 -0.6**
IRK pmax pmax
comp=Z,54nm,1.7s
SADO Sadowa 52.77 63 LR LR 22 38 32.9
comp=Z,145nm,19.4s,baz=353,slow=35
SADO Sadowa 52.77 63 P **P 22 17 06.9 -0.8**
SADO IAmb IAmb 22 17 08.8
comp=Z,66nm,1.6s
HKT Hockley 53.04 88 P **P 22 17 10.3 +0.5**
HKT IAmb IAmb 22 17 12.3
comp=Z,102nm,1.5s
HKT Hockley 53.04 88 *i*P **P 22 17 10.7 +1.0**
HKT pmax pmax
comp=Z,75nm,1.4s
HKT Hockley 53.04 88 P **P 22 17 11.2 +1.4**
baz=316
HKT Hockley 53.04 88 P **P 22 17 09.3 -0.4**
WCI Wyandotte Cave 53.05 73 P **P 22 17 09.8 0.0**
baz=312
P49A Miami Univ. Ec 53.09 71 P **P 22 17 10.0 -0.2**
baz=312
T47A Sharon Grove 53.41 75 P **P 22 17 11.7 -0.8**
baz=313,SNR=8.0
WVT Waverly 53.56 76 P **P 22 17 12.8 -0.9**
WVT IAmb IAmb 22 17 14.1
comp=Z,24nm,0.9s
WVT Waverly 53.56 76 P **P 22 17 12.8 -0.9**
WVT pmax pmax
comp=Z,24nm,0.9s
WVT Waverly 53.56 76 P **P 22 17 12.9 -0.8**
baz=313,SNR=14
WVT Waverly 53.56 76 P **P 22 17 12.6 -1.1**
baz=313
WVT Waverly 53.56 76 P **P 22 17 11.9 -1.7**
ACSO Alum Creek Sta 53.62 69 P **P 22 17 12.7 -1.3**
baz=312
OXF Oxford 53.73 79 P **P 22 17 14.2 -0.7**
OXF Oxford 53.73 79 P **P 22 17 14.2 -0.7**
OXF pmax pmax
comp=Z,155nm,1.1s
OXF Oxford 53.73 79 P **P 22 17 14.6 -0.3**
baz=314
OXF Oxford 53.73 79 P **P 22 17 13.7 -1.1**
baz=314
SCO Scoresbysund 53.96 15 P **P 22 17 16.2 +0.2**
SCO Scoresbysund 53.96 15 P **P 22 17 16.2 +0.2**
SCO pmax pmax
comp=Z,82nm,1.3s
SCO Scoresbysund 53.96 15 *e*P **P 22 17 16.9 +0.9**
ERPA Erie 54.05 66 P **P 22 17 15.2 -1.9**
baz=312
Y45A Yeager Farm, C 54.10 80 P **P 22 17 17.1 -0.5**
baz=314,SNR=5.7
M53A WI Miller and 54.12 67 P **P 22 17 16.3 -1.4**
baz=312
ULN Ulaanbaatar 54.21 304 P **P 22 17 18.5 +0.1**
ULN IAmb IAmb 22 17 31.8
comp=Z,17nm,0.8s
ULN Ulaanbaatar 54.21 304 *ce*P **P 22 17 18.6 +0.2**
ULN pmax pmax
comp=Z,18nm,0.8s
TRQ Mont Tremblant 54.26 59 P **P 22 17 17.6 -1.0**
ZAK Zakamensk 54.40 308 *e*P **P 22 17 19.1 -0.6**
ZAK pmax pmax
comp=Z,12nm,1.5s
V48A Smith Brothers 54.42 76 P **P 22 17 18.4 -1.5**
baz=314,SNR=5.8
BJI Beijing 54.50 291 P **P 22 17 20.5 +0.1**
BJI S **S 22 25 01.3 +3.8**
BJI pmax pmax
comp=Z,14nm,0.8s
BJI LR LR
comp=Z,41nm,24.4s
BJI LR LR
comp=Z,240nm,24.1s
BJI LR LR
comp=Z,190nm,21.9s
BJT Baijiatuau 54.52 291 P **P 22 17 19.9 -0.7**
BJT Baijiatuau 54.52 291 P **P 22 17 19.9 -0.7**
BJT pmax pmax
comp=Z,12nm,0.9s
SONM Songino Array 54.56 304 P **P 22 17 21.3 +0.4**
comp=Z,12nm,1.0s,baz=52,slow=6.7,SNR=57
SONM PcP **PcP 22 18 24.3 +0.4**
comp=Z,9.8nm,0.8s,baz=50,slow=1.8,SNR=8.1
SONM LR LR 22 42 48.6
comp=Z,182nm,18.6s,baz=48,slow=38
comp=Z,12nm,1.0s
SONM Songino Array 54.56 304 P **P 22 17 21.0 +0.1**
SONM IAmb IAmb 22 17 22.4
comp=Z,25nm,1.2s
SONM Songino Array 54.56 304 P **P 22 17 21.0 +0.1**
SONM pmax pmax
comp=Z,25nm,1.2s
O53A New Philadelph 54.61 68 P **P 22 17 19.0 -2.2**
baz=313
MOY Mondy 54.61 311 *e*P **P 22 17 22.1 +0.9**
MOY pmax pmax
comp=Z,29nm,1.3s
VBMS Vicksburg 54.66 82 P **P 22 17 20.8 -0.8**
baz=315
ANGG Ammassalik, Gr 54.82 25 P **P 22 17 22.1 -0.3**
344A Westbrook Farm 55.07 83 P **P 22 17 25.5 +0.9**
baz=315,SNR=10
M55A Ridgway 55.16 66 P **P 22 17 24.0 -1.2**
baz=313,SNR=6.1
M55A P **P 22 17 24.0 -1.2**
baz=313,SNR=6.1
X48A Hartselle 55.18 77 P **P 22 17 24.2 -1.2**
baz=314,SNR=5.3
146A Union 55.24 80 P **P 22 17 25.4 -0.5**
baz=315,SNR=6.9
JMIC Jan Mayen 55.29 10 LR LR 22 43 37.4
comp=Z,31nm,18.3s,baz=8.0,slow=39
LONY Lake Ozonia 55.31 60 P **P 22 17 25.3 -1.0**
LONY IAmb IAmb 22 17 27.2
comp=Z,31nm,1.4s
LONY Lake Ozonia 55.31 60 P **P 22 17 24.7 -1.5**
baz=312
J57A Williamstown 55.37 62 P **P 22 17 26.2 -0.4**
baz=312
J57A P **P 22 17 26.2 -0.4**
baz=312
L56A Greenwood 55.38 64 P **P 22 17 26.0 -0.8**
baz=313,SNR=6.8
L56A P **P 22 17 26.0 -0.8**
baz=313,SNR=6.8
PSDB Penn State Uni 55.40 66 P **P 22 17 25.5 -1.4**
baz=313
Z47A Carrollton 55.44 79 P **P 22 17 26.6 -0.7**
baz=315,SNR=6.2
FRNY Flat Rock 55.69 59 P **P 22 17 27.8 -1.2**
FRNY Flat Rock 55.69 59 P **P 22 17 27.7 -1.2**
baz=313
MCWV Mont Chateau 55.78 68 P **P 22 17 28.0 -1.7**
baz=313
TZTN Tazewell 55.79 73 P **P 22 17 28.7 -1.2**
baz=314
NCB Newcomb 55.94 61 P **P 22 17 30.5 -0.3**
baz=313,SNR=6.4
Y49A Blount Mountai 55.97 77 P **P 22 17 29.6 -1.5**
baz=315,SNR=7.7
J59A Piesco 56.13 61 P **P 22 17 30.8 -1.3**
baz=313
J59A P **P 22 17 30.8 -1.3**
baz=313
M57A Sunshine Farm, 56.16 65 P **P 22 17 31.0 -1.3**
baz=313
M57A P **P 22 17 31.0 -1.3**
baz=313
BINY Binghamton 56.19 63 P **P 22 17 32.0 -0.6**
BINY Binghamton 56.19 63 P **P 22 17 31.3 -1.3**
baz=313
LRAL Lakeview Retre 56.20 78 P **P 22 17 31.4 -1.3**
baz=315
LRAL Lakeview Retre 56.20 78 P **P 22 17 31.2 -1.5**
baz=315
SSPA Standing Stone 56.22 66 P **P 22 17 32.0 -0.7**
SSPA Standing Stone 56.22 66 P **P 22 17 31.9 -0.9**
baz=313,SNR=7.0
SSPA Standing Stone 56.22 66 P **P 22 17 31.8 -1.0**
baz=313
TKL Tuckaleechee C 56.27 74 LR LR 22 40 03.1
comp=Z,181nm,20.0s,baz=319,slow=34
D62A Allapoint, All 56.48 55 P **P 22 17 33.4 -1.1**
baz=313
D62A P **P 22 17 33.4 -1.1**
baz=313
HHC Hu-ho-hao-te 56.54 295 *e*P **P 22 17 36.0 +0.8**
HHC S **S 22 25 22.6 -2.4**
HHC pmax pmax
comp=Z,36nm,0.9s
HHC pmax pmax
comp=Z,170nm,6.0s
HHC LR LR
comp=Z,410nm,15.9s
HHC LR LR
comp=Z,350nm,15.9s
HHC LR LR
comp=Z,300nm,14.6s
E62A Clayton Lake 56.56 56 P **P 22 17 33.5 -1.7**
baz=313
E62A P **P 22 17 33.5 -1.7**
baz=313
TIA Tai'an 56.57 287 ⇓P **P 22 17 35.3 -0.1**
TIA pmax pmax
comp=Z,39nm,0.8s
ACCN Adirondack Com 56.63 61 P **P 22 17 35.2 -0.5**
baz=313
HCNY Howe Caverns 56.71 62 P **P 22 17 36.2 0.0**
baz=313,SNR=8.8
N58A Sunbury 56.72 65 P **P 22 17 36.1 -0.3**
baz=314
N58A P **P 22 17 36.1 -0.3**
baz=314
V53A Saluda 56.83 73 P **P 22 17 36.4 -0.9**
baz=314
V53A P **P 22 17 36.4 -0.9**
baz=314
F62A Pittston Farm, 56.83 56 P **P 22 17 36.1 -1.0**
baz=314
F62A P **P 22 17 36.1 -1.0**
baz=314
GUMO Guam 56.87 247 P **P 22 17 35.4 -2.2**
comp=Z,77nm,0.7s,baz=100,slow=8.8,SNR=4.4
comp=Z,77nm,0.7s
HAMF Hammerfest 56.92 357 *e*P **P 22 17 37.3 0.0**
HAMF IAmb IAmb 22 17 38.6
comp=Z,32nm,1.0s
P57A Homestead Farm 56.94 67 P **P 22 17 37.4 -0.5**
baz=314,SNR=6.5
P57A P **P 22 17 37.4 -0.5**
baz=314,SNR=6.5
KNGR Kungurtug, Tuv 56.94 311 *i*P **P 22 17 38.0 +0.1**
KNGR pmax pmax
comp=Z,26nm,1.0s
LBNH Lisbon 56.96 59 P **P 22 17 35.6 -2.4**
baz=314
G62A West of Eustis 57.01 57 P **P 22 17 37.3 -1.1**
baz=314
G62A P **P 22 17 37.3 -1.1**
baz=314
PAGS Pennsylvania G 57.14 65 P **P 22 17 38.4 -1.0**
PAGS IAmb IAmb 22 17 38.8
comp=Z,23nm,0.8s
HNS HongShan 57.14 290 ⇓P **P 22 17 40.1 +0.7**
HNS pmax pmax
comp=Z,40nm,1.0s
J61A Chester 57.25 60 P **P 22 17 39.4 -0.7**
baz=314
J61A P **P 22 17 39.4 -0.7**
baz=314
E63A Oxbow 57.25 55 P **P 22 17 38.5 -1.5**
baz=314,SNR=5.1
E63A P **P 22 17 38.5 -1.5**
baz=314,SNR=5.1
250A Grady 57.38 79 P **P 22 17 40.3 -0.9**
baz=316,SNR=6.1
MOIG Morelia 57.39 100 P **P 22 17 41.1 -0.6**
MOIG IAmb IAmb 22 17 51.3
comp=Z,36nm,1.0s
F63A Nahmakanta, Br 57.41 56 P **P 22 17 40.2 -0.9**
baz=314
F63A P **P 22 17 40.2 -0.9**
baz=314
BRAL Brewton 57.49 80 P **P 22 17 41.8 -0.1**
baz=316,SNR=5.1
BRAL Brewton 57.49 80 P **P 22 17 41.2 -0.7**
baz=316,SNR=5.1
PKME Peaks-Kenny Pk 57.61 57 P **P 22 17 41.4 -1.2**
baz=314
F64A Sherman 57.67 56 P **P 22 17 41.8 -1.2**
baz=314,SNR=6.6
F64A P **P 22 17 41.8 -1.2**
baz=314,SNR=6.6
KEV Kevo 57.69 356 P **P 22 17 42.6 -0.1**
KEV IAmb IAmb 22 17 43.6
comp=Z,41nm,0.8s
KEV Kevo 57.69 356 P **P 22 17 42.6 -0.1**
KEV pmax pmax
comp=Z,41nm,0.8s
L61B Northampton 57.80 61 P **P 22 17 41.8 -2.2**
baz=314
152A Waverly Hall 57.81 77 P **P 22 17 42.4 -1.8**
baz=316,SNR=5.9
BATG Bathurst New B 57.82 53 P **P 22 17 43.3 -0.7**
BATG IAmb IAmb 22 17 44.2
comp=Z,21nm,0.7s
ARA0 ARCESS Array S 57.97 357 *e*P **P 22 17 44.6 -0.1**
ARA0 IAmb IAmb 22 17 45.2
comp=Z,26nm,0.9s
ARCES ARCESS Array B 57.97 357 P **P 22 17 44.6 -0.1**
comp=Z,16nm,0.8s,baz=15,slow=6.7,SNR=23
ARCES LR LR 22 44 09.0
comp=Z,94nm,18.7s,baz=9.0,slow=38
comp=Z,16nm,0.8s
ARCES ARCESS Array B 57.97 357 P **P 22 17 44.6 -0.1**
ARCES IAmb IAmb 22 17 50.1
comp=Z,46nm,1.4s
ARCES ARCESS Array B 57.97 357 P **P 22 17 44.6 -0.1**
ARCES pmax pmax
comp=Z,47nm,1.4s
TRO Tromso 58.01 359 *e*P **P 22 17 45.5 +0.5**
TRO IAmb IAmb 22 17 45.9
comp=Z,41nm,0.9s
TUPA Temple Univers 58.03 64 P **P 22 17 44.8 -0.7**
baz=314,SNR=5.2
KMSC Kings Mountain 58.06 73 P **P 22 17 44.5 -1.4**
baz=315
KMSC Kings Mountain 58.06 73 P **P 22 17 45.0 -0.9**
baz=315
JETT Jettan, Norway 58.07 359 *e*P **P 22 17 45.7 +0.1**
JETT IAmb IAmb 22 17 46.6
comp=Z,38nm,0.6s
PAL Palisades 58.15 63 P **P 22 17 45.7 -0.7**
baz=314
TIY Taiyuan 58.22 292 *e*P **P 22 17 50.9 +3.8**
TIY S **S 22 25 51.2 +4.1**
TIY pmax pmax
comp=Z,89nm,8.3s
TIY LR LR
comp=Z,170nm,7.4s
TIY LR LR
comp=Z,100nm,3.9s
TIY LR LR
comp=Z,150nm,13.2s
HRV Adam Dziewonsk 58.36 60 P **P 22 17 47.3 -0.6**
baz=315
NJ2 Nanjing 58.48 283 ⇓*i*P **P 22 17 48.5 -0.3**
NJ2 pP **sP 22 17 59.3 +1.5**
NJ2 pmax pmax
comp=Z,44nm,0.7s
KTK1 Kautokeino 58.56 357 *e*P **P 22 17 48.7 -0.2**
KTK1 IAmb IAmb 22 17 49.3
comp=Z,18nm,0.6s
KTK1 Kautokeino 58.56 357 *e*PB **P 22 17 49.1 +0.2**
BRYW Bryant College 58.78 61 P **P 22 17 50.7 -0.1**
LVZ Lovozero 59.06 352 P **P 22 17 52.6 +0.1**
LVZ Lovozero 59.06 352 *ce*P **P 22 17 53.0 +0.6**
LVZ pmax pmax
comp=Z,61nm,1.0s
LVZ Lovozero 59.06 352 P **P 22 17 51.1 -1.3**
LVZ pP **pP 22 17 57.8 -1.0**
LVZ sP **sP 22 18 02.9 +1.3**
BORG Borgarnes 59.19 18 LR LR 22 43 38.1
comp=Z,43nm,21.7s,baz=338,slow=36
BORG Borgarnes 59.19 18 P **P 22 17 54.2 +0.9**
BORG Borgarnes 59.19 18 P **P 22 17 54.2 +0.9**
APA Apatity 59.48 353 ⇓*i*P **P 22 17 53.4 -1.9**
APA pmax pmax
comp=Z,9.0nm,0.8s
APA MLR MLR
comp=Z,800nm,13.0s
STEI Steigen 59.72 1 *e*P **P 22 17 57.0 +0.2**
STEI IAmb IAmb 22 17 58.9
comp=Z,52nm,1.1s
ZAA0 Zalesovo Array 59.85 321 P **P 22 17 58.0 0.0**
ZALV Zalesovo Beam 59.85 321 P **P 22 17 58.0 0.0**
comp=Z,5.7nm,0.6s,baz=40,slow=6.7,SNR=30
ZALV PcP **PcP 22 18 44.5 +0.3**
comp=Z,5.6nm,0.6s,baz=32,slow=4.7,SNR=7.1
ZALV LR LR 22 45 03.9
comp=Z,108nm,18.4s,baz=42,slow=37
comp=Z,5.7nm,0.6s
ZALV Zalesovo Beam 59.85 321 P **P 22 17 58.0 0.0**
NHSC New Hope 60.18 74 P **P 22 17 59.3 -1.2**
baz=316
FAUS Fauske 60.27 1 *e*P **P 22 18 01.0 +0.4**
FAUS IAmb IAmb 22 18 01.3
comp=Z,26nm,0.9s
TLIG Tlapa 60.59 100 P **P 22 18 03.9 +0.2**
KONS Konsvik 61.13 2 *e*P **P 22 18 10.7 +4.2**
KONS IAmb IAmb 22 18 11.9
comp=Z,61nm,1.3s
GBN Guysborough 61.36 52 P **P 22 18 08.1 -0.3**
GBN IAmb IAmb 22 18 09.1
comp=Z,18nm,0.7s
MOR6 Moi Rana 61.48 1 *e*P **P 22 18 08.0 -1.0**
YOJ Yonaguni jima 61.49 274 P **P 22 18 08.2 -1.4**
YOJ Yonaguni jima 61.49 274 P **P 22 18 08.2 -1.4**
YOJ pmax pmax
comp=Z,45nm,0.9s
DGZ Jazzator, Alta 62.03 316 *d i*P **P 22 18 13.5 +0.4**
DGZ pmax pmax
comp=Z,20nm,1.1s
WHN Wuhan 62.23 285 ⇓P **P 22 18 14.2 -0.3**
WHN pP **pP 22 18 18.8 -2.3**
WHN S **S 22 26 45.7 +7.2**
WHN pmax pmax
comp=Z,36nm,1.0s
WHN LR LR
comp=Z,410nm,18.4s
YHNB Yeheng 62.33 275 P **P 22 18 14.4 -0.9**
XAN Xi'an 62.84 291 P **P 22 18 18.3 -0.3**
XAN pP pP 22 18 23.6 -1.6
XAN S **S 22 26 48.4 +2.2**
XAN pmax pmax
comp=Z,33nm,0.9s
XAN pmax pmax
comp=Z,210nm,3.5s
XAN LR LR
comp=Z,220nm,21.1s
XAN LR LR
comp=Z,190nm,19.9s
XAN LR LR
comp=Z,210nm,15.8s
DWPF Disney Wildern 63.06 78 P **P 22 18 19.0 -1.0**
baz=318
NSS Namsos 63.07 3 *e*P **P 22 18 19.8 +0.2**
NSS IAmb IAmb 22 18 21.2
comp=Z,37nm,1.1s
SSLB Suanglung 63.24 275 P **P 22 18 20.7 -0.7**
YULB Yu-li 63.33 274 P **P 22 18 21.3 -0.6**

YULB				IAmb	IAmb	22 18 23.4	
	comp=Z,20nm,0.6s						
TPUB	**Ta-pu**	**63.80**	**275**	P	**P**	**22 18 24.5**	**-0.6**
PRGR	**Permogore**	**63.84**	**345**	*e*P	**P**	**22 18 24.1**	**-0.6**
PRGR				pmax	pmax		
	comp=Z,62nm,0.8s						
GTA	**Gaotai**	**63.88**	**301**	⇓P	**P**	**22 18 25.1**	**-0.4**
GTA				pP	pP	22 18 31.7	-0.4
GTA				sP	sP	22 18 36.3	+1.7
GTA				S	**S**	**22 27 00.2**	**+1.0**
GTA				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,5.5s						
GTA				LR	LR		
	comp=Z,200nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,18.5s						
GTA				LR	LR		
	comp=Z,85nm,14.2s						
LZH	**Lanzhou**	**64.17**	**296**	*e*P	**P**	**22 18 28.0**	**+0.5**
LZH				pP	pP	22 18 32.9	-1.2
LZH				sP	sP	22 18 36.4	-0.2
LZH				S	**S**	**22 27 01.4**	**-1.6**
LZH				pmax	pmax		
	comp=Z,60nm,1.2s						
LZH				pmax	pmax		
	comp=Z,270nm,5.5s						
LZH				LR	LR		
	comp=Z,240nm,16.1s						
LZH				LR	LR		
	comp=Z,190nm,16.1s						
LZH				LR	LR		
	comp=Z,230nm,16.8s						
TAOE	**Nuku Hiva Isla**	**64.25**	**155**	*e*LR	LR	22 37 44.9	
	comp=Z,183nm,27.0s						
KURK	**Kurchatov**	**64.75**	**322**	P	**P**	**22 18 30.8**	**0.0**
KURK				IAmb	IAmb	22 18 37.1	
	comp=Z,24nm,0.9s						
KURK	**Kurchatov**	**64.75**	**322**	*ce*P	**P**	**22 18 31.0**	**+0.2**
KURK				pmax	pmax		
	comp=Z,35nm,1.3s						
TEIG	**Tepich**	**64.80**	**89**	P	**P**	**22 18 31.0**	**-0.5**
TEIG				IAmb	IAmb	22 18 33.2	
	comp=Z,42nm,1.1s						
CNSH	**ChangSha**	**64.80**	**284**	⇓P	**P**	**22 18 31.5**	**0.0**
CNSH				pmax	pmax		
	comp=Z,42nm,1.0s						
ZSN	**Zaisan**	**64.85**	**316**	*d i*P	**P**	**22 18 31.4**	**-0.2**
ZSN				pmax	pmax		
	comp=Z,13nm,0.7s						
ZSN	**Zaisan**	**64.85**	**316**	⇓*i*P	**P**	**22 18 31.5**	**-0.2**
	comp=Z,13nm,0.7s,baz=316						
KURBB	**Kurchatov Arra**	**64.86**	**322**	LR	LR	22 50 03.6	
	comp=Z,114nm,18.2s,baz=12,slow=39						
MOL	**Molde**	**64.86**	**5**	*e*P	**P**	**22 18 30.2**	**-1.1**
MOL				IAmb	IAmb	22 18 31.4	
	comp=Z,23nm,0.8s						
AKN	**Aaknes**	**65.22**	**5**	*e*P	**P**	**22 18 34.7**	**+0.9**
AKN				IAmb	IAmb	22 18 35.1	
	comp=Z,63nm,0.8s						
ENH	**Enshi**	**65.27**	**288**	P	**P**	**22 18 34.2**	**-0.4**
ENH	**Enshi**	**65.27**	**288**	P	**P**	**22 18 33.5**	**-1.2**
ENH				pP	**sP**	**22 18 44.4**	**+0.6**
KLMR	**Klimovskoe**	**65.44**	**348**	*e*P	**P**	**22 18 33.2**	**-1.9**
KLMR				*e*		22 19 06.6	
KLMR				*e*		22 20 58.0	
KLMR				pmax	pmax		
	comp=Z,56nm,1.3s						
KLMR	**Klimovskoe**	**65.44**	**348**	*e*P	**P**	**22 18 33.3**	**-1.9**
KLMR				AMP		22 18 35.9	
	comp=Z,56nm,1.3s						
KLMR				*e*PcP	**PcP**	**22 19 06.7**	**-0.2**
KLMR				*e*PP	**PP**	**22 20 58.1**	**-0.5**
DOMB	**Dombas**	**65.46**	**4**	*e*P	**P**	**22 18 35.5**	**+0.1**
DOMB				IAmb	IAmb	22 18 36.0	
	comp=Z,30nm,0.8s						
BVAR	**Borovoye Array**	**65.72**	**328**	LR	LR	22 51 12.1	
	comp=Z,107nm,18.3s,baz=40,slow=40						
BRVK	**Borovoye**	**65.72**	**328**	P	**P**	**22 18 37.0**	**-0.2**
BRVK				IAmb	IAmb	22 18 38.8	
	comp=Z,26nm,0.8s						
BRVK	**Borovoye**	**65.72**	**328**	*ce*P	**P**	**22 18 37.5**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,27nm,0.8s						
FIA1	**FINESS Array S**	**66.03**	**355**	P	**P**	**22 18 38.6**	**-0.3**
FINES	**FINESS Array B**	**66.03**	**355**	P	**P**	**22 18 38.9**	**-0.1**
	comp=Z,32nm,0.8s,baz=17,slow=8.0,SNR=115						
FINES				LR	LR	22 47 38.0	
	comp=Z,56nm,21.3s,baz=24,slow=36						
	comp=Z,32nm,0.8s						
FINES	**FINESS Array B**	**66.03**	**355**	P	**P**	**22 18 38.4**	**-0.5**
SOR	**Soroa**	**66.07**	**83**	P	**P**	**22 18 39.7**	**-0.1**
SOR	**Soroa**	**66.07**	**83**	P	**P**	**22 18 39.7**	**-0.1**
SOR				pmax	pmax		
	comp=Z,68nm,1.0s						
KIRV	**Kirov**	**66.08**	**342**	LR	LR	22 50 44.7	
	comp=Z,91nm,20.1s,baz=28,slow=39						
KIRV	**Kirov**	**66.08**	**342**	*ce*P	**P**	**22 18 39.4**	**+0.1**
ARU	**Arti**	**66.09**	**336**	LR	LR	22 50 08.9	
	comp=Z,120nm,20.3s,baz=360,slow=38						
ARU	**Arti**	**66.09**	**336**	P	**P**	**22 18 39.5**	**0.0**
ARU	**Arti**	**66.09**	**336**	*d i*P	**P**	**22 18 39.5**	**0.0**
ARU						22 19 06.3	
ARU				S	**S**	**22 27 27.4**	**+1.8**
ARU				SS	**SS**	**22 31 38.9**	**-1.3**
ARU				pmax	pmax		
	comp=Z,53nm,1.2s						
HYA	**Hoyanger**	**66.18**	**6**	*e*P	**P**	**22 18 40.6**	**+0.7**
PETF	**Flores**	**66.36**	**93**	P	**P**	**22 18 41.6**	**-0.1**
NC303	**NORSAR Array S**	**66.37**	**3**	P	**P**	**22 18 41.2**	**+0.1**
NC303				IAmb	IAmb	22 18 42.5	
	comp=Z,26nm,0.8s						
MK31	**Makanchi Array**	**66.45**	**317**	P	**P**	**22 18 41.4**	**-0.5**
MK31				IAmb	IAmb	22 18 42.6	
	comp=Z,12nm,0.8s						
MK31	**Makanchi Array**	**66.45**	**317**	*i* P	**P**	**22 18 41.4**	**-0.5**
MK31				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	**Makanchi Array**	**66.45**	**317**	P	**P**	**22 18 41.5**	**-0.4**
	comp=Z,12nm,0.7s,baz=48,slow=6.4,SNR=131						
MKAR				LR	LR	22 48 29.9	
	comp=Z,97nm,19.9s,baz=36,slow=37						
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**66.45**	**312**	*e*P	**P**	**22 18 42.6**	**+0.6**
WMQ				pP	pP	22 18 48.6	-0.1
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.9s						
WMQ				LR	LR		
	comp=Z,320nm,17.3s						
WMQ				LR	LR		
	comp=Z,320nm,18.5s						
WMQ				LR	LR		
	comp=Z,140nm,22.5s						
NBO00	**NORSAR Array S**	**66.54**	**3**	P	**P**	**22 18 42.6**	**+0.3**
NB2	**NORSAR Subarra**	**66.55**	**3**	P	**P**	**22 18 42.8**	**+0.5**
	comp=Z,7.3nm,0.7s,baz=358,slow=6.5						
NB2	**NORSAR Subarra**	**66.55**	**3**	P	**P**	**22 18 42.8**	**+0.5**
	baz=358,slow=6.5						
NOA	**NORSAR Array B**	**66.55**	**3**	P	**P**	**22 18 42.3**	**0.0**
	comp=Z,14nm,0.8s,baz=357,slow=6.4,SNR=50						
NOA				LR	LR	22 48 59.2	
	comp=Z,22nm,18.0s,baz=355,slow=37						
	comp=Z,14nm,0.8s						
MAKZ	**Makanchi**	**66.57**	**317**	P	**P**	**22 18 42.4**	**-0.3**
MAKZ				IAmb	IAmb	22 18 43.3	
	comp=Z,22nm,1.0s						
MAKZ	**Makanchi**	**66.57**	**317**	P	**P**	**22 18 42.4**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.0s						
MAKZ	**Makanchi**	**66.57**	**317**	P	**P**	**22 18 40.9**	**-1.7**
MAKZ				pP	**sP**	**22 18 52.8**	**+0.9**
LRW	**Lerwick**	**66.58**	**10**	*e*P	**P**	**22 18 42.5**	**+0.1**
LRW				IAmb	IAmb	22 18 43.8	
	comp=Z,40nm,0.8s						
RAF	**Rauma**	**66.61**	**358**	*e*P	**P**	**22 18 41.0**	**-1.6**
AFI	**Afiamalu**	**66.75**	**190**	LR	LR	22 44 35.9	
	comp=Z,59nm,18.9s,baz=36,slow=33						
AFI	**Afiamalu**	**66.75**	**190**	P	**P**	**22 18 43.6**	**-0.5**
AFI				IAmb	IAmb	22 18 44.3	
	comp=Z,46nm,1.0s						
AFI	**Afiamalu**	**66.75**	**190**	P	**P**	**22 18 43.6**	**-0.5**
AFI				pmax	pmax		
	comp=Z,46nm,1.0s						
SKAR	**Skarslia**	**66.78**	**5**	*e*P	**P**	**22 18 44.3**	**+0.4**
SKAR				IAmb	IAmb	22 18 44.9	
	comp=Z,28nm,0.8s						
ASK	**Askoy**	**66.79**	**6**	*e*P	**P**	**22 18 44.2**	**+0.4**
ASK				IAmb	IAmb	22 18 44.9	
	comp=Z,45nm,0.7s						
NC602	**NORSAR Array S**	**66.86**	**3**	*e*P	**P**	**22 18 44.0**	**-0.3**
MEF	**Metsahovi**	**67.33**	**356**	*e*P	**P**	**22 18 47.2**	**0.0**
PUL	**Pulkovo**	**67.43**	**353**	*ce*P	**P**	**22 18 48.9**	**+1.1**
PUL				pmax	pmax		
	comp=Z,29nm,0.5s						
ODD1	**Odda**	**67.45**	**6**	*e*P	**P**	**22 18 48.6**	**+0.5**
BRZS	**Berezniki**	**67.51**	**325**	*d i*P	**P**	**22 18 47.9**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,12nm,1.2s						
BRZS	**Berezniki**	**67.51**	**325**	⇓*i*P	**P**	**22 18 47.9**	**-0.7**
	comp=Z,12nm,1.2s,baz=325						
HFS	**Hagfors**	**67.52**	**2**	LR	LR	22 48 15.7	
	comp=Z,48nm,21.3s,baz=9.0,slow=36						
OSL	**Oslo**	**67.63**	**4**	*e*P	**P**	**22 18 49.6**	**+0.4**
KONO	**Kongsberg**	**67.87**	**4**	P	**P**	**22 18 51.1**	**+0.5**
KONO				IAmb	IAmb	22 18 52.3	
	comp=Z,32nm,0.9s						
KONO	**Kongsberg**	**67.87**	**4**	*ce*P	**P**	**22 18 51.9**	**+1.2**
KONO				pmax	pmax		
	comp=Z,38nm,1.3s						
KONO	**Kongsberg**	**67.87**	**4**	*e*P	**P**	**22 18 51.0**	**+0.4**
BLS5	**Blasjo**	**67.93**	**6**	*e*P	**P**	**22 18 51.5**	**+0.4**
BLS5				IAmb	IAmb	22 18 52.3	
	comp=Z,31nm,0.8s						
CD2	**Chengdu**	**68.07**	**292**	P	**P**	**22 18 52.7**	**+0.2**
CD2				pP	pP	22 18 58.1	-1.0
CD2				sP	sP	22 19 00.8	-0.8
CD2				S	**S**	**22 27 47.4**	**-2.9**
CD2				sS	sS	22 28 02.2	+0.9
CD2				pmax	pmax		
	comp=Z,85nm,0.4s						
CD2				pmax	pmax		
	comp=Z,490nm,6.0s						
MLA1	**Latheron**	**68.13**	**12**	*e*P	**P**	**22 18 53.0**	**+0.7**
STRU	**Stroemstad**	**68.55**	**3**	*i* P	**P**	**22 18 55.5**	**+0.6**
MTO3	**Montecristo**	**68.61**	**94**	P	**P**	**22 18 55.5**	**-0.7**
MANU	**Manus Island**	**68.65**	**235**	P	**P**	**22 18 55.8**	**-0.3**
MANU				IAmb	IAmb	22 18 56.7	
	comp=Z,26nm,0.7s						
KAC	**Achnashellach**	**68.66**	**13**	*e*P	**P**	**22 18 56.2**	**+0.5**
KPL	**Plockton**	**68.77**	**13**	*e*P	**P**	**22 18 56.9**	**+0.6**
MCD	**Coleburn Disti**	**68.84**	**12**	*e*P	**P**	**22 18 57.6**	**+0.8**
MTSE	**Matsula**	**68.86**	**356**	*e*P	**P**	**22 18 56.8**	**0.0**
GOMU	**GeErMu**	**68.89**	**302**	P	**P**	**22 18 57.5**	**-0.4**
GOMU				pmax	pmax		
	comp=Z,11nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,72nm,5.8s						
GOMU				LR	LR		
	comp=Z,97nm,14.7s						
GOMU				LR	LR		
	comp=Z,180nm,17.4s						
GOMU				LR	LR		
	comp=Z,150nm,17.8s						
VSU	**Vasula**	**68.97**	**355**	*i* P	**P**	**22 18 58.2**	**+0.7**
VSU				pmax	pmax		
	comp=Z,155nm,0.9s						
VSU	**Vasula**	**68.97**	**355**	*e*P	**P**	**22 18 58.0**	**+0.5**
SNART	**Snartemo**	**69.06**	**6**	IAmb	IAmb	22 18 58.9	
	comp=Z,150nm,1.3s						
SNART				*e*P	**P**	**22 18 58.9**	**+0.8**
SNART	**Snartemo**	**69.06**	**6**	*e*P	**P**	**22 18 59.1**	**+1.0**
OTUK	**Ortayu**	**69.10**	**324**	*i* P	**P**	**22 18 58.7**	**+0.1**
OTUK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HOMB	**Homborsund**	**69.20**	**5**	*e*P	**P**	**22 18 59.5**	**+0.5**
HOMB				IAmb	IAmb	22 19 00.2	
	comp=Z,38nm,1.0s						
JCNP	**Jose Panganiba**	**69.41**	**267**	⇑*e*P	**P**	**22 19 01.0**	**+0.1**
TJOU	**Tjoern**	**69.57**	**3**	*i* P	**P**	**22 19 01.8**	**+0.5**
DRUM	**Mains of Drumt**	**69.59**	**11**	*e*P	**P**	**22 19 01.4**	**0.0**
DRUM				IAmb	IAmb	22 19 02.5	
	comp=Z,71nm,0.8s						
GYA	**Guiyang**	**69.77**	**287**	⇑*i*P	**P**	**22 19 03.6**	**+0.4**
GYA				pP	pP	22 19 07.2	-2.6
GYA				S	**S**	**22 28 10.2**	**-0.5**
GYA				pmax	pmax		
	comp=Z,39nm,1.1s						
GYA				LR	LR		
	comp=Z,170nm,15.9s						
LAWE	**Loch Awe, Argy**	**69.85**	**13**	*e*P	**P**	**22 19 03.0**	**0.0**
INVG	**Invergeldie, C**	**69.87**	**12**	*e*P	**P**	**22 19 03.5**	**+0.4**
INVG				IAmb	IAmb	22 19 03.8	
	comp=Z,34nm,1.1s						
SLIT	**Slitere, Latvi**	**69.99**	**357**	*e*P	**P**	**22 19 04.4**	**+0.6**
BORU	**Boraas**	**70.00**	**3**	*i* P	**P**	**22 19 04.3**	**+0.3**
EAB	**Aberfoyle**	**70.06**	**13**	*e*P	**P**	**22 19 04.7**	**+0.3**
ONAU	**Onsala**	**70.22**	**3**	*i* P	**P**	**22 19 05.3**	**0.0**
LQP	**Lukban**	**70.25**	**267**	⇓*e*P	**P**	**22 19 06.2**	**-0.1**
ARXS	**Arharly**	**70.37**	**318**	*e*P	**P**	**22 19 06.7**	**+0.1**
PGBU	**Glenifferbraes**	**70.41**	**13**	*e*P	**P**	**22 19 07.0**	**+0.5**
PGBU				IAmb	IAmb	22 19 07.2	
	comp=Z,38nm,1.0s						
PDGK	**Podgornoye**	**70.42**	**317**	*i* P	**P**	**22 19 07.0**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,51nm,1.0s						
SHLS	**Shalkode**	**70.57**	**317**	*d i*P	**P**	**22 19 07.3**	**-0.6**
SHLS				pmax	pmax		
	comp=Z,24nm,1.1s						
SHLS	**Shalkode**	**70.57**	**317**	⇓*i*P	**P**	**22 19 07.3**	**-0.6**
	comp=Z,24nm,1.1s,baz=316						
TGY	**Tagaytay City**	**70.62**	**268**	P	**P**	**22 19 09.2**	**+0.7**
	baz=90,slow=19						
FABU	**Falkenberg**	**70.64**	**3**	*i* P	**P**	**22 19 08.0**	**+0.2**
EBL	**Broad Law**	**70.64**	**12**	*e*P	**P**	**22 19 08.7**	**+0.8**
KPKS	**Kokpek**	**70.64**	**317**	*d i*P	**P**	**22 19 08.0**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KPKS	**Kokpek**	**70.64**	**317**	⇓*i*P	**P**	**22 19 08.1**	**-0.2**
	comp=Z,9.9nm,0.5s,baz=318						
MOS	**Moscow**	**70.66**	**348**	*e*P	**P**	**22 19 06.0**	**-2.0**
MOS				pmax	pmax		
	comp=Z,55nm,0.7s						
UZB	**Uzynbulak**	**70.76**	**317**	*e*P	**P**	**22 19 08.1**	**-0.9**
UZB	**Uzynbulak**	**70.76**	**317**	*e*P	**P**	**22 19 08.2**	**-0.9**
	baz=317						
PPT	**Papeete**	**70.86**	**167**	LR	LR	22 41 30.1	
	comp=Z,114nm,21.7s,baz=1.5,slow=28						
PPT2	**Papeete2**	**70.88**	**167**	*e*S	**S**	**22 28 27.2**	**+3.9**
	comp=Z,137nm,32.2s						
PPT2	**Papeete2**	**70.88**	**167**	*e*LR	LR	22 40 48.4	
	comp=Z,202nm,24.8s						
CHKK	**Chushkaly**	**71.01**	**319**	*e*P	**P**	**22 19 09.7**	**-0.7**
CHKK	**Chushkaly**	**71.01**	**319**	*e*P	**P**	**22 19 09.7**	**-0.7**
	baz=319						
MUD	**Monsted U'grnd**	**71.05**	**5**	*i* P	**P**	**22 19 11.0**	**+0.7**
MUD				IAmb	IAmb	22 19 11.9	
	comp=Z,40nm,1.1s						
EKA	**Eskdalemuir Ar**	**71.05**	**12**	LR	LR	22 53 43.6	
	comp=Z,32nm,18.1s,baz=352,slow=39						
ESK	**Eskdalemuir**	**71.06**	**12**	*e*P	**P**	**22 19 10.8**	**+0.3**
ESK				IAmb	IAmb	22 19 11.8	
	comp=Z,30nm,0.9s						
ESK	**Eskdalemuir**	**71.06**	**12**	P	**P**	**22 19 10.8**	**+0.3**
ESK				IAmb	IAmb	22 19 12.0	
	comp=Z,29nm,0.8s						
ESK	**Eskdalemuir**	**71.06**	**12**	P	**P**	**22 19 10.8**	**+0.3**
ESK				pmax	pmax		
	comp=Z,29nm,0.9s						
SATY	**Saty**	**71.09**	**317**	*e*P	**P**	**22 19 10.4**	**-0.6**
SATY				pmax	pmax		
	comp=Z,12nm,1.1s						
SATY	**Saty**	**71.09**	**317**	*e*P	**P**	**22 19 10.5**	**-0.6**
	comp=Z,12nm,1.1s,baz=317						
NEWG	**New Galloway**	**71.12**	**13**	*e*P	**P**	**22 19 11.4**	**+0.6**
NEWG				IAmb	IAmb	22 19 11.9	
	comp=Z,36nm,1.1s						
BTLS	**Baital**	**71.17**	**321**	*d i*P	**P**	**22 19 10.9**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,17nm,0.6s						
BTLS	**Baital**	**71.17**	**321**	⇓*i*P	**P**	**22 19 11.0**	**-0.4**
	comp=Z,17nm,0.6s,baz=321						
DEL	**Delary**	**71.20**	**2**	*i* P	**P**	**22 19 12.0**	**+0.8**
KUU	**Kurty**	**71.24**	**319**	*e*P	**P**	**22 19 10.5**	**-1.3**
KUU	**Kurty**	**71.24**	**319**	*e*P	**P**	**22 19 10.5**	**-1.3**
	baz=319						
OBN	**Obninsk**	**71.41**	**348**	LR	LR	22 53 59.7	
	comp=Z,25nm,20.1s,baz=358,slow=39						
OBN	**Obninsk**	**71.41**	**348**	P	**P**	**22 19 12.1**	**-0.4**
OBN	**Obninsk**	**71.41**	**348**	⇑*i*P	**P**	**22 19 12.2**	**-0.3**
OBN				*e*		22 21 50.2	
OBN				*e*S	**S**	**22 28 32.2**	**+3.6**
OBN				*e*SS	**SS**	**22 33 11.1**	**+9.1**
OBN				pmax	pmax		
	comp=Z,46nm,0.8s						
MDOK	**Medeo**	**71.56**	**318**	*e*P	**P**	**22 19 12.9**	**-1.0**
MDOK	**Medeo**	**71.56**	**318**	*e*P	**P**	**22 19 13.0**	**-1.0**
	baz=318						
BJUU	**Bjuv**	**71.57**	**3**	*i* P	**P**	**22 19 14.0**	**+0.5**
AAA	**Alma-Ata**	**71.58**	**318**	*e*P	**P**	**22 19 12.8**	**-1.0**
AAA	**Alma-Ata**	**71.58**	**318**	*e*P	**P**	**22 19 12.9**	**-1.0**
	baz=318						
VSVD	**Vaisvydziai**	**71.58**	**356**	*e*P	**P**	**22 19 14.3**	**+0.8**
AKTO	**Aktyubinsk**	**71.66**	**334**	LR	LR	22 56 04.8	
	comp=Z,63nm,18.2s,baz=26,slow=40						
AKTO	**Aktyubinsk**	**71.66**	**334**	*i* P	**P**	**22 19 14.8**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,65nm,0.8s						
EDMD	**Edmundbyers**	**71.69**	**12**	*e*P	**P**	**22 19 14.6**	**+0.3**
ISAL	**Salakas**	**71.89**	**355**	*e*P	**P**	**22 19 16.0**	**+0.6**
LUNU	**Lund**	**72.03**	**2**	*i* P	**P**	**22 19 16.9**	**+0.7**
MSVF	**Nonsavu**	**72.05**	**199**	LR	LR	22 44 56.0	
	comp=Z,88nm,19.3s,baz=123,slow=31						
PABE	**Paberze**	**72.06**	**356**	P	**P**	**22 19 16.4**	**0.0**
PABE	**Paberze**	**72.06**	**356**	*e*P	**P**	**22 19 17.1**	**+0.7**
IIGN	**Ignalina**	**72.10**	**355**	*e*P	**P**	**22 19 17.5**	**+0.8**
AB31	**Akbulak array**	**72.20**	**332**	*i* P	**P**	**22 19 18.1**	**+0.7**
AB31				pmax	pmax		
	comp=Z,31nm,0.8s						
ABKAR	**Akbulak array**	**72.20**	**332**	P	**P**	**22 19 17.8**	**+0.4**
ABKAR	**Akbulak array**	**72.20**	**332**	P	**P**	**22 19 17.6**	**+0.2**
ABKAR				IAmb	IAmb	22 19 19.1	
	comp=Z,32nm,0.8s						
BELG	**Belogornoye**	**72.26**	**341**	LR	LR	22 56 22.0	
	comp=Z,83nm,18.4s,baz=313,slow=40						
BELG	**Belogornoye**	**72.26**	**341**	*d i*P	**P**	**22 19 17.7**	**0.0**
BELG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SGDS	**Sogindy**	**72.28**	**320**	*d i*P	**P**	**22 19 17.8**	**-0.3**
SGDS				pmax	pmax		
	comp=Z,14nm,0.9s						
SGDS	**Sogindy**	**72.28**	**320**	⇓*i*P	**P**	**22 19 17.8**	**-0.3**
	comp=Z,14nm,0.9s,baz=320						
TKM2	**Tokmak 2**	**72.35**	**319**	P	**P**	**22 19 19.3**	**+0.6**
	SNR=9.4						
TARG	**Taragay, Kyrgy**	**72.44**	**317**	P	**P**	**22 19 18.8**	**-0.7**
TARG				IAmb	IAmb	22 19 19.6	
	comp=Z,14nm,0.6s						
TARG	**Taragay, Kyrgy**	**72.44**	**317**	P	**P**	**22 19 18.8**	**-0.7**
TARG				pmax	pmax		
	comp=Z,14nm,0.6s						
USP	**Ospenovka**	**72.49**	**320**	P	**P**	**22 19 20.3**	**+1.0**
	SNR=23						
NACGM	**Naroch**	**72.51**	**354**	⇑*e*P	**P**	**22 19 19.7**	**+0.5**
	baz=6.0						
PZH	**PanZhiHua**	**72.57**	**291**	⇓P	**P**	**22 19 20.0**	**-0.1**
PZH				sP	**sP**	**22 19 29.6**	**+0.3**
PZH				S	**S**	**22 28 42.5**	**-0.6**
PZH				sS	**SKiKP**	**22 28 53.3**	**+0.7**
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,5.9s						
PZH				LR	LR		
	comp=Z,340nm,21.1s						
PZH				LR	LR		
	comp=Z,370nm,22.0s						
BSD	**Bornholm Skovb**	**72.58**	**1**	*i* P	**P**	**22 19 19.8**	**+0.3**
CHMS	**Chumysh**	**72.62**	**320**	P	**P**	**22 19 21.1**	**+1.0**
	SNR=20						
CHMS	**Chumysh**	**72.62**	**320**	*i* P	**P**	**22 19 20.9**	**+0.8**
CHMS				pmax	pmax		
	comp=Z,69nm,1.4s						
DSB	**Dublin**	**72.63**	**15**	P	**P**	**22 19 20.3**	**+0.4**
KBK	**Karagaybulak**	**72.83**	**319**	P	**P**	**22 19 22.6**	**+1.1**
	SNR=11						
MNK	**Minsk**	**72.84**	**354**	*i* P	**P**	**22 19 22.1**	**+1.0**
MNK				*i*		22 19 39.0	
MNK				*i*		22 22 03.8	
MNK				*i* PPP	PPP	22 23 48.1	
MNK				*i* S	**S**	**22 28 46.4**	**+1.4**
MNK				*i*		22 29 28.2	
MNK				*i* SS	**SS**	**22 33 28.1**	**+4.2**
MNK				pmax	pmax		
	comp=N,29nm,0.8s						
MNK				pmax	pmax		
	comp=Z,87nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,3μm,20.0s						
MNK				MLR	MLR		
	comp=E,11nm,19.0s						
MNK				MLR	MLR		
	comp=Z,44nm,16.0s						
MNK	**Minsk**	**72.84**	**354**	*i* P	**P**	**22 19 22.1**	**+1.0**
	comp=E,2.0nm,0.7s						
MNK				*i* P	**P**	**22 19 22.1**	**+1.0**
	comp=N,29nm,0.8s						
MNK				*i* P	**P**	**22 19 22.1**	**+1.0**
	comp=Z,87nm,0.9s,baz=7.0						
MNK				*i* PcP	**PcP**	**22 19 39.1**	**+0.9**
MNK				*i* PP	**PP**	**22 22 03.8**	**+1.3**
MNK				*i* PPP	PPP	22 23 48.1	
MNK				*i* S	**S**	**22 28 46.5**	**+1.4**
MNK				*i* SS	**SS**	**22 33 28.1**	**+4.2**
MNK				*i* SSS	SSS	22 36 48.5	
MNK				*i* LR	LR	22 51 59.0	
MNK				*i* LRM	MLR	22 53 21.0	
	comp=N,3μm,19.5s						
MNK				*i* LRM	MLR	22 54 06.0	
	comp=E,11nm,18.6s						
MNK				*i* LRM	MLR	22 54 11.1	
	comp=Z,44nm,16.1s						
GENI	**Genyem**	**72.84**	**241**	P	P	22 19 27.5	+5.8
AAK	**Ala-Archa**	**73.02**	**320**	P	**P**	**22 19 23.6**	**+0.9**
	SNR=27						
AAK	**Ala-Archa**	**73.02**	**320**	LR	LR	22 52 24.1	
	comp=Z,142nm,21.4s,baz=39,slow=37						
AAK	**Ala-Archa**	**73.02**	**320**	P	**P**	**22 19 23.3**	**+0.6**
AAK				IAmb	IAmb	22 19 24.5	
	comp

VORR pmax pmax
comp=Z,30nm,0.5s
GKP Gorka Klasztor 74.44 0 *e*P **P 22 19 31.1 +0.6**
VRH Novokhopyorsk 74.47 344 *e*P **P 22 19 29.1 -1.7**
VRH pmax pmax
comp=Z,20nm,0.8s
STRD Stroud 74.66 12 *e*P **P 22 19 32.7 +0.9**
STRD IAmb IAmb 22 19 33.1
comp=Z,52nm,0.7s
VSR Storozhevoye 74.86 346 *e*P **P 22 19 31.1 -1.9**
VSR pmax pmax
comp=Z,20nm,0.6s
SWN1 Swindon 74.97 12 *e*P **P 22 19 33.6 0.0**
SWN1 IAmb IAmb 22 19 35.6
comp=Z,276nm,1.4s
KSH Kashi 75.05 317 P **P 22 19 38.2 +3.7**
KSH sP pwP 22 19 49.3 +1.0
KSH pmax pmax
comp=Z,35nm,0.9s
KSH LR LR
comp=Z,390nm,16.8s
KSH LR LR
comp=Z,190nm,14.4s
KSH LR LR
comp=Z,480nm,16.5s
PMG Port Moresby 75.12 232 P **P 22 19 34.7 -0.2**
comp=Z,47nm,0.7s,baz=18,slow=6.0,SNR=16
comp=Z,47nm,0.7s
PMG Port Moresby 75.12 232 P **P 22 19 34.5 -0.4**
PMG Port Moresby 75.12 232 *ce*P **P 22 19 34.9 0.0**
PMG pmax pmax
comp=Z,73nm,1.0s
IUG Iuzhnay 75.16 322 *i* P **P 22 19 35.7 +0.7**
IUG Iuzhnay 75.16 322 ⇓*i* P **P 22 19 35.5 +0.5**
baz=322
RUE Ruedersdorf 75.19 2 *e*P **P 22 19 35.8 +0.9**
CCA1 Carnmenellis 75.78 15 *e*P **P 22 19 39.0 +0.8**
LSA Lhasa 75.88 300 P **P 22 19 39.8 0.0**
LSA IAmb IAmb 22 19 41.8
comp=Z,16nm,0.8s
LSA Lhasa 75.88 300 P **P 22 19 39.8 0.0**
LSA pmax pmax
comp=Z,16nm,0.8s
SDDR Presa de Saban 76.01 77 P **P 22 19 40.1 -0.1**
SDDR Presa de Saban 76.01 77 *e*P **P 22 19 40.3 +0.2**
CLL Collm 76.34 3 P **P 22 19 41.6 +0.1**
CLL IAmb IAmb 22 19 42.9
comp=Z,27nm,0.9s
CLL Collm 76.34 3 ⇓*i* P **P 22 19 41.6 +0.1**
CLL *i* 22 19 52.8
CLL pmax pmax
comp=Z,26nm,0.8s
CLL Collm 76.34 3 ⇓*i* P **P 22 19 41.6 +0.1**
comp=Z,26nm,0.8s
CLL *i* PcP **PcP 22 19 52.8 -0.5**
comp=Z,28nm,1.5s
CLL *i* pPcP 22 20 00.2
CLL *e*SS SS 22 34 42.0 +25
CLL *e*SSS SSS 22 37 42.0
SIJI Sorong 76.36 250 P **P 22 19 41.7 -0.4**
comp=Z,27nm,0.6s,baz=7.1,slow=5.9,SNR=22
comp=Z,27nm,0.6s
AKASG Malin Array Be 76.52 352 P **P 22 19 42.0 -0.5**
comp=Z,32nm,0.7s,baz=12,slow=5.8,SNR=31
AKASG LR LR 22 57 21.7
comp=Z,50nm,19.2s,baz=7.0,slow=39
comp=Z,32nm,0.7s
AKASG Malin Array Be 76.52 352 P **P 22 19 42.2 -0.3**
AKBB Malin Array Si 76.52 352 P **P 22 19 42.2 -0.2**
AKBB Malin Array Si 76.52 352 *ce*P **P 22 19 41.9 -0.6**
AKBB pmax pmax
comp=Z,34nm,0.9s
TBI Tubuai 76.57 167 *e*LR LR 22 43 26.7
comp=Z,213nm,27.8s
BSTI Sart Tilman 76.66 8 *d*P **P 22 19 44.1 +0.9**
comp=Z,10nm,0.7s
BTK Batken 76.66 321 P **P 22 19 44.1 +0.5**
BTK IAmb IAmb 22 19 45.1
comp=Z,27nm,0.8s
BTK Batken 76.66 321 P **P 22 19 44.1 +0.5**
BTK pmax pmax
comp=Z,27nm,0.9s
MEM Membach 76.67 7 *d*P **P 22 19 43.8 +0.4**
comp=Z,26nm,0.9s
BTNL Ternell 76.70 7 *d*P **P 22 19 44.0 +0.4**
comp=Z,24nm,1.0s
DRK Karamyk 76.78 320 P **P 22 19 45.1 +0.5**
DRK IAmb IAmb 22 19 46.4
comp=Z,32nm,0.8s
BCLA Clavier 76.80 8 *d*P **P 22 19 44.8 +0.7**
comp=Z,16nm,1.1s
BRG Berggiesshubel 76.80 2 *i* P **P 22 19 44.8 +0.7**
BRG Amp 22 19 45.8
comp=Z,24nm,0.8s
BRG *ex* x 22 19 54.7
BRG Amp 22 19 56.6
comp=Z,15nm,1.1s
BRG Berggiesshubel 76.80 2 *i* P **P 22 19 44.8 +0.7**
BRG *e* 22 19 54.7
BRG pmax pmax
comp=Z,24nm,0.9s
BGES Gesves 76.81 8 *d*P **P 22 19 44.7 +0.5**
BGES *dp*P **pP 22 19 50.2 -0.8**
KSP Ksiaz 76.87 1 *e*P **P 22 19 44.8 +0.3**
BMRD Maredsous 76.87 8 *d*P **P 22 19 45.3 +0.8**
comp=Z,22nm,1.1s
BMRD *dp*P **pP 22 19 50.8 -0.5**
BHOU Houvegnez 76.92 7 *d*P **P 22 19 45.5 +0.7**
comp=Z,12nm,0.9s
BHOU *d*PcP **PcP 22 19 55.7 -0.1**
RCHB Rochefort 77.05 8 *d*P **P 22 19 45.9 +0.4**
comp=Z,21nm,0.9s
DOU Dourbes 77.06 8 *d*P **P 22 19 45.8 +0.2**
CHVC Chvalec 77.12 1 *e*P **P 22 19 46.9 +0.9**
OSTC Ostas 77.15 1 *e*P **P 22 19 47.0 +0.9**
PVCC Panska Ves 77.16 2 *e*P **P 22 19 47.2 +1.1**
PVCC Panska Ves 77.16 2 *e*P **P 22 19 47.2 +1.1**
UPC Upice 77.20 1 *e*P **P 22 19 47.1 +0.7**
UPC Upice 77.20 1 *e*P **P 22 19 47.1 +0.7**
TNTI Ternate 77.29 254 P **P 22 19 46.9 -0.4**
comp=Z,13nm,1.2s
DPC Dobruska-Polom 77.36 1 *e*P **P 22 19 48.3 +1.0**
DPC Dobruska-Polom 77.36 1 *e*P **P 22 19 48.3 +1.0**
NKC Novy Kostel 77.40 3 *e*P **P 22 19 48.1 +0.6**
NKC Novy Kostel 77.40 3 *e*P **P 22 19 48.1 +0.6**
OJC Ojcow 77.47 358 *e*P **P 22 19 46.3 -1.6**
OJC Ojcow 77.47 358 P **P 22 19 47.4 -0.5**
OJC IAmb IAmb 22 19 48.2
comp=Z,98nm,1.9s
OJC Ojcow 77.47 358 P **P 22 19 47.4 -0.5**
OJC pmax pmax
comp=Z,98nm,1.9s
FAKI Fak Fak 77.47 248 P **P 22 19 48.3 -0.1**
FAKI IAmb IAmb 22 19 49.1
comp=Z,18nm,0.8s
FAKI Fak Fak 77.47 248 P **P 22 19 47.7 -0.7**
comp=Z,455nmcomp=Z,35nm,1.5s
WLF Walferdange 77.62 7 P **P 22 19 49.7 +1.0**
WLF IAmb IAmb 22 19 50.8
comp=Z,39nm,1.2s
WLF Walferdange 77.62 7 P **P 22 19 49.7 +1.0**
WLF pmax pmax
comp=Z,39nm,1.2s
KRLC Kraliky 77.64 0 *e*P **P 22 19 50.0 +1.1**
KRLC Kraliky 77.64 0 *e*P **P 22 19 50.0 +1.1**
PRU Pruhonice 77.70 2 *e*P **P 22 19 49.8 +0.6**
PRU *e* 22 19 57.2
PRU Pruhonice 77.70 2 *e*P **P 22 19 49.8 +0.6**
PRU *ep*P **pP 22 19 57.2 +1.2**
LVV L'vov 77.73 356 *e*P **P 22 19 49.3 -0.1**
GAR Garm 77.77 320 P **P 22 19 50.3 +0.4**
GOPC GO Pecny, Ondr 77.78 2 *e*P **P 22 19 50.2 +0.6**
GOPC GO Pecny, Ondr 77.78 2 *e*P **P 22 19 50.2 +0.6**
OKC Ostrava-Krasne 77.88 359 *e*P **P 22 19 51.1 +1.0**
OKC Ostrava-Krasne 77.88 359 *e*P **P 22 19 51.1 +1.0**
GRA1 Grafenberg Arr 77.89 4 P **P 22 19 51.3 +1.0**
GRA1 IAmb IAmb 22 19 52.4
comp=Z,38nm,0.8s
GRF Grafenberg Arr 77.89 4 P **P 22 19 51.3 +1.0**
GRF pmax pmax
comp=Z,38nm,0.8s
GRFO Grafenberg 77.90 4 P **P 22 19 51.6 +1.4**
GRFO IAmb IAmb 22 19 52.3
comp=Z,38nm,0.8s
GRFO Grafenberg 77.90 4 P **P 22 19 51.7 +1.4**
GRFO pmax pmax
comp=Z,38nm,0.8s
MORC Moravsky Berou 77.94 360 ⇑P **P 22 19 51.6 +1.0**
MORC Moravsky Berou 77.94 360 P **P 22 19 51.2 +0.7**
MORC IAmb IAmb 22 19 52.3
comp=Z,17nm,0.8s
MORC Moravsky Berou 77.94 360 ⇑P **P 22 19 51.6 +1.0**
MORC Moravsky Berou 77.94 360 *e*P **P 22 19 51.1 +0.5**
NIE Niedzica 78.27 358 *e*P **P 22 19 53.4 +1.0**
LBMI Labuha 78.35 253 P **P 22 19 55.4 +2.2**
MAUC Maruska 78.35 360 *e*P **P 22 19 54.1 +1.3**
VRAC Vranov 78.41 0 ⇓P **P 22 19 54.2 +1.1**
VRAC Vranov 78.41 0 ⇓P **P 22 19 54.2 +1.1**
VRAC Vranov 78.41 0 *e*P **P 22 19 53.9 +0.8**
CHGR Chuyangaron 78.52 321 P **P 22 19 53.9 -0.1**
CHGR Chuyangaron 78.52 321 P **P 22 19 53.9 -0.1**
CHGR pmax pmax
comp=Z,137nm,0.7s
KHC Kasperske Hory 78.54 2 P **P 22 19 55.0 +1.1**
KHC IAmb IAmb 22 19 56.1
comp=Z,68nm,1.5s
KHC Kasperske Hory 78.54 2 *e*P **P 22 19 54.8 +0.9**
KHC *e* 22 20 02.5
KHC Kasperske Hory 78.54 2 *e*P **P 22 19 54.8 +0.9**
KHC *ep*P **PcP 22 20 02.5 -0.4**
LANS Liptovska Anna 78.55 359 *e*P **P 22 19 55.9 +2.0**
LANS pmax pmax
comp=Z,26nm,0.8s
KRUC Moravsky 78.65 1 *e*P **P 22 19 55.0 +0.5**
KOLS Kolonicke sedl 78.69 357 *e*P **P 22 19 55.9 +1.2**
KOLS pmax pmax
comp=Z,28nm,0.8s
STU Stuttgart 78.71 5 P **P 22 19 54.6 -0.2**
STU IAmb IAmb 22 19 56.4
comp=Z,26nm,0.9s
STU Stuttgart 78.71 5 P **P 22 19 54.6 -0.2**
STU pmax pmax
comp=Z,26nm,0.9s
CRVS Cervenica-Dubn 78.75 357 *e*P **P 22 19 56.4 +1.4**
CRVS pmax pmax
comp=Z,41nm,0.9s
GEC2 GERESS Array S 78.83 2 P **P 22 19 55.5 -0.1**
GERES GERESS Array B 78.83 2 P **P 22 19 55.9 +0.4**
comp=Z,6.8nm,0.7s,baz=0.0,slow=2.7,SNR=79
comp=Z,6.8nm,0.7s
GERES GERESS Array B 78.83 2 P **P 22 19 55.8 +0.3**
GERES GERESS Array B 78.83 2 P **P 22 19 55.8 +0.3**
JAVC Velka Javorina 78.86 360 *e*P **P 22 19 57.4 +1.7**
CLF Chambon-Foret 78.88 10 P **P 22 19 56.6 +1.0**
UZH Uzhgorod 79.00 357 ⇑*i*P **P 22 19 56.2 -0.1**
UZH *i* 22 20 04.0
MYLDM Lahad Datu 79.08 264 P **P 22 19 58.0 +0.8**
MYLDM IAmb IAmb 22 19 59.5
comp=Z,25nm,0.8s
UBPT Khong Chiam 79.09 281 P **P 22 19 57.1 -0.2**
UBPT IAmb IAmb 22 19 58.5
comp=Z,35nm,0.9s
BFO Black Forest 79.10 6 P **P 22 19 57.5 +0.5**
BFO IAmb IAmb 22 19 58.5
comp=Z,12nm,0.7s
BFO Black Forest 79.10 6 P **P 22 19 57.5 +0.5**
BFO pmax pmax
comp=Z,13nm,0.7s
DZM Mont Dzumac 79.11 209 *e*LR LR 22 44 36.2
comp=Z,181nm,22.1s
DZM Mont Dzumac 79.11 209 LR LR 22 49 29.4
comp=Z,140nm,19.1s,baz=35,slow=32
ECH Echery 79.13 7 P **P 22 19 57.2 0.0**
ECH IAmb IAmb 22 19 58.7
comp=Z,34nm,0.9s
ECH Echery 79.13 7 P **P 22 19 57.2 0.0**
ECH pmax pmax
comp=Z,35nm,0.9s
KECS Kecovo 79.20 358 *e*P **P 22 19 58.7 +1.3**
KECS pmax pmax
comp=Z,59nm,0.7s
SMOL Smolenice 79.20 360 *e*P **P 22 19 59.0 +1.5**
SMOL pmax pmax
comp=Z,15nm,1.0s
VYHS Vyhne 79.21 359 *e*P **P 22 19 58.7 +1.1**
VYHS pmax pmax
comp=Z,39nm,1.1s
OUENC Ouen Island, N 79.32 208 P **P 22 19 59.1 +0.9**
OUENC IAmb IAmb 22 20 10.5
comp=Z,26nm,1.3s
MODS Modra-Piesok 79.34 360 *e*P **P 22 19 59.9 +1.6**
MODS pmax pmax
comp=Z,108nm,1.2s
TRPA Tarpa 79.49 356 ⇓P **P 22 20 00.1 +1.1**
TRPA Tarpa 79.49 356 P **P 22 19 60.0 +1.0**
CELP Cerrillos 79.49 74 P **P 22 19 59.4 -0.2**
ZST Bratislava 79.52 0 *e*P **P 22 20 00.8 +1.6**
ZST pmax pmax
comp=Z,96nm,1.2s
GCPR Guaynabo City 79.60 74 P **P 22 19 59.8 -0.2**
SJG San Juan 79.71 74 P **P 22 20 00.7 0.0**
SJG IAmb IAmb 22 20 02.2
comp=Z,46nm,0.8s
SJG San Juan 79.71 74 P **P 22 20 00.7 0.0**
SJG pmax pmax
comp=Z,46nm,0.9s
PSZ Piszkesteto 79.77 358 ⇑P **P 22 20 02.5 +1.8**
PSZ Piszkesteto 79.77 358 P **P 22 20 01.1 +0.4**
PSZ IAmb IAmb 22 20 03.2
comp=Z,48nm,1.1s
PSZ Piszkesteto 79.77 358 ⇑P **P 22 20 02.5 +1.8**
PSZ Piszkesteto 79.77 358 P **P 22 20 01.4 +0.7**
CONA Conrad Observa 79.78 1 *i* P **P 22 20 02.3 +1.5**
comp=Z,14nm,0.8s,SNR=23
KKM Kota Kinabalu 79.79 267 P **P 22 20 01.4 +0.1**
KKM IAmb IAmb 22 20 02.6
comp=Z,37nm,0.9s
MOA Molln 79.83 2 *i* P **P 22 20 01.9 +1.0**
comp=Z,14nm,0.9s
BUR08 Bucovina Ar. S 79.84 355 P **P 22 20 01.8 +0.7**
BUR08 IAmb IAmb 22 20 02.7
comp=Z,18nm,0.8s
BURAR Bucovina Array 79.87 355 ⇑P **P 22 20 02.1 +0.8**
BURAR Bucovina Array 79.87 355 P **P 22 20 01.8 +0.5**
BURAR IAmb IAmb 22 20 02.8
comp=Z,27nm,0.7s
BURAR Bucovina Array 79.87 355 ⇑P **P 22 20 02.1 +0.8**
SRO Srobarova 79.90 359 *e*P **P 22 20 02.9 +1.6**
SRO pmax pmax
comp=Z,17nm,0.8s
BIOA Bad Ischl, Aus 79.98 2 *i* P **P 22 20 02.8 +1.0**
comp=Z,4.2nm,0.6s,SNR=9.7
RONA Rosalia, Austr 80.01 1 *i* P **P 22 20 03.4 +1.5**
comp=Z,0.5nm,0.3s,SNR=12
SOP Sopron 80.03 0 P **P 22 20 03.1 +1.1**
GUN Gumba 80.05 303 *e*P **P 22 20 03.2 +0.3**
comp=Z,124nm,1.0s
RETA Reutte 80.08 4 *i* P **P 22 20 03.2 +0.9**
comp=Z,8.8nm,0.6s,SNR=5.6
JIRN Jiri 80.10 303 *e*P **P 22 20 03.3 +0.1**
ODAN Odare 80.13 301 *e*P **P 22 20 03.1 -0.1**
CHTO Chiang Mai 80.17 288 P **P 22 20 02.6 -0.6**
CHTO Chiang Mai 80.17 288 P **P 22 20 02.6 -0.6**
GOF Gofitskoye 80.17 342 ⇑*i*P **P 22 20 03.5 +0.7**
GOF pmax pmax
comp=Z,129nm,0.7s
BUD Budapest 80.22 359 P **P 22 20 04.3 +1.3**
KIS Kishinev 80.23 352 ⇓*i*P **P 22 20 02.8 -0.3**
comp=Z,9.0nm,0.3s
KIS Kishinev 80.23 352 *d i*P **P 22 20 02.8 -0.3**
KIS pmax pmax
comp=Z,9.0nm,0.3s
DAVA Damuels 80.23 5 *e*P **P 22 20 04.1 +0.8**
comp=Z,1.1nm,0.5s
MOTA Moosalm 80.23 4 *i* P **P 22 20 04.3 +1.0**
comp=Z,17nm,0.6s,SNR=17
LTVH Ltavrtes, Hu 80.25 357 ⇑P **P 22 20 05.2 +2.0**
LTVH Ltavrtes, Hu 80.25 357 P **P 22 20 04.9 +1.7**
WATA Walderalm 80.26 4 *i* P **P 22 20 04.5 +1.0**
comp=Z,19nm,0.6s,SNR=18
EGYH Egyhazaskeszo 80.30 360 P **P 22 20 04.7 +1.3**
MILM Milestii Mici 80.31 352 ⇑P **P 22 20 03.4 -0.1**
MILM Milestii Mici 80.31 352 *d i*P **P 22 20 02.9 -0.6**
MILM pmax pmax
comp=Z,70nm,1.0s
WTTA Wattenberg 80.34 4 *i* P **P 22 20 05.1 +1.2**
comp=Z,29nm,0.6s,SNR=21
CSKK Cskako 80.35 359 P **P 22 20 05.0 +1.3**
SQTA Sankt Quirin 80.36 4 *i* P **P 22 20 05.1 +1.2**
comp=Z,26nm,0.6s,SNR=30
SANI Sanana 80.37 254 P **P 22 20 02.8 -1.4**
comp=Z,32nm,1.1s
BSZH Besenyszg 80.39 358 ⇑P **P 22 20 04.6 +0.7**
BSZH Besenyszg 80.39 358 P **P 22 20 05.5 +1.7**
AAI Ambon 80.41 251 P **P 22 20 03.6 -0.9**
comp=Z,49nm,0.9s
ARCR ARCALIA 80.45 355 ⇓P **P 22 20 05.6 +1.3**
CM31 Chiang Mai Arr 80.45 288 P **P 22 20 04.3 -0.4**
CM31 IAmb IAmb 22 20 05.6
comp=Z,33nm,1.1s
CMAR Chiang Mai Arr 80.45 288 P **P 22 20 04.5 -0.1**
comp=Z,13nm,0.8s,baz=19,slow=5.2,SNR=78
CMAR LR LR 22 58 30.8
comp=Z,52nm,19.5s,baz=75,slow=38
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 80.45 288 P **P 22 20 04.3 -0.4**
MESR Meseseni 80.45 356 ⇑P **P 22 20 06.0 +1.7**
KKN Kakani 80.45 304 *e*P **P 22 20 05.0 +0.1**
ARSA Arzberg 80.46 1 *i* P **P 22 20 05.9 +1.5**
comp=Z,11nm,0.7s,SNR=21
RAMN Ramite 80.46 302 *e*P **P 22 20 04.8 -0.2**
comp=Z,160nm,0.9s
FETA Feichten 80.54 5 *e*P **P 22 20 06.0 +1.1**
comp=Z,15nm,0.7s,SNR=24
MPLH Magyarpolny 80.55 360 P **P 22 20 05.9 +1.1**
BORR Bors 80.55 357 ⇑P **P 22 20 06.9 +2.1**
PKI Pulchoki 80.57 303 *e*P **P 22 20 05.4 -0.2**
comp=Z,120nm,1.1s
PKIN Phulchoki 80.57 303 *e*P **P 22 20 05.3 -0.3**
comp=Z,112nm,1.1s
KBA Koelnbreinsper 80.58 3 *i* P **P 22 20 06.8 +1.6**
comp=Z,42nm,0.6s
GKN Gorkha 80.61 304 *e*P **P 22 20 05.5 -0.1**
comp=Z,147nm,1.0s
VASR Vaslui 80.67 353 P **P 22 20 05.8 +0.3**
DMN Daman 80.69 304 *e*P **P 22 20 06.3 +0.1**
comp=Z,114nm,1.1s
MRSI Marisa 80.74 259 P **P 22 20 05.0 -1.2**
comp=Z,29nm,1.1s
DANN Dangsing 80.76 305 *e*P **P 22 20 06.9 +0.3**
comp=Z,245nm,0.8s
CBBR Cluj-Babes-Bol 80.80 356 ⇑P **P 22 20 06.4 +0.2**
DRGR 80.82 356 ⇑P **P 22 20 07.2 +0.9**
DRGR 80.82 356 ⇑P **P 22 20 07.2 +0.9**
TIH Tihany 80.82 360 P **P 22 20 07.7 +1.4**
CJR Cluj-Napoca 80.86 356 ⇓P **P 22 20 07.3 +0.8**
CJR Cluj-Napoca 80.86 356 ⇓P **P 22 20 07.3 +0.8**
TESR Tescani 80.88 353 ⇑P **P 22 20 06.4 -0.2**
ABTA Abfaltersbach 80.89 3 *i* P **P 22 20 07.6 +0.9**
comp=Z,38nm,1.1s,SNR=14
FUORN Ofenpass-Fuorn 80.92 5 P **P 22 20 08.0 +0.9**
FUORN IAmb IAmb 22 20 09.5
comp=Z,58nm,1.4s
COEN Coen 80.98 233 P **P 22 20 06.7 -0.7**
COEN IAmb IAmb 22 20 07.6
comp=Z,56nm,1.6s
SENIN Lac Senin/Sane 80.99 7 P **P 22 20 07.7 +0.3**
TUE Stuetta 81.01 6 P **P 22 20 07.5 0.0**
TUE IAmb IAmb 22 20 09.3
comp=Z,32nm,1.3s
SOKA Soboth 81.02 2 *i* P **P 22 20 08.7 +1.3**
comp=Z,18nm,0.7s,SNR=33
MYKA Terra Mystica 81.04 3 *i* P **P 22 20 08.2 +0.7**
comp=Z,1.7nm,0.3s,SNR=5.5
PERS Pernice 81.06 1 *i* P **P 22 20 08.6 +0.9**
OBKA Obir 81.18 2 ⇓*i*P **P 22 20 09.0 +0.7**
OBKA Obir 81.18 2 *e*P **P 22 20 09.4 +1.1**
comp=Z,22nm,0.5s,SNR=32
CLUD Cludinico 81.19 3 P **P 22 20 08.3 0.0**
CLUD IAmb IAmb 22 20 10.8
comp=Z,16nm,0.7s
PRED Cave del Predi 81.22 3 P **P 22 20 08.7 +0.2**
GHRR 81.27 353 ⇑P **P 22 20 09.8 +1.2**
KVAR Kislovodsk Arr 81.30 342 LR LR 22 59 19.8
comp=Z,48nm,20.9s,baz=269,slow=38
KIV Kislovodsk 81.30 342 ⇑P **P 22 20 10.3 +1.4**
KIV Kislovodsk 81.30 342 P **P 22 20 10.0 +1.0**
KIV IAmb IAmb 22 20 11.0
comp=Z,25nm,0.8s
KIV Kislovodsk 81.30 342 *e*P **P 22 20 10.2 +1.2**
KIV *e*S **S 22 30 19.9 +2.2**
KIV pmax pmax
comp=Z,32nm,1.0s
KIV pmax pmax
comp=Z,5.0nm,2.3s
KIV MLR MLR
comp=Z,54nm,19.0s
KOLN Koldanda 81.32 305 *e*P **P 22 20 09.0 -0.5**
AMBH Ambrzfalva 81.32 358 ⇑P **P 22 20 10.4 +1.5**
AMBH Ambrzfalva 81.32 358 P **P 22 20 10.1 +1.2**
SIRR Siria 81.38 357 ⇑P **P 22 20 10.3 +1.1**
ANN Anapa 81.38 346 *e*P **P 22 20 07.8 -1.4**
ANN *e**PP **PcP 22 20 14.3 -1.0**
ANN *e* 22 23 10.9
ANN *e*S **S 22 30 19.4 +1.2**
ANN pmax pmax
comp=Z,62nm,1.2s
STAL STALIGIAL 81.38 3 P **P 22 20 09.3 +0.1**
GROC Groznyy 81.39 339 *e*P **P 22 20 07.5 -1.8**
GROC *e* 22 20 14.6
GROC pmax pmax
comp=Z,18nm,0.8s
VLDR Vladesti 81.44 352 ⇓P **P 22 20 09.8 +0.2**
CADS Cadrg 81.44 2 *i* P **P 22 20 09.7 0.0**
LUWI Luwuk 81.46 257 P **P 22 20 08.8 -1.2**
LUWI Luwuk 81.46 257 P **P 22 20 08.3 -1.7**
comp=Z,70nm,0.9s
KBZ Khabaz 81.48 342 P **P 22 20 11.0 +1.3**
comp=Z,14nm,0.9s,baz=322,slow=3.0,SNR=26
KBZ LR LR 22 58 49.4
comp=Z,46nm,21.8s,baz=13,slow=38
comp=Z,14nm,0.9s
KBZ Khabaz 81.48 342 *ce*P **P 22 20 10.8 +1.0**
KBZ pmax pmax
comp=Z,16nm,0.9s
MORH Mrgy, Hungar 81.50 359 ⇓P **P 22 20 10.3 +0.5**
MORH Mrgy, Hungar 81.50 359 P **P 22 20 10.1 +0.2**
DOPR Dopca 81.50 354 ⇑P **P 22 20 11.4 +1.4**
SHA1 Shidzhatmaz 81.52 342 *d i*P **P 22 20 11.0 +0.7**
VRI Vrincioaia 81.52 353 ⇑P **P 22 20 10.6 +0.6**
VRI Vrincioaia 81.52 353 ⇑P **P 22 20 10.6 +0.6**
PLOR Plostina 81.54 353 ⇓P **P 22 20 10.6 +0.5**
PLOR Plostina 81.54 353 ⇓P **P 22 20 10.6 +0.5**
CTI Castel Tesino 81.55 4 P **P 22 20 10.4 +0.1**
CTI IAmb IAmb 22 20 11.5
comp=Z,28nm,1.1s
CTI Castel Tesino 81.55 4 P **P 22 20 10.4 +0.1**
CTI pmax pmax
comp=Z,28nm,1.1s
COVR Voineasa-Covas 81.57 354 ⇑P **P 22 20 11.7 +1.4**
ODBI Odobesti 81.59 353 ⇓P **P 22 20 12.0 +1.6**
SCTR Scanteiesti 81.61 352 ⇑P **P 22 20 11.4 +1.0**
KOVH Kovagotottos 81.63 359 P **P 22 20 11.0 +0.4**
SIM Simferopol' 81.69 348 *e*P **P 22 20 11.7 +0.8**
SIM pmax pmax
comp=Z,40nm,1.0s
SLCR Slobozia Conac 81.71 353 ⇑P **P 22 20 11.9 +0.9**
SSB Saint Sauveur 81.83 9 P **P 22 20 12.4 +0.7**
SSB IAmb IAmb 22 20 13.4
comp=Z,26nm,1.0s
SSB Saint Sauveur 81.83 9 P **P 22 20 12.4 +0.7**
SSB pmax pmax
comp=Z,26nm,1.0s
BISRR Bisoca 81.83 353 ⇑P **P 22 20 12.8 +1.0**
CRES Cresnjev 81.88 1 ⇓*i*P **P 22 20 11.4 -0.5**
SALO Salr 81.93 5 P **P 22 20 12.3 +0.1**
SALO IAmb IAmb 22 20 13.5
comp=Z,42nm,0.9s
MLR Muntele Rosu 81.94 354 ⇑P **P 22 20 13.6 +1.2**
MLR Muntele Rosu 81.94 354 LR LR 22 57 10.0
comp=Z,84nm,22.0s,baz=24,slow=36
MLR Muntele Rosu 81.94 354 P **P 22 20 12.8 +0.4**
MLR IAmb IAmb 22 20 14.4
comp=Z,37nm,1.4s
MLR Muntele Rosu 81.94 354 ⇑P **P 22 20 13.6 +1.2**
CEY Cerknica 81.95 2 ⇓*i*P **P 22 20 12.5 +0.2**
NEY Neytrino 81.97 342 *i* P **P 22 20 12.9 +0.2**
NEY pmax pmax
comp=Z,3.0nm,1.0s
TLCR 82.03 352 ⇑P **P 22 20 12.6 0.0**
TLCR 82.03 352 ⇑P **P 22 20 12.6 0.0**
BZS Buzias 82.03 357 ⇓P **P 22 20 13.2 +0.5**
BZS Buzias 82.03 357 ⇓P **P 22 20 13.2 +0.5**

VOIR		82.05 354	⇑P	P	P	22 20 13.8 +0.9
VOIR		82.05 354	⇑P	P	P	22 20 13.8 +0.9
MPSI	Mapaga	82.07 260	P	P	P	22 20 12.1 -1.2
comp=Z,382nmcomp=Z,31nm,1.2s						
CFR	Carcaliu	82.09 352	⇑P	P	P	22 20 13.4 +0.4
CFR	Carcaliu	82.09 352	⇑P	P	P	22 20 13.4 +0.4
LOT	Lotru	82.11 355	⇑P	P	P	22 20 13.2 -0.1
SKDS	Skadanscina	82.13 2	*e*P	P	P	22 20 13.2 -0.1
ARR	Arges	82.14 355	⇓P	P	P	22 20 14.3 +0.9
KBL	Kabul	82.15 319	P	P	P	22 20 13.0 -0.8
KBL			IAmb	IAmb		22 20 13.7
comp=Z,19nm,0.8s						
KBL	Kabul	82.15 319	P	P	P	22 20 13.0 -0.8
KBL			pmax	pmax		
comp=Z,19nm,0.8s						
SAUI	Saumlaki	82.16 246	P	P	P	22 20 14.2 +0.5
SAUI	Saumlaki	82.16 246	P	P	P	22 20 14.3 +0.6
ZEI	Tsey	82.18 341	*e*P	P	P	22 20 13.5 -0.3
ZEI			pmax	pmax		
comp=Z,21nm,1.0s						
SOC	Sochi	82.20 344	*e*P	P	P	22 20 13.2 -0.4
SOC			*e*			22 23 23.0
SOC			*e*PPP	PPP		22 25 17.9
SOC			*e*S	S		22 30 27.9 +1.2
SOC			pmax	pmax		
comp=Z,14nm,0.4s						
BOJS	Bojanci	82.20 1	⇓*i*P	P	P	22 20 13.8 +0.2
BOJS	Bojanci	82.20 1	*i* P	P	P	22 20 14.1 +0.5
GZR	Gura Zlata	82.21 356	⇑P	P	P	22 20 14.6 +0.9
GZR	Gura Zlata	82.21 356	⇑P	P	P	22 20 14.6 +0.9
TEOL	Teolo	82.24 4	P	P	P	22 20 14.5 +0.7
MTUR	Matau	82.26 354	⇑P	P	P	22 20 15.3 +1.3
MTUR	Matau	82.26 354	⇑P	P	P	22 20 15.3 +1.3
SECR		82.39 354	⇑P	P	P	22 20 15.0 +0.4
ONI	Oni	82.47 341	P	P	P	22 20 16.1 +1.0
ONI	Oni	82.47 341	P	P	P	22 20 16.1 +1.0
ONI			pmax	pmax		
comp=Z,13nm,1.0s						
FRGS	Fruska Gora	82.54 358	⇓*i*P	P	P	22 20 15.6 +0.2
HARR	Harsova	82.59 352	⇓P	P	P	22 20 16.1 +0.5
HARR	Harsova	82.59 352	⇓P	P	P	22 20 16.1 +0.5
A052A	Srbac	82.61 360	*e*P	P	P	22 20 16.3 +0.6
A051A	Mrakovica	82.70 0	⇓*i*P	P	P	22 20 15.9 -0.4
TLBR	Topalu	82.73 352	⇓P	P	P	22 20 16.9 +0.6
SULR		82.73 354	⇑P	P	P	22 20 16.6 +0.3
HERR	Herculane	82.74 356	⇑P	P	P	22 20 16.9 +0.5
TIRR	Tirgusor	82.78 352	⇑P	P	P	22 20 17.3 +0.7
TIRR	Tirgusor	82.78 352	⇑P	P	P	22 20 17.3 +0.7
TIRR	Tirgusor	82.78 352	P	P	P	22 20 16.4 -0.2
TIRR	Tirgusor	82.78 352	⇑P	P	P	22 20 17.3 +0.7
MDVR	Moldovita	82.86 357	⇓P	P	P	22 20 17.4 +0.3
LEHL	Lehliu	82.89 353	⇑P	P	P	22 20 17.7 +0.6
CVDA	Cernavoda	82.94 352	⇑P	P	P	22 20 18.3 +0.9
HUMR	Humele	82.96 354	⇑P	P	P	22 20 17.4 -0.1
BLY	Banja Luka	82.97 0	⇓*i*P	P	P	22 20 17.6 0.0
DOB	Doboj	82.98 359	*e*P	P	P	22 20 18.9 +1.3
GEYT	Alibeck	83.04 329	P	P	P	22 20 18.8 +0.7
comp=Z,26nm,0.9s,baz=328,slow=5.3,SNR=45						
comp=Z,26nm,0.9s						
GEYT	Alibeck	83.04 329	P	P	P	22 20 18.6 +0.5
GEYT			IAmb	IAmb		22 20 19.9
comp=Z,33nm,0.9s						
GYA0B	ALIBECK ARRAY	83.04 329	P	P	P	22 20 18.3 +0.1
GYA0B			IAmb	IAmb		22 20 19.8
comp=Z,29nm,0.9s						
RASA	Rasa	83.13 353	⇑P	P	P	22 20 18.6 +0.2
TEKS	Tekeris	83.15 358	*e*P	P	P	22 20 15.8 -2.8
ICOR	Ion Corvin	83.17 352	⇑P	P	P	22 20 19.6 +1.0
PGAV	Gavieira, Arco	83.20 19	*e*P	P	P	22 20 20.1 +1.1
comp=Z,48nm,1.2s						
SGRR	Singureni	83.20 354	⇑P	P	P	22 20 18.8 0.0
ZCCA	Zocca	83.22 5	P	P	P	22 20 20.8 +1.9
A050A	Klekovaca	83.23 1	*e*P	P	P	22 20 17.9 -1.2
MGRS	Mrkonjic Grad	83.30 0	*e*P	P	P	22 20 19.4 0.0
PUNG	Punghina	83.32 356	⇑P	P	P	22 20 19.5 +0.2
MNGR	Mingechevir, A	83.42 338	P	P	P	22 20 20.8 +0.8
PCAB	Cabril	83.49 19	*e*P	P	P	22 20 21.5 +1.1
comp=Z,52nm,1.7s						
DIVS	Divibare	83.59 358	P	P	P	22 20 20.9 -0.1
DIVS			IAmb	IAmb		22 20 22.5
comp=Z,24nm,1.0s						
DIVS	Divibare	83.59 358	⇓*i*P	P	P	22 20 20.8 -0.1
PBRG	Braganca	83.65 18	*e*P	P	P	22 20 21.9 +0.7
comp=Z,27nm,1.9s						
GANJ	Ganja	83.72 338	P	P	P	22 20 22.3 +0.7
PTBC	PUERTO BERRIO,	83.81 87	*e*P	P	P	22 20 21.1 -1.3
RAZG	Razgrad	83.82 353	⇑P	P	P	22 20 21.4 -0.6
BBLS	Lazići	83.83 358	⇓*i*P	P	P	22 20 23.0 +0.8
POLO	Lamas de Olo	83.86 19	*e*P	P	P	22 20 23.5 +1.1
comp=Z,24nm,1.3s						
PTO	Porto	83.93 19	*e*P	P	P	22 20 23.9 +1.3
comp=Z,81nm,1.2s						
PVRL	Vila Real	83.97 19	*e*P	P	P	22 20 24.2 +1.3
comp=Z,40nm,1.6s						
BLKB	Belogradchik	83.98 356	⇑P	P	P	22 20 23.1 +0.2
OSSC	Osservatorio P	84.05 4	P	P	P	22 20 22.3 -1.0
OSSC			IAmb	IAmb		22 20 23.1
comp=Z,30nm,0.8s						
RUDO	Rudo	84.08 358	*e*P	P	P	22 20 23.3 0.0
PRD	Provadia	84.12 353	P	P	P	22 20 24.2 +0.7
SZH	Strazhica	84.16 354	P	P	P	22 20 32.3 +8.6
MPEP	Malo Peshtene	84.20 355	P	P	P	22 20 23.5 -0.4
MVO	Moncorvo	84.21 18	*e*P	P	P	22 20 25.1 +1.0
comp=Z,34nm,1.4s						
PVL	Pavlikeni	84.25 354	P	P	P	22 20 24.8 +0.7
SDV	Santo Domingo	84.28 83	LR	LR		22 59 58.7
comp=Z,39nm,18.3s,baz=308,slow=37						
SDV	Santo Domingo	84.28 83	P	P	P	22 20 24.4 -0.6
SDV			IAmb	IAmb		22 20 25.6
comp=Z,21nm,1.1s						
SDV	Santo Domingo	84.28 83	*e*P	P	P	22 20 24.9 -0.1
GUY2C	Guyana, Caldas	84.29 89	*e*P	P	P	22 20 24.6 -0.7
GUY2C			*e*P	PcP		22 20 27.8 -1.3
NORC	Norcasia	84.32 88	*e*P	P	P	22 20 24.4 -0.7
PLE	Pljevlja	84.37 358	*e*P	P	P	22 20 26.1 +1.1
KARS	Kars	84.43 341	P	P	P	22 20 26.4 +1.1
KARS	Kars	84.43 341	P	P	P	22 20 26.4 +1.1
KARS			pmax	pmax		
comp=Z,151nm,1.4s						
PVIS	Viseu	84.48 19	*e*P	P	P	22 20 26.6 +1.1
comp=Z,62nm,1.4s						
UPM	Unac-Piva	84.50 359	*e*P	P	P	22 20 25.5 -0.2
GNI	Garni	84.54 339	LR	LR		23 00 47.5
comp=Z,81nm,21.9s,baz=18,slow=38						
GNI	Garni	84.54 339	P	P	P	22 20 27.1 +1.1
GNI			IAmb	IAmb		22 20 28.8
comp=Z,23nm,0.8s						
GNI	Garni	84.54 339	*ce*P	P	P	22 20 26.9 +1.0
GNI			pmax	pmax		
comp=Z,29nm,1.3s						
BARC	Barichara	84.54 86	*e*P	P	P	22 20 26.0 -0.3
FDMO	Fiordimonte	84.61 3	P	P	P	22 20 26.8 +0.7
FDMO			IAmb	IAmb		22 20 29.6
comp=Z,29nm,0.8s						
KTUT	Trabzon	84.71 343	⇑P	P	P	22 20 27.7 +1.2
SPBC	San Pablo de B	84.74 88	*e*P	P	P	22 20 25.8 -1.3
BRY	Bratogost	84.81 359	*e*P	P	P	22 20 27.1 -0.1
BRY	Bratogost	84.81 359	*e*P	P	P	22 20 27.2 0.0
TTSI	Tana Toraja	84.81 258	P	P	P	22 20 26.9 -0.5
comp=Z,19nm,1.4s						
NRCA	Norcia	84.82 3	P	P	P	22 20 28.2 +1.0
IVA	Berane	84.82 358	*e*P	P	P	22 20 27.6 +0.4
STON	Ston	84.84 360	⇓*i*P	P	P	22 20 25.3 -1.9
KOME	Kolasin	84.85 358	*e*P	P	P	22 20 27.4 +0.1
MTE	Manteigas	84.85 19	*e*P	P	P	22 20 28.2 +0.8
comp=Z,33nm,1.6s						
MTE	Manteigas	84.85 19	P	P	P	22 20 27.8 +0.4
MTE			IAmb	IAmb		22 20 36.6
comp=Z,73nm,2.0s						
HRA	Herat	84.86 324	P	P	P	22 20 27.4 -0.3
HRA			IAmb	IAmb		22 20 28.7
comp=Z,17nm,0.9s						
COI	Coimbra	84.86 19	*e*P	P	P	22 20 29.0 +1.7
comp=Z,61nm,1.7s						
COI	Coimbra	84.86 19	P	P	P	22 20 28.4 +1.1
COI	Coimbra	84.86 19	P	P	P	22 20 28.4 +1.1
COI			pmax	pmax		
comp=Z,55nm,1.2s						
CTA	Charters Tower	84.87 227	P	P	P	22 20 26.4 -1.1
comp=Z,7.7nm,0.8s,baz=25,slow=6.7,SNR=14						
CTA			LR	LR		22 54 55.1
comp=Z,51nm,20.3s,baz=79,slow=33						
comp=Z,7.7nm,0.8s						
CTAO	Charters Tower	84.87 227	P	P	P	22 20 26.9 -0.5
CTAO			IAmb	IAmb		22 20 28.1
comp=Z,39nm,1.6s						
CTAO	Charters Tower	84.87 227	P	P	P	22 20 26.9 -0.5
CTAO			pmax	pmax		
comp=Z,39nm,1.6s						
JMB	Yambol	84.91 353	P	P	P	22 20 25.0 -2.5
NKME	Niksic	84.94 359	*e*P	P	P	22 20 27.8 +0.1
VTS	Vitosha	84.96 356	⇓P	P	P	22 20 27.9 -0.1
VTS	Vitosha	84.96 356	P	P	P	22 20 27.9 -0.1
VTS			IAmb	IAmb		22 20 29.0
comp=Z,21nm,1.1s						
VTS	Vitosha	84.96 356	⇓P	P	P	22 20 27.9 -0.1
VTS	Vitosha	84.96 356	P	P	P	22 20 27.9 -0.1
LKRN	Lenkeran, Azer	84.97 336	P	P	P	22 20 28.8 +0.9
PGB	Panagyurishte	84.98 355	P	P	P	22 20 28.3 +0.3
PCAS	Casmilo, Conde	85.00 20	*e*P	P	P	22 20 28.5 +0.5
comp=Z,46nm,1.5s						
CESX	Cesi	85.02 3	P	P	P	22 20 28.4 +0.2
CESX			IAmb	IAmb		22 20 30.0
comp=Z,27nm,0.9s						
SBUM	Sibu	85.05 268	P	P	P	22 20 28.5 -0.1
SBUM			IAmb	IAmb		22 20 29.9
comp=Z,18nm,0.8s						
CAMP	Campotosto	85.12 3	P	P	P	22 20 29.4 +0.6
RUSC	La Rusia	85.15 87	*e*P	P	P	22 20 28.9 -0.8
CEME	Cevo	85.16 359	*e*P	P	P	22 20 28.8 -0.1
HCY	Herceg Novi	85.26 359	⇓*i*P	P	P	22 20 29.0 -0.3
HCY	Herceg Novi	85.26 359	*e*P	P	P	22 20 29.2 -0.1
PDG	Podgorica	85.27 359	⇓P	P	P	22 20 29.8 +0.5
PDG	Podgorica	85.27 359	P	P	P	22 20 29.6 +0.2
TTG	Podgorica	85.27 359	*e*P	P	P	22 20 29.5 +0.2
AQU	L'Aquila	85.30 3	P	P	P	22 20 30.6 +1.0
AQU	L'Aquila	85.30 3	P	P	P	22 20 30.6 +1.0
AQU			pmax	pmax		
comp=Z,35nm,0.9s						
NAX	Nakhchivan	85.31 338	P	P	P	22 20 30.5 +0.8
PLD	Plovdiv	85.39 354	P	P	P	22 20 29.9 0.0
PCBR	Castelo Branco	85.40 19	*e*P	P	P	22 20 30.6 +0.6
BUM	Brajici-Budva	85.41 359	*e*P	P	P	22 20 30.0 -0.1
PSBE	So Bento	85.45 20	*e*P	P	P	22 20 30.9 +0.6
comp=Z,40nm,1.7s						
DRME	Dracevica, Mon	85.52 359	*e*P	P	P	22 20 30.5 -0.1
DRME	Dracevica, Mon	85.52 359	*e*P	P	P	22 20 31.0 +0.4
KOPT	Kop Dagi	85.52 342	P	P	P	22 20 32.0 +1.1
KOPT			IAmb	IAmb		22 20 33.9
comp=Z,15nm,0.9s						
SPSI	Sidrap Palu	85.58 258	P	P	P	22 20 30.1 -1.1
comp=Z,14nm,1.0s						
SKO	Skopje	85.67 357	*i* P	P	P	22 20 32.3 +0.9
KKB	Krupnik	85.72 356	P	P	P	22 20 32.2 +0.6
BNSI	Bone	85.72 257	P	P	P	22 20 30.7 -1.2
comp=Z,11nm,1.5s						
ULC	Ulcinj	85.74 359	*e*P	P	P	22 20 31.9 +0.2
PRAC	Prado	85.77 89	*e*P	P	P	22 20 22.8 -9.5
KDZ	Kurdzhali	85.80 354	P	P	P	22 20 32.7 +0.7
BAUV	El Baul	85.80 81	P	P	P	22 20 32.0 -0.4
RZN	Rozhen	85.81 354	P	P	P	22 20 32.8 +0.5
PMRV	Marv??o	85.82 19	*e*P	P	P	22 20 32.6 +0.4
comp=Z,16nm,1.2s						
PMAFR	Mafra	85.89 20	*e*P	P	P	22 20 33.0 +0.5
comp=Z,57nm,1.9s						
STIP	Stip	85.93 356	*i* P	P	P	22 20 32.4 -0.2
MMB	Musomiste	85.96 355	P	P	P	22 20 33.7 +0.9
PMTG	Montargil	86.00 20	*e*P	P	P	22 20 33.1 +0.1
comp=Z,18nm,1.7s						
MTKI	Muara Teweh, K	86.10 263	P	P	P	22 20 33.2 -0.6
ESBB	Sonseca Array	86.21 16	P	P	P	22 20 34.1 0.0
ESBB			IAmb	IAmb		22 20 35.1
comp=Z,12nm,0.9s						
ESDC	Sonseca Array	86.21 16	P	P	P	22 20 33.6 -0.5
comp=Z,7.6nm,0.8s,baz=341,slow=4.5,SNR=72						
ESDC			PP	PP		22 23 53.1 -0.9
comp=Z,1.2nm,0.9s,baz=340,slow=7.9,SNR=5.1						
ESDC			PKKPbc	PKKPbc		22 38 29.4 -0.7
comp=Z,0.4nm,0.7s,baz=163,slow=2.2,SNR=6.3						
ESDC			LR	LR		23 02 01.3
comp=Z,21nm,18.3s,baz=347,slow=38						
comp=Z,7.6nm,0.8s						
ESDC	Sonseca Array	86.21 16	P	P	P	22 20 34.0 -0.2
MTN	Manton Dam	86.26 243	P	P	P	22 20 34.2 -0.3
PAB	San Pablo	86.27 17	P	P	P	22 20 34.5 +0.1
PAB	San Pablo	86.27 17	⇑P	P	P	22 20 33.7 -0.8
VAY	Valandovo	86.28 356	*i* P	P	P	22 20 35.2 +0.9
RDO	Rodhopi	86.30 354	P	P	P	22 20 35.2 +0.8
PESTR	Estremoz	86.32 19	*e*P	P	P	22 20 34.8 +0.2
PESTR	Estremoz	86.32 19	P	P	P	22 20 34.5 -0.1
OTAV	Otavalo	86.34 94	P	P	P	22 20 35.4 -0.2
OTAV	Otavalo	86.34 94	P	P	P	22 20 35.4 -0.2
OTAV			pmax	pmax		
comp=Z,7.0nm,0.9s						
OTAV	Otavalo	86.34 94	*e*P	P	P	22 20 36.1 +0.5
TIR	Tirane	86.34 358	⇑P	P	P	22 20 35.6 +1.0
TIR	Tirane	86.34 358	⇑P	P	P	22 20 35.6 +1.0
TULM	Tulcn-Chalpat	86.36 94	P	P	P	22 20 35.6 -0.1
TULM			IAmb	IAmb		22 20 37.5
comp=Z,25nm,1.1s						
KAPI	Kappang	86.42 257	P	P	P	22 20 34.9 -0.5
comp=Z,45nm,1.2s,baz=64,slow=2.9,SNR=16						
comp=Z,45nm,1.2s						
KAPI	Kappang	86.42 257	P	P	P	22 20 34.9 -0.5
KAPI	Kappang	86.42 257	P	P	P	22 20 34.9 -0.5
KAPI			pmax	pmax		
comp=Z,47nm,1.2s						
BKSI	Bulukumba	86.45 257	P	P	P	22 20 34.1 -1.4
comp=Z,21nm,1.2s						
MDUB	Mudurnu	86.46 349	P	P	P	22 20 35.0 -0.5
ALN	Alexandroupoli	86.51 353	P	P	P	22 20 35.4 -0.1
ALN	Alexandroupoli	86.51 353	P	P	P	22 20 35.4 -0.1
ALN			pmax	pmax		
comp=Z,41nm,1.1s						
OHR	Ohrid	86.55 357	*i* P	P	P	22 20 36.6 +0.8
PNCL	Nicolau / Gran	86.86 20	*e*P	P	P	22 20 37.7 +0.5
comp=Z,34nm,1.5s						
ANTO	Ankara	86.86 348	P	P	P	22 20 37.5 +0.2
ANTO			IAmb	IAmb		22 20 39.4
comp=Z,24nm,0.8s						
ANTO	Ankara	86.86 348	P	P	P	22 20 37.5 +0.2
ANTO			pmax	pmax		
comp=Z,24nm,0.8s						
BSSI	Bau Bau, Buton	86.89 256	P	P	P	22 20 35.7 -1.9
comp=Z,22nm,0.9s						
BR231	Keskin MP Arra	86.89 348	P	P	P	22 20 38.2 +0.7
BR231			IAmb	IAmb		22 20 39.6
comp=Z,21nm,0.8s						
BR131	Keskin Array S	86.90 347	P	P	P	22 20 37.6 0.0
BR131			IAmb	IAmb		22 20 39.1
comp=Z,20nm,0.8s						
BR131	Keskin Array S	86.90 347	*d* *i*P	P	P	22 20 37.6 0.0
BRTR	Keskin Array B	86.90 347	P	P	P	22 20 38.2 +0.6
comp=Z,9.8nm,0.8s,baz=54,slow=2.7,SNR=60						
BRTR			LR	LR		23 04 21.8
comp=Z,37nm,18.4s,baz=340,slow=39						
comp=Z,9.8nm,0.8s						
BRTR	Keskin Array B	86.90 347	P	P	P	22 20 37.6 0.0
FLOC	Florencia	86.98 91	*e*P	P	P	22 20 38.4 +0.2
MATE	Matera	87.06 0	⇑P	P	P	22 20 39.0 +0.9
PBAR	Barrancos	87.10 19	*e*P	P	P	22 20 38.3 -0.1
comp=Z,23nm,1.7s						
BORA	Eskisehir	87.12 350	P	P	P	22 20 38.8 +0.1
VLO	Vlora	87.23 358	P	P	P	22 20 39.1 +0.1
VLO	Vlora	87.23 358	P	P	P	22 20 39.1 +0.1
VLO			pmax	pmax		
comp=Z,51nm,1.1s						
STKI	Sintang	87.38 267	P	P	P	22 20 39.4 -0.7
PCVE	Castro Verde	87.42 20	*e*P	P	P	22 20 39.9 -0.1
BNN	Bunyan	87.44 346	P	P	P	22 20 39.9 -0.4
EIDS	Eidsvold	87.50 221	P	P	P	22 20 40.2 0.0
EIDS			IAmb	IAmb		22 21 06.3
comp=Z,25nm,1.8s						
LIT	Litokhoron	87.50 356	P	P	P	22 20 40.2 -0.2
LIT			IAmb	IAmb		22 20 41.2
comp=Z,18nm,0.9s						
LIT	Litokhoron	87.50 356	P	P	P	22 20 40.2 -0.2
LIT			pmax	pmax		
comp=Z,18nm,0.9s						
SOEI	Soe	87.59 251	P	P		22 20 48.8 +7.7
MMRI	Maumere	87.86 253	P	P	P	22 20 40.6 -1.7
MMRI			IAmb	IAmb		22 20 42.4
comp=Z,14nm,0.7s						
MARD	Mardin	88.08 341	P	P	P	22 20 44.2 +0.8
EDFI	Ende, Flores	88.27 253	P	P	P	22 20 40.5 -3.9
comp=Z,4.6nm,1.4s						
BATI	Baumata	88.30 251	P	P	P	22 20 42.8 -1.6
comp=Z,9.3nm,0.4s,baz=108,slow=6.4,SNR=4.1						
comp=Z,9.3nm,0.4s						
BATI	Baumata	88.30 251	P	P	P	22 20 43.1 -1.3
comp=Z,8.1nm,0.8s						
TIP	Timpagrande	88.53 0	⇑P	P	P	22 20 44.3 -1.1
TIP	Timpagrande	88.53 0	P	P	P	22 20 45.5 +0.1
TIP			IAmb	IAmb		22 20 46.1
comp=Z,8.8nm,0.9s						
PTLC	Puerto Leguiza	88.61 92	*e*P	P	P	22 20 46.2 +0.2
PMOZ	Porto Moniz, M	89.72 28	*e*P	P	P	22 20 51.9 +0.8
comp=Z,62nm,1.4s						
PMPST	Porto Santo, M	89.72 28	*e*P	P	P	22 20 51.5 +0.5
comp=Z,92nm,1.1s						
PMPS	Porto Santo	89.74 28	*e*P	P	P	22 20 51.7 +0.7
comp=Z,77nm,2.2s						
KULM	Kulim	89.84 278	P	P	P	22 20 52.1 +0.4
KULM			IAmb	IAmb		22 21 05.9
comp=Z,29nm,1.4s						
KNRA	Kununurra	89.88 244	P	P	P	22 20 50.9 -0.8
PMAR	Madeira	89.89 28	*e*P	P	P	22 20 53.3 +1.3
comp=Z,77nm,1.9s						
WB0	Warramunga Arr	90.29 237	P	P	P	22 20 52.3 -1.3
WB0			IAmb	IAmb		22 20 53.4
comp=Z,19nm,1.3s						
WR0	Warramunga Arr	90.37 237	P	P	P	22 20 52.7 -1.2
WR0			IAmb	IAmb		22 20 53.7
comp=Z,18nm,1.1s						
WRAB	Tennant Creek	90.45 237	*ce*P	P	P	22 20 53.0 -1.3
WRAB			pmax	pmax		
comp=Z,14nm,1.1s						
WRA	Warramunga Arr	90.46 237	P	P	P	22 20 53.2 -1.2
comp=Z,6.6nm,0.9s,baz=40,slow=5.3,SNR=46						
comp=Z,6.6nm,0.9s						
WRA	Warramunga Arr	90.46 237	P	P	P	22 20 52.8 -1.5
KEST	Kesra	91.71 6	P	P	P	22 20 59.8 -0.5
comp=Z,5.6nm,0.8s,baz=53,slow=0.9,SNR=6.1						
comp=Z,5.6nm,0.8s						
ARMA	Armidale	91.81 218	P	P	P	22 21 00.8 +0.3
ARMA			IAmb	IAmb		22 21 02.6
comp=Z,31nm,1.4s						
DSRI	Dabo	92.01 272	P	P	P	22 21 02.0 +0.2
comp=Z,11nm,1.5s						
IDI	Anoyia	92.17 354	LR	LR		23 05 42.1
comp=Z,18nm,19.2s,baz=9.0,slow=38						
URZ	Urewera	92.23 196	LR	LR		22 56 07.7
comp=Z,46nm,20.3s,baz=88,slow=31						
MDT	Midelt	92.77 18	LR	LR		23 05 47.8
comp=Z,14nm,18.1s,baz=346,slow=38						
MMAI	Mount Meron Ar	93.22 345	LR	LR		23 10 38.5
comp=Z,17nm,18.0s,baz=17,slow=40						
FITZ	Fitzroy Crossi	93.57 245	P	P	P	22 21 08.0 -0.7
comp=Z,10nm,0.9s,baz=48,slow=3.3,SNR=14						
comp=Z,10nm,0.9s						
FITZ	Fitzroy Crossi	93.57 245	P	P	P	22 21 08.3 -0.4
FITZ			IAmb	IAmb		22 21 09.1
comp=Z,12nm,0.9s						
AS31	Alice Springs	93.79 235	P	P	P	22 21 09.1 -0.7
ASAR	Alice Springs	93.79 235	P	P	P	22 21 09.1 -0.6
comp=Z,7.7nm,0.8s,baz=34,slow=4.7,SNR=58						
ASAR			PKKPbc	PKKPbc		22 38 12.8 +0.8
comp=Z,0.5nm,0.4s,baz=204,slow=1.9,SNR=13						
ASAR			LR	LR		22 58 16.0
comp=Z,98nm,21.6s,baz=343,slow=32						
comp=Z,7.7nm,0.8s						
SDSI	Sungai Dareh	94.28 274	P	P	P	22 21 11.7 -0.6
BOAV	Boa Vista	95.50 79	*e*P	P	P	22 21 19.1 +1.2
CZSB	Cruzeiro do Su	96.11 95	*e*P	P	P	22 21 20.4 -0.2
WSAR	Wadi Sarin	96.28 322	LR	LR		23 08 24.1
comp=Z,59nm,19.4s,baz=64,slow=38						
EIL	Elat	96.57 345	LR	LR		23 10 08.1
comp=Z,45nm,18.9s,baz=118,slow=39						
STKA	Stephens Creek	97.15 225	LR	LR		23 01 03.4
comp=Z,107nm,19.8s,baz=22,slow=33						
PALK	Pallekele	99.81 296	LR	LR		23 11 59.1
comp=Z,43nm,19.7s,baz=122,slow=39						
H03N2	Juan Fernandez	112.34 116	T	T		00 28 36.5
baz=322,slow=78,SNR=6.3						
H03N1	Juan Fernandez	112.35 116	T	T		00 28 39.5
baz=322,slow=78,SNR=7.6						
H03N3	Juan Fernandez	112.35 116	T	T		00 28 37.1
baz=322,slow=78,SNR=7.3						
TORD	Torodi Ar. Bea	113.10 17	PKiKP	PKiKP		22 26 28.9 -1.3
comp=Z,1.2nm,0.9s,baz=346,slow=2.9,SNR=5.6						
TORD			PKKPbc	PKKPbc		22 37 13.3 -0.8
comp=Z,14nm,0.6s,baz=167,slow=2.0,SNR=5.6						
BDFB	Brasília	117.26 80	PKP	PKPdf		22 26 37.3 -0.9
comp=Z,0.7nm,0.3s,baz=278,slow=5.9,SNR=3.9						
CPUP	Villa Florida	119.68 95	PKP	PKPdf		22 26 41.0 -1.4
comp=Z,2.9nm,0.8s,baz=353,slow=4.2,SNR=7.1						
PMNB	Patos De Minas	120.44 81	*e*P	PKiKP		22 26 44.6 +0.2
MC01	Montes Claros	120.52 77	*e*P	PKiKP		22 26 45.0 +0.5
GDU01	Guandu, BA	120.71 71	*e*P	PKiKP		22 26 45.6 +0.7
DIAM	Diamantina, MG	121.91 78	*e*P	PKPdf		22 26 47.2 0.0
CMC01	Camacan, BA	122.05 72	*e*P	PKiKP		22 26 48.3 +0.8
PLCA	Paso Flores	122.22 116	PKP	PKPdf		22 26 46.1 -0.9
comp=Z,4.2nm,0.9s,baz=255,slow=2.1,SNR=11						
PLCA	Paso Flores	122.22 116		PKPdf		22 26 46.3 -0.7
PLCA	Paso Flores	122.22 116	PKIKP	PKPdf		22 26 46.3 -0.7
PLCA	Paso Flores	122.22 116	*e*P	PKiKP		22 26 48.1 +0.9
RCLB	Rio Claro- Sao	122.74 84	*e*P	PKPdf		22 26 48.5 0.0
CNLB	Canela	125.78 93	*e*P	PKiKP		22 26 54.6 +0.1
PLTB	Pedras Altas	125.84 97	PKPdf	PKPdf		22 26 53.9 -0.3

KLF eSB Sg 22 17 52.6 -1.1
HEF Hetta 1.68 41 eP Pn 22 17 42.5 -0.7
HEF MSG 22 18 02.9
comp=Z,2.0nm,0.2s
HEF eSN Sn 22 18 04.7 -0.7
KALU Kalix 1.71 140 P Pn 22 17 42.9 -0.7
KALU Kalix 1.71 140 eP Pn 22 17 42.9 -0.6
baz=326
KALU eSN Sb 22 18 06.7 0.0
TOF Tornio 1.83 125 eP Pn 22 17 45.0 -0.2
TOF MSG 22 18 07.3
comp=Z,2.7nm,0.2s
TOF eSG Sn 22 18 08.8 -0.2
KIF Kilpisjarvi 1.84 1 ePG Pn 22 17 46.0 +0.7
KIF MSG 22 18 07.8
comp=Z,2.8nm,0.2s
KTK1 Kautokeino 2.08 26 eSG Sb 22 18 17.0 -0.5
RNF Rovaniemi 2.18 103 ePB Pn 22 17 50.8 +0.7
RNF eSG Sb 22 18 20.1 -0.4
SGF Sodankyl 2.29 81 ePB Pn 22 17 52.6 +1.1
SGF eSG Sb 22 18 23.1 -0.3
BURU Burvik 2.62 173 eP Pn 22 17 56.5 +0.4
MSF Maaselka 3.58 107 eP Pn 22 18 08.6 -0.7
VAF Ylistaro 4.24 168 ePG Pb 22 18 29.0 +1.1

MAN 01 22:17:30.9, 8°32N×125°92E, h14km, mb4.1, ML2.8, MS2.5, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.46**	**107**	eP	Pg	22 17 39.2	-0.9
BIPH				i S	Sg	22 17 46.7	+0.4
BUKP	**Musuan**	**0.95**	**243**	iP	Pb	22 17 47.9	-1.4
BUKP				i S	Sn	22 18 03.5	+0.1
CGP	**Cagayan de Oro**	**1.22**	**277**	eP	Pn	22 17 52.0	-1.6
CGP				eS	Sb	22 18 08.4	-1.0
GLSP	**General Luna,**	**1.47**	**8**	eP	Pn	22 17 56.1	-1.0
GLSP				eS	Sb	22 18 17.2	+0.5
GHBP	**Garcia Hernand**	**2.04**	**310**	iP	Pn	22 18 04.5	-0.5
GHBP				i S	Sb	22 18 31.8	-1.4
DDMP	**Don Marcelino,**	**2.21**	**185**	eP	Pg	22 18 12.9	-0.4
TABP	**Talibon, Bohol**	**2.36**	**319**	iP	Pg	22 18 15.0	-1.2
TABP				eS	Sn	22 18 37.3	-0.6

*LDG **01** 22:17:41.5±0.1, 44°72N×6°69E, h6km, Md0.6/2, Error ellipse: s-maj=1.5km s-min=1.0km az=49.0*
STR 01 22:17:42.5±1.3, 45°N±6°×±°, h5km, MLv0.2/4, Error ellipse: s-maj=0.0km s-min=0.0km az=60.3, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.04**	**48**	ePg	Pg	22 17 43.8	-0.1
MBDF				eSg	Sg	22 17 44.6	-0.2
12nm,0.2s							
CREF	**Crivoux**	**0.17**	**207**	Pg	Pg	22 17 45.5	-0.3
CREF				Sg	Sg	22 17 48.1	+0.1
SURF	**Saint Ours**	**0.23**	**164**	Pg	Pg	22 17 46.8	-0.1
SURF				Sg	Sg	22 17 50.5	+0.6
JAUF	**Jausiers**	**0.27**	**177**	Pg	Pg	22 17 47.6	-0.2
JAUF				Sg	Sg	22 17 51.9	+0.6
OGAG	**Argentiere**	**0.28**	**209**	Pg	Pg	22 17 45.5	-2.4
OGAG				Sg	Sg	22 17 48.6	-3.0
ORIF	**Oris-en-Rattie**	**0.64**	**290**	ePg	Pg	22 17 53.1	-1.7
ORIF				eSg	Sg	22 18 01.0	-2.2
0.1nm,0.2s							

*MAN **01** 22:22:39.7, 9°72N×125°33E, h5km, mb5.4, ML4.4, MS4.6*
MAN INTENSITY IV - SURIGAO CITY; SISON & MOLIMONO SURIGAO DEL NORTE; INTENSITY III - TUBOD SURIGAO DEL NORTE; INTENSITY II - MAINIT SURIGAO DEL NORTE.
*NEIC **01** 22:22:40.0±1.4, 9°77N±0°07×125°40E±0°09, h10km±1km, mb4.7/72, Error ellipse: s-maj=15.0km s-min=11.0km az=68.0*
*BJI **01** 22:22:41.6±0.0, 9°76N×125°17E, h23km, mb4.4/27, mB4.8/18, Ms4.1/12, Ms7 3.9/12*
*IDC **01** 22:22:42.4±3.3, 9°69N×125°44E, h33km±26km, mb4.0/25, mbtmp4.3/29, ML4.2/4, MS3.5/11, Error ellipse: s-maj=20.7km s-min=10.6km az=76.0*
*DJA **01** 22:22:46.7±0.4, 10°N±3°×12°6E±°, h54km±4km, M4.8/33, mB5.2/9, mb4.6/33, MLv5.0/3, Mw(mB)4.6/9*
ISC 01 22:22:40.3±0.8, 9.74N±0.02×125.40E±0.03, h16km±5km, n193, σ1§51/208, mb4.5/61, MS3.5/11, 8C-21D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.10**	**68**	iP	**Pg**	**22 22 43.7**	**0.0**
SCPH				i S	**Sg**	**22 22 46.6**	**+0.7**
MSLP	**Maasin**	**0.66**	**306**	iP	**Pb**	**22 22 53.7**	**+0.4**
MSLP				i S	**Sn**	**22 23 04.2**	**-0.7**
GLSP	**General Luna,**	**0.72**	**87**	eP	**Pb**	**22 22 53.7**	**-0.7**
GLSP				eS	**Sb**	**22 23 03.6**	**-0.5**
BUTP	**Butuan**	**0.80**	**164**	eP	**Pb**	**22 22 55.3**	**-0.5**
BUTP				eS	**Sn**	**22 23 10.2**	**+1.8**
GHBP	**Garcia Hernand**	**1.07**	**264**	iP	**Pb**	**22 22 59.7**	**-0.7**
GHBP				i S	**Sb**	**22 23 14.8**	**+0.8**
TABP	**Talibon, Bohol**	**1.10**	**288**	iP	**Pn**	**22 22 59.8**	**-1.3**
TABP				i S	**Sb**	**22 23 14.6**	**-0.5**
CGP	**Cagayan de Oro**	**1.46**	**208**	eP	**Pn**	**22 23 04.7**	**-1.2**
CGP				i S	**Sb**	**22 23 26.1**	**+0.8**
TBP	**Tagbilaran**	**1.51**	**268**	eP	**Pn**	**22 23 06.5**	**-0.2**
TBP				i S	**Sn**	**22 23 26.1**	**0.0**
LLP	**Lapu-Lapu**	**1.52**	**292**	eP	**Pn**	**22 23 06.3**	**-0.5**
LLP				eS	**Sn**	**22 23 25.9**	**-0.4**
BIPH	**Bislig**	**1.82**	**148**	eP	**Pn**	**22 23 10.9**	**0.0**
BIPH				i S	**Sn**	**22 23 34.0**	**+0.4**
LSIP	**Lazi, Siquijor**	**1.85**	**251**	iP	**Pn**	**22 23 10.6**	**-0.6**
LSIP				i S	**Sn**	**22 23 34.0**	**-0.3**
BUKP	**Musuan**	**1.88**	**190**	iP	**Pn**	**22 23 11.7**	**-0.1**
BUKP				i S	**Sg**	**22 23 41.6**	**+0.6**
DCPH	**Dipolog City**	**2.33**	**240**	eP	**Pn**	**22 23 17.4**	**-0.5**
DCPH				eS	**Sn**	**22 23 46.6**	**+0.5**
DAV	**Davao City (W)**	**2.66**	**176**	Pn	**Pn**	**22 23 23.7**	**+1.2**
44nm,0.3s,baz=40,slow=9.3,SNR=10							
DAV				Lg	Lg	22 24 07.1	
94nm,0.3s,baz=36,slow=21,SNR=4.3							
136nm,0.4s							
DAV	**Davao City (W)**	**2.66**	**176**	Pn	**Pn**	**22 23 24.0**	**+1.5**
CNOP	**Candoni, Negro**	**2.72**	**272**	eP	**Pn**	**22 23 23.8**	**+0.5**
CNOP				eS	**Sn**	**22 23 55.4**	**-0.5**
KCP	**Kidapawan**	**2.73**	**186**	iP	**Pn**	**22 23 24.0**	**+0.4**
KCP				i S	**Sg**	**22 24 06.1**	**-2.1**
PAGZ	**Pagadian**	**2.74**	**227**	eP	**Pn**	**22 23 23.6**	**0.0**
PAGZ				i S	**Sb**	**22 24 00.4**	**-1.9**
CTBH	**Cotabato--PC H**	**2.75**	**205**	iP	**Pn**	**22 23 24.4**	**+0.7**
CNP	**Catarman**	**2.84**	**345**	eP	**Pn**	**22 23 27.3**	**+2.4**
CNP				eS	**Sg**	**22 24 09.0**	**-2.7**
GUIM	**Jordan**	**2.90**	**288**	eP	**Pn**	**22 23 26.0**	**+0.2**
GUIM				eS	**Sn**	**22 24 00.3**	**0.0**
MATI	**Mati**	**2.91**	**163**	eP	**Pb**	**22 23 29.9**	**-1.9**
MATI				eS	**Sb**	**22 24 08.1**	**+1.0**
SKMP	**Bagumbayan, Su**	**3.31**	**195**	eP	**Pb**	**22 23 41.3**	**+2.6**
JAP	**San Jose, Anti**	**3.54**	**287**	eP	**Pn**	**22 23 32.0**	**-2.6**
DDMP	**Don Marcelino,**	**3.63**	**175**	eP	**Pn**	**22 23 37.9**	**+2.1**
DDMP				eS	**Sn**	**22 24 18.8**	**+0.4**
GSPH	**General Santos**	**3.66**	**187**	eP	**Pn**	**22 23 39.2**	**+2.9**
PVCP	**Virac**	**4.02**	**342**	eP	**Pn**	**22 23 44.5**	**+3.4**
PVCP				eS	**Sb**	**22 24 35.3**	**-3.7**
LQP	**Lukban**	**5.75**	**319**	eP	**Pn**	**22 24 06.3**	**+1.1**
SGSI	**Sangihe**	**6.02**	**179**	P	**Pn**	**22 24 09.3**	**+0.6**
1.0nm3μm289nm,0.7s							
LUBP	**Lubang**	**6.42**	**309**	iP	**Pn**	**22 24 18.2**	**+4.1**
SMPP	**San Manuel, Pa**	**7.85**	**325**	eP	**Pn**	**22 24 36.8**	**+2.9**
CAUP	**Cauayan**	**7.96**	**334**	eP	**Pn**	**22 24 39.4**	**+4.1**
MYLDM	**Lahad Datu**	**8.20**	**237**	Pn	**Pn**	**22 24 40.8**	**+2.1**
BOLP	**Bolinao**	**8.49**	**322**	eP	Pn	22 24 49.1	+6.6
TNTI	**Ternate**	**9.13**	**167**		**Pn**	**22 24 53.0**	**+1.6**
TNTI	**Ternate**	**9.13**	**167**	P	**Pn**	**22 24 55.2**	**+3.8**
668nm40nm,0.8s							
GTOI	**Gorontalo**	**9.36**	**195**	P	**Pn**	**22 24 58.7**	**+4.2**
224nm16nm,0.6s							
KKM	**Kota Kinabalu**	**9.81**	**249**	Pn	**Pn**	**22 25 02.4**	**+1.6**
LBMI	**Labuha**	**10.52**	**168**	P	**Pn**	**22 25 15.3**	**+4.7**
1μm22nm,0.8s							
LUWI	**Luwuk**	**11.03**	**194**	Pn	**Pn**	**22 25 20.3**	**+2.9**
LUWI	**Luwuk**	**11.03**	**194**	P	**Pn**	**22 25 22.0**	**+4.5**
3μm52nm,1.1s							
APSI	**Ampana**	**11.22**	**200**	P	Pn	22 25 25.8	+5.7
23nm,1.2s							
SANI	**Sanana**	**11.73**	**177**	P	**Pn**	**22 25 27.2**	**+0.1**
40nm,0.8s							
SIJI	**Sorong**	**12.05**	**151**	Pn	**Pn**	**22 25 32.5**	**+0.9**
1.4nm,0.3s,baz=346,slow=6.4,SNR=10							
SIJI				Sn	**Sn**	**22 27 43.1**	**-2.6**
0.7nm,0.3s,baz=161,slow=20,SNR=2.0							
15nm,0.7s							
NLAI	**Namlea**	**13.01**	**172**	P	**Pn**	**22 25 41.9**	**-2.7**
TTSI	**Tana Toraja**	**13.87**	**204**	P	**P**	**22 26 03.3**	**-1.2**
3μm33nm,0.7s							
YULB	**Yu-li**	**14.13**	**344**	Pn	**Pn**	**22 25 59.4**	**-0.4**
FAKI	**Fak Fak**	**14.31**	**151**	Pn	**Pn**	**22 26 04.0**	**+1.6**
FAKI	**Fak Fak**	**14.31**	**151**	P	**Pn**	**22 26 04.8**	**+2.4**
20nm,0.9s							
SSLB	**Suanglung**	**14.60**	**344**	Pn	**Pn**	**22 26 05.8**	**-0.4**
SPSI	**Sidrap Palu**	**14.73**	**203**	P	**P**	**22 26 12.4**	**-1.7**
18nm,1.0s							
BNDI	**Bandanaira**	**14.87**	**162**	P	**Pn**	**22 26 11.9**	**+1.9**
35nm,0.7s							
SBUM	**Sibu**	**14.96**	**242**	Pn	**Pn**	**22 26 10.3**	**-0.9**
BNSI	**Bone**	**15.01**	**201**	P	**P**	**22 26 16.4**	**-0.8**
9.8nm,0.9s							
YHNB	**Yeheng**	**15.33**	**346**	Pn	**Pn**	**22 26 17.2**	**+1.1**
YHNB				IAmb	IAmb	22 26 28.7	
comp=Z,51nm,1.4s							
KAPI	**Kappang**	**15.70**	**201**	Pn	**Pn**	**22 26 22.4**	**+1.4**
comp=Z,0.3nm,0.3s,baz=9.3,slow=2.9,SNR=4.6							
KAPI				LR	LR	22 33 22.4	
comp=Z,107nm,19.3s,baz=34,slow=41							
comp=Z,7.3nm,0.8s							
KAPI	**Kappang**	**15.70**	**201**		**Pn**	**22 26 21.2**	**+0.2**
JOW	**Kunigami**	**17.21**	**9**	LR	LR	22 32 17.6	
comp=Z,155nm,20.7s,baz=335,slow=33							
QIZ	**Qiongzhong**	**17.66**	**303**	P	**Pn**	**22 26 45.6**	**-0.1**
QIZ				S	**Sn**	**22 30 03.7**	**+1.5**
QIZ				LR	LR		
comp=Z,140nm,13.7s							
QIZ				LR	LR		
comp=Z,220nm,15.3s							
QIZ				LR	LR		
comp=Z,210nm,15.9s							
SMPI	**Sarmi**	**17.66**	**131**	P	**Pn**	**22 26 46.0**	**+0.3**
MMRI	**Maumere**	**18.53**	**190**	P	**Pn**	**22 26 56.6**	**+0.2**
SAUI	**Saumlaki**	**18.57**	**161**	P	**P**	**22 26 56.5**	**-0.1**
SAUI				IAmb	IAmb	22 27 07.0	
comp=Z,32nm,0.6s							
EDFI	**Ende, Flores**	**18.74**	**191**	P	**Pn**	**22 27 01.4**	**+2.3**
comp=Z,4.0nm,0.6s							
SOEI	**Soe**	**19.40**	**183**	P	**Pn**	**22 27 07.2**	**+0.1**
SOEI				IAmb	IAmb	22 27 31.3	
comp=Z,28nm,0.9s							
SOEI	**Soe**	**19.40**	**183**	P	**Pn**	**22 27 09.8**	**+2.7**
comp=Z,33nm,0.9s							
BATI	**Baumata**	**19.89**	**185**	P	**P**	**22 27 09.8**	**-1.4**
comp=Z,2.3nm,0.3s,baz=116,slow=5.7,SNR=2.3							
comp=Z,6.5nm,0.3s							
BATI	**Baumata**	**19.89**	**185**	P	**Pn**	**22 27 13.4**	**+0.5**
comp=Z,35nm,1.0s							
PLAI	**Plampang**	**19.95**	**203**	P	**P**	**22 27 12.4**	**+0.6**
comp=Z,15nm,0.8s							
TWSI	**Taliwang, Sumb**	**20.22**	**205**	P	**P**	**22 27 14.5**	**-0.3**
comp=Z,11nm,0.9s							
JAGI	**Jajag, Banyuwa**	**21.28**	**212**	P	**P**	**22 27 26.0**	**-0.2**
JAGI				IAmb	IAmb	22 27 38.8	
comp=Z,21nm,1.0s							
JAGI	**Jajag, Banyuwa**	**21.28**	**212**	P	**P**	**22 27 26.5**	**+0.3**
comp=Z,22nm,1.4s							
MTN	**Manton Dam**	**23.15**	**166**	P	**P**	**22 27 47.3**	**+1.2**
MTN				IAmb	IAmb	22 27 53.3	
comp=Z,18nm,0.9s							
LEM	**Lembang**	**24.18**	**228**	LR	LR	22 37 35.4	
comp=Z,156nm,18.3s,baz=64,slow=37							
IPM	**Ipoh**	**24.73**	**260**	P	**P**	**22 28 00.5**	**-0.8**
KULM	**Kulim**	**24.92**	**262**	P	**P**	**22 28 02.2**	**-0.7**
JMN	**Monobe**	**25.11**	**17**	P	**P**	**22 28 03.8**	**-0.6**
JMN				IAmb	IAmb	22 28 20.5	
comp=Z,14nm,1.1s							
KNRA	**Kununurra**	**25.48**	**172**	P	**P**	**22 28 07.6**	**-0.2**
JHS	**Saijyo**	**26.11**	**15**	P	**P**	**22 28 13.1**	**-0.4**
JHS				IAmb	IAmb	22 28 26.0	
comp=Z,12nm,1.2s							
KMI	**Kunming**	**26.41**	**308**	P	**P**	**22 28 19.9**	**+3.3**
KMI				pmax	pmax		
comp=Z,5.0nm,1.4s							
JHJ	**Hachijo jima 2**	**26.78**	**28**	LR	LR	22 36 58.7	
comp=Z,54nm,21.4s,baz=196,slow=32							
CMAR	**Chiang Mai Arr**	**27.05**	**292**	P	**P**	**22 28 23.2**	**+1.1**
comp=Z,1.0nm,0.3s,baz=110,slow=6.4,SNR=11							
comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**27.05**	**292**	P	**P**	**22 28 22.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**27.67**	**180**	P	**P**	**22 28 26.7**	**-0.9**
comp=Z,4.4nm,0.7s,baz=351,slow=5.3,SNR=13							
comp=Z,4.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**27.67**	**180**	P	**P**	**22 28 26.4**	**-1.2**
KSRS	**Korea Array**	**27.68**	**4**	P	**P**	**22 28 27.7**	**+0.1**
comp=Z,1.5nm,0.8s,baz=186,slow=11,SNR=7.3							
comp=Z,1.5nm,0.8s							
PZH	**PanZhiHua**	**27.90**	**310**	P	**P**	**22 28 31.2**	**+1.4**
PZH				pmax	pmax		
comp=Z,10.0nm,1.0s							
PZH				pmax	pmax		
comp=Z,90nm,4.7s							
XAN	**Xi'an**	**28.52**	**330**	P	**P**	**22 28 38.2**	**+3.0**
XAN				pP	sP	22 28 42.8	+0.8
XAN				pmax	pmax		
comp=Z,9.0nm,0.8s							
GSI	**Gunungsitoli**	**28.91**	**255**	P	**P**	**22 28 37.6**	**-1.2**
GSI				IAmb	IAmb	22 29 02.1	
comp=Z,14nm,1.0s							
MJAR	**Matsushiro Arr**	**29.10**	**22**	P	**P**	**22 28 40.7**	**+0.4**
comp=Z,1.0nm,0.7s,baz=146,slow=44,SNR=2.1							
comp=Z,1.0nm,0.7s							
COEN	**Coen**	**29.42**	**143**	P	**P**	**22 28 43.0**	**-0.4**
COEN				IAmb	IAmb	22 28 54.1	
comp=Z,22nm,1.2s							
WB0	**Warramunga Arr**	**30.64**	**163**	P	**P**	**22 28 53.9**	**-0.1**
WRA	**Warramunga Arr**	**30.79**	**163**	P	**P**	**22 28 52.6**	**-2.7**
comp=Z,0.6nm,0.6s,baz=344,slow=8.9,SNR=12							
WRA				LR	LR	22 43 39.1	
comp=Z,62nm,21.4s,baz=52,slow=41							
comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**30.79**	**163**	P	**P**	**22 28 54.2**	**-1.1**
MBWA	**Marble Bar**	**31.21**	**190**	P	**P**	**22 28 57.9**	**-1.2**
BJT	**Baijiatuan**	**31.25**	**346**	P	**P**	**22 28 58.3**	**-0.9**
PSA00	**Pilbara Seismi**	**31.59**	**190**	P	**P**	**22 29 02.6**	**+0.2**
PSA00				IAmb	IAmb	22 29 35.9	
comp=Z,11nm,1.5s							
HHC	**Hu-ho-hao-te**	**33.31**	**341**	eP	**P**	**22 29 20.7**	**+3.2**
HHC				pmax	pmax		
comp=Z,22nm,0.8s							
HHC				pmax	pmax		
comp=Z,160nm,4.4s							
AS31	**Alice Springs**	**34.23**	**166**	P	**P**	**22 29 25.7**	**+0.2**
ASAR	**Alice Springs**	**34.23**	**166**	P	**P**	**22 29 24.8**	**-0.8**
comp=Z,1.1nm,0.6s,baz=347,slow=6.8,SNR=25							
ASAR				PcP	**PcP**	**22 32 01.5**	**-0.6**
comp=Z,0.4nm,0.5s,baz=341,slow=2.9,SNR=1.8							
comp=Z,1.1nm,0.6s							
ASAR	**Alice Springs**	**34.23**	**166**	P	**P**	**22 29 25.9**	**+0.3**
USA0B	**Ussuriysk Arra**	**34.80**	**8**	P	**P**	**22 29 30.3**	**+0.1**
USA0B				IAmb	IAmb	22 29 34.7	
comp=Z,7.6nm,0.9s							
USRK	**Ussuriysk Ar.**	**34.80**	**8**	P	**P**	**22 29 30.6**	**+0.4**
comp=Z,6.3nm,0.8s,baz=186,slow=7.6,SNR=15							
comp=Z,6.3nm,0.8s							
USRK	**Ussuriysk Ar.**	**34.80**	**8**	P	**P**	**22 29 30.5**	**+0.3**
XLT	**XiLinHaoTe**	**34.98**	**348**	eP	**P**	**22 29 34.4**	**+2.6**
XLT				pP	sP	22 29 38.3	-0.3
XLT				sP	pP	22 29 42.4	+5.8
XLT				PcP	**PcP**	**22 32 01.0**	**-3.1**
XLT				S	**S**	**22 35 09.7**	**+6.6**
XLT				sS	sS	22 35 16.8	+5.7
XLT				pmax	pmax		
comp=Z,14nm,0.9s							
XLT				pmax	pmax		
comp=Z,160nm,5.0s							
XLT				LR	LR		
comp=Z,220nm,14.7s							
XLT				LR	LR		
comp=Z,210nm,13.5s							
XLT				LR	LR		
comp=Z,260nm,15.2s							
CTA	**Charters Tower**	**36.06**	**145**	P	**P**	**22 29 40.7**	**-0.6**
comp=Z,2.1nm,0.6s,baz=326,slow=9.7,SNR=5.9							
comp=Z,2.1nm,0.6s							
CTAO	**Charters Tower**	**36.06**	**145**	P	**P**	**22 29 41.5**	**+0.2**
CTAO				IAmb	IAmb	22 29 47.2	
comp=Z,9.9nm,1.1s							
LSA	**Lhasa**	**37.64**	**307**	P	**P**	**22 29 55.2**	**0.0**
MORW	**Morawa**	**39.63**	**193**	P	**P**	**22 30 10.8**	**-0.5**
KLR	**Kul'dur**	**39.72**	**7**	LR	LR	22 46 27.1	
comp=Z,51nm,21.8s,baz=228,slow=36							
FORT	**Forrest**	**40.37**	**176**	P	**P**	**22 30 17.2**	**-0.2**
SONM	**Songino Array**	**41.22**	**341**	P	**P**	**22 30 26.3**	**+1.9**
comp=Z,0.8nm,0.7s,baz=165,slow=8.6,SNR=6.1							
comp=Z,0.8nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**41.24**	**71**	T	T	23 13 48.8	
baz=265,slow=74,SNR=57							
H11N2	**WAKE ISLAND Hy**	**41.24**	**71**	T	T	23 13 50.0	
baz=265,slow=74,SNR=47							
H11N3	**WAKE ISLAND Hy**	**41.26**	**71**	T	T	23 13 50.9	
baz=265,slow=74,SNR=50							
BBOO	**Buckleboo**	**43.52**	**167**	P	**P**	**22 30 43.2**	**0.0**
STKA	**Stephens Creek**	**44.19**	**160**	P	**P**	**22 30 48.3**	**-0.3**
comp=Z,4.6nm,0.8s,baz=334,slow=9.2,SNR=4.8							
comp=Z,4.6nm,0.8s							
STKA	**Stephens Creek**	**44.19**	**160**	P	**P**	**22 30 48.2**	**-0.4**
WMQ	**Urumqi**	**47.11**	**323**	eP	**P**	**22 31 14.0**	**+2.3**
WMQ				LR	LR		
comp=Z,240nm,17.7s							
WMQ				LR	LR		
comp=Z,150nm,23.5s							
ARMA	**Armidale**	**47.23**	**149**	P	**P**	**22 31 13.0**	**+0.2**
PEA0B	**Petropavlovsk-**	**50.47**	**25**	P	**P**	**22 31 37.7**	**+0.4**
PETK	**Petropavlovsk-**	**50.47**	**25**	P	**P**	**22 31 38.5**	**+1.2**
comp=Z,2.9nm,0.7s,baz=206,slow=4.2,SNR=6.1							
comp=Z,2.9nm,0.7s							
PETK	**Petropavlovsk-**	**50.47**	**25**	P	**P**	**22 31 37.6**	**+0.4**
TOO	**Toolangi**	**50.69**	**159**	P	**P**	**22 31 38.5**	**-0.6**
TOO				IAmb	IAmb	22 31 59.0	
comp=Z,15nm,1.3s							
LIFNC	**LIFOU**	**51.11**	**127**	P	**P**	**22 31 42.8**	**+0.3**
DZM	**Mont Dzumac**	**51.19**	**129**	P	**P**	**22 31 43.0**	**-0.2**
DZM				IAmb	IAmb	22 31 44.3	
comp=Z,9.0nm,0.9s							
MK31	**Makanchi Array**	**51.93**	**323**	P	**P**	**22 31 48.7**	**+0.3**
MKAR	**Makanchi Array**	**51.93**	**323**	P	**P**	**22 31 49.8**	**+1.4**
comp=Z,1.8nm,0.7s,baz=122,slow=8.1,SNR=18							
comp=Z,1.8nm,0.7s							
MKAR	**Makanchi Array**	**51.93**	**323**	P	**P**	**22 31 48.7**	**+0.4**
MAKZ	**Makanchi**	**52.12**	**323**	P	**P**	**22 31 49.9**	**+0.1**
KSH	**Kashi**	**52.95**	**313**	P	**P**	**22 31 58.1**	**+1.9**
KSH				pmax	pmax		
comp=Z,2.0nm,0.5s							
MA2	**Magadan**	**53.27**	**16**	LR	LR	22 53 18.3	
comp=Z,30nm,21.9s,baz=146,slow=34							
ZALV	**Zalesovo Beam**	**54.68**	**332**	P	**P**	**22 32 10.2**	**+1.8**
comp=Z,0.8nm,0.8s,baz=134,slow=8.3,SNR=1.8							
ZALV				PcP	**PcP**	**22 33 09.3**	**-1.8**
comp=Z,0.5nm,0.4s,baz=132,slow=4.3,SNR=2.1							
comp=Z,0.8nm,0.8s							
DRK	**Karamyk**	**56.00**	**311**	P	**P**	**22 32 18.6**	**0.0**
DRK				IAmb	IAmb	22 32 58.4	
comp=Z,5.8nm,0.8s							
KURK	**Kurchatov**	**56.02**	**326**	P	**P**	**22 32 18.0**	**-0.1**
KURK				IAmb	IAmb	22 32 19.8	
comp=Z,4.3nm,0.8s							
KBL	**Kabul**	**56.92**	**305**	P	**P**	**22 32 24.9**	**-0.2**
KBL				IAmb	IAmb	22 32 27.5	
comp=Z,5.0nm,0.6s							
GAR	**Garm**	**56.97**	**310**	P	**P**	**22 32 25.6**	**+0.3**
CHGR	**Chuyangaron**	**57.76**	**310**	P	**P**	**22 32 30.7**	**-0.1**
KK31	**Karatay Array**	**58.01**	**315**	P	**P**	**22 32 32.3**	**-0.1**
KK31				IAmb	IAmb	22 32 34.7	
comp=Z,7.0nm,1.4s							
KKAR	**Karatay Array**	**58.01**	**315**	P	**P**	**22 32 32.6**	**+0.1**
KKAR	**Karatay Array**	**58.01**	**315**	P	**P**	**22 32 32.5**	**0.0**
KKAR				IAmb	IAmb	22 32 34.7	
comp=Z,7.0nm,1.4s							
BRVK	**Borovoye**	**61.68**	**326**	P	**P**	**22 32 57.6**	**+0.1**
BRVK				IAmb	IAmb	22 32 58.7	
comp=Z,3.6nm,0.8s							
GEYT	**Alibeck**	**66.17**	**307**	P	**P**	**22 33 28.5**	**+1.1**
comp=Z,4.5nm,0.8s,baz=101,slow=1.5,SNR=13							
comp=Z,4.5nm,0.8s							
GEYT	**Alibeck**	**66.17**	**307**	P	**P**	**22 33 27.5**	**+0.1**
GEYT				IAmb	IAmb	22 33 33.3	
comp=Z,7.1nm,0.9s							
GYA0B	**ALIBECK ARRAY**	**66.17**	**307**	P	**P**	**22 33 27.7**	**+0.3**
GYA0B				IAmb	IAmb	22 33 33.2	
comp=Z,5.9nm,0.9s							
AFI	**Afiamalu**	**66.61**	**110**	LR	LR	23 02 24.8	
comp=Z,29nm,18.0s,baz=50,slow=36							
ABKAR	**Akbulak array**	**66.71**	**320**	P	**P**	**22 33 29.8**	**-0.7**
ABKAR	**Akbulak array**	**66.71**	**320**	P	**P**	**22 33 30.0**	**-0.6**
ABKAR				IAmb	IAmb	22 33 31.4	
comp=Z,2.9nm,0.7s							
LTZ	**Lake Taylor**	**67.52**	**144**	P	**P**	**22 33 35.9**	**+0.1**
BKZ	**Black Stump Fm**	**67.94**	**139**	P	**P**	**22 33 38.3**	**-0.3**
ARU	**Arti**	**69.19**	**327**	P	**P**	**22 33 45.6**	**-0.4**
ARU				IAmb	IAmb	22 33 45.8	
comp=Z,5.3nm,0.9s							
L19K	**White Mountain**	**76.66**	**28**	P	**P**	**22 34 30.7**	**+0

comp=Z,1.1nm,0.6s,baz=327,slow=6.0,SNR=12
VNDA LR LR 23 18 26.9
comp=Z,42nm,18.2s,baz=343,slow=37
comp=Z,1.1nm,0.6s
VNDA Vanda 89.52 173 P P 22 35 36.0 -0.2
BURAR Bucovina Array 89.66 318 P P 22 35 36.8 -0.9
BUR08 Bucovina Ar. S 89.66 318 P P 22 35 37.3 -0.5
NB2 NORSAR Subarra 92.84 334 P P 22 35 49.8 -2.3
comp=Z,2.4nm,0.8s,baz=67,slow=4.4
NB2 NORSAR Subarra 92.84 334 P P 22 35 49.8 -2.3
baz=67,slow=4.4
NOA NORSAR Array B 92.84 334 P P 22 35 50.1 -2.1
comp=Z,0.8nm,0.6s,baz=65,slow=4.5,SNR=6.1
NOA LR LR 23 20 43.9
comp=Z,37nm,19.8s,baz=80,slow=38
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 94.58 24 P P 22 35 59.4 -0.6
comp=Z,1.2nm,0.9s,baz=299,slow=5.4,SNR=3.2
comp=Z,1.2nm,0.9s
GERES GERESS Array B 96.57 322 P P 22 36 08.1 -1.5
comp=Z,0.6nm,0.6s,baz=54,slow=3.4,SNR=7.7
comp=Z,0.6nm,0.6s
YBH Yreka Blue Hor 99.42 45 LR LR 23 14 39.1
comp=Z,20nm,20.2s,baz=332,slow=31
TORD Torodi Ar. Bea 119.66 291 PKP PKPdf 22 41 28.7 -1.9
comp=Z,13nm,0.6s,baz=84,slow=2.1,SNR=5.1
PLCA Paso Flores 146.06 158 PKPbc PKPdf 22 42 19.5 +0.4
comp=Z,1.6nm,0.8s,baz=214,slow=4.1,SNR=7.3

*INET **01** 22:33:11.0±0.6, 8°.39N×83°.08W, h30km±999km, MW3.4*
*UCR **01** 22:33:13.1±1.6, 8°.70N×82°.94W, h27km±3km, MW3.7*
ISC 01 22:33:12.9±1.8, 8°.7N±0°.2×82°.91W±0°.08, h29km±7km, n16, σ0.94/22, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.12**	**327**	*eP*	**Pb**	**22 33 17.7**	**-0.7**
EDSV				*eS*	**Sb**	**22 33 23.0**	**+0.8**
SRBA	**San Rafael, Bu**	**0.68**	**319**	*eP*	**Pb**	**22 33 25.7**	**-0.6**
SRBA				*eS*	**Sn**	**22 33 36.5**	**+0.1**
PEZE	**Perez Zeledon,**	**1.01**	**311**	*eP*	**Pn**	**22 33 30.4**	**-0.8**
PEZE	**Perez Zeledon,**	**1.01**	**311**	*eP*	**Pn**	**22 33 30.6**	**-0.6**
PEZE				*eS*	**Sn**	**22 33 45.4**	**+0.9**
EDDO	**Dominical**	**1.09**	**299**	*eP*	**Pb**	**22 33 32.6**	**-0.5**
CDM	**Cerro de Muert**	**1.19**	**315**	*eP*	**Pn**	**22 33 33.7**	**-0.3**
CDM				*eS*	**Sb**	**22 33 50.2**	**0.0**
CDM	**Cerro de Muert**	**1.19**	**315**	*eP*	**Pn**	**22 33 33.7**	**-0.3**
CDM				*eS*	**Sb**	**22 33 50.1**	**-0.1**
RIMA	**Rio Macho**	**1.41**	**318**	*eP*	**Pn**	**22 33 37.0**	**+0.2**
RIMA	**Rio Macho**	**1.41**	**318**	*eP*	**Pn**	**22 33 36.9**	**+0.2**
RIMA				*eS*	**Sb**	**22 33 56.5**	**+0.3**
LCR2	**La Lucha 2**	**1.49**	**313**	*eP*	**Pn**	**22 33 37.8**	**-0.1**
HDC	**Heredia**	**1.75**	**317**	*eP*	**Pn**	**22 33 42.6**	**+1.2**
JACO	**JACO, Garabito**	**1.97**	**299**	*eP*	**Pn**	**22 33 43.7**	**-0.6**
LAFE	**Finca La Fe, P**	**2.25**	**299**	*eP*	**Pb**	**22 33 51.2**	**-1.8**
JTS	**Las Juntas de**	**2.55**	**308**	*eP*	**Pn**	**22 33 53.8**	**+1.5**
BCIP	**Isla Barro Col**	**3.06**	**81**	*eP*	**Pn**	**22 33 59.5**	**+0.1**
SAJU	**San Juanillo,**	**3.08**	**296**	*eP*	**Pn**	**22 34 01.7**	**+2.2**

WEL 01 22:42:33.8±1.6, 37°.5S±6°.×17°.9E±°, h11km±6km, M3.2/17, ML3.5/25, MLv3.2/17, Error ellipse: s-maj=0.0km s-min=0.0km az=81.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.65**	**241**	P	Pg	22 42 46.3	0.0
MXZ				S	Sg	22 42 54.0	-0.9
WMGZ	**Waiomatatini S**	**0.74**	**220**	P	Pn	22 42 49.9	-0.3
WMGZ				S	Sn	22 43 00.4	-1.0
PKGZ	**Pakihiroa**	**0.98**	**229**	P	Pb	22 42 52.8	0.0
PKGZ				S	Sg	22 43 05.5	-0.1
PUZ	**Puketiti**	**1.02**	**216**	P	Pn	22 42 53.7	-0.3
PUZ				S	Sn	22 43 07.6	-0.6
HAZ	**Te Kaha**	**1.10**	**243**	P	Pb	22 42 53.5	-1.3
HAZ				S	Sg	22 43 09.6	+0.2
RUGZ	**Raukumara Rang**	**1.28**	**236**	P	Pn	22 42 57.7	0.0
CNGZ	**Carnagh Statio**	**1.39**	**207**	P	Pb	22 42 59.5	-0.2
CNGZ				S	Sg	22 43 18.5	+0.1
TKGZ	**Te Karaka**	**1.50**	**218**	P	Pn	22 43 00.2	-0.4
MWZ	**Matawai**	**1.60**	**227**	P	Pn	22 43 01.9	-0.2
RIGZ	**Rimuhau**	**1.76**	**214**	P	Pn	22 43 03.8	-0.4
URZ	**Urewera**	**1.82**	**236**	P	Pn	22 43 05.3	+0.4
OPRZ	**Ohinepanea**	**2.04**	**252**	P	Pn	22 43 08.5	+0.4
KNZ	**Kokohu**	**2.06**	**211**	P	Pn	22 43 07.2	-1.1
MHGZ	**Mahia Peninsul**	**2.09**	**204**	P	Pn	22 43 08.4	-0.3
MKRZ	**Makatiti**	**2.21**	**246**	P	Pn	22 43 10.3	-0.1
WHHZ	**Waihua**	**2.30**	**217**	P	Pn	22 43 11.3	-0.3
MTHZ	**Maungataniwha**	**2.35**	**226**	P	Pn	22 43 12.5	+0.2
NMHZ	**Naumai**	**2.54**	**223**	P	Pn	22 43 15.2	+0.3
ARHZ	**Aropaoanui**	**2.56**	**218**	P	Pn	22 43 14.7	-0.5
BKZ	**Black Stump Fm**	**2.76**	**225**	P	Pn	22 43 17.6	-0.3
TOZ	**Tahuroa Road**	**2.84**	**259**	P	Pn	22 43 20.1	+1.1
MCHZ	**McNeill Hill**	**2.85**	**219**	P	Pn	22 43 18.4	-0.7
KWHZ	**Kaweka Forest**	**2.98**	**222**	P	Pn	22 43 20.3	-0.7
KAHZ	**Kahuranaki**	**3.04**	**213**	P	Pn	22 43 20.4	-1.4
MKAZ	**Moumakai**	**3.08**	**272**	P	Pn	22 43 22.5	+0.2
TMVZ	**Te Maari**	**3.21**	**234**	P	Pn	22 43 24.1	-0.1
NTVZ	**North Tongarir**	**3.21**	**234**	P	Pn	22 43 24.2	-0.1
KRVZ	**Karewarewa**	**3.23**	**234**	P	Pn	22 43 24.4	-0.2
HIZ	**Hauiti**	**3.53**	**248**	P	Pn	22 43 29.5	+1.0
BFZ	**Birch Farm**	**4.05**	**211**	P	Pn	22 43 32.9	-2.7
MRZ	**Mangatainoka R**	**4.33**	**217**	P	Pn	22 43 37.1	-2.5
OGWZ	**Otaki Gorge**	**4.65**	**219**	P	Pn	22 43 46.7	+2.8
OUZ	**Omahuta**	**4.83**	**293**	P	Pn	22 43 46.8	+0.4
CTZ	**Chatham Island**	**7.28**	**154**	P	Pn	22 44 20.4	+0.5

*MAN **01** 22:50:21.6, 13°.70N×120°.50E, h80km, mb4.7, ML3.6, MS3.5*
*IDC **01** 22:50:21.1±0.6, 13°.74N×120°.83E, h105km±4km, mb3.8/17, mbtmp4.2/18, MS3.0/7, Error ellipse: s-maj=22.3km s-min=11.4km az=70.0*
*NEIC **01** 22:50:22.4±1.4, 13°.81N±0°.08×120°.8E±0°.1, h111km±5km, mb4.5/36, Error ellipse: s-maj=16.5km s-min=10.9km az=77.0*
*DJA **01** 22:50:26.5±0.8, 14°N±4°.×12°1E±°, h160km±9km, M4.3/35, mB5.0/7, mb4.3/35, Mw(mB)4.4/7*
ISC 01 22:50:21.4±0.5, 13°.73N±0°.03×120°.55E±0°.04, h101km±5km, n131, σ1.53/145, mb4.5/40, 9C-15D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.30**	**271**	↓*eP*	**Pn**	**22 50 35.6**	**-0.5**
LUBP				*i* S	Sn	22 50 38.4	-8.6
TGY	**Tagaytay City**	**0.53**	**45**	P	**Pn**	**22 50 37.9**	**+0.3**
TGY				S	**Sn**	**22 50 50.1**	**+0.5**
TGY	**Tagaytay City**	**0.53**	**45**	↓*eP*	**Pn**	**22 50 38.4**	**+0.8**
TGY				*i* S	**Sn**	**22 50 49.8**	**+0.2**
MACP	**Maragondon, Ca**	**0.56**	**17**	↓*eP*	**Pn**	**22 50 37.1**	**-0.6**
MACP				*eS*	**Sn**	**22 50 49.1**	**-0.8**
LQP	**Lukban**	**1.03**	**68**	↑*eP*	**Pn**	**22 50 42.8**	**+0.4**
LQP				*eS*	**Sn**	**22 50 58.7**	**+0.5**
BOAC	**Boac**	**1.28**	**102**	↓*eP*	**Pn**	**22 50 45.1**	**0.0**
BOAC				*eS*	**Sn**	**22 51 04.0**	**+1.0**
BUSP	**Coron**	**1.75**	**191**	↓*eP*	**Pn**	**22 50 50.3**	**-0.6**
BUSP				*eS*	**Sn**	**22 51 12.0**	**-1.2**
GQP	**Guinayangan**	**1.85**	**84**	↑*eP*	**Pn**	**22 50 53.4**	**+1.4**
GQP				*eS*	**Sn**	**22 51 18.9**	**+3.5**
JCNP	**Jose Panganiba**	**2.15**	**75**	↑*eP*	**Pn**	**22 50 57.1**	**+1.1**
JCNP				*i* S	**Sn**	**22 51 24.6**	**+2.1**
BALP	**Baler**	**2.23**	**26**	↓*eP*	**Pn**	**22 50 58.9**	**+1.8**
BALP				*eS*	**Sn**	**22 51 29.4**	**+5.1**
SMPP	**San Manuel, Pa**	**2.41**	**3**	↓*eP*	**Pn**	**22 50 59.2**	**-0.2**
SMPP				*eS*	**Sn**	**22 51 27.0**	**-1.6**
BOLP	**Bolinao**	**2.71**	**347**	↓*eP*	**Pn**	**22 51 04.1**	**+0.8**
BOLP				*eS*	**Sn**	**22 51 37.0**	**+1.5**
JAP	**San Jose, Anti**	**3.26**	**155**	↑*eP*	**Pn**	**22 51 11.6**	**+0.9**
SAMP	**Sagada Mountai**	**3.35**	**6**	↓*eP*	**Pn**	**22 51 12.8**	**+0.9**
SAMP				*eS*	**Sn**	**22 51 47.5**	**-3.4**
PVCP	**Virac**	**3.50**	**92**	↓*eP*	**Pn**	**22 51 15.3**	**+1.4**
PVCP				*eS*	**Sn**	**22 51 56.3**	**+1.8**
PPR	**Puerto Princes**	**4.32**	**205**	↓*eP*	**Pn**	**22 51 25.5**	**+0.6**
PPR				*eS*	**Sn**	**22 52 16.7**	**+2.5**
CNOP	**Candoni, Negro**	**4.38**	**152**	↓*eP*	**Pn**	**22 51 26.8**	**+1.0**
CNOP				*i* S	**Sn**	**22 52 15.1**	**-0.7**
TABP	**Talibon, Bohol**	**5.17**	**134**	↑*iP*	**Pn**	**22 51 37.8**	**+1.4**
TABP				*i* S	Sn	22 52 50.0	+15
GHBP	**Garcia Hernand**	**5.50**	**137**	↑*iP*	Pn	22 51 47.2	+6.3
MSLP	**Maasin**	**5.52**	**130**	↑*eP*	**Pn**	**22 51 43.5**	**+2.2**
PAGZ	**Pagadian**	**6.47**	**154**	↓*eP*	**Pn**	**22 51 57.4**	**+3.3**
PAGZ				*eS*	**Sn**	**22 53 08.8**	**+2.2**
KCP	**Kidapawan**	**8.03**	**146**	↑*eP*	**Pn**	**22 52 17.1**	**+1.7**
KCP				*eS*	**Sn**	**22 53 42.5**	**-2.1**
DAV	**Davao City (W)**	**8.26**	**143**	LR	LR	22 56 04.0	
comp=Z,104nm,18.4s,baz=247,slow=42							
MYLDM	**Lahad Datu**	**8.73**	**194**	Pn	**Pn**	**22 52 28.9**	**+4.0**
KKM	**Kota Kinabalu**	**8.75**	**210**	Pn	Pn	22 52 30.3	+5.1
QIZ	**Qiongzhong**	**11.55**	**299**	Pn	**Pn**	**22 53 04.6**	**+1.4**
GTOI	**Gorontalo**	**13.23**	**169**	P	**P**	**22 53 29.1**	**-2.5**
12nm,0.8s							
MRSI	**Marisa**	**13.24**	**174**	P	**P**	**22 53 29.3**	**-2.3**
18nm,0.6s							
MPSI	**Mapaga**	**13.32**	**183**	P	**Pn**	**22 53 30.2**	**+3.6**
771nm14nm,1.0s							
SBUM	**Sibu**	**13.91**	**217**		**P**	**22 53 42.1**	**+3.1**
TNTI	**Ternate**	**14.53**	**152**	Pn	**Pn**	**22 53 39.5**	**-2.7**
TNTI	**Ternate**	**14.53**	**152**	P	**Pn**	**22 53 40.3**	**-2.0**
11nm,0.5s							
APSI	**Ampana**	**14.59**	**176**	P	**P**	**22 53 45.9**	**-0.7**
35nm,1.1s							
LUWI	**Luwuk**	**14.84**	**171**	P	**P**	**22 53 49.2**	**-0.2**
LUWI	**Luwuk**	**14.84**	**171**	P	**P**	**22 53 50.3**	**+0.9**
2μm36nm,1.1s							
LBMI	**Labuha**	**15.85**	**154**	P	**Pn**	**22 53 57.9**	**-1.0**
16nm,0.6s							
SANI	**Sanana**	**16.58**	**161**	P	**Pn**	**22 54 05.6**	**-2.3**
18nm,0.9s							
TTSI	**Tana Toraja**	**16.68**	**183**	P	**P**	**22 54 11.6**	**+1.8**
2μm14nm,0.8s							
SPSI	**Sidrap Palu**	**17.59**	**183**	P	**P**	**22 54 19.9**	**0.0**
15nm,0.9s							
SIJI	**Sorong**	**17.97**	**143**	LR	LR	23 01 17.8	
comp=Z,42nm,19.9s,baz=106,slow=37							
BNSI	**Bone**	**18.02**	**181**	P	**Pn**	**22 54 27.4**	**+2.0**
11nm,0.6s							
NLAI	**Namlea**	**18.07**	**158**	P	**Pn**	**22 54 27.0**	**+1.0**
11nm,0.7s							
KAPI	**Kappang**	**18.64**	**183**	P	**Pn**	**22 54 32.9**	**+0.1**
9.0nm,0.4s,baz=34,slow=3.3,SNR=10							
KAPI				LR	LR	23 02 20.0	
comp=Z,18nm,19.6s,baz=13,slow=38							
KAPI	**Kappang**	**18.64**	**183**	P	**P**	**22 54 32.4**	**+1.1**
MSAI	**Masohi**	**18.89**	**153**	P	**Pn**	**22 54 35.5**	**-0.3**
2μm7.8nm,0.9s							
BKSI	**Bulukumba**	**18.93**	**181**	P	**P**	**22 54 35.5**	**+1.0**
17nm,0.6s							
BBSI	**Bau Bau**	**19.20**	**174**	P	**Pn**	**22 54 39.3**	**-0.1**
28nm,1.1s							
ENH	**Enshi**	**19.38**	**330**	P	**P**	**22 54 39.6**	**+0.3**
BSSI	**Bau Bau, Buton**	**19.74**	**180**	P	**P**	**22 54 42.4**	**-1.0**
573nm16nm,0.8s							
FAKI	**Fak Fak**	**20.20**	**144**	P	**P**	**22 54 48.0**	**-0.3**
KMI	**Kunming**	**20.24**	**307**	↓P	**P**	**22 54 52.5**	**+3.5**
KMI				sP	sP	22 55 36.8	+17
CM31	**Chiang Mai Arr**	**21.28**	**286**	P	**P**	**22 55 00.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**21.28**	**286**	P	**P**	**22 55 02.8**	**+2.8**
2.5nm,0.8s,baz=96,slow=7.6,SNR=22							
2.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.28**	**286**	P	**P**	**22 55 00.5**	**+0.5**
CHTO	**Chiang Mai**	**21.34**	**287**	P	**P**	**22 55 02.4**	**+1.8**
PZH	**PanZhiHua**	**21.72**	**309**	P	**P**	**22 55 06.6**	**+1.9**
MMRI	**Maumere**	**22.28**	**176**	P	**P**	**22 55 11.0**	**+0.4**
MMRI				IAmb	IAmb	22 55 16.2	
comp=Z,20nm,0.7s							
MMRI	**Maumere**	**22.28**	**176**	P	**P**	**22 55 11.5**	**+1.0**
comp=Z,32nm,1.0s							
SRBI	**Singaraja**	**22.31**	**194**	P	**P**	**22 55 12.3**	**+1.5**
comp=Z,20nm,0.7s							
EDFI	**Ende, Flores**	**22.36**	**177**	P	**P**	**22 55 11.3**	**-0.2**
comp=Z,460nmcomp=Z,58nm,0.6s							
PLAI	**Plampang**	**22.58**	**187**	P	**P**	**22 55 14.6**	**+1.0**
comp=Z,1μmcomp=Z,125nm,0.8s							
TWSI	**Taliwang, Sumb**	**22.62**	**189**	P	**P**	**22 55 14.6**	**+0.6**
comp=Z,11nm,0.8s							
XAN	**Xi'an**	**22.81**	**334**	P	**P**	**22 55 15.5**	**-0.4**
XAN				pP	pP	22 55 38.8	+3.2
JAGI	**Jajag, Banyuwa**	**22.95**	**196**	P	**P**	**22 55 18.1**	**+0.8**
JAGI	**Jajag, Banyuwa**	**22.95**	**196**	P	**P**	**22 55 18.7**	**+1.4**
comp=Z,36nm,0.8s							
IGBI	**Denpasar**	**23.03**	**194**	P	**P**	**22 55 18.0**	**-0.1**
comp=Z,43nm,1.1s							
JMN	**Monobe**	**23.30**	**29**	P	**P**	**22 55 18.0**	**-2.6**
JMN				IAmb	IAmb	22 55 22.4	
comp=Z,33nm,1.1s							
SOEI	**Soe**	**23.62**	**171**	P	**P**	**22 55 23.7**	**+0.1**
SOEI				IAmb	IAmb	22 55 32.1	
comp=Z,15nm,0.7s							
SOEI	**Soe**	**23.62**	**171**	P	**P**	**22 55 22.4**	**-1.3**
comp=Z,25nm,0.7s							
BATI	**Baumata**	**23.98**	**172**	P	**P**	**22 55 25.6**	**-1.2**
comp=Z,58nm,0.8s							
HNS	**HongShan**	**24.14**	**349**	↑P	**P**	**22 55 28.0**	**0.0**
KSRS	**Korea Array**	**24.53**	**14**	P	**P**	**22 55 30.9**	**-0.6**
comp=Z,0.3nm,0.3s,baz=198,slow=9.4,SNR=2.3							
KSRS				LR	LR	23 05 59.1	
comp=Z,22nm,19.9s,baz=220,slow=38							
comp=Z,0.3nm,0.3s							
JHJ	**Hachijo jima 2**	**26.07**	**39**	LR	LR	23 03 56.0	
comp=Z,17nm,21.1s,baz=126,slow=32							
MJAR	**Matsushiro Arr**	**27.68**	**32**	P	**P**	**22 55 57.6**	**-2.4**
comp=Z,0.4nm,0.5s,baz=220,slow=6.7,SNR=4.1							
comp=Z,0.4nm,0.5s							
HHC	**Hu-ho-hao-te**	**28.14**	**345**	*eP*	**P**	**22 56 06.9**	**+2.8**
GTA	**Gaotai**	**31.44**	**328**	↓P	**P**	**22 56 34.7**	**+1.3**
GTA				pP	pP	22 56 38.7	-17
GTA				sP	sP	22 56 43.5	-24
LSA	**Lhasa**	**31.48**	**305**	P	**P**	**22 56 35.2**	**+0.9**
LSA				IAmb	IAmb	22 56 37.7	
comp=Z,6.1nm,0.6s							
TAPN	**Taplejung**	**33.49**	**299**	*eP*	**P**	**22 56 52.5**	**+0.8**
ODAN	**Odare**	**33.62**	**298**	*eP*	**P**	**22 56 54.2**	**+1.5**
comp=Z,4.9nm,0.8s							
RAMN	**Ramite**	**34.33**	**298**	*eP*	**P**	**22 57 00.0**	**+1.2**
comp=Z,49nm,0.8s							
JIRN	**Jiri**	**34.87**	**299**	*eP*	**P**	**22 57 04.9**	**+1.2**
comp=Z,45nm,0.7s							
GUN	**Gumba**	**35.21**	**299**	*eP*	**P**	**22 57 07.8**	**+1.3**
PKI	**Pulchoki**	**35.51**	**298**	*eP*	**P**	**22 57 09.7**	**+0.5**
PKIN	**Phulchoki**	**35.53**	**298**	*eP*	**P**	**22 57 10.0**	**+0.8**
DMN	**Daman**	**35.78**	**298**	*eP*	**P**	**22 57 12.5**	**+1.1**
ULN	**Ulaanbaatar**	**35.84**	**344**	P	**P**	**22 57 11.0**	**-0.5**
ULN				IAmb	IAmb	22 57 13.8	
comp=Z,4.7nm,0.9s							
WB0	**Warramunga Arr**	**35.96**	**157**	P	**P**	**22 57 10.9**	**-1.7**
WB0				IAmb	IAmb	22 57 17.8	
comp=Z,12nm,1.4s							
SONM	**Songino Array**	**35.99**	**344**	P	**P**	**22 57 12.9**	**+0.2**
comp=Z,7.6nm,1.0s,baz=163,slow=9.1,SNR=22							
comp=Z,7.6nm,1.0s							
SONM	**Songino Array**	**35.99**	**344**	P	**P**	**22 57 12.1**	**-0.6**
SONM				IAmb	IAmb	22 57 14.9	
comp=Z,6.1nm,1.1s							
WRA	**Warramunga Arr**	**36.10**	**158**	P	**P**	**22 57 10.9**	**-2.9**
comp=Z,2.2nm,0.6s,baz=334,slow=9.7,SNR=12							
WRA				pP	**pP**	**22 57 35.4**	**-1.5**
comp=Z,3.2nm,0.7s,baz=336,slow=9.6,SNR=6.5							
WRA				LR	LR	23 14 01.1	
comp=Z,88nm,18.1s,baz=345,slow=39							
comp=Z,2.2nm,0.6s							
WRA	**Warramunga Arr**	**36.10**	**158**	P	**P**	**22 57 11.6**	**-2.2**
GKN	**Gorkha**	**36.29**	**299**	*eP*	**P**	**22 57 16.0**	**+0.4**
KLR	**Kul'dur**	**36.58**	**12**	P	**P**	**22 57 17.8**	**+0.2**
comp=Z,1.7nm,0.6s,baz=235,slow=7.5,SNR=6.7							
KLR				LR	LR	23 11 56.9	
comp=Z,26nm,19.1s,baz=288,slow=36							
comp=Z,1.7nm,0.6s							
DANN	**Dangsing**	**37.13**	**299**	*eP*	**P**	**22 57 23.3**	**+0.5**
AS31	**Alice Springs**	**39.39**	**161**	P	**P**	**22 57 40.2**	**-1.3**
ASAR	**Alice Springs**	**39.39**	**161**	P	**P**	**22 57 40.0**	**-1.5**
comp=Z,2.3nm,0.4s,baz=338,slow=6.9,SNR=23							
ASAR				pP	**pP**	**22 58 03.9**	**-1.0**
comp=Z,1.7nm,0.6s,baz=341,slow=6.4,SNR=4.6							
comp=Z,2.3nm,0.4s							
WMQ	**Urumqi**	**41.10**	**323**	*eP*	**P**	**22 57 58.0**	**+2.6**
CTA	**Charters Tower**	**42.05**	**143**	P	**P**	**22 58 02.5**	**-0.9**
comp=Z,2.5nm,0.8s,baz=333,slow=6.8,SNR=3.6							
comp=Z,2.5nm,0.8s							
MORW	**Morawa**	**42.77**	**186**	P	**P**	**22 58 07.8**	**-1.3**
FORT	**Forrest**	**44.84**	**171**	P	**P**	**22 58 24.1**	**-1.5**
MK31	**Makanchi Array**	**45.92**	**324**	P	**P**	**22 58 34.4**	**+0.3**
MK31				IAmb	IAmb	22 58 36.0	
comp=Z,4.8nm,0.8s							
MKAR	**Makanchi Array**	**45.92**	**324**	P	**P**	**22 58 34.9**	**+0.8**
comp=Z,5.3nm,0.7s,baz=130,slow=8.7,SNR=52							
comp=Z,5.3nm,0.7s							
MAKZ	**Makanchi**	**46.11**	**324**	P	**P**	**22 58 36.3**	**+0.7**
KSH	**Kashi**	**46.77**	**312**	P	**P**	**22 58 42.0**	**+1.0**
NRN	**Naryn**	**47.45**	**314**	P	**P**	**22 58 46.9**	**+0.4**
NRN				IAmb	IAmb	22 58 48.7	
comp=Z,4.8nm,0.8s							
EIDS	**Eidsvold**	**48.94**	**142**	P	**P**	**22 58 55.3**	**-2.3**
EIDS				IAmb	IAmb	22 59 08.0	
comp=Z,7.2nm,1.4s							
ZAA0	**Zalesovo Array**	**48.97**	**333**	P	**P**	**22 58 56.9**	**-0.6**
ZAA0				IAmb	IAmb	22 58 57.6	
comp=Z,2.5nm,0.5s							
ZALV	**Zalesovo Beam**	**48.97**	**333**	P	**P**	**22 58 57.4**	**-0.1**
comp=Z,2.0nm,0.3s,baz=124,slow=7.2,SNR=13							
comp=Z,2.0nm,0.3s							
ZALV	**Zalesovo Beam**	**48.97**	**333**	P	**P**	**22 58 56.5**	**-1.0**
KURK	**Kurchatov**	**50.09**	**326**	P	**P**	**22 59 06.6**	**+0.6**
BTK	**Batken**	**50.71**	**311**	P	**P**	**22 59 11.6**	**+0.5**
BTK				IAmb	IAmb	22 59 14.7	
comp=Z,4.8nm,1.1s							
GAR	**Garm**	**50.79**	**309**	P	**P**	**22 59 12.3**	**+0.6**
KK31	**Karatay Array**	**51.85**	**314**	P	**P**	**22 59 19.7**	**+0.2**
KK31				IAmb	IAmb	22 59 21.1	
comp=Z,6.2nm,0.9s							
KKAR	**Karatay Array**	**51.85**	**314**	P	**P**	**22 59 20.1**	**+0.6**
KKAR	**Karatay Array**	**51.85**	**314**	P	**P**	**22 59 19.7**	**+0.2**
KKAR				IAmb	IAmb	22 59 21.0	
comp=Z,6.2nm,0.9s							
BRVK	**Borovoye**	**55.74**	**326**	P	**P**	**22 59 48.2**	**+0.6**
NRIK	**Noril'sk**	**59.35**	**347**	P	**P**	**23 00 11.1**	**-1.5**
comp=Z,2.7nm,0.4s,baz=142,slow=9.1,SNR=4.7							
comp=Z,2.7nm,0.4s							
NRIK	**Noril'sk**	**59.35**	**347**	P	**P**	**23 00 11.8**	**-0.8**
NRIK				IAmb	IAmb	23 00 12.9	
comp=Z,3.7nm,0.7s							
GEYT	**Alibeck**	**60.00**	**306**	P	**P**	**23 00 18.9**	**+1.2**
comp=Z,5.5nm,0.8s,baz=134,slow=4.3,SNR=9.5							
comp=Z,5.5nm,0.8s							
GEYT	**Alibeck**	**60.00**	**306**	P	**P**	**23 00 18.6**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**60.00**	**306**	P	**P**	**23 00 18.3**	**+0.5**
ABKAR	**Akbulak array**	**60.62**	**319**	P	**P**	**23 00 21.3**	**-0.4**
ABKAR				IAmb	IAmb	23 00 22.7	
comp=Z,4.5nm,0.7s							
ABKAR	**Akbulak array**	**60.62**	**319**	P	**P**	**23 00 21.2**	**-0.4**
ARU	**Arti**	**63.28**	**327**	P	**P**	**23 00 38.7**	**-0.6**
ARU				IAmb	IAmb	23 00 39.4	
comp=Z,4.2nm,0.7s							
RAYN	**Ar Rayn**	**71.11**	**290**	P	**P**	**23 01 29.8**	**+0.3**
RAYN				IAmb	IAmb	23 01 31.0	
comp=Z,5.0nm,0.9s							
ARCES	**ARCESS Array B**	**79.01**	**339**	P	**P**	**23 02 13.5**	**-0.4**
comp=Z,1.4nm,0.6s,baz=58,slow=4.6,SNR=8.1							
comp=Z,1.4nm,0.6s							
BRTR	**Keskin Array B**	**79.02**	**308**	P	**P**	**23 02 14.6**	**-0.2**
comp=Z,0.6nm,0.7s,baz=131,slow=5.6,SNR=6.3							
comp=Z,0.6nm,0.7s							
FINES	**FINESS Array B**	**80.19**	**331**	P	**P**	**23 02 19.8**	**-0.6**
comp=Z,4.0nm,1.1s,baz=17,slow=5.8,SNR=1.5							
comp=Z,4.0nm,1.1s							
AKASG	**Malin Array Be**	**80.35**	**320**	P	**P**	**23 02 20.0**	**-1.5**
comp=Z,0.4nm,0.6s,baz=65,slow=4.4,SNR=1.7							
comp=Z,0.4nm,0.6s							
NB2	**NORSAR Subarra**	**87.17**	**333**	P	**P**	**23 02 54.7**	**-1.5**
comp=Z,1.7nm,0.8s,baz=64,slow=5.1							
NOA	**NORSAR Array B**	**87.17**	**333**	P	**P**	**23 02 53.9**	**-2.3**
comp=Z,0.8nm,0.8s,baz=67,slow=4.7,SNR=4.3							
comp=Z,0.8nm,0.8s							

**IDC 01 22:53:26.1±2.8, 7°.54S×129°.56E, h116km±38km, mb3.0/1

OGSI				Sg	Sg	23 17 42.3	-0.2
OGSI	**Sixt**	**0.07**	**319**	⇓Pg	Pg	23 17 40.9	+0.3
OGSI				Sg	Sg	23 17 42.3	-0.2
SEMOS	**Emosson Stauma**	**0.10**	**56**	⇑Pg	Pg	23 17 40.8	-0.2
SEMOS				Sg	Sg	23 17 42.0	-1.2
SALAN	**Lac Salanfe**	**0.17**	**39**	⇑Pg	Pg	23 17 42.0	0.0
SALAN				Sg	Sg	23 17 43.9	-0.9
SALAN	**Lac Salanfe**	**0.17**	**39**	P	Pg	23 17 42.0	0.0
SALAN				S	Sg	23 17 43.9	-0.9
SMAO	**Martigny, Rue**	**0.20**	**64**	⇑Pg	Pg	23 17 42.5	+0.2
SMUK	**Muraz-Klaeranl**	**0.28**	**17**	⇑Pg	Pg	23 17 44.2	+0.4
REMY	**Saint-Rhmy-en**	**0.29**	**127**	⇓Pg	Pb	23 17 44.9	-0.5
REMY				Sg	Sg	23 17 49.0	+0.7
REMY	**Saint-Rhmy-en**	**0.29**	**127**	P	Pb	23 17 44.8	-0.5
REMY				S	Sg	23 17 49.0	+0.7
REMY	**Saint-Rhmy-en**	**0.29**	**127**	⇓*i*P	Pb	23 17 44.9	-0.5
REMY				S	Sg	23 17 48.9	+0.7
REMY				AML	AML		
	comp=E,6700µm,1.1s						
REMY				AML	AML		
	comp=N,9020µm,0.4s						
REMY				AML	AML		
	comp=N,9025µm,0.4s						
REMY				AML	AML		
	comp=E,6695µm,1.1s						
MRGE	**Morge**	**0.30**	**145**	P	Pb	23 17 45.0	-0.4
MRGE				S	Sb	23 17 49.1	-1.3
MRGE	**Morge**	**0.30**	**145**	⇓P	Pb	23 17 45.0	-0.4
MRGE				S	Sb	23 17 49.0	-1.3
GRYON	**Gryon**	**0.31**	**40**	⇑Pg	Pg	23 17 44.5	+0.1
SAIG	**Aigle Rue de l**	**0.32**	**19**	⇑Pg	Pg	23 17 44.8	+0.3
AIGLE	**Aigle**	**0.34**	**16**	⇑Pg	Pg	23 17 45.1	+0.2
AIGLE	**Aigle**	**0.34**	**16**	⇑Pg	Pg	23 17 45.1	+0.2
RSL	**Roselend**	**0.35**	**203**	P	Pb	23 17 46.2	-0.2
RSL				S	Sb	23 17 51.4	-0.5
RSL	**Roselend**	**0.35**	**203**	⇑Pg	Pb	23 17 46.2	-0.2
RSL				Sg	Sb	23 17 51.2	-0.7
DIX	**Grande Dixence**	**0.41**	**81**	⇓Pg	Pg	23 17 46.6	+0.3
DIX				Sg	Sg	23 17 51.7	-0.2
DIX	**Grande Dixence**	**0.41**	**81**	P	Pg	23 17 46.6	+0.3
DIX				S	Sg	23 17 51.7	-0.2
DIX	**Grande Dixence**	**0.41**	**81**	⇓*i*P	Pg	23 17 46.6	+0.3
DIX				S	Sg	23 17 51.6	-0.2
DIX				AML	AML		
	comp=E,2280µm,0.3s						
DIX				AML	AML		
	comp=N,9940µm,0.2s						
DIX				AML	AML		
	comp=N,9940µm,1.8s						
DIX				AML	AML		
	comp=E,2280µm,1.7s						
DIX	**Grande Dixence**	**0.41**	**81**	⇓Pg	Pg	23 17 46.6	+0.3
DIX				Sg	Sg	23 17 51.7	-0.2
ESION	**College des Cr**	**0.42**	**60**	⇑Pg	Pg	23 17 46.7	+0.2
SIOM	**Sion-Mayennets**	**0.43**	**60**	⇑Pg	Pg	23 17 46.8	+0.2
SIOV	**Sion-Valere**	**0.44**	**60**	⇑Pg	Pg	23 17 46.8	+0.1
OG02	**Monnetier-Morn**	**0.44**	**289**	⇓Pg	Pb	23 17 47.9	+0.2
SIOO	**Sion-Ophtalmol**	**0.45**	**61**	⇑Pg	Pg	23 17 47.2	+0.3
SENIN	**Lac Senin/Sane**	**0.48**	**43**	⇑Pg	Pg	23 17 47.6	+0.1
SENIN	**Lac Senin/Sane**	**0.48**	**43**	Pg	Pg	23 17 47.7	+0.1
SENIN				Sg	Sg	23 17 53.5	-0.5
LPL	**La Plagne**	**0.50**	**187**	*e*Pg	Pb	23 17 48.8	-0.1
LPL				*e*Sg	Sb	23 17 55.8	-0.5
	comp=E,634nm,0.3s						
LPG	**La Plagne**	**0.52**	**185**	*e*Pg	Pb	23 17 49.3	+0.1
LPG				*e*Sg	Sb	23 17 56.3	-0.5
	comp=E,999nm,0.3s						
SIEB	**Ecole de Borzu**	**0.57**	**60**	⇑Pg	Pg	23 17 49.1	0.0
VANNI	**Vissoie, Val d**	**0.57**	**70**	⇑Pg	Pg	23 17 49.4	+0.1
VANNI				Sg	Sg	23 17 56.4	-0.5
VANNI	**Vissoie, Val d**	**0.57**	**70**	P	Pg	23 17 49.4	+0.1
VANNI				S	Sg	23 17 56.4	-0.5
LSD	**Lago del Serru**	**0.60**	**158**	⇓Pg	Pb	23 17 50.5	-0.1
LSD				Sg	Sb	23 17 58.2	-0.8
LSD	**Lago del Serru**	**0.60**	**158**	P	Pb	23 17 50.5	-0.1
LSD				S	Sb	23 17 58.2	-0.8
LSD	**Lago del Serru**	**0.60**	**158**	P	Pb	23 17 50.5	-0.1
LSD				S	Sb	23 17 58.2	-0.8
LSD				AML	AML		
	comp=E,5205µm,0.2s						
LSD				AML	AML		
	comp=N,2775µm,0.3s						
GIMEL	**St. Georges /**	**0.65**	**324**	⇓Pg	Pb	23 17 51.7	+0.3
GIMEL	**St. Georges /**	**0.65**	**324**	P	Pb	23 17 51.6	+0.3
GIMEL				S	Sb	23 18 01.2	+0.8
GIMEL	**St. Georges /**	**0.65**	**324**	Sg	Sb	23 18 01.3	+0.8
GIMEL	**St. Georges /**	**0.65**	**324**	⇓Pg	Pb	23 17 51.7	+0.3
SMOE	**Moudon cole,**	**0.66**	**359**	⇑Pg	Pb	23 17 51.6	+0.2
CIRO	**Champorcher**	**0.67**	**128**	⇓Pg	Pb	23 17 51.2	-0.6
CIRO	**Champorcher**	**0.67**	**128**	P	Pb	23 17 51.2	-0.6
CIRO				S	Sg	23 17 59.7	-0.1
CIRO	**Champorcher**	**0.67**	**128**	⇓*i*P	Pb	23 17 51.2	-0.6
CIRO				S	Sg	23 17 59.6	-0.2
CIRO				AML	AML		
	comp=E,1246µm,0.6s						
CIRO				AML	AML		
	comp=N,1940µm,0.6s						
CIRO				AML	AML		
	comp=E,1246µm,0.6s						
LKBD	**Leukerbad**	**0.67**	**56**	⇑Pg	Pg	23 17 51.0	-0.1
LKBD2	**Leukerbad 2**	**0.68**	**58**	⇑Pg	Pg	23 17 51.0	-0.2
SATI	**Passo dei Sala**	**0.74**	**100**	⇓Pg	Pg	23 17 52.0	-0.5
SATI	**Passo dei Sala**	**0.74**	**100**	P	Pg	23 17 52.0	-0.5
SATI				S	Sg	23 18 01.7	-0.6
SATI	**Passo dei Sala**	**0.74**	**100**	⇓P	Pg	23 17 52.0	-0.5
SATI				S	Sg	23 18 01.7	-0.6
SATI				AML	AML		
	comp=E,592µm,1.5s						
SATI				AML	AML		
	comp=N,600µm,1.3s						
SATI				AML	AML		
	comp=E,592µm,0.5s						
TORNY	**Torny/Romont**	**0.77**	**7**	⇑Pg	Pb	23 17 53.3	0.0
TORNY	**Torny/Romont**	**0.77**	**7**	⇑Pg	Pb	23 17 53.3	0.0
TORNY				Pn	Pn	23 17 56.3	+1.6
LAUCH	**Lauchernalp**	**0.77**	**58**	⇑Pg	Pg	23 17 52.7	-0.3
LAUCH	**Lauchernalp**	**0.77**	**58**	P	Pg	23 17 52.8	-0.3
LAUCH				S	Sg	23 18 03.3	+0.1
CABF	**La Chapelle**	**0.78**	**320**	*e*Pg	Pb	23 17 54.1	+0.4
CABF				*e*Sg	Sb	23 18 04.6	+0.3
CABF				*e*Sn	Sn	23 18 07.8	+1.0
	comp=E,804nm,0.3s						
MMK	**Mattmark**	**0.80**	**87**	P	Pg	23 17 52.9	-0.6
MMK				S	Sg	23 18 02.5	-1.4
MMK	**Mattmark**	**0.80**	**87**	⇓P	Pg	23 17 52.9	-0.6
MMK				S	Sg	23 18 02.6	-1.4
MMK				AML	AML		
	comp=E,538µm,0.3s						
MMK				AML	AML		
	comp=N,736µm,0.2s						
MMK				AML	AML		
	comp=N,736µm,0.2s						
MMK				AML	AML		
	comp=E,538µm,0.3s						
OGMO	**Fort Saint-Gob**	**0.81**	**187**	P	Pb	23 17 54.5	+0.3
OGMO				S	Sn	23 18 06.9	-0.5
OGMO	**Fort Saint-Gob**	**0.81**	**187**	⇑Pg	Pb	23 17 54.4	+0.3
TRAV	**Traversella**	**0.82**	**127**	P	Pb	23 17 53.9	-0.3
TRAV				S	Sg	23 18 04.0	-0.6
TRAV	**Traversella**	**0.82**	**127**	⇓P	Pb	23 17 53.9	-0.3
TRAV				S	Sg	23 18 04.7	+0.1
TRAV				AML	AML		
	comp=N,1760µm,0.3s						
TRAV				AML	AML		
	comp=E,1199µm,1.2s						
TRAV				AML	AML		
	comp=E,1069µm,0.2s						
WIMIS	**Wimmis**	**0.86**	**40**	⇑Pg	Pg	23 17 54.5	-0.1
SIMPL	**Simplonpass**	**0.86**	**74**	⇓Pg	Pg	23 17 54.4	-0.3
SIMPL	**Simplonpass**	**0.86**	**74**	P	Pg	23 17 54.4	-0.3
SIMPL				S	Sg	23 18 05.3	-0.7
OG35	**Corcelles**	**0.87**	**272**	⇓Pg	Pn	23 17 56.2	+0.1
OG35	**Corcelles**	**0.87**	**272**	⇓Pg	Pn	23 17 56.2	+0.1
OG35				Sg	Sb	23 18 08.4	+1.6
OG35				Sn	Sn	23 18 12.0	+3.1
OGSM	**Saint Maurice**	**0.88**	**243**	⇑Pg	Pn	23 17 56.7	+0.4
OGSM				Sg	Sn	23 18 09.1	0.0
OGSM				Sn	Sb	23 18 12.9	+5.9
GDM	**Grand'Maison**	**0.95**	**212**	⇑Pg	Pb	23 17 56.8	+0.3
BRANT	**Les Verrieres**	**0.95**	**346**	Pg	Pb	23 17 57.5	+0.9
BRANT				Pn	Pn	23 17 59.1	+1.7
BRANT	**Les Verrieres**	**0.95**	**346**	Sn	Sn	23 18 12.9	+1.9
BNI	**Bardonecchia**	**0.97**	**186**	⇑Pg	Pb	23 17 57.2	+0.4
BNI	**Bardonecchia**	**0.97**	**186**	Pg	Pb	23 17 57.2	+0.4
BNI				Sg	Sb	23 18 10.6	+1.1
BNI	**Bardonecchia**	**0.97**	**186**	P	Pb	23 17 57.2	+0.4
BNI				S	Sb	23 18 10.4	+0.8
BNI	**Bardonecchia**	**0.97**	**186**	⇑*i*P	Pb	23 17 57.2	+0.4
BNI				S	Sb	23 18 10.7	+1.1
BNI				AML	AML		
	comp=E,272µm,0.3s						
BNI				AML	AML		
	comp=N,346µm,0.5s						
BNI				AML	AML		
	comp=N,381µm,0.4s						
BNI				AML	AML		
	comp=E,352µm,0.3s						
RIVEL	**MONT RIVEL**	**0.97**	**321**	Pg	Pb	23 17 57.4	+0.6
RIVEL				Pn	Pn	23 17 59.6	+2.1
FIESA	**Fiescheralp**	**0.99**	**64**	⇑Pg	Pg	23 17 56.8	-0.3
WOLEN	**Wohlen bei Ber**	**1.05**	**21**	⇑Pg	Pb	23 17 58.5	+0.2
RRL	**Rocca Remolon**	**1.09**	**181**	S	Sb	23 18 14.3	+1.0
RRL	**Rocca Remolon**	**1.09**	**181**	P	Pn	23 17 59.6	+0.2
HASLI	**Hasliberg/Brie**	**1.18**	**51**	⇑Pg	Pg	23 18 00.5	-0.3
BHB	**Bricherasio**	**1.21**	**165**	P	Pn	23 18 01.8	+1.0
BHB	**Bricherasio**	**1.21**	**165**	P	Pn	23 18 01.8	+1.0
MONC	**Moncucco Torin**	**1.22**	**140**	P	Pn	23 18 03.2	+2.3
MONC				S	Sn	23 18 22.7	+5.3
MONC	**Moncucco Torin**	**1.22**	**140**	P	Pn	23 18 02.9	+2.0
MONC				AML	AML		
	comp=E,1246µm,0.9s						
MONC				AML	AML		
	comp=N,924µm,1.3s						
CHMF	**Charmoille**	**1.24**	**355**	⇑Pg	Pn	23 18 02.2	+0.9
CHMF	**Charmoille**	**1.24**	**355**	⇑Pg	Pn	23 18 02.2	+0.9
CHMF				Sg	Sb	23 18 18.6	+1.2
ORIF	**Oris-en-Rattie**	**1.28**	**211**	*e*Pn	Pn	23 18 02.7	+0.9
ORIF				*e*Sn	Sn	23 18 19.5	+0.5
	comp=N,416nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.28**	**211**	⇑Pn	Pn	23 18 02.8	+0.9
MBDF	**Montbardon**	**1.29**	**182**	*e*Pn	Pn	23 18 02.9	+0.9
MBDF				*e*Sn	Sb	23 18 19.1	+0.3
	comp=N,1µm,0.7s						
BOUC	**Bouclans**	**1.29**	**343**	⇑Pn	Pn	23 18 03.0	+1.0
BOUC				Sg	Sb	23 18 19.8	+0.9
SAIRA	**Les Sairains D**	**1.30**	**8**	⇑Pg	Pb	23 18 02.9	+0.4
FUSIO	**Fusio**	**1.35**	**70**	P	Pg	23 18 03.4	-0.7
FUSIO				S	Sn	23 18 22.2	+1.3
FUSIO	**Fusio**	**1.35**	**70**	P	Pg	23 18 03.4	-0.7
FUSIO				AML	AML		
	comp=N,680µm,0.9s						
FUSIO				AML	AML		
	comp=E,694µm,0.3s						
FUSIO				AML	AML		
	comp=N,680µm,1.1s						
VARE	**Varese**	**1.37**	**95**	⇓Pg	Pn	23 18 03.4	+0.3
VARE	**Varese**	**1.37**	**95**	P	Pn	23 18 03.4	+0.3
VARE				S	Sg	23 18 21.5	-0.6
VARE	**Varese**	**1.37**	**95**	P	Pn	23 18 03.6	+0.6
VARE				AML	AML		
	comp=N,814µm,1.5s						
VARE				AML	AML		
	comp=E,436µm,0.6s						
VARE				AML	AML		
	comp=N,814µm,0.5s						
MTI02	**Mont Terri, (H**	**1.39**	**10**	⇑Pg	Pn	23 18 03.9	+0.7
BNALP	**Bannalp**	**1.40**	**52**	Pg	Pb	23 18 04.8	+0.6
BNALP	**Bannalp**	**1.40**	**52**	P	Pb	23 18 04.8	+0.6
BNALP				AML	AML		
	comp=N,900µm,0.4s						
BNALP				AML	AML		
	comp=E,708µm,1.3s						
BNALP				AML	AML		
	comp=N,900µm,0.3s						
BNALP				AML	AML		
	comp=E,708µm,0.7s						
BOURR	**Bourrignon**	**1.41**	**11**	⇑Pg	Pn	23 18 04.3	+0.7
BOURR	**Bourrignon**	**1.41**	**11**	⇑Pn	Pn	23 18 04.2	+0.7
BOURR	**Bourrignon**	**1.41**	**11**	Sn	Sn	23 18 24.6	+2.5
BALST	**Balsthal**	**1.45**	**24**	⇑Pg	Pn	23 18 04.7	+0.5
BALST	**Balsthal**	**1.45**	**24**	*e*Pn	Pn	23 18 04.7	+0.5
BALST				*e*Pg	Pg	23 18 06.3	+0.3
BALST				*e*Sg	Sn	23 18 25.9	+2.7
BALST	**Balsthal**	**1.45**	**24**	⇑Pn	Pn	23 18 04.7	+0.5
BALST				Pg	Pg	23 18 06.2	+0.3
BALST	**Balsthal**	**1.45**	**24**	Sn	Sn	23 18 25.7	+2.5
DAGMA	**Lutertal, Dagm**	**1.47**	**34**	⇑Pg	Pn	23 18 05.2	+0.8
CREF	**Crivoux**	**1.47**	**185**	⇓Pn	Pg	23 18 06.6	+0.3
PZZ	**Stroppo**	**1.52**	**172**	P	Pg	23 18 07.2	0.0
PZZ				AML	AML		
	comp=N,1109µm,0.4s						
PZZ				AML	AML		
	comp=N,1110µm,0.4s						
PZZ				AML	AML		
	comp=E,1052µm,0.3s						
SURF	**Saint Ours**	**1.53**	**180**	⇑Pn	Pg	23 18 07.3	-0.1
MUGIO	**Muggio**	**1.55**	**93**	P	Pb	23 18 07.1	+0.3
MUGIO				S	Sg	23 18 27.5	-0.5
MUGIO	**Muggio**	**1.55**	**93**	P	Pb	23 18 06.7	0.0
MUGIO				AML	AML		
	comp=E,650µm,0.6s						
MUGIO				AML	AML		
	comp=N,1025µm,0.6s						
MUGIO				AML	AML		
	comp=E,650µm,1.4s						
OGAG	**Argentiere**	**1.57**	**187**	P	Pn	23 18 02.3	-3.6
OGAG				S	Sn	23 18 20.2	-6.0
OGAG	**Argentiere**	**1.57**	**187**	⇑Pn	Pn	23 18 02.2	-3.7
OGAG				Pg	Pb	23 18 05.8	-1.3
OGAG				Sn	Sn	23 18 19.7	-6.5
MUO	**Muotathal**	**1.58**	**52**	Pg	Pg	23 18 07.8	-0.5
MUO				Pn	Pg	23 18 07.8	-0.5
HAMIK	**Hmikon, Dlik**	**1.59**	**39**	⇑Pn	Pn	23 18 06.8	+0.8
JAUF	**Jausiers**	**1.59**	**182**	⇑Pn	Pg	23 18 08.6	+0.1
ROTM	**Rocchetta Tana**	**1.59**	**137**	P	Pg	23 18 08.3	-0.2
ROTM				AML	AML		
	comp=E,684µm,0.6s						
ROTM				AML	AML		
	comp=N,996µm,0.7s						
ROTM				AML	AML		
	comp=E,686µm,0.7s						
EMMET	**Emmethof**	**1.64**	**30**	⇑Pn	Pn	23 18 07.1	+0.3
ROTHE	**Rothenfluh**	**1.65**	**27**	⇑Pn	Pn	23 18 07.2	+0.4
RONF	**Ronchamp**	**1.70**	**356**	⇑Pn	Pn	23 18 08.2	+0.7
RONF				Pg	Pg	23 18 11.1	+0.4
PLYF	**Puligny Montra**	**1.72**	**304**	Pn	Pb	23 18 09.2	-0.3
PLYF				Pg	Pg	23 18 12.1	+1.1
LLS	**Linth-Limmern**	**1.73**	**60**	⇑Pn	Pb	23 18 10.3	+0.5
SULZ	**Cheisacher**	**1.75**	**30**	⇑Pn	Pn	23 18 08.6	+0.3
SULZ	**Cheisacher**	**1.75**	**30**	*e*Pn	Pn	23 18 08.6	+0.3
SULZ				*e*Pg	Pg	23 18 11.9	+0.2
SULZ				*e*Sg	Sg	23 18 34.5	+0.1
SULZ	**Cheisacher**	**1.75**	**30**	⇑Pn	Pn	23 18 08.6	+0.3
SULZ	**Cheisacher**	**1.75**	**30**	Sn	Sg	23 18 34.1	-0.3
SSB	**Saint Sauveur**	**1.76**	**246**	Pn	Pb	23 18 10.0	-0.2
SSB	**Saint Sauveur**	**1.76**	**246**	Pn	Pb	23 18 10.1	-0.2
SSB				Pg	Pg	23 18 12.8	+1.1
SSB				Sn	Sg	23 18 35.1	+0.6
PANIX	**Pigniu (Panix)**	**1.78**	**62**	⇑Pn	Pb	23 18 11.2	+0.5
HINF	**Hinteralfeld**	**1.80**	**1**	*e*Pn	Pn	23 18 09.2	+0.2
HINF	**Hinteralfeld**	**1.80**	**1**	*e*Pg	Pg	23 18 12.0	-0.6
HINF				*e*Sn	Sn	23 18 30.4	-1.4
HINF				*e*Sg	Sb	23 18 34.7	+1.1
	comp=E,206nm,0.3s						
STV	**Sant Anna di V**	**1.80**	**168**	P	Pb	23 18 11.1	+0.1
STV				AML	AML		
	comp=E,140µm,0.4s						
STV				AML	AML		
	comp=N,164µm,0.4s						
TUE	**Stuetta**	**1.81**	**74**	Pn	Pb	23 18 11.8	+0.6
ZUR	**Degenried**	**1.82**	**41**	Pn	Pn	23 18 09.9	+0.8
ZUR	**Degenried**	**1.82**	**41**	Pg	Pg	23 18 12.7	-0.2
ENR	**Entracque**	**1.84**	**166**	P	Pb	23 18 11.5	-0.1
ENR				AML	AML		
	comp=E,274µm,0.4s						
ENR				AML	AML		
	comp=N,196µm,0.7s						
ISO	**Isola**	**1.84**	**175**	Pn	Pg	23 18 13.3	+0.1
MOF	**Molkenrain**	**1.85**	**7**	⇑Pn	Pn	23 18 10.0	+0.3
MOF				Pg	Pg	23 18 13.5	-0.1
ACHB	**Acheberg**	**1.86**	**32**	⇑Pn	Pn	23 18 09.8	+0.1
SARZ	**Sarezzano**	**1.86**	**127**	P	Pg	23 18 13.6	-0.2
SARZ				AML	AML		
	comp=N,594µm,0.5s						
SARZ				AML	AML		
	comp=N,532µm,0.5s						
SARZ				AML	AML		
	comp=E,414µm,0.5s						
SARZ				AML	AML		
	comp=E,444µm,0.9s						
VIVF	**Saint-Julien-l**	**1.90**	**233**	*e*Pn	Pb	23 18 12.2	-0.5
VIVF	**Saint-Julien-l**	**1.90**	**233**	*e*Pg	Pg	23 18 15.3	+0.8
VIVF				*e*Sn	Sn	23 18 35.3	+1.0
	comp=E,558nm,0.2s						
ENAUX	**Enaux**	**1.91**	**181**	Pn	Pg	23 18 14.0	-0.5
PCP	**Piancastagn**	**1.91**	**140**	P	Pb	23 18 13.5	+0.7
PCP				AML	AML		
	comp=N,146µm,1.2s						
PCP				AML	AML		
	comp=E,152µm,1.0s						
METMA	**Mettma DE**	**1.96**	**30**	⇑Pn	Pn	23 18 10.9	-0.2
METMA	**Mettma DE**	**1.96**	**30**	*e*Pn	Pn	23 18 11.0	-0.2
METMA				*e*Pg	Pg	23 18 15.6	-0.1
METMA				*e*Sg	Sg	23 18 40.8	-0.3
FLACH	**Flaach**	**1.97**	**37**	⇑Pn	Pn	23 18 11.5	+0.4
QLNO	**Quiliano**	**2.00**	**147**	P	Pb	23 18 14.9	+0.5
QLNO				AML	AML		
	comp=E,156µm,0.7s						
QLNO				AML	AML		
	comp=N,178µm,1.1s						
WILA	**Wila**	**2.01**	**45**	⇑Pn	Pn	23 18 12.6	+0.8
WILA	**Wila**	**2.01**	**45**	*e*Pn	Pn	23 18 12.6	+0.8
WILA				*e*Pg	Pg	23 18 16.5	0.0
WILA				*e*Sg	Sg	23 18 42.6	+0.1
HAU	**Haudompre**	**2.02**	**351**	*e*Pn	Pn	23 18 12.6	+0.7
HAU	**Haudompre**	**2.02**	**351**	*e*Pg	Pg	23 18 16.4	-0.3
HAU				*e*Sn	Sn	23 18 36.6	-0.5
HAU				*e*Sg	Sg	23 18 41.8	-1.1
	comp=N,286nm,0.3s						
FELD	**Feldberg im Sc**	**2.03**	**23**	⇑Pn	Pn	23 18 11.9	-0.3
FELD	**Feldberg im Sc**	**2.03**	**23**	Pg	Pg	23 18 16.3	-0.7
FELD	**Feldberg im Sc**	**2.03**	**23**	⇑Pn	Pn	23 18 11.7	-0.5
PLONS	**Plons/SG**	**2.05**	**59**	⇑Pn	Pn	23 18 14.3	+1.9
PLONS	**Plons/SG**	**2.05**	**59**	*e*Pg	Pg	23 18 17.3	0.0
PLONS				*e*Sg	Sg	23 18 44.4	+0.5
PLONS	**Plons/SG**	**2.05**	**59**	P	Pn	23 18 14.3	+1.9
PLONS				AML	AML		
	comp=E,588µm,0.7s						
PLONS				AML	AML		
	comp=N,698µm,1.1s						
CANO	**Canova, Maglio**	**2.07**	**150**	P	Pb	23 18 15.9	+0.4
CANO				AML	AML		
	comp=N,508µm,0.4s						
CANO				AML	AML		
	comp=E,616µm,0.8s						
BERGE	**Lenzkirch (DE)**	**2.08**	**26**	⇑Pn	Pn	23 18 12.5	-0.3
BERGE	**Lenzkirch (DE)**	**2.08**	**26**	*e*Pn	Pn	23 18 12.4	-0.3
BERGE				*e*Pg	Pg	23 18 17.4	-0.4
BERGE				*e*Sg	Sg	23 18 44.8	0.0
TURF	**col de Turini**	**2.08**	**169**	Pn	Pb	23 18 15.6	-0.2
KIZ	**Kirchzarten**	**2.08**	**21**	⇑Pn	Pn	23 18 12.4	-0.4
KIZ	**Kirchzarten**	**2.08**	**21**	⇑Pn	Pn	23 18 12.3	-0.4
SLE	**Schleitheim**	**2.09**	**33**	⇑Pn	Pn	23 18 12.8	-0.2
SLE	**Schleitheim**	**2.09**	**33**	*e*Pn	Pn	23 18 12.8	-0.2
SLE				*e*Pg	Pg	23 18 17.8	-0.3
SLE				*e*Sg	Sg	23 18 44.7	-0.6
SLE	**Schleitheim**	**2.09**	**33**	⇑Pn	Pn	23 18 12.7	-0.2
SAOF	**Saorge**	**2.09**	**165**	P	Pb	23 18 15.6	-0.3
SAOF				AML	AML		
	comp=E,235µm,0.4s						
SAOF				AML	AML		
	comp=N,288µm,0.7s						
SAOF	**Saorge**	**2.09**	**165**	Pn	Pb	23 18 15.5	-0.3
RORO	**Rocca Rossa**	**2.10**	**155**	P	Pb	23 18 16.1	+0.1
RORO				AML	AML		
	comp=N,160µm,1.4s						
RORO				AML	AML		
	comp=E,306µm,0.7s						
MVIF	**Mont Vial**	**2.13**	**174**	⇑Pn	Pb	23 18 17.3	+0.7
VOGT	**Vogtsburg - To**	**2.15**	**15**	Pn	Pn	23 18 13.0	-0.7
SMF	**Signal de Mont**	**2.16**	**288**	*e*Pn	Pn	23 18 15.3	+1.5
SMF	**Signal de Mont**	**2.16**	**288**	*e*Pg	Pg	23 18 19.6	+0.2
SMF				*e*Sn	Sn	23 18 41.0	+0.5
SMF				*e*Sg	Sg	23 18 47.3	-0.1
	comp=E,106nm,0.2s						
SGT04	**Schlatt-Haslen**	**2.19**	**52**	⇑Pn	Pn	23 18 15.6	+1.3
SBF	**Sospel**	**2.19**	**168**	*e*P	Pb	23 18 16.8	-0.9
SBF	**Sospel**	**2.19**	**168**	*e*Pg	Pg	23 18 19.3	-0.8
SBF				*e*Sg	Sg	23 18 48.2	-0.3
	comp=E,266nm,0.4s						
ECH	**Echery**	**2.21**	**6**	⇑Pn	Pn	23 18 14.7	+0.1
ECH	**Echery**	**2.21**	**6**		Pn	23 18 14.7	+0.1
ECH	**Echery**	**2.21**	**6**	*e*Pn	Pn	23 18 14.7	+0.1
ECH				*e*Sg	Sg	23 18 48.3	-0.9
ECH	**Echery**	**2.21**	**6**	⇑Pn	Pn	23 18 14.7	+0.1
SMRF	**Simiane la Rot**	**2.22**	**204**	*e*P	Pb	23 18 17.2	-0.9
SMRF	**Simiane la Rot**	**2.22**	**204**	*e*Pg	Pg	23 18 20.7	+0.1
SMRF				*e*Sn	Sn	23 18 42.3	+0.2
SMR

comp=N,109μm,0.6s
GUT Gutenstein 2.59 37 ⇑Pn Pn 23 18 19.4 -0.3
GUT Gutenstein 2.59 37 ⇑Pn Pn 23 18 19.4 -0.3
SALO Salr 2.62 97 Pn **Pn 23 18 22.5 +2.3**
SALO Salr 2.62 97 P **Pb 23 18 23.1 -1.8**
SALO AML AML
comp=N,258μm,0.7s
SALO AML AML
comp=E,274μm,0.4s
PAGF Fort de Pagny 2.65 344 *e*Pn **Pn 23 18 20.7 +0.1**
baz=164
PAGF Fort de Pagny 2.65 344 *e*Pg **Pg 23 18 28.1 -0.7**
baz=158
PAGF *e*Sn **Sn 23 18 51.0 -1.6**
baz=159
PAGF *e*Sg **Sg 23 19 01.6 -1.5**
comp=E,196nm,0.6s,baz=165
MAGA Magasa 2.67 94 P **Pn 23 18 23.5 +2.6**
MAGA AML AML
comp=E,686μm,0.6s
MAGA AML AML
comp=N,346μm,0.5s
LMR La Mourre 2.69 185 *e*P **Pn 23 18 23.1 +2.0**
LMR La Mourre 2.69 185 *e*Pg **Pg 23 18 28.8 -0.7**
LMR *e*S **Sb 23 18 57.9 -1.1**
LMR *e*Sg **Sg 23 19 03.8 -0.6**
comp=N,65nm,0.4s
GRAM Graiana 2.75 122 P **Pb 23 18 26.2 -0.9**
PRMA PARMA 2.76 116 Pn **Pb 23 18 25.2 -2.1**
MEZF Maizieres J'vi 2.77 335 *e*P **Pn 23 18 24.6 +2.5**
baz=152
MEZF Maizieres J'vi 2.77 335 *e*Pg **Pg 23 18 30.7 -0.3**
baz=154
MEZF *e*Sn **Sn 23 18 54.6 -0.9**
baz=163
MEZF *e*Sg **Sg 23 19 05.9 -0.9**
comp=N,294nm,0.5s,baz=156
OBER Oberstdorf 2.77 59 *e*Pg **Pg 23 18 31.3 +0.3**
OBER *e*Sg **Sg 23 19 06.2 -0.6**
UBR Ueberruh 2.81 52 *e*Pn **Pn 23 18 23.7 +0.9**
UBR *e*Pg **Pg 23 18 31.7 -0.1**
UBR *e*Sg **Sg 23 19 07.9 -0.2**
BGF Bois d'Agland 2.81 283 *e*Pn **Pn 23 18 24.3 +1.5**
BGF Bois d'Agland 2.81 283 *e*Pg **Pg 23 18 31.8 0.0**
BGF *e*Sn **Sn 23 18 55.9 -0.7**
BGF *e*Sg **Sg 23 19 09.0 +0.8**
comp=N,146nm,0.4s
SAVF Savonnieres en 2.85 337 *e*P **Pn 23 18 26.0 +2.7**
baz=157
SAVF Savonnieres en 2.85 337 *e*Pg **Pg 23 18 31.5 -1.0**
SAVF *e*Sn **Sn 23 18 56.1 -1.4**
SAVF *e*Sg **Sg 23 19 08.2 -1.2**
comp=N,214nm,0.6s,baz=164
LASF Ste Croix 2.86 228 *e*Pn **Pn 23 18 25.1 +1.7**
LASF Ste Croix 2.86 228 *e*Pg **Pg 23 18 32.6 -0.1**
LASF *e*Sn **Sn 23 18 56.9 -0.9**
LASF *e*Sg **Sg 23 19 09.2 -0.6**
comp=N,173nm,0.4s
FETA Feichten 2.88 68 *e*Pn **Pn 23 18 27.0 +3.1**
comp=N,1.9nm,0.2s,SNR=18
FETA Sg **Sg 23 19 10.4 -0.1**
comp=N,117nm,0.8s
RETA Reutte 3.08 60 *i* Pn **Pn 23 18 28.3 +1.7**
comp=N,1.5nm,0.1s,SNR=29
RETA *e*Pg **Pg 23 18 37.9 +0.8**
comp=N,8.6nm,0.3s
RETA *i* Sn **Sn 23 19 03.9 +0.4**
comp=N,14nm,0.3s
RETA *i* Sg **Sg 23 19 17.8 +0.7**
comp=N,46nm,0.4s
VLC Villacollemand 3.13 125 Pn **Pn 23 18 30.4 +3.2**
HYF Humbligny 3.14 295 *e*Pn **Pn 23 18 28.7 +1.4**
HYF Humbligny 3.14 295 *e*Pg **Pg 23 18 37.7 -0.5**
HYF *e*Sn **Sn 23 19 04.3 -0.5**
HYF *e*Sg **Sg 23 19 18.9 0.0**
KOSI Kohlern 3.19 80 P **Pb 23 18 32.8 -2.0**
KOSI AML AML
comp=N,94μm,1.6s
KOSI AML AML
comp=E,125μm,1.2s
STU Stuttgart 3.20 29 Pn **Pn 23 18 26.7 -1.4**
STU Stuttgart 3.20 29 *e*Pn **Pn 23 18 27.0 -1.1**
STU *e*Pg **Pg 23 18 38.3 -0.9**
STU *e*Sg **Sg 23 19 20.6 0.0**
TCF Toulx Ste Croi 3.22 277 *e*Pn **Pn 23 18 30.0 +1.6**
TCF Toulx Ste Croi 3.22 277 *e*Pg **Pg 23 18 39.4 -0.2**
TCF *e*Sn **Sn 23 19 06.5 -0.1**
TCF *e*Sg **Sg 23 19 21.1 -0.2**
comp=E,37nm,0.2s
MOTA Moosalm 3.23 64 *i* Pn **Pn 23 18 31.1 +2.4**
comp=E,7.7nm,0.2s,SNR=44
MOTA Sg **Sg 23 19 21.9 0.0**
comp=E,15nm,0.3s
SQTA Sankt Quirin 3.26 67 *i* Pn **Pn 23 18 31.8 +2.8**
comp=E,7.6nm,0.3s,SNR=24
SQTA *e*Sg **Sg 23 19 22.1 -0.5**
comp=E,37nm,0.5s
ROSI Rosskopf 3.30 72 P **Pn 23 18 33.4 +3.7**
ROSI AML AML
comp=E,246μm,0.5s
ROSI AML AML
comp=N,197μm,1.0s
CTI Castel Tesino 3.37 88 Pn **Pn 23 18 31.7 +1.2**
CTI Castel Tesino 3.37 88 P **Pb 23 18 34.7 -2.9**
CTI AML AML
comp=E,76μm,0.4s
CTI AML AML
comp=N,89μm,1.0s
ZCCA Zocca 3.38 118 Pn **Pn 23 18 33.8 +3.2**
TEOL Teolo 3.46 99 Pn **Pn 23 18 33.8 +2.1**
CAF Calviac 3.52 254 *e*Pn **Pn 23 18 34.1 +1.6**
CAF Calviac 3.52 254 *e*Pg **Pg 23 18 45.4 0.0**
CAF *e*Sn **Sn 23 19 13.2 -0.9**
CAF *e*Sg **Sg 23 19 31.4 +0.4**
comp=N,82nm,0.4s
WATA Walderalm 3.53 66 *i* Pn **Pn 23 18 35.2 +2.3**
comp=N,2.7nm,0.1s,SNR=14
WATA *e*Sn **Sn 23 19 16.1 +1.5**
comp=N,5.2nm,0.2s
WTTA Wattenberg 3.55 68 *i* Pn **Pn 23 18 35.9 +2.9**
comp=N,6.7nm,0.2s,SNR=20
WTTA *e*Sg **Sb 23 19 27.6 +3.8**
comp=N,20nm,0.5s
WTTA Wattenberg 3.55 68 ⇑P **Pn 23 18 35.9 +2.9**
WTTA AML AML
comp=E,170μm,1.0s
WTTA AML AML
comp=N,124μm,0.8s
WLF Walferdange 3.68 353 Pn **Pn 23 18 36.1 +1.4**
CLF Chambon-Foret 3.71 304 Pn **Pn 23 18 37.1 +2.0**
FUR Furstenfeldbru 3.73 53 *e*Pn **Pn 23 18 36.4 +1.0**
FUR *e*Pg **Pg 23 18 48.5 -0.9**
FUR *e*Sg **Sg 23 19 37.5 -0.1**
RISI Rein 3.75 74 P **Pn 23 18 39.6 +3.8**
RISI AML AML
comp=N,241μm,0.4s
RISI AML AML
comp=E,116μm,0.6s
RJF Les Rejaudoux 3.79 261 *e*Pn **Pn 23 18 38.2 +2.0**
RJF Les Rejaudoux 3.79 261 *e*Pg **Pg 23 18 50.4 -0.1**
RJF *e*Sn **Sn 23 19 20.5 -0.2**
RJF *e*Sg **Sg 23 19 39.9 +0.4**
comp=E,32nm,0.5s
PGF Pioggiola 3.80 155 *e*P **Pn 23 18 39.0 +2.5**
PGF *e*Sn **Sn 23 19 18.8 -2.4**
comp=E,23nm,0.5s
ABTA Abfaltersbach 4.01 77 *i* Pn **Pn 23 18 43.7 +4.4**
comp=E,0.8nm,0.2s
ABTA *e*Sn **Sn 23 19 27.2 +0.9**
comp=E,2.7nm,0.3s
OSSC Osservatorio P 4.02 127 Pn **Pn 23 18 40.7 +1.4**
STAL STALIGIAL 4.10 84 Pn **Pn 23 18 42.9 +2.3**
MILB Miltenberg 4.16 23 *e*Pn **Pn 23 18 40.0 -1.4**
MILB *e*Sg **Sg 23 19 51.5 -0.2**
CLUD Cludinico 4.23 82 Pn **Pn 23 18 45.8 +3.5**
MTLF Montolieu 4.23 232 *e*Pn **Pn 23 18 44.7 +2.4**
MTLF Montolieu 4.23 232 *e*Pg **Pg 23 18 58.2 -0.9**
MTLF *e*Sn **Sn 23 19 31.3 -0.4**
MTLF *e*Sg **Sg 23 19 52.5 -1.4**
comp=E,44nm,0.3s
RCHB Rochefort 4.28 346 *d*P **Pn 23 18 44.9 +1.9**
RCHB *d*S **Sn 23 19 29.9 -2.9**
ZOU Zoufplan 4.30 81 AML AML
comp=N,57μm,1.2s
ZOU AML AML
comp=E,41μm,0.8s
GIVF Givet 4.30 343 *e*Pn **Pn 23 18 42.0 -1.3**
GIVF Givet 4.30 343 *e*Pg **Pg 23 18 57.3 -3.1**
GIVF *e*Sn **Sn 23 19 30.9 -2.5**
GIVF *e*Sg **Sg 23 19 52.9 -3.2**
comp=E,45nm,0.6s
DOU Dourbes 4.35 341 *d*P **Pn 23 18 45.7 +1.8**
DOU *d*x x 23 19 04.1
TNS Taunus Mts 4.35 14 *e*Pn **Pn 23 18 44.2 +0.2**
TNS *e*Sg **Sg 23 19 55.5 -2.1**
BHOU Houvegnez 4.38 353 *d*P **Pn 23 18 46.0 +1.7**
BHOU *d*S **Sn 23 19 35.2 -0.1**
LFF La Frestale 4.41 258 *e*Pn **Pn 23 18 47.0 +2.3**
LFF La Frestale 4.41 258 *e*Pg **Pg 23 19 01.6 -0.8**
LFF *e*Sn **Sn 23 19 35.8 -0.2**
LFF *e*Sg **Sg 23 19 59.3 -0.2**
comp=E,97nm,0.4s
BAIF Baives 4.41 338 *e*Pn **Pn 23 18 46.3 +1.6**
BAIF *e*Sn **Sn 23 19 33.0 -3.0**
BAIF *e*Sg **Sg 23 19 55.9 -3.6**
comp=E,32nm,0.5s
BMRD Maredsous 4.51 343 *d*P **Pn 23 18 47.9 +1.9**
BMRD *d*S **Sg 23 20 03.2 +0.7**
BCLA Clavier 4.52 348 *d*P **Pn 23 18 48.1 +1.8**
BCLA *d*S **Sn 23 19 36.3 -2.5**
BGES Gesves 4.52 346 *d*P **Pn 23 18 48.7 +2.4**
BGES *d*S **Sn 23 19 38.2 -0.6**
BTNL Ternell 4.60 355 *d*P **Pn 23 18 48.8 +1.4**
BTNL *d*S **Sn 23 19 37.4 -3.3**
KBA Koelnbreinsper 4.63 74 *i* Pn **Pn 23 18 50.8 +2.9**
comp=E,3.0nm,0.3s
KBA *i* Sn **Sn 23 19 44.3 +2.7**
comp=E,2.4nm,0.2s
KBA *e*Sg **Sg 23 20 09.8 +3.4**
comp=E,4.0nm,0.5s
MEM Membach 4.63 354 *d*P **Pn 23 18 49.1 +1.3**
MEM *d*S **Sn 23 19 41.8 +0.4**
BSTI Sart Tilman 4.65 350 *d*P **Pn 23 18 50.0 +2.0**
PRED Cave del Predi 4.70 82 Pn **Pn 23 18 51.5 +2.7**
GRFO Grafenberg 4.72 37 Pn **Pn 23 18 49.2 +0.2**
GRA1 Grafenberg Arr 4.72 37 Pn **Pn 23 18 49.1 0.0**
GRF Grafenberg Arr 4.72 37 *e*Pn **Pn 23 18 49.1 0.0**
GRF *e*Pg **Pg 23 19 06.6 -1.8**
GRF *e*Sg **Sg 23 20 10.8 +1.2**
MYKA Terra Mystica 4.77 80 *i* Pn **Pn 23 18 53.5 +3.8**
comp=E,1.9nm,0.2s
TRI Trieste 4.86 91 Pn **Pn 23 18 53.9 +3.0**
MFF Saint Martin d 4.86 279 *e*Pn **Pn 23 18 52.8 +1.8**
MFF Saint Martin d 4.86 279 *e*Pg **Pg 23 19 09.7 -1.4**
MFF *e*Sn **Sn 23 19 45.8 -1.4**
MFF *e*Sg **Sg 23 20 12.3 -1.8**
comp=E,30nm,0.5s
MURB Monte Urbino 4.91 122 Pn **Pn 23 18 53.9 +2.2**
LATE Laterza 4.93 132 Pn **Pn 23 18 55.6 +3.6**
BIOA Bad Ischl, Aus 4.97 68 *i* Pn **Pn 23 18 54.2 +1.7**
comp=E,5.9nm,0.3s,SNR=9.6
HROE Hohe Rhon--Fla 5.04 25 *e*Pg **Pg 23 19 13.1 -1.4**
ROTZ Rotzenmuhle 5.22 42 *e*Pg **Pg 23 19 15.8 -2.1**
ROTZ *e*Sg **Sg 23 20 23.3 -2.1**
UBBA Unterbreizbach 5.25 23 *e*Sg **Sg 23 20 26.2 -0.4**
KASTN Kahler Asten 5.30 11 *e*Pn **Pn 23 18 57.3 +0.3**
FDMO Fiordimonte 5.38 121 Pn **Pn 23 19 01.0 +2.9**
LDF La Druitiere 5.38 301 *e*Pn **Pn 23 18 59.5 +1.4**
LDF La Druitiere 5.38 301 *e*Pg **Pg 23 19 19.4 -1.6**
LDF *e*Sn **Sn 23 19 57.7 -2.2**
comp=E,9.9nm,0.2s
LDF *e*Sg **Sg 23 20 28.2 -2.4**
comp=E,30nm,0.5s
OBKA Obir 5.38 82 *i* Pn **Pn 23 19 01.3 +3.1**
comp=E,1.9nm,0.2s,SNR=8.4
MOA Molln 5.42 68 *i* Pn **Pn 23 18 57.9 -0.7**
comp=E,1.4nm,0.1s
MOA *e*Sn **Sn 23 19 59.0 -2.0**
comp=E,1.0nm,0.2s
BUG Bochum--Univer 5.44 3 *e*Pn **Pn 23 18 59.9 +1.0**
GEC2 GERESS Array S 5.46 56 Pn **Pn 23 18 59.5 +0.2**
GERES GERESS Array B 5.46 56 Pn **Pn 23 18 59.6 +0.4**
EPF Esparros 5.51 240 *e*P **Pn 23 19 04.5 +4.6**
EPF Esparros 5.51 240 *e*Pg **Pg 23 19 22.0 -1.5**
EPF *e*Sg **Sg 23 20 33.3 -1.5**
comp=E,27nm,0.3s
NRCA Norcia 5.52 123 Pn **Pn 23 19 01.4 +1.4**
KHC Kasperske Hory 5.54 53 Pn **Pn 23 19 00.3 +0.1**
KHC Kasperske Hory 5.54 53 *e*PN **Pn 23 19 00.6 +0.4**
KHC *e*SN **Sn 23 20 00.4 -3.4**
KHC *e*SG **Sg 23 20 32.3 -3.3**
comp=E,20nm,0.7s
MOX Moxa 5.63 33 *e*Sg **Sg 23 20 37.2 -1.4**
FLN La Foliniere 5.67 302 *e*Pn **Pn 23 19 03.5 +1.5**
baz=120
FLN La Foliniere 5.67 302 *e*Pg **Pg 23 19 24.0 -2.5**
baz=124
FLN *e*Sn **Sn 23 20 04.5 -2.5**
FLN *e*Sg **Sg 23 20 37.6 -2.3**
comp=E,24nm,0.5s,baz=124
SOKA Soboth 5.72 80 *i* Pn **Pn 23 19 05.5 +2.6**
comp=E,0.6nm,0.2s
GRR Gorron 5.75 297 *e*Pn **Pn 23 19 04.2 +1.1**
GRR Gorron 5.75 297 *e*Pg **Pg 23 19 25.6 -2.4**
GRR *e*Sn **Sn 23 20 06.8 -2.1**
comp=E,33nm,0.4s
GRR *e*Sg **Sg 23 20 39.5 -2.8**
comp=E,10.0nm,0.4s
CKRC Cesky Krumlov 5.81 58 *e*PN **Pn 23 19 04.4 +0.5**
CKRC *e*SN **Sn 23 20 06.2 -4.2**
CAMP Campotosto 5.87 124 Pn **Pn 23 19 07.9 +3.0**
ARSA Arzberg 6.12 75 *i* Pn **Pn 23 19 09.8 +1.5**
comp=E,1.5nm,0.2s,SNR=7.1
ARSA *i* Sn **Sn 23 20 18.2 0.0**
comp=E,1.7nm,0.3s
ETSF Etsaut 6.13 242 *e*P **Pn 23 19 13.1 +4.6**
ETSF Etsaut 6.13 242 *e*Pg **Pg 23 19 33.5 -1.9**
ETSF *e*Sn **Sn 23 20 16.6 -1.9**
ETSF *e*Sg **Sg 23 20 52.8 -1.9**
comp=E,22nm,0.5s
SJPF Ste Jean 6.44 246 *e*P Pn 23 19 17.4 +4.8
SJPF Ste Jean 6.44 246 *e*Pg **Pg 23 19 38.9 -2.3**
SJPF *e*Sg **Sg 23 21 02.6 -1.9**
comp=E,24nm,0.6s
CONA Conrad Observa 6.48 70 *i* Pn **Pn 23 19 14.1 +0.9**
comp=E,0.7nm,0.2s
CONA *e*Sn **Sn 23 20 23.8 -3.3**
comp=E,0.9nm,0.2s
CLL Collm 6.69 35 *e*Pg **Pg 23 19 45.0 -1.1**
CLL *e*x x 23 20 57.0
CLL *e*Sg **Sg 23 21 11.0 -1.7**
comp=Z,12nm,0.8s
RONA Rosalia, Austr 6.71 72 *i* Pn **Pn 23 19 17.9 +1.5**
comp=Z,2.2nm,0.2s,SNR=7.7
SGMF Saint Gilles 6.78 293 *e*Pn **Pn 23 19 17.8 +0.6**
SGMF *e*Sn **Sn 23 20 31.5 -2.8**
comp=Z,8.0nm,0.3s
SGMF *e*Sg **Sg 23 21 12.6 -2.8**
comp=Z,11nm,0.6s
BRG Berggiesshubel 6.79 42 Sg **Sg 23 21 13.9 -1.8**
BRG Amp 23 21 21.6
comp=Z,7.3nm,0.6s
QUIF Quistinic 7.09 289 *e*Pn **Pn 23 19 22.4 +0.8**
QUIF *e*Sn **Sn 23 20 38.2 -3.9**
QUIF *e*Sg **Sg 23 21 22.4 -3.1**
comp=Z,11nm,0.6s
KRUC Moravsky 7.16 61 *e*SN **Sn 23 20 40.6 -3.2**
KRUC *e*SG **Sg 23 21 25.8 -1.9**
ROSF Rostrenen 7.26 292 *e*Pn **Pn 23 19 24.4 +0.5**
ROSF *e*Sn **Sn 23 20 42.9 -3.3**
comp=Z,215nm,1.4s
ROSF *e*Sg **Sg 23 21 27.7 -3.2**
comp=Z,4.4nm,0.4s
VRAC Vranov 7.38 60 *e*SN **Sn 23 20 44.8 -4.3**
VRAC *e*SG **Sg 23 21 33.8 -0.8**
SGRT San Giovanni R 7.72 120 Pn **Pn 23 19 32.4 +2.0**
MORC Moravsky Berou 8.13 59 *e*SG Sg 23 21 58.5 -0.2
PAB San Pablo 10.44 236 Pn **Pn 23 20 11.7 +4.1**

IDC 01 23:17:44.8±1.7, 10°.96S×166°.00E, h0km, mb3.5/3, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=58.4km s-min=30.3km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.06**	**178**	Pn	Pn	23 20 24.8	+0.4
	0.2nm,0.3s,baz=343,slow=19,SNR=1.4						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**31.75**	**250**	P	P	23 24 11.4	+0.4
	0.2nm,0.8s,baz=83,slow=8.3,SNR=2.4						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**33.06**	**243**	P	P	23 24 22.0	-0.5
	0.3nm,0.7s,baz=68,slow=9.6,SNR=6.7						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**83.35**	**18**	P	P	23 30 13.4	0.0
	1.0nm,0.6s,baz=240,slow=5.8,SNR=12						
	1.0nm,0.6s						

*AEIC **01** 23:34:39±2.7, 64°.86N±0°.05×133°.2W±0°.1, h22km±6km, Error ellipse: s-maj=7.5km s-min=6.9km az=221.0*
*IDC **01** 23:34:40.2±0.5, 64°.94N×133°.50W, h0km, mb3.6/11, mbtmp3.8/17, ML4.0/6, MS2.5/1, Error ellipse: s-maj=9.7km s-min=7.4km az=47.0*
*NEIC **01** 23:34:41.1±1.6, 64°.87N±0°.05×133°.5W±0°.1, h10km±3km, Error ellipse: s-maj=7.8km s-min=6.5km az=139.0*
*ANF **01** 23:34:42.1±1.2, 64°.86N×133°.59W, h18km±10km, ML4.2/41, ML4.2/41, Error ellipse: s-maj=2.4km s-min=1.7km az=76.0*
*PGC **01** 23:34:42.4±0.2, 64°.87N×133°.68W, h20km, ML4.2/17, Mw3.6, 288km Sse of Fort McPherson, Nt Southern Yukon Territory, Canada*
*NEIC **01** 23:34:42, 64°.87N×133°.68W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.01; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$0.02; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.01; $M_{\phi r}$-0.01; Fault plane solution: $M_0$3.30000×10^{14} NP1:ϕ_s213.00000°, δ58.00000°, λ7.00000°. NP2:ϕ_s120.00000°, δ84.00000°, λ148.00000°. Principal axes: T 0.0311, Plg27.0000°, Azm72.0000°; N 0.0030, Plg57.0000°, Azm290.0000°; P -0.0341, Plg17.0000°, Azm171.0000°;*

ISC 01 23:34:42.9±1.3, 64°.89N±0°.03×133°.50W±0°.04, h23km±11km, n242, σ1°07/269, mb3.7/12, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYO	**Mayo, Yukon**	**1.67**	**220**		**Pn**	**23 35 09.3**	**-1.3**
MAYO				Sn	**Sn**	**23 35 28.8**	**-2.6**
MAYO	**Mayo, Yukon**	**1.67**	**220**	P	**Pn**	**23 35 09.4**	**-1.2**
MAYO				Sn	**Sn**	**23 35 28.7**	**-2.6**
MAYO	**Mayo, Yukon**	**1.67**	**220**	P	**Pn**	**23 35 09.6**	**-1.1**
	baz=36,SNR=82						
MAYO				S	**Sn**	**23 35 29.1**	**-2.2**
	baz=36						
EPYK	**Eagle Plains**	**2.00**	**319**	Pn	**Pn**	**23 35 14.9**	**-0.3**
EPYK				IAML		23 35 47.8	
	comp=E,2μm,0.8s						
EPYK	**Eagle Plains**	**2.00**	**319**	Pn	**Pn**	**23 35 15.0**	**-0.3**
EPYK				Sn	**Sn**	**23 35 38.7**	**-0.7**
EPYK				Sg	**Sb**	**23 35 43.5**	**+0.6**
EPYK	**Eagle Plains**	**2.00**	**319**	P	**Pn**	**23 35 14.9**	**-0.3**
	baz=139,SNR=54						
K29M	**Barlow Dome**	**2.04**	**241**	Pn	**Pn**	**23 35 13.9**	**-2.0**
K29M				Sn	**Sn**	**23 35 38.7**	**-1.9**
K29M	**Barlow Dome**	**2.04**	**241**	P	**Pn**	**23 35 14.3**	**-1.6**
	baz=57,SNR=284						
J29M	**Klondike Camp**	**2.08**	**260**		**Pn**	**23 35 14.7**	**-1.6**
J29M	**Klondike Camp**	**2.08**	**260**	Pn	**Pn**	**23 35 15.2**	**-1.1**
J29M	**Klondike Camp**	**2.08**	**260**	P	**Pn**	**23 35 15.2**	**-1.1**
	baz=76						
I29M	**Ogilvie Camp,**	**2.09**	**285**		**Pn**	**23 35 15.2**	**-1.2**
I29M				IAML		23 35 47.9	
	comp=N,898nm,0.5s						
I29M	**Ogilvie Camp,**	**2.09**	**285**	Pn	**Pn**	**23 35 15.4**	**-1.0**
I29M	**Ogilvie Camp,**	**2.09**	**285**	P	**Pn**	**23 35 15.3**	**-1.0**
	baz=102,SNR=111						
I29M				S	**Sb**	**23 35 43.2**	**-2.3**
	baz=102						
G30M	**tAoh Zraii Nji**	**2.38**	**333**	P	**Pn**	**23 35 19.8**	**-0.7**
	baz=153,SNR=64						
MMPY	**Sheldon Lake,**	**2.49**	**155**	Pn	**Pn**	**23 35 22.1**	**+0.2**
MMPY				Sg	**Sb**	**23 35 59.5**	**+2.5**
MMPY	**Sheldon Lake,**	**2.49**	**155**	P	**Pn**	**23 35 22.1**	**+0.2**
	baz=336,SNR=225						
F31M	**Tsiigehtchic**	**2.56**	**358**	P	**Pn**	**23 35 22.6**	**-0.3**
	baz=179,SNR=122						
FARO	**Faro, Yukon**	**2.67**	**178**		**Pn**	**23 35 23.2**	**-1.2**
FARO				IAML		23 36 03.5	
	comp=N,582nm,0.4s						
FARO	**Faro, Yukon**	**2.67**	**178**	Pn	**Pn**	**23 35 23.4**	**-1.1**
FARO				Sn	**Sn**	**23 35 53.8**	**-2.3**
FARO				Sg	**Sb**	**23 36 03.2**	**+0.8**
FARO	**Faro, Yukon**	**2.67**	**178**	P	**Pn**	**23 35 23.6**	**-0.8**
	baz=357,SNR=46						
DAWY	**Dawson**	**2.68**	**255**		**Pn**	**23 35 23.8**	**-0.8**
DAWY				IAML		23 36 08.6	
	comp=N,520nm,0.6s						
DAWY	**Dawson**	**2.68**	**255**	Pn	**Pn**	**23 35 23.8**	**-0.8**
DAWY	**Dawson**	**2.68**	**255**	P	**Pn**	**23 35 23.4**	**-1.2**
	baz=69,SNR=53						
DAWY				Sb	**Sb**	**23 36 02.8**	**+0.2**
	baz=69						
L29M	**L29M**	**2.71**	**231**	P	**Pn**	**23 35 23.4**	**-1.7**
	baz=46,SNR=71						
M31M	**Drury Creek, Y**	**2.73**	**189**		**Pn**	**23 35 24.4**	**-0.8**
M31M				IAML		23 36 09.7	
	comp=E,550nm,0.6s						
M31M				IAML		23 36 11.3	
	comp=N,733nm,0.6s						
M31M	**Drury Creek, Y**	**2.73**	**189**	Pn	**Pn**	**23 35 24.3**	**-1.0**
M31M	**Drury Creek, Y**	**2.73**	**189**	P	**Pn**	**23 35 24.1**	**-1.1**
	baz=6.4,SNR=47						
M31M				Sb	**Sb**	**23 36 03.1**	**-0.8**
	baz=6.4						
EGAK	**Eagle**	**3.27**	**271**		**Pn**	**23 35 31.6**	**-1.0**
EGAK				IAML		23 36 24.8	
	comp=N,311nm,0.7s						
EGAK				IAML		23 36 27.8	
	comp=N,400nm,0.8s						
EGAK	**Eagle**	**3.27**	**271**	P	**Pn**	**23 35 31.7**	**-1.0**
	baz=85,SNR=19						
EGAK				Sb	**Sb**	**23 36 20.1**	**+0.6**
	baz=85						
M29M	**Somme Creek**	**3.31**	**224**	Pn	**Pn**	**23 35 31.6**	**-1.6**
M29M	**Somme Creek**	**3.31**	**224**	P	**Pn**	**23 35 31.5**	**-1.7**
	baz=39,SNR=29						
M29M				Sb	**Sb**	**23 36 20.0**	**-0.6**
	baz=39						
INK	**Inuvik**	**3.43**	**360**	Pn	**Pn**	**23 35 34.5**	**-0.3**
	comp=N,3.9nm,0.3s,baz=164,slow=14,SNR=58						
INK				Pg	**Pb**	**23 35 42.3**	**-0.5**
	comp=N,12nm,0.3s,baz=170,slow=13,SNR=20						
INK				Sn	**Sn**	**23 36 14.8**	**+0.1**
	comp=N,20nm,0.3s,baz=150,slow=30,SNR=4.6						
INK				Lg	Lg	23 36 26.2	
	comp=N,24nm,0.3s,baz=90,slow=19,SNR=4.7						
	comp=N,8.2nm,0.3s						
INK	**Inuvik**	**3.43**	**360**	Pn	**Pn**	**23 35 34.5**	**-0.3**
INK				IAML		23 36 41.0	
	comp=E,261nm,1.2s						
INK	**Inuvik**	**3.43**	**360**	Pn	**Pn**	**23 35 34.2**	**-0.6**
INK	**Inuvik**	**3.43**	**360**	P	**Pn**	**23 35 34.1**	**-0.7**
	baz=181,SNR=9.2						
I27K	**Kandik River**	**3.49**	**285**	Pn	**Pn**	**23 35 34.7**	**-1.0**
I27K	**Kandik River**	**3.49**	**285**	P	**Pn**	**23 35 34.9**	**-0.8**
	baz=99,SNR=47						
N31M	**Braeburn, Yuko**	**3.57**	**198**		**Pn**	**23 35 36.1**	**-0.7**
N31M				IAML		23 36 37.9	
	comp=E,453nm,1.0s						
N31M				IAML		23 36 41.3	
	comp=N,294nm,1.0s						
N31M	**Braeburn, Yuko**	**3.57**	**198**	Pn	**Pn**	**23 35 36.0**	**-0.9**
N31M				Pg	**Pb**	**23 35 45.4**	**+0.1**
N31M	**Braeburn, Yuko**	**3.57**	**198**	P	**Pn**	**23 35 35.0**	**-1.8**
	baz=15,SNR=25						
N31M				Sb	**Sb**	**23 36 29.1**	**+0.9**
	baz=15						
H27K	**Steamboat Moun**	**3.60**	**296**	Pn	**Pn**	**23 35 36.2**	**-1.0**
H27K	**Steamboat Moun**	**3.60**	**296**	P	**Pn**	**23 35 36.4**	**-0.7**
	baz=109,SNR=26						
N32M	**Quiet Lake**	**3.76**	**177**	P	**Pn**	**23 35 38.6**	**-0.8**
	baz=356						
N30M	**Aishikik Lake**	**3.81**	**207**	Pn	**Pn**	**23 35 38.8**	**-1.4**
N30M	**Aishikik Lake**	**3.81**	**207**	P	**Pn**	**23 35 38.7**	**-1.4**
	baz=23,SNR=25						
N30M				Sb	**Sb**	**23 36 36.6**	**+1.6**
	baz=23						
K27K	**Chicken**	**3.81**	**261**		**Pn**	**23 35 39.2**	**-0.9**
K27K	**Chicken**	**3.81**	**261**	Pn	**Pn**	**23 35 39.2**	**-0.9**
K27K	**Chicken**	**3.81**	**261**	P	**Pn**	**23 35 39.2**	**-0.9**
	baz=73						

K27K			Sb	Sb	23 36 36.5	+1.4
	baz=73					
G27K	Doyon Strip	3.87 304	Pn	Pn	23 35 40.2	-0.6
G27K	Doyon Strip	3.87 304	P	Pn	23 35 40.4	-0.5
	baz=117,SNR=32					
BCAR	Beaver Creek A	4.08 247		Pn	23 35 42.6	-1.2
L27K	Beaver Creek,	4.10 247	Pn	Pn	23 35 43.2	-0.9
L27K			IAML		23 36 51.2	
	comp=E,217nm,0.9s					
L27K	Beaver Creek,	4.10 247	Pn	Pn	23 35 42.1	-2.0
L27K	Beaver Creek,	4.10 247	P	Pn	23 35 42.8	-1.3
	baz=60					
L27K			Sb	Sb	23 36 44.9	+1.4
	baz=60					
I26K	Coal Creek Min	4.11 280		Pn	23 35 42.3	-1.8
I26K			IAML		23 36 52.6	
	comp=E,184nm,0.7s					
I26K			IAML		23 36 56.6	
	comp=N,302nm,0.8s					
I26K	Coal Creek Min	4.11 280	P	Pn	23 35 42.4	-1.6
	baz=92					
BVCY	Beaver Creek	4.12 236	Pn	Pn	23 35 43.7	-0.5
BVCY	Beaver Creek	4.12 236	P	Pn	23 35 43.8	-0.5
	baz=49					
TGTN	Hyland Airport	4.12 143	Pn	Pn	23 35 45.0	+0.7
TGTN	Hyland Airport	4.12 143	P	Pn	23 35 45.3	+0.9
	baz=326,SNR=39					
YUK4	Talbot Arm	4.26 216	Pn	Pn	23 35 44.0	-2.4
YUK4	Talbot Arm	4.26 216	P	Pn	23 35 43.9	-2.4
	baz=30,SNR=28					
YUK5	Granite Creek	4.26 210	Pn	Pn	23 35 45.5	-0.9
WHY	Whitehorse	4.29 189		Pn	23 35 46.2	-0.6
WHY			IAML		23 37 00.8	
	comp=E,232nm,0.9s					
WHY	Whitehorse	4.29 189	Pn	Pn	23 35 46.0	-0.8
WHY			Pg	Pb	23 35 59.2	+1.6
WHY	Whitehorse	4.29 189	P	Pn	23 35 45.8	-1.0
	baz=6.9,SNR=6.7					
WHY			Sb	Sb	23 36 49.3	+0.3
	baz=6.9					
O30N	Mendenhall	4.30 197	P	Pn	23 35 46.0	-0.8
	baz=14,SNR=55					
O30N			Sb	Sb	23 36 48.5	-0.7
	baz=14					
J26L	Joseph Creek	4.34 269		Pn	23 35 46.0	-1.3
J26L			IAML		23 37 01.8	
	comp=N,149nm,1.0s					
J26L	Joseph Creek	4.34 269	P	Pn	23 35 46.5	-0.9
	baz=81,SNR=10					
YUK3	Moose Creek	4.43 228	Pn	Pn	23 35 47.6	-1.1
YUK3	Moose Creek	4.43 228	P	Pn	23 35 47.7	-1.1
	baz=42,SNR=31					
HYT	Haines Junctio	4.47 206		Pn	23 35 48.2	-1.0
HYT			IAML		23 36 59.4	
	comp=N,138nm,1.0s					
HYT			IAML		23 37 12.4	
	comp=E,147nm,1.0s					
HYT	Haines Junctio	4.47 206	Pn	Pn	23 35 48.3	-1.0
HYT	Haines Junctio	4.47 206	P	Pn	23 35 48.3	-1.0
	baz=22,SNR=36					
HYT			S	Sn	23 36 40.2	-0.4
	baz=22					
M27K	Edge Creek, AK	4.52 240		Pn	23 35 48.3	-1.7
M27K	Edge Creek, AK	4.52 240	Pn	Pn	23 35 48.2	-1.7
M27K	Edge Creek, AK	4.52 240	P	Pn	23 35 48.4	-1.5
	baz=52,SNR=26					
YUK6	Outpost Mounta	4.54 212	Pn	Pn	23 35 49.3	-1.1
YUK6	Outpost Mounta	4.54 212	P	Pn	23 35 49.3	-1.1
	baz=26,SNR=20					
YUK2	White River	4.54 230	Pn	Pn	23 35 48.9	-1.4
E27K	Coleen River	4.63 319	P	Pn	23 35 50.2	-1.0
	baz=133					
SCRK	Sand Creek	4.64 263	Pn	Pn	23 35 50.3	-1.2
SCRK	Sand Creek	4.64 263	P	Pn	23 35 50.4	-1.2
	baz=74,SNR=18					
P33M	Teslin, Yukon	4.71 176	Pn	Pn	23 35 51.5	-1.0
P33M			IAML		23 37 09.1	
	comp=E,125nm,1.4s					
P33M			IAML		23 37 14.7	
	comp=N,155nm,0.8s					
P33M	Teslin, Yukon	4.71 176	Pn	Pn	23 35 51.5	-1.0
P33M	Teslin, Yukon	4.71 176	P	Pn	23 35 51.4	-1.0
	baz=356,SNR=13					
WRGLY	Wrigley	4.71 106	P	Pn	23 35 52.3	-0.2
	baz=295					
L26K	Log Cabin Wild	4.73 251		Pn	23 35 51.9	-0.8
L26K	Log Cabin Wild	4.73 251	P	Pn	23 35 51.9	-0.8
	baz=62					
DOT	Dot Lake	4.77 260		Pn	23 35 52.5	-0.8
DOT	Dot Lake	4.77 260	Pn	Pn	23 35 52.3	-1.0
YUK7	Dusty Glacier	4.87 208	Pn	Pn	23 35 54.0	-0.8
M26K	Nabesna, AK	4.91 244		Pn	23 35 54.2	-1.1
M26K			IAML		23 37 19.1	
	comp=E,150nm,0.8s					
M26K			IAML		23 37 25.4	
	comp=N,160nm,0.6s					
M26K	Nabesna, AK	4.91 244	P	Pn	23 35 54.5	-0.8
	baz=55,SNR=8.6					
MENT	Mentasta	4.92 251		Pn	23 35 54.9	-0.4
P30M	Million Dollar	5.05 200	P	Pn	23 35 56.4	-0.7
	baz=16					
RIDG	Independent Ri	5.07 262		Pn	23 35 57.4	-0.1
RIDG			IAML		23 37 26.9	
	comp=N,131nm,0.8s					
RIDG			IAML		23 37 34.4	
	comp=E,138nm,0.8s					
RIDG	Independent Ri	5.07 262	P	Pn	23 35 57.1	-0.3
	baz=72					
J25K	Salcha River,	5.09 272		Pn	23 35 56.7	-1.0
J25K			IAML		23 37 27.3	
	comp=N,91nm,1.1s					
J25K	Salcha River,	5.09 272	P	Pn	23 35 56.6	-1.1
	baz=82					
PRP	Porcupine Dome	5.10 282		Pn	23 35 56.5	-1.5
PRP	Porcupine Dome	5.10 282	P	Pn	23 35 56.6	-1.3
	baz=92					
FYU	Fort Yukon	5.12 294	Pn	Pn	23 35 57.0	-1.0
F26K	Sheenjek River	5.13 308	P	Pn	23 35 57.6	-0.6
	baz=119					
O28M	Mount Upton	5.15 220	Pn	Pn	23 35 58.5	-0.2
O28M	Mount Upton	5.15 220	P	Pn	23 35 58.3	-0.4
	baz=33,SNR=18					
BMAR	Burnt Mountain	5.17 304	Pn	Pn	23 35 57.6	-1.1
O29M	Mount Kennedy	5.17 209	Pn	Pn	23 35 58.4	-0.4
O29M	Mount Kennedy	5.17 209	P	Pn	23 35 58.6	-0.2
	baz=24,SNR=43					
WTLY	Watson Lake, Y	5.27 153		Pn	23 35 59.0	-1.1
WTLY	Watson Lake, Y	5.27 153	Pn	Pn	23 35 59.4	-0.6
WTLY	Watson Lake, Y	5.27 153	P	Pn	23 35 60.0	-0.1
	baz=337					
H25K	Birch Creek	5.30 291	P	Pn	23 35 59.4	-1.0
	baz=100					
CTGM	Chitina Glacie	5.32 226	Pn	Pn	23 36 00.4	-0.5
CTGM			IAML		23 37 33.1	
	comp=E,68nm,1.3s					
CTGM	Chitina Glacie	5.32 226	Pn	Pn	23 36 00.6	-0.4
CTG	Chitna Glacier	5.32 226	P	Pn	23 36 00.8	-0.2
	baz=38,SNR=6.4					
P32M	Atlin	5.32 181	Pn	Pn	23 36 00.3	-0.5
P32M	Atlin	5.32 181	P	Pn	23 36 00.6	-0.3
	baz=0.1,SNR=6.3					
LOGN	Logan Glacier	5.33 224		Pn	23 36 00.3	-0.8
LOGN			IAML		23 37 31.8	
	comp=E,67nm,1.0s					
LOGN	Logan Glacier	5.33 224	Pn	Pn	23 36 00.7	-0.5
BARN	Barnard Glacie	5.35 228		Pn	23 36 01.2	-0.2
BARN			IAML		23 37 30.2	
	comp=N,82nm,0.7s					
BARN			IAML		23 37 34.0	
	comp=E,76nm,1.2s					
K24K	Donnelly Dome	5.45 264	P	Pn	23 36 02.0	-0.5
	baz=73					
PTPK	Patty Peak	5.52 232	Pn	Pn	23 36 03.9	+0.3
SKAG	Skagway	5.52 190		Pn	23 36 03.5	0.0
SKAG	Skagway	5.52 190	P	Pn	23 36 03.4	0.0
	baz=7.4					
MCARA	McCarthy VSAT	5.57 235		Pn	23 36 03.7	-0.5
MCARA	McCarthy VSAT	5.57 235	P	Pn	23 36 03.8	-0.4
	baz=46,SNR=16					
BALM	Baldy	5.59 230	Pn	Pn	23 36 05.0	+0.4
F25K	Christian Rive	5.61 304	P	Pn	23 36 04.3	-0.4
	baz=114					
PLBC	Pleasant Camp	5.62 195	Pn	Pn	23 36 05.3	+0.5
PLBC	Pleasant Camp	5.62 195	P	Pn	23 36 05.2	+0.4
	baz=12,SNR=6.8					
PAX	Paxson	5.62 255		Pn	23 36 04.5	-0.4
PAX	Paxson	5.62 255	P	Pn	23 36 04.7	-0.3
	baz=65					
P29M	Windy Craggy	5.64 202	Pn	Pn	23 36 04.9	-0.3
P29M	Windy Craggy	5.64 202	Pn	Pn	23 36 04.9	-0.3
P29M	Windy Craggy	5.64 202	P	Pn	23 36 04.9	-0.3
	baz=18,SNR=11					
R33M	Jennings River	5.64 167	Pn	Pn	23 36 05.4	0.0
R33M	Jennings River	5.64 167	P	Pn	23 36 05.2	-0.2
	baz=348,SNR=8.9					
KIAG	Kiagna River	5.68 230	Pn	Pn	23 36 05.2	-0.6
TABL	Table Mountain	5.69 222		Pn	23 36 06.1	+0.1
TABL	Table Mountain	5.69 222	Pn	Pn	23 36 06.4	+0.4
BCPM	Bancas Point	5.71 213		Pn	23 36 06.3	+0.1
IL31		5.72 275		Pn	23 36 06.3	+0.2
ILAR	Eielson Array	5.72 275	Pn	Pn	23 36 04.6	-1.6
	comp=E,0.7nm,0.3s,baz=86,slow=12,SNR=22					
ILAR			Sn	Sn	23 37 10.7	-0.3
	comp=E,1.5nm,0.3s,baz=80,slow=16,SNR=5.5					
ILAR			Lg	Lg	23 37 31.3	
	comp=E,2.6nm,0.3s,baz=80,slow=28,SNR=5.9					
	comp=E,1.0nm,0.5s					
ILAR	Eielson Array	5.72 275	Pn	Pn	23 36 06.0	-0.2
PINM	Pinnacle	5.74 216	P	Pn	23 36 07.1	+0.5
	baz=30,SNR=12					
PCA	Pinnacle	5.74 216		Pn	23 36 06.8	+0.2
PCA	Pinnacle	5.74 216	Pn	Pn	23 36 07.0	+0.5
C36M	Paulatuk	5.79 35	Pn	Pn	23 36 06.6	-0.5
C36M	Paulatuk	5.79 35	Pn	Pn	23 36 06.4	-0.7
C36M	Paulatuk	5.79 35	P	Pn	23 36 06.6	-0.5
	baz=224					
HDA	Harding Lake	5.80 271		Pn	23 36 07.8	+0.4
HDA	Harding Lake	5.80 271	P	Pn	23 36 06.9	-0.5
	baz=79,SNR=5.6					
E25K	Arctic Village	5.81 309	P	Pn	23 36 07.2	-0.3
	baz=119					
GLB	Gilahina Butte	5.81 238		Pn	23 36 07.5	-0.1
VRDI	Verde Repeater	5.83 235		Pn	23 36 07.7	-0.2
SAMH	Samovar Hills	5.85 219	Pn	Pn	23 36 08.6	+0.5
POKR	Poker Plat Res	5.91 278		Pn	23 36 09.1	+0.2
POKR	Poker Plat Res	5.91 278	P	Pn	23 36 08.5	-0.4
	baz=86					
ISLE	Juniper Island	5.92 227		Pn	23 36 09.1	0.0
PNL	Peninsula	5.92 210	Pn	Pn	23 36 08.9	-0.1
PNL	Peninsula	5.92 210	P	Pn	23 36 09.1	+0.1
	baz=25,SNR=5.3					
YAH	Yahtse	5.92 224		Pn	23 36 09.6	+0.4
Q32M	Nakina River	5.98 174	P	Pn	23 36 09.3	-0.8
	baz=354,SNR=9.2					
N25K	Chitina, Valde	6.00 242		Pn	23 36 09.6	-0.6
N25K	Chitina, Valde	6.00 242	P	Pn	23 36 08.5	-1.7
	baz=52					
H24K	Noodor Dome	6.09 285		Pn	23 36 09.8	-1.5
H24K	Noodor Dome	6.09 285	P	Pn	23 36 10.2	-1.1
	baz=93					
CCB	Clear Creek Bu	6.12 274		Pn	23 36 10.7	-1.0
MESA	MESA	6.13 223	Pn	Pn	23 36 12.1	0.0
WAX	Waxell Ridge	6.19 228		Pn	23 36 13.6	+0.8
MDM	Murphy Dome	6.26 277		Pn	23 36 12.8	-0.9
BESE	Bessie Mountai	6.37 186		Pn	23 36 14.6	-0.6
BESE	Bessie Mountai	6.37 186	Pn	Pn	23 36 14.8	-0.4
DHY	Denali Highway	6.37 260		Pn	23 36 15.5	+0.1
DHY	Denali Highway	6.37 260	P	Pn	23 36 15.4	+0.1
	baz=67					
BMRM	Bremner River	6.42 237		Pn	23 36 15.9	0.0
BMRM	Bremner River	6.42 237	P	Pn	23 36 17.6	+1.7
	baz=47					
BERG	Berg Lake	6.51 231		Pn	23 36 18.1	+0.9
JIS	Juneau Island	6.65 184		Pn	23 36 18.3	-0.7
R32K	Eaglecrest	6.66 185	P	Pn	23 36 19.0	-0.2
	baz=3.1,SNR=7.0					
DLBC	Dease Lake	6.68 164	Pn	Pn	23 36 19.4	-0.2
	comp=E,7.7nm,0.3s,baz=356,slow=10,SNR=75					
DLBC			Sn	Sn	23 37 32.2	-2.8
	comp=E,1.8nm,0.3s,baz=336,slow=8.3,SNR=1.3					
DLBC			Lg	Lg	23 38 05.2	
	comp=E,3.4nm,0.3s,baz=45,slow=19,SNR=8.9					
	comp=E,27nm,0.4s					
DLBC	Dease Lake	6.68 164	Pn	Pn	23 36 19.5	0.0
DLBC	Dease Lake	6.68 164	P	Pn	23 36 19.4	-0.2
	baz=346,SNR=27					
I23K	Minto, Yukon-K	6.72 279		Pn	23 36 20.7	+0.7
WAT6	Susitna Watana	6.73 256	P	Pn	23 36 20.5	+0.3
	baz=64					
DIV	Divide	6.74 242		Pn	23 36 20.0	-0.3
HMT	Hamilton	6.74 232		Pn	23 36 20.6	+0.3
E24K	Your Creek	6.79 305	P	Pn	23 36 20.7	-0.2
	baz=112					
MCK	McKinley	6.81 267		Pn	23 36 20.5	-0.8
RND	Reindeer	6.88 264		Pn	23 36 21.5	-0.7
WAT1	Susitna Watana	6.96 260	P	Pn	23 36 24.5	+1.2
	baz=66					
S34M	Telegraph Cree	7.09 170	Pn	Pn	23 36 25.8	+0.7
S34M	Telegraph Cree	7.09 170	P	Pn	23 36 25.5	+0.4
	baz=351,SNR=9.9					
EYAK	Cordova Ski Ar	7.11 238	Pn	Pn	23 36 24.6	-0.7
E23K	Chandalar	7.18 303	P	Pn	23 36 26.7	+0.4
	baz=109					
COLD	Coldfoot	7.18 297	Pn	Pn	23 36 26.4	+0.1
COLD	Coldfoot	7.18 297	Pn	Pn	23 36 26.3	+0.1
NBC2	NorthernBC 2	7.25 130	Pn	Pn	23 36 26.9	-0.3
SML	Sawmill	7.35 252		Pn	23 36 29.4	+0.8
TOLK	Toolik Lake Re	7.37 308		Pn	23 36 29.2	+0.3
TOLK	Toolik Lake Re	7.37 308	P	Pn	23 36 29.6	+0.7
	baz=114					
TRF	Thorofare Moun	7.47 267		Pn	23 36 30.2	-0.2
TRF	Thorofare Moun	7.47 267	P	Pn	23 36 30.3	-0.1
	baz=72,SNR=9.7					
BPAW	Bear Paw Mtn.	7.59 272	Pn	Pn	23 36 31.5	-0.4
GHO	Glory Hole Cre	7.61 253	Pn	Pn	23 36 32.9	+0.7
KTH	Kantishna Hill	7.71 268		Pn	23 36 33.5	-0.1
A36M	Sachs Harbour	7.74 19		Pn	23 36 33.5	-0.3
A36M	Sachs Harbour	7.74 19	Pn	Pn	23 36 33.6	-0.2
A36M	Sachs Harbour	7.74 19	P	Pn	23 36 33.7	-0.2
	baz=208					
SIT	Sitka	7.91 187	Pn	Pn	23 36 36.9	+0.6
F22K	John River	7.99 298	P	Pn	23 36 38.1	+0.8
	baz=101					
E22K	Anaktuvuk Pass	7.99 302	P	Pn	23 36 38.3	+0.9
	baz=106					
T35M	Bob Quinn	8.09 167	P	Pn	23 36 39.1	+0.3
	baz=350,SNR=13					
G21K	Allakaket	8.40 290	P	Pn	23 36 42.8	-0.2
	baz=92					
F21K	Alatna River	8.44 295	P	Pn	23 36 43.4	-0.1
	baz=97					
IMAR	Indian Mountai	8.50 287	Pn	Pn	23 36 42.7	-1.6
YKA	Yellowknife Ar	8.72 97	Pn	Pn	23 36 45.1	-2.2
	comp=E,1.6nm,0.3s,baz=290,slow=13,SNR=39					
YKA			Sn	Sn	23 38 18.7	-6.0
	comp=E,1.7nm,0.3s,baz=287,slow=23,SNR=5.4					
YKA			Lg	Lg	23 39 12.5	
	baz=296,slow=27					
YKA			LR	LR	23 40 41.4	
	comp=E,35nm,21.9s,baz=128,slow=41					
	comp=E,8.4nm,0.7s					
YKA	Yellowknife Ar	8.72 97	Pn	Pn	23 36 44.6	-2.7
U33K	Whale Pass	8.81 179	P	Pn	23 36 48.2	-0.4
	baz=358					
J20K	Nowinta River	8.92 275	Pn	Pn	23 36 49.4	-0.6
K20K	Telida	9.12 270	Pn	Pn	23 36 53.1	+0.3
M20K	Styx River	9.30 260	Pn	Pn	23 36 55.5	+0.2
BRLDA	Berland Lookou	13.51 136	Pn	Pn	23 37 51.1	-1.9
EDM	Edmonton	15.53 129	Pn	Pn	23 38 20.0	-0.1
EDM			IAmb	IAmb	23 38 30.3	
	comp=Z,3.8nm,0.8s					
RES	Resolute Bay	16.16 37	Pn	Pn	23 38 26.1	-1.9
	comp=Z,0.9nm,0.3s,baz=176,slow=5.4,SNR=1.8					
	comp=Z,9.7nm,0.6s					
FFC	Flin Flon	18.62 108	P	P	23 38 55.8	-2.5
FFC			IAmb	IAmb	23 38 57.8	
	comp=Z,5.5nm,0.8s					
NEW	Newport	18.84 144	P	P	23 39 00.9	-0.1
	comp=Z,0.1nm,0.3s,baz=303,slow=14,SNR=3.3					
	comp=Z,2.2nm,0.7s					
EUNU	Eureka	19.75 22	P	P	23 39 12.5	+1.8
EUNU			IAmb	IAmb	23 39 35.7	
	comp=Z,10nm,1.3s					
PDAR	Pinedale Array	25.97 137	P	P	23 40 14.4	+0.7
	comp=Z,0.7nm,0.8s,baz=15,slow=6.2,SNR=6.9					
	comp=Z,0.7nm,0.8s					
NVAR	Mina Array Bea	27.97 154	P	P	23 40 33.2	+1.6
	comp=Z,0.7nm,0.7s,baz=332,slow=7.7,SNR=6.3					
	comp=Z,0.7nm,0.7s					
TXAR	Lajitas Array	40.18 138	P	P	23 42 17.3	+0.2
	comp=Z,0.2nm,0.7s,baz=7.8,slow=7.3,SNR=2.1					
	comp=Z,0.2nm,0.7s					
HFS	Hagfors	52.88 20	P	P	23 43 56.9	+0.8
	comp=Z,0.9nm,0.8s,baz=28,slow=6.5,SNR=1.5					
	comp=Z,0.9nm,0.8s					
FINES	FINESS Array B	53.06 12	P	P	23 43 57.4	0.0
	comp=Z,1.9nm,0.7s,baz=12,slow=9.8,SNR=12					
	comp=Z,1.9nm,0.7s					
EKA	Eskdalemuir Ar	54.24 32	P	P	23 44 07.1	+1.0
	comp=Z,0.7nm,0.6s,baz=330,slow=7.0,SNR=1.5					
	comp=Z,0.7nm,0.6s					
ZALV	Zalesovo Beam	57.89 334	P	P	23 44 34.3	+2.1
	comp=Z,0.4nm,0.4s,baz=66,slow=8.1,SNR=2.0					
	comp=Z,0.4nm,0.4s					
BVAR	Borovoye Array	60.98 344	P	P	23 44 53.0	-0.6
	comp=Z,0.3nm,0.5s,baz=12,slow=7.5,SNR=2.3					
	comp=Z,0.3nm,0.5s					
KURBB	Kurchatov Arra	62.17 338	P	P	23 45 02.8	+1.1
	comp=Z,0.6nm,0.2s,baz=12,slow=5.7,SNR=2.1					
AKASG	Malin Array Be	63.97 12	P	P	23 45 14.1	+0.6
	comp=Z,0.6nm,0.4s,baz=354,slow=6.8,SNR=6.0					
	comp=Z,0.6nm,0.4s					
MKAR	Makanchi Array	65.21 334	P	P	23 45 22.1	+0.3
	comp=Z,0.2nm,0.7s,baz=48,slow=3.1,SNR=1.9					
	comp=Z,0.2nm,0.7s					
ESDC	Sonseca Array	68.56 40	P	P	23 45 45.4	+2.1
	comp=Z,0.6nm,0.9s,baz=343,slow=8.1,SNR=4.3					
	comp=Z,0.6nm,0.9s					

*ISK **01** 23:50:42.5, 38°65N×44°16E, h5km, ML2.5/13*
*DDA **01** 23:50:43.6±0.0, 38°67N×44°02E, h19km, ML2.6*
ISC 01 23:50:43.3±1.3, 38°65N±0°04×44°11E±0°05, h12km±9km, n21, σ1°19/25, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.09	278	P	Pg	23 50 46.8	+0.5
CLDR	Caldiran	0.52	343	PG	Pg	23 50 52.7	-0.8
VANB	Van	0.57	265	PG	Pb	23 50 55.3	+0.1
VANB				SG	Sn	23 51 04.7	-2.0
AKDM	Akdamar-Van	0.94	251	PG	Pn	23 51 01.9	-0.6
AKDM				SG	Sn	23 51 17.2	+1.2
YOVA	Hakkari_Yksek	1.07	172	P	Pn	23 51 04.8	+0.5
YOVA				S	Sn	23 51 20.2	+1.0
ADCV	BITLIS_Adilcev	1.10	279	P	Pb	23 51 03.3	-1.0
ADCV				S	Sn	23 51 22.9	+3.1
ADCV				*i* AML	AML	23 51 28.0	
	comp=N,70nm,0.5s						
AGRB	Hanur-Agry	1.27	317	PN	Pg	23 51 08.3	+0.6
MLAZ	Malazgirt-MUS	1.31	292	PN	Pg	23 51 09.4	+0.8
TASB	TASBURUN-IGDIR	1.34	4	PN	Pg	23 51 09.5	+0.5
KOTA	Agri, Merkez-K	1.35	329	P	Pb	23 51 08.2	-0.4
CUKT	Cukurca	1.46	196	PN	Pg	23 51 10.7	-0.5
GNI	Garni	1.58	18	PN	Pg	23 51 12.9	-0.7
BLIS	Bitlis-Merkez	1.58	262	P	Pg	23 51 12.6	-1.1
GURO	Guroymak-BITLI	1.63	267	PN	Pg	23 51 14.2	-0.4
EAK	Akyaka	2.07	349	P	Pb	23 51 21.1	+0.2
KARS	Kars	2.13	338	PN	Pb	23 51 20.7	-1.2
VRTB	Varto-Mus	2.13	285	PN	Pb	23 51 21.1	-0.9
KOPR	Koprukoy-ERZUR	2.21	308	PN	Pb	23 51 22.3	-0.9
SVAN	Silvan-Diyarba	2.34	259	PN	Pb	23 51 24.5	-0.9
SENK	Senkaya-Erzuru	2.34	325	PN	Pb	23 51 24.0	-1.6
MIDY	Mardin/Midyat-	2.48	241	P	Pn	23 51 24.7	+1.2

MAN 01 23:53:45.0, 6°10N×126°56E, h101km, mb4.4, ML3.3, MS3.0, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.85	270	↓*e*P	Pn	23 54 05.2	+1.3
DDMP				*e*S	Sn	23 54 19.4	+1.3
MATI	Mati	0.90	340	↓*e*P	Pn	23 54 07.9	+3.5
MATI				*e*S	Sn	23 54 26.1	+7.0
GSPH	General Santos	1.60	270	*e*P	Pn	23 54 10.7	-2.1
SKMP	Bagumbayan, Su	2.05	282	↓*e*P	Pn	23 54 16.0	-2.3
SKMP				*e*S	Sn	23 54 48.0	+4.2
BIPH	Bislig	2.08	354	↓*i*P	Pn	23 54 19.9	+1.2
BIPH				*i* S	Sn	23 54 46.4	+2.0
BUKP	Musuan	2.31	320	↑*e*P	Pn	23 54 21.6	-0.2
BUKP				*e*S	Sn	23 54 50.5	+0.6

WEL 01 23:57:01.4±0.7, 37°S±5°×17°9E±°, h20km, M3.3/30, ML3.6/40, MLv3.3/30, Error ellipse: s-maj=0.0km s-min=0.0km az=125.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.58	262	P	Pb	23 57 12.8	-0.1
MXZ				S	Sb	23 57 21.0	+0.2
WMGZ	Waiomatatini S	0.60	235	P	Pn	23 57 15.2	+0.4
WMGZ				S	Sn	23 57 24.0	+0.1
PUZ	Puketiti	0.85	226	P	Pn	23 57 19.0	+0.6
PUZ				S	Sn	23 57 31.5	+1.3
PKGZ	Pakihiroa	0.86	241	P	Pn	23 57 18.6	+0.1
PKGZ				S	Sn	23 57 30.3	-0.2
HAZ	Te Kaha	1.03	254	P	Pn	23 57 20.7	0.0
HAZ				S	Sn	23 57 34.5	-0.1
RUGZ	Raukumara Rang	1.18	245	P	Pb	23 57 23.6	+0.4
CNGZ	Carnagh Statio	1.20	213	P	Pb	23 57 24.8	+1.4
CNGZ				S	Sn	23 57 42.5	+3.8
TKGZ	Te Karaka	1.34	224	P	Pb	23 57 25.9	+0.1
TKGZ				S	Sb	23 57 43.0	+0.5
MWZ	Matawai	1.46	234	P	Pb	23 57 27.5	-0.5
MWZ				S	Sn	23 57 44.8	-0.6
RIGZ	Rimuhau	1.58	219	P	Pn	23 57 28.7	+0.4
RIGZ				S	Sb	23 57 49.2	-0.4
URZ	Urewera	1.71	242	P	Pb	23 57 31.1	-1.0
URZ				S	Sn	23 57 51.6	+0.3
SNGZ	Shannon Statio	1.86	225	P	Pn	23 57 30.7	-1.6
SNGZ				S	Sn	23 57 55.4	+0.2
KNZ	Kokohu	1.87	214	P	Pn	23 57 32.4	+0.1
KNZ				S	Sn	23 57 54.7	-0.7
MHGZ	Mahia Peninsul	1.89	208	P	Pn	23 57 33.4	+0.8
EDRZ	Edgecumbe	1.92	250	P	Pn	23 57 34.0	+1.0
MUGZ	Murupara	2.05	240	P	Pn	23 57 35.5	+0.8
MUGZ				S	Sn	23 57 59.

*INMG **02** 00:00:53.5±1.2, 36°.85N×4°.21W, h59km±7km, ML1.6, Error ellipse: s-maj=3.0km s-min=2.6km az=3.0*
*SFS **02** 00:00:53.0, 36°.82N×4°.18W, ML2.5, BENAMARGOSA (MALAGA)*

ISC 02 00:00:51.9±1.5, 36°.84N±0°.06×4°.18W±0°.03, h69km±9km, n31, σ1°14/55, 18C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAL	**Malaga-Limoner**	**0.21**	**250**	P	**Pn**	**00 01 02.7**	**+0.3**
EMAL				S	**Sn**	**00 01 09.6**	**-0.5**
EGOR	**Sierra Gorda,**	**0.28**	**11**	P	**Pn**	**00 01 03.5**	**+0.5**
EGOR	78nm,SNR=2.7			⇑iVmb_V		00 01 05.9	
EGOR				S	**Sn**	**00 01 10.4**	**-0.6**
ELGU	**Los Guajares,**	**0.44**	**86**	P	**Pn**	**00 01 04.5**	**+0.4**
ELGU	285nm,SNR=7.7			⇑iVmb_V		00 01 05.9	
ELGU				S	**Sn**	**00 01 12.8**	**-0.3**
EMIJ	**Mijas**	**0.55**	**241**	P	**Pn**	**00 01 05.2**	**+0.1**
EMIJ	86nm,SNR=2.4			⇑iVmb_V		00 01 07.1	
EMIJ				S	**Sn**	**00 01 14.2**	**-0.6**
EBER	**Berja**	**1.03**	**86**	P	**Pn**	**00 01 10.9**	**0.0**
EBER	98nm,SNR=1.5			⇑iVmb_V		00 01 16.6	
EBER				S	**Sn**	**00 01 25.7**	**+0.7**
EQES	**Quesada**	**1.31**	**42**	P	**Pn**	**00 01 15.2**	**+0.9**
EQES	69nm,SNR=1.5			⇑iVmb_V		00 01 17.9	
EQES				S	**Sn**	**00 01 31.2**	**0.0**
ESPR	**Espera**	**1.35**	**272**	P	**Pn**	**00 01 15.3**	**+0.6**
ESPR	48nm,SNR=0.9			⇑iVmb_V		00 01 19.8	
ESPR				S	**Sn**	**00 01 32.9**	**+1.0**
EADA	**Adamuz**	**1.37**	**347**	P	**Pn**	**00 01 15.5**	**+0.5**
EADA	108nm,SNR=2.3			⇑iVmb_V		00 01 16.6	
EADA				S	**Sn**	**00 01 32.0**	**-0.5**
ECAB	**El Cabril**	**1.58**	**322**	P	**Pn**	**00 01 18.2**	**+0.3**
ECAB	68nm,SNR=1.8			⇑iVmb_V		00 01 19.2	
ECAB				S	**Sn**	**00 01 36.9**	**-0.7**
EMIN	**Mina Concepcio**	**2.20**	**296**	P	**Pn**	**00 01 26.2**	**+0.1**
EMIN	83nm,SNR=1.9			⇑iVmb_V		00 01 27.8	
EMIN				S	**Sn**	**00 01 50.3**	**-2.0**
PBAR	**Barrancos**	**2.64**	**301**	*e*P	**Pn**	**00 01 32.9**	**+0.8**
PBAR				*e*S	**Sn**	**00 02 02.0**	**-1.0**
PBAR	1.5nm,0.3s			A	A	00 02 03.0	
PAB	**San Pablo**	**2.71**	**357**	P	**Pn**	**00 01 34.2**	**+1.0**
PAB	60nm,SNR=2.0			⇑iVmb_V		00 01 36.3	
PAB				S	**Sn**	**00 02 03.6**	**-1.2**
EGRO	**El Granado**	**2.73**	**286**	P	**Pn**	**00 01 33.1**	**-0.2**
EGRO	132nm,SNR=1.2			⇑iVmb_V		00 01 35.4	
EGRO				S	**Sn**	**00 02 04.3**	**-1.0**
ETOB	**Tobarra**	**2.76**	**48**	P	**Pn**	**00 01 34.3**	**+0.4**
ETOB	84nm,SNR=1.3			⇑iVmb_V		00 01 36.4	
ETOB				S	**Sn**	**00 02 03.7**	**-2.3**
ESDC	**Sonseca Array**	**2.84**	**3**	⇑iVmb_V		00 01 37.2	
ESDC	66nm,SNR=1.6						
ESDC				S	**Sn**	**00 02 06.8**	**-1.2**
PVAQ	**Vaqueiros**	**2.88**	**282**	*e*P	**Pn**	**00 01 36.0**	**+0.5**
PVAQ				*e*S	**Sn**	**00 02 07.4**	**-1.6**
PVAQ	1.6nm,0.1s			A	A	00 02 08.8	
EBAD	**Badajoz**	**2.95**	**311**	P	**Pn**	**00 01 36.6**	**+0.2**
EBAD	99nm,SNR=2.1			⇑iVmb_V		00 01 37.8	
EBAD				S	**Sn**	**00 02 08.6**	**-2.0**
PCVE	**Castro Verde**	**3.18**	**286**	*e*S	**Sn**	**00 02 15.1**	**-1.2**
MESJ	**Messejana**	**3.37**	**288**	*e*P	**Pn**	**00 01 43.5**	**+1.4**
MESJ				*e*S	**Sn**	**00 02 19.7**	**-1.3**
PESTR	**Estremoz**	**3.38**	**308**	*e*P	**Pn**	**00 01 43.1**	**+0.9**
PESTR				*e*S	**Sn**	**00 02 19.9**	**-1.2**
PESTR	0.8nm,0.5s			A	A	00 02 23.3	
EPLA	**Plasencia**	**3.55**	**336**	P	**Pn**	**00 01 46.1**	**+1.5**
EPLA	70nm,SNR=1.3			⇑iVmb_V		00 01 47.1	
EPLA				S	**Sn**	**00 02 25.2**	**-0.2**
PMRV	**Marv??o**	**3.62**	**317**	*e*P	**Pn**	**00 01 46.5**	**+1.0**
PMRV				*e*S	**Sn**	**00 02 25.8**	**-1.3**
PNCL	**Nicolau / Gran**	**3.69**	**292**	*e*P	**Pn**	**00 01 47.6**	**+1.2**
PNCL				*e*S	**Sn**	**00 02 27.7**	**-0.9**
ECHE	**Chera**	**3.74**	**42**	P	**Pn**	**00 01 47.9**	**+0.8**
ECHE	168nm,SNR=0.9			⇑iVmb_V		00 01 49.7	
ECHE				S	**Sn**	**00 02 28.1**	**-1.8**
GUD	**Guadarrama**	**3.80**	**0**	P	**Pn**	**00 01 48.9**	**+0.8**
GUD	38nm,SNR=0.9			⇑iVmb_V		00 01 49.6	
PMTG	**Montargil**	**3.90**	**306**	*e*P	**Pn**	**00 01 50.6**	**+1.3**
PMTG				*e*S	**Sn**	**00 02 32.9**	**-0.9**
PCBR	**Castelo Branco**	**3.97**	**320**	*e*P	**Pn**	**00 01 52.0**	**+1.8**
PACT	**Alcochete**	**4.16**	**299**	*e*P	**Pn**	**00 01 54.6**	**+1.8**
ETOR	**Torete**	**4.31**	**22**	P	**Pn**	**00 01 55.6**	**+0.6**
ETOR	63nm,SNR=1.2			⇑iVmb_V		00 01 56.7	
ETOR				S	**Sn**	**00 02 43.0**	**-1.0**
PSBE	**So Bento**	**4.51**	**308**	*e*P	**Pn**	**00 01 59.6**	**+1.9**
MVO	**Moncorvo**	**4.86**	**334**	*e*P	**Pn**	**00 02 04.6**	**+2.1**

IDC 02 00:19:22.1±8.0, 7°.27S×129°.61E, h125km±84km, mb3.3/1, mbtmp3.7/5, Error ellipse: s-maj=70.6km s-min=26.5km az=33.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.56**	**243**	P	Pn	00 20 56.4	+0.2
BATI	12nm,0.4s,baz=48,slow=3.1,SNR=3.9			S	Sn	00 22 10.7	+1.0
FITZ	**Fitzroy Crossi**	**11.43**	**199**	P	Pn	00 22 01.4	-0.3
FITZ	17nm,0.4s,baz=92,slow=20,SNR=7.7 1.4nm,0.4s,baz=22,slow=11,SNR=20			S	Sn	00 24 00.8	-6.9
WRA	**Warramunga Arr**	**13.41**	**160**	P	Pn	00 22 26.3	-1.2
WRA	2.4nm,0.3s,baz=306,slow=22,SNR=6.6 0.6nm,0.3s,baz=337,slow=13,SNR=22			S	Sn	00 24 48.3	-7.2
ASAR	**Alice Springs**	**16.82**	**166**	P	P	00 23 11.4	+1.1
ASAR	1.8nm,0.5s,baz=343,slow=21,SNR=10.0 0.3nm,0.3s,baz=335,slow=9.5,SNR=10			S	Sn	00 26 11.9	-5.7
MKAR	**Makanchi Array**	**68.24**	**327**	P	P	00 30 09.2	-0.1
	0.5nm,0.5s,baz=358,slow=27,SNR=2.2 0.3nm,0.4s,baz=122,slow=8.4,SNR=6.2 0.3nm,0.4s						

*IDC **02** 00:33:05.9±0.7, 2°.01S×140°.70E, h0km, mb4.1/12, mbtmp4.2/14, ML4.6/2, MS3.2/12, Error ellipse: s-maj=27.9km s-min=14.5km az=85.0*
*NEIC **02** 00:33:08.5±1.6, 2°.09S±0°.04×140°.54E±0°.09, h10km±1km, mb4.5/19, Error ellipse: s-maj=15.7km s-min=6.3km az=99.0*
*DJA **02** 00:33:14.0±0.8, 2°.5S±5°×14°.0E±°, h33km±6km, M4.0/17, mB4.5/2, mb4.3/17, MLv3.8/3, Mw(mB)3.7/2*

ISC 02 00:33:13.1±0.5, 2°.29S±0°.06×140°.52E±0°.08, h35km, n75, σ1°66/68, mb4.3/19, MS3.2/7, 1C, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.46**	**229**	P	**Pn**	**00 33 24.0**	**+0.8**
GENI	**Genyem**	**0.46**	**229**	P	**Pn**	**00 33 24.3**	**+1.1**
SMPI	**Sarmi**	**1.83**	**279**	P	**Pn**	**00 33 41.3**	**-0.8**
WAMI	**Wamena**	**2.40**	**229**	P	**Pn**	**00 33 51.1**	**+1.2**
FAKI	**Fak Fak**	**8.28**	**265**		**Pn**	**00 35 10.2**	**-0.7**
PMG	**Port Moresby**	**9.68**	**137**	LR	LR	00 39 45.5	
	comp=Z,93nm,19.9s,baz=277,slow=41						
PMG	**Port Moresby**	**9.68**	**137**	Pn	**Pn**	**00 35 30.3**	**+0.3**
COEN	**Coen**	**11.89**	**167**	Pn	**Pn**	**00 35 59.8**	**-0.5**
KDU	**Kakadu**	**13.04**	**217**	P	**Pn**	**00 36 15.7**	**-0.4**
MTN	**Manton Dam**	**14.01**	**221**	Pn	**Pn**	**00 36 27.9**	**-1.3**
MTN	**Manton Dam**	**14.01**	**221**	P	**Pn**	**00 36 29.5**	**+0.2**
GUMO	**Guam**	**16.36**	**15**	LR	LR	00 41 35.0	
	comp=Z,63nm,21.6s,baz=190,slow=32						
DAV	**Davao City (W)**	**17.57**	**302**	LR	LR	00 44 13.1	
	comp=Z,29nm,18.6s,baz=88,slow=38						
KNRA	**Kununurra**	**17.64**	**220**		**Pn**	**00 37 16.3**	**0.0**
KNRA				IAmb	IAmb	00 37 18.8	
	comp=Z,41nm,1.4s						
GTOI	**Gorontalo**	**17.74**	**279**	P	**P**	**00 37 20.0**	**+1.9**
	comp=Z,7.8nm,1.2s						
SOEI	**Soe**	**17.77**	**245**		**Pn**	**00 37 18.4**	**+0.3**
SOEI				IAmb	IAmb	00 37 32.0	
	comp=Z,37nm,0.8s						
SOEI	**Soe**	**17.77**	**245**	P	**P**	**00 37 19.1**	**+0.5**
	comp=Z,50nm,0.7s						
SOEI	**Soe**	**17.77**	**245**	P	**P**	**00 37 21.6**	**+3.0**
WB0	**Warramunga Arr**	**18.37**	**199**	P	**P**	**00 37 24.7**	**-0.4**
BATI	**Baumata**	**18.49**	**244**	P	**Pn**	**00 37 27.9**	**+1.1**
	comp=Z,3.5nm,0.3s,baz=298,slow=3.6,SNR=9.0 comp=Z,24nm,0.5s						
WR0	**Warramunga Arr**	**18.51**	**198**	P	**P**	**00 37 26.8**	**+0.3**
WR0				IAmb	IAmb	00 37 35.4	
	comp=Z,8.2nm,0.7s						
WRAB	**Tennant Creek**	**18.54**	**199**	P	**Pn**	**00 37 27.7**	**+0.4**
WRA	**Warramunga Arr**	**18.55**	**199**	P	**Pn**	**00 37 27.7**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=24,slow=12,SNR=117						
WRA				LR	LR	00 45 22.9	
	comp=Z,148nm,21.9s,baz=20,slow=39 comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**18.55**	**199**	P	**P**	**00 37 25.7**	**-1.4**
CTA	**Charters Tower**	**18.56**	**163**	P	**Pn**	**00 37 29.9**	**+2.3**
	comp=Z,3.1nm,0.8s,baz=345,slow=11,SNR=9.9						
CTA				LR	LR	00 45 05.9	
	comp=Z,84nm,19.2s,baz=75,slow=38						
CTAO	**Charters Tower**	**18.56**	**163**		**P**	**00 37 27.0**	**-0.1**
MRSI	**Marisa**	**18.77**	**278**	P	**Pn**	**00 37 30.5**	**+0.3**
	comp=Z,13nm,0.9s						
EDFI	**Ende, Flores**	**19.80**	**250**	P	**P**	**00 37 38.0**	**-2.9**
	comp=Z,3.9nm,1.2s						
TOLI2	**Tolitoli**	**20.02**	**280**	P	**P**	**00 37 42.8**	**-0.3**
TOLI2				IAmb	IAmb	00 37 53.3	
	comp=Z,4.6nm,0.7s						
SPSI	**Sidrap Palu**	**20.78**	**265**	P	**P**	**00 37 52.6**	**+1.2**
	comp=Z,8.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.44**	**222**	P	**P**	**00 37 58.5**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=45,slow=10,SNR=18						
FITZ				LR	LR	00 47 45.2	
	comp=Z,139nm,20.6s,baz=350,slow=40 comp=Z,3.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.44**	**222**		**P**	**00 37 58.1**	**-0.4**
FITZ				IAmb	IAmb	00 38 00.2	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.44**	**222**	P	**P**	**00 37 59.2**	**+0.7**
AS31	**Alice Springs**	**22.19**	**196**	P	**P**	**00 38 06.5**	**0.0**
AS31				IAmb	IAmb	00 38 08.6	
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**22.19**	**196**	P	**P**	**00 38 07.0**	**+0.4**
	comp=Z,8.0nm,0.6s,baz=29,slow=11,SNR=96						
ASAR				LR	LR	00 47 25.0	
	comp=Z,151nm,18.7s,baz=341,slow=38 comp=Z,8.0nm,0.6s						
ASAR	**Alice Springs**	**22.19**	**196**	P	**P**	**00 38 06.4**	**-0.2**
RK1H	**Rockhampton Ha**	**23.09**	**156**	P	**P**	**00 38 15.5**	**-0.5**
QLP	**Quilpie**	**24.42**	**172**	P	**P**	**00 38 30.0**	**+1.5**
EIDS	**Eidsvold**	**25.10**	**157**	P	**P**	**00 38 35.4**	**+0.7**
EIDS	**Eidsvold**	**25.10**	**157**	P	**P**	**00 38 36.8**	**+2.0**
INKA	**Innaminka**	**25.31**	**180**	P	**P**	**00 38 37.7**	**+1.1**
RMQ	**Roma**	**25.33**	**163**	P	**P**	**00 38 38.7**	**+1.9**
	comp=Z,17nm,0.8s						
MBWA	**Marble Bar**	**27.60**	**226**	P	**P**	**00 38 56.5**	**-0.8**
MBWA				IAmb	IAmb	00 39 07.2	
	comp=Z,28nm,1.4s						
PSA00	**Pilbara Seismi**	**27.79**	**225**	P	**P**	**00 38 59.1**	**+0.1**
PSA00				IAmb	IAmb	00 39 00.1	
	comp=Z,19nm,1.5s						
STKA	**Stephens Creek**	**29.45**	**178**	P	**P**	**00 39 13.7**	**0.0**
	comp=Z,4.6nm,0.7s,baz=355,slow=4.7,SNR=6.7 comp=Z,4.6nm,0.7s						
STKA	**Stephens Creek**	**29.45**	**178**	P	**P**	**00 39 13.0**	**-0.7**
ARMA	**Armidale**	**29.89**	**160**	P	**P**	**00 39 16.6**	**-1.2**
ARMA				IAmb	IAmb	00 39 20.3	
	comp=Z,13nm,1.4s						
BBOO	**Buckleboo**	**30.65**	**187**	P	**P**	**00 39 24.1**	**-0.3**
FORT	**Forrest**	**30.69**	**201**	P	**P**	**00 39 24.8**	**+0.1**
JOW	**Kunigami**	**31.27**	**339**	LR	LR	00 50 09.4	
	comp=Z,62nm,22.0s,baz=9.0,slow=33						
DZM	**Mont Dzumac**	**31.96**	**130**	P	**P**	**00 39 34.3**	**-1.8**
	comp=Z,4.6nm,0.7s,baz=307,slow=11,SNR=7.6						
DZM				LR	LR	00 51 44.4	
	comp=Z,57nm,18.6s,baz=38,slow=35 comp=Z,4.6nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**33.02**	**50**	T	T	01 15 12.0	
	baz=232,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**33.03**	**50**	T	T	01 15 13.7	
	baz=232,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**33.03**	**50**	T	T	01 15 13.8	
	baz=232,slow=75,SNR=16						
CAN	**Canberra**	**33.80**	**167**	P	**P**	**00 39 51.9**	**-0.1**
MORW	**Morawa**	**35.38**	**219**	P	**P**	**00 40 05.0**	**-0.7**
MORW				IAmb	IAmb	00 40 06.7	
	comp=Z,26nm,1.3s						
MJAR	**Matsushiro Arr**	**38.69**	**357**	P	P	00 40 28.4	-5.4
	comp=Z,1.6nm,1.1s,baz=173,slow=10.0,SNR=4.1 comp=Z,1.6nm,1.1s						
KSRS	**Korea Array**	**41.23**	**345**	P	**P**	**00 40 50.7**	**-4.1**
	comp=Z,0.7nm,0.6s,baz=162,slow=9.2,SNR=2.3						
KSRS				LR	LR	00 55 02.2	
	comp=Z,18nm,21.5s,baz=145,slow=32 comp=Z,0.7nm,0.6s						
GSI	**Gunungsitoli**	**43.08**	**274**	P	**P**	**00 41 08.0**	**-2.2**
GSI				IAmb	IAmb	00 41 09.7	
	comp=Z,32nm,1.5s						
KMI	**Kunming**	**45.64**	**309**	⇑P	**P**	**00 41 31.1**	**+0.3**
PZH	**PanZhiHua**	**47.12**	**310**	P	**P**	**00 41 45.5**	**+3.2**
MDJ	**Mudanjiang**	**47.71**	**349**	P	**P**	**00 41 47.3**	**+0.9**
MDJ				pP	pP	00 41 50.2	-5.7
MDJ				ScP	**ScP**	**00 47 10.4**	**+3.2**
MDJ				S	**S**	**00 48 44.2**	**+4.0**
MDJ				ScS	**ScS**	**00 51 40.2**	**+2.9**
HHC	**Hu-ho-hao-te**	**50.40**	**332**	*e*P	**P**	**00 42 10.4**	**+3.1**
KLR	**Kul'dur**	**51.87**	**353**	P	**P**	**00 42 13.9**	**-4.1**
	comp=Z,1.1nm,0.6s,baz=188,slow=6.8,SNR=3.5 comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-**	**57.05**	**12**	P	**P**	**00 42 54.4**	**-1.2**
SONM	**Songino Array**	**58.13**	**334**	LR	LR	01 11 20.1	
	comp=Z,13nm,18.1s,baz=80,slow=40						
WMQ	**Urumqi**	**65.81**	**321**	*e*P	**P**	**00 43 56.9**	**+1.8**
MKAR	**Makanchi Array**	**70.57**	**322**	P	**P**	**00 44 23.0**	**-1.8**
	comp=Z,1.0nm,0.8s,baz=126,slow=5.4,SNR=7.9 comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**70.57**	**322**	P	**P**	**00 44 22.5**	**-2.3**
ZALV	**Zalesovo Beam**	**72.49**	**329**	LR	LR	01 15 29.0	
	comp=Z,12nm,19.9s,baz=20,slow=35						
KURBB	**Kurchatov Arra**	**74.43**	**324**	P	**P**	**00 44 45.0**	**-2.7**
	comp=Z,0.4nm,0.7s,baz=126,slow=4.7,SNR=2.6 comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**76.04**	**175**	P	**P**	**00 44 56.5**	**0.0**
	comp=Z,3.0nm,0.7s,baz=328,slow=7.4,SNR=27 comp=Z,3.0nm,0.7s						
BVAR	**Borovoye Array**	**80.01**	**325**	P	**P**	**00 45 16.5**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=146,slow=6.4,SNR=3.0 comp=Z,0.4nm,0.5s						
MAW	**Mawson**	**83.19**	**202**	P	**P**	**00 45 35.9**	**+0.5**
	comp=Z,3.5nm,1.1s,baz=90,slow=12,SNR=4.0 comp=Z,3.5nm,1.1s						
LPAZ	**La Paz**	**146.21**	**124**	PKPbc	**PKPdf**	**00 52 49.6**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=263,slow=5.9,SNR=6.2						

*NIED **02** 01:08:34.5, 34°.94N×133°.35E, h16km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.28; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-1.69; $M_{r\theta}$-0.24; $M_{\theta\phi}$-0.06; $M_{\phi r}$0.27; Fault plane solution: $M_0$1.60000×10^{14} NP1: ϕ_s226.00000°, δ76.00000°, λ177.00000°. NP2: ϕ_s317.00000°, δ87.00000°, λ14.00000°.*

JMA 02 01:08:34.5±0.0, 34°.94N±0°.07×133°.35E±0°.08, h16km, MV3.6/20, 8D, OKAYAMA PREF, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHS	**Saijyo**	**0.20**	**287**	⇓P	Pg	01 08 39.1	-0.1
JHS				⇓S	Sg	01 08 42.4	0.0
JJG	**Jouge**	**0.34**	**208**	P	Pg	01 08 41.5	-0.1
JJG				S	Sg	01 08 46.4	0.0
JNM	**Ikuma**	**0.61**	**335**	P	Pg	01 08 46.6	0.0
JNM				S	Sb	01 08 55.2	0.0
JAD	**Aida**	**0.68**	**90**	⇓P	Pg	01 08 47.2	-0.6
JAD				⇓S	Sg	01 08 56.3	-0.5
JISK	**Izumosakaura**	**0.69**	**324**	P	Pg	01 08 47.7	-0.3
JISK				S	Sg	01 08 57.2	0.0
JGT2	**ShimaneMisato**	**0.70**	**280**	⇓P	Pg	01 08 47.8	-0.4
JGT2				⇓S	Sg	01 08 57.1	-0.4
JJS	**Sakaide**	**0.74**	**139**	P	Pg	01 08 48.3	-0.8
JJS				S	Sg	01 08 58.2	-0.7
JHT	**Toyohira**	**0.81**	**250**	⇓P	Pb	01 08 49.6	-0.7
JHT				⇓S	Sb	01 09 00.4	-0.6
JHM	**Kurahashi**	**1.05**	**220**	P	Pb	01 08 53.4	-0.8
JHM				S	Sb	01 09 07.6	-0.1

WEL 02 01:11:59.8±0.8, 35°.5S±12°.2×18°.0E±1°.9, h255km±10km, M3.7/17, mB4.3/7, ML4.3/19, MLv3.9/17, Mw(mB)3.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=119.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.66**	**201**	P	Pn	01 12 46.2	-2.8
WMGZ				S	S	01 13 27.5	-0.4
HAZ	**Te Kaha**	**2.83**	**211**	P	Pn	01 12 50.6	-0.1
HAZ				S	S	01 13 30.3	-0.8
PKGZ	**Pakihiroa**	**2.83**	**205**	P	Pn	01 12 48.0	-2.8
PKGZ				S	S	01 13 29.7	-1.6
PUZ	**Puketiti**	**2.94**	**201**	P	Pn	01 12 53.9	+2.0
PUZ				S	S	01 13 32.9	-0.4
SNGZ	**Shannon Statio**	**3.89**	**207**	P	Pn	01 13 03.5	+0.7
SNGZ				S	S	01 13 53.9	+1.5
MHGZ	**Mahia Peninsul**	**4.05**	**199**	P	Pn	01 13 05.7	+1.4
MHGZ				S	S	01 13 57.9	+2.2
RAHZ	**Arahi**	**4.11**	**209**	P	Pn	01 13 05.3	+0.3
RAHZ				S	S	01 13 57.5	+0.6
ALRZ	**Allen Road**	**4.15**	**218**	P	Pn	01 13 05.8	+0.2
MTHZ	**Maungataniwha**	**4.15**	**211**	P	Pn	01 13 06.3	+0.7
MTHZ				S	S	01 13 58.7	+0.7
WHHZ	**Waihua**	**4.19**	**206**	P	Pn	01 13 06.6	+0.6
WHHZ				S	S	01 14 01.1	+2.4
NMHZ	**Naumai**	**4.37**	**210**	P	Pn	01 13 08.5	+0.3
NMHZ				S	S	01 14 04.7	+1.9
ARHZ	**Aropaoanui**	**4.44**	**207**	P	Pn	01 13 09.2	+0.3
ARHZ				S	S	01 14 07.0	+3.0
BKZ	**Black Stump Fm**	**4.56**	**212**	P	Pn	01 13 10.8	+0.4
BKZ				S	S	01 14 07.6	+0.8
KWHZ	**Kaweka Forest**	**4.81**	**211**	P	Pn	01 13 13.1	-0.3
KWHZ				S	S	01 14 12.7	+0.6
TMVZ	**Te Maari**	**4.90**	**218**	P	Pn	01 13 14.8	+0.3
NTVZ	**North Tongarir**	**4.90**	**219**	P	Pn	01 13 15.0	+0.5
ETVZ	**East Tongariro**	**4.91**	**218**	P	Pn	01 13 15.0	+0.4
OTVZ	**Oturere**	**4.95**	**218**	P	Pn	01 13 15.4	+0.2
KAHZ	**Kahuranaki**	**4.95**	**205**	P	Pn	01 13 15.4	+0.3
SNVZ	**South Ngauruho**	**4.98**	**218**	P	Pn	01 13 15.8	+0.2
BHHZ	**Black Hill Sta**	**5.02**	**213**	P	Pn	01 13 15.9	0.0
BHHZ				S	S	01 14 16.9	+0.2
PXZ	**Pawanui**	**5.17**	**204**	P	Pn	01 13 17.3	-0.4
PXZ				S	S	01 14 20.0	0.0
PNHZ	**Pukenui**	**5.31**	**210**	P	Pn	01 13 18.6	-0.9
PNHZ				S	S	01 14 22.2	-1.0
PRHZ	**Porangahau**	**5.46**	**205**	P	Pn	01 13 21.0	-0.3
PRHZ				S	S	01 14 26.8	+0.4
TSZ	**Takapari Road**	**5.53**	**210**	P	Pn	01 13 21.7	-0.5
PRWZ	**Pori Road**	**5.95**	**208**	P	Pn	01 13 28.5	+1.2
PRWZ				S	S	01 14 37.5	+0.1
MRZ	**Mangatainoka R**	**6.20**	**210**	P	Pn	01 13 29.1	-1.3
MRZ				S	S	01 14 41.5	-1.5
TMWZ	**Te Maipa**	**6.46**	**206**	P	Pn	01 13 33.4	-0.4
TMWZ				S	S	01 14 47.6	-1.5
OGWZ	**Otaki Gorge**	**6.50**	**211**	P	Pn	01 13 33.2	-0.9
OGWZ				S	S	01 14 48.1	-1.7

*NEIC **02** 01:25:45.2±1.3, 18°.64N±0°.05×145°.8E±0°.3, h202km±11km, mb4.2/14, Error ellipse: s-maj=34.9km s-min=5.6km az=95.0*
*IDC **02** 01:25:45.7±2.6, 18°.63N×145°.79E, h209km±25km, mb3.0/6, mbtmp3.7/7, Error ellipse: s-maj=35.7km s-min=19.1km az=95.0.*

ISC 02 01:25:44.8±0.8, 18°.68N±0°.08×145°.7E±0°.2, h200km, n25, σ0°80/26, mb4.0/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.13**	**189**	P	**Pn**	**01 27 02.4**	**+1.4**
GUMO	35nm,0.3s,baz=7.1,slow=8.1,SNR=8.3			S	**Sn**	**01 28 01.2**	**+0.1**
GUMO	**Guam**	**5.13**	**189**	Pn	**Pn**	**01 27 01.1**	**+0.1**
JGF	**Kuroka**	**18.41**	**338**	P	**P**	**01 29 45.8**	**+0.8**
KNRA	**Kununurra**	**38.01**	**207**	P	**P**	**01 32 43.3**	**-0.5**
WB0	**Warramunga Arr**	**39.80**	**197**	P	**P**	**01 32 58.4**	**-0.3**
WB0				IAmb	IAmb	01 33 16.7	
	comp=Z,4.2nm,0.7s						
WB2	**Warramunga Arr**	**39.98**	**197**	P	**P**	**01 32 59.3**	**-0.8**
WB2				IAmb	IAmb	01 33 17.9	
	comp=Z,20nm,1.5s						
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**01 32 59.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=20,slow=8.6,SNR=32 comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**01 32 58.6**	**-1.5**
FITZ	**Fitzroy Crossi**	**41.54**	**210**	P	**P**	**01 33 12.3**	**-0.6**
FITZ				IAmb	IAmb	01 33 17.2	
	comp=Z,5.5nm,1.1s						
SONM	**Songino Array**	**43.17**	**321**	P	**P**	**01 33 26.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=122,slow=4.8,SNR=2.

```
     1.5nm,0.8s
VNDA Vanda          68.17 179  P          P          01 38 44.0 +1.0
     0.5nm,0.8s,baz=346,slow=5.6,SNR=3.9
     0.5nm,0.8s
SONM Songino Array  73.50 326  P          P          01 39 16.7 +0.7
     0.8nm,0.6s,baz=137,slow=4.9,SNR=4.9
     0.8nm,0.6s
MKAR Makanchi Array 87.83 318  P          P          01 40 32.2 -0.4
     1.1nm,0.7s,baz=107,slow=5.8,SNR=8.6
     1.1nm,0.7s
```

*VAO **02** 01:39:23.9±0.3,21˚.22S×68˚.79W,h118km,mb4.1*
*NEIC **02** 01:39:23.9±1.1,21˚.30S±0˚.02×68˚.88W±0˚.10,*
h130km±10km,mb4.0/4,ML4.1(GUC),Error ellipse:
s-maj=13.2km s-min=2.1km az=79.0
*GUC **02** 01:39:24.1±0.8,21˚.29S×68˚.84W,h114km±5km,ML4.1*
*IDC **02** 01:39:25.7±2.5,21˚.29S×68˚.40W,h114km±25km,mb3.6/2,*
mbtmp3.8/5,MS3.7/1,Error ellipse: s-maj=33.8km
s-min=18.7km az=94.0

ISC 02 01:39:23.8±0.6,21˚.29S±0˚.03×68˚.83W±0˚.06,h120km±7km,
n98,σ1°01/98,5C-5D,Chile-Bolivia border region

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                  Op    ISC         h m  s    ISC
PB09 IPOC Station P      0.63 217        Pn          01 39 43.3 +0.5
PB09 IPOC Station P      0.63 217 ⇑iP    Pn          01 39 43.4 +0.5
PB09                              eS    Sn          01 39 57.5 +0.3
PB09                              IAML                01 39 58.4
     comp=N,4μm,0.4s
PB01 IPOC Station P      0.66 292        Pn          01 39 42.9 -0.1
PB01 IPOC Station P      0.66 292 ⇓iP    Pn          01 39 43.1 +0.2
PB01                              eS    Sn          01 39 57.1 -0.2
PB01                              IAML                01 39 58.8
     comp=E,7μm,0.1s
PB02 IPOC Station P      0.99 268        Pn          01 39 46.5 +0.6
PB02 IPOC Station P      0.99 268 ⇓iP    Pn          01 39 46.5 +0.6
PB02                              eS    Sn          01 40 03.0 +0.5
PB02                              IAML                01 40 04.4
     comp=E,9μm,0.2s
PB07 IPOC Station P      1.07 246        Pn          01 39 47.4 +0.6
PB07 IPOC Station P      1.07 246 ⇑iP    Pn          01 39 47.3 +0.6
PB07                              eS    Sn          01 40 04.2 +0.1
PB07                              IAML                01 40 04.9
     comp=N,6μm,0.1s
PB08 IPOC Station P      1.19 345        Pn          01 39 49.0 +0.8
LVC  Limon Verde         1.31 183  LR    LR          01 40 04.6
     comp=N,68nm,18.4s,baz=1.5,slow=28
LVC  Limon Verde         1.31 183        Pn          01 39 50.0 +0.5
LVC  Limon Verde         1.31 183 ⇑iP    Pn          01 39 49.8 +0.3
LVC                               eS    Sn          01 49 09.4 +0.5
LVC  Limon Verde         1.31 183  eP    Pn          01 39 50.0 +0.5
PATCX Punta Patache      1.32 291        Pn          01 39 50.1 +0.8
PATCX Punta Patache      1.32 291 ⇓iP    Pn          01 39 50.1 +0.8
PATCX                             eS    Sn          01 40 09.3 +0.7
PATCX                             IAML                01 40 11.4
     comp=E,6μm,0.2s
HMBC Humberstone         1.42 315 ⇓iP    Pn          01 39 50.7 +0.3
HMBC                              eS    Sn          01 40 10.8 +0.3
HMBC                              IAML                01 40 12.9
     comp=N,4μm,0.4s
TA01 Diego Aracena       1.46 300  Pn    Pn          01 39 51.2 +0.5
TA01 Diego Aracena       1.46 300 ⇓iP    Pn          01 39 51.2 +0.5
TA01                              eS    Sn          01 40 11.4 +0.2
TA01                              IAML                01 40 13.1
     comp=N,3μm,0.4s
PB06 IPOC Station P      1.56 206        Pn          01 39 52.7 +0.6
PB06 IPOC Station P      1.56 206 ⇑iP    Pn          01 39 52.8 +0.6
PB06                              eS    Sn          01 40 14.4 +0.6
PB06                              IAML                01 40 16.5
     comp=E,1μm,0.3s
TA02 Huaiquique          1.59 310        Pn          01 39 52.5 +0.2
TA02 Huaiquique          1.59 310  eP    Pn          01 39 52.6 +0.3
TA02                              eS    Sn          01 40 13.8 -0.1
TA02                              IAML                01 40 21.0
     comp=N,3μm,0.2s
PB04 IPOC Station P      1.60 230  Pn    Pn          01 39 52.9 +0.2
GO01 Chusmiza            1.65 348        Pn          01 39 54.1 +0.5
GO01 Chusmiza            1.65 348 ⇑iP    Pn          01 39 54.1 +0.5
GO01                              eS    Sn          01 40 16.9 +0.8
GO01                              IAML                01 40 20.3
     comp=N,3μm,0.1s
AF01 San Pedro de A      1.76 160        Pn          01 39 55.8 +1.3
AF01 San Pedro de A      1.76 160  eP    Pn          01 39 55.9 +1.3
PB15 IPOC Station P      2.00 197        Pn          01 39 57.9 +0.5
PB15 IPOC Station P      2.00 197  eP    Pn          01 39 58.0 +0.5
PB15                              eS    Sn          01 40 24.6 +1.5
PB16 IPOC Station P      3.01 348  Pn    Pn          01 40 11.4 +0.6
PB16 IPOC Station P      3.01 348  eP    Pn          01 40 11.6 +0.7
PB16                              eS    Sn          01 40 47.5 +0.6
PB16                              IAML                01 40 49.5
     comp=N,193nm,0.3s
PB12 IPOC Station P      3.02 332  Pn    Pn          01 40 10.0 -0.4
PB14 IPOC Station P      3.62 203  Pn    Pn          01 40 18.1 -0.4
GO02 Mina Guanaco        3.91 190  Pn    Pn          01 40 21.8 -0.7
LPAZ La Paz              5.02  8   P     Pn          01 40 39.4 +1.7
     comp=N,7.3nm,0.3s,baz=176,slow=4.1,SNR=100
LPAZ                              S     Sn          01 41 36.0 +1.0
     comp=N,4.1nm,0.6s,baz=35,slow=19,SNR=3.6
LPAZ La Paz              5.02  8   Pn    Pn          01 40 39.7 +2.0
AC01 Pan de Azucar       5.10 198  Pn    Pn          01 40 36.5 -1.6
AC01 Pan de Azucar       5.10 198  eP    Pn          01 40 36.1 -2.0
AC02 Maricunga           5.52 183  Pn    Pn          01 40 44.0 -0.3
AC06 Mina Casimiro       6.20 193  Pn    Pn          01 40 50.3 -2.6
LCO  Las Campanas        7.87 192  Pn    Pn          01 41 10.1 -5.7
CO01 Juntas del Tor      8.72 187        Pn          01 41 25.0 -2.3
GO04 Tololo Observa      9.02 191  Pn    Pn          01 41 26.4 -4.9
CO02 Combarbal          10.06 191  Pn    Pn          01 41 39.7 -5.5
PTLB Pontes e Lacer     10.88  59  eP    Pn          01 41 54.4 -1.9
CPUP Villa Florida      11.66 118  P     Pn          01 42 04.2 -2.3
     comp=N,0.8nm,0.8s,baz=295,slow=12,SNR=2.8
CPUP Villa Florida      11.66 118  eP    Pn          01 42 06.4 -0.1
ETMB Extrema            11.69  13  eP    Pn          01 42 06.0 -1.0
ANTJ Antonio Joao (     11.95  96  eP    Pn          01 42 09.9 -0.5
ITQB Itaqui             13.81 130  eP    Pn          01 42 34.6 +0.1
MCR1 Marechal Candi     13.99 106  eP    Pn          01 42 37.5 +0.6
UNIS Unistalda (Bra     14.65 125  eP    Pn          01 42 45.9 +0.5
H03N1 Juan Fernandez    15.04 214  T     T           01 57 31.7
     baz=37,slow=72,SNR=3.3
H03N2 Juan Fernandez    15.05 214  T     T           01 57 31.0
     baz=37,slow=72,SNR=3.8
H03N3 Juan Fernandez    15.06 214  T     T           01 57 30.5
     baz=37,slow=72,SNR=3.3
PDRB Porto dos Gac      15.07  52  eP    Pn          01 42 51.4 +0.8
FRBT Francisco Belt     15.18 111  eP    Pn          01 42 52.1 +0.1
RODS Rosario do Sul     15.22 129  eP    Pn          01 42 53.2 +0.8
ALGR Alto Alegre (B     16.14 121  eP    P           01 43 05.0 +0.1
CLDB Colider            16.24  52  eP    Pn          01 43 05.5 +0.3
ITAB Concordia          16.33 115  eP    P           01 43 06.9  0.0
CPSB Cacapava Do Su     16.55 126  eP    Pn          01 43 08.7 -0.1
TRQA Tornquist          17.72 162  P     P           01 43 22.1 -0.1
TRQA                              IAmb  IAmb         01 43 25.3
     comp=Z,13nm,1.4s
CNLB Canela             18.09 120  eP    P           01 43 26.1 -0.3
GO06 Curarrehue         18.37 186  P     P           01 43 27.6 -1.8
TIJ01 Guaruva-PR        18.64 106  eP    P           01 43 29.2 -3.3
BB19B Bebedouro         18.93  93  eP    P           01 43 35.2 -0.5
SNDB Serra Nova Dou     19.17  64  eP    P           01 43 37.2 -1.0
NPGB Novo Progresso     19.24  45  eP    P           01 43 37.5 -1.5
TER01 Tubaro-SC         19.25 116  eP    P           01 43 39.8 +0.8
PLCA Paso Flores        19.43 184  P     Pn          01 43 43.5 +0.3
     comp=Z,2.6nm,0.7s,baz=12,slow=11,SNR=7.1
PLCA Paso Flores        19.43 184  eP    P           01 43 42.0 +1.1
MACA Manacapuru-AM      19.69  25  eP    P           01 43 42.2 -1.6
IPMB Ipameri, GO        19.70  84  eP    P           01 43 43.4 -0.5
LL04 Puerto Octay       19.79 188  P     P           01 43 44.0 -0.6
LL04                              IAmb  IAmb         01 43 46.8
     comp=Z,5.7nm,0.8s
RCLB Rio Claro- Sao     19.80  97  eP    P           01 43 44.8 -0.2
VAO  Valinhos           20.32  99  eP    P           01 43 49.0 -1.7
BDFB Brasilia           20.52  78  P     P           01 43 51.3 -1.5
     comp=Z,1.6nm,0.4s,baz=247,slow=12,SNR=6.4
     comp=Z,1.6nm,0.4s
BDFB Brasilia           20.52  78  eP    P           01 43 52.4 -0.4
ITTB Itaituba           21.09  39  eP    P           01 43 57.5 -1.4
SMTB Santa Maria do     23.91  62  eP    P           01 44 27.1 +0.3
MALB Monte Alegre       23.98  38  eP    P           01 44 27.1 -0.2
JANB Januaria           24.09  79  eP    P           01 44 28.1 -0.4
SDBA SAO DESIDERIO      24.52  73  eP    P           01 44 33.0 +0.6
BOAV Boa Vista          24.91  20  eP    P           01 44 36.4 +0.5
CAM01 Campos-RJ         25.27  96  eP    P           01 44 39.6 +0.5
GDU01 Guandu, BA        28.86  80  eP    P           01 45 10.9 -0.5
PMSA Palmer Station     43.58 177  eP    P           01 47 15.8 +0.3
QSPA South Pole Qui     68.90 180  P     P           01 50 18.1 +2.6
     comp=Z,1.3nm,0.6s,baz=144,slow=1.2,SNR=8.2
     comp=Z,1.3nm,0.6s
PPT  Papeete            75.44 257  LR    LR          02 17 47.8
     comp=Z,47nm,19.0s,baz=150,slow=30
TORD Torodi Ar. Bea     77.22  70  P     P           01 51 05.1 -0.1
     comp=Z,13nm,0.6s,baz=254,slow=6.0,SNR=5.2
H11S2 WAKE ISLAND Hy 27.93 277  T     T           04 18 30.2
     baz=101,slow=74,SNR=5.1
H11S1 WAKE ISLAND Hy 27.94 277  T     T           04 18 28.4
     baz=101,slow=74,SNR=7.8
H11S3 WAKE ISLAND Hy 27.94 277  T     T           04 18 34.3
     baz=101,slow=74,SNR=4.8
H11N3 WAKE ISLAND Hy 28.00 279  T     T           04 18 28.1
     baz=102,slow=75,SNR=4.3
H11N2 WAKE ISLAND Hy 28.01 279  T     T           04 18 29.9
     baz=102,slow=75,SNR=3.8
H11N1 WAKE ISLAND Hy 28.02 279  T     T           04 18 29.6
     baz=102,slow=75,SNR=3.1
MKAR Makanchi Array     145.42  36  PKPbc PKPab   01 58 49.7 +1.5
     comp=Z,0.5nm,0.7s,baz=318,slow=1.6,SNR=4.7
MKAR                              pPKPbc pPKPab   01 59 20.9 -0.2
     comp=Z,1.6nm,0.8s,baz=338,slow=2.9,SNR=11
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*MOS **02** 01:50:35.6±0.9,6˚.39S×155˚.46E,h117km,mb5.1/33,Error*
ellipse: s-maj=7.7km s-min=5.8km az=107.5
*BJI **02** 01:50:36.4±0.0,6˚.09S×155˚.59E,h120km,mb4.8/51,*
mB5.0/25
*NEIC **02** 01:50:37.6±1.5,6˚.44S±0˚.07×155˚.46E±0˚.07,h120km±4km,*
mb5.4/359,Mww5.3,Error ellipse: s-maj=11.3km
s-min=8.5km az=215.0
*IDC **02** 01:50:37.5±0.3,6˚.47S×155˚.41E,h124km±2km,mb5.0/32,*
mbtmp5.4/35,MS3.9/31,Error ellipse: s-maj=7.6km
s-min=6.5km az=65.0
*DJA **02** 01:50:38.2±0.4,6˚S±3˚×15˚5E±˚,h141km±4km,M5.4/86,*
mB5.8/55,mb5.6/86,MLv5.7/2,Mw(mB)5.4/55,
MwMwp4.9/3,Mwp5.2/3
*GCMT **02** 01:50:38.6±0.1,6˚.50S±0˚.01×155˚.52E±0˚.01,h133km,*
MW5.3/144,Moment Tensor Solution. s126,c186;
s144,c266; Duration: 1ꝏ Moment tensor: Scale 10^{17}
Nm; M_{rr}-0.67±.01; $M_{\theta\theta}$0.29±.02; $M_{\phi\phi}$0.37±.02;
$M_{r\theta}$0.01±.01; $M_{\theta\phi}$-0.62±.02; $M_{\phi r}$0.83±.01; Best double
couple: $M_0$1.18800×10^{17} NP1:ϕ_s166.00000°,δ70.00000°,
λ-61.00000°. NP2:ϕ_s288.00000°,δ34.00000°,
λ-143.00000°. Principal axes: T 1.1800, Plg20.0000°,
Azm235.0000°; N 0.0160, Plg27.0000°, Azm336.0000°; P
-1.1970, Plg55.0000°, Azm113.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*NEIC **02** 01:50:39,6˚.36S×155˚.23E,h130km,Moment Tensor*
Solution. Duration: 2ꝏ Moment tensor: Scale 10^{17}Nm;
M_{rr}-0.71; $M_{\theta\theta}$0.28; $M_{\phi\phi}$0.42; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.76;
Fault plane solution: $M_0$1.13000×10^{17} NP1:
ϕ_s165.00000°,δ68.00000°,λ-63.00000°. NP2:
ϕ_s292.00000°,δ34.00000°,λ-137.00000°. Principal axes:
T 1.1167, Plg19.0000°, Azm236.0000°; N 0.0250,
Plg24.0000°, Azm335.0000°; P -1.1417, Plg58.0000°,
Azm112.0000°;

ISC 02 01:50:37.2±0.2,6˚.44S±0˚.03×155˚.47E±0˚.03,h126km±1km,
h126km:pP-P,n1182,σ1ꝏ16/1161,mb5.4/292,45C-14D,
Bougainville-Solomon Islands region

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                  Op    ISC         h m  s    ISC
RABL Rabaul             3.98 304  Pn    Pn          01 51 37.2 +0.6
RABL Rabaul             3.98 304  P     Pn          01 51 39.8 +3.1
KRVT Keravat (AS076     4.03 302  P     Pn          01 51 38.4 +1.0
     792nm,0.7s,baz=243,slow=2.3,SNR=33
KRVT                              S     Sn          01 52 24.0  0.0
     4μm,1.0s,baz=132,slow=20,SNR=3.8
HNR  Honiara            5.33 124  P     Pn          01 51 56.3 +1.5
     18μm,0.8s,baz=264,slow=2.8,SNR=11
HNR                               S     Sn          01 52 56.6 +1.4
     44μm,0.9s,baz=76,slow=5.8,SNR=8.0
HNR  Honiara            5.33 124  Pn    Pn          01 51 55.5 +0.7
HNR  Honiara            5.33 124  P     Pn          01 51 57.5 +2.7
PMG  Port Moresby       8.74 250  P     Pn          01 52 43.4 +2.7
     716nm,0.8s,baz=62,slow=7.5,SNR=65
PMG                               S     Sn          01 54 18.7 +1.0
     374nm,0.7s,baz=71,slow=11,SNR=3.0
PMG  Port Moresby       8.74 250  Pn    Pn          01 52 42.7 +1.9
PMG  Port Moresby       8.74 250  P     Pn          01 52 42.7 +1.9
PMG  Port Moresby       8.74 250  P     Pn          01 52 46.3 +5.5
PMG  Port Moresby       8.74 250  P     Pn          01 52 46.6 +5.8
MANU Manus Island       9.19 298        Pn          01 52 47.2 +0.5
PATS Pohnpei           13.49  12  P     Pn          01 53 43.8 +0.1
     baz=14,SNR=4.4
PATS Pohnpei           13.49  12  Pn    Pn          01 53 42.6 -1.1
PATS Pohnpei           13.49  12  P     Pn          01 53 44.9 +1.2
COEN Coen              14.21 237  P     P           01 53 55.8 -0.7
     baz=14,SNR=475
COEN Coen              14.21 237        P           01 53 54.9 -1.6
GENI Genyem            15.73 283  P     Pn          01 54 11.4 -0.6
     3μm279nm,0.8s
GENI Genyem            15.73 283  P     P           01 54 14.8 +1.5
MTSU Mount Surprise    15.92 222  P     P           01 54 17.2 +1.8
     baz=16,SNR=184
MTSU Mount Surprise    15.92 222  P     P           01 54 18.3 +2.8
CTA  Charters Tower    16.25 213  P     P           01 54 21.0 +1.9
     236nm,0.8s,baz=33,slow=13,SNR=244
CTA                               LR    LR          01 59 57.9
     comp=Z,338nm,18.2s,baz=56,slow=35
CTA  Charters Tower    16.25 213  P     P           01 54 21.8 +2.7
CTAO Charters Tower    16.25 213        P           01 54 19.5 +0.4
CTAO                              IAmb  IAmb         01 54 23.1
     comp=Z,246nm,0.8s
CTAO Charters Tower    16.25 213  P     P           01 54 19.5 +0.4
CTAO                              pmax  pmax
     comp=Z,246nm,0.8s
CTAO Charters Tower    16.25 213  P     P           01 54 22.1 +3.0
KOUNC Koumac, New Ca   16.43 149        P           01 54 20.9  0.0
KOUNC                             IAmb  IAmb         01 54 30.1
     comp=Z,211nm,0.9s
KOUNC Koumac, New Ca   16.43 149  P     P           01 54 23.0 +2.0
DVP  Devils Point      16.73 133  P     P           01 54 25.4 +1.1
RTV  Rentapao          16.95 133  P     Pn          01 54 27.7 +0.9
SMPI Sarmi             17.29 284  P     P           01 54 30.4 -0.2
     comp=Z,5μmcomp=Z,478nm,0.8s
RK1H Rockhampton Ha    17.52 195  P     Pn          01 54 34.5 +0.8
LIFNC LIFOU            18.25 142  P     P           01 54 41.5 +0.4
LIFNC LIFOU            18.25 142  P     Pn          01 54 43.1 +0.6
NOUC Port Laguerre     18.76 147  P     Pn          01 54 48.5  0.0
DZM  Mont Dzumac       18.81 147  ePn   P           01 54 46.9 -0.4
     comp=Z,2μm,1.1s
DZM                               eLR   LR          01 59 17.6
     comp=Z,894nm,31.1s
DZM  Mont Dzumac       18.81 147  P     Pn          01 54 49.2  0.0
     comp=Z,494nm,0.5s,baz=270,slow=8.2,SNR=978
DZM                               LR    LR          02 00 23.2
     comp=Z,675nm,21.4s,baz=28,slow=31
DZM  Mont Dzumac       18.81 147  P     P           01 54 47.9 +0.6
DZM  Mont Dzumac       18.81 147  P     Pn          01 54 49.2  0.0
ONTNC Ouen Toro        19.00 147  P     P           01 54 49.7 +0.5
ONTNC Ouen Toro        19.00 147  P     Pn          01 54 51.1 -0.3
YATNC Mamie plateau,   19.05 146  P     Pn          01 54 51.2 -0.7
TARA Tarawa            19.07  67  P     Pn          01 54 52.1 -0.1
TARA Tarawa            19.07  67  P     Pn          01 54 52.8 +0.6
MARNC Mare, Loyalty    19.27 142  P     P           01 54 52.3 +0.2
MARNC Mare, Loyalty    19.27 142  P     Pn          01 54 53.4 -1.0
EIDS Eidsvold          19.28 192  P     Pn          01 54 54.9 +0.3
     baz=19,SNR=38
EIDS Eidsvold          19.28 192  P     Pn          01 54 53.6 -1.0
EIDS                              IAmb  IAmb         01 54 56.9
     comp=Z,435nm,1.8s
EIDS Eidsvold          19.28 192  P     Pn          01 54 55.0 +0.4
OUENC Ouen Island, N   19.30 147  P     P           01 54 52.5 -0.1
OUENC Ouen Island, N   19.30 147  P     Pn          01 54 54.2 -0.7
SRPI Serui, Papua      19.71 282  P     P           01 54 56.3 -0.7
     comp=Z,264nm,1.4s
PINNC Pines Island,    19.80 146  P     Pn          01 54 59.4 -1.2
QIS  Mount Isa         20.82 226  P     P           01 55 10.0 +1.0
     baz=21,SNR=164
QIS  Mount Isa         20.82 226  P     P           01 55 10.0 +1.0
RMQ  Roma              20.93 197  P     P           01 55 12.0 +2.0
     baz=21,SNR=32
RMQ  Roma              20.93 197  P     P           01 55 11.9 +1.8
QLP  Quilpie           22.71 207  P     P           01 55 29.2 +0.7
     baz=23,SNR=109
QLP  Quilpie           22.71 207  P     P           01 55 29.4 +0.9
FAKI Fak Fak           23.41 278  P     P           01 55 34.2 -1.0
FAKI Fak Fak           23.41 278  P     P           01 55 33.9 -1.3
     comp=Z,3μmcomp=Z,378nm,0.9s
FAKI Fak Fak           23.41 278  P     P           01 55 34.3 -0.9
KDU  Kakadu            23.50 253  P     P           01 55 35.4 -0.6
     baz=24,SNR=329
KDU  Kakadu            23.50 253  P     P           01 55 35.7 -0.3
FUNA Funafuti          23.61  97  P     P           01 55 36.9 -0.1
FUNA                              IAmb  IAmb         01 55 39.4
     comp=Z,115nm,0.8s
FUNA Funafuti          23.61  97  P     P           01 55 38.2 +1.2
SAUI Saumlaki          24.03 265  P     P           01 55 41.2 +0.4
SAUI Saumlaki          24.03 265  P     P           01 55 41.7 +1.0
     comp=Z,20μmcomp=Z,2μm,0.9s
SAUI Saumlaki          24.03 265  P     P           01 55 41.8 +1.0
ARMA Armidale          24.12 188  P     P           01 55 43.1 +1.5
     baz=24,SNR=57
ARMA Armidale          24.12 188  P     P           01 55 42.3 +0.8
ARMA                              IAmb  IAmb         01 55 44.1
     comp=Z,118nm,0.8s
ARMA Armidale          24.12 188  P     P           01 55 43.1 +1.5
WRAB Tennant Creek     24.51 235  P     P           01 55 45.6 +0.5
WRAB Tennant Creek     24.51 235  P     P           01 55 45.6 +0.5
WRAB                              pmax  pmax
     comp=Z,721nm,1.0s
WRAB Tennant Creek     24.51 235  P     P           01 55 45.8 +0.7
WRA  Warramunga Arr    24.52 235  P     P           01 55 46.0 +0.8
     comp=Z,407nm,0.5s,baz=59,slow=9.8,SNR=755
WRA                               S     S           01 59 55.7 -1.1
     comp=Z,22nm,1.0s,baz=62,slow=15,SNR=4.6
WRA                               ScP   ScP         02 02 47.0 -0.8
     comp=Z,4.9nm,0.9s,baz=68,slow=2.4,SNR=4.8
WRA  Warramunga Arr    24.52 235  P     P           01 55 45.3 +0.1
WRA                               IAmb  IAmb         01 55 48.3
     comp=Z,106nm,1.1s
MSVF Nonsavu           24.73 119  P     P           01 55 48.4 +1.2
     comp=Z,50nm,0.7s,baz=263,slow=9.5,SNR=18
MSVF                              LR    LR          02 05 07.2
     comp=Z,128nm,21.9s,baz=333,slow=35
     comp=Z,50nm,0.7s
MSVF Nonsavu           24.73 119  P     P           01 55 47.9 +0.7
MSVF                              IAmb  IAmb         01 55 49.8
     comp=Z,71nm,0.7s
MSVF Nonsavu           24.73 119  P     P           01 55 47.9 +0.7
MSVF                              pmax  pmax
     comp=Z,71nm,0.7s
MSVF Nonsavu           24.73 119  P     P           01 55 49.3 +2.1
SIJI Sorong            24.77 282  P     P           01 55 46.9 -0.7
     comp=Z,234nm,0.7s,baz=83,slow=6.7,SNR=60
     comp=Z,234nm,0.7s
MTN  Manton Dam        24.81 253  P     P           01 55 47.7 -0.2
     baz=25,SNR=118
MTN  Manton Dam        24.81 253  P     P           01 55 47.7 -0.2
MTN  Manton Dam        24.81 253  P     P           01 55 48.5 +0.6
LHI  Lord Howe Isla    25.18 173  P     P           01 55 52.0 +1.0
     baz=25,SNR=7.0
LHI  Lord Howe Isla    25.18 173  P     P           01 55 51.1 +0.1
LHI                               IAmb  IAmb         01 55 52.3
     comp=Z,156nm,0.8s
LHI  Lord Howe Isla    25.18 173  P     P           01 55 51.9 +1.0
INKA Innaminka         25.38 212  P     P           01 55 53.4 +0.5
NFK  Norfolk Island    25.38 154  P     P           01 55 53.7 +0.9
     baz=26,SNR=4.0
BNDI Bandanaira        25.52 273  P     P           01 55 53.3 -1.0
     comp=Z,247nm,0.6s
BNDI Bandanaira        25.52 273  P     P           01 55 54.4 +0.1
NTLH Newcastle Hard    26.56 187  P     P           01 56 05.8 +2.4
     comp=Z,66nm,1.1s
CMSA Cobar Meteorol    26.59 199  P     P           01 56 04.5 +0.7
     baz=27,SNR=32
CMSA Cobar Meteorol    26.59 199  P     P           01 56 04.5 +0.7
MSAI Masohi            26.62 275  P     P           01 56 04.3  0.0
     comp=Z,2μmcomp=Z,246nm,0.7s
AS31 Alice Springs     26.89 228  P     P           01 56 06.3 -0.3
ASAR Alice Springs     26.89 228  P     P           01 56 06.4 -0.2
     comp=Z,35nm,0.5s,baz=59,slow=8.7,SNR=386
ASAR                              pP    pP          01 56 32.3 +0.4
     comp=Z,76nm,0.8s,baz=55,slow=13,SNR=12
ASAR                              S     S           02 00 33.4 -1.0
     comp=Z,13nm,0.8s,baz=58,slow=15,SNR=4.6
ASAR                              ScP   ScP         02 02 53.6 -1.1
     comp=Z,4.4nm,0.9s,baz=77,slow=1.7,SNR=4.3
ASAR                              LR    LR          02 05 45.1
     comp=Z,310nm,20.9s,baz=8.5,slow=34
     comp=Z,35nm,0.5s
MGCD Mangrove Creek    26.94 188  P     P           01 56 08.6 +1.7
     baz=27,SNR=17
MGCD Mangrove Creek    26.94 188  P     P           01 56 08.4 +1.5
     comp=Z,98nm,0.8s
H11S3 WAKE ISLAND Hy 27.14  24  T     T           02 24 38.7
     baz=202,slow=76,SNR=93
H11S2 WAKE ISLAND Hy 27.14  24  T     T           02 24 37.9
     baz=202,slow=76,SNR=86
H11S1 WAKE ISLAND Hy 27.15  24  T     T           02 24 50.0
     baz=202,slow=76,SNR=76
AAI  Ambon             27.30 274  P     P           01 56 09.4 -1.0
     comp=Z,2μmcomp=Z,141nm,0.7s
SYDH Sydney Hard Ro    27.54 189  P     P           01 56 13.8 +1.6
RIV  Riverview         27.54 188  P     P           01 56 13.5 +1.2
     baz=28,SNR=5.2
KNRA Kununurra         27.74 248  P     P           01 56 13.9 -0.3
     baz=28,SNR=41
KNRA Kununurra         27.74 248  P     P           01 56 14.0 -0.3
KNRA                              IAmb  IAmb         01 56 14.5
     comp=Z,78nm,0.7s
KNRA Kununurra         27.74 248  P     P           01 56 14.0 -0.3
OOD  Oodnadatta        28.34 219  P     P           01 56 19.5 +0.1
STKA Stephens Creek    28.43 205  P     P           01 56 20.9 +0.7
     comp=Z,11nm,0.6s,baz=22,slow=12,SNR=16
STKA                              LR    LR          02 07 43.9
     comp=Z,330nm,18.7s,baz=17,slow=36
     comp=Z,11nm,0.6s
STKA Stephens Creek    28.43 205  P     P           01 56 20.7 +0.5
     baz=29,SNR=16
STKA Stephens Creek    28.43 205  P     P           01 56 20.4 +0.2
STKA Stephens Creek    28.43 205  P     P           01 56 20.4 +0.2
STKA                              pmax  pmax
     comp=Z,5.0nm,0.8s
STKA Stephens Creek    28.43 205  P     P           01 56 20.9 +0.7
NLAI Namlea            28.45 275  P     P           01 56 20.4 -0.1
     comp=Z,7μmcomp=Z,107nm,0.6s
LBMI Labuha            28.50 281  P     P           01 56 22.0 +1.0
     comp=Z,6μmcomp=Z,585nm,0.8s
LCRK Leigh Creek       28.86 212  P     P           01 56 24.3 +0.3
TNTI Ternate           28.95 283  P     P           01 56 24.5 -0.5
TNTI                              IAmb  IAmb         01 56 26.1
     comp=Z,91nm,1.0s
TNTI Ternate           28.95 283  P     P           01 56 25.1 +0.1
     comp=Z,60nm,0.9s
TNTI Ternate           28.95 283  P     P           01 56 25.3 +0.3
     comp=Z,94nm,0.9s
CNB  Canberra Magne    29.28 190  P     P           01 56 29.0 +1.3
     baz=30,SNR=17
CNB  Canberra Magne    29.28 190  P     P           01 56 28.8 +1.0
CAN  Canberra          29.35 191  P     P           01 56 28.5 +0.1
CAN  Canberra          29.35 191  P     P           01 56 28.5 +0.1
CAN                               pmax  pmax
     comp=Z,28nm,1.0s
CAN  Canberra          29.35 191  P     P           01 56 30.3 +1.9
     comp=Z,51nm,1.1s
SANI Sanana            29.72 277  P     P           01 56 31.2 -0.6
     comp=Z,2μmcomp=Z,281nm,0.7s
SANI Sanana            29.72 277  P     P           01 56 31.8  0.0
HTT  Hallett           30.94 208  P     P           01 56 43.0 +0.7
     baz=31,SNR=11
HTT  Hallett           30.94 208  P     P           01 56 43.1 +0.7
SOEI Soe               31.06 262  P     P           01 56 43.6 -0.2
SOEI Soe               31.06 262  P     P           01 56 44.0 +0.2
     comp=Z,2μmcomp=Z,188nm,0.7s
SOEI Soe               31.06 262  P     P           01 56 44.0 +0.2
     comp=Z,190nm,0.8s
MULG Mulgathing        31.11 218  P     P           01 56 43.4 -0.5
     comp=Z,80nm,0.7s
WHYH Whyalla           31.25 210  P     P           01 56 45.4 +0.3
FITZ Fitzroy Crossi    31.31 246  P     P           01 56 45.4 -0.4
     comp=Z,161nm,0.6s,baz=73,slow=7.2,SNR=699
FITZ                              pP    pP          01 57 13.2 +1.5
     comp=Z,46nm,0.7s,baz=80,slow=6.2,SNR=3.4
FITZ                              LR    LR          02 09 58.9
     comp=Z,409nm,18.9s,baz=84,slow=37
     comp=Z,161nm,0.6s
FITZ Fitzroy Crossi    31.31 246  P     P           01 56 45.1 -0.6
     baz=31,SNR=410
FITZ Fitzroy Crossi    31.31 246  P     P           01 56 44.7 -1.1
FITZ Fitzroy Crossi    31.31 246  P     P           01 56 45.2 -0.6
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SGSI	**Sangihe**	31.54	288	P	P	01 56 46.3	-1.6
	comp=Z,134nm,0.7s						
BATI	**Baumata**	31.68	261	P	P	01 56 50.1	+1.0
	comp=Z,125nm,0.7s,baz=123,slow=2.7,SNR=32						
BATI				LR	LR	02 12 17.7	
	comp=Z,334nm,18.2s,baz=92,slow=41						
	comp=Z,125nm,0.7s						
BATI	**Baumata**	31.68	261	P	P	01 56 49.8	+0.6
	comp=Z,1μmcomp=Z,119nm,0.8s						
BBOO	**Buckleboo**	31.85	212	P	P	01 56 50.2	-0.2
	baz=32,SNR=48						
BBOO	**Buckleboo**	31.85	212	P	P	01 56 49.7	-0.7
BBOO				IAmb	IAmb	01 56 57.1	
	comp=Z,51nm,1.1s						
BBOO	**Buckleboo**	31.85	212	P	P	01 56 50.5	+0.1
WRKA	**Warakurna**	31.91	232	P	P	01 56 50.4	-0.7
	baz=32,SNR=94						
WRKA	**Warakurna**	31.91	232	P	P	01 56 50.5	-0.6
KMSI	**Cibinong**	32.19	281	P	P	01 56 53.6	0.0
	comp=Z,9μmcomp=Z,1μm,0.6s						
TOO	**Toolangi**	32.29	195	P	P	01 56 55.7	+1.5
	baz=32,SNR=5.0						
TOO	**Toolangi**	32.29	195	P	P	01 56 54.4	+0.2
TOO	**Toolangi**	32.29	195	P	P	01 56 54.4	+0.2
TOO				pmax	pmax		
	comp=Z,17nm,0.9s						
TOO	**Toolangi**	32.29	195	P	P	01 56 55.1	+0.9
ARPS	**Mount Arapiles**	32.66	201	P	P	01 56 58.5	+1.2
	baz=33,SNR=18						
ARPS	**Mount Arapiles**	32.66	201	P	P	01 56 58.1	+0.8
DAV	**Davao City (W)**	32.70	294	LR	LR	02 09 54.7	
	comp=Z,109nm,18.0s,baz=153,slow=35						
BBSI	**Bau Bau**	32.73	270	P	P	01 56 59.1	+0.8
	comp=Z,11μmcomp=Z,99nm,1.2s						
MMRI	**Maumere**	33.01	264	P	P	01 56 59.6	-1.2
	comp=Z,15μmcomp=Z,1μm,0.6s						
MMRI	**Maumere**	33.01	264	P	P	01 57 00.7	-0.1
AFI	**Afiamalu**	33.05	106	P	P	01 57 00.7	-0.4
	comp=Z,44nm,0.9s,baz=108,slow=17,SNR=6.0						
	comp=Z,44nm,0.9s						
AFI	**Afiamalu**	33.05	106	P	P	01 57 01.0	-0.1
AFI				IAmb	IAmb	01 57 02.0	
	comp=Z,81nm,1.1s						
AFI	**Afiamalu**	33.05	106	P	P	01 57 01.0	-0.1
AFI				pmax	pmax		
	comp=Z,81nm,1.2s						
AFI	**Afiamalu**	33.05	106	P	P	01 57 01.0	-0.1
LUWI	**Luwuk**	33.06	278	P	P	01 57 00.8	-0.3
	comp=Z,4μmcomp=Z,246nm,1.2s						
LUWI	**Luwuk**	33.06	278	P	P	01 57 01.6	+0.5
OUZ	**Omahuta**	33.15	152	P	P	01 57 01.9	+0.3
OUZ				IAmb	IAmb	01 57 05.6	
	comp=Z,56nm,0.7s						
GTOI	**Gorontalo**	33.15	281	P	P	01 57 02.4	+0.4
	comp=Z,2μmcomp=Z,225nm,0.7s						
EDFI	**Ende, Flores**	33.56	264	P	P	01 57 04.0	-1.6
	comp=Z,4μmcomp=Z,498nm,0.8s						
RAO	**Raoul Island**	33.84	135	P	P	01 57 07.3	-0.4
RAO	**Raoul Island**	33.84	135	P	P	01 57 07.3	-0.4
MRSI	**Marisa**	34.16	280	P	P	01 57 09.7	-1.0
	comp=Z,1μmcomp=Z,104nm,0.6s						
APSI	**Ampana**	34.18	278	P	P	01 57 10.4	-0.5
	comp=Z,2μmcomp=Z,174nm,1.1s						
BSSI	**Bau Bau, Buton**	34.77	269	P	P	01 57 15.7	-0.3
	comp=Z,2μmcomp=Z,250nm,1.1s						
BKSI	**Bulukumba**	35.18	270	P	P	01 57 18.4	-1.1
	comp=Z,606nmcomp=Z,43nm,0.8s						
BNSI	**Bone**	35.26	271	P	P	01 57 20.2	0.0
	comp=Z,780nmcomp=Z,41nm,1.4s						
FORT	**Forrest**	35.31	223	P	P	01 57 20.6	+0.2
	baz=35,SNR=42						
FORT	**Forrest**	35.31	223	P	P	01 57 19.4	-1.0
FORT	**Forrest**	35.31	223	P	P	01 57 20.4	0.0
TOLI2	**Tolitoli**	35.43	281	P	P	01 57 20.3	-1.3
TOLI2	**Tolitoli**	35.43	281	P	P	01 57 20.5	-1.1
KAPI	**Kappang**	35.57	270	P	P	01 57 22.8	0.0
KAPI				IAmb	IAmb	01 57 23.8	
	comp=Z,80nm,1.0s						
KAPI	**Kappang**	35.57	270	P	P	01 57 22.8	0.0
KAPI				pmax	pmax		
	comp=Z,80nm,1.0s						
KAPI	**Kappang**	35.57	270	P	P	01 57 23.1	+0.3
KAPI	**Kappang**	35.57	270	P	P	01 57 21.7	-1.1
KAPI				pP	pwP	01 57 56.9	+3.3
SPSI	**Sidrap Palu**	35.63	272	P	P	01 57 21.9	-1.5
	comp=Z,64nm,0.7s						
TTSI	**Tana Toraja**	35.68	274	P	P	01 57 24.1	+0.3
	comp=Z,2μmcomp=Z,31nm,0.8s						
MPSI	**Mapaga**	36.13	279	P	P	01 57 26.9	-0.7
	comp=Z,3μmcomp=Z,284nm,0.9s						
MOO	**Moorlands**	36.59	190	P	P	01 57 33.4	+2.2
	baz=37,SNR=6.3						
MOO	**Moorlands**	36.59	190	P	P	01 57 33.3	+2.2
TAU	**Tasmania Unive**	37.03	190	P	P	01 57 35.9	+1.1
TAU				IAmb	IAmb	01 57 37.3	
	comp=Z,66nm,0.8s						
TAU	**Tasmania Unive**	37.03	190	P	P	01 57 35.9	+1.1
TAU				pmax	pmax		
	comp=Z,66nm,0.8s						
TAU	**Tasmania Unive**	37.03	190	P	P	01 57 36.9	+2.1
TAU	**Tasmania Unive**	37.03	190	P	P	01 57 35.9	+1.1
TAU				sP	sP	01 58 16.9	+1.6
URZ	**Urewera**	37.26	151	P	P	01 57 37.6	+0.8
	comp=Z,135nm,0.6s,baz=10,slow=3.0,SNR=60						
	comp=Z,135nm,0.6s						
URZ	**Urewera**	37.26	151	P	P	01 57 37.9	+1.1
PLAI	**Plampang**	37.43	264	P	P	01 57 36.1	-2.5
	comp=Z,2μmcomp=Z,243nm,0.8s						
PLAI	**Plampang**	37.43	264	P	P	01 57 36.8	-1.8
QRZ	**Quartz Range**	37.48	159	P	P	01 57 40.6	+1.9
MBWA	**Marble Bar**	37.54	243	P	P	01 57 38.4	-1.1
MBWA	**Marble Bar**	37.54	243	P	P	01 57 38.9	-0.6
MBWA	**Marble Bar**	37.54	243	P	P	01 57 37.4	-2.1
MBWA				pP	pP	01 58 08.5	+2.6
PSA00	**Pilbara Seismi**	37.57	243	P	P	01 57 38.4	-1.3
PSA00				IAmb	IAmb	01 57 40.7	
	comp=Z,55nm,0.8s						
PSA00	**Pilbara Seismi**	37.57	243	P	P	01 57 39.2	-0.5
BKZ	**Black Stump Fm**	37.70	153	P	P	01 57 41.7	+1.1
SGKI	**Sangatta, Kali**	38.23	277	P	P	01 57 46.1	+0.7
	comp=Z,262nm,0.9s						
TWSI	**Taliwang, Sumb**	38.31	264	P	P	01 57 43.8	-2.2
	comp=Z,693nmcomp=Z,75nm,1.0s						
MYLDM	**Lahad Datu**	38.67	287	P	P	01 57 49.6	+0.6
MYLDM				IAmb	IAmb	01 57 52.4	
	comp=Z,66nm,1.2s						
SNZO	**South Karori**	38.73	157	P	P	01 57 49.5	+0.4
SNZO	**South Karori**	38.73	157	P	P	01 57 48.7	-0.3
BKB	**Balikpapan**	38.82	276	P	P	01 57 50.3	+0.1
BKB	**Balikpapan**	38.82	276	P	P	01 57 51.6	+1.3
	comp=Z,2μmcomp=Z,153nm,1.2s						
BKB	**Balikpapan**	38.82	276	P	P	01 57 52.9	+2.6
	comp=Z,152nm,1.2s						
BFZ	**Birch Farm**	38.83	155	P	P	01 57 50.5	+0.5
KHZ	**Kahutara**	39.24	159	P	P	01 57 53.4	+0.1
KHZ	**Kahutara**	39.24	159	P	P	01 57 53.7	+0.4
RPZ	**Rata Peaks**	39.57	162	P	P	01 57 56.7	+0.6
	comp=Z,140nm,0.6s,baz=301,slow=2.3,SNR=116						
	comp=Z,140nm,0.6s						
RPZ	**Rata Peaks**	39.57	162	P	P	01 57 57.4	+1.3
JMZ	**Minamidaito 2**	39.79	325	P	P	01 57 58.1	0.0
IGBI	**Denpasar**	40.03	264	P	P	01 57 58.4	-1.9
	comp=Z,5μmcomp=Z,288nm,0.4s						
MEEK	**Meekatharra**	40.41	236	P	P	01 58 03.2	-0.2
	baz=40,SNR=66						
MEEK	**Meekatharra**	40.41	236	P	P	01 58 03.1	-0.2
BBKI	**Banjar Baru**	40.58	272	P	P	01 58 05.3	+0.4
	comp=Z,3μmcomp=Z,239nm,0.7s						
JAGI	**Jajag, Banyuwa**	41.01	265	P	P	01 58 05.9	-2.5
JAGI	**Jajag, Banyuwa**	41.01	265	P	P	01 58 05.4	-3.0
	comp=Z,1μmcomp=Z,176nm,0.8s						
JAGI	**Jajag, Banyuwa**	41.01	265	P	P	01 58 06.0	-2.4
KKM	**Kota Kinabalu**	41.10	287	P	P	01 58 09.0	-0.2
KKM				IAmb	IAmb	01 58 10.8	
	comp=Z,65nm,0.9s						
KKM	**Kota Kinabalu**	41.10	287	P	P	01 58 09.2	0.0
KMMI	**Kalianget**	41.21	267	P	P	01 58 08.7	-1.4
	comp=Z,35nm,1.0s						
JOW	**Kunigami**	42.29	323	pP	pP	01 58 47.3	-0.2
	comp=Z,25nm,0.9s,baz=94,slow=5.8,SNR=3.4						
JOW				LR	LR	02 16 41.2	
	comp=Z,74nm,19.0s,baz=158,slow=37						
JOW	**Kunigami**	42.29	323	P	P	01 58 19.2	+0.6
GIRL	**Giralia**	42.86	244	P	P	01 58 23.9	+0.6
	baz=43,SNR=9.2						
KLBR	**Kellerberrin**	43.20	230	P	P	01 58 25.3	-0.7
	baz=43,SNR=70						
KLBR	**Kellerberrin**	43.20	230	P	P	01 58 25.3	-0.7
PWJI	**Pagerwojo**	43.34	265	P	P	01 58 25.6	-1.7
	comp=Z,2μmcomp=Z,178nm,0.8s						
MORW	**Morawa**	43.46	234	P	P	01 58 27.6	-0.5
	baz=44,SNR=14						
MORW	**Morawa**	43.46	234	P	P	01 58 27.7	-0.5
MORW				IAmb	IAmb	01 58 28.5	
	comp=Z,92nm,0.7s						
MORW	**Morawa**	43.46	234	P	P	01 58 27.9	-0.2
BLDU	**Ballidu**	43.57	232	P	P	01 58 28.5	-0.4
	baz=44,SNR=52						
BLDU	**Ballidu**	43.57	232	P	P	01 58 28.6	-0.4
PBKI	**Pangkalan Bun**	43.81	273	P	P	01 58 31.5	+0.4
	comp=Z,6μmcomp=Z,417nm,0.9s						
PCJI	**Pacitan**	43.95	265	P	P	01 58 31.2	-1.0
	comp=Z,4μmcomp=Z,358nm,1.2s						
SBUM	**Sibu**	44.08	280	P	P	01 58 33.5	+0.4
NWAO	**Narrogin (SRO)**	44.21	228	P	P	01 58 33.8	-0.2
	comp=Z,56nm,0.7s,baz=283,slow=6.3,SNR=27						
NWAO				LR	LR	02 17 41.8	
	comp=Z,288nm,18.6s,baz=288,slow=37						
	comp=Z,56nm,0.7s						
NWAO	**Narrogin (SRO)**	44.21	228	P	P	01 58 33.8	-0.2
	baz=44,SNR=16						
NWAO				P	P	01 58 33.8	-0.2
	baz=44,SNR=16						
STKI	**Sintang**	44.37	277	P	P	01 58 36.4	+0.8
	comp=Z,62nm,1.4s						
MUN	**Mundaring**	44.55	230	P	P	01 58 36.6	-0.2
	baz=45,SNR=23						
MUN	**Mundaring**	44.55	230	P	P	01 58 36.8	+0.1
UGM	**Wanagama**	44.60	265	P	P	01 58 35.9	-1.6
UGM	**Wanagama**	44.60	265	P	P	01 58 36.6	-0.9
	comp=Z,244nm,1.1s						
SMRI	**Semarang**	44.71	266	P	P	01 58 38.5	+0.2
SMRI	**Semarang**	44.71	266	P	P	01 58 38.1	-0.2
	comp=Z,170nm,0.9s						
SMRI	**Semarang**	44.71	266	P	P	01 58 38.4	+0.2
	comp=Z,171nm,0.9s						
JYT	**Yasato**	44.80	342	IAmb	IAmb	01 58 40.3	
	comp=Z,68nm,1.0s						
JMN	**Monobe**	44.89	334	P	P	01 58 40.1	+0.8
INU	**Inuyama**	45.06	339	P	P	01 58 44.0	+3.4
SSLB	**Suanglung**	45.14	313	P	P	01 58 41.4	-0.1
SSLB				IAmb	IAmb	01 58 44.1	
	comp=Z,122nm,2.0s						
RKGY	**Rocky Gully**	45.21	226	P	P	01 58 42.9	+1.0
	baz=45,SNR=14						
MJAR	**Matsushiro Arr**	45.72	340	P	P	01 58 45.6	-0.2
	comp=Z,7.9nm,0.7s,baz=168,slow=7.9,SNR=26						
MJAR				pP	pP	01 59 14.4	0.0
	comp=Z,6.7nm,0.9s,baz=165,slow=8.8,SNR=4.3						
MJAR				PcP	PcP	02 00 21.6	-0.1
	comp=Z,11nm,0.9s,baz=159,slow=3.7,SNR=8.4						
	comp=Z,7.9nm,0.7s						
MAJO	**Matsushiro**	45.72	340	P	P	01 58 45.7	-0.2
MAJO				PcP	PcP	02 00 21.5	-0.2
MAJO	**Matsushiro**	45.72	340	*d iP*	P	01 58 45.3	-0.5
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAJO	**Matsushiro**	45.72	340	P	P	01 58 46.4	+0.6
MAJO	**Matsushiro**	45.72	340	P	P	01 58 44.9	-0.9
MAJO				pP	pP	01 59 12.6	-1.8
MJB9	**Matsu-Tunnel**	45.72	340	P	P	01 58 46.5	+0.6
MJB9				PcP	PcP	02 00 22.8	+1.1
JCJI	**Jatiwangi**	46.89	267	P	P	01 58 55.1	-0.3
	comp=Z,458nm,1.0s						
JSD	**Sado**	47.06	341	IAmb	IAmb	01 58 59.7	
	comp=Z,24nm,0.5s						
LEM	**Lembang**	47.52	267	P	P	01 58 59.9	-0.6
	comp=Z,1μmcomp=Z,114nm,0.8s						
CNJI	**Cibinong**	47.98	266	P	P	01 59 02.3	-1.5
	comp=Z,5μmcomp=Z,682nm,1.0s						
MCQ	**Macquarie Isla**	48.00	177	P	P	01 59 03.9	+0.6
	baz=48,SNR=5.3						
MCQ	**Macquarie Isla**	48.00	177	P	P	01 59 03.8	+0.6
MCQ	**Macquarie Isla**	48.00	177	P	P	01 59 03.8	+0.5
MCQ				pmax	pmax		
	comp=Z,146nm,1.0s						
MCQ	**Macquarie Isla**	48.00	177	P	P	01 59 05.6	+2.3
	comp=Z,178nm,1.1s						
SKJI	**Sukabumi**	48.56	266	P	P	01 59 06.6	-1.7
	comp=Z,3μmcomp=Z,362nm,0.6s						
PPBI	**Pangkal Pinang**	49.36	273	P	P	01 59 13.9	-0.5
	comp=Z,55nm,0.9s						
ERM	**Erimo**	49.52	348	P	P	01 59 16.1	+1.1
ERM	**Erimo**	49.52	348	P	P	01 59 16.1	+1.1
ERM				pmax	pmax		
	comp=Z,34nm,1.2s						
TJN	**Taejon**	50.09	330	*c*eP	P	01 59 20.7	+1.2
KSRS	**Korea Array**	50.68	332	P	P	01 59 24.2	+0.4
	comp=Z,6.5nm,0.8s,baz=151,slow=8.7,SNR=27						
KSRS				pP	pP	01 59 52.8	-0.5
	comp=Z,9.4nm,0.8s,baz=146,slow=7.9,SNR=9.9						
	comp=Z,6.5nm,0.8s						
KSAR	**Wonju Array Be**	50.69	332	P	P	01 59 24.1	+0.2
KSAR	**Wonju Array Be**	50.69	332	P	P	01 59 24.1	+0.2
KASI	**Kota Agung**	50.69	268	P	P	01 59 21.6	-2.8
	comp=Z,128nm,1.0s						
KS19	**Wonju Array Si**	50.74	332	P	P	01 59 25.1	+0.7
LWLI	**Liwa**	51.16	269	P	P	01 59 27.5	-0.6
	comp=Z,4μmcomp=Z,65nm,0.6s						
INCN	**Inchon**	51.32	331	P	P	01 59 28.6	-0.1
INCN				IAmb	IAmb	01 59 31.3	
	comp=Z,31nm,0.9s						
INCN	**Inchon**	51.32	331	P	P	01 59 28.6	-0.1
INCN				pmax	pmax		
	comp=Z,31nm,1.0s						
INCN	**Inchon**	51.32	331	P	P	01 59 31.0	+2.3
	comp=Z,53nm,0.9s						
QIZ	**Qiongzhong**	51.59	300	P	P	01 59 32.6	+1.6
QIZ				pP	pP	02 00 00.2	-0.2
QIZ				S	S	02 06 44.4	+1.8
QIZ				pmax	pmax		
	comp=Z,11nm,0.8s						
QIZ				LR	LR		
	comp=Z,180nm,17.5s						
QIZ				LR	LR		
	comp=Z,170nm,26.5s						
NJ2	**Nanjing**	51.80	320	*e*P	P	01 59 32.6	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KIP	**Kipapa**	53.36	57	P	P	01 59 44.0	-0.1
KIP	**Kipapa**	53.36	57	P	P	01 59 44.0	-0.1
KIP	**Kipapa**	53.36	57	P	P	01 59 46.2	+2.1
KIP	**Kipapa**	53.36	57	P	P	01 59 46.0	+1.9
OPA	**Opana**	53.48	57	P	P	01 59 46.2	+1.3
OPA	**Opana**	53.48	57	P	P	01 59 46.2	+1.3
UBPT	**Khong Chiam**	54.04	294	P	P	01 59 48.6	-0.5
SDSI	**Sungai Dareh**	54.18	273	P	P	01 59 48.7	-1.5
	comp=Z,684nmcomp=Z,27nm,1.2s						
YSS	**Yuzh-Sakhalins**	54.35	349	P	P	01 59 51.5	+0.7
YSS				IAmb	IAmb	01 59 53.2	
	comp=Z,45nm,0.9s						
YSS	**Yuzh-Sakhalins**	54.35	349	*e*P	P	01 59 51.8	+1.1
YSS				*e**PP	pP	02 00 21.0	+1.1
YSS				*e*S	S	02 07 17.8	-1.2
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=Z,100nm,2.3s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	54.35	349	P	P	01 59 52.9	+2.2
	comp=Z,72nm,1.2s						
YSS	**Yuzh-Sakhalins**	54.35	349	P	P	01 59 51.2	+0.4
YSS				pP	pP	02 00 19.5	-0.4
HUH	**Hualalai**	54.49	60	P	P	01 59 53.5	+0.9
USRK	**Ussuriysk Ar.**	54.68	339	P	P	01 59 54.3	+1.1
	comp=Z,40nm,1.0s,baz=149,slow=7.8,SNR=29						
USRK				pP	pP	02 00 23.4	+0.5
	comp=Z,27nm,1.0s,baz=177,slow=8.7,SNR=6.1						
	comp=Z,40nm,1.0s						
PPT2	**Papeete2**	54.70	107	*e*P	P	01 59 53.4	-0.6
	comp=Z,184nm,29.0s						
PPT2				*e*S	S	02 07 22.7	-2.3
	comp=Z,232nm,25.0s						
PPT2				*e*LR	LR	02 15 56.4	
	comp=Z,353nm,36.5s						
BKNI	**Bangkinang**	54.73	275	P	P	01 59 54.3	+0.1
POHA	**Pohakuloa**	54.78	60	P	P	01 59 55.6	+0.9
POHA	**Pohakuloa**	54.78	60	P	P	01 59 56.2	+1.5
TIAR	**Tiarei**	54.92	107	*e*P	P	01 59 55.2	-0.3
	comp=Z,13nm,1.0s						
IPM	**Ipoh**	55.43	280	P	P	01 59 58.2	-1.0
TBI	**Tubuai**	55.46	114	*e*LR	LR	02 16 18.0	
	comp=Z,598nm,36.2s						
MDJ	**Mudanjiang**	55.91	338	P	P	02 00 02.0	0.0
MDJ				IAmb	IAmb	02 00 04.1	
	comp=Z,32nm,1.1s						
MDJ	**Mudanjiang**	55.91	338	P	P	02 00 03.2	+1.2
MDJ				pP	pP	02 00 31.6	-0.3
MDJ				sP	sP	02 00 45.1	-0.7
MDJ				PcS	PcS	02 05 00.1	+0.6
MDJ				S	S	02 07 42.1	+2.1
MDJ				ScS	ScS	02 09 39.6	+0.8
MDJ				pmax	pmax		
	comp=Z,29nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.8s						
MDJ	**Mudanjiang**	55.91	338	P	P	02 00 03.7	+1.7
	comp=Z,28nm,1.3s						
KULM	**Kulim**	55.95	281	P	P	02 00 01.5	-1.4
SKR	**Severo-Kuril's**	56.90	0	*e*P	P	02 00 08.7	-0.2
SKR				pmax	pmax		
	comp=Z,100nm,2.6s						
CN2	**Changchun**	56.90	334	*e*P	P	02 00 09.8	+0.7
CN2				pP	pP	02 00 36.6	-2.4
CN2				S	S	02 07 54.2	+1.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
GYA	**Guiyang**	57.50	307	⇑P	P	02 00 07.5	-6.3
GYA				pP	pP	02 00 43.7	-0.3
GYA				S	S	02 08 01.4	-0.5
GYA				sS	sS	02 08 56.6	+4.2
LYN	**LuoYang**	57.52	318	⇓*i*P	P	02 00 11.5	-2.1
LYN				pP	pP	02 00 41.3	-2.7
LYN				S	S	02 07 54.9	-6.7
LYN				pmax	pmax		
	comp=Z,110nm,5.5s						
BNX	**BinXian**	57.69	337	⇑P	P	02 00 15.1	+0.6
BNX				pmax	pmax		
	comp=Z,33nm,1.0s						
HNS	**HongShan**	57.86	322	⇑P	P	02 00 16.7	+0.8
HNS				pmax	pmax		
	comp=Z,12nm,1.4s						
TYV	**Tymovskoe**	58.14	350	*e*P	P	02 00 18.3	+0.7
TYV				*e*S	S	02 08 11.1	+2.1
TYV				pmax	pmax		
	comp=Z,37nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,4.4s						
TYV				smax	smax		
	comp=N,400nm,10.1s						
TYV				smax	smax		
	comp=E,400nm,10.1s						
GSI	**Gunungsitoli**	58.30	276	P	P	02 00 16.5	-3.0
	comp=E,20nm,0.8s						
KLR	**Kul'dur**	59.19	342	P	P	02 00 26.1	+1.3
	comp=E,21nm,1.1s,baz=134,slow=6.3,SNR=22						
KLR				pP	pP	02 00 56.1	+1.1
	comp=E,27nm,1.0s,baz=140,slow=6.5,SNR=13						
	comp=E,21nm,1.1s						
KLR	**Kul'dur**	59.19	342	*c*eP	P	02 00 26.2	+1.3
KLR				pmax	pmax		
	comp=Z,41nm,1.3s						
PET	**Petropavlovsk**	59.30	2	P	P	02 00 26.3	+0.7
PET	**Petropavlovsk**	59.30	2	*e*P	P	02 00 25.9	+0.3
PET				*e**PP	pwP	02 00 56.7	-0.9
PET				*e*		02 02 42.9	
PET				*e*S	S	02 08 22.3	-1.6
PET				pmax	pmax		
	comp=Z,106nm,1.1s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PEA0B	**Petropavlovsk-**	59.35	2	P	P	02 00 27.5	+1.6
PEA0B	**Petropavlovsk-**	59.35	2	*c*eP	P	02 00 27.5	+1.6
PETK	**Petropavlovsk-**	59.35	2	P	P	02 00 27.1	+1.2
	comp=Z,89nm,0.9s,baz=168,slow=7.6,SNR=64						
PETK				pP	pwP	02 00 57.1	-1.0
	comp=Z,46nm,0.9s,baz=114,slow=5.5,SNR=5.5						
PETK				LR	LR	02 22 25.9	
	comp=Z,82nm,21.8s,baz=183,slow=32						
	comp=Z,89nm,0.9s						
PETK	**Petropavlovsk-**	59.35	2	P	P	02 00 26.9	+1.0
XAN	**Xi'an**	59.64	316	P	P	02 00 28.6	+0.2
XAN				pP	pP	02 00 58.0	-1.0
XAN				S	S	02 08 26.7	-2.5
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI	**Kunming**	60.10	304	⇓P	P	02 00 32.9	+0.9
KMI				pP	pP	02 01 01.2	-1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CM31	**Chiang Mai Arr**	60.98	295	P	P	02 00 38.3	+0.5
CMAR	**Chiang Mai Arr**	60.98	295	P	P	02 00 39.0	+1.3
	comp=Z,8.9nm,0.9s,baz=114,slow=5.0,SNR=34						
CMAR				pP	pP	02 01 08.6	+0.6
	comp=Z,77nm,0.8s,baz=114,slow=5.0,SNR=40						
CMAR				PKP2bc		02 29 55.5	
	comp=Z,0.8nm,0.4s,baz=292,slow=5.1,SNR=5.1						
	comp=Z,8.9nm,0.9s						
CMAR	**Chiang Mai Arr**	60.98	295	P	P	02 00 38.5	+0.8
CMAR	**Chiang Mai Arr**	60.98	295	*i* P	P	02 00 39.0	+1.3
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DRV	**Dumont d'Urvil**	61.07	187	P	P	02 00 36.4	-1.0
DRV				pP	pwP	02 01 09.3	0.0
CHTO	**Chiang Mai**	61.09	295	P	P	02 00 39.3	+0.8
CHTO	**Chiang Mai**	61.09	295	P	P	02 00 39.3	+0.8
CHTO	**Chiang Mai**	61.09	295	P	P	02 00 39.0	+0.5
CHTO	**Ch

ZEA pmax pmax
comp=Z,40nm,1.1s
MA2 Magadan 65.91 357 P **P 02 01 10.2 +0.8**
comp=Z,31nm,1.0s,baz=140,slow=8.3,SNR=6.7
MA2 pP **pP 02 01 40.8 +1.2**
comp=Z,41nm,1.0s,baz=185,slow=5.1,SNR=5.8
MA2 LR LR 02 31 25.4
comp=Z,36nm,18.6s,baz=169,slow=37
comp=Z,31nm,1.0s
MA2 Magadan 65.91 357 P **P 02 01 10.7 +1.3**
MA2 IAmb IAmb 02 01 11.7
comp=Z,85nm,1.3s
MA2 Magadan 65.91 357 *ce*P **P 02 01 10.4 +1.0**
MA2 pmax pmax
comp=Z,82nm,2.5s
MA2 Magadan 65.91 357 P **P 02 01 10.8 +1.4**
NIKH Nikolski High 66.45 23 P **P 02 01 13.3 +0.3**
baz=219
CASY Casey 67.26 198 P **P 02 01 18.5 +0.6**
UNV Unalaska Valle 68.03 23 P **P 02 01 22.7 -0.1**
baz=221
ULN Ulaanbaatar 68.80 327 P **P 02 01 28.9 +1.0**
ULN Ulaanbaatar 68.80 327 P **P 02 01 29.0 +1.0**
ULN pmax pmax
comp=Z,21nm,1.1s
ULN Ulaanbaatar 68.80 327 P **P 02 01 27.8 -0.2**
ULN pP **pP 02 01 57.6 -1.4**
SONM Songino Array 69.13 327 P **P 02 01 31.4 +1.3**
comp=Z,12nm,0.8s,baz=133,slow=5.7,SNR=52
SONM pP **pP 02 02 00.8 -0.2**
comp=Z,14nm,0.9s,baz=132,slow=5.9,SNR=8.0
SONM PKP2bc 02 29 39.7
comp=Z,3.2nm,1.0s,baz=275,slow=3.5,SNR=10
SONM LR LR 02 30 27.5
comp=Z,57nm,22.0s,baz=77,slow=35
comp=Z,12nm,0.8s
SONM Songino Array 69.13 327 P **P 02 01 30.7 +0.6**
SONM pP **pP 02 01 58.9 -2.2**
SEY Seymchan 69.22 358 P **P 02 01 30.7 +0.7**
comp=Z,18nm,1.0s,baz=161,slow=6.1,SNR=21
SEY pP **pP 02 02 01.8 +1.3**
comp=Z,34nm,1.1s,baz=178,slow=7.1,SNR=11
comp=Z,18nm,1.0s
SEY Seymchan 69.22 358 *ce*P **P 02 01 30.9 +0.8**
SEY pmax pmax
comp=Z,35nm,1.0s
SPIA Saint Paul Isl 69.28 19 P **P 02 01 30.7 +0.2**
baz=217
FALS False Pass 70.00 24 P **P 02 01 35.3 +0.3**
baz=224
CCD Concordia, Ant 71.02 188 P **P 02 01 40.6 -0.9**
VNDA Vanda 71.12 179 P **P 02 01 42.5 +1.0**
comp=Z,31nm,0.8s,baz=334,slow=6.6,SNR=204
VNDA PKPPKP **P'P'df 02 29 36.1 +0.4**
comp=Z,0.9nm,1.1s,baz=234,slow=3.5,SNR=3.7
comp=Z,31nm,0.8s
VNDA Vanda 71.12 179 P **P 02 01 40.5 -1.0**
VNDA pP **pP 02 02 14.6 +2.2**
YAK Yakutsk 71.12 347 P **P 02 01 42.4 +0.8**
comp=Z,12nm,0.4s,baz=359,slow=0.1,SNR=9.4
YAK pP **pP 02 02 13.4 +0.6**
comp=Z,14nm,0.6s,baz=86,slow=3.4,SNR=1.7
YAK LR LR 02 35 22.9
comp=Z,29nm,18.1s,baz=88,slow=38
comp=Z,12nm,0.4s
YAK Yakutsk 71.12 347 P **P 02 01 42.5 +0.8**
YAK IAmb IAmb 02 01 43.7
comp=Z,67nm,1.0s
YAK Yakutsk 71.12 347 *e*P **P 02 01 42.3 +0.6**
YAK *e* 02 02 01.0
YAK *e**PP **pP 02 02 12.0 -0.8**
YAK *e* 02 04 21.5
YAK *e*PPP PPP 02 06 05.0
YAK *e*S **S 02 10 49.1 +1.1**
YAK *e* 02 11 23.6
YAK *e*SS **SS 02 15 26.4 +2.1**
YAK pmax pmax
comp=Z,56nm,0.9s
YAK pmax pmax
comp=N,21nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,90nm,3.7s
YAK pmax pmax
comp=N,45nm,3.0s
YAK pmax pmax
comp=E,82nm,3.8s
YAK smax smax
comp=E,144nm,3.3s
YAK smax smax
comp=N,55nm,3.0s
LSA Lhasa 71.35 304 P **P 02 01 44.3 -0.1**
LSA **pP 02 02 14.6 -1.1**
LSA Lhasa 71.35 304 P **P 02 01 44.3 -0.1**
LSA *PP **pP 02 02 14.6 -1.1**
LSA pmax pmax
comp=Z,6.0nm,0.4s
SBA Scott Base 71.62 177 P **P 02 01 46.1 +1.6**
SBA IAmb IAmb 02 01 47.8
comp=Z,74nm,0.9s
SBA Scott Base 71.62 177 P **P 02 01 46.1 +1.6**
SBA pmax pmax
comp=Z,74nm,1.0s
SBA Scott Base 71.62 177 P **P 02 01 44.8 +0.3**
ZAK Zakamensk 72.28 328 *e*P **P 02 01 48.1 -0.9**
ZAK *e* 02 02 18.2
ZAK pmax pmax
comp=Z,19nm,1.3s
BOD Bodaibo 72.28 338 *e*P **P 02 01 49.0 +0.3**
BOD pmax pmax
comp=Z,22nm,1.6s
TAPN Taplejung 73.53 301 *e*P **P 02 01 57.2 +0.1**
CHIR Chirikof Islan 73.94 26 P **P 02 01 58.5 0.0**
baz=231
MOY Mondy 74.19 328 *e*P **P 02 02 01.1 +0.8**
MOY pmax pmax
comp=Z,23nm,1.3s
R16K Pilot Point 74.24 24 P **P 02 02 00.8 +0.7**
baz=229
GAMB Gambell 74.27 14 P **P 02 02 00.9 +0.7**
baz=214
RAMN Ramite 74.36 300 *e*P **P 02 02 01.4 -0.6**
R17K Ugashik Creek 74.77 25 P **P 02 02 03.0 -0.3**
baz=230
JIRN Jiri 74.91 301 *e*P **P 02 02 05.8 +0.6**
SII Sitkinak Islan 75.03 26 P **P 02 02 04.9 +0.1**
baz=232
P16K Nushagak River 75.04 23 P **P 02 02 04.3 -0.5**
baz=228
GUN Gumba 75.24 301 *e*P **P 02 02 07.3 +0.2**
Q16K King Salmon 75.33 24 P **P 02 02 06.1 -0.4**
baz=230
Q17K Contact Creek 75.38 24 P **P 02 02 06.9 0.0**
baz=230
O16K Kokwok River B 75.38 22 P **P 02 02 06.9 +0.2**
baz=228
KNGR Kungurtug, Tuv 75.52 326 *i* P **P 02 02 09.1 +1.2**
KNGR pmax pmax
comp=Z,12nm,1.0s
PKI Pulchoki 75.55 300 *e*P **P 02 02 09.2 +0.3**
PKIN Phulchoki 75.56 300 *e*P **P 02 02 09.2 +0.3**
N16K Nishlik Lake 75.72 21 P **P 02 02 10.2 +1.5**
baz=227,SNR=7.9
P17K Kvichak River 75.75 23 P **P 02 02 09.4 +0.5**
baz=230
PALK Pallekele 75.82 279 P **P 02 02 11.0 +0.7**
PALK Pallekele 75.82 279 P **P 02 02 11.0 +0.7**
PALK pmax pmax
comp=Z,24nm,1.2s
OHAK Old Harbor 75.83 26 P **P 02 02 09.6 +0.3**
baz=233
O17K Koliganek Bris 75.88 23 P **P 02 02 09.7 +0.2**
baz=229
Q18K Katmai Hardscr 75.98 24 P **P 02 02 10.4 +0.1**
baz=231,SNR=20
GKN Gorkha 76.33 301 *e*P **P 02 02 13.8 +0.8**
P18K Big Mountain, 76.36 24 P **P 02 02 11.6 -0.7**
baz=231
KDAK Kodiak Island 76.47 26 LR LR 02 31 37.6
comp=Z,100nm,21.9s,baz=258,slow=32
KDAK Kodiak Island 76.47 26 *i* P **P 02 02 14.7 +1.8**
KDAK pmax pmax
comp=Z,70nm,0.9s
KDAK Kodiak Island 76.47 26 P **P 02 02 13.5 +0.5**
baz=234

ANM Nome 76.57 16 P **P 02 02 14.0 +0.6**
baz=220
TNA Tin City 76.67 15 P **P 02 02 14.6 +0.6**
baz=218
Q19K Cape Douglas, 76.71 24 P **P 02 02 14.5 +0.1**
baz=232
N18K Kilae Creek 76.93 22 P **P 02 02 16.9 +1.3**
baz=230,SNR=21
Q20K Shuyak Island 77.04 25 P **P 02 02 16.8 +0.7**
baz=234
DANN Dangsing 77.16 301 *e*P **P 02 02 18.4 +0.5**
SVW2 Sparrevohn 77.31 22 IAmb IAmb 02 02 20.6
comp=Z,183nm,1.5s
P19K Oil Pt 77.32 24 P **P 02 02 17.6 -0.2**
baz=233,SNR=5.4
N19K Bonanza Creek 77.55 23 P **P 02 02 20.0 +0.9**
baz=231,SNR=5.1
PYUN Piuthan 77.76 300 *e*P **P 02 02 21.0 -0.1**
O20K Slope Mountain 77.82 24 P **P 02 02 20.7 +0.1**
baz=233
HOM Homer 77.97 24 P **P 02 02 21.7 +0.4**
baz=234
M19K Big River Lodg 78.27 22 P **P 02 02 24.5 +1.5**
baz=231
L19K White Mountain 78.27 21 P **P 02 02 24.5 +1.5**
baz=231,SNR=36
TTA Tatalina 78.34 20 IAmb IAmb 02 02 25.7
comp=Z,67nm,1.0s
TTA Tatalina 78.34 20 P **P 02 02 24.3 +0.9**
baz=230,SNR=13
BRLK Bradley Lake 78.34 25 P **P 02 02 24.4 +0.9**
BRLK IAmb IAmb 02 02 25.1
comp=Z,72nm,0.9s
BRSE Bradley Lake S 78.39 25 P **P 02 02 24.1 +0.5**
baz=235
N20K Mount Spurr 78.66 23 P **P 02 02 24.7 -0.5**
baz=233
SPCR Spurr Chakacha 78.66 23 P **P 02 02 24.7 -0.5**
baz=233
M20K Styx River 78.72 22 IAmb IAmb 02 02 27.8
comp=Z,60nm,0.9s
M20K Styx River 78.72 22 P **P 02 02 26.2 +0.6**
baz=232
WMQ Urumqi 78.75 317 *e*P **P 02 02 28.1 +2.0**
L20K Farewell, AK 78.81 21 P **P 02 02 26.9 +0.9**
baz=232,SNR=24
CAPN Captain Cook N 78.82 24 P **P 02 02 26.8 +0.9**
baz=234
SEW Seward 79.13 25 IAmb IAmb 02 02 29.5
comp=Z,106nm,1.1s
SEW Seward 79.13 25 P **P 02 02 28.2 +0.5**
baz=236,SNR=7.7
O22K Cooper Landing 79.23 24 P **P 02 02 28.8 +0.6**
baz=236
GCSA Galena City Sc 79.25 19 P **P 02 02 29.2 +1.0**
baz=228
K20K Telida 79.30 21 IAmb IAmb 02 02 31.1
comp=Z,75nm,1.1s
K20K Telida 79.30 21 P **P 02 02 29.6 +1.1**
baz=231,SNR=25
SKT Skwentna 79.39 23 P **P 02 02 28.3 -0.8**
baz=234,SNR=8.5
SUA Susitna One 79.39 23 IAmb IAmb 02 02 30.2
comp=Z,69nm,0.7s
SUA Susitna One 79.39 23 P **P 02 02 29.1 -0.1**
baz=235
HYBB Hyderabad (bro 79.54 289 *e*P **P 02 02 30.8 -0.1**
HYBB *ep*P **pP 02 03 00.6 -1.9**
HYBB *e*PP **PP 02 05 32.3 -0.9**
HYBB *e*S **S 02 12 23.2 +0.4**
RC01 Rabbit Creek A 79.57 24 IAmb IAmb 02 02 31.8
comp=Z,153nm,1.3s
RC01 Rabbit Creek A 79.57 24 P **P 02 02 30.4 +0.3**
baz=236,SNR=7.9
PPLA Purkeypile 79.69 22 IAmb IAmb 02 02 32.2
comp=Z,102nm,1.5s
PPLA Purkeypile 79.69 22 P **P 02 02 30.9 +0.1**
baz=233,SNR=6.6
J20K Nowinta River 79.78 20 IAmb IAmb 02 02 33.8
comp=Z,79nm,0.9s
J20K Nowinta River 79.78 20 P **P 02 02 32.1 +1.0**
baz=231,SNR=36
M22K Willow 79.80 23 IAmb IAmb 02 02 33.0
comp=Z,59nm,1.1s
M22K Willow 79.80 23 P **P 02 02 31.2 0.0**
baz=235,SNR=6.8
TIXI Tiksi 79.88 352 P **P 02 02 31.9 +0.4**
comp=Z,4.1nm,0.7s,baz=87,slow=23,SNR=3.3
comp=Z,4.1nm,0.7s
TIXI Tiksi 79.88 352 *i* P **P 02 02 32.7 +1.2**
TIXI pmax pmax
comp=Z,12nm,1.4s
P23K Montague Islan 79.94 25 P **P 02 02 32.6 +0.5**
baz=238
PWL Port Wells 80.01 24 P **P 02 02 33.0 +0.5**
baz=237,SNR=70
CAST Castle Rocks 80.04 21 IAmb IAmb 02 02 33.8
comp=Z,82nm,0.8s
CAST Castle Rocks 80.04 21 P **P 02 02 32.6 0.0**
baz=233,SNR=57
PMR Palmer 80.10 24 P **P 02 02 33.4 +0.6**
PMR IAmb IAmb 02 02 34.3
comp=Z,88nm,1.0s
PMR Palmer 80.10 24 P **P 02 02 33.4 +0.6**
PMR pmax pmax
comp=Z,88nm,1.0s
PMR Palmer 80.10 24 P **P 02 02 33.1 +0.3**
baz=236,SNR=25
CUT Chulitna 80.11 23 IAmb IAmb 02 02 34.4
comp=Z,123nm,1.0s
CUT Chulitna 80.11 23 P **P 02 02 32.9 0.0**
baz=235,SNR=11
CHUM Lake Minchumin 80.24 21 P **P 02 02 34.3 +0.8**
baz=233,SNR=39
KNK Knik Glacier 80.27 24 IAmb IAmb 02 02 35.9
comp=Z,122nm,1.4s
KNK Knik Glacier 80.27 24 P **P 02 02 34.3 +0.5**
baz=237,SNR=10
GHO Glory Hole Cre 80.28 23 IAmb IAmb 02 02 35.6
comp=Z,92nm,0.9s
SML Sawmill 80.53 24 P **P 02 02 35.9 +0.6**
baz=237,SNR=50
GLI Glacier Island 80.53 25 IAmb IAmb 02 02 37.0
comp=Z,122nm,1.1s
GLI Glacier Island 80.53 25 P **P 02 02 35.8 +0.5**
baz=238,SNR=24
KTH Kantishna Hill 80.54 21 IAmb IAmb 02 02 36.1
comp=Z,73nm,1.0s
TRF Thorofare Moun 80.71 22 IAmb IAmb 02 02 38.5
comp=Z,65nm,0.7s
TRF Thorofare Moun 80.71 22 P **P 02 02 35.8 -0.6**
baz=235,SNR=34
FID Port Fidalgo 80.72 25 IAmb IAmb 02 02 37.9
comp=Z,83nm,1.1s
M23K Glacier View 80.77 24 P **P 02 02 36.9 +0.4**
baz=237,SNR=12
BPAW Bear Paw Mtn. 80.84 21 P **P 02 02 36.6 -0.2**
baz=234,SNR=13
EYAK Cordova Ski Ar 80.93 25 IAmb IAmb 02 02 39.3
comp=Z,77nm,1.4s
EYAK Cordova Ski Ar 80.93 25 P **P 02 02 37.8 +0.5**
baz=239,SNR=5.8
SCM Sheep Creek Mo 80.95 24 IAmb IAmb 02 02 39.6
comp=Z,109nm,1.0s
SCM Sheep Creek Mo 80.95 24 P **P 02 02 38.3 +0.8**
baz=238,SNR=23
DGZ Jazzator, Alta 80.99 322 *i* P **P 02 02 39.2 +1.1**
DGZ pmax pmax
comp=Z,9.0nm,1.0s
WAT1 Susitna Watana 81.01 23 P **P 02 02 37.9 +0.2**
baz=236
IMAR Indian Mountai 81.06 19 P **P 02 02 38.9 +1.0**
I21K Tanana 81.14 20 IAmb IAmb 02 02 40.7
comp=Z,78nm,0.9s
I21K Tanana 81.14 20 P **P 02 02 39.2 +0.8**
baz=233,SNR=14
H21K Melozitna River 81.16 19 IAmb IAmb 02 02 40.8
comp=Z,43nm,0.9s
H21K Melozitna River 81.16 19 P **P 02 02 39.5 +1.0**
baz=232,SNR=26
WAT6 Susitna Watana 81.19 23 P **P 02 02 39.2 +0.3**
baz=237,SNR=28
KAIM Kayak Island 81.19 26 IAmb IAmb 02 02 41.2
comp=Z,95nm,1.3s
KAIM Kayak Island 81.19 26 P **P 02 02 39.8 +1.0**
baz=241
DIV Divide 81.22 25 IAmb IAmb 02 02 41.0
comp=Z,68nm,1.0s

RND Reindeer 81.22 22 IAmb IAmb 02 02 40.0
comp=Z,94nm,0.8s
RAGM Ragged Mountai 81.31 26 IAmb IAmb 02 02 42.3
comp=Z,85nm,1.3s
KLU Klutina 81.34 24 IAmb IAmb 02 02 42.5
comp=Z,104nm,1.0s
KLU Klutina 81.34 24 P **P 02 02 40.6 +1.0**
baz=239,SNR=46
MCK McKinley 81.37 22 P **P 02 02 39.4 -0.3**
MCK pP **pP 02 03 10.0 -1.3**
MCK McKinley 81.37 22 P **P 02 02 39.4 -0.3**
MCK *PP **pP 02 03 10.0 -1.3**
MCK pmax pmax
comp=Z,196nm,1.0s
MCK McKinley 81.37 22 P **P 02 02 39.7 +0.1**
baz=236,SNR=110
BWN Browne 81.42 21 IAmb IAmb 02 02 42.0
comp=Z,110nm,1.0s
HMT Hamilton 81.46 26 IAmb IAmb 02 02 42.5
comp=Z,120nm,1.4s
G21K Allakaket 81.47 18 P **P 02 02 40.9 +0.8**
baz=231,SNR=29
MLY Manley 81.47 20 IAmb IAmb 02 02 41.8
comp=Z,78nm,1.2s
MLY Manley 81.47 20 P **P 02 02 40.6 +0.4**
baz=234,SNR=27
SUCK Suckling Hills 81.55 26 IAmb IAmb 02 02 43.3
comp=Z,54nm,1.2s
M24K Tolsona, Glenn 81.56 24 P **P 02 02 42.0 +1.3**
baz=239,SNR=28
DHY Denali Highway 81.60 23 IAmb IAmb 02 02 42.8
comp=Z,82nm,1.1s
DHY Denali Highway 81.60 23 P **P 02 02 41.2 +0.2**
baz=238,SNR=34
BMRM Bremner River 81.62 25 IAmb IAmb 02 02 43.9
comp=Z,104nm,1.3s
BMRM Bremner River 81.62 25 P **P 02 02 41.7 +0.6**
baz=240,SNR=23
H22K Ishtalitna Cre 81.77 19 P **P 02 02 42.7 +1.0**
baz=234,SNR=19
NEA2 Nenana 81.81 21 IAmb IAmb 02 02 42.8
comp=Z,60nm,0.9s
NEA2 Nenana 81.81 21 P **P 02 02 41.4 -0.5**
baz=236,SNR=10
F21K Alatna River 81.92 18 P **P 02 02 43.0 +0.6**
baz=231,SNR=22
N25K Chitina, Valde 81.94 25 IAmb IAmb 02 02 45.2
comp=Z,121nm,1.3s
N25K Chitina, Valde 81.94 25 P **P 02 02 43.7 +0.9**
baz=240,SNR=31
SNH Sunshine Point 82.01 26 IAmb IAmb 02 02 45.7
comp=Z,117nm,1.2s
I23K Minto, Yukon-K 82.02 21 P **P 02 02 43.5 +0.5**
I23K Minto, Yukon-K 82.02 21 P **P 02 02 43.1 +0.1**
baz=236,SNR=9.7
WRH Wood River Hil 82.09 21 IAmb IAmb 02 02 44.3
comp=Z,106nm,1.3s
HARP HAARP 82.11 24 P **P 02 02 44.4 +0.8**
baz=240,SNR=16
WAX Waxell Ridge 82.13 26 IAmb IAmb 02 02 46.2
comp=Z,75nm,0.9s
VRDI Verde Repeater 82.24 25 IAmb IAmb 02 02 46.5
comp=Z,111nm,1.2s
PAX Paxson 82.28 23 P **P 02 02 44.6 0.0**
baz=239,SNR=13
TGL Tana Glacier 82.28 26 IAmb IAmb 02 02 46.8
comp=Z,86nm,1.1s
CCB Clear Creek Bu 82.29 21 IAmb IAmb 02 02 45.1
comp=Z,62nm,1.1s
MDM Murphy Dome 82.31 21 IAmb IAmb 02 02 45.5
comp=Z,75nm,1.2s
H23K Yukon River 82.34 20 IAmb IAmb 02 02 46.8
comp=Z,62nm,1.0s
H23K Yukon River 82.34 20 P **P 02 02 45.3 +0.6**
baz=235,SNR=25
G22K Bettles 82.34 19 P **P 02 02 45.5 +0.8**
baz=233
TCOL CIGO, UAF Yank 82.39 21 P **P 02 02 44.7 -0.2**
baz=237,SNR=15
COLA College 82.40 21 P **P 02 02 44.8 -0.1**
COLA **pP 02 03 16.9 +0.3**
COLA College 82.40 21 *i* P **P 02 02 44.7 -0.2**
COLA pmax pmax
comp=Z,115nm,1.0s
COLA College 82.40 21 P **P 02 02 44.8 -0.1**
baz=237
MESA MESA 82.40 27 IAmb IAmb 02 02 47.7
comp=Z,97nm,1.1s
MESA MESA 82.40 27 P **P 02 02 46.0 +0.6**
baz=243,SNR=8.5
ISLE Juniper Island 82.43 26 IAmb IAmb 02 02 47.4
comp=Z,82nm,1.0s
HDA Harding Lake 82.47 22 IAmb IAmb 02 02 47.2
comp=Z,69nm,1.2s
HDA Harding Lake 82.47 22 P **P 02 02 45.1 -0.3**
baz=238,SNR=28
F22K John River 82.49 18 P **P 02 02 46.7 +1.2**
baz=232
MCARA McCarthy VSAT 82.50 25 P **P 02 02 46.4 +0.8**
baz=242,SNR=43
YAH Yahtse 82.58 26 IAmb IAmb 02 02 48.6
comp=Z,58nm,1.0s
K24K Donnelly Dome 82.59 22 P **P 02 02 47.0 +0.9**
baz=239,SNR=27
POKR Poker Plat Res 82.68 21 IAmb IAmb 02 02 47.1
comp=Z,46nm,1.1s
POKR Poker Plat Res 82.68 21 P **P 02 02 45.8 -0.6**
baz=237,SNR=5.0
IL31 82.69 21 IAmb IAmb 02 02 47.1
comp=Z,54nm,1.0s
ILAR Eielson Array 82.69 21 P **P 02 02 46.1 -0.4**
comp=Z,36nm,0.9s,baz=255,slow=4.9,SNR=168
ILAR pP **pP 02 03 18.5 +0.3**
comp=Z,14nm,1.1s,baz=240,slow=5.2,SNR=2.7
ILAR LR LR 02 36 39.3
comp=Z,229nm,20.8s,baz=235,slow=33
comp=Z,36nm,0.9s
G23K Bananza Creek 82.69 19 P **P 02 02 47.6 +1.1**
baz=235,SNR=21
RIDG Independent Ri 82.92 23 P **P 02 02 48.1 +0.4**
RIDG pP **pP 02 03 18.9 -0.5**
RIDG Independent Ri 82.92 23 P **P 02 02 48.5 +0.7**
baz=240,SNR=9.4
H24K Noodor Dome 82.92 20 P **P 02 02 49.0 +1.2**
baz=237,SNR=11
BARN Barnard Glacie 82.93 26 IAmb IAmb 02 02 50.4
comp=Z,91nm,1.0s
COLD Coldfoot 82.94 19 IAmb IAmb 02 02 50.4
comp=Z,89nm,1.5s
COLD Coldfoot 82.94 19 P **P 02 02 48.7 +1.0**
baz=234,SNR=21
MENT Mentasta 82.96 24 IAmb IAmb 02 02 50.2
comp=Z,75nm,1.3s
E22K Anaktuvuk Pass 82.98 17 P **P 02 02 49.0 +1.0**
baz=233
M26K Nabesna, AK 82.99 24 IAmb IAmb 02 02 50.4
comp=Z,58nm,1.1s
M26K Nabesna, AK 82.99 24 P **P 02 02 49.2 +1.0**
baz=242,SNR=31
CTG Chitna Glacier 83.03 26 P **P 02 02 49.4 +0.9**
baz=243,SNR=68
LOGN Logan Glacier 83.11 26 IAmb IAmb 02 02 51.1
comp=Z,76nm,1.0s
PINM Pinnacle 83.13 27 P **P 02 02 49.7 +0.7**
baz=244,SNR=44
L26K Log Cabin Wild 83.15 24 IAmb IAmb 02 02 51.1
comp=Z,65nm,1.1s
L26K Log Cabin Wild 83.15 24 P **P 02 02 49.8 +0.9**
baz=241,SNR=32
J25K Salcha River, 83.16 22 P **P 02 02 49.6 +0.6**
baz=239,SNR=79
MK31 Makanchi Array 83.31 319 P **P 02 02 49.8 -0.3**
MK31 Makanchi Array 83.31 319 P **P 02 02 49.8 -0.3**
MK31 pmax pmax
comp=Z,11nm,1.1s
MKAR Makanchi Array 83.31 319 P **P 02 02 50.2 +0.1**
comp=Z,10nm,0.8s,baz=103,slow=6.2,SNR=38
MKAR PKKPbc **PKKPbc 02 21 09.3 -2.2**
comp=Z,0.4nm,0.6s,baz=346,slow=2.5,SNR=4.3
MKAR LR LR 02 41 13.1
comp=Z,24nm,18.2s,baz=104,slow=36
comp=Z,10nm,0.8s
PNL Peninsula 83.33 28 P **P 02 02 50.9 +1.0**
baz=245,SNR=24
BCPM Bancas Point 83.35 27 IAmb IAmb 02 02 52.3
comp=Z,100nm,1.1s
SCRK Sand Creek 83.36 23 P **P 02 02 50.8 +0.7**
SCRK IAmb IAmb 02 02 52.0

comp=Z,81nm,1.2s
SCRK pP **pP** **02 03 22.7 +0.8**
SCRK Sand Creek 83.36 23 P **P** **02 02 50.9 +0.7**
baz=241,SNR=41
M27K Edge Creek, AK 83.43 25 P **P** **02 02 52.2 +1.6**
baz=243,SNR=159
O28M Mount Upton 83.45 26 P **P** **02 02 51.8 +0.9**
baz=244,SNR=68
MAKZ Makanchi 83.52 318 P **P** **02 02 51.2 0.0**
MAKZ pP **pP** **02 03 21.4 -2.0**
MAKZ Makanchi 83.52 318 P **P** **02 02 51.2 0.0**
MAKZ *PP **pP** **02 03 21.4 -2.0**
MAKZ pmax pmax
comp=Z,16nm,1.1s
G24K Hadweenzic Riv 83.53 20 P **P** **02 02 51.5 +0.7**
baz=237,SNR=11
QSPA South Pole Qui 83.53 180 P **P** **02 02 51.5 +0.5**
comp=Z,126nm,0.7s,baz=334,slow=0.7,SNR=352
comp=Z,126nm,0.7s
QSPA South Pole Qui 83.53 180 P **P** **02 02 51.0 -0.1**
PRP Porcupine Dome 83.57 21 P **P** **02 02 50.5 -0.7**
baz=239
E23K Chandalar 83.60 18 P **P** **02 02 52.7 +1.4**
baz=235,SNR=34
YUK3 Moose Creek 83.77 25 P **P** **02 02 53.0 +0.7**
baz=244,SNR=57
L27K Beaver Creek, 83.78 24 IAmb IAmb 02 02 54.7
comp=Z,78nm,1.1s
L27K Beaver Creek, 83.78 24 P **P** **02 02 53.3 +1.2**
baz=243,SNR=53
J26L Joseph Creek 83.78 22 IAmb IAmb 02 02 54.2
comp=Z,114nm,1.6s
J26L Joseph Creek 83.78 22 P **P** **02 02 53.0 +0.8**
baz=241,SNR=29
D23K Nanushuk River 83.82 17 P **P** **02 02 53.9 +1.7**
baz=234,SNR=35
F24K Squaw Lake 83.84 19 P **P** **02 02 53.5 +1.1**
baz=237,SNR=30
H25K Birch Creek 83.86 20 P **P** **02 02 54.3 +1.9**
baz=239
BVCY Beaver Creek 83.88 25 P **P** **02 02 54.2 +1.5**
baz=244,SNR=13
TOLK Toolik Lake Re 83.95 18 IAmb IAmb 02 02 55.2
comp=Z,65nm,0.9s
TOLK Toolik Lake Re 83.95 18 P **P** **02 02 53.9 +0.9**
baz=235,SNR=21
E24K Your Creek 83.96 18 P **P** **02 02 53.9 +0.9**
baz=236
O29M Mount Kennedy 83.97 27 P **P** **02 02 54.8 +1.4**
baz=246,SNR=26
ZAA0 Zalesovo Array 83.99 326 P **P** **02 02 52.6 -0.8**
ZAA0 **pP** **02 03 22.8 -2.7**
ZALV Zalesovo Beam 83.99 326 P **P** **02 02 52.8 -0.5**
comp=Z,6.1nm,0.8s,baz=112,slow=4.9,SNR=18
ZALV pP **pP** **02 03 24.6 -1.0**
comp=Z,5.1nm,0.7s,baz=111,slow=4.9,SNR=5.3
ZALV LR LR 02 39 13.6
comp=Z,54nm,21.8s,baz=100,slow=35
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 83.99 326 P **P** **02 02 53.1 -0.3**
ZALV **pP** **02 03 23.9 -1.6**
ZALV Zalesovo Beam 83.99 326 *i* P **P** **02 02 52.5 -0.9**
ZALV pmax pmax
comp=Z,6.0nm,0.8s
G25K Bearman Lake 84.02 20 P **P** **02 02 54.2 +1.0**
baz=238,SNR=14
P29M Windy Craggy 84.09 28 IAmb IAmb 02 02 56.2
comp=Z,46nm,1.2s
P29M Windy Craggy 84.09 28 P **P** **02 02 54.9 +1.1**
baz=247,SNR=14
K27K Chicken 84.13 23 IAmb IAmb 02 02 56.9
comp=Z,72nm,1.1s
K27K Chicken 84.13 23 P **P** **02 02 55.5 +1.7**
baz=242
SIT Sitka 84.29 31 P **P** **02 02 55.8 +1.0**
baz=249,SNR=6.1
I26K Coal Creek Min 84.33 22 IAmb IAmb 02 02 56.7
comp=Z,65nm,1.2s
I26K Coal Creek Min 84.33 22 P **P** **02 02 55.6 +0.8**
baz=241
YUK6 Outpost Mounta 84.33 27 P **P** **02 02 56.6 +1.3**
baz=246,SNR=19
C23K Itkillik River 84.35 16 P **P** **02 02 56.6 +1.7**
baz=234,SNR=8.7
YUK4 Talbot Arm 84.37 26 P **P** **02 02 57.3 +1.8**
baz=246,SNR=44
D24K Happy Valley 84.47 17 P **P** **02 02 56.9 +1.4**
baz=236
DIB Dawson Inlet, 84.54 35 IAmb IAmb 02 02 58.4
comp=Z,85nm,1.3s
F25K Christian Rive 84.61 19 P **P** **02 02 57.7 +1.4**
baz=239,SNR=15
P30M Million Dollar 84.64 28 P **P** **02 02 57.8 +1.1**
baz=247,SNR=32
PLBC Pleasant Camp 84.67 28 P **P** **02 02 57.6 +1.0**
baz=248,SNR=17
HYT Haines Junctio 84.67 27 P **P** **02 02 58.2 +1.4**
baz=247,SNR=106
S32K Killisnoo 84.82 31 P **P** **02 02 58.9 +1.4**
baz=250
C24K Franklin Bluff 84.83 17 P **P** **02 02 58.7 +1.5**
baz=236
EGAK Eagle 84.83 23 IAmb IAmb 02 02 59.7
comp=Z,72nm,0.9s
EGAK Eagle 84.83 23 P **P** **02 02 58.4 +1.0**
baz=243,SNR=58
CRAG Craig 84.90 33 IAmb IAmb 02 03 00.7
comp=Z,98nm,1.5s
CRAG Craig 84.90 33 P **P** **02 02 59.3 +1.4**
baz=251,SNR=5.1
M29M Somme Creek 84.90 25 P **P** **02 02 59.3 +1.3**
baz=246,SNR=40
G26K Porcupine Rive 84.91 20 P **P** **02 02 59.7 +2.0**
baz=240,SNR=54
E25K Arctic Village 84.91 19 P **P** **02 02 59.1 +1.3**
baz=239,SNR=7.9
HG4B Hotspring 85.00 36 IAmb IAmb 02 03 00.9
comp=Z,40nm,1.0s
I27K Kandik River 85.03 22 P **P** **02 02 59.8 +1.4**
baz=243,SNR=40
BESE Bessie Mountai 85.07 30 P **P** **02 02 59.8 +1.0**
BESE IAmb IAmb 02 03 01.4
comp=Z,106nm,1.5s
BESE **pP** **02 03 31.1 +0.7**
MAW Mawson 85.09 203 P **P** **02 02 59.4 +0.8**
comp=Z,49nm,0.7s,baz=96,slow=5.8,SNR=125
MAW pP **pP** **02 03 29.9 -0.7**
comp=Z,40nm,1.1s,baz=82,slow=7.9,SNR=3.6
MAW LR LR 02 38 56.0
comp=Z,37nm,18.1s,baz=64,slow=34
comp=Z,49nm,0.7s
MAW Mawson 85.09 203 P **P** **02 02 59.5 +0.8**
baz=85,SNR=64
MAW Mawson 85.09 203 P **P** **02 02 59.5 +0.9**
MAW pP **pP** **02 03 29.3 -1.4**
MAW Mawson 85.09 203 P **P** **02 02 59.5 +0.9**
MAW *PP **pP** **02 03 29.3 -1.4**
MAW pmax pmax
comp=Z,13nm,0.8s
N30M Aishikik Lake 85.10 26 P **P** **02 03 00.2 +1.2**
baz=247,SNR=20
U33K Whale Pass 85.12 32 P **P** **02 03 00.3 +1.4**
baz=251,SNR=10
R32K Eaglecrest 85.13 30 P **P** **02 03 00.3 +1.3**
baz=250,SNR=9.9
F26K Sheenjek River 85.16 19 P **P** **02 03 00.4 +1.4**
baz=240,SNR=18
SKAG Skagway 85.16 29 IAmb IAmb 02 03 02.4
comp=Z,38nm,1.1s
SKAG Skagway 85.16 29 P **P** **02 03 00.5 +1.4**
baz=249,SNR=22
DAWY Dawson 85.20 24 P **P** **02 03 00.8 +1.4**
baz=245,SNR=39
O30N Mendenhall 85.29 27 P **P** **02 03 01.1 +1.2**
baz=248,SNR=49
D25K Kavik River 85.29 18 P **P** **02 03 00.2 +0.5**
baz=238
L29M L29M 85.32 25 P **P** **02 03 01.3 +1.4**
baz=246,SNR=44
H27K Steamboat Moun 85.36 21 P **P** **02 03 01.3 +1.3**
baz=243,SNR=39
G27K Doyon Strip 85.58 21 P **P** **02 03 02.3 +1.2**
baz=242,SNR=21
WRAK Wrangell Islan 85.62 32 IAmb IAmb 02 03 04.0
comp=Z,93nm,1.2s
WRAK Wrangell Islan 85.62 32 P **P** **02 03 02.7 +1.2**
baz=252,SNR=13
V35K Ketchikan 85.68 33 P **P** **02 03 02.7 +1.0**
baz=252,SNR=19
N31M Braeburn, Yuko 85.70 27 P **P** **02 03 03.2 +1.4**
baz=248,SNR=39
WHY Whitehorse 85.80 28 P **P** **02 03 03.5 +1.0**
baz=249,SNR=18
J29M Klondike Camp 85.83 23 P **P** **02 03 04.7 +2.2**
baz=246
K29M Barlow Dome 85.86 24 P **P** **02 03 03.9 +1.2**
baz=246,SNR=68
P32M Atlin 85.97 29 P **P** **02 03 04.4 +1.2**
baz=250,SNR=16
KSH Kashi 86.02 310 P **P** **02 03 05.3 +1.3**
KSH pP pP 02 03 37.4 +1.2
KSH S **S** **02 13 28.5 +0.6**
KSH pmax pmax
comp=Z,6.0nm,0.9s
C26K Camden Bay 86.04 17 P **P** **02 03 05.2 +2.0**
baz=239,SNR=5.8
RUBB Prince Rupert 86.13 34 IAmb IAmb 02 03 06.5
comp=Z,45nm,1.3s
GRNB Grenville Isla 86.17 35 IAmb IAmb 02 03 06.7
comp=Z,58nm,1.8s
I29M Ogilvie Camp, 86.17 23 P **P** **02 03 04.9 +0.9**
baz=246,SNR=24
E27K Coleen River 86.24 19 P **P** **02 03 06.0 +1.6**
baz=242,SNR=38
C27K Jago River 86.26 18 P **P** **02 03 06.2 +1.8**
baz=240,SNR=13
MAYO Mayo, Yukon 86.44 25 P **P** **02 03 07.1 +1.8**
baz=248,SNR=15
Q32M Nakina River 86.47 30 P **P** **02 03 06.9 +1.1**
baz=252,SNR=15
M31M Drury Creek, Y 86.57 26 IAmb IAmb 02 03 08.0
comp=Z,43nm,1.0s
M31M Drury Creek, Y 86.57 26 P **P** **02 03 06.8 +0.7**
baz=249,SNR=28
P33M Teslin, Yukon 86.61 28 P **P** **02 03 07.3 +0.9**
baz=251,SNR=14
KURK Kurchatov 86.69 322 P **P** **02 03 06.5 -0.4**
KURK pP **pP** **02 03 37.4 -1.9**
KURK Kurchatov 86.69 322 P **P** **02 03 06.5 -0.4**
KURK *PP **pP** **02 03 37.4 -1.9**
KURK pmax pmax
comp=Z,21nm,2.0s
S34M Telegraph Cree 86.71 31 P **P** **02 03 08.4 +1.5**
baz=252,SNR=53
KURBB Kurchatov Arra 86.73 322 P **P** **02 03 07.4 +0.4**
comp=Z,0.6nm,0.3s,baz=106,slow=4.4,SNR=4.9
KURBB pP **pP** **02 03 38.9 -0.5**
comp=Z,2.3nm,0.7s,baz=108,slow=3.7,SNR=3.2
KURBB LR LR 02 39 20.6
comp=Z,46nm,21.9s,baz=97,slow=34
BBB Bella Bella 86.80 37 LR LR 02 36 01.2
comp=Z,91nm,20.2s,baz=244,slow=31
N32M Quiet Lake 86.80 27 P **P** **02 03 08.3 +1.1**
baz=251,SNR=5.4
T35M Bob Quinn 86.90 32 P **P** **02 03 08.9 +1.1**
baz=253,SNR=21
FARO Faro, Yukon 87.04 26 IAmb IAmb 02 03 10.3
comp=Z,50nm,1.2s
FARO Faro, Yukon 87.04 26 P **P** **02 03 09.2 +0.9**
baz=250,SNR=36
KCPM Cahto Peak 87.15 50 IAmb IAmb 02 03 12.4
comp=Z,45nm,1.5s
KMRM Mail Ridge 87.15 49 IAmb IAmb 02 03 16.9
comp=Z,40nm,1.3s
EPYK Eagle Plains 87.17 22 P **P** **02 03 10.5 +1.5**
baz=247,SNR=102
R33M Jennings River 87.24 29 P **P** **02 03 10.8 +1.2**
baz=253,SNR=25
DLBC Dease Lake 87.43 30 LR LR 02 36 59.1
comp=Z,113nm,21.5s,baz=248,slow=32
DLBC Dease Lake 87.43 30 IAmb IAmb 02 03 13.1
comp=Z,84nm,1.2s
DLBC Dease Lake 87.43 30 P **P** **02 03 11.6 +1.3**
baz=253,SNR=37
G30M tAoh Zraii Nji 87.59 21 P **P** **02 03 11.5 +0.6**
baz=248,SNR=22
AAK Ala-Archa 87.72 313 pP **pP** **02 03 46.0 +1.5**
comp=Z,2.8nm,0.7s,baz=156,slow=5.4,SNR=3.5
AAK LR LR 02 43 54.3
comp=Z,27nm,21.4s,baz=116,slow=36
CBB Campbell River 87.98 39 IAmb IAmb 02 03 15.3
comp=Z,46nm,1.3s
MMPY Sheldon Lake, 88.08 26 P **P** **02 03 14.4 +1.0**
baz=252,SNR=23
YBH Yreka Blue Hor 88.17 48 LR LR 02 35 14.8
comp=Z,124nm,21.8s,baz=274,slow=30
YBH Yreka Blue Hor 88.17 48 P **P** **02 03 14.9 +0.6**
YBH pP **pP** **02 03 44.9 -1.7**
NRIK Noril'sk 88.37 341 P **P** **02 03 14.1 -0.4**
comp=Z,29nm,1.1s,baz=109,slow=5.9,SNR=15
comp=Z,29nm,1.1s
NRIK Noril'sk 88.37 341 P **P** **02 03 13.8 -0.8**
NRIK IAmb IAmb 02 03 15.6
comp=Z,34nm,1.1s
NRIK pP **pP** **02 03 45.9 -0.9**
NRIK Noril'sk 88.37 341 *ce* P **P** **02 03 13.7 -0.8**
NRIK pmax pmax
comp=Z,35nm,1.1s
WTLY Watson Lake, Y 88.50 29 IAmb IAmb 02 03 18.0
comp=Z,43nm,1.0s
WTLY Watson Lake, Y 88.50 29 P **P** **02 03 16.4 +1.1**
baz=254,SNR=6.8
F31M Tsiigehtchic 88.66 21 P **P** **02 03 16.3 +0.4**
baz=250,SNR=33
INK Inuvik 89.04 21 P **P** **02 03 18.1 +0.5**
comp=Z,54nm,0.9s,baz=232,slow=4.4,SNR=57
INK pP **pP** **02 03 50.6 +1.0**
comp=Z,24nm,1.1s,baz=229,slow=9.8,SNR=3.3
INK LR LR 02 40 27.1
comp=Z,173nm,20.7s,baz=244,slow=34
comp=Z,54nm,0.9s
INK Inuvik 89.04 21 P **P** **02 03 18.5 +0.9**
baz=250
H04A Detroit Lake 89.06 45 P **P** **02 03 18.5 +0.2**
TGTN Hyland Airport 89.12 28 P **P** **02 03 19.6 +1.3**
baz=255,SNR=10
SMMC Simmler 89.24 55 P **P** **02 03 21.5 +2.1**
baz=262
PKM Mcpherson Peak 89.32 55 P **P** **02 03 22.2 +2.2**
baz=262,SNR=6.5
HOOD Mount Hood Mea 89.54 44 IAmb IAmb 02 03 22.9
comp=Z,25nm,1.1s
BEKR Beckworth 89.62 50 IAmb IAmb 02 03 23.5
comp=Z,36nm,1.5s
D05A Enumclaw 89.63 43 IAmb IAmb 02 03 28.5
comp=Z,69nm,1.6s
PINE Pine Mountain 89.80 46 IAmb IAmb 02 03 24.6
comp=Z,29nm,1.3s
VOG Valley Oaks Go 89.88 54 P **P** **02 03 23.2 +0.9**
baz=262
BTK Batken 90.02 310 P **P** **02 03 23.8 +0.7**
BTK pP **pP** **02 03 54.0 -1.5**
BTK Batken 90.02 310 P **P** **02 03 23.8 +0.7**
BTK *PP **pP** **02 03 54.0 -1.5**
BTK pmax pmax
comp=Z,4.0nm,1.2s
VES Vestal, Richgr 90.05 54 P **P** **02 03 24.1 +1.0**
baz=262
VCNR Virginia City 90.08 51 IAmb IAmb 02 03 25.9
comp=Z,45nm,1.5s
SCI2 San Clemente I 90.11 57 P **P** **02 03 24.7 +1.3**
baz=262
ARVC Arvin 90.16 55 P **P** **02 03 25.4 +1.8**
baz=262
OSI Osito Audit: C 90.17 55 P **P** **02 03 25.7 +1.9**
baz=262
GAR Garm 90.26 309 P **P** **02 03 24.0 -0.1**
GAR pP **pP** **02 03 56.0 -0.6**
CIS Catalina Islan 90.27 57 P **P** **02 03 25.5 +1.2**
baz=262
MDPB Devils Postpil 90.30 52 IAmb IAmb 02 03 27.1
comp=Z,41nm,1.5s
PAHR Pah Rah Range 90.34 50 IAmb IAmb 02 03 27.0
comp=Z,35nm,1.2s
OMMB Old Mammoth Mi 90.36 52 IAmb IAmb 02 03 27.5
comp=Z,28nm,1.5s
YERR Yerington 90.36 51 IAmb IAmb 02 03 27.2
comp=Z,67nm,1.6s
DECC Green Verdugo 90.45 56 P **P** **02 03 26.2 +1.1**
baz=263
ISA Isabella, Lake 90.52 54 P **P** **02 03 26.4 +1.0**
ISA IAmb IAmb 02 03 28.0
comp=Z,30nm,1.3s
ISA pP **pP** **02 03 55.6 -2.0**
ISA Isabella, Lake 90.52 54 P **P** **02 03 26.4 +1.0**
ISA *PP **pP** **02 03 55.6 -2.0**
ISA pmax pmax
comp=Z,30nm,1.3s
ISA Isabella, Lake 90.52 54 P **P** **02 03 26.5 +1.1**
baz=262,SNR=8.3
KBL Kabul 90.68 305 P **P** **02 03 26.2 -0.1**
KBL Kabul 90.68 305 P **P** **02 03 26.3 -0.1**
KBL pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 90.69 313 P **P** **02 03 26.3 +0.4**
KKAR Karatay Array 90.69 313 P **P** **02 03 26.3 +0.4**
EDW2 Edwards Air Fo 90.81 55 P **P** **02 03 28.2 +1.5**
baz=263,SNR=14
LHV Little Huntoon 90.83 52 IAmb IAmb 02 03 29.7
comp=Z,50nm,1.1s
RYN Ryan 90.86 51 P **P** **02 03 27.5 +0.4**
RYN IAmb IAmb 02 03 29.6
comp=Z,42nm,1.1s
TIN Tinemaha, Big 90.89 53 P **P** **02 03 28.5 +1.3**
baz=263
CWC Cottonwood Cre 90.93 54 P **P** **02 03 28.6 +1.1**
baz=263
BFSC Mount Baldy Ra 91.00 56 P **P** **02 03 28.8 +1.0**
baz=263,SNR=11
NVAR Mina Array Bea 91.01 52 P **P** **02 03 29.1 +1.3**
comp=Z,25nm,1.0s,baz=252,slow=5.9,SNR=107
NVAR pP **pP** **02 04 01.4 +1.4**
comp=Z,4.2nm,0.9s,baz=280,slow=4.0,SNR=2.5
comp=Z,25nm,1.0s
NVAR Mina Array Bea 91.01 52 P **P** **02 03 29.0 +1.2**
FLDN Fort Liard 91.12 30 P **P** **02 03 29.0 +1.5**
baz=259
NV11 Mina Array Sit 91.12 52 IAmb IAmb 02 03 30.8
comp=Z,53nm,1.1s
LRMC Laurel Mtn Rad 91.13 55 P **P** **02 03 30.0 +1.6**
baz=263,SNR=7.3
DSP Deep Springs 91.14 53 IAmb IAmb 02 03 31.2
comp=Z,43nm,1.2s
HAWA Hanford 91.17 44 IAmb IAmb 02 03 29.7
comp=Z,23nm,1.3s
KVN Kaiserville 91.25 51 IAmb IAmb 02 03 31.3
comp=Z,55nm,1.3s
109C Camp Elliot, M 91.30 57 P **P** **02 03 30.0 +1.0**
baz=263
MURC Murrieta 91.31 57 P **P** **02 03 30.3 +1.2**
baz=263
MPMC Manual Prospec 91.36 54 P **P** **02 03 30.8 +1.3**
baz=263,SNR=32
G08A Pilot Rock 91.42 45 P **P** **02 03 29.3 -0.1**
E08A Dider Farm, El 91.51 44 IAmb IAmb 02 03 31.3
comp=Z,47nm,1.5s
J08A Circle Bar Ran 91.51 47 IAmb IAmb 02 03 31.6
comp=Z,18nm,1.2s
GRAC Grapevine Rang 91.57 53 P **P** **02 03 31.5 +1.3**
baz=263
B08A Colville Reser 91.58 42 IAmb IAmb 02 03 31.1
comp=Z,38nm,1.6s
RRX Edison Barstow 91.62 55 P **P** **02 03 31.8 +1.4**
baz=263
BAR Barrett 91.64 57 IAmb IAmb 02 03 33.3
comp=Z,19nm,1.1s
MZP Montezuma Peak 91.64 52 IAmb IAmb 02 03 34.0
comp=Z,54nm,1.4s
TKX Tecate 91.68 58 P **P** **02 03 30.7 -0.1**
TKX IAmb IAmb 02 03 33.4
comp=Z,22nm,1.1s
TKX pP **pP** **02 04 01.2 -1.8**
WRGLY Wrigley 91.69 27 P **P** **02 03 31.3 +1.3**
baz=259
RPN Rapa Nui 91.70 117 LR LR 02 37 49.7
comp=Z,19nm,19.1s,baz=288,slow=31
GSC Goldstone, Bar 91.82 55 IAmb IAmb 02 03 34.1
comp=Z,17nm,1.1s
GSC Goldstone, Bar 91.82 55 P **P** **02 03 32.7 +1.2**
baz=263,SNR=9.5
MONP2 Monument Peak 91.87 57 P **P** **02 03 33.7 +1.8**
baz=264,SNR=8.3
FURC Furnace Creek, 91.91 54 P **P** **02 03 33.0 +1.3**
baz=263,SNR=8.3
PFO Pinyon Flats O 91.92 57 P **P** **02 03 32.1 +0.1**
PFO IAmb IAmb 02 03 34.6
comp=Z,16nm,0.8s
PFO pP **pP** **02 04 03.4 -0.8**
PFO Pinyon Flats O 91.92 57 P **P** **02 03 32.1 +0.1**
PFO *PP **pP** **02 04 03.4 -0.8**
PFO pmax pmax
comp=Z,17nm,0.9s
PFO Pinyon Flats O 91.92 57 P **P** **02 03 33.6 +1.5**
baz=264,SNR=9.0
TPFO Pinon Flats 91.92 57 P **P** **02 03 33.6 +1.5**
baz=264,SNR=7.4
GWY Greenwater Val 92.03 54 IAmb IAmb 02 03 35.0
comp=Z,45nm,1.4s
BMN Battle Mountai 92.08 50 IAmb IAmb 02 03 35.0
comp=Z,38nm,1.0s
IKP In-Ko-Pah, Jac 92.10 58 P **P** **02 03 34.1 +1.2**
baz=264
WCT Wildcat Mounta 92.14 53 IAmb IAmb 02 03 35.5
comp=Z,41nm,1.1s
E09A Wood Farm, Sta 92.14 44 IAmb IAmb 02 03 34.1
comp=Z,23nm,1.1s
BVAR Borovoye Array 92.14 323 P **P** **02 03 32.3 -0.1**
comp=Z,0.7nm,0.5s,baz=106,slow=4.8,SNR=8.5
BVAR pP **pP** **02 04 03.0 -2.1**
comp=Z,4.3nm,1.0s,baz=112,slow=4.0,SNR=5.8
BVAR LR LR 02 44 48.6
comp=Z,38nm,21.1s,baz=103,slow=35
HEC Hector,Ludlow 92.15 55 P **P** **02 03 34.1 +1.0**
baz=264
ESJX Sierra Juarez 92.17 58 IAmb IAmb 02 03 36.7
comp=Z,23nm,1.3s
BRVK Borovoye 92.21 323 P **P** **02 03 32.6 -0.1**
BRVK pP **pP** **02 04 03.1 -2.3**
BRVK Borovoye 92.21 323 *ce* P **P** **02 03 31.7 -1.0**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
YUH Yuha Desert 92.26 58 IAmb IAmb 02 03 36.4
comp=Z,19nm,1.1s
SHOC Shoshone, Teco 92.32 54 P **P** **02 03 35.0 +1.3**
baz=264,SNR=13
BELC Belle Mtn. Jos 92.34 56 P **P** **02 03 35.3 +1.3**
baz=264,SNR=29
SWSC Sam W. Stewart 92.39 57 P **P** **02 03 35.7 +1.7**
baz=264,SNR=5.4
TPNV Topopah Spring 92.45 53 P **P** **02 03 35.8 +1.3**
baz=264
WAPA Wapiti River 92.54 35 IAmb IAmb 02 03 36.5
comp=Z,33nm,0.8s
TUQ Turquoise Moun 92.55 55 P **P** **02 03 35.9 +1.0**
baz=264,SNR=14
C36M Paulatuk 92.62 21 P **P** **02 03 34.7 +0.4**
baz=259
GMRC Granite Mounta 92.70 55 P **P** **02 03 36.9 +1.3**
baz=264,SNR=23
BC3 Big Chuckawall 92.76 57 P **P** **02 03 37.7 +1.9**
baz=264,SNR=17
A36M Sachs Harbour 92.78 18 P **P** **02 03 35.8 +0.9**
A36M Sachs Harbour 92.78 18 P **P** **02 03 35.1 +0.2**
baz=258
S11A Rachel 92.92 53 IAmb IAmb 02 03 41.3
comp=Z,32nm,1.2s
NEW Newport 93.03 42 LR LR 02 44 52.2
comp=Z,81nm,18.1s,baz=272,slow=35
NEW Newport 93.03 42 IAmb IAmb 02 03 37.8
comp=Z,17nm,1.1s
NEW Newport 93.03 42 P **P** **02 03 36.6 -0.1**
baz=264
IRM Iron Mountain 93.06 56 P **P** **02 03 39.0 +1.9**
baz=264,SNR=25
R11A Troy Canyon, C 93.12 52 IAmb IAmb 02 03 40.1
comp=Z,34nm,1.2s
R11A Troy Canyon, C 93.12 52 P **P** **02 03 38.5 +1.0**
baz=264
GLA Glamis 93.22 57 IAmb IAmb 02 03 41.2
comp=Z,21nm,1.0s
GLA Glamis 93.22 57 P **P** **02 03 39.5 +1.6**
baz=264
SHPR Sheep Range 93.28 54 IAmb IAmb 02 03 41.2
comp=Z,23nm,1.3s
MFID Camas Ranch 93.43 47 P **P** **02 03 38.8 0.0**
V12A Nelson 93.45 55 IAmb IAmb 02 03 41.8
comp=Z,40nm,1.5s
BLYC Blythe 93.54 57 IAmb IAmb 02 03 42.3
comp=Z,37nm,1.5s
ELK Elko 93.62 50 IAmb IAmb 02 03 42.1
comp=Z,25nm,1.2s
PDMCI Parker Dam,Lak 93.90 56 P **P** **02 03 42.4 +1.4**

baz=265
113A Mohawk Valley, 94.08 58 IAmb IAmb 02 03 44.9
comp=Z,24nm,1.8s
W13A Hualapai Mount 94.18 55 P **P 02 03 42.8 +0.2**
W13A IAmb IAmb 02 03 45.3
comp=Z,40nm,1.6s
W13A **pP 02 04 14.1 -0.7**
HLID Hailey 94.47 47 P **P 02 03 44.7 +1.1**
baz=265
PSUT Pine Spring 94.49 52 IAmb IAmb 02 03 46.5
comp=Z,37nm,1.3s
214A Organ Pipe Nat 94.82 59 P **P 02 03 47.5 +2.2**
baz=265
LCMT Little Creek M 94.86 53 IAmb IAmb 02 03 48.4
comp=Z,18nm,1.1s
MSO Missoula 95.05 44 P **P 02 03 48.1 +2.0**
baz=266
WALA Waterton Lakes 95.22 41 IAmb IAmb 02 03 48.5
comp=Z,13nm,0.9s
BCYI Bear Canyon 95.25 46 P **P 02 03 47.1 -0.1**
DUG Dugway, Tooele 95.42 50 IAmb IAmb 02 03 50.2
comp=Z,29nm,1.9s
DUG Dugway, Tooele 95.42 50 P **P 02 03 48.7 +0.7**
baz=266
HVU Hansel Valley 95.55 49 IAmb IAmb 02 03 50.5
comp=Z,16nm,0.9s
BELA Belgrano 2 95.62 178 P **P 02 03 47.3 -0.7**
PKCU Pink Cliffs 95.63 53 IAmb IAmb 02 03 52.9
comp=Z,23nm,1.1s
YKA Yellowknife Ar 95.63 28 P **P 02 03 48.9 +0.7**
comp=Z,29nm,0.9s,baz=263,slow=4.8,SNR=55
YKA pP **pP 02 04 21.4 +0.8**
comp=Z,7.5nm,0.9s,baz=262,slow=4.8,SNR=3.5
comp=Z,29nm,0.9s
YKA Yellowknife Ar 95.63 28 P **P 02 03 48.3 +0.1**
YKA **pP 02 04 21.3 +0.7**
MTPU Mount Pierson 95.77 52 IAmb IAmb 02 03 53.3
comp=Z,18nm,1.0s
NLU North Lily Min 95.97 51 IAmb IAmb 02 03 52.8
comp=Z,15nm,1.2s
WUAZ Wupatki 96.26 55 P **P 02 03 53.2 +1.2**
baz=267
HWUT Hardware Ranch 96.44 49 P **P 02 03 52.9 +0.2**
HWUT IAmb IAmb 02 03 53.9
comp=Z,6.9nm,0.8s
JLU Jordanelle 96.48 50 IAmb IAmb 02 03 54.8
comp=Z,17nm,1.4s
BOZ Bozeman (W) 96.58 45 P **P 02 03 53.5 +0.4**
baz=268
TMUT Trail Mountain 96.60 51 IAmb IAmb 02 03 56.1
comp=Z,20nm,1.0s
P17A Butcher Ranch, 96.97 51 IAmb IAmb 02 03 57.4
comp=Z,17nm,1.2s
REDW Red Top Meadow 97.05 47 IAmb IAmb 02 03 57.0
comp=Z,26nm,1.6s
YFT Old Faithful 97.10 46 IAmb IAmb 02 03 59.0
comp=Z,13nm,1.2s
LOHW Long Hollow 97.24 47 P Pdif 02 03 56.9 +0.5
H17A Grant Village 97.28 46 P Pdif 02 03 57.2 +0.7
baz=268
P18A Preston Nutter 97.36 51 IAmb IAmb 02 03 59.2
comp=Z,8.6nm,1.0s
X18A Snowflake 97.38 56 IAmb IAmb 02 04 02.6
comp=Z,13nm,1.3s
EGMT Eagleton 97.94 42 P Pdif 02 03 59.9 +0.7
baz=269
BW06 Boulder Array 97.98 48 IAmb IAmb 02 04 00.4
comp=Z,9.6nm,1.0s
BW06 Boulder Array 97.98 48 P Pdif 02 03 60.0 +0.3
baz=269
PD31 Pinedale Array 97.98 48 IAmb IAmb 02 04 00.4
comp=Z,8.5nm,1.0s
PDAR Pinedale Array 97.98 48 P **P 02 03 59.5 -0.2**
comp=Z,6.6nm,0.9s,baz=243,slow=2.3,SNR=37
PDAR pP **pP 02 04 32.5 +0.4**
comp=Z,2.6nm,1.0s,baz=261,slow=3.9,SNR=3.3
PDAR PP **PP 02 07 58.4 -1.6**
comp=Z,1.7nm,1.0s,baz=263,slow=7.3,SNR=4.6
PDAR LR LR 02 42 37.2
comp=Z,43nm,21.3s,baz=280,slow=32
comp=Z,6.6nm,0.9s
RLMT Red Lodge 98.23 45 IAmb IAmb 02 04 03.1
comp=Z,13nm,1.6s
RLMT Red Lodge 98.23 45 P Pdif 02 04 01.9 +1.2
baz=269
MVCO Mesa Verde 98.65 53 **P 02 04 02.0 -0.8**
MVCO IAmb IAmb 02 04 08.3
comp=Z,12nm,1.4s
MVCO Mesa Verde 98.65 53 P **P 02 04 02.6 -0.2**
baz=268
PV15 Paradox Valley 98.69 52 IAmb IAmb 02 04 05.2
comp=Z,15nm,1.2s
O20A White River Ci 98.92 50 IAmb IAmb 02 04 05.8
comp=Z,11nm,0.9s
O20A White River Ci 98.92 50 P Pdif 02 04 04.4 +0.6
baz=269
ARU Arti 99.16 326 LR LR 02 49 02.6
comp=Z,52nm,22.0s,baz=67,slow=35
AKTO Aktyubinsk 99.68 320 LR LR 02 47 56.3
comp=Z,46nm,21.9s,baz=83,slow=34
RWWY Rawlins 99.71 49 Pdif **Pdif 02 04 07.7 +0.3**
RWWY IAmb IAmb 02 04 09.1
comp=Z,18nm,1.1s
TROLL Troll, Antarti 99.73 188 P **Pdif 02 04 06.6 -0.2**
S22A 4UR Ranch, Cre 99.99 53 Pdif **Pdif 02 04 10.6 +1.7**
S22A 4UR Ranch, Cre 99.99 53 P **Pdif 02 04 09.4 +0.6**
baz=270
K22A Casper 100.21 48 P **Pdif 02 04 09.8 +0.3**
baz=271
K22A Casper 100.21 48 P **Pdif 02 04 09.7 +0.3**
baz=271
ANMO Albuquerque 100.26 56 P **Pdif 02 04 11.0 +1.0**
baz=269
LAO LASA Array 100.35 44 P **Pdif 02 04 10.4 +0.5**
baz=272
LAO LASA Array 100.35 44 P **Pdif 02 04 10.6 +0.7**
baz=272
N23A Red Feather La 100.67 50 P **Pdif 02 04 12.7 +0.9**
baz=271
SNAA Sanae 100.74 187 P **Pdif 02 04 11.0 -0.2**
SNAA Sanae 100.74 187 Pdif **Pdif 02 04 11.0 -0.2**
SNAA Sanae 100.74 187 *i* P **Pdif 02 04 10.9 -0.2**
SNAA pmax pmax
comp=Z,6.0nm,1.0s
ISCO Idaho Springs 100.94 51 P **Pdif 02 04 12.9 -0.1**
baz=271
SDCO Great Sand Dun 101.04 53 P **Pdif 02 04 13.7 +0.3**
baz=270
Q24A Divide 101.31 52 P **Pdif 02 04 14.9 +0.3**
baz=271
DGMT Dagmar 101.64 42 P **Pdif 02 04 16.3 +0.7**
baz=274
DGMT Dagmar 101.64 42 P **Pdif 02 04 15.5 -0.1**
baz=274
VNA3 Neumayer Olymp 101.84 185 P **Pdif 02 04 15.6 -0.4**
T25A Trinidad 101.92 54 P **Pdif 02 04 17.3 0.0**
baz=271
VNA2 Neumayer--Watz 101.94 186 P **Pdif 02 04 15.7 -0.7**
baz=179,slow=3.0
RSSD Black Hills 101.98 46 P **Pdif 02 04 17.6 +0.1**
baz=273
RSSD Black Hills 101.98 46 P **Pdif 02 04 17.3 -0.1**
baz=273
VNA1 Neumayer--Stat 102.29 185 P **Pdif 02 04 17.7 -0.3**
TXAR Lajitas Array 102.58 61 P **Pdif 02 04 20.4 +0.1**
comp=Z,0.9nm,1.1s,baz=258,slow=6.0,SNR=4.3
TXAR PP **PP 02 08 32.0 -3.0**
comp=Z,2.5nm,1.2s,baz=270,slow=5.9,SNR=5.2
TXAR PKKPbc **PKKPbc 02 20 19.1 -1.4**
comp=Z,0.3nm,0.7s,baz=148,slow=5.4,SNR=4.5
WMOK Wichita Mounta 106.58 56 P **PKiKP 02 08 47.8 -0.2**
baz=274
MAK Makhachkala 107.50 313 *e*P **Pdif 02 04 40.0 -1.6**
MAK *e* 02 09 07.2
KSU1 Kansas State U 107.93 51 P **PKiKP 02 08 50.9 +0.5**
baz=276
ARCES ARCESS Array B 109.20 343 PKiKP **PKiKP 02 08 51.8 -0.1**
comp=Z,1.7nm,0.6s,baz=70,slow=1.4,SNR=10
U38A Gravette 109.99 54 P **PKiKP 02 08 53.8 -0.6**
baz=277
EYMN Ely 110.12 41 P **PKiKP 02 08 54.1 -0.1**
baz=283
KIV Kislovodsk 110.80 315 *i* PKIKP **PKiKP 02 08 55.6 -0.1**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,23nm,21.0s

OBN Obninsk 111.54 327⇑ *i* PKIKP **PKiKP 02 09 01.8 +5.2**
OBN pmax pmax
comp=Z,5.0nm,0.9s
JFWS Jewell Farm 112.08 46 P **PKiKP 02 08 57.4 -0.7**
baz=282
CCM Cathedral Cave 112.24 52 P **PKiKP 02 08 58.2 -0.3**
baz=280
HDIL Hopedale 113.27 49 P **PKiKP 02 09 00.1 -0.3**
baz=282
344A Westbrook Farm 113.61 59 P **PKiKP 02 09 01.9 +0.6**
baz=277
FINES FINESS Array B 113.63 336 PKiKP **PKiKP 02 08 59.7 -0.7**
comp=Z,4.4nm,1.0s,baz=18,slow=0.6,SNR=9.0
FINES PKKPbc **PKKPbc 02 19 43.6 -3.1**
comp=Z,1.8nm,0.6s,baz=218,slow=3.6,SNR=12
FINES FINESS Array B 113.63 336*c* *i* PKIKP **PKiKP 02 08 58.2 -2.2**
FINES pmax pmax
comp=Z,4.0nm,1.0s
OXF Oxford 114.28 55 P PKPdf 02 09 02.3 -0.2
baz=279
SFIN Lafayette 114.94 48 P **PKiKP 02 09 02.5 -1.1**
baz=284
WVT Waverly 115.27 53 P **PKiKP 02 09 03.5 -0.9**
baz=281
RAF Rauma 115.58 337 *e*P **PKiKP 02 09 01.9 -2.3**
T47A Sharon Grove 115.67 52 **PKPdf 02 09 04.7 -0.5**
T47A Sharon Grove 115.67 52 P **PKPdf 02 09 04.4 -0.7**
baz=282
WCI Wyandotte Cave 116.04 51 **PKPdf 02 09 05.2 -0.6**
WCI Wyandotte Cave 116.04 51 PKIKP **PKPdf 02 09 05.2 -0.6**
WCI Wyandotte Cave 116.04 51 P **PKPdf 02 09 05.2 -0.6**
baz=283
WCI Wyandotte Cave 116.04 51 P **PKPdf 02 09 05.6 -0.1**
baz=283
V48A Smith Brothers 116.15 53 P **PKPdf 02 09 04.4 -1.7**
baz=282
X48A Hartselle 116.22 55 P **PKPdf 02 09 04.6 -1.7**
baz=281
MNK Minsk 116.37 329 *i* PKIKP **PKPdf 02 09 04.1 -1.8**
MNK *i* 02 09 36.4
MNK *i* 02 09 49.1
MNK *i* PPP PPP 02 12 43.8
MNK *i* 02 16 04.8
MNK *i* SP **PS 02 20 03.5 +6.0**
MNK *i* SS SS 02 26 07.6 -0.1
MNK *i* SSS SSS 02 30 27.4
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=Z,5.0nm,0.9s
MNK Minsk 116.37 329 *i* PKP **PKPdf 02 09 04.1 -1.8**
comp=E,1.0nm,0.8s
MNK *i* PKP **PKPdf 02 09 04.1 -1.8**
MNK *i* PKP **PKPdf 02 09 04.1 -1.8**
comp=Z,5.0nm,0.8s,baz=62
MNK *i* pPKP pPKPdf 02 09 36.5 -3.4
MNK *i* sPKP 02 09 49.1
MNK *i* PP PP 02 10 03.8 -10
MNK *i* SKP 02 11 42.6
MNK *i* PKS PKSdf 02 12 16.4 -26
MNK *i* PPP PPP 02 12 43.8
MNK *i* SKS **SKSdf 02 16 04.8 -1.5**
MNK *i* SKKS 02 18 27.9
MNK *i* SP **PS 02 20 03.6 +6.0**
MNK *i* SS **SS 02 26 07.7 0.0**
MNK *i* SSS SSS 02 30 27.5
P48A Milroy 116.41 49 P **PKPdf 02 09 05.5 -1.0**
baz=284
P48A P **PKPdf 02 09 05.5 -1.0**
baz=284
O48B Farmland 116.41 48 P **PKPdf 02 09 06.3 -0.1**
baz=285
L48A N Adams 116.49 46 P **PKPdf 02 09 05.8 -0.7**
baz=286
L48A P **PKPdf 02 09 05.8 -0.7**
baz=286
LRAL Lakeview Retre 116.51 56 P **PKPdf 02 09 06.1 -0.8**
baz=280
LRAL Lakeview Retre 116.51 56 P **PKPdf 02 09 06.3 -0.5**
baz=280
NACGM Naroch 116.73 330‖ *e*PKP **PKPdf 02 09 06.3 -0.3**
baz=60
PLCA Paso Flores 116.87 142 PKP **PKPdf 02 09 06.8 -0.6**
comp=Z,2.0nm,0.6s,baz=271,slow=1.8,SNR=14
PLCA pPKP pPKPdf 02 09 40.3 -1.2
comp=Z,1.7nm,0.7s,baz=180,slow=0.5,SNR=3.7
P49A Miami Univ. Ec 116.92 49 P **PKPdf 02 09 07.0 -0.5**
baz=285
AAM Ann Arbor 116.94 46 P **PKiKP 02 09 07.6 +0.2**
baz=287
N49A Columbus Grove 116.95 47 P **PKPdf 02 09 06.1 -1.4**
baz=286
N49A P **PKPdf 02 09 06.1 -1.4**
baz=286
AKASG Malin Array Be 117.37 325 PKP **PKPdf 02 09 07.2 -0.7**
comp=Z,5.3nm,0.8s,baz=61,slow=2.3,SNR=12
AKASG Malin Array Be 117.37 325*c* *i* PKIKP **PKPdf 02 09 07.1 -0.8**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 117.37 325*c* *i* PKIKP **PKPdf 02 09 05.8 -2.1**
T50A Nancy 117.44 52 P **PKPdf 02 09 07.6 -0.9**
baz=284
T50A P **PKPdf 02 09 07.6 -0.9**
baz=284
W50A Signal Mountai 117.47 54 **PKPdf 02 09 07.9 -0.8**
W50A Signal Mountai 117.47 54 P **PKPdf 02 09 07.2 -1.5**
baz=282
R50A Paris 117.53 50 P **PKPdf 02 09 07.8 -0.9**
baz=284
R50A P **PKPdf 02 09 07.8 -0.9**
baz=284
VSVD Vaisvydziai 117.56 332 *e*P **PKiKP 02 09 08.4 +0.2**
PABE Paberze 117.80 331 PKPdf **PKPdf 02 09 08.6 0.0**
PABE Paberze 117.80 331 *e*P **PKiKP 02 09 08.9 +0.2**
ACSO Alum Creek Sta 118.02 48 P **PKPdf 02 09 08.7 -0.9**
baz=286
ACSO Alum Creek Sta 118.02 48 P **PKPdf 02 09 09.5 0.0**
baz=286
Q51A Peebles 118.08 49 P **PKPdf 02 09 08.6 -1.1**
baz=286
Q51A P **PKPdf 02 09 08.6 -1.1**
baz=286
V51A Loudon 118.10 53 P **PKPdf 02 09 09.0 -0.9**
baz=283
S51A Beattyville 118.25 51 P **PKPdf 02 09 09.4 -0.7**
baz=285
S51A P **PKPdf 02 09 09.4 -0.7**
baz=285
BR131 Keskin Array S 118.37 312 *i* PKIKP **PKPdf 02 09 09.9 -0.5**
BRTR Keskin Array B 118.37 312 PKP **PKPdf 02 09 09.7 -0.8**
comp=Z,4.2nm,1.0s,baz=134,slow=2.5,SNR=13
BRTR pPKP **pPKPdf 02 09 43.2 -1.1**
comp=Z,1.0nm,0.7s,baz=84,slow=0.8,SNR=2.9
BRTR PKKPbc **PKKPbc 02 19 28.8 -0.9**
comp=Z,1.1nm,0.8s,baz=227,slow=2.9,SNR=6.0
BRTR Keskin Array B 118.37 312*c* *i* PKIKP **PKPdf 02 09 09.5 -1.0**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
152A Waverly Hall 118.46 56 **PKPdf 02 09 10.2 -0.4**
TZTN Tazewell 118.56 52 P **PKPdf 02 09 10.0 -0.7**
baz=284
W52A Murphy 118.59 54 P **PKPdf 02 09 10.5 -0.4**
baz=283
V52A Sevierville 118.69 53 P **PKPdf 02 09 10.7 -0.3**
baz=284
Y52A Lilburn 118.76 55 P **PKPdf 02 09 10.8 -0.3**
baz=282
Y52A P **PKPdf 02 09 10.8 -0.3**
baz=282
P52A Corning 118.81 48 P **PKPdf 02 09 10.3 -0.8**
baz=287
O52A Adamsville 118.89 47 P **PKPdf 02 09 10.4 -0.9**
baz=287
O52A P **PKPdf 02 09 10.4 -0.9**
baz=287
O53A New Philadelph 119.31 47 P **PKiKP 02 09 12.2 +0.1**
baz=288
M53A WI Miller and 119.32 46 P **PKPdf 02 09 11.8 -0.2**
baz=289
NB2 NORSAR Subarra 119.34 341 PKPdf **PKPdf 02 09 10.8 -0.7**
comp=Z,1.7nm,0.7s,baz=41,slow=1.9
NOA NORSAR Array B 119.34 341 PKP **PKPdf 02 09 11.1 -0.4**
comp=Z,3.0nm,0.8s,baz=44,slow=2.0,SNR=13
NOA PKKPbc **PKKPab 02 19 24.9 -1.8**
comp=Z,1.9nm,0.7s,baz=225,slow=4.2,SNR=7.7
GOGA Godfrey 119.34 55 P **PKPdf 02 09 12.2 -0.1**

baz=282
P53A Whipple 119.41 48 P **PKPdf 02 09 11.7 -0.6**
baz=287
P53A P **PKPdf 02 09 11.7 -0.6**
baz=287
N53A Lisbon 119.41 46 P **PKPdf 02 09 12.1 -0.2**
baz=288
N53A P **PKPdf 02 09 12.1 -0.2**
baz=288
CASEE Lake Jocassee 119.41 53 P **PKPdf 02 09 11.7 -0.7**
baz=284
TIGA Tifton 119.64 58 P **PKPdf 02 09 12.7 -0.2**
baz=281
MDUB Mudurnu 119.93 313 PKPdf **PKPdf 02 09 12.1 -1.2**
O54A Avella 119.94 47 P **PKPdf 02 09 13.0 -0.2**
baz=288
O54A P **PKPdf 02 09 13.0 -0.2**
baz=288
S54A Dingess, Beckl 119.95 50 P **PKPdf 02 09 12.8 -0.6**
baz=286
S54A P **PKPdf 02 09 12.8 -0.6**
baz=286
Q54A Coxs Mills 119.97 48 P **PKPdf 02 09 12.8 -0.5**
baz=287
Q54A P **PKPdf 02 09 12.8 -0.5**
baz=287
UPAO U. Pittsburgh 120.10 47 P **PKPdf 02 09 13.4 -0.2**
baz=289
VLDR Vladesti 120.10 320 ⇑P **PKiKP 02 09 13.8 +0.3**
BO02 Sierra Bellavi 120.15 137 **PKPdf 02 09 12.4 -1.6**
CFR Carcaliu 120.34 319 ⇑P **PKiKP 02 09 13.9 0.0**
CFR Carcaliu 120.34 319 ⇑PKIKP **PKiKP 02 09 13.9 0.0**
MCWV Mont Chateau 120.49 47 P **PKiKP 02 09 14.5 0.0**
baz=289
V55A Taylorsville 120.56 52 P **PKPdf 02 09 13.7 -0.9**
baz=285
V55A P **PKPdf 02 09 13.7 -0.9**
baz=285
KMSC Kings Mountain 120.65 53 P **PKPdf 02 09 14.1 -0.6**
baz=285
KMSC Kings Mountain 120.65 53 P **PKPdf 02 09 14.6 -0.2**
baz=285
TLBR Topalu 120.65 319 ⇑P **PKiKP 02 09 14.8 +0.3**
HARR Harsova 120.67 319 ⇑P **PKiKP 02 09 14.8 +0.2**
HARR Harsova 120.67 319 ⇑PKIKP **PKiKP 02 09 14.8 +0.2**
BOSA Boshof 120.73 231 PKP **PKPdf 02 09 15.2 -0.1**
comp=Z,4.6nm,0.8s,baz=92,slow=2.1,SNR=7.0
BOSA pPKP **pPKPdf 02 09 47.8 -1.4**
comp=Z,4.6nm,0.7s,baz=197,slow=2.7,SNR=3.5
BLA Blacksburg 120.80 50 P **PKPdf 02 09 14.5 -0.6**
baz=287
BLA Blacksburg 120.80 50 P **PKiKP 02 09 15.2 0.0**
baz=287
BIZ Bicaz 120.87 322 ⇑P **PKiKP 02 09 15.2 +0.3**
JSC Jenkinsville 120.92 54 P **PKiKP 02 09 15.4 0.0**
baz=284
BURAR Bucovina Array 121.10 323 ⇑P **PKiKP 02 09 16.7 +1.2**
BURAR Bucovina Array 121.10 323 ⇑PKIKP **PKiKP 02 09 16.7 +1.2**
SSPA Standing Stone 121.58 46 PKPdf **PKPdf 02 09 16.1 -0.3**
SSPA Standing Stone 121.58 46 P **PKPdf 02 09 15.7 -0.7**
baz=291
SSPA Standing Stone 121.58 46 P **PKPdf 02 09 16.0 -0.4**
baz=291
MLR Muntele Rosu 121.61 320 ⇑P **PKPdf 02 09 16.1 -0.4**
MLR Muntele Rosu 121.61 320 PKPdf **PKPdf 02 09 16.1 -0.4**
MLR Muntele Rosu 121.61 320 ⇑PKIKP **PKPdf 02 09 16.1 -0.4**
W57A Gilead 121.70 53 P **PKPdf 02 09 15.9 -0.8**
baz=286
W57A P **PKPdf 02 09 15.9 -0.8**
baz=286
DOPR Dopca 121.75 321 ⇑P **PKiKP 02 09 17.0 +0.2**
T57A Hurt 121.75 50 P **PKPdf 02 09 16.3 -0.5**
baz=288
T57A P **PKPdf 02 09 16.3 -0.5**
baz=288
WCNY West Carthage 121.83 41 P **PKPdf 02 09 16.1 -0.6**
baz=294
J57A Williamstown 121.83 42 P **PKPdf 02 09 16.1 -0.7**
baz=294
J57A P **PKPdf 02 09 16.1 -0.7**
baz=294
NHSC New Hope 122.09 55 P **PKPdf 02 09 17.4 -0.1**
baz=284
DWPF Disney Wildern 122.11 61 P **PKPdf 02 09 17.1 -0.7**
baz=281
KOLS Kolonicke sedl 122.17 325 *e*PKIKP **PKiKP 02 09 18.1 +0.6**
VOIR 122.20 321 ⇑P **PKPdf 02 09 17.1 -0.5**
VOIR 122.20 321 ⇑PKIKP **PKPdf 02 09 17.1 -0.5**
LONY Lake Ozonia 122.25 40 P **PKPdf 02 09 17.5 -0.1**
baz=296
GKP Gorka Klasztor 122.30 332 *e*P **PKiKP 02 09 18.2 +0.7**
BINY Binghamton 122.32 43 P **PKPdf 02 09 17.6 -0.2**
baz=293
N58A Sunbury 122.33 45 P **PKPdf 02 09 16.9 -0.9**
baz=292
N58A P **PKPdf 02 09 16.9 -0.9**
baz=292
TRPA Tarpa 122.43 324 ⇑P **PKPdf 02 09 17.5 -0.2**
R58B Mineral 122.49 49 P **PKPdf 02 09 17.0 -1.2**
baz=289
R58B P **PKPdf 02 09 17.0 -1.2**
baz=289
ARR Arges 122.49 321 ⇑P **PKiKP 02 09 18.6 +0.3**
CRVS Cervenica-Dubn 122.64 326 *e*PKIKP **PKiKP 02 09 18.7 +0.3**
SDMD Soldier's Deli 122.76 47 P **PKPdf 02 09 18.4 -0.3**
baz=291
NCB Newcomb 122.77 41 P **PKPdf 02 09 17.9 -0.7**
baz=296
CBN Corbin Frederi 122.79 48 P **PKPdf 02 09 18.4 -0.4**
baz=290
MVL Millersville 122.90 46 **PKPdf 02 09 18.4 -0.6**
DRGR 123.00 323 ⇑P **PKPdf 02 09 18.9 -0.1**
DRGR 123.00 323 ⇑PKIKP **PKPdf 02 09 18.9 -0.1**
U59A Littleton 123.07 51 P **PKPdf 02 09 18.1 -1.2**
baz=288
U59A P **PKPdf 02 09 18.1 -1.2**
baz=288
LCO Las Campanas 123.30 131 PKPdf **PKPdf 02 09 19.3 -1.1**
LCO Las Campanas 123.30 131 PKIKP **PKPdf 02 09 19.3 -1.1**
CNNC Cliffs of the 123.33 52 P **PKPdf 02 09 19.6 -0.3**
baz=288
LSZ Lusaka 123.49 247 **PKPdf 02 09 20.4 -0.5**
LSZ Lusaka 123.49 247 PKIKP **PKPdf 02 09 20.4 -0.5**
LANS Liptovska Anna 123.61 327 *e*PKIKP **PKiKP 02 09 20.7 +0.4**
GZR Gura Zlata 123.64 322 ‖P **PKPdf 02 09 20.0 -0.3**
GZR Gura Zlata 123.64 322 ‖PKIKP **PKPdf 02 09 20.0 -0.3**
TRQA Tornquist 123.67 145 **PKPdf 02 09 19.9 -0.7**
TRQA Tornquist 123.67 145 PKIKP **PKPdf 02 09 19.9 -0.7**
PSZ Piszkesteto 124.05 325 PKP **PKiKP 02 09 22.3 +1.0**
HERR Herculane 124.11 321 ⇑P **PKPdf 02 09 20.9 -0.2**
LBNH Lisbon 124.12 40 P **PKPdf 02 09 21.1 -0.1**
baz=298
PAL Palisades 124.23 44 P **PKPdf 02 09 21.1 -0.3**
baz=294
BZS Buzias 124.24 322 ⇑P **PKPdf 02 09 21.3 0.0**
BZS Buzias 124.24 322 ⇑PKIKP **PKPdf 02 09 21.3 0.0**
MORC Moravsky Berou 124.27 328 ⇑P **PKPdf 02 09 19.7 -1.6**
MORC Moravsky Berou 124.27 328 PKPdf **PKiKP 02 09 21.7 0.0**
MORC Moravsky Berou 124.27 328 PKIKP **PKiKP 02 09 21.7 0.0**
MORC Moravsky Berou 124.27 328 *e*PKP **PKiKP 02 09 21.5 -0.1**
VYHS Vyhne 124.32 326 *e*PKIKP **PKiKP 02 09 21.6 -0.1**
MAUC Maruska 124.36 328 *e*PKPDF **PKiKP 02 09 22.3 +0.5**
L61B Northampton 124.45 42 P **PKiKP 02 09 22.1 -0.1**
baz=296
OSTC Ostas 124.48 330 *e*PKPDF **PKPdf 02 09 21.4 -0.3**
KRLC Kraliky 124.49 329 *e*PKIKP **PKiKP 02 09 21.9 -0.2**
KRLC smax smax
comp=N,2.0nm,0.3s
KRLC Kraliky 124.49 329 *e*PKPDF **PKiKP 02 09 21.9 -0.2**
BLKB Belogradchik 124.54 320 ⇑P **PKPdf 02 09 22.2 +0.1**
CHVC Chvalec 124.54 330 *e*PKPDF **PKiKP 02 09 22.3 +0.2**
DPC Dobruska-Polom 124.55 329 *e*PKIKP **PKiKP 02 09 22.2 0.0**
DPC *e* 02 09 50.1
DPC Dobruska-Polom 124.55 329 *e*PKPDF **PKiKP 02 09 22.2 0.0**
DPC *ex* x 02 09 50.1
MDVR Moldovita 124.59 321 ⇑P **PKPdf 02 09 21.7 -0.4**
ATAH Atahualpa 124.59 103 PKP **PKiKP 02 09 24.4 +0.6**
baz=235,slow=2.7
VTS Vitosha 124.63 318 ⇑P **PKPdf 02 09 22.3 -0.1**
VTS Vitosha 124.63 318 PKPdf **PKPdf 02 09 21.9 -0.5**
VTS Vitosha 124.63 318 ⇑PKIKP **PKPdf 02 09 22.3 -0.1**
JAVC Velka Javorina 124.74 327 *e*PKP **PKiKP 02 09 23.3 +0.7**
VRAC Vranov 125.05 328 ⇑P **PKiKP 02 09 23.3 +0.2**
VRAC Vranov 125.05 328 ⇑PKIKP **PKiKP 02 09 23.3 +0.2**
VRAC Vranov 125.05 328 *e*PKP **PKPdf 02 09 22.7 -0.1**

SMOL	Smolenice	125.08 327	*e*PKIKP	PKiKP	02 09 23.4	+0.2
MODS	Modra-Piesok	125.24 327	*e*PKIKP	PKiKP	02 09 23.9	+0.3
KRUC	Moravsky	125.30 328	*e*PKP	PKPdf	02 09 23.1	-0.2
PVCC	Panska Ves	125.31 330	*e*PKIKP	PKiKP	02 09 23.7	+0.1
PVCC			smax	smax		
	comp=N,6.0nm,0.2s					
PVCC	Panska Ves	125.31 330	*e*PKPDF	PKiKP	02 09 23.7	+0.1
BRG	Berggiesshubel	125.39 331	Amp		02 09 25.4	
	comp=Z,15nm,1.0s					
BRG	Berggiesshubel	125.39 331	*i* PKIKP	PKiKP	02 09 23.9	+0.2
BRG			pmax	pmax		
	comp=Z,15nm,1.0s					
BRG	Berggiesshubel	125.39 331	*i* P	PKiKP	02 09 24.0	+0.2
CLL	Collm	125.55 332	*i* PKIKP	PKPdf	02 09 23.8	+0.1
CLL			*e*		02 09 56.0	
CLL			pmax	pmax		
	comp=Z,16nm,0.9s					
CLL	Collm	125.55 332	*i* PKPdf	PKPdf	02 09 23.8	+0.1
	comp=Z,16nm,0.9s					
CLL			*ex*	x	02 09 28.0	
CLL			*e*pPKPdf	pPKPdf	02 09 56.0	-1.6
CLL			*e*PP	PP	02 11 15.0	-1.0
CLL			*e*PS	PS	02 21 30.0	+11
CLL			*ex*	x	02 22 12.0	
CLL			*e*PPS	PPS	02 22 48.0	
TREC	Trest	125.63 329	*e*PKIKP	PKPdf	02 09 23.9	0.0
TREC	Trest	125.63 329	*e*PKPDF	PKPdf	02 09 23.9	0.0
PRU	Pruhonice	125.67 330	*e*PKIKP	PKPdf	02 09 24.1	+0.2
PRU			*e*		02 10 00.1	
PRU			smax	smax		
	comp=N,1.0nm,0.2s					
PRU	Pruhonice	125.67 330	*e*PKPDF	PKPdf	02 09 24.1	+0.2
PRU			*e*pPKP	pPKPdf	02 10 00.1	+2.2
MORH	Mrgy, Hungar	125.69 324	⇑P	PKiKP	02 09 24.3	-0.2
MORH	Mrgy, Hungar	125.69 324	PKP	PKPdf	02 09 24.1	0.0
MPLH	Magyarpolny	125.79 326	PKP	PKPdf	02 09 24.4	+0.2
RONA	Rosalia, Austr	126.17 327	*e*P	PKiKP	02 09 25.3	-0.2
	comp=N,5.7nm,1.0s,SNR=5.6					
CONA	Conrad Observa	126.27 327	*e*P	PKiKP	02 09 25.6	-0.2
	comp=N,5.4nm,0.8s					
IDI	Anoyia	126.37 310	⇑P	PKiKP	02 09 26.2	-0.1
IDI	Anoyia	126.37 310	PKP	PKPdf	02 09 25.8	0.0
CKRC	Cesky Krumlov	126.53 329	*e*PKPDF	PKPdf	02 09 25.8	+0.1
CKRC			*ex*	x	02 09 57.6	
NKC	Novy Kostel	126.53 331	*e*PKIKP	PKiKP	02 09 26.0	-0.1
NKC	Novy Kostel	126.53 331	*e*PKPDF	PKiKP	02 09 26.0	-0.1
TULM	Tulcn-Chalpat	126.57 94		PKPdf	02 09 27.3	0.0
KHC	Kasperske Hory	126.70 330	*e*PKIKP	PKPdf	02 09 26.2	+0.2
KHC			*e*		02 09 58.0	
KHC	Kasperske Hory	126.70 330	*e*PKPDF	PKPdf	02 09 26.2	+0.2
KHC			*e*pPKP	pPKPdf	02 09 58.0	-2.0
GERES	GERESS Array B	126.83 329	PKP	PKiKP	02 09 26.7	-0.1
	comp=N,6.6nm,0.7s,baz=90,slow=2.0,SNR=39					
GERES			pPKP	pPKPdf	02 09 58.8	-1.5
	comp=N,1.8nm,0.7s,baz=82,slow=2.0,SNR=4.1					
GCUF	Volcan Galeras	127.07 93	*e*P	PKPdf	02 09 28.5	+0.2
MOA	Molln	127.16 328	*e*P	PKPdf	02 09 26.9	-0.1
	comp=N,3.2nm,0.8s					
BBAC	Balboa, Cauca	127.26 92	*e*P	PKPdf	02 09 27.1	-1.2
PDG	Podgorica	127.31 320	⇓P	PKPdf	02 09 27.5	+0.2
PDG	Podgorica	127.31 320	PKPdf	PKPdf	02 09 26.6	-0.7
TIR	Tirane	127.44 318	PKPdf	PKPdf	02 09 27.8	+0.2
TIR	Tirane	127.44 318	PKIKP	PKPdf	02 09 27.8	+0.2
SOKA	Soboth	127.47 326	*i* P	PKPdf	02 09 27.5	-0.1
	comp=N,5.5nm,0.8s					
BIOA	Bad Ischl, Aus	127.59 328	*e*P	PKPdf	02 09 27.4	-0.3
	comp=N,4.7nm,0.9s					
LVC	Limon Verde	127.86 125	PKP	PKPdf	02 09 29.3	-0.1
	comp=N,5.9nm,0.7s,baz=308,slow=2.9,SNR=6.9					
POPC	Popayan, Colom	127.89 92	*e*P	PKPdf	02 09 28.4	-1.2
EKA	Eskdalemuir Ar	128.34 345	PKP	PKPdf	02 09 29.0	+0.1
	comp=N,5.0nm,0.9s,baz=25,slow=4.6,SNR=7.7					
YOTC	Yotoco, Valle	128.36 90	*e*P	PKPdf	02 09 28.8	-1.5
PLMC	San Jos del P	128.49 89	*e*P	PKPdf	02 09 29.1	-1.4
ABTA	Abfaltersbach	128.78 328	*e*P	PKPdf	02 09 29.6	-0.6
	comp=N,8.4nm,1.1s					
WATA	Walderalm	128.89 329	*i* P	PKPdf	02 09 30.2	-0.1
	comp=N,14nm,1.2s,SNR=7.1					
WTTA	Wattenberg	128.91 329	*e*P	PKPdf	02 09 30.6	+0.1
	comp=N,8.9nm,0.8s,SNR=8.3					
STU	Stuttgart	129.08 332	PKPdf	PKiKP	02 09 31.7	+0.5
STU	Stuttgart	129.08 332	PKIKP	PKiKP	02 09 31.7	+0.5
BTNL	Ternell	129.11 335	*d*PKP	PKPdf	02 09 30.6	+0.1
MOTA	Moosalm	129.12 329	*i* P	PKPdf	02 09 30.7	-0.1
	comp=N,14nm,1.2s,SNR=6.8					
MEM	Membach	129.14 335	*d*PKP	PKPdf	02 09 30.6	+0.1
SQTA	Sankt Quirin	129.15 329	*e*P	PKPdf	02 09 31.0	+0.1
	comp=N,11nm,1.2s,SNR=5.4					
RETA	Reutte	129.20 330	*i* P	PKPdf	02 09 31.0	+0.2
	comp=N,3.8nm,1.0s					
HELC	Santa Helena	129.33 87	*e*P	PKPdf	02 09 31.8	-0.6
UREC	San Jos de Ur	129.39 85	*e*P	PKPdf	02 09 30.7	-1.4
GUY2C	Guyana, Caldas	129.43 89	*e*P	PKPdf	02 09 32.5	-0.3
PTLC	Puerto Leguiza	129.46 95	*e*P	PKPdf	02 09 31.6	-0.7
FETA	Feichten	129.53 329	*e*P	PKPdf	02 09 31.9	+0.2
	comp=N,10nm,1.3s,SNR=5.7					
GBN	Guysborough	129.67 33	PKPdf	PKPdf	02 09 31.6	-0.1
BGES	Gesves	129.69 336	*d*PKP	PKiKP	02 09 32.3	0.0
DAVA	Damuels	129.78 330	*i* P	PKPdf	02 09 32.2	+0.1
	comp=N,9.0nm,1.0s					
PRAC	Prado	129.78 91	*e*P	PKPdf	02 09 32.4	-0.5
WLF	Walferdange	129.80 334	*d*PKP	PKPdf	02 09 32.0	+0.1
RCHB	Rochefort	129.81 335	*d*PKP	PKiKP	02 09 32.6	0.0
BMRD	Maredsous	129.89 336	*d*PKP	PKiKP	02 09 33.3	+0.5
CZSB	Cruzeiro do Su	129.93 106	*e*P	PKPdf	02 09 32.8	-0.4
ZARC	Zaragoza, Cauc	130.05 86	*e*P	PKPdf	02 09 31.7	-1.6
MACC	Macarena, Meta	130.65 93	*e*P	PKPdf	02 09 32.4	-2.1
SPBC	San Pablo de B	130.74 88	*e*P	PKPdf	02 09 33.7	-1.0
BRRC	Barranca, Sant	131.17 86	*e*P	PKPdf	02 09 34.6	-0.8
LPAZ	La Paz	131.30 118	PKP	PKPdf	02 09 36.4	0.0
	comp=N,6.9nm,0.6s,baz=316,slow=1.8,SNR=21					
LPAZ			SKPbc	SKPbc	02 12 50.1	+0.1
	comp=N,2.2nm,0.8s,baz=280,slow=3.9,SNR=4.4					
OCAC	Ocana	131.60 85	*e*P	PKPdf	02 09 35.8	-0.7
RUSC	La Rusia	131.74 88	*e*P	PKPdf	02 09 33.6	-3.5
CRJC	Cerrejon, Guaj	132.03 81	*e*P	PKPdf	02 09 36.5	-0.6
ITQB	Itaqui	132.67 141	PKPdf	PKPdf	02 09 38.3	+0.4
SDV	Santo Domingo	134.26 84	PKPdf	PKPdf	02 09 41.0	-0.5
CPUP	Villa Florida	134.46 137	PKP	PKPdf	02 09 41.1	-0.3
	comp=N,4.6nm,0.8s,baz=294,slow=1.2,SNR=15					
CPUP			pPKP	pPKPdf	02 10 14.8	-0.6
	comp=N,3.9nm,0.8s,baz=352,slow=2.9,SNR=4.8					
ALGR	Alto Alegre (B	135.49 143	*e*P	PKPdf	02 09 36.5	-6.8
KEST	Kesra	137.40 318	PKP	PKPdf	02 09 46.7	0.0
	comp=N,5.2nm,0.8s,baz=329,slow=0.1,SNR=8.1					
SIV	San Ignacio	137.51 122	PKhKP	PKPpre	02 09 37.4	
	comp=N,1.3nm,0.7s,baz=251,slow=2.7,SNR=9.6					
SIV			PKP	PKPdf	02 09 47.0	-0.3
	comp=N,3.7nm,0.6s,baz=254,slow=0.8,SNR=11					
HUMP	Col San Antoni	138.09 70	PKPdf	PKPdf	02 09 47.9	-0.3
AQDB	Aquidauana	139.33 132	PKPdf	PKPdf	02 09 49.3	-1.2
TRCB	Terra Rica	140.00 137		PKPdf	02 09 51.3	-0.4
PGAV	Gavieira, Arco	141.79 340	*e*PKP	PKPdf	02 09 55.3	+0.8
MVO	Moncorvo	142.06 338	*e*PKP	PKPdf	02 09 50.8	-4.1
ESDC	Sonseca Array	142.09 334	PKhKP	PKPpre	02 09 50.7	
	comp=N,1.6nm,0.9s,baz=26,slow=3.0,SNR=12					
ESDC			SKPbc	SKPbc	02 13 20.7	-0.5
	comp=N,0.6nm,0.9s,baz=8.6,slow=3.3,SNR=2.2					
POLO	Lamas de Olo	142.15 339	*e*PKP	PKPdf	02 09 51.3	-3.8
PVRL	Vila Real	142.21 339	*e*PKP	PKPdf	02 09 51.2	-4.0
PAB	San Pablo	142.36 334	PKPdf	PKPdf	02 09 55.8	+0.3
PAB	San Pablo	142.36 334	PKIKP	PKPdf	02 09 55.8	+0.3
MACA	Manacapuru-AM	142.66 104	*e*P	PKPdf	02 09 52.7	-4.0
PVIS	Viseu	142.77 339	*e*PKP	PKPdf	02 09 53.2	-3.0
MTE	Manteigas	142.92 338	*e*PKP	PKPdf	02 09 53.3	-3.2
PCBR	Castelo Branco	143.38 338	*e*PKP	PKPbc	02 09 54.8	+0.1
VAO	Valinhos	143.42 144	*e*P	PKPab	02 09 52.9	-1.3
PCAS	Casmilo, Conde	143.57 339	*e*PKP	PKPbc	02 09 55.8	+0.6
PMRV	Marv??o	143.71 337	*e*PKP	PKPbc	02 09 55.8	+0.1
BOAV	Boa Vista	143.90 95	*e*P	PKPab	02 09 56.5	+0.2
TOSP	Speyside	144.12 80	PKPdf	PKPab	02 09 56.9	-0.2
PSBE	So Bento	144.15 339	*e*PKP	PKPdf	02 09 58.0	-0.6
PESTR	Estremoz	144.27 337	*e*PKP	PKPbc	02 09 57.5	+0.1
PESTR	Estremoz	144.27 337	PKPdf	PKPbc	02 09 57.9	+0.5
PESTR	Estremoz	144.27 337	P	PKPbc	02 09 57.5	+0.2
PMTG	Montargil	144.34 338	*e*PKP	PKPbc	02 09 57.4	-0.1
CLDB	Colider	144.44 119	*e*P	PKPab	02 09 57.1	-1.2
PBAR	Barrancos	144.65 336	*e*PKP	PKPbc	02 09 58.9	+0.4
EVO	Evora	144.73 337	*e*PKP	PKPdf	02 09 59.4	-0.2
PMAFR	Mafra	144.82 339	*e*PKP	PKPdf	02 09 59.7	-0.1
PACT	Alcochete	144.83 338	*e*PKP	PKPdf	02 09 59.9	+0.2
PMST	Lisbon--Monsan	144.98 339	*e*PKP	PKPdf	02 10 00.4	+0.4
LIS	Lisbon	144.99 339	*e*PKPdf	PKPdf	02 10 00.2	+0.2
PBEJ	Beja	145.11 337	*e*PKP	PKPdf	02 10 00.6	+0.3
TAF	Taforalt	145.17 327	P	PKPdf	02 10 01.0	+0.4
PNCL	Nicolau / Gran	145.29 338	*e*PKP	PKPab	02 10 01.2	+0.5
MESJ	Messejana	145.41 337	*e*PKPdf	PKPbc	02 10 00.9	0.0
MESJ	Messejana	145.41 337	*e*PKP	PKPab	02 10 01.9	+0.7
PCVE	Castro Verde	145.52 337	*e*PKP	PKPab	02 10 02.0	+0.4
PVAQ	Vaqueiros	145.59 336	*e*PKP	PKPab	02 10 02.2	+0.3
PVAQ	Vaqueiros	145.59 336	PKPbc	PKPab	02 10 02.8	+0.9
PVAQ	Vaqueiros	145.59 336	P	PKPab	02 10 02.6	+0.8
JBK	JBK	145.62 327	P	PKPab	02 10 03.0	+0.6
PALE	Palemas	145.66 329	P	PKPbc	02 10 02.0	+0.1
PTEO	Sao Teotonio	145.86 337	*e*PKP	PKPab	02 10 03.5	+0.6
SMIR	Smir Dam	146.00 331	P	PKPbc	02 10 03.0	+0.2
MORF	Marmelete	146.04 337	*e*PKPdf	PKPdf	02 10 02.1	+0.1
MORF	Marmelete	146.04 337	*e*PKP	PKPab	02 10 04.1	+0.5
AKLM	AKL	146.17 328	P	PKPbc	02 10 03.0	-0.5
PFVI	Vila Bisbo	146.26 337	*e*PKP	PKPab	02 10 04.6	+0.1
IPMB	Ipameri, GO	146.30 136	*e*P	PKPdf	02 10 02.4	-0.5
CHEFC	Chefchaouen	146.44 331	P	PKPbc	02 10 04.0	-0.3
FIGM	Figuig	146.47 323	P	PKPbc	02 10 04.0	-0.5
DUB01	Friburgo-RJ	146.69 149	*e*P	PKPbc	02 10 05.1	-0.2
TAM	Tamanrasset	146.80 302		PKPbc	02 10 05.1	-0.7
TAM	Tamanrasset	146.80 302	PKP2	PKPbc	02 10 05.1	-0.7
PMNB	Patos De Minas	147.09 139	*e*P	PKPbc	02 10 05.5	-1.1
CAM01	Campos-RJ	147.27 150	*e*P	PKPbc	02 10 06.6	-0.3
LCRM	LCR	147.33 329	P	PKPbc	02 10 06.0	-0.9
SNDB	Serra Nova Dou	147.70 124	*e*P	PKPdf	02 10 05.1	-0.2
BDFB	Brasilia	148.02 134	PKP	PKPdf	02 10 05.8	-0.2
	comp=N,31nm,0.7s,baz=221,slow=1.8,SNR=35					
BDFB			PKPbc	PKPbc	02 10 08.4	-0.7
	comp=N,31nm,0.7s,baz=220,slow=1.7,SNR=47					
BDFB			pPKPbc	pPKPbc	02 10 41.6	-1.1
	comp=N,16nm,0.7s,baz=5.0,slow=3.6,SNR=3.4					
BDFB	Brasilia	148.02 134		PKPdf	02 10 06.3	+0.4
BDFB	Brasilia	148.02 134	*e*P	PKPdf	02 10 06.2	+0.2
MALB	Monte Alegre	149.19 105	*e*P	PKPbc	02 10 11.7	-0.4
RIB01	Linhares ES	150.01 149	*e*P	PKPbc	02 10 13.9	-0.1
JANB	Januaria	151.00 138	*e*P	PKPdf	02 10 09.6	-1.0
NAN01	Guarapari, ES	151.37 148	*e*P	PKPbc	02 10 16.5	-0.7
MDP	Montagnes des	152.00 91	PKPbc	PKPbc	02 10 18.6	-0.1
	comp=N,19nm,0.5s,baz=274,slow=3.3,SNR=28					
PMPST	Porto Santo, M	152.42 345	*e*PKP	PKiKP	02 10 20.2	+0.8
SMTB	Santa Maria do	152.44 123	*e*P	PKPbc	02 10 19.3	-0.4
GUA01	Guaratinga, BA	152.58 147	*e*P	PKPbc	02 10 19.3	-0.6
PMAR	Madeira	152.91 346	*e*PKP	PKiKP	02 10 21.2	+0.5
TOA0	Torodi Ar. Sit	153.33 286	PKPdf	PKPdf	02 10 12.6	-1.4
TOA0				PKPbc	02 10 20.3	-1.3
TORD	Torodi Ar. Bea	153.33 286	PKP	PKPdf	02 10 13.1	-0.9
	comp=N,2.3nm,0.7s,baz=6.9,slow=1.4,SNR=15					
TORD			PKPbc	PKPbc	02 10 20.7	-1.0
	comp=N,22nm,0.8s,baz=66,slow=3.7,SNR=5.8					
CMC01	Camacan, BA	153.73 146	*e*P	PKPab	02 10 35.4	-0.2
KOWA	Kowa	158.32 293	PKPdf	PKPdf	02 10 18.7	-1.9
NBAN	Anadia - AL	160.17 144	*e*P	PKPab	02 11 03.6	+0.2
DBIC	Dimbokro	160.46 272	PKPab	PKPab	02 11 04.7	-0.2
	comp=N,6.5nm,0.8s,baz=46,slow=4.2,SNR=4.5					

IDC 02 01:51:48.6±4.0, 19°.61N×144°.17E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=100.0km s-min=82.7km az=45.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	22.74	325	P	P		01 56 52.5	+0.2
	0.7nm,0.6s,baz=150,slow=9.2,SNR=5.2							
	0.7nm,0.6s							
KLR	Kul'dur	31.19	344	P	P		01 58 09.2	-0.2
	1.6nm,0.6s,baz=164,slow=7.4,SNR=4.1							
	1.6nm,0.6s							
MKAR	Makanchi Array	56.79	314	P	P		02 01 34.8	+0.2
	0.3nm,0.5s,baz=93,slow=7.6,SNR=3.1							
	0.3nm,0.5s							
KURBB	Kurchatov Arra	59.67	318	P	P		02 01 54.6	-0.1
	0.9nm,0.3s,baz=97,slow=7.6,SNR=6.8							
	0.9nm,0.3s							
BVAR	Borovoye Array	64.85	320	P	P		02 02 29.4	0.0
	0.9nm,0.4s,baz=89,slow=7.5,SNR=9.5							
	0.9nm,0.4s							
ARCES	ARCESS Array B	81.18	342	P	P		02 04 06.5	+0.6
	4.0nm,0.9s,baz=73,slow=9.0,SNR=4.0							
	4.0nm,0.9s							
FINES	FINESS Array B	85.45	335	P	P		02 04 27.5	-0.5
	2.7nm,1.0s,baz=64,slow=6.3,SNR=5.6							
	2.7nm,1.0s							

IDC ***02*** *02:02:19.6±1.9, 36°.91S×178°.87E, h0km, mb4.3/4, mbtmp4.3/4, MS3.1/2, Error ellipse: s-maj=41.1km s-min=31.0km az=56.0*

NEIC ***02*** *02:02:19.8±1.6, 37°.21S±0°.09×179°.13E±0°.08, h10km±1km, mb4.3/10, ML4.1(WEL), Error ellipse: s-maj=16.2km s-min=8.5km az=151.0*

NOU ***02*** *02:02:22.0, 37°.54S×179°.17E, h144km, MLv4.8/8, Off E. Coast of N. Island, N.Z.*

WEL ***02*** *02:02:24.7±0.7, 37°.5S±4°×17°.9E±°, h20km, M4.1/52, ML4.3/51, MLv4.1/52, Error ellipse: s-maj=0.0km s-min=0.0km az=80.6*

ISC 02 02:02:20.9±1.9, 37°.29S±0°.05×179°.11E±0°.07, h17km, ⍵9km, n168, σ1.9±52/174, mb4.2/8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.69	247		Pn		02 02 36.3	+0.5
MXZ				Sg	Sb		02 02 43.9	+0.1
MXZ	Matakaoa Point	0.69	247	P	Pn		02 02 36.4	+0.5
MXZ				S	Sb		02 02 43.9	+0.1
WMGZ	Waiomatatini S	0.76	226	P	Pn		02 02 39.2	+2.3
WMGZ				S	Sn		02 02 49.4	+1.5
PKGZ	Pakihiroa	1.01	234	P	Pn		02 02 42.1	+1.7
PKGZ				S	Sn		02 02 54.8	+0.6
PUZ	Puketiti	1.03	221	P	Pn		02 02 42.5	+2.0
HAZ	Te Kaha	1.15	246	P	Pg		02 02 43.2	+0.2
HAZ				S	Sg		02 02 57.8	-0.3
RUGZ	Raukumara Rang	1.32	239	P	Pg		02 02 46.5	+0.3
RUGZ				S	Sg		02 03 03.4	-0.1
CNGZ	Carnagh Statio	1.39	211	P	Pg		02 02 48.3	+0.8
TKGZ	Te Karaka	1.52	221	P	Pb		02 02 48.8	+0.3
WIZ	White Island	1.54	261	P	Pb		02 02 48.5	-0.5
WIZ				S	Sn		02 03 06.2	-1.1
MWZ	Matawai	1.62	230	P	Pb		02 02 50.3	-0.2
MWZ				S	Sn		02 03 08.7	-0.7
RIGZ	Rimuhau	1.77	217	P	Pn		02 02 52.2	+1.5
WHRZ	Whale Island	1.78	251	P	Pb		02 02 52.4	-0.7
RAGZ	Rawiri	1.80	228	P	Pn		02 02 52.9	+1.7
URZ	Urewera	1.85	238	Pn	Pb		02 02 53.5	-0.7
	231nm,0.3s,baz=328,slow=2.1,SNR=1222							
URZ				Sn	Sn		02 03 14.3	-0.5
	208nm,0.3s,baz=329,slow=21,SNR=8.8							
URZ				LR	LR		02 03 49.6	
	comp=Z,390nm,20.4s,baz=134,slow=46							
URZ	Urewera	1.85	238		Pn		02 02 53.0	+1.1
URZ	Urewera	1.85	238	P	Pn		02 02 53.2	+1.3
URZ				S	Sn		02 03 14.4	-0.5
URZ	Urewera	1.85	238	P	Pb		02 02 53.6	-0.7
SNGZ	Shannon Statio	2.04	223	P	Pn		02 02 55.7	+1.2
SNGZ				S	Sn		02 03 19.6	+0.1
EDRZ	Edgecumbe	2.04	246	P	Pn		02 02 56.0	+1.4
MARZ	Manawahe	2.05	250	P	Pn		02 02 55.6	+0.9
KNZ	Kokohu	2.06	213	P	Pn		02 02 55.4	+0.6
MHGZ	Mahia Peninsul	2.08	207	P	Pn		02 02 56.5	+1.4
MHGZ				S	Sn		02 03 21.6	+1.0
OPRZ	Ohinepanea	2.10	254	P	Pn		02 02 55.8	+0.5
RTZ	Ruatahuna	2.14	231	P	Pn		02 02 57.3	+1.4
RTZ				S	Sn		02 03 22.0	0.0
MUGZ	Murupara	2.19	237	P	Pn		02 02 57.6	+1.0
MUGZ				S	Sn		02 03 23.5	+0.1
MKRZ	Makatiti	2.26	247	P	Pn		02 02 59.2	+1.7
RAHZ	Arahi	2.27	224	P	Pn		02 02 59.0	+1.3
LIRZ	Lichensteins R	2.27	251	P	Pn		02 02 59.0	+1.3
MYRZ	Mayor Island	2.28	269	P	Pn		02 02 58.9	+1.0
MYRZ				S	Sn		02 03 22.6	-3.0
RRRZ	Republican Roa	2.30	242	P	Pn		02 02 59.1	+1.1
TGRZ	Tauranga	2.30	258	P	Pn		02 02 58.6	+0.6
WHHZ	Waihua	2.31	219	P	Pn		02 02 59.4	+1.2
OMRZ	Omania	2.31	249	P	Pn		02 02 59.7	+1.4
MTHZ	Maungataniwha	2.37	228	P	Pn		02 03 00.5	+1.5
HLRZ	Highlands Stat	2.38	245	P	Pn		02 03 00.8	+1.6
KARZ	Kaharoa	2.38	251	P	Pn		02 03 00.2	+1.0
NGRZ	Ngongotaha	2.45	250	P	Pn		02 03 01.9	+1.7
PRRZ	Plateau Road	2.46	240	P	Pn		02 03 01.2	+1.0
UTU	Utuhina	2.47	248	P	Pn		02 03 02.8	+2.4
HSRZ	Hossack Road	2.48	245	P	Pn		02 03 02.5	+1.9
HRRZ	Handcock Road	2.49	243	P	Pn		02 03 02.0	+1.3
ALRZ	Allen Road	2.52	239	P	Pn		02 03 02.1	+0.9
NMHZ	Naumai	2.55	224	P	Pn		02 03 03.1	+1.4
ARHZ	Aropaoanui	2.57	220	P	Pn		02 03 02.9	+1.1
KMRZ	Kaimai	2.57	257	P	Pn		02 03 02.4	+0.6
GRRZ	Galatos Road	2.60	245	P	Pn		02 03 03.6	+1.5
MRHZ	Matea Rd	2.62	233	P	Pn		02 03 03.7	+1.2
WPRZ	Whakapapatarin	2.63	241	P	Pn		02 03 03.9	+1.3
KUZ	Kuaotunu	2.76	280	P	Pn		02 03 04.3	-0.1
BKZ	Black Stump Fm	2.78	227		Pn		02 03 05.5	+0.8
BKZ	Black Stump Fm	2.78	227	P	Pn		02 03 05.6	+0.8
BKZ	Black Stump Fm	2.78	227	P	Pn		02 03 05.7	+1.0
CKHZ	Cape Kidnapper	2.85	213	P	Pn		02 03 05.8	+0.2
KUTZ	Kaahu Road	2.86	244	P	Pn		02 03 07.1	+1.3
HATZ	Hinemaiaia	2.86	235	P	Pn		02 03 07.0	+1.1
MCHZ	McNeill Hill	2.86	221	P	Pn		02 03 06.6	+0.8
TOZ	Tahuroa Road	2.90	260	P	Pn		02 03 06.8	+0.6
KWHZ	Kaweka Forest	3.00	224	P	Pn		02 03 08.1	+0.4
TLZ	Tolley Road	3.01	249	P	Pn		02 03 08.8	+1.0
WATZ	Wairara	3.02	241	P	Pn		02 03 09.4	+1.5
KAHZ	Kahuranaki	3.05	214	P	Pn		02 03 08.5	+0.2
RITZ	Rihia Road	3.06	236	P	Pn		02 03 09.6	+1.1
RATZ	Rangitukua	3.06	238	P	Pn		02 03 10.0	+1.4
GRZ	Great Barrier	3.11	288	P	Pn		02 03 09.8	+0.7
MKAZ	Moumakai	3.15	272	P	Pn		02 03 10.4	+0.7
KATZ	Kakaramea	3.17	237	P	Pn		02 03 11.5	+1.3
KRHZ	Kereru	3.18	222	P	Pn		02 03 10.0	-0.2
WIAZ	Waiheke Island	3.22	278	P	Pn		02 03 11.3	+0.7
TMVZ	Te Maari	3.24	235	P	Pn		02 03 11.6	+0.6
BHHZ	Black Hill Sta	3.24	227	P	Pn		02 03 11.6	+0.6
ETVZ	East Tongariro	3.25	234	P	Pn		02 03 11.7	+0.5
NTVZ	North Tongarir	3.25	235	P	Pn		02 03 11.8	+0.6
PXZ	Pawanui	3.25	212	P	Pn		02 03 10.5	-0.6
KRVZ	Karewarewa	3.27	236	P	Pn		02 03 12.2	+0.7
NNVZ	North Ngauruho	3.31	235	P	Pn		02 03 12.9	+0.9
WTVZ	West Tongariro	3.31	236	P	Pn		02 03 13.0	+0.9
SNVZ	South Ngauruho	3.32	234	P	Pn		02 03 12.7	+0.5
NGZ	Ngauruhoe	3.34	235	P	Pn		02 03 13.1	+0.6
ETAZ	East Tamaki Re	3.36	275	P	Pn		02 03 13.6	+1.0
MOVZ	Moawhango	3.38	230	P	Pn		02 03 13.0	+0.1
TWVZ	Taurewa	3.39	237	P	Pn		02 03 14.1	+0.9
WHVZ	Whangaehu Hut	3.41	233	P	Pn		02 03 14.0	+0.5
MBAZ	Motutapu North	3.41	278	P	Pn		02 03 14.4	+1.1
FWVZ	Far West T-bar	3.41	234	P	Pn		02 03

ROM 02 02:06:44.2±0.1, 42°.660N±0°.003×13°.218E±0°.004, h12km, ML1.2/6, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.1km az=195.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**7**	P	Pg	02 06 47.1	+0.4
T1202				S	Sg	02 06 48.7	+0.1
T1202				AML	AML		
	comp=E,285μm,0.4s						
T1202				AML	AML		
	comp=N,636μm,0.2s						
LNSS	**Leonessa**	**0.14**	**247**	P	Pg	02 06 48.2	+0.4
LNSS				S	Sg	02 06 51.0	+0.7
LNSS				AML	AML		
	comp=E,72μm,0.2s						
LNSS				AML	AML		
	comp=N,75μm,0.5s						
LNSS				AML	AML		
	comp=E,72μm,0.2s						
LNSS				AML	AML		
	comp=N,75μm,0.5s						
RM33	**Pellescritta (**	**0.15**	**181**	P	Pg	02 06 48.4	+0.5
RM33				S	Sg	02 06 51.2	+0.7
RM33				AML	AML		
	comp=E,95μm,0.3s						
RM33				AML	AML		
	comp=N,66μm,1.0s						
RM33				AML	AML		
	comp=E,95μm,0.3s						
RM33				AML	AML		
	comp=N,66μm,1.0s						
T1242	**Castelluccio d**	**0.17**	**357**	P	Pg	02 06 48.7	+0.5
T1243	**Rocca Santa Ma**	**0.17**	**78**	P	Pg	02 06 48.7	+0.4
T1243				S	Sg	02 06 51.6	+0.5
NRCA	**Norcia**	**0.19**	**336**	P	Pg	02 06 48.9	+0.4
NRCA				S	Sg	02 06 52.1	+0.6
NRCA				AML	AML		
	comp=E,53μm,0.1s						
NRCA				AML	AML		
	comp=N,58μm,1.2s						
T1217	**Poggiodomo (PG**	**0.22**	**284**	P	Pg	02 06 49.3	+0.4
T1217				S	Sg	02 06 53.1	+0.8
T1241	**Roccafluvione,**	**0.25**	**39**	P	Pg	02 06 50.0	+0.4
MMO1	**Montemonaco**	**0.25**	**19**	P	Pg	02 06 50.1	+0.5
T1216	**Preci, Frazion**	**0.27**	**328**	⇓P	Pb	02 06 50.8	-0.3
TERO	**Teramo**	**0.29**	**97**	P	Pg	02 06 50.4	+0.3
T1215	**Vallo di Nera,**	**0.29**	**299**	P	Pg	02 06 50.5	+0.2
T1215				AML	AML		
	comp=E,50μm,1.6s						
T1215				AML	AML		
	comp=N,50μm,1.6s						
AM05	**Amandola Campo**	**0.33**	**17**	⇑P	Pg	02 06 51.2	+0.2
AM05				AML	AML		
	comp=E,160μm,0.1s						
AM05				AML	AML		
	comp=N,81μm,0.8s						
AM05				AML	AML		
	comp=E,656μm,0.1s						
AM05				AML	AML		
	comp=N,72μm,0.1s						
AM05				AML	AML		
	comp=E,161μm,0.1s						
AM05				AML	AML		
	comp=E,655μm,0.1s						
AM05				AML	AML		
	comp=N,72μm,0.1s						
AM05				AML	AML		
	comp=N,119μm,0.5s						
CSP1	**Cessapalombo**	**0.43**	**359**	⇓P	Pb	02 06 54.3	+0.5
APEC	**Apecchio**	**1.07**	**327**	S	Sn	02 07 21.0	+1.1

ROM 02 02:14:59.2±0.1, 42°.798N±0°.003×13°.238E±0°.004, h7km, ML1.0/2, Error ellipse: s-maj=0.3km s-min=0.1km az=208.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.04**	**322**	P	Pg	02 15 00.8	0.0
T1242				S	Sg	02 15 01.8	-0.2
NRCA	**Norcia**	**0.10**	**291**	P	Pg	02 15 01.9	+0.3
NRCA				S	Sg	02 15 03.9	+0.7
NRCA				AML	AML		
	comp=E,162μm,1.0s						
NRCA				AML	AML		
	comp=N,200μm,0.1s						
MMO1	**Montemonaco**	**0.12**	**33**	P	Pg	02 15 02.2	+0.3
MMO1				S	Sg	02 15 04.5	+0.7
T1204	**Amatrice, Fraz**	**0.14**	**155**	P	Pg	02 15 02.3	+0.1
T1204				S	Sg	02 15 05.3	+1.1
T1241	**Roccafluvione,**	**0.15**	**68**	P	Pg	02 15 02.9	+0.5
T1241				S	Sg	02 15 05.9	+1.3
T1243	**Rocca Santa Ma**	**0.18**	**123**	P	Pg	02 15 03.4	+0.4
T1243				S	Sg	02 15 06.6	+1.1
T1216	**Preci, Frazion**	**0.19**	**300**	P	Pg	02 15 03.5	+0.6
T1216				S	Sg	02 15 06.8	+1.3
T1216				AML	AML		
	comp=E,70μm,1.4s						
T1216				AML	AML		
	comp=N,46μm,1.6s						
LNSS	**Leonessa**	**0.24**	**217**	P	Pg	02 15 04.7	+0.6
LNSS				S	Sg	02 15 09.0	+1.7

ROM 02 02:15:14.8±0.1, 42°.898N±0°.003×13°.250E±0°.004, h10km, ML1.1/4, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**289**	P	Pg	02 15 17.2	+0.2
MC2				S	Sg	02 15 18.6	0.0
MC2	**Monte Cornacci**	**0.05**	**289**	P	Pg	02 15 17.2	+0.2
MC2				S	Sg	02 15 18.5	-0.2
MMO1	**Montemonaco**	**0.06**	**88**	P	Pg	02 15 17.2	+0.3
MMO1				S	Sg	02 15 18.5	0.0
T1242	**Castelluccio d**	**0.08**	**206**	P	Pg	02 15 17.6	+0.4
T1242				S	Sg	02 15 19.3	+0.3
AM05	**Amandola Campo**	**0.11**	**43**	P	Pg	02 15 18.1	+0.5
AM05				S	Sg	02 15 20.2	+0.7
AM05	**Amandola Campo**	**0.11**	**43**	P	Pg	02 15 18.1	+0.6
AM05				S	Sg	02 15 20.2	+0.7
NRCA	**Norcia**	**0.12**	**237**	P	Pg	02 15 18.3	+0.6
NRCA				S	Sg	02 15 20.5	+0.7
T1241	**Roccafluvione,**	**0.14**	**107**	P	Pg	02 15 18.7	+0.7
T1216	**Preci, Frazion**	**0.17**	**268**	P	Pg	02 15 19.2	+0.7
T1216				S	Sg	02 15 22.2	+1.1
T1216				AML	AML		
	comp=E,80μm,1.4s						
T1216				AML	AML		
	comp=N,70μm,1.6s						
FDMO	**Fiordimonte**	**0.18**	**319**	P	Pg	02 15 19.2	+0.5
FDMO				S	Sg	02 15 22.5	+1.1
FDMO				AML	AML		
	comp=N,86μm,0.2s						
FDMO				AML	AML		
	comp=E,63μm,0.2s						
T1202	**Accumoli, Fraz**	**0.20**	**185**	P	Pg	02 15 16.1	-2.8
T1202				S	Sg	02 15 17.1	-4.7
CSP1	**Cessapalombo**	**0.20**	**350**	P	Pg	02 15 19.7	+0.7
CSP1				S	Sg	02 15 23.0	+1.1
CSP1				AML	AML		
	comp=N,72μm,1.6s						
CSP1				AML	AML		
	comp=E,95μm,1.6s						
T1243	**Rocca Santa Ma**	**0.25**	**144**	P	Pg	02 15 20.4	+0.5
T1243				S	Sg	02 15 24.8	+1.5
TERO	**Teramo**	**0.38**	**136**	S	Sg	02 15 24.0	-3.3
ZCCA	**Zocca**	**2.20**	**312**	⇑P	Pg	02 15 57.2	+0.3
BOSI	**Bolzano**	**3.85**	**340**	⇓P	Pb	02 16 22.3	-0.5

PRU 02 02:15:22.7±0.0, 51°.50N×16°.16E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**173**	*e*Pg	Pg	02 15 35.5	+0.1
KSP				*e*Sg	Sg	02 15 44.4	+0.4
CHVC	**Chvalec**	**0.92**	**184**	*e*PG	Pg	02 15 40.2	0.0
CHVC				*e*SG	Sg	02 15 52.5	+0.4
OSTC	**Ostas**	**0.94**	**178**	*e*PG	Pg	02 15 41.0	+0.2
OSTC				*e*SG	Sg	02 15 53.2	+0.2
UPC	**Upice**	**1.00**	**185**	*e*PG	Pg	02 15 42.1	+0.3
UPC				*e*SG	Sg	02 15 54.9	+0.2
	comp=Z,2.8nm,0.6s						
DPC	**Dobruska-Polom**	**1.16**	**175**	*e*PG	Pg	02 15 43.9	-0.9
DPC				*e*SG	Sg	02 15 59.4	-0.4
PVCC	**Panska Ves**	**1.40**	**227**	*e*PG	Pn	02 15 49.1	-0.4
PVCC				*e*SG	Sg	02 16 07.4	-0.2
	comp=Z,5.6nm,0.2s						
PVCC	**Panska Ves**	**1.40**	**227**	*e*	Sg	02 16 07.4	-0.2
KRLC	**Kraliky**	**1.48**	**164**	*e*PG	Pn	02 15 49.7	-0.9
KRLC				*e*SG	Sg	02 16 09.2	-1.0
	comp=Z,1.6nm,0.3s						
KRLC	**Kraliky**	**1.48**	**164**	*e*	Sg	02 16 09.2	-1.0
BRG	**Berggiesshubel**	**1.53**	**247**	Pg	Pn	02 15 51.6	+0.3
BRG				Sg	Sg	02 16 11.7	-0.1
BRG				Amp		02 16 12.2	
	comp=Z,2.0nm,0.4s						
PRU	**Pruhonice**	**1.83**	**215**	*e*SG	Sg	02 16 21.1	-0.3
	comp=Z,1.0nm,0.2s						
PRU	**Pruhonice**	**1.83**	**215**	*e*	Sg	02 16 21.1	-0.3
KHC	**Kasperske Hory**	**2.89**	**216**	*e*SG	Sg	02 16 54.3	-1.3
CKRC	**Cesky Krumlov**	**2.94**	**205**	*e*SG	Sg	02 16 55.6	-1.3

*IDC **02** 02:22:57.5±0.8, 7°.25N×78°.18W, h0km, mb3.5/6, mbtmp3.8/8, ML3.7/2, MS3.2/6, Error ellipse: s-maj=28.2km s-min=20.5km az=34.0*
*UPA **02** 02:22:58.6±0.9, 7°.30N×78°.23W, h10km±4km, MW4.3*
*RSNC **02** 02:22:59.3±1.3, 7°.33N×78°.22W, h12km±6km, ML3.5, Mw4.1*
*NEIC **02** 02:23:00.2±2.1, 7°.51N±0°.08×78°.16W±0°.08, h10km±2km, mb4.3/6, Mwr4.1(RSNC), Error ellipse: s-maj=16.0km s-min=10.8km az=227.0*

ISC 02 02:22:59.3±1.2, 7°.34N±0°.03×78°.20W±0°.03, h14km±8km, n87, σ1°.974/125, mb3.8/10, MS3.2/4, 4D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.43**	**117**	⇓*i*P	**Pg**	**02 23 07.5**	**-0.4**
PTAC				*e*S	**Sg**	**02 23 13.3**	**-0.5**
PTAC	**Punta Ardita,**	**0.43**	**117**	⇓*i*P	**Pg**	**02 23 07.6**	**-0.4**
PTAC				*e*S	**Sb**	**02 23 14.0**	**-1.0**
UPD2	**Meteti**	**1.21**	**8**	*e*P	**Pn**	**02 23 20.4**	**-1.5**
UPD2				*e*S	**Sb**	**02 23 37.5**	**-0.1**
TOTI	**Torti**	**1.58**	**356**	*e*P	**Pn**	**02 23 26.4**	**-0.6**
TOTI				*e*S	**Sn**	**02 23 47.3**	**0.0**
PEDA3	**Pedasi**	**1.82**	**276**	*e*P	**Pn**	**02 23 30.9**	**+0.6**
PEDA3				*e*S	**Sn**	**02 23 51.6**	**-1.7**
CNTA3	**Canitas, Panam**	**1.99**	**340**	*e*P	**Pn**	**02 23 32.2**	**-0.4**
CNTA3				*e*S	**Sn**	**02 23 57.6**	**+0.3**
DBBC	**Dabeiba**	**2.00**	**99**	*e*P	**Pn**	**02 23 33.0**	**+0.2**
DBBC				*e*S	**Sn**	**02 23 54.0**	**-3.6**
CHPO	**Chepo, Panama**	**2.03**	**333**	*e*P	**Pn**	**02 23 31.9**	**-1.2**
CHPO				*e*S	**Sn**	**02 23 58.3**	**-0.1**
UPA	**Univ. de Panam**	**2.10**	**321**	*e*P	**Pn**	**02 23 32.4**	**-1.7**
UPA				*e*S	**Sn**	**02 23 59.3**	**-0.7**
UPA				*i*		02 24 02.4	
	comp=Z,258nm,0.6s						
UPA	**Univ. de Panam**	**2.10**	**321**	*e*P	**Pn**	**02 23 33.9**	**-0.2**
UPA				*e*S	**Sn**	**02 23 59.8**	**-0.2**
AZU	**Azuero**	**2.11**	**282**	*e*P	**Pn**	**02 23 33.4**	**-0.9**
AZU				*e*S	**Sn**	**02 23 56.9**	**-3.4**
AZU	**Azuero**	**2.11**	**282**	*e*P	**Pn**	**02 23 33.6**	**-0.6**
AZU				*e*S	**Sn**	**02 23 58.8**	**-1.5**
CHOR3	**La Chorrera**	**2.19**	**315**	*e*P	**Pn**	**02 23 34.5**	**-0.9**
CHOR3				*e*S	**Sn**	**02 24 02.0**	**-0.3**
VTON	**El Valle, Cocl**	**2.28**	**304**	*e*P	**Pn**	**02 23 35.8**	**-0.8**
VTON				*e*S	**Sn**	**02 24 04.3**	**-0.3**
CHIT3	**Chitre**	**2.29**	**286**	*e*P	**Pn**	**02 23 36.2**	**-0.4**
CHIT3				*e*S	**Sn**	**02 24 03.1**	**-1.5**
LCBC	**Los crdobas,**	**2.35**	**50**	*e*P	**Pn**	**02 23 39.0**	**+1.4**
LCBC				*e*S	**Sb**	**02 24 09.3**	**-1.2**
LCBC				*i*		02 24 22.3	
	comp=Z,327nm,0.5s						
LCBC	**Los crdobas,**	**2.35**	**50**	*e*P	**Pn**	**02 23 38.7**	**+1.1**
LCBC				*e*S	**Sn**	**02 24 07.4**	**+1.2**
PNME	**Penonome**	**2.40**	**298**	*e*P	**Pn**	**02 23 37.3**	**-0.9**
PNME				*e*S	**Sn**	**02 24 05.5**	**-1.9**
BCIP	**Isla Barro Col**	**2.43**	**318**	Pn	**Pn**	**02 23 37.0**	**-1.7**
BCIP	**Isla Barro Col**	**2.43**	**318**	*e*P	**Pn**	**02 23 37.0**	**-1.7**
BCIP				*e*S	**Sb**	**02 24 11.1**	**-1.7**
BCIP				*i*		02 24 25.6	
	comp=Z,318nm,0.4s						
BCIP	**Isla Barro Col**	**2.43**	**318**	⇓*e*P	**Pn**	**02 23 37.3**	**-1.4**
BCIP				*e*S	**Sn**	**02 24 08.2**	**-0.1**
SABA3	**Sabanitas, Col**	**2.55**	**322**	*e*P	**Pn**	**02 23 40.0**	**-0.3**
CBOC	**Ciudad Bolivar**	**2.62**	**124**	*e*P	**Pn**	**02 23 40.3**	**-1.2**
CBOC				*e*S	**Sn**	**02 24 12.1**	**-1.1**
CBOC				*i*		02 24 29.6	
	comp=Z,237nm,0.6s						
CACAO	**El Cacao, Vera**	**2.64**	**270**	*e*P	**Pn**	**02 23 40.2**	**-1.3**
CACAO				*e*S	**Sn**	**02 24 08.2**	**-5.3**
CACAO				*i*		02 24 13.0	
	comp=Z,346nm,0.6s						
CACAO	**El Cacao, Vera**	**2.64**	**270**	*e*P	**Pn**	**02 23 40.3**	**-1.3**
CACAO				*e*S	**Sn**	**02 24 12.2**	**-1.3**
UREC	**San Jos de Ur**	**2.67**	**81**	*e*P	**Pn**	**02 23 42.1**	**+0.2**
UREC				*e*S	**Sn**	**02 24 13.5**	**-0.7**
UREC				*i*		02 24 25.5	
	comp=Z,186nm,0.7s						
UREC	**San Jos de Ur**	**2.67**	**81**	*e*P	**Pn**	**02 23 42.2**	**+0.2**
UREC				⇓*e*S	**Sn**	**02 24 14.7**	**+0.5**
HELC	**Santa Helena**	**2.88**	**113**	*e*P	**Pn**	**02 23 45.3**	**+0.1**
HELC				*e*S	**Sb**	**02 24 23.1**	**-3.0**
HELC				*i*		02 24 27.8	
	comp=Z,113nm,0.4s						
PLMC	**San Jos del P**	**3.08**	**142**	*e*P	**Pn**	**02 23 45.7**	**-2.0**
PLMC				*i*		02 24 43.4	
	comp=Z,89nm,0.6s						
ZARC	**Zaragoza, Cauc**	**3.31**	**87**	*e*P	**Pn**	**02 23 51.4**	**+0.6**
ZARC				*e*S	**Sn**	**02 24 27.3**	**-2.8**
ZARC				*i*		02 24 39.4	
	comp=Z,274nm,0.5s						
MALC	**Bahia Malaga**	**3.42**	**165**	*e*P	**Pn**	**02 23 51.5**	**-0.7**
MALC				*e*S	**Sn**	**02 24 32.0**	**-0.6**
GUY2C	**Guyana, Caldas**	**3.51**	**127**	*e*P	**Pn**	**02 23 54.8**	**+0.8**
GUY2C				*e*S	**Sb**	**02 24 40.5**	**-3.9**
GUY2C				*i*		02 24 47.0	
	comp=Z,138nm,0.6s						
NORC	**Norcasia**	**3.75**	**118**	*e*P	**Pn**	**02 23 58.3**	**+1.5**
NORC				*i*		02 24 55.1	
	comp=Z,53nm,0.5s						
PTBC	**PUERTO BERRIO,**	**3.80**	**102**	*e*P	**Pn**	**02 23 57.8**	**+0.3**
PTBC				*e*S	**Sn**	**02 24 39.4**	**-2.6**
PTBC				*i*		02 24 54.5	
	comp=Z,112nm,0.6s						
YOTC	**Yotoco, Valle**	**3.81**	**151**	*e*P	**Pn**	**02 23 56.8**	**-0.9**
YOTC				*e*S	**Sb**	**02 24 52.0**	**-0.6**
SJCC	**San Jacinto, C**	**3.92**	**49**	*e*P	**Pn**	**02 23 58.6**	**-0.6**
SJCC				*e*S	**Sn**	**02 24 41.7**	**-3.2**
SJCC				*i*		02 24 51.4	
	comp=Z,52nm,0.5s						
ANIL	**Santa Ana**	**3.97**	**135**	*e*P	**Pn**	**02 24 00.9**	**+0.8**
ANIL				*i*		02 25 05.0	
	comp=Z,85nm,0.4s						
SPBC	**San Pablo de B**	**4.43**	**112**	*e*P	**Pn**	**02 24 07.4**	**+1.2**
SPBC				*e*S	**Sb**	**02 25 09.3**	**-1.0**
SPBC				*i*		02 25 26.2	
	comp=Z,29nm,0.6s						
BRRC	**Barranca, Sant**	**4.45**	**93**	*e*P	**Pn**	**02 24 07.5**	**+1.0**
BRRC				*e*S	**Sn**	**02 24 57.2**	**-1.0**
BRRC				*i*		02 25 07.1	
	comp=Z,43nm,0.5s						
ROSC	**El Rosal**	**4.59**	**123**	*e*P	**Pn**	**02 24 10.7**	**+2.1**
ROSC				*e*S	**Sn**	**02 25 07.2**	**+5.2**
ROSC				*i*		02 25 32.4	
	comp=Z,31nm,0.6s						
BRU2	**Volcan**	**4.68**	**288**	Pn	**Pn**	**02 24 12.2**	**+2.4**
PRAC	**Prado**	**4.88**	**137**	*e*P	**Pn**	**02 24 14.7**	**+2.3**
PRAC				*e*S	**Sn**	**02 25 08.4**	**-0.4**
PRAC				*i*		02 25 35.7	
	comp=Z,30nm,0.7s						
POPC	**Popayan, Colom**	**5.01**	**162**	*e*P	**Pn**	**02 24 14.8**	**+0.5**
POPC				*e*S	**Sn**	**02 25 08.5**	**-3.7**
RUSC	**La Rusia**	**5.28**	**106**	*e*P	**Pn**	**02 24 19.6**	**+1.3**
RUSC				*e*S	**Sn**	**02 25 22.1**	**+2.9**
RUSC				*i*		02 25 41.4	
	comp=Z,54nm,0.7s						
BBAC	**Balboa, Cauca**	**5.37**	**170**	*e*P	**Pn**	**02 24 20.9**	**+1.6**
BBAC				*e*S	**Sn**	**02 25 19.6**	**-1.5**
BBAC				*i*		02 25 28.9	
	comp=Z,13nm,0.4s						
SRBA	**San Rafael, Bu**	**5.45**	**291**		**Pn**	**02 24 20.6**	**+0.4**
PAMC	**Pamplona, Colo**	**5.45**	**90**	*e*P	**Pn**	**02 24 22.4**	**+1.8**
PAMC				*e*S	**Sn**	**02 25 22.9**	**-0.6**
PAMC				*i*		02 25 30.7	
	comp=Z,77nm,0.5s						
GARC	**Garzon, Huila**	**5.79**	**152**	*e*P	**Pn**	**02 24 27.3**	**+2.3**
GARC				*i*		02 25 36.3	
	comp=Z,27nm,0.3s						
PEZE	**Perez Zeledon,**	**5.79**	**291**	Pn	**Pn**	**02 24 26.9**	**+2.0**
RIMA	**Rio Macho**	**6.10**	**294**	Pn	**Pn**	**02 24 29.7**	**+0.3**
GCUF	**Volcan Galeras**	**6.14**	**172**	*e*P	**Pn**	**02 24 33.0**	**+2.9**
GCUF				*e*S	**Sn**	**02 25 41.2**	**+0.8**
GCUF				*i*		02 25 43.3	
	comp=Z,8.9nm,0.5s						
HDC	**Heredia**	**6.42**	**295**	Pn	**Pn**	**02 24 32.3**	**-1.4**
TULM	**Tulcn-Chalpat**	**6.60**	**176**	Pn	**Pn**	**02 24 39.7**	**+3.3**
COVE	**Coope Vega, Sa**	**6.99**	**299**	Pn	**Pn**	**02 24 40.7**	**-0.7**
IMBA	**Imbabura, San**	**7.02**	**180**	Pn	**Pn**	**02 24 45.0**	**+2.8**
OTAV	**Otavalo**	**7.06**	**182**	Pn	**Pn**	**02 24 46.7**	**+3.9**
JTS	**Las Juntas de**	**7.29**	**294**	Pn	**Pn**	**02 24 46.4**	**+0.9**
SDV	**Santo Domingo**	**7.64**	**78**	Pn	**Pn**	**02 24 51.2**	**+0.7**
	comp=Z,3.0nm,0.3s,baz=332,slow=13,SNR=12						
SDV				Sn	**Sn**	**02 26 15.2**	**-1.9**
	comp=Z,14nm,0.3s,baz=24,slow=16,SNR=7.8						
	comp=Z,24nm,0.8s						
SDV	**Santo Domingo**	**7.64**	**78**	Pn	**Pn**	**02 24 50.5**	**0.0**
SLOR	**San Lorenzo -**	**8.03**	**182**	Pn	**Pn**	**02 25 00.2**	**+4.2**
BOAB	**BOACO BROADBAN**	**8.94**	**305**	Pn	**Pn**	**02 25 08.9**	**+0.8**
MATN	**Matagalpa**	**9.42**	**307**		**Pn**	**02 25 14.9**	**+0.1**
BAUV	**El Baul**	**10.18**	**80**	Pn	**Pn**	**02 25 24.2**	**-1.0**
BOSC	**San Juan Bosco**	**10.43**	**182**		**Pn**	**02 25 32.7**	**+4.0**
MCRA	**Macar, Loja**	**11.77**	**189**		**Pn**	**02 25 50.1**	**+3.2**
SDDR	**Presa de Saban**	**13.38**	**29**	Pn	**Pn**	**02 26 08.6**	**-0.3**
PCRV	**Puerto La Cruz**	**13.69**	**77**	Pn	**Pn**	**02 26 13.9**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=279,slow=3.9,SNR=7.1						
	comp=Z,5.9nm,0.4s						
SJG	**San Juan**	**15.88**	**46**	Pn	**Pn**	**02 26 39.4**	**-3.2**
	comp=Z,1.6nm,0.3s,baz=227,slow=19,SNR=2.3						
SJG				LR	LR	02 33 51.9	
	comp=Z,55nm,20.7s,baz=240,slow=41						
NNA	**Nana**	**19.25**	**176**	LR	LR	02 36 47.9	
	comp=Z,48nm,19.7s,baz=26,slow=43						
TIGA	**Tifton**	**24.50**	**349**	P	**P**	**02 28 17.6**	**-0.7**
LPAZ	**La Paz**	**25.51**	**157**	LR	LR	02 39 19.0	
	comp=Z,50nm,20.7s,baz=309,slow=39						
SIV	**San Ignacio**	**28.72**	**144**	P	**P**	**02 28 55.7**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=309,slow=12,SNR=3.7						
	comp=Z,0.7nm,0.5s						
WCI	**Wyandotte Cave**	**31.61**	**348**	P	**P**	**02 29 20.5**	**-1.3**
WCI				IAmb	IAmb	02 29 38.4	
	comp=Z,3.7nm,0.9s						
TXAR	**Lajitas Array**	**32.45**	**316**	P	**P**	**02 29 30.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=137,slow=9.2,SNR=7.3						
	comp=Z,0.5nm,0.7s						
TX31	**Lajitas Ar. Si**	**32.46**	**316**	P	**P**	**02 29 28.8**	**-0.7**
TX31				IAmb	IAmb	02 29 31.1	
	comp=Z,4.4nm,1.0s						
TX32	**Lajitas Array**	**32.46**	**316**	P	**P**	**02 29 28.6**	**-0.9**
WMOK	**Wichita Mounta**	**33.20**	**328**	P	**P**	**02 29 36.9**	**+1.0**
WMOK				IAmb	IAmb	02 29 39.2	
	comp=Z,4.5nm,0.8s						
RCBR	**Riachuelo**	**44.18**	**106**	LR	LR	02 49 42.6	
	comp=Z,70nm,18.5s,baz=122,slow=36						
PDAR	**Pinedale Array**	**44.80**	**327**	P	**P**	**02 31 14.7**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=127,slow=10,SNR=2.4						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**47.59**	**317**	P	**P**	**02 31 35.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=141,slow=7.5,SNR=2.8						
	comp=Z,0.3nm,0.6s						
PLCA	**Paso Flores**	**48.35**	**172**	P	**P**	**02 31 40.3**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=0.1,slow=6.5,SNR=2.0						
PLCA				LR	LR	02 50 57.8	
	comp=Z,36nm,19.5s,baz=278,slow=35						
	comp=Z,0.8nm,0.8s						
ESDC	**Sonseca Array**	**73.22**	**51**	P	**P**	**02 34 30.6**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=277,slow=5.5,SNR=5.9						
	comp=Z,0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.56**	**78**	P	**P**	**02 35 02.0**	**+0.8**
	comp=Z,13nm,0.6s,baz=284,slow=6.8,SNR=5.2						
NOA	**NORSAR Array B**	**83.34**	**29**	LR	LR	03 09 49.5	
	comp=Z,5.3nm,18.2s,baz=45,slow=34						
ASAR	**Alice Springs**	**145.20**	**239**	PKPbc	**PKPdf**	**02 42 37.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=117,slow=3.4,SNR=6.9						
WRA	**Warramunga Arr**	**146.07**	**245**	PKPbc	**PKPdf**	**02 42 39.4**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=98,slow=2.8,SNR=6.8						
PZH	**PanZhiHua**	**146.35**	**0**	PKPbc	**PKPdf**	**02 42 39.2**	**-0.4**

IDC 02 02:27:58.3±44.0, 24°.96S×175°.31W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=825.9km s-min=177.7km az=90.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.33**	**250**	P	P	02 35 20.9	-0.2
	1.0nm,0.4s,baz=95,slow=8.6,SNR=3.0						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**46.08**	**260**	P	P	02 36 24.2	-0.2
	1.0nm,0.4s,baz=97,slow=7.9,SNR=26						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**46.60**	**266**	P	P	02 36 28.4	0.0
	1.2nm,0.6s,baz=106,slow=7.6,SNR=14						
	1.2nm,0.6s						

NNC 02 02:44:10.8±1.8, 43°.79N×87°.85E, h0km, mb3.8, mpv3.4, 7C-2D, Error ellipse: s-maj=13.2km s-min=10.6km az=95.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.94**	**309**	Pn	Pn	02 45 26.4	+0.2
	1.6nm,0.5s,baz=122,slow=14,SNR=74						
MK31				Sn	Sn	02 46 25.4	+1.4
	8.8nm,0.7s,baz=124,slow=

comp=N,5μm,0.6s
NPH North Pit 0.13 333 Pg 02 50 29.7 -0.1
NPH North Pit 0.13 333 IAML 02 50 32.6
comp=N,3μm,0.4s
HATHI Halema'uma'u T 0.13 343 Pg 02 50 29.8 -0.1
HATHI Sg 02 50 32.4 +0.1
HATHI Halema'uma'u T 0.13 343 IAML 02 50 32.8
comp=E,8μm,0.5s
WRMHI West Rim 0.13 325 Pg 02 50 29.9 0.0
WRMHI Sg 02 50 32.6 +0.4
WRMHI West Rim 0.13 325 IAML 02 50 32.9
comp=E,11μm,0.4s
OBL Observatory Le 0.14 333 Pg 02 50 29.9 0.0
OBL Sg 02 50 32.8 +0.5
OBL Observatory Le 0.14 333 IAML 02 50 33.2
comp=E,10μm,0.6s
SBLHI Steaming Bluff 0.14 341 Pg 02 50 29.9 -0.1
SBLHI Sg 02 50 32.5 +0.1
SBLHI Steaming Bluff 0.14 341 IAML 02 50 32.8
comp=N,8μm,0.5s
UWB Uwekahuna B 0.14 337 Pg 02 50 29.9 -0.1
UWB Sg 02 50 32.4 -0.1
UWB Uwekahuna B 0.14 337 IAML 02 50 32.8
comp=E,830nm,0.4s
JCUZ Jacuzzi 0.14 52 Pg 02 50 30.0 +0.1
JCUZ Sg 02 50 32.7 +0.3
JCUZ Jacuzzi 0.14 52 IAML 02 50 33.0
comp=N,3μm,0.4s
NPOC North of Pu'u 0.14 47 Pg 02 50 29.9 0.0
NPOC Sg 02 50 32.6 +0.2
NPOC North of Pu'u 0.14 47 IAML 02 50 32.8
comp=E,3μm,0.7s
NPOC IAML 02 50 33.4
comp=N,2μm,0.4s
UWE Uwekahuna 0.14 331 Pg 02 50 30.0 0.0
UWE Sg 02 50 33.0 +0.5
UWE Uwekahuna 0.14 331 IAML 02 50 33.3
comp=E,6μm,0.5s
UWE IAML 02 50 33.4
comp=N,3μm,0.3s
RSD Rainshed 0.17 342 Pg 02 50 30.4 -0.1
HTC Hot Caves 0.18 251 Pb 02 50 31.2 -0.7
AIN Ainahou 0.24 289 Pg 02 50 32.0 +0.4
AIN Sg 02 50 37.4 +2.3
AIN Ainahou 0.24 289 IAML 02 50 37.6
comp=E,12μm,0.2s
MLH Mauna Loa 0.25 321 Pg 02 50 32.0 +0.1
MLH Mauna Loa 0.25 321 IAML 02 50 38.2
comp=E,2μm,0.3s
PHO Puu Honuaula 0.36 59 Pg 02 50 34.0 +0.2
KHU Kahuku 0.38 263 Pg 02 50 34.2 0.0
KHU Sg 02 50 40.2 +1.0
KHU Kahuku 0.38 263 IAML 02 50 40.5
comp=E,2μm,0.5s
KHU IAML 02 50 47.0
comp=N,2μm,0.5s
HMH Humu'ula Sheep 0.39 321 Pg 02 50 34.4 -0.1
HMH Sb 02 50 41.0 -0.9
HMH Humu'ula Sheep 0.39 321 IAML 02 50 42.2
comp=N,6μm,0.2s
HMH IAML 02 50 42.4
comp=E,4μm,0.3s
MWH Moku'aweowe 0.40 298 Pg 02 50 34.7 0.0
MWH Sb 02 50 41.7 -0.7
MWH Moku'aweowe 0.40 298 IAML 02 50 43.6
comp=E,4μm,0.7s
MLOA Mauna Loa Obse 0.41 305 Pg 02 50 34.8 -0.1
MLOA Sb 02 50 41.5 -1.0
POHA Pohakuloa 0.55 327 Pg 02 50 36.6 -0.6
KHLU Kahalu`u 0.70 295 Pg 02 50 39.3 -0.9

*IDC **02** 02:51:39.2±2.2,9.°49S×111.°81E,h0km,mb4.0/6, mbtmp4.0/7,ML3.4/1,Error ellipse: s-maj=72.4km s-min=19.9km az=60.0*
*DJA **02** 02:51:44.9±0.5,10.°S±5.°S×11.°2E±.°,h25km±4km,M3.9/9, mb4.3/7,mB4.9/2,MLv3.7/9,Mw(mB)4.2/2*
*NEIC **02** 02:51:46.0±1.0,9.°6S±0.°1×111.°8E±0.°1,h60km±9km, mb4.1/9,Error ellipse: s-maj=23.1km s-min=11.0km az=213.0*
ISC 02 02:51:43.8±0.9,9.°7S±0.°1×111.°75E±0.°09,h35km,n42, σ1§36/40,mb4.1/10,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.62**	**339**	P	**Pn**	**02 52 09.1**	**-0.8**
PWJI	**Pagerwojo**	**1.69**	**2**	P	**Pn**	**02 52 09.6**	**-1.2**
UGM	**Wanagama**	**2.17**	**326**		**Pn**	**02 52 17.9**	**+0.4**
UGM	**Wanagama**	**2.17**	**326**	P	**Pn**	**02 52 17.8**	**+0.4**
UGM				S	**Sn**	**02 52 45.8**	**+2.7**
UGM	**Wanagama**	**2.17**	**326**	P	**Pn**	**02 52 18.2**	**+0.7**
JAGI	**Jajag, Banyuwa**	**2.68**	**63**		**Pn**	**02 52 25.6**	**+1.1**
JAGI	**Jajag, Banyuwa**	**2.68**	**63**	P	**Pn**	**02 52 25.0**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.68**	**63**	P	**Pn**	**02 52 25.8**	**+1.4**
SMRI	**Semarang**	**2.95**	**334**	Pn	**Pn**	**02 52 28.8**	**+0.6**
SMRI	**Semarang**	**2.95**	**334**	P	**Pn**	**02 52 29.5**	**+1.2**
SMRI	**Semarang**	**2.95**	**334**	P	**Pn**	**02 52 31.0**	**+2.7**
SRBI	**Singaraja**	**3.79**	**65**	P	**Pn**	**02 52 41.4**	**+1.7**
TWSI	**Taliwang, Sumb**	**5.16**	**80**	P	**Pn**	**02 52 59.6**	**+1.0**
0.1nm15nm,0.7s							
PLAI	**Plampang**	**6.01**	**82**	P	**Pn**	**02 53 11.1**	**+0.8**
0.2nm787nm69nm,0.7s							
PLAI	**Plampang**	**6.01**	**82**	P	**Pn**	**02 53 12.0**	**+1.7**
EDFI	**Ende, Flores**	**9.86**	**85**	P	**Pn**	**02 54 03.8**	**+0.5**
5.7nm,0.5s							
MNAI	**Manna**	**10.22**	**301**	P	**Pn**	**02 54 08.9**	**+0.8**
302nm,1.4s							
GTOI	**Gorontalo**	**15.21**	**48**	pP	**P**	**02 55 21.2**	**+0.4**
5.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**15.84**	**123**	Pn	**Pn**	**02 55 22.6**	**-1.6**
0.1nm,0.3s,baz=304,slow=11,SNR=1.6							
FITZ				Sn	Sn	02 58 08.8	-10
0.1nm,0.3s,baz=2.9,slow=21,SNR=1.5							
1.1nm,0.7s							
FITZ	**Fitzroy Crossi**	**15.84**	**123**	Pn	**Pn**	**02 55 23.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**15.84**	**123**	P	**Pn**	**02 55 24.1**	**-0.2**
4.2nm,1.8s							
MTN	**Manton Dam**	**19.26**	**101**	P	**P**	**02 56 05.5**	**-0.1**
MTN				IAmb	IAmb	02 56 13.8	
comp=Z,9.2nm,1.0s							
FAKI	**Fak Fak**	**21.45**	**73**	P	**P**	**02 56 28.5**	**-0.9**
WB0	**Warramunga Arr**	**24.04**	**117**	P	**P**	**02 56 55.8**	**0.0**
WB0				IAmb	IAmb	02 56 57.8	
comp=Z,5.3nm,0.7s							
WRA	**Warramunga Arr**	**24.05**	**118**	P	**P**	**02 56 56.9**	**+0.8**
comp=Z,2.8nm,0.7s,baz=293,slow=11,SNR=76							
comp=Z,2.8nm,0.7s							
WRAB	**Tennant Creek**	**24.06**	**118**	P	**P**	**02 56 56.8**	**+0.7**
WB2	**Warramunga Arr**	**24.07**	**118**	P	**P**	**02 56 55.5**	**-0.6**
WB2				IAmb	IAmb	02 56 58.5	
comp=Z,7.0nm,0.8s							
AS31	**Alice Springs**	**25.30**	**126**	P	**P**	**02 57 06.8**	**-0.5**
ASAR	**Alice Springs**	**25.30**	**126**	P	**P**	**02 57 08.7**	**+1.4**
comp=Z,1.8nm,0.7s,baz=303,slow=8.9,SNR=24							
comp=Z,1.8nm,0.7s							
STKA	**Stephens Creek**	**35.35**	**133**	P	**P**	**02 58 38.2**	**+2.1**
comp=Z,2.9nm,0.7s,baz=327,slow=9.8,SNR=4.2							
comp=Z,2.9nm,0.7s							
H08S2	**Diego Garcia H**	**38.85**	**270**	T	T	03 40 10.4	
baz=96,slow=75,SNR=46							
H08S3	**Diego Garcia H**	**38.86**	**270**	T	T	03 40 11.3	
baz=96,slow=75,SNR=45							
H08S1	**Diego Garcia H**	**38.87**	**270**	T	T	03 40 11.7	
baz=96,slow=75,SNR=19							
KSRS	**Korea Array**	**49.31**	**17**	P	**P**	**03 00 29.3**	**-0.1**
comp=Z,2.2nm,0.7s,baz=199,slow=7.4,SNR=11							
comp=Z,2.2nm,0.7s							
MJAR	**Matsushiro Arr**	**52.31**	**27**	P	**P**	**03 00 50.2**	**-2.0**
comp=Z,1.6nm,0.9s,baz=198,slow=7.5,SNR=7.1							
comp=Z,1.6nm,0.9s							
MK31	**Makanchi Array**	**62.10**	**338**	P	**P**	**03 01 59.4**	**-1.8**
MK31				IAmb	IAmb	03 02 06.4	
comp=Z,1.8nm,1.2s							
MKAR	**Makanchi Array**	**62.10**	**338**	P	**P**	**03 02 00.2**	**-1.0**
comp=Z,0.6nm,0.4s,baz=146,slow=7.6,SNR=5.5							
comp=Z,0.6nm,0.4s							
MKAR	**Makanchi Array**	**62.10**	**338**	P	**P**	**03 01 58.4**	**-2.8**
ZAA0	**Zalesovo Array**	**67.40**	**343**	P	**P**	**03 02 33.8**	**-1.7**
ZAA0				IAmb	IAmb	03 02 39.7	
comp=Z,1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**67.40**	**343**	P	**P**	**03 02 33.5**	**-2.0**
BRVK	**Borovoye**	**71.81**	**335**	P	**P**	**03 03 02.6**	**-0.2**
ABKAR	**Akbulak array**	**74.18**	**328**	P	**P**	**03 03 15.5**	**-1.4**

IDC 02 02:55:14.6±11.0,2.°42S×67.°45E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=780.1km s-min=32.2km az=41.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**52.16**	**327**	P	P	03 04 27.1	-0.1
0.7nm,0.8s,baz=154,slow=6.7,SNR=5.1							
0.7nm,0.8s							
WRA	**Warramunga Arr**	**67.47**	**110**	P	P	03 06 12.8	0.0
0.7nm,0.9s,baz=288,slow=5.2,SNR=4.9							
0.7nm,0.9s							
ASAR	**Alice Springs**	**67.50**	**115**	P	P	03 06 13.1	+0.1
0.5nm,0.7s,baz=284,slow=6.1,SNR=4.6							
0.5nm,0.7s							

*IDC **02** 03:12:16.2±1.0,7.°88N×127.°36E,h0km,mb3.8/9, mbtmp3.8/9,MS2.9/1,Error ellipse: s-maj=28.4km s-min=18.5km az=83.0*
*MAN **02** 03:12:24.1,7.°76N×126.°96E,h19km,mb4.5,ML3.3,MS3.1*
ISC 02 03:12:18.5±1.0,7.°79N±0.°06×127.°22E±0.°07,h10km,n20, σ1§73/24,mb3.9/9,1C-3D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.94**	**295**	⇑*i*P	**Pn**	**03 12 37.8**	**+0.1**
BIPH				*i*S	**Sn**	**03 12 50.9**	**-0.4**
DAV	**Davao City (W)**	**1.78**	**247**	Pn	**Pn**	**03 12 49.0**	**-0.3**
51nm,0.3s,baz=53,slow=0.7,SNR=7.3							
DAV				Sn	**Sg**	**03 13 17.2**	**+1.4**
50nm,0.3s,baz=67,slow=19,SNR=6.3							
DAV				LR	LR	03 13 60.0	
comp=Z,297nm,18.0s,baz=19,slow=54							
BUKP	**Musuan**	**2.14**	**273**	⇓*i*P	**Pb**	**03 12 57.4**	**-0.1**
BUKP				*i*S	**Sg**	**03 13 29.1**	**+1.7**
KCP	**Kidapawan**	**2.25**	**250**	⇓*i*P	**Pn**	**03 12 57.6**	**+1.7**
KCP				*i*S	**Sb**	**03 13 25.6**	**-1.7**
CGP	**Cagayan de Oro**	**2.59**	**285**	⇓*e*P	Pg	03 13 13.0	+4.8
CGP				*e*S	**Sb**	**03 13 35.2**	**-1.8**
SCPH	**Surigao**	**2.62**	**319**	*e*P	**Pb**	**03 13 05.2**	**-0.4**
GHBP	**Garcia Hernand**	**3.40**	**303**	*e*P	**Pn**	**03 13 14.3**	**+2.6**
GHBP				*i*S	**Sb**	**03 13 56.2**	**-4.2**
TABP	**Talibon, Bohol**	**3.66**	**309**	*e*P	**Pn**	**03 13 17.9**	**+2.7**
TABP				*i*S	Sn	03 13 45.9	-13
PAGZ	**Pagadian**	**3.81**	**271**	*e*P	**Pn**	**03 13 19.6**	**+2.4**
PAGZ				*i*S	Sn	03 13 35.5	-27
TBP	**Tagbilaran**	**3.82**	**300**	*e*P	**Pn**	**03 13 20.1**	**+2.6**
TBP				*i*S	**Sb**	**03 14 12.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**25.77**	**183**	P	**P**	**03 17 48.7**	**-0.9**
0.7nm,0.4s,baz=20,slow=10,SNR=2.0							
0.7nm,0.4s							
WRA	**Warramunga Arr**	**28.43**	**166**	P	**P**	**03 18 14.2**	**+0.6**
0.3nm,0.5s,baz=346,slow=10.0,SNR=2.4							
0.3nm,0.5s							
ASAR	**Alice Springs**	**31.94**	**168**	P	**P**	**03 18 45.4**	**+0.8**
0.1nm,0.3s,baz=336,slow=7.2,SNR=1.8							
0.1nm,0.3s							
MKAR	**Makanchi Array**	**54.57**	**323**	P	**P**	**03 21 47.0**	**0.0**
1.2nm,0.6s,baz=125,slow=8.4,SNR=12							
1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**57.24**	**332**	P	**P**	**03 22 05.1**	**-0.8**
0.5nm,0.4s,baz=142,slow=7.2,SNR=2.2							
0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**58.64**	**326**	P	**P**	**03 22 15.4**	**-0.5**
0.4nm,0.3s,baz=123,slow=6.7,SNR=7.5							
0.4nm,0.3s							
BVAR	**Borovoye Array**	**64.23**	**326**	P	**P**	**03 22 53.4**	**-0.3**
0.3nm,0.3s,baz=150,slow=9.8,SNR=3.0							
0.3nm,0.3s							
ILAR	**Eielson Array**	**81.25**	**26**	P	P	03 24 31.8	-2.8
0.3nm,0.8s,baz=236,slow=6.4,SNR=1.4							
0.3nm,0.8s							
BRTR	**Keskin Array B**	**87.83**	**310**	LR	LR	04 08 31.3	
comp=Z,5.7nm,18.3s,baz=307,slow=38							
FINES	**FINESS Array B**	**88.51**	**332**	P	**P**	**03 25 10.2**	**-0.9**
5.2nm,1.1s,baz=76,slow=8.0,SNR=3.5							
5.2nm,1.1s							

*SOME **02** 03:13:31.1,38.°93N×72.°40E,h0km*
*IDC **02** 03:13:32.6±5.3,37.°95N×72.°94E,h134km±42km,mb3.3/5, mbtmp3.8/11,MS3.4/1,Error ellipse: s-maj=42.8km s-min=27.1km az=2.0*
*NNC **02** 03:13:34.6±7.1,38.°42N×72.°41E,h0km,mb4.5,mpv4.0, Error ellipse: s-maj=56.8km s-min=38.9km az=162.0*
ISC 02 03:13:27.5±0.9,38.°36N±0.°06×72.°17E±0.°05,h10km,n29, σ2§72/35,mb3.6/5,3C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.94**	**17**	P	**Pb**	**03 14 36.4**	**-1.0**
SNR=19							
IUG	**Iuzhnay**	**4.12**	**337**	*e*P	**Pb**	**03 14 40.6**	**+0.3**
20nm,0.1s							
IUG				*e*S	**Sb**	**03 15 30.7**	**+0.6**
228nm,0.4s							
UCH	**Uchtor**	**4.26**	**24**	P	**Pb**	**03 14 40.5**	**-2.3**
SNR=22							
MRKS	**Merke**	**4.46**	**10**	*e*P	**Pb**	**03 14 43.9**	**-2.0**
42nm,0.3s							
MRKS				*e*S	**Sb**	**03 15 36.1**	**-3.6**
39nm,0.4s							
EKS2	**Erkin-Say**	**4.47**	**15**	P	**Pb**	**03 14 44.1**	**-2.1**
SNR=12							
AAK	**Ala-Archa**	**4.63**	**22**	P	**Pb**	**03 14 45.7**	**-3.2**
SNR=13							
AAK	**Ala-Archa**	**4.63**	**22**	P	**Pb**	**03 14 45.1**	**-3.7**
18nm,0.4s,baz=185,slow=5.6,SNR=55							
AAK				S	**Sb**	**03 15 39.1**	**-5.6**
13nm,0.4s,baz=18,slow=17,SNR=22							
KK31	**Karatay Array**	**4.90**	**346**	⇑P	**Pb**	**03 14 50.8**	**-2.7**
11nm,0.3s,baz=155,slow=12,SNR=418							
KK31				⇓S	**Sb**	**03 15 48.2**	**-4.3**
17nm,0.5s,baz=162,slow=23,SNR=11							
CHMS	**Chumysh**	**5.03**	**22**	P	Pb	03 14 50.8	-4.9
SNR=7.5							
CHMS	**Chumysh**	**5.03**	**22**	⇓P	Pb	03 14 50.6	-5.2
8.5nm,0.5s							
CHMS				⇑S	**Sn**	**03 15 47.9**	**+6.6**
22nm,0.9s							
KST	**Kastek**	**5.50**	**30**	*e*P	**Pb**	**03 15 03.2**	**-0.5**
2.0nm,0.2s							
KST				*e*S	**Sb**	**03 16 10.6**	**+0.9**
4.4nm,0.7s							
DGS	**Degeres**	**5.59**	**28**	*e*P	**Pb**	**03 15 04.8**	**-0.5**
4.0nm,0.4s							
DGS				*e*S	**Sb**	**03 16 10.8**	**-1.5**
5.5nm,0.5s							
THN	**Thein Dam**	**6.58**	**153**	*e*P	**Pn**	**03 15 02.7**	**-1.6**
THN				*e*S	Sn	03 16 06.0	-13
ARXS	**Arharly**	**7.24**	**34**	*e*P	**Pb**	**03 15 32.8**	**-0.4**
4.4nm,0.5s							
ARXS				*e*S	**Sb**	**03 17 00.5**	**+0.9**
4.7nm,0.5s							
GEYT	**Alibeck**	**11.08**	**272**	P	**Pn**	**03 16 08.7**	**+2.7**
2.6nm,0.3s,baz=93,slow=9.0,SNR=7.9							
GEYT				S	**Sn**	**03 18 08.1**	**-1.9**
2.8nm,0.6s,baz=96,slow=15,SNR=4.2							
MKAR	**Makanchi Array**	**11.25**	**38**	P	**Pn**	**03 16 09.7**	**+1.4**
0.3nm,0.4s,baz=230,slow=12,SNR=3.8							
KURBB	**Kurchatov Arra**	**13.07**	**18**	P	**Pn**	**03 16 33.9**	**+0.8**
0.7nm,0.5s,baz=207,slow=12,SNR=6.4							
AB31	**Akbulak array**	**14.00**	**325**	⇑P	**Pn**	**03 16 50.4**	**+4.6**
6.0nm,0.5s,baz=133,slow=12,SNR=126							
BVAR	**Borovoye Array**	**14.72**	**356**	P	**Pn**	**03 16 57.9**	**+2.2**
1.0nm,0.5s,baz=162,slow=14,SNR=11							
BVAR				S	**Sn**	**03 19 38.9**	**+0.1**
0.2nm,0.4s,baz=233,slow=15,SNR=2.6							
AKTO	**Aktyubinsk**	**15.72**	**325**	P	**P**	**03 17 13.7**	**+0.8**
5.3nm,0.5s,baz=133,slow=13,SNR=24							
AKTO				S	**Sn**	**03 19 59.7**	**-3.3**
1.2nm,0.7s,baz=164,slow=15,SNR=2.4							
AKTO	**Aktyubinsk**	**15.72**	**325**	⇓P	**P**	**03 17 14.9**	**+2.0**
9.7nm,0.8s							
ZALV	**Zalesovo Beam**	**17.84**	**25**	P	**Pn**	**03 17 33.2**	**-2.4**
1.0nm,0.4s,baz=223,slow=12,SNR=4.7							
ARU	**Arti**	**20.22**	**338**	P	**P**	**03 18 02.9**	**+0.4**
3.6nm,0.6s,baz=145,slow=9.5,SNR=5.4							
3.6nm,0.6s							
SONM	**Songino Array**	**26.54**	**58**	P	P	03 18 54.5	-11
0.4nm,0.7s,baz=331,slow=5.3,SNR=2.0							
0.4nm,0.7s							
FINES	**FINESS Array B**	**36.49**	**324**	P	**P**	**03 20 30.0**	**-2.5**
2.1nm,0.8s,baz=97,slow=9.8,SNR=6.4							
2.1nm,0.8s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**39.80**	**336**	P	**P**	**03 20 58.4**	**-2.0**
1.0nm,0.7s,baz=115,slow=8.0,SNR=1.1							
1.0nm,0.7s							
NOA	**NORSAR Array B**	**43.48**	**322**	P	**P**	**03 21 28.1**	**-2.5**
0.3nm,0.6s,baz=101,slow=7.2,SNR=2.0							
0.3nm,0.6s							
VAE	**Valguarnera**	**44.92**	**288**	LR	LR	03 43 17.5	
comp=Z,39nm,19.6s,baz=160,slow=39							
TORD	**Torodi Ar. Bea**	**66.69**	**269**	P	P	03 24 12.9	-6.1
13nm,0.6s,baz=48,slow=6.1,SNR=5.1							

*MDD **02** 03:13:41.0±1.1,29.°93N×15.°74W,h0km,mb_Lg3.0/13, Error ellipse: s-maj=9.8km s-min=3.8km az=172.0*
*INMG **02** 03:13:42.5±0.9,30.°14N×15.°80W,h10km,ML2.1,Error ellipse: s-maj=2.5km s-min=1.4km az=81.0*
ISC 02 03:13:30.9±1.5,30.°17N±0.°03×15.°73W±0.°04,h8km±12km, n20,σ0§98/36,1D,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGUI	**Guimar, Teneri**	**1.94**	**199**	P	**Pg**	**03 14 09.0**	**+0.8**
CGUI				S	**Sn**	**03 14 29.8**	**+0.8**
CGUI				*i* Vmb_Lg		03 14 31.3	
MACI	**Morro de la Ar**	**2.03**	**200**	P	**Pg**	**03 14 10.2**	**+0.3**
MACI				S	**Sn**	**03 14 32.0**	**+0.7**
MACI				*i* Vmb_Lg		03 14 36.9	
CRAJ	**Montana Rajada**	**2.04**	**202**	P	**Pg**	**03 14 10.7**	**+0.6**
CRAJ				S	**Sn**	**03 14 32.7**	**+0.9**
CRAJ				*i* Vmb_Lg		03 14 39.3	
GGC	**Guia, Gran Can**	**2.05**	**178**	P	**Pg**	**03 14 10.8**	**+0.7**
GGC				S	**Sn**	**03 14 32.0**	**+0.5**
GGC				*i* Vmb_Lg		03 14 43.9	
CBOL	**Buenavista del**	**2.08**	**208**	P	**Pg**	**03 14 11.2**	**+0.4**
CBOL				S	**Sn**	**03 14 32.5**	**-0.1**
CCAN	**Las Canadas**	**2.09**	**202**	P	**Pg**	**03 14 10.7**	**-0.3**
CCAN				S	**Sn**	**03 14 32.6**	**-0.2**
CCAN				*i* Vmb_Lg		03 14 39.4	
CLOB	**Isla de Lobos,**	**2.18**	**129**	P	**Pg**	**03 14 14.1**	**+1.4**
CLOB				S	**Sb**	**03 14 37.0**	**-0.8**
CLOB				*i* Vmb_Lg		03 14 38.9	
EFAM	**Famara**	**2.18**	**118**	S	**Sb**	**03 14 36.7**	**-1.2**
EFAM				*i* Vmb_Lg		03 14 45.7	
CFUE	**Fuerteventura**	**2.18**	**134**	P	**Pg**	**03 14 13.7**	**+0.9**
CFUE				S	**Sb**	**03 14 36.3**	**-1.6**
CFUE				*i* Vmb_Lg		03 14 37.5	
CFTV	**Fuerteventura**	**2.27**	**140**	S	**Sb**	**03 14 37.9**	**-2.5**
CFTV				*i* Vmb_Lg		03 14 38.6	
EGOM	**La Gomera**	**2.38**	**213**	P	**Pb**	**03 14 13.8**	**-0.3**
EGOM				S	**Sn**	**03 14 39.6**	**-0.2**
EGOM				*i* Vmb_Lg		03 14 42.7	
TBT	**Taburiente**	**2.42**	**233**	P	**Pb**	**03 14 15.5**	**+0.9**
TBT				S	**Sn**	**03 14 40.0**	**-0.5**
TBT				*i* Vmb_Lg		03 14 40.9	
EHIG	**Higuera**	**2.42**	**229**	S	**Sn**	**03 14 41.4**	**+0.5**
EHIG				*i* Vmb_Lg		03 14 43.2	
CGIN	**Giniginamar, F**	**2.43**	**143**	P	**Pg**	**03 14 17.2**	**-0.4**
CGIN				S	**Sn**	**03 14 42.0**	**+1.0**
CGIN				*i* Vmb_Lg		03 14 43.1	
FUL	**Funchal**	**2.66**	**338**	*e*Pn	**Pg**	**03 14 21.0**	**-0.9**
PMAR	**Madeira**	**2.74**	**339**	⇓*i*Pn	**Pb**	**03 14 20.9**	**+0.7**
PMAR				*e*Sn	**Sn**	**03 14 49.8**	**+1.1**
PMPS	**Porto Santo**	**2.92**	**350**	*e*Pn	**Pb**	**03 14 22.9**	**-0.4**
PMPS				*e*Sn	**Sn**	**03 14 54.2**	**+1.2**
PMPS				A	A	03 14 59.3	
5.1nm,0.8s							
PMOZ	**Porto Moniz, M**	**2.92**	**335**	*e*Pn	**Pb**	**03 14 23.6**	**+0.2**
PMOZ				*e*Sn	**Sn**	**03 14 54.4**	**+1.1**
PMPST	**Porto Santo, M**	**2.94**	**350**	*e*Pn	**Pb**	**03 14 23.1**	**-0.6**
PMPST				*e*Sn	**Sn**	**03 14 54.9**	**+1.3**
CMCL	**Mercadel, El H**	**3.17**	**220**	P	**Pb**	**03 14 27.1**	**-0.4**
CMCL				S	**Sn**	**03 15 00.9**	**+1.7**

*DJA **02** 03:20:06.7±0.4,6.°S±3.°×13.°0E±.°,h232km±9km,M4.0/11, mB5.1/3,mb3.9/7,MLv4.0/11,Mw(mB)4.4/3*
*IDC **02** 03:20:07.3±1.8,5.°71S×129.°79E,h191km±21km,mb3.3/5, mbtmp4.1/9,Error ellipse: s-maj=33.7km s-min=15.8km az=98.0*
ISC 02 03:20:07.4±0.7,5.°73S±0.°05×129.°89E±0.°08,h200km,n30, σ2§25/34,mb3.5/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.20**	**1**	P	**Pn**	**03 20 40.9**	**+2.2**
BNDI	**Bandanaira**	**1.20**	**1**	P	**Pn**	**03 20 41.2**	**+2.5**
MSAI	**Masohi**	**2.56**	**338**	P	**Pn**	**03 20 52.1**	**+0.1**
SAUI	**Saumlaki**	**2.64**	**148**	P	**Pn**	**03 20 55.4**	**+2.5**
FAKI	**Fak Fak**	**3.65**	**40**	P	**Pn**	**03 21 06.3**	**+1.3**
FAKI				S	**Sn**	**03 21 49.8**	**-0.4**
FAKI	**Fak Fak**	**3.65**	**40**	P	**Pn**	**03 21 06.8**	**+1.8**
NLAI	**Namlea**	**3.72**	**312**	P	**Pn**	**03 21 10.2**	**+4.3**
SIJI	**Sorong**	**5.02**	**16**	P	**Pn**	**03 21 22.1**	**-0.1**
138nm,0.2s,baz=235,slow=19,SNR=206							
SIJI				S	**Sn**	**03 22 15.8**	**-5.5**
26nm,0.2s,baz=136,slow=23,SNR=4.8							
SANI	**Sanana**	**5.34**	**313**	P	**Pn**	**03 21 25.6**	**-0.7**
0.0nm8.4nm,0.6s							
LBMI	**Labuha**	**5.59**	**335**	P	**Pn**	**03 21 29.1**	**-0.4**
0.1nm18nm,0.6s							
MTN	**Manton Dam**	**7.17**	**170**	P	**Pn**	**03 21 50.6**	**+0.7**
KDU	**Kakadu**	**7.37**	**160**	P	**Pn**	**03 21 54.1**	**+1.6**
BATI	**Baumata**	**7.60**	**234**	P	**Pn**	**03 21 55.0**	**-0.6**
14nm,0.3s,baz=344,slow=19							
EDFI	**Ende, Flores**	**8.67**	**249**	P	**Pn**	**03 22 10.7**	**+1.1**
13nm,1.1s							
KNRA	**Kununurra**	**9.94**	**186**	P	**Pn**	**03 22 25.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.97**	**198**	P	**Pn**	**03 23 03.3**	**-1.3**
1.1nm,0.3s,baz=21,slow=9.9,SNR=32							
FITZ				S	S	03 25 19.2	-10
2.3nm,0.3s,baz=114,slow=20,SNR=6.7							
**FITZ

baz=297,slow=16
MG02 Cerro Sombrero 17.33 283 Pn Pn 03 46 16.5 -0.3
BELA Belgrano 2 17.66 176 Pn 03 46 21.6 +0.8
GO10 Punta Arenas 17.99 280 Pn **Pn 03 46 22.5 -2.6**
GO10 IAmb IAmb 03 46 45.9
comp=Z,62nm,1.4s
SNAA Sanae 18.65 143 P **Pn 03 46 33.8 +0.7**
comp=Z,0.2nm,0.3s,baz=266,slow=12,SNR=7.7
SNAA S Sn 03 49 43.6 -18
comp=Z,0.6nm,0.7s,baz=353,slow=20,SNR=2.7
SNAA LR LR 03 52 19.6
comp=Z,52nm,19.6s,baz=13,slow=33
comp=Z,1.7nm,0.8s
SNAA Sanae 18.65 143 P **Pn 03 46 34.3 +1.2**
MG05 Puerto Natales 19.59 282 P **P 03 46 43.2 +0.1**
MG05 IAmb IAmb 03 46 48.0
comp=Z,43nm,1.2s
PLCA Paso Flores 26.93 304 LR LR 03 57 54.0
comp=Z,26nm,18.3s,baz=154,slow=35
QSPA South Pole Qui 29.82 180 P **P 03 48 23.6 +1.6**
comp=Z,3.3nm,0.7s,baz=187,slow=3.9,SNR=26
comp=Z,3.3nm,0.7s
QSPA South Pole Qui 29.82 180 P **P 03 48 23.9 +1.8**
PLTB Pedras Altas 29.90 338 P **P 03 48 21.5 -1.4**
PLTB IAmb IAmb 03 48 27.6
comp=Z,11nm,1.3s
BO01 Tunca 32.62 309 P **P 03 48 47.2 +0.5**
BO01 IAmb IAmb 03 48 54.2
comp=Z,9.0nm,1.4s
VNDA Vanda 41.60 187 P **P 03 50 04.4 +1.9**
comp=Z,1.2nm,1.0s,baz=211,slow=3.7,SNR=6.4
comp=Z,1.2nm,1.0s
CASY Casey 51.83 166 P **P 03 51 23.6 +0.9**
CASY IAmb IAmb 03 51 38.9
comp=Z,5.4nm,0.9s
H10S2 ASCENSION HYDR 54.94 32 T T 04 52 12.1
baz=26,slow=74,SNR=4.3
H10S3 ASCENSION HYDR 54.94 32 T T 04 52 08.4
baz=194,slow=74,SNR=7.7
H10N3 ASCENSION HYDR 56.05 32 T T 04 53 40.9
baz=194,slow=75,SNR=7.2
H10N1 ASCENSION HYDR 56.05 32 T T 04 53 42.0
baz=194,slow=75,SNR=7.1
H10N2 ASCENSION HYDR 56.06 32 T T 04 53 32.1
baz=194,slow=75,SNR=8.5
TSUM Tsumeb 57.99 72 P **P 03 52 08.1 +0.1**
TORD Torodi Ar. Bea 80.77 42 P **P 03 54 29.6 +1.0**
comp=Z,13nm,0.6s,baz=212,slow=5.3,SNR=5.2
comp=Z,13nm,0.6s
RAO Raoul Island 84.02 217 LR LR 04 26 42.6
comp=Z,57nm,20.9s,baz=103,slow=32
ASAR Alice Springs 96.11 175 P **P 03 55 41.9 -1.1**
comp=Z,0.4nm,0.7s,baz=172,slow=4.7,SNR=6.0
comp=Z,0.4nm,0.7s
WRA Warramunga Arr 99.83 175 P **Pdif 03 55 59.2 -0.4**
comp=Z,0.1nm,0.5s,baz=191,slow=4.3,SNR=1.8
comp=Z,0.1nm,0.5s
FINES FINESS Array B 131.88 36 PKP **PKPdf 04 01 26.8 -0.2**
comp=Z,2.4nm,0.9s,baz=146,slow=6.0,SNR=3.7
INK Inuvik 144.58 320 PKP PKPbc 04 01 50.1 +1.3
comp=Z,3.9nm,0.6s,baz=96,slow=2.7,SNR=14
MKAR Makanchi Array 144.76 86 PKP **PKPab 04 01 49.4 -0.6**
comp=Z,1.3nm,0.7s,baz=246,slow=4.9,SNR=11
ILAR Eielson Array 147.52 310 PKPbc **PKPbc 04 01 59.1 +1.3**
comp=Z,1.6nm,0.6s,baz=152,slow=2.7,SNR=14
ZALV Zalesovo Beam 150.57 78 PKPbc **PKPbc 04 02 05.1 -0.7**
comp=Z,2.1nm,0.6s,baz=261,slow=3.1,SNR=7.1

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*ANF **02** 03:51:09.7±0.5, 36°.21N×97°.58W, h3km±4km, ML3.6/13, Error ellipse: s-maj=3.5km s-min=2.5km az=167.0*
*TUL **02** 03:51:09.9±0.9, 36°.21N±0°.02×97°.57W±0°.02, h6km±7km, ML3.2, mb_Lg3.0/86(NEIC), Error ellipse: s-maj=2.2km s-min=2.1km az=75.0*
*NEIC **02** 03:51:09.8±0.6, 36°.215N±0°.005×97°.58W±0°.02, h7km±7km, Error ellipse: s-maj=2.2km s-min=0.7km az=89.0*
ISC 02 03:51:10.0±0.8, 36°.21N±0°.03×97°.58W±0°.03, h10km, n89, σ0°60/59, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	**E0420 Rd and N**	**0.30**	**50**	Pg	**Pg**	**03 51 16.0**	**0.0**
OK029	**Liberty Lake**	**0.43**	**166**	Pg	**Pg**	**03 51 18.4**	**-0.1**
OK050	**Pawnee Station**	**0.52**	**70**		**Pg**	**03 51 19.9**	**-0.2**
OK033	**Mehan**	**0.55**	**108**	Pg	**Pg**	**03 51 20.5**	**-0.2**
OK048	**Pawnee Station**	**0.56**	**69**	Pg	**Pg**	**03 51 20.5**	**-0.3**
OK046	**Pawnee Station**	**0.58**	**71**		**Pg**	**03 51 20.9**	**-0.3**
OK045	**Pawnee Station**	**0.58**	**66**		**Pg**	**03 51 21.0**	**-0.3**
OK044	**Pawnee Station**	**0.66**	**76**	Pg	**Pg**	**03 51 22.3**	**-0.4**
OK031	**S. Brethren Rd**	**0.66**	**113**	Pg	**Pg**	**03 51 22.4**	**-0.3**
OK025	**Westminster Rd**	**0.66**	**162**	Pg	**Pg**	**03 51 22.6**	**-0.2**
OK051	**E0350 and S346**	**0.67**	**64**	Pg	**Pg**	**03 51 22.6**	**-0.4**
OK034	**N. Norfolk Rd.**	**0.73**	**106**	Pg	**Pg**	**03 51 23.7**	**-0.5**
OK032	**Salt Plains WL**	**0.78**	**320**	Pg	**Pg**	**03 51 24.8**	**-0.2**
KAN13	**South Haven SW**	**0.80**	**6**	Pg	**Pg**	**03 51 25.2**	**-0.3**
KAN01	**Argonia South**	**0.95**	**352**	Pg	**Pg**	**03 51 27.8**	**-0.4**
OK035	**E0210 Rd and N**	**1.03**	**299**	Pg	**Pg**	**03 51 29.5**	**-0.4**
KAN16	**Harper SW Stat**	**1.08**	**339**	Pg	**Pg**	**03 51 30.3**	**-0.5**
T35B	**Sooner Cattle**	**1.11**	**51**	P	**Pb**	**03 51 30.6**	**-0.8**
baz=231
U32A Winter Ranch, 1.16 279 Pg **Pb 03 51 31.8 -0.4**
U32A Winter Ranch, 1.16 279 P **Pb 03 51 31.5 -0.6**
baz=98
U32A S **Sn 03 51 48.2 0.0**
baz=98
TUL1 Leonard 1.48 101 P **Pn 03 51 36.3 -0.4**
baz=282
TUL1 S **Sb 03 51 56.5 0.0**
baz=282
WMOK Wichita Mounta 1.77 214 P **Pn 03 51 41.2 +0.6**
baz=33
WMOK S **Sb 03 52 05.3 +0.5**
baz=33
R32A Long Quarter, 2.38 338 Pn 03 51 49.7 +0.5
R32A Long Quarter, 2.38 338 S **Sn 03 52 20.1 +1.6**
baz=157
X37A Clayton 2.43 131 Pn **Pn 03 51 50.5 +0.8**
X37A IAmb_Lg 03 52 31.6
comp=Z,72nm,0.8s
X37A Clayton 2.43 131 P **Pn 03 51 50.7 +0.9**
baz=313
U38A Gravette 2.59 84 Pn **Pn 03 51 53.5 +1.4**
Z35A Perchaven, San 2.89 174 Pn **Pn 03 51 55.9 -0.2**
Z35A Perchaven, San 2.89 174 P **Pn 03 51 57.4 +1.3**
baz=355
HHAR Hobbs 2.95 88 Pn 03 51 57.3 +0.4
HHAR Hobbs 2.95 88 P **Pn 03 51 57.8 +0.9**
baz=270
KSU1 Kansas State U 2.98 15 Pn **Pn 03 51 57.6 +0.2**
KSU1 IAmb_Lg 03 52 49.0
comp=Z,39nm,0.7s
KSU1 Kansas State U 2.98 15 P **Pn 03 51 58.8 +1.4**
baz=195
CBKS Cedar Bluff 3.11 327 Pn **Pn 03 51 58.9 -0.3**
Z38A Mt. Pleasant 3.64 143 Pn **Pn 03 52 05.9 -0.5**
MIAR Mount Ida 3.67 116 Pn 03 52 06.6 -0.3
MIAR IAmb_Lg 03 53 15.4
comp=Z,40nm,0.9s
MIAR Mount Ida 3.67 116 P **Pn 03 52 07.9 +1.0**
baz=298
S39A Bolivar 3.72 65 Pn **Pn 03 52 07.4 -0.1**
S39A Bolivar 3.72 65 P **Pn 03 52 08.2 +0.7**
baz=248
ABTX Abilene, Hawle 3.96 206 IAmb_Lg 03 53 16.6
comp=Z,32nm,0.8s
MGMO Mountain Grove 4.37 76 Pn **Pn 03 52 17.0 +0.4**
MGMO IAmb_Lg 03 53 29.8
comp=Z,22nm,0.8s
WHAR Wooly Hollow 4.40 101 Pn **Pn 03 52 17.4 +0.5**
WHAR IAmb_Lg 03 53 32.7
comp=Z,30nm,0.9s
FCAR Ozark Folk Cen 4.44 93 Pn **Pn 03 52 16.8 -0.6**
FCAR IAmb_Lg 03 53 32.8
comp=Z,25nm,0.7s
237A Washetta, Mont 4.45 160 Pn **Pn 03 52 17.3 -0.3**
237A Washetta, Mont 4.45 160 P **Pn 03 52 17.5 -0.1**
baz=341
WLAR White Oak Lake 4.45 123 Pn **Pn 03 52 17.3 -0.3**
WLAR IAmb_Lg 03 53 36.7
comp=Z,45nm,0.8s
N33A J Bar K, Exete 4.52 1 IAmb_Lg 03 53 45.1
comp=Z,35nm,0.8s
P38A Dawn 4.67 42 Pn **Pn 03 52 21.4 +0.8**
P38A IAmb_Lg 03 53 41.8
comp=Z,32nm,0.7s

R40A Maddies Statio 4.72 62 P **Pn 03 52 21.8 +0.6**
R40A Maddies Statio 4.72 62 P **Pn 03 52 21.7 +0.5**
baz=246
MSTX Muleshoe 4.81 244 Pn **Pn 03 52 22.0 -0.5**
MSTX Muleshoe 4.81 244 P **Pn 03 52 23.0 +0.4**
baz=61
N35A Tabor 4.88 18 Pn **Pn 03 52 23.5 0.0**
BGNE Belgrade 5.21 355 Pn **Pn 03 52 27.4 -0.5**
BGNE IAmb_Lg 03 54 08.5
comp=Z,41nm,0.8s
LCAR Lake Charles 5.21 90 Pn **Pn 03 52 27.9 0.0**
CCAR Cane Creek 5.29 114 IAmb_Lg 03 54 12.0
comp=Z,42nm,0.8s
CCM Cathedral Cave 5.39 68 Pn **Pn 03 52 30.4 -0.1**
435B Jarrell 5.42 180 IAmb_Lg 03 54 03.4
comp=Z,20nm,0.7s
P40A Paris 5.49 51 IAmb_Lg 03 54 07.3
comp=Z,30nm,0.7s
T25A Trinidad 5.56 282 Pn **Pn 03 52 33.0 -0.1**
N38A Joes South For 5.70 35 IAmb_Lg 03 54 21.8
comp=Z,40nm,0.8s
PBMO Pour Bluff 5.79 82 IAmb_Lg 03 54 14.0
comp=Z,22nm,0.7s
OGNE Ogallala 5.87 325 IAmb_Lg 03 54 26.9
comp=Z,27nm,0.8s
JCT Junction City 6.01 199 Pn **Pn 03 52 39.6 +0.5**
143A Socs Landing, 6.19 123 IAmb_Lg 03 54 32.9
comp=Z,23nm,0.7s
SLM Saint Louis 6.33 65 IAmb_Lg 03 54 33.7
comp=Z,18nm,0.8s
Q24A Divide 6.60 297 IAmb_Lg 03 54 44.0
comp=Z,33nm,1.1s
S44A Carbondale 6.83 75 IAmb_Lg 03 54 44.4
comp=Z,20nm,0.8s
BRIGG Briggsdale 6.85 312 IAmb_Lg 03 54 51.7
comp=Z,32nm,0.9s
OXF Oxford 6.89 102 IAmb_Lg 03 54 56.0
comp=Z,23nm,0.8s
W45A Hickory Valley 6.92 96 IAmb_Lg 03 55 06.0
comp=Z,25nm,0.8s
Y45A Yeager Farm, C 7.00 107 IAmb_Lg 03 55 00.9
comp=Z,16nm,0.8s
VBMS Vicksburg 7.08 122 IAmb_Lg 03 55 01.1
comp=Z,12nm,0.9s
P43A Skaggs, Pawnee 7.23 59 IAmb_Lg 03 55 10.4
comp=Z,20nm,0.7s
Q44A Meyer Farm, Va 7.32 66 IAmb_Lg 03 55 09.3
comp=Z,21nm,0.8s
L40A Anamosa 7.65 38 IAmb_Lg 03 55 17.5
comp=Z,19nm,0.9s
OLIL Olney 7.95 69 IAmb_Lg 03 55 27.0
comp=Z,18nm,1.1s
PHWY Pilot Hill 7.97 312 IAmb_Lg 03 55 31.8
comp=Z,11nm,0.9s
833A Chaparral WMA, 8.02 192 IAmb_Lg 03 55 27.6
comp=Z,11nm,0.9s
N23A Red Feather La 8.04 308 IAmb_Lg 03 55 38.9
comp=Z,14nm,0.7s
O44A Mansfield 8.18 59 IAmb_Lg 03 55 34.9
comp=Z,19nm,0.9s
SUSD Miller 8.29 353 IAmb_Lg 03 55 35.9
comp=Z,15nm,0.8s
I37A Lemond, Waseca 8.42 21 IAmb_Lg 03 55 44.4
comp=Z,14nm,0.8s
L42A Oliver, Polo 8.44 44 IAmb_Lg 03 55 44.4
comp=Z,15nm,1.0s
JFWS Jewell Farm 8.76 38 IAmb_Lg 03 56 08.0
comp=Z,16nm,0.8s
I40A Norwalk 9.34 33 IAmb_Lg 03 56 12.8
comp=Z,9.6nm,0.9s
K22A Casper 9.44 316 IAmb_Lg 03 56 27.1
comp=Z,18nm,1.1s
F33A 5 Mile Ranch, 9.67 5 IAmb_Lg 03 56 28.9
comp=Z,13nm,1.1s
SPMN Marine on St. 9.70 20 IAmb_Lg 03 56 30.7
comp=Z,8.1nm,0.8s

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*DJA **02** 03:59:34.1±0.3, 4°.5±2°.×13°.5E±°, h14km±2km, M4.3/12, mB5.0/3, mb4.5/12, MLv4.2/6, Mw(mB)4.3/3*
*IDC **02** 03:59:34.5±1.5, 4°.61S×134°.66E, h0km, mb3.7/1, mbtmp4.2/7, ML4.1/5, MS3.2/7, Error ellipse: s-maj=40.4km s-min=22.5km az=74.0*
*NEIC **02** 03:59:35.3±1.8, 4°.34S±0°.09×135°.0E±0°.1, h20km±7km, mb4.2/10, Error ellipse: s-maj=16.9km s-min=11.4km az=61.0*
ISC 02 03:59:34.1±0.6, 4°.40S±0°.06×134°.87E±0°.06, h16km, n39, σ1°99/38, mb4.1/4, MS3.6/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**2.86**	**29**	P	**Pn**	**04 00 17.5**	**-1.5**
SRPI S **Sn 04 00 52.1 -1.0**
FAKI Fak Fak 3.00 299 Pn 04 00 22.1 +1.1
FAKI Fak Fak 3.00 299 P **Pn 04 00 21.9 +0.9**
FAKI S **Sn 04 00 57.2 +0.5**
SMPI Sarmi 4.52 58 P **Pn 04 00 43.1 +1.3**
BNDI Bandanaira 4.96 268 P **Pn 04 00 50.3 +2.4**
1.4nm100nm,1.1s
SIJI Sorong 5.03 314 Pn **Pn 04 00 50.1 +1.2**
3.9nm,0.3s,baz=142,slow=15,SNR=19
SIJI Sn **Sn 04 01 43.7 -3.0**
2.4nm,0.3s,baz=93,slow=9.9,SNR=3.9
SIJI LR LR 04 02 58.5
comp=Z,175nm,19.4s,baz=44,slow=40
8.7nm,0.3s
MSAI Masohi 6.02 280 P Pb 04 01 13.3 -5.4
MSAI S **Sn 04 02 13.3 +2.1**
MTN Manton Dam 9.17 204 Pn 04 01 47.3 +1.5
SANI Sanana 9.17 284 P **Pn 04 01 45.6 -0.2**
7.9nm,0.6s
SOEI Soe 11.79 243 Pn 04 02 23.3 +1.4
SOEI Soe 11.79 243 P **Pn 04 02 23.1 +1.2**
29nm,0.8s
COEN Coen 12.54 140 Pn 04 02 31.1 -0.9
KNRA Kununurra 12.72 208 Pn 04 02 35.5 +1.1
PMG Port Moresby 13.17 113 Pn **Pn 04 02 42.9 +2.3**
15nm,0.8s,baz=311,slow=9.3,SNR=2.6
PMG LR LR 04 09 39.5
comp=Z,161nm,19.8s,baz=255,slow=46
PMG Port Moresby 13.17 113 Pn **Pn 04 02 40.5 -0.1**
EDFI Ende, Flores 13.79 251 P **Pn 04 02 51.0 +1.8**
3.2nm,1.1s
DAV Davao City (W) 14.69 321 LR LR 04 09 50.5
comp=Z,89nm,18.7s,baz=162,slow=42
WB0 Warramunga Arr 15.29 182 Pn **Pn 04 03 10.8 +1.4**
WB0 IAmb IAmb 04 03 18.9
comp=Z,10nm,1.1s
WRAB Tennant Creek 15.45 182 Pn **Pn 04 03 11.3 -0.3**
WRAB IAmb IAmb 04 03 19.9
comp=Z,9.6nm,0.7s
WB2 Warramunga Arr 15.46 182 Pn 04 03 11.4 -0.3
WB2 IAmb IAmb 04 03 21.3
comp=Z,9.8nm,0.6s
WRA Warramunga Arr 15.46 182 Pn **Pn 04 03 09.1 -2.5**
comp=Z,0.2nm,0.3s,baz=357,slow=13,SNR=14
WRA Sn **Sn 04 05 54.4 -8.3**
comp=Z,0.7nm,0.3s,baz=11,slow=22,SNR=6.6
comp=Z,0.7nm,0.5s
FITZ Fitzroy Crossi 16.34 213 Pn **Pn 04 03 21.0 -2.0**
comp=Z,1.0nm,0.3s,baz=33,slow=13,SNR=35
FITZ Sn Sn 04 06 12.3 -12
comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=6.6
FITZ LR LR 04 09 14.1
comp=Z,47nm,20.0s,baz=22,slow=36
comp=Z,2.0nm,0.3s
FITZ Fitzroy Crossi 16.34 213 Pn 04 03 23.1 +0.1
CTA Charters Tower 19.14 146 P **Pn 04 03 58.4 +0.8**
comp=Z,1.6nm,0.3s,baz=325,slow=11,SNR=28
comp=Z,19nm,0.8s
CTAO Charters Tower 19.14 146 P **Pn 04 03 58.5 +0.8**
AS31 Alice Springs 19.18 183 P **Pn 04 03 58.9 +0.7**
ASAR Alice Springs 19.18 183 P **Pn 04 03 59.1 +1.0**
comp=Z,0.9nm,0.3s,baz=7.9,slow=11,SNR=63
ASAR S Sn 04 07 20.9 -12
comp=Z,0.8nm,0.7s,baz=3.8,slow=13,SNR=3.0
comp=Z,3.8nm,0.6s
ASAR Alice Springs 19.18 183 P **P 04 03 58.6 +1.4**
MJAR Matsushiro Arr 40.84 4 P P 04 07 20.4 +5.3
comp=Z,0.9nm,0.8s,baz=182,slow=7.4,SNR=2.4
comp=Z,0.9nm,0.8s
KSAR Wonju Array Be 42.13 352 P **P 04 07 23.8 -1.9**
KSRS Korea Array 42.13 352 LR LR 04 23 22.9
comp=Z,10nm,21.9s,baz=225,slow=34
ENH Enshi 42.17 326 P **P 04 07 25.4 -0.8**
ENH IAmb IAmb 04 07 44.5

comp=Z,11nm,1.3s
RPZ Rata Peaks 50.51 146 LR LR 04 27 29.1
comp=Z,63nm,18.9s,baz=252,slow=33
MK31 Makanchi Array 68.84 324 P **P 04 10 39.3 +1.4**
MK31 IAmb IAmb 04 11 01.7
comp=Z,1.3nm,1.1s
MKAR Makanchi Array 68.84 324 P **P 04 10 38.5 +0.7**
ZALV Zalesovo Beam 71.52 331 P **P 04 10 54.6 +0.5**
KBL Kabul 72.90 308 P **P 04 11 02.5 -0.6**
KURK Kurchatov 72.94 326 P **P 04 11 02.9 +0.2**
KURK IAmb IAmb 04 11 13.1
comp=Z,2.2nm,0.9s
QSPA South Pole Qui 85.56 180 LR LR 04 50 19.5
comp=Z,30nm,20.2s,baz=330,slow=36

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*JMA **02** 04:01:45.8±0.2, 29°.4N±0°.7×14°.0E±°, h430km±3km, MV3.4/18, NEAR TORISHIMA IS*
*IDC **02** 04:01:45.4±1.0, 29°.25N×139°.76E, h414km±23km, mb2.9/4, mbtmp3.7/8, Error ellipse: s-maj=79.9km s-min=12.3km az=72.0*
ISC 02 04:01:45.4±0.8, 29°.24N±0°.08×139°.5E±0°.2, h400km, n14, σ1°37/18, mb3.3/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima 3.19 131**			P	**Pn**	**04 02 51.1**	**+0.9**
CBIJ S **S 04 03 42.8 +0.1**
JCJ Chichijima 3.19 131 P **Pn 04 02 50.8 +0.5**
31nm,0.4s,baz=6.5,slow=20,SNR=29
JCJ S **S 04 03 42.2 -0.5**
116nm,0.3s,baz=301,slow=23,SNR=25
JHH2 Haha-jima-NKT2 3.51 137 S **S 04 03 48.1 +0.3**
JHJ Hachijo jima 2 3.88 4 P **Pn 04 02 58.3 +2.1**
19nm,0.3s,baz=106,slow=22,SNR=13
JHJ S **S 04 03 55.0 +1.3**
51nm,0.7s,baz=131,slow=19,SNR=3.2
JIE Ise 5.66 336 *e*P **Pn 04 03 17.8 +3.6**
BSO4 Boso 4 5.78 7 S **S 04 04 27.1 -1.7**
JRY Ryogami san 6.78 356 P **P 04 03 27.6 +0.5**
JRY S **S 04 04 48.4 -0.7**
JAG Ashikaga 7.17 360 P **P 04 03 30.7 -0.7**
MJAR Matsushiro Arr 7.37 352 P **Pn 04 03 32.5 -0.6**
0.7nm,0.4s,baz=166,slow=10.0,SNR=5.0
USRK Ussuriysk Ar. 16.09 340 P **P 04 05 10.2 +0.8**
1.9nm,0.5s,baz=144,slow=9.8,SNR=7.0
MKAR Makanchi Array 47.29 308 P **P 04 09 40.0 -0.6**
0.2nm,0.5s,baz=37,slow=8.1,SNR=1.7
0.2nm,0.5s
WRA Warramunga Arr 49.15 186 P **P 04 09 54.0 -0.8**
0.6nm,0.3s,baz=6.0,slow=8.0,SNR=1.7
0.6nm,0.3s
FINES FINESS Array B 74.98 333 P **P 04 12 42.9 -0.9**
0.8nm,0.6s,baz=72,slow=6.2,SNR=5.3
0.8nm,0.6s
NOA NORSAR Array B 80.74 337 P **P 04 13 14.1 -1.1**
0.5nm,0.9s,baz=52,slow=6.3,SNR=1.4
0.5nm,0.9s

HEL 02 04:04:04.9±0.5, 67°.84N×20°.26E, h0km, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara 0.69 71**			PG	Pg	04 04 16.1	-1.9
baz=255
LANU SG Sg 04 04 26.4 -0.5
KIF Kilpisjarvi 1.19 9 *e*P Pg 04 04 26.7 -1.0
KIF Kilpisjarvi 1.19 9 PG Pg 04 04 27.1 -0.6
baz=191
KIF MSG 04 04 42.0
comp=Z,2.4nm,0.2s
KIF SB Sg 04 04 42.4 -0.6
PAJU Pajala 1.37 125 PG Pg 04 04 28.7 -2.4
PAJU SG Sg 04 04 47.8 -1.1
HEF Hetta 1.40 64 *e*P Pg 04 04 28.5 -3.1
HEF Hetta 1.40 64 MSG 04 04 46.9
comp=Z,1.2nm,0.2s
HEF SG Sg 04 04 48.8 -0.8
ERTU Ertsjaerv 1.49 149 PG Pn 04 04 31.6 -1.3
baz=331
ERTU SG Sg 04 04 51.7 -1.0
KLF Kolari 1.55 111 PG Pn 04 04 33.7 0.0
KLF SG Sn 04 04 53.6 -0.8
KTK1 Kautokeino 1.61 42 SN Sg 04 04 57.3 +0.7
TOF Tornio 2.38 136 MSG 04 05 15.4
comp=Z,1.3nm,0.2s
TOF SG Sb 04 05 17.9 -0.5
RNF Rovaniemi 2.56 116 PB Pn 04 04 48.6 +1.1

KRSC 02 04:10:53.5±1.6, 54°.41N×168°.09E, h25km±30km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering 1.46 304**			*e*P	Pb	04 11 19.1	-0.9
BKI *e*S Sb 04 11 39.0 +1.0
KBTR Krutoberegovo 3.51 303 P Pn 04 11 48.9 +2.5
MKZ Mys Kozlova 3.71 275 *e*P Pn 04 11 53.2 +4.0
MKZ *e*S Sn 04 12 35.8 +3.8
TUMR Tumrok 4.67 284 *e*P Pn 04 12 07.9 +5.4
SPN Mys Shipunski 4.96 258 *e*P Pn 04 12 10.9 +4.5
SPN S Sn 04 13 08.0 +5.1
SDLR Sedlovina 5.57 262 *e*P Pn 04 12 19.4 +4.6
KRX Arik 5.68 263 *e*P Pn 04 12 21.2 +4.8
GNL Ganaly 6.02 267 *e*P Pn 04 12 26.5 +5.5
RUS Russkaya 6.06 255 *e*P Pn 04 12 25.7 +4.3
RUS S Sn 04 13 35.2 +5.4

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*HVO **02** 04:34:06.8±0.9, 19°.302N±0°.010×155°.21W±0°.01, h2km±6km, ML2.6/25, ML2.3/42(NEIC), Error ellipse: s-maj=2.1km s-min=0.9km az=122.0*
NEIC 02 04:34:07.6±0.5, 19°.32N±0°.01×155°.21W±0°.01, h7km±1km, Error ellipse: s-maj=2.5km s-min=1.2km az=139.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUH	**Pauahi 0.05 358**			Pg	Pg	04 34 09.4	0.0
KNHH Kane Nui o Ham 0.07 35 Pg 04 34 09.6 0.0
HLP Hilina Pali 0.09 255 Pg 04 34 09.8 0.0
HLP Hilina Pali 0.09 255 Sg 04 34 12.2 +0.8
HLP Hilina Pali 0.09 255 IAML 04 34 10.6
comp=N,723nm,0.1s
HLP IAML 04 34 10.6
comp=E,861nm,0.1s
KKO Keanakako`i 0.09 328 Pg 04 34 10.0 +0.1
KKO Sg 04 34 12.4 +0.9
KKO Keanakako`i 0.09 328 IAML 04 34 12.5
comp=E,2μm,0.1s
RIM Rim 0.10 323 Pg 04 34 10.0 0.0
RIM Sg 04 34 12.2 +0.6
RIM Rim 0.10 323 IAML 04 34 12.5
comp=E,1μm,0.2s
RIM IAML 04 34 12.5
comp=N,3μm,0.3s
BYL Byron's Ledge 0.10 335 Pg 04 34 10.0 0.0
BYL Sg 04 34 12.5 +0.8
BYL Byron's Ledge 0.10 335 IAML 04 34 12.7
comp=E,1μm,0.3s
BYL IAML 04 34 12.8
comp=N,1μm,0.4s
SDHHI Sand Hill 0.10 313 Pg 04 34 10.0 0.0
SDHHI Sand Hill 0.10 313 IAML 04 34 12.7
comp=N,2μm,0.5s
HATHI Halema'uma'u T 0.11 336 Pg 04 34 10.2 0.0
HATHI Sg 04 34 12.9 +0.9
HATHI Halema'uma'u T 0.11 336 IAML 04 34 13.0
comp=N,1μm,0.5s
HATHI IAML 04 34 13.2
comp=E,1μm,0.3s
OBL Observatory Le 0.12 326 Pg 04 34 10.3 0.0
OBL Observatory Le 0.12 326 IAML 04 34 11.9
comp=N,1μm,0.7s
OBL IAML 04 34 12.3
comp=E,1μm,0.7s
SBLHI Steaming Bluff 0.12 334 Pg 04 34 10.2 0.0
SBLHI Sg 04 34 12.9 +0.8
SBLHI Steaming Bluff 0.12 334 IAML 04 34 13.2
comp=N,1μm,0.3s
SBLHI IAML 04 34 13.2
comp=E,924nm,0.3s

WRMHI	**West Rim**	**0.12 317**		Pg	04 34 10.2	-0.1
WRMHI	**West Rim**	**0.12 317**	IAML		04 34 13.2	
	comp=N,1μm,1.3s					
WRMHI			IAML		04 34 13.3	
	comp=E,2μm,0.5s					
UWB	**Uwekahuna B**	**0.12 330**		Pg	04 34 10.3	-0.1
UWB				Sg	04 34 13.1	+0.9
UWB	**Uwekahuna B**	**0.12 330**	IAML		04 34 13.2	
	comp=E,274nm,0.8s					
UWB			IAML		04 34 13.2	
	comp=N,594nm,0.5s					
NPOC	**North of Pu'u**	**0.12 53**		Pg	04 34 10.3	0.0
NPOC	**North of Pu'u**	**0.12 53**	IAML		04 34 13.1	
	comp=E,524nm,0.4s					
NPOC			IAML		04 34 13.9	
	comp=N,492nm,0.3s					
JCUZ	**Jacuzzi**	**0.12 59**		Pg	04 34 10.5	+0.1
JCUZ	**Jacuzzi**	**0.12 59**	IAML		04 34 13.3	
	comp=E,776nm,0.7s					
JCUZ			IAML		04 34 13.9	
	comp=N,420nm,0.4s					
UWE	**Uwekahuna**	**0.13 323**		Pg	04 34 10.4	0.0
UWE				Sg	04 34 13.3	+1.0
UWE	**Uwekahuna**	**0.13 323**	IAML		04 34 13.7	
	comp=E,1μm,0.5s					
UWE			IAML		04 34 13.8	
	comp=N,606nm,0.7s					
RSD	**Rainshed**	**0.15 337**		Pg	04 34 10.6	-0.3
HTC	**Hot Caves**	**0.19 245**		Pg	04 34 11.6	+0.1
AIN	**Ainahou**	**0.24 283**		Pg	04 34 12.3	0.0
AIN				Sg	04 34 16.8	+1.2
AIN	**Ainahou**	**0.24 283**	IAML		04 34 17.8	
	comp=E,2μm,0.2s					
AIN			IAML		04 34 18.1	
	comp=N,3μm,0.2s					
MLH	**Mauna Loa**	**0.24 317**		Pg	04 34 12.4	0.0
MLH	**Mauna Loa**	**0.24 317**	IAML		04 34 18.4	
	comp=N,607nm,0.2s					
MLH			IAML		04 34 18.5	
	comp=E,566nm,0.3s					
HMH	**Humu'ula Sheep**	**0.38 318**		Pg	04 34 15.1	0.0
HMH	**Humu'ula Sheep**	**0.38 318**	IAML		04 34 22.0	
	comp=E,618nm,0.2s					
HMH			IAML		04 34 22.3	
	comp=N,972nm,0.3s					
KHU	**Kahuku**	**0.39 259**		Pg	04 34 14.5	-0.7
KHU				Sg	04 34 20.5	+0.2
KHU	**Kahuku**	**0.39 259**	IAML		04 34 22.8	
	comp=N,271nm,0.9s					
KHU			IAML		04 34 26.2	
	comp=E,491nm,2.8s					
MWH	**Moku'aweowe**	**0.40 295**		Pg	04 34 15.0	-0.5
MWH	**Moku'aweowe**	**0.40 295**	IAML		04 34 22.6	
	comp=E,723nm,0.9s					
MWH			IAML		04 34 28.3	
	comp=N,483nm,0.4s					
MLOA	**Mauna Loa Obse**	**0.40 302**		Pg	04 34 15.4	-0.2
MLOA	**Mauna Loa Obse**	**0.40 302**	IAML		04 34 22.7	
	comp=N,832nm,0.2s					
MLOA			IAML		04 34 23.4	
	comp=E,615nm,0.1s					
POHA	**Pohakuloa**	**0.53 325**		Pg	04 34 16.9	-1.0
POHA				Sg	04 34 25.0	+0.1
POHA	**Pohakuloa**	**0.53 325**	IAML		04 34 25.8	
	comp=E,750nm,0.3s					
POHA			IAML		04 34 25.8	
	comp=E,481nm,1.8s					
HUH	**Hualalai**	**0.69 302**		Pg	04 34 19.4	-1.5

*NIED **02** 04:50:46.5, 40°.88N×142°.87E, h20km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.31; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.98; $M_{\theta\phi}$-1.28; $M_{\phi r}$2.02; Fault plane solution: $M_0$3.27000×10^{14} NP1: ϕ_s236.00000°, δ25.00000°, λ112.00000°. NP2: ϕ_s32.00000°, δ67.00000°, λ80.00000°.*

JMA 02 04:50:46.5±0.3, 40°.9N±0°.4×142°.9E±0°.8, h20km±4km, MV3.8/31, 11D, E OFF AOMORI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**1.11**	**233**	⇓P	Pn	04 51 06.6	-0.4
JARK	**Aomorirokkasho**	**1.15**	**277**	⇓*i*P	Pn	04 51 07.3	-0.2
JARK				⇓*e*S	Sb	04 51 22.2	+0.1
JANG	**Nango**	**1.15**	**244**	⇓P	Pn	04 51 07.5	0.0
JANG				⇓*e*S	Sn	04 51 22.7	0.0
JEM	**Erimo**	**1.15**	**11**	P	Pn	04 51 07.5	0.0
JTH	**Tanohata**	**1.22**	**219**	*i* P	Pn	04 51 08.1	-0.3
JTH				*e*S	Sb	04 51 23.6	-0.5
JAHD	**Aomorihigashid**	**1.22**	**289**	⇓P	Pn	04 51 08.5	0.0
JAHD				⇓*e*S	Sb	04 51 23.5	-0.7
JTM	**Tenmabayashi**	**1.37**	**267**	*e*S	Sn	04 51 28.3	+0.2
JNBK	**Urakawa-nobuka**	**1.40**	**356**	P	Pb	04 51 11.6	-0.4
JOT	**Ohata**	**1.46**	**290**	⇓P	Pn	04 51 12.1	+0.3
JOT				⇓*e*S	Sn	04 51 30.3	-0.1
JKB	**Kayabe**	**1.71**	**307**	⇓P	Pn	04 51 15.7	+0.5
JKB				⇓S	Sn	04 51 36.7	+0.3
JCH	**Churui**	**1.77**	**12**	P	Pn	04 51 16.2	+0.2
JCH				*e*S	Sn	04 51 37.4	-0.5
JMK	**Ichinoseki**	**2.31**	**214**	P	Pn	04 51 25.1	+1.6

*NEIC **02** 05:01:13.0±4.1, 51°.0N±0°.2×171°.0W±0°.1, h16km±8km, Error ellipse: s-maj=24.2km s-min=8.1km az=165.0*

AEIC 02 05:01:32±0.9, 52°.6N±0°.3×172°.8W±0°.2, h179km±5km, ML3.0, mb3.8/11(NEIC), Error ellipse: s-maj=50.6km s-min=7.5km az=166.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.84**	**251**		Pn	05 01 58.4	-0.1
KOFP	**Korovin Flat P**	**0.90**	**248**		Pn	05 01 58.9	0.0
KOFP					Sn	05 02 20.0	+0.5
KOKL	**Mount Kliuchef**	**0.94**	**252**		Pn	05 01 59.4	+0.2
GSTR	**Great Sitkin T**	**2.10**	**257**	Pn	Pn	05 02 08.2	-1.9
GSMY	**Great Sitkin M**	**2.11**	**255**		Pn	05 02 10.4	+0.2
GSMY					Sn	05 02 39.8	0.0
GSTD	**Great Sitkin T**	**2.16**	**256**		Pn	05 02 10.7	-0.1
GSTD					Sn	05 02 40.7	-0.1
GSCK	**Great Sitkin C**	**2.18**	**255**		Pn	05 02 10.8	-0.1
NIKH	**Nikolski High**	**2.39**	**80**		Pn	05 02 12.9	-0.3
NIKH	**Nikolski High**	**2.39**	**80**		Sn	05 02 44.4	-0.9
ADK	**Adak**	**2.53**	**255**	Pn	Pn	05 02 14.7	-0.2
ADK	**Adak**	**2.53**	**255**	Sn	Sn	05 02 46.9	-1.3
KIWB	**Kanaga Island**	**2.81**	**256**	Pn	Pn	05 02 18.6	+0.3
UNV	**Unalaska Valle**	**3.95**	**69**		Pn	05 02 32.3	0.0
SCM	**Sheep Creek Mo**	**16.46**	**46**	P	P	05 05 10.9	-1.2
CCB	**Clear Creek Bu**	**17.55**	**37**	P	P	05 05 24.0	+0.1
CCB				IAmb	IAmb	05 05 24.8	
	comp=Z,5.1nm,1.5s						
HDA	**Harding Lake**	**17.75**	**38**	P	P	05 05 26.5	+0.3
HDA				IAmb	IAmb	05 05 48.7	
	comp=Z,4.5nm,0.9s						
IL31		**17.95**	**37**	P	P	05 05 28.1	-0.2
J25K	**Salcha River,**	**18.45**	**39**	P	P	05 05 33.5	-0.3
J25K				IAmb	IAmb	05 05 34.7	
	comp=Z,4.2nm,0.7s						
DOT	**Dot Lake**	**18.55**	**42**	P	P	05 05 34.4	-0.5
DOT				IAmb	IAmb	05 05 48.5	
	comp=Z,3.8nm,0.9s						
SCRK	**Sand Creek**	**18.71**	**41**	P	P	05 05 36.6	-0.2
J26L	**Joseph Creek**	**19.10**	**40**	P	P	05 05 39.3	-1.6
BCAR	**Beaver Creek A**	**19.30**	**45**	P	P	05 05 43.2	+0.1
K27K	**Chicken**	**19.51**	**42**	P	P	05 05 44.5	-0.7
K27K				IAmb	IAmb	05 05 49.9	
	comp=Z,5.6nm,1.4s						
EGAK	**Eagle**	**20.16**	**41**	P	P	05 05 51.6	-0.5
EGAK				IAmb	IAmb	05 05 52.8	
	comp=Z,3.2nm,0.9s						
DAWY	**Dawson**	**20.64**	**43**	P	P	05 05 54.6	-2.7
DAWY				IAmb	IAmb	05 06 01.0	
	comp=Z,5.9nm,1.4s						

*IDC **02** 05:18:03.9±0.6, 20°.78S×176°.00W, h0km, mb4.1/11, mbtmp4.1/12, ML4.1/1, MS3.7/50, Error ellipse: s-maj=29.2km s-min=18.4km az=130.0*
*NEIC **02** 05:18:04.9±1.3, 20°.9S±0°.1×175°.49W±0°.06, h10km±1km, mb4.5/14, Error ellipse: s-maj=22.7km s-min=7.6km az=345.0*
*NOU **02** 05:18:12.9, 19°.67S×175°.29W, h109km, mb4.6/7, Tonga Islands*

ISC 02 05:18:05.3±0.4, 21°.03S±0°.08×175°.55W±0°.06, h10km, n115, σ2§52/67, mb4.4/15, MS3.8/46, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.63**	**71**		**Pn**	**05 19 26.4**	**-2.7**
NIUE	**Niue**	**5.63**	**71**	P	**Pn**	**05 19 27.1**	**-2.0**
MSVF	**Nonsavu**	**6.87**	**297**	Pn	**Pn**	**05 19 47.1**	**+0.9**
	2.1nm,0.3s,baz=135,slow=12,SNR=24						
MSVF				LR	LR	05 22 02.3	
	comp=Z,1μm,19.4s,baz=110,slow=37						
MSVF	**Nonsavu**	**6.87**	**297**	Pn	**Pn**	**05 19 46.1**	**-0.1**
MSVF	**Nonsavu**	**6.87**	**297**	P	**Pn**	**05 19 47.3**	**+1.1**
AFI	**Afiamalu**	**7.94**	**28**	Pn	**Pn**	**05 20 00.0**	**-0.8**
	2.7nm,0.3s,baz=59,slow=8.7,SNR=4.1						
AFI				Sn	**Sn**	**05 21 30.1**	**-0.8**
	1.2nm,0.3s,baz=66,slow=23,SNR=1.2						
AFI				LR	LR	05 22 22.5	
	comp=Z,190nm,20.8s,baz=196,slow=33						
	12nm,0.5s						
AFI	**Afiamalu**	**7.94**	**28**	Pn	**Pn**	**05 19 58.7**	**-2.2**
RAO	**Raoul Island**	**8.47**	**194**	LR	LR	05 22 49.3	
	comp=Z,465nm,21.2s,baz=42,slow=33						
RAR	**Rarotonga**	**14.73**	**94**	Pn	**Pn**	**05 21 34.0**	**+0.3**
	1.5nm,0.3s,baz=50,slow=19,SNR=2.2						
RAR				LR	LR	05 26 06.2	
	comp=Z,220nm,18.9s,baz=278,slow=32						
MARNC	**Mare, Loyalty**	**15.31**	**265**	Pn	**Pn**	**05 21 41.5**	**-0.1**
PINNC	**Pines Island,**	**15.87**	**261**	Pn	**Pn**	**05 21 49.0**	**+0.2**
LIFNC	**LIFOU**	**16.08**	**268**	Pn	**Pn**	**05 21 50.4**	**-1.2**
LIFNC				IAmb	IAmb	05 22 09.6	
	comp=Z,47nm,0.9s						
OUENC	**Ouen Island, N**	**16.42**	**262**		**Pn**	**05 21 55.7**	**-0.3**
OUENC	**Ouen Island, N**	**16.42**	**262**	P	**P**	**05 22 03.4**	**+4.7**
DZM	**Mont Dzumac**	**16.78**	**263**	*e*Pn	**P**	**05 22 02.5**	**-0.3**
	comp=Z,82nm,1.1s						
DZM				*e*LR	LR	05 25 57.1	
	comp=Z,915nm,24.7s						
DZM	**Mont Dzumac**	**16.78**	**263**	Pn	**P**	**05 22 04.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=90,slow=15,SNR=15						
DZM				LR	LR	05 27 33.6	
	comp=Z,682nm,18.3s,baz=34,slow=35						
DZM	**Mont Dzumac**	**16.78**	**263**		**Pn**	**05 22 00.5**	**-0.2**
DZM				IAmb	IAmb	05 22 10.2	
	comp=Z,32nm,0.9s						
DZM	**Mont Dzumac**	**16.78**	**263**	P	**P**	**05 22 04.9**	**+2.0**
NOUC	**Port Laguerre**	**16.91**	**263**	P	**P**	**05 22 08.9**	**+4.7**
URZ	**Urewera**	**18.31**	**199**	P	**P**	**05 22 14.2**	**-5.2**
	comp=Z,17nm,0.9s,baz=5.2,slow=11,SNR=2.9						
URZ				LR	LR	05 28 21.7	
	comp=Z,712nm,20.0s,baz=96,slow=34						
KOUNC	**Koumac, New Ca**	**18.86**	**268**	P	**P**	**05 22 22.1**	**-3.5**
KOUNC				IAmb	IAmb	05 22 42.3	
	comp=Z,32nm,1.2s						
KOUNC	**Koumac, New Ca**	**18.86**	**268**	P	**Pn**	**05 22 28.7**	**+2.5**
TBI	**Tubuai**	**24.26**	**100**	*e*T	T	05 47 49.9	
	comp=Z,19nm,0.3s						
PAE	**Paea**	**24.72**	**87**	*e*T	T	05 48 29.3	
	comp=Z,13nm,0.3s						
PPT2	**Papeete2**	**24.74**	**87**	*e*LR	LR	05 29 38.6	
	comp=Z,547nm,25.0s						
PPT2	**Papeete2**	**24.74**	**87**	*e*T	T	05 48 30.8	
	comp=Z,15nm,0.3s						
PPT	**Papeete**	**24.75**	**86**	LR	LR	05 30 33.2	
	comp=Z,139nm,21.3s,baz=286,slow=30						
TIAR	**Tiarei**	**24.96**	**87**	*e*T	T	05 48 39.3	
	comp=Z,2.1nm,0.3s						
TVO	**Taravao**	**25.00**	**87**	*e*T	T	05 48 44.4	
	comp=Z,6.9nm,0.3s						
RPZ	**Rata Peaks**	**25.23**	**203**	P	**P**	**05 23 31.9**	**+0.6**
	comp=Z,6.6nm,0.6s,baz=25,slow=14,SNR=2.1						
RPZ				LR	LR	05 33 47.6	
	comp=Z,335nm,20.0s,baz=36,slow=37						
	comp=Z,6.6nm,0.6s						
MEH	**Mehetia**	**26.09**	**88**	*e*T	T	05 50 07.4	
	comp=Z,48nm,0.2s						
HNR	**Honiara**	**26.26**	**292**	LR	LR	05 32 53.6	
	comp=Z,1μm,19.3s,baz=149,slow=34						
ARMA	**Armidale**	**30.92**	**246**	P	**P**	**05 24 22.8**	**+0.3**
ARMA				IAmb	IAmb	05 24 29.9	
	comp=Z,4.4nm,1.0s						
CTA	**Charters Tower**	**35.72**	**265**	LR	LR	05 38 00.6	
	comp=Z,216nm,19.2s,baz=82,slow=34						
CTAO	**Charters Tower**	**35.72**	**265**	P	**P**	**05 25 04.1**	**-0.3**
CTAO				IAmb	IAmb	05 25 08.7	
	comp=Z,8.3nm,0.9s						
TAOE	**Nuku Hiva Isla**	**36.19**	**76**	*e*LR	LR	05 34 47.6	
	comp=Z,417nm,25.8s						
TAOE	**Nuku Hiva Isla**	**36.19**	**76**	*e*T	T	06 02 50.0	
	comp=Z,55nm,0.3s						
RKT	**Rikitea**	**37.58**	**101**	*e*T	T	06 04 26.0	
	comp=Z,22nm,0.3s						
PMG	**Port Moresby**	**37.69**	**282**	LR	LR	05 38 36.2	
	comp=Z,112nm,20.1s,baz=137,slow=33						
PMG	**Port Moresby**	**37.69**	**282**	P	**P**	**05 25 19.7**	**-1.5**
STKA	**Stephens Creek**	**39.63**	**245**	LR	LR	05 40 03.9	
	comp=Z,135nm,19.2s,baz=39,slow=34						
COEN	**Coen**	**39.90**	**273**	P	**P**	**05 25 38.2**	**-1.5**
COEN				IAmb	IAmb	05 25 44.5	
	comp=Z,16nm,1.0s						
AS31	**Alice Springs**	**46.63**	**257**	P	**P**	**05 26 33.1**	**-1.0**
ASAR	**Alice Springs**	**46.63**	**257**	P	**P**	**05 26 31.0**	**-3.1**
	comp=Z,7.0nm,1.1s,baz=99,slow=8.5,SNR=14						
ASAR				PcP	**PcP**	**05 28 08.1**	**0.0**
	comp=Z,0.8nm,0.9s,baz=109,slow=4.8,SNR=1.7						
ASAR				LR	LR	05 46 29.4	
	comp=Z,147nm,18.7s,baz=161,slow=37						
	comp=Z,7.0nm,1.1s						
ASAR	**Alice Springs**	**46.63**	**257**	P	**P**	**05 26 33.8**	**-0.3**
WRA	**Warramunga Arr**	**46.80**	**262**	P	**P**	**05 26 32.4**	**-3.1**
	comp=Z,1.0nm,1.0s,baz=97,slow=5.4,SNR=5.4						
WRA				PcP	**PcP**	**05 28 08.8**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=107,slow=2.6,SNR=2.1						
WRA				LR	LR	05 44 49.5	
	comp=Z,81nm,18.7s,baz=66,slow=35						
	comp=Z,1.0nm,1.0s						
MTN	**Manton Dam**	**51.46**	**270**	P	**P**	**05 27 10.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**55.23**	**262**	LR	LR	05 51 16.2	
	comp=Z,127nm,18.1s,baz=98,slow=36						
SIJI	**Sorong**	**55.59**	**284**	LR	LR	05 49 24.0	
	comp=Z,68nm,21.3s,baz=128,slow=34						
SBA	**Scott Base**	**57.51**	**184**	P	**P**	**05 27 56.2**	**+1.9**
SBA				IAmb	IAmb	05 28 06.2	
	comp=Z,6.7nm,1.1s						
VNDA	**Vanda**	**57.60**	**186**	P	**P**	**05 27 57.8**	**+2.8**
	comp=Z,1.5nm,0.8s,baz=360,slow=5.2,SNR=13						
VNDA				LR	LR	05 48 42.8	
	comp=Z,38nm,21.5s,baz=10,slow=32						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**57.60**	**186**	P	**P**	**05 27 55.2**	**+0.3**
VNDA				IAmb	IAmb	05 27 59.7	
	comp=Z,3.8nm,1.1s						
BATI	**Baumata**	**59.23**	**270**	LR	LR	05 52 08.9	
	comp=Z,118nm,21.5s,baz=170,slow=35						
RPN	**Rapa Nui**	**60.16**	**110**	LR	LR	05 50 17.7	
	comp=Z,34nm,18.7s,baz=292,slow=32						
NWAO	**Narrogin (SRO)**	**60.18**	**243**	LR	LR	05 52 03.5	
	comp=Z,79nm,19.5s,baz=15,slow=34						
DAV	**Davao City (W)**	**64.17**	**289**	LR	LR	05 54 41.4	
	comp=Z,22nm,18.1s,baz=152,slow=34						
CASY	**Casey**	**64.47**	**206**	P	**P**	**05 28 43.0**	**+1.2**
QSPA	**South Pole Qui**	**69.05**	**180**	LR	LR	05 53 59.9	
	comp=Z,56nm,21.7s,baz=24,slow=31						
MJAR	**Matsushiro Arr**	**72.01**	**322**	LR	LR	05 55 30.7	
	comp=Z,30nm,21.1s,baz=128,slow=31						
SHEM	**Shemya Is, Ala**	**73.99**	**353**	LR	LR	05 58 29.2	
	comp=Z,56nm,19.0s,baz=296,slow=33						
PETK	**Petropavlovsk-**	**77.39**	**344**	LR	LR	05 56 49.4	
	comp=Z,65nm,21.2s,baz=131,slow=30						
LPIG	**La Paz**	**77.72**	**58**	LR	LR	05 59 55.2	
	comp=Z,66nm,18.1s,baz=196,slow=32						
PFO	**Pinyon Flats O**	**78.23**	**47**	LR	LR	05 55 49.0	
	comp=Z,38nm,19.8s,baz=198,slow=29						
KSRS	**Korea Array**	**78.81**	**317**	LR	LR	05 58 49.6	
	comp=Z,18nm,21.7s,baz=125,slow=31						
YBH	**Yreka Blue Hor**	**79.29**	**37**	LR	LR	05 57 43.8	
	comp=Z,49nm,18.6s,baz=232,slow=30						
NVAR	**Mina Array Bea**	**79.85**	**42**	P	**P**	**05 30 15.8**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=222,slow=8.6,SNR=5.9						
NVAR				LR	LR	06 00 18.9	
	comp=Z,50nm,20.0s,baz=279,slow=32						
	comp=Z,0.6nm,0.7s						
PMSA	**Palmer Station**	**79.89**	**156**	LR	LR	06 01 09.7	
	comp=Z,36nm,19.8s,baz=274,slow=32						
KDAK	**Kodiak Island**	**80.82**	**12**	LR	LR	05 59 08.6	
	comp=Z,39nm,20.5s,baz=224,slow=31						
MAW	**Mawson**	**81.84**	**199**	P	**P**	**05 30 23.6**	**-0.7**
	comp=Z,5.1nm,0.8s,baz=78,slow=11,SNR=6.3						
MAW				LR	LR	06 05 45.9	
	comp=Z,75nm,18.1s,baz=109,slow=35						
	comp=Z,5.1nm,0.8s						
ELK	**Elko**	**83.13**	**42**	LR	LR	06 03 46.5	
	comp=Z,64nm,18.1s,baz=246,slow=33						
H03S2	**Juan Fernandez**	**83.80**	**124**	T	T	07 02 39.1	
	baz=247						
H03S1	**Juan Fernandez**	**83.81**	**124**	T	T	07 02 41.4	
	baz=247						
H03S3	**Juan Fernandez**	**83.82**	**124**	T	T	07 02 40.2	
	baz=247						
H03N2	**Juan Fernandez**	**83.94**	**123**	T	T	07 02 50.6	
	baz=249,slow=71						
H03N3	**Juan Fernandez**	**83.94**	**123**	T	T	07 02 53.5	
	baz=249,slow=71						
H03N1	**Juan Fernandez**	**83.95**	**123**	T	T	07 02 50.1	
	baz=249,slow=71						
KLR	**Kul'dur**	**84.16**	**328**	LR	LR	06 01 49.3	
	comp=Z,66nm,21.8s,baz=182,slow=31						
MA2	**Magadan**	**84.92**	**344**	LR	LR	06 02 40.3	
	comp=Z,37nm,19.8s,baz=136,slow=32						
TXAR	**Lajitas Array**	**85.42**	**56**	P	**P**	**05 30 44.6**	**+1.2**
	comp=Z,1.3nm,0.9s,baz=217,slow=8.6,SNR=12						
TXAR				LR	LR	06 05 21.1	
	comp=Z,34nm,18.9s,baz=236,slow=33						
	comp=Z,1.3nm,0.9s						
ANMO	**Albuquerque**	**85.96**	**50**	LR	LR	06 04 49.5	
	comp=Z,36nm,18.5s,baz=247,slow=33						
NEW	**Newport**	**86.48**	**35**	LR	LR	06 03 54.4	
	comp=Z,29nm,18.6s,baz=252,slow=32						
PLCA	**Paso Flores**	**87.24**	**133**	P	**P**	**05 30 54.0**	**+1.7**
	comp=Z,2.7nm,1.1s,baz=328,slow=6.8,SNR=4.4						
	comp=Z,2.7nm,1.1s						
SNAA	**Sanae**	**87.41**	**178**	LR	LR	06 07 59.6	
	comp=Z,26nm,18.8s,baz=196,slow=34						
DLBC	**Dease Lake**	**87.66**	**22**	LR	LR	06 03 26.6	
	comp=Z,32nm,19.2s,baz=220,slow=31						
CMIG	**Matias Romero**	**87.67**	**71**	LR	LR	06 00 09.1	
	comp=Z,53nm,21.3s,baz=256,slow=29						
PDAR	**Pinedale Array**	**87.79**	**42**	P	**P**	**05 30 56.0**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=329,slow=1.6,SNR=1.8						
PDAR				LR	LR	06 01 43.5	
	comp=Z,24nm,21.9s,baz=271,slow=30						
	comp=Z,0.1nm,0.4s						
ILAR	**Eielson Array**	**88.33**	**12**	P	**P**	**05 30 56.7**	**0.0**
	comp=Z,0.8nm,1.0s,baz=218,slow=6.8,SNR=3.1						
ILAR				LR	LR	06 01 56.1	
	comp=Z,43nm,21.6s,baz=154,slow=30						
	comp=Z,0.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**92.45**	**289**	P	**P**	**05 31 15.3**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=123,slow=3.3,SNR=1.0						
	comp=Z,0.6nm,0.3s						
YAK	**Yakutsk**	**93.47**	**337**	LR	LR	06 10 41.2	
	comp=Z,17nm,18.4s,baz=89,slow=34						
NNA	**Nana**	**93.72**	**104**	LR	LR	06 02 58.3	
	comp=Z,53nm,21.9s,baz=257,slow=29						
ATAH	**Atahualpa**	**94.10**	**99**	LR	LR	06 04 02.3	
	comp=Z,30nm,20.2s,baz=238,slow=29						
INK	**Inuvik**	**94.19**	**14**	LR	LR	06 08 20.7	
	comp=Z,26nm,19.6s,baz=168,slow=32						
LVC	**Limon Verde**	**96.37**	**117**	LR	LR	06 05 01.6	
	comp=Z,30nm,20.3s,baz=246,slow=29						
TIXI	**Tiksi**	**99.85**	**345**	LR	LR	06 11 04.3	
	comp=Z,68nm,21.9s,baz=180,slow=32						
ARCES	**ARCESS Array B**	**129.83**	**351**	PKP	**PKPdf**	**05 37 13.1**	**-1.2**
	comp=Z,2.6nm,0.9s,baz=57,slow=3.3,SNR=1.5						
FINES	**FINESS Array B**	**136.89**	**345**	PKP	**PKiKP**	**05 37 28.8**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=32,slow=5.6,SNR=1.7						
AKASG	**Malin Array Be**	**144.56**	**333**	PKP	**PKPab**	**05 37 38.9**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=41,slow=4.0,SNR=12						
BRTR	**Keskin Array B**	**148.88**	**313**	PKPbc	**PKPbc**	**05 37 51.7**	**-2.0**
	comp=Z,3.1nm,1.0s,baz=121,slow=5.9,SNR=10.0						
CLL	**Collm**	**149.04**	**350**	*e*PKPbc	**PKPbc**	**05 37 52.0**	**-1.5**
CLL				*e*PKPab	**pPKPbc**	**05 37 56.0**	**-0.4**
CLL				*i* x	x	05 38 00.5	
	comp=Z,6.0nm,0.8s						
OSTC	**Ostas**	**149.10**	**345**	*e*PKP	**PKPab**	**05 37 55.7**	**-2.2**
DPC	**Dobruska-Polom**	**149.27**	**345**	*e*PKP	**PKPbc**	**05 37 54.0**	**-0.2**
DPC				*ex*	x	05 38 01.1	
KRLC	**Kraliky**	**149.41**	**344**	*e*PKP	**PKPab**	**05 38 00.4**	**+1.2**
KRLC				*ex*	x	05 38 03.9	
MAUC	**Maruska**	**149.78**	**343**	*e*PKP	**PKPbc**	**05 37 53.4**	**-2.0**
PRU	**Pruhonice**	**150.01**	**347**	*e*PKP	**PKPbc**	**05 37 55.3**	**-0.6**
KHC	**Kasperske Hory**	**151.02**	**348**	*e*PKP	**PKiKP**	**05 37 59.9**	**+0.9**
CKRC	**Cesky Krumlov**	**151.16**	**346**	*e*PKP	**PKPdf**	**05 37 54.0**	**+1.1**
CKRC				*ex*	x	05 38 03.2	
GERES	**GERESS Array B**	**151.27**	**347**	PKPbc	**PKPbc**	**05 37 58.1**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=44,slow=3.0,SNR=4.0						
CONA	**Conrad Observa**	**151.62**	**344**	*e*P	**PKPab**	**05 38 15.2**	**+6.8**
	comp=Z,11nm,1.8s						
RONA	**Rosalia, Austr**	**151.72**	**343**	*e*P	**PKPab**	**05 38 13.2**	**+

0.5nm,0.5s,baz=76,slow=5.9,SNR=6.8
0.5nm,0.5s

*ZUR **02** 05:46:30.8, 46°.03N×6°.87E, h5km±1km, MLh1.9/25, Error ellipse: s-maj=2.8km s-min=1.0km az=315.0*
*GEN **02** 05:46:30.3, 46°.03N×6°.90E, h6km±1km, Ml1.6*
*ROM **02** 05:46:31.6±0.1, 45°.999N±0°.004×6°.952E±0°.004, h11km, ML1.5/8, Error ellipse: s-maj=0.5km s-min=0.3km az=203.0*
*STR **02** 05:46:31.1±0.3, 46°.N±2°.°×°.°±°, h0km, MLv2.1/24, Error ellipse: s-maj=0.0km s-min=0.0km az=127.1, preliminary*
*LDG **02** 05:46:31.0±0.0, 46°.01N×6°.90E, h2km, Md2.5/2, Ml2.3/22, Error ellipse: s-maj=0.8km s-min=0.7km az=95.0*

ISC 02 05:46:29.8±0.8, 46°.01N±0°.01×6°.88E±0°.01, h16km±5km, n108, σ0°.91/170, 19C-12D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEMOS	Emosson Stauma	0.07	36	⇑Pg	Pg	05 46 32.6	-0.5
SEMOS				Sg	Sg	05 46 33.9	-1.6
OGSI	Sixt	0.10	301	⇓Pg	Pb	05 46 32.7	-0.7
OGSI				Sg	Sb	05 46 34.1	-1.8
OGSI	Sixt	0.10	301	⇓Pg	Pb	05 46 32.7	-0.7
OGSI				Sg	Sb	05 46 34.0	-1.8
SALAN	Lac Salanfe	0.14	26	⇑Pg	Pb	05 46 33.8	-0.5
SALAN	Lac Salanfe	0.14	26	P	Pb	05 46 33.8	-0.5
SALAN				S	Sb	05 46 35.8	-1.5
SMAO	Martigny, Rue	0.16	58	⇑Pg	Pg	05 46 34.3	+0.4
REMY	Saint-Rhmy-en	0.26	132	⇓Pg	Pg	05 46 36.7	+1.0
REMY	Saint-Rhmy-en	0.26	132	P	Pg	05 46 36.7	+1.0
REMY				S	Sg	05 46 40.8	+1.1
REMY	Saint-Rhmy-en	0.26	132	⇓P	Pg	05 46 36.7	+1.0
REMY				S	Sg	05 46 40.8	+1.1
REMY				AML	AML		
	comp=E,217μm,0.3s						
REMY				AML	AML		
	comp=N,212μm,0.8s						
REMY				AML	AML		
	comp=N,212μm,1.2s						
MRGE	Morge	0.28	153	P	Pg	05 46 36.8	+1.0
MRGE				S	Sg	05 46 40.9	+0.9
MRGE	Morge	0.28	153	⇓P	Pg	05 46 36.8	+1.0
MRGE				S	Sg	05 46 40.9	+0.9
MRGE				AML	AML		
	comp=E,622μm,0.3s						
MRGE				AML	AML		
	comp=N,536μm,0.3s						
GRYON	Gryon	0.29	34	⇑Pg	Pb	05 46 36.3	-0.3
SAIG	Aigle Rue de l	0.31	11	⇑Pg	Pg	05 46 36.6	+0.3
AIGLE	Aigle	0.33	9	⇑Pg	Pg	05 46 36.9	+0.2
AIGLE	Aigle	0.33	9	Sg	Sg	05 46 41.0	-0.5
AIGLE	Aigle	0.33	9	⇑Pg	Pg	05 46 36.9	+0.2
RSL	Roselend	0.37	209	⇑Pg	Pb	05 46 38.0	-0.1
RSL	Roselend	0.37	209	P	Pb	05 46 38.0	-0.1
RSL				S	Sg	05 46 42.9	+0.1
RSL	Roselend	0.37	209	⇑Pg	Pb	05 46 37.9	-0.1
RSL				Sg	Sg	05 46 42.8	+0.1
DIX	Grande Dixence	0.37	80	⇓Pg	Pb	05 46 38.4	+0.2
DIX				Sg	Sb	05 46 43.6	-0.3
DIX	Grande Dixence	0.37	80	P	Pb	05 46 38.4	+0.2
DIX				S	Sb	05 46 43.6	-0.3
DIX	Grande Dixence	0.37	80	⇓P	Pb	05 46 38.4	+0.2
DIX				S	Sb	05 46 43.6	-0.3
DIX				AML	AML		
	comp=N,393μm,0.2s						
DIX				AML	AML		
	comp=E,95μm,0.1s						
DIX				AML	AML		
	comp=N,393μm,0.2s						
DIX	Grande Dixence	0.37	80	⇓Pg	Pb	05 46 38.4	+0.2
SENIN	Lac Senin/Sane	0.46	40	⇑Pg	Pg	05 46 39.5	+0.4
SENIN				Sg	Sg	05 46 45.6	+0.4
LPL	La Plagne	0.51	192	*e*Pg	Pb	05 46 40.8	+0.4
LPL				*e*Sg	Sb	05 46 47.6	-0.1
	comp=N,18nm,0.2s						
LPG	La Plagne	0.52	190	*e*Pg	Pg	05 46 41.2	+0.9
LPG				*e*Sg	Sb	05 46 48.3	+0.1
	comp=N,27nm,0.3s						
VANNI	Vissoie, Val d	0.54	68	P	Pn	05 46 41.7	-1.2
VANNI				S	Sg	05 46 48.7	+1.0
LSD	Lago del Serru	0.58	162	P	Pn	05 46 42.4	-1.2
LSD				S	Sg	05 46 49.9	+0.7
LSD	Lago del Serru	0.58	162	⇓P	Pn	05 46 42.4	-1.2
LSD				S	Sg	05 46 49.9	+0.7
LSD				AML	AML		
	comp=E,162μm,0.2s						
LSD				AML	AML		
	comp=N,90μm,0.2s						
LSD				AML	AML		
	comp=N,90μm,0.2s						
LSD				AML	AML		
	comp=E,162μm,0.2s						
CIRO	Champorcher	0.63	130	P	Pn	05 46 43.1	-1.2
CIRO				S	Sg	05 46 51.5	+0.7
CIRO	Champorcher	0.63	130	⇑P	Pn	05 46 43.1	-1.2
CIRO				S	Sg	05 46 51.5	+0.7
CIRO				AML	AML		
	comp=E,31μm,1.1s						
CIRO				AML	AML		
	comp=E,31μm,1.1s						
CIRO				AML	AML		
	comp=N,39μm,0.4s						
CIRO				AML	AML		
	comp=E,31μm,0.9s						
GIMEL	St. Georges /	0.67	321	Pg	Pg	05 46 43.7	+0.7
GIMEL	St. Georges /	0.67	321	Sg	Sg	05 46 52.8	+0.9
SATI	Passo dei Sala	0.70	101	P	Pg	05 46 43.9	+0.3
SATI				S	Sg	05 46 53.6	+0.6
SATI	Passo dei Sala	0.70	101	⇑P	Pg	05 46 44.0	+0.3
SATI				AML	AML		
	comp=E,30μm,1.2s						
SATI				AML	AML		
	comp=N,35μm,0.4s						
SATI				AML	AML		
	comp=N,35μm,0.4s						
SATI				AML	AML		
	comp=E,30μm,0.8s						
LAUCH	Lauchernalp	0.74	57	⇑Pg	Pg	05 46 45.0	+0.7
LAUCH	Lauchernalp	0.74	57	P	Pg	05 46 45.0	+0.7
LAUCH				S	Sg	05 46 55.0	+0.9
MMK	Mattmark	0.76	87	P	Pg	05 46 45.0	+0.4
MMK				S	Sg	05 46 55.0	+0.4
MMK	Mattmark	0.76	87	⇓P	Pg	05 46 45.0	+0.4
MMK				S	Sg	05 46 55.0	+0.4
MMK				AML	AML		
	comp=N,28μm,0.7s						
MMK				AML	AML		
	comp=E,23μm,1.4s						
MMK				AML	AML		
	comp=E,23μm,0.6s						
TORNY	Torny/Romont	0.76	4	Pg	Pn	05 46 45.6	-0.3
TORNY				Pn	Pg	05 46 48.2	+3.5
TORNY	Torny/Romont	0.76	4	Sg	Sg	05 46 56.1	+1.4
TRAV	Traversella	0.79	129	P	Pn	05 46 45.9	-0.4
TRAV				S	Sg	05 46 55.8	+0.2
TRAV	Traversella	0.79	129	⇑P	Pn	05 46 45.9	-0.4
TRAV				AML	AML		
	comp=E,41μm,0.2s						
TRAV				AML	AML		
	comp=N,50μm,0.3s						
CABF	La Chapelle	0.81	318	*e*Pg	Pn	05 46 46.4	-0.2
CABF				*e*Sn	Sn	05 46 59.9	+1.5
	comp=N,16nm,0.3s						
OGMO	Fort Saint-Gob	0.82	190	P	Pn	05 46 46.4	-0.3
OGMO				S	Sn	05 46 57.4	-1.1
OGMO	Fort Saint-Gob	0.82	190	⇓Pg	Pn	05 46 46.2	-0.5
OGMO				Sg	Sn	05 46 57.8	-0.7
SIMPL	Simplonpass	0.82	74	P	Pg	05 46 46.3	+0.4
SIMPL				S	Sg	05 46 57.2	+0.4
OG35	Corcelles	0.91	272	⇓Pg	Pg	05 46 48.0	+0.5
OG35				Pn	Pn	05 46 50.2	+2.2
OG35				Sg	Sn	05 47 00.1	-0.7
OG35				Sn	Sg	05 47 03.9	+4.5
OGSM	Saint Maurice	0.92	244	Pg	Pg	05 46 48.5	+0.9
OGSM				Sg	Sn	05 47 01.0	0.0
BRANT	Les Verrieres	0.97	343	Pg	Pg	05 46 49.5	+1.0
BRANT	Les Verrieres	0.97	343	Sg	Sn	05 47 02.9	+0.7
BNI	Bardonecchia	0.97	188	P	Pg	05 46 49.0	+0.3
BNI				S	Sn	05 47 02.0	-0.3
BNI	Bardonecchia	0.97	188	P	Pg	05 46 49.2	+0.6
BNI				S	Sn	05 47 02.4	0.0
RIVEL	MONT RIVEL	1.00	319	Pg	Pn	05 46 49.1	0.0
RIVEL				Sg	Sg	05 47 03.0	+0.8
RRL	Rocca Remolon	1.09	183	P	Pg	05 46 51.6	+0.7
RRL	Rocca Remolon	1.09	183	P	Pg	05 46 51.9	+1.0
RRL				S	Sg	05 47 05.9	+0.6
MONC	Moncucco Torin	1.19	142	P	Pg	05 46 52.4	-0.5
BHB	Bricherasio	1.20	167	⇑P	Pg	05 46 54.1	+1.1
BHB				S	Sg	05 47 09.6	+0.9
CHMF	Charmoille	1.25	353	Pg	Pg	05 46 53.7	-0.1
CHMF				Sg	Sg	05 47 12.0	+2.0
MBDF	Montbardon	1.29	183	*e*Pn	Pg	05 46 54.2	-0.4
MBDF	Montbardon	1.29	183	*e*Pg	Pg	05 46 55.4	+0.8
MBDF				*e*Sg	Sg	05 47 11.9	+0.4
	comp=N,15nm,0.6s						
ORIF	Oris-en-Rattie	1.30	213	*e*Pn	Pg	05 46 54.6	-0.3
ORIF				*e*Sg	Sg	05 47 12.9	+1.0
	comp=N,9.5nm,0.3s						
ORIF	Oris-en-Rattie	1.30	213	Sg	Sg	05 47 11.8	-0.1
ORIF	Oris-en-Rattie	1.30	213	⇑Pn	Pg	05 46 55.0	+0.1
BOUC	Bouclans	1.31	341	Pg	Pg	05 46 55.5	+0.6
BOUC				Sg	Sg	05 47 12.3	+0.3
BOURR	Bourrignon	1.40	10	⇑Pn	Pg	05 46 57.4	+0.6
BALST	Balsthal	1.44	23	Sg	Sg	05 47 18.3	+2.1
BALST	Balsthal	1.44	23	⇑Pn	Pg	05 46 57.9	+0.5
MUGIO	Muggio	1.51	93	P	Pg	05 46 58.8	0.0
MUGIO				S	Sg	05 47 17.6	-0.8
MUGIO				AML	AML		
	comp=E,15μm,0.6s						
MUGIO				AML	AML		
	comp=N,24μm,0.6s						
SURF	Saint Ours	1.53	182	Pn	Pg	05 46 59.9	+0.6
JAUF	Jausiers	1.59	183	Pn	Pg	05 47 00.4	+0.1
SULZ	Cheisacher	1.73	29	Pg	Pg	05 47 03.6	+0.5
SULZ	Cheisacher	1.73	29	Pn	Pb	05 47 00.4	-0.8
SULZ	Cheisacher	1.73	29	Sn	Sg	05 47 26.5	+0.9
PLYF	Puligny Montra	1.75	303	Pn	Pg	05 47 03.5	+0.1
SSB	Saint Sauveur	1.80	247	⇑Pn	Pg	05 47 04.7	+0.4
SSB				Sn	Sg	05 47 27.2	-0.4
HINF	Hinteralfeld	1.80	359	*e*Pn	Pn	05 47 01.2	+1.0
HINF	Hinteralfeld	1.80	359	*e*Pg	Pg	05 47 04.6	+0.2
HINF				*e*Sg	Sg	05 47 27.5	-0.3
	comp=N,4.5nm,0.2s						
ENR	Entracque	1.83	168	S	Sg	05 47 31.0	+2.4
MOF	Molkenrain	1.85	5	Pn	Pn	05 47 01.8	+1.0
MOF				Pg	Pg	05 47 05.4	+0.2
VIVF	Saint-Julien-I	1.94	234	*e*Pg	Pg	05 47 07.4	+0.4
VIVF				*e*Sn	Sb	05 47 27.2	-1.4
	comp=N,12nm,0.2s						
HAU	Haudompre	2.02	350	*e*Pn	Pn	05 47 04.2	+1.0
HAU	Haudompre	2.02	350	*e*Pg	Pg	05 47 08.7	+0.1
HAU				*e*Sg	Sg	05 47 34.4	-0.5
	comp=N,5.1nm,0.2s						
KIZ	Kirchzarten	2.07	20	Pg	Pg	05 47 09.3	-0.1
KIZ	Kirchzarten	2.07	20	Pn	Pn	05 47 04.2	+0.4
SLE	Schleitheim	2.07	32	Pg	Pg	05 47 09.7	+0.2
SLE	Schleitheim	2.07	32	Pn	Pn	05 47 04.5	+0.7
SMF	Signal de Mont	2.20	288	*e*Pg	Pg	05 47 11.9	0.0
SMF				*e*Sn	Sn	05 47 33.4	+0.9
	comp=N,4.3nm,0.2s						
ECH	Echery	2.21	5	Pn	Pn	05 47 06.6	+0.8
SMRF	Simiane la Rot	2.24	205	*e*Pg	Pg	05 47 12.7	0.0
TRIGF	Trigance	2.29	189	Pn	Pb	05 47 10.4	-0.3
CDF	Champ du Feu	2.41	6	*e*Pn	Pn	05 47 09.4	+0.7
CDF	Champ du Feu	2.41	6	*e*Pg	Pg	05 47 15.9	-0.2
CDF				*e*Sg	Sg	05 47 46.6	-0.8
	comp=N,2.6nm,0.3s						
LOR	Lormes	2.43	302	*e*Pg	Pn	05 47 10.2	+1.4
	baz=119						
LOR				*e*Sn	Sn	05 47 38.8	+0.6
	comp=N,1.3nm,0.2s						
LOR				*e*Sg	Sg	05 47 47.8	-0.1
	comp=N,2.7nm,0.2s						
SFTF	Sexfontaines	2.53	331	*e*Pn	Pn	05 47 11.6	+1.5
	baz=149						
SFTF				*e*Sn	Sn	05 47 40.9	+0.3
	comp=N,1.9nm,0.2s						
SFTF				*e*Sg	Sg	05 47 50.6	-0.4
	comp=N,3.3nm,0.3s						
SSF	Saint Saulge	2.55	295	*e*Pn	Pn	05 47 11.7	+1.2
SSF	Saint Saulge	2.55	295	*e*P	Pb	05 47 14.1	-1.1
SSF	Saint Saulge	2.55	295	*e*Pg	Pg	05 47 18.6	-0.1
SSF				*e*Sn	Sn	05 47 40.8	-0.4
	comp=N,1.2nm,0.4s						
SSF				*e*Sg	Sg	05 47 51.6	-0.2
	comp=N,1.3nm,0.2s						
AVF	Avril sur Loir	2.56	289	*e*Pn	Pn	05 47 12.4	+1.8
AVF	Avril sur Loir	2.56	289	*e*Pg	Pg	05 47 19.0	+0.1
AVF				*e*Sg	Sg	05 47 50.5	-1.5
	comp=N,2.1nm,0.4s						
GUT	Gutenstein	2.56	36	Pn	Pn	05 47 10.7	+0.1
PAGF	Fort de Pagny	2.66	343	*e*Sg	Sg	05 47 54.6	-0.6
	comp=N,2.1nm,0.3s						
LMR	La Mourre	2.69	186	*e*Pg	Pg	05 47 20.8	-0.6
LMR				*e*Sg	Sg	05 47 55.6	-0.7
	comp=N,0.7nm,0.2s						
MEZF	Maizieres J'vi	2.78	334	*e*Sg	Sg	05 47 58.6	-0.5
	comp=N,4.7nm,0.3s						
BGF	Bois d'Agland	2.85	282	*e*Pg	Pg	05 47 24.0	-0.4
SAVF	Savonnieres en	2.86	336	*e*Sg	Sg	05 48 01.3	-0.4
	comp=N,2.4nm,0.4s						
TCF	Toulx Ste Croi	3.26	277	*e*Pn	Pn	05 47 21.4	+1.2
TCF	Toulx Ste Croi	3.26	277	*e*Pg	Pg	05 47 31.7	-0.5
TCF				*e*Sn	Sn	05 47 58.6	0.0
TCF				*e*Sg	Sg	05 48 13.8	-0.6
	comp=N,1.6nm,0.3s						

IDC 02 06:03:12.5±3.6, 1°.92S×140°.36E, h0km, mb3.4/3, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=112.5km s-min=30.3km az=91.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.86	198	P	P	06 07 34.0	-0.3
	0.2nm,0.3s,baz=16,slow=12,SNR=14						
	0.5nm,0.4s						
FITZ	Fitzroy Crossi	21.61	221	P	P	06 08 05.2	+1.0
	1.8nm,0.9s,baz=24,slow=12,SNR=3.1						
	1.8nm,0.9s						
ASAR	Alice Springs	22.50	196	P	P	06 08 14.2	+0.3
	0.7nm,0.5s,baz=28,slow=11,SNR=15						
	0.7nm,0.5s						
MKAR	Makanchi Array	70.18	322	P	P	06 14 26.6	-0.6
	0.3nm,0.6s,baz=96,slow=5.8,SNR=2.5						
	0.3nm,0.6s						

IDC 02 06:12:45.1±2.0, 5°.93S×130°.79E, h0km, mbtmp3.5/4, ML3.2/4, Error ellipse: s-maj=81.8km s-min=27.6km az=94.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.05	5	Pn	Pn	06 14 03.5	+1.3
	2.1nm,0.3s,baz=235,slow=23,SNR=18						
SIJI				Sn	Sn	06 14 56.2	-5.1
	1.8nm,0.3s,baz=222,slow=22,SNR=7.9						
	4.5nm,0.3s						
FITZ	Fitzroy Crossi	13.10	202	Pn	Pn	06 15 53.5	+1.0
	baz=39,slow=13,SNR=2.3						
FITZ				Sn	Sn	06 18 13.1	-6.0
	0.1nm,0.3s,baz=171,slow=22,SNR=2.3						
	1.8nm,1.0s						
WRA	Warramunga Arr	14.35	166	Pn	Pn	06 16 10.8	+1.1
	0.1nm,0.3s,baz=346,slow=11,SNR=9.4						
WRA				Sn	Sn	06 18 40.6	-9.1
	0.1nm,0.3s,baz=352,slow=23,SNR=1.2						
	0.3nm,0.5s						
ASAR	Alice Springs	17.89	171	P	Pn	06 16 55.6	0.0
	0.1nm,0.3s,baz=350,slow=9.5,SNR=11						
	0.5nm,0.6s						
TXAR	Lajitas Array	123.71	59	PKP	PKPdf	06 31 44.5	-1.3
	0.1nm,0.5s,baz=242,slow=1.9,SNR=2.2						

ISK 02 06:53:03.5, 35°.51N×29°.54E, h85km, ML2.4/9, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.72	4	PG	Pn	06 53 20.4	+0.4
FETY	Fethiye	1.18	342	PN	Pn	06 53 25.9	+0.8
CAME	Cameli-Denizli	1.44	352	PN	Pn	06 53 29.3	+0.9
CAME				SN	Sn	06 53 48.1	+0.9
KORT	Korkueli	1.62	24	PN	Pn	06 53 31.7	+0.9
TURN	Turunc	1.64	321	PN	Pn	06 53 31.9	+1.1
YER	Yerkesik	1.91	328	PN	Pn	06 53 35.6	+1.2
GAZI	Gazipasa	2.37	71	PN	Pn	06 53 41.9	+1.5
GAZI				SN	Sn	06 54 09.9	+1.2
SEYD	Seydisehir-KON	2.65	44	PN	Pn	06 53 45.8	+1.5
ZKR	Zakros	2.75	263	PN	Pn	06 53 47.2	+1.7
ZKR				SN	Sn	06 54 19.0	+1.2
AYDB	Zeytinkoy-Aydi	2.77	332	PN	Pn	06 53 47.5	+1.6
HDMB	Hadim	2.79	58	PN	Pn	06 53 47.7	+1.4
BERE	Bereket-Mersin	3.10	73	PN	Pn	06 53 51.8	+1.4

DDA 02 06:53:17.6±0.0, 36°.22N×29°.49E, h2km±3km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.10	81	P	Pg	06 53 19.0	-0.5
AKAS				S	Sg	06 53 30.4	+10
KORT	Korkueli	1.04	41	P	Pg	06 53 37.1	-0.5
KORT				S	Sn	06 53 55.0	+0.4
TURN	Turunc	1.15	299	P	Pg	06 53 39.3	-0.2
TURN				S	Sg	06 53 53.9	-0.5
TURN				*i* AML	AML	06 53 59.0	
	comp=N,11nm,0.5s						
TURN				*i* AML	AML	06 54 00.0	
	comp=E,10nm,0.6s						
KEPZ	Antalya-Kepez	1.83	68	P	Pn	06 53 40.2	-10
KEPZ				S	Sn	06 54 06.0	-8.0
KEPZ				*i* AML	AML	06 54 12.0	
	comp=E,4.4nm,0.8s						
AYDN	Tasoluk	1.93	319	P	Pn	06 53 52.3	+0.8
AYDN				S	Sn	06 54 14.2	-2.2
AYDN				*i* AML	AML	06 54 18.0	
	comp=E,7.0nm,0.3s						
AYDN				*i* AML	AML	06 54 38.0	
	comp=Z,3.2nm,0.7s						
AYDN				*i* AML	AML	06 54 48.0	
	comp=N,3.8nm,0.7s						

*IDC **02** 06:54:23.8±0.6, 32°.35S×177°.74W, h0km, mb4.2/9, mbtmp4.2/12, ML3.6/3, MS3.3/6, Error ellipse: s-maj=20.7km s-min=19.0km az=130.0*
*WEL **02** 06:54:24.3±0.9, 32°.S±8°.×17°.8W±2°.3, h9km±7km, M4.6/14, mB5.0/13, ML5.0/15, MLv5.1/14, Mw(mB)4.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=107.7*
*NEIC **02** 06:54:25.2±1.6, 32°.6S±0°.1×177°.79W±0°.06, h10km±1km, mb4.5/20, Error ellipse: s-maj=18.7km s-min=8.0km az=8.0*

ISC 02 06:54:24.7±0.5, 32°.48S±0°.05×177°.92W±0°.08, h10km, n104, σ1°.76/113, mb4.4/17, MS3.4/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.20	360	P	Pn	06 55 13.2	-1.9
GLKZ				S	Sn	06 55 52.6	-0.7
RAO	Raoul Island	3.21	360	Sn	Sn	06 55 51.5	-2.1
	158nm,0.3s,baz=119,slow=23,SNR=3.3						
RIZ	Raoul Island	3.22	360	S	Sn	06 55 52.4	-1.4
MXZ	Matakaoa Point	5.95	210	Pn	Pn	06 55 51.8	-0.9
WMGZ	Waiomatatini S	6.12	208	P	Pn	06 55 54.6	-0.6
WMGZ				S	Sn	06 57 06.3	+1.2
PKGZ	Pakihiroa	6.32	210	P	Pn	06 55 57.2	-0.8
PKGZ				S	Sn	06 57 10.0	-0.2
HAZ	Te Kaha	6.34	213	P	Pn	06 55 58.9	+0.8
HAZ				S	Sn	06 57 10.5	-0.1
PUZ	Puketiti	6.40	208	P	Pn	06 55 57.9	-1.2
PUZ				S	Sn	06 57 10.7	-1.4
RUGZ	Raukumara Rang	6.56	212	P	Pn	06 56 00.9	-0.4
RUGZ				S	Sn	06 57 16.1	-0.1
CNGZ	Carnagh Statio	6.78	207	P	Pn	06 56 02.9	-1.3
CNGZ				S	Sn	06 57 22.0	+0.6
TKGZ	Te Karaka	6.88	209	P	Pn	06 56 03.9	-1.7
TKGZ				S	Sn	06 57 22.4	-1.5
MWZ	Matawai	6.93	211	P	Pn	06 56 04.9	-1.4
MWZ				S	Sn	06 57 24.0	-1.1
URZ	Urewera	7.05	214	Pn	Pn	06 56 07.4	-0.6
	5.5nm,0.3s,baz=352,slow=3.8,SNR=25						
URZ				Sn	Sn	06 57 27.1	-1.2
	18nm,0.3s,baz=313,slow=19,SNR=19						
URZ	Urewera	7.05	214	Pn	Pn	06 56 06.9	-1.1
URZ	Urewera	7.05	214	P	Pn	06 56 07.4	-0.6
URZ				S	Sn	06 57 26.1	-2.1
RIGZ	Rimuhau	7.14	208	P	Pn	06 56 07.7	-1.5
RIGZ				S	Sn	06 57 28.8	-1.7
RTZ	Ruatahuna	7.40	213	P	Pn	06 56 12.4	-0.4
RTZ				S	Sn	06 57 34.8	-2.1
KNZ	Kokohu	7.45	208	P	Pn	06 56 10.6	-2.8
KNZ				S	Sn	06 57 34.9	-3.0
MHGZ	Mahia Peninsul	7.47	206	P	Pn	06 56 11.9	-1.9
MHGZ				S	Sn	06 57 34.0	-4.6
RAHZ	Arahi	7.60	211	P	Pn	06 56 15.1	-0.4
RAHZ				S	Sn	06 57 40.8	-1.0
MTHZ	Maungataniwha	7.66	212	P	Pn	06 56 15.5	-0.8
MTHZ				S	Sn	06 57 42.0	-1.2
BKZ	Black Stump Fm	8.07	213	Pn	Pn	06 56 20.5	-1.5
KWHZ	Kaweka Forest	8.31	212	P	Pn	06 56 23.6	-1.7
KWHZ				S	Sn	06 57 56.4	-2.9
NTVZ	North Tongarir	8.41	216	P	Pn	06 56 26.4	-0.3
NTVZ				S	Sn	06 57 59.2	-2.6
BHHZ	Black Hill Sta	8.53	213	P	Pn	06 56 27.2	-1.1
BHHZ				S	Sn	06 58 01.3	-3.4
TCW	Tory Channel	10.72	213	P	Pn	06 56 53.9	-4.4
TCW				S	Sn	06 58 49.0	-9.4
NNZ	Nelson	11.16	216	P	Pn	06 57 02.2	-2.0
TKNZ	Takaka Hill	11.24	218	P	Pn	06 57 05.4	0.0
THZ	Tophouse	11.81	216	P	Pn	06 57 10.7	-2.5
KHZ	Kahutara	12.01	212	P	Pn	06 57 13.0	-3.0
DSZ	Denniston Nort	12.36	219	P	Pn	06 57 19.2	-1.5
GVZ	Greta Valley S	12.68	212	P	Pn	06 57 20.9	-4.2
LTZ	Lake Taylor	12.88	214	P	Pn	06 57 23.9	-4.0
INZ	Inchbonnie	13.25	216	P	Pn	06 57 30.7	-2.1
OKCZ	Okains Bay	13.28	210	P	Pn	06 57 29.2	-4.0
MQZ	McQueen's Vall	13.44	211	P	Pn	06 57 30.3	-5.1
RACZ	Rakaia	13.68	212	P	Pn	06 57 36.3	-2.3
RPZ	Rata Peaks	14.17	215	Pn	Pn	06 57 42.9	-2.6
	4.9nm,0.3s,baz=103,slow=1.1,SNR=19						
RPZ				Sn	Sn	07 00 09.8	-13
	2.4nm,0.3s,baz=355,slow=23,SNR=7.2						
RPZ	Rata Peaks	14.17	215	P	Pn	06 57 42.8	-2.7
GCSZ

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.11**	**269**	P	**P**	**07 02 26.6**	**+1.2**
	comp=Z,2.6nm,0.7s,baz=106,slow=7.6,SNR=34						
ASAR				PcP	**PcP**	**07 04 15.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=121,slow=3.7,SNR=2.7						
	comp=Z,2.6nm,0.7s						
ASAR	**Alice Springs**	**43.11**	**269**	P	**P**	**07 02 24.8**	**-0.6**
WR0	**Warramunga Arr**	**44.11**	**274**	P	**P**	**07 02 34.1**	**+0.7**
WR0				IAmb	IAmb	07 02 52.4	
	comp=Z,6.4nm,1.1s						
WB2	**Warramunga Arr**	**44.27**	**274**	P	**P**	**07 02 35.3**	**+0.6**
WB2				IAmb	IAmb	07 02 53.9	
	comp=Z,9.9nm,1.1s						
WRAB	**Tennant Creek**	**44.28**	**274**	P	**P**	**07 02 35.1**	**+0.4**
WRA	**Warramunga Arr**	**44.28**	**274**	P	**P**	**07 02 36.0**	**+1.1**
	comp=Z,4.0nm,0.5s,baz=114,slow=7.6,SNR=86						
WRA				PcP	**PcP**	**07 04 19.8**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=175,slow=2.5,SNR=1.6						
WRA				S	**S**	**07 09 05.7**	**-3.2**
	comp=Z,0.3nm,0.9s,baz=106,slow=17,SNR=1.1						
	comp=Z,4.0nm,0.5s						
WRA	**Warramunga Arr**	**44.28**	**274**	P	**P**	**07 02 35.0**	**+0.1**
WB0	**Warramunga Arr**	**44.31**	**274**	P	**P**	**07 02 35.8**	**+0.7**
WB0				IAmb	IAmb	07 02 36.4	
	comp=Z,6.9nm,0.8s						
FORT	**Forrest**	**45.62**	**257**	P	**P**	**07 02 45.1**	**-0.3**
VNDA	**Vanda**	**46.04**	**186**	P	**P**	**07 02 50.3**	**+2.3**
	comp=Z,0.6nm,0.7s,baz=99,slow=14,SNR=6.3						
	comp=Z,0.6nm,0.7s						
MTN	**Manton Dam**	**50.40**	**281**	P	**P**	**07 03 23.5**	**+1.0**
MTN				IAmb	IAmb	07 03 37.1	
	comp=Z,7.6nm,1.1s						
KNRA	**Kununurra**	**50.96**	**276**	P	**P**	**07 03 27.8**	**+1.1**
KNRA				IAmb	IAmb	07 03 49.6	
	comp=Z,9.1nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.45**	**271**	P	**P**	**07 03 39.6**	**+1.7**
CASY	**Casey**	**53.35**	**209**	P	**P**	**07 03 43.6**	**-0.2**
QSPA	**South Pole Qui**	**57.64**	**180**	P	**P**	**07 04 16.6**	**+1.7**
	comp=Z,3.6nm,0.7s,baz=32,slow=1.2,SNR=31						
QSPA				LR	LR	07 24 05.3	
	comp=Z,30nm,21.5s,baz=78,slow=31						
	comp=Z,3.6nm,0.7s						
QSPA	**South Pole Qui**	**57.64**	**180**	P	**P**	**07 04 16.7**	**+1.8**
MAW	**Mawson**	**70.40**	**201**	P	**P**	**07 05 40.3**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=93,slow=12,SNR=3.0						
	comp=Z,0.9nm,0.5s						
MAW	**Mawson**	**70.40**	**201**	P	**P**	**07 05 40.1**	**+1.6**
TROLL	**Troll, Antarti**	**75.80**	**180**	P	**P**	**07 06 11.2**	**+0.6**
TROLL	**Troll, Antarti**	**75.80**	**180**	P	P	07 06 25.6	+15
SNAA	**Sanae**	**76.08**	**178**	P	**P**	**07 06 12.3**	**+0.1**
SNAA	**Sanae**	**76.08**	**178**	P	P	07 06 27.6	+15
SNAA	**Sanae**	**76.08**	**178**	P	**P**	**07 06 12.6**	**+0.4**
VNA3	**Neumayer Olymp**	**76.23**	**176**	P	**P**	**07 06 12.9**	**0.0**
VNA3	**Neumayer Olymp**	**76.23**	**176**	P	P	07 06 28.8	+16
JHJ	**Hachijo jima 2**	**76.47**	**324**	LR	LR	07 32 58.6	
	comp=Z,20nm,21.7s,baz=172,slow=30						
VNA2	**Neumayer--Watz**	**76.67**	**177**	P	**P**	**07 06 15.8**	**+0.4**
	baz=171,slow=6.0						
VNA2	**Neumayer--Watz**	**76.67**	**177**	P	P	07 06 30.7	+15
	baz=182,slow=5.0						
VNA1	**Neumayer--Stat**	**76.90**	**176**	P	**P**	**07 06 16.7**	**0.0**
VNA1	**Neumayer--Stat**	**76.90**	**176**	P	P	07 06 32.8	+16
H03N3	**Juan Fernandez**	**79.47**	**123**	T	T	08 35 44.0	
	baz=240,slow=72,SNR=5.5						
H03N2	**Juan Fernandez**	**79.47**	**123**	T	T	08 35 46.7	
	baz=240,slow=72,SNR=5.6						
H03N1	**Juan Fernandez**	**79.48**	**123**	T	T	08 35 36.9	
	baz=240,slow=72,SNR=8.9						
USRK	**Ussuriysk Ar.**	**88.93**	**327**	P	**P**	**07 07 20.8**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=166,slow=6.0,SNR=3.2						
	comp=Z,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**89.71**	**43**	P	**P**	**07 07 22.8**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=216,slow=9.0,SNR=9.1						
	comp=Z,1.3nm,0.8s						
KDAK	**Kodiak Island**	**92.41**	**13**	LR	LR	07 44 17.3	
	comp=Z,34nm,19.3s,baz=184,slow=32						
TXAR	**Lajitas Array**	**93.45**	**57**	P	**P**	**07 07 39.5**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=212,slow=4.4,SNR=4.1						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**99.93**	**13**	LR	LR	07 46 44.5	
	comp=Z,20nm,19.8s,baz=278,slow=32						
KBZ	**Khabaz**	**146.29**	**301**	PKPbc	**PKPab**	**07 14 07.2**	**+1.1**
	comp=Z,6.9nm,1.0s,baz=111,slow=3.0,SNR=6.4						
FINES	**FINESS Array B**	**147.11**	**339**	PKPbc	**PKPbc**	**07 14 07.0**	**-0.2**
	comp=Z,6.3nm,0.7s,baz=38,slow=3.6,SNR=30						
NB2	**NORSAR Subarra**	**150.81**	**351**	PKP	**PKPbc**	**07 14 16.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=12,slow=2.5						
NOA	**NORSAR Array B**	**150.81**	**351**	PKPbc	**PKPbc**	**07 14 16.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=15,slow=4.1,SNR=4.7						
AKASG	**Malin Array Be**	**152.97**	**320**	PKPbc	**PKiKP**	**07 14 23.1**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=56,slow=2.3,SNR=2.9						
DBIC	**Dimbokro**	**153.52**	**164**	PKPbc	**PKPbc**	**07 14 24.3**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=217,slow=3.0,SNR=5.4						
BRTR	**Keskin Array B**	**153.59**	**295**	PKPbc	**PKiKP**	**07 14 24.3**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=120,slow=3.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**160.76**	**179**	PKPab	**PKPab**	**07 15 07.9**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=176,slow=3.7,SNR=5.5						
ESDC	**Sonseca Array**	**171.31**	**33**	PKP	**PKPdf**	**07 14 36.0**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=8.6,slow=3.2,SNR=1.6						
ESDC				PKPab	**pPKPab**	**07 15 55.2**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=322,slow=3.6,SNR=3.8						

*WEL **02** 07:00:57.4±1.1, 32°.5S×9°.9E±1°.7, h20km±11km,*
M4.2/16, mB4.8/10, ML4.6/20, MLv4.4/16, Mw(mB)4.0/10,
Error ellipse: s-maj=0.0km s-min=0.0km az=116.6
*NOU **02** 07:01:35.1, 35°.87S×179°.33E, h244km, MLv4.4/6, Off E.*
Coast of N. Island, N.Z.

ISC 02 07:00:58.0±1.1, 32.7S±0°.1×179.9E±0°.2, h10km, n32,
σ2°18/46, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.90**	**29**	P	**Pn**	**07 01 59.1**	**+1.1**
GLKZ				S	**Sn**	**07 02 42.7**	**-1.1**
WMGZ	**Waiomatatini S**	**5.25**	**193**	P	**Pn**	**07 02 15.7**	**-0.8**
WMGZ				S	**Sn**	**07 03 20.6**	**+3.5**
HAZ	**Te Kaha**	**5.33**	**198**	P	**Pn**	**07 02 19.4**	**+1.7**
HAZ				S	**Sn**	**07 03 26.0**	**+6.9**
PKGZ	**Pakihiroa**	**5.39**	**196**	P	**Pn**	**07 02 18.9**	**+0.5**
PKGZ				S	**Sn**	**07 03 22.2**	**+1.6**
PUZ	**Puketiti**	**5.53**	**194**	P	**Pn**	**07 02 20.0**	**-0.3**
RUGZ	**Raukumara Rang**	**5.56**	**199**	P	**Pn**	**07 02 21.7**	**+0.9**
RUGZ				S	**Sn**	**07 03 22.2**	**-2.7**
OPRZ	**Ohinepanea**	**5.82**	**207**	P	**Pn**	**07 02 25.4**	**+1.1**
CNGZ	**Carnagh Statio**	**5.93**	**193**	P	**Pn**	**07 02 25.3**	**-0.6**
CNGZ				S	**Sn**	**07 03 37.1**	**+3.2**
TKGZ	**Te Karaka**	**5.97**	**196**	P	**Pn**	**07 02 25.2**	**-1.1**
TKGZ				S	**Sn**	**07 03 36.5**	**+1.8**
URZ	**Urewera**	**6.00**	**202**	P	**Pn**	**07 02 26.9**	**+0.1**
URZ				S	**Sn**	**07 03 39.8**	**+4.3**
URZ	**Urewera**	**6.00**	**202**	P	**Pn**	**07 02 26.9**	**+0.1**
RIGZ	**Rimuhau**	**6.24**	**196**	P	**Pn**	**07 02 28.4**	**-1.8**
RIGZ				S	**Sn**	**07 03 40.6**	**-0.9**
RTZ	**Ruatahuna**	**6.36**	**201**	P	**Pn**	**07 02 31.2**	**-0.7**
RTZ				S	**Sn**	**07 03 45.5**	**+0.8**
PRRZ	**Plateau Road**	**6.46**	**205**	P	**Pn**	**07 02 33.0**	**-0.1**
KNZ	**Kokohu**	**6.56**	**195**	P	**Pn**	**07 02 31.7**	**-2.8**
RAHZ	**Arahi**	**6.61**	**200**	P	**Pn**	**07 02 34.0**	**-1.3**
RAHZ				S	**Sn**	**07 03 50.6**	**-0.1**
MTHZ	**Maungataniwha**	**6.62**	**201**	P	**Pn**	**07 02 33.9**	**-1.5**
MTHZ				S	**Sn**	**07 03 50.2**	**-0.9**
ARHZ	**Aropaoanui**	**6.96**	**199**	P	**Pn**	**07 02 37.4**	**-2.6**
ARHZ				S	**Sn**	**07 03 58.5**	**-0.7**
BKZ	**Black Stump Fm**	**7.02**	**202**	P	**Pn**	**07 02 38.4**	**-2.5**
BKZ	**Black Stump Fm**	**7.02**	**202**	P	**Pn**	**07 02 38.4**	**-2.5**
HIZ	**Hauiti**	**7.11**	**214**	P	**Pn**	**07 02 43.8**	**+1.7**
NTVZ	**North Tongarir**	**7.25**	**207**	P	**Pn**	**07 02 43.2**	**-0.9**
ETVZ	**East Tongariro**	**7.27**	**207**	P	**Pn**	**07 02 43.1**	**-1.3**
KWHZ	**Kaweka Forest**	**7.28**	**202**	P	**Pn**	**07 02 41.3**	**-3.1**
KWHZ				S	**Sn**	**07 04 04.6**	**-2.5**
OTVZ	**Oturere**	**7.31**	**207**	P	**Pn**	**07 02 43.1**	**-1.9**
SNVZ	**South Ngauruho**	**7.34**	**207**	P	**Pn**	**07 02 42.4**	**-3.0**
SNVZ				S	**Sn**	**07 04 08.5**	**-0.3**
NGZ	**Ngauruhoe**	**7.34**	**207**	P	**Pn**	**07 02 45.7**	**+0.2**
BHHZ	**Black Hill Sta**	**7.45**	**204**	P	**Pn**	**07 02 44.5**	**-2.4**
BHHZ				S	**Sn**	**07 04 08.5**	**-2.9**
MOVZ	**Moawhango**	**7.49**	**206**	P	**Pn**	**07 02 45.9**	**-1.4**
MOVZ				S	**Sn**	**07 04 09.8**	**-2.6**
BFZ	**Birch Farm**	**8.49**	**199**	P	Pn	07 02 55.3	-5.7
KHZ	**Kahutara**	**10.93**	**206**	P	Pn	07 03 27.4	-7.0
ODZ	**Otahua Downs**	**14.27**	**208**	P	Pn	07 04 09.9	-10

*IDC **02** 07:01:56.4±2.2, 14°.91S×178°.69W, h423km±23km, mb3.1/9,*
mbtmp3.9/11, Error ellipse: s-maj=29.9km s-min=18.7km
az=143.0

ISC 02 07:01:53.5±0.8, 14.8S±0°.2×178.6W±0°.2, h390km, n12,
σ1°55/11, mb3.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.33**	**227**	P	**Pn**	**07 03 11.3**	**+3.1**
	24nm,0.4s,baz=233,slow=22,SNR=76						
DZM	**Mont Dzumac**	**15.89**	**241**	P	**Pn**	**07 05 18.7**	**-0.9**
	1.8nm,0.6s,baz=17,slow=19,SNR=6.7						
STKA	**Stephens Creek**	**40.02**	**238**	P	**P**	**07 08 52.6**	**0.0**
	2.4nm,0.7s,baz=66,slow=12,SNR=2.4						
	2.4nm,0.7s						
WRA	**Warramunga Arr**	**45.06**	**256**	P	**P**	**07 09 31.5**	**-1.3**
	0.3nm,0.5s,baz=81,slow=5.8,SNR=5.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**45.50**	**251**	P	**P**	**07 09 35.9**	**-0.4**
	8.1nm,0.5s,baz=84,slow=8.4,SNR=95						
	8.1nm,0.5s						
VNDA	**Vanda**	**63.52**	**185**	P	**P**	**07 11 41.8**	**-1.5**
	0.5nm,0.7s,baz=8.7,slow=13,SNR=5.1						
	0.5nm,0.7s						
QSPA	**South Pole Qui**	**75.25**	**180**	P	**P**	**07 12 53.7**	**-0.9**
	6.5nm,1.4s,baz=278,slow=2.0,SNR=5.6						
	6.5nm,1.4s						
NVAR	**Mina Array Bea**	**77.35**	**44**	P	**P**	**07 13 06.6**	**-0.2**
	0.4nm,0.7s,baz=236,slow=6.4,SNR=2.9						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**82.91**	**13**	P	**P**	**07 13 34.5**	**-0.8**
	0.3nm,0.6s,baz=226,slow=7.3,SNR=3.1						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**84.53**	**58**	P	**P**	**07 13 46.1**	**+1.8**
	0.3nm,0.7s,baz=222,slow=6.9,SNR=6.4						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	**85.25**	**44**	P	**P**	**07 13 48.0**	**+0.3**
	0.3nm,0.5s,baz=248,slow=1.0,SNR=2.8						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**130.14**	**345**	PKhKP	PKPpre	07 20 12.9	
	0.6nm,0.7s,baz=2.9,slow=7.6,SNR=4.8						

*NNC **02** 07:15:13.7±1.0, 50°.05N×78°.84E, h0km, mb2.8, mpv2.2,*
Error ellipse: s-maj=20.4km s-min=4.9km az=72.0,
Suspected Mining explosion.
*IDC **02** 07:15:17.2±4.1, 49°.99N×78°.99E, h0km, mbtmp2.3/2,*
ML1.6/2, Error ellipse: s-maj=52.0km s-min=18.9km
az=92.0

ISC 02 07:15:13.8±2.0, 49.97N±0°.08×78.6E±0°.3, h0km, n11,
σ1°31/15, 9C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR14	**Kurchatov Arra**	**0.64**	**357**	⇑P	**Pg**	**07 15 25.0**	**-1.0**
KUR14				⇑S	**Sg**	**07 15 33.8**	**-0.6**
KUR15	**Kurchatov Arra**	**0.65**	**356**	⇑P	**Pg**	**07 15 25.0**	**-1.1**
KUR15				⇓S	**Sg**	**07 15 33.9**	**-0.7**
KUR05	**Kurchatov Arra**	**0.67**	**354**	⇓P	**Pg**	**07 15 25.8**	**-0.9**
KUR05				⇓S	**Sg**	**07 15 34.8**	**-0.5**
KUR04	**Kurchatov Arra**	**0.69**	**355**	⇑P	**Pg**	**07 15 26.0**	**-1.0**
KUR04				⇑S	**Sg**	**07 15 34.9**	**-1.1**
KURK	**Kurchatov**	**0.74**	**359**	⇑P	**Pg**	**07 15 26.7**	**-1.3**
	3.7nm,0.7s						
KURK				⇑S	**Sg**	**07 15 37.0**	**-0.6**
	8.2nm,0.7s						
MAKZ	**Makanchi**	**3.87**	**144**	⇑Lg	Lg	07 17 16.2	
	3.9nm,0.6s						
MK31	**Makanchi Array**	**4.01**	**141**	⇓Pn	**Pn**	**07 16 17.5**	**+1.2**
	baz=321,slow=9.3,SNR=11						
MK31				⇑Pg	**Pg**	**07 16 28.0**	**-2.5**
	0.2nm,0.2s,baz=327,slow=15,SNR=9.5						
MK31				⇓Lg	Lg	07 17 19.9	
	3.7nm,0.6s,baz=331,slow=29,SNR=19						
MKAR	**Makanchi Array**	**4.01**	**141**	Pn	**Pn**	**07 16 17.6**	**+1.2**
	baz=323,slow=9.8,SNR=9.9						
MKAR				Pg	**Pb**	**07 16 26.5**	**+1.3**
	0.2nm,0.3s,baz=325,slow=14,SNR=9.2						
MKAR				Lg	Lg	07 17 17.9	
	1.0nm,0.3s,baz=342,slow=27,SNR=18						
	0.2nm,0.5s						
OTUK	**Ortayu**	**4.49**	**250**	⇓Lg	Lg	07 17 39.0	
	1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**5.52**	**41**	Pn	**Pn**	**07 16 38.4**	**+1.4**
	0.1nm,0.3s,baz=238,slow=12,SNR=2.6						
ZALV				Lg	Lg	07 18 07.3	
	0.1nm,0.3s,baz=221,slow=28,SNR=2.7						
	0.4nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.52**	**41**	I		07 48 00.0	
	baz=224,slow=328,SNR=2.5						

*SNET **02** 07:51:00.2±1.0, 14°.09N×89°.73W, h6km±4km, ML3.4*
*GCG **02** 07:51:03.4±0.7, 14°.22N×89°.83W, h6km±11km, MD3.2*

ISC 02 07:51:00.1±1.4, 14.15N±0°.08×89.71W±0°.03, h7km±17km,
n22, σ0°46/31, 2C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**0.14**	**212**	⇑*iP*	**Pg**	**07 51 02.9**	**-0.3**
NUBE	**Las Nubes**	**0.26**	**197**	⇓*iP*	**Pg**	**07 51 04.7**	**-0.6**
RTR	**El Retiro**	**0.26**	**167**	*eP*	**Pg**	**07 51 05.1**	**-0.1**
SNJE	**San Jose**	**0.30**	**161**	⇓*iP*	**Pg**	**07 51 05.8**	**-0.2**
CEVE	**Cerro Verde**	**0.33**	**166**	*eP*	**Pg**	**07 51 06.4**	**-0.3**
MTO3	**Montecristo**	**0.42**	**53**	*eP*	**Pb**	**07 51 09.9**	**-0.1**
CEDA	**San Andres**	**0.46**	**139**	*eP*	**Pg**	**07 51 08.9**	**-0.1**
CEDA				*eS*	**Sg**	**07 51 15.4**	**+0.4**
UEES	**Universidad Ev**	**0.62**	**134**	*eP*	**Pg**	**07 51 12.0**	**-0.2**
LFU	**La Fuente**	**0.70**	**125**	*eP*	**Pg**	**07 51 13.6**	**0.0**
NBG	**Las Nubes**	**0.76**	**305**	*eP*	**Pn**	**07 51 17.1**	**-0.4**
NBG				*eS*	**Sb**	**07 51 26.8**	**+0.3**
LFRS	**El Faro**	**0.81**	**130**	*eP*	**Pg**	**07 51 15.2**	**-0.6**
PAVA	**Las Pavas**	**0.86**	**120**	*eP*	**Pg**	**07 51 16.5**	**-0.2**
PAVA				*eS*	**Sg**	**07 51 28.7**	**+0.8**
SJTE	**Alcalda de S**	**0.86**	**128**	*eP*	**Pg**	**07 51 16.2**	**-0.5**
SJTE				*eS*	**Sg**	**07 51 28.0**	**+0.1**
PCG	**Pacaya**	**0.91**	**285**	*eP*	**Pb**	**07 51 18.7**	**+0.3**
PCG				*eS*	**Sb**	**07 51 30.9**	**+0.1**
MRL	**Marmol**	**0.93**	**1**	*eP*	**Pn**	**07 51 20.2**	**+0.4**
MRL				*eS*	**Sn**	**07 51 33.8**	**+0.3**
P5NO	**Presa 5 de nov**	**0.93**	**100**	*eP*	**Pg**	**07 51 17.6**	**-0.5**
COEG	**Centro de Oper**	**0.96**	**123**	*eP*	**Pg**	**07 51 18.1**	**-0.4**
COEG				*eS*	**Sg**	**07 51 31.5**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.05**	**115**	⇑*eP*	**Pg**	**07 51 19.8**	**-0.4**
SCLA				*eS*	**Sb**	**07 51 34.7**	**0.0**
FUG	**Fuego 3**	**1.14**	**285**	*eP*	**Pb**	**07 51 22.5**	**+0.1**
FUG				*eS*	**Sb**	**07 51 37.4**	**-0.1**
PQSS	**Presa 15 de Se**	**1.23**	**115**	*eP*	**Pg**	**07 51 22.7**	**-1.0**
COEB	**Comit de Eme**	**1.31**	**119**	*eP*	**Pg**	**07 51 24.2**	**-1.1**
STG3	**Santiaguito 3,**	**1.89**	**287**	*eP*	**Pb**	**07 51 34.9**	**-0.3**

MAN 02 08:02:10.9, 9°.74N×125°.59E, h24km, mb4.1, ML2.9, MS2.6,
5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.11**	**294**	⇑*iP*	Pb	08 02 16.1	+0.6
SCPH				*i S*	Sb	08 02 19.8	+1.2
GLSP	**General Luna,**	**0.53**	**85**	⇑*eP*	Pn	08 02 22.9	-0.1
GLSP				*eS*	Sn	08 02 31.6	+0.4
MSLP	**Maasin**	**0.82**	**299**	⇑*eP*	Pn	08 02 26.9	-0.2
MSLP				*eS*	Sn	08 02 40.5	+2.0
GHBP	**Garcia Hernand**	**1.26**	**265**	*eP*	Pn	08 02 31.7	-1.4
TABP	**Talibon, Bohol**	**1.29**	**286**	⇓*eP*	Pn	08 02 32.9	-0.6
TABP				*i S*	Sb	08 02 50.7	0.0
CGP	**Cagayan de Oro**	**1.55**	**215**	⇓*eP*	Pn	08 02 35.2	-1.8
CGP				*eS*	Sn	08 02 52.4	-4.0
TBP	**Tagbilaran**	**1.71**	**269**	*eP*	Pn	08 02 38.5	-0.7
TBP				*i S*	Sb	08 03 03.2	+0.5
BIPH	**Bislig**	**1.72**	**154**	⇑*iP*	Pn	08 02 38.3	-1.0
BIPH				*i S*	Sn	08 02 58.9	-1.7
BUKP	**Musuan**	**1.92**	**196**	⇑*eP*	Pn	08 02 42.5	+0.4
BUKP				*eS*	Sn	08 03 05.8	+0.2

*NOU **02** 08:07:26.4, 37°.32S×179°.94W, h76km, MLv4.6/8, East of*
North Island, N.Z.
*WEL **02** 08:07:33.7±0.9, 37°.5S±4°.×17°.9E±°., h13km±4km, M3.3/50,*
ML3.6/61, MLv3.3/50, Error ellipse: s-maj=0.0km
s-min=0.0km az=92.7

ISC 02 08:07:31.4±2.8, 37.28S±0°.07×179.3E±0°.1, h26km±14km,
n90, σ1°27/99, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.83**	**250**	P	**Pb**	**08 07 45.3**	**-1.8**
MXZ				S	Sb	08 07 51.7	-6.1
WMGZ	**Waiomatatini S**	**0.87**	**232**	P	**Pn**	**08 07 49.1**	**+1.1**
WMGZ				S	**Sb**	**08 07 59.9**	**+0.7**
PUZ	**Puketiti**	**1.13**	**226**	P	**Pb**	**08 07 52.8**	**+0.5**
PUZ				S	**Sn**	**08 08 06.7**	**+0.3**
PKGZ	**Pakihiroa**	**1.13**	**237**	P	**Pn**	**08 07 51.9**	**+0.3**
PKGZ				S	**Sn**	**08 08 05.5**	**-0.9**
HAZ	**Te Kaha**	**1.28**	**248**	P	**Pn**	**08 07 52.5**	**-1.1**
HAZ				S	**Sn**	**08 08 08.9**	**-1.1**
RUGZ	**Raukumara Rang**	**1.45**	**241**	P	**Pn**	**08 07 56.7**	**+0.7**
RUGZ				S	**Sn**	**08 08 12.9**	**-1.3**
CNGZ	**Carnagh Statio**	**1.47**	**215**	P	**Pb**	**08 07 58.7**	**+0.6**
CNGZ				S	**Sb**	**08 08 16.8**	**+0.4**
TKGZ	**Te Karaka**	**1.62**	**224**	P	**Pn**	**08 07 59.4**	**+1.2**
TKGZ				S	**Sn**	**08 08 17.3**	**-1.0**
WIZ	**White Island**	**1.69**	**261**	P	**Pn**	**08 07 60.0**	**+0.8**
MWZ	**Matawai**	**1.74**	**232**	P	**Pn**	**08 08 00.9**	**+0.8**
MWZ				S	**Sn**	**08 08 22.1**	**+0.7**
RIGZ	**Rimuhau**	**1.86**	**220**	P	**Pn**	**08 08 02.8**	**+1.2**
WHRZ	**Whale Island**	**1.92**	**252**	P	**Pb**	**08 08 04.9**	**-0.9**
URZ	**Urewera**	**1.98**	**240**	P	**Pn**	**08 08 04.5**	**+1.3**
URZ				S	**Sn**	**08 08 26.4**	**-0.8**
URZ	**Urewera**	**1.98**	**240**	P	**Pn**	**08 08 05.1**	**+1.9**
SNGZ	**Shannon Statio**	**2.14**	**225**	P	**Pn**	**08 08 06.4**	**+0.9**
KNZ	**Kokohu**	**2.15**	**216**	P	**Pn**	**08 08 06.2**	**+0.6**
MHGZ	**Mahia Peninsul**	**2.16**	**210**	P	**Pn**	**08 08 07.3**	**+1.6**
EDRZ	**Edgecumbe**	**2.18**	**247**	P	**Pn**	**08 08 07.2**	**+1.1**
EDRZ				S	**Sn**	**08 08 30.3**	**-1.9**
OPRZ	**Ohinepanea**	**2.24**	**255**	P	**Pn**	**08 08 05.5**	**-1.3**
RTZ	**Ruatahuna**	**2.25**	**233**	P	**Pn**	**08 08 08.5**	**+1.4**
RTZ				S	**Sn**	**08 08 34.5**	**+0.3**
MUGZ	**Murupara**	**2.32**	**238**	P	**Pn**	**08 08 08.8**	**+0.9**
RAHZ	**Arahi**	**2.38**	**226**	P	**Pn**	**08 08 10.0**	**+1.2**
RRRZ	**Republican Roa**	**2.43**	**243**	P	**Pn**	**08 08 10.7**	**+1.2**
TGRZ	**Tauranga**	**2.44**	**259**	P	**Pn**	**08 08 09.9**	**+0.3**
OMRZ	**Omania**	**2.45**	**250**	P	**Pn**	**08 08 09.5**	**-0.2**
MTHZ	**Maungataniwha**	**2.48**	**230**	P	**Pn**	**08 08 11.6**	**+1.4**
KARZ	**Kaharoa**	**2.52**	**252**	P	**Pn**	**08 08 11.5**	**+0.8**
PRRZ	**Plateau Road**	**2.59**	**241**	P	**Pn**	**08 08 12.5**	**+0.9**
HRRZ	**Handcock Road**	**2.62**	**244**	P	**Pn**	**08 08 13.2**	**+1.1**
ALRZ	**Allen Road**	**2.65**	**240**	P	**Pn**	**08 08 13.5**	**+1.0**
NMHZ	**Naumai**	**2.66**	**226**	P	**Pn**	**08 08 14.1**	**+1.4**
ARHZ	**Aropaoanui**	**2.67**	**222**	P	**Pn**	**08 08 13.8**	**+1.1**
KMRZ	**Kaimai**	**2.71**	**257**	P	**Pn**	**08 08 14.1**	**+0.8**
MRHZ	**Matea Rd**	**2.74**	**235**	P	**Pn**	**08 08 14.6**	**+0.8**
BKZ	**Black Stump Fm**	**2.89**	**229**	P	**Pn**	**08 08 16.5**	**+0.7**
BKZ	**Black Stump Fm**	**2.89**	**229**	P	**Pn**	**08 08 17.0**	**+1.2**
KUZ	**Kuaotunu**	**2.90**	**280**	P	**Pn**	**08 08 14.2**	**-1.7**
CKHZ	**Cape Kidnapper**	**2.94**	**215**	P	**Pn**	**08 08 16.8**	**+0.4**
MCHZ	**McNeill Hill**	**2.97**	**222**	P	**Pn**	**08 08 17.5**	**+0.7**
TOZ	**Tahuroa Road**	**3.04**	**260**	P	**Pn**	**08 08 17.9**	**+0.1**
KWHZ	**Kaweka Forest**	**3.10**

BKRG			S		Sg	08 22 45.5	+1.4
EAK	**Akyaka**	**0.59 179**	P		**Pg**	**08 22 39.1**	**-0.9**
EAK			S		**Sg**	**08 22 47.6**	**-0.2**
EAK			*i* AML	AML		08 22 50.0	
	comp=E,193nm,0.4s						
EAK			*i* AML	AML		08 22 51.0	
	comp=N,173nm,0.4s						
KZRT	**Kazreti**	**0.62 80**	P		**Pg**	**08 22 40.3**	**-0.1**
KZRT			S		**Sg**	**08 22 48.5**	**+0.1**
ABS	**Abastumani**	**0.75 309**	P		**Pg**	**08 22 43.3**	**+0.3**
ABS			S		**Sg**	**08 22 54.0**	**+1.2**
KARS	**Kars**	**0.76 211**	PG		**Pg**	**08 22 43.9**	**+0.7**
KARS			SG		**Sg**	**08 22 55.4**	**+2.4**
ALIG	**Mtskhetisjvari**	**0.82 3**	P		**Pg**	**08 22 44.3**	**-0.1**
ALIG			S		**Sb**	**08 22 55.9**	**-1.1**
DIGO	**Kars**	**0.88 191**	P		**Pg**	**08 22 43.9**	**-1.6**
DIGO			S		**Sg**	**08 22 56.0**	**-1.0**
DIGO			*i* AML	AML		08 22 58.0	
	comp=N,131nm,0.4s						
DIGO			*i* AML	AML		08 23 09.0	
	comp=E,139nm,0.4s						
TKB	**Tkibuli**	**1.16 337**	P		**Pg**	**08 22 50.7**	**-0.1**
TKB			S		**Sb**	**08 23 06.4**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.18 233**	PN		**Pg**	**08 22 51.6**	**+0.3**
SENK			SN		**Sb**	**08 23 08.9**	**+1.5**
DAGI	**Agillar**	**1.28 261**	P		**Pn**	**08 22 53.4**	**+0.1**
DAGI			S		**Sb**	**08 23 10.1**	**0.0**
DAGI			*i* AML	AML		08 23 18.0	
	comp=N,54nm,0.6s						
ONI	**Oni**	**1.31 355**	PN		**Pn**	**08 22 52.7**	**-1.0**
ONI			SN		**Sb**	**08 23 10.7**	**-0.3**
ONI	**Oni**	**1.31 355**	P		**Pn**	**08 22 53.1**	**-0.6**
ONI			S		**Sb**	**08 23 10.4**	**-0.5**
TASB	**TASBURUN-IGDIR**	**1.39 159**	PN		**Pn**	**08 22 54.5**	**-0.2**
TASB			SN		**Sn**	**08 23 13.9**	**+0.5**
GNI	**Garni**	**1.43 142**	PN		**Pn**	**08 22 55.2**	**-0.1**
GNI			SN		**Sn**	**08 23 14.9**	**+0.3**
DBOC	**Borcka**	**1.45 273**	P		**Pn**	**08 22 55.7**	**+0.1**
DBOC			S		**Sn**	**08 23 14.4**	**-0.6**
DBOC			*i* AML	AML		08 23 15.0	
	comp=Z,41nm,0.4s						
DBOC			*i* AML	AML		08 23 15.0	
	comp=E,49nm,0.3s						
DBAD	**Bademkaya**	**1.46 260**	P		**Pn**	**08 22 56.1**	**+0.4**
DBAD			S		**Sn**	**08 23 14.6**	**-0.6**
DBAD			*i* AML	AML		08 23 16.0	
	comp=N,31nm,0.4s						
DBAD			*i* AML	AML		08 23 16.0	
	comp=E,39nm,0.6s						
BATM	**Batumi**	**1.46 283**	P		**Pn**	**08 22 55.9**	**+0.2**
BATM			S		**Sn**	**08 23 15.0**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.51 191**	P		**Pb**	**08 22 57.9**	**+0.8**
ZEI	**Tsey**	**1.52 9**	*e*Pg		**Pb**	**08 22 57.6**	**+0.2**
ZEI			*e*Sg		**Sg**	**08 23 18.6**	**+1.1**
PNSH	**Pansheti**	**1.55 29**	P		**Pb**	**08 22 57.8**	**-0.2**
PNSH			S		**Sg**	**08 23 18.8**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.62 360**	*e*Pg		**Pb**	**08 22 59.2**	**+0.2**
DIGR			*e*Sg		**Sg**	**08 23 21.0**	**+0.5**
HOPA	**Hopa-Artvin**	**1.62 274**	PN		**Pn**	**08 22 57.7**	**-0.1**
LACR	**Lac**	**1.63 19**	*e*Pg		**Pb**	**08 22 59.0**	**-0.3**
LACR			*e*Sg		**Sg**	**08 23 20.7**	**-0.3**
EATA	**Eleskirt**	**1.65 211**	P		**Pn**	**08 22 58.6**	**+0.2**
EATA			S		**Sn**	**08 23 19.8**	**-0.4**
EATA			*i* AML	AML		08 23 25.0	
	comp=E,26nm,0.4s						
EATA			*i* AML	AML		08 23 26.0	
	comp=N,27nm,0.5s						
DDFL	**Dedoflistskaro**	**1.91 84**	P		**Pg**	**08 23 05.8**	**+0.6**
LGD	**Lagodekhi**	**2.06 74**	P		**Pb**	**08 23 05.7**	**-0.8**
LGD			S		**Sg**	**08 23 33.8**	**-1.0**
NEY	**Neytrino**	**2.07 342**	*e*Pg		**Pb**	**08 23 06.4**	**-0.4**
NEY			*e*Sg		**Sb**	**08 23 33.5**	**+0.7**
SHA1	**Shidzhatmaz**	**2.55 345**	*e*Pn		**Pb**	**08 23 15.8**	**+0.8**
SHA1			*e*Sn		**Sg**	**08 23 49.7**	**-0.8**

*IDC **02** 08:23:53.7±1.4, 14°.20S×73°.29W, h0km, mb3.4/2, mbtmp3.7/4, ML4.4/2, MS2.6/4, Error ellipse: s-maj=43.2km s-min=21.1km az=39.0*
*NEIC **02** 08:24:01.5±2.1, 13°.88S±0°.03×72°.62W±0°.09, h71km±9km, mb4.1/10, Error ellipse: s-maj=12.9km s-min=4.7km az=84.0*
*VAO **02** 08:24:02.8±0.5, 13°.85S×72°.52W, h71km, mb4.1*
ISC 02 08:24:02.2±0.7, 13°.86S±0°.07×72°.65W±0°.08, h83km, n63, σ1§48/60, mb3.8/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.49 294**		LR	LR	08 26 32.8	
	comp=Z,38nm,19.2s,baz=156,slow=39						
NNA	**Nana**	**4.49 294**		Pn	**Pn**	**08 25 09.5**	**+1.5**
LPAZ	**La Paz**	**4.99 119**		Pn	**Pn**	**08 25 17.0**	**+1.8**
	6.9nm,0.3s,baz=308,slow=8.8,SNR=239						
LPAZ				Sn	**Sn**	**08 26 14.4**	**+2.5**
	baz=220,slow=25						
LPAZ				Lg	Lg	08 26 44.4	
	0.2nm,0.3s,baz=179,slow=18,SNR=2.2						
LPAZ				LR	LR	08 27 33.2	
	comp=Z,41nm,18.0s,baz=320,slow=41						
	15nm,0.3s						
LPAZ	**La Paz**	**4.99 119**		Pn	**Pn**	**08 25 16.8**	**+1.6**
PB12	**IPOC Station P**	**5.22 155**		Pn	**Pn**	**08 25 16.9**	**-1.1**
PB16	**IPOC Station P**	**5.38 146**		Pn	**Pn**	**08 25 22.0**	**+1.5**
CZSB	**Cruzeiro do Su**	**6.09 359**		*e*P	**Pn**	**08 25 29.6**	**-0.2**
GO01	**Chusmiza**	**6.65 151**			**Pn**	**08 25 37.5**	**-0.3**
TA02	**Huaiquique**	**6.81 160**		Pn	**Pn**	**08 25 37.1**	**-2.5**
PB08	**IPOC Station P**	**7.08 152**			**Pn**	**08 25 42.0**	**-1.6**
PATCX	**Punta Patache**	**7.32 161**		Pn	**Pn**	**08 25 43.6**	**-3.0**
ETMB	**Extrema**	**7.47 58**		*e*P	**Pn**	**08 25 48.4**	**-0.2**
PB01	**IPOC Station P**	**7.75 158**		Pn	**Pn**	**08 25 50.1**	**-2.4**
PB02	**IPOC Station P**	**7.87 161**		Pn	**Pn**	**08 25 51.0**	**-3.1**
PB07	**IPOC Station P**	**8.25 162**		Pn	**Pn**	**08 25 56.2**	**-3.2**
PB09	**IPOC Station P**	**8.53 158**		Pn	**Pn**	**08 26 01.8**	**-1.4**
PB04	**IPOC Station P**	**8.75 165**		Pn	Pn	08 26 01.4	-4.9
LVC	**Limon Verde**	**9.40 158**		LR	LR	08 29 55.2	
	comp=Z,30nm,19.3s,baz=300,slow=39						
LVC	**Limon Verde**	**9.40 158**		Pn	**Pn**	**08 26 13.2**	**-2.0**
PB15	**IPOC Station P**	**9.77 163**		Pn	**Pn**	**08 26 18.1**	**-2.1**
TBTG	**Tabatinga, AM**	**9.99 16**		*e*P	**Pn**	**08 26 21.6**	**-1.4**
GO02	**Mina Guanaco**	**11.61 166**		Pn	**Pn**	**08 26 44.6**	**-0.6**
MCRA	**Macar, Loja**	**11.87 322**			**Pn**	**08 26 47.4**	**-1.2**
BBSD	**Serra de San D**	**12.06 107**		*e*P	**Pn**	**08 26 48.9**	**-2.3**
BOSC	**San Juan Bosco**	**12.11 331**			**Pn**	**08 26 51.7**	**-0.3**
VILB	**Vilhena**	**12.15 87**		*e*P	**Pn**	**08 26 51.7**	**-0.6**
BBRB	**Robore, Bolivi**	**13.10 111**		*e*P	**Pn**	**08 27 03.2**	**-1.9**
PTLB	**Pontes e Lacer**	**13.17 99**		*e*P	**Pn**	**08 27 05.3**	**-0.7**
PDRB	**Porto dos Gac**	**15.69 84**		*e*P	**Pn**	**08 27 38.3**	**-0.5**
MURT	**Porto Murtinho**	**16.28 121**		*e*P	**Pn**	**08 27 44.3**	**-1.6**
SALV	**Santo Antonio**	**16.51 99**		*e*P	**Pn**	**08 27 48.8**	**-0.1**
CLDB	**Colider**	**16.73 82**		*e*P	**Pn**	**08 27 51.4**	**-0.1**
AQDB	**Aquidauana**	**17.47 114**		P	**Pn**	**08 27 59.2**	**-1.5**
AQDB				IAmb	IAmb	08 28 01.7	
	comp=Z,6.8nm,1.0s						
AQDB	**Aquidauana**	**17.47 114**		*e*P	**Pn**	**08 27 59.7**	**-1.0**
ANTJ	**Antonio Joao (**	**17.77 119**		*e*P	**Pn**	**08 28 04.5**	**+0.1**
NPGB	**Novo Progresso**	**18.30 70**		*e*P	**P**	**08 28 09.7**	**-0.1**
VA03	**San Esteban**	**18.91 175**		P	**P**	**08 28 15.3**	**-1.2**
VA03				IAmb	IAmb	08 28 19.4	
	comp=Z,9.6nm,0.7s						
CPUP	**Villa Florida**	**18.97 133**		P	**P**	**08 28 17.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=316,slow=9.6,SNR=11						
CPUP				LR	LR	08 37 23.2	
	comp=Z,37nm,19.4s,baz=25,slow=42						
	comp=Z,4.0nm,0.8s						
CPUP	**Villa Florida**	**18.97 133**		P	**P**	**08 28 15.6**	**-1.5**
CPUP	**Villa Florida**	**18.97 133**		*e*P	**P**	**08 28 17.2**	**+0.2**
ITTB	**Itaituba**	**19.16 62**		*e*P	**P**	**08 28 19.8**	**+0.5**
BOAV	**Boa Vista**	**20.14 38**		*e*P	**P**	**08 28 29.9**	**0.0**
MCR1	**Marechal Candi**	**20.47 124**		*e*P	**P**	**08 28 33.6**	**+0.2**
SNDB	**Serra Nova Dou**	**20.90 87**		*e*P	**P**	**08 28 39.2**	**+1.2**
AZCA	**Azaras, Argent**	**20.99 135**		*e*P	**P**	**08 28 40.0**	**+1.0**
ITQB	**Itaqui**	**21.61 139**		P	**P**	**08 28 44.4**	**-1.2**
ITQB	**Itaqui**	**21.61 139**		*e*P	**P**	**08 28 46.7**	**+1.1**
MALB	**Monte Alegre**	**21.74 58**		*e*P	**P**	**08 28 47.7**	**+0.6**
FRBT	**Francisco Belt**	**21.97 126**		*e*P	**P**	**08 28 48.8**	**-0.7**
CRSM	**Crissiumal (Br**	**22.02 131**		*e*P	**P**	**08 28 49.5**	**-0.5**
UNIS	**Unistalda (Bra**	**22.24 136**		*e*P	**P**	**08 28 54.0**	**+1.7**
RODS	**Rosario do Sul**	**22.98 138**		*e*P	**P**	**08 28 59.9**	**-0.1**
BAUV	**El Baul**	**23.11 12**		P	**P**	**08 29 00.1**	**-1.3**
ITAB	**Concordia**	**23.32 128**		*e*P	**P**	**08 29 04.5**	**+1.2**
CPSB	**Cacapava Do Su**	**24.18 136**		*e*P	**P**	**08 29 11.5**	**+0.5**
PLTB	**Pedras Altas**	**24.94 139**		*e*P	**P**	**08 29 20.3**	**+2.4**
SMTB	**Santa Maria do**	**25.06 81**		*e*P	**P**	**08 29 21.0**	**+1.9**
TRQA	**Tornquist**	**25.89 160**		P	**P**	**08 29 26.8**	**+0.3**
PLCA	**Paso Flores**	**26.83 176**		P	**P**	**08 29 33.9**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=348,slow=12,SNR=2.1						
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**52.35 325**		P	**P**	**08 33 06.8**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=148,slow=8.7,SNR=6.6						
	comp=Z,0.2nm,0.6s						
SNAA	**Sanae**	**70.62 162**		P	**P**	**08 35 08.8**	**+0.3**
SNAA				IAmb	IAmb	08 35 10.6	
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**76.28 180**		P	**P**	**08 35 44.3**	**+2.4**
QSPA				IAmb	IAmb	08 36 13.8	
	comp=Z,1.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**78.37 73**		P	P	08 36 01.2	+6.9
	comp=Z,13nm,0.6s,baz=253,slow=4.3,SNR=5.0						

*IDC **02** 08:33:13.5±1.4, 49°.86N×81°.05E, h0km, mbtmp2.2/2, ML1.6/1, Error ellipse: s-maj=18.7km s-min=9.0km az=52.0*
*NNC **02** 08:33:14.7±2.7, 49°.84N×80°.96E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=49.2km s-min=8.8km az=46.0, Suspected Mining explosion.*
ISC 02 08:33:14.6±1.4, 49°.89N±0°.07×80°.98E±0°.08, h0km, n8, σ1§35/9, 2C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**1.72 299**		⇑P	**Pn**	**08 33 45.2**	**-0.6**
	9.2nm,0.6s						
KURK				⇓S	**Sn**	**08 34 09.3**	**+0.8**
	13nm,0.7s						
KURBB	**Kurchatov Arra**	**1.73 296**		Pg	**Pn**	**08 33 46.1**	**+0.2**
	0.1nm,0.3s,baz=115,slow=18,SNR=28						
KURBB				Lg	Lg	08 34 09.5	
	0.2nm,0.3s,baz=76,slow=33,SNR=22						
KURBB				Rg	Rg	08 34 24.0	
	1.4nm,0.7s,baz=234,slow=37,SNR=4.7						
KURBB	**Kurchatov Arra**	**1.73 296**		⇓P	**Pn**	**08 33 45.7**	**-0.2**
	8.8nm,0.8s						
KURBB				⇑S	**Sb**	**08 34 09.9**	**+0.3**
	32nm,0.7s						
MAKZ	**Makanchi**	**3.16 168**		⇓Lg	Lg	08 34 51.4	
	5.6nm,1.0s						
MK31	**Makanchi Array**	**3.22 164**		⇓Pn	**Pn**	**08 34 07.8**	**+1.3**
	1.2nm,0.7s,baz=358,slow=14,SNR=4.0						
MK31				⇓Lg	Lg	08 34 52.4	
	3.6nm,0.7s,baz=354,slow=26,SNR=8.2						
MKAR	**Makanchi Array**	**3.22 164**		Pn	**Pn**	**08 34 07.6**	**+1.1**
	0.3nm,0.3s,baz=347,slow=16,SNR=1.3						
MKAR				Sn	**Sn**	**08 34 43.0**	**-2.6**
	0.1nm,0.3s,baz=339,slow=28,SNR=3.0						
MKAR				Lg	Lg	08 34 51.6	
	0.3nm,0.3s,baz=339,slow=28,SNR=7.5						
ZALV	**Zalesovo Beam**	**4.70 29**		Pn	**Pn**	**08 34 26.9**	**+0.2**
	0.1nm,0.3s,baz=212,slow=13,SNR=1.7						
ZALV				Lg	Lg	08 35 40.1	
	baz=195,slow=22						
	0.3nm,0.3s						
I46RU	**ZALESOVO INFRA**	**4.70 29**		I		09 01 30.0	
	baz=209,slow=330,SNR=0.6						

WEL 02 09:12:41.0±0.7, 37°S±3°×17°9E±°, h20km, M3.5/48, ML3.8/57, MLv3.5/48, Error ellipse: s-maj=0.0km s-min=0.0km az=94.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.79 233**		P	Pb	09 12 55.4	-0.6
MXZ				S	Sb	09 13 05.5	-0.8
WMGZ	**Waiomatatini S**	**0.91 216**		P	Pn	09 12 59.3	+0.6
WMGZ				S	Sn	09 13 12.8	+1.6
PKGZ	**Pakihiroa**	**1.14 225**		P	Pb	09 13 02.2	+0.1
PKGZ				S	Sn	09 13 18.1	+1.2
PUZ	**Puketiti**	**1.19 214**		P	Pb	09 13 02.8	-0.1
PUZ				S	Sn	09 13 19.7	+1.6
HAZ	**Te Kaha**	**1.24 237**		P	Pn	09 13 02.2	-1.0
RUGZ	**Raukumara Rang**	**1.43 232**		P	Pb	09 13 06.7	-0.4
CNGZ	**Carnagh Statio**	**1.56 207**		P	Pb	09 13 08.6	-0.7
WIZ	**White Island**	**1.58 253**		P	Pn	09 13 07.3	-0.6
TKGZ	**Te Karaka**	**1.67 216**		P	Pn	09 13 09.4	+0.3
MWZ	**Matawai**	**1.76 225**		P	Pn	09 13 10.8	+0.4
EDRZ	**Edgecumbe**	**2.13 241**		P	Pn	09 13 16.2	+0.7
OPRZ	**Ohinepanea**	**2.16 249**		P	Pn	09 13 15.9	+0.1
MHGZ	**Mahia Peninsul**	**2.27 204**		P	Pn	09 13 17.3	0.0
MHGZ				S	Sn	09 13 45.6	+0.9
RTZ	**Ruatahuna**	**2.27 227**		P	Pn	09 13 18.0	+0.6
MUGZ	**Murupara**	**2.31 232**		P	Pn	09 13 18.3	+0.4
MUGZ				S	Sn	09 13 46.0	+0.3
TGRZ	**Tauranga**	**2.35 253**		P	Pn	09 13 18.6	+0.2
OMRZ	**Omania**	**2.39 244**		P	Pn	09 13 19.2	+0.1
RRRZ	**Republican Roa**	**2.40 238**		P	Pn	09 13 19.7	+0.5
RRRZ				S	Sn	09 13 49.8	+1.8
RAHZ	**Arahi**	**2.42 220**		P	Pn	09 13 19.5	+0.1
RAHZ				S	Sn	09 13 49.0	+0.5
KARZ	**Kaharoa**	**2.45 247**		P	Pn	09 13 20.7	+0.8
HLRZ	**Highlands Stat**	**2.47 241**		P	Pn	09 13 21.0	+0.9
WHHZ	**Waihua**	**2.47 216**		P	Pn	09 13 20.6	+0.5
WHHZ				S	Sn	09 13 50.3	+0.5
MTHZ	**Maungataniwha**	**2.51 225**		P	Pn	09 13 21.1	+0.4
MTHZ				S	Sn	09 13 51.4	+0.7
PRRZ	**Plateau Road**	**2.56 236**		P	Pn	09 13 21.4	0.0
PRRZ				S	Sn	09 13 52.0	-0.1
KMRZ	**Kaimai**	**2.62 252**		P	Pn	09 13 21.9	-0.4
ALRZ	**Allen Road**	**2.63 235**		P	Pn	09 13 22.9	+0.5
GRRZ	**Galatos Road**	**2.68 241**		P	Pn	09 13 24.1	+1.0
NMHZ	**Naumai**	**2.70 221**		P	Pn	09 13 23.6	+0.2
NMHZ				S	Sn	09 13 55.7	+0.2
KUZ	**Kuaotunu**	**2.73 276**		P	Pn	09 13 22.4	-1.2
ARHZ	**Aropaoanui**	**2.73 217**		P	Pn	09 13 23.4	-0.4
ARHZ				S	Sn	09 13 57.4	+1.2
MRHZ	**Matea Rd**	**2.74 230**		P	Pn	09 13 24.1	+0.1
MRHZ				S	Sn	09 13 56.1	-0.5
BKZ	**Black Stump Fm**	**2.92 224**		P	Pn	09 13 26.1	-0.3
BKZ				S	Sn	09 14 00.1	-0.8
TOZ	**Tahuroa Road**	**2.93 256**		P	Pn	09 13 25.7	-0.8
KUTZ	**Kaahu Road**	**2.95 241**		P	Pn	09 13 27.7	+1.0
CKHZ	**Cape Kidnapper**	**3.02 211**		P	Pn	09 13 26.3	-1.3
MCHZ	**McNeill Hill**	**3.02 218**		P	Pn	09 13 27.0	-0.6
GRZ	**Great Barrier**	**3.04 285**		P	Pn	09 13 27.8	-0.2
TLZ	**Tolley Road**	**3.08 245**		P	Pn	09 13 29.1	+0.5
KWHZ	**Kaweka Forest**	**3.14 221**		P	Pn	09 13 28.5	-0.9
MKAZ	**Moumakai**	**3.15 269**		P	Pn	09 13 28.6	-0.8
RATZ	**Rangitukua**	**3.17 235**		P	Pn	09 13 31.0	+1.2
WIAZ	**Waiheke Island**	**3.19 274**		P	Pn	09 13 29.3	-0.7
KAHZ	**Kahuranaki**	**3.22 212**		P	Pn	09 13 29.1	-1.4
KATZ	**Kakaramea**	**3.28 234**		P	Pn	09 13 32.7	+1.3
KRHZ	**Kereru**	**3.33 219**		P	Pn	09 13 30.7	-1.3
ETAZ	**East Tamaki Re**	**3.34 271**		P	Pn	09 13 32.0	-0.1
TMVZ	**Te Maari**	**3.36 232**		P	Pn	09 13 32.3	-0.2
ETVZ	**East Tongariro**	**3.36 232**		P	Pn	09 13 32.3	-0.2
NTVZ	**North Tongarir**	**3.36 232**		P	Pn	09 13 32.4	-0.1
MBAZ	**Motutapu North**	**3.38 274**		P	Pn	09 13 32.2	-0.4
BHHZ	**Black Hill Sta**	**3.38 224**		P	Pn	09 13 32.0	-0.7
KRVZ	**Karewarewa**	**3.38 233**		P	Pn	09 13 32.7	-0.1
OTVZ	**Oturere**	**3.41 232**		P	Pn	09 13 32.8	-0.4
NNVZ	**North Ngauruho**	**3.42 232**		P	Pn	09 13 33.8	+0.4
WTVZ	**West Tongariro**	**3.43 233**		P	Pn	09 13 34.4	+0.9
SNVZ	**South Ngauruho**	**3.44 231**		P	Pn	09 13 33.3	-0.3
ABAZ	**Army Bay**	**3.46 277**		P	Pn	09 13 33.7	0.0
NGZ	**Ngauruhoe**	**3.46 232**		P	Pn	09 13 33.7	-0.1
TWVZ	**Taurewa**	**3.50 234**		P	Pn	09 13 34.6	+0.2
MOVZ	**Moawhango**	**3.51 228**		P	Pn	09 13 34.0	-0.5
WNVZ	**Wahianoa**	**3.55 230**		P	Pn	09 13 34.6	-0.5
AWAZ	**Awhitu Peninsu**	**3.56 269**		P	Pn	09 13 35.1	0.0
PNHZ	**Pukenui**	**3.62 218**		P	Pn	09 13 34.6	-1.4
WTAZ	**Waiatarua**	**3.62 271**		P	Pn	09 13 36.2	+0.2
WPHZ	**Waipukurau**	**3.63 214**		P	Pn	09 13 34.4	-1.7
RVAZ	**Riverhead Bore**	**3.63 274**		P	Pn	09 13 36.1	0.0
HIZ	**Hauiti**	**3.65 246**		P	Pn	09 13 37.9	+1.5
MTVZ	**Mangateitei**	**3.66 230**		P	Pn	09 13 36.6	0.0
PKVZ	**Pokaka**	**3.68 232**		P	Pn	09 13 37.0	+0.2
ANWZ	**Angora Road**	**3.94 211**		P	Pn	09 13 38.6	-1.7
VRZ	**Vera Road**	**3.98 238**		P	Pn	09 13 41.5	+0.7
WCZ	**Waipu Caves**	**4.00 285**		P	Pn	09 13 41.3	+0.2
WAZ	**Wanganui**	**4.18 229**		P	Pn	09 13 43.5	-0.3
DREZ	**Durham Road**	**4.39 240**		P	Pn	09 13 48.8	+2.3
NEZ	**North Egmont**	**4.50 240**		P	Pn	09 13 50.2	+2.1
PKE	**Pukeiti**	**4.54 241**		P	Pn	09 13 51.3	+2.7
KHEZ	**Kahui Hut**	**4.57 240**		P	Pn	09 13 51.5	+2.5
OUZ	**Omahuta**	**4.83 291**		P	Pn	09 13 52.7	+0.2
KHZ	**Kahutara**	**6.83 217**		P	Pn	09 14 18.5	-1.5
CTZ	**Chatham Island**	**7.40 155**		P	Pn	09 14 27.5	-0.3

DJA 02 09:15:24.3±0.7, 3°S±28°×13°9E±°, h41km±69km, M3.5/4, mb3.5/1, MLv3.5/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.74 354**		P	Pn	09 15 39.0	+0.7
GENI	**Genyem**	**1.38 84**		P	Pn	09 15 47.3	+0.2
GENI				S	Sn	09 16 04.6	+0.4
SRPI	**Serui, Papua**	**2.69 288**		P	Pn	09 16 04.8	-0.3
SRPI				S	Sn	09 16 37.0	+0.6
FAKI	**Fak Fak**	**6.54 268**		P	Pn	09 16 57.7	-0.3

*SNET **02** 09:24:59.8±1.2, 15°.80N×88°.81W, h0km±30km, ML3.6*
UCR 02 09:24:59.9±1.1, 15°.86N×88°.81W, h5km, ML3.4, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**2.05 207**		*e*P	Pn	09 25 35.1	-0.1
PAVA	**Las Pavas**	**2.14 183**		*e*P	Pn	09 25 36.1	-0.3
PAVA				*e*S	Sn	09 26 04.2	+0.7
PAVA	**Las Pavas**	**2.14 183**		*e*P	Pn	09 25 36.1	-0.3
PAVA				*e*S	Sn	09 26 04.2	+0.7
SCLA	**Alcaldia de Sa**	**2.15 178**		*e*P	Pn	09 25 35.6	-0.8
SCLA	**Alcaldia de Sa**	**2.15 178**		*e*P	Pn	09 25 35.6	-0.8
NUBE	**Las Nubes**	**2.16 206**		*e*P	Pn	09 25 36.9	+0.2
NUBE	**Las Nubes**	**2.16 206**		*e*P	Pn	09 25 36.9	+0.2
COEG	**Centro de Oper**	**2.23 182**		*e*P	Pn	09 25 37.1	-0.5
COEG				*e*S	Sn	09 26 06.9	+1.3
COEG				IAML		09 26 16.2	
	comp=Z,382nm,0.4s						
COEG	**Centro de Oper**	**2.23 182**		*e*P	Pn	09 25 37.1	-0.5
COEG				*e*S	Sn	09 26 06.9	+1.3
COEG				IAML		09 26 16.2	
	comp=Z,382nm,0.4s						
PQSS	**Presa 15 de Se**	**2.24 174**		*e*P	Pn	09 25 37.0	-0.7
PQSS				*e*S	Sn	09 26 06.3	+0.6
PQSS	**Presa 15 de Se**	**2.24 174**		*e*P	Pn	09 25 37.0	-0.7
PQSS				*e*S	Sn	09 26 06.3	+0.6
SJTE	**Alcalda de S**	**2.24 185**		*e*P	Pn	09 25 37.9	+0.1
SJTE	**Alcalda de S**	**2.24 185**		*e*P	Pn	09 25 37.9	+0.1
COEB	**Comit de Eme**	**2.37 173**		*e*P	Pn	09 25 39.0	-0.5
COEB				*e*S	Sn	09 26 09.9	+0.9
COEB				IAML		09 26 11.4	
	comp=Z,332nm,0.5s						
COEB	**Comit de Eme**	**2.37 173**		*e*P	Pn	09 25 39.0	-0.5
COEB				*e*S	Sn	09 26 09.9	+0.9
COEB				IAML		09 26 11.4	
	comp=Z,332nm,0.5s						
LCND	**La Caada**	**2.69 161**		*e*P	Pn	09 25 43.9	0.0
LCND				*e*S	Sn	09 26 18.5	+1.6
LCND				IAML		09 26 22.7	
	comp=Z,200nm,0.4s						
LCND	**La Caada**	**2.69 161**		*e*P	Pn	09 25 43.9	0.0
LCND				*e*S	Sn	09 26 18.5	+1.6
LCND				IAML		09 26 22.7	
	comp=Z,200nm,0.4s						

*ISK **02** 09:45:56.8, 40°.76N×37°.61E, h6km, ML2.6/6*
*DDA **02** 09:45:57.8±0.0, 40°.67N×37°.67E, h8km±3km, ML1.7*
ISC 02 09:45:57.4±1.2, 40°.71N±0°.03×37°.65E±0°.03, h10km±11km, n13, σ0§53/23, Turkey

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

*NEIC **02** 10:48:42.3±1.3, 18°.2S±0°.3×178°.5W±0°.3, h606km±22km, mb4.2/11, Error ellipse: s-maj=46.1km s-min=33.9km az=210.0*
*IDC **02** 10:48:43.4±2.1, 17°.65S×178°.77W, h610km±19km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=87.2km s-min=16.7km az=152.0*
ISC 02 10:48:41.2±0.7, 18°.1S±0°.2×178°.5W±0°.2, h600km, n21, σ0§76/26, mb3.9/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.31**	**276**	P	**P**	**10 50 03.8**	**+1.5**
	14nm,0.6s,baz=158,slow=3.1,SNR=16						
FOZ	**Fox Glacier**	**27.22**	**199**	P	**P**	**10 53 37.9**	**-0.8**
WKZ	**Wanaka**	**28.63**	**199**	P	**P**	**10 53 50.1**	**-0.9**
MLZ	**Mavora Lakes**	**29.40**	**199**	P	**P**	**10 53 57.8**	**+0.2**
MLZ				IAmb	IAmb	10 54 22.7	
	comp=Z,26nm,1.5s						
WHZ	**Wether Hill Ro**	**29.92**	**199**	P	**P**	**10 54 02.0**	**0.0**
WHZ				IAmb	IAmb	10 54 08.8	
	comp=Z,21nm,1.2s						
WR0	**Warramunga Arr**	**44.33**	**260**	P	**P**	**10 55 59.2**	**-0.5**
WR0				IAmb	IAmb	10 56 14.1	
	comp=Z,8.2nm,1.4s						
WB0	**Warramunga Arr**	**44.49**	**260**	P	**P**	**10 56 00.6**	**-0.3**
WB0				IAmb	IAmb	10 56 01.6	
	comp=Z,5.8nm,1.1s						
WB2	**Warramunga Arr**	**44.51**	**260**	P	**P**	**10 56 01.0**	**-0.1**
WB2				IAmb	IAmb	10 56 19.6	
	comp=Z,6.0nm,1.2s						
WB2				PcP	**PcP**	**10 57 31.0**	**-0.1**
WRAB	**Tennant Creek**	**44.51**	**260**	P	**P**	**10 56 00.8**	**-0.4**
WRAB				IAmb	IAmb	10 56 24.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**10 56 01.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.3,SNR=32						
WRA				PcP	**PcP**	**10 57 31.5**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=90,slow=3.7,SNR=6.8						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**10 56 01.3**	**+0.1**
WRA				PcP	**PcP**	**10 57 31.1**	**-0.1**
AS31	**Alice Springs**	**44.66**	**254**	P	**P**	**10 56 03.0**	**+0.7**
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**10 56 02.8**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=87,slow=8.7,SNR=56						
ASAR				PcP	**PcP**	**10 57 31.8**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=102,slow=3.7,SNR=8.5						
	comp=Z,2.7nm,0.6s						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**10 56 02.3**	**0.0**
ASAR				PcP	**PcP**	**10 57 31.8**	**+0.1**
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**10 59 04.9**	**-0.1**
QSPA				IAmb	IAmb	10 59 36.0	
	comp=Z,2.6nm,1.4s						
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**10 59 48.5**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=219,slow=7.1,SNR=7.5						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**86.08**	**13**	P	**P**	**11 00 18.1**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=222,slow=4.8,SNR=11						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**11 00 21.8**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=221,slow=5.9,SNR=13						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**87.54**	**43**	P	**P**	**11 00 26.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=214,slow=3.3,SNR=6.6						
	comp=Z,0.6nm,0.7s						
CLL	**Collm**	**145.62**	**347**	*i* PKPbc	**PKPab**	**11 07 13.7**	**-1.7**
GERES	**GERESS Array B**	**147.77**	**345**	PKPbc	**PKiKP**	**11 07 19.6**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=33,slow=3.2,SNR=9.7						

*NEIC **02** 11:01:40.4±2.1, 22°.6S±0°.1×173°.05E±0°.09, h10km±2km, mb4.4/15, Error ellipse: s-maj=25.4km s-min=13.0km az=348.0*
*IDC **02** 11:01:44.3±2.4, 22°.64S×172°.99E, h55km±23km, mb3.6/9, mbtmp3.9/11, ML5.4/1, MS3.7/30, Error ellipse: s-maj=21.2km s-min=13.6km az=156.0*
*NOU **02** 11:02:42.7, 22°.11S×168°.20E, h0km, MLv2.8/8, New Caledonia*
ISC 02 11:01:42.6±0.6, 22°.67S±0°.08×173°.06E±0°.06, h32km, n74, σ1§41/47, mb4.2/13, MS3.7/29, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.81**	**283**	Pn	**Pn**	**11 02 52.4**	**-0.4**
MARNC	**Mare, Loyalty**	**4.81**	**283**	P	**Pn**	**11 02 55.1**	**+2.3**
PINNC	**Pines Island,**	**5.18**	**270**	Pn	**Pn**	**11 02 59.2**	**+1.3**
PINNC	**Pines Island,**	**5.18**	**270**	P	**Pn**	**11 02 59.2**	**+1.3**
YATNC	**Mamie plateau,**	**5.74**	**275**	P	**Pn**	**11 03 05.5**	**-0.1**
OUENC	**Ouen Island, N**	**5.75**	**271**		**Pn**	**11 03 05.0**	**-0.7**
OUENC				Sn	**Sn**	**11 04 13.3**	**+2.6**
OUENC	**Ouen Island, N**	**5.75**	**271**	P	**Pn**	**11 03 06.6**	**+0.9**
ONTNC	**Ouen Toro**	**6.12**	**272**		**Pn**	**11 03 10.4**	**-0.3**
ONTNC	**Ouen Toro**	**6.12**	**272**	P	**Pn**	**11 03 12.0**	**+1.2**
DZM	**Mont Dzumac**	**6.15**	**274**	*e*Pn	**Pn**	**11 03 10.8**	**-0.5**
	44nm,1.2s						
DZM				*e*Sn	**Sn**	**11 04 20.6**	**0.0**
	163nm,1.2s						
DZM				*e*LR	LR	11 04 38.1	
	comp=Z,917nm,24.1s						
DZM	**Mont Dzumac**	**6.15**	**274**	P	**Pn**	**11 03 11.4**	**+0.1**
	5.6nm,0.3s,baz=100,slow=18,SNR=47						
DZM				S	**Sn**	**11 04 20.8**	**+0.2**
	11nm,0.3s,baz=115,slow=14,SNR=8.7						
DZM				LR	LR	11 04 29.3	
	comp=Z,56nm,19.3s,baz=172,slow=27						
DZM	**Mont Dzumac**	**6.15**	**274**		**Pn**	**11 03 11.3**	**+0.1**
DZM				Sn	**Sn**	**11 04 19.8**	**-0.8**
DZM	**Mont Dzumac**	**6.15**	**274**	P	**Pn**	**11 03 11.9**	**+0.6**
NOUC	**Port Laguerre**	**6.27**	**274**	P	**Pn**	**11 03 13.8**	**+0.8**
MSVF	**Nonsavu**	**6.79**	**45**	P	**Pn**	**11 03 19.9**	**-0.2**
	2.5nm,0.3s,baz=216,slow=14,SNR=15						
MSVF				S	**Sn**	**11 04 40.2**	**+3.8**
	3.2nm,0.4s,baz=99,slow=23,SNR=1.2						
MSVF				LR	LR	11 05 18.2	
	comp=Z,563nm,18.1s,baz=256,slow=31						
	11nm,0.6s						
KOUNC	**Koumac, New Ca**	**8.43**	**283**	P	**Pn**	**11 03 44.9**	**+2.4**
URZ	**Urewera**	**15.92**	**168**	LR	LR	11 10 33.9	
	comp=Z,171nm,18.3s,baz=78,slow=33						
BKZ	**Black Stump Fm**	**16.70**	**171**	P	**P**	**11 05 37.6**	**+1.3**
BKZ				IAmb	IAmb	11 05 40.3	
	comp=Z,15nm,1.1s						
AFI	**Afiamalu**	**16.82**	**61**	LR	LR	11 10 54.3	
	comp=Z,194nm,18.8s,baz=244,slow=33						
HNR	**Honiara**	**18.20**	**314**	LR	LR	11 12 09.1	
	comp=Z,1μm,18.6s,baz=149,slow=34						
TUWZ	**Tuamarina**	**18.72**	**178**	P	**Pn**	**11 06 01.1**	**+2.0**
LTZ	**Lake Taylor**	**20.07**	**182**	P	**P**	**11 06 14.0**	**+0.7**
LTZ				IAmb	IAmb	11 06 30.6	
	comp=Z,35nm,1.2s						
OXZ	**Oxford**	**20.62**	**182**	P	**P**	**11 06 20.5**	**+1.4**
OXZ				IAmb	IAmb	11 06 25.9	
	comp=Z,20nm,1.0s						
ARMA	**Armidale**	**20.64**	**244**	P	Pn	11 06 21.8	-0.3
ARMA				IAmb	IAmb	11 06 39.0	
	comp=Z,13nm,1.2s						
RPZ	**Rata Peaks**	**21.05**	**184**	P	**P**	**11 06 25.1**	**+1.2**
	comp=Z,9.0nm,0.9s,baz=52,slow=12,SNR=2.7						
RPZ				LR	LR	11 14 09.4	
	comp=Z,224nm,18.9s,baz=336,slow=35						
	comp=Z,9.0nm,0.9s						
RPZ	**Rata Peaks**	**21.05**	**184**	P	**P**	**11 06 26.2**	**+2.3**
CTA	**Charters Tower**	**25.08**	**271**	P	**P**	**11 07 03.6**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=101,slow=13,SNR=2.3						
CTA				LR	LR	11 16 36.0	
	comp=Z,176nm,18.9s,baz=83,slow=36						
	comp=Z,1.8nm,0.7s						
RAR	**Rarotonga**	**25.23**	**92**	LR	LR	11 17 06.7	
	comp=Z,54nm,18.2s,baz=235,slow=36						
PMG	**Port Moresby**	**28.10**	**294**	LR	LR	11 16 57.8	
	comp=Z,102nm,21.3s,baz=171,slow=33						
STKA	**Stephens Creek**	**29.34**	**245**	LR	LR	11 18 59.8	
	comp=Z,150nm,18.3s,baz=40,slow=35						
STKA	**Stephens Creek**	**29.34**	**245**	P	**P**	**11 07 42.9**	**+0.3**
TBI	**Tubuai**	**34.45**	**99**	*e*LR	LR	11 17 26.0	
	comp=Z,92nm,27.0s						
PPT2	**Papeete2**	**35.38**	**89**	*e*LR	LR	11 17 52.5	
	comp=Z,154nm,29.0s						
PPT	**Papeete**	**35.39**	**89**	LR	LR	11 21 41.0	
	comp=Z,27nm,18.4s,baz=284,slow=34						
WR0	**Warramunga Arr**	**35.92**	**267**	P	**P**	**11 08 40.2**	**0.0**
WR0				IAmb	IAmb	11 08 50.0	
	comp=Z,7.9nm,1.3s						
AS31	**Alice Springs**	**35.93**	**261**	P	**P**	**11 08 40.3**	**-0.1**
ASAR	**Alice Springs**	**35.93**	**261**	P	**P**	**11 08 39.6**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=82,slow=10,SNR=12						
ASAR				LR	LR	11 23 19.5	
	comp=Z,161nm,18.1s,baz=153,slow=36						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**35.93**	**261**	P	**P**	**11 08 41.5**	**+1.1**
WB0	**Warramunga Arr**	**36.09**	**267**	P	**P**	**11 08 41.4**	**-0.3**
WB0				IAmb	IAmb	11 08 57.5	
	comp=Z,9.6nm,1.4s						
WB2	**Warramunga Arr**	**36.09**	**267**	P	**P**	**11 08 41.5**	**-0.3**
WB2				IAmb	IAmb	11 09 08.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**36.10**	**267**	P	**P**	**11 08 39.8**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=96,slow=8.6,SNR=12						
WRA				LR	LR	11 23 09.9	
	comp=Z,194nm,19.0s,baz=109,slow=36						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**36.10**	**267**	P	**P**	**11 08 39.4**	**-2.4**
FORT	**Forrest**	**40.77**	**249**	P	**P**	**11 09 22.3**	**+1.3**
H11S2	**WAKE ISLAND Hy**	**41.38**	**351**	T	T	11 53 20.8	
	baz=171,slow=76,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**41.38**	**351**	T	T	11 53 37.3	
	baz=171,slow=76,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**41.40**	**351**	T	T	11 53 20.2	
	baz=171,slow=76,SNR=7.9						
KNRA	**Kununurra**	**42.29**	**271**	P	**P**	**11 09 32.4**	**-1.2**
KNRA				IAmb	IAmb	11 10 02.3	
	comp=Z,18nm,1.2s						
FITZ	**Fitzroy Crossi**	**44.54**	**267**	LR	LR	11 27 36.3	
	comp=Z,99nm,19.2s,baz=132,slow=35						
FITZ	**Fitzroy Crossi**	**44.54**	**267**	P	**P**	**11 09 50.8**	**-0.8**
GUMO	**Guam**	**45.40**	**320**	LR	LR	11 28 23.6	
	comp=Z,36nm,19.8s,baz=172,slow=35						
SIJI	**Sorong**	**46.02**	**292**	LR	LR	11 29 13.2	
	comp=Z,51nm,19.5s,baz=212,slow=36						
TAOE	**Nuku Hiva Isla**	**46.88**	**81**	*e*LR	LR	11 23 12.4	
	comp=Z,90nm,23.0s						
BATI	**Baumata**	**48.76**	**276**	LR	LR	11 30 30.9	
	comp=Z,305nm,20.8s,baz=208,slow=36						
NWAO	**Narrogin (SRO)**	**49.93**	**245**	LR	LR	11 30 01.1	
	comp=Z,163nm,20.0s,baz=335,slow=34						
KAPI	**Kappang**	**54.33**	**280**	LR	LR	11 35 05.4	
	comp=Z,55nm,18.3s,baz=94,slow=37						
VNDA	**Vanda**	**55.17**	**183**	LR	LR	11 31 49.5	
	comp=Z,76nm,18.7s,baz=10.0,slow=33						
LEM	**Lembang**	**64.75**	**273**	LR	LR	11 42 02.7	
	comp=Z,69nm,18.1s,baz=206,slow=37						
QSPA	**South Pole Qui**	**67.40**	**180**	P	**P**	**11 12 34.3**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=13,slow=1.2,SNR=11						
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**67.40**	**180**	P	**P**	**11 12 34.3**	**-0.4**
MJAR	**Matsushiro Arr**	**67.46**	**330**	P	**P**	**11 12 34.7**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=135,slow=4.3,SNR=4.7						
	comp=Z,1.2nm,0.8s						
RPN	**Rapa Nui**	**69.49**	**112**	LR	LR	11 38 15.9	
	comp=Z,9.4nm,19.3s,baz=211,slow=32						
PSI	**Prapat**	**76.49**	**279**	LR	LR	11 49 42.2	
	comp=Z,125nm,18.7s,baz=118,slow=38						
PETK	**Petropavlovsk-**	**76.63**	**351**	P	**P**	**11 13 29.0**	**-0.8**
	comp=Z,3.1nm,0.9s,baz=160,slow=4.6,SNR=4.2						
	comp=Z,3.1nm,0.9s						
KDAK	**Kodiak Island**	**85.13**	**18**	LR	LR	11 45 18.8	
	comp=Z,53nm,19.6s,baz=227,slow=31						
SNAA	**Sanae**	**85.87**	**181**	P	**P**	**11 14 16.9**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=263,slow=5.1,SNR=4.3						
	comp=Z,1.2nm,0.8s						
SNAA	**Sanae**	**85.87**	**181**	P	**P**	**11 14 16.7**	**-2.2**
SNAA				IAmb	IAmb	11 14 35.1	
	comp=Z,3.2nm,1.1s						
YBH	**Yreka Blue Hor**	**87.34**	**42**	LR	LR	11 46 18.2	
	comp=Z,32nm,20.3s,baz=270,slow=31						
PFO	**Pinyon Flats O**	**87.34**	**52**	LR	LR	11 46 53.0	
	comp=Z,45nm,18.2s,baz=177,slow=31						
LPIG	**La Paz**	**87.74**	**63**	LR	LR	11 45 32.0	
	comp=Z,42nm,19.2s,baz=252,slow=30						
NVAR	**Mina Array Bea**	**88.45**	**47**	P	**P**	**11 14 29.8**	**-2.2**
	comp=Z,0.1nm,0.6s,baz=205,slow=4.0,SNR=2.8						
	comp=Z,0.1nm,0.6s						
YAK	**Yakutsk**	**91.23**	**341**	LR	LR	11 54 30.1	
	comp=Z,25nm,18.0s,baz=258,slow=35						
ELK	**Elko**	**91.66**	**46**	LR	LR	11 47 18.4	
	comp=Z,49nm,21.7s,baz=256,slow=30						
SONM	**Songino Array**	**92.10**	**322**	LR	LR	11 54 27.6	
	comp=Z,16nm,20.6s,baz=166,slow=34						
NEW	**Newport**	**94.14**	**39**	LR	LR	11 56 34.2	
	comp=Z,44nm,18.2s,baz=289,slow=35						

*VAO **02** 11:11:42.9±0.5, 21°.97S×67°.31W, h177km, mb3.7*
*GUC **02** 11:11:43.0±0.6, 22°.11S×67°.58W, h206km±7km, ML4.0*
*SCB **02** 11:11:46.6±1.2, 22°.11S×67°.42W, h153km, ML3.3/5, MW3.4, Error ellipse: s-maj=6.9km s-min=3.8km az=0.0*
ISC 02 11:11:41.9±0.7, 22°.11S±0°.05×67°.43W±0°.06, h190km±10km, n39, σ1§17/51, 9C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.46**	**250**	⇑*i*P	**Pn**	**11 12 15.5**	**+0.8**
LVC				*i* S	**S**	**11 12 40.5**	**+0.4**
LVC				IAML		11 12 42.1	
	406nm,0.4s						
LVC	**Limon Verde**	**1.46**	**250**	P	**Pn**	**11 12 15.4**	**+0.7**
LVC				IAML		11 12 42.5	
	46nm,1.6s						
LVC	**Limon Verde**	**1.46**	**250**	*e*P	**Pn**	**11 12 15.8**	**+1.1**
PB09	**IPOC Station P**	**1.71**	**280**	⇑*i*P	**Pn**	**11 12 18.3**	**+1.4**
YJA	**Yavi**	**1.78**	**92**	P	**Pn**	**11 12 17.9**	**0.0**
MOCB	**Mochara**	**1.88**	**63**	P	**Pn**	**11 12 18.8**	**-0.1**
MOCB				IAML		11 12 49.3	
	141nm,0.4s						
PB06	**IPOC Station P**	**2.07**	**253**	⇑*i*P	**Pn**	**11 12 21.3**	**+0.8**
PB06				*i* S	**S**	**11 12 50.8**	**+0.2**
PB15	**IPOC Station P**	**2.18**	**240**	⇑*i*P	**Pn**	**11 12 22.8**	**+1.0**
PB15				*i* S	**S**	**11 12 53.0**	**+0.2**
PB01	**IPOC Station P**	**2.19**	**299**	⇑*i*P	**Pn**	**11 12 22.4**	**+0.6**
PB01				*i* S	**S**	**11 12 53.0**	**+0.2**
PB01				IAML		11 12 53.9	
	comp=E,471nm,0.2s						
PB07	**IPOC Station P**	**2.31**	**279**	*e*P	**Pn**	**11 12 24.0**	**+0.8**
PB07				*i* S	**S**	**11 12 54.6**	**-0.7**
PB07				IAML		11 12 55.7	
	comp=N,499nm,0.1s						
PB02	**IPOC Station P**	**2.42**	**289**	⇑*i*P	**Pn**	**11 12 25.1**	**+0.7**
PB02				*i* S	**S**	**11 12 56.6**	**-0.8**
PB02				IAML		11 12 58.6	
	comp=E,661nm,0.2s						
PB02	**IPOC Station P**	**2.42**	**289**	P	**Pn**	**11 12 25.4**	**+1.0**
PB04	**IPOC Station P**	**2.53**	**264**	*e*P	**Pn**	**11 12 26.4**	**+0.8**
PB04				*i* S	**S**	**11 12 59.0**	**-0.7**
PB04				IAML		11 13 00.6	
	comp=N,384nm,0.1s						
PB04	**IPOC Station P**	**2.53**	**264**	P	**Pn**	**11 12 26.7**	**+1.0**
PB04				S	**S**	**11 12 55.6**	**-4.1**
PB04				IAML		11 13 04.4	
	comp=N,278nm,0.3s						
PB08	**IPOC Station P**	**2.54**	**320**	⇑*i*P	**Pn**	**11 12 27.5**	**+1.5**
PATCX	**Punta Patache**	**2.84**	**296**	*e*P	**Pn**	**11 12 29.6**	**+0.3**
PATCX				*i* S	**S**	**11 13 04.5**	**-1.5**
PATCX				IAML		11 13 05.8	
	comp=N,338nm,0.3s						
GO01	**Chusmiza**	**2.94**	**326**	⇑*i*P	**Pn**	**11 12 31.8**	**+1.0**
GO01				*i* S	**S**	**11 13 10.9**	**+2.1**
GO01				IAML		11 13 15.2	
	comp=E,434nm,0.1s						
GO01	**Chusmiza**	**2.94**	**326**	P	**Pn**	**11 12 32.0**	**+1.2**
TA01	**Diego Aracena**	**2.99**	**300**	⇑*i*P	**Pn**	**11 12 30.9**	**0.0**
TA01				*i* S	**S**	**11 13 07.6**	**-1.5**
TA01				IAML		11 13 08.7	
	comp=E,236nm,0.3s						
TA01	**Diego Aracena**	**2.99**	**300**	P	**Pn**	**11 12 31.9**	**+1.0**
TA02	**Huaiquique**	**3.12**	**306**	*e*P	**Pn**	**11 12 33.4**	**+1.0**
TA02				*i* S	**S**	**11 13 11.1**	**-0.7**
TA02				IAML		11 13 13.7	
	comp=E,444nm,0.1s						
TA02	**Huaiquique**	**3.12**	**306**	P	**Pn**	**11 12 32.6**	**+0.2**
GO02	**Mina Guanaco**	**3.62**	**213**	P	**Pn**	**11 12 40.2**	**+1.3**
GO02				IAML		11 13 24.5	
	comp=E,287nm,0.1s						
BBOE	**La Paz, Chanca**	**5.30**	**354**	P	**Pn**	**11 13 03.0**	**+2.5**
BBOE				IAML		11 14 08.4	
	comp=E,5.3nm,1.2s						
PTLB	**Pontes e Lacer**	**10.28**	**51**	*e*P	**Pn**	**11 14 02.7**	**-2.2**
VILB	**Vilhena**	**11.42**	**38**	*e*P	**Pn**	**11 14 19.1**	**-0.6**
ETMB	**Extrema**	**12.28**	**6**	*e*P	**Pn**	**11 14 30.4**	**-0.3**
ITQB	**Itaqui**	**12.29**	**130**	*e*P	**Pn**	**11 14 31.3**	**+0.6**
RODS	**Rosario do Sul**	**13.70**	**129**	*e*P	**P**	**11 14 50.5**	**-0.4**
ALGR	**Alto Alegre (B**	**14.61**	**120**	*e*P	**P**	**11 15 00.8**	**-0.3**
PDRB	**Porto dos Gac**	**14.62**	**46**	*e*P	**Pn**	**11 14 58.6**	**-1.4**
ITAB	**Concordia**	**14.81**	**113**	*e*P	**P**	**11 15 04.1**	**+0.8**
CLDB	**Colider**	**15.78**	**47**	*e*P	**Pn**	**11 15 14.9**	**+0.8**
SNDB	**Serra Nova Dou**	**18.41**	**59**	*e*P	**P**	**11 15 42.9**	**0.0**
IPMB	**Ipameri, GO**	**18.52**	**81**	*e*P	**P**	**11 15 45.3**	**+1.2**
VAO	**Valinhos**	**18.92**	**97**	*e*P	**P**	**11 15 49.0**	**+0.5**
BDFB	**Brasilia**	**19.46**	**74**	*e*P	**P**	**11 15 55.0**	**+0.6**
JANB	**Januaria**	**22.99**	**76**	*e*P	**P**	**11 16 29.7**	**-0.5**
PRPB	**Parauapebas**	**23.25**	**50**	*e*P	**P**	**11 16 32.9**	**+0.4**

*JMA **02** 11:20:46.9±0.1, 25°.N±3°.×122°.7E±0°.7, h85km±2km, MV1.7/8, NW OFF ISHIGAKIJIMA IS*
*TAP **02** 11:20:46.6, 24°.52N×122°.63E, h86km, ML2.6, C*
ISC 02 11:20:47.0±1.6, 24°.52N±0°.05×122°.64E±0°.03, h87km±10km, n62, σ0§48/89, Taiwan region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.29**	**103**	P	**Pn**	**11 21 00.2**	**+0.3**
JYNG				*e*S	**Sn**	**11 21 10.0**	**+0.5**
YOJ	**Yonaguni jima**	**0.34**	**99**	*i* P	**Pn**	**11 21 00.2**	**-0.1**
	baz=98						
YOJ				*i* S	**Sn**	**11 21 09.9**	**-0.2**
	baz=98						
YOJ	**Yonaguni jima**	**0.34**	**99**	P	**Pn**	**11 21 00.4**	**+0.2**
YOJ				*e*S	**Sn**	**11 21 10.6**	**+0.5**
EGS		**0.72**	**297**	*e*P	**Pn**	**11 21 03.1**	**-0.3**
	baz=297						
TWC	**Suao**	**0.72**	**278**	P	**Pn**	**11 21 03.1**	**-0.3**
	baz=277						
TWC				*i* S	**Sn**	**11 21 15.5**	**-0.2**
	baz=277						
TWB1	**Santiao Chiao**	**0.77**	**310**	*i* P	**Pn**	**11 21 03.8**	**-0.1**
	baz=310						
TWB1				*i* S	**Sn**	**11 21 16.4**	**0.0**
	baz=310						
NTC	**Toucheng**	**0.81**	**295**	*i* P	**Pn**	**11 21 04.4**	**+0.1**
	baz=294						
NTC				*e*S	**Sn**	**11 21 17.0**	**-0.2**
	baz=294						
TIPB	**Shuangxi**	**0.87**	**302**	P	**Pn**	**11 21 04.8**	**-0.1**
	baz=301						
TIPB				*e*S	**Sn**	**11 21 18.2**	**-0.2**
	baz=301						
SXI1	**Grass Mountain**	**0.90**	**310**	*i* P	**Pn**	**11 21 05.5**	**0.0**
	baz=309						
SXI1				*e*S	**Sn**	**11 21 19.5**	**+0.3**
	baz=309						
TWE	**Neicheng**	**0.91**	**283**	*e*P	**Pn**	**11 21 05.5**	**+0.1**
	baz=283						
TWE				*e*S	**Sn**	**11 21 19.2**	**0.0**
	baz=283						
NWF	**Wu-fen Shan**	**0.95**	**306**	*e*P	**Pn**	**11 21 06.0**	**0.0**
	baz=305						
WFSB	**Wu-fen Shan**	**0.95**	**306**	*e*P	**Pn**	**11 21 06.1**	**+0.2**
	baz=305						
ENTT	**Nioudou**	**0.98**	**277**	*e*P	**Pn**	**11 21 05.8**	**-0.5**
	baz=277						
ENTT				S	**Sn**	**11 21 20.8**	**0.0**
	baz=277						
FUSB	**Fushanzhiwuyua**	**0.99**	**284**	P	**Pn**	**11 21 06.5**	**+0.1**
	baz=284						
FUSB				*i* S	**Sn**	**11 21 20.8**	**0.0**
	baz=284						
NACB	**Ninganchiao**	**1.01**	**251**	*e*P	**Pn**	**11 21 06.3**	**-0.3**
	baz=250						
IRIF	**Iriomote-Funau**	**1.01**	**100**	*e*P	**Pn**	**11 21 06.6**	**0.0**
IRIF				*e*S	**Sn**	**11 21 21.1**	**-0.1**
LATG	**Datong**	**1.01**	**271**	P	**Pn**	**11 21 06.8**	**+0.1**
	baz=271						
LATG				*e*S	**Sn**	**11 21 21.8**	**+0.3**
	baz=271						
TWD	**Chiawan**	**1.04**	**246**	*e*P	**Pn**	**11 21 06.8**	**-0.2**
	baz=245						
TWA	**Mucha**	**1.06**	**296**	*i* P	**Pn**	**11 21 07.1**	**-0.1**
	baz=295						
TWA				*i* S	**Sn**	**11 21 22.4**	**0.0**
	baz=295						
NHDH	**Xindian Distri**	**1.10**	**294**	*e*P	**Pn**	**11 21 07.6**	**-0.1**
	baz=293						
NHDH				*e*S	**Sn**	**11 21 23.1**	**-0.1**
	baz=293						
TEYL	**Yanliau Villag**	**1.15**	**236**	*i* P	**Pn**	**11 21 08.1**	**-0.1**
	baz=237						
YM01	**YM01**	**1.16**	**303**	P	**Pn**	**11 21 08.3**	**-0.1**
	baz=302						
YM01				*i* S	**Sn**	**11 21 24.4**	**0.0**
	baz=302						
HATJ	**Hateruma jima**	**1.16**	**113**	*e*S	**Sn**	**11 21 25.3**	**+0.9**
YHNB	**Yeheng**	**1.16**	**278**	P	**Pn**	**11 21 08.6**	**+0.2**
	baz=277						
NSK	**Sanguang**	**1.18**	**278**	*e*P	**Pn**	**11 21 07.8**	**-0.8**
	baz=277						
ETM	**Tong

JTJ	Tarama	1.88	86	S	Sn	11 21 40.0	-0.8
EHD	Haiduan baz=223	1.89	224	eP	Pn	11 21 16.2	-1.5
ALS	Alishan baz=238	1.95	240	eP	Pn	11 21 19.6	+0.8
EDH	Donghe baz=218	1.96	219	eP	Pn	11 21 17.9	-0.7
LONT	Longtian baz=220	2.12	221	eP	Pn	11 21 20.5	-0.1
WCKO	Fanlu baz=239	2.15	240	eP	Pn	11 21 21.4	+0.4
TPUB	Ta-pu baz=236	2.20	237	eP	Pn	11 21 22.9	+1.1
TWGBT	Beinan baz=220	2.21	221	eP	Pn	11 21 22.5	+0.5
TWG	Pinlang baz=220	2.22	221	eP	Pn	11 21 22.4	+0.4
WTP	Ta-pu baz=235	2.24	236	eP	Pn	11 21 23.4	+1.0
CHN1	Nanshi baz=235	2.34	236	eP	Pn	11 21 24.6	+0.9

*IDC **02** 11:24:19.6±0.9, 36°.46N×79°.89E, h0km, mb3.6/5, mbtmp3.6/9, ML3.4/4, MS3.2/2, Error ellipse: s-maj=34.3km s-min=17.3km az=55.0*
*NNC **02** 11:24:28.6±2.2, 37°.06N×80°.05E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=17.6km s-min=14.0km az=145.0*
ISC 02 11:24:22.6±1.1, 36°.64N±0°.09×80°.3E±0°.1, h10km, n18, σ1§95/20, mb3.7/7, 10C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye 13nm,0.8s	6.71	355	⇑Pn	Pn	11 26 03.1	+1.7
PDGK 11nm,0.5s				⇑Sn	Sn	11 27 16.5	-1.4
PDGK 39nm,0.8s				⇑Lg	Lg	11 27 49.5	
MDOK	Medeo 12nm,0.7s	6.97	340	⇑Pg	Pb	11 26 26.9	+3.0
MDOK 63nm,1.2s				⇑Lg	Lg	11 27 54.6	
TKM2	Tokmak 2 3.5nm,0.5s	7.23	332	⇑Pn	Pn	11 26 10.1	+1.5
TKM2 7.4nm,0.8s				⇑Pg	Pb	11 26 34.9	+6.5
TKM2 16nm,0.8s				⇓Lg	Lg	11 28 02.2	
AAK	Ala-Archa 0.3nm,0.3s,baz=231,slow=20,SNR=1.7	7.46	325	Pn	Pn	11 26 13.4	+1.7
AAK 1.7nm,0.3s,baz=124,slow=7.8,SNR=9.5				Pg	Pb	11 26 39.0	+6.7
AAK 0.9nm,0.3s,baz=91,slow=22,SNR=3.8 0.9nm,0.3s				Lg	Lg	11 28 12.3	
KK31	Karatay Array 0.4nm,0.3s	9.89	314	⇓Pn	Pn	11 26 46.6	+1.8
KK31 1.1nm,0.5s				⇑Sn	Sn	11 28 33.5	-2.4
KK31 1.3nm,0.5s,baz=344,slow=27,SNR=2.9				⇓Lg	Lg	11 29 28.0	
MAKZ	Makanchi 4.1nm,0.6s	10.24	7	⇓Pn	Pn	11 26 49.7	0.0
MAKZ 2.4nm,0.5s				⇑Sn	Sn	11 28 45.1	+0.6
MK31	Makanchi Array 2.7nm,0.7s,baz=192,slow=14,SNR=19	10.26	8	Pn	Pn	11 26 50.9	+1.0
MK31 2.9nm,0.5s,baz=187,slow=22,SNR=8.4				⇑Sn	Sn	11 28 42.9	-2.1
MKAR	Makanchi Array 0.7nm,0.3s,baz=190,slow=14,SNR=18	10.26	8	Pn	Pn	11 26 50.7	+0.8
MKAR 1.5nm,0.3s,baz=181,slow=24,SNR=8.9 2.7nm,0.6s				Sn	Sn	11 28 41.5	-3.5
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=186,slow=12,SNR=1.3 0.6nm,0.5s	17.60	9	P	Pn	11 28 27.6	-0.2
BVAR	Borovoye Array 0.3nm,0.3s,baz=144,slow=12,SNR=9.6 1.5nm,0.7s	17.79	340	P	Pn	11 28 30.0	-0.2
AKTO	Aktyubinsk 0.6nm,0.5s,baz=120,slow=15,SNR=2.3	21.11	318	P	P	11 29 04.2	-3.2
AKTO comp=Z,38nm,21.0s,baz=149,slow=40 0.6nm,0.5s				LR	LR	11 38 25.4	
CMAR	Chiang Mai Arr 1.5nm,0.8s,baz=313,slow=10,SNR=13 1.5nm,0.8s	24.46	133	P	P	11 29 42.5	+0.7
FINES	FINESS Array B 3.2nm,1.1s,baz=96,slow=9.9,SNR=1.0 3.2nm,1.1s	41.65	324	P	P	11 32 09.6	-1.2
ESDC	Sonseca Array comp=Z,35nm,18.3s,baz=331,slow=40	63.88	301	LR	LR	12 07 15.9	
TORD	Torodi Ar. Bea 1.0nm,0.6s,baz=45,slow=5.2,SNR=6.8	73.17	274	P	P	11 35 50.8	-3.1
WRA	Warramunga Arr 0.4nm,0.9s,baz=326,slow=5.8,SNR=5.7 0.4nm,0.9s	75.96	128	P	P	11 36 08.6	-1.4
KDAK	Kodiak Island 26nm,1.2s,baz=236,slow=3.6,SNR=2.2	76.03	26	P	P	11 36 11.7	+1.9
ASAR	Alice Springs 0.4nm,0.9s,baz=335,slow=6.3,SNR=2.7 0.4nm,0.9s	78.46	131	P	P	11 36 22.0	-1.9

*JMA **02** 11:29:00.4±0.4, 45°.N±2°.×14°.3E±°., h285km±3km, MV3.4/35, NE OFF HOKKAIDO*
*SKHL **02** 11:29:01.4±0.3, 44°.90N×143°.10E, h247km±12km, mb4.0/4, msha4.4/4*
*IDC **02** 11:29:05.6±3.4, 45°.60N×143°.40E, h301km±32km, mb2.9/9, mbtmp3.6/12, Error ellipse: s-maj=29.6km s-min=15.3km az=162.0*
ISC 02 11:29:00.7±0.7, 44°.97N±0°.06×143°.48E±0°.06, h280km±6km, n33, σ1§65/44, mb3.2/9, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	Soyaes	0.63	269	P	Pn	11 29 37.5	+0.2
JSE				eS	S	11 30 06.0	-0.3
JTKR	Abashiri--Toko	1.05	163	P	Pn	11 29 40.1	+0.9
JTKR				eS	S	11 30 10.4	+0.7
ASAJ	Asahikawa	1.06	217	P	Pn	11 29 40.3	+1.0
ASAJ				eS	S	11 30 11.2	+1.4
JWK2	Keihoku	1.17	288	P	Pn	11 29 40.2	+0.5
JKK2	Kamakawa 2	1.22	206	P	Pn	11 29 41.0	+0.8
JSS	Shosan	1.29	244	eP	Pn	11 29 41.4	+0.8
JRR	Rishiri	1.54	277	eP	Pn	11 29 42.3	+0.2
JRA	Rausu	1.57	131	eP	Pn	11 29 43.0	+0.7
JAR	Ashorobuto	1.69	173	eP	Pn	11 29 44.1	+0.8
JAR				eS	S	11 30 17.5	+0.4
JHR	Hokuryu	1.76	226	eP	Pn	11 29 44.9	+1.1
JRBN	Rebuntou	1.76	286	eP	Pn	11 29 42.9	-0.8
YUK	Yuzh-Kuril'sk	1.95	118	eP	Pn	11 29 46.2	+0.9
YUK 50nm,0.5s				AMB	AMB	11 29 48.2	
YUK				eS	S	11 30 21.5	+0.9
YUK 70nm,0.5s				A	A	11 30 42.9	
YUK 70nm,0.5s				A	A	11 30 42.9	
YSS	Yuzh-Sakhalins	2.04	346	eP	Pn	11 29 44.9	-1.0
YSS 20nm,0.6s				AMB	AMB	11 29 48.9	
YSS				eS	S	11 30 18.5	-3.4
YSS 40nm,0.6s				A	A	11 30 23.9	
YSS 30nm,0.6s				A	A	11 30 23.9	
JAK	Akkeshi	2.17	156	eP	Pn	11 29 46.9	-0.3
JAK				eS	S	11 30 23.0	-1.0
AKK	Akkeshi	2.19	153	eP	Pn	11 29 46.5	-0.9
AKK				eS	S	11 30 21.8	-2.6
NMR	Nemuro--Hokkai	2.28	134	eP	Pn	11 29 47.1	-1.0
NMR				eS	S	11 30 22.8	-3.0
NEM2	Nemuro 2	2.29	134	eP	Pn	11 29 46.9	-1.3
NEM2				eS	S	11 30 22.5	-3.5
JCH	Churui	2.36	182	eP	Pn	11 29 48.6	-0.3
JCH				eS	S	11 30 24.4	-2.8
JNBK	Urakawa-nobuka	2.74	191	eP	Pn	11 29 52.6	+0.1
KUR	Kuril'sk	3.12	84	eP	Pn	11 29 59.3	+3.0
KUR 30nm,0.5s				AMB	AMB	11 30 04.5	
KUR				eS	S	11 30 44.8	+4.3
KUR				A	A	11 31 02.2	
KUR 30nm,0.6s				A	A	11 31 02.2	
KLR	Kul'dur 1.7nm,0.5s,baz=108,slow=11,SNR=6.0	9.06	302	P	Pn	11 31 07.1	-0.1
PETK	Petropavlovsk- 2.6nm,0.9s,baz=219,slow=8.9,SNR=4.2	12.37	44	P	Pn	11 31 47.0	-0.9
KSRS	Korea Array 0.9nm,0.6s,baz=49,slow=10,SNR=5.0	13.89	243	P	Pn	11 32 09.6	+3.0
SEY	Seymchan 1.1nm,0.4s,baz=189,slow=9.3,SNR=6.3	18.71	13	P	P	11 32 57.3	-1.5
SONM	Songino Array 0.5nm,0.5s,baz=90,slow=10,SNR=1.9 0.5nm,0.5s	25.57	290	P	P	11 34 05.3	+0.8
MKAR	Makanchi Array 0.5nm,0.5s,baz=79,slow=10,SNR=5.4 0.5nm,0.5s	41.68	295	P	P	11 36 22.9	+0.7
ILAR	Eielson Array 0.3nm,0.9s,baz=266,slow=8.9,SNR=4.5 0.3nm,0.9s	42.08	37	P	P	11 36 23.9	-1.2
KURBB	Kurchatov Arra 0.5nm,0.2s,baz=72,slow=8.2,SNR=1.3 0.5nm,0.2s	42.74	302	P	P	11 36 30.2	-0.4
BVAR	Borovoye Array 0.2nm,0.3s,baz=80,slow=10,SNR=2.9 0.2nm,0.3s	46.68	307	P	P	11 37 01.0	-0.5
INK	Inuvik 0.5nm,0.4s,baz=292,slow=6.9,SNR=6.6 0.5nm,0.4s	46.68	30	P	P	11 37 00.1	-1.1
WRA	Warramunga Arr 0.7nm,1.3s,baz=6.8,slow=6.8,SNR=1.7 0.7nm,1.3s	65.14	189	P	P	11 39 19.0	+7.0
PDAR	Pinedale Array 0.3nm,0.5s,baz=327,slow=2.5,SNR=4.2 0.3nm,0.5s	71.09	48	P	P	11 39 49.1	+0.1
TXAR	Lajitas Array 0.5nm,0.6s,baz=288,slow=3.1,SNR=9.7 0.5nm,0.6s	84.11	54	P	P	11 41 01.4	+0.8

*IDC **02** 11:41:47.4±0.6, 27°.20N×140°.33E, h444km±7km, mb3.3/13, mbtmp4.1/15, Error ellipse: s-maj=18.5km s-min=10.6km az=80.0*
*JMA **02** 11:41:49.6±0.2, 27°.N±2°.×14°.1E±°., h458km, MV3.6/17, W OFF OGASAWARA*
ISC 02 11:41:48.0±0.6, 27°.25N±0°.09×140°.4E±0°.1, h450km, n25, σ1§44/32, mb3.5/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.59	95	P	P	11 42 47.6	+1.1
CBIJ				S	S	11 43 33.5	-0.4
JCJ	Chichijima 76nm,0.3s,baz=273,slow=19,SNR=122	1.59	95	P	P	11 42 47.4	+0.9
JCJ 90nm,0.5s,baz=288,slow=22,SNR=7.0				S	S	11 43 32.5	-1.4
JHH2	Haha-jima-NKT2	1.70	111	P	P	11 42 48.7	+1.7
JHJ	Hachijo jima 2 42nm,0.3s,baz=56,slow=23,SNR=20	5.88	355	P	P	11 43 22.1	+1.2
JHJ 14nm,0.3s,baz=65,slow=23,SNR=1.5				S	S	11 44 35.0	-1.9
BSO1	Boso 1	7.40	4	P	P	11 43 38.0	+1.7
JIE	Ise	7.80	337	P	P	11 43 44.4	+3.3
JWY	Kouya	8.09	330	P	P	11 43 48.0	+3.6
JNY	Yasuok	8.37	346	P	P	11 43 49.0	+1.6
JRY	Ryogami san	8.84	352	P	P	11 43 53.0	+0.6
MJAR	Matsushiro Arr 2.3nm,0.4s,baz=168,slow=9.0,SNR=11	9.45	349	P	P	11 43 59.0	0.0
MJAR 0.5nm,0.6s,baz=228,slow=50,SNR=1.4				S	S	11 45 44.5	-2.4
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=67,slow=6.9,SNR=1.8 0.2nm,0.3s	39.05	266	P	P	11 48 35.3	+0.5
WRA	Warramunga Arr 0.7nm,0.4s,baz=3.8,slow=7.5,SNR=48	47.28	188	P	P	11 49 38.5	-0.9
WRA 0.4nm,0.9s,baz=356,slow=5.0,SNR=2.1 0.7nm,0.4s				ScP	ScP	11 54 10.4	-2.0
ZALV	Zalesovo Beam 1.4nm,0.3s,baz=110,slow=7.8,SNR=5.0	48.34	319	P	P	11 49 46.6	-0.3
ZALV 0.7nm,0.4s,baz=111,slow=6.3,SNR=2.3 1.4nm,0.3s				PcP	PcP	11 51 04.8	-0.6
MKAR	Makanchi Array 1.1nm,0.5s,baz=90,slow=9.9,SNR=13	49.16	310	P	P	11 49 53.3	+0.1
MKAR 0.4nm,0.6s,baz=82,slow=8.6,SNR=1.9 1.1nm,0.5s				PcP	PcP	11 51 08.0	-0.6
ASAR	Alice Springs 0.2nm,0.4s,baz=2.8,slow=4.9,SNR=16 0.2nm,0.4s	51.00	188	P	P	11 50 06.3	-0.7
KDAK	Kodiak Island 16nm,1.1s,baz=233,slow=13,SNR=2.2 16nm,1.1s	55.20	37	P	P	11 50 37.8	+1.1
ILAR	Eielson Array 0.2nm,0.5s,baz=267,slow=5.5,SNR=5.1 0.2nm,0.5s	58.34	29	P	P	11 50 58.4	+0.1
GEYT	Alibeck 1.2nm,0.4s,baz=45,slow=8.4,SNR=2.4 1.2nm,0.4s	68.08	302	P	P	11 52 00.9	-0.9
ARCES	ARCESS Array B 4.4nm,1.0s,baz=65,slow=7.1,SNR=5.6 4.4nm,1.0s	72.87	340	P	P	11 52 30.0	+0.4
FINES	FINESS Array B 4.9nm,0.3s,baz=68,slow=5.0,SNR=88 4.9nm,0.3s	77.11	333	P	P	11 52 53.5	-0.1
AKASG	Malin Array Be 0.5nm,0.4s,baz=52,slow=5.2,SNR=6.5 0.5nm,0.4s	81.55	323	P	P	11 53 17.0	-0.4
NVAR	Mina Array Bea 0.4nm,0.6s,baz=275,slow=4.2,SNR=4.1 0.4nm,0.6s	81.67	51	P	P	11 53 20.1	+1.6
NB2	NORSAR Subarra comp=Z,0.5nm,0.4s,baz=45,slow=4.8	82.88	338	P	P	11 53 23.4	-0.6
NOA	NORSAR Array B comp=Z,0.8nm,0.4s,baz=54,slow=6.5,SNR=7.7 comp=Z,0.8nm,0.4s	82.88	338	P	P	11 53 23.1	-0.9
PLCA	Paso Flores comp=Z,0.5nm,0.6s,baz=270,slow=4.0,SNR=1.7	151.19	126	PKPbc	PKiKP	12 00 50.4	+0.4

*KEA **02** 11:53:04.5, 35°.73N×129°.05E, h15km*
*KMA **02** 11:53:07.4±0.2, 35°.75N×129°.19E, h18km±1km, Error ellipse: s-maj=1.5km s-min=1.1km az=0.0*
*JMA **02** 11:53:07.5±0.2, 35°.8N±0°.6×129°.2E±0°.8, h39km, MV3.1/9, S KOREAN PENINSULA REG*
ISC 02 11:53:04.4±1.0, 35°.82N±0°.04×129°.31E±0°.05, h10km, n15, σ1§16/21, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOCB	Yeongcheon SNR=250	0.33	299	P	Pn	11 53 14.1	-1.2
KSDAG	Daegu SNR=1297	0.34	261	P	Pb	11 53 13.2	+0.7
KSDAG				S	Sg	11 53 17.0	+1.4
KSPHA	Pohang SNR=268	0.38	8	P	Pn	11 53 16.9	+1.0
KSPHA SNR=268				P	Pn	11 53 16.9	+1.0
KSADO	Andong SNR=582	0.66	334	P	Pn	11 53 20.7	+0.9
KSADO SNR=582				P	Pn	11 53 20.7	+0.9
KSCHR	CHANGNYEONG SNR=59	0.72	248	P	Pb	11 53 19.2	+0.2
JTU	Tsushima	1.29	177	P	Pg	11 53 29.7	+0.5
JTU				S	Sg	11 53 45.9	-0.2
JTSM	Tsushimamitsus	1.48	178	eP	Pg	11 53 32.4	-0.4
JTSM				eS	Sb	11 53 50.8	0.0
JHGM	Hagimishima	1.82	124	eP	Pg	11 53 38.5	-0.8
JII	Iki	2.05	170	eP	Pb	11 53 40.7	-1.0
HJU	Haeju	3.63	309	Sg	Sg	11 54 58.1	-2.8
HHU	Hamhung	4.34	342	Sg	Sg	11 55 24.1	+0.5
PYS	Pyongsong	4.39	322	Sg	Sg	11 55 23.1	-2.2

*NIED **02** 12:23:06.3, 35°.80N×140°.89E, h12km, MW3.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{13}Nm; Mrr=6.06; Mθθ=2.56; Mφφ=8.62; Mrθ=2.14; Mrφ=2.46; Mθφ=0.76; Fault plane solution: M0=8.16000×10^{13} NP1: φs=348.00000°, δ=46.00000°, λ=-127.00000°. NP2: φs=215.00000°, δ=55.00000°, λ=-58.00000°.*
JMA 02 12:23:06.3±0.2, 35°.8N±0°.4×140°.9E±0°.8, h12km±1km, MV3.5/32, 1D, NEAR CHOSHI CITY, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.10	197	⇓P	Pg	12 23 09.1	0.0
JIHU	Itakohorinouch	0.34	300	P	Pg	12 23 13.8	+0.5
JIHU				eS	Sb	12 23 19.6	-0.1
JSMT	Sammumatsuo	0.39	247	P	Pb	12 23 14.7	-0.5
JHYU	Hitachinakayam	0.60	336	P	Pg	12 23 18.2	+0.2
JHYU				eS	Sg	12 23 26.3	+0.3
JCN	Nagara	0.68	236	eP	Pb	12 23 20.3	+0.3
JYT	Yasato	0.71	307	P	Pg	12 23 19.8	-0.4
JYT				eS	Sg	12 23 29.3	-0.2
JHO	Hitachi	0.85	342	P	Pg	12 23 22.0	-0.9
JHO				eS	Sg	12 23 33.7	-0.4

*HVO **02** 12:32:55.5±2.6, 19°.76N±0°.02×156°.59W±0°.03, h6km±7km, Error ellipse: s-maj=4.5km s-min=2.3km az=60.0*
NEIC 02 12:32:52.2±1.0, 19°.73N±0°.05×156°.63W±0°.04, h20km±9km, ML3.0/30, ML3.0/15(HVO), Error ellipse: s-maj=8.7km s-min=2.5km az=214.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKH	Kailua Kona	0.58	97		Pn	12 33 05.8	+0.5
KKH					Sn	12 33 13.6	-0.7
KHLU	Kahalu`u	0.71	101		Pn	12 33 07.1	-0.1
KHLU					Sb	12 33 16.3	+1.0
CPH	Captain Cook	0.71	109		Pn	12 33 07.4	+0.2
HUH	Hualalai	0.75	93		Pn	12 33 07.7	-0.2
HUH	Hualalai comp=E,1μm,0.6s	0.75	93	IAML		12 33 26.9	
HPAH	Hawaii Prepara	0.93	71		Pb	12 33 09.8	+0.1
HPAH					Sb	12 33 20.0	-1.6
HPAH	Hawaii Prepara comp=E,496nm,0.4s	0.93	71	IAML		12 33 35.0	
MWH	Moku'aweowe	1.00	104		Pn	12 33 11.5	-0.2
MLOA	Mauna Loa Obse	1.01	101		Pn	12 33 11.7	+0.1
MLOA					Sb	12 33 24.1	-0.3
MLOA	Mauna Loa Obse comp=E,458nm,0.7s	1.01	101	IAML		12 33 35.2	
MLOA comp=N,443nm,0.6s				IAML		12 33 37.6	
POHA	Pohakuloa	1.03	88		Pb	12 33 11.6	0.0
POHA	Pohakuloa comp=N,430nm,0.5s	1.03	88	IAML		12 33 37.5	
POHA comp=N,472nm,0.5s				IAML		12 33 42.8	
KHU	Kahuku	1.07	116		Pn	12 33 12.4	0.0
KHU	Kahuku comp=E,374nm,3.9s	1.07	116	IAML		12 33 39.5	
HLK	Haleakala	1.09	19		Pb	12 33 12.4	-0.2
HLK					Sb	12 33 24.6	-1.8
HLK	Haleakala comp=N,391nm,2.6s	1.09	19	IAML		12 33 44.5	
HMH	Humu'ula Sheep	1.09	96		Pn	12 33 12.9	+0.3
HMH					Sb	12 33 26.4	-0.1
HMH	Humu'ula Sheep comp=E,393nm,1.0s	1.09	96	IAML		12 33 43.5	
HMH comp=N,493nm,0.6s				IAML		12 33 47.4	
AIN	Ainahou	1.16	107		Pn	12 33 13.4	-0.1
AIN	Ainahou comp=N,412nm,1.8s	1.16	107	IAML		12 33 37.9	
KHLH	Kahului Airpor	1.18	9		Pb	12 33 14.2	+0.2
KHLH					Sb	12 33 27.2	-1.6
MLH	Mauna Loa	1.20	101		Pn	12 33 14.1	0.0
MLH					Sb	12 33 28.3	-1.2
HTC	Hot Caves	1.26	112		Pn	12 33 14.8	+0.1
UWE	Uwekahuna	1.30	103	Pn	Pn	12 33 14.9	-0.4
RSD	Rainshed	1.30	101		Pn	12 33 15.5	0.0
RSD	Rainshed	1.30	101		Sn	12 33 30.9	-1.4
HLP	Hilina Pali	1.32	109	Pn	Pn	12 33 14.7	-0.9
PUH	Pauahi	1.38	104		Pn	12 33 16.8	+0.4
PUH	Pauahi comp=E,256nm,4.1s	1.38	104	IAML		12 33 42.4	
PUH comp=N,339nm,2.9s				IAML		12 33 55.7	
WMR	Waimanalo Ridg	1.87	328		Pn	12 33 23.5	+0.4
DHH	Diamond Head	1.88	325		Pn	12 33 23.9	+0.6
HON	Honolulu	2.04	321		Pn	12 33 26.0	+0.5
HON					Sn	12 33 48.7	-1.7
KIP	Kipapa	2.13	323		Pn	12 33 27.2	+0.5
KIP				IAML		12 34 31.8	
KIP comp=N,133nm,3.2s							
KIP	Kipapa	2.13	323		Pn	12 33 27.6	+1.0
OPA	Opana	2.34	327		Sn	12 33 55.4	-2.3
OPA	Opana	2.34	327	Pn	Pn	12 33 29.4	-0.2
KEKH	Kekaha	3.65	308		Pn	12 33 47.5	-0.1
KEKH					Sn	12 34 27.3	-2.8

*BJI **02** 12:51:47.1±0.0, 29°.63S×60°.58E, h11km, mb4.7/31, mB4.9/14, Ms4.9/5, Ms7 4.6/4*
*IDC **02** 12:51:49.3±0.4, 29°.24S×61°.12E, h0km, mb4.6/38, mbtmp4.6/38, MS4.0/37, Error ellipse: s-maj=13.7km s-min=11.2km az=78.0*
*NEIC **02** 12:51:51.1±1.5, 29°.23S±0°.07×61°.0E±0°.1, h10km±1km, mb4.9/54, Error ellipse: s-maj=17.8km s-min=11.4km az=254.0*
*GCMT **02** 12:51:52.1±0.3, 29°.30S±0°.02×60°.73E±0°.04, h17km±1km, MW4.9/82, Moment Tensor Solution. s17, c18; s82, c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr=2.56±.22; Mθθ=2.70±.15; Mφφ=-0.14±.12; Mrθ=0.19±.32; Mφθ=0.41±.09; Mφr=0.72±.45; Best double couple: M0=2.76800×10^{16} NP1:φs=247.00000°, δ=50.00000°, λ=-110.00000°. NP2: φs=97.00000°, δ=44.00000°, λ=-68.00000°. Principal axes: T 2.7750, Plg3.0000°, Azm351.0000°; N -0.0130, Plg15.0000°, Azm260.0000°; P -2.7620, Plg75.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 12:51:51.2±0.3, 29°.20S±0°.07×60°.96E±0°.07, h10km, n183, σ1§21/168, mb4.8/78, MS4.0/42, 7C-10D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.29	328	Pn	Pn	12 54 01.9	-3.3
VOI	Vohitsoka	14.69	296	Pn	Pn	12 55 18.3	-1.0
VOI	Vohitsoka	14.69	296	P	Pn	12 55 19.7	+0.4
ABPO	Ambohimpanom	16.11	306		Pn	12 55 38.0	+0.1
OPO	Ambohidratompo 0.9nm,0.3s,baz=125,slow=11,SNR=26	16.43	307	Pn	Pn	12 55 40.9	-1.2
OPO 0.4nm,0.3s,baz=87,slow=20,SNR=3.9				Sn	Sn	12 58 30.0	-15
H08S1	Diego Carcia H baz=204,slow=76,SNR=13	24.03	29	T	T	13 21 48.4	
H08S2	Diego Garcia H baz=204,slow=76,SNR=6.4	24.04	29	T	T	13 21 49.0	
H08S3	Diego Garcia H baz=204,slow=76,SNR=20	24.05	29	T	T	13 21 49.9	
POGA	Pongola comp=Z,36nm,0.9s	25.80	267	P	P	12 57 23.3	+0.8
POGA				IAmb	IAmb	12 57 25.2	
BOSA	Boshof comp=Z,13nm,0.9s,baz=115,slow=7.8,SNR=14	31.19	262	P	P	12 58 11.2	+0.4
BOSA				LR	LR	13 08 52.7	
BOSA	Boshof comp=Z,17nm,0.9s	31.19	262	P	P	12 58 12.0	+1.3
BOSA				IAmb	IAmb	12 58 13.0	
LBTB	Lobatse comp=Z,8.7nm,0.8s,baz=74,slow=5.3,SNR=8.1	31.68	269	P	P	12 58 14.8	-0.2
LBTB				LR	LR	13 09 15.2	
LBTB	Lobatse comp=Z,8.7nm,0.8s	31.68	269	P	P	12 58 14.5	-0.6
LBTB				IAmb	IAmb	12 58 24.2	
LSZ	Lusaka comp=Z,108nm,20.8s,baz=132,slow=33	33.22	288	LR	LR	13 09 59.4	
LSZ	Lusaka	33.22	288	P	P	12 58 28.8	+0.1

LSZ IAmb IAmb 12 58 32.2
comp=Z,21nm,1.2s
KIBK Kibwezi 34.48 317 P **P 12 58 39.5 -0.1**
SUR Sutherland 34.50 254 P **P 12 58 40.2 +0.4**
comp=Z,4.9nm,0.9s,baz=85,slow=15,SNR=1.5
SUR LR LR 13 10 25.0
comp=Z,112nm,19.3s,baz=142,slow=32
comp=Z,4.9nm,0.9s
SUR Sutherland 34.50 254 P **P 12 58 38.4 -1.4**
KMBO Kilima Mbogo 35.92 317 P **P 12 58 52.0 -0.1**
MAW Mawson 38.45 179 P **P 12 59 12.3 -0.5**
comp=Z,3.7nm,0.8s,baz=34,slow=14,SNR=7.5
MAW PcP **PcP 13 01 26.2 +0.5**
comp=Z,4.0nm,0.8s,baz=14,slow=4.2,SNR=4.8
MAW LR LR 13 11 51.6
comp=Z,275nm,18.7s,baz=0.5,slow=31
comp=Z,3.7nm,0.8s
MAW Mawson 38.45 179 P **P 12 59 12.8 +0.1**
MBAR Mbarara 40.49 309 LR LR 13 14 45.3
comp=Z,237nm,19.6s,baz=148,slow=34
TSUM Tsumeb 40.60 274 P **P 12 59 33.3 +1.9**
comp=Z,8.8nm,0.8s,baz=94,slow=6.6,SNR=7.5
TSUM LR LR 13 15 18.2
comp=Z,129nm,18.4s,baz=148,slow=35
comp=Z,8.8nm,0.8s
TSUM Tsumeb 40.60 274 P **P 12 59 31.4 0.0**
LODK Lodwar 40.68 319 P **P 12 59 32.5 +0.5**
PALK Pallekele 40.94 31 LR LR 13 13 03.3
comp=Z,181nm,18.6s,baz=312,slow=31
ATD Arta Tunnel 44.10 334 P **P 13 00 01.2 +1.4**
comp=Z,5.7nm,0.3s,baz=100,slow=11,SNR=3.8
ATD LR LR 13 15 22.4
comp=Z,328nm,20.7s,baz=163,slow=32
comp=Z,5.7nm,0.3s
ATD Arta Tunnel 44.10 334 P **P 12 59 60.0 +0.1**
ATD IAmb IAmb 13 00 01.7
comp=Z,22nm,1.2s
H01W2 Cape Leeuwin H 45.00 111 T T 13 47 45.7
baz=261,slow=75,SNR=88
H01W3 Cape Leeuwin H 45.00 111 T T 13 47 46.3
baz=261,slow=75,SNR=87
H01W1 Cape Leeuwin H 45.01 111 T T 13 47 46.5
baz=261,slow=75,SNR=74
GSI Gunungsitoli 46.32 56 P **P 13 00 19.8 +2.3**
comp=Z,13nm,1.3s
SDSI Sungai Dareh 47.71 61 P **P 13 00 29.0 +0.7**
comp=Z,3.3nm,1.1s
MORW Morawa 47.72 104 P **P 13 00 26.9 -1.4**
WSAR Wadi Sarin 52.18 357 LR LR 13 17 36.5
comp=Z,102nm,21.1s,baz=194,slow=30
TROLL Troll, Antarti 52.87 199 P **P 13 01 06.2 -0.7**
UOSS Minazif 54.03 355 P **P 13 01 14.1 -1.6**
UOSS IAmb IAmb 13 02 10.4
comp=Z,22nm,1.2s
SNAA Sanae 54.37 200 P **P 13 01 17.0 -0.8**
SNAA Sanae 54.37 200 P **P 13 01 16.5 -1.2**
comp=Z,4.6nm,0.8s,baz=107,slow=6.4,SNR=26
SNAA LR LR 13 18 54.8
comp=Z,159nm,22.0s,baz=16,slow=30
comp=Z,4.6nm,0.8s
SNAA Sanae 54.37 200 P **P 13 01 17.0 -0.8**
RAYN Ar Rayn 54.49 343 P **P 13 01 19.4 +0.3**
RAYN IAmb IAmb 13 01 22.2
comp=Z,8.3nm,0.9s
VNA2 Neumayer--Watz 55.64 202 P **P 13 01 27.1 +0.2**
baz=82,slow=7.0
VNA3 Neumayer Olymp 56.42 201 P **P 13 01 31.9 -0.6**
BRDH Bariadhala 59.44 33 LR LR 13 23 54.9
comp=Z,150nm,20.5s,baz=271,slow=32
FITZ Fitzroy Crossi 59.64 95 P **P 13 01 54.5 -1.3**
CMAR Chiang Mai Arr 59.91 42 P **P 13 01 56.5 -1.0**
comp=Z,4.0nm,0.9s,baz=233,slow=7.3,SNR=21
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 59.91 42 P **P 13 01 57.5 -0.1**
CHTO Chiang Mai 60.19 42 P **P 13 01 58.7 -0.8**
QSPA South Pole Qui 60.96 180 P **P 13 02 03.2 -1.1**
comp=Z,7.5nm,0.8s,baz=276,slow=1.6,SNR=34
QSPA LR LR 13 24 51.6
comp=Z,198nm,21.0s,baz=267,slow=32
comp=Z,7.5nm,0.8s
QSPA South Pole Qui 60.96 180 P **P 13 02 03.3 -1.1**
QSPA IAmb IAmb 13 02 06.1
comp=Z,9.0nm,0.9s
EIL Elat 63.59 335 LR LR 13 26 37.9
comp=Z,172nm,19.3s,baz=215,slow=33
KBL Kabul 63.85 7 P **P 13 02 23.7 -0.3**
KBL IAmb IAmb 13 02 27.2
comp=Z,9.1nm,1.1s
VNDA Vanda 64.04 166 P **P 13 02 23.9 -0.6**
comp=Z,2.9nm,0.7s,baz=257,slow=6.8,SNR=23
VNDA LR LR 13 28 28.0
comp=Z,281nm,18.1s,baz=252,slow=34
comp=Z,2.9nm,0.7s
VNDA Vanda 64.04 166 P **P 13 02 24.1 -0.4**
ASAR Alice Springs 64.61 104 P **P 13 02 27.8 -1.4**
comp=Z,5.9nm,0.7s,baz=243,slow=6.1,SNR=77
ASAR LR LR 13 26 21.4
comp=Z,44nm,20.0s,baz=194,slow=32
comp=Z,5.9nm,0.7s
ASAR Alice Springs 64.61 104 P **P 13 02 27.5 -1.7**
AS31 Alice Springs 64.61 104 P **P 13 02 27.8 -1.5**
SBA Scott Base 64.92 167 P **P 13 02 30.7 +0.4**
ASF Jabal al Asfar 65.17 338 P **P 13 02 33.6 +1.1**
comp=Z,3.6nm,0.8s,baz=83,slow=4.1,SNR=4.9
comp=Z,3.6nm,0.8s
WRA Warramunga Arr 66.43 100 P **P 13 02 39.8 -1.2**
comp=Z,7.0nm,0.9s,baz=244,slow=5.7,SNR=27
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 66.43 100 P **P 13 02 40.6 -0.4**
WB2 Warramunga Arr 66.44 100 P **P 13 02 40.5 -0.6**
WRAB Tennant Creek 66.45 100 P **P 13 02 39.9 -1.3**
WRAB IAmb IAmb 13 02 41.1
comp=Z,9.0nm,0.9s
MMAI Mount Meron Ar 66.45 337 P **P 13 02 41.4 +0.7**
comp=Z,4.0nm,0.7s,baz=149,slow=10,SNR=4.6
MMAI LR LR 13 28 34.5
comp=Z,125nm,19.2s,baz=124,slow=33
comp=Z,4.0nm,0.7s
WB0 Warramunga Arr 66.55 100 P **P 13 02 40.3 -1.5**
WB0 IAmb IAmb 13 02 41.6
comp=Z,10.0nm,1.0s
WR0 Warramunga Arr 66.60 101 P **P 13 02 40.8 -1.3**
GEYT Alibeck 66.83 358 P **P 13 02 44.2 +1.2**
comp=Z,1.9nm,0.8s,baz=205,slow=3.0,SNR=4.4
GEYT LR LR 13 29 19.1
comp=Z,88nm,20.9s,baz=200,slow=34
comp=Z,1.9nm,0.8s
KMI Kunming 67.29 41 ⇑P **P 13 02 49.7 +3.2**
KMI pmax pmax
comp=Z,8.0nm,1.3s
PZH PanZhiHua 67.80 39 P **P 13 02 50.9 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,110nm,4.5s
STKA Stephens Creek 67.91 115 P **P 13 02 49.0 -1.2**
comp=Z,2.0nm,0.7s,baz=187,slow=12,SNR=2.9
STKA LR LR 13 28 51.4
comp=Z,54nm,19.7s,baz=210,slow=33
comp=Z,2.0nm,0.7s
CHGR Chuyangaron 67.94 7 P **P 13 02 50.0 -0.1**
CHGR IAmb IAmb 13 03 10.9
comp=Z,13nm,1.1s
SAUI Saumlaki 69.00 87 P **P 13 02 58.0 +0.7**
GURO Guroymak-BITLI 69.68 344 P **P 13 03 02.0 +1.0**
KSH Kashi 69.78 12 P **P 13 02 59.0 -2.6**
KSH pmax pmax
comp=Z,19nm,0.9s
GNI Garni 70.62 347 P **P 13 03 07.5 +0.7**
comp=Z,7.4nm,0.7s,baz=12,slow=4.3,SNR=6.1
GNI LR LR 13 32 25.6
comp=Z,184nm,20.0s,baz=180,slow=34
comp=Z,7.4nm,0.7s
GNI Garni 70.62 347 P **P 13 03 07.1 +0.3**
GNI IAmb IAmb 13 03 09.0
comp=Z,20nm,1.2s
TOA0 Torodi Ar. Sit 71.00 298 P **P 13 03 09.8 +0.3**
TOA0 IAmb IAmb 13 03 12.6
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 71.00 298 P **P 13 03 09.6 +0.2**
comp=Z,5.5nm,0.4s,baz=110,slow=4.0,SNR=39
TORD LR LR 13 34 13.5
comp=Z,285nm,19.1s,baz=214,slow=36
comp=Z,5.5nm,0.4s
KARP Karpathos 71.84 331 P **P 13 03 14.1 0.0**
FAKI Fak Fak 72.26 83 P **P 13 03 16.6 -0.5**
FAKI IAmb IAmb 13 03 18.4
comp=Z,15nm,1.1s
KK31 Karatay Array 72.48 7 P **P 13 03 17.3 -0.5**
KK31 IAmb IAmb 13 03 21.5
comp=Z,8.3nm,1.0s
KKAR Karatay Array 72.48 7 P **P 13 03 17.6 -0.2**
DBIC Dimbokro 72.55 288 P **P 13 03 19.1 +0.2**
comp=Z,10nm,0.8s,baz=112,slow=4.3,SNR=8.4
DBIC LR LR 13 34 49.3
comp=Z,64nm,18.6s,baz=144,slow=36
comp=Z,10nm,0.8s
DBIC Dimbokro 72.55 288 P **P 13 03 19.5 +0.6**
IDI Anoyia 72.60 330 ⇓P **P 13 03 19.3 +0.6**
IDI Anoyia 72.60 330 P **P 13 03 18.8 +0.1**
comp=Z,4.1nm,0.7s,baz=163,slow=14,SNR=4.3
comp=Z,4.1nm,0.7s
IDI Anoyia 72.60 330 P **P 13 03 18.5 -0.2**
IDI IAmb IAmb 13 03 20.1
comp=Z,19nm,1.4s
BR131 Keskin Array S 73.13 338 P **P 13 03 21.1 -0.8**
BR131 IAmb IAmb 13 03 24.8
comp=Z,14nm,1.1s
BRTR Keskin Array B 73.13 338 P **P 13 03 21.4 -0.5**
comp=Z,4.5nm,0.8s,baz=159,slow=8.4,SNR=16
BRTR LR LR 13 32 38.5
comp=Z,85nm,20.5s,baz=144,slow=33
comp=Z,4.5nm,0.8s
ONI Oni 73.23 347 P **P 13 03 22.8 +0.5**
DIKM Dikmen 74.39 340 P **P 13 03 30.7 +1.7**
KBZ Khabaz 74.44 347 P **P 13 03 30.5 +1.3**
comp=Z,2.8nm,0.7s,baz=199,slow=10,SNR=4.5
KBZ LR LR 13 34 14.9
comp=Z,194nm,21.9s,baz=150,slow=34
comp=Z,2.8nm,0.7s
KVAR Kislovodsk Arr 74.70 346 P **P 13 03 31.8 +0.9**
comp=Z,2.0nm,0.4s,baz=146,slow=3.6,SNR=1.6
comp=Z,2.0nm,0.4s
KIV Kislovodsk 74.70 346 P **P 13 03 33.3 +2.4**
KOWA Kowa 76.26 295 LR LR 13 36 36.8
comp=Z,92nm,19.7s,baz=123,slow=35
KOWA Kowa 76.26 295 P **P 13 03 41.0 +0.6**
WMQ Urumqi 76.68 20 *e*P **P 13 03 44.1 +1.9**
WMQ LR LR
comp=Z,460nm,13.3s
ALN Alexandroupoli 76.88 334 P **P 13 03 43.1 -0.2**
ALN IAmb IAmb 13 03 46.2
comp=Z,9.5nm,1.1s
PMSA Palmer Station 77.08 201 P **P 13 03 45.4 +1.1**
comp=Z,4.3nm,0.4s,baz=117,slow=11,SNR=7.3
PMSA LR LR 13 33 31.6
comp=Z,60nm,18.4s,baz=138,slow=32
comp=Z,4.3nm,0.4s
GTA Gaotai 77.26 30 ⇑P **P 13 03 45.9 +0.2**
GTA sP pwP 13 03 54.2 +0.5
GTA pmax pmax
comp=Z,5.0nm,1.0s
XAN Xi'an 77.54 39 *e*P **P 13 03 50.7 +3.4**
XAN pP pwP 13 03 55.3 0.0
XAN pmax pmax
comp=Z,6.0nm,1.0s
LIT Litokhoron 77.66 331 P **P 13 03 47.4 -0.4**
MKAR Makanchi Array 78.06 15 P **P 13 03 49.8 0.0**
comp=Z,3.7nm,0.8s,baz=188,slow=4.9,SNR=16
comp=Z,3.7nm,0.8s
MKAR Makanchi Array 78.06 15 P **P 13 03 49.5 -0.4**
ABKAR Akbulak array 78.11 359 P **P 13 03 49.6 -0.3**
ABKAR Akbulak array 78.11 359 P **P 13 03 49.5 -0.4**
ABKAR IAmb IAmb 13 03 52.6
comp=Z,10.0nm,0.9s
TIRR Tirgusor 79.10 337 P **P 13 03 55.2 -0.4**
AKTO Aktyubinsk 79.32 358 P **P 13 03 56.5 -0.1**
comp=Z,3.4nm,0.8s,baz=222,slow=6.0,SNR=6.3
AKTO LR LR 13 36 09.0
comp=Z,70nm,21.9s,baz=198,slow=34
comp=Z,3.4nm,0.8s
VAE Valguarnera 79.38 324 LR LR 13 39 54.1
comp=Z,50nm,19.1s,baz=152,slow=36
VTS Vitosha 79.45 333 P **P 13 03 57.3 -0.4**
HARR Harsova 79.47 337 ⇓P **P 13 03 58.1 +0.6**
CFR Carcaliu 79.83 337 ⇓P **P 13 03 59.4 0.0**
ISR Istrita 80.33 336 ⇑P **P 13 04 02.7 +0.4**
BLKB Belogradchik 80.52 333 ⇑P **P 13 04 02.5 -0.8**
KEST Kesra 80.82 320 LR LR 13 41 19.7
comp=Z,152nm,18.4s,baz=307,slow=37
MLR Muntele Rosu 80.87 336 ⇓P **P 13 04 04.9 -0.4**
MLR Muntele Rosu 80.87 336 LR LR 13 39 49.7
comp=Z,50nm,18.4s,baz=137,slow=36
MLR Muntele Rosu 80.87 336 P **P 13 04 04.7 -0.6**
VRI Vrincioaia 80.91 337 ⇑P **P 13 04 05.3 -0.1**
PLOR Plostina 80.93 336 ⇓P **P 13 04 05.7 +0.2**
COVR Voineasa-Covas 81.08 336 ⇓P **P 13 04 05.6 -0.7**
KURK Kurchatov 81.08 11 P **P 13 04 06.4 +0.3**
KURK IAmb IAmb 13 04 09.6
comp=Z,9.8nm,1.1s
ARR Arges 81.24 335 ⇓P **P 13 04 06.4 -0.7**
HERR Herculane 81.67 333 ⇓P **P 13 04 09.0 -0.4**
GZR Gura Zlata 81.96 334 ⇑P **P 13 04 09.8 -1.2**
DIVS Divibare 82.00 332 P **P 13 04 11.3 0.0**
DIVS IAmb IAmb 13 04 13.2
comp=Z,11nm,1.2s
NJ2 Nanjing 82.05 47 *e*P **P 13 04 13.8 +2.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
BELG Belogornoye 82.08 352 P **P 13 04 10.8 -0.5**
comp=Z,18nm,0.9s,baz=92,slow=5.8,SNR=8.9
BELG LR LR 13 43 26.5
comp=Z,54nm,18.1s,baz=106,slow=38
comp=Z,18nm,0.9s
BVAR Borovoye Array 82.29 6 P **P 13 04 11.8 -0.7**
comp=Z,2.4nm,0.9s,baz=157,slow=4.8,SNR=12
comp=Z,2.4nm,0.9s
BRVK Borovoye 82.31 6 P **P 13 04 12.1 -0.4**
BRVK IAmb IAmb 13 04 15.8
comp=Z,12nm,1.6s
BURAR Bucovina Array 82.95 337 ⇓P **P 13 04 16.6 +0.4**
BURAR Bucovina Array 82.95 337 P **P 13 04 16.4 +0.3**
DRGR 83.16 335 ⇓P **P 13 04 17.0 -0.2**
HHC Hu-ho-hao-te 83.99 36 *e*P **P 13 04 22.8 +1.1**
HHC pmax pmax
comp=Z,27nm,0.7s
HHC pmax pmax
comp=Z,140nm,4.7s
NRCA Norcia 84.09 327 P **P 13 04 21.6 -0.5**
AKASG Malin Array Be 84.36 340 P **P 13 04 22.4 -0.8**
comp=Z,2.5nm,0.7s,baz=154,slow=4.3,SNR=11
comp=Z,2.5nm,0.7s
AKASG Malin Array Be 84.36 340 P **P 13 04 22.8 -0.4**
AKBB Malin Array Si 84.36 340 P **P 13 04 22.5 -0.6**
AKBB IAmb IAmb 13 04 25.9
comp=Z,16nm,1.4s
ARU Arti 85.31 359 P **P 13 04 27.9 +0.1**
comp=Z,4.1nm,0.7s,baz=141,slow=5.7,SNR=5.8
comp=Z,4.1nm,0.7s
ARU Arti 85.31 359 P **P 13 04 28.0 +0.1**
ZAA0 Zalesovo Array 85.34 14 P **P 13 04 28.1 +0.1**
ZAA0 IAmb IAmb 13 04 31.1
comp=Z,7.9nm,1.0s
ZALV Zalesovo Beam 85.34 14 P **P 13 04 27.5 -0.5**
comp=Z,5.9nm,1.0s,baz=216,slow=4.4,SNR=18
comp=Z,5.9nm,1.0s
ZALV Zalesovo Beam 85.34 14 P **P 13 04 28.3 +0.2**
RONA Rosalia, Austr 86.43 332 *e*P **P 13 04 32.9 -0.7**
comp=Z,5.2nm,1.2s
BBTS Babate 86.49 289 LR LR 13 43 06.9
comp=Z,113nm,18.3s,baz=132,slow=36
OBN Obninsk 86.55 346 LR LR 13 43 24.4
comp=Z,19nm,19.1s,baz=168,slow=36
SONM Songino Array 86.86 29 P **P 13 04 35.6 -0.3**
comp=Z,1.0nm,0.8s,baz=202,slow=3.2,SNR=4.2
comp=Z,1.0nm,0.8s
MOA Molln 87.41 331 *e*P **P 13 04 39.0 +0.6**
comp=Z,9.7nm,1.2s
MDT Midelt 87.55 310 P **P 13 04 40.5 +0.9**
comp=Z,1.2nm,0.9s,baz=210,slow=0.9,SNR=2.8
MDT LR LR 13 43 18.0
comp=Z,135nm,19.5s,baz=132,slow=35
comp=Z,1.2nm,0.9s
BIOA Bad Ischl, Aus 87.56 330 *e*P **P 13 04 40.5 +1.4**
comp=Z,4.0nm,0.6s
VRAC Vranov 87.58 333 P **P 13 04 40.0 +0.8**
comp=Z,0.8nm,0.3s,baz=155,slow=0.5,SNR=3.5
comp=Z,0.8nm,0.3s
KIRV Kirov 87.98 354 P **P 13 04 40.8 0.0**
comp=Z,6.1nm,0.5s,baz=3.2,slow=5.3,SNR=1.7
KIRV LR LR 13 45 32.6
comp=Z,49nm,18.2s,baz=197,slow=37
comp=Z,6.1nm,0.5s
MNK Minsk 88.10 341 *i* P **P 13 04 40.1 -1.4**
comp=E,3.0nm,0.9s
MNK *i* P **P 13 04 40.1 -1.4**
MNK *i* P **P 13 04 40.1 -1.4**
comp=Z,12nm,0.9s,baz=151
MNK *i* PP **PP 13 08 06.7 -2.1**
MNK *i* PPP PPP 13 10 02.1
MNK *i* S **SKSac 13 15 08.1 -1.6**
MNK *i* PS **PnS 13 16 20.1 -7.9**
MNK *i* SS SS 13 22 22.0 +68
MNK *i* SSS SSS 13 24 07.4
MNK *i* LQ LQ 13 38 30.0
MNK *i* LR LR 13 40 12.6
MNK *i* LRM MLR 13 45 12.8
comp=Z,31nm,18.5s
MNK *i* LRM MLR 13 45 19.2
comp=E,50nm,18.5s
MNK *i* LRM MLR 13 47 24.1
WTTA Wattenberg 88.12 329 *e*P **P 13 04 41.5 -0.5**
comp=E,1.8nm,0.4s
SQTA Sankt Quirin 88.28 329 *e*P **P 13 04 42.5 -0.2**
comp=E,3.3nm,0.7s
FETA Feichten 88.36 328 *e*P **P 13 04 43.3 +0.2**
comp=E,10.0nm,1.3s
GERES GERESS Array B 88.42 331 P **P 13 04 42.1 -1.2**
comp=E,0.5nm,0.8s,baz=62,slow=9.3,SNR=5.4
comp=E,0.5nm,0.8s
MOTA Moosalm 88.42 329 *e*P **P 13 04 42.0 -1.5**
comp=E,9.5nm,1.1s
XLT XiLinHaoTe 88.51 36 *e*P **P 13 04 43.6 -0.2**
XLT S **S 13 15 32.4 +2.6**
XLT pmax pmax
comp=E,8.0nm,1.0s
XLT pmax pmax
comp=E,97nm,4.2s
DAVOX Davos/Dischmat 88.57 328 P **P 13 04 43.7 -0.4**
comp=E,6.0nm,0.9s,baz=141,slow=7.5,SNR=7.8
comp=E,6.0nm,0.9s
RETA Reutte 88.69 329 *e*P **P 13 04 44.2 -0.4**
comp=E,4.0nm,0.5s
NACGM Naroch 88.77 341⇑*e*P **P 13 04 45.8 +1.1**
baz=150
DAVA Damuels 88.94 328 *e*P **P 13 04 45.4 -0.5**
comp=E,3.7nm,0.6s
BRG Berggiesshubel 89.87 332 *e*P **P 13 04 53.0 +3.0**
BRG Amp 13 04 54.5
comp=Z,7.9nm,1.3s
ESBB Sonseca Array 91.30 316 P **P 13 04 58.3 +1.4**
ESBB IAmb IAmb 13 05 01.6
comp=Z,11nm,1.2s
ESDC Sonseca Array 91.30 316 P **P 13 04 57.7 +0.8**
comp=Z,4.2nm,1.0s,baz=116,slow=3.3,SNR=21
ESDC LR LR 13 44 54.0
comp=Z,69nm,21.2s,baz=135,slow=35
comp=Z,4.2nm,1.0s
ESDC Sonseca Array 91.30 316 P **P 13 04 57.9 +1.0**
ESDC IAmb IAmb 13 05 01.5
comp=Z,8.4nm,1.1s
KLMR Klimovskoe 91.42 350 *e*P **P 13 04 54.6 -2.3**
KLMR AMP 13 05 06.9
comp=Z,30nm,1.9s
DZM Mont Dzumac 92.02 117 *e*SS SS 13 22 11.5 -0.1
comp=Z,62nm,26.6s
DZM Mont Dzumac 92.02 117 *e*LR LR 13 34 27.4
comp=Z,79nm,22.9s
PESTR Estremoz 93.08 313 IAmb IAmb 13 05 18.1
comp=Z,5.8nm,1.2s
PLCA Paso Flores 97.17 215 LR LR 13 44 00.8
comp=Z,29nm,19.0s,baz=154,slow=32
TBI Tubuai 120.11 147 *e*LR LR 13 47 29.4
comp=Z,86nm,24.5s
PPT2 Papeete2 124.93 144 *e*LR LR 13 49 42.9
comp=Z,70nm,23.0s
ILAR Eielson Array 140.34 18 PKP **PKPdf 13 11 18.9 -0.7**
comp=Z,1.1nm,1.1s,baz=326,slow=0.8,SNR=4.7
KDAK Kodiak Island 143.15 30 PKP **PKPdf 13 11 24.6 -0.3**
comp=Z,11nm,0.8s,baz=284,slow=4.2,SNR=1.8
SADO Sadowa 144.93 307 PKPbc **PKPab 13 11 27.1 -0.5**
comp=Z,6.7nm,0.8s,baz=99,slow=3.2,SNR=5.1
YKA Yellowknife Ar 146.57 356 PKPbc **PKPdf 13 11 31.3 +0.6**
comp=Z,9.4nm,1.0s,baz=357,slow=3.3,SNR=6.9
NEW Newport 160.90 356 PKP **PKPdf 13 11 50.7 -0.7**
comp=Z,2.0nm,0.9s,baz=346,slow=4.8,SNR=4.3
PDAR Pinedale Array 164.45 333 PKP **PKPdf 13 11 54.7 -0.6**
comp=Z,1.6nm,0.8s,baz=100,slow=2.7,SNR=15
TXAR Lajitas Array 166.57 274 PKP **PKPdf 13 11 57.3 0.0**
comp=Z,0.8nm,0.9s,baz=95,slow=2.9,SNR=10.0
TXAR PKPab **pPKPab 13 13 01.4 -0.2**
comp=Z,0.2nm,0.6s,baz=119,slow=7.3,SNR=1.6
ELK Elko 168.07 346 PKP **PKPdf 13 11 58.3 +0.1**
comp=Z,0.7nm,0.6s,baz=76,slow=4.2,SNR=3.1
ELK PKPab **PKPab 13 13 06.3 +0.5**
comp=Z,1.6nm,0.9s,baz=28,slow=5.7,SNR=5.0
NVAR Mina Array Bea 170.77 356 PKP **PKPdf 13 12 00.8 +0.8**
comp=Z,1.6nm,0.8s,baz=116,slow=2.1,SNR=12

NOU ***02*** *12:57:15.0, 37°.34S×179°.66E, h131km, MLv4.6/8, Off E. Coast of N. Island, N.Z.*
IDC ***02*** *12:57:15.4±2.6, 36°.97S×179°.08E, h0km, mb3.9/2, mbtmp4.0/3, ML4.0/1, MS2.5/1, Error ellipse: s-maj=70.6km s-min=38.6km az=139.0*
NEIC ***02*** *12:57:16.6±0.7, 37°.11S±0°.09×179°.24E±0°.10, h11km±6km, mb4.3/9, Error ellipse: s-maj=15.1km s-min=8.2km az=140.0*
WEL ***02*** *12:57:20.6±0.6, 37°.S±3°.×17°.9E±°., h20km, M3.7/68, ML4.0/70, MLv3.7/68, Error ellipse: s-maj=0.0km s-min=0.0km az=85.0*

ISC 02 12:57:18.2±1.1, 37°.20S±0°.07×179°.15E±0°.09, h21km±6km, n146, σ1§28/154, mb4.3/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**			Pg	**Pb**	12 57 33.3	**+0.5**
MXZ	**Matakaoa Point**			P	**Pb**	12 57 33.3	**+0.5**
MXZ				S	**Sb**	12 57 41.3	**-1.4**
WMGZ	**Waiomatatini S**			P	**Pn**	12 57 36.8	**+1.8**
WMGZ				S	**Sn**	12 57 48.5	**+1.7**
PKGZ	**Pakihiroa**			P	**Pb**	12 57 39.6	**+1.1**
PKGZ				S	**Sn**	12 57 53.2	**+0.2**
PUZ	**Puketiti**			P	**Pb**	12 57 40.2	**+1.3**
PUZ				S	**Sn**	12 57 53.9	**+0.3**
HAZ	**Te Kaha**			P	**Pn**	12 57 40.1	**+0.1**
HAZ				S	**Sn**	12 57 55.7	**-0.3**
RUGZ	**Raukumara Rang**			P	**Pb**	12 57 44.2	**+0.6**
RUGZ				S	**Sn**	12 58 00.7	**+0.2**
CNGZ	**Carnagh Statio**			P	**Pb**	12 57 45.9	**+0.8**
CNGZ				S	**Sb**	12 58 04.6	**+1.2**
WIZ	**White Island**			P	**Pn**	12 57 44.5	**-0.7**
WIZ				S	**Sn**	12 58 02.9	**-2.3**
WSRZ	**White Island S**			P	**Pn**	12 57 45.1	**-0.2**
WSRZ				S	**Sn**	12 58 04.3	**-1.2**
TKGZ	**Te Karaka**			P	**Pb**	12 57 46.5	**-0.7**
TKGZ				S	**Sn**	12 58 06.2	**+0.7**
MWZ	**Matawai**			P	**Pb**	12 57 48.1	**-0.9**
MWZ				S	**Sn**	12 58 07.2	**-1.0**
WHRZ	**Whale Island**			P	**Pb**	12 57 50.9	**-0.4**
RIGZ	**Rimuhau**			P	**Pn**	12 57 49.9	**+1.0**
URZ	**Urewera**			Pn	**Pn**	12 57 50.8	**+0.9**
	50nm,0.3s,baz=121,slow=7.5,SNR=276						
URZ				Sn	**Sn**	12 58 12.1	**-1.4**
	83nm,0.3s,baz=155,slow=23,SNR=7.3						
URZ				LR	LR	12 58 55.0	
	comp=Z,122nm,21.4s,baz=101,slow=49						
	130nm,0.3s						
URZ	**Urewera**			Pn	**Pn**	12 57 51.0	**+1.1**
URZ	**Urewera**			P	**Pn**	12 57 50.9	**+1.1**
URZ				S	**Sn**	12 58 12.4	**-1.1**
URZ	**Urewera**			P	**Pn**	12 57 50.9	**+1.1**
EDRZ	**Edgecumbe**			P	**Pn**	12 57 53.7	**+1.2**
MARZ	**Manawahe**			P	**Pn**	12 57 53.2	**+0.7**
SNGZ	**Shannon Statio**			P	**Pn**	12 57 53.5	**+0.9**
SNGZ				S	**Sn**	12 58 17.6	**-0.8**
KNZ	**Kokohu**			P	**Pn**	12 57 53.3	**+0.4**
OPRZ	**Ohinepanea**			P	**Pn**	12 57 53.4	**+0.4**
MHGZ	**Mahia Peninsul**			P	**Pn**	12 57 54.6	**+1.3**
RTZ	**Ruatahuna**			P	**Pn**	12 57 54.9	**+1.0**
MUGZ	**Murupara**			P	**Pn**	12 57 55.5	**+0.9**
MYRZ	**Mayor Island**			P	**Pn**	12 57 56.1	**+0.8**
MKRZ	**Makatiti**			P	**Pb**	12 57 58.9	**-0.6**
LIRZ	**Lichensteins R**			P	**Pn**	12 57 57.0	**+1.6**
TGRZ	**Tauranga**			P	**Pn**	12 57 56.7	**+1.0**
RAHZ	**Arahi**			P	**Pn**	12 57 56.9	**+1.0**
RRRZ	**Republican Roa**			P	**Pn**	12 57 57.2	**+1.2**

OMRZ	Omania	2.38 247	P	Pn	12 57 57.8 +1.7
WHHZ	Waihua	2.41 218	P	Pn	12 57 57.2 +0.8
KARZ	Kaharoa	2.45 250	P	Pn	12 57 57.9 +0.9
HLRZ	Highlands Stat	2.46 244	P	Pn	12 57 59.1 +2.0
MTHZ	Maungataniwha	2.46 227	P	Pn	12 57 58.3 +1.2
NGRZ	Ngongotaha	2.52 248	P	Pn	12 58 00.1 +2.1
PRRZ	Plateau Road	2.54 239	P	Pn	12 57 58.9 +0.6
UTU	Utuhina	2.54 247	P	Pb	12 58 02.8 -0.3
HSRZ	Hossack Road	2.56 243	P	Pb	12 58 02.7 -0.7
HRRZ	Handcock Road	2.56 242	P	Pn	12 57 59.7 +1.1
ALRZ	Allen Road	2.60 238	P	Pn	12 57 59.8 +0.7
KMRZ	Kaimai	2.63 255	P	Pn	12 57 59.2 -0.3
NMHZ	Naumai	2.65 224	P	Pn	12 58 00.7 +0.9
ARHZ	Aropaoanui	2.67 219	P	Pn	12 58 00.8 +0.8
MRHZ	Matea Rd	2.71 232	P	Pn	12 58 01.4 +0.9
KUZ	Kuaotunu	2.79 278	P	Pn	12 58 01.1 -0.4
BKZ	Black Stump Fm	2.87 226	Pn	Pn	12 58 03.4 +0.5
BKZ	Black Stump Fm	2.87 226	P	Pn	12 58 03.3 +0.5
BKZ	Black Stump Fm	2.87 226	P	Pn	12 58 03.5 +0.7
KUTZ	Kaahu Road	2.93 243	P	Pn	12 58 05.1 +1.5
CKHZ	Cape Kidnapper	2.94 213	P	Pn	12 58 03.8 0.0
TOZ	Tahuroa Road	2.95 259	P	Pn	12 58 04.1 +0.3
MCHZ	McNeill Hill	2.96 220	P	Pn	12 58 04.4 +0.5
TLZ	Tolley Road	3.08 247	P	Pn	12 58 06.7 +1.1
KWHZ	Kaweka Forest	3.09 223	P	Pn	12 58 06.0 +0.1
GRZ	Great Barrier	3.12 287	P	Pn	12 58 06.7 +0.6
RATZ	Rangitukua	3.14 237	P	Pn	12 58 07.9 +1.3
KAHZ	Kahuranaki	3.14 214	P	Pn	12 58 06.3 -0.3
RITZ	Rihia Road	3.15 235	P	Pn	12 58 07.5 +0.9
MKAZ	Moumakai	3.19 271	P	Pn	12 58 07.3 +0.2
WIAZ	Waiheke Island	3.24 276	P	Pn	12 58 08.1 +0.3
KATZ	Kakaramea	3.25 236	P	Pn	12 58 09.8 +1.7
KRRZ	Kereru	3.27 221	P	Pn	12 58 07.9 -0.4
TMVZ	Te Maari	3.32 234	P	Pn	12 58 09.7 +0.7
ETVZ	East Tongariro	3.33 234	P	Pn	12 58 09.5 +0.4
NTVZ	North Tongarir	3.33 234	P	Pn	12 58 09.9 +0.7
BHHZ	Black Hill Sta	3.33 226	P	Pn	12 58 09.5 +0.3
PXZ	Pawanui	3.34 212	P	Pn	12 58 08.2 -1.1
KRVZ	Karewarewa	3.35 235	P	Pn	12 58 10.2 +0.7
OTVZ	Oturere	3.37 233	P	Pn	12 58 10.1 +0.2
ETAZ	East Tamaki Re	3.39 273	P	Pn	12 58 10.4 +0.5
NNVZ	North Ngauruho	3.39 234	P	Pn	12 58 10.7 +0.6
WTVZ	West Tongariro	3.40 235	P	Pn	12 58 11.0 +0.9
SNVZ	South Ngauruho	3.40 233	P	Pn	12 58 10.8 +0.5
NGZ	Ngauruhoe	3.42 234	P	Pn	12 58 10.7 +0.2
MBAZ	Motutapu North	3.43 276	P	Pn	12 58 11.2 +0.7
TUVZ	Tukino	3.44 232	P	Pn	12 58 11.2 +0.4
MOVZ	Moawhango	3.46 230	P	Pn	12 58 11.1 +0.1
TWVZ	Taurewa	3.47 236	P	Pn	12 58 12.2 +1.0
WHVZ	Whangaehu Hut	3.49 232	P	Pn	12 58 12.4 +0.9
FWVZ	Far West T-bar	3.50 233	P	Pn	12 58 12.2 +0.6
WNVZ	Wahianoa	3.51 232	P	Pn	12 58 12.1 +0.4
ABAZ	Army Bay	3.51 279	P	Pn	12 58 12.4 +0.8
EPAZ	Eden Park BICE	3.54 274	P	Pn	12 58 13.2 +1.2
HBAZ	Herne Bay Bore	3.56 274	P	Pn	12 58 13.4 +1.2
WPHZ	Waipukurau	3.56 216	P	Pn	12 58 11.6 -0.7
PNHZ	Pukenui	3.56 220	P	Pn	12 58 11.2 -1.1
AWAZ	Awhitu Peninsu	3.61 271	P	Pn	12 58 13.7 +0.8
MTVZ	Mangateitei	3.62 232	P	Pn	12 58 13.6 +0.4
PRHZ	Porangahau	3.64 212	P	Pn	12 58 12.1 -1.2
HIZ	Hauiti	3.64 248	Pn	Pn	12 58 15.2 +1.8
HIZ	Hauiti	3.64 248	P	Pn	12 58 15.2 +1.8
HIZ	Hauiti	3.64 248	P	Pn	12 58 15.1 +1.7
PKVZ	Pokaka	3.65 234	P	Pn	12 58 14.6 +1.1
WTAZ	Waiatarua	3.67 273	P	Pn	12 58 14.8 +1.0
RVAZ	Riverhead Bore	3.69 275	P	Pn	12 58 14.9 +1.0
TSZ	Takapari Road	3.79 220	P	Pn	12 58 14.0 -1.5
ANWZ	Angora Road	3.87 212	P	Pn	12 58 15.0 -1.4
DVHZ	Dannevirke	3.87 216	P	Pn	12 58 15.5 -1.1
VRZ	Vera Road	3.96 240	P	Pn	12 58 19.2 +1.5
WCZ	Waipu Caves	4.07 287	P	Pn	12 58 20.5 +1.3
POWZ	Post Office Ro	4.14 219	P	Pn	12 58 19.2 -1.0
WAZ	Wanganui	4.14 231	P	Pn	12 58 20.6 +0.3
BFZ	Birch Farm	4.15 212	P	Pn	12 58 18.6 -1.7
BFZ	Birch Farm	4.15 212	P	Pn	12 58 18.4 -1.9
PRWZ	Pori Road	4.17 216	P	Pn	12 58 19.7 -0.9
LREZ	Lake Rotokare	4.36 237	P	Pn	12 58 24.7 +1.5
TIWZ	Tintock	4.38 214	P	Pn	12 58 22.5 -1.1
PREZ	Palmer Road	4.47 240	P	Pn	12 58 26.9 +2.0
NEZ	North Egmont	4.48 241	P	Pn	12 58 27.3 +2.2
PKE	Pukeiti	4.53 242	P	Pn	12 58 28.6 +3.0
KHEZ	Kahui Hut	4.55 241	P	Pn	12 58 28.4 +2.5
NBEZ	Newall Road No	4.64 242	P	Pn	12 58 30.2 +3.1
OUZ	Omahuta	4.91 292	Pn	Pn	12 58 32.8 +2.0
OUZ	Omahuta	4.91 292	P	Pn	12 58 32.5 +1.7
OUZ	Omahuta	4.91 292	P	Pn	12 58 32.6 +1.8
TUWZ	Tuamarina	5.84 222	Pn	Pn	12 58 41.4 -2.2
BSWZ	Blackbirch Sta	6.08 221	Pn	Pn	12 58 45.1 -1.7
QRZ	Quartz Range	6.30 233	P	Pn	12 58 48.1 -1.8
KHZ	Kahutara	6.76 218	P	Pn	12 58 53.7 -2.5
CTZ	Chatham Island	7.28 155	P	Pn	12 59 06.9 +3.6
RPZ	Rata Peaks	8.96 221	Pn	Pn	12 59 23.0 -3.5
	0.2nm,0.3s,baz=61,slow=10,SNR=9.7				
RPZ			Sn	Sn	13 00 54.0 -13
	2.8nm,0.3s,baz=339,slow=22,SNR=17				
RPZ	Rata Peaks	8.96 221	P	Pn	12 59 23.6 -2.8
ODZ	Otahua Downs	10.12 217	Pn	Pn	12 59 43.3 +1.0
AS31	Alice Springs	40.91 276	P	P	13 04 58.2 -1.1
ASAR	Alice Springs	40.91 276	P	P	13 04 58.6 -0.6
	0.8nm,0.6s,baz=116,slow=6.4,SNR=11				
	0.8nm,0.6s				
ASAR	Alice Springs	40.91 276	P	P	13 04 58.8 -0.4
WR0	Warramunga Arr	42.35 281	P	P	13 05 10.5 -0.6
WR0			IAmb	IAmb	13 05 30.5
	comp=Z,12nm,1.5s				
WB2	Warramunga Arr	42.51 281	P	P	13 05 11.8 -0.6
WB2			IAmb	IAmb	13 05 41.2
	comp=Z,12nm,1.5s				
WRAB	Tennant Creek	42.52 281	P	P	13 05 11.1 -1.3
WRAB			IAmb	IAmb	13 05 13.3
	comp=Z,13nm,1.5s				
WRA	Warramunga Arr	42.52 281	P	P	13 05 11.6 -0.8
	comp=Z,1.5nm,0.6s,baz=124,slow=7.4,SNR=33				
	comp=Z,1.5nm,0.6s				
WRA	Warramunga Arr	42.52 281	P	P	13 05 11.9 -0.6
WB0	Warramunga Arr	42.58 281	P	P	13 05 12.1 -0.8
WB0			IAmb	IAmb	13 05 12.5
	comp=Z,8.1nm,1.2s				
KNRA	Kununurra	49.30 282	P	P	13 06 05.2 -0.7
QSPA	South Pole Qui	52.92 180	P	P	13 06 36.2 +3.6
QSPA			IAmb	IAmb	13 06 43.1
	comp=Z,2.9nm,1.4s				
WAKE	Wake Island	57.40 346	P	P	13 07 03.8 -1.5
H03S2	Juan Fernandez	78.67 124	T	T	14 35 40.2
	baz=230				
H03S1	Juan Fernandez	78.68 124	T	T	14 35 40.2
	baz=230				
H03S3	Juan Fernandez	78.69 124	T	T	14 35 40.2
	baz=230				
H03N3	Juan Fernandez	78.91 124	T	T	14 35 53.6
	baz=234,slow=72,SNR=27				
H03N2	Juan Fernandez	78.91 124	T	T	14 35 52.3
	baz=234,slow=72,SNR=23				
H03N1	Juan Fernandez	78.92 124	T	T	14 35 54.4
	baz=234,slow=72,SNR=29				
ARCES	ARCESS Array B	144.61 344	PKP	PKPab	13 16 50.4 -0.3
	comp=Z,2.6nm,0.8s,baz=8.7,slow=1.2,SNR=0.9				
FINES	FINESS Array B	150.47 334	PKPbc	PKiKP	13 17 08.0 -0.1
	comp=Z,1.0nm,0.9s,baz=62,slow=3.6,SNR=6.2				

*IDC **02** 13:09:52.5±1.7, 6°.01S×146°.74E, h0km, mb3.6/3, mbtmp3.6/5, ML3.5/1, MS3.6/2, Error ellipse: s-maj=53.5km s-min=28.1km az=117.0*

ISC 02 13:09:56.1±2.4, 6°.1S±0°.2×146°.9E±0°.2, h35km, n8, σ1§71/7, mb3.7/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.31	175	Pn	Pn	13 10 47.1	+1.8
	12nm,0.3s,baz=21,slow=14,SNR=18						
PMG				Sn	Sn	13 11 21.5	-2.0
	7.7nm,0.3s,baz=352,slow=19,SNR=5.5						
WRA	Warramunga Arr	18.39	220	P	Pn	13 14 08.2	-0.2
	0.2nm,0.3s,baz=42,slow=12,SNR=16						
	1.0nm,0.6s						
ASAR	Alice Springs	21.48	214	P	P	13 14 42.5	+0.7
	1.1nm,0.7s,baz=48,slow=7.7,SNR=16						
ASAR				S	S	13 18 37.8	-0.5
	0.7nm,0.9s,baz=30,slow=20,SNR=3.7						
	1.1nm,0.7s						
FITZ	Fitzroy Crossi	23.92	238	P	P	13 15 07.5	+0.5
	2.3nm,0.7s,baz=56,slow=10,SNR=9.2						
	2.3nm,0.7s						
DZM	Mont Dzumac	24.70	132	LR	LR	13 23 20.3	
	comp=Z,50nm,18.6s,baz=300,slow=32						
RPZ	Rata Peaks	43.08	154	LR	LR	13 32 41.9	
	comp=Z,165nm,20.5s,baz=246,slow=32						
ILAR	Eielson Array	85.61	23	P	P	13 22 32.4	+1.7
	0.3nm,0.6s,baz=260,slow=4.5,SNR=2.0						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	145.00	284	PKP	PKiKP	13 29 32.7	-1.9
	1.4nm,0.9s,baz=87,slow=2.5,SNR=6.1						

*BJI **02** 13:40:03.3±0.0, 16°.44N×119°.81E, h12km, mb5.0/74, mB5.1/62, Ms5.0/89, Ms7 4.8/84*

*NEIC **02** 13:40:04.8±1.8, 16°.48N±0°.04×119°.75E±0°.06, h10km±1km, mb5.7/346, Mww5.4, Error ellipse: s-maj=10.5km s-min=5.3km az=71.0*

*MOS **02** 13:40:06.4±0.9, 16°.46N×119°.71E, h38km, mb5.6/99, MS4.8/22, Error ellipse: s-maj=6.5km s-min=3.7km az=113.4*

*GCMT **02** 13:40:08.8±0.1, 16°.66N±0°.01×119°.48E±0°.01, h41km, MW5.3/115, Moment Tensor Solution. s115,c181; s113,c190; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.94±.02; $M_{\theta\theta}$-0.02±.01; $M_{\phi\phi}$-0.91±.01; $M_{r\theta}$-0.11±.02; $M_{\theta\phi}$-0.34±.01; $M_{\phi r}$-0.42±.02; Best double couple: $M_0$1.07400×10^{17} NP1:ϕ_s197.00000°, δ57.00000°, λ88.00000°. NP2:ϕ_s21.00000°, δ33.00000°, λ93.00000°. Principal axes: T 1.0290, Plg78.0000°, Azm99.0000°; N 0.0910, Plg2.0000°, Azm198.0000°; P -1.1190, Plg12.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 13:40:08.5±0.3, 17°N±2°×12°0E±°, h51km±3km, M5.0/100, mb5.4/100, mB5.6/65, MLv5.0/1, Mw(mB)5.0/65, MwMwp5.0/18, Mwp5.2/18*

*MAN **02** 13:40:08.4, 16°.50N×119°.72E, h20km, mb6.0, ML5.0, MS5.5*

MAN REPORTED INTENSITIES:; INTENSITY V - BOLINAO PANGASINAN; INTENSITY IV - LINGAYEN ALAMINOS CITY SUAL BURGOS DASOL AND SAN FABIAN PANGASINAN; ALILEM ILOCOS SU INTENSTIY III - SAN CARLOS MALASIQUI LAOAC BAYAMBANG AND DAGUPAN CITY PANGASINAN; SAN EMILIO ILOCOS SUR; BAUANG LA UNION; INTENSITY II - BUGALLON MANGALDAN & ASINGAN PANGASINAN; SAN FERNANDO CITY LA UNION; PALAUIG ZAMBALES; BAGUIO CITY; SAN MATEO RIZAL; MAKATI CITY PASIG CITY QUEZON CITY PASAY CITY & MARIKINA CITY; INTENSITY I - VIGAN CITY.

*NEIC **02** 13:40:09, 16°.38N×119°.82E, h30km, Moment Tensor Solution. Duration: 5§6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-0.81; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.32; $M_{\phi r}$-0.97; Fault plane solution: $M_0$1.38000×10^{17} NP1: ϕ_s193.00000°, δ68.00000°, λ83.00000°. NP2:ϕ_s30.00000°, δ23.00000°, λ106.00000°. Principal axes: T 1.4114, Plg66.0000°, Azm92.0000°; N -0.0678, Plg6.0000°, Azm196.0000°; P -1.3436, Plg23.0000°, Azm288.0000°;*

*IDC **02** 13:40:11.3±1.2, 16°.49N×119°.71E, h65km±11km, mb4.9/30, mbtmp5.1/32, MS4.6/79 Error ellipse: s-maj=10.7km s-min=6.7km az=73.0*

ISC 02 13:40:08.1±0.2, 16°.39N±0°.02×119°.66E±0°.03, h43km±1km, h42km:pP-P, n1689, σ1§38/1797, mb5.5/356, MS4.7/129, 84C-38D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.24	91	↑eP	Pn	13 40 14.7	-1.3
BOLP				eS	Sn	13 40 22.7	+1.1
SMPP	San Manuel, Pa	1.01	103	↑eP	Pn	13 40 26.6	+0.7
SMPP				eS	Sn	13 40 41.0	+2.1
SAMP	Sagada Mountai	1.38	60	↑eP	Pn	13 40 30.6	-0.3
SAMP				eS	Sn	13 40 47.5	-0.3
PCPH	Palayan	1.61	120	↓eP	Pn	13 40 35.2	+1.2
PCPH				eS	Sn	13 40 56.8	+3.3
SIPP	Brgy, Tapao	1.71	26	↑iP	Pn	13 40 37.5	+2.1
SIPP				i S	Sn	13 41 18.4	+22
BALP	Baler	1.95	109	↑eP	Pn	13 40 41.7	+2.9
BALP				eS	Sn	13 41 08.1	+6.1
MACP	Maragondon, Ca	2.35	154	↑eP	Pn	13 40 47.3	+3.2
MACP				eS	Sn	13 41 17.8	+6.0
TGY	Tagaytay City	2.58	151	P	Pn	13 40 51.2	+3.7
	baz=270,slow=2.2						
TGY				S	Sn	13 41 25.5	+7.7
	baz=255,slow=12						
TGY	Tagaytay City	2.58	151	eP	Pn	13 40 53.4	+5.9
TGY				i S	Sn	13 41 28.1	+10
PACPP	Pamplona Cagay	2.62	38	↑eP	Pn	13 40 47.8	-0.1
PACPP				i S	Sn	13 41 18.7	+0.2
LUBP	Lubang	2.70	168	eP	Pn	13 40 51.1	+2.1
LUBP				i S	Sn	13 41 36.8	+16
PALP	Palanan	2.73	75	↑eP	Pn	13 40 52.1	+2.7
PALP				eS	Sn	13 41 32.6	+11
LQP	Lukban	2.90	141	↑eP	Pn	13 40 54.4	+2.4
LQP				eS	Sn	13 41 35.5	+10
SGCP	Gonzaga	2.93	51	↑eP	Pn	13 40 53.9	+1.7
SGCP				eS	Sn	13 41 28.1	+1.8
CICP	Calayan Island	3.35	31	↓eP	Pn	13 41 00.0	+2.1
CICP				i S	Sn	13 41 59.5	+23
BOAC	Boac	3.60	144	↑eP	Pn	13 41 05.1	+3.8
BOAC				eS	Sn	13 41 50.3	+7.7
JCNP	Jose Panganiba	3.60	125	↓iP	Pn	13 41 04.9	+3.6
JCNP				i S	Sn	13 41 50.2	+7.5
GQP	Guinayangan	3.65	132	↓eP	Pn	13 41 05.3	+3.2
GQP				eS	Sn	13 41 49.1	+5.2
SJMP	San Jose	4.15	160	↑eP	Pn	13 41 11.7	+2.7
SJMP				eS	Sn	13 41 57.1	+0.8
BUSP	Coron	4.39	173	↑eP	Pn	13 41 13.7	+1.4
BUSP				eS	Sn	13 41 59.3	-2.8
PVCP	Virac	5.15	122	↑eP	Pn	13 41 25.6	+2.9
PVCP				eS	Sn	13 42 27.6	+6.5
CUYO	Cuyo Island	5.66	166	↑eP	Pn	13 41 31.4	+1.6
CUYO				eS	Sn	13 42 27.5	-6.0
JAP	San Jose, Anti	6.03	158	↑eP	Pn	13 41 40.8	+6.0
CNP	Catarman	6.19	128	↑eP	Pn	13 41 40.7	+3.7
CNP				eS	Sn	13 42 51.2	+4.7
TWG	Pinlang	6.54	12		Pn	13 41 41.2	-0.5
TPUB	Ta-pu	6.94	7	Pn	Pn	13 41 46.4	-0.9
CNOP	Candoni, Negro	7.14	156	↑eP	Pn	13 41 55.1	+5.1
YULB	Yu-li	7.14	12		Pn	13 41 48.7	-1.3
OCLP	Ormoc	7.16	137	↑eP	Pn	13 41 57.0	+6.7
LLP	Lapu-Lapu	7.35	145	eP	Pn	13 41 56.6	+3.7
LLP				eS	Sn	13 43 37.8	+23
SSLB	Suanglung	7.46	9	Pn	Pn	13 41 53.5	-1.0
TABP	Talibon, Bohol	7.74	143	↑iP	Pn	13 42 02.3	+4.1
TABP				i S	Sn	13 42 25.1	-59
BATP	Bataraza	7.76	194	↑eP	Pn	13 41 58.9	+0.3
TBP	Tagbilaran	7.81	148	↓eP	Pn	13 42 05.8	+6.5
HKPS	Hong Kong Po S	7.84	319		Pn	13 41 57.0	-2.6
NACB	Ninganchiao	7.96	13	Pn	Pn	13 41 60.0	-1.3
MSLP	Maasin	8.02	140	↑eP	Pn	13 42 08.7	+6.6
GHBP	Garcia Hernand	8.11	145	↑iP	Pn	13 42 09.2	+5.9
GHBP				i S	Sn	13 43 47.3	+14
KNMB	Chin-men Tao	8.12	352	Pn	Pn	13 42 01.6	-1.8
LSIP	Lazi, Siquijor	8.19	151	eP	Pn	13 42 12.1	+7.7
LSIP				i S	Sn	13 42 54.6	-41
YHNB	Yeheng	8.40	11	Pn	Pn	13 42 08.3	+1.0
DCPH	Dipolog City	8.55	155	↓eP	Pn	13 42 14.9	+5.4
QZH	Quanzhou	8.57	353	↑iP	Pn	13 42 02.5	-7.1
QZH				S	Sn	13 43 37.2	-7.8
TATO	Taipei	8.71	11		Pn	13 42 11.1	-0.5
GZH	Guangzhou	8.93	319	P	Pn	13 42 15.7	+1.1
GLSP	General Luna,	9.10	135	↑eP	Pn	13 42 20.0	+3.1
PAGZ	Pagadian	9.23	156	eP	Pn	13 42 25.1	+6.4
CGP	Cagayan de Oro	9.29	147	↓eP	Pn	13 42 28.6	+9.1
QIZ	Qiongzhong	9.72	287	P	Pn	13 42 24.0	-1.4
QIZ				S	Sn	13 44 16.3	+3.1
QIZ				pmax	pmax		
	comp=Z,130nm,0.9s						
QIZ				LR	LR		
	comp=N,3μm,15.6s						
QIZ				LR	LR		
	comp=E,5μm,18.7s						
QIZ				LR	LR		
	comp=Z,7μm,22.0s						
BUKP	Musuan	9.97	147	eP	Pn	13 42 36.2	+7.3
BUKP	Musuan	9.97	147	↑eP	Pn	13 42 36.3	+7.4
CTBH	Cotabato--PC H	10.15	153	↑iP	Pn	13 42 42.1	+11
BIPH	Bislig	10.46	140	↑eP	Pn	13 42 41.0	+5.5
KCP	Kidapawan	10.73	150	↓eP	Pn	13 42 44.5	+5.2
KCP				i S		13 43 02.5	
KKM	Kota Kinabalu	10.82	199	Pn	Pn	13 42 40.1	-0.4
DAV	Davao City (W)	10.92	147	LR	LR	13 48 24.5	
	comp=Z,11μm,18.6s,baz=317,slow=45						
MYLDM	Lahad Datu	11.20	186	Pn	Pn	13 42 47.6	+1.9
DDMP	Don Marcelino,	11.81	149	↑eP	Pn	13 42 58.9	+4.8
JOW	Kunigami	13.12	36	P	Pn	13 43 14.7	+2.8
	40nm,0.8s,baz=233,slow=11,SNR=2.6						
JOW	Kunigami	13.12	36	Pn	Pn	13 43 10.5	-1.4
CNSH	ChangSha	13.28	333	↓P	Pn	13 43 15.1	+1.0
CNSH				S	Sn	13 45 45.1	+4.7
CNSH				LR	LR		
	comp=N,5μm,14.9s						
CNSH				LR	LR		
	comp=E,4μm,12.9s						
CNSH				LR	LR		
	comp=Z,6μm,15.1s						
UBPT	Khong Chiam	13.70	267	Pn	Pn	13 43 20.1	+0.2
SGSI	Sangihe	13.88	155	P	Pn	13 43 23.2	+0.9
	206nm,0.9s						
SSE	Sheshan	14.71	5	P	Pn	13 43 32.3	-1.1
SSE				S	Sn	13 46 16.8	+1.7
SSE				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSE				LR	LR		
	comp=N,1μm,19.6s						
SSE				LR	LR		
	comp=E,620nm,21.8s						
SSE				LR	LR		
	comp=Z,2μm,20.1s						
WHN	Wuhan	14.90	342	↓P	Pn	13 43 36.2	+0.2
WHN				sP	P	13 43 43.5	+2.6
WHN				pmax	pmax		
	comp=Z,240nm,1.0s						
WHN				LR	LR		
	comp=N,10μm,16.7s						
WHN				LR	LR		
	comp=E,3μm,13.8s						
WHN				LR	LR		
	comp=Z,11μm,17.3s						
NJ2	Nanjing	15.61	357	eP	P	13 43 47.5	-1.3
NJ2				sP	pP	13 43 55.0	-3.4
NJ2				PP	pwP	13 43 58.0	-3.1
NJ2				sS	S	13 46 47.8	-3.1
NJ2				SS	SnSn	13 46 56.9	+6.2
NJ2				pmax	pmax		
	comp=Z,25nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,210nm,5.0s						
NJ2				LR	LR		
	comp=N,3μm,15.2s						
NJ2				LR	LR		
	comp=E,2μm,14.2s						
NJ2				LR	LR		
	comp=Z,3μm,16.6s						
SBUM	Sibu	15.66	209	Pn	Pn	13 43 46.0	+0.1
GYA	Guiyang	15.70	312	↓iP	Pn	13 43 46.8	+0.3
GYA				pP	P	13 43 50.2	+0.3
GYA				S	Sn	13 46 43.5	+4.1
GYA				SS	S	13 47 00.9	+8.0
GYA				pmax	pmax		
	comp=Z,95nm,1.4s						
GYA				pmax	pmax		
	comp=Z,1μm,3.6s						
GYA				LR	LR		
	comp=N,3μm,17.4s						
GYA				LR	LR		
	comp=E,4μm,15.2s						
GYA				LR	LR		
	comp=Z,7μm,16.2s						
MPSI	Mapaga	15.95	179	P	P	13 43 51.6	-1.0
	2μm1μm138nm,1.3s						
MRSI	Marisa	15.97	172	P	P	13 43 53.0	+0.2
	2μm2μm196nm,1.2s						
KMSI	Cibinong	16.28	164	P	P	13 43 55.7	-0.6
	291nm,0.9s						
ENH	Enshi	16.67	328	Pn	Pn	13 43 57.9	-0.7
SMKI	Samarinda	16.90	188	P	P	13 44 06.0	+2.8
	4μm267nm,1.0s						
TNTI	Ternate	17.28	153	P	Pn	13 44 05.8	-0.6
TNTI	Ternate	17.28	153	P	Pn	13 44 06.2	-0.1
	2μm111nm,1.4s						
APSI	Ampana	17.30	173	P	P	13 44 08.9	+1.3
	2μm154nm,0.7s						
LUWI	Luwuk	17.59	170	P	Pn	13 44 10.6	+0.4
LUWI				IAmb	IAmb	13 44 15.6	
	comp=Z,380nm,0.8s						
LUWI	Luwuk	17.59	170	P	P	13 44 11.4	+0.6
	comp=Z,3μmcomp=Z,7μmcomp=Z,521nm,0.9s						
BKB	Balikpapan	17.75	189	P	P	13 44 14.0	+1.5
	comp=Z,3μmcomp=Z,4μmcomp=Z,227nm,0.8s						
MTKI	Muara Teweh, K	17.85	196	P	P	13 44 16.1	+2.4
	comp=Z,40nm,0.5s						
JSU	Suzuyama	17.98	31	P	Pn	13 44 13.9	-1.0
KMI	Kunming	18.04	302	↓P	P	13 44 18.9	+3.0
KMI				sP	sP	13 44 31.5	+0.9
KMI				S	Sn	13 47 35.4	-0.9
KMI				pmax	pmax		
	comp=Z,52nm,1.9s						
KMI				pmax	pmax		
	comp=Z,2μm,5.5s						
KMI				LR	LR		
	comp=Z,1μm,18.1s						
KMI				LR	LR		
	comp=Z,2μm,16.9s						
KMI				LR	LR		
	comp=Z,4μm,16.7s						
STKI	Sintang	18.11	207	P	Pn	13 44 19.7	+3.1
	comp=Z,6μmcomp=Z,24nm,0.8s						
LBMI	Labuha	18.60	155	P	Pn	13 44 22.8	+0.2
	comp=Z,1μmcomp=Z,122nm,0.9s						
LYN	LuoYang	19.20	342	↓P	Pn	13 44 29.5	-0.2
LYN				sP	pwP	13 44 41.5	+0.9
LYN				PP	PnPn	13 44 46.7	+3.3
LYN				S	Sn	13 48 07.0	+3.0
LYN				sS	sS	13 48 12.5	-7.2
LYN				pmax	pmax		
	comp=Z,30nm,1.1s						
LYN				pmax	pmax		
	comp=Z,550nm,4.8s						
LYN

TIA LR LR
comp=Z,2μm,16.7s
CHTO Chiang Mai 19.89 280 P **P** **13 44 37.6 +1.5**
CHTO **PcP** **13 48 53.4 +1.2**
CHTO Chiang Mai 19.89 280 P **P** **13 44 37.6 +1.5**
CHTO pmax pmax
comp=Z,6.0nm,1.7s
XAN Xi'an 20.06 333 ⇓P **P** **13 44 38.9 +1.1**
XAN pP Pn 13 44 43.4 +3.6
XAN PP **PnPn** **13 45 00.7 +5.6**
XAN S Sn 13 48 24.1 -0.6
XAN SS **SnSn** **13 48 49.5 +10**
XAN pmax pmax
comp=Z,92nm,1.6s
XAN pmax pmax
comp=Z,490nm,3.5s
XAN LR LR
comp=Z,4μm,16.9s
XAN LR LR
comp=Z,3μm,14.8s
XAN LR LR
comp=Z,7μm,15.5s
JTU Tsushima 20.07 24 P **P** **13 44 37.5 -0.3**
SPSI Sidrap Palu 20.22 180 P Pn 13 44 41.3 -0.5
comp=Z,2μmcomp=Z,2μmcomp=Z,239nm,1.1s
BBKI Banjar Baru 20.29 194 P **P** **13 44 42.0 +1.6**
comp=Z,3μmcomp=Z,253nm,1.0s
CD2 Chengdu 20.48 318 P **P** **13 44 43.6 +1.1**
CD2 pP Pn 13 44 45.5 +0.6
CD2 S **S** **13 48 32.0 +2.5**
CD2 sS Sn 13 48 39.0 +4.0
CD2 LR LR
comp=Z,5μm,5.9s
CD2 LR LR
comp=Z,5μm,5.9s
CD2 LR LR
comp=Z,10μm,7.4s
PBKI Pangkalan Bun 20.55 203 P P 13 44 32.8 -10
SIJI Sorong 20.62 145 P **P** **13 44 44.7 +0.7**
comp=Z,65nm,0.6s,baz=333,slow=4.4,SNR=20
SIJI S **S** **13 48 34.0 +1.7**
comp=Z,8.9nm,0.9s,baz=252,slow=19,SNR=2.7
SIJI LR LR 13 53 27.8
comp=Z,3μm,21.5s,baz=332,slow=38
comp=Z,65nm,0.6s
BNSI Bone 20.66 179 P **P** **13 44 45.7 +1.3**
comp=Z,1μmcomp=Z,1μmcomp=Z,96nm,1.4s
NLAI Namlea 20.84 159 P **P** **13 44 47.9 +1.5**
comp=Z,160nm,0.8s
TJN Taejon 21.05 18 P **P** **13 44 47.7 -0.8**
TJN IAmb IAmb 13 44 49.3
comp=Z,768nm,1.4s
TJN Taejon 21.05 18 P **P** **13 44 47.7 -0.8**
TJN pmax pmax
comp=Z,768nm,1.4s
KAPI Kappang 21.27 180 P **P** **13 44 52.5 +1.6**
comp=Z,59nm,0.6s,baz=2.2,slow=6.1,SNR=18
KAPI S **S** **13 48 47.8 +2.8**
comp=Z,9.8nm,0.2s,baz=151,slow=20,SNR=1.5
KAPI LR LR 13 53 49.2
comp=Z,1μm,20.1s,baz=12,slow=38
comp=Z,59nm,0.6s
KAPI Kappang 21.27 180 P **P** **13 44 50.9 0.0**
MYKOM Kota Tinggi 21.28 229 P **P** **13 44 52.1 +1.1**
HNS HongShan 21.38 349 ⇑P **P** **13 44 54.0 +2.0**
HNS S **S** **13 48 51.1 +4.0**
HNS pmax pmax
comp=Z,44nm,1.2s
HNS LR LR
comp=Z,3μm,17.1s
HNS LR LR
comp=Z,2μm,16.4s
HNS LR LR
comp=Z,4μm,17.5s
TPRI Tanjung Pinang 21.42 226 P **P** **13 44 55.6 +3.0**
comp=Z,1μmcomp=Z,2μmcomp=Z,38nm,1.2s
JMN Monobe 21.50 34 P **P** **13 44 53.3 -0.1**
JMN IAmb IAmb 13 44 56.1
comp=Z,408nm,1.3s
BKSI Bulukumba 21.57 179 P **P** **13 44 54.9 +0.7**
comp=Z,1μmcomp=Z,114nm,0.8s
MSAI Masohi 21.64 154 P **P** **13 44 56.6 +1.6**
comp=Z,26nm,0.7s
KULM Kulim 21.66 242 P **P** **13 44 56.8 +1.6**
AAI Ambon 21.66 156 P **P** **13 44 55.8 +0.7**
comp=Z,2μmcomp=Z,229nm,0.8s
IPM Ipoh 21.79 239 P **P** **13 44 57.1 +0.6**
INCN Inchon 21.90 15 P **P** **13 44 56.4 -1.2**
INCN Inchon 21.90 15 P **P** **13 44 56.4 -1.2**
INCN pmax pmax
comp=Z,201nm,1.5s
BBSI Bau Bau 21.93 172 P **P** **13 44 59.7 +1.7**
comp=Z,108nm,0.9s
JHS Saijyo 22.11 31 P **P** **13 44 57.6 -2.2**
TIY Taiyuan 22.18 345 ⇓P **P** **13 45 04.4 +3.7**
TIY S **S** **13 49 04.7 +2.2**
TIY pmax pmax
comp=Z,340nm,4.3s
TIY LR LR
comp=Z,1μm,18.1s
TIY LR LR
comp=Z,2μm,16.7s
TIY LR LR
comp=Z,2μm,20.1s
KSAR Wonju Array Be 22.20 18 P **P** **13 44 59.3 -1.5**
KSAR **PcP** **13 48 56.3 0.0**
KSAR Wonju Array Be 22.20 18 P **P** **13 44 59.3 -1.5**
KSAR 13 48 56.3
KSRS Korea Array 22.22 18 P **P** **13 45 00.1 -0.8**
comp=Z,45nm,0.9s,baz=200,slow=11,SNR=68
KSRS PcP **PcP** **13 48 56.9 +0.5**
comp=Z,10nm,1.0s,baz=185,slow=2.3,SNR=9.8
KSRS LR LR 13 54 19.6
comp=Z,2μm,19.8s,baz=205,slow=38
comp=Z,45nm,0.9s
HJU Haeju 22.23 13 P **P** **13 45 01.2 +0.2**
KS19 Wonju Array Si 22.25 17 P **P** **13 44 59.9 -1.5**
BSSI Bau Bau, Buton 22.40 178 P **P** **13 45 03.3 +0.2**
comp=Z,1μmcomp=Z,160nm,0.9s
DSRI Dabo 22.41 223 P **P** **13 45 05.0 +1.7**
comp=Z,31nm,1.1s
DL2 Dalian 22.50 4 P **P** **13 45 04.8 +0.8**
DL2 S **S** **13 49 07.9 -0.2**
DL2 pmax pmax
comp=Z,99nm,1.1s
DL2 pmax pmax
comp=Z,470nm,4.2s
DL2 LR LR
comp=Z,2μm,14.9s
DL2 LR LR
comp=Z,1μm,12.2s
DL2 LR LR
comp=Z,2μm,18.2s
PPBI Pangkal Pinang 22.76 217 P **P** **13 45 08.2 +1.2**
comp=Z,1μmcomp=Z,86nm,1.1s
FAKI Fak Fak 22.86 146 P **P** **13 45 06.2 -1.8**
FAKI IAmb IAmb 13 45 10.7
comp=Z,167nm,1.1s
FAKI Fak Fak 22.86 146 P **P** **13 45 07.1 -0.9**
comp=Z,2μmcomp=Z,139nm,0.9s
BNDI Bandanaira 23.11 153 P **P** **13 45 10.9 +0.3**
comp=Z,7μmcomp=Z,594nm,1.5s
JCJ Chichijima 23.44 59 P **P** **13 45 11.8 -1.9**
comp=Z,100nm,0.9s,baz=240,slow=16,SNR=3.2
JCJ LR LR 13 52 43.1
comp=Z,1μm,21.5s,baz=276,slow=32
JCJ Chichijima 23.44 59 P **P** **13 45 12.0 -1.7**
JCJ IAmb IAmb 13 45 13.3
comp=Z,226nm,1.2s
BJT Baijiatuau 23.74 353 P **P** **13 45 17.1 +0.7**
BJT IAmb IAmb 13 45 19.0
comp=Z,442nm,1.9s
BJT Baijiatuau 23.74 353 P **P** **13 45 17.1 +0.7**
BJT pmax pmax
comp=Z,442nm,1.9s
BJI Beijing 23.76 353 P **P** **13 45 17.3 +0.7**
BJI pP **pP** **13 45 20.9 -6.3**
BJI PcP **PcP** **13 49 00.5 +1.0**
BJI S **S** **13 49 35.0 +6.0**
BJI pmax pmax
comp=Z,94nm,1.5s
BJI LR LR
comp=Z,160nm,20.8s
BJI LR LR
comp=Z,590nm,18.1s
BJI LR LR
comp=Z,1μm,24.0s
KMMI Kalianget 23.96 194 P **P** **13 45 20.9 +2.3**
comp=Z,3μmcomp=Z,245nm,1.1s
SUJ Sinuiju 24.00 9 P **P** **13 45 18.6 -0.2**
SUJ sP **pP** **13 45 29.9 +0.2**
SUJ S **S** **13 49 35.0 +2.1**
LZH Lanzhou 24.15 327 *e*P **P** **13 45 22.7 +2.3**
LZH sP sP 13 45 34.9 -1.2
LZH PcP **PcP** **13 49 02.4 +1.8**
LZH S **S** **13 49 38.5 +2.9**
LZH sS sS 13 49 48.0 -5.9
LZH pmax pmax
comp=Z,150nm,1.5s
LZH pmax pmax
comp=Z,160nm,4.5s
LZH LR LR
comp=Z,4μm,15.5s
LZH LR LR
comp=Z,3μm,16.8s
LZH LR LR
comp=Z,6μm,16.1s
PMBI Palembang 24.18 219 P **P** **13 45 23.2 +2.5**
comp=Z,402nm,1.2s
BKNI Bangkinang 24.33 231 P **P** **13 45 23.1 +1.1**
BKNI IAmb IAmb 13 45 36.4
comp=Z,94nm,0.8s
BKNI Bangkinang 24.33 231 P **P** **13 45 24.3 +2.3**
comp=Z,2μmcomp=Z,110nm,0.9s
TSI Tuntungan 24.37 241 P **P** **13 45 24.8 +2.4**
comp=Z,3μmcomp=Z,243nm,1.2s
INU Inuyama 24.43 36 P **P** **13 45 21.7 -1.1**
INU IAmb IAmb 13 45 36.7
comp=Z,134nm,1.1s
HHU Hamhung 24.44 15 P **P** **13 45 22.7 -0.1**
HHU pP **pP** **13 45 31.6 -2.1**
HHU S **S** **13 49 42.7 +2.8**
SRPI Serui, Papua 24.44 136 P **P** **13 45 23.1 +0.1**
comp=Z,203nm,0.8s
PSI Prapat 24.46 239 P **P** **13 45 25.3 +1.9**
comp=Z,13nm,0.8s,baz=31,slow=6.3,SNR=9.3
PSI PcP **PcP** **13 49 02.8 +1.2**
comp=Z,31nm,0.9s,baz=83,slow=1.8,SNR=10.0
PSI LR LR 13 54 43.7
comp=Z,2μm,19.6s,baz=42,slow=35
comp=Z,13nm,0.8s
GUMO Guam 24.50 93 P **P** **13 45 24.4 +0.8**
comp=Z,50nm,1.0s,baz=234,slow=8.7,SNR=2.3
GUMO LR LR 13 53 04.1
comp=Z,2μm,21.9s,baz=254,slow=32
comp=Z,50nm,1.0s
RPSI Rantau Prapat 24.52 238 P **P** **13 45 25.3 +1.5**
JHJ Hachijo jima 2 24.65 44 P **P** **13 45 24.6 -0.3**
comp=Z,136nm,0.9s,baz=204,slow=10.0,SNR=9.7
JHJ LR LR 13 54 26.3
comp=Z,762nm,21.1s,baz=249,slow=35
comp=Z,136nm,0.9s
JHJ2 Mitsune 24.67 44 P **P** **13 45 23.9 -1.1**
JHJ2 IAmb IAmb 13 45 26.3
comp=Z,310nm,1.1s
SRBI Singaraja 24.71 191 P **P** **13 45 27.8 +2.4**
comp=Z,3μmcomp=Z,287nm,1.1s
JGF Kuroka 24.81 36 P **P** **13 45 25.0 -1.3**
JGF IAmb IAmb 13 45 40.0
comp=Z,187nm,1.4s
JGF **PcP** **13 49 02.8 +0.8**
SDSI Sungai Dareh 24.90 228 P **P** **13 45 28.7 +1.5**
comp=Z,19nm,1.0s
MMRI Maumere 24.99 174 P **P** **13 45 28.9 +0.9**
MMRI Maumere 24.99 174 P **P** **13 45 28.7 +0.7**
comp=Z,3μmcomp=Z,426nm,0.8s
SMRI Semarang 25.01 202 P **P** **13 45 28.1 -0.1**
SMRI Semarang 25.01 202 P **P** **13 45 28.0 -0.2**
comp=Z,233nm,1.1s
KCSI Kotacane, Aceh 25.02 242 P **P** **13 45 30.4 +2.0**
comp=Z,30nm,1.5s
EDFI Ende, Flores 25.06 175 P **P** **13 45 29.4 +0.7**
comp=Z,775nmcomp=Z,2μmcomp=Z,252nm,0.8s
TWSI Taliwang, Sumb 25.11 186 P **P** **13 45 30.9 +1.8**
comp=Z,896nmcomp=Z,90nm,0.9s
PLAI Plampang 25.12 184 P **P** **13 45 30.1 +0.9**
comp=Z,4μmcomp=Z,400nm,0.8s
DNP Denpasar 25.29 190 P **P** **13 45 30.8 +0.1**
comp=Z,430nm,1.1s
JAGI Jajag, Banyuwa 25.29 193 P **P** **13 45 30.6 -0.1**
JAGI IAmb IAmb 13 45 36.2
comp=Z,196nm,1.4s
JAGI **PcP** **13 49 02.5 -0.7**
JAGI Jajag, Banyuwa 25.29 193 P **P** **13 45 31.4 +0.7**
comp=Z,2μmcomp=Z,92nm,1.1s
HHC Hu-ho-hao-te 25.36 346 *e*P **P** **13 45 32.9 +1.6**
HHC S **S** **13 50 01.4 +6.4**
HHC sS sS 13 50 10.7 -2.7
HHC pmax pmax
comp=Z,92nm,1.2s
HHC pmax pmax
comp=Z,770nm,5.1s
HHC LR LR
comp=Z,3μm,17.5s
HHC LR LR
comp=Z,2μm,15.6s
HHC LR LR
comp=Z,4μm,19.3s
IGBI Denpasar 25.44 190 P **P** **13 45 33.7 +1.6**
comp=Z,2μmcomp=Z,177nm,1.2s
PWJI Pagerwojo 25.47 198 P **P** **13 45 33.7 +1.4**
comp=Z,100nm,1.0s
BTO Baotou 25.54 343 *e*P **P** **13 45 34.7 +1.8**
BTO S **S** **13 50 06.2 +8.5**
BTO LR LR
comp=Z,7μm,20.2s
BTO LR LR
comp=Z,5μm,15.5s
SNY Shenyang 25.58 7 ⇑P **P** **13 45 32.9 -0.2**
SNY S **S** **13 49 56.9 -1.1**
SNY pmax pmax
comp=Z,97nm,0.9s
SNY pmax pmax
comp=Z,470nm,4.8s
SNY LR LR
comp=Z,2μm,17.4s
SNY LR LR
comp=Z,700nm,14.4s
SNY LR LR
comp=Z,2μm,18.9s
UGM Wanagama 25.78 201 P **P** **13 45 36.3 +1.1**
UGM Wanagama 25.78 201 P **P** **13 45 37.4 +2.2**
comp=Z,318nm,1.4s
PCJI Pacitan 25.83 200 P **P** **13 45 37.5 +1.9**
comp=Z,164nm,1.2s
BLSI Bandar Lampung 25.89 215 P **P** **13 45 37.9 +1.6**
comp=Z,102nm,0.8s
MASI Mara Aman, Be 25.94 223 P **P** **13 45 39.0 +2.3**
comp=Z,3μmcomp=Z,412nm,0.9s
LEM Lembang 25.96 208 P **P** **13 45 38.8 +1.8**
comp=Z,106nm,0.8s,baz=97,slow=3.4,SNR=11
LEM LR LR 13 57 31.5
comp=Z,821nm,18.8s,baz=22,slow=40
comp=Z,106nm,0.8s
MAJO Matsushiro 25.96 36 P **P** **13 45 33.6 -3.1**
MAJO **PcP** **13 49 04.8 +0.3**
MAJO Matsushiro 25.96 36 P **P** **13 45 33.6 -3.1**
MAJO 13 49 04.8
MAJO pmax pmax
comp=Z,98nm,1.9s
MJAR Matsushiro Arr 25.96 36 P **P** **13 45 34.5 -2.2**
comp=Z,4.6nm,0.9s,baz=222,slow=9.2,SNR=16
MJAR PcP **PcP** **13 49 05.5 +1.0**
comp=Z,18nm,1.0s,baz=210,slow=2.5,SNR=19
MJB9 Matsu-Tunnel 25.96 36 P **P** **13 45 34.7 -2.0**
SBJI Serang 26.06 212 P **P** **13 45 40.3 +2.5**
comp=Z,463nm,1.0s
SMPI Sanni 26.22 132 P **P** **13 45 38.6 -0.6**
comp=Z,55nm,1.2s
LWLI Liwa 26.28 217 P **P** **13 45 42.2 +2.4**
comp=Z,3μmcomp=Z,327nm,1.1s
LWLI pP **pP** **13 45 53.2 +2.4**
comp=Z,3μmcomp=Z,327nm,1.1s
SOEI Soe 26.37 170 P **P** **13 45 39.2 -1.4**
SOEI IAmb IAmb 13 45 58.3
comp=Z,123nm,0.9s
SOEI Soe 26.37 170 P **P** **13 45 39.6 -1.1**
comp=Z,1μmcomp=Z,133nm,1.1s
GSI Gunungsitoli 26.42 238 P **P** **13 45 42.2 +1.2**
GSI Gunungsitoli 26.42 238 P **P** **13 45 42.2 +1.2**
comp=Z,37nm,1.9s
KASI Kota Agung 26.44 216 P **P** **13 45 42.0 +0.9**
comp=Z,124nm,1.1s
CNJI Cibinong 26.61 209 P **P** **13 45 43.0 +0.3**
comp=Z,3μmcomp=Z,409nm,1.0s
BATI Baumata 26.72 171 P **P** **13 45 43.5 -0.2**
comp=Z,259nm,0.9s,baz=39,slow=1.2,SNR=52
BATI PcP **PcP** **13 49 09.0 +2.5**
comp=Z,100nm,0.7s,baz=284,slow=4.2,SNR=10
BATI LR LR 13 55 49.3
comp=Z,739nm,21.8s,baz=346,slow=35
BATI Baumata 26.72 171 P **P** **13 45 42.8 -0.9**
comp=Z,1μmcomp=Z,156nm,0.9s
SAUI Saumlaki 26.82 154 P **P** **13 45 43.2 -1.3**
SAUI Saumlaki 26.82 154 P **P** **13 45 44.0 -0.5**
comp=Z,423nm,1.2s
JSD Sado 27.08 34 **PcP** **13 49 07.5 +0.5**
BRDH Bariadhala 27.11 288 P **P** **13 45 48.8 +1.6**
comp=Z,80nm,0.3s,baz=63,slow=14,SNR=3.7
BRDH LR LR 13 57 33.2
comp=Z,2μm,20.1s,baz=62,slow=38
XLT XiLinHaoTe 27.59 354 *e*P **P** **13 45 50.1 -1.3**
XLT S **S** **13 50 30.0 0.0**
XLT sS sS 13 50 37.2 -11
XLT SS **SnSn** **13 51 49.2 +5.3**
XLT pmax pmax
comp=Z,48nm,1.2s
XLT pmax pmax
comp=Z,290nm,3.6s
XLT LR LR
comp=Z,91nm,16.5s
XLT LR LR
comp=Z,500nm,17.7s
XLT LR LR
comp=Z,1μm,16.7s
GENI Genyem 27.68 131 P **P** **13 45 50.2 -2.2**
comp=Z,64nm,1.0s
CN2 Changchun 27.77 9 *e*P **P** **13 45 51.1 -1.7**
CN2 pP pP 13 46 01.5 -2.3
CN2 S **S** **13 50 31.7 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,800nm,16.0s
CN2 LR LR
comp=Z,2μm,16.0s
MSHR Mys Shultsa 27.90 18 ⇓*e*P **P** **13 45 54.7 +0.7**
MSHR pmax pmax
comp=Z,35nm,1.3s
JMM Marumori 28.36 37 P **P** **13 45 56.8 -1.4**
JMM IAmb IAmb 13 46 15.5
comp=Z,89nm,1.1s
JMM PcP **PcP** **13 49 10.5 +0.3**
GTA Gaotai 28.75 327 ⇑P **P** **13 46 03.8 +2.0**
GTA pP pP 13 46 11.0 -1.7
GTA sP pwP 13 46 14.7 -0.6
GTA S **S** **13 50 48.8 +0.4**
GTA pmax pmax
comp=Z,19nm,0.9s
GTA pmax pmax
comp=Z,81nm,6.4s
GTA LR LR
comp=Z,2μm,18.7s
GTA LR LR
comp=Z,3μm,17.5s
GTA LR LR
comp=Z,4μm,18.3s
LSA Lhasa 29.30 302 P **P** **13 46 07.9 +0.7**
LSA Lhasa 29.30 302 P **P** **13 46 07.9 +0.7**
LSA pmax pmax
comp=Z,43nm,1.1s
MDJ Mudanjiang 29.36 15 P **P** **13 46 06.8 -0.3**
MDJ IAmb IAmb 13 46 08.8
comp=Z,135nm,1.5s
MDJ Mudanjiang 29.36 15 P **P** **13 46 07.2 +0.2**
MDJ S **S** **13 51 03.0 +5.3**
MDJ pmax pmax
comp=Z,67nm,1.3s
MDJ pmax pmax
comp=Z,430nm,3.5s
MDJ LR LR
comp=Z,1μm,18.8s
MDJ LR LR
comp=Z,860nm,15.9s
MDJ LR LR
comp=Z,2μm,18.9s
GOMU GeErMu 29.61 317 P **P** **13 46 11.7 +2.0**
GOMU S **S** **13 51 05.3 +2.8**
GOMU pmax pmax
comp=Z,170nm,4.4s
GOMU LR LR
comp=Z,2μm,15.7s
GOMU LR LR
comp=Z,2μm,17.7s
GOMU LR LR
comp=Z,3μm,18.5s
USA0B Ussuriysk Arra 29.63 18 P **P** **13 46 08.8 -0.5**
USA0B Ussuriysk Arra 29.63 18 P **P** **13 46 08.8 -0.5**
USA0B pmax pmax
comp=Z,43nm,1.1s
USRK Ussuriysk Ar. 29.63 18 P **P** **13 46 09.3 -0.1**
comp=Z,21nm,0.8s,baz=197,slow=8.2,SNR=28
USRK PcP **PcP** **13 49 13.2 0.0**
comp=Z,7.9nm,0.6s,baz=227,slow=3.1,SNR=14
USRK LR LR 13 58 33.4
comp=Z,1μm,19.5s,baz=183,slow=37
comp=Z,21nm,0.8s
USRK Ussuriysk Ar. 29.63 18 P **P** **13 46 09.1 -0.2**
USRK PcP **PcP** **13 49 12.6 -0.6**
BNX BinXian 29.98 11 ⇑P **P** **13 46 13.8 +1.4**
BNX pP **pP** **13 46 23.2 -0.3**
BNX sP **sP** **13 46 27.2 -1.2**
BNX S **S** **13 51 10.1 +2.8**
BNX sS **sS** **13 51 24.6 -1.2**
BNX pmax pmax
comp=Z,35nm,1.6s
BNX pmax pmax
comp=Z,320nm,5.9s
BNX LR LR
comp=Z,850nm,15.4s
BNX LR LR
comp=Z,610nm,15.3s
BNX LR LR
comp=Z,1μm,16.0s
JTM Tenmabayashi 30.57 33 **PcP** **13 49 15.6 -0.1**
MTN Manton Dam 31.18 158 P **P** **13 46 21.5 -1.8**
MTN IAmb IAmb 13 46 22.9
comp=Z,71nm,0.8s
TAPN Taplejung 31.50 296 *e*P **P** **13 46 27.9 +1.4**
TEY Ternei 31.92 23 ⇑*e*P **P** **13 46 28.8 -0.8**
TEY *e* 13 53 59.0
TEY pmax pmax
comp=Z,10.0nm,1.6s
RAMN Ramite 32.38 295 *e*P **P** **13 46 35.9 +1.7**
comp=Z,98nm,0.8s
JIRN Jiri 32.89 296 *e*P **P** **13 46 40.2 +1.4**
comp=Z,88nm,0.8s
ULN Ulaanbaatar 33.06 344 P **P** **13 46 40.7 +0.9**
ULN Ulaanbaatar 33.06 344 *c i*P **P** **13 46 40.7 +0.9**
ULN pmax pmax
comp=Z,75nm,1.7s
KNRA Kununurra 33.10 164 P **P** **13 46 39.5 -0.7**
KNRA IAmb IAmb 13 46 40.5
comp=Z,99nm,0.9s
SONM Songino Array 33.21 344 P **P** **13 46 41.9 +0.9**
comp=Z,35nm,0.7s,baz=161,slow=10.0,SNR=185
SONM PcP **PcP** **13 49 23.0 +0.1**
comp=Z,6.8nm,1.1s,baz=177,slow=4.7,SNR=4.1
SONM ScP **ScP** **13 53 03.2 -0.8**
comp=Z,1.1nm,0.9s,baz=174,slow=5.8,SNR=3.1
SONM PKiKP **PKiKP** **13 56 48.3 -0.4**
comp=Z,0.7nm,0.7s,baz=158,slow=1.4,SNR=4.6
SONM LR LR 14 01 01.5
comp=Z,2μm,18.6s,baz=160,slow=38
comp=Z,35nm,0.7s
SONM Songino Array 33.21 344 P **P** **13 46 42.1 +1.1**
SONM IAmb IAmb 13 46 43.1
comp=Z,40nm,0.7s
SONM Songino Array 33.21 344 P **P** **13 46 42.1 +1.1**
SONM pmax pmax
comp=Z,41nm,0.7s
GUN Gumba 33.21 296 *e*P **P** **13 46 43.2 +1.6**
comp=Z,144nm,0.8s
PKI Pulchoki 33.55 295 *e*P **P** **13 46 45.4 +0.9**
comp=Z,86nm,1.0s

PKIN Phulchoki 33.56 295 *e*P **P 13 46 45.4 +0.9**
comp=Z,45nm,0.7s
DMN Daman 33.82 295 *e*P **P 13 46 47.5 +0.8**
comp=Z,98nm,1.0s
KLR Kul'dur 34.21 14 LR LR 14 01 45.7
comp=Z,2μm,19.6s,baz=198,slow=38
KLR Kul'dur 34.21 14*c i*P **P 13 46 49.5 0.0**
KLR pmax pmax
comp=Z,93nm,1.7s
KLR MLR MLR
comp=Z,2μm,19.0s
GKN Gorkha 34.31 296 *e*P **P 13 46 51.5 +0.7**
comp=Z,89nm,0.9s
FITZ Fitzroy Crossi 34.77 170 P **P 13 46 54.0 -0.7**
comp=Z,37nm,1.0s,baz=3.2,slow=7.4,SNR=49
FITZ PcP **PcP 13 49 28.6 +1.0**
comp=Z,17nm,0.8s,baz=324,slow=2.8,SNR=6.6
FITZ Fitzroy Crossi 34.77 170 P **P 13 46 53.7 -0.9**
DANN Dangsing 35.14 296 *e*P **P 13 46 59.1 +0.9**
comp=Z,118nm,0.8s
PYUN Piuthan 35.75 295 *e*P **P 13 47 04.5 +1.1**
comp=Z,155nm,1.0s
CIT Chita 35.88 354 *e*P **P 13 47 04.7 +0.8**
CIT *e* 13 47 18.8
CIT pmax pmax
comp=Z,108nm,1.6s
YSS Yuzh-Sakhalins 35.99 27 *e*P **P 13 47 06.0 +1.1**
YSS *e* 13 48 41.9
YSS *e*S **S 13 52 40.4 -0.2**
YSS pmax pmax
comp=Z,40nm,1.3s
YSS MLR MLR
comp=Z,700nm,18.0s
ZAK Zakamensk 36.39 342 *e*P **P 13 47 08.7 +0.3**
ZAK pmax pmax
comp=Z,25nm,1.2s
MBWA Marble Bar 37.31 180 P **P 13 47 15.9 -0.5**
PMG Port Moresby 37.38 131 P **P 13 47 15.8 -1.2**
comp=Z,24nm,0.7s,baz=338,slow=11,SNR=10.0
PMG PcP **PcP 13 49 36.9 +1.4**
comp=Z,13nm,0.7s,baz=315,slow=6.9,SNR=3.4
PMG LR LR 14 05 27.3
comp=Z,445nm,18.9s,baz=290,slow=40
PMG Port Moresby 37.38 131 P **P 13 47 16.0 -1.1**
PMG Port Moresby 37.38 131 P **P 13 47 16.0 -1.1**
PMG pmax pmax
comp=Z,27nm,0.8s
PSA00 Pilbara Seismi 37.73 180 P **P 13 47 19.3 -0.6**
PSA00 IAmb IAmb 13 47 21.7
comp=Z,127nm,1.1s
PSA00 Pilbara Seismi 37.73 180 P **P 13 47 19.2 -0.6**
PSA00 IAmb IAmb 13 47 21.1
comp=Z,68nm,1.1s
ZEA Zeya 37.74 7 *e*P **P 13 47 19.8 +0.1**
ZEA *e* 13 47 35.1
ZEA *e* 13 48 54.6
ZEA *e*PPP PPP 13 49 14.7
ZEA *e*S **S 13 53 03.3 -3.8**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA pmax pmax
comp=N,100nm,3.8s
ZEA pmax pmax
comp=Z,100nm,5.7s
ZEA smax smax
comp=E,100nm,8.6s
ZEA MLR MLR
comp=N,500nm,15.0s
ZEA MLR MLR
comp=Z,800nm,16.0s
IRK Irkutsk 37.80 345 *e*P **P 13 47 20.5 +0.3**
IRK pmax pmax
comp=Z,84nm,1.9s
KRVT Keravat (AS076 38.04 120 LR LR 14 00 44.5
comp=Z,1μm,20.5s,baz=65,slow=32
COEN Coen 38.07 141 P **P 13 47 20.2 -2.6**
RABL Rabaul 38.09 120 P **P 13 47 21.9 -1.2**
RABL IAmb IAmb 13 47 25.6
comp=Z,90nm,0.8s
MOY Mondy 38.21 341 *e*P **P 13 47 24.9 +1.1**
MOY pmax pmax
comp=Z,69nm,1.7s
WMQ Urumqi 38.47 322 *e*P **P 13 47 29.4 +3.3**
WMQ sP sP 13 47 41.1 -0.9
WMQ PP **PnPn 13 48 57.0 +0.2**
WMQ PcP **PcP 13 49 42.7 +4.2**
WMQ S **S 13 53 27.3 +8.7**
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ pmax pmax
comp=Z,210nm,3.7s
WMQ LR LR
comp=Z,4μm,16.5s
WMQ LR LR
comp=Z,3μm,14.7s
WMQ LR LR
comp=Z,2μm,17.1s
WB0 Warramunga Arr 38.74 157 P **P 13 47 26.5 -1.9**
WB0 IAmb IAmb 13 47 27.9
comp=Z,143nm,0.8s
WRAB Tennant Creek 38.87 158 P **P 13 47 28.0 -1.6**
WRAB IAmb IAmb 13 47 29.2
comp=Z,162nm,0.8s
WRAB Tennant Creek 38.87 158*ce*P **P 13 47 28.2 -1.4**
WRAB pmax pmax
comp=Z,157nm,0.9s
WRA Warramunga Arr 38.88 158 P **P 13 47 28.2 -1.4**
comp=Z,142nm,0.8s,baz=338,slow=9.2,SNR=281
WRA PcP **PcP 13 49 40.8 +0.7**
comp=Z,12nm,0.7s,baz=340,slow=3.1,SNR=7.0
WRA S **S 13 53 18.8 -6.2**
comp=Z,4.0nm,1.0s,baz=339,slow=15,SNR=5.5
WRA Warramunga Arr 38.88 158 P **P 13 47 26.8 -2.8**
WRA Warramunga Arr 38.88 158 *i* P **P 13 47 26.2 -3.4**
WRA pmax pmax
comp=Z,143nm,0.8s
WB2 Warramunga Arr 38.88 158 P **P 13 47 28.0 -1.7**
WB2 IAmb IAmb 13 47 29.3
comp=Z,189nm,0.8s
WR0 Warramunga Arr 38.97 157 P **P 13 47 28.7 -1.7**
WR0 IAmb IAmb 13 47 30.0
comp=Z,109nm,0.8s
PALK Pallekele 39.13 261 P **P 13 47 32.9 +1.0**
comp=Z,11nm,0.8s,baz=154,slow=8.0,SNR=3.2
PALK LR LR 14 03 39.0
comp=Z,739nm,19.7s,baz=158,slow=36
comp=Z,11nm,0.8s
PALK Pallekele 39.13 261⇑*e*P **P 13 47 33.9 +2.0**
PALK pmax pmax
comp=Z,28nm,1.3s
GIRL Giralia 39.15 188 P **P 13 47 33.7 +1.9**
GIRL IAmb IAmb 13 48 36.8
comp=Z,390nm,1.4s
HYBB Hyderabad (bro 39.29 278 *e*P **P 13 47 35.3 +2.1**
HYBB *es*P **pP 13 47 38.5 -5.9**
HYBB *e*PcP **PcP 13 49 42.3 +0.7**
HYBB *e*S **S 13 53 36.7 +5.2**
HYBB *e*ScS **ScS 13 57 42.8 +3.8**
BOD Bodaibo 41.58 355 *e*P **P 13 47 51.9 +0.4**
BOD pmax pmax
comp=Z,34nm,1.6s
AS31 Alice Springs 42.17 160 P **P 13 47 55.8 -1.0**
ASAR Alice Springs 42.17 160 P **P 13 47 56.0 -0.9**
comp=Z,102nm,0.7s,baz=340,slow=6.9,SNR=1362
ASAR PcP **PcP 13 49 51.5 +0.9**
comp=Z,28nm,1.0s,baz=345,slow=3.1,SNR=9.9
ASAR S **S 13 54 11.2 -2.8**
comp=Z,3.6nm,1.0s,baz=351,slow=22,SNR=6.3
ASAR LR LR 14 09 21.4
comp=Z,366nm,19.0s,baz=349,slow=41
ASAR PKPPKP **P'P'df 14 19 58.8 +2.0**
comp=Z,1.0nm,0.9s,baz=134,slow=3.7,SNR=4.3
ASAR P4KPbc 14 25 58.4
comp=Z,0.5nm,0.8s,baz=337,slow=3.5,SNR=4.3
ASAR Alice Springs 42.17 160 P **P 13 47 55.9 -0.9**
ASAR Alice Springs 42.17 160 P **P 13 47 55.9 -0.9**
ZSN Zaisan 42.19 325 *e*P **P 13 47 55.8 -0.9**
ZSN Zaisan 42.19 325 *e*P **P 13 47 55.9 -0.9**
baz=324
DGZ Jazzator, Alta 42.23 329*ce*P **P 13 47 58.8 +1.6**
DGZ pmax pmax
comp=Z,13nm,0.9s
PCHI Peechi 42.46 268⇑*e*P **P 13 48 01.4 +2.1**
PCHI *e*S **S 13 54 13.1 -5.6**
MK31 Makanchi Array 43.29 323 P **P 13 48 06.7 +1.0**
MK31 Makanchi Array 43.29 323 P **P 13 48 06.7 +1.0**
MK31 pmax pmax
comp=Z,29nm,0.9s
MKAR Makanchi Array 43.29 323 P **P 13 48 06.7 +1.0**
comp=Z,28nm,0.8s,baz=130,slow=9.0,SNR=103
MKAR PcP **PcP 13 49 54.8 +0.7**
comp=Z,10nm,0.8s,baz=114,slow=5.9,SNR=5.0
MKAR ScP **ScP 13 53 41.6 -0.6**
comp=Z,1.1nm,0.8s,baz=142,slow=3.7,SNR=3.4
MKAR PKiKP **PKiKP 13 56 56.6 -0.4**
comp=Z,0.3nm,0.6s,baz=114,slow=0.5,SNR=4.7
MKAR LR LR 14 07 40.2
comp=Z,2μm,19.1s,baz=116,slow=38
comp=Z,28nm,0.8s
MKAR Makanchi Array 43.29 323 P **P 13 48 06.9 +1.2**
MKAR Makanchi Array 43.29 323 *i* P **P 13 48 07.1 +1.4**
MKAR pmax pmax
comp=Z,28nm,0.8s
SHLS Shalkode 43.31 316 *e*P **P 13 48 04.3 -1.7**
SHLS Shalkode 43.31 316 *e*P **P 13 48 04.4 -1.7**
baz=316
MAKZ Makanchi 43.48 322 P **P 13 48 08.4 +1.3**
MAKZ Makanchi 43.48 322 P **P 13 48 08.5 +1.3**
MAKZ pmax pmax
comp=Z,19nm,0.7s
KPKS Kokpek 43.96 317 *e*P **P 13 48 11.5 +0.3**
KPKS Kokpek 43.96 317 *e*P **P 13 48 11.5 +0.3**
baz=316
KSH Kashi 44.39 310 P **P 13 48 18.5 +3.8**
KSH sP sP 13 48 30.9 +0.3
KSH pmax pmax
comp=Z,22nm,0.9s
KSH LR LR
comp=Z,2μm,18.9s
CTA Charters Tower 44.68 143 LR LR 14 07 33.7
comp=Z,933nm,21.7s,baz=325,slow=37
CTAO Charters Tower 44.68 143 P **P 13 48 16.4 -0.7**
CTAO Charters Tower 44.68 143 P **P 13 48 16.4 -0.7**
CTAO pmax pmax
comp=Z,28nm,1.0s
MDOK Medeo 44.92 315 *e*P **P 13 48 19.4 +0.4**
MDOK Medeo 44.92 315 *e*P **P 13 48 19.4 +0.4**
baz=315
TNSS Tian-Shan 44.94 315 *e*P **P 13 48 19.7 +0.3**
TNSS Tian-Shan 44.94 315 *e*P **P 13 48 19.8 +0.3**
baz=315
SKR Severo-Kuril's 44.97 32 *e*P P 13 48 11.5 -7.5
SKR pmax pmax
comp=Z,100nm,3.7s
SKR MLR MLR
comp=Z,300nm,16.0s
MORW Morawa 45.32 184 P **P 13 48 21.9 -0.1**
MORW IAmb IAmb 13 48 24.3
comp=Z,55nm,0.9s
KUU Kurty 45.69 316 *e*P **P 13 48 25.7 +0.9**
KUU pmax pmax
comp=Z,25nm,0.6s
KUU Kurty 45.69 316 *e*P **P 13 48 25.7 +0.9**
comp=Z,25nm,0.6s,baz=316
YAK Yakutsk 46.14 7 LR LR 14 09 57.4
comp=Z,886nm,18.2s,baz=264,slow=39
YAK Yakutsk 46.14 7 P **P 13 48 26.7 -1.3**
YAK IAmb IAmb 13 48 28.5
comp=Z,45nm,0.8s
YAK Yakutsk 46.14 7*c i*P **P 13 48 27.2 -0.8**
YAK *e**PP **sP 13 48 46.6 +2.2**
YAK *e* 13 50 03.1
YAK *e* 13 50 16.4
YAK *e*PPP PPP 13 50 58.3
YAK *e*S **S 13 55 07.3 -3.5**
YAK *e* 13 58 14.9
YAK *e*SS **SS 13 58 32.7 -3.6**
YAK *e*SSS SSS 13 59 31.5
YAK pmax pmax
comp=Z,55nm,1.0s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=Z,110nm,2.9s
YAK pmax pmax
comp=N,47nm,2.0s
YAK pmax pmax
comp=E,38nm,2.2s
YAK smax smax
comp=E,63nm,2.5s
YAK smax smax
comp=N,37nm,2.8s
YAK MLR MLR
comp=Z,863nm,18.0s
YAK MLR MLR
comp=N,420nm,14.0s
YAK MLR MLR
comp=E,186nm,17.0s
ZAA0 Zalesovo Array 46.22 332 P **P 13 48 28.8 -0.1**
ZALV Zalesovo Beam 46.22 332 P **P 13 48 28.9 0.0**
comp=E,14nm,0.8s,baz=121,slow=7.1,SNR=50
ZALV PcP **PcP 13 50 03.2 -0.7**
comp=E,3.5nm,0.5s,baz=102,slow=4.3,SNR=5.6
ZALV LR LR 14 08 40.6
comp=E,1μm,19.1s,baz=132,slow=37
comp=E,14nm,0.8s
ZALV Zalesovo Beam 46.22 332 P **P 13 48 28.7 -0.1**
ZALV Zalesovo Beam 46.22 332 *i* P **P 13 48 29.1 +0.2**
ZALV pmax pmax
comp=Z,14nm,0.8s
AAK Ala-Archa 46.48 314 LR LR 14 09 36.9
comp=Z,2μm,21.3s,baz=96,slow=38
AAK Ala-Archa 46.48 314*de*P **P 13 48 33.3 +2.0**
AAK pmax pmax
comp=Z,6.0nm,1.0s
PEA0B Petropavlovsk- 47.20 30 P **P 13 48 35.8 -0.7**
PEA0B IAmb IAmb 13 48 37.8
comp=Z,102nm,1.2s
PEA0B Petropavlovsk- 47.20 30 P **P 13 48 35.8 -0.7**
PEA0B pmax pmax
comp=Z,102nm,1.2s
PETK Petropavlovsk- 47.20 30 P **P 13 48 35.9 -0.6**
comp=Z,30nm,1.0s,baz=202,slow=7.7,SNR=16
PETK PcP **PcP 13 50 07.5 +0.1**
comp=Z,14nm,0.8s,baz=204,slow=3.3,SNR=4.4
PETK LR LR 14 09 06.4
comp=Z,501nm,19.4s,baz=230,slow=37
comp=Z,30nm,1.0s
PETK Petropavlovsk- 47.20 30 P **P 13 48 35.8 -0.7**
HNR Honiara 47.41 120 LR LR 14 05 45.2
comp=Z,16μm,21.4s,baz=286,slow=32
KURK Kurchatov 47.41 325 P **P 13 48 38.9 +0.7**
KURK IAmb IAmb 13 48 40.3
comp=Z,91nm,0.8s
KURK Kurchatov 47.41 325*ce*P **P 13 48 39.2 +1.0**
KURK pmax pmax
comp=Z,87nm,0.7s
KURBB Kurchatov Arra 47.41 325 LR LR 14 09 29.5
comp=Z,692nm,19.5s,baz=101,slow=37
FORT Forrest 47.59 170 P **P 13 48 39.0 -0.7**
FORT IAmb IAmb 13 48 40.3
comp=Z,81nm,0.7s
PET Petropavlovsk 47.62 31 P **P 13 48 39.0 -0.7**
PET IAmb IAmb 13 48 41.0
comp=Z,53nm,1.0s
PET Petropavlovsk 47.62 31 *e*P **P 13 48 39.7 0.0**
PET *e* 13 50 08.6
PET *e*S **S 13 55 33.4 +1.2**
PET pmax pmax
comp=Z,75nm,1.1s
PET pmax pmax
comp=Z,200nm,17.4s
PET MLR MLR
comp=Z,600nm,20.0s
PET MLR MLR
comp=Z,600nm,18.0s
BTLS Baital 47.64 317 *e*P **P 13 48 40.4 +0.3**
BTLS Baital 47.64 317 *e*P **P 13 48 40.5 +0.3**
baz=316
BTK Batken 48.35 309 P **P 13 48 46.7 +0.9**
BTK IAmb IAmb 13 49 01.0
comp=Z,62nm,1.4s
BTK Batken 48.35 309 P **P 13 48 46.7 +0.9**
BTK pmax pmax
comp=Z,62nm,1.5s
GAR Garm 48.47 308 P **P 13 48 47.8 +1.0**
GAR IAmb IAmb 13 49 01.7
comp=Z,155nm,1.3s
KBL Kabul 48.62 302 P **P 13 48 48.7 +0.6**
KBL IAmb IAmb 13 49 03.1
comp=Z,56nm,1.1s
KBL Kabul 48.62 302 P **P 13 48 48.7 +0.6**
KBL pmax pmax
comp=Z,56nm,1.1s
MA2 Magadan 48.73 20 LR LR 14 09 30.1
comp=Z,815nm,21.3s,baz=211,slow=36
MA2 Magadan 48.73 20 P **P 13 48 48.2 0.0**
MA2 IAmb IAmb 13 48 49.7
comp=Z,102nm,0.9s
MA2 Magadan 48.73 20*ce*P **P 13 48 48.6 +0.4**
MA2 pmax pmax
comp=Z,149nm,1.0s
MA2 MLR MLR
comp=Z,885nm,20.0s
DZA Taraz 48.76 313 *e*P **P 13 48 48.0 -0.8**
DZA Taraz 48.76 313 *e*P **P 13 48 48.0 -0.8**
baz=313
NWAO Narrogin (SRO) 49.09 183 P **P 13 48 51.2 -0.1**
comp=Z,28nm,0.8s,baz=211,slow=5.9,SNR=12
NWAO PcP **PcP 13 50 15.4 +0.9**
comp=Z,17nm,0.9s,baz=71,slow=1.3,SNR=2.3
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 49.09 183 P **P 13 48 51.2 -0.1**
NWAO IAmb IAmb 13 48 52.0
comp=Z,39nm,0.8s
CHGR Chuyangaron 49.27 307 P **P 13 48 53.8 +0.9**
CHGR IAmb IAmb 13 49 08.5
comp=Z,50nm,0.9s
CHGR Chuyangaron 49.27 307 P **P 13 48 53.8 +0.9**
CHGR pmax pmax
comp=Z,51nm,0.9s
KK31 Karatay Array 49.40 313 P **P 13 48 54.5 +0.8**
KK31 Karatay Array 49.40 313 *i* P **P 13 48 54.5 +0.8**
KKAR Karatay Array 49.40 313 P **P 13 48 54.1 +0.4**
KKAR Karatay Array 49.40 313 P **P 13 48 54.3 +0.6**
KKAR Karatay Array 49.40 313 P **P 13 48 54.3 +0.6**
KKAR pmax pmax
comp=Z,21nm,1.0s
OTUK Ortayu 49.95 320 P **P 13 48 57.6 -0.2**
BRZS Berezniki 50.44 322 *e*P **P 13 49 01.2 -0.2**
BRZS pmax pmax
comp=Z,11nm,0.7s
BRZS Berezniki 50.44 322 *e*P **P 13 49 01.3 -0.2**
comp=Z,10nm,0.7s,baz=322
BBOO Buckleboo 51.37 162 P **P 13 49 07.4 -1.2**
BBOO IAmb IAmb 13 49 08.7
comp=Z,88nm,0.8s
EIDS Eidsvold 51.57 143 P **P 13 49 08.3 -1.9**
SEY Seymchan 51.77 18*ce*P **P 13 49 12.2 +1.0**
SEY pmax pmax
comp=Z,63nm,1.0s
SEY MLR MLR
comp=Z,518nm,21.0s
STKA Stephens Creek 52.40 156 P **P 13 49 15.7 -0.5**
comp=Z,89nm,0.7s,baz=333,slow=7.7,SNR=124
STKA LR LR 14 14 10.2
comp=Z,341nm,19.9s,baz=337,slow=39
comp=Z,89nm,0.7s
STKA Stephens Creek 52.40 156 P **P 13 49 15.5 -0.8**
BVA0 Borovoye Array 53.00 325 *i* P **P 13 49 21.1 +0.6**
BVAR Borovoye Array 53.00 325 LR LR 14 13 18.0
comp=Z,1μm,18.3s,baz=127,slow=38
BVAR PKPPKP 14 19 43.2
comp=Z,0.3nm,0.6s,baz=253,slow=4.4,SNR=4.4
BRVK Borovoye 53.07 325 P **P 13 49 21.6 +0.6**
BRVK Borovoye 53.07 325*c i*P **P 13 49 21.9 +0.9**
BRVK pmax pmax
comp=Z,45nm,1.0s
HRA Herat 54.19 301 P **P 13 49 29.7 -0.1**
TIXI Tiksi 55.52 4 LR LR 14 16 08.0
comp=Z,1μm,19.1s,baz=181,slow=39
TIXI Tiksi 55.52 4 P **P 13 49 37.3 -1.2**
TIXI IAmb IAmb 13 49 39.0
comp=Z,53nm,1.1s
TIXI Tiksi 55.52 4*ce*P **P 13 49 37.5 -1.0**
TIXI pmax pmax
comp=Z,41nm,1.0s
TIXI MLR MLR
comp=Z,1μm,19.0s
ARMA Armidale 55.80 146 P **P 13 49 40.6 -0.6**
SHEM Shemya Is, Ala 55.80 37 LR LR 14 12 47.1
comp=Z,192nm,21.4s,baz=281,slow=35
SMY Shemya 55.80 37 P **P 13 49 41.1 +0.3**
SMY Shemya 55.80 37 P **P 13 49 41.1 +0.3**
SMY pmax pmax
comp=Z,179nm,1.1s
NRIK Noril'sk 56.58 347 P **P 13 49 46.4 +0.2**
comp=Z,45nm,0.7s,baz=133,slow=7.0,SNR=51
NRIK LR LR 14 15 50.8
comp=Z,2μm,18.2s,baz=150,slow=38
comp=Z,45nm,0.7s
NRIK Noril'sk 56.58 347 P **P 13 49 45.5 -0.6**
NRIK IAmb IAmb 13 49 47.4
comp=Z,54nm,0.8s
NRIK Noril'sk 56.58 347*c i*P **P 13 49 46.3 +0.2**
NRIK pmax pmax
comp=Z,47nm,0.9s
GEYT Alibeck 57.77 305 P **P 13 49 56.8 +1.6**
comp=Z,23nm,0.8s,baz=132,slow=2.2,SNR=46
GEYT PcP **PcP 13 50 48.6 +1.0**
comp=Z,10nm,0.8s,baz=29,slow=3.3,SNR=1.7
GEYT LR LR 14 17 15.3
comp=Z,1μm,20.6s,baz=70,slow=38
comp=Z,23nm,0.8s
GEYT Alibeck 57.77 305 P **P 13 49 55.6 +0.5**
GEYT IAmb IAmb 13 50 11.0
comp=Z,121nm,1.6s
GYA0 ALIBECK ARRAY 57.77 305 P **P 13 49 56.4 +1.3**
GYA0 pmax pmax
comp=Z,128nm,1.6s
GYA0B ALIBECK ARRAY 57.77 305 P **P 13 49 56.4 +1.2**
GYA0B IAmb IAmb 13 50 10.9
comp=Z,128nm,1.6s
AB31 Akbulak array 58.06 318 *i* P **P 13 49 57.3 +0.4**
ABKAR Akbulak array 58.06 318 P **P 13 49 57.6 +0.7**
ABKAR Akbulak array 58.06 318 P **P 13 49 57.6 +0.7**
ABKAR IAmb IAmb 13 49 58.8
comp=Z,29nm,0.8s
CAN Canberra 58.48 152 P **P 13 49 59.5 -0.5**
CAN IAmb IAmb 13 50 01.1
comp=Z,114nm,1.7s
CAN Canberra 58.48 152 P **P 13 49 59.5 -0.5**
CAN pmax pmax
comp=Z,114nm,1.7s
AMKA Amchitka 58.50 39 P **P 13 49 59.4 -0.5**
MIDW Midway 58.88 67 P **P 13 50 01.7 -1.3**
MIDW IAmb IAmb 13 50 03.6
comp=Z,93nm,0.9s
TOO Toolangi 58.92 156 P **P 13 50 03.0 0.0**
TOO IAmb IAmb 13 50 04.3
comp=Z,74nm,1.1s
TOO Toolangi 58.92 156 P **P 13 50 03.0 0.0**
TOO pmax pmax
comp=Z,74nm,1.1s
BILL Bilibino 59.48 18*d i*P **P 13 50 06.6 +0.1**
BILL *i* *PP **pP 13 50 18.0 -0.4**
BILL *e* 13 50 54.4
BILL S S 13 58 29.0 +16
BILL *e*SSS SSS 14 04 41.4
BILL pmax pmax
comp=Z,72nm,1.3s
BILL MLR MLR
comp=Z,281nm,20.0s
AKTO Aktyubinsk 59.53 319 LR LR 14 17 35.7
comp=Z,2μm,18.9s,baz=101,slow=38
AKTO PKP2bc 14 19 47.0
comp=Z,2.0nm,1.0s,baz=15,slow=1.2,SNR=7.4
AKTO PKP2ab 14 19 58.4
comp=Z,0.3nm,0.3s,baz=273,slow=4.5,SNR=4.2
AKTO Aktyubinsk 59.53 319 P **P 13 50 07.5 +0.4**
UOSS Minazif 59.53 290 P **P 13 50 08.3 +0.7**
UOSS IAmb IAmb 13 51 21.1
comp=Z,77nm,1.9s
DZM Mont Dzumac 59.67 128 *e*S **S 13 58 19.3 +2.8**
comp=Z,285nm,30.6s
DZM *e*LR LR 14 07 41.5
comp=Z,623nm,23.5s
DZM Mont Dzumac 59.67 128 LR LR 14 12 39.5
comp=Z,287nm,21.6s,baz=308,slow=33
DZM Mont Dzumac 59.67 128 P **P 13 50 07.5 -1.1**
ARU Arti 60.60 326 LR LR 14 17 59.5
comp=Z,1μm,19.5s,baz=100,slow=38
ARU Arti 60.60 326 P **P 13 50 14.2 -0.1**
ARU IAmb IAmb 13 50 15.4
comp=Z,35nm,0.7s
ARU Arti 60.60 326*c i*P **P 13 50 14.4 +0.1**

ARU 13 50 53.2
ARU 13 52 24.5
ARU S **S** **13 58 29.3 +2.0**
ARU SS **SS** **14 02 24.2 -1.7**
ARU pmax pmax
comp=Z,32nm,0.7s
ARU MLR MLR
comp=Z,1μm,19.0s
KIWB Kanaga Island 60.76 39 P **P** **13 50 14.7 -0.8**
ADK Adak 61.05 39 P **P** **13 50 16.9 -0.6**
ADK IAmb IAmb 13 50 18.1
comp=Z,92nm,1.1s
ADK Adak 61.05 39 P **P** **13 50 16.9 -0.6**
ADK pmax pmax
comp=Z,92nm,1.1s
SPIA Saint Paul Isl 65.60 34 P **P** **13 50 47.5 +0.1**
baz=262
KIRV Kirov 65.87 327 LR LR 14 21 36.1
comp=Z,1μm,20.0s,baz=98,slow=38
KIRV Kirov 65.87 327 *ce*P **P** **13 50 49.1 0.0**
NIKH Nikolski High 65.94 39 P **P** **13 50 48.7 -1.1**
NIKH Nikolski High 65.94 39 P **P** **13 50 49.9 +0.2**
baz=265
GAMB Gambell 66.01 27 P **P** **13 50 50.9 +0.9**
GAMB Gambell 66.01 27 P **P** **13 50 50.8 +0.8**
baz=258
MAK Makhachkala 66.02 310 *e*P **P** **13 50 49.2 -1.3**
MAK *e* 13 53 21.3
MAK *e*S **S** **13 59 35.0 -0.4**
MAK *e*SS **SS** **14 03 53.1 +2.0**
MAK pmax pmax
comp=Z,203nm,1.0s
MAK MLR MLR
comp=Z,741nm,19.0s
BELG Belogornoye 66.23 320 LR LR 14 21 46.8
comp=Z,555nm,19.4s,baz=114,slow=38
BELG Belogornoye 66.23 320 *d i*P **P** **13 50 52.0 +0.4**
BELG pmax pmax
comp=Z,11nm,1.0s
MSVF Nonsavu 66.76 118 LR LR 14 16 50.2
comp=Z,516nm,19.8s,baz=305,slow=33
MSVF Nonsavu 66.76 118 P **P** **13 50 55.5 -0.1**
MSVF Nonsavu 66.76 118 P **P** **13 50 55.5 -0.1**
MSVF pmax pmax
comp=Z,22nm,1.0s
GROC Groznyy 67.27 310 *e*P **P** **13 50 59.1 +0.7**
GROC *e* 13 51 27.8
GROC pmax pmax
comp=Z,130nm,1.2s
UNV Unalaska Valle 67.41 38 P **P** **13 50 57.9 -1.1**
UNV IAmb IAmb 13 51 13.9
comp=Z,43nm,0.9s
UNV Unalaska Valle 67.41 38 P **P** **13 50 59.2 +0.1**
baz=267
AKUT Akutan 67.85 38 P **P** **13 51 01.3 -0.5**
TNA Tin City 67.94 25 P **P** **13 51 02.5 +0.3**
baz=261
PRGR Permogore 68.13 330 *e*P **P** **13 51 02.0 -1.5**
PRGR *e* 13 51 28.4
PRGR pmax pmax
comp=Z,27nm,0.8s
GNI Garni 68.19 307 LR LR 14 25 46.8
comp=Z,139nm,20.1s,baz=72,slow=40
GNI Garni 68.19 307 P **P** **13 51 04.9 +0.4**
GNI IAmb IAmb 13 51 20.5
comp=Z,83nm,1.2s
GNI Garni 68.19 307 P **P** **13 51 04.9 +0.4**
GNI pmax pmax
comp=Z,83nm,1.3s
ZEI Tsey 68.68 310 *e*P **P** **13 51 07.5 -0.1**
ZEI pmax pmax
comp=Z,60nm,1.4s
ANM Nome 68.88 27 P **P** **13 51 08.6 +0.5**
baz=264
ONI Oni 69.02 310 P **P** **13 51 10.9 +1.4**
ONI IAmb IAmb 13 51 12.7
comp=Z,35nm,0.9s
ONI Oni 69.02 310 P **P** **13 51 10.9 +1.4**
ONI pmax pmax
comp=Z,35nm,0.9s
GOF Gofitskoye 69.19 312⇑ *e*P **P** **13 51 07.2 -3.2**
FALS False Pass 69.25 37 P **P** **13 51 10.8 +0.3**
baz=269
KBZ Khabaz 69.36 311 P **P** **13 51 12.3 +0.8**
comp=Z,26nm,0.9s,baz=164,slow=7.2,SNR=25
KBZ PKP2bc 14 19 20.6
comp=Z,1.2nm,0.6s,baz=235,slow=4.5,SNR=5.4
KBZ LR LR 14 25 46.5
comp=Z,739nm,18.6s,baz=76,slow=40
comp=Z,26nm,0.9s
RAYN Ar Rayn 69.40 289 P **P** **13 51 12.9 +0.7**
RAYN IAmb IAmb 13 51 27.4
comp=Z,89nm,1.1s
RAYN Ar Rayn 69.40 289 P **P** **13 51 12.9 +0.7**
RAYN pmax pmax
comp=Z,89nm,1.2s
KIV Kislovodsk 69.50 311 ⇓P **P** **13 51 13.9 +1.4**
KIV Kislovodsk 69.50 311 P **P** **13 51 13.3 +0.9**
KIV IAmb IAmb 13 51 14.7
comp=Z,48nm,0.8s
KIV Kislovodsk 69.50 311 *e*P **P** **13 51 13.4 +0.9**
KIV *e*S **S** **14 00 19.9 +2.6**
KIV pmax pmax
comp=Z,67nm,1.1s
KIV pmax pmax
comp=Z,16nm,3.8s
KIV MLR MLR
comp=Z,519nm,17.0s
NEY Neytrino 69.52 311⇑ *e*P **P** **13 51 12.7 0.0**
NEY pmax pmax
comp=Z,4.0nm,0.8s
GEVA Gevas 69.63 305 P **P** **13 51 14.0 +0.5**
GEVA IAmb IAmb 13 51 28.2
comp=Z,38nm,1.0s
VRH Novokhopyorsk 69.87 319 *e*P **P** **13 51 13.8 -0.7**
VRH pmax pmax
comp=Z,40nm,0.9s
RDOG Red Dog Mine 70.22 23 P **P** **13 51 17.1 +0.8**
baz=265
GURO Guroymak-BITLI 70.41 306 P **P** **13 51 19.6 +1.3**
GURO IAmb IAmb 13 51 21.3
comp=Z,43nm,0.9s
SDPT Sand Point 70.94 37 P **P** **13 51 19.9 -1.0**
SDPT Sand Point 70.94 37 P **P** **13 51 22.0 +1.2**
baz=271
KLMR Klimovskoe 71.04 329 *e*P **P** **13 51 18.3 -3.1**
KLMR pmax pmax
comp=Z,56nm,1.0s
KLMR MLR MLR
comp=Z,1μm,17.0s
KLMR Klimovskoe 71.04 329 *e*P **P** **13 51 18.3 -3.1**
KLMR AMP 13 51 22.2
comp=Z,56nm,1.0s
KLMR LQ LQ 14 17 13.5
KLMR LQ LQ 14 17 13.5
KLMR LR LR 14 19 24.1
KLMR AMP 14 24 53.8
comp=Z,1μm,17.1s
KLMR LRM MLR 14 25 03.0
VORR Voronezh 71.42 320 *e*P **P** **13 51 23.8 -0.1**
VORR pmax pmax
comp=Z,50nm,0.5s
CHNA Chernabura Isl 71.46 37 P **P** **13 51 24.9 +0.8**
baz=272
CNBA Chernabura Isl 71.46 37 P **P** **13 51 23.1 -1.0**
CNBA IAmb IAmb 13 51 25.6
comp=Z,112nm,1.1s
VSR Storozhevoye 71.47 319 *e*P **P** **13 51 23.2 -1.1**
VSR pmax pmax
comp=Z,20nm,0.7s
MARD Mardin 71.53 304 P **P** **13 51 26.4 +1.4**
MARD IAmb IAmb 13 51 27.4
comp=Z,40nm,0.8s
LPSR Galich'ya Gora 71.55 321 *e*P **P** **13 51 24.4 -0.3**
LPSR pmax pmax
comp=Z,50nm,1.0s
SOC Sochi 71.67 311 *e*P **P** **13 51 24.9 -0.7**
SOC *e* 13 54 04.5
SOC *e*PPP PPP 13 55 48.4
SOC *e*S **S** **14 00 44.1 +1.8**
SOC *e*SS **SS** **14 05 20.3 +2.1**
SOC pmax pmax
comp=Z,30nm,0.7s
SOC MLR MLR
comp=Z,718nm,19.0s

N16K Nishlik Lake 71.74 31 P **P** **13 51 27.1 +1.3**
baz=271,SNR=28
CHGN Chignik 72.06 35 P **P** **13 51 27.4 -0.3**
O16K Kokwok River B 72.11 32 P **P** **13 51 29.0 +1.1**
baz=272,SNR=25
MOS Moscow 72.15 324 *e*P **P** **13 51 26.3 -1.9**
MOS *e* 13 51 43.5
MOS *e* 13 54 05.2
MOS *e*S **S** **14 00 43.7 -3.7**
MOS *e* 14 01 16.8
MOS pmax pmax
comp=Z,50nm,0.8s
MOS MLR MLR
comp=Z,900nm,19.0s
P16K Nushagak River 72.18 33 P **P** **13 51 29.6 +1.3**
baz=272
R16K Pilot Point 72.46 34 P **P** **13 51 31.2 +1.2**
baz=273
GCSA Galena City Sc 72.53 27 P **P** **13 51 31.6 +1.3**
baz=271,SNR=37
O17K Koliganek Bris 72.61 32 P **P** **13 51 31.7 +0.9**
baz=273,SNR=14
OBN Obninsk 72.79 323 *c i*P **P** **13 51 31.9 -0.1**
OBN *e* 13 51 44.2
OBN *i*S **S** **14 00 56.6 +1.9**
OBN *i*SS **SS** **14 05 44.2 +9.5**
OBN SSS SSS 14 08 54.0
OBN pmax pmax
comp=Z,36nm,1.0s
OBN MLR MLR
comp=Z,798nm,19.0s
Q16K King Salmon 72.89 33 P **P** **13 51 32.7 +0.2**
baz=273
RER Riviere de l'E 72.94 241 P **P** **13 51 35.1 +1.5**
RER IAmb IAmb 13 51 36.6
comp=Z,115nm,1.0s
P17K Kvichak River 72.97 32 P **P** **13 51 34.1 +1.1**
baz=273,SNR=53
TTA Tatalina 72.98 28 P **P** **13 51 34.1 +1.0**
TTA Tatalina 72.98 28 P **P** **13 51 34.1 +1.0**
TTA pmax pmax
comp=Z,130nm,1.0s
TTA Tatalina 72.98 28 P **P** **13 51 34.5 +1.4**
baz=273,SNR=22
LVZ Lovozero 73.07 337 P **P** **13 51 33.5 -0.1**
LVZ IAmb IAmb 13 53 46.0
comp=Z,199nm,1.9s
LVZ Lovozero 73.07 337 P **P** **13 51 33.5 -0.1**
LVZ pmax pmax
comp=Z,199nm,1.9s
R17K Ugashik Creek 73.10 34 P **P** **13 51 33.6 -0.2**
baz=274
N18K Kilae Creek 73.16 31 P **P** **13 51 35.1 +1.0**
N18K IAmb IAmb 13 51 36.8
comp=Z,117nm,1.1s
N18K Kilae Creek 73.16 31 P **P** **13 51 35.6 +1.4**
baz=273,SNR=13
ANN Anapa 73.18 313 *e*P **P** **13 51 33.7 -0.8**
ANN *e**PP **pP** **13 51 46.7 +0.1**
ANN *e*S **S** **14 01 01.0 +1.5**
ANN pmax pmax
comp=Z,46nm,1.2s
ANN MLR MLR
comp=Z,561nm,16.0s
SVW2 Sparrevohn 73.28 30 P **P** **13 51 36.2 +1.4**
SVW2 IAmb IAmb 13 51 37.5
comp=Z,102nm,0.9s
Q17K Contact Creek 73.32 33 P **P** **13 51 34.6 -0.6**
baz=274,SNR=17
O18K Koktuh Hills 73.55 32 P **P** **13 51 37.8 +1.3**
O18K Koktuh Hills 73.55 32 P **P** **13 51 37.6 +1.1**
baz=274,SNR=36
L19K White Mountain 73.56 29 P **P** **13 51 37.9 +1.3**
L19K White Mountain 73.56 29 P **P** **13 51 37.8 +1.3**
baz=274,SNR=52
APA Apatity 73.56 336 ⇓*i*P **P** **13 51 35.0 -1.4**
APA *i* 13 51 55.9
APA pmax pmax
comp=Z,36nm,0.8s
APA MLR MLR
comp=Z,3μm,15.0s
P18K Big Mountain, 73.58 32 P **P** **13 51 37.0 +0.3**
P18K Big Mountain, 73.58 32 P **P** **13 51 37.3 +0.6**
baz=274,SNR=10
CHIR Chirikof Islan 73.66 36 P **P** **13 51 37.5 +0.3**
baz=275
J20K Nowinta River 73.74 27 P **P** **13 51 38.9 +1.4**
J20K Nowinta River 73.74 27 P **P** **13 51 39.3 +1.8**
baz=274,SNR=82
Q18K Katmai Hardscr 73.75 33 P **P** **13 51 37.3 -0.4**
baz=275,SNR=14
IMAR Indian Mountai 73.79 25 P **P** **13 51 38.6 +0.9**
M19K Big River Lodg 73.80 29 P **P** **13 51 39.5 +1.6**
baz=274
F21K Alatna River 73.81 24 P **P** **13 51 38.7 +0.8**
baz=274,SNR=15
K20K Telida 73.83 28 P **P** **13 51 39.5 +1.4**
K20K Telida 73.83 28 P **P** **13 51 39.8 +1.7**
baz=274,SNR=38
N19K Bonanza Creek 73.84 31 P **P** **13 51 39.3 +1.0**
N19K Bonanza Creek 73.84 31 P **P** **13 51 39.7 +1.4**
baz=275,SNR=31
G21K Allakaket 73.85 25 P **P** **13 51 39.5 +1.4**
baz=274,SNR=85
O19K Port Alsworth 73.97 31 P **P** **13 51 39.1 +0.2**
O19K Port Alsworth 73.97 31 P **P** **13 51 40.0 +1.1**
baz=275,SNR=22
L20K Farewell, AK 73.99 29 P **P** **13 51 40.5 +1.5**
baz=275,SNR=20
AFI Afiamalu 74.12 110 LR LR 14 21 35.6
comp=Z,256nm,18.4s,baz=295,slow=34
H21K Melozitna Rive 74.20 25 P **P** **13 51 41.2 +1.1**
H21K Melozitna Rive 74.20 25 P **P** **13 51 41.6 +1.5**
baz=275,SNR=133
F22K John River 74.30 24 P **P** **13 51 42.2 +1.5**
baz=275,SNR=29
ATD Arta Tunnel 74.32 278 LR LR 14 25 57.1
comp=Z,92nm,18.4s,baz=31,slow=37
E22K Anaktuvuk Pass 74.38 23 P **P** **13 51 42.4 +1.2**
baz=275
SII Sitkinak Islan 74.39 35 P **P** **13 51 41.8 +0.4**
baz=276
M20K Styx River 74.39 29 P **P** **13 51 43.2 +1.8**
baz=276
Q19K Cape Douglas, 74.43 33 P **P** **13 51 41.2 -0.5**
Q19K Cape Douglas, 74.43 33 P **P** **13 51 41.2 -0.5**
baz=276
P19K Oil Pt 74.57 32 P **P** **13 51 42.4 -0.1**
P19K Oil Pt 74.57 32 P **P** **13 51 42.4 -0.1**
baz=276,SNR=5.6
CHUM Lake Minchumin 74.57 27 P **P** **13 51 43.7 +1.4**
baz=276,SNR=60
I21K Tanana 74.59 26 P **P** **13 51 43.6 +1.2**
I21K Tanana 74.59 26 P **P** **13 51 44.1 +1.8**
baz=276,SNR=33
G22K Bettles 74.61 24 P **P** **13 51 43.3 +0.8**
baz=276
C23K Itkillik River 74.66 21 P **P** **13 51 43.8 +1.1**
baz=276,SNR=15
RSO Redoubt South 74.72 31 P **P** **13 51 44.0 +0.5**
CAST Castle Rocks 74.72 28 P **P** **13 51 44.2 +1.0**
CAST Castle Rocks 74.72 28 P **P** **13 51 44.6 +1.4**
baz=276,SNR=226
D23K Nanushuk River 74.72 22 P **P** **13 51 44.6 +1.5**
baz=276,SNR=38
PPLA Purkeypile 74.73 28 P **P** **13 51 44.4 +0.9**
PPLA Purkeypile 74.73 28 P **P** **13 51 44.7 +1.2**
baz=276,SNR=26
H22K Ishtalitna Cre 74.77 25 P **P** **13 51 45.4 +1.9**
baz=276,SNR=113
OHAK Old Harbor 74.80 34 P **P** **13 51 43.9 +0.1**
OHAK IAmb IAmb 13 51 45.3
comp=Z,174nm,1.2s
OHAK Old Harbor 74.80 34 P **P** **13 51 44.2 +0.4**
baz=277,SNR=6.3
O20K Slope Mountain 74.82 31 P **P** **13 51 44.0 0.0**
baz=276
N20K Mount Spurr 74.90 30 P **P** **13 51 45.0 +0.6**
baz=276,SNR=31
SPCR Spurr Chakacha 74.90 30 P **P** **13 51 45.0 +0.6**
baz=276,SNR=27
SPU Mount Spurr 74.98 30 P **P** **13 51 44.9 0.0**
COLD Coldfoot 75.09 24 P **P** **13 51 46.1 +0.8**
COLD IAmb IAmb 13 51 47.8
comp=Z,73nm,1.1s
COLD Coldfoot 75.09 24 P **P** **13 51 46.6 +1.3**

baz=277,SNR=27
DCZ Deep Cove 75.10 148 P **P** **13 51 45.0 -0.5**
DCZ IAmb IAmb 13 53 31.6
comp=Z,106nm,1.8s
Q20K Shuyak Island 75.11 33 P **P** **13 51 45.7 +0.2**
baz=277
KDAK Kodiak Island 75.11 34 LR LR 14 23 24.7
comp=Z,185nm,21.9s,baz=281,slow=35
KDAK Kodiak Island 75.11 34 P **P** **13 51 45.7 +0.1**
KDAK Kodiak Island 75.11 34 *c i*P **P** **13 51 45.7 +0.1**
KDAK pmax pmax
comp=Z,267nm,1.1s
KDAK Kodiak Island 75.11 34 P **P** **13 51 46.0 +0.4**
baz=277
MLY Manley 75.12 26 P **P** **13 51 46.7 +1.1**
MLY Manley 75.12 26 P **P** **13 51 47.0 +1.4**
baz=277,SNR=136
BPAW Bear Paw Mtn. 75.13 27 P **P** **13 51 46.1 +0.5**
BPAW Bear Paw Mtn. 75.13 27 P **P** **13 51 46.8 +1.2**
baz=277,SNR=142
SKT Skwentna 75.13 29 P **P** **13 51 45.6 -0.1**
SKT Skwentna 75.13 29 P **P** **13 51 45.9 +0.2**
baz=277,SNR=44
TOLK Toolik Lake Re 75.16 22 P **P** **13 51 46.5 +0.8**
TOLK IAmb IAmb 13 51 47.9
comp=Z,78nm,0.8s
TOLK Toolik Lake Re 75.16 22 P **P** **13 51 46.7 +1.0**
baz=277,SNR=18
BNN Bunyan 75.17 307 P **P** **13 51 45.4 -1.1**
BNN IAmb IAmb 13 51 47.6
comp=Z,43nm,1.0s
HIZ Hauiti 75.17 138 P **P** **13 51 48.3 +2.1**
HIZ IAmb IAmb 13 53 34.8
comp=Z,190nm,1.6s
E23K Chandalar 75.21 23 P **P** **13 51 47.3 +1.2**
baz=277,SNR=36
G23K Bananza Creek 75.22 24 P **P** **13 51 47.5 +1.5**
baz=277,SNR=35
KTH Kantishna Hill 75.22 28 P **P** **13 51 46.7 +0.5**
KTH IAmb IAmb 13 51 48.5
comp=Z,104nm,0.9s
C24K Franklin Bluff 75.33 21 P **P** **13 51 47.6 +1.0**
baz=277
D24K Happy Valley 75.36 22 P **P** **13 51 47.8 +1.0**
baz=277
HOM Homer 75.37 32 P **P** **13 51 48.1 +1.2**
baz=277
RAO Raoul Island 75.40 127 LR LR 14 21 25.8
comp=Z,181nm,21.5s,baz=10,slow=33
SIM Simferopol' 75.50 313 *e*P **P** **13 51 47.9 -0.2**
SIM *e* 13 52 01.6
SIM 13 54 39.3
SIM pmax pmax
comp=Z,35nm,0.7s
SIM pmax pmax
comp=Z,7.0nm,13.0s
TRF Thorofare Moun 75.52 28 P **P** **13 51 48.8 +0.8**
TRF IAmb IAmb 13 51 51.6
comp=Z,99nm,0.8s
TRF Thorofare Moun 75.52 28 P **P** **13 51 48.5 +0.5**
baz=278,SNR=34
H23K Yukon River 75.52 25 P **P** **13 51 49.3 +1.5**
H23K Yukon River 75.52 25 P **P** **13 51 49.6 +1.8**
baz=278,SNR=128
SUA Susitna One 75.57 30 P **P** **13 51 48.5 +0.2**
baz=278
CNPM China Poot 75.59 32 P **P** **13 51 47.6 -0.7**
CNPM IAmb IAmb 13 51 50.6
comp=Z,93nm,0.9s
E24K Your Creek 75.63 23 P **P** **13 51 49.5 +1.1**
baz=278,SNR=39
CUT Chulitna 75.67 29 P **P** **13 51 48.5 -0.1**
CUT Chulitna 75.67 29 P **P** **13 51 49.0 +0.3**
baz=278,SNR=36
KEV Kevo 75.68 339 P **P** **13 51 48.6 0.0**
KEV IAmb IAmb 13 52 19.9
comp=Z,99nm,1.5s
KEV Kevo 75.68 339 P **P** **13 51 48.6 0.0**
KEV pmax pmax
comp=Z,99nm,1.5s
I23K Minto, Yukon-K 75.69 26 P **P** **13 51 49.6 +0.8**
I23K Minto, Yukon-K 75.69 26 P **P** **13 51 50.0 +1.3**
baz=278,SNR=74
BRLK Bradley Lake 75.73 31 P **P** **13 51 48.9 -0.2**
BWN Browne 75.78 27 P **P** **13 51 50.1 +0.8**
BRSE Bradley Lake S 75.81 31 P **P** **13 51 49.5 -0.1**
baz=278,SNR=10
M22K Willow 75.83 29 P **P** **13 51 49.3 -0.2**
M22K Willow 75.83 29 P **P** **13 51 49.7 +0.2**
baz=278,SNR=44
NNZ Nelson 75.85 141 P **P** **13 51 50.0 0.0**
NNZ IAmb IAmb 13 51 51.5
comp=Z,233nm,1.9s
TWVZ Taurewa 75.86 138 P **P** **13 51 51.2 +0.9**
NEA2 Nenana 75.89 26 P **P** **13 51 50.3 +0.3**
NEA2 Nenana 75.89 26 P **P** **13 51 50.6 +0.7**
baz=278,SNR=101
THZ Tophouse 75.90 142 P **P** **13 51 49.4 -1.0**
THZ IAmb IAmb 13 53 16.4
comp=Z,76nm,1.7s
PKVZ Pokaka 75.93 139 P **P** **13 51 51.4 +0.8**
F24K Squaw Lake 75.94 23 P **P** **13 51 51.5 +1.3**
baz=279,SNR=60
RATZ Rangitukua 75.96 138 P **P** **13 51 52.9 +2.2**
WTVZ West Tongariro 75.99 138 P **P** **13 51 52.1 +1.2**
LBZ Lake Benmore 75.99 145 P **P** **13 51 50.7 -0.1**
NGZ Ngauruhoe 76.03 138 P **P** **13 51 51.8 +0.5**
NTVZ North Tongarir 76.03 138 P **P** **13 51 53.2 +2.0**
RPZ Rata Peaks 76.04 144 P **P** **13 51 51.0 -0.1**
comp=Z,16nm,0.9s,baz=2.2,slow=6.2,SNR=8.4
RPZ LR LR 14 26 07.5
comp=Z,335nm,20.2s,baz=293,slow=36
comp=Z,16nm,0.9s
RPZ Rata Peaks 76.04 144 P **P** **13 51 51.0 -0.1**
SNVZ South Ngauruho 76.06 138 P **P** **13 51 51.6 +0.1**
OTVZ Oturere 76.06 138 P **P** **13 51 53.5 +2.0**
MCK McKinley 76.08 27 P **P** **13 51 51.2 +0.1**
MCK McKinley 76.08 27 P **P** **13 51 51.2 +0.1**
MCK pmax pmax
comp=Z,286nm,0.9s
MCK McKinley 76.08 27 P **P** **13 51 51.5 +0.4**
baz=279,SNR=111
RC01 Rabbit Creek A 76.11 30 P **P** **13 51 51.0 -0.2**
RC01 Rabbit Creek A 76.11 30 P **P** **13 51 51.2 0.0**
baz=279,SNR=10
LTZ Lake Taylor 76.15 143 P **P** **13 51 51.5 -0.2**
LTZ IAmb IAmb 13 52 57.3
comp=Z,92nm,2.0s
RND Reindeer 76.16 28 P **P** **13 51 51.5 -0.1**
RND Reindeer 76.16 28 P **P** **13 51 51.5 -0.1**
RND pmax pmax
comp=Z,273nm,0.8s
MDM Murphy Dome 76.19 26 P **P** **13 51 52.0 +0.3**
H24K Noodor Dome 76.20 25 P **P** **13 51 52.7 +1.0**
H24K IAmb IAmb 13 51 54.3
comp=Z,141nm,1.1s
H24K Noodor Dome 76.20 25 P **P** **13 51 53.2 +1.5**
baz=279,SNR=49
D25K Kavik River 76.20 21 P **P** **13 51 52.7 +1.0**
baz=280,SNR=20
O22K Cooper Landing 76.20 31 P **P** **13 51 51.7 0.0**
O22K Cooper Landing 76.20 31 P **P** **13 51 51.7 0.0**
baz=279,SNR=13
G24K Hadweenzic Riv 76.22 24 P **P** **13 51 53.0 +1.2**
baz=279,SNR=53
ARA0 ARCESS Array S 76.23 339 *e*P **P** **13 51 52.4 +0.6**
ARA0 IAmb IAmb 13 52 07.6
comp=Z,366nm,2.1s
ARCES ARCESS Array B 76.23 339 P **P** **13 51 52.1 +0.4**
comp=Z,12nm,0.6s,baz=76,slow=6.7,SNR=41
ARCES LR LR 14 29 16.8
comp=Z,994nm,18.0s,baz=112,slow=39
comp=Z,12nm,0.6s
ARCES ARCESS Array B 76.23 339 P **P** **13 51 51.9 +0.1**
ARCES ARCESS Array B 76.23 339 P **P** **13 51 51.9 +0.1**
ARCES pmax pmax
comp=Z,36nm,1.0s
PMR Palmer 76.32 29 P **P** **13 51 52.2 -0.2**
PMR Palmer 76.32 29 P **P** **13 51 52.2 -0.2**
PMR pmax pmax
comp=Z,203nm,0.9s
PMR Palmer 76.32 29 P **P** **13 51 52.6 +0.2**
baz=279,SNR=48
TUWZ Tuamarina 76.32 141 P **P** **13 51 51.5 -1.1**
WRH Wood River Hil 76.33 26 P **P** **13 51 51.9 -0.5**
WRH IAmb IAmb 13 51 54.8

comp=Z,117nm,0.9s
OXZ Oxford 76.36 144 P P 13 51 51.9 -0.9
TCOL CIGO, UAF Yank 76.36 26 P P 13 51 52.3 -0.3
TCOL IAmb IAmb 13 51 55.5
comp=Z,128nm,1.2s
TCOL CIGO, UAF Yank 76.36 26 P P 13 51 52.7 +0.2
baz=279,SNR=22
COLA College 76.36 26 P P 13 51 52.4 -0.2
COLA IAmb IAmb 13 51 55.5
comp=Z,141nm,1.3s
COLA College 76.36 26 *c iP* **P 13 51 52.7 +0.2**
COLA pmax pmax
comp=Z,18nm,0.6s
COLA College 76.36 26 P P 13 51 52.8 +0.2
baz=279
WAT1 Susitna Watana 76.39 28 P P 13 51 52.8 0.0
baz=279
SEW Seward 76.40 31 P P 13 51 52.6 -0.2
SEW Seward 76.40 31 P P 13 51 53.1 +0.3
baz=279,SNR=12
ILGA Ilgaz 76.42 309 P P 13 51 53.8 +0.1
ILGA IAmb IAmb 13 52 08.8
comp=Z,123nm,1.7s
CCB Clear Creek Bu 76.42 26 P P 13 51 52.5 -0.4
CCB IAmb IAmb 13 51 55.1
comp=Z,49nm,0.9s
BSWZ Blackbirch Sta 76.45 141 P P 13 51 52.2 -1.2
URZ Urewera 76.49 137 LR LR 14 24 59.7
comp=Z,272nm,21.8s,baz=32,slow=35
POKR Poker Plat Res 76.50 26 P P 13 51 53.4 0.0
POKR IAmb IAmb 13 51 56.2
comp=Z,84nm,0.9s
POKR Poker Plat Res 76.50 26 P P 13 51 54.6 +1.3
baz=280,SNR=8.7
BHHZ Black Hill Sta 76.50 138 P P 13 51 53.7 -0.1
MMAI Mount Meron Ar 76.54 301 LR LR 14 30 24.7
comp=Z,289nm,21.7s,baz=290,slow=39
BKZ Black Stump Fm 76.59 138 P P 13 51 53.7 -0.6
BKZ IAmb IAmb 13 51 55.5
comp=Z,40nm,0.7s
C26K Camden Bay 76.60 21 P P 13 51 55.4 +1.5
baz=281
SML Sawmill 76.66 29 P P 13 51 54.5 +0.2
SML Sawmill 76.66 29 P P 13 51 54.6 +0.2
baz=280,SNR=58
KNK Knik Glacier 76.66 30 P P 13 51 54.7 +0.3
KNK Knik Glacier 76.66 30 P P 13 51 54.8 +0.4
baz=280,SNR=52
KHZ Kahutara 76.67 142 P P 13 51 54.3 -0.2
KHZ IAmb IAmb 13 54 09.2
comp=Z,127nm,2.0s
E25K Arctic Village 76.70 23 P P 13 51 55.6 +1.1
baz=281,SNR=21
OGWZ Otaki Gorge 76.71 140 P P 13 51 54.1 -0.7
BR131 Keskin Array S 76.71 308 P P 13 51 55.0 -0.2
BR131 Keskin Array S 76.71 308 P P 13 51 55.0 -0.2
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 76.71 308 P P 13 51 55.4 +0.1
comp=Z,3.9nm,0.8s,baz=116,slow=4.2,SNR=20
BRTR LR LR 14 31 18.4
comp=Z,259nm,18.9s,baz=68,slow=40
comp=Z,3.9nm,0.8s
BRTR Keskin Array B 76.71 308 P P 13 51 55.0 -0.2
G25K Bearman Lake 76.75 24 P P 13 51 56.2 +1.5
baz=280,SNR=45
SPB2 Spitsbergen Ar 76.77 348 P P 13 51 55.0 +0.3
SPB2 IAmb IAmb 13 51 56.4
comp=Z,64nm,0.8s
SPA0 Spitsbergen Ar 76.77 348 *eP* **P 13 51 55.5 +0.8**
SPA0 IAmb IAmb 13 51 57.0
comp=Z,223nm,1.5s
SPITS Spitsbergen Ar 76.77 348 LR LR 14 30 58.9
comp=Z,909nm,18.3s,baz=36,slow=40
SPITS Spitsbergen Ar 76.77 348 P P 13 51 55.1 +0.4
SPITS pmax pmax
comp=Z,117nm,1.2s
F25K Christian Rive 76.77 23 P P 13 51 56.4 +1.5
baz=281,SNR=48
IL31 76.79 26 P P 13 51 54.0 -1.0
ILAR Eielson Array 76.79 26 P P 13 51 54.1 -0.9
comp=Z,22nm,0.9s,baz=266,slow=5.6,SNR=93
ILAR LR LR 14 29 20.8
comp=Z,149nm,18.2s,baz=276,slow=38
comp=Z,22nm,0.9s
ILAR Eielson Array 76.79 26 P P 13 51 53.8 -1.2
WAT6 Susitna Watana 76.80 28 P P 13 51 55.8 +0.5
baz=280,SNR=88
PWL Port Wells 76.82 30 P P 13 51 55.1 -0.2
PWL Port Wells 76.82 30 P P 13 51 55.7 +0.4
baz=280,SNR=42
HDA Harding Lake 76.83 26 P P 13 51 54.4 -0.8
HDA IAmb IAmb 13 51 55.8
comp=Z,66nm,0.8s
HDA Harding Lake 76.83 26 P P 13 51 54.8 -0.4
baz=280,SNR=41
DHY Denali Highway 76.88 28 P P 13 51 55.5 -0.3
DHY IAmb IAmb 13 51 57.5
comp=Z,83nm,0.8s
DHY Denali Highway 76.88 28 P P 13 51 55.9 +0.1
baz=280,SNR=41
MCHZ McNeill Hill 76.88 138 P P 13 51 56.4 +0.5
M23K Glacier View 76.94 29 P P 13 51 56.5 +0.5
baz=280,SNR=31
MQZ McQueen's Vall 76.94 144 P P 13 51 56.2 +0.2
H25K Birch Creek 76.95 24 P P 13 51 57.4 +1.5
baz=281,SNR=38
C27K Jago River 77.07 21 P P 13 51 58.0 +1.5
baz=282,SNR=34
WPHZ Waipukurau 77.07 139 P P 13 51 57.1 +0.1
KTK1 Kautokeino 77.12 338 *eP* **P 13 51 57.0 +0.2**
SCM Sheep Creek Mo 77.12 29 P P 13 51 57.4 +0.4
SCM Sheep Creek Mo 77.12 29 P P 13 51 57.4 +0.4
SCM pmax pmax
comp=Z,376nm,1.0s
SCM Sheep Creek Mo 77.12 29 P P 13 51 57.9 +0.9
baz=280,SNR=60
FYU Fort Yukon 77.13 24 P P 13 51 57.7 +0.9
FYU IAmb IAmb 13 51 59.4
comp=Z,129nm,1.1s
RIGZ Rimuhau 77.16 137 P P 13 51 57.4 -0.1
KAHZ Kahuranaki 77.19 138 P P 13 51 56.4 -1.3
PLWZ Palliser 77.20 141 P P 13 51 56.8 -0.9
BMAR Burnt Mountain 77.20 23 P P 13 51 58.7 +1.4
PRP Porcupine Dome 77.22 25 P P 13 51 57.1 -0.4
PRP IAmb IAmb 13 52 00.4
comp=Z,57nm,1.0s
PRP Porcupine Dome 77.22 25 P P 13 51 57.6 0.0
baz=281,SNR=37
BFZ Birch Farm 77.30 139 P P 13 51 58.0 -0.2
BFZ IAmb IAmb 13 51 59.0
comp=Z,58nm,1.0s
F26K Sheenjek River 77.31 23 P P 13 51 59.6 +1.6
baz=282,SNR=48
TMWZ Te Maipa 77.32 140 P P 13 51 57.4 -0.9
GLI Glacier Island 77.41 30 P P 13 51 58.8 +0.2
GLI Glacier Island 77.41 30 P P 13 51 59.1 +0.6
baz=281,SNR=37
P23K Montague Islan 77.43 31 P P 13 51 59.4 +0.7
baz=281
K24K Donnelly Dome 77.45 27 P P 13 51 59.5 +0.8
baz=281,SNR=39
J25K Salcha River, 77.46 26 P P 13 51 57.9 -1.0
J25K IAmb IAmb 13 51 59.1
comp=Z,32nm,0.7s
J25K Salcha River, 77.46 26 P P 13 51 58.1 -0.7
baz=282,SNR=29
FIA1 FINESS Array S 77.46 331 P P 13 51 58.6 -0.2
FIA0 FINESS Array S 77.46 331 P P 13 51 58.3 -0.5
FIA0 FINESS Array S 77.46 331 P P 13 51 58.3 -0.5
FINES FINESS Array B 77.46 331 P P 13 51 58.8 0.0
comp=Z,13nm,0.6s,baz=52,slow=5.9,SNR=71
FINES LR LR 14 29 21.6
comp=Z,960nm,18.2s,baz=80,slow=38
comp=Z,13nm,0.6s
FINES FINESS Array B 77.46 331 P P 13 51 58.7 -0.1
FINES FINESS Array B 77.46 331 *i P* **P 13 51 58.7 -0.1**
FINES pmax pmax
comp=Z,13nm,0.6s
EIL Elat 77.58 297 LR LR 14 32 12.8
comp=Z,334nm,19.2s,baz=68,slow=40
M24K Tolsona, Glenn 77.61 29 P P 13 52 00.5 +0.8
M24K Tolsona, Glenn 77.61 29 P P 13 52 00.9 +1.2
baz=281,SNR=59
G26K Porcupine Rive 77.61 24 P P 13 52 01.1 +1.6
baz=282,SNR=59

VSU Vasula 77.71 328 *eP* **P 13 52 00.2 -0.1**
VSU pmax pmax
comp=Z,117nm,0.9s
VSU Vasula 77.71 328 *eP* **P 13 52 00.8 +0.6**
FID Port Fidalgo 77.73 30 P P 13 52 00.6 +0.2
PAX Paxson 77.75 28 P P 13 52 00.9 +0.3
PAX IAmb IAmb 13 52 02.5
comp=Z,121nm,0.9s
PAX Paxson 77.75 28 P P 13 52 00.9 +0.3
PAX pmax pmax
comp=Z,121nm,0.9s
PAX Paxson 77.75 28 P P 13 52 01.3 +0.8
baz=282,SNR=74
AKASG Malin Array Be 77.77 319 P P 13 52 00.3 -0.4
comp=Z,14nm,0.8s,baz=64,slow=5.6,SNR=43
AKASG LR LR 14 29 52.8
comp=Z,542nm,19.0s,baz=78,slow=38
comp=Z,14nm,0.8s
AKASG Malin Array Be 77.77 319 P P 13 52 00.2 -0.6
AKASG Malin Array Be 77.77 319 P P 13 52 00.2 -0.6
AKASG pmax pmax
comp=Z,39nm,1.6s
AKBB Malin Array Si 77.77 319 P P 13 52 00.2 -0.6
AKBB Malin Array Si 77.77 319 *c iP* **P 13 52 00.2 -0.6**
HIN Hinchinbrook I 77.79 30 P P 13 52 01.2 +0.5
AK05 Malin Array Si 77.80 319 P P 13 52 00.4 -0.5
KLU Klutina 77.85 29 P P 13 52 01.6 +0.5
KLU IAmb IAmb 13 52 03.0
comp=Z,124nm,1.0s
KLU Klutina 77.85 29 P P 13 52 01.8 +0.7
baz=282,SNR=42
CSS Mathiatis 77.85 303 P P 13 52 02.1 +0.5
CSS IAmb IAmb 13 52 03.6
comp=Z,53nm,0.8s
MNK Minsk 77.85 323 *i P* **P 13 52 00.4 -0.7**
MNK *i* 13 52 07.6
MNK *i S* **S 14 01 51.5 +0.7**
MNK *i* 14 02 11.3
MNK pmax pmax
comp=Z,29nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK MLR MLR
comp=Z,796nm,17.0s
MNK MLR MLR
comp=E,99nm,17.0s
MNK Minsk 77.85 323 *i P* **P 13 52 00.5 -0.7**
comp=E,1.0nm,0.8s
MNK *i P* **P 13 52 00.5 -0.7**
MNK *i P* **P 13 52 00.5 -0.7**
comp=Z,29nm,0.8s,baz=79
MNK *i* PcP **PcP 13 52 07.7 -3.2**
MNK *i S* **S 14 01 51.5 +0.7**
MNK *i* SS SS 14 05 14.8 -97
MNK *i* SSS SSS 14 12 21.4
MNK *i* LQ LQ 14 21 22.0
MNK *i* LR LR 14 24 26.2
MNK *i* LRM MLR 14 28 23.4
comp=Z,796nm,17.4s
MNK *i* LRM MLR 14 28 25.3
comp=E,99nm,17.4s
MNK *i* LRM MLR 14 28 33.2
RIDG Independent Ri 77.86 27 P P 13 52 01.1 0.0
RIDG Independent Ri 77.86 27 P P 13 52 01.4 +0.3
baz=282,SNR=46
JETT Jettan, Norway 77.98 339 *eP* **P 13 52 02.4 +0.8**
JETT IAmb IAmb 13 52 02.6
comp=Z,77nm,0.9s
DIV Divide 77.99 30 P P 13 52 02.2 +0.3
HARP HAARP 78.01 28 P P 13 52 03.2 +1.3
baz=282,SNR=39
Q23K Middleton Isla 78.06 31 P P 13 52 03.3 +1.1
baz=282
EYAK Cordova Ski Ar 78.12 30 P P 13 52 03.3 +0.8
EYAK Cordova Ski Ar 78.12 30 P P 13 52 03.5 +1.0
baz=282,SNR=15
MCQ Macquarie Isla 78.14 158 P P 13 52 03.2 +0.7
MCQ Macquarie Isla 78.14 158 P P 13 52 03.2 +0.7
MCQ pmax pmax
comp=Z,692nm,2.0s
E27K Coleen River 78.14 22 P P 13 52 03.9 +1.3
baz=284,SNR=51
SCRK Sand Creek 78.18 27 P P 13 52 03.1 +0.1
SCRK IAmb IAmb 13 52 04.7
comp=Z,185nm,1.5s
SCRK Sand Creek 78.18 27 P P 13 52 03.4 +0.4
baz=283,SNR=43
DOT Dot Lake 78.22 27 P P 13 52 03.1 0.0
DOT IAmb IAmb 13 52 04.6
comp=Z,96nm,1.0s
I26K Coal Creek Min 78.23 25 P P 13 52 03.4 +0.4
baz=283
J26L Joseph Creek 78.25 26 P P 13 52 03.1 -0.2
J26L IAmb IAmb 13 52 04.6
comp=Z,229nm,1.7s
J26L Joseph Creek 78.25 26 P P 13 52 03.5 +0.2
baz=283,SNR=46
NACGM Naroch 78.40 324 ⇑ *eP* **P 13 52 04.6 +0.5**
baz=78
MDUB Mudurnu 78.41 309 P P 13 52 03.7 -1.0
N25K Chitina, Valde 78.44 29 P P 13 52 05.2 +0.8
N25K Chitina, Valde 78.44 29 P P 13 52 05.5 +1.1
baz=283,SNR=39
G27K Doyon Strip 78.46 24 P P 13 52 05.8 +1.4
baz=284,SNR=79
MEF Metsahovi 78.52 330 *eP* **P 13 52 05.3 +0.6**
MENT Mentasta 78.54 28 P P 13 52 05.6 +0.8
MENT IAmb IAmb 13 52 07.1
comp=Z,155nm,1.3s
BMRM Bremner River 78.58 30 P P 13 52 05.8 +0.6
BMRM Bremner River 78.58 30 P P 13 52 06.0 +0.9
baz=283,SNR=26
IIGN Ignalina 78.62 324 *eP* **P 13 52 05.9 +0.5**
ISAL Salakas 78.63 325 *eP* **P 13 52 06.1 +0.7**
H27K Steamboat Moun 78.66 24 P P 13 52 06.9 +1.4
baz=285,SNR=57
RAGM Ragged Mountai 78.68 30 P P 13 52 05.9 +0.3
L26K Log Cabin Wild 78.68 27 P P 13 52 06.4 +0.8
L26K IAmb IAmb 13 52 08.0
comp=Z,93nm,0.8s
L26K Log Cabin Wild 78.68 27 P P 13 52 06.9 +1.3
baz=284,SNR=53
KIS Kishinev 78.77 316 *eP* **P 13 52 06.0 -0.4**
KIS *eL* L 14 28 52.0
KIS LQM 14 31 13.0
comp=Z,400nm,19.0s
KIS LRM MLR 14 32 01.0
comp=Z,300nm,17.0s
KIS Kishinev 78.77 316 *eP* **P 13 52 06.0 -0.4**
I27K Kandik River 78.78 25 P P 13 52 07.6 +1.4
baz=285,SNR=65
MILM Milestii Mici 78.79 316 ⇓ **P 13 52 06.2 -0.3**
MILM Milestii Mici 78.79 316 *c iP* **P 13 52 06.0 -0.5**
MILM pmax pmax
comp=Z,20nm,0.5s
MILM MLR MLR
comp=Z,700nm,18.0s
GLB Gilahina Butte 78.85 29 P P 13 52 07.2 +0.6
HMT Hamilton 78.89 30 P P 13 52 07.5 +0.6
HMT IAmb IAmb 13 52 08.8
comp=Z,110nm,1.0s
KAIM Kayak Island 78.91 31 P P 13 52 07.8 +0.9
KAIM Kayak Island 78.91 31 P P 13 52 08.1 +1.3
baz=283,SNR=9.3
K27K Chicken 78.99 26 P P 13 52 08.8 +1.6
baz=285
M26K Nabesna, AK 78.99 28 P P 13 52 08.2 +0.9
M26K Nabesna, AK 78.99 28 P P 13 52 08.5 +1.1
baz=284,SNR=178
VRDI Verde Repeater 79.06 29 P P 13 52 08.3 +0.3
VRDI IAmb IAmb 13 52 09.9
comp=Z,85nm,1.0s
BORA Eskisehir 79.09 308 P P 13 52 08.1 -0.3
BERG Berg Lake 79.15 30 P P 13 52 09.1 +0.9
TLCR 79.15 314 ⇓ **P P 13 52 09.2 +0.7**
MTSE Matsula 79.15 328 *eP* **P 13 52 08.8 +0.6**
EGAK Eagle 79.18 26 P P 13 52 08.5 +0.2
EGAK IAmb IAmb 13 52 09.9
comp=Z,83nm,0.8s
EGAK Eagle 79.18 26 P P 13 52 08.8 +0.6
baz=285,SNR=68
SUCK Suckling Hills 79.19 30 P P 13 52 09.6 +1.2
SUCK IAmb IAmb 13 52 10.9
comp=Z,66nm,1.0s
MCARA McCarthy VSAT 79.23 29 P P 13 52 09.2 +0.6

MCARA IAmb IAmb 13 52 12.1
comp=Z,120nm,0.8s
MCARA McCarthy VSAT 79.23 29 P P 13 52 09.9 +1.3
baz=284,SNR=44
OPO Ambohidratompo 79.31 247 P P 13 52 11.3 +1.3
comp=Z,22nm,0.8s,baz=71,slow=5.0,SNR=18
comp=Z,22nm,0.8s
L27K Beaver Creek, 79.34 27 P P 13 52 10.6 +1.3
L27K Beaver Creek, 79.34 27 P P 13 52 10.8 +1.6
baz=285,SNR=174
BCAR Beaver Creek A 79.36 27 P P 13 52 10.7 +1.3
ISP Isparta 79.47 306 P P 13 52 09.9 -0.7
ISP IAmb IAmb 13 52 11.3
comp=Z,85nm,1.6s
ISP Isparta 79.47 306 P P 13 52 09.9 -0.7
ISP pmax pmax
comp=Z,85nm,1.6s
TGL Tana Glacier 79.48 30 P P 13 52 10.7 +0.6
TGL IAmb IAmb 13 52 12.0
comp=Z,104nm,0.8s
TPGR Topolog 79.49 314 ⇓ **P P 13 52 11.2 +0.8**
M27K Edge Creek, AK 79.51 28 P P 13 52 11.2 +0.9
M27K IAmb IAmb 13 52 12.6
comp=Z,100nm,0.9s
M27K Edge Creek, AK 79.51 28 P P 13 52 11.5 +1.2
baz=285,SNR=53
WAX Waxell Ridge 79.54 30 P P 13 52 11.1 +0.7
WAX IAmb IAmb 13 52 12.6
comp=Z,127nm,0.8s
TIRR Tirgusor 79.59 313 ⇓ **P P 13 52 11.4 +0.5**
TIRR Tirgusor 79.59 313 P P 13 52 11.3 +0.5
TIRR Tirgusor 79.59 313 P P 13 52 11.3 +0.5
TIRR pmax pmax
comp=Z,35nm,0.9s
RAF Rauma 79.59 331 *eP* **P 13 52 10.6 0.0**
SCTR Scanteiesti 79.61 315 ⇑ **P P 13 52 11.8 +0.8**
SNH Sunshine Point 79.62 30 P P 13 52 12.0 +1.2
SNH IAmb IAmb 13 52 13.3
comp=Z,132nm,0.9s
CFR Carcaliu 79.62 314 ⇓ **P P 13 52 11.6 +0.6**
VSVD Vaisvydziai 79.74 325 *eP* **P 13 52 12.1 +0.6**
ISLE Juniper Island 79.75 30 P P 13 52 11.9 +0.3
ISLE IAmb IAmb 13 52 13.6
comp=Z,89nm,1.0s
PABE Paberze 79.84 325 P P 13 52 12.0 +0.1
PABE IAmb IAmb 13 52 13.3
comp=Z,80nm,0.8s
PABE Paberze 79.84 325 *eP* **P 13 52 12.5 +0.5**
ISK Istanbul-Kandi 79.87 310 P P 13 52 12.7 +0.2
HARR Harsova 79.87 314 ⇓ **P P 13 52 12.9 +0.5**
NOR Nord 79.91 354 *eP* **P 13 52 12.0 0.0**
NOR IAmb IAmb 13 52 12.4
comp=Z,32nm,1.0s
BVCY Beaver Creek 79.95 28 P P 13 52 14.0 +1.5
baz=286,SNR=47
BARN Barnard Glacie 79.95 29 P P 13 52 14.0 +1.2
BARN IAmb IAmb 13 52 15.2
comp=Z,143nm,0.8s
MESA MESA 80.05 30 P P 13 52 14.3 +1.0
MESA IAmb IAmb 13 52 15.8
comp=Z,106nm,1.0s
MESA MESA 80.05 30 P P 13 52 14.6 +1.3
baz=285,SNR=18
YAH Yahtse 80.10 30 P P 13 52 14.8 +1.2
YAH IAmb IAmb 13 52 16.2
comp=Z,148nm,1.2s
DAWY Dawson 80.12 26 P P 13 52 14.0 +0.6
DAWY IAmb IAmb 13 52 15.5
comp=Z,100nm,0.9s
DAWY Dawson 80.12 26 P P 13 52 14.4 +1.0
baz=287,SNR=109
CTG Chitna Glacier 80.12 29 P P 13 52 15.3 +1.6
baz=286,SNR=126
CTGM Chitina Glacie 80.13 29 P P 13 52 14.9 +1.2
I29M Ogilvie Camp, 80.17 25 P P 13 52 14.1 +0.4
I29M IAmb IAmb 13 52 15.7
comp=Z,116nm,1.1s
I29M Ogilvie Camp, 80.17 25 P P 13 52 14.5 +0.8
baz=288,SNR=57
ELL Elmali 80.19 305 P P 13 52 14.5 0.0
ELL Elmali 80.19 305 P P 13 52 14.5 0.0
ELL pmax pmax
comp=Z,472nm,1.8s
SLIT Slitere, Latvi 80.20 327 *eP* **P 13 52 13.9 -0.1**
STEI Steigen 80.25 338 *eP* **P 13 52 14.0 0.0**
STEI IAmb IAmb 13 52 15.3
comp=Z,132nm,1.5s
YUK3 Moose Creek 80.31 28 P P 13 52 15.8 +1.1
baz=286,SNR=69
LOGN Logan Glacier 80.32 29 P P 13 52 15.6 +0.9
LOGN IAmb IAmb 13 52 17.4
comp=Z,159nm,1.0s
TESR Tescani 80.33 316 ⇑ **P P 13 52 15.5 +0.6**
TABL Table Mountain 80.36 30 P P 13 52 15.8 +0.8
TABL IAmb IAmb 13 52 17.5
comp=Z,159nm,1.0s
FAUS Fauske 80.42 338 *eP* **P 13 52 14.8 -0.1**
VRI Vrincioaia 80.43 315 ⇑ **P P 13 52 16.2 +0.8**
G30M tAoh Zraii Nji 80.46 23 P P 13 52 15.5 +0.3
baz=289,SNR=50
EPYK Eagle Plains 80.47 23 P P 13 52 15.4 +0.1
EPYK Eagle Plains 80.47 23 P P 13 52 15.6 +0.2
baz=289,SNR=78
PLOR Plostina 80.48 315 ⇑ **P P 13 52 16.5 +0.7**
J29M Klondike Camp 80.49 25 P P 13 52 16.6 +1.2
J29M Klondike Camp 80.49 25 P P 13 52 16.9 +1.4
baz=288,SNR=5.7
BISRR Bisoca 80.52 315 ⇓ **P P 13 52 17.9 +1.9**
AKAS Kas 80.55 305 P P 13 52 14.6 -1.8
PRD Provadia 80.58 312 P P 13 52 17.1 +0.8
BIZ Bicaz 80.59 316 ⇑ **P P 13 52 17.1 +0.8**
O28M Mount Upton 80.72 29 P P 13 52 18.5 +1.5
baz=287,SNR=39
ISR Istrita 80.73 314 ⇑ **P P 13 52 19.2 +2.1**
COVR Voineasa-Covas 80.79 315 ⇑ **P P 13 52 18.4 +1.0**
PBUR Paburge 80.82 326 *eP* **P 13 52 18.1 +0.9**
VOI Vohitsoka 80.87 244 P P 13 52 19.1 +0.8
VOI IAmb IAmb 13 52 20.7
comp=Z,133nm,1.8s
VOI Vohitsoka 80.87 244 P P 13 52 20.6 +2.3
PCA Pinnacle 80.88 30 P P 13 52 18.8 +1.1
PINM Pinnacle 80.89 30 P P 13 52 19.1 +1.4
baz=287,SNR=35
L29M L29M 80.94 27 P P 13 52 19.8 +1.9
baz=288,SNR=154
INK Inuvik 80.96 21 LR LR 14 31 15.8
comp=Z,236nm,20.9s,baz=292,slow=38
INK Inuvik 80.96 21 P P 13 52 17.8 0.0
INK IAmb IAmb 13 52 19.3
comp=Z,141nm,1.1s
INK Inuvik 80.96 21 P P 13 52 17.8 0.0
INK pmax pmax
comp=Z,141nm,1.1s
INK Inuvik 80.96 21 P P 13 52 18.1 +0.3
baz=292,SNR=71
K29M Barlow Dome 80.97 26 P P 13 52 19.3 +1.1
baz=289,SNR=119
M29M Somme Creek 81.01 27 P P 13 52 20.2 +1.9
baz=288,SNR=180
BURAR Bucovina Array 81.02 317 ⇑ **P P 13 52 19.4 +0.8**
BURAR Bucovina Array 81.02 317 P P 13 52 18.9 +0.2
BUR08 Bucovina Ar. S 81.02 317 P P 13 52 18.9 +0.2
MLR Muntele Rosu 81.05 315 ⇓ **P P 13 52 19.8 +0.8**
MLR Muntele Rosu 81.05 315 LR LR 14 33 14.7
comp=Z,723nm,19.6s,baz=64,slow=39
MLR Muntele Rosu 81.05 315 P P 13 52 19.2 +0.3
MLR Muntele Rosu 81.05 315 P P 13 52 19.2 +0.3
MLR pmax pmax
comp=Z,26nm,0.8s
SECR 81.08 314 ⇑ **P P 13 52 20.5 +1.5**
MOR8 Moi Rana 81.15 337 *eP* **P 13 52 17.7 -1.2**
F31M Tsiigehtchic 81.21 22 P P 13 52 19.4 +0.3
baz=291,SNR=82
LVV L'vov 81.22 319 *eP* **P 13 52 19.2 -0.4**
BCPM Bancas Point 81.22 30 P P 13 52 19.8 +0.4
BCPM IAmb IAmb 13 52 22.1
comp=Z,98nm,1.1s
YUK4 Talbot Arm 81.26 29 P P 13 52 21.1 +1.3
baz=288,SNR=24
DOPR Dopca 81.31 315 ⇓ **P P 13 52 21.1 +1.0**
JMB Yambol 81.34 312 P P 13 52 18.4 -2.0
YER Yerkesik 81.37 306 P P 13 52 21.0 +0.3
EDRB Edirne 81.38 311 P P 13 52 20.0 -0.6
PNL Peninsula 81.42 30 P P 13 52 21.9 +1.4
baz=288,SNR=26

YUK6 Outpost Mounta 81.52 29 P **P 13 52 23.0 +1.7**
baz=288,SNR=36
SZH Strazhica 81.61 313 P P 13 52 30.6 +8.8
O29M Mount Kennedy 81.62 30 P **P 13 52 23.1 +1.4**
baz=288,SNR=14
VOIR 81.67 315 ⇑P **P 13 52 21.7 -0.5**
MAYO Mayo, Yukon 81.74 26 P **P 13 52 22.8 +0.7**
MAYO Mayo, Yukon 81.74 26 P **P 13 52 23.3 +1.2**
baz=290,SNR=39
N30M Aishikik Lake 81.94 28 P **P 13 52 24.9 +1.7**
baz=289,SNR=97
HYT Haines Junctio 81.96 29 P **P 13 52 24.6 +1.2**
HYT IAmb IAmb 13 52 26.2
comp=Z,201nm,1.5s
HYT Haines Junctio 81.96 29 P **P 13 52 25.1 +1.7**
baz=289,SNR=45
A36M Sachs Harbour 81.96 17 P **P 13 52 23.3 +0.2**
A36M Sachs Harbour 81.96 17 P **P 13 52 23.2 +0.2**
baz=299,SNR=5.9
ARR Arges 81.97 315 ⇑P **P 13 52 24.3 +0.6**
DAT Datca 82.01 306 P **P 13 52 23.2 -1.0**
PVL Pavlikeni 82.05 313 P **P 13 52 25.2 +1.2**
BMR Baia Mare 82.12 317 ⇑P **P 13 52 25.2 +0.9**
ALN Alexandroupoli 82.12 310 P **P 13 52 24.2 -0.3**
ALN Alexandroupoli 82.12 310 P **P 13 52 24.2 -0.3**
ALN pmax pmax
comp=Z,16nm,0.8s
DIM Dimitrovgrad 82.20 311 P **P 13 52 25.5 +0.6**
P29M Windy Craggy 82.24 30 P **P 13 52 26.1 +1.3**
P29M IAmb IAmb 13 52 27.7
comp=Z,93nm,0.9s
P29M Windy Craggy 82.24 30 P **P 13 52 26.7 +1.9**
baz=289,SNR=13
KDZ Kurdzhali 82.39 311 P **P 13 52 26.1 +0.2**
RDO Rodhopi 82.43 311 P **P 13 52 25.6 -0.5**
RDO Rodhopi 82.43 311 P **P 13 52 25.8 -0.3**
P30M Million Dollar 82.44 29 P **P 13 52 27.3 +1.4**
baz=290
HLFA HLFA 82.48 290 *i* P **P 13 52 27.9 +1.1**
N31M Braeburn, Yuko 82.52 28 P **P 13 52 27.5 +1.2**
N31M IAmb IAmb 13 52 29.0
comp=Z,114nm,1.0s
N31M Braeburn, Yuko 82.52 28 P **P 13 52 27.8 +1.6**
baz=290,SNR=56
KOLS Kolonicke sedl 82.56 319 *e*P **P 13 52 27.5 +0.8**
KOLS pmax pmax
comp=Z,9.0nm,0.7s
KIBK Kibwezi 82.62 265 P **P 13 52 29.1 +1.4**
O30N Mendenhall 82.63 29 P **P 13 52 28.4 +1.6**
baz=290,SNR=42
KARP Karpathos 82.64 305 P **P 13 52 27.8 +0.4**
KARP Karpathos 82.64 305 P **P 13 52 26.0 -1.4**
UZH Uzhgorod 82.64 318 *e*P **P 13 52 26.0 -1.0**
UZH *e* 13 52 35.1
UZH *e* 13 55 36.0
UZH *e*S **S 14 02 39.0 -2.3**
BEL Belsk 82.64 322 *e*P **P 13 52 27.3 +0.3**
MRWI Hamdab 82.68 287 *i* P **P 13 52 29.1 +1.3**
MRWI *i* 13 52 32.6
baz=305,slow=11
SIGR SIGRI 82.70 309 P **P 13 52 27.2 -0.3**
CASY Casey 82.70 184 P **P 13 52 27.7 +0.9**
CASY IAmb IAmb 13 52 29.2
comp=Z,68nm,1.0s
NSS Namsos 82.72 335 *e*P **P 13 52 26.5 -0.6**
NSS IAmb IAmb 13 52 29.7
comp=Z,186nm,2.1s
EUNU Eureka 82.75 4 P **P 13 52 27.5 +0.3**
EUNU IAmb IAmb 13 52 28.9
comp=Z,174nm,1.6s
PLD Plovdiv 82.78 312 P **P 13 52 27.9 0.0**
M31M Drury Creek, Y 82.88 27 P **P 13 52 28.7 +0.6**
M31M IAmb IAmb 13 52 30.1
comp=Z,82nm,0.8s
M31M Drury Creek, Y 82.88 27 P **P 13 52 29.1 +1.1**
baz=292,SNR=97
DRGR 82.88 317 ⇑P **P 13 52 29.0 +0.6**
RZN Rozhen 82.89 311 P **P 13 52 28.8 +0.1**
PLBC Pleasant Camp 82.95 30 P **P 13 52 29.7 +1.2**
baz=290,SNR=12
DEV Deva 83.01 316 ⇑P **P 13 52 30.2 +1.2**
KMBO Kilima Mbogo 83.03 267 P **P 13 52 32.2 +2.2**
comp=Z,0.8nm,0.9s,baz=52,slow=19,SNR=18
KMBO LR LR 14 28 54.4
comp=Z,5.0nm,18.9s,baz=94,slow=35
KMBO Kilima Mbogo 83.03 267 P **P 13 52 31.9 +1.9**
KMBO IAmb IAmb 13 52 33.7
comp=Z,34nm,1.1s
KMBO Kilima Mbogo 83.03 267 P **P 13 52 31.9 +1.9**
KMBO pmax pmax
comp=Z,34nm,1.1s
PGB Panagyurishte 83.05 312 P **P 13 52 29.5 +0.1**
CRVS Cervenica-Dubn 83.09 319 *e*P **P 13 52 30.1 +0.7**
CRVS pmax pmax
comp=Z,241nm,2.3s
MPEP Malo Peshtene 83.13 313 P **P 13 52 30.7 +1.0**
KAVA Kavala 83.22 311 P **P 13 52 29.6 -0.6**
WHY Whitehorse 83.22 29 P **P 13 52 30.9 +0.9**
WHY IAmb IAmb 13 52 32.8
comp=Z,102nm,1.1s
WHY Whitehorse 83.22 29 P **P 13 52 31.6 +1.6**
baz=291,SNR=40
GZR Gura Zlata 83.23 315 ⇑P **P 13 52 30.6 +0.4**
FARO Faro, Yukon 83.32 27 P **P 13 52 31.2 +0.9**
FARO Faro, Yukon 83.32 27 P **P 13 52 31.6 +1.2**
baz=292,SNR=146
SKAG Skagway 83.45 30 P **P 13 52 32.1 +1.1**
SKAG IAmb IAmb 13 52 33.9
comp=Z,81nm,0.9s
SKAG Skagway 83.45 30 P **P 13 52 32.7 +1.7**
baz=291,SNR=29
ZKR Zakros 83.49 305 P **P 13 52 32.1 +0.3**
LODK Lodwar 83.58 272 P **P 13 52 34.3 +1.6**
C36M Paulatuk 83.60 19 P **P 13 52 31.3 -0.2**
C36M Paulatuk 83.60 19 P **P 13 52 31.6 0.0**
baz=300,SNR=16
HERR Herculane 83.62 315 ⇓P **P 13 52 33.0 +0.8**
R31K City Hall, Gus 83.62 31 P **P 13 52 33.0 +1.2**
baz=291
MMB Musomiste 83.63 311 P **P 13 52 31.9 -0.5**
HFS Hagfors 83.65 331 LR LR 14 32 12.8
comp=Z,725nm,19.5s,baz=66,slow=37
VTS Vitosha 83.69 312 ⇑P **P 13 52 33.3 +0.5**
VTS Vitosha 83.69 312 P **P 13 52 33.1 +0.3**
VTS IAmb IAmb 13 52 34.8
comp=Z,53nm,1.3s
VTS Vitosha 83.69 312 P **P 13 52 33.1 +0.3**
VTS pmax pmax
comp=Z,53nm,1.3s
VTS Vitosha 83.69 312 P **P 13 52 33.3 +0.5**
OJC Ojcow 83.72 320 *e*P **P 13 52 31.6 -1.1**
OJC Ojcow 83.72 320 P **P 13 52 31.3 -1.3**
OJC IAmb IAmb 13 52 32.8
comp=Z,32nm,1.0s
OJC Ojcow 83.72 320 P **P 13 52 31.3 -1.3**
OJC pmax pmax
comp=Z,32nm,1.0s
SIRR Siria 83.73 316 ⇓P **P 13 52 33.7 +1.0**
SANT Santorini 83.75 306 ⇓P **P 13 52 32.2 -0.9**
SANT Santorini 83.75 306 P **P 13 52 32.2 -0.9**
SANT IAmb IAmb 13 52 33.3
comp=Z,109nm,1.2s
SANT Santorini 83.75 306 P **P 13 52 32.0 -1.1**
BLKB Belogradchik 83.80 314 ⇑P **P 13 52 33.8 +0.6**
DAG Danmarks Havn 83.81 351 *i* P **P 13 52 32.1 -0.4**
DAG IAmb IAmb 13 52 32.8
comp=Z,88nm,0.9s
KECS Kecovo 83.83 319 *e*P **P 13 52 33.9 +0.7**
N32M Quiet Lake 83.85 28 P **P 13 52 34.2 +1.1**
baz=293
BZS Buzias 83.94 316 ⇓P **P 13 52 34.2 +0.3**
BESE Bessie Mountai 84.00 31 P **P 13 52 35.1 +1.1**
KKB Krupnik 84.01 312 P **P 13 52 34.0 -0.3**
MMPY Sheldon Lake, 84.06 26 P **P 13 52 35.5 +1.4**
baz=294,SNR=47
MDVR Moldovita 84.13 315 ⇓P **P 13 52 35.7 +0.9**
P32M Atlin 84.16 29 P **P 13 52 36.0 +1.3**
baz=292
KYMI Kymi, Euboea I 84.17 308 P **P 13 52 33.9 -1.3**
NC405 NORSAR Array S 84.17 332 P **P 13 52 34.1 -0.6**
GKP Gorka Klasztor 84.25 324 *e*P **P 13 52 35.2 0.0**
GKP Gorka Klasztor 84.25 324 *e*P **P 13 52 35.8 +0.6**
LANS Liptovska Anna 84.26 319 *e*P **P 13 52 36.5 +1.1**
LANS pmax pmax
comp=Z,5.0nm,0.8s
R32K Eaglecrest 84.28 31 P **P 13 52 36.9 +1.6**
baz=292,SNR=7.3
NC303 NORSAR Array S 84.28 333 P **P 13 52 34.6 -0.7**
NC303 IAmb IAmb 13 52 37.1
comp=Z,76nm,1.2s
SIT Sitka 84.32 32 P **P 13 52 36.8 +1.3**
SIT Sitka 84.32 32 P **P 13 52 36.8 +1.3**
SIT pmax pmax
comp=Z,125nm,1.0s
SIT Sitka 84.32 32 P **P 13 52 36.8 +1.3**
baz=291,SNR=17
P33M Teslin, Yukon 84.34 29 P **P 13 52 36.0 +0.3**
P33M Teslin, Yukon 84.34 29 P **P 13 52 36.9 +1.2**
baz=293,SNR=40
JIS Juneau Island 84.34 31 P **P 13 52 36.7 +1.2**
JIS IAmb IAmb 13 52 38.6
comp=Z,105nm,1.1s
KNT Kendrikon 84.35 311 P **P 13 52 34.1 -1.9**
PSZ Piszkesteto 84.38 318 ⇓P **P 13 52 36.9 +0.8**
PSZ Piszkesteto 84.38 318 P **P 13 52 36.1 0.0**
PSZ IAmb IAmb 13 52 37.9
comp=Z,59nm,1.7s
PSZ Piszkesteto 84.38 318 P **P 13 52 36.1 0.0**
PSZ pmax pmax
comp=Z,59nm,1.7s
PSZ Piszkesteto 84.38 318 P **P 13 52 36.2 +0.1**
NB201 NORSAR Array S 84.39 332 P **P 13 52 35.1 -0.7**
NB201 IAmb IAmb 13 52 36.9
comp=Z,137nm,1.4s
NC602 NORSAR Array S 84.40 332 P **P 13 52 35.3 -0.6**
NC602 NORSAR Array S 84.40 332 *e*P **P 13 52 35.6 -0.2**
NB2 NORSAR Subarra 84.43 332 P **P 13 52 35.2 -0.8**
comp=Z,33nm,0.9s,baz=69,slow=4.6
NB2 NORSAR Subarra 84.43 332 P **P 13 52 35.2 -0.8**
baz=69,slow=4.6
NOA NORSAR Array B 84.43 332 P **P 13 52 35.3 -0.8**
comp=Z,10nm,0.7s,baz=67,slow=4.7,SNR=48
NOA LR LR 14 33 01.2
comp=Z,846nm,18.5s,baz=75,slow=38
comp=Z,10nm,0.7s
MHLO Agja Marina, M 84.48 306 P **P 13 52 35.7 -1.1**
IDI Anoyia 84.49 305 ⇓P **P 13 52 37.0 +0.1**
IDI Anoyia 84.49 305 P **P 13 52 35.7 -1.3**
IDI Anoyia 84.49 305 P **P 13 52 36.2 -0.7**
NC204 NORSAR Array S 84.53 333 P **P 13 52 35.9 -0.7**
NC204 IAmb IAmb 13 52 37.8
comp=Z,86nm,1.0s
S32K Killisnoo 84.55 31 P **P 13 52 37.7 +1.1**
baz=292,SNR=12
NBO00 NORSAR Array S 84.62 332 P **P 13 52 36.0 -1.0**
VLY Voula,Athens 84.62 308 P **P 13 52 35.9 -1.6**
NAO01 NORSAR Array S 84.65 332 P **P 13 52 36.0 -1.1**
NAO01 IAmb IAmb 13 52 38.0
comp=Z,93nm,1.2s
STIP Stip 84.70 312 *i* P **P 13 52 36.4 -1.4**
GRG Griva 84.76 311 P **P 13 52 36.9 -1.2**
OKC Ostrava-Krasne 84.86 320 *e*P **P 13 52 38.8 +0.4**
OKC MLR MLR
comp=Z,500nm,18.7s
OKC Ostrava-Krasne 84.86 320 *e*P **P 13 52 38.8 +0.4**
OKC AMS AMS 14 32 50.0
comp=Z,500nm,18.7s
VYHS Vyhne 84.87 319 *e*P **P 13 52 39.0 +0.5**
VYHS pmax pmax
comp=Z,102nm,2.1s
DOMB Dombas 84.94 334 *e*P **P 13 52 38.5 -0.1**
DOMB IAmb IAmb 13 52 39.9
comp=Z,38nm,1.0s
LIT Litokhoron 84.95 310 P **P 13 52 37.7 -1.4**
LIT IAmb IAmb 13 52 39.4
comp=Z,26nm,0.9s
LIT Litokhoron 84.95 310 P **P 13 52 37.8 -1.3**
LIT Litokhoron 84.95 310 P **P 13 52 37.7 -1.4**
LIT pmax pmax
comp=Z,27nm,0.9s
BUD Budapest 85.07 318 P **P 13 52 39.6 +0.1**
Q32M Nakina River 85.09 30 P **P 13 52 41.4 +1.8**
baz=294,SNR=36
OSL Oslo 85.10 331 *e*P **P 13 52 39.3 0.0**
SKO Skopje 85.15 312 *i* P **P 13 52 39.9 -0.2**
MAUC Maruska 85.21 320 *e*P **P 13 52 40.9 +0.7**
MAUC AMS AMS 14 33 00.0
comp=Z,900nm,14.6s
MORC Moravsky Berou 85.25 321 ⇑P **P 13 52 41.1 +0.7**
MORC Moravsky Berou 85.25 321 P **P 13 52 40.5 +0.1**
MORC IAmb IAmb 13 52 42.4
comp=Z,87nm,1.9s
MORC Moravsky Berou 85.25 321 P **P 13 52 40.5 +0.1**
MORC pmax pmax
comp=Z,87nm,1.9s
MORC Moravsky Berou 85.25 321 *e*P **P 13 52 40.8 +0.4**
KRND KRANIDI 85.25 307 P **P 13 52 38.5 -2.1**
TYRN Tyrnavos 85.25 310 P **P 13 52 38.9 -1.7**
MOL Molde 85.34 335 *e*P **P 13 52 39.9 -0.6**
MOL IAmb IAmb 13 52 40.2
comp=Z,25nm,0.8s
KZN Kozani 85.42 311 P **P 13 52 40.2 -1.3**
SRO Srobarova 85.42 318 *e*P **P 13 52 42.1 +0.9**
SRO pmax pmax
comp=Z,28nm,0.7s
JAVC Velka Javorina 85.48 320 *e*P **P 13 52 43.0 +1.4**
DIVS Divibare 85.51 315 P **P 13 52 41.8 -0.1**
R33M Jennings River 85.53 29 P **P 13 52 43.6 +1.9**
baz=295,SNR=65
CSKK Cskako 85.60 318 P **P 13 52 42.5 +0.4**
VLI Veliai 85.60 307 P **P 13 52 40.3 -2.1**
KRLC Kraliky 85.61 321 *e*P **P 13 52 42.4 +0.2**
KRLC MLR MLR
comp=Z,500nm,21.0s
KRLC Kraliky 85.61 321 *e*P **P 13 52 42.4 +0.2**
KRLC AMS AMS 14 33 10.0
comp=Z,500nm,21.0s
T33K Petersburg 85.62 32 P **P 13 52 43.1 +1.2**
baz=293
KSP Ksiaz 85.63 322 *e*P **P 13 52 42.7 +0.5**
KTHA Kythira Island 85.64 306 P **P 13 52 41.5 -1.1**
KTHR Kythira 85.69 306 P **P 13 52 41.9 -0.9**
MORH Mrgy, Hungar 85.73 317 ⇑P **P 13 52 43.1 +0.3**
MORH Mrgy, Hungar 85.73 317 P **P 13 52 43.1 +0.3**
KONO Kongsberg 85.74 331 P **P 13 52 41.9 -0.6**
KONO Kongsberg 85.74 331 *c*e**P 13 52 41.9 -0.6**
KONO pmax pmax
comp=Z,67nm,2.5s
KONO Kongsberg 85.74 331 *e*P **P 13 52 41.9 -0.6**
SMOL Smolenice 85.74 319 *e*P **P 13 52 44.7 +1.9**
SMOL pmax pmax
comp=Z,10.0nm,1.3s
AKN Aaknes 85.75 334 *e*P **P 13 52 42.7 +0.1**
AKN IAmb IAmb 13 52 43.8
comp=Z,104nm,1.0s
OSTC Ostas 85.78 322 *e*P **P 13 52 42.6 -0.4**
OSTC AMS AMS 14 33 00.0
comp=Z,800nm,16.9s
DPC Dobruska-Polom 85.79 321 *e*P **P 13 52 43.8 +0.7**
DPC *e* 13 52 53.9
DPC MLR MLR
comp=Z,600nm,20.9s
DPC Dobruska-Polom 85.79 321 *e*P **P 13 52 43.8 +0.7**
DPC *ex* x 13 52 53.9
DPC AMS AMS 14 33 10.0
comp=Z,600nm,20.9s
TGTN Hyland Airport 85.80 26 P **P 13 52 44.5 +1.5**
baz=297,SNR=82
EVR Evrytania 85.81 309 P **P 13 52 42.1 -1.4**
U33K Whale Pass 85.81 32 P **P 13 52 44.4 +1.5**
baz=293,SNR=16
CHVC Chvalec 85.86 322 *e*P **P 13 52 44.0 +0.6**
CHVC AMS AMS 14 33 10.0
comp=Z,700nm,17.5s
SKAR Skarslia 85.87 333 *e*P **P 13 52 43.8 +0.5**
SKAR IAmb IAmb 13 52 44.0
comp=Z,31nm,0.8s
OHR Ohrid 85.87 312 *i* P **P 13 52 43.0 -0.8**
MODS Modra-Piesok 85.89 319 *e*P **P 13 52 44.1 +0.5**
MODS pmax pmax
comp=Z,105nm,1.9s
UPC Upice 85.92 322 *e*P **P 13 52 44.0 +0.3**
UPC MLR MLR
comp=Z,700nm,17.2s
UPC Upice 85.92 322 *e*P **P 13 52 44.0 +0.3**
UPC AMS AMS 14 33 10.0
comp=Z,700nm,17.2s
PHP Peshkopia 85.95 312 P **P 13 52 42.8 -1.3**
JMIC Jan Mayen 85.96 345 LR LR 14 34 18.8
comp=Z,429nm,20.4s,baz=58,slow=38
DBG Daneborg 85.98 350 *e*P **P 13 52 43.2 -0.3**
VRAC Vranov 85.99 320 ⇑P **P 13 52 45.2 +1.1**
VRAC Vranov 85.99 320 LR LR 14 34 15.9
comp=Z,433nm,18.6s,baz=76,slow=38
VRAC Vranov 85.99 320 *e*P **P 13 52 44.8 +0.8**
ZST Bratislava 86.06 319 *e*P **P 13 52 45.2 +0.8**
ZST pmax pmax
comp=Z,33nm,1.0s
CRAG Craig 86.06 33 P **P 13 52 45.4 +1.2**
CRAG IAmb IAmb 13 52 46.9
comp=Z,97nm,1.2s
CRAG Craig 86.06 33 P **P 13 52 45.4 +1.2**
baz=293,SNR=16
S34M Telegraph Cree 86.07 30 P **P 13 52 46.1 +1.9**
baz=295,SNR=34
WRAK Wrangell Islan 86.08 32 P **P 13 52 45.3 +1.0**
WRAK IAmb IAmb 13 52 46.7
comp=Z,58nm,1.1s
WRAK Wrangell Islan 86.08 32 P **P 13 52 45.7 +1.4**
baz=294,SNR=11
MPLH Magyarpolny 86.13 318 P **P 13 52 45.2 +0.4**
KOVH Kovagotottos 86.13 317 P **P 13 52 44.8 0.0**
DRO Drossia 86.17 308 P **P 13 52 44.2 -1.0**
EGYH Egyhazaskeszo 86.18 318 P **P 13 52 45.9 +0.9**
KRUC Moravsky 86.20 320 *e*P **P 13 52 45.6 +0.5**
NEEM North Greenlan 86.20 358 *e*P **P 13 52 45.4 +0.5**
NEEM IAmb IAmb 13 52 46.5
comp=Z,224nm,1.1s
WTLY Watson Lake, Y 86.21 28 P **P 13 52 45.6 +0.7**
WTLY Watson Lake, Y 86.21 28 P **P 13 52 46.3 +1.4**
baz=297,SNR=14
ITM Ithomi 86.24 308 P **P 13 52 44.5 -1.0**
ITM IAmb IAmb 13 52 45.8
comp=Z,58nm,0.9s
ITM Ithomi 86.24 308 P **P 13 52 44.5 -1.0**
RLS Riolos of Patr 86.32 308 P **P 13 52 45.2 -0.7**
DLBC Dease Lake 86.38 30 LR LR 14 31 08.1
comp=Z,179nm,20.9s,baz=298,slow=35
DLBC Dease Lake 86.38 30 P **P 13 52 47.1 +1.3**
DLBC IAmb IAmb 13 52 48.9
comp=Z,108nm,1.1s
DLBC Dease Lake 86.38 30 P **P 13 52 47.8 +1.9**
baz=296,SNR=46
PYL PYLOS 86.47 307 P P 13 52 40.5 -6.1
TIR Tirane 86.47 312 P **P 13 52 46.2 -0.4**
TIR IAmb IAmb 13 53 00.6
comp=Z,76nm,1.3s
TIR Tirane 86.47 312 P **P 13 52 46.2 -0.4**
TIR pmax pmax
comp=Z,76nm,1.3s
RUE Ruedersdorf 86.49 324 *e*P **P 13 52 47.1 +0.7**
RES Resolute Bay 86.55 9 LR LR 14 35 45.8
comp=Z,233nm,19.2s,baz=323,slow=39
RES Resolute Bay 86.55 9 P **P 13 52 46.6 +0.3**
RES Resolute Bay 86.55 9 P **P 13 52 46.6 +0.3**
RES pmax pmax
comp=Z,94nm,0.9s
PDG Podgorica 86.55 313 P **P 13 52 46.3 -0.6**
HYA Hoyanger 86.56 334 *e*P **P 13 52 46.7 +0.1**
HYA IAmb IAmb 13 52 47.5
comp=Z,52nm,1.0s
SOP Sopron 86.58 319 P **P 13 52 46.9 -0.1**
TREC Trest 86.67 321 *e*P **P 13 52 48.2 +0.8**
TREC *e* 13 53 00.4
TREC MLR MLR
comp=Z,500nm,20.3s
TREC Trest 86.67 321 *e*P **P 13 52 48.2 +0.8**
TREC *ex* x 13 53 00.4
TREC AMS AMS 14 34 00.0
comp=Z,500nm,20.3s
TSLK Tsoukalades, L 86.69 309 P **P 13 52 46.3 -1.4**
RONA Rosalia, Austr 86.74 319 *e*P **P 13 52 48.0 +0.2**
comp=Z,8.4nm,1.0s
PVCC Panska Ves 86.77 322 AMS AMS 14 33 50.0
comp=Z,700nm,18.1s
GOPC GO Pecny, Ondr 86.87 321 AMS AMS 14 33 40.0
comp=Z,700nm,17.1s
T35M Bob Quinn 86.90 31 P **P 13 52 50.1 +1.7**
baz=296,SNR=11
V35K Ketchikan 86.91 33 P **P 13 52 48.8 +0.4**
baz=294
CONA Conrad Observa 86.93 319 *e*P **P 13 52 48.9 +0.1**
comp=Z,15nm,1.1s,SNR=5.3
WRGLY Wrigley 86.94 24 P **P 13 52 49.6 +1.2**
baz=301,SNR=20
VLS Valsamata 86.94 309 P **P 13 52 47.9 -1.1**
ODD1 Odda 86.96 332 *e*P **P 13 52 48.5 -0.1**
PSDA Pessada-Kefalo 86.97 309 P **P 13 52 47.8 -1.2**
PRU Pruhonice 86.99 321 *e*P **P 13 52 49.1 +0.2**
PRU *e* 13 53 00.2
PRU MLR MLR
comp=Z,700nm,18.9s
PRU Pruhonice 86.99 321 *e*P **P 13 52 49.1 +0.2**
PRU *ex* x 13 53 00.2
PRU AMS AMS 14 33 50.0
comp=Z,700nm,18.9s
BRG Berggiesshubel 87.01 322 *i* P **P 13 52 49.4 +0.4**
BRG Amp 13 52 50.6
comp=Z,22nm,1.0s
BRG *ex* x 13 52 60.0
BRG Amp 13 53 02.6
comp=Z,21nm,1.4s
BRG Amp 14 34 39.0
comp=N,0.4nm,19.5s
BRG Amp 14 34 39.0
comp=E,0.4nm,19.9s
BRG Amp 14 34 43.0
comp=Z,0.6nm,18.3s
BRG Berggiesshubel 87.01 322 *i* P **P 13 52 49.4 +0.4**
BRG *e* 13 52 59.9
BRG pmax pmax
comp=Z,22nm,1.0s
BRG MLR MLR
comp=N,384nm,19.5s
BRG MLR MLR
comp=E,368nm,19.9s
BRG MLR MLR
comp=Z,618nm,18.3s
KEK Kerkira 87.04 310 P **P 13 52 48.3 -1.1**
TULEG Thule 87.12 2 P **P 13 52 48.9 -0.1**
TULEG IAmb IAmb 13 52 50.3
comp=Z,78nm,1.0s
BLS5 Blasjo 87.27 332 *e*P **P 13 52 50.1 0.0**
BLS5 IAmb IAmb 13 52 51.0
comp=Z,87nm,1.1s
BER Bergen 87.31 333 *e*P **P 13 52 49.8 -0.4**
DIB Dawson Inlet, 87.31 35 P **P 13 52 50.7 +0.3**
DIB IAmb IAmb 13 52 52.3
comp=Z,78nm,1.6s
ASK Askoy 87.32 333 *e*P **P 13 52 50.3 +0.1**
RAR Rarotonga 87.37 113 LR LR 14 24 38.5
comp=Z,113nm,21.2s,baz=316,slow=30
CLL Collm 87.39 323 P **P 13 52 50.5 -0.2**
CLL Collm 87.39 323 ⇑*i*P **P 13 52 50.6 -0.2**
CLL *i* *PP **pP 13 53 00.2 -3.1**
CLL *e* 14 03 12.0
CLL *e*S **ScS 14 03 35.0 -0.3**
CLL pmax pmax
comp=Z,86nm,2.3s
CLL Collm 87.39 323 ⇑*i*P **P 13 52 50.6 -0.2**
comp=Z,86nm,2.3s
CLL *i* sP **PcP 13 52 56.2 +3.4**
CLL *e*PP **PP 13 56 13.0 -2.2**
CLL *e*SKSac **SKSac 14 03 15.0 -0.1**
CLL *e*S **ScS 14 03 35.0 -0.3**
CLL *e*SP **SPn 14 04 28.0 +1.0**
CLL *e*PS **PS 14 04 40.0 +5.0**
CLL *e*PPS PPS 14 04 58.0
CLL *e*SS SS 14 09 24.0 +11
CLL *e*SSS SSS 14 12 42.0
CLL *e*SSSS 14 15 30.0
ARSA Arzberg 87.39 319 *e*P **P 13 52 50.9 -0.1**
comp=Z,11nm,1.2s,SNR=5.2
CKRC Cesky Krumlov 87.56 320 *e*P **P 13 52 52.1 +0.3**
CKRC *ex* x 13 53 03.1
KHC Kasperske Hory 87.89 321 P **P 13 52 53.4 +0.1**
KHC Kasperske Hory 87.89 321 P **P 13 52 53.4 +0.1**
KHC pmax pmax
comp=Z,24nm,1.6s
KHC Kasperske Hory 87.89 321 *e*P **P 13 52 52.5 -0.8**
KHC *ex* x 13 53 04.2
KHC AMS AMS 14 34 20.0

comp=Z,600nm,18.6s
SOKA Soboth 87.91 318 *e*P **P 13 52 53.6 0.0**
comp=Z,4.6nm,0.7s
KMY Karmoy 87.92 332 *e*P **P 13 52 53.3 +0.1**
GEC2 GERESS Array S 87.93 321 P **P 13 52 53.3 -0.3**
GERES GERESS Array B 87.93 321 P **P 13 52 53.6 0.0**
comp=Z,2.8nm,0.8s,baz=80,slow=4.5,SNR=28
comp=Z,2.8nm,0.8s
MOA Molln 87.96 319 *e*P **P 13 52 53.7 +0.1**
comp=Z,18nm,0.9s,SNR=9.4
RUBB Prince Rupert 88.04 33 P **P 13 52 54.2 +0.4**
RUBB IAmb IAmb 13 52 56.1
comp=Z,77nm,1.7s
NKC Novy Kostel 88.14 322 AMS AMS 14 35 10.0
comp=Z,700nm,16.7s
HG4B Hotspring 88.40 35 P **P 13 52 55.8 +0.2**
HG4B IAmb IAmb 13 52 57.6
comp=Z,32nm,1.1s
GRNB Grenville Isla 88.41 34 P **P 13 52 56.0 +0.4**
GRNB IAmb IAmb 13 52 58.0
comp=Z,25nm,1.0s
FLDN Fort Liard 88.48 26 P **P 13 52 57.3 +1.5**
baz=301
KBA Koelnbreinsper 88.83 319 *e*P **P 13 52 57.5 -0.5**
comp=Z,3.3nm,0.5s
MBAR Mbarara 89.13 269 LR LR 14 32 26.0
comp=Z,115nm,19.0s,baz=48,slow=35
MBAR Mbarara 89.13 269 P **P 13 53 01.1 +1.1**
MBAR Mbarara 89.13 269 P **P 13 53 01.1 +1.1**
MBAR pmax pmax
comp=Z,14nm,1.0s
SGRT San Giovanni R 89.24 313 P **P 13 52 58.9 -1.0**
SGRT IAmb IAmb 13 53 49.9
comp=Z,76nm,1.4s
CLUD Cludinico 89.37 319 P **P 13 52 59.1 -1.3**
ABTA Abfaltersbach 89.49 319 *e*P **P 13 53 00.0 -0.9**
comp=Z,6.7nm,0.7s
STAL STALIGIAL 89.55 318 P **P 13 53 00.3 -0.9**
CUC Castrocucco 89.83 312 P **P 13 53 01.5 -1.2**
WTTA Wattenberg 89.83 320 *e*P **P 13 53 02.5 -0.2**
comp=Z,20nm,0.7s,SNR=9.0
WATA Walderalm 89.83 320 *e*P **P 13 53 02.1 -0.5**
comp=Z,26nm,1.2s,SNR=12
SUMG Summit 90.06 354 P **P 13 53 03.2 -0.3**
SUMG Summit 90.06 354 P **P 13 53 03.2 -0.3**
SUMG pmax pmax
comp=Z,25nm,1.1s
SUMG Summit 90.06 354 *i*P **P 13 53 03.0 -0.5**
SUMG IAmb IAmb 13 53 04.7
comp=Z,36nm,1.1s
SQTA Sankt Quirin 90.11 320 *e*P **P 13 53 03.8 -0.1**
comp=Z,14nm,0.6s,SNR=14
MOTA Moosalm 90.12 320 *i*P **P 13 53 03.7 -0.3**
comp=Z,22nm,0.9s,SNR=7.7
BBB Bella Bella 90.15 35 LR LR 14 33 20.1
comp=Z,86nm,20.6s,baz=272,slow=35
RETA Reutte 90.27 320 *i*P **P 13 53 04.4 -0.2**
comp=Z,9.6nm,1.0s
CTI Castel Tesino 90.31 319 P **P 13 53 04.2 -0.6**
CTI Castel Tesino 90.31 319 P **P 13 53 04.3 -0.6**
CTI pmax pmax
comp=Z,8.0nm,0.7s
CEL Celeste 90.39 310 P **P 13 53 05.1 -0.2**
CEL IAmb IAmb 13 53 06.8
comp=Z,45nm,0.9s
FETA Feichten 90.49 320 *i*P **P 13 53 05.6 -0.1**
comp=Z,12nm,0.8s,SNR=13
TEOL Teolo 90.58 318 P **P 13 53 05.9 -0.1**
TEOL IAmb IAmb 13 53 07.5
comp=Z,33nm,1.1s
YKA Yellowknife Ar 90.69 22 P **P 13 53 06.4 +0.4**
comp=Z,57nm,0.8s,baz=312,slow=4.5,SNR=56
YKA PKiKP **PKiKP 13 58 00.8 +0.8**
comp=Z,1.4nm,0.7s,baz=288,slow=2.0,SNR=3.7
YKA LR LR 14 38 02.7
comp=Z,82nm,19.4s,baz=298,slow=38
YKA Yellowknife Ar 90.69 22 P **P 13 53 05.8 -0.3**
YKA Yellowknife Ar 90.69 22 *i*P **P 13 53 06.8 +0.7**
YKA pmax pmax
comp=Z,57nm,0.8s
DAVA Damuels 90.90 320 *e*P **P 13 53 07.6 0.0**
comp=Z,18nm,1.4s,SNR=5.2
FUORN Ofenpass-Fuorn 90.95 319 P **P 13 53 08.1 +0.1**
FUORN IAmb IAmb 13 53 09.8
comp=Z,57nm,1.4s
DAVOX Davos/Dischmat 91.12 320 LR LR 14 37 47.8
comp=Z,502nm,18.8s,baz=82,slow=38
SALO Salr 91.21 318 P **P 13 53 09.1 +0.1**
SALO IAmb IAmb 13 53 10.5
comp=Z,50nm,0.8s
BFO Black Forest 91.39 322 P **P 13 53 09.4 -0.3**
BFO Black Forest 91.39 322 P **P 13 53 09.4 -0.3**
BFO pmax pmax
comp=Z,15nm,1.1s
TUE Stuetta 91.58 320 P **P 13 53 10.6 -0.3**
TUE IAmb IAmb 13 53 13.2
comp=Z,68nm,1.6s
VAE Valguarnera 91.77 310 LR LR 14 41 51.3
comp=Z,102nm,18.9s,baz=40,slow=40
WLF Walferdange 92.04 323 P **P 13 53 13.2 +0.5**
WLF IAmb IAmb 13 53 14.7
comp=Z,52nm,1.5s
WLF Walferdange 92.04 323 P **P 13 53 13.2 +0.5**
WLF pmax pmax
comp=Z,52nm,1.5s
ECH Echery 92.13 322 P **P 13 53 12.8 -0.3**
ECH Echery 92.13 322 P **P 13 53 12.8 -0.3**
ECH pmax pmax
comp=Z,12nm,1.1s
HILA High Level 92.16 26 P **P 13 53 13.4 +0.5**
SENIN Lac Senin/Sane 92.90 320 P **P 13 53 16.6 -0.4**
MANA Manning 92.90 28 P **P 13 53 17.0 +0.5**
WAPA Wapiti River 93.13 29 P **P 13 53 17.5 -0.1**
MAW Mawson 93.30 199 P **P 13 53 18.9 +1.1**
comp=Z,11nm,1.0s,baz=45,slow=6.4,SNR=16
MAW PKKP **PKKPdf 14 10 26.1 -0.9**
comp=Z,4.8nm,1.0s,baz=273,slow=2.8,SNR=4.4
MAW LR LR 14 33 52.9
comp=Z,140nm,18.2s,baz=53,slow=34
comp=Z,11nm,1.0s
MAW Mawson 93.30 199 P **P 13 53 19.1 +1.3**
MAW Mawson 93.30 199 P **P 13 53 19.1 +1.3**
MAW pmax pmax
comp=Z,8.0nm,1.4s
ICESG Greenland Ices 93.48 353 *e*P **P 13 53 20.2 +0.9**
ICESG IAmb IAmb 13 53 20.9
comp=Z,16nm,0.8s
BORG Borgarnes 93.82 344 LR LR 14 40 04.9
comp=Z,360nm,18.9s,baz=25,slow=38
EKA Eskdalemuir Ar 93.85 331 PKKPbc PKKPbc 14 10 24.8 -1.0
comp=Z,1.7nm,0.8s,baz=225,slow=1.7,SNR=4.7
EKA LR LR 14 40 33.4
comp=Z,659nm,18.2s,baz=30,slow=39
BNI Bardonecchia 93.89 319 P **P 13 53 21.2 -0.3**
BNI Bardonecchia 93.89 319 P **P 13 53 21.2 -0.3**
LLLB Lilloet 94.32 34 P **P 13 53 23.8 +0.6**
LLLB IAmb IAmb 13 53 25.8
comp=Z,30nm,1.1s
PGC Sidney 94.48 36 P **P 13 53 24.8 +0.9**
PGC IAmb IAmb 13 53 26.3
comp=Z,24nm,1.0s
BRLDA Berland Lookou 94.64 30 P **P 13 53 25.5 +0.9**
BRLDA IAmb IAmb 13 53 27.0
comp=Z,49nm,1.0s
B04A Port Angeles 94.75 37 P **P 13 53 26.3 +1.2**
B04A IAmb IAmb 13 53 27.9
comp=Z,22nm,1.1s
SSF Saint Saulge 94.85 322 *e*P **P 13 53 24.8 -0.9**
SSF pmax pmax
comp=Z,69nm,2.1s
PPT Papeete 95.53 107 LR LR 14 26 45.5
comp=Z,155nm,21.3s,baz=294,slow=29
PPT2 Papeete2 95.53 107 *e*S **S 14 04 43.3 -0.2**
comp=Z,116nm,26.2s
PPT2 Papeete2 95.53 107 *e*LR LR 14 24 17.4
comp=Z,422nm,25.8s
LSZ Lusaka 95.58 256 LR LR 14 34 24.6
comp=Z,526nm,18.2s,baz=102,slow=34
B06A Marblemount 95.66 36 P **P 13 53 29.4 +0.1**
B06A IAmb IAmb 13 53 31.3
comp=Z,26nm,1.1s
KEST Kesra 96.20 310 P **P 13 53 32.1 -0.1**
comp=Z,2.1nm,0.6s,baz=348,slow=5.0,SNR=2.9
KEST LR LR 14 44 45.5
comp=Z,137nm,18.1s,baz=272,slow=40
comp=Z,2.1nm,0.6s

SFJD Kangerlussuaq 96.55 356 LR LR 14 40 47.6
comp=Z,135nm,18.5s,baz=3.0,slow=38
SFJD Kangerlussuaq 96.55 356 *e*P **P 13 53 32.6 -0.3**
LTY Liberty 96.80 37 P **P 13 53 34.5 -0.1**
CAF Calviac 96.81 321 *e*P **P 13 53 34.2 -0.5**
CAF pmax pmax
comp=Z,10.0nm,1.4s
VNDA Vanda 96.83 172 P **P 13 53 34.1 +0.2**
comp=Z,6.8nm,0.9s,baz=306,slow=5.2,SNR=25
VNDA PP **PP 13 57 30.8 +1.3**
comp=Z,7.6nm,1.3s,baz=336,slow=6.8,SNR=4.1
VNDA PKKP **PKKPbc 14 10 16.9 -2.1**
comp=Z,1.7nm,0.8s,baz=182,slow=1.1,SNR=13
VNDA LR LR 14 38 56.4
comp=Z,96nm,19.7s,baz=344,slow=36
comp=Z,6.8nm,0.9s
B08A Colville Reser 96.94 35 P **P 13 53 35.3 +0.1**
B08A IAmb IAmb 13 53 37.2
comp=Z,17nm,0.9s
EDM Edmonton 97.08 29 P **P 13 53 36.1 +0.4**
EDM IAmb IAmb 13 53 37.7
comp=Z,41nm,1.3s
EDM Edmonton 97.08 29 P **P 13 53 36.1 +0.4**
EDM pmax pmax
comp=Z,41nm,1.3s
TBI Tubuai 97.13 112 *e*LR LR 14 25 01.4
comp=Z,361nm,26.0s
SBA Scott Base 97.79 171 P Pdif 13 53 39.5 +1.3
SBA Scott Base 97.79 171 P Pdif 13 53 39.5 +1.3
SBA pmax pmax
comp=Z,15nm,1.6s
D08A Wollman Farm, 97.90 36 P **P 13 53 39.8 +0.2**
HAWA Hanford 97.93 37 P **P 13 53 39.8 +0.2**
HAWA IAmb IAmb 13 53 42.0
comp=Z,21nm,1.6s
NEW Newport 98.21 34 P **P 13 53 40.9 0.0**
NEW IAmb IAmb 13 53 42.9
comp=Z,13nm,1.1s
NEW Newport 98.21 34 P **P 13 53 40.9 0.0**
NEW pmax pmax
comp=Z,13nm,1.1s
NEW Newport 98.21 34 P Pdif 13 53 41.5 +0.6
baz=306
YBH Yreka Blue Hor 98.47 42 LR LR 14 31 24.0
comp=Z,63nm,21.4s,baz=304,slow=31
E09A Wood Farm, Sta 98.65 36 P Pdif 13 53 43.5 +0.6
WALA Waterton Lakes 99.42 32 P **Pdif 13 53 46.9 +0.4**
WALA IAmb IAmb 13 53 49.0
comp=Z,24nm,1.1s
FRB Frobisher Bay 99.87 4 LR LR 14 43 34.1
comp=Z,104nm,18.6s,baz=12,slow=38
MSO Missoula 100.79 34 P **Pdif 13 53 52.7 +0.1**
baz=308
TAOE Nuku Hiva Isla 102.17 96 *e*LR LR 14 27 21.5
comp=Z,276nm,22.5s
EGMT Eagleton 102.20 31 P **Pdif 13 53 59.3 +0.6**
baz=312
HLID Hailey 102.53 37 P **Pdif 13 54 01.5 +1.1**
baz=307
BOZ Bozeman (W) 102.82 34 P **Pdif 13 54 02.1 +0.4**
baz=310
NVAR Mina Array Bea 103.08 43 P **Pdif 13 54 03.4 +0.3**
comp=Z,0.7nm,0.7s,baz=300,slow=5.7,SNR=7.1
NVAR PP **PKiKP 13 58 21.0 -1.8**
comp=Z,0.6nm,0.6s,baz=293,slow=7.8,SNR=4.6
NVAR PKKPbc **PKKPbc 14 10 00.0 +0.1**
comp=Z,0.6nm,0.7s,baz=166,slow=4.5,SNR=4.5
NVAR PKKPab PKKPdf 14 10 20.1 +13
comp=Z,1.0nm,0.8s,baz=135,slow=4.8,SNR=6.2
ESDC Sonseca Array 103.41 319 PP **PP 13 58 21.9 +2.1**
comp=Z,0.5nm,0.9s,baz=65,slow=6.1,SNR=4.7
PDAR Pinedale Array 105.78 35 Pdiff **Pdif 13 54 14.9 -0.1**
comp=Z,0.2nm,0.5s,baz=71,slow=41,SNR=2.9
PDAR PKiKP **PKiKP 13 58 27.8 +0.1**
comp=Z,0.6nm,0.6s,baz=200,slow=1.0,SNR=4.9
PDAR PKKPbc **PKKPbc 14 09 51.5 -0.5**
comp=Z,0.7nm,0.6s,baz=136,slow=4.9,SNR=7.3
PDAR PKKPab **PKKPab 14 10 07.7 -2.3**
comp=Z,1.8nm,0.8s,baz=116,slow=6.8,SNR=11
QSPA South Pole Qui 106.22 180 Pdiff **Pdif 13 54 18.0 +1.9**
comp=Z,3.2nm,1.0s,baz=245,slow=0.7,SNR=12
TUQ Turquoise Moun 106.33 45 P **PKiKP 13 58 29.9 +1.1**
baz=304
HEC Hector,Ludlow 106.39 45 P **PKiKP 13 58 30.1 +1.3**
baz=304
MURC Murrieta 106.47 47 P **PKiKP 13 58 30.7 +1.8**
baz=303
GMRC Granite Mounta 106.88 45 P **PKiKP 13 58 30.7 +0.9**
baz=305
BELC Belle Mtn. Jos 107.09 46 P **PKiKP 13 58 31.1 +0.9**
baz=304
MONP2 Monument Peak 107.40 47 P **PKiKP 13 58 32.0 +1.1**
baz=304
K22A Casper 107.52 34 P **PKiKP 13 58 31.9 +1.1**
baz=314
IRM Iron Mountain 107.58 45 P **PKiKP 13 58 32.3 +1.3**
baz=305
BC3 Big Chuckawall 107.65 46 P **PKiKP 13 58 32.0 +0.8**
baz=304
RSSD Black Hills 107.78 31 P **PKiKP 13 58 31.4 +0.1**
baz=316
RSSD Black Hills 107.78 31 P **PKiKP 13 58 32.2 +1.0**
baz=316
SWSC Sam W. Stewart 107.81 47 P **PKiKP 13 58 32.6 +1.2**
baz=304
AGMN Agassiz Nation 108.24 24 P **PKiKP 13 58 33.0 +1.2**
baz=324
O20A White River Ci 108.26 37 P **PKiKP 13 58 33.0 +0.7**
baz=312
N23A Red Feather La 109.04 35 P **PKiKP 13 58 34.8 +1.0**
baz=314
WUAZ Wupatki 109.29 42 P **PKiKP 13 58 35.5 +1.2**
baz=308
MVCO Mesa Verde 110.02 39 P **PKiKP 13 58 36.6 +0.9**
baz=311
EYMN Ely 110.16 22 P **PKiKP 13 58 36.5 +1.1**
baz=328
214A Organ Pipe Nat 110.45 46 P **PKiKP 13 58 37.7 +1.3**
baz=306
W18A Petrified Fore 110.58 42 P **PKiKP 13 58 37.9 +1.1**
baz=309
S22A 4UR Ranch, Cre 110.67 38 P **PKiKP 13 58 37.8 +0.8**
baz=312
F36A Milaca 111.15 24 P **PKiKP 13 58 37.0 -0.3**
baz=326
SDCO Great Sand Dun 111.45 37 P **PKiKP 13 58 38.9 +0.4**
baz=313
SDCO Great Sand Dun 111.45 37 P **PKiKP 13 58 38.8 +0.3**
baz=313
ECSD EROS Data Cent 111.58 27 P **PKiKP 13 58 38.4 +0.3**
baz=322
ECSD EROS Data Cent 111.58 27 P **PKiKP 13 58 38.5 +0.3**
baz=322
TUC Tucson 111.62 45 P **PKiKP 13 58 39.1 +0.4**
baz=307
SPMN Marine on St. 111.96 24 P **PKiKP 13 58 39.6 +0.8**
baz=326
TORD Torodi Ar. Bea 112.03 292 PKiKP **PKiKP 13 58 39.9 +0.1**
comp=Z,3.8nm,0.7s,baz=30,slow=2.0,SNR=15
TORD PKKPab **PKKPab 14 09 40.8 -0.3**
comp=Z,4.1nm,1.0s,baz=253,slow=3.9,SNR=13
T25A Trinidad 112.49 37 P **PKiKP 13 58 41.3 +0.9**
baz=314
BGNE Belgrade 112.69 30 P **PKiKP 13 58 40.6 +0.2**
baz=320
BGNE Belgrade 112.69 30 P **PKiKP 13 58 40.1 -0.3**
baz=320
I37B Waseca 112.72 25 P **PKiKP 13 58 40.9 +0.5**
baz=326
ANMO Albuquerque 112.75 40 PKKPab PKKPab 14 09 37.8 -1.1
comp=Z,0.3nm,0.3s,baz=102,slow=3.7,SNR=4.0
ANMO Albuquerque 112.75 40 P **PKiKP 13 58 41.5 +0.6**
baz=312
ANMO Albuquerque 112.75 40 P **PKiKP 13 58 42.0 +1.1**
baz=312
G40A Rib Lake 112.91 22 P **PKiKP 13 58 41.1 +0.4**
baz=329
Y22D IRIS PASSCAL I 113.03 41 P **PKiKP 13 58 41.4 0.0**
baz=311
Y22F Passcal Instru 113.03 41 P **PKiKP 13 58 41.5 +0.1**
baz=311
Y22A Socorro 113.09 41 P **PKiKP 13 58 42.5 +1.0**
baz=311
121A Cookes Peak, D 113.47 43 P **PKiKP 13 58 43.1 +0.8**
baz=310
121A Cookes Peak, D 113.47 43 P **PKiKP 13 58 43.7 +1.4**
baz=310
TROLL Troll, Antarti 113.74 198 PKKPbc PKKPbc 14 09 24.2 -3.0

TROLL Troll, Antarti 113.74 198 PKPdf **PKiKP 13 58 42.6 +1.0**
TROLL Troll, Antarti 113.74 198 SKKPdf SKKPdf 14 13 22.5 +1.4
CBKS Cedar Bluff 113.86 33 P **PKiKP 13 58 42.9 +0.1**
baz=318
R32A Long Quarter, 114.68 32 P **PKiKP 13 58 44.3 +0.1**
baz=319
JFWS Jewell Farm 114.90 24 P **PKiKP 13 58 44.0 -0.5**
baz=328
JFWS Jewell Farm 114.90 24 P **PKiKP 13 58 44.9 +0.4**
baz=328
GLMI Grayling 115.19 19 P **PKiKP 13 58 45.5 +0.5**
baz=334
KSU1 Kansas State U 115.22 31 P **PKiKP 13 58 45.3 +0.1**
baz=321
L40A Anamosa 115.23 25 P **PKiKP 13 58 44.5 -0.7**
baz=327
SNAA Sanae 115.41 197 PKKPbc PKKPbc 14 09 18.1 -3.1
SNAA Sanae 115.41 197 PKPdf **PKiKP 13 58 45.0 +0.3**
SNAA Sanae 115.41 197 SKKPdf SKKPdf 14 13 11.1 -6.8
N38A Joes South For 115.43 27 P **PKiKP 13 58 45.8 +0.2**
baz=325
AMTX Amarillo 115.65 37 **PKiKP 13 58 46.5 +0.1**
AMTX Amarillo 115.65 37 P **PKPdf 13 58 47.0 +0.7**
baz=315
MSTX Muleshoe 115.65 38 P **PKiKP 13 58 46.9 +0.5**
baz=314
MSTX Muleshoe 115.65 38 P **PKiKP 13 58 46.7 +0.3**
baz=314
CLN7 Carlsbad 7 116.08 40 **PKiKP 13 58 46.8 -0.4**
HTMS Hat Mesa 116.15 40 **PKiKP 13 58 47.5 +0.1**
P38A Dawn 116.25 28 **PKiKP 13 58 46.9 -0.3**
P38A Dawn 116.25 28 P **PKiKP 13 58 47.2 0.0**
baz=324
L44A Lake County Fo 116.42 23 P **PKPdf 13 58 48.0 +0.6**
baz=330
KOWA Kowa 116.47 296 **PKPdf 13 58 48.0 -0.3**
T35A Sooner Cattle 116.96 32 **PKPdf 13 58 48.8 +0.1**
T35B Sooner Cattle 116.96 32 P **PKPdf 13 58 49.0 +0.3**
baz=321
P40A Paris 116.99 27 **PKPdf 13 58 48.2 -0.5**
P40A Paris 116.99 27 P **PKPdf 13 58 48.8 +0.1**
baz=326
VNA2 Neumayer--Watz 117.06 197 PKKPbc PKKPbc 14 09 08.0 -7.4
VNA2 Neumayer--Watz 117.06 197 PKPdf **PKiKP 13 58 48.6 +0.8**
baz=96,slow=2.0
VNA2 x x 14 09 11.2
OK045 Pawnee Station 117.11 33 **PKPdf 13 58 48.8 -0.1**
OK050 Pawnee Station 117.12 33 **PKPdf 13 58 48.9 -0.1**
OK048 Pawnee Station 117.12 33 **PKPdf 13 58 49.1 +0.1**
OK046 Pawnee Station 117.15 33 **PKPdf 13 58 48.5 -0.5**
OK044 Pawnee Station 117.23 33 **PKPdf 13 58 49.1 -0.1**
HDIL Hopedale 117.28 25 **PKPdf 13 58 48.2 -1.0**
HDIL Hopedale 117.28 25 P **PKPdf 13 58 49.0 -0.2**
baz=329
WMOK Wichita Mounta 117.40 35 **PKPdf 13 58 49.4 -0.2**
WMOK Wichita Mounta 117.40 35 PKIKP **PKPdf 13 58 49.4 -0.2**
WMOK Wichita Mounta 117.40 35 P **PKPdf 13 58 50.0 +0.4**
baz=318
WMOK Wichita Mounta 117.40 35 P **PKPdf 13 58 49.6 0.0**
baz=318
OK033 Mehan 117.41 33 **PKPdf 13 58 49.6 0.0**
VNA1 Neumayer--Stat 117.45 197 PKKPbc PKKPbc 14 09 10.2 -3.7
VNA1 Neumayer--Stat 117.45 197 PKPdf **PKiKP 13 58 49.1 +0.7**
VNA1 Neumayer--Stat 117.45 197 SKKPdf SKKPdf 14 13 06.3 -7.6
VNA3 Neumayer Olymp 117.52 196 PKKPbc PKKPbc 14 09 10.3 -3.4
VNA3 Neumayer Olymp 117.52 196 PKPdf **PKPdf 13 58 49.2 +0.5**
VNA3 Neumayer Olymp 117.52 196 SKKPdf SKKPdf 14 13 05.1 -8.7
OK031 S. Brethren Rd 117.53 33 **PKPdf 13 58 49.9 +0.1**
OK034 N. Norfolk Rd. 117.55 33 **PKPdf 13 58 49.9 0.0**
BMNY Brushton-Moira 117.72 11 P **PKPdf 13 58 50.1 +0.2**
baz=345
FNO Franklin 117.76 34 **PKPdf 13 58 50.6 +0.3**
L48A N Adams 117.84 20 **PKPdf 13 58 50.0 -0.2**
L48A N Adams 117.84 20 P **PKPdf 13 58 50.2 0.0**
baz=334
L48A P **PKPdf 13 58 50.2 0.0**
baz=334
R40A Maddies Statio 117.91 28 **PKPdf 13 58 49.8 -0.6**
R40A Maddies Statio 117.91 28 P **PKPdf 13 58 50.7 +0.2**
baz=325
S39A Bolivar 117.91 29 **PKPdf 13 58 50.2 -0.3**
S39A Bolivar 117.91 29 P **PKPdf 13 58 50.4 -0.1**
baz=324
LONY Lake Ozonia 117.91 11 P **PKPdf 13 58 50.3 0.0**
baz=344
P43A Skaggs, Pawnee 117.97 25 **PKPdf 13 58 50.4 -0.1**
P43A Skaggs, Pawnee 117.97 25 P **PKPdf 13 58 50.6 +0.1**
baz=328
TUL1 Leonard 118.10 32 **PKPdf 13 58 51.1 +0.1**
TUL1 Leonard 118.10 32 P **PKPdf 13 58 51.0 +0.1**
baz=321
TUL1 Leonard 118.10 32 P **PKPdf 13 58 51.3 +0.4**
baz=321
PKME Peaks-Kenny Pk 118.11 7 P **PKPdf 13 58 50.8 +0.2**
baz=350
TX31 Lajitas Ar. Si 118.23 43 **PKPdf 13 58 51.7 +0.2**
TX31 Lajitas Ar. Si 118.23 43 P **PKiKP 13 58 52.4 +0.9**
baz=312
TX32 Lajitas Array 118.23 43 **PKPdf 13 58 51.9 +0.4**
TXAR Lajitas Array 118.23 43 PKP **PKiKP 13 58 52.0 +0.6**
comp=Z,11nm,0.8s,baz=257,slow=0.9,SNR=103
TXAR PKKPab **PKKPab 14 09 13.3 -1.2**
comp=Z,1.3nm,1.0s,baz=150,slow=8.2,SNR=7.2
SFIN Lafayette 118.28 23 **PKPdf 13 58 50.8 -0.3**
SFIN Lafayette 118.28 23 P **PKPdf 13 58 51.2 +0.1**
baz=331
SFIN Lafayette 118.28 23 P **PKPdf 13 58 51.3 +0.1**
baz=331
N47A Urbana 118.36 22 P **PKPdf 13 58 51.0 -0.2**
baz=332
N47A P **PKPdf 13 58 51.0 -0.2**
baz=332
U38A Gravette 118.39 31 **PKPdf 13 58 51.1 -0.3**
U38A Gravette 118.39 31 P **PKPdf 13 58 51.4 0.0**
baz=322
ABTX Abilene, Hawle 118.45 37 **PKPdf 13 58 51.6 -0.1**
ABTX Abilene, Hawle 118.45 37 P **PKiKP 13 58 52.5 +0.7**
baz=316
ABTX Abilene, Hawle 118.45 37 P **PKiKP 13 58 52.2 +0.5**
baz=316
J55A Hilton 118.51 14 **PKPdf 13 58 51.4 -0.1**
J55A Hilton 118.51 14 P **PKPdf 13 58 50.7 -0.7**
baz=341
J55A P **PKPdf 13 58 50.7 -0.7**
baz=341
CCM Cathedral Cave 118.56 27 **PKPdf 13 58 51.5 -0.2**
CCM Cathedral Cave 118.56 27 PKIKP **PKPdf 13 58 51.5 -0.2**
CCM Cathedral Cave 118.56 27 P **PKPdf 13 58 51.7 0.0**
baz=326
CCM Cathedral Cave 118.56 27 P **PKPdf 13 58 51.6 0.0**
baz=326
HHAR Hobbs 118.74 31 **PKPdf 13 58 51.6 -0.5**
HHAR Hobbs 118.74 31 P **PKPdf 13 58 52.1 -0.1**
baz=323
LBNH Lisbon 118.75 9 P **PKPdf 13 58 52.0 +0.1**
baz=347
J57A Williamstown 118.79 13 P **PKPdf 13 58 51.5 -0.5**
baz=343
J57A P **PKPdf 13 58 51.5 -0.5**
baz=343
Q44A Meyer Farm, Va 118.80 25 P **PKPdf 13 58 52.3 +0.1**
baz=328
MGMO Mountain Grove 118.83 29 **PKPdf 13 58 52.0 -0.3**
N49A Columbus Grove 118.84 20 **PKPdf 13 58 51.8 -0.4**
N49A Columbus Grove 118.84 20 P **PKPdf 13 58 52.1 -0.1**
baz=334
N49A P **PKPdf 13 58 52.1 -0.1**
baz=334
P46A Rosedale 118.90 23 **PKPdf 13 58 51.6 -0.8**
P46A Rosedale 118.90 23 P **PKPdf 13 58 52.7 +0.4**
baz=330
J58A Remsen 118.98 12 **PKPdf 13 58 52.0 -0.4**
J58A Remsen 118.98 12 P **PKPdf 13 58 52.3 -0.1**
baz=344
J58A P **PKPdf 13 58 52.3 -0.1**
baz=344
ERPA Erie 119.03 17 P **PKPdf 13 58 52.8 +0.3**
baz=338
J59A Piesco 119.04 12 P **PKPdf 13 58 52.0 -0.6**
baz=344
J59A P **PKPdf 13 58 52.0 -0.6**
baz=344
O48B Farmland 119.10 22 P **PKPdf 13 58 52.9 +0.2**
baz=333
O48B Farmland 119.10 22 P **PKPdf 13 58 52.6 -0.1**
baz=333

Z35A	Perchaven, San	119.29	35		PKPdf	13 58 51.5	-1.8
OLIL	Olney	119.31	25		PKPdf	13 58 52.1	-1.1
OLIL	Olney	119.31	25	P	PKPdf	13 58 53.5	+0.3
	baz=329						
K57A	Scipio Center	119.32	14		PKPdf	13 58 52.6	-0.5
K57A	Scipio Center	119.32	14	P	PKPdf	13 58 53.2	+0.1
	baz=342						
X37A	Clayton	119.34	33		PKPdf	13 58 53.4	+0.2
X37A	Clayton	119.34	33	P	PKPdf	13 58 53.5	+0.2
	baz=321						
O49A	Covington	119.44	21		PKPdf	13 58 53.0	-0.4
O49A	Covington	119.44	21	P	PKPdf	13 58 53.1	-0.3
	baz=333						
O49A				P	PKPdf	13 58 53.1	-0.3
	baz=333						
M53A	WI Miller and	119.46	17	P	PKPdf	13 58 53.1	-0.3
	baz=338						
BLO	Bloomington	119.55	23		PKPdf	13 58 53.5	0.0
BLO	Bloomington	119.55	23	PKIKP	PKPdf	13 58 53.6	0.0
L56A	Greenwood	119.64	15	P	PKPdf	13 58 53.6	-0.1
	baz=341						
L56A				P	PKPdf	13 58 53.6	-0.1
	baz=341						
P48A	Milroy	119.70	22		PKPdf	13 58 53.3	-0.6
P48A	Milroy	119.70	22	P	PKPdf	13 58 53.5	-0.4
	baz=332						
P48A				P	PKPdf	13 58 53.5	-0.4
	baz=332						
S44A	Carbondale	119.72	26		PKPdf	13 58 53.5	-0.5
S44A	Carbondale	119.72	26	P	PKPdf	13 58 54.1	+0.2
	baz=328						
HCNY	Howe Caverns	119.80	12	P	PKPdf	13 58 54.2	+0.2
	baz=344						
ACSO	Alum Creek Sta	119.86	20		PKPdf	13 58 53.8	-0.3
ACSO	Alum Creek Sta	119.86	20	P	PKPdf	13 58 54.0	-0.1
	baz=335						
ACSO	Alum Creek Sta	119.86	20	P	PKPdf	13 58 54.2	0.0
	baz=335						
JCT	Junction City	119.89	39		PKPdf	13 58 54.5	0.0
JCT	Junction City	119.89	39	PKIKP	PKPdf	13 58 54.6	0.0
JCT	Junction City	119.89	39	P	PKiKP	13 58 55.5	+0.9
	baz=315						
JCT	Junction City	119.89	39	P	PKiKP	13 58 55.2	+0.6
	baz=315						
P49A	Miami Univ. Ec	119.89	22	P	PKPdf	13 58 54.0	-0.2
	baz=333						
FCAR	Ozark Folk Cen	119.93	30		PKPdf	13 58 53.9	-0.6
BINY	Binghamton	119.94	13		PKPdf	13 58 53.6	-0.7
BINY	Binghamton	119.94	13	P	PKPdf	13 58 54.1	-0.2
	baz=343						
BINY	Binghamton	119.94	13	P	PKPdf	13 58 54.6	+0.3
	baz=343						
M55A	Ridgway	119.96	16	P	PKPdf	13 58 54.5	+0.1
	baz=340						
M55A				P	PKPdf	13 58 54.5	+0.1
	baz=340						
N53A	Lisbon	120.00	18		PKPdf	13 58 53.9	-0.5
N53A	Lisbon	120.00	18	P	PKPdf	13 58 54.3	-0.2
	baz=337						
N53A				P	PKPdf	13 58 54.3	-0.2
	baz=337						
WHTX	Lake Whitney,	120.17	36		PKPdf	13 58 54.8	-0.2
WHTX	Lake Whitney,	120.17	36	P	PKiKP	13 58 55.7	+0.7
	baz=318						
WHTX	Lake Whitney,	120.17	36	P	PKiKP	13 58 55.8	+0.8
	baz=318						
LCAR	Lake Charles	120.23	29		PKPdf	13 58 54.4	-0.5
MIAR	Mount Ida	120.30	32	PKIKP	PKPdf	13 58 55.2	0.0
MIAR	Mount Ida	120.30	32	P	PKPdf	13 58 55.5	+0.3
	baz=323						
MIAR	Mount Ida	120.30	32	P	PKiKP	13 58 55.8	+0.5
	baz=323						
O52A	Adamsville	120.33	19		PKPdf	13 58 54.3	-0.7
O52A	Adamsville	120.33	19	P	PKPdf	13 58 55.3	+0.2
	baz=336						
O52A				P	PKPdf	13 58 55.3	+0.2
	baz=336						
WHAR	Wooly Hollow	120.33	30		PKPdf	13 58 54.5	-0.7
L61B	Northampton	120.36	11	P	PKPdf	13 58 55.6	+0.5
	baz=346						
O53A	New Philadelph	120.40	18		PKPdf	13 58 54.7	-0.5
O53A	New Philadelph	120.40	18	P	PKPdf	13 58 55.5	+0.3
	baz=337						
WCI	Wyandotte Cave	120.46	24		PKPdf	13 58 55.2	-0.2
WCI	Wyandotte Cave	120.46	24	PKIKP	PKPdf	13 58 55.2	-0.2
WCI	Wyandotte Cave	120.46	24	P	PKPdf	13 58 55.4	0.0
	baz=331						
WCI	Wyandotte Cave	120.46	24	P	PKPdf	13 58 55.8	+0.4
	baz=331						
HRV	Adam Dziewonsk	120.50	10	P	PKPdf	13 58 55.6	+0.3
	baz=348						
M57A	Sunshine Farm,	120.50	15		PKPdf	13 58 55.1	-0.2
M57A	Sunshine Farm,	120.50	15	P	PKPdf	13 58 55.7	+0.3
	baz=341						
M57A				P	PKPdf	13 58 55.7	+0.3
	baz=341						
P51A	Williamsport	120.51	20		PKPdf	13 58 54.7	-0.7
P51A	Williamsport	120.51	20	P	PKPdf	13 58 54.9	-0.5
	baz=335						
P51A				P	PKPdf	13 58 54.9	-0.5
	baz=335						
DBIC	Dimbokro	120.53	288	PKP	PKPdf	13 58 56.4	+0.3
	comp=Z,8.4nm,0.6s,baz=60,slow=1.6,SNR=14						
UPAO	U. Pittsburgh	120.53	17	P	PKPdf	13 58 55.8	+0.4
	baz=338						
KIC	Kosan Boka	120.54	288⇑	eP	PKPdf	13 58 54.3	-1.8
	comp=Z,26nm,0.5s						
T45A	Paducah	120.55	26		PKPdf	13 58 55.5	-0.1
T45B	Paducah	120.55	26	P	PKiKP	13 58 56.2	+0.5
	baz=328						
Z38A	Mt. Pleasant	120.57	34		PKPdf	13 58 55.9	+0.1
KSPA	Keystone Colle	120.61	13		PKPdf	13 58 55.7	+0.1
P52A	Corning	120.67	19		PKPdf	13 58 55.3	-0.4
P52A	Corning	120.67	19	P	PKPdf	13 58 55.7	-0.1
	baz=336						
TIC	Toumodi	120.68	288⇑	iP	PKPdf	13 58 56.4	0.0
	comp=Z,17nm,0.7s						
O54A	Avella	120.71	18	P	PKiKP	13 58 56.4	+0.5
	baz=338						
O54A				P	PKiKP	13 58 56.4	+0.5
	baz=338						
UALR	University of	120.72	30		PKPdf	13 58 55.4	-0.5
Q51A	Peebles	120.82	21		PKPdf	13 58 55.3	-0.7
Q51A	Peebles	120.82	21	P	PKPdf	13 58 56.0	0.0
	baz=334						
Q51A				P	PKPdf	13 58 56.0	0.0
	baz=334						
R49A	Shelbyville	120.83	23		PKPdf	13 58 55.4	-0.7
R49A	Shelbyville	120.83	23	P	PKPdf	13 58 56.2	+0.1
	baz=332						
R49A				P	PKPdf	13 58 56.2	+0.1
	baz=332						
GNAR	Gosnell	120.84	28		PKPdf	13 58 56.5	+0.3
LIC	Lamto	120.86	288⇑	iP	PKPdf	13 58 56.6	-0.1
	comp=Z,58nm,0.8s						
SSPA	Standing Stone	120.97	16		PKPdf	13 58 56.2	-0.1
SSPA	Standing Stone	120.97	16	P	PKPdf	13 58 56.7	+0.4
	baz=340						
SSPA	Standing Stone	120.97	16	P	PKPdf	13 58 56.5	+0.2
	baz=340						
435B	Jarrell	120.99	37		PKPdf	13 58 56.9	+0.3
435B	Jarrell	120.99	37	P	PKiKP	13 58 57.6	+0.8
	baz=318						
435B	Jarrell	120.99	37	P	PKiKP	13 58 57.5	+0.8
	baz=318						
P53A	Whipple	121.04	19		PKPdf	13 58 56.1	-0.3
P53A	Whipple	121.04	19	P	PKPdf	13 58 55.9	-0.5
	baz=336						
P53A				P	PKPdf	13 58 55.9	-0.5
	baz=336						
N58A	Sunbury	121.07	14		PKPdf	13 58 56.4	-0.1
N58A	Sunbury	121.07	14	P	PKPdf	13 58 56.2	-0.3
	baz=342						
N58A				P	PKPdf	13 58 56.2	-0.3
	baz=342						
BRNY	Black Rk. Fore	121.11	12	P	PKPdf	13 58 56.9	+0.4
	baz=345						
R50A	Paris	121.14	22		PKPdf	13 58 56.0	-0.7
R50A	Paris	121.14	22	P	PKPdf	13 58 56.6	-0.1
	baz=333						
R50A				P	PKPdf	13 58 56.6	-0.1
	baz=333						
WLAR	White Oak Lake	121.21	32	PKPdf	PKPdf	13 58 56.8	-0.1
T47A	Sharon Grove	121.22	25		PKPdf	13 58 56.7	-0.2
Q52A	Bidwell	121.24	20		PKPdf	13 58 56.5	-0.4
Q52A	Bidwell	121.24	20	P	PKPdf	13 58 56.8	0.0
	baz=335						
Q52A				P	PKPdf	13 58 56.8	0.0
	baz=335						
ODNJ	Ogdensburg	121.31	13		PKPdf	13 58 56.7	-0.2
ODNJ	Ogdensburg	121.31	13	P	PKPdf	13 58 57.2	+0.3
	baz=344						
MCWV	Mont Chateau	121.35	18	P	PKiKP	13 58 57.9	+0.7
	baz=338						
PAL	Palisades	121.53	12	P	PKPdf	13 58 57.8	+0.5
	baz=345						
PAGS	Pennsylvania G	121.65	15		PKPdf	13 58 57.2	-0.3
WVT	Waverly	121.65	26		PKPdf	13 58 57.5	-0.2
WVT	Waverly	121.65	26	PKIKP	PKPdf	13 58 57.5	-0.2
WVT	Waverly	121.65	26	P	PKPdf	13 58 57.9	+0.2
	baz=329						
WVT	Waverly	121.65	26	P	PKPdf	13 58 58.2	+0.5
	baz=329						
833A	Chaparral WMA,	121.66	41	P	PKiKP	13 58 59.1	+1.1
	baz=315						
833A	Chaparral WMA,	121.66	41	P	PKiKP	13 58 59.0	+0.9
	baz=315						
Q54A	Coxs Mills	121.67	19		PKPdf	13 58 57.4	-0.3
W45A	Hickory Valley	121.89	28		PKPdf	13 58 57.8	-0.4
NATX	Nacogdoches	121.90	34		PKPdf	13 58 58.4	+0.1
NATX	Nacogdoches	121.90	34	P	PKiKP	13 58 59.3	+0.8
	baz=320						
R53A	Hurricane	121.92	20		PKPdf	13 58 57.8	-0.4
R53A	Hurricane	121.92	20	P	PKPdf	13 58 58.5	+0.3
	baz=335						
R53A				P	PKPdf	13 58 58.5	+0.3
	baz=335						
MVL	Millersville	121.95	14		PKPdf	13 58 58.0	-0.2
PANJ	Princeton	121.97	13	P	PKPdf	13 58 58.1	-0.1
	baz=344						
S51A	Beattyville	121.98	22		PKPdf	13 58 57.8	-0.5
S51A	Beattyville	121.98	22	P	PKPdf	13 58 58.6	+0.2
	baz=334						
S51A				P	PKPdf	13 58 58.6	+0.2
	baz=334						
P57A	Homestead Farm	122.02	16		PKPdf	13 58 58.2	-0.1
P57A	Homestead Farm	122.02	16	P	PKPdf	13 58 58.5	+0.2
	baz=340						
P57A				P	PKPdf	13 58 58.5	+0.2
	baz=340						
T50A	Nancy	122.07	23		PKPdf	13 58 58.1	-0.4
T50A	Nancy	122.07	23	P	PKPdf	13 58 58.5	0.0
	baz=332						
T50A				P	PKPdf	13 58 58.5	0.0
	baz=332						
Q56A	Snyder Ridge,	122.11	17		PKPdf	13 58 58.5	-0.1
U49A	Red Boiling Sp	122.16	24		PKPdf	13 58 58.4	-0.3
U49A	Red Boiling Sp	122.16	24	P	PKPdf	13 58 58.7	0.0
	baz=331						
PSUB	Penn St. - Bra	122.23	14	P	PKPdf	13 58 58.9	+0.2
	baz=343						
CLTN	Cedars of Leba	122.30	25		PKPdf	13 58 58.7	-0.3
OXF	Oxford	122.32	28		PKPdf	13 58 58.7	-0.3
OXF	Oxford	122.32	28	PKIKP	PKPdf	13 58 58.7	-0.3
OXF	Oxford	122.32	28	P	PKPdf	13 58 59.4	+0.4
	baz=327						
OXF	Oxford	122.32	28	P	PKPdf	13 58 59.1	+0.1
	baz=327						
SDMD	Soldier's Deli	122.39	15	P	PKPdf	13 58 59.1	+0.1
	baz=341						
V48A	Smith Brothers	122.41	25		PKPdf	13 58 58.6	-0.6
V48A	Smith Brothers	122.41	25	P	PKPdf	13 58 58.9	-0.3
	baz=330						
PLAL	Pickwick Lake	122.52	27		PKPdf	13 58 58.7	-0.7
R55A	Marlinton	122.54	18		PKPdf	13 58 59.3	-0.2
R55A	Marlinton	122.54	18	P	PKPdf	13 58 59.6	+0.1
	baz=337						
R55A				P	PKPdf	13 58 59.6	+0.1
	baz=337						
S54A	Dingess, Beckl	122.61	20		PKPdf	13 58 59.3	-0.3
S54A	Dingess, Beckl	122.61	20	P	PKPdf	13 58 59.5	-0.1
	baz=336						
S54A				P	PKPdf	13 58 59.5	-0.1
	baz=336						
HKT	Hockley	122.62	37	PKPdf	PKPdf	13 58 59.8	+0.2
HKT	Hockley	122.62	37	PKIKP	PKPdf	13 58 59.8	+0.2
HKT	Hockley	122.62	37	P	PKiKP	13 59 00.7	+0.8
	baz=319						
Y45A	Yeager Farm, C	122.80	29		PKPdf	13 58 59.7	-0.3
Y45A	Yeager Farm, C	122.80	29	P	PKPdf	13 59 00.5	+0.5
	baz=326						
TZTN	Tazewell	122.97	22		PKPdf	13 59 00.2	-0.1
TZTN	Tazewell	122.97	22	P	PKPdf	13 59 00.6	+0.4
	baz=333						
TZTN	Tazewell	122.97	22	P	PKPdf	13 59 00.8	+0.5
	baz=333						
SWET	Sewanee	123.22	25		PKPdf	13 59 00.2	-0.6
V51A	Loudon	123.33	23		PKPdf	13 59 00.8	-0.1
V51A	Loudon	123.33	23	P	PKPdf	13 59 00.9	-0.1
	baz=332						
S57A	Dark Hollow, R	123.37	18	P	PKPdf	13 59 00.9	-0.1
	baz=338						
S57A				P	PKPdf	13 59 00.9	-0.1
	baz=338						
CBN	Corbin Frederi	123.39	16	P	PKiKP	13 59 01.7	+0.5
	baz=340						
X48A	Hartselle	123.42	26		PKPdf	13 59 00.3	-0.8
X48A	Hartselle	123.42	26	P	PKPdf	13 59 00.8	-0.4
	baz=329						
BLA	Blacksburg	123.43	19		PKPdf	13 59 00.7	-0.5
BLA	Blacksburg	123.43	19	PKIKP	PKPdf	13 59 00.7	-0.5
BLA	Blacksburg	123.43	19	P	PKPdf	13 59 01.4	+0.2
	baz=337						
BLA	Blacksburg	123.43	19	P	PKPdf	13 59 01.3	+0.1
	baz=337						
R58B	Mineral	123.48	17		PKPdf	13 59 01.0	-0.2
R58B	Mineral	123.48	17	P	PKPdf	13 59 01.1	0.0
	baz=340						
R58B				P	PKPdf	13 59 01.1	0.0
	baz=340						
W50A	Signal Mountai	123.48	24		PKPdf	13 59 00.9	-0.4
W50A	Signal Mountai	123.48	24	P	PKPdf	13 59 01.3	-0.1
	baz=331						
V52A	Sevierville	123.58	23		PKPdf	13 59 01.6	+0.2
V52A	Sevierville	123.58	23	P	PKPdf	13 59 01.8	+0.3
	baz=333						
U54A	Nelsons Funny	123.60	21		PKPdf	13 59 01.2	-0.3
U54A	Nelsons Funny	123.60	21	P	PKPdf	13 59 01.6	+0.1
	baz=335						
U54A				P	PKPdf	13 59 01.6	+0.1
	baz=335						
TKL	Tuckaleechee C	123.68	23		PKPdf	13 59 01.8	+0.2
TKL	Tuckaleechee C	123.68	23	PKIKP	PKPdf	13 59 01.8	+0.2
TKL	Tuckaleechee C	123.68	23	P	PKPdf	13 59 02.2	+0.6
	baz=333						
VBMS	Vicksburg	123.68	31	P	PKPdf	13 59 02.3	+0.6
	baz=325						
VBMS	Vicksburg	123.68	31	P	PKPdf	13 59 01.9	+0.2
	baz=325						
JSRW	J. Sargeant Re	123.73	17		PKPdf	13 59 01.7	+0.1
FPAL	Fort Paine	123.94	25		PKPdf	13 59 01.4	-0.8
T57A	Hurt	123.98	18	P	PKPdf	13 59 02.2	0.0
	baz=338						
T57A				P	PKPdf	13 59 02.2	0.0
	baz=338						
V53A	Saluda	124.02	22		PKPdf	13 59 02.3	0.0
V53A	Saluda	124.02	22	P	PKPdf	13 59 02.4	0.0
	baz=334						
V53A				P	PKPdf	13 59 02.4	0.0
	baz=334						
Z47A	Carrollton	124.03	28		PKPdf	13 59 02.0	-0.4
Z47A	Carrollton	124.03	28	P	PKPdf	13 59 02.4	0.0
	baz=328						
146A	Union	124.04	29		PKPdf	13 59 02.3	-0.1
146A	Union	124.04	29	P	PKiKP	13 59 03.2	+0.6
	baz=326						
W52A	Murphy	124.12	23		PKPdf	13 59 02.6	0.0
W52A	Murphy	124.12	23	P	PKPdf	13 59 03.1	+0.6
	baz=332						
Y49A	Blount Mountai	124.19	26		PKPdf	13 59 02.3	-0.4
Y49A	Blount Mountai	124.19	26	P	PKPdf	13 59 02.6	-0.1
	baz=329						
344A	Westbrook Farm	124.20	32	P	PKiKP	13 59 04.0	+1.0
	baz=324						
U56A	King	124.23	20	P	PKPdf	13 59 03.1	+0.4
	baz=337						
U56A				P	PKPdf	13 59 03.1	+0.4
	baz=337						
V55A	Taylorsville	124.41	21		PKPdf	13 59 02.8	-0.3
V55A	Taylorsville	124.41	21	P	PKPdf	13 59 03.2	+0.2
	baz=336						
V55A				P	PKPdf	13 59 03.2	+0.2
	baz=336						
T59A	Double "B" Far	124.50	17		PKPdf	13 59 03.2	+0.1
T59A	Double "B" Far	124.50	17	P	PKiKP	13 59 03.9	+0.4
	baz=340						
T59A				P	PKiKP	13 59 03.9	+0.4
	baz=340						
BG3	Lake Jocassee	124.58	23		PKPdf	13 59 03.5	+0.1
LRAL	Lakeview Retre	124.64	27		PKPdf	13 59 03.3	-0.2
LRAL	Lakeview Retre	124.64	27	P	PKPdf	13 59 03.8	+0.3
	baz=329						
LRAL	Lakeview Retre	124.64	27	P	PKPdf	13 59 03.7	+0.3
	baz=329						
346A	Big Creek Wild	124.88	30		PKPdf	13 59 04.0	-0.1
U59A	Littleton	125.01	17	P	PKPdf	13 59 04.6	+0.5
	baz=340						
U59A				P	PKPdf	13 59 04.6	+0.5
	baz=340						
KMSC	Kings Mountain	125.02	21		PKPdf	13 59 04.2	0.0
KMSC	Kings Mountain	125.02	21	P	PKPdf	13 59 04.7	+0.5
	baz=335						
KMSC	Kings Mountain	125.02	21	P	PKPdf	13 59 04.4	+0.2
	baz=335						
PAULI	Pauline	125.14	22		PKPdf	13 59 04.4	0.0
PAULI	Pauline	125.14	22	P	PKPdf	13 59 04.6	+0.2
	baz=335						
Y52A	Lilburn	125.15	24		PKPdf	13 59 05.0	+0.5
Y52A	Lilburn	125.15	24	P	PKiKP	13 59 05.5	+0.6
	baz=332						
Y52A				P	PKiKP	13 59 05.5	+0.6
	baz=332						
Z51A	Franklin	125.18	25		PKPdf	13 59 04.7	+0.1
Z51A	Franklin	125.18	25	P	PKiKP	13 59 05.3	+0.3
	baz=331						
W57A	Gilead	125.45	20		PKPdf	13 59 05.2	+0.2
W57A	Gilead	125.45	20	P	PKPdf	13 59 05.2	+0.2
	baz=337						
W57A				P	PKPdf	13 59 05.2	+0.2
	baz=337						
HODGE	Hodges	125.51	22		PKPdf	13 59 05.2	+0.1
HODGE	Hodges	125.51	22	P	PKPdf	13 59 05.8	+0.7
	baz=334						
BIRD	Birdtown, Kers	125.76	20	P	PKPdf	13 59 05.9	+0.3
	baz=336						
GOGA	Godfrey	125.78	24		PKPdf	13 59 06.1	+0.4
GOGA	Godfrey	125.78	24	PKIKP	PKPdf	13 59 06.1	+0.4
GOGA	Godfrey	125.78	24	P	PKPdf	13 59 06.2	+0.5
	baz=332						
GOGA	Godfrey	125.78	24	P	PKPdf	13 59 06.3	+0.5
	baz=332						
JSC	Jenkinsville	125.82	21		PKPdf	13 59 06.0	+0.2
JSC	Jenkinsville	125.82	21	PKIKP	PKPdf	13 59 06.0	+0.2
JSC	Jenkinsville	125.82	21	P	PKPdf	13 59 06.4	+0.6
	baz=335						
250A	Grady	125.86	27		PKPdf	13 59 06.2	+0.3
250A	Grady	125.86	27	P	PKPdf	13 59 06.4	+0.4
	baz=329						
152A	Waverly Hall	125.93	25		PKPdf	13 59 06.4	+0.4
152A	Waverly Hall	125.93	25	P	PKiKP	13 59 06.8	+0.3
	baz=331						
CNNC	Cliffs of the	126.02	18	P	PKiKP	13 59 06.9	+0.4
	baz=339						
BRAL	Brewton	126.20	29	P	PKiKP	13 59 07.6	+0.7
	baz=328						
BRAL	Brewton	126.20	29	P	PKiKP	13 59 07.7	+0.7
	baz=328						
HAW	Hawthorne Fire	126.53	22	P	PKiKP	13 59 08.1	+0.5
	baz=334						
154A	Montrose	126.63	24	P	PKiKP	13 59 08.5	+0.6
	baz=332						
Y58A	Scranton	126.70	20		PKPdf	13 59 07.8	+0.4
Y58A	Scranton	126.70	20	P	PKPdf	13 59 07.8	+0.4
	baz=337						
Y58A				P	PKPdf	13 59 07.8	+0.4
	baz=337						
451A	Vernon	127.26	28	P	PKiKP	13 59 10.3	+1.1
	baz=329						
NHSC	New Hope	127.26	21	P	PKiKP	13 59 09.5	+0.4
	baz=336						
TIGA	Tifton	127.47	25	P	PKiKP	13 59 10.8	+1.2
	baz=332						
TIGA	Tifton	127.47	25	P	PKiKP	13 59 09.8	+0.3
	baz=332						
255A	Hazlehurst	127.48	24	P	PKiKP	13 59 10.3	+0.8
	baz=333						
DWPF	Disney Wildern	131.28	25	P	PKPdf	13 59 17.2	+0.9
	baz=333						
ACON	Acoyapa	142.62	43		PKPdf	13 59 36.9	-0.6
ACON	Acoyapa	142.62	43	eP	PKPdf	13 59 37.3	-0.2
SDDR	Presa de Saban	143.24	17	PKPpre	PKPpre	13 59 35.1	
SDDR	Presa de Saban	143.24	17	eP	PKPbc	13 59 35.5	-0.1
MG05	Puerto Natales	143.48	167		PKPbc	13 59 36.5	+1.3
AGPR	Aguadilla, PR	144.73	11		PKPbc	13 59 40.5	+0.5
EFI	East Falkland	144.75	182		PKPdf	13 59 40.5	+0.3
EFI	East Falkland	144.75	182	PKIKP	PKPdf	13 59 40.5	+0.3
HDC	Heredia	144.77	44	eP	PKPbc	13 59 41.3	+0.8
AOPR	Arecibo Observ	144.91	11		PKPab	13 59 40.4	-0.2
GCPR	Guaynabo City	145.06	10		PKPbc	13 59 40.5	-0.6
CBYP	Canovanas	145.13	9		PKPbc	13 59 40.7	-0.7
CRPR	Cabo Rojo, PR	145.18	11		PKPbc	13 59 41.2	-0.3
CUPR	Culebra, Puert	145.18	8		PKPbc	13 59 41.0	-0.4
STVI	Saint Thomas	145.18	8		PKPbc	13 59 41.1	-0.4
CELP	Cerrillos	145.21	10		PKPbc	13 59 41.3	-0.3
MLPR	Magueyes Islan	145.23	11		PKPbc	13 59 41.5	-0.1
OBIP	Obispado Ponce	145.24	10		PKPbc	13 59 40.8	-0.8
SJG	San Juan	145.24	10	PKPbc	PKPbc	13 59 41.1	-0.6
	comp=Z,47nm,0.7s,baz=56,slow=3.6,SNR=17						
SJG	San Juan	145.24	10		PKPbc	13 59 40.6	-1.1
HUMP	Col San Antoni	145.26	9		PKPbc	13 59 41.5	-0.3
MTP	Monte Pirata	145.35	9		PKPbc	13 59 41.9	-0.1
CDVI	St. Croix	145.80	8	PKPdf	PKPdf	13 59 42.7	-0.3
ANWB	Willy Bob	146.13	2	eP	PKPdf	13 59 44.2	+0.7
CDITO	Canoas	146.65	44		PKPbc	13 59 46.2	+0.1
GDSD	La Dsirade Is	147.50	1		PKPbc	13 59 48.0	-0.5
GDHS	Morne Mazeau,	147.52	3		PKPdf	13 59 47.7	+1.7
CBE	Ff, Capester	147.72	2		PKPbc	13 59 48.8	-0.3
TDBA	Terre de Bas,	147.94	2		PKPbc	13 59 49.2	-0.4
BCIP	Isla Barro Col	148.11	39	PKPdf	PKPdf	13 59 46.9	-0.1
BCIP	Isla Barro Col	148.11	39	eP	PKPdf	13 59 46.3	-0.7
BCIP	Isla Barro Col	148.11	39	PKIKP	PKPdf	13 59 46.9	-0.1
UPA	Univ. de Panam	148.44	38	eP	PKPbc	13 59 50.6	-0.4
CACAO	El Cacao, Vera	148.88	42	eP	PKPbc	13 59 52.8	+0.6
AZU	Azuero	148.91	41	e

BBAC	Balboa, Cauca	155.23	44	eP	PKPdf	13 59 58.8	+0.7
CHIC	Chingaza	155.27	33	eP	PKPdf	13 59 59.4	+1.0
PRAC	Prado	155.39	37	eP	PKPdf	13 59 59.1	+1.1
NBAN	Anadia - AL	155.64	283	eP	PKPdf	13 59 59.4	+1.2
OTAV	Otavalo	155.67	49	eP	PKPdf	13 59 56.8	-2.2
VILC	Villavicencio,	155.73	34	eP	PKPdf	13 59 59.9	+1.3
GARC	Garzon, Huila	156.24	40	eP	PKPdf	14 00 00.9	+1.5
FLOC	Florencia	156.60	42	eP	PKPdf	14 00 01.1	+1.5
MDP	Montagnes des	157.33	340	PKP	PKPdf	14 00 01.1	+0.6
	comp=Z,15nm,1.1s,baz=214,slow=3.6,SNR=3.1						
MDP				PKPab	PKPab	14 00 30.7	-0.9
	comp=Z,4.5nm,0.6s,baz=45,slow=8.6,SNR=1.5						
TRQA	Tornquist	158.37	176	PKPdf	PKPdf	14 00 01.6	+0.5
TRQA					PKPab	14 00 36.5	+1.1
TRQA	Tornquist	158.37	176	PKIKP	PKPdf	14 00 01.6	+0.5
TRQA						14 00 36.5	
TRQA	Tornquist	158.37	176	eP	PKPdf	14 00 01.9	+0.8
ROSB	Rosrio	159.16	308	eP	PKPdf	14 00 03.3	+0.6
GDU01	Guandu, BA	159.77	275	eP	PKPdf	14 00 03.5	+0.1
CMC01	Camacan, BA	159.94	270	eP	PKPdf	14 00 04.0	+0.5
MT01	Popeta	160.02	153		PKPdf	14 00 03.5	+0.4
MT01					PKPab	14 00 42.7	-0.1
ATAH	Atahualpa	160.09	65	PKP	PKPdf	14 00 05.3	+1.1
	comp=Z,28nm,1.0s,baz=338,slow=1.8,SNR=21						
ATAH				PKPab	PKPab	14 00 46.1	+1.8
	comp=Z,20nm,0.9s,baz=291,slow=4.5,SNR=5.4						
GUA01	Guaratinga, BA	160.31	267	eP	PKPdf	14 00 04.3	+0.4
NAN01	Guarapari, ES	160.62	263	eP	PKPdf	14 00 04.9	+0.7
RIB01	Linhares ES	160.79	258	eP	PKPdf	14 00 04.9	+0.5
BOAV	Boa Vista	161.34	1	eP	PKPdf	14 00 05.4	+0.2
TMAB	Tom-Au,PA,Br	161.58	318	eP	PKPdf	14 00 05.8	+0.4
SJMB	Sao Joao De Ma	161.59	260	eP	PKPdf	14 00 07.1	+1.9
VAS01	Vassouras-RJ	163.01	247	eP	PKPdf	14 00 07.4	+0.8
ZON	Zonda	163.11	155		PKPab	14 00 56.5	+0.1
ZON	Zonda	163.11	155	PKP2	PKPab	14 00 56.5	+0.1
MAN01	Angra dos Reis	163.29	245	eP	PKPdf	14 00 08.8	+1.9
NNA	Nana	163.42	77	PKP	PKPdf	14 00 08.6	+1.4
	comp=Z,4.0nm,0.3s,baz=265,slow=11,SNR=1.8						
PLTB	Pedras Altas	163.51	201	eP	PKPdf	14 00 08.5	+1.7
DIAM	Diamantina, MG	163.97	261	eP	PKPdf	14 00 09.0	+1.2
MC01	Montes Claros	164.27	267	eP	PKPdf	14 00 09.8	+1.8
MALB	Monte Alegre	164.37	337	eP	PKPdf	14 00 09.2	+1.1
CNLB	Canela	164.46	212	eP	PKPdf	14 00 08.8	+1.0
JANB	Januaria	164.51	273	eP	PKPdf	14 00 09.3	+1.1
PARB	Paraibuna	164.53	241	eP	PKPdf	14 00 09.5	+1.4
SDBA	SAO DESIDERIO	164.53	283	eP	PKPdf	14 00 09.0	+0.8
TBTG	Tabatinga, AM	164.66	39	eP	PKPdf	14 00 09.6	+1.3
CPSB	Cacapava Do Su	164.68	203	eP	PKPdf	14 00 08.8	+0.9
CZSB	Cruzeiro do Su	165.17	56	eP	PKPdf	14 00 10.1	+1.3
PET01	Itanhaem-SP	165.45	235	eP	PKPdf	14 00 10.9	+2.2
SMTB	Santa Maria do	165.49	299	eP	PKPdf	14 00 10.1	+1.0
PRPB	Parauapebas	165.53	313	eP	PKPdf	14 00 10.1	+1.0
VAO	Valinhos	165.79	240	eP	PKPdf	14 00 10.7	+1.6
ITQB	Itaqui	166.34	194	PKPdf	PKPdf	14 00 09.7	+0.5
ITQB					PKPab	14 01 10.6	+0.1
ITQB	Itaqui	166.34	194	eP	PKPdf	14 00 11.0	+1.8
RCLB	Rio Claro- Sao	166.51	242	eP	PKPdf	14 00 12.6	+2.9
PMNB	Patos De Minas	166.56	259	eP	PKPdf	14 00 11.5	+1.6
ITAB	Concordia	166.79	214	eP	PKPdf	14 00 11.2	+1.5
MACA	Manacapuru-AM	166.85	2	eP	PKPdf	14 00 10.9	+0.7
ITTB	Itaituba	167.23	339	eP	PKPdf	14 00 11.8	+1.4
BDFB	Brasilia	168.12	272	PKP	PKPdf	14 00 11.0	0.0
	comp=Z,8.1nm,0.8s,baz=203,slow=2.7,SNR=11						
BDFB	Brasilia	168.12	272	eP	PKPdf	14 00 11.8	+0.7
IPMB	Ipameri, GO	168.30	260	eP	PKPdf	14 00 11.8	+0.7
NPGB	Novo Progresso	169.51	332	eP	PKPdf	14 00 13.1	+1.1
CPUP	Villa Florida	169.72	195	PKP	PKPdf	14 00 11.9	+0.3
	comp=Z,8.1nm,1.1s,baz=195,slow=0.7,SNR=9.8						
CPUP				PKPab	PKPab	14 01 26.0	+0.5
	comp=Z,7.4nm,0.9s,baz=160,slow=4.2,SNR=7.3						
CPUP	Villa Florida	169.72	195	PKPab	PKPab	14 01 25.8	+0.3
CPUP	Villa Florida	169.72	195	eP	PKPdf	14 00 12.7	+1.1
LVC	Limon Verde	169.82	129	PKP	PKPdf	14 00 12.5	+0.2
	comp=Z,12nm,0.9s,baz=214,slow=2.2,SNR=5.2						
LVC	Limon Verde	169.82	129	eP	PKPdf	14 00 13.5	+1.2
PCMB	Pacaembu	169.97	237	eP	PKPdf	14 00 13.2	+1.2
SNDB	Serra Nova Dou	170.19	295	eP	PKPdf	14 00 12.7	+0.5
ETMB	Extrema	171.32	42	eP	PKPdf	14 00 13.7	+0.8
C2SB	Chapadao do Su	172.46	251	eP	PKPdf	14 00 14.8	+1.5
LPAZ	La Paz	172.52	90	PKP	PKPdf	14 00 13.9	-0.3
	comp=Z,12nm,0.8s,baz=3.3,slow=1.6,SNR=46						
LPAZ				PKPab	PKPab	14 01 41.0	+1.6
	comp=Z,12nm,1.0s,baz=282,slow=1.5,SNR=8.6						
LPAZ	La Paz	172.52	90	eP	PKPdf	14 00 15.5	+1.3
LPAZ	La Paz	172.52	90	eP	PKPdf	14 00 14.6	+0.5
CLDB	Colider	172.96	321	eP	PKPdf	14 00 14.5	+0.8
AQDB	Aquidauana	174.00	227	PKPdf	PKPdf	14 00 13.4	-0.4
AQDB				PKPab	PKPab	14 01 44.5	-0.4
AQDB	Aquidauana	174.00	227	eP	PKPdf	14 00 14.3	+0.5
PDRB	Porto dos Gac	174.10	323	eP	PKPdf	14 00 14.3	+0.2
SALV	Santo Antonio	175.51	276	eP	PKPdf	14 00 15.2	+0.8
VILB	Vilhena	176.58	358	eP	PKPdf	14 00 14.8	0.0
PTLB	Pontes e Lacer	178.51	309	eP	PKPdf	14 00 15.7	+0.8
SIV	San Ignacio	179.19	61	PKP	PKPdf	14 00 15.3	+0.2
	comp=Z,23nm,0.8s,baz=173,slow=0.7,SNR=91						
SIV				PKPab	PKPab	14 02 06.7	
	comp=Z,10nm,0.9s,baz=322,slow=3.5,SNR=12						
SIV				PP	PP	14 06 00.4	-1.4
	comp=Z,9.1nm,1.2s,baz=348,slow=5.2,SNR=10						

MAN 02 14:02:07.7,8°.26N×126°.31E,h32km,mb4.3,ML3.1,MS2.9, 5C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.09**	**146**	⇓*i*P	Pb	14 02 13.7	+0.5
BIPH				*i* S	Sb	14 02 18.4	+1.4
BUTP	**Butuan**	**0.98**	**316**	⇑eP	Pb	14 02 28.0	+1.8
BUTP				eS	Sb	14 02 44.0	+5.1
MATI	**Mati**	**1.30**	**182**	⇑eP	Pn	14 02 29.1	-0.5
MATI				eS	Sn	14 02 46.3	+0.3
GLSP	**General Luna,**	**1.53**	**353**	⇑eP	Pn	14 02 33.5	+0.8
GLSP				eS	Sn	14 02 51.4	-0.1
CGP	**Cagayan de Oro**	**1.61**	**277**	⇑eP	Pb	14 02 37.5	+0.7
CGP				eS	Sb	14 02 55.3	-1.5
DDMP	**Don Marcelino,**	**2.22**	**196**	⇑eP	Pn	14 02 43.3	+1.0
DDMP				eS	Sb	14 03 13.8	-0.4

MAN 02 14:09:36.1,8°.37N×125°.88E,h22km,mb4.2,ML3.0,MS2.7, 6C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.51**	**111**	⇓*i*P	Pb	14 09 45.0	-1.4
BIPH				*i* S	Sb	14 09 52.4	-1.0
BUTP	**Butuan**	**0.65**	**337**	⇑eP	Pb	14 09 49.3	+0.5
BUKP	**Musuan**	**0.95**	**239**	⇑eP	Pb	14 09 53.2	-0.7
BUKP				eS	Sn	14 10 09.6	+2.6
CGP	**Cagayan de Oro**	**1.18**	**274**	⇑eP	Pn	14 09 57.0	-0.3
CGP				eS	Sn	14 10 12.9	+0.2
GLSP	**General Luna,**	**1.43**	**10**	⇑eP	Pn	14 10 01.2	+0.5
GLSP				eS	Sn	14 10 18.5	-0.3
MATI	**Mati**	**1.46**	**165**	⇑eP	Pn	14 10 01.3	0.0
MATI				eS	Sb	14 10 20.5	-0.3
DDMP	**Don Marcelino,**	**2.26**	**184**	⇑eP	Pb	14 10 18.7	+2.4
DDMP				eS	Sb	14 10 44.7	+1.0

*DNK **02** 14:41:02.0±0.9,58°.83N×15°.07E,h0km,ML1.6(UPP), Explosion*

UPP 02 14:41:01.4±0.1,58°.84N×15°.06E,h0km,ML1.6, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASKU	**Askersund**	**0.14**	**296**	P	Pg	14 41 04.2	+0.2
ASKU				S	Sg	14 41 06.2	+0.5
ASKU	**Askersund**	**0.14**	**296**	P	Pg	14 41 04.2	+0.2
ASKU				S	Sg	14 41 06.2	+0.5
LNKU	**Linkoeping**	**0.66**	**159**	P	Pg	14 41 13.6	-0.4
LNKU	**Linkoeping**	**0.66**	**159**	P	Pg	14 41 13.6	-0.4
LNKU				S	Sg	14 41 22.8	+0.4
LNKU	**Linkoeping**	**0.66**	**159**	P	Pg	14 41 13.6	-0.4
LNKU				S	Sg	14 41 22.8	+0.4
LNKU	**Linkoeping**	**0.66**	**159**	P	Pg	14 41 13.6	-0.4
NRAU	**Nora**	**0.74**	**359**	S	Sg	14 41 26.0	+0.9
NRAU	**Nora**	**0.74**	**359**	S	Sg	14 41 26.0	+0.9
ESKU	**Eskilstuna**	**0.80**	**59**	P	Pg	14 41 16.5	-0.1
ESKU	**Eskilstuna**	**0.80**	**59**	P	Pg	14 41 16.5	-0.1
VIKU	**Vikbolandet**	**0.92**	**111**	P	Pg	14 41 18.5	-0.5
VIKU	**Vikbolandet**	**0.92**	**111**	P	Pg	14 41 18.5	-0.5
VIKU	**Vikbolandet**	**0.92**	**111**	P	Pg	14 41 18.5	-0.5
FKPU	**Falk**	**0.98**	**227**	P	Pb	14 41 20.8	-0.3
FKPU	**Falk**	**0.98**	**227**	P	Pb	14 41 20.8	-0.3
EKSU	**Eksjoe**	**1.27**	**174**	P	Pg	14 41 24.9	-0.8
EKSU	**Eksjoe**	**1.27**	**174**	P	Pg	14 41 24.9	-0.8
EKSU	**Eksjoe**	**1.27**	**174**	P	Pg	14 41 24.9	-0.8
EKSU	**Eksjoe**	**1.27**	**174**	P	Pg	14 41 24.9	-0.8
VSTU	**Vaestervik**	**1.41**	**146**	P	Pn	14 41 27.8	-0.5
VSTU	**Vaestervik**	**1.41**	**146**	P	Pn	14 41 27.8	-0.5
VSTU	**Vaestervik**	**1.41**	**146**	P	Pn	14 41 27.8	-0.5
VSTU	**Vaestervik**	**1.41**	**146**	P	Pn	14 41 27.8	-0.5

*HEL **02** 14:41:05.7±0.1,58°.82N×15°.11E,h0km,ML1.7, ML2.3(UPP),Suspected explosion*
*DNK **02** 14:41:05.5±2.9,58°.79N×15°.19E,h0km,ML2.1,Explosion*
*BER **02** 14:41:05.9±2.1,58°.67N×15°.40E,h0km,ML1.4, ML1.6(UPP),Suspected explosion*

UPP 02 14:41:05.2±0.1,58°.82N×15°.09E,h0km,ML2.3, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASKU	**Askersund**	**0.16**	**301**	P	Pg	14 41 08.4	+0.2
ASKU				S	Sg	14 41 10.7	+0.5
ASKU	**Askersund**	**0.16**	**301**	P	Pg	14 41 08.4	+0.2
ASKU				S	Sg	14 41 10.7	+0.5
ASKU	**Askersund**	**0.16**	**301**	*i* P	Pg	14 41 08.4	+0.2
ASKU				*i* S	Sg	14 41 10.7	+0.5
LNKU	**Linkoeping**	**0.63**	**160**	P	Pg	14 41 17.2	-0.1
LNKU	**Linkoeping**	**0.63**	**160**	P	Pg	14 41 17.2	-0.1
LNKU	**Linkoeping**	**0.63**	**160**	*i* P	Pg	14 41 17.2	-0.1
NRAU	**Nora**	**0.76**	**358**	P	Pg	14 41 19.5	-0.2
NRAU	**Nora**	**0.76**	**358**	P	Pg	14 41 19.5	-0.2
NRAU	**Nora**	**0.76**	**358**	*i* P	Pg	14 41 19.5	-0.2
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	14 41 20.1	-0.3
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	14 41 20.1	-0.3
ESKU	**Eskilstuna**	**0.79**	**58**	*i* P	Pg	14 41 20.1	-0.3
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	14 41 21.9	-0.5
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	14 41 21.9	-0.5
VIKU	**Vikbolandet**	**0.90**	**110**	eP	Pg	14 41 21.9	-0.5
FKPU	**Falk**	**0.97**	**228**	P	Pg	14 41 23.5	-0.4
FKPU	**Falk**	**0.97**	**228**	P	Pg	14 41 23.5	-0.4
FKPU	**Falk**	**0.97**	**228**	eP	Pg	14 41 23.5	-0.4
EKSU	**Eksjoe**	**1.25**	**175**	P	Pg	14 41 28.3	-0.8
EKSU	**Eksjoe**	**1.25**	**175**	P	Pg	14 41 28.3	-0.8
EKSU	**Eksjoe**	**1.25**	**175**	eP	Pg	14 41 28.3	-0.8
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	14 41 30.8	-1.0
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	14 41 30.8	-1.0
VSTU	**Vaestervik**	**1.39**	**146**	eP	Pn	14 41 30.8	-1.0
HFC2	**Hagfors New Ar**	**1.50**	**332**	eP	Pn	14 41 30.2	-3.2
HFC2				ePG	Pb	14 41 32.7	-1.3
HFC2				eS	Sg	14 41 52.4	-1.0
BORU	**Boraas**	**1.71**	**227**	eP	Pn	14 41 36.0	-0.1
NRTU	**Norrtaelje**	**2.01**	**63**	eP	Pn	14 41 38.9	-1.5
NRTU				eSB	Sn	14 42 06.7	+0.5
STRU	**Stroemstad**	**2.04**	**278**	eP	Pb	14 41 41.9	-1.1
STRU				e		14 42 09.0	
STRU	**Stroemstad**	**2.04**	**278**	eP	Pn	14 41 40.3	-0.4
STRU				eP	Pb	14 41 41.9	-1.1
STRU				e		14 42 09.0	
GOTU	**Gotland**	**2.16**	**120**	ePG	Pb	14 41 43.8	-1.3
GOTU				eSG	Sb	14 42 11.4	-1.0
ONAU	**Onsala**	**2.20**	**231**	eP	Pn	14 41 43.6	+0.6
FABU	**Falkenberg**	**2.22**	**216**	eS	Sb	14 42 14.3	+0.3
DEL	**Delary**	**2.44**	**196**	eP	Pb	14 41 48.1	-1.8
BLEU	**Blekinge**	**2.55**	**171**	eP	Pn	14 41 48.9	+1.2
NC602	**NORSAR Array S**	**2.63**	**319**	eP	Pb	14 41 51.0	-2.1
NC602				e		14 42 25.1	
NC602				IAML		14 42 35.1	
	comp=Z,4.9nm,0.5s						
NC602	**NORSAR Array S**	**2.63**	**319**	eP	Pb	14 41 51.0	-2.1
NC602				e		14 42 25.1	
NC602				IAML		14 42 35.1	
	comp=Z,4.9nm,0.5s						
AAL	**Aland**	**2.85**	**59**	eP	Pn	14 41 52.2	+0.4
AAL				eSG	Sb	14 42 31.8	-0.4
NAO01	**NORSAR Array S**	**2.94**	**316**	eP	Pn	14 41 55.6	+2.4
NAO01				e		14 42 28.8	
NAO01				IAML		14 42 38.8	
	comp=Z,2.6nm,0.3s						
NAO01	**NORSAR Array S**	**2.94**	**316**	eP	Pn	14 41 55.6	+2.4
NAO01				e		14 42 28.8	
NAO01				IAML		14 42 38.8	
	comp=Z,2.6nm,0.3s						
KONO	**Kongsberg**	**2.94**	**289**	eP	Pb	14 41 56.9	-1.6
KONO				e		14 42 27.8	
KONO				IAML		14 42 43.3	
	comp=Z,2.1nm,0.3s						
KONO	**Kongsberg**	**2.94**	**289**	eP	Pb	14 41 56.9	-1.6
KONO				e		14 42 27.8	
KONO				IAML		14 42 43.3	
	comp=Z,2.1nm,0.3s						
NB201	**NORSAR Array S**	**2.94**	**321**	eP	Pn	14 41 54.6	+1.4
NB201				IAML		14 42 42.5	
	comp=Z,1.8nm,0.3s						
NB201	**NORSAR Array S**	**2.94**	**321**	eP	Pn	14 41 54.6	+1.4
NB201				IAML		14 42 42.5	
	comp=Z,1.8nm,0.3s						
BJUU	**Bjuv**	**2.97**	**203**	eP	Pn	14 41 54.2	+0.8
NC303	**NORSAR Array S**	**3.06**	**324**	eP	Pn	14 41 55.1	+0.4
NC303				IAML		14 42 44.9	
	comp=Z,2.6nm,0.3s						
NC303	**NORSAR Array S**	**3.06**	**324**	eP	Pn	14 41 55.1	+0.4
NC303				IAML		14 42 44.9	
	comp=Z,2.6nm,0.3s						
ARNU	**Arnoeviken**	**3.10**	**21**	eP	Pn	14 41 55.8	+0.4
ARNU				eS	Sn	14 42 33.0	-0.1
NBO00	**NORSAR Array S**	**3.11**	**318**	eP	Pn	14 41 57.4	+1.9
NBO00				e		14 42 39.3	
NBO00				IAML		14 42 43.4	
	comp=Z,2.4nm,0.2s						
NBO00	**NORSAR Array S**	**3.11**	**318**	eP	Pn	14 41 57.4	+1.9
NBO00				e		14 42 39.3	
NBO00				IAML		14 42 43.4	
	comp=Z,2.4nm,0.2s						
NC204	**NORSAR Array S**	**3.29**	**321**	eP	Pn	14 42 00.6	+2.6
NC204				IAML		14 42 53.2	
	comp=Z,3.0nm,0.5s						
NC204	**NORSAR Array S**	**3.29**	**321**	eP	Pn	14 42 00.6	+2.6
NC204				IAML		14 42 53.2	
	comp=Z,3.0nm,0.5s						
BSD	**Bornholm Skovb**	**3.71**	**182**	eP	Pn	14 42 03.8	+0.1
BSD				eSG	Sb	14 43 00.6	+3.5
SKAR	**Skarslia**	**3.91**	**301**	eP	Pn	14 42 06.7	+0.2
SKAR				e		14 42 50.5	
SKAR				IAML		14 43 08.7	
	comp=Z,5.5nm,0.4s						
SKAR	**Skarslia**	**3.91**	**301**	eP	Pn	14 42 06.7	+0.2
SKAR				e		14 42 50.5	
SKAR				IAML		14 43 08.7	
	comp=Z,5.5nm,0.4s						
SLIT	**Slitere, Latvi**	**3.99**	**104**	ePG	Pb	14 42 16.3	0.0
SLIT				eSG	Sb	14 43 07.2	+2.2
RAF	**Rauma**	**4.02**	**54**	eP	Pn	14 42 07.9	0.0
RAF				ePG	Pb	14 42 17.1	+0.2
RAF				eSG	Sb	14 43 08.9	+2.9
RAF				MSG		14 43 13.5	
	comp=Z,1.2nm,0.1s						
HEMU	**Hemsoen**	**4.13**	**19**	eP	Pn	14 42 10.4	+0.9
MTSE	**Matsula**	**4.54**	**88**	eSG	Sb	14 43 24.1	+3.2
KPF	**Kankaanpaa**	**4.60**	**46**	eSG	Sb	14 43 26.5	+3.8
MEF	**Metsahovi**	**4.94**	**70**	eP	Pn	14 42 21.1	+0.5
MEF				eSG	Sb	14 43 37.3	+4.9
MEF				MSG		14 43 40.6	
	comp=Z,0.8nm,0.1s						
VAF	**Ylistaro**	**5.62**	**38**	MSG		14 44 10.3	
	comp=Z,0.4nm,0.1s						
FIA0	**FINESS Array S**	**6.09**	**60**	MSG		14 44 25.5	
	comp=Z,0.5nm,0.1s						

IDC 02 15:00:02.8±11.0,12°.63S×166°.81E,h179km±122km, mb3.3/4,mbtmp3.7/5,MS3.3/1,Error ellipse: s-maj=93.3km s-min=27.1km az=161.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.39**	**182**	P	Pn	15 02 15.8	+1.3
	1.2nm,0.7s,baz=343,slow=20,SNR=1.4						
DZM				S	Sn	15 03 57.9	-1.5
	1.5nm,0.8s,baz=354,slow=17,SNR=1.6						
CTA	**Charters Tower**	**21.06**	**247**	P	P	15 04 32.6	-0.5
	2.8nm,0.9s,baz=56,slow=11,SNR=2.2						
	2.8nm,0.9s						
WRA	**Warramunga Arr**	**31.96**	**253**	P	P	15 06 12.4	+0.2
	2.0nm,1.2s,baz=84,slow=9.2,SNR=4.7						
	2.0nm,1.2s						
RAR	**Rarotonga**	**33.03**	**109**	LR	LR	15 18 03.2	
	comp=Z,44nm,18.1s,baz=24,slow=33						
ASAR	**Alice Springs**	**33.06**	**246**	P	P	15 06 21.8	+0.1
	0.5nm,0.7s,baz=72,slow=9.8,SNR=12						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**84.68**	**18**	P	P	15 12 15.8	-0.2
	0.4nm,0.4s,baz=232,slow=5.2,SNR=12						
	0.4nm,0.4s						

*NEIC **02** 15:17:53.7±2.1,13°.95N±0°.08×144°.6E±0°.2,h132km±8km, mb4.3/9,Error ellipse: s-maj=22.1km s-min=10.9km az=98.0*
*IDC **02** 15:17:53.8±1.0,13°.81N×144°.94E,h137km±4km,mb3.1/4, mbtmp3.5/4,Error ellipse: s-maj=128.9km s-min=19.6km az=113.0*

ISC 02 15:17:53.8±0.8,13°.9N±0°.1×144°.8E±0°.2,h150km,n22, σ1s71/18,mb4.0/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.35**	**163**	P	**Pn**	**15 18 13.6**	**-0.9**
	2μm,0.3s,baz=198,slow=3.2,SNR=1822						
GUMO				S	**Sn**	**15 18 27.8**	**-2.5**
	589nm,0.3s,baz=162,slow=19,SNR=6.3						
GUMO	**Guam**	**0.35**	**163**	Pn	**Pn**	**15 18 13.6**	**-0.9**
GUMO				Sn	**Sn**	**15 18 25.9**	**-4.4**
PATS	**Pohnpei**	**15.06**	**117**	Pn	**P**	**15 21 20.6**	**-0.3**
JHJ2	**Mitsune**	**19.63**	**348**	P	**P**	**15 22 08.4**	**-2.2**
H11S3	**WAKE ISLAND Hy**	**21.53**	**75**	T	T	15 44 48.6	
	baz=261,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**21.54**	**75**	T	T	15 44 47.8	
	baz=261,slow=74,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	**21.55**	**75**	T	T	15 44 50.8	
	baz=261,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**21.94**	**72**	T	T	15 45 37.8	
	baz=257,slow=75						
H11N2	**WAKE ISLAND Hy**	**21.95**	**72**	T	T	15 45 40.7	
	baz=257,slow=75						
H11N3	**WAKE ISLAND Hy**	**21.95**	**72**	T	T	15 45 41.6	
	baz=257,slow=75						
JGF	**Kuroka**	**22.59**	**344**	P	**P**	**15 22 42.6**	**+0.8**
WB0	**Warramunga Arr**	**35.00**	**197**	P	**P**	**15 24 32.0**	**0.0**
WB0				IAmb	IAmb	15 24 33.4	
	comp=Z,10nm,1.5s						
WR0	**Warramunga Arr**	**35.14**	**197**	P	**P**	**15 24 33.8**	**+0.5**
WR0				IAmb	IAmb	15 24 49.8	
	comp=Z,7.1nm,1.4s						
WB2	**Warramunga Arr**	**35.18**	**197**	P	**P**	**15 24 34.0**	**+0.4**
WB2				IAmb	IAmb	15 24 51.9	
	comp=Z,5.1nm,1.1s						
WRA	**Warramunga Arr**	**35.18**	**197**	P	**P**	**15 24 34.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=20,slow=9.0,SNR=10						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**35.18**	**197**	P	**P**	**15 24 33.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**36.99**	**211**	P	**P**	**15 24 50.1**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=19,slow=9.9,SNR=7.7						
	comp=Z,0.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**36.99**	**211**	P	**P**	**15 24 50.4**	**+1.4**
FITZ				IAmb	IAmb	15 25 17.9	
	comp=Z,7.9nm,1.4s						
ASAR	**Alice Springs**	**38.84**	**196**	P	**P**	**15 25 05.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=11						
	comp=Z,0.1nm,0.3s						
DZM	**Mont Dzumac**	**41.61**	**149**	P	**P**	**15 25 29.4**	**+2.0**
DZM				IAmb	IAmb	15 25 42.6	
	comp=Z,8.0nm,1.2s						
ILAR	**Eielson Array**	**68.31**	**25**	P	**P**	**15 28 39.9**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=255,slow=6.1,SNR=7.4						
	comp=Z,0.4nm,0.5s						
ABKAR	**Akbulak array**	**76.23**	**318**	P	**P**	**15 29 26.1**	**+0.4**

IDC 02 15:53:31.6±41.0,23°.71S×175°.91W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=768.0km s-min=160.8km az=88.0,Tonga Islands region

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

AC06 IAML 16 34 07.9
comp=E,1μm,0.5s
CO06 Fray Jorge 1.89 188 *eP* **Pb 16 33 46.2 -1.3**
CO06 *eS* **Sb 16 34 10.4 -0.4**
CO06 IAML 16 34 20.3
comp=E,436nm,0.4s
CO03 El Pedregal 2.10 165⇑ *eP* **Pb 16 33 50.4 -0.9**
CO03 *eS* **Sb 16 34 16.5 -0.5**
CO03 IAML 16 34 27.8
comp=E,443nm,0.6s
CO02 Combarbal 2.41 174 *eP* **Pb 16 33 54.0 -2.4**
CO02 *eS* **Sn 16 34 22.2 +1.3**
AC01 Pan de Azucar 2.71 14 *eP* **Pn 16 33 56.7 +0.8**
AC02 Maricunga 2.75 45 *eP* **Pb 16 34 00.6 -1.8**
LVC Limon Verde 6.53 20 Pn **Pn 16 34 48.8 0.0**
comp=E,1.0nm,0.3s,baz=168,slow=9.3,SNR=0.7
LVC Sn **Sn 16 35 59.7 -3.0**
comp=E,1.8nm,0.3s,baz=190,slow=16,SNR=3.5
H03N1 Juan Fernandez 7.99 233 T T 16 43 21.3
baz=58,slow=72,SNR=340
H03N2 Juan Fernandez 8.01 233 T T 16 43 20.2
baz=58,slow=72,SNR=313
H03N3 Juan Fernandez 8.01 233 T T 16 43 18.9
baz=58,slow=72,SNR=441
CPUP Villa Florida 12.64 82 Pn **Pn 16 36 07.7 -4.5**
comp=E,0.1nm,0.3s,baz=186,slow=12,SNR=2.6
comp=E,1.9nm,1.0s
LPAZ La Paz 12.79 14 Pn **Pn 16 36 16.4 +1.6**
comp=E,0.2nm,0.3s,baz=205,slow=17,SNR=3.3
comp=E,0.4nm,0.4s
SIV San Ignacio 15.86 39 Pn **Pn 16 36 54.4 -1.3**
baz=248,slow=15,SNR=1.3
comp=E,0.3nm,0.4s
TORD Torodi Ar. Bea 81.86 70 P **P 16 45 32.0 +0.4**
comp=E,0.3nm,0.5s,baz=258,slow=5.5,SNR=2.3
ASAR Alice Springs 122.47 208 PKP **PKPdf 16 52 07.8 -0.1**
comp=E,0.4nm,0.9s,baz=146,slow=1.8,SNR=2.2
WRA Warramunga Arr 125.59 210 PKP **PKiKP 16 52 17.0 +2.7**
comp=E,0.2nm,0.7s,baz=165,slow=1.6,SNR=1.5
ZALV Zalesovo Beam 149.43 28 PKPbc **PKPbc 16 53 01.1 +0.7**
comp=E,0.4nm,0.5s,baz=306,slow=1.2,SNR=1.8
MKAR Makanchi Array 152.67 42 PKPbc **PKPbc 16 53 08.4 +0.1**
comp=E,0.6nm,0.8s,baz=299,slow=2.0,SNR=2.0

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*SJA **02** 16:38:07.4±1.0,27.°29S×63.°37W,h601km±9km,ML4.1, MW4.2*
*NEIC **02** 16:38:13.4±1.4,27.°10S±0.°09×63.°5W±0.°1,h568km±5km, mb4.5/188, Error ellipse: s-maj=15.4km s-min=12.8km az=82.0*
*IDC **02** 16:38:13.4±0.5,27.°00S×63.°33W,h569km±5km,mb4.1/20, mbtmp5.0/27, Error ellipse: s-maj=10.4km s-min=8.0km az=76.0*
*VAO **02** 16:38:13.5±0.3,27.°05S×63.°37W,h568km,mb4.8*
ISC 02 16:38:12.5±0.3,27.°07S±0.°04×63.°43W±0.°05,h561km, n488,σ1§08/519,mb4.5/129,4C-10D,Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**1.73**	**279⇓**	*eP*	**P**	**16 39 23.7**	**+1.5**
AHML				*eS*	**S**	**16 40 18.2**	**-0.7**
AHML	**Horco Molle**	**1.73**	**279**	*iP*	**P**	**16 39 23.7**	**+1.5**
AHML				*iS*	**S**	**16 40 19.4**	**+0.5**
CYA	**Choya**	**2.51**	**237⇓**	*iP*	**P**	**16 39 26.6**	**+1.0**
CYA				*eS*	**S**	**16 40 24.0**	**-1.3**
CYA	**Choya**	**2.51**	**237**	*iP*	**P**	**16 39 26.7**	**+1.0**
CYA				*iS*	**S**	**16 40 24.0**	**-1.3**
CYA				IAML		16 40 35.5	
comp=Z,37nm,0.9s							
SLA	**San Lorenzo**	**3.00**	**321**	*iP*	**P**	**16 39 30.5**	**+1.7**
AZAP	**Zapla**	**3.20**	**332**	*iP*	**P**	**16 39 31.3**	**+1.2**
AZAP				*eS*	**S**	**16 40 33.0**	**-0.1**
AZAP				IAML		16 40 35.2	
comp=Z,138nm,0.8s							
ASTB	**Santa Barbara**	**3.25**	**343**	*iP*	**P**	**16 39 32.6**	**+2.2**
ALOL	**LOMAS DE OLMED**	**3.29**	**351**	*iP*	**P**	**16 39 33.1**	**+2.7**
ALOL				*eS*	**S**	**16 40 34.7**	**+1.0**
TINO	**Tinogasta**	**3.81**	**254**	*iP*	**P**	**16 39 35.2**	**+1.3**
ACLC	**CERRO LA CRUZ**	**3.89**	**232**	*iP*	**P**	**16 39 35.0**	**+0.5**
ACLC				*eS*	**S**	**16 40 40.0**	**-1.6**
HJA	**Humahuaca**	**4.25**	**335**	*iP*	**P**	**16 39 39.8**	**+2.1**
HJA				IAML		16 40 52.2	
comp=Z,20nm,0.6s							
APLL	**PUNTA DE LOS L**	**4.29**	**219**	*iP*	**P**	**16 39 37.3**	**0.0**
TCA	**Tanti**	**4.37**	**193**	*iP*	**P**	**16 39 38.4**	**+0.4**
ACHE	**Chepes**	**4.96**	**214**	*iP*	**P**	**16 39 42.9**	**+0.1**
ACHE				*eS*	**S**	**16 40 53.8**	**-2.8**
AVFE	**Valle Fertil**	**5.03**	**224**	*iP*	**P**	**16 39 44.1**	**+0.8**
AVFE				*eS*	**S**	**16 40 56.4**	**-1.0**
AVFE				IAML		16 41 00.3	
comp=Z,92nm,0.4s							
AC02	**Maricunga**	**5.10**	**271**	P	**P**	**16 39 47.0**	**+2.6**
AC02	**Maricunga**	**5.10**	**271⇓**	*iP*	**P**	**16 39 47.2**	**+2.8**
AC02				IAmb	IAmb	16 39 48.0	
comp=Z,554nm,0.8s							
AC02				*iS*	**S**	**16 41 02.6**	**+3.3**
AC02	**Maricunga**	**5.10**	**271**	*iP*	**P**	**16 39 47.3**	**+2.8**
AC02				*iS*	**S**	**16 41 03.0**	**+3.7**
YJA	**Yavi**	**5.23**	**338**	*iP*	**P**	**16 39 48.0**	**+2.4**
YJA				*iS*	**S**	**16 41 02.5**	**+1.1**
YJA				IAML		16 41 05.7	
comp=Z,8.7nm,0.5s							
CPUP	**Villa Florida**	**5.50**	**84**	P	**P**	**16 39 48.7**	**+1.4**
comp=Z,283nm,0.7s,baz=251,slow=8.6,SNR=506							
CPUP				S	**S**	**16 41 06.7**	**+2.0**
comp=Z,14nm,0.6s,baz=194,slow=20,SNR=0.9							
CPUP	**Villa Florida**	**5.50**	**84⇑**	*iP*	**P**	**16 39 49.0**	**+1.7**
CPUP				*eS*	**S**	**16 41 07.2**	**+2.5**
GO02	**Mina Guanaco**	**5.86**	**288**	P	**P**	**16 39 52.8**	**+1.9**
GO02	**Mina Guanaco**	**5.86**	**288**	*iP*	**P**	**16 39 52.9**	**+2.1**
GO02				*iP*	P	16 39 53.4	+2.5
AF01	**San Pedro de A**	**5.95**	**313**	P	**P**	**16 39 53.2**	**+1.5**
AC06	**Mina Casimiro**	**6.18**	**266**	P	**P**	**16 39 54.5**	**+1.2**
AC05	**El Transito**	**6.31**	**252**	P	**P**	**16 39 56.4**	**+1.9**
AC05	**El Transito**	**6.31**	**252⇓**	*iP*	**P**	**16 39 56.7**	**+2.1**
AC05				IVmB_BB		16 40 04.7	
comp=Z,6μm,0.1s							
AC05				*iS*	**S**	**16 41 19.4**	**+1.3**
ZON	**Zonda**	**6.39**	**225**	P	**P**	**16 39 56.8**	**+1.6**
AC01	**Pan de Azucar**	**6.49**	**277**	P	**P**	**16 39 57.4**	**+1.2**
ITQB	**Itaqui**	**6.53**	**115**	P	**P**	**16 39 58.0**	**+1.6**
ITQB	**Itaqui**	**6.53**	**115**	*eP*	**P**	**16 39 57.7**	**+1.3**
CO01	**Juntas del Tor**	**6.54**	**242**	P	**P**	**16 39 59.3**	**+2.5**
CO01	**Juntas del Tor**	**6.54**	**242⇓**	*iP*	**P**	**16 39 59.7**	**+2.9**
CO01				*iS*	**S**	**16 41 25.5**	**+3.3**
LVC	**Limon Verde**	**6.68**	**311**	P	**P**	**16 39 59.6**	**+1.2**
comp=Z,197nm,0.4s,baz=140,slow=4.9,SNR=221							
LVC				S	**S**	**16 41 21.1**	**-3.8**
comp=Z,84nm,0.3s,baz=139,slow=20,SNR=6.6							
LVC	**Limon Verde**	**6.68**	**311**	P	**P**	**16 39 59.3**	**+0.9**
LVC	**Limon Verde**	**6.68**	**311**	*eP*	**P**	**16 39 59.6**	**+1.2**
AZCA	**Azaras, Argent**	**6.68**	**100**	*eP*	**P**	**16 39 59.5**	**+1.6**
PB15	**IPOC Station P**	**6.70**	**304**	P	**P**	**16 39 59.7**	**+1.3**
PB14	**IPOC Station P**	**6.74**	**290**	P	**P**	**16 40 00.1**	**+1.2**
PB14	**IPOC Station P**	**6.74**	**290**	*eP*	**P**	**16 40 00.4**	**+1.5**
PB14				*eS*	**S**	**16 41 26.2**	**+0.3**
AC04	**Llanos de Chal**	**6.88**	**259**	P	**P**	**16 40 00.8**	**+1.0**
PB06	**IPOC Station P**	**7.08**	**307**	P	**P**	**16 40 03.1**	**+1.2**
PB06	**IPOC Station P**	**7.08**	**307⇓**	*iP*	**P**	**16 40 03.4**	**+1.4**
PB06				*iS*	**S**	**16 41 29.9**	**-1.5**
GO04	**Tololo Observa**	**7.18**	**243**	P	**P**	**16 40 03.8**	**+1.0**
PB10	**IPOC Station P**	**7.36**	**297**	P	**P**	**16 40 05.7**	**+1.2**
PB10	**IPOC Station P**	**7.36**	**297⇑**	*iP*	**P**	**16 40 06.0**	**+1.5**
CO03	**El Pedregal**	**7.39**	**238**	P	**P**	**16 40 05.5**	**+0.8**
CO03	**El Pedregal**	**7.39**	**238**	*eP*	**P**	**16 40 06.1**	**+1.4**
CO05	**La Serena**	**7.44**	**246**	P	**P**	**16 40 05.1**	**+0.1**
PB09	**IPOC Station P**	**7.46**	**314**	P	**P**	**16 40 06.9**	**+1.2**
PB09	**IPOC Station P**	**7.46**	**314**	*iP*	**P**	**16 40 07.3**	**+1.7**
MURT	**Porto Murtinho**	**7.56**	**46**	*eP*	**P**	**16 40 07.9**	**+1.5**
UNIS	**Unistalda (Bra**	**7.64**	**107**	*eP*	**P**	**16 40 08.5**	**+1.5**
PB04	**IPOC Station P**	**7.72**	**306**	P	**P**	**16 40 08.9**	**+0.8**
PB04	**IPOC Station P**	**7.72**	**306**	*iP*	**P**	**16 40 09.3**	**+1.1**
CO02	**Combarbal**	**7.80**	**236**	P	**P**	**16 40 09.6**	**+0.9**
CO02	**Combarbal**	**7.80**	**236**	*eP*	**P**	**16 40 09.8**	**+1.2**
RODS	**Rosario do Sul**	**7.93**	**116**	*eP*	**P**	**16 40 11.6**	**+1.8**
PB07	**IPOC Station P**	**7.94**	**311**	P	**P**	**16 40 11.1**	**+0.9**
PB07	**IPOC Station P**	**7.94**	**311⇓**	*iP*	**P**	**16 40 11.4**	**+1.1**
PB07				*iS*	**S**	**16 41 44.6**	**-2.1**
CO06	**Fray Jorge**	**8.04**	**242**	P	**P**	**16 40 11.4**	**+0.5**
CO06	**Fray Jorge**	**8.04**	**242⇓**	*eP*	**P**	**16 40 11.4**	**+0.5**
PB01	**IPOC Station P**	**8.17**	**316**	P	**P**	**16 40 13.1**	**+0.7**
PB01	**IPOC Station P**	**8.17**	**316**	*iP*	**P**	**16 40 13.3**	**+0.8**
PB02	**IPOC Station P**	**8.23**	**313**	P	**P**	**16 40 13.9**	**+0.8**
PB02	**IPOC Station P**	**8.23**	**313**	*iP*	**P**	**16 40 14.0**	**+1.0**
CRSM	**Crissiumal (Br**	**8.36**	**95**	*eP*	**P**	**16 40 15.5**	**+1.3**
VA03	**San Esteban**	**8.39**	**226**	P	**P**	**16 40 15.7**	**+1.3**
ANTJ	**Antonio Joao (**	**8.43**	**55**	*eP*	**P**	**16 40 16.4**	**+1.4**
FCH	**Farellones**	**8.61**	**222**	*eP*	**P**	**16 40 18.7**	**+1.9**
PB08	**IPOC Station P**	**8.67**	**322**	P	**P**	**16 40 19.0**	**+1.2**
PB08	**IPOC Station P**	**8.67**	**322⇓**	*iP*	**P**	**16 40 19.3**	**+1.5**
PEL	**Peldehue**	**8.72**	**224**	P	**P**	**16 40 18.3**	**+0.6**
PATCX	**Punta Patache**	**8.75**	**314**	P	**P**	**16 40 19.1**	**+0.9**
PATCX	**Punta Patache**	**8.75**	**314⇑**	*iP*	**P**	**16 40 19.4**	**+1.2**
VA06	**Catapilco**	**8.75**	**229**	P	**P**	**16 40 18.1**	**+0.2**
ROC1	**El Roble**	**8.82**	**225**	P	**P**	**16 40 18.8**	**-0.1**
MT03	**Universidad Ad**	**8.86**	**222**	P	**P**	**16 40 19.4**	**+0.3**
MT05	**Renca**	**8.92**	**223**	P	**P**	**16 40 19.8**	**+0.2**
LMEL	**Las Melosas**	**8.93**	**219**	P	**P**	**16 40 21.1**	**+1.2**
TA01	**Diego Aracena**	**8.96**	**315**	P	**P**	**16 40 20.6**	**+0.4**
GO01	**Chusmiza**	**9.08**	**323**	P	**P**	**16 40 21.9**	**0.0**
MT02	**Curacav**	**9.08**	**225**	P	**P**	**16 40 21.3**	**+0.1**
TA02	**Huaiquique**	**9.14**	**316**	P	**P**	**16 40 22.7**	**+0.6**
BO04	**La Punta**	**9.26**	**220**	P	**P**	**16 40 23.7**	**+0.6**
VA01	**Torpederas**	**9.27**	**228**	P	**P**	**16 40 23.3**	**+0.3**
MT09	**Talagante**	**9.34**	**223**	P	**P**	**16 40 23.9**	**0.0**
FRBT	**Francisco Belt**	**9.35**	**86**	*eP*	**P**	**16 40 24.9**	**+0.8**
ALGR	**Alto Alegre (B**	**9.36**	**103**	*eP*	**P**	**16 40 25.2**	**+1.1**
BBRB	**Robore, Bolivi**	**9.37**	**22**	*eP*	**P**	**16 40 25.5**	**+1.1**
CPSB	**Cacapava Do Su**	**9.37**	**113**	*eP*	**P**	**16 40 24.7**	**+0.5**
MT01	**Popeta**	**9.56**	**223**	P	**P**	**16 40 26.0**	**0.0**
AQDB	**Aquidauana**	**9.65**	**49**	P	**P**	**16 40 28.4**	**+1.2**
AQDB	**Aquidauana**	**9.65**	**49**	*eP*	**P**	**16 40 28.6**	**+1.4**
PLTB	**Pedras Altas**	**9.75**	**121**	P	**P**	**16 40 28.2**	**+0.2**
PLTB	**Pedras Altas**	**9.75**	**121**	*eP*	**P**	**16 40 28.2**	**+0.2**
BO01	**Tunca**	**9.83**	**220**	P	**P**	**16 40 28.8**	**0.0**
BO02	**Sierra Bellavi**	**9.95**	**218**	P	**P**	**16 40 30.6**	**+0.6**
ITAB	**Concordia**	**10.06**	**93**	P	**P**	**16 40 31.4**	**+0.1**
ITAB	**Concordia**	**10.06**	**93**	*eP*	**P**	**16 40 31.6**	**+0.4**
BBSD	**Serra de San D**	**10.18**	**15**	*eP*	**P**	**16 40 33.4**	**+0.8**
PB16	**IPOC Station P**	**10.35**	**326**	P	**P**	**16 40 36.1**	**+1.2**
PB12	**IPOC Station P**	**10.55**	**322**	P	**P**	**16 40 37.0**	**+0.5**
TRCB	**Terra Rica**	**10.68**	**69**	P	**P**	**16 40 38.4**	**+0.7**
TRQA	**Tornquist**	**11.02**	**174**	P	**P**	**16 40 39.7**	**-1.2**
ML02	**Panimavida**	**11.02**	**216**	P	**P**	**16 40 41.4**	**+0.5**
RPRD	**Ribas do Rio P**	**11.06**	**56**	*eP*	**P**	**16 40 42.5**	**+1.0**
SIV	**San Ignacio**	**11.24**	**12**	P	**P**	**16 40 43.6**	**+0.1**
comp=Z,37nm,0.9s,baz=196,slow=8.4,SNR=136							
SIV				S	**S**	**16 42 45.6**	**-2.0**
comp=Z,4.8nm,0.9s,baz=243,slow=12,SNR=5.2							
CNLB	**Canela**	**11.31**	**104**	*eP*	**P**	**16 40 44.5**	**+0.4**
LPAZ	**La Paz**	**11.59**	**337**	P	**P**	**16 40 48.1**	**+0.4**
comp=Z,16nm,0.3s,baz=119,slow=4.4,SNR=74							
LPAZ				S	**S**	**16 42 53.7**	**-1.4**
comp=Z,6.4nm,0.7s,baz=72,slow=17,SNR=3.7							
LPAZ	**La Paz**	**11.59**	**337**	P	**P**	**16 40 47.9**	**+0.2**
PTLB	**Pontes e Lacer**	**12.24**	**20**	*eP*	**P**	**16 40 54.3**	**+0.6**
PCMB	**Pacaembu**	**12.35**	**66**	*eP*	**P**	**16 40 55.0**	**+0.2**
BI05	**Punta Hualpn**	**12.71**	**218**	P	**P**	**16 40 57.9**	**-0.3**
TER01	**Tubaro-SC**	**12.74**	**100**	*eP*	**P**	**16 40 58.6**	**-0.1**
C2SB	**Chapadao do Su**	**12.78**	**52**	*eP*	**P**	**16 41 00.1**	**+0.9**
TIJ01	**Guaruva-PR**	**13.06**	**86**	*eP*	**P**	**16 41 00.7**	**-1.5**
SALV	**Santo Antonio**	**13.24**	**34**	*eP*	**P**	**16 41 04.2**	**+0.2**
GO06	**Cururehue**	**14.16**	**206**		**P**	**16 41 12.8**	**-0.5**
VILB	**Vilhena**	**14.37**	**13**	*eP*	**P**	**16 41 14.6**	**-1.1**
VA04	**Juan Fernndez**	**14.81**	**240**		**P**	**16 41 19.4**	**-0.4**
PET01	**Itanhaem-SP**	**14.82**	**83**	*eP*	**P**	**16 41 19.3**	**-0.7**
PLCA	**Paso Flores**	**14.84**	**202**	P	**P**	**16 41 20.1**	**0.0**
comp=Z,9.1nm,0.6s,baz=20,slow=11,SNR=48							
PLCA				S	**S**	**16 43 52.3**	**-2.0**
comp=Z,1.8nm,0.9s,baz=346,slow=8.3,SNR=1.3							
PLCA				PcP	**PcP**	**16 45 50.1**	**+1.0**
comp=Z,2.8nm,0.7s,baz=360,slow=1.7,SNR=6.0							
PLCA				ScP	**ScP**	**16 48 29.2**	**-1.2**
comp=Z,5.2nm,0.8s,baz=8.5,slow=6.5,SNR=3.5							
PLCA	**Paso Flores**	**14.84**	**202**	P	**P**	**16 41 19.4**	**-0.6**
PLCA	**Paso Flores**	**14.84**	**202**	*eP*	**P**	**16 41 20.1**	**0.0**
BB19B	**Bebedouro**	**14.86**	**69**	*eP*	**P**	**16 41 20.0**	**-0.5**
RCLB	**Rio Claro- Sao**	**15.16**	**76**	*eP*	**P**	**16 41 23.1**	**-0.4**
LR04	**Corral**	**15.24**	**211**	P	**P**	**16 41 23.2**	**-0.7**
VAO	**Valinhos**	**15.46**	**78**	*eP*	**P**	**16 41 26.6**	**+0.1**
LL04	**Puerto Octay**	**15.67**	**206**	P	**P**	**16 41 26.9**	**-1.3**
LL05	**Los Muermos**	**16.52**	**208**	P	**P**	**16 41 34.8**	**-1.4**
LL05					**PcP**	**16 45 50.5**	**-0.9**
PARB	**Paraibuna**	**16.54**	**81**	*eP*	**P**	**16 41 37.1**	**+0.4**
PDRB	**Porto dos Gac**	**16.62**	**24**	*eP*	**P**	**16 41 36.5**	**-1.0**
IPMB	**Ipameri, GO**	**16.70**	**60**	*eP*	**P**	**16 41 38.5**	**+0.2**
ETMB	**Extrema**	**17.37**	**351**	*eP*	**P**	**16 41 44.3**	**+0.1**
LL02	**Futaleuf**	**17.48**	**201**	P	**P**	**16 41 43.8**	**-1.1**
LL02				IAmb	IAmb	16 41 50.8	
comp=Z,9.9nm,0.9s							
CLDB	**Colider**	**17.65**	**25**	*eP*	**P**	**16 41 47.0**	**+0.2**
PMNB	**Patos De Minas**	**17.80**	**65**	*eP*	**P**	**16 41 49.1**	**+0.8**
SAML	**Samuel**	**18.03**	**1**	P	**P**	**16 41 50.0**	**-0.3**
MAN01	**Angra dos Reis**	**18.13**	**81**	*eP*	**P**	**16 41 51.9**	**+0.7**
BDFB	**Brasilia**	**18.29**	**55**	P	**P**	**16 41 52.8**	**0.0**
comp=Z,87nm,0.6s,baz=230,slow=8.8,SNR=116							
BDFB				S	**S**	**16 44 51.0**	**-1.0**
comp=Z,5.4nm,0.7s,baz=227,slow=22,SNR=2.7							
BDFB	**Brasilia**	**18.29**	**55**	P	**P**	**16 41 52.8**	**0.0**
BDFB	**Brasilia**	**18.29**	**55**	*eP*	**P**	**16 41 53.3**	**+0.4**
VAS01	**Vassouras-RJ**	**18.77**	**80**	*eP*	**P**	**16 41 57.5**	**+0.5**
AY01	**Puyuhuapi**	**18.84**	**201**	P	**P**	**16 41 56.3**	**-0.9**
SNDB	**Serra Nova Dou**	**18.86**	**40**	*eP*	**P**	**16 41 57.8**	**0.0**
NNA	**Nana**	**19.60**	**317**	P	**P**	**16 42 05.3**	**+0.6**
comp=Z,6.4nm,0.3s,baz=197,slow=7.5,SNR=5.2							
DUB01	**Friburgo-RJ**	**19.77**	**80**	*eP*	**P**	**16 42 04.8**	**-1.4**
DIAM	**Diamantina, MG**	**20.19**	**68**	*eP*	**P**	**16 42 10.9**	**+0.8**
MC01	**Montes Claros**	**20.79**	**64**	*eP*	**P**	**16 42 15.6**	**+0.2**
NPGB	**Novo Progresso**	**21.34**	**23**	*eP*	**P**	**16 42 20.0**	**-0.4**
JANB	**Januaria**	**21.44**	**60**	*eP*	**P**	**16 42 21.5**	**+0.3**
ALF01	**Guarapari-ES**	**21.72**	**78**	*eP*	**P**	**16 42 24.0**	**+0.4**
SJMB	**Sao Joao De Ma**	**22.09**	**73**	*eP*	**P**	**16 42 27.5**	**+0.5**
RIB01	**Linhares ES**	**22.51**	**75**	*eP*	**P**	**16 42 31.2**	**+0.4**
SDBA	**SAO DESIDERIO**	**22.69**	**54**	*eP*	**P**	**16 42 32.5**	**+0.1**
NAN01	**Guarapari, ES**	**23.38**	**72**	*eP*	**P**	**16 42 38.9**	**+0.4**
SMTB	**Santa Maria do**	**23.51**	**43**	*eP*	**P**	**16 42 40.0**	**+0.3**
ITTB	**Itaituba**	**23.75**	**19**	*eP*	**P**	**16 42 41.6**	**-0.2**
MACA	**Manacapuru-AM**	**23.92**	**7**	*eP*	**P**	**16 42 42.8**	**-0.6**
GUA01	**Guaratinga, BA**	**24.24**	**69**	*eP*	**P**	**16 42 46.6**	**+0.5**
ATAH	**Atahualpa**	**24.40**	**322**	P	**P**	**16 42 49.9**	**+1.8**
comp=Z,4.4nm,0.5s,baz=194,slow=11,SNR=4.4							
comp=Z,4.4nm,0.5s							
PRPB	**Parauapebas**	**24.49**	**34**	*eP*	**P**	**16 42 47.5**	**-0.9**
CMC01	**Camacan, BA**	**25.10**	**67**	*eP*	**P**	**16 42 54.2**	**+0.5**
GDU01	**Guandu, BA**	**25.94**	**64**	*eP*	**P**	**16 43 01.2**	**0.0**
MALB	**Monte Alegre**	**26.57**	**21**	*eP*	**P**	**16 43 06.6**	**-0.1**
MCRA	**Macar, Loja**	**27.55**	**322**	P	**P**	**16 43 16.0**	**+0.7**
TMAB	**Tom-Au,PA,Br**	**28.62**	**33**	*eP*	**P**	**16 43 25.3**	**+0.7**
BOAV	**Boa Vista**	**29.43**	**6**	*eP*	**P**	**16 43 31.7**	**0.0**
ROSB	**Rosrio**	**30.32**	**41**	*eP*	**P**	**16 43 39.4**	**+0.1**
OTAV	**Otavalo**	**30.76**	**330**	P	**P**	**16 43 43.9**	**+0.3**
OTAV	**Otavalo**	**30.76**	**330**	*eP*	**P**	**16 43 46.7**	**+3.1**
NBAN	**Anadia - AL**	**30.93**	**61**	*eP*	**P**	**16 43 44.2**	**-0.4**
PTGC	**Puerto Gaitan,**	**32.21**	**344**	*eP*	**P**	**16 43 54.7**	**-0.8**
VILC	**Villavicencio,**	**32.55**	**341**	*eP*	**P**	**16 43 59.2**	**+0.7**
CHIC	**Chingaza**	**33.06**	**341**	*eP*	**P**	**16 44 03.0**	**0.0**
MDP	**Montagnes des**	**33.65**	**20**	P	**P**	**16 44 06.8**	**-0.7**
comp=Z,20nm,0.4s,baz=194,slow=9.9,SNR=30							
comp=Z,20nm,0.4s							
RCBR	**Riachuelo**	**33.66**	**56**	P	**P**	**16 44 08.0**	**+0.2**
comp=Z,26nm,0.8s,baz=267,slow=15							
comp=Z,26nm,0.8s							
RCBR	**Riachuelo**	**33.66**	**56**	*eP*	**P**	**16 44 08.1**	**+0.3**
RUSC	**La Rusia**	**34.08**	**343**	*eP*	**P**	**16 44 11.5**	**-0.3**
GUY2C	**Guyana, Caldas**	**34.12**	**338**	*eP*	**P**	**16 44 12.4**	**+0.3**
PLMC	**San Jos del P**	**34.14**	**337**	*eP*	**P**	**16 44 11.0**	**-0.7**
NORC	**Norcasia**	**34.28**	**339**	*eP*	**P**	**16 44 13.2**	**+0.2**
BARC	**Barichara**	**34.78**	**343**	*eP*	**P**	**16 44 15.4**	**-1.8**
PTBC	**PUERTO BERRIO,**	**35.08**	**341**	*eP*	**P**	**16 44 16.7**	**-2.9**
PAMC	**Pamplona, Colo**	**35.37**	**344**	*eP*	**P**	**16 44 21.4**	**-1.0**
ZARC	**Zaragoza, Cauc**	**36.10**	**341**	*eP*	**P**	**16 44 26.3**	**-1.7**
SDV	**Santo Domingo**	**36.42**	**348**	P	**P**	**16 44 29.1**	**-1.7**
comp=Z,9.5nm,0.4s,baz=173,slow=5.7,SNR=3.9							
comp=Z,9.5nm,0.4s							
SDV	**Santo Domingo**	**36.42**	**348**	*eP*	**P**	**16 44 30.9**	**+0.1**
PCRV	**Puerto La Cruz**	**37.05**	**358**	P	**P**	**16 44 35.4**	**-0.3**
comp=Z,16nm,0.7s,baz=248,slow=5.4,SNR=10							
comp=Z,16nm,0.7s							
SJG	**San Juan**	**44.99**	**356**	P	**P**	**16 45 36.4**	**-2.2**
comp=Z,5.6nm,0.4s,baz=137,slow=18,SNR=3.9							
comp=Z,5.6nm,0.4s							
BELA	**Belgrano 2**	**52.58**	**173**	P	**P**	**16 46 34.5**	**+0.6**
BELA				IAmb	IAmb	16 46 35.9	
comp=Z,11nm,0.6s							
VNA3	**Neumayer Olymp**	**53.21**	**161**	P	**P**	**16 46 39.2**	**+0.7**
VNA3	**Neumayer Olymp**	**53.21**	**161**	pP	pP	16 48 26.8	+2.2
VNA1	**Neumayer--Stat**	**53.37**	**160**	P	**P**	**16 46 40.7**	**+1.2**
VNA2	**Neumayer--Watz**	**53.75**	**160**	P	**P**	**16 46 43.1**	**+0.9**
baz=284,slow=8.0							
VNA2	**Neumayer--Watz**	**53.75**	**160**	pP	pP	16 48 30.9	+2.2
SNAA	**Sanae**	**55.39**	**160**	P	**P**	**16 46 54.3**	**+0.5**
SNAA	**Sanae**	**55.39**	**160**	pP	pP	16 48 43.0	+1.8
SNAA	**Sanae**	**55.39**	**160**	P	**P**	**16 46 53.7**	**-0.1**
comp=Z,9.0nm,0.6s,baz=285,slow=8.7,SNR=63							
SNAA				PcP	**PcP**	**16 47 44.5**	**-1.2**
comp=Z,3.4nm,0.9s,baz=282,slow=4.2,SNR=4.0							
SNAA				pP	**pP**	**16 48 42.8**	**+1.6**
comp=Z,8.3nm,1.1s,baz=289,slow=4.4,SNR=7.5							
SNAA				ScP	**ScP**	**16 50 49.9**	**-0.9**
comp=Z,1.0nm,0.7s,baz=296,slow=5.7,SNR=2.8							
comp=Z,9.0nm,0.6s							
SNAA	**Sanae**	**55.39**	**160**	P	**P**	**16 46 53.9**	**+0.1**
SNAA					**pP**	**16 48 42.8**	**+1.6**
TROLL	**Troll, Antarti**	**57.10**	**160**	P	**P**	**16 47 06.5**	**+0.9**
TROLL	**Troll, Antarti**	**57.10**	**160**	pP	pP	16 48 55.5	+1.4
BBTS	**Babate**	**61.58**	**53**	P	**P**	**16 47 35.8**	**-0.4**
comp=Z,46nm,0.9s,baz=206,slow=5.8,SNR=3.8							
comp=Z,46nm,0.9s							
LRAL	**Lakeview Retre**	**63.84**	**338**	P	**P**	**16 47 49.9**	**-0.5**
W57A	**Gilead**	**63.84**	**345**	P	**P**	**16 47 51.0**	**+0.7**
W57A				IAmb	IAmb	16 47 51.9	
comp=Z,13nm,0.7s							
KMSC	**Kings Mountain**	**64.16**	**344**	P	**P**	**16 47 53.0**	**+0.7**
KMSC				IAmb	IAmb	16 47 54.1	
comp=Z,12nm,0.9s							
V58A	**Windy Hill, Pi**	**64.26**	**346**	P	**P**	**16 47 53.4**	**+0.4**
V58A				IAmb	IAmb	16 47 54.8	
comp=Z,12nm,1.1s							
Y49A	**Blount Mountai**	**64.41**	**339**	P	**P**	**16 47 53.4**	**-0.6**
Y49A				IAmb	IAmb	16 47 54.8	
comp=Z,8.0nm,0.7s							
BG3	**Lake

KSPA IAmb IAmb 16 48 25.9
comp=Z,14nm,0.9s
M57A Sunshine Farm, 69.24 349 P **P 16 48 24.6 +1.1**
M57A IAmb IAmb 16 48 25.0
comp=Z,13nm,1.1s
HHAR Hobbs 69.27 334 P **P 16 48 23.9 0.0**
HHAR IAmb IAmb 16 48 25.2
comp=Z,6.3nm,0.6s
P48A Milroy 69.30 342 P **P 16 48 23.5 -0.5**
MGMO Mountain Grove 69.41 336 P **P 16 48 24.6 -0.1**
MGMO IAmb IAmb 16 48 25.9
comp=Z,10.0nm,0.8s
U38A Gravette 69.58 334 P **P 16 48 25.7 -0.1**
M55A Ridgway 69.66 348 P **P 16 48 26.4 +0.3**
M55A IAmb IAmb 16 48 27.8
comp=Z,15nm,0.8s
O49A Covington 69.69 343 P **P 16 48 26.0 -0.3**
O49A IAmb IAmb 16 48 30.4
comp=Z,24nm,1.5s
TUL1 Leonard 69.69 332 P **P 16 48 26.4 0.0**
L61B Northampton 69.70 353 P **P 16 48 27.1 +0.8**
L61B IAmb IAmb 16 49 01.4
comp=Z,20nm,1.3s
L59A Walton 69.75 351 P **P 16 48 27.3 +0.7**
L59A IAmb IAmb 16 48 28.9
comp=Z,14nm,0.8s
CCM Cathedral Cave 69.84 337 P **P 16 48 27.0 -0.2**
CCM IAmb IAmb 16 48 28.0
comp=Z,9.8nm,0.7s
BINY Binghamton 69.90 350 P **P 16 48 27.5 +0.1**
BINY IAmb IAmb 16 48 29.1
comp=Z,9.8nm,0.7s
L56A Greenwood 70.09 349 P **P 16 48 29.4 +0.8**
ALLY Alegheny Colle 70.11 347 P **P 16 48 29.3 +0.6**
S39A Bolivar 70.27 335 P **P 16 48 29.5 -0.3**
S39A IAmb IAmb 16 48 31.1
comp=Z,9.0nm,0.8s
N49A Columbus Grove 70.34 343 P **P 16 48 29.8 -0.3**
R40A Maddies Statio 70.41 336 P **P 16 48 30.4 -0.2**
R40A IAmb IAmb 16 48 31.2
comp=Z,6.8nm,0.7s
OK044 Pawnee Station 70.51 332 P **P 16 48 31.4 +0.2**
OK044 IAmb IAmb 16 48 32.4
comp=Z,6.3nm,0.6s
ERPA Erie 70.53 347 P **P 16 48 31.4 +0.2**
WVNY West Valley, N 70.54 348 P **P 16 48 32.0 +0.8**
WVNY IAmb IAmb 16 48 33.1
comp=Z,18nm,0.8s
OK048 Pawnee Station 70.61 332 P **P 16 48 32.5 +0.7**
SFIN Lafayette 70.63 341 P **P 16 48 30.9 -0.9**
SFIN IAmb IAmb 16 48 31.6
comp=Z,8.0nm,0.8s
P43A Skaggs, Pawnee 70.69 339 P **P 16 48 31.6 -0.6**
P43A IAmb IAmb 16 48 32.6
comp=Z,15nm,0.8s
N47A Urbana 70.70 342 P **P 16 48 31.7 -0.5**
N47A IAmb IAmb 16 48 32.6
comp=Z,19nm,1.1s
MMNY Mt. Morris Dam 70.73 349 P **P 16 48 32.9 +0.5**
T35A Sooner Cattle 70.85 332 P **P 16 48 33.7 +0.4**
T35A IAmb IAmb 16 48 34.9
comp=Z,10nm,1.0s
KOWA Kowa 70.92 62 P **P 16 48 33.6 -0.5**
KOWA Kowa 70.92 62 P **P 16 48 34.0 -0.1**
I63A Otisfield 71.08 355 P **P 16 48 36.2 +1.8**
J56A Wolcott 71.08 350 P **P 16 48 34.4 +0.1**
J56A IAmb IAmb 16 48 35.7
comp=Z,19nm,0.8s
J55A Hilton 71.23 349 P **P 16 48 36.0 +0.8**
J55A IAmb IAmb 16 48 43.9
comp=Z,15nm,1.0s
SBA Scott Base 71.25 190 P **P 16 48 35.4 +0.4**
KAN13 South Haven SW 71.34 332 P **P 16 48 36.5 +0.5**
KAN13 IAmb IAmb 16 48 37.8
comp=Z,13nm,0.7s
HAL Halifax 71.36 360 P **P 16 48 37.0 +1.1**
L48A N Adams 71.37 344 P **P 16 48 35.4 -0.7**
L48A IAmb IAmb 16 48 36.3
comp=Z,8.5nm,0.7s
NCB Newcomb 71.39 352 P **P 16 48 36.7 +0.5**
LBNH Lisbon 71.39 354 P **P 16 48 37.8 +1.6**
LBNH IAmb IAmb 16 49 12.9
comp=Z,33nm,1.4s
P40A Paris 71.44 337 P **P 16 48 36.4 -0.2**
P40A IAmb IAmb 16 48 37.4
comp=Z,7.2nm,0.8s
SUR Sutherland 71.52 117 P **P 16 48 38.7 +1.1**
WVL Waterville 71.52 355 P **P 16 48 38.3 +1.4**
WVL IAmb IAmb 16 48 39.1
comp=Z,16nm,0.8s
EMMW East Machias 71.53 357 P **P 16 48 38.2 +1.3**
H62A Milan 71.65 354 P **P 16 48 39.0 +1.3**
H62A IAmb IAmb 16 48 40.1
comp=Z,9.0nm,0.7s
G65A Princeton 72.03 357 P **P 16 48 41.2 +1.4**
G65A IAmb IAmb 16 48 49.6
comp=Z,25nm,1.2s
P38A Dawn 72.05 336 P **P 16 48 40.1 0.0**
LONY Lake Ozonia 72.07 352 P **P 16 48 41.0 +0.9**
LONY IAmb IAmb 16 48 42.4
comp=Z,17nm,1.3s
GBN Guysborough 72.16 1 P **P 16 48 41.6 +1.1**
GBN IAmb IAmb 16 48 42.1
comp=Z,24nm,1.2s
FRNY Flat Rock 72.16 352 P **P 16 48 41.8 +1.1**
PKME Peaks-Kenny Pk 72.19 356 P **P 16 48 42.1 +1.3**
VNDA Vanda 72.22 189 P **P 16 48 42.1 +1.5**
comp=Z,1.6nm,0.9s,baz=150,slow=3.7,SNR=11
VNDA pP **pP 16 50 37.4 +0.7**
comp=Z,0.4nm,0.7s,baz=162,slow=0.8,SNR=3.1
comp=Z,1.6nm,0.9s
G62A West of Eustis 72.24 355 P **P 16 48 42.6 +1.5**
G62A IAmb IAmb 16 48 43.9
comp=Z,25nm,1.2s
F63A Nahmakanta, Br 72.61 356 P **P 16 48 44.6 +1.4**
F63A IAmb IAmb 16 48 56.1
comp=Z,32nm,1.4s
J47A Sunmer 72.68 344 P **P 16 48 44.5 +0.8**
J47A IAmb IAmb 16 48 48.8
comp=Z,8.1nm,0.7s
F64A Sherman 72.73 356 P **P 16 48 45.3 +1.4**
F64A IAmb IAmb 16 48 46.3
comp=Z,19nm,0.8s
F62A Pittston Farm, 72.87 355 P **P 16 48 46.2 +1.5**
F62A IAmb IAmb 16 48 46.7
comp=Z,13nm,0.6s
I49A Point Hope 72.87 345 P **P 16 48 44.7 0.0**
L42A Oliver, Polo 72.89 340 P **P 16 48 44.8 -0.1**
SADO Sadowa 72.92 348 P **P 16 48 45.3 +0.2**
SADO IAmb IAmb 16 49 19.0
comp=Z,23nm,1.4s
K43A Burlington 73.13 341 P **P 16 48 46.3 0.0**
K43A IAmb IAmb 16 49 22.4
comp=Z,21nm,1.1s
L40A Anamosa 73.43 339 P **P 16 48 47.8 -0.2**
L40A IAmb IAmb 16 48 48.9
comp=Z,15nm,0.8s
PQI Presque Isle 73.52 357 P **P 16 48 49.3 +1.0**
PQI IAmb IAmb 16 48 50.6
comp=Z,19nm,1.1s
E62A Clayton Lake 73.56 356 P **P 16 48 50.1 +1.5**
E62A IAmb IAmb 16 48 51.1
comp=Z,14nm,0.8s
TRQ Mont Tremblant 73.64 352 P **P 16 48 49.6 +0.4**
TSUM Tsumeb 73.76 104 P **P 16 48 50.3 -0.3**
TSUM IAmb IAmb 16 48 52.0
comp=Z,13nm,0.7s
CBKS Cedar Bluff 73.82 331 P **P 16 48 51.6 +1.3**
JFWS Jewell Farm 73.89 340 P **P 16 48 50.3 -0.3**
D62A Allapoint, All 73.98 356 P **P 16 48 52.2 +1.2**
D62A IAmb IAmb 16 48 52.8
comp=Z,14nm,0.8s
BATG Bathurst New B 74.04 358 P **P 16 48 52.4 +1.1**
BATG IAmb IAmb 16 48 52.6
comp=Z,28nm,1.4s
I42A Draeger Farm, 74.39 341 P **P 16 48 53.3 0.0**
I42A IAmb IAmb 16 49 31.0
comp=Z,27nm,1.3s
TOA0 Torodi Ar. Sit 74.75 66 P **P 16 48 55.5 -0.5**
TORD Torodi Ar. Bea 74.75 66 P **P 16 48 54.6 -1.4**
comp=Z,39nm,0.5s,baz=271,slow=5.4,SNR=22
comp=Z,39nm,0.5s
TORD Torodi Ar. Bea 74.75 66 P **P 16 48 56.0 0.0**
SOE Somerset East 75.12 119 P **P 16 48 58.5 +0.4**

L34A Svendsen Farm, 75.14 335 P **P 16 48 57.6 0.0**
BGNE Belgrade 75.35 334 P **P 16 48 59.3 +0.5**
E46A Sault Ste Mari 75.51 345 P **P 16 48 59.7 +0.2**
E46A IAmb IAmb 16 49 00.7
comp=Z,16nm,1.1s
I37A Lemond, Waseca 75.89 338 P **P 16 49 01.9 +0.2**
VLDQ Val d'Or 75.89 350 P **P 16 49 02.3 +0.7**
DRLN Deer Lake 76.17 4 P **P 16 49 03.9 +0.8**
BOSA Boshof 76.48 115 P **P 16 49 05.5 -0.2**
comp=Z,27nm,0.5s,baz=263,slow=3.7,SNR=108
comp=Z,27nm,0.5s
BOSA Boshof 76.48 115 P **P 16 49 05.5 -0.2**
BOSA Boshof 76.48 115 *i* P **P 16 49 05.8 +0.2**
BOSA Boshof 76.48 115 *i* P **P 16 49 05.8 +0.2**
ECSD EROS Data Cent 76.76 336 P **P 16 49 06.6 +0.1**
D41A Chassel 77.20 343 P **P 16 49 09.6 +0.7**
ISCO Idaho Springs 77.27 328 P **P 16 49 11.2 +1.4**
SMCO Snowmass 77.44 327 P **P 16 49 12.5 +1.6**
MAW Mawson 77.53 162 P **P 16 49 11.3 +0.9**
comp=Z,8.7nm,0.6s,baz=210,slow=6.8,SNR=25
comp=Z,8.7nm,0.6s
MAW Mawson 77.53 162 P **P 16 49 11.5 +1.1**
PV07 Paradox Valley 77.71 325 P **P 16 49 13.4 +1.4**
TTIG Tnine Tigouga, 77.73 46 P **P 16 49 14.0 +1.7**
LBTB Lobatse 78.22 112 P **P 16 49 15.1 -0.1**
LBTB Lobatse 78.22 112 *i* P **P 16 49 15.6 +0.4**
LBTB Lobatse 78.22 112 *i* P **P 16 49 15.6 +0.4**
PHWY Pilot Hill 78.39 329 P **P 16 49 16.3 +0.6**
OUK Oukaimeden 78.54 46 P **P 16 49 18.0 +1.2**
EYMN Ely 78.83 341 P **P 16 49 17.7 +0.1**
P18A Preston Nutter 79.42 325 P **P 16 49 23.0 +1.7**
RDMU Red Mountain 79.79 326 P **P 16 49 24.3 +1.2**
B35A Bob, Littlefor 79.86 340 P **P 16 49 23.3 +0.3**
B35A IAmb IAmb 16 49 24.3
comp=Z,16nm,0.6s
RSSD Black Hills 80.01 332 P **P 16 49 24.8 +0.6**
AGMN Agassiz Nation 80.47 339 P **P 16 49 26.3 +0.2**
AGMN IAmb IAmb 16 49 27.6
comp=Z,11nm,0.7s
E28A Huff 80.69 335 P **P 16 49 28.4 +1.0**
MDND Maddock 81.36 336 P **P 16 49 30.9 +0.1**
PD31 Pinedale Array 81.45 328 P **P 16 49 32.5 +0.9**
PDAR Pinedale Array 81.45 328 P **P 16 49 32.0 +0.4**
comp=Z,1.5nm,0.5s,baz=129,slow=8.6,SNR=15
comp=Z,1.5nm,0.5s
PDAR Pinedale Array 81.45 328 P **P 16 49 31.9 +0.2**
HWUT Hardware Ranch 81.56 326 P **P 16 49 32.8 +0.6**
SCHQ Schefferville 81.62 358 P **P 16 49 32.2 +0.3**
comp=Z,10nm,0.7s,baz=190,slow=4.3,SNR=9.5
comp=Z,10nm,0.7s
SCHQ Schefferville 81.62 358 P **P 16 49 32.0 +0.1**
SCHQ IAmb IAmb 16 49 33.3
comp=Z,13nm,0.8s
POGA Pongola 82.19 117 P **P 16 49 36.0 +0.4**
LOHW Long Hollow 82.59 328 P **P 16 49 38.3 +0.9**
PCVE Castro Verde 82.71 41 *eP* **P 16 49 38.8 +0.9**
comp=Z,18nm,1.6s
MESJ Messejana 82.75 41 *eP* **P 16 49 38.6 +0.6**
MESJ IAmb IAmb 16 49 41.4
comp=Z,36nm,1.9s
MESJ Messejana 82.75 41 *eP* **P 16 49 38.9 +0.9**
comp=Z,22nm,1.7s
PVAQ Vaqueiros 82.75 42 *eP* **P 16 49 38.9 +0.9**
comp=Z,22nm,1.4s
PNCL Nicolau / Gran 82.75 41 *eP* **P 16 49 38.9 +0.9**
comp=Z,20nm,1.6s
MOOW Moose Ponds 82.76 328 P **P 16 49 38.8 +0.6**
BLWY Bulawayo 82.81 109 *i* P **P 16 49 39.7 +0.6**
BLWY Bulawayo 82.81 109 *i* P **P 16 49 39.7 +0.6**
MUSN Musina, Limpop 82.91 111 *i* P **P 16 49 40.7 +1.3**
MUSN Musina, Limpop 82.91 111 *i* P **P 16 49 40.7 +1.3**
NVAR Mina Array Bea 82.95 320 P **P 16 49 39.8 +0.5**
comp=Z,0.1nm,0.3s,baz=188,slow=5.5,SNR=2.5
LAO LASA Array 82.99 332 P **P 16 49 39.8 +0.6**
LAO IAmb IAmb 16 50 19.7
comp=Z,14nm,1.4s
SMIR Smir Dam 83.03 44 P **P 16 49 41.1 +1.6**
TAM Tamanrasset 83.04 60 P **P 16 49 40.5 +0.4**
TAM IAmb IAmb 16 49 41.6
comp=Z,11nm,0.7s
PBEJ Beja 83.08 41 *eP* **P 16 49 40.5 +0.8**
comp=Z,16nm,1.8s
AKLM AKL 83.24 46 P **P 16 49 42.0 +1.3**
EVO Evora 83.33 41 *eP* **P 16 49 41.9 +1.0**
comp=Z,17nm,1.8s
FIGM Figuig 83.48 49 P **P 16 49 43.0 +1.1**
PSBE So Bento 83.55 39 *eP* **P 16 49 43.0 +1.0**
comp=Z,28nm,1.4s
PMTG Montargil 83.57 40 *eP* **P 16 49 42.7 +0.6**
comp=Z,26nm,1.4s
DGMT Dagmar 83.60 334 P **P 16 49 43.1 +1.1**
DGMT IAmb IAmb 16 49 44.2
comp=Z,7.4nm,0.7s
MOPA Mopani 83.64 113 *i* P **P 16 49 44.1 +1.1**
MOPA Mopani 83.64 113 *i* P **P 16 49 44.1 +1.1**
PALE Palemas 83.64 45 P **P 16 49 43.1 +0.5**
PBAR Barrancos 83.66 41 *eP* **P 16 49 43.1 +0.5**
comp=Z,16nm,1.9s
PESTR Estremoz 83.80 41 *eP* **P 16 49 43.9 +0.6**
comp=Z,17nm,2.2s
PESTR Estremoz 83.80 41 P **P 16 49 43.5 +0.2**
PESTR Estremoz 83.80 41 P **P 16 49 43.9 +0.6**
JBK JBK 83.97 47 P **P 16 49 45.0 +0.6**
PCAS Casmilo, Conde 84.08 39 *eP* **P 16 49 45.4 +0.8**
comp=Z,34nm,1.8s
COI Coimbra 84.24 39 *eP* **P 16 49 46.8 +1.5**
comp=Z,26nm,1.7s
PMRV Marv??o 84.29 40 *eP* **P 16 49 46.0 +0.3**
comp=Z,15nm,1.1s
TAF Taforalt 84.36 46 P **P 16 49 48.0 +1.8**
HLID Hailey 84.43 325 P **P 16 49 47.8 +1.4**
PCBR Castelo Branco 84.52 40 *eP* **P 16 49 46.9 +0.2**
comp=Z,20nm,1.1s
MTE Manteigas 84.86 39 *eP* **P 16 49 48.9 +0.4**
comp=Z,24nm,1.0s
MTE Manteigas 84.86 39 P **P 16 49 48.3 -0.2**
PVIS Viseu 84.87 39 *eP* **P 16 49 48.7 +0.2**
comp=Z,18nm,1.6s
PVRL Vila Real 85.35 39 *eP* **P 16 49 51.4 +0.6**
comp=Z,26nm,0.9s
POLO Lamas de Olo 85.37 39 *eP* **P 16 49 51.4 +0.4**
comp=Z,12nm,1.4s
PCAB Cabril 85.47 38 *eP* **P 16 49 51.8 +0.4**
PGAV Gavieira, Arco 85.51 38 *eP* **P 16 49 51.8 +0.2**
MVO Moncorvo 85.66 39 *eP* **P 16 49 53.0 +0.7**
comp=Z,31nm,2.1s
PAB San Pablo 86.15 42 P **P 16 49 54.9 +0.2**
PAB IAmb IAmb 16 49 56.1
comp=Z,8.6nm,1.1s
PBRG Braganca 86.25 39 *eP* **P 16 49 55.5 +0.4**
J08A Circle Bar Ran 86.40 323 P **P 16 49 57.1 +1.3**
J08A IAmb IAmb 16 49 58.3
comp=Z,4.0nm,0.7s
ESDC Sonseca Array 86.46 42 P **P 16 49 56.0 -0.2**
comp=Z,3.8nm,0.7s,baz=239,slow=4.4,SNR=35
comp=Z,3.8nm,0.7s
ESDC Sonseca Array 86.46 42 P **P 16 49 56.3 +0.2**
ESBB Sonseca Array 86.46 42 P **P 16 49 56.4 +0.3**
WALA Waterton Lakes 88.16 329 P **P 16 50 04.5 +0.6**
WALA IAmb IAmb 16 50 05.7
comp=Z,3.6nm,0.8s
KEST Kesra 92.77 51 P **P 16 50 25.5 -0.1**
comp=Z,4.1nm,0.9s,baz=185,slow=9.9,SNR=5.0
comp=Z,4.1nm,0.9s
SSB Saint Sauveur 94.84 41 P **P 16 50 35.3 +0.6**
YKA Yellowknife Ar 98.13 339 P Pdif 16 50 48.6 -0.3
comp=Z,1.3nm,0.6s,baz=145,slow=7.0,SNR=2.2
comp=Z,1.3nm,0.6s
DAVOX Davos/Dischmat 98.79 42 P Pdif 16 50 52.2 -0.3
comp=Z,2.4nm,0.6s,baz=315,slow=10.0,SNR=5.7
comp=Z,2.4nm,0.6s
BRTR Keskin Array B 111.89 56 PP **PP 16 56 40.9 +1.9**
comp=Z,1.0nm,1.1s,baz=316,slow=6.9,SNR=3.8
AKASG Malin Array Be 112.06 43 PKiKP **PKiKP 16 55 42.3 -1.8**
comp=Z,0.6nm,0.4s,baz=264,slow=3.1,SNR=5.1
FINES FINESS Array B 113.16 32 PKiKP **PKiKP 16 55 45.7 -0.2**
comp=Z,0.3nm,0.4s,baz=253,slow=1.5,SNR=1.8
ARCES ARCESS Array B 114.70 23 PKP PKPdf 16 55 47.9 -0.8
comp=Z,2.6nm,0.9s,baz=236,slow=3.9,SNR=5.8
ARCES PKKPbc **PKKPbc 17 06 28.8 -1.1**
comp=Z,4.1nm,0.9s,baz=65,slow=4.3,SNR=5.7
KLMR Klimovskoe 119.51 33 *e*PKPdf **PKPdf 16 55 57.1 -1.0**
KLMR AMP 16 55 58.7
comp=Z,7.0nm,0.7s
KBZ Khabaz 119.57 53 PKP **PKPdf 16 55 58.5 -0.3**

comp=Z,2.6nm,0.9s,baz=244,slow=8.4,SNR=4.1
BELG Belogornoye 123.64 43 PKP **PKPdf 16 56 05.9 -0.4**
comp=Z,12nm,0.5s,baz=274,slow=2.6,SNR=11
ASAR Alice Springs 126.85 200 PKP **PKPdf 16 56 13.4 -0.2**
comp=Z,3.5nm,0.6s,baz=140,slow=1.7,SNR=21
ASAR pPKP **pPKPdf 16 58 24.8 +0.4**
comp=Z,0.4nm,0.8s,baz=138,slow=1.9,SNR=2.3
ASAR SKP 16 58 55.2
comp=Z,0.8nm,0.6s,baz=154,slow=2.5,SNR=6.3
ASAR PKKP **PKKPdf 17 06 25.4 -1.7**
comp=Z,0.3nm,0.6s,baz=350,slow=1.8,SNR=6.6
WRA Warramunga Arr 130.19 202 PKP **PKPdf 16 56 20.0 0.0**
comp=Z,1.3nm,0.4s,baz=166,slow=1.7,SNR=59
WRA SKPbc **SKPbc 16 58 49.5 -1.6**
comp=Z,8.1nm,0.6s,baz=157,slow=3.9,SNR=81
GEYT Alibeck 130.24 62 PKP **PKPdf 16 56 19.5 0.0**
comp=Z,1.7nm,0.7s,baz=321,slow=1.8,SNR=4.2
GEYT SKPbc **SKPbc 16 58 47.2 -3.5**
comp=Z,2.4nm,0.7s,baz=266,slow=7.1,SNR=4.7
ABKAR Akbulak array 131.56 47 **PKiKP 16 56 22.1 -0.5**
ABKAR Akbulak array 131.56 47 **PKiKP 16 56 22.2 -0.5**
BRVK Borovoye 137.12 40 **PKiKP 16 56 32.9 -1.0**
PETK Petropavlovsk- 140.01 322 PKP **PKPdf 16 56 37.7 +0.6**
comp=Z,8.8nm,1.1s,baz=115,slow=5.2,SNR=3.7
AAK Ala-Archa 142.55 54 P **PKPdf 16 56 40.3 -1.9**
SNR=8.4
AAK Ala-Archa 142.55 54 **PKPdf 16 56 40.0 -2.2**
UCH Uchtor 142.64 55 P **PKPdf 16 56 41.0 -1.7**
SNR=8.4
CHMS Chumysh 142.67 54 P **PKPdf 16 56 40.2 -2.0**
SNR=7.5
KURK Kurchatov 142.79 40 **PKPdf 16 56 40.3 -1.8**
KBK Karagaybulak 142.88 54 P **PKPdf 16 56 41.8 -1.0**
SNR=9.5
TKM2 Tokmak 2 143.29 54 P PKPbc 16 56 42.5 +0.5
SNR=5.7
KUU Kurty 143.60 52 *e*PKP PKPab 16 56 41.5 -1.1
baz=52
BOOM Boomskoye usch 143.63 54 **PKPdf 16 56 43.6 -0.5**
ULHL Ulahol 143.90 55 P **PKPdf 16 56 45.2 +0.6**
SNR=12
YAK Yakutsk 143.97 350 PKPab 16 56 43.3 -0.1
CHKK Chushkaly 144.06 52 *e*PKP PKPbc 16 56 43.9 -0.2
baz=52
KSH Kashi 144.15 59 PKP PKPbc 16 56 44.8 +0.1
KSH sPKP 16 59 32.5
TNSS Tian-Shan 144.23 53 *e*PKP PKPbc 16 56 44.9 -0.3
baz=53
MDOK Medeo 144.27 53 *e*PKP PKPbc 16 56 44.7 -0.3
baz=53
ZAA0 Zalesovo Array 144.42 32 PKPbc 16 56 44.9 +0.1
ZALV Zalesovo Beam 144.42 32 PKP **PKPab 16 56 45.4 0.0**
comp=Z,14nm,0.3s,baz=293,slow=3.6,SNR=107
ZALV pPKP **pPKPdf 16 58 57.5 +1.4**
comp=Z,3.9nm,0.9s,baz=298,slow=4.4,SNR=5.3
ZALV SKPbc **SKiKP 16 59 31.8 -0.1**
comp=Z,4.5nm,0.6s,baz=310,slow=3.1,SNR=6.6
ZALV Zalesovo Beam 144.42 32 PKPbc 16 56 45.0 +0.1
SATY Saty 145.26 53 *e*PKP **PKPbc 16 56 47.5 -0.5**
baz=53
KPKS Kokpek 145.35 52 *e*PKP **PKPbc 16 56 47.8 -0.4**
baz=52
SHLS Shalkode 145.98 52 *e*PKP **PKPdf 16 56 48.9 +0.8**
baz=52
MKAR Makanchi Array 146.63 45 PKPbc **PKPdf 16 56 50.0 +1.1**
comp=Z,24nm,0.7s,baz=294,slow=1.8,SNR=164
MKAR pPKPbc pPKPbc 16 59 01.6 +1.2
comp=Z,1.1nm,0.8s,baz=298,slow=3.1,SNR=2.0
MKAR SKPbc **SKiKP 16 59 37.2 +0.4**
comp=Z,0.6nm,0.6s,baz=277,slow=2.3,SNR=1.7
MKAR Makanchi Array 146.63 45 **PKPdf 16 56 49.4 +0.5**
MKAR PKPbc **PKPbc 16 56 51.8 +0.2**
MKAR PKPab **PKPab 16 56 54.8 +0.4**
PYUN Piuthan 150.27 80 *e*P **PKPdf 16 56 55.7 +0.1**
comp=Z,52nm,0.5s
DANN Dangsing 150.97 80 *e*P **PKPdf 16 56 57.3 +0.6**
comp=Z,116nm,0.6s
WMQ Urumqi 151.34 47 *e*P **PKPdf 16 56 56.6 +0.1**
GKN Gorkha 151.71 81 *e*P **PKPdf 16 56 57.9 +0.2**
comp=Z,19nm,0.3s
DMN Daman 152.08 82 *e*P **PKPdf 16 56 59.1 +0.7**
PKIN Phulchoki 152.33 82 *e*P **PKPdf 16 56 58.7 0.0**
comp=Z,14nm,0.5s
PKI Pulchoki 152.34 82 *e*P **PKPdf 16 56 59.3 +0.5**
comp=Z,21nm,0.7s
GUN Gumba 152.79 81 *e*P **PKPdf 16 57 00.3 +0.8**
comp=Z,30nm,0.7s
JIRN Jiri 153.04 82 *e*P **PKPdf 16 57 00.0 +0.1**
comp=Z,4.2nm,0.3s
RAMN Ramite 153.32 83 *e*P **PKPdf 16 57 00.8 +0.6**
comp=Z,28nm,0.6s
TAPN Taplejung 154.35 83 *e*P **PKPdf 16 57 01.3 -0.4**
SONM Songino Array 157.79 18 PKP **PKPdf 16 57 05.4 +0.1**
comp=Z,1.5nm,0.8s,baz=315,slow=1.3,SNR=7.0
SONM PKPab **PKPab 16 57 41.0 -0.6**
comp=Z,1.6nm,0.7s,baz=304,slow=3.8,SNR=6.2
GOMU GeErMu 159.40 58 PKP **PKPdf 16 57 06.2 -1.6**
GOMU PKPab **PKPab 16 57 50.6 +1.2**
GTA Gaotai 161.39 44 *e*PKPbc **PKPdf 16 57 11.0 +1.4**
GTA PKPab **PKPab 16 57 58.8 +1.1**
CMAR Chiang Mai Arr 161.63 114 PKP **PKPdf 16 57 10.5 +0.3**
comp=Z,0.4nm,0.3s,baz=282,slow=1.8,SNR=5.8
CMAR PKPab **PKPab 16 57 58.3 -0.9**
comp=Z,0.6nm,0.5s,baz=242,slow=5.4,SNR=6.3
CMAR PP **PP 17 01 41.5 -3.2**
comp=Z,0.8nm,1.0s,baz=249,slow=6.2,SNR=5.1
HHC Hu-ho-hao-te 165.65 16 *e*P **PKPdf 16 57 14.9 +1.5**
PZH PanZhiHua 166.74 89 PKP **PKPdf 16 57 08.9 -5.8**
NJ2 Nanjing 174.66 339 *e*P **PKPdf 16 57 16.5 -2.0**

SJA ***02*** *16:43:43.9±0.9, 27°.33S×63°.37W, h595km±8km, ML4.5, MW4.5*
IDC ***02*** *16:43:48.7±0.5, 27°.02S×63°.33W, h568km±4km, mb4.0/21, mbtmp4.9/28, Error ellipse: s-maj=10.3km s-min=8.0km az=81.0*
VAO ***02*** *16:43:48.8±0.3, 27°.05S×63°.44W, h564km, mb4.7*
NEIC ***02*** *16:43:49.1±1.4, 27°.09S±0°.08×63°.44W±0°.10, h564km±6km, mb4.4/154, Error ellipse: s-maj=14.5km s-min=9.1km az=51.0*

ISC 02 16:43:48.3±0.3, 27°.07S±0°.04×63°.42W±0°.05, h561km, n406, σ1$12/442, mb4.4/113, 5C-4D, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**1.73**	**279**	*i* P	**P**	**16 44 59.5**	**+1.5**
AHML				*i* S	**S**	**16 45 54.7**	**0.0**
CYA	**Choya**	**2.51**	**237**	*i* P	**P**	**16 45 02.4**	**+0.9**
CYA				*i* S	**S**	**16 45 59.2**	**-1.9**
CYA				IAML		16 46 11.1	
comp=Z,80nm,0.9s							
SLA	**San Lorenzo**	**3.00**	**321**	*i* P	**P**	**16 45 06.0**	**+1.5**
AZAP	**Zapla**	**3.20**	**332**	*i* P	**P**	**16 45 07.0**	**+1.1**
AZAP				*i* S	**S**	**16 46 09.0**	**+0.2**
AZAP				IAML		16 46 11.4	
comp=Z,166nm,0.6s							
ASTB	**Santa Barbara**	**3.25**	**343**	*i* P	**P**	**16 45 08.0**	**+2.0**
ALOL	**LOMAS DE OLMED**	**3.28**	**351**	*i* P	**P**	**16 45 08.8**	**+2.6**
ALOL				*i* S	**S**	**16 46 12.1**	**+2.7**
ACLC	**CERRO LA CRUZ**	**3.90**	**232**	*i* P	**P**	**16 45 10.6**	**+0.2**
ACLC				*e*S	**S**	**16 46 15.7**	**-1.7**
HJA	**Humahuaca**	**4.25**	**334**	*i* P	**P**	**16 45 15.4**	**+2.0**
HJA				IAML		16 46 31.5	
comp=Z,27nm,0.9s							
APLL	**PUNTA DE LOS L**	**4.29**	**219**	*i* P	**P**	**16 45 13.0**	**-0.1**
TCA	**Tanti**	**4.37**	**193**	*i* P	**P**	**16 45 14.0**	**+0.3**
ACHE	**Chepes**	**4.97**	**214**	*i* P	**P**	**16 45 18.4**	**-0.1**
ACHE				*e*S	S	16 46 22.1	-10
AVFE	**Valle Fertil**	**5.03**	**224**	*i* P	**P**	**16 45 19.7**	**+0.6**
AVFE				*e*S	**S**	**16 46 31.7**	**-1.5**
AVFE				IAML		16 46 37.1	
comp=Z,252nm,0.7s							
AC02	**Maricunga**	**5.10**	**271**	P	**P**	**16 45 22.5**	**+2.3**
AC02	**Maricunga**	**5.10**	**271**	*e*P	**P**	**16 45 22.8**	**+2.6**
AC02				*e*S	**S**	**16 46 37.7**	**+2.6**
AC02	**Maricunga**	**5.10**	**271**	*i* P	**P**	**16 45 23.0**	**+2.8**
AC02				*i* S	**S**	**16 46 38.8**	**+3.6**
YJA	**Yavi**	**5.23**	**338**	*i* P	**P**	**16 45 23.5**	**+2.1**
YJA				*e*S	**S**	**16 46 35.1**	**-2.0**
CPUP	**Villa Florida**	**5.50**	**84**	P	**P**	**16 45 24.2**	**+1.2**
comp=Z,511nm,0.7s,baz=251,slow=8.6,SNR=239							
CPUP				S	**S**	**16 46 41.0**	**+0.6**
comp=Z,20nm,0.4s,baz=238,slow=14,SNR=0.7							

CPUP Villa Florida 5.50 84 P P 16 45 24.5 +1.5
GO02 Mina Guanaco 5.86 288 P P 16 45 28.3 +1.8
GO02 Mina Guanaco 5.86 288⇑ eP P 16 45 28.4 +1.8
GO02 eS S 16 46 47.4 +0.5
GO02 IAML 16 46 50.4
comp=E,1µm,0.7s
AF01 San Pedro de A 5.95 312 P P 16 45 28.7 +1.3
AC06 Mina Casimiro 6.18 266 P P 16 45 30.1 +1.0
AC05 El Transito 6.31 252 P P 16 45 32.1 +1.7
AC05 El Transito 6.31 252⇓ eP P 16 45 32.4 +2.0
AC05 eS S 16 46 51.8 -2.2
AC05 IAML 16 47 07.5
comp=N,379nm,0.4s
ZON Zonda 6.40 225 P P 16 45 32.5 +1.5
AC01 Pan de Azucar 6.49 277 P P 16 45 33.1 +1.1
ITQB Itaqui 6.52 115 P P 16 45 33.5 +1.4
ITQB Itaqui 6.52 115 eP P 16 45 33.7 +1.6
CO01 Juntas del Tor 6.55 242 P P 16 45 34.9 +2.3
CO01 Juntas del Tor 6.55 242⇑ eP P 16 45 35.4 +2.8
CO01 eS S 16 46 55.2 -2.9
CO01 IAML 16 47 07.0
comp=E,94nm,0.6s
LVC Limon Verde 6.68 311 P P 16 45 35.1 +1.0
comp=E,156nm,0.6s,baz=138,slow=4.8,SNR=93
LVC S S 16 46 55.4 -5.2
comp=E,150nm,0.6s,baz=161,slow=12,SNR=4.3
LVC Limon Verde 6.68 311 P P 16 45 35.0 +0.9
LVC Limon Verde 6.68 311 eP P 16 45 35.2 +1.0
AZCA Azaras, Argent 6.68 100 eP P 16 45 35.1 +1.5
PB15 IPOC Station P 6.70 304 P P 16 45 35.4 +1.2
PB15 IPOC Station P 6.70 304⇓ eP P 16 45 35.6 +1.5
PB15 eS S 16 46 59.3 -1.4
LCO Las Campanas 6.72 252 P P 16 45 34.7 +0.5
PB14 IPOC Station P 6.75 290 P P 16 45 35.5 +0.8
AC04 Llanos de Chal 6.88 259 P P 16 45 36.3 +0.8
PB06 IPOC Station P 7.08 307 P P 16 45 38.7 +1.0
GO04 Tololo Observa 7.18 243 P P 16 45 39.6 +1.0
GO04 Tololo Observa 7.18 243⇓ eP P 16 45 39.8 +1.2
GO04 eS S 16 47 09.3 +0.2
PB10 IPOC Station P 7.36 297 P P 16 45 40.9 +0.7
CO03 El Pedregal 7.39 238 P P 16 45 40.9 +0.4
CO05 La Serena 7.44 246 P P 16 45 41.1 +0.3
CO05 La Serena 7.44 246⇑ eP P 16 45 41.6 +0.8
CO05 eS S 16 47 11.6 -1.4
CO05 IAML 16 47 15.5
comp=N,498nm,0.9s
PB09 IPOC Station P 7.46 313 P P 16 45 42.4 +0.9
MURT Porto Murtinho 7.55 46 eP P 16 45 43.6 +1.6
UNIS Unistalda (Bra 7.64 107 eP P 16 45 44.2 +1.5
PB04 IPOC Station P 7.72 306 P P 16 45 44.6 +0.7
CO02 Combarbal 7.80 236 P P 16 45 44.9 +0.4
RODS Rosario do Sul 7.92 116 eP P 16 45 47.1 +1.6
PB07 IPOC Station P 7.94 311 P P 16 45 46.7 +0.7
CO06 Fray Jorge 8.05 242 P P 16 45 47.0 +0.3
PB01 IPOC Station P 8.17 316 P P 16 45 48.8 +0.6
PB02 IPOC Station P 8.23 313 P P 16 45 49.4 +0.6
CRSM Crissiumal (Br 8.35 95 eP P 16 45 51.1 +1.3
VA03 San Esteban 8.39 226 P P 16 45 51.2 +1.0
ANTJ Antonio Joao (8.43 55 eP P 16 45 51.6 +0.9
PB08 IPOC Station P 8.67 321 P P 16 45 54.5 +0.9
PEL Peldehue 8.73 224 P P 16 45 54.1 +0.6
PATCX Punta Patache 8.75 314 P P 16 45 54.8 +0.9
VA06 Catapilco 8.76 229 P P 16 45 53.6 -0.1
ROC1 El Roble 8.83 226 P P 16 45 54.7 0.0
MT03 Universidad Ad 8.86 222 P P 16 45 55.5 +0.7
MT05 Renca 8.93 223 P P 16 45 56.1 +0.6
LMEL Las Melosas 8.94 219 P P 16 45 56.9 +1.2
TA01 Diego Aracena 8.96 315 P P 16 45 56.7 +0.8
GO01 Chusmiza 9.08 323 P P 16 45 58.3 +0.7
MT02 Curacav 9.09 225 P P 16 45 56.8 -0.2
BO04 La Punta 9.27 220 P P 16 45 59.5 +0.6
VA01 Torpederas 9.27 228 P P 16 45 58.6 -0.2
FRBT Francisco Belt 9.34 86 eP P 16 46 00.7 +0.9
MT09 Talagante 9.34 223 P P 16 45 59.6 -0.1
ALGR Alto Alegre (B 9.35 103 eP P 16 46 00.9 +1.0
BBRB Robore, Bolivi 9.36 22 eP P 16 46 01.1 +1.1
CPSB Cacapava Do Su 9.37 113 eP P 16 46 00.5 +0.6
MT01 Popeta 9.56 223 P P 16 46 01.3 -0.5
AQDB Aquidauana 9.64 49 P P 16 46 04.0 +1.1
AQDB Aquidauana 9.64 49 eP P 16 46 03.9 +1.1
VA05 Santo Domingo 9.65 225 P P 16 46 02.6 -0.1
PLTB Pedras Altas 9.75 121 P P 16 46 03.8 0.0
PLTB Pedras Altas 9.75 121 eP P 16 46 04.1 +0.3
BO01 Tunca 9.83 220 P P 16 46 04.4 -0.1
BO02 Sierra Bellavi 9.96 218 P P 16 46 06.2 +0.3
ITAB Concordia 10.06 94 P P 16 46 07.0 +0.1
ITAB Concordia 10.06 94 eP P 16 46 07.1 +0.1
BBSD Serra de San D 10.17 15 eP P 16 46 09.4 +1.1
PB16 IPOC Station P 10.35 326 P P 16 46 11.4 +0.7
PB12 IPOC Station P 10.55 321 P P 16 46 12.7 +0.5
TRCB Terra Rica 10.67 69 P P 16 46 14.1 +0.7
GO05 Huala 10.76 221 P P 16 46 13.5 -0.5
TRQA Tornquist 11.02 174 P P 16 46 15.7 -1.0
ML02 Panimavida 11.03 216 P P 16 46 17.0 +0.3
RPRD Ribas do Rio P 11.05 56 eP P 16 46 18.7 +1.5
SIV San Ignacio 11.24 12 P P 16 46 19.5 +0.3
comp=N,26nm,0.9s,baz=198,slow=8.6,SNR=24
SIV S S 16 48 21.4 -1.9
comp=N,4.4nm,0.8s,baz=171,slow=19,SNR=4.0
CNLB Canela 11.31 104 eP P 16 46 20.0 +0.2
LPAZ La Paz 11.59 337 P P 16 46 23.3 -0.1
comp=N,6.4nm,0.5s,baz=119,slow=4.5,SNR=17
LPAZ S S 16 48 25.2 -5.6
comp=N,5.7nm,0.7s,baz=222,slow=14,SNR=2.6
LPAZ La Paz 11.59 337 P P 16 46 23.9 +0.4
LPAZ La Paz 11.59 337 eP P 16 46 22.9 -0.5
PTLB Pontes e Lacer 12.23 20 eP P 16 46 30.0 +0.6
PCMB Pacaembu 12.34 66 eP P 16 46 31.3 +0.8
BI05 Punta Hualpn 12.72 218 P P 16 46 34.2 +0.1
TER01 Tubaro-SC 12.74 100 eP P 16 46 34.3 -0.1
C2SB Chapadao do Su 12.77 52 eP P 16 46 35.2 +0.3
SALV Santo Antonio 13.23 34 eP P 16 46 40.0 +0.3
GO06 Curarrehue 14.17 206 P P 16 46 48.5 -0.6
VILB Vilhena 14.37 13 eP P 16 46 50.5 -0.9
LR03 Panguipulli 14.57 208 P P 16 46 51.8 -1.2
PET01 Itanhaem-SP 14.82 83 eP P 16 46 55.4 -0.4
VA04 Juan Fernndez 14.82 240 P P 16 46 55.5 -0.1
PLCA Paso Flores 14.85 202 P P 16 46 55.0 -0.9
comp=N,15nm,0.6s,baz=22,slow=1.5,SNR=43
PLCA S S 16 49 25.4 -4.7
comp=N,2.4nm,0.9s,baz=83,slow=16,SNR=1.7
PLCA ScP ScP 16 54 05.5 -0.6
comp=N,3.3nm,0.7s,baz=339,slow=1.6,SNR=6.6
PLCA Paso Flores 14.85 202 eP P 16 46 55.1 -0.8
BB19B Bebedouro 14.85 69 eP P 16 46 55.9 -0.3
RCLB Rio Claro- Sao 15.16 76 eP P 16 46 58.8 -0.4
LR04 Corral 15.25 211 P P 16 46 58.7 -1.0
VAO Valinhos 15.45 78 eP P 16 47 02.0 -0.2
LL04 Puerto Octay 15.67 206 P P 16 47 02.4 -1.7
LL05 Los Muermos 16.52 208 P P 16 47 10.6 -1.4
PARB Paraibuna 16.53 81 eP P 16 47 12.9 +0.5
PDRB Porto dos Gac 16.61 24 eP P 16 47 12.4 -0.8
IPMB Ipameri, GO 16.70 60 eP P 16 47 13.7 -0.3
ETMB Extrema 17.36 351 eP P 16 47 20.3 +0.3
LL02 Futaleuf 17.48 201 P P 16 47 19.8 -0.9
CLDB Colider 17.64 25 eP P 16 47 22.4 -0.1
PMNB Patos De Minas 17.80 65 eP P 16 47 24.6 +0.6
SAML Samuel 18.03 1 P P 16 47 25.7 -0.3
MAN01 Angra dos Reis 18.13 81 eP P 16 47 27.5 +0.6
BDFB Brasilia 18.29 55 P P 16 47 28.1 -0.4
comp=N,84nm,0.7s,baz=231,slow=8.1,SNR=40
BDFB S S 16 50 21.1 -6.6
comp=N,20nm,1.0s,baz=231,slow=25,SNR=2.7
BDFB Brasilia 18.29 55 P P 16 47 28.3 -0.2
BDFB Brasilia 18.29 55 eP P 16 47 28.9 +0.4
VAS01 Vassouras-RJ 18.77 80 eP P 16 47 33.8 +1.1
AY01 Puyuhuapi 18.84 201 P P 16 47 32.1 -0.9
SNDB Serra Nova Dou 18.85 40 eP P 16 47 33.6 +0.1
NNA Nana 19.60 317 P P 16 47 40.1 -0.2
comp=N,5.7nm,0.3s,baz=187,slow=7.5,SNR=6.1
COYC Coyhaique 19.72 198 P P 16 47 40.4 -0.6
DUB01 Friburgo-RJ 19.77 80 eP P 16 47 42.9 +1.1
DIAM Diamantina, MG 20.18 68 eP P 16 47 46.9 +1.1
MC01 Montes Claros 20.78 64 eP P 16 47 51.2 +0.1
CZSB Cruzeiro do Su 21.16 334 eP P 16 47 54.5 +0.1
NPGB Novo Progresso 21.34 22 eP P 16 47 55.5 -0.6
JANB Januaria 21.43 60 eP P 16 47 57.2 +0.2
ALF01 Guarapari-ES 21.71 78 eP P 16 48 00.1 +0.7
SJMB Sao Joao De Ma 22.09 73 eP P 16 48 03.2 +0.5
SDBA SAO DESIDERIO 22.68 54 eP P 16 48 08.2 +0.1
NAN01 Guarapari, ES 23.37 72 eP P 16 48 14.3 +0.1

SMTB Santa Maria do 23.50 43 eP P 16 48 15.7 +0.3
ITTB Itaituba 23.74 19 eP P 16 48 17.1 -0.4
GUA01 Guaratinga, BA 24.24 69 eP P 16 48 22.3 +0.5
ATAH Atahualpa 24.40 322 P P 16 48 25.4 +1.6
comp=N,7.0nm,0.9s,baz=144,slow=9.5,SNR=5.5
comp=N,7.0nm,0.9s
PRPB Parauapebas 24.49 34 eP P 16 48 23.6 -0.6
CMC01 Camacan, BA 25.09 67 eP P 16 48 29.8 +0.4
GO09 Cerro Castillo 25.10 193 P P 16 48 29.5 +0.5
GDU01 Guandu, BA 25.94 64 eP P 16 48 36.9 0.0
MG02 Cerro Sombrero 26.05 188 P P 16 48 38.6 +1.3
MALB Monte Alegre 26.57 21 eP P 16 48 42.3 -0.1
MCRA Macar, Loja 27.55 322 P P 16 48 52.0 +0.9
BOSC San Juan Bosco 27.82 326 P P 16 48 54.0 +0.5
BOSC IAmb IAmb 16 48 55.4
comp=Z,12nm,0.8s
TMAB Tom-Au,PA,Br 28.62 33 eP P 16 49 01.4 +1.1
BOAV Boa Vista 29.43 6 eP P 16 49 07.8 +0.5
ROSB Rosrio 30.32 41 eP P 16 49 15.3 +0.3
NBAN Anadia - AL 30.92 61 eP P 16 49 20.3 +0.1
VILC Villavicencio, 32.55 341 eP P 16 49 35.6 +1.4
CHIC Chingaza 33.05 341 eP P 16 49 38.7 0.0
HOPE Hope Point 33.61 151 P P 16 49 43.1 +0.7
MDP Montagnes des 33.64 20 P P 16 49 42.4 -0.8
comp=Z,27nm,0.9s,baz=189,slow=9.5,SNR=11
comp=Z,27nm,0.9s
RCBR Riachuelo 33.65 56 P P 16 49 43.2 -0.2
comp=Z,29nm,1.0s,baz=267,slow=18,SNR=8.7
comp=Z,29nm,1.0s
RCBR Riachuelo 33.65 56 eP P 16 49 44.0 +0.6
BAUV El Baul 36.08 352 P P 16 50 02.6 -0.9
BAUV IAmb IAmb 16 50 03.3
comp=Z,16nm,1.1s
PCRV Puerto La Cruz 37.04 358 P P 16 50 09.4 -2.1
comp=Z,16nm,0.8s,baz=119,slow=8.4,SNR=4.9
comp=Z,16nm,0.8s
BIRV Birongo 37.42 355 P P 16 50 14.1 -0.4
MAGL Barre de l'ile 42.81 3 P P 16 50 59.2 +1.7
ANWB Willy Bob 44.50 2 P P 16 51 08.8 -1.7
MLPR Magueyes Islan 44.91 355 P P 16 51 13.4 -0.2
CELP Cerrillos 44.98 356 P P 16 51 13.4 -0.8
GCPR Guaynabo City 45.18 356 P P 16 51 14.3 -1.4
GCPR IAmb IAmb 16 51 28.3
comp=Z,17nm,1.1s
MTO3 Montecristo 48.31 325 P P 16 51 39.7 +0.1
MTO3 IAmb IAmb 16 51 41.0
comp=Z,5.9nm,0.8s
BELA Belgrano 2 52.58 173 P P 16 52 10.4 +0.7
BELA IAmb IAmb 16 52 11.5
comp=Z,12nm,0.6s
SOR Soroa 53.06 337 P P 16 52 14.4 +0.6
SOR IAmb IAmb 16 52 24.1
comp=Z,23nm,1.2s
VNA3 Neumayer Olymp 53.21 161 P P 16 52 14.8 +0.6
VNA3 Neumayer Olymp 53.21 161 pP pP 16 54 02.2 +1.8
VNA1 Neumayer--Stat 53.38 160 P P 16 52 16.4 +1.1
VNA1 Neumayer--Stat 53.38 160 pP pP 16 54 04.0 +2.4
CMIG Matias Romero 53.47 322 P P 16 52 15.7 -1.0
comp=Z,2.9nm,0.8s,baz=124,slow=7.3,SNR=3.9
comp=Z,2.9nm,0.8s
VNA2 Neumayer--Watz 53.75 160 P P 16 52 18.7 +0.7
baz=284,slow=8.0
VNA2 Neumayer--Watz 53.75 160 pP pP 16 54 06.4 +1.9
SNAA Sanae 55.39 160 P P 16 52 29.9 +0.4
SNAA Sanae 55.39 160 pP pP 16 54 19.2 +2.3
SNAA Sanae 55.39 160 P P 16 52 29.3 -0.2
comp=Z,14nm,0.8s,baz=284,slow=8.4,SNR=54
SNAA PcP PcP 16 53 20.8 -0.6
comp=Z,3.6nm,0.8s,baz=285,slow=5.6,SNR=3.7
SNAA pP pP 16 54 18.2 +1.2
comp=Z,10nm,1.1s,baz=309,slow=5.1,SNR=8.9
SNAA ScP ScP 16 56 25.6 -1.1
comp=Z,1.0nm,0.7s,baz=300,slow=7.1,SNR=2.3
comp=Z,14nm,0.8s
SNAA Sanae 55.39 160 P P 16 52 29.9 +0.4
SNAA IAmb IAmb 16 52 31.1
comp=Z,16nm,0.9s
TROLL Troll, Antarti 57.10 160 P P 16 52 42.0 +0.6
TROLL Troll, Antarti 57.10 160 pP pP 16 54 31.3 +1.5
BBTS Babate 61.58 53 P P 16 53 11.0 -0.8
comp=Z,35nm,0.7s,baz=143,slow=9.4,SNR=4.0
comp=Z,35nm,0.7s
QSPA South Pole Qui 63.15 180 P P 16 53 21.7 +0.3
comp=Z,9.0nm,0.7s,baz=160,slow=0.7,SNR=32
QSPA pP pP 16 55 14.6 +1.5
comp=Z,3.0nm,0.8s,baz=191,slow=4.6,SNR=4.6
comp=Z,9.0nm,0.7s
JSC Jenkinsville 63.32 344 P P 16 53 23.4 +0.7
LRAL Lakeview Retre 63.84 338 P P 16 53 26.1 0.0
W57A Gilead 63.84 345 P P 16 53 26.8 +0.8
W57A IAmb IAmb 16 53 27.6
comp=Z,9.6nm,0.8s
Y49A Blount Mountai 64.40 339 P P 16 53 29.4 -0.3
Y49A IAmb IAmb 16 53 30.4
comp=Z,6.4nm,0.8s
BG3 Lake Jocassee 64.43 342 P P 16 53 30.6 +0.7
V55A Taylorsville 64.80 344 P P 16 53 32.9 +0.8
V55A IAmb IAmb 16 53 34.0
comp=Z,17nm,0.8s
833A Chaparral WMA, 65.00 325 P P 16 53 34.8 +1.2
833A IAmb IAmb 16 53 35.8
comp=Z,13nm,0.8s
V53A Saluda 65.03 343 P P 16 53 34.0 +0.3
X48A Hartselle 65.15 339 P P 16 53 34.5 +0.1
TKL Tuckaleechee C 65.28 342 P P 16 53 35.2 0.0
CPCT Cooper Cave 65.30 341 P P 16 53 35.4 +0.1
W50A Signal Mountai 65.30 340 P P 16 53 35.4 0.0
V52A Sevierville 65.41 342 P P 16 53 36.0 0.0
LIC Lamto 65.43 69⇓ eP P 16 53 36.1 -0.5
comp=Z,39nm,0.6s
Y45A Yeager Farm, C 65.47 336 P P 16 53 36.5 +0.1
Y45A IAmb IAmb 16 54 18.6
comp=Z,12nm,0.9s
U54A Nelsons Funny 65.58 344 P P 16 53 37.6 +0.5
TIC Toumodi 65.66 68⇑ iP P 16 53 37.9 -0.2
comp=Z,16nm,0.4s
KIC Kosan Boka 65.74 69 eP P 16 53 38.0 -0.5
comp=Z,46nm,0.6s
DBIC Dimbokro 65.81 68 P P 16 53 38.1 -0.9
comp=Z,25nm,0.6s,baz=243,slow=6.5,SNR=32
comp=Z,25nm,0.6s
DBIC Dimbokro 65.81 68 P P 16 53 38.7 -0.3
PLAL Pickwick Lake 65.98 338 P P 16 53 39.4 -0.2
PLAL IAmb IAmb 16 53 39.8
comp=Z,4.7nm,0.6s
V48A Smith Brothers 66.27 339 P P 16 53 41.1 -0.2
V48A IAmb IAmb 16 53 42.0
comp=Z,6.6nm,0.7s
CLTN Cedars of Leba 66.44 340 P P 16 53 42.1 -0.2
CLTN IAmb IAmb 16 53 43.0
comp=Z,6.8nm,0.6s
U49A Red Boiling Sp 66.66 341 P P 16 53 43.4 -0.3
S54A Dingess, Beckl 66.68 345 P P 16 53 44.0 +0.2
S54A IAmb IAmb 16 53 45.4
comp=Z,12nm,0.8s
T50A Nancy 66.86 341 P P 16 53 44.6 -0.3
WVT Waverly 66.94 339 P P 16 53 44.9 -0.5
WVT IAmb IAmb 16 53 45.8
comp=Z,6.0nm,0.7s
R53A Hurricane 67.33 344 P P 16 53 48.4 +0.5
Q56A Snyder Ridge, 67.40 347 P P 16 53 49.4 +1.2
Q56A IAmb IAmb 16 53 50.6
comp=Z,7.8nm,0.9s
T47A Sharon Grove 67.50 340 P P 16 53 48.5 -0.3
T47A IAmb IAmb 16 53 49.2
comp=Z,6.7nm,0.6s
WHAR Wooly Hollow 67.76 335 P P 16 53 51.2 +0.8
MVL Millersville 67.80 349 P P 16 53 51.8 +1.2
Q52A Bidwell 68.01 344 P P 16 53 52.2 +0.3
Q52A IAmb IAmb 16 53 53.1
comp=Z,9.6nm,0.8s
LCAR Lake Charles 68.03 336 P P 16 53 52.0 -0.1
TX31 Lajitas Ar. Si 68.06 323 P P 16 53 53.3 +0.8
TX32 Lajitas Array 68.06 323 P P 16 53 52.9 +0.3
TXAR Lajitas Array 68.06 323 P P 16 53 52.7 +0.1
comp=Z,0.6nm,0.4s,baz=150,slow=7.6,SNR=21
comp=Z,0.6nm,0.4s
TXAR Lajitas Array 68.06 323 P P 16 53 53.1 +0.5
FCAR Ozark Folk Cen 68.23 335 P P 16 53 53.4 +0.1
FCAR IAmb IAmb 16 53 54.1
comp=Z,5.3nm,0.6s
P53A Whipple 68.30 345 P P 16 53 54.5 +0.8
P53A IAmb IAmb 16 53 55.8
comp=Z,7.7nm,0.8s
Q51A Peebles 68.34 343 P P 16 53 54.2 +0.3

WCI Wyandotte Cave 68.40 341 P P 16 53 53.4 -0.9
P52A Corning 68.62 345 P P 16 53 55.4 -0.1
P52A IAmb IAmb 16 53 56.5
comp=Z,8.5nm,0.7s
N58A Sunbury 68.68 349 P P 16 53 57.0 +1.0
N58A IAmb IAmb 16 53 58.1
comp=Z,11nm,0.9s
SSPA Standing Stone 68.69 348 P P 16 53 56.9 +0.9
SSPA IAmb IAmb 16 54 28.4
comp=Z,11nm,1.2s
S44A Carbondale 68.84 338 P P 16 53 56.9 -0.1
S44A IAmb IAmb 16 53 57.1
comp=Z,7.4nm,0.6s
SIUC Southern Illin 68.84 338 P P 16 53 56.6 -0.3
O53A New Philadelph 68.99 345 P P 16 53 58.3 +0.5
O53A IAmb IAmb 16 54 40.0
comp=Z,18nm,1.4s
P49A Miami Univ. Ec 69.18 343 P P 16 53 58.8 -0.1
P49A IAmb IAmb 16 54 04.1
comp=Z,23nm,1.5s
KSPA Keystone Colle 69.23 350 P P 16 54 00.1 +0.9
KSPA IAmb IAmb 16 54 01.3
comp=Z,9.2nm,0.9s
M57A Sunshine Farm, 69.24 349 P P 16 54 00.2 +0.9
M57A IAmb IAmb 16 54 01.0
comp=Z,8.3nm,0.8s
HHAR Hobbs 69.27 334 P P 16 54 00.3 +0.7
BLO Bloomington 69.34 341 P P 16 54 00.2 +0.3
BLO IAmb IAmb 16 54 04.3
comp=Z,8.1nm,0.8s
MGMO Mountain Grove 69.40 336 P P 16 54 00.5 +0.1
MGMO IAmb IAmb 16 54 02.0
comp=Z,7.4nm,0.9s
M55A Ridgway 69.66 348 P P 16 54 02.6 +0.8
M55A IAmb IAmb 16 54 03.2
comp=Z,9.8nm,0.8s
O49A Covington 69.69 343 P P 16 54 01.9 -0.1
O49A IAmb IAmb 16 54 02.7
comp=Z,8.1nm,1.1s
L61B Northampton 69.70 353 P P 16 54 03.3 +1.3
L61B IAmb IAmb 16 54 28.2
comp=Z,17nm,1.2s
L59A Walton 69.75 351 P P 16 54 03.7 +1.3
L59A IAmb IAmb 16 54 04.6
comp=Z,13nm,0.9s
CCM Cathedral Cave 69.84 337 P P 16 54 02.8 -0.2
CCM IAmb IAmb 16 54 03.7
comp=Z,5.6nm,0.7s
L56A Greenwood 70.09 349 P P 16 54 05.1 +0.8
L56A IAmb IAmb 16 54 06.2
comp=Z,16nm,0.8s
ALLY Alegheny Colle 70.11 347 P P 16 54 05.0 +0.6
S39A Bolivar 70.27 335 P P 16 54 05.9 +0.4
N49A Columbus Grove 70.34 343 P P 16 54 05.5 -0.3
N49A IAmb IAmb 16 54 06.3
comp=Z,8.5nm,0.7s
R40A Maddies Statio 70.41 336 P P 16 54 05.8 -0.6
ERPA Erie 70.52 347 P P 16 54 07.6 +0.8
WVNY West Valley, N 70.54 348 P P 16 54 07.4 +0.4
WVNY IAmb IAmb 16 54 08.9
comp=Z,11nm,0.8s
OK050 Pawnee Station 70.60 332 P P 16 54 08.0 +0.5
P43A Skaggs, Pawnee 70.69 339 P P 16 54 07.5 -0.4
P43A IAmb IAmb 16 54 08.3
comp=Z,11nm,0.8s
MMNY Mt. Morris Dam 70.73 349 P P 16 54 08.8 +0.7
MMNY IAmb IAmb 16 54 09.6
comp=Z,10nm,0.7s
KOWA Kowa 70.91 62 P P 16 54 08.8 -1.0
comp=Z,27nm,0.7s,baz=235,slow=5.4,SNR=51
comp=Z,27nm,0.7s
KOWA Kowa 70.91 62 P P 16 54 09.5 -0.3
KOWA Kowa 70.91 62 eP P 16 54 09.7 -0.1
J59A Piesco 70.92 351 P P 16 54 10.6 +1.3
J59A IAmb IAmb 16 54 11.0
comp=Z,15nm,0.9s
J56A Wolcott 71.08 350 P P 16 54 10.6 +0.5
J56A IAmb IAmb 16 54 11.5
comp=Z,13nm,0.8s
MSTX Muleshoe 71.26 326 P P 16 54 12.5 +0.9
HAL Halifax 71.36 360 P P 16 54 12.7 +1.0
L48A N Adams 71.36 344 P P 16 54 11.6 -0.2
L48A IAmb IAmb 16 54 20.4
comp=Z,24nm,1.4s
NCB Newcomb 71.38 352 P P 16 54 13.1 +1.2
NCB IAmb IAmb 16 54 34.6
comp=Z,12nm,1.2s
LBNH Lisbon 71.39 354 P P 16 54 13.6 +1.7
LBNH IAmb IAmb 16 54 50.9
comp=Z,29nm,1.5s
SUR Sutherland 71.51 117 P P 16 54 14.4 +1.1
H62A Milan 71.65 354 P P 16 54 15.0 +1.5
H62A IAmb IAmb 16 54 15.6
comp=Z,7.7nm,0.8s
HSIG 72.01 317 P P 16 54 16.7 +0.9
P38A Dawn 72.05 336 P P 16 54 15.7 -0.1
P38A IAmb IAmb 16 54 16.5
comp=Z,7.6nm,0.5s
FRNY Flat Rock 72.16 352 P P 16 54 17.4 +1.0
FRNY IAmb IAmb 16 54 46.5
comp=Z,16nm,1.3s
PKME Peaks-Kenny Pk 72.19 356 P P 16 54 17.7 +1.3
VNDA Vanda 72.22 189 P P 16 54 16.3 -0.1
comp=Z,0.8nm,0.9s,baz=140,slow=4.3,SNR=4.1
VNDA pP pP 16 56 13.6 +1.1
comp=Z,0.8nm,0.9s,baz=129,slow=3.9,SNR=3.7
G62A West of Eustis 72.23 355 P P 16 54 18.2 +1.4
G62A IAmb IAmb 16 54 19.7
comp=Z,30nm,1.4s
F64A Sherman 72.72 356 P P 16 54 21.1 +1.6
319A Douglas 72.75 320 P P 16 54 21.9 +1.6
319A IAmb IAmb 16 54 22.9
comp=Z,7.6nm,0.9s
SADO Sadowa 72.92 348 P P 16 54 21.0 +0.2
SADO IAmb IAmb 16 55 02.7
comp=Z,21nm,1.4s
E62A Clayton Lake 73.55 356 P P 16 54 24.5 +0.2
E62A IAmb IAmb 16 54 26.8
comp=Z,17nm,0.9s
TRQ Mont Tremblant 73.64 352 P P 16 54 25.7 +0.8
TRQ IAmb IAmb 16 54 26.6
comp=Z,20nm,0.9s
TSUM Tsumeb 73.75 104 P P 16 54 26.3 0.0
TSUM IAmb IAmb 16 54 27.7
comp=Z,18nm,0.8s
JFWS Jewell Farm 73.89 340 P P 16 54 25.9 -0.4
JFWS IAmb IAmb 16 54 27.3
comp=Z,13nm,0.7s
ANMO Albuquerque 73.90 324 P P 16 54 28.0 +1.1
D62A Allapoint, All 73.98 356 P P 16 54 28.0 +1.3
D62A IAmb IAmb 16 54 29.0
comp=Z,18nm,0.9s
BATG Bathurst New B 74.04 358 P P 16 54 28.2 +1.2
BATG IAmb IAmb 16 54 28.9
comp=Z,8.5nm,0.9s
I42A Draeger Farm, 74.39 341 P P 16 54 29.0 -0.1
I42A IAmb IAmb 16 54 30.1
comp=Z,7.9nm,0.7s
TOA0 Torodi Ar. Sit 74.74 66 P P 16 54 31.2 -0.5
TORD Torodi Ar. Bea 74.74 66 P P 16 54 30.7 -1.0
comp=Z,47nm,0.6s,baz=263,slow=5.1,SNR=14
comp=Z,47nm,0.6s
L34A Svendsen Farm, 75.14 335 P P 16 54 33.5 +0.1
L34A IAmb IAmb 16 54 34.2
comp=Z,9.3nm,0.7s
VLDQ Val d'Or 75.89 350 P P 16 54 37.9 +0.6
VLDQ IAmb IAmb 16 54 38.7
comp=Z,8.3nm,0.9s
E43A Lone Tree Farm 76.16 343 P P 16 54 39.4 +0.5
E43A IAmb IAmb 16 54 40.4
comp=Z,11nm,0.7s
DRLN Deer Lake 76.16 4 P P 16 54 39.4 +0.6
DRLN IAmb IAmb 16 55 18.3
comp=Z,38nm,1.4s
BOSA Boshof 76.48 115 P P 16 54 40.7 -0.7
comp=Z,27nm,0.6s,baz=257,slow=3.8,SNR=85
comp=Z,27nm,0.6s
BOSA Boshof 76.48 115 P P 16 54 41.3 -0.1
ECSD EROS Data Cent 76.76 336 P P 16 54 42.5 +0.2
D41A Chassel 77.20 343 P P 16 54 45.6 +1.0
MAW Mawson 77.53 162 P P 16 54 46.6 +0.5
comp=Z,12nm,0.8s,baz=221,slow=5.7,SNR=24
comp=Z,12nm,0.8s
MAW Mawson 77.53 162 P P 16 54 47.2 +1.0
TTIG Tnine Tigouga, 77.73 46 P P 16 54 50.0 +2.0

LBTB	Lobatse	78.22	112	P		P	16 54 50.6	-0.3
OUK	Oukaimeden	78.53	46	P		P	16 54 54.0	+1.4
EYMN	Ely	78.82	341	P		P	16 54 53.3	0.0
EYMN				IAmb		IAmb	16 54 53.9	
	comp=Z,13nm,1.2s							
RDMU	Red Mountain	79.79	326	P		P	16 55 00.1	+1.2
B35A	Bob, Littlefor	79.86	340	P		P	16 54 59.2	+0.5
B35A				IAmb		IAmb	16 54 60.0	
	comp=Z,11nm,0.7s							
AGMN	Agassiz Nation	80.47	339	P		P	16 55 02.5	+0.6
AGMN				IAmb		IAmb	16 55 03.3	
	comp=Z,9.3nm,0.8s							
MDND	Maddock	81.36	336	P		P	16 55 07.3	+0.8
PDAR	Pinedale Array	81.44	328	P		P	16 55 07.1	-0.3
	comp=Z,0.8nm,0.5s,baz=122,slow=8.2,SNR=9.5							
PDAR				pP		pP	16 57 09.4	+2.0
	comp=Z,0.5nm,0.8s,baz=131,slow=3.7,SNR=3.1							
	comp=Z,0.8nm,0.5s							
PDAR	Pinedale Array	81.44	328	P		P	16 55 07.8	+0.5
HWUT	Hardware Ranch	81.56	326	P		P	16 55 08.7	+0.8
SCHQ	Schefferville	81.62	358	P		P	16 55 07.4	-0.3
	comp=Z,8.5nm,0.8s,baz=138,slow=2.5,SNR=6.3							
	comp=Z,8.5nm,0.8s							
SCHQ	Schefferville	81.62	358	P		P	16 55 08.1	+0.4
SCHQ				IAmb		IAmb	16 55 09.1	
	comp=Z,11nm,0.8s							
MDT	Midelt	81.68	47	P		P	16 55 08.4	-0.2
	comp=Z,8.1nm,0.8s,baz=264,slow=3.7,SNR=26							
MDT				pP		pP	16 57 09.3	+0.9
	comp=Z,2.8nm,0.9s,baz=272,slow=3.0,SNR=5.0							
	comp=Z,8.1nm,0.8s							
MDT	Midelt	81.68	47	P		P	16 55 09.7	+1.1
BGU	Big Grassy Mou	81.81	324	P		P	16 55 08.3	-0.9
POGA	Pongola	82.19	117	P		P	16 55 11.4	0.0
POGA				IAmb		IAmb	16 55 31.4	
	comp=Z,23nm,1.1s							
LOHW	Long Hollow	82.58	328	P		P	16 55 14.6	+1.4
CHEFC	Chefchaouen	82.68	45	P		P	16 55 15.0	+1.4
PCVE	Castro Verde	82.71	41	*eP*		P	16 55 14.4	+0.8
MESJ	Messejana	82.74	41	*eP*		P	16 55 13.7	0.0
MESJ				IAmb		IAmb	16 55 15.2	
	comp=Z,11nm,1.0s							
MESJ	Messejana	82.74	41	*eP*		P	16 55 14.6	+0.9
PVAQ	Vaqueiros	82.74	42	*eP*		P	16 55 14.6	+0.8
	comp=Z,22nm,1.6s							
PNCL	Nicolau / Gran	82.74	41	*eP*		P	16 55 14.5	+0.8
	comp=Z,20nm,1.5s							
NVAR	Mina Array Bea	82.95	320	P		P	16 55 15.8	+0.7
	comp=Z,0.1nm,0.4s,baz=153,slow=6.1,SNR=2.4							
IMW	Indian Meadow	82.96	328	P		P	16 55 15.8	+0.8
SMIR	Smir Dam	83.03	44	P		P	16 55 17.0	+1.8
TAM	Tamanrasset	83.03	60	P		P	16 55 16.1	+0.3
TAM				IAmb		IAmb	16 55 17.3	
	comp=Z,16nm,0.9s							
PBEJ	Beja	83.07	41	*eP*		P	16 55 16.2	+0.8
	comp=Z,15nm,1.2s							
AKLM	AKL	83.23	46	P		P	16 55 17.1	+0.7
EVO	Evora	83.33	41	*eP*		P	16 55 17.4	+0.8
	comp=Z,12nm,1.7s							
FIGM	Figuig	83.47	49	P		P	16 55 19.0	+1.3
PSBE	So Bento	83.54	39	*eP*		P	16 55 18.7	+1.0
	comp=Z,36nm,1.1s							
PMTG	Montargil	83.57	40	*eP*		P	16 55 18.6	+0.8
	comp=Z,34nm,1.1s							
PALE	Palemas	83.63	45	P		P	16 55 19.0	+0.7
PBAR	Barrancos	83.66	41	*eP*		P	16 55 18.8	+0.5
	comp=Z,12nm,1.7s							
PESTR	Estremoz	83.80	41	*eP*		P	16 55 19.8	+0.8
	comp=Z,18nm,1.1s							
PESTR	Estremoz	83.80	41	P		P	16 55 19.4	+0.4
PESTR				IAmb		IAmb	16 55 20.6	
	comp=Z,7.5nm,1.0s							
PESTR	Estremoz	83.80	41	P		P	16 55 19.6	+0.6
GCMT	Greycliff	83.80	329	P		P	16 55 19.3	+0.3
JBK	JBK	83.96	47	P		P	16 55 21.0	+0.8
PCAS	Casmilo, Conde	84.08	39	*eP*		P	16 55 21.1	+0.8
	comp=Z,28nm,1.9s							
PMRV	Marv??o	84.29	40	*eP*		P	16 55 21.5	+0.1
TAF	Taforalt	84.36	46	P		P	16 55 23.0	+1.1
HLID	Hailey	84.43	325			P	16 55 23.9	+1.7
PCBR	Castelo Branco	84.51	40	*eP*		P	16 55 22.8	+0.3
MTE	Manteigas	84.85	39	*eP*		P	16 55 24.7	+0.5
	comp=Z,22nm,1.5s							
MTE	Manteigas	84.85	39	P		P	16 55 24.4	+0.2
PVIS	Viseu	84.86	39	*eP*		P	16 55 24.6	+0.4
	comp=Z,14nm,1.7s							
PVRL	Vila Real	85.34	39	*eP*		P	16 55 27.3	+0.8
	comp=Z,32nm,1.0s							
POLO	Lamas de Olo	85.36	39	*eP*		P	16 55 27.5	+0.8
	comp=Z,9.3nm,1.2s							
PGAV	Gavieira, Arco	85.50	38	*eP*		P	16 55 28.2	+0.9
MVO	Moncorvo	85.65	39	*eP*		P	16 55 28.9	+0.9
	comp=Z,23nm,1.1s							
PAB	San Pablo	86.14	42	P		P	16 55 30.7	+0.3
PAB				IAmb		IAmb	16 55 31.9	
	comp=Z,7.9nm,1.1s							
PBRG	Braganca	86.24	39	*eP*		P	16 55 31.2	+0.4
	comp=Z,15nm,1.2s							
ESDC	Sonseca Array	86.45	42	P		P	16 55 30.7	-1.1
	comp=Z,3.4nm,0.7s,baz=244,slow=4.9,SNR=33							
ESDC				pP		pP	16 57 33.8	+0.3
	comp=Z,0.7nm,1.1s,baz=247,slow=5.1,SNR=2.8							
	comp=Z,3.4nm,0.7s							
ESDC	Sonseca Array	86.45	42	P		P	16 55 31.5	-0.3
ESDC				IAmb		IAmb	16 55 33.4	
	comp=Z,7.5nm,1.4s							
ESBB	Sonseca Array	86.45	42	P		P	16 55 32.1	+0.2
ESBB				IAmb		IAmb	16 55 34.6	
	comp=Z,4.6nm,0.8s							
JTMT	Jette	87.37	328	P		P	16 55 36.1	0.0
JTMT				IAmb		IAmb	16 56 09.7	
	comp=Z,10nm,1.1s							
WALA	Waterton Lakes	88.15	329	P		P	16 55 40.1	+0.4
WALA				IAmb		IAmb	16 56 09.3	
	comp=Z,7.1nm,1.4s							
KEST	Kesra	92.77	51	P		P	16 55 59.6	-1.6
	comp=Z,3.9nm,0.8s,baz=152,slow=1.6,SNR=4.6							
	comp=Z,3.9nm,0.8s							
SSB	Saint Sauveur	94.84	41	P		P	16 56 11.1	+0.6
EKA	Eskdalemuir Ar	96.82	30	P		P	16 56 17.7	-1.3
	comp=Z,3.6nm,0.9s,baz=201,slow=1.6,SNR=5.9							
	comp=Z,3.6nm,0.9s							
DAVOX	Davos/Dischmat	98.78	42	P		Pdif	16 56 27.7	-0.6
	comp=Z,2.0nm,0.7s,baz=205,slow=9.2,SNR=6.2							
	comp=Z,2.0nm,0.7s							
BRTR	Keskin Array B	111.88	56	PKiKP		PKiKP	17 01 19.3	-0.8
	comp=Z,0.5nm,0.7s,baz=242,slow=2.7,SNR=4.5							
BELG	Belogornoye	123.64	43	PKP		PKPdf	17 01 40.6	-1.4
	comp=Z,14nm,0.8s,baz=323,slow=1.5,SNR=6.8							
ASAR	Alice Springs	126.86	200	PKP		PKPdf	17 01 49.0	-0.4
	comp=Z,2.5nm,0.7s,baz=141,slow=1.9,SNR=33							
ASAR				pPKP		pPKPdf	17 03 59.6	-0.5
	comp=Z,0.4nm,0.7s,baz=133,slow=1.6,SNR=2.3							
ASAR				SKP			17 04 30.9	
	comp=Z,0.9nm,0.8s,baz=160,slow=2.4,SNR=4.8							
WRA	Warramunga Arr	130.20	202	PKP		PKPdf	17 01 54.3	-1.5
	comp=Z,1.5nm,0.8s,baz=167,slow=1.7,SNR=13							
WRA				pPKP		pPKPdf	17 04 07.1	+0.5
	comp=Z,0.5nm,0.7s,baz=162,slow=1.8,SNR=2.8							
WRA				SKPbc		SKPbc	17 04 25.2	-1.6
	comp=Z,14nm,0.9s,baz=156,slow=3.9,SNR=50							
GEYT	Alibeck	130.23	62	PKP		PKiKP	17 01 55.7	-0.5
	comp=Z,1.0nm,0.4s,baz=226,slow=5.4,SNR=3.2							
GEYT				SKPbc		SKPbc	17 04 25.7	-0.8
	comp=Z,2.5nm,0.8s,baz=279,slow=10,SNR=4.8							
ABKAR	Akbulak array	131.55	47			PKPdf	17 01 57.5	+0.2
BRVK	Borovoye	137.12	40			PKPdf	17 02 08.1	+0.6
PETK	Petropavlovsk-	140.01	322	PKP		PKPdf	17 02 13.4	+0.6
	comp=Z,3.3nm,1.0s,baz=349,slow=3.0,SNR=1.8							
AAK	Ala-Archa	142.54	54	P		PKPdf	17 02 16.4	-1.5
	SNR=6.1							
AAK	Ala-Archa	142.54	54			PKPdf	17 02 15.7	-2.3
UCH	Uchtor	142.63	55	P		PKPdf	17 02 16.8	-1.6
	SNR=8.4							
CHMS	Chumysh	142.66	54	P		PKPdf	17 02 16.1	-1.8
	SNR=6.1							
KURK	Kurchatov	142.78	40			PKPdf	17 02 15.8	-2.1
KBK	Karagaybulak	142.87	54	P		PKPdf	17 02 16.9	-1.6
	SNR=11							
TKM2	Tokmak 2	143.28	54	P		PKPbc	17 02 18.2	+0.4
	SNR=17							
ULHL	Ulahol	143.89	55	P		PKPdf	17 02 20.7	+0.3
	SNR=12							
YAK	Yakutsk	143.96	350			PKPdf	17 02 19.5	0.0
KSH	Kashi	144.15	59	PKP		PKPbc	17 02 20.3	-0.1
KSH				sPKP			17 05 08.2	
ZAA0	Zalesovo Array	144.42	32			PKPab	17 02 20.9	-0.2
ZALV	Zalesovo Beam	144.42	32	PKP		PKPab	17 02 21.1	-0.1
	comp=Z,29nm,0.8s,baz=298,slow=3.2,SNR=95							
ZALV				pPKP		pPKPdf	17 04 32.8	+1.1
	comp=Z,4.9nm,0.9s,baz=281,slow=3.9,SNR=7.5							
ZALV				SKPbc		SKPbc	17 05 06.4	-0.7
	comp=Z,4.6nm,0.8s,baz=307,slow=3.1,SNR=5.5							
ZALV	Zalesovo Beam	144.42	32			PKPab	17 02 20.8	-0.4
MAKZ	Makanchi	146.42	45	PKPdf		PKPdf	17 02 24.3	0.0
MAKZ				PKPbc		PKPbc	17 02 26.8	+0.1
MK31	Makanchi Array	146.62	45			PKPdf	17 02 25.1	+0.5
MK31				PKPbc		PKPbc	17 02 27.4	+0.1
MK31				PKPab		PKPab	17 02 30.4	+0.3
MKAR	Makanchi Array	146.62	45	PKPbc		PKPdf	17 02 25.6	+0.9
	comp=Z,24nm,0.7s,baz=281,slow=3.4,SNR=69							
MKAR	Makanchi Array	146.62	45			PKPdf	17 02 24.7	+0.1
MKAR				PKPbc		PKPbc	17 02 27.5	+0.2
MKAR				PKPab		PKPab	17 02 30.5	+0.4
PYUN	Piuthan	150.26	80	*eP*		PKPdf	17 02 30.0	-1.3
	comp=Z,80nm,0.8s							
DANN	Dangsing	150.96	80	*eP*		PKPdf	17 02 33.1	+0.6
	comp=Z,107nm,0.8s							
WMQ	Urumqi	151.34	47	*eP*		PKPdf	17 02 32.1	-0.2
GKN	Gorkha	151.70	81	*eP*		PKPdf	17 02 33.5	+0.1
	comp=Z,40nm,0.7s							
PKIN	Phulchoki	152.33	82	*eP*		PKPdf	17 02 34.2	-0.3
	comp=Z,16nm,0.6s							
PKI	Pulchoki	152.34	82	*eP*		PKPdf	17 02 34.8	+0.2
	comp=Z,18nm,0.7s							
GUN	Gumba	152.78	81	*eP*		PKPdf	17 02 36.5	+1.3
	comp=Z,53nm,1.0s							
JIRN	Jiri	153.03	82	*eP*		PKPdf	17 02 36.1	+0.5
	comp=Z,19nm,0.8s							
RAMN	Ramite	153.32	83	*eP*		PKPdf	17 02 35.6	-0.3
	comp=Z,28nm,0.8s							
SONM	Songino Array	157.79	18	PKP		PKPdf	17 02 41.0	0.0
	comp=Z,1.5nm,0.8s,baz=270,slow=1.3,SNR=8.4							
SONM				PKPab		PKPab	17 03 17.5	+0.2
	comp=Z,1.6nm,0.7s,baz=320,slow=3.8,SNR=7.4							
CMAR	Chiang Mai Arr	161.63	114	PKP		PKPdf	17 02 46.3	+0.3
	comp=Z,0.8nm,0.8s,baz=268,slow=2.6,SNR=5.3							
CMAR				PKPab		PKPab	17 03 33.7	-1.2
	comp=Z,1.4nm,0.9s,baz=250,slow=5.4,SNR=8.0							
CMAR				PP		PP	17 07 19.2	-1.3
	comp=Z,0.7nm,0.9s,baz=259,slow=7.3,SNR=4.4							
HHC	Hu-ho-hao-te	165.64	16	*eP*		PKPdf	17 02 49.5	+0.4
PZH	PanZhiHua	166.73	89	PKP		PKPdf	17 02 46.1	-4.3

ROM 02 16:44:20.6±0.1, 42°.840N±0°.004×13°.126E±0°.004, h9km, ML1.2/1, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=150.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.01	232	P	Pg	16 44 22.5	+0.2
NRCA				S	Sg	16 44 23.5	0.0
NRCA				AML	AML		
	comp=E,1835μm,0.1s						
NRCA				AML	AML		
	comp=N,830μm,1.0s						
T1242	Castelluccio d	0.06	101	P	Pg	16 44 22.9	+0.3
T1242				S	Sg	16 44 24.4	+0.2
MC2	Monte Cornacci	0.09	33	P	Pg	16 44 23.4	+0.3
MC2				S	Sg	16 44 25.2	+0.3
T1216	Preci, Frazion	0.09	303	P	Pg	16 44 23.3	+0.3
T1216				S	Sg	16 44 25.2	+0.4
T1202	Accumoli, Fraz	0.15	152	P	Pg	16 44 24.7	+0.7
T1217	Poggiodomo (PG	0.19	228	P	Pg	16 44 25.2	+0.6
T1215	Vallo di Nera,	0.19	259	P	Pg	16 44 25.1	+0.5
T1215				AML	AML		
	comp=E,108μm,1.5s						
T1215				AML	AML		
	comp=N,135μm,1.6s						
FDMO	Fiordimonte	0.20	352	⇑P	Pg	16 44 25.1	+0.4
T1204	Amatrice, Fraz	0.22	139	P	Pg	16 44 26.0	+0.9
T1241	Roccafluvione,	0.23	86	P	Pg	16 44 25.7	+0.5
T1241				S	Sg	16 44 29.5	+1.2
LNSS	Leonessa	0.24	195	P	Pg	16 44 26.2	+0.7
LNSS				S	Sg	16 44 30.4	+1.5
T1243	Rocca Santa Ma	0.28	121	⇓P	Pg	16 44 26.6	+0.5

VIE 02 16:44:41.2±0.3, 46°.66N×9°.84E, h8km±3km, ml1.4/4, Error ellipse: s-maj=1.4km s-min=1.1km az=152.0 16 km S of Davos

ZUR 02 16:44:41.4, 46°.66N×9°.84E, h10km±3km, MLh1.0/14, 6C, Error ellipse: s-maj=5.7km s-min=1.3km az=264.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVOX	Davos/Dischmat	0.12	11	⇑Pg	Pg	16 44 44.5	+0.1
DAVOX	Davos/Dischmat	0.12	11	⇑P	Pg	16 44 44.5	+0.1
DAVOX				AML	AML		
	comp=E,106μm,0.2s						
DAVOX				AML	AML		
	comp=N,136μm,0.8s						
SCEL	Celerina	0.15	177	⇑Pg	Pg	16 44 45.1	+0.3
BERNI	Berninapass	0.28	154	⇑Pg	Pg	16 44 47.3	+0.3
BERNI	Berninapass	0.28	154	P	Pg	16 44 47.5	+0.4
FUORN	Ofenpass-Fuorn	0.29	98	⇑Pg	Pg	16 44 47.5	+0.2
VDL	Val di Lei	0.33	237	⇑Pg	Pg	16 44 48.0	0.0
PLONS	Plons/SG	0.50	321	Sg	Sg	16 44 58.1	+0.3
DAVA	Damuels	0.63	2	*e*Pg	Pg	16 44 53.9	+0.4
	comp=N,0.9nm,0.1s						
FETA	Feichten	0.71	59	*i* Pg	Pg	16 44 54.9	-0.2
	comp=N,0.8nm,0.1s						
FETA				*e*Sg	Sg	16 45 04.3	0.0
	comp=N,1.1nm,0.2s						
MOTA	Moosalm	1.10	51	*e*Pg	Pg	16 45 02.2	-0.3
	comp=N,0.4nm,0.2s						
MOTA				*e*Sg	Sn	16 45 18.5	0.0
	comp=N,0.2nm,0.1s						

IDC 02 16:50:17.2±1.0, 20°.95S×68°.08W, h119km±17km, mb4.8/1, mbtmp4.4/4, Error ellipse: s-maj=42.0km s-min=10.2km az=103.0
GUC 02 16:50:18.5±0.6, 20°.99S×68°.33W, h139km±4km, ML3.6

ISC 02 16:50:17.4±1.0, 20°.96S±0°.04×68°.31W±0°.09, h141km±11km, n22, σ0°.86/36, 12C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	1.10	266	⇑*i*P	Pn	16 50 42.2	-0.2
PB01				*i* S	Sn	16 51 00.7	-0.6
PB01				IAML		16 51 01.9	
	comp=N,955nm,0.2s						
PB08	IPOC Station P	1.14	316	⇑*i*P	Pn	16 50 43.9	+0.8
PB08				*i* S	Sn	16 51 03.0	+0.6
PB08				IAML		16 51 05.4	
	comp=N,1μm,0.5s						
PB09	IPOC Station P	1.20	226	⇑*i*P	Pn	16 50 44.0	+0.6
PB09				*i* S	Sn	16 51 03.7	+0.6
PB09				IAML		16 51 05.5	
	comp=N,381nm,0.6s						
PB02	IPOC Station P	1.52	256	⇑*i*P	Pn	16 50 46.7	0.0
PB02				*i* S	Sn	16 51 08.6	-0.4
PB02				IAML		16 51 11.9	
	comp=E,1μm,0.2s						
GO01	Chusmiza	1.53	327	*e*P	Pn	16 50 48.0	+0.8
GO01				*i* S	Sn	16 51 10.4	+0.6
HMBC	Humberstone	1.63	294	⇑*i*P	Pn	16 50 47.8	-0.1
HMBC				*i* S	Sn	16 51 10.5	-0.5
HMBC				IAML		16 51 13.7	
	comp=N,910nm,0.2s						
PB07	IPOC Station P	1.65	242	⇑*i*P	Pn	16 50 48.0	-0.1
PB07				*i* S	Sn	16 51 10.7	-1.0
PB07				IAML		16 51 13.3	
	comp=N,383nm,0.2s						
PATCX	Punta Patache	1.73	274	⇑*i*P	Pn	16 50 49.0	0.0
PATCX				*i* S	Sn	16 51 12.8	-0.2
PATCX				IAML		16 51 14.8	
	comp=N,801nm,0.1s						
LVC	Limon Verde	1.73	199	P	Pn	16 50 49.5	+0.2
	comp=N,165nm,0.3s,baz=26,slow=9.4,SNR=333						
LVC				S	Sn	16 51 12.9	-0.7
	comp=N,134nm,0.5s,baz=106,slow=20,SNR=17						
LVC	Limon Verde	1.73	199	⇑*i*P	Pn	16 50 49.8	+0.6
LVC				*i* S	Sn	16 51 13.6	-0.1
TA01	Diego Aracena	1.79	282	*e*P	Pn	16 50 49.5	-0.1
TA01				*i* S	Sn	16 51 13.4	-0.8
TA01				IAML		16 51 14.2	
	comp=E,480nm,0.2s						
TA02	Huaiquique	1.84	292	*e*P	Pn	16 50 50.1	0.0
TA02				*i* S	Sn	16 51 14.4	-0.7
PB06	IPOC Station P	2.09	214	⇑*i*P	Pn	16 50 53.5	+0.2
PB06				*i* S	Sn	16 51 20.0	-0.8
PB06				IAML		16 51 21.3	
	comp=E,436nm,0.2s						
PB04	IPOC Station P	2.19	231	*e*P	Pn	16 50 54.5	0.0
PB15	IPOC Station P	2.48	205	⇑*i*P	Pn	16 50 58.3	+0.2
PB16	IPOC Station P	2.85	336	⇑*i*P	Pn	16 51 04.3	+1.3
PB16				*i* S	Sn	16 51 39.6	+1.4
PB10	IPOC Station P	3.28	219	⇑*i*P	Pn	16 51 07.9	-0.2
LPAZ	La Paz	4.65	2	P	Pn	16 51 27.3	+0.6
	comp=E,4.1nm,0.4s,baz=192,slow=2.5,SNR=21						
LPAZ				S	Sn	16 52 19.2	-1.3
	comp=E,2.1nm,0.7s,baz=196,slow=18,SNR=0.9						
SIV	San Ignacio	8.46	55	P	Pn	16 52 14.0	-3.2
	comp=E,33nm,0.6s,baz=247,slow=9.8,SNR=57						
PLCA	Paso Flores	19.80	185	P	Pn	16 54 40.2	+0.3
	comp=E,2.0nm,0.8s,baz=16,slow=8.9,SNR=2.6						
TORD	Torodi Ar. Bea	76.65	70	P	P	17 01 53.8	+0.5
	comp=E,13nm,0.6s,baz=258,slow=5.8,SNR=5.0						
	comp=E,13nm,0.6s						
MKAR	Makanchi Array	144.87	36	PKP	PKPbc	17 09 38.9	+1.6
	comp=E,0.7nm,0.7s,baz=307,slow=2.6,SNR=3.5						

MAN 02 17:07:09.3, 10°.05N×126°.31E, h50km, mb4.8, ML3.7, MS3.6
IDC 02 17:07:29.4±6.5, 10°.37N×126°.29E, h62km±55km, mb3.5/7, mbtmp3.8/8, ML4.5/1, MS3.0/3, Error ellipse: s-maj=64.4km s-min=17.2km az=61.0

ISC 02 17:07:29.7±1.6, 10°.30N±0°.06×126°.15E±0°.08, h60km±16km, n24, σ1°.60/32, mb3.7/7, 9C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHBP	Garcia Hernand	1.92	250	⇓*i*P	Pn	17 07 59.4	-0.7
GHBP				*i* S	Sn	17 08 23.9	+0.7
BIPH	Bislig	2.11	174	⇑*e*P	Pn	17 08 00.3	-2.5
BIPH				*e*S	Sn	17 08 26.7	-1.2
LLP	Lapu-Lapu	2.15	271	⇓*i*P	Pn	17 08 03.2	0.0
LLP				*i* S	Sn	17 08 30.6	+1.7
CGP	Cagayan de Oro	2.33	218	⇑*e*P	Pn	17 08 04.6	-1.1
CGP				*i* S	Sn	17 08 32.6	-0.7
LSIP	Lazi, Siquijor	2.74	245	⇑*i*P	Pn	17 08 10.6	-0.7
LSIP				*i* S	Sn	17 08 43.2	-0.1
DCPH	Dipolog City	3.25	239	⇑*e*P	Pn	17 08 18.5	+0.3
DCPH				*e*S	Sn	17 08 55.9	+0.2
DAV	Davao City (W)	3.26	190	P	Pn	17 08 20.3	+1.9
	53nm,0.3s,baz=86,slow=19,SNR=3.7						
DAV				S	Sn	17 08 58.2	+2.2
	99nm,0.5s,baz=253,slow=23,SNR=3.8						
	103nm,0.3s						
KCP	Kidapawan	3.44	198	⇓*e*P	Pn	17 08 18.8	-2.1
KCP				*i* S	Sn	17 09 29.2	+29
GUIM	Jordan	3.52	276	⇑*e*P	Pn	17 08 22.4	+0.4
GUIM				*e*S	Sn	17 09 01.3	-1.1
CTBH	Cotabato--PC H	3.59	212	⇓*i*P	Pn	17 08 23.4	+0.4
PAGZ	Pagadian	3.66	229	⇑*i*P	Pn	17 08 23.9	0.0
PAGZ				*i* S	Sn	17 09 04.1	-1.8
PVCP	Virac	3.81	329	⇑*e*P	Pn	17 08 17.1	-8.9
PVCP				*e*S	Sn	17 08 34.5	-35
DDMP	Don Marcelino,	4.19	186	⇑*e*P	Pn	17 08 31.9	+0.7
DDMP				*e*S	Sn	17 09 24.4	+5.4
JCNP	Jose Panganiba	5.21	320	⇑*e*P	Pn	17 08 45.4	+0.3
JCNP				*e*S	Sn	17 09 45.0	+1.2
SIJI	Sorong	12.21	155	LR	LR	17 16 42.2	
	comp=Z,19nm,18.9s,baz=132,slow=45						
GUMO	Guam	18.60	78	LR	LR	17 17 12.5	
	comp=Z,29nm,21.2s,baz=160,slow=32						
BATI	Baumata	20.52	187	LR	LR	17 22 31.4	
	comp=Z,283nm,18.7s,baz=262,slow=44						
CMAR	Chiang Mai Arr	27.55	290	P	P	17 13 11.1	-0.1
	1.0nm,0.8s,baz=97,slow=8.1,SNR=11						
	1.0nm,0.8s						
FITZ	Fitzroy Crossi	28.22	181	P	P	17 13 18.7	+1.6
	1.7nm,0.9s,baz=346,slow=8.3,SNR=2.0						
	1.7nm,0.9s						
WRA	Warramunga Arr	31.12	165	P	P	17 13 41.0	-1.8
	0.3nm,0.5s,baz=345,slow=9.5,SNR=2.7						
	0.3nm,0.5s						
ASAR	Alice Springs	34.60	167	P	P	17 14 12.3	-0.9
	0.4nm,0.4s,baz=351,slow=7.0,SNR=12						
ASAR				PcP	PcP	17 16 46.4	-0.3
	0.4nm,0.9s,baz=341,slow=3.6,SNR=2.1						
	0.4nm,0.4s						
STKA	Stephens Creek	44.47	161	P	P	17 15 34.9	-0.2
	2.0nm,1.0s,baz=337,slow=13,SNR=1.2						
	2.0nm,1.0s						
MKAR	Makanchi Array	51.93	323	P	P	17 16 32.8	+0.2

0.3nm,0.4s
ASAR Alice Springs 25.10 159 P P 17 27 26.9 +1.6
0.3nm,0.8s,baz=343,slow=7.9,SNR=6.1
ASAR PcP **PcP 17 30 59.6 +1.3**
0.2nm,0.5s,baz=348,slow=2.1,SNR=5.8
0.3nm,0.8s
MKAR Makanchi Array 59.52 328 P P 17 32 02.7 -0.3
0.4nm,0.5s,baz=121,slow=8.8,SNR=2.9
0.4nm,0.5s

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*NEIC **02** 17:30:11.1±1.8, 12°.72N±0°.09×143°.70E±0°.09, h80km±7km, mb4.5/21, Error ellipse: s-maj=14.2km s-min=11.9km az=137.0*
*IDC **02** 17:30:12.0±0.6, 12°.84N×143°.71E, h80km±5km, mb3.7/21, mbtmp4.0/22, MS3.3/17, Error ellipse: s-maj=10.9km s-min=7.5km az=126.0*
ISC 02 17:30:12.9±0.4, 12°.79N±0°.06×143°.75E±0°.08, h100km, n74, σ1§56/68, mb4.2/32, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.34**	**54**	P	**Pn**	**17 30 35.6**	**-1.7**
	2μm,0.4s,baz=192,slow=9.3,SNR=761						
GUMO				S	**Sn**	**17 30 53.0**	**-2.7**
	1μm,0.3s,baz=30,slow=22,SNR=8.2						
GUMO				LR	LR	17 31 20.6	
	comp=Z,334nm,21.1s,baz=252,slow=51						
PATS	**Pohnpei**	**15.51**	**111**	Pn	**Pn**	**17 33 44.4**	**-1.9**
SIJI	**Sorong**	**18.38**	**223**	P	**Pn**	**17 34 21.5**	**+0.1**
	3.0nm,0.5s,baz=37,slow=12,SNR=5.9						
SIJI				LR	LR	17 41 36.0	
	comp=Z,36nm,18.8s,baz=90,slow=37						
DAV	**Davao City (W)**	**18.78**	**254**	P	**P**	**17 34 20.8**	**-3.7**
	202nm,0.4s,baz=28,slow=4.0,SNR=5.3						
DAV				LR	LR	17 41 46.9	
	comp=Z,28nm,18.9s,baz=126,slow=37						
JOW	**Kunigami**	**20.15**	**316**	LR	LR	17 43 00.1	
	comp=Z,39nm,18.6s,baz=166,slow=38						
JHJ	**Hachijo jima 2**	**20.56**	**350**	LR	LR	17 42 04.2	
	comp=Z,32nm,19.2s,baz=278,slow=35						
PMG	**Port Moresby**	**22.31**	**171**	P	**P**	**17 35 02.7**	**+0.3**
	8.5nm,1.0s,baz=342,slow=6.4,SNR=1.7						
	8.5nm,1.0s						
H11S3	**WAKE ISLAND Hy 22.79**	**73**		T	T	17 58 20.6	
	baz=258,slow=75,SNR=6.9						
H11S1	**WAKE ISLAND Hy 22.80**	**73**		T	T	17 58 13.9	
	baz=258,slow=75,SNR=6.9						
H11S2	**WAKE ISLAND Hy 22.81**	**73**		T	T	17 58 16.2	
	baz=258,slow=75,SNR=7.3						
H11N1	**WAKE ISLAND Hy 23.24**	**70**		T	T	17 58 50.6	
	baz=255,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy 23.25**	**70**		T	T	17 58 51.3	
	baz=255,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy 23.26**	**70**		T	T	17 58 45.4	
	baz=255,slow=75,SNR=18						
MJAR	**Matsushiro Arr**	**24.17**	**349**	P	**P**	**17 35 19.7**	**-0.2**
	1.3nm,0.5s,baz=160,slow=8.9,SNR=7.1						
MJAR				pP	**pP**	**17 35 37.8**	**-2.7**
	1.1nm,0.7s,baz=165,slow=8.7,SNR=2.9						
MJAR				LR	LR	17 43 07.7	
	comp=Z,55nm,21.4s,baz=171,slow=32						
	1.3nm,0.5s						
LUWI	**Luwuk**	**24.95**	**238**	P	**P**	**17 35 25.9**	**-1.3**
JMM	**Marumori**	**25.11**	**354**	P	**P**	**17 35 28.2**	**-0.3**
COEN	**Coen**	**26.58**	**181**	P	**P**	**17 35 42.6**	**+0.6**
COEN				IAmb	IAmb	17 35 43.7	
	comp=Z,23nm,1.4s						
HNR	**Honiara**	**27.32**	**143**	LR	LR	17 45 56.4	
	comp=Z,527nm,18.7s,baz=142,slow=34						
KSRS	**Korea Array**	**28.35**	**333**	P	**P**	**17 35 58.9**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=142,slow=10,SNR=1.9						
	comp=Z,0.5nm,0.6s						
BATI	**Baumata**	**30.33**	**222**	LR	LR	17 49 32.3	
	comp=Z,332nm,18.9s,baz=264,slow=38						
CTA	**Charters Tower**	**32.77**	**176**	P	**P**	**17 36 37.8**	**+1.2**
	comp=Z,3.4nm,0.8s,baz=26,slow=10,SNR=4.2						
	comp=Z,3.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**32.89**	**344**	LR	LR	17 48 24.5	
	comp=Z,28nm,19.0s,baz=26,slow=33						
WB0	**Warramunga Arr**	**33.64**	**196**	P	**P**	**17 36 42.2**	**-2.1**
WB0				IAmb	IAmb	17 36 55.6	
	comp=Z,7.3nm,1.1s						
WB2	**Warramunga Arr**	**33.82**	**196**	P	**P**	**17 36 43.2**	**-2.6**
WB2				IAmb	IAmb	17 37 06.6	
	comp=Z,4.1nm,0.7s						
WRA	**Warramunga Arr**	**33.82**	**196**	P	**P**	**17 36 46.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=20,slow=9.7,SNR=17						
WRA				pP	**pP**	**17 37 05.3**	**-1.9**
	comp=Z,2.4nm,0.6s,baz=19,slow=9.7,SNR=9.7						
WRA				PcP	**PcP**	**17 39 24.6**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=16,slow=3.9,SNR=2.3						
WRA				ScP	**ScP**	**17 43 01.1**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=13,slow=3.5,SNR=2.8						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**33.82**	**196**	P	**P**	**17 36 44.4**	**-1.4**
FITZ	**Fitzroy Crossi**	**35.52**	**211**	P	**P**	**17 37 01.4**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=24,slow=12,SNR=1.2						
	comp=Z,0.9nm,0.9s						
AS31	**Alice Springs**	**37.49**	**195**	P	**P**	**17 37 15.1**	**-2.1**
ASAR	**Alice Springs**	**37.49**	**195**	P	**P**	**17 37 18.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=17,slow=14,SNR=21						
ASAR				pP	**pP**	**17 37 38.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=18,slow=13,SNR=4.2						
ASAR				PcP	**PcP**	**17 39 34.7**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=29,slow=4.4,SNR=3.9						
ASAR				ScP	**ScP**	**17 43 13.8**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=24,slow=4.5,SNR=4.5						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**37.49**	**195**	P	**P**	**17 37 17.0**	**-0.2**
KLR	**Kul'dur**	**37.66**	**347**	P	**P**	**17 37 18.8**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=180,slow=8.1,SNR=4.2						
	comp=Z,1.0nm,0.5s						
EIDS	**Eidsvold**	**38.60**	**169**	P	**P**	**17 37 25.4**	**-0.9**
EIDS				IAmb	IAmb	17 37 27.6	
	comp=Z,3.6nm,0.6s						
DZM	**Mont Dzumac**	**41.18**	**147**	P	**P**	**17 37 50.1**	**+2.1**
	comp=Z,4.5nm,0.7s,baz=302,slow=11,SNR=13						
DZM				PcP	**PcP**	**17 39 47.9**	**+2.4**
	comp=Z,1.9nm,0.5s,baz=300,slow=20,SNR=2.0						
	comp=Z,4.5nm,0.7s						
DZM	**Mont Dzumac**	**41.18**	**147**	P	**P**	**17 37 47.8**	**-0.2**
DZM				IAmb	IAmb	17 37 50.8	
	comp=Z,5.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**43.44**	**283**	P	**P**	**17 38 08.0**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=90,slow=7.0,SNR=18						
CMAR				pP	**pP**	**17 38 25.5**	**-3.2**
	comp=Z,1.1nm,0.7s,baz=82,slow=6.4,SNR=4.7						
	comp=Z,2.0nm,0.8s						
ARMA	**Armidale**	**43.62**	**170**	P	**P**	**17 38 05.5**	**-2.1**
ARMA				IAmb	IAmb	17 38 15.6	
	comp=Z,17nm,1.5s						
STKA	**Stephens Creek**	**44.46**	**183**	P	**P**	**17 38 14.6**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=7.8,slow=7.0,SNR=9.4						
	comp=Z,5.1nm,0.8s						
STKA	**Stephens Creek**	**44.46**	**183**	P	**P**	**17 38 13.6**	**-0.6**
SONM	**Songino Array**	**46.77**	**326**	P	**P**	**17 38 33.9**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=143,slow=6.2,SNR=5.0						
SONM				LR	LR	17 57 32.1	
	comp=Z,29nm,19.5s,baz=180,slow=35						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**46.77**	**326**	P	**P**	**17 38 32.9**	**+0.5**
MA2	**Magadan**	**46.99**	**5**	LR	LR	17 56 34.7	
	comp=Z,12nm,20.9s,baz=128,slow=34						
GSI	**Gunungsitoli**	**47.14**	**260**	P	**P**	**17 38 32.7**	**-2.9**
GSI				IAmb	IAmb	17 38 34.0	
	comp=Z,13nm,1.1s						
BRDH	**Bariadhala**	**50.38**	**289**	LR	LR	18 01 39.9	
	comp=Z,90nm,18.3s,baz=183,slow=38						
AFI	**Afiamalu**	**51.43**	**120**	LR	LR	17 57 55.3	
	comp=Z,17nm,19.0s,baz=291,slow=32						
URZ	**Urewera**	**59.62**	**150**	P	**P**	**17 40 04.3**	**-2.2**
BKZ	**Black Stump Fm**	**60.03**	**151**	P	**P**	**17 40 08.9**	**-0.5**
MKAR	**Makanchi Array**	**61.31**	**317**	P	**P**	**17 40 19.0**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=94,slow=8.5,SNR=8.3						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**61.31**	**317**	P	**P**	**17 40 18.1**	**+0.1**
ZALV	**Zalesovo Beam**	**61.64**	**325**	P	**P**	**17 40 22.1**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=103,slow=6.4,SNR=2.9						
ZALV				PcP	**PcP**	**17 40 59.0**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=117,slow=5.0,SNR=2.5						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**64.49**	**320**	P	**P**	**17 40 38.1**	**-0.9**
KURK				IAmb	IAmb	17 41 03.6	
	comp=Z,7.1nm,1.0s						
J20K	**Nowinta River**	**66.57**	**25**	P	**P**	**17 40 52.6**	**+0.5**
J20K				IAmb	IAmb	17 41 01.4	
	comp=Z,14nm,1.5s						
IMAR	**Indian Mountai**	**67.35**	**23**	P	**P**	**17 40 57.3**	**+0.2**
PWL	**Port Wells**	**68.20**	**29**	P	**P**	**17 41 02.0**	**-0.5**
ILAR	**Eielson Array**	**69.75**	**25**	P	**P**	**17 41 11.3**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=250,slow=5.7,SNR=14						
ILAR				pP	**PcP**	**17 41 34.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=250,slow=6.1,SNR=2.8						
	comp=Z,0.7nm,0.4s						
BVAR	**Borovoye Array**	**69.88**	**322**	P	**P**	**17 41 13.4**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=105,slow=9.1,SNR=3.3						
	comp=Z,0.6nm,0.3s						
BBB	**Bella Bella**	**78.88**	**39**	LR	LR	18 17 05.8	
	comp=Z,25nm,18.6s,baz=288,slow=36						
YKA	**Yellowknife Ar**	**84.06**	**27**	P	**P**	**17 42 33.2**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=283,slow=5.0,SNR=9.2						
	comp=Z,1.2nm,0.4s						
YBH	**Yreka Blue Hor**	**84.21**	**49**	LR	LR	18 21 04.3	
	comp=Z,13nm,18.4s,baz=300,slow=36						
BEKR	**Beckworth**	**86.36**	**50**	P	**P**	**17 42 44.3**	**-0.2**
BEKR				IAmb	IAmb	17 42 46.6	
	comp=Z,4.1nm,0.9s						
NEW	**Newport**	**86.54**	**41**	LR	LR	18 21 40.8	
	comp=Z,24nm,18.6s,baz=309,slow=36						
ARCES	**ARCESS Array B**	**87.50**	**342**	P	**P**	**17 42 49.7**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=61,slow=7.3,SNR=6.1						
	comp=Z,3.8nm,0.9s						
NVAR	**Mina Array Bea**	**88.26**	**51**	P	**P**	**17 42 55.3**	**+1.6**
	comp=Z,4.9nm,0.7s,baz=263,slow=5.8,SNR=39						
NVAR	**Mina Array Bea**	**88.26**	**51**	P	**P**	**17 42 55.2**	**+1.4**
NV11	**Mina Array Sit**	**88.38**	**51**	P	**P**	**17 42 54.9**	**+0.7**
NV11				IAmb	IAmb	17 42 56.8	
	comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**90.75**	**176**	P	**P**	**17 43 05.9**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=347,slow=4.1,SNR=3.8						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**91.42**	**335**	P	**P**	**17 43 07.1**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=70,slow=5.0,SNR=16						
	comp=Z,0.7nm,0.4s						
PDAR	**Pinedale Array**	**93.29**	**45**	P	**P**	**17 43 17.8**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=276,slow=0.8,SNR=2.6						
PDAR				LR	LR	18 22 59.4	
	comp=Z,12nm,18.4s,baz=332,slow=34						
	comp=Z,0.2nm,0.6s						
MLR	**Muntele Rosu**	**99.42**	**321**	LR	LR	18 30 57.5	
	comp=Z,12nm,19.7s,baz=95,slow=37						
TXAR	**Lajitas Array**	**102.70**	**56**	P	**Pdif**	**17 44 01.3**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=289,slow=2.8,SNR=3.8						
ESDC	**Sonseca Array**	**119.78**	**332**	PKP	**PKiKP**	**17 48 54.6**	**+2.6**
	comp=Z,0.3nm,0.4s,baz=7.0,slow=3.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**134.40**	**303**	PKP	**PKiKP**	**17 49 22.4**	**+0.7**
	comp=Z,13nm,0.6s,baz=5.9,slow=2.3,SNR=5.0						
PLCA	**Paso Flores**	**139.06**	**139**	PKP	**PKiKP**	**17 49 30.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=244,slow=2.0,SNR=4.3						
LPAZ	**La Paz**	**148.96**	**100**	PKPbc	**PKiKP**	**17 49 53.1**	**+0.8**
	comp=Z,1.8nm,0.4s,baz=259,slow=3.4,SNR=12						
CPUP	**Villa Florida**	**156.05**	**127**	PKPab	**PKPab**	**17 50 26.3**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=258,slow=20,SNR=5.0						

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*IDC **02** 17:36:32.0±1.5, 15°.38S×177°.04W, h400km±21km, mb3.0/4, mbtmp4.0/6, Error ellipse: s-maj=88.4km s-min=18.8km az=149.0*
ISC 02 17:36:31.9±1.0, 15°.3S±0°.4×177°.0W±0°.2, h400km, n8, σ0§44/9, mb3.4/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.28**	**75**	P	**Pn**	**17 37 56.9**	**-0.1**
	82nm,0.6s,baz=284,slow=8.3,SNR=23						
MSVF	**Nonsavu**	**5.28**	**243**	P	**Pn**	**17 37 57.5**	**+0.5**
	35nm,0.7s,baz=60,slow=20,SNR=30						
STKA	**Stephens Creek**	**41.05**	**239**	P	**P**	**17 43 38.2**	**-0.2**
	2.1nm,0.9s,baz=76,slow=8.3,SNR=3.8						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**46.45**	**257**	P	**P**	**17 44 20.4**	**-0.6**
	0.2nm,0.6s,baz=95,slow=7.0,SNR=2.5						
WRA				PcP	**PcP**	**17 45 48.5**	**+0.2**
	0.3nm,0.7s,baz=91,slow=3.5,SNR=1.8						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**46.80**	**252**	P	**P**	**17 44 23.3**	**-0.4**
	1.8nm,0.5s,baz=85,slow=8.4,SNR=91						
ASAR				PcP	**PcP**	**17 45 49.8**	**+0.3**
	0.2nm,0.5s,baz=92,slow=4.6,SNR=1.7						
	1.8nm,0.5s						
ILAR	**Eielson Array**	**83.11**	**13**	P	**P**	**17 48 13.7**	**0.0**
	0.5nm,0.7s,baz=224,slow=5.0,SNR=4.7						
	0.5nm,0.7s						
BRTR	**Keskin Array B**	**143.84**	**318**	PKP	PKPbc	17 55 19.8	+0.5
	0.9nm,0.7s,baz=52,slow=1.3,SNR=7.5						
GERES	**GERESS Array B**	**145.44**	**347**	PKPbc	**PKPbc**	**17 55 24.4**	**+0.3**
	0.1nm,0.3s,baz=24,slow=7.5,SNR=2.6						

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*IDC **02** 17:46:22.0±4.2, 14°.62S×168°.35E, h0km, mb4.2/3, mbtmp4.1/4, ML5.2/1, MS3.4/2, Error ellipse: s-maj=127.8km s-min=34.2km az=5.0*
*NOU **02** 17:48:36.4, 21°.18S×167°.51E, h0km, MLv2.1/6, Loyalty Islands*
ISC 02 17:46:50.8±2.5, 14°.4S±0°.4×171°.4E±0°.2, h650km, n12, σ1§24/10, mb3.9/3, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.16**	**118**	Pn	**P**	**17 48 44.7**	**+0.2**
	0.8nm,0.3s,baz=295,slow=19,SNR=5.6						
	4.2nm,0.7s						
LIFNC	**LIFOU**	**7.50**	**212**	P	**P**	**17 48 45.3**	**-2.0**
MARNC	**Mare, Loyalty**	**7.75**	**204**	P	**P**	**17 48 47.9**	**-1.7**
YATNC	**Mamie plateau,**	**8.76**	**209**	P	**P**	**17 48 57.8**	**-1.0**
PINNC	**Pines Island,**	**9.00**	**204**	P	**P**	**17 49 01.1**	**+0.1**
OUENC	**Ouen Island, N**	**9.09**	**208**	P	**P**	**17 49 01.8**	**-0.1**
ONTNC	**Ouen Toro**	**9.18**	**210**	P	**P**	**17 49 03.2**	**+0.5**
RPZ	**Rata Peaks**	**29.21**	**181**	LR	LR	18 02 25.6	
	comp=Z,41nm,18.4s,baz=298,slow=33						
STKA	**Stephens Creek**	**32.34**	**232**	P	**P**	**17 52 31.2**	**+1.5**
	3.2nm,0.5s,baz=60,slow=7.2,SNR=9.9						
	3.2nm,0.5s						
WRA	**Warramunga Arr**	**35.82**	**256**	P	**P**	**17 52 58.2**	**-0.6**
	0.5nm,0.5s,baz=87,slow=8.9,SNR=8.2						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**36.57**	**250**	P	**P**	**17 53 04.9**	**0.0**
	1.5nm,0.3s,baz=77,slow=9.6,SNR=93						
	1.5nm,0.3s						
JOW	**Kunigami**	**58.63**	**314**	LR	LR	18 15 55.3	
	comp=Z,69nm,21.4s,baz=132,slow=31						

MAN 02 17:48:26.0, 14°.22N×120°.31E, h119km, mb4.1, ML2.8, MS2.5, 9C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	**Maragondon, Ca**	**0.40**	**83⇑**	*e*P	Pn	17 48 44.5	+1.3
MACP				*e*S	Sn	17 48 58.4	+2.2
LUBP	**Lubang**	**0.48**	**188⇑**	*i*P	Pn	17 48 46.1	+2.4
LUBP				*i*S	Sn	17 48 59.8	+2.7
TGY	**Tagaytay City**	**0.62**	**101**	*e*P	Pn	17 48 47.0	+2.4
LQP	**Lukban**	**1.20**	**95⇑**	*e*P	Pn	17 48 50.3	+0.1
LQP				*e*S	Sn	17 49 10.1	+1.7
PCPH	**Palayan**	**1.54**	**29⇓**	*e*P	Pn	17 48 53.6	-0.1
BOAC	**Boac**	**1.67**	**117⇑**	*e*P	Pn	17 48 56.0	+0.7
BOAC				*e*S	Sn	17 49 19.0	+1.3
BALP	**Baler**	**1.95**	**39⇑**	*e*P	Pn	17 48 59.6	+0.9
BALP				*e*S	Sn	17 49 26.4	+2.6
SMPP	**San Manuel, Pa**	**1.96**	**10⇑**	*e*P	Pn	17 48 59.4	+0.5
SMPP				*e*S	Sn	17 49 24.3	+0.3
BOLP	**Bolinao**	**2.19**	**350⇑**	*e*P	Pn	17 49 03.1	+1.4
BOLP				*e*S	Sn	17 49 30.2	+1.1
BUSP	**Coron**	**2.20**	**183⇑**	*e*P	Pn	17 49 02.7	+0.7
BUSP				*e*S	Sn	17 49 29.6	+0.1
SAMP	**Sagada Mountai**	**2.90**	**11⇑**	*e*P	Pn	17 49 11.6	+0.6
SAMP				*e*S	Sn	17 49 46.0	+0.3

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*SEA **02** 18:09:20.2±1.9, 47°.46N±0°.02×121°.96W±0°.03, h24km±6km, ML2.9/156, ML2.7/56(NEIC), Error ellipse: s-maj=3.2km s-min=2.6km az=57.0*
NEIC 02 18:09:20.1±1.9, 47°.46N±0°.02×121°.97W±0°.03, h24km±7km, Error ellipse: s-maj=3.3km s-min=2.5km az=64.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELW	**Echo Lake**	**0.08**	**62**		Pb	18 09 24.2	-0.4
ELW					Sb	18 09 27.5	-0.1
RATT	**Rattlesnake La**	**0.12**	**106**		Pb	18 09 24.5	-0.4
RATT					Sb	18 09 27.9	-0.2
RAW	**Raver**	**0.12**	**167**		Pb	18 09 24.8	-0.1
RAW					Sb	18 09 28.7	+0.6
PNLK	**Pine Lake Midd**	**0.13**	**342**		Pb	18 09 25.0	0.0
MPL	**Maple valley S**	**0.15**	**274**		Pb	18 09 25.0	-0.1
CDMR	**Cedar Moraine**	**0.15**	**104**		Pb	18 09 24.9	-0.3
CDMR					Sb	18 09 28.7	+0.1
KNEL	**Kent Elementar**	**0.21**	**248**		Pb	18 09 26.0	+0.2
KNEL					Sb	18 09 31.6	+1.9
SP2	**Seward Park 2**	**0.21**	**298**		Pb	18 09 25.9	+0.1
MARYW	**Marymoor Park**	**0.23**	**334**		Pb	18 09 26.4	+0.3
MARYW					Sb	18 09 31.9	+1.8
KIMB	**Kimball Elemen**	**0.25**	**298**		Pb	18 09 27.1	+0.6
D05A	**Enumclaw**	**0.27**	**183**	Pg	Pb	18 09 26.8	+0.2
D05A				Sg	Sb	18 09 30.6	-0.5
D05A				IAML		18 09 32.4	
	comp=E,2μm,0.5s						
KDKW	**Coast Env Seat**	**0.28**	**299**		Pb	18 09 27.5	+0.7
GSM	**Grass Mountain**	**0.28**	**155**		Pb	18 09 26.6	-0.4
EARN	**East Ridge Ele**	**0.29**	**351**		Pb	18 09 26.8	0.0
EARN					Sb	18 09 32.6	+1.2
NOWS	**NOAA--Sand Poi**	**0.30**	**320**		Pb	18 09 27.6	+0.5
SEA	**Seattle**	**0.30**	**311**		Pb	18 09 27.7	+0.6
TTW	**Tolt Reservoir**	**0.30**	**39**		Pb	18 09 26.6	-0.5
TTW					Sb	18 09 31.3	-0.7
C05A	**Tolt Reservoir**	**0.30**	**39**		Pb	18 09 26.5	-0.7
C05A					Sb	18 09 31.3	-0.7
SMNR	**Sumner High Sc**	**0.31**	**215**		Pb	18 09 27.4	+0.1
SMNR					Sn	18 09 33.9	-1.0
FINN	**Finn Hill Juni**	**0.32**	**326**		Pb	18 09 27.8	+0.4
FINN					Sn	18 09 34.4	-0.6
ALKI	**Alki Wastewate**	**0.32**	**291**		Pb	18 09 28.0	+0.6
LEOT	**Leota Junior H**	**0.33**	**343**		Pb	18 09 27.4	-0.1
NIHS	**Ingelmoor High**	**0.33**	**329**		Pb	18 09 27.9	+0.3
VVHS	**Vashon High Sc**	**0.33**	**264**		Pb	18 09 27.4	-0.2
VVHS					Sb	18 09 33.7	+1.1
TBPA	**Tacoma Substat**	**0.34**	**233**		Pb	18 09 27.7	+0.1
LAWT	**Lawton Element**	**0.35**	**305**		Pb	18 09 28.4	+0.6
PAYL	**Puyallup Schoo**	**0.35**	**221**		Sn	18 09 34.8	-1.1
HTW	**Haystack Looko**	**0.37**	**22**		Pb	18 09 27.5	-0.8
PCEP	**Pierce County**	**0.41**	**212**		Pb	18 09 28.6	-0.2
BABE	**Bainbridge Sch**	**0.41**	**291**		Pb	18 09 29.3	+0.5
EVGW	**Everett Gatewa**	**0.41**	**343**		Pb	18 09 28.6	-0.4
EVGW					Sb	18 09 35.6	+0.7
LYNC	**Lynnwood City**	**0.43**	**329**		Pb	18 09 28.9	-0.2
MBPA	**Monroe Substat**	**0.44**	**7**		Pb	18 09 28.7	-0.7
GHW	**Garrison Hill**	**0.47**	**206**		Pb	18 09 29.2	-0.5
PSNS	**PSNS Bremerton**	**0.47**	**283**		Pb	18 09 29.4	-0.4
KITP	**Kitsap County**	**0.50**	**296**		Sn	18 09 39.0	-0.4
B941	**Kapowsin**	**0.50**	**200**		Pb	18 09 29.6	-0.8
KINR	**Kitsap County**	**0.54**	**303**		Pb	18 09 30.6	-0.4
GMW	**Gold Mountain**	**0.56**	**280**		Pb	18 09 30.5	-0.8
GMW					Sb	18 09 38.9	0.0
FMW	**Mount Fremont**	**0.56**	**159**		Pb	18 09 30.9	-0.7
OBSR	**Observation Ro**	**0.57**	**169**		Pb	18 09 31.2	-0.4
GNW	**Green Mountain**	**0.59**	**281**		Pb	18 09 30.7	-1.1
GNW					Sb	18 09 39.1	-0.7
RCS	**Mount Rainier-**	**0.61**	**164**		Pb	18 09 31.8	-0.5
PANH	**Panhandle Gap,**	**0.64**	**159**		Pb	18 09 32.2	-0.6
RCM	**Mount Rainier-**	**0.64**	**165**		Pb	18 09 32.4	-0.6
SR41	**SR410 Landslid**	**0.64**	**152**		Pb	18 09 32.2	-0.7
SR41					Sb	18 09 41.2	-0.3
REMR	**Mount Rainier-**	**0.65**	**172**		Pb	18 09 32.2	-0.7
LON	**Longmire**	**0.72**	**171**		Pb	18 09 33.0	-1.0
LON				Sg	Sb	18 09 42.9	-0.6
LON	**Longmire**	**0.72**	**171**		Pb	18 09 33.3	-0.7
C04A	**Brinnon**	**0.72**	**291**		Pb	18 09 32.7	-1.4
B013	**Quilcene**	**0.73**	**300**		Pb	18 09 32.7	-1.4
B013	**Quilcene**	**0.73**	**300**		Pb	18 09 32.7	-1.4
HDW	**Hoodsport**	**0.76**	**285**		Pb	18 09 33.4	-1.3
WPW	**White Pass**	**0.81**	**159**		Pb	18 09 35.1	-0.6
TWW	**Teanaway**	**0.82**	**113**		Pb	18 09 35.8	+0.1
WRW	**Wenatchee Ridg**	**0.84**	**61**		Pb	18 09 35.5	-0.6
GPW	**Glacier Peak**	**0.87**	**40**		Pb	18 09 35.9	-0.8
LTY	**Liberty**	**0.91**	**102**		Pb	18 09 36.4	-0.8

B08A	**Colville Reser**	**1.99 62**	Pn	Pn	18 09 52.0	-0.2
HIYU	**Hiyu Mountain**	**2.03 177**		Pb	18 09 54.7	-1.6
F07A	**Phinny Hill Vi**	**2.10 137**		Pn	18 09 54.5	+0.7
KMOR	**Kings Mountain**	**2.10 210**		Pn	18 09 55.1	+1.2
WIW	**Wooded Island**	**2.11 118**		Pb	18 09 55.8	-1.8
D08A	**Wollman Farm,**	**2.12 100**		Pn	18 09 53.9	-0.1
D08A			IAML		18 10 20.5	
	comp=E,45nm,0.3s					
D08A			IAML		18 10 29.0	
	comp=N,49nm,0.3s					
HOOD	**Mount Hood Mea**	**2.15 174**		Pn	18 09 55.8	+1.2
TDH	**Tom, Dick, Har**	**2.17 177**		Pn	18 09 56.4	+1.5
E08A	**Dider Farm, El**	**2.22 115**		Pn	18 09 56.0	+0.7
E08A			IAML		18 10 31.2	
	comp=E,48nm,0.2s					
E08A			IAML		18 10 33.7	
	comp=N,38nm,0.7s					
SHB	**Sechelt**	**2.49 330**		Pn	18 10 00.5	+1.3
C09A	**Chrisman Ranch**	**2.52 81**		Pn	18 09 59.4	-0.2
B928	**Bamfield**	**2.53 304**		Pb	18 10 03.2	-1.5
WSLR	**Whistler**	**2.74 347**		Pb	18 10 05.8	-2.7
H04A	**Detroit Lake**	**2.78 183**		Pn	18 10 04.3	+1.2
H04A			IAML		18 10 45.9	
	comp=N,33nm,0.3s					
H04A			IAML		18 10 51.1	
	comp=E,30nm,0.4s					
E09A	**Wood Farm, Sta**	**2.78 108**		Pn	18 10 03.3	+0.2
E09A			IAML		18 10 53.0	
	comp=E,28nm,0.2s					
E09A			IAML		18 10 53.2	
	comp=N,31nm,0.4s					
OZB	**Mount Ozzard**	**2.79 304**		Pn	18 10 03.8	+0.4
OZB			IAML		18 10 56.0	
	comp=E,30nm,2.6s					
OZB			IAML		18 11 18.3	
	comp=N,34nm,3.1s					
G08A	**Pilot Rock**	**3.01 135**		Pn	18 10 06.4	+0.1
COR	**Corvallis**	**3.02 198**	Pn	Pn	18 10 06.6	+0.2
COR			IAML		18 10 40.8	
	comp=N,30nm,3.3s					
COR			IAML		18 11 29.4	
	comp=N,31nm,3.6s					
NEW	**Newport**	**3.36 74**		Pn	18 10 10.8	-0.3
NEW			IAML		18 11 07.3	
	comp=N,18nm,0.5s					
NEW			IAML		18 11 08.3	
	comp=N,12nm,0.4s					
MOON	**Moon Mountain**	**3.41 176**		Pb	18 10 21.8	+1.9
F10A	**Beach Ranch, E**	**3.58 113**		Pn	18 10 15.1	+0.8
PINE	**Pine Mountain**	**3.74 168**		Pn	18 10 18.3	+1.9
PINE			IAML		18 11 13.3	
	comp=E,13nm,3.8s					
PINE			IAML		18 11 14.1	
	comp=N,16nm,4.2s					
I07A	**Izee**	**3.79 152**	Pn	Pn	18 10 18.5	+1.4
I07A			IAML		18 11 32.9	
	comp=E,8.6nm,3.6s					
I07A			IAML		18 11 45.4	
	comp=N,9.3nm,4.3s					
HSO	**Harness Mounta**	**4.01 192**		Pn	18 10 21.8	+1.7
BMO	**Blue Mountains**	**4.16 127**		Pn	18 10 22.6	+0.4
BSMT	**Bassoo Peak**	**4.87 83**		Pn	18 10 34.9	+2.9
JTMT	**Jette**	**5.21 84**	Pn	Pn	18 10 35.5	-1.1
MSO	**Missoula**	**5.51 94**	Pn	Pn	18 10 40.3	-0.5
BCYI	**Bear Canyon**	**6.76 115**	Pn	Pn	18 10 60.0	+2.0
MCMT	**McKenzie Canyo**	**6.86 109**	Pn	Pn	18 11 01.6	+2.2

MAN 02 18:18:40.3, 17°.41N×120°.15E, h33km, mb4.2, ML3.0, MS2.7, 6C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAMP	**Sagada Mountai**	**0.79**	**115⇑**	*e*	P	Pn	18 18 55.2	0.0
SAMP				*e*	S	Sn	18 19 05.8	-0.1
BOLP	**Bolinao**	**1.05**	**192⇑**	*e*	P	Pn	18 18 59.3	+0.6
BOLP				*e*	S	Sn	18 19 11.7	-0.5
SMPP	**San Manuel, Pa**	**1.36**	**158⇑**	*e*	P	Pb	18 19 04.1	-1.1
SMPP				*e*	S	Sb	18 19 22.4	+0.1
PACPP	**Pamplona Cagay**	**1.55**	**48**	*e*	P	Pn	18 19 06.0	+0.4
PACPP				*i*	S	Sn	18 19 24.6	+0.1
CAUP	**Cauayan**	**1.67**	**106⇑**	*e*	P	Pb	18 19 11.6	+1.2
CAUP				*e*	S	Sb	18 19 39.4	+8.3
SGCP	**Gonzaga**	**1.99**	**65⇑**	*e*	P	Pn	18 19 13.6	+1.9
SGCP				*e*	S	Sb	18 19 39.9	-0.3
BALP	**Baler**	**2.15**	**140⇑**	*e*	P	Pb	18 19 19.9	+1.2
BALP				*e*	S	Sb	18 19 43.7	-1.3

TAP 02 18:19:02.7, 22°.85N×120°.93E, h8km±1km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.14**	**102**		P	Pg	18 19 07.1	+1.4
TWG	baz=102			*i*	S	Sg	18 19 09.3	+1.6
TWGBT	**Beinan**	**0.14**	**103**		P	Pg	18 19 07.0	+1.2
TWGBT	baz=102			*i*	S	Sg	18 19 09.3	+1.4
LONT	**Longtian**	**0.19**	**73**	*i*	P	Pg	18 19 07.7	+1.0
LONT	baz=73				S	Sg	18 19 10.4	+1.0
ECL	**Taimali**	**0.25**	**175**	*e*	S	Sb	18 19 12.9	-1.3
SSD	baz=172 **Sandimen**	**0.29**	**249**	*i*	P	Pg	18 19 09.4	+0.9
TSMG	baz=248 **Majia**	**0.30**	**241**	*e*	P	Pb	18 19 09.6	-0.7
MASBT	baz=241 **Mashibuluo**	**0.36**	**229**	*i*	P	Pb	18 19 10.9	-0.5
MASBT	baz=228				S	Sb	18 19 16.0	-1.3
EDH	baz=228 **Donghe**	**0.37**	**71**		P	Pb	18 19 11.1	-0.5
EDH	baz=70			*e*	S	Sb	18 19 17.6	+0.1
SCST	baz=70 **Cishan**	**0.40**	**275**	*e*	P	Pb	18 19 12.1	0.0
SCST	baz=275				S	Sb	18 19 18.1	-0.3
EAST	baz=275 **Anshuo**	**0.47**	**189**	*e*	P	Pb	18 19 13.6	+0.3
EAST	baz=188				S	Sb	18 19 20.5	+0.1
EAST	baz=188 **Anshuo**	**0.47**	**189**		P	Pb	18 19 13.6	+0.3
EAST	baz=332			*e*	S	Sb	18 19 20.3	-0.1
FULB	baz=332 **Fuli**	**0.48**	**44**	*e*	P	Pb	18 19 13.3	-0.2
FULB	baz=44			*e*	S	Sb	18 19 20.1	-0.8
SCZT	baz=44 **Fangliau**	**0.55**	**211**	*e*	P	Pb	18 19 14.5	-0.2
SCZT	baz=210			*e*	S	Sb	18 19 24.0	+1.2
SCZT	baz=210 **Fangliau**	**0.55**	**211**		P	Pb	18 19 14.8	+0.1
	baz=311							

TAP 02 18:19:04.2, 22°.05N×121°.11E, h30km±1km, ML1.4, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMST	**Manzhou Townsh**	**0.25**	**264**	*i*	P	Pb	18 19 11.1	+0.1
SMST	baz=263				S	Sb	18 19 16.0	+0.2
SLIU	baz=263 **Shizi**	**0.33**	**300**	*i*	P	Pb	18 19 12.5	+0.3
SLIU	baz=300				S	Sn	18 19 18.3	-0.4
HEN	baz=300 **Hengchun**	**0.34**	**263**		P	Pb	18 19 12.5	+0.2
HEN	baz=262				S	Sb	18 19 18.1	+0.3
TAWH	baz=262 **Dawu Township**	**0.35**	**325**		P	Pb	18 19 11.9	-0.5
TAWH	baz=332			*e*	S	Sb	18 19 17.7	-0.3
LYUB	baz=332 **Lan-yu**	**0.45**	**96**		P	Pb	18 19 13.4	-0.3
LYUB	baz=86				S	Sb	18 19 19.9	-0.4
	baz=86							

MAN 02 18:20:25.6, 17°.46N×120°.06E, h6km, mb4.6, ML3.5, MS3.4, 8C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.60**	**40⇑**	*i*	P	Pg	18 20 37.0	-0.1
SIPP				*e*	S	Sb	18 20 47.5	+0.5
SAMP	**Sagada Mountai**	**0.89**	**115⇑**	*e*	P	Pg	18 20 43.0	+0.3
SAMP				*e*	S	Sg	18 20 54.4	+0.1
BOLP	**Bolinao**	**1.08**	**187⇑**	*e*	P	Pg	18 20 46.1	-0.3
BOLP				*e*	S	Sn	18 21 02.3	-0.3
SMPP	**San Manuel, Pa**	**1.44**	**155⇑**	*e*	P	Pn	18 20 51.3	-0.9
SMPP				*e*	S	Sb	18 21 09.9	-1.3
PACPP	**Pamplona Cagay**	**1.58**	**51⇓**	*e*	P	Pn	18 20 53.0	-1.1
PACPP				*i*	S	Sn	18 21 12.6	-2.3
CAUP	**Cauayan**	**1.76**	**107⇑**	*e*	P	Pg	18 20 59.1	-0.3
CAUP				*e*	S	Sn	18 21 20.0	+0.6
SGCP	**Gonzaga**	**2.05**	**67⇑**	*e*	P	Pn	18 21 01.2	+0.6
SGCP				*e*	S	Sn	18 21 27.2	+0.8
PCPH	**Palayan**	**2.14**	**152⇑**	*e*	P	Pb	18 21 03.3	-1.3
PCPH				*e*	S	Sg	18 21 35.0	+0.7
BALP	**Baler**	**2.25**	**139⇑**	*e*	P	Pb	18 21 05.6	-1.0
BALP				*e*	S	Sg	18 21 38.5	+0.7

MAN 02 18:22:51.8, 17°.50N×120°.12E, h20km, mb4.2, ML3.0, MS2.7, 4C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.53**	**37⇓**	*e*	P	Pb	18 23 02.1	-0.2
SIPP				*e*	S	Sn	18 23 15.2	+2.6
SAMP	**Sagada Mountai**	**0.85**	**119⇑**	*e*	P	Pb	18 23 07.9	-0.1
SAMP				*e*	S	Sn	18 23 21.1	+0.5
BOLP	**Bolinao**	**1.13**	**190⇑**	*e*	P	Pb	18 23 18.0	+5.4
BOLP				*e*	S	Sn	18 23 27.2	-0.2
SMPP	**San Manuel, Pa**	**1.45**	**158⇑**	*e*	P	Pn	18 23 16.9	0.0
SMPP				*e*	S	Sn	18 23 35.4	+0.2
PACPP	**Pamplona Cagay**	**1.51**	**51**	*e*	P	Pn	18 23 18.0	+0.3
PACPP				*i*	S	Sb	18 23 37.4	-0.4
SGCP	**Gonzaga**	**1.98**	**68⇑**	*e*	P	Pb	18 23 34.1	+7.1
SGCP				*e*	S	Sb	18 23 57.1	+5.9

MAN 02 18:34:09.8, 17°.49N×120°.18E, h26km, mb4.3, ML3.2, MS2.9, 7C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.51**	**31⇑**	*e*	P	Pb	18 34 18.5	-1.7
SIPP				*e*	S	Sn	18 34 32.1	+2.9
SAMP	**Sagada Mountai**	**0.80**	**120⇑**	*e*	P	Pb	18 34 24.6	-0.5
SAMP				*e*	S	Sn	18 34 37.4	+1.0
BOLP	**Bolinao**	**1.13**	**193⇑**	*e*	P	Pn	18 34 30.0	+0.2
BOLP				*e*	S	Sn	18 34 44.5	0.0
SMPP	**San Manuel, Pa**	**1.41**	**160⇑**	*e*	P	Pn	18 34 33.8	0.0
SMPP				*e*	S	Sn	18 34 51.7	+0.1
PACPP	**Pamplona Cagay**	**1.48**	**49⇓**	*i*	P	Pn	18 34 34.2	-0.5
PACPP				*i*	S	Sn	18 34 54.0	+0.8
CAUP	**Cauayan**	**1.66**	**109⇑**	*e*	P	Pb	18 34 40.8	+1.1
CAUP				*e*	S	Sb	18 35 06.9	+6.7
SGCP	**Gonzaga**	**1.93**	**67⇑**	*e*	P	Pb	18 34 43.0	-1.2
SGCP				*e*	S	Sn	18 35 03.4	-1.0
BALP	**Baler**	**2.19**	**142⇑**	*e*	P	Pb	18 34 47.8	-0.9
BALP				*e*	S	Sb	18 35 13.4	-2.0

IDC ***02*** *18:40:48.9±10.0, 12°.64S×166°.76E, h302km±123km, mb3.3/5, mbtmp4.0/6, Error ellipse: s-maj=100.7km s-min=28.5km az=158.0*
NOU ***02*** *18:41:27.3, 15°.85S×167°.16E, h0km, mb4.2/8, Vanuatu Islands*

ISC 02 18:40:48.5±1.3, 12°.6S±0°.1×166°.9E±0°.2, h300km, n13, σ1°.63/14, mb3.5/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**8.29**	**197**		P	**Pn**	**18 42 49.2**	**+3.6**
YATNC	**Mamie plateau,**	**9.41**	**180**		P	**Pn**	**18 42 58.3**	**-1.1**
DZM	**Mont Dzumac**	**9.43**	**182**		P	**Pn**	**18 43 00.2**	**+0.5**
	7.6nm,0.3s,baz=351,slow=18,SNR=66							
DZM					S	**S**	**18 44 45.2**	**-1.4**
	4.2nm,1.0s,baz=227,slow=19,SNR=2.4							
DZM	**Mont Dzumac**	**9.43**	**182**		P	**Pn**	**18 43 00.0**	**+0.3**
NOUC	**Port Laguerre**	**9.47**	**183**		P	**Pn**	**18 43 01.2**	**+1.2**
ONTNC	**Ouen Toro**	**9.66**	**182**		P	**Pn**	**18 43 04.4**	**+1.9**
OUENC	**Ouen Island, N**	**9.77**	**180**		P	**Pn**	**18 43 04.8**	**+1.1**
PINNC	**Pines Island,**	**9.97**	**177**		P	**Pn**	**18 43 07.8**	**+1.5**
CTA	**Charters Tower**	**21.13**	**247**		P	**P**	**18 45 09.7**	**-1.1**
	1.8nm,0.4s,baz=63,slow=11,SNR=2.2							
	1.8nm,0.4s							
WRA	**Warramunga Arr**	**32.04**	**253**		P	**P**	**18 46 46.4**	**-1.6**
	0.6nm,0.8s,baz=84,slow=9.2,SNR=3.0							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**33.13**	**246**		P	**P**	**18 46 56.9**	**-0.5**
	1.3nm,0.7s,baz=69,slow=10,SNR=20							
	1.3nm,0.7s							
ILAR	**Eielson Array**	**84.63**	**18**		P	**P**	**18 52 48.4**	**+0.1**
	0.4nm,0.5s,baz=224,slow=5.0,SNR=5.9							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**95.41**	**317**		P	**P**	**18 53 39.6**	**+0.5**
	0.6nm,0.5s,baz=84,slow=5.9,SNR=7.5							
	0.6nm,0.5s							

TAP ***02*** *18:51:06.0, 24°.77N×121°.93E, h85km, ML3.5, B*
JMA ***02*** *18:51:06.2±0.1, 24°.8N±0°.4×121°.9E±0°.4, h80km±1km, MV2.4/10, TAIWAN REGION*

ISC 02 18:51:05.9±1.3, 24°.80N±0°.03×121°.95E±0°.02, h85km±6km, n121, σ0°.88/217, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGS		**0.05**	**340**		P	**Pn**	**18 51 18.3**	**+0.3**
EGS	baz=26				S	**Sn**	**18 51 27.2**	**+0.3**
NTC	**Toucheng**	**0.12**	**298**	*e*	P	**Pn**	**18 51 18.2**	**0.0**
NTC	baz=322			*e*	S	**Sn**	**18 51 26.6**	**-0.6**
ILA	**Ilan**	**0.19**	**261**	*i*	P	**Pn**	**18 51 18.8**	**+0.5**
ILA	baz=266			*i*	S	**Sn**	**18 51 28.2**	**+0.8**
TWC	**Suao**	**0.21**	**207**	*i*	P	**Pn**	**18 51 18.7**	**+0.3**
TWC	baz=199			*i*	S	**Sn**	**18 51 27.7**	**+0.1**
TIPB	**Shuangxi**	**0.21**	**327**	*i*	P	**Pn**	**18 51 18.5**	**0.0**
TIPB	baz=336			*i*	S	**Sn**	**18 51 27.1**	**-0.6**
TWB1	**Santiao Chiao**	**0.21**	**9**	*e*	P	**Pn**	**18 51 18.5**	**+0.1**
TWB1	baz=21				S	**Sn**	**18 51 27.3**	**-0.3**
TWE	**Neicheng**	**0.27**	**254**	*i*	P	**Pn**	**18 51 19.1**	**+0.5**
TWE	baz=256				S	**Sn**	**18 51 28.4**	**+0.3**
SXI1	**Grass Mountain**	**0.30**	**347**	*e*	P	**Pn**	**18 51 18.8**	**-0.2**
SXI1	baz=345			*e*	S	**Sn**	**18 51 28.0**	**-0.6**
NWF	**Wu-fen Shan**	**0.32**	**331**		P	**Pn**	**18 51 19.1**	**0.0**
NWF	baz=341				S	**Sn**	**18 51 28.4**	**-0.3**
WFSB	**Wu-fen Shan**	**0.32**	**331**	*i*	P	**Pn**	**18 51 19.1**	**+0.1**
WFSB	baz=341			*i*	S	**Sn**	**18 51 28.4**	**-0.2**
FUSB	**Fushanzhiwuyua**	**0.33**	**264**		P	**Pn**	**18 51 19.4**	**+0.3**
FUSB	baz=275			*e*	S	**Sn**	**18 51 28.5**	**-0.4**
TWA	**Mucha**	**0.38**	**299**		P	**Pn**	**18 51 19.4**	**+0.1**
TWA	baz=308				S	**Sn**	**18 51 28.9**	**-0.4**
ENTT	**Nioudou**	**0.38**	**246**	*i*	P	**Pn**	**18 51 19.0**	**-0.3**
ENTT	baz=254				S	**Sn**	**18 51 29.5**	**+0.2**
TNOU	**National Taiwa**	**0.39**	**335**	*i*	P	**Pn**	**18 51 19.3**	**0.0**
TNOU	baz=340			*i*	S	**Sn**	**18 51 29.0**	**-0.3**
NHDH	**Xindian Distri**	**0.42**	**293**	*i*	P	**Pn**	**18 51 19.9**	**+0.3**
NHDH	baz=301			*i*	S	**Sn**	**18 51 29.8**	**+0.1**
NHY	**Taipei**	**0.42**	**305**	*e*	P	**Pn**	**18 51 20.8**	**+1.2**
TATO	baz=316 **Taipei**	**0.46**	**293**		P	**Pn**	**18 51 19.9**	**0.0**
TATO	baz=303				S	**Sn**	**18 51 29.7**	**-0.5**
LATG	baz=303 **Datong**	**0.47**	**236**	*i*	P	**Pn**	**18 51 20.8**	**+0.7**
LATG	baz=245			*i*	S	**Sn**	**18 51 31.5**	**+0.9**
TAP	**Taipei**	**0.47**	**301**		P	**Pn**	**18 51 20.1**	**+0.1**
TAP	baz=311				S	**Sn**	**18 51 30.4**	**+0.1**
YM01	**YM01**	**0.49**	**315**	*i*	P	**Pn**	**18 51 20.2**	**+0.1**
YM01	baz=322				S	**Sn**	**18 51 30.3**	**-0.5**
BACT	**New Taipei Cit**	**0.50**	**294**	*e*	P	**Pn**	**18 51 20.7**	**+0.5**
BACT	baz=300			*e*	S	**Sn**	**18 51 32.1**	**+1.3**
YM08	**YM08**	**0.51**	**320**	*e*	P	**Pn**	**18 51 20.2**	**-0.2**
YM08	baz=327			*e*	S	**Sn**	**18 51 30.1**	**-0.9**
YHNB	**Yeheng**	**0.54**	**257**		P	**Pn**	**18 51 20.8**	**+0.2**
YHNB	baz=258				S	**Sn**	**18 51 31.1**	**-0.4**
ANP	**Anpu**	**0.55**	**315**		P	**Pn**	**18 51 20.5**	**-0.2**
ANP	baz=324				S	**Sn**	**18 51 31.0**	**-0.7**
NSK	**Sanguang**	**0.55**	**258**		P	**Pn**	**18 51 19.8**	**-0.9**
NSK	baz=259				S	**Sn**	**18 51 30.4**	**-1.4**
TWY	**Chenhua**	**0.57**	**326**		P	**Pn**	**18 51 21.1**	**+0.2**
TWY	baz=335			*e*	S	**Sn**	**18 51 32.3**	**+0.3**
NTST	**Danshui**	**0.58**	**309**		P	**Pn**	**18 51 21.2**	**+0.3**
NTST	baz=317				S	**Sn**	**18 51 32.3**	**+0.2**
NTY	**Taoyuan**	**0.63**	**289**		P	**Pn**	**18 51 21.8**	**+0.5**
NTY	baz=300			*e*	S	**Sn**	**18 51 33.8**	**+1.0**
NACB	**Ninganchiao**	**0.70**	**208**		P	**Pn**	**18 51 21.8**	**-0.3**
NACB	baz=216			*e*	S	**Sn**	**18 51 33.4**	**-0.7**
ETL	**Fush Village**	**0.70**	**205**		P	**Pn**	**18 51 22.2**	**+0.1**
ETL	baz=215			*e*	S	**Sn**	**18 51 33.8**	**-0.3**
NCU	**National Centr**	**0.71**	**284**		P	**Pn**	**18 51 22.4**	**+0.3**
NCU	baz=278			*e*	S	**Sn**	**18 51 35.1**	**+0.8**
NFF	**Wufeng Townshi**	**0.78**	**258**	*e*	P	**Pn**	**18 51 21.9**	**-1.0**
NFF	baz=267			*e*	S	**Sn**	**18 51 34.1**	**-1.4**
TWD	**Chiawan**	**0.78**	**205**		P	**Pn**	**18 51 22.5**	**-0.4**
TWD	baz=212			*e*	S	**Sn**	**18 51 34.7**	**-0.8**
NJD	**Zhudong**	**0.79**	**266**	*i*	P	**Pn**	**18 51 23.4**	**+0.5**
NJD	baz=267			*i*	S	**Sn**	**18 51 36.1**	**+0.5**
FUSS	**Fushou**	**0.84**	**230**	*e*	P	**Pn**	**18 51 24.6**	**+0.7**
FUSS	baz=222				S	**Sn**	**18 51 37.3**	**+0.2**
NHW	**Xinwu Township**	**0.85**	**285**	*e*	P	**Pn**	**18 51 23.9**	**+0.4**
NHW	baz=286			*e*	S	**Sn**	**18 51 37.6**	**+0.8**
HSN1	**Hsinchu**	**0.85**	**269**	*e*	P	**Pn**	**18 51 24.0**	**+0.4**
HSN1	baz=270			*e*	S	**Sn**	**18 51 37.3**	**+0.5**
LIOB	**Emei**	**0.86**	**260**	*e*	P	**Pn**	**18 51 24.0**	**+0.2**
LIOB	baz=261			*e*	S	**Sn**	**18 51 37.0**	**-0.1**
HWA	**Hwalien**	**0.87**	**201**	*e*	P	**Pn**	**18 51 23.8**	**-0.1**
SBCB	baz=209 **Hsinchu**	**0.88**	**270**	*e*	P	**Pn**	**18 51 24.3**	**+0.4**
SBCB	baz=271				S	**Sn**	**18 51 37.2**	**-0.2**
NSTT	**Nanjuang**	**0.88**	**259**		P	**Pn**	**18 51 24.1**	**+0.1**
NSTT	baz=260			*e*	S	**Sn**	**18 51 37.0**	**-0.4**
TWT	**Tachien**	**0.89**	**233**		P	**Pn**	**18 51 25.3**	**+1.1**
TWT	baz=226			*e*	S	**Sn**	**18 51 39.0**	**+1.1**
HSN	**Hsinchu**	**0.89**	**271**	*e*	P	**Pn**	**18 51 24.0**	**0.0**
HSN	baz=265			*e*	S	**Sn**	**18 51 37.3**	**-0.3**
WHF	**Hehuan Shan**	**0.90**	**224**		P	**Pn**	**18 51 24.9**	**+0.3**
WHF	baz=216				S	**Sn**	**18 51 38.5**	**0.0**
TDCB	**Techi**	**0.90**	**233**	*e*	P	**Pn**	**18 51 25.2**	**+0.9**
TDCB	baz=227			*e*	S	**Sn**	**18 51 38.6**	**+0.5**
ETM	**Tongmen**	**0.93**	**207**		P	**Pn**	**18 51 23.7**	**-0.8**
ETM	baz=205			*e*	S	**Sn**	**18 51 38.5**	**+0.2**
JYNG	**Yonagunijimaku**	**0.97**	**111**		P	**Pn**	**18 51 25.1**	**+0.2**
JYNG					S	**Sn**	**18 51 39.2**	**+0.1**
TEYL	**Yanliau Villag**	**0.98**	**199**	*e*	P	**Pn**	**18 51 25.1**	**+0.1**
NJN	baz=188 **Zhunan**	**0.99**	**264**	*e*	P	**Pn**	**18 51 25.7**	**+0.5**
NJN	baz=260			*e*	S	**Sn**	**18 51 39.8**	**+0.2**
CHGB	**Renai**	**1.02**	**224**		P	**Pn**	**18 51 26.4**	**+0.7**
CHGB	baz=216			*e*	S	**Sn**	**18 51 40.7**	**+0.1**
YOJ	**Yonaguni jima**	**1.02**	**109**		P	**Pn**	**18 51 25.8**	**+0.2**
YOJ	baz=107			*e*	S	**Sn**	**18 51 40.2**	**0.0**
YOJ	**Yonaguni jima**	**1.02**	**109**		P	**Pn**	**18 51 25.8**	**+0.2**
YOJ					S	**Sn**	**18 51 40.0**	**-0.2**
WHP	**Taichung City**	**1.05**	**241**		P	**Pn**	**18 51 26.8**	**+0.8**
WHP	baz=241			*e*	S	**Sn**	**18 51 41.7**	**+0.6**
ESL	**Shilin**	**1.09**	**206**	*e*	P	**Pn**	**18 51 25.2**	**-1.2**
ESL	baz=204			*e*	S	**Sn**	**18 51 40.0**	**-1.6**
NMLH	**Miaoli**	**1.09**	**257**	*e*	P	**Pn**	**18 51 26.4**	**+0.1**
NMLH	baz=257			*e*	S	**Sn**	**18 51 41.3**	**-0.3**
OWD	**Renai**	**1.10**	**220**	*e*	P	**Pn**	**18 51 27.0**	**+0.4**
OWD	baz=214			*e*	S	**Sn**	**18 51 41.7**	**-0.4**
WUSB	**Renai**	**1.10**	**224**		P	**Pn**	**18 51 27.4**	**+0.7**

	baz=217					
WUSB			eS	Sn	18 51 42.4	+0.2
	baz=217					
NSY	**Sanyi**	**1.15 251**	eP	Pn	18 51 27.6	+0.5
	baz=251					
NSY			eS	Sn	18 51 43.2	+0.3
	baz=251					
WCS	**Beigang Elemen**	**1.20 232**	eP	Pn	18 51 27.3	-0.4
	baz=240					
WCS			eS	Sn	18 51 44.2	+0.2
	baz=240					
DPDB	**Guoxing**	**1.20 231**	eP	Pn	18 51 28.3	+0.5
	baz=241					
EGFH	**Guangfu**	**1.22 203**	eP	Pn	18 51 27.8	-0.2
	baz=206					
WDJ	**Dajia District**	**1.27 250**	eP	Pn	18 51 29.1	+0.4
	baz=242					
WDJ			eS	Sn	18 51 45.8	+0.1
	baz=242					
SMLT	**Sun Moon Lake**	**1.32 227**	eP	Pn	18 51 29.6	+0.2
	baz=234					
SMLT			eS	Sn	18 51 48.3	+1.4
	baz=234					
TCU	**Taichung**	**1.33 241**	eP	Pn	18 51 29.7	+0.4
	baz=240					
TCU			eS	Sn	18 51 46.2	-0.7
	baz=240					
TYC	**Yuchr**	**1.34 229**	P	Pn	18 51 29.3	-0.1
	baz=235					
TYC			eS	Sn	18 51 47.9	+0.8
	baz=235					
SSLB	**Suanglung**	**1.35 222**	P	Pn	18 51 30.3	+0.6
	baz=232					
SSLB			S	Sn	18 51 48.3	+0.8
	baz=232					
WWF	**Wufeng**	**1.37 237**	eP	Pn	18 51 29.4	-0.4
	baz=244					
WWF			eS	Sn	18 51 47.6	-0.2
	baz=244					
HGSD	**Ruisui**	**1.39 200**	eP	Pn	18 51 29.9	-0.1
	baz=206					
HGSD			eS	Sn	18 51 48.5	+0.3
	baz=206					
EHY	**Hungye**	**1.41 204**	eP	Pn	18 51 29.7	-0.6
	baz=202					
WCHH	**Zhanghua**	**1.46 241**	eS	Sn	18 51 50.2	+0.5
	baz=240					
WNT1	**Nantou City**	**1.46 233**	eP	Pn	18 51 31.7	+0.7
	baz=241					
WNT1			eS	Sn	18 51 50.5	+0.7
	baz=241					
WNT	**Mingjian**	**1.47 232**	eP	Pn	18 51 32.0	+0.9
	baz=241					
WNT			eS	Sn	18 51 51.1	+1.0
	baz=241					
WJS	**Zhushan**	**1.48 229**	eP	Pn	18 51 31.2	0.0
	baz=238					
WJS			eS	Sn	18 51 51.2	+0.9
	baz=238					
WYL	**Yuanlin Townsh**	**1.50 237**	P	Pn	18 51 32.0	+0.5
	baz=245					
WYL			eS	Sn	18 51 51.5	+0.7
	baz=245					
YULB	**Yu-li**	**1.52 203**	eP	Pn	18 51 31.1	-0.7
	baz=194					
YULB			eS	Sn	18 51 49.9	-1.4
	baz=194					
EYUL	**Yuli**	**1.55 202**	eP	Pn	18 51 32.8	+0.6
	baz=205					
TWF1	**Yuli**	**1.56 203**	eP	Pn	18 51 32.5	+0.2
	baz=205					
YUS	**Yu-Shan**	**1.59 215**	eP	Pn	18 51 33.9	+0.8
	baz=207					
YUS			eS	Sn	18 51 55.1	+1.5
	baz=207					
ALS	**Alishan**	**1.65 220**	eP	Pn	18 51 34.6	+0.9
	baz=227					
ALS			eS	Sn	18 51 56.5	+1.7
	baz=227					
WGK	**Gukeng**	**1.68 229**	P	Pn	18 51 34.3	+0.5
	baz=237					
WGK			eS	Sn	18 51 55.8	+0.9
	baz=237					
IRIF	**Iriomote-Funau**	**1.68 105**	P	Pn	18 51 33.9	+0.1
IRIF			eS	Sn	18 51 54.3	-0.7
WRL	**Guolierlin Hig**	**1.69 239**	eP	Pn	18 51 32.6	-1.3
	baz=237					
WRL			eS	Sn	18 51 54.2	-0.9
	baz=237					
WDLH	**Douliu**	**1.70 230**	eP	Pn	18 51 34.6	+0.6
	baz=238					
WDLH			eS	Sn	18 51 56.5	+1.2
	baz=238					
FULB	**Fuli**	**1.70 201**	eP	Pn	18 51 35.5	+1.4
	baz=205					
FULB			eS	Sn	18 51 56.6	+1.1
	baz=205					
CHKT	**Chengkung**	**1.77 198**	eP	Pn	18 51 33.9	-1.1
	baz=195					
CHKT			eS	Sn	18 51 54.8	-2.2
	baz=195					
EHD	**Haiduan**	**1.78 203**	eP	Pn	18 51 34.3	-0.8
	baz=201					
EHD			eS	Sn	18 51 54.9	-2.3
	baz=201					
WTCT	**Ta-ch'eng**	**1.78 239**	eS	Sn	18 51 57.2	-0.1
	baz=238					
WCKO	**Fanlu**	**1.83 223**	eP	Pn	18 51 35.7	0.0
	baz=221					
WCKO			eS	Sn	18 51 58.8	+0.4
	baz=221					
CHY	**Chiayi**	**1.90 228**	eP	Pn	18 51 36.3	-0.4
	baz=235					
CHY			eS	Sn	18 52 00.8	+0.7
	baz=235					
EDH	**Donghe**	**1.91 198**	eP	Pn	18 51 36.3	-0.5
	baz=196					
EDH			eS	Sn	18 51 58.7	-1.5
	baz=196					
TPUB	**Ta-pu**	**1.92 219**	eP	Pn	18 51 37.7	+0.7
	baz=217					
TPUB			eS	Sn	18 52 02.9	+2.4
	baz=217					
JKRS	**Kuro-shima**	**1.96 106**	P	Pn	18 51 38.3	+0.9
JKRS			S	Sn	18 52 01.2	-0.1
WSF	**Szhu**	**1.96 234**	eP	Pn	18 51 37.5	+0.2
	baz=233					
WSF			eS	Sn	18 52 01.8	+0.4
	baz=233					
WTP	**Ta-pu**	**1.97 219**	eP	Pn	18 51 38.4	+0.8
	baz=227					
WTP			eS	Sn	18 52 03.2	+1.4
	baz=227					
WSL	**Shuilin Townsh**	**2.02 232**	eP	Pn	18 51 36.5	-1.7
	baz=237					
WSL			eS	Sn	18 52 02.5	-0.4
	baz=237					
LONT	**Longtian**	**2.03 202**	eP	Pn	18 51 38.8	+0.4
	baz=190					
LONT			eS	Sn	18 52 02.4	-0.6
	baz=190					
TWK	**Hsinying**	**2.03 222**	eP	Pn	18 51 39.1	+0.7
	baz=219					
TWK			eS	Sn	18 52 06.4	+3.3
	baz=219					
JIJ	**Ishigaki jima**	**2.04 102**	P	Pn	18 51 39.0	+0.5
JIJ			S	Sn	18 52 02.7	-0.7
CHN1	**Nanshi**	**2.06 219**	eP	Pn	18 51 39.5	+0.7
	baz=217					
CHN1			eS	Sn	18 52 04.9	+0.9
	baz=217					
SGST	**Jiashian**	**2.12 217**	eS	Sn	18 52 06.0	+0.8
	baz=224					
TWG	**Pinlang**	**2.12 202**	eP	Pn	18 51 40.0	+0.3
	baz=192					
TWG			eS	Sn	18 52 04.4	-1.0
	baz=192					
TWGBT	**Beinan**	**2.12 202**	eP	Pn	18 51 40.0	+0.3
	baz=192					
TWGBT			eS	Sn	18 52 03.9	-1.5
	baz=192					
JISG	**Ishigakijimahi**	**2.16 95**	P	Pn	18 51 40.8	+0.8
LDUT	**Ludao**	**2.16 192**	eP	Pn	18 51 38.8	-1.3
	baz=185					
LDUT			eS	Sn	18 52 03.8	-2.4
	baz=185					
MATB	**Ma-tsu**	**2.26 307**	eP	Pn	18 51 41.0	-0.4
	baz=308					
VWUC	**VWUC**	**2.28 275**	eP	Pn	18 51 40.8	-0.9
	baz=274					
SCST	**Cishan**	**2.32 215**	eP	Pn	18 51 43.8	+1.5
	baz=223					
TSCK	**Chigu Township**	**2.37 226**	eP	Pn	18 51 42.5	-0.3
	baz=224					
TSCK			eS	Sn	18 52 09.9	-1.3
	baz=224					
SSD	**Sandimen**	**2.37 211**	eP	Pn	18 51 44.4	+1.5
	baz=220					
TSMG	**Majia**	**2.40 210**	eP	Pn	18 51 44.5	+1.2
	baz=207					
TSMG			eS	Sn	18 52 14.8	+2.8
	baz=207					
MASBT	**Mashibuluo**	**2.49 209**	eP	Pn	18 51 45.7	+1.2
	baz=206					
MASBT			eS	Sn	18 52 16.6	+2.5
	baz=206					
JTJ	**Tarama**	**2.51 93**	S	Sn	18 52 16.3	+1.8
PNG	**Penghu**	**2.51 241**	eP	Pn	18 51 43.9	-0.8
	baz=238					
PHUB	**P'eng-hu**	**2.52 240**	eP	Pn	18 51 43.5	-1.4
	baz=238					
PHUB			eS	Sn	18 52 12.1	-2.7
	baz=238					
EAST	**Anshuo**	**2.61 203**	eP	Pn	18 51 48.4	+2.3
	baz=192					
TAWH	**Dawu Township**	**2.63 202**	eS	Sn	18 52 15.7	-1.9
	baz=192					
SCZT	**Fangliau**	**2.70 207**	eP	Pn	18 51 48.5	+1.1
	baz=216					
LAY	**Lan-yu**	**2.77 188**	eP	Pn	18 51 47.4	-0.9
	baz=185					
LYUB	**Lan-yu**	**2.80 187**	eP	Pn	18 51 48.0	-0.7
	baz=185					
KNMB	**Chin-men Tao**	**3.26 265**	P	Pn	18 51 54.0	-0.9
	baz=261					
DSXP	**Dongshan**	**4.27 256**	eP	Pn	18 52 08.1	-0.5
	baz=252					

MAN 02 18:55:14.0, 6°.69N×126°.34E, h17km, mb4.5, ML3.4, MS3.2, 7C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.27**	**343⇑**	eP	Pb	18 55 21.8	+1.3
MATI				eS	Sn	18 55 30.0	+1.0
DDMP	**Don Marcelino,**	**0.85**	**227⇑**	eP	Pb	18 55 29.1	-1.2
DDMP				eS	Sn	18 55 43.6	+0.3
KCP	**Kidapawan**	**1.28**	**285⇓**	iP	Pn	18 55 36.1	-1.1
KCP				i S	Sg	18 55 55.0	-0.4
GSPH	**General Santos**	**1.50**	**247⇓**	eP	Pn	18 55 36.5	-3.8
GSPH				eS	Sn	18 55 56.7	-2.9
BUKP	**Musuan**	**1.73**	**313**	eP	Pn	18 55 43.5	+0.1
BUKP				i S	Sb	18 56 07.7	+0.7
SKMP	**Bagumbayan, Su**	**1.79**	**265⇑**	eP	Pg	18 55 48.4	-0.1
SKMP				eS	Sb	18 56 07.5	-1.0
CTBH	**Cotabato--PC H**	**2.14**	**285⇑**	eP	Pn	18 55 48.8	-0.2
CGP	**Cagayan de Oro**	**2.40**	**317⇑**	eP	Pn	18 55 52.1	-0.4
CGP				eS	Sn	18 56 21.7	+0.2
GLSP	**General Luna,**	**3.09**	**356⇑**	eP	Pn	18 56 03.3	+1.2
GLSP				eS	Sn	18 56 39.9	+1.4
TABP	**Talibon, Bohol**	**3.92**	**330⇑**	iP	Pn	18 56 12.1	-1.4
TABP				i S	Sn	18 56 50.3	-8.8

IDC 02 19:18:56.1±2.0, 30°.17N×140°.77E, h0km, mb3.4/2, mbtmp3.4/5, ML2.8/3, Error ellipse: s-maj=114.9km s-min=20.1km az=78.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.06**	**344**	Pn	Pn	19 19 46.0	+0.2
	4.3nm,0.3s,baz=78,slow=21,SNR=1.6						
JHJ				Sn	Sn	19 20 23.4	+0.2
	2.5nm,0.3s,baz=253,slow=21,SNR=1.8						
	12nm,0.4s						
JCJ	**Chichijima**	**3.30**	**158**	Pn	Pn	19 19 49.0	-0.1
	3.5nm,0.3s,baz=289,slow=22,SNR=6.5						
	76nm,1.0s						
MJAR	**Matsushiro Arr**	**6.71**	**342**	Pn	Pn	19 20 35.4	-0.5
	baz=161,slow=11,SNR=4.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**50.20**	**188**	P	P	19 27 53.6	-0.2
	0.5nm,0.6s,baz=6.3,slow=7.7,SNR=11						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**53.93**	**188**	P	P	19 28 21.6	0.0
	0.3nm,0.7s,baz=7.0,slow=6.3,SNR=4.1						
	0.3nm,0.7s						

*KRNET **02** 19:25:11.0±0.1, 42°.41N×79°.64E, mb2.8*
*NNC **02** 19:25:12.9±1.8, 42°.57N×79°.59E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=11.4km s-min=6.2km az=132.0*
*SOME **02** 19:25:12.8, 42°.45N×79°.57E, h15km*
ISC 02 19:25:11.1±2.4, 42°.51N±0°.07×79°.73E±0°.08, h2km±12km, n21, σ1°.07/38, 14C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.68**	**343**	eP	**Pg**	**19 25 25.6**	**+1.5**
	4.1nm,0.1s						
SHLS				eS	**Sb**	**19 25 34.4**	**-1.3**
	77nm,0.1s						
SHLS	**Shalkode**	**0.68**	**343**	P	**Pg**	**19 25 25.6**	**+1.5**
	3.8nm,0.1s						
SHLS				S	**Sb**	**19 25 34.4**	**-1.3**
	50nm,0.2s						
PDGK	**Podgornoye**	**0.84**	**348**	⇑P	**Pg**	**19 25 27.9**	**+0.7**
	1.2nm,0.6s						
PDGK				⇑S	**Sg**	**19 25 38.3**	**+0.2**
	9.1nm,0.7s						
SATY	**Saty**	**1.12**	**300**	P	**Pg**	**19 25 33.0**	**+0.4**
	4.4nm,0.1s						
SATY				S	**Sb**	**19 25 46.9**	**-1.6**
KPKS	**Kokpek**	**1.23**	**322**	eP	**Pg**	**19 25 34.5**	**-0.2**
	2.7nm,0.1s						
KPKS				eS	**Sg**	**19 25 49.6**	**-1.0**
	7.0nm,0.1s						
KPKS	**Kokpek**	**1.23**	**322**	P	**Pg**	**19 25 34.5**	**-0.2**
	2.7nm,0.1s						
KPKS				S	**Sg**	**19 25 49.6**	**-1.0**
	7.0nm,0.2s						
ANVS	**Anan'yevo**	**1.55**	**281⇑**	eP	**Pn**	**19 25 39.3**	**-0.6**
	baz=85						
ANVS			⇑	iS	**Sg**	**19 25 59.9**	**-1.0**
	baz=85						
TARG	**Taragay, Kyrgy**	**1.63**	**242⇑**	eP	**Pn**	**19 25 39.7**	**-1.5**
	baz=44						
TARG			⇑	eS	**Sn**	**19 26 00.8**	**-2.2**
	baz=44						
BLB	**Baldybastay**	**1.83**	**330**	eP	**Pb**	**19 25 45.5**	**+0.1**
	5.6nm,0.1s						
BLB				eS	**Sg**	**19 26 08.9**	**-1.2**
	10nm,0.1s						
BLB	**Baldybastay**	**1.83**	**330**	P	**Pb**	**19 25 45.5**	**+0.1**
	5.9nm,0.2s						
BLB				S	**Sg**	**19 26 08.9**	**-1.2**
KOTS	**Kotyrbulak**	**2.06**	**292**	eP	**Pb**	**19 25 50.0**	**+0.7**
	1.4nm,0.1s						
KOTS				eS	**Sg**	**19 26 16.6**	**-0.7**
	30nm,0.3s						
KOTS	**Kotyrbulak**	**2.06**	**292**	Pg	**Pb**	**19 25 50.1**	**+0.7**
	1.4nm,0.2s						
KOTS				Lg	Lg	19 26 16.5	
	13nm,0.6s						
MDOK	**Medeo**	**2.08**	**289**	⇓Pg	**Pn**	**19 25 47.7**	**+0.5**
	0.8nm,0.2s						
MDOK				⇓Lg	Lg	19 26 14.1	
	0.8nm,0.2s						
ARXS	**Arharly**	**2.20**	**321**	eP	**Pb**	**19 25 51.0**	**-0.7**
	1.5nm,0.3s						
ARXS				eS	**Sb**	**19 26 18.3**	**-1.2**
	5.8nm,0.3s						
CHKK	**Chushkaly**	**2.42**	**305**	eP	**Pb**	**19 25 55.4**	**+0.1**
	0.6nm,0.0s						
CHKK				eS	**Sb**	**19 26 25.5**	**-0.2**
	5.7nm,0.1s						
CHKK	**Chushkaly**	**2.42**	**305**	Pg	**Pb**	**19 25 55.4**	**+0.1**
CHKK				Lg	Lg	19 26 25.5	
	5.7nm,0.3s						
ULHL	**Ulahol**	**2.60**	**265⇑**	eP	**Pn**	**19 25 55.4**	**+1.0**
	baz=67						
ULHL			⇑	eS	**Sn**	**19 26 27.7**	**+1.0**
	baz=67						
BOOM	**Boomskoye usch**	**2.81**	**271⇑**	eP	**Pn**	**19 25 58.2**	**+1.0**
	baz=73						
BOOM			⇑	iS	**Sn**	**19 26 32.6**	**+0.9**
	baz=73						
DGS	**Degeres**	**3.00**	**286**	eP	**Pb**	**19 26 06.0**	**+0.7**
	3.2nm,0.6s						
DGS				eS	**Sb**	**19 26 43.7**	**+1.1**
	4.0nm,0.3s						
TKM2	**Tokmak 2**	**3.08**	**279⇑**	eP	**Pn**	**19 26 02.3**	**+1.4**
	baz=81						
TKM2			⇑	iS	**Sn**	**19 26 39.7**	**+1.3**
	baz=81						
TKM2	**Tokmak 2**	**3.08**	**279**	⇑Pg	**Pn**	**19 26 02.1**	**+1.2**
	2.9nm,1.1s						
TKM2			⇑	Lg	Lg	19 26 44.7	
	3.8nm,0.8s						

*IDC **02** 19:32:55.9±1.3, 8°.30S×124°.71E, h0km, mb3.8/4, mbtmp4.0/8, ML4.1/4, Error ellipse: s-maj=50.0km s-min=20.3km az=75.0*
ISC 02 19:32:59.2±1.0, 8°.49S±0°.08×124°.4E±0°.1, h20km, n8, σ0°.96/9, mb3.9/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.86**	**204**	Pn	**Pb**	**19 33 33.8**	**+1.2**
	142nm,0.3s,baz=26,slow=4.1,SNR=317						
BATI				Sn	**Sn**	**19 33 51.9**	**-1.1**
	315nm,0.3s,baz=119,slow=23,SNR=19						
	404nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.62**	**173**	Pn	**Pn**	**19 35 16.0**	**-0.6**
	1.2nm,0.3s,baz=359,slow=9.5,SNR=68						
FITZ				Sn	Sn	19 36 51.8	-12
	5.3nm,0.3s,baz=242,slow=19,SNR=16						
	3.3nm,0.3s						
WRA	**Warramunga Arr**	**14.88**	**141**	Pn	**Pn**	**19 36 29.0**	**+0.4**
	0.9nm,0.3s,baz=316,slow=15,SNR=50						
WRA				Sn	Sn	19 39 00.9	-12
	1.3nm,0.3s,baz=318,slow=24,SNR=12						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**17.61**	**150**	P	**P**	**19 37 04.2**	**-0.2**
	0.4nm,0.3s,baz=328,slow=12,SNR=34						
ASAR				S	Sn	19 40 05.9	-13
	1.2nm,0.6s,baz=317,slow=22,SNR=8.2						
	3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.74**	**317**	P	**P**	**19 40 06.3**	**+0.9**
	0.6nm,0.8s,baz=140,slow=7.0,SNR=4.3						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**66.59**	**330**	P	**P**	**19 43 48.3**	**+0.2**
	1.1nm,0.8s,baz=152,slow=6.6,SNR=4.6						
	1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**70.61**	**336**	P	**P**	**19 44 11.9**	**-1.1**
	0.6nm,0.6s,baz=134,slow=6.2,SNR=4.1						
	0.6nm,0.6s						
AKTO	**Aktyubinsk**	**81.94**	**324**	P	**P**	**19 45 16.8**	**-0.6**
	0.7nm,0.5s,baz=100,slow=12,SNR=2.6						
	0.7nm,0.5s						

*IDC **02** 19:41:16.4±0.8, 42°.46N×19°.25E, h0km, mb4.0/7, mbtmp3.7/23, ML3.3/13, MS3.1/13, Error ellipse: s-maj=12.5km s-min=10.4km az=4.0*
*PRU **02** 19:41:16.8±0.0, 42°.46N×19°.23E, h0km, M4.2*
*MOS **02** 19:41:17.9±1.0, 42°.48N×19°.09E, h22km, mb4.3/6, Error ellipse: s-maj=5.9km s-min=3.6km az=96.1*
*PDG **02** 19:41:18.9±0.5, 42°.50N×19°.17E, h18km, MD3.8/11, ML3.8/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*NEIC **02** 19:41:19.3±1.9, 42°.49N±0°.05×19°.13E±0°.06, h16km±5km, mb4.2/8, ML3.9(PDG), Error ellipse: s-maj=7.4km s-min=6.6km az=180.0*
*LDG **02** 19:41:19.1±0.3, 42°.42N×19°.34E, h18km, Ml3.9/21, Error ellipse: s-maj=7.2km s-min=5.0km az=177.0*
*BEO **02** 19:41:19.5±0.3, 42°.53N×19°.25E, h13km±1km, ML3.5/19*
*RHSSO **02** 19:41:19.7±0.3, 42°.52N×19°.21E, h8km±1km, ML4.0/21*
*BGR **02** 19:41:21.2±0.7, 42°.44N×19°.16E, h10km, ML3.8/3, Error ellipse: s-maj=24.5km s-min=13.3km az=55.0*
*MCSM **02** 19:41:21.1±0.3, 42°.N±2°×1°.9E±°, h22km±2km, mb4.2*
ISC 02 19:41:18.7±0.7, 42°.49N±0°.01×19°.13E±0°.01, h19km±2km, n420, σ2°.11/571, mb4.0/14, MS3.4/6, 45C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.11**	**122**	⇑P	**Pg**	**19 41 22.6**	**0.0**
PDG				⇑S	**Sg**	**19 41 25.8**	**+0.7**
PDG	**Podgorica**	**0.11**	**122**		**Pg**	**19 41 22.2**	**-0.4**
PDG				Sg	**Sg**	**19 41 25.6**	**+0.4**
PDG	**Podgorica**	**0.11**	**122**	ePg	**Pg**	**19 41 22.6**	**0.0**
PDG				eSg	**Sg**	**19 41 25.8**	**+0.7**
TTG	**Podgorica**	**0.11**	**122**	P	**Pg**	**19 41 22.9**	**+0.4**
TTG				S	**Sg**	**19 41 26.0**	**+0.9**
TTG	**Podgorica**	**0.11**	**122**	⇓iPg	**Pg**	**19 41 22.4**	**-0.1**
TTG				i Sg	**Sg**	**19 41 25.3**	**+0.2**
CEME	**Cevo**	**0.17**	**291**		**Pg**	**19 41 24.4**	**+1.1**
CEME	**Cevo**	**0.17**	**291**	ePg	**Pg**	**19 41 23.6**	**+0.2**
CEME				i Sg	**Sg**	**19 41 27.5**	**+1.0**
BUM	**Brajici-Budva**	**0.26**	**224**		**Pg**	**19 41 25.8**	**+1.1**
BUM	**Brajici-Budva**	**0.26**	**224**	ePg	**Pb**	**19 41 25.1**	**+0.4**
BUM				i Sg	**Sg**	**19 41 30.3**	**+1.6**
DRME	**Dracevica, Mon**	**0.30**	**173**		**Pb**	**19 41 25.9**	**+0.3**
DRME	**Dracevica, Mon**	**0.30**	**173**	⇓iPg	**Pb**	**19 41 25.9**	**+0.3**
DRME				eSg	**Sb**	**19 41 31.4**	**+1.3**
DRME	**Dracevica, Mon**	**0.30**	**173**	ePg	**Pg**	**19 41 25.5**	**+0.1**
DRME				i Sg	**Sb**	**19 41 31.1**	**+1.0**
KOME	**Kolasin**	**0.46**	**38**		**Pg**	**19 41 27.9**	**-0.2**
KOME	**Kolasin**	**0.46**	**38**	⇑iPg	**Pg**	**19 41 27.4**	**-0.8**
KOME				i Sg	**Sg**	**19 41 34.6**	**+0.1**
HCY	**Herceg Novi**	**0.47**	**265**	⇓iPg	**Pb**	**19 41 29.2**	**+0.7**
HCY				eSg	**Sn**	**19 41 37.5**	**-0.9**
HCY	**Herceg Novi**	**0.47**	**265**	ePg	**Pg**	**19 41 28.7**	**+0.3**
HCY				i Sg	**Sb**	**19 41 37.0**	**+1.8**
ULC	**Ulcinj**	**0.53**	**171**		**Pb**	**19 41 29.2**	**-0.2**
ULC	**Ulcinj**	**0.53**	**171**	P	**Pb**	**19 41 29.2**	**-0.2**
ULC				S	**Sg**	**19 41 38.0**	**+1.5**
ULC	**Ulcinj**	**0.53**	**171**	⇑iPg	**Pb**	**19 41 29.3**	**-0.2**
ULC				i Sg	**Sg**	**19 41 38.2**	**+1.7**
BRY	**Bratogost**	**0.60**	**314**		**Pb**	**19 41 31.1**	**+0.4**
BRY	**Bratogost**	**0.60**	**314**	⇓iPg	**Pb**	**19 41 31.0**	**+0.4**
BRY				eSg	**Sg**	**19 41 40.5**	**+1.6**
BRY	**Bratogost**	**0.60**	**314**	P	**Pb**	**19 41 31.1**	**+0.4**
BRY	**Bratogost**	**0.60**	**314**	ePg	**Pb**	**19 41 30.7**	**0.0**
BRY				i Sg	**Sg**	**19 41 40.6**	**+1.6**
PVY	**Plav**	**0.62**	**80**		**Pb**	**19 41 30.2**	**-0.8**
PVY	**Plav**	**0.62**	**80**	ePg	**Pb**	**19 41 30.2**	**-0.8**
PVY				i Sg	**Sg**	**19 41 39.7**	**+0.2**
BEY	**Berane**	**0.68**	**55**		**Pb**	**19 41 31.6**	**-0.5**
IVA	**Berane**	**0.68**	**55**	⇑iPg	**Pb**	**19 41 31.2**	**-0.8**
IVA				i Sg	**Sg**	**19 41 41.7**	**+0.4**
UPM	**Unac-Piva**	**0.73**	**347**		**Pb**	**19 41 32.9**	**-0.2**
UPM	**Unac-Piva**	**0.73**	**347**	⇓iPg	**Pb**	**19 41 32.9**	**-0.2**
UPM				eSg	**Sb**	**19 41 43.1**	**+0.2**
UPM	**Unac-Piva**	**0.73**	**347**	ePg	**Pb**	**19 41 32.6**	**-0.5**
UPM				i Sg	**Sg**	**19 41 44.2**	**+1.1**
DBRK	**Dubrovnik**	**0.75**	**284**	ePg	**Pb**	**19 41 32.8**	**-0.4**
DBRK				Sg	**Sn**	**19 41 45.6**	**+0.4**
PEJK	**Peje**	**0.86**	**79**		**Pb**	**19 41 34.2**	**-0.9**
PLE	**Pljevlja**	**0.86**	**13**	ePg	**Pb**	**19 41 34.7**	**-0.5**
PLE				i Sg	**Sn**	**19 41 48.1**	**-0.1**
SJES	**Sjenica**	**0.99**	**38**	⇓iPg	**Pb**	**19 41 36.9**	**-0.5**
SJES				eSg	**Sb**	**19 41 49.2**	**-0.9**
SJES	**Sjenica**	**0.99**	**38**	ePg	**Pb**	**19 41 37.2**	**-0.2**
SJES				eSg	**Sb**	**19 41 49.6**	**-0.5**
STON	**Ston**	**1.12**	**291**		**Pn**	**19 41 39.0**	**-0.5**
STON	**Ston**	**1.12**	**291**	ePg	**Pn**	**19 41 39.7**	**+0.2**
STON				eSg	**Sg**	**19 41 56.0**	**+0.8**
STON	**Ston**	**1.12**	**291**	ePg	**Pn**	**19 41 38.9**	**-0.6**
STON				Sg	**Sg**	**19 41 56.9**	**+1.7**
STON	**Ston**	**1.12**	**291**	ePg	**Pn**	**19 41 39.7**	**+0.2**
STON				eSg	**Sg**	**19 41 57.6**	**+2.4**
RUDO	**Rudo**	**1.14**	**9**	ePg	**Pn**	**19

SELS *e*Sg **Sb** 19 42 08.4 -0.2
LSTV Lastovo 1.68 280 *e*Pn **Pb** 19 41 49.0 0.0
LSTV Sn **Sg** 19 42 12.6 -0.2
DIVS Divibare 1.73 21 **Pn** 19 41 48.4 +0.6
DIVS Sn **Sn** 19 42 10.2 +0.6
DIVS Divibare 1.73 21 ⇓*i* Pn **Pn** 19 41 48.5 +0.6
DIVS *e*Sn **Sn** 19 42 10.3 +0.8
DIVS Divibare 1.73 21 *e*Pg **Pn** 19 41 48.8 +0.9
DIVS *e*Sg **Sb** 19 42 12.6 +1.2
MAKA Makarska 1.75 298 *e*Pn **Pb** 19 41 50.5 +0.3
MAKA Sn **Sg** 19 42 14.3 -0.8
RICI Ricice 1.78 305 *e*Pn **Pb** 19 41 51.2 +0.4
RICI Sn **Sg** 19 42 16.4 +0.3
SKO Skopje 1.79 106 **Pb** 19 41 50.8 -0.2
SKO Skopje 1.79 106 P **Pb** 19 41 50.7 -0.2
SKO S **Sb** 19 42 12.0 -1.0
SKO Skopje 1.79 106 *e*Pg **Pb** 19 41 51.0 +0.1
SKO *e*Sg **Sb** 19 42 14.2 +1.2
SKO Skopje 1.79 106 *i* Pn **Pb** 19 41 51.1 +0.1
GRUS Gruza 1.82 39 *e*Pg **Pn** 19 41 49.8 +0.8
GRUS *e*Sg **Sb** 19 42 14.5 +0.7
OHR Ohrid 1.85 137 *e*P **Pb** 19 41 53.1 +1.0
OHR *e*SG **Sg** 19 42 18.3 -0.2
OHR Ohrid 1.85 137 *e*Pg **Pb** 19 41 53.1 +1.0
OHR *e*Sg **Sg** 19 42 18.3 -0.2
OHR Ohrid 1.85 137 *i* Pn **Pg** 19 41 53.5 -0.9
BARS Barje 2.01 80 *e*Pg **Pn** 19 41 52.8 +1.1
VLO Vlora 2.04 172 Pn **Pn** 19 41 53.1 +1.1
VLO Vlora 2.04 172 P **Pn** 19 41 53.7 +1.7
VLO Vlora 2.04 172 P **Pn** 19 41 53.1 +1.1
TEKS Tekeris 2.08 8 *e*Pn **Pn** 19 41 53.0 +0.3
TEKS *e*Sn **Sn** 19 42 18.9 +0.8
HVAR Hvar 2.09 290 *e*Pn **Pb** 19 41 55.0 -1.0
HVAR Sn **Sb** 19 42 22.4 +0.8
SRKY Kupres RS 2.14 318 *e*Pn **Pb** 19 41 56.6 -0.3
SRKY *e*Sn **Sb** 19 42 22.5 -0.6
BOVS Bovan 2.21 58 *e*Pg **Pn** 19 41 54.5 +0.1
BOVS *e*Sg **Sb** 19 42 26.6 +1.6
BLJ Bijeljina 2.30 2 *e*Pn **Pn** 19 41 57.0 +1.4
BLJ *e*Sn **Sn** 19 42 24.3 +0.9
DOB Doboj 2.37 342 *e*Pn **Pb** 19 41 58.9 -1.9
DOB *e*Sn **Sb** 19 42 27.9 -1.7
MGRS Mrkonjic Grad 2.44 323 *e*Pn **Pb** 19 42 00.6 -1.4
MGRS *e*Sn **Sb** 19 42 30.0 -1.7
SCTE Santa Cesarea 2.46 192 **Pn** 19 41 58.0 +0.1
BOSS Bosilegrad 2.48 89 *e*Pn **Pn** 19 41 58.9 +0.8
BOSS *e*Sn **Sn** 19 42 27.1 -0.8
NEST Nestorio 2.52 145 P **Pb** 19 42 01.3 -2.2
LSK Leskovik 2.58 154 P **Pn** 19 42 01.8 +2.2
MATE Matera 2.59 226 ⇓P **Pb** 19 42 02.4 -2.1
MATE ⇑S **Sb** 19 42 36.2 +0.4
SGRT San Giovanni R 2.62 255 **Pn** 19 42 01.1 +0.9
ZAGS Zajecar 2.63 59 *e*Pn **Pn** 19 42 00.4 +0.2
ZAGS *e*Sn **Sn** 19 42 31.4 -0.2
BLY Banja Luka 2.67 329 ⇑*i* Pn **Pb** 19 42 03.7 -2.2
BLY *e*Sn **Sb** 19 42 36.2 -2.0
SRN Sarande 2.69 166 P **Pn** 19 42 02.0 +1.1
ZAPS Zavoj 2.69 72 *e*Pn **Pn** 19 42 02.2 +1.1
ZAPS *e*Sn **Sn** 19 42 32.4 -0.8
FRGS Fruska Gora 2.71 10 *e*Pn **Pn** 19 42 02.5 +1.1
FRGS *e*Sn **Sn** 19 42 35.3 +1.5
FRGS Fruska Gora 2.71 10 *e*Pn **Pn** 19 42 02.2 +0.8
FRGS *e*Sn **Sn** 19 42 33.4 -0.4
PENT Pentalofos 2.74 146 P **Pn** 19 42 04.6 +2.7
A050A Klekovaca 2.75 317 ⇑*i* Pn **Pb** 19 42 05.1 -2.2
A050A *e*Sn **Sn** 19 42 37.4 +2.7
ZIRJ Zirje 2.81 296 *e*Pn **Pn** 19 42 05.1 +2.5
ZIRJ Sn **Sb** 19 42 40.7 -1.6
KEK Kerkira 2.82 169 Pn **Pn** 19 42 03.6 +0.8
KEK Kerkira 2.82 169 P **Pn** 19 42 03.3 +0.5
BLKB Belogradchik 2.83 65 ⇑P **Pn** 19 42 04.5 +1.4
MORI Morici 2.86 300 *e*Pn **Pn** 19 42 06.3 +3.0
MORI Sn **Sb** 19 42 42.5 -1.3
A052A Srbac 2.87 336 ⇑*i* Pn **Pn** 19 42 05.8 +2.4
A052A *e*Sn **Sn** 19 42 39.7 +2.3
GRG Griva 2.89 121 P **Pn** 19 42 05.8 +2.0
KZN Kozani 2.95 137 P **Pn** 19 42 07.2 +2.6
MDVR Moldovita 2.96 38 ⇑P **Pn** 19 42 05.5 +0.7
A051A Mrakovica 3.00 328 ⇑*i* Pn **Pn** 19 42 08.1 +2.8
A051A *e*Sn **Sn** 19 42 42.9 +2.2
VTS Vitosha 3.04 86 ⇓P **Pn** 19 42 07.1 +1.2
VTS Vitosha 3.04 86 Pn **Pn** 19 42 06.9 +1.0
VTS Vitosha 3.04 86 P **Pn** 19 42 06.9 +1.0
KPRO Kipourio 3.04 146 P **Pn** 19 42 09.0 +3.1
PRIJ Prijedor 3.04 326 *e*Pn **Pn** 19 42 08.3 +2.4
PRIJ *e*Sn **Sn** 19 42 44.8 +3.0
KNT Kendrikon 3.11 114 P **Pn** 19 42 08.4 +1.6
JAN Janina 3.11 155 P **Pn** 19 42 07.9 +1.0
UDBI Udbina 3.19 311 *e*Pn **Pb** 19 42 11.9 -2.9
UDBI Sn **Sb** 19 42 51.7 -1.6
BANR Banloc 3.24 26 ⇑P **Pn** 19 42 09.6 +1.1
DUGI Dugi Otok 3.33 298 *e*Pn **Pn** 19 42 12.4 +2.5
DUGI Sn **Sb** 19 42 53.6 -3.8
HERR Herculane 3.38 44 ⇓P **Pn** 19 42 11.0 +0.6
LIT Litokhoron 3.48 132 **Pn** 19 42 14.2 +2.3
LIT Litokhoron 3.48 132 P **Pn** 19 42 14.4 +2.5
LIT Litokhoron 3.48 132 P **Pn** 19 42 14.2 +2.3
VIRC Vir 3.48 303 *e*Pn **Pn** 19 42 14.5 +2.6
VIRC Sn **Sn** 19 42 56.6 +4.2
PLIT Plitvice 3.49 314 *e*Pn **Pn** 19 42 15.8 +3.7
PLIT Sn **Sb** 19 42 58.3 -3.7
CUC Castrocucco 3.53 226 Pn **Pn** 19 42 13.7 +1.1
CUC Castrocucco 3.53 226 Pn **Pn** 19 42 13.8 +1.1
MOSL Moslavina 3.56 332 *e*Pn **Pn** 19 42 15.3 +2.2
SRS Serrai 3.60 111 P **Pn** 19 42 15.5 +1.9
SRS Serrai 3.60 111 Pn **Pn** 19 42 15.5 +1.9
BZS Buzias 3.61 29 ⇑P **Pn** 19 42 14.1 +0.5
BZS Buzias 3.61 29 *e*Pn **Pn** 19 42 13.9 +0.3
TYRN Tyrnavos 3.63 139 P **Pn** 19 42 15.5 +1.6
THL Klokotos Trika 3.64 142 P **Pn** 19 42 15.8 +1.7
SRE Strehaia 3.67 52 ⇓P **Pn** 19 42 16.5 +2.0
KOVH Kovagotottos 3.68 349 P **Pn** 19 42 16.1 +1.5
KOVH S **Sn** 19 42 58.2 +0.8
NVR Nevrokopi 3.71 106 P **Pn** 19 42 17.4 +2.3
PAOL Paolisi 3.71 248 **Pn** 19 42 17.4 +2.3
NVLJ Novalja 3.73 305 *e*Pn **Pn** 19 42 17.7 +2.4
NVLJ Sn **Sn** 19 43 03.4 +4.7
MORH Mrgy, Hungar 3.74 355 ⇓P **Pn** 19 42 16.5 +0.9
MORH Mrgy, Hungar 3.74 355 ⇓*i* Pn **Pn** 19 42 16.4 +0.9
MORH *e*Sn **Sn** 19 43 00.0 +0.9
MORH Mrgy, Hungar 3.74 355 P **Pn** 19 42 16.4 +0.9
MORH S **Sn** 19 42 58.8 -0.2
TIP Timpagrande 3.76 209 Pn **Pn** 19 42 16.5 +0.6
TIP Timpagrande 3.76 209 Pn **Pn** 19 42 16.1 +0.2
TSLK Tsoukalades, L 3.84 162 P **Pn** 19 42 17.4 +0.6
LKD2 Lefkada island 3.87 162 P **Pn** 19 42 17.6 +0.3
RABC Rab 3.88 307 *e*Pn **Pn** 19 42 19.9 +2.5
RABC Sn **Sn** 19 43 06.9 +4.4
GZR Gura Zlata 3.92 41 ⇓P **Pn** 19 42 18.7 +0.7
DRAG Dragano-Lefkad 3.95 163 P **Pn** 19 42 18.5 +0.1
AMBH Ambrzfalva 4.03 16 ⇑P **Pn** 19 42 20.9 +1.5
EVGI Lefkada island 4.03 163 P **Pn** 19 42 19.5 0.0
ZAG Zagreb 4.03 327 *e*Pn **Pn** 19 42 22.1 +2.6
OZLJ Ozalj 4.09 321 *e*Pn **Pn** 19 42 23.6 +3.3
OZLJ Sn **Sn** 19 43 13.1 +5.5
EVR Evrytania 4.11 149 P **Pn** 19 42 23.2 +2.6
PTJ Puntijarka 4.11 327 *e*Pn **Pn** 19 42 23.0 +2.4
BOJS Bojanci 4.11 318 *i* Pn **Pn** 19 42 24.0 +3.4
KALN Kalnik 4.12 333 *e*Pn **Pn** 19 42 22.8 +2.1
MAKR Makrakomi, Fth 4.15 146 P **Pn** 19 42 22.8 +1.7
SIRR Siria 4.19 25 ⇓P **Pn** 19 42 22.9 +1.2
CAMP Campotosto 4.23 273 **Pn** 19 42 24.2 +1.8
AQU L'Aquila 4.24 270 ⇑*i* Pn **Pn** 19 42 24.7 +2.3
AQU *e*Sn **Sn** 19 43 13.9 +2.4
CRES Cresnjev 4.26 323 ⇑*i* Pn **Pn** 19 42 25.2 +2.6
CRES *e*Sn **Sn** 19 43 13.2 +1.4
CRES Cresnjev 4.26 323 *i* Pn **Pn** 19 42 25.4 +2.8
CRES *e*Sn **Sn** 19 43 15.4 +3.6
LOBO Lobor 4.28 330 *e*Pn **Pn** 19 42 25.3 +2.5
DEV Deva 4.35 37 ⇓P **Pn** 19 42 25.8 +2.0
DMLN Damoulianata-K 4.35 167 P **Pn** 19 42 23.6 -0.2
GBRS Gornja Briga 4.36 316 *i* Pn **Pn** 19 42 27.3 +3.4
GBRS *e*Sn **Sn** 19 43 18.8 +4.5
GBRS IAML 19 43 23.0
comp=Z,80nm,0.5s
KEF3 Kipouria, Keph 4.38 167 P **Pn** 19 42 23.7 -0.5
XOR Xorichti 4.38 134 P **Pn** 19 42 25.6 +1.3
RIY Rijeka 4.40 312 *e*Pn **Pn** 19 42 27.4 +2.9
RIY Sn **Sn** 19 43 20.3 +5.2

SMRN Sveta Marina 4.41 307 *e*Pn **Pn** 19 42 26.8 +2.1
VLS Valsamata 4.45 165 P **Pn** 19 42 24.6 -0.6
VLS Valsamata 4.45 165 Pn **Pn** 19 42 24.7 -0.5
LOT Lotru 4.47 47 ⇑P **Pn** 19 42 27.2 +1.6
FDMO Fiordimonte 4.48 279 **Pn** 19 42 27.7 +2.0
TIH Tihany 4.50 349 P **Pn** 19 42 27.6 +1.8
TIH S **Sn** 19 43 20.0 +2.3
PSDA Pessada-Kefalo 4.51 165 P **Pn** 19 42 25.7 -0.3
KNDS Knezji Dol 4.58 313 *i* Pn **Pn** 19 42 29.8 +2.7
BRJN Brijuni 4.59 304 *e*Pn **Pn** 19 42 29.2 +2.1
THAS Thassos island 4.59 112 P **Pn** 19 42 26.1 -1.1
CEY Cerknica 4.70 315 *e*Pn **Pn** 19 42 31.3 +2.7
CEY *e*Sn **Sn** 19 43 24.2 +1.6
HUMR Humele 4.72 62 ⇑P **Pn** 19 42 29.7 +0.8
GROS Grobnik 4.75 328 *i* Pn **Pn** 19 42 31.7 +2.4
A253A Karojba, Istri 4.76 308 *e*Pn **Pn** 19 42 31.3 +1.9
SKDS Skadanscina 4.79 311 *e*Pn **Pn** 19 42 31.8 +1.8
SKDS *e*Sn **Sn** 19 43 25.8 +0.8
MPLH Magyarpolny 4.82 347 P **Pn** 19 42 32.4 +2.1
MPLH S **Sn** 19 43 28.0 +2.4
CESX Cesi 4.84 274 **Pn** 19 42 31.5 +0.8
CEL Celeste 4.89 211 **Pn** 19 42 31.1 -0.2
CEL Celeste 4.89 211 Pn **Pn** 19 42 31.7 +0.3
ARR Arges 4.91 52 ⇑P **Pn** 19 42 32.3 +0.7
CSKK Cskako 4.92 353 P **Pn** 19 42 33.5 +1.9
CSKK S **Sn** 19 43 30.9 +3.0
RDO Rodhopi 4.97 103 P **Pn** 19 42 34.5 +2.1
RDO Rodhopi 4.97 103 Pn **Pn** 19 42 34.5 +2.1
BORR Bors 4.97 21 ⇑P **Pn** 19 42 34.3 +1.9
BUD Budapest 5.00 359 P **Pn** 19 42 33.9 +1.2
BUD S **Sn** 19 43 31.6 +1.6
DRGR 5.00 29 ⇓P **Pn** 19 42 33.6 +0.7
DRGR 5.00 29 P **Pn** 19 42 33.6 +0.7
DRGR *e*SN **Sn** 19 43 28.5 -1.8
DRGR 5.00 29 *e*Pn **Pn** 19 42 33.8 +0.9
DRGR *e*Sn **Sn** 19 43 28.5 -1.8
TRI Trieste 5.03 312 **Pn** 19 42 34.8 +1.6
TRI Trieste 5.03 312 P **Pn** 19 42 34.8 +1.6
MTUR Matau 5.09 55 ⇑P **Pn** 19 42 36.2 +2.1
EGYH Egyhazaskeszo 5.09 346 P **Pn** 19 42 36.3 +2.3
EGYH S **Sn** 19 43 35.0 +2.7
SOKA Soboth 5.11 326 *i* Pn **Pn** 19 42 37.3 +2.9
comp=Z,13nm,0.2s,SNR=16
SOKA *e*Sn **Sn** 19 43 33.9 +1.0
comp=Z,12nm,0.4s
OBKA Obir 5.19 322 *e*Pn **Pn** 19 42 37.5 +2.1
OBKA *e*Sn **Sn** 19 43 35.4 +0.6
OBKA Obir 5.19 322 *i* Pn **Pn** 19 42 38.3 +2.9
comp=Z,11nm,0.2s,SNR=5.8
OBKA *e*Sn **Sn** 19 43 37.9 +3.1
comp=Z,18nm,0.3s
OBKA Obir 5.19 322 *e*Pn **Pn** 19 42 38.5 +3.1
OBKA *e*Sn **Sn** 19 43 40.4 +5.6
VOIR 5.19 53 ⇑P **Pn** 19 42 36.8 +1.3
VOIR 5.19 53 P **Pn** 19 42 39.5 +4.0
SGRR Singureni 5.28 69 ⇓P **Pn** 19 42 38.2 +1.6
CJR Cluj-Napoca 5.29 36 ⇑P **Pn** 19 42 37.8 +1.0
SRO Srobarova 5.36 354 *e*P **Pn** 19 42 40.8 +3.1
SRO *e* 19 43 42.6
ARSA Arzberg 5.41 333 *e*Pn **Pn** 19 42 40.7 +2.3
ARSA *e*Sn **Sn** 19 43 40.7 +0.5
ARSA Arzberg 5.41 333 *i* Pn **Pn** 19 42 40.7 +2.3
comp=Z,28nm,0.4s,SNR=19
ARSA *e*Sn **Sn** 19 43 41.0 +0.8
comp=Z,8.7nm,0.4s
ARSA Arzberg 5.41 333 *e*Pn **Pn** 19 42 41.0 +2.6
ARSA *e*Sn **Sn** 19 43 41.0 +0.8
ALN Alexandroupoli 5.41 105 Pn **Pn** 19 42 40.5 +2.0
ALN Alexandroupoli 5.41 105 P **Pn** 19 42 40.5 +2.0
ALN Alexandroupoli 5.41 105 P **Pn** 19 42 40.5 +2.0
LATE Laterza 5.42 274 Pn **Pn** 19 42 39.8 +1.3
PSZ Piszkesteto 5.46 5 ⇑P **Pn** 19 42 39.8 +0.7
PSZ Piszkesteto 5.46 5 Pn **Pn** 19 42 39.5 +0.4
PSZ Piszkesteto 5.46 5 P **Pn** 19 42 39.5 +0.4
PSZ Piszkesteto 5.46 5 P **Pn** 19 42 39.9 +0.7
PSZ S **Sn** 19 43 39.6 -1.8
SOP Sopron 5.51 342 P **Pn** 19 42 41.8 +2.1
SOP S **Sn** 19 43 44.5 +2.0
RONA Rosalia, Austr 5.59 340 *i* Pn **Pn** 19 42 42.1 +1.2
comp=Z,22nm,0.5s,SNR=16
RONA *e*Sn **Sn** 19 43 45.2 +0.7
comp=Z,32nm,0.4s
PRED Cave del Predi 5.61 317 Pn **Pn** 19 42 42.8 +1.5
DOPR Dopca 5.68 50 ⇑P **Pn** 19 42 43.6 +1.4
MYKA Terra Mystica 5.70 318 *i* Pn **Pn** 19 42 45.3 +2.8
comp=Z,7.9nm,0.3s
MYKA *e*Sn **Sn** 19 43 49.9 +2.5
comp=Z,13nm,0.5s
ITM Ithomi 5.72 157 **Pn** 19 42 43.4 +0.7
MLR Muntele Rosu 5.76 56 ⇓P **Pn** 19 42 46.0 +2.7
MLR Muntele Rosu 5.76 56 Pn **Pn** 19 42 45.2 +1.8
comp=Z,3.6nm,0.4s,baz=319,slow=18
MLR Sn **Sn** 19 43 49.1 +0.2
comp=Z,0.6nm,0.3s,baz=281,slow=17,SNR=3.1
VLY Voula,Athens 5.84 141 P **Pn** 19 42 45.1 +0.7
OSSC Osservatorio P 5.88 283 Pn **Pn** 19 42 45.2 +0.4
ZST Bratislava 5.89 347 *e*P **Pn** 19 42 47.1 +2.2
ZST *e* 19 43 51.5
CONA Conrad Observa 5.91 338 *i* Pn **Pn** 19 42 47.7 +2.4
comp=Z,18nm,0.4s,SNR=22
CONA *e*Sn **Sn** 19 43 53.9 +1.3
comp=Z,15nm,0.4s
STAL STALIGIAL 5.95 312 **Pn** 19 42 46.5 +0.7
CLUD Cludinico 5.98 314 Pn **Pn** 19 42 47.7 +1.4
OZUR 5.99 51 ⇑P **Pn** 19 42 48.6 +2.3
VYHS Vyhne 6.01 358 *e*P **Pn** 19 42 48.3 +1.6
VYHS *e* 19 43 53.4
MODS Modra-Piesok 6.03 348 *e*P **Pn** 19 42 49.6 +2.7
MODS *e* 19 43 56.2
KECS Kecovo 6.07 9 *e*P **Pn** 19 42 49.3 +1.8
KECS *e* 19 43 54.8
COVR Voineasa-Covas 6.09 54 ⇑P **Pn** 19 42 49.1 +1.3
CASP Castiglione de 6.11 276 Pn **Pn** 19 42 49.2 +1.3
TEOL Teolo 6.11 301 **Pn** 19 42 49.0 +1.0
TRPA Tarpa 6.13 22 ⇑P **Pn** 19 42 49.4 +1.1
TRPA Tarpa 6.13 22 P **Pn** 19 42 52.5 +4.2
SMOL Smolenice 6.14 349 *e*P **Pn** 19 42 51.7 +3.2
SMOL *e* 19 43 58.7
KBA Koelnbreinsper 6.17 320 *e*Pn **Pn** 19 42 52.1 +3.1
comp=Z,9.8nm,0.3s
KBA Koelnbreinsper 6.17 320 *e*Pn **Pn** 19 42 52.5 +3.6
KBA *e*Sn **Sn** 19 43 59.2 +0.2
VAE Valguarnera 6.18 217 Pn **Pn** 19 42 52.0 +3.0
comp=Z,0.9nm,0.3s,baz=9.5,slow=12,SNR=4.8
comp=Z,6.3nm,0.7s
ZCCA Zocca 6.22 290 Pn **Pn** 19 42 50.5 +0.9
ABTA Abfaltersbach 6.36 314 *i* Pn **Pn** 19 42 53.7 +2.2
comp=Z,4.7nm,0.2s,SNR=5.8
ABTA *e*Sn **Sn** 19 44 05.0 +1.4
comp=Z,17nm,0.3s
PLOR Plostina 6.37 56 ⇓P **Pn** 19 42 52.6 +1.0
PLOR Plostina 6.37 56 P **Pn** 19 42 52.6 +1.0
MOA Molln 6.37 329 *i* Pn **Pn** 19 42 55.1 +3.5
comp=Z,5.5nm,0.4s,SNR=7.1
MOA *e*Sn **Sn** 19 44 06.1 +2.3
comp=Z,25nm,0.6s
MOA Molln 6.37 329 *e*Pn **Pn** 19 42 55.0 +3.4
MOA *e*Sn **Sn** 19 44 04.8 +1.0
RAFF Raffo Rosso 6.41 216 Pn **Pn** 19 42 52.2 +0.1
VRI Vrincioaia 6.42 56 ⇓P **Pn** 19 42 53.8 +1.4
VRI ⇑S **Sn** 19 44 07.8 +2.7
VRI Vrincioaia 6.42 56 P **Pn** 19 42 53.7 +1.4
VRI S **Sn** 19 44 07.7 +2.7
CTI Castel Tesino 6.44 306 Pn **Pn** 19 42 54.1 +1.4
CTI Castel Tesino 6.44 306 P **Pn** 19 42 54.1 +1.4
JAVC Velka Javorina 6.46 351 *e*PN **Pn** 19 42 54.2 +1.4
JAVC *e*SN **Sn** 19 44 08.5 +2.6
BIOA Bad Ischl, Aus 6.50 325 *e*Pn **Pn** 19 42 56.4 +3.1
comp=Z,6.5nm,0.3s,SNR=7.7
ICOR Ion Corvin 6.53 73 ⇑P **Pn** 19 42 55.3 +1.5
UZH Uzhgorod 6.53 19 *e*P **Pn** 19 43 03.3 -8.4
VLC Villacollemand 6.59 288 Pn **Pn** 19 42 55.8 +1.1
CRVS Cervenica-Dubn 6.62 13 *e*P **Pn** 19 42 56.6 +1.6
BIZ Bicaz 6.67 46 ⇑P **Pn** 19 42 56.5 +0.8
LANS Liptovska Anna 6.67 2 *e*P **Pn** 19 42 58.7 +3.0
LANS *e* 19 44 12.0
BURAR Bucovina Array 6.70 38 ⇑P **Pn** 19 42 58.4 +2.2
BURAR Bucovina Array 6.70 38 **Pn** 19 42 57.1 +0.9
BURAR Bucovina Array 6.70 38 Pn **Pn** 19 42 58.7 +2.5
BUR08 Bucovina Ar. S 6.71 38 **Pn** 19 42 56.4 0.0
KOLS Kolonicke sedl 6.81 18 *e*P **Pn** 19 42 59.7 +2.1
KRUC Moravsky 6.85 345 *e*PN **Pn** 19 42 58.5 +0.4

KRUC *e*SN **Sn** 19 44 15.0 -0.5
RJOB Jochberg 6.90 322 *e*Pn **Pn** 19 43 02.2 +3.2
RJOB *e*Sn **Sn** 19 44 22.2 +5.2
MAUC Maruska 6.94 353 *e*PN **Pn** 19 43 00.4 +1.0
MAUC *e*SN **Sn** 19 44 16.9 -0.9
NIE Niedzica 6.98 6 Pn **Pn** 19 43 02.2 +2.2
CFR Carcaliu 7.04 64 ⇑P **Pn** 19 43 03.0 +2.2
VRAC Vranov 7.05 346 ⇑P **Pn** 19 43 02.0 +1.0
VRAC Vranov 7.05 346 Pn **Pn** 19 43 01.9 +1.0
comp=Z,0.5nm,0.3s,baz=192,slow=13,SNR=4.3
VRAC Sn **Sn** 19 44 19.8 -0.7
comp=Z,0.7nm,0.3s,baz=169,slow=16,SNR=1.9
comp=Z,1.5nm,0.5s
VRAC Vranov 7.05 346 *e*PN **Pn** 19 43 01.7 +0.8
VRAC *e*SN **Sn** 19 44 21.9 +1.4
TPGR Topolog 7.14 67 ⇑P **Pn** 19 43 03.9 +1.7
WTTA Wattenberg 7.15 314 *i* Pn **Pn** 19 43 04.9 +2.4
comp=Z,7.9nm,0.2s,SNR=7.7
WTTA *e*Sn **Sn** 19 44 25.5 +2.2
comp=Z,47nm,0.5s
WTTA Wattenberg 7.15 314 *e*Pn **Pn** 19 43 05.0 +2.5
WTTA *e*Sn **Sn** 19 44 25.5 +2.2
CKRC Cesky Krumlov 7.18 334 *e*PN **Pn** 19 43 04.5 +1.8
CKRC *e*SN **Sn** 19 44 23.3 -0.4
WATA Walderalm 7.23 315 *i* Pn **Pn** 19 43 06.1 +2.6
comp=Z,8.1nm,0.2s,SNR=11
WATA *e*Sn **Sn** 19 44 27.5 +2.3
comp=Z,29nm,0.4s
MSSA Maissana 7.24 288 Pn **Pn** 19 43 05.0 +1.5
VLDR Vladesti 7.26 59 ⇓P **Pn** 19 43 05.6 +1.8
TREC Trest 7.27 341 *e*SN **Sn** 19 44 25.6 -0.3
APE Apeiranthos 7.32 136 ⇑*e*P **Pn** 19 43 05.3 +0.7
SQTA Sankt Quirin 7.35 313 *i* Pn **Pn** 19 43 08.3 +3.1
comp=Z,11nm,0.4s,SNR=10
SQTA *e*Sn **Sn** 19 44 30.1 +2.0
comp=Z,37nm,0.5s
MORC Moravsky Berou 7.38 352 ⇓P **Pn** 19 43 07.0 +1.6
MORC Moravsky Berou 7.38 352 **Pn** 19 43 06.2 +0.9
MORC Moravsky Berou 7.38 352 P **Pn** 19 43 06.3 +0.9
MORC Moravsky Berou 7.38 352 *e*PN **Pn** 19 43 07.4 +2.0
MORC *e*SN **Sn** 19 44 28.5 0.0
MORC Moravsky Berou 7.38 352 Pn **Pn** 19 43 08.8 +3.4
MORC Sn **Sn** 19 44 28.6 0.0
GEC2 GERESS Array S 7.41 331 **Pn** 19 43 08.0 +2.1
GEC2 GERESS Array S 7.41 331 *e*Pn **Pn** 19 43 09.5 +3.6
GEC2 *e*Sn **Sn** 19 44 29.7 +0.3
GERES GERESS Array B 7.41 331 Pn **Pn** 19 43 08.7 +2.8
comp=Z,1.5nm,0.3s,baz=152,slow=14,SNR=58
GERES Sn **Sn** 19 44 28.5 -1.0
comp=Z,1.7nm,0.3s,baz=150,slow=24,SNR=11
comp=Z,5.7nm,0.6s
GERES GERESS Array B 7.41 331 **Pn** 19 43 08.2 +2.3
MOTA Moosalm 7.49 313 *i* Pn **Pn** 19 43 10.0 +2.9
comp=Z,5.7nm,0.3s
MOTA *e*Sn **Sn** 19 44 32.7 +1.3
comp=Z,32nm,0.6s
PGF Pioggiola 7.49 274 *e*Pn **Pn** 19 43 07.0 0.0
PGF *e*Sn **Sn** 19 44 27.2 -4.2
comp=Z,4.1nm,0.5s
FETA Feichten 7.50 310 *e*Pn **Pn** 19 43 09.5 +2.2
comp=Z,2.1nm,0.4s
FETA *e*Sn **Sn** 19 44 32.8 +0.9
comp=Z,6.1nm,0.4s
FUORN Ofenpass-Fuorn 7.56 306 **Pn** 19 43 10.8 +2.7
KHC Kasperske Hory 7.69 332 *e*P **Pn** 19 43 12.0 +2.2
KHC *e* 19 44 37.1
KHC Kasperske Hory 7.69 332 *e*PN **Pn** 19 43 12.0 +2.2
KHC *e*PG Pb 19 43 40.5 +9.0
KHC *e*SN **Sn** 19 44 37.1 +0.7
KHC Kasperske Hory 7.69 332 Pn **Pn** 19 43 12.3 +2.5
KHC Sn **Sn** 19 44 36.8 +0.4
OJC Ojcow 7.75 3 Pn **Pn** 19 43 10.8 +0.4
OJC Ojcow 7.75 3 P **Pn** 19 43 10.9 +0.4
RETA Reutte 7.76 313 *i* Sn **Sn** 19 44 39.3 +1.3
comp=Z,15nm,0.4s
KRLC Kraliky 7.76 349 *e*P **Pn** 19 43 12.1 +1.4
KRLC *e* 19 44 37.0
KRLC Kraliky 7.76 349 *e*PN **Pn** 19 43 12.1 +1.4
KRLC *e*SN **Sn** 19 44 37.0 -1.1
KRLC Kraliky 7.76 349 Pn **Pn** 19 43 13.4 +2.7
KRLC Sn **Sn** 19 44 38.6 +0.5
DAVOX Davos/Dischmat 7.87 306 Pn **Pn** 19 43 14.9 +2.5
comp=Z,2.1nm,0.3s,baz=116,slow=12,SNR=32
DAVOX Sn **Sn** 19 44 41.0 0.0
comp=Z,2.1nm,0.3s,baz=23,slow=22,SNR=5.5
DAVOX LR LR 19 47 00.4
comp=Z,25nm,19.8s,baz=92,slow=43
comp=Z,4.7nm,0.4s
FUR Furstenfeldbru 7.93 318 *e*Pn **Pn** 19 43 15.1 +2.1
KMPD K-Podol'skiy 7.96 38 Pn **Pn** 19 43 17.2 +3.8
comp=Z,9.6nm,0.9s
KMPD pP Pb 19 43 22.3 -14
comp=Z,9.6nm,0.9s
KMPD sP 19 43 25.0
comp=Z,9.6nm,0.9s
WET Wettzell 7.96 329 *e*Pn **Pn** 19 43 16.7 +3.3
DPC Dobruska-Polom 8.10 347 *e*P **Pn** 19 43 16.5 +1.1
DPC *e* 19 44 44.9
DPC Dobruska-Polom 8.10 347 *e*PN **Pn** 19 43 16.5 +1.1
DPC *e*SN **Sn** 19 44 44.9 -1.5
DAVA Damuels 8.13 309 *e*Pn **Pn** 19 43 19.3 +3.4
comp=Z,5.3nm,0.5s
DAVA *e*Sn **Sn** 19 44 49.5 +2.2
comp=Z,13nm,0.5s
DAVA Damuels 8.13 309 *e*Pn **Pn** 19 43 20.1 +4.1
DAVA *e*Sn **Sn** 19 44 48.6 +1.2
PRU Pruhonice 8.15 339 *e*P **Pn** 19 43 17.7 +1.7
PRU *e* 19 44 46.9
PRU Pruhonice 8.15 339 *e*PN **Pn** 19 43 17.7 +1.7
PRU *e*SN **Sn** 19 44 46.9 -0.6
UBR Ueberruh 8.23 312 *e*Pn **Pn** 19 43 19.0 +1.9
OSTC Ostas 8.32 347 *e*PN **Pn** 19 43 19.7 +1.4
OSTC *e*SN **Sn** 19 44 49.1 -2.6
CHVC Chvalec 8.38 346 *e*PN **Pn** 19 43 19.7 +0.6
CHVC *e*SN **Sn** 19 44 52.2 -0.9
CHVC Chvalec 8.38 346 Pn **Pn** 19 43 22.8 +3.7
IDI Anoyia 8.47 146 Pn **Pn** 19 43 18.3 -2.2
comp=Z,0.3nm,0.3s,baz=349,slow=21,SNR=2.1
IDI Sn **Sn** 19 44 49.2 -6.4
comp=Z,0.5nm,0.3s,baz=326,slow=22,SNR=1.8
comp=Z,1.9nm,0.8s
SBF Sospel 8.66 283 *e*Pn **Pn** 19 43 23.3 +0.2
SBF *e*Sn **Sn** 19 44 54.9 -5.3
comp=Z,8.5nm,0.4s
ROTZ Rotzenmuhle 8.72 329 *e*Pn **Pn** 19 43 27.6 +3.7
ROTZ *e*Sn **Sn** 19 44 60.0 -1.7
WILA Wila 8.76 308 *e*Pn **Pn** 19 43 27.2 +2.7
WERN Wernitzgruen 9.09 331 *e*Pn **Pn** 19 43 33.0 +4.1
TANN Tannenbergstha 9.17 332 *e*Pn **Pn** 19 43 34.4 +4.4
SLE Schleitheim 9.18 309 *e*Pn **Pn** 19 43 31.6 +1.4
MBDF Montbardon 9.24 288 *e*Pn **Pn** 19 43 32.0 +0.9
MBDF *e*Sn **Sn** 19 45 08.3 -6.4
comp=Z,10nm,0.7s
LMR La Mourre 9.30 279 *e*Pn **Pn** 19 43 33.0 +1.2
LMR *e*Sn **Sn** 19 45 10.3 -5.6
comp=Z,1.6nm,0.4s
SENIN Lac Senin/Sane 9.31 299 **Pn** 19 43 33.9 +1.8
BNI Bardonecchia 9.37 290 Pn **Pn** 19 43 33.3 +0.5
BNI Bardonecchia 9.37 290 P **Pn** 19 43 33.3 +0.5
LPG La Plagne 9.42 293 *e*Pn **Pn** 19 43 34.9 +1.3

comp=Z,4.5nm,0.3s
SMRF Simiane la Rot 10.01 283 *e*Pn **Pn 19 43 42.3 +0.8**
SMRF *e*Sn **Sn 19 45 27.3 -6.0**
comp=Z,9.7nm,0.9s
KEST Kesra 10.16 232 Pn **Pn 19 43 44.9 +1.2**
comp=Z,0.1nm,0.3s,baz=12,slow=0.4,SNR=9.1
comp=Z,2.0nm,0.8s
KEST Kesra 10.16 232 Pn **Pn 19 43 44.2 +0.6**
HINF Hinteralfeld 10.18 306 *e*Pn **Pn 19 43 43.8 0.0**
HINF *e*Sn **Sn 19 45 30.6 -6.8**
comp=Z,6.8nm,0.4s
CABF La Chapelle 10.18 298 *e*Pn **Pn 19 43 45.2 +1.3**
CABF *e*Sn **Sn 19 45 30.8 -6.8**
comp=Z,8.9nm,0.6s
CDF Champ du Feu 10.22 309 *e*Pn **Pn 19 43 44.8 +0.4**
CDF *e*Sn **Sn 19 45 32.1 -6.3**
comp=Z,9.2nm,0.8s
HAU Haudompre 10.56 306 *e*Pn **Pn 19 43 49.2 +0.1**
HAU *e*Sn **Sn 19 45 39.7 -7.2**
comp=Z,8.6nm,0.4s
VIVF Saint-Julien-l 10.74 288 *e*Pn **Pn 19 43 50.8 -0.7**
VIVF *e*Sn **Sn 19 45 44.2 -7.0**
comp=Z,2.1nm,0.5s
AKASG Malin Array Be 10.75 37 Pn **Pn 19 43 51.7 +0.1**
comp=Z,0.1nm,0.3s,baz=226,slow=13,SNR=4.7
AKASG LR LR 19 48 27.8
comp=Z,98nm,18.7s,baz=180,slow=40
comp=Z,0.7nm,0.7s
AKASG Malin Array Be 10.75 37 *i*P **Pn 19 43 54.9 +3.3**
AKBB Malin Array Si 10.75 37⇑ *e*P **Pn 19 43 54.6 +3.0**
SSB Saint Sauveur 10.90 290 Pn **Pn 19 43 53.9 +0.2**
SSB Saint Sauveur 10.90 290 P **Pn 19 43 53.9 +0.2**
PAGF Fort de Pagny 11.19 307 *e*Pn **Pn 19 43 56.4 -1.2**
baz=125
PAGF *e*Sn **Sn 19 45 56.7 -5.4**
BRTR Keskin Array B 11.29 99 Pn **Pn 19 43 59.8 +0.6**
comp=Z,0.1nm,0.3s,baz=263,slow=11,SNR=2.2
BRTR LR LR 19 49 10.2
comp=Z,51nm,18.2s,baz=310,slow=42
comp=Z,0.2nm,0.4s
SFTF Sexfontaines 11.44 305 *e*Pn **Pn 19 44 01.0 -0.1**
baz=132
MEZF Maizieres J'vi 11.56 306 *e*Pn **Pn 19 44 02.3 -0.4**
baz=121
SAVF Savonnieres en 11.57 307 *e*Pn **Pn 19 44 01.6 -1.2**
baz=128
SMF Signal de Mont 11.67 296 *e*Pn **Pn 19 44 04.2 0.0**
SMF *e*Sn **Sn 19 46 07.3 -6.6**
comp=Z,6.5nm,0.5s
LOR Lormes 11.84 299 *e*Pn **Pn 19 44 07.0 +0.5**
baz=118
LOR *e*Sn **Sn 19 46 10.4 -7.7**
comp=Z,8.6nm,0.5s
SSF Saint Saulge 12.01 298 *e*Pn **Pn 19 44 10.7 +1.9**
SSF *e*Sn **Sn 19 46 15.2 -6.9**
comp=Z,6.1nm,0.6s
SSF Saint Saulge 12.01 298 P **Pn 19 44 10.7 +1.9**
AVF Avril sur Loir 12.03 296 *e*Pn **Pn 19 44 09.6 +0.5**
AVF *e*Sn **Sn 19 46 15.4 -7.4**
comp=Z,8.6nm,1.0s
BGF Bois d'Agland 12.31 295 *e*Pn **Pn 19 44 12.9 -0.1**
BGF *e*Sn Sn 19 46 21.5 -8.1
comp=Z,12nm,0.7s
TCF Toulx Ste Croi 12.69 293 *e*Pn **Pn 19 44 17.9 -0.2**
TCF *e*Sn Sn 19 46 30.5 -8.3
comp=Z,1.4nm,0.3s
MMAI Mount Meron Ar 15.95 121 Pn **Pn 19 45 01.7 -0.4**
comp=Z,0.3nm,0.3s,baz=318,slow=8.0,SNR=2.2
comp=Z,1.2nm,0.8s
VORR Voronezh 16.43 49 *e*P **Pn 19 45 06.9 -1.2**
VORR pmax pmax
comp=Z,20nm,0.4s
VSU Vasula 16.69 14⇑ *e*P **Pn 19 45 12.5 +1.2**
VSU pmax pmax
comp=Z,26nm,0.9s
OBN Obninsk 17.01 36⇓ *e*P **P 19 45 17.1 -0.1**
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN MLR MLR
comp=Z,33nm,13.0s
KIV Kislovodsk 17.22 77 *e*P **P 19 45 19.1 -0.6**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 17.39 78 P **Pn 19 45 20.8 +0.6**
baz=290,slow=14,SNR=1.1
comp=Z,0.4nm,0.4s
ESDC Sonseca Array 17.63 269 LR LR 19 52 10.1
comp=Z,44nm,18.9s,baz=48,slow=37
HFS Hagfors 17.98 351 P **Pn 19 45 27.5 0.0**
comp=Z,0.2nm,0.3s,baz=168,slow=11,SNR=11
HFS LR LR 19 52 18.2
comp=Z,66nm,18.1s,baz=90,slow=37
comp=Z,2.4nm,0.6s
NC602 NORSAR Array S 18.85 348 P **P 19 45 37.2 -0.2**
NC602 IAmb IAmb 19 45 48.5
comp=Z,22nm,1.4s
NC602 NORSAR Array S 18.85 348 *e*P **P 19 45 37.7 +0.3**
NB2 NORSAR Subarra 19.19 348 P **P 19 45 40.9 -0.3**
comp=Z,0.9nm,0.4s,baz=161,slow=10
NB2 NORSAR Subarra 19.19 348 P **P 19 45 40.9 -0.3**
baz=161,slow=10
NOA NORSAR Array B 19.19 348 P **P 19 45 40.5 -0.7**
baz=155,slow=10,SNR=3.7
NOA LR LR 19 53 04.8
comp=Z,22nm,18.9s,baz=305,slow=37
comp=Z,0.3nm,0.4s
GNI Garni 19.36 88 P **P 19 45 42.5 -0.9**
comp=Z,4.6nm,0.6s,baz=312,slow=9.6,SNR=5.5
GNI Garni 19.36 88⇑ *e*P **P 19 45 43.6 +0.3**
GNI pmax pmax
comp=Z,6.0nm,0.7s
SKAR Skarslia 19.37 344 *e*P **P 19 45 44.0 +0.7**
EKA Eskdalemuir Ar 19.38 319 P **P 19 45 42.5 -0.8**
comp=Z,1.0nm,0.5s,baz=114,slow=8.5,SNR=18
ESK Eskdalemuir 19.39 319 P **P 19 45 43.9 +0.5**
ESK IAmb IAmb 19 45 55.4
comp=Z,24nm,1.2s
ESK Eskdalemuir 19.39 319 P **P 19 45 43.9 +0.5**
ESK pmax pmax
comp=Z,24nm,1.3s
FINES FINESS Array B 19.44 10 P **P 19 45 42.7 -1.2**
comp=Z,0.2nm,0.3s,baz=198,slow=9.8,SNR=8.5
FINES LR LR 19 54 10.0
comp=Z,69nm,18.4s,baz=175,slow=40
comp=Z,0.9nm,0.6s
FINES FINESS Array B 19.44 10 P **P 19 45 43.7 -0.2**
FINES FINESS Array B 19.44 10 P **P 19 45 43.7 -0.2**
FIA1 FINESS Array S 19.44 10 P **P 19 45 43.9 0.0**
MDT Midelt 21.07 251 P **P 19 46 03.1 +1.1**
comp=Z,1.2nm,0.7s,baz=74,slow=13,SNR=3.3
comp=Z,1.2nm,0.7s
BELG Belogornoye 21.54 53 P **P 19 46 07.5 +0.9**
comp=Z,9.4nm,0.9s,baz=158,slow=5.4,SNR=3.8
BELG LR LR 19 55 42.4
comp=Z,55nm,18.1s,baz=184,slow=40
comp=Z,9.4nm,0.9s
BELG Belogornoye 21.54 53⇑ *e*P **P 19 46 07.8 +1.2**
BELG pmax pmax
comp=Z,2.0nm,0.9s
KLMR Klimovskoe 22.15 27 *e*P **P 19 46 11.2 -1.9**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 22.15 27 *e*P **P 19 46 11.2 -1.9**
KLMR AMP 19 46 26.5
comp=Z,22nm,1.5s
NSS Namsos 22.46 352 *e*P **P 19 46 17.0 +0.6**
PRGR Permogore 24.85 30 *e*P **P 19 46 38.9 -0.8**
PRGR pmax pmax
comp=Z,18nm,0.7s
TRO Tromso 27.21 360 *e*P **P 19 47 01.3 +0.3**
ARCES ARCESS Array B 27.32 5 LR LR 19 58 43.7
comp=Z,77nm,20.6s,baz=10,slow=38
AKTO Aktyubinsk 27.68 60 LR LR 19 59 29.3
comp=Z,39nm,20.1s,baz=268,slow=40
ARU Arti 28.72 47 P **P 19 47 13.3 -1.3**
comp=Z,1.4nm,0.5s,baz=269,slow=9.4,SNR=4.5
comp=Z,1.4nm,0.5s
ARU Arti 28.72 47 P **P 19 47 13.8 -0.8**
ARU IAmb IAmb 19 47 24.6
comp=Z,3.5nm,0.7s
ARU Arti 28.72 47*c i*P **P 19 47 17.2 +2.6**
ARU 19 48 04.6
ARU S **S 19 52 08.7 +6.0**
ARU SS **SnSn 19 53 26.0 +2.4**
ARU pmax pmax
comp=Z,11nm,2.1s
ABKAR Akbulak array 28.93 62 P **P 19 47 16.8 +0.2**

TORD Torodi Ar. Bea 32.91 212 P **P 19 47 53.2 +1.3**
comp=Z,14nm,0.6s,baz=8.9,slow=10,SNR=5.1
BRVK Borovoye 35.26 55 P **P 19 48 12.0 +0.1**
BRVK Borovoye 35.26 55 P **P 19 48 12.0 +0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 37.22 71 P **P 19 48 29.0 +0.1**
KKAR Karatay Array 37.22 71 P **P 19 48 29.0 +0.1**
ZAA0 Zalesovo Array 43.71 51 P **P 19 49 21.3 -1.0**
ZAA0 IAmb IAmb 19 49 22.4
comp=Z,1.7nm,0.7s
ZALV Zalesovo Beam 43.71 51 P **P 19 49 21.6 -0.8**
comp=Z,1.7nm,0.5s,baz=278,slow=8.2,SNR=8.9
comp=Z,1.7nm,0.5s
ZALV Zalesovo Beam 43.71 51 P **P 19 49 21.8 -0.6**
ZALV Zalesovo Beam 43.71 51 *i*P **P 19 49 21.7 -0.6**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
MK31 Makanchi Array 44.08 62 P **P 19 49 25.0 -0.4**
MK31 Makanchi Array 44.08 62⇑ *e*P **P 19 49 25.0 -0.4**
MKAR Makanchi Array 44.08 62 P **P 19 49 24.9 -0.5**
comp=Z,2.0nm,0.7s,baz=278,slow=8.0,SNR=22
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 44.08 62 P **P 19 49 25.0 -0.4**
MKAR Makanchi Array 44.08 62 *i*P **P 19 49 25.2 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
DGZ Jazzator, Alta 46.42 56⇑ *e*P **P 19 49 44.7 +0.6**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
FRB Frobisher Bay 51.97 326 LR LR 20 10 44.2
comp=Z,56nm,21.8s,baz=164,slow=34
SONM Songino Array 58.59 52 P **P 19 51 14.2 -0.2**
comp=Z,0.8nm,0.7s,baz=302,slow=8.6,SNR=6.0
comp=Z,0.8nm,0.7s
ULN Ulaanbaatar 58.96 52⇑ *e*P **P 19 51 17.2 +0.2**
ULN pmax pmax
comp=Z,1.0nm,1.4s
CMAR Chiang Mai Arr 70.37 83 P **P 19 52 30.6 -1.0**
comp=Z,0.8nm,0.7s,baz=302,slow=7.0,SNR=8.6
comp=Z,0.8nm,0.7s
NEW Newport 81.74 332 LR LR 20 30 27.7
comp=Z,24nm,18.1s,baz=0.0,slow=36
MJAR Matsushiro Arr 83.72 45 LR LR 20 34 04.1
comp=Z,35nm,18.3s,baz=164,slow=38

*IDC **02** 19:48:51.1±5.6, 18°.63N×145°.76E, h194km±53km, mb3.1/8, mbtmp3.7/10, Error ellipse: s-maj=39.1km s-min=15.8km az=87.0*

ISC 02 19:48:45.8±1.1, 18°.6N±0°.1×145°.9E±0°.3, h145km, n11, σ0°92/11, mb3.4/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**15.43**	**341**	P	**Pn**	**19 52 16.3**	**+0.6**
	22nm,0.6s,baz=278,slow=20,SNR=1.6						
MJAR	**Matsushiro Arr**	**19.08**	**341**	P	**Pn**	**19 52 59.3**	**-0.2**
	0.4nm,0.4s,baz=163,slow=9.1,SNR=4.4						
KLR	**Kul'dur**	**32.59**	**343**	P	**P**	**19 55 03.9**	**+0.6**
	0.7nm,0.4s,baz=183,slow=4.8,SNR=4.1						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**39.95**	**197**	P	**P**	**19 56 06.5**	**+0.4**
	0.5nm,0.8s,baz=12,slow=8.3,SNR=7.3						
	0.5nm,0.8s						
SONM	**Songino Array**	**43.29**	**321**	P	**P**	**19 56 33.2**	**0.0**
	0.2nm,0.3s,baz=129,slow=7.1,SNR=2.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**43.62**	**196**	P	**P**	**19 56 36.3**	**+0.4**
	0.3nm,0.9s,baz=17,slow=9.7,SNR=1.4						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**58.62**	**314**	P	**P**	**19 58 28.0**	**+0.4**
	0.4nm,0.5s,baz=93,slow=6.4,SNR=6.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**63.65**	**26**	P	**P**	**19 59 01.8**	**+0.7**
	0.2nm,0.6s,baz=251,slow=4.7,SNR=1.6						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**66.63**	**320**	P	**P**	**19 59 20.6**	**+0.1**
	0.7nm,0.6s,baz=95,slow=7.3,SNR=6.1						
	0.7nm,0.6s						
FINES	**FINESS Array B**	**87.01**	**335**	P	**P**	**20 01 12.3**	**-2.2**
	1.1nm,0.9s,baz=64,slow=4.4,SNR=4.9						
	1.1nm,0.9s						
LPAZ	**La Paz**	**147.53**	**91**	PKPbc	**PKPbc**	**20 08 14.1**	**-0.4**
	0.3nm,0.3s,baz=243,slow=2.3,SNR=1.6						

MAN 02 20:07:12.1, 10°.06N×125°.96E, h3km, mb4.3, ML3.1, MS2.8, 5C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.32**	**149⇑**	*e*P	Pg	20 07 18.6	+0.4
GLSP				*e*S	Sb	20 07 24.6	-1.3
MSLP	**Maasin**	**1.09**	**274⇑**	*e*P	Pg	20 07 33.0	-0.1
MSLP				*e*S	Sn	20 07 50.6	+0.7
BUTP	**Butuan**	**1.13**	**197⇑**	*e*P	Pb	20 07 34.5	+0.1
TABP	**Talibon, Bohol**	**1.61**	**271⇓**	*i*P	Pn	20 07 40.1	-1.3
TABP				*i*S	Sn	20 08 02.8	+0.1
GHBP	**Garcia Hernand**	**1.67**	**255⇑**	*i*P	Pn	20 07 42.1	-0.3
GHBP				*i*S	Sg	20 08 08.3	+2.3
CGP	**Cagayan de Oro**	**2.03**	**218⇑**	*e*P	Pg	20 07 52.5	+1.5
CGP				*e*S	Sn	20 08 12.2	-0.8

*IDC **02** 20:09:40.9±1.2, 22°.23S×179°.73W, h599km±12km, mb3.4/12, mbtmp4.3/13, Error ellipse: s-maj=17.5km s-min=12.3km az=146.0*

*NEIC **02** 20:09:41.2±1.5, 22°.4S±0°.1×179°.6W±0°.1, h613km±8km, mb4.4/33, Error ellipse: s-maj=19.6km s-min=18.3km az=57.0*

ISC 02 20:09:38.7±0.5, 22°.37S±0°.08×179°.63W±0°.09, h579km, n62, σ1°.23/67, mb4.4/29, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.10**	**334**	P	**P**	**20 11 12.5**	**+1.2**
	27nm,0.4s,baz=205,slow=5.2,SNR=68						
MSVF				S	**S**	**20 12 29.5**	**+2.8**
	12nm,0.8s,baz=115,slow=21,SNR=3.8						
MARNC	**Mare, Loyalty**	**11.49**	**272**	P	**P**	**20 12 12.8**	**+0.6**
DZM	**Mont Dzumac**	**12.90**	**269**	P	P	20 12 31.2	+4.4
	4.8nm,0.5s,baz=215,slow=5.0,SNR=16						
OUZ	**Omahuta**	**14.11**	**203**	P	**P**	**20 12 40.7**	**+2.0**
URZ	**Urewera**	**16.09**	**189**	P	**P**	**20 12 56.9**	**-0.7**
	2.7nm,0.3s,baz=102,slow=1.7,SNR=5.6						
URZ				S	**S**	**20 15 37.7**	**-2.1**
	6.0nm,0.5s,baz=293,slow=22,SNR=9.2						
URZ	**Urewera**	**16.09**	**189**	P	**P**	**20 12 55.6**	**-2.0**
ARMA	**Armidale**	**26.91**	**247**	P	**P**	**20 14 36.7**	**+1.8**
ARMA				IAmb	IAmb	20 14 37.8	
	comp=Z,6.7nm,0.7s						
EIDS	**Eidsvold**	**26.93**	**258**	P	**P**	**20 14 36.0**	**+1.1**
EIDS				IAmb	IAmb	20 14 36.9	
	comp=Z,5.9nm,0.6s						
CTAO	**Charters Tower**	**31.84**	**268**	P	**P**	**20 15 18.4**	**+1.0**
TOO	**Toolangi**	**33.58**	**235**	P	**P**	**20 15 31.8**	**-0.1**
TOO				IAmb	IAmb	20 15 45.0	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	**35.63**	**246**	P	**P**	**20 15 50.0**	**+1.1**
	comp=Z,7.2nm,0.4s,baz=94,slow=11,SNR=34						
	comp=Z,7.2nm,0.4s						
STKA	**Stephens Creek**	**35.63**	**246**	P	**P**	**20 15 50.0**	**+1.1**
COEN	**Coen**	**36.24**	**277**	P	**P**	**20 15 55.0**	**+0.8**
COEN				IAmb	IAmb	20 15 59.5	
	comp=Z,4.8nm,0.8s						
BBOO	**Buckleboo**	**40.37**	**245**	P	**P**	**20 16 27.5**	**+0.1**
BBOO				IAmb	IAmb	20 16 28.2	
	comp=Z,12nm,0.6s						
AS31	**Alice Springs**	**42.64**	**259**	P	**P**	**20 16 45.8**	**+0.3**
ASAR	**Alice Springs**	**42.64**	**259**	P	**P**	**20 16 46.0**	**+0.5**
	comp=Z,14nm,0.6s,baz=99,slow=7.6,SNR=239						
ASAR				PcP	**PcP**	**20 18 24.1**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=116,slow=3.8,SNR=4.2						
ASAR				S	**S**	**20 22 25.7**	**-2.0**
	comp=Z,1.8nm,1.0s,baz=98,slow=14,SNR=6.4						
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**42.64**	**259**	P	**P**	**20 16 45.0**	**-0.5**
WR0	**Warramunga Arr**	**42.68**	**264**	P	**P**	**20 16 45.7**	**-0.1**
WR0				IAmb	IAmb	20 16 46.4	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**42.86**	**265**	P	**P**	**20 16 46.9**	**-0.3**
WB2	**Warramunga Arr**	**42.86**	**264**	P	**P**	**20 16 47.0**	**-0.2**
WB2				IAmb	IAmb	20 16 47.8	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**42.87**	**264**	P	**P**	**20 16 47.1**	**-0.2**

	comp=Z,9.7nm,0.5s,baz=95,slow=8.1,SNR=322						
WRA				PcP	**PcP**	**20 18 24.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=103,slow=4.9,SNR=2.0						
WRA				ScP	**ScP**	**20 21 20.9**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=96,slow=4.2,SNR=6.5						
WRA				S	**S**	**20 22 29.5**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=94,slow=14,SNR=1.3						
	comp=Z,9.7nm,0.5s						
WRA	**Warramunga Arr**	**42.87**	**264**	P	**P**	**20 16 46.6**	**-0.7**
FORT	**Forrest**	**47.18**	**248**	P	**P**	**20 17 19.9**	**-0.1**
MTN	**Manton Dam**	**47.70**	**273**	P	**P**	**20 17 23.6**	**-0.5**
MTN				IAmb	IAmb	20 17 24.3	
	comp=Z,15nm,0.7s						
KNRA	**Kununurra**	**49.05**	**268**	P	**P**	**20 17 34.3**	**+0.2**
FAKI	**Fak Fak**	**50.48**	**285**	P	**P**	**20 17 44.5**	**-0.2**
FAKI				IAmb	IAmb	20 17 48.1	
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.30**	**264**	P	**P**	**20 17 50.9**	**+0.4**
FITZ				IAmb	IAmb	20 17 52.0	
	comp=Z,6.8nm,0.8s						
SOEI	**Soe**	**55.07**	**274**	P	**P**	**20 18 18.1**	**+0.7**
SOEI				IAmb	IAmb	20 18 28.8	
	comp=Z,31nm,0.7s						
PSA00	**Pilbara Seismi**	**55.79**	**258**	P	**P**	**20 18 22.1**	**-0.1**
PSA00				IAmb	IAmb	20 18 23.3	
	comp=Z,19nm,1.1s						
VNDA	**Vanda**	**55.93**	**185**	P	**P**	**20 18 24.2**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=359,slow=6.2,SNR=6.3						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**55.93**	**185**	P	**P**	**20 18 23.1**	**+1.0**
MBWA	**Marble Bar**	**55.98**	**259**	P	**P**	**20 18 22.9**	**-0.6**
MBWA				IAmb	IAmb	20 18 24.0	
	comp=Z,22nm,0.8s						
MMRI	**Maumere**	**57.34**	**274**	P	**P**	**20 18 32.2**	**-0.6**
MMRI				IAmb	IAmb	20 18 33.0	
	comp=Z,23nm,0.4s						
MORW	**Morawa**	**57.73**	**249**	P	**P**	**20 18 34.9**	**-0.4**
QSPA	**South Pole Qui**	**67.71**	**180**	P	**P**	**20 19 39.3**	**+0.4**
UGM	**Wanagama**	**68.43**	**270**	P	**P**	**20 19 43.2**	**-0.8**
KKM	**Kota Kinabalu**	**68.79**	**286**	P	**P**	**20 19 46.0**	**-0.3**
KKM				IAmb	IAmb	20 19 47.1	
	comp=Z,10nm,0.7s						
MJAR	**Matsushiro Arr**	**70.83**	**325**	P	**P**	**20 19 57.3**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=152,slow=5.5,SNR=7.2						
	comp=Z,1.7nm,0.8s						
TPUB	**Ta-pu**	**73.73**	**304**	P	**P**	**20 20 13.4**	**-1.5**
TPUB				IAmb	IAmb	20 20 19.4	
	comp=Z,18nm,1.0s						
SSLB	**Suanglung**	**73.76**	**305**	P	**P**	**20 20 13.6**	**-1.4**
SSLB				IAmb	IAmb	20 20 14.1	
	comp=Z,7.2nm,0.8s						
KSRS	**Korea Array**	**77.30**	**320**	P	**P**	**20 20 34.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=134,slow=5.2,SNR=3.5						
	comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-**	**77.70**	**346**	P	**P**	**20 20 36.0**	**0.0**
	comp=Z,1.9nm,0.6s,baz=119,slow=5.4,SNR=3.5						
	comp=Z,1.9nm,0.6s						
PETK	**Petropavlovsk-**	**77.70**	**346**	P	**P**	**20 20 35.6**	**-0.4**
BELA	**Belgrano 2**	**77.91**	**173**	P	P	20 20 31.3	-5.6
MAW	**Mawson**	**79.30**	**200**	P	**P**	**20 20 45.8**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=180,slow=6.0,SNR=2.4						
	comp=Z,1.1nm,0.5s						
SRIG	**Santa Rosalia**	**81.73**	**56**	P	**P**	**20 20 57.6**	**-0.2**
NVAR	**Mina Array Bea**	**83.42**	**44**	P	**P**	**20 21 07.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=221,slow=8.8,SNR=3.9						
	comp=Z,1.5nm,0.8s						
MG01	**Puerto William**	**83.75**	**147**	P	**P**	**20 21 10.2**	**+2.8**
O19K	**Port Alsworth**	**84.82**	**12**		pP	20 23 21.0	+4.9
TROLL	**Troll, Antarti**	**85.86**	**181**	P	**P**	**20 21 17.2**	**-0.4**
VNA2	**Neumayer--Watz**	**86.80**	**177**	P	**P**	**20 21 21.3**	**-0.5**
	baz=181,slow=3.0						
CMAR	**Chiang Mai Arr**	**89.32**	**290**	P	**P**	**20 21 36.2**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=130,slow=3.4,SNR=16						
	comp=Z,2.2nm,0.8s						
TXAR	**Lajitas Array**	**89.33**	**58**	P	**P**	**20 21 34.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=204,slow=8.2,SNR=6.1						
	comp=Z,0.7nm,0.8s						
MENT	**Mentasta**	**89.63**	**16**		pP	20 23 45.0	+4.6
PDAR	**Pinedale Array**	**91.36**	**44**	P	**P**	**20 21 42.5**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=238,slow=5.2,SNR=2.3						
	comp=Z,0.3nm,0.8s						
FINES	**FINESS Array B**	**137.10**	**342**	PKP	**PKPdf**	**20 27 54.3**	**-1.7**
	comp=Z,1.8nm,1.0s,baz=54,slow=3.6,SNR=4.6						
AKASG	**Malin Array Be**	**143.86**	**329**	PKP	PKPbc	20 28 06.4	-1.3
	comp=Z,1.5nm,0.4s,baz=44,slow=4.0,SNR=20						
BRTR	**Keskin Array B**	**146.90**	**309**	PKPbc	**PKPbc**	**20 28 16.3**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=135,slow=4.6,SNR=11						
BRTR				PKPab	**PKPab**	**20 28 19.4**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=60,slow=4.7,SNR=4.1						
CLL	**Collm**	**149.48**	**344**	*i* PKPbc	**PKPbc**	**20 28 22.6**	**-0.4**
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	**151.53**	**341**	PKPbc	**PKPbc**	**20 28 27.0**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=357,slow=2.0,SNR=4.4						
GERES				PKPab	**PKPab**	**20 28 38.7**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=45,slow=4.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**170.75**	**188**	PKP	**PKPdf**	**20 28 39.7**	**-2.1**
	comp=Z,14nm,0.6s,baz=179,slow=1.0,SNR=5.1						
TORD				PKPab	**PKPab**	**20 30 03.3**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=181,slow=5.0,SNR=1.6						
TORD	**Torodi Ar. Bea**	**170.75**	**188**		**PKPdf**	**20 28 37.2**	**-4.5**

MAN 02 20:20:06.2, 8°.43N×126°.65E, h5km, mb4.2, ML3.0, MS2.7, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.38**	**229⇓**	*e*P	Pb	20 20 15.1	-0.3
BIPH				*e*S	Sb	20 20 21.7	+0.2
BUTP	**Butuan**	**1.15**	**298⇑**	*e*P	Pg	20 20 27.7	-0.5
GLSP	**General Luna,**	**1.44**	**339⇑**	*e*P	Pn	20 20 29.7	-3.3
GLSP				*e*S	Sb	20 20 48.0	-4.1
MATI	**Mati**	**1.53**	**195⇑**	*e*P	Pn	20 20 32.6	-1.5
MATI				*e*S	Sn	20 20 54.5	+0.1
SCPH	**Surigao**	**1.76**	**320**	*e*P	Pn	20 20 37.6	+0.2
SCPH				*e*S	Sn	20 21 00.5	+0.3
CGP	**Cagayan de Oro**	**1.93**	**271⇑**	*e*P	Pn	20 20 40.2	+0.5
CGP				*e*S	Sb	20 21 06.0	-0.4
DDMP	**Don Marcelino,**	**2.49**	**202⇑**	*e*P	Pn	20 20 48.9	+1.4
DDMP				*e*S	Sb	20 21 21.1	-1.4
TABP	**Talibon, Bohol**	**2.82**	**306**	*e*P	Pn	20 20 51.3	-0.6
TABP				*i*S	Sn	20 21 28.9	+2.6

*NOU **02** 20:21:41.2, 37°.27S×179°.90E, h158km, MLv5.2/8, Off E. Coast of N. Island, N.Z.*

*NEIC **02** 20:21:44.1±1.9, 37°.2S±0°.1×179°.34E±0°.08, h10km±1km, mb4.7/21, Error ellipse: s-maj=18.5km s-min=8.7km az=334.0*

*WEL **02** 20:21:48.1±1.7, 37°S±6°×17°9E±°, h16km±11km, M4.6/21, ML4.9/21, MLv4.6/21, Error ellipse: s-maj=0.0km s-min=0.0km az=96.1*

*IDC **02** 20:21:54.0±1.7, 37°.03S×178°.70E, h71km±12km, mb4.2/7, mbtmp4.4/9, MS3.6/20, Error ellipse: s-maj=15.9km s-min=12.1km az=173.0*

ISC 02 20:21:50.4±1.4, 37°.17S±0°.06×179°.10E±0°.09, h51km±10km, n203, σ1°53/188, mb4.6/18, MS3.7/18, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.75**	**238**	Pn	**Pn**	**20 22 03.4**	**-1.4**
MXZ					**Sn**	**20 22 13.1**	**-2.1**
MXZ	**Matakaoa Point**	**0.75**	**238**	P	**Pn**	**20 22 03.4**	**-1.4**
MXZ				S	**Sn**	**20 22 13.3**	**-2.0**
WMGZ	**Waiomatatini S**	**0.85**	**220**	P	**Pn**	**20 22 06.4**	**+0.2**
WMGZ		

URZ	Urewera	1.92	235	P	Pn	20 22 20.5 -0.1
	524nm,0.3s,baz=348,slow=5.1,SNR=1072					
URZ				S	Sn	20 22 44.2 +0.7
	2μm,0.6s,baz=234,slow=17,SNR=43					
URZ				LR	LR	20 23 15.8
	comp=Z,590nm,20.4s,baz=128,slow=46					
URZ	Urewera	1.92	235	Pn	Pn	20 22 20.3 -0.3
URZ	Urewera	1.92	235	P	Pn	20 22 20.5 -0.1
URZ	Urewera	1.92	235	P	Pn	20 22 20.9 +0.3
MARZ	Manawahe	2.09	246	P	Pn	20 22 22.9 -0.1
EDRZ	Edgecumbe	2.10	243	P	Pn	20 22 23.4 +0.3
SNGZ	Shannon Statio	2.13	220	P	Pn	20 22 23.1 -0.4
OPRZ	Ohinepanea	2.13	251	P	Pn	20 22 23.2 -0.3
KNZ	Kokohu	2.17	211	P	Pn	20 22 22.9 -1.1
MHGZ	Mahia Peninsul	2.19	205	P	Pn	20 22 23.8 -0.6
RTZ	Ruatahuna	2.21	229	P	Pn	20 22 24.4 -0.3
MUGZ	Murupara	2.26	234	P	Pn	20 22 25.0 -0.4
MYRZ	Mayor Island	2.29	266	P	Pn	20 22 24.3 -1.3
MKRZ	Makatiti	2.31	244	P	Pn	20 22 26.5 +0.5
LIRZ	Lichensteins R	2.31	248	P	Pn	20 22 26.7 +0.6
TGRZ	Tauranga	2.33	255	P	Pn	20 22 25.7 -0.5
RRRZ	Republican Roa	2.36	240	P	Pn	20 22 26.6 0.0
OMRZ	Omania	2.36	246	P	Pn	20 22 27.2 +0.5
RAHZ	Arahi	2.36	222	P	Pn	20 22 26.2 -0.5
WHHZ	Waihua	2.41	217	P	Pn	20 22 26.7 -0.6
KARZ	Kaharoa	2.42	249	P	Pn	20 22 27.5 -0.1
HLRZ	Highlands Stat	2.43	243	P	Pn	20 22 28.1 +0.4
MTHZ	Maungataniwha	2.45	226	P	Pn	20 22 27.7 -0.2
NGRZ	Ngongotaha	2.49	247	P	Pn	20 22 29.1 +0.6
UTU	Utuhina	2.52	246	P	Pn	20 22 30.3 +1.5
PRRZ	Plateau Road	2.52	237	P	Pn	20 22 28.5 -0.4
HSRZ	Hossack Road	2.54	242	P	Pn	20 22 31.5 +2.5
HRRZ	Handcock Road	2.54	241	P	Pn	20 22 29.1 -0.1
ALRZ	Allen Road	2.59	237	P	Pn	20 22 29.4 -0.4
KMRZ	Kaimai	2.60	254	P	Pn	20 22 29.5 -0.5
NMHZ	Naumai	2.64	223	P	Pn	20 22 30.4 -0.2
ARHZ	Aropaoanui	2.67	218	P	Pn	20 22 30.2 -0.7
WPRZ	Whakapapatarin	2.69	239	P	Pn	20 22 31.4 +0.2
MRHZ	Matea Rd	2.69	231	P	Pn	20 22 30.9 -0.3
KUZ	Kuaotunu	2.74	278	P	Pn	20 22 30.4 -1.4
BKZ	Black Stump Fm	2.86	225	Pn	Pn	20 22 32.2 -1.4
BKZ	Black Stump Fm	2.86	225	P	Pn	20 22 32.8 -0.8
BKZ	Black Stump Fm	2.86	225	P	Pn	20 22 32.8 -0.8
WHTZ	Whakaora	2.90	238	P	Pn	20 22 34.7 +0.5
KUTZ	Kaahu Road	2.91	242	P	Pn	20 22 34.3 0.0
TOZ	Tahuroa Road	2.92	258	P	Pn	20 22 33.7 -0.6
HATZ	Hinemaiaia	2.93	233	P	Pn	20 22 34.3 -0.2
CKHZ	Cape Kidnapper	2.95	212	P	Pn	20 22 33.1 -1.6
MCHZ	McNeill Hill	2.96	219	P	Pn	20 22 33.9 -0.9
TLZ	Tolley Road	3.05	247	P	Pn	20 22 36.4 +0.2
GRZ	Great Barrier	3.07	286	P	Pn	20 22 35.5 -0.8
KWHZ	Kaweka Forest	3.08	222	P	Pn	20 22 35.3 -1.3
RATZ	Rangitukua	3.13	236	P	Pn	20 22 37.4 +0.2
KAHZ	Kahuranaki	3.15	213	P	Pn	20 22 35.8 -1.7
MKAZ	Moumakai	3.15	270	P	Pn	20 22 36.7 -0.8
WIAZ	Waiheke Island	3.20	276	P	Pn	20 22 37.5 -0.7
KATZ	Kakaramea	3.24	235	P	Pn	20 22 38.7 -0.1
KRHZ	Kereru	3.27	220	P	Pn	20 22 37.3 -1.9
TMVZ	Te Maari	3.31	233	P	Pn	20 22 38.9 -0.9
ETVZ	East Tongariro	3.32	233	P	Pn	20 22 38.9 -1.0
NTVZ	North Tongarir	3.32	233	P	Pn	20 22 39.0 -0.9
BHHZ	Black Hill Sta	3.33	225	P	Pn	20 22 38.8 -1.2
KRVZ	Karewarewa	3.34	234	P	Pn	20 22 39.4 -0.8
ETAZ	East Tamaki Re	3.35	272	P	Pn	20 22 40.1 -0.1
PXZ	Pawanui	3.35	211	P	Pn	20 22 37.6 -2.7
OTVZ	Oturere	3.36	233	P	Pn	20 22 39.7 -0.9
NNVZ	North Ngauruho	3.38	233	P	Pn	20 22 40.3 -0.4
WTVZ	West Tongariro	3.38	234	P	Pn	20 22 40.3 -0.5
MBAZ	Motutapu North	3.39	276	P	Pn	20 22 40.4 -0.4
SNVZ	South Ngauruho	3.39	233	P	Pn	20 22 40.0 -0.9
NGZ	Ngauruhoe	3.41	233	P	Pn	20 22 40.3 -0.9
TUVZ	Tukino	3.43	231	P	Pn	20 22 40.4 -1.1
MOVZ	Moawhango	3.46	229	P	Pn	20 22 40.3 -1.4
TWVZ	Taurewa	3.46	236	P	Pn	20 22 41.3 -0.5
ABAZ	Army Bay	3.47	278	P	Pn	20 22 41.7 -0.2
WHVZ	Whangaehu Hut	3.48	232	P	Pn	20 22 41.4 -0.9
FWVZ	Far West T-bar	3.49	232	P	Pn	20 22 41.7 -0.6
WNVZ	Wahianoa	3.50	231	P	Pn	20 22 41.3 -1.2
EPAZ	Eden Park BICE	3.50	274	P	Pn	20 22 42.7 +0.4
HBAZ	Herne Bay Bore	3.51	274	P	Pn	20 22 42.8 +0.4
PNHZ	Pukenui	3.56	219	P	Pn	20 22 40.7 -2.5
WPHZ	Waipukurau	3.56	215	P	Pn	20 22 41.0 -2.1
AWAZ	Awhitu Peninsu	3.57	270	P	Pn	20 22 43.2 0.0
MTVZ	Mangateitei	3.61	231	P	Pn	20 22 42.8 -1.1
HIZ	Hauiti	3.62	247	Pn	Pn	20 22 44.2 +0.3
HIZ	Hauiti	3.62	247	P	Pn	20 22 44.6 +0.7
HIZ	Hauiti	3.62	247	P	Pn	20 22 44.6 +0.7
WTAZ	Waiatarua	3.63	272	P	Pn	20 22 44.3 +0.2
PKVZ	Pokaka	3.64	233	P	Pn	20 22 43.7 -0.5
RVAZ	Riverhead Bore	3.64	275	P	Pn	20 22 44.4 +0.2
PRHZ	Porangahau	3.65	211	P	Pn	20 22 41.4 -2.9
TSZ	Takapari Road	3.79	220	P	Pn	20 22 43.7 -2.6
ANWZ	Angora Road	3.87	211	P	Pn	20 22 44.7 -2.6
DVHZ	Dannevirke	3.88	215	P	Pn	20 22 44.8 -2.7
VRZ	Vera Road	3.94	239	P	Pn	20 22 48.5 +0.2
WCZ	Waipu Caves	4.02	286	P	Pn	20 22 49.3 -0.1
WAZ	Wanganui	4.13	230	P	Pn	20 22 50.2 -0.8
POWZ	Post Office Ro	4.14	218	P	Pn	20 22 48.1 -3.0
BFZ	Birch Farm	4.15	212		Pn	20 22 47.6 -3.6
BFZ	Birch Farm	4.15	212	P	Pn	20 22 47.8 -3.5
BFZ	Birch Farm	4.15	212	P	Pn	20 22 47.8 -3.5
PRWZ	Pori Road	4.17	215	P	Pn	20 22 49.0 -2.5
LREZ	Lake Rotokare	4.35	237	P	Pn	20 22 55.0 +1.1
DREZ	Durham Road	4.36	241	P	Pn	20 22 56.0 +1.9
CPWZ	Castlepoint	4.36	210	P	Pn	20 22 50.6 -3.5
TIWZ	Tintock	4.39	214	P	Pn	20 22 51.6 -2.9
MRZ	Mangatainoka R	4.44	217	P	Pn	20 22 51.4 -3.7
PREZ	Palmer Road	4.46	239	P	Pn	20 22 57.8 +2.4
NEZ	North Egmont	4.47	240	P	Pn	20 22 56.9 +1.3
PKE	Pukeiti	4.51	242	P	Pn	20 22 57.6 +1.4
KHEZ	Kahui Hut	4.53	241	P	Pn	20 22 58.2 +1.7
NBEZ	Newall Road No	4.62	241	P	Pn	20 22 59.2 +1.5
TMWZ	Te Maipa	4.66	211	P	Pn	20 22 54.2 -4.0
OUZ	Omahuta	4.86	292	P	Pn	20 23 01.2 +0.3
OUZ	Omahuta	4.86	292	P	Pn	20 23 01.2 +0.3
MSWZ	Moikau Station	5.19	214		Pn	20 23 00.3 -5.2
WEL	Wellington	5.31	218	P	Pn	20 23 03.4 -3.7
SNZO	South Karori	5.36	218	P	Pn	20 23 04.5 -3.3
DUWZ	D'Urville Isla	5.43	226	P	Pn	20 23 05.4 -3.3
CMWZ	Cape Campbell	5.93	218	P	Pn	20 23 14.4 -1.3
QRZ	Quartz Range	6.29	232	P	Pn	20 23 17.1 -3.4
QRZ	Quartz Range	6.29	232	P	Pn	20 23 17.3 -3.2
THZ	Tophouse	6.63	224	P	Pn	20 23 21.6 -3.7
KHZ	Kahutara	6.77	218	P	Pn	20 23 21.6 -5.4
CTZ	Chatham Island	7.32	155	P	Pn	20 23 33.9 -0.7
RAO	Raoul Island	8.28	18	LR	LR	20 26 26.9
	comp=Z,150nm,20.2s,baz=191,slow=33					
RPZ	Rata Peaks	8.96	221	P	Pn	20 23 52.7 -4.4
	8.4nm,0.3s,baz=168,slow=1.0,SNR=19					
RPZ				S	Sn	20 25 27.5 -9.1
	38nm,0.3s,baz=24,slow=18,SNR=18					
RPZ				LR	LR	20 28 22.1
	comp=Z,459nm,20.3s,baz=45,slow=44					
DZM	Mont Dzumac	18.61	320	eLR	LR	20 30 25.1
	comp=Z,451nm,24.9s					
DZM	Mont Dzumac	18.61	320	P	P	20 26 03.2 -0.5
	3.8nm,0.7s,baz=188,slow=8.2,SNR=5.1					
DZM				LR	LR	20 31 59.3
	comp=Z,231nm,21.6s,baz=208,slow=33					
DZM	Mont Dzumac	18.61	320	P	Pn	20 26 03.6 -0.8
MSVF	Nonsavu	19.39	357	P	Pn	20 26 12.9 -0.7
	5.0nm,0.8s,baz=304,slow=23,SNR=2.5					
MSVF				LR	LR	20 32 13.3
	comp=Z,156nm,18.2s,baz=153,slow=32					
MSVF	Nonsavu	19.39	357	P	P	20 26 11.4 -0.7
KOUNC	Koumac, New Ca	20.99	318	P	P	20 26 29.2 -0.2
KOUNC				IAmb	IAmb	20 26 55.6
	comp=Z,16nm,1.3s					
RAR	Rarotonga	24.27	55	LR	LR	20 35 04.9
	comp=Z,36nm,19.6s,baz=333,slow=32					
TOO	Toolangi	26.64	259	P	P	20 27 23.8 -0.4
TOO				IAmb	IAmb	20 27 45.1
	comp=Z,23nm,1.4s					
TBI	Tubuai	30.29	72	eT	T	20 59 27.2
	comp=Z,17nm,0.3s					
STKA	Stephens Creek	31.21	268	P	P	20 28 04.5 -0.4
	comp=Z,8.7nm,1.2s,baz=96,slow=10,SNR=1.9					
STKA				LR	LR	20 40 06.5
	comp=Z,154nm,18.0s,baz=51,slow=35					
	comp=Z,8.7nm,1.2s					
STKA	Stephens Creek	31.21	268	P	P	20 28 04.6 -0.3

HNR	Honiara	32.60	323	LR	LR	20 40 43.0
	comp=Z,592nm,18.6s,baz=168,slow=35					
CTA	Charters Tower	33.26	292	LR	LR	20 40 00.1
	comp=Z,95nm,21.7s,baz=112,slow=33					
CTAO	Charters Tower	33.26	292	P	P	20 28 23.2 +0.2
CTAO				IAmb	IAmb	20 28 29.0
	comp=Z,17nm,1.2s					
PAE	Paea	33.69	63	eT	T	21 03 48.4
	comp=Z,1.8nm,0.3s					
PPT2	Papeete2	33.74	63	eLR	LR	20 37 18.0
	comp=Z,86nm,26.8s					
PPT2	Papeete2	33.74	63	eT	T	21 03 47.5
	comp=Z,2.3nm,0.3s					
TIAR	Tiarei	33.92	63	eT	T	21 03 52.5
	comp=Z,0.5nm,0.2s					
COEN	Coen	39.45	296	P	P	20 29 15.7 -0.1
COEN				IAmb	IAmb	20 29 16.5
	comp=Z,23nm,0.9s					
PMG	Port Moresby	39.96	306	LR	LR	20 43 48.4
	comp=Z,65nm,18.8s,baz=146,slow=33					
AS31	Alice Springs	40.87	276	P	P	20 29 26.6 -0.9
ASAR	Alice Springs	40.87	276	P	P	20 29 26.6 -0.8
	comp=Z,6.4nm,0.6s,baz=120,slow=8.1,SNR=129					
ASAR				PcP	PcP	20 31 28.0 +0.6
	comp=Z,0.6nm,0.6s,baz=135,slow=3.6,SNR=1.2					
ASAR				ScP	ScP	20 35 09.3 -3.4
	comp=Z,0.6nm,0.7s,baz=120,slow=3.7,SNR=5.6					
ASAR				S	S	20 35 31.1 -4.2
	comp=Z,1.4nm,0.8s,baz=126,slow=15,SNR=9.9					
ASAR				LR	LR	20 45 58.4
	comp=Z,86nm,18.9s,baz=156,slow=36					
	comp=Z,6.4nm,0.6s					
VNDA	Vanda	41.14	186	P	P	20 29 32.2 +3.2
	comp=Z,0.3nm,0.6s,baz=357,slow=7.5,SNR=3.0					
VNDA				LR	LR	20 43 44.4
	comp=Z,26nm,18.2s,baz=10,slow=32					
WR0	Warramunga Arr	42.31	281	P	P	20 29 38.4 -0.9
WR0				IAmb	IAmb	20 29 56.1
	comp=Z,8.2nm,0.9s					
FORT	Forrest	42.39	263	P	P	20 29 38.9 -0.9
WRAB	Tennant Creek	42.47	281	P	P	20 29 39.8 -0.8
WRAB				IAmb	IAmb	20 29 40.3
	comp=Z,11nm,0.7s					
WRA	Warramunga Arr	42.48	281	P	P	20 29 39.7 -0.9
	comp=Z,9.5nm,0.7s,baz=122,slow=7.6,SNR=108					
WRA				PcP	PcP	20 31 33.1 +0.4
	comp=Z,1.5nm,0.7s,baz=113,slow=3.1,SNR=1.4					
WRA				ScP	ScP	20 35 15.8 -3.4
	comp=Z,0.7nm,0.9s,baz=119,slow=3.7,SNR=1.6					
WRA				S	S	20 35 54.2 -5.0
	comp=Z,1.7nm,1.0s,baz=122,slow=14,SNR=5.6					
WRA				LR	LR	20 47 54.2
	comp=Z,108nm,18.1s,baz=196,slow=37					
	comp=Z,9.5nm,0.7s					
WRA	Warramunga Arr	42.48	281	P	P	20 29 39.8 -0.9
CASY	Casey	48.07	210	P	P	20 30 24.7 +0.4
KNRA	Kununurra	49.26	282	P	P	20 30 33.2 -0.9
KNRA				IAmb	IAmb	20 30 58.7
	comp=Z,20nm,1.1s					
FITZ	Fitzroy Crossi	50.35	277	LR	LR	20 52 35.1
	comp=Z,88nm,18.0s,baz=119,slow=37					
FITZ	Fitzroy Crossi	50.35	277	P	P	20 30 41.9 -0.5
FITZ				IAmb	IAmb	20 30 42.7
	comp=Z,7.9nm,0.7s					
MORW	Morawa	52.59	259	P	P	20 30 57.2 -1.8
QSPA	South Pole Qui	52.95	180	P	P	20 31 04.8 +3.4
	comp=Z,7.8nm,0.9s,baz=46,slow=1.0,SNR=26					
QSPA				LR	LR	20 50 25.8
	comp=Z,45nm,19.5s,baz=40,slow=32					
	comp=Z,7.8nm,0.9s					
MBWA	Marble Bar	53.44	270	P	P	20 31 03.2 -2.1
SOEI	Soe	56.31	284	P	P	20 31 27.4 +1.1
SOEI				IAmb	IAmb	20 31 39.1
	comp=Z,23nm,1.2s					
BATI	Baumata	56.50	284	LR	LR	20 58 00.0
	comp=Z,260nm,18.3s,baz=250,slow=39					
SIJI	Sorong	56.96	298	P	P	20 31 30.4 -0.3
	comp=Z,4.4nm,0.7s,baz=208,slow=22,SNR=2.5					
	comp=Z,4.4nm,0.7s					
MMRI	Maumere	58.57	284	P	P	20 31 41.7 -0.4
GUMO	Guam	59.89	321	LR	LR	20 53 56.3
	comp=Z,17nm,21.9s,baz=182,slow=32					
KAPI	Kappang	62.75	285	LR	LR	21 00 40.6
	comp=Z,67nm,18.1s,baz=160,slow=37					
BELA	Belgrano 2	63.41	172	P	P	20 32 13.2 -0.8
BELA				IAmb	IAmb	20 32 16.9
	comp=Z,7.1nm,0.9s					
MAW	Mawson	65.14	202	LR	LR	20 59 59.8
	comp=Z,32nm,18.3s,baz=116,slow=35					
LEM	Lembang	71.16	276	LR	LR	21 08 23.4
	comp=Z,68nm,18.0s,baz=180,slow=39					
SNAA	Sanae	71.45	179	P	P	20 33 06.0 +1.0
SNAA				IAmb	IAmb	20 33 28.1
	comp=Z,3.2nm,1.1s					
H03S2	Juan Fernandez	78.72	124	T	T	22 00 15.4
	baz=231					
H03S1	Juan Fernandez	78.73	124	T	T	22 00 31.3
	baz=231					
H03S3	Juan Fernandez	78.74	124	T	T	22 00 33.6
	baz=231					
H03N3	Juan Fernandez	78.96	124	T	T	22 00 31.9
	baz=234,slow=72,SNR=93					
H03N2	Juan Fernandez	78.96	124	T	T	22 00 37.1
	baz=234,slow=72,SNR=90					
H03N1	Juan Fernandez	78.97	124	T	T	22 00 35.4
	baz=234,slow=72,SNR=100					
PLCA	Paso Flores	79.63	134	P	P	20 33 55.7 +3.3
	comp=Z,1.8nm,0.7s,baz=232,slow=5.7,SNR=12					
	comp=Z,1.8nm,0.7s					
CMAR	Chiang Mai Arr	93.42	290	P	P	20 35 00.3 -0.1
	comp=Z,1.2nm,0.7s,baz=157,slow=3.4,SNR=10					
	comp=Z,1.2nm,0.7s					
PZH	PanZhiHua	96.34	298	P	P	20 35 14.6 +0.8
LPAZ	La Paz	97.42	117	LR	LR	21 09 05.5
	comp=Z,712nm,21.2s,baz=308,slow=29					
MA2	Magadan	99.21	346	LR	LR	21 14 01.5
	comp=Z,27nm,20.1s,baz=165,slow=32					
HHC	Hu-ho-hao-te	99.23	315	eP	Pdif	20 35 26.0 -0.4
WMQ	Urumqi	115.42	307	eP	PKiKP	20 40 26.6 +0.5
ARCES	ARCESS Array B	144.57	344	PKP	PKPab	20 41 18.2 -0.4
	comp=Z,1.2nm,0.5s,baz=36,slow=3.8,SNR=11					
DBIC	Dimbokro	149.43	172	PKPbc	PKiKP	20 41 35.5 +0.1
	comp=Z,3.2nm,0.6s,baz=197,slow=1.1,SNR=4.3					
FINES	FINESS Array B	150.42	334	PKPbc	PKPbc	20 41 34.7 -0.5
	comp=Z,3.1nm,0.7s,baz=66,slow=4.7,SNR=24					
BRTR	Keskin Array B	152.93	286	PKPbc	PKPbc	20 41 41.0 -0.8
	comp=Z,1.0nm,0.9s,baz=98,slow=4.4,SNR=5.9					
AKASG	Malin Array Be	154.64	312	PKPbc	PKiKP	20 41 46.3 +1.3
	comp=Z,0.6nm,0.6s,baz=57,slow=3.5,SNR=2.1					
NOA	NORSAR Array B	154.91	346	PKPbc	PKPbc	20 41 45.0 -0.3
	comp=Z,0.6nm,1.0s,baz=16,slow=3.7,SNR=1.6					
TORD	Torodi Ar. Bea	155.97	186	PKPab	PKPab	20 42 06.8 +0.4
	comp=Z,13nm,0.6s,baz=174,slow=3.6,SNR=5.2					

DJA 02 20:36:04.1±0.2, 3°S±2°×12°8E±°, h10km, M3.6/14, mb4.0/5, mB4.8/2, MLv3.5/14, Mw(mB)4.1/2, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.93	171	P	Pg	20 36 21.3	-0.8
MSAI	Masohi	1.05	124	P	Pg	20 36 24.4	0.0
MSAI				S	Sn	20 36 40.6	+0.9
NLAI	Namlea	1.06	243	P	Pb	20 36 24.6	0.0
NLAI				S	Sn	20 36 39.7	-0.2
LBMI	Labuha	2.18	345	P	Pn	20 36 41.8	+1.4
LBMI				S	Sn	20 37 08.0	+0.5
SANI	Sanana	2.18	289	P	Pn	20 36 39.5	-0.9
SANI				S	Sn	20 37 05.1	-2.4
BNDI	Bandanaira	2.55	133	P	Pn	20 36 46.0	+0.5
TNTI	Ternate	3.57	349	P	Pn	20 36 59.6	0.0
FAKI	Fak Fak	4.20	92	P	Pn	20 37 07.3	-0.9
LUWI	Luwuk	5.54	288	P	Pn	20 37 26.5	-0.3
	0.1nm1μm12nm,0.6s						
APSI	Ampana	6.66	286	P	Pn	20 37 43.4	+1.4
	0.2nm588nm39nm,0.6s						
MRSI	Marisa	6.90	298	P	Pn	20 37 44.1	-1.3

THE 02 20:39:59.6, 38°20N×20°44E, h14km±1km, ML1.1/6, Error ellipse: s-maj=1.2km s-min=0.6km az=230.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.06	349	P	Pg	20 40 02.1	-0.2
KEF4				S	Sg	20 40 04.3	+0.2
	512nm,0.1s						
DMLN	Damoulianata-K	0.07	309	P	Pg	20 40 02.3	-0.1
DMLN				S	Sg	20 40 04.5	+0.2
	70nm,0.1s						
KEF3	Kipouria, Keph	0.07	276	P	Pg	20 40 02.2	-0.2
KEF3				S	Sg	20 40 04.3	0.0
	660nm,0.1s						
VLS	Valsamata	0.12	99	P	Pg	20 40 02.7	-0.2
VLS				S	Sg	20 40 05.2	-0.1
	130nm,0.0s						
PSDA	Pessada-Kefalo	0.14	126	P	Pg	20 40 03.2	0.0
PSDA				S	Sg	20 40 06.1	+0.5
FSK	Fiskardo	0.28	20	P	Pg	20 40 05.8	+0.3
FSK				S	Sg	20 40 10.1	+0.7
	25nm,0.2s						
EVGI	Lefkada island	0.46	22	P	Pg	20 40 08.4	-0.3
EVGI				S	Sg	20 40 15.1	+0.3
	15nm,0.1s						

ATH 02 20:40:58.5, 37°47N×20°52E, h10km±31km, ML1.6/2, Error ellipse: s-maj=31.6km s-min=1.6km az=0.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.34	47	P	Pg	20 41 04.7	-0.6
LTHK				S	Sg	20 41 09.8	-0.1
LTHK				AML	AML	20 41 11.1	
	comp=N,311μm,0.3s						
LTHK				AML	AML	20 41 11.8	
	comp=E,411μm,0.2s						
PSDA	Pessada-Kefalo	0.64	5	P	Pg	20 41 10.6	-0.3
VLS	Valsamata	0.70	5	P	Pg	20 41 11.4	-0.7
VLS				S	Sb	20 41 22.3	-0.3
VLS				AML	AML	20 41 27.8	
	comp=N,86μm,0.3s						
VLS				AML	AML	20 41 32.5	
	comp=E,79μm,0.4s						
FSK	Fiskardo	0.98	2	P	Pg	20 41 17.3	-0.2
FSK				S	Sb	20 41 30.6	-0.1
DRO	Drossia	1.06	63	P	Pg	20 41 17.6	-1.2
DRO				S	Sb	20 41 33.2	+0.3
EVGI	Lefkada island	1.15	5	P	Pb	20 41 19.6	-0.9
ITM	Ithomi	1.16	104	P	Pb	20 41 20.3	-0.3
ITM				S	Sg	20 41 36.0	+0.2

*IDC **02** 20:59:53.7±1.0, 8°.56S×80°.56W, h0km, mb3.9/7, mbtmp4.0/12, ML3.8/5, MS4.0/35, Error ellipse: s-maj=24.2km s-min=17.8km az=65.0*

*NEIC **02** 20:59:55.6±2.5, 8°.55S±0°.07×80°.45W±0°.08, h10km±1km, mb4.6/28, Error ellipse: s-maj=14.0km s-min=10.3km az=239.0*

*VAO **02** 20:59:56.1±0.7, 8°.52S×80°.37W, h10km, mb4.6*

*GCMT **02** 20:59:57.6±0.4, 8°.53S±0°.03×80°.74W±0°.03, h22km±1km, MW4.9/84, Moment Tensor Solution. s23,c25; s84,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.37±.20; $M_{\theta\theta}$-0.38±.10; $M_{\phi\phi}$-1.99±.12; $M_{r\theta}$-0.17±.15; $M_{\phi\theta}$0.42±.07; $M_{\theta r}$-2.36±.22; Best double couple: $M_0$3.24600×10^{16} NP1:ϕ_s179.00000°, δ68.00000°, λ98.00000°. NP2: ϕ_s338.00000°, δ23.00000°, λ71.00000°. Principal axes: T 3.4310, Plg66.0000°, Azm102.0000°; N -0.3680, Plg7.0000°, Azm356.0000°; P -3.0610, Plg23.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 20:59:55.1±0.5, 8°57S±0°.05×80°55W±0°.07, h10km, n120, σ1$39/81, mb4.5/15, MS4.0/37, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.56	57	Pn	Pn	21 00 38.1	+1.0
	34nm,0.3s,baz=262,slow=5.3,SNR=65						
ATAH				Sn	Sn	21 01 11.4	+2.8
	23nm,0.3s,baz=4.9,slow=16,SNR=6.7						
	60nm,0.3s						
MCRA	Macar, Loja	4.21	8		Pn	21 00 57.5	-2.0
MCRA				Sn	Sn	21 01 44.5	-4.3
NNA	Nana	4.99	133	Pn	Pn	21 01 08.4	-1.8
	2.1nm,0.3s,baz=324,slow=8.4,SNR=6.4						
NNA				Sn	Sn	21 02 06.5	-1.5
	19nm,0.3s,baz=81,slow=16,SNR=6.7						
	6.3nm,0.3s						
NNA	Nana	4.99	133		Pn	21 01 07.5	-2.6
ARNL	Arenillas	5.01	6	Pn	Pn	21 01 11.3	+0.9
ARNL				Sn	Sn	21 02 07.8	-0.6
BOSC	San Juan Bosco	5.75	21		Pn	21 01 20.6	-0.2
CZSB	Cruzeiro do Su	7.81	84	eP	Pn	21 01 48.1	-0.9
SLOR	San Lorenzo -	8.05	15		Pn	21 01 53.1	+0.4
OTAV	Otavalo	8.99	14	Pn	Pn	21 02 06.0	+0.5
OTAV	Otavalo	8.99	14	eP	Pn	21 02 05.3	-0.3
GCUF	Volcan Galeras	10.24	18	eP	Pn	21 02 24.0	+1.3
PTLC	Puerto Leguiza	10.40

MALB	Monte Alegre	27.00	77	eP		P		21 05 36.9	-0.7
ANTJ	Antonio Joao (	27.13	122	eP		P		21 05 38.9	+0.2
CPUP	Villa Florida	28.25	132	P		P		21 05 48.8	+0.2
	comp=Z,1.6nm,0.8s,baz=327,slow=8.6,SNR=3.0								
CPUP				LR		LR		21 18 48.9	
	comp=Z,286nm,18.2s,baz=322,slow=40								
	comp=Z,1.6nm,0.8s								
SNDB	Serra Nova Dou	28.98	99	eP		P		21 05 54.3	-1.0
SJG	San Juan	30.08	28	LR		LR		21 19 28.6	
	comp=Z,397nm,20.9s,baz=184,slow=39								
BDFB	Brasília	32.55	106	LR		LR		21 19 47.8	
	comp=Z,273nm,18.8s,baz=170,slow=37								
IPMB	Ipameri, GO	32.79	110	eP		P		21 06 28.0	-0.9
RPN	Rapa Nui	32.90	232	LR		LR		21 16 29.3	
	comp=Z,355nm,19.2s,baz=42,slow=30								
PLCA	Paso Flores	33.25	166	P		P		21 06 34.2	+1.6
	comp=Z,1.1nm,0.8s,baz=338,slow=11,SNR=4.4								
	comp=Z,1.1nm,0.8s								
PLCA	Paso Flores	33.25	166	eP		P		21 06 34.3	+1.6
NBAN	Anadia - AL	43.71	95	eP		P		21 07 59.9	-1.0
TXAR	Lajitas Array	43.77	330	P		P		21 08 01.8	+0.6
	comp=Z,0.2nm,0.8s,baz=134,slow=9.1,SNR=2.2								
	comp=Z,0.2nm,0.8s								
RCBR	Riachuelo	44.36	90	LR		LR		21 28 01.7	
	comp=Z,283nm,19.0s,baz=52,slow=38								
X37A	Clayton	45.16	343	P		P		21 08 12.2	+0.1
MGMO	Mountain Grove	46.79	347	P		P		21 08 26.3	+1.3
R40A	Maddies Statio	47.88	348	P		P		21 08 32.8	-0.7
R40A				IAmb		IAmb		21 08 46.2	
	comp=Z,6.6nm,1.1s								
SDCO	Great Sand Dun	51.64	335	P		P		21 09 01.9	-0.5
PV15	Paradox Valley	53.44	333	P		P		21 09 16.3	+0.5
PV15				IAmb		IAmb		21 09 24.9	
	comp=Z,12nm,1.2s								
PFO	Pinyon Flats O	54.06	323	LR		LR		21 29 55.6	
	comp=Z,72nm,19.9s,baz=186,slow=33								
HWUT	Hardware Ranch	57.47	333	P		P		21 09 44.9	+0.2
HWUT				IAmb		IAmb		21 09 53.1	
	comp=Z,7.6nm,1.0s								
PDAR	Pinedale Array	57.53	335	P		P		21 09 44.8	-0.4
	comp=Z,0.3nm,0.4s,baz=128,slow=8.1,SNR=5.1								
PDAR				LR		LR		21 34 13.8	
	comp=Z,70nm,18.7s,baz=140,slow=36								
	comp=Z,0.3nm,0.4s								
ELK	Elko	58.56	330	LR		LR		21 33 52.3	
	comp=Z,146nm,19.0s,baz=100,slow=35								
ELK	Elko	58.56	330	P		P		21 09 53.0	+0.6
ELK				IAmb		IAmb		21 10 01.3	
	comp=Z,6.3nm,1.3s								
TAOE	Nuku Hiva Isla	58.85	265	eLR		LR		21 27 13.4	
	comp=Z,203nm,23.4s								
YHL	Hebgen Lake	59.91	335	P		P		21 10 02.2	+0.5
HLID	Hailey	60.31	332	P		P		21 10 02.7	-1.6
HLID				IAmb		IAmb		21 10 14.7	
	comp=Z,3.7nm,1.2s								
YBH	Yreka Blue Hor	63.22	326	LR		LR		21 34 26.3	
	comp=Z,41nm,18.3s,baz=156,slow=33								
TBI	Tubuai	67.33	248	eLR		LR		21 31 16.3	
	comp=Z,228nm,27.0s								
BBTS	Babate	67.53	70	LR		LR		21 39 27.5	
	comp=Z,135nm,19.9s,baz=252,slow=35								
PPT2	Papeete2	67.54	255	eLR		LR		21 31 19.7	
	comp=Z,296nm,26.2s								
PPT	Papeete	67.54	255	LR		LR		21 32 48.0	
	comp=Z,107nm,18.5s,baz=115,slow=29								
VNA3	Neumayer Olymp	75.83	162	P		P		21 11 41.4	+0.2
VNA1	Neumayer--Stat	76.13	161	P		P		21 11 43.4	+0.5
VNA2	Neumayer--Watz	76.47	161	P		P		21 11 44.2	-0.7
	baz=277,slow=5.0								
RAR	Rarotonga	76.95	250	LR		LR		21 38 39.5	
	comp=Z,69nm,20.0s,baz=166,slow=30								
DBIC	Dimbokro	76.96	81	LR		LR		21 43 24.8	
	comp=Z,87nm,19.7s,baz=245,slow=34								
SNAA	Sanae	78.06	162	P		P		21 11 53.6	-0.2
SNAA	Sanae	78.06	162	P		P		21 11 53.0	-0.8
SNAA				IAmb		IAmb		21 12 04.0	
	comp=Z,11nm,1.4s								
SFJD	Kangerlussuaq	78.42	12	LR		LR		21 46 21.4	
	comp=Z,48nm,21.0s,baz=192,slow=36								
RSD	Rainshed	78.65	292	P		P		21 11 57.8	-0.4
KOWA	Kowa	79.26	73	LR		LR		21 45 19.6	
	comp=Z,67nm,20.7s,baz=305,slow=34								
KOWA	Kowa	79.26	73	P		P		21 11 59.7	-1.8
TROLL	Troll, Antarti	79.77	162	P		P		21 12 02.2	-1.1
QSPA	South Pole Qui	81.54	180	P		P		21 12 13.6	+0.7
QSPA				IAmb		IAmb		21 12 24.2	
	comp=Z,9.2nm,1.1s								
MDT	Midelt	82.96	55	LR		LR		21 47 53.1	
	comp=Z,39nm,18.2s,baz=284,slow=35								
TOA0	Torodi Ar. Sit	84.46	76	P		P		21 12 26.9	-2.0
TORD	Torodi Ar. Bea	84.46	76	P		P		21 12 27.9	-0.9
	comp=Z,16nm,0.6s,baz=270,slow=3.0,SNR=5.4								
TORD				LR		LR		21 48 35.6	
	comp=Z,74nm,21.6s,baz=224,slow=35								
INK	Inuvik	85.18	343	LR		LR		21 52 50.1	
	comp=Z,106nm,19.4s,baz=160,slow=37								
BORG	Borgarnes	85.21	22	LR		LR		21 48 45.0	
	comp=Z,48nm,20.3s,baz=183,slow=34								
ESDC	Sonseca Array	85.24	49	P		P		21 12 33.0	+0.6
	comp=Z,1.7nm,0.9s,baz=272,slow=5.1,SNR=10.0								
ESDC				LR		LR		21 49 17.6	
	comp=Z,69nm,18.4s,baz=251,slow=35								
	comp=Z,1.7nm,0.9s								
ESDC	Sonseca Array	85.24	49	P		P		21 12 30.7	-1.7
VNDA	Vanda	87.44	191	LR		LR		21 43 42.5	
	comp=Z,52nm,19.6s,baz=120,slow=30								
ILAR	Eielson Array	87.91	337	LR		LR		21 54 00.9	
	comp=Z,47nm,18.1s,baz=78,slow=37								
EKA	Eskdalemuir Ar	89.89	34	LR		LR		21 49 18.1	
	comp=Z,37nm,20.1s,baz=262,slow=33								
JMIC	Jan Mayen	92.28	18	LR		LR		21 53 03.7	
	comp=Z,36nm,19.6s,baz=283,slow=35								
URZ	Urewera	94.31	230	LR		LR		21 48 28.1	
	comp=Z,142nm,18.1s,baz=214,slow=31								
TSUM	Tsumeb	94.81	110	LR		LR		21 54 48.0	
	comp=Z,91nm,19.3s,baz=208,slow=35								
SUR	Sutherland	94.93	124	LR		LR		21 53 26.2	
	comp=Z,63nm,19.4s,baz=286,slow=34								
DAVOX	Davos/Dischmat	96.46	44	LR		LR		21 50 43.1	
	comp=Z,42nm,20.3s,baz=264,slow=32								
NOA	NORSAR Array B	98.28	29	LR		LR		21 55 14.4	
	comp=Z,45nm,20.7s,baz=275,slow=34								
BOSA	Boshof	99.58	121	LR		LR		21 56 32.1	
	comp=Z,55nm,19.0s,baz=207,slow=34								
SPITS	Spitsbergen Ar	99.75	12	LR		LR		22 02 41.6	
	comp=Z,36nm,18.5s,baz=208,slow=38								
DZM	Mont Dzumac	107.65	244	eLR		LR		21 49 59.0	
	comp=Z,144nm,25.4s								
ZALV	Zalesovo Beam	133.23	12	PKP		PKPdf		21 19 11.5	+0.2
	comp=Z,1.2nm,0.7s,baz=336,slow=1.7,SNR=6.7								
ASAR	Alice Springs	133.53	226	PKP		PKPdf		21 19 12.4	-0.4
	comp=Z,0.4nm,0.7s,baz=87,slow=2.0,SNR=4.3								
WRA	Warramunga Arr	135.48	230	PKP		PKPdf		21 19 15.2	-1.4
	comp=Z,0.8nm,1.0s,baz=119,slow=2.0,SNR=3.8								
MKAR	Makanchi Array	139.18	18	PKP		PKPdf		21 19 22.7	+0.1
	comp=Z,0.5nm,0.7s,baz=292,slow=3.1,SNR=4.7								

*JMA **02** 21:00:31.5±0.2, 24°.3N±0°.9×122°.0E±0°.7, h42km±4km, MV2.6/8, TAIWAN REGION*
*TAP **02** 21:00:31.6, 24°.43N×122°.01E, h20km, ML3.1, B*
ISC 02 21:00:31.5±1.0, 24°.42N±0°.02×122°.05E±0°.02, h20km±4km, n94, σ0°48/123, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.26	316	P		Pb	21 00 37.3	-0.2
	baz=324						
TWC				*i* S		Sb	21 00 40.7	-0.8
	baz=324						
EGS		0.44	346	P		Pb	21 00 40.8	+0.2
	baz=350						
EGS				*e*S		Sg	21 00 46.3	-0.3
	baz=350						
ILA	Ilan	0.44	321	*i* P		Pb	21 00 40.7	+0.1
	baz=323						
ILA				S		Sg	21 00 46.9	+0.1
	baz=323						
TWE	Neicheng	0.46	311	*i* P		Pg	21 00 40.7	-0.3
	baz=315						
TWE				*e*S		Sg	21 00 47.0	-0.3
	baz=315						
ETL	Fush Village	0.47	236	*i* P		Pg	21 00 40.9	-0.2
	baz=235						
ETL				S		Sb	21 00 47.9	+0.2
	baz=235						
NTC	Toucheng	0.48	335	*i* P		Pg	21 00 41.3	0.0
	baz=341						
NTC				*e*S		Sg	21 00 47.2	-0.6
	baz=341						
NACB	Ninganchiao	0.48	239	*e*P		Pg	21 00 40.8	-0.5
	baz=235						
NACB				*e*S		Sb	21 00 48.1	+0.1
	baz=235						
LATG	Datong	0.49	284	*e*P		Pg	21 00 41.1	-0.4
	baz=285						
LATG				S		Sg	21 00 47.9	-0.4
	baz=285						
ENTT	Nioudou	0.49	296	*e*P		Pb	21 00 40.2	-1.3
	baz=298						
TWD	Chiawan	0.54	231	*i* P		Pb	21 00 42.0	-0.1
	baz=229						
TWD				*e*S		Sg	21 00 49.5	-0.1
	baz=229						
FUSB	Fushanzhiwuyua	0.54	309	P		Pb	21 00 42.3	0.0
	baz=312						
FUSB				*e*S		Sb	21 00 49.2	-0.5
	baz=312						
TIPB	Shuangxi	0.58	340	*e*P		Pg	21 00 43.3	0.0
	baz=344						
TIPB				*i* S		Sb	21 00 50.5	-0.5
	baz=344						
TWB1	Santiao Chiao	0.59	354	*i* P		Pg	21 00 43.4	+0.1
	baz=352						
HWA	Hwalien	0.60	223	*e*P		Pg	21 00 44.0	+0.5
	baz=218						
YHNB	Yeheng	0.66	292	*e*P		Pb	21 00 44.3	-0.1
	baz=293						
YHNB				*e*S		Sb	21 00 52.8	-0.5
	baz=293						
NSK	Sanguang	0.68	292	*e*P		Pb	21 00 43.5	-1.2
	baz=293						
ETM	Tongmen	0.68	228	P		Pg	21 00 44.8	-0.2
	baz=227						
TEYL	Yanliau Villag	0.69	217	*e*P		Pn	21 00 45.9	-0.2
	baz=215						
SXI1	Grass Mountain	0.69	347	*e*P		Pg	21 00 45.3	+0.1
	baz=355						
SXI1				*e*S		Sb	21 00 54.1	+0.1
	baz=355						
NWF	Wu-fen Shan	0.69	339	P		Pg	21 00 45.6	+0.4
	baz=335						
NWF				S		Sg	21 00 54.5	0.0
	baz=335						
WFSB	Wu-fen Shan	0.69	339	*e*P		Pg	21 00 45.6	+0.4
	baz=335						
WFSB				*e*S		Sg	21 00 54.6	+0.2
	baz=335						
TWA	Mucha	0.70	323	P		Pg	21 00 45.3	0.0
	baz=333						
TWA				*e*S		Sb	21 00 54.3	0.0
	baz=333						
NHDH	Xindian Distri	0.72	319	*e*P		Pn	21 00 46.6	+0.1
	baz=311						
NHDH				*i* S		Sb	21 00 55.0	+0.2
	baz=311						
TATO	Taipei	0.75	317	P		Pg	21 00 46.2	-0.1
	baz=312						
TATO				*i* S		Sb	21 00 55.8	0.0
	baz=312						
FUSS	Fushou	0.76	257	*e*P		Pb	21 00 45.8	-0.4
	baz=262						
FUSS				*e*S		Sb	21 00 56.1	0.0
	baz=262						
TNOU	National Taiwa	0.77	341	*e*P		Pg	21 00 46.7	+0.1
	baz=336						
WHF	Hehuan Shan	0.77	249	*e*P		Pb	21 00 46.0	-0.5
	baz=253						
WHF				*e*S		Sg	21 00 56.8	-0.2
	baz=253						
TAP	Taipei	0.79	321	*e*P		Pg	21 00 47.0	0.0
	baz=317						
TAP				*e*S		Sg	21 00 57.9	+0.3
	baz=317						
TWT	Tachien	0.81	258	P		Pg	21 00 47.3	-0.2
	baz=261						
TWT				*e*S		Sg	21 00 58.7	+0.3
	baz=261						
JYNG	Yonagunijimaku	0.82	88	P		Pn	21 00 47.9	0.0
JYNG				S		Sn	21 00 59.3	-0.1
ESL	Shilin	0.83	223	P		Pg	21 00 47.4	-0.3
	baz=219						
TDCB	Techi	0.83	259	*e*S		Sb	21 00 58.2	+0.1
	baz=257						
YM01	YM01	0.84	329	*e*P		Pn	21 00 48.5	+0.2
	baz=332						
YM01				*e*S		Sb	21 00 58.9	+0.4
	baz=332						
YM08	YM08	0.87	331	*e*P		Pg	21 00 48.4	-0.2
	baz=333						
NFF	Wufeng Townshi	0.88	284	*e*P		Pb	21 00 47.4	-0.7
	baz=284						
YOJ	Yonaguni jima	0.88	87	P		Pg	21 00 48.4	-0.2
	baz=80						
YOJ	Yonaguni jima	0.88	87	P		Pn	21 00 48.7	0.0
YOJ				*e*S		Sn	21 01 00.9	+0.1
CHGB	Renai	0.88	246	P		Pb	21 00 48.3	+0.1
	baz=249						
CHGB				*e*S		Sg	21 00 60.0	-0.4
	baz=249						
TWS1	Kuangyinshan	0.89	320	*e*P		Pn	21 00 49.4	+0.5
	baz=322						
ANP	Anpu	0.90	328	*e*P		Pg	21 00 49.1	0.0
	baz=330						
NTST	Danshui	0.92	324	*e*P		Pg	21 00 49.8	+0.4
	baz=325						
OWD	Renai	0.92	240	P		Pb	21 00 49.0	+0.1
	baz=229						
NJD	Zhudong	0.93	290	*e*P		Pb	21 00 49.1	+0.2
	baz=290						
EGFH	Guangfu	0.94	217	*e*P		Pg	21 00 49.8	-0.1
	baz=232						
WUSB	Renai	0.95	244	P		Pb	21 00 49.5	+0.1
	baz=233						
NCU	National Centr	0.96	305	*e*P		Pg	21 00 50.9	+0.7
	baz=306						
LIOB	Emei	0.97	284	P		Pn	21 00 50.1	+0.1
	baz=283						
NSTT	Nanjuang	0.98	283	*e*P		Pg	21 00 50.4	-0.1
	baz=282						
WHP	Taichung City	1.02	262	*e*P		Pg	21 00 51.1	-0.2
	baz=261						
SBCB	Hsinchu	1.04	291	*e*P		Pg	21 00 51.9	+0.2
	baz=291						
WPL	Puli Township	1.08	248	*e*P		Pn	21 00 51.8	+0.3
	baz=234						
NHW	Xinwu Township	1.08	303	*e*P		Pg	21 00 52.4	-0.1
	baz=303						
HGSD	Ruisui	1.09	212	*e*P		Pg	21 00 52.4	-0.2
	baz=195						
DPDB	Guoxing	1.10	250	*e*P		Pg	21 00 52.3	-0.5
	baz=236						
WCS	Beigang Elemen	1.10	251	*e*P		Pn	21 00 51.5	-0.3
	baz=256						
EHY	Hungye	1.13	216	*e*P		Pg	21 00 52.9	-0.5
	baz=213						
NMLH	Miaoli	1.15	276	*e*P		Pg	21 00 54.5	+0.7
	baz=275						
NSY	Sanyi	1.18	270	*e*P		Pg	21 00 54.0	-0.3
	baz=282						
SMLT	Sun Moon Lake	1.18	243	*e*P		Pg	21 00 54.0	-0.3
	baz=229						
SSLB	Suanglung	1.18	238	*e*P		Pb	21 00 53.8	+0.5
	baz=235						
PCYT	Pengchaiyu	1.20	1	*e*P		Pn	21 00 52.8	-0.4
	baz=4.0						
TYC	Yuchr	1.21	245	*e*P		Pg	21 00 54.3	-0.5
	baz=232						
YULB	Yu-li	1.23	214	*e*P		Pb	21 00 54.2	+0.1
	baz=211						
EYUL	Yuli	1.26	212	*e*P		Pb	21 00 55.2	+0.6
	baz=225						
TWF1	Yuli	1.27	213	*e*P		Pn	21 00 54.3	+0.2
	baz=224						
TCU	Taichung	1.28	258	*e*P		Pg	21 00 56.1	-0.2
	baz=256						
WWF	Wufeng	1.29	253	*e*P		Pb	21 00 55.7	+0.6
	baz=251						
WJS	Zhushan	1.35	244	*e*P		Pb	21 00 57.3	-0.2
	baz=227						
WNT	Mingjian	1.36	247	*e*P		Pg	21 00 57.8	0.0
	baz=244						
YUS	Yu-Shan	1.37	228	*e*P		Pb	21 00 57.1	+0.4
	baz=224						
FULB	Fuli	1.40	210	*e*P		Pb	21 00 57.4	+0.4
	baz=221						
ALS	Alishan	1.46	232	*e*P		Pb	21 00 58.5	+0.4
	baz=229						
IRIF	Iriomote-Funau	1.53	93	P		Pn	21 00 57.7	0.0
IRIF				S		Sn	21 01 17.0	-0.1
WDLH	Douliu	1.56	243	*e*P		Pb	21 01 00.5	+0.7
	baz=240						
EDH	Donghe	1.60	206	*e*P		Pb	21 01 00.3	0.0
	baz=189						
WRL	Guolierlin Hig	1.61	252	*e*P		Pn	21 00 59.6	+0.8
	baz=249						
WCKO	Fanlu	1.65	234	*e*P		Pb	21 01 01.5	+0.3
	baz=231						
STYH	Taoyuan	1.71	223	*e*P		Pn	21 01 00.6	+0.5
	baz=208						
TPUB	Ta-pu	1.71	230	*e*P		Pb	21 01 02.7	+0.3
	baz=212						
LONT	Longtian	1.73	209	*e*P		Pn	21 01 01.3	+0.9
	baz=206						
WTP	Ta-pu	1.76	229	*e*P		Pb	21 01 03.3	+0.1
	baz=226						
JKRS	Kuro-shima	1.80	95	P		Pn	21 01 02.4	+1.0
JKRS				*e*S		Sn	21 01 23.8	+0.2
TWK	Hsinying	1.83	232	*e*P		Pb	21 01 04.5	+0.1
	baz=228						
CHN1	Nanshi	1.86	229	*e*P		Pb	21 01 04.9	+0.1
	baz=226						
WSL	Shuilin Townsh	1.89	242	*e*P		Pb	21 01 04.0	-1.3
	baz=240						
JIJ	Ishigaki jima	1.91	91	P		Pn	21 01 03.4	+0.5
JIJ				S		Sn	21 01 24.8	-1.6
SCST	Cishan	2.09	223	*e*P		Pb	21 01 08.8	0.0
	baz=221						
SSD	Sandimen	2.12	218	*e*P		Pb	21 01 09.0	-0.2
	baz=199						
TSMG	Majia	2.14	217	*e*P		Pn	21 01 06.7	+0.6
	baz=214						
TSCK	Chigu Township	2.20	235	*e*P		Pn	21 01 08.2	+1.3
	baz=233						
MASBT	Mashibuluo	2.22	216	*e*P		Pb	21 01 09.8	-1.2
	baz=213						
VWUC	VWUC	2.43	284	*e*P		Pn	21 01 10.5	+0.4
	baz=284						
PHUB	P'eng-hu	2.44	249	*e*P		Pn	21 01 11.5	+1.3
	baz=246						
MATB	Ma-tsu	2.57	313	*e*P		Pn	21 01 13.4	+1.4
	baz=313						

MAN 02 21:02:25.3, 15°.70N×121°.80E, h20km, mb4.1, ML2.9, MS2.6, 5C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.22	281	*e*S		Sb	21 02 39.5	+5.0
BALP	Baler	0.22	281	↑*e*P		Pb	21 02 32.2	+1.5
PCPH	Palayan	0.70	259	*e*S		Sn	21 02 55.6	+5.5
PCPH	Palayan	0.70	259	↑*e*P		Pn	21 02 41.2	+1.2
SMPP	San Manuel, Pa	1.17	293	*e*S		Sn	21 03 02.6	+0.6
SMPP	San Manuel, Pa	1.17	293	↑*e*P		Pn	21 02 46.5	0.0
SAMP	Sagada Mountai	1.62	328	*e*S		Sb	21 03 14.0	-0.6
SAMP	Sagada Mountai	1.62	328	↑*e*P		Pn	21 02 52.0	-0.8
JCNP	Jose Panganiba	1.65	148	*e*S		Sb	21 03 14.6	-0.7
JCNP	Jose Panganiba	1.65	148	↑*e*P		Pn	21 02 52.8	-0.3

*IDC **02** 21:19:05.5±1.2, 25°.33N×99°.66E, h0km, mb3.6/7, mbtmp3.5/8, ML3.5/1, MS3.4/3, Error ellipse: s-maj=41.2km s-min=18.3km az=79.0*
ISC 02 21:19:07.8±1.0, 25°.53N±0°.09×99°.8E±0°.2, h10km, n10, σ2°.41/9, mb3.5/7, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.08	187	Pn		Pn	21 20 49.2	-2.4
	0.2nm,0.3s,baz=357,slow=12,SNR=6.7						
CMAR				Pg		Pb	21 21 14.7	+3.7
	0.8nm,0.3s,baz=357,slow=17,SNR=29						
CMAR				Lg		Lg	21 22 44.1	
	0.5nm,0.3s,baz=359,slow=29,SNR=2.8						
	0.8nm,0.5s						
SONM	Songino Array	22.86	11	P		P	21 24 14.1	+2.6
	1.0nm,0.8s,baz=190,slow=7.3,SNR=3.9						
SONM				LR		LR	21 35 01.8	
	comp=Z,26nm,20.7s,baz=196,slow=41						
	1.0nm,0.8s						
MKAR	Makanchi Array	25.39	331	P		P	21 24 34.9	-0.4
	1.3nm,0.7s,baz=136,slow=11,SNR=10						
	1.3nm,0.7s						
KURBB	Kurchatov Arra	29.92	332	P		P	21 25 14.9	-0.9
	0.4nm,0.6s,baz=134,slow=7.8,SNR=2.2						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	30.50	342	P		P	21 25 22.3	+1.3
	0.6nm,0.5s,baz=156,slow=7.7,SNR=3.4						
	0.6nm,0.5s						
KAPI	Kappang	36.02	145	LR		LR	21 42 55.6	
	comp=Z,81nm,19.6s,baz=240,slow=40						
GEYT	Alibeck	37.25	300	P		P	21 26 19.1	-0.7
	1.3nm,0.8s,baz=153,slow=9.7,SNR=3.8						
	1.3nm,0.8s						
WRA	Warramunga Arr	56.30	140	P		P	21 28 46.8	-2.2
	0.3nm,0.7s,baz=332,slow=7.4,SNR=2.1						
	0.3nm,0.7s						
FINES	FINESS Array B	60.16	328	LR		LR	21 56 51.5	
	comp=Z,98nm,19.4s,baz=276,slow=38						
GERES	GERESS Array B	68.75	315	P		P	21 30 11.8	-0.3
	0.2nm,0.6s,baz=83,slow=3.1,SNR=2.4						
	0.2nm,0.6s						

*TAP **02** 21:31:52.9, 25°.68N×122°.25E, h287km, ML3.7, C*
*JMA **02** 21:31:56.3±0.3, 25°.7N±3°.1×122°.3E±0°.9, h258km±3km, MV4.2/16, TAIWAN REGION*
ISC 02 21:31:53.8±1.8, 25°.51N±0°.07×122°.26E±0°.04, h272km±11km, n61, σ1°.03/113, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	Pengchaiyu	0.21	307	*e*P		Pn	21 32 30.9	+2.3
	baz=268						
SXI1	Grass Mountain	0.54	220	*i* P		Pn	21 32 30.3	+0.9
	baz=221						
SXI1				S		S	21 32 58.1	+0.5
	baz=221						
TWB1	Santiao Chiao	0.55	206	*i* P		Pn	21 32 30.4	+1.0
	baz=187						
TATO	Taipei	0.87	233	*e*P		Pn	21 32 31.6	+1.0
	baz=225						
TATO				*e*S		S	21 32 59.8	+0.2
	baz=225						
TWE	Neicheng	0.95	214	*i* P		Pn	21 32 31.9	+0.9
	baz=208						
TWE				*e*S		S	21 33 01.7	+1.4
	baz=208						
FUSB	Fushanzhiwuyua	0.96	219	*i* P		Pn	21 32 31.9	+0.8
	baz=214						
FUSB				*i* S		S	21 33 00.4	-0.2
	baz=214				

	baz=225						
LIOB			S		S	21 33 04.4	-0.9
	baz=225						
NSTT	**Nanjuang**	**1.43 233**	P		**Pn**	**21 32 34.7**	**+0.9**
	baz=224						
NSTT			*i* S		**S**	**21 33 05.2**	**-0.2**
	baz=224						
NACB	**Ninganchiao**	**1.46 204**	*e*P		**Pn**	**21 32 33.7**	**-0.2**
	baz=201						
NACB			*e*S		**S**	**21 33 04.7**	**-1.0**
	baz=201						
ETL	**Fush Village**	**1.46 203**	*i* P		**Pn**	**21 32 34.8**	**+0.7**
	baz=200						
ETL			*i* S		**S**	**21 33 05.5**	**-0.4**
	baz=200						
TWD	**Chiawan**	**1.54 203**	*e*P		**Pn**	**21 32 34.4**	**-0.1**
	baz=206						
TWD			S		**S**	**21 33 05.9**	**-0.9**
	baz=206						
FUSS	**Fushou**	**1.55 216**	P		**Pn**	**21 32 36.0**	**+1.1**
	baz=216						
FUSS			*e*S		**S**	**21 33 04.9**	**-2.6**
	baz=216						
WHF	**Hehuan Shan**	**1.63 214**	P		**Pn**	**21 32 36.5**	**+0.9**
	baz=209						
WHF			*e*S		**S**	**21 33 08.5**	**-0.3**
	baz=209						
HWA	**Hwalien**	**1.63 201**	P		**Pn**	**21 32 36.0**	**+0.7**
	baz=204						
HWA			S		**S**	**21 33 08.0**	**0.0**
	baz=204						
ETM	**Tongmen**	**1.68 204**	*e*P		**Pn**	**21 32 35.7**	**+0.1**
	baz=202						
ETM			S		**S**	**21 33 08.0**	**-0.7**
	baz=202						
CHGB	**Renai**	**1.74 215**	P		**Pn**	**21 32 37.3**	**+0.9**
	baz=211						
CHGB			S		**S**	**21 33 09.8**	**-0.3**
	baz=211						
IRIF	**Iriomote-Funau**	**1.78 131**	P		**Pn**	**21 32 36.8**	**+0.5**
IRIF			S		**S**	**21 33 08.2**	**-1.8**
WUSB	**Renai**	**1.83 215**	*i* P		**Pn**	**21 32 37.6**	**+0.7**
	baz=219						
WUSB			S		**S**	**21 33 10.6**	**-0.5**
	baz=219						
OWD	**Renai**	**1.83 213**	*i* P		**Pn**	**21 32 37.7**	**+0.8**
	baz=219						
OWD			S		**S**	**21 33 10.8**	**-0.3**
	baz=219						
WCS	**Beigang Elemen**	**1.89 221**	*e*P		**Pn**	**21 32 36.9**	**-0.3**
	baz=217						
WCS			S		**S**	**21 33 10.2**	**-1.4**
	baz=217						
WPL	**Puli Township**	**1.90 219**	P		**Pn**	**21 32 38.0**	**+0.7**
	baz=215						
DPDB	**Guoxing**	**1.90 220**	P		**Pn**	**21 32 37.9**	**+0.5**
	baz=216						
DPDB			S		**S**	**21 33 11.2**	**-0.8**
	baz=216						
TCU	**Taichung**	**1.97 227**	P		**Pn**	**21 32 38.8**	**+0.9**
	baz=217						
HATJ	**Hateruma jima**	**2.02 135**	P		**Pn**	**21 32 39.4**	**+1.2**
HATJ			*e*S		**S**	**21 33 12.4**	**-1.1**
SMLT	**Sun Moon Lake**	**2.03 218**	*i* P		**Pn**	**21 32 39.2**	**+0.6**
	baz=214						
SMLT			S		**S**	**21 33 13.2**	**-0.8**
	baz=214						
JKRS	**Kuro-shima**	**2.03 128**	P		**Pn**	**21 32 39.6**	**+1.2**
JKRS			S		**S**	**21 33 12.7**	**-1.1**
TYC	**Yuchr**	**2.04 219**	*e*P		**Pn**	**21 32 39.2**	**+0.7**
	baz=215						
TYC			*e*S		**S**	**21 33 13.1**	**-0.8**
	baz=215						
JIJ	**Ishigaki jima**	**2.06 123**	P		**Pn**	**21 32 39.1**	**+0.5**
JIJ			S		**S**	**21 33 12.1**	**-2.1**
JISG	**Ishigakijimahi**	**2.08 116**	P		**Pn**	**21 32 39.5**	**+0.7**
JISG			S		**S**	**21 33 13.0**	**-1.4**
SSLB	**Suanglung**	**2.08 215**	P		**Pn**	**21 32 39.8**	**+0.9**
	baz=216						
SSLB			S		**S**	**21 33 13.7**	**-0.9**
	baz=216						
HGSD	**Ruisui**	**2.14 201**	*i* P		**Pn**	**21 32 40.3**	**+0.9**
	baz=201						
HGSD			*e*S		**S**	**21 33 16.4**	**+0.8**
	baz=201						
WJS	**Zhushan**	**2.18 220**	P		**Pn**	**21 32 40.3**	**+0.6**
	baz=214						
MATB	**Ma-tsu**	**2.18 288**	*e*P		**Pn**	**21 32 40.6**	**+1.0**
	baz=282						
MATB			*e*S		**S**	**21 33 14.8**	**-1.2**
	baz=282						
YULB	**Yu-li**	**2.28 203**	*e*P		**Pn**	**21 32 40.2**	**-0.4**
	baz=201						
YULB			*e*S		**S**	**21 33 16.5**	**-1.4**
	baz=201						
EYUL	**Yuli**	**2.31 202**	*e*P		**Pn**	**21 32 42.3**	**+1.4**
	baz=202						
EYUL			*e*S		**S**	**21 33 18.5**	**+0.1**
	baz=202						
TWF1	**Yuli**	**2.31 202**	*e*P		**Pn**	**21 32 40.9**	**-0.1**
	baz=201						
TWF1			*e*S		**S**	**21 33 17.8**	**-0.6**
	baz=201						
YUS	**Yu-Shan**	**2.33 211**	P		**Pn**	**21 32 42.6**	**+0.9**
	baz=215						
YUS			*e*S		**S**	**21 33 19.5**	**-0.1**
	baz=215						
JTJ	**Tarama**	**2.38 111**	P		**Pn**	**21 32 42.9**	**+1.4**
JTJ			S		**S**	**21 33 18.4**	**-1.0**
ALS	**Alishan**	**2.38 214**	P		**Pn**	**21 32 42.7**	**+0.7**
	baz=216						
ALS			*e*S		**S**	**21 33 20.6**	**+0.5**
	baz=216						
FULB	**Fuli**	**2.46 201**	*i* P		**Pn**	**21 32 43.3**	**+0.9**
	baz=202						
FULB			*e*S		**S**	**21 33 23.2**	**+2.3**
	baz=202						
VWUC	**VWUC**	**2.59 259**	P		**Pn**	**21 32 43.9**	**+0.4**
	baz=255						
VWUC			S		**S**	**21 33 21.8**	**-1.2**
	baz=255						
TPUB	**Ta-pu**	**2.65 214**	P		**Pn**	**21 32 44.7**	**+0.5**
	baz=215						
TPUB			S		**S**	**21 33 23.6**	**-0.6**
	baz=215						
WTP	**Ta-pu**	**2.70 214**	P		**Pn**	**21 32 45.2**	**+0.5**
	baz=215						
WTP			*e*S		**S**	**21 33 24.8**	**-0.4**
	baz=215						
JIRB	**Irabujima**	**2.73 104**	P		**Pn**	**21 32 46.0**	**+1.1**
JIRB			S		**S**	**21 33 23.7**	**-1.8**
TWK	**Hsinying**	**2.75 216**	*i* P		**Pn**	**21 32 45.8**	**+0.6**
	baz=213						
TWK			*e*S		**S**	**21 33 26.3**	**+0.2**
	baz=213						
JIKM	**Ikemajima**	**2.77 101**	P		**Pn**	**21 32 46.8**	**+1.5**
JIKM			*e*S		**S**	**21 33 25.8**	**-0.5**
CHN1	**Nanshi**	**2.80 215**	P		**Pn**	**21 32 45.9**	**+0.3**
	baz=214						
CHN1			*e*S		**S**	**21 33 25.6**	**-1.2**
	baz=214						
JMJ	**Miyako jima 2**	**2.84 103**	*e*P		**Pn**	**21 32 48.3**	**+2.3**
	baz=107						
JMJ			*e*S		**S**	**21 33 28.6**	**+1.2**
	baz=107						
JMJ2	**Miyako jima3**	**2.89 105**	P		**Pn**	**21 32 48.0**	**+1.5**
JMJ2			*e*S		**S**	**21 33 27.6**	**-0.8**
JOGS	**Gusukube**	**2.95 104**	P		**Pn**	**21 32 48.9**	**+1.7**
PHUB	**P'eng-hu**	**3.15 231**	P		**Pn**	**21 32 49.2**	**0.0**
	baz=226						
JKE	**Kume jima 2**	**4.16 78**	P		**Pn**	**21 33 00.7**	**+0.3**
JOW	**Kunigami**	**5.57 75**	*e*P		**Pn**	**21 33 16.6**	**-0.6**
	baz=78						

NEIC ***02*** *21:53:03.2±1.6, 30°.94S±0°.06×178°.1W±0°.2, h10km±1km, mb4.5/14, Error ellipse: s-maj=28.2km s-min=7.5km az=106.0*

IDC ***02*** *21:53:09.2±2.2, 30°.64S×178°.17W, h63km±21km, mb3.9/6, mbtmp4.2/6, MS3.4/6, Error ellipse: s-maj=23.4km s-min=19.1km az=120.0*

ISC 02 21:53:07.2±0.6, 30°.84S±0°.07×178°.3W±0°.1, h46km, n63, σ1§58/46, mb4.5/13, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.61**	**10**	P	**Pn**	**21 53 32.3**	**-0.8**
	654nm,0.2s,baz=61,slow=14,SNR=16						
RAO				S	**Sn**	**21 53 50.1**	**-2.5**
	2μm,0.3s,baz=121,slow=22,SNR=13						
RAO				LR	LR	21 53 50.7	
	comp=Z,91nm,19.8s,baz=226,slow=30						
RAO	**Raoul Island**	**1.61**	**10**	Pn	**Pn**	**21 53 32.5**	**-0.7**
URZ	**Urewera**	**8.33**	**206**	P	**Pn**	**21 55 02.1**	**-3.2**
	2.7nm,0.3s,baz=178,slow=22,SNR=1.5						
URZ				S	**Sn**	**21 56 35.4**	**-2.6**
	17nm,0.3s,baz=344,slow=19,SNR=10						
URZ	**Urewera**	**8.33**	**206**	Pn	**Pn**	**21 55 03.0**	**-2.3**
BKZ	**Black Stump Fm**	**9.36**	**206**	Pn	**Pn**	**21 55 16.6**	**-2.8**
SNZO	**South Karori**	**11.90**	**207**	Pn	**Pn**	**21 55 50.4**	**-3.6**
BSWZ	**Blackbirch Sta**	**12.57**	**208**	Pn	**Pn**	**21 56 01.8**	**-1.5**
THZ	**Tophouse**	**13.02**	**211**	Pn	**Pn**	**21 56 06.5**	**-2.9**
KHZ	**Kahutara**	**13.29**	**207**	Pn	**Pn**	**21 56 10.4**	**-2.7**
MSVF	**Nonsavu**	**13.48**	**345**	LR	LR	22 00 31.2	
	comp=Z,104nm,19.1s,baz=203,slow=33						
RPZ	**Rata Peaks**	**15.40**	**210**	LR	LR	22 02 23.4	
	comp=Z,97nm,19.2s,baz=94,slow=36						
DZM	**Mont Dzumac**	**16.24**	**299**	*e*LR	LR	22 00 36.6	
	comp=Z,223nm,25.9s						
DZM	**Mont Dzumac**	**16.24**	**299**	LR	LR	22 02 00.1	
	comp=Z,124nm,19.3s,baz=198,slow=33						
RAR	**Rarotonga**	**19.15**	**64**	LR	LR	22 05 12.1	
	comp=Z,32nm,18.1s,baz=309,slow=38						
TBI	**Tubuai**	**26.64**	**81**	*e*T	T	22 26 36.0	
	25nm,0.3s						
PAE	**Paea**	**29.15**	**70**	*e*T	T	22 29 42.6	
	9.6nm,0.2s						
PPT2	**Papeete2**	**29.19**	**70**	*e*LR	LR	22 06 14.0	
	comp=Z,78nm,27.0s						
PPT2	**Papeete2**	**29.19**	**70**	*e*T	T	22 29 44.0	
	6.7nm,0.3s						
TVO	**Taravao**	**29.35**	**70**	*e*T	T	22 29 51.9	
	1.8nm,0.3s						
TIAR	**Tiarei**	**29.39**	**70**	*e*T	T	22 29 48.0	
	0.8nm,0.3s						
HNR	**Honiara**	**29.43**	**312**	LR	LR	22 08 37.9	
	comp=Z,601nm,20.8s,baz=141,slow=32						
MEH	**Mehetia**	**30.27**	**72**	*e*T	T	22 31 08.3	
	18nm,0.3s						
VAH	**Vaihoa**	**32.04**	**68**	*e*T	T	22 33 15.6	
	50nm,0.3s						
CTAO	**Charters Tower**	**33.66**	**280**	P	**P**	**21 59 45.2**	**+1.4**
CTAO				IAmb	IAmb	21 59 50.2	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	**34.17**	**258**	P	**P**	**21 59 50.3**	**+2.2**
	comp=Z,2.6nm,0.4s,baz=94,slow=10,SNR=8.9						
	comp=Z,2.6nm,0.4s						
STKA	**Stephens Creek**	**34.17**	**258**	P	**P**	**21 59 50.4**	**+2.2**
STKA				IAmb	IAmb	22 00 03.4	
	comp=Z,6.0nm,1.4s						
BBOO	**Buckleboo**	**38.65**	**255**	P	**P**	**22 00 26.5**	**+0.3**
COEN	**Coen**	**39.19**	**287**	P	**P**	**22 00 32.9**	**+1.9**
COEN				IAmb	IAmb	22 01 09.6	
	comp=Z,13nm,1.3s						
ASAR	**Alice Srngs**	**42.88**	**268**	P	**P**	**22 01 02.1**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=104,slow=7.6,SNR=32						
	comp=Z,3.3nm,0.7s						
ASAR	**Alice Srngs**	**42.88**	**268**	P	**P**	**22 01 01.9**	**+0.7**
WR0	**Warramunga Arr**	**43.72**	**273**	P	**P**	**22 01 08.8**	**+0.7**
WR0				IAmb	IAmb	22 01 20.1	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**43.89**	**273**	P	**P**	**22 01 10.1**	**+0.6**
WB2				IAmb	IAmb	22 01 11.6	
	comp=Z,6.1nm,0.7s						
WRA	**Warramunga Arr**	**43.90**	**273**	P	**P**	**22 01 09.9**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=112,slow=7.9,SNR=28						
WRA				LR	LR	22 20 33.2	
	comp=Z,71nm,18.5s,baz=168,slow=37						
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**43.90**	**273**	P	**P**	**22 01 10.0**	**+0.4**
WB0	**Warramunga Arr**	**43.93**	**273**	P	**P**	**22 01 10.4**	**+0.7**
WB0				IAmb	IAmb	22 01 12.2	
	comp=Z,6.9nm,0.8s						
VNDA	**Vanda**	**47.64**	**186**	P	**P**	**22 01 39.7**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=45,slow=8.6,SNR=11						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**47.64**	**186**	P	**P**	**22 01 40.0**	**+1.8**
KNRA	**Kununurra**	**50.53**	**275**	P	**P**	**22 02 01.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**52.15**	**270**	P	**P**	**22 02 14.0**	**+0.7**
FITZ				IAmb	IAmb	22 02 49.1	
	comp=Z,12nm,1.5s						
MORW	**Morawa**	**56.20**	**254**	P	**P**	**22 02 42.0**	**-0.7**
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**22 03 05.5**	**+1.6**
QSPA				IAmb	IAmb	22 03 12.9	
	comp=Z,6.0nm,0.9s						
MAW	**Mawson**	**71.82**	**201**	P	**P**	**22 04 25.3**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=169,slow=5.1,SNR=2.8						
	comp=Z,1.3nm,0.7s						
MAW	**Mawson**	**71.82**	**201**	P	**P**	**22 04 25.5**	**+0.9**
TROLL	**Troll, Antarti**	**77.43**	**180**	P	**P**	**22 04 58.0**	**+0.7**
SNAA	**Sanae**	**77.72**	**179**	P	**P**	**22 04 59.1**	**+0.3**
VNA3	**Neumayer Olymp**	**77.88**	**176**	P	**P**	**22 04 59.8**	**+0.2**
VNA2	**Neumayer--Watz**	**78.31**	**177**	P	**P**	**22 05 02.6**	**+0.6**
	baz=174,slow=5.0						
VNA1	**Neumayer--Stat**	**78.54**	**177**	P	**P**	**22 05 03.8**	**+0.6**
H03S2	**Juan Fernandez**	**80.40**	**124**	T	T	23 34 20.3	
	baz=236						
H03S1	**Juan Fernandez**	**80.41**	**124**	T	T	23 34 22.3	
	baz=236						
H03S3	**Juan Fernandez**	**80.42**	**124**	T	T	23 34 20.3	
	baz=236						
H03N3	**Juan Fernandez**	**80.59**	**123**	T	T	23 34 20.9	
	baz=241,slow=72,SNR=30						
H03N2	**Juan Fernandez**	**80.60**	**123**	T	T	23 34 26.6	
	baz=241,slow=72,SNR=38						
H03N1	**Juan Fernandez**	**80.61**	**123**	T	T	23 34 21.6	
	baz=241,slow=72,SNR=56						
PLCA	**Paso Flores**	**82.36**	**133**	P	**P**	**22 05 25.9**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=226,slow=7.1,SNR=6.5						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**117.89**	**310**	PKP	**PKPdf**	**22 11 47.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=59,slow=1.4,SNR=1.9						
ARCES	**ARCESS Array B**	**138.97**	**348**	PKP	**PKPdf**	**22 12 27.3**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=5.7,slow=1.8,SNR=4.0						
FINES	**FINESS Array B**	**145.48**	**340**	PKPbc	**PKPdf**	**22 12 38.4**	**-1.0**
	comp=Z,11nm,0.7s,baz=58,slow=3.9,SNR=88						
NB2	**NORSAR Subarra**	**149.15**	**351**	PKP	**PKPbc**	**22 12 49.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**149.15**	**351**	PKPbc	**PKPbc**	**22 12 49.3**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=14,slow=4.1,SNR=8.0						
AKASG	**Malin Array Be**	**151.52**	**322**	PKPbc	**PKPbc**	**22 12 54.9**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=49,slow=2.8,SNR=6.9						
BRTR	**Keskin Array B**	**152.62**	**298**	PKPbc	**PKPbc**	**22 12 57.9**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=144,slow=3.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**162.39**	**180**	PKP	**PKPdf**	**22 13 04.2**	**-0.3**
	comp=Z,14nm,0.6s,baz=191,slow=1.6,SNR=5.1						
TORD				PKPab	**PKPab**	**22 13 51.5**	**-0.3**
	comp=Z,14nm,0.6s,baz=177,slow=4.1,SNR=5.1						

MAN 02 21:49:17.3, 6°.64N×126°.49E, h24km, mb4.5, ML3.4, MS3.2, 6C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.38**	**323⇑**	*e*P	Pn	21 49 27.0	-0.3
MATI				*e*S	Sn	21 49 35.2	+1.2
DDMP	**Don Marcelino,**	**0.94**	**235⇑**	*e*P	Pb	21 49 34.4	-0.5
DDMP				*e*S	Sn	21 49 48.0	+0.3
KCP	**Kidapawan**	**1.44**	**285⇑**	*e*P	Pn	21 49 41.0	-0.9
KCP				*i* S	Sn	21 50 00.6	+0.5
BIPH	**Bislig**	**1.54**	**355⇓**	*e*P	Pn	21 49 42.2	-1.1
BIPH				*e*S	Sb	21 50 03.8	-0.5
BUKP	**Musuan**	**1.88**	**311⇑**	*e*P	Pn	21 49 48.5	+0.5
BUKP				*e*S	Sb	21 50 15.3	+1.3
GLSP	**General Luna,**	**3.15**	**354⇑**	*e*P	Pn	21 50 07.0	+1.6
GLSP				*e*S	Sn	21 50 40.1	-2.1
TABP	**Talibon, Bohol**	**4.04**	**328⇑**	*i* P	Pn	21 50 18.2	+0.5
TABP				*i* S	Sn	21 51 04.8	+0.5

IDC ***02*** *22:35:05.8±0.6, 20°.41S×169°.53E, h0km, mb4.5/17, mbtmp4.5/18, ML4.1/1, MS3.9/39, Error ellipse: s-maj=19.7km s-min=16.3km az=117.0*

BJI ***02*** *22:35:10.0±0.0, 20°.60S×169°.10E, h26km, mb4.8/30, mB5.2/14, Ms4.7/3, Ms7 4.4/3*

NOU ***02*** *22:35:11.1, 20°.54S×169°.07E, h2km, MLv5.0/9, Vanuatu Islands*

NEIC ***02*** *22:35:14.8±1.8, 20°.51S±0°.07×169°.07E±0°.07, h41km±3km, mb4.8/33, Mwr4.6/12, Error ellipse: s-maj=10.5km s-min=8.6km az=137.0*

NEIC ***02*** *22:35:14.9, 20°.51S×169°.06E, h40km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.74; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-0.23; $M_{r\theta}$-0.16; $M_{\theta\phi}$0.48; $M_{\phi r}$0.70; Fault plane solution: $M_0$1.08000×10^{16} NP1:ϕ_s331.28000°, δ66.75000°, λ112.76000°. NP2:ϕ_s104.53000°, δ32.08000°, λ47.99000°. Principal axes: T 1.1097, Plg61.0000°, Azm276.0000°; N -0.0551, Plg21.0000°, Azm142.0000°; P -1.0546, Plg19.0000°, Azm44.0000°;*

ISC 02 22:35:12.1±0.3, 20°.46S±0°.04×169°.12E±0°.05, h31km, n222, σ1§48/189, mb4.8/47, MS3.9/37, 7C-11D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.44**	**225**	Pn	**Pb**	**22 35 37.2**	**-1.2**
MARNC					**Sn**	**22 35 54.6**	**+0.7**
MARNC	**Mare, Loyalty**	**1.44**	**225**	P	**Pn**	**22 35 36.7**	**+0.6**
LIFNC	**LIFOU**	**1.79**	**259**	Pn	**Pn**	**22 35 42.1**	**+1.2**
LIFNC				Sn	**Sn**	**22 36 04.0**	**+1.3**
LIFNC	**LIFOU**	**1.79**	**259**	P	**Pn**	**22 35 41.7**	**+0.8**
YATNC	**Mamie plateau,**	**2.62**	**232**	P	**Pn**	**22 35 52.3**	**0.0**
PINNC	**Pines Island,**	**2.65**	**216**	Pn	**Pn**	**22 35 53.5**	**+0.8**
RTV	**Rentapao**	**2.73**	**346**	P	**Pb**	**22 35 57.8**	**-2.5**
DVP	**Devils Point**	**2.86**	**342**	P	**Pn**	**22 35 58.6**	**+3.0**
OUENC	**Ouen Island, N**	**2.88**	**227**		**Pn**	**22 35 57.7**	**+1.8**
DZM	**Mont Dzumac**	**2.97**	**237**	*e*Pn	**Pn**	**22 35 58.1**	**+0.9**
	921nm,0.8s						
DZM	**Mont Dzumac**	**2.97**	**237**	Pn	**Pn**	**22 35 58.9**	**+1.7**
	18nm,0.3s,baz=99,slow=8.5,SNR=500						
DZM				Sn	**Sn**	**22 36 33.7**	**+1.8**
	44nm,0.3s,baz=61,slow=19,SNR=6.2						
	100nm,0.5s						
DZM	**Mont Dzumac**	**2.97**	**237**	Pn	**Pn**	**22 35 57.2**	**0.0**
ONTNC	**Ouen Toro**	**3.10**	**233**	Pn	**Pn**	**22 36 00.6**	**+1.8**
KOUNC	**Koumac, New Ca**	**4.54**	**268**	Pn	**Pn**	**22 36 21.6**	**+3.0**
MSVF	**Nonsavu**	**8.86**	**74**	Pn	**Pn**	**22 37 21.6**	**+3.5**
	1.5nm,0.3s,baz=248,slow=11,SNR=21						
MSVF				LR	LR	22 40 08.1	
	comp=Z,2μm,19.0s,baz=224,slow=36						
HNR	**Honiara**	**14.09**	**320**	LR	LR	22 43 12.6	
	comp=Z,2μm,20.7s,baz=140,slow=34						
EIDS	**Eidsvold**	**17.32**	**250**	P	**P**	**22 39 13.5**	**+0.5**
URZ	**Urewera**	**19.04**	**160**	P	**Pn**	**22 39 32.4**	**-0.1**
	21nm,0.8s,baz=65,slow=3.1,SNR=12						
URZ				LR	LR	22 45 42.8	
	comp=Z,257nm,19.4s,baz=57,slow=34						
URZ	**Urewera**	**19.04**	**160**	P	**Pn**	**22 39 33.1**	**+0.5**
AFI	**Afiamalu**	**19.36**	**73**	P	**P**	**22 39 32.9**	**-2.5**
	55nm,0.2s,baz=192,slow=9.3,SNR=1.6						
AFI				LR	LR	22 45 43.8	
	comp=Z,220nm,19.5s,baz=250,slow=34						
BKZ	**Black Stump Fm**	**19.70**	**163**	P	**Pn**	**22 39 40.0**	**-0.5**
BKZ				IAmb	IAmb	22 39 55.9	
	comp=Z,30nm,0.8s						
CTA	**Charters Tower**	**21.46**	**267**	P	**P**	**22 40 01.2**	**+3.1**
	comp=Z,7.9nm,0.7s,baz=96,slow=10,SNR=12						
CTA				LR	LR	22 48 08.1	
	comp=Z,282nm,18.5s,baz=87,slow=36						
	comp=Z,7.9nm,0.7s						
CTAO	**Charters Tower**	**21.46**	**267**	P	**P**	**22 39 58.1**	**+0.1**
THZ	**Tophouse**	**21.48**	**172**	P	**P**	**22 39 58.6**	**+0.5**
THZ				IAmb	IAmb	22 40 14.1	
	comp=Z,21nm,0.7s						
LTZ	**Lake Taylor**	**22.41**	**174**	P	**P**	**22 40 09.5**	**+1.3**
LTZ				IAmb	IAmb	22 40 12.5	
	comp=Z,44nm,1.3s						
KRVT	**Keravat (AS076**	**23.12**	**312**	P	**P**	**22 40 16.9**	**+1.1**
	comp=Z,38nm,0.7s,baz=90,slow=2.5,SNR=8.6						
	comp=Z,38nm,0.7s						
RPZ	**Rata Peaks**	**23.25**	**176**	P	**P**	**22 40 18.5**	**+1.7**
	comp=Z,8.9nm,0.5s,baz=308,slow=2.6,SNR=8.6						
RPZ				LR	LR	22 48 34.0	
	comp=Z,430nm,20.8s,baz=330,slow=35						
PMG	**Port Moresby**	**23.86**	**294**	P	**P**	**22 40 23.8**	**+0.9**
	comp=Z,16nm,0.6s,baz=110,slow=8.0,SNR=6.3						
PMG				LR	LR	22 49 03.2	
	comp=Z,174nm,19.1s,baz=114,slow=35						
	comp=Z,16nm,0.6s						
PMG	**Port Moresby**	**23.86**	**294**	P	**P**	**22 40 23.1**	**+0.1**
PMG				IAmb	IAmb	22 40 36.4	
	comp=Z,38nm,1.2s						
LBZ	**Lake Benmore**	**23.88**	**178**	P	**P**	**22 40 23.5**	**+0.7**
DCZ	**Deep Cove**	**24.99**	**183**	P	**P**	**22 40 33.3**	**+0.4**
DCZ				IAmb	IAmb	22 40 35.6	
	comp=Z,18nm,1.0s						
COEN	**Coen**	**25.60**	**280**	P	**P**	**22 40 38.4**	**-0.4**
COEN				IAmb	IAmb	22 40 57.6	
	comp=Z,17nm,1.1s						
STKA	**Stephens Creek**	**27.12**	**240**	P	**P**	**22 40 54.0**	**+1.6**
	comp=Z,5.0nm,0.8s,baz=77,slow=9.2,SNR=7.1						
STKA				LR	LR	22 51 29.4	
	comp=Z,384nm,18.3s,baz=52,slow=36						
	comp=Z,5.0nm,0.8s						
RAR	**Rarotonga**	**29.06**	**97**	LR	LR	22 50 23.1	
	comp=Z,87nm,20.9s,baz=310,slow=32						
BBOO	**Buckleboo**	**31.88**	**240**	P	**P**	**22 41 35.8**	**+1.1**
WB0	**Warramunga Arr**	**32.59**	**265**	P	**P**	**22 41 41.3**	**+0.3**
WB0				IAmb	IAmb	22 41 55.0	
	comp=Z,26nm,1.5s						
WRA	**Warramunga Arr**	**32.61**	**265**	P	**P**	**22 41 41.3**	**0.0**
	comp=Z,2.2nm,0.6s,baz=94,slow=8.3,SNR=33						
WRA				PcP	**PcP**	**22 44 25.9**	**-1.3**
	comp=Z,1.5nm,0.9s,baz=93,slow=3.4,SNR=4.7						
WRA				ScP	**ScP**	**22 48 12.5**	**+3.6**
	comp=Z,0.7nm,0.8s,baz=87,slow=4.0,SNR=4.7						
WRA				LR	LR	22 55 06.3	
	comp=Z,330nm,18.6s,baz=98,slow=36						
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**32.61**	**265**	P	**P**	**22 41 41.5**	**+0.2**
AS31	**Alice Springs**	**32.75**	**258**	P	**P**	**22 41 43.0**

PPT2 *e*SS **SnSn** **22 51 32.7 +4.8**
comp=Z,104nm,26.8s
PPT2 *e*LR LR 22 53 22.4
comp=Z,381nm,27.5s
PPT Papeete 39.08 93 LR LR 22 54 52.2
comp=Z,120nm,21.4s,baz=267,slow=31
FAKI Fak Fak 39.94 291 P **P** **22 42 43.9 0.0**
comp=Z,30nm,0.9s
FITZ Fitzroy Crossi 41.03 266 LR LR 22 59 56.3
comp=Z,205nm,18.7s,baz=104,slow=36
FITZ Fitzroy Crossi 41.03 266 P **P** **22 42 53.6 +0.8**
FITZ IAmb IAmb 22 43 06.9
comp=Z,12nm,0.9s
GUMO Guam 41.40 323 LR LR 22 59 55.2
comp=Z,46nm,20.1s,baz=126,slow=36
SIJI Sorong 41.80 293 LR LR 23 00 33.7
comp=Z,150nm,20.8s,baz=92,slow=36
NLAI Namlea 44.36 287 P **P** **22 43 21.1 +1.2**
comp=Z,4µmcomp=Z,8.9nm,0.6s
SOEI Soe 44.46 277 P **P** **22 43 21.7 +0.8**
SOEI IAmb IAmb 22 43 38.1
comp=Z,29nm,1.0s
SOEI Soe 44.46 277 P **P** **22 43 22.8 +1.9**
comp=Z,28nm,1.0s
BATI Baumata 44.88 276 LR LR 23 02 27.1
comp=Z,414nm,19.5s,baz=201,slow=36
BATI Baumata 44.88 276 P **P** **22 43 25.9 +1.8**
comp=Z,22nm,1.1s
SANI Sanana 45.88 288 P **P** **22 43 32.6 +0.6**
comp=Z,1µmcomp=Z,29nm,1.1s
MMRI Maumere 46.72 277 P **P** **22 43 39.2 +0.5**
comp=Z,33nm,0.5s
EDFI Ende, Flores 47.19 277 P **P** **22 43 42.9 +0.4**
comp=Z,5.0nm,1.1s
NWAO Narrogin (SRO) 47.57 244 LR LR 23 03 29.2
comp=Z,406nm,20.3s,baz=298,slow=36
BSSI Bau Bau, Buton 49.22 280 P **P** **22 43 57.8 -0.2**
comp=Z,578nmcomp=Z,6.4nm,1.0s
KAPI Kappang 50.33 281 P **P** **22 44 07.4 +1.0**
VNDA Vanda 57.22 182 P **P** **22 44 55.2 -0.6**
comp=Z,1.6nm,0.7s,baz=1.8,slow=7.3,SNR=14
VNDA LR LR 23 05 08.6
comp=Z,76nm,21.6s,baz=0.0,slow=32
comp=Z,1.6nm,0.7s
SBA Scott Base 57.45 181 P **P** **22 44 58.1 +0.6**
CASY Casey 58.97 204 P **P** **22 45 07.8 -0.5**
CASY IAmb IAmb 22 45 22.3
comp=Z,10nm,1.1s
LEM Lembang 60.97 274 LR LR 23 12 33.9
comp=Z,82nm,18.2s,baz=77,slow=37
MJAR Matsushiro Arr 63.77 333 P **P** **22 45 40.1 -1.1**
comp=Z,6.8nm,1.0s,baz=164,slow=6.9,SNR=15
comp=Z,6.8nm,1.0s
JMM Marumori 63.84 335 P **P** **22 45 42.0 +0.4**
JMM IAmb IAmb 22 45 43.2
comp=Z,18nm,1.0s
JSD Sado 65.02 333 P **P** **22 45 49.7 +0.4**
KSRS Korea Array 69.45 326 P **P** **22 46 17.1 -0.2**
comp=Z,1.5nm,0.8s,baz=127,slow=8.0,SNR=5.3
KSRS LR LR 23 14 04.9
comp=Z,27nm,21.1s,baz=240,slow=34
comp=Z,1.5nm,0.8s
QSPA South Pole Qui 69.60 180 LR LR 23 14 20.8
comp=Z,89nm,18.4s,baz=38,slow=34
QSPA South Pole Qui 69.60 180 P **P** **22 46 17.6 -0.5**
USRK Ussuriysk Ar. 72.77 333 P **P** **22 46 37.8 +0.5**
comp=Z,14nm,1.0s,baz=143,slow=4.5,SNR=22
comp=Z,14nm,1.0s
SHEM Shemya Is, Ala 73.00 3 LR LR 23 13 56.1
comp=Z,81nm,20.1s,baz=260,slow=32
PETK Petropavlovsk- 73.92 353 LR LR 23 13 50.2
comp=Z,83nm,21.4s,baz=149,slow=31
TIA Tai'an 74.78 319 *e*P **P** **22 46 49.6 +0.3**
TIA pmax pmax
comp=Z,11nm,1.0s
CN2 Changchun 75.44 329 *e*P **P** **22 46 53.1 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.1s
BNX BinXian 75.99 331 ⇓P **P** **22 46 55.4 -0.6**
BNX pmax pmax
comp=Z,11nm,0.9s
KLR Kul'dur 76.93 336 P **P** **22 47 01.8 +0.5**
comp=Z,7.2nm,0.9s,baz=114,slow=4.6,SNR=15
KLR LR LR 23 16 57.3
comp=Z,36nm,22.0s,baz=186,slow=33
comp=Z,7.2nm,0.9s
MAW Mawson 77.27 202 P **P** **22 47 03.6 +0.6**
comp=Z,8.2nm,0.9s,baz=118,slow=7.7,SNR=16
MAW LR LR 23 16 42.0
comp=Z,79nm,21.3s,baz=105,slow=32
comp=Z,8.2nm,0.9s
MAW Mawson 77.27 202 P **P** **22 47 03.8 +0.7**
KMI Kunming 78.83 302 ⇓P **P** **22 47 13.8 +1.1**
KMI sP pwP 22 47 26.1 +1.3
KMI pmax pmax
comp=Z,15nm,1.1s
XAN Xi'an 78.85 313 P **P** **22 47 13.0 +0.6**
XAN pP PcP 22 47 20.9 -0.1
XAN pmax pmax
comp=Z,7.0nm,1.0s
CM31 Chiang Mai Arr 78.91 294 P **P** **22 47 13.8 +0.8**
CM31 IAmb IAmb 22 47 15.7
comp=Z,13nm,1.0s
CMAR Chiang Mai Arr 78.91 294 P **P** **22 47 14.6 +1.6**
comp=Z,7.3nm,0.9s,baz=133,slow=4.2,SNR=32
comp=Z,7.3nm,0.9s
CMAR Chiang Mai Arr 78.91 294 P **P** **22 47 13.9 +0.9**
CHTO Chiang Mai 79.06 295 P **P** **22 47 14.2 +0.4**
PZH PanZhiHua 80.27 303 P **P** **22 47 24.5 +4.1**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.4s
CD2 Chengdu 80.89 308 *e*P **P** **22 47 26.6 +3.1**
HHC Hu-ho-hao-te 81.07 320 *e*P P 22 47 29.8 +5.5
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,200nm,5.0s
MA2 Magadan 81.15 351 LR LR 23 19 17.1
comp=Z,84nm,20.4s,baz=145,slow=33
LZH Lanzhou 83.46 312 *e*P **P** **22 47 38.3 +1.3**
LZH sP sP 22 47 51.1 +1.7
LZH pmax pmax
comp=Z,12nm,1.4s
KDAK Kodiak Island 84.21 19 LR LR 23 17 10.1
comp=Z,64nm,21.8s,baz=225,slow=30
PAGB Antelope Grade 87.07 50 P **P** **22 47 54.2 -0.7**
PAGB IAmb IAmb 22 48 20.0
comp=Z,4.3nm,1.2s
TROLL Troll, Antarti 87.32 184 P **P** **22 47 54.2 -1.6**
ULN Ulaanbaatar 87.77 323 P **P** **22 47 58.3 +0.2**
GTA Gaotai 87.88 314 *e*P **P** **22 47 59.5 +0.6**
GTA pP pP 22 48 05.2 -2.8
GTA sP pwP 22 48 10.0 -1.3
GTA pmax pmax
comp=Z,4.0nm,0.9s
SNAA Sanae 87.95 183 P **P** **22 47 56.7 -1.9**
SNAA Sanae 87.95 183 LR LR 23 25 34.3
comp=Z,71nm,18.1s,baz=193,slow=34
YAK Yakutsk 88.00 343 LR LR 23 26 26.3
comp=Z,24nm,19.0s,baz=88,slow=35
SONM Songino Array 88.12 323 P **P** **22 47 58.9 -1.0**
comp=Z,4.9nm,0.9s,baz=138,slow=6.1,SNR=28
SONM LR LR 23 25 50.5
comp=Z,17nm,20.2s,baz=134,slow=34
comp=Z,4.9nm,0.9s
SONM Songino Array 88.12 323 P **P** **22 47 59.5 -0.4**
SONM IAmb IAmb 22 48 00.8
comp=Z,9.0nm,1.0s
YBH Yreka Blue Hor 88.25 44 P **P** **22 47 57.2 -3.3**
comp=Z,2.5nm,0.8s,baz=104,slow=4.8,SNR=5.0
YBH LR LR 23 19 25.1
comp=Z,56nm,21.4s,baz=250,slow=30
comp=Z,2.5nm,0.8s
VNA3 Neumayer Olymp 88.54 180 P **P** **22 47 59.4 -2.0**
VNA2 Neumayer--Watz 88.83 181 P **P** **22 48 01.2 -1.6**
baz=170,slow=5.0
VNA1 Neumayer--Stat 89.12 181 P **P** **22 48 02.5 -1.5**
NVAR Mina Array Bea 89.69 49 P **P** **22 48 05.8 -1.7**
comp=Z,0.7nm,0.5s,baz=227,slow=7.4,SNR=4.9
comp=Z,0.7nm,0.5s
LPIG La Paz 90.04 64 LR LR 23 19 28.5
comp=Z,58nm,20.9s,baz=230,slow=30
B04A Port Angeles 90.90 38 P **P** **22 48 12.1 -0.5**
B04A IAmb IAmb 22 48 12.4
comp=Z,7.9nm,0.9s

ILAR Eielson Array 91.42 17 P **P** **22 48 11.2 -3.5**
comp=Z,0.5nm,0.7s,baz=242,slow=5.7,SNR=4.3
ILAR LR LR 23 27 25.3
comp=Z,62nm,18.1s,baz=233,slow=34
comp=Z,0.5nm,0.7s
ELK Elko 92.82 47 LR LR 23 21 59.8
comp=Z,36nm,21.0s,baz=250,slow=30
WTLY Watson Lake, Y 94.64 26 P **P** **22 48 33.5 +3.8**
NEW Newport 94.77 40 LR LR 23 26 01.6
comp=Z,26nm,18.2s,baz=269,slow=32
ANMO Albuquerque 97.08 55 LR LR 23 28 03.0
comp=Z,30nm,18.2s,baz=246,slow=33
YPP Pitchstone Pla 97.21 46 P Pdif 22 48 44.2 +2.0
YPP IAmb IAmb 22 48 46.9
comp=Z,6.1nm,1.1s
TXAR Lajitas Array 97.44 62 LR LR 23 25 26.5
comp=Z,40nm,19.2s,baz=249,slow=31
PDAR Pinedale Array 97.52 47 LR LR 23 25 34.7
comp=Z,20nm,20.9s,baz=296,slow=31
INK Inuvik 97.73 18 LR LR 23 29 00.4
comp=Z,44nm,19.8s,baz=282,slow=33
WMQ Urumqi 97.97 314 *e*P Pdif 22 48 50.0 +4.7
ARCES ARCESS Array B 126.21 345 PKP **PKPdf** **22 54 08.7 -2.2**
comp=Z,2.8nm,0.9s,baz=5.7,slow=2.4,SNR=7.0
BDFB Brasilia 128.84 132 PKP **PKPdf** **22 54 15.1 -2.5**
comp=Z,2.5nm,0.7s,baz=224,slow=4.3,SNR=3.2
FINES FINESS Array B 131.66 337 PKP **PKPdf** **22 54 18.7 -2.6**
comp=Z,0.8nm,0.6s,baz=113,slow=2.7,SNR=4.4
AKASG Malin Array Be 136.41 324 PKP **PKPdf** **22 54 30.3 -0.3**
comp=Z,0.8nm,0.7s,baz=64,slow=1.4,SNR=4.0
NOA NORSAR Array B 136.59 345 PKP **PKPdf** **22 54 29.0 -1.7**
comp=Z,0.2nm,0.6s,baz=203,slow=15,SNR=2.4
BRTR Keskin Array B 137.46 307 PKhKP PKPpre 22 54 27.2
comp=Z,0.5nm,0.9s,baz=96,slow=1.4,SNR=3.2
MORC Moravsky Berou 143.05 329 *e*PKP PKPab 22 54 37.8 -0.4
OSTC Ostas 143.14 331 *e*PKP PKPab 22 54 38.1 -0.3
SMTH Samothraki Isl 143.17 311 P PKPab 22 54 39.2 +0.3
CHVC Chvalec 143.19 331 *e*PKP PKPab 22 54 38.5 -0.2
CHVC *ex* x 22 54 52.2
DPC Dobruska-Polom 143.23 331 *e*PKP PKPab 22 54 37.9 -1.0
DPC *ex* x 22 54 50.6
UPC Upice 143.26 331 *e*PKP PKPab 22 54 39.2 +0.3
AMBH Ambrzfalva 143.50 322 PKP PKPbc 22 54 41.5 +0.6
JAVC Velka Javorina 143.60 328 *e*PKP PKPbc 22 54 41.7 +0.5
BUD Budapest 143.77 325 PKP PKPbc 22 54 41.7 +0.1
VRAC Vranov 143.83 329 *e*PKP PKPab 22 54 41.1 -0.1
PVCC Panska Ves 143.89 332 *e*PKP PKPab 22 54 40.9 -0.4
BRG Berggiesshubel 143.91 333 ⇓*i*PKP PKPab 22 54 41.3 -0.1
BRG Amp 22 54 42.4
comp=Z,25nm,0.9s
BRG *ex* x 22 54 53.6
BRG Amp 22 54 55.8
comp=Z,11nm,1.1s
NVR Nevrokopi 143.98 313 P **PKPab** **22 54 41.1 -1.0**
KRUC Moravsky 144.09 329 *e*PKP **PKPab** **22 54 41.9 -0.2**
GOPC GO Pecny, Ondr 144.24 331 *e*PKP **PKPab** **22 54 41.3 -1.4**
CSKK Cskako 144.25 325 PKP **PKPab** **22 54 42.4 -0.4**
SRS Serrai 144.26 313 P **PKPab** **22 54 41.3 -1.8**
PRU Pruhonice 144.30 332 *e*PKP **PKPab** **22 54 41.8 -1.1**
PRU *ex* x 22 54 53.5
OUR Ouranopolis 144.31 312 P **PKPab** **22 54 41.4 -1.8**
TREC Trest 144.36 330 *e*PKP **PKPab** **22 54 42.5 -0.7**
THR8 Santorini-Mono 144.54 304 P **PKPab** **22 54 42.3 -1.9**
SOH Sokhos 144.55 313 P **PKPab** **22 54 42.3 -1.9**
THR3 Thira Island, 144.60 305 P **PKPab** **22 54 43.0 -1.4**
PAIG Paliouri 144.68 311 P **PKPab** **22 54 42.9 -1.7**
FRGS Fruska Gora 144.69 321 ⇑*i*P **PKPab** **22 54 44.0 -0.6**
EGYH Egyhazaskeszo 144.71 326 PKP PKPbc 22 54 44.9 +0.3
KNT Kendrikon 144.72 313 P **PKPab** **22 54 42.8 -2.0**
TIH Tihany 144.74 325 PKP **PKPdf** **22 54 45.9 +0.1**
MORH Mrgy, Hungar 144.75 324 PKP **PKPab** **22 54 43.9 -0.8**
MPLH Magyarpolny 144.76 326 PKP **PKPab** **22 54 44.2 -0.5**
SOP Sopron 144.93 327 PKP **PKPdf** **22 54 46.3 +0.3**
NKC Novy Kostel 145.02 334 *e*PKP **PKPbc** **22 54 44.6 -1.0**
NKC *ep*PKP **sPKPdf** **22 55 01.0 +2.1**
RONA Rosalia, Austr 145.06 327 *e*P **PKPbc** **22 54 45.3 -0.5**
comp=Z,34nm,0.9s,SNR=16
CONA Conrad Observa 145.12 328 *e*P **PKPbc** **22 54 45.6 -0.5**
comp=Z,37nm,0.9s,SNR=19
KOVH Kovagotottos 145.13 324 PKP **PKPbc** **22 54 45.3 -0.7**
DIVS Divibare 145.17 320 ⇑*i*P **PKPbc** **22 54 45.4 -0.9**
CKRC Cesky Krumlov 145.24 330 *e*PKP **PKPbc** **22 54 44.7 -1.6**
CKRC *ex* x 22 54 58.3
PTL Penteli 145.24 308 P **PKPbc** **22 54 44.3 -2.4**
NEO Neokhori 145.25 310 P **PKPbc** **22 54 44.2 -2.5**
ATHU Athens Univers 145.33 308 P **PKPbc** **22 54 44.8 -2.2**
KHC Kasperske Hory 145.35 331 *e*PKP **PKPbc** **22 54 45.5 -1.2**
KHC *ep*PKP sPKPab 22 54 58.7 -1.0
VLY Voula,Athens 145.36 308 P **PKPbc** **22 54 44.6 -2.5**
ATH Athens Observa 145.38 308 P **PKPbc** **22 54 45.1 -2.0**
LIT Litokhoron 145.45 312 P **PKPdf** **22 54 45.2 -2.1**
GERES GERESS Array B 145.50 331 PKPbc **PKPdf** **22 54 44.8 -2.4**
comp=Z,11nm,0.9s,baz=345,slow=24,SNR=130
VILL Villia 145.61 308 P **PKPdf** **22 54 45.3 -2.3**
SJES Sjenica 145.63 318 *e*P **PKPdf** **22 54 47.3 -0.3**
BBLS Lazići 145.65 320 ⇑*i*P **PKPdf** **22 54 47.3 -0.3**
LKR Lokris 145.66 309 P **PKPdf** **22 54 44.7 -2.9**
ARSA Arzberg 145.75 327 *e*P **PKPdf** **22 54 47.7 +0.1**
comp=Z,9.1nm,0.9s
HAPS Han Pijesak,Bl 145.80 320 *e*P **PKPdf** **22 54 47.5 -0.4**
RUDO Rudo 145.81 319 *e*P **PKPdf** **22 54 46.9 -0.9**
MOA Molln 145.95 329 *e*P **PKPdf** **22 54 47.6 -0.3**
comp=Z,8.6nm,0.9s
IMMV Iera Moni Meta 145.98 304 P **PKPdf** **22 54 48.0 -0.3**
KRND KRANIDI 146.01 307 P **PKPdf** **22 54 46.7 -1.6**
A052A Srbac 146.05 323 *e*P **PKPdf** **22 54 47.0 -1.1**
PHP Peshkopia 146.12 316 P **PKPdf** **22 54 48.1 -0.3**
KNDR Palaiochora Ch 146.27 303 P **PKPdf** **22 54 48.8 0.0**
BIOA Bad Ischl, Aus 146.36 330 *e*P **PKPbc** **22 54 49.4 -0.5**
comp=Z,7.5nm,0.9s
SOKA Soboth 146.38 327 *e*P **PKPdf** **22 54 48.4 -0.3**
comp=Z,8.6nm,0.9s
EVR Evrytania 146.41 310 P **PKPdf** **22 54 49.0 -0.1**
SERG Sergoula 146.43 309 P **PKPdf** **22 54 48.8 -0.2**
A051A Mrakovica 146.45 323 ⇑*i*P **PKPdf** **22 54 48.6 -0.3**
BLY Banja Luka 146.45 323 ⇑*i*P **PKPdf** **22 54 49.0 +0.2**
KTHR Kythira 146.49 305 P **PKPdf** **22 54 48.6 -0.5**
KLV Kalavryta, Ach 146.51 309 P **PKPdf** **22 54 49.2 0.0**
EFP Efpalio 146.54 310 P **PKPdf** **22 54 49.7 +0.6**
BRY Bratogost 146.71 319 *e*P **PKPdf** **22 54 48.3 -1.2**
MGRS Mrkonjic Grad 146.71 322 *e*P **PKPdf** **22 54 49.8 +0.5**
CRES Cresnjev 146.72 326 ⇑*i*P **PKPdf** **22 54 49.7 +0.5**
PVO Paravola 146.74 310 P **PKPdf** **22 54 50.0 +0.5**
OBKA Obir 146.74 327 *e*P **PKPdf** **22 54 48.4 -1.0**
OBKA Obir 146.74 327 *e*P **PKPdf** **22 54 50.0 +0.7**
comp=Z,8.3nm,1.1s
JAN Jamina 146.78 312 P **PKPdf** **22 54 49.2 -0.4**
DRO Drossia 146.86 309 P **PKPdf** **22 54 50.7 +1.0**
A050A Klekovaca 146.98 323 *e*P **PKPdf** **22 54 49.2 -0.6**
RLS Riolos of Patr 147.00 309 P **PKPdf** **22 54 50.5 +0.6**
BTNL Ternell 147.07 340 *d*PKP **PKPdf** **22 54 50.6 +0.9**
MEM Membach 147.09 340 *d*PKP **PKPdf** **22 54 50.2 +0.6**
MYKA Terra Mystica 147.11 328 *e*P **PKPdf** **22 54 50.0 +0.1**
comp=Z,5.0nm,0.6s
BSTI Sart Tilman 147.25 341 *d*PKP **PKPdf** **22 54 51.1 +1.2**
LKD2 Lefkada island 147.29 311 P **PKPdf** **22 54 51.3 +0.9**
BHOU Houvegnez 147.31 340 *d*PKP **PKPbc** **22 54 51.5 -1.0**
CEY Cerknica 147.32 326 ⇑*i*P **PKPdf** **22 54 51.1 +0.8**
EVGI Lefkada island 147.36 311 P **PKPdf** **22 54 51.2 +0.7**
BCLA Clavier 147.47 341 *d*PKP **PKPdf** **22 54 50.5 +0.2**
ABTA Abfaltersbach 147.57 329 *e*P **PKPdf** **22 54 51.3 +0.5**
comp=Z,6.6nm,0.7s
WATA Walderalm 147.58 331 *e*P **PKPdf** **22 54 51.6 +0.7**
comp=Z,4.5nm,0.7s
WTTA Wattenberg 147.61 331 *e*P **PKPdf** **22 54 52.2 +1.3**
comp=Z,9.6nm,0.9s
SKDS Skadanscina 147.66 326 *e*P **PKPdf** **22 54 49.5 -1.3**
BMRD Maredsous 147.74 341 *d*PKP **PKPdf** **22 54 52.2 +1.4**
MOTA Moosalm 147.79 331 *e*P **PKPdf** **22 54 52.2 +1.0**
comp=Z,7.0nm,0.6s,SNR=7.5
RETA Reutte 147.83 332 *e*P **PKPdf** **22 54 52.4 +1.3**
comp=Z,3.8nm,0.6s
SQTA Sankt Quirin 147.83 331 *e*P **PKPdf** **22 54 52.5 +1.3**
comp=Z,9.5nm,0.6s,SNR=8.1
WLF Walferdange 147.85 339 *d*PKP **PKPbc** **22 54 53.0 -0.9**
DOU Dourbes 147.98 341 *d*PKP **PKPdf** **22 54 52.3 +1.2**
FETA Feichten 148.20 331 *e*P **PKPbc** **22 54 53.7 -1.5**
comp=Z,8.5nm,0.7s,SNR=8.8
DAVA Damuels 148.37 333 *e*P **PKPbc** **22 54 54.1 -1.5**
comp=Z,12nm,1.0s
ESDC Sonseca Array 159.95 344 PKPab **PKPab** **22 55 45.7 -2.0**
comp=Z,0.4nm,0.9s,baz=16,slow=3.9,SNR=2.7
TORD Torodi Ar. Bea 165.94 241 PKPab **PKPab** **22 56 14.2 -0.6**
comp=Z,1.1nm,1.0s,baz=105,slow=5.2,SNR=3.4

BEO ***02*** *22:35:41.6±1.5, 42°.44N×19°.23E, h20km±1km, ML1.6/4*
RHSSO ***02*** *22:35:42.7±0.3, 42°.51N×19°.23E, h4km±2km, ML1.8/5*
PDG 02 22:35:41.6±0.0, 42°.49N×19°.21E, h20km, ML1.9/12,
10C-9D, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.07**	**149**	*e*Pg	Pg	22 35 44.9	-0.3
PDG				*e*Sg	Sg	22 35 48.2	+0.5
TTG	**Podgorica**	**0.07**	**149**	⇑*i*Pg	Pg	22 35 45.3	+0.1
TTG				*e*Sg	Sg	22 35 48.3	+0.6
TTG	**Podgorica**	**0.07**	**149**	⇑*i*Pg	Pg	22 35 45.1	-0.1
TTG				*i* Sg	Sg	22 35 48.1	+0.4
CEME	**Cevo**	**0.22**	**285**	⇓*i*Pg	Pg	22 35 46.9	-0.2
CEME				*e*Sg	Sg	22 35 51.2	+0.4
CEME	**Cevo**	**0.22**	**285**	⇓*i*Pg	Pb	22 35 46.8	+0.1
CEME				*i* Sg	Sg	22 35 51.2	+0.4
BUM	**Brajici-Budva**	**0.30**	**231**	⇓*i*Pg	Pb	22 35 48.5	+0.2
BUM				*e*Sg	Sb	22 35 52.2	-0.6
BUM	**Brajici-Budva**	**0.30**	**231**	⇑*i*Pg	Pg	22 35 48.1	-0.2
BUM				*i* Sg	Sg	22 35 53.5	+0.6
DRME	**Dracevica, Mon**	**0.30**	**183**	*e*Pg	Pg	22 35 48.2	-0.1
DRME				*e*Sg	Sb	22 35 53.9	+0.9
DRME	**Dracevica, Mon**	**0.30**	**183**	⇑*i*Pg	Pg	22 35 48.3	0.0
DRME				*e*Sg	Sn	22 35 55.2	-1.7
DRME	**Dracevica, Mon**	**0.30**	**183**	⇓*i*Pg	Pg	22 35 48.1	-0.2
DRME				*i* Sg	Sb	22 35 53.6	+0.6
KOME	**Kolasin**	**0.42**	**32**	⇓*i*Pg	Pg	22 35 50.5	0.0
KOME				*e*Sg	Sg	22 35 56.3	-0.2
KOME	**Kolasin**	**0.42**	**32**	*e*Pg	Pg	22 35 50.1	-0.4
KOME				*i* Sg	Sb	22 35 57.3	+0.6
ULC	**Ulcinj**	**0.53**	**177**	⇓*i*Pg	Pb	22 35 51.7	-0.5
ULC				*e*Sg	Sb	22 35 59.1	-0.3
ULC	**Ulcinj**	**0.53**	**177**	⇓*i*Pg	Pb	22 35 51.8	-0.4
ULC				*i* Sg	Sg	22 36 00.6	+1.1
HCY	**Herceg Novi**	**0.53**	**265**	*e*Pg	Pb	22 35 52.2	0.0
HCY				*e*Sg	Sg	22 36 00.5	+1.0
HCY	**Herceg Novi**	**0.53**	**265**	⇓*i*Pg	Pb	22 35 52.1	-0.1
HCY				*e*Sg	Sg	22 36 00.6	+1.1
HCY	**Herceg Novi**	**0.53**	**265**	*e*Pg	Pb	22 35 51.9	-0.3
HCY				*i* Sg	Sg	22 36 00.6	+1.1
PVY	**Plav**	**0.57**	**79**	⇓*i*Pg	Pg	22 35 53.2	+0.2
PVY				*e*Sg	Sg	22 36 01.6	+0.9
PVY	**Plav**	**0.57**	**79**	*e*Pg	Pb	22 35 52.5	-0.4
PVY				*i* Sg	Sg	22 36 01.8	+1.1
IVA	**Berane**	**0.63**	**53**	⇑*i*Pg	Pb	22 35 54.1	+0.1
IVA	**Berane**	**0.63**	**53**	⇑*i*Pg	Pb	22 35 53.7	-0.3
IVA				*i* Sg	Sn	22 36 04.0	-1.2
BRY	**Bratogost**	**0.64**	**310**	*e*Pg	Pg	22 35 54.6	+0.2
BRY				*e*Sg	Sg	22 36 03.5	+0.5
BRY	**Bratogost**	**0.64**	**310**	⇑*i*Pg	Pn	22 35 55.1	-0.7
BRY				*e*Sg	Sb	22 36 01.9	-0.8
BRY	**Bratogost**	**0.64**	**310**	*e*Pg	Pb	22 35 53.8	-0.4
BRY				*i* Sg	Sg	22 36 04.2	+1.2
UPM	**Unac-Piva**	**0.74**	**343**	*e*Pg	Pg	22 35 56.6	+0.3
UPM				*e*Sg	Sb	22 36 05.8	-0.1
UPM	**Unac-Piva**	**0.74**	**343**	*e*Pg	Pb	22 35 55.7	-0.3
UPM				*i* Sg	Sn	22 36 07.7	-0.4
DBRK	**Dubrovnik**	**0.80**	**283**	*e*Pg	Pb	22 35 56.0	-0.9
DBRK				Sg	Sn	22 36 08.8	-0.4
PLE	**Pljevlja**	**0.85**	**9**	⇑*i*Pg	Pb	22 35 57.6	-0.2
PLE				*i* Sg	Sn	22 36 11.2	+0.6
SJES	**Sjenica**	**0.95**	**36**	⇑*i*Pg	Pn	22 35 59.9	-0.1
SJES				*e*Sg	Sb	22 36 12.3	+0.5
SJES	**Sjenica**	**0.95**	**36**	*e*Pg	Pn	22 35 59.9	-0.1
SJES				*e*Sg	Sn	22 36 13.3	+0.2
RUDO	**Rudo**	**1.13**	**6**	⇑*i*Pg	Pn	22 36 01.9	-0.5
RUDO				*e*Sg	Sg	22 36 18.1	-0.4
STON	**Ston**	**1.17**	**289**	*e*Pg	Pg	22 36 04.3	0.0
STON				*e*Sg	Sg	22 36 20.6	+0.9
STON	**Ston**	**1.17**	**289**	*e*Pg	Pn	22 36 02.1	-0.8
STON				Sg	Sg	22 36 20.9	+1.1
STON	**Ston**	**1.17**	**289**	*e*Pg	Pn	22 36 02.7	-0.2
STON				*e*Sg	Sg	22 36 20.6	+0.9
IVAS	**Ivanjica**	**1.29**	**32**	*e*Pg	Pb	22 36 05.4	+0.2
IVAS				*e*Sg	Sg	22 36 23.4	0.0
BBLS	**Lazići**	**1.38**	**6**	*e*Pg	Pb	22 36 07.3	+0.5
BBLS				*e*Sg	Sg	22 36 26.7	+0.3
BBLS	**Lazići**	**1.38**	**6**	*e*Pg	Pg	22 36 07.8	-0.5
BBLS				*e*Sg	Sg	22 36 26.7	+0.3
HAPS	**Han Pijesak,Bl**	**1.60**	**353**	*e*Pn	Pb	22 36 10.8	+0.1
HAPS				*e*Sn	Sg	22 36 32.5	-1.0
DIVS	**Divibare**	**1.71**	**19**	*e*Pn	Pb	22 36 13.0	+0.6
DIVS				*e*Sn	Sg	22 36 35.4	-1.3
LSTV	**Lastovo**	**1.73**	**280**	Sn	Sg	22 36 38.3	+0.9
MAKA	**Makarska**	**1.79**	**297**	Sn	Sb	22 36 37.5	+1.7
MORI	**Morici**	**2.91**	**299**	Sn	Sb	22 37 05.2	-2.6

NCEDC ***02*** *22:37:15.9±1.5, 35°.905N±0°.010×120°.45W±0°.01,*
h6km±2km, ML3.0/22, ML2.6/45(NEIC), Error ellipse:
s-maj=1.6km s-min=1.2km az=147.0
NEIC 02 22:37:16.1±1.2, 35°.91N±0°.02×120°.455W±0°.007,
h14km±1km, Error ellipse: s-maj=2.4km s-min=0.5km
az=165.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSTM	**Stockdale Moun**	**0.05**	**296**		Pg	22 37 17.8	-1.1
PHFM	**Heflinger Ranc**	**0.05**	**121**		Pg	22 37 17.7	-1.2
PVCM	**Vineyard Canyo**	**0.07**	**283**		Pg	22 37 18.1	-1.0
PKD	**Bear Valley Ra**	**0.08**	**298**		Pg	22 37 18.2	-1.0
PHAM	**Harlan Ranch**	**0.09**	**147**		Pg	22 37 18.4	-0.8
CTM	**Castle Mountai**	**0.10**	**76**		Pg	22 37 19.1	-0.3
PWKM	**Work Ranch**	**0.10**	**206**		Pg	22 37 18.9	-0.6
PCMM	**Cholame Hills**	**0.11**	**160**		Pg	22 37 18.9	-0.6
GHC	**Gold Hill**	**0.11**	**133**		Pg	22 37 18.7	-0.8
PPO	**Portuguese Can**	**0.14**	**253**		Pg	22 37 19.6	-0.2
PHPM	**Hope Ranch**	**0.14**	**301**		Pg	22 37 19.4	-0.6
PSRM	**Scobie Ranch**	**0.15**	**109**		Pg	22 37 23.4	0.0
PKLM	**Kerr Lake**	**0.16**	**145**		Pg	22 37 19.9	-0.3
PSNM	**Stone Corral**	**0.18**	**133**		Pg	22 37 19.9	-0.4
PMCM	**McMillan Canyo**	**0.20**	**159**		Pg	22 37 20.6	-0.1
PSMM	**Smith Mountain**	**0.20**	**325**		Pg	22 37 21.0	+0.2
PMRM	**Maxey Ranch**	**0.22**	**124**		Pg	22 37 20.8	-0.2
TCHL	**Shandon**	**0.22**	**169**		Pg	22 37 21.3	+0.2
PAGB	**Antelope Grade**	**0.24**	**137**		Pg	22 37 21.5	+0.1
PAGB	**Antelope Grade**	**0.24**	**137**	IAML		22 37 27.2	
	comp=E,5.9nm,0.3s						
THIS	**South End of C**	**0.26**	**135**		Pg	22 37 21.8	+0.1
TRAM	**Private Proper**	**0.28**	**147**		Pg	22 37 22.0	0.0
PPTM	**Peach Tree Val**	**0.29**	**313**		Pg	22 37 22.4	+0.1
PKEM	**Kettleman Hill**	**0.32**	**61**		Pb	22 37 24.3	+0.7
PJUM	**Juniper Ridge**	**0.34**	**341**		Pb	22 37 24.1	+0.2
PARM	**Anticline Ridg**	**0.35**	**15**		Pb	22 37 24.8	+0.6
PSAM	**San Ardo**	**0.37**	**289**		Pg	22 37 23.6	0.0
TSCN	**Private Proper**	**0.37**

BBGB	**Big Mountain B**	**0.82**	**325**			**Pb**	22 37 32.6 +0.4
BSGM	**Shirttail Gulc**	**0.82**	**308**			**Pg**	22 37 31.4 -0.7
BAVM	**Antelope Valle**	**0.87**	**328**			**Pg**	22 37 33.2 +0.2
CRGC	**Crocker Grade**	**0.89**	**138**			**Pg**	22 37 33.5 +0.1
BVL	**Bear Valley**	**0.89**	**318**			**Pb**	22 37 33.0 -0.3
BSMM	**Soledad Missio**	**0.92**	**301**			**Pb**	22 37 33.3 -0.6
VOG	**Valley Oaks Go**	**0.96**	**64**			**Pb**	22 37 34.1 -0.4
BRMM	**Rolling Bench**	**0.97**	**342**			**Pn**	22 37 35.8 +0.5
BJCM	**Johnson Can.**	**0.99**	**310**			**Pb**	22 37 34.5 -0.6
BAPM	**Anderson Peak**	**1.00**	**286**			**Pb**	22 37 34.9 -0.4
BJOM	**Mount Johnson**	**1.00**	**316**			**Pb**	22 37 34.4 -0.7
HAST	**Hastings Reser**	**1.01**	**299**			**Pb**	22 37 34.7 -0.7
PMLM	**Mount Lospe**	**1.02**	**187**			**Pb**	22 37 35.5 0.0
SCZ	**Santa Cruz**	**1.03**	**312**			**Pb**	22 37 35.3 -0.4
BPOM	**Post Ranch**	**1.11**	**287**			**Pb**	22 37 36.2 -0.9
VES	**Vestal, Reichgr**	**1.11**	**93**			**Pb**	22 37 36.1 -1.1
BSLM	**Silva Ranch**	**1.13**	**320**			**Pg**	22 37 38.0 +0.1
PKM	**Mcpherson Peak**	**1.14**	**153**			**Pb**	22 37 37.5 -0.2
BSRM	**Salinas Radio**	**1.15**	**312**			**Pb**	22 37 37.1 -0.5
BPCNC	**Pine Canyon**	**1.16**	**305**			**Pn**	22 37 37.5 -0.4
MRHM	**Rocky Hill**	**1.17**	**71**			**Pn**	22 37 36.9 -1.2
SAO	**San Andreas Ge**	**1.17**	**317**			**Pn**	22 37 37.6 -0.5
FRP	**Fremont Peak**	**1.19**	**316**			**Pn**	22 37 37.8 -0.5
HSFM	**Saint Francis**	**1.23**	**317**			**Pb**	22 37 39.1 -0.1
FIGC	**Figueroa Mtn.**	**1.24**	**162**			**Pb**	22 37 39.3 0.0
BCW	**Bitter Crk WRg**	**1.29**	**138**			**Pg**	22 37 40.7 -0.2
MHDM	**Hidden Dam**	**1.29**	**20**			**Pn**	22 37 39.2 -0.4
HBTM	**San Juan Bauti**	**1.29**	**317**			**Pn**	22 37 39.5 -0.2
HFEM	**San Felipe**	**1.32**	**325**			**Pn**	22 37 39.8 -0.3
SLD	**San Luis Dam**	**1.32**	**332**			**Pb**	22 37 40.6 0.0
HPCM	**Pacheco Lake**	**1.33**	**330**			**Pb**	22 37 40.5 -0.3
HTUM	**Tustin Road**	**1.33**	**314**			**Pn**	22 37 39.6 -0.6
HMOM	**Monterey**	**1.37**	**301**			**Pn**	22 37 40.4 -0.4
CSR	**Chase Ranch**	**1.39**	**319**			**Pn**	22 37 40.9 -0.1
SPG2	**Springville 2**	**1.40**	**77**			**Pn**	22 37 40.3 -0.9
HCOM	**Corn Cob Canyo**	**1.41**	**314**			**Pn**	22 37 40.9 -0.3
GHS	**Gilroy Hot Spr**	**1.43**	**326**			**Pn**	22 37 41.8 +0.1
MYLM	**Yosemite Lake**	**1.47**	**1**			**Pn**	22 37 42.1 -0.1
ARVC	**Arvin**	**1.54**	**120**			**Pn**	22 37 42.7 -0.4
WASM	**Alta Sierra Ca**	**1.55**	**96**			**Pn**	22 37 42.9 -0.5
TEJ	**El Tejon**	**1.59**	**115**			**Pn**	22 37 42.6 -1.2
JTGM	**Trout Gulch Ro**	**1.60**	**315**			**Pn**	22 37 44.3 +0.3
MMIM	**Miami Mountain**	**1.61**	**21**			**Pb**	22 37 45.1 -0.7
ISA	**Isabella, Lake**	**1.63**	**98**			**Pn**	22 37 44.1 -0.3
ISA	**Isabella, Lake**	**1.63**	**98**	IAML			22 38 11.6
	comp=E,74nm,0.3s						
JRGM	**Rodeo Gulch Ro**	**1.66**	**313**			**Pn**	22 37 44.0 -0.8
MBUM	**Mount Bullion**	**1.68**	**10**			**Pn**	22 37 45.6 +0.4
ARN	**Arnold Ranch**	**1.68**	**329**			**Pn**	22 37 45.5 +0.4
KCC	**Kaiser Creek**	**1.68**	**33**			**Pb**	22 37 46.2 -0.7
WLHM	**Little Horse**	**1.75**	**81**			**Pn**	22 37 46.8 +0.4
JBNB	**Ben Lomond Mou**	**1.83**	**312**			**Pn**	22 37 46.1 -1.1
CALM	**Calaveras Res.**	**1.88**	**325**			**Pn**	22 37 48.4 +0.6
JSCM	**Stevens Creek**	**1.92**	**316**			**Pn**	22 37 48.4 0.0
CWC	**Cottonwood Cre**	**1.99**	**74**			**Pn**	22 37 50.6 +1.1
SCHCA	**Scheelite**	**2.03**	**44**			**Pb**	22 37 52.0 -0.9
OMMB	**Old Mammoth Mi**	**2.06**	**34**			**Pn**	22 37 51.6 +0.9
OMMB				IAML			22 38 25.1
	comp=E,55nm,0.7s						
OMMB				IAML			22 38 26.3
	comp=N,71nm,0.7s						
MCUB	**Copperopolis B**	**2.07**	**356**			**Pn**	22 37 51.6 +1.2
MTUM	**Tungsten Hills**	**2.10**	**46**			**Pb**	22 37 52.6 -1.4
MGPM	**Gravel Pit**	**2.12**	**36**			**Pb**	22 37 53.3 -1.1
CMB	**Columbia Colle**	**2.12**	**1**			**Pn**	22 37 52.6 +1.4
CCAC	**Calif City Air**	**2.13**	**110**			**Pn**	22 37 51.4 +0.2
CCAC				IAML			22 38 35.1
	comp=E,62nm,1.0s						
MCVM	**Convict Lake**	**2.13**	**37**			**Pb**	22 37 53.8 -0.8
JCHM	**Cahill Ridge**	**2.23**	**317**			**Pn**	22 37 52.2 -0.4
LCH	**Last Change Ra**	**2.62**	**59**	Pn		**Pn**	22 37 59.3 +1.2
LCH				IAML			22 38 46.2
	comp=E,34nm,0.4s						
LCH				IAML			22 38 50.6
	comp=N,23nm,0.7s						
WAKR	**Walker**	**2.72**	**17**			**Pn**	22 37 59.7 +0.2
WAKR				IAML			22 38 47.5
	comp=N,34nm,1.0s						
WAKR				IAML			22 38 54.2
	comp=E,35nm,1.0s						
LHV	**Little Huntoon**	**2.81**	**33**			**Pn**	22 38 00.9 +0.3
LHV				IAML			22 39 00.1
	comp=E,29nm,0.9s						
LHV				IAML			22 39 02.1
	comp=N,28nm,1.0s						
GMN	**Gold Mountain**	**2.92**	**61**			**Pn**	22 38 02.3 -0.1
GMN				IAML			22 38 52.5
	comp=E,13nm,0.6s						
GMN				IAML			22 39 01.6
	comp=N,18nm,0.7s						
FLSC	**Flash Two Peak**	**2.94**	**108**			**Pn**	22 38 01.3 -1.2
GSC	**Goldstone, Bar**	**3.03**	**100**			**Pn**	22 38 04.5 +0.7
GSC				IAML			22 38 55.6
	comp=E,25nm,0.6s						
GSC				IAML			22 38 58.1
	comp=N,19nm,1.4s						
NVAR	**Mina Array Bea**	**3.05**	**34**	Pn		**Pn**	22 38 04.9 +0.9
AFDM	**Forest Hills D**	**3.06**	**352**	Pn		**Pn**	22 38 04.4 +0.3
GWY	**Greenwater Val**	**3.08**	**84**	Pn		**Pn**	22 38 04.3 -0.1
GWY				IAML			22 38 31.6
	comp=N,13nm,1.3s						
GWY				IAML			22 39 15.8
	comp=E,11nm,1.9s						
NV11	**Mina Array Sit**	**3.12**	**35**	Pn		**Pn**	22 38 06.1 +1.1
WCT	**Wildcat Mounta**	**3.21**	**73**	Pn		**Pn**	22 38 07.1 +0.9
TPH	**Tonopah**	**3.37**	**49**	Pn		**Pn**	22 38 08.9 +0.4
VCNR	**Virginia City**	**3.44**	**10**	Pn		**Pn**	22 38 09.9 +0.5
VCNR				IAML			22 39 21.9
	comp=N,20nm,0.9s						
KBF	**Kyburz Flat**	**3.60**	**3**			**Pn**	22 38 12.8 +1.2
KVN	**Kaiserville**	**3.65**	**30**	Pn		**Pn**	22 38 13.1 +0.7
KVN				IAML			22 39 21.0
	comp=N,6.7nm,1.3s						
KVN				IAML			22 39 39.0
	comp=E,7.2nm,4.7s						
BEKR	**Beckworth**	**3.95**	**1**	Pn		**Pn**	22 38 17.0 +0.6
BEKR				IAML			22 39 27.5
	comp=E,13nm,0.6s						
BEKR				IAML			22 39 32.5
	comp=N,6.1nm,1.3s						

NEIC ***02*** *22:39:40.6±1.9, 60.°92N±0.°02×149.°52W±0.°04, h39km±5km, Error ellipse: s-maj=3.6km s-min=2.6km az=129.0*

NEIC ***02*** *22:39:40, 60.°90N×149.°52W, h43km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.30; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$0.67; $M_{r\theta}$0.26; $M_{\theta\phi}$0.56; $M_{\phi r}$0.65; Fault plane solution: $M_0$1.24000×10^{15} NP1:ϕ_s67.42000°, δ68.38000°, λ27.69000°. NP2:ϕ_s326.48000°, δ64.41000°, λ155.89000°. Principal axes: T 1.3121, Plg34.0000°, Azm288.0000°; N -0.1706, Plg55.0000°, Azm102.0000°; P -1.1415, Plg3.0000°, Azm196.0000°;*

IDC ***02*** *22:39:40.6±0.8, 61.°12N×149.°99W, h34km±6km, mb3.5/10, mbtmp3.7/13, ML3.6/3, MS2.9/3 Error ellipse: s-maj=19.8km s-min=14.0km az=113.0*

AEIC ***02*** *22:39:41±1.8, 60.°88N±0.°02×149.°52W±0.°06, h24km±5km, ML3.9, mb4.3/2(NEIC), ML4.1/186(NEIC), Mwr4.0/108(NEIC), Error ellipse: s-maj=3.9km s-min=3.0km az=103.0*

ISC 02 22:39:39.9±0.6, 60.°91N±0.°02×149.°53W±0.°02, h33km±3km, n442, σ1.9 18/413, mb3.8/14, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	**Rabbit Creek A**	**0.21**	**332**		**Pn**	**22 39 46.7**	**+0.8**
RC01	**Rabbit Creek A**	**0.21**	**332**		**Sb**	**22 39 51.7**	**+0.5**
RC01				IAML		22 39 52.0	
	comp=N,46μm,0.5s						
RC01				IAML		22 39 52.7	
	comp=E,33μm,0.6s						
RC01	**Rabbit Creek A**	**0.21**	**332**	P	**Pn**	**22 39 46.7**	**+0.8**
	baz=153,SNR=1000						
RC01				S	**Sb**	**22 39 51.5**	**+0.3**
	baz=153						
FIS	**Fire Island**	**0.41**	**306**		**Pb**	**22 39 49.7**	**+0.6**
FIS	**Fire Island**	**0.41**	**306**		**Sn**	**22 39 57.7**	**+1.8**
FIS				IAML		22 39 58.1	
	comp=N,40μm,0.6s						
FIS				IAML		22 39 58.5	
	comp=E,54μm,0.8s						
O22K	**Cooper Landing**	**0.44**	**192**		**Pb**	**22 39 49.6**	**+0.1**
O22K	**Cooper Landing**	**0.44**	**192**	IAML		22 39 58.7	
	comp=E,33μm,0.6s						
O22K				IAML		22 40 02.7	
	comp=N,30μm,0.7s						
O22K	**Cooper Landing**	**0.44**	**192**	P	**Pb**	**22 39 49.5**	**-0.1**
	baz=14,SNR=1000						
O22K				S	**Sb**	**22 39 56.5**	**+0.3**
	baz=14						
SLKM	**Skilak Lake**	**0.53**	**220**		**Pb**	**22 39 50.7**	**-0.2**
SLKM					**Sb**	**22 39 58.6**	**+0.1**
PWL	**Port Wells**	**0.59**	**94**		**Pn**	**22 39 51.7**	**-0.2**
PWL					**Sb**	**22 40 00.6**	**+0.4**
PWL	**Port Wells**	**0.59**	**94**	IAML		22 40 01.1	
	comp=N,14μm,0.4s						
PWL				IAML		22 40 02.5	
	comp=E,9μm,0.2s						
PWL	**Port Wells**	**0.59**	**94**	P	**Pn**	**22 39 51.7**	**-0.2**
	baz=273,SNR=1000						
PWL				S	**Sb**	**22 40 00.3**	**+0.1**
	baz=273						
PMR	**Palmer**	**0.71**	**16**		**Pn**	**22 39 53.0**	**-0.6**
PMR	**Palmer**	**0.71**	**16**		**Sn**	**22 40 02.4**	**-1.1**
PMR	**Palmer**	**0.71**	**16**	P	**Pn**	**22 39 53.0**	**-0.6**
	baz=195,SNR=1000						
PMR				S	**Sn**	**22 40 02.3**	**-1.1**
	baz=195						
KNK	**Knik Glacier**	**0.73**	**45**		**Pn**	**22 39 53.8**	**0.0**
KNK	**Knik Glacier**	**0.73**	**45**		**Sn**	**22 40 03.9**	**+0.1**
KNK	**Knik Glacier**	**0.73**	**45**	P	**Pn**	**22 39 53.6**	**-0.2**
	baz=224,SNR=500						
KNK				S	**Sn**	**22 40 03.7**	**-0.2**
	baz=224						
CAPN	**Captain Cook N**	**0.81**	**261**		**Pb**	**22 39 56.0**	**+0.6**
CAPN	**Captain Cook N**	**0.81**	**261**	IAML		22 40 15.1	
	comp=E,7μm,0.7s						
CAPN				IAML		22 40 16.2	
	comp=N,8μm,0.7s						
CAPN	**Captain Cook N**	**0.81**	**261**	P	**Pb**	**22 39 55.9**	**+0.4**
	baz=81,SNR=6.3						
SEW	**Seward**	**0.81**	**177**		**Pn**	**22 39 54.5**	**-0.4**
SEW					**Sb**	**22 40 06.4**	**+0.3**
SEW	**Seward**	**0.81**	**177**	P	**Pn**	**22 39 54.5**	**-0.4**
	baz=358,SNR=62						
SUA	**Susitna One**	**0.81**	**314**		**Pn**	**22 39 54.5**	**-0.5**
SUA	**Susitna One**	**0.81**	**314**	IAML		22 40 06.5	
	comp=N,5μm,0.9s						
SUA	**Susitna One**	**0.81**	**314**	P	**Pn**	**22 39 54.6**	**-0.5**
	baz=134,SNR=313						
SUA				S	**Sn**	**22 40 05.7**	**-0.3**
	baz=134						
M22K	**Willow**	**0.89**	**342**		**Pn**	**22 39 55.4**	**-0.7**
M22K	**Willow**	**0.89**	**342**	IAML		22 40 15.3	
	comp=E,8μm,0.6s						
M22K	**Willow**	**0.89**	**342**	P	**Pn**	**22 39 55.3**	**-0.7**
	baz=162,SNR=122						
M22K				S	**Sn**	**22 40 07.3**	**-0.6**
	baz=162						
GHO	**Glory Hole Cre**	**0.92**	**18**		**Pn**	**22 39 56.2**	**-0.3**
GHO	**Glory Hole Cre**	**0.92**	**18**	IAML		22 40 12.3	
	comp=E,8μm,0.4s						
SML	**Sawmill**	**1.07**	**32**		**Pn**	**22 39 58.5**	**-0.1**
SML	**Sawmill**	**1.07**	**32**	IAML		22 40 15.3	
	comp=N,4μm,0.8s						
SML				IAML		22 40 17.4	
	comp=E,4μm,0.6s						
SML	**Sawmill**	**1.07**	**32**	P	**Pn**	**22 39 58.6**	**-0.1**
	baz=212,SNR=449						
SML				S	**Sb**	**22 40 13.6**	**-0.1**
	baz=212						
GLI	**Glacier Island**	**1.19**	**90**		**Pn**	**22 40 00.2**	**0.0**
GLI	**Glacier Island**	**1.19**	**90**	IAML		22 40 17.6	
	comp=N,5μm,0.6s						
GLI	**Glacier Island**	**1.19**	**90**	P	**Pn**	**22 40 00.3**	**0.0**
	baz=271,SNR=254						
GLI				S	**Sn**	**22 40 16.3**	**+1.1**
	baz=271						
M23K	**Glacier View**	**1.24**	**44**		**Pn**	**22 40 01.5**	**+0.6**
M23K					**Sb**	**22 40 19.4**	**+0.9**
M23K	**Glacier View**	**1.24**	**44**	P	**Pn**	**22 40 01.5**	**+0.6**
	baz=224,SNR=942						
SPU	**Mount Spurr**	**1.26**	**284**		**Pn**	**22 40 01.0**	**-0.2**
STLK	**Strandline Lak**	**1.26**	**299**		**Pn**	**22 40 01.1**	**-0.1**
SPCG	**Spurr Capps Gl**	**1.27**	**289**		**Pn**	**22 40 01.3**	**-0.1**
BRSE	**Bradley Lake S**	**1.32**	**208**		**Pn**	**22 40 02.6**	**+0.7**
BRSE					**Sb**	**22 40 20.4**	**-0.2**
BRSE	**Bradley Lake S**	**1.32**	**208**	P	**Pn**	**22 40 02.5**	**+0.6**
	baz=27,SNR=160						
SPCP	**Crater Peak Br**	**1.32**	**287**		**Pn**	**22 40 02.5**	**+0.3**
BRLK	**Bradley Lake**	**1.33**	**211**		**Pn**	**22 40 03.0**	**+0.9**
BRLK	**Bradley Lake**	**1.33**	**211**	IAML		22 40 22.3	
	comp=E,2μm,0.5s						
N20K	**Mount Spurr**	**1.33**	**284**	P	**Pn**	**22 40 02.1**	**-0.1**
	baz=103,SNR=295						
SPCR	**Spurr Chakacha**	**1.33**	**284**		**Pn**	**22 40 02.3**	**+0.1**
SPCR	**Spurr Chakacha**	**1.33**	**284**	P	**Pn**	**22 40 02.2**	**-0.1**
	baz=103,SNR=271						
CKL	**Chakachamna La**	**1.40**	**283**		**Pn**	**22 40 03.2**	**+0.1**
P23K	**Montague Islan**	**1.40**	**130**		**Pn**	**22 40 03.3**	**+0.3**
P23K	**Montague Islan**	**1.40**	**130**	P	**Pn**	**22 40 03.1**	**+0.1**
	baz=311						
SCM	**Sheep Creek Mo**	**1.41**	**48**		**Pn**	**22 40 04.0**	**+0.7**
SCM					**Sb**	**22 40 23.8**	**+0.4**
SCM	**Sheep Creek Mo**	**1.41**	**48**	IAML		22 40 31.2	
	comp=N,4μm,1.0s						
SCM	**Sheep Creek Mo**	**1.41**	**48**	P	**Pn**	**22 40 04.0**	**+0.7**
	baz=229,SNR=185						
SCM				S	**Sb**	**22 40 22.6**	**-0.7**
	baz=229						
JPK	**Jack Peak**	**1.44**	**83**		**Pn**	**22 40 04.1**	**+0.4**
SKT	**Skwentna**	**1.44**	**319**		**Pn**	**22 40 04.3**	**+0.6**
SKT	**Skwentna**	**1.44**	**319**	IAML		22 40 24.2	
	comp=E,4μm,0.5s						
SKT	**Skwentna**	**1.44**	**319**	P	**Pn**	**22 40 04.2**	**+0.5**
	baz=138,SNR=342						
SKT				S	**Sn**	**22 40 23.3**	**+1.9**
	baz=138						
FID	**Port Fidalgo**	**1.50**	**95**		**Pn**	**22 40 04.2**	**-0.3**
FID					**Sn**	**22 40 23.9**	**+0.9**
FID	**Port Fidalgo**	**1.50**	**95**	IAML		22 40 25.7	
	comp=N,4μm,0.5s						
CUT	**Chulitna**	**1.54**	**347**		**Pn**	**22 40 05.7**	**+0.7**
CUT	**Chulitna**	**1.54**	**347**	P	**Pn**	**22 40 05.4**	**+0.3**
	baz=167,SNR=123						
CUT				S	**Sn**	**22 40 25.4**	**+1.6**
	baz=167						
VMT	**TAPS Tl Valdez**	**1.55**	**82**		**Pn**	**22 40 06.0**	**+0.9**
VMT					**Sb**	**22 40 26.6**	**-0.7**
HIN	**Hinchinbrook I**	**1.58**	**108**		**Pn**	**22 40 05.8**	**+0.2**
HIN					**Sb**	**22 40 26.9**	**-1.2**
HIN	**Hinchinbrook I**	**1.58**	**108**	IAML		22 40 31.3	
	comp=N,2μm,0.8s						
HIN				IAML		22 40 33.2	
	comp=E,3μm,0.9s						
DFR	**Drift River**	**1.58**	**260**		**Pn**	**22 40 05.8**	**+0.1**
CNPM	**China Poot**	**1.63**	**212**		**Pn**	**22 40 06.9**	**+0.7**
HOM	**Homer**	**1.64**	**221**		**Pn**	**22 40 07.2**	**+0.9**
HOM					**Sb**	**22 40 28.5**	**-1.2**
HOM	**Homer**	**1.64**	**221**	IAML		22 40 42.3	
	comp=N,4μm,0.8s						
HOM	**Homer**	**1.64**	**221**	P	**Pn**	**22 40 07.4**	**+1.1**
	baz=40,SNR=10.0						
HOM				S	**Sn**	**22 40 28.0**	**+1.9**
	baz=40						
RDJH	**Redoubt Jeurge**	**1.64**	**260**		**Pn**	**22 40 07.0**	**+0.6**
RSO	**Redoubt South**	**1.65**	**256**		**Pn**	**22 40 06.8**	**+0.2**
RED	**Redoubt Volcan**	**1.67**	**254**		**Pn**	**22 40 07.3**	**+0.5**
RED					**Sb**	**22 40 29.6**	**-1.1**
RDWB	**Redoubt West**	**1.68**	**257**		**Pn**	**22 40 07.6**	**+0.6**
NCT	**North Crescent**	**1.70**	**260**		**Pn**	**22 40 08.0**	**+0.6**
O20K	**Slope Mountain**	**1.74**	**243**		**Pn**	**22 40 09.1**	**+1.3**
O20K	**Slope Mountain**	**1.74**	**243**	P	**Pn**	**22 40 09.3**	**+1.5**
	baz=61,SNR=20						
O20K				S	**Sn**	**22 40 30.7**	**+1.9**
	baz=61						
KLU	**Klutina**	**1.84**	**70**		**Pn**	**22 40 10.0**	**+0.8**
KLU	**Klutina**	**1.84**	**70**	IAML		22 40 37.6	
	comp=E,2μm,0.2s						
KLU	**Klutina**	**1.84**	**70**	P	**Pn**	**22 40 10.1**	**+0.8**
	baz=252,SNR=122						
DIV	**Divide**	**1.84**	**81**		**Pn**	**22 40 09.9**	**+0.7**
WAT6	**Susitna Watana**	**1.88**	**26**		**Pn**	**22 40 10.6**	**+0.7**
WAT6	**Susitna Watana**	**1.88**	**26**	P	**Pn**	**22 40 10.6**	**+0.7**
	baz=207,SNR=426						
WAT6				S	**Sn**	**22 40 34.9**	**+2.3**
	baz=207						
EYAK	**Cordova Ski Ar**	**1.89**	**99**		**Pn**	**22 40 10.2**	**+0.3**
EYAK	**Cordova Ski Ar**	**1.89**	**99**	P	**Pn**	**22 40 10.1**	**+0.3**
	baz=282,SNR=63						
IVE	**Iliamna Volcan**	**1.94**	**244**		**Pn**	**22 40 11.2**	**+0.6**
WAT1	**Susitna Watana**	**1.98**	**13**		**Pn**	**22 40 12.5**	**+1.3**
WAT1	**Susitna Watana**	**1.98**	**13**	P	**Pn**	**22 40 12.5**	**+1.3**
	baz=194						
WAT1				S	**Sn**	**22 40 37.6**	**+2.7**
	baz=194						
M20K	**Styx River**	**1.99**	**301**		**Pn**	**22 40 12.7**	**+1.5**
M20K	**Styx River**	**1.99**	**301**	P	**Pn**	**22 40 12.5**	**+1.3**
	baz=118						
ILS	**Iliamna Low So**	**2.00**	**243**		**Pn**	**22 40 12.2**	**+0.9**
M24K	**Tolsona, Glenn**	**2.01**	**52**		**Pn**	**22 40 12.9**	**+1.4**
M24K	**Tolsona, Glenn**	**2.01**	**52**	P	**Pn**	**22 40 13.0**	**+1.5**
	baz=234,SNR=212						
Q23K	**Middleton Isla**	**2.18**	**132**		**Pn**	**22 40 14.9**	**+1.3**
Q23K	**Middleton Isla**	**2.18**	**132**	IAML		22 40 52.6	
	comp=N,1μm,0.5s						
Q23K				IAML		22 40 57.4	
	comp=E,1μm,0.8s						
Q23K	**Middleton Isla**	**2.18**	**132**	Pb	**Pb**	**22 40 18.1**	**-0.4**
	baz=314						
MID	**Middleton Isla**	**2.18**	**132**		**Pn**	**22 40 14.9**	**+1.2**
MID	**Middleton Isla**	**2.18**	**132**	IAML		22 40 55.8	
	comp=N,1μm,0.9s						
MID				IAML		22 40 57.3	
	comp=E,1μm,0.8s						
PS12	**TAPS Pump St12**	**2.20**	**73**		**Pn**	**22 40 15.7**	**+1.6**
OPT	**Oil Point**	**2.23**	**237**		**Pn**	**22 40 16.2**	**+1.7**
P19K	**Oil Pt**	**2.23**	**237**		**Pn**	**22 40 16.2**	**+1.6**
P19K	**Oil Pt**	**2.23**	**237**	IAML		22 40 51.3	
	comp=E,2μm,0.7s						
P19K				IAML		22 40 51.5	
	comp=N,1μm,0.8s						
P19K	**Oil Pt**	**2.23**	**237**	P	**Pn**	**22 40 15.9**	**+1.3**
	baz=55,SNR=10						
PS11	**TAPS Pump St11**	**2.27**	**57**		**Pn**	**22 40 16.6**	**+1.5**
PPLA	**Purkeypile**	**2.36**	**329**		**Pn**	**22 40 17.5**	**+1.1**
PPLA	**Purkeypile**	**2.36**	**329**	P	**Pn**	**22 40 17.2**	**+0.9**
	baz=147,SNR=58						
GOAT	**Goat Mountain**	**2.38**	**96**		**Pn**	**22 40 16.9**	**+0.3**
DHY	**Denali Highway**	**2.40**	**24**		**Pn**	**22 40 18.4**	**+1.4**
DHY	**Denali Highway**	**2.40**	**24**	IAML		22 40 53.0	
	comp=E,1μm,0.4s						
DHY				IAML		22 40 53.2	
	comp=N,971nm,0.5s						
DHY	**Denali Highway**	**2.40**	**24**	P	**Pn**	**22 40 18.2**	**+1.2**
	baz=206,SNR=378						
BMRM	**Bremner River**	**2.41**	**86**		**Pn**	**22 40 17.1**	**+0.1**
BMRM	**Bremner River**	**2.41**	**86**	P	**Pn**	**22 40 17.3**	**+0.4**
	baz=270,SNR=75						
N19K	**Bonanza Creek**	**2.42**	**270**		**Pn**	**22 40 18.0**	**+0.7**
N19K	**Bonanza Creek**	**2.42**	**270**	P	**Pn**	**22 40 18.1**	**+0.9**
	baz=86,SNR=42						
RAGM	**Ragged Mountai**	**2.45**	**100**		**Pn**	**22 40 17.2**	**-0.3**
O19K	**Port Alsworth**	**2.47**	**255**		**Pn**	**22 40 18.4**	**+0.7**
O19K	**Port Alsworth**	**2.47**	**255**	P	**Pn**	**22 40 18.5**	**+0.7**
	baz=72,SNR=30						
AUL	**Augustine Lava**	**2.48**	**234**		**Pn**	**22 40 19.6**	**+1.7**
N25K	**Chitina, Valde**	**2.49**	**71**		**Pn**	**22 40 19.0**	**+1.0**
N25K	**Chitina, Valde**	**2.49**	**71**	IAML		22 40 54.8	
	comp=E,1μm,0.8s						
N25K				IAML		22 41 00.8	
	comp=N,1μm,0.6s						
N25K	**Chitina, Valde**	**2.49**	**71**	P	**Pn**	**22 40 19.1**	**+1.1**
	baz=255,SNR=50						
AUQ	**Augustine Qik'**	**2.49**	**233**		**Pn**	**22 40 19.5**	**+1.4**
AUH	**Augustine H**	**2.50**	**233**		**Pn**	**22 40 19.5**	**+1.3**
AUCH	**Augustine Cone**	**2.50**	**233**		**Pn**	**22 40 19.8**	**+1.6**
RND	**Reindeer**	**2.53**	**7**		**Pn**	**22 40 19.6**	**+1.0**
RND				IAML		22 40 55.1	
	comp=E,840nm,0.5s						
RND				IAML		22 40 55.6	
	comp=N,874nm,0.8s						
M19K	**Big River Lodg**	**2.54**	**295**		**Pn**	**22 40 19.8**	**+1.0**
M19K	**Big River Lodg**	**2.54**	**295**	P	**Pn**	**22 40 19.8**	**+1.0**
	baz=112						
HARP	**HAARP**	**2.57**	**52**		**Pn**	**22 40 20.9**	**+1.7**
HARP	**HAARP**	**2.57**	**52**	P	**Pn**	**22 40 20.6**	**+1.4**
	baz=236,SNR=163						
TRF	**Thorofare Moun**	**2.58**	**352**		**Pn**	**22 40 20.7**	**+1.3**
TRF	**Thorofare Moun**	**2.58**	**352**	IAML		22 40 58.3	
	comp=E,844nm,0.5s						
TRF	**Thorofare Moun**	**2.58**	**352**	P	**Pn**	**22 40 20.6**	**+1.3**
	baz=172,SNR=102						
L20K	**Farewell, AK**	**2.60**	**309**

baz=168,SNR=56
BWN Browne 3.28 1 Pn 22 40 30.9 +2.0
TGL Tana Glacier 3.29 90 Pn 22 40 29.2 +0.1
TGL Tana Glacier 3.29 90 IAML 22 41 24.2
comp=N,736nm,0.5s
WAX Waxell Ridge 3.32 95 Pn 22 40 29.4 -0.1
WAX Waxell Ridge 3.32 95 IAML 22 41 28.7
comp=E,718nm,0.7s
SNH Sunshine Point 3.39 100 Pn 22 40 29.9 -0.6
K24K Donnelly Dome 3.39 29 Pn 22 40 32.4 +2.0
K24K Donnelly Dome 3.39 29 P **Pn 22 40 32.0 +1.6**
baz=212,SNR=424
MENT Mentasta 3.42 51 Pn 22 40 31.9 +1.1
PTPK Patty Peak 3.45 82 Pn 22 40 32.2 +0.8
M26K Nabesna, AK 3.46 61 Pn 22 40 33.1 +1.7
M26K Nabesna, AK 3.46 61 IAML 22 41 31.7
comp=E,311nm,1.0s
M26K IAML 22 41 39.5
comp=N,326nm,0.7s
M26K Nabesna, AK 3.46 61 P **Pn 22 40 32.7 +1.3**
baz=247,SNR=26
KDAK Kodiak Island 3.50 208 Pn **Pn 22 40 31.8 -0.1**
comp=N,4.8nm,0.3s,baz=85,slow=13,SNR=102
KDAK Pg 22 40 39.5
comp=N,20nm,0.3s,baz=35,slow=13,SNR=16
KDAK Sn **Sn 22 41 10.0 -2.1**
comp=N,9.7nm,0.3s,baz=216,slow=11,SNR=6.5
KDAK Lg Lg 22 41 24.1
comp=N,11nm,0.3s,baz=145,slow=22,SNR=1.9
KDAK LR LR 22 41 56.1
comp=N,116nm,19.9s,baz=65,slow=38
comp=N,31nm,0.7s
KDAK Kodiak Island 3.50 208 IAML 22 41 35.1
comp=N,286nm,1.2s
KDAK Kodiak Island 3.50 208 P **Pn 22 40 31.8 -0.1**
baz=25
BARK Barkley Ridge 3.50 95 Pn 22 40 32.0 0.0
KIAG Kiagna River 3.50 87 Pn 22 40 32.5 +0.4
BALM Baldy 3.51 85 Pn 22 40 32.5 +0.4
ISLE Juniper Island 3.54 92 Pn 22 40 32.5 -0.1
ISLE Juniper Island 3.54 92 IAML 22 41 29.9
comp=E,566nm,0.7s
KAHC Katmai Hardscr 3.58 233 Pn 22 40 33.5 +0.4
Q18K Katmai Hardscr 3.58 233 P **Pn 22 40 33.5 +0.4**
baz=49
L26K Log Cabin Wild 3.61 51 Pn 22 40 34.5 +1.0
L26K Log Cabin Wild 3.61 51 IAML 22 41 34.1
comp=E,425nm,0.6s
L26K IAML 22 41 39.7
comp=N,462nm,0.4s
L26K Log Cabin Wild 3.61 51 P **Pn 22 40 34.8 +1.3**
baz=236
WRH Wood River Hil 3.64 10 Pn 22 40 35.6 +1.8
WRH Wood River Hil 3.64 10 IAML 22 41 35.1
comp=E,304nm,1.0s
WRH IAML 22 41 37.0
comp=N,264nm,0.6s
TT01 Tatalina 3.67 306 Pn 22 40 34.6 +0.4
TTA Tatalina 3.67 306 Pn 22 40 34.7 +0.3
TTA Tatalina 3.67 306 IAML 22 41 45.8
comp=E,276nm,1.0s
TTA Tatalina 3.67 306 P **Pn 22 40 34.8 +0.5**
baz=121,SNR=32
BAGL Bagley Icefiel 3.68 93 Pn 22 40 34.5 +0.2
NEA2 Nenana 3.71 3 Pn 22 40 36.7 +2.0
NEA2 Nenana 3.71 3 P **Pn 22 40 35.8 +1.1**
baz=183,SNR=50
HDA Harding Lake 3.71 18 Pn 22 40 36.8 +2.0
HDA Harding Lake 3.71 18 IAML 22 41 37.0
comp=E,394nm,0.7s
HDA IAML 22 41 41.4
comp=N,492nm,0.6s
HDA Harding Lake 3.71 18 P **Pn 22 40 36.6 +1.8**
baz=200,SNR=249
DOT Dot Lake 3.75 41 Pn 22 40 36.6 +1.2
MESA MESA 3.82 98 Pn 22 40 36.6 +0.1
MESA MESA 3.82 98 IAML 22 41 48.8
comp=E,490nm,0.5s
MESA MESA 3.82 98 P **Pn 22 40 36.3 -0.1**
baz=284
CCB Clear Creek Bu 3.84 11 Pn 22 40 38.4 +1.9
CCB Clear Creek Bu 3.84 11 IAML 22 41 44.7
comp=E,215nm,1.1s
BARN Barnard Glacie 3.84 84 Pn 22 40 37.9 +1.1
BARN Barnard Glacie 3.84 84 IAML 22 41 42.7
comp=N,357nm,1.0s
BARN IAML 22 41 46.7
comp=E,306nm,0.7s
KAKN Katmai Knife C 3.84 229 Pn 22 40 37.3 +0.7
PS08 TAPS Pump Stn8 3.86 18 Pn 22 40 38.8 +2.0
P17K Kvichak River 3.87 247 Pn 22 40 38.0 +1.1
P17K Kvichak River 3.87 247 P **Pn 22 40 37.7 +0.8**
baz=61,SNR=9.1
YAH Yahtse 3.88 95 Pn 22 40 37.2 -0.1
YAH Yahtse 3.88 95 IAML 22 41 42.7
comp=N,338nm,0.8s
YAH IAML 22 41 43.8
comp=E,240nm,0.7s
J20K Nowinta River 3.91 329 Pn 22 40 38.3 +0.8
J20K Nowinta River 3.91 329 IAML 22 41 29.3
comp=N,344nm,0.5s
J20K IAML 22 41 29.8
comp=E,326nm,0.4s
J20K Nowinta River 3.91 329 P **Pn 22 40 37.8 +0.2**
baz=145,SNR=160
O17K Koliganek Bris 3.93 256 Pn 22 40 38.7 +1.0
O17K Koliganek Bris 3.93 256 P **Pn 22 40 38.2 +0.4**
baz=70
M27K Edge Creek, AK 3.93 65 Pn 22 40 39.1 +1.1
M27K Edge Creek, AK 3.93 65 P **Pn 22 40 39.3 +1.3**
baz=251
CTG Chitna Glacier 4.00 86 P **Pn 22 40 40.1 +1.2**
baz=272,SNR=6.6
CTGM Chitina Glacie 4.00 86 Pn 22 40 40.2 +1.2
CTGM Chitina Glacie 4.00 86 IAML 22 41 45.3
comp=N,245nm,0.7s
TCOL CIGO, UAF Yank 4.05 10 Pn 22 40 41.4 +1.9
TCOL CIGO, UAF Yank 4.05 10 P **Pn 22 40 41.4 +1.9**
baz=192,SNR=57
COLA College 4.05 10 Pn 22 40 41.4 +1.9
COLA College 4.05 10 P **Pn 22 40 41.3 +1.8**
baz=192
IL31 4.06 16 Pn 22 40 41.4 +1.8
ILAR Eielson Array 4.06 16 Pn **Pn 22 40 40.6 +1.0**
comp=N,10nm,0.3s,baz=198,slow=14,SNR=217
ILAR Sn **Sn 22 41 25.3 -0.7**
comp=N,11nm,0.3s,baz=146,slow=27,SNR=5.1
ILAR LR LR 22 42 30.5
comp=N,154nm,20.9s,baz=254,slow=43
MDM Murphy Dome 4.11 8 Pn 22 40 42.4 +2.1
MDM Murphy Dome 4.11 8 IAML 22 41 50.2
comp=E,241nm,0.9s
TABL Table Mountain 4.16 93 Pn 22 40 40.9 -0.2
TABL Table Mountain 4.16 93 IAML 22 41 44.3
comp=N,209nm,0.8s
TABL IAML 22 41 54.6
comp=E,177nm,0.9s
LOGN Logan Glacier 4.17 87 Pn 22 40 41.9 +0.6
LOGN Logan Glacier 4.17 87 IAML 22 41 48.0
comp=E,208nm,0.9s
LOGN IAML 22 41 54.7
comp=N,174nm,0.9s
OHAK Old Harbor 4.17 209 Pn 22 40 40.5 -0.6
OHAK Old Harbor 4.17 209 IAML 22 41 51.3
comp=E,236nm,1.4s
OHAK Old Harbor 4.17 209 P **Pn 22 40 40.6 -0.6**
baz=26
MLY Manley 4.17 353 Pn 22 40 42.0 +0.8
MLY Manley 4.17 353 P **Pn 22 40 43.2 +1.9**
baz=172,SNR=58
CNTC Contact Creek 4.18 233 Pn 22 40 42.4 +1.1
Q17K Contact Creek 4.18 233 P **Pn 22 40 42.1 +0.8**
baz=48
J25K Salcha River, 4.18 25 Pn 22 40 42.2 +0.8
J25K Salcha River, 4.18 25 IAML 22 41 44.2
comp=N,236nm,0.7s
J25K Salcha River, 4.18 25 P **Pn 22 40 42.4 +1.0**
baz=209,SNR=199
L27K Beaver Creek, 4.23 56 Pn 22 40 43.2 +1.3
L27K Beaver Creek, 4.23 56 P **Pn 22 40 43.1 +1.2**
baz=242,SNR=26
Q16K King Salmon 4.24 241 P **Pn 22 40 43.0 +1.0**
baz=55
BC03 4.25 56 Pn 22 40 43.6 +1.5
BCAR Beaver Creek A 4.25 56 Pn 22 40 43.1 +0.8
CHX Chaix Hills 4.25 98 Pn 22 40 42.2 -0.1

I23K Minto, Yukon-K 4.26 1 Pn 22 40 44.4 +2.1
I23K Minto, Yukon-K 4.26 1 IAML 22 41 53.2
comp=N,218nm,0.7s
I23K IAML 22 41 57.5
comp=E,174nm,1.6s
I23K Minto, Yukon-K 4.26 1 P **Pn 22 40 43.3 +1.0**
baz=181,SNR=150
YUK2 White River 4.28 74 Pn 22 40 44.1 +1.4
POKR Poker Plat Res 4.33 12 Pn 22 40 45.1 +1.7
POKR Poker Plat Res 4.33 12 IAML 22 41 55.0
comp=E,181nm,0.7s
POKR IAML 22 41 57.6
comp=N,185nm,0.8s
POKR Poker Plat Res 4.33 12 P **Pn 22 40 44.7 +1.4**
baz=194,SNR=67
SAMH Samovar Hills 4.40 96 Pn 22 40 44.8 +0.5
I21K Tanana 4.43 347 Pn 22 40 46.7 +2.0
I21K Tanana 4.43 347 IAML 22 42 04.1
comp=E,176nm,0.8s
I21K IAML 22 42 07.2
comp=N,212nm,0.8s
I21K Tanana 4.43 347 P **Pn 22 40 46.1 +1.4**
baz=164,SNR=94
PS07 TAPS Pump Stn7 4.46 7 Pn 22 40 47.0 +2.0
YUK3 Moose Creek 4.46 75 Pn 22 40 46.4 +1.2
YUK3 Moose Creek 4.46 75 P **Pn 22 40 46.1 +0.9**
baz=262,SNR=8.3
O16K Kokwok River B 4.46 257 Pn 22 40 45.4 +0.3
O16K Kokwok River B 4.46 257 P **Pn 22 40 45.4 +0.3**
baz=70
J26L Joseph Creek 4.53 35 Pn 22 40 46.7 +0.5
J26L Joseph Creek 4.53 35 IAML 22 42 00.8
comp=E,183nm,0.9s
J26L IAML 22 42 03.0
comp=N,191nm,0.8s
J26L Joseph Creek 4.53 35 P **Pn 22 40 46.5 +0.3**
baz=220,SNR=94
N16K Nishlik Lake 4.56 269 Pn 22 40 47.2 +0.7
N16K Nishlik Lake 4.56 269 P **Pn 22 40 46.9 +0.4**
baz=81,SNR=29
O28M Mount Upton 4.57 88 Pn 22 40 48.0 +1.1
O28M Mount Upton 4.57 88 P **Pn 22 40 47.7 +0.8**
baz=275,SNR=17
P16K Nushagak River 4.65 250 Pn 22 40 49.0 +1.3
P16K Nushagak River 4.65 250 P **Pn 22 40 48.9 +1.3**
baz=63
PCA Pinnacle 4.66 96 Pn 22 40 47.7 -0.2
PINM Pinnacle 4.66 96 P **Pn 22 40 47.7 -0.2**
baz=284
K27K Chicken 4.67 45 Pn 22 40 49.4 +1.4
K27K Chicken 4.67 45 IAML 22 42 06.4
comp=E,112nm,1.2s
K27K IAML 22 42 13.3
comp=N,115nm,0.9s
K27K Chicken 4.67 45 P **Pn 22 40 48.6 +0.7**
baz=231
R17K Ugashik Creek 4.81 230 Pn 22 40 51.4 +1.6
R17K Ugashik Creek 4.81 230 P **Pn 22 40 50.6 +0.8**
baz=44
H23K Yukon River 4.94 360 Pn 22 40 53.7 +2.0
H23K Yukon River 4.94 360 IAML 22 42 19.4
comp=E,96nm,1.4s
H23K Yukon River 4.94 360 P **Pn 22 40 53.7 +2.0**
baz=180,SNR=24
PRP Porcupine Dome 4.97 20 Pn 22 40 53.6 +1.4
PRP Porcupine Dome 4.97 20 IAML 22 41 58.8
comp=N,197nm,0.6s
PRP IAML 22 42 01.7
comp=E,152nm,0.7s
PRP Porcupine Dome 4.97 20 P **Pn 22 40 53.1 +0.9**
baz=203,SNR=77
H21K Melozitna Rive 4.99 344 Pn 22 40 53.2 +0.8
H21K Melozitna Rive 4.99 344 IAML 22 42 12.6
comp=E,89nm,1.0s
H21K IAML 22 42 25.1
comp=N,107nm,1.3s
H21K Melozitna Rive 4.99 344 P **Pn 22 40 53.8 +1.4**
baz=161,SNR=38
BCPM Bancas Point 5.00 97 Pn 22 40 52.5 0.0
BCPM Bancas Point 5.00 97 IAML 22 42 26.2
comp=E,182nm,1.1s
BCPM IAML 22 42 27.6
comp=N,161nm,0.8s
H24K Noodor Dome 5.00 8 Pn 22 40 54.6 +2.0
H24K Noodor Dome 5.00 8 IAML 22 42 18.4
comp=E,139nm,1.6s
H24K Noodor Dome 5.00 8 P **Pn 22 40 54.4 +1.8**
baz=189,SNR=50
H22K Ishtalitna Cre 5.07 351 Pn 22 40 55.5 +2.0
H22K Ishtalitna Cre 5.07 351 P **Pn 22 40 55.7 +2.2**
baz=170,SNR=54
GCSA Galena City Sc 5.11 322 P **Pn 22 40 54.7 +0.7**
baz=136
PNL Peninsula 5.20 99 Pn 22 40 54.6 -0.6
PNL Peninsula 5.20 99 P **Pn 22 40 55.3 +0.1**
baz=288
I26K Coal Creek Min 5.28 30 Pn 22 40 57.1 +0.8
I26K Coal Creek Min 5.28 30 P **Pn 22 40 57.4 +1.1**
baz=216
YUK4 Talbot Arm 5.30 81 P **Pn 22 40 58.3 +1.6**
baz=269
IM03 5.43 341 Pn 22 40 59.1 +0.8
IMAR Indian Mountai 5.43 341 Pn **Pn 22 40 59.1 +0.7**
O29M Mount Kennedy 5.43 92 Pn 22 40 59.8 +1.3
O29M Mount Kennedy 5.43 92 P **Pn 22 40 59.9 +1.3**
baz=281,SNR=5.8
YUK6 Outpost Mounta 5.45 85 Pn 22 40 60.0 +1.1
YUK6 Outpost Mounta 5.45 85 P **Pn 22 40 59.9 +1.0**
baz=274
EGAK Eagle 5.46 41 Pn 22 40 59.6 +0.9
EGAK Eagle 5.46 41 P **Pn 22 40 59.6 +0.9**
baz=228,SNR=5.3
M29M Somme Creek 5.49 69 P **Pn 22 41 00.7 +1.4**
baz=258
YUK7 Dusty Glacier 5.61 89 Pn 22 41 02.1 +1.0
H25K Birch Creek 5.63 16 Pn 22 41 03.0 +1.9
H25K Birch Creek 5.63 16 P **Pn 22 41 03.2 +2.1**
baz=199,SNR=25
DAWY Dawson 5.67 52 Pn 22 41 02.6 +1.0
DAWY Dawson 5.67 52 P **Pn 22 41 02.4 +0.7**
baz=240
YUK5 Granite Creek 5.68 83 Pn 22 41 03.0 +1.0
L29M L29M 5.81 63 P **Pn 22 41 05.2 +1.6**
baz=252
G23K Bananza Creek 5.83 358 Pn 22 41 05.6 +1.7
G23K Bananza Creek 5.83 358 P **Pn 22 41 05.8 +1.8**
baz=178,SNR=20
HYT Haines Junctio 5.88 86 Pn 22 41 05.5 +0.9
HYT Haines Junctio 5.88 86 P **Pn 22 41 05.6 +0.9**
baz=276
G24K Hadweenzic Riv 5.89 8 Pn 22 41 06.2 +1.6
G24K Hadweenzic Riv 5.89 8 P **Pn 22 41 06.3 +1.6**
baz=190,SNR=11
G21K Allakaket 5.90 344 Pn 22 41 06.8 +2.0
G21K Allakaket 5.90 344 P **Pn 22 41 06.9 +2.0**
baz=161,SNR=13
I27K Kandik River 5.91 34 Pn 22 41 06.2 +1.2
I27K Kandik River 5.91 34 P **Pn 22 41 06.3 +1.2**
baz=221,SNR=20
FYU Fort Yukon 5.99 17 Pn **Pn 22 41 07.1 +1.0**
P29M Windy Craggy 6.01 97 Pn 22 41 06.9 +0.5
P29M Windy Craggy 6.01 97 P **Pn 22 41 06.8 +0.4**
baz=287,SNR=12
N30M Aishikik Lake 6.05 79 Pn 22 41 07.0 +0.1
N30M Aishikik Lake 6.05 79 P **Pn 22 41 07.1 +0.2**
baz=270
G25K Bearman Lake 6.07 13 Pn 22 41 09.0 +1.9
G25K Bearman Lake 6.07 13 P **Pn 22 41 09.1 +1.9**
baz=196,SNR=34
G22K Bettles 6.10 353 P **Pn 22 41 08.8 +1.2**
baz=171
K29M Barlow Dome 6.31 57 P **Pn 22 41 11.9 +1.2**
baz=247
COLD Coldfoot 6.35 358 Pn 22 41 12.8 +1.8
COLD Coldfoot 6.35 358 P **Pn 22 41 12.3 +1.2**
baz=177,SNR=18
H27K Steamboat Moun 6.42 30 P **Pn 22 41 13.2 +1.2**
baz=217,SNR=16
F21K Alatna River 6.57 346 Pn 22 41 15.2 +1.2
F21K Alatna River 6.57 346 P **Pn 22 41 15.2 +1.2**
baz=163,SNR=16
G26K Porcupine Rive 6.57 20 Pn 22 41 14.9 +0.9
G26K Porcupine Rive 6.57 20 P **Pn 22 41 14.8 +0.9**
baz=205,SNR=22
O30N Mendenhall 6.57 85 P **Pn 22 41 14.6 +0.4**
baz=277

N31M Braeburn, Yuko 6.67 79 Pn 22 41 16.7 +0.7
N31M Braeburn, Yuko 6.67 79 P **Pn 22 41 16.5 +1.0**
baz=271
F24K Squaw Lake 6.68 5 Pn 22 41 16.9 +1.4
F24K Squaw Lake 6.68 5 P **Pn 22 41 17.3 +1.8**
baz=187,SNR=12
F22K John River 6.73 351 P **Pn 22 41 18.2 +2.1**
baz=169
PLBC Pleasant Camp 6.73 97 P **Pn 22 41 17.5 +1.3**
baz=288
G27K Doyon Strip 6.87 27 Pn 22 41 19.3 +1.2
G27K Doyon Strip 6.87 27 P **Pn 22 41 19.2 +1.1**
baz=214,SNR=11
BM03 Burnt Mountain 6.88 16 Pn 22 41 19.6 +1.3
BMAR Burnt Mountain 6.89 16 Pn **Pn 22 41 19.7 +1.3**
F25K Christian Rive 6.92 12 Pn 22 41 20.1 +1.2
F25K Christian Rive 6.92 12 P **Pn 22 41 20.3 +1.4**
baz=196,SNR=20
WHY Whitehorse 7.18 86 Pn 22 41 22.9 +0.4
WHY Whitehorse 7.18 86 P **Pn 22 41 22.7 +0.2**
baz=278
E23K Chandalar 7.18 360 P **Pn 22 41 24.1 +1.6**
baz=180,SNR=6.7
F26K Sheenjek River 7.20 17 Pn 22 41 24.2 +1.5
F26K Sheenjek River 7.20 17 P **Pn 22 41 23.9 +1.2**
baz=201,SNR=22
E24K Your Creek 7.21 3 Pn 22 41 24.4 +1.6
E24K Your Creek 7.21 3 P **Pn 22 41 24.5 +1.6**
baz=184
SKAG Skagway 7.23 95 Pn 22 41 24.4 +1.3
SKAG Skagway 7.23 95 P **Pn 22 41 24.1 +1.0**
baz=288
M31M Drury Creek, Y 7.35 73 P **Pn 22 41 25.5 +0.7**
baz=266
E25K Arctic Village 7.44 12 Pn 22 41 27.6 +1.6
E25K Arctic Village 7.44 12 P **Pn 22 41 27.3 +1.3**
baz=195,SNR=6.2
TOLK Toolik Lake Re 7.77 360 P **Pn 22 41 34.3 +3.8**
baz=180,SNR=7.7
EPYK Eagle Plains 7.90 41 P **Pn 22 41 32.1 -0.2**
baz=232
P32M Attlin 7.98 93 P **Pn 22 41 34.2 +0.8**
baz=286
SDPT Sand Point 8.03 231 P **Pn 22 41 35.9 +1.8**
baz=42
E27K Coleen River 8.06 22 Pn 22 41 35.6 +1.1
E27K Coleen River 8.06 22 P **Pn 22 41 35.3 +0.8**
baz=209,SNR=7.5
R32K Eaglecrest 8.06 103 P **Pn 22 41 35.0 +0.5**
baz=295
D23K Nanushuk River 8.11 357 P **Pn 22 41 37.6 +2.5**
baz=176
CHNA Chernabura Isl 8.11 226 P **Pn 22 41 34.7 -0.4**
baz=37
ANM Nome 8.14 304 P **Pn 22 41 38.2 +2.8**
baz=110
P33M Teslin, Yukon 8.27 88 Pn **Pn 22 41 37.4 0.0**
P33M Teslin, Yukon 8.27 88 P **Pn 22 41 37.9 +0.5**
baz=282
D24K Happy Valley 8.29 2 P **Pn 22 41 39.7 +2.2**
baz=182
SIT Sitka 8.29 111 P **Pn 22 41 39.6 +2.0**
baz=304
S32K Killisnoo 8.41 108 P **Pn 22 41 39.4 +0.2**
baz=300
G30M tAoh Zraii Nji 8.44 38 P **Pn 22 41 41.7 +2.0**
baz=230,SNR=8.0
D25K Kavik River 8.55 8 P **Pn 22 41 42.2 +1.0**
baz=190
MMPY Sheldon Lake, 8.83 71 P **Pn 22 41 46.5 +1.5**
baz=267
C24K Franklin Bluff 8.86 2 P **Pn 22 41 47.5 +2.2**
baz=183
Q32M Nakina River 8.88 95 P **Pn 22 41 45.5 -0.4**
baz=290
C23K Itkillik River 8.98 358 P **Pn 22 41 48.4 +1.4**
baz=177
C27K Jago River 9.08 13 P **Pn 22 41 49.6 +1.2**
baz=198
R33M Jennings River 9.38 91 Pn 22 41 53.0 +0.3
R33M Jennings River 9.38 91 P **Pn 22 41 52.7 0.0**
baz=287
F31M Tsiigehtchic 9.48 40 P **Pn 22 41 55.4 +1.5**
baz=234,SNR=8.7
TNA Tin City 9.50 307 Pn 22 41 54.9 +0.9
U33K Whale Pass 9.83 112 Pn 22 41 59.2 +0.6
S34M Telegraph Cree 9.84 100 P **Pn 22 42 00.1 +1.2**
baz=295
INK Inuvik 10.08 36 Pn **Pn 22 42 05.0 +2.9**
comp=E,0.7nm,0.3s,baz=243,slow=12,SNR=2.2
INK Sn **Sn 22 43 52.5 -1.2**
comp=E,0.8nm,0.3s,baz=103,slow=9.8,SNR=1.7
INK Lg Lg 22 44 48.6
comp=E,0.8nm,0.3s,baz=80,slow=14,SNR=1.3
comp=E,3.8nm,0.3s
INK Inuvik 10.08 36 P **Pn 22 42 04.5 +2.4**
baz=230
YKA Yellowknife Ar 16.52 69 Pn **Pn 22 43 29.3 +0.7**
comp=E,0.1nm,0.3s,baz=274,slow=10,SNR=1.6
comp=E,0.8nm,0.6s
GSTR Great Sitkin T 16.98 251 P **P 22 43 36.2 0.0**
NEW Newport 22.36 110 LR LR 22 53 58.0
comp=E,44nm,19.5s,baz=298,slow=38
WVOR Wild Horse Val 26.24 121 P **P 22 45 11.6 -0.1**
WVOR IAmb IAmb 22 45 34.6
comp=Z,8.7nm,1.1s
NVAR Mina Array Bea 29.75 125 pP pP 22 45 55.5 +2.6
comp=Z,0.5nm,0.5s,baz=319,slow=11,SNR=1.6
PDAR Pinedale Array 30.00 109 pP pP 22 45 57.3 +2.2
comp=Z,0.2nm,0.4s,baz=339,slow=6.2,SNR=3.3
TXAR Lajitas Array 43.75 115 P **P 22 47 45.7 +3.7**
comp=Z,0.1nm,0.5s,baz=353,slow=3.6,SNR=1.6
TXAR pP **pP 22 47 54.0 +2.1**
comp=Z,0.2nm,0.6s,baz=319,slow=5.0,SNR=3.2
comp=Z,0.1nm,0.5s
SONM Songino Array 55.62 308 P **P 22 49 11.8 -0.3**
comp=Z,2.7nm,0.8s,baz=31,slow=8.1,SNR=8.9
comp=Z,2.7nm,0.8s
SONM Songino Array 55.62 308 P **P 22 49 11.9 -0.3**
SONM IAmb IAmb 22 49 12.3
comp=Z,2.5nm,0.9s
NOA NORSAR Array B 57.48 11 P **P 22 49 24.8 -0.3**
comp=Z,0.2nm,0.7s,baz=349,slow=7.3,SNR=1.3
NOA pP **pP 22 49 34.3 -1.1**
comp=Z,0.5nm,0.7s,baz=348,slow=7.3,SNR=2.1
comp=Z,0.2nm,0.7s
ZALV Zalesovo Beam 57.63 325 P **P 22 49 24.6 -1.6**
comp=Z,1.3nm,0.5s,baz=30,slow=8.0,SNR=7.6
comp=Z,1.3nm,0.5s
FINES FINESS Array B 57.93 2 P **P 22 49 26.8 -1.3**
comp=Z,1.2nm,0.5s,baz=1.2,slow=8.9,SNR=11
comp=Z,1.2nm,0.5s
MKAR Makanchi Array 64.76 323 P **P 22 50 12.3 -2.3**
comp=Z,0.6nm,0.5s,baz=35,slow=6.2,SNR=16
comp=Z,0.6nm,0.5s
ABKAR Akbulak array 67.64 340 P **P 22 50 31.6 -1.4**
AKASG Malin Array Be 68.74 1 P **P 22 50 38.1 -1.6**
comp=Z,0.2nm,0.4s,baz=2.6,slow=6.2,SNR=3.0
AKASG pP **pP 22 50 50.1 -0.2**
comp=Z,0.9nm,0.5s,baz=2.3,slow=6.3,SNR=6.1
comp=Z,0.2nm,0.4s
GERES GERESS Array B 69.77 12 P **P 22 50 45.8 -0.5**
comp=Z,0.2nm,0.5s,baz=318,slow=5.3,SNR=2.5
comp=Z,0.2nm,0.5s
ESDC Sonseca Array 75.90 27 P **P 22 51 22.2 -0.5**
comp=Z,0.4nm,0.8s,baz=342,slow=5.5,SNR=4.1
comp=Z,0.4nm,0.8s
BRTR Keskin Array B 79.69 358 pP pP 22 51 55.0 +0.3
comp=Z,0.5nm,0.7s,baz=316,slow=3.4,SNR=3.5
CMAR Chiang Mai Arr 84.01 297 P **P 22 52 05.4 -1.4**
comp=Z,0.5nm,0.3s,baz=8.9,slow=7.6,SNR=4.7
comp=Z,0.5nm,0.3s

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*MOS **02** 22:43:16.8±0.7, 49°.49N×156°.36E, h49km, mb4.3/4, Error ellipse: s-maj=13.2km s-min=4.5km az=75.4*
*KRSC **02** 22:43:19.2±2.2, 49°.73N×156°.91E, h45km±32km, ML4.4*
*NEIC **02** 22:43:21.2±1.4, 49°.8N±0°.1×155°.9E±0°.2, h77km±10km, mb4.2/9, Error ellipse: s-maj=26.2km s-min=13.7km az=130.0*
*IDC **02** 22:43:23.3±2.7, 49°.94N×155°.81E, h93km±22km, mb3.4/12, mbtmp3.8/15, MS3.0/3, Error ellipse: s-maj=24.6km s-min=15.2km az=147.0*
ISC 02 22:43:18.2±0.6, 49°.63N±0°.07×156°.24E±0°.07, h50km, n93, σ1.9 71/99, mb3.9/20, 5C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.06**	**356**	PN	**Pn**	**22 43 37.5**	**+0.8**
SKR				S	**Sn**	**22 43 50.1**	**-0.2**
SKR	**Severo-Kuril's**	**1.06**	**356**	*e*P	**Pn**	**22 43 37.5**	**+0.8**
SKR				*e*S	**Sn**	**22 43 50.1**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.48**	**27**	PN	**Pn**	**22 43 56.5**	**+0.5**
KDTR				S	**Sn**	**22 44 23.3**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.48**	**27**	*e*P	**Pn**	**22 43 56.5**	**+0.5**
KDTR				*e*S	**Sn**	**22 44 23.3**	**-1.7**
MTVR	**Mutnovka**	**3.11**	**23**	PN	**Pn**	**22 44 05.8**	**+0.9**
MTVR				S	**Sn**	**22 44 40.5**	**-0.3**
MTVR	**Mutnovka**	**3.11**	**23**	*e*P	**Pn**	**22 44 05.8**	**+0.9**
MTVR				*e*S	**Sn**	**22 44 40.5**	**-0.3**
GRL	**Gorelyy**	**3.15**	**21**	PN	**Pn**	**22 44 06.8**	**+1.4**
GRL				S	**Sn**	**22 44 42.3**	**+0.6**
GRL	**Gorelyy**	**3.15**	**21**	*e*P	**Pn**	**22 44 06.8**	**+1.4**
GRL				*e*S	**Sn**	**22 44 42.3**	**+0.6**
RUS	**Russkaya**	**3.15**	**26**	PN	**Pn**	**22 44 05.5**	**+0.2**
RUS				S	**Sn**	**22 44 40.2**	**-1.4**
RUS	**Russkaya**	**3.15**	**26**	*e*P	**Pn**	**22 44 05.5**	**+0.2**
RUS				*e*S	**Sn**	**22 44 40.2**	**-1.4**
APC	**Apacha**	**3.35**	**10**	PN	**Pn**	**22 44 09.5**	**+1.5**
APC	**Apacha**	**3.35**	**10**	*e*P	**Pn**	**22 44 09.5**	**+1.5**
KRMR	**Karymshinskiy**	**3.42**	**20**	PN	**Pn**	**22 44 10.3**	**+1.4**
KRMR	**Karymshinskiy**	**3.42**	**20**	*e*P	**Pn**	**22 44 10.3**	**+1.4**
PEA0B	**Petropavlovsk-**	**3.60**	**14**		**Pn**	**22 44 13.7**	**+2.2**
PEA0B	**Petropavlovsk-**	**3.60**	**14**	PN	**Pn**	**22 44 13.7**	**+2.2**
PETK	**Petropavlovsk-**	**3.60**	**14**	P	**Pn**	**22 44 12.1**	**+0.6**
	15nm,0.6s,baz=192,slow=9.5,SNR=28						
PETK				S	**Sn**	**22 44 54.7**	**+2.0**
	7.4nm,0.6s,baz=185,slow=15,SNR=1.3						
PETK	**Petropavlovsk-**	**3.60**	**14**		**Pn**	**22 44 12.8**	**+1.3**
PET	**Petropavlovsk**	**3.72**	**23**		**Pn**	**22 44 14.3**	**+1.3**
PET				Sn	**Sn**	**22 44 57.2**	**+1.6**
PET	**Petropavlovsk**	**3.72**	**23**	PN	**Pn**	**22 44 14.4**	**+1.3**
PET				S	**Sn**	**22 44 56.3**	**+0.7**
PET	**Petropavlovsk**	**3.72**	**23**	*e*P	**Pn**	**22 44 14.4**	**+1.3**
PET				*e*S	**Sn**	**22 44 56.3**	**+0.7**
UGLR	**Uglovaya**	**3.93**	**23**	PN	**Pn**	**22 44 18.0**	**+1.9**
UGLR	**Uglovaya**	**3.93**	**23**	*e*P	**Pn**	**22 44 18.0**	**+1.9**
AVH	**Avacha**	**3.96**	**22**	PN	**Pn**	**22 44 18.9**	**+2.4**
AVH	**Avacha**	**3.96**	**22**	*e*P	**Pn**	**22 44 18.9**	**+2.4**
KOK	**Koryaka**	**3.96**	**21**	PN	**Pn**	**22 44 19.1**	**+2.6**
KOK	**Koryaka**	**3.96**	**21**	*e*P	**Pn**	**22 44 19.1**	**+2.6**
SMAR	**Somma**	**3.98**	**23**	PN	**Pn**	**22 44 18.7**	**+1.9**
SMAR	**Somma**	**3.98**	**23**	*e*P	**Pn**	**22 44 18.7**	**+1.9**
SDLR	**Sedlovina**	**4.01**	**23**	PN	**Pn**	**22 44 18.5**	**+1.3**
SDLR	**Sedlovina**	**4.01**	**23**	*e*P	**Pn**	**22 44 18.5**	**+1.3**
KRX	**Arik**	**4.03**	**21**	PN	**Pn**	**22 44 19.7**	**+2.3**
KRX	**Arik**	**4.03**	**21**	*e*P	**Pn**	**22 44 19.7**	**+2.3**
SPN	**Mys Shipunski**	**4.21**	**33**	PN	**Pn**	**22 44 20.5**	**+0.8**
SPN	**Mys Shipunski**	**4.21**	**33**	*e*P	**Pn**	**22 44 20.5**	**+0.8**
SPN				*e*S	**Sn**	**22 45 06.2**	**-1.3**
GNL	**Ganaly**	**4.21**	**14**	PN	**Pn**	**22 44 22.3**	**+2.4**
GNL	**Ganaly**	**4.21**	**14**	*e*P	**Pn**	**22 44 22.3**	**+2.4**
KII	**Karymskiy**	**4.84**	**23**	PN	**Pn**	**22 44 31.0**	**+2.5**
KII	**Karymskiy**	**4.84**	**23**	*e*P	**Pn**	**22 44 31.0**	**+2.5**
MKZ	**Mys Kozlova**	**5.98**	**32**	PN	**Pn**	**22 44 43.6**	**-0.5**
MKZ	**Mys Kozlova**	**5.98**	**32**	*e*P	**Pn**	**22 44 43.6**	**-0.5**
MKZ				*e*S	**Sn**	**22 45 46.8**	**-4.3**
KUR	**Kuril'sk**	**7.18**	**235**	⇑*e*PN	**Pn**	**22 44 59.2**	**-1.3**
MA2	**Magadan**	**10.45**	**344**	P	**Pn**	**22 45 45.4**	**+0.1**
	11nm,0.8s,baz=194,slow=20,SNR=1.9						
MA2				LR	LR	22 50 10.0	
	comp=Z,46nm,18.1s,baz=190,slow=40						
ERM	**Erimo**	**11.87**	**235**	Pn	**Pn**	**22 46 06.4**	**+1.7**
ERM	**Erimo**	**11.87**	**235**	PN	**Pn**	**22 46 06.4**	**+1.7**
KLR	**Kul'dur**	**15.92**	**278**	*c*eP	**P**	**22 47 00.9**	**-0.7**
	comp=Z,54nm,18.7s,baz=58,slow=37						
KLR	**Kul'dur**	**15.92**	**278**	*c*eP	**P**	**22 47 00.9**	**-0.7**
KLR				pmax	pmax		
	comp=Z,12nm,1.1s						
ZEA	**Zeya**	**18.37**	**294**	*e*P	**Pn**	**22 47 30.5**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MAJO	**Matsushiro**	**18.50**	**232**	⇓*e*P	**P**	**22 47 31.0**	**+0.9**
MJAR	**Matsushiro Arr**	**18.50**	**232**	P	**P**	**22 47 30.7**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=28,slow=9.5,SNR=4.2						
BILL	**Biiibino**	**19.13**	**12**	⇓*e*P	**Pn**	**22 47 39.7**	**+1.6**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK	**Yakutsk**	**19.23**	**320**	⇓*e*P	**Pn**	**22 47 42.2**	**+3.0**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSRS	**Korea Array**	**23.71**	**250**	P	**P**	**22 48 25.2**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=44,slow=11,SNR=3.4						
	comp=Z,1.8nm,0.8s						
KDAK	**Kodiak Island**	**30.70**	**55**	⇑*e*P	**P**	**22 49 30.1**	**+2.2**
H11N2	**WAKE ISLAND Hy**	**31.03**	**160**	T	T	23 22 37.3	
	baz=347,slow=77,SNR=26						
H11N1	**WAKE ISLAND Hy**	**31.04**	**160**	T	T	23 22 35.6	
	baz=347,slow=77,SNR=34						
H11N3	**WAKE ISLAND Hy**	**31.04**	**160**	T	T	23 22 40.1	
	baz=347,slow=77,SNR=41						
H11S1	**WAKE ISLAND Hy**	**32.17**	**161**	T	T	23 24 02.4	
	baz=347,slow=76,SNR=476						
H11S3	**WAKE ISLAND Hy**	**32.18**	**161**	T	T	23 24 05.2	
	baz=347,slow=76,SNR=847						
H11S2	**WAKE ISLAND Hy**	**32.19**	**161**	T	T	23 23 59.5	
	baz=347,slow=76,SNR=645						
COLA	**College**	**32.58**	**41**	⇑*e*P	**P**	**22 49 46.1**	**+1.7**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**33.00**	**41**	P	**P**	**22 49 48.5**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=250,slow=6.5,SNR=4.0						
	comp=Z,0.4nm,0.6s						
NRIK	**Noril'sk**	**37.42**	**327**	⇑*e*P	**P**	**22 50 28.9**	**+2.9**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**42.67**	**304**	P	**P**	**22 51 07.4**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=68,slow=8.3,SNR=2.9						
	comp=Z,0.5nm,0.3s						
DGZ	**Jazzator, Alta**	**43.08**	**298**	⇓*e*P	**P**	**22 51 14.9**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**47.50**	**296**	P	**P**	**22 51 46.3**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=46,slow=4.9,SNR=5.1						
MKAR				LR	LR	23 15 14.5	
	comp=Z,18nm,18.2s,baz=40,slow=41						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**47.54**	**303**	P	**P**	**22 51 46.8**	**-1.5**
KURK				IAmb	IAmb	22 51 47.6	
	comp=Z,3.9nm,0.8s						
KURK	**Kurchatov**	**47.54**	**303**	P	**P**	**22 51 46.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**55.07**	**257**	P	**P**	**22 52 46.0**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=34,slow=7.1,SNR=2.5						
	comp=Z,0.8nm,0.5s						
ARCES	**ARCESS Array B**	**55.81**	**341**	P	**P**	**22 52 46.5**	**-3.1**
	comp=Z,4.4nm,1.1s,baz=30,slow=7.3,SNR=0.9						
	comp=Z,4.4nm,1.1s						
ABKAR	**Akbulak array**	**58.18**	**310**	IAmb	IAmb	22 53 04.7	
	comp=Z,2.3nm,1.2s						
ABKAR				P	**P**	**22 53 04.7**	**-2.0**
CHGR	**Chuyangaron**	**60.09**	**296**	P	**P**	**22 53 18.3**	**-1.9**
CHGR	**Chuyangaron**	**60.09**	**296**	P	**P**	**22 53 18.3**	**-1.9**
PDAR	**Pinedale Array**	**61.39**	**57**	P	**P**	**22 53 30.4**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=338,slow=3.2,SNR=5.1						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**62.30**	**335**	P	**P**	**22 53 31.1**	**-3.6**
	comp=Z,0.8nm,0.8s,baz=28,slow=6.3,SNR=4.6						
	comp=Z,0.8nm,0.8s						
NOA	**NORSAR Array B**	**66.15**	**342**	P	**P**	**22 53 58.4**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=29,slow=7.6,SNR=1.9						
	comp=Z,0.2nm,0.6s						
AKASG	**Malin Array Be**	**70.28**	**327**	P	**P**	**22 54 22.9**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=33,slow=6.6,SNR=4.1						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**70.28**	**327**	P	**P**	**22 54 23.3**	**-2.6**
AKASG				IAmb	IAmb	22 54 31.4	
	comp=Z,2.6nm,1.1s						
AKASG	**Malin Array Be**	**70.28**	**327**	P	**P**	**22 54 23.3**	**-2.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WRA	**Warramunga Arr**	**71.94**	**202**	P	**P**	**22 54 37.3**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=20,slow=6.1,SNR=2.0						
	comp=Z,0.4nm,0.8s						
WMOK	**Wichita Mounta**	**72.99**	**56**	P	**P**	**22 54 42.6**	**+0.1**
WMOK				IAmb	IAmb	22 55 10.7	
	comp=Z,6.4nm,1.2s						
WMOK	**Wichita Mounta**	**72.99**	**56**	P	**P**	**22 54 42.6**	**+0.1**
R40A	**Maddies Statio**	**73.66**	**50**	P	**P**	**22 54 44.2**	**-2.1**
BUR08	**Bucovina Ar. S**	**74.28**	**328**	P	**P**	**22 54 47.9**	**-2.1**
TX31	**Lajitas Ar. Si**	**74.29**	**63**	P	**P**	**22 54 51.5**	**+1.2**
TX32	**Lajitas Array**	**74.29**	**63**	P	**P**	**22 54 51.4**	**+1.1**
TX32				IAmb	IAmb	22 55 17.9	
	comp=Z,3.8nm,1.4s						
TXAR	**Lajitas Array**	**74.29**	**63**	P	**P**	**22 54 51.3**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=299,slow=4.4,SNR=16						
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**74.29**	**63**	P	**P**	**22 54 50.6**	**+0.3**
CLL	**Collm**	**74.67**	**337**	*i* P	**P**	**22 54 53.0**	**+1.0**
CLL	**Collm**	**74.67**	**337**	*i* x	**P**	**22 54 53.0**	**+1.0**
	comp=Z,10.0nm,1.0s						
H03N2	**Juan Fernandez**	**136.66**	**89**	T	T	01 34 45.4	
	baz=313,slow=77,SNR=67						
H03N1	**Juan Fernandez**	**136.67**	**89**	T	T	01 34 46.9	
	baz=313,slow=77,SNR=48						
H03N3	**Juan Fernandez**	**136.67**	**89**	T	T	01 34 43.3	
	baz=313,slow=77,SNR=60						

*IDC **02** 22:54:52.6±1.1, 27°.75N×85°.41E, h0km, mb3.8/9, mbtmp3.8/10, ML4.2/1, MS3.4/3, Error ellipse: s-maj=39.7km s-min=18.9km az=59.0*

ISC 02 22:54:53.2±0.8, 27°.52N±0°.10×85°.0E±0°.1, h10km, n15, σ1§43/13, mb3.8/9, MS3.5/3, 1D, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBP	**Jabalpur**	**6.27**	**227**	⇓*e*P	**Pb**	**22 56 40.8**	**-1.7**
JBP				*e*S	**Sn**	**22 57 38.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**15.68**	**122**	Pn	**Pn**	**22 58 35.1**	**+0.7**
	0.3nm,0.3s,baz=313,slow=10.0,SNR=8.7						
MKAR	**Makanchi Array**	**19.36**	**354**	P	**P**	**22 59 17.9**	**-1.0**
	0.7nm,0.3s,baz=176,slow=11,SNR=27						
	2.3nm,0.5s						
KURBB	**Kurchatov Arra**	**23.59**	**350**	P	**P**	**23 00 03.1**	**-0.9**
	0.8nm,0.4s,baz=170,slow=10.0,SNR=16						
	0.8nm,0.4s						
SONM	**Songino Array**	**26.27**	**34**	P	**P**	**23 00 26.1**	**-2.7**
	1.2nm,0.6s,baz=225,slow=9.9,SNR=10						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**26.40**	**360**	P	**P**	**23 00 28.7**	**-1.0**
	1.0nm,0.4s,baz=196,slow=6.5,SNR=8.6						
	1.0nm,0.4s						
KVAR	**Kislovodsk Arr**	**37.60**	**307**	LR	LR	23 21 47.3	
	comp=Z,29nm,18.7s,baz=82,slow=43						
FINES	**FINESS Array B**	**51.44**	**328**	P	**P**	**23 03 59.1**	**+0.9**
	0.5nm,0.4s,baz=114,slow=8.5,SNR=8.0						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**53.93**	**338**	P	**P**	**23 04 17.3**	**+0.7**
	5.6nm,1.0s,baz=100,slow=8.1,SNR=5.6						
	5.6nm,1.0s						
NOA	**NORSAR Array B**	**58.52**	**327**	P	**P**	**23 04 50.4**	**+0.8**
	0.9nm,0.9s,baz=90,slow=5.5,SNR=1.5						
	0.9nm,0.9s						
WRA	**Warramunga Arr**	**67.14**	**129**	P	**P**	**23 05 47.4**	**-0.1**
	0.9nm,1.0s,baz=322,slow=6.3,SNR=7.8						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**69.41**	**132**	P	**P**	**23 06 02.4**	**+0.7**
	0.2nm,0.3s,baz=312,slow=6.1,SNR=4.6						
	0.2nm,0.3s						
ESDC	**Sonseca Array**	**72.26**	**306**	P	**P**	**23 06 21.0**	**+2.1**
	0.3nm,0.8s,baz=64,slow=5.6,SNR=3.0						
	0.3nm,0.8s						
LBTB	**Lobatse**	**77.47**	**233**	LR	LR	23 38 06.4	
	comp=Z,24nm,18.8s,baz=178,slow=33						
TSUM	**Tsumeb**	**80.09**	**242**	LR	LR	23 42 19.9	
	comp=Z,35nm,21.6s,baz=158,slow=35						

*KRNET **02** 23:03:59.9±0.1, 41°.10N×78°.54E, h16km, mb2.7*
*NNC **02** 23:04:00.9±0.8, 41°.15N×78°.69E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=5.7km s-min=3.9km az=171.0*
*SOME **02** 23:04:00.0, 41°.15N×78°.72E, h10km*

ISC 02 23:03:59.4±1.9, 41°.01N±0°.08×78°.68E±0°.04, h10km, n46, σ1§23/71, 8C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.97**	**318**	⇓*e*P	**Pg**	**23 04 16.0**	**-2.2**
	baz=19						
TARG				⇓*e*S	**Sg**	**23 04 27.8**	**-3.2**
	baz=19						
ANVS	**Anan'yevo**	**1.93**	**337**	⇓*e*P	**Pb**	**23 04 33.5**	**-1.3**
	baz=39						
ANVS				⇓*e*S	**Sb**	**23 04 58.0**	**-0.9**
	baz=39						
SATY	**Saty**	**2.06**	**354**	*e*P	**Pb**	**23 04 37.1**	**+0.1**
	9.3nm,0.2s						
SATY				*e*S	**Sg**	**23 05 03.6**	**-2.0**
	28nm,0.2s						
SATY	**Saty**	**2.06**	**354**	Pg	**Pb**	**23 04 37.1**	**+0.1**
	9.3nm,0.2s						
SATY				Lg	Lg	23 05 03.6	
	28nm,0.2s						
NRN	**Naryn**	**2.06**	**283**	⇑*e*P	**Pb**	**23 04 36.5**	**-0.7**
	baz=80						
NRN				⇑*e*S	**Sb**	**23 05 02.7**	**-0.3**
	baz=80						
ZHN	**Zhinishke**	**2.17**	**355**	*e*P	**Pb**	**23 04 38.6**	**-0.2**
	12nm,0.2s						
ZHN				*e*S	**Sb**	**23 05 05.9**	**+0.1**
	38nm,0.2s						
ZHN	**Zhinishke**	**2.17**	**355**	Pg	**Pb**	**23 04 38.6**	**-0.2**
	12nm,0.2s						
ZHN				Lg	Lg	23 05 05.9	
	38nm,0.2s						
ULHL	**Ulahol**	**2.21**	**305**	⇑*e*P	**Pn**	**23 04 37.8**	**+1.5**
	baz=4.0						
ULHL				⇑*e*S	**Sb**	**23 05 05.7**	**-1.3**
	baz=4.0						
SHLS	**Shalkode**	**2.23**	**15**	*e*P	**Pg**	**23 04 41.3**	**-0.8**
	2.1nm,0.2s						
SHLS				*e*S	**Sg**	**23 05 10.7**	**-0.2**
	38nm,0.7s						
SHLS	**Shalkode**	**2.23**	**15**	Pg	**Pg**	**23 04 41.3**	**-0.8**
	2.1nm,0.2s						
SHLS				Lg	Lg	23 05 10.7	
	38nm,0.7s						
PDGK	**Podgornoye**	**2.40**	**14**	⇓Pg	**Pb**	**23 04 41.6**	**-1.1**
	2.8nm,0.4s						
PDGK				⇓Lg	Lg	23 05 13.7	
	26nm,0.6s						
TNSS	**Tian-Shan**	**2.40**	**328**	*e*P	**Pb**	**23 04 43.5**	**+0.5**
	20nm,0.5s						
TNSS				*e*S	**Sg**	**23 05 14.6**	**-2.0**
	13nm,0.6s						
TNSS	**Tian-Shan**	**2.40**	**328**	Pg	**Pb**	**23 04 43.5**	**+0.5**
	20nm,0.5s						
TNSS				Lg	Lg	23 05 14.6	
	13nm,0.6s						
KPKS	**Kokpek**	**2.46**	**0**	*e*P	**Pb**	**23 04 43.1**	**-0.7**
	8.0nm,0.2s						
KPKS				*e*S	**Sb**	**23 05 14.0**	**0.0**
	35nm,0.5s						
KPKS	**Kokpek**	**2.46**	**0**	Pg	**Pb**	**23 04 43.1**	**-0.7**
	8.0nm,0.2s						
KPKS				Lg	Lg	23 05 14.0	
	35nm,0.5s						
MDOK	**Medeo**	**2.47**	**331**	*e*P	**Pb**	**23 04 44.2**	**+0.1**
	8.7nm,0.4s						
MDOK				*e*S	**Sb**	**23 05 15.4**	**+0.8**
	17nm,0.5s						
MDOK	**Medeo**	**2.47**	**331**	⇑Pg	**Pb**	**23 04 43.6**	**-0.4**
	8.8nm,0.5s						
MDOK				Pg	**Pb**	**23 04 44.2**	**+0.1**
	8.7nm,0.4s						
MDOK				⇑Lg	Lg	23 05 15.1	
	15nm,0.6s						
MDOK				Lg	Lg	23 05 15.4	
	17nm,0.5s						
KURS	**Kuram**	**2.51**	**352**	*e*P	**Pb**	**23 04 44.6**	**0.0**
	7.1nm,0.7s						
KURS				*e*S	**Sb**	**23 05 17.0**	**+1.5**
	7.5nm,0.4s						
KURS	**Kuram**	**2.51**	**352**	Pg	**Pb**	**23 04 44.6**	**0.0**
	7.1nm,0.7s						
KURS				Lg	Lg	23 05 17.0	
	7.5nm,0.4s						
KOTS	**Kotyrbulak**	**2.51**	**333**	*e*P	**Pb**	**23 04 44.7**	**0.0**
	15nm,0.3s						
KOTS				*e*S	**Sb**	**23 05 17.1**	**+1.4**
	27nm,0.6s						
KOTS	**Kotyrbulak**	**2.51**	**333**	Pg	**Pb**	**23 04 44.7**	**0.0**
	15nm,0.3s						
KOTS				Lg	Lg	23 05 17.1	
	27nm,0.6s						
BOOM	**Boomskoye usch**	**2.53**	**307**	⇓*e*P	**Pn**	**23 04 42.3**	**+1.6**
	baz=6.0						
BOOM				⇓*e*S	**Sn**	**23 05 13.3**	**+1.7**
	baz=6.0						
KNDC	**Almaty**	**2.55**	**331**	⇑Pg	**Pb**	**23 04 44.4**	**-0.9**
	18nm,0.7s						
KNDC				⇓Lg	Lg	23 05 19.4	
	56nm,1.1s						
AAA	**Alma-Ata**	**2.56**	**330**	*e*P	**Pb**	**23 04 46.3**	**+0.8**
	46nm,0.3s						
AAA				*e*S	**Sg**	**23 05 19.7**	**-2.0**
	64nm,0.7s						
AAA	**Alma-Ata**	**2.56**	**330**	Pg	**Pb**	**23 04 46.3**	**+0.8**
	46nm,0.3s						
AAA				Lg	Lg	23 05 19.7	
	64nm,0.7s						
MTBS	**Maitube**	**2.70**	**322**	*e*P	**Pb**	**23 04 48.5**	**+0.7**
	3.3nm,0.2s						
MTBS				*e*S	**Sg**	**23 05 23.2**	**-3.0**
	16nm,0.3s						
MTBS	**Maitube**	**2.70**	**322**	Pg	**Pb**	**23 04 48.5**	**+0.7**
	3.3nm,0.2s						
MTBS				Lg	Lg	23 05 23.2	
	16nm,0.3s						
KTMS	**Ketmen**	**2.73**	**26**	*e*P	**Pb**	**23 04 48.1**	**-0.4**
	1.9nm,0.4s						
KTMS				*e*S	**Sb**	**23 05 22.7**	**+0.6**
	15nm,0.7s						
KTMS	**Ketmen**	**2.73**	**26**	Pg	**Pb**	**23 04 48.1**	**-0.4**
	1.9nm,0.4s						
KTMS				Lg	Lg	23 05 22.7	
	15nm,0.7s						
TKM2	**Tokmak 2**	**2.99**	**311**	⇓Pg	**Pb**	**23 04 54.2**	**+1.3**
	9.4nm,1.1s						
TKM2				⇑Lg	Lg	23 05 32.9	
	5.8nm,0.6s						
KTBS	**Karatobe**	**3.08**	**332**	*e*P	**Pb**	**23 04 54.6**	**+0.3**
	4.4nm,0.4s						
KTBS				*e*S	**Sb**	**23 05 33.9**	**+1.9**
	24nm,0.3s						
KTBS	**Karatobe**	**3.08**	**332**	Pg	**Pb**	**23 04 54.6**	**+0.3**
	4.4nm,0.4s						
KTBS				Lg	Lg	23 05 33.9	
	24nm,0.3s						
BLB	**Baldybastay**	**3.09**	**357**	*e*P	**Pb**	**23 04 54.8**	**+0.2**
	9.5nm,0.2s						
BLB				*e*S	**Sb**	**23 05 34.0**	**+1.6**
	16nm,0.4s						
BLB	**Baldybastay**	**3.09**	**357**	Pg	**Pb**	**23 04 54.7**	**+0.2**
	9.5nm,0.2s						
BLB				Lg	Lg	23 05 34.0	
	16nm,0.4s						
CHKK	**Chushkaly**	**3.11**	**337**	*e*P	**Pb**	**23 04 54.7**	**0.0**
	2.2nm,0.4s						
CHKK				*e*S	**Sb**	**23 05 33.6**	**+0.9**
	17nm,0.4s						
CHKK	**Chushkaly**	**3.11**	**337**	Pg	**Pb**	**23 04 54.7**	**0.0**
	2.2nm,0.4s						
CHKK				Lg	Lg	23 05 33.6	
	17nm,0.4s						
DGS	**Degeres**	**3.11**	**317**	*e*P	**Pb**	**23 04 55.6**	**+0.8**
	4.6nm,0.7s						
DGS				*e*S	**Sb**	**23 05 35.4**	**+2.5**
	8.3nm,0.6s						
DGS	**Degeres**	**3.11**	**317**	Pg	**Pb**	**23 04 55.6**	**+0.8**
	4.6nm,0.7s						
DGS				Lg	Lg	23 05 35.4	
	8.3nm,0.6s						
ARXS	**Arharly**	**3.26**	**349**	*e*P	**Pb**	**23 04 58.3**	**+0.8**
	7.9nm,0.6s						
ARXS				*e*S	**Sb**	**23 05 39.6**	**+2.4**
	14nm,0.5s						
ARXS	**Arharly**	**3.26**	**349**	Pg	**Pb**	**23 04 58.3**	**+0.8**
	7.9nm,0.6s						
ARXS				Lg	Lg	23 05 39.6	
	14nm,0.5s						
KUU	**Kurty**	**3.36**	**330**	*e*P	**Pb**	**23 04 59.8**	**+0.7**
	1.2nm,0.4s						
KUU				*e*S	**Sb**	**23 05 42.5**	**+2.4**
	3.5nm,0.5s						
KUU	**Kurty**	**3.36**	**330**	Pg	**Pb**	**23 04 59.8**	**+0.7**
	1.2nm,0.4s						
KUU				Lg	Lg	23 05 42.5	
	3.5nm,0.5s						
DJR	**Jarkent**	**3.42**	**13**	*e*P	**Pb**	**23 04 59.8**	**-0.3**
	1.3nm,0.1s						
DJR				*e*S	**Sb**	**23 05 42.9**	**+1.0**
	12nm,0.4s						
DJR	**Jarkent**	**3.42**	**13**	Pg	**Pb**	**23 04 59.8**	**-0.3**
	1.3nm,0.1s						
DJR				Lg	Lg	23 05 42.9	
	12nm,0.4s						
KRBS	**Karabastau**	**3.49**	**321**	*e*P	**Pb**	**23 05 02.1**	**+0.8**
	1.8nm,0.3s						
KRBS				*e*S	**Sb**	**23 05 46.6**	**+2.9**
	4.6nm,0.6s						
KRBS	**Karabastau**	**3.49**	**321**	Pg	**Pb**	**23 05 02.1**	**+0.8**
	1.8nm,0.3s						
KRBS				Lg	Lg	23 05 46.6	
	4.6nm,0.6s						

*NEIC **02** 23:12:45.8±1.2, 18°.72N±0°.03×145°.5E±0°.2, h191km±8km, mb4.5/88, Error ellipse: s-maj=21.9km s-min=4.9km az=92.0*
*IDC **02** 23:12:47.5±2.5, 18

comp=Z,0.5nm,0.3s,baz=14,slow=8.0,SNR=8.4
comp=Z,0.5nm,0.3s
WRA Warramunga Arr 39.92 197 P **P 23 20 00.7 0.0**
KMI Kunming 40.09 287 ⇑P **P 23 20 03.4 +0.9**
PZH PanZhiHua 41.01 289 P **P 23 20 12.3 +2.4**
MA2 Magadan 41.02 4 P **P 23 20 09.4 +0.1**
comp=Z,11nm,0.8s,baz=169,slow=18,SNR=3.6
comp=Z,11nm,0.8s
FITZ Fitzroy Crossi 41.44 209 P **P 23 20 13.5 +0.2**
FITZ IAmb IAmb 23 20 38.0
comp=Z,16nm,1.5s
SONM Songino Array 43.06 321 P **P 23 20 25.9 -0.3**
comp=Z,1.5nm,0.6s,baz=138,slow=9.4,SNR=7.3
comp=Z,1.5nm,0.6s
SONM Songino Array 43.06 321 P **P 23 20 26.3 +0.1**
ASAR Alice Springs 43.59 196 P **P 23 20 32.0 +1.6**
comp=Z,0.4nm,0.6s,baz=19,slow=8.0,SNR=4.2
comp=Z,0.4nm,0.6s
CMAR Chiang Mai Arr 44.06 277 P **P 23 20 34.6 +0.3**
comp=Z,0.7nm,0.6s,baz=81,slow=5.8,SNR=1.1
comp=Z,0.7nm,0.6s
SEY Seymchan 44.47 4 P **P 23 20 37.6 +0.7**
comp=Z,1.2nm,0.2s,baz=184,slow=6.3,SNR=4.4
comp=Z,1.2nm,0.2s
WMQ Urumqi 54.20 311 *e*P **P 23 21 53.4 +2.4**
MORW Morawa 55.35 212 P **P 23 21 58.1 -1.2**
ZAA0 Zalesovo Array 57.93 323 P **P 23 22 17.3 +0.2**
ZALV Zalesovo Beam 57.93 323 P **P 23 22 16.2 -0.9**
comp=Z,2.9nm,0.6s,baz=108,slow=7.4,SNR=10
comp=Z,2.9nm,0.6s
ZALV Zalesovo Beam 57.93 323 P **P 23 22 16.5 -0.6**
MK31 Makanchi Array 58.36 314 P **P 23 22 20.3 0.0**
MKAR Makanchi Array 58.36 314 P **P 23 22 20.1 -0.2**
comp=Z,2.0nm,0.6s,baz=90,slow=7.7,SNR=23
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 58.36 314 P **P 23 22 20.6 +0.3**
MAKZ Makanchi 58.57 314 P **P 23 22 22.2 +0.5**
MAKZ IAmb IAmb 23 22 29.1
comp=Z,9.9nm,1.4s
N18K Kilae Creek 58.65 29 P **P 23 22 22.6 +0.6**
N18K IAmb IAmb 23 22 29.9
comp=Z,11nm,1.2s
O18K Koktuh Hills 58.72 31 P **P 23 22 22.9 +0.5**
SVW2 Sparrevohn 58.93 29 P **P 23 22 24.6 +0.7**
SVW2 IAmb IAmb 23 22 50.9
comp=Z,21nm,1.5s
N19K Bonanza Creek 59.35 30 P **P 23 22 27.7 +0.8**
L19K White Mountain 59.60 28 P **P 23 22 29.0 +0.4**
L19K IAmb IAmb 23 22 40.9
comp=Z,14nm,1.5s
M20K Styx River 60.28 29 P **P 23 22 33.5 +0.2**
M20K IAmb IAmb 23 22 34.7
comp=Z,6.7nm,1.1s
K20K Telida 60.32 27 P **P 23 22 34.4 +1.0**
J20K Nowinta River 60.55 26 P **P 23 22 35.8 +0.9**
J20K IAmb IAmb 23 22 37.2
comp=Z,9.5nm,1.2s
CNPM China Poot 60.57 32 P **P 23 22 34.7 -0.4**
PPLA Purkeypile 60.99 28 P **P 23 22 38.6 +0.5**
KURK Kurchatov 61.18 318 P **P 23 22 38.9 -0.5**
CAST Castle Rocks 61.19 27 P **P 23 22 39.6 +0.4**
IMAR Indian Mountai 61.30 24 P **P 23 22 40.8 +0.9**
H21K Melozitna Rive 61.57 25 P **P 23 22 42.4 +0.6**
H21K IAmb IAmb 23 22 42.9
comp=Z,6.0nm,1.1s
NRIK Noril'sk 61.57 340 P **P 23 22 41.1 -0.6**
comp=Z,3.6nm,0.6s,baz=117,slow=7.5,SNR=7.0
comp=Z,3.6nm,0.6s
NRIK Noril'sk 61.57 340 P **P 23 22 41.8 +0.1**
NRIK IAmb IAmb 23 22 42.0
comp=Z,3.7nm,0.6s
SEW Seward 61.58 31 P **P 23 22 41.7 -0.1**
RC01 Rabbit Creek A 61.66 30 P **P 23 22 41.8 -0.6**
RC01 IAmb IAmb 23 23 22.9
comp=Z,9.5nm,0.9s
KTH Kantishna Hill 61.73 27 P **P 23 22 43.0 +0.1**
KTH IAmb IAmb 23 22 44.0
comp=Z,14nm,1.2s
I21K Tanana 61.75 25 P **P 23 22 43.7 +0.8**
I21K IAmb IAmb 23 22 44.1
comp=Z,4.6nm,0.8s
BPAW Bear Paw Mtn. 61.85 26 P **P 23 22 43.9 +0.2**
BPAW IAmb IAmb 23 22 44.5
comp=Z,4.7nm,0.7s
TRF Thorofare Moun 61.98 27 P **P 23 22 44.2 -0.5**
TRF IAmb IAmb 23 23 24.9
comp=Z,11nm,1.3s
MLY Manley 62.21 25 P **P 23 22 46.4 +0.3**
MLY IAmb IAmb 23 22 46.9
comp=Z,4.7nm,0.7s
PWL Port Wells 62.27 30 P **P 23 22 46.4 -0.1**
KNK Knik Glacier 62.33 30 P **P 23 22 46.6 -0.2**
SML Sawmill 62.47 29 P **P 23 22 47.9 +0.1**
RND Reindeer 62.59 28 P **P 23 22 48.2 -0.4**
RND IAmb IAmb 23 23 28.8
comp=Z,11nm,1.4s
BOOM Boomskoye usch 62.69 309 P **P 23 22 50.1 +0.3**
I23K Minto, Yukon-K 62.80 26 P **P 23 22 50.4 +0.5**
I23K IAmb IAmb 23 23 12.0
comp=Z,11nm,1.5s
H23K Yukon River 62.91 25 P **P 23 22 51.2 +0.6**
H23K IAmb IAmb 23 22 51.3
comp=Z,15nm,1.4s
SCM Sheep Creek Mo 62.94 29 P **P 23 22 50.8 -0.2**
FID Port Fidalgo 63.15 31 P **P 23 22 51.8 -0.5**
WRH Wood River Hil 63.16 26 P **P 23 22 51.6 -0.7**
WRH IAmb IAmb 23 22 52.9
comp=Z,6.7nm,1.2s
DHY Denali Highway 63.17 28 P **P 23 22 52.9 +0.3**
DHY IAmb IAmb 23 23 28.5
comp=Z,5.9nm,1.0s
MDM Murphy Dome 63.22 26 P **P 23 22 53.5 +0.8**
MDM IAmb IAmb 23 22 53.9
comp=Z,4.6nm,0.7s
CCB Clear Creek Bu 63.33 26 P **P 23 22 52.5 -0.8**
KLU Klutina 63.54 30 P **P 23 22 55.4 +0.4**
KLU IAmb IAmb 23 22 55.8
comp=Z,11nm,1.3s
H24K Noodor Dome 63.57 25 P **P 23 22 55.1 +0.1**
TOLK Toolik Lake Re 63.67 22 P **P 23 22 56.4 +0.7**
TOLK IAmb IAmb 23 22 56.6
comp=Z,9.9nm,0.8s
IL31 63.74 26 IAmb IAmb 23 22 55.2
comp=Z,7.0nm,1.1s
ILAR Eielson Array 63.74 26 P **P 23 22 54.2 -1.8**
comp=Z,2.5nm,0.8s,baz=257,slow=4.9,SNR=22
comp=Z,2.5nm,0.8s
ILAR Eielson Array 63.74 26 P **P 23 22 54.0 -2.0**
PAX Paxson 64.00 28 P **P 23 22 57.8 -0.1**
N25K Chitina, Valde 64.18 30 P **P 23 22 59.6 +0.5**
N25K IAmb IAmb 23 23 26.5
comp=Z,8.8nm,1.2s
J25K Salcha River, 64.34 27 P **P 23 22 59.2 -0.9**
BERG Berg Lake 64.45 31 P **P 23 23 01.3 +0.5**
GLB Gilahina Butte 64.53 30 P **P 23 23 01.3 -0.1**
GLB IAmb IAmb 23 23 14.3
comp=Z,10nm,1.3s
DOT Dot Lake 64.74 28 P **P 23 23 02.5 -0.2**
DOT IAmb IAmb 23 23 02.8
comp=Z,4.0nm,0.7s
FYU Fort Yukon 64.78 24 P **P 23 23 03.3 +0.5**
FYU IAmb IAmb 23 23 18.7
comp=Z,10.0nm,1.1s
MCARA McCarthy VSAT 64.90 30 P **P 23 23 04.3 +0.7**
MCARA IAmb IAmb 23 23 14.6
comp=Z,9.3nm,1.1s
J26L Joseph Creek 65.09 27 P **P 23 23 04.5 -0.5**
J26L IAmb IAmb 23 23 05.8
comp=Z,4.3nm,0.8s
ISLE Juniper Island 65.14 31 P **P 23 23 05.6 +0.2**
BMAR Burnt Mountain 65.20 24 P **P 23 23 06.6 +1.0**
I26K Coal Creek Min 65.39 26 P **P 23 23 05.3 -1.5**
BARN Barnard Glacie 65.52 31 P **P 23 23 08.0 +0.1**
BARN IAmb IAmb 23 23 08.4
comp=Z,5.7nm,0.9s
M27K Edge Creek, AK 65.56 29 P **P 23 23 08.2 +0.1**
L27K Beaver Creek, 65.66 28 P **P 23 23 08.8 +0.2**
K27K Chicken 65.67 27 P **P 23 23 09.0 +0.5**
CTGM Chitina Glacie 65.67 31 P **P 23 23 09.1 +0.3**
CTGM IAmb IAmb 23 23 36.4
comp=Z,13nm,1.4s
BCAR Beaver Creek A 65.68 28 P **P 23 23 08.8 +0.1**
TABL Table Mountain 65.72 31 P **P 23 23 09.4 +0.2**
BRVK Borovoye 66.45 320 P **P 23 23 13.8 +0.1**
BRVK IAmb IAmb 23 23 14.7
comp=Z,5.3nm,0.8s
KK31 Karatay Array 66.66 310 P **P 23 23 15.3 0.0**
KKAR Karatay Array 66.66 310 P **P 23 23 15.5 +0.2**
KKAR Karatay Array 66.66 310 IAmb IAmb 23 23 16.4
comp=Z,2.8nm,0.8s
P29M Windy Craggy 67.38 32 P **P 23 23 20.6 +1.1**
HYT Haines Junctio 67.53 31 IAmb IAmb 23 23 22.1
comp=Z,5.3nm,0.8s
EPYK Eagle Plains 68.14 25 P **P 23 23 24.7 +0.6**
EPYK IAmb IAmb 23 23 25.2
comp=Z,12nm,1.4s
N31M Braeburn, Yuko 68.38 30 P **P 23 23 26.6 +0.9**
N31M IAmb IAmb 23 23 30.3
comp=Z,12nm,1.3s
INK Inuvik 69.46 23 P **P 23 23 31.4 -0.8**
comp=Z,2.8nm,0.5s,baz=254,slow=7.4,SNR=6.5
comp=Z,2.8nm,0.5s
ABKAR Akbulak array 73.24 317 P **P 23 23 54.6 -0.6**
GEYT Alibeck 76.78 306 P **P 23 24 15.8 +0.1**
comp=Z,1.1nm,0.6s,baz=134,slow=4.2,SNR=4.1
comp=Z,1.1nm,0.6s
NLWA Neilton Lookou 76.90 44 P **P 23 24 16.9 +0.8**
NLWA IAmb IAmb 23 24 34.4
comp=Z,15nm,1.5s
EUNU Eureka 77.77 8 P **P 23 24 20.4 -0.1**
YKA Yellowknife Ar 78.08 28 P **P 23 24 21.2 -1.2**
comp=Z,1.6nm,0.6s,baz=291,slow=6.1,SNR=2.5
comp=Z,1.6nm,0.6s
HUMO Hull Mountain 78.69 49 P **P 23 24 28.0 +1.9**
PINE Pine Mountain 79.80 47 P **P 23 24 33.0 +0.6**
PINE IAmb IAmb 23 24 33.6
comp=Z,7.4nm,0.8s
K05A Summer Lake 80.12 48 P **P 23 24 34.8 +0.6**
ARCES ARCESS Array B 82.46 342 P **P 23 24 45.0 -0.6**
comp=Z,7.2nm,0.9s,baz=74,slow=6.8,SNR=2.6
comp=Z,7.2nm,0.9s
NVAR Mina Array Bea 83.28 52 P **P 23 24 50.5 -0.2**
comp=Z,2.5nm,0.7s,baz=266,slow=5.6,SNR=11
comp=Z,2.5nm,0.7s
HRY Holter Researc 84.94 42 P **P 23 24 58.9 +0.1**
FINES FINESS Array B 86.83 335 P **P 23 25 05.4 -2.2**
comp=Z,1.3nm,0.5s,baz=61,slow=4.1,SNR=14
comp=Z,1.3nm,0.5s
BRTR Keskin Array B 94.01 314 P **P 23 25 39.8 -1.9**
comp=Z,0.7nm,0.9s,baz=127,slow=3.3,SNR=4.9
comp=Z,0.7nm,0.9s
LPAZ La Paz 147.84 91 PKPbc **PKPbc 23 32 08.6 -0.3**
comp=Z,2.8nm,0.9s,baz=226,slow=2.6,SNR=10.0

*HEL **02** 23:18:53.2, 67°.83N×20°.23E, h0km, ML1.3, Explosion*
UPP 02 23:18:52.2±0.0, 67°.82N×20°.20E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.15**	**20**	P	Pg	23 18 55.3	+0.3
KUA				S	Sg	23 18 57.4	+0.5
KUA	**Kurravaara**	**0.15**	**20**	*i* P	Pg	23 18 55.3	+0.3
KUA				*i* S	Sg	23 18 57.4	+0.5
RATU	**Laukkuluspa**	**0.23**	**272**	P	Pg	23 18 56.9	+0.3
RATU				S	Sg	23 19 00.0	+0.4
RATU	**Laukkuluspa**	**0.23**	**272**	P	Pg	23 19 00.0	+3.4
RATU	**Laukkuluspa**	**0.23**	**272**	*i* P	Pg	23 18 56.9	+0.3
RATU				*i* S	Sg	23 19 00.0	+0.4
KOVU	**Salmi**	**0.41**	**358**	P	Pg	23 19 00.1	+0.1
KOVU	**Salmi**	**0.41**	**358**	*i* P	Pg	23 19 00.1	+0.1
NIKU	**Nikkaluokta**	**0.45**	**277**	P	Pg	23 19 00.8	0.0
NIKU	**Nikkaluokta**	**0.45**	**277**	*i* P	Pg	23 19 00.8	0.0
DUNU	**Dundret**	**0.71**	**168**	P	Pg	23 19 05.6	-0.2
DUNU	**Dundret**	**0.71**	**168**	*i* P	Pg	23 19 05.6	-0.2
LANU	**Lannavaara**	**0.71**	**70**	P	Pg	23 19 05.7	-0.2
LANU	**Lannavaara**	**0.71**	**70**	*e*P	Pg	23 19 05.6	-0.2
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	23 19 07.0	-0.1
MASU	**Masugnsbyn**	**0.78**	**117**	*i* P	Pg	23 19 07.0	-0.1
SALU	**Saltoluokta**	**0.79**	**237**	P	Pg	23 19 07.0	-0.2
SALU	**Saltoluokta**	**0.79**	**237**	*i* P	Pg	23 19 07.0	-0.2
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pb	23 19 15.8	-0.1
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	23 19 15.6	+0.2
KIF				*e*S	Sg	23 19 31.4	+0.4
KIF				MSG		23 19 35.7	
comp=Z,2.6nm,0.1s							
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 19 17.5	-1.1
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 19 17.5	-1.1
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	23 19 18.6	-0.8
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	23 19 18.4	-0.9
HEF				MSG		23 19 45.2	
comp=Z,1.7nm,0.1s							
KLF	**Kolari**	**1.56**	**110**	*e*P	Pn	23 19 20.6	-0.5
KTK1	**Kautokeino**	**1.64**	**42**	*e*P	Pn	23 19 21.8	-0.5
HARU	**Harads**	**1.69**	**169**	P	Pn	23 19 22.9	+0.1
HARU	**Harads**	**1.69**	**169**	*e*P	Pn	23 19 22.9	+0.1
STEI	**Steigen**	**1.88**	**276**	*e*P	Pn	23 19 26.4	+0.9
TRO	**Tromso**	**1.88**	**346**	*e*PG	Pb	23 19 26.7	-0.7
TOF	**Tornio**	**2.38**	**135**	*e*P	Pn	23 19 33.8	+1.3
SGF	**Sodankyl**	**2.45**	**96**	*e*P	Pn	23 19 34.4	+1.1
SGF				*e*SG	Sb	23 20 07.7	0.0
RNF	**Rovaniemi**	**2.57**	**116**	*e*P	Pn	23 19 36.0	+1.0

UPP 02 23:18:55.5±0.0, 67°.83N×20°.20E, h0km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**21**	P	Pg	23 18 58.4	+0.2
KUA				S	Sg	23 19 00.5	+0.5
KOVU	**Salmi**	**0.40**	**358**	P	Pg	23 19 03.2	0.0
NIKU	**Nikkaluokta**	**0.45**	**276**	P	Pg	23 19 04.0	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 19 08.9	-0.2
DUNU	**Dundret**	**0.72**	**169**	P	Pg	23 19 09.0	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 19 10.5	-0.1
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 19 20.7	-1.2

*PRU **02** 23:47:05.5±0.0, 42°.75N×13°.34E, h0km*
*ROM **02** 23:47:07.0±0.0, 42°.790N±0°.003×13°.230E±0°.004, h9km, ML3.4/74, Mw3.2, Error ellipse: s-maj=0.3km s-min=0.2km az=243.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-7.39; $M_{\theta\theta}$4.34; $M_{\phi\phi}$3.05; $M_{r\theta}$-1.53; $M_{\theta\phi}$-4.51; $M_{\phi r}$1.59; Fault plane solution: $M_0$8.12723×10^{13} NP1:ϕ_s309.00000°, δ37.00000°, λ-93.00000°. NP2:ϕ_s133.00000°, δ53.00000°, λ-88.00000°.*
*PDG **02** 23:47:07.9±0.5, 42°.79N×13°.25E, h9km, ML3.7/11 Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*LDG **02** 23:47:08.1±0.2, 42°.73N×13°.24E, h9km, Ml3.1/20, Error ellipse: s-maj=5.5km s-min=3.2km az=45.0*
*BGR **02** 23:47:08.5±0.7, 42°.73N×13°.51E, h10km, ML3.6/6, Error ellipse: s-maj=12.2km s-min=11.1km az=6.0*
ISC 02 23:47:07.7±0.8, 42°.78N±0°.01×13°.21E±0°.02, h7km±5km, n206, σ1§89/296, 58C-46D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.05**	**357**	⇑P	**Pg**	**23 47 09.0**	**-0.6**
T1242				S	**Sg**	**23 47 10.0**	**-0.9**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1202	**Accumoli, Fraz**	**0.08**	**170**	P	**Pg**	**23 47 10.0**	**+0.2**
T1202				S	**Sg**	**23 47 12.2**	**+0.9**
NRCA	**Norcia**	**0.09**	**308**	⇑P	**Pg**	**23 47 09.9**	**0.0**
NRCA				S	**Sg**	**23 47 11.8**	**+0.3**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1204	**Amatrice, Fraz**	**0.13**	**142**	⇓P	**Pg**	**23 47 10.8**	**+0.2**
T1204				AML	AML		
comp=E,44150μm,0.5s							
T1204				AML	AML		
comp=N,30050μm,1.1s							
T1204				AML	AML		
comp=N,30100μm,1.1s							
MC2	**Monte Cornacci**	**0.13**	**355**	⇑P	**Pg**	**23 47 10.4**	**-0.3**
MC2				S	**Sg**	**23 47 12.9**	**+0.1**
T1216	**Preci, Frazion**	**0.18**	**309**	⇑P	**Pg**	**23 47 11.5**	**+0.1**
T1216				S	**Sg**	**23 47 14.7**	**+0.9**
T1216				AML	AML		
comp=E,35500μm,0.4s							
T1216				AML	AML		
comp=N,32400μm,1.4s							
T1216				AML	AML		
comp=N,32350μm,1.4s							
T1216				AML	AML		
comp=E,35450μm,0.4s							
T1241	**Roccafluvione,**	**0.18**	**65**	⇑P	**Pg**	**23 47 11.1**	**-0.3**
T1241				S	**Sg**	**23 47 14.0**	**+0.1**
T1241				AML	AML		
comp=E,42550μm,0.7s							
T1241				AML	AML		
comp=N,29850μm,0.5s							
T1241				AML	AML		
comp=N,29850μm,0.5s							
T1241				AML	AML		
comp=N,29900μm,0.5s							
T1241				AML	AML		
comp=E,42150μm,0.7s							
T1241				AML	AML		
comp=E,42550μm,0.7s							
T1241				AML	AML		
comp=N,28450μm,0.6s							
T1243	**Rocca Santa Ma**	**0.20**	**115**	⇓P	**Pg**	**23 47 11.6**	**-0.1**
T1243				S	**Sg**	**23 47 14.7**	**+0.3**
T1217	**Poggiodomo (PG**	**0.21**	**252**	⇑P	**Pg**	**23 47 12.5**	**+0.5**
T1217				S	**Sg**	**23 47 16.8**	**+1.8**
T1217				AML	AML		
comp=N,11100μm,1.5s							
T1217				AML	AML		
comp=E,10755μm,0.5s							
T1217				AML	AML		
comp=N,11155μm,1.5s							
T1217				AML	AML		
comp=E,11100μm,0.5s							
T1217				AML	AML		
comp=N,11050μm,1.5s							
T1217				AML	AML		
comp=E,10760μm,0.4s							
T1217				AML	AML		
comp=N,11190μm,1.5s							
T1217				AML	AML		
comp=E,11150μm,0.5s							
T1217				AML	AML		
comp=E,10750μm,0.5s							
LNSS	**Leonessa**	**0.21**	**215**	⇑P	**Pg**	**23 47 12.6**	**+0.5**
LNSS				S	**Sg**	**23 47 16.6**	**+1.6**
LNSS				AML	AML		
comp=N,13450μm,0.4s							
LNSS				AML	AML		
comp=E,17250μm,0.5s							
FEMA	**Monte Fema**	**0.22**	**328**	⇑P	**Pg**	**23 47 12.3**	**+0.2**
FEMA				S	**Sg**	**23 47 16.1**	**+1.0**
FEMA				AML	AML		
comp=E,33050μm,0.2s							
FEMA				AML	AML		
comp=N,25450μm,1.6s							
FEMA				AML	AML		
comp=N,25400μm,1.6s							
FEMA				AML	AML		
comp=N,25400μm,1.6s							
AM05	**Amandola Campo**	**0.23**	**28**	⇑P	**Pg**	**23 47 12.0**	**-0.2**
AM05				S	**Sg**	**23 47 15.5**	**+0.2**
AM05				AML	AML		
comp=E,7745μm,0.8s							
AM05				AML	AML		
comp=N,8110μm,0.4s							
AM05				AML	AML		
comp=N,1050μm,1.4s							
AM05				AML	AML		
comp=E,33800μm,0.6s							
AM05				AML	AML		
comp=N,1051μm,1.4s							
T1215	**Vallo di Nera,**	**0.25**	**275**	P	**Pg**	**23 47 13.0**	**+0.3**
T1215				S	**Sg**	**23 47 17.5**	**+1.4**
RM33	**Pellescritta (**	**0.27**	**179**	⇑P	**Pg**	**23 47 13.4**	**+0.4**
RM33				AML	AML		
comp=N,9055μm,0.4s							
RM33				AML	AML		
comp=E,13250μm,1.2s							
RM33				AML	AML		
comp=E,13050μm,1.3s							
RM33				AML	AML		
comp=N,9285μm,0.4s							
RM33				AML	AML		
comp=E,13100μm,1.3s							
FDMO	**Fiordimonte**	**0.27**	**341**	⇑P	**Pg**	**23 47 12.9**	**-0.2**
FDMO				S	**Sg**	**23 47 17.4**	**+0.7**
FDMO				AML	AML		
comp=E,11750μm,1.2s							
FDMO				AML	AML		
comp=N,18700μm,0.2s							
CAMP	**Campotosto**	**0.28**	**149**	⇓P	**Pg**	**23 47 13.3**	**-0.1**
CAMP				S	**Sg**	**23 47 18.1**	**+0.9**
CAMP				AML	AML		
comp=E,5750μm,0.6s							
CAMP				AML	AML		
comp=N,5470μm,0.5s							
T1246	**Crognaleto (TE**	**0.29**	**133**	P	**Pg**	**23 47 13.3**	**-0.1**
T1246				S	**Sg**	**23 47 18.0**	**+0.8**
GUMA	**Gualdo di Mace**	**0.30**	**18**	⇑P	**Pg**	**23 47 13.6**	**0.0**
GUMA				S	**Sg**	**23 47 18.8**	**+1.2**
GUMA				AML	AML		
comp=E,52600μm,0.5s							
GUMA				AML	AML		
comp=N,60650μm,0.4s							
GUMA				AML	AML		
comp=N,56100μm,0.4s							
GUMA				AML	AML		
comp=E,71400μm,0.5s							
CSP1	**Cessapalombo**	**0.31**	**360**	⇑P	**Pg**	**23 47 13.6**	**-0.3**
CSP1				S	**Sg**	**23 47 18.7**	**+0.6**
CSP1				AML	AML		
comp=N,42850μm,0.4s							
CSP1				AML	AML		
comp=N,42900μm,0.4s							
CSP1				AML	AML		
comp=E,25250μm,0.6s							
CESI	**CESI - Serrava**	**0.32**	**315**	⇓P	**Pg**	**23 47 14.1**	**+0.1**
CESI				S	**Sg**	**23 47 19.4**	**+1.2**
CESI				AML	AML		
comp=E,10160μm,0.5s							
CESI				AML	AML		
comp=N,20250μm,0.4s							
TERO	**Teramo**	**0.33**	**118**	⇓P	**Pg**	**23 47 13.9**	**-0.3**
TERO				AML	AML		
comp=E,9450μm,0.3s							
TERO				AML	AML		
comp=E,10235μm,0.3s							
TERO				AML	AML		
comp=E,9415μm,0.3s							
TERO				AML	AML		
comp=N,14850μm,1.2s							
TERO				AML	AML		
comp=E,9425μm,0.3s							
TERO				AML	AML		
comp=N,14000μm,1.2s							
T1247	**Pizzolo (AQ)**	**0.34**	**169**	⇓P	**Pg**	**23 47 14.6**	**+0.2**
T1247				AML	AML		
comp=E,12650μm,0.5s							
T1247				AML	AML		
comp=N,10070μm,0.6s							
OFFI	**Offida**	**0.38**	**66**	⇑P	**Pg**	**23 47 15.7**	**+0.4**
OFFI				AML	AML		
comp=E,18950μm,0.5s							
OFFI				AML	AML		
comp=N,28750μm,0.6s							
MNTP	**Montappone**	**0.41**	**28**	⇓P	**Pg**	**23 47 16.0**	**+0.3**
MNTP				AML	AML		
comp=E,15500μm,0.7s							
MNTP				AML	AML		
comp=E,15550μm,0.7s							
MNTP				AML	AML		
comp=N,12350μm,0.5s							
SEF1	**Sefro**	**0.41**	**333**	⇑P	**Pg**	**23 47 15.8**	**0.0**
SEF1				AML	AML		
comp=E,23800μm,0.3s							
SEF1				AML	AML		
comp=N,25200μm,0.2s							
SEF1				AML	AML		
comp=N,25250μm,0.3s							
SEF1				AML	AML		
comp=E,23850μm,0.3s							
MDAR	**Monte D'Aria**	**0.42**	**353**	P	**Pg**	**23 47 15.5**	**-0.3**
MDAR				S	**Sg**	**23 47 22.1**	**+0.8**
GIGS	**Gran Sasso**	**0.42**	**141**	⇓P	**Pg**	**23 47 15.4**	**-0.6**

GIGS				AML	AML		
	comp=E,1405µm,1.2s						
GIGS				AML	AML		
	comp=N,1065µm,1.6s						
PIO1	**Pioraco**	**0.43**	**338**	P	**Pg**	**23 47 16.6**	**+0.5**
PIO1				S	**Sb**	**23 47 23.3**	**-1.0**
AQU	**L'Aquila**	**0.45**	**161**	P	**Pg**	**23 47 16.3**	**-0.1**
SSM1	**San Severino M**	**0.45**	**357**	P	**Pg**	**23 47 16.1**	**-0.3**
SSM1				S	**Sg**	**23 47 23.3**	**+0.9**
FIU1	**Fiuminata**	**0.46**	**334**	⇑P	**Pg**	**23 47 16.7**	**+0.2**
FIU1				AML	AML		
	comp=E,8685µm,1.1s						
FIU1				AML	AML		
	comp=N,6695µm,1.1s						
FIU1				AML	AML		
	comp=N,6700µm,1.1s						
FIU1				AML	AML		
	comp=E,8725µm,1.1s						
GAG1	**Gagliole**	**0.47**	**347**	⇓P	**Pg**	**23 47 17.1**	**+0.3**
GAG1				AML	AML		
	comp=N,17850µm,0.5s						
GAG1				AML	AML		
	comp=E,23350µm,0.5s						
GAG1				AML	AML		
	comp=N,17800µm,0.6s						
CESX	**Cesi**	**0.49**	**250**	⇑P	**Pg**	**23 47 17.2**	**0.0**
CESX				S	**Sb**	**23 47 26.0**	**-0.1**
CESX				AML	AML		
	comp=N,3215µm,0.5s						
CESX				AML	AML		
	comp=E,4150µm,1.4s						
MTL1	**Matelica**	**0.50**	**343**	⇑P	**Pg**	**23 47 17.7**	**+0.3**
MTL1				AML	AML		
	comp=E,16650µm,0.4s						
MTL1				AML	AML		
	comp=N,20600µm,0.4s						
MTL1				AML	AML		
	comp=E,16700µm,0.4s						
MTL1				AML	AML		
	comp=N,20650µm,0.4s						
SNTG	**Esanatoglia**	**0.51**	**338**	⇓P	**Pg**	**23 47 17.4**	**-0.3**
SNTG				S	**Sb**	**23 47 26.0**	**-0.8**
SNTG				AML	AML		
	comp=E,4435µm,0.6s						
SNTG				AML	AML		
	comp=N,4935µm,1.0s						
SNTG				AML	AML		
	comp=E,4215µm,0.6s						
SNTG				AML	AML		
	comp=N,5175µm,1.0s						
FIAM	**Fiamignano**	**0.52**	**187**	P	**Pg**	**23 47 17.6**	**-0.1**
FIAM				S	**Sb**	**23 47 27.0**	**+0.2**
FIAM				AML	AML		
	comp=N,2755µm,1.1s						
FIAM				AML	AML		
	comp=E,3300µm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**87**	⇑P	**Pb**	**23 47 18.8**	**-0.3**
TRTR				AML	AML		
	comp=E,12700µm,0.7s						
TRTR				AML	AML		
	comp=N,12450µm,1.2s						
TRE1	**Treia**	**0.54**	**8**	P	**Pg**	**23 47 18.4**	**+0.3**
TRE1				S	**Sb**	**23 47 27.8**	**+0.4**
EL6	**Elcito**	**0.56**	**352**	⇑P	**Pg**	**23 47 18.0**	**-0.5**
EL6				S	**Sb**	**23 47 28.0**	**0.0**
EL6				AML	AML		
	comp=E,12185µm,1.4s						
EL6				AML	AML		
	comp=N,10585µm,0.6s						
EL6				AML	AML		
	comp=E,12160µm,1.4s						
EL6				AML	AML		
	comp=N,10575µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.58**	**314**	⇓P	**Pg**	**23 47 18.8**	**-0.2**
FAGN	**Fagnano**	**0.58**	**151**	⇑P	**Pg**	**23 47 18.8**	**-0.2**
FAGN				AML	AML		
	comp=E,5005µm,1.4s						
FAGN				AML	AML		
	comp=N,5640µm,0.6s						
CING	**Cingoli**	**0.60**	**359**	⇑P	**Pg**	**23 47 18.6**	**-0.6**
CING				AML	AML		
	comp=N,3565µm,0.3s						
CING				AML	AML		
	comp=E,3775µm,0.9s						
VCEL	**Villa Celiera**	**0.60**	**129**	⇓P	**Pg**	**23 47 19.2**	**-0.2**
VCEL				S	**Sb**	**23 47 30.0**	**+0.6**
VCEL				AML	AML		
	comp=E,3990µm,0.6s						
VCEL				AML	AML		
	comp=E,3995µm,0.6s						
VCEL				AML	AML		
	comp=N,3535µm,1.0s						
PP3	**Marolino**	**0.67**	**26**	⇓P	**Pg**	**23 47 20.9**	**+0.3**
PP3				AML	AML		
	comp=N,14300µm,1.1s						
PP3				AML	AML		
	comp=E,12050µm,1.2s						
PP3				AML	AML		
	comp=N,14550µm,1.1s						
PP3				AML	AML		
	comp=E,12150µm,1.2s						
MURB	**Monte Urbino**	**0.70**	**314**	⇑P	**Pg**	**23 47 21.0**	**-0.2**
MURB				S	**Sb**	**23 47 33.0**	**+1.0**
MURB				AML	AML		
	comp=E,10600µm,0.3s						
MURB				AML	AML		
	comp=E,12750µm,0.3s						
MURB				AML	AML		
	comp=N,10850µm,0.3s						
MURB				AML	AML		
	comp=N,10500µm,0.3s						
T0110	**Collepietro**	**0.70**	**142**	P	**Pg**	**23 47 19.8**	**-1.3**
T0110				AML	AML		
	comp=E,3920µm,0.6s						
T0110				AML	AML		
	comp=N,3425µm,0.5s						
SSFR	**Montelago di S**	**0.73**	**335**	⇑P	**Pg**	**23 47 21.6**	**-0.1**
SSFR				AML	AML		
	comp=N,9805µm,0.2s						
SSFR				AML	AML		
	comp=E,11550µm,0.2s						
SSFR				AML	AML		
	comp=N,9115µm,0.9s						
SSFR				AML	AML		
	comp=E,12100µm,0.2s						
ARVD	**Arcevia**	**0.74**	**345**	⇑P	**Pg**	**23 47 21.3**	**-0.7**
ARVD				S	**Sb**	**23 47 34.0**	**+0.6**
ARVD				AML	AML		
	comp=N,1517µm,1.5s						
ARVD				AML	AML		
	comp=E,2220µm,0.6s						
SRES	**S.Oreste - Sor**	**0.75**	**224**	P	**Pg**	**23 47 21.6**	**-0.5**
SRES				AML	AML		
	comp=N,1039µm,0.5s						
SRES				AML	AML		
	comp=E,1253µm,0.6s						
ATFO	**Monte Foce - G**	**0.75**	**322**	⇑P	**Pg**	**23 47 21.8**	**-0.4**
ATFO				AML	AML		
	comp=N,2285µm,0.2s						
ATFO				AML	AML		
	comp=E,2340µm,0.9s						
ATTE	**AVT- Monte Tez**	**0.75**	**304**	⇓P	**Pg**	**23 47 22.1**	**-0.1**
ATTE				AML	AML		
	comp=E,1430µm,0.8s						
ATTE				AML	AML		
	comp=N,1185µm,1.0s						
PTQR	**Pietraquaria**	**0.77**	**169**	⇑P	**Pg**	**23 47 21.7**	**-0.8**
PTQR				AML	AML		
	comp=N,708µm,1.2s						
PTQR				AML	AML		
	comp=E,954µm,1.1s						
MGAB	**Montegabbione**	**0.82**	**280**	⇓P	**Pg**	**23 47 23.4**	**0.0**
MGAB				AML	AML		
	comp=E,3625µm,1.6s						
MGAB				AML	AML		
	comp=E,4110µm,0.4s						
MGAB				AML	AML		
	comp=N,4795µm,0.4s						
MGAB				AML	AML		
	comp=N,4675µm,0.4s						
FRON	**Frontone**	**0.82**	**335**	⇓P	**Pg**	**23 47 22.6**	**-0.8**
FRON				S	**Sb**	**23 47 36.0**	**+0.5**
FRON				AML	AML		
	comp=N,5680µm,0.3s						
FRON				AML	AML		
	comp=E,2845µm,0.7s						
AOI	**Ancona**	**0.82**	**20**	⇓P	**Pg**	**23 47 23.1**	**-0.4**
AOI				AML	AML		
	comp=E,2785µm,0.9s						
AOI				AML	AML		
	comp=N,2730µm,0.4s						
MTCE	**Montecelio**	**0.83**	**205**	⇑P	**Pg**	**23 47 23.8**	**+0.1**
MTCE				AML	AML		
	comp=E,2480µm,0.5s						
MTCE				AML	AML		
	comp=N,1630µm,1.2s						
ATVO	**AVT- Monte Val**	**0.84**	**316**	⇓P	**Pg**	**23 47 23.2**	**-0.7**
ATVO				S	**Sb**	**23 47 37.0**	**+0.8**
ATVO				AML	AML		
	comp=N,1440µm,0.5s						
ATVO				AML	AML		
	comp=E,1390µm,1.1s						
CERT	**Cerreto**	**0.85**	**191**	⇓P	**Pg**	**23 47 23.2**	**-0.8**
CERT				AML	AML		
	comp=N,2650µm,0.5s						
CERT				AML	AML		
	comp=E,3335µm,0.5s						
COR1	**Corinaldo**	**0.86**	**350**	⇓P	**Pg**	**23 47 24.4**	**+0.1**
COR1				AML	AML		
	comp=N,4655µm,1.2s						
COR1				AML	AML		
	comp=N,4235µm,1.2s						
COR1				AML	AML		
	comp=E,2448µm,0.6s						
COR1				AML	AML		
	comp=E,5075µm,1.3s						
ATMI	**Monte Miggiano**	**0.88**	**309**	⇓P	**Pg**	**23 47 24.9**	**+0.2**
ATMI				AML	AML		
	comp=N,3500µm,0.7s						
ATMI				AML	AML		
	comp=E,3445µm,0.9s						
ATPI	**Pietralunga -**	**0.89**	**319**	S	**Sb**	**23 47 38.0**	**+0.3**
PIEI	**Pieia**	**0.90**	**327**	⇑P	**Pg**	**23 47 24.2**	**-0.8**
PIEI				S	**Sb**	**23 47 39.0**	**+1.1**
PIEI				AML	AML		
	comp=N,1242µm,1.2s						
PIEI				AML	AML		
	comp=E,1490µm,0.2s						
MPAG	**Monte Paganucc**	**0.91**	**339**	⇓P	**Pg**	**23 47 24.8**	**-0.4**
MPAG				S	**Sn**	**23 47 40.0**	**-0.4**
MPAG				AML	AML		
	comp=E,3330µm,0.4s						
MPAG				AML	AML		
	comp=N,1765µm,1.6s						
MPAG				AML	AML		
	comp=E,3460µm,0.4s						
MPAG				AML	AML		
	comp=N,1850µm,0.5s						
INTR	**Introdacqua**	**0.93**	**146**	⇓P	**Pg**	**23 47 24.1**	**-1.4**
INTR				AML	AML		
	comp=E,1µm,0.7s						
INTR				AML	AML		
	comp=N,3µm,0.6s						
INTR				AML	AML		
	comp=E,1µm,0.7s						
INTR				AML	AML		
	comp=N,3µm,0.6s						
INTR				AML	AML		
	comp=N,3635µm,0.6s						
INTR				AML	AML		
	comp=E,1290µm,0.7s						
SACS	**San Casciano d**	**0.96**	**275**	⇓P	**Pg**	**23 47 26.1**	**0.0**
SACS				AML	AML		
	comp=N,1655µm,1.4s						
SACS				AML	AML		
	comp=N,1670µm,1.4s						
SACS				AML	AML		
	comp=E,1300µm,1.6s						
SACS				AML	AML		
	comp=E,1275µm,1.6s						
FSSB	**Fossombrone**	**0.96**	**341**	P	**Pg**	**23 47 25.1**	**-1.1**
FSSB				S	**Sn**	**23 47 42.0**	**+0.4**
FSSB				AML	AML		
	comp=N,6010µm,0.3s						
FSSB				AML	AML		
	comp=E,5580µm,0.4s						
APEC	**Apecchio**	**0.97**	**324**	⇑P	**Pg**	**23 47 26.2**	**-0.1**
APEC				S	**Sn**	**23 47 42.0**	**+0.3**
BADI	**Badiali**	**1.01**	**316**	P	**Pg**	**23 47 26.5**	**-0.7**
BADI				S	**Sn**	**23 47 43.0**	**+0.1**
PE3	**Peglio**	**1.05**	**331**	⇑P	**Pg**	**23 47 27.7**	**-0.3**
PE3				AML	AML		
	comp=E,10µm,1.2s						
PE3				AML	AML		
	comp=N,8µm,0.2s						
CAFI	**Castiglion Fio**	**1.06**	**302**	⇑P	**Pg**	**23 47 27.6**	**-0.5**
CAFI				AML	AML		
	comp=N,746µm,1.2s						
CAFI				AML	AML		
	comp=E,862µm,1.2s						
VIVA	**Pratoni del Vi**	**1.08**	**198**	⇓P	**Pn**	**23 47 30.1**	**+0.9**
VIVA				AML	AML		
	comp=E,2920µm,0.5s						
VIVA				AML	AML		
	comp=N,3005µm,0.5s						
POFI	**Posta Fibreno**	**1.13**	**160**	⇑P	**Pn**	**23 47 30.5**	**+0.6**
POFI				AML	AML		
	comp=N,489µm,0.9s						
POFI				AML	AML		
	comp=E,738µm,0.7s						
MCIV	**Monte Civitell**	**1.13**	**270**	⇑P	**Pn**	**23 47 30.4**	**+0.5**
MCIV				AML	AML		
	comp=E,604µm,0.4s						
MCIV				AML	AML		
	comp=N,450µm,0.5s						
TOLF	**Tolfa**	**1.15**	**232**	P	**Pg**	**23 47 28.1**	**-1.5**
TOLF				AML	AML		
	comp=N,676µm,0.4s						
TOLF				AML	AML		
	comp=E,969µm,0.5s						
LAV9	**Lanuvio**	**1.16**	**199**	⇓P	**Pn**	**23 47 31.0**	**+0.6**
LAV9				AML	AML		
	comp=E,2185µm,0.4s						
LAV9				AML	AML		
	comp=N,2215µm,0.7s						
LAV9				AML	AML		
	comp=E,2230µm,0.5s						
LAV9				AML	AML		
	comp=N,2290µm,0.7s						
PESA	**Pesaro**	**1.19**	**347**	⇓P	**Pn**	**23 47 31.0**	**+0.3**
PESA				AML	AML		
	comp=E,3095µm,1.1s						
PESA				AML	AML		
	comp=N,2485µm,0.4s						
GIUL	**Giuliano Di Ro**	**1.22**	**178**	⇑P	**Pn**	**23 47 32.1**	**+0.9**
GIUL				AML	AML		
	comp=N,1008µm,0.9s						
GIUL				AML	AML		
	comp=E,625µm,0.8s						
CRE	**Caprese Michel**	**1.25**	**313**	P	**Pg**	**23 47 32.6**	**+1.0**
CRE				AML	AML		
	comp=E,629µm,0.5s						
CRE				AML	AML		
	comp=N,566µm,1.2s						
ARCI	**Arcidosso**	**1.28**	**274**	⇑P	**Pg**	**23 47 33.2**	**+1.0**
ARCI				AML	AML		
	comp=N,198µm,0.6s						
ARCI				AML	AML		
	comp=E,247µm,0.7s						
CERA	**Filignano**	**1.33**	**153**	⇑P	**Pg**	**23 47 34.6**	**+1.5**
TRIV	**Trivento**	**1.42**	**135**	⇑P	**Pg**	**23 47 35.6**	**+0.7**
TRIV				AML	AML		
	comp=E,920µm,1.0s						
TRIV				AML	AML		
	comp=N,690µm,1.5s						
VAGA	**Valle Agricola**	**1.56**	**150**	⇑P	**Pg**	**23 47 38.1**	**+0.5**
CSNT	**Castellina Chi**	**1.56**	**297**	P	**Pn**	**23 47 36.1**	**+0.2**
CSNT				AML	AML		
	comp=E,224µm,1.3s						
CSNT				AML	AML		
	comp=N,198µm,0.6s						
RUFI	**Rufina**	**1.63**	**311**	⇓P	**Pb**	**23 47 37.7**	**-0.4**
CASP	**Castiglione de**	**1.72**	**271**	⇓P	**Pn**	**23 47 38.0**	**-0.1**
CASP				AML	AML		
	comp=N,88µm,1.6s						
CASP				AML	AML		
	comp=E,140µm,1.0s						
MELA	**Melanico ??? S**	**1.78**	**126**	⇓P	**Pb**	**23 47 40.0**	**-0.7**
MELA				AML	AML		
	comp=N,818µm,0.5s						
MELA				AML	AML		
	comp=N,972µm,0.6s						
MELA				AML	AML		
	comp=E,554µm,0.9s						
MELA				AML	AML		
	comp=E,564µm,0.9s						
BRIS	**BRISIGHELLA**	**1.84**	**319**	⇓P	**Pb**	**23 47 42.1**	**+0.3**
SEI	**Scarperia**	**1.86**	**314**	⇓P	**Pg**	**23 47 45.3**	**+2.1**
SGRT	**San Giovanni R**	**2.14**	**118**	⇑P	**Pn**	**23 47 44.7**	**+0.8**
SGRT				S	**Sb**	**23 48 13.0**	**-0.7**
SGRT				AML	AML		
	comp=E,297µm,0.8s						
SGRT				AML	AML		
	comp=N,298µm,0.7s						
PALZ	**Palazzo San Ge**	**2.75**	**131**	⇑P	**Pn**	**23 47 53.8**	**+1.5**
SKDS	**Skadanscina**	**2.83**	**12**	*e*Pn	**Pn**	**23 47 52.2**	**-1.1**
A050A	**Klekovaca**	**2.95**	**54**	*e*Pn	**Pn**	**23 47 55.9**	**+0.9**
CEY	**Cerknica**	**3.09**	**16**	*e*Pn	**Pn**	**23 47 56.6**	**-0.2**
PGF	**Pioggiola**	**3.11**	**267**	*e*P	**Pn**	**23 47 59.7**	**+2.4**
PGF				*e*Sn	**Sn**	**23 48 32.8**	**-1.9**
	comp=N,10nm,0.5s						
SRKY	**Kupres RS**	**3.16**	**65**	*e*Pn	**Pn**	**23 47 59.1**	**+1.2**
SABO	**M.te Sabotino**	**3.21**	**5**	⇓P	**Pn**	**23 47 58.2**	**-0.3**
SABO				AML	AML		
	comp=N,366µm,0.6s						
SABO				AML	AML		
	comp=E,308µm,1.5s						
SABO				AML	AML		
	comp=N,1385µm,0.7s						
SABO				AML	AML		
	comp=E,1120µm,1.5s						
MGRS	**Mrkonjic Grad**	**3.26**	**59**	*e*Pn	**Pn**	**23 48 00.9**	**+1.7**
CGRP	**Cima Grappa**	**3.26**	**342**	⇑P	**Pn**	**23 48 00.1**	**+0.8**
CGRP				S	**Sn**	**23 48 39.0**	**+0.5**
CGRP				AML	AML		
	comp=N,266µm,0.8s						
CGRP				AML	AML		
	comp=E,195µm,0.5s						
STON	**Ston**	**3.31**	**87**	*e*Pn	**Pn**	**23 47 59.0**	**-0.8**
VARN	**Col Varnada, M**	**3.31**	**347**	S	**Sn**	**23 48 41.0**	**+1.5**
PRIJ	**Prijedor**	**3.35**	**48**	*e*Pn	**Pb**	**23 48 06.4**	**-1.0**
MATE	**Matera**	**3.37**	**128**	⇑P	**Pn**	**23 48 01.7**	**+1.0**
LJU	**Ljubljana**	**3.40**	**16**	⇑P	**Pn**	**23 48 01.7**	**+0.6**
LJU				AML	AML		
	comp=E,910µm,0.8s						
LJU				AML	AML		
	comp=N,1245µm,0.9s						
DOSS	**Dosso del Somm**	**3.42**	**336**	⇑P	**Pn**	**23 48 03.1**	**+1.5**
CRES	**Cresnjev**	**3.45**	**27**	*e*Pn	**Pn**	**23 48 02.2**	**+0.4**
CTI	**Castel Tesino**	**3.45**	**342**	⇑P	**Pn**	**23 48 03.6**	**+1.6**
A051A	**Mrakovica**	**3.48**	**49**	*e*Pn	**Pn**	**23 48 02.0**	**-0.3**
BLY	**Banja Luka**	**3.49**	**54**	*e*Pn	**Pn**	**23 48 05.8**	**+3.5**
STAL	**STALIGIAL**	**3.50**	**354**	⇓P	**Pn**	**23 48 02.7**	**+0.2**
STAL				AML	AML		
	comp=E,188µm,0.5s						
STAL				AML	AML		
	comp=N,162µm,0.7s						
NOCI	**Noci**	**3.50**	**123**	⇓P	**Pn**	**23 48 03.9**	**+1.3**
NOCI				AML	AML		
	comp=E,69µm,1.3s						
NOCI				AML	AML		
	comp=N,104µm,0.5s						
MAGA	**Magasa**	**3.52**	**329**	⇑P	**Pn**	**23 48 03.8**	**+0.9**
MAGA				AML	AML		
	comp=N,220µm,0.5s						
MAGA				AML	AML		
	comp=E,302µm,0.4s						
GAGG	**Gaggia**	**3.67**	**335**	⇓P	**Pn**	**23 48 07.0**	**+1.9**
ZONE	**Zone**	**3.72**	**324**	⇑P	**Pn**	**23 48 06.9**	**+1.3**
ACOM	**Acomizza, Ital**	**3.77**	**3**	⇓P	**Pn**	**23 48 07.3**	**+0.9**
ACOM				AML	AML		
	comp=N,175µm,0.7s						
ACOM				AML	AML		
	comp=N,178µm,0.8s						
ACOM				AML	AML		
	comp=E,222µm,0.7s						
ACOM				AML	AML		
	comp=E,206µm,0.7s						
ZOU	**Zoufplan**	**3.78**	**358**	⇑P	**Pn**	**23 48 06.7**	**+0.1**
ZOU				AML	AML		
	comp=E,137µm,0.8s						
ZOU				AML	AML		
	comp=N,135µm,1.4s						
ZOU				AML	AML		
	comp=N,115µm,1.4s						
ZOU				AML	AML		
	comp=E,108µm,0.8s						
OBKA	**Obir**	**3.85**	**14**	*e*Pn	**Pn**	**23 48 07.0**	**-0.3**
OBKA	**Obir**	**3.85**	**14**	*e*Pn	**Pn**	**23 48 07.3**	**-0.1**
	comp=E,0.9nm,0.2s						
OBKA	**Obir**	**3.85**	**14**	*e*Pn	**Pn**	**23 48 07.1**	**-0.3**
OBKA				*e*Sn	**Sn**	**23 48 49.2**	**-3.7**
MYKA	**Terra Mystica**	**3.86**	**4**	*i* Pn	**Pn**	**23 48 08.3**	**+0.8**
	comp=E,1.6nm,0.2s						
MYKA				*e*Sn	**Sn**	**23 48 53.1**	**-0.1**
	comp=E,8.8nm,0.3s						
A052A	**Srbac**	**3.88**	**52**	*e*Pn	**Pn**	**23 48 04.9**	**-2.8**
KOSI	**Kohlern**	**3.91**	**341**	⇑P	**Pn**	**23 48 09.6**	**+1.4**
HCY	**Herceg Novi**	**3.92**	**93**	*e*Pn	**Pn**	**23 48 08.2**	**0.0**
HCY	**Herceg Novi**	**3.92**	**93**	*e*Pn	**Pn**	**23 48 09.3**	**+1.1**
HCY				*i* Sn	**Sn**	**23 48 55.0**	**+0.6**
BRY	**Bratogost**	**3.92**	**86**	*e*Pn	**Pn**	**23 48 09.5**	**+1.0**
BRY	**Bratogost**	**3.92**	**86**	*e*Pn	**Pn**	**23 48 09.4**	**+1.0**
BRY				*i* Sn	**Sn**	**23 48 55.2**	**+0.5**
APPI	**Appiano**	**3.96**	**340**	⇓P	**Pn**	**23 48 10.6**	**+1.8**
ABTA	**Abfaltersbach**	**4.00**	**353**	*e*Pn	**Pn**	**23 48 10.2**	**+0.8**
	comp=E,26nm,0.6s,SNR=13						
SOKA	**Soboth**	**4.11**	**18**	*e*Pn	**Pn**	**23 48 11.7**	**+0.8**
	comp=E,3.1nm,0.5s						
SOKA				*e*Sn	**Sn**	**23 48 59.3**	**0.0**
	comp=E,6.2nm,0.4s						
UPM	**Unac-Piva**	**4.20**	**82**	*e*Pn	**Pn**	**23 48 14.5**	**+2.2**
UPM	**Unac-Piva**	**4.20**	**82**	*e*Pn	**Pn**	**23 48 13.2**	**+0.9**
UPM				*i* Sn	**Sn**	**23 49 01.9**	**+0.2**
CEME	**Cevo**	**4.22**	**91**	⇑*i*Pn	**Pn**	**23 48 13.5**	**+1.1**
CEME				*i* Sn	**Sn**	**23 49 02.5**	**+0.6**
BUM	**Brajici-Budva**	**4.23**	**95**	*e*Pn	**Pn**	**23 48 13.6**	**+1.0**
BUM				*i* Sn	**Sn**	**23 49 02.8**	**+0.6**
KBA	**Koelnbreinsper**	**4.30**	**1**	*e*Pn	**Pn**	**23 48 14.5**	**+0.8**
	comp=E,9.6nm,0.6s						
KBA	**Koelnbreinsper**	**4.30**	**1**	*e*Pn	**Pn**	**23 48 14.8**	**+1.2**
KBA				*e*Sn	**Sn**	**23 49 04.4**	**+0.3**
SBF	**Sospel**	**4.35**	**286**	*e*Pn	**Pn**	**23 48 13.3**	**-0.9**
SBF				*e*Sn	**Sn**	**23 49 01.2**	**-3.9**
	comp=E,21nm,0.6s						
VSL	**Villasalto**	**4.37**	**223**	⇓P	**Pn**	**23 48 16.1**	**+1.6**
HAPS	**Han Pijesak,BI**	**4.38**	**71**	*e*Pn	**Pn**	**23 48 16.4**	**+1.7**
DRME	**Dracevica, Mon**	**4.46**	**96**	*e*Pn	**Pn**	**23 48 16.2**	**+0.5**
DRME	**Dracevica, Mon**	**4.46**	**96**	⇓*i*Pn	**Pn**	**23 48 16.9**	**+1.2**
DRME				*i* Sn	**Sn**	**23 49 08.4**	**+0.6**
TTG	**Podgorica**	**4.48**	**92**	⇑*i*Pn	**Pn**	**23 48 17.1**	**+1.2**
TTG				*i* Sn	**Sn**	**23 49 08.8**	**+0.6**
ULC	**Ulcinj**	**4.55**	**98**	⇑*i*Pn	**Pn**	**23 48 18.1**	**+1.2**
ULC				*i* Sn	**Sn**	**23 49 10.6**	**+0.6**
RUDO	**Rudo**	**4.58**	**77**	*e*Pn	**Pn**	**23 48 18.0**	**+0.6**
FETA	**Feichten**	**4.59**	**338**	*e*Pn	**Pn**	**23 48 19.8**	**+2.2**
	comp=E,2.5nm,0.4s,SNR=9.9						
WTTA	**Wattenberg**	**4.62**	**347**	*e*Pn	**Pn**	**23 48 20.3**	**+2.3**
	comp=E,1.4nm,0.2s						
WTTA	**Wattenberg**	**4.62**	**347**	*e*Pn	**Pn**	**23 48 20.5**	**+2.4**
WTTA				*e*Sn	**Sn**	**23 49 14.0**	**+2.0**
KOME	**Kolasin**	**4.64**	**87**	⇑*i*Pn	**Pn**	**23 48 19.4**	**+1.1**
KOME				*i* Sn	**Sn**	**23 49 12.8**	**+0.4**
BBLS	**Lazići**	**4.65**	**74**	*e*Pn	**Pn**	**23 48 19.3**	**+0.9**
SQTA	**Sankt Quirin**	**4.66**	**343**	*e*Pn	**Pn**	**23 48 20.5**	**+2.0**
	comp=E,7.6nm,0.5s,SNR=11						
SQTA				*e*Sn	**Sn**	**23 49 16.6**	**+3.7**
	comp=E,10nm,0.3s						
WATA	**Walderalm**	**4.70**	**346**	*e*Pn	**Pn**	**23 48 21.0**	**+1.9**
	comp=E,2.1nm,0.2s						
WATA				*e*Sn	**Sn**	**23 49 16.5**	**+2.6**
	comp=E,10nm,0.3s						
ARSA	**Arzberg**	**4.76**	**19**	*e*Pn	**Pn**	**23 48 22.8**	**+2.9**
	comp=E,2.8nm,0.5s						
ARSA				*e*Sn	**Sn**	**23 49 13.0**	**-2.2**
	comp=E,3.3nm,0.3s						
MOTA	**Moosalm**	**4.80**	**343**	*e*Pn	**Pn**	**23 48 23.0**	**+2.5**
	comp=E,6.5nm,0.8s,SNR=7.7						
IVA	**Berane**	**4.92**	**87**	⇑*i*Pn	**Pn**	**23 48 23.3**	**+1.2**
IVA				*i* Sn	**Sn**	**23 49 19.5**	**+0.3**
BIOA	**Bad Ischl, Aus**	**4.92**	**3**	*i* Pn	**Pn**	**23 48 22.5**	**+0.4**
	comp=E,4.3nm,0.3s,SNR=8.2						
BIOA				*e*Sn	**Sn**	**23 49 19.5**	**+0.3**
	comp=E,10nm,0.4s						
LMR	**La Mourre**	**4.94**	**279**	*e*Pn	**Pn**	**23 48 20.7**	**-1.6**
LMR				*e*Sn	**Sn**	**23 49 14.8**	**-4.8**

comp=E,15nm,1.1s
RJOB Jochberg 4.97 357 *e*Pn **Pn 23 48 24.0 +1.3**
RJOB *e*Sn **Sn 23 49 22.0 +1.7**
PVY Plav 4.98 90⇑ *i*/Pn **Pn 23 48 24.1 +1.2**
PVY *i* Sn **Sn 23 49 21.1 +0.3**
RETA Reutte 5.01 341 *e*Pn **Pn 23 48 25.3 +1.9**
comp=E,3.3nm,0.3s,SNR=10.0
MBDF Montbardon 5.05 295 *e*Pn **Pn 23 48 23.5 -0.5**
MBDF *e*Sn **Sn 23 49 18.0 -4.6**
comp=E,13nm,0.8s
PLONS Plons/SG 5.06 329 *e*Pn **Pn 23 48 27.2 +3.2**
PLONS *e*Sn **Sn 23 49 25.6 +2.9**
OBER Oberstdorf 5.07 337 *e*Pn **Pn 23 48 27.4 +3.3**
OBER *e*Sn **Sn 23 49 25.6 +2.8**
DAVA Damuels 5.09 334 *e*Pn **Pn 23 48 26.8 +2.4**
comp=E,4.8nm,0.4s,SNR=6.1
DAVA Damuels 5.09 334 *e*Pn **Pn 23 48 27.4 +2.9**
DAVA *e*Sn **Sn 23 49 26.1 +2.7**
DIVS Divibare 5.11 73 *e*Pn **Pn 23 48 26.8 +2.1**
MOA Molln 5.12 8 *e*Pn **Pn 23 48 25.2 +0.4**
comp=E,1.2nm,0.2s
MOA *e*Sn **Sn 23 49 24.1 -0.1**
comp=E,5.3nm,0.4s
TIR Tirane 5.16 104⇓P **Pn 23 48 25.3 0.0**
FRGS Fruska Gora 5.33 61 *e*Pn **Pn 23 48 25.9 -1.7**
UBR Ueberruh 5.37 337 *e*Pn **Pn 23 48 29.8 +1.6**
UBR *e*Sn **Sn 23 49 33.1 +2.9**
LPG La Plagne 5.38 303 *e*Pn **Pn 23 48 27.1 -1.5**
LPG *e*Sn **Sn 23 49 25.5 -5.4**
comp=E,9.1nm,0.6s
LPL La Plagne 5.40 303 *e*Pn **Pn 23 48 27.5 -1.3**
LPL *e*Sn **Sn 23 49 26.2 -5.1**
comp=E,4.6nm,0.4s
CONA Conrad Observa 5.48 19 *i* Pn **Pn 23 48 29.9 +0.2**
comp=E,0.8nm,0.3s
CONA *e*Sn **Sn 23 49 31.5 -1.5**
comp=E,3.6nm,0.3s
SMRF Simiane la Rot 5.69 285 *e*Pn **Pn 23 48 31.5 -1.1**
ORIF Oris-en-Rattie 5.71 294 *e*P **Pn 23 48 35.7 +2.7**
ORIF *e*Sn **Sn 23 49 34.5 -4.3**
comp=E,5.2nm,0.6s
BALST Balsthal 6.00 321 *e*Pn **Pn 23 48 38.3 +1.4**
BALST *e*Sn **Sn 23 49 44.8 -1.0**
GEC2 GERESS Array S 6.08 3 *e*PN **Pn 23 48 38.0 0.0**
GEC2 *e*Sn **Sn 23 49 45.1 -2.6**
CKRC Cesky Krumlov 6.09 7 *e*PN **Pn 23 48 37.0 -1.1**
CKRC *e*SN **Sn 23 49 44.5 -3.5**
BERGE Lenzkirch (DE) 6.20 327 *e*Pn **Pn 23 48 40.5 +0.9**
BERGE *e*Sn **Sn 23 49 49.7 -1.1**
CABF La Chapelle 6.36 309 *e*Pn **Pn 23 48 40.9 -0.9**
CABF *e*Sn **Sn 23 49 48.9 -5.7**
comp=E,5.8nm,0.7s
KHC Kasperske Hory 6.36 2 *e*PN **Pn 23 48 40.6 -1.2**
KHC *e*SN **Sn 23 49 51.2 -3.4**
WET Wettzell 6.37 358 *e*Pn **Pn 23 48 41.7 -0.2**
WET *e*Sn **Sn 23 49 52.1 -2.8**
MDVR Moldovita 6.47 69⇓P **Pn 23 48 39.8 -3.6**
VIVF Saint-Julien-l 6.51 291 *e*P **Pn 23 48 47.5 +3.6**
BFO Black Forest 6.52 330 *e*Pn **Pn 23 48 46.1 +2.1**
BFO *e*Sn **Sn 23 49 58.0 -0.6**
BZS Buzias 6.68 62⇓P **Pn 23 48 46.0 -0.1**
HINF Hinteralfeld 6.74 321 *e*Pn **Pn 23 48 45.1 -1.9**
HINF *e*Sn **Sn 23 49 59.1 -4.9**
comp=E,7.4nm,0.3s
ECH Echery 6.90 324 *e*Pn **Pn 23 48 49.7 +0.5**
ECH *e*Sn **Sn 23 50 07.0 -0.9**
LASF Ste Croix 6.93 284 *e*Pn **Pn 23 48 48.0 -1.6**
BLKB Belogradchik 6.97 80⇓P **Pn 23 48 54.6 +4.4**
SIRR Siria 6.97 57⇓P **Pn 23 48 53.0 +2.7**
HERR Herculane 6.98 69⇑P Pn 23 48 44.8 -5.5
CDF Champ du Feu 7.00 326 *e*Pn **Pn 23 48 49.7 -0.9**
CDF *e*Sn **Sn 23 50 05.3 -5.2**
comp=E,6.2nm,0.5s
HAU Haudompre 7.11 320 *e*Pn **Pn 23 48 51.4 -0.7**
HAU *e*Sn **Sn 23 50 07.6 -5.6**
comp=E,13nm,0.5s
GZR Gura Zlata 7.37 66⇑P **Pn 23 48 58.7 +3.0**
VTS Vitosha 7.39 88⇓P **Pn 23 48 58.2 +2.2**
NKC Novy Kostel 7.47 356 *e*SN **Sn 23 50 19.5 -2.5**
SMF Signal de Mont 7.71 303 *e*Pn **Pn 23 48 59.1 -1.2**
SMF *e*Sn **Sn 23 50 20.0 -7.8**
comp=E,6.5nm,0.8s
PAGF Fort de Pagny 7.80 320 *e*Pn **Pn 23 48 59.6 -1.9**
baz=141
PAGF *e*Sn **Sn 23 50 23.7 -6.2**
comp=E,12nm,0.7s
SFTF Sexfontaines 7.89 316 *e*Pn **Pn 23 49 01.3 -1.5**
baz=134
LOR Lormes 8.00 307 *e*Pn **Pn 23 49 02.3 -2.0**
baz=119
LOR *e*Sn **Sn 23 50 29.0 -5.9**
comp=E,3.4nm,0.4s
MTLF Montolieu 8.07 278 *e*P **Pn 23 49 08.5 +3.3**
AVF Avril sur Loir 8.07 303 *e*Pn **Pn 23 49 05.3 0.0**
AVF *e*Sn **Sn 23 50 28.8 -7.9**
MEZF Maizieres J'vi 8.08 318 *e*Pn **Pn 23 49 03.1 -2.3**
MEZF *e*Sn **Sn 23 50 31.8 -5.2**
comp=E,1.9nm,0.4s
SSF Saint Saulge 8.11 305 *e*Pn **Pn 23 49 04.3 -1.4**
SSF *e*Sn **Sn 23 50 31.3 -6.2**
comp=E,2.2nm,0.6s
SAVF Savonnieres en 8.12 319 *e*Pn **Pn 23 49 04.1 -1.9**
SAVF *e*Sn Sn 23 50 28.6 -9.4
comp=E,3.2nm,0.4s
CAF Calviac 8.33 289 *e*Pn **Pn 23 49 06.8 -2.1**
CLL Collm 8.53 359 *e*Pn **Pn 23 49 11.0 -0.5**
CLL *ex* x 23 50 45.0
CLL *e*Sg **Sg 23 51 46.0 +4.6**
LFF La Frestale 9.26 288 *e*Pn **Pn 23 49 20.5 -1.1**

SKHL ***02*** *23:49:36.2±0.6, 44°.50N×153°.50E, h58km±3km, mb4.3/3*
IDC ***02*** *23:49:46.2±4.5, 47°.80N×152°.36E, h226km±44km, mb3.2/13, mbtmp3.8/14, MS3.3/1, Error ellipse: s-maj=30.7km s-min=14.8km az=159.0*
ISC 02 23:49:35.1±1.0, 47°.5N±0°.2×152°.4E±0°.1, h128km, n35, σ1°93/28, mb3.6/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.86**	**236**	*e*P	**Pn**	**23 50 36.8**	**+3.9**
KUR				AMB	AMB	23 50 39.1	
20nm,0.4s							
KUR				*e*S	**Sn**	**23 51 22.8**	**+5.1**
KUR				A	A	23 51 24.6	
80nm,0.5s							
KUR				A	A	23 51 24.6	
50nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.73**	**235**	*e*P	**Pn**	**23 50 55.6**	**-2.2**
YUK				AMB	AMB	23 50 56.3	
20nm,0.4s							
YUK				*e*S	**Sn**	**23 51 57.3**	**-5.1**
YUK				A	A	23 51 59.3	
60nm,0.5s							
YUK				A	A	23 51 59.3	
40nm,0.5s							
NMR	**Nemuro--Hokkai**	**6.24**	**231**	*e*P	Pn	23 50 59.8	-4.9
NMR				AMB	AMB	23 51 06.2	
10.0nm,0.3s							
NMR				*e*S	Sn	23 52 02.1	-13
NMR				A	A	23 52 14.4	
20nm,0.4s							
NMR				A	A	23 52 14.4	
20nm,0.4s							
PETK	**Petropavlovsk-**	**6.57**	**29**	P	**Pn**	**23 51 11.3**	**+2.1**
2.3nm,0.4s,baz=201,slow=7.7,SNR=5.8							
SEY	**Seymchan**	**15.48**	**360**	P	**P**	**23 53 09.1**	**+1.3**
5.2nm,0.8s,baz=136,slow=9.8,SNR=6.4							
KSRS	**Korea Array**	**20.57**	**250**	P	Pn	23 54 09.6	+2.5
0.7nm,0.5s,baz=42,slow=10,SNR=1.7							
0.7nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**30.11**	**152**	T	T	00 27 16.5	
baz=340,slow=75,SNR=35							
H11N1	**WAKE ISLAND Hy**	**30.12**	**152**	T	T	00 27 16.1	
baz=340,slow=75,SNR=20							
H11N3	**WAKE ISLAND Hy**	**30.12**	**152**	T	T	00 27 17.5	
baz=340,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**31.19**	**153**	T	T	00 28 36.8	
baz=341,slow=76,SNR=16							
H11S3	**WAKE ISLAND Hy**	**31.20**	**153**	T	T	00 28 46.2	
baz=341,slow=76,SNR=18							
H11S2	**WAKE ISLAND Hy**	**31.21**	**153**	T	T	00 28 38.9	
baz=341,slow=76,SNR=14							
GUMO	**Guam**	**34.38**	**193**	LR	LR	00 09 35.9	

comp=Z,47nm,21.4s,baz=114,slow=34
ILAR Eielson Array 36.28 39 P **P 23 56 25.6 -0.1**
0.6nm,0.5s,baz=262,slow=7.0,SNR=9.0
0.6nm,0.5s
INK Inuvik 41.29 33 P **P 23 57 07.8 +0.5**
1.6nm,0.5s,baz=173,slow=6.3,SNR=3.8
1.6nm,0.5s
ZALV Zalesovo Beam 41.78 305 P **P 23 57 10.1 -1.4**
0.5nm,0.5s,baz=63,slow=7.0,SNR=2.2
0.5nm,0.5s
MKAR Makanchi Array 46.16 296 P **P 23 57 45.7 -0.9**
0.6nm,0.8s,baz=64,slow=7.1,SNR=3.1
0.6nm,0.8s
CMAR Chiang Mai Arr 52.07 255 P **P 23 58 33.5 +1.6**
0.6nm,0.4s,baz=46,slow=6.4,SNR=1.9
0.6nm,0.4s
FINES FINESS Array B 63.16 334 P **P 23 59 47.5 -1.2**
1.3nm,0.6s,baz=29,slow=8.1,SNR=10
1.3nm,0.6s
PDAR Pinedale Array 64.71 54 P **P 23 59 58.0 -1.5**
0.3nm,0.7s,baz=339,slow=4.8,SNR=3.8
0.3nm,0.7s
NB2 NORSAR Subarra 67.36 341 P **P 00 00 15.8 -0.2**
comp=Z,0.4nm,0.6s,baz=28,slow=6.5
NOA NORSAR Array B 67.36 341 P **P 00 00 15.3 -0.7**
comp=Z,0.6nm,0.6s,baz=28,slow=6.4,SNR=3.7
comp=Z,0.6nm,0.6s
AKASG Malin Array Be 70.65 326 P **P 00 00 34.7 -1.7**
comp=Z,0.8nm,0.5s,baz=35,slow=6.3,SNR=5.4
comp=Z,0.8nm,0.5s
KHC Kasperske Hory 77.35 334 *e*P **P 00 01 15.5 +0.1**
BRTR Keskin Array B 77.51 316 P **P 00 01 16.7 +0.1**
comp=Z,0.7nm,0.9s,baz=68,slow=8.1,SNR=6.2
comp=Z,0.7nm,0.9s
TXAR Lajitas Array 77.56 60 P **P 00 01 16.5 -0.5**
comp=Z,0.4nm,0.7s,baz=308,slow=4.1,SNR=6.2
comp=Z,0.4nm,0.7s
GERES GERESS Array B 77.57 333 P **P 00 01 16.0 -0.7**
comp=Z,0.5nm,0.5s,baz=36,slow=5.3,SNR=7.7
comp=Z,0.5nm,0.5s
CONA Conrad Observa 77.71 332 *e*P **P 00 01 17.9 +0.4**
comp=Z,0.9nm,0.4s
SOKA Soboth 79.08 332 *e*P **P 00 01 25.0 0.0**
comp=Z,1.4nm,0.7s
OBKA Obir 79.38 332 *e*P **P 00 01 26.7 0.0**
comp=Z,0.4nm,0.3s
WATA Walderalm 79.56 334 *e*P **P 00 01 28.0 +0.2**
comp=Z,0.6nm,0.2s
WTTA Wattenberg 79.61 334 *e*P **P 00 01 28.5 +0.5**
comp=Z,1.5nm,0.3s
RETA Reutte 79.66 335 *e*P **P 00 01 28.6 +0.5**
comp=Z,0.2nm,0.2s
MOTA Moosalm 79.69 334 *e*P **P 00 01 28.6 +0.2**
comp=Z,0.7nm,0.4s
FETA Feichten 80.09 334 *e*P **P 00 01 31.2 +0.6**
comp=Z,0.7nm,0.7s

NOU 02 23:50:43.7, 15°.90S×167°.43E, h0km, MLv4.0/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.96**	**158**	P	Pn	23 51 18.5	+0.4
RTV	**Rentapao**	**2.11**	**153**	P	Pn	23 51 19.9	-0.4
LIFNC	**LIFOU**	**4.85**	**182**	P	Pn	23 51 55.9	-2.1
YATNC	**Mamie plateau,**	**6.15**	**185**	P	Pn	23 52 15.0	-0.8
DZM	**Mont Dzumac**	**6.21**	**188**	P	Pn	23 52 17.2	+0.4
ONTNC	**Ouen Toro**	**6.44**	**188**	P	Pn	23 52 20.8	+1.0
OUENC	**Ouen Island, N**	**6.51**	**185**	P	Pn	23 52 21.2	+0.4

IDC ***02*** *23:54:32.0±0.6, 34°.61N×141°.64E, h0km, mb3.9/15, mbtmp3.9/18, ML3.6/3, MS3.7/30, Error ellipse: s-maj=17.5km s-min=14.9km az=111.0*
JMA ***02*** *23:54:32.1±0.4, 35°.N±1°×14°.2E±°, h19km±2km, MV3.8/36, FAR SE OFF BOSO PEN*
NIED ***02*** *23:54:32.1, 34°.62N×141°.89E, h19km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.32; Mθθ2.45; Mφφ-2.77; Mrθ2.27; Mrφ-2.97; Mθφ1.31; Fault plane solution: M0 4.72000×10^15 NP1: φs158.00000°, δ57.00000°, λ0.00000°. NP2: φs68.00000°, δ90.00000°, λ147.00000°.*
MOS ***02*** *23:54:33.6±1.5, 34°.70N×142°.02E, h33km, mb4.6/28 Error ellipse: s-maj=12.2km s-min=6.5km az=118.9*
NEIC ***02*** *23:54:34.5±1.4, 34°.72N±0°.05×142°.10E±0°.09, h30km±4km, mb4.6/25, Error ellipse: s-maj=11.2km s-min=7.5km az=97.0*
ISC 02 23:54:33.4±0.4, 34°.62N±0°.04×141°.98E±0°.05, h21km, n141, σ1°73/124, mb4.4/45, MS3.8/29, 15C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.83**	**272**	P	**Pb**	**23 54 46.2**	**-2.5**
BSO1				X		23 54 55.7	
BSO3	**Boso 3**	**1.23**	**279**	P	**Pn**	**23 54 53.8**	**-1.3**
BSO4	**Boso 4**	**1.40**	**286**	P	**Pn**	**23 54 56.5**	**-1.2**
CHOJ	**Chosi**	**1.42**	**320**	P	**Pn**	**23 54 56.5**	**-1.4**
CHOJ				S	**Sn**	**23 55 13.6**	**-2.3**
JKUC	**kamogawauchiur**	**1.56**	**291**	P	**Pn**	**23 54 58.3**	**-1.6**
JKUC				*e*S	**Sn**	**23 55 17.4**	**-2.1**
JMYK	**Miyake Tsubota**	**2.09**	**255**	P	**Pn**	**23 55 06.5**	**-0.7**
JIM2	**Oshima 3**	**2.10**	**273**	P	**Pn**	**23 55 05.5**	**-2.0**
JMKN	**Mikurajimanish**	**2.11**	**250**	P	**Pn**	**23 55 06.0**	**-1.5**
JMKN				S	**Sn**	**23 55 30.0**	**-3.1**
JYT	**Yasato**	**2.17**	**318**	Pn	**Pn**	**23 55 06.9**	**-1.4**
JYT	**Yasato**	**2.17**	**318**	P	**Pn**	**23 55 07.4**	**-0.8**
JHJ2	**Mitsune**	**2.35**	**231**		**Pn**	**23 55 10.9**	**+0.1**
JHJ	**Hachijo jima 2**	**2.37**	**231**	Pn	**Pn**	**23 55 10.4**	**-0.5**
40nm,0.3s,baz=109,slow=23,SNR=26							
JHJ				Sn	**Sn**	**23 55 37.3**	**-2.1**
176nm,0.3s,baz=45,slow=22,SNR=12							
122nm,0.2s							
JMM	**Marumori**	**3.38**	**344**	Pn	**Pn**	**23 55 24.4**	**-0.5**
MJAR	**Matsushiro Arr**	**3.62**	**303**	Pn	**Pn**	**23 55 26.7**	**-1.6**
1.2nm,0.3s,baz=92,slow=14,SNR=45							
MJAR				Sn	**Sn**	**23 56 07.3**	**-3.1**
0.9nm,0.3s,baz=142,slow=15,SNR=6.8							
5.2nm,0.3s							
MAJO	**Matsushiro**	**3.62**	**303**	Pn	**Pn**	**23 55 28.6**	**+0.3**
MAJO	**Matsushiro**	**3.62**	**303**	P	**Pn**	**23 55 28.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**3.63**	**303**		**Pn**	**23 55 29.6**	**+1.3**
JGF	**Kuroka**	**3.91**	**286**	Pn	**Pn**	**23 55 32.6**	**+0.2**
INU	**Inuyama**	**4.14**	**281**	Pn	**Pn**	**23 55 36.1**	**+0.7**
JSD	**Sado**	**4.54**	**320**	Pn	**Pn**	**23 55 40.2**	**-0.7**
JTM	**Tenmabayashi**	**6.19**	**354**	Pn	**Pn**	**23 56 03.0**	**-0.6**
JMN	**Monobe**	**6.78**	**265**	Pn	**Pn**	**23 56 13.9**	**+2.3**
JHS	**Saijyo**	**7.30**	**275**	Pn	**Pn**	**23 56 20.4**	**+1.6**
ERM	**Erimo**	**7.44**	**7**	Pn	**Pn**	**23 56 18.6**	**-2.1**
ERM					**Sn**	**23 57 39.6**	**-4.7**
ERM	**Erimo**	**7.44**	**7**	P	**Pn**	**23 56 18.6**	**-2.1**
ERM						23 57 39.7	
JCJ	**Chichijima**	**7.51**	**179**	Pn	**Pn**	**23 56 22.7**	**+1.0**
6.5nm,0.3s,baz=288,slow=22,SNR=1.3							
JCJ				Sn	**Sn**	**23 57 39.4**	**-6.8**
3.4nm,0.3s,baz=294,slow=22,SNR=2.3							
46nm,0.7s							
JCJ	**Chichijima**	**7.51**	**179**	Pn	**Pn**	**23 56 22.6**	**+0.9**
KSRS	**Korea Array**	**11.73**	**288**	Pn	**Pn**	**23 57 21.1**	**+1.7**
0.2nm,0.3s,baz=98,slow=14,SNR=4.9							
KSRS				LR	LR	00 02 24.1	
comp=Z,554nm,18.2s,baz=95,slow=41							
USRK	**Ussuriysk Ar.**	**12.28**	**324**	LR	LR	00 01 51.0	
comp=Z,200nm,18.7s,baz=132,slow=36							
YSS	**Yuzh-Sakhalins**	**12.33**	**2**	*e*P	**Pn**	**23 57 26.3**	**-1.3**
YSS				pmax	pmax		
comp=Z,30nm,0.7s							
YSS				MLR	MLR		
comp=Z,600nm,17.0s							
KLR	**Kul'dur**	**16.44**	**336**	LR	LR	00 04 33.0	
comp=Z,134nm,19.4s,baz=150,slow=37							
KLR	**Kul'dur**	**16.44**	**336**	‖ *e*P	**Pn**	**23 58 20.9**	**-1.7**
PETK	**Petropavlovsk-**	**21.59**	**26**	LR	LR	00 10 27.2	
comp=Z,58nm,18.1s,baz=201,slow=44							
ZEA	**Zeya**	**21.75**	**336**	*e*P	**P**	**23 59 24.0**	**+0.6**
ZEA				pmax	pmax		
comp=Z,20nm,1.0s							
ZEA				MLR	MLR		
comp=N,200nm,13.0s							
ZEA				MLR	MLR		
comp=Z,100nm,14.0s							
PET	**Petropavlovsk**	**21.88**	**28**⇑	*e*P	**P**	**23 59 22.6**	**-2.1**
PET				pmax	pmax		
comp=Z,20nm,1.0s							
HIA Hailar 21.97 318⇑ *e*P **P 23 59 26.9 +1.1**							
HIA				pmax	pmax		
comp=Z,5.0nm,1.0s							
XLT XiLinHaoTe 22.02 303 *e*P **P 23 59 26.0 -0.4**							
XLT XiLinHaoTe 22.02 303 pP pP 23 59 35.2 +4.9							
XLT XiLinHaoTe 22.02 303 sP sP 23 59 39.9 +6.9							
MA2 Magadan 25.62 10 LR LR 00 12 20.3							
comp=Z,72nm,18.3s,baz=116,slow=42							
MA2 Magadan 25.62 10‖ *e*P **P 00 00 00.7 -0.4**							
MA2				pmax	pmax		
comp=Z,18nm,1.3s							
XAN Xi'an 27.24 278 *e*P **P 00 00 15.2 -0.9**							
XAN				pP	sP	00 00 24.9	+2.6
HKPS Hong Kong Po S 27.30 251 P **P 00 00 18.3 +1.7**							
YAK Yakutsk 28.52 348 LR LR 00 12 56.3							
comp=Z,309nm,18.1s,baz=256,slow=39							
SHEM Shemya Is, Ala 29.10 42 LR LR 00 11 31.8							
comp=Z,57nm,19.5s,baz=231,slow=35							
ULN Ulaanbaatar 29.14 308 P **P 00 00 32.2 -0.8**							
ULN Ulaanbaatar 29.14 308‖ *e*P **P 00 00 33.5 +0.5**							
ULN				pmax	pmax		
comp=Z,8.0nm,1.7s							
SONM Songino Array 29.56 307 P **P 00 00 37.1 +0.4**							
comp=Z,2.6nm,1.0s,baz=115,slow=10.0,SNR=12							
SONM				LR	LR	00 12 01.8	
comp=Z,76nm,19.2s,baz=102,slow=36							
comp=Z,2.6nm,1.0s							
SONM Songino Array 29.56 307 P **P 00 00 36.2 -0.5**							
SONM Songino Array 29.56 307 P **P 00 00 36.2 -0.5**							
SONM				pmax	pmax		
comp=Z,6.0nm,1.3s							
BOD Bodaibo 29.82 330 *e*P P 00 00 43.3 +4.5							
BOD				pmax	pmax		
comp=Z,11nm,1.7s							
LZH Lanzhou 31.01 284⇓P P 00 00 40.1 -10							
LZH				sP	pP	00 00 52.4	-1.4
LZH				S	**S**	**00 05 52.1**	**-1.5**
DAV Davao City (W) 31.31 213 LR LR 00 13 30.9							
comp=Z,58nm,20.2s,baz=36,slow=37							
KIWB Kanaga Island 33.85 47 P **P 00 01 12.1 -2.1**							
PZH PanZhiHua 35.40 268 P **P 00 01 29.0 +1.0**							
PZH				S	**S**	**00 07 01.0**	**-0.7**
KNGR Kungurtug, Tuv 35.81 310⇓ *i*P **P 00 01 32.1 +0.8**							
KNGR				pmax	pmax		
comp=Z,11nm,1.2s							
BILL Bilibino 36.22 15⇑ *e*P **P 00 01 36.0 +1.6**							
BILL				pmax	pmax		
comp=Z,9.0nm,1.2s							
KKM Kota Kinabalu 37.08 226 P **P 00 01 41.6 -0.8**							
CMAR Chiang Mai Arr 41.40 258 P **P 00 02 16.7 -1.7**							
comp=Z,1.0nm,0.4s,baz=48,slow=7.7,SNR=7.1							
CMAR				LR	LR	00 21 44.8	
comp=Z,43nm,19.8s,baz=235,slow=40							
comp=Z,1.0nm,0.4s							
CMAR Chiang Mai Arr 41.40 258 P **P 00 02 18.0 -0.3**							
CMAR Chiang Mai Arr 41.40 258 *i* P **P 00 02 18.1 -0.3**							
CMAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
DGZ Jazzator, Alta 42.21 308⇑ *e*P **P 00 02 25.6 +0.7**							
DGZ				pmax	pmax		
comp=Z,6.0nm,1.0s							
WMQ Urumqi 42.38 299⇑ *i*P **P 00 02 28.0 +1.8**							
WMQ				pP	sP	00 02 35.5	+2.6
WMQ				PcP	**PcP**	**00 04 23.7**	**+4.4**
ZALV Zalesovo Beam 43.90 314 P **P 00 02 37.5 -0.7**							
comp=Z,0.5nm,0.3s,baz=91,slow=7.4,SNR=4.6							
ZALV				LR	LR	00 22 30.4	
comp=Z,57nm,18.2s,baz=73,slow=38							
comp=Z,0.5nm,0.3s							
ZALV Zalesovo Beam 43.90 314 P **P 00 02 38.1 -0.2**							
NRIK Noril'sk 45.65 336 P **P 00 02 48.0 -4.0**							
NRIK				IAmb	IAmb	00 03 08.3	
comp=Z,6.8nm,1.2s							
NRIK Noril'sk 45.65 336⇑ *e*P **P 00 02 53.6 +1.6**							
NRIK				pmax	pmax		
comp=Z,11nm,1.5s							
MK31 Makanchi Array 45.82 304 P **P 00 02 53.2 -0.5**							
MK31 Makanchi Array 45.82 304 P **P 00 02 53.2 -0.5**							
MK31				pmax	pmax		
comp=Z,3.0nm,1.1s							
MKAR Makanchi Array 45.82 304 P **P 00 02 54.0 +0.3**							
comp=Z,1.5nm,0.8s,baz=88,slow=8.8,SNR=10							
MKAR				LR	LR	00 20 54.7	
comp=Z,68nm,20.3s,baz=116,slow=35							
comp=Z,1.5nm,0.8s							
MKAR Makanchi Array 45.82 304 *i* P **P 00 02 57.7 +4.0**							
MKAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
HNR Honiara 47.01 155 LR LR 00 22 43.2							
comp=Z,570nm,19.4s,baz=18,slow=36							
KURK Kurchatov 47.80 310 P **P 00 03 09.0 -0.1**							
KURK				IAmb	IAmb	00 03 14.4	
comp=Z,8.1nm,0.9s							
KURK Kurchatov 47.80 310 *ce*P **P 00 03 09.8 +0.7**							
KURK				pmax	pmax		
comp=Z,9.0nm,1.0s							
KURBB Kurchatov Arra 47.87 310 LR LR 00 24 32.4							
comp=Z,104nm,18.2s,baz=84,slow=38							
IPM Ipoh 48.33 241 P **P 00 03 14.3 +0.6**							
IL31 51.29 31 P **P 00 03 34.5 -1.0**							
IL31				IAmb	IAmb	00 03 43.8	
comp=Z,7.0nm,1.2s							
ILAR Eielson Array 51.29 31 P **P 00 03 38.2 +2.6**							
comp=Z,1.4nm,0.8s,baz=260,slow=5.9,SNR=9.5							
comp=Z,1.4nm,0.8s							
ILAR Eielson Array 51.29 31 P **P 00 03 35.0 -0.6**							
KSH Kashi 51.84 296 P P 00 03 44.5 +4.3							
AAK Ala-Archa 52.07 300 LR LR 00 28 07.2							
comp=Z,109nm,18.4s,baz=76,slow=39							
AAK Ala-Archa 52.07 300‖ *e*P **P 00 03 43.5 +1.6**							
AAK				pmax	pmax		
comp=Z,7.0nm,1.6s							
BVAR Borovoye Array 52.55 314 LR LR 00 27 41.9							
comp=Z,64nm,19.5s,baz=65,slow=38							
BRVK Borovoye 52.61 314‖ *e*P **P 00 03 48.7 +3.2**							
BRVK				pmax	pmax		
comp=Z,3.0nm,1.1s							
WB0 Warramunga Arr 54.57 189 P **P 00 04 00.3 +0.1**							
WB0				IAmb	IAmb	00 04 03.7	
comp=Z,6.3nm,0.9s							
WRAB Tennant Creek 54.74 189 P **P 00 04 00.9 -0.5**							
WRAB Tennant Creek 54.74 189‖ *e*P **P 00 04 02.4 +1.0**							
WRAB				pmax	pmax		
comp=Z,23nm,2.5s							
WR0 Warramunga Arr 54.74 189 P **P 00 04 01.2 -0.2**							
WR0				IAmb	IAmb	00 04 04.4	
comp=Z,7.9nm,1.1s							
WB2 Warramunga Arr 54.75 189 P **P 00 04 02.1 +0.7**							
WB2				IAmb	IAmb	00 04 05.3	
comp=Z,6.5nm,0.9s							
WRA Warramunga Arr 54.75 189 P **P 00 04 02.7 +1.2**							
comp=Z,3.2nm,0.7s,baz=6.5,slow=7.6,SNR=22							
comp=Z,3.2nm,0.7s							
WRA Warramunga Arr 54.75 189 P **P 00 04 01.9 +0.4**							
KK31 Karatay Array 54.76 302 P **P 00 04 01.6 +0.1**							
KK31				IAmb	IAmb	00 04 03.0	
comp=Z,8.6nm,1.2s							
KK31 Karatay Array 54.76 302 P **P 00 04 01.6 +0.1**							
KK31				pmax	pmax		
comp=Z,9.0nm,1.2s							
KKAR Karatay Array 54.76 302 P **P 00 04 01.0 -0.4**							
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ARU Arti 58.48 320 LR LR 00 29 39.3
comp=Z,30nm,18.4s,baz=124,slow=36
ARU Arti 58.48 320 *d i* P **P 00 04 25.2 -2.5**
ARU S **S 00 12 28.5 -1.2**
ARU SS **SS 00 16 18.8 -2.8**
ARU pmax pmax
comp=Z,6.0nm,1.5s
KBL Kabul 58.74 293 P **P 00 04 29.5 -0.6**
KBL Kabul 58.74 293 P **P 00 04 29.5 -0.6**
KBL pmax pmax
comp=Z,2.0nm,0.8s
AKTO Aktyubinsk 60.64 313 LR LR 00 33 19.6
comp=Z,65nm,18.4s,baz=78,slow=38
KIRV Kirov 62.45 324‖ *eP* **P 00 04 55.7 +1.0**
AFI Afiamalu 65.25 129 P **P 00 05 11.9 -1.9**
AFI Afiamalu 65.25 129 P **P 00 05 11.9 -1.9**
AFI pmax pmax
comp=Z,95nm,1.5s
BELG Belogornoye 65.89 318 LR LR 00 36 57.9
comp=Z,161nm,18.1s,baz=151,slow=39
ARCES ARCESS Array B 66.41 340 LR LR 00 38 34.5
comp=Z,53nm,19.0s,baz=64,slow=40
OBN Obninsk 70.31 324 LR LR 00 40 25.5
comp=Z,22nm,19.5s,baz=182,slow=39
VSU Vasula 72.77 330⇑ *eP* **P 00 06 00.9 +1.1**
VSU pmax pmax
comp=Z,53nm,2.0s
KBZ Khabaz 72.83 311⇑ *eP* **P 00 06 02.5 +2.0**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
KIV Kislovodsk 72.84 312 *eP* **P 00 06 02.8 +2.1**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,82nm,18.0s
GNI Garni 73.53 308 LR LR 00 40 43.5
comp=Z,38nm,18.1s,baz=59,slow=38
GNI Garni 73.53 308⇑ *eP* **P 00 06 05.5 +0.6**
GNI pmax pmax
comp=Z,5.0nm,1.2s
NVAR Mina Array Bea 76.07 53 P P 00 06 24.0 +4.3
comp=Z,0.3nm,0.3s,baz=317,slow=3.8,SNR=2.2
NVAR LR LR 00 36 04.7
comp=Z,33nm,20.1s,baz=265,slow=33
comp=Z,0.3nm,0.3s
HFS Hagfors 76.47 336 LR LR 00 44 01.6
comp=Z,80nm,18.4s,baz=63,slow=39
AKASG Malin Array Be 76.49 323 P **P 00 06 22.1 +0.6**
comp=Z,0.2nm,0.3s,baz=47,slow=5.7,SNR=2.5
AKASG LR LR 00 43 18.1
comp=Z,74nm,18.9s,baz=41,slow=38
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 76.49 323 *i* P P 00 06 26.1 +4.5
NB2 NORSAR Subarra 76.58 338 P **P 00 06 22.0 0.0**
comp=Z,8.3nm,1.4s,baz=39,slow=5.9
NOA NORSAR Array B 76.58 338 P **P 00 06 21.7 -0.3**
comp=Z,2.0nm,1.0s,baz=61,slow=1.0,SNR=3.3
NOA LR LR 00 44 05.2
comp=Z,105nm,18.0s,baz=40,slow=39
comp=Z,2.0nm,1.0s
PDAR Pinedale Array 79.03 45 P **P 00 06 39.0 +2.8**
comp=Z,0.6nm,0.8s,baz=338,slow=1.6,SNR=4.6
comp=Z,0.6nm,0.8s
PDAR Pinedale Array 79.03 45 P **P 00 06 34.8 -1.4**
BR131 Keskin Array S 80.80 312 P **P 00 06 46.0 +0.3**
BR131 Keskin Array S 80.80 312 P **P 00 06 46.1 +0.3**
BR131 pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 80.80 312 P **P 00 06 46.7 +1.0**
comp=Z,0.8nm,0.9s,baz=90,slow=1.2,SNR=5.9
comp=Z,0.8nm,0.9s
BRTR Keskin Array B 80.80 312 P **P 00 06 46.2 +0.5**
BRTR Keskin Array B 80.80 312 *i* P **P 00 06 49.2 +3.5**
BRTR pmax pmax
comp=Z,1.0nm,1.0s
MLR Muntele Rosu 81.52 320 LR LR 00 47 35.4
comp=Z,128nm,18.1s,baz=32,slow=39
FOZ Fox Glacier 81.83 160 P **P 00 06 51.2 +0.7**
RAYN Ar Rayn 82.01 293 P **P 00 06 52.0 -0.3**
RAYN IAmb IAmb 00 06 57.0
comp=Z,3.8nm,1.1s
RAYN Ar Rayn 82.01 293 P **P 00 06 52.0 -0.3**
RAYN pmax pmax
comp=Z,4.0nm,1.2s
VRAC Vranov 83.39 328 LR LR 00 48 08.5
comp=Z,72nm,19.0s,baz=22,slow=39
GERES GERESS Array B 85.00 329 P **P 00 07 10.5 +3.2**
comp=Z,0.3nm,0.8s,baz=19,slow=5.7,SNR=3.6
comp=Z,0.3nm,0.8s
EIL Elat 86.08 303 LR LR 00 50 36.8
comp=Z,57nm,18.3s,baz=120,slow=39
TXAR Lajitas Array 91.22 53 P **P 00 07 40.9 +3.5**
comp=Z,0.4nm,0.8s,baz=288,slow=1.2,SNR=5.7
comp=Z,0.4nm,0.8s
ESDC Sonseca Array 99.65 334 LR LR 00 59 10.7
comp=Z,44nm,18.6s,baz=8.5,slow=39
LPAZ La Paz 147.43 64 PKPbc **PKiKP 00 14 19.7 +0.5**
comp=Z,0.7nm,0.7s,baz=25,slow=8.1,SNR=3.9

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*IDC **03** 00:45:31.9±0.7, 18°.33S×172°.91E, h0km, mb4.1/7, mbtmp4.0/9, ML4.9/1, MS3.4/24, Error ellipse: s-maj=32.5km s-min=19.0km az=160.0*
*NEIC **03** 00:45:37.8±2.7, 17°.95±0°.2×173°.0E±0°.1, h36km±7km, mb4.2/5, Error ellipse: s-maj=25.8km s-min=11.5km az=160.0*
ISC 03 00:45:37.4±0.5, **18°.1S**±0°.1×**172°.98E**±0°.08, **h35**km, **n60**, σ1§**34**/43, **mb4.2**/9, **MS3.5**/22, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.84**	**87**	Pn	**Pn**	**00 46 48.1**	**+0.2**
	1.8nm,0.3s,baz=251,slow=12,SNR=13						
MSVF				LR	LR	00 48 13.3	
	comp=Z,115nm,22.0s,baz=287,slow=33						
	22nm,0.9s						
MSVF	**Nonsavu**	**4.84**	**87**		**Pn**	**00 46 48.8**	**+0.9**
MSVF				Sn	**Sn**	**00 47 39.8**	**-3.0**
PINNC	**Pines Island,**	**6.87**	**228**	Pn	**Pn**	**00 47 16.9**	**+1.4**
OUENC	**Ouen Island, N**	**7.19**	**232**	Pn	**Pn**	**00 47 21.4**	**+1.4**
DZM	**Mont Dzumac**	**7.31**	**236**	*eP*	Pn	00 47 42.3	+21
DZM				*e*LR	LR	00 49 45.7	
	comp=Z,109nm,19.7s						
DZM	**Mont Dzumac**	**7.31**	**236**	Pn	**Pn**	**00 47 18.5**	**-3.2**
	1.9nm,0.7s,baz=36,slow=18,SNR=1.4						
DZM				LR	LR	00 49 20.2	
	comp=Z,72nm,19.7s,baz=39,slow=32						
DZM	**Mont Dzumac**	**7.31**	**236**		**Pn**	**00 47 22.9**	**+1.2**
AFI	**Afiamalu**	**15.23**	**76**	LR	LR	00 53 12.7	
	comp=Z,29nm,19.8s,baz=9.0,slow=30						
URZ	**Urewera**	**20.42**	**171**	LR	LR	00 56 33.4	
	comp=Z,71nm,18.7s,baz=86,slow=33						
THZ	**Tophouse**	**23.60**	**180**	P	**P**	**00 50 48.8**	**+3.7**
THZ				IAmb	IAmb	00 50 50.2	
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**25.32**	**261**	P	**P**	**00 51 00.9**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=59,slow=15,SNR=3.8						
CTA				LR	LR	00 58 29.7	
	comp=Z,61nm,19.7s,baz=79,slow=31						
	comp=Z,2.1nm,0.6s						
RPZ	**Rata Peaks**	**25.60**	**183**	LR	LR	00 59 48.9	
	comp=Z,144nm,18.6s,baz=20,slow=34						
STKA	**Stephens Creek**	**31.45**	**238**	LR	LR	01 03 24.0	
	comp=Z,86nm,19.4s,baz=22,slow=34						
PPT2	**Papeete2**	**35.61**	**95**	*e*LR	LR	01 00 51.4	
	comp=Z,39nm,27.5s						
WB0	**Warramunga Arr**	**36.48**	**261**	P	**P**	**00 52 38.6**	**-0.9**
WB2	**Warramunga Arr**	**36.51**	**261**	P	**P**	**00 52 38.0**	**-1.7**
WB2				IAmb	IAmb	00 52 49.1	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**36.52**	**261**	P	**P**	**00 52 37.8**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=95,slow=9.0,SNR=14						
WRA				PcP	**PcP**	**00 55 02.4**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=95,slow=3.8,SNR=3.1						
WRA				LR	LR	01 05 34.7	
	comp=Z,96nm,18.1s,baz=159,slow=33						
	comp=Z,1.1nm,0.8s						
WRA	**Warramunga Arr**	**36.52**	**261**	P	**P**	**00 52 38.4**	**-1.5**
ASAR	**Alice Springs**	**36.84**	**255**	P	**P**	**00 52 41.2**	**-1.4**
	comp=Z,2.6nm,0.7s,baz=83,slow=9.0,SNR=22						
ASAR				PcP	**PcP**	**00 55 03.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=91,slow=3.0,SNR=8.0						
	comp=Z,2.6nm,0.7s						
VNDA	**Vanda**	**59.72**	**183**	LR	LR	01 19 04.5	
	comp=Z,51nm,18.1s,baz=344,slow=34						
SHEM	**Shemya Is, Ala**	**70.53**	**1**	LR	LR	01 20 07.9	
	comp=Z,21nm,21.9s,baz=304,slow=29						
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**00 56 56.1**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=31,slow=1.3,SNR=9.2						
	comp=Z,1.9nm,0.7s						
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**00 56 56.5**	**-0.7**
QSPA				IAmb	IAmb	00 56 57.6	
	comp=Z,3.2nm,0.9s						
PETK	**Petropavlovsk-**	**72.12**	**350**	LR	LR	01 23 15.3	
	comp=Z,27nm,19.6s,baz=128,slow=31						
KLR	**Kul'dur**	**76.35**	**334**	LR	LR	01 32 33.6	
	comp=Z,30nm,18.0s,baz=168,slow=37						
MA2	**Magadan**	**79.48**	**349**	LR	LR	01 36 00.3	
	comp=Z,14nm,18.2s,slow=38						
KDAK	**Kodiak Island**	**80.81**	**18**	LR	LR	01 27 37.2	
	comp=Z,31nm,21.4s,baz=216,slow=31						
L19K	**White Mountain**	**83.96**	**15**	P	**P**	**00 58 04.3**	**+0.8**
YBH	**Yreka Blue Hor**	**84.03**	**43**	P	**P**	**00 58 06.1**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=153,slow=2.3,SNR=2.4						
YBH				LR	LR	01 35 10.9	
	comp=Z,16nm,18.2s,baz=272,slow=35						
	comp=Z,1.1nm,0.6s						
PFO	**Pinyon Flats O**	**84.60**	**52**	LR	LR	01 28 07.6	
	comp=Z,21nm,19.0s,baz=249,slow=30						
LPIG	**La Paz**	**85.73**	**63**	LR	LR	01 27 32.4	
	comp=Z,26nm,19.7s,baz=264,slow=29						
YAK	**Yakutsk**	**86.89**	**341**	LR	LR	01 31 22.2	
	comp=Z,21nm,21.5s,baz=91,slow=32						
ELK	**Elko**	**88.55**	**46**	LR	LR	01 38 13.7	
	comp=Z,28nm,18.2s,baz=251,slow=36						
TROLL	**Troll, Antarti**	**89.89**	**183**	P	**P**	**00 58 31.6**	**-1.0**
SNAA	**Sanae**	**90.42**	**181**	P	**P**	**00 58 33.6**	**-1.4**
SNAA	**Sanae**	**90.42**	**181**	P	**P**	**00 58 33.1**	**-1.8**
	comp=Z,1.3nm,0.8s,baz=197,slow=7.5,SNR=10						
	comp=Z,1.3nm,0.8s						
NEW	**Newport**	**90.64**	**39**	LR	LR	01 29 36.2	
	comp=Z,26nm,20.3s,baz=290,slow=29						
VNA3	**Neumayer Olymp**	**90.88**	**179**	P	**P**	**00 58 35.5**	**-1.5**
VNA2	**Neumayer--Watz**	**91.22**	**180**	P	**P**	**00 58 37.4**	**-1.1**
	baz=180,slow=5.0						
VNA1	**Neumayer--Stat**	**91.49**	**180**	P	**P**	**00 58 38.7**	**-1.1**
ANMO	**Albuquerque**	**92.75**	**54**	LR	LR	01 30 54.5	
	comp=Z,17nm,21.5s,baz=214,slow=29						
TXAR	**Lajitas Array**	**93.11**	**60**	P	**P**	**00 58 49.1**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=222,slow=5.7,SNR=14						
TXAR				LR	LR	01 33 36.2	
	comp=Z,28nm,18.0s,baz=272,slow=31						
	comp=Z,1.1nm,0.8s						
CMIG	**Matias Romero**	**97.13**	**74**	LR	LR	01 35 49.0	
	comp=Z,16nm,18.4s,baz=50,slow=31						
YKA	**Yellowknife Ar**	**98.04**	**27**	LR	LR	01 36 32.7	
	comp=Z,34nm,20.3s,baz=302,slow=31						
ARCES	**ARCESS Array B**	**124.82**	**347**	PKP	**PKPdf**	**01 04 32.7**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=0.0,slow=6.1,SNR=5.5						
RONA	**Rosalia, Austr**	**144.84**	**332**	*eP*	**PKPdf**	**01 05 10.9**	**+0.2**
	comp=Z,5.3nm,1.0s						
CONA	**Conrad Observa**	**144.86**	**333**	*eP*	**PKPdf**	**01 05 11.1**	**+0.3**
	comp=Z,3.2nm,0.9s						
GERES	**GERESS Array B**	**145.02**	**336**	PKPbc	**PKPdf**	**01 05 11.0**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=45,slow=4.0,SNR=17						
ARSA	**Arzberg**	**145.53**	**333**	*eP*	**PKPdf**	**01 05 12.0**	**+0.1**
	comp=Z,4.4nm,1.1s						
MOA	**Molln**	**145.59**	**334**	*eP*	**PKPab**	**01 05 13.0**	**+0.5**
	comp=Z,9.0nm,0.9s						
SOKA	**Soboth**	**146.18**	**332**	*eP*	**PKPbc**	**01 05 14.5**	**+0.4**
	comp=Z,6.7nm,1.4s						
WATA	**Walderalm**	**147.08**	**336**	*eP*	**PKPbc**	**01 05 16.9**	**+0.1**
	comp=Z,3.0nm,0.9s						
WTTA	**Wattenberg**	**147.11**	**336**	*eP*	**PKPbc**	**01 05 16.9**	**0.0**
	comp=Z,4.7nm,0.9s						
ABTA	**Abfaltersbach**	**147.19**	**335**	*i* P	**PKPbc**	**01 05 16.9**	**-0.2**
	comp=Z,4.3nm,1.0s,SNR=4.4						
MOTA	**Moosalm**	**147.25**	**337**	*i* P	**PKPbc**	**01 05 17.8**	**+0.5**
	comp=Z,7.5nm,1.0s,SNR=5.1						
RETA	**Reute**	**147.25**	**337**	*eP*	**PKPdf**	**01 05 14.2**	**-0.7**
	comp=Z,5.9nm,1.2s						
SQTA	**Sankt Quirin**	**147.31**	**337**	*i* P	**PKPbc**	**01 05 18.1**	**+0.7**
	comp=Z,5.6nm,0.8s,SNR=4.6						
FETA	**Feichten**	**147.66**	**337**	*eP*	**PKPbc**	**01 05 18.3**	**-0.2**
	comp=Z,4.4nm,0.9s						
DAVA	**Damuels**	**147.74**	**338**	*eP*	**PKPab**	**01 05 21.8**	**+0.8**
	comp=Z,5.9nm,1.0s						
ESDC	**Sonseca Array**	**158.33**	**354**	PKPab	**PKPab**	**01 06 05.5**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=345,slow=5.0,SNR=4.1						

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*NOU **03** 02:02:21.1, 19°.53S×177°.33W, h565km, mb4.5/16, Fiji Islands Region*
*NEIC **03** 02:02:21.9±1.2, 19°.2S±0°.1×177°.5W±0°.1, h555km±8km, mb4.2/48, Error ellipse: s-maj=18.4km s-min=16.0km az=145.0*
*IDC **03** 02:02:22.6±1.8, 18°.90S×177°.72W, h553km±16km, mb3.6/8, mbtmp4.5/11, Error ellipse: s-maj=54.4km s-min=13.3km az=153.0*
ISC 03 02:02:21.2±0.5, **19°.31S**±0°.10×**177°.46W**±0°.08, **h550**km, **n118**, σ1§**15**/118, **mb4.2**/29, **5C-11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**1.67**	**309**	P	**P**	**02 03 32.0**	**+2.3**
TAVE	**Taveuni**	**3.48**	**318**	P	**P**	**02 03 41.7**	**+2.2**
MSVF	**Nonsavu**	**4.54**	**289**	P	**P**	**02 03 48.2**	**+0.7**
	18nm,0.6s,baz=136,slow=7.1,SNR=21						
MSVF	**Nonsavu**	**4.54**	**289**	P	**P**	**02 03 48.7**	**+1.2**
MSVF	**Nonsavu**	**4.54**	**289**	P	**P**	**02 03 50.0**	**+2.5**
NIUE	**Niue**	**7.12**	**89**	P	**P**	**02 04 11.2**	**+0.8**
NIUE	**Niue**	**7.12**	**89**	P	**P**	**02 04 12.2**	**+1.8**
AFI	**Afiamalu**	**7.64**	**46**	P	**P**	**02 04 14.9**	**-0.8**
	51nm,0.2s,baz=34,slow=11,SNR=6.2						
AFI				S	**S**	**02 05 45.0**	**-4.3**
	52nm,0.5s,baz=204,slow=22,SNR=5.7						
DVP	**Devils Point**	**13.71**	**274**	P	**P**	**02 05 18.4**	**+0.9**
MARNC	**Mare, Loyalty**	**13.78**	**258**	P	**P**	**02 05 17.9**	**-0.3**
MARNC	**Mare, Loyalty**	**13.78**	**258**	P	**P**	**02 05 18.2**	**0.0**
LIFNC	**LIFOU**	**14.46**	**262**	P	**P**	**02 05 24.1**	**-1.1**
PINNC	**Pines Island,**	**14.48**	**254**	P	**P**	**02 05 25.3**	**-0.1**
YATNC	**Mamie plateau,**	**14.90**	**275**	P	**P**	**02 05 29.3**	**-0.5**
DZM	**Mont Dzumac**	**15.32**	**257**	P	**P**	**02 05 32.6**	**-1.5**
	4.5nm,0.6s,baz=152,slow=18,SNR=9.6						
DZM	**Mont Dzumac**	**15.32**	**257**	P	**P**	**02 05 33.9**	**-0.2**
DZM				IAmb	IAmb	02 05 36.0	
	comp=Z,6.1nm,0.8s						
DZM	**Mont Dzumac**	**15.32**	**257**	P	**P**	**02 05 34.9**	**+0.8**
KOUNC	**Koumac, New Ca**	**17.21**	**263**	P	**P**	**02 05 51.5**	**-0.5**
KOUNC	**Koumac, New Ca**	**17.21**	**263**	P	**P**	**02 05 54.7**	**+2.7**
URZ	**Urewera**	**19.47**	**193**	P	**P**	**02 06 12.3**	**0.0**
HIZ	**Hauiti**	**20.27**	**198**	P	**P**	**02 06 15.2**	**-4.4**
	comp=Z,220nm,2.1s						
RPZ	**Rata Peaks**	**26.18**	**199**	P	**P**	**02 07 09.6**	**-2.6**
DCZ	**Deep Cove**	**29.04**	**203**	P	**P**	**02 07 37.1**	**0.0**
ARMA	**Armidale**	**30.06**	**242**	P	**P**	**02 07 46.3**	**-0.1**
CTAO	**Charters Tower**	**34.13**	**262**	P	**P**	**02 08 19.6**	**-1.4**
PMG	**Port Moresby**	**35.60**	**281**	P	**P**	**02 08 32.4**	**-0.9**
TOO	**Toolangi**	**37.02**	**233**	P	**P**	**02 08 44.2**	**-0.5**
COEN	**Coen**	**38.04**	**272**	P	**P**	**02 08 52.8**	**-0.5**
STKA	**Stephens Creek**	**38.78**	**243**	P	**P**	**02 08 59.8**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=81,slow=9.1,SNR=6.8						
	comp=Z,2.9nm,0.3s						
STKA	**Stephens Creek**	**38.78**	**243**	P	**P**	**02 08 58.4**	**-0.6**
STKA				IAmb	IAmb	02 09 37.2	
	comp=Z,5.1nm,1.4s						
BBOO	**Buckleboo**	**43.54**	**242**	P	**P**	**02 09 36.5**	**-0.4**
WR0	**Warramunga Arr**	**45.09**	**261**	P	**P**	**02 09 48.6**	**-0.3**
WR0				IAmb	IAmb	02 10 08.7	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**45.26**	**261**	P	**P**	**02 09 49.3**	**-0.9**
WB0				IAmb	IAmb	02 09 50.3	
	comp=Z,9.5nm,1.0s						
WB2	**Warramunga Arr**	**45.27**	**261**	P	**P**	**02 09 49.7**	**-0.6**
WB2				IAmb	IAmb	02 09 50.6	
	comp=Z,6.2nm,0.6s						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**02 09 49.7**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=97,slow=7.7,SNR=109						
	comp=Z,2.5nm,0.3s						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**02 09 49.1**	**-1.3**
AS31	**Alice Springs**	**45.30**	**256**	P	**P**	**02 09 50.2**	**-0.3**
ASAR	**Alice Springs**	**45.30**	**256**	P	**P**	**02 09 50.4**	**-0.1**
	comp=Z,8.0nm,0.7s,baz=87,slow=8.7,SNR=66						
	comp=Z,8.0nm,0.7s						
ASAR	**Alice Springs**	**45.30**	**256**	P	**P**	**02 09 49.7**	**-0.8**
KNRA	**Kununurra**	**51.26**	**265**	P	**P**	**02 10 33.4**	**-1.5**
SIJI	**Sorong**	**53.44**	**284**	P	**P**	**02 10 48.9**	**-1.7**
	comp=Z,10nm,0.5s,baz=152,slow=19,SNR=5.6						
	comp=Z,10nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.70**	**261**	P	**P**	**02 10 52.5**	**+0.1**
PSA00	**Pilbara Seismi**	**58.44**	**256**	P	**P**	**02 11 24.5**	**-0.6**
PSA00				IAmb	IAmb	02 11 31.1	
	comp=Z,14nm,1.4s						
MBWA	**Marble Bar**	**58.62**	**257**	P	**P**	**02 11 25.5**	**-0.8**
MBWA				IAmb	IAmb	02 12 01.0	
	comp=Z,36nm,1.4s						
QSPA	**South Pole Qui**	**70.75**	**180**	P	**P**	**02 12 43.5**	**+1.4**
QSPA				IAmb	IAmb	02 12 45.1	
	comp=Z,5.2nm,0.9s						
CMB	**Columbia Colle**	**78.24**	**43**	P	**P**	**02 13 24.7**	**+0.1**
OMMB	**Old Mammoth Mi**	**78.89**	**44**	P	**P**	**02 13 27.7**	**-0.7**
YBH	**Yreka Blue Hor**	**79.04**	**39**	P	**P**	**02 13 27.9**	**-0.9**
WAKR	**Walker**	**79.12**	**43**	P	**P**	**02 13 29.8**	**+0.4**
WAKR				IAmb	IAmb	02 13 31.8	
	comp=Z,5.5nm,0.9s						
BEKR	**Beckworth**	**79.34**	**41**	P	**P**	**02 13 30.9**	**+0.5**
PNTR	**Pine Nut**	**79.36**	**42**	P	**P**	**02 13 30.6**	**0.0**
PNTR				IAmb	IAmb	02 13 33.2	
	comp=Z,7.2nm,0.7s						
NVAR	**Mina Array Bea**	**79.81**	**43**	P	**P**	**02 13 33.0**	**0.0**
	comp=Z,1.8nm,0.7s,baz=217,slow=8.6,SNR=6.0						
	comp=Z,1.8nm,0.7s						
PAHR	**Pah Rah Range**	**79.85**	**42**	P	**P**	**02 13 33.1**	**0.0**
HSIG		**80.15**	**55**	P	**P**	**02 13 34.2**	**-0.6**
KVN	**Kaiserville**	**80.29**	**43**	P	**P**	**02 13 36.4**	**+0.9**
MOD	**Modoc Plateau**	**80.58**	**39**	P	**P**	**02 13 36.4**	**-0.4**
MOD				IAmb	IAmb	02 13 38.9	
	comp=Z,4.1nm,0.8s						
K05A	**Summer Lake**	**80.72**	**39**	P	**P**	**02 13 37.6**	**-0.1**
K05A				IAmb	IAmb	02 13 40.0	
	comp=Z,8.0nm,0.9s						
PINE	**Pine Mountain**	**81.33**	**38**	P	**P**	**02 13 42.0**	**+1.2**
PINE				IAmb	IAmb	02 13 43.2	
	comp=Z,9.6nm,1.0s						
BMN	**Battle Mountai**	**81.63**	**42**	P	**P**	**02 13 41.2**	**-1.1**
BMN				IAmb	IAmb	02 13 44.4	
	comp=Z,6.5nm,1.0s						
TUC	**Tucson**	**81.84**	**52**	P	**P**	**02 13 44.2**	**+0.7**
TUC				IAmb	IAmb	02 13 46.7	
	comp=Z,5.7nm,1.0s						
ELK	**Elko**	**83.06**	**43**	P	**P**	**02 13 49.0**	**-0.7**
G08A	**Pilot Rock**	**83.36**	**37**	P	**P**	**02 13 50.8**	**-0.1**
G08A				IAmb	IAmb	02 13 52.8	
	comp=Z,3.6nm,0.8s						
N25K	**Chitina, Valde**	**84.81**	**15**	P	**P**	**02 13 57.6**	**0.0**
N25K				IAmb	IAmb	02 13 58.2	
	comp=Z,5.2nm,0.7s						
RND	**Reindeer**	**85.43**	**12**	P	**P**	**02 14 00.1**	**-0.4**
RND				IAmb	IAmb	02 14 01.5	
	comp=Z,9.9nm,1.1s						
TX31	**Lajitas Ar. Si**	**85.98**	**57**	P	**P**	**02 14 04.1**	**+0.1**
TX32	**Lajitas Array**	**85.98**	**57**	P	**P**	**02 14 04.8**	**+0.8**
TX32				IAmb	IAmb	02 14 07.1	
	comp=Z,5.8nm,1.1s						
TXAR	**Lajitas Array**	**85.98**	**57**	P	**P**	**02 14 06.0**	**+2.0**
	comp=Z,2.5nm,0.8s,baz=217,slow=6.6,SNR=36						
	comp=Z,2.5nm,0.8s						
TXAR	**Lajitas Array**	**85.98**	**57**	P	**P**	**02 14 04.8**	**+0.8**
ANMO	**Albuquerque**	**86.26**	**51**	P	**P**	**02 14 05.3**	**-0.1**
ANMO				IAmb	IAmb	02 14 07.4	
	comp=Z,3.3nm,1.1s						
ILAR	**Eielson Array**	**87.04**	**13**	P	**P**	**02 14 07.0**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=227,slow=5.0,SNR=8.0						
	comp=Z,1.0nm,0.6s						
J26L	**Joseph Creek**	**87.53**	**14**	P	**P**	**02 14 10.5**	**0.0**
J26L				IAmb	IAmb	02 14 11.7	
	comp=Z,9.2nm,1.4s						
PDAR	**Pinedale Array**	**87.75**	**43**	P	**P**	**02 14 12.1**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=209,slow=3.5,SNR=8.1						
	comp=Z,0.9nm,0.7s						
BOZ	**Bozeman (W)**	**87.85**	**40**	P	**P**	**02 14 12.4**	**-0.1**
BOZ				IAmb	IAmb	02 14 14.6	
	comp=Z,2.9nm,0.9s						
MSTX	**Muleshoe**	**88.59**	**53**	P	**P**	**02 14 15.4**	**-0.8**
MSTX				IAmb	IAmb	02 14 17.5	
	comp=Z,4.6nm,0.8s						
HHC	**Hu-ho-hao-te**	**88.89**	**314**	*eP*	**P**	**02 14 20.5**	**+3.1**
TROLL	**Troll, Antarti**	**88.92**	**180**	PcP	**P**	**02 14 18.0**	**+0.9**
SNAA	**Sanae**	**89.18**	**178**	PcP	**P**	**02 14 18.8**	**+0.6**
VNA3	**Neumayer Olymp**	**89.29**	**176**	PcP	**P**	**02 14 19.5**	**+0.8**
VNA2	**Neumayer--Watz**	**89.74**	**177**	PcP	**P**	**02 14 21.8**	**+1.0**
	baz=88,slow=3.0						
VNA1	**Neumayer--Stat**	**89.96**	**176**	PcP	**P**	**02 14 22.8**	**+1.1**
PZH	**PanZhiHua**	**90.61**	**298**	P	**P**	**02 14 27.3**	**+1.6**
LZH	**Lanzhou**	**92.46**	**307**	*eP*	P	02 14 39.5	+5.4
LZH				pP	pP	02 16 38.4	+3.7
LZH				sP	sP	02 17 27.4	-2.3
ARCES	**ARCESS Array B**	**127.84**	**350**	PKP	**PKPdf**	**02 20 23.5**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=22,slow=3.9,SNR=5.4						
AKASG	**Malin Array Be**	**142.21**	**332**	PKhKP	PKPpre	02 20 46.5	
	comp=Z,0.8nm,0.4s,baz=42,slow=3.8,SNR=6.3						
BURAR	**Bucovina Array**	**146.27**	**332**	⇑P	**PKPbc**	**02 21 01.7**	**+1.1**
BIZ	**Bicaz**	**146.37**	**330**	⇑P	**PKPbc**	**02 21 01.1**	**+0.4**
BRTR	**Keskin Array B**	**146.40**	**314**	PKPbc	**PKPbc**	**02 21 00.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=140,slow=5.6,SNR=10						
CFR	**Carcaliu**	**146.59**	**326**	⇓P	**PKPdf**	**02 20 59.4**	**+0.7**
TPGR	**Topolog**	**146.66**	**326**	⇑P	**PKPbc**	**02 21 01.5**	**-0.1**
VRI	**Vrincioaia**	**146.84**	**328**	⇓P	**

HNR	Honiara	8.81 305	LR	LR	02 21 00.7	
	comp=Z,854nm,18.7s,baz=40,slow=39					
EIDS	Eidsvold	18.61 232	P	P	02 19 29.3	+0.5
ARMA	Armidale	21.36 220	P	P	02 19 58.1	-0.4
ARMA			IAmb	IAmb	02 20 38.4	
	comp=Z,13nm,1.4s					
MXZ	Matakaoa Point	24.91 159	P	P	02 20 30.3	-2.4
BKZ	Black Stump Fm	25.81 163	P	P	02 20 40.2	-0.7
BKZ			IAmb	IAmb	02 20 42.0	
	comp=Z,4.2nm,0.6s					
THZ	Tophouse	27.53 171	P	P	02 20 55.6	-0.7
THZ			IAmb	IAmb	02 21 11.3	
	comp=Z,21nm,1.5s					
STKA	Stephens Creek	29.10 229	P	P	02 21 10.8	+0.4
	comp=Z,2.4nm,0.4s,baz=68,slow=8.5,SNR=8.8					
	comp=Z,2.4nm,0.4s					
STKA	Stephens Creek	29.10 229	P	P	02 21 11.7	+1.2
RPZ	Rata Peaks	29.22 174	P	P	02 21 11.4	0.0
	comp=Z,3.3nm,0.6s,baz=298,slow=5.1,SNR=2.2					
	comp=Z,3.3nm,0.6s					
RPZ	Rata Peaks	29.22 174	P	P	02 21 10.6	-0.7
RPZ			IAmb	IAmb	02 21 20.6	
	comp=Z,27nm,1.5s					
WB0	Warramunga Arr	31.81 256	P	P	02 21 34.3	-0.2
WB0			IAmb	IAmb	02 22 01.2	
	comp=Z,10nm,1.5s					
WB2	Warramunga Arr	31.86 256	P	P	02 21 35.2	+0.2
WB2			IAmb	IAmb	02 22 07.8	
	comp=Z,7.2nm,1.3s					
WRA	Warramunga Arr	31.88 256	P	P	02 21 35.0	-0.1
	comp=Z,0.2nm,0.5s,baz=83,slow=7.5,SNR=5.9					
	comp=Z,0.2nm,0.5s					
ASAR	Alice Springs	32.74 249	P	P	02 21 42.9	+0.3
	comp=Z,1.0nm,0.6s,baz=77,slow=9.1,SNR=9.1					
	comp=Z,1.0nm,0.6s					
ASAR	Alice Springs	32.74 249	P	P	02 21 44.2	+1.6
BBOO	Buckleboo	33.69 232	P	P	02 21 50.3	-0.4
SIJI	Sorong	38.11 288	P	P	02 22 26.8	-1.9
	comp=Z,23nm,0.4s,baz=111,slow=2.5,SNR=9.5					
FORT	Forrest	39.39 239	P	P	02 22 39.0	-0.2
FITZ	Fitzroy Crossi	40.06 259	P	P	02 22 43.7	-1.2
	comp=Z,1.9nm,0.8s,baz=96,slow=9.2,SNR=1.4					
	comp=Z,1.9nm,0.8s					
FITZ	Fitzroy Crossi	40.06 259	P	P	02 22 45.7	+0.9
FITZ			IAmb	IAmb	02 23 21.1	
	comp=Z,17nm,1.5s					
BATI	Baumata	42.78 271	LR	LR	02 40 38.9	
	comp=Z,388nm,18.1s,baz=252,slow=36					
MORW	Morawa	49.35 244	P	P	02 23 58.8	+0.2
VNDA	Vanda	63.02 181	P	P	02 25 34.8	-0.2
	comp=Z,0.8nm,0.5s,baz=352,slow=7.2,SNR=14					
	comp=Z,0.8nm,0.5s					
VNDA	Vanda	63.02 181	P	P	02 25 34.8	-0.2
SBA	Scott Base	63.29 180	P	P	02 25 36.9	+0.1
SBA			IAmb	IAmb	02 25 38.7	
	comp=Z,3.1nm,0.7s					
CASY	Casey	63.68 202	P	P	02 25 39.0	-0.5
QSPA	South Pole Qui	75.45 180	P	P	02 26 51.9	-0.1
	comp=Z,2.8nm,0.7s,baz=35,slow=1.0,SNR=14					
	comp=Z,2.8nm,0.7s					
QSPA	South Pole Qui	75.45 180	P	P	02 26 51.4	-0.7
MAW	Mawson	82.03 202	P	P	02 27 26.5	-1.4
	comp=Z,0.7nm,0.5s,baz=122,slow=19,SNR=2.2					
	comp=Z,0.7nm,0.5s					
J20K	Nowinta River	83.87 16	P	P	02 27 40.7	+3.4
J20K			IAmb	IAmb	02 28 02.6	
	comp=Z,9.8nm,1.5s					
TROLL	Troll, Antarti	93.02 185	P	P	02 28 20.4	-0.8
SNAA	Sanae	93.70 183	P	P	02 28 22.7	-1.6
SNAA	Sanae	93.70 183	P	P	02 28 22.6	-1.6
	comp=Z,0.7nm,0.6s,baz=261,slow=8.9,SNR=14					
	comp=Z,0.7nm,0.6s					
VNA3	Neumayer Olymp	94.37 181	P	P	02 28 25.8	-1.4
VNA2	Neumayer--Watz	94.64 182	P	P	02 28 27.4	-1.0
	baz=177,slow=6.0					
VNA1	Neumayer--Stat	94.94 181	P	P	02 28 28.6	-1.2
ARCES	ARCESS Array B	120.10 345	PKP	PKPdf	02 33 57.8	+0.1
	comp=Z,1.1nm,0.5s,baz=24,slow=3.3,SNR=3.8					

FUNV ***03*** *02:23:00.7, 7°.83N×72°.14W, h5km, MW4.2*
CAR ***03*** *02:23:00.7±1.6, 7°.83N±0°.07×72°.14W±0°.07, h5km±6km, Mwr3.5, Error ellipse: s-maj=13.4km s-min=3.6km az=135.0*
NEIC ***03*** *02:23:00.1±1.8, 7°.84N±0°.07×72°.14W±0°.07, h10km±2km, Error ellipse: s-maj=16.2km s-min=4.3km az=315.0*
RSNC ***03*** *02:23:01.9±1.1, 7°.77N×72°.20W, h0km±6km, ML3.3, Mw3.5*
IDC ***03*** *02:23:01.9±2.6, 7°.87N×72°.15W, h35km±22km, mb3.3/4, mbtmp3.6/6, ML2.8/2, Error ellipse: s-maj=21.1km s-min=16.0km az=131.0*

ISC 03 02:22:59.1±1.0, 7°.84N±0°.03×72°.07W±0°.02, h10km±7km, n54, σ1§62/73, mb3.6/5, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	0.24	277	eP	Pg	02 23 04.2	+0.1
CAPV				eS	Sg	02 23 07.3	-0.3
PAMC	Pamplona, Colo	0.80	232	⇓iP	Pg	02 23 13.8	-0.7
PAMC				i		02 23 34.9	
	comp=Z,497nm,0.1s						
SOCV	Socops	1.28	70	eP	Pn	02 23 24.2	+1.1
SOCV				eS	Sg	02 23 43.2	+2.9
OCAC	Ocana	1.30	288	eP	Pn	02 23 23.1	-0.4
OCAC				eS	Sb	02 23 39.9	-0.7
TAMC	Tame, Arauca	1.42	169	eP	Pg	02 23 26.7	+0.4
TAMC				eS	Sg	02 23 46.0	+1.2
TAMC				i		02 23 50.1	
	comp=Z,430nm,0.2s						
BARC	Barichara	1.66	222	eP	Pb	02 23 29.3	-0.6
BARC				i		02 23 57.9	
	comp=Z,402nm,0.7s						
SDV	Santo Domingo	1.76	54	Pn	Pb	02 23 32.2	+0.6
	comp=Z,119nm,0.3s,baz=205,slow=4.3,SNR=111						
SDV				Sn	Sn	02 23 54.6	+2.1
	comp=Z,264nm,0.3s,baz=248,slow=8.8,SNR=9.4						
BRRC	Barranca, Sant	1.78	246	⇓iP	Pb	02 23 32.1	+0.2
BRRC				eS	Sg	02 23 55.9	-0.5
BRRC				i		02 23 59.9	
	comp=Z,240nm,0.2s						
RUSC	La Rusia	2.18	208	eP	Pn	02 23 36.8	+0.9
RUSC				eS	Sb	02 24 07.1	+1.0
RUSC				i		02 24 10.3	
	comp=Z,115nm,0.4s						
LL1C	La Loma 1 Cana	2.24	319	eP	Pb	02 23 38.7	-1.1
LL1C				eS	Sg	02 24 11.4	+0.2
MCQV	Machiques	2.25	348	eP	Pn	02 23 37.6	+1.2
MCQV				eS	Sn	02 24 05.8	+1.6
PTBC	PUERTO BERRIO,	2.70	242	eP	Pn	02 23 42.8	+0.2
PTBC				i		02 24 24.5	
	comp=Z,208nm,0.4s						
ZARC	Zaragoza, Cauc	2.79	263	eP	Pn	02 23 45.4	+1.5
ZARC				eS	Sn	02 24 18.6	+1.0
ZARC				i		02 24 26.1	
	comp=Z,313nm,0.4s						
ARGC	Ariguani, Magd	2.94	313	⇑eP	Pn	02 23 47.3	+1.3
ARGC				eS	Sn	02 24 24.4	+3.0
ARGC				i		02 24 33.8	
	comp=Z,46nm,0.3s						
CURV	Curarigua	3.00	44	eS	Sn	02 24 25.3	+2.2
CRJC	Cerrejon, Guaj	3.26	346	eP	Pn	02 23 50.7	+0.2
CRJC				i		02 24 43.6	
	comp=Z,189nm,0.2s						
DABV	Dabajuro	3.38	25	eP	Pn	02 23 53.3	+1.3
DABV				eS	Sn	02 24 32.5	+0.4
UREC	San Jos de Ur	3.43	269	eP	Pn	02 23 55.2	+2.4
UREC				eS	Sn	02 24 37.2	+3.6
UREC				i		02 24 49.2	
	comp=Z,81nm,0.2s						
SIQV	Siquisique	3.58	38	eP	Pn	02 23 56.4	+1.7
SIQV				eS	Sn	02 24 38.6	+1.4
CHIC	Chingaza	3.59	208	eP	Pn	02 23 56.3	+1.1
CHIC				i		02 25 02.7	
	comp=Z,34nm,0.6s						
PTGC	Puerto Gaitan,	3.61	181	eP	Pn	02 23 56.5	+1.3
PTGC				i		02 24 55.1	
	comp=Z,97nm,0.5s						
SJCC	San Jacinto, C	3.69	304	eP	Pn	02 23 58.9	+2.5
SJCC				eS	Sn	02 24 42.5	+2.5
SJCC				i		02 24 46.4	
	comp=Z,80nm,0.3s						
ROSC	El Rosal	3.72	217	Pn	Pn	02 23 58.8	+1.7
	comp=Z,3.8nm,0.3s,baz=119,slow=24,SNR=4.6						
ROSC				Pg	Pg	02 24 09.0	-1.5
	comp=Z,7.7nm,0.3s,baz=50,slow=20,SNR=6.4						
	comp=Z,9.1nm,0.3s						
ROSC	El Rosal	3.72	217	Pn	Pn	02 23 57.5	+0.4
HELC	Santa Helena	3.80	245	eP	Pn	02 23 59.9	+1.8
HELC				i		02 24 58.8	
	comp=Z,47nm,0.3s						
URIC	Uribia, Colomb	3.84	1	eP	Pn	02 23 58.2	-0.1
URIC				i		02 25 01.3	
	comp=Z,69nm,0.5s						
MAPV	Macapo	4.08	61	eP	Pn	02 24 03.1	+1.4
MAPV				eS	Sn	02 24 51.8	+2.2
BAUV	El Baul	4.13	74	Pn	Pn	02 24 02.9	+0.5
BAUV	El Baul	4.13	74	eP	Pn	02 24 03.2	+0.8
BAUV				eS	Sn	02 24 50.5	-0.3
GUY2C	Guyana, Caldas	4.18	232	eP	Pn	02 24 05.4	+2.0
CBOC	Ciudad Bolivar	4.38	244	eP	Pn	02 24 08.9	+3.0
CBOC				i		02 25 19.8	
	comp=Z,18nm,0.6s						
BENV	Beln	4.90	64	eP	Pn	02 24 14.2	+1.3
BENV				eS	Sn	02 25 08.9	-0.8
PLMC	San Jos del P	5.10	235	eP	Pn	02 24 18.7	+3.0
CACV	CAICARA DEL OR	5.49	92	eP	Pb	02 24 29.2	-5.9
CACV				eS	Sb	02 25 36.1	-4.9
YOTC	Yotoco, Valle	5.72	228	eP	Pn	02 24 25.9	+1.6
BIRV	Birongo	6.30	65	Pn	Pn	02 24 33.3	+1.1
GARC	Garzon, Huila	6.57	211	eP	Pn	02 24 34.8	-1.3
POPC	Popayan, Colom	6.98	221	eP	Pn	02 24 41.7	0.0
PCRV	Puerto La Cruz	7.70	72	Pn	Pn	02 24 52.6	+1.1
	comp=Z,0.8nm,0.3s,baz=335,slow=2.6,SNR=21						
	comp=Z,2.9nm,0.2s						
BCIP	Isla Barro Col	7.80	280	Pn	Pn	02 24 52.4	-0.3
OTAV	Otavalo	9.87	220	Pn	Pn	02 25 22.3	+0.7
BRU2	Volcan	10.55	276	Pn	Pn	02 25 29.5	-1.2
SDDR	Presa de Saban	11.11	4	Pn	Pn	02 25 38.7	+0.5
CELP	Cerrillos	11.49	27	Pn	Pn	02 25 42.7	-0.7
MTDJ	Mount Denham	11.62	333	Pn	Pn	02 25 45.8	+0.6
SJG	San Juan	11.73	29	Pn	Pn	02 25 46.6	0.0
	comp=Z,6.7nm,0.3s,baz=322,slow=19,SNR=17						
JACO	JACO, Garabito	12.58	279	Pn	Pn	02 25 58.9	+0.7
LPAZ	La Paz	24.28	171	P	P	02 28 18.1	+0.5
	comp=Z,0.5nm,0.4s,baz=252,slow=3.2,SNR=3.2						
	comp=Z,0.5nm,0.4s						
SIV	San Ignacio	26.06	155	P	P	02 28 33.7	+0.7
	comp=Z,1.0nm,0.7s,baz=336,slow=6.4,SNR=5.6						
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	36.59	310	P	P	02 30 05.1	-0.7
	comp=Z,0.2nm,0.4s,baz=123,slow=8.7,SNR=10						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	47.89	323	P	P	02 31 36.4	-1.5
	comp=Z,0.3nm,0.6s,baz=108,slow=8.6,SNR=3.1						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	72.51	79	P	P	02 34 24.9	-2.0
	comp=Z,15nm,0.6s,baz=268,slow=7.1,SNR=5.1						
ASAR	Alice Springs	150.54	235	PKPbc	PKPdf	02 42 49.5	+2.6
	comp=Z,0.2nm,0.3s,baz=98,slow=3.8,SNR=2.5						
WRA	Warramunga Arr	151.73	242	PKPbc	PKPbc	02 42 52.7	-2.3
	comp=Z,0.4nm,0.4s,baz=107,slow=2.8,SNR=11						

MOS ***03*** *02:34:41.6±1.6, 37°.68N×21°.06E, h20km, mb4.7/16, Error ellipse: s-maj=6.0km s-min=3.7km az=81.2*
NEIC ***03*** *02:34:42.6±1.5, 37°.72N±0°.06×21°.14E±0°.07, h12km±3km, mb4.5/33, Mwr4.5/59, ML4.2(THE), ML3.9(ATH), Error ellipse: s-maj=9.0km s-min=7.4km az=218.0*
PDG ***03*** *02:34:43.2±0.7, 37°.78N×21°.09E, h8km±1km, ML4.3/12, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
THE ***03*** *02:34:43.6, 37°.76N×21°.19E, h18km±1km, ML4.2/10, Error ellipse: s-maj=1.4km s-min=0.6km az=192.0*
ATH ***03*** *02:34:43.4, 37°.77N×21°.20E, h29km±3km, ML3.9/7, Error ellipse: s-maj=3.8km s-min=0.9km az=242.0*
MED_RC ***03*** *02:34:43.0±0.7, 37°.86N×21°.23E, h20km±1km, MW4.5/19, Moment Tensor Solution.Mantle waves: s19,c26; Duration: 1s0 Moment tensor: Scale 1016Nm; Mrr-0.63±.09; Mθθ0.63±.05; Mφφ0.00±.05; Mrθ-0.23±.04; Mθφ-0.41±.02; Mφr-0.05±.05; Best double couple: M0 0.78000×1016 NP1:φs102.00000°, δ54.00000°, λ-110.00000°. NP2:φs313.00000°, δ40.00000°, λ-65.00000°. Principal axes: T 0.8600, Plg7.0000°, Azm205.0000°; N -0.1600, Plg16.0000°, Azm113.0000°; P -0.7000, Plg72.0000°, Azm319.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***03*** *02:34:44.7, 37°.65N×21°.05E, h12km, Moment Tensor Solution. Moment tensor: Scale 1015Nm; Mrr-5.75; Mθθ6.03; Mφφ-0.28; Mrθ-1.97; Mφθ-1.81; Mφr-1.17; Fault plane solution: M0 6.58000×1015 NP1:φs300.76000°, δ39.90000°, λ-65.10000°. NP2:φs89.57000°, δ54.42000°, λ-109.40000°. Principal axes: T 6.7247, Plg8.0000°, Azm193.0000°; N -0.3031, Plg16.0000°, Azm101.0000°; P -6.4216, Plg73.0000°, Azm308.0000°;*
IDC ***03*** *02:34:44.7±3.9, 37°.89N×21°.19E, h27km±28km, mb3.8/19, mbtmp3.9/33, ML3.5/13, MS3.6/55 Error ellipse: s-maj=13.1km s-min=10.9km az=152.0*

ISC 03 02:34:42.7±0.9, 37°.73N±0°.02×21°.18E±0°.02, h11km±6km, n382, σ1§90/419, mb4.4/47, MS3.6/44, 24C-24D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.27	266	P	Pb	02 34 50.2	+0.6
LTHK				S	Sb	02 34 54.6	+0.4
LTHK	Lithakia	0.27	266	P	Pb	02 34 50.5	+0.9
LTHK				S	Sb	02 34 55.8	+1.6
RLS	Riolos of Patr	0.40	35	P	Pg	02 34 50.7	+0.1
RLS				S	Sb	02 34 57.9	-0.2
	16μm,0.6s						
RLS	Riolos of Patr	0.40	35	P	Pg	02 34 50.8	+0.1
RLS				S	Sg	02 34 57.5	+1.5
RLS				AML	AML	02 34 57.6	
	comp=N,39267μm,0.8s						
RLS				AML	AML	02 34 58.3	
	comp=E,22817μm,0.3s						
DRO	Drossia	0.48	62	P	Pg	02 34 52.2	+0.1
DRO				S	Sb	02 35 00.0	-0.3
	comp=E,55μm,0.5s						
DRO	Drossia	0.48	62	P	Pg	02 34 52.6	+0.5
DRO				S	Sg	02 34 59.5	+1.0
PSDA	Pessada-Kefalo	0.61	310	P	Pg	02 34 54.4	-0.1
PSDA				S	Sb	02 35 03.8	-0.1
	comp=E,69μm,0.4s						
PSDA	Pessada-Kefalo	0.61	310	P	Pg	02 34 54.6	+0.1
PSDA				S	Sb	02 35 04.0	0.0
VLS	Valsamata	0.64	314	P	Pg	02 34 55.1	-0.1
VLS				S	Sb	02 35 05.0	-0.1
VLS	Valsamata	0.64	314	P	Pg	02 34 55.1	-0.1
VLS				S	Sb	02 35 05.0	-0.1
VLS	Valsamata	0.64	314	P	Pg	02 34 55.3	0.0
VLS				S	Sg	02 35 04.5	+0.8
VLS				AML	AML	02 35 06.0	
	comp=E,46295μm,0.2s						
VLS				AML	AML	02 35 06.5	
	comp=N,44889μm,0.2s						
UPR	University Cam	0.74	41	P	Pg	02 34 57.5	+0.5
UPR				S	Sg	02 35 07.3	+0.7
KEF4	Livadi, Kephal	0.80	312	P	Pb	02 34 57.6	-1.0
KEF4				S	Sg	02 35 10.2	+1.7
KEF4	Livadi, Kephal	0.80	312	P	Pb	02 34 57.9	-0.6
KEF4				S	Sg	02 35 09.9	+1.4
KEF3	Kipouria, Keph	0.81	306	P	Pb	02 34 57.8	-1.0
KEF3				S	Sn	02 35 11.1	-1.0
KEF3	Kipouria, Keph	0.81	306	P	Pb	02 34 57.9	-0.9
KEF3				S	Sg	02 35 10.4	+1.5
ITM	Ithomi	0.81	132		Pg	02 34 58.7	+0.3
ITM	Ithomi	0.81	132	P	Pg	02 34 58.7	+0.3
ITM				S	Sn	02 35 10.6	-1.6
	comp=N,13μm,0.6s						
ITM	Ithomi	0.81	132	P	Pg	02 34 59.2	+0.8
ITM				S	Sb	02 35 10.2	+0.3
ITM				AML	AML	02 35 20.0	
	comp=N,23833μm,0.8s						
ITM				AML	AML	02 35 21.1	
	comp=E,25909μm,0.7s						
DMLN	Damoulianata-K	0.81	309	P	Pb	02 34 58.2	-0.7
DMLN				S	Sn	02 35 11.2	-1.1
	comp=E,45μm,0.6s						
LAKA	Lakka	0.81	51	P	Pb	02 34 58.2	-0.8
LAKA				S	Sb	02 35 09.8	-0.2
	comp=E,38μm,1.0s						
LAKA	Lakka	0.81	51	P	Pb	02 34 58.0	-1.0
KLV	Kalavryta, Ach	0.83	67	P	Pb	02 34 57.7	-1.6
KLV				S	Sb	02 35 10.2	-0.4
	comp=E,6μm,0.7s						
KLV	Kalavryta, Ach	0.83	67	P	Pb	02 34 59.0	-0.2
KLV				S	Sb	02 35 08.9	-1.7
KLV				AML	AML	02 35 20.0	
	comp=E,10676μm,0.6s						
KLV				AML	AML	02 35 26.4	
	comp=N,10775μm,0.6s						
FSK	Fiskardo	0.88	327	P	Pb	02 34 59.9	-0.1
FSK				S	Sb	02 35 12.0	+0.3
	comp=N,15μm,0.7s						
EFP	Efpalio	0.91	39	P	Pb	02 34 59.3	-1.2
PVO	Paravola	0.93	17	P	Pb	02 34 59.9	-1.0
PVO				S	Sb	02 35 13.0	-0.3
	comp=N,9μm,0.5s						
PVO	Paravola	0.93	17	P	Pb	02 35 00.2	-0.7
PYL	PYLOS	0.95	151	P	Pb	02 35 00.8	-0.4
PYL				S	Sn	02 35 16.1	+0.6
	comp=N,8μm,0.8s						
PYL	PYLOS	0.95	151	P	Pn	02 35 01.5	-0.5
PYL				S	Sg	02 35 13.7	+0.4
PYL				AML	AML	02 35 30.4	
	comp=N,12796μm,0.7s						
PYL				AML	AML	02 35 31.5	
	comp=E,18056μm,0.9s						
SERG	Sergoula	0.98	45	P	Pb	02 35 00.6	-1.1
SERG				S	Sb	02 35 13.6	-1.0
SERG				AML	AML	02 35 20.8	
	comp=N,16822μm,0.4s						
SERG				AML	AML	02 35 21.1	
	comp=E,13217μm,0.7s						
EVGI	Lefkada island	0.98	336	P	Pb	02 35 00.6	-1.1
EVGI				S	Sb	02 35 14.3	-0.4
LKD2	Lefkada island	1.14	339	P	Pn	02 35 03.2	-1.4
LKD2				S	Sb	02 35 18.8	-0.4
LKD2	Lefkada island	1.14	339	P	Pn	02 35 03.4	-1.3
THAL	Thalero	1.22	75	P	Pb	02 35 05.9	+0.1
EVR	Evrytania	1.29	23	P	Pn	02 35 06.0	-0.8
EVR				S	Sb	02 35 21.8	-1.9
EVR				AML	AML	02 35 35.7	
	comp=N,6324μm,0.8s						
EVR				AML	AML	02 35 42.3	
	comp=E,8954μm,1.0s						
JAN	Janina	1.94	353	P	Pb	02 35 18.6	+0.4
KEK	Kerkira	2.26	332		Pn	02 35 20.5	+0.5
LIT	Litokhoron	2.58	23	Pn	Pn	02 35 26.0	+1.5
LIT	Litokhoron	2.58	23	P	Pn	02 35 26.0	+1.5
KBN	Korca	2.91	354		Pn	02 35 30.1	+1.0
KBN	Korca	2.91	354	P	Pn	02 35 30.1	+1.0
VLO	Vlora	3.03	335	Pn	Pn	02 35 31.4	+0.7
VLO	Vlora	3.03	335	P	Pn	02 35 31.4	+0.7
SCTE	Santa Cesarea	3.15	319	Pn	Pn	02 35 32.3	0.0
OHR	Ohrid	3.39	355	*i* Pn	Pn	02 35 39.0	+3.3
APE	Apeiranthos	3.53	99	⇑P	Pb	02 35 41.5	-3.8
APE				⇓S	Sb	02 36 25.6	-2.5
APE	Apeiranthos	3.53	99	*d* iP	Pn	02 35 39.6	+2.0
SANT	Santorini	3.69	110	⇓P	Pn	02 35 43.0	+3.3
SANT	Santorini	3.69	110	Pn	Pn	02 35 41.2	+1.5
TIR	Tirane	3.75	345	⇑P	Pn	02 35 42.5	+1.9
TIR	Tirane	3.75	345		Pn	02 35 41.7	+1.1
TIR	Tirane	3.75	345	P	Pn	02 35 41.7	+1.1
TIP	Timpagrande	3.76	294	⇓P	Pn	02 35 40.1	-0.6
TIP				⇑S	Sn	02 36 22.7	-2.3
TIP	Timpagrande	3.76	294	Pn	Pn	02 35 40.3	-0.4
IDI	Anoyia	3.86	128	⇑P	Pn	02 35 44.2	+2.1
IDI	Anoyia	3.86	128	Pn	Pn	02 35 42.2	+0.1
	comp=E,1.2nm,0.3s,baz=304,slow=17,SNR=5.6						
IDI				Sn	Sn	02 36 30.6	+3.1
	comp=E,8.1nm,0.3s,baz=356,slow=14,SNR=4.4						
IDI				LR	LR	02 37 41.5	
	comp=E,1μm,19.0s,baz=295,slow=45						
	comp=E,4.3nm,0.5s						
IDI	Anoyia	3.86	128	Pn	Pn	02 35 41.5	-0.6
CEL	Celeste	4.21	279	Pn	Pn	02 35 45.7	-1.2
SKO	Skopje	4.24	3	*i* Pn	Pn	02 35 49.4	+2.0
ULC	Ulcinj	4.48	341	*e*Pn	Pn	02 35 51.5	+0.8
ULC				*i* Sn	Sn	02 36 43.3	+0.5
MATE	Matera	4.54	311	⇑P	Pn	02 35 51.9	+0.5
DRME	Dracevica, Mon	4.71	342	*e*Pn	Pn	02 35 53.6	-0.1
DRME	Dracevica, Mon	4.71	342	*e*Pn	Pn	02 35 54.7	+1.0
DRME				*i* Sn	Sn	02 36 48.7	+0.4
CUC	Castrocucco	4.75	300	Pn	Pn	02 35 53.5	-0.9
RDO	Rodhopi	4.80	43		Pn	02 35 55.6	+0.6
BUM	Brajici-Budva	4.89	340	*e*Pn	Pn	02 35 57.2	+0.9
BUM				*i* Sn	Sn	02 36 53.1	+0.2
PDG	Podgorica	4.92	343	⇓P	Pn	02 35 57.7	+1.1
PDG				⇑S	Sn	02 36 55.0	+1.5
PDG	Podgorica	4.92	343	Pn	Pn	02 35 55.4	-1.2
TTG	Podgorica	4.92	343	⇑*i*Pn	Pn	02 35 57.7	+1.1
TTG				*i* Sn	Sn	02 36 53.9	+0.3
ALN	Alexandroupoli	4.93	49	Pn	Pn	02 35 57.0	+0.3
ALN	Alexandroupoli	4.93	49	P	Pn	02 35 57.0	+0.3
PVY	Plav	4.95	350	*e*Pn	Pn	02 35 58.3	+1.1
PVY				*i* Sn	Sn	02 36 54.9	+0.4
CEME	Cevo	5.11	341	*e*Pn	Pn	02 36 00.4	+1.0
CEME				*i* Sn	Sn	02 36 58.5	+0.1
VTS	Vitosha	5.13	17	⇑P	Pn	02 36 02.7	+3.0
VTS	Vitosha	5.13	17	Pn	Pn	02 35 59.5	-0.2
VTS	Vitosha	5.13	17	P	Pn	02 35 59.5	-0.2
HCY	Herceg Novi	5.14	337	*e*Pn	Pn	02 35 57.7	-2.0
HCY	Herceg Novi	5.14	337	*e*Pn	Pn	02 36 00.6	+0.9
HCY				*i* Sn	Sn	02 36 59.0	0.0
IVA	Berane	5.23	350	*e*Pn	Pn	02 36 02.3	+1.3
IVA				*i* Sn	Sn	02 37 01.8	+0.5
KOME	Kolasin	5.27	347	*e*Pn	Pn	02 36 02.7	+1.2
KOME				*i* Sn	Sn	02 37 02.6	+0.3
KARP	Karpathos	5.28	113	Pn	Pn	02 36 02.1	+0.5
VAE	Valguarnera	5.38	269	Pn	Pn	02 36 04.7	+1.7
	comp=E,5.0nm,0.3s,baz=131,slow=3.8,SNR=6.0						
VAE				Sn	Sn	02 37 03.0	-1.9
	comp=E,1.

MLR **Muntele Rosu** 8.54 23 Pn Pn 02 36 47.9 +1.5
comp=E,0.3nm,0.3s,baz=235,slow=11,SNR=12
comp=E,1.2nm,0.8s
MLR **Muntele Rosu** 8.54 23 Pn Pn 02 36 47.1 +0.7
SIRR **Siria** 8.54 2 ⇓P Pn 02 36 49.1 +2.7
MURB **Monte Urbino** 8.60 313 Pn Pn 02 36 47.3 +0.1
TIRR **Tirgusor** 8.66 37 ⇓P Pn 02 36 52.3 +4.3
TIRR **Tirgusor** 8.66 37 ⇓P Pn 02 36 52.3 +4.3
KOVH **Kovagotottos** 8.66 346 P Pn 02 36 48.8 +0.9
MORH **Mrgy, Hungar** 8.69 348 ⇓P Pn 02 36 50.5 +2.2
MORH **Mrgy, Hungar** 8.69 348 P Pn 02 36 49.7 +1.4
DOPR **Dopca** 8.81 20 ⇑P Pn 02 36 54.3 +4.3
BISRR **Bisoca** 8.84 26 ⇑P Pn 02 36 54.3 +3.8
COVR **Voineasa-Covas** 8.94 23 ⇑P Pn 02 36 56.3 +4.5
TPGR **Topolog** 8.97 35 ⇓P Pn 02 36 56.2 +4.1
PLOR **Plostina** 9.09 25 ⇑P Pn 02 36 58.3 +4.5
CFR **Carcaliu** 9.09 33 ⇑P Pn 02 36 58.5 +4.7
VRI **Vrincioaia** 9.12 25 ⇑P Pn 02 36 58.7 +4.3
CEY **Cerknica** 9.46 330 *e*Pn Pn 02 36 58.4 -0.5
SKDS **Skadanscina** 9.47 328 *e*Pn Pn 02 36 57.4 -1.7
KEST **Kesra** 9.70 262 Pn Pn 02 37 02.7 +0.3
comp=E,0.1nm,0.3s,baz=191,slow=3.1,SNR=8.2
KEST Sn Sn 02 38 47.8 -3.6
comp=E,0.1nm,0.3s,baz=1.8,slow=22,SNR=3.6
KEST LR LR 02 41 14.3
comp=E,140nm,21.6s,baz=354,slow=40
comp=E,5.1nm,0.9s
KEST **Kesra** 9.70 262 Pn Pn 02 37 01.5 -0.9
MPLH **Magyarpolny** 9.81 345 P Pn 02 37 03.3 -0.4
BR131 **Keskin Array S** 9.94 75 Pn Pn 02 37 05.9 +0.2
BR131 **Keskin Array S** 9.94 75 P Pn 02 37 05.9 +0.2
BRTR **Keskin Array B** 9.94 75 Pn Pn 02 37 09.1 +3.4
comp=E,0.3nm,0.3s,baz=256,slow=13,SNR=18
BRTR LR LR 02 41 02.0
comp=E,379nm,18.7s,baz=268,slow=38
comp=E,1.0nm,0.5s
BRTR **Keskin Array B** 9.94 75 Pn Pn 02 37 08.8 +3.1
BRTR **Keskin Array B** 9.94 75 P Pn 02 37 08.8 +3.1
SOKA **Soboth** 10.03 335 *e*Pn Pn 02 37 06.4 -0.5
comp=E,1.0nm,0.3s
SOKA *e*Sn Sn 02 38 55.5 -3.9
comp=E,3.8nm,0.6s
OBKA **Obir** 10.06 333 *e*Pn Pn 02 37 07.3 +0.1
OBKA **Obir** 10.06 333 *e*Pn Pn 02 37 06.0 -1.2
comp=E,0.3nm,0.2s
OBKA *e*Sn Sn 02 39 01.3 +1.3
comp=E,8.3nm,0.6s
CSS **Mathiatis** 10.19 102 Pn Pn 02 37 08.5 -0.4
PSZ **Piszkesteto** 10.23 355 Pn Pn 02 37 08.4 -1.1
PSZ **Piszkesteto** 10.23 355 P Pn 02 37 08.4 -1.1
PSZ **Piszkesteto** 10.23 355 P Pn 02 37 10.1 +0.6
BURAR **Bucovina Array** 10.32 15 ⇓P Pn 02 37 14.9 +4.2
BUR08 **Bucovina Ar. S** 10.34 15 Pn Pn 02 37 11.2 +0.1
PRED **Cave del Predi** 10.38 329 Pn Pn 02 37 10.1 -1.5
ARSA **Arzberg** 10.39 338 *e*Pn Pn 02 37 13.4 +1.8
comp=E,1.4nm,0.3s
TRPA **Tarpa** 10.45 5 P Pn 02 37 14.1 +1.7
MYKA **Terra Mystica** 10.50 330 *e*Pn Pn 02 37 17.7 +4.5
comp=E,1.7nm,0.3s
MYKA *e*Sn Sn 02 39 11.9 +1.0
comp=E,1.9nm,0.4s
RONA **Rosalia, Austr** 10.59 342 *e*Pn Pn 02 37 16.1 +1.7
comp=E,4.7nm,0.7s
CLUD **Cludinico** 10.67 327 Pn Pn 02 37 14.1 -1.5
KIS **Kishinev** 10.85 29 *e*P Pn 02 37 20.0 +2.1
KIS MLR MLR
comp=Z,300nm,13.0s
VYHS **Vyhne** 10.89 352 *e*P Pn 02 37 19.3 +0.7
VYHS *e* 02 39 19.5
CONA **Conrad Observa** 10.91 341 *e*Pn Pn 02 37 21.3 +2.4
comp=Z,1.2nm,0.5s
CTI **Castel Tesino** 10.93 323 Pn Pn 02 37 18.0 -1.1
CTI **Castel Tesino** 10.93 323 P Pn 02 37 18.0 -1.1
UZH **Uzhgorod** 10.93 4 *e*P Pn 02 37 20.3 +1.3
UZH *e*S Sn 02 39 22.3 +1.1
UZH MLR MLR
comp=Z,80nm,12.0s
KBA **Koelnbreinsper** 10.98 331 *e*Pn Pn 02 37 22.0 +2.0
comp=Z,0.4nm,0.1s
KBA *e*Sn Sn 02 39 22.1 -0.8
comp=Z,0.8nm,0.2s
MODS **Modra-Piesok** 11.01 346 *e*P Pn 02 37 24.9 +4.7
ABTA **Abfaltersbach** 11.06 327 *e*Pn Pn 02 37 20.7 -0.2
comp=Z,0.8nm,0.4s
ABTA *e*Sn Sn 02 39 22.4 -2.2
comp=Z,20nm,1.1s
CRVS **Cervenica-Dubn** 11.17 1 *e*P Pn 02 37 23.8 +1.4
SALO **Salr** 11.20 318 Pn Pn 02 37 21.2 -1.5
KOLS **Kolonicke sedl** 11.23 4 *e*P Pn 02 37 23.2 +0.1
MOA **Molln** 11.31 336 *e*Pn Pn 02 37 24.4 +0.2
comp=Z,0.8nm,0.3s
MOA *e*Sn Sn 02 39 32.5 +1.9
comp=Z,3.2nm,0.5s
BIOA **Bad Ischl, Aus** 11.39 333 *e*Pn Pn 02 37 27.1 +1.8
comp=Z,3.4nm,0.4s
BIOA *e*Sn Sn 02 39 34.9 +2.4
comp=Z,3.3nm,0.4s
WTTA **Wattenberg** 11.84 327 *e*Pn Pn 02 37 31.2 -0.4
comp=Z,1.2nm,0.4s
WTTA *e*Sn Sn 02 39 40.3 -3.4
comp=Z,8.5nm,0.7s
KRUC **Moravsky** 11.85 345 *e*PN Pn 02 37 32.5 +0.9
WATA **Walderalm** 11.92 327 *e*Pn Pn 02 37 32.7 0.0
comp=Z,0.8nm,0.2s
WATA *e*Sn Sn 02 39 46.6 +0.9
comp=Z,7.2nm,0.6s
SQTA **Sankt Quirin** 11.99 325 *e*Pn Pn 02 37 35.1 +1.4
comp=Z,0.7nm,0.3s
SQTA *e*Sn Sn 02 39 44.2 -3.3
comp=Z,3.8nm,0.4s
FUORN **Ofenpass-Fuorn** 12.01 321 Pn Pn 02 37 34.5 +0.5
VRAC **Vranov** 12.04 345 LR LR 02 43 01.7
comp=Z,404nm,18.3s,baz=170,slow=42
VRAC **Vranov** 12.04 345 *e*PN Pn 02 37 34.5 +0.3
FETA **Feichten** 12.07 324 *e*Pn Pn 02 37 36.5 +1.7
comp=Z,0.5nm,0.5s
FETA *e*Sn Sn 02 39 49.0 -0.4
comp=Z,4.9nm,0.9s
SIM **Simferopol'** 12.10 49 *e*P Pn 02 37 39.5 +4.4
SIM pmax pmax
comp=Z,10.0nm,1.1s
MOTA **Moosalm** 12.13 326 *e*Pn Pn 02 37 36.6 +0.9
comp=Z,0.1nm,0.1s
MOTA *e*Sn Sn 02 39 49.6 -1.4
comp=Z,6.6nm,0.6s
CKRC **Cesky Krumlov** 12.16 338 *e*PN Pn 02 37 41.1 +5.3
DAVOX **Davos/Dischmat** 12.31 321 Pn Pn 02 37 37.9 -0.2
comp=Z,0.2nm,0.3s,baz=144,slow=18,SNR=2.3
DAVOX Sn Sn 02 39 52.9 -2.4
comp=Z,0.5nm,0.3s,baz=294,slow=21,SNR=3.0
DAVOX LR LR 02 44 29.5
comp=Z,383nm,18.9s,baz=85,slow=48
comp=Z,0.6nm,0.4s
MORC **Moravsky Berou** 12.33 349 *e*PN Pn 02 37 37.8 -0.4
GERES **GERESS Array B** 12.37 336 Pn Pn 02 37 38.5 -0.3
comp=Z,0.2nm,0.3s,baz=168,slow=14,SNR=3.8
GERES LR LR 02 43 24.9
comp=Z,767nm,18.7s,baz=144,slow=42
comp=Z,0.6nm,0.5s
RETA **Reutte** 12.39 325 *e*Pn Pn 02 37 41.5 +2.4
comp=Z,0.6nm,0.4s
RETA *e*Sn Sn 02 39 53.3 -4.0
comp=Z,2.5nm,0.5s
MMAI **Mount Meron Ar** 12.53 108 Pn Pn 02 37 40.6 -0.4
comp=Z,0.4nm,0.3s,baz=318,slow=14,SNR=2.0
MMAI Sn Sn 02 40 00.8 +0.2
comp=Z,0.8nm,0.3s,baz=308,slow=24,SNR=2.6
MMAI LR LR 02 44 03.8
comp=Z,126nm,19.2s,baz=124,slow=44
comp=Z,0.9nm,0.5s
KHC **Kasperske Hory** 12.66 337 Pn Pn 02 37 42.3 -0.4
KHC **Kasperske Hory** 12.66 337 *e*P Pn 02 37 44.6 +1.9
KHC **Kasperske Hory** 12.66 337 *e*PN Pn 02 37 44.6 +1.9
KHC *e*SN Sn 02 39 42.9 -21
DAVA **Damuels** 12.66 323 *e*Pn Pn 02 37 41.7 -1.2
comp=Z,1.6nm,0.6s
DAVA *e*Sn Sn 02 39 59.6 -4.4
comp=Z,10.0nm,1.1s
PRU **Pruhonice** 13.15 341 *e*P Pn 02 37 48.0 -1.3
PRU **Pruhonice** 13.15 341 *e*PN Pn 02 37 48.0 -1.3
OSTC **Ostas** 13.31 346 *e*PN P 02 37 57.1 -4.2
SENIN **Lac Senin/Sane** 13.43 314 Pn Pn 02 37 52.0 -1.3
GRFO **Grafenberg** 13.94 332 Pn Pn 02 37 59.5 -0.7
GRFO **Grafenberg** 13.94 332 P Pn 02 37 59.5 -0.7
EIL **Elat** 13.99 121 Pn Pn 02 38 00.5 -0.4
comp=Z,0.3nm,0.3s,baz=304,slow=12,SNR=3.3
EIL Sn Sn 02 40 38.7 +2.4
comp=Z,0.5nm,0.3s,baz=300,slow=20,SNR=3.8
EIL LR LR 02 44 25.2
comp=Z,62nm,21.7s,baz=299,slow=41
comp=Z,2.7nm,0.6s
ASF **Jabal al Asfar** 14.03 109 Pn Pn 02 38 00.9 -0.6
comp=Z,0.2nm,0.3s,baz=302,slow=4.8,SNR=1.8
comp=Z,0.5nm,0.3s
STU **Stuttgart** 14.05 326 Pn Pn 02 38 01.1 -0.6
STU **Stuttgart** 14.05 326 P Pn 02 38 01.1 -0.6
ANN **Anapa** 14.11 55 *e*P P 02 38 16.1 +5.9
ANN pmax pmax
comp=Z,28nm,0.9s
BRG **Berggiesshubel** 14.12 341 *e*P P 02 38 18.9 +8.6
BRG Amp 02 38 20.6
comp=Z,5.0nm,1.1s
BRG Amp 02 44 20.0
comp=Z,1.3nm,9.7s
BRG Amp 02 44 23.0
comp=N,0.7nm,13.7s
BRG Amp 02 44 29.0
comp=E,0.4nm,12.6s
AKASG **Malin Array Be** 14.18 21 Pn Pn 02 38 00.7 -2.8
comp=E,0.3nm,0.3s,baz=213,slow=12,SNR=2.3
AKASG LR LR 02 45 00.1
comp=E,270nm,19.5s,baz=199,slow=44
comp=E,0.3nm,0.5s
AKBB **Malin Array Si** 14.18 21 Pn Pn 02 38 03.9 +0.4
AKBB **Malin Array Si** 14.18 21 P Pn 02 38 03.9 +0.4
MOX **Moxa** 14.60 335 P P 02 38 13.3 -2.4
CLL **Collm** 14.76 340 P P 02 38 16.6 -0.8
CLL **Collm** 14.76 340 *i* P P 02 38 16.6 -0.8
CLL pmax pmax
comp=Z,30nm,1.6s
KOPT **Kop Dagi** 15.22 75 P P 02 38 22.8 -0.1
KOPT IAmb IAmb 02 38 31.5
comp=Z,15nm,1.0s
SOC **Sochi** 15.23 62 *e*P P 02 38 21.3 -1.3
SOC *e* 02 41 13.5
SOC MLR MLR
comp=Z,68nm,14.0s
MARD **Mardin** 15.56 86 Pn Pn 02 38 21.6 -0.7
MARD IAmb IAmb 02 38 45.1
comp=Z,10.0nm,0.7s
WLF **Walferdange** 16.10 323 P P 02 38 32.5 +0.3
WLF IAmb IAmb 02 38 50.3
comp=Z,48nm,1.1s
WLF **Walferdange** 16.10 323 P P 02 38 32.5 +0.3
WLF pmax pmax
comp=Z,48nm,1.1s
WLF **Walferdange** 16.10 323 *dx* x 02 38 34.8
WLF *dx* x 02 38 49.5
GURO **Guroymak-BITLI** 16.43 81 P P 02 38 36.4 +0.2
MEM **Membach** 16.82 325 *dx* x 02 38 49.6
MEM *dx* x 02 38 57.7
BCLA **Clavier** 17.01 323 *dP* Pn 02 38 40.4 -0.1
DOU **Dourbes** 17.14 321 *dP* P 02 38 45.5 +1.7
comp=Z,7.9nm,1.3s
BMRD **Maredsous** 17.19 322 *dx* x 02 38 47.7
MNK **Minsk** 17.40 13 *i* P Pn 02 38 44.6 -0.7
MNK *i* S Sn 02 41 57.4 -1.3
MNK pmax pmax
comp=N,21nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=Z,6.0nm,0.8s
MNK MLR MLR
comp=N,361nm,16.0s
MNK MLR MLR
comp=Z,299nm,17.0s
MNK MLR MLR
comp=E,19nm,18.0s
MNK **Minsk** 17.40 13 *i* P Pn 02 38 44.6 -0.7
comp=E,1.0nm,0.7s
MNK *i* P Pn 02 38 44.6 -0.7
comp=N,21nm,0.8s
MNK *i* P Pn 02 38 44.6 -0.7
comp=Z,6.0nm,0.8s,baz=199
MNK *i* PP PnPn 02 38 56.0 +0.6
MNK *i* S Sn 02 41 57.4 -1.3
MNK *i* SS SnSn 02 42 11.9 -0.2
MNK *i* LQ LQ 02 44 13.0
MNK *i* LR LR 02 44 58.3
MNK *i* LRM MLR 02 46 13.7
comp=N,361nm,16.3s
MNK *i* LRM MLR 02 46 24.9
comp=Z,299nm,17.2s
MNK *i* LRM MLR 02 46 25.2
comp=E,19nm,17.6s
KIV **Kislovodsk** 17.40 62 *e*P P 02 38 51.3 +4.4
KIV *e*S S 02 42 07.4 -0.3
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,37nm,14.0s
KBZ **Khabaz** 17.50 63 P Pn 02 38 45.5 -1.2
comp=Z,0.1nm,0.3s,baz=225,slow=14,SNR=1.9
comp=Z,2.8nm,1.1s
NACGM **Naroch** 17.60 11⇑*e*P Pn 02 38 46.6 -1.2
baz=195
ONI **Oni** 17.69 67 P P 02 38 50.0 0.0
ONI **Oni** 17.69 67 P P 02 38 50.0 0.0
ONI pmax pmax
comp=Z,17nm,1.2s
PABE **Paberze** 17.88 5 P P 02 38 51.7 -0.3
PABE IAmb IAmb 02 38 56.2
comp=Z,52nm,1.1s
PABE **Paberze** 17.88 5 *e*P Pn 02 38 51.2 -0.1
IIGN **Ignalina** 17.96 9 *e*P P 02 38 52.5 -0.3
IIGN IAmb IAmb 02 39 11.0
comp=Z,7.4nm,0.8s
ZEI **Tsey** 18.05 67 *e*P P 02 39 00.4 +6.3
ZEI pmax pmax
comp=Z,6.0nm,0.9s
VSVD **Vaisvydziai** 18.36 5 *e*P Pn 02 38 57.3 +0.2
VSVD IAmb IAmb 02 39 07.6
comp=Z,5.3nm,0.5s
GNI **Garni** 18.48 75 P P 02 38 58.4 -0.4
comp=Z,1.4nm,0.3s,baz=202,slow=19,SNR=1.8
GNI LR LR 02 46 08.8
comp=Z,173nm,20.2s,baz=284,slow=37
GNI **Garni** 18.48 75 P P 02 38 58.6 -0.2
GNI **Garni** 18.48 75 P P 02 38 58.6 -0.2
GNI pmax pmax
comp=Z,21nm,1.4s
VSR **Storozhevoye** 18.55 38 *e*P Pn 02 39 01.1 +1.6
VSR pmax pmax
comp=Z,10.0nm,1.3s
VORR **Voronezh** 18.86 37 *e*P Pn 02 39 03.9 +0.6
VORR pmax pmax
comp=Z,20nm,0.3s
LPSR **Galich'ya Gora** 19.36 34 *e*P Pn 02 39 10.6 +1.3
LPSR pmax pmax
comp=Z,20nm,0.9s
ESBB **Sonseca Array** 19.70 283 P P 02 39 11.3 -0.8
ESDC **Sonseca Array** 19.70 283 P P 02 39 11.1 -1.1
comp=Z,0.1nm,0.3s,baz=79,slow=11,SNR=28
ESDC LR LR 02 47 07.2
comp=Z,102nm,18.5s,baz=73,slow=38
comp=Z,4.8nm,1.0s
ESDC **Sonseca Array** 19.70 283 P P 02 39 11.6 -0.5
VRH **Novokhopyorsk** 19.82 41 *e*P Pn 02 39 16.7 +1.9
VRH pmax pmax
comp=Z,20nm,0.7s
PAB **San Pablo** 20.00 283 P P 02 39 14.7 -0.7
PAB **San Pablo** 20.00 283 P P 02 39 14.7 -0.7
PAB pmax pmax
comp=Z,9.0nm,1.1s
TAM **Tamanrasset** 20.07 227 P P 02 39 14.3 -2.0
TAM **Tamanrasset** 20.07 227 P P 02 39 14.3 -2.0
TAM pmax pmax
comp=Z,8.0nm,1.2s
OBN **Obninsk** 20.29 26 LR LR 02 47 57.5
comp=Z,38nm,20.1s,baz=201,slow=39
OBN **Obninsk** 20.29 26 P P 02 39 18.4 +0.1
OBN **Obninsk** 20.29 26 *e*P Pn 02 39 22.2 +1.9
OBN *e* 02 39 32.0
OBN *e*PPP PPP 02 39 46.4
OBN pmax pmax
comp=Z,13nm,0.6s
OBN MLR MLR
comp=Z,181nm,15.0s
VSU **Vasula** 21.06 8 *e*P P 02 39 26.3 -0.3
MTSE **Matsula** 21.07 4 *e*P P 02 39 26.3 -0.4
MOS **Moscow** 21.16 26 *e*P P 02 39 24.8 -2.8
MOS *e* 02 39 50.5
MOS *e*S S 02 43 19.3 -3.4
MOS *e* 02 43 50.2
MOS pmax pmax
comp=Z,41nm,1.1s
MDT **Midelt** 21.58 265 P P 02 39 32.9 +0.3
comp=Z,3.7nm,1.0s,baz=65,slow=12,SNR=5.0
MDT LR LR 02 50 00.6
comp=Z,43nm,19.3s,baz=90,slow=42
comp=Z,3.7nm,1.0s
PBRG **Braganca** 21.80 290 *e*P P 02 39 38.4 +3.6
comp=Z,31nm,1.4s
MVO **Moncorvo** 22.01 288 *e*P P 02 39 36.6 -0.5
comp=Z,24nm,1.9s
PMRV **Marv??o** 22.36 283 *e*P P 02 39 44.9 +4.1
comp=Z,18nm,1.3s
PCBR **Castelo Branco** 22.40 284 *e*P P 02 39 45.8 +4.6
MTE **Manteigas** 22.42 286 *e*P P 02 39 46.0 +4.5
PESTR **Estremoz** 22.57 282 *e*P P 02 39 45.0 +2.0
comp=Z,16nm,2.7s
PESTR **Estremoz** 22.57 282 P P 02 39 41.5 -1.6
POLO **Lamas de Olo** 22.58 288 *e*P P 02 39 48.1 +4.8
PVIS **Viseu** 22.67 287 *e*P P 02 39 48.1 +3.9
PUL **Pulkovo** 22.83 12⇑*e*P P 02 39 47.7 +2.2
PUL pmax pmax
comp=Z,33nm,0.8s
HFS **Hagfors** 22.93 350 P P 02 39 44.9 -1.7
comp=Z,5.8nm,0.8s,baz=175,slow=7.4,SNR=8.9
HFS LR LR 02 50 03.6
comp=Z,169nm,19.9s,baz=166,slow=40
comp=Z,5.8nm,0.8s
PMTG **Montargil** 23.04 282 *e*P P 02 39 46.7 -1.2
comp=Z,19nm,1.5s
PCVE **Castro Verde** 23.09 279 *e*P P 02 39 50.4 +2.0
comp=Z,33nm,1.6s
MESJ **Messejana** 23.19 279 *e*P P 02 39 49.6 +0.1
BELG **Belogornoye** 23.57 43 P P 02 39 51.5 -1.7
comp=Z,7.0nm,0.6s,baz=337,slow=1.8,SNR=7.8
BELG LR LR 02 50 09.3
comp=Z,93nm,20.3s,baz=191,slow=39
comp=Z,7.0nm,0.6s
BELG **Belogornoye** 23.57 43⇑*e*P P 02 39 57.3 +4.2
BELG pmax pmax
comp=Z,3.0nm,0.9s
NC602 **NORSAR Array S** 23.82 348 P P 02 39 54.9 -0.6
FINES **FINESS Array B** 23.94 6 P P 02 39 54.2 -2.4
comp=Z,1.7nm,0.4s,baz=180,slow=11,SNR=15
FINES LR LR 02 50 15.8
comp=Z,332nm,18.7s,baz=194,slow=39
comp=Z,1.7nm,0.4s
FINES **FINESS Array B** 23.94 6 P P 02 39 55.6 -1.0
FINES **FINESS Array B** 23.94 6 P P 02 39 55.6 -1.0
FIA1 **FINESS Array S** 23.94 6 P P 02 39 55.5 -1.0
FIA1 IAmb IAmb 02 40 07.1
comp=Z,22nm,1.1s
NAO01 **NORSAR Array S** 24.03 348 P P 02 39 55.3 -2.2
EKA **Eskdalemuir Ar** 24.09 325 P P 02 39 56.2 -1.9
comp=Z,1.6nm,0.4s,baz=127,slow=10,SNR=16
EKA LR LR 02 52 53.9
comp=Z,170nm,18.6s,baz=124,slow=45
comp=Z,1.6nm,0.4s
NB201 **NORSAR Array S** 24.16 348 P P 02 39 58.1 -0.6
NB2 **NORSAR Subarra** 24.16 348 P P 02 39 58.0 -0.8
comp=Z,21nm,1.1s,baz=154,slow=10
NOA **NORSAR Array B** 24.16 348 P P 02 39 56.5 -2.2
comp=Z,2.7nm,1.0s,baz=155,slow=9.2,SNR=7.1
NOA LR LR 02 51 17.7
comp=Z,192nm,18.7s,baz=165,slow=41
comp=Z,2.7nm,1.0s
NC204 **NORSAR Array S** 24.46 348 P P 02 40 00.8 -0.7
RAYN **Ar Rayn** 25.18 117 P P 02 40 07.4 -0.9
RAYN IAmb IAmb 02 40 25.1
comp=Z,12nm,1.4s
RAYN **Ar Rayn** 25.18 117 P P 02 40 07.4 -0.9
RAYN pmax pmax
comp=Z,12nm,1.4s
KLMR **Klimovskoe** 25.87 21 *e*P P 02 40 15.1 +0.9
KLMR pmax pmax
comp=Z,48nm,1.8s
KLMR **Klimovskoe** 25.87 21 *e*P P 02 40 15.2 +1.0
KLMR AMP 02 40 24.0
comp=Z,48nm,1.8s
KIRV **Kirov** 27.76 32⇑*e*P P 02 40 36.2 +5.0
PRGR **Permogore** 28.35 25 *e*P P 02 40 45.2 +8.8
PRGR pmax pmax
comp=Z,10.0nm,1.1s
AKTO **Aktyubinsk** 29.04 52 P P 02 40 40.9 -1.9
comp=Z,1.1nm,0.5s,baz=270,slow=10,SNR=3.8
AKTO LR LR 02 54 42.2
comp=Z,58nm,18.4s,baz=264,slow=41
comp=Z,1.1nm,0.5s
TOA0 **Torodi Ar. Sit** 30.01 220 P P 02 40 50.9 -0.7
TOA0 IAmb IAmb 02 40 58.8
comp=Z,4.9nm,0.8s
TORD **Torodi Ar. Bea** 30.01 220 P P 02 40 51.8 +0.1
comp=Z,16nm,0.6s,baz=46,slow=13,SNR=5.3
ABKAR **Akbulak array** 30.07 55 P P 02 40 51.9 0.0
ARU **Arti** 31.06 41 LR LR 02 53 28.2
comp=Z,53nm,19.8s,baz=247,slow=36
ARU **Arti** 31.06 41 *d* *i* P P 02 41 04.5 +4.0
ARU 02 42 04.7
ARU S S 02 46 13.7 +8.3
ARU SS SnSn 02 47 55.8 +10
ARU pmax pmax
comp=Z,8.0nm,1.3s
ARCES **ARCESS Array B** 31.95 3 P P 02 41 06.1 -2.2
comp=Z,3.3nm,0.8s,baz=187,slow=9.5,SNR=7.1
ARCES LR LR 02 55 13.8
comp=Z,172nm,19.2s,baz=202,slow=39
comp=Z,3.3nm,0.8s
KOWA **Kowa** 32.16 231 P P 02 41 12.2 +1.5
comp=Z,0.5nm,0.6s,baz=30,slow=20,SNR=1.1
KOWA LR LR 02 55 05.9
comp=Z,115nm,18.6s,baz=302,slow=38
comp=Z,0.5nm,0.6s
UOSS **Minazif** 32.33 103 P P 02 41 11.4 -0.7
UOSS IAmb IAmb 02 41 18.5
comp=Z,8.2nm,0.8s
WSAR **Wadi Sarin** 35.11 103 LR LR 02 59 07.1
comp=Z,48nm,18.2s,baz=314,slow=42
JMIC **Jan Mayen** 36.73 344 LR LR 02 56 57.7
comp=Z,47nm,19.2s,baz=228,slow=36
BORG **Borgarnes** 36.76 331 LR LR 02 58 40.4
comp=Z,102nm,18.5s,baz=143,slow=39
BRVK **Borovoye** 36.95 49 P 02 41 50.8 -0.9
BRVK IAmb IAmb 02 42 08.1
comp=Z,12nm,1.2s
BRVK **Borovoye** 36.95 49 P P 02 41 50.8 -0.9
BRVK pmax pmax
comp=Z,12nm,1.3s
BVAR **Borovoye Array** 37.01 49 LR LR 02 59 46.2
comp=Z,38nm,18.1s,baz=264,slow=41
CHGR **Chuyangaron** 37.38 73 P P 02 41 54.6 -1.1
CHGR **Chuyangaron** 37.38 73 P P 02 41 54.6 -1.1
CHGR pmax pmax
comp=Z,20nm,0.8s
KK31 **Karatay Array** 37.51 66 P P 02 41 54.9 -1.6
KK31 IAmb IAmb 02 42 12.6
comp=Z,5.8nm,1.0s
KK31 **Karatay Array** 37.51 66 P P 02 41 54.9 -1.6
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KKAR **Karatay Array** 37.51 66 P P 02 41 55.6 -0.9
KKAR **Karatay Array** 37.51 66 P P 02 41 55.6 -0.9
GAR **Garm** 38.18 72 P P 02 42 01.5 -0.9
GAR IAmb IAmb 02 42 08.9
comp=Z,14nm,0.9s
DBIC **Dimbokro** 38.92 224 P P 02 42 09.4 +0.8
comp=Z,3.9nm,0.7s,baz=188,slow=11,SNR=3.6
comp=Z,3.9nm,0.7s
MBAR **Mbarara** 39.15 165 LR LR 03 01 12.1
comp=Z,81nm,18.7s,baz=342,slow=40
AAK **Ala-Archa** 40.47 66 LR LR 03 02 08.6
comp=Z,32nm,18.1s,baz=282,slow=41
AAK **Ala-Archa** 40.47 66⇑*e*P P 02 42 24.3 +2.7
AAK pmax pmax
comp=Z,3.0nm,0.8s
SPITS **Spitsbergen Ar** 40.61 358 LR LR 03 00 44.4
comp=Z,212nm,21.9s,baz=145,slow=39
BOOM **Boomskoye usch** 41.55 66 P P 02 42 30.0 -0.5
BOOM **Boomskoye usch** 41.55 66 P P 02 42 30.0 -0.5
BOOM pmax pmax
comp=Z,32nm,1.4s
NIL **Nilore** 42.05 79 P P 02 42 32.2 -2.3
NIL IAmb IAmb 02 42 41.2

comp=Z,14nm,1.1s
NIL Nilore 42.05 79 P **P 02 42 32.2 -2.3**
NIL pmax pmax
comp=Z,14nm,1.1s
KURBB Kurchatov Arra 42.08 53 LR LR 03 02 38.4
comp=Z,68nm,18.1s,baz=287,slow=40
KURK Kurchatov 42.13 53 P **P 02 42 33.7 -1.2**
KURK IAmb IAmb 02 42 40.9
comp=Z,10.0nm,1.1s
KURK Kurchatov 42.13 53 P **P 02 42 33.7 -1.2**
KURK pmax pmax
comp=Z,10.0nm,1.1s
MK31 Makanchi Array 45.10 58 P **P 02 42 58.3 -0.6**
MK31 IAmb IAmb 02 43 04.6
comp=Z,4.9nm,0.8s
MK31 Makanchi Array 45.10 58 P **P 02 42 58.3 -0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 45.10 58 P **P 02 42 58.1 -0.8**
comp=Z,1.7nm,0.5s,baz=272,slow=7.8,SNR=15
MKAR LR LR 03 04 11.2
comp=Z,42nm,19.6s,baz=342,slow=39
comp=Z,1.7nm,0.5s
ZAA0 Zalesovo Array 45.61 48 P **P 02 43 01.2 -1.6**
ZAA0 IAmb IAmb 02 43 27.2
comp=Z,4.9nm,0.7s
ZALV Zalesovo Beam 45.61 48 P **P 02 43 01.2 -1.5**
comp=Z,2.3nm,0.5s,baz=268,slow=9.1,SNR=6.8
ZALV LR LR 03 04 01.7
comp=Z,72nm,19.6s,baz=255,slow=39
comp=Z,2.3nm,0.5s
ZALV Zalesovo Beam 45.61 48 P **P 02 42 59.9 -2.9**
NRIK Noril'sk 46.97 26 LR LR 03 04 51.0
comp=Z,70nm,19.6s,baz=22,slow=39
DGZ Jazzator, Alta 47.88 53⇓*eP* **P 02 43 24.0 +3.2**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
SFJD Kangerlussuaq 48.88 330 LR LR 03 06 00.1
comp=Z,119nm,18.5s,baz=89,slow=38
WMQ Urumqi 49.53 61 *eP* **P 02 43 37.5 +4.0**
LSZ Lusaka 53.13 172 P **P 02 44 01.6 +0.9**
comp=Z,0.9nm,0.4s,baz=349,slow=5.2,SNR=2.0
LSZ LR LR 03 08 22.2
comp=Z,95nm,19.3s,baz=324,slow=38
comp=Z,0.9nm,0.4s
TSUM Tsumeb 56.73 184 LR LR 03 11 20.2
comp=Z,96nm,18.4s,baz=142,slow=39
SONM Songino Array 60.34 51 P **P 02 44 51.7 -0.1**
comp=Z,0.5nm,0.6s,baz=270,slow=7.4,SNR=4.1
comp=Z,0.5nm,0.6s
SONM Songino Array 60.34 51 P **P 02 44 50.8 -1.0**
SONM IAmb IAmb 02 45 07.9
comp=Z,5.8nm,1.4s
SONM Songino Array 60.34 51 P **P 02 44 50.8 -1.0**
SONM pmax pmax
comp=Z,6.0nm,1.4s
LBTB Lobatse 62.55 175 LR LR 03 16 22.3
comp=Z,42nm,18.6s,baz=355,slow=40
BOSA Boshof 66.11 176 LR LR 03 14 59.7
comp=Z,45nm,21.9s,baz=7.5,slow=36
HHC Hu-ho-hao-te 66.86 56 *eP* **P 02 45 37.7 +2.8**
PZH PanZhiHua 67.24 73 P **P 02 45 39.6 +2.1**
TRQ Mont Tremblant 67.44 312 P **P 02 45 37.0 -1.5**
ZEA Zeya 68.92 38 *eP* **P 02 45 50.7 +3.2**
CMAR Chiang Mai Arr 69.44 82 P **P 02 45 50.1 -1.2**
comp=Z,1.2nm,0.7s,baz=39,slow=42,SNR=3.1
comp=Z,1.2nm,0.7s
SUR Sutherland 69.75 180 LR LR 03 18 49.5
comp=Z,78nm,18.3s,baz=4.5,slow=38
INK Inuvik 72.59 350 P **P 02 46 06.6 -3.0**
comp=Z,1.1nm,0.8s,baz=356,slow=4.6,SNR=4.0
INK LR LR 03 19 40.5
comp=Z,46nm,20.3s,baz=284,slow=37
comp=Z,1.1nm,0.8s
KLR Kul'dur 73.89 40 P **P 02 46 14.4 -3.1**
comp=Z,0.7nm,0.5s,baz=314,slow=18,SNR=1.8
comp=Z,0.7nm,0.5s
YKA Yellowknife Ar 73.99 340 LR LR 03 20 48.9
comp=Z,89nm,18.9s,baz=66,slow=37
MA2 Magadan 74.49 24 LR LR 03 24 35.6
comp=Z,65nm,18.3s,baz=307,slow=40
IMAR Indian Mountai 76.54 358 P **P 02 46 31.9 -0.7**
H21K Melozitna Rive 76.84 357 P **P 02 46 33.9 -0.3**
H21K IAmb IAmb 02 46 41.4
comp=Z,8.1nm,1.1s
SJG San Juan 77.09 283 LR LR 03 14 25.9
comp=Z,25nm,21.5s,baz=234,slow=31
USRK Ussuriysk Ar. 77.25 44 LR LR 03 24 21.7
comp=Z,78nm,18.9s,baz=216,slow=39
USRK Ussuriysk Ar. 77.25 44 P **P 02 46 36.2 -0.7**
USRK Ussuriysk Ar. 77.25 44 P **P 02 46 36.3 -0.7**
ILAR Eielson Array 77.40 355 LR LR 03 21 32.3
comp=Z,35nm,21.1s,baz=312,slow=36
BCAR Beaver Creek A 78.62 352 P **P 02 46 44.6 +0.3**
KSRS Korea Array 79.21 51 P **P 02 46 47.6 -0.3**
comp=Z,1.0nm,0.7s,baz=130,slow=18,SNR=2.0
comp=Z,1.0nm,0.7s
TKL Tuckaleechee C 79.22 307 LR LR 03 21 50.9
comp=Z,48nm,18.4s,baz=44,slow=36
NEW Newport 86.69 334 LR LR 03 27 43.6
comp=Z,49nm,19.8s,baz=38,slow=37
PDAR Pinedale Array 88.21 326 LR LR 03 29 16.2
comp=Z,69nm,18.2s,baz=48,slow=37
ELK Elko 92.30 328 LR LR 03 30 55.2
comp=Z,65nm,18.1s,baz=256,slow=37
ANMO Albuquerque 92.88 319 LR LR 03 29 14.6
comp=Z,60nm,21.8s,baz=50,slow=35
SIV San Ignacio 93.67 253 LR LR 03 31 35.5
comp=Z,30nm,18.3s,baz=104,slow=36
YBH Yreka Blue Hor 94.32 334 LR LR 03 34 43.3
comp=Z,42nm,18.2s,baz=8.0,slow=38
NVAR Mina Array Bea 95.52 329 LR LR 03 32 31.3
comp=Z,57nm,19.2s,baz=85,slow=36
TXAR Lajitas Array 95.66 314 P **P 02 48 08.9 +0.1**
comp=Z,0.1nm,0.6s,baz=38,slow=15,SNR=1.2
TXAR LR LR 03 30 29.4
comp=Z,26nm,19.1s,baz=32,slow=35
comp=Z,0.1nm,0.6s
PFO Pinyon Flats O 98.81 325 LR LR 03 36 00.9
comp=Z,37nm,18.4s,baz=58,slow=37
WRA Warramunga Arr 120.00 93 PKP **PKPdf 02 53 33.3 -0.5**
comp=Z,0.2nm,0.7s,baz=315,slow=2.1,SNR=1.1
ASAR Alice Springs 121.61 97 PKP **PKiKP 02 53 37.6 +0.6**
comp=Z,0.5nm,0.8s,baz=317,slow=1.4,SNR=2.4

MAN ***03*** *02:40:58.1, 4°.62N×126°.47E, h20km, mb5.0, ML3.9, MS4.0*
IDC ***03*** *02:41:00.9±2.3, 4°.88N×126°.33E, h77km±21km, mb3.9/14, mbtmp4.2/16, MS2.9/4, Error ellipse: s-maj=42.6km s-min=11.7km az=73.0*
NEIC ***03*** *02:41:01.6±1.7, 4°.93N±0°.06×126°.5E±0°.1, h80km±8km, mb4.3/27, Error ellipse: s-maj=18.3km s-min=7.5km az=73.0*
DJA ***03*** *02:41:04.8±0.5, 5°N±4°×12°6E±°, h63km±13km, M4.5/13, mb4.4/9, mB5.1/6, MLv4.5/13, Mw(mB)4.5/6*
ISC 03 02:41:02.3±0.9,**4°.81N**±0°.04×**126°.41E**±0°.07,**h94**km±8km,
n78,σ1**°46**/86,**mb4.3**/25,**3C-6D**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.42**	**218**	P		**Pn**		**02 41 27.5**	**+0.2**
DDMP	**Don Marcelino,**	**1.46**	**332**⇓	*eP*		**Pn**		**02 41 25.3**	**-2.6**
DDMP				*eS*		**Sn**		**02 41 45.3**	**-1.8**
GSPH	**General Santos**	**1.93**	**311** ⇓	*i P*		**Pn**		**02 41 31.6**	**-2.3**
GSPH				*i S*		**Sn**		**02 41 55.5**	**-2.5**
MATI	**Mati**	**2.13**	**356**⇓	*eP*		**Pn**		**02 41 34.6**	**-1.8**
MATI				*eS*		**Sn**		**02 42 06.2**	**+3.8**
DAV	**Davao City (W)**	**2.39**	**340**	P		**Pn**		**02 41 37.6**	**-2.3**
	303nm,0.4s,baz=95,slow=3.2,SNR=2.4								
DAV	**Davao City (W)**	**2.39**	**340**	Pn		**Pn**		**02 41 38.1**	**-1.8**
SKMP	**Bagumbayan, Su**	**2.52**	**313**⇑	*eP*		**Pn**		**02 41 41.6**	**+0.1**
SKMP				*eS*		**Sn**		**02 42 13.2**	**+1.7**
KCP	**Kidapawan**	**2.55**	**329**⇑	*i P*		**Pn**		**02 41 41.4**	**-0.6**
KCP				*i S*		**Sn**		**02 42 16.7**	**+4.2**
CTBH	**Cotabato--PC H**	**3.22**	**318**⇑	*i P*		**Pn**		**02 41 51.0**	**+0.1**
BUKP	**Musuan**	**3.33**	**336**	*i P*		**Pn**		**02 41 52.6**	**+0.2**
BUKP				*i S*		Sn		02 42 43.0	+12
BIPH	**Bislig**	**3.35**	**359**⇓	*eP*		**Pn**		**02 41 51.2**	**-1.5**
BIPH				*eS*		**Sn**		**02 42 34.6**	**+3.0**
CGP	**Cagayan de Oro**	**4.00**	**335**⇓	*eP*		Pn		02 42 07.2	+5.7
CGP				*eS*		Sn		02 42 55.5	+8.1
TNTI	**Ternate**	**4.12**	**167**	Pn		**Pn**		**02 42 03.3**	**+0.3**
TNTI	**Ternate**	**4.12**	**167**	P		**Pn**		**02 42 03.4**	**+0.3**
TNTI				S		**Sn**		**02 42 49.4**	**-0.8**
PAGZ	**Pagadian**	**4.26**	**315**	*i P*		**Pn**		**02 42 06.0**	**+0.9**
GLSP	**General Luna,**	**4.95**	**357**⇓	*eP*		**Pn**		**02 42 16.7**	**+2.3**
GLSP				*eS*		**Sn**		**02 43 15.8**	**+5.4**
GTOI	**Gorontalo**	**5.36**	**219**	P		**Pn**		**02 42 21.4**	**+1.5**
	0.1nm240nm11nm,0.6s								
LBMI	**Labuha**	**5.52**	**169**	P		**Pn**		**02 42 22.8**	**+0.7**
	0.3nm1μm66nm,0.8s								
MRSI	**Marisa**	**6.20**	**226**	P		**Pn**		**02 42 33.2**	**+1.9**
	0.3nm1μm73nm,0.5s								
TOLI2	**Tolitoli**	**6.71**	**237**	Pn		**Pn**		**02 42 38.6**	**+0.3**
SANI	**Sanana**	**6.83**	**184**	P		**Pn**		**02 42 37.6**	**-2.3**
LUWI	**Luwuk**	**6.85**	**212**	Pn		**Pn**		**02 42 40.9**	**+0.6**
SIJI	**Sorong**	**7.44**	**139**	P		**Pn**		**02 42 47.4**	**-0.9**
	14nm,0.3s,baz=339,slow=16,SNR=6.6								
SIJI				LR		LR		02 46 11.2	
	comp=Z,62nm,18.9s,baz=355,slow=41								
MYLDM	**Lahad Datu**	**7.89**	**273**			**Pn**		**02 42 55.0**	**+0.7**
NLAI	**Namlea**	**8.02**	**175**	P		**Pn**		**02 42 55.3**	**-0.9**
	0.7nm33nm,0.5s								
FAKI	**Fak Fak**	**9.64**	**143**			**Pn**		**02 43 16.3**	**-1.9**
FAKI	**Fak Fak**	**9.64**	**143**	P		**Pn**		**02 43 18.6**	**+0.4**
KAPI	**Kappang**	**11.81**	**214**	LR		LR		02 48 41.1	
	comp=Z,60nm,21.3s,baz=20,slow=39								
SBUM	**Sibu**	**14.35**	**261**			**Pn**		**02 44 22.0**	**+0.9**
MTN	**Manton Dam**	**18.15**	**165**	P		**P**		**02 45 07.0**	**-0.4**
MTN				IAmb		IAmb		02 45 14.0	
	comp=Z,33nm,1.5s								
TPUB	**Ta-pu**	**19.21**	**344**	P		**P**		**02 45 17.4**	**-1.6**
TPUB				IAmb		IAmb		02 45 23.2	
	comp=Z,26nm,1.1s								
KNRA	**Kununurra**	**20.49**	**174**	P		**P**		**02 45 33.8**	**+1.0**
KNRA				IAmb		IAmb		02 45 40.7	
	comp=Z,28nm,1.1s								
FITZ	**Fitzroy Crossi**	**22.77**	**182**	P		**P**		**02 45 57.2**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=8.8,slow=6.6,SNR=12								
	comp=Z,3.5nm,0.7s								
FITZ	**Fitzroy Crossi**	**22.77**	**182**	P		**P**		**02 45 58.1**	**+1.0**
FITZ				IAmb		IAmb		02 46 01.1	
	comp=Z,16nm,1.3s								
WB0	**Warramunga Arr**	**25.65**	**162**	P		**P**		**02 46 24.5**	**+1.1**
WB0				IAmb		IAmb		02 46 27.3	
	comp=Z,11nm,1.1s								
WRA	**Warramunga Arr**	**25.80**	**163**	P		**P**		**02 46 26.1**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=344,slow=10,SNR=18								
	comp=Z,4.0nm,0.8s								
WRA	**Warramunga Arr**	**25.80**	**163**	P		**P**		**02 46 25.7**	**+0.9**
WB2	**Warramunga Arr**	**25.80**	**163**	P		**P**		**02 46 26.6**	**+1.7**
WR0	**Warramunga Arr**	**25.88**	**162**	P		**P**		**02 46 27.2**	**+1.7**
PSA00	**Pilbara Seismi**	**27.00**	**194**	P		**P**		**02 46 35.5**	**0.0**
PSA00				IAmb		IAmb		02 46 53.2	
	comp=Z,15nm,1.1s								
ASAR	**Alice Springs**	**29.23**	**166**	P		**P**		**02 46 56.8**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=349,slow=7.2,SNR=15								
ASAR				PcP		**PcP**		**02 50 02.1**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=338,slow=2.3,SNR=4.1								
	comp=Z,0.7nm,0.5s								
ASAR	**Alice Springs**	**29.23**	**166**	P		**P**		**02 46 56.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**30.06**	**299**	LR		LR		03 01 11.8	
	comp=Z,20nm,18.1s,baz=245,slow=40								
MORW	**Morawa**	**35.12**	**196**	P		**P**		**02 47 47.3**	**+0.4**
STKA	**Stephens Creek**	**39.24**	**159**	P		**P**		**02 48 23.0**	**+1.2**
	comp=Z,4.3nm,0.9s,baz=309,slow=14,SNR=3.0								
	comp=Z,4.3nm,0.9s								
STKA	**Stephens Creek**	**39.24**	**159**	P		**P**		**02 48 22.9**	**+1.2**
KLR	**Kul'dur**	**44.50**	**5**	P		**P**		**02 49 04.0**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=176,slow=7.1,SNR=4.1								
	comp=Z,1.0nm,0.4s								
SONM	**Songino Array**	**46.18**	**341**	P		**P**		**02 49 17.2**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=157,slow=8.6,SNR=7.2								
SONM				PcP		**PcP**		**02 50 52.8**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=162,slow=0.5,SNR=4.6								
	comp=Z,0.9nm,0.6s								
SONM	**Songino Array**	**46.18**	**341**	P		**P**		**02 49 17.2**	**-0.6**
MK31	**Makanchi Array**	**56.49**	**325**	P		**P**		**02 50 34.5**	**-0.3**
MK31				IAmb		IAmb		02 50 35.0	
	comp=Z,2.0nm,0.8s								
MKAR	**Makanchi Array**	**56.49**	**325**	P		**P**		**02 50 34.4**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=128,slow=7.9,SNR=18								
MKAR				PcP		**PcP**		**02 51 31.1**	**+0.6**
	comp=Z,4.1nm,0.7s,baz=123,slow=3.6,SNR=15								
	comp=Z,2.6nm,0.7s								
MKAR	**Makanchi Array**	**56.49**	**325**	P		**P**		**02 50 34.0**	**-0.7**
MAKZ	**Makanchi**	**56.68**	**325**	P		**P**		**02 50 35.1**	**-0.9**
MAKZ				IAmb		IAmb		02 50 36.8	
	comp=Z,4.3nm,0.9s								
KURK	**Kurchatov**	**60.67**	**327**	P		**P**		**02 51 01.8**	**-1.7**
KKAR	**Karatay Array**	**62.23**	**317**	P		**P**		**02 51 13.4**	**-0.9**
ADK	**Adak**	**66.26**	**35**	P		**P**		**02 51 38.9**	**-1.5**
BRVK	**Borovoye**	**66.32**	**327**	P		**P**		**02 51 40.3**	**-0.4**
BRVK				IAmb		IAmb		02 51 41.0	
	comp=Z,3.4nm,0.8s								
NRIK	**Noril'sk**	**69.31**	**346**	P		**P**		**02 51 59.5**	**+0.3**
	comp=Z,9.1nm,0.8s,baz=117,slow=5.9,SNR=12								
	comp=Z,9.1nm,0.8s								
NRIK	**Noril'sk**	**69.31**	**346**	P		**P**		**02 51 58.4**	**-0.8**
ABKAR	**Abkulak array**	**71.12**	**321**	P		**P**		**02 52 09.4**	**-1.2**
AKTO	**Aktyubinsk**	**72.62**	**321**	P		**P**		**02 52 19.2**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=91,slow=9.1,SNR=7.5								
	comp=Z,1.6nm,0.6s								
IMAR	**Indian Mountai**	**81.50**	**24**	P		**P**		**02 53 08.6**	**-0.4**
PPLA	**Purkeypile**	**81.82**	**27**	P		**P**		**02 53 11.4**	**+0.5**
H21K	**Melozitna Rive**	**81.84**	**24**	P		**P**		**02 53 11.2**	**+0.4**
H21K				IAmb		IAmb		02 53 18.4	
	comp=Z,7.6nm,1.5s								
CAST	**Castle Rocks**	**81.92**	**27**	P		**P**		**02 53 10.7**	**-0.6**
CAST				IAmb		IAmb		02 53 24.1	
	comp=Z,7.1nm,1.4s								
I21K	**Tanana**	**82.13**	**25**	P		**P**		**02 53 12.4**	**0.0**
BPAW	**Bear Paw Mtn.**	**82.46**	**26**	P		**P**		**02 53 14.8**	**+0.6**
BPAW				IAmb		IAmb		02 53 46.1	
	comp=Z,4.4nm,1.2s								
MLY	**Manley**	**82.64**	**25**	P		**P**		**02 53 15.7**	**+0.6**
MLY				IAmb		IAmb		02 53 17.4	
	comp=Z,3.7nm,1.1s								
I23K	**Minto, Yukon-K**	**83.23**	**25**	P		**P**		**02 53 17.3**	**-0.8**
I23K				IAmb		IAmb		02 53 20.8	
	comp=Z,7.0nm,1.4s								
H24K	**Noodor Dome**	**83.88**	**24**	P		**P**		**02 53 22.7**	**+1.2**
H24K				IAmb		IAmb		02 53 37.6	
	comp=Z,4.6nm,1.2s								
GLI	**Glacier Island**	**84.12**	**29**	P		**P**		**02 53 22.3**	**-0.4**
ILAR	**Eielson Array**	**84.27**	**25**	P		**P**		**02 53 23.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=281,slow=8.1,SNR=4.9								
	comp=Z,0.3nm,0.6s								
BRTR	**Keskin Array B**	**89.09**	**310**	P		**P**		**02 53 48.2**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=118,slow=5.5,SNR=3.9								
	comp=Z,0.3nm,0.7s								
ARCES	**ARCESS Array B**	**89.33**	**340**	P		**P**		**02 53 47.2**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=73,slow=4.2,SNR=7.2								
	comp=Z,2.6nm,0.7s								
FINES	**FINESS Array B**	**90.74**	**332**	P		**P**		**02 53 54.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=62,slow=4.7,SNR=16								
	comp=Z,1.2nm,0.5s								
NB2	**NORSAR Subarra**	**97.69**	**334**	P		**P**		**02 54 25.4**	**-1.1**
	comp=Z,4.9nm,1.1s,baz=66,slow=4.6								
NOA	**NORSAR Array B**	**97.69**	**334**	P		**P**		**02 54 25.6**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=65,slow=4.6,SNR=8.1								
NOA				LR		LR		03 40 35.9	
	comp=Z,8.0nm,21.3s,baz=320,slow=37								
	comp=Z,1.3nm,0.7s								
TORD	**Torodi Ar. Bea**	**122.28**	**289**	PKP		**PKPdf**		**02 59 47.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=73,slow=2.2,SNR=3.4								

IDC ***03*** *02:54:05.4±0.9, 9°.46S×111°.76E, h0km, mb4.4/16, mbtmp4.4/17, ML3.9/1, MS3.3/5, Error ellipse: s-maj=28.2km s-min=16.0km az=42.0*
DJA ***03*** *02:54:05.4±0.6, 10°.5S±3°×111°.1E±°, h11km±3km, M4.4/13, mb4.6/13, mB5.1/2, MLv4.3/13, Mw(mB)4.4/2*
NEIC ***03*** *02:54:10.2±1.9, 9°.51S±0°.05×111°.72E±0°.06, h35km±1km, mb4.6/38, Error ellipse: s-maj=10.2km s-min=8.3km az=67.0*
ISC 03 02:54:08.7±0.5,**9°.82S**±0°.07×**111°.64E**±0°.06,**h35**km,**n137**,
σ1**°93**/136,**mb4.6**/32,**MS3.3**/5,**1C**,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.68**	**344**	P		**Pn**		**02 54 33.4**	**-2.3**
PWJI	**Pagerwojo**	**1.80**	**5**	P		**Pn**		**02 54 35.8**	**-1.5**
UGM	**Wanagama**	**2.20**	**330**	Pn		**Pn**		**02 54 41.9**	**-0.9**
UGM	**Wanagama**	**2.20**	**330**	P		**Pn**		**02 54 42.5**	**-0.3**
UGM	**Wanagama**	**2.20**	**330**	P		**Pn**		**02 54 43.4**	**+0.6**
YOGI	**Yogyakarta**	**2.40**	**326**	P		**Pn**		**02 54 45.9**	**+0.4**
JAGI	**Jajag, Banyuwa**	**2.82**	**62**	Pn		**Pn**		**02 54 50.4**	**-0.9**
JAGI	**Jajag, Banyuwa**	**2.82**	**62**	P		**Pn**		**02 54 51.9**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.82**	**62**	P		**Pn**		**02 54 52.4**	**+1.1**
TBJI	**Tambak Boyo**	**2.99**	**4**	P		**Pn**		**02 54 53.5**	**-0.2**
SMRI	**Semarang**	**3.00**	**337**	Pn		**Pn**		**02 54 51.5**	**-2.4**
SMRI	**Semarang**	**3.00**	**337**	P		**Pn**		**02 54 55.1**	**+1.2**
SMRI	**Semarang**	**3.00**	**337**	P		**Pn**		**02 54 55.4**	**+1.5**
KMMI	**Kalianget**	**3.59**	**40**	P		**Pn**		**02 55 02.6**	**+0.7**
SRBI	**Singaraja**	**3.93**	**64**	P		**Pn**		**02 55 08.4**	**+1.8**
LEM	**Lembang**	**4.97**	**306**	Pn		**Pn**		**02 55 22.2**	**+1.1**
	4.8nm,0.3s,baz=162,slow=20,SNR=1.6								
	27nm,0.5s								
TWSI	**Taliwang, Sumb**	**5.28**	**79**	P		**Pn**		**02 55 26.7**	**+1.5**
	0.3nm65nm,0.7s								
XMIS	**Christmas Isla**	**5.93**	**263**	Pn		**Pn**		**02 55 34.6**	**+0.4**
PLAI	**Plampang**	**6.13**	**81**	P		**Pn**		**02 55 38.2**	**+1.3**
	0.8nm2μm217nm,0.9s								
PLAI	**Plampang**	**6.13**	**81**	P		**Pn**		**02 55 39.0**	**+2.1**
BBKI	**Banjar Baru**	**7.07**	**27**	P		**Pn**		**02 55 52.6**	**+2.8**
	0.5nm43nm,0.4s								
KAPI	**Kappang**	**9.35**	**60**	Pn		**Pn**		**02 56 21.9**	**+0.8**
	0.3nm,0.3s,baz=233,slow=9.1,SNR=11								
KAPI	**Kappang**	**9.35**	**60**	Pn		**Pn**		**02 56 19.3**	**-1.8**
KAPI	**Kappang**	**9.35**	**60**	P		**Pn**		**02 56 24.9**	**+3.8**
BSSI	**Bau Bau, Buton**	**9.49**	**68**	P		**Pn**		**02 56 23.9**	**+0.8**
	528nm19nm,0.6s								
BKSI	**Bulukumba**	**9.52**	**63**	P		**Pn**		**02 56 26.4**	**+3.0**
	14nm,0.8s								
SPSI	**Sidrap Palu**	**9.95**	**55**	P		**Pn**		**02 56 31.5**	**+2.2**
	14nm,1.0s								
EDFI	**Ende, Flores**	**9.97**	**85**	P		**Pn**		**02 56 28.2**	**-1.6**
	18nm,0.8s								
MMRI	**Maumere**	**10.53**	**84**	Pn		**Pn**		**02 56 34.6**	**-2.6**
SOEI	**Soe**	**12.44**	**91**	Pn		**Pn**		**02 57 02.5**	**-1.1**
SOEI	**Soe**	**12.44**	**91**	P		**Pn**		**02 57 04.7**	**+1.1**
	40nm,0.8s								
SOEI	**Soe**	**12.44**	**91**	P		**Pn**		**02 57 06.3**	**+2.7**
GIRL	**Giralia**	**12.99**	**169**	Pn		**Pn**		**02 57 10.0**	**-0.8**
MBWA	**Marble Bar**	**13.70**	**146**	Pn		**Pn**		**02 57 18.8**	**-1.8**
PSA00	**Pilbara Seismi**	**14.09**	**147**	Pn		**Pn**		**02 57 24.0**	**-1.9**
MRSI	**Marisa**	**14.48**	**46**	P		**Pn**		**02 57 33.2**	**+1.9**
	32nm,0.8s								
MRSI				pP		**P**		**02 57 36.8**	**-0.8**
	32nm,0.8s								
GTOI	**Gorontalo**	**15.36**	**48**	P		**P**		**02 57 45.9**	**-1.4**
	13nm,0.7s								
FITZ	**Fitzroy Crossi**	**15.87**	**123**	Pn		**Pn**		**02 57 47.9**	**-1.7**
	0.5nm,0.3s,baz=305,slow=10.0,SNR=18								
FITZ				Sn		**Sn**		**03 00 35.8**	**-8.8**
	0.5nm,0.3s,baz=113,slow=17,SNR=6.2								
FITZ	**Fitzroy Crossi**	**15.87**	**123**	Pn		**Pn**		**02 57 47.9**	**-1.7**
SANI	**Sanana**	**16.22**	**62**	P		**P**		**02 57 56.2**	**-0.6**
MYLDM	**Lahad Datu**	**16.40**	**25**	Pn		**Pn**		**02 57 53.5**	**-2.8**
KNRA	**Kununurra**	**17.68**	**111**			**P**		**02 58 12.9**	**-0.1**
KNRA				IAmb		IAmb		02 58 24.0	
	comp=Z,42nm,1.4s								
BNDI	**Bandanaira**	**18.86**	**75**	P		**Pn**		**02 58 26.5**	**-0.4**
BNDI				pP		**P**		**02 58 29.6**	**+3.5**
BNDI	**Bandanaira**	**18.86**	**75**	P		**Pn**		**02 58 29.8**	**+2.9**
MTN	**Manton Dam**	**19.34**	**101**	Pn		**Pn**		**02 58 34.2**	**+1.6**
MORW	**Morawa**	**19.58**	**168**	P		**Pn**		**02 58 37.4**	**+2.0**
KDU	**Kakadu**	**20.63**	**100**	P		Pn		02 58 49.2	+1.5
SIJI	**Sorong**	**21.45**	**67**	P		**P**		**02 58 53.3**	**-1.0**
	comp=Z,7.8nm,0.5s,baz=114,slow=8.0,SNR=4.1								
	comp=Z,7.8nm,0.5s								
FAKI	**Fak Fak**	**21.59**	**73**	P		**P**		**02 58 52.9**	**-2.8**
FAKI				IAmb		IAmb		02 58 57.8	
	comp=Z,17nm,0.9s								
FAKI	**Fak Fak**	**21.59**	**73**	P		**P**		**02 58 59.0**	**+3.3**
NWAO	**Narrogin (SRO)**	**23.56**	**168**	LR		LR		03 08 56.9	
	comp=Z,88nm,18.2s,baz=134,slow=37								
WB0	**Warramunga Arr**	**24.09**	**117**	P		**P**		**02 59 22.2**	**+1.0**
WRA	**Warramunga Arr**	**24.10**	**117**	P		**P**		**02 59 23.4**	**+2.0**
	comp=Z,2.7nm,0.7s,baz=292,slow=11,SNR=40								
WRA				PcP		**PcP**		**03 03 04.4**	**+2.2**
	comp=Z,0.3nm,0.5s,baz=291,slow=2.3,SNR=1.5								
WRA				S		**S**		**03 03 47.4**	**+11**
	comp=Z,0.7nm,0.9s,baz=300,slow=26,SNR=3.0								
	comp=Z,2.7nm,0.7s								
WRA	**Warramunga Arr**	**24.10**	**117**	P		**P**		**02 59 22.4**	**+1.0**
WRAB	**Tennant Creek**	**24.11**	**117**	P		**P**		**02 59 20.9**	**-0.6**
WRAB				IAmb		IAmb		02 59 27.5	
	comp=Z,8.1nm,0.8s								
WRAB	**Tennant Creek**	**24.11**	**117**	P		**P**		**02 59 23.5**	**+2.1**
WB2	**Warramunga Arr

comp=Z,6.7nm,0.9s,baz=173,slow=8.4,SNR=30
SONM PcP **PcP** 03 04 49.6 +1.4
comp=Z,1.2nm,0.7s,baz=188,slow=3.7,SNR=4.6
comp=Z,6.7nm,0.9s
SONM Songino Array 57.59 356 P **P** 03 03 54.7 -0.5
SONM IAmb IAmb 03 03 55.9
comp=Z,5.1nm,0.8s
WMQ Urumqi 57.66 340 *e*P **P** 03 03 58.1 +2.5
KBL Kabul 59.79 320 P **P** 03 04 09.7 -1.2
KBL IAmb IAmb 03 04 11.5
comp=Z,5.6nm,0.8s
NRN Naryn 60.63 330 P **P** 03 04 15.8 -0.8
NRN IAmb IAmb 03 04 17.1
comp=Z,5.2nm,0.8s
KLR Kul'dur 61.40 15 P **P** 03 04 20.2 -1.1
comp=Z,1.4nm,0.5s,baz=185,slow=5.6,SNR=8.5
comp=Z,1.4nm,0.5s
GAR Garm 61.94 324 P **P** 03 04 24.2 -1.1
GAR IAmb IAmb 03 04 26.0
comp=Z,7.8nm,0.8s
MK31 Makanchi Array 62.16 338 P **P** 03 04 25.7 -0.8
MK31 IAmb IAmb 03 04 27.2
comp=Z,4.3nm,0.8s
MKAR Makanchi Array 62.16 338 P **P** 03 04 26.4 -0.1
comp=Z,4.1nm,0.4s,baz=150,slow=7.5,SNR=59
comp=Z,4.1nm,0.4s
MKAR Makanchi Array 62.16 338 P **P** 03 04 25.6 -0.9
AAK Ala-Archa 62.27 330 P **P** 03 04 25.7 -1.8
AAK IAmb IAmb 03 04 31.3
comp=Z,4.2nm,0.8s
KKAR Karatay Array 64.64 328 P **P** 03 04 41.7 -1.2
KURBB Kurchatov Arra 66.73 338 P **P** 03 04 55.5 -0.7
comp=Z,1.0nm,0.5s,baz=146,slow=5.0,SNR=4.0
comp=Z,1.0nm,0.5s
KURK Kurchatov 66.77 338 P **P** 03 04 55.2 -1.3
KURK IAmb IAmb 03 04 57.0
comp=Z,5.7nm,1.4s
ZAA0 Zalesovo Array 67.47 343 P **P** 03 04 59.8 -1.1
ZAA0 IAmb IAmb 03 05 02.2
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 67.47 343 P **P** 03 04 59.9 -1.0
comp=Z,1.9nm,0.3s,baz=149,slow=5.9,SNR=1.3
comp=Z,1.9nm,0.3s
ZALV Zalesovo Beam 67.47 343 P **P** 03 04 59.7 -1.2
GEYT Alibeck 68.93 317 P **P** 03 05 11.1 +0.7
comp=Z,2.0nm,0.7s,baz=258,slow=4.2,SNR=4.6
comp=Z,2.0nm,0.7s
GEYT Alibeck 68.93 317 P **P** 03 05 09.2 -1.2
GEYT IAmb IAmb 03 05 13.4
comp=Z,4.4nm,1.1s
GYA0B ALIBECK ARRAY 68.93 317 P **P** 03 05 09.2 -1.2
GYA0B IAmb IAmb 03 05 13.3
comp=Z,5.2nm,1.1s
RAYN Ar Rayn 72.62 298 P **P** 03 05 33.1 -0.1
YAK Yakutsk 73.00 9 P **P** 03 05 33.1 -1.5
ABKAR Abkulak array 74.21 328 P **P** 03 05 42.4 +0.4
AKTO Aktyubinsk 75.91 328 LR LR 03 46 10.9
comp=Z,21nm,18.7s,baz=122,slow=41
SEY Seymchan 79.00 18 P **P** 03 06 09.4 +0.7
comp=Z,3.0nm,0.4s,baz=206,slow=1.9,SNR=8.9
comp=Z,3.0nm,0.4s
ARU Arti 79.17 333 LR LR 03 48 51.2
comp=Z,16nm,18.3s,baz=127,slow=42
KBZ Khabaz 81.82 317 P **P** 03 06 25.4 +1.1
comp=Z,5.3nm,0.9s,baz=173,slow=2.5,SNR=6.9
comp=Z,5.3nm,0.9s
BRTR Keskin Array B 87.13 311 P **P** 03 06 52.8 +1.3
comp=Z,1.4nm,0.8s,baz=136,slow=7.0,SNR=14
comp=Z,1.4nm,0.8s
BRTR Keskin Array B 87.13 311 P **P** 03 06 50.9 -0.6
BR131 Keskin Array S 87.13 311 P **P** 03 06 50.5 -1.0
BR131 IAmb IAmb 03 06 53.6
comp=Z,2.2nm,0.8s
TXAR Lajitas Array 141.71 55 PKhKP PKPpre 03 13 35.4
comp=Z,0.1nm,0.5s,baz=197,slow=0.9,SNR=2.6
CCM Cathedral Cave 145.16 33 PKPdf **PKPdf** 03 13 43.4 +0.3
WVT Waverly 148.40 31 **PKPbc** 03 13 51.4 -0.6
T50A Nancy 149.09 26 PKPbc **PKPbc** 03 13 52.0 -1.8
PLAL Pickwick Lake 149.15 33 PKPbc **PKPbc** 03 13 53.5 -0.5
Y45A Yeager Farm, C 149.16 36 PKPbc **PKiKP** 03 13 54.6 -0.6
SWET Sewanee 150.07 30 PKPbc **PKPbc** 03 13 55.2 -1.1
CPCT Cooper Cave 150.54 28 PKPbc **PKPbc** 03 13 57.0 -0.4
V52A Sevierville 150.62 26 PKPbc **PKPbc** 03 13 57.8 +0.3

*IDC **03** 03:23:57.1±0.6,24°.27N×123°.54E,h0km,mb4.1/15, mbtmp4.0/17,ML3.5/2,MS3.1/5,Error ellipse: s-maj=27.8km s-min=13.8km az=70.0*
*JMA **03** 03:23:59.8±0.1,24°.3N±0°.4×123°.7E±0°.3,h16km±1km, MD4.2/8,MV4.3/8,NEAR ISHIGAKIJIMA ISLAND*
JMA Felt III J1 at NEAR ISHIGAKIJIMA ISLAND.
*NEIC **03** 03:24:00.6±1.1,24°.27N±0°.07×123°.59E±0°.05,h18km±4km, mb4.6/34,Error ellipse: s-maj=11.0km s-min=5.1km az=202.0*
ISC 03 03:23:59.6±0.8,24°.27N±0°.05×123°.62E±0°.03,h16km±5km, n92,σ0$71/87,mb4.5/32,MS3.0/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.12**	**56**	P	**Pg**	03 24 03.1	-0.1
IRIF				S	**Sg**	03 24 05.9	+0.2
IRIF	**Iriomote-Funau**	**0.12**	**56**	A	A	03 24 03.1	
comp=E,342nm,0.2s,comp=E,203nm,1.9s							
HATJ	**Hateruma jima**	**0.27**	**141**	P	**Pg**	03 24 05.2	-0.3
HATJ				S	**Sg**	03 24 09.2	-0.3
HATJ	**Hateruma jima**	**0.27**	**141**	A	A	03 24 05.2	
comp=E,47nm,0.9s,comp=E,55nm,1.0s							
JKRS	**Kuro-shima**	**0.36**	**95**	P	**Pg**	03 24 06.8	-0.2
JKRS				S	**Sg**	03 24 12.1	+0.1
JKRS	**Kuro-shima**	**0.36**	**95**	A	A	03 24 06.8	
comp=E,33nm,1.7s,comp=E,53nm,1.1s							
JIJ	**Ishigaki jima**	**0.49**	**79**	P	**Pg**	03 24 08.8	-0.6
JIJ				S	**Sg**	03 24 15.8	-0.1
JIJ	**Ishigaki jima**	**0.49**	**79**	A	A	03 24 08.8	
comp=E,14nm,2.9s,comp=E,11nm,4.3s							
YOJ	**Yonaguni jima**	**0.59**	**289**		**Pb**	03 24 11.6	+0.1
YOJ				Sg	**Sb**	03 24 19.9	+0.2
YOJ	**Yonaguni jima**	**0.59**	**289**	*i* P	**Pb**	03 24 11.8	+0.3
YOJ				S	**Sb**	03 24 20.2	+0.5
YOJ	**Yonaguni jima**	**0.59**	**289**	A	A	03 24 11.8	
comp=E,26nm,0.8s,comp=E,20nm,0.7s							
JYNG	**Yonagunijimaku**	**0.64**	**287**	*i* P	**Pb**	03 24 12.7	+0.2
JYNG				S	**Sb**	03 24 21.7	+0.5
JYNG	**Yonagunijimaku**	**0.64**	**287**	A	A	03 24 12.7	
comp=E,29nm,0.3s,comp=E,33nm,0.5s							
JTJ	**Tarama**	**1.05**	**69**	*i* P	**Pb**	03 24 19.4	-0.1
JTJ				S	**Sb**	03 24 33.8	+0.7
JTJ	**Tarama**	**1.05**	**69**	A	A	03 24 19.4	
comp=E,68nm,0.7s,comp=E,53nm,0.8s							
NACB	**Ninganchiao**	**1.85**	**268**		**Pn**	03 24 31.4	+0.7
TATO	**Taipei**	**2.06**	**290**		**Pn**	03 24 34.0	+0.4
YHNB	**Yeheng**	**2.08**	**282**		**Pn**	03 24 34.0	0.0
YULB	**Yu-li**	**2.30**	**248**		**Pn**	03 24 36.6	-0.3
SSLB	**Suanglung**	**2.48**	**259**		**Pn**	03 24 39.3	-0.2
TWG	**Pinlang**	**2.75**	**239**		**Pn**	03 24 42.8	-0.3
TPUB	**Ta-pu**	**2.90**	**251**	Pn	**Pn**	03 24 46.8	+1.5
KNMB	**Chin-men Tao**	**4.78**	**273**	Pn	**Pn**	03 25 11.2	+0.3
JOW	**Kunigami**	**4.92**	**58**	Pn	**Pn**	03 25 14.9	+2.0
6.4nm,0.3s,baz=257,slow=14,SNR=3.0							
21nm,0.4s							
JMN	**Monobe**	**13.01**	**41**	Pn	**Pn**	03 27 02.9	-0.9
KSRS	**Korea Array**	**13.65**	**15**	Pn	**Pn**	03 27 13.6	+1.0
0.1nm,0.3s,baz=196,slow=12,SNR=3.5							
KSRS				LR	LR	03 32 17.3	
comp=Z,74nm,19.4s,baz=195,slow=37							
1.0nm,0.8s							
MJAR	**Matsushiro Arr**	**17.52**	**42**	LR	LR	03 34 39.2	
comp=Z,57nm,21.1s,baz=236,slow=37							
TNTI	**Ternate**	**23.64**	**171**	P	**P**	03 29 10.8	+0.6
TNTI				IAmb	IAmb	03 29 12.8	
comp=Z,31nm,1.2s							
CMAR	**Chiang Mai Arr**	**23.68**	**261**	LR	LR	03 39 21.6	
comp=Z,49nm,18.4s,baz=195,slow=39							
KLR	**Kul'dur**	**25.72**	**12**	LR	LR	03 41 24.1	
comp=Z,43nm,19.0s,baz=196,slow=41							
SONM	**Songino Array**	**27.21**	**334**	P	**P**	03 29 42.3	-0.5
comp=Z,0.7nm,0.6s,baz=133,slow=6.2,SNR=3.8							
comp=Z,0.7nm,0.6s							
PETK	**Petropavlovsk-**	**38.57**	**33**	LR	LR	03 47 42.8	
comp=Z,18nm,18.3s,baz=239,slow=37							
MK31	**Makanchi Array**	**39.84**	**315**	P	**P**	03 31 31.7	-0.6
MKAR	**Makanchi Array**	**39.84**	**315**	P	**P**	03 31 32.4	0.0
comp=Z,1.2nm,0.5s,baz=99,slow=9.6,SNR=20							
MKAR				PcP	**PcP**	03 33 38.0	-0.1
comp=Z,0.7nm,0.6s,baz=96,slow=4.5,SNR=3.1							
comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**39.84**	**315**	P	**P**	03 31 31.4	-0.9
MAKZ	**Makanchi**	**40.05**	**315**	P	**P**	03 31 34.1	+0.1
H11N1	**WAKE ISLAND Hy**	**40.26**	**88**	T	T	04 14 20.1	
baz=281							
H11N2	**WAKE ISLAND Hy**	**40.26**	**88**	T	T	04 14 28.6	
baz=281,SNR=2.9							
H11N3	**WAKE ISLAND Hy**	**40.28**	**88**	T	T	04 14 21.7	
baz=281							
ZALV	**Zalesovo Beam**	**41.40**	**326**	P	**P**	03 31 43.6	-1.5
comp=Z,1.5nm,0.4s,baz=115,slow=7.9,SNR=1.6							
comp=Z,1.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**42.16**	**177**	P	**P**	03 31 50.0	-1.6
comp=Z,3.8nm,0.8s,baz=25,slow=7.0,SNR=6.9							
comp=Z,3.8nm,0.8s							
FITZ	**Fitzroy Crossi**	**42.16**	**177**	P	**P**	03 31 50.9	-0.6
COEN	**Coen**	**42.52**	**151**	P	**P**	03 31 55.8	+1.2
COEN				IAmb	IAmb	03 31 56.9	
comp=Z,11nm,0.8s							
KURBB	**Kurchatov Arra**	**43.49**	**319**	P	**P**	03 32 01.4	-0.7
comp=Z,1.4nm,0.6s,baz=125,slow=7.6,SNR=6.3							
comp=Z,1.4nm,0.6s							
WB0	**Warramunga Arr**	**45.01**	**166**	P	**P**	03 32 14.5	0.0
WB0				IAmb	IAmb	03 32 16.2	
comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**45.17**	**166**	P	**P**	03 32 16.3	+0.5
comp=Z,4.9nm,0.8s,baz=347,slow=8.9,SNR=38							
comp=Z,4.9nm,0.8s							
WRA	**Warramunga Arr**	**45.17**	**166**	P	**P**	03 32 15.7	-0.1
WB2	**Warramunga Arr**	**45.17**	**166**	P	**P**	03 32 15.3	-0.5
WB2				IAmb	IAmb	03 32 17.3	
comp=Z,8.4nm,0.9s							
WR0	**Warramunga Arr**	**45.23**	**165**	P	**P**	03 32 16.1	-0.3
KKAR	**Karatay Array**	**47.19**	**307**	P	**P**	03 32 31.2	-0.4
ASAR	**Alice Springs**	**48.68**	**167**	P	**P**	03 32 44.1	+0.9
comp=Z,1.4nm,0.5s,baz=349,slow=6.8,SNR=21							
comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**48.68**	**167**	P	**P**	03 32 41.4	-1.9
GSTR	**Great Sitkin T**	**53.10**	**42**	P	**P**	03 33 16.8	+0.5
ABKAR	**Abkulak array**	**54.98**	**314**	P	**P**	03 33 28.7	-1.3
STKA	**Stephens Creek**	**58.41**	**162**	P	**P**	03 33 54.6	0.0
comp=Z,2.8nm,0.8s,baz=284,slow=1.5,SNR=3.5							
comp=Z,2.8nm,0.8s							
STKA	**Stephens Creek**	**58.41**	**162**	P	**P**	03 33 55.1	+0.6
SVW2	**Sparrevohn**	**64.65**	**32**	P	**P**	03 34 36.9	+0.5
SVW2				IAmb	IAmb	03 34 46.0	
comp=Z,8.9nm,1.2s							
L19K	**White Mountain**	**64.91**	**31**	P	**P**	03 34 38.4	+0.4
L19K				IAmb	IAmb	03 35 13.2	
comp=Z,8.6nm,1.4s							
J20K	**Nowinta River**	**65.07**	**29**	P	**P**	03 34 40.2	+1.1
K20K	**Telida**	**65.17**	**29**	P	**P**	03 34 41.0	+1.2
K20K				IAmb	IAmb	03 34 52.4	
comp=Z,4.8nm,1.2s							
H21K	**Melozitna Rive**	**65.53**	**27**	P	**P**	03 34 43.0	+1.0
H21K				IAmb	IAmb	03 35 10.1	
comp=Z,4.6nm,1.4s							
CAST	**Castle Rocks**	**66.06**	**29**	P	**P**	03 34 46.3	+0.8
CAST				IAmb	IAmb	03 35 28.6	
comp=Z,8.2nm,1.4s							
BPAW	**Bear Paw Mtn.**	**66.46**	**29**	P	**P**	03 34 48.9	+0.8
BPAW				IAmb	IAmb	03 35 08.8	
comp=Z,8.0nm,1.5s							
H23K	**Yukon River**	**66.85**	**27**	P	**P**	03 34 50.8	+0.3
H23K				IAmb	IAmb	03 34 53.3	
comp=Z,3.6nm,1.1s							
SEW	**Seward**	**67.78**	**33**	P	**P**	03 34 56.2	-0.2
ILAR	**Eielson Array**	**68.12**	**28**	P	**P**	03 34 57.6	-0.9
comp=Z,0.4nm,0.8s,baz=257,slow=4.9,SNR=5.3							
comp=Z,0.4nm,0.8s							
BMAR	**Burnt Mountain**	**68.53**	**24**	P	**P**	03 35 02.8	+1.6
J26L	**Joseph Creek**	**69.57**	**27**	P	**P**	03 35 07.8	+0.1
J26L				IAmb	IAmb	03 35 45.8	
comp=Z,6.7nm,1.4s							
GLB	**Gilahina Butte**	**70.20**	**31**	P	**P**	03 35 11.7	+0.2
M26K	**Nabesna, AK**	**70.33**	**30**	P	**P**	03 35 13.2	+0.8
M26K				IAmb	IAmb	03 35 14.4	
comp=Z,4.5nm,0.9s							
VRDI	**Verde Repeater**	**70.42**	**31**	P	**P**	03 35 13.8	+0.8
BCAR	**Beaver Creek A**	**70.70**	**29**	P	**P**	03 35 16.0	+1.4
CTGM	**Chitina Glacie**	**71.48**	**31**	P	**P**	03 35 20.1	+0.7
INK	**Inuvik**	**72.31**	**22**	P	**P**	03 35 24.3	+0.2
INK				IAmb	IAmb	03 35 47.6	
comp=Z,6.8nm,1.3s							
FINES	**FINESS Array B**	**72.49**	**330**	P	**P**	03 35 25.1	-0.1
comp=Z,0.9nm,0.5s,baz=65,slow=5.1,SNR=6.7							
comp=Z,0.9nm,0.5s							
AKASG	**Malin Array Be**	**74.28**	**319**	P	**P**	03 35 35.1	-0.9
comp=Z,0.2nm,0.3s,baz=60,slow=6.0,SNR=2.0							
comp=Z,0.2nm,0.3s							
WHY	**Whitehorse**	**74.57**	**30**	P	**P**	03 35 38.2	+0.5
WHY				IAmb	IAmb	03 35 47.4	
comp=Z,7.6nm,1.4s							
BRTR	**Keskin Array B**	**74.91**	**307**	P	**P**	03 35 40.5	+0.4
comp=Z,1.0nm,0.8s,baz=98,slow=6.4,SNR=8.3							
comp=Z,1.0nm,0.8s							
BRTR	**Keskin Array B**	**74.91**	**307**	P	**P**	03 35 40.3	+0.2
BUR08	**Bucovina Ar. S**	**77.83**	**317**	P	**P**	03 35 56.9	+0.3
BURAR	**Bucovina Array**	**77.83**	**317**	P	**P**	03 35 56.8	+0.3
MLR	**Muntele Rosu**	**78.18**	**315**	P	**P**	03 35 58.9	+0.3
MLR				IAmb	IAmb	03 35 59.6	
comp=Z,2.3nm,0.6s							
ELL	**Elmali**	**78.69**	**305**	P	**P**	03 36 01.3	-0.3
NC405	**NORSAR Array S**	**78.93**	**333**	P	**P**	03 36 02.1	-0.1
NB2	**NORSAR Subarra**	**79.18**	**333**	P	**P**	03 36 03.3	-0.3
comp=Z,1.0nm,0.5s,baz=53,slow=6.2							
NOA	**NORSAR Array B**	**79.18**	**333**	P	**P**	03 36 03.3	-0.3
comp=Z,1.3nm,0.6s,baz=53,slow=5.8,SNR=9.9							
comp=Z,1.3nm,0.6s							
NC204	**NORSAR Array S**	**79.25**	**333**	P	**P**	03 36 03.6	-0.4
YKA	**Yellowknife Ar**	**82.02**	**23**	P	**P**	03 36 18.5	-0.2
comp=Z,1.7nm,0.6s,baz=301,slow=5.4,SNR=4.7							
comp=Z,1.7nm,0.6s							
LIT	**Litokhoron**	**82.70**	**311**	P	**P**	03 36 22.1	-0.7
LIT				IAmb	IAmb	03 36 48.5	
comp=Z,5.5nm,1.0s							
GEC2	**GERESS Array S**	**84.18**	**321**	P	**P**	03 36 30.3	0.0
GEC2				IAmb	IAmb	03 36 31.1	
comp=Z,3.2nm,0.8s							
GERES	**GERESS Array B**	**84.18**	**321**	P	**P**	03 36 30.5	+0.2
comp=Z,2.3nm,0.8s,baz=59,slow=5.1,SNR=8.6							
comp=Z,2.3nm,0.8s							
GERES	**GERESS Array B**	**84.18**	**321**	P	**P**	03 36 30.3	0.0

*NEIC **03** 04:04:18.2±1.1,19°.72S±0°.07×67°.2W±0°.2,h267km±13km, mb4.0/7,Error ellipse: s-maj=21.1km s-min=10.7km az=92.0*
*SCB **03** 04:04:19.4±1.1,19°.81S×66°.95W,h242km±9km,ML3.4/3, MW3.4,Error ellipse: s-maj=7.3km s-min=4.1km az=1.0*
ISC 03 04:04:17.9±1.0,19°.81S±0°.08×67°.08W±0°.07,h250km,n46, σ1$25/48,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.97**	**260**		**Pn**	04 05 01.7	+1.1
GO01	**Chusmiza**	**1.99**	**274**		**Pn**	04 05 01.8	+0.9
GO01	**Chusmiza**	**1.99**	**274**	P	**Pn**	04 05 01.6	+0.7
PB01	**IPOC Station P**	**2.56**	**241**	Pn	**Pn**	04 05 06.8	+0.8
PB16	**IPOC Station P**	**2.73**	**302**	Pn	**Pn**	04 05 09.3	+1.2
YJA	**Yavi**	**2.77**	**148**	P	**Pn**	04 05 08.1	-0.3
PB09	**IPOC Station P**	**2.82**	**225**	Pn	**Pn**	04 05 10.4	+1.7
TA02	**Huaiquique**	**2.90**	**260**	Pn	**Pn**	04 05 10.0	+0.7
TA02	**Huaiquique**	**2.90**	**260**	P	**Pn**	04 05 10.4	+1.1
TA01	**Diego Aracena**	**3.00**	**255**	Pn	**Pn**	04 05 09.8	-0.6
TA01	**Diego Aracena**	**3.00**	**255**	P	**Pn**	04 05 11.7	+1.3
SOEJ	**Jacaque**	**3.01**	**339**	P	**Pn**	04 05 11.7	+0.5
PB02	**IPOC Station P**	**3.03**	**240**	Pn	**Pn**	04 05 11.3	+0.5
PB02	**IPOC Station P**	**3.03**	**240**	P	**Pn**	04 05 11.5	+0.7
PB02				S	**S**	04 05 50.9	-1.8
PB02				IAML		04 05 53.2	
176nm,0.4s							
PATCX	**Punta Patache**	**3.05**	**250**	Pn	**Pn**	04 05 09.3	-1.7
BBOE	**La Paz, Chanca**	**3.10**	**344**	P	**Pn**	04 05 13.2	+1.0
PB07	**IPOC Station P**	**3.24**	**234**	Pn	**Pn**	04 05 14.4	+1.2
LVC	**Limon Verde**	**3.26**	**211**	Pn	**Pn**	04 05 15.0	+1.4
LVC	**Limon Verde**	**3.26**	**211**	P	**Pn**	04 05 15.0	+1.4
LVC				IAML		04 06 01.7	
13nm,1.8s							
AF01	**San Pedro de A**	**3.29**	**198**	Pn	**Pn**	04 05 15.6	+1.8
PB12	**IPOC Station P**	**3.29**	**291**	Pn	**Pn**	04 05 13.3	-0.5
AP01	**Chacalluta**	**3.40**	**294**	Pn	**Pn**	04 05 14.5	-0.3
BBOD	**La Paz, Gloria**	**3.47**	**335**	P	**Pn**	04 05 17.2	+0.9
LPAZ	**La Paz**	**3.65**	**344**	Pn	**Pn**	04 05 17.8	-0.6
LPAZ	**La Paz**	**3.65**	**344**	P	**Pn**	04 05 18.8	+0.5
PB06	**IPOC Station P**	**3.70**	**218**		**Pn**	04 05 20.2	+1.8
PB06	**IPOC Station P**	**3.70**	**218**	P	**Pn**	04 05 20.2	+1.8
PB06				S	**S**	04 06 03.3	-3.0
PB06				IAML		04 06 09.4	
72nm,0.2s							
PB04	**IPOC Station P**	**3.81**	**228**	Pn	**Pn**	04 05 20.2	+0.5
PB04	**IPOC Station P**	**3.81**	**228**	P	**Pn**	04 05 21.3	+1.7
PB15	**IPOC Station P**	**4.04**	**213**		**Pn**	04 05 25.1	+2.6
PB15	**IPOC Station P**	**4.04**	**213**	P	**Pn**	04 05 24.5	+2.1
PB14	**IPOC Station P**	**5.69**	**212**	Pn	**Pn**	04 05 43.9	+1.3
GO02	**Mina Guanaco**	**5.81**	**203**	Pn	**Pn**	04 05 45.1	+1.1
GO02	**Mina Guanaco**	**5.81**	**203**	P	**Pn**	04 05 45.4	+1.5
BBSD	**Serra de San D**	**6.67**	**68**	P	**Pn**	04 05 53.3	-1.3
AC01	**Pan de Azucar**	**7.09**	**207**	Pn	**Pn**	04 05 59.9	+0.2
AC02	**Maricunga**	**7.24**	**195**	Pn	**Pn**	04 06 03.2	+1.1
AC06	**Mina Casimiro**	**8.09**	**201**	Pn	**Pn**	04 06 12.3	0.0
AC04	**Llanos de Chal**	**9.11**	**203**	Pn	**Pn**	04 06 24.6	-0.6
AC05	**El Transito**	**9.44**	**197**	Pn	**Pn**	04 06 29.4	-0.1
GO04	**Tololo Observa**	**10.85**	**197**	Pn	**Pn**	04 06 47.7	+0.3
ITAB	**Concordia**	**15.57**	**121**	P	**P**	04 07 44.0	0.0
ITAB				IAmb	IAmb	04 08 02.7	
comp=Z,12nm,1.3s							
PLTB	**Pedras Altas**	**16.98**	**137**	P	**P**	04 07 59.9	+0.5
PLTB				IAmb	IAmb	04 08 32.5	
comp=Z,18nm,1.4s							
BDFB	**Brasilia**	**18.63**	**80**	P	**P**	04 08 17.5	-0.1
BDFB				IAmb	IAmb	04 09 01.2	
comp=Z,8.0nm,1.2s							
TRQA	**Tornquist**	**18.71**	**167**	P	**P**	04 08 18.9	+0.8
TRQA				IAmb	IAmb	04 08 57.4	
comp=Z,5.5nm,1.4s							
PLCA	**Paso Flores**	**21.06**	**187**	P	**P**	04 08 43.9	+0.9

*IDC **03** 04:11:10.9±2.8,36°.76N×141°.95E,h0km,mb3.4/2, mbtmp3.4/3,ML2.6/1,Error ellipse: s-maj=59.0km s-min=33.0km az=37.0*
*JMA **03** 04:11:13.5±0.3,36°.2N±0°.4×14°.2E±°,h56km±4km, MV2.9/28,FAR E OFF IBARAKI PREF*
ISC 03 04:11:15.0±1.4,36°.29N±0°.06×141°.62E±0°.09,h26km,n14, σ1$87/13,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.85**	**227**	*e*P	**Pb**	04 11 30.1	-1.1
CHOJ				*e*S	**Sn**	04 11 42.4	-0.6
JHO	**Hitachi**	**0.91**	**291**	*e*P	**Pn**	04 11 31.5	-0.6
JFK	**Kawauchi**	**1.23**	**331**	*e*P	**Pn**	04 11 36.1	-0.5
JMM	**Marumori**	**1.71**	**337**	*e*P	**Pn**	04 11 43.4	+0.2
BSO1	**Boso 1**	**1.71**	**198**	*e*P	**Pn**	04 11 40.7	-2.0
JAG	**Ashikaga**	**1.76**	**275**	*e*P	**Pb**	04 11 44.1	-2.5
JFY	**Yanaizu**	**1.90**	**307**	*e*P	**Pb**	04 11 46.8	-2.3
JRY	**Ryogami san**	**2.22**	**264**	*e*P	**Pn**	04 11 50.3	+0.1
MJAR	**Matsushiro Arr**	**2.77**	**276**	Pn	**Pn**	04 11 59.4	+1.7
0.8nm,0.3s,baz=85,slow=10.0,SNR=16							
MJAR				Sn	**Sb**	04 12 38.8	+1.6
0.2nm,0.3s,baz=109,slow=19,SNR=4.9							
6.6nm,0.5s							
H11S1	**WAKE ISLAND Hy**	**28.32**	**122**	T	T	04 46 21.5	
baz=314,slow=75,SNR=4.7							
H11S3	**WAKE ISLAND Hy**	**28.32**	**122**	T	T	04 46 23.4	
baz=314,slow=75,SNR=6.6							
H11S2	**WAKE ISLAND Hy**	**28.33**	**122**	T	T	04 46 26.1	
baz=314,slow=75,SNR=4.7							
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	04 19 24.7	-0.8
0.3nm,0.6s,baz=100,slow=7.7,SNR=2.5							
0.3nm,0.6s							
WRA	**Warramunga Arr**	**56.35**	**188**	P	**P**	04 20 57.2	+3.4
0.4nm,0.6s,baz=0.5,slow=7.7,SNR=7.2							
0.4nm,0.6s							

*NEIC **03** 04:40:29.0±2.6,31°.25S±0°.06×68°.81W±0°.10,h103km±6km, mb4.5/15,Md4.1(SJA),Error ellipse: s-maj=12.3km s-min=8.1km az=88.0*
*SJA **03** 04:40:28.7±0.8,31°.29S×68°.77W,h110km±2km,ML4.3, MW4.2*
*IDC **03** 04:40:29.6±0.6,31°.22S×68°.81W,h114km±5km,mb4.0/8, mbtmp4.3/12,Error ellipse: s-maj=27.8km s-min=13.1km az=87.0*
ISC 03 04:40:29.1±0.5,31°.22S±0°.03×68°.74W±0°.03,h113km±4km, n151,σ1$46/207,mb4.4/14,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.25**	**115**	*e*P	**Pn**	04 40 45.0	-0.1
RTLL				*e*S	**Sn**	04 40 57.6	+0.5
ZON	**Zonda**	**0.33**	**171**	Pn	**Pn**	04 40 45.2	-0.2
ZON	**Zonda**	**0.33**	**171**	*e*P	**Pn**	04 40 45.2	-0.2
ZON				*e*S	**Sn**	04 40 57.2	-0.4
ZON				IAML		04 40 58.3	
comp=Z,10μm,0.8s							
RTCV	**Cerro Valdivia**	**0.66**	**165**	*e*P	**Pn**	04 40 47.

VA03 *i* S **Sn** **04 41 32.1 +0.5**
VA03 IAML 04 41 33.4
comp=N,2μm,0.5s
VA03 San Esteban 2.17 225 *e*P **Pn** **04 41 04.7 +0.2**
VA03 *i* S **Sn** **04 41 32.1 +0.5**
VA03 IAML 04 41 33.4
comp=N,2μm,0.5s
VA03 San Esteban 2.17 225 *e*P **Pn** **04 41 04.7 +0.2**
VA03 *e*S **Sn** **04 41 33.4 +1.8**
VA03 IAML 04 41 40.2
comp=Z,902nm,0.3s
ACLC CERRO LA CRUZ 2.37 41 *e*P **Pn** **04 41 04.5 -2.6**
ACLC *e*S Sn 04 41 24.0 -12
ACLC IAML 04 41 39.9
comp=Z,1μm,0.5s
FCH Farellones 2.48 212 *e*P **Pn** **04 41 09.2 +0.6**
FCH *i* S **Sn** **04 41 40.5 +1.6**
FCH Farellones 2.48 212 *e*P **Pn** **04 41 09.2 +0.6**
FCH *i* S **Sn** **04 41 40.5 +1.6**
CO05 La Serena 2.52 300 **Pn** **04 41 08.1 -0.7**
CO05 La Serena 2.52 300 *e*P **Pn** **04 41 08.1 -0.7**
CO05 *i* S **Sn** **04 41 37.2 -2.1**
CO05 IAML 04 41 41.0
comp=N,4μm,0.3s
CO05 La Serena 2.52 300 *e*P **Pn** **04 41 08.1 -0.7**
CO05 *i* S **Sn** **04 41 37.2 -2.1**
CO05 IAML 04 41 41.0
comp=N,4μm,0.3s
PEL Peldehue 2.53 220 Pn **Pn** **04 41 07.9 -1.1**
PEL Peldehue 2.53 220 *e*P **Pn** **04 41 08.5 -0.5**
PEL *i* S **Sn** **04 41 39.0 -0.6**
PEL Peldehue 2.53 220 *e*P **Pn** **04 41 08.5 -0.5**
PEL *i* S **Sn** **04 41 39.0 -0.6**
PEL Peldehue 2.53 220 *e*P **Pn** **04 41 08.6 -0.5**
PEL *e*S **Sn** **04 41 39.6 -0.1**
CO06 Fray Jorge 2.55 282 **Pn** **04 41 07.5 -1.7**
CO06 Fray Jorge 2.55 282 *e*P **Pn** **04 41 07.6 -1.7**
CO06 *i* S **Sn** **04 41 36.1 -3.9**
CO06 Fray Jorge 2.55 282 *e*P **Pn** **04 41 07.6 -1.7**
CO06 *i* S **Sn** **04 41 36.1 -3.9**
VA06 Catapilco 2.55 238 Pn **Pn** **04 41 07.9 -1.3**
VA06 Catapilco 2.55 238 *e*P **Pn** **04 41 08.0 -1.3**
VA06 *i* S **Sn** **04 41 37.5 -2.6**
VA06 IAML 04 41 42.1
comp=E,1μm,0.4s
VA06 Catapilco 2.55 238 *e*P **Pn** **04 41 08.0 -1.3**
VA06 *i* S **Sn** **04 41 37.5 -2.6**
VA06 IAML 04 41 42.1
comp=E,1μm,0.4s
ROCH El Roble 2.60 227 *e*P **Pn** **04 41 09.2 -0.9**
ROCH *i* S **Sn** **04 41 40.7 -0.9**
ROCH El Roble 2.60 227 *e*P **Pn** **04 41 09.2 -0.9**
ROCH *i* S **Sn** **04 41 40.7 -0.9**
ROCH IAML 04 41 47.4
comp=N,1μm,0.5s
ROC1 El Roble 2.60 227 **Pn** **04 41 09.0 -1.2**
ROC1 El Roble 2.60 227 *e*P **Pn** **04 41 09.6 -0.6**
ROC1 *e*S **Sn** **04 41 42.1 +0.3**
MT03 Universidad Ad 2.71 213 **Pn** **04 41 11.6 +0.1**
MT03 Universidad Ad 2.71 213 *e*P **Pn** **04 41 11.8 +0.3**
MT03 *e*S **Sn** **04 41 45.6 +1.5**
MT03 IAML 04 41 47.4
comp=Z,612nm,0.3s
AC05 El Transito 2.73 330 Pn **Pn** **04 41 13.2 +1.5**
AC05 El Transito 2.73 330 *e*P **Pn** **04 41 13.3 +1.6**
AC05 *e*S **Sn** **04 41 47.2 +2.7**
AC05 IAML 04 41 49.7
comp=Z,1μm,0.2s
MT05 Renca 2.75 217 **Pn** **04 41 11.4 -0.5**
MT05 Renca 2.75 217 *e*P **Pn** **04 41 11.6 -0.2**
MT05 *i* S **Sn** **04 41 44.3 -0.5**
MT05 Renca 2.75 217 *e*P **Pn** **04 41 11.6 -0.2**
MT05 *i* S **Sn** **04 41 44.3 -0.5**
MT05 IAML 04 41 46.4
comp=N,2μm,0.3s
MT05 Renca 2.75 217 *e*P **Pn** **04 41 11.7 -0.2**
MT05 *e*S **Sn** **04 41 44.3 -0.5**
MT05 IAML 04 41 47.0
comp=Z,486nm,0.3s
LCO Las Campanas 2.78 322 Pn **Pn** **04 41 12.6 0.0**
LCO Las Campanas 2.78 322 *e*P **Pn** **04 41 12.8 +0.2**
LCO *i* S **Sn** **04 41 46.2 +0.2**
LCO Las Campanas 2.78 322 *e*P **Pn** **04 41 12.8 +0.2**
LCO *i* S **Sn** **04 41 46.2 +0.2**
MRA San Martin 2.84 116 *e*S **Sn** **04 41 46.8 -0.2**
MRA IAML 04 42 14.9
comp=Z,3μm,0.5s
MT02 Curacav 2.87 224 Pn **Pn** **04 41 11.9 -1.6**
MT02 Curacav 2.87 224 *e*P **Pn** **04 41 12.2 -1.3**
MT02 Curacav 2.87 224 *e*P **Pn** **04 41 12.2 -1.3**
MT02 Curacav 2.87 224 *e*P **Pn** **04 41 12.3 -1.2**
MT02 *e*S **Sn** **04 41 46.6 -1.1**
LMEL Las Melosas 2.89 205 Pn **Pn** **04 41 14.4 +0.5**
LMEL Las Melosas 2.89 205 *e*P **Pn** **04 41 14.8 +0.8**
LMEL *i* S **Sn** **04 41 50.2 +1.8**
LMEL Las Melosas 2.89 205 *e*P **Pn** **04 41 14.8 +0.8**
LMEL *i* S **Sn** **04 41 50.2 +1.8**
VA01 Torpederas 3.05 233 Pn **Pn** **04 41 13.7 -2.1**
MT09 Talagante 3.18 216 **Pn** **04 41 16.5 -1.2**
MT09 Talagante 3.18 216 *e*P **Pn** **04 41 16.3 -1.3**
MT09 *i* S **Sn** **04 41 53.7 -1.3**
MT09 IAML 04 41 56.2
comp=N,657nm,0.5s
MT09 Talagante 3.18 216 *e*P **Pn** **04 41 16.3 -1.3**
MT09 *i* S **Sn** **04 41 53.7 -1.3**
MT09 IAML 04 41 56.2
comp=N,657nm,0.5s
BO04 La Punta 3.18 209 **Pn** **04 41 17.2 -0.3**
TINO Tinogasta 3.31 18 *e*P **Pn** **04 41 21.6 +2.2**
MT01 Popeta 3.38 218 **Pn** **04 41 18.2 -2.0**
VA05 Santo Domingo 3.43 224 Pn **Pn** **04 41 19.1 -1.8**
TCA Tanti 3.55 93 *e*S **Sn** **04 41 56.9 -7.0**
AC04 Llanos de Chal 3.63 325 Pn **Pn** **04 41 23.1 -0.4**
BO01 Tunca 3.73 211 Pn **Pn** **04 41 22.8 -2.0**
BO01 Tunca 3.73 211 *e*P **Pn** **04 41 23.1 -1.7**
BO02 Sierra Bellavi 3.95 205 Pn **Pn** **04 41 27.1 -0.8**
AC06 Mina Casimiro 4.10 340 Pn **Pn** **04 41 29.7 -0.2**
AC02 Maricunga 4.38 355 Pn **Pn** **04 41 35.8 +1.6**
AC02 Maricunga 4.38 355 *e*S **Sn** **04 42 22.4 -2.2**
AC02 IAML 04 42 31.4
comp=Z,177nm,0.3s
GO05 Huala 4.63 214 Pn **Pn** **04 41 33.3 -3.6**
ML02 Panimavida 5.05 206 Pn **Pn** **04 41 39.9 -2.7**
AC01 Pan de Azucar 5.31 342 Pn **Pn** **04 41 45.6 -0.7**
GO02 Mina Guanaco 6.08 353 Pn **Pn** **04 41 56.1 -0.8**
BI05 Punta Hualpn 6.63 213 Pn **Pn** **04 41 59.6 -4.4**
PB14 IPOC Station P 6.74 347 **Pn** **04 42 03.7 -2.1**
PB15 IPOC Station P 8.01 355 **Pn** **04 42 21.3 -1.6**
AF01 San Pedro de A 8.25 4 Pn **Pn** **04 42 26.0 -0.3**
PB06 IPOC Station P 8.52 355 Pn **Pn** **04 42 27.6 -2.2**
LVC Limon Verde 8.58 359 P **Pn** **04 42 29.2 -1.7**
comp=Z,14nm,0.5s,baz=179,slow=8.2,SNR=28
LVC S **Sn** **04 44 01.7 -4.4**
comp=Z,16nm,0.6s,baz=123,slow=20,SNR=3.6
LVC Limon Verde 8.58 359 Pn **Pn** **04 42 29.0 -1.8**
GO06 Curarrehue 8.63 194 Pn **Pn** **04 42 28.0 -3.2**
TRQA Tornquist 8.80 143 **Pn** **04 42 32.5 -0.9**
H03N1 Juan Fernandez 8.89 253 P **Pn** **04 42 33.5 -0.8**
baz=13,slow=28,SNR=11
LR03 Panguipulli 8.89 198 Pn **Pn** **04 42 31.2 -3.4**
H03N3 Juan Fernandez 8.90 253 P **Pn** **04 42 33.3 -1.2**
baz=13,slow=28,SNR=8.3
H03N2 Juan Fernandez 8.90 253 P **Pn** **04 42 33.6 -0.9**
baz=13,slow=28,SNR=5.5
PB09 IPOC Station P 9.40 357 Pn **Pn** **04 42 39.8 -2.0**
PLCA Paso Flores 9.60 188 P **Pn** **04 42 42.8 -1.5**
comp=Z,0.7nm,0.4s,baz=354,slow=12,SNR=16
PLCA Paso Flores 9.60 188 Pn **Pn** **04 42 42.1 -2.2**
PB08 IPOC Station P 11.04 358 **Pn** **04 43 01.8 -2.3**
PB12 IPOC Station P 12.64 353 **Pn** **04 43 25.4 +0.5**
PB16 IPOC Station P 12.85 357 Pn **Pn** **04 43 25.4 -2.8**
PLTB Pedras Altas 12.93 96 Pn **Pn** **04 43 25.4 -3.3**
AY01 Puyuhuapi 13.53 192 P **P** **04 43 39.9 -1.5**
COYC Coyhaique 14.56 189 **Pn** **04 43 47.6 -2.0**
LPAZ La Paz 14.88 2 P **Pn** **04 43 53.9 -0.5**
comp=Z,11nm,0.7s,baz=173,slow=8.2,SNR=54
LPAZ La Paz 14.88 2 **Pn** **04 43 54.5 +0.1**
ITAB Concordia 15.04 79 Pn **Pn** **04 43 54.8 -0.9**
SIV San Ignacio 16.70 27 P **Pn** **04 44 15.7 -0.7**
comp=Z,3.9nm,0.7s,baz=216,slow=12,SNR=17
SIV San Ignacio 16.70 27 P **Pn** **04 44 15.7 -0.7**
GO09 Cerro Castillo 20.21 187 P **P** **04 44 55.9 +1.0**

GO09 IAmb IAmb 04 44 57.1
comp=Z,21nm,0.9s
EFI East Falkland 21.90 162 P **P** **04 45 11.7 -1.2**
USHA Ushuaia 23.60 180 P **P** **04 45 28.1 -1.4**
comp=Z,17nm,0.6s,baz=11,slow=1.3,SNR=6.4
comp=Z,17nm,0.6s
USHA Ushuaia 23.60 180 P **P** **04 45 28.1 -1.4**
BELA Belgrano 2 49.15 171 P **P** **04 49 05.5 +0.6**
BELA IAmb IAmb 04 49 07.1
comp=Z,4.5nm,0.7s
VNA3 Neumayer Olymp 50.91 159 P **P** **04 49 19.4 +1.1**
VNA1 Neumayer--Stat 51.17 158 P **P** **04 49 21.4 +1.2**
VNA2 Neumayer--Watz 51.52 158 P **P** **04 49 23.9 +1.0**
baz=280,slow=8.0
SNAA Sanae 53.13 159 P **P** **04 49 35.3 +0.5**
SNAA Sanae 53.13 159 P **P** **04 49 35.1 +0.3**
comp=Z,4.5nm,0.8s,baz=284,slow=9.3,SNR=25
comp=Z,4.5nm,0.8s
SNAA Sanae 53.13 159 P **P** **04 49 34.6 -0.3**
TROLL Troll, Antarti 54.85 159 P **P** **04 49 48.3 +1.0**
TXAR Lajitas Array 68.78 328 P **P** **04 51 20.8 -0.4**
comp=Z,0.2nm,0.6s,baz=146,slow=9.1,SNR=3.4
TXAR pP **pP** **04 51 51.1 +1.2**
comp=Z,0.6nm,0.8s,baz=152,slow=7.3,SNR=5.5
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 68.78 328 P **P** **04 51 23.2 +2.0**
WVT Waverly 69.35 344 P **P** **04 51 25.1 +0.7**
WVT IAmb IAmb 04 51 56.2
comp=Z,3.6nm,0.8s
DBIC Dimbokro 71.64 70 P **P** **04 51 39.2 +0.4**
comp=Z,3.9nm,0.8s,baz=217,slow=2.9,SNR=4.8
comp=Z,3.9nm,0.8s
DBIC Dimbokro 71.64 70 P **P** **04 51 40.3 +1.5**
R40A Maddies Statio 72.56 341 P **P** **04 51 44.2 +0.5**
R40A IAmb IAmb 04 52 13.8
comp=Z,5.9nm,0.9s
MAW Mawson 75.02 163 P **P** **04 51 58.7 +0.9**
comp=Z,2.6nm,0.6s,baz=198,slow=6.8,SNR=9.4
comp=Z,2.6nm,0.6s
MAW Mawson 75.02 163 P **P** **04 51 59.2 +1.4**
KOWA Kowa 76.94 64 P **P** **04 52 10.9 +1.4**
KOWA IAmb IAmb 04 52 11.3
comp=Z,17nm,1.5s
BOSA Boshof 78.86 117 P **P** **04 52 20.8 +0.6**
comp=Z,2.4nm,0.6s,baz=216,slow=7.4,SNR=4.0
comp=Z,2.4nm,0.6s
BOSA Boshof 78.86 117 P **P** **04 52 21.6 +1.4**
BOSA IAmb IAmb 04 52 55.0
comp=Z,15nm,1.4s
TORD Torodi Ar. Bea 80.63 68 P **P** **04 52 30.7 +1.0**
comp=Z,16nm,0.6s,baz=263,slow=5.0,SNR=5.2
comp=Z,16nm,0.6s
LBTB Lobatse 80.90 114 P **P** **04 52 32.3 +1.0**
LBTB IAmb IAmb 04 52 57.6
comp=Z,9.8nm,1.2s
PDAR Pinedale Array 82.62 331 P **P** **04 52 41.1 +1.2**
comp=Z,0.2nm,0.7s,baz=104,slow=2.9,SNR=2.4
PDAR pP **pP** **04 53 10.0 +0.6**
comp=Z,0.5nm,0.7s,baz=124,slow=5.6,SNR=5.0
comp=Z,0.2nm,0.7s
NVAR Mina Array Bea 83.27 323 pP pP 04 53 14.8 +1.6
comp=Z,0.3nm,0.4s,baz=152,slow=4.7,SNR=1.7
ASAR Alice Springs 121.27 204 PKP **PKPdf** **04 59 08.9 -0.5**
comp=Z,0.6nm,0.6s,baz=143,slow=1.8,SNR=8.2
WRA Warramunga Arr 124.51 207 PKP **PKPdf** **04 59 15.4 -0.4**
comp=Z,1.5nm,0.6s,baz=168,slow=1.6,SNR=6.7
KSH Kashi 150.21 64 PKPbc **PKiKP** **05 00 08.4 +0.6**
KSH pPKP pPKPbc 05 00 38.4 +0.6
ZALV Zalesovo Beam 150.40 32 PKPbc **PKiKP** **05 00 08.1 +0.6**
comp=Z,3.9nm,0.4s,baz=312,slow=3.6,SNR=14
ZALV pPKPbc **pPKPbc** **05 00 37.8 +0.2**
comp=Z,5.6nm,0.6s,baz=305,slow=3.5,SNR=9.6
MKAR Makanchi Array 152.84 47 PKPbc **PKiKP** **05 00 13.2 +0.4**
comp=Z,1.5nm,0.8s,baz=306,slow=2.3,SNR=6.2
MKAR PKPab **PKPab** **05 00 25.4 +1.2**
comp=Z,1.1nm,0.6s,baz=313,slow=3.7,SNR=6.3
MKAR pPKPbc **pPKPbc** **05 00 43.4 -0.2**
comp=Z,1.9nm,0.7s,baz=317,slow=2.0,SNR=7.6
PZH PanZhiHua 170.43 117 PKP **PKPdf** **05 00 24.6 +0.4**

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*IDC **03** 04:40:37.9±0.6, 30.°18S×177.°72W, h0km, mb4.4/10, mbtmp4.4/11, ML4.3/1, MS3.8/33, Error ellipse: s-maj=23.4km s-min=13.8km az=92.0*
*NEIC **03** 04:40:38.5±0.8, 30.°22S±0.°03×177.°4W±0.°1, h10km±1km, mb4.8/33, Error ellipse: s-maj=17.6km s-min=5.4km az=91.0*
ISC 03 04:40:42.7±0.5, **30.°35S**±0.°05×**177.°64W**±0.°09, **h33**km, **n122**, σ1$**73**/80, **mb4.8**/24, **MS3.9**/32, **1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.12**	**347**	Pn		**Pn**	**04 40 59.5**	**-2.6**
	473nm,0.3s,baz=30,slow=21,SNR=24							
RAO				Sn		**Sn**	**04 41 13.2**	**-3.2**
	4μm,0.3s,baz=136,slow=23,SNR=17							
RAO	**Raoul Island**	**1.12**	**347**			**Pn**	**04 41 00.6**	**-1.5**
RAO				Sn		**Sn**	**04 41 13.6**	**-2.7**
OUZ	**Omahuta**	**8.83**	**234**	Pn		**Pn**	**04 42 50.5**	**+2.5**
URZ	**Urewera**	**9.00**	**207**	Pn		**Pn**	**04 42 48.1**	**-2.2**
	0.9nm,0.3s,baz=230,slow=22,SNR=2.0							
URZ				Sn		**Sn**	**04 44 26.1**	**-4.4**
	4.8nm,0.3s,baz=302,slow=23,SNR=14							
BFZ	**Birch Farm**	**11.45**	**204**	Pn		**Pn**	**04 43 19.2**	**-4.6**
NNZ	**Nelson**	**13.06**	**211**	Pn		**Pn**	**04 43 44.5**	**-1.3**
MSVF	**Nonsavu**	**13.16**	**342**	LR		LR	04 48 06.7	
	comp=Z,429nm,20.0s,baz=159,slow=35							
KHZ	**Kahutara**	**13.97**	**208**	Pn		**Pn**	**04 43 55.4**	**-2.8**
OXZ	**Oxford**	**15.35**	**210**			**Pn**	**04 44 17.3**	**+0.6**
OXZ				IAmb		IAmb	04 44 21.9	
	comp=Z,29nm,0.8s							
PINNC	**Pines Island,**	**15.41**	**296**			**Pn**	**04 44 16.9**	**-0.7**
OUENC	**Ouen Island, N**	**15.98**	**296**	P		**P**	**04 44 27.4**	**-1.0**
OUENC	**Ouen Island, N**	**15.98**	**296**	P		P	04 44 40.4	+12
RPZ	**Rata Peaks**	**16.09**	**211**	Pn		**Pn**	**04 44 26.9**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=182,slow=0.2,SNR=11							
RPZ				Sn		Sn	04 47 12.7	-11
	comp=Z,1.1nm,0.3s,baz=277,slow=23,SNR=8.0							
RPZ				LR		LR	04 50 44.6	
	comp=Z,260nm,21.1s,baz=50,slow=38							
	comp=Z,10nm,0.6s							
RPZ	**Rata Peaks**	**16.09**	**211**	Pn		**Pn**	**04 44 26.7**	**+0.4**
YATNC	**Mamie plateau,**	**16.14**	**297**	P		P	04 44 41.0	+11
DZM	**Mont Dzumac**	**16.48**	**296**	*e*Pn		**P**	**04 44 33.6**	**-0.3**
	comp=Z,52nm,0.9s							
DZM				*e*LR		LR	04 48 24.4	
	comp=Z,816nm,24.6s							
DZM	**Mont Dzumac**	**16.48**	**296**	Pn		**P**	**04 44 35.5**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=101,slow=18,SNR=6.6							
DZM				LR		LR	04 49 49.8	
	comp=Z,442nm,18.2s,baz=178,slow=34							
DZM	**Mont Dzumac**	**16.48**	**296**	P		**P**	**04 44 33.1**	**-0.8**
DZM	**Mont Dzumac**	**16.48**	**296**	P		**P**	**04 44 38.1**	**+4.2**
NOUC	**Port Laguerre**	**16.57**	**296**	P		**P**	**04 44 41.3**	**+6.4**
RAR	**Rarotonga**	**18.46**	**65**	LR		LR	04 50 18.0	
	comp=Z,251nm,20.0s,baz=252,slow=31							
TBI	**Tubuai**	**26.05**	**81**	*e*LR		LR	04 52 43.8	
	comp=Z,437nm,26.0s							
TBI	**Tubuai**	**26.05**	**81**	*e*T		T	05 13 11.0	
	comp=Z,8.1nm,0.3s							
ARMA	**Armidale**	**26.47**	**262**	P		**P**	**04 46 17.4**	**+0.4**
ARMA				IAmb		IAmb	04 46 39.2	
	comp=Z,15nm,1.1s							
EIDS	**Eidsvold**	**28.04**	**272**	P		**P**	**04 46 30.7**	**-0.3**
EIDS				IAmb		IAmb	04 46 33.4	
	comp=Z,9.0nm,0.8s							
CAN	**Canberra**	**28.39**	**251**	P		**P**	**04 46 36.6**	**+2.6**
CAN				IAmb		IAmb	04 46 37.4	
	comp=Z,21nm,0.9s							
PAE	**Paea**	**28.49**	**70**	*e*T		T	05 16 08.7	
	comp=Z,2.7nm,0.3s							
PPT2	**Papeete2**	**28.53**	**70**	*e*LR		LR	04 53 53.4	
	comp=Z,312nm,24.2s							
PPT2	**Papeete2**	**28.53**	**70**	*e*T		T	05 16 12.5	
	comp=Z,2.2nm,0.2s							
PPT	**Papeete**	**28.54**	**70**	LR		LR	04 55 18.5	
	comp=Z,62nm,18.9s,baz=234,slow=31							
TOO	**Toolangi**	**31.27**	**247**	P		**P**	**04 46 59.9**	**+0.4**
TOO				IAmb		IAmb	04 47 02.9	
	comp=Z,25nm,1.1s							
VAH	**Vaihoa**	**31.37**	**68**	*e*T		T	05 19 48.4	
	comp=Z,12nm,0.2s							
CTA	**Charters Tower**	**34.10**	**279**	LR		LR	04 59 38.6	
	comp=Z,249nm,18.5s,baz=82,slow=34							
CTAO	**Charters Tower**	**34.10**	**279**	P		**P**	**04 47 24.9**	**+0.5**

STKA Stephens Creek 34.79 257 P **P** **04 47 30.9 +0.6**
comp=Z,26nm,0.9s,baz=85,slow=10,SNR=17
STKA LR LR 05 00 31.8
comp=Z,184nm,18.5s,baz=42,slow=34
comp=Z,26nm,0.9s
STKA Stephens Creek 34.79 257 P **P** **04 47 30.3 -0.1**
STKA IAmb IAmb 04 47 33.7
comp=Z,5.3nm,0.8s
PMG Port Moresby 38.87 295 LR LR 05 01 22.6
comp=Z,158nm,20.6s,baz=150,slow=32
BBOO Buckleboo 39.28 254 P **P** **04 48 08.7 +0.3**
BBOO IAmb IAmb 04 48 10.1
comp=Z,28nm,0.8s
COEN Coen 39.56 286 P **P** **04 48 12.0 +1.1**
COEN IAmb IAmb 04 48 13.7
comp=Z,12nm,1.0s
TAOE Nuku Hiva Isla 41.00 66 *e*LR LR 04 59 40.6
comp=Z,222nm,24.9s
AS31 Alice Springs 43.42 267 P **P** **04 48 42.6 0.0**
ASAR Alice Springs 43.42 267 P **P** **04 48 42.5 -0.2**
comp=Z,5.9nm,0.8s,baz=105,slow=7.9,SNR=36
ASAR LR LR 05 06 33.2
comp=Z,230nm,18.5s,baz=150,slow=36
comp=Z,5.9nm,0.8s
WR0 Warramunga Arr 44.23 272 P **P** **04 48 48.5 -0.6**
WR0 IAmb IAmb 04 48 51.4
comp=Z,15nm,1.0s
WB2 Warramunga Arr 44.40 272 P **P** **04 48 49.1 -1.3**
WB2 IAmb IAmb 04 48 52.7
comp=Z,21nm,0.8s
WRAB Tennant Creek 44.40 272 P **P** **04 48 50.2 -0.3**
WRA Warramunga Arr 44.41 272 P **P** **04 48 49.9 -0.6**
comp=Z,16nm,0.7s,baz=112,slow=7.5,SNR=157
WRA LR LR 05 07 16.4
comp=Z,182nm,18.0s,baz=108,slow=36
comp=Z,16nm,0.7s
WRA Warramunga Arr 44.41 272 P **P** **04 48 49.5 -1.0**
WB0 Warramunga Arr 44.43 272 P **P** **04 48 50.3 -0.4**
WB0 IAmb IAmb 04 48 52.5
comp=Z,17nm,0.7s
FORT Forrest 46.36 255 P **P** **04 49 05.5 -0.4**
SBA Scott Base 48.11 184 P **P** **04 49 18.5 -0.3**
SBA IAmb IAmb 04 49 28.8
comp=Z,8.9nm,0.8s
VNDA Vanda 48.18 186 P **P** **04 49 21.7 +2.4**
comp=Z,0.8nm,0.7s,baz=18,slow=5.5,SNR=10
comp=Z,0.8nm,0.7s
VNDA Vanda 48.18 186 P **P** **04 49 19.8 +0.4**
FITZ Fitzroy Crossi 52.67 270 LR LR 05 10 32.6
comp=Z,127nm,20.8s,baz=120,slow=34
FITZ Fitzroy Crossi 52.67 270 P **P** **04 49 53.9 -0.2**
FITZ IAmb IAmb 04 49 54.8
comp=Z,11nm,0.9s
NWAO Narrogin (SRO) 54.71 249 LR LR 05 10 59.1
comp=Z,98nm,18.3s,baz=42,slow=33
CASY Casey 55.33 208 P **P** **04 50 12.9 +0.1**
PSA00 Pilbara Seismi 56.28 263 P **P** **04 50 18.8 -1.6**
MBWA Marble Bar 56.54 263 P **P** **04 50 20.2 -2.0**
MBWA IAmb IAmb 04 50 31.8
comp=Z,13nm,1.1s
GUMO Guam 56.66 315 LR LR 05 11 51.4
comp=Z,38nm,20.4s,baz=122,slow=33
MORW Morawa 56.84 253 P **P** **04 50 22.7 -1.5**
MORW IAmb IAmb 04 50 28.8
comp=Z,24nm,1.4s
BATI Baumata 57.95 277 LR LR 05 14 04.2
comp=Z,362nm,20.4s,baz=140,slow=35
RPN Rapa Nui 59.15 105 LR LR 05 14 08.9
comp=Z,10.0nm,18.1s,baz=296,slow=34
QSPA South Pole Qui 59.76 180 P **P** **04 50 44.9 +0.7**
GIRL Giralia 60.66 260 P **P** **04 50 49.3 -1.5**
KAPI Kappang 63.91 280 LR LR 05 18 29.2
comp=Z,69nm,18.0s,baz=148,slow=36
BELA Belgrano 2 69.79 172 P **P** **04 51 49.2 0.0**
BELA IAmb IAmb 04 51 51.0
comp=Z,5.8nm,0.9s
PMSA Palmer Station 72.18 156 LR LR 05 20 05.9
comp=Z,148nm,18.1s,baz=7.5,slow=33
MAW Mawson 72.46 200 P **P** **04 52 06.7 +1.2**
comp=Z,4.4nm,0.8s,baz=161,slow=4.0,SNR=11
comp=Z,4.4nm,0.8s
MAW Mawson 72.46 200 P **P** **04 52 06.0 +0.5**
MAW IAmb IAmb 04 52 08.1
comp=Z,1.3nm,0.8s
LEM Lembang 73.43 272 LR LR 05 25 17.6
comp=Z,166nm,18.1s,baz=313,slow=36
TROLL Troll, Antarti 77.92 180 P **P** **04 52 38.3 +1.2**
SNAA Sanae 78.20 178 P **P** **04 52 39.0 +0.5**
SNAA Sanae 78.20 178 P **P** **04 52 39.2 +0.7**
comp=Z,3.0nm,0.8s,baz=159,slow=4.0,SNR=9.1
comp=Z,3.0nm,0.8s
SNAA Sanae 78.20 178 P **P** **04 52 38.9 +0.5**
SNAA IAmb IAmb 04 52 48.0
comp=Z,5.8nm,1.0s
VNA3 Neumayer Olymp 78.33 176 P **P** **04 52 39.8 +0.6**
VNA2 Neumayer--Watz 78.77 177 P **P** **04 52 42.5 +1.0**
baz=181,slow=5.0
VNA1 Neumayer--Stat 79.00 176 P **P** **04 52 43.9 +1.2**
H03S2 Juan Fernandez 80.23 123 T T 06 22 12.1
SNR=30
H03S1 Juan Fernandez 80.24 123 T T 06 22 09.8
SNR=24
H03S3 Juan Fernandez 80.25 123 T T 06 22 13.0
SNR=29
H03N3 Juan Fernandez 80.42 123 T T 06 22 20.8
baz=241,slow=72,SNR=9.1
H03N2 Juan Fernandez 80.42 123 T T 06 22 18.8
baz=241,slow=72,SNR=8.5
H03N1 Juan Fernandez 80.44 123 T T 06 22 20.3
baz=241,slow=72,SNR=15
ADK Adak 81.88 1 P **P** **04 52 57.0 -1.3**
SHEM Shemya Is, Ala 83.04 355 LR LR 05 26 02.3
comp=Z,43nm,18.5s,baz=190,slow=33
LPIG La Paz 84.24 58 LR LR 05 26 10.3
comp=Z,37nm,18.4s,baz=206,slow=32
KSRS Korea Array 84.51 319 P **P** **04 53 10.1 -2.1**
comp=Z,0.5nm,0.4s,baz=152,slow=10,SNR=4.2
comp=Z,0.5nm,0.4s
PSI Prapat 85.74 276 LR LR 05 32 10.2
comp=Z,103nm,19.6s,baz=176,slow=36
PETK Petropavlovsk- 85.84 345 P **P** **04 53 17.2 -1.3**
comp=Z,5.9nm,0.8s,baz=160,slow=9.0,SNR=6.4
PETK LR LR 05 25 48.3
comp=Z,30nm,20.8s,baz=134,slow=32
comp=Z,5.9nm,0.8s
USRK Ussuriysk Ar. 87.29 326 LR LR 05 33 56.1
comp=Z,33nm,18.1s,baz=175,slow=37
YBH Yreka Blue Hor 87.80 38 LR LR 05 23 36.5
comp=Z,32nm,21.8s,baz=226,slow=29
NVAR Mina Array Bea 87.99 43 P **P** **04 53 30.8 +1.1**
comp=Z,0.4nm,0.3s,baz=216,slow=7.2,SNR=7.5
comp=Z,0.4nm,0.3s
CN2 Changchun 90.29 323 *e*P **P** **04 53 43.7 +3.7**
KLR Kul'dur 91.15 330 LR LR 05 37 13.3
comp=Z,34nm,18.1s,baz=151,slow=37
TXAR Lajitas Array 92.10 57 P **P** **04 53 49.8 +0.9**
comp=Z,0.4nm,0.9s,baz=221,slow=5.0,SNR=3.9
TXAR LR LR 05 31 05.9
comp=Z,26nm,18.8s,baz=226,slow=33
comp=Z,0.4nm,0.9s
CMIG Matias Romero 92.44 72 LR LR 05 27 09.2
comp=Z,26nm,19.9s,baz=215,slow=30
NNA Nana 93.14 106 LR LR 05 25 42.4
comp=Z,42nm,21.4s,baz=263,slow=29
ANMO Albuquerque 93.30 51 LR LR 05 32 03.0
comp=Z,26nm,18.1s,baz=225,slow=33
MA2 Magadan 93.33 345 LR LR 05 30 05.4
comp=Z,46nm,22.0s,baz=125,slow=32
CMAR Chiang Mai Arr 93.68 289 LR LR 05 38 24.0
comp=Z,17nm,18.1s,baz=185,slow=37
LVC Limon Verde 93.69 119 LR LR 05 27 20.6
comp=Z,41nm,21.0s,baz=235,slow=30
PZH PanZhiHua 95.56 297 P **P** **04 54 07.3 +2.4**
PDAR Pinedale Array 95.88 43 LR LR 05 28 39.8
comp=Z,30nm,21.9s,baz=244,slow=30
HHC Hu-ho-hao-te 96.42 314 *e*P **P** **04 54 11.0 +2.5**
MKAR Makanchi Array 117.98 310 PKP **PKPdf** **04 59 24.8 -0.9**
comp=Z,0.9nm,0.6s,baz=173,slow=1.5,SNR=6.9
H10S3 ASCENSION HYDR 137.64 155 T T 07 34 38.0
SNR=2.9
ARCES ARCESS Array B 138.61 348 PKP **PKPdf** **05 00 04.0 -0.1**
comp=Z,2.0nm,0.7s,baz=48,slow=3.6,SNR=5.3
H10N3 ASCENSION HYDR 138.72 154 T T 07 35 53.0
baz=203,slow=74,SNR=12
H10N1 ASCENSION HYDR 138.72 154 T T 07 35 46.8
baz=203,slow=74,SNR=15
H10N2 ASCENSION HYDR 138.74 154 T T 07 35 55.5

baz=203,slow=74,SNR=13
FINES FINESS Array B 145.20 340 PKPbc **PKPbc 05 00 15.2 -0.6**
comp=Z,21nm,0.7s,baz=60,slow=3.5,SNR=71
NB2 NORSAR Subarra148.75 352 PKP **PKPbc 05 00 25.7 -0.3**
comp=Z,1.8nm,0.6s,baz=13,slow=2.6
NOA NORSAR Array B 148.75 352 PKPbc **PKPbc 05 00 25.4 -0.6**
comp=Z,4.3nm,0.8s,baz=14,slow=4.3,SNR=15
NACGM Naroch 149.88 332∥*e*PKP **PKPbc 05 00 29.2 +0.3**
comp=Z,21nm,0.9s,baz=45
AKASG Malin Array Be 151.45 323 PKPbc **PKPbc 05 00 32.3 -0.4**
comp=Z,11nm,0.8s,baz=50,slow=2.8,SNR=27
BRTR Keskin Array B 152.85 299 PKPbc **PKPbc 05 00 36.1 -0.4**
comp=Z,2.0nm,0.6s,baz=134,slow=3.6,SNR=12
GERES GERESS Array B 159.61 338 PKPab **PKPab 05 01 14.6 -1.6**
comp=Z,0.5nm,0.8s,baz=35,slow=4.9,SNR=3.5
WATA Walderalm 161.61 340 *e*P **PKPab 05 01 24.5 -0.5**
comp=Z,2.0nm,0.3s
WTTA Wattenberg 161.65 340 *e*P **PKPab 05 01 25.5 +0.2**
comp=Z,2.0nm,0.5s
RETA Reutte 161.70 342 *e*P **PKPab 05 01 25.4 +0.1**
comp=Z,7.0nm,1.1s
DAVA Damuels 162.12 343 *e*P **PKPab 05 01 27.1 -0.1**
comp=Z,3.4nm,0.7s
TORD Torodi Ar. Bea 162.87 178 PKPab **PKPab 05 01 32.1 +1.0**
comp=Z,17nm,0.6s,baz=178,slow=3.6,SNR=5.1

*NEIC **03** 05:01:57.6±1.1,51.°12N±0.°04×169.°81W±0.°09,h23km±7km, mb3.7/21,ML3.6/6,ML3.1(AEIC),Error ellipse: s-maj=8.0km s-min=5.2km az=101.0*
*AEIC **03** 05:01:59±1.4,50.°95N±0.°07×169.°7W±0.°1,h10km±2km, Error ellipse: s-maj=12.9km s-min=10.6km az=151.0*
ISC 03 05:01:58.2±1.3,51.°0N±0.°1×169.°77W±0.°06,h35km,n45, σ0§86/46,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**2.01**	**16**		**Sn**	**05 02 53.6**	**0.0**
NIKH	**Nikolski High**	**2.01**	**16**		**Pn**	**05 02 29.1**	**-0.6**
OKWR	**Okmok West Rim**	**2.58**	**21**		**Pn**	**05 02 37.5**	**-0.1**
KOFP	**Korovin Flat P**	**2.97**	**296**		**Pn**	**05 02 42.5**	**-0.3**
KOFP					**Sn**	**05 03 16.4**	**-0.7**
KOSE	**Korovin Southe**	**2.97**	**298**		**Pn**	**05 02 43.2**	**+0.4**
UNV	**Unalaska Valle**	**3.45**	**34**		**Pn**	**05 02 49.5**	**+0.1**
UNV	**Unalaska Valle**	**3.45**	**34**		**Sn**	**05 03 28.4**	**-0.5**
AKUT	**Akutan**	**3.94**	**37**	Pn	**Pn**	**05 02 55.0**	**-1.1**
AKUT				IAML		05 04 06.7	
	comp=E,86nm,3.7s						
AKUT				IAML		05 04 59.2	
	comp=N,94nm,3.4s						
GSTR	**Great Sitkin T**	**4.06**	**287**	Pn	**Pn**	**05 02 58.1**	**+0.2**
GSTD	**Great Sitkin T**	**4.11**	**287**		**Pn**	**05 02 57.6**	**-0.9**
ADK	**Adak**	**4.41**	**284**	Pn	**Pn**	**05 03 01.5**	**-1.1**
ADK				IAML		05 03 53.7	
	comp=N,68nm,0.6s						
KIWB	**Kanaga Island**	**4.69**	**283**	Pn	**Pn**	**05 03 05.8**	**-0.6**
FALS	**False Pass**	**5.42**	**43**	Pn	**Pn**	**05 03 15.4**	**-1.0**
SPIA	**Saint Paul Isl**	**6.15**	**358**	Pn	**Pn**	**05 03 26.6**	**+0.1**
SDPT	**Sand Point**	**7.05**	**49**	Pn	**Pn**	**05 03 39.5**	**+0.7**
CNBA	**Chernabura Isl**	**7.22**	**54**	Pn	**Pn**	**05 03 41.4**	**+0.2**
CHGN	**Chignik**	**8.55**	**48**	Pn	**Pn**	**05 04 01.0**	**+1.7**
SEW	**Seward**	**14.58**	**44**	Pn	**Pn**	**05 05 20.5**	**-1.2**
SUA	**Susitna One**	**14.79**	**38**	Pn	**Pn**	**05 05 24.3**	**-0.4**
RC01	**Rabbit Creek A**	**14.98**	**40**	Pn	**Pn**	**05 05 27.1**	**0.0**
PWL	**Port Wells**	**15.44**	**42**	Pn	**Pn**	**05 05 32.9**	**-0.2**
J20K	**Nowinta River**	**15.53**	**26**	Pn	**Pn**	**05 05 34.2**	**-0.1**
CAST	**Castle Rocks**	**15.59**	**31**	Pn	**Pn**	**05 05 35.2**	**+0.2**
HIN	**Hinchinbrook I**	**16.02**	**45**	Pn	**Pn**	**05 05 39.6**	**-1.1**
SCM	**Sheep Creek Mo**	**16.35**	**40**	Pn	**Pn**	**05 05 42.7**	**-2.2**
SCM				IAmb	IAmb	05 05 51.1	
	comp=Z,8.5nm,0.9s						
BPAW	**Bear Paw Mtn.**	**16.42**	**30**	Pn	**Pn**	**05 05 45.2**	**-0.4**
EYAK	**Cordova Ski Ar**	**16.43**	**45**	Pn	**Pn**	**05 05 44.6**	**-1.1**
KLU	**Klutina**	**16.77**	**42**	Pn	**Pn**	**05 05 48.5**	**-1.7**
KLU				IAmb	IAmb	05 06 24.3	
	comp=Z,14nm,1.4s						
I21K	**Tanana**	**16.90**	**26**	Pn	**Pn**	**05 05 51.4**	**-0.3**
I21K				IAmb	IAmb	05 05 58.7	
	comp=Z,7.1nm,1.1s						
MLY	**Manley**	**17.15**	**28**	Pn	**Pn**	**05 05 53.8**	**-1.1**
BERG	**Berg Lake**	**17.30**	**47**	Pn	**Pn**	**05 05 55.9**	**-0.8**
M26K	**Nabesna, AK**	**18.41**	**42**	P	**P**	**05 06 08.2**	**-1.9**
M26K				IAmb	IAmb	05 06 33.1	
	comp=Z,7.1nm,1.4s						
H24K	**Noodor Dome**	**18.57**	**29**	P	**Pn**	**05 06 12.3**	**-0.1**
H24K				IAmb	IAmb	05 06 51.9	
	comp=Z,5.1nm,1.2s						
DOT	**Dot Lake**	**18.58**	**37**	P	**Pn**	**05 06 12.2**	**-0.2**
L27K	**Beaver Creek,**	**19.19**	**40**	P	**Pn**	**05 06 19.4**	**-0.4**
L27K				IAmb	IAmb	05 06 29.7	
	comp=Z,5.7nm,1.4s						
BCAR	**Beaver Creek A**	**19.21**	**41**	P	**Pn**	**05 06 19.1**	**-0.9**
J26L	**Joseph Creek**	**19.21**	**36**	P	**Pn**	**05 06 19.1**	**-1.0**
J26L				IAmb	IAmb	05 06 25.2	
	comp=Z,4.6nm,1.2s						
I26K	**Coal Creek Min**	**19.80**	**34**	P	**P**	**05 06 25.4**	**+0.2**
I26K				IAmb	IAmb	05 06 39.6	
	comp=Z,7.5nm,1.4s						
EGAK	**Eagle**	**20.25**	**36**	P	**P**	**05 06 30.5**	**+0.4**
EGAK				IAmb	IAmb	05 07 06.8	
	comp=Z,5.5nm,1.4s						
DAWY	**Dawson**	**20.61**	**39**	P	**P**	**05 06 34.2**	**+0.1**
DAWY				IAmb	IAmb	05 06 48.3	
	comp=Z,6.8nm,1.4s						
BMAR	**Burnt Mountain**	**20.62**	**28**	P	**P**	**05 06 34.4**	**+0.3**
P33M	**Teslin, Yukon**	**22.50**	**52**	P	**P**	**05 06 54.2**	**-0.3**
P33M				IAmb	IAmb	05 07 34.9	
	comp=Z,7.7nm,1.4s						
EPYK	**Eagle Plains**	**22.63**	**35**	P	**P**	**05 06 56.1**	**+0.4**
TXAR	**Lajitas Array**	**53.04**	**88**	P	**P**	**05 11 12.9**	**+1.2**
ABKAR	**Akbulak array**	**71.43**	**328**	P	**P**	**05 13 15.7**	**+1.1**

*NEIC **03** 05:55:46.6±1.0,17.°47S±0.°09×178.°3W±0.°2,h545km±15km, mb4.3/17,Error ellipse: s-maj=24.2km s-min=9.0km az=65.0*
*IDC **03** 05:55:48.4±2.2,17.°53S×178.°64W,h550km±19km,mb3.6/5, mbtmp4.4/7,Error ellipse: s-maj=65.8km s-min=23.3km az=153.0*
ISC 03 05:55:46.7±0.7,17.°5S±0.°2×178.°42W±0.°10,h547km,n29, σ0§82/29,mb4.3/14,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.38**	**265**	P	**P**	**05 57 04.5**	**+0.5**
	71nm,0.7s,baz=102,slow=5.2,SNR=48						
AFI	**Afiamalu**	**7.30**	**62**	P	**P**	**05 57 36.1**	**-1.5**
NIUE	**Niue**	**8.23**	**103**	P	**P**	**05 57 45.1**	**-1.5**
DZM	**Mont Dzumac**	**14.97**	**250**	P	**P**	**05 58 55.7**	**-0.3**
	1.4nm,0.5s,baz=72,slow=20,SNR=1.8						
CTAO	**Charters Tower**	**33.52**	**260**	P	**P**	**06 01 40.4**	**-1.0**
CTAO				IAmb	IAmb	06 02 05.7	
	comp=Z,7.6nm,1.2s						
COEN	**Coen**	**37.10**	**270**	P	**P**	**06 02 12.1**	**+0.9**
COEN				IAmb	IAmb	06 02 12.8	
	comp=Z,6.8nm,1.1s						
TOO	**Toolangi**	**37.45**	**230**	P	**P**	**06 02 13.1**	**-0.8**
STKA	**Stephens Creek**	**38.84**	**241**	P	**P**	**06 02 24.7**	**-0.5**
	comp=Z,5.4nm,0.7s,baz=94,slow=11,SNR=6.0						
	comp=Z,5.4nm,0.7s						
STKA	**Stephens Creek**	**38.84**	**241**	P	**P**	**06 02 25.6**	**+0.4**
BBOO	**Buckleboo**	**43.62**	**241**	P	**P**	**06 03 03.1**	**+0.1**
WR0	**Warramunga Arr**	**44.52**	**259**	P	**P**	**06 03 09.3**	**-0.9**
WR0				IAmb	IAmb	06 03 27.1	
	comp=Z,6.4nm,1.1s						
WB0	**Warramunga Arr**	**44.67**	**259**	P	**P**	**06 03 11.0**	**-0.4**
WB0				IAmb	IAmb	06 03 18.1	
	comp=Z,21nm,1.5s						
WB2	**Warramunga Arr**	**44.70**	**259**	P	**P**	**06 03 10.9**	**-0.7**
WB2				IAmb	IAmb	06 03 43.6	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.71**	**259**	P	**P**	**06 03 11.1**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=94,slow=7.3,SNR=45						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**44.71**	**259**	P	**P**	**06 03 10.7**	**-0.9**
AS31	**Alice Springs**	**44.91**	**254**	P	**P**	**06 03 13.0**	**-0.1**
AS31				IAmb	IAmb	06 03 13.5	
	comp=Z,7.1nm,0.6s						
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**06 03 12.9**	**-0.2**
	comp=Z,25nm,0.6s,baz=88,slow=8.1,SNR=277						
	comp=Z,25nm,0.6s						
MTN	**Manton Dam**	**48.80**	**268**	P	**P**	**06 03 42.7**	**+0.1**
MTN				IAmb	IAmb	06 03 42.9	
	comp=Z,9.1nm,0.8s						
FORT	**Forrest**	**50.19**	**244**	P	**P**	**06 03 52.4**	**-0.2**
KNRA	**Kununurra**	**50.53**	**264**	P	**P**	**06 03 55.7**	**+0.5**
KNRA				IAmb	IAmb	06 04 08.4	
	comp=Z,28nm,1.4s						
SIJI	**Sorong**	**52.13**	**283**	P	**P**	**06 04 06.7**	**-0.1**
	comp=Z,9.0nm,0.3s,baz=128,slow=8.1,SNR=4.1						
	comp=Z,9.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**53.09**	**260**	P	**P**	**06 04 13.6**	**-0.1**
MBWA	**Marble Bar**	**58.18**	**256**	P	**P**	**06 04 48.7**	**-0.2**
MORW	**Morawa**	**60.65**	**246**	P	**P**	**06 05 04.9**	**-0.5**
MORW				IAmb	IAmb	06 05 29.4	
	comp=Z,25nm,1.2s						
VNDA	**Vanda**	**60.89**	**185**	P	**P**	**06 05 06.8**	**+0.9**
QSPA	**South Pole Qui**	**72.59**	**180**	P	**P**	**06 06 19.1**	**+0.6**
TXAR	**Lajitas Array**	**85.76**	**58**	P	**P**	**06 07 30.9**	**+2.2**
	comp=Z,0.4nm,0.8s,baz=211,slow=7.0,SNR=5.1						
	comp=Z,0.4nm,0.8s						
BRTR	**Keskin Array B**	**144.46**	**315**	PKP	**PKPab**	**06 14 21.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=106,slow=1.9,SNR=3.6						
GERES	**GERESS Array B**	**147.18**	**345**	PKPbc	**PKiKP**	**06 14 29.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=2.3,slow=2.5,SNR=4.2						

*AUST **03** 06:16:33.3±1.2,35.°85S×136.°83E,h10km,Error ellipse: s-maj=12.9km s-min=8.1km az=35.0*
*IDC **03** 06:16:35.5±5.9,35.°36S×136.°76E,h0km,mbtmp3.5/4, ML3.4/4,Error ellipse: s-maj=60.4km s-min=29.8km az=175.0*
ISC 03 06:16:33.2±1.3,35.°83S±0.°08×136.°99E±0.°07,h10km,n17, σ1§84/22,Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**2.87**	**34**	P	**Pn**	**06 17 20.5**	**+1.3**
	baz=3.0						
HTT				S	**Sb**	**06 17 58.6**	**-1.2**
	baz=3.0						
BBOO	**Buckleboo**	**3.10**	**345**	P	**Pn**	**06 17 23.7**	**+1.5**
	baz=3.1						
BBOO				S	**Sn**	**06 18 00.6**	**+1.2**
	baz=3.1						
ARPS	**Mount Arapiles**	**4.03**	**105**	P	**Pn**	**06 17 35.8**	**+0.8**
	baz=4.1						
ARPS				S	**Sn**	**06 18 22.1**	**-0.2**
	baz=4.1						
LCRK	**Leigh Creek**	**5.46**	**11**	P	**Pn**	**06 17 56.5**	**+1.8**
	baz=5.5						
LCRK				S	**Sn**	**06 18 59.0**	**+1.5**
	baz=5.5						
STKA	**Stephens Creek**	**5.50**	**46**	Pn	**Pn**	**06 17 57.0**	**+1.8**
	0.5nm,0.3s,baz=225,slow=11,SNR=5.3						
STKA				Sn	**Sn**	**06 18 57.4**	**-1.1**
	2.1nm,0.3s,baz=226,slow=9.9,SNR=4.7						
STKA				Lg	Lg	06 19 25.1	
	3.2nm,0.3s,baz=165,slow=10,SNR=5.4						
	1.2nm,0.3s						
STKA	**Stephens Creek**	**5.50**	**46**	P	**Pn**	**06 17 56.6**	**+1.5**
	baz=5.6						
MULG	**Mulgathing**	**6.05**	**335**	P	**Pn**	**06 18 03.9**	**+1.1**
	baz=6.0						
MULG				S	**Sn**	**06 19 11.8**	**-0.3**
	baz=6.0						
TOO	**Toolangi**	**7.05**	**107**	P	**Pn**	**06 18 18.3**	**+1.8**
	baz=7.2						
OOD	**Oodnadatta**	**8.08**	**352**	P	**Pn**	**06 18 32.0**	**+1.4**
	baz=8.1,SNR=3.1						
INKA	**Innaminka**	**8.67**	**23**	P	**Pn**	**06 18 40.4**	**+1.7**
	baz=8.8,SNR=3.6						
FORT	**Forrest**	**9.01**	**301**	P	**Pn**	**06 18 42.5**	**-0.7**
	baz=8.9						
ASAR	**Alice Springs**	**12.41**	**347**	Pn	Pn	06 19 26.3	-3.7
	0.3nm,0.3s,baz=174,slow=9.9,SNR=8.2						
ASAR				Sn	Sn	06 21 36.6	-12
	0.2nm,0.3s,baz=172,slow=22,SNR=2.1						
ASAR				Lg	Lg	06 22 55.2	
	baz=173,slow=25						
	0.5nm,0.4s						
ASPA	**Alice Springs**	**12.41**	**347**	P	**Pn**	**06 19 29.4**	**-0.6**
	baz=12						
WRKA	**Warakurna**	**13.10**	**323**	P	**Pn**	**06 19 37.9**	**-1.5**
	baz=13						
WB2	**Warramunga Arr**	**15.99**	**351**	P	**Pn**	**06 20 15.3**	**-3.1**
	baz=16						
WRA	**Warramunga Arr**	**15.99**	**351**	Pn	**Pn**	**06 20 13.7**	**-4.7**
	0.3nm,0.3s,baz=167,slow=14,SNR=10						
WRA				Sn	Sn	06 23 03.2	-13
	0.1nm,0.3s,baz=168,slow=26,SNR=3.6						
	0.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.32**	**327**	Pn	**P**	**06 21 10.6**	**+1.1**
	0.1nm,0.3s,baz=147,slow=15,SNR=1.4						
	2.9nm,1.1s						

*NEIC **03** 06:25:24.4±1.1,37.°38S±0.°09×179.°74E±0.°05,h10km±1km, mb4.8/21,Error ellipse: s-maj=15.1km s-min=7.6km az=7.0*
*IDC **03** 06:25:27.0±1.1,36.°69S×179.°15E,h0km,mb4.6/8, mbtmp4.6/9,ML5.1/1,MS3.5/14,Error ellipse: s-maj=32.1km s-min=23.5km az=56.0*
*WEL **03** 06:25:32.1±1.1,37.°S±6.°×17.°9E±.°,h20km,M4.8/12, ML5.1/12,MLv4.8/12,Error ellipse: s-maj=0.0km s-min=0.0km az=108.7*
*NOU **03** 06:25:38.1,37.°53S×178.°50E,h45km,MLv4.7/10,Off E. Coast of N. Island, N.Z.*
ISC 03 06:25:32.0±0.7,37.°14S±0.°08×179.°2E±0.°1,h37km±3km, n184,σ2§52/178,mb4.7/18,MS3.6/15,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.83**	**239**	Pn	**Pn**	**06 25 46.7**	**-0.4**
MXZ	**Matakaoa Point**	**0.83**	**239**	P	**Pn**	**06 25 46.9**	**-0.2**
MXZ				S	**Sn**	**06 25 57.6**	**-0.6**
MXZ	**Matakaoa Point**	**0.83**	**239**	P	**Pn**	**06 25 46.8**	**-0.4**
WMGZ	**Waiomatatini S**	**0.92**	**223**	P	**Pn**	**06 25 50.4**	**+1.9**
WMGZ				S	**Sn**	**06 26 04.4**	**+3.9**
PKGZ	**Pakihiroa**	**1.17**	**230**	P	**Pn**	**06 25 53.7**	**+1.8**
PKGZ				S	**Sn**	**06 26 09.3**	**+2.7**
PUZ	**Puketiti**	**1.19**	**219**	P	**Pn**	**06 25 53.6**	**+1.4**
PUZ				S	**Sn**	**06 26 09.9**	**+2.7**
HAZ	**Te Kaha**	**1.29**	**241**	P	**Pn**	**06 25 55.7**	**+2.2**
HAZ				S	**Sn**	**06 26 12.3**	**+2.9**
TWGZ	**Tauwhareparae**	**1.42**	**223**	P	**Pn**	**06 25 56.9**	**+1.6**
TWGZ				S	**Sn**	**06 26 16.5**	**+3.7**
RUGZ	**Raukumara Rang**	**1.47**	**235**	P	**Pn**	**06 25 58.0**	**+1.9**
RUGZ				S	**Sn**	**06 26 16.9**	**+2.9**
CNGZ	**Carnagh Statio**	**1.56**	**210**	P	**Pn**	**06 25 59.4**	**+2.3**
TKGZ	**Te Karaka**	**1.68**	**219**	P	**Pn**	**06 26 00.0**	**+1.1**
TKGZ				S	**Sn**	**06 26 22.8**	**+3.7**
MWZ	**Matawai**	**1.78**	**228**	P	**Pn**	**06 26 01.9**	**+1.5**
MWZ				S	**Sn**	**06 26 23.9**	**+2.1**
WHRZ	**Whale Island**	**1.91**	**247**	P	**Pn**	**06 26 03.4**	**+1.3**
WHRZ				S	**Sn**	**06 26 27.8**	**+2.9**
RIGZ	**Rimuhau**	**1.93**	**216**	P	**Pn**	**06 26 03.4**	**+1.1**
RIGZ				S	**Sn**	**06 26 28.8**	**+3.4**
RAGZ	**Rawiri**	**1.96**	**226**	P	**Pn**	**06 26 04.1**	**+1.3**
RAGZ				S	**Sn**	**06 26 27.3**	**+1.2**
URZ	**Urewera**	**2.00**	**236**	Pn	**Pn**	**06 26 04.4**	**+1.2**
	468nm,0.3s,baz=308,slow=1.4,SNR=2735						
URZ				Sn	**Sn**	**06 26 29.1**	**+2.1**
	201nm,0.3s,baz=21,slow=23,SNR=14						
	990nm,0.3s						
URZ	**Urewera**	**2.00**	**236**	Pn	**Pn**	**06 26 04.5**	**+1.2**
URZ				Sn	**Sn**	**06 26 30.0**	**+2.9**
URZ	**Urewera**	**2.00**	**236**	P	**Pn**	**06 26 04.6**	**+1.3**
URZ				S	**Sn**	**06 26 29.2**	**+2.2**
MARZ	**Manawahe**	**2.18**	**247**	P	**Pn**	**06 26 06.6**	**+0.8**
EDRZ	**Edgecumbe**	**2.18**	**243**	P	**Pn**	**06 26 07.0**	**+1.2**
SNGZ	**Shannon Statio**	**2.20**	**221**	P	**Pn**	**06 26 06.9**	**+0.9**
OPRZ	**Ohinepanea**	**2.22**	**251**	P	**Pn**	**06 26 07.2**	**+0.9**
KNZ	**Kokohu**	**2.23**	**212**	P	**Pn**	**06 26 06.8**	**+0.4**
MHGZ	**Mahia Peninsul**	**2.25**	**207**	P	**Pn**	**06 26 07.6**	**+0.8**
RTZ	**Ruatahuna**	**2.29**	**229**	P	**Pn**	**06 26 09.1**	**+1.7**
MUGZ	**Murupara**	**2.34**	**235**	P	**Pn**	**06 26 09.1**	**+1.1**
MYRZ	**Mayor Island**	**2.37**	**266**	P	**Pn**	**06 26 08.8**	**+0.4**
MKRZ	**Makatiti**	**2.39**	**245**	P	**Pn**	**06 26 10.3**	**+1.6**
LIRZ	**Lichensteins R**	**2.40**	**248**	P	**Pn**	**06 26 10.1**	**+1.3**
TGRZ	**Tauranga**	**2.42**	**255**	P	**Pn**	**06 26 09.5**	**+0.5**
RAHZ	**Arahi**	**2.44**	**223**	P	**Pn**	**06 26 10.1**	**+0.8**
RRRZ	**Republican Roa**	**2.44**	**240**	P	**Pn**	**06 26 10.9**	**+1.5**
OMRZ	**Omania**	**2.45**	**246**	P	**Pn**	**06 26 10.9**	**+1.5**
KARZ	**Kaharoa**	**2.51**	**249**	P	**Pn**	**06 26 11.3**	**+1.0**
HLRZ	**Highlands Stat**	**2.52**	**243**	P	**Pn**	**06 26 12.0**	**+1.6**
KUZ	**Kuaotunu**	**2.82**	**277**	P	**Pn**	**06 26 14.2**	**-0.3**
BKZ	**Black Stump Fm**	**2.94**	**226**	Pn	**Pn**	**06 26 16.8**	**+0.5**
BKZ				Sn	**Sn**	**06 26 51.3**	**+1.0**
HIZ	**Hauiti**	**3.71**	**247**	Pn	**Pn**	**06 26 28.4**	**+1.7**
TSZ	**Takapari Road**	**3.86**	**220**	P	**Pn**	**06 26 27.7**	**-1.3**
TSZ				S	**Sn**	**06 27 11.3**	**-1.7**
DVHZ	**Dannevirke**	**3.95**	**216**	P	**Pn**	**06 26 28.5**	**-1.6**
DVHZ				S	**Sn**	**06 27 12.9**	**-2.2**
BFZ	**Birch Farm**	**4.22**	**212**		**Pn**	**06 26 31.7**	**-2.1**
BFZ	**Birch Farm**	**4.22**	**212**	P	**Pn**	**06 26 31.5**	**-2.3**
BFZ				S	**Sn**	**06 27 18.9**	**-2.9**
BFZ	**Birch Farm**	**4.22**	**212**	P	**Pn**	**06 26 31.5**	**-2.3**
CPWZ	**Castlepoint**	**4.43**	**211**	P	**Pn**	**06 26 35.0**	**-1.6**
CPWZ				S	**Sn**	**06 27 24.0**	**-2.9**
MRZ	**Mangatainoka R**	**4.51**	**218**	P	**Pn**	**06 26 36.0**	**-1.8**
MRZ				S	**Sn**	**06 27 25.3**	**-3.6**
HOWZ	**Holdsworth Sta**	**4.72**	**216**	P	**Pn**	**06 26 38.0**	**-2.7**
HOWZ				S	**Sn**	**06 27 30.0**	**-4.2**
TMWZ	**Te Maipa**	**4.72**	**212**	S	**Sn**	**06 27 31.2**	**-3.0**
OGWZ	**Otaki Gorge**	**4.83**	**219**	P	**Pn**	**06 26 39.5**	**-2.6**
OGWZ				S	**Sn**	**06 27 32.8**	**-4.0**
OUZ	**Omahuta**	**4.93**	**291**	Pn	**Pn**	**06 26 44.0**	**+0.6**
OUZ	**Omahuta**	**4.93**	**291**	P	**Pn**	**06 26 44.4**	**+1.0**
OUZ	**Omahuta**	**4.93**	**291**	P	**Pn**	**06 26 44.9**	**+1.4**
MTW	**Mount Morrison**	**4.94**	**215**	P	**Pn**	**06 26 40.6**	**-3.0**
KIW	**Kapiti Island**	**5.00**	**221**	P	**Pn**	**06 26 41.9**	**-2.6**
TRWZ	**Traveller**	**5.05**	**212**	P	**Pn**	**06 26 41.5**	**-3.7**
CAW	**Cannon Point**	**5.10**	**218**	P	**Pn**	**06 26 42.5**	**-3.3**
PAWZ	**Paruwai Farm**	**5.15**	**214**	P	**Pn**	**06 26 43.4**	**-3.2**
MSWZ	**Moikau Station**	**5.26**	**215**		**Pn**	**06 26 44.0**	**-4.0**
MSWZ	**Moikau Station**	**5.26**	**215**	P	**Pn**	**06 26 44.6**	**-3.5**
PLWZ	**Palliser**	**5.38**	**213**	Pn	**Pn**	**06 26 45.2**	**-4.5**
PLWZ	**Palliser**	**5.38**	**213**	P	**Pn**	**06 26 46.2**	**-3.5**
WEL	**Wellington**	**5.38**	**218**	P	**Pn**	**06 26 47.1**	**-2.6**
SNZO	**South Karori**	**5.43**	**219**		**Pn**	**06 26 46.6**	**-3.8**
SNZO	**South Karori**	**5.43**	**219**	P	**Pn**	**06 26 48.0**	**-2.4**
DUWZ	**D'Urville Isla**	**5.50**	**227**	P	**Pn**	**06 26 49.4**	**-2.0**
TCW	**Tory Channel**	**5.58**	**222**	P	**Pn**	**06 26 49.4**	**-3.0**
TUWZ	**Tuamarina**	**5.91**	**222**		**Pn**	**06 26 53.4**	**-3.7**
TUWZ	**Tuamarina**	**5.91**	**222**	P	**Pn**	**06 26 53.9**	**-3.1**
CMWZ	**Cape Campbell**	**6.01**	**218**	Pn	**Pn**	**06 26 54.4**	**-3.9**
CMWZ	**Cape Campbell**	**6.01**	**218**	P	**Pn**	**06 26 56.4**	**-1.9**
NNZ	**Nelson**	**6.08**	**226**		**Pn**	**06 26 56.0**	**-3.4**
NNZ	**Nelson**	**6.08**	**226**	P	**Pn**	**06 26 56.6**	**-2.8**
BSWZ	**Blackbirch Sta**	**6.15**	**220**		**Pn**	**06 26 56.5**	**-3.8**
BSWZ	**Blackbirch Sta**	**6.15**	**220**	P	**Pn**	**06 26 57.2**	**-3.1**
TKNZ	**Takaka Hill**	**6.22**	**229**	P	**Pn**	**06 26 58.7**	**-2.5**
QRZ	**Quartz Range**	**6.37**	**233**		**Pn**	**06 27 00.6**	**-2.7**
QRZ	**Quartz Range**	**6.37**	**233**	P	**Pn**	**06 27 00.9**	**-2.4**
QRZ	**Quartz Range**	**6.37**	**233**	P	**Pn**	**06 27 00.1**	**-3.2**
THZ	**Tophouse**	**6.71**	**225**	Pn	**Pn**	**06 27 04.5**	**-3.6**
THZ	**Tophouse**	**6.71**	**225**	P	**Pn**	**06 27 04.6**	**-3.4**
KHZ	**Kahutara**	**6.84**	**218**		**Pn**	**06 27 05.3**	**-4.3**
KHZ	**Kahutara**	**6.84**	**218**	P	**Pn**	**06 27 05.8**	**-3.9**
KHZ	**Kahutara**	**6.84**	**218**	P	**Pn**	**06 27 06.2**	**-3.5**
DSZ	**Denniston Nort**	**7.34**	**229**	P	**Pn**	**06 27 12.8**	**-3.8**
GVZ	**Greta Valley S**	**7.50**	**217**	P	**Pn**	**06 27 15.5**	**-3.3**
LTZ	**Lake Taylor**	**7.75**	**221**		**Pn**	**06 27 18.0**	**-4.3**
LTZ	**Lake Taylor**	**7.75**	**221**	P	**Pn**	**06 27 18.0**	**-4.3**
INZ	**Inchbonnie**	**8.16**	**225**	P	**Pn**	**06 27 23.7**	**-4.1**
WVZ	**Waitaha Valley**	**8.78**	**225**	P	**Pn**	**06 27 33.1**	**-3.2**
RPZ	**Rata Peaks**	**9.04**	**221**	Pn	**Pn**	**06 27 37.1**	**-2.7**
	11nm,0.3s,baz=71,slow=1.7,SNR=22						
RPZ	**Rata Peaks**	**9.04**	**221**	Pn	**Pn**	**06 27 36.7**	**-3.2**
RPZ	**Rata Peaks**	**9.04**	**221**	P	**Pn**	**06 27 37.2**	**-2.7**
FOZ	**Fox Glacier**	**9.59**	**225**	Pn	**Pn**	**06 27 43.3**	**-4.2**
FOZ	**Fox Glacier**	**9.59**	**225**	P	**Pn**	**06 27 44.3**	**-3.1**
LBZ	**Lake Benmore**	**9.95**	**221**		**Pn**	**06 27 48.7**	**-3.7**
**

FITZ	**Fitzroy Crossi**	**50.43 277**	LR	LR	06 55 08.3		
	comp=Z,64nm,18.6s,baz=106,slow=35						
FITZ	**Fitzroy Crossi**	**50.43 277**	P	**P**	**06 34 25.1**	**-1.0**	
MORW	**Morawa**	**52.67 259**	P	**P**	**06 34 41.4**	**-1.4**	
QSPA	**South Pole Qui**	**52.98 180**	P	**P**	**06 34 48.5**	**+3.8**	
	comp=Z,3.6nm,0.8s,baz=38,slow=0.5,SNR=18						
	comp=Z,3.6nm,0.8s						
QSPA	**South Pole Qui**	**52.98 180**	P	P	06 34 39.5	-5.2	
QSPA			IAmb	IAmb	06 35 01.0		
	comp=Z,10nm,0.7s						
PSA00	**Pilbara Seismi**	**53.21 270**	P	**P**	**06 34 45.5**	**-1.4**	
MBWA	**Marble Bar**	**53.52 270**	P	**P**	**06 34 47.3**	**-1.8**	
MBWA			IAmb	IAmb	06 35 03.0		
	comp=Z,8.4nm,0.9s						
RPN	**Rapa Nui**	**60.06 103**	LR	LR	06 55 52.9		
	comp=Z,36nm,21.9s,baz=246,slow=30						
MAW	**Mawson**	**65.20 202**	P	**P**	**06 36 13.2**	**+4.2**	
	comp=Z,2.0nm,0.6s,baz=115,slow=9.4,SNR=6.7						
	comp=Z,2.0nm,0.6s						
TROLL	**Troll, Antarti**	**71.12 181**	P	**P**	**06 36 48.6**	**+2.3**	
LEM	**Lembang**	**71.24 276**	LR	LR	07 09 11.3		
	comp=Z,79nm,18.5s,baz=219,slow=37						
SNAA	**Sanae**	**71.48 179**	P	**P**	**06 36 49.8**	**+1.4**	
VNA3	**Neumayer Olymp**	**71.73 177**	P	**P**	**06 36 51.8**	**+2.0**	
VNA2	**Neumayer--Watz**	**72.13 178**	P	**P**	**06 36 54.5**	**+2.2**	
	baz=174,slow=5.0						
VNA1	**Neumayer--Stat**	**72.38 177**	P	**P**	**06 36 57.0**	**+3.3**	
H03S2	**Juan Fernandez**	**78.67 124**	T	T	08 04 03.1		
	baz=232,SNR=31						
H03S1	**Juan Fernandez**	**78.68 124**	T	T	08 04 07.7		
	baz=232,SNR=25						
H03S3	**Juan Fernandez**	**78.69 124**	T	T	08 04 07.0		
	baz=232,SNR=27						
H03N3	**Juan Fernandez**	**78.90 124**	T	T	08 04 22.6		
	baz=235						
H03N2	**Juan Fernandez**	**78.91 124**	T	T	08 04 11.7		
	baz=235						
H03N1	**Juan Fernandez**	**78.92 124**	T	T	08 04 12.0		
	baz=235						
RPSI	**Rantau Prapat**	**83.88 278**	P	**P**	**06 38 00.4**	**+2.1**	
PSI	**Prapat**	**83.94 278**	P	**P**	**06 38 00.4**	**+1.7**	
	comp=Z,7.6nm,0.5s,baz=177,slow=19,SNR=6.4						
	comp=Z,7.6nm,0.5s						
PFO	**Pinyon Flats O**	**92.43 49**	LR	LR	07 13 27.0		
	comp=Z,22nm,19.4s,baz=226,slow=31						
CMAR	**Chiang Mai Arr**	**93.49 290**	P	**P**	**06 38 44.1**	**0.0**	
	comp=Z,0.8nm,0.4s,baz=158,slow=3.4,SNR=4.2						
	comp=Z,0.8nm,0.4s						
NNA	**Nana**	**93.70 108**	LR	LR	07 13 39.2		
	comp=Z,25nm,18.3s,baz=318,slow=31						
YBH	**Yreka Blue Hor**	**94.73 40**	LR	LR	07 12 53.6		
	comp=Z,28nm,20.1s,baz=222,slow=30						
PZH	**PanZhiHua**	**96.40 298**	P	**P**	**06 38 57.3**	**-0.1**	
HHC	**Hu-ho-hao-te**	**99.27 315**	*e*P	**Pdif**	**06 39 09.4**	**-0.5**	
ANMO	**Albuquerque**	**99.53 53**	LR	LR	07 17 32.0		
	comp=Z,15nm,18.9s,baz=136,slow=32						
WMQ	**Urumqi**	**115.47 307**	*e*P	**PKPdf**	**06 44 06.8**	**-2.9**	
MKAR	**Makanchi Array**	**120.19 308**	PKP	**PKPdf**	**06 44 17.3**	**-1.3**	
	comp=Z,0.4nm,0.7s,baz=96,slow=2.9,SNR=2.7						
ARCES	**ARCESS Array B**	**144.56 344**	PKP	**PKPdf**	**06 45 04.1**	**+0.6**	
	comp=Z,2.3nm,0.7s,baz=352,slow=5.3,SNR=3.6						
FINES	**FINESS Array B**	**150.43 334**	PKPbc	**PKPbc**	**06 45 18.3**	**-0.3**	
	comp=Z,2.2nm,0.7s,baz=26,slow=4.9,SNR=7.3						
BRTR	**Keskin Array B**	**153.00 286**	PKPbc	**PKPbc**	**06 45 24.9**	**-0.5**	
	comp=Z,0.5nm,0.6s,baz=50,slow=2.3,SNR=2.2						
AKASG	**Malin Array Be**	**154.69 312**	PKPbc	**PKPbc**	**06 45 28.1**	**-0.4**	
	comp=Z,0.3nm,0.3s,baz=50,slow=1.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**156.00 186**	PKPab	**PKPab**	**06 45 51.3**	**+1.3**	
	comp=Z,1.0nm,0.5s,baz=156,slow=5.0,SNR=6.6						
BRG	**Berggiesshubel**	**162.70 327**	*e*Pn	**PKPdf**	**06 45 28.2**	**-1.3**	
BRG			Amp		06 45 30.3		
	comp=Z,3.6nm,0.4s						

GEN ***03*** *06:43:42.5, 46.°7ON×8.°49E, h8km±3km, Ml3.3*
ROM ***03*** *06:43:43.2±0.2, 46.°668N±0.°009×8.°49E±0.°01, h6km±1km, ML3.1/35, Error ellipse: s-maj=1.0km s-min=0.6km az=93.0*
ZUR ***03*** *06:43:43.5, 46.°67N×8.°51E, h5km, MLh3.3/99, Error ellipse: s-maj=1.3km s-min=0.3km az=250.0*
LDG ***03*** *06:43:43.7±0.1, 46.°66N×8.°49E, h5km, Md3.3/2, Ml3.4/60, Error ellipse: s-maj=1.4km s-min=1.2km az=124.0*
STR ***03*** *06:43:44.4±0.4, 47.°7N×2.°×.°±.°, h4km±3km, MLv3.3/32, Error ellipse: s-maj=0.0km s-min=0.0km az=132.7, preliminary*
BGR ***03*** *06:43:45.2±0.4, 46.°71N×8.°50E, h10km, ML3.3/21, Error ellipse: s-maj=4.4km s-min=2.2km az=17.0*
BUG ***03*** *06:43:46.9±0.0, 46.°81N×8.°54E, h0km±20km, MD3.7/6, ML3.9/8*

ISC 03 06:43:43.9±0.8, 46.°66N±0.°01×8.°501E±0.°010, h12km±4km, n372, σ1.°85/542, 102C-65D, Switzerland

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIMS	**Grimsel Gerste**	**0.15 236**	⇑Pg	**Pg**	**06 43 47.2**	**-0.6**
GRIMS			Sg	**Sg**	**06 43 49.4**	**-1.0**
GRIMS	**Grimsel Gerste**	**0.15 236**	⇑Pg	**Pg**	**06 43 47.2**	**-0.6**
GRIMS			Sg	**Sg**	**06 43 49.4**	**-1.0**
NALPS	**Val Nalps**	**0.18 112**	⇓Pg	**Pg**	**06 43 47.9**	**-0.3**
NALPS	**Val Nalps**	**0.18 112**	⇓Pg	**Pg**	**06 43 47.9**	**-0.3**
NALPS			Sg	**Sg**	**06 43 50.7**	**-0.5**
BNALP	**Bannalp**	**0.21 346**	⇓Pg	**Pg**	**06 43 48.0**	**-0.7**
BNALP			Sg	**Sg**	**06 43 51.0**	**-1.0**
BNALP	**Bannalp**	**0.21 346**	⇓Pg	**Pg**	**06 43 48.0**	**-0.7**
BNALP			Sg	**Sg**	**06 43 51.0**	**-1.0**
BNALP	**Bannalp**	**0.21 346**	P	**Pg**	**06 43 48.0**	**-0.7**
BNALP			S	**Sg**	**06 43 51.0**	**-1.0**
BNALP			AML	AML		
	comp=E,11350μm,0.3s					
BNALP			AML	AML		
	comp=E,11350μm,0.2s					
BNALP			AML	AML		
	comp=N,7625μm,0.3s					
FUSIO	**Fusio**	**0.24 152**	⇓Pg	**Pg**	**06 43 48.8**	**-0.2**
FUSIO	**Fusio**	**0.24 152**	⇓Pg	**Pg**	**06 43 48.8**	**-0.2**
FUSIO	**Fusio**	**0.24 152**	P	**Pg**	**06 43 48.8**	**-0.2**
FUSIO			S	**Sg**	**06 43 52.3**	**-0.1**
FUSIO	**Fusio**	**0.24 152**	P	**Pg**	**06 43 48.8**	**-0.2**
FUSIO			S	**Sg**	**06 43 52.4**	**-0.1**
FUSIO			AML	AML		
	comp=N,2670μm,0.2s					
FUSIO			AML	AML		
	comp=E,3200μm,0.2s					
SALTS	**Altdorf, Kanto**	**0.24 23**	⇑Pg	**Pg**	**06 43 48.5**	**-0.5**
SALTS			Sg	**Sg**	**06 43 51.7**	**-0.7**
SALTS	**Altdorf, Kanto**	**0.24 23**	⇑Pg	**Pg**	**06 43 48.5**	**-0.5**
SALTS			Sg	**Sg**	**06 43 51.7**	**-0.7**
HASLI	**Hasliberg/Brie**	**0.26 291**	⇑Pg	**Pg**	**06 43 48.9**	**-0.5**
HASLI			Sg	**Sg**	**06 43 52.3**	**-0.8**
HASLI	**Hasliberg/Brie**	**0.26 291**	⇑Pg	**Pg**	**06 43 48.9**	**-0.5**
HASLI			Sg	**Sg**	**06 43 52.3**	**-0.8**
SARK	**Sarnen Kantons**	**0.29 322**	⇓Pg	**Pg**	**06 43 49.4**	**-0.5**
SARK			Sg	**Sg**	**06 43 53.4**	**-0.5**
SARK	**Sarnen Kantons**	**0.29 322**	⇓Pg	**Pg**	**06 43 49.4**	**-0.5**
SARK			Sg	**Sg**	**06 43 53.4**	**-0.5**
FIESA	**Fiescheralp**	**0.35 230**	⇑Pg	**Pg**	**06 43 50.8**	**-0.3**
FIESA	**Fiescheralp**	**0.35 230**	⇑Pg	**Pg**	**06 43 50.8**	**-0.3**
LLS	**Linth-Limmern**	**0.40 62**	⇑Pg	**Pg**	**06 43 51.2**	**-0.6**
LLS	**Linth-Limmern**	**0.40 62**	⇑Pg	**Pg**	**06 43 51.2**	**-0.6**
SLUB	**Luzern Bramber**	**0.42 341**	Pg	**Pg**	**06 43 52.1**	**-0.1**
SLUB	**Luzern Bramber**	**0.42 341**	Pg	**Pg**	**06 43 52.1**	**-0.1**
SLTM2	**Linthal, Matt**	**0.43 53**	⇑Pg	**Pg**	**06 43 51.9**	**-0.6**
SLTM2			Sg	**Sg**	**06 43 57.5**	**-0.8**
SLTM2	**Linthal, Matt**	**0.43 53**	⇑Pg	**Pg**	**06 43 51.9**	**-0.6**
SLTM2			Sg	**Sg**	**06 43 57.5**	**-0.8**
SINS	**Interlaken, Sc**	**0.44 273**	Sg	**Sg**	**06 43 58.5**	**0.0**
SINS	**Interlaken, Sc**	**0.44 273**	Sg	**Sg**	**06 43 58.5**	**0.0**
PANIX	**Pigniu (Panix)**	**0.45 69**	⇑Pg	**Pg**	**06 43 52.3**	**-0.6**
PANIX	**Pigniu (Panix)**	**0.45 69**	⇑Pg	**Pg**	**06 43 52.3**	**-0.6**
PANIX			Sg	**Sg**	**06 43 58.2**	**-0.8**
BIBA	**Brigerbad**	**0.53 228**	⇑Pg	**Pg**	**06 43 54.0**	**-0.4**
BIBA	**Brigerbad**	**0.53 228**	⇑Pg	**Pg**	**06 43 54.0**	**-0.4**
SIMPL	**Simplonpass**	**0.54 218**	⇑Pg	**Pg**	**06 43 54.0**	**-0.5**
SIMPL	**Simplonpass**	**0.54 218**	⇑Pg	**Pg**	**06 43 54.0**	**-0.5**
SIMPL	**Simplonpass**	**0.54 218**	P	**Pg**	**06 43 54.0**	**-0.5**
SIMPL			S	**Sg**	**06 44 01.4**	**-0.3**
LAUCH	**Lauchernalp**	**0.56 244**	⇑Pg	**Pg**	**06 43 54.5**	**-0.5**
LAUCH	**Lauchernalp**	**0.56 244**	⇑Pg	**Pg**	**06 43 54.5**	**-0.5**
LAUCH	**Lauchernalp**	**0.56 244**	P	**Pg**	**06 43 54.5**	**-0.5**
LAUCH			S	**Sg**	**06 44 01.9**	**-0.5**
SVIT	**Visp-Terbiners**	**0.57 229**	⇑Pg	**Pg**	**06 43 54.6**	**-0.4**
SVIT			Sg	**Sg**	**06 44 01.9**	**-0.6**
SVIT	**Visp-Terbiners**	**0.57 229**	⇑Pg	**Pg**	**06 43 54.6**	**-0.4**
SVIT			Sg	**Sg**	**06 44 01.9**	**-0.6**
SVIO	**Visp Obere Sta**	**0.57 229**	⇑Pg	**Pg**	**06 43 54.6**	**-0.4**
SVIO			Sg	**Sg**	**06 44 02.0**	**-0.6**
SVIO	**Visp Obere Sta**	**0.57 229**	⇑Pg	**Pg**	**06 43 54.6**	**-0.4**
SVIO			Sg	**Sg**	**06 44 02.0**	**-0.6**
HAMIK	**Hmikon, Dlik**	**0.60 345**	⇓Pg	**Pg**	**06 43 55.5**	**-0.2**
HAMIK	**Hmikon, Dlik**	**0.60 345**	⇓Pg	**Pg**	**06 43 55.5**	**-0.2**
WIMIS	**Wimmis**	**0.60 271**	⇑Pg	**Pg**	**06 43 55.4**	**-0.4**
WIMIS			Sg	**Sg**	**06 44 03.7**	**0.0**
WIMIS	**Wimmis**	**0.60 271**	⇑Pg	**Pg**	**06 43 55.4**	**-0.4**
WIMIS			Sg	**Sg**	**06 44 03.7**	**0.0**
TUE	**Stuetta**	**0.61 108**	⇑Pg	**Pg**	**06 43 55.5**	**-0.4**
TUE			Sg	**Sg**	**06 44 03.3**	**-0.7**
TUE	**Stuetta**	**0.61 108**	⇑Pg	**Pg**	**06 43 55.5**	**-0.4**
TUE			Sg	**Sg**	**06 44 03.3**	**-0.7**
TUE	**Stuetta**	**0.61 108**	P	**Pg**	**06 43 55.5**	**-0.4**
TUE			S	**Sg**	**06 44 03.4**	**-0.7**
TUE	**Stuetta**	**0.61 108**	⇑P	**Pg**	**06 43 55.5**	**-0.4**
TUE			S	**Sg**	**06 44 03.4**	**-0.7**
TUE			AML	AML		
	comp=N,2215μm,0.3s					
TUE			AML	AML		
	comp=E,1895μm,1.4s					
TUE			AML	AML		
	comp=E,1510μm,1.5s					
TUE			AML	AML		
	comp=E,1895μm,0.6s					
TUE			AML	AML		
	comp=E,1510μm,0.5s					
TUE			AML	AML		
	comp=N,3000μm,1.2s					
SGRA	**Graechen Ausbl**	**0.66 225**	⇑Pg	**Pg**	**06 43 56.2**	**-0.5**
SGRA	**Graechen Ausbl**	**0.66 225**	⇑Pg	**Pg**	**06 43 56.2**	**-0.5**
LKBD2	**Leukerbad 2**	**0.66 244**	⇑Pg	**Pg**	**06 43 56.2**	**-0.6**
LKBD2	**Leukerbad 2**	**0.66 244**	⇑Pg	**Pg**	**06 43 56.2**	**-0.6**
DAGMA	**Lutertal, Dagm**	**0.66 330**	⇓Pg	**Pg**	**06 43 56.7**	**-0.1**
DAGMA	**Lutertal, Dagm**	**0.66 330**	⇓Pg	**Pg**	**06 43 56.7**	**-0.1**
LKBD	**Leukerbad**	**0.66 246**	⇑Pg	**Pg**	**06 43 56.4**	**-0.5**
LKBD	**Leukerbad**	**0.66 246**	⇑Pg	**Pg**	**06 43 56.4**	**-0.5**
EWZT2	**Wettswil, ZR**	**0.68 360**	⇓Pg	**Pg**	**06 43 57.0**	**-0.1**
EWZT2	**Wettswil, ZR**	**0.68 360**	⇓Pg	**Pg**	**06 43 57.0**	**-0.1**
VDL	**Val di Lei**	**0.68 105**	⇑Pg	**Pg**	**06 43 56.6**	**-0.5**
VDL	**Val di Lei**	**0.68 105**	⇑Pg	**Pg**	**06 43 56.6**	**-0.5**
VDL	**Val di Lei**	**0.68 105**	P	**Pg**	**06 43 56.6**	**-0.5**
VDL			S	**Sg**	**06 44 05.2**	**-0.9**
SVAM	**Vaz, Muldain**	**0.71 87**	⇑Pg	**Pg**	**06 43 57.1**	**-0.6**
SVAM	**Vaz, Muldain**	**0.71 87**	⇑Pg	**Pg**	**06 43 57.1**	**-0.6**
ZUR	**Degenried**	**0.71 4**	⇓Pg	**Pg**	**06 43 57.6**	**-0.1**
ZUR			PmP		06 44 00.4	
ZUR			Sg	**Sg**	**06 44 07.4**	**+0.4**
ZUR	**Degenried**	**0.71 4**	⇓Pg	**Pg**	**06 43 57.6**	**-0.1**
ZUR			PmP		06 44 00.4	
ZUR			Sg	**Sg**	**06 44 07.4**	**+0.4**
ZUR			SmS		06 44 12.1	
ZUR	**Degenried**	**0.71 4**	⇓Pg	**Pg**	**06 43 57.6**	**-0.1**
MMK	**Mattmark**	**0.72 211**	⇑Pg	**Pg**	**06 43 57.2**	**-0.7**
MMK			Sg	**Sg**	**06 44 06.8**	**-0.5**
MMK	**Mattmark**	**0.72 211**	⇑Pg	**Pg**	**06 43 57.2**	**-0.7**
MMK			Sg	**Sg**	**06 44 06.8**	**-0.5**
MMK	**Mattmark**	**0.72 211**	P	**Pg**	**06 43 57.2**	**-0.7**
MMK			S	**Sg**	**06 44 06.8**	**-0.5**
MMK	**Mattmark**	**0.72 211**	⇑P	**Pg**	**06 43 57.2**	**-0.7**
MMK			S	**Sg**	**06 44 06.8**	**-0.5**
MMK			AML	AML		
	comp=E,1555μm,0.9s					
MMK			AML	AML		
	comp=N,1450μm,0.8s					
MMK			AML	AML		
	comp=N,1450μm,0.8s					
MMK			AML	AML		
	comp=E,1555μm,0.9s					
PLONS	**Plons/SG**	**0.72 57**	PmP		06 43 57.1	
PLONS			⇑Pg	**Pg**	**06 43 57.1**	**-0.8**
PLONS	**Plons/SG**	**0.72 57**	PmP		06 43 57.1	
PLONS			⇑Pg	**Pg**	**06 43 57.1**	**-0.8**
PLONS	**Plons/SG**	**0.72 57**	*e*Pg	**Pg**	**06 43 57.1**	**-0.8**
PLONS			*e*Sg	**Sg**	**06 44 06.2**	**-1.1**
PLONS	**Plons/SG**	**0.72 57**	P	**Pg**	**06 43 57.1**	**-0.8**
PLONS			S	**Sg**	**06 44 06.2**	**-1.1**
PLONS			AML	AML		
	comp=E,637μm,0.3s					
PLONS			AML	AML		
	comp=N,797μm,0.3s					
PLONS			AML	AML		
	comp=N,797μm,0.3s					
SIEB	**Ecole de Borzu**	**0.76 242**	⇑Pg	**Pg**	**06 43 58.1**	**-0.6**
SIEB	**Ecole de Borzu**	**0.76 242**	⇑Pg	**Pg**	**06 43 58.1**	**-0.6**
VANNI	**Vissoie, Val d**	**0.77 234**	⇑Pg	**Pg**	**06 43 58.3**	**-0.6**
VANNI	**Vissoie, Val d**	**0.77 234**	⇑Pg	**Pg**	**06 43 58.3**	**-0.6**
VANNI	**Vissoie, Val d**	**0.77 234**	P	**Pg**	**06 43 58.3**	**-0.6**
VANNI			S	**Sg**	**06 44 08.3**	**-0.7**
SBUB	**Buchserberg Ma**	**0.80 53**	⇑Pg	**Pb**	**06 43 58.8**	**-1.1**
SBUB	**Buchserberg Ma**	**0.80 53**	⇑Pg	**Pb**	**06 43 58.8**	**-1.1**
SKLW	**Kloten, Waffen**	**0.80 3**	Sg	**Sb**	**06 44 10.1**	**-0.5**
SKLW	**Kloten, Waffen**	**0.80 3**	Sg	**Sb**	**06 44 10.1**	**-0.5**
WILA	**Wila**	**0.80 20**	⇑Pg	**Pb**	**06 43 59.4**	**-0.4**
WILA			Sg	**Sb**	**06 44 10.1**	**-0.6**
WILA			SmS		06 44 14.6	
WILA	**Wila**	**0.80 20**	⇑Pg	**Pb**	**06 43 59.4**	**-0.4**
WILA			Sg	**Sb**	**06 44 10.1**	**-0.6**
WILA			SmS		06 44 14.6	
WILA	**Wila**	**0.80 20**	*e*Pg	**Pb**	**06 43 59.4**	**-0.4**
WILA			*e*Sg	**Sb**	**06 44 10.4**	**-0.3**
VARE	**Varese**	**0.82 167**	⇓Pg	**Pg**	**06 43 59.5**	**-0.2**
VARE	**Varese**	**0.82 167**	⇓Pg	**Pg**	**06 43 59.5**	**-0.2**
VARE	**Varese**	**0.82 167**	P	**Pg**	**06 43 59.5**	**-0.2**
VARE			S	**Sg**	**06 44 10.4**	**-0.1**
VARE	**Varese**	**0.82 167**	P	**Pg**	**06 43 59.5**	**-0.2**
VARE			S	**Sg**	**06 44 10.1**	**-0.3**
VARE			AML	AML		
	comp=E,1345μm,1.2s					
VARE			AML	AML		
	comp=N,1380μm,0.3s					
SBUA2	**Buchs, Altendo**	**0.83 53**	⇑Pg	**Pb**	**06 43 59.3**	**-1.0**
SBUA2	**Buchs, Altendo**	**0.83 53**	⇑Pg	**Pb**	**06 43 59.3**	**-1.0**
MUGIO	**Muggio**	**0.83 153**	⇓Pg	**Pb**	**06 43 59.5**	**-0.8**
MUGIO	**Muggio**	**0.83 153**	⇓Pg	**Pb**	**06 43 59.5**	**-0.8**
MUGIO	**Muggio**	**0.83 153**	P	**Pb**	**06 43 59.5**	**-0.8**
MUGIO			S	**Sb**	**06 44 11.1**	**-0.4**
MUGIO	**Muggio**	**0.83 153**	P	**Pb**	**06 43 59.5**	**-0.8**
MUGIO			AML	AML		
	comp=E,894μm,0.7s					
MUGIO			AML	AML		
	comp=N,789μm,0.4s					
MUGIO			AML	AML		
	comp=N,790μm,0.4s					
MUGIO			AML	AML		
	comp=E,894μm,0.7s					
MUGIO			AML	AML		
	comp=N,790μm,1.6s					
MUGIO			AML	AML		
	comp=E,894μm,1.3s					
STIEG	**Stiegenhof Hun**	**0.84 7**	⇓Pg	**Pb**	**06 44 00.1**	**-0.5**
STIEG	**Stiegenhof Hun**	**0.84 7**	⇓Pg	**Pb**	**06 44 00.1**	**-0.5**
EMMET	**Emmethof**	**0.84 337**	⇓Pg	**Pb**	**06 43 59.8**	**-0.7**
EMMET			PmP		06 44 01.9	
EMMET	**Emmethof**	**0.84 337**	⇓Pg	**Pb**	**06 43 59.8**	**-0.7**
EMMET			PmP		06 44 01.9	
WOLEN	**Wohlen bei Ber**	**0.85 294**	⇓Pg	**Pb**	**06 44 00.4**	**-0.2**
WOLEN			Sg	**Sb**	**06 44 11.7**	**-0.2**
WOLEN	**Wohlen bei Ber**	**0.85 294**	⇓Pg	**Pb**	**06 44 00.4**	**-0.2**
WOLEN			Sg	**Sb**	**06 44 11.7**	**-0.2**
STRW	**Triesenberg, W**	**0.85 57**	⇑Pg	**Pb**	**06 43 59.7**	**-1.0**
STRW			PmP		06 44 03.3	
STRW	**Triesenberg, W**	**0.85 57**	⇑Pg	**Pb**	**06 43 59.7**	**-1.0**
STRW			PmP		06 44 03.3	
BALST	**Balsthal**	**0.87 321**	⇓Pg	**Pb**	**06 44 00.4**	**-0.6**
BALST			PmP		06 44 02.3	
BALST	**Balsthal**	**0.87 321**	⇓Pg	**Pb**	**06 44 00.4**	**-0.6**
BALST			PmP		06 44 02.3	
BALST	**Balsthal**	**0.87 321**	*e*Pg	**Pb**	**06 44 00.5**	**-0.6**
BALST			*e*Sg	**Sb**	**06 44 12.7**	**+0.1**
BALST	**Balsthal**	**0.87 321**	⇓Pg	**Pb**	**06 44 00.4**	**-0.6**
BALST	**Balsthal**	**0.87 321**	Pn	**Pb**	**06 44 02.3**	**+1.3**
BALST	**Balsthal**	**0.87 321**	Sn	**Sb**	**06 44 14.8**	**+2.2**
SENIN	**Lac Senin/Sane**	**0.88 251**	⇑Pg	**Pb**	**06 44 00.3**	**-1.0**
SENIN	**Lac Senin/Sane**	**0.88 251**	⇑Pg	**Pb**	**06 44 00.3**	**-1.0**
STAF	**Tafers**	**0.90 280**	SmS		06 44 17.3	
STAF	**Tafers**	**0.90 280**	SmS		06 44 17.3	
SGT04	**Schlatt-Haslen**	**0.90 40**	⇑Pg	**Pb**	**06 44 01.0**	**-0.5**
SGT04			SmS		06 44 17.6	
SGT04	**Schlatt-Haslen**	**0.90 40**	⇑Pg	**Pb**	**06 44 01.0**	**-0.5**
SGT04			SmS		06 44 17.6	
SATI	**Passo dei Sala**	**0.90 209**	Pg	**Pb**	**06 44 00.7**	**-1.0**
SATI	**Passo dei Sala**	**0.90 209**	Pg	**Pb**	**06 44 00.7**	**-1.0**
SATI	**Passo dei Sala**	**0.90 209**	P	**Pb**	**06 44 00.6**	**-1.1**
SATI			S	**Sb**	**06 44 12.4**	**-1.3**
SATI	**Passo dei Sala**	**0.90 209**	P	**Pb**	**06 44 00.8**	**-1.0**
SATI			S	**Sb**	**06 44 12.2**	**-1.5**
SATI			AML	AML		
	comp=E,898μm,0.2s					
SATI			AML	AML		
	comp=E,898μm,0.2s					
SATI			AML	AML		
	comp=N,822μm,0.3s					
ROTHE	**Rothenfluh**	**0.91 334**	⇓Pg	**Pb**	**06 44 01.1**	**-0.5**
ROTHE			PmP		06 44 02.8	
ROTHE	**Rothenfluh**	**0.91 334**	⇓Pg	**Pb**	**06 44 01.1**	**-0.5**
ROTHE			PmP		06 44 02.8	
SULZ	**Cheisacher**	**0.91 343**	⇓Pg	**Pb**	**06 44 01.1**	**-0.5**
SULZ			PmP		06 44 03.0	
SULZ			SmS		06 44 16.1	
SULZ	**Cheisacher**	**0.91 343**	⇓Pg	**Pb**	**06 44 01.1**	**-0.5**
SULZ			PmP		06 44 03.0	
SULZ			SmS		06 44 16.1	
SULZ	**Cheisacher**	**0.91 343**	*e*Pg	**Pb**	**06 44 01.1**	**-0.5**
SULZ	**Cheisacher**	**0.91 343**	Pn	**Pb**	**06 44 03.0**	**+1.4**
SULZ	**Cheisacher**	**0.91 343**	⇓Pg	**Pb**	**06 44 01.1**	**-0.5**
FLACH	**Flaach**	**0.91 3**	Pg	**Pb**	**06 44 01.3**	**-0.4**
FLACH	**Flaach**	**0.91 3**	Pg	**Pb**	**06 44 01.3**	**-0.4**
FLACH			PmP		06 44 03.2	
FLACH			Sg	**Sb**	**06 44 13.6**	**-0.1**
FLACH			SmS		06 44 16.8	
WEIN	**Weingarten**	**0.93 21**	⇑Pg	**Pb**	**06 44 01.7**	**-0.2**
WEIN			SmS		06 44 17.8	
WEIN	**Weingarten**	**0.93 21**	⇑Pg	**Pb**	**06 44 01.7**	**-0.2**
WEIN			SmS		06 44 17.8	
SGT00	**Sennhlsen**	**0.94 36**	⇑Pg	**Pb**	**06 44 01.9**	**-0.3**
SGT00	**Sennhlsen**	**0.94 36**	⇑Pg	**Pb**	**06 44 01.9**	**-0.3**
DIX	**Grande Dixence**	**0.95 233**	⇑Pg	**Pb**	**06 44 01.5**	**-1.0**
DIX	**Grande Dixence**	**0.95 233**	⇑Pg	**Pb**	**06 44 01.5**	**-1.0**
DIX	**Grande Dixence**	**0.95 233**	P	**Pb**	**06 44 01.6**	**-1.0**
DIX			S	**Sb**	**06 44 14.1**	**-1.1**
DIX	**Grande Dixence**	**0.95 233**	P	**Pb**	**06 44 01.6**	**-1.0**
DIX			AML	AML		
	comp=N,549μm,0.6s					
DIX			AML	AML		
	comp=E,747μm,0.2s					
DIX	**Grande Dixence**	**0.95 233**	Sg	**Sb**	**06 44 15.2**	**0.0**
DIX	**Grande Dixence**	**0.95 233**	⇑Pg	**Pb**	**06 44 01.5**	**-1.0**
DAVOX	**Davos/Dischmat**	**0.96 82**	⇑Pg	**Pb**	**06 44 01.6**	**-1.0**
DAVOX	**Davos/Dischmat**	**0.96 82**	⇑Pg	**Pb**	**06 44 01.6**	**-1.0**
DAVOX	**Davos/Dischmat**	**0.96 82**	P	**Pb**	**06 44 01.6**	**-1.0**
DAVOX			S	**Sb**	**06 44 14.6**	**-0.6**
DAVOX	**Davos/Dischmat**	**0.96 82**	⇑P	**Pb**	**06 44 01.6**	**-1.0**
DAVOX			AML	AML		
	comp=N,725μm,0.2s					
DAVOX			AML	AML		
	comp=E,361μm,0.3s					
DAVOX			AML	AML		
	comp=E,361μm,1.7s					
TRULL	**Truellikon**	**0.99 7**	⇓Pg	**Pb**	**06 44 02.9**	**-0.2**
TRULL			Sg	**Sb**	**06 44 16.0**	**-0.1**
TRULL	**Truellikon**	**0.99 7**	⇓Pg	**Pb**	**06 44 02.9**	**-0.2**
TRULL			PmP		06 44 04.5	
TRULL			Sg	**Sb**	**06 44 16.0**	**-0.1**
TRULL			SmS		06 44 18.7	
SGT05	**Eggersriet**	**1.02 40**	⇑Pg	**Pb**	**06 44

TRAV	**Traversella**	**1.26 205**	PmP			06 44 06.7
TRAV	**Traversella**	**1.26 205**	Pn	**Pn**	**06 44 06.7**	**-0.7**
TRAV			PmP			06 44 07.6
TRAV	**Traversella**	**1.26 205**	P	**Pn**	**06 44 06.8**	**-0.7**
TRAV			S	**Sb**	**06 44 23.5**	**-0.4**
TRAV	**Traversella**	**1.26 205**	P	**Pn**	**06 44 06.8**	**-0.7**
TRAV			AML	AML		
	comp=E,1190µm,0.2s					
TRAV			AML	AML		
	comp=N,914µm,0.5s					
TRAV			AML	AML		
	comp=E,1190µm,1.8s					
BRMO	**Bormio**	**1.30 98**	⇑Pg	**Pn**	**06 44 07.6**	**-0.5**
BRMO	**Bormio**	**1.30 98**	⇑Pn	**Pn**	**06 44 07.6**	**-0.5**
BRMO	**Bormio**	**1.30 98**	P	**Pn**	**06 44 07.6**	**-0.5**
BRMO	**Bormio**	**1.30 98**	P	**Pn**	**06 44 07.6**	**-0.5**
BRMO			AML	AML		
	comp=E,240µm,0.3s					
BRMO			AML	AML		
	comp=E,240µm,0.3s					
BRMO			AML	AML		
	comp=N,318µm,0.3s					
BRMO			AML	AML		
	comp=E,240µm,1.7s					
MRGE	**Morge**	**1.34 229**	P	**Pn**	**06 44 08.3**	**-0.3**
MRGE	**Morge**	**1.34 229**	P	**Pn**	**06 44 08.2**	**-0.3**
MRGE			AML	AML		
	comp=E,522µm,0.8s					
MRGE			AML	AML		
	comp=E,523µm,0.8s					
MRGE			AML	AML		
	comp=N,476µm,1.1s					
MRGE			AML	AML		
	comp=N,476µm,0.9s					
OGSI	**Sixt**	**1.35 244**	Pn	**Pn**	**06 44 08.9**	**+0.3**
OGSI	**Sixt**	**1.35 244**	Pn	**Pn**	**06 44 08.9**	**+0.3**
OGSI	**Sixt**	**1.35 244**	⇑Pn	**Pn**	**06 44 08.8**	**+0.3**
OGSI			Sn	**Sn**	**06 44 27.1**	**+0.6**
KIZ	**Kirchzarten**	**1.35 343**	⇓Pn	**Pn**	**06 44 08.2**	**-0.5**
KIZ			PmP		06 44 09.4	
KIZ	**Kirchzarten**	**1.35 343**	⇓Pn	**Pn**	**06 44 08.2**	**-0.5**
KIZ			PmP		06 44 09.4	
KIZ	**Kirchzarten**	**1.35 343**	⇓Pn	**Pn**	**06 44 08.2**	**-0.5**
KIZ			Pn	**Pb**	**06 44 09.4**	**+0.2**
KIZ	**Kirchzarten**	**1.35 343**	Sn	**Sn**	**06 44 26.8**	**+0.3**
CHMF	**Charmoille**	**1.40 295**	⇓Pn	**Pn**	**06 44 09.6**	**+0.4**
CHMF	**Charmoille**	**1.40 295**	⇓Pn	**Pn**	**06 44 09.6**	**+0.4**
CHMF	**Charmoille**	**1.40 295**	⇓Pn	**Pn**	**06 44 09.6**	**+0.4**
CHMF			Sg	**Sn**	**06 44 27.3**	**-0.3**
MOSI	**Grossmontoni**	**1.41 91**	P	**Pn**	**06 44 09.7**	**+0.1**
MOSI			AML	AML		
	comp=E,758µm,0.4s					
MOSI			AML	AML		
	comp=N,879µm,1.0s					
BRANT	**Les Verrieres**	**1.42 282**	⇑Pn	**Pn**	**06 44 10.3**	**+0.7**
BRANT	**Les Verrieres**	**1.42 282**	⇑Pn	**Pn**	**06 44 10.3**	**+0.7**
BRANT	**Les Verrieres**	**1.42 282**	Sn	**Sn**	**06 44 28.5**	**+0.2**
BRANT	**Les Verrieres**	**1.42 282**	⇑Pn	**Pn**	**06 44 10.2**	**+0.6**
OBER	**Oberstdorf**	**1.44 58**	*e*Pn	**Pn**	**06 44 10.7**	**+0.9**
OBER			*e*Pg	**Pb**	**06 44 12.0**	**+1.4**
OBER			*e*Sg	**Sb**	**06 44 30.6**	**+1.7**
ZONE	**Zone**	**1.44 128**	AML	AML		
	comp=E,1665µm,1.5s					
ZONE			AML	AML		
	comp=N,1230µm,0.2s					
GUT	**Gutenstein**	**1.47 16**	⇓Pn	**Pn**	**06 44 09.7**	**-0.5**
GUT	**Gutenstein**	**1.47 16**	⇓Pn	**Pn**	**06 44 09.7**	**-0.5**
GUT	**Gutenstein**	**1.47 16**	Pg	**Pn**	**06 44 11.9**	**+1.6**
GUT	**Gutenstein**	**1.47 16**	Sn	**Sn**	**06 44 28.8**	**-0.6**
GUT			Sg	**Sb**	**06 44 31.2**	**+1.3**
GUT	**Gutenstein**	**1.47 16**	⇓Pn	**Pn**	**06 44 09.8**	**-0.5**
UBR	**Ueberruh**	**1.50 47**	⇑Pn	**Pn**	**06 44 11.4**	**+0.8**
UBR	**Ueberruh**	**1.50 47**	⇑Pn	**Pn**	**06 44 11.4**	**+0.8**
UBR	**Ueberruh**	**1.50 47**	*e*Pn	**Pn**	**06 44 11.4**	**+0.8**
UBR			*e*Pg	**Pb**	**06 44 12.8**	**+1.1**
UBR			*e*Sg	**Sn**	**06 44 31.5**	**+1.4**
MOF	**Molkenrain**	**1.51 322**	⇓Pn	**Pn**	**06 44 10.7**	**-0.2**
MOF			Pg	**Pb**	**06 44 12.3**	**+0.4**
MOF			Sn	**Sn**	**06 44 29.4**	**-1.2**
MOF			Sg	**Sb**	**06 44 31.9**	**+0.9**
MABI	**Malga Bissina**	**1.52 113**	P	**Pn**	**06 44 12.2**	**+1.1**
MABI			AML	AML		
	comp=E,538µm,0.6s					
MABI			AML	AML		
	comp=N,598µm,0.6s					
MABI			AML	AML		
	comp=N,598µm,1.4s					
MABI			AML	AML		
	comp=E,538µm,0.6s					
VOGT	**Vogtsburg - To**	**1.53 339**	Pg	**Pn**	**06 44 12.6**	**+1.6**
VOGT	**Vogtsburg - To**	**1.53 339**	Sg	**Sn**	**06 44 32.7**	**+1.9**
VOGT	**Vogtsburg - To**	**1.53 339**	⇓Pn	**Pn**	**06 44 10.7**	**-0.3**
LSD	**Lago del Serru**	**1.53 219**	⇑Pn	**Pn**	**06 44 11.9**	**+0.5**
LSD	**Lago del Serru**	**1.53 219**	⇑Pn	**Pn**	**06 44 11.9**	**+0.5**
LSD	**Lago del Serru**	**1.53 219**	P	**Pn**	**06 44 11.9**	**+0.5**
LSD			AML	AML		
	comp=E,406µm,1.4s					
LSD			AML	AML		
	comp=N,440µm,0.5s					
LSD			AML	AML		
	comp=N,440µm,0.5s					
GIMEL	**St. Georges /**	**1.55 266**	⇑Pn	**Pn**	**06 44 12.2**	**+0.8**
GIMEL			PmP		06 44 13.8	
GIMEL	**St. Georges /**	**1.55 266**	P	**Pn**	**06 44 12.2**	**+0.8**
GIMEL	**St. Georges /**	**1.55 266**	Pg	**Pn**	**06 44 13.7**	**+2.4**
GIMEL	**St. Georges /**	**1.55 266**	⇑Pn	**Pn**	**06 44 12.2**	**+0.8**
FETA	**Feichten**	**1.57 76**	*e*Pn	**Pn**	**06 44 12.5**	**+0.7**
	comp=N,1.7nm,0.2s,SNR=119					
FETA			*e*Sn	**Sn**	**06 44 32.3**	**+0.2**
	comp=N,6.1nm,0.2s					
HINF	**Hinteralfeld**	**1.61 316**	*e*P	**Pn**	**06 44 12.1**	**-0.1**
HINF	**Hinteralfeld**	**1.61 316**	*e*Pg	**Pn**	**06 44 13.9**	**+1.7**
HINF			*e*Sn	**Sn**	**06 44 30.4**	**-2.5**
	comp=N,28nm,0.2s					
HINF			*e*Sg	**Sb**	**06 44 34.0**	**+0.1**
	comp=N,75nm,0.2s					
RSL	**Roselend**	**1.63 234**	⇑Pn	**Pn**	**06 44 13.8**	**+1.2**
RSL	**Roselend**	**1.63 234**	⇑Pn	**Pn**	**06 44 13.8**	**+1.2**
RSL	**Roselend**	**1.63 234**	⇑Pn	**Pn**	**06 44 13.8**	**+1.2**
MONC	**Moncucco Torin**	**1.64 194**	AML	AML		
	comp=E,441µm,1.6s					
MONC			AML	AML		
	comp=N,476µm,0.4s					
RONF	**Ronchamp**	**1.64 310**	⇓Pn	**Pn**	**06 44 12.7**	**+0.1**
RONF			Pg	**Pb**	**06 44 14.8**	**+0.7**
RONF			Sn	**Sn**	**06 44 32.2**	**-1.4**
RONF			Sg	**Sb**	**06 44 35.7**	**+1.0**
CABF	**La Chapelle**	**1.66 269**	*e*P	**Pn**	**06 44 13.7**	**+0.7**
CABF	**La Chapelle**	**1.66 269**	*e*Pg	**Pb**	**06 44 15.6**	**+1.1**
CABF			*e*Sn	**Sn**	**06 44 32.1**	**-2.2**
	comp=N,23nm,0.3s					
CABF			*e*Sg	**Sb**	**06 44 36.2**	**+0.7**
	comp=N,228nm,0.3s					
BFO	**Black Forest**	**1.67 356**	⇓Pn	**Pn**	**06 44 12.5**	**-0.5**
BFO	**Black Forest**	**1.67 356**	⇓Pn	**Pn**	**06 44 12.5**	**-0.5**
BFO	**Black Forest**	**1.67 356**	*e*Pn	**Pn**	**06 44 12.5**	**-0.5**
BFO			*e*Pg	**Pb**	**06 44 15.8**	**+1.1**
BFO			*e*Sg	**Sn**	**06 44 36.8**	**+2.4**
LPL	**La Plagne**	**1.68 228**	*e*Pg	**Pn**	**06 44 14.7**	**+1.4**
LPL			*e*Sg	**Sn**	**06 44 36.5**	**+1.6**
	comp=N,92nm,0.3s					
LPG	**La Plagne**	**1.69 227**	*e*Pg	**Pn**	**06 44 14.8**	**+1.4**
LPG			*e*Sg	**Sn**	**06 44 36.5**	**+1.4**
	comp=N,128nm,0.4s					
MAGA	**Magasa**	**1.72 120**	P	**Pn**	**06 44 15.8**	**+2.0**
MAGA			AML	AML		
	comp=N,1540µm,0.7s					
MAGA			AML	AML		
	comp=E,2820µm,0.5s					
MAGA			AML	AML		
	comp=N,1545µm,0.7s					
RETA	**Reutte**	**1.75 61**	PmP		06 44 16.9	
RETA	**Reutte**	**1.75 61**	*e*Pn	**Pn**	**06 44 15.4**	**+1.2**
	comp=N,1.6nm,0.1s,SNR=21					
RETA			*e*Sn	**Sn**	**06 44 38.0**	**+1.6**
	comp=N,11nm,0.1s					
SALO	**Salr**	**1.75 126**	P	**Pb**	**06 44 16.4**	**+0.4**
SALO			AML	AML		
	comp=N,660µm,1.1s					
SALO			AML	AML		
	comp=E,632µm,0.8s					
SALO			AML	AML		
	comp=E,632µm,1.2s					
RIVEL	**MONT RIVEL**	**1.78 274**	⇑Pn	**Pn**	**06 44 15.1**	**+0.6**
RIVEL			Pg	**Pb**	**06 44 18.0**	**+1.6**
RIVEL			Sn	**Sn**	**06 44 36.8**	**-0.2**
GAGG	**Gaggia**	**1.80 108**	P	**Pn**	**06 44 17.1**	**+2.2**
GAGG			AML	AML		
	comp=E,450µm,1.0s					
GAGG			AML	AML		
	comp=N,372µm,0.4s					
GAGG			AML	AML		
	comp=E,450µm,1.0s					
GAGG			AML	AML		
	comp=N,371µm,0.4s					
ECH	**Echery**	**1.80 330**	*e*Pn	**Pn**	**06 44 14.8**	**0.0**
ECH			*e*Sn	**Sn**	**06 44 35.5**	**-2.1**
ECH			*e*Sg	**Sb**	**06 44 40.6**	**+1.2**
ECH	**Echery**	**1.80 330**	⇓Pn	**Pn**	**06 44 14.6**	**-0.2**
LUSI	**Trento, Gardas**	**1.83 112**	P	**Pb**	**06 44 17.8**	**+0.4**
LUSI			AML	AML		
	comp=E,582µm,1.4s					
LUSI			AML	AML		
	comp=N,1080µm,0.4s					
APPI	**Appiano**	**1.89 95**	P	**Pn**	**06 44 18.3**	**+2.2**
APPI			AML	AML		
	comp=N,270µm,1.3s					
APPI			AML	AML		
	comp=E,250µm,1.1s					
APPI			AML	AML		
	comp=E,250µm,0.9s					
MOTA	**Moosalm**	**1.91 68**	*e*Pn	**Pn**	**06 44 18.4**	**+2.0**
	comp=E,0.7nm,0.1s,SNR=29					
MOTA			*e*Sn	**Sn**	**06 44 42.6**	**+2.3**
	comp=E,8.4nm,0.1s					
WLS	**Welschbruch**	**1.92 336**	⇓Pn	**Pn**	**06 44 16.2**	**-0.2**
OGMO	**Fort Saint-Gob**	**1.93 222**	Pn	**Pn**	**06 44 17.9**	**+1.3**
CDF	**Champ du Feu**	**1.94 335**	*e*P	**Pn**	**06 44 16.5**	**-0.2**
CDF	**Champ du Feu**	**1.94 335**	*e*Pg	**Pb**	**06 44 20.2**	**+1.0**
CDF			*e*Sn	**Sn**	**06 44 38.8**	**-2.2**
	comp=E,25nm,0.3s					
CDF			*e*Sg	**Sb**	**06 44 44.7**	**+1.4**
	comp=E,31nm,0.2s					
SQTA	**Sankt Quirin**	**1.94 72**	*e*Pn	**Pn**	**06 44 18.9**	**+2.2**
	comp=E,5.0nm,0.1s,SNR=70					
SQTA			*e*Sn	**Sn**	**06 44 42.4**	**+1.4**
	comp=E,3.4nm,0.1s					
PART	**Garmisch-Parte**	**1.97 64**	*e*Pg	**Pb**	**06 44 20.5**	**+0.7**
PART			*e*Sg	**Sg**	**06 44 48.0**	**+0.7**
HAU	**Haudompre**	**1.99 313**	*e*P	**Pn**	**06 44 17.5**	**+0.1**
HAU	**Haudompre**	**1.99 313**	*e*Pg	**Pn**	**06 44 20.6**	**+3.2**
HAU			*e*Sn	**Sn**	**06 44 40.0**	**-2.2**
	comp=E,98nm,0.3s					
HAU			*e*Sg	**Sb**	**06 44 45.9**	**+1.2**
	comp=E,118nm,0.3s					
KOSI	**Kohlern**	**2.00 95**	AML	AML		
	comp=E,214µm,1.6s					
KOSI			AML	AML		
	comp=N,178µm,1.2s					
KOSI			AML	AML		
	comp=E,214µm,0.4s					
ROSI	**Rosskopf**	**2.02 81**	P	**Pn**	**06 44 20.8**	**+2.9**
ROSI			AML	AML		
	comp=N,408µm,0.4s					
ROSI			AML	AML		
	comp=E,418µm,0.3s					
DOSS	**Dosso del Somm**	**2.02 112**	P	**Pb**	**06 44 21.7**	**+1.0**
DOSS			AML	AML		
	comp=E,688µm,0.7s					
DOSS			AML	AML		
	comp=N,486µm,0.7s					
DOSS			AML	AML		
	comp=E,486µm,0.4s					
DOSS			AML	AML		
	comp=N,683µm,0.5s					
DOSS			AML	AML		
	comp=E,486µm,1.6s					
DOSS			AML	AML		
	comp=N,486µm,1.3s					
DOSS			AML	AML		
	comp=N,683µm,1.5s					
BNI	**Bardonecchia**	**2.05 219**	P	**Pn**	**06 44 21.2**	**+2.9**
BNI			AML	AML		
	comp=N,124µm,0.6s					
BNI			AML	AML		
	comp=N,124µm,1.4s					
BNI			AML	AML		
	comp=E,116µm,1.1s					
RRL	**Rocca Remolon**	**2.11 215**	P	**Pb**	**06 44 22.3**	**0.0**
RRL			AML	AML		
	comp=N,190µm,1.4s					
RRL			AML	AML		
	comp=E,179µm,0.9s					
RRL			AML	AML		
	comp=N,190µm,0.6s					
RRL			AML	AML		
	comp=E,179µm,1.1s					
OG35	**Corcelles**	**2.12 254**	Pn	**Pb**	**06 44 23.8**	**+1.4**
OG35			Sn	**Sb**	**06 44 51.0**	**+2.4**
PCP	**Piancastagn**	**2.12 179**	P	**Pn**	**06 44 20.2**	**+1.0**
PCP			AML	AML		
	comp=N,91µm,1.5s					
PCP			AML	AML		
	comp=E,81µm,1.6s					
PCP			AML	AML		
	comp=N,91µm,0.5s					
PCP			AML	AML		
	comp=E,81µm,0.4s					
STU	**Stuttgart**	**2.16 12**	*e*Pn	**Pn**	**06 44 18.9**	**-0.8**
STU			*e*Sg	**Sb**	**06 44 51.5**	**+1.8**
WATA	**Walderalm**	**2.21 71**	*e*Pn	**Pn**	**06 44 23.6**	**+3.0**
	comp=E,1.7nm,0.1s,SNR=14					
WATA			*e*Sn	**Sg**	**06 44 55.9**	**+0.9**
	comp=E,30nm,0.2s					
WTTA	**Wattenberg**	**2.23 73**	*e*Pn	**Pn**	**06 44 23.2**	**+2.4**
	comp=E,45nm,0.4s,SNR=51					
WTTA			*e*Sn	**Sg**	**06 44 56.4**	**+0.8**
	comp=E,22nm,0.3s					
WTTA	**Wattenberg**	**2.23 73**	P	**Pn**	**06 44 23.2**	**+2.4**
WTTA			AML	AML		
	comp=N,168µm,0.4s					
WTTA			AML	AML		
	comp=E,260µm,0.4s					
WTTA			AML	AML		
	comp=N,168µm,1.6s					
MBDF	**Montbardon**	**2.28 213**	*e*P	**Pn**	**06 44 22.7**	**+1.2**
MBDF	**Montbardon**	**2.28 213**	*e*Pg	**Pb**	**06 44 25.8**	**+0.7**
MBDF			*e*Sg	**Sb**	**06 44 55.0**	**+1.6**
	comp=N,112nm,0.6s					
FUR	**Furstenfeldbru**	**2.41 50**	*e*Pn	**Pn**	**06 44 24.0**	**+0.8**
FUR			Pg	**Pb**	**06 44 28.7**	**+1.5**
FUR			Sn	**Sb**	**06 44 56.7**	**-0.2**
FUR			*e*Sg	**Sg**	**06 45 00.7**	**-0.7**
RISI	**Rein**	**2.47 82**	AML	AML		
	comp=N,566µm,0.4s					
RISI			AML	AML		
	comp=E,320µm,0.5s					
NORI	**Noerdlinger Ri**	**2.51 34**	*e*Pg	**Pb**	**06 44 30.8**	**+1.9**
NORI			*e*Sg	**Sb**	**06 45 04.0**	**+4.3**
ORIF	**Oris-en-Rattie**	**2.53 227**	*e*P	**Pn**	**06 44 26.4**	**+1.5**
ORIF	**Oris-en-Rattie**	**2.53 227**	*e*Pg	**Pb**	**06 44 31.7**	**+2.4**
ORIF			*e*Sg	**Sb**	**06 45 04.2**	**+3.8**
	comp=E,71nm,0.5s					
ENR	**Entracque**	**2.55 198**	P	**Pn**	**06 44 25.0**	**-0.1**
PAGF	**Fort de Pagny**	**2.67 316**	*e*P	**Pn**	**06 44 27.4**	**+0.7**
	baz=136					
PAGF	**Fort de Pagny**	**2.67 316**	*e*Pg	**Pb**	**06 44 33.4**	**+1.8**
PAGF			*e*Sn	**Sn**	**06 44 56.1**	**-2.8**
	comp=E,23nm,0.2s,baz=139					
PAGF			*e*Sg	**Sb**	**06 45 06.7**	**+2.5**
	comp=E,66nm,0.5s,baz=135					
CIMO	**Cimolais**	**2.74 96**	P	**Pn**	**06 44 31.5**	**+3.8**
CIMO			AML	AML		
	comp=E,59µm,1.0s					
CIMO			AML	AML		
	comp=N,82µm,0.7s					
ABTA	**Abfaltersbach**	**2.76 87**	*e*Pn	**Pn**	**06 44 31.7**	**+3.6**
	comp=N,2.2nm,0.2s					
ABTA			*e*Sn	**Sb**	**06 45 10.9**	**+3.9**
	comp=N,15nm,0.4s					
SFTF	**Sexfontaines**	**2.81 305**	*e*P	**Pn**	**06 44 29.2**	**+0.5**
	baz=124					
SFTF	**Sexfontaines**	**2.81 305**	*e*Pg	**Pb**	**06 44 35.9**	**+1.9**
SFTF			*e*Sn	**Sn**	**06 44 58.8**	**-3.7**
	comp=N,17nm,0.2s,baz=130					
SFTF			*e*Sg	**Sb**	**06 45 11.3**	**+2.9**
	comp=N,42nm,0.3s,baz=119					
SBF	**Sospel**	**2.90 195**	*e*P	**Pn**	**06 44 30.8**	**+0.9**
SBF			*e*Sn	**Sn**	**06 45 00.5**	**-4.2**
	comp=N,52nm,0.3s					
SBF			*e*Sg	**Sb**	**06 45 14.6**	**+3.6**
	comp=N,41nm,0.2s					
MEZF	**Maizieres J'vi**	**2.97 310**	*e*P	**Pn**	**06 44 32.3**	**+1.5**
	baz=129					
MEZF	**Maizieres J'vi**	**2.97 310**	*e*Pg	**Pb**	**06 44 38.3**	**+1.5**
MEZF			*e*Sn	**Sn**	**06 45 02.9**	**-3.5**
MEZF			*e*Sg	**Sb**	**06 45 16.2**	**+3.2**
	comp=N,84nm,0.5s,baz=138					
SAVF	**Savonnieres en**	**3.00 312**	*e*P	**Pn**	**06 44 32.2**	**+0.9**
	baz=131					
SAVF			*e*Sn	**Sn**	**06 45 04.0**	**-3.2**
SAVF			*e*Sg	**Sb**	**06 45 17.6**	**+3.7**
	comp=N,47nm,0.5s,baz=133					
RJOB	**Jochberg**	**3.12 68**	*e*Pn	**Pn**	**06 44 34.8**	**+1.8**
RJOB			*e*Sg	**Sg**	**06 45 24.5**	**+0.4**
SMF	**Signal de Mont**	**3.21 271**	*e*P	**Pn**	**06 44 34.5**	**+0.4**
SMF	**Signal de Mont**	**3.21 271**	*e*Pg	**Pb**	**06 44 43.9**	**+3.1**
SMF			*e*Sn	**Sn**	**06 45 09.1**	**-3.2**
	comp=N,108nm,0.4s					
SMF			*e*Sg	**Sb**	**06 45 23.9**	**+4.0**
	comp=N,108nm,0.4s					
MILB	**Miltenberg**	**3.21 9**	*e*Pn	**Pn**	**06 44 32.7**	**-1.4**
MILB			*e*Sn	**Sn**	**06 45 10.6**	**-1.7**
MILB			*e*Sg	**Sb**	**06 45 25.3**	**+5.4**
VIVF	**Saint-Julien-l**	**3.23 237**	*e*P	**Pn**	**06 44 35.1**	**+0.6**
VIVF	**Saint-Julien-l**	**3.23 237**	*e*Pg	**Pb**	**06 44 43.9**	**+2.7**
VIVF			*e*Sg	**Sb**	**06 45 24.8**	**+4.3**
	comp=N,18nm,0.3s					
LOR	**Lormes**	**3.24 282**	*e*P	**Pn**	**06 44 36.0**	**+1.5**
	baz=102					
LOR	**Lormes**	**3.24 282**	*e*Pg	**Pb**	**06 44 44.0**	**+2.7**
LOR			*e*Sn	**Sn**	**06 45 09.1**	**-3.8**
	baz=103					
LOR			*e*Sg	**Sb**	**06 45 24.5**	**+3.9**
	comp=N,69nm,0.3s,baz=104					
RIVT	**Riveris**	**3.26 340**	*e*Pn	**Pn**	**06 44 35.7**	**+0.9**
ABH	**Alteburg**	**3.28 349**	*e*Pn	**Pn**	**06 44 35.2**	**0.0**
ABH			*e*Sn	**Sn**	**06 45 12.6**	**-1.6**
ABH			*e*Sg	**Sb**	**06 45 26.6**	**+4.6**
KBA	**Koelnbreinsper**	**3.35 81**	*i* Pn	**Pn**	**06 44 38.9**	**+2.7**
	comp=N,2.3nm,0.2s,SNR=5.6					
KBA			*e*Sn	**Sb**	**06 45 26.6**	**+2.5**
	comp=N,12nm,0.5s					
SMRF	**Simiane la Rot**	**3.39 219**	*e*P	**Pn**	**06 44 38.6**	**+2.0**
SMRF	**Simiane la Rot**	**3.39 219**	*e*Pg	**Pb**	**06 44 46.0**	**+2.1**
SMRF			*e*Sn	**Sn**	**06 45 12.9**	**-3.8**
	comp=N,6.1nm,0.3s					
SSF	**Saint Saulge**	**3.45 278**	*e*P	**Pn**	**06 44 38.9**	**+1.5**
SSF	**Saint Saulge**	**3.45 278**	*e*Pg	**Pb**	**06 44 47.4**	**+2.5**
SSF			*e*Sn	**Sn**	**06 45 14.8**	**-3.4**
	comp=N,54nm,0.3s					
SSF			*e*Sg	**Sb**	**06 45 30.9**	**+4.1**
	comp=N,54nm,0.3s					
GRF	**Grafenberg Arr**	**3.54 30**	*e*Pn	**Pn**	**06 44 38.0**	**-0.6**
GRF			*e*Pg	**Pb**	**06 44 49.9**	**+3.6**
GRF			*e*Sg	**Sg**	**06 45 35.9**	**-1.5**
MYKA	**Terra Mystica**	**3.54 89**	*e*Pn	**Pn**	**06 44 42.5**	**+3.8**
	comp=N,0.4nm,0.1s					
MYKA			*e*Sn	**Sn**	**06 45 23.1**	**+2.5**
	comp=N,2.2nm,0.3s					
AVF	**Avril sur Loir**	**3.54 274**	*e*P	**Pn**	**06 44 39.2**	**+0.5**
AVF	**Avril sur Loir**	**3.54 274**	*e*Pg	**Pb**	**06 44 48.7**	**+2.2**
AVF			*e*Sn	**Sn**	**06 45 17.3**	**-3.2**
AVF			*e*Sg	**Sb**	**06 45 33.7**	**+4.3**
	comp=N,28nm,0.5s					
LMR	**La Mourre**	**3.62 204**	*e*P	**Pn**	**06 44 41.4**	**+1.7**
LMR	**La Mourre**	**3.62 204**	*e*Pg	**Pb**	**06 44 50.9**	**+3.2**
LMR			*e*Sn	**Sn**	**06 45 18.3**	**-4.0**
	comp=N,12nm,0.3s					
BIOA	**Bad Ischl, Aus**	**3.65 72**	*e*Pn	**Pn**	**06 44 42.1**	**+1.9**
	comp=N,2.0nm,0.1s					
BIOA			*e*Sn	**Sb**	**06 45 35.3**	**+2.7**
	comp=N,17nm,0.4s					
WET	**Wettzell**	**3.85 48**	*e*Pn	**Pn**	**06 44 42.6**	**-0.3**
WET			*e*Pg	**Pb**	**06 44 55.6**	**+3.9**
WET			*e*Sn	**Sn**	**06 45 25.2**	**-3.0**
WET			*e*Sg	**Sg**	**06 45 45.6**	**-1.9**
BGF	**Bois d'Agland**	**3.90 271**	*e*P	**Pn**	**06 44 44.0**	**+0.4**
BGF	**Bois d'Agland**	**3.90 271**	*e*Pg	Pb	06 44 56.3	+3.7
BGF			*e*Sn	**Sn**	**06 45 25.1**	**-4.2**
	comp=N,51nm,0.3s					
BGF			*e*Sg	**Sb**	**06 45 45.1**	**+5.4**
	comp=N,64nm,0.3s					
ROTZ	**Rotzenmuhle**	**3.97 37**	*e*Pn	**Pn**	**06 44 43.1**	**-1.5**
ROTZ			*e*Pg	**Pb**	**06 44 57.7**	**+3.9**
ROTZ			*e*Sg	**Sg**	**06 45 49.1**	**-2.4**
HYF	**Humbligny**	**4.06 281**	*e*P	**Pn**	**06 44 47.2**	**+1.4**
HYF			*e*Sn	**Sn**	**06 45 28.4**	**-4.8**
HYF			*e*Sg	**Sb**	**06 45 49.6**	**+5.3**
MOA	**Molln**	**4.10 71**	*e*Pn	**Pn**	**06 44 47.6**	**+1.2**
	comp=N,0.3nm,0.1s					
MOA			*e*Sn	**Sn**	**06 45 34.1**	**-0.2**
	comp=N,3.0nm,0.1s					
PGF	**Pioggiola**	**4.13 175**	*e*Pn	**Pn**	**06 44 44.8**	**-2.1**
PGF	**Pioggiola**	**4.13 175**	*e*P	**Pn**	**06 44 49.0**	**+2.1**
PGF			*e*Sn	**Sn**	**06 45 30.7**	**-4.4**
	comp=N,3.2nm,0.3s					
GEC2	**GERESS Array S**	**4.13 56**	*e*Pn	**Pn**	**06 44 47.1**	**+0.3**
GEC2			*e*Sn	**Sn**	**06 45 33.1**	**-2.1**
LASF	**Ste Croix**	**4.17 233**	*e*P	**Pn**	**06 44 48.1**	**+0.7**
LASF	**Ste Croix**	**4.17 233**	*e*Pg	**Pb**	**06 45 00.2**	**+3.0**
LASF			*e*Sn	**Sn**	**06 45 31.5**	**-4.5**
	comp=N,5.6nm,0.3s					
LASF			*e*Sg	**Sg**	**06 45 54.9**	**-2.9**
	comp=N,4.6nm,0.3s					
OBKA	**Obir**	**4.17 90**	*e*Pn	**Pn**	**06 44 49.5**	**+2.1**
	comp=N,1.2nm,0.3s					
OBKA			*e*Sn	**Sb**	**06 45 44.4**	**-3.3**
	comp=N,6.8nm,0.6s					
GIVF	**Givet**	**4.22 326**	*e*P	**Pn**	**06 44 49.6**	**+1.5**
GIVF	**Givet**	**4.22 326**	*e*Pg	Pb	06 45 02.0	+3.9
GIVF			*e*Sn	**Sn**	**06 45 32.9**	**-4.4**
GIVF			*e*Sg	**Sb**	**06 45 56.0**	**+7.0**
	comp=N,5.7nm,0.3s					
TCF	**Toulx Ste Croi**	**4.36 267**	*e*P	**Pn**	**06 44 50.2**	**+0.2**
TCF	**Toulx Ste Croi**	**4.36 267**	*e*Pg	Pb	06 45 04.4	+3.9
TCF			*e*Sn	**Sn**	**06 45 36.2**	**-4.5**
	comp=N,12nm,0.3s					
TCF			*e*Sg	**Sb**	**06 45 59.6**	**+6.6**
	comp=N,29nm,0.6s					
BAIF	**Baives**	**4.44 321**	*e*Pn	**Pn**	**06 44 49.7**	**-1.

KRUC				*e*SG	**Sg**	06 46 50.7 -0.2
MFF	**Saint Martin d**	**5.96**	**273**	*e*Pn	**Pn**	06 45 10.5 -1.3
MFF	**Saint Martin d**	**5.96**	**273**	*e*P	**Pn**	06 45 12.7 +0.9
MFF				*e*Sn	**Sn**	06 46 14.1 -5.8
	comp=Z,4.2nm,0.3s					
MFF				*e*Sg	**Sg**	06 46 49.2 -5.8
	comp=Z,5.4nm,0.4s					
VRAC	**Vranov**	**6.04**	**61**	*e*PN	**Pn**	06 45 12.7 -0.3
VRAC				*e*SN	**Sn**	06 46 18.4 -3.7
VRAC				*e*SG	**Sg**	06 46 56.6 -1.2
LDF	**La Druitiere**	**6.14**	**291**	*e*Pn	**Pn**	06 45 13.5 -0.9
LDF	**La Druitiere**	**6.14**	**291**	*e*Pg	Pb	06 46 36.9 +6.2
LDF				*e*Sn	**Sn**	06 46 18.3 -6.2
	comp=Z,5.5nm,0.3s					
LDF				*e*Sg	**Sg**	06 46 54.8 -6.1
	comp=Z,10nm,0.3s					
FLN	**La Foliniere**	**6.42**	**292**	*e*P	Pn	06 45 22.2 +4.1
FLN				*e*Sn	**Sn**	06 46 26.5 -4.7
FLN				*e*Sg	**Sg**	06 47 03.9 -5.8
	comp=Z,18nm,0.4s					
GRR	**Gorron**	**6.57**	**289**	*e*P	**Pn**	06 45 21.4 +1.2
GRR				*e*Sn	**Sn**	06 46 28.4 -6.6
GRR				*e*Sg	**Sg**	06 47 09.4 -5.2
	comp=Z,2.0nm,0.2s					
MORC	**Moravsky Berou**	**6.80**	**59**	*e*PN	**Pn**	06 45 23.2 -0.2
EPF	**Esparros**	**6.84**	**241**	*e*Sn	**Sn**	06 46 36.3 -5.6
EPF				*e*Sg	**Sg**	06 47 18.0 -5.4
	comp=Z,1.2nm,0.2s					
ETSF	**Etsaut**	**7.46**	**243**	*e*Pn	**Pn**	06 45 32.0 -0.6
ETSF	**Etsaut**	**7.46**	**243**	*e*Pg	Pb	06 46 00.9 +7.6
SGMF	**Saint Gilles**	**7.66**	**286**	*e*Pn	**Pn**	06 45 32.6 -2.7
SGMF	**Saint Gilles**	**7.66**	**286**	*e*Pg	Pb	06 46 05.2 +8.6
SGMF				*e*Sn	**Sn**	06 46 55.6 -6.3
	comp=Z,3.1nm,0.3s					
SGMF				*e*Sg	Sb	06 47 43.9 +16
	comp=Z,1.5nm,0.3s					
QUIF	**Quistinic**	**8.03**	**283**	*e*Pn	**Pn**	06 45 38.8 -1.5
QUIF				*e*Sn	**Sn**	06 47 04.3 -6.7
	comp=Z,7.8nm,0.3s					
QUIF				*e*Sg	Sb	06 47 55.0 +17
	comp=Z,2.0nm,0.2s					

PDG 03 06:53:24.4±0.0, 42°.54N×19°.19E, h19km, ML1.5/11, 7C-9D, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTG	**Podgorica**	**0.12**	**154**	⇑*i*Pg	Pg	06 53 28.7	+0.4
TTG				*e*Sg	Sg	06 53 31.6	+0.7
TTG	**Podgorica**	**0.12**	**154**	*e*Pg	Pg	06 53 28.2	-0.1
TTG				*i* Sg	Sg	06 53 31.4	+0.5
CEME	**Cevo**	**0.20**	**273**	⇑*i*Pg	Pg	06 53 29.9	+0.5
CEME				*e*Sg	Sg	06 53 34.0	+1.1
CEME	**Cevo**	**0.20**	**273**	*e*Pg	Pg	06 53 29.2	-0.2
CEME				*i* Sg	Sg	06 53 33.2	+0.3
NKME	**Niksic**	**0.29**	**323**	⇑*i*Pg	Pb	06 53 31.4	+0.4
NKME				*e*Sg	Sb	06 53 37.0	+1.6
NKME	**Niksic**	**0.29**	**323**	*e*Pg	Pg	06 53 30.5	-0.3
NKME				*i* Sg	Sb	06 53 35.8	+0.4
BUM	**Brajici-Budva**	**0.32**	**223**	⇓*i*Pg	Pb	06 53 31.7	+0.1
BUM				*e*Sg	Sb	06 53 37.0	+0.6
BUM	**Brajici-Budva**	**0.32**	**223**	*e*Pg	Pg	06 53 31.0	-0.4
BUM				*i* Sg	Sb	06 53 36.6	+0.2
DRME	**Dracevica, Mon**	**0.35**	**180**	⇑*i*Pg	Pg	06 53 31.8	0.0
DRME				*e*Sg	Sb	06 53 37.8	+0.5
DRME	**Dracevica, Mon**	**0.35**	**180**	⇑*i*Pg	Pg	06 53 31.5	-0.3
DRME				*i* Sg	Sb	06 53 37.5	+0.2
KOME	**Kolasin**	**0.40**	**38**	⇑*i*Pg	Pb	06 53 33.8	+0.8
KOME				*e*Sg	Sb	06 53 40.0	+1.2
KOME	**Kolasin**	**0.40**	**38**	*e*Pg	Pg	06 53 32.3	-0.4
KOME				*i* Sg	Sb	06 53 39.0	+0.2
HCY	**Herceg Novi**	**0.52**	**260**	⇓*i*Pg	Pb	06 53 35.4	+0.5
HCY				*e*Sg	Sn	06 53 43.8	-1.4
HCY	**Herceg Novi**	**0.52**	**260**	*e*Pg	Pg	06 53 34.4	-0.5
HCY				*i* Sg	Sb	06 53 43.0	+0.9
PVY	**Plav**	**0.57**	**84**	⇑*i*Pg	Pg	06 53 36.0	+0.1
PVY				*e*Sg	Sn	06 53 45.6	-1.1
PVY	**Plav**	**0.57**	**84**	⇓*i*Pg	Pb	06 53 35.4	-0.5
PVY				*i* Sg	Sg	06 53 44.8	+1.1
ULC	**Ulcinj**	**0.57**	**176**	⇓*i*Pg	Pg	06 53 36.1	+0.2
ULC				*e*Sg	Sg	06 53 45.0	+1.4
ULC	**Ulcinj**	**0.57**	**176**	⇓*i*Pg	Pb	06 53 35.4	-0.4
ULC				*i* Sg	Sg	06 53 44.7	+1.1
BRY	**Bratogost**	**0.60**	**308**	⇓*i*Pg	Pg	06 53 36.7	+0.3
BRY				*e*Sg	Sn	06 53 46.5	-0.9
BRY	**Bratogost**	**0.60**	**308**	⇓*i*Pg	Pb	06 53 35.9	-0.4
BRY				*i* Sg	Sg	06 53 45.7	+1.2
IVA	**Berane**	**0.62**	**57**	⇓*i*Pg	Pg	06 53 36.8	0.0
IVA				*e*Sg	Sn	06 53 46.7	-1.1
UPM	**Unac-Piva**	**0.70**	**343**	⇓*i*Pg	Pg	06 53 38.8	+0.6
UPM				*e*Sg	Sn	06 53 50.0	+0.1
UPM	**Unac-Piva**	**0.70**	**343**	*e*Pg	Pb	06 53 37.6	-0.5
UPM				*i* Sg	Sn	06 53 48.9	-1.0

*KRNET **03** 06:58:11.0±0.1, 40°.65N×73°.17E, h15km, mb2.9*
*ISU **03** 06:58:13, 40°.33N×72°.95E, h5km*
*SOME **03** 06:58:13.3, 40°.90N×73°.15E, h0km*
*NNC **03** 06:58:14.4±0.8, 40°.86N×73°.21E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=6.2km s-min=3.7km az=0.0*
ISC 03 06:58:12.8±1.1, 40°.62N±0°.04×73°.08E±0°.03, h9km±10km, n44, σ1§48/68, 14C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.25**	**247**	⇑*i*P	**Pg**	06 58 17.3	-0.5
	baz=47						
OHH				⇑*i*S	**Sg**	06 58 21.9	+0.7
	baz=47						
TSTA	**Tashata**	**0.46**	**265**	P	**Pg**	06 58 21.2	-0.6
TSTA				S	**Sg**	06 58 28.3	+0.4
ANR	**Andizhan**	**0.57**	**284**	P	**Sb**	06 58 34.2	+1.1
FRG	**Fergana**	**1.02**	**256**	P	**Sg**	06 58 45.9	+0.2
CHMI	**Chimion**	**1.24**	**254**	P	**Pb**	06 58 36.2	-0.2
CHMI				S	**Sn**	06 58 53.6	+0.3
ARK	**Arkit**	**1.45**	**325**	⇑*i*P	**Pn**	06 58 37.9	-1.4
	baz=22						
ARK				⇑*i*S	**Sn**	06 58 57.8	-0.7
	baz=22						
DRK	**Karamyk**	**1.51**	**221**	⇑*i*P	**Pn**	06 58 40.1	-0.1
	baz=22						
DRK				⇑*i*S	**Sg**	06 59 01.2	0.0
	baz=22						
ARLS	**Aral**	**1.55**	**37**	⇑*i*P	**Pn**	06 58 38.5	-2.3
	baz=36						
ARLS				⇑*i*S	**Sn**	06 58 58.4	-2.7
	baz=36						
TRKS	**Terek-Say**	**1.73**	**302**	⇑*i*P	**Pn**	06 58 42.7	-0.5
	baz=99						
TRKS				⇑*i*S	**Sn**	06 59 05.4	0.0
	baz=99						
BTK	**Batken**	**1.82**	**253**	⇑*i*P	**Pb**	06 58 45.6	-0.7
	baz=53						
BTK				⇑*i*S	**Sg**	06 59 10.8	-0.5
	baz=53						
UCH	**Uchtor**	**1.93**	**33**	⇓*i*P	**Pn**	06 58 44.9	-1.4
	baz=32						
UCH				⇓*i*S	**Sn**	06 59 10.3	-0.6
	baz=32						
MRKS	**Merke**	**2.12**	**3**	*e*P	**Pn**	06 58 48.8	+0.3
	25nm,0.2s						
MRKS				*e*S	**Sn**	06 59 14.5	-0.6
	79nm,0.4s						
MRKS	**Merke**	**2.12**	**3**	Pg	**Pn**	06 58 48.8	+0.3
	25nm,0.2s						
MRKS				Lg	Lg	06 59 14.5	
	79nm,0.4s						
NRN	**Naryn**	**2.35**	**69**	⇓*i*P	**Pn**	06 58 50.6	-1.3
	baz=69						
NRN				⇓*e*S	**Sn**	06 59 19.0	-2.0
	baz=69						
CHMG	**Chimgan**	**2.50**	**293**	P	**Sg**	06 59 32.8	-0.4
CHMS	**Chumysh**	**2.68**	**27**	⇓Pn	**Pn**	06 58 55.7	-0.5
	3.9nm,0.6s						
CHMS				⇓Lg	Lg	06 59 31.4	
	10nm,0.6s						
TKM2	**Tokmak 2**	**2.97**	**38**	⇑Pg	**Pb**	06 59 04.3	-1.7
	1.5nm,0.4s						
TKM2				⇓Lg	Lg	06 59 41.4	
	3.3nm,0.4s						
KK31	**Karatay Array**	**3.14**	**323**	⇑Pg	**Pb**	06 59 08.5	-0.2
	0.7nm,0.2s,baz=144,slow=18,SNR=14						
KK31				Lg	Lg	06 59 49.5	
	7.9nm,0.6s,baz=132,slow=29,SNR=6.2						
KST	**Kastek**	**3.24**	**41**	*e*P	**Pb**	06 59 09.5	-1.0
	1.9nm,0.2s						
KST				*e*S	**Sb**	06 59 49.8	-0.3
	9.6nm,0.2s						
KST	**Kastek**	**3.24**	**41**	Pg	**Pb**	06 59 09.5	-1.0
	1.9nm,0.2s						
KST				Lg	Lg	06 59 49.8	
	9.6nm,0.2s						
DGS	**Degeres**	**3.30**	**37**	*e*P	**Pb**	06 59 11.4	-0.1
	3.6nm,0.5s						
DGS				*e*S	**Sb**	06 59 53.2	+1.4
	8.7nm,0.4s						
DGS	**Degeres**	**3.30**	**37**	Pg	**Pb**	06 59 11.4	-0.1
	3.6nm,0.5s						
DGS				Lg	Lg	06 59 53.2	
	8.7nm,0.4s						
MTBS	**Maitube**	**3.54**	**44**	*e*P	**Pb**	06 59 14.6	-1.0
	1.9nm,0.1s						
MTBS				*e*S	**Sb**	06 59 58.6	-0.1
	6.3nm,0.3s						
MTBS	**Maitube**	**3.54**	**44**	Pg	**Pb**	06 59 14.6	-1.0
	1.9nm,0.1s						
MTBS				Lg	Lg	06 59 58.7	
	6.3nm,0.3s						
KRBS	**Karabastau**	**3.63**	**31**	*e*P	**Pb**	06 59 15.8	-1.3
	1.3nm,0.3s						
KRBS				*e*S	**Sb**	07 00 00.7	-0.5
	4.2nm,0.2s						
KRBS	**Karabastau**	**3.63**	**31**	Pg	**Pb**	06 59 15.8	-1.3
	1.3nm,0.3s						
KRBS				Lg	Lg	07 00 00.7	
	4.2nm,0.2s						
TNSS	**Tian-Shan**	**3.76**	**49**	*e*P	**Pb**	06 59 19.5	-0.1
	2.0nm,0.2s						
TNSS				*e*S	**Sb**	07 00 07.1	+1.6
	3.0nm,0.4s						
TNSS	**Tian-Shan**	**3.76**	**49**	Pg	**Pb**	06 59 19.5	-0.1
	2.0nm,0.2s						
TNSS				Lg	Lg	07 00 07.1	
	3.0nm,0.4s						
KOTS	**Kotyrbulak**	**3.98**	**48**	*e*P	**Pb**	06 59 22.4	-0.8
	3.8nm,0.4s						
KOTS				*e*S	**Sb**	07 00 11.7	+0.2
	5.8nm,0.3s						
KOTS	**Kotyrbulak**	**3.98**	**48**	Pg	**Pb**	06 59 22.3	-0.8
	3.8nm,0.4s						
KOTS				Lg	Lg	07 00 11.7	
	5.8nm,0.3s						
KUU	**Kurty**	**4.07**	**35**	*e*P	**Pb**	06 59 23.9	-0.6
	1.9nm,0.4s						
KUU				*e*S	**Sb**	07 00 14.8	+1.0
	6.6nm,0.4s						
KUU	**Kurty**	**4.07**	**35**	Pg	**Pb**	06 59 23.9	-0.6
	1.9nm,0.4s						
KUU				Lg	Lg	07 00 14.8	
	6.6nm,0.4s						
CHKK	**Chushkaly**	**4.34**	**41**	*e*P	**Pb**	06 59 29.6	+0.4
	1.0nm,0.1s						
CHKK				*e*S	**Sb**	07 00 24.5	+2.8
	4.9nm,0.4s						
CHKK	**Chushkaly**	**4.34**	**41**	Pg	**Pb**	06 59 29.6	+0.4
	1.0nm,0.1s						
CHKK				Lg	Lg	07 00 24.5	
	4.9nm,0.4s						
BTLS	**Baital**	**4.47**	**9**	*e*P	**Pb**	06 59 32.6	+1.1
	1.8nm,0.3s						
BTLS				*e*S	**Sb**	07 00 29.6	+4.0
	5.4nm,0.3s						
BTLS	**Baital**	**4.47**	**9**	Pg	**Pb**	06 59 32.6	+1.1
	1.8nm,0.3s						
BTLS				Lg	Lg	07 00 29.6	
	5.4nm,0.3s						
SATY	**Saty**	**4.66**	**57**	*e*P	**Pb**	06 59 35.6	+0.8
	1.9nm,0.2s						
SATY				*e*S	**Sb**	07 00 34.5	+3.4
	4.3nm,0.3s						
SATY	**Saty**	**4.66**	**57**	Pg	**Pb**	06 59 35.6	+0.8
	1.9nm,0.2s						
SATY				Lg	Lg	07 00 34.5	
	4.3nm,0.3s						
KPKS	**Kokpek**	**5.05**	**54**	*e*P	**Pb**	06 59 42.1	+0.8
	1.3nm,0.2s						
KPKS				*e*S	**Sb**	07 00 46.1	+4.0
	6.7nm,0.3s						
KPKS	**Kokpek**	**5.05**	**54**	Pg	**Pb**	06 59 42.1	+0.8
	1.3nm,0.2s						
KPKS				Lg	Lg	07 00 46.1	
	6.7nm,0.3s						
UZB	**Uzynbulak**	**5.10**	**58**	*e*P	**Pb**	06 59 43.1	+0.8
	0.6nm,0.2s						
UZB				*e*S	**Sb**	07 00 47.6	+3.9
	2.9nm,0.4s						
UZB	**Uzynbulak**	**5.10**	**58**	Pg	**Pb**	06 59 43.1	+0.8
	0.6nm,0.2s						
UZB				Lg	Lg	07 00 47.6	
	2.9nm,0.4s						
BLB	**Baldybastay**	**5.29**	**47**	*e*P	**Pb**	06 59 46.6	+1.0
	2.5nm,0.2s						
BLB				*e*S	**Sb**	07 00 53.4	+4.2
	4.5nm,0.3s						
BLB	**Baldybastay**	**5.29**	**47**	Pg	**Pb**	06 59 46.6	+1.0
	2.5nm,0.2s						
BLB				Lg	Lg	07 00 53.4	
	4.5nm,0.3s						

*IDC **03** 07:01:45.1±1.9, 1°.63N×124°.30E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=262.8km s-min=22.8km az=63.0*
*DJA **03** 07:02:14.0±0.4, 1°.N±5°.×12°.4E±°, h257km±4km, M3.9/12, mb3.8/1, MLv3.9/12*
ISC 03 07:02:13.6±1.0, 1°.27N±0°.09×124°.33E±0°.07, h250km, n15, σ1§72/18, mb3.7/3, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.77**	**207**	P	**Pn**	07 02 49.6	+2.0
KMSI				S	**S**	07 03 17.5	+3.3
GTOI	**Gorontalo**	**1.46**	**245**	P	**Pn**	07 02 53.6	+1.9
GTOI				S	**S**	07 03 23.7	+2.2
MRSI	**Marisa**	**2.51**	**252**	P	**Pn**	07 03 02.1	+1.1
MRSI				S	**S**	07 03 38.9	+0.5
SGSI	**Sangihe**	**2.69**	**26**	P	**Pn**	07 03 04.6	+1.8
LUWI	**Luwuk**	**2.77**	**214**	P	**Pn**	07 03 03.7	0.0
TNTI	**Ternate**	**3.08**	**99**	P	**Pn**	07 03 08.9	+1.9
APSI	**Ampana**	**3.44**	**231**	P	**Pn**	07 03 11.2	+0.1
SANI	**Sanana**	**3.69**	**153**	P	**Pn**	07 03 13.3	-0.6
LBMI	**Labuha**	**3.69**	**121**	P	**Pn**	07 03 15.0	+1.1
MPSI	**Mapaga**	**4.53**	**258**	P	**Pn**	07 03 23.9	+0.2
BIPH	**Bislig**	**7.16**	**16**	⇓*e*P	**Pn**	07 03 56.5	+0.1
FAKI	**Fak Fak**	**8.94**	**118**	P	**Pn**	07 04 19.5	+0.5
WRA	**Warramunga Arr**	**23.25**	**156**	P	**P**	07 06 57.9	-1.3
	2.1nm,0.3s,baz=334,slow=10.0,SNR=55						
	2.1nm,0.3s						
ASAR	**Alice Springs**	**26.48**	**160**	P	**P**	07 07 26.7	-1.5
	0.4nm,0.5s,baz=340,slow=7.4,SNR=10						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.26**	**327**	P	**P**	07 11 39.5	-2.7
	0.6nm,0.3s,baz=125,slow=7.7,SNR=16						
	0.6nm,0.3s						

*SNET **03** 07:17:56.5±1.4, 14°.12N×89°.71W, h5km, ML3.3*
*GCG **03** 07:17:59.0±1.1, 14°.28N×89°.80W, h1km±6km, MD3.3*
ISC 03 07:17:56.3±1.0, 14°.19N±0°.04×89°.72W±0°.03, h10km±10km, n24, σ0§40/40, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**0.17**	**200**	*e*P	**Pg**	07 17 59.9	-0.1
SLOZ				*e*S	**Sg**	07 18 02.6	-0.1
NUBE	**Las Nubes**	**0.29**	**191**	⇓*i*P	**Pg**	07 18 02.0	-0.2
NUBE				*e*S	**Sg**	07 18 05.9	-0.3
RTR	**El Retiro**	**0.30**	**166**	*e*P	**Pg**	07 18 02.4	0.0
SNJE	**San Jose**	**0.34**	**161**	*e*P	**Pg**	07 18 03.1	0.0
SBLS	**San Blas**	**0.36**	**165**	*e*P	**Pg**	07 18 03.6	0.0
CEVE	**Cerro Verde**	**0.37**	**165**	*e*P	**Pg**	07 18 04.0	+0.2
CEVE				*e*S	**Sg**	07 18 09.6	+0.9
MTO3	**Montecristo**	**0.41**	**59**	*e*P	**Pb**	07 18 05.5	-0.2
MTO3				*e*S	**Sb**	07 18 12.0	-0.1
CEDA	**San Andres**	**0.50**	**140**	*e*P	**Pg**	07 18 05.8	-0.2
CEDA				*e*S	**Sg**	07 18 13.1	+0.5
ESQI	**Esquipulas**	**0.52**	**45**	*e*P	**Pb**	07 18 07.8	+0.2
ESQI				*e*S	**Sb**	07 18 16.1	+0.7
BOQS	**Boqueron**	**0.62**	**136**	*e*P	**Pg**	07 18 08.6	+0.1
UEES	**Universidad Ev**	**0.66**	**135**	*e*P	**Pg**	07 18 08.9	-0.3
UEES				*e*S	**Sg**	07 18 18.2	+0.3
SNET	**Serv Nac Est T**	**0.69**	**136**	*i* P	**Pg**	07 18 09.6	0.0
SNET				*e*S	**Sg**	07 18 18.9	+0.2
NBG	**Las Nubes**	**0.72**	**303**	*e*P	**Pn**	07 18 12.6	-0.3
NBG				*e*S	**Sn**	07 18 24.1	0.0
LFRS	**El Faro**	**0.85**	**131**	*i* P	**Pg**	07 18 12.5	-0.3
PCG	**Pacaya**	**0.88**	**283**	*e*P	**Pn**	07 18 15.0	-0.1
PCG				*e*S	**Sn**	07 18 27.7	-0.4
MRL	**Marmol**	**0.89**	**2**	*e*P	**Pn**	07 18 15.7	+0.6
MRL				*e*S	**Sn**	07 18 28.3	+0.2
PAVA	**Las Pavas**	**0.90**	**122**	*e*P	**Pg**	07 18 13.2	-0.4
PAVA				*e*S	**Sg**	07 18 25.8	+0.5
SJTE	**Alcalda de S**	**0.90**	**129**	*e*P	**Pg**	07 18 13.0	-0.6
P5NO	**Presa 5 de nov**	**0.96**	**102**	*e*P	**Pg**	07 18 14.0	-0.7
P5NO				*e*S	**Sg**	07 18 27.2	0.0
SCLA	**Alcaldia de Sa**	**1.08**	**117**	*e*P	**Pb**	07 18 16.6	-0.6
FUG	**Fuego 3**	**1.12**	**283**	*e*P	**Pn**	07 18 18.7	+0.5
FUG				*e*S	**Sn**	07 18 34.3	+0.6
PQSS	**Presa 15 de Se**	**1.26**	**116**	*e*P	**Pn**	07 18 19.6	-0.4
PQSS				*e*S	**Sb**	07 18 36.9	+0.4
COEB	**Comit de Eme**	**1.35**	**121**	*e*P	**Pn**	07 18 21.3	0.0
STG3	**Santiaguito 3,**	**1.86**	**286**	*e*P	**Pg**	07 18 31.4	-0.6
STG3				*e*S	**Sg**	07 18 56.5	+0.2

*IDC **03** 07:27:50.8±1.8, 5°.55S×147°.19E, h151km±15km, mb3.8/9, mbtmp4.3/12, Error ellipse: s-maj=20.4km s-min=10.9km az=119.0*
*NEIC **03** 07:27:53.4±2.1, 5°.66S±0°.06×147°.2E±0°.2, h169km±6km, mb4.3/49, Error ellipse: s-maj=21.8km s-min=9.3km az=86.0*
ISC 03 07:27:51.6±0.6, 5°.64S±0°.07×147°.2E±0°.1, h150km, n85, σ1§15/88, mb4.3/32, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.58**	**2**	P	Pn	07 28 50.0	+3.5
PMG	**Port Moresby**	**3.74**	**181**	P	**Pn**	07 28 49.9	+1.4
	79nm,0.3s,baz=18,slow=9.0,SNR=20						
PMG				S	**Sn**	07 29 32.4	-0.3
	36nm,0.3s,baz=150,slow=18,SNR=5.8						
PMG	**Port Moresby**	**3.74**	**181**	P	**Pn**	07 28 50.1	+1.6
COEN	**Coen**	**9.18**	**206**	Pn	**Pn**	07 30 03.2	+2.3
CTA	**Charters Tower**	**14.39**	**184**	P	**P**	07 31 10.4	-0.8
	4.3nm,1.0s,baz=0.1,slow=4.4,SNR=3.1						
MTN	**Manton Dam**	**17.43**	**245**	P	**Pn**	07 31 45.6	-0.2
WB0	**Warramunga Arr**	**18.80**	**221**	P	**P**	07 31 59.1	-0.6
WB0				IAmb	IAmb	07 32 03.8	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**18.85**	**220**	P	**Pn**	07 32 01.0	-1.5
WRAB	**Tennant Creek**	**18.95**	**220**	P	**P**	07 32 00.1	-1.2
WRAB	**Tennant Creek**	**18.95**	**220**	P	**Pn**	07 32 02.6	-1.1
WB2	**Warramunga Arr**	**18.95**	**220**	P	**P**	07 31 59.9	-1.5
WRA	**Warramunga Arr**	**18.96**	**220**	P	**Pn**	07 32 02.6	-1.3
	comp=Z,13nm,0.7s,baz=44,slow=11,SNR=147						
WRA				S	**S**	07 35 27.2	-1.8
	comp=Z,3.2nm,1.2s,baz=46,slow=20,SNR=6.8						
WRA				PcP	**PcP**	07 36 19.8	-1.1
	comp=Z,0.4nm,0.8s,baz=23,slow=1.6,SNR=4.5						
WRA	**Warramunga Arr**	**18.96**	**220**	P	**P**	07 31 59.5	-1.9
AS01	**Alice Springs**	**22.02**	**214**	P	**P**	07 32 35.6	+1.4
AS31	**Alice Springs**	**22.05**	**214**	P	**P**	07 32 33.3	-1.1
AS31				IAmb	IAmb	07 32 39.8	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**22.05**	**214**	P	**P**	07 32 35.4	+0.9
	comp=Z,20nm,0.8s,baz=48,slow=8.2,SNR=51						
ASAR				S	**S**	07 36 27.7	+0.4
	comp=Z,9.0nm,0.9s,baz=30,slow=22,SNR=24						
	comp=Z,20nm,0.8s						
ASAR	**Alice Springs**	**22.05**	**214**	P	**P**	07 32 34.8	+0.4
INKA	**Innaminka**	**22.83**	**195**	P	**P**	07 32 43.0	+1.2
FITZ	**Fitzroy Crossi**	**24.46**	**238**	P	**P**	07 32 56.4	-0.4
	comp=Z,3.1nm,0.6s,baz=42,slow=8.2,SNR=13						
	comp=Z,3.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.46**	**238**	P	**P**	07 32 56.8	-0.1
FITZ				IAmb	IAmb	07 33 38.5	
	comp=Z,6.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**24.46**	**238**	P	**P**	07 32 57.2	+0.4
DZM	**Mont Dzumac**	**24.73**	**133**	P	**P**	07 32 59.1	-0.2
	comp=Z,3.0nm,0.5s,baz=256,slow=13,SNR=12						
	comp=Z,3.0nm,0.5s						
DZM	**Mont Dzumac**	**24.73**	**133**	P	**P**	07 32 58.3	-1.0
DZM				IAmb	IAmb	07 33 01.8	
	comp=Z,16nm,1.2s						
DZM	**Mont Dzumac**	**24.73**	**133**	P	**P**	07 33 00.6	+1.3
ARMA	**Armidale**	**24.99**	**171**	P	**P**	07 33 02.7	+1.1
STKA	**Stephens Creek**	**26.63**	**191**	P	**P**	07 33 17.3	+1.1
	comp=Z,6.5nm,1.1s,baz=252,slow=4.7,SNR=3.1						
	comp=Z,6.5nm,1.1s						
MULG	**Mulgathing**	**27.48**	**205**	P	**P**	07 33 24.2	+0.4
PTPS	**Port Pirie**	**28.71**	**196**	P	**P**	07 33 36.1	+1.3
	comp=Z,80nm,0.5s						
URZ	**Urewera**	**42.30**	**144**	P	**P**	07 35 31.1	+0.6
BKZ	**Black Stump Fm**	**42.57**	**146**	P	**P**	07 35 33.0	+0.3
BKZ				IAmb	IAmb	07 35 53.3	
	comp=Z,18nm,1.5s						
TUWZ	**Tuamarina**	**42.87**	**150**	P	**P**	07

I23K	**Minto, Yukon-K**	84.27	22	P	P	07 40 05.3	-0.8
I23K				IAmb	IAmb	07 40 26.1	
comp=Z,7.3nm,1.4s							
M24K	**Tolsona, Glenn**	84.27	26	P	P	07 40 06.0	-0.3
QSPA	**South Pole Qui**	84.32	180	P	P	07 40 05.5	-1.2
QSPA				IAmb	IAmb	07 40 07.0	
comp=Z,11nm,1.5s							
H23K	**Yukon River**	84.51	22	P	P	07 40 07.1	-0.3
H23K				IAmb	IAmb	07 40 14.6	
comp=Z,7.2nm,1.5s							
MDM	**Murphy Dome**	84.62	23	P	P	07 40 06.2	-1.8
CCB	**Clear Creek Bu**	84.65	23	P	P	07 40 06.1	-1.9
HDA	**Harding Lake**	84.88	23	P	P	07 40 07.5	-1.7
HDA				IAmb	IAmb	07 40 26.4	
comp=Z,8.7nm,1.5s							
IL31		85.06	23	P	P	07 40 08.4	-1.7
ILAR	**Eielson Array**	85.06	23	P	P	07 40 07.8	-2.4
comp=Z,1.7nm,0.6s,baz=255,slow=4.8,SNR=16							
comp=Z,1.7nm,0.6s							
H24K	**Noodor Dome**	85.13	22	P	P	07 40 10.2	-0.4
VRDI	**Verde Repeater**	85.14	27	P	P	07 40 11.6	+0.7
VRDI				IAmb	IAmb	07 40 18.4	
comp=Z,8.4nm,1.3s							
J25K	**Salcha River,**	85.59	24	P	P	07 40 11.8	-1.0
J25K				IAmb	IAmb	07 40 13.0	
comp=Z,4.0nm,1.0s							
MENT	**Mentasta**	85.64	25	P	P	07 40 12.8	-0.2
CTGM	**Chitina Glacie**	86.02	28	P	P	07 40 15.3	+0.1
LOGN	**Logan Glacier**	86.13	28	P	P	07 40 14.6	-1.1
M27K	**Edge Creek, AK**	86.23	26	P	P	07 40 15.4	-0.8
M27K				IAmb	IAmb	07 40 27.0	
comp=Z,11nm,1.5s							
BCAR	**Beaver Creek A**	86.51	26	P	P	07 40 16.3	-1.1
K27K	**Chicken**	86.72	25	P	P	07 40 17.8	-0.5
K27K				IAmb	IAmb	07 40 32.8	
comp=Z,5.6nm,1.4s							
GERES	**GERESS Array B**	121.75	326	PKP	PKPdf	07 46 26.2	-1.8
comp=Z,0.3nm,0.8s,baz=66,slow=4.8,SNR=3.7							
TORD	**Torodi Ar. Bea**	145.24	285	PKPbc	PKPbc	07 47 10.4	-2.1
comp=Z,16nm,0.6s,baz=66,slow=3.2,SNR=5.1							
BDFB	**Brasilia**	154.01	145	PKPbc	PKPbc	07 47 34.0	-0.7
comp=Z,0.8nm,0.4s,baz=126,slow=3.2,SNR=3.9							

HEL 03 07:32:30.4±0.3, 67°.86N×20°.11E, h0km, ML1.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	0.73	74	PG	Pn	07 32 47.6	-0.5
LANU	**Lannavaara**	0.73	74	PG	Pg	07 32 43.5	-1.0
LANU				SG	Sg	07 32 53.1	-0.8
KIF	**Kilpisjarvi**	1.18	12	PG	Pn	07 32 54.0	-0.1
KIF				SG	Sn	07 33 11.1	+0.3
KIF				MSG		07 33 12.9	
comp=Z,2.7nm,0.2s							
KIF	**Kilpisjarvi**	1.18	12	PN	Pn	07 32 54.0	-0.1
KIF				MSG		07 33 07.2	
comp=Z,2.7nm,0.2s							
KIF				SB	Sb	07 33 08.8	-0.5
PAJU	**Pajala**	1.43	125	PG	Pn	07 32 55.6	-2.0
PAJU	**Pajala**	1.43	125	PG	Pn	07 32 55.6	-2.0
PAJU				SG	Sg	07 33 14.1	-2.2
HEF	**Hetta**	1.44	66	MSG		07 33 22.7	
comp=Z,1.1nm,0.2s							
HEF				SG	Sn	07 33 26.6	+9.3
HEF	**Hetta**	1.44	66	MSG		07 33 13.7	
comp=Z,3.2nm,0.2s							
HEF				SN	Sn	07 33 18.6	+1.3
ERTU	**Ertsjaerv**	1.54	147	SN	Sn	07 33 18.8	-1.0
ERTU	**Ertsjaerv**	1.54	147	PG	Pn	07 32 58.4	-0.7
ERTU				SN	Sn	07 33 18.8	-1.0
KLF	**Kolari**	1.61	111	PB	Pn	07 32 59.9	-0.1
KLF				SB	Sg	07 33 23.4	+1.4
KLF	**Kolari**	1.61	111	PN	Pn	07 32 59.9	-0.1
KLF				SG	Sn	07 33 18.3	-3.1
KALU	**Kalix**	2.38	146	PG	Pn	07 33 11.5	+0.9
KALU	**Kalix**	2.38	146	PB	Pn	07 33 11.5	+0.9
baz=325							
TOF	**Tornio**	2.44	135	MSG		07 33 43.2	
comp=Z,1.4nm,0.2s							
TOF				SB	Sb	07 33 45.2	-0.4
TOF	**Tornio**	2.44	135	MSG		07 33 42.4	
comp=Z,1.3nm,0.2s							
TOF				SG	Sb	07 33 45.2	-0.4
RNF	**Rovaniemi**	2.62	116	PB	Pn	07 33 15.8	+1.9
RNF				SN	Sb	07 33 49.0	-1.8
RNF	**Rovaniemi**	2.62	116	PB	Pn	07 33 15.8	+1.9
RNF				SB	Sb	07 33 49.0	-1.8
KEV	**Kevo**	3.15	50	SN	Sb	07 34 05.6	-0.3
KEV	**Kevo**	3.15	50	MSG		07 34 02.9	
comp=Z,0.6nm,0.2s							
KEV				SG	Sb	07 34 05.6	-0.3

IDC 03 07:47:05.6±1.9, 10°.14S×125°.15E, h0km, mb3.4/1, mbtmp3.5/4, ML3.5/3, MS3.3/1, Error ellipse: s-maj=34.6km s-min=22.4km az=39.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	1.46	267	Pn	Pn	07 47 32.8	-0.5
12nm,0.3s,baz=90,slow=3.0,SNR=2.5							
BATI				Sn	Sn	07 47 54.6	+1.4
16nm,0.3s,baz=322,slow=21,SNR=6.0							
FITZ	**Fitzroy Crossi**	7.93	177	Pn	Pn	07 49 04.1	+1.8
0.4nm,0.3s,baz=356,slow=9.8,SNR=27							
FITZ				Sn	Sn	07 50 32.7	0.0
0.7nm,0.3s,baz=288,slow=22,SNR=4.1							
1.0nm,0.3s							
WRA	**Warramunga Arr**	13.18	139	Pn	Pn	07 50 13.0	-1.2
0.3nm,0.3s,baz=316,slow=15,SNR=28							
WRA				Sn	Sn	07 52 34.7	-6.9
0.3nm,0.3s,baz=318,slow=25,SNR=4.1							
0.4nm,0.3s							
ASAR	**Alice Springs**	15.84	149	Pn	Pn	07 50 49.6	-0.5
0.1nm,0.3s,baz=319,slow=11,SNR=9.4							
ASAR				Sn	Sn	07 53 43.1	-3.5
0.2nm,0.3s,baz=327,slow=25,SNR=5.1							
0.4nm,0.5s							
CTA	**Charters Tower**	22.63	118	LR	LR	08 02 41.3	
comp=Z,66nm,19.0s,baz=250,slow=41							
MKAR	**Makanchi Array**	68.35	330	P	P	07 58 09.0	+0.1
0.3nm,0.6s,baz=142,slow=7.3,SNR=2.6							
0.3nm,0.6s							

MAN 03 07:49:21.9, 17°.88N×119°.55E, h139km, mb4.2, ML3.1, MS2.8, 5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	0.87	87	⇓eP	Pn	07 49 42.4	-2.0
SIPP				eS	Sn	07 50 06.2	+4.7
BOLP	**Bolinao**	1.53	167	⇓eP	Pn	07 49 51.9	+0.9
BOLP				eS	Sn	07 50 14.2	+1.1
APYP	**Conner**	1.61	90	⇓eP	Pn	07 49 54.6	+2.7
APYP				eS	Sn	07 50 15.7	+1.0
SMPP	**San Manuel, Pa**	2.03	148	⇓eP	Pn	07 49 56.6	-0.2
SMPP				eS	Sn	07 50 24.6	+1.1
BALP	**Baler**	2.88	137	⇓eP	Pn	07 50 09.5	+2.3
BALP				eS	Sn	07 50 38.0	-4.3

MAN 03 08:04:14.9, 17°.82N×119°.62E, h9km, mb4.3, ML3.1, MS2.9, 5C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	0.81	82	⇑iP	Pg	08 04 30.5	0.0
SIPP				i S	Sn	08 04 54.6	+10
SAMP	**Sagada Mountai**	1.43	121	⇑eP	Pn	08 04 39.1	-2.0
SAMP				eS	Sn	08 04 49.2	-11
BOLP	**Bolinao**	1.46	169	⇑eP	Pn	08 04 40.4	-1.1
BOLP				eS	Sg	08 05 05.0	+3.1
APYP	**Conner**	1.55	88	⇑eP	Pn	08 04 42.4	-0.4
APYP				eS	Sb	08 05 03.4	-0.2
SMPP	**San Manuel, Pa**	1.95	148	⇑eP	Pn	08 04 45.7	-2.5
SMPP				eS	Sb	08 05 15.9	+0.8

*PRU **03** 08:14:45.4±0.0, 53°.89N×18°.33E, h0km*
*IDC **03** 08:14:48.5±0.8, 54°.71N×19°.39E, h0km, mbtmp3.2/8, ML3.1/8, Error ellipse: s-maj=12.5km s-min=9.2km az=77.0*
ISC 03 08:14:46.6±1.0, 54°.74N±0°.07×19°.46E±0°.06, h10km, n15, σ1§67/18, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLEU	**Blekinge**	2.60	309	eP	Pn	08 15 29.5	+0.8
BLEU				eS	Sb	08 16 05.3	+0.1
BSD	**Bornholm Skovb**	2.65	280	eP	Pn	08 15 31.0	+1.7
BSD				eS	Sb	08 16 06.5	-0.2
BSD				IAML		08 16 20.3	
comp=Z,26nm,0.2s							
LUNU	**Lund**	3.56	287	eP	Pn	08 15 41.4	-0.5
DEL	**Delary**	3.62	301	eP	Pn	08 15 43.5	+0.9
OSTC	**Ostas**	4.63	207	ePG	Pn	08 15 51.1	-5.5
CHVC	**Chvalec**	4.64	208	ePG	Pn	08 15 55.1	-1.7
MAUC	**Maruska**	5.47	191	ePG	Pn	08 16 07.8	-0.4
VRAC	**Vranov**	5.72	199	Pn	Pn	08 16 15.0	+3.4
comp=Z,0.5nm,0.3s,baz=29,slow=10,SNR=1.7							
comp=Z,1.5nm,0.3s							
HFS	**Hagfors**	6.24	332	Pn	Pn	08 16 20.3	+1.7
comp=Z,0.7nm,0.3s,baz=146,slow=14,SNR=39							
comp=Z,2.1nm,0.2s							
GERES	**GERESS Array B**	6.89	214	Pn	Pn	08 16 28.3	+0.5
comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=1.6							
comp=Z,0.1nm,0.3s							
AKASG	**Malin Array Be**	7.18	120	Pn	Pn	08 16 31.1	-0.5
comp=Z,1.2nm,0.3s,baz=311,slow=12,SNR=5.7							
AKASG				Sn	Sn	08 17 52.7	-0.3
comp=Z,1.3nm,0.3s,baz=316,slow=36,SNR=2.4							
comp=Z,0.2nm,0.2s							
FINES	**FINESS Array B**	7.58	25	Pn	Pn	08 16 39.4	+2.3
comp=Z,0.6nm,0.3s,baz=209,slow=12,SNR=23							
FINES				Sn	Sn	08 18 03.2	+0.4
comp=Z,0.6nm,0.3s,baz=218,slow=20,SNR=2.8							
comp=Z,1.5nm,0.3s							
NOA	**NORSAR Array B**	7.69	329	Pn	Pn	08 16 38.1	-0.5
baz=169,slow=0.9,SNR=7.1							
comp=Z,0.2nm,0.3s							
EKA	**Eskdalemuir Ar**	12.98	282	Pn	Pn	08 17 52.8	+1.9
baz=86,slow=13							
comp=Z,0.1nm,0.2s							
ARCES	**ARCESS Array B**	15.10	8	Pn	Pn	08 18 16.7	-3.1
comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=1.8							
comp=Z,1.0nm,0.5s							

*IDC **03** 08:19:40.3±1.3, 12°.82N×49°.60E, h0km, mb3.8/7, mbtmp3.8/7, MS3.3/8, Error ellipse: s-maj=35.5km s-min=28.6km az=178.0*
ISC 03 08:19:41.8±1.2, 12°.8N±0°.3×49°.6E±0°.2, h10km, n15, σ0§46/8, mb3.9/8, MS3.3/8, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	21.56	323	LR	LR	08 32 39.3	
comp=Z,42nm,20.6s,baz=286,slow=36							
MMAI	**Mount Meron Ar**	23.91	329	LR	LR	08 33 57.1	
comp=Z,58nm,18.5s,baz=143,slow=36							
GNI	**Garni**	27.53	352	LR	LR	08 38 05.4	
comp=Z,91nm,19.8s,baz=162,slow=40							
KBZ	**Khabaz**	31.31	351	LR	LR	08 39 16.4	
comp=Z,42nm,20.5s,baz=190,slow=38							
MKAR	**Makanchi Array**	43.58	33	P	P	08 27 45.6	-0.5
0.8nm,0.7s,baz=216,slow=9.7,SNR=7.6							
0.8nm,0.7s							
KURBB	**Kurchatov Arra**	44.44	26	P	P	08 27 53.7	+0.8
0.6nm,0.7s,baz=226,slow=7.9,SNR=6.2							
0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	46.62	276	P	P	08 28 10.8	0.0
8.5nm,0.4s,baz=86,slow=7.5,SNR=5.0							
CMAR	**Chiang Mai Arr**	47.73	77	P	P	08 28 19.2	-0.1
1.3nm,0.3s,baz=279,slow=8.9,SNR=6.8							
1.3nm,0.3s							
ZALV	**Zalesovo Beam**	49.52	27	P	P	08 28 32.9	+0.3
0.5nm,0.3s,baz=201,slow=7.7,SNR=2.2							
0.5nm,0.3s							
FINES	**FINESS Array B**	51.43	346	P	P	08 28 46.6	-0.3
1.9nm,0.9s,baz=138,slow=15,SNR=1.8							
FINES				LR	LR	08 54 52.3	
comp=Z,34nm,19.4s,baz=270,slow=41							
1.9nm,0.9s							
SUR	**Sutherland**	52.73	211	LR	LR	08 54 10.7	
comp=Z,43nm,18.1s,baz=86,slow=39							
NOA	**NORSAR Array B**	55.59	339	LR	LR	08 56 36.8	
comp=Z,19nm,18.0s,baz=310,slow=40							
BBTS	**Babate**	64.06	280	LR	LR	08 59 42.4	
comp=Z,68nm,18.1s,baz=2.0,slow=38							
WRA	**Warramunga Arr**	89.47	110	P	P	08 32 39.8	-0.1
0.3nm,0.7s,baz=300,slow=3.5,SNR=1.8							
0.3nm,0.7s							
ASAR	**Alice Springs**	89.97	114	P	P	08 32 42.2	+0.2
0.3nm,0.4s,baz=290,slow=5.1,SNR=2.4							
0.3nm,0.4s							

*IDC **03** 08:47:04.9±1.2, 24°.2S±0°.2×115°.5W±0°.3, h21km, n48, σ0§75/10, mb4.0/5, MS3.9/33, Southern East Pacific Rise*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	6.28	119	LR	LR	08 50 25.4	
comp=Z,1μm,20.4s,baz=300,slow=32							
TAOE	**Nuku Hiva Isla**	28.06	299	eLR	LR	08 59 42.7	
comp=Z,703nm,26.4s							
PPT2	**Papeete2**	32.44	275	eS	S	08 58 31.9	-18
56nm,27.0s							
PPT2				eLR	LR	09 01 46.9	
comp=Z,389nm,28.5s							
PPT	**Papeete**	32.44	275	LR	LR	09 01 54.5	
comp=Z,82nm,19.5s,baz=118,slow=27							
H03N2	**Juan Fernandez**	33.19	114	T	T	09 28 49.1	
baz=280,slow=75,SNR=364							
H03N3	**Juan Fernandez**	33.20	114	T	T	09 28 50.3	
baz=280,slow=75,SNR=414							
H03N1	**Juan Fnandez**	33.21	114	T	T	09 28 50.2	
baz=280,slow=75,SNR=480							
NNA	**Nana**	38.60	79	LR	LR	09 06 07.4	
comp=Z,166nm,18.6s,baz=244,slow=30							
ATAH	**Atahualpa**	39.41	71	LR	LR	09 06 33.6	
comp=Z,123nm,21.6s,baz=246,slow=30							
RAR	**Rarotonga**	40.80	265	LR	LR	09 06 23.4	
comp=Z,184nm,22.0s,baz=116,slow=28							
PLCA	**Paso Flores**	40.87	125	P	P	08 54 48.2	+0.2
3.6nm,1.0s,baz=275,slow=9.3,SNR=6.5							
PLCA				LR	LR	09 07 26.3	
comp=Z,248nm,21.5s,baz=280,slow=30							
3.6nm,1.0s							
LVC	**Limon Verde**	42.65	98	LR	LR	09 08 14.9	
comp=Z,135nm,20.1s,baz=264,slow=30							
LPAZ	**La Paz**	44.98	89	P	P	08 55 22.4	+0.2
4.5nm,1.0s,baz=286,slow=5.2,SNR=12							
LPAZ				LR	LR	09 09 35.6	
comp=Z,125nm,21.5s,baz=286,slow=30							
4.5nm,1.0s							
CMIG	**Matias Romero**	45.75	28	LR	LR	09 08 10.1	
comp=Z,23nm,20.4s,baz=198,slow=28							
LPIG	**La Paz**	48.32	6	LR	LR	09 11 02.0	
comp=Z,111nm,20.4s,baz=184,slow=30							
SIV	**San Ignacio**	51.52	92	LR	LR	09 13 39.0	
comp=Z,66nm,20.7s,baz=277,slow=31							
AFI	**Afiamalu**	53.85	270	LR	LR	09 13 47.8	
comp=Z,114nm,18.0s,baz=110,slow=30							
TXAR	**Lajitas Array**	54.47	13	P	P	08 56 33.9	+0.3
0.5nm,1.0s,baz=199,slow=7.4,SNR=3.6							
TXAR				LR	LR	09 14 50.8	
comp=Z,49nm,19.6s,baz=124,slow=31							
0.5nm,1.0s							
SDV	**Santo Domingo**	54.80	59	LR	LR	09 14 58.2	
comp=Z,85nm,19.7s,baz=264,slow=31							
PFO	**Pinyon Flats O**	57.54	359	LR	LR	09 15 19.6	
comp=Z,75nm,21.2s,baz=192,slow=30							
URZ	**Urewera**	58.11	239	LR	LR	09 16 21.3	
comp=Z,73nm,18.4s,baz=203,slow=30							
ANMO	**Albuquerque**	59.49	9	LR	LR	09 17 50.8	
comp=Z,52nm,18.1s,baz=182,slow=31							
RPZ	**Rata Peaks**	61.97	232	LR	LR	09 19 28.5	
comp=Z,84nm,18.0s,baz=96,slow=31							
NVAR	**Mina Array Bea**	62.40	358	P	P	08 57 29.7	+0.8
1.0nm,0.8s,baz=195,slow=8.2,SNR=8.3							
NVAR				LR	LR	09 17 56.0	
comp=Z,77nm,20.3s,baz=70,slow=30							
1.0nm,0.8s							
ELK	**Elko**	64.65	0	LR	LR	09 19 23.6	
comp=Z,45nm,18.2s,baz=270,slow=30							
VNDA	**Vanda**	64.91	194	LR	LR	09 19 04.4	
comp=Z,70nm,19.1s,baz=93,slow=30							
QSPA	**South Pole Qui**	65.91	180	LR	LR	09 22 26.6	
comp=Z,93nm,18.9s,baz=102,slow=32							
YBH	**Yreka Blue Hor**	65.98	354	LR	LR	09 20 34.3	
comp=Z,34nm,18.2s,baz=306,slow=30							
PDAR	**Pinedale Array**	66.90	5	P	P	08 57 57.2	-1.0
0.4nm,0.6s,baz=163,slow=6.2,SNR=5.0							
PDAR				LR	LR	09 21 27.5	
comp=Z,36nm,18.2s,baz=86,slow=31							
0.4nm,0.6s							
MDP	**Montagnes des**	67.76	73	LR	LR	09 24 01.6	
comp=Z,61nm,20.6s,baz=191,slow=33							
DZM	**Mont Dzumac**	70.85	254	eLR	LR	09 19 40.1	
comp=Z,111nm,26.6s							
DZM	**Mont Dzumac**	70.85	254	LR	LR	09 25 28.9	
comp=Z,56nm,18.2s,baz=34,slow=32							
NEW	**Newport**	72.19	359	LR	LR	09 24 12.6	
comp=Z,67nm,20.5s,baz=208,slow=31							
RCBR	**Riachuelo**	78.18	91	LR	LR	09 30 55.9	
comp=Z,55nm,18.3s,baz=317,slow=34							
HNR	**Honiara**	81.24	264	LR	LR	09 32 47.5	
comp=Z,360nm,18.3s,baz=146,slow=34							
H11S2	**WAKE ISLAND Hy**	86.86	292	T	T	10 35 42.3	
baz=118,slow=75,SNR=366							
H11S1	**WAKE ISLAND Hy**	86.87	292	T	T	10 35 43.4	
baz=118,slow=75,SNR=226							
H11S3	**WAKE ISLAND Hy**	86.88	292	T	T	10 35 40.0	
baz=118,slow=75,SNR=314							
H11N3	**WAKE ISLAND Hy**	87.24	293	T	T	10 36 11.2	
baz=121,slow=75,SNR=21							
H11N1	**WAKE ISLAND Hy**	87.25	293	T	T	10 36 10.5	
baz=121,slow=75,SNR=14							
H11N2	**WAKE ISLAND Hy**	87.26	293	T	T	10 36 11.5	
baz=121,slow=75,SNR=32							
STKA	**Stephens Creek**	87.63	236	LR	LR	09 34 56.8	
comp=Z,136nm,19.1s,baz=203,slow=33							
MAW	**Mawson**	88.42	179	LR	LR	09 33 57.0	
comp=Z,65nm,21.9s,baz=195,slow=32							
FRB	**Frobisher Bay**	95.09	19	LR	LR	09 39 19.2	
comp=Z,54nm,18.6s,baz=42,slow=33							
ZALV	**Zalesovo Beam**	146.65	338	PKPbc	PKPbc	09 06 47.3	+0.1
0.9nm,0.4s,baz=128,slow=30,SNR=2.3							
CMAR	**Chiang Mai Arr**	147.45	267	PKPbc	PKPab	09 06 52.5	-0.1
1.1nm,0.3s,baz=50,slow=1.4,SNR=2.7							
BRTR	**Keskin Array B**	149.81	52	PKPbc	PKPbc	09 06 54.9	-1.3
2.1nm,1.0s,baz=252,slow=1.2,SNR=6.0							
MKAR	**Makanchi Array**	153.35	332	PKP	PKPdf	09 06 57.0	+0.5
0.8nm,0.7s,baz=351,slow=1.9,SNR=2.7							
MKAR				PKPbc	sPKPdf	09 07 04.5	0.0
1.0nm,0.8s,baz=45,slow=3.6,SNR=5.9							

*MOS **03** 08:48:24.2±1.0, 41°.89N×142°.40E, h69km, mb4.7/16, Error ellipse: s-maj=7.4km s-min=6.1km az=74.9*
*JMA **03** 08:48:25.3±0.2, 41°.9N±0°.7×142°.4E±0°.7, h67km±2km, MD4.5/40, MW4.4/40, S OFF URAKAWA*
JMA Felt III J1 at S OFF URAKAWA .
*NEIC **03** 08:48:25.4, 41°.87N×142°.55E, h65km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.08; $M_{\theta\theta}$2.75; $M_{\phi\phi}$-2.84; $M_{r\theta}$-0.37; $M_{\theta\phi}$-3.44; $M_{\phi r}$0.08; Fault plane solution: $M_0$4.45000×10^{15} NP1:ϕ_s340.54000°, δ85.79000°, λ2.71000°. NP2:ϕ_s250.34000°, δ87.30000°, λ175.79000°. Principal axes: T 4.4186, Plg5.0000°, Azm205.0000°; N 0.0534, Plg85.0000°, Azm38.0000°; P -4.4720, Plg1.0000°, Azm295.0000°;*
*NIED **03** 08:48:25.3, 41°.92N×142°.44E, h67km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.10; $M_{\theta\theta}$2.30; $M_{\phi\phi}$-2.21; $M_{r\theta}$0.18; $M_{\theta\phi}$-2.52; $M_{\phi r}$0.61; Fault plane solution: $M_0$3.44000×10^{15} NP1: ϕ_s250.00000°, δ82.00000°, λ-173.00000°. NP2: ϕ_s159.00000°, δ84.00000°, λ-9.00000°.*
*IDC **03** 08:48:26.7±0.7, 41°.94N×142°.39E, h76km±6km, mb3.8/19, mbtmp4.1/24, MS3.1/13 Error ellipse: s-maj=13.7km s-min=12.4km az=122.0*
*NEIC **03** 08:48:26.0±2.0, 41°.92N±0°.05×142°.4E±0°.1, h67km±7km, mb4.6/90, Mwr4.4/13, Error ellipse: s-maj=12.4km s-min=7.2km az=101.0*
ISC 03 08:48:26.0±0.5, 41°.89N±0°.04×142°.45E±0°.03, h72km±4km, n290, σ1§73/260, mb4.5/73, 10C-17D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	0.45	30	iP	Pn	08 48 36.8	-1.7
JNBK				eS	Sn	08 48 45.3	-2.5
JNBK	**Urakawa-nobuka**	0.45	30	A	A	08 48 36.8	
comp=E,196nm,0.5s,comp=E,160nm,0.4s							
JSHD	**Hidakashinhida**	0.52	1	P	Pn	08 48 37.9	-1.3
JSHD				eS	Sn	08 48 47.2	-1.7
JSHD	**Hidakashinhida**	0.52	1	A	A	08 48 37.9	
comp=E,101nm,2.3s,comp=E,83nm,1.8s							
ERM	**Erimo**	0.54	77	diP	Pn	08 48 38.4	-1.0
JEM	**Erimo**	0.54	77	⇓iP	Pn	08 48 38.5	-0.9
JEM				⇓eS	Sn	08 48 48.2	-1.1
JEM	**Erimo**	0.54	77	A	A	08 48 38.5	
comp=E,14nm,1.9s,comp=E,17nm,0.6s							
JTHR	**Tokachihiroo**	0.75	58	iP	Pn	08 48 40.7	-0.8
JTHR				eS	Sn	08 48 52.1	-1.0
JTHR	**Tokachihiroo**	0.75	58	A	A	08 48 40.7	
comp=E,20nm,2.2s,comp=E,32nm,0.9s							
JIAM	**Iburiatsuma**	0.83	332	⇓iP	Pn	08 48 42.1	-0.5
JIAM				⇓eS	Sn	08 48 54.2	-0.6
JIAM	**Iburiatsuma**	0.83	332	A	A	08 48 42.1	
comp=E,376nm,0.8s,comp=E,267nm,0.4s							
JBT2	**Biratori 2**	0.89	356	eS	Sn	08 48 54.6	-1.4
JBT2	**Biratori 2**	0.89	356	A	A	08 48 54.6	
comp=E,16nm,1.1s,comp=E,14nm,0.9s							
JCH	**Churui**	0.99	43	P	Pn	08 48 43.5	-0.9
JCH				eS	Sn	08 48 57.2	-1.0
JCH	**Churui**	0.99	43	A	A	08 48 43.5	
comp=E,12nm,0.8s,comp=E,35nm,0.9s							
JKB	**Kayabe**	1.06	270	⇓iP	Pn	08 48 44.2	-1.1
JKB				⇓eS	Sn	08 48 58.3	-1.5
JKB	**Kayabe**	1.06	270	A	A	08 48 44.2	
comp=E,93nm,0

comp=E,7.0nm,1.2s,comp=E,9.0nm,1.2s
JSI2 Shiura 2 1.74 242 A A 08 48 54.1
comp=E,20nm,0.7s,comp=E,19nm,1.8s
JKEN Kujiedanarisaw 1.78 199 A A 08 48 54.7
comp=E,33nm,1.2s,comp=E,34nm,0.3s
JOMM Oshimamatsumae 1.87 259 A A 08 48 55.6
comp=E,6.0nm,0.7s,comp=E,5.0nm,1.2s
JHR Hokuryu 1.93 344 A A 08 48 56.1
comp=E,29nm,2.2s,comp=E,16nm,1.3s
JHST Hiyamasetana 1.98 286 A A 08 48 57.1
comp=E,6.0nm,1.1s,comp=E,6.0nm,1.2s
JKK2 Kamakawa 2 1.99 6 A A 08 48 57.0
comp=E,8.0nm,1.5s,comp=E,5.0nm,0.8s
JAK Akkeshi 2.00 56 A A 08 48 57.3
comp=E,13nm,1.4s,comp=E,24nm,1.1s
JHHS Hirosakihyakuz 2.00 232 A A 08 48 57.7
comp=E,19nm,1.0s,comp=E,18nm,0.8s
JKZ Kuzumaki 2.09 204 A A 08 48 59.0
comp=E,9.0nm,0.3s,comp=E,7.0nm,0.3s
JAH Hinai 2.19 219 A A 08 49 00.4
comp=E,6.0nm,1.0s,comp=E,5.0nm,0.6s
JMP Maruseppu 2.22 17 A A 08 49 00.2
comp=E,3.0nm,1.5s,comp=E,4.0nm,0.8s
JIW Iwasaki 2.25 236 A A 08 49 01.2
comp=E,5.0nm,1.0s,comp=E,6.0nm,1.0s
JTKR Abashiri--Toko 2.34 27 A A 08 49 01.9
comp=E,3.0nm,1.4s,comp=E,2.0nm,1.9s
MIYJ Miyakonagasawa 2.36 192 A A 08 49 03.0
comp=E,7.0nm,1.6s,comp=E,9.0nm,0.7s
JNTW Noshirotokiwa 2.37 228 A A 08 49 02.9
comp=E,13nm,3.1s,comp=E,9.0nm,0.7s
JSS Shosan 2.54 350 A A 08 49 04.7
comp=E,10.0nm,1.1s,comp=E,8.0nm,0.7s
JOM Ohasama 2.57 200 A A 08 49 05.8
comp=E,10.0nm,0.3s,comp=E,8.0nm,0.5s
JNSB Nemuroshibetsu 2.66 44 A A 08 49 06.5
comp=E,7.0nm,1.6s,comp=E,8.0nm,1.0s
JRA Rausu 2.83 43 A A 08 49 09.0
comp=E,3.0nm,1.1s,comp=E,4.0nm,1.0s
NMR Nemuro--Hokkai 2.83 58 *e*P **Pn 08 49 07.1 -1.8**
NMR *e*S **Sn 08 49 40.7 -1.3**
OFUJ Ofunato 2.87 192 A A 08 49 10.1
comp=E,4.0nm,0.4s,comp=E,3.0nm,0.5s
JYW Yuwa 2.90 217 A A 08 49 10.4
comp=E,5.0nm,1.1s,comp=E,6.0nm,1.2s
RUSJ Misakicho 3.02 42 *e*P **Pn 08 49 12.4 +1.0**
RUSJ *e*S **Sn 08 49 47.0 +0.6**
YUK Yuzh-Kuril'sk 3.29 48⇓ *i*P **Pn 08 49 15.2 0.0**
YUK *i* S **Sn 08 49 51.6 -1.6**
YUK pmax pmax
comp=N,105nm,0.2s
YUK pmax pmax
comp=E,114nm,0.2s
YUK pmax pmax
comp=Z,851nm,0.2s
YUK smax smax
comp=N,2µm,0.5s
YUK smax smax
comp=E,433nm,0.4s
JOFO Osakifurukawao 3.49 200 A A 08 49 18.7
comp=E,10.0nm,3.5s,comp=E,10.0nm,2.8s
JOU Okura 3.78 202 A A 08 49 22.7
comp=E,3.0nm,1.1s,comp=E,4.0nm,1.2s
JYA Atsumi 3.91 213 A A 08 49 24.4
comp=E,4.0nm,1.0s,comp=E,5.0nm,1.3s
JMM Marumori 4.22 198 Pn **Pn 08 49 27.2 -0.6**
JSD Sado 5.02 221 Pn **Pn 08 49 40.3 +1.5**
YSS Yuzh-Sakhalins 5.07 2 Pn **Pn 08 49 40.3 +1.0**
YSS Yuzh-Sakhalins 5.07 2*oe*P **Pn 08 49 39.8 +0.5**
YSS *e*S **Sn 08 50 37.3 +0.9**
YSS pmax pmax
comp=Z,130nm,1.1s
YSS smax smax
comp=N,110nm,1.1s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS MLR MLR
comp=E,200nm,13.0s
KUR Kuril'sk 5.16 48 *e*P **Pn 08 49 41.6 +1.0**
KUR *e*S **Sn 08 50 38.5 -0.3**
KUR pmax pmax
comp=N,55nm,0.7s
KUR pmax pmax
comp=Z,146nm,0.7s
KUR smax smax
comp=E,378nm,0.7s
KUR smax smax
comp=N,266nm,0.6s
TEY Ternei 5.29 308⇑ *e*P **Pn 08 49 41.9 -0.5**
TEY pmax pmax
comp=N,30nm,0.6s
TEY pmax pmax
comp=E,60nm,0.6s
TEY pmax pmax
comp=Z,60nm,0.6s
JYT Yasato 5.92 198 Pn **Pn 08 49 49.3 -1.8**
MJB9 Matsu-Tunnel 6.27 213 **Pn 08 49 55.1 -0.8**
MAJO Matsushiro 6.28 213 Pn **Pn 08 49 56.2 +0.3**
MAJO Matsushiro 6.28 213 *i* P **Pn 08 49 57.1 +1.1**
MJAR Matsushiro Arr 6.28 213 P **Pn 08 49 57.1 +1.2**
comp=Z,8.0nm,0.3s,baz=24,slow=14,SNR=49
MJAR LR LR 08 52 53.9
comp=Z,88nm,18.8s,baz=354,slow=42
JGF Kuroka 7.43 214 Pn **Pn 08 50 12.8 +1.0**
INU Inuyama 7.79 215 Pn **Pn 08 50 15.2 -1.4**
USA0B Ussuriysk Arra 8.00 290 Pn **Pn 08 50 17.4 -2.0**
USA0B Ussuriysk Arra 8.00 290 P **Pn 08 50 17.4 -2.0**
USRK Ussuriysk Ar. 8.00 290 P **Pn 08 50 19.2 -0.2**
comp=Z,46nm,0.9s,baz=94,slow=14,SNR=43
USRK LR LR 08 53 24.6
comp=Z,86nm,18.2s,baz=92,slow=38
USRK Ussuriysk Ar. 8.00 290 Pn **Pn 08 50 18.6 -0.8**
MSHR Mys Shultsa 8.41 278*ce*P **Pn 08 50 27.4 +2.4**
MSHR pmax pmax
comp=Z,32nm,1.3s
JWT Wachi 8.60 222 Pn **Pn 08 50 27.4 -0.3**
TYV Tymovskoe 8.97 1 *e*P **Pn 08 50 35.6 +2.9**
TYV *e*S **Sn 08 52 14.6 +2.6**
TYV pmax pmax
comp=Z,30nm,1.0s
TYV pmax pmax
comp=Z,300nm,2.7s
TYV smax smax
comp=N,14nm,1.2s
TYV smax smax
comp=E,12nm,1.2s
TYV smax smax
comp=N,300nm,3.2s
TYV smax smax
comp=E,300nm,3.2s
JHJ Hachijo jima 2 9.01 194 P **Pn 08 50 30.4 -2.9**
comp=E,37nm,0.3s,baz=47,slow=4.8,SNR=7.8
JHJ S **Sn 08 52 06.8 -6.3**
comp=E,65nm,0.3s,baz=60,slow=22,SNR=5.6
MDJ Mudanjiang 9.77 290 **Pn 08 50 42.1 -1.5**
JHS Saijyo 10.04 230 **Pn 08 50 43.7 -3.7**
KLR Kul'dur 10.49 318 P **Pn 08 50 54.5 +1.2**
comp=E,24nm,0.9s,baz=124,slow=13,SNR=61
KLR LR LR 08 54 55.4
comp=E,71nm,19.7s,baz=154,slow=37
KLR Kul'dur 10.49 318*ce*P **Pn 08 50 54.6 +1.2**
KLR pmax pmax
comp=Z,32nm,1.0s
JMN Monobe 10.60 222 Pn **Pn 08 50 55.0 0.0**
BNX BinXian 11.53 295⇓ P **Pn 08 51 09.3 +1.7**
KSRS Korea Array 12.04 253 P **Pn 08 51 15.9 +1.4**
comp=Z,3.6nm,0.6s,baz=60,slow=14,SNR=19
KSRS S **Sn 08 53 32.6 +5.7**
comp=Z,13nm,0.9s,baz=66,slow=24,SNR=12
KSRS LR LR 08 55 27.6
comp=Z,40nm,20.3s,baz=65,slow=35
KSRS Korea Array 12.04 253 P **Pn 08 51 16.0 +1.4**
KS19 Wonju Array Si 12.06 253 **Pn 08 51 12.4 -2.4**
KSAR Wonju Array Be 12.07 253 Pn **Pn 08 51 12.3 -2.7**
KSAR Wonju Array Be 12.07 253 P **Pn 08 51 12.3 -2.7**
JTU Tsushima 12.62 239 Pn **Pn 08 51 19.5 -3.0**
TJN Taejon 12.94 250 Pn **Pn 08 51 26.1 -0.7**
TJN Taejon 12.94 250 P **Pn 08 51 26.1 -0.7**
JSU Suzuyama 14.13 227 Pn **Pn 08 51 42.6 0.0**
JCJ Chichijima 14.76 181 Pn **Pn 08 51 48.3 -2.5**
PEA0B Petropavlovsk- 15.20 37 Pn **Pn 08 51 55.9 -0.4**
PEA0B IAmb IAmb 08 51 56.1
comp=Z,37nm,1.2s
PEA0B Petropavlovsk- 15.20 37 P **Pn 08 51 55.9 -0.4**
PEA0B pmax pmax
comp=Z,37nm,1.2s
PETK Petropavlovsk- 15.20 37 P **Pn 08 51 54.7 -1.6**
comp=Z,4.3nm,0.7s,baz=230,slow=6.9,SNR=11
MA2 Magadan 18.44 13 LR LR 08 59 38.0
comp=Z,33nm,19.9s,baz=158,slow=36
MA2 Magadan 18.44 13 P **P 08 52 34.0 -1.5**
MA2 IAmb IAmb 08 52 34.9
comp=Z,42nm,1.5s
MA2 Magadan 18.44 13*ce*P **P 08 52 32.6 -2.9**
MA2 pmax pmax
comp=Z,24nm,1.3s
XLT XiLinHaoTe 19.40 285⇑ *i*P **P 08 52 45.6 -0.6**
XLT pP Pn 08 52 53.4 +5.4
TIA Tai'an 20.43 262 P Pn 08 52 59.5 -0.6
NJ2 Nanjing 21.20 250 *e*P **P 08 53 07.2 +1.6**
HNS HongShan 21.79 267⇓ P **P 08 53 18.7 +6.9**
SEY Seymchan 21.88 12 P **P 08 53 10.7 -1.9**
comp=Z,3.3nm,0.5s,baz=197,slow=8.6,SNR=9.8
comp=Z,3.3nm,0.5s
SEY Seymchan 21.88 12*ce*P **P 08 53 08.3 -4.2**
SEY pmax pmax
comp=Z,17nm,2.5s
HHC Hu-ho-hao-te 23.14 278 *e*P **P 08 53 25.2 -1.0**
ULN Ulaanbaatar 25.62 296 *i* P **P 08 53 48.0 -0.7**
ULN pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 26.07 296 P **P 08 53 51.8 -0.9**
comp=Z,7.3nm,0.9s,baz=80,slow=6.9,SNR=26
SONM LR LR 09 04 39.0
comp=Z,41nm,20.4s,baz=88,slow=37
comp=Z,7.3nm,0.9s
SONM Songino Array 26.07 296 P **P 08 53 51.8 -0.9**
XAN Xi'an 27.44 264 P **P 08 54 09.7 +4.6**
XAN pP pP 08 54 22.8 +1.0
H11N2 WAKE ISLAND Hy 30.29 129 T T 09 27 11.4
baz=322,slow=75,SNR=1055
H11N1 WAKE ISLAND Hy 30.30 129 T T 09 27 12.3
baz=322,slow=75,SNR=1237
H11N3 WAKE ISLAND Hy 30.30 129 T T 09 27 12.8
baz=322,slow=75,SNR=448
LZH Lanzhou 30.38 272 *e*P P 08 54 36.1 +4.9
LZH sP sP 08 54 51.9 -4.6
H11S1 WAKE ISLAND Hy 31.14 131 T T 09 28 12.1
baz=323,slow=76,SNR=795
H11S3 WAKE ISLAND Hy 31.15 131 T T 09 28 13.0
baz=323,slow=76,SNR=711
H11S2 WAKE ISLAND Hy 31.16 131 T T 09 28 13.6
baz=323,slow=76,SNR=272
GTA Gaotai 32.20 280 *e*P **P 08 54 50.3 +3.1**
GTA pP pP 08 54 55.1 -9.0
PZH PanZhiHua 36.64 258 P **P 08 55 25.9 +0.3**
ZAA0 Zalesovo Array 39.39 308 P **P 08 55 45.7 -2.6**
ZALV Zalesovo Beam 39.39 308 LR LR 09 13 56.2
comp=Z,26nm,18.1s,baz=52,slow=39
ZALV Zalesovo Beam 39.39 308 P **P 08 55 47.1 -1.2**
ZALV Zalesovo Beam 39.39 308 P **P 08 55 47.1 -1.2**
WMQ Urumqi 39.57 292 *e*P **P 08 55 53.1 +3.1**
N19K Bonanza Creek 41.79 41 P **P 08 56 05.9 -2.2**
N19K IAmb IAmb 08 56 16.5
comp=Z,13nm,1.1s
M19K Big River Lodg 41.79 39 P **P 08 56 07.5 -0.6**
M19K IAmb IAmb 08 56 46.5
comp=Z,12nm,1.5s
J20K Nowinta River 41.89 36 P **P 08 56 09.9 +1.2**
K20K Telida 41.92 37 P **P 08 56 10.3 +1.3**
K20K IAmb IAmb 08 56 15.8
comp=Z,9.3nm,1.4s
IMAR Indian Mountai 42.11 33 P **P 08 56 10.7 +0.1**
Q19K Cape Douglas, 42.34 44 P **P 08 56 13.0 +0.4**
MK31 Makanchi Array 42.39 298 P **P 08 56 13.1 0.0**
MK31 Makanchi Array 42.39 298 P **P 08 56 13.1 0.0**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 42.39 298 P **P 08 56 13.2 +0.1**
comp=Z,3.0nm,0.6s,baz=85,slow=9.2,SNR=15
MKAR LR LR 09 14 11.2
comp=Z,21nm,19.7s,baz=38,slow=36
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 42.39 298*ce*P **P 08 56 15.5 +2.4**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
H21K Melozitna Rive 42.49 34 P **P 08 56 14.2 +0.6**
MAKZ Makanchi 42.59 298 P **P 08 56 14.4 -0.3**
MAKZ IAmb IAmb 08 56 19.8
comp=Z,6.3nm,0.8s
MAKZ Makanchi 42.59 298 P **P 08 56 14.4 -0.3**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
PPLA Purkeypile 42.78 38 P **P 08 56 17.5 +1.3**
PPLA IAmb IAmb 08 56 20.4
comp=Z,8.9nm,1.1s
CAST Castle Rocks 42.81 37 P **P 08 56 17.5 +1.2**
I21K Tanana 42.83 34 P **P 08 56 17.3 +1.0**
KDAK Kodiak Island 43.03 45 P **P 08 56 18.4 +0.3**
KDAK Kodiak Island 43.03 45 P **P 08 56 18.4 +0.3**
KDAK pmax pmax
comp=Z,66nm,1.5s
BPAW Bear Paw Mtn. 43.27 36 P **P 08 56 21.0 +1.0**
KTH Kantishna Hill 43.33 37 P **P 08 56 20.9 +0.4**
KTH IAmb IAmb 08 56 51.7
comp=Z,20nm,1.5s
MLY Manley 43.35 35 P **P 08 56 20.8 +0.1**
COLD Coldfoot 43.55 31 P **P 08 56 21.1 -1.1**
TRF Thorofare Moun 43.62 37 P **P 08 56 22.3 -0.6**
TRF IAmb IAmb 08 56 26.8
comp=Z,8.5nm,1.3s
CMAR Chiang Mai Arr 43.67 251 P **P 08 56 23.2 -0.5**
comp=Z,0.5nm,0.3s,baz=40,slow=7.1,SNR=1.3
CMAR LR LR 09 17 12.5
comp=Z,13nm,19.1s,baz=210,slow=40
comp=Z,0.5nm,0.3s
KURK Kurchatov 43.71 304 P **P 08 56 23.0 -0.6**
KURK IAmb IAmb 08 56 26.6
comp=Z,9.6nm,0.7s
KURK Kurchatov 43.71 304 P **P 08 56 23.0 -0.6**
KURK pmax pmax
comp=Z,10.0nm,0.7s
KURBB Kurchatov Arra 43.79 304 P **P 08 56 24.1 -0.2**
comp=Z,6.7nm,0.5s,baz=77,slow=8.9,SNR=34
comp=Z,6.7nm,0.5s
H23K Yukon River 43.83 33 P **P 08 56 25.2 +0.7**
I23K Minto, Yukon-K 43.93 34 P **P 08 56 25.5 +0.2**
BWN Browne 43.94 36 P **P 08 56 26.8 +1.5**
BWN IAmb IAmb 08 56 55.5
comp=Z,18nm,1.2s
NEA2 Nenana 44.09 35 P **P 08 56 26.7 +0.2**
NEA2 IAmb IAmb 08 56 27.8
comp=Z,5.4nm,0.6s
RND Reindeer 44.26 37 P **P 08 56 28.9 +0.9**
RND IAmb IAmb 08 56 54.5
comp=Z,12nm,1.4s
RND Reindeer 44.26 37 P **P 08 56 28.9 +0.9**
RND pmax pmax
comp=Z,12nm,1.4s
PMR Palmer 44.31 40 P **P 08 56 27.8 -0.5**
PMR IAmb IAmb 08 56 55.3
comp=Z,15nm,1.4s
PMR Palmer 44.31 40 P **P 08 56 27.8 -0.5**
PMR pmax pmax
comp=Z,15nm,1.4s
GHO Glory Hole Cre 44.39 39 P **P 08 56 29.8 +0.7**
GHO IAmb IAmb 08 57 09.3
comp=Z,18nm,1.3s
MDM Murphy Dome 44.42 35 P **P 08 56 29.1 -0.1**
WRH Wood River Hil 44.52 35 P **P 08 56 31.1 +1.1**
H24K Noodor Dome 44.52 33 P **P 08 56 28.8 -1.1**
TCOL CIGO, UAF Yank 44.58 35 P **P 08 56 30.9 +0.5**
TCOL IAmb IAmb 08 57 16.0
comp=Z,5.5nm,0.7s
COLA College 44.59 35 P **P 08 56 31.0 +0.5**
COLA IAmb IAmb 08 56 38.1
comp=Z,6.0nm,0.5s
COLA College 44.59 35 P **P 08 56 31.0 +0.5**
COLA pmax pmax
comp=Z,6.0nm,0.5s
KNK Knik Glacier 44.65 40 P **P 08 56 31.5 +0.4**
KNK IAmb IAmb 08 57 05.7
comp=Z,15nm,1.3s
SML Sawmill 44.66 39 P **P 08 56 31.5 +0.3**
SML IAmb IAmb 08 56 38.0
comp=Z,17nm,1.3s
PWL Port Wells 44.78 41 P **P 08 56 30.9 -1.2**
PWL IAmb IAmb 08 56 52.2
comp=Z,15nm,1.2s
DHY Denali Highway 44.96 37 P **P 08 56 34.9 +1.2**
IL31 45.01 35 P **P 08 56 33.6 -0.1**
ILAR Eielson Array 45.01 35 P **P 08 56 34.1 +0.3**
comp=Z,2.6nm,1.0s,baz=259,slow=4.7,SNR=15
comp=Z,2.6nm,1.0s
ILAR Eielson Array 45.01 35 P **P 08 56 34.0 +0.2**
HDA Harding Lake 45.01 35 P **P 08 56 33.7 -0.2**
HDA IAmb IAmb 08 56 40.7
comp=Z,13nm,1.4s
SCM Sheep Creek Mo 45.13 39 P **P 08 56 36.3 +1.3**
SCM IAmb IAmb 08 56 53.9
comp=Z,9.3nm,1.1s
SCM Sheep Creek Mo 45.13 39 P **P 08 56 36.3 +1.3**
SCM pmax pmax
comp=Z,9.0nm,1.1s
PRP Porcupine Dome 45.51 34 P **P 08 56 39.2 +1.2**
FYU Fort Yukon 45.54 32 P **P 08 56 39.2 +1.2**
FYU IAmb IAmb 08 56 51.4
comp=Z,15nm,1.3s
J25K Salcha River, 45.67 35 P **P 08 56 38.1 -1.1**
FID Port Fidalgo 45.70 40 P **P 08 56 38.5 -0.8**
BMAR Burnt Mountain 45.73 31 P **P 08 56 40.8 +1.2**
KLU Klutina 45.85 39 P **P 08 56 41.5 +0.9**
KLU IAmb IAmb 08 57 17.9
comp=Z,16nm,1.4s
EYAK Cordova Ski Ar 46.09 41 P **P 08 56 41.7 -0.7**
DOT Dot Lake 46.37 36 P **P 08 56 45.1 +0.5**
N25K Chitina, Valde 46.45 39 P **P 08 56 45.1 -0.3**
N25K IAmb IAmb 08 57 04.3
comp=Z,5.4nm,1.1s
J26L Joseph Creek 46.46 35 P **P 08 56 45.8 +0.4**
I26K Coal Creek Min 46.52 34 P **P 08 56 44.2 -1.5**
MENT Mentasta 46.63 37 P **P 08 56 47.3 +0.7**
MENT IAmb IAmb 08 57 11.7
comp=Z,6.0nm,1.1s
L26K Log Cabin Wild 46.78 37 P **P 08 56 49.3 +1.5**
L26K IAmb IAmb 08 57 17.0
comp=Z,7.2nm,1.3s
M26K Nabesna, AK 47.05 38 P **P 08 56 51.5 +1.4**
M26K IAmb IAmb 08 57 18.9
comp=Z,12nm,1.2s
VRDI Verde Repeater 47.06 39 P **P 08 56 51.0 +0.7**
K27K Chicken 47.18 36 P **P 08 56 51.6 +0.7**
K27K IAmb IAmb 08 56 52.3
comp=Z,4.1nm,0.7s
MCARA McCarthy VSAT 47.24 39 P **P 08 56 53.3 +1.9**
MCARA IAmb IAmb 08 57 17.9
comp=Z,6.8nm,0.8s
EGAK Eagle 47.44 34 P **P 08 56 53.5 +0.6**
EGAK IAmb IAmb 08 57 26.2
comp=Z,9.2nm,1.4s
L27K Beaver Creek, 47.46 37 P **P 08 56 54.7 +1.6**
L27K IAmb IAmb 08 57 18.6
comp=Z,6.4nm,1.1s
BCAR Beaver Creek A 47.48 37 P **P 08 56 54.5 +1.2**
WAX Waxell Ridge 47.51 40 P **P 08 56 54.2 +0.6**
JIRN Jiri 47.54 271 *e*P **P 08 56 55.2 +0.6**
comp=Z,17nm,0.3s
M27K Edge Creek, AK 47.57 38 P **P 08 56 54.4 +0.2**
M27K IAmb IAmb 08 57 09.5
comp=Z,6.9nm,1.1s
RAMN Ramite 47.62 270 *e*P **P 08 56 55.7 +0.6**
comp=Z,23nm,0.7s
GUN Gumba 47.64 272 *e*P **P 08 56 56.8 +1.4**
comp=Z,65nm,0.5s
ISLE Juniper Island 47.73 40 P **P 08 56 55.6 +0.2**
BARN Barnard Glacie 47.95 39 P **P 08 56 58.5 +1.4**
BVAR Borovoye Array 48.00 309 P **P 08 56 57.9 +0.4**
comp=Z,1.8nm,0.4s,baz=76,slow=8.9,SNR=6.4
BVAR LR LR 09 18 06.6
comp=Z,46nm,18.9s,baz=333,slow=37
comp=Z,1.8nm,0.4s
BRVK Borovoye 48.05 309 *i* P **P 08 56 58.2 +0.4**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
CTGM Chitina Glacie 48.13 40 P **P 08 57 00.1 +1.7**
CTGM IAmb IAmb 08 57 09.4
comp=Z,12nm,1.4s
PKI Pulchoki 48.17 272 *e*P **P 08 57 00.9 +1.4**
comp=Z,10.0nm,0.4s
PKIN Phulchoki 48.18 272 *e*P **P 08 57 00.7 +1.2**
DAWY Dawson 48.33 35 P **P 08 57 00.7 +0.9**
DAWY IAmb IAmb 08 57 23.4
comp=Z,6.2nm,1.4s
I29M Ogilvie Camp, 48.52 33 P **P 08 57 02.5 +1.3**
I29M IAmb IAmb 08 57 08.7
comp=Z,4.3nm,0.9s
EPYK Eagle Plains 48.95 32 P **P 08 57 04.9 +0.3**
DANN Dangsing 48.99 274 *e*P **P 08 57 06.9 +1.2**
comp=Z,94nm,0.6s
AAK Ala-Archa 49.02 295 *i* P **P 08 57 04.7 -0.9**
AAK pmax pmax
comp=Z,17nm,1.2s
KOLN Koldanda 49.42 273 *e*P **P 08 57 10.3 +1.5**
PYUN Piuthan 49.69 274 *e*P **P 08 57 12.6 +1.6**
comp=Z,23nm,0.5s
INK Inuvik 49.73 29 P **P 08 57 10.8 +0.5**
comp=Z,2.8nm,0.5s,baz=287,slow=4.1,SNR=23
comp=Z,2.8nm,0.5s
INK Inuvik 49.73 29 P **P 08 57 10.9 +0.7**
INK IAmb IAmb 08 57 19.3
comp=Z,8.4nm,1.4s
INK Inuvik 49.73 29 P **P 08 57 11.0 +0.7**
INK pmax pmax
comp=Z,8.0nm,1.4s
HYT Haines Junctio 49.97 39 P **P 08 57 13.7 +1.1**
P29M Windy Craggy 50.20 41 P **P 08 57 14.4 +0.3**
N31M Braeburn, Yuko 50.59 38 P **P 08 57 19.0 +2.0**
KAPI Kappang 51.06 210 LR LR 09 20 28.5
comp=Z,55nm,18.5s,baz=218,slow=38
WHY Whitehorse 51.25 39 P **P 08 57 22.7 +0.6**
WHY IAmb IAmb 08 58 05.5
comp=Z,5.6nm,1.2s
FARO Faro, Yukon 51.46 37 P **P 08 57 23.7 +0.1**
FARO IAmb IAmb 08 57 54.0
comp=Z,8.0nm,1.4s
KK31 Karatay Array 51.50 297 P **P 08 57 24.5 +0.3**
KK31 IAmb IAmb 08 57 43.6
comp=Z,5.3nm,0.8s
KK31 Karatay Array 51.50 297 P **P 08 57 24.5 +0.3**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 51.50 297 P **P 08 57 24.0 -0.1**
KKAR Karatay Array 51.50 297 P **P 08 57 24.0 -0.1**
P33M Teslin, Yukon 52.37 39 P **P 08 57 31.4 +1.0**
P33M IAmb IAmb 08 57 33.0
comp=Z,7.4nm,1.1s
ARU Arti 53.32 316*c i*P **P 08 57 40.1 +2.7**
ARU 08 58 38.3
ARU 08 59 35.7
ARU S **S 09 05 11.3 +8.0**
ARU pmax pmax
comp=Z,8.0nm,1.2s
GAR Garm 53.45 293 P **P 08 57 36.9 -1.9**
CHGR Chuyangaron 54.41 293 P **P 08 57 43.3 -2.4**
CHGR Chuyangaron 54.41 293 P **P 08 57 44.8 -0.9**
CHGR pmax pmax
comp=Z,20nm,0.7s
ABKAR Akbulak array 55.50 308 **P 08 57 53.5 +0.3**
KIRV Kirov 56.91 321 *i* P **P 08 58 03.5 +0.4**
YKA Yellowknife Ar 59.23 32 P **P 08 58 19.6 +0.3**
comp=Z,1.2nm,0.7s,baz=320,slow=5.7,SNR=4.7
comp=Z,1.2nm,0.7s
BELG Belogornoye 60.84 316 *i* P **P 08 58 30.4 0.0**
BELG pmax pmax
comp=Z,3.0nm,1.5s
MANA Manning 60.97 38 P **P 08 58 31.4 +0.1**
WAPA Wapiti River 61.11 40 P **P 08 58 32.6 +0.3**
WB0 Warramunga Arr 61.80 189 P **P 08 58 37.3 +0.1**
WB0 IAmb IAmb 08 59 07.5
comp=Z,6.4nm,0.9s
WR0 Warramunga Arr 61.97 188 P **P 08 58 38.3 -0.1**
WR0 IAmb IAmb 08 58 59.2
comp=Z,5.2nm,0.8s
WB2 Warramunga Arr 61.98 189 P **P 08 58 38.7 +0.3**
WB2 IAmb IAmb 08 59 08.3
comp=Z,5.4nm,0.8s
WRA Warramunga Arr 61.98 189 P **P 08 58 38.8 +0.4**
comp=Z,0.9nm,0.5s,baz=6.5,slow=6.8,SNR=28
WRA pP **pP 08 58 58.0 +1.2**
comp=Z,1.9nm,0.5s,baz=6.0,slow=6.9,SNR=7.6
comp=Z,0.9nm,0.5s
WRA Warramunga Arr 61.98 189 P **P 08 58 38.9 +0.5**
OBN Obninsk 64.72 322 *e*P **P 08 58 55.4 -0.7**
OBN *e* 08 59 28.3
OBN *e* 09 01 19.3
OBN pmax pmax

comp=Z,3.0nm,0.8s
FIA1 FINESS Array S 64.91 332 P **P 08 58 57.7 +0.4**
FINES FINESS Array B 64.91 332 P **P 08 58 57.2 -0.1**
comp=Z,1.8nm,0.4s,baz=60,slow=7.5,SNR=16
FINES pP **pP 08 59 17.2 +1.3**
comp=Z,2.4nm,0.5s,baz=56,slow=6.7,SNR=3.9
comp=Z,1.8nm,0.4s
FINES FINESS Array B 64.91 332 P **P 08 58 56.6 -0.7**
ASAR Alice Springs 65.70 189 P **P 08 59 03.3 +0.4**
comp=Z,0.3nm,0.5s,baz=8.9,slow=7.9,SNR=7.2
ASAR pP **pP 08 59 23.4 +2.0**
comp=Z,1.5nm,0.7s,baz=11,slow=5.3,SNR=7.9
comp=Z,0.3nm,0.5s
ASAR Alice Springs 65.70 189 P **P 08 59 02.2 -0.7**
SUMG Summit 65.83 0 P **P 08 59 04.4 +0.8**
SUMG IAmb IAmb 08 59 22.0
comp=Z,14nm,1.4s
SUMG Summit 65.83 0 P **P 08 59 04.4 +0.8**
SUMG pmax pmax
comp=Z,14nm,1.4s
KBZ Khabaz 68.38 310 P **P 08 59 20.3 +0.6**
comp=Z,2.7nm,0.8s,baz=63,slow=2.3,SNR=2.6
comp=Z,2.7nm,0.8s
MNK Minsk 68.94 325 *i* P P 08 59 17.2 -5.8
MNK *i* *PP pP 08 59 39.4 -2.4
MNK *i* *SP sP 08 59 48.5 -1.2
MNK *i* PPP PPP 09 03 31.7
MNK *i* S **S 09 08 13.8 -7.8**
MNK *i* *SS sS 09 08 58.1 +4.2
MNK *i* SS **SS 09 12 42.9 -4.3**
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK Minsk 68.94 325 *i* P P 08 59 17.2 -5.7
comp=E,2.0nm,0.9s
MNK *i* P P 08 59 17.2 -5.7
comp=N,24nm,0.8s
MNK *i* P P 08 59 17.2 -5.7
comp=Z,10.0nm,0.8s,baz=226
MNK *i* pP pP 08 59 39.4 -2.4
MNK *i* sP sP 08 59 48.6 -1.2
MNK *i* PP **PP 09 01 50.8 -4.7**
MNK *i* PPP PPP 09 03 31.7
MNK *i* S **S 09 08 13.8 -7.8**
MNK *i* sS sS 09 08 58.2 +4.2
MNK *i* SS **SS 09 12 43.0 -4.3**
MNK *i* LQ LQ 09 24 53.9
MNK *i* LR LR 09 28 23.7
MNK *i* LRM MLR 09 35 31.1
comp=E,79nm,24.4s
MNK *i* LRM MLR 09 35 32.9
comp=N,710nm,22.6s
MNK *i* LRM MLR 09 36 55.2
comp=Z,134nm,23.5s
NC405 NORSAR Array S 69.82 337 P **P 08 59 28.1 -0.2**
NC405 IAmb IAmb 08 59 38.3
comp=Z,12nm,1.3s
NC204 NORSAR Array S 69.96 337 P **P 08 59 29.0 -0.3**
NB201 NORSAR Array S 69.99 337 P **P 08 59 28.7 -0.8**
NB2 NORSAR Subarra 70.02 337 P **P 08 59 29.4 -0.2**
comp=Z,2.4nm,0.8s,baz=37,slow=6.5
NOA NORSAR Array B 70.02 337 P **P 08 59 28.7 -0.9**
comp=Z,0.4nm,0.5s,baz=42,slow=7.2,SNR=4.6
comp=Z,0.4nm,0.5s
LRM Limekiln Ridge 70.15 46 P **P 08 59 32.1 +1.1**
BOZ Bozeman (W) 70.74 46 P **P 08 59 35.2 +0.9**
BOZ Bozeman (W) 70.74 46 P **P 08 59 35.3 +0.9**
BOZ pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 70.96 322 P **P 08 59 34.0 -1.4**
comp=Z,1.2nm,0.5s,baz=46,slow=6.9,SNR=4.9
comp=Z,1.2nm,0.5s
NVAR Mina Array Bea 71.48 55 P **P 08 59 39.5 +0.4**
comp=Z,0.5nm,0.7s,baz=287,slow=5.5,SNR=5.2
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 73.72 47 P **P 08 59 52.9 +0.5**
comp=Z,0.7nm,0.6s,baz=257,slow=2.1,SNR=7.4
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 73.72 47 P **P 08 59 53.2 +0.8**
BRTR Keskin Array B 76.24 311 P **P 09 00 07.4 +0.6**
comp=Z,0.4nm,0.5s,baz=60,slow=8.7,SNR=2.0
comp=Z,0.4nm,0.5s
CLL Collm 77.28 330 *e*pP **pP 09 00 32.0 +0.6**
CLL *e*sP sP 09 00 40.0 +0.7
MMAI Mount Meron Ar 79.81 305 LR LR 09 38 36.5
comp=Z,32nm,18.5s,baz=192,slow=38
TXAR Lajitas Array 86.54 53 P **P 09 01 02.9 +1.5**
comp=Z,0.3nm,0.5s,baz=294,slow=4.1,SNR=9.9
comp=Z,0.3nm,0.5s
TBI Tubuai 90.35 121 *e*LR LR 09 01 11.5
comp=Z,263nm,29.8s
MDT Midelt 99.72 332 LR LR 09 54 36.2
comp=Z,30nm,18.1s,baz=327,slow=40
H03N2 Juan Fernandez 146.44 89 T T 11 51 18.8
baz=301,slow=76,SNR=30
H03N3 Juan Fernandez 146.45 89 T T 11 51 20.7
baz=301,slow=76,SNR=34
H03N1 Juan Fernandez 146.46 89 T T 11 51 20.7
baz=301,slow=76,SNR=40

*KRNET **03** 08:55:39.8±0.1, 39°.53N×74°.95E, mb3.2*
*NNC **03** 08:55:48.6±2.3, 40°.13N×74°.93E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=16.0km s-min=13.5km az=157.0
*SOME **03** 08:55:48.4, 40°.13N×74°.88E, h10km*
ISC 03 08:55:43.8±2.8, 39°.9N±0°.1×74°.96E±0°.06, h0km±17km, n24, σ2°.58/40, 12C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.69**	**27**	⇓*i*P	**Pb**	**08 56 17.3**	**+1.3**
NRN	baz=22			⇓*i*S	**Sg**	**08 56 45.0**	**+6.7**
OHH	**Osh**	**1.77**	**290**	⇓*i*P	**Pn**	**08 56 15.6**	**-0.1**
OHH	baz=2.0			⇓*i*S	**Sg**	**08 56 42.1**	**+1.5**
ARLS	**Aral**	**1.99**	**346**	⇑*i*P	**Pg**	**08 56 22.3**	**+0.4**
ARLS	baz=49			⇑*i*S	**Sg**	**08 56 53.0**	**+5.4**
UCH	**Uchtor**	**2.32**	**352**	⇑*i*P	**Pb**	**08 56 27.4**	**+0.7**
UCH	baz=53			⇑*i*S	**Sg**	**08 57 01.8**	**+3.5**
DRK	**Karamyk**	**2.48**	**261**	⇓*i*P	Pn	08 56 23.0	-2.7
DRK	baz=70			⇓*i*S	**Sn**	**08 56 54.6**	**-2.2**
BOOM	**Boomskoye usch**	**2.66**	**16**	⇑*i*P	**Pb**	**08 56 31.9**	**-0.5**
BOOM	baz=14			⇑*i*S	**Sg**	**08 57 09.5**	**+0.2**
TKM2	**Tokmak 2**	**3.02**	**9**	⇑*i*P	**Pb**	**08 56 37.0**	**-1.6**
TKM2	baz=8.0			⇑*i*S	**Sg**	**08 57 18.1**	**-2.9**
TKM2	**Tokmak 2**	**3.02**	**9**	⇓Pg	**Pb**	**08 56 39.5**	**+0.9**
TKM2	4.8nm,0.5s			⇓Lg	Lg	08 57 19.7	
CHMS	**Chumysh**	**3.07**	**357**	⇑Pg	**Pb**	**08 56 40.3**	**+1.0**
CHMS	4.5nm,0.5s			⇓Lg	Lg	08 57 22.4	
MRKS	**Merke**	**3.10**	**336**	*e*P	**Pb**	**08 56 41.6**	**+1.8**
MRKS	11nm,0.5s			*e*S	**Sg**	**08 57 19.2**	**-4.1**
MRKS	**Merke**	**3.10**	**336**	Pg	**Pb**	**08 56 41.6**	**+1.8**
MRKS	11nm,0.5s			Lg	Lg	08 57 19.2	
BTK	**Batken**	**3.19**	**274**	⇑*i*P	**Pn**	**08 56 33.8**	**-1.4**
BTK	baz=81			⇑*i*S	**Sn**	**08 57 13.8**	**-0.1**
KST	**Kastek**	**3.20**	**13**	*e*P	**Pg**	**08 56 44.3**	**-0.8**
KST	6.9nm,0.5s			*e*S	**Sg**	**08 57 23.8**	**-2.7**
KST	**Kastek**	**3.20**	**13**	Pg	**Pg**	**08 56 44.3**	**-0.8**
KST	13nm,0.5s			Lg	Lg	08 57 23.8	
DGS	**Degeres**	**3.36**	**10**	*e*P	**Pb**	**08 56 46.3**	**+2.0**
DGS	7.4nm,0.8s			*e*S	**Sg**	**08 57 27.2**	**-4.6**
MTBS	**Maitube**	**3.38**	**19**	*e*P	**Pb**	**08 56 46.9**	**+2.3**
MTBS	3.7nm,0.5s			*e*S	**Sg**	**08 57 28.3**	**-4.1**
MTBS	**Maitube**	**3.38**	**19**	Pg	**Pb**	**08 56 46.9**	**+2.3**
MTBS	3.7nm,0.5s			Lg	Lg	08 57 28.3	
MDOK	**Medeo**	**3.59**	**25**	*e*P	**Pb**	**08 56 50.6**	**+2.4**
MDOK	3.4nm,0.6s			*e*S	**Sb**	**08 57 34.9**	**+2.6**
MDOK	**Medeo**	**3.59**	**25**	Pg	**Pb**	**08 56 50.1**	**+1.9**
MDOK	3.7nm,0.5s			Pg	**Pb**	**08 56 50.6**	**+2.4**
MDOK	3.4nm,0.6s			Lg	Lg	08 57 34.9	
MDOK	4.3nm,0.7s			⇑Lg	Lg	08 57 38.8	
KRBS	**Karabastau**	**3.80**	**8**	*e*P	**Pg**	**08 56 55.8**	**-0.8**
KRBS	4.3nm,0.8s			*e*S	**Sg**	**08 57 43.5**	**-2.3**
KTBS	**Karatobe**	**3.99**	**18**	*e*P	**Pg**	**08 56 59.2**	**-1.0**
KTBS	2.1nm,0.5s			*e*S	**Sg**	**08 57 49.5**	**-2.4**
KTBS	**Karatobe**	**3.99**	**18**	Pg	**Pg**	**08 56 59.2**	**-1.0**
KTBS	2.1nm,0.5s			Lg	Lg	08 57 49.5	
KUU	**Kurty**	**4.09**	**14**	*e*P	**Pg**	**08 57 01.3**	**-0.9**
KUU	4.5nm,0.5s			*e*S	**Sg**	**08 57 52.6**	**-2.5**
KUU	**Kurty**	**4.09**	**14**	Pg	**Pg**	**08 57 01.3**	**-0.9**
KUU	4.5nm,0.5s			Lg	Lg	08 57 52.6	
	8.2nm,0.6s						

*IDC **03** 09:00:35.0±3.5, 18°.88N×62°.56W, h0km, mb3.4/3,*
mbtmp3.4/3, MS3.1/3, Error ellipse: s-maj=172.1km
s-min=22.7km az=53.0
*TRN **03** 09:00:36.9, 18°.49N×62°.89W, h22km, MD4.4*
ISC 03 09:00:38.6±1.1, 18°.53N±0°.10×62°.88W±0°.05, h21km±6km, n28, σ0°.75/39, mb3.3/3, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.51**	**202**	*e*P	**Pb**	**09 00 49.1**	**+0.1**
SMRT				*e*S	**Sb**	**09 00 56.1**	**+0.1**
ANWB	**Willy Bob**	**1.34**	**129**	*e*P	**Pn**	**09 01 01.4**	**-0.8**
ANWB				*e*S	**Sb**	**09 01 20.0**	**+0.1**
ANBD	**Bethesda, Anti**	**1.81**	**144**	*e*P	**Pn**	**09 01 08.2**	**-0.4**
ANBD				*e*S	**Sn**	**09 01 30.5**	**-0.4**
MBFL	**Flemmings, Mon**	**1.88**	**160**	*e*P	**Pn**	**09 01 08.7**	**-0.9**
MBFL				*e*S	**Sn**	**09 01 33.1**	**+0.4**
CDVI	**St. Croix**	**1.96**	**247**	*e*P	**Pn**	**09 01 10.5**	**-0.1**
CDVI				*e*S	**Sn**	**09 01 34.7**	**+0.2**
ABD	**La Joyeuse, An**	**2.44**	**147**	*e*P	**Pn**	**09 01 17.2**	**0.0**
ABD				*e*S	**Sn**	**09 01 47.0**	**+0.7**
CBE	**Ff, Capester**	**2.73**	**153**	*e*P	**Pn**	**09 01 21.3**	**+0.1**
CBE				*e*S	**Sn**	**09 01 53.9**	**+0.2**
H05N1	**Guadeloupe/Mar**	**2.80**	**141**	Pn	**Pn**	**09 01 22.2**	**-0.1**
H05N1				Sn	**Sn**	**09 01 56.8**	**+1.3**
TDBA	**Terre de Bas,**	**2.92**	**156**	*e*P	**Pn**	**09 01 23.5**	**-0.3**
TDBA				*e*S	**Sn**	**09 01 58.1**	**-0.1**
MAGL	**Barre de l'ile**	**2.98**	**149**	*e*P	**Pn**	**09 01 24.7**	**0.0**
MAGL				*e*S	**Sn**	**09 01 58.7**	**-1.2**
SJG	**San Juan**	**3.14**	**263**	LR	LR	09 02 52.8	
	comp=Z,159nm,20.8s,baz=74,slow=39						
MDCT	**Cottage Hill,**	**3.20**	**155**	*e*P	**Pn**	**09 01 27.7**	**+0.1**
MDVC	**Dominica, Viel**	**3.22**	**154**	*e*P	**Pn**	**09 01 27.9**	**-0.1**
DSLB	**Salisbury**	**3.38**	**155**	*e*P	**Pn**	**09 01 29.9**	**-0.2**
DSLB				*e*S	**Sn**	**09 02 08.1**	**-1.5**
MDN	**Morne-Daniel**	**3.49**	**156**	*e*P	**Pn**	**09 01 31.9**	**+0.1**
MDN				*e*S	**Sn**	**09 02 11.7**	**-0.8**
AOPR	**Arecibo Observ**	**3.69**	**268**	*e*P	**Pn**	**09 01 34.1**	**-0.3**
AOPR				*e*S	**Sn**	**09 02 16.9**	**-0.4**
FDF	**Fort de France**	**4.12**	**156**	*e*P	**Pn**	**09 01 41.0**	**+0.6**
BIM	**Bigot**	**4.35**	**156**	*e*P	**Pn**	**09 01 43.9**	**+0.4**
MPOM	**Morne Pois Mar**	**4.50**	**154**	*e*P	**Pn**	**09 01 45.0**	**-0.6**
MPOM	**Morne Pois Mar**	**4.50**	**154**	*e*S	**Sn**	**09 02 36.6**	**-0.6**
H05S1	**Guadeloupe/Mar**	**4.53**	**154**	Pn	**Pn**	**09 01 48.3**	**+2.3**
H05S1				Sn	**Sn**	**09 02 39.2**	**+1.3**
SLBI	**Saint Lucia, B**	**4.84**	**158**	*e*P	**Pn**	**09 01 50.0**	**-0.2**
SLBI	**Saint Lucia, B**	**4.84**	**158**	*e*S	**Sn**	**09 02 44.4**	**-1.2**
MDP	**Montagnes des**	**16.67**	**142**	LR	LR	09 10 59.6	
	comp=Z,38nm,20.4s,baz=18,slow=37						
BDFB	**Brasilia**	**36.98**	**156**	LR	LR	09 23 20.2	
	comp=Z,94nm,21.7s,baz=129,slow=37						
TXAR	**Lajitas Array**	**38.63**	**294**	P	**P**	**09 08 01.1**	**+0.3**
	0.4nm,0.8s,baz=106,slow=9.0,SNR=5.8						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**46.13**	**312**	P	**P**	**09 09 01.2**	**-0.6**
	0.9nm,0.9s,baz=106,slow=8.3,SNR=5.9						
	0.9nm,0.9s						
NVAR	**Mina Array Bea**	**51.80**	**305**	P	**P**	**09 09 46.0**	**+0.7**
	0.2nm,0.5s,baz=93,slow=10.0,SNR=2.2						
	0.2nm,0.5s						

ISK 03 09:06:16.8, 39°.64N×29°.40E, h0km, ML2.0/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.19**	**165**	PG	Pg	09 06 20.9	+0.4
TVSB				SG	Sg	09 06 25.1	+2.1
CAVI	**Cavuskoy**	**0.66**	**31**	PG	Pg	09 06 29.4	0.0
BORA	**Eskisehir**	**0.85**	**73**	PG	Pg	09 06 33.4	+0.3
BORA				SG	Sb	09 06 45.8	-0.7
ARMT	**Armutlu**	**1.01**	**336**	PG	Pb	09 06 36.9	-0.4
ARMT				SG	Sb	09 06 51.2	0.0
SRCK	**Saricakaya, Es**	**1.03**	**67**	PG	Pg	09 06 36.9	+0.4
SRCK				SG	Sb	09 06 51.6	+0.1
GULT	**Gulveren**	**1.17**	**47**	PN	Pb	09 06 40.1	+0.2
GULT				SN	Sb	09 06 56.2	+0.5

DDA 03 09:06:18.2±0.0, 39°.02N×27°.73E, h7km±5km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	**Manisa**	**0.83**	**129**	P	Pb	09 06 35.4	+0.3
MANT				S	Sb	09 06 47.1	+0.5
MANT				*i* AML	AML	09 06 49.0	
	comp=N,23nm,0.2s						
MANT				*i* AML	AML	09 06 50.0	
	comp=E,29nm,0.1s						
USAK	**Uak-Merkez**	**1.05**	**106**	P	Pg	09 06 37.5	-0.8
USAK				S	Sn	09 06 53.5	-0.7
USAK				*i* AML	AML	09 06 56.0	
	comp=E,17nm,1.5s						
USAK				*i* AML	AML	09 06 57.0	
	comp=N,9.9nm,0.4s						

*NOU **03** 09:20:44.1, 37°.22S×179°.58E, h0km, MLv3.7/7, Off E.*
Coast of N. Island, N.Z.
*WEL **03** 09:20:51.2±1.4, 37°.5±5°.5°×17°.9E±°, h16km±8km, M3.2/25,*
ML3.6/34, MLv3.2/25, Error ellipse: s-maj=0.0km
s-min=0.0km az=91.8
ISC 03 09:20:47.5±2.9, 37°.24S±0°.07×179°.2E±0°.1, h3km±13km, n53, σ0°.99/60, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.80**	**246**	P	**Pb**	**09 21 04.3**	**+0.4**
MXZ				S	**Sg**	**09 21 11.8**	**-1.3**
MXZ	**Matakaoa Point**	**0.80**	**246**	P	**Pb**	**09 21 04.3**	**+0.4**
WMGZ	**Waiomatatini S**	**0.86**	**228**	P	**Pn**	**09 21 07.4**	**+0.9**
WMGZ				S	**Sb**	**09 21 18.6**	**+1.6**
PKGZ	**Pakihiroa**	**1.11**	**234**	P	**Pn**	**09 21 10.4**	**+0.4**
PKGZ				S	**Sg**	**09 21 23.2**	**-0.2**
PUZ	**Puketiti**	**1.13**	**222**	P	**Pn**	**09 21 10.9**	**+0.7**
PUZ				S	**Sg**	**09 21 24.7**	**+1.0**
HAZ	**Te Kaha**	**1.25**	**245**	P	**Pn**	**09 21 11.5**	**-0.4**
HAZ				S	**Sg**	**09 21 26.6**	**-1.2**
TWGZ	**Tauwhareparae**	**1.36**	**226**	P	**Pg**	**09 21 13.7**	**+0.2**
TWGZ				S	**Sg**	**09 21 31.0**	**-0.1**
RUGZ	**Raukumara Rang**	**1.42**	**239**	P	**Pg**	**09 21 15.1**	**+0.3**
RUGZ				S	**Sb**	**09 21 31.2**	**-2.0**
CNGZ	**Carnagh Statio**	**1.48**	**213**	P	**Pg**	**09 21 16.7**	**+0.9**
CNGZ				S	**Sn**	**09 21 35.0**	**+0.3**
TKGZ	**Te Karaka**	**1.61**	**222**	P	**Pb**	**09 21 17.4**	**-0.5**
MWZ	**Matawai**	**1.73**	**230**	P	**Pn**	**09 21 19.0**	**+0.6**
RIGZ	**Rimuhau**	**1.86**	**218**	P	**Pn**	**09 21 20.9**	**+0.6**
RAGZ	**Rawiri**	**1.90**	**228**	P	**Pn**	**09 21 21.6**	**+0.8**
URZ	**Urewera**	**1.96**	**238**	P	**Pn**	**09 21 22.0**	**+0.4**
URZ	**Urewera**	**1.96**	**238**	P	**Pn**	**09 21 22.2**	**+0.7**
SNGZ	**Shannon Statio**	**2.14**	**223**	P	**Pn**	**09 21 24.5**	**+0.5**
MARZ	**Manawahe**	**2.15**	**249**	P	**Pb**	**09 21 26.0**	**-1.1**
MHGZ	**Mahia Peninsul**	**2.17**	**208**	P	**Pn**	**09 21 25.3**	**+0.8**
RTZ	**Ruatahuna**	**2.24**	**232**	P	**Pn**	**09 21 26.2**	**+0.7**
MUGZ	**Murupara**	**2.30**	**237**	P	**Pn**	**09 21 27.9**	**+1.7**
RAHZ	**Arahi**	**2.37**	**225**	P	**Pn**	**09 21 28.2**	**+1.0**
RRRZ	**Republican Roa**	**2.41**	**242**	P	**Pn**	**09 21 29.4**	**+1.7**
MTHZ	**Maungataniwha**	**2.47**	**229**	P	**Pn**	**09 21 29.3**	**+0.6**
NMHZ	**Naumai**	**2.66**	**225**	P	**Pn**	**09 21 31.8**	**+0.6**
ARHZ	**Aropaoanui**	**2.67**	**220**	P	**Pn**	**09 21 31.6**	**+0.3**
KUZ	**Kuaotunu**	**2.85**	**279**	P	**Pn**	**09 21 32.4**	**-1.3**
KUZ	**Kuaotunu**	**2.85**	**279**	P	**Pn**	**09 21 33.4**	**-0.3**
BKZ	**Black Stump Fm**	**2.88**	**227**	P	**Pn**	**09 21 34.6**	**+0.2**
BKZ	**Black Stump Fm**	**2.88**	**227**	P	**Pn**	**09 21 34.9**	**+0.6**
MCHZ	**McNeill Hill**	**2.96**	**221**	P	**Pn**	**09 21 35.5**	**+0.1**
TOZ	**Tahuroa Road**	**3.00**	**260**	P	**Pn**	**09 21 35.4**	**-0.5**
KWHZ	**Kaweka Forest**	**3.10**	**224**	P	**Pn**	**09 21 36.8**	**-0.5**
KAHZ	**Kahuranaki**	**3.14**	**215**	P	**Pn**	**09 21 37.2**	**-0.7**
MKAZ	**Moumakai**	**3.25**	**271**	P	**Pn**	**09 21 38.5**	**-0.7**
BHHZ	**Black Hill Sta**	**3.35**	**227**	P	**Pn**	**09 21 40.4**	**-0.3**
ETVZ	**East Tongariro**	**3.35**	**235**	P	**Pn**	**09 21 40.7**	**-0.2**
NTVZ	**North Tongarir**	**3.35**	**235**	P	**Pn**	**09 21 40.7**	**-0.1**
OTVZ	**Oturere**	**3.40**	**235**	P	**Pn**	**09 21 41.4**	**0.0**
SNVZ	**South Ngauruho**	**3.42**	**234**	P	**Pn**	**09 21 41.9**	**0.0**
WPHZ	**Waipukurau**	**3.56**	**217**	P	**Pn**	**09 21 42.8**	**-0.8**
HIZ	**Hauiti**	**3.68**	**249**	P	**Pn**	**09 21 46.4**	**+1.2**
HIZ	**Hauiti**	**3.68**	**249**	P	**Pn**	**09 21 46.0**	**+0.8**
RVAZ	**Riverhead Bore**	**3.75**	**276**	P	**Pn**	**09 21 46.2**	**+0.1**
TSZ	**Takapari Road**	**3.80**	**221**	P	**Pn**	**09 21 45.6**	**-1.3**
WCZ	**Waipu Caves**	**4.13**	**287**	P	**Pn**	**09 21 51.8**	**+0.3**
BFZ	**Birch Farm**	**4.14**	**213**	P	**Pn**	**09 21 50.4**	**-1.2**
TIWZ	**Tintock**	**4.38**	**215**	P	**Pn**	**09 21 53.2**	**-1.7**
MRZ	**Mangatainoka R**	**4.44**	**219**	P	**Pn**	**09 21 54.0**	**-1.7**
PKE	**Puketi**	**4.56**	**243**	P	**Pn**	**09 22 00.5**	**+3.1**
OUZ	**Omahuta**	**4.97**	**292**	P	**Pn**	**09 22 04.1**	**+1.1**
OUZ	**Omahuta**	**4.97**	**292**	P	**Pn**	**09 22 04.1**	**+1.1**
KHZ	**Kahutara**	**6.77**	**218**	P	**Pn**	**09 22 26.5**	**-1.1**
CTZ	**Chatham Island**	**7.22**	**155**	P	Pn	09 22 38.1	+4.3

DDA 03 09:29:18.5±0.0, 39°.88N×28°.88E, h8km±2km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.33**	**37**	P	Pg	09 29 24.9	-0.2
DURS	**Dursunbey**	**0.42**	**228**	P	Pg	09 29 27.1	+0.5
DURS				S	Sb	09 29 34.3	-0.4
DURS				*i* AML	AML	09 29 36.0	
	comp=E,24nm,0.5s						
BALY	**Balya**	**0.98**	**262**	P	Pg	09 29 35.0	-2.3
BALY				S	Sb	09 29 51.0	+0.1
BALY				*i* AML	AML	09 29 55.0	
	comp=N,7.8nm,0.6s						
BALY				*i* AML	AML	09 29 56.0	
	comp=E,5.2nm,0.3s						
STEP	**BALIKESIR_Sava**	**1.03**	**241**	P	Pg	09 29 37.9	-0.3
STEP				S	Sb	09 29 53.0	+0.8
STEP				*i* AML	AML	09 29 57.0	
	comp=N,6.7nm,0.3s						
STEP				*i* AML	AML	09 29 59.0	
	comp=E,8.8nm,0.4s						

BUC 03 09:31:18.8±0.1, 46°.04N×22°.84E, h8km±1km, ml1.9/9, 30C-12D, Error ellipse: s-maj=1.1km s-min=0.8km az=94.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.16**	**164**	⇑P	Pg	09 31 21.6	-0.5
DEV				⇑S	Sg	09 31 24.7	+0.4
DEV	**Deva**	**0.16**	**164**	⇑P	Pg	09 31 21.6	-0.5
DEV				⇑S	Sg	09 31 24.7	+0.4
GZR	**Gura Zlata**	**0.65**	**184**	⇑P	Pg	09 31 31.0	-0.2
GZR				⇓S	Sg	09 31 40.6	+0.9
GZR	**Gura Zlata**	**0.65**	**184**	⇑P	Pg	09 31 31.0	-0.2
GZR				⇓S	Sg	09 31 40.6	+0.9
DRGR		**0.76**	**353**	⇑P	Pg	09 31 33.3	-0.1
DRGR				⇑S	Sb	09 31 44.2	-0.6
DRGR		**0.76**	**353**	⇑P	Pg	09 31 33.3	-0.1
DRGR				⇑S	Sb	09 31 44.2	-0.6
SIRR	**Siria**	**0.85**	**286**	⇑P	Pb	09 31 35.6	-0.3
SIRR				⇓S	Sb	09 31 47.4	-0.1
SIRR	**Siria**	**0.85**	**286**	⇑P	Pb	09 31 35.6	-0.3
SIRR				⇓S	Sb	09 31 47.4	-0.1
CJR	**Cluj-Napoca**	**0.85**	**38**	⇑P	Pg	09 31 34.7	-0.5
CJR				⇑S	Sb	09 31 47.8	+0.2
CJR	**Cluj-Napoca**	**0.85**	**38**	⇑P	Pg	09 31 34.7	-0.5
CJR				⇑S	Sb	09 31 47.8	+0.2
LOT	**Lotru**	**0.88**	**132**	⇑P	Pg	09 31 35.8	+0.2
LOT				⇑S	Sb	09 31 48.3	0.0
LOT	**Lotru**	**0.88**	**132**	⇑P	Pg	09 31 35.8	+0.2
LOT				⇑S	Sb	09 31 48.3	0.0
BZS	**Buzias**	**0.95**	**244**	⇓P	Pg	09 31 36.6	-0.5
BZS				⇑S	Sg	09 31 49.6	+0.1
BZS	**Buzias**	**0.95**	**244**	⇓P	Pg	09 31 36.6	-0.5
BZS				⇑S	Sg	09 31 49.6	+0.1
MESR	**Meseseni**	**1.11**	**4**	⇑S	Sb	09 31 55.3	+0.2
MESR	**Meseseni**	**1.11**	**4**	⇑S	Sb	09 31 55.3	+0.2
HERR	**Herculane**	**1.20**	**195**	⇑P	Pg	09 31 41.7	0.0
HERR				⇑S	Sn	09 31 58.4	+0.1
HERR	**Herculane**	**1.20**	**195**	⇑P	Pg	09 31 41.7	0.0
HERR				⇑S	Sn	09 31 58.4	+0.1
MDVR	**Moldovita**	**1.49**	**213**	⇑P	Pn	09 31 46.0	+0.1
MDVR				⇓S	Sg	09 32 06.4	-0.1
MDVR	**Moldovita**	**1.49**	**213**	⇑P	Pn	09 31 46.0	+0.1
MDVR				⇓S	Sg	09 32 06.4	-0.1
VOIR		**1.66**	**110**	⇓P	Pn	09 31 48.6	+0.3
VOIR				⇓S	Sb	09 32 10.6	-0.2
VOIR		**1.66**	**110**	⇓P	Pn	09 31 48.6	+0.3
VOIR				⇓S	Sb	09 32 10.6	-0.2

IDC 03 09:33:20.7±6.6, 2°.07S×140°.59E, h0km, mb3.3/2, mbtmp3.3/3, ML3.6/1, MS3.4/2, Error ellipse: s-maj=178.9km s-min=76.4km az=130.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**18.75**	**163**	LR	LR	09 44 14.6	
	comp=Z,98nm,20.5s,baz=234,slow=35						
WRA	**Warramunga Arr**	**18.79**	**199**	P	P	09 37 41.2	-0.7
	0.2nm,0.3s,baz=22,slow=12,SNR=19						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**22.43**	**196**	P	P	09 38 21.1	-0.2
	0.5nm,0.8s,baz=25,slow=11,SNR=7.3						
	0.5nm,0.8s						
LEM	**Lembang**	**33.20**	**261**	LR	LR	09 56 29.3	
	comp=Z,88nm,18.4s,baz=180,slow=42						
VNDA	**Vanda**	**76.26**	**175**	P	P	09 45 11.2	+0.5
	0.7nm,1.1s,baz=341,slow=4.3,SNR=2.4						
	0.7nm,1.1s						

*IDC

BATI			S	Sn	09 40 40.7	-1.9
	44nm,0.5s,baz=304,slow=23,SNR=7.3					
SIJI	**Sorong**	**6.73 15**	P	**Pn**	09 39 34.6	+0.7
	3.8nm,0.2s,baz=53,slow=23,SNR=16					
SIJI			S	**Sn**	09 40 47.7	-1.5
	7.7nm,0.2s,baz=253,slow=23,SNR=6.0					
FITZ	**Fitzroy Crossi**	**11.28 199**	P	**Pn**	09 40 36.0	+0.4
	4.3nm,0.4s,baz=32,slow=11,SNR=21					
FITZ			S	Sn	09 42 32.4	-7.3
	3.0nm,0.3s,baz=52,slow=13,SNR=3.9					
WRA	**Warramunga Arr**	**13.27 160**	P	**Pn**	09 41 03.4	+1.3
	1.4nm,0.3s,baz=339,slow=13,SNR=45					
WRA			S	**Sn**	09 43 24.8	-3.4
	4.4nm,0.5s,baz=343,slow=20,SNR=9.3					
ASAR	**Alice Springs**	**16.67 166**	P	**Pn**	09 41 48.1	+2.9
	2.3nm,0.5s,baz=342,slow=10,SNR=47					
ASAR			S	**Sn**	09 44 47.7	-2.7
	0.7nm,0.4s,baz=349,slow=25,SNR=6.1					
STKA	**Stephens Creek**	**26.78 157**	P	**P**	09 43 30.7	+2.4
	0.9nm,0.4s,baz=337,slow=9.2,SNR=1.1					
	0.9nm,0.4s					
KLR	**Kul'dur**	**56.45 2**	LR	LR	10 14 32.4	
	comp=Z,20nm,18.0s,baz=243,slow=39					
MKAR	**Makanchi Array**	**68.35 327**	P	**P**	09 48 46.3	-2.0
	0.1nm,0.3s,baz=126,slow=5.6,SNR=1.5					
	0.1nm,0.3s					

*IDC **03** 09:46:14.8±4.2, 11°.87N×125°.56E, h0km, mb3.9/4, mbtmp3.9/4, MS3.0/2, Error ellipse: s-maj=153.9km s-min=77.7km az=81.0*
*MAN **03** 09:46:21.7, 11°.82N×125°.47E, h22km, mb4.5, ML3.4, MS3.2*
ISC 03 09:46:16.3±2.0, 11°.95N±0°.06×125°.52E±0°.09, h8km±13km, n16, σ1°75/24, mb3.9/4, 6D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.92**	**200**	*e*P	**Pg**	**09 46 52.7**	**-0.5**
MSLP				*i* S	**Sn**	**09 47 13.5**	**-0.2**
SCPH	**Surigao**	**2.16**	**181**	*e*P	**Pb**	**09 46 55.3**	**-0.4**
SCPH				*e*S	**Sn**	**09 47 20.0**	**+0.5**
TABP	**Talibon, Bohol**	**2.19**	**212**	↓*e*P	**Pn**	**09 46 54.6**	**+1.6**
TABP				*i* S	**Sb**	**09 47 22.1**	**-1.3**
LLP	**Lapu-Lapu**	**2.23**	**223**	*e*P	**Pn**	**09 46 54.9**	**+1.3**
LLP				*e*S	**Sb**	**09 47 23.6**	**-1.1**
GHBP	**Garcia Hernand**	**2.59**	**207**	↓↓*i*P	**Pn**	**09 47 01.2**	**+2.6**
GHBP				*i* S	**Sb**	**09 47 34.1**	**-0.9**
TBP	**Tagbilaran**	**2.78**	**216**	↓↓*e*P	**Pn**	**09 47 02.8**	**+1.7**
TBP				*i* S	**Sb**	**09 47 38.7**	**-1.7**
CGP	**Cagayan de Oro**	**3.57**	**193**	↓↓*e*P	**Pn**	**09 47 14.8**	**+2.8**
CGP				*e*S	**Sn**	**09 47 55.9**	**+1.5**
BIPH	**Bislig**	**3.84**	**168**	↓↓*i*P	**Pn**	**09 47 16.4**	**+0.8**
BIPH				*i* S	**Sn**	**09 48 02.5**	**+1.6**
BUKP	**Musuan**	**4.08**	**186**	*e*P	**Pn**	**09 47 23.0**	**+4.0**
BUKP				*e*S	**Sn**	**09 48 09.1**	**+2.2**
LQP	**Lukban**	**4.44**	**299**	↓↓*e*P	**Pg**	**09 47 41.8**	**+0.4**
DAV	**Davao City (W)**	**4.85**	**179**	LR	LR	09 49 55.0	
	comp=Z,254nm,19.6s,baz=347,slow=46						
KSRS	**Korea Array**	**25.48**	**4**	LR	LR	10 03 02.1	
	comp=Z,16nm,18.9s,baz=230,slow=39						
FITZ	**Fitzroy Crossi**	**29.86**	**180**	P	**P**	**09 52 23.0**	**-1.3**
	0.9nm,0.4s,baz=3.9,slow=12,SNR=1.7						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**32.86**	**165**	P	**P**	**09 52 49.2**	**-1.7**
	0.6nm,0.8s,baz=347,slow=9.1,SNR=3.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**36.34**	**167**	P	**P**	**09 53 20.2**	**-0.7**
	0.8nm,0.5s,baz=346,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**09 55 45.0**	**-0.7**
	0.3nm,0.4s,baz=351,slow=2.8,SNR=4.9						
	0.8nm,0.5s						
STKA	**Stephens Creek**	**46.22**	**161**	P	**P**	**09 54 41.4**	**-0.6**
	4.2nm,0.9s,baz=330,slow=8.0,SNR=5.6						
	4.2nm,0.9s						

*IDC **03** 09:46:41.9±4.2, 38°.47N×142°.27E, h75km±38km, mb3.2/6, mbtmp3.5/9, ML2.7/3, Error ellipse: s-maj=37.1km s-min=23.2km az=86.0*
*JMA **03** 09:46:43.4±0.1, 38°.5N±0°.3×142°.0E±0°.6, h81km, MV3.8/38, E OFF MIYAGI PREF*
JMA Felt II J1 at E OFF MIYAGI PREF .
ISC 03 09:46:42.8±1.1, 38°.50N±0°.07×142°.11E±0°.09, h81km±7km, n27, σ0°93/33, mb3.5/6, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.54**	**250**	↓↓*i*P	**Pn**	**09 46 57.1**	**+0.2**
JIKH				↓↓S	**Sn**	**09 47 07.1**	**-0.3**
JKMT	**Kesennumamotoy**	**0.59**	**302**	↓↓*i*P	**Pn**	**09 46 57.5**	**+0.1**
JKMT				↓↓S	**Sn**	**09 47 07.5**	**-0.7**
JIO	**Ouri**	**0.60**	**266**	↓↓*i*P	**Pn**	**09 46 57.5**	**+0.1**
JIO				↓↓S	**Sn**	**09 47 07.6**	**-0.8**
OFUJ	**Ofunato**	**0.68**	**330**	↓↓*i*P	**Pn**	**09 46 58.4**	**+0.1**
OFUJ				↓↓S	**Sn**	**09 47 09.3**	**-0.5**
JMK	**Ichinoseki**	**0.83**	**303**	↓↓*i*P	**Pn**	**09 46 60.0**	**+0.1**
JMK				↓↓S	**Sn**	**09 47 12.1**	**-0.6**
JOU	**Okura**	**1.14**	**264**	*i* P	**Pn**	**09 47 03.5**	**-0.1**
JOU				S	**Sn**	**09 47 18.5**	**-0.7**
JOM	**Ohasama**	**1.16**	**327**	*i* P	**Pn**	**09 47 03.9**	**0.0**
JOM				S	**Sn**	**09 47 19.0**	**-0.7**
JMM	**Marumori**	**1.21**	**239**	*i* P	**Pn**	**09 47 04.3**	**-0.1**
JMM				S	**Sn**	**09 47 19.7**	**-1.0**
JYK	**Kaneyama**	**1.43**	**288**	*i* P	**Pn**	**09 47 07.0**	**-0.2**
JYK				S	**Sn**	**09 47 25.3**	**-0.4**
JRG	**Rokugo**	**1.46**	**308**	*i* P	**Pn**	**09 47 07.3**	**-0.3**
JRG				*e*S	**Sn**	**09 47 25.7**	**-0.7**
JYS	**Shiratake**	**1.63**	**261**	*i* P	**Pn**	**09 47 09.8**	**0.0**
JYS				S	**Sn**	**09 47 30.3**	**0.0**
JYA	**Atsumi**	**1.88**	**274**	P	**Pn**	**09 47 12.9**	**-0.1**
JYA				S	**Sn**	**09 47 33.6**	**-2.6**
MJAR	**Matsushiro Arr**	**3.66**	**239**	P	**Pn**	**09 47 37.4**	**+0.2**
	0.4nm,0.3s,baz=34,slow=15,SNR=17						
	3.3nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.50**	**310**	P	**Pn**	**09 48 57.0**	**+0.4**
	0.3nm,0.3s,baz=112,slow=16,SNR=2.6						
	1.8nm,0.6s						
KSRS	**Korea Array**	**11.25**	**269**	P	**Pn**	**09 49 22.6**	**+2.2**
	0.2nm,0.3s,baz=80,slow=14,SNR=4.7						
	1.0nm,0.5s						
SONM	**Songino Array**	**27.46**	**301**	P	**P**	**09 52 20.1**	**-1.0**
	0.4nm,0.5s,baz=113,slow=11,SNR=2.0						
	0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.46**	**124**	T	T	10 22 59.8	
	baz=317,slow=76,SNR=69						
H11N1	**WAKE ISLAND Hy**	**28.47**	**124**	T	T	10 23 12.3	
	baz=317,slow=76,SNR=108						
H11N3	**WAKE ISLAND Hy**	**28.48**	**124**	T	T	10 23 00.5	
	baz=317,slow=76,SNR=83						
H11S1	**WAKE ISLAND Hy**	**29.23**	**126**	T	T	10 23 55.0	
	baz=318,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.23**	**126**	T	T	10 23 55.2	
	baz=318,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	10 23 57.1	
	baz=318,slow=76,SNR=26						
MKAR	**Makanchi Array**	**43.83**	**301**	P	**P**	**09 54 42.5**	**+1.9**
	0.5nm,0.7s,baz=79,slow=12,SNR=4.3						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**58.59**	**189**	P	**P**	**09 56 30.6**	**-0.5**
	0.3nm,0.5s,baz=7.1,slow=7.1,SNR=8.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**62.31**	**188**	P	**P**	**09 56 56.5**	**0.0**
	0.4nm,0.9s,baz=3.4,slow=4.6,SNR=2.6						
	0.4nm,0.9s						
PDAR	**Pinedale Array**	**76.25**	**46**	P	**P**	**09 58 23.4**	**+0.6**
	0.4nm,0.7s,baz=279,slow=2.9,SNR=3.8						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**88.80**	**53**	P	**P**	**09 59 26.1**	**-1.8**
	0.2nm,0.7s,baz=259,slow=3.3,SNR=4.3						
	0.2nm,0.7s						

IDC 03 09:47:13.1±7.4, 7°.26S×117°.27E, h594km±66km, mb2.9/3, mbtmp3.8/5, Error ellipse: s-maj=156.8km s-min=100.4km az=95.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.32**	**48**	P	P	09 48 33.7	0.0
	9.6nm,0.3s,baz=194,slow=4.2,SNR=3.5						
FITZ	**Fitzroy Crossi**	**13.51**	**144**	P	P	09 50 06.7	-0.5
	1.7nm,0.4s,baz=343,slow=9.7,SNR=18						
WRA	**Warramunga Arr**	**20.81**	**129**	P	P	09 51 14.6	+0.1
	0.8nm,0.4s,baz=312,slow=9.1,SNR=29						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**22.83**	**137**	P	P	09 51 32.4	-0.1
	1.1nm,0.4s,baz=313,slow=7.9,SNR=38						
	1.1nm,0.4s						
STKA	**Stephens Creek**	**33.38**	**140**	P	P	09 53 03.7	-0.1
	0.7nm,0.3s,baz=311,slow=9.1,SNR=6.6						
	0.7nm,0.3s						

*SNET **03** 09:50:24.1±0.8, 16°.28N×84°.52W, h30km, ML4.1*
UCR 03 09:50:24.1±1.0, 16°.31N×84°.53W, h30km, ML3.6, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**4.39**	**227**	*e*P	Pn	09 51 29.7	+0.8
CNCH				*e*S	Sn	09 52 21.1	+1.9
CNCH	**Conchagua**	**4.39**	**227**	*e*P	Pn	09 51 29.7	+0.8
CNCH				*e*S	Sn	09 52 21.1	+1.9
LCND	**La Caada**	**4.41**	**228**	*e*P	Pn	09 51 29.1	0.0
LCND				*e*S	Sn	09 52 19.3	-0.1
LCND	**La Caada**	**4.41**	**228**	*e*P	Pn	09 51 29.1	0.0
LCND				*e*S	Sn	09 52 19.3	-0.1
PACA	**Pacayal**	**4.63**	**233**	*e*P	Pn	09 51 32.5	+0.3
PACA				*e*S	Sn	09 52 26.7	+1.7
PACA	**Pacayal**	**4.63**	**233**	*e*P	Pn	09 51 32.5	+0.3
PACA				*e*S	Sn	09 52 26.7	+1.7
COEB	**Comit de Eme**	**4.77**	**235**	*e*S	Sn	09 52 29.6	+1.1
COEB				IAML		09 52 34.2	
	comp=Z,125nm,0.5s						
COEB	**Comit de Eme**	**4.77**	**235**	*e*S	Sn	09 52 29.6	+1.1
COEB				IAML		09 52 34.2	
	comp=Z,125nm,0.5s						
SCLA	**Alcaldia de Sa**	**4.81**	**238**	*e*P	Pn	09 51 35.8	+1.2
SCLA	**Alcaldia de Sa**	**4.81**	**238**	*e*P	Pn	09 51 35.8	+1.2
COEG	**Centro de Oper**	**4.98**	**238**	*e*P	Pn	09 51 37.5	+0.6
COEG				IAML		09 52 46.2	
	comp=Z,124nm,0.5s						
COEG	**Centro de Oper**	**4.98**	**238**	*e*P	Pn	09 51 37.5	+0.6
COEG				IAML		09 52 46.2	
	comp=Z,124nm,0.5s						

*RSNC **03** 09:52:47.7±1.1, 6°.81N×73°.15W, h145km±5km, ML3.0, Mw3.5*
*IDC **03** 09:52:49.1±7.9, 7°.06N×74°.48W, h157km±154km, mbtmp3.2/1, ML1.8/1, Error ellipse: s-maj=1033.0km s-min=96.8km az=92.0*
ISC 03 09:52:46.9±1.1, 6°.88N±0°.03×73°.10W±0°.04, h149km±7km, n26, σ1°66/50, 2C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**196**	*e*P	**Pn**	**09 53 07.3**	**-0.4**
BARC				*e*S	**Sn**	**09 53 22.1**	**-1.3**
BARC				*i*		09 53 24.2	
	comp=Z,344nm,0.2s						
PAMC	**Pamplona, Colo**	**0.61**	**41**	↓↓*i*P	**Pn**	**09 53 10.2**	**+0.9**
PAMC				*e*S	**Sn**	**09 53 27.0**	**+0.6**
PAMC				*i*		09 53 29.5	
	comp=Z,489nm,0.6s						
BRRC	**Barranca, Sant**	**0.65**	**291**	↑↑*i*P	**Pn**	**09 53 09.2**	**+0.2**
BRRC				*e*S	**Sn**	**09 53 26.1**	**+0.3**
BRRC				*i*		09 53 29.2	
	comp=Z,195nm,0.3s						
RUSC	**La Rusia**	**0.98**	**179**	*e*P	**Pn**	**09 53 11.2**	**-0.8**
RUSC				*e*S	**Sn**	**09 53 29.9**	**-1.2**
RUSC				*i*		09 53 31.4	
	comp=Z,91nm,0.3s						
OCAC	**Ocana**	**1.37**	**351**	↑↑*i*P	**Pn**	**09 53 15.7**	**+0.4**
OCAC				*e*S	**Sn**	**09 53 37.4**	**+0.5**
TAMC	**Tame, Arauca**	**1.37**	**109**	↓↓*i*P	**Pn**	**09 53 15.7**	**+0.5**
TAMC				*e*S	**Sn**	**09 53 37.0**	**+0.3**
TAMC				*i*		09 53 38.2	
	comp=Z,70nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	*e*P	**Pn**	**09 53 13.9**	**-1.4**
PTBC				*e*S	**Sn**	**09 53 34.8**	**-2.1**
PTBC				*i*		09 53 38.3	
	comp=Z,166nm,0.3s						
SPBC	**San Pablo de B**	**1.55**	**218**	*e*P	**Pn**	**09 53 16.2**	**-0.9**
SPBC				*e*S	**Sn**	**09 53 38.3**	**-2.0**
SPBC				*i*		09 53 45.0	
	comp=Z,89nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**289**	*e*P	**Pn**	**09 53 20.4**	**+0.2**
ZARC				*e*S	**Sn**	**09 53 46.1**	**+0.3**
ZARC				*i*		09 53 51.5	
	comp=Z,164nm,0.3s						
NORC	**Norcasia**	**2.19**	**234**	*e*P	**Pn**	**09 53 23.2**	**-1.1**
NORC				*e*S	**Sn**	**09 53 51.0**	**-2.0**
NORC				*i*		09 53 54.5	
	comp=Z,62nm,0.3s						
CHIC	**Chingaza**	**2.32**	**196**	*e*P	**Pn**	**09 53 25.7**	**-0.5**
CHIC				*e*S	**Sn**	**09 53 55.2**	**-1.3**
ROSC	**El Rosal**	**2.36**	**211**	P	**Pn**	**09 53 27.7**	**+1.0**
	comp=Z,5.6nm,0.3s,baz=149,slow=22,SNR=3.2						
ROSC				S	**Sn**	**09 53 57.6**	**+0.3**
	comp=Z,53nm,0.4s,baz=247,slow=23,SNR=7.5						
	comp=Z,11nm,0.3s						
ROSC	**El Rosal**	**2.36**	**211**	*e*P	**Pn**	**09 53 27.3**	**+0.6**
ROSC				*e*S	**Sn**	**09 53 56.6**	**-0.7**
ROSC				*i*		09 54 05.0	
	comp=Z,49nm,0.4s						
HELC	**Santa Helena**	**2.51**	**254**	*e*P	**Pn**	**09 53 29.3**	**+0.9**
HELC				*e*S	**Sn**	**09 53 59.1**	**-1.3**
HELC				*i*		09 54 06.5	
	comp=Z,53nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**290**	*e*P	**Pn**	**09 53 27.9**	**-0.9**
UREC				*e*S	**Sn**	**09 53 58.7**	**-2.4**
UREC				*i*		09 54 09.1	
	comp=Z,85nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.79**	**234**	*e*P	**Pn**	**09 53 32.4**	**+0.3**
GUY2C				*e*S	**Sn**	**09 54 08.5**	**+1.7**
GUY2C				*i*		09 54 12.7	
	comp=Z,54nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.83**	**160**	*e*P	**Pn**	**09 53 30.5**	**-1.7**
PTGC				*e*S	**Sn**	**09 54 03.2**	**-3.9**
PTGC				*i*		09 54 06.3	
	comp=Z,49nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.06**	**251**	*e*P	**Pn**	**09 53 36.1**	**+0.8**
CBOC				*e*S	**Sn**	**09 54 11.7**	**-0.9**
CBOC				*i*		09 54 16.4	
	comp=Z,28nm,0.6s						
ANIL	**Santa Ana**	**3.30**	**224**	*e*P	**Pn**	**09 53 40.1**	**+1.8**
ANIL				*e*S	**Sn**	**09 54 18.7**	**+0.5**
ANIL				*i*		09 54 25.3	
	comp=Z,78nm,0.4s						
PRAC	**Prado**	**3.61**	**210**	*e*P	**Pn**	**09 53 41.6**	**-0.6**
PRAC				*e*S	**Sn**	**09 54 22.6**	**-2.5**
PRAC				*i*		09 54 29.4	
	comp=Z,30nm,0.5s						
SJCC	**San Jacinto, C**	**3.64**	**326**	*e*P	**Pn**	**09 53 42.2**	**-0.3**
SJCC				*e*S	**Sn**	**09 54 23.2**	**-2.5**
SJCC				*i*		09 54 26.7	
	comp=Z,34nm,0.5s						
PLMC	**San Jos del P**	**3.72**	**238**	*e*P	**Pn**	**09 53 43.5**	**-0.1**
PLMC				*e*S	**Sn**	**09 54 23.6**	**-4.0**
PLMC				*i*		09 54 28.3	
	comp=Z,18nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.12**	**3**	*e*P	**Pn**	**09 53 47.9**	**-1.0**
CRJC				*e*S	**Sn**	**09 54 34.1**	**-2.9**
CRJC				*i*		09 54 40.8	
	comp=Z,29nm,0.4s						
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*P	**Pn**	**09 53 58.4**	**-0.8**
URIC				*e*S	**Sn**	**09 54 52.8**	**-2.9**
URIC				*i*		09 54 56.4	
	comp=Z,7.1nm,0.4s						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPdf**	**10 12 16.6**	**+2.3**
	comp=Z,0.2nm,0.7s,baz=114,slow=2.6,SNR=1.8						
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc	**PKPdf**	**10 12 19.9**	**+3.6**
	comp=Z,0.3nm,0.8s,baz=107,slow=2.8,SNR=4.8						

*NORS **03** 09:55:45.4±0.0, 43°.75N×43°.52E, h19km, MPVA3.7*
*MOS **03** 09:55:46.6±0.0, 43°.75N×43°.55E, h18km, MPVA3.6*
ISC 03 09:55:46.4±1.0, 43°.74N±0°.03×43°.53E±0°.02, h19km±2km, n23, σ0°75/45, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTC	**Kuba-Taba**	**0.11**	**312**	*e*Pg	**Pg**	**09 55 50.2**	**-0.2**
KBTC				*e*Sg	**Sg**	**09 55 53.3**	**+0.2**
KBZ	**Khabaz**	**0.46**	**269**	*i* Pg	**Pn**	**09 55 56.9**	**-1.0**
KBZ				*e*Sg	**Sb**	**09 56 03.2**	**+1.0**
LSNR	**Lesken**	**0.51**	**155**	*e*Pg	**Pb**	**09 55 56.7**	**0.0**
LSNR				*e*Sg	**Sb**	**09 56 03.8**	**0.0**
STDR	**Stavd-Durt**	**0.54**	**133**	*e*Pg	**Pn**	**09 55 57.9**	**-1.2**
STDR				*e*Sg	**Sn**	**09 56 06.9**	**-0.7**
PRTR	**Priterechnaya**	**0.55**	**89**	*e*Pg	**Pb**	**09 55 57.3**	**0.0**
PRTR				*e*Sg	**Sb**	**09 56 05.7**	**+1.0**
BEYR	**Belyy Ugol+**	**0.58**	**298**	*e*Pg	**Pb**	**09 55 58.4**	**+0.6**
BEYR				*i* Sg	**Sb**	**09 56 06.7**	**+1.1**
SHA1	**Shidzhatmaz**	**0.63**	**270**	*e*Pg	**Pn**	**09 55 59.7**	**-0.8**
SHA1				*e*Sg	**Sn**	**09 56 09.0**	**-1.2**
KIV0	**Kislovodsk Arr**	**0.64**	**290**	*e*Pg	**Pg**	**09 55 59.1**	**+0.1**
KIV0				*e*Sg	**Sg**	**09 56 08.6**	**+1.0**
KIV	**Kislovodsk**	**0.64**	**290**	*i* Pg	**Pg**	**09 55 59.2**	**+0.1**
KIV				*e*Sg	**Sg**	**09 56 08.6**	**+0.8**
NEY	**Neytrino**	**0.76**	**230**	*e*Pg	**Pg**	**09 56 01.6**	**+0.2**
NEY				*e*Sg	**Sn**	**09 56 12.7**	**-0.7**
KORR	**Kora**	**0.77**	**149**	*e*Pg	**Pn**	**09 56 02.4**	**+0.2**
KORR				*e*Sg	**Sn**	**09 56 13.9**	**+0.7**
ARNR	**Ardon**	**0.79**	**135**	*e*Pg	**Pn**	**09 56 02.2**	**-0.3**
ARNR				*e*Sg	**Sn**	**09 56 13.9**	**+0.2**
BTKR	**Batakoyurt**	**0.83**	**116**	*e*Pg	**Pn**	**09 56 02.4**	**-0.6**
BTKR				*e*Sg	**Sg**	**09 56 13.1**	**-0.5**
DIGR	**Digorskoe uzhe**	**0.84**	**177**	*e*Pg	**Pb**	**09 56 02.0**	**-0.5**
DIGR				*e*Sg	**Sb**	**09 56 13.3**	**-0.2**
TRKR	**Terskaya**	**0.88**	**91**	*e*Pg	**Pb**	**09 56 02.4**	**-0.6**
TRKR				*e*Sg	**Sn**	**09 56 15.6**	**-0.3**
ZEI	**Tsey**	**0.99**	**164**	*i* Pg	**Pb**	**09 56 05.0**	**0.0**
ZEI				*e*Sg	**Sn**	**09 56 19.3**	**+0.3**
LACR	**Lac**	**1.07**	**148**	*e*Pg	**Pn**	**09 56 06.5**	**0.0**
LACR				*e*Sg	**Sg**	**09 56 22.3**	**+1.0**
VLKR	**Vladikavkaz**	**1.09**	**129**	*e*Pg	**Pg**	**09 56 07.8**	**+0.3**
VLKR				*e*Sg	**Sg**	**09 56 24.3**	**+2.4**
ALER	**Alexandrovskoy**	**1.11**	**337**	*e*Pg	**Pg**	**09 56 07.2**	**-0.8**
ALER				*e*Sg	**Sg**	**09 56 23.2**	**+0.6**
ONI	**Oni**	**1.15**	**183**	P	**Pg**	**09 56 08.4**	**-0.3**
ONI				S	**Sg**	**09 56 24.4**	**+0.6**
KMGR	**Komgaron**	**1.19**	**125**	*e*Pg	**Pn**	**09 56 07.4**	**-0.7**
KMGR				*e*Sg	**Sb**	**09 56 23.3**	**-0.1**
PNSH	**Pansheti**	**1.36**	**144**	P	**Pn**	**09 56 10.1**	**-0.5**
PNSH				S	**Sb**	**09 56 29.1**	**+0.6**
ABS	**Abastumani**	**2.05**	**195**	P	**Pg**	**09 56 24.9**	**-1.0**

HEL 03 10:43:58.2, 67°.87N×20°.12E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.21**	**258**	*i* P	Pg	10 44 02.9	+0.8
RATU				*i* S	Sg	10 44 06.4	+1.7
KOVU	**Salmi**	**0.36**	**2**	*i* P	Pg	10 44 06.0	+0.9
KOVU				*i* S	Sg	10 44 11.2	+1.5
NIKU	**Nikkaluokta**	**0.41**	**271**	*i* P	Pg	10 44 06.9	+0.8
LANU	**Lannavaara**	**0.73**	**75**	*e*P	Pg	10 44 11.7	-0.4
LANU				*e*S	Sg	10 44 21.4	-0.1
SALU	**Saltoluokta**	**0.79**	**232**	*i* P	Pg	10 44 13.1	-0.1
MASU	**Masugnsbyn**	**0.83**	**119**	*i* P	Pg	10 44 12.9	-1.1
KIF	**Kilpisjarvi**	**1.17**	**12**	*e*PB	Pn	10 44 22.4	+0.6
KIF				MSG		10 44 34.8	
	comp=Z,3.6nm,0.2s						
KIF				*e*SB	Sn	10 44 38.3	-0.1
PAJU	**Pajala**	**1.43**	**125**	*e*P	Pn	10 44 23.2	-2.2
PAJU				*e*SB	Sg	10 44 42.0	-2.1
HEF	**Hetta**	**1.43**	**66**	MSG		10 44 41.2	
	comp=Z,2.5nm,0.2s						
HEF				*e*SB	Sg	10 44 44.2	+0.1
ERTU	**Ertsjaerv**	**1.54**	**148**	*e*PG	Pn	10 44 26.3	-0.6
ERTU				*e*SB	Sn	10 44 46.2	-1.5
KLF	**Kolari**	**1.61**	**112**	*e*PG	Pn	10 44 27.2	-0.6
KLF				*e*SN	Sn	10 44 48.4	-0.7
KTK1	**Kautokeino**	**1.63**	**44**	*e*PN	Pg	10 44 29.6	+0.3
KTK1				*e*SN	Sg	10 44 51.5	+1.1
HARU	**Harads**	**1.74**	**169**	*e*P	Pn	10 44 29.1	-0.5
TOF	**Tornio**	**2.44**	**135**	MSG		10 45 10.2	
	comp=Z,2.6nm,0.2s						
TOF				*e*SG	Sb	10 45 12.5	-0.9
RNF	**Rovaniemi**	**2.62**	**116**	*e*PB	Pn	10 44 43.7	+2.1

HEL 03 10:44:25.3±0.7, 67°.48N×34°.17E, h0km, ML1.6, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.46**	**24**	PG	Pg	10 44 33.0	-1.0
LVZ				SG	Sg	10 44 39.7	-0.2
VRF	**Varrio**	**1.77**	**281**	*e*P	Pn	10 44 55.5	-1.6
VRF	**Varrio**	**1.77**	**281**	PB	Pn	10 44 55.5	-1.6
VRF				MSG		10 45 17.9	
	comp=Z,4.5nm,0.2s						
OLKF	**Oulanka, Finla**	**2.21**	**240**	*e*P	Pn	10 45 01.0	-2.2
OLKF	**Oulanka, Finla**	**2.21**	**240**	PN	Pn	10 45 01.7	-1.5
	baz=56						
OLKF				SG	Sb	10 45 34.8	+0.8
KU6	**Riek

0.7nm,0.3s
COEN Coen 14.84 121 P P 11 42 52.1 0.0
ASAR Alice Springs 17.51 168 P Pn 11 43 23.7 +1.8
0.4nm,0.3s,baz=346,slow=9.1,SNR=30
ASAR S Sn 11 46 33.4 -3.5
0.4nm,0.6s,baz=0.1,slow=28,SNR=5.2
0.9nm,0.5s
MKAR Makanchi Array 67.84 327 P P 11 50 13.0 +1.5
0.2nm,0.4s,baz=123,slow=7.1,SNR=2.0
0.2nm,0.4s

*PGC **03** 11:48:29.6, 47°.64N×123°.16W, h45km, ML2.6, ML2.2/24, 62km west of Seattle, Wa Washington*
*SEA **03** 11:48:29.6±1.1, 47°.64N±0°.02×123°.16W±0°.03, h45km±3km, ML2.6/114, ML2.6/34(NEIC), Error ellipse: s-maj=3.0km s-min=2.9km az=174.0*
*PNSN **03** 11:48:29.6, 47°.64N×123°.16W, h45km, MD2.6, Fault plane solution: NP1:φ=105.00000°, δ=40.00000°, λ=-40.00000°.*
*NEIC **03** 11:48:29.6±1.4, 47°.66N±0°.02×123°.23W±0°.02, h35km±7km, Error ellipse: s-maj=2.8km s-min=1.2km az=156.0*
ISC 03 11:48:29.3±1.2, 47°.67N±0°.02×123°.22W±0°.02, h47km±5km, n157, σ0°.64/199, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDW	**Hoodsport**	**0.11**	**100**		**Pn**	**11 48 36.5**	**-0.4**
HDW	**Hoodsport**	**0.11**	**100**	P	**Pn**	**11 48 36.5**	**-0.4**
C04A	**Brinnon**	**0.17**	**73**		**Pn**	**11 48 36.7**	**-0.4**
C04A					**Sn**	**11 48 42.4**	**-0.3**
B013	**Quilcene**	**0.25**	**55**		**Pn**	**11 48 37.3**	**-0.4**
B013					**Sn**	**11 48 43.4**	**-0.2**
GNW	**Green Mountain**	**0.28**	**111**		**Pn**	**11 48 37.2**	**-0.8**
GNW					**Sn**	**11 48 43.2**	**-1.0**
GNW	**Green Mountain**	**0.28**	**111**	P	**Pn**	**11 48 37.2**	**-0.8**
GNW				S	**Sn**	**11 48 43.3**	**-0.8**
GMW	**Gold Mountain**	**0.32**	**112**		**Pn**	**11 48 37.5**	**-0.8**
GMW					**Sn**	**11 48 43.9**	**-0.8**
KIMR	**Kitsap County**	**0.35**	**118**		**Pn**	**11 48 38.0**	**-0.6**
KIMR					**Sn**	**11 48 44.8**	**-0.4**
SMW	**South Mountain**	**0.36**	**194**		**Pn**	**11 48 38.9**	**+0.1**
SMW	**South Mountain**	**0.36**	**194**	P	**Pn**	**11 48 38.9**	**+0.1**
SMW				S	**Sn**	**11 48 45.9**	**+0.3**
OSD	**Olympics--Snow**	**0.36**	**295**		**Pn**	**11 48 39.2**	**+0.2**
OSD	**Olympics--Snow**	**0.36**	**295**	P	**Pn**	**11 48 39.3**	**+0.3**
OSD				S	**Sn**	**11 48 47.1**	**+1.1**
KINR	**Kitsap County**	**0.40**	**78**		**Pn**	**11 48 39.0**	**-0.1**
PSNS	**PSNS Bremerton**	**0.40**	**105**		**Pn**	**11 48 38.7**	**-0.5**
SQM	**Sequim**	**0.42**	**16**		**Pn**	**11 48 39.9**	**+0.5**
OLQ	**Olympics--Lake**	**0.43**	**250**		**Pn**	**11 48 39.8**	**+0.3**
OLQ					**Sn**	**11 48 47.5**	**+0.7**
B04A	**Port Angeles**	**0.44**	**334**		**Pn**	**11 48 39.8**	**+0.2**
B04A					**Sn**	**11 48 47.9**	**+1.0**
B04A	**Port Angeles**	**0.44**	**334**		**Pn**	**11 48 39.8**	**+0.2**
B04A	**Port Angeles**	**0.44**	**334**	IAML		11 48 48.4	
	comp=N,791nm,0.3s						
B04A				IAML		11 48 48.5	
	comp=E,1μm,0.4s						
MNWA	**Manchester**	**0.47**	**102**		**Pn**	**11 48 39.6**	**-0.6**
NLWA	**Neilton Lookou**	**0.52**	**238**		**Pn**	**11 48 40.7**	**+0.1**
NLWA					**Sn**	**11 48 49.4**	**+0.6**
NLWA	**Neilton Lookou**	**0.52**	**238**	IAML		11 48 50.6	
	comp=E,468nm,0.2s						
STW	**Striped Peak**	**0.57**	**328**		**Pn**	**11 48 41.6**	**+0.4**
STW	**Striped Peak**	**0.57**	**328**	P	**Pn**	**11 48 41.6**	**+0.4**
VVHS	**Vashon High Sc**	**0.57**	**115**		**Pn**	**11 48 40.7**	**-0.5**
EGRN	**Evergreen Coll**	**0.62**	**165**		**Pn**	**11 48 41.6**	**-0.2**
EGRN					**Sn**	**11 48 51.2**	**+0.4**
SWID	**South Whidbey**	**0.64**	**57**		**Pn**	**11 48 42.3**	**+0.2**
SP2	**Seward Park 2**	**0.66**	**99**		**Pn**	**11 48 42.5**	**+0.1**
WISH	**Wishkah**	**0.67**	**215**		**Pn**	**11 48 42.7**	**+0.2**
WISH	**Wishkah**	**0.67**	**215**	IAML		11 48 53.5	
	comp=E,166nm,0.3s						
WISH	**Wishkah**	**0.67**	**215**	P	**Pn**	**11 48 42.7**	**+0.2**
WISH				S	**Sn**	**11 48 52.8**	**+0.8**
OBC	**Olympics--Boni**	**0.69**	**303**		**Pn**	**11 48 43.2**	**+0.4**
OBC	**Olympics--Boni**	**0.69**	**303**	P	**Pn**	**11 48 43.2**	**+0.4**
CPW	**Capitol Peak**	**0.70**	**175**		**Pn**	**11 48 42.6**	**-0.3**
CPW	**Capitol Peak**	**0.70**	**175**	P	**Pn**	**11 48 42.6**	**-0.3**
CPW				S	**Sn**	**11 48 52.2**	**-0.6**
B017	**Montesano**	**0.71**	**199**		**Pn**	**11 48 43.3**	**+0.3**
SVOH	**Skagit Valley**	**0.73**	**32**		**Pn**	**11 48 43.5**	**+0.2**
SVOH					**Sn**	**11 54.8**	**+1.2**
SVOH	**Skagit Valley**	**0.73**	**32**	P	**Pn**	**11 48 43.6**	**+0.2**
P403	**Sandy Floe Qua**	**0.74**	**303**		**Pn**	**11 48 43.6**	**+0.2**
EVGW	**Everett Gatewa**	**0.74**	**75**		**Pn**	**11 48 43.5**	**+0.1**
EVGW					**Sn**	**11 54.8**	**+1.2**
VGZ	**Gonzales**	**0.75**	**355**		**Pn**	**11 48 43.2**	**-0.3**
VGZ	**Gonzales**	**0.75**	**355**	P	**Pn**	**11 48 43.3**	**-0.3**
VGZ				S	**Sn**	**11 48 53.5**	**-0.4**
PAYL	**Puyallup Schoo**	**0.78**	**127**		**Sn**	**11 48 54.9**	**+0.4**
PNLK	**Pine Lake Midd**	**0.81**	**96**		**Sn**	**11 48 56.0**	**+0.7**
GHW	**Garrison Hill**	**0.90**	**134**		**Pn**	**11 48 44.7**	**-0.8**
C03A	**Quillayute Air**	**0.95**	**288**	Pn	**Pn**	**11 48 46.6**	**+0.4**
C03A				IAML		11 49 00.1	
	comp=E,196nm,0.3s						
C03A				IAML		11 49 00.1	
	comp=N,178nm,0.3s						
B941	**Kapowsin**	**0.96**	**135**		**Pn**	**11 48 45.4**	**-0.9**
D05A	**Enumclaw**	**0.96**	**119**		**Pn**	**11 48 46.2**	**-0.2**
D05A	**Enumclaw**	**0.96**	**119**	P	**Pn**	**11 48 46.2**	**-0.2**
D05A				S	**Sn**	**11 58.3**	**+0.3**
HTW	**Haystack Looko**	**0.99**	**82**		**Pn**	**11 48 46.4**	**-0.4**
RATT	**Rattlesnake La**	**0.99**	**104**		**Pn**	**11 48 46.0**	**-0.7**
B009	**North Saanich**	**0.99**	**351**	P	**Pn**	**11 48 46.6**	**-0.2**
B009				S	**Sn**	**11 48 59.1**	**-0.6**
B011	**North Saanich**	**0.99**	**351**		**Pn**	**11 48 46.6**	**-0.2**
B011					**Sn**	**11 48 59.2**	**-0.5**
B011	**North Saanich**	**0.99**	**351**	P	**Pn**	**11 48 46.7**	**-0.2**
B011				S	**Sn**	**11 48 59.2**	**-0.5**
B010	**North Saanich**	**1.00**	**351**	P	**Pn**	**11 48 46.7**	**-0.1**
B010				S	**Sn**	**11 48 59.2**	**-0.5**
PGC	**Sidney**	**1.00**	**351**		**Pn**	**11 48 46.7**	**-0.1**
PGC				IAML		11 48 59.5	
	comp=E,94nm,0.3s						
PGC				IAML		11 49 00.1	
	comp=N,92nm,0.2s						
PGC	**Sidney**	**1.00**	**351**	P	**Pn**	**11 48 46.7**	**-0.1**
PGC				S	**Sn**	**11 48 59.3**	**-0.5**
PA01	**PA01 North**	**1.00**	**351**	P	**Pn**	**11 48 46.7**	**-0.1**
PA01				S	**Sn**	**11 48 59.4**	**-0.4**
C05A	**Tolt Reservoir**	**1.03**	**88**		**Pn**	**11 48 46.9**	**-0.4**
C05A	**Tolt Reservoir**	**1.03**	**88**	P	**Pn**	**11 48 46.9**	**-0.4**
C05A				S	**Sn**	**11 48 60.0**	**-0.8**
MCW	**Mount Constitu**	**1.04**	**14**		**Pn**	**11 48 47.8**	**+0.2**
MCW	**Mount Constitu**	**1.04**	**14**	P	**Pn**	**11 48 47.8**	**+0.2**
CMW	**Cultus Mountai**	**1.06**	**44**	P	**Pn**	**11 48 48.0**	**+0.2**
CMW				S	**Sn**	**11 49 01.4**	**0.0**
B019	**Raymond**	**1.06**	**196**		**Pn**	**11 48 47.9**	**+0.2**
GSM	**Grass Mountain**	**1.07**	**115**		**Pn**	**11 48 47.4**	**-0.6**
OCP	**Olym-Cheeka Pk**	**1.14**	**304**	P	**Pn**	**11 48 48.9**	**+0.1**
E03A	**Lebam**	**1.15**	**192**		**Pn**	**11 48 48.8**	**-0.1**
E03A	**Lebam**	**1.15**	**192**	IAML		11 49 04.2	
	comp=N,108nm,0.2s						
E03A				IAML		11 49 04.5	
	comp=E,109nm,0.2s						
E03A	**Lebam**	**1.15**	**192**	P	**Pn**	**11 48 48.8**	**-0.1**
E03A				S	**Sn**	**11 49 03.2**	**-0.2**
BMW	**Boistfort Moun**	**1.19**	**180**		**Pn**	**11 48 49.5**	**-0.1**
PFB	**Port Renfrew**	**1.22**	**318**		**Pn**	**11 48 49.6**	**-0.3**
PFB	**Port Renfrew**	**1.22**	**318**	P	**Pn**	**11 48 49.6**	**-0.3**
PFB				S	**Sn**	**11 49 04.5**	**-0.8**
OBSR	**Observation Ro**	**1.23**	**128**		**Pn**	**11 48 49.7**	**-0.5**
REMR	**Mount Rainier-**	**1.26**	**132**		**Pn**	**11 48 50.1**	**-0.5**
FMW	**Mount Fremont**	**1.28**	**124**		**Pn**	**11 48 50.3**	**-0.6**
FMW	**Mount Fremont**	**1.28**	**124**	P	**Pn**	**11 48 50.4**	**-0.5**
RCS	**Mount Rainier-**	**1.29**	**128**		**Pn**	**11 48 50.8**	**-0.4**
GOBB	**Galiano Island**	**1.30**	**351**	P	**Pn**	**11 48 51.1**	**+0.2**
GOBB				S	**Sn**	**11 49 07.0**	**-0.1**
B926	**Mesachie Lake**	**1.31**	**332**		**Pn**	**11 48 50.8**	**-0.3**
B926	**Mesachie Lake**	**1.31**	**332**	P	**Pn**	**11 48 50.8**	**-0.3**
B926				S	**Sn**	**11 49 06.3**	**-1.1**
RCM	**Mount Rainier-**	**1.31**	**129**		**Pn**	**11 48 51.1**	**-0.4**
LON	**Longmire**	**1.33**	**133**		**Pn**	**11 48 50.9**	**-0.5**
LON				IAML		11 49 07.8	
	comp=N,60nm,0.3s						
LON				IAML		11 49 07.9	
	comp=E,92nm,0.5s						
LON	**Longmire**	**1.33**	**133**		**Pn**	**11 48 51.0**	**-0.5**
LON	**Longmire**	**1.33**	**133**	P	**Pn**	**11 48 50.9**	**-0.5**
LON				S	**Sn**	**11 49 07.1**	**-0.8**
PANH	**Panhandle Gap,**	**1.34**	**126**		**Pn**	**11 48 51.5**	**-0.3**
RPW	**Rockport**	**1.38**	**55**		**Pn**	**11 48 52.4**	**+0.2**
RPW	**Rockport**	**1.38**	**55**	P	**Pn**	**11 48 52.4**	**+0.2**
RPW				S	**Sn**	**11 49 09.2**	**-0.2**
SR41	**SR410 Landslid**	**1.39**	**124**		**Pn**	**11 48 52.0**	**-0.2**
MBW	**Mount Baker**	**1.42**	**38**		**Pn**	**11 48 53.3**	**+0.4**
MBW	**Mount Baker**	**1.42**	**38**	P	**Pn**	**11 48 53.3**	**+0.4**
MBW				S	**Sn**	**11 49 10.9**	**+0.4**
B06A	**Marblemount**	**1.44**	**53**		**Pn**	**11 48 53.2**	**+0.4**
B06A				IAML		11 49 11.6	
	comp=E,146nm,0.3s						
B06A				IAML		11 49 11.9	
	comp=N,116nm,0.3s						
B06A	**Marblemount**	**1.44**	**53**	P	**Pn**	**11 48 53.0**	**+0.1**
B06A				S	**Sn**	**11 49 10.3**	**-0.3**
GPW	**Glacier Peak**	**1.47**	**71**	P	**Pn**	**11 48 53.7**	**+0.2**
GPW				S	**Sn**	**11 49 11.5**	**-0.3**
ERK	**Elk Rock**	**1.49**	**156**		**Pn**	**11 48 53.5**	**-0.1**
WPW	**White Pass**	**1.50**	**130**		**Pn**	**11 48 54.0**	**+0.2**
B201	**Coldwater, Mou**	**1.51**	**154**		**Pn**	**11 48 53.9**	**-0.1**
A05A	**Maple Falls**	**1.53**	**29**	P	**Pn**	**11 48 54.8**	**+0.6**
A05A				S	**Sn**	**11 49 13.0**	**+0.2**
RVW	**Rose Valley**	**1.55**	**168**		**Pn**	**11 48 54.6**	**+0.2**
B023	**Clatskanie**	**1.56**	**176**		**Pn**	**11 48 54.4**	**-0.1**
SHUK	**Shuksan-Mt. Ba**	**1.57**	**40**		**Pn**	**11 48 55.2**	**+0.4**
FL2	**Flat Top 2**	**1.59**	**158**		**Pn**	**11 48 55.3**	**+0.3**
B202	**Windy Ridge, M**	**1.60**	**152**		**Pn**	**11 48 55.3**	**+0.1**
SOSW	**Source of Smit**	**1.60**	**152**		**Pn**	**11 48 55.6**	**+0.4**
VALT	**Mount Saint He**	**1.61**	**154**		**Pn**	**11 48 56.1**	**+0.7**
B203	**Quarry, Mount**	**1.62**	**158**		**Pn**	**11 48 55.5**	**+0.1**
BOLM	**Sugar Bowl**	**1.62**	**153**		**Pn**	**11 48 56.3**	**+0.8**
SHW	**Mount Saint He**	**1.62**	**155**		**Pn**	**11 48 56.0**	**+0.4**
SEPW	**September Lobe**	**1.63**	**154**		**Pn**	**11 48 56.4**	**+0.7**
SWF2	**Southwest Flan**	**1.64**	**155**		**Pn**	**11 48 56.5**	**+0.8**
ESD	**East Dome**	**1.64**	**153**		**Pn**	**11 48 56.5**	**+0.7**
NLLB	**Nanaimo Lost L**	**1.64**	**342**	S	**Sn**	**11 49 14.5**	**-1.1**
HSR	**South Ridge**	**1.66**	**154**		**Pn**	**11 48 56.7**	**+0.7**
MGB	**Mount Grey**	**1.66**	**324**	P	**Pn**	**11 48 55.9**	**-0.1**
MGB				S	**Sn**	**11 49 15.4**	**-0.8**
B928	**Bamfield**	**1.73**	**313**		**Pn**	**11 48 56.5**	**-0.4**
B928	**Bamfield**	**1.73**	**313**	P	**Pn**	**11 48 56.5**	**-0.4**
B928				S	**Sn**	**11 49 16.8**	**-1.0**
BFSB	**Bamfield**	**1.73**	**313**	P	**Pn**	**11 48 56.5**	**-0.4**
BFSB				S	**Sn**	**11 49 16.7**	**-1.1**
BIB	**Bowen Island**	**1.74**	**358**	P	**Pn**	**11 48 57.5**	**+0.5**
BIB				S	**Sn**	**11 49 17.7**	**-0.3**
GHNB	**Nanoose**	**1.77**	**338**	P	**Pn**	**11 48 57.5**	**+0.1**
GHNB				S	**Sn**	**11 49 17.7**	**-1.1**
LTY	**Liberty**	**1.78**	**102**		**Pn**	**11 48 57.8**	**+0.3**
LTY	**Liberty**	**1.78**	**102**	P	**Pn**	**11 48 57.6**	**+0.1**
LTY				S	**Sn**	**11 49 18.9**	**-0.1**
MTMW	**Mount Mitchell**	**1.78**	**157**		**Pn**	**11 48 58.4**	**+0.8**
B022	**Seaside**	**1.78**	**196**		**Pn**	**11 48 57.2**	**-0.3**
TBM	**Table Mountain**	**1.85**	**105**		**Pn**	**11 48 59.3**	**+0.8**
NAC	**Naches**	**1.88**	**119**		**Pn**	**11 49 00.1**	**+1.2**
B927	**Port Alberni**	**1.88**	**326**		**Pn**	**11 48 59.0**	**+0.2**
B927	**Port Alberni**	**1.88**	**326**	P	**Pn**	**11 48 59.1**	**+0.2**
B927				S	**Sn**	**11 49 20.6**	**-0.8**
ASR	**Mount Adams--S**	**1.88**	**143**		**Pn**	**11 48 59.6**	**+0.6**
EBG	**Ellensburg**	**1.96**	**112**		**Pn**	**11 49 01.6**	**+1.5**
SHB	**Sechelt**	**1.98**	**348**	P	**Pn**	**11 49 00.7**	**+0.3**
SHB				S	**Sn**	**11 49 23.8**	**-0.2**
WPB	**Watts Point**	**1.99**	**0**	P	**Pn**	**11 49 00.7**	**+0.2**
WPB				S	**Sn**	**11 49 23.2**	**-0.9**
OZB	**Mount Ozzard**	**2.00**	**311**		**Pn**	**11 49 00.2**	**-0.4**
OZB	**Mount Ozzard**	**2.00**	**311**	IAML		11 49 23.1	
	comp=E,46nm,0.6s						
OZB				IAML		11 49 23.1	
	comp=N,46nm,0.2s						
OZB	**Mount Ozzard**	**2.00**	**311**	P	**Pn**	**11 48 60.0**	**-0.6**
OZB				S	**Sn**	**11 49 22.6**	**-1.7**
B012	**Ucluelet**	**2.00**	**310**	S	**Sn**	**11 49 22.4**	**-1.9**
KMOR	**Kings Mountain**	**2.04**	**185**		**Pn**	**11 49 00.8**	**-0.4**
NCBC	**Barkley Canyon**	**2.13**	**292**	S	**Sn**	**11 49 26.4**	**-0.9**
TOFB	**Tofino**	**2.33**	**311**	P	**Pn**	**11 49 04.4**	**-0.6**
TOFB				S	**Sn**	**11 49 30.5**	**-1.9**
BTB	**Buttle Lake**	**2.36**	**321**	P	**Pn**	**11 49 05.7**	**0.0**
HIYU	**Hiyu Mountain**	**2.44**	**156**		**Pn**	**11 49 08.2**	**+1.5**
WSLR	**Whistler**	**2.47**	**4**		**Pn**	**11 49 07.9**	**+0.8**
WSLR	**Whistler**	**2.47**	**4**	P	**Pn**	**11 49 07.7**	**+0.6**
HEBO	**Mount Hebo**	**2.48**	**189**		**Pn**	**11 49 07.2**	**0.0**
HEBO	**Mount Hebo**	**2.48**	**189**	IAML		11 50 31.5	
	comp=N,49nm,2.9s						
TDH	**Tom, Dick, Har**	**2.57**	**157**		**Pn**	**11 49 09.9**	**+1.3**
HOOD	**Mount Hood Mea**	**2.58**	**155**	Pn	**Pn**	**11 49 09.3**	**+0.6**
HOOD				IAML		11 50 18.7	
	comp=N,16nm,2.6s						
BLTW	**Bickleton**	**2.73**	**129**		**Pn**	**11 49 07.7**	**-2.9**
CBB	**Campbell River**	**2.76**	**330**	Pn	**Pn**	**11 49 12.6**	**+1.7**
CBB	**Campbell River**	**2.76**	**330**	P	**Pn**	**11 49 11.1**	**+0.1**
ETB	**Estevan Point**	**2.79**	**309**	P	**Pn**	**11 49 12.1**	**+0.8**
GDR	**Gold River**	**2.82**	**320**		**Pn**	**11 49 12.8**	**+1.1**
GDR	**Gold River**	**2.82**	**320**	P	**Pn**	**11 49 12.3**	**+0.6**
F07A	**Phinny Hill Vi**	**2.87**	**127**		**Pn**	**11 49 12.6**	**0.0**
PNT	**Penticton**	**2.91**	**54**	P	**Pn**	**11 49 13.2**	**+0.2**
H04A	**Detroit Lake**	**3.07**	**166**	Pn	**Pn**	**11 49 16.1**	**+0.8**
LLLB	**Lillooet**	**3.07**	**16**	Pn	**Pn**	**11 49 15.3**	**0.0**
LLLB	**Lillooet**	**3.07**	**16**	P	**Pn**	**11 49 15.7**	**+0.4**
LLLB				S	**Sn**	**11 49 50.3**	**-0.5**
UBRB	**Upper Baezaeko**	**5.26**	**354**	P	**Pn**	**11 49 47.0**	**+1.7**

*ATH **03** 12:01:25.5, 35°.45N×23°.33E, h36km±4km, ML3.8/5, Error ellipse: s-maj=4.6km s-min=1.2km az=77.0*
*ISK **03** 12:01:25.8, 35°.56N×23°.47E, h24km, ML3.6/15*
*THE **03** 12:01:25.9, 35°.44N×23°.27E, h26km±1km, ML3.5/8, Error ellipse: s-maj=2.0km s-min=0.8km az=53.0*
*IDC **03** 12:01:26.2±7.0, 35°.66N×23°.10E, h78km±64km, mb3.9/4, mbtmp4.1/5, ML2.9/1, MS3.0/3, Error ellipse: s-maj=268.0km s-min=22.5km az=139.0*
*GII **03** 12:01:31.4±0.6, 34°.75N×23°.98E, h30km*
ISC 03 12:01:24.1±1.2, 35°.42N±0°.04×23°.28E±0°.06, h39km±4km, n54, σ1°.80/63, mb3.9/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.38**	**119**	PG	**Pn**	**12 01 33.9**	**+0.8**
KNDR				SG	**Sn**	**12 01 39.9**	**+0.3**
KNDR	**Palaiochora Ch**	**0.38**	**119**	P	**Pn**	**12 01 33.5**	**+0.4**
KNDR				S	**Sn**	**12 01 40.0**	**+0.3**
	7μm,0.4s						
KNDR	**Palaiochora Ch**	**0.38**	**119**	P	**Pn**	**12 01 33.6**	**+0.4**
KNDR				S	**Sn**	**12 01 39.5**	**-0.2**
KNDR				AML	AML	12 01 42.4	
	comp=E,47124μm,0.4s						
KNDR				AML	AML	12 01 46.0	
	comp=N,31872μm,0.5s						
ANKY	**Antikythira Is**	**0.45**	**2**	P	**Pn**	**12 01 34.8**	**+0.8**
ANKY				S	**Sn**	**12 01 42.6**	**+1.6**
	comp=N,5μm,0.9s						
ANKY	**Antikythira Is**	**0.45**	**2**	P	**Pn**	**12 01 34.8**	**+0.8**
IMMV	**Iera Moni Meta**	**0.57**	**86**	PG	**Pn**	**12 01 35.7**	**-0.1**
IMMV	**Iera Moni Meta**	**0.57**	**86**	P	**Pn**	**12 01 36.7**	**+0.9**
IMMV				S	**Sn**	**12 01 45.4**	**+1.3**
	comp=N,7μm,0.5s						
IMMV	**Iera Moni Meta**	**0.57**	**86**	P	**Pn**	**12 01 36.6**	**+0.9**
IMMV				S	**Sn**	**12 01 44.5**	**+0.4**
IMMV				AML	AML	12 01 45.9	
	comp=N,45186μm,0.3s						
IMMV				AML	AML	12 01 46.2	
	comp=E,25215μm,0.4s						
CHAN	**Chania**	**0.63**	**81**	P	**Pn**	**12 01 37.8**	**+1.2**
CHAN				S	**Sn**	**12 01 46.0**	**+0.6**
CHAN				AML	AML	12 01 51.4	
	comp=N,25940μm,0.5s						
CHAN				AML	AML	12 01 52.1	
	comp=E,23520μm,0.5s						
KTHA	**Kythira Island**	**0.85**	**348**	PG	**Pn**	**12 01 41.3**	**+1.7**
KTHA	**Kythira Island**	**0.85**	**348**	P	**Pn**	**12 01 41.4**	**+1.7**
KTHA	**Kythira Island**	**0.85**	**348**	P	**Pn**	**12 01 41.4**	**+1.7**
KTHA				S	**Sn**	**12 01 53.0**	**+2.1**
KTHA				AML	AML	12 01 58.3	
	comp=N,1305μm,0.7s						
KTHA				AML	AML	12 02 02.2	
	comp=E,4223μm,0.6s						
KTHR	**Kythira**	**0.87**	**345**	P	**Pn**	**12 01 41.3**	**+1.5**
KTHR	**Kythira**	**0.87**	**345**	P	**Pn**	**12 01 41.4**	**+1.6**
GVDS	**Gavdos**	**0.88**	**131**	PG	**Pn**	**12 01 42.2**	**+2.3**
GVDS	**Gavdos**	**0.88**	**131**	P	**Pn**	**12 01 41.3**	**+1.4**
GVDS				S	**Sn**	**12 01 54.0**	**+2.5**
	comp=E,3μm,0.3s						
GVD	**Gavdos**	**0.88**	**131**	PG	**Pn**	**12 01 41.9**	**+2.0**
GVD	**Gavdos**	**0.88**	**131**	P	**Pn**	**12 01 42.0**	**+2.0**
GVD				S	**Sn**	**12 01 55.1**	**+3.5**
	comp=E,5μm,0.4s						
GVD	**Gavdos**	**0.88**	**131**	P	**Pn**	**12 01 41.9**	**+2.0**
GVD				S	**Sn**	**12 01 53.7**	**+2.2**
GVD				AML	AML	12 01 59.7	
	comp=N,11568μm,0.3s						
GVD				AML	AML	12 02 03.9	
	comp=E,10140μm,0.3s						
PRNS	**Prines Rethymn**	**1.00**	**93**	P	**Pn**	**12 01 43.0**	**+1.4**
PRNS				S	**Sn**	**12 01 56.3**	**+1.9**
	comp=E,2μm,0.8s						
IDI	**Anoyia**	**1.32**	**95**	PN	**Pn**	**12 01 47.9**	**+1.8**
IDI	**Anoyia**	**1.32**	**95**	P	**Pn**	**12 01 48.3**	**+2.2**
IDI				S	**Sn**	**12 02 05.8**	**+3.3**
	comp=E,2μm,0.6s						
IDI	**Anoyia**	**1.32**	**95**	P	**Pn**	**12 01 48.4**	**+2.2**
MHLO	**Agia Marina, M**	**1.56**	**35**	P	**Pn**	**12 01 49.9**	**+0.6**
SANT	**Santorini**	**2.01**	**61**	PN	**Pn**	**12 01 56.3**	**+0.8**
THR8	**Santorini-Mono**	**2.04**	**60**	P	**Pn**	**12 01 57.3**	**+1.5**
ITM	**Ithomi**	**2.07**	**328**	PN	**Pn**	**12 02 00.7**	**+4.4**
ITM	**Ithomi**	**2.07**	**328**	P	**Pn**	**12 01 57.0**	**+0.7**
ZKR	**Zakros**	**2.42**	**96**	PN	**Pn**	**12 02 03.5**	**+2.4**
ZKR	**Zakros**	**2.42**	**96**	P	**Pn**	**12 02 03.5**	**+2.4**
APE	**Apeiranthos**	**2.45**	**47**	PN	**Pn**	**12 02 02.5**	**+0.9**
APE	**Apeiranthos**	**2.45**	**47**	P	**Pn**	**12 02 02.4**	**+0.9**
VLY	**Voula,Athens**	**2.46**	**10**	P	**Pn**	**12 02 02.4**	**+0.7**
DION	**Dionisos Attik**	**2.70**	**11**	P	**Pn**	**12 02 06.1**	**+1.1**
DION				S	**Sn**	**12 02 37.8**	**+1.3**
	comp=E,385nm,0.6s						
KARP	**Karpathos**	**3.17**	**87**	PN	**Pn**	**12 02 13.7**	**+2.3**
KARP	**Karpathos**	**3.17**	**87**	P	**Pn**	**12 02 12.8**	**+1.4**
CHOS	**Chios island**	**3.70**	**36**	PN	**Pn**	**12 02 20.5**	**+1.7**
URLA	**Izmir**	**3.96**	**41**	PN	**Pn**	**12 02 24.1**	**+1.8**
ARG	**Arkhangelos**	**4.02**	**77**	PN	**Pn**	**12 02 24.5**	**+1.5**
TURN	**Turunc**	**4.24**	**70**	PN	**Pn**	**12 02 28.3**	**+2.2**
CAME	**Cameli-Denizli**	**5.10**	**71**	PN	**Pn**	**12 02 39.8**	**+1.7**
BRTR	**Keskin Array B**	**9.28**	**59**	P	**Pn**	**12 03 37.5**	**+2.1**
	comp=E,0.1nm,0.3s,baz=249,slow=12,SNR=14						
BRTR				LR	LR	12 07 56.0	
	comp=E,79nm,19.9s,baz=296,slow=42						
	comp=E,3.0nm,0.9s						
HMDT	**Nahal Hemdat**	**10.66**	**104**	Pn	**Pn**	**12 03 52.9**	**-1.3**
YTIR	**Yattir**	**10.69**	**109**	Pn	**Pn**	**12 03 53.7**	**-1.0**
YTIR				Sn	Sn	12 05 42.8	-10
DSI	**Dead Sea**	**10.81**	**107**	Pn	**Pn**	**12 03 53.6**	**-2.6**
DSI				Sn	Sn	12 05 46.2	-10
KRMI	**Paran Flat**	**10.99**	**116**	Pn	Pn	12 03 55.7	-3.0
KRMI				Sn	Sn	12 05 49.3	-11
PRNI	**Paran**	**11.07**	**114**	Pn	Pn	12 03 56.4	-3.5
PRNI				Sn	Sn	12 05 52.2	-10
EIL	**Elat**	**11.39**	**117**	Pn	**Pn**	**12 04 01.6**	**-2.6**
EIL				Sn	Sn	12 05 59.1	-11
GNI	**Garni**	**17.60**	**68**	LR	LR	12 13 12.0	
	comp=E,43nm,20.0s,baz=296,slow=40						
BELG	**Belogornoye**	**24.22**	**38**	LR	LR	12 17 26.2	
	comp=E,33nm,18.1s,baz=134,slow=40						
TORD	**Torodi Ar. Bea**	**29.52**	**227**	P	**P**	**12 07 23.8**	**-1.0**
	comp=E,15nm,0.6s,baz=35,slow=9.3,SNR=5.1						
	comp=E,15nm,0.6s						
KURBB	**Kurchatov Arra**	**42.15**	**51**	P	**P**	**12 09 10.7**	**-1.8**
	comp=E,0

CHIR				IAML		12 11 27.9	
	comp=N,250nm,2.7s						
CHIR				IAML		12 12 04.0	
	comp=E,168nm,3.4s						
R17K	**Ugashik Creek**	**4.06**	**41**		**Pn**	**12 10 48.8**	**+2.2**
SII	**Sitkinak Islan**	**4.49**	**63**	Pn	**Pn**	**12 10 52.5**	**0.0**
CNTC	**Contact Creek**	**4.70**	**38**		**Pn**	**12 10 57.3**	**+1.8**
NIKH	**Nikolski High**	**4.75**	**252**	Pn	**Pn**	**12 10 56.1**	**0.0**
ANCK	**Angle Creek**	**4.79**	**41**		**Pn**	**12 10 58.7**	**+1.9**
OHAK	**Old Harbor**	**5.20**	**58**	Pn	**Pn**	**12 11 03.0**	**+0.8**
OHAK				IAML		12 12 29.8	
	comp=E,94nm,2.1s						
SPIA	**Saint Paul Isl**	**5.57**	**300**	Pn	**Pn**	**12 11 07.3**	**+0.1**
P18K	**Big Mountain,**	**5.78**	**33**	Pn	**Pn**	**12 11 11.9**	**+1.7**
KDAK	**Kodiak Island**	**5.80**	**54**	Pn	**Pn**	**12 11 10.5**	**+0.1**
	comp=E,0.8nm,0.3s,baz=189,slow=4.0,SNR=45						
KDAK				Sn	**Sn**	**12 12 14.1**	**-1.4**
	baz=189,slow=17						
KDAK				LR	LR	12 12 56.1	
	comp=E,53nm,19.2s,baz=218,slow=32						
	comp=E,4.4nm,0.5s						
KDAK	**Kodiak Island**	**5.80**	**54**	Pn	**Pn**	**12 11 11.4**	**+1.0**
Q19K	**Cape Douglas,**	**6.00**	**42**	Pn	**Pn**	**12 11 14.6**	**+1.3**
O18K	**Koktuh Hills**	**6.16**	**30**	Pn	**Pn**	**12 11 17.1**	**+1.7**
N18K	**Kilae Creek**	**6.68**	**24**	Pn	**Pn**	**12 11 24.2**	**+1.7**
SVW2	**Sparrevohn**	**7.12**	**23**		**Pn**	**12 11 30.1**	**+1.5**
N19K	**Bonanza Creek**	**7.15**	**28**	Pn	**Pn**	**12 11 31.4**	**+2.3**
CNPM	**China Poot**	**7.34**	**45**	Pn	**Pn**	**12 11 33.8**	**+2.3**
M19K	**Big River Lodg**	**8.10**	**24**		**Pn**	**12 11 44.0**	**+2.0**
L19K	**White Mountain**	**8.24**	**22**	Pn	**Pn**	**12 11 44.4**	**+0.5**
M20K	**Styx River**	**8.40**	**28**	Pn	**Pn**	**12 11 48.6**	**+2.4**
SEW	**Seward**	**8.41**	**45**	Pn	**Pn**	**12 11 47.0**	**+0.9**
TTA	**Tatalina**	**8.71**	**16**		**Pn**	**12 11 51.0**	**+0.7**
RC01	**Rabbit Creek A**	**8.90**	**39**	Pn	**Pn**	**12 11 53.8**	**+0.8**
PWL	**Port Wells**	**9.30**	**43**	Pn	**Pn**	**12 11 59.6**	**+1.3**
K20K	**Telida**	**9.46**	**20**	Pn	**Pn**	**12 12 01.3**	**+0.7**
PPLA	**Purkeypile**	**9.49**	**26**	Pn	**Pn**	**12 12 03.5**	**+2.4**
HIN	**Hinchinbrook I**	**9.81**	**48**	Pn	**Pn**	**12 12 06.0**	**+0.6**
CAST	**Castle Rocks**	**9.96**	**25**	Pn	**Pn**	**12 12 09.4**	**+2.1**
J20K	**Nowinta River**	**10.19**	**18**	Pn	**Pn**	**12 12 11.6**	**+1.2**
EYAK	**Cordova Ski Ar**	**10.21**	**49**	Pn	**Pn**	**12 12 11.3**	**+0.5**
SCM	**Sheep Creek Mo**	**10.27**	**40**	Pn	**Pn**	**12 12 12.1**	**+0.4**
KLU	**Klutina**	**10.62**	**44**		**Pn**	**12 12 17.0**	**+0.5**
HMT	**Hamilton**	**10.78**	**52**	Pn	**Pn**	**12 12 19.5**	**+0.9**
BPAW	**Bear Paw Mtn.**	**10.80**	**25**	Pn	**Pn**	**12 12 20.9**	**+2.1**
M24K	**Tolsona, Glenn**	**10.87**	**41**	Pn	**Pn**	**12 12 21.4**	**+1.5**
BERG	**Berg Lake**	**11.06**	**52**	Pn	**Pn**	**12 12 22.9**	**+0.5**
N25K	**Chitina, Valde**	**11.22**	**45**	Pn	**Pn**	**12 12 25.1**	**+0.4**
GLB	**Gilahina Butte**	**11.47**	**47**	Pn	**Pn**	**12 12 30.2**	**+2.2**
I21K	**Tanana**	**11.50**	**20**	Pn	**Pn**	**12 12 29.2**	**+0.8**
MLY	**Manley**	**11.64**	**23**	Pn	**Pn**	**12 12 32.1**	**+1.9**
PAX	**Paxson**	**11.66**	**38**		**Pn**	**12 12 31.0**	**+0.4**
H21K	**Melozitna Rive**	**11.78**	**18**		**Pn**	**12 12 33.3**	**+1.2**
WRH	**Wood River Hil**	**11.86**	**29**	Pn	**Pn**	**12 12 32.0**	**-1.2**
IMAR	**Indian Mountai**	**11.92**	**15**	Pn	**Pn**	**12 12 35.5**	**+1.4**
TABL	**Table Mountain**	**12.26**	**54**	Pn	**Pn**	**12 12 40.6**	**+1.6**
M26K	**Nabesna, AK**	**12.28**	**44**	Pn	**Pn**	**12 12 39.5**	**+0.5**
MENT	**Mentasta**	**12.29**	**41**	Pn	**Pn**	**12 12 40.2**	**+1.1**
ILAR	**Eielson Array**	**12.43**	**30**	Pn	Pn	12 12 33.8	-7.3
	comp=E,0.1nm,0.3s,baz=227,slow=13,SNR=1.7						
	comp=E,0.1nm,0.5s						
H23K	**Yukon River**	**12.58**	**23**	Pn	**Pn**	**12 12 44.8**	**+1.7**
M27K	**Edge Creek, AK**	**12.71**	**45**	Pn	**Pn**	**12 12 46.5**	**+1.5**
J25K	**Salcha River,**	**12.77**	**33**	Pn	**Pn**	**12 12 45.6**	**-0.2**
L27K	**Beaver Creek,**	**13.08**	**42**	Pn	**Pn**	**12 12 50.5**	**+0.5**
BCAR	**Beaver Creek A**	**13.10**	**42**	Pn	**Pn**	**12 12 51.2**	**+0.9**
INK	**Inuvik**	**18.79**	**33**	P	**P**	**12 13 59.2**	**-2.2**
	comp=E,0.1nm,0.3s,baz=249,slow=18,SNR=8.0						
	comp=E,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**23.92**	**283**	P	**P**	**12 14 54.5**	**-1.1**
	comp=E,1.0nm,0.4s,baz=92,slow=13,SNR=18						
	comp=E,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**25.07**	**53**	P	**P**	**12 15 08.8**	**+2.8**
	comp=E,0.8nm,0.6s,baz=270,slow=8.5,SNR=2.2						
	comp=E,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**33.17**	**101**	P	P	12 16 28.0	+10
	comp=E,0.3nm,0.7s,baz=320,slow=8.3,SNR=1.9						
	comp=E,0.3nm,0.7s						
TXAR	**Lajitas Array**	**48.12**	**97**	P	P	12 18 32.8	+11
	comp=E,0.3nm,0.7s,baz=309,slow=6.3,SNR=4.7						
	comp=E,0.3nm,0.7s						
SONM	**Songino Array**	**54.09**	**304**	P	**P**	**12 19 05.7**	**-0.2**
	comp=E,0.6nm,0.6s,baz=35,slow=6.3,SNR=3.6						
	comp=E,0.6nm,0.6s						
FINES	**FINESS Array B**	**64.05**	**356**	P	**P**	**12 20 13.7**	**-0.7**
	comp=E,2.6nm,0.9s,baz=43,slow=6.5,SNR=5.1						
	comp=E,2.6nm,0.9s						
HFS	**Hagfors**	**65.45**	**3**	P	**P**	**12 20 22.9**	**-0.7**
	comp=E,0.7nm,0.4s,baz=61,slow=7.0,SNR=7.0						
	comp=E,0.7nm,0.4s						
MKAR	**Makanchi Array**	**65.49**	**317**	P	**P**	**12 20 23.4**	**-0.8**
	comp=E,0.3nm,0.5s,baz=43,slow=11,SNR=1.6						
	comp=E,0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**68.88**	**13**	P	**P**	**12 20 46.2**	**+0.8**
	comp=E,1.2nm,0.6s,baz=345,slow=5.4,SNR=3.9						
	comp=E,1.2nm,0.6s						
AKASG	**Malin Array Be**	**74.60**	**353**	P	**P**	**12 21 19.0**	**-0.7**
	comp=E,1.4nm,0.5s,baz=8.2,slow=5.8,SNR=7.2						
	comp=E,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**80.58**	**288**	P	**P**	**12 21 54.1**	**+0.5**
	comp=E,0.9nm,0.6s,baz=8.3,slow=5.2,SNR=5.6						
	comp=E,0.9nm,0.6s						
ESDC	**Sonseca Array**	**84.02**	**17**	P	**P**	**12 22 12.7**	**+1.3**
	comp=E,1.4nm,0.9s,baz=342,slow=5.3,SNR=8.5						
	comp=E,1.4nm,0.9s						
BRTR	**Keskin Array B**	**85.07**	**348**	P	**P**	**12 22 15.8**	**-1.0**
	comp=E,0.8nm,0.8s,baz=67,slow=4.2,SNR=3.6						
	comp=E,0.8nm,0.8s						

*IDC **03** 12:09:50.6±3.2, 30°.23S×177°.57W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=61.2km s-min=22.4km az=101.0*

ISC 03 12:09:55.1±2.9, 30°.2S±0°.1×177°.4W±0°.4, h35km, n7, σ0°88/8, mb4.0/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.03**	**335**	Pn	**Pn**	**12 10 13.3**	**+0.2**
	116nm,0.3s,baz=108,slow=17,SNR=9.2						
RAO				Sn	**Sn**	**12 10 26.2**	**-0.1**
	409nm,0.3s,baz=40,slow=23,SNR=9.9						
CTA	**Charters Tower**	**34.26**	**279**	P	**P**	**12 16 38.1**	**+0.2**
	2.6nm,0.6s,baz=131,slow=9.3,SNR=5.5						
	2.6nm,0.6s						
STKA	**Stephens Creek**	**35.01**	**257**	P	**P**	**12 16 44.8**	**+0.5**
	2.3nm,0.8s,baz=92,slow=12,SNR=2.9						
	2.3nm,0.8s						
ASAR	**Alice Springs**	**43.62**	**266**	P	**P**	**12 17 55.7**	**-0.6**
	0.4nm,0.5s,baz=106,slow=7.2,SNR=8.4						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.59**	**272**	P	**P**	**12 18 02.3**	**-1.8**
	0.9nm,0.6s,baz=110,slow=8.1,SNR=20						
	0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.86**	**269**	P	**P**	**12 19 07.6**	**0.0**
	1.9nm,1.8s,baz=110,slow=14,SNR=2.0						
	1.9nm,1.0s						
FINES	**FINESS Array B**	**145.12**	**340**	PKPbc	**PKPbc**	**12 29 27.4**	**-0.2**
	1.1nm,0.8s,baz=27,slow=4.7,SNR=4.1						

*IDC **03** 12:10:58.0±1.4, 38°.13N×22°.24E, h0km, mb3.5/3, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=39.7km s-min=20.9km az=143.0*
*ATH **03** 12:10:58.6, 38°.45N×21°.94E, h12km±1km, ML3.2/9, Error ellipse: s-maj=1.8km s-min=0.9km az=159.0*
*THE **03** 12:10:59.1, 38°.44N×21°.91E, h11km±1km, ML3.1/8, Error ellipse: s-maj=1.5km s-min=0.6km az=87.0*

ISC 03 12:10:58.8±0.8, 38°.45N±0°.02×21°.93E±0°.02, h13km±4km, n34, σ0°74/52, mb3.9/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.03**	**227**	P	**Pg**	**12 11 00.7**	**-0.4**
EFP				S	**Sg**	**12 11 02.2**	**-0.6**
	152μm,0.2s						
EFP	**Efpalio**	**0.03**	**227**	P	**Pg**	**12 11 00.7**	**-0.4**
EFP				S	**Sg**	**12 11 02.1**	**-0.7**
EFP				AML	AML	12 11 02.3	
EFP				AML	AML	12 11 02.7	
SERG	**Sergoula**	**0.10**	**110**	P	**Pg**	**12 11 01.9**	**0.0**
SERG				S	**Sg**	**12 11 04.5**	**+0.5**
	16μm,0.2s						
SERG	**Sergoula**	**0.10**	**110**	P	**Pg**	**12 11 01.8**	**0.0**
SERG				S	**Sg**	**12 11 04.0**	**0.0**
SERG				AML	AML	12 11 04.6	
	comp=E,44415μm,0.3s						
SERG				AML	AML	12 11 06.7	
	comp=N,34112μm,0.2s						
UPR	**University Cam**	**0.20**	**215**	P	**Pg**	**12 11 03.0**	**-0.3**
LAKA	**Lakka**	**0.21**	**171**	P	**Pg**	**12 11 03.5**	**+0.1**
LAKA	**Lakka**	**0.21**	**171**	P	**Pg**	**12 11 03.2**	**-0.3**
LAKA				S	**Sg**	**12 11 06.4**	**-0.2**
LAKA				AML	AML	12 11 08.2	
	comp=N,4074μm,0.4s						
LAKA				AML	AML	12 11 11.2	
	comp=E,5679μm,0.3s						
ALIK	**Aliki, Aigiali**	**0.23**	**143**	P	**Pb**	**12 11 04.3**	**-0.6**
ALIK				S	**Sg**	**12 11 08.3**	**+1.1**
PVO	**Paravola**	**0.36**	**298**	P	**Pg**	**12 11 05.6**	**-0.5**
PVO				S	**Sg**	**12 11 11.7**	**+0.7**
	comp=E,5μm,0.4s						
PVO	**Paravola**	**0.36**	**298**	P	**Pg**	**12 11 05.5**	**-0.5**
KLV	**Kalavryta, Ach**	**0.44**	**157**	P	**Pg**	**12 11 07.4**	**-0.1**
KLV				S	**Sb**	**12 11 13.9**	**-1.0**
	comp=E,1μm,0.3s						
KLV	**Kalavryta, Ach**	**0.44**	**157**	P	**Pg**	**12 11 07.3**	**-0.2**
KLV				S	**Sb**	**12 11 14.0**	**-0.9**
KLV				AML	AML	12 11 16.7	
	comp=E,2377μm,0.4s						
KLV				AML	AML	12 11 17.0	
	comp=N,2956μm,0.3s						
DLFA	**Delphi**	**0.44**	**86**	P	**Pg**	**12 11 07.0**	**-0.6**
EVR	**Evrytania**	**0.48**	**348**	P	**Pg**	**12 11 07.7**	**-0.6**
EVR				S	**Sb**	**12 11 15.6**	**-0.6**
	comp=N,5μm,0.2s						
EVR	**Evrytania**	**0.48**	**348**	P	**Pg**	**12 11 07.6**	**-0.6**
EVR				S	**Sg**	**12 11 14.9**	**+0.2**
EVR				AML	AML	12 11 17.3	
	comp=N,8769μm,0.3s						
EVR				AML	AML	12 11 17.3	
	comp=E,9223μm,0.2s						
RLS	**Riolos of Patr**	**0.54**	**224**	P	**Pg**	**12 11 09.0**	**-0.3**
RLS				S	**Sb**	**12 11 17.4**	**-0.3**
	comp=E,2μm,0.3s						
RLS	**Riolos of Patr**	**0.54**	**224**	P	**Pg**	**12 11 08.6**	**-0.7**
RLS				S	**Sg**	**12 11 16.7**	**+0.3**
RLS				AML	AML	12 11 19.1	
	comp=E,3510μm,0.2s						
RLS				AML	AML	12 11 19.3	
	comp=N,5139μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.58**	**15**	P	**Pg**	**12 11 10.0**	**-0.3**
MAKR				S	**Sb**	**12 11 20.2**	**+1.0**
	comp=N,8μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.58**	**15**	P	**Pg**	**12 11 09.9**	**-0.3**
MAKR				S	**Sg**	**12 11 17.8**	**-0.3**
THAL	**Thalero**	**0.70**	**125**	P	**Pg**	**12 11 11.5**	**-1.0**
THAL				S	**Sg**	**12 11 20.4**	**-1.4**
THAL				AML	AML	12 11 26.5	
	comp=E,6687μm,0.5s						
THAL				AML	AML	12 11 30.5	
	comp=N,6930μm,0.3s						
LKR	**Lokris**	**0.86**	**76**	P	**Pg**	**12 11 13.6**	**-1.8**
LKR				S	**Sg**	**12 11 25.8**	**-0.8**
LKR				AML	AML	12 11 29.8	
	comp=N,3574μm,0.2s						
LKR				AML	AML	12 11 31.2	
	comp=E,4611μm,0.2s						
EVGI	**Lefkada island**	**1.02**	**280**	P	**Pg**	**12 11 17.2**	**-1.2**
LKD2	**Lefkada island**	**1.06**	**289**	P	**Pb**	**12 11 18.0**	**-0.9**
TSLK	**Tsoukalades, L**	**1.07**	**291**	P	**Pb**	**12 11 18.9**	**-0.3**
FSK	**Fiskardo**	**1.08**	**271**	P	**Pb**	**12 11 18.7**	**-0.6**
VLS	**Valsamata**	**1.09**	**256**	P	**Pb**	**12 11 18.2**	**-1.4**
VLS				S	**Sn**	**12 11 35.2**	**+0.4**
	comp=E,678nm,0.3s						
NEO	**Neokhori**	**1.32**	**49**	P	**Pn**	**12 11 23.3**	**+0.2**
NEO				S	**Sb**	**12 11 40.1**	**-0.2**
NEO				AML	AML	12 11 46.8	
	comp=N,1381μm,0.3s						
NEO				AML	AML	12 11 47.0	
	comp=E,1292μm,0.5s						
XOR	**Xorichti**	**1.34**	**47**	P	**Pn**	**12 11 23.4**	**+0.1**
XOR				S	**Sb**	**12 11 40.5**	**-0.5**
MLR	**Muntele Rosu**	**7.64**	**22**	Pn	Pn	12 12 55.1	+5.2
	comp=E,0.4nm,0.3s,baz=209,slow=10,SNR=4.5						
	comp=E,2.5nm,0.7s						
BRTR	**Keskin Array B**	**9.19**	**78**	Pn	**Pn**	**12 13 13.0**	**+1.8**
	comp=E,0.1nm,0.3s,baz=259,slow=12,SNR=2.2						
	comp=E,0.3nm,0.3s						
ESDC	**Sonseca Array**	**20.13**	**282**	P	Pn	12 15 36.9	+2.4
	comp=E,0.5nm,0.7s,baz=72,slow=9.9,SNR=4.1						
	comp=E,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P	**P**	**12 17 16.2**	**+0.6**
	comp=E,15nm,0.6s,baz=40,slow=8.1,SNR=5.1						
MKAR	**Makanchi Array**	**44.21**	**59**	P	**P**	**12 19 08.2**	**+0.7**
	comp=E,0.3nm,0.4s,baz=279,slow=7.4,SNR=6.7						
	comp=E,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**44.68**	**48**	P	**P**	**12 19 11.7**	**+0.6**
	comp=E,0.5nm,0.3s,baz=278,slow=9.9,SNR=2.1						
	comp=E,0.5nm,0.3s						

*IDC **03** 12:12:01.7±2.2, 14°.95S×173°.74W, h0km, mb3.8/5, mbtmp3.8/5, MS3.4/7, Error ellipse: s-maj=158.5km s-min=23.2km az=152.0*
*NOU **03** 12:12:07.1, 14°.11S×172°.92W, h137km, MLv3.5/5, Samoa Islands*

ISC 03 12:12:03.6±2.8, 15°S±2°×173°.4W±0°.8, h35km, n19, σ0°28/7, mb3.6/5, MS3.3/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.77**	**62**	Pn	**Pn**	**12 12 31.4**	**-0.3**
	60nm,0.3s,baz=198,slow=2.0,SNR=99						
AFI				Sn	**Sn**	**12 12 53.3**	**+0.3**
	119nm,0.3s,baz=195,slow=21,SNR=12						
AFI				LR	LR	12 13 04.5	
	comp=Z,156nm,18.1s,baz=188,slow=29						
AFI	**Afiamalu**	**1.77**	**62**	P	**Pn**	**12 12 31.8**	**+0.1**
MSVF	**Nonsavu**	**8.74**	**249**	LR	LR	12 16 54.3	
	comp=Z,234nm,18.6s,baz=40,slow=35						
DZM	**Mont Dzumac**	**20.46**	**246**	eLR	LR	12 21 38.0	
	comp=Z,109nm,25.6s						
DZM	**Mont Dzumac**	**20.46**	**246**	LR	LR	12 22 42.5	
	comp=Z,65nm,21.1s,baz=40,slow=32						
PPT	**Papeete**	**23.04**	**100**	LR	LR	12 23 32.6	
	comp=Z,27nm,20.4s,baz=256,slow=30						
PPT2	**Papeete2**	**23.04**	**100**	eLR	LR	12 22 14.9	
	comp=Z,74nm,24.5s						
HNR	**Honiara**	**26.59**	**278**	LR	LR	12 27 36.8	
	comp=Z,496nm,18.1s,baz=146,slow=36						
H11S2	**WAKE ISLAND Hy**	**38.41**	**329**	T	T	13 00 15.3	
	baz=149,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**38.42**	**329**	T	T	13 00 13.4	
	baz=149,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**38.42**	**329**	T	T	13 00 16.6	
	baz=149,slow=76,SNR=20						
WRA	**Warramunga Arr**	**50.01**	**256**	P	**P**	**12 20 55.2**	**+0.3**
	0.5nm,0.6s,baz=91,slow=7.1,SNR=9.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**50.33**	**251**	P	**P**	**12 20 57.4**	**0.0**
	3.1nm,0.6s,baz=86,slow=7.9,SNR=44						
ASAR				LR	LR	12 39 47.6	
	comp=Z,53nm,20.8s,baz=116,slow=33						
	3.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**58.36**	**258**	LR	LR	12 47 04.1	
	comp=Z,51nm,18.3s,baz=101,slow=36						
NVAR	**Mina Array Bea**	**73.83**	**42**	P	P	12 23 40.1	+5.0
	0.6nm,0.8s,baz=234,slow=9.7,SNR=4.4						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**80.24**	**56**	P	P	12 24 17.8	+6.7
	0.6nm,0.9s,baz=232,slow=4.1,SNR=5.1						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**81.77**	**42**	P	P	12 24 24.1	+4.9
	0.3nm,0.5s,baz=177,slow=3.5,SNR=5.5						
	0.3nm,0.5s						
GERES	**GERESS Array B**	**145.49**	**352**	PKPbc	**PKiKP**	**12 31 42.0**	**-0.2**
	0.8nm,0.8s,baz=39,slow=5.1,SNR=4.8						
BRTR	**Keskin Array B**	**145.65**	**322**	PKPbc	**PKiKP**	**12 31 42.6**	**-0.2**
	0.8nm,0.7s,baz=207,slow=2.5,SNR=5.9						

MAN 03 12:33:01.5, 6°.46N×123°.50E, h34km, mb4.4, ML3.2, MS3.0, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**1.04**	**86**	eP	Pn	12 33 18.2	-1.4
SKMP				eS	Sn	12 33 30.3	-2.7
CTBH	**Cotabato--PC H**	**1.06**	**44**	iP	Pn	12 33 19.5	-0.4
CTBH				i S	Sn	12 33 33.7	+0.1
PAGZ	**Pagadian**	**1.39**	**355**	eP	Pn	12 33 25.0	+0.6
PAGZ				eS	Sn	12 33 42.1	+0.5
ZCP	**Zamboanga City**	**1.49**	**289**	iP	Pn	12 33 26.6	+0.7
ZCP				i S	Sn	12 33 44.2	0.0
KCP	**Kidapawan**	**1.67**	**71**	eP	Pn	12 33 26.0	-2.4
KCP				i S	Sn	12 33 47.7	-1.0
BUKP	**Musuan**	**2.10**	**47**	i P	Pn	12 33 35.6	+1.4
DDMP	**Don Marcelino,**	**2.23**	**99**	eP	Pn	12 33 36.6	+0.6
DDMP				eS	Sn	12 34 03.4	+1.1
CGP	**Cagayan de Oro**	**2.31**	**31**	eP	Pn	12 33 39.1	+1.9
CGP				eS	Sn	12 34 06.8	+2.3

*NEIC **03** 12:41:08.9±2.5, 24°.1S±0°.2×179°.87W±0°.07, h509km±16km, mb4.3/19, Error ellipse: s-maj=25.8km s-min=9.5km az=186.0*
*IDC **03** 12:41:09.7±1.9, 23°.98S×179°.93E, h515km±19km, mb3.6/10, mbtmp4.4/13, Error ellipse: s-maj=27.2km s-min=15.4km az=158.0*

ISC 03 12:41:10.1±0.7, 24°.0S±0°.1×180°.0E±0°.1, h526km, n47, σ1°23/48, mb4.2/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.47**	**343**	P	**P**	**12 42 51.9**	**-0.4**
	9.5nm,0.5s,baz=240,slow=23,SNR=33						
MSVF	**Nonsavu**	**6.47**	**343**	P	**P**	**12 42 51.7**	**-0.6**
MARNC	**Mare, Loyalty**	**11.30**	**280**	P	**P**	**12 43 41.5**	**+0.1**
MARNC	**Mare, Loyalty**	**11.30**	**280**	P	**P**	**12 43 41.9**	**+0.5**
PINNC	**Pines Island,**	**11.60**	**274**	P	**P**	**12 43 45.5**	**+1.0**
PINNC	**Pines Island,**	**11.60**	**274**	P	**P**	**12 43 46.2**	**+1.7**
YATNC	**Mamie plateau,**	**12.20**	**276**	P	**P**	**12 43 52.6**	**+1.8**
DZM	**Mont Dzumac**	**12.61**	**276**	P	**P**	**12 43 55.5**	**+0.3**
	2.7nm,0.6s,baz=112,slow=13,SNR=9.2						
DZM	**Mont Dzumac**	**12.61**	**276**	P	**P**	**12 43 57.2**	**+2.0**
DZM	**Mont Dzumac**	**12.61**	**276**	P	**P**	**12 43 57.8**	**+2.6**
NOUC	**Port Laguerre**	**12.73**	**276**	P	**P**	**12 44 00.3**	**+4.0**
URZ	**Urewera**	**14.45**	**189**	P	**P**	**12 44 13.1**	**-0.9**
	6.1nm,0.5s,baz=118,slow=1.6,SNR=10						
URZ	**Urewera**	**14.45**	**189**	P	**P**	**12 44 12.3**	**-1.7**
BKZ	**Black Stump Fm**	**15.43**	**190**	P	**P**	**12 44 22.6**	**-1.8**
BKZ				IAmb	IAmb	12 44 30.7	
	comp=Z,11nm,1.2s						
QRZ	**Quartz Range**	**17.93**	**199**	P	**P**	**12 44 48.5**	**+0.2**
LTZ	**Lake Taylor**	**19.81**	**197**	P	**P**	**12 45 05.3**	**-0.2**
LTZ				IAmb	IAmb	12 45 20.3	
	comp=Z,7.7nm,1.1s						
ARMA	**Armidale**	**25.98**	**249**	P	**P**	**12 46 01.5**	**+0.5**
ARMA				IAmb	IAmb	12 46 24.5	
	comp=Z,28nm,1.5s						
CTA	**Charters Tower**	**31.46**	**270**	P	**P**	**12 46 49.1**	**+0.4**
	comp=Z,15nm,0.5s,baz=92,slow=12,SNR=14						
	comp=Z,15nm,0.5s						
CTAO	**Charters Tower**	**31.46**	**270**	P	**P**	**12 46 49.1**	**+0.4**
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**12 47 14.2**	**-0.2**
	comp=Z,14nm,0.8s,baz=119,slow=7.0,SNR=7.1						
	comp=Z,14nm,0.8s						
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**12 47 14.6**	**+0.2**
COEN	**Coen**	**36.11**	**279**	P	**P**	**12 47 27.0**	**-0.8**
COEN				IAmb	IAmb	12 47 42.9	
	comp=Z,8.2nm,1.1s						
AS31	**Alice Springs**	**42.00**	**261**	P	**P**	**12 48 15.2**	**-0.2**
ASAR	**Alice Springs**	**42.00**	**261**	P	**P**	**12 48 15.0**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=98,slow=7.2,SNR=54						
ASAR				ScP	**ScP**	**12 53 01.8**	**+3.0**
	comp=Z,0.8nm,0.7s,baz=83,slow=4.6,SNR=4.6						
	comp=Z,3.3nm,0.7s						
ASAR	**Alice Springs**	**42.00**	**261**	P	**P**	**12 48 14.9**	**-0.6**
WR0	**Warramunga Arr**	**42.19**	**266**	P	**P**	**12 48 16.0**	**-1.0**
WR0				IAmb	IAmb	12 48 16.6	
	comp=Z,4.9nm,0.8s						
WB2	**Warramunga Arr**	**42.37**	**266**	P	**P**	**12 48 17.8**	**-0.6**
WB2				IAmb	IAmb	12 48 18.1	
	comp=Z,6.6nm,0.6s						
WRAB	**Tennant Creek**	**42.37**	**266**	P	**P**	**12 48 17.5**	**-0.9**
WRAB				IAmb	IAmb	12 48 18.1	
	comp=Z,5.8nm,0.8s						
WB0	**Warramunga Arr**	**42.38**	**266**	P	**P**	**12 48 17.6**	**-0.7**
WB0				IAmb	IAmb	12 48 18.2	
	comp=Z,11nm,0.7s						
WRA	**Warramunga Arr**	**42.38**	**266**	P	**P**	**12 48 17.5**	**-1.0**
	comp=Z,7.3nm,0.6s

SPSI Sidrap Palu 9.94 294 P **Pn 12 49 22.7 +0.6**
FITZ Fitzroy Crossi 10.46 197 P **Pn 12 49 29.2 +0.1**
2.2nm,0.4s,baz=44,slow=14,SNR=20
FITZ S **Sn 12 51 20.7 -3.8**
15nm,0.6s,baz=137,slow=13,SNR=7.2
WRA Warramunga Arr 12.93 156 P **Pn 12 50 04.0 +1.8**
1.7nm,0.6s,baz=325,slow=14,SNR=15
WRA S **Sn 12 52 23.3 -1.2**
8.7nm,0.7s,baz=330,slow=21,SNR=12
ASAR Alice Springs 16.24 163 P **P 12 50 46.4 +0.7**
1.0nm,0.6s,baz=330,slow=9.2,SNR=21
ASAR S **Sn 12 53 43.8 -0.8**
2.0nm,0.6s,baz=346,slow=25,SNR=6.7
CTA Charters Tower 20.62 127 LR LR 13 00 34.9
comp=Z,75nm,20.1s,baz=256,slow=39
KASI Kota Agung 24.35 274 P **P 12 52 05.4 -5.5**
SONM Songino Array 59.11 343 P **P 12 56 54.5 +2.3**
1.0nm,0.8s,baz=173,slow=8.2,SNR=6.4
1.0nm,0.8s
PETK Petropavlovsk- 65.67 19 P **P 12 57 38.2 +2.6**
3.2nm,1.0s,baz=181,slow=5.9,SNR=4.2
3.2nm,1.0s
MKAR Makanchi Array 68.52 328 P **P 12 57 55.3 +1.5**
0.6nm,0.5s,baz=121,slow=7.6,SNR=11
0.6nm,0.5s
ZALV Zalesovo Beam 72.05 334 P **P 12 58 16.4 +1.2**
0.9nm,0.5s,baz=123,slow=5.5,SNR=4.1
0.9nm,0.5s

TAP 03 13:06:42.8, 24°.49N×121°.72E, h35km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.17**	**45**	*i* P	Pn	13 06 49.7	-1.0
TWC	baz=47			S	Sn	13 06 54.4	-3.0
LATG	**Datong**	**0.18**	**286**	*i* P	Pn	13 06 49.5	-1.3
LATG	baz=285			*i* S	Sn	13 06 54.7	-2.8
ENTT	**Nioudou**	**0.20**	**319**	*e*P	Pn	13 06 48.7	-1.8
ENTT	baz=318			*e*S	Sn	13 06 54.1	-2.9
TWE	**Neicheng**	**0.24**	**349**	*i* P	Pn	13 06 50.4	-0.1
TWE	baz=352			*e*S	Sn	13 06 56.7	+0.1
FUSB	**Fushanzhiwuyua**	**0.30**	**337**	*i* P	Pn	13 06 51.0	+0.2
FUSB	baz=336			*i* S	Sn	13 06 57.0	0.0
NACB	**Ninganchiao**	**0.33**	**200**	*e*P	Pn	13 06 51.0	0.0
NACB	baz=207			S	Sn	13 06 57.6	+0.5
YHNB	**Yeheng**	**0.36**	**301**	*i* P	Pn	13 06 52.0	+0.5
YHNB	baz=300			*i* S	Sn	13 06 57.8	-0.1
NSK	**Sanguang**	**0.38**	**300**	*e*P	Pn	13 06 51.2	-0.5
NSK	baz=300			*e*S	Sn	13 06 57.4	-0.7
TIPB	**Shuangxi**	**0.49**	**12**	*e*P	Pn	13 06 53.3	-0.1
TIPB	baz=6.0			*e*S	Sn	13 07 01.7	+0.9
	baz=6.0						

JMA 03 13:06:57.5±0.3, 24°.3N±0°.5×123°.6E±0°.9, h18km±1km, MV1.8/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.14**	**65**	*i* P	Pg	13 07 01.5	0.0
IRIF				S	Sb	13 07 04.2	+0.1
HATJ	**Hateruma jima**	**0.29**	**138**	*i* P	Pg	13 07 03.6	-0.2
HATJ				S	Sg	13 07 07.9	-0.3
JKRS	**Kuro-shima**	**0.39**	**95**	P	Pg	13 07 05.4	-0.1
JKRS				S	Sg	13 07 11.0	+0.1
JIJ	**Ishigaki jima**	**0.51**	**80**	P	Pg	13 07 07.3	-0.5
JIJ				S	Sg	13 07 14.2	-0.5
JTJ	**Tarama**	**1.08**	**70**	P	Pn	13 07 17.9	+0.2
JTJ				S	Sg	13 07 33.0	+0.5

*NEIC **03** 13:36:06.7±1.0, 33°.3S±0°.1×178°.4W±0°.2, h10km±2km, mb4.4/5, Error ellipse: s-maj=33.9km s-min=4.7km az=120.0*
*IDC **03** 13:36:07.5±3.2, 33°.18S×178°.81W, h0km, mb3.8/4, mbtmp3.9/5, ML3.7/1, MS3.1/1, Error ellipse: s-maj=63.8km s-min=32.4km az=106.0*
ISC 03 13:36:08.4±2.8, 33°.3S±0°.1×178°.2W±0°.4, h34km, n17, σ0°.74/17, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.10**	**213**	Pn	**Pn**	**13 37 23.0**	**+0.6**
URZ	**Urewera**	**6.23**	**216**	Pn	**Pn**	**13 37 39.3**	**+1.4**
URZ	1.7nm,0.3s,baz=358,slow=5.0,SNR=14			Sn	**Sn**	**13 38 47.7**	**-0.2**
	2.9nm,0.3s,baz=192,slow=20,SNR=8.0						
	3.8nm,0.3s						
URZ	**Urewera**	**6.23**	**216**	Pn	**Pn**	**13 37 37.7**	**-0.2**
BKZ	**Black Stump Fm**	**7.24**	**215**	Pn	**Pn**	**13 37 52.1**	**+0.3**
MSWZ	**Moikau Station**	**9.61**	**211**	Pn	**Pn**	**13 38 23.5**	**-0.8**
DZM	**Mont Dzumac**	**17.61**	**306**	LR	LR	13 45 35.7	
	comp=Z,61nm,19.1s,baz=36,slow=33						
CTA	**Charters Tower**	**34.22**	**284**	P	**P**	**13 42 51.9**	**+0.8**
	1.3nm,0.7s,baz=119,slow=11,SNR=1.6						
	1.3nm,0.7s						
CTAO	**Charters Tower**	**34.22**	**284**	P	**P**	**13 42 51.6**	**+0.6**
CTAO				IAmb	IAmb	13 43 12.4	
	comp=Z,9.4nm,1.4s						
KRVT	**Keravat (AS076**	**40.06**	**310**	P	**P**	**13 43 40.3**	**-0.3**
	comp=Z,26nm,0.7s,baz=141,slow=4.7,SNR=5.8						
ASAR	**Alice Springs**	**42.88**	**270**	P	**P**	**13 44 03.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=108,slow=7.4,SNR=12						
	comp=Z,0.8nm,0.7s						
WR0	**Warramunga Arr**	**43.95**	**275**	P	**P**	**13 44 11.5**	**-0.9**
WR0				IAmb	IAmb	13 44 39.7	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**44.12**	**275**	P	**P**	**13 44 12.9**	**-0.8**
WB2				IAmb	IAmb	13 44 49.6	
	comp=Z,7.6nm,1.4s						
WRAB	**Tennant Creek**	**44.12**	**275**	P	**P**	**13 44 12.8**	**-1.0**
WRA	**Warramunga Arr**	**44.13**	**275**	P	**P**	**13 44 12.9**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=118,slow=8.0,SNR=33						
	comp=Z,1.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.26**	**272**	P	**P**	**13 45 16.7**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=104,slow=7.4,SNR=1.2						
	comp=Z,0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**52.26**	**272**	P	**P**	**13 45 16.3**	**-0.2**
FINES	**FINESS Array B**	**147.81**	**338**	PKPbc	**PKPab**	**13 55 51.9**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=55,slow=5.3,SNR=3.9						

*JMA **03** 13:44:06.4±0.1, 24°.2N±0°.8×122°.4E±0°.2, h70km±1km, MV2.3/10, NW OFF ISHIGAKIJIMA IS*
*TAP **03** 13:44:06.6, 24°.25N×122°.42E, h70km, ML2.9, D*
ISC 03 13:44:06.8±1.3, 24°.20N±0°.03×122°.42E±0°.02, h64km±11km, n59, σ0°.80/116, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.54**	**62**	P	**Pn**	**13 44 19.7**	**+0.2**
JYNG				S	**Sn**	**13 44 29.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.60**	**64**	*i* P	**Pn**	**13 44 20.4**	**+0.2**
YOJ	baz=61			*i* S	**Sn**	**13 44 30.2**	**+0.3**
	baz=61						
YOJ	**Yonaguni jima**	**0.60**	**64**	P	**Pn**	**13 44 20.3**	**+0.2**
YOJ				S	**Sn**	**13 44 30.4**	**+0.5**
TWC	**Suao**	**0.67**	**308**	P	**Pn**	**13 44 20.9**	**0.0**
TWC	baz=302			S	**Sn**	**13 44 31.0**	**-0.3**
	baz=302						
ETL	**Fush Village**	**0.73**	**267**	P	**Pn**	**13 44 21.6**	**-0.1**
ETL	baz=263			S	**Sn**	**13 44 32.7**	**0.0**
	baz=263						
NACB	**Ninganchiao**	**0.76**	**269**	P	**Pn**	**13 44 21.9**	**-0.1**
	baz=264						
NACB				*i* S	**Sn**	**13 44 33.0**	**-0.1**
	baz=264						
TWD	**Chiawan**	**0.76**	**261**	P	**Pn**	**13 44 22.0**	**0.0**
	baz=251						
TWD				S	**Sn**	**13 44 33.2**	**-0.1**
	baz=251						
HWA	**Hwalien**	**0.78**	**254**	P	**Pn**	**13 44 22.1**	**-0.1**
	baz=250						
HWA				*i* S	**Sn**	**13 44 34.5**	**+0.9**
	baz=250						
TEYL	**Yanliau Villag**	**0.82**	**247**	P	**Pn**	**13 44 23.1**	**+0.4**
	baz=240						
TEYL				*i* S	**Sn**	**13 44 35.0**	**+0.5**
	baz=240						
NTC	**Toucheng**	**0.85**	**321**	P	**Pn**	**13 44 23.1**	**0.0**
	baz=327						
NTC				S	**Sn**	**13 44 34.1**	**-1.0**
	baz=327						
ETLH	**Xiulin Townshi**	**0.86**	**271**	P	**Pn**	**13 44 23.0**	**-0.3**
	baz=267						
ETLH				S	**Sn**	**13 44 35.5**	**-0.1**
	baz=267						
TWE	**Neicheng**	**0.86**	**307**	*e*P	**Pn**	**13 44 23.9**	**+0.6**
	baz=311						
TWE				*e*S	**Sn**	**13 44 36.2**	**+0.7**
	baz=311						
ETM	**Tongmen**	**0.88**	**255**	*e*P	**Pn**	**13 44 21.8**	**-1.7**
	baz=252						
ETM				S	**Sn**	**13 44 35.8**	**0.0**
	baz=252						
LATG	**Datong**	**0.88**	**293**	P	**Pn**	**13 44 23.8**	**+0.1**
	baz=289						
LATG				S	**Sn**	**13 44 36.0**	**-0.1**
	baz=289						
ENTT	**Nioudou**	**0.90**	**300**	P	**Pn**	**13 44 23.2**	**-0.6**
	baz=290						
ENTT				S	**Sn**	**13 44 35.8**	**-0.5**
	baz=290						
TWB1	**Santiao Chiao**	**0.90**	**334**	*i* P	**Pn**	**13 44 23.2**	**-0.6**
	baz=323						
TWB1				S	**Sn**	**13 44 34.8**	**-1.5**
	baz=323						
TEGC	**Jichi Village**	**0.94**	**239**	P	**Pn**	**13 44 24.1**	**-0.1**
	baz=230						
TEGC				S	**Sn**	**13 44 37.4**	**+0.2**
	baz=230						
TIPB	**Shuangxi**	**0.94**	**325**	P	**Pn**	**13 44 23.9**	**-0.4**
	baz=323						
TIPB				*e*S	**Sn**	**13 44 35.9**	**-1.4**
	baz=323						
FUSB	**Fushanzhiwuyua**	**0.95**	**307**	P	**Pn**	**13 44 24.9**	**+0.5**
	baz=312						
FUSB				*e*S	**Sn**	**13 44 36.9**	**-0.5**
	baz=312						
ESL	**Shilin**	**0.98**	**247**	*i* P	**Pn**	**13 44 24.8**	**0.0**
	baz=251						
ESL				*i* S	**Sn**	**13 44 38.5**	**+0.4**
	baz=251						
SXI1	**Grass Mountain**	**1.02**	**331**	P	**Pn**	**13 44 25.1**	**-0.3**
	baz=329						
SXI1				S	**Sn**	**13 44 38.4**	**-0.8**
	baz=329						
NWF	**Wu-fen Shan**	**1.05**	**326**	P	**Pn**	**13 44 25.1**	**-0.6**
	baz=324						
NWF				S	**Sn**	**13 44 38.5**	**-1.2**
	baz=324						
WFSB	**Wu-fen Shan**	**1.05**	**326**	P	**Pn**	**13 44 25.8**	**+0.1**
	baz=324						
WFSB				S	**Sn**	**13 44 38.3**	**-1.4**
	baz=324						
EGFH	**Guangfu**	**1.05**	**240**	P	**Pn**	**13 44 25.9**	**+0.2**
	baz=233						
EGFH				S	**Sn**	**13 44 40.1**	**+0.4**
	baz=233						
WHF	**Hehuan Shan**	**1.06**	**268**	*i* P	**Pn**	**13 44 26.3**	**+0.2**
	baz=257						
WHF				*e*S	**Sn**	**13 44 40.2**	**-0.4**
	baz=257						
YHNB	**Yeheng**	**1.06**	**297**	P	**Pn**	**13 44 26.3**	**+0.4**
	baz=287						
YHNB				S	**Sn**	**13 44 39.9**	**-0.2**
	baz=287						
FUSS	**Fushou**	**1.08**	**273**	P	**Pn**	**13 44 26.7**	**+0.4**
	baz=271						
FUSS				*i* S	**Sn**	**13 44 41.0**	**+0.3**
	baz=271						
TWT	**Tachien**	**1.14**	**273**	P	**Pn**	**13 44 27.3**	**+0.4**
	baz=271						
TWT				*i* S	**Sn**	**13 44 42.7**	**+0.7**
	baz=271						
CHGB	**Renai**	**1.15**	**264**	P	**Pn**	**13 44 27.7**	**+0.5**
	baz=253						
CHGB				S	**Sn**	**13 44 42.4**	**+0.1**
	baz=253						
HGSD	**Ruisui**	**1.15**	**233**	P	**Pn**	**13 44 26.9**	**0.0**
	baz=226						
HGSD				S	**Sn**	**13 44 43.1**	**+1.1**
	baz=226						
TDCB	**Techi**	**1.16**	**273**	*e*P	**Pn**	**13 44 28.2**	**+1.0**
	baz=271						
TDCB				S	**Sn**	**13 44 42.2**	**-0.1**
	baz=271						
OWD	**Renai**	**1.16**	**258**	*e*P	**Pn**	**13 44 27.9**	**+0.6**
	baz=256						
OWD				S	**Sn**	**13 44 42.5**	**-0.1**
	baz=256						
IRIF	**Iriomote-Funau**	**1.20**	**83**	P	**Pn**	**13 44 27.9**	**+0.3**
IRIF				*e*S	**Sn**	**13 44 43.5**	**+0.3**
WUSB	**Renai**	**1.21**	**261**	P	**Pn**	**13 44 28.7**	**+0.9**
	baz=253						
WUSB				S	**Sn**	**13 44 43.7**	**+0.1**
	baz=253						
EHY	**Hungye**	**1.22**	**236**	P	**Pn**	**13 44 28.2**	**+0.3**
	baz=233						
EHY				S	**Sn**	**13 44 43.0**	**-0.6**
	baz=233						
NFF	**Wufeng Townshi**	**1.27**	**290**	*e*P	**Pn**	**13 44 28.6**	**+0.1**
	baz=287						
NFF				S	**Sn**	**13 44 44.8**	**0.0**
	baz=287						
HATJ	**Hateruma jima**	**1.27**	**96**	*e*S	**Sn**	**13 44 45.5**	**+0.7**
YULB	**Yu-li**	**1.30**	**232**	P	**Pn**	**13 44 29.2**	**+0.2**
	baz=240						
YULB				S	**Sn**	**13 44 45.9**	**+0.2**
	baz=240						
EYUL	**Yuli**	**1.32**	**230**	P	**Pn**	**13 44 29.9**	**+0.7**
	baz=239						
EYUL				*e*S	**Sn**	**13 44 46.5**	**+0.6**
	baz=239						
TWF1	**Yuli**	**1.33**	**231**	P	**Pn**	**13 44 29.6**	**+0.3**
	baz=239						
TWF1				*e*S	**Sn**	**13 44 46.7**	**+0.4**
	baz=239						
WHP	**Taichung City**	**1.35**	**274**	P	**Pn**	**13 44 31.1**	**+1.4**
	baz=268						
WHP				S	**Sn**	**13 44 48.1**	**+1.2**
	baz=268						
WPL	**Puli Township**	**1.35**	**263**	S	**Sn**	**13 44 47.2**	**+0.5**
	baz=257						
WCS	**Beigang Elemen**	**1.39**	**265**	P	**Pn**	**13 44 30.3**	**+0.2**
	baz=259						
WCS				S	**Sn**	**13 44 48.1**	**+0.5**
	baz=259						
SSLB	**Suanglung**	**1.40**	**253**	*e*P	**Pn**	**13 44 32.9**	**+2.6**
	baz=256						
SSLB				*i* S	**Sn**	**13 44 47.9**	**-0.2**
	baz=256						
SMLT	**Sun Moon Lake**	**1.43**	**258**	*e*P	**Pn**	**13 44 33.5**	**+2.8**
	baz=250						
SMLT				S	**Sn**	**13 44 48.9**	**+0.2**
	baz=250						
FULB	**Fuli**	**1.43**	**226**	*i* P	**Pn**	**13 44 30.9**	**+0.2**
	baz=217						
FULB				*e*S	**Sn**	**13 44 49.2**	**+0.5**
	baz=217						
JKRS	**Kuro-shima**	**1.45**	**88**	P	**Pn**	**13 44 31.6**	**+0.7**
JKRS				S	**Sn**	**13 44 49.9**	**+0.9**
TYC	**Yuchr**	**1.46**	**259**	*e*P	**Pn**	**13 44 33.1**	**+2.0**
	baz=253						
TYC				S	**Sn**	**13 44 49.8**	**+0.5**
	baz=253						
YUS	**Yu-Shan**	**1.52**	**243**	P	**Pn**	**13 44 33.3**	**+1.0**
	baz=233						
YUS				S	**Sn**	**13 44 51.6**	**+0.2**
	baz=233						
EHD	**Haiduan**	**1.53**	**227**	*e*P	**Pn**	**13 44 31.0**	**-0.9**
	baz=235						
EHD				*e*S	**Sn**	**13 44 49.6**	**-1.3**
	baz=235						
JIJ	**Ishigaki jima**	**1.58**	**84**	P	**Pn**	**13 44 32.7**	**+0.1**
JIJ				S	**Sn**	**13 44 51.5**	**-0.6**
EDH	**Donghe**	**1.59**	**220**	P	**Pn**	**13 44 32.5**	**-0.3**
	baz=213						
EDH				*e*S	**Sn**	**13 44 50.9**	**-1.6**
	baz=213						
ELDTW	**Lidau**	**1.63**	**232**	P	**Pn**	**13 44 33.4**	**0.0**
	baz=224						
ELDTW				S	**Sn**	**13 44 53.2**	**-0.4**
	baz=224						
LONT	**Longtian**	**1.75**	**223**	P	**Pn**	**13 44 35.1**	**+0.1**
	baz=228						
LONT				S	**Sn**	**13 44 56.4**	**+0.1**
	baz=228						
LDUT	**Ludao**	**1.75**	**210**	*e*P	**Pn**	**13 44 32.8**	**-2.2**
	baz=208						
LDUT				S	**Sn**	**13 44 54.9**	**-1.4**
	baz=208						
STYH	**Taoyuan**	**1.82**	**236**	P	**Pn**	**13 44 36.4**	**+0.5**
	baz=229						
STYH				S	**Sn**	**13 44 58.2**	**+0.2**
	baz=229						
TWG	**Pinlang**	**1.85**	**222**	P	**Pn**	**13 44 36.8**	**+0.5**
	baz=227						
TWG				S	**Sn**	**13 44 58.5**	**-0.1**
	baz=227						
JTJ	**Tarama**	**2.12**	**77**	P	**Pn**	**13 44 40.4**	**+0.4**
JTJ				*e*S	**Sn**	**13 45 05.1**	**-0.2**
LYUB	**Lan-yu**	**2.32**	**200**	P	**Pn**	**13 44 41.9**	**-0.7**
	baz=199						
LYUB				*e*S	**Sn**	**13 45 07.4**	**-2.6**
	baz=199						

*IDC **03** 14:05:41.2±0.8, 43°.95N×147°.00E, h0km, mb3.7/12, mbtmp3.7/13, ML2.2/1, MS3.3/1, Error ellipse: s-maj=24.5km s-min=18.7km az=149.0*
*MOS **03** 14:05:52.2±0.9, 43°.95N×146°.98E, h108km, mb4.3/1, Error ellipse: s-maj=18.7km s-min=14.6km az=92.9*
*JMA **03** 14:05:53.8±0.2, 43°.8N±0°.8×147°.7E±°, h93km±2km, MV4.0/36, E OFF HOKKAIDO*
*SKHL **03** 14:05:53.1±0.1, 43°.90N×147°.00E, h109km±8km, mb4.5/3, msha5.3/2*
ISC 03 14:05:52.7±0.9, 43°.88N±0°.05×147°.08E±0°.06, h95km±7km, n49, σ0°.93/62, mb3.7/12, 1C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.90**	**280**	*d* PN	**Pn**	**14 06 11.8**	**+0.2**
YUK				*i* S	**Sn**	**14 06 25.0**	**-0.8**
YUK				pmax	pmax		
	comp=Z,3μm,0.2s						
YUK				pmax	pmax		
	comp=N,197nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.1s						
YUK				smax	smax		
	comp=E,8μm,0.1s						
YUK	**Yuzh-Kuril'sk**	**0.90**	**280**	*i* P	**Pn**	**14 06 11.9**	**+0.3**
YUK				AMB	AMB	14 06 12.1	
	comp=E,250nm,0.2s						
YUK				*i* S	**Sn**	**14 06 25.4**	**-0.4**
YUK				A	A	14 06 30.0	
	comp=E,250nm,0.2s						
YUK				A	A	14 06 30.0	
	comp=E,430nm,0.2s						
NEM2	**Nemuro 2**	**1.10**	**243**	*i* P	**Pn**	**14 06 14.1**	**+0.2**
NEM2				*e*S	**Sn**	**14 06 29.1**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.11**	**243**	⇓ *i* PN	**Pn**	**14 06 14.1**	**+0.1**
NMR				*i* S	**Sn**	**14 06 29.1**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.11**	**243**	*i* P	**Pn**	**14 06 14.1**	**+0.1**
NMR				*i* S	**Sn**	**14 06 29.2**	**-0.8**
RUSJ	**Misakicho**	**1.34**	**280**	⇑ *i* PN	**Pn**	**14 06 17.6**	**+0.8**
RUSJ				*i* S	**Sn**	**14 06 36.0**	**+1.0**
JRA	**Rausu**	**1.42**	**273**	*i* P	**Pn**	**14 06 18.6**	**+0.9**
JRA				*e*S	**Sn**	**14 06 37.4**	**+0.8**
KUR	**Kuril'sk**	**1.47**	**22**	*d* PN	**Pn**	**14 06 18.4**	**+0.1**
KUR				*e*S	**Sn**	**14 06 37.7**	**+0.1**
KUR				pmax	pmax		
	comp=Z,87nm,0.4s						
KUR				smax	smax		
	comp=N,286nm,0.2s						
KUR				smax	smax		
	comp=E,332nm,0.2s						
KUR	**Kuril'sk**	**1.47**	**22**	*i* P	**Pn**	**14 06 18.7**	**+0.4**
KUR				AMB	AMB	14 06 23.0	
	comp=E,90nm,0.4s						
KUR				*e*S	**Sn**	**14 06 37.8**	**+0.1**
KUR				A	A	14 06 39.9	
	comp=E,250nm,0.2s						
KUR				A	A	14 06 39.9	
	comp=E,240nm,0.2s						
JNSB	**Nemuroshibetsu**	**1.51**	**267**	*i* P	**Pn**	**14 06 19.9**	**+1.1**
JNSB				*e*S	**Sn**	**14 06 39.8**	**+1.3**
JNSB	**Nemuroshibetsu**	**1.51**	**267**	A	A	14 06 19.9	
	comp=E,4.0nm,0.7s,comp=E,4.0nm,2.1s						
JKHN	**Kushirohamanak**	**1.61**	**241**	*e*P	**Pn**	**14 06 20.6**	**+0.5**
JKHN				*e*S	**Sn**	**14 06 40.6**	**-0.3**
JNK	**Nakash**	**1.74**	**261**	*e*P	**Pn**	**14 06 22.2**	**+0.5**
JNK				*e*S	**Sn**	**14 06 43.2**	**-0.6**
AKK	**Akkeshi**	**1.85**	**243**	*e*P	**Pn**	**14 06 23.2**	**+0.1**
AKK				*i* S	**Sn**	**14 06 45.3**	**-0.9**
JAK	**Akkeshi**	**1.95**	**244**	P	**Pn**	**14 06 24.7**	**+0.3**
JAK				*e*S	**Sn**	**14 06 48.0**	**-0.6**
JTKR	**Abashiri--Toko**	**2.30**	**273**	P	**Pn**	**14 06 29.8**	**+0.8**
JTKR				*e*S	**Sn**	**14 06 56.8**	**+0.1**
JAR	**Ashorobuto**	**2.48**	**258**	*e*P	**Pn**	**14 06 32.8**	**+1.4**
JAR				*e*S	**Sn**	**14 07 02.2**	**+1.2**
JOB	**Onbets**	**2.56**	**249**	*e*P	**Pn**	**14 06 33.5**	**+1.0**
JOB				*e*S	**Sn**	**14 07 02.6**	**-0.4**
JMP	**Maruseppu**	**2.69**	**274**	*e*P	**Pn**	**14 06 35.2**	**+0.9**
JMP				*e*S	**Sn**	**14 07 07.1**	**+0.9**
JCH	**Churui**	**3.00**	**246**	*e*P	**Pn**	**14 06 38.8**	**+0.5**
JCH				*e*S	**Sn**	**14 07 12.2**	**-1.2**
JKK2	**Kamakawa 2**	**3.13**	**271**	*e*P	**Pn**	**14 06 41.4**	**+1.3**
ASAJ	**Asahikawa**	**3.25**	**276**	*e*P	**Pn**	**14 06 43.0**	**+1.3**
JSE	**Soyaes**	**3.40**	**290**	*e*P	**Pn**	**14 06 44.3**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.55**	**245**	*e*P	**Pn**	**14 06 46.0**	**+0.3**
JNBK				*e*S	**Sn**	**14 07 24.6**	**-2.2**
YSS	**Yuzh-Sakhalins**	**4.33**	**317**	*e*PN	**Pn**	**14 06 56.8**	**+0.6**
YSS				*e*S	**Sn**	**14 07 42.1**	**-3.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				smax	smax		
	comp=N,10.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.33**	**317**	*e*P	**Pn**	**14 06 57.2**	**+1.0**
YSS				AMB	AMB	14 06 58.2	
	comp=N,20nm,0.4s						
YSS				*e*S	**Sn**	**14 07 44.6**	**-0.9**
YSS				A	A	14 07 56.7	
	comp=N,30nm,0.6s						
YSS				A	A	14 07 56.7	
	comp=N,10.0nm,0.6s						
MJAR	**Matsushiro Arr**	**9.98**	**226**	Pn	Pn	14 08 05.7	-7.5
	baz=68,slow=16,SNR=1.5						
	comp=N,0.5nm,0.5s						
SONM	**Songino Array**	**28.38**	**292**	P	**P**	**14 11 37.4**	**-0.5**
	comp=N,0.5nm,0.5s,baz=96,slow=7.8,SNR=2.3						
	comp=N,0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.23**	**139**	T	T	14 42 43.4	
	baz=330,slow=75,SNR=121						
H11N1	**WAKE ISLAND Hy**	**29.24**	**139**	T	T	14 42 45.5	
	baz=330,slow=75,SNR=152						
H11N3	**WAKE ISLAND Hy**	**29.25**	**139**	T	T	14 42 45.9	
	baz=330,slow=75,SNR=170						
H11S1	**WAKE ISLAND Hy**	**30.20**	**141**	T	T	14 43 52.8	
	baz=331,slow=76,SNR=262						
H11S3	**WAKE ISLAND Hy**	**30.20**	**141**	T	T	14 43 55.4	
	baz=331,slow=76,SNR=240						
H11S2	**WAKE ISLAND Hy**	**30.21**	**141**	T	T	14 43 56.7	
	baz=331,slow=76,SNR=201						
ILAR	**Eielson Array**	**41.41**	**36**	P	**P**	**14 13 29.2**	**-0.1**
	comp=N,0.5nm,0.5s,baz=271,slow=7.4,SNR=7.2						
	comp=N,0.5nm,0.5s						
MKAR	**Makanchi Array**	**44.48**	**297**	P	**P**	**14 13 53.7**	**-0.6**
	comp=N,0.6nm,0.5s,baz=79,slow=7.6,SNR=9.5						
	comp=N,0.6nm,0.5s						
KURK	**Kurchatov**	**45.42**	**304**	P	**P**	**14 14 01.4**	**-0.2**
KURK	**Kurchatov**	**45.42**	**304**	*e*P	**P**	**14 14 01.4**	**-0.2**
KURBB	**Kurchatov Arra**	**45.50**	**304**	P	**P**	**14 14 01.4**	**-0.9**
	comp=N,0.4nm,0.3s,baz=76,slow=9.4,SNR=2.7						
	comp=N,0.4nm,0.3s						
INK	**Inu

comp=N,1.3nm,0.5s,baz=301,slow=10,SNR=7.6
comp=N,1.3nm,0.5s
YKA Yellowknife Ar 55.72 34 LR LR 14 39 25.7
comp=N,25nm,19.6s,baz=16,slow=36
WRA Warramunga Arr 64.57 193 P **P 14 16 20.3 +0.5**
comp=N,0.5nm,0.8s,baz=7.8,slow=6.6,SNR=2.6
comp=N,0.5nm,0.8s
FINES FINESS Array B 64.74 333 P **P 14 16 19.2 -1.1**
comp=N,0.8nm,0.6s,baz=0.0,slow=7.6,SNR=4.1
comp=N,0.8nm,0.6s
NVAR Mina Array Bea 67.55 58 P **P 14 16 40.2 +1.2**
comp=N,0.5nm,0.5s,baz=290,slow=7.1,SNR=6.7
comp=N,0.5nm,0.5s
ASAR Alice Springs 68.29 193 P **P 14 16 44.5 +1.1**
comp=N,0.3nm,0.7s,baz=28,slow=8.4,SNR=2.1
comp=N,0.3nm,0.7s
NB2 NORSAR Subarra 69.47 339 P **P 14 16 49.3 -1.1**
comp=Z,0.4nm,0.4s,baz=30,slow=6.5
NOA NORSAR Array B 69.47 339 P **P 14 16 49.6 -0.8**
comp=Z,0.3nm,0.4s,baz=31,slow=6.6,SNR=4.5
comp=Z,0.3nm,0.4s
PDAR Pinedale Array 69.86 50 P **P 14 16 54.0 +0.6**
comp=Z,0.4nm,0.5s,baz=281,slow=2.1,SNR=6.0
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 82.62 56 P **P 14 18 06.2 +0.6**
comp=Z,0.6nm,0.5s,baz=301,slow=3.0,SNR=9.7
comp=Z,0.6nm,0.5s

ROM 03 14:09:12.7±0.1, 42°.770N±0°.003×13°.257E±0°.004, h14km, ML1.3/2, Error ellipse: s-maj=0.3km s-min=0.2km az=315.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**200**	P	Pg	14 09 16.0	+0.3
T1202				S	Sg	14 09 18.2	+0.4
T1204	**Amatrice, Fraz**	**0.10**	**155**	P	Pg	14 09 16.3	+0.2
T1204				S	Sg	14 09 18.6	+0.3
NRCA	**Norcia**	**0.12**	**301**	P	Pg	14 09 16.4	+0.1
NRCA				S	Sg	14 09 18.8	+0.1
NRCA				AML	AML		
	comp=N,108μm,1.3s						
NRCA				AML	AML		
	comp=E,153μm,0.1s						
MMO1	**Montemonaco**	**0.14**	**22**	P	Pg	14 09 16.7	+0.2
MMO1				S	Sg	14 09 19.6	+0.5
MC2	**Monte Cornacci**	**0.15**	**341**	P	Pg	14 09 17.1	+0.3
MC2				S	Sg	14 09 20.0	+0.5
T1241	**Roccafluvione,**	**0.15**	**56**	P	Pg	14 09 16.9	+0.3
T1241				S	Sg	14 09 19.9	+0.5
T1216	**Preci, Frazion**	**0.21**	**305**	P	Pg	14 09 17.6	0.0
T1216				S	Sb	14 09 21.6	-0.7
LNSS	**Leonessa**	**0.23**	**224**	P	Pg	14 09 18.2	+0.3
LNSS				S	Sb	14 09 22.2	-0.6
LNSS				AML	AML		
	comp=N,94μm,0.1s						
LNSS				AML	AML		
	comp=E,125μm,0.1s						
LNSS				AML	AML		
	comp=N,94μm,0.1s						
T1215	**Vallo di Nera,**	**0.29**	**277**	P	Pg	14 09 19.0	+0.2
T1215				S	Sb	14 09 24.0	-0.4
TERO	**Teramo**	**0.29**	**120**	P	Pg	14 09 19.0	+0.1
TERO				S	Sb	14 09 23.9	-0.7
CSP1	**Cessapalombo**	**0.32**	**353**	P	Pg	14 09 19.8	+0.3
CSP1				S	Sb	14 09 25.1	-0.4

BUC 03 14:11:02.8±0.4, 46°.26N×23°.17E, h12km±3km, ml1.3/3, 8C-10D, Error ellipse: s-maj=3.1km s-min=1.8km az=48.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRGR		**0.62**	**329**	↑S	Sg	14 11 23.8	+0.6
DRGR		**0.62**	**329**	↑S	Sg	14 11 23.8	+0.6
GZR	**Gura Zlata**	**0.91**	**198**	↑P	Pg	14 11 19.5	-0.7
GZR				↓S	Sb	14 11 33.2	+0.7
GZR	**Gura Zlata**	**0.91**	**198**	↑P	Pg	14 11 19.5	-0.7
GZR				↓S	Sb	14 11 33.2	+0.7
LOT	**Lotru**	**0.91**	**152**	↓P	Pb	14 11 21.0	+0.4
LOT				↓S	Sb	14 11 33.2	+0.6
LOT	**Lotru**	**0.91**	**152**	↓P	Pb	14 11 21.0	+0.4
LOT				↓S	Sb	14 11 33.2	+0.6
SIRR	**Siria**	**1.05**	**271**	↓P	Pb	14 11 22.5	-0.4
SIRR				↑S	Sn	14 11 37.7	-0.3
SIRR	**Siria**	**1.05**	**271**	↓P	Pb	14 11 22.5	-0.4
SIRR				↑S	Sn	14 11 37.7	-0.3
VOIR		**1.55**	**121**	↓P	Pb	14 11 30.9	-0.5
VOIR				↑S	Sb	14 11 50.7	-0.3
VOIR		**1.55**	**121**	↓P	Pb	14 11 30.9	-0.5
VOIR				↑S	Sb	14 11 50.7	-0.3

*IDC **03** 14:41:52.1±4.5, 16°.06S×173°.45W, h0km, mb3.8/3, mbtmp3.8/4, MS3.0/3, Error ellipse: s-maj=226.2km s-min=25.8km az=139.0*
ISC 03 14:41:55.8±3.1, 15°.8S±0°.9×173°.4W±0°.8, h35km, n10, σ0°64/7, mb4.1/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.48**	**39**	Pn	**Pn**	**14 42 34.5**	**+0.7**
	14nm,0.3s,baz=242,slow=3.6						
AFI				Sn	**Sn**	**14 43 02.1**	**-0.8**
	13nm,0.3s,baz=230,slow=24,SNR=1.8						
MSVF	**Nonsavu**	**8.41**	**256**	LR	LR	14 46 51.6	
	comp=Z,50nm,21.8s,baz=156,slow=36						
RAR	**Rarotonga**	**13.98**	**115**	LR	LR	14 49 34.5	
	comp=Z,42nm,18.9s,baz=360,slow=33						
DZM	**Mont Dzumac**	**20.04**	**249**	LR	LR	14 52 51.0	
	comp=Z,117nm,18.2s,baz=42,slow=33						
HNR	**Honiara**	**26.76**	**281**	LR	LR	14 56 31.5	
	comp=Z,788nm,19.8s,baz=202,slow=33						
STKA	**Stephens Creek**	**43.82**	**240**	P	**P**	**14 49 58.1**	**-0.6**
	3.4nm,1.0s,baz=104,slow=12,SNR=2.3						
	3.4nm,1.0s						
WRA	**Warramunga Arr**	**49.75**	**257**	P	**P**	**14 50 45.5**	**+0.3**
	0.3nm,0.6s,baz=92,slow=7.0,SNR=6.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.98**	**252**	P	**P**	**14 50 47.3**	**+0.3**
	1.5nm,0.7s,baz=90,slow=7.7,SNR=23						
	1.5nm,0.7s						
BRTR	**Keskin Array B**	**146.50**	**321**	PKPbc	**PKiKP**	**15 01 36.8**	**-0.1**
	1.3nm,0.7s,baz=76,slow=2.1,SNR=6.6						
GERES	**GERESS Array B**	**146.58**	**351**	PKPbc	**PKiKP**	**15 01 36.5**	**-0.1**
	0.2nm,0.4s,baz=25,slow=4.4,SNR=4.5						

*NEIC **03** 14:49:20.6±1.0, 16°.8S±0°.2×178°.4W±0°.2, h530km±6km, mb4.2/14, Error ellipse: s-maj=30.4km s-min=27.2km az=191.0*
*IDC **03** 14:49:21.5±44.0, 17°.02S×178°.17W, h571km±41km, mb3.3/3, mbtmp4.1/4, Error ellipse: s-maj=814.3km s-min=115.7km az=79.0*
ISC 03 14:49:19.7±1.5, 16°.6S±0°.1×178°.2W±0°.2, h550km, n21, σ1°88/21, mb4.1/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.80**	**253**	P	**P**	**14 50 42.7**	**+2.5**
	4.3nm,0.5s,baz=90,slow=14,SNR=6.6						
MSVF	**Nonsavu**	**3.80**	**253**	P	**P**	**14 50 42.2**	**+2.0**
FUNA	**Funafuti**	**8.45**	**342**	P	**P**	**14 51 20.1**	**-1.9**
BKZ	**Black Stump Fm**	**22.95**	**191**	P	**P**	**14 53 38.2**	**-4.0**
BKZ				IAmb	IAmb	14 54 10.4	
	comp=Z,11nm,1.3s						
NNZ	**Nelson**	**25.58**	**195**	P	**P**	**14 54 02.0**	**-3.4**
NNZ				IAmb	IAmb	14 54 05.5	
	comp=Z,30nm,1.4s						
STKA	**Stephens Creek**	**39.48**	**240**	P	**P**	**14 56 01.9**	**-1.3**
	comp=Z,5.1nm,1.0s,baz=95,slow=11,SNR=5.5						
	comp=Z,5.1nm,1.0s						
STKA	**Stephens Creek**	**39.48**	**240**	P	**P**	**14 56 02.4**	**-0.8**
BBOO	**Buckleboo**	**44.26**	**240**	P	**P**	**14 56 39.7**	**-1.1**
WR0	**Warramunga Arr**	**44.93**	**258**	P	**P**	**14 56 45.4**	**-0.8**
WR0				IAmb	IAmb	14 57 19.2	
	comp=Z,7.7nm,1.4s						
WB0	**Warramunga Arr**	**45.09**	**258**	P	**P**	**14 56 46.1**	**-1.3**
WB0				IAmb	IAmb	14 56 47.1	
	comp=Z,4.2nm,1.1s						
WB2	**Warramunga Arr**	**45.11**	**258**	P	**P**	**14 56 46.5**	**-1.1**
WB2				IAmb	IAmb	14 57 18.3	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**45.12**	**258**	P	**P**	**14 56 46.4**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=95,slow=8.2,SNR=34						
	comp=Z,0.7nm,0.5s						
AS31	**Alice Springs**	**45.39**	**253**	P	**P**	**14 56 48.8**	**-0.9**
AS31				IAmb	IAmb	14 56 49.7	
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	**45.39**	**253**	P	**P**	**14 56 49.2**	**-0.5**
	comp=Z,4.7nm,0.4s,baz=89,slow=8.0,SNR=96						
	comp=Z,4.7nm,0.4s						
ASAR	**Alice Springs**	**45.39**	**253**	P	**P**	**14 56 48.6**	**-1.1**
GUMO	**Guam**	**47.29**	**307**	P	**P**	**14 57 05.0**	**+1.0**
FORT	**Forrest**	**50.79**	**244**	P	**P**	**14 57 28.8**	**-1.0**
KNRA	**Kununurra**	**50.88**	**263**	P	**P**	**14 57 31.5**	**+0.9**
KNRA				IAmb	IAmb	14 57 52.7	
	comp=Z,17nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.49**	**260**	P	**P**	**14 57 49.9**	**+0.6**
FITZ				IAmb	IAmb	14 57 56.2	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**73.43**	**180**	P	**P**	**14 59 57.9**	**+1.9**
MAW	**Mawson**	**85.15**	**200**	P	**P**	**15 00 59.9**	**+2.2**

*DDA **03** 14:55:41.7±0.0, 37°.29N×27°.60E, h7km±2km, ML1.9*
*ISK **03** 14:55:41.1, 37°.28N×27°.58E, h5km, ML2.5/7*
ISC 03 14:55:41.8±0.9, 37°.29N±0°.03×27°.62E±0°.03, h12km±9km, n18, σ0°67/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.26**	**213**	P	**Pg**	**14 55 47.4**	**+0.1**
BDRM				*i* AML	AML	14 55 51.0	
	comp=E,503nm,0.2s						
BDRM				S	**Sg**	**14 55 51.3**	**+0.4**
BODT	**Bodrum**	**0.34**	**228**	PG	**Pg**	**14 55 47.6**	**-1.0**
DDIM	**Aydin, Didim**	**0.35**	**299**	P	**Pg**	**14 55 48.9**	**+0.1**
DDIM				S	**Sg**	**14 55 54.2**	**+0.7**
DDIM				*i* AML	AML	14 55 55.0	
	comp=N,224nm,0.1s						
DDIM				*i* AML	AML	14 55 57.0	
	comp=E,214nm,0.5s						
AYDN	**Tasoluk**	**0.42**	**29**	P	**Pg**	**14 55 50.5**	**+0.2**
AYDN				*i* AML	AML	14 55 56.0	
	comp=N,358nm,0.2s						
AYDN				S	**Sg**	**14 55 56.1**	**+0.1**
GCAM	**G?zelcaml?**	**0.52**	**323**	PG	**Pg**	**14 55 51.6**	**-0.3**
GCAM				SG	**Sg**	**14 55 58.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.52**	**323**	P	**Pg**	**14 55 51.7**	**-0.3**
GCAM				S	**Sg**	**14 55 59.1**	**+0.4**
GCAM				*i* AML	AML	14 56 04.0	
	comp=N,209nm,0.6s						
GCAM				*i* AML	AML	14 56 04.0	
	comp=E,213nm,0.3s						
YER	**Yerkesik**	**0.55**	**106**	PG	**Pb**	**14 55 52.9**	**-0.5**
YER				SG	**Sb**	**14 56 01.2**	**-0.1**
MULA	**Mugla, Merkez-**	**0.56**	**93**	P	**Pb**	**14 55 53.3**	**-0.3**
MULA				S	**Sb**	**14 56 01.2**	**-0.4**
MULA				*i* AML	AML	14 56 03.0	
	comp=E,62nm,0.5s						
MULA				*i* AML	AML	14 56 03.0	
	comp=N,45nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**0.69**	**18**	PG	**Pg**	**14 55 55.1**	**-0.2**
AYDB				SG	**Sb**	**14 56 05.4**	**-0.1**
TURN	**Turunc**	**0.71**	**136**	PG	**Pb**	**14 55 55.6**	**-0.6**
TURN	**Turunc**	**0.71**	**136**	P	**Pb**	**14 55 56.0**	**-0.2**
TURN				S	**Sb**	**14 56 07.0**	**+1.1**
TURN				*i* AML	AML	14 56 09.0	
	comp=E,52nm,0.2s						
TURN				*i* AML	AML	14 56 09.0	
	comp=N,77nm,0.6s						
DALY	**Dalyan (Mula)**	**0.95**	**119**	PG	**Pb**	**14 56 00.2**	**0.0**
DALY				SG	**Sn**	**14 56 14.2**	**-0.2**
DGB	**zmir**	**0.96**	**323**	P	**Pg**	**14 56 00.7**	**+0.3**
DGB				S	**Sg**	**14 56 13.5**	**+0.6**
DGB				*i* AML	AML	14 56 15.0	
	comp=N,23nm,0.8s						
DGB				*i* AML	AML	14 56 18.0	
	comp=E,30nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.04**	**80**	P	**Pn**	**14 56 02.7**	**+0.3**
TAVA				S	**Sn**	**14 56 17.2**	**+0.3**
TAVA				*i* AML	AML	14 56 18.0	
	comp=E,9.1nm,0.4s						
TAVA				*i* AML	AML	14 56 19.0	
	comp=N,12nm,0.7s						
ARG	**Arkhangelos**	**1.14**	**159**	PN	**Pb**	**14 56 03.7**	**+0.2**
BLCB	**Balcova**	**1.19**	**337**	PN	**Pg**	**14 56 03.9**	**-0.8**
ZEYE	**Izmir, Urla-Ze**	**1.30**	**317**	P	**Pn**	**14 56 05.8**	**0.0**
ZEYE				S	**Sg**	**14 56 22.5**	**-1.1**
URLA	**Izmir**	**1.34**	**323**	P	**Pn**	**14 56 05.1**	**-1.4**
URLA				S	**Sn**	**14 56 26.3**	**+2.0**

KRSC 03 15:01:55.7±0.3, 60°.79N×167°.02E, h34km±2km, ML3.7, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TILK	**Tilichiki**	**0.55**	**232**	P	Pb	15 02 07.5	+0.4
TILK				S	Sn	15 02 15.7	+0.7
KMSK	**Kamenskaya**	**1.73**	**347**	P	Pb	15 02 25.2	-1.6
KMSK				S	Sb	15 02 47.1	-1.0
OSSR	**Ossora**	**2.52**	**234**	P	Pn	15 02 36.9	+2.8
KBTR	**Krutoberegovo**	**5.09**	**207**	P	Pn	15 03 14.4	+4.9

*BJI **03** 15:02:07.2±0.0, 1°.88N×99°.03E, h163km, mb4.8/53, mB4.9/25*
*IDC **03** 15:02:13.4±0.3, 2°.53N×99°.29E, h155km±1km, mb4.5/31, mbtmp5.0/34, MS3.7/5, Error ellipse: s-maj=9.5km s-min=7.3km az=47.0*
*DJA **03** 15:02:13.9±0.1, 2°.N±2°.×9°.9E±°, h163km±2km, M4.7/61, mb5.0/61, mB5.2/29, MLv4.9/20, Mw(mB)4.6/29, MwMwp6.7/1, Mwp6.6/1*
*NEIC **03** 15:02:13.9±1.6, 2°.49N±0°.06×99°.19E±0°.05, h158km±4km, mb5.1/152, Error ellipse: s-maj=8.8km s-min=7.6km az=190.0*
*MOS **03** 15:02:13.0±0.9, 2°.53N×99°.19E, h169km, mb5.0/62, Error ellipse: s-maj=8.5km s-min=3.7km az=117.9*
ISC 03 15:02:13.3±0.3, 2°.51N±0°.03×99°.22E±0°.03, h156km±2km, h156km:pP-P, n855, σ1°16/922, mb5.0/226, 28C-34D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	**Rantau Prapat**	**0.34**	**303**		**Pn**	**15 02 36.5**	**+1.8**
RPSI					**Sn**	**15 02 52.5**	**+1.6**
PSI	**Prapat**	**0.41**	**315**	P	**Pn**	**15 02 36.5**	**+1.4**
	429nm,0.3s,baz=333,slow=9.0,SNR=892						
PSI				S	**Sn**	**15 02 52.5**	**+0.8**
	3μm,0.8s,baz=306,slow=22,SNR=17						
TSI	**Tuntungan**	**1.18**	**327**	P	**Pn**	**15 02 41.8**	**+1.6**
TSI				S	**Sn**	**15 03 04.0**	**+3.1**
MNSI	**Mandailing Nat**	**1.74**	**168**	P	**Pn**	**15 02 47.7**	**+1.8**
KCSI	**Kotacane, Aceh**	**1.76**	**305**	P	**Pn**	**15 02 47.0**	**+0.9**
KCSI				S	**Sn**	**15 03 12.5**	**+1.2**
GSI	**Gunungsitoli**	**2.03**	**234**	Pn	**Pn**	**15 02 50.0**	**+0.9**
GSI	**Gunungsitoli**	**2.03**	**234**	P	**Pn**	**15 02 49.7**	**+0.6**
GSI				S	**Sn**	**15 03 15.7**	**-1.0**
GSI	**Gunungsitoli**	**2.03**	**234**	P	**Pn**	**15 02 50.5**	**+1.4**
IPM	**Ipoh**	**2.67**	**43**	Pn	**Pn**	**15 02 58.7**	**+1.9**
IPM	**Ipoh**	**2.67**	**43**	P	**Pn**	**15 02 59.4**	**+2.6**
PBSI	**Pulau Batu**	**2.71**	**200**	P	**Pn**	**15 02 57.7**	**+0.4**
PBSI				S	**Sn**	**15 03 30.4**	**-1.0**
BKNI	**Bangkinang**	**2.83**	**140**		**Pn**	**15 03 00.5**	**+1.6**
BKNI	**Bangkinang**	**2.83**	**140**	P	**Pn**	**15 03 00.8**	**+2.0**
BKNI				S	**Sn**	**15 03 35.8**	**+1.7**
BKNI	**Bangkinang**	**2.83**	**140**	P	**Pn**	**15 03 01.0**	**+2.2**
KULM	**Kulim**	**3.11**	**27**	Pn	**Pn**	**15 03 03.5**	**+1.1**
MLSI	**Meulaboh, Aceh**	**3.31**	**302**	P	**Pn**	**15 03 05.3**	**+0.5**
LHMI	**Lhok Sumawe**	**3.52**	**320**	Pn	**Pn**	**15 03 08.7**	**+1.2**
LHMI	**Lhok Sumawe**	**3.52**	**320**	P	**Pn**	**15 03 08.9**	**+1.3**
LHMI	**Lhok Sumawe**	**3.52**	**320**	P	**Pn**	**15 03 09.7**	**+2.1**
SISI	**Saibi**	**3.81**	**182**	P	**Pn**	**15 03 09.7**	**-1.6**
SDSI	**Sungai Dareh**	**4.07**	**147**	P	**Pn**	**15 03 16.3**	**+1.7**
MYKOM	**Kota Tinggi**	**4.69**	**99**		**Pn**	**15 03 23.4**	**+0.7**
PPSI	**Pulau Pagai**	**5.29**	**171**	P	**Pn**	**15 03 30.6**	**-0.1**
	4.5nm8μm275nm,0.7s						
TPRI	**Tanjung Pinang**	**5.54**	**106**	P	**Pn**	**15 03 35.8**	**+1.8**
	0.3nm1μm78nm,0.7s						
JMBI	**JAMBI**	**6.04**	**133**	P	**Pn**	**15 03 42.8**	**+2.2**
	0.9nm3μm287nm,1.1s						
SRIT	**Nakonsritamara**	**6.06**	**4**		**Pn**	**15 03 41.5**	**+0.6**
DSRI	**Dabo**	**6.13**	**119**	P	**Pn**	**15 03 43.7**	**+1.9**
	0.3nm893nm97nm,0.9s						
MASI	**Maura Aman, Be**	**6.37**	**152**	P	**Pn**	**15 03 46.0**	**+0.9**
	1.6nm161nm,0.9s						
KSI	**Kapahiang**	**6.99**	**151**	P	**Pn**	**15 03 53.2**	**-0.1**
MNAI	**Manna**	**7.78**	**151**	Pn	**Pn**	**15 04 02.5**	**-1.3**
MNAI	**Manna**	**7.78**	**151**	P	**Pn**	**15 04 02.3**	**-1.5**
	2.3nm224nm,1.3s						
MNAI	**Manna**	**7.78**	**151**	P	**Pn**	**15 04 03.3**	**-0.5**
PPBI	**Pangkal Pinang**	**8.33**	**124**	P	**Pn**	**15 04 13.5**	**+2.4**
	136nm,1.2s						
LWLI	**Liwa**	**8.90**	**147**	P	**Pn**	**15 04 19.7**	**+0.8**
	10μm74nm,0.6s						
KLI	**Kotabumi**	**9.24**	**142**	P	**Pn**	**15 04 23.7**	**+0.5**
	131nm,0.5s						
DGPR	**DIGLIPUR**	**12.29**	**330**	*e*P	**Pn**	**15 05 02.1**	**-1.1**
DGPR				*e*S	**Sn**	**15 07 11.8**	**-7.5**
STKI	**Sintang**	**12.50**	**101**	P	**P**	**15 05 09.5**	**-1.9**
	89nm,0.9s						
LEM	**Lembang**	**12.50**	**138**	P	**Pn**	**15 05 05.0**	**-1.2**
	21nm,0.4s,baz=24,slow=23,SNR=4.2						
LEM	**Lembang**	**12.50**	**138**	P	**Pn**	**15 05 05.0**	**-1.2**
LEM	**Lembang**	**12.50**	**138**	P	**Pn**	**15 05 05.3**	**-0.8**
	19nm,1.1s						
SBUM	**Sibu**	**12.99**	**90**	Pn	**Pn**	**15 05 13.1**	**+0.8**
PBKI	**Pangkalan Bun**	**13.48**	**112**	P	**P**	**15 05 20.8**	**-1.6**
	279μm161nm,0.9s						
UBPT	**Khong Chiam**	**14.11**	**26**		**P**	**15 05 28.2**	**-1.1**
XMI	**Christmas Isla**	**14.39**	**154**	P	**P**	**15 05 33.0**	**+0.5**
SMRI	**Semarang**	**14.69**	**130**		**P**	**15 05 35.5**	**-0.2**
SMRI	**Semarang**	**14.69**	**130**	P	**P**	**15 05 35.4**	**-0.3**
	102nm,0.6s						
UGM	**Wanagama**	**15.31**	**133**	P	**P**	**15 05 42.4**	**-0.3**
	149nm,2.2s						
UGM	**Wanagama**	**15.31**	**133**	P	**P**	**15 05 44.2**	**+1.5**
TBJI	**Tambak Boyo**	**15.65**	**126**	P	**P**	**15 05 47.5**	**+1.1**
	159nm,0.7s						
NGJI	**Ngawi**	**15.67**	**129**	P	**P**	**15 05 48.6**	**+2.0**
	186nm,1.0s						
BWJI	**Bawean**	**15.79**	**122**	P	**P**	**15 05 50.2**	**+2.3**
	162nm,1.1s						
CM31	**Chiang Mai Arr**	**15.85**	**359**		**P**	**15 05 49.7**	**+1.1**
CM31	**Chiang Mai Arr**	**15.85**	**359**	P	**P**	**15 05 50.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**15.85**	**359**	P	**P**	**15 05 49.2**	**+0.6**
	64nm,0.7s,baz=191,slow=11,SNR=386						
CMAR				PcP	**PcP**	**15 10 38.0**	**+1.2**
	1.8nm,0.8s,baz=198,slow=2.9,SNR=6.5						
CMAR				ScP	**ScP**	**15 13 56.8**	**0.0**
	3.4nm,0.7s,baz=213,slow=3.7,SNR=19						
CMAR	**Chiang Mai Arr**	**15.85**	**359**		**P**	**15 05 49.7**	**+1.1**
PCJI	**Pacitan**	**15.98**	**132**	P	**P**	**15 05 49.9**	**-0.1**
	79nm,1.1s						
MTKI	**Muara Teweh, K**	**16.05**	**102**	P	**P**	**15 05 52.8**	**+2.0**
	57nm,0.7s						
CHTO	**Chiang Mai**	**16.21**	**359**		**P**	**15 05 53.3**	**+0.8**
CHTO	**Chiang Mai**	**16.21**	**359**	P	**P**	**15 05 53.3**	**+0.8**
CHTO	**Chiang Mai**	**16.21**	**359**	P	**Pn**	**15 05 51.8**	**-0.6**
CHTO	**Chiang Mai**	**16.21**	**359**	P	**P**	**15 05 53.3**	**+0.8**
PWJI	**Pagerwojo**	**16.34**	**130**	P	**P**	**15 05 55.8**	**+1.8**
	101nm,0.7s						
BBKI	**Banjar Baru**	**16.71**	**111**	P	**Pn**	**15 06 00.5**	**+2.0**
	132nm,0.9s						
KKM	**Kota Kinabalu**	**17.31**	**78**	Pn	**Pn**	**15 06 07.1**	**+1.3**
KKM	**Kota Kinabalu**	**17.31**	**78**	P	**Pn**	**15 06 08.8**	**+3.0**
KMMI	**Kalianget**	**17.52**	**123**	P	**Pn**	**15 06 08.8**	**+0.6**
	424nm,1.0s						
ABJI	**Asem Bagus**	**18.14**	**124**	P	**Pn**	**15 06 16.6**	**+1.0**
JAGI	**Jajag, Banyuwa**	**18.46**	**126**	P	**P**	**15 06 17.5**	**+0.2**
JAGI	**Jajag, Banyuwa**	**18.46**	**126**	P	**P**	**15 06 18.2**	**+0.9**
	118nm,1.2s						
JAGI	**Jajag, Banyuwa**	**18.46**	**126**	P	**P**	**15 06 17.8**	**+0.5**
SGKI	**Sangatta, Kali**	**18.63**	**99**	P	**P**	**15 06 18.4**	**-0.8**
	4μm248nm,0.8s						
PALK	**Pallekele**	**19.04**	**285**	P	**Pn**	**15 06 26.2**	**+0.1**
	25nm,0.6s,baz=213,slow=9.8,SNR=16						
PALK				S	**S**	**15 09 54.9**	**+3.3**
	8.3nm,0.4s,baz=287,slow=22,SNR=7.1						
PALK	**Pallekele**	**19.04**	**285**		**Pn**	**15 06 26.1**	**-0.1**
PALK	**Pallekele**	**19.04**	**285**	*i* P	**Pn**	**15 06 25.4**	**-0.7**
PALK				pmax	pmax		
	comp=Z,31nm,0.6s						
PALK	**Pallekele**	**19.04**	**285**	P	**Pn**	**15 06 26.7**	**+0.5**
SRBI	**Singaraja**	**19.11**	**124**	P	**Pn**	**15 06 26.3**	**-0.6**
	comp=Z,5μmcomp=Z,526nm,0.9s						
QIZ	**Qiongzhong**	**19.44**	**32**	P	**Pn**	**15 06 33.8**	**+3.1**
QIZ				S	**S**	**15 10 04.4**	**+5.1**
QIZ				sS	**sS**	**15 10 41.0**	**-4.1**
MPSI	**Mapaga**	**20.79**	**96**	P	**P**	**15 06 44.1**	**+1.7**
	comp=Z,368nmcomp=Z,40nm,1.0s						
TWSI	**Taliwang, Sumb**	**20.86**	**123**	P	**P**	**15 06 43.5**	**+0.4**
	comp=Z,74nm,0.9s						
TTSI	**Tana Toraja**	**21.32**	**105**	P	**P**	**15 06 50.2**	**+2.1**
	comp=Z,2μmcomp=Z,52nm,1.0s						
BRDH	**Bariadhala**	**21.35**	**340**	P	**P**	**15 06 50.3**	**+1.9**
	comp=Z,277nm,0.4s,baz=26,slow=10,SNR=5.8						
MDRS	**Chennai**	**21.50**	**300**	*e*P	**P**	**15 06 52.4**	**+2.4**
MDRS				*i* x	x	15 10 44.7	
SPSI	**Sidrap Palu**	**21.52**	**107**	P	**P**	**15 06 51.1**	**+0.8**
	comp=Z,556nmcomp=Z,61nm,0.7s						
TOLI2	**Tolitoli**	**21.60**	**93**	P	**P**	**15 06 51.4**	**+0.3**
TOLI2				IAmb	IAmb	15 06 53.3	
	comp=Z,66nm,0.8s						
TOLI2	**Tolitoli**	**21.60**	**93**	P	**P**	**15 06 52.3**	**+1.2**
PLAI	**Plampang**	**21.66**	**122**	P	**P**	**15 06 50.7**	**-1.0**
	comp=Z,3μmcomp=Z,203nm,0.8s						
PLAI	**Plampang**	**21.66**	**122**	P	**P**	**15 06 51.5**	**-0.2**
KAPI	**Kappang**	**21.84**	**110**	P

EDFI Ende, Flores 25.04 117 P P 15 07 23.0 -0.4
comp=Z,22nm,0.6s
ITAN ITANAGAR 25.06 348 *e*P **P 15 07 23.1 -0.1**
ITAN IAmb IAmb 15 07 25.7
comp=Z,145nm,0.3s
HYB Hyderabad 25.12 307 *e*P **P 15 07 24.7 +0.7**
HYB IAmb IAmb 15 07 26.3
comp=Z,28nm,0.7s
HYBB Hyderabad (bro 25.12 307 *e*P **P 15 07 24.7 +0.7**
HYBB epP **pP 15 07 56.8 +0.1**
HYBB ⇑esP **sP 15 08 16.2 +1.3**
HYBB *e*S **S 15 11 36.7 -0.7**
ZIRO ZIRO 25.40 349 *e*P **P 15 07 26.2 -0.4**
ZIRO IAmb IAmb 15 07 27.6
comp=Z,98nm,0.5s
MMRI Maumere 25.48 116 P P 15 07 24.5 -2.8
MMRI IAmb IAmb 15 07 34.7
comp=Z,38nm,1.0s
BLSP Bilaspur 25.61 321 *e*P **P 15 07 29.0 +0.6**
GTK Tadong 26.68 339 *e*P **P 15 07 39.2 +1.1**
GTK IAmb IAmb 15 07 40.5
comp=Z,47nm,0.8s
NGP Nagpur 27.00 315 *e*P **P 15 07 42.1 +1.3**
RAMN Ramite 27.15 335 *e*P **P 15 07 42.9 +0.5**
comp=Z,45nm,0.4s
SANI Sanana 27.15 99 P **P 15 07 43.2 +1.0**
comp=Z,11nm,0.7s
BATI Baumata 27.42 118 P **P 15 07 43.3 -1.4**
comp=Z,28nm,0.5s,baz=82,slow=8.9,SNR=12
BATI S **S 15 12 08.9 -4.9**
comp=Z,21nm,0.8s,baz=116,slow=22,SNR=3.8
comp=Z,28nm,0.5s
BATI Baumata 27.42 118 P **P 15 07 44.0 -0.7**
comp=Z,25nm,0.6s
SOEI Soe 27.77 116 P **P 15 07 45.3 -2.6**
SOEI IAmb IAmb 15 07 59.8
comp=Z,51nm,0.8s
SOEI Soe 27.77 116 P **P 15 07 47.4 -0.5**
comp=Z,67nm,0.8s
SOEI Soe 27.77 116 P **P 15 07 48.7 +0.8**
JIRN Jiri 27.94 335 *e*P **P 15 07 50.1 +0.5**
comp=Z,76nm,0.4s
LSA Lhasa 28.11 345 P **P 15 07 51.4 +0.3**
LSA IAmb IAmb 15 07 53.0
comp=Z,27nm,0.6s
LSA Lhasa 28.11 345 P **P 15 07 51.7 +0.6**
LSA pmax pmax
comp=Z,45nm,0.7s
LSA Lhasa 28.11 345 P **P 15 07 51.4 +0.3**
LSA pmax pmax
comp=Z,27nm,0.6s
LSA Lhasa 28.11 345 P **P 15 07 52.5 +1.3**
LSA Lhasa 28.11 345 P **P 15 07 52.5 +1.3**
ALBI Allahabad 28.20 325 *e*P **P 15 07 52.4 +1.0**
AKL Akola 28.20 312 *e*P **P 15 07 52.6 +1.0**
PKI Pulchoki 28.21 333 *e*P **P 15 07 51.9 0.0**
comp=Z,31nm,0.5s
PKIN Phulchoki 28.22 333 *e*P **P 15 07 51.8 -0.1**
comp=Z,29nm,0.4s
GUN Gumba 28.29 334 *e*P **P 15 07 53.3 +0.6**
comp=Z,126nm,0.4s
DMN Daman 28.38 333 *e*P **P 15 07 53.4 +0.1**
comp=Z,22nm,0.3s
LBMI Labuha 28.45 96 P **P 15 07 54.8 +0.9**
comp=Z,28nm,0.8s
NLAI Namlea 28.45 101 P **P 15 07 54.5 +0.7**
comp=Z,2µmcomp=Z,37nm,0.7s
CD2 Chengdu 28.57 8 *e*P **P 15 07 55.7 +0.9**
GKN Gorkha 28.93 333 *e*P **P 15 07 58.3 +0.2**
comp=Z,49nm,0.3s
GIRL Giralia 28.98 150 P **P 15 07 57.5 -0.9**
ENH Enshi 29.28 18 P **P 15 08 00.0 -1.0**
BHPL Bhopal 29.50 316 *e*P **P 15 08 02.5 -0.6**
BHPL IAmb IAmb 15 08 03.8
comp=Z,20nm,0.6s
AAI Ambon 29.61 102 P **P 15 08 04.5 +0.4**
comp=Z,948nmcomp=Z,75nm,0.7s
DANN Dangsing 29.63 332 *e*P **P 15 08 04.6 +0.2**
comp=Z,163nm,0.4s
PYUN Piuthan 29.80 330 *e*P **P 15 08 06.0 +0.2**
comp=Z,56nm,0.5s
MSAI Masohi 30.26 101 P **P 15 08 10.1 +0.2**
comp=Z,715nmcomp=Z,12nm,0.6s
JHNI Jhansi 30.29 321 *e*P **P 15 08 10.0 +0.1**
MBWA Marble Bar 30.93 140 P **P 15 08 14.7 -0.9**
MBWA IAmb IAmb 15 08 21.4
comp=Z,72nm,1.9s
MBWA Marble Bar 30.93 140 P **P 15 08 16.2 +0.6**
comp=Z,9.3nm,2.5s
PSA00 Pilbara Seismi 31.31 141 P **P 15 08 17.7 -1.2**
PSA00 IAmb IAmb 15 08 20.3
comp=Z,57nm,1.6s
PSA00 Pilbara Seismi 31.31 141 P **P 15 08 18.0 -0.9**
LGTI Lohaghat 32.30 328 *e*P **P 15 08 28.4 +0.9**
XAN Xi'an 32.66 15 P **P 15 08 29.4 -1.2**
XAN pP pP 15 09 01.4 -2.3
XAN pmax pmax
comp=Z,25nm,0.6s
FITZ Fitzroy Crossi 33.12 129 P **P 15 08 33.8 -1.0**
comp=Z,42nm,1.0s,baz=307,slow=5.5,SNR=57
comp=Z,42nm,1.0s
FITZ Fitzroy Crossi 33.12 129 P **P 15 08 33.4 -1.4**
baz=33,SNR=48
FITZ Fitzroy Crossi 33.12 129 P **P 15 08 33.6 -1.2**
FITZ IAmb IAmb 15 08 36.0
comp=Z,32nm,0.8s
FITZ Fitzroy Crossi 33.12 129 P **P 15 08 35.2 +0.4**
FAKI Fak Fak 33.46 99 P **P 15 08 37.8 -0.1**
FAKI IAmb IAmb 15 08 38.9
comp=Z,25nm,1.1s
FAKI Fak Fak 33.46 99 P **P 15 08 37.3 -0.6**
comp=Z,22nm,1.1s
FAKI Fak Fak 33.46 99 P **P 15 08 39.6 +1.8**
LZH Lanzhou 33.69 7 ⇑P **P 15 08 39.9 +0.2**
LZH pP pP 15 09 20.8 +7.9
LZH pmax pmax
comp=Z,28nm,1.3s
GOMU GeErMu 33.77 354 P **P 15 08 40.6 -0.1**
GOMU pmax pmax
comp=Z,4.0nm,1.0s
GOMU pmax pmax
comp=Z,80nm,6.0s
LYN LuoYang 34.19 20 ⇓*i*P **P 15 08 42.9 -0.9**
LYN sP sP 15 09 43.8 +8.8
LYN pmax pmax
comp=Z,20nm,0.5s
KNRA Kununurra 34.36 123 P **P 15 08 44.2 -1.3**
baz=34,SNR=39
KNRA Kununurra 34.36 123 P **P 15 08 44.0 -1.5**
KNRA IAmb IAmb 15 08 45.2
comp=Z,22nm,0.6s
KNRA Kununurra 34.36 123 P **P 15 08 44.9 -0.6**
MEEK Meekatharra 34.51 148 P **P 15 08 46.1 -0.6**
baz=35,SNR=20
MEEK Meekatharra 34.51 148 P **P 15 08 45.6 -1.1**
NJ2 Nanjing 34.72 30 *e*P **P 15 08 51.4 +3.0**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
MTN Manton Dam 35.17 116 P **P 15 08 51.3 -1.2**
baz=35,SNR=58
MTN Manton Dam 35.17 116 P **P 15 08 51.3 -1.2**
MTN IAmb IAmb 15 08 52.7
comp=Z,59nm,1.4s
MTN Manton Dam 35.17 116 P **P 15 08 52.3 -0.2**
SMLA Simla 35.27 326 *e*P **P 15 08 53.3 +0.1**
SMLA IAmb IAmb 15 08 55.0
comp=Z,23nm,0.5s
MORW Morawa 35.30 154 P **P 15 08 53.8 +0.3**
baz=36,SNR=11
MORW Morawa 35.30 154 P **P 15 08 53.6 +0.2**
MORW IAmb IAmb 15 08 54.7
comp=Z,17nm,0.8s
MORW Morawa 35.30 154 P **P 15 08 53.7 +0.3**
KDU Kakadu 36.31 115 P **P 15 09 01.6 -0.7**
baz=36,SNR=18
KDU Kakadu 36.31 115 P **P 15 09 01.6 -0.7**
GTA Gaotai 36.74 1 ⇓P **P 15 09 05.4 -0.3**
GTA pP pP 15 09 41.8 +2.5
GTA sP sP 15 09 58.4 +1.3
GTA PcP **PcP 15 11 25.6 +0.8**
GTA ScP **ScP 15 14 56.0 -1.1**
GTA pmax pmax
comp=Z,19nm,0.9s
JOW Kunigami 36.89 46 P **P 15 09 06.5 -0.5**
BLDU Ballidu 36.92 154 P **P 15 09 07.4 +0.1**
baz=37,SNR=19
BLDU Ballidu 36.92 154 P **P 15 09 07.7 +0.5**
TIA Tai'an 37.40 24 P **P 15 09 11.1 -0.1**
TIA pmax pmax
comp=Z,4.0nm,0.5s
HNS HongShan 37.53 20 ⇑P **P 15 09 12.7 +0.4**
HNS pmax pmax
comp=Z,15nm,0.7s
MUN Mundaring 37.90 156 P **P 15 09 16.1 +0.7**
baz=38,SNR=19
MUN Mundaring 37.90 156 P **P 15 09 16.5 +1.1**
KLBR Kellerberrin 38.22 154 P **P 15 09 18.2 +0.1**
baz=38,SNR=22
KLBR Kellerberrin 38.22 154 P **P 15 09 18.3 +0.2**
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 26.2 +0.4**
comp=Z,12nm,0.7s,baz=144,slow=5.8,SNR=3.8
comp=Z,12nm,0.7s
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 26.4 +0.6**
baz=39,SNR=5.7
NWAO P **P 15 09 26.4 +0.6**
baz=39,SNR=5.7
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 26.0 +0.2**
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 26.0 +0.2**
NWAO pmax pmax
comp=Z,142nm,1.9s
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 26.2 +0.4**
NWAO Narrogin (SRO) 39.15 156 P **P 15 09 27.1 +1.3**
comp=Z,34nm,1.2s
WRKA Warakurna 39.31 136 P **P 15 09 26.2 -1.2**
baz=39,SNR=67
WRKA Warakurna 39.31 136 P **P 15 09 26.5 -0.9**
HHC Hu-ho-hao-te 39.77 15 *e*P **P 15 09 33.2 +2.2**
HHC pmax pmax
comp=Z,36nm,0.9s
HHC pmax pmax
comp=Z,250nm,5.7s
BJT Baijiatuau 40.38 20 P **P 15 09 36.4 +0.5**
BJT IAmb IAmb 15 09 38.0
comp=Z,17nm,0.5s
BJT Baijiatuau 40.38 20 P **P 15 09 36.4 +0.5**
BJT pmax pmax
comp=Z,17nm,0.5s
BJI Beijing 40.41 20 P **P 15 09 37.0 +0.9**
BJI pP **pP 15 10 09.1 -1.1**
BJI PcP **PcP 15 11 37.8 +1.7**
BJI pmax pmax
comp=Z,17nm,0.7s
RKGY Rocky Gully 40.52 157 P **P 15 09 38.6 +1.5**
comp=Z,86nm,0.9s
WB0 Warramunga Arr 41.02 124 P **P 15 09 40.7 -0.8**
WB0 IAmb IAmb 15 09 43.2
comp=Z,31nm,1.1s
WRA Warramunga Arr 41.06 125 P **P 15 09 41.3 -0.5**
comp=Z,11nm,0.4s,baz=299,slow=8.9,SNR=210
WRA pP **pP 15 10 16.6 +0.6**
comp=Z,8.1nm,0.8s,baz=302,slow=9.0,SNR=2.8
WRA ScP **ScP 15 15 11.8 -2.2**
comp=Z,1.1nm,0.6s,baz=310,slow=3.5,SNR=4.8
WRA S **S 15 15 35.6 -7.4**
comp=Z,5.5nm,1.0s,baz=294,slow=16,SNR=16
comp=Z,11nm,0.4s
WRA Warramunga Arr 41.06 125 P **P 15 09 40.8 -1.0**
WRA Warramunga Arr 41.06 125 P **P 15 09 40.8 -1.0**
WRAB Tennant Creek 41.07 124 P **P 15 09 41.2 -0.7**
WRAB IAmb IAmb 15 09 43.7
comp=Z,22nm,0.7s
WRAB Tennant Creek 41.07 124 P **P 15 09 41.2 -0.7**
WRAB pmax pmax
comp=Z,22nm,0.7s
WRAB Tennant Creek 41.07 124 P **P 15 09 41.8 -0.1**
WRAB Tennant Creek 41.07 124 P **P 15 09 40.8 -1.1**
WRAB pP **pP 15 10 18.1 +2.0**
WB2 Warramunga Arr 41.07 125 P **P 15 09 41.2 -0.7**
WB1 Warramunga Ar. 41.08 125 P **P 15 09 40.8 -1.2**
WR0 Warramunga Arr 41.24 124 P **P 15 09 42.6 -0.6**
WR0 IAmb IAmb 15 09 45.5
comp=Z,36nm,0.6s
WMQ Urumqi 42.39 348 ⇑*i*P **P 15 09 53.5 +1.2**
WMQ pmax pmax
comp=Z,32nm,1.1s
KSH Kashi 42.47 333 P **P 15 09 52.2 -0.9**
KSH pmax pmax
comp=Z,100nm,0.6s
KBL Kabul 42.48 322 P **P 15 09 52.8 -0.6**
KBL IAmb IAmb 15 09 55.6
comp=Z,37nm,0.6s
KBL Kabul 42.48 322 P **P 15 09 52.8 -0.6**
KBL pmax pmax
comp=Z,37nm,0.6s
KBL Kabul 42.48 322 P **P 15 09 53.7 +0.3**
SNR=13
AS31 Alice Springs 42.62 130 P **P 15 09 53.5 -0.9**
ASAR Alice Springs 42.62 130 P **P 15 09 54.0 -0.5**
comp=Z,8.2nm,0.5s,baz=300,slow=7.8,SNR=106
ASAR ScP **ScP 15 15 17.8 -2.5**
comp=Z,2.7nm,0.9s,baz=303,slow=4.1,SNR=8.8
ASAR S **S 15 16 01.2 -4.7**
comp=Z,2.1nm,0.9s,baz=299,slow=15,SNR=8.4
comp=Z,8.2nm,0.5s
ASAR Alice Springs 42.62 130 P **P 15 09 53.7 -0.8**
ASAR Alice Springs 42.62 130 P **P 15 09 54.0 -0.5**
AS01 Alice Springs 42.66 130 P **P 15 09 53.9 -0.9**
comp=Z,17nm,1.1s
FORT Forrest 43.03 143 P **P 15 09 57.3 -0.2**
baz=43,SNR=6.7
FORT Forrest 43.03 143 P **P 15 09 57.1 -0.4**
FORT Forrest 43.03 143 P **P 15 09 58.3 +0.7**
KSRS Korea Array 43.65 34 P **P 15 10 02.2 -0.2**
comp=Z,4.1nm,0.8s,baz=215,slow=8.8,SNR=15
KSRS ScP **ScP 15 15 22.0 -2.0**
comp=Z,3.3nm,0.8s,baz=233,slow=4.1,SNR=12
comp=Z,4.1nm,0.8s
KS19 Wonju Array Si 43.65 34 P **P 15 10 02.2 -0.3**
WBK Wadi Bani Khal 43.84 300 P **P 15 10 05.8 +1.5**
NRN Naryn 44.02 335 P **P 15 10 06.1 +0.3**
NRN IAmb IAmb 15 10 07.5
comp=Z,77nm,1.2s
NRN Naryn 44.02 335 P **P 15 10 06.1 +0.3**
NRN pmax pmax
comp=Z,77nm,1.2s
SHLS Shalkode 44.14 339 *e*P **P 15 10 04.1 -2.3**
SHLS Shalkode 44.14 339 *e*P **P 15 10 04.2 -2.3**
baz=339
MHTO MHTO 44.16 298 P **P 15 10 06.9 +0.1**
DQM DQM 44.21 296 P **P 15 10 07.8 +0.6**
PDGK Podgornoye 44.28 339 P **P 15 10 07.7 +0.1**
UZB Uzynbulak 44.29 339 *e*P **P 15 10 07.4 -0.2**
UZB Uzynbulak 44.29 339 *e*P **P 15 10 07.4 -0.2**
baz=339
WSAR Wadi Sarin 44.36 301 P **P 15 10 09.9 +1.5**
SNR=5.7
SATY Saty 44.44 338 *e*P **P 15 10 08.2 -0.6**
SATY pmax pmax
comp=Z,14nm,0.9s
SATY Saty 44.44 338 *e*P **P 15 10 08.3 -0.6**
comp=Z,14nm,0.9s,baz=338
DRK Karamyk 44.45 329 P **P 15 10 10.3 +1.1**
JMDO Jabal Madar 44.51 300 P **P 15 10 10.8 +1.2**
KPKS Kokpek 44.69 339 *e*P **P 15 10 10.2 -0.5**
KPKS pmax pmax
comp=Z,13nm,1.2s
KPKS Kokpek 44.69 339 *e*P **P 15 10 10.2 -0.5**
comp=Z,13nm,1.2s,baz=338
SMDO Samad 44.79 301 P **P 15 10 13.3 +1.4**
GAR Garm 44.87 328 P **P 15 10 11.8 -0.4**
BIDO Bidbid 44.90 301 P **P 15 10 14.3 +1.7**
SNR=14
BOOM Boomskoye usch 44.92 336 P **P 15 10 13.1 +0.3**
BOOM IAmb IAmb 15 10 14.4
comp=Z,55nm,1.6s
BOOM Boomskoye usch 44.92 336 P **P 15 10 13.1 +0.3**
BOOM pmax pmax
comp=Z,55nm,1.6s
TNSS Tian-Shan 44.98 337 *e*P **P 15 10 13.9 +0.5**
TNSS Tian-Shan 44.98 337 *e*P **P 15 10 13.9 +0.5**
baz=337
MDOK Medeo 45.04 337 P **P 15 10 14.1 +0.5**
MDOK Medeo 45.04 337 *e*P **P 15 10 12.6 -1.0**
baz=337
JHS Saijyo 45.12 40 P **P 15 10 14.4 +0.1**
AAA Alma-Ata 45.13 337 *e*P **P 15 10 14.3 +0.1**
AAA Alma-Ata 45.13 337 *e*P **P 15 10 14.4 +0.1**
baz=337
CHGR Chuyangaron 45.25 326 P **P 15 10 14.7 -0.6**
CHGR Chuyangaron 45.25 326 P **P 15 10 14.7 -0.6**
CHGR pmax pmax
comp=Z,142nm,1.2s
UCH Uchtor 45.31 344 P **P 15 10 17.7 +1.5**
SNR=9.6
BTK Batken 45.38 329 P **P 15 10 17.0 +0.7**
BTK Batken 45.38 329 P **P 15 10 17.0 +0.7**
BTK pmax pmax
comp=Z,108nm,1.2s
BSY Bisya 45.42 300 P **P 15 10 18.1 +1.3**
SNR=5.8
TKM2 Tokmak 2 45.42 336 P **P 15 10 17.6 +0.9**
SNR=40
TKM2 Tokmak 2 45.42 336 P **P 15 10 17.0 +0.3**
KBK Karagaybulak 45.48 335 P **P 15 10 18.6 +1.5**
SNR=64
SONM Songino Array 45.58 7 P **P 15 10 18.3 +0.6**
comp=Z,27nm,0.6s,baz=190,slow=9.6,SNR=141
SONM PcP **PcP 15 11 54.0 +0.4**
comp=Z,5.4nm,0.6s,baz=190,slow=3.7,SNR=7.8
SONM ScP **ScP 15 15 30.0 -1.9**
comp=Z,3.7nm,0.8s,baz=190,slow=4.3,SNR=12
comp=Z,27nm,0.6s
SONM Songino Array 45.58 7 P **P 15 10 18.1 +0.4**
SONM IAmb IAmb 15 10 19.1
comp=Z,22nm,0.6s
SONM Songino Array 45.58 7 P **P 15 10 18.1 +0.4**
SONM pmax pmax
comp=Z,22nm,0.6s
AML Almayashu 45.60 333 P **P 15 10 19.9 +1.6**
SNR=22
HOQ Hoqain 45.62 301 P **P 15 10 19.7 +1.4**
SNR=5.2
CHKK Chushkaly 45.65 338 *e*P **P 15 10 17.7 -0.5**
CHKK Chushkaly 45.65 338 *e*P **P 15 10 17.7 -0.5**
baz=337
AAK Ala-Archa 45.66 334 P **P 15 10 19.8 +1.3**
SNR=25
AAK Ala-Archa 45.66 334 P **P 15 10 19.3 +0.8**
AAK IAmb IAmb 15 10 21.9
comp=Z,65nm,1.4s
AAK Ala-Archa 45.66 334 P **P 15 10 19.3 +0.8**
AAK pmax pmax
comp=Z,65nm,1.5s
AAK Ala-Archa 45.66 334 *i* P **P 15 10 19.8 +1.3**
SNR=31
AAK Ala-Archa 45.66 334 P **P 15 10 19.0 +0.5**
ULN Ulaanbaatar 45.69 7 P **P 15 10 18.9 +0.2**
ULN Ulaanbaatar 45.69 7 *ce*P **P 15 10 19.2 +0.6**
ULN pmax pmax
comp=Z,29nm,1.3s
ULN Ulaanbaatar 45.69 7 P **P 15 10 19.4 +0.7**
ULN Ulaanbaatar 45.69 7 P **P 15 10 18.4 -0.3**
ULN pP **sP 15 11 04.9 -6.1**
CHMS Chumysh 45.84 335 P **P 15 10 20.5 +0.7**
SNR=23
CHMS Chumysh 45.84 335 *i* P **P 15 10 19.8 0.0**
CHMS pmax pmax
comp=Z,33nm,0.7s
KUU Kurty 45.93 337 *e*P **P 15 10 20.1 -0.4**
KUU pmax pmax
comp=Z,22nm,0.6s
KUU Kurty 45.93 337 *e*P **P 15 10 20.1 -0.4**
comp=Z,22nm,0.6s,baz=337
DMTO DMTO 45.97 292 P **P 15 10 21.3 +0.2**
EKS2 Erkin-Say 45.99 334 P **P 15 10 22.2 +1.2**
SNR=38
JASK Jask - Hormozg 46.01 304 P **P 15 10 22.2 +0.8**
TDK Taldyqorghan 46.12 340 *e*P **P 15 10 20.6 -1.3**
TDK Taldyqorghan 46.12 340 *e*P **P 15 10 20.7 -1.3**
baz=339
USP Ospenovka 46.16 335 P **P 15 10 23.1 +0.8**
SNR=60
ARQ Araqi 46.21 300 P **P 15 10 24.3 +1.3**
OOD Oodnadatta 46.25 133 P **P 15 10 23.1 0.0**
SGDS Sogindy 46.26 335 *e*P **P 15 10 22.9 -0.2**
SGDS pmax pmax
comp=Z,9.0nm,0.8s
SGDS Sogindy 46.26 335 *e*P **P 15 10 22.9 -0.2**
comp=Z,8.7nm,0.8s,baz=335
ZSN Zaisan 46.46 347 *e*P **P 15 10 24.6 0.0**
ZSN Zaisan 46.46 347 *e*P **P 15 10 24.6 0.0**
baz=346
MK31 Makanchi Array 46.51 344 P **P 15 10 24.7 -0.2**
MK31 IAmb IAmb 15 10 25.8
comp=Z,16nm,0.5s
MK31 Makanchi Array 46.51 344 P **P 15 10 24.7 -0.2**
MK31 pmax pmax
comp=Z,16nm,0.5s
MKAR Makanchi Array 46.51 344 P **P 15 10 25.1 +0.2**
comp=Z,18nm,0.4s,baz=156,slow=8.8,SNR=456
MKAR PcP **PcP 15 11 57.0 +0.2**
comp=Z,2.8nm,0.6s,baz=143,slow=3.5,SNR=2.6
comp=Z,18nm,0.4s
MKAR Makanchi Array 46.51 344 P **P 15 10 24.9 0.0**
COEN Coen 46.55 112 P **P 15 10 25.1 -0.5**
baz=46,SNR=13
COEN Coen 46.55 112 P **P 15 10 25.3 -0.5**
COEN Coen 46.55 112 P **P 15 10 25.2 -0.5**
comp=Z,12nm,1.5s
MULG Mulgathing 46.57 137 P **P 15 10 24.3 -1.3**
comp=Z,18nm,3.0s
MAKZ Makanchi 46.61 344 P **P 15 10 25.3 -0.4**
MAKZ IAmb IAmb 15 10 26.5
comp=Z,20nm,0.6s
MAKZ Makanchi 46.61 344 P **P 15 10 25.3 -0.4**
MAKZ pmax pmax
comp=Z,20nm,0.6s
MAKZ Makanchi 46.61 344 P **P 15 10 25.0 -0.7**
HRA Herat 46.80 317 P **P 15 10 26.9 -0.8**
DOK Doka 46.94 293 P **P 15 10 29.4 +0.7**
UOSS Minazif 47.05 302 P **P 15 10 29.1 -0.4**
UOSS Minazif 47.05 302 P **P 15 10 29.8 +0.4**
UOSS Minazif 47.05 302 P **P 15 10 30.2 +0.8**
UOSS Minazif 47.05 302 P **P 15 10 29.7 +0.3**
UOSS pP **pP 15 11 00.5 -4.4**
UOSS sP **sP 15 11 16.5 -6.0**
HATD Hatta, Dubai 47.06 302 P **P 15 10 30.7 +1.1**
HATD Hatta, Dubai 47.06 302 *i* P **P 15 10 30.7 +1.1**
SNR=9.5
ASHO Ashiyiah 47.08 302 P **P 15 10 30.7 +0.9**
ASHO Ashiyiah 47.08 302 *i* P **P 15 10 30.8 +1.1**
SNR=8.9
WHFO Wadi Hawf 47.10 292 P **P 15 10 30.4 +0.3**
ALNE Al Ain 47.12 301 P **P 15 10 31.1 +1.1**
SNR=11
ALNE Al Ain 47.12 301 *i* P **P 15 10 31.2 +1.2**
SNR=12
UMZA Um Al Zommool 47.18 299 P **P 15 10 31.2 +0.7**
MASF Masafi 47.24 303 P **P 15 10 32.5 +1.5**
DZA Taraz 47.28 332 *e*P **P 15 10 30.8 -0.1**
DZA Taraz 47.28 332 *e*P **P 15 10 30.9 -0.1**
baz=332
BANOM Banah 47.33 303 P **P 15 10 32.1 +0.5**
ABTO Aybut 47.42 291 P **P 15 10 31.5 -1.0**
FAQ Al Faqa, Dubai 47.49 302 P **P 15 10 34.0 +1.1**
FAQ Al Faqa, Dubai 47.49 302 *i* P **P 15 10 34.1 +1.2**
SNR=14
NAZ Nazwa, Dubai 47.52 302 P **P 15 10 34.7 +1.6**
ASUD Al Ashush, Dub 47.68 301 P **P 15 10 36.0 +1.7**
SNR=5.8
ASUD Al Ashush, Dub 47.68 301 *i* P **P 15 10 36.0 +1.7**
SNR=68
BTLS Baital 47.80 336 *e*P **P 15 10 34.3 -0.6**
BTLS pmax pmax
comp=Z,8.0nm,0.6s
BTLS Baital 47.80 336 *e*P **P 15 10 34.3 -0.6**
comp=Z,7.9nm,0.6s,baz=336
KK31 Karatay Array 47.83 332 P **P 15 10 34.8 -0.4**
KK31 IAmb IAmb 15 10 37.4
comp=Z,81nm,1.8s
KK31 Karatay Array 47.83 332 P **P 15 10 34.8 -0.4**
KK31 pmax pmax
comp=Z,81nm,1.8s
KKAR Karatay Array 47.83 332 P **P 15 10 35.0 -0.2**
KKAR IAmb IAmb 15 10 37.4
comp=Z,81nm,1.8s
KKAR Karatay Array 47.83 332 P **P 15 10 35.0 -0.2**
KKAR pmax pmax
comp=Z,81nm,1.8s
ZAK Zakamensk 47.83 4 *e*P **P 15 10 35.4 +0.2**
ZAK pmax pmax
comp=Z,6.0nm,0.9s
AJN Ajban 47.95 301 P **P 15 10 37.2 +0.9**
AJN Ajban 47.95 301 *i* P **P 15 10 37.3 +1.0**
SNR=8.1

DGZ Jazzator, Alta 48.08 350 ⇓*i*P **P 15 10 37.6 +0.4**
DGZ pmax pmax
comp=Z,9.0nm,0.5s
MANU Manus Island 48.35 95 P **P 15 10 40.1 +0.5**
MZWR Madinat Zayed 48.63 300 P **P 15 10 42.3 +0.7**
MZR Muzera 48.74 299 P **P 15 10 43.8 +1.2**
MZR Muzera 48.74 299 *i* P **P 15 10 43.7 +1.2**
SNR=9.6
MTSU Mount Surprise 48.92 117 P **P 15 10 44.3 +0.4**
baz=49,SNR=25
MTSU Mount Surprise 48.92 117 P **P 15 10 44.9 +1.0**
PMG Port Moresby 49.21 105 P **P 15 10 45.7 -0.5**
PMG IAmb IAmb 15 10 47.2
comp=Z,20nm,0.8s
PMG Port Moresby 49.21 105 P **P 15 10 45.7 -0.5**
PMG pmax pmax
comp=Z,20nm,0.8s
PMG Port Moresby 49.21 105 P **P 15 10 46.9 +0.7**
comp=Z,28nm,0.8s
PMG Port Moresby 49.21 105 P **P 15 10 45.5 -0.7**
MJAR Matsushiro Arr 49.38 42 PcP **PcP 15 12 07.7 +0.4**
comp=Z,0.8nm,0.7s,baz=221,slow=2.5,SNR=4.2
MJAR ScP **ScP 15 15 47.1 -1.0**
comp=Z,2.4nm,0.8s,baz=235,slow=5.5,SNR=5.0
BBOO Buckleboo 49.47 138 P **P 15 10 47.0 -0.9**
baz=50,SNR=14
BBOO Buckleboo 49.47 138 P **P 15 10 46.9 -1.0**
BBOO Buckleboo 49.47 138 P **P 15 10 47.4 -0.5**
LCRK Leigh Creek 49.57 134 P **P 15 10 50.7 +2.1**
GHWR Ruwais 49.57 300 P **P 15 10 49.4 +0.6**
JRN Qarnain Island 49.90 301 P **P 15 10 52.2 +0.9**
INKA Innaminka 50.00 130 P **P 15 10 53.8 +1.8**
WHYH Whyalla 50.62 138 P **P 15 10 55.9 -0.6**
comp=Z,20nm,1.0s
USA0B Ussuriysk Arra 50.63 30 P **P 15 10 57.6 +1.2**
USA0B Ussuriysk Arra 50.63 30 P **P 15 10 57.6 +1.2**
USA0B pmax pmax
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 50.63 30 P **P 15 10 56.9 +0.5**
comp=Z,7.3nm,0.6s,baz=230,slow=5.6,SNR=17
USRK LR LR 15 33 03.6
comp=Z,69nm,18.3s,baz=196,slow=37
comp=Z,7.3nm,0.6s
SLWR Sila 50.63 299 P **P 15 10 56.9 +0.1**
KURBB Kurchatov Arra 51.03 343 P **P 15 10 59.3 0.0**
KURK Kurchatov 51.09 343 P **P 15 10 59.8 0.0**
KURK IAmb IAmb 15 11 01.0
comp=Z,23nm,1.0s
KURK Kurchatov 51.09 343 P **P 15 10 59.8 0.0**
KURK pmax pmax
comp=Z,23nm,1.0s
KURK Kurchatov 51.09 343 P **P 15 11 00.0 +0.3**
KURK Kurchatov 51.09 343 P **P 15 10 59.3 -0.5**
OTUK Ortayu 51.10 337 P **P 15 11 00.0 +0.1**
CTAO Charters Tower 51.31 118 P **P 15 11 01.5 -0.4**
CTAO Charters Tower 51.31 118 P **P 15 11 01.5 -0.4**
CTAO pmax pmax
comp=Z,13nm,1.5s
GEYT Alibeck 51.54 318 P **P 15 11 03.9 +0.5**
comp=Z,36nm,0.8s,baz=150,slow=6.8,SNR=58
GEYT pP **pP 15 11 39.4 +0.1**
comp=Z,10nm,0.9s,baz=120,slow=8.9,SNR=2.8
comp=Z,36nm,0.8s
GEYT Alibeck 51.54 318 P **P 15 11 03.7 +0.3**
GYA0 ALIBECK ARRAY 51.54 318 P **P 15 11 03.3 -0.1**
GYA0B ALIBECK ARRAY 51.54 318 P **P 15 11 04.0 +0.6**
GYA0B IAmb IAmb 15 11 04.8
comp=Z,50nm,1.0s
SMRA Abu-Samra 51.59 300 P **P 15 11 04.7 +0.9**
HTT Hallett 51.76 137 P **P 15 11 04.9 -0.2**
baz=52,SNR=12
HTT Hallett 51.76 137 P **P 15 11 04.8 -0.3**
SHMA Al-Shehemyia 51.81 301 P **P 15 11 06.3 +0.8**
JMM Marumori 51.83 42 P **P 15 11 05.4 -0.1**
QLP Quilpie 52.19 127 P **P 15 11 09.0 +0.6**
baz=52,SNR=37
QLP Quilpie 52.19 127 P **P 15 11 10.4 +2.1**
BRZS Berezniki 52.40 339 *e*P **P 15 11 08.7 -0.7**
BRZS pmax pmax
comp=Z,5.0nm,0.7s
BRZS Berezniki 52.40 339 *e*P **P 15 11 08.7 -0.7**
comp=Z,5.1nm,0.7s,baz=338
ZAA0 Zalesovo Array 52.62 349 P **P 15 11 11.1 0.0**
ZAA0 IAmb IAmb 15 11 12.9
comp=Z,29nm,0.8s
ZALV Zalesovo Beam 52.62 349 P **P 15 11 11.0 -0.1**
comp=Z,27nm,0.5s,baz=166,slow=6.9,SNR=129
comp=Z,27nm,0.5s
ZALV Zalesovo Beam 52.62 349 P **P 15 11 10.9 -0.1**
STKA Stephens Creek 52.77 134 P **P 15 11 11.9 -0.5**
comp=Z,8.6nm,0.6s,baz=323,slow=5.7,SNR=24
comp=Z,8.6nm,0.6s
STKA Stephens Creek 52.77 134 P **P 15 11 12.2 -0.3**
baz=53,SNR=21
STKA Stephens Creek 52.77 134 P **P 15 11 12.0 -0.5**
STKA Stephens Creek 52.77 134 P **P 15 11 12.0 -0.5**
STKA pmax pmax
comp=Z,14nm,1.8s
STKA Stephens Creek 52.77 134 P **P 15 11 13.0 +0.5**
KLR Kul'dur 54.20 26*ce*P **P 15 11 23.3 +0.7**
KLR pmax pmax
comp=Z,18nm,0.8s
OPO Ambohidratompo 55.30 245 P **P 15 11 32.8 +1.6**
comp=Z,9.9nm,0.8s,baz=46,slow=6.1,SNR=5.0
comp=Z,9.9nm,0.8s
CMSA Cobar Meteorol 55.61 131 P **P 15 11 33.3 +0.3**
baz=56,SNR=119
CMSA Cobar Meteorol 55.61 131 P **P 15 11 33.6 +0.5**
ARPS Mount Arapiles 55.64 139 P **P 15 11 33.9 +0.7**
baz=56,SNR=5.3
ARPS Mount Arapiles 55.64 139 P **P 15 11 35.6 +2.4**
BVA0 Borovoye Array 55.71 339 *i* P **P 15 11 32.7 -0.7**
BRVK Borovoye 55.78 339 P **P 15 11 33.4 -0.5**
BRVK IAmb IAmb 15 11 34.5
comp=Z,32nm,1.0s
BRVK Borovoye 55.78 339 *i* P **P 15 11 33.4 -0.5**
BRVK pmax pmax
comp=Z,35nm,1.1s
BRVK Borovoye 55.78 339 P **P 15 11 33.6 -0.3**
BRVK Borovoye 55.78 339 P **P 15 11 32.7 -1.1**
RMQ Roma 55.83 124 P **P 15 11 35.9 +1.2**
baz=56,SNR=15
RMQ Roma 55.83 124 P **P 15 11 35.5 +0.8**
RAYN Ar Rayn 55.95 297 P **P 15 11 34.5 -1.1**
RAYN IAmb IAmb 15 11 36.8
comp=Z,15nm,0.8s
RAYN Ar Rayn 55.95 297 P **P 15 11 34.5 -1.1**
RAYN pmax pmax
comp=Z,15nm,0.8s
RAYN Ar Rayn 55.95 297 P **P 15 11 35.7 0.0**
RAYN Ar Rayn 55.95 297 *i* P **P 15 11 35.9 +0.2**
SNR=19
RAYN Ar Rayn 55.95 297 P **P 15 11 34.6 -1.1**
RAYN pP **pP 15 12 11.2 -1.2**
RAYN sP **sP 15 12 29.5 -0.2**
ZEA Zeya 56.03 20 *e*P **P 15 11 36.9 +1.3**
ZEA pmax pmax
comp=Z,10.0nm,0.3s
BOD Bodaibo 56.38 9 *e*P **P 15 11 38.9 +0.8**
BOD pmax pmax
comp=Z,34nm,0.8s
ATD Arta Tunnel 56.57 282 P **P 15 11 41.7 +1.4**
VOI Vohitsoka 56.65 242 P **P 15 11 42.1 +1.3**
VOI Vohitsoka 56.65 242 P **P 15 11 42.1 +1.3**
EIDS Eidsvold 57.34 122 P **P 15 11 45.7 +0.3**
baz=57,SNR=5.5
EIDS Eidsvold 57.34 122 P **P 15 11 45.3 -0.1**
EIDS IAmb IAmb 15 12 54.3
comp=Z,46nm,1.6s
EIDS Eidsvold 57.34 122 P **P 15 11 48.6 +3.1**
AB31 Akbulak array 57.35 330 *i* P **P 15 11 44.4 -0.6**
ABKAR Akbulak array 57.35 330 P **P 15 11 44.5 -0.5**
ABKAR Akbulak array 57.35 330 P **P 15 11 44.7 -0.3**
ABKAR IAmb IAmb 15 11 45.7
comp=Z,45nm,0.7s
YSS Yuzh-Sakhalins 58.15 34 P **P 15 11 51.8 +1.2**
YSS Yuzh-Sakhalins 58.15 34 *e*P **P 15 11 51.9 +1.2**
TOO Toolangi 58.51 138 P **P 15 11 54.1 +0.7**
TOO Toolangi 58.51 138 P **P 15 11 54.1 +0.7**
TOO pmax pmax
comp=Z,82nm,1.7s
AKTO Aktyubinsk 59.06 331 P **P 15 11 56.1 -0.8**
ARMA Armidale 59.70 128 P **P 15 12 01.9 0.0**
baz=60,SNR=15
ARMA Armidale 59.70 128 P **P 15 12 03.2 +1.3**
ARMA IAmb IAmb 15 13 11.0
comp=Z,34nm,1.4s
ARMA Armidale 59.70 128 P **P 15 12 03.5 +1.7**
comp=Z,18nm,1.4s
CAN Canberra 59.84 134 P **P 15 12 02.4 -0.2**
CAN IAmb IAmb 15 12 06.0
comp=Z,26nm,1.0s
CAN Canberra 59.84 134 P **P 15 12 02.4 -0.2**
CAN pmax pmax
comp=Z,26nm,1.0s
CAN Canberra 59.84 134 P **P 15 12 02.5 -0.1**
comp=Z,56nm,1.9s
MNGR Mingechevir, A 60.39 316 P **P 15 12 06.1 -0.1**
SEKA Sheki 60.50 317 P **P 15 12 06.5 -0.5**
NAX Nakhchivan 60.87 314 P **P 15 12 09.6 0.0**
GANJ Ganja 60.87 316 P **P 15 12 09.3 -0.2**
MAK Makhachkala 61.06 319 *e*P **P 15 12 09.0 -1.6**
MAK *e**PP **pP 15 12 45.2 -2.4**
MAK *e*PPP PPP 15 15 53.0
MAK *e*S **S 15 20 15.2 -2.0**
MAK *e*SSS SSS 15 27 07.5
MAK pmax pmax
comp=Z,405nm,1.4s
ZKTA Zakatala 61.07 317 P **P 15 12 10.7 -0.1**
KIBK Kibwezi 61.34 266 P **P 15 12 14.5 +1.2**
GNI Garni 61.78 315 P **P 15 12 15.2 -0.6**
GNI IAmb IAmb 15 12 21.9
comp=Z,25nm,0.8s
GNI Garni 61.78 315*ce*P **P 15 12 16.5 +0.7**
GNI pmax pmax
comp=Z,46nm,1.3s
GNI Garni 61.78 315 P **P 15 12 16.5 +0.7**
GNI Garni 61.78 315 P **P 15 12 16.5 +0.7**
GNI Garni 61.78 315 P **P 15 12 15.6 -0.2**
KMBO Kilima Mbogo 62.05 267 P **P 15 12 18.8 +0.6**
comp=Z,0.4nm,0.8s,baz=58,slow=23,SNR=10
KMBO Kilima Mbogo 62.05 267 P **P 15 12 18.7 +0.6**
KMBO Kilima Mbogo 62.05 267 P **P 15 12 18.7 +0.6**
KMBO pmax pmax
comp=Z,10.0nm,0.9s
KMBO Kilima Mbogo 62.05 267 P **P 15 12 19.3 +1.1**
KMBO Kilima Mbogo 62.05 267 *i* P **P 15 12 19.3 +1.1**
SNR=11
KMBO Kilima Mbogo 62.05 267 P **P 15 12 18.2 +0.1**
SVE Sverdlovsk 62.25 337*ci* P **P 15 12 18.6 +0.3**
SVE pmax pmax
comp=Z,94nm,1.0s
GROC Groznyy 62.29 318 *e*P **P 15 12 18.7 -0.2**
GROC *e**PP **pP 15 12 54.9 -1.2**
GROC *e* 15 12 55.5
GROC *e**SP **sP 15 13 14.8 +1.5**
GROC pmax pmax
comp=Z,209nm,1.0s
GEVA Gevas 62.32 312 P **P 15 12 19.5 0.0**
GEVA IAmb IAmb 15 12 21.8
comp=Z,18nm,0.9s
ARU Arti 62.79 336 P **P 15 12 20.9 -1.0**
ARU Arti 62.79 336*di* P **P 15 12 21.0 -1.0**
ARU *PP **PcP 15 12 58.7 -0.3**
ARU S **S 15 20 40.3 +1.7**
ARU SS **SS 15 24 47.6 +1.2**
ARU pmax pmax
comp=Z,57nm,1.2s
ARU Arti 62.79 336 P **P 15 12 20.4 -1.6**
KARS Kars 63.13 315 P **P 15 12 24.1 -0.7**
KARS Kars 63.13 315 P **P 15 12 24.1 -0.7**
KARS pmax pmax
comp=Z,98nm,0.8s
GURO Guroymak-BITLI 63.16 312 P **P 15 12 25.2 +0.2**
GURO IAmb IAmb 15 12 26.6
comp=Z,30nm,1.0s
ZEI Tsey 63.39 317 *e*P **P 15 12 25.9 -0.6**
ZEI pmax pmax
comp=Z,51nm,0.7s
ONI Oni 63.62 317 P **P 15 12 28.0 +0.2**
ONI IAmb IAmb 15 12 29.4
comp=Z,14nm,0.7s
ONI Oni 63.62 317 P **P 15 12 28.0 +0.2**
ONI pmax pmax
comp=Z,15nm,0.7s
YAK Yakutsk 63.62 15 P **P 15 12 26.7 -0.6**
YAK IAmb IAmb 15 12 27.9
comp=Z,33nm,0.8s
YAK Yakutsk 63.62 15 *e*P **P 15 12 26.5 -0.8**
YAK *e*PPP PPP 15 16 20.8
YAK *e*S **S 15 20 46.8 -1.8**
YAK *e*SS **SS 15 24 55.0 -4.1**
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=Z,104nm,3.6s
YAK smax smax
comp=E,37nm,2.2s
YAK smax smax
comp=N,43nm,2.3s
YAK Yakutsk 63.62 15 P **P 15 12 26.1 -1.2**
YAK pP **pP 15 13 05.2 +0.9**
MARD Mardin 63.69 311 P **P 15 12 28.0 -0.5**
LODK Lodwar 63.76 273 P **P 15 12 29.3 0.0**
LODK Lodwar 63.76 273 P **P 15 12 30.8 +1.5**
NEY Neytrino 64.36 317 *i* P **P 15 12 33.8 +1.0**
NEY pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 64.43 318 P **P 15 12 33.0 +0.1**
comp=Z,28nm,0.8s,baz=129,slow=5.5,SNR=52
comp=Z,28nm,0.8s
KBZ Khabaz 64.43 318*ce*P **P 15 12 33.2 +0.3**
KBZ pmax pmax
comp=Z,41nm,0.9s
SHA1 Shidzhatmaz 64.59 318 *i* P **P 15 12 34.4 0.0**
KIV Kislovodsk 64.66 318 P **P 15 12 34.0 -0.6**
KIV IAmb IAmb 15 12 35.6
comp=Z,38nm,1.0s
KIV Kislovodsk 64.66 318 *e*P **P 15 12 34.6 0.0**
KIV pmax pmax
comp=Z,42nm,1.1s
KIV Kislovodsk 64.66 318 P **P 15 12 34.6 0.0**
KIV Kislovodsk 64.66 318 *i* P **P 15 12 34.5 0.0**
SNR=5.2
KIV Kislovodsk 64.66 318 P **P 15 12 33.9 -0.6**
BELG Belogornoye 65.50 328 *i* P **P 15 12 39.0 -0.7**
BELG pmax pmax
comp=Z,14nm,0.8s
VSLR Vesyoloye 66.27 317 *i* P **P 15 12 44.9 +0.1**
EIL Elat 66.49 301 LR LR 15 41 59.4
comp=Z,27nm,19.4s,baz=112,slow=36
SOC Sochi 66.53 317 *e*P **P 15 12 45.2 -1.2**
SOC *e**PP **pP 15 13 23.0 -1.1**
SOC *e**SP **sP 15 13 40.1 -1.0**
SOC *e* 15 15 13.3
SOC *e*PPP PPP 15 16 51.3
SOC *e*S **S 15 21 23.9 -0.9**
SOC *e*SS **SS 15 25 47.7 +2.8**
SOC pmax pmax
comp=Z,54nm,0.5s
NRIK Noril'sk 67.18 356 P **P 15 12 49.9 -0.2**
comp=Z,18nm,0.5s,baz=146,slow=5.6,SNR=20
comp=Z,18nm,0.5s
NRIK Noril'sk 67.18 356 P **P 15 12 49.6 -0.4**
NRIK IAmb IAmb 15 12 50.9
comp=Z,57nm,1.2s
NRIK Noril'sk 67.18 356*ce*P **P 15 12 50.0 -0.1**
NRIK pmax pmax
comp=Z,47nm,1.1s
KOUNC Koumac, New Ca 67.70 113 P **P 15 12 53.9 -0.4**
KOUNC IAmb IAmb 15 12 57.5
comp=Z,44nm,1.6s
BNN Bunyan 67.86 311 P **P 15 12 53.9 -1.3**
KIRV Kirov 67.99 334*ce*P **P 15 12 55.4 +0.1**
VRH Novokhopyorsk 68.19 325 *e*P **P 15 12 55.3 -1.4**
VRH pmax pmax
comp=Z,160nm,0.7s
MBAR Mbarara 68.53 268*ce*P **P 15 13 01.6 +1.8**
MBAR pmax pmax
comp=Z,8.0nm,1.0s
MBAR Mbarara 68.53 268 P **P 15 13 00.9 +1.1**
MBAR Mbarara 68.53 268 P **P 15 12 59.4 -0.4**
CSS Mathiatis 68.90 307 P **P 15 13 01.4 -0.1**
CSS IAmb IAmb 15 13 02.7
comp=Z,31nm,1.1s
DIKM Dikmen 69.05 314 ⇑P **P 15 13 02.6 +0.3**
MA2 Magadan 69.30 25 P **P 15 13 03.4 -0.1**
MA2 Magadan 69.30 25 *i* P **P 15 13 03.6 +0.2**
MA2 pmax pmax
comp=Z,10.0nm,0.6s
MA2 Magadan 69.30 25 P **P 15 13 03.3 -0.1**
MA2 sP **sP 15 14 03.2 +5.4**
PETK Petropavlovsk- 69.54 33 P **P 15 13 04.8 -0.3**
comp=Z,4.3nm,0.8s,baz=142,slow=2.6,SNR=10
comp=Z,4.3nm,0.8s
PETK Petropavlovsk- 69.54 33 P **P 15 13 05.1 0.0**
PETK Petropavlovsk- 69.54 33 P **P 15 13 05.1 0.0**
VSR Storozhevoye 69.67 324 *e*P **P 15 13 04.6 -1.3**
VSR pmax pmax
comp=Z,110nm,1.1s
BR131 Keskin Array S 69.74 312 P **P 15 13 05.8 -1.0**
BR131 IAmb IAmb 15 13 07.0
comp=Z,27nm,0.7s
BR131 Keskin Array S 69.74 312 P **P 15 13 05.8 -1.0**
BR131 pmax pmax
comp=Z,27nm,0.7s
BR131 Keskin Array S 69.74 312 P **P 15 13 06.1 -0.7**
SNR=15
BRTR Keskin Array B 69.74 312 P **P 15 13 06.0 -0.8**
comp=Z,15nm,0.7s,baz=129,slow=7.1,SNR=87
BRTR LR LR 15 46 57.9
comp=Z,40nm,18.0s,baz=326,slow=38
comp=Z,15nm,0.7s
BRTR Keskin Array B 69.74 312 P **P 15 13 05.8 -1.0**
VORR Voronezh 69.82 325 *e*P **P 15 13 05.3 -1.5**
VORR pmax pmax
comp=Z,60nm,0.4s
ILGA Ilgaz 70.02 313 P **P 15 13 08.2 -0.4**
PET Petropavlovsk 70.03 34 P **P 15 13 08.5 +0.5**
PET IAmb IAmb 15 13 09.2
comp=Z,28nm,0.7s
PET Petropavlovsk 70.03 34 *e*P **P 15 13 08.7 +0.7**
PET pmax pmax
comp=Z,57nm,0.7s
BZK Bozkurt 70.04 314 P **P 15 13 06.5 -1.8**
LPSR Galich'ya Gora 70.34 326 *e*P **P 15 13 09.2 -0.7**
LPSR pmax pmax
comp=Z,30nm,0.8s
ANTO Ankara 70.41 312 ⇓P **P 15 13 10.7 -0.1**
ANTO Ankara 70.41 312 P **P 15 13 10.4 -0.4**
ANTO IAmb IAmb 15 13 11.3
comp=Z,25nm,0.8s
ANTO Ankara 70.41 312 P **P 15 13 10.4 -0.4**
ANTO pmax pmax
comp=Z,25nm,0.8s
ANTO Ankara 70.41 312 P **P 15 13 10.5 -0.2**
SIM Simferopol' 70.77 317 *e*P **P 15 13 12.9 +0.2**
SIM *e**PP **pP 15 13 52.0 +1.3**
SIM *e*SP 15 14 09.1
SIM pmax pmax
comp=Z,32nm,1.3s
PRGR Permogore 71.25 336 *e*P **P 15 13 14.0 -1.3**
PRGR pmax pmax
comp=Z,79nm,0.6s
POGA Pongola 71.33 240 P **P 15 13 17.5 +1.0**
POGA IAmb IAmb 15 13 43.5
comp=Z,74nm,1.5s
TIXI Tiksi 71.57 10 P **P 15 13 16.7 -0.3**
TIXI Tiksi 71.57 10*ce*P **P 15 13 16.8 -0.1**
TIXI pmax pmax
comp=Z,58nm,1.2s
MDUB Mudurnu 71.74 312 P **P 15 13 17.3 -1.5**
KDZE Karadeniz Ereo 71.74 313 ⇓P **P 15 13 19.1 +0.4**
SEY Seymchan 71.78 23*ce*P **P 15 13 19.0 +0.6**
SEY pmax pmax
comp=Z,24nm,1.3s
ELL Elmali 71.97 308 P **P 15 13 19.7 -0.6**
ELL IAmb IAmb 15 13 21.0
comp=Z,43nm,0.8s
ELL Elmali 71.97 308 P **P 15 13 19.7 -0.6**
ELL pmax pmax
comp=Z,43nm,0.8s
LSZ Lusaka 72.42 253 P **P 15 13 24.0 +0.7**
comp=Z,5.1nm,0.6s,baz=93,slow=5.6,SNR=6.4
comp=Z,5.1nm,0.6s
LSZ Lusaka 72.42 253 P **P 15 13 24.0 +0.7**
OBN Obninsk 72.58 328 ⇑P **P 15 13 23.8 +0.5**
OBN Obninsk 72.58 328 P **P 15 13 22.5 -0.8**
OBN IAmb IAmb 15 13 24.0
comp=Z,33nm,0.7s
OBN Obninsk 72.58 328 ⇑*i* P **P 15 13 23.4 +0.1**
OBN *e* 15 13 41.3
OBN *e**PP **pP 15 14 02.6 +1.1**
OBN *e**SP **sP 15 14 20.3 +2.0**
OBN *e* 15 16 06.7
OBN pmax pmax
comp=Z,34nm,0.7s
OBN MLR MLR
comp=Z,45nm,15.0s
MATP Matopo 72.88 248 P **P 15 13 27.0 +1.1**
comp=Z,10nm,0.7s,baz=70,slow=5.9,SNR=21
comp=Z,10nm,0.7s
KLMR Klimovskoe 73.46 334 *e*P **P 15 13 27.1 -1.3**
KLMR pmax pmax
comp=Z,43nm,1.4s
KLMR Klimovskoe 73.46 334 *e*P **P 15 13 27.1 -1.3**
KLMR AMP 15 13 29.2
comp=Z,43nm,1.4s
KLMR *e*pP **pP 15 14 02.0 -4.4**
KARP Karpathos 73.97 306 P **P 15 13 31.9 -0.1**
KARP IAmb IAmb 15 13 32.8
comp=Z,56nm,0.9s
JURR Jurilovca 74.34 316 ⇑P **P 15 13 33.8 0.0**
MAW Mawson 74.44 194 P **P 15 13 35.3 +1.4**
MAW Mawson 74.44 194 P **P 15 13 35.3 +1.4**
TLCR 74.47 316 ⇓P **P 15 13 34.7 +0.1**
TIRR Tirgusor 74.60 315 ⇑P **P 15 13 35.3 0.0**
TIRR Tirgusor 74.60 315 P **P 15 13 34.7 -0.6**
TIRR Tirgusor 74.60 315 P **P 15 13 34.7 -0.6**
TIRR pmax pmax
comp=Z,47nm,0.7s
TPGR Topolog 74.68 316 ⇓P **P 15 13 35.3 -0.5**
MILM Milestii Mici 74.85 318 ⇑P **P 15 13 36.7 0.0**
CFR Carcaliu 74.94 316 ⇓P **P 15 13 37.0 -0.2**
ICOR Ion Corvin 74.96 315 ⇓P **P 15 13 38.2 +0.8**
HARR Harsova 74.98 316 ⇑P **P 15 13 37.9 +0.4**
SANT Santorini 75.45 307 ⇓P **P 15 13 39.7 -0.8**
SANT Santorini 75.45 307 P **P 15 13 39.2 -1.2**
AKASG Malin Array Be 75.47 322 P **P 15 13 39.2 -0.9**
comp=Z,3.3nm,0.6s,baz=87,slow=5.5,SNR=27
AKASG pP **pP 15 14 16.8 -1.9**
comp=Z,2.8nm,0.7s,baz=94,slow=4.4,SNR=2.7
AKASG PP **PP 15 16 32.1 +0.7**
comp=Z,2.3nm,0.8s,baz=92,slow=6.7,SNR=6.3
comp=Z,3.3nm,0.6s
AKASG Malin Array Be 75.47 322 P **P 15 13 39.0 -1.2**
AKASG Malin Array Be 75.47 322 P **P 15 13 39.0 -1.2**
AKASG pmax pmax
comp=Z,16nm,1.6s
AKBB Malin Array Si 75.47 322 P **P 15 13 39.0 -1.2**
AKBB IAmb IAmb 15 13 40.2
comp=Z,50nm,1.7s
AKBB Malin Array Si 75.47 322 P **P 15 13 39.0 -1.2**
AKBB pmax pmax
comp=Z,51nm,1.7s
ALN Alexandroupoli 75.66 312 P **P 15 13 40.5 -1.0**
ALN Alexandroupoli 75.66 312 P **P 15 13 40.5 -1.0**
ALN pmax pmax
comp=Z,9.0nm,0.9s
IDI Anoyia 75.77 306 ⇑P **P 15 13 42.7 +0.4**
IDI Anoyia 75.77 306 P **P 15 13 42.2 -0.2**
BISRR Bisoca 76.00 316 ⇓P **P 15 13 44.2 +0.7**
VRI Vrincioaia 76.05 317 ⇓P **P 15 13 44.4 +0.8**
RDO Rodhopi 76.08 312 P **P 15 13 43.1 -0.7**
PLOR Plostina 76.10 317 ⇑P **P 15 13 44.3 +0.3**
TESR Tescani 76.22 317 ⇓P **P 15 13 44.8 +0.2**
LBTB Lobatse 76.27 244 P **P 15 13 46.5 +1.1**
comp=Z,9.1nm,0.7s,baz=96,slow=5.2,SNR=9.3
comp=Z,9.1nm,0.7s
LBTB Lobatse 76.27 244 P **P 15 13 46.4 +1.0**
LBTB Lobatse 76.27 244 P **P 15 13 46.4 +1.0**
LBTB pmax pmax
comp=Z,13nm,1.0s
COVR Voineasa-Covas 76.40 317 ⇓P **P 15 13 46.1 +0.4**
MLR Muntele Rosu 76.52 316 ⇓P **P 15 13 46.7 +0.3**
MLR Muntele Rosu 76.52 316 P **P 15 13 46.6 +0.2**
MLR IAmb IAmb 15 13 47.8
comp=Z,21nm,0.9s
MLR Muntele Rosu 76.52 316 P **P 15 13 46.6 +0.2**

MLR pmax pmax
comp=Z,21nm,0.9s
BIZ Bicaz 76.67 318 ⇓P **P 15 13 47.4 +0.3**
DOPR Dopca 76.98 317 ⇓P **P 15 13 48.9 0.0**
VOIR 77.13 316 ⇓P **P 15 13 49.3 -0.5**
VOIR 77.13 316 P **P 15 13 49.3 -0.5**
BOSA Boshof 77.17 240 P **P 15 13 51.2 +0.8**
comp=Z,11nm,0.6s,baz=89,slow=4.0,SNR=20
comp=Z,11nm,0.6s
BOSA Boshof 77.17 240 P **P 15 13 50.9 +0.5**
BOSA IAmb IAmb 15 14 38.2
comp=Z,62nm,1.8s
BOSA Boshof 77.17 240 P **P 15 13 50.9 +0.5**
BOSA pmax pmax
comp=Z,62nm,1.8s
MNK Minsk 77.18 325 *i* P **P 15 13 47.9 -1.8**
MNK *i* *PP **pP 15 14 27.1 -1.2**
MNK *i* 15 16 43.9
MNK *i* PPP PPP 15 18 31.9
MNK *i* S **S 15 23 23.1 -3.1**
MNK *i* SS **SS 15 28 27.4 +0.1**
MNK pmax pmax
comp=E,5.0nm,1.3s
MNK pmax pmax
comp=Z,28nm,1.3s
MNK pmax pmax
comp=N,34nm,0.7s
MNK Minsk 77.18 325 *i* P **P 15 13 48.0 -1.8**
comp=E,5.0nm,1.3s
MNK *i* P **P 15 13 48.0 -1.8**
comp=N,34nm,0.7s
MNK *i* P **P 15 13 48.0 -1.8**
comp=Z,28nm,1.3s,baz=285
MNK *i* pP **pP 15 14 27.1 -1.2**
MNK *i* PP **PP 15 16 43.9 -1.8**
MNK *i* PPP PPP 15 18 31.9
MNK *i* S **S 15 23 23.1 -3.1**
MNK *i* SS **SS 15 28 27.4 +0.1**
MNK *i* SSS SSS 15 32 39.6
BURAR Bucovina Array 77.39 318 ⇓P **P 15 13 52.1 +0.9**
BURAR Bucovina Array 77.39 318 P **P 15 13 51.5 +0.3**
BURAR IAmb IAmb 15 13 52.8
comp=Z,22nm,0.7s
BURAR Bucovina Array 77.39 318 P **P 15 13 51.5 +0.3**
BURAR pmax pmax
comp=Z,22nm,0.7s
ARR Arges 77.41 316 ⇑P **P 15 13 50.9 -0.4**
BUR08 Bucovina Ar. S 77.41 318 P **P 15 13 51.6 +0.3**
BUR08 IAmb IAmb 15 13 53.0
comp=Z,15nm,0.7s
NACGM Naroch 77.90 326⇑ *eP* **P 15 13 53.4 -0.3**
baz=103
VTS Vitosha 78.00 313 ⇓P **P 15 13 54.5 -0.2**
VTS Vitosha 78.00 313 P **P 15 13 54.1 -0.7**
VTS Vitosha 78.00 313 P **P 15 13 54.1 -0.7**
VTS pmax pmax
comp=Z,14nm,0.9s
LIT Litokhoron 78.24 310 P **P 15 13 54.6 -1.4**
LIT IAmb IAmb 15 13 55.6
comp=Z,20nm,0.7s
LIT **pP 15 14 34.3 -0.5**
LBZ Lake Benmore 78.27 136 P **P 15 13 55.6 -0.4**
LBZ IAmb IAmb 15 16 51.9
comp=Z,56nm,1.8s
LVZ Lovozero 78.31 340 P **P 15 13 55.3 -0.5**
LVZ Lovozero 78.31 340 P **P 15 13 55.3 -0.5**
LVZ pmax pmax
comp=Z,164nm,2.0s
IIGN Ignalina 78.31 326 *eP* **P 15 13 56.8 +0.8**
ITM Ithomi 78.36 307 P **P 15 13 55.9 -0.8**
ITM IAmb IAmb 15 13 56.3
comp=Z,23nm,0.5s
BLKB Belogradchik 78.54 314 ⇓P **P 15 13 57.1 -0.4**
LVV L'vov 78.55 320 *eP* **P 15 13 56.4 -1.0**
APA Apatity 78.62 339⇓ *iP* P 15 13 47.0 -10
APA *i* *PP **PcP 15 14 06.2 +0.3**
APA pmax pmax
comp=Z,10.0nm,0.7s
GZR Gura Zlata 78.70 316 ⇓P **P 15 13 58.6 +0.1**
RPZ Rata Peaks 78.70 135 P **P 15 13 58.0 -0.4**
RPZ IAmb IAmb 15 13 59.5
comp=Z,44nm,1.5s
VSU Vasula 78.75 329 *eP* **P 15 13 58.0 -0.3**
QRZ Quartz Range 79.08 132 P **P 15 14 00.4 -0.1**
BOVS Bovan 79.24 314 ⇓P **P 15 14 00.4 -0.9**
BILL Bilibino 79.24 21 *eP* **P 15 14 02.8 +2.0**
BILL *e*PP **pP 15 14 41.1 +1.7**
BILL pmax pmax
comp=Z,11nm,1.2s
TRPA Tarpa 79.25 318 ⇑P **P 15 14 01.8 +0.5**
TRPA Tarpa 79.25 318 P **P 15 14 00.6 -0.7**
OXZ Oxford 79.30 135 P **P 15 14 00.8 -0.9**
OXZ IAmb IAmb 15 14 02.1
comp=Z,35nm,1.7s
LTZ Lake Taylor 79.34 134 P **P 15 14 01.8 -0.2**
LTZ IAmb IAmb 15 16 05.2
comp=Z,56nm,1.8s
MDVR Moldovita 79.37 315 ⇓P **P 15 14 01.8 -0.3**
BZS Buzias 79.54 316 ⇓P **P 15 14 03.0 0.0**
KOLS Kolonicke sedl 79.54 319 *eP* **P 15 14 03.7 +0.8**
KOLS pmax pmax
comp=Z,15nm,0.6s
THZ Tophouse 79.57 133 P **P 15 14 02.8 -0.4**
THZ IAmb IAmb 15 14 03.9
comp=Z,23nm,0.7s
SIRR Siria 79.59 316 ⇑P **P 15 14 03.6 +0.3**
PABE Paberze 79.60 326 P **P 15 14 02.7 -0.3**
PABE IAmb IAmb 15 14 03.8
comp=Z,25nm,0.8s
PABE Paberze 79.60 326 *eP* **P 15 14 03.0 0.0**
FIA1 FINESS Array S 79.78 332 P **P 15 14 03.4 -0.4**
FIA1 IAmb IAmb 15 14 04.2
comp=Z,16nm,0.5s
FINES FINESS Array B 79.78 332 P **P 15 14 03.8 -0.1**
comp=Z,9.7nm,0.3s,baz=107,slow=5.6,SNR=161
FINES LR LR 15 56 38.3
comp=Z,37nm,18.3s,baz=305,slow=41
comp=Z,9.7nm,0.3s
FINES FINESS Array B 79.78 332 P **P 15 14 03.6 -0.3**
NNZ Nelson 79.80 132 P **P 15 14 03.4 -0.9**
NNZ IAmb IAmb 15 17 06.0
comp=Z,112nm,1.9s
NEZ North Egmont 79.93 130 P **P 15 14 09.2 +3.9**
CRVS Cervenica-Dubn 80.07 319 *eP* **P 15 14 04.8 -0.9**
DUWZ D'Urville Isla 80.11 132 P **P 15 14 05.8 -0.3**
KHZ Kahutara 80.17 134 P **P 15 14 05.9 -0.4**
KHZ IAmb IAmb 15 15 06.3
comp=Z,49nm,1.6s
TUWZ Tuamarina 80.26 133 P **P 15 14 05.2 -1.6**
KEK Kerkira 80.26 310 P **P 15 14 06.3 -0.6**
MEF Metsahovi 80.31 331 *eP* **P 15 14 07.1 +0.4**
HIZ Hauiti 80.36 130 P **P 15 14 08.5 +1.0**
DIVS Divibare 80.52 314 P **P 15 14 08.0 -0.3**
WAZ Wanganui 80.70 131 P **P 15 14 09.7 +0.4**
SNZO South Karori 80.79 132 P **P 15 14 08.6 -1.1**
SNZO IAmb IAmb 15 16 02.1
comp=Z,74nm,1.6s
PKVZ Pokaka 80.88 130 P **P 15 14 10.4 +0.1**
PDG Podgorica 80.90 312 ⇓P **P 15 14 09.8 -0.4**
PSZ Piszkesteto 80.98 318 ⇓P **P 15 14 10.7 0.0**
PSZ Piszkesteto 80.98 318 P **P 15 14 10.1 -0.6**
PSZ Piszkesteto 80.98 318 P **P 15 14 10.1 -0.6**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
CAW Cannon Point 81.02 132 P **P 15 14 10.3 -0.6**
WTVZ West Tongariro 81.04 130 P **P 15 14 11.2 0.0**
OGWZ Otaki Gorge 81.04 132 P **P 15 14 10.6 -0.4**
NGZ Ngauruhoe 81.06 130 P **P 15 14 11.4 0.0**
NNVZ North Ngauruho 81.06 130 P **P 15 14 11.2 -0.2**
SNVZ South Ngauruho 81.09 130 P **P 15 14 11.6 +0.1**
OTVZ Oturere 81.10 130 P **P 15 14 11.7 +0.1**
ETVZ East Tongariro 81.13 130 P **P 15 14 12.1 +0.3**
OJC Ojcow 81.31 320 *eP* **P 15 14 11.1 -1.1**
OJC Ojcow 81.31 320 P **P 15 14 10.9 -1.4**
OJC Ojcow 81.31 320 P **P 15 14 10.9 -1.4**
OJC pmax pmax
comp=Z,10.0nm,0.8s
HOWZ Holdsworth Sta 81.31 132 P **P 15 14 12.4 -0.1**
MRZ Mangatainoka R 81.32 132 P **P 15 14 12.1 -0.4**
MTW Mount Morrison 81.35 132 P **P 15 14 12.3 -0.4**
WPRZ Whakapapatarin 81.37 129 P **P 15 14 13.4 +0.5**
LANS Liptovska Anna 81.40 319 *eP* **P 15 14 13.5 +0.7**
LANS pmax pmax
comp=Z,2.0nm,0.8s
BHHZ Black Hill Sta 81.47 130 P **P 15 14 12.8 -0.6**
TSZ Takapari Road 81.49 131 P **P 15 14 13.1 -0.4**
TRWZ Traveller 81.54 132 P **P 15 14 13.8 +0.2**
SUR Sutherland 81.56 237 P **P 15 14 14.9 +0.7**
comp=Z,20nm,1.0s,baz=88,slow=6.2,SNR=14
comp=Z,20nm,1.0s
SUR Sutherland 81.56 237 P **P 15 14 15.8 +1.6**
SUR IAmb IAmb 15 17 11.4
comp=Z,100nm,1.6s
TIWZ Tintock 81.57 132 P **P 15 14 13.6 -0.3**
PRWZ Pori Road 81.59 131 P **P 15 14 14.0 0.0**
RRRZ Republican Roa 81.61 129 P **P** 15 14 07.7 -6.4
MRHZ Matea Rd 81.62 130 P **P 15 14 13.3 -0.9**
TMWZ Te Maipa 81.63 132 P **P 15 14 14.4 +0.3**
PNHZ Pukenui 81.65 131 P **P 15 14 14.1 -0.2**
MORH Mrgy, Hungar 81.67 316 ⇓P **P 15 14 14.4 +0.2**
MORH Mrgy, Hungar 81.67 316 P **P 15 14 13.8 -0.4**
DVHZ Dannevirke 81.69 131 P **P 15 14 14.0 -0.5**
KWHZ Kaweka Forest 81.73 130 P **P 15 14 14.3 -0.5**
BKZ Black Stump Fm 81.74 130 P **P 15 14 13.9 -0.9**
BKZ IAmb IAmb 15 14 14.8
comp=Z,24nm,0.6s
BKZ Black Stump Fm 81.74 130 P **P 15 14 14.0 -0.8**
RAF Rauma 81.74 331 *eP* **P 15 14 14.2 0.0**
VYHS Vyhne 81.75 318 *eP* **P 15 14 14.7 +0.1**
VYHS pmax pmax
comp=Z,10.0nm,1.5s
BFZ Birch Farm 81.82 132 P **P 15 14 14.4 -0.7**
BFZ IAmb IAmb 15 14 15.6
comp=Z,94nm,1.8s
BFZ Birch Farm 81.82 132 P **P 15 14 14.9 -0.3**
WPHZ Waipukurau 81.86 131 P **P 15 14 15.2 -0.2**
ANWZ Angora Road 81.95 131 P **P 15 14 15.8 0.0**
ARA0 ARCESS Array S 82.00 340 *eP* **P 15 14 15.6 +0.1**
ARCES ARCESS Array B 82.00 340 P **P 15 14 15.6 +0.1**
comp=Z,5.4nm,0.4s,baz=100,slow=4.6,SNR=71
comp=Z,5.4nm,0.4s
ARCES ARCESS Array B 82.00 340 P **P 15 14 15.3 -0.2**
ARCES ARCESS Array B 82.00 340 P **P 15 14 15.3 -0.2**
ARCES pmax pmax
comp=Z,150nm,1.9s
RTZ Ruatahuna 82.02 129 P **P 15 14 15.3 -1.1**
PRHZ Porangahau 82.04 131 P **P 15 14 16.4 +0.1**
URZ Urewera 82.06 129 P **P 15 14 15.3 -1.1**
URZ IAmb IAmb 15 16 36.9
comp=Z,53nm,1.8s
PXZ Pawanui 82.17 131 P **P 15 14 16.8 -0.1**
OKC Ostrava-Krasne 82.33 320 *eP* **P 15 14 18.1 +0.5**
OKC Ostrava-Krasne 82.33 320 *eP* **P 15 14 18.1 +0.5**
RAGZ Rawiri 82.34 129 P **P 15 14 17.1 -0.8**
MWZ Matawai 82.40 129 P **P 15 14 17.3 -1.0**
MPLH Magyarpolny 82.50 317 P **P 15 14 18.4 -0.2**
JAVC Velka Javorina 82.55 319 *eP* **P 15 14 19.7 +0.8**
TIP Timpagrande 82.57 309 ⇓P **P 15 14 20.0 +0.7**
TIP Timpagrande 82.57 309 P **P 15 14 19.1 -0.1**
KTK1 Kautokeino 82.66 339 *eP* **P 15 14 19.1 +0.1**
KTK1 IAmb IAmb 15 14 19.4
comp=Z,13nm,0.8s
MORC Moravsky Berou 82.71 320 ⇓P **P 15 14 20.0 +0.3**
MORC Moravsky Berou 82.71 320 P **P 15 14 19.2 -0.4**
MORC Moravsky Berou 82.71 320 P **P 15 14 19.2 -0.4**
MORC pmax pmax
comp=Z,14nm,1.2s
MORC Moravsky Berou 82.71 320 *eP* **P 15 14 19.6 -0.1**
TWGZ Tauwhareparae 82.72 129 P **P 15 14 19.3 -0.6**
ZST Bratislava 82.88 318 *eP* **P 15 14 21.4 +0.9**
TSUM Tsumeb 82.92 250 P **P 15 14 23.3 +1.8**
comp=Z,3.3nm,0.5s,baz=76,slow=5.7,SNR=8.8
comp=Z,3.3nm,0.5s
KRLC Kraliky 83.22 320 *eP* **P 15 14 22.8 +0.5**
KRLC Kraliky 83.22 320 *eP* **P 15 14 22.8 +0.5**
VRAC Vranov 83.29 319 *eP* **P 15 14 21.6 -1.0**
RONA Rosalia, Austr 83.38 318 *eP* **P 15 14 25.7 +2.5**
comp=Z,4.9nm,0.9s
KRUC Moravsky 83.40 319 *eP* **P 15 14 22.5 -0.7**
DPC Dobruska-Polom 83.54 320 *eP* **P 15 14 24.9 +1.0**
DPC Dobruska-Polom 83.54 320 *eP* **P 15 14 24.9 +1.0**
OSTC Ostas 83.62 320 *eP* **P 15 14 24.6 +0.3**
CHVC Chvalec 83.72 320 *eP* **P 15 14 25.5 +0.7**
JETT Jettan, Norway 83.75 340 *eP* **P 15 14 24.8 +0.2**
JETT IAmb IAmb 15 14 25.2
comp=Z,30nm,0.8s
ARSA Arzberg 83.88 317 *eP* **P 15 14 26.4 +0.8**
comp=Z,5.7nm,0.8s
SOKA Soboth 84.19 316 *eP* **P 15 14 27.9 +0.6**
comp=Z,10nm,1.0s
BLEU Blekinge 84.26 326 *i* P **P 15 14 27.2 -0.1**
TRO Tromso 84.28 340 *eP* **P 15 14 26.9 -0.2**
TRO IAmb IAmb 15 14 33.6
comp=Z,90nm,1.7s
OBKA Obir 84.52 316 *eP* **P 15 14 29.4 +0.4**
comp=Z,9.2nm,1.2s
BSD Bornholm Skovb 84.69 325 *eP* **P 15 14 29.4 -0.1**
BRG Berggiesshubel 85.08 321 *eP* **P 15 14 32.0 +0.4**
BRG Amp 15 14 33.8
comp=Z,5.8nm,1.0s
BRG Berggiesshubel 85.08 321 *eP* **P 15 14 31.9 +0.4**
BRG pmax pmax
comp=Z,6.0nm,1.0s
MYKA Terra Mystica 85.14 316 *eP* **P 15 14 33.0 +0.9**
comp=Z,5.1nm,1.0s
GEC2 GERESS Array S 85.17 319 P **P 15 14 32.0 -0.2**
GERES GERESS Array B 85.17 319 P **P 15 14 32.3 +0.1**
comp=Z,1.9nm,0.6s,baz=100,slow=6.1,SNR=19
GERES pP **pP 15 15 12.8 +1.3**
comp=Z,0.8nm,0.8s,baz=101,slow=4.2,SNR=2.5
GERES PKKPbc **PKKPdf 15 32 33.3 +2.0**
comp=Z,0.4nm,0.8s,baz=322,slow=4.1,SNR=3.7
comp=Z,1.9nm,0.6s
GERES GERESS Array B 85.17 319 P **P 15 14 31.7 -0.5**
PRED Cave del Predi 85.19 316 P **P 15 14 32.3 -0.1**
RUE Ruedersdorf 85.24 322 *eP* **P 15 14 33.0 +0.8**
KHC Kasperske Hory 85.26 319 P **P 15 14 32.5 -0.1**
KHC Kasperske Hory 85.26 319 *eP* **P 15 14 32.5 -0.1**
KHC Kasperske Hory 85.26 319 *eP* **P 15 14 32.5 -0.1**
DEL Delary 85.35 326 *i* P **P 15 14 33.0 +0.3**
FAUS Fauske 85.36 337 *eP* **P 15 14 32.6 0.0**
FAUS IAmb IAmb 15 14 33.1
comp=Z,27nm,0.6s
STEI Steigen 85.42 338 *eP* **P 15 14 32.6 -0.2**
STEI IAmb IAmb 15 14 34.1
comp=Z,30nm,0.8s
MOR8 Moi Rana 85.60 336 *eP* **P 15 14 33.5 -0.4**
MOR8 IAmb IAmb 15 14 33.8
comp=Z,15nm,0.7s
CLUD Cludinico 85.67 316 P **P 15 14 34.0 -0.7**
CLL Collm 85.68 321 *i* P **P 15 14 33.6 -0.9**
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 85.68 321 *i* P **P 15 14 33.6 -0.9**
comp=Z,8.0nm,1.0s
STAL STALIGIAL 85.78 316 P **P 15 14 35.0 -0.2**
STAL IAmb IAmb 15 14 36.6
comp=Z,26nm,1.2s
BJUU Bjuv 85.80 326 *eP* **P 15 14 35.6 +0.6**
ABTA Abfaltersbach 85.92 317 *eP* **P 15 14 35.5 -0.4**
comp=Z,6.6nm,1.4s
BORU Boraas 85.99 327 *eP* **P 15 14 36.3 +0.4**
LOF Lofoten 86.07 338 *eP* **P 15 14 36.3 +0.2**
SPB2 Spitsbergen Ar 86.09 348 P **P 15 14 35.6 -0.5**
SPA0 Spitsbergen Ar 86.09 348 *eP* **P 15 14 35.8 -0.3**
SPA0 IAmb IAmb 15 14 38.2
comp=Z,718nm,2.7s
SPITS Spitsbergen Ar 86.09 348 P **P 15 14 35.7 -0.3**
SPITS pmax pmax
comp=Z,249nm,1.8s
STOK Stokkvaagen 86.19 336 *eP* **P 15 14 36.2 -0.5**
ONAU Onsala 86.44 327 *eP* **P 15 14 38.5 +0.4**
WTTA Wattenberg 86.53 317 *eP* **P 15 14 37.9 -1.1**
comp=Z,9.3nm,1.0s
NSS Namsos 86.56 334 *eP* **P 15 14 38.7 +0.1**
NSS IAmb IAmb 15 14 39.3
comp=Z,561nm,3.2s
WATA Walderalm 86.57 317 *eP* **P 15 14 38.5 -0.7**
comp=Z,2.6nm,0.5s
NC405 NORSAR Array S 86.61 331 P **P 15 14 38.8 -0.1**
NC602 NORSAR Array S 86.69 331 P **P 15 14 38.9 -0.4**
NC602 NORSAR Array S 86.69 331 *eP* **P 15 14 39.3 0.0**
NC602 IAmb IAmb 15 14 39.6
comp=Z,10.0nm,0.6s
VNDA Vanda 86.70 169 P **P 15 14 39.0 0.0**
comp=Z,0.5nm,0.6s,baz=330,slow=7.5,SNR=3.3
NC303 NORSAR Array S 86.78 331 P **P 15 14 39.3 -0.4**
NC303 IAmb IAmb 15 16 11.2
comp=Z,56nm,1.9s
NB201 NORSAR Array S 86.81 331 P **P 15 14 39.5 -0.4**
SQTA Sankt Quirin 86.82 317 *eP* **P 15 14 39.8 -0.6**
comp=Z,4.5nm,0.5s
NB2 NORSAR Subarra 86.85 331 P **P 15 14 39.4 -0.7**
comp=Z,3.2nm,0.6s,baz=94,slow=4.6
NB2 NORSAR Subarra 86.85 331 P **P 15 14 39.4 -0.7**
baz=94,slow=4.6
NOA NORSAR Array B 86.85 331 P **P 15 14 39.8 -0.3**
comp=Z,4.8nm,0.7s,baz=94,slow=4.6,SNR=22
NOA pP **pP 15 15 20.0 +0.5**
comp=Z,1.6nm,0.8s,baz=92,slow=4.9,SNR=3.0
NOA PP **PP 15 18 05.9 +1.0**
comp=Z,1.1nm,0.8s,baz=86,slow=8.0,SNR=4.8
comp=Z,4.8nm,0.7s
STRU Stroemstad 86.85 329 *eP* **P 15 14 40.3 +0.2**
MOTA Moosalm 86.89 317 *eP* **P 15 14 40.0 -0.7**
comp=Z,2.2nm,0.3s
NBO00 NORSAR Array S 87.06 331 P **P 15 14 40.9 -0.2**
NC204 NORSAR Array S 87.07 331 P **P 15 14 40.9 -0.3**
NC204 IAmb IAmb 15 14 42.3
comp=Z,56nm,1.5s
RETA Reutte 87.12 317 *eP* **P 15 14 41.2 -0.6**
comp=Z,4.6nm,0.5s
FETA Feichten 87.15 317 *eP* **P 15 14 41.5 -0.5**
comp=Z,3.1nm,0.9s
SALO Salr 87.31 315 P **P 15 14 42.9 +0.3**
SALO IAmb IAmb 15 14 44.4
comp=Z,27nm,0.8s
KONO Kongsberg 87.66 329 *eP* **P 15 14 44.2 +0.3**
DAVA Damuels 87.72 317 *eP* **P 15 14 45.1 +0.3**
comp=Z,7.4nm,0.8s
SKAR Skarslia 88.28 331 *eP* **P 15 14 50.6 +3.6**
KEST Kesra 88.45 306 P **P 15 14 49.5 +1.2**
comp=Z,9.8nm,0.8s,baz=26,slow=2.8,SNR=13
KEST pP **pP 15 15 29.5 +1.5**
comp=Z,9.7nm,0.8s,baz=307,slow=3.7,SNR=6.4
comp=Z,9.8nm,0.8s
KEST Kesra 88.45 306 P **P 15 14 48.9 +0.6**
KEST IAmb IAmb 15 15 31.5
comp=Z,16nm,1.0s
KEST Kesra 88.45 306 P **P 15 14 49.2 +0.9**
SSB Saint Sauveur 91.53 315 P **P 15 15 02.2 -0.2**
SSB Saint Sauveur 91.53 315 P **P 15 15 02.2 -0.2**
SSB pmax pmax
comp=Z,7.0nm,0.9s
QSPA South Pole Qui 92.44 180 P **P 15 15 06.6 +0.4**
comp=Z,1.5nm,1.0s,baz=264,slow=0.3,SNR=12
comp=Z,1.5nm,1.0s
JMIC Jan Mayen 93.36 342 LR LR 16 02 25.4
comp=Z,52nm,18.1s,baz=239,slow=39
GCSA Galena City Sc 93.66 25 P **P 15 15 13.1 +1.4**
baz=284
DAG Danmarks Havn 93.74 348 *i* P **P 15 15 11.0 -0.9**
N16K Nishlik Lake 93.74 29 P **P 15 15 12.8 +0.5**
baz=282
F21K Alatna River 94.34 22 P **P 15 15 15.1 +0.2**
baz=287
G21K Allakaket 94.54 23 P **P 15 15 15.8 0.0**
baz=287
F22K John River 94.73 21 P **P 15 15 17.2 +0.5**
baz=288
J20K Nowinta River 94.95 25 P **P 15 15 18.2 +0.6**
baz=286
H21K Melozitna Rive 95.06 23 P **P 15 15 19.0 +0.7**
H21K Melozitna Rive 95.06 23 P **P 15 15 18.8 +0.6**
baz=288
N18K Kilae Creek 95.08 29 P **P 15 15 18.9 +0.5**
baz=284
G22K Bettles 95.17 22 P **P 15 15 19.0 +0.4**
baz=289
L19K White Mountain 95.18 27 P **P 15 15 19.4 +0.6**
baz=285
K20K Telida 95.21 26 P **P 15 15 19.9 +1.1**
K20K IAmb IAmb 15 15 20.8
comp=Z,5.2nm,0.7s
K20K Telida 95.21 26 P **P 15 15 20.0 +1.1**
baz=286
D24K Happy Valley 95.35 19 P **P 15 15 20.7 +1.4**
baz=292
M19K Big River Lodg 95.46 27 P **P 15 15 21.0 +0.9**
baz=286
L20K Farewell, AK 95.54 27 P **P 15 15 21.3 +0.9**
baz=286
I21K Tanana 95.54 24 P **P 15 15 21.1 +0.8**
baz=288
N19K Bonanza Creek 95.72 28 P **P 15 15 22.1 +0.7**
baz=286
P18K Big Mountain, 95.73 30 P **P 15 15 22.2 +0.8**
baz=285
G23K Bananza Creek 95.79 22 P **P 15 15 22.6 +1.1**
baz=290
CHUM Lake Minchumin 95.80 25 P **P 15 15 22.0 +0.5**
baz=288
M20K Styx River 96.04 27 P **P 15 15 23.6 +0.7**
baz=287
CAST Castle Rocks 96.05 25 P **P 15 15 23.6 +0.9**
baz=288
MLY Manley 96.09 24 P **P 15 15 24.2 +1.3**
baz=289
PPLA Purkeypile 96.16 26 P **P 15 15 23.8 +0.4**
baz=288
F24K Squaw Lake 96.28 21 P **P 15 15 24.5 +0.7**
baz=292
BPAW Bear Paw Mtn. 96.29 25 P **P 15 15 24.2 +0.4**
baz=289
P19K Oil Pt 96.64 29 P **P 15 15 25.0 -0.5**
baz=286
TORD Torodi Ar. Bea 96.75 283 P **P 15 15 27.1 +0.2**
comp=Z,15nm,0.6s,baz=89,slow=6.1,SNR=5.0
TRF Thorofare Moun 96.80 25 P **P 15 15 26.8 +0.5**
baz=290
MCK McKinley 97.27 25 P Pdif 15 15 28.6 +0.2
baz=291
ILAR Eielson Array 97.71 23 PP **PP 15 19 26.6 -3.2**
comp=Z,0.4nm,0.9s,baz=313,slow=8.8,SNR=4.7
G26K Porcupine Rive 97.97 21 P Pdif 15 15 32.1 +0.8
baz=296
WAT6 Susitna Watana 98.19 25 P Pdif 15 15 33.0 +0.3
baz=292
PWL Port Wells 98.56 27 P **P 15 15 34.0 -0.1**
baz=291
RIDG Independent Ri 98.94 24 P Pdif 15 15 36.4 +0.6
baz=295
SCRK Sand Creek 99.19 24 P **Pdif 15 15 36.1 -0.9**
baz=295
SCHQ Schefferville 121.70 351 PKP **PKPdf 15 20 48.5 -0.2**
comp=Z,5.6nm,0.6s,baz=25,slow=3.3,SNR=9.2
F10A Beach Ranch, E 121.96 29 **PKPdf 15 20 49.5 0.0**
MSO Missoula 122.87 27 PKPdf **PKPdf 15 20 50.7 -0.5**
MOD Modoc Plateau 123.12 35 PKPdf **PKiKP 15 20 52.1 -0.1**
PLID Pearl Lake 123.20 29 PKPdf **PKPdf 15 20 51.7 -0.4**
BOZ Bozeman (W) 124.84 26 **PKPdf 15 20 55.2 +0.1**
BOZ Bozeman (W) 124.84 26 PKIKP **PKPdf 15 20 55.2 +0.1**
LAO LASA Array 126.13 21 P **PKPdf 15 20 56.4 -1.1**
baz=328
KVN Kaiserville 126.26 36 PKPdf **PKiKP 15 20 58.5 0.0**
KVN Kaiserville 126.26 36 PKIKP **PKiKP 15 20 58.5 0.0**
NVAR Mina Array Bea 126.55 37 PKP **PKiKP 15 21 00.1 +1.0**
comp=Z,1.9nm,0.8s,baz=273,slow=1.9,SNR=15
NVAR SKPbc SKPbc 15 24 03.2
comp=Z,0.6nm,0.6s,baz=287,slow=4.0,SNR=5.5
NVAR Mina Array Bea 126.55 37 PKPdf **PKiKP 15 20 59.3 +0.2**
REDW Red Top Meadow 126.93 27 PKPdf **PKiKP 15 20 59.6 -0.2**
BW06 Boulder Array 127.99 27 **PKPdf 15 21 01.2 -0.2**
PDAR Pinedale Array 127.99 27 PKP **PKPdf 15 21 01.4 +0.1**
comp=Z,1.3nm,0.6s,baz=140,slow=1.9,SNR=12
PDAR SKPbc SKPbc 15 24 04.4
comp=Z,1.0nm,0.9s,baz=232,slow=2.4,SNR=4.3
B35A Bob, Littlefor 128.10 11 P **PKPdf 15 21 00.7 -0.4**
baz=344
EYMN Ely 128.89 9 P **PKPdf 15 21 02.4 -0.2**
baz=346
RSSD Black Hills 129.12 21 PKPdf **PKPdf 15 21 02.8 -0.6**
RSSD Black Hills 129.12 21 PKIKP **PKPdf 15 21 02.8 -0.6**
D41A Chassel 130.17 7 P **PKPdf 15 21 04.5 -0.6**
baz=350
F36A Milaca 130.53 12 **PKPdf 15 21 05.3 -0.5**
F36A Milaca 130.53 12 P **PKPdf 15 21 05.1 -0.6**
baz=343
ECSD EROS Data Cent 131.82 15 **PKPdf 15 21 07.9 -0.4**
BMNY Brushton-Moira 132.53 354 P **PKPdf 15 21 09.3 -0.3**
baz=8.5
RCBR Riachuelo 135.12 264 *eP* **PKiKP 15 21 16.1 -0.7**
TXAR Lajitas Array 141.49 33 PKhKP PKPpre 15 21 21.5
comp=Z,1.0nm,0.6s,baz=268,slow=1.4,SNR=13

TXAR PKP **PKPdf** **15 21 27.4 +0.7**
comp=Z,2.5nm,0.8s,baz=213,slow=0.3,SNR=10
TXAR SKPbc **SKPbc** **15 24 48.6 -0.9**
comp=Z,3.7nm,0.6s,baz=259,slow=0.4,SNR=22
TXAR Lajitas Array 141.49 33 PKPpre PKPpre 15 21 22.2
ITQB Itaqui 144.56 218 PKPbc 15 21 30.9 0.0
BDFB Brasilia 145.18 246 PKPbc **PKPab** **15 21 33.9 +0.3**
comp=Z,15nm,0.7s,baz=149,slow=4.8,SNR=16
BO02 Sierra Bellavi 146.56 195 PKPbc **PKPbc** **15 21 36.6 -0.4**
MT01 Popeta 147.56 195 PKPbc **PKPbc** **15 21 38.9 -0.8**
VA03 San Esteban 148.41 197 PKPbc **PKPbc** **15 21 41.5 -0.6**
LPAZ La Paz 161.49 222 PKP **PKPdf** **15 21 57.6 +0.4**
comp=Z,2.1nm,0.8s,baz=98,slow=2.4,SNR=6.8
LPAZ PKPab **PKPab** **15 22 42.8 +0.4**
comp=Z,1.4nm,0.6s,baz=71,slow=2.9,SNR=4.9

IDC 03 15:07:00.8±1.6, 29°.54S×60°.95E, h0^{km}, mb3.8/3, mbtmp3.9/4, ML4.3/1, MS3.4/8, Error ellipse: s-maj=67.2km s-min=27.5km az=21.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.63**	**308**	Pn	Pn	15 10 56.4	+0.7
	0.1nm,0.3s,baz=274,slow=6.8,SNR=5.4						
OPO				Sn	Sn	15 13 44.9	-16
	0.1nm,0.3s,baz=291,slow=21,SNR=1.8 1.9nm,0.2s						
BOSA	**Boshof**	**31.14**	**263**	LR	LR	15 24 09.0	
	comp=Z,40nm,19.4s,baz=85,slow=33						
SUR	**Sutherland**	**34.40**	**255**	LR	LR	15 25 21.8	
	comp=Z,46nm,19.3s,baz=111,slow=32						
MAW	**Mawson**	**38.11**	**179**	LR	LR	15 27 14.2	
	comp=Z,52nm,18.9s,baz=359,slow=32						
TSUM	**Tsumeb**	**40.62**	**275**	LR	LR	15 29 53.5	
	comp=Z,37nm,19.3s,baz=148,slow=34						
ATD	**Arta Tunnel**	**44.41**	**334**	LR	LR	15 31 14.1	
	comp=Z,48nm,20.8s,baz=76,slow=33						
H01W2	**Cape Leeuwin H**	**44.88**	**111**	T	T	16 02 58.0	
	baz=261,slow=75,SNR=16						
H01W3	**Cape Leeuwin H**	**44.88**	**111**	T	T	16 02 57.8	
	baz=261,slow=75,SNR=10						
H01W1	**Cape Leeuwin H**	**44.89**	**111**	T	T	16 03 00.1	
	baz=261,slow=75,SNR=15						
CMAR	**Chiang Mai Arr**	**60.16**	**42**	P	P	15 17 10.5	-0.1
	0.8nm,0.8s,baz=229,slow=7.4,SNR=6.1 0.8nm,0.8s						
ASAR	**Alice Springs**	**64.53**	**104**	P	P	15 17 40.2	+0.2
	0.9nm,0.7s,baz=246,slow=6.2,SNR=5.1 0.9nm,0.7s						
WRA	**Warramunga Arr**	**66.38**	**100**	P	P	15 17 51.8	-0.2
	1.2nm,0.9s,baz=250,slow=5.9,SNR=4.8 1.2nm,0.9s						
MMAI	**Mount Meron Ar**	**66.76**	**337**	LR	LR	15 44 58.9	
	comp=Z,21nm,18.0s,baz=152,slow=34						
GNI	**Garni**	**70.95**	**347**	LR	LR	15 47 08.4	
	comp=Z,34nm,20.4s,baz=156,slow=34						
TORD	**Torodi Ar. Bea**	**71.15**	**298**	P	P	15 18 21.6	-0.1
	15nm,0.6s,baz=114,slow=5.1,SNR=5.1						
KBZ	**Khabaz**	**74.77**	**347**	LR	LR	15 49 04.8	
	comp=Z,36nm,21.9s,baz=56,slow=34						

HEL 03 15:12:01.4±0.8, 67°.88N×20°.15E, h0^{km}, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.71**	**75**	PG	Pg	15 12 13.9	-1.1
LANU				SG	Sg	15 12 24.3	+0.1
KIF	**Kilpisjarvi**	**1.16**	**12**	MSG		15 12 37.7	
	comp=Z,1.2nm,0.2s						
KIF				SB	Sb	15 12 39.1	-0.6
HEF	**Hetta**	**1.42**	**66**	MSG		15 12 43.9	
	comp=Z,1.0nm,0.2s						
HEF				SN	Sn	15 12 49.2	+1.4
PAJU	**Pajala**	**1.43**	**126**	PG	Pn	15 12 26.4	-2.2
	baz=306						
PAJU				SG	Sg	15 12 44.7	-2.5
ERTU	**Ertsjaerv**	**1.55**	**148**	PG	Pn	15 12 30.1	-0.2
ERTU				SN	Sn	15 12 50.1	-0.9
KLF	**Kolari**	**1.60**	**112**	SN	Sn	15 12 52.2	-0.1
TOF	**Tornio**	**2.44**	**136**	MSG		15 13 13.7	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	15 13 16.1	-0.6
ARA0	**ARCESS Array S**	**2.57**	**47**	PG	Pn	15 12 45.5	+1.3
	baz=230						
ARA0				SG	Sb	15 13 20.8	+0.5
RNF	**Rovaniemi**	**2.61**	**117**	SG	Sb	15 13 20.1	-1.5
MSF	**Maaselka**	**4.02**	**115**	SG	Sb	15 14 03.1	+1.0

HEL 03 15:13:19.3±0.3, 63°.82N×22°.90E, h0^{km}, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAF	**Ylistaro**	**0.78**	**188**	PG	Pg	15 13 32.5	-1.8
VAF				SB	Sb	15 13 46.0	-0.9
OBF0	**Syolatti, Pyha**	**0.90**	**40**	PG	Pg	15 13 35.4	-1.1
OBF0				SB	Sg	15 13 48.0	-0.2
OUF	**Merijarvi**	**0.97**	**55**	PG	Pg	15 13 36.5	-1.5
OUF				MSG		15 13 49.1	
	comp=Z,0.5nm,0.2s						
UMAU	**Umeaa**	**0.99**	**275**	SN	Sg	15 13 50.0	-1.0
UMAU	**Umeaa**	**0.99**	**275**	PB	Pg	15 13 36.9	-1.3
UMAU				SB	Sg	15 13 50.0	-1.0
BURU	**Burvik**	**1.02**	**320**	SB	Pg	15 13 38.3	-0.5
BURU	**Burvik**	**1.02**	**320**	PG	Pg	15 13 38.3	-0.5
BURU				SN	Sn	15 13 56.0	+0.2
OBF4	**Vikkela, Lumij**	**1.39**	**43**	SN	Pg	15 13 43.8	-2.0
OBF4	**Vikkela, Lumij**	**1.39**	**43**	PG	Pg	15 13 43.8	-2.0
OBF4				SN	Sn	15 14 05.8	+0.9
HUSU	**Husum**	**1.72**	**256**	SG	Sg	15 14 21.7	+7.4
HUSU	**Husum**	**1.72**	**256**	SN	Sn	15 14 12.5	-0.5
OUL	**Oulu**	**1.82**	**44**	SG	Sb	15 14 16.8	+0.1
KALU	**Kalix**	**2.06**	**5**	PG	Pn	15 13 55.5	+0.3
TOF	**Tornio**	**2.35**	**14**	MSG		15 14 28.8	
	comp=Z,1.6nm,0.2s						
TOF				SG	Sb	15 14 31.5	-0.6
HEMU	**Hemsoen**	**2.48**	**245**	SG	Sb	15 14 34.8	-0.9
FIA0	**FINESS Array S**	**2.80**	**147**	PN	Pn	15 14 03.3	-1.9
RNF	**Rovaniemi**	**3.10**	**24**	PB	Pn	15 14 10.5	+1.2
PAJU	**Pajala**	**3.22**	**1**	PG	Pb	15 14 16.8	-0.6
KLF	**Kolari**	**3.46**	**7**	PN	Pn	15 14 15.2	+0.9
AAL	**Aland**	**3.90**	**202**	PN	Pn	15 14 17.7	-2.7
HEF	**Hetta**	**4.62**	**3**	SN	Sn	15 15 22.8	-1.8

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*IDC **03** 15:15:17.8±1.7, 2°.10N×126°.35E, h0^{km}, mb3.2/4, mbtmp3.3/5, ML3.3/1, MS3.2/1, Error ellipse: s-maj=62.6km s-min=26.2km az=62.0*
*DJA **03** 15:15:21.9±0.3, 2°.N±3°.×12°.7E±°, h10^{km}, M3.2/6, MLv3.2/6*

ISC 03 15:15:24.5±1.2, 2°.37N±0°.09×126°.9E±0°.1, h53^{km}, n9, σ1°.93/10, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.66**	**163**	P	**Pn**	**15 15 50.6**	**-0.7**
TNTI				S	**Sn**	**15 16 14.5**	**+3.0**
SGSI	**Sangihe**	**1.88**	**314**	P	**Pn**	**15 15 55.1**	**+0.8**
LBMI	**Labuha**	**3.05**	**168**	P	**Pn**	**15 16 11.1**	**+0.8**
KMSI	**Cibinong**	**3.41**	**238**	P	**Pn**	**15 16 16.4**	**+1.2**
SIJI	**Sorong**	**5.43**	**126**	Pn	**Pn**	**15 16 44.5**	**+1.4**
	0.8nm,0.3s,baz=335,slow=20,SNR=4.9 1.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**20.38**	**183**	P	**P**	**15 19 54.4**	**-2.5**
	0.9nm,0.8s,baz=1.7,slow=9.7,SNR=1.8 0.9nm,0.8s						
WRA	**Warramunga Arr**	**23.35**	**162**	P	**P**	**15 20 26.7**	**-1.8**
	0.3nm,0.4s,baz=338,slow=10,SNR=10 0.3nm,0.4s						
ASAR	**Alice Springs**	**26.77**	**166**	P	**P**	**15 20 58.1**	**-1.5**
	0.1nm,0.3s,baz=344,slow=12,SNR=1.6						
ASAR				LR	LR	15 33 24.9	
	comp=Z,50nm,19.0s,baz=148,slow=41 0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.76**	**326**	P	**P**	**15 25 17.2**	**+0.1**
	0.3nm,0.6s,baz=122,slow=6.7,SNR=1.8 0.3nm,0.6s						

TRN 03 15:18:56.5, 15°.35N×60°.91W, h31^{km}, MD4.2, 3C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.32**	**267**	↓*iP*	Pn	15 19 06.8	+1.6
DLPL				*eS*	Sn	15 19 12.8	+1.9
MDN	**Morne-Daniel**	**0.46**	**266**	↓*iP*	Pn	15 19 08.7	+1.6
MDN				*eS*	Sn	15 19 16.4	+2.1
DSLB	**Salisbury**	**0.50**	**280**	*eP*	Pn	15 19 09.3	+1.7
DSLB				*eS*	Sn	15 19 17.3	+2.1
MDVC	**Dominica, Viel**	**0.54**	**299**	*eP*	Pn	15 19 09.6	+1.4
MDVC				*eS*	Sn	15 19 17.6	+1.3
SVN	**Savane Anatole**	**0.56**	**206**	*eP*	Pn	15 19 09.8	+1.3
ILAM	**Ilet Lapin Mar**	**0.57**	**176**	↑*iP*	Pn	15 19 09.2	+0.6
ILAM				*eS*	Sn	15 19 17.2	+0.3
BAMF	**Morne Balai**	**0.58**	**203**	*eP*	Pn	15 19 09.9	+1.1
CXM	**Morne La Croix**	**0.59**	**205**	*eP*	Pn	15 19 10.4	+1.5
MDCT	**Cottage Hill,**	**0.59**	**297**	*eP*	Pn	15 19 10.4	+1.5
MDCT				*eS*	Sn	15 19 20.0	+2.5
GBMF	**Grand Be**	**0.60**	**204**	*eP*	Pn	15 19 10.1	+1.0
PCM	**Pelee Case Pet**	**0.60**	**209**	*eP*	Pn	15 19 10.6	+1.5
PML	**Morne Lenard**	**0.62**	**205**	*eP*	Pn	15 19 10.5	+1.2
FDF	**Fort de France**	**0.65**	**201**	↑*iP*	Pn	15 19 10.7	+1.0
FDF				*eS*	Sn	15 19 21.0	+1.9
MAGL	**Barre de l'ile**	**0.70**	**329**	*eP*	Pn	15 19 11.6	+1.2
MAGL				*eS*	Sn	15 19 21.2	+1.1
LPMF	**Morne Lapointe**	**0.77**	**184**	*eP*	Pb	15 19 11.9	+0.4
ZAM	**Aeronautique**	**0.78**	**188**	*eP*	Pb	15 19 12.1	+0.5
MVM	**Montagne Vaucl**	**0.79**	**179**	↓*eP*	Pb	15 19 12.7	+0.9
TRMF	**Trois Ilets**	**0.82**	**189**	*eP*	Pb	15 19 12.8	+0.5
BIM	**Bigot**	**0.84**	**191**	*eP*	Pb	15 19 13.5	+0.8
BIM				*eS*	Sb	15 19 25.0	+1.4
TDBA	**Terre de Bas,**	**0.86**	**306**	*eP*	Pb	15 19 14.5	+1.5
TDBA				*eS*	Sb	15 19 26.3	+2.1
TBG	**Guadaloupe-3**	**0.87**	**305**	*eP*	Pb	15 19 14.4	+1.3
MPOM	**Morne Pois Mar**	**0.90**	**177**	*eP*	Pb	15 19 14.3	+0.7
MPOM				*eS*	Sb	15 19 26.4	+1.1
CBE	**Ff, Capester**	**0.98**	**317**	*eP*	Pb	15 19 16.4	+1.3
CBE				*eS*	Sb	15 19 29.3	+1.7
ABD	**La Joyeuse, An**	**1.25**	**334**	*eP*	Pb	15 19 19.9	+0.4
ABD				*eS*	Sb	15 19 35.3	0.0
SLBI	**Saint Lucia, B**	**1.32**	**183**	*eP*	Pb	15 19 20.9	+0.2
SLBI				*eS*	Sb	15 19 39.6	+2.4
SLCP	**Castries, St.**	**1.33**	**183**	*eP*	Pb	15 19 20.9	-0.1
SLCP				*eS*	Sb	15 19 38.4	+0.8
MCLT	**Moule a Chique**	**1.63**	**181**	*eP*	Pb	15 19 25.2	-0.8
MCLT				*eS*	Sb	15 19 46.7	+0.5
MBFL	**Flemmings, Mon**	**1.87**	**318**	*eP*	Pb	15 19 28.5	-1.6
MBFL				*eS*	Sb	15 19 53.1	0.0
ANBD	**Bethesda, Anti**	**1.88**	**334**	*eP*	Pn	15 19 28.3	+1.7
ANBD				*eS*	Sn	15 19 50.5	+1.2
SVB	**Belmont**	**2.09**	**189**	*eP*	Pn	15 19 31.5	+1.9
SVB				*eS*	Sb	15 19 59.0	-0.4
ANWB	**Willy Bob**	**2.46**	**340**	*eP*	Pn	15 19 37.0	+2.5
ANWB				*eS*	Sn	15 20 04.6	+1.1
BBGH	**Gun Hill**	**2.55**	**149**	*eS*	Sn	15 20 07.6	+1.6
BBSP	**Saint Philip**	**2.64**	**148**	*eP*	Pn	15 19 39.2	+2.1
GRGR	**Grenville**	**3.28**	**193**	*eP*	Pn	15 19 47.8	+1.9
GRFF	**Grenada Fort F**	**3.38**	**194**	*eP*	Pn	15 19 49.1	+1.9
SMRT	**St. Maarten**	**3.39**	**323**	*eP*	Pn	15 19 49.6	+2.1
SMRT				*eS*	Sn	15 20 27.5	+0.8
TOSP	**Speyside**	**4.04**	**175**	*eP*	Pn	15 19 59.2	+2.9
TOSP				*eS*	Sn	15 20 44.0	+1.4
TRN	**Trinidad (W)**	**4.70**	**186**	*eP*	Pn	15 20 08.4	+3.1
TRN	**Trinidad (W)**	**4.70**	**186**	*eS*	Sn	15 21 00.5	+1.7
AOPR	**Arecibo Observ**	**6.34**	**299**	*eP*	Pn	15 20 31.7	+3.8
BAUV	**El Baul**	**9.44**	**228**	*eP*	Pn	15 21 12.0	+1.5
BAUV	**El Baul**	**9.44**	**228**	*eS*	Sn	15 22 50.1	-5.6

KRSC 03 15:30:43.2±1.9, 54°.82N×165°.78E, h40^{km}±14^{km}, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.41**	**16**	*eP*	Pn	15 30 51.8	-0.9
BKI				*eS*	Sn	15 30 57.7	-1.6
MKZ	**Mys Kozlova**	**2.37**	**265**	*eP*	Pn	15 31 23.5	+4.1
MKZ				*eS*	Sn	15 31 51.8	+4.6
SPN	**Mys Shipunski**	**3.81**	**246**	*eP*	Pn	15 31 43.5	+4.2
SPN				*eS*	Sn	15 32 26.1	+3.3
SDLR	**Sedlovina**	**4.35**	**252**	*eP*	Pn	15 31 51.7	+4.9
SMAR	**Somma**	**4.40**	**252**	*eP*	Pn	15 31 52.9	+5.3
SMAR				*eS*	Sn	15 32 42.1	+4.5
UGLR	**Uglovaya**	**4.41**	**251**	*eP*	Pn	15 31 52.8	+5.2
KRER	**Koryakskii**	**4.41**	**253**	*eP*	Pn	15 31 53.2	+5.5
AVH	**Avacha**	**4.43**	**252**	*eP*	Pn	15 31 53.1	+5.2
KRX	**Arik**	**4.45**	**254**	*eP*	Pn	15 31 53.1	+4.9
KRX				*eS*	Sn	15 32 43.2	+4.5
KOK	**Koryaka**	**4.48**	**253**	*eP*	Pn	15 31 53.7	+5.1
PET	**Petropavlovsk**	**4.58**	**250**	*eP*	Pn	15 31 54.5	+4.7
PET				*eS*	Sn	15 32 45.4	+3.7
GNL	**Ganaly**	**4.73**	**259**	*eP*	Pn	15 31 57.8	+5.7
RUS	**Russkaya**	**4.94**	**244**	*eP*	Pn	15 31 59.1	+4.3
RUS				*eS*	Sn	15 32 54.5	+3.9
MTVR	**Mutnovka**	**5.09**	**246**	*eP*	Pn	15 32 02.0	+5.0
MTVR				*eS*	Sn	15 32 58.4	+3.9
GRL	**Gorelyy**	**5.11**	**247**	*eP*	Pn	15 32 03.3	+6.0
KDTR	**Khodutka, Kamc**	**5.51**	**240**	S	Sn	15 33 06.4	+1.7

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*NEIC **03** 15:33:03.9±1.5, 36°.5S±0°.2×78°.9E±0°.3, h10^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=42.1km s-min=17.9km az=309.0*
*IDC **03** 15:33:03.2±0.9, 36°.59S×79°.37E, h0^{km}, mb4.0/10, mbtmp4.0/10, MS4.1/46, Error ellipse: s-maj=33.0km s-min=20.0km az=93.0*
*GCMT **03** 15:33:07.9±0.4, 36°.31S±0°.02×79°.09E±0°.02, h12^{km}, MW4.8/78, Moment Tensor Solution. s12,c12; s78,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.03±.07; $M_{\theta\theta}$-1.61±.06; $M_{\phi\phi}$1.65±.06; $M_{r\theta}$0.46±.23; $M_{\theta\phi}$0.02±.08; $M_{\phi r}$0.27±.20; Best double couple: $M_0$1.71600×10^{16} NP1:ϕ_s225.00000°, δ86.00000°, λ-18.00000°. NP2: ϕ_s316.00000°, δ72.00000°, λ-176.00000°. Principal axes: T 1.6960, Plg9.0000°, Azm272.0000°; N 0.0470, Plg72.0000°, Azm32.0000°; P -1.7360, Plg15.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 15:33:04.8±0.7, 36°.6S±0°.1×79°.1E±0°.2, h12^{km}, n61, σ1°.14/17, mb4.2/13, MS4.2/46, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**1.68**	**225**		**Pn**	**15 33 32.4**	**-1.6**
H01W2	**Cape Leeuwin H**	**28.41**	**97**	T	T	16 08 26.3	
	baz=256,slow=75,SNR=949						
H01W3	**Cape Leeuwin H**	**28.41**	**97**	T	T	16 08 26.7	
	baz=256,slow=75,SNR=421						
H01W1	**Cape Leeuwin H**	**28.43**	**97**	T	T	16 08 27.6	
	baz=256,slow=75,SNR=620						
H08S2	**Diego Garcia H**	**29.46**	**347**	T	T	16 09 49.1	
	baz=169,slow=76,SNR=1321						
H08S1	**Diego Garcia H**	**29.46**	**347**	T	T	16 09 49.3	
	baz=169,slow=76,SNR=726						
H08S3	**Diego Garcia H**	**29.48**	**347**	T	T	16 09 50.5	
	baz=169,slow=76,SNR=2165						
NWAO	**Narrogin (SRO)**	**31.42**	**95**	LR	LR	15 49 11.1	
	comp=Z,682nm,20.0s,baz=87,slow=31						
MAW	**Mawson**	**32.37**	**192**	P	**P**	**15 39 35.4**	**+1.6**
	1.3nm,0.8s,baz=32,slow=6.9,SNR=4.4						
MAW				LR	LR	15 50 21.5	
	comp=Z,479nm,18.5s,baz=10.0,slow=32 1.3nm,0.8s						
OPO	**Ambohidratompo**	**33.28**	**294**	LR	LR	15 49 51.3	
	comp=Z,180nm,19.6s,baz=358,slow=30						
LEM	**Lembang**	**39.47**	**48**	LR	LR	15 53 24.8	
	comp=Z,149nm,19.6s,baz=185,slow=31						
PSI	**Prapat**	**43.36**	**30**	LR	LR	15 54 45.2	
	comp=Z,294nm,19.4s,baz=210,slow=30						
PALK	**Pallekele**	**43.69**	**2**	LR	LR	15 55 42.4	
	comp=Z,155nm,18.9s,baz=275,slow=31						
FITZ	**Fitzroy Crossi**	**44.81**	**79**	LR	LR	15 56 53.5	
	comp=Z,246nm,20.0s,baz=250,slow=32						
BOSA	**Boshof**	**45.53**	**264**	LR	LR	15 56 20.5	
	comp=Z,171nm,21.3s,baz=122,slow=30						
LBTB	**Lobatse**	**46.83**	**269**	LR	LR	15 57 07.8	
	comp=Z,299nm,21.0s,baz=115,slow=31						
SUR	**Sutherland**	**47.58**	**257**	LR	LR	15 57 09.8	
	comp=Z,253nm,21.2s,baz=118,slow=30						
BATI	**Baumata**	**48.04**	**68**	LR	LR	15 58 35.3	
	comp=Z,302nm,20.3s,baz=250,slow=32						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.55**	**91**	P	**P**	**15 41 45.9**	**-2.3**
	2.3nm,1.0s,baz=236,slow=6.5,SNR=8.5						
ASAR				LR	LR	15 59 43.8	
	comp=Z,366nm,20.4s,baz=254,slow=33 2.3nm,1.0s						
KAPI	**Kappang**	**48.74**	**60**	LR	LR	15 58 24.2	
	comp=Z,168nm,22.0s,baz=224,slow=31						
LSZ	**Lusaka**	**49.81**	**281**	LR	LR	16 00 02.7	
	comp=Z,320nm,19.3s,baz=137,slow=32						
WRA	**Warramunga Arr**	**50.76**	**87**	P	**P**	**15 42 03.1**	**-1.8**
	5.0nm,1.1s,baz=238,slow=7.3,SNR=8.9						
WRA				LR	LR	16 01 16.5	
	comp=Z,315nm,20.4s,baz=198,slow=34 5.0nm,1.1s						
WRA	**Warramunga Arr**	**50.76**	**87**	P	**P**	**15 42 04.2**	**-0.7**
WB2	**Warramunga Arr**	**50.77**	**87**	P	**P**	**15 42 03.9**	**-1.1**
WB2				IAmb	IAmb	15 42 13.8	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**50.91**	**87**	P	**P**	**15 42 05.4**	**-0.6**
WR0				IAmb	IAmb	15 42 16.3	
	comp=Z,12nm,1.5s						
STKA	**Stephens Creek**	**51.10**	**104**	LR	LR	16 00 06.1	
	comp=Z,261nm,20.1s,baz=213,slow=32						
VNDA	**Vanda**	**53.01**	**164**	P	**P**	**15 42 21.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=278,slow=6.8,SNR=7.1						
VNDA				LR	LR	16 02 32.6	
	comp=Z,247nm,19.9s,baz=269,slow=33 comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**53.01**	**164**	P	**P**	**15 42 21.6**	**+0.7**
VNDA				IAmb	IAmb	15 42 46.8	
	comp=Z,3.2nm,1.2s						
SNAA	**Sanae**	**53.19**	**203**	LR	LR	16 01 22.9	
	comp=Z,94nm,19.4s,baz=38,slow=32						
SNAA	**Sanae**	**53.19**	**203**	P	**P**	**15 42 22.8**	**+0.3**
SNAA				IAmb	IAmb	15 42 54.6	
	comp=Z,4.1nm,1.2s						
QSPA	**South Pole Qui**	**53.54**	**180**	P	**P**	**15 42 25.3**	**+0.1**
	comp=Z,6.1nm,1.1s,baz=188,slow=0.8,SNR=6.6						
QSPA				LR	LR	16 02 57.9	
	comp=Z,255nm,20.9s,baz=299,slow=34 comp=Z,6.1nm,1.1s						
QSPA	**South Pole Qui**	**53.54**	**180**	P	**P**	**15 42 25.6**	**+0.4**
TSUM	**Tsumeb**	**56.15**	**270**	LR	LR	16 03 02.7	
	comp=Z,445nm,21.0s,baz=150,slow=32						
MBAR	**Mbarara**	**57.25**	**297**	LR	LR	16 03 00.6	
	comp=Z,138nm,22.0s,baz=48,slow=31						
CMAR	**Chiang Mai Arr**	**57.91**	**22**	P	**P**	**15 42 57.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=214,slow=6.5,SNR=5.3						
CMAR				LR	LR	16 03 34.5	
	comp=Z,52nm,21.2s,baz=230,slow=32 comp=Z,0.3nm,0.3s						
ATD	**Arta Tunnel**	**58.79**	**317**	LR	LR	16 05 27.2	
	comp=Z,39nm,18.1s,baz=91,slow=33						
SIJI	**Sorong**	**59.86**	**66**	LR	LR	16 07 09.2	
	comp=Z,35nm,20.1s,baz=230,slow=34						
BRDH	**Bariadhala**	**60.16**	**13**	LR	LR	16 06 39.8	
	comp=Z,163nm,18.8s,baz=98,slow=34						
CTA	**Charters Tower**	**60.26**	**94**	LR	LR	16 07 36.7	
	comp=Z,446nm,18.2s,baz=248,slow=34						
DAV	**Davao City (W)**	**61.51**	**55**	LR	LR	16 06 46.0	
	comp=Z,42nm,21.8s,baz=199,slow=33						
WSAR	**Wadi Sarin**	**62.59**	**339**	LR	LR	16 03 55.7	
	comp=Z,177nm,21.8s,baz=152,slow=30						
PMG	**Port Moresby**	**66.88**	**85**	LR	LR	16 10 37.1	
	comp=Z,304nm,21.7s,baz=244,slow=34						
RPZ	**Rata Peaks**	**67.12**	**128**	LR	LR	16 06 30.1	
	comp=Z,183nm,20.1s,baz=256,slow=30						
KRVT	**Keravat (AS076**	**73.77**	**83**	LR	LR	16 15 46.7	
	comp=Z,145nm,20.0s,baz=22,slow=35						
PMSA	**Palmer Station**	**74.88**	**195**	LR	LR	16 15 58.9	
	comp=Z,120nm,20.1s,baz=142,slow=34						
DZM	**Mont Dzumac**	**75.16**	**107**	LR	LR	16 14 06.7	
	comp=Z,128nm,18.1s,baz=217,slow=33						
AAK	**Ala-Archa**	**78.99**	**357**	LR	LR	16 16 38.9	
	comp=Z,115nm,20.5s,baz=174,slow=33						
GUMO	**Guam**	**79.51**	**64**	LR	LR	16 18 54.4	
	comp=Z,30nm,18.3s,baz=220,slow=35						
MKAR	**Makanchi Array**	**83.08**	**2**	P	**P**	**15 45 29.9**	**0.0**
	comp=Z,1.9nm,1.0s,baz=194,slow=8.4,SNR=5.2						
MKAR				LR	LR	16 20 01.1	
	comp=Z,62nm,20.8s,baz=135,slow=34 comp=Z,1.9nm,1.0s						
MSVF	**Nonsavu**	**86.55**	**109**	LR	LR	16 16 33.6	
	comp=Z,83nm,20.9s,baz=208,slow=30						
BRTR	**Keskin Array B**	**86.71**	**327**	P	**P**	**15 45 48.2**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=186,slow=4.2,SNR=2.1 comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**86.87**	**360**	P	**P**	**15 45 48.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=185,slow=4.2,SNR=6.7 comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**87.55**	**18**	P	**P**	**15 45 53.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=204,slow=4.0,SNR=3.8						
SONM				LR	LR	16 23 42.5	
	comp=Z,76nm,18.0s,baz=205,slow=35 comp=Z,0.4nm,0.5s

LIRZ	Lichensteins R	2.42 252	P	Pn	15 36 14.4	+1.7
WHHZ	Waihua	2.43 221	P	Pn	15 36 14.8	+2.0
MYRZ	Mayor Island	2.44 269	P	Pn	15 36 13.9	+1.0
RRRZ	Republican Roa	2.45 243	P	Pn	15 36 14.7	+1.6
TGRZ	Tauranga	2.46 258	P	Pn	15 36 14.0	+0.9
OMRZ	Omania	2.47 249	P	Pn	15 36 15.1	+1.8
MTHZ	Maungataniwha	2.50 230	P	Pn	15 36 15.7	+1.9
HLRZ	Highlands Stat	2.53 246	P	Pn	15 36 16.0	+1.8
KARZ	Kaharoa	2.54 252	P	Pn	15 36 15.5	+1.3
NGRZ	Ngongotaha	2.60 250	P	Pn	15 36 15.7	+0.5
PRRZ	Plateau Road	2.60 241	P	Pn	15 36 16.5	+1.3
UTU	Utuhina	2.62 249	P	Pn	15 36 18.2	+2.8
HSRZ	Hossack Road	2.63 246	P	Pn	15 36 17.5	+2.0
HRRZ	Handcock Road	2.63 244	P	Pn	15 36 17.4	+1.8
ALRZ	Allen Road	2.67 240	P	Pn	15 36 17.3	+1.3
NMHZ	Naumai	2.68 226	P	Pn	15 36 18.3	+2.0
ARHZ	Aropaoanui	2.69 222	P	Pn	15 36 18.2	+1.8
KMRZ	Kaimai	2.73 257	P	Pn	15 36 17.8	+0.9
GRRZ	Galatos Road	2.74 246	P	Pn	15 36 18.9	+1.7
MRHZ	Matea Rd	2.76 235	P	Pn	15 36 18.6	+1.3
WPRZ	Whakapapatarin	2.77 242	P	Pn	15 36 19.5	+1.9
BKZ	Black Stump Fm	2.91 229	P	Pn	15 36 20.8	+1.4
BKZ	Black Stump Fm	2.91 229	P	Pn	15 36 21.3	+1.9
KUZ	Kuaotunu	2.91 279	P	Pn	15 36 19.4	+0.1
KUZ	Kuaotunu	2.91 279	P	Pn	15 36 19.7	+0.4
CKHZ	Cape Kidnapper	2.95 215	P	Pn	15 36 21.0	+1.0
MCHZ	McNeill Hill	2.98 222	P	Pn	15 36 21.8	+1.5
WHTZ	Whakaora	2.98 241	P	Pn	15 36 23.4	+2.9
KUTZ	Kaahu Road	3.00 245	P	Pn	15 36 22.5	+1.8
TOZ	Tahuroa Road	3.05 260	P	Pn	15 36 22.2	+0.8
KWHZ	Kaweka Forest	3.12 226	P	Pn	15 36 23.5	+1.1
KAHZ	Kahuranaki	3.15 216	P	Pn	15 36 23.6	+0.8
TLZ	Tolley Road	3.16 249	P	Pn	15 36 24.1	+1.3
RATZ	Rangitukua	3.21 239	P	Pn	15 36 25.4	+1.9
GRZ	Great Barrier	3.25 287	P	Pn	15 36 25.0	+1.0
KRHZ	Kereru	3.30 223	P	Pn	15 36 25.4	+0.6
MKAZ	Moumakai	3.31 272	P	Pn	15 36 25.6	+0.8
KATZ	Kakaramea	3.31 238	P	Pn	15 36 26.6	+1.6
PXZ	Pawanui	3.35 214	P	Pn	15 36 25.7	+0.2
WIAZ	Waiheke Island	3.36 277	P	Pn	15 36 26.4	+0.8
BHHZ	Black Hill Sta	3.37 228	P	Pn	15 36 26.9	+1.1
TMVZ	Te Maari	3.38 236	P	Pn	15 36 27.0	+1.1
ETVZ	East Tongariro	3.38 235	P	Pn	15 36 26.9	+0.9
NTVZ	North Tongarir	3.39 236	P	Pn	15 36 27.0	+1.0
KRVZ	Karewarewa	3.41 237	P	Pn	15 36 27.5	+1.2
OTVZ	Oturere	3.43 235	P	Pn	15 36 27.6	+0.9
NNVZ	North Ngauruho	3.44 236	P	Pn	15 36 28.2	+1.3
WTVZ	West Tongariro	3.45 237	P	Pn	15 36 28.5	+1.6
SNVZ	South Ngauruho	3.46 235	P	Pn	15 36 28.0	+0.9
NGZ	Ngauruhoe	3.48 236	P	Pn	15 36 28.3	+1.0
TUVZ	Tukino	3.49 234	P	Pn	15 36 28.7	+1.2
ETAZ	East Tamaki Re	3.50 274	P	Pn	15 36 28.7	+1.1
MOVZ	Moawhango	3.51 231	P	Pn	15 36 28.3	+0.6
TWVZ	Taurewa	3.53 238	P	Pn	15 36 29.3	+1.2
WHVZ	Whangaehu Hut	3.54 234	P	Pn	15 36 29.3	+1.0
FWVZ	Far West T-bar	3.55 235	P	Pn	15 36 29.7	+1.3
MBAZ	Motutapu North	3.56 277	P	Pn	15 36 29.5	+1.3
WNVZ	Wahianoa	3.56 234	P	Pn	15 36 29.4	+0.9
WPHZ	Waipukurau	3.58 218	P	Pn	15 36 29.1	+0.6
PNHZ	Pukenui	3.58 222	P	Pn	15 36 28.7	0.0
ABAZ	Army Bay	3.64 279	P	Pn	15 36 31.0	+1.6
PRHZ	Porangahau	3.64 214	P	Pn	15 36 29.6	+0.1
EPAZ	Eden Park BICE	3.66 275	P	Pn	15 36 32.0	+2.4
HBAZ	Herne Bay Bore	3.67 275	P	Pn	15 36 32.5	+2.6
MTVZ	Mangateitei	3.68 234	P	Pn	15 36 30.8	+0.8
PKVZ	Pokaka	3.71 236	P	Pn	15 36 31.7	+1.3
AWAZ	Awhitu Peninsu	3.72 272	P	Pn	15 36 32.1	+1.6
HIZ	Hauiti	3.73 249	P	Pn	15 36 32.7	+2.1
HIZ	Hauiti	3.73 249	P	Pn	15 36 33.0	+2.4
WTAZ	Waiatarua	3.79 274	P	Pn	15 36 33.2	+1.7
RVAZ	Riverhead Bore	3.81 276	P	Pn	15 36 33.3	+1.6
TSZ	Takapari Road	3.82 222	P	Pn	15 36 31.5	-0.4
ANWZ	Angora Road	3.87 214	P	Pn	15 36 32.4	-0.2
DVHZ	Dannevirke	3.89 218	P	Pn	15 36 32.8	-0.1
VRZ	Vera Road	4.03 241	P	Pn	15 36 36.5	+1.8
BFZ	Birch Farm	4.15 214	P	Pn	15 36 36.1	-0.4
POWZ	Post Office Ro	4.16 220	P	Pn	15 36 36.1	-0.5
PRWZ	Pori Road	4.18 217	P	Pn	15 36 37.0	+0.1
WAZ	Wanganui	4.19 232	P	Pn	15 36 38.2	+1.1
WCZ	Waipu Caves	4.20 287	P	Pn	15 36 38.9	+1.8
CPWZ	Castlepoint	4.36 213	P	Pn	15 36 39.1	-0.2
LREZ	Lake Rotokare	4.42 239	P	Pn	15 36 42.2	+2.0
PREZ	Palmer Road	4.54 241	P	Pn	15 36 44.8	+3.0
NEZ	North Egmont	4.55 242	P	Pn	15 36 44.8	+2.8
PKE	Pukeiti	4.60 244	P	Pn	15 36 45.5	+2.9
KHEZ	Kahui Hut	4.62 242	P	Pn	15 36 45.6	+2.6
KHEZ	Kahui Hut	4.62 242	P	Pn	15 36 46.2	+3.2
NBEZ	Newall Road No	4.71 243	P	Pn	15 36 47.7	+3.5
OUZ	Omahuta	5.04 292	P	Pn	15 36 51.1	+2.4
OUZ	Omahuta	5.04 292	P	Pn	15 36 51.3	+2.7
SNZO	South Karori	5.38 220	P	Pn	15 36 51.8	-1.5
QRZ	Quartz Range	6.35 234	P	Pn	15 37 05.2	-1.5
KHZ	Kahutara	6.78 219	P	Pn	15 37 10.3	-2.3
CTZ	Chatham Island	7.17 156	P	Pn	15 37 24.0	+6.1
RPZ	Rata Peaks	8.99 222	Pn	Pn	15 37 40.4	-2.4
	1.3nm,0.3s,baz=251,slow=2.3,SNR=31					
RPZ			Sn	Sn	15 39 10.9	-13
	2.2nm,0.3s,baz=109,slow=20,SNR=13					
RPZ	Rata Peaks	8.99 222	P	Pn	15 37 41.1	-1.8
ODZ	Otahua Downs	10.14 217	P	Pn	15 37 55.6	-3.0
JCZ	Jackson Bay	10.48 226	P	Pn	15 38 03.9	+0.6
	20nm,2.7s					
SYZ	Scrubby Hill	11.95 216	P	Pn	15 38 22.3	-1.0
ASAR	Alice Springs	41.03 276	P	P	15 43 16.4	+0.1
	0.4nm,0.5s,baz=122,slow=7.2,SNR=7.2					
	0.4nm,0.5s					
WRA	Warramunga Arr	42.65 281	P	P	15 43 29.0	-0.5
	0.3nm,0.3s,baz=123,slow=7.0,SNR=22					
	0.3nm,0.3s					
FINES	FINESS Array B	150.58 334	PKPbc	PKPab	15 55 30.1	-0.3
	1.4nm,0.8s,baz=64,slow=6.3,SNR=1.7					

*IDC **03** 15:52:10.9±2.0, 6.°99S×129.°58E, h148km±20km, mb3.5/8, mbtmp4.2/13, Error ellipse: s-maj=25.8km s-min=13.2km az=69.0*
*DJA **03** 15:52:11.2±0.3, 7.°S±.2°×13.°0E±.°, h207km±6km, M4.4/15, mb4.2/15, mB5.0/6, MLv4.5/15, Mw(mB)4.3/6*
*NEIC **03** 15:52:12.6±2.1, 6.°92S±0.°09×129.°61E±0.°09, h160km±12km, mb4.4/6, Error ellipse: s-maj=13.5km s-min=11.5km az=136.0*
ISC 03 15:52:11.3±0.5, 7.°10S±0.°04×129.°53E±0.°05, h150km, n78, σ2°50/83, mb3.8/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.96	117	Pn	Pn	15 52 48.5	+2.5
SAUI	Saumlaki	1.96	117	P	Pn	15 52 48.5	+2.5
SAUI				S	Sn	15 53 17.2	+4.5
BNDI	Bandanaira	2.59	8	P	Pn	15 52 55.7	+2.2
BNDI				S	Sn	15 53 31.3	+5.2
BNDI	Bandanaira	2.59	8	P	Pn	15 52 56.0	+2.5
AAI	Ambon	3.64	339	P	Pn	15 53 09.1	+2.2
MSAI	Masohi	3.78	351	P	Pn	15 53 11.3	+2.6
FAKI	Fak Fak	4.96	33	Pn	Pn	15 53 22.2	-2.0
FAKI	Fak Fak	4.96	33	P	Pn	15 53 22.3	-2.0
SOEI	Soe	5.83	243	Pn	Pn	15 53 39.0	+3.1
SOEI	Soe	5.83	243	P	Pn	15 53 39.3	+3.4
	0.6nm2μm110nm,0.8s						
SOEI	Soe	5.83	243	P	Pn	15 53 39.4	+3.5
MTN	Manton Dam	5.92	165	Pn	Pn	15 53 38.5	+1.5
MTN	Manton Dam	5.92	165	P	Pn	15 53 38.8	+1.8
SANI	Sanana	6.13	325	P	Pn	15 53 42.0	+2.2
	0.1nm18nm,0.8s						
SANI	Sanana	6.13	325	P	Pn	15 53 45.1	+5.3
KDU	Kakadu	6.26	153	P	Pn	15 53 42.8	+1.2
SIJI	Sorong	6.43	16	P	Pn	15 53 41.9	-1.9
	27nm,0.2s,baz=217,slow=22,SNR=46						
SIJI				S	Sn	15 54 49.1	-7.1
	56nm,0.2s,baz=56,slow=20,SNR=15						
BATI	Baumata	6.57	242	P	Pn	15 53 47.8	+2.1
	69nm,0.4s,baz=271,slow=1.3,SNR=72						
BATI				S	Sn	15 54 57.5	-2.1
	76nm,0.5s,baz=95,slow=4.7,SNR=6.2						
BATI	Baumata	6.57	242	P	Pn	15 53 48.5	+2.9
	0.4nm1μm56nm,0.8s						
LBMI	Labuha	6.73	342	P	Pn	15 53 49.6	+1.8
	0.2nm670nm52nm,0.7s						
BBSI	Bau Bau	7.10	283	P	Pn	15 53 56.5	+3.8
	0.2nm17nm,1.0s						
MMRI	Maumere	7.38	258	Pn	Pn	15 53 59.8	+3.3
MMRI	Maumere	7.38	258	P	Pn	15 53 59.4	+2.9
	0.1nm25nm,0.5s						
MMRI	Maumere	7.38	258	P	Pn	15 54 01.1	+4.6
EDFI	Ende, Flores	7.93	258	P	Pn	15 54 07.1	+3.1
	11nm,0.6s						
TNTI	Ternate	8.11	345	Pn	Pn	15 54 06.0	-0.3
TNTI	Ternate	8.11	345	P	Pn	15 54 05.2	-1.0
	21nm,0.7s						
KNRA	Kununurra	8.56	185	Pn	Pn	15 54 12.8	+0.6
KNRA	Kununurra	8.56	185	P	Pn	15 54 12.9	+0.7
BSSI	Bau Bau, Buton	9.03	276	P	Pn	15 54 20.3	+1.8
	8.8nm,1.2s						
FITZ	Fitzroy Crossi	11.57	199	P	Pn	15 54 51.7	-0.3
	6.3nm,0.3s,baz=20,slow=9.3,SNR=59						
FITZ				S	Sn	15 56 54.9	-5.1
	12nm,0.4s,baz=75,slow=22,SNR=7.1						
FITZ	Fitzroy Crossi	11.57	199	Pn	Pn	15 54 51.4	-0.6
FITZ	Fitzroy Crossi	11.57	199	P	Pn	15 54 51.8	-0.3
PLAI	Plampang	11.76	261	P	Pn	15 54 53.9	-0.7
	38nm,0.7s						
PLAI	Plampang	11.76	261	P	Pn	15 54 57.2	+2.6
TWSI	Taliwang, Sumb	12.63	262	P	Pn	15 55 04.8	-1.0
	15nm,1.7s						
WB0	Warramunga Arr	13.45	160	Pn	Pn	15 55 14.4	-1.9
WRAB	Tennant Creek	13.59	160		Pn	15 55 15.8	-2.3
WRA	Warramunga Arr	13.59	160	P	Pn	15 55 17.0	-1.2
	4.4nm,0.6s,baz=335,slow=14,SNR=33						
WRA				S	Sn	15 57 42.2	-6.5
	4.1nm,0.4s,baz=337,slow=22,SNR=9.3						
WRA	Warramunga Arr	13.59	160	Pn	Pn	15 55 15.1	-3.1
WB2	Warramunga Arr	13.60	160		Pn	15 55 16.6	-1.6
WB1	Warramunga Ar.	13.61	160	P	Pn	15 55 17.0	-1.4
WR0	Warramunga Arr	13.68	160		Pn	15 55 17.4	-1.9
COEN	Coen	15.04	118	Pn	Pn	15 55 33.2	-3.2
COEN				IAmb	IAmb	15 55 41.2	
	comp=Z,15nm,1.2s						
COEN	Coen	15.04	118	P	P	15 55 37.3	-0.8
JAGI	Jajag, Banyuwa	15.29	264	Pn	Pn	15 55 38.1	-1.4
JAGI				IAmb	IAmb	15 55 40.2	
	comp=Z,49nm,1.3s						
JAGI	Jajag, Banyuwa	15.29	264	P	P	15 55 40.9	0.0
	comp=Z,40nm,1.8s						
MBWA	Marble Bar	16.89	213	P	Pn	15 56 02.4	+3.5
AS31	Alice Springs	17.00	166		P	15 55 59.0	-0.8
AS31				IAmb	IAmb	15 56 02.7	
	comp=Z,8.8nm,0.5s						
ASAR	Alice Springs	17.00	166	P	Pn	15 56 01.0	+0.7
	comp=Z,17nm,0.7s,baz=346,slow=11,SNR=110						
ASAR				S	S	15 59 03.8	-5.6
	comp=Z,2.9nm,0.9s,baz=350,slow=25,SNR=6.5						
ASAR	Alice Springs	17.00	166		P	15 55 59.2	-0.5
AS01	Alice Springs	17.01	166	P	Pn	15 56 02.4	+2.0
PSA00	Pilbara Seismi	17.16	212		Pn	15 56 03.8	+1.6
WRKA	Warakurna	17.88	184	P	Pn	15 56 12.0	+1.3
MTSU	Mount Surprise	18.11	129	P	Pn	15 56 14.2	+0.6
CTA	Charters Tower	20.73	130	P	P	15 56 40.8	+0.5
	comp=Z,1.6nm,0.8s,baz=308,slow=12,SNR=2.5						
	comp=Z,1.6nm,0.8s						
OOD	Oodnadatta	21.40	165	P	P	15 56 48.4	+1.2
INKA	Innaminka	23.12	154	P	P	15 57 06.9	+2.7
MULG	Mulgathing	23.45	170	P	P	15 57 09.9	+2.7
FORT	Forrest	23.60	183	P	P	15 57 11.0	+2.5
FORT	Forrest	23.60	183	P	P	15 57 10.8	+2.3
	comp=Z,27nm,0.7s						
LCRK	Leigh Creek	24.62	162	P	P	15 57 19.5	+1.7
STKA	Stephens Creek	27.10	157	P	P	15 57 41.0	+0.8
	comp=Z,1.8nm,0.5s,baz=333,slow=8.0,SNR=4.9						
	comp=Z,1.8nm,0.5s						
CMSA	Cobar Meteorol	28.62	150	P	P	15 57 55.4	+1.7
ARPS	Mount Arapiles	31.60	161	P	P	15 58 22.1	+2.2
	comp=Z,25nm,1.1s						
CMAR	Chiang Mai Arr	39.44	311	P	P	15 59 26.3	-0.7
	comp=Z,0.6nm,0.4s,baz=141,slow=7.3,SNR=6.7						
	comp=Z,0.6nm,0.4s						
PZH	PanZhiHua	42.92	322	P	P	15 59 57.6	+2.1
HHC	Hu-ho-hao-te	50.49	342	*eP*	P	16 00 54.9	+0.7
BTO	Baotou	50.76	341	*eP*	P	16 01 03.4	+7.3
WMQ	Urumqi	63.22	327	*eP*	P	16 02 25.2	+1.4
MK31	Makanchi Array	68.05	327	P	P	16 02 54.7	+0.1
MK31				IAmb	IAmb	16 03 01.4	
	comp=Z,4.8nm,1.2s						
MKAR	Makanchi Array	68.05	327	P	P	16 02 54.2	-0.5
	comp=Z,2.0nm,0.5s,baz=117,slow=8.2,SNR=33						
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	68.05	327	P	P	16 02 54.4	-0.3
ZALV	Zalesovo Beam	71.47	334	P	P	16 03 14.4	-0.9
	comp=Z,0.5nm,0.4s,baz=125,slow=7.8,SNR=3.9						
	comp=Z,0.5nm,0.4s						
KURBB	Kurchatov Arra	72.35	329	P	P	16 03 20.1	-0.6
	comp=Z,1.0nm,0.8s,baz=130,slow=4.9,SNR=9.0						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	72.41	173	P	P	16 03 21.3	+0.7
	comp=Z,0.4nm,0.6s,baz=293,slow=6.8,SNR=5.5						
	comp=Z,0.4nm,0.6s						
BVAR	Borovoye Array	77.90	328	P	P	16 03 51.6	-0.9
	comp=Z,0.5nm,0.7s,baz=121,slow=5.6,SNR=4.9						
	comp=Z,0.5nm,0.7s						
ABKAR	Akbulak array	82.30	322	P	P	16 04 15.3	-0.7

*IDC **03** 15:55:10.8±2.2, 16.°76S×174.°63W, h173km±20km, mb4.0/13, mbtmp4.4/15, MS3.1/4, Error ellipse: s-maj=22.8km s-min=12.4km az=143.0*
*NEIC **03** 15:55:11.3±1.3, 16.°77S±0.°09×174.°59W±0.°03, h176km±7km, mb4.3/47, Error ellipse: s-maj=13.6km s-min=4.1km az=169.0*
*NOU **03** 15:55:11.8, 16.°84S×174.°55W, h176km, MLv5.4/15, Tonga Islands*
ISC 03 15:55:10.6±0.5, 16.°76S±0.°07×174.°58W±0.°08, h172km, n102, σ0°78/101, mb4.2/35, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.91	44	P	Pn	15 56 11.4	+1.0
	232nm,0.3s,baz=199,slow=3.2,SNR=176						
AFI				S	Sn	15 56 53.8	-3.4
	1μm,0.5s,baz=22,slow=21,SNR=20						
AFI				LR	LR	15 57 13.9	
	comp=Z,62nm,21.4s,baz=348,slow=31						
AFI	Afiamalu	3.91	44		Pn	15 56 11.3	+0.8
AFI	Afiamalu	3.91	44	P	Pn	15 56 11.7	+1.3
AFI	Afiamalu	3.91	44	P	Pn	15 56 11.8	+1.3
AFI	Afiamalu	3.91	44	P	Pn	15 56 11.8	+1.3
NIUE	Niue	4.99	118		Pn	15 56 25.2	+0.9
NIUE	Niue	4.99	118	P	Pn	15 56 25.4	+1.1
MARNC	Mare, Loyalty	17.09	251		P	15 58 58.5	+0.1
LIFNC	LIFOU	17.67	254		P	15 59 04.9	+0.1
DZM	Mont Dzumac	18.66	251	P	P	15 59 15.8	+0.1
	3.0nm,0.7s,baz=307,slow=20,SNR=3.1						
DZM	Mont Dzumac	18.66	251	P	P	15 59 14.7	-1.0
DZM				IAmb	IAmb	15 59 55.1	
	comp=Z,7.9nm,1.1s						
KOUNC	Koumac, New Ca	20.38	256	P	P	15 59 34.4	+0.4
KOUNC				IAmb	IAmb	15 59 35.5	
	comp=Z,26nm,1.4s						
KOUNC	Koumac, New Ca	20.38	256	P	P	15 59 34.7	+0.6
	comp=Z,14nm,1.3s						
KUZ	Kuaotunu	21.68	201	P	P	15 59 48.1	+0.3
URZ	Urewera	22.63	197	P	P	15 59 57.5	+0.6
	comp=Z,4.7nm,0.3s,baz=32,slow=3.8,SNR=13						
	comp=Z,4.7nm,0.3s						
URZ	Urewera	22.63	197	P	P	15 59 56.6	-0.4
URZ				IAmb	IAmb	16 00 02.4	
	comp=Z,30nm,1.4s						
URZ	Urewera	22.63	197	P	P	15 59 57.7	+0.8
BKZ	Black Stump Fm	23.65	198	P	P	16 00 04.1	-2.2
BKZ				IAmb	IAmb	16 00 11.3	
	comp=Z,22nm,1.4s						
BFZ	Birch Farm	25.13	197	P	P	16 00 19.0	-0.6
QRZ	Quartz Range	26.45	202	P	P	16 00 30.7	-0.8
QRZ	Quartz Range	26.45	202	P	P	16 00 31.9	+0.4
JCZ	Jackson Bay	30.65	204	P	P	16 01 08.1	-0.7
ARMA	Armidale	33.68	240	P	P	16 01 34.9	-0.6
KRVT	Keravat (AS076	35.02	287	P	P	16 01 45.5	-1.5
	comp=Z,19nm,0.6s,baz=317,slow=1.8,SNR=5.4						
	comp=Z,19nm,0.6s						
PMG	Port Moresby	37.93	276	P	P	16 02 11.9	+0.3
	comp=Z,9.8nm,0.5s,baz=351,slow=22,SNR=7.8						
	comp=Z,9.8nm,0.5s						
PMG	Port Moresby	37.93	276	P	P	16 02 13.2	+1.5
COEN	Coen	40.78	268	P	P	16 02 35.4	0.0
COEN				IAmb	IAmb	16 03 10.3	
	comp=Z,9.7nm,1.2s						
STKA	Stephens Creek	42.39	241	P	P	16 02 47.1	-1.0
	comp=Z,4.2nm,0.6s,baz=84,slow=10,SNR=7.1						
	comp=Z,4.2nm,0.6s						
STKA	Stephens Creek	42.39	241	P	P	16 02 47.7	-0.4
ASAR	Alice Springs	48.62	253	P	P	16 03 36.3	-1.0
	comp=Z,11nm,0.7s,baz=86,slow=8.3,SNR=28						
	comp=Z,11nm,0.7s						
FAKI	Fak Fak	53.98	279	P	P	16 04 17.1	-0.2
FAKI				IAmb	IAmb	16 04 18.0	
	comp=Z,6.8nm,1.0s						
SIJI	Sorong	55.58	281	P	P	16 04 27.9	-0.8
	comp=Z,4.7nm,0.5s,baz=172,slow=6.4,SNR=8.2						
	comp=Z,4.7nm,0.5s						
FITZ	Fitzroy Crossi	56.83	259	P	P	16 04 37.4	-0.2
SOEI	Soe	59.75	268	P	P	16 04 58.7	+0.7
MBWA	Marble Bar	61.91	255	P	P	16 05 10.9	-1.4
JHS	Saijyo	71.50	317	P	P	16 06 13.4	+0.7
JHS				IAmb	IAmb	16 06 18.6	
	comp=Z,20nm,1.4s						
QSPA	South Pole Qui	73.29	180	P	P	16 06 22.9	-0.1
QSPA				IAmb	IAmb	16 06 40.8	
	comp=Z,5.9nm,1.4s						
PEA0B	Petropavlovsk-	73.58	343	P	P	16 06 24.9	+0.3
PETK	Petropavlovsk-	73.58	343	P	P	16 06 24.3	-0.3
	comp=Z,2.2nm,0.6s,baz=115,slow=9.0,SNR=10						
	comp=Z,2.2nm,0.6s						
PETK	Petropavlovsk-	73.58	343	P	P	16 06 24.8	+0.2
YBH	Yreka Blue Hor	75.36	37	P	P	16 06 36.0	+0.8
YBH				IAmb	IAmb	16 07 05.6	
	comp=Z,8.5nm,1.4s						
NVAR	Mina Array Bea	76.09	42	P	P	16 06 40.2	+0.6
	comp=Z,1.3nm,0.8s,baz=224,slow=9.4,SNR=9.1						
	comp=Z,1.3nm,0.8s						
KSRS	Korea Array	76.34	316	P	P	16 06 42.3	+1.6
	comp=Z,1.2nm,0.8s,baz=126,slow=7.2,SNR=5.6						
KSRS				LR	LR	16 34 39.4	
	comp=Z,10.0nm,21.7s,baz=205,slow=31						
	comp=Z,1.2nm,0.8s						
I07A	Izee	78.66	37	P	P	16 06 53.6	-0.1
LCMT	Little Creek M	78.69	46	P	P	16 06 53.4	-0.6
LCMT				IAmb	IAmb	16 06 54.8	
	comp=Z,4.2nm,0.6s						
MA2	Magadan	81.12	343	LR	LR	16 41 04.0	
	comp=Z,23nm,19.3s,baz=306,slow=34						
SCM	Sheep Creek Mo	81.26	13	P	P	16 07 07.2	0.0
SCM				IAmb	IAmb	16 07 30.3	
	comp=Z,9.6nm,1.3s						
HLID	Hailey	81.39	40	P	P	16 07 09.3	+0.9
TABL	Table Mountain	81.51	16	P	P	16 07 09.4	+0.7
N25K	Chitina, Valde	81.66	14	P	P	16 07 09.3	0.0
N25K				IAmb	IAmb	16 07 10.4	
	comp=Z,10nm,1.4s						
GLB	Gilahina Butte	81.71	14	P	P	16 07 09.2	-0.2
GLB				IAmb	IAmb	16 07 26.3	
	comp=Z,6.4nm,1.4s						
M24K	Tolsona, Glenn	81.75	13	P	P	16 07 10.4	+0.7
CAST	Castle Rocks	81.82	10	P	P	16 07 09.4	-0.6
CTGM	Chitina Glacie	81.91	16	P	P	16 07 11.3	+0.7
CTGM				IAmb	IAmb	16 07 11.4	
	comp=Z,8.5nm,1.0s						
J20K	Nowinta River	82.21	9	P	P	16 07 12.1	+0.2
J20K				IAmb	IAmb	16 07 29.0	
	comp=Z,6.2nm,1.3s						
PV10	Paradox Valley	82.26	46	P	P	16 07 13.1	-0.1
PV11	David Mesa, Pa	82.34	46	P	P	16 07 13.6	+0.1
MENT	Mentasta	83.03	14	P	P	16 07 16.4	+0.1
PMSA	Palmer Station	83.40	156	P	P	16 07 18.7	+0.5
RIDG	Independent Ri	83.49	13	P	P	16 07 18.4	-0.2
RIDG				IAmb	IAmb	16 07 37.0	
	comp=Z,8.9nm,1.4s						
WRH	Wood River Hil	83.49	11	P	P	16 07 18.0	-0.6
WRH				IAmb	IAmb	16 07 49.8	
	comp=Z,7.8nm,1.4s						
MLY	Manley	83.54	10	P	P	16 07 18.2	-0.6
MLY				IAmb	IAmb	16 07 52.0	
	comp=Z,7.1nm,1.5s						
DOT	Dot Lake	83.58	13	P	P	16 07 18.8	-0.3
DOT				IAmb	IAmb	16 07 24.0	
	comp=Z,5.7nm,1.4s						
HDA	Harding Lake	83.66	12	P	P	16 07 19.2	-0.2
HDA				IAmb	IAmb	16 07 19.3	
	comp=Z,4.2nm,1.2s						
CCB	Clear Creek Bu	83.71	11	P	P	16 07 19.2	-0.5
CCB				IAmb	IAmb	16 07 19.4	
	comp=

CMIG			eS	Sn	16 05 12.1	-0.1
UXUV	**UXUV**	0.56 25	eP	Pn	16 05 02.8	+0.3
UXUV			eS	Sn	16 05 12.0	-0.3
TUIG	**Tuzandepetl**	1.22 359	e	Sn	16 05 24.6	-1.6
TGIG		1.22 91		Pn	16 05 10.5	+0.1
TGIG				Sn	16 05 25.4	-1.0
TGIG		1.22 91	eP	Pn	16 05 10.5	+0.1
TGIG			eS	Sn	16 05 25.4	-1.0
PCIG		1.58 134		Pn	16 05 15.6	+0.5
PCIG				Sn	16 05 34.0	-0.7
PCIG		1.58 134	eP	Pn	16 05 15.6	+0.5
PCIG			eS	Sn	16 05 34.0	-0.7
NEUV	**Arroyo Zacate**	1.62 304	eP	Pn	16 05 15.4	-0.2
NEUV			/ S	Sn	16 05 35.3	-0.3
HUIG	**Huatulco**	1.95 238		Pn	16 05 19.3	-0.7
HUIG				Sn	16 05 42.6	-1.0
HUIG	**Huatulco**	1.95 238	eP	Pn	16 05 19.3	-0.7
HUIG			eS	Sn	16 05 42.6	-1.0
CCIG	**Comitan**	2.23 103		Pn	16 05 24.9	+0.9
CCIG	**Comitan**	2.23 103	eP	Pn	16 05 26.9	+2.9
CCIG			eS	Sn	16 05 45.6	-5.0
OXIG	**Oaxaca**	2.25 277		Pn	16 05 25.3	+1.0
OXIG				Sn	16 05 51.4	+0.1
VHO	**Vista Hermosa**	2.25 277	eP	Pn	16 05 25.3	+1.0
VHO			eS	Sn	16 05 51.4	+0.1
PAVE	**Pavencul**	2.67 127	eP	Pn	16 05 31.7	+1.7
PAVE			eS	Sn	16 06 01.1	-0.3
PATR	**El Naranjo**	2.67 129	eP	Pn	16 05 31.5	+1.4
PATR			eS	Sn	16 06 01.2	-0.3
PEIG	**Puerto Escondi**	2.77 253		Pn	16 05 29.9	-1.2
PEIG				Sn	16 06 01.9	-1.6
PEIG	**Puerto Escondi**	2.77 253	eP	Pn	16 05 29.9	-1.2
PEIG			eS	Sn	16 06 01.9	-1.6
CHUJ	**Union Juarez**	2.78 128	eP	Pn	16 05 33.1	+1.5
CHUJ			eS	Sn	16 06 04.7	+0.5
TOIG	**Toxpalan**	2.85 297		Pn	16 05 33.1	+0.8
TOIG				Sn	16 06 05.2	-0.5
TOIG	**Toxpalan**	2.85 297	eP	Pn	16 05 33.1	+0.8
TOIG			eS	Sn	16 06 05.2	-0.5
YOIG	**Yosondua**	3.02 271		Pn	16 05 36.1	+1.3
YOIG				Sn	16 06 10.1	+0.1
YOIG	**Yosondua**	3.02 271	eP	Pn	16 05 36.1	+1.3
YOIG			eS	Sn	16 06 10.1	+0.1
TXIG	**Tlaxiaco**	3.26 278		Pn	16 05 39.8	+1.7
TXIG				Sn	16 06 16.8	+0.9
TXIG	**Tlaxiaco**	3.26 278	eP	Pn	16 05 39.8	+1.7
TXIG			eS	Sn	16 06 16.8	+0.9
HLIG	**Huajuapan de L**	3.41 288		Pn	16 05 41.7	+1.6
HLIG				Sn	16 06 19.5	0.0
HLIG	**Huajuapan de L**	3.41 288	eP	Pn	16 05 41.7	+1.6
HLIG			eS	Sn	16 06 19.5	0.0
JAUV	**Jalcomulco**	3.42 318	eP	Pn	16 05 39.8	-0.2
JAUV			eS	Sn	16 06 16.0	-3.5
LVIG	**Laguna Verde**	3.48 327	e	Sn	16 06 17.0	-3.7
PNIG	**Pinotepa**	3.60 264		Pn	16 05 42.2	-0.3
PNIG				Sn	16 06 20.0	-3.9
PNIG	**Pinotepa**	3.60 264	eP	Pn	16 05 42.2	-0.3
PNIG			eS	Sn	16 06 20.0	-3.9
SCIG	**Sabancuy**	3.73 54	eP	Pn	16 05 43.8	-0.5
SCIG			eS	Sn	16 06 24.2	-2.8
FTIG	**Fresnillo de T**	3.73 288		Pn	16 05 46.5	+2.1
FTIG				Sn	16 06 26.4	-0.9
FTIG	**Fresnillo de T**	3.73 288	eP	Pn	16 05 46.5	+2.1
FTIG			eS	Sn	16 06 26.4	-0.9
PETF	**Flores**	4.33 88	Pn	Pn	16 05 53.4	+0.9
CXUV	**Coxquihui**	4.51 318	eP	Pn	16 05 55.5	+0.6
CXUV			eS	Sn	16 06 46.4	+0.2
PPM	**Popocatepetl**	4.61 300	e	Pn	16 06 00.5	+3.8
PPIG	**Popocatepetl**	4.61 300		Pn	16 06 00.5	+3.8
PLIG	**Platanillo**	5.12 289		Pn	16 06 04.5	+1.1
PLIG				Sn	16 07 02.6	+1.4
PLIG	**Platanillo**	5.12 289	eP	Pn	16 06 04.5	+1.1
PLIG			eS	Sn	16 07 02.6	+1.4
ARIG	**Puente Sto Nin**	5.87 285		Pn	16 06 15.7	+2.2
ARIG				Sn	16 07 13.2	-6.1
ARIG	**Puente Sto Nin**	5.87 285	eP	Pn	16 06 15.7	+2.2
ARIG			e		16 07 13.2	
TEIG	**Tepich**	6.72 59	Pn	Pn	16 06 24.7	-0.4
451A	**Vernon**	15.85 28	P	P	16 08 31.5	+1.2
451A			IAmb	IAmb	16 08 38.6	
	comp=Z,116nm,1.5s					
LCAR	**Lake Charles**	19.39 8	P	P	16 09 09.3	-0.1
LCAR			IAmb	IAmb	16 09 10.0	
	comp=Z,2.8nm,0.9s					

*IDC **03** 16:14:12.5±1.1, 32°.54N×97°.61E, h0km, mb3.4/5, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=55.9km s-min=19.0km az=59.0*

ISC 03 16:14:17.3±1.0, 32°.5N±0°.1×97°.6E±0°.2, h35km, n8, σ0°.40/8, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	14.08	175	Pn	Pn	16 17 34.1	-0.2
	0.1nm,0.3s,baz=333,slow=13,SNR=2.1						
	0.5nm,0.9s						
SONM	**Songino Array**	16.68	21	Pn	Pn	16 18 08.4	-0.1
	0.3nm,0.6s,baz=187,slow=8.4,SNR=1.3						
MKAR	**Makanchi Array**	18.41	325	P	Pn	16 18 29.9	+0.2
	0.1nm,0.3s,baz=128,slow=14,SNR=5.5						
	1.1nm,0.7s						
AAK	**Ala-Archa**	20.81	306	P	P	16 18 55.9	+0.1
	1.3nm,0.6s,baz=108,slow=8.1,SNR=4.8						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	22.89	328	P	P	16 19 18.0	+0.2
	0.7nm,0.8s,baz=142,slow=9.5,SNR=4.3						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	23.25	341	P	P	16 19 20.8	-0.6
	1.0nm,0.8s,baz=155,slow=37,SNR=2.5						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	62.94	141	P	P	16 24 40.4	0.0
	0.5nm,1.0s,baz=334,slow=7.6,SNR=2.1						
	0.5nm,1.0s						
ASAR	**Alice Springs**	65.79	143	P	P	16 24 59.5	+0.5
	0.3nm,0.5s,baz=327,slow=6.4,SNR=5.6						
	0.3nm,0.5s						

*TAP **03** 16:43:47.5, 24°.77N×122°.14E, h125km, ML3.4, C*
*JMA **03** 16:43:48.5±0.1, 24°.8N±0°.7×122°.1E±0°.3, h118km±1km, MV2.4/10, TAIWAN REGION*

ISC 03 16:43:48.0±1.4, 24°.76N±0°.04×122°.10E±0°.03, h124km±6km, n102, σ0°.72/191, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	0.27	292	eP	Pn	16 44 05.2	-0.1
NTC	baz=299			eS	Sn	16 44 18.5	+0.2
TWB1	**Santiao Chiao**	0.27	337	eP	Pn	16 44 05.3	0.0
TWB1	baz=325			eS	Sn	16 44 18.6	+0.2
TWC	**Suao**	0.27	238	P	Pn	16 44 05.6	+0.3
TWC	baz=235			S	Sn	16 44 18.0	-0.4
ILA	**Ilan**	0.32	272	eP	Pn	16 44 05.5	0.0
ILA	baz=278			eS	Sn	16 44 18.4	-0.3
TIPB	**Shuangxi**	0.33	310	P	Pn	16 44 05.2	-0.4
TIPB	baz=306			eS	Sn	16 44 18.2	-0.6
SXI1	**Grass Mountain**	0.40	328	P	Pn	16 44 05.0	-1.0
SXI1	baz=313			S	Sn	16 44 19.6	+0.1
TWE	**Neicheng**	0.40	265	P	Pn	16 44 06.2	+0.3
TWE	baz=266			S	Sn	16 44 20.0	+0.8
NWF	**Wu-fen Shan**	0.43	317	P	Pn	16 44 05.9	-0.2
NWF	baz=305			eS	Sn	16 44 19.4	-0.4
FUSB	**Fushanzhiwuyua**	0.47	271	P	Pn	16 44 06.4	+0.1
FUSB	baz=276			S	Sn	16 44 19.8	-0.3
ENTT	**Nioudou**	0.50	257	P	Pn	16 44 06.2	-0.2
ENTT	baz=256			S	Sn	16 44 20.4	+0.1
TWA	**Mucha**	0.52	295	P	Pn	16 44 06.2	-0.3
TWA	baz=298			S	Sn	16 44 20.5	-0.1
NHDH	**Xindian Distri**	0.56	292	eP	Pn	16 44 06.7	-0.1
NHDH	baz=292			eS	Sn	16 44 20.9	-0.1
LATG	**Datong**	0.57	247	P	Pn	16 44 08.2	+1.2
LATG	baz=247			S	Sn	16 44 22.4	+1.2
TAP	**Taipei**	0.61	298	eP	Pn	16 44 07.1	0.0
TAP	baz=298			eS	Sn	16 44 21.6	+0.1
YM01	**YM01**	0.62	309	P	Pn	16 44 06.9	-0.3
YM01	baz=305			S	Sn	16 44 21.8	0.0
YHNB	**Yeheng**	0.67	263	P	Pn	16 44 08.1	+0.5
YHNB	baz=262			S	Sn	16 44 21.9	-0.5
ANP	**Anpu**	0.68	309	eP	Pn	16 44 07.5	-0.3
ANP	baz=311			eS	Sn	16 44 22.5	-0.2
NSK	**Sanguang**	0.68	263	P	Pn	16 44 07.2	-0.5
NSK	baz=262			S	Sn	16 44 21.1	-1.5
TWY	**Chenhua**	0.69	319	eP	Pn	16 44 07.5	-0.2
TWY	baz=317			eS	Sn	16 44 22.4	-0.2
TWS1	**Kuangyinshan**	0.71	299	eP	Pn	16 44 07.8	0.0
TWS1	baz=298			eS	Sn	16 44 22.8	0.0
NTST	**Danshui**	0.72	305	eP	Pn	16 44 07.8	-0.1
NTST	baz=303			eS	Sn	16 44 23.4	+0.5
ETL	**Fush Village**	0.74	216	eP	Pn	16 44 08.3	+0.2
ETL	baz=227			eS	Sn	16 44 23.5	+0.2
NACB	**Ninganchiao**	0.74	219	eP	Pn	16 44 07.7	-0.4
NACB	baz=229			eS	Sn	16 44 22.7	-0.6
ETLH	**Xiulin Townshi**	0.79	226	eP	Pn	16 44 09.3	+0.7
ETLH	baz=233			eS	Sn	16 44 24.3	+0.1
TWD	**Chiawan**	0.82	215	eP	Pn	16 44 08.8	+0.1
TWD	baz=225			eS	Sn	16 44 24.3	-0.1
JYNG	**Yonagunijimaku**	0.82	111	P	Pn	16 44 08.9	+0.1
JYNG				S	Sn	16 44 24.3	-0.2
NCU	**National Centr**	0.86	285	eP	Pn	16 44 08.8	-0.3
NCU	baz=283			eS	Sn	16 44 25.5	+0.5
PCYT	**Pengchaiyu**	0.87	358	eP	Pn	16 44 09.0	-0.1
YOJ	baz=354			eS	Sn	16 44 23.9	-1.4
YOJ	**Yonaguni jima**	0.88	109	eP	Pn	16 44 08.8	-0.4
YOJ	baz=115			eS	Sn	16 44 23.9	-1.4
YOJ	**Yonaguni jima**	0.88	109	P	Pn	16 44 09.5	+0.3
YOJ				S	Sn	16 44 25.0	-0.3
HWA	**Hwalien**	0.90	210	eP	Pn	16 44 09.4	0.0
HWA	baz=203			eS	Sn	16 44 25.7	+0.1
NFF	**Wufeng Townshi**	0.91	262	P	Pn	16 44 09.1	-0.5
NFF	baz=268			S	Sn	16 44 24.9	-0.9
FUSS	**Fushou**	0.93	237	eP	Pn	16 44 10.8	+0.7
FUSS	baz=231			eS	Sn	16 44 27.4	+0.7
WHF	**Hehuan Shan**	0.98	232	eP	Pn	16 44 11.4	+0.7
WHF	baz=231			eS	Sn	16 44 28.0	+0.3
TWT	**Tachien**	0.98	240	eP	Pn	16 44 11.8	+1.4
TWT	baz=235			eS	Sn	16 44 28.4	+1.0
LIOB	**Emei**	1.00	264	eP	Pn	16 44 10.6	+0.2
LIOB	baz=262			eS	Sn	16 44 27.1	-0.1
TDCB	**Techi**	1.00	240	eP	Pn	16 44 11.4	+0.9
TDCB	baz=235			eS	Sn	16 44 28.1	+0.6
NSTT	**Nanjuang**	1.01	263	eP	Pn	16 44 11.3	+0.8
NSTT	baz=262			eS	Sn	16 44 27.5	0.0
SBCB	**Hsinchu**	1.02	272	eP	Pn	16 44 10.2	-0.3
SBCB	baz=265			eS	Sn	16 44 26.4	-1.2
HSN	**Hsinchu**	1.03	273	eS	Sn	16 44 27.5	-0.4
CHGB	**Renai**	1.09	231	eP	Pn	16 44 12.6	+1.0
CHGB	baz=230			eS	Sn	16 44 29.8	+0.4
ESL	**Shilin**	1.12	213	eP	Pn	16 44 10.9	-0.7
ESL	baz=219			eS	Sn	16 44 28.3	-1.1
WHP	**Taichung City**	1.16	246	eP	Pn	16 44 13.0	+1.0
WHP	baz=245			eS	Sn	16 44 31.4	+1.2
OWD	**Renai**	1.16	227	eP	Pn	16 44 12.6	+0.4
OWD	baz=224			eS	Sn	16 44 31.0	+0.5
WUSB	**Renai**	1.18	230	eP	Pn	16 44 12.8	+0.5
WUSB	baz=233			eS	Sn	16 44 31.3	+0.5
NMLH	**Miaoli**	1.21	260	eP	Pn	16 44 12.2	-0.4
NMLH	baz=259			eS	Sn	16 44 30.8	-0.4
EGFH	**Guangfu**	1.25	210	eP	Pn	16 44 12.8	-0.1
EGFH	baz=219			eS	Sn	16 44 30.6	-1.1
NSY	**Sanyi**	1.27	255	eP	Pn	16 44 12.6	-0.6
NSY	baz=254			eS	Sn	16 44 32.1	-0.2
WCS	**Beigang Elemen**	1.29	238	eP	Pn	16 44 13.7	+0.3
WCS	baz=243			eS	Sn	16 44 33.6	+1.0
WDJ	**Dajia District**	1.39	253	eP	Pn	16 44 13.8	-0.7
WDJ	baz=253			eS	Sn	16 44 35.6	+1.1
SMLT	**Sun Moon Lake**	1.40	232	eP	Pn	16 44 16.8	+2.1
SMLT	baz=231			eS	Sn	16 44 37.1	+2.2
HGSD	**Ruisui**	1.40	206	eP	Pn	16 44 14.7	0.0
HGSD	baz=214			eS	Sn	16 44 34.4	-0.4
TYC	**Yuchr**	1.42	234	eP	Pn	16 44 15.4	+0.7
TYC	baz=233			eS	Sn	16 44 35.9	+0.8
SSLB	**Suanglung**	1.43	228	eP	Pn	16 44 15.4	+0.5
SSLB	baz=229			eS	Sn	16 44 36.0	+0.7
EHY	**Hungye**	1.44	210	eP	Pn	16 44 14.0	-1.0
EHY	baz=209			eS	Sn	16 44 33.9	-1.6
TCU	**Taichung**	1.44	245	eP	Pn	16 44 15.9	+1.0
TCU	baz=244			eS	Sn	16 44 35.3	-0.2
IRIF	**Iriomote-Funau**	1.54	105	P	Pn	16 44 16.4	+0.3
IRIF				S	Sn	16 44 37.4	-0.1
YULB	**Yu-li**	1.54	209	eP	Pn	16 44 14.5	-1.8
YULB	baz=213			eS	Sn	16 44 35.6	-2.2
WCHH	**Zhanghua**	1.56	245	eS	Sn	16 44 38.4	+0.4
WJS	**Zhushan**	1.56	234	eS	Sn	16 44 38.3	+0.2
WNT	**Mingjian**	1.56	236	eP	Pn	16 44 17.9	+1.4
WNT	baz=236			eS	Sn	16 44 38.2	+0.2
EYUL	**Yuli**	1.57	207	eP	Pn	16 44 16.7	+0.1
EYUL	baz=213			eS	Sn	16 44 38.5	+0.1
YUS	**Yu-Shan**	1.64	220	eP	Pn	16 44 18.5	+0.6
YUS	baz=213			eS	Sn	16 44 40.8	+0.3
HATJ	**Hateruma jima**	1.70	114	P	Pn	16 44 18.9	+0.9
HATJ				S	Sn	16 44 41.6	+0.7
ALS	**Alishan**	1.72	224	eP	Pn	16 44 19.6	+1.0
ALS	baz=233			eS	Sn	16 44 42.9	+1.1
FULB	**Fuli**	1.72	206	eP	Pn	16 44 17.9	-0.4
FULB	baz=214			eS	Sn	16 44 41.5	+0.1
CHN5	**Tsauling**	1.74	229	eP	Pn	16 44 18.9	+0.3
CHN5	baz=236			eS	Sn	16 44 41.9	0.0
WDLH	**Douliu**	1.78	234	eP	Pn	16 44 19.4	+0.4
WDLH	baz=233			eS	Sn	16 44 42.8	+0.1
WRL	**Guolierlin Hig**	1.79	242	eP	Pn	16 44 19.3	+0.2
WRL	baz=241			eS	Sn	16 44 42.4	-0.4
EHD	**Haiduan**	1.80	207	eP	Pn	16 44 19.5	+0.2
EHD	baz=212			eS	Sn	16 44 42.6	-0.5
JKRS	**Kuro-shima**	1.81	106	P	Pn	16 44 20.0	+0.7
JKRS				S	Sn	16 44 43.8	+0.5
ELDTW	**Lidau**	1.85	213	eS	Sn	16 44 44.1	-0.3
WTCT	**Ta-ch'eng**	1.89	242	eS	Sn	16 44 45.2	+0.4
WCKO	**Fanlu**	1.90	227	eS	Sn	16 44 46.3	+1.1
JIJ	**Ishigaki jima**	1.90	101	P	Pn	16 44 20.6	+0.2
JIJ				S	Sn	16 44 44.6	-0.6
EDH	**Donghe**	1.92	203	eP	Pn	16 44 19.9	-0.8
EDH	baz=208			eS	Sn	16 44 43.9	-1.8
TPUB	**Ta-pu**	1.98	223	eP	Pn	16 44 21.5	+0.1
TPUB	baz=223			eS	Sn	16 44 48.0	+1.0
STYH	**Taoyuan**	1.99	218	eS	Sn	16 44 47.0	-0.3
WTP	**Ta-pu**	2.03	222	eP	Pn	16 44 22.1	+0.1
WTP	baz=231			eS	Sn	16 44 49.2	+1.1
WSF	**Szhu**	2.05	237	eP	Pn	16 44 22.5	+0.2
WSF	baz=237			eS	Sn	16 44 49.3	+0.9
TWK	**Hsinying**	2.09	225	eP	Pn	16 44 22.9	0.0
TWK	baz=225			eS	Sn	16 44 49.9	+0.3
WSL	**Shuilin Townsh**	2.11	235	eP	Pn	16 44 23.1	+0.1
WSL	baz=243			eS	Sn	16 44 49.7	-0.1
CHN1	**Nanshi**	2.13	223	eP	Pn	16 44 24.7	+1.4
CHN1	baz=230			eS	Sn	16 44 51.6	+1.3
TWGBT	**Beinan**	2.15	206	eP	Pn	16 44 23.5	0.0
TWGBT	baz=201			eS	Sn	16 44 50.2	-0.5
TWG	**Pinlang**	2.15	206	eP	Pn	16 44 23.3	-0.2
TWG	baz=201			eS	Sn	16 44 49.5	-1.2
LDUT	**Ludao**	2.15	196	eP	Pn	16 44 24.0	+0.4
LDUT	baz=195			eS	Sn	16 44 50.2	-0.6
SGST	**Jiashian**	2.17	220	eS	Sn	16 44 50.8	-0.5
JTJ	**Tarama**	2.37 92	P	Pn	Pn	16 44 26.9	+0.7
JTJ				S	Sn	16 44 55.9	+0.3
SSD	**Sandimen**	2.41	214	eP	Pn	16 44 27.1	+0.3
SSD	baz=221			eS	Sn	16 44 56.1	-0.6
VWUC	**VWUC**	2.42	276	eP	Pn	16 44 27.2	+0.3
VWUC	baz=275			eS	Sn	16 44 55.9	-0.9
TSMG	**Majia**	2.44	214	eP	Pn	16 44 27.2	0.0
TSMG	baz=223			eS	Sn	16 44 57.1	-0.2
MASBT	**Mashibuluo**	2.52	213	eP	Pn	16 44 28.5	+0.2
MASBT	baz=223			eS	Sn	16 44 58.8	-0.4
PNG	**Penghu**	2.61	244	eP	Pn	16 44 29.7	+0.3
PNG	baz=243			eS	Sn	16 45 00.6	-0.6
PHUB	**P'eng-hu**	2.62	242	eP	Pn	16 44 28.2	-1.3
PHUB	baz=242			eS	Sn	16 44 58.8	-2.6
EAST	**Anshuo**	2.63	206	eP	Pn	16 44 30.2	+0.5
EAST	baz=200			eS	Sn	16 45 00.8	-0.9
TAWH	**Dawu Township**	2.65	205	eP	Pn	16 44 30.3	+0.3
TAWH	baz=200			eS	Sn	16 45 01.5	-0.7
WDGT	**Dungji**	2.69	237	eS	Sn	16 45 02.9	0.0
PTMZ	**Houxiangcun**	2.72	277	eP	Pn	16 44 31.4	+0.6
PTMZ	baz=276			eS	Sn	16 45 03.0	-0.8
LYUB	**Lan-yu**	2.78	190	eS	Sn	16 45 04.0	-1.2
KNMB	**Chin-men Tao**	3.39	266	eP	Pn	16 44 39.9	+0.4
KNMB	baz=265			eS	Sn	16 45 18.3	-1.1
AXDP	**Jialang**	3.76	273	eP	Pn	16 44 45.0	+0.6
ZPLA	**Ao Xicun**	4.05	259	eP	Pn	16 44 48.8	+0.4

*NEIC **03** 16:53:24.2±2.9, 12°.66N±0°.06×58°.2E±0°.1, h10km±2km,*

mb4.2/8, Error ellipse: s-maj=25.1km s-min=6.9km az=250.0
*IDC **03** 16:53:24.4±1.0, 12°.63N×57°.92E, h0km, mb4.0/13, mbtmp4.0/14, ML3.8/1, MS3.4/25, Error ellipse: s-maj=27.2km s-min=18.1km az=36.0*
ISC 03 16:53:25.2±0.9, 12°.7N±0°.1×58°.0E±0°.1, h10km, n48, σ1§76/27, mb4.1/18, MS3.4/23, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**10.53**	**3**	Pn	**Pn**	**16 55 56.1**	**-0.1**
	0.7nm,0.3s,baz=246,slow=8.9,SNR=16						
WSAR				LR	LR	16 59 28.5	
	comp=Z,233nm,20.6s,baz=196,slow=34						
	9.3nm,1.1s						
UOSS	**Minazif**	**12.32**	**352**	Pn	**Pn**	**16 56 20.7**	**-0.1**
ATD	**Arta Tunnel**	**14.83**	**267**	LR	LR	17 01 01.8	
	comp=Z,87nm,20.5s,baz=134,slow=31						
RAYN	**Ar Rayn**	**16.01**	**314**		**Pn**	**16 57 10.3**	**-0.4**
PALK	**Pallekele**	**23.02**	**101**	LR	LR	17 05 39.7	
	comp=Z,67nm,19.0s,baz=25,slow=32						
LODK	**Lodwar**	**24.17**	**250**	P	**P**	**16 58 39.7**	**-2.4**
LODK				IAmb	IAmb	16 58 52.1	
	comp=Z,6.3nm,1.4s						
GEYT	**Alibeck**	**25.15**	**0**	P	**P**	**16 58 52.7**	**+2.0**
	comp=Z,3.7nm,0.8s,baz=206,slow=9.9,SNR=6.2						
GEYT				LR	LR	17 08 51.9	
	comp=Z,66nm,18.1s,baz=98,slow=37						
	comp=Z,3.7nm,0.8s						
GEYT	**Alibeck**	**25.15**	**0**	P	**P**	**16 58 48.7**	**-2.0**
EIL	**Elat**	**27.23**	**312**	LR	LR	17 10 00.0	
	comp=Z,64nm,19.4s,baz=133,slow=37						
MMAI	**Mount Meron Ar**	**28.90**	**318**	LR	LR	17 11 46.7	
	comp=Z,32nm,18.2s,baz=228,slow=38						
MBAR	**Mbarara**	**30.06**	**246**	LR	LR	17 11 14.6	
	comp=Z,38nm,18.2s,baz=38,slow=36						
KKAR	**Karatay Array**	**32.21**	**17**	P	**P**	**16 59 50.0**	**-3.5**
AAK	**Ala-Archa**	**33.12**	**23**	LR	LR	17 14 42.9	
	comp=Z,89nm,19.4s,baz=201,slow=38						
KBZ	**Khabaz**	**33.56**	**340**	P	**P**	**17 00 07.5**	**+2.2**
	comp=Z,2.4nm,0.8s,baz=138,slow=9.6,SNR=5.4						
	comp=Z,2.4nm,0.8s						
BRTR	**Keskin Array B**	**34.45**	**326**	LR	LR	17 16 27.5	
	comp=Z,42nm,18.3s,baz=136,slow=40						
IDI	**Anoyia**	**37.40**	**313**	P	**P**	**17 00 40.8**	**+2.2**
	comp=Z,16nm,0.8s,baz=46,slow=8.1,SNR=6.9						
IDI				LR	LR	17 17 58.1	
	comp=Z,27nm,18.3s,baz=100,slow=39						
	comp=Z,16nm,0.8s						
AKTO	**Aktyubinsk**	**37.66**	**0**	LR	LR	17 17 00.2	
	comp=Z,37nm,18.1s,baz=182,slow=38						
MKAR	**Makanchi Array**	**39.70**	**26**	P	**P**	**17 00 58.8**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=215,slow=8.9,SNR=2.1						
MKAR				LR	LR	17 18 26.9	
	comp=Z,55nm,20.2s,baz=264,slow=38						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.83**	**76**	P	**P**	**17 01 00.2**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=270,slow=9.9,SNR=1.8						
CMAR				LR	LR	17 18 41.5	
	comp=Z,20nm,18.4s,baz=275,slow=38						
	comp=Z,0.2nm,0.4s						
RDO	**Rodhopi**	**40.09**	**321**	P	**P**	**17 01 00.3**	**-0.7**
RDO				IAmb	IAmb	17 01 04.4	
	comp=Z,3.6nm,1.0s						
LSZ	**Lusaka**	**40.49**	**228**	LR	LR	17 15 53.9	
	comp=Z,45nm,21.9s,baz=132,slow=33						
BVAR	**Borovoye Array**	**41.46**	**11**	LR	LR	17 21 30.9	
	comp=Z,64nm,18.1s,baz=199,slow=41						
ARU	**Arti**	**43.66**	**0**	LR	LR	17 19 23.6	
	comp=Z,40nm,19.2s,baz=150,slow=36						
BURAR	**Bucovina Array**	**44.29**	**328**	P	**P**	**17 01 32.6**	**-2.6**
AKASG	**Malin Array Be**	**44.57**	**334**	P	**P**	**17 01 36.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=139,slow=6.9,SNR=5.9						
	comp=Z,0.3nm,0.4s						
DIVS	**Divibare**	**45.13**	**321**	P	**P**	**17 01 42.3**	**+0.3**
DIVS				IAmb	IAmb	17 01 46.5	
	comp=Z,7.7nm,1.4s						
ZALV	**Zalesovo Beam**	**46.33**	**22**	P	**P**	**17 01 52.1**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=234,slow=5.1,SNR=5.8						
ZALV				LR	LR	17 22 55.5	
	comp=Z,87nm,18.9s,baz=205,slow=38						
	comp=Z,1.4nm,0.7s						
LBTB	**Lobatse**	**48.99**	**220**	LR	LR	17 21 05.7	
	comp=Z,48nm,20.1s,baz=34,slow=34						
MORC	**Moravsky Berou**	**49.64**	**327**	P	**P**	**17 02 17.0**	**0.0**
MORC				IAmb	IAmb	17 02 18.7	
	comp=Z,4.1nm,0.8s						
OSSC	**Osservatorio P**	**50.49**	**317**	P	**P**	**17 02 22.8**	**-0.7**
TSUM	**Tsumeb**	**50.85**	**232**	LR	LR	17 24 14.6	
	comp=Z,38nm,18.4s,baz=36,slow=36						
BOSA	**Boshof**	**51.82**	**217**	LR	LR	17 22 35.7	
	comp=Z,60nm,19.9s,baz=18,slow=34						
SONM	**Songino Array**	**53.32**	**39**	P	**P**	**17 02 46.7**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=225,slow=7.5,SNR=2.7						
SONM				LR	LR	17 25 42.6	
	comp=Z,34nm,18.3s,baz=262,slow=36						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**53.89**	**342**	P	**P**	**17 02 48.7**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=165,slow=7.9,SNR=4.3						
	comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**54.75**	**277**	P	**P**	**17 02 55.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=67,slow=6.1,SNR=3.7						
SUR	**Sutherland**	**57.18**	**217**	LR	LR	17 25 13.3	
	comp=Z,53nm,21.2s,baz=38,slow=33						
ARCES	**ARCESS Array B**	**60.42**	**347**	P	**P**	**17 03 34.5**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=147,slow=5.2,SNR=2.5						
	comp=Z,3.8nm,0.8s						
ESDC	**Sonseca Array**	**60.46**	**308**	P	**P**	**17 03 36.0**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=84,slow=6.4,SNR=6.0						
	comp=Z,1.0nm,0.9s						
KS19	**Wonju Array Si**	**66.49**	**55**	P	**P**	**17 04 12.8**	**-2.5**
KSAR	**Wonju Array Be**	**66.50**	**55**	P	**P**	**17 04 11.6**	**-3.8**
KSRS	**Korea Array**	**66.54**	**55**	LR	LR	17 33 39.2	
	comp=Z,23nm,18.3s,baz=225,slow=36						
KLR	**Kul'dur**	**69.92**	**42**	LR	LR	17 36 29.0	
	comp=Z,49nm,18.2s,baz=294,slow=37						
H01W3	**Cape Leeuwin H**	**71.18**	**134**	T	T	18 22 19.2	
	baz=302,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**71.19**	**134**	T	T	18 22 20.5	
	baz=302,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**71.20**	**134**	T	T	18 22 21.4	
	baz=302,slow=75,SNR=15						
MJAR	**Matsushiro Arr**	**74.79**	**55**	LR	LR	17 39 56.5	
	comp=Z,20nm,19.9s,baz=344,slow=37						
WRA	**Warramunga Arr**	**81.81**	**113**	P	**P**	**17 05 46.1**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=297,slow=4.1,SNR=40						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**82.51**	**116**	P	**P**	**17 05 49.9**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=294,slow=5.1,SNR=17						
	comp=Z,1.3nm,0.8s						

IDC 03 16:57:26.9±1.5, 3°.03S×130°.99E, h0km, mb3.9/2, mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=72.3km s-min=19.6km az=89.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.16**	**7**	Pn	Pn	16 58 05.0	+0.8
	1.8nm,0.3s,baz=130,slow=23,SNR=15						
SIJI				Sn	Sn	16 58 32.2	+0.5
	4.7nm,0.3s,baz=86,slow=23,SNR=11						
	7.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.87**	**199**	Pn	Pn	17 01 13.1	+1.3
	0.1nm,0.3s,baz=22,slow=13,SNR=6.0						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**17.13**	**169**	P	Pn	17 01 26.7	-1.2
	0.1nm,0.3s,baz=351,slow=13,SNR=11						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**20.71**	**172**	P	P	17 02 09.3	+0.3
	6.7nm,0.7s,baz=351,slow=11,SNR=135						
	6.7nm,0.7s						
MKAR	**Makanchi Array**	**65.50**	**325**	P	P	17 08 11.8	-0.3
	0.6nm,0.6s,baz=120,slow=8.3,SNR=5.8						
	0.6nm,0.6s						

IDC 03 17:08:37.3±6.0, 32°.90S×178°.88W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=257.4km s-min=59.5km az=160.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.30**	**270**	P	P	17 16 32.2	-0.6
	0.6nm,0.7s,baz=118,slow=8.0,SNR=11						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**43.51**	**275**	P	P	17 16 43.2	+0.4
	0.7nm,0.7s,baz=116,slow=7.8,SNR=8.8						
	0.7nm,0.7s						
FINES	**FINESS Array B**	**147.20**	**338**	PKPbc	PKPbc	17 28 20.9	-0.8
	1.1nm,0.7s,baz=62,slow=3.3,SNR=4.5						

*AAE **03** 17:11:07.3±5.7, 12°.32N×40°.71E, h15km±999km, ML3.8*
*EAF **03** 17:11:08.4±5.2, 12°.26N×40°.78E, h38km±999km, ML3.5*
ISC 03 17:10:59.2±2.7, 12°.3N±0°.2×40°.59E±0°.08, h14km, n13, σ1§65/25, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**2.34**	**109**	*e*P	**Pn**	**17 11 37.6**	**+0.2**
ATD				IAML		17 11 57.2	
	comp=E,5μm,1.1s						
ATD				IAML		17 12 03.6	
	comp=N,3μm,0.5s						
ATD				*e*Sg	**Sg**	**17 12 14.7**	**0.0**
ATD				*i* Sg	**Sg**	**17 12 15.3**	**+0.6**
ATD	**Arta Tunnel**	**2.34**	**109**	*e*P	**Pn**	**17 11 37.6**	**+0.2**
ATD	**Arta Tunnel**	**2.34**	**109**	*e*P	**Pn**	**17 11 37.6**	**+0.2**
ATD				IAML		17 11 57.2	
	comp=E,5μm,1.1s						
ATD				IAML		17 12 03.6	
	comp=N,3μm,0.5s						
ATD				*e*Sg	**Sg**	**17 12 14.7**	**0.0**
ATD				*i* Sg	**Sg**	**17 12 15.3**	**+0.6**
ATD	**Arta Tunnel**	**2.34**	**109**	*e*P	**Pn**	**17 11 37.7**	**+0.2**
ATD				*e*S	**Sg**	**17 12 15.3**	**+0.6**
ANKE	**Ethiopia-Afar**	**2.83**	**197**	*e*P	**Pb**	**17 11 49.2**	**-0.5**
ANKE				*e*S	**Sg**	**17 12 29.5**	**-0.7**
ANKE	**Ethiopia-Afar**	**2.83**	**197**	*e*P	**Pb**	**17 11 49.3**	**-0.5**
ANKE	**Ethiopia-Afar**	**2.83**	**197**	*e*P	**Pb**	**17 11 49.1**	**-0.6**
ANKE				*e*S	**Sg**	**17 12 35.8**	**+5.6**
AAE	**Adis Abeba**	**3.72**	**209**	*e*P	**Pb**	**17 12 05.4**	**+0.5**
AAE				IAML		17 12 37.9	
	comp=N,170nm,0.6s						
AAE				IAML		17 12 42.3	
	comp=E,24nm,0.6s						
AAE				*e*Sg	**Sg**	**17 12 58.6**	**-0.2**
AAE	**Adis Abeba**	**3.72**	**209**	*e*P	**Pb**	**17 12 06.2**	**+1.3**
AAE				*e*S	**Sn**	**17 12 36.5**	**-3.8**
AAE	**Adis Abeba**	**3.72**	**209**	*e*P	**Pb**	**17 12 05.4**	**+0.5**
AAE				IAML		17 12 37.9	
	comp=N,170nm,0.6s						
AAE				IAML		17 12 42.3	
	comp=E,24nm,0.6s						
AAE				*e*Sg	**Sg**	**17 12 58.6**	**-0.2**
FURI	**Furi**	**3.88**	**209**	*e*P	**Pb**	**17 12 08.8**	**+1.2**
FURI				IAML		17 12 42.7	
	comp=E,72nm,0.7s						
FURI				IAML		17 12 43.0	
	comp=E,41nm,0.6s						
FURI				*e*Sg	**Sg**	**17 13 03.8**	**-0.1**
FURI	**Furi**	**3.88**	**209**	*e*P	**Pb**	**17 12 10.2**	**+2.5**
FURI	**Furi**	**3.88**	**209**	*e*P	**Pb**	**17 12 08.8**	**+1.2**
FURI				IAML		17 12 42.7	
	comp=E,72nm,0.7s						
FURI				IAML		17 12 43.0	
	comp=E,41nm,0.6s						
FURI				*e*Sg	**Sg**	**17 13 03.8**	**-0.1**

*IDC **03** 17:24:04.0±0.7, 7°.35N×34°.66W, h0km, mb4.2/22, mbtmp4.2/23, ML4.1/1, MS3.8/39, Error ellipse: s-maj=23.3km s-min=14.6km az=155.0*
*NEIC **03** 17:24:05.8±1.6, 7°.4N±0°.1×34°.48W±0°.10, h10km±1km, mb4.9/102, Error ellipse: s-maj=20.3km s-min=15.8km az=168.0*
ISC 03 17:24:05.2±0.5, 7°.28N±0°.09×34°.50W±0°.07, h12km, n161, σ0§96/128, mb4.8/71, MS3.8/37, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.09**	**186**	Pn	**Pn**	**17 27 10.9**	**-0.3**
	0.9nm,0.3s,baz=158,slow=16,SNR=6.6						
RCBR				LR	LR	17 31 02.6	
	comp=Z,165nm,19.3s,baz=153,slow=32						
	4.8nm,0.5s						
SACV	**Santiago Islan**	**13.14**	**53**	Pn	**Pn**	**17 27 08.9**	**-2.9**
MDP	**Montagnes des**	**18.16**	**264**	LR	LR	17 33 46.1	
	comp=Z,295nm,21.4s,baz=72,slow=32						
MBO	**M'Bour**	**18.62**	**66**	P	**P**	**17 28 20.9**	**-1.9**
MBO				IAmb	IAmb	17 28 21.1	
	comp=Z,45nm,0.9s						
H10N3	**ASCENSION HYDR**	**24.97**	**127**	T	T	17 55 39.3	
	baz=307,slow=76,SNR=64						
H10N2	**ASCENSION HYDR**	**24.97**	**127**	T	T	17 55 39.5	
	baz=307,slow=76,SNR=55						
H10N1	**ASCENSION HYDR**	**24.99**	**127**	T	T	17 55 40.8	
	baz=307,slow=76,SNR=67						
H10S3	**ASCENSION HYDR**	**25.51**	**129**	T	T	17 56 21.7	
	baz=274,slow=74,SNR=22						
H10S2	**ASCENSION HYDR**	**25.53**	**129**	T	T	17 56 19.7	
	baz=306,slow=74,SNR=11						
BDFB	**Brasilia**	**26.41**	**210**	LR	LR	17 39 33.3	
	comp=Z,243nm,19.8s,baz=168,slow=35						
DBIC	**Dimbokro**	**29.43**	**89**	P	**P**	**17 30 10.0**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=278,slow=6.6,SNR=3.9						
DBIC				LR	LR	17 40 20.4	
	comp=Z,166nm,18.4s,baz=316,slow=33						
	comp=Z,1.8nm,0.6s						
PMOZ	**Porto Moniz, M**	**30.07**	**30**	*e*T	T	18 01 08.9	
FUL	**Funchal**	**30.09**	**31**	*e*T	T	18 01 24.5	
PMAR	**Madeira**	**30.14**	**30**	*e*T	T	18 01 20.0	
KOWA	**Kowa**	**30.76**	**74**	P	**P**	**17 30 22.2**	**+1.4**
	comp=Z,2.6nm,0.6s,baz=267,slow=16,SNR=7.6						
KOWA				LR	LR	17 41 08.7	
	comp=Z,167nm,21.3s,baz=304,slow=33						
	comp=Z,2.6nm,0.6s						
SJG	**San Juan**	**32.64**	**292**	LR	LR	17 41 10.6	
	comp=Z,140nm,20.0s,baz=84,slow=32						
SIV	**San Ignacio**	**35.02**	**229**	P	**P**	**17 30 59.1**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=64,slow=4.9,SNR=7.1						
SIV				LR	LR	17 44 40.6	
	comp=Z,245nm,19.8s,baz=97,slow=35						
	comp=Z,1.9nm,0.6s						
SDV	**Santo Domingo**	**35.80**	**275**	LR	LR	17 44 48.7	
	comp=Z,92nm,20.4s,baz=66,slow=35						
TOA0	**Torodi Ar. Sit**	**36.07**	**78**	P	**P**	**17 31 07.9**	**+0.8**
TOA0				IAmb	IAmb	17 31 16.8	
	comp=Z,22nm,1.7s						
TORD	**Torodi Ar. Bea**	**36.07**	**78**	P	**P**	**17 31 07.9**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=271,slow=9.4,SNR=12						
TORD				LR	LR	17 43 55.9	
	comp=Z,244nm,21.8s,baz=214,slow=33						
	comp=Z,2.1nm,0.6s						
SDD	**Santo Domingo**	**36.19**	**291**	P	**P**	**17 31 07.9**	**-0.1**
SHEL	**Horse Pasture**	**36.66**	**129**	P	**P**	**17 31 11.8**	**-0.3**
MDT	**Midelt**	**37.62**	**43**	LR	LR	17 45 25.1	
	comp=Z,99nm,18.6s,baz=195,slow=34						
ROSC	**El Rosal**	**39.66**	**269**	LR	LR	17 47 01.4	
	comp=Z,172nm,21.7s,baz=77,slow=35						
LPAZ	**La Paz**	**40.69**	**235**	P	**P**	**17 31 46.5**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=50,slow=9.2,SNR=5.2						
LPAZ				LR	LR	17 48 07.5	
	comp=Z,148nm,18.9s,baz=96,slow=36						
	comp=Z,2.3nm,0.8s						
LPAZ	**La Paz**	**40.69**	**235**	P	**P**	**17 31 46.9**	**+0.2**
TAM	**Tamanrasset**	**41.45**	**64**	P	**P**	**17 31 51.0**	**-1.4**
ESDC	**Sonseca Array**	**42.32**	**36**	P	**P**	**17 31 60.0**	**+0.9**
	comp=Z,1.1nm,1.1s,baz=232,slow=7.3,SNR=4.9						
ESDC				LR	LR	17 46 58.1	
	comp=Z,66nm,18.4s,baz=238,slow=32						
	comp=Z,1.1nm,1.1s						
PB16	**IPOC Station P**	**42.90**	**233**	P	**P**	**17 32 03.3**	**-1.4**
LVC	**Limon Verde**	**44.91**	**228**	LR	LR	17 51 41.0	
	comp=Z,97nm,18.5s,baz=10,slow=37						
BOSC	**San Juan Bosco**	**45.11**	**258**	P	**P**	**17 32 20.2**	**-1.9**
BOSC				IAmb	IAmb	17 32 21.0	
	comp=Z,10nm,0.6s						
ATAH	**Atahualpa**	**46.06**	**253**	LR	LR	17 52 49.9	
	comp=Z,100nm,18.0s,baz=79,slow=38						
NNA	**Nana**	**46.25**	**246**	LR	LR	17 51 32.1	
	comp=Z,149nm,19.9s,baz=18,slow=36						
HRV	**Adam Dziewonsk**	**47.92**	**323**	P	**P**	**17 32 44.2**	**+0.7**
PAL	**Palisades**	**48.52**	**320**	P	**P**	**17 32 47.1**	**-1.1**
PAL				IAmb	IAmb	17 32 49.3	
	comp=Z,12nm,0.8s						
KEST	**Kesra**	**49.06**	**48**	P	**P**	**17 32 55.4**	**+2.8**
	comp=Z,4.5nm,0.9s,baz=250,slow=9.9,SNR=4.3						
KEST				LR	LR	17 53 08.2	
	comp=Z,135nm,19.1s,baz=278,slow=36						
	comp=Z,4.5nm,0.9s						
ESPN	**Las Esperanzas**	**49.27**	**280**	P	**P**	**17 32 55.6**	**+1.3**
TRY	**Troy**	**49.32**	**322**	P	**P**	**17 32 54.0**	**-0.3**
JSRW	**J. Sargeant Re**	**49.56**	**314**	P	**P**	**17 32 56.5**	**+0.3**
NCB	**Newcomb**	**50.36**	**323**	P	**P**	**17 33 01.9**	**-0.4**
NCB				IAmb	IAmb	17 34 43.2	
	comp=Z,22nm,1.5s						
BINY	**Binghamton**	**50.47**	**320**	P	**P**	**17 33 03.6**	**+0.5**
BINY				IAmb	IAmb	17 33 16.9	
	comp=Z,29nm,1.5s						
FRNY	**Flat Rock**	**50.48**	**324**	P	**P**	**17 33 03.1**	**0.0**
FRNY				IAmb	IAmb	17 33 12.6	
	comp=Z,14nm,1.2s						
J58A	**Remsen**	**50.66**	**322**	P	**P**	**17 33 03.9**	**-0.6**
J58A				IAmb	IAmb	17 33 05.4	
	comp=Z,22nm,1.4s						
152A	**Waverly Hall**	**52.91**	**306**	P	**P**	**17 33 20.8**	**-0.7**
O53A	**New Philadelph**	**53.01**	**316**	P	**P**	**17 33 21.3**	**-0.8**
O53A				IAmb	IAmb	17 33 23.2	
	comp=Z,24nm,1.2s						
TKL	**Tuckaleechee C**	**53.12**	**310**	LR	LR	17 54 45.3	
	comp=Z,38nm,18.1s,baz=32,slow=35						
TZTN	**Tazewell**	**53.26**	**311**	P	**P**	**17 33 23.9**	**-0.1**
TZTN				IAmb	IAmb	17 33 25.3	
	comp=Z,17nm,1.2s						
VAE	**Valguarnera**	**53.49**	**48**	P	**P**	**17 33 27.1**	**+1.3**
	comp=Z,12nm,0.5s,baz=49,slow=4.2,SNR=6.8						
VAE				LR	LR	17 54 20.6	
	comp=Z,91nm,21.7s,baz=180,slow=34						
	comp=Z,12nm,0.5s						
S51A	**Beattyville**	**53.68**	**312**	P	**P**	**17 33 27.4**	**+0.3**
S51A				IAmb	IAmb	17 34 06.9	
	comp=Z,32nm,1.6s						
OSSC	**Osservatorio P**	**53.85**	**40**	P	**P**	**17 33 26.0**	**-2.2**
OSSC				IAmb	IAmb	17 34 55.9	
	comp=Z,29nm,1.6s						
SCHQ	**Schefferville**	**54.01**	**338**	P	**P**	**17 33 27.9**	**-1.3**
	comp=Z,4.4nm,0.5s,baz=116,slow=7.1,SNR=6.4						
	comp=Z,4.4nm,0.5s						
Q51A	**Peebles**	**54.02**	**314**		**P**	**17 33 29.6**	**0.0**
Q51A				IAmb	IAmb	17 33 31.1	
	comp=Z,11nm,0.8s						
R50A	**Paris**	**54.46**	**312**	P	**P**	**17 33 33.1**	**+0.4**
SWET	**Sewanee**	**54.64**	**308**	P	**P**	**17 33 34.4**	**+0.2**
SWET				IAmb	IAmb	17 35 29.3	
	comp=Z,23nm,1.6s						
DAVOX	**Davos/Dischmat**	**54.64**	**36**	P	**P**	**17 33 35.4**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=249,slow=10,SNR=5.4						
DAVOX				LR	LR	17 54 54.0	
	comp=Z,92nm,18.9s,baz=262,slow=34						
	comp=Z,3.2nm,0.8s						
CTI	**Castel Tesino**	**55.33**	**38**	P	**P**	**17 33 39.7**	**+0.7**
V48A	**Smith Brothers**	**55.49**	**309**	P	**P**	**17 33 39.7**	**-0.6**
V48A				IAmb	IAmb	17 33 49.0	
	comp=Z,18nm,1.5s						
AAM	**Ann Arbor**	**55.55**	**317**	P	**P**	**17 33 39.9**	**-0.6**
L48A	**N Adams**	**55.93**	**316**	P	**P**	**17 33 41.7**	**-1.6**
T47A	**Sharon Grove**	**56.09**	**310**	P	**P**	**17 33 44.4**	**-0.2**
T47A				IAmb	IAmb	17 33 47.3	
	comp=Z,9.2nm,1.0s						
PLAL	**Pickwick Lake**	**56.25**	**307**	P	**P**	**17 33 44.4**	**-1.3**
PLAL				IAmb	IAmb	17 34 14.8	
	comp=Z,16nm,1.6s						
CLUD	**Cludinico**	**56.27**	**38**	P	**P**	**17 33 45.8**	**+0.1**
CLUD				IAmb	IAmb	17 33 49.9	
	comp=Z,14nm,1.3s						
P46A	**Rosedale**	**57.03**	**313**	P	**P**	**17 33 51.2**	**+0.1**
P46A				IAmb	IAmb	17 33 53.9	
	comp=Z,12nm,0.9s						
Y45A	**Yeager Farm, C**	**57.12**	**306**	P	**P**	**17 33 52.9**	**+0.9**
W45A	**Hickory Valley**	**57.17**	**307**	P	**P**	**17 33 52.6**	**+0.3**
TSUM	**Tsumeb**	**57.66**	**118**	LR	LR	17 52 50.2	
	comp=Z,108nm,21.9s,baz=322,slow=30						
GERES	**GERESS Array B**	**57.91**	**36**	P	**P**	**17 33 59.2**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=229,slow=5.1,SNR=5.3						
	comp=Z,0.3nm,0.5s						
PLCA	**Paso Flores**	**58.15**	**212**	LR	LR	17 59 29.4	
	comp=Z,234nm,18.0s,baz=26,slow=37						
LCAR	**Lake Charles**	**58.96**	**308**	P	**P**	**17 34 05.4**	**+0.6**
E43A	**Lone Tree Farm**	**59.40**	**320**	P	**P**	**17 34 07.5**	**-0.2**
CCM	**Cathedral Cave**	**59.55**	**310**	P	**P**	**17 34 08.5**	**-0.4**
CCM				IAmb	IAmb	17 34 11.7	
	comp=Z,10nm,1.2s						
I42A	**Draeger Farm,**	**59.71**	**317**	P	**P**	**17 34 09.7**	**-0.2**
I42A				IAmb	IAmb	17 34 13.3	
	comp=Z,11nm,0.9s						
VRAC	**Vranov**	**59.81**	**36**	LR	LR	17 58 05.0	
	comp=Z,43nm,18.0s,baz=306,slow=34						
DIVS	**Divibare**	**59.84**	**43**	P	**P**	**17 34 12.7**	**+1.9**
MGMO	**Mountain Grove**	**60.10**	**309**	P	**P**	**17 34 12.2**	**-0.5**
MGMO				IAmb	IAmb	17 34 14.6	
	comp=Z,7.9nm,1.0s						
JFWS	**Jewell Farm**	**60.29**	**316**	P	**P**	**17 34 13.9**	**+0.1**
JFWS				IAmb	IAmb	17 34 14.0	
	comp=Z,9.5nm,0.9s						
LIT	**Litokhoron**	**60.31**	**48**	P	**P**	**17 34 13.7**	**-0.4**
LIT				IAmb	IAmb	17 34 18.6	
	comp=Z,6.7nm,1.1s						
R40A	**Maddies Statio**	**60.39**	**310**	P	**P**	**17 34 13.6**	**-1.0**
L40A	**Anamosa**	**60.70**	**314**	P	**P**	**17 34 15.4**	**-1.2**
L40A				IAmb	IAmb	17 34 15.9	
	comp=Z,14n

LAO	LASA Array	72.21 317	P	P	17 35 31.1	+0.7
O20A	White River Ci	72.92 310	P	P	17 35 35.5	+0.6
O20A			IAmb	IAmb	17 35 38.6	
	comp=Z,23nm,1.4s					
ARCES	ARCESS Array B	73.01 19	P	P	17 35 34.5	-0.1
	comp=Z,3.3nm,0.7s,baz=251,slow=3.7,SNR=6.9					
	comp=Z,3.3nm,0.7s					
RDMU	Red Mountain	73.96 310	P	P	17 35 40.8	-0.3
RDMU			IAmb	IAmb	17 35 49.8	
	comp=Z,6.1nm,0.8s					
PD31	Pinedale Array	74.12 312	P	P	17 35 41.6	-0.4
PD31			IAmb	IAmb	17 35 50.5	
	comp=Z,19nm,2.0s					
PDAR	Pinedale Array	74.12 312	P	P	17 35 42.0	0.0
	comp=Z,2.3nm,1.0s,baz=91,slow=8.1,SNR=9.3					
	comp=Z,2.3nm,1.0s					
PDAR	Pinedale Array	74.12 312	P	P	17 35 41.6	-0.4
BW06	Boulder Array	74.12 312	P	P	17 35 41.9	-0.1
RLMT	Red Lodge	74.13 315	P	P	17 35 41.6	-0.3
RLMT			IAmb	IAmb	17 35 54.0	
	comp=Z,28nm,2.0s					
SRU	San Rafael Swe	74.60 308	P	P	17 35 44.9	+0.1
SRU			IAmb	IAmb	17 35 49.3	
	comp=Z,8.8nm,1.3s					
YMP	Mirror Lake Pl	74.72 314	P	P	17 35 45.3	-0.2
YMP			IAmb	IAmb	17 36 03.7	
	comp=Z,16nm,1.5s					
P17A	Butcher Ranch,	74.79 309	P	P	17 35 45.9	0.0
P17A			IAmb	IAmb	17 35 48.8	
	comp=Z,6.9nm,1.1s					
LOHW	Long Hollow	74.95 313	P	P	17 35 46.8	+0.1
LOHW			IAmb	IAmb	17 35 49.5	
	comp=Z,7.9nm,1.2s					
GURO	Guroymak-BITLI	74.98 52	P	P	17 35 48.8	+1.9
SNOW	Snow King Moun	75.05 313		P	17 35 47.6	+0.2
SNOW			IAmb	IAmb	17 35 50.2	
	comp=Z,14nm,1.2s					
MOOW	Moose Ponds	75.07 313	P	P	17 35 47.6	+0.2
REDW	Red Top Meadow	75.12 313	P	P	17 35 47.7	-0.1
REDW			IAmb	IAmb	17 35 56.4	
	comp=Z,13nm,1.4s					
YFT	Old Faithful	75.18 314	P	P	17 35 49.8	+1.7
YFT			IAmb	IAmb	17 36 00.5	
	comp=Z,14nm,1.3s					
TPAW	Teton Pass	75.20 313	P	P	17 35 48.7	+0.5
TPAW			IAmb	IAmb	17 35 51.8	
	comp=Z,10.0nm,1.3s					
IMW	Indian Meadow	75.22 313	P	P	17 35 48.4	0.0
IMW			IAmb	IAmb	17 35 58.0	
	comp=Z,13nm,1.4s					
YHH	Holmes Hill	75.22 314	P	P	17 35 49.0	+0.6
AHID	Auburn Hatcher	75.26 312	P	P	17 35 48.1	-0.4
AHID			IAmb	IAmb	17 36 19.4	
	comp=Z,19nm,1.9s					
FXWY	Fox Creek	75.26 313	P	P	17 35 48.6	+0.1
FXWY			IAmb	IAmb	17 37 25.0	
	comp=Z,18nm,1.9s					
YMR	Madison River	75.29 314	P	P	17 35 48.6	-0.1
RES	Resolute Bay	75.43 346	P	P	17 35 48.1	-0.4
YHL	Hebgen Lake	75.46 314	P	P	17 35 50.7	+0.9
YHL			IAmb	IAmb	17 36 36.9	
	comp=Z,16nm,1.7s					
HWUT	Hardware Ranch	75.53 311	P	P	17 35 49.9	-0.2
QLMT	Earthquake Lak	75.64 314	P	P	17 35 50.7	+0.1
BOZ	Bozeman (W)	75.83 315	P	P	17 35 53.5	+1.8
BOZ			IAmb	IAmb	17 35 57.0	
	comp=Z,12nm,1.6s					
NLU	North Lily Min	75.84 309	P	P	17 35 51.8	-0.2
MSU	Marysvale	75.87 308	P	P	17 35 52.1	0.0
MVU	Marysvale	75.89 308	P	P	17 35 53.0	+0.7
KBZ	Khabaz	75.90 47	P	P	17 35 53.7	+1.8
	comp=Z,2.9nm,0.8s,baz=312,slow=6.4,SNR=4.5					
KBZ			LR	LR	18 11 53.3	
	comp=Z,24nm,18.8s,baz=330,slow=38					
	comp=Z,9.9nm,0.8s					
ATD	Arta Tunnel	76.24 80	LR	LR	18 07 05.5	
	comp=Z,28nm,21.8s,baz=9.5,slow=34					
CCUT	Cedar City	76.78 307	P	P	17 35 58.3	+0.9
GNI	Garni	77.13 51	LR	LR	18 10 24.5	
	comp=Z,43nm,21.4s,baz=296,slow=36					
PSUT	Pine Spring	77.18 308	P	P	17 35 58.4	-1.2
PSUT			IAmb	IAmb	17 36 14.5	
	comp=Z,5.6nm,0.5s					
WALA	Waterton Lakes	77.60 319	P	P	17 36 01.3	-0.3
WALA			IAmb	IAmb	17 36 02.4	
	comp=Z,20nm,1.5s					
PRN	Pahroc Range	78.12 307	P	P	17 36 06.0	+1.2
PRN			IAmb	IAmb	17 36 10.1	
	comp=Z,10nm,1.3s					
ELK	Elko	78.28 310	P	P	17 36 06.5	+0.8
YKA	Yellowknife Ar	79.01 332	P	P	17 36 08.0	-0.9
	comp=Z,7.8nm,1.1s,baz=101,slow=5.2,SNR=8.4					
	comp=Z,7.8nm,1.1s					
GWY	Greenwater Val	79.43 305	P	P	17 36 14.4	+2.4
TPH	Tonopah	79.83 307	P	P	17 36 14.8	+0.6
BRLDA	Berland Lookou	79.98 324	P	P	17 36 15.0	+0.4
LCH	Last Change Ra	80.19 306	P	P	17 36 16.5	+0.5
DSP	Deep Springs	80.44 307	P	P	17 36 19.0	+1.8
NVAR	Mina Array Bea	80.67 308	P	P	17 36 18.5	-0.3
	comp=Z,0.7nm,0.9s,baz=103,slow=5.3,SNR=5.2					
	comp=Z,0.7nm,0.9s					
LHV	Little Huntoon	80.84 308	P	P	17 36 20.5	+1.2
BEKR	Beckworth	82.21 309	P	P	17 36 27.8	+0.9
ARU	Arti	85.69 34	LR	LR	18 13 32.9	
	comp=Z,26nm,19.7s,baz=294,slow=35					
WTLY	Watson Lake, Y	85.89 330	P	P	17 36 46.1	+1.2
WTLY			IAmb	IAmb	17 36 49.3	
	comp=Z,13nm,1.1s					
WSAR	Wadi Sarin	90.03 67	LR	LR	18 19 52.7	
	comp=Z,76nm,18.9s,baz=236,slow=37					
ILAR	Eielson Array	92.76 337	P	P	17 37 17.8	+0.4
	comp=Z,2.2nm,1.1s,baz=53,slow=3.4,SNR=6.5					
	comp=Z,2.2nm,1.1s					
PZH	PanZhiHua	125.89 50	PKP	PKPdf	17 43 07.7	-0.4

*NOU **03** 17:33:38.1, 37°.19S×179°.70E, h0km, MLv3.8/8, Off E. Coast of N. Island, N.Z.*
*WEL **03** 17:33:44.9±1.5, 37°S±5°×17°9E±°, h10km±7km, M3.0/17, ML3.4/26, MLv3.0/17, Error ellipse: s-maj=0.0km s-min=0.0km az=84.7*

ISC 03 17:33:43.3±2.8, 37°21S±0°.07×179°2E±0°.1, h6km±13km, n43, σ0°91/49, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.82	244	P	Pg	17 33 59.6	+0.5
MXZ				S	Sg	17 34 08.4	-1.5
MXZ	Matakaoa Point	0.82	244	P	Pg	17 33 59.7	+0.5
WMGZ	Waiomatatini S	0.90	227	P	Pg	17 34 00.6	0.0
WMGZ				S	Sb	17 34 15.1	+1.5
PKGZ	Pakihiroa	1.15	233	P	Pn	17 34 06.3	+0.3
PKGZ				S	Sg	17 34 20.5	+0.2
PUZ	Puketiti	1.16	222	P	Pn	17 34 07.0	+0.7
PUZ				S	Sg	17 34 21.5	+0.7
HAZ	Te Kaha	1.28	244	P	Pn	17 34 06.1	-1.7
HAZ				S	Sb	17 34 23.8	-0.8
TWGZ	Tauwhareparae	1.39	226	P	Pg	17 34 10.3	+0.3
TWGZ				S	Sn	17 34 28.5	+0.4
RUGZ	Raukumara Rang	1.46	238	P	Pb	17 34 11.1	+0.2
CNGZ	Carnagh Statio	1.51	212	P	Pg	17 34 12.0	-0.4
MWZ	Matawai	1.76	230	P	Pn	17 34 15.1	+0.6
RIGZ	Rimuhau	1.90	218	P	Pn	17 34 16.9	+0.5
RAGZ	Rawiri	1.94	228	P	Pn	17 34 17.3	+0.4
URZ	Urewera	1.99	238	P	Pn	17 34 15.7	-1.9
URZ	Urewera	1.99	238	P	Pn	17 34 17.9	+0.4
SNGZ	Shannon Statio	2.17	223	P	Pn	17 34 20.6	+0.5
KNZ	Kokohu	2.19	214	P	Pn	17 34 20.4	+0.1
MHGZ	Mahia Peninsul	2.21	208	P	Pn	17 34 21.3	+0.7
MTHZ	Maungataniwha	2.51	228	P	Pn	17 34 25.2	+0.5
NMHZ	Naumai	2.69	225	P	Pn	17 34 28.1	+0.8
ARHZ	Aropaoanui	2.71	220	P	Pn	17 34 27.7	+0.3
KUZ	Kuaotunu	2.86	278	P	Pn	17 34 29.0	-0.4
KUZ	Kuaotunu	2.86	278	P	Pn	17 34 29.1	-0.4
BKZ	Black Stump Fm	2.92	227	P	Pn	17 34 30.3	-0.1
BKZ	Black Stump Fm	2.92	227	P	Pn	17 34 29.6	-0.8
TOZ	Tahuroa Road	3.02	259	P	Pn	17 34 31.8	0.0
KAHZ	Kahuranaki	3.18	215	P	Pn	17 34 33.0	-1.0
GRZ	Great Barrier	3.19	286	P	Pn	17 34 34.2	+0.2
MKAZ	Moumakai	3.26	271	P	Pn	17 34 33.6	-1.4
BHHZ	Black Hill Sta	3.38	227	P	Pn	17 34 36.5	-0.3
ETVZ	East Tongariro	3.38	234	P	Pn	17 34 36.4	-0.5
NTVZ	North Tongarir	3.39	235	P	Pn	17 34 36.8	-0.1
OTVZ	Oturere	3.43	234	P	Pn	17 34 37.2	-0.3
SNVZ	South Ngauruho	3.46	234	P	Pn	17 34 37.6	-0.3
HIZ	Hauiti	3.71	248	P	Pn	17 34 42.1	+0.9
HIZ	Hauiti	3.71	248	P	Pn	17 34 41.9	+0.7
VRZ	Vera Road	4.02	240	P	Pn	17 34 45.5	0.0
WCZ	Waipu Caves	4.14	286	P	Pn	17 34 47.1	-0.1
BFZ	Birch Farm	4.18	213	P	Pn	17 34 45.7	-2.0
MRZ	Mangatainoka R	4.48	219	P	Pn	17 34 49.7	-2.1
OUZ	Omahuta	4.98	292	P	Pn	17 34 58.8	+0.2
OUZ	Omahuta	4.98	292	P	Pn	17 34 58.8	+0.2
QRZ	Quartz Range	6.35	233	P	Pn	17 35 14.9	-2.6
QRZ	Quartz Range	6.35	233	P	Pn	17 35 17.2	-0.3

*IDC **03** 18:00:25.1±1.9, 0°.97N×126°.71E, h0km, mb3.5/3, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=116.5km s-min=24.4km az=68.0*
*DJA **03** 18:00:29.0±0.4, 1°N±2°×12°7E±°, h39km±13km, M3.4/10, MLv3.4/10*

ISC 03 18:00:29.9±1.0, 0°.96N±0°.07×126°.70E±0°.06, h39km, n12, σ1°95/14, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.70	106	P	Pn	18 00 43.3	0.0
TNTI				S	Sn	18 00 53.6	+0.7
LBMI	Labuha	1.78	153	P	Pn	18 00 58.2	0.0
LBMI				S	Sn	18 01 19.6	0.0
KMSI	Cibinong	2.74	262	P	Pn	18 01 11.2	-0.2
SGSI	Sangihe	2.95	337	P	Pn	18 01 13.0	-1.2
SANI	Sanana	3.07	193	P	Pn	18 01 15.9	0.0
GTOI	Gorontalo	3.70	265	P	Pn	18 01 25.7	+1.2
NLAI	Namlea	4.19	174	P	Pn	18 01 29.6	-1.7
MRSI	Marisa	4.78	264	P	Pn	18 01 38.1	-1.3
FITZ	Fitzroy Crossi	18.97	183	P	Pn	18 04 48.2	-0.7
	baz=7.1,slow=8.1,SNR=1.3						
	0.8nm,0.8s						
WRA	Warramunga Arr	22.08	161	P	P	18 05 20.9	-0.9
	1.1nm,0.5s,baz=339,slow=11,SNR=22						
	1.1nm,0.5s						
ASAR	Alice Springs	25.46	164	P	P	18 05 55.9	+1.4
	0.3nm,0.4s,baz=344,slow=11,SNR=19						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.81	326	P	P	18 10 32.2	+0.8
	0.2nm,0.3s,baz=129,slow=7.8,SNR=5.7						
	0.2nm,0.3s						

*BJI **03** 18:07:39.9±0.0, 23°.33S×175°.12W, h12km, mb5.4/52, mB5.8/32, Ms5.3/38, Ms7 4.9/40*
*IDC **03** 18:07:39.2±0.4, 23°.67S×175°.45W, h0km, mb4.8/27, mbtmp4.7/28, ML4.2/1, MS4.7/58, Error ellipse: s-maj=15.2km s-min=13.7km az=130.0*
*NEIC **03** 18:07:40.9±1.9, 23°.65S±0°.08×175°.5W±0°.1, h10km±1km, mb5.2/159, Error ellipse: s-maj=16.5km s-min=13.3km az=106.0*
*MOS **03** 18:07:41.0±1.4, 23°.67S×175°.51W, h18km, mb5.3/19, MS4.9/5, Error ellipse: s-maj=10.4km s-min=9.0km az=86.1*
*GCMT **03** 18:07:43.9±0.2, 23°.70S±0°.02×174°.95W±0°.01, h24km, MW5.1/107, Moment Tensor Solution. s63,c92; s107,c145; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.55±.13; Mθθ-0.73±.10; Mφφ-2.81±.08; Mrθ1.45±.15; Mθφ-0.90±.07; Mφr3.27±.12; Best double couple: M0=4.89800×10^16 NP1:φs23.00000°, δ68.00000°, λ92.00000°. NP2:φs199.00000°, δ22.00000°, λ86.00000°. Principal axes: T 5.1040, Plg67.0000°, Azm296.0000°; N -0.4070, Plg1.0000°, Azm202.0000°; P -4.6910, Plg23.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 18:07:40.6±0.7, 23°.77S±0°.04×175°.47W±0°.06, h11km±3km, n661, σ1°43/642, mb5.2/143, MS4.8/78, 48C-34D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.89	201	Sn	Sn	18 10 18.1	+2.9
	122nm,0.3s,baz=109,slow=22,SNR=5.6						
RAO	Raoul Island	5.89	201	Pn	Pn	18 09 08.7	+0.9
RAO				Sn	Sn	18 10 15.6	+0.4
RAO	Raoul Island	5.89	201	P	Pn	18 09 09.2	+1.5
RAO				SN	Sn	18 10 15.6	+0.4
NIUE	Niue	6.96	49	P	Pn	18 09 14.2	-8.3
	baz=6.5,SNR=26						
NIUE				S	Sn	18 10 21.6	-20
	baz=6.5						
NIUE	Niue	6.96	49		Pn	18 09 14.0	-8.5
MSVF	Nonsavu	8.53	314	Pn	Pn	18 09 47.4	+3.3
	5.1nm,0.3s,baz=142,slow=11,SNR=59						
MSVF				LR	LR	18 13 00.5	
	comp=Z,10μm,18.9s,baz=95,slow=38						
MSVF	Nonsavu	8.53	314	Pn	Pn	18 09 46.8	+2.6
MSVF	Nonsavu	8.53	314	*i* P	Pn	18 09 46.8	+2.6
AFI	Afiamalu	10.41	20	Pn	Pn	18 10 02.6	-7.4
	14nm,0.3s,baz=318,slow=4.3,SNR=12						
AFI				Sn	Sn	18 11 48.0	-19
	4.6nm,0.3s,baz=207,slow=22,SNR=2.8						
AFI	Afiamalu	10.41	20		Pn	18 10 02.2	-7.7
RAR	Rarotonga	14.73	83	Pn	Pn	18 11 01.3	-7.7
	13nm,0.3s,baz=246,slow=9.4,SNR=21						
RAR				Sn	Sn	18 13 34.7	-18
	4.1nm,0.3s,baz=82,slow=22,SNR=3.4						
RAR				LR	LR	18 17 21.7	
	comp=Z,2μm,18.2s,baz=272,slow=40						
RAR	Rarotonga	14.73	83	Pn	Pn	18 11 00.7	-8.2
MARNC	Marn, Loyalty	15.40	275		Pn	18 11 16.6	-1.3
PINNC	Pines Island,	15.75	271	P	P	18 11 24.4	-2.1
URZ	Urewera	15.77	202	Pn	Pn	18 11 20.6	-2.0
	0.6nm,0.3s,baz=94,slow=7.3,SNR=3.9						
URZ				Sn	Sn	18 14 08.8	-8.7
	1.9nm,0.3s,baz=346,slow=23,SNR=5.8						
URZ	Urewera	15.77	202	Pn	Pn	18 11 21.1	-1.6
FUNA	Funafuti	15.99	341	Pn	Pn	18 11 23.4	-2.2
FUNA				IAmb	IAmb	18 11 28.1	
	comp=Z,169nm,1.2s						
LIFNC	LIFOU	16.28	277	P	Pn	18 11 27.6	-1.6
LIFNC				IAmb	IAmb	18 11 37.7	
	comp=Z,142nm,1.0s						
OUENC	Ouen Island, N	16.33	271	P	P	18 11 32.9	0.0
ONTNC	Ouen Toro	16.70	271	Pn	Pn	18 11 33.3	-1.4
DZM	Mont Dzumac	16.75	272	*e*Pn	P	18 11 36.9	-0.7
	comp=Z,193nm,1.2s						
DZM				*e*LR	LR	18 15 26.0	
	comp=Z,3μm,22.2s						
DZM	Mont Dzumac	16.75	272	Pn	P	18 11 37.5	-0.1
	comp=Z,0.8nm,0.3s,baz=94,slow=16,SNR=29						
DZM				LR	LR	18 15 32.4	
	comp=Z,1μm,19.5s,baz=104,slow=28						
	comp=Z,9.8nm,0.8s						
DZM	Mont Dzumac	16.75	272		P	18 11 38.5	+0.8
BKZ	Black Stump Fm	16.80	202	P	Pn	18 11 36.3	+0.5
OTVZ	Oturere	17.09	204	P	Pn	18 11 40.3	+0.7
BFZ	Birch Farm	18.25	200	P	Pn	18 11 52.2	-1.6
MRZ	Mangatainoka R	18.45	202	P	P	18 11 54.9	-1.3
HOWZ	Holdsworth Sta	18.68	202	P	P	18 11 56.7	-2.0
MTW	Mount Morrison	18.92	201	P	Pn	18 12 04.3	+2.4
KOUNC	Koumac, New Ca	19.02	276	P	Pn	18 12 02.9	-0.4
KOUNC				IAmb	IAmb	18 12 14.4	
	comp=Z,209nm,1.7s						
TRWZ	Traveller	19.07	201	P	Pn	18 12 04.4	+0.6
PAWZ	Paruwai Farm	19.14	201	P	Pn	18 12 08.1	+3.4
DUWZ	D'Urville Isla	19.18	205	P	P	18 12 01.5	-2.7
MSWZ	Moikau Station	19.23	202	P	P	18 12 04.8	-0.1
MSWZ	Moikau Station	19.23	202	P	P	18 12 05.0	+0.2
SNZO	South Karori	19.33	203	P	P	18 12 03.1	-2.7
PLWZ	Palliser	19.37	201	P	P	18 12 03.9	-2.4
PLWZ	Palliser	19.37	201	P	Pn	18 12 07.4	-0.1
TUWZ	Tuamarina	19.71	204	P	P	18 12 07.0	-3.0
NNZ	Nelson	19.75	206	P	P	18 12 10.2	-0.1
QRZ	Quartz Range	19.77	208	P	P	18 12 10.3	-0.3
QRZ	Quartz Range	19.77	208	P	Pn	18 12 12.2	+0.1
CMWZ	Cape Campbell	19.89	203	P	P	18 12 09.8	-2.1
BSWZ	Blackbirch Sta	19.99	204	P	P	18 12 10.7	-2.3
THZ	Tophouse	20.40	206	P	P	18 12 15.6	-1.9
THZ	Tophouse	20.40	206	P	P	18 12 17.9	+0.3
KHZ	Kahutara	20.72	204	P	P	18 12 18.6	-2.4
KHZ	Kahutara	20.72	204	P	P	18 12 21.1	+0.1
LTZ	Lake Taylor	21.51	205	P	P	18 12 28.7	-0.9
OXZ	Oxford	22.06	205	P	P	18 12 33.9	-1.5
RPZ	Rata Peaks	22.78	206	P	P	18 12 42.5	-0.5
	comp=Z,5.1nm,0.8s,baz=232,slow=6.6,SNR=3.9						
RPZ				S	S	18 16 51.6	-0.3
	comp=Z,9.7nm,0.8s,baz=96,slow=5.2,SNR=4.0						
RPZ				LR	LR	18 21 43.0	
	comp=Z,4μm,19.1s,baz=22,slow=37						
	comp=Z,5.1nm,0.8s						
RPZ	Rata Peaks	22.78	206	P	P	18 12 42.4	-0.7
FOZ	Fox Glacier	23.14	208	P	P	18 12 47.8	+1.0
TBI	Tubuai	23.84	94	*e*P	P	18 12 55.4	+1.5
TBI				*e*LR	LR	18 18 44.5	
	comp=Z,2μm,26.2s						
ODZ	Otahua Downs	24.05	205	P	P	18 12 56.7	+1.0
WKZ	Wanaka	24.53	207	P	P	18 13 00.5	+0.4
PPT2	Papeete2	24.97	81	*e*P	P	18 13 06.2	+1.8
	comp=Z,128nm,20.2s						
PPT2				*e*LR	LR	18 19 15.5	
	comp=Z,2μm,23.2s						
PPT	Papeete	24.98	81	LR	LR	18 21 57.4	
	comp=Z,1μm,18.5s,baz=217,slow=34						
MLZ	Mavora Lakes	25.34	208	P	P	18 13 09.5	+2.0
WHZ	Wether Hill Ro	25.83	207	P	P	18 13 12.6	+0.7
WHZ				IAmb	IAmb	18 13 42.2	
	comp=Z,122nm,1.8s						
DCZ	Deep Cove	25.84	209	P	P	18 13 13.1	+1.2
HNR	Honiara	27.47	297	LR	LR	18 22 57.1	
	comp=Z,16μm,19.8s,baz=147,slow=33						
ARMA	Armidale	29.96	250	P	P	18 13 50.9	+1.7
	baz=30						
ARMA	Armidale	29.96	250	P	P	18 13 50.9	+1.7
EIDS	Eidsvold	30.42	260	P	P	18 13 54.2	+1.1
	baz=31,SNR=4.4						
RMQ	Roma	32.44	258	P	P	18 14 12.5	+1.5
	baz=33,SNR=8.8						
CMSA	Cobar Meteorol	35.12	249	P	P	18 14 35.3	+1.1
	baz=36,SNR=12						
CTA	Charters Tower	35.63	268	P	P	18 14 39.1	+0.5
	comp=Z,6.3nm,0.4s,baz=98,slow=10,SNR=22						
CTA				LR	LR	18 28 36.9	
	comp=Z,1μm,18.2s,baz=95,slow=35						
	comp=Z,6.3nm,0.4s						
CTA	Charters Tower	35.63	268	P	P	18 14 38.7	0.0
CTA				pmax	pmax		
	comp=Z,39nm,1.5s						
CTAO	Charters Tower	35.63	268	P	P	18 14 38.2	-0.5
CTAO				IAmb	IAmb	18 14 55.0	
	comp=Z,39nm,1.1s						
CTAO	Charters Tower	35.63	268	P	P	18 14 38.2	-0.5
CTAO				pmax	pmax		
	comp=Z,39nm,1.1s						
QLP	Quilpie	36.47	257	P	P	18 14 45.7	-0.1
	baz=37,SNR=7.1						
RABL	Rabaul	36.78	297	P	P	18 14 46.0	-2.7
RABL				IAmb	IAmb	18 15 44.1	
	comp=Z,29nm,0.6s						
KRVT	Keravat (AS076	36.83	297	P	P	18 14 50.9	+1.9
	comp=Z,17nm,0.9s,baz=102,slow=10,SNR=5.6						
KRVT				LR	LR	18 30 18.0	
	comp=Z,758nm,18.1s,baz=267,slow=37						
	comp=Z,17nm,0.9s						
TAOE	Nuku Hiva Isla	36.87	72	*e*S	S	18 20 35.4	+1.2
	comp=Z,134nm,23.3s						
TAOE				*e*LR	LR	18 24 45.4	
	comp=Z,847nm,23.1s						
MTSU	Mount Surprise	37.88	271	P	P	18 14 58.5	+0.5
	baz=38,SNR=24						
PMG	Port Moresby	38.42	285	P	P	18 15 02.1	-0.3
	comp=Z,20nm,0.7s,baz=70,slow=6.5,SNR=10.0						
PMG				LR	LR	18 29 32.2	
	comp=Z,1μm,19.2s,baz=151,slow=34						
	comp=Z,20nm,0.7s						
PMG	Port Moresby	38.42	285	P	P	18 15 02.3	-0.1
PMG				IAmb	IAmb	18 15 19.6	
	comp=Z,74nm,1.1s						
PMG	Port Moresby	38.42	285	P	P	18 15 02.3	-0.1
PMG				pmax	pmax		
	comp=Z,74nm,1.1s						
STKA	Stephens Creek	38.62	248	P	P	18 15 04.2	+0.2
	comp=Z,3.1nm,0.6s,baz=94,slow=12,SNR=11						
STKA				LR	LR	18 29 35.9	
	comp=Z,2μm,19.6s,baz=75,slow=34						
	comp=Z,3.1nm,0.6s						
STKA	Stephens Creek	38.62	248	P	P	18 15 04.7	+0.7
	baz=39,SNR=11						
STKA	Stephens Creek	38.62	248	*i* P	P	18 15 02.8	-1.2
COEN	Coen	40.21	276	P	P	18 15 17.0	-0.4
	baz=40,SNR=4.8						
COEN	Coen	40.21	276	P	P	18 15 16.7	-0.7
HTT	Hallett	40.91	246	P	P	18 15 23.6	+0.5
	baz=41,SNR=8.2						
AS31	Alice Springs	46.14	259	P	P	18 16 05.4	0.0
ASAR	Alice Springs	46.14	259	P	P	18 16 06.0	+0.6
	comp=Z,9.8nm,0.8s,baz=101,slow=6.8,SNR=77						
ASAR				S	S	18 22 46.5	-5.0
	comp=Z,1.0nm,0.9s,baz=104,slow=16,SNR=4.2						
ASAR				LR	LR	18 35 31.2	
	comp=Z,3μm,18.1s,baz=109,slow=36						
	comp=Z,9.8nm,0.8s						
ASAR	Alice Springs	46.14	259	P	P	18 16 05.4	0.0
ASAR	Alice Springs	46.14	259	P	P	18 16 05.4	0.0
WR0	Warramunga Arr	46.36	265	P	P	18 16 05.3	-1.8
WR0				IAmb	IAmb	18 16 22.6	
	comp=Z,22nm,1.1s						
WB2	Warramunga Arr	46.54	265	P	P	18 16 07.0	-1.5
	baz=47						
WB2	Warramunga Arr	46.54	265	P	P	18 16 07.7	-0.9
WB2				IAmb	IAmb	18 16 23.0	
	comp=Z,33nm,1.1s						
WRAB	Tennant Creek	46.54	265	P	P	18 16 06.7	-1.9
WRAB				IAmb	IAmb	18 16 24.0	
	comp=Z,23nm,0.9s						
WRAB	Tennant Creek	46.54	265	P	P	18 16 06.7	-1.9
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WB0	Warramunga Arr	46.55	265	P	P	18 16 06.8	-1.8
WB0				IAmb	IAmb	18 16 09.4	
	comp=Z,19nm,0.7s						
WRA	Warramunga Arr	46.55	265	P	P	18 16 07.9	-0.8
	comp=Z,15nm,

SOEI Soe 58.98 273 P **P 18 17 41.7 +1.0**
comp=Z,1µmcomp=Z,85nm,0.8s
NLAI Namlea 59.01 281 P **P 18 17 44.0 +3.2**
comp=Z,3µmcomp=Z,10nm,0.7s
NWAO Narrogin (SRO) 59.06 245 LR LR 18 42 38.2
comp=Z,818nm,18.0s,baz=290,slow=36
MEEK Meekatharra 59.11 252 P **P 18 17 41.8 +0.3**
baz=60,SNR=5.8
RPN Rapa Nui 59.20 108 LR LR 18 38 45.9
comp=Z,91nm,19.2s,baz=254,slow=32
BATI Baumata 59.36 272 LR LR 18 44 32.5
comp=Z,2µm,18.2s,baz=158,slow=37
BATI Baumata 59.36 272 P **P 18 17 44.8 +1.5**
comp=Z,23nm,1.4s
LBMI Labuha 59.80 284 P **P 18 17 46.3 0.0**
comp=Z,24nm,0.8s
BLDU Ballidu 59.92 247 P **P 18 17 46.9 0.0**
baz=60,SNR=9.5
SANI Sanana 60.52 282 P **P 18 17 50.1 -1.2**
comp=Z,20nm,1.5s
MORW Morawa 60.80 249 P **P 18 17 52.8 -0.2**
baz=61,SNR=7.0
MMRI Maumere 61.25 273 P **P 18 17 58.2 +2.0**
comp=Z,38nm,1.0s
EDFI Ende, Flores 61.71 273 P **P 18 18 00.9 +1.5**
comp=Z,18nm,0.9s
CASY Casey 62.05 206 P **P 18 18 02.8 +2.0**
BBSI Bau Bau 62.17 277 P **P 18 18 03.4 +0.9**
comp=Z,12nm,0.6s
KAPI Kappang 64.93 276 LR LR 18 46 53.0
comp=Z,283nm,18.8s,baz=112,slow=36
JCJ Chichijima 65.03 319 LR LR 18 43 27.3
comp=Z,736nm,19.5s,baz=132,slow=33
DAV Davao City (W) 65.17 290 LR LR 18 45 31.3
comp=Z,153nm,19.5s,baz=114,slow=35
QSPA South Pole Qui 66.32 180 P **P 18 18 28.6 -0.4**
comp=Z,16nm,0.9s,baz=33,slow=1.7,SNR=44
QSPA LR LR 18 46 39.1
comp=Z,651nm,18.0s,baz=34,slow=35
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 74.22 323 P **P 18 19 16.9 -0.6**
comp=Z,5.3nm,0.8s,baz=157,slow=5.7,SNR=11
MJAR LR LR 18 51 31.7
comp=Z,357nm,18.3s,baz=146,slow=36
comp=Z,5.3nm,0.8s
MAJO Matsushiro 74.22 323 *i* P **P 18 19 16.7 -0.9**
MAJO pmax pmax
comp=Z,30nm,2.1s
LEM Lembang 75.33 269 LR LR 18 54 15.0
comp=Z,458nm,18.8s,baz=166,slow=37
BELA Belgrano 2 76.02 172 P **P 18 19 28.3 +0.8**
BELA IAmb IAmb 18 19 30.2
comp=Z,17nm,0.9s
JHS Saijyo 76.10 319 P **P 18 19 28.0 -0.4**
JHS IAmb IAmb 18 19 44.9
comp=Z,30nm,1.1s
SHEM Shemya Is, Ala 76.71 354 LR LR 18 50 19.1
comp=Z,1µm,19.1s,baz=147,slow=33
PMSA Palmer Station 77.37 156 LR LR 18 49 33.1
comp=Z,221nm,18.6s,baz=302,slow=32
TPUB Ta-pu 77.70 302 P **P 18 19 35.5 -2.3**
SSLB Suanglung 77.72 303 P **P 18 19 36.3 -1.5**
SSLB IAmb IAmb 18 19 40.2
comp=Z,21nm,0.7s
LPIG La Paz 79.11 58 LR LR 18 48 11.4
comp=Z,945nm,19.0s,baz=231,slow=31
MAW Mawson 79.29 199 P **P 18 19 48.6 +2.9**
comp=Z,14nm,0.8s,baz=128,slow=6.6,SNR=37
MAW LR LR 18 54 27.8
comp=Z,849nm,18.4s,baz=116,slow=35
comp=Z,14nm,0.8s
MAW Mawson 79.29 199 P **P 18 19 48.6 +2.9**
baz=80,SNR=27
MAW Mawson 79.29 199 P **P 18 19 48.4 +2.7**
MAW Mawson 79.29 199 P **P 18 19 48.4 +2.7**
MAW pmax pmax
comp=Z,19nm,1.8s
PET Petropavlovsk 79.71 344 *e*P **P 18 19 48.4 +0.4**
PET *e*S **S 18 29 47.5 -2.7**
PET pmax pmax
comp=Z,200nm,12.7s
PET MLR MLR
comp=Z,400nm,17.0s
PET MLR MLR
comp=Z,700nm,18.0s
YSS Yuzh-Sakhalins 79.86 332 P **P 18 19 50.1 +1.1**
YSS Yuzh-Sakhalins 79.86 332 *e*P **P 18 19 49.2 +0.2**
YSS *e**SP **PcP 18 19 56.3 -0.2**
YSS *e* 18 22 45.0
YSS *e*S **S 18 29 50.9 -1.1**
YSS *e* 18 30 04.5
YSS pmax pmax
comp=Z,300nm,6.5s
YSS pmax pmax
comp=Z,80nm,0.9s
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=N,300nm,17.0s
ISA Isabella, Lake 79.99 44 P **P 18 19 49.4 -0.7**
ISA Isabella, Lake 79.99 44 P **P 18 19 49.4 -0.7**
ISA pmax pmax
comp=Z,28nm,1.5s
ISA Isabella, Lake 79.99 44 P **P 18 19 50.5 +0.4**
baz=231
PEA0B Petropavlovsk- 80.03 344 *i* P **P 18 19 49.7 -0.1**
PETK Petropavlovsk- 80.03 344 P **P 18 19 49.8 0.0**
comp=Z,22nm,0.9s,baz=158,slow=9.1,SNR=17
PETK LR LR 18 49 00.4
comp=Z,507nm,22.0s,baz=155,slow=31
comp=Z,22nm,0.9s
PETK Petropavlovsk- 80.03 344 P **P 18 19 49.6 -0.2**
PETK Petropavlovsk- 80.03 344 P **P 18 19 49.6 -0.2**
PFO Pinyon Flats O 80.05 47 LR LR 18 50 17.6
comp=Z,598nm,18.3s,baz=226,slow=32
PFO Pinyon Flats O 80.05 47 *i* P **P 18 19 50.0 -0.5**
PFO pmax pmax
comp=Z,10.0nm,1.4s
PFO Pinyon Flats O 80.05 47 P **P 18 19 50.4 -0.2**
baz=233
TPFO Pinon Flats 80.05 47 P **P 18 19 50.4 -0.2**
baz=233
CMB Columbia Colle 80.32 41 P **P 18 19 51.3 -0.5**
CMB Columbia Colle 80.32 41 P **P 18 19 51.3 -0.5**
CMB pmax pmax
comp=Z,16nm,1.4s
LRMC Laurel Mtn Rad 80.39 44 P **P 18 19 52.8 +0.4**
baz=232
BELC Belle Mtn. Jos 80.59 46 P **P 18 19 53.6 +0.2**
baz=233
CWC Cottonwood Cre 80.73 43 P **P 18 19 54.6 +0.4**
baz=231
GSC Goldstone, Bar 80.84 45 P **P 18 19 54.6 -0.1**
baz=232
MPMC Manual Prospec 80.86 44 P **P 18 19 55.1 +0.1**
baz=232
KSRS Korea Array 80.87 318 P **P 18 19 55.8 +1.1**
comp=Z,2.6nm,0.7s,baz=133,slow=6.2,SNR=11
KSRS LR LR 18 52 15.0
comp=Z,331nm,19.6s,baz=120,slow=33
comp=Z,2.6nm,0.7s
WAKR Walker 81.19 41 P **P 18 19 56.7 +0.1**
WAKR IAmb IAmb 18 20 13.9
comp=Z,23nm,1.2s
IRM Iron Mountain 81.25 47 P **P 18 19 57.3 +0.5**
baz=234
GMRC Granite Mounta 81.28 46 P **P 18 19 57.6 +0.5**
baz=233
DSP Deep Springs 81.37 43 P **P 18 19 57.0 -0.3**
YBH Yreka Blue Hor 81.42 37 P **P 18 19 58.3 +0.7**
comp=Z,3.4nm,0.9s,baz=148,slow=1.9,SNR=5.0
YBH LR LR 18 50 25.0
comp=Z,265nm,19.6s,baz=236,slow=32
comp=Z,3.4nm,0.9s
GWY Greenwater Val 81.47 44 P **P 18 19 57.8 -0.4**
LCH Last Change Ra 81.49 43 P **P 18 19 58.2 0.0**
TUQ Turquoise Moun 81.50 45 P **P 18 19 58.4 +0.2**
baz=233
BEKR Beckworth 81.52 40 P **P 18 19 58.2 -0.2**
BEKR IAmb IAmb 18 20 20.1
comp=Z,40nm,1.9s
GRAC Grapevine Rang 81.52 43 P **P 18 19 58.4 +0.2**
baz=232
LHV Little Huntoon 81.60 42 P **P 18 19 59.1 +0.6**
LHV IAmb IAmb 18 20 16.0
comp=Z,18nm,1.1s
YERR Yerington 81.61 41 P **P 18 19 58.2 -0.7**
YERR IAmb IAmb 18 20 05.1
comp=Z,50nm,2.0s
MASI Maura Aman, Be 81.69 270 P **P 18 20 02.6 +2.9**
comp=Z,46nm,1.4s
GMN Gold Mountain 81.78 43 P **P 18 19 59.8 0.0**
RYN Ryan 81.82 42 P **P 18 20 00.3 +0.3**
RYN IAmb IAmb 18 20 15.7
comp=Z,41nm,1.7s
NVAR Mina Array Bea 81.83 42 P **P 18 20 00.3 +0.3**
comp=Z,2.9nm,0.8s,baz=224,slow=9.3,SNR=22
NVAR LR LR 18 48 26.5
comp=Z,354nm,21.4s,baz=267,slow=30
comp=Z,2.9nm,0.8s
NVAR Mina Array Bea 81.83 42 P **P 18 19 59.6 -0.4**
NV11 Mina Array Sit 81.92 42 P **P 18 20 00.6 +0.1**
NV11 IAmb IAmb 18 20 22.4
comp=Z,34nm,1.4s
MZP Montezuma Peak 81.94 43 P **P 18 19 59.8 -1.0**
PAHR Pah Rah Range 81.99 40 P **P 18 20 00.7 -0.1**
PAHR IAmb IAmb 18 20 16.5
comp=Z,66nm,2.0s
TPNV Topopah Spring 82.20 44 P **P 18 20 01.3 -0.6**
TPNV IAmb IAmb 18 20 18.1
comp=Z,58nm,1.9s
TPNV Topopah Spring 82.20 44 P **P 18 20 01.3 -0.6**
TPNV pmax pmax
comp=Z,58nm,1.9s
H03S2 Juan Fernandez 82.23 123 T T 19 51 51.2
baz=242,SNR=28
H03S1 Juan Fernandez 82.24 123 T T 19 51 52.4
baz=242,SNR=30
H03S3 Juan Fernandez 82.25 123 T T 19 51 51.2
baz=242,SNR=30
TPH Tonopah 82.28 43 P **P 18 20 01.7 -0.7**
TPH Tonopah 82.28 43 P **P 18 20 01.7 -0.7**
TPH pmax pmax
comp=Z,171nm,1.6s
KVN Kaiserville 82.34 41 P **P 18 20 02.1 -0.6**
KVN IAmb IAmb 18 20 24.5
comp=Z,19nm,1.3s
KVN Kaiserville 82.34 41 P **P 18 20 02.1 -0.6**
KVN pmax pmax
comp=Z,19nm,1.3s
H03N2 Juan Fernandez 82.38 123 T T 19 51 54.3
baz=251,slow=73,SNR=10
H03N3 Juan Fernandez 82.38 123 T T 19 52 05.6
baz=251,slow=73,SNR=7.6
H03N1 Juan Fernandez 82.39 123 T T 19 51 59.6
baz=251,slow=73,SNR=7.3
SHPR Sheep Range 82.63 45 P **P 18 20 04.1 -0.1**
SHPR IAmb IAmb 18 20 25.8
comp=Z,22nm,1.7s
W13A Hualapai Mount 82.64 47 P **P 18 20 03.5 -0.9**
W13A IAmb IAmb 18 20 11.1
comp=Z,22nm,1.6s
MOD Modoc Plateau 82.88 38 P **P 18 20 05.0 -0.3**
S11A Rachel 82.94 44 P **P 18 20 05.2 -0.6**
USA0B Ussuriysk Arra 82.97 325 P **P 18 20 06.9 +1.3**
USA0B Ussuriysk Arra 82.97 325 P **P 18 20 06.9 +1.3**
USA0B pmax pmax
comp=Z,89nm,1.3s
USRK Ussuriysk Ar. 82.97 325 P **P 18 20 07.1 +1.5**
comp=Z,30nm,0.8s,baz=136,slow=3.1,SNR=37
USRK LR LR 18 55 08.7
comp=Z,322nm,18.9s,baz=121,slow=34
comp=Z,30nm,0.8s
USRK Ussuriysk Ar. 82.97 325 P **P 18 20 05.2 -0.3**
USRK Ussuriysk Ar. 82.97 325 P **P 18 20 05.3 -0.3**
TYV Tymovskoe 82.97 335 *e*P **P 18 20 06.5 +1.1**
TYV *e*S **S 18 30 28.6 +4.4**
TYV pmax pmax
comp=Z,500nm,3.3s
TYV pmax pmax
comp=Z,47nm,1.0s
TYV smax smax
comp=N,400nm,5.5s
TYV smax smax
comp=E,200nm,5.5s
K05A Summer Lake 83.08 37 P **P 18 20 06.6 +0.1**
TUC Tucson 83.19 50 P **P 18 20 07.0 -0.1**
TUC IAmb IAmb 18 20 14.2
comp=Z,45nm,1.9s
TUC Tucson 83.19 50 P **P 18 20 07.1 -0.1**
TUC pmax pmax
comp=Z,45nm,2.0s
PRN Pahroc Range 83.24 44 P **P 18 20 07.7 +0.4**
SDSI Sungai Dareh 83.31 272 P **P 18 20 10.8 +2.7**
comp=Z,3.8nm,0.8s
LL02 Futaleuf 83.37 134 P **P 18 20 08.9 +1.0**
LL02 IAmb IAmb 18 20 11.0
comp=Z,21nm,1.0s
R11A Troy Canyon, C 83.46 43 P **P 18 20 08.4 -0.2**
R11A IAmb IAmb 18 20 24.1
comp=Z,37nm,2.0s
R11A Troy Canyon, C 83.46 43 P **P 18 20 09.1 +0.6**
baz=233
KDAK Kodiak Island 83.47 12 LR LR 18 50 55.0
comp=Z,784nm,21.6s,baz=235,slow=31
BMN Battle Mountai 83.73 41 P **P 18 20 09.7 -0.1**
BMN Battle Mountai 83.73 41 P **P 18 20 09.7 -0.1**
BMN pmax pmax
comp=Z,62nm,2.0s
NJ2 Nanjing 83.75 309 *e*P **P 18 20 10.8 +0.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PINE Pine Mountain 83.76 36 P **P 18 20 09.8 -0.1**
Q18K Katmai Hardscr 83.85 11 P **P 18 20 09.8 -0.1**
baz=199
P17K Kvichak River 84.14 10 P **P 18 20 11.2 +0.1**
baz=198
WVOR Wild Horse Val 84.17 39 P **P 18 20 11.9 0.0**
WVOR Wild Horse Val 84.17 39 P **P 18 20 11.9 0.0**
WVOR pmax pmax
comp=Z,54nm,1.6s
LCMT Little Creek M 84.17 45 P **P 18 20 12.3 +0.1**
LCMT IAmb IAmb 18 20 49.8
comp=Z,13nm,0.8s
QIZ Qiongzhong 84.32 294 P **P 18 20 15.4 +2.3**
QIZ S **S 18 30 40.5 +1.4**
QIZ pmax pmax
comp=Z,16nm,2.2s
QIZ pmax pmax
comp=Z,250nm,6.4s
QIZ LR LR
comp=Z,200nm,14.3s
QIZ LR LR
comp=Z,250nm,15.9s
QIZ LR LR
comp=Z,360nm,18.3s
CCUT Cedar City 84.41 45 P **P 18 20 13.4 0.0**
TROLL Troll, Antarti 84.47 179 P **P 18 20 14.5 +1.3**
MDJ Mudanjiang 84.53 324 P **P 18 20 13.9 +0.4**
MDJ Mudanjiang 84.53 324 P **P 18 20 14.8 +1.3**
MDJ S **S 18 30 41.5 +1.3**
MDJ pmax pmax
comp=Z,48nm,0.9s
MDJ pmax pmax
comp=Z,520nm,3.5s
MDJ LR LR
comp=Z,340nm,16.1s
MDJ LR LR
comp=Z,560nm,20.1s
O17K Koliganek Bris 84.59 9 P **P 18 20 14.7 +1.2**
baz=197
SZCU Shurtz Canyon 84.61 45 P **P 18 20 15.2 +0.7**
SZCU IAmb IAmb 18 20 31.6
comp=Z,22nm,1.2s
PSUT Pine Spring 84.67 44 P **P 18 20 14.7 0.0**
PSUT IAmb IAmb 18 20 31.4
comp=Z,24nm,1.6s
SNAA Sanae 84.68 178 P **P 18 20 15.0 +0.9**
SNAA Sanae 84.68 178 LR LR 18 58 07.5
comp=Z,634nm,18.1s,baz=194,slow=36
SNAA Sanae 84.68 178 P **P 18 20 14.6 +0.4**
SNAA IAmb IAmb 18 20 17.1
comp=Z,18nm,1.0s
SNAA Sanae 84.68 178 P **P 18 20 14.6 +0.4**
SNAA pmax pmax
comp=Z,18nm,1.0s
VNA3 Neumayer Olymp 84.73 175 P **P 18 20 14.9 +0.6**
I07A Izee 84.74 37 P **P 18 20 14.3 -0.4**
I07A IAmb IAmb 18 20 30.6
comp=Z,36nm,1.7s
J08A Circle Bar Ran 84.85 38 P **P 18 20 15.3 0.0**
J08A IAmb IAmb 18 20 30.9
comp=Z,33nm,1.4s
O18K Koktuh Hills 84.96 10 P **P 18 20 15.0 -0.4**
baz=199
PKCU Pink Cliffs 85.03 45 P **P 18 20 18.0 +1.3**
N16K Nishlik Lake 85.04 8 P **P 18 20 16.3 +0.5**
baz=195
ELK Elko 85.12 41 LR LR 18 50 40.1
comp=Z,386nm,21.8s,baz=252,slow=30
ELK Elko 85.12 41 P **P 18 20 17.0 0.0**
ELK Elko 85.12 41 P **P 18 20 17.0 0.0**
ELK pmax pmax
comp=Z,14nm,1.4s
VNA2 Neumayer--Watz 85.19 176 P **P 18 20 18.2 +1.5**
baz=166,slow=3.0
GO06 Curarrehue 85.23 131 P **P 18 20 17.2 -0.4**
GO06 IAmb IAmb 18 20 20.4
comp=Z,14nm,0.8s
SISI Saibi 85.30 271 P **P 18 20 20.6 +2.4**
comp=Z,19nm,1.5s
PLCA Paso Flores 85.34 133 P **P 18 20 19.5 +1.4**
comp=Z,3.9nm,0.8s,baz=227,slow=5.6,SNR=7.3
PLCA LR LR 18 52 51.2
comp=Z,154nm,18.1s,baz=232,slow=32
comp=Z,3.9nm,0.8s
PLCA Paso Flores 85.34 133 P **P 18 20 18.2 +0.1**
PLCA IAmb IAmb 18 20 21.0
comp=Z,19nm,1.2s
PLCA Paso Flores 85.34 133 P **P 18 20 18.2 +0.1**
PLCA pmax pmax
comp=Z,19nm,1.3s
VNA1 Neumayer--Stat 85.41 176 P **P 18 20 19.2 +1.5**
O19K Port Alsworth 85.43 10 P **P 18 20 16.8 -0.8**
121A Cookes Peak, D 85.45 52 P **P 18 20 19.2 +0.5**
121A IAmb IAmb 18 20 46.7
comp=Z,32nm,1.5s
MTPU Mount Pierson 85.45 45 P **P 18 20 18.7 -0.1**
W18A Petrified Fore 85.46 49 P **P 18 20 18.7 0.0**
baz=237
NVL N'lazarevskaya 85.59 182 *e*P P 18 20 34.3 +16
NVL *e*S **S 18 30 51.0 +0.9**
NVL pmax pmax
comp=Z,5.0nm,0.9s
NVL MLR MLR
comp=Z,732nm,17.0s
MVU Marysvale 85.70 45 P **P 18 20 20.6 +0.7**
MSU Marysvale 85.73 45 P **P 18 20 20.8 +0.8**
MSU Marysvale 85.73 45 P **P 18 20 20.8 +0.8**
G08A Pilot Rock 85.81 36 P **P 18 20 19.5 -0.7**
G08A IAmb IAmb 18 20 35.6
comp=Z,25nm,1.4s
IPM Ipoh 85.86 277 P **P 18 20 20.6 -0.4**
BBB Bella Bella 86.20 27 LR LR 18 55 51.1
comp=Z,502nm,18.1s,baz=232,slow=34
HAWA Hanford 86.22 35 P **P 18 20 22.2 +0.2**
HAWA IAmb IAmb 18 20 37.7
comp=Z,36nm,1.6s
CN2 Changchun 86.31 322 *e*P **P 18 20 22.7 +0.3**
CN2 S S 18 30 48.0 -10
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,300nm,7.0s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,500nm,18.0s
BNX BinXian 86.43 324 ⇓P **P 18 20 24.0 +1.0**
BNX pmax pmax
comp=Z,39nm,1.1s
BNX pmax pmax
comp=Z,280nm,4.9s
BMO Blue Mountains 86.44 37 P **P 18 20 22.6 -0.7**
BMO IAmb IAmb 18 20 25.8
comp=Z,31nm,2.0s
BMO Blue Mountains 86.44 37 P **P 18 20 22.6 -0.7**
BMO pmax pmax
comp=Z,31nm,2.0s
KLR Kul'dur 86.52 328 LR LR 18 53 26.6
comp=Z,460nm,21.8s,baz=140,slow=32
KLR Kul'dur 86.52 328*c*e*P **P 18 20 23.7 +0.3**
KLR pmax pmax
comp=Z,21nm,1.2s
SBM South Baldy 86.63 51 P **P 18 20 24.4 -0.4**
Y22A Socorro 86.77 51 P **P 18 20 26.0 +0.8**
baz=239
TXAR Lajitas Array 86.88 56 P **P 18 20 26.2 +0.5**
comp=Z,5.9nm,1.1s,baz=216,slow=6.2,SNR=28
TXAR LR LR 18 53 15.9
comp=Z,551nm,18.9s,baz=223,slow=32
comp=Z,5.9nm,1.1s
TXAR Lajitas Array 86.88 56 P **P 18 20 25.4 -0.3**
TXAR Lajitas Array 86.88 56 P **P 18 20 25.4 -0.3**
D08A Wollman Farm, 86.97 35 P **P 18 20 25.1 -0.5**
D08A IAmb IAmb 18 20 41.2
comp=Z,28nm,1.6s
RPSI Rantau Prapat 87.05 274 P **P 18 20 27.8 +0.9**
PSI Prapat 87.10 274 P **P 18 20 27.8 +0.5**
comp=Z,12nm,0.8s,baz=134,slow=6.6,SNR=9.7
PSI LR LR 19 02 00.7
comp=Z,225nm,18.4s,baz=124,slow=38
comp=Z,12nm,0.8s
BNM Barren Site 87.12 51 P **P 18 20 26.3 -0.7**
PWL Port Wells 87.16 13 P **P 18 20 27.6 +1.4**
baz=205
F10A Beach Ranch, E 87.19 36 P **P 18 20 25.8 -1.1**
F10A IAmb IAmb 18 20 51.0
comp=Z,32nm,1.6s
TIA Tai'an 87.19 312 P **P 18 20 27.7 +0.7**
TIA pmax pmax
comp=Z,24nm,1.0s
L19K White Mountain 87.23 10 P **P 18 20 26.8 +0.3**
baz=199
HLID Hailey 87.30 40 P **P 18 20 28.0 +0.4**
HLID IAmb IAmb 18 20 33.1
comp=Z,26nm,1.9s
PLID Pearl Lake 87.31 38 P **P 18 20 25.9 -1.7**
PLID IAmb IAmb 18 20 33.5
comp=Z,34nm,1.9s
MA2 Magadan 87.56 344 P **P 18 20 28.1 -0.1**
comp=Z,6.7nm,0.7s,baz=241,slow=8.8,SNR=3.7
MA2 LR LR 18 55 38.2
comp=Z,262nm,20.1s,baz=148,slow=33
comp=Z,6.7nm,0.7s
MA2 Magadan 87.56 344 *i* P **P 18 20 29.2 +1.1**
MA2 pmax pmax
comp=Z,72nm,1.9s
ANMO Albuquerque 87.65 50 LR LR 18 54 30.5
comp=Z,929nm,18.7s,baz=246,slow=32
ANMO Albuquerque 87.65 50 P **P 18 20 29.3 -0.2**
ANMO Albuquerque 87.65 50 P **P 18 20 29.3 -0.2**
ANMO pmax pmax
comp=Z,69nm,2.0s
ANMO Albuquerque 87.65 50 P **P 18 20 29.9 +0.5**
baz=239
L20K Farewell, AK 87.66 10 P **P 18 20 28.5 -0.1**
baz=200
TCUT Toone Canyon 87.69 43 P **P 18 20 29.0 -0.7**
TCUT IAmb IAmb 18 20 33.4
comp=Z,20nm,1.1s
GSI Gunungsitoli 87.73 272 P **P 18 20 30.9 +0.8**
GSI Gunungsitoli 87.73 272 P **P 18 20 32.5 +2.4**
comp=Z,79nm,0.8s
TTA Tatalina 87.77 9 P **P 18 20 29.0 -0.2**
TTA IAmb IAmb 18 20 51.0
comp=Z,14nm,1.1s
TTA Tatalina 87.77 9 P **P 18 20 29.0 -0.2**
TTA pmax pmax
comp=Z,14nm,1.1s
TTA Tatalina 87.77 9 P **P 18 20 28.9 -0.4**
baz=198
BMRM Bremner River 88.06 14 P **P 18 20 30.2 -0.4**
baz=208
BCYI Bear Canyon 88.33 39 P **P 18 20 31.9 -0.6**
CMIG Matias Romero 88.49 71 LR LR 18 53 23.3
comp=Z,221nm,18.7s,baz=222,slow=31
N25K Chitina, Valde 88.63 14 P **P 18 20 33.1 -0.3**
baz=208
GLB Gilahina Butte 88.67 15 P **P 18 20 32.1 -1.4**
NEW Newport 88.68 35 LR LR 18 57 50.7
comp=Z,702nm,18.1s,baz=218,slow=34
SRIT Nakonsritamara 88.82 280 P **P 18 20 32.6 -2.7**
CAST Castle Rocks 88.83 10 P **P 18 20 32.2 -2.0**
CAST IAmb IAmb 18 21 04.2
comp=Z,13nm,1.2s
CAST Castle Rocks 88.83 10 P **P 18 20 32.9 -1.3**

baz=201
WAT6 Susitna Watana 88.84 12 P **P 18 20 34.3 -0.1**
baz=205
CTG Chitna Glacier 88.85 16 P **P 18 20 34.5 0.0**
baz=211
BARN Barnard Glacie 88.85 16 P **P 18 20 33.7 -0.8**
O28M Mount Upton 88.97 16 P **P 18 20 35.3 0.0**
baz=212
TRF Thorofare Moun 89.17 11 P **P 18 20 34.4 -1.5**
TRF Thorofare Moun 89.17 11 P **P 18 20 34.8 -1.1**
baz=203
HARP HAARP 89.21 14 P **P 18 20 35.8 -0.2**
baz=208
J20K Nowinta River 89.22 9 P **P 18 20 35.2 -0.8**
J20K IAmb IAmb 18 20 54.7
comp=Z,40nm,1.7s
J20K Nowinta River 89.22 9 P **P 18 20 35.9 -0.1**
baz=200
CHUM Lake Minchumin 89.23 10 P **P 18 20 34.8 -1.2**
baz=201
REDW Red Top Meadow 89.30 41 P **P 18 20 36.5 -0.6**
REDW IAmb IAmb 18 20 52.5
comp=Z,26nm,1.6s
P30M Million Dollar 89.31 18 P **P 18 20 37.0 +0.5**
baz=215
FXWY Fox Creek 89.35 41 P **P 18 20 35.1 -2.2**
FXWY IAmb IAmb 18 20 53.0
comp=Z,26nm,1.9s
DHY Denali Highway 89.36 12 P **P 18 20 36.1 -0.8**
DHY IAmb IAmb 18 20 58.2
comp=Z,24nm,1.5s
DHY Denali Highway 89.36 12 P **P 18 20 37.6 +0.8**
baz=206
S34M Telegraph Cree 89.38 22 P **P 18 20 37.3 +0.5**
baz=220
RND Reindeer 89.38 12 P **P 18 20 36.6 -0.2**
RND IAmb IAmb 18 21 08.9
comp=Z,30nm,1.3s
RND Reindeer 89.38 12 P **P 18 20 36.6 -0.2**
RND pmax pmax
comp=Z,29nm,1.3s
HNS HongShan 89.47 312 ⇑P **P 18 20 39.1 +1.4**
HNS SKS **SKSac 18 31 09.6 +1.6**
HNS S **ScS 18 31 32.6 -0.2**
HNS pmax pmax
comp=Z,21nm,1.2s
HNS LR LR
comp=Z,320nm,19.6s
HNS LR LR
comp=Z,420nm,18.6s
IMW Indian Meadow 89.55 41 P **P 18 20 38.1 -0.2**
IMW IAmb IAmb 18 21 03.2
comp=Z,34nm,2.0s
MOOW Moose Ponds 89.58 41 P **P 18 20 38.3 -0.1**
MOOW IAmb IAmb 18 20 53.9
comp=Z,25nm,1.9s
LOHW Long Hollow 89.59 41 P **P 18 20 37.4 -1.0**
LOHW IAmb IAmb 18 20 54.9
comp=Z,27nm,1.9s
LYN LuoYang 89.62 308 ⇑*i*P **P 18 20 39.2 +0.7**
LYN pP sP 18 20 45.1 +4.3
LYN SKS **SKSac 18 31 08.2 -0.9**
LYN pmax pmax
comp=Z,20nm,0.8s
LYN pmax pmax
comp=Z,220nm,8.5s
LYN LR LR
comp=Z,380nm,19.4s
PAX Paxson 89.66 13 P **P 18 20 37.7 -0.5**
baz=207
MCK McKinley 89.67 11 P **P 18 20 37.0 -1.1**
baz=204
M26K Nabesna, AK 89.69 14 P **P 18 20 37.0 -1.3**
M26K Nabesna, AK 89.69 14 P **P 18 20 38.4 +0.1**
baz=210
BW06 Boulder Array 89.76 42 P **P 18 20 38.0 -1.3**
PDAR Pinedale Array 89.76 42 P **P 18 20 38.6 -0.6**
comp=Z,0.8nm,0.7s,baz=237,slow=3.9,SNR=7.5
PDAR LR LR 18 55 35.8
comp=Z,244nm,19.2s,baz=254,slow=32
comp=Z,0.8nm,0.7s
PDAR Pinedale Array 89.76 42 P **P 18 20 37.3 -2.0**
LRM Limekiln Ridge 89.76 39 P **P 18 20 38.7 -0.6**
QLMT Earthquake Lak 89.78 40 P **P 18 20 37.6 -1.7**
MSTX Muleshoe 89.80 53 P **P 18 20 39.0 -0.6**
MSTX Muleshoe 89.80 53 P **P 18 20 39.4 -0.2**
baz=241
ENH Enshi 89.80 303 P **P 18 20 39.1 -0.4**
YPP Pitchstone Pla 89.84 40 P **P 18 20 39.0 -0.7**
YPP IAmb IAmb 18 20 49.2
comp=Z,18nm,1.6s
BJI Beijing 89.85 314 P **P 18 20 40.0 +0.6**
BJI S **S 18 31 36.0 +4.4**
BJI pmax pmax
comp=Z,14nm,2.2s
M27K Edge Creek, AK 89.92 15 P **P 18 20 39.6 +0.2**
M27K IAmb IAmb 18 20 55.5
comp=Z,35nm,1.4s
M27K Edge Creek, AK 89.92 15 P **P 18 20 40.2 +0.8**
baz=210
YHL Hebgen Lake 89.94 40 P **P 18 20 39.0 -1.1**
MENT Mentasta 90.00 14 P **P 18 20 39.8 +0.1**
SEY Seymchan 90.09 346 P **P 18 20 39.9 -0.1**
comp=Z,12nm,1.1s,baz=143,slow=5.4,SNR=10
comp=Z,12nm,1.1s
SEY Seymchan 90.09 346 *ce*P **P 18 20 42.1 +2.1**
SEY pmax pmax
comp=Z,11nm,1.0s
O30N Mendenhall 90.09 18 P **P 18 20 40.3 +0.1**
baz=216
YHH Holmes Hill 90.10 40 P **P 18 20 41.0 0.0**
YHH IAmb IAmb 18 20 48.7
comp=Z,39nm,1.9s
BOZ Bozeman (W) 90.10 39 P **P 18 20 40.0 -0.7**
BOZ IAmb IAmb 18 20 56.3
comp=Z,37nm,1.8s
BOZ Bozeman (W) 90.10 39 P **P 18 20 40.0 -0.7**
BOZ pmax pmax
comp=Z,37nm,1.8s
DLBC Dease Lake 90.16 22 P **P 18 20 40.8 +0.2**
comp=Z,5.4nm,1.1s,baz=143,slow=9.5,SNR=3.9
DLBC LR LR 18 56 59.7
comp=Z,334nm,18.3s,baz=244,slow=33
comp=Z,5.4nm,1.1s
DLBC Dease Lake 90.16 22 P **P 18 20 41.9 +1.3**
baz=221
L26K Log Cabin Wild 90.16 14 P **P 18 20 40.3 -0.1**
L26K IAmb IAmb 18 20 56.1
comp=Z,24nm,1.4s
L26K Log Cabin Wild 90.16 14 P **P 18 20 40.0 -0.4**
baz=209
GYA Guiyang 90.28 299 ⇑P **P 18 20 43.4 +1.4**
GYA pP pP 18 20 45.5 +1.9
GYA S **S 18 31 40.9 +4.3**
GYA pmax pmax
comp=Z,19nm,0.8s
GYA LR LR
comp=Z,550nm,23.2s
K24K Donnelly Dome 90.34 13 P **P 18 20 41.4 +0.2**
baz=207
RIDG Independent Ri 90.47 13 P **P 18 20 41.6 -0.2**
RIDG IAmb IAmb 18 20 57.1
comp=Z,23nm,1.3s
RIDG Independent Ri 90.47 13 P **P 18 20 41.6 -0.2**
baz=206
I21K Tanana 90.50 10 P **P 18 20 41.8 -0.1**
baz=201
WRH Wood River Hil 90.50 11 P **P 18 20 40.4 -1.5**
WRH IAmb IAmb 18 21 03.0
comp=Z,28nm,1.2s
L27K Beaver Creek, 90.54 15 P **P 18 20 40.9 -1.3**
L27K IAmb IAmb 18 21 37.4
comp=Z,31nm,1.9s
L27K Beaver Creek, 90.54 15 P **P 18 20 42.0 -0.2**
baz=210
BCAR Beaver Creek A 90.55 15 P **P 18 20 41.4 -0.8**
MLY Manley 90.55 10 P **P 18 20 40.5 -1.7**
baz=203
DOT Dot Lake 90.55 13 P **P 18 20 41.9 -0.4**
DOT IAmb IAmb 18 20 57.5
comp=Z,13nm,1.0s
HDA Harding Lake 90.65 12 P **P 18 20 41.9 -0.8**
HDA IAmb IAmb 18 20 57.4
comp=Z,19nm,1.3s
HDA Harding Lake 90.65 12 P **P 18 20 42.1 -0.5**
baz=206

CCB Clear Creek Bu 90.71 12 P **P 18 20 41.6 -1.2**
CCB IAmb IAmb 18 21 03.1
comp=Z,16nm,1.2s
H21K Melozitna Rive 90.82 9 P **P 18 20 43.4 0.0**
baz=201
M29M Somme Creek 90.83 16 P **P 18 20 44.1 +0.4**
baz=214
WALA Waterton Lakes 90.85 35 P **P 18 20 42.5 -1.5**
SCRK Sand Creek 90.86 13 P **P 18 20 43.0 -0.8**
SCRK IAmb IAmb 18 20 59.1
comp=Z,24nm,1.5s
SCRK Sand Creek 90.86 13 P **P 18 20 44.2 +0.4**
baz=209
I23K Minto, Yukon-K 90.89 11 P **P 18 20 44.0 +0.3**
baz=204
COLA College 90.91 11 *i* P **P 18 20 42.9 -0.8**
COLA pmax pmax
comp=Z,7.0nm,1.2s
MDM Murphy Dome 90.91 11 P **P 18 20 43.1 -0.8**
MDM IAmb IAmb 18 21 04.0
comp=Z,13nm,1.2s
ILAR Eielson Array 90.99 12 P **P 18 20 43.0 -1.2**
comp=Z,1.5nm,0.9s,baz=219,slow=4.9,SNR=9.4
comp=Z,1.5nm,0.9s
ILAR Eielson Array 90.99 12 P **P 18 20 43.0 -1.2**
J25K Salcha River, 91.14 12 P **P 18 20 43.9 -1.1**
J25K IAmb IAmb 18 21 00.1
comp=Z,12nm,1.2s
J25K Salcha River, 91.14 12 P **P 18 20 44.2 -0.8**
baz=207
TIY Taiyuan 91.19 311 P **P 18 20 46.5 +0.6**
TIY S **S 18 31 43.5 -0.8**
TIY pmax pmax
comp=Z,260nm,5.1s
TIY LR LR
comp=Z,250nm,5.9s
TIY LR LR
comp=Z,350nm,15.9s
TIY LR LR
comp=Z,330nm,19.2s
H22K Ishtalitna Cre 91.25 10 P **P 18 20 45.5 0.0**
baz=202
N32M Quiet Lake 91.28 19 P **P 18 20 45.7 +0.1**
baz=218
K27K Chicken 91.32 14 P **P 18 20 46.1 +0.4**
baz=210
J26L Joseph Creek 91.41 13 P **P 18 20 46.6 +0.3**
J26L Joseph Creek 91.41 13 P **P 18 20 46.9 +0.6**
baz=209
L29M L29M 91.47 16 P **P 18 20 47.0 +0.5**
baz=214
ZEA Zeya 91.61 330 *e*P **P 18 20 48.5 +1.2**
ZEA *e*S **S 18 31 51.1 +3.9**
ZEA *e* 18 41 25.3
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA pmax pmax
comp=Z,100nm,6.5s
ZEA smax smax
comp=Z,100nm,5.3s
ZEA smax smax
comp=E,300nm,10.1s
ZEA smax smax
comp=N,300nm,9.4s
M31M Drury Creek, Y 91.73 18 P **P 18 20 46.9 -0.8**
baz=217
PRP Porcupine Dome 91.92 12 P **P 18 20 47.7 -0.9**
PRP IAmb IAmb 18 21 20.9
comp=Z,29nm,1.7s
PRP Porcupine Dome 91.92 12 P **P 18 20 48.7 0.0**
baz=207
XLT XiLinHaoTe 91.93 318 ⇓*i*P **P 18 20 50.2 +1.0**
XLT sP pwP 18 21 02.2 +3.2
XLT pmax pmax
comp=Z,15nm,0.8s
XLT pmax pmax
comp=Z,200nm,3.8s
XLT LR LR
comp=Z,250nm,16.1s
XLT LR LR
comp=Z,390nm,19.0s
XAN Xi'an 91.96 306 ⇑P **P 18 20 51.0 +1.5**
XAN pP sP 18 20 55.8 +4.0
XAN SKS **SKSac 18 31 22.8 +0.1**
XAN S **ScS 18 31 54.4 +0.5**
XAN pmax pmax
comp=Z,46nm,0.9s
XAN LR LR
comp=Z,340nm,17.9s
XAN LR LR
comp=Z,620nm,16.4s
XAN LR LR
comp=Z,580nm,19.9s
DAWY Dawson 91.97 15 P **P 18 20 48.7 -0.1**
DAWY IAmb IAmb 18 21 04.5
comp=Z,12nm,1.1s
DAWY Dawson 91.97 15 P **P 18 20 49.3 +0.5**
baz=213
EGAK Eagle 92.17 14 P **P 18 20 48.9 -0.7**
EGAK IAmb IAmb 18 20 57.4
comp=Z,15nm,1.2s
I26K Coal Creek Min 92.20 13 P **P 18 20 49.5 -0.3**
I26K Coal Creek Min 92.20 13 P **P 18 20 49.4 -0.3**
baz=209
G23K Bananza Creek 92.22 10 P **P 18 20 49.7 -0.2**
baz=203
MTO3 Montecristo 92.22 75 P **P 18 20 50.3 -1.1**
K29M Barlow Dome 92.24 16 P **P 18 20 50.0 -0.2**
baz=214
BILL Bilibino 92.53 353 *e*P **P 18 20 50.5 -0.7**
BILL *e* 18 24 32.6
BILL *e*PPP PPP 18 26 34.0
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,642nm,19.0s
KMI Kunming 92.90 296 ⇑P **P 18 20 56.3 +2.0**
KMI pmax pmax
comp=Z,27nm,0.9s
NNA Nana 92.97 104 LR LR 18 54 24.4
comp=Z,284nm,20.1s,baz=206,slow=30
WMOK Wichita Mounta 93.07 53 P **P 18 20 51.5 -3.0**
WMOK IAmb IAmb 18 20 53.6
comp=Z,6.9nm,0.8s
WMOK Wichita Mounta 93.07 53 P **P 18 20 51.6 -3.0**
WMOK pmax pmax
comp=Z,7.0nm,0.9s
HHC Hu-ho-hao-te 93.30 313 *e*P **P 18 20 56.8 +1.2**
HHC SKS **SKSac 18 31 30.6 +0.7**
HHC S **S 18 32 00.2 -2.9**
HHC sS sS 18 32 09.2 +2.7
HHC pmax pmax
comp=Z,63nm,0.9s
HHC pmax pmax
comp=Z,280nm,4.5s
HHC LR LR
comp=Z,480nm,14.8s
HHC LR LR
comp=Z,690nm,15.6s
HHC LR LR
comp=Z,620nm,20.0s
H27K Steamboat Moun 93.34 13 P **P 18 20 55.0 -0.1**
baz=211
CM31 Chiang Mai Arr 93.39 289 P **P 18 20 58.4 +2.0**
CMAR Chiang Mai Arr 93.39 289 P **P 18 20 58.1 +1.7**
comp=Z,16nm,0.9s,baz=134,slow=3.2,SNR=89
CMAR LR LR 19 03 39.9
comp=Z,106nm,19.7s,baz=110,slow=36
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 93.39 289 *i* P **P 18 20 58.9 +2.5**
CMAR pmax pmax
comp=Z,17nm,0.9s
G26K Porcupine Rive 93.52 12 P **P 18 20 55.8 0.0**
baz=209
CHTO Chiang Mai 93.54 289 P **P 18 20 58.6 +1.5**
CHTO Chiang Mai 93.54 289 P **P 18 20 58.6 +1.5**
CHTO pmax pmax
comp=Z,1.0nm,0.9s
ATAH Atahualpa 93.58 99 LR LR 18 56 57.9
comp=Z,344nm,18.0s,baz=231,slow=32
RSSD Black Hills 93.89 43 P **P 18 20 57.6 -0.8**
RSSD IAmb IAmb 18 21 14.0
comp=Z,14nm,1.1s
RSSD Black Hills 93.89 43 P **P 18 20 57.6 -0.8**
RSSD pmax pmax
comp=Z,14nm,1.2s

RSSD Black Hills 93.89 43 P **P 18 20 58.3 -0.1**
baz=240
PZH PanZhiHua 94.29 297 P **P 18 21 01.3 +0.8**
PZH SKS **SKSac 18 31 34.6 -1.4**
PZH S **ScS 18 32 12.1 -1.7**
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,100nm,4.7s
PZH LR LR
comp=Z,410nm,16.3s
PZH LR LR
comp=Z,390nm,16.0s
PZH LR LR
comp=Z,440nm,16.7s
CD2 Chengdu 94.51 302 *e*P **P 18 21 01.7 +0.4**
LVC Limon Verde 95.05 117 LR LR 18 57 53.5
comp=Z,204nm,18.1s,baz=228,slow=32
YAK Yakutsk 96.01 337 LR LR 18 59 30.7
comp=Z,146nm,20.8s,baz=90,slow=32
YAK Yakutsk 96.01 337 *eP* **P 18 21 08.2 +0.9**
YAK pmax pmax
comp=Z,9.0nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.1s
LZH Lanzhou 96.60 306 ⇑P **P 18 21 13.6 +2.7**
LZH pP sP 18 21 17.0 +3.8
LZH sP pwP 18 21 19.8 -0.9
LZH SKS **SKSac 18 31 46.7 -1.3**
LZH S **ScS 18 32 36.3 +3.6**
LZH pmax pmax
comp=N,30nm,1.5s
LZH pmax pmax
comp=N,230nm,4.8s
LZH LR LR
comp=N,280nm,15.5s
LZH LR LR
comp=N,320nm,15.5s
LZH LR LR
comp=N,500nm,16.8s
INK Inuvik 96.82 14 LR LR 19 02 17.7
comp=N,363nm,18.5s,baz=190,slow=34
YKA Yellowknife Ar 98.50 24 LR LR 18 59 50.0
comp=N,284nm,20.7s,baz=245,slow=32
LPAZ La Paz 98.66 112 P Pdif 18 21 23.1 +1.8
comp=N,1.1nm,0.7s,baz=134,slow=3.9,SNR=4.0
LPAZ LR LR 18 59 58.6
comp=N,178nm,18.1s,baz=256,slow=32
comp=N,1.1nm,0.7s
ULN Ulaanbaatar 99.35 318 P **Pdif 18 21 23.0 0.0**
ULN IAmb IAmb 18 21 31.3
comp=Z,5.4nm,1.1s
ULN Ulaanbaatar 99.35 318 P **Pdif 18 21 23.0 0.0**
ULN pmax pmax
comp=Z,5.0nm,1.1s
SONM Songino Array 99.74 318 P **Pdif 18 21 25.7 +1.0**
comp=Z,0.8nm,0.8s,baz=301,slow=0.4,SNR=5.6
SONM LR LR 19 04 50.3
comp=Z,136nm,18.6s,baz=98,slow=34
comp=Z,0.8nm,0.8s
GTA Gaotai 100.84 308 ⇓P **Pdif 18 21 31.1 +1.3**
GTA pP pP 18 21 33.8 +2.3
GTA sP pwP 18 21 37.3 -2.4
GTA SKS **SKSac 18 32 07.9 -1.2**
GTA sS sS 18 33 12.4 +1.1
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,160nm,6.4s
GTA LR LR
comp=Z,200nm,16.3s
GTA LR LR
comp=Z,210nm,16.3s
GTA LR LR
comp=Z,310nm,19.1s
WMQ Urumqi 110.82 310 *e*PKP **PKiKP 18 26 14.0 +0.2**
ZALV Zalesovo Beam 114.50 320 PKP PKPdf 18 26 19.2 -1.1
comp=Z,1.6nm,0.6s,baz=156,slow=2.6,SNR=7.3
MKAR Makanchi Array 115.13 312 PKP **PKiKP 18 26 21.4 -0.4**
comp=Z,1.1nm,0.7s,baz=80,slow=1.8,SNR=6.5
KURK Kurchatov 117.97 316 *c i*PKIKP **PKiKP 18 26 27.3 +0.2**
KURK pmax pmax
comp=Z,6.0nm,2.5s
KSH Kashi 118.66 303 PKP **PKiKP 18 26 32.8 +3.8**
GAR Garm 122.95 302 **PKiKP 18 26 37.4 -0.1**
BVAR Borovoye Array 123.08 319 PKP **PKiKP 18 26 36.9 -0.2**
comp=Z,1.8nm,0.7s,baz=66,slow=1.8,SNR=9.6
KK31 Karatay Array 123.09 307 **PKPdf 18 26 36.0 -1.3**
KK31 Karatay Array 123.09 307 PKIKP **PKPdf 18 26 36.0 -1.3**
KKAR Karatay Array 123.09 307 **PKiKP 18 26 36.5 -1.0**
KKAR Karatay Array 123.09 307 **PKPdf 18 26 35.8 -1.5**
KKAR Karatay Array 123.09 307 PKIKP **PKiKP 18 26 36.5 -1.0**
BRVK Borovoye 123.14 319 *c i*PKIKP **PKiKP 18 26 36.6 -0.6**
BRVK pmax pmax
comp=Z,11nm,2.5s
CHGR Chuyangaron 123.83 302 **PKPdf 18 26 37.7 -1.2**
CHGR Chuyangaron 123.83 302 PKIKP **PKPdf 18 26 37.7 -1.2**
SVE Sverdlovsk 128.00 325 *e*PKIKP **PKiKP 18 26 46.7 -0.1**
SVE pmax pmax
comp=Z,18nm,1.5s
ARU Arti 129.21 325 PKP **PKiKP 18 26 48.2 -1.0**
comp=Z,2.6nm,0.4s,baz=327,slow=2.9,SNR=7.7
ARU Arti 129.21 325 *i* PKIKP **PKiKP 18 26 49.2 0.0**
ARU 18 28 58.7
ARU 18 33 59.8
ARU SP SP 18 38 58.6 -5.5
ARU SS **SS 18 46 20.1 +2.6**
AKTO Aktyubinsk 131.05 317 PKP **PKiKP 18 26 52.8 -0.4**
comp=Z,1.8nm,0.8s,baz=68,slow=1.6,SNR=6.2
GEYT Alibeck 132.48 300 PKP **PKiKP 18 26 56.1 -0.3**
comp=Z,2.5nm,0.8s,baz=211,slow=1.7,SNR=4.6
GEYT SKP 18 30 30.4
comp=Z,4.5nm,0.8s,baz=321,slow=1.8,SNR=10
ARCES ARCESS Array B 132.53 350 PKP **PKiKP 18 26 54.3 -1.3**
comp=Z,3.4nm,0.8s,baz=341,slow=2.6,SNR=4.9
KIRV Kirov 132.95 330 *c i*PKIKP **PKiKP 18 26 55.8 -0.8**
KLMR Klimovskoe 135.80 336 *e*PKIKP **PKiKP 18 27 05.2 +2.8**
KLMR *e* 18 29 39.5
KLMR pmax pmax
comp=Z,16nm,1.3s
KLMR Klimovskoe 135.80 336 *e*PKPdf **PKiKP 18 27 05.2 +2.8**
KLMR AMP 18 27 12.2
comp=Z,16nm,1.3s
KLMR *e*PP **PP 18 29 39.6 +0.6**
KLMR *e*SKP 18 30 37.8
BELG Belogornoye 136.61 322 PKP **PKiKP 18 27 03.7 -0.5**
comp=Z,6.0nm,0.7s,baz=232,slow=3.5,SNR=7.4
FINES FINESS Array B 139.55 344 PKP **PKiKP 18 27 09.0 -1.0**
comp=Z,2.4nm,0.7s,baz=19,slow=12,SNR=5.8
MAK Makhachkala 139.84 309 *eP* **Pdif 18 24 19.0 -3.9**
MAK *e*PPP PPP 18 33 05.8
MAK *e* 18 34 18.7
MAK *e*SSS SSS 18 53 34.0
MOS Moscow 139.87 331 *e*PKIKP **PKiKP 18 27 16.3 +5.5**
OBN Obninsk 140.74 331 *e*PKIKP **PKPdf 18 27 10.2 +0.2**
OBN *e* 18 30 11.7
OBN *e*PPP PPP 18 33 14.6
OBN pmax pmax
comp=Z,10.0nm,1.2s
VORR Voronezh 141.51 325 *e*PKIKP **PKPdf 18 27 09.9 -1.6**
VORR pmax pmax
comp=Z,10.0nm,0.3s
ZEI Tsey 142.43 310 *i* PKIKP **PKPdf 18 27 13.9 +0.1**
ZEI pmax pmax
comp=Z,5.0nm,1.4s
NB2 NORSAR Subarra142.46 355 PKP **PKPdf 18 27 08.6 -4.4**
comp=Z,0.8nm,0.7s,baz=21,slow=2.9
NOA NORSAR Array B142.46 355 PKhKP PKPpre 18 27 08.7
comp=Z,1.7nm,0.8s,baz=16,slow=4.5,SNR=6.8
RAYN Ar Rayn 142.56 278 ⇑PKHKP PKPpre 18 27 09.2
KIV Kislovodsk 142.89 312 *i* PKIKP **PKiKP 18 27 15.7 -1.9**
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,215nm,24.0s
HFS Hagfors 143.10 352 PKhKP PKPpre 18 27 10.4
comp=Z,4.1nm,0.7s,baz=40,slow=2.5,SNR=6.1
LODK Lodwar 144.01 241 PKPdf PKPbc 18 27 15.0 -0.1
MNK Minsk 144.70 336 *i* PKHKP PKPpre 18 27 13.4
MNK *i* 18 34 21.9
MNK *i* SS SS 18 49 55.9 +35
MNK pmax pmax
comp=E,4.0nm,1.4s
MNK pmax pmax
comp=Z,13nm,1.4s

MNK pmax pmax
comp=N,28nm,0.8s
MNK Minsk 144.70 336 *i* PKP **PKPab 18 27 13.5 -2.3**
comp=E,4.0nm,1.4s
MNK *i* PKP **PKPab 18 27 13.5 -2.3**
comp=N,28nm,0.8s
MNK *i* PKP **PKPab 18 27 13.5 -2.3**
comp=Z,13nm,1.4s,baz=18
MNK *i* PP PP 18 30 46.5 +13
MNK *i* PKS **PKSdf 18 30 48.6 -3.8**
MNK *i* SKP 18 31 01.8
MNK *i* PPP PPP 18 34 04.9
MNK *i* SKS **SKSdf 18 34 22.0 -4.3**
MNK *i* SKKS SKKSdf 18 43 20.1 -19
MNK *i* SS SS 18 49 56.0 +35
MNK *i* LR LR 19 30 19.8
MNK *i* LRM MLR 19 34 24.4
comp=Z,245nm,17.6s
MNK *i* LRM MLR 19 34 47.9
comp=N,2μm,27.1s
MNK *i* LRM MLR 19 34 51.7
comp=E,72nm,24.5s
NACGM Naroch 144.78 338⇑*e*PKP **PKPab 18 27 12.8 -3.2**
baz=50
MBAR Mbarara 144.86 230 PKPdf **PKPdf 18 27 19.6 +0.7**
MBAR Mbarara 144.86 230*c i*PKIKP **PKPdf 18 27 19.8 +0.9**
MBAR pmax pmax
comp=Z,16nm,0.7s
GURO Guroymak-BITLI 144.95 304 PKPdf 18 27 18.1 -0.2
SOC Sochi 145.03 313 *i* PKIKP **PKiKP 18 27 20.1 -1.7**
SOC *e* 18 30 34.0
SOC *e*PPP PPP 18 33 47.4
SOC MLR MLR
comp=Z,242nm,19.0s
PABE Paberze 145.20 341 PKPdf 18 27 16.8 -1.1
TJOU Tjoern 145.39 353 *e*P **PKPdf 18 27 17.5 -0.6**
HOMB Homborsund 145.41 356 *e*P **PKPdf 18 27 17.7 -0.4**
BORU Boraas 145.65 352 *e*P **PKPab 18 27 18.2 -1.0**
ONAU Onsala 145.98 353 *e*P **PKPab 18 27 19.1 -1.3**
ANN Anapa 146.00 316 *i* PKP2 **PKPab 18 27 20.5 -0.4**
ANN pmax pmax
comp=Z,64nm,1.1s
MARD Mardin 146.20 302 PKPab 18 27 21.2 -1.0
FABU Falkenberg 146.27 352 *e*P **PKPab 18 27 20.2 -1.3**
DEL Delary 146.62 351 *i* P **PKPab 18 27 22.0 -0.9**
AKASG Malin Array Be 147.00 331 PKPbc **PKPbc 18 27 22.6 -0.5**
comp=Z,10.0nm,0.7s,baz=41,slow=3.9,SNR=42
AKASG Malin Array Be 147.00 331 PKPbc 18 27 21.6 -1.5
AKASG Malin Array Be 147.00 331 PKP2 **PKPbc 18 27 21.6 -1.5**
AKBB Malin Array Si 147.00 331 PKPdf **PKPbc 18 27 22.0 -1.1**
AKBB Malin Array Si 147.00 331 PKP2 **PKPbc 18 27 22.0 -1.1**
BJUU Bjuv 147.13 351 *e*P **PKPab 18 27 23.1 -1.8**
MUD Monsted U'grnd 147.17 355 *i* P **PKPab 18 27 24.0 -1.0**
EKA Eskdalemuir Ar 147.96 8 PKPbc **PKPbc 18 27 23.4 -2.2**
comp=Z,5.9nm,0.8s,baz=343,slow=2.6,SNR=9.3
SIM Simferopol' 147.99 319 *e*PKP2 **PKiKP 18 27 26.2 -1.7**
SIM pmax pmax
comp=Z,65nm,1.1s
DIKM Dikmen 148.82 312⇑P **PKiKP 18 27 29.1 -0.6**
GKP Gorka Klasztor 149.01 345 *e*PKPbc **PKiKP 18 27 28.8 -0.9**
BEL Belsk 149.32 340 *e*PKPbc **PKiKP 18 27 29.9 -0.5**
BNN Bunyan 149.49 307 PKPdf **PKPdf 18 27 23.6 -2.2**
BZK Bozkurt 149.53 314⇓P **PKPbc 18 27 28.5 -1.6**
BZK Bozkurt 149.53 314 PKPdf 18 27 26.4 +0.9
MILM Milestii Mici 149.80 326⇓P **PKiKP 18 27 30.9 -0.6**
MILM Milestii Mici 149.80 326⇓PKP2 **PKiKP 18 27 30.9 -0.6**
LVV L'vov 149.85 334 *e*PKP2 **PKiKP 18 27 30.7 -0.9**
VASR Vaslui 150.50 326⇓P **PKiKP 18 27 32.9 -0.1**
BR131 Keskin Array S 150.75 310 PKPbc 18 27 32.3 -1.0
BR131 Keskin Array S 150.75 310 PKIKP **PKPbc 18 27 32.3 -1.0**
BRTR Keskin Array B 150.75 310 PKPbc **PKiKP 18 27 33.2 -0.8**
comp=Z,5.2nm,0.8s,baz=138,slow=3.2,SNR=30
BRTR Keskin Array B 150.75 310 PKiKP 18 27 32.8 -1.2
BRTR Keskin Array B 150.75 310 PKIKP **PKiKP 18 27 32.8 -1.2**
TLCR 150.92 323⇑P **PKiKP 18 27 32.8 -1.1**
TLCR 150.92 323⇑PKIKP **PKiKP 18 27 32.8 -1.1**
BUR08 Bucovina Ar. S 151.03 330 PKPdf **PKPdf 18 27 27.6 -0.3**
OJC Ojcow 151.03 340 *e*PKPbc **PKPbc 18 27 32.4 -1.1**
OJC Ojcow 151.03 340 PKPdf **PKPdf 18 27 27.2 -0.5**
OJC Ojcow 151.03 340 PKIKP **PKPdf 18 27 27.2 -0.5**
BURAR Bucovina Array 151.05 330⇓P **PKiKP 18 27 34.8 +0.6**
BURAR Bucovina Array 151.05 330 PKPdf 18 27 27.9 0.0
BURAR Bucovina Array 151.05 330⇓PKIKP **PKiKP 18 27 34.8 +0.6**
GHRR 151.09 326⇓P **PKiKP 18 27 35.0 +0.7**
BIZ Bicaz 151.13 329⇓P **PKiKP 18 27 34.3 -0.1**
TESR Tescani 151.16 327⇑P **PKiKP 18 27 34.4 0.0**
KOLS Kolonicke sedl 151.25 335 *e*PKIKP **PKiKP 18 27 35.3 +0.8**
KOLS *e* 18 27 42.6
ANTO Ankara 151.28 311⇑P **PKiKP 18 27 35.2 +0.2**
ANTO Ankara 151.28 311 PKiKP 18 27 34.3 -0.7
ANTO Ankara 151.28 311 PKIKP **PKiKP 18 27 34.3 -0.7**
CFR Carcaliu 151.29 324⇓P **PKiKP 18 27 34.4 -0.3**
CFR Carcaliu 151.29 324⇓PKIKP **PKiKP 18 27 34.4 -0.3**
TPGR Topolog 151.34 323⇑P **PKiKP 18 27 34.9 +0.1**
MMAI Mount Meron Ar 151.41 296 PKPbc **PKiKP 18 27 36.1 +0.7**
comp=Z,11nm,0.7s,baz=69,slow=4.6,SNR=7.1
KSP Ksiaz 151.47 344 *e*PKPbc **PKiKP 18 27 35.0 +0.1**
UZH Uzhgorod 151.49 335 *e*PKIKP **PKPdf 18 27 30.0 +1.6**
UZH *e* 18 27 37.5
UZH *e* 18 27 43.3
NIE Niedzica 151.56 338 *e*PKPbc **PKiKP 18 27 35.7 +0.6**
VRI Vrincioaia 151.57 326⇓P **PKiKP 18 27 35.2 -0.1**
VRI Vrincioaia 151.57 326⇓PKIKP **PKiKP 18 27 35.2 -0.1**
CRVS Cervenica-Dubn 151.58 336 *e*PKIKP **PKiKP 18 27 35.5 +0.3**
PLOR Plostina 151.62 326⇑P **PKiKP 18 27 35.1 -0.3**
PLOR Plostina 151.62 326⇑PKIKP **PKiKP 18 27 35.1 -0.3**
EFOR EFORIE 151.71 322⇑P **PKPab 18 27 47.1 +3.2**
HARR Harsova 151.72 323⇓P **PKiKP 18 27 36.1 +0.5**
HARR Harsova 151.72 323⇓PKIKP **PKiKP 18 27 36.1 +0.5**
CLL Collm 151.74 349 PKiKP 18 27 34.3 -1.1
CLL Collm 151.74 349⇓*e*PKIKP **PKPdf 18 27 30.0 +1.3**
CLL *i* 18 27 35.1
CLL *i* 18 27 42.3
CLL pmax pmax
comp=Z,28nm,2.0s
CLL Collm 151.74 349 *e*SSSS 19 01 00.0
CLL Collm 151.74 349 *e*PKPdf **PKPdf 18 27 30.0 +1.3**
comp=Z,28nm,2.0s
CLL Collm 151.74 349⇓*i*PKPbc **PKiKP 18 27 35.1 -0.3**
comp=Z,23nm,0.8s
CLL Collm 151.74 349 *i* PKPab **PKPab 18 27 42.3 -1.5**
CLL Collm 151.74 349 *i* x x 18 27 49.1
CLL Collm 151.74 349 *e*PKPlp 18 28 12.0
CLL Collm 151.74 349 *e*SKPdf **SKPdf 18 31 03.0 +0.9**
CLL Collm 151.74 349 *e*SS SS 18 50 36.0 -3.6
OSTC Ostas 151.75 344⇑*e*PKP **PKiKP 18 27 35.8 +0.3**
CHVC Chvalec 151.77 344⇑*e*PKP **PKiKP 18 27 36.0 +0.5**
TRPA Tarpa 151.79 334⇓P **PKiKP 18 27 35.3 -0.3**
TRPA Tarpa 151.79 334 PKP **PKiKP 18 27 35.6 0.0**
ARCR ARCALIA 151.83 331⇑P **PKiKP 18 27 36.3 +0.6**
COVR Voineasa-Covas 151.85 327⇑P **PKiKP 18 27 35.5 -0.4**
OZUR 151.88 328⇓P **PKiKP 18 27 36.6 +0.6**
DPC Dobruska-Polom 151.92 344 *e*PKIKP **PKiKP 18 27 36.5 +0.6**
DPC Dobruska-Polom 151.92 344⇑*e*PKP **PKiKP 18 27 36.5 +0.6**
DPC *e*PKPAB **sPKPab 18 27 50.2 +3.2**
BRG Berggiesshubel 151.97 347 Amp 18 27 50.5
comp=Z,25nm,0.9s
BRG Berggiesshubel 151.97 347 *i* PKIKP **PKiKP 18 27 36.0 +0.1**
BRG *e* 18 27 43.3
BRG pmax pmax
comp=Z,22nm,0.7s
BRG Berggiesshubel 151.97 347 *i* PKP **PKiKP 18 27 36.0 +0.1**
BRG Berggiesshubel 151.97 347 Amp 18 27 37.3
comp=Z,22nm,0.7s
BRG Berggiesshubel 151.97 347 *ex* x 18 27 43.3
BRG Berggiesshubel 151.97 347 Amp 18 27 44.2
comp=Z,14nm,1.0s
BRG Berggiesshubel 151.97 347 *ex* x 18 27 49.2
KRLC Kraliky 152.05 343 *e*PKIKP **PKiKP 18 27 36.5 +0.3**
KRLC Kraliky 152.05 343⇑*e*PKP **PKiKP 18 27 36.5 +0.3**
LANS Liptovska Anna 152.07 339 *e*PKIKP **PKiKP 18 27 37.3 +1.1**
MDUB Mudurnu 152.09 313 PKPbc 18 27 33.0 -3.4
MORC Moravsky Berou 152.11 342⇑P **PKiKP 18 27 36.8 +0.5**
MORC Moravsky Berou 152.11 342 PKiKP 18 27 35.5 -0.7
MORC Moravsky Berou 152.11 342 PKIKP **PKiKP 18 27 35.6 -0.7**
MORC Moravsky Berou 152.11 342 *e*PKP **PKiKP 18 27 36.3 0.0**
PVCC Panska Ves 152.17 346 *e*PKIKP **PKiKP 18 27 36.8 +0.5**
PVCC Panska Ves 152.17 346⇑*e*PKP **PKiKP 18 27 36.8 +0.5**
PVCC *ep*PKP **sPKPab 18 27 50.6 +2.7**
DOPR Dopca 152.17 328⇓P **PKiKP 18 27 37.0 +0.4**
ISR Istrita 152.18 325⇑P **PKPab 18 27 46.9 +0.9**
PSN Preselentsi 152.21 321 *e*P **PKPab 18 27 47.9 +1.8**
MLR Muntele Rosu 152.23 327⇓P **PKiKP 18 27 36.9 +0.1**
MLR Muntele Rosu 152.23 327 PKPbc **PKiKP 18 27 36.5 -0.3**
comp=Z,4.6nm,0.9s,baz=156,slow=14,SNR=9.5
MLR Muntele Rosu 152.23 327 PKiKP 18 27 35.7 -1.1
MLR Muntele Rosu 152.23 327 PKIKP **PKiKP 18 27 35.7 -1.1**
MAUC Maruska 152.39 341⇑*e*PKP **PKiKP 18 27 38.0 +1.1**
CJR Cluj-Napoca 152.45 331⇑P **PKiKP 18 27 36.8 -0.3**
CJR Cluj-Napoca 152.45 331⇑PKIKP **PKiKP 18 27 36.8 -0.3**
CSS Mathiatis 152.63 301 PKPbc 18 27 36.3 -1.3
PRU Pruhonice 152.68 346 *e*PKIKP **PKiKP 18 27 37.2 -0.2**
PRU Pruhonice 152.68 346⇑*e*PKP **PKiKP 18 27 37.2 -0.2**
GOPC GO Pecny, Ondr 152.69 345 *e*PKIKP **PKiKP 18 27 37.7 +0.2**
GOPC GO Pecny, Ondr 152.69 345⇑*e*PKP **PKiKP 18 27 37.7 +0.2**
VOIR 152.71 327⇓P **PKiKP 18 27 38.4 +0.6**
VOIR 152.71 327⇓PKIKP **PKiKP 18 27 38.4 +0.6**
VRAC Vranov 152.80 343⇑P **PKPdf 18 27 31.8 +1.5**
VRAC Vranov 152.80 343⇑PKIKP **PKPdf 18 27 31.8 +1.5**
VRAC Vranov 152.80 343 *e*PKP **PKiKP 18 27 39.6 +1.9**
VYHS Vyhne 152.84 339 *e*PKIKP **PKPdf 18 27 31.6 +1.1**
VYHS *e* 18 27 38.1
NKC Novy Kostel 152.87 349 *e*PKIKP **PKiKP 18 27 38.9 +1.1**
NKC Novy Kostel 152.87 349⇑*e*PKP **PKiKP 18 27 38.9 +1.1**
JAVC Velka Javorina 152.89 341 *e*PKP **PKiKP 18 27 39.3 +1.3**
BORR Bors 152.93 334⇓P **PKPbc 18 27 36.5 -1.3**
PRD Provadia 152.96 321 *e*P **PKPab 18 27 51.0 +1.8**
ARR Arges 152.97 328⇑P **PKiKP 18 27 39.3 +1.1**
PSZ Piszkesteto 152.97 337⇓P **PKPab 18 27 45.4 -3.8**
KRUC Moravsky 153.08 343 *e*PKP **PKiKP 18 27 38.5 +0.2**
BCLA Clavier 153.39 359 *d*PKP **PKPab 18 27 50.4 -0.4**
MODS Modra-Piesok 153.44 341 *e*PKIKP **PKiKP 18 27 38.9 -0.2**
COPA Copaceanca 153.54 325⇓P **PKPbc 18 27 36.7 -2.5**
SIRR Siria 153.64 333⇓P **PKiKP 18 27 40.2 +0.7**
KHC Kasperske Hory 153.70 347 PKPbc 18 27 38.4 -1.2
KHC Kasperske Hory 153.70 347 *e*PKIKP **PKiKP 18 27 39.8 +0.2**
KHC *e* 18 27 53.0
KHC Kasperske Hory 153.70 347⇑*e*PKP **PKiKP 18 27 39.8 +0.2**
KHC *e*PKPAB **PKPab 18 27 53.0 +0.8**
SZH Strazhica 153.74 323 *e*P PKPab 18 27 59.8 +7.3
GZR Gura Zlata 153.83 330⇓P **PKiKP 18 27 39.9 -0.1**
GZR Gura Zlata 153.83 330⇓PKIKP **PKiKP 18 27 39.9 -0.1**
CKRC Cesky Krumlov 153.83 345⇑*e*PKP **PKiKP 18 27 40.2 +0.3**
GEC2 GERESS Array S 153.94 346 PKPbc 18 27 35.4 -4.7
GERES GERESS Array B 153.94 346 PKPbc **PKiKP 18 27 40.1 0.0**
comp=Z,1.6nm,0.8s,baz=40,slow=2.3,SNR=13
GERES PKPab **PKPab 18 27 52.8 -0.5**
comp=Z,1.0nm,0.6s,baz=22,slow=1.4,SNR=6.3
GERES GERESS Array B 153.94 346 PKPdf 18 27 31.2 -0.9
GERES GERESS Array B 153.94 346 PKIKP **PKPdf 18 27 31.2 -0.9**
BZS Buzias 154.17 332⇑P **PKPdf 18 27 31.9 -0.5**
BZS Buzias 154.17 332⇑PKIKP **PKPdf 18 27 31.9 -0.5**
CONA Conrad Observa 154.26 342 P **PKPdf 18 27 34.1 +1.5**
comp=Z,4.6nm,0.8s
RONA Rosalia, Austr 154.34 341 P **PKPbc 18 27 36.6 -4.3**
comp=Z,9.2nm,1.4s
HERR Herculane 154.38 330⇑P **PKPbc 18 27 39.9 -1.1**
MDVR Moldovita 154.78 330⇓P **PKiKP 18 27 45.2 +3.2**
MORH Mrgy, Hungar 154.87 337⇓P **PKPdf 18 27 32.8 -0.6**
BIOA Bad Ischl, Aus 155.04 345 *e*P **PKPdf 18 27 33.3 -0.3**
comp=Z,4.7nm,1.1s
ALN Alexandroupoli 155.16 319 PKPdf **PKPdf 18 27 29.9 -4.0**
ALN **pPKPdf 18 27 30.4 -5.3**
ALN Alexandroupoli 155.16 319 PKIKP **PKPdf 18 27 29.9 -4.0**
ALN 18 27 30.4
VTS Vitosha 155.63 325 PKPdf **PKPdf 18 27 34.5 -0.2**
VTS Vitosha 155.63 325 PKIKP **PKPdf 18 27 34.5 -0.2**
VTS Vitosha 155.63 325 *e*P **PKPab 18 28 00.8 0.0**
WATA Walderalm 155.81 348 *e*P **PKPdf 18 27 33.2 -1.6**
comp=Z,8.6nm,1.5s
WATA *e*P **PKPab 18 27 58.1 -3.2**
comp=Z,8.6nm,1.5s
WTTA Wattenberg 155.87 348 *e*P **PKPdf 18 27 35.9 +1.0**
comp=Z,13nm,1.8s
MOTA Moosalm 155.89 349 *e*P **PKPdf 18 27 35.4 +0.5**
comp=Z,8.0nm,1.7s
SQTA Sankt Quirin 155.99 349 *e*P **PKPdf 18 27 32.1 -2.9**
comp=Z,3.5nm,0.9s
SQTA *e*P **PKPab 18 27 58.5 -3.6**
comp=Z,11nm,1.4s
MMB Musomiste 156.07 323 *e*P **PKPab 18 28 03.9 +1.3**
DAVA Damuels 156.14 351 *e*P **PKPdf 18 27 34.4 -0.9**
comp=Z,7.1nm,1.5s
ABTA Abfaltersbach 156.19 346 *e*P **PKPdf 18 27 33.5 -1.8**
comp=Z,10.0nm,1.2s
KKB Krupnik 156.24 324 *e*P **PKPab 18 27 57.2 -6.0**
FETA Feichten 156.27 349 *e*P **PKPdf 18 27 37.6 +2.2**
comp=Z,12nm,1.8s
LIT Litokhoron 157.76 321 PKPab **PKPab 18 28 09.4 -0.5**
LIT Litokhoron 157.76 321 PKP2 **PKPab 18 28 09.4 -0.5**
SANT Santorini 158.01 310 PKPab **PKPab 18 28 10.2 -0.9**
PAB San Pablo 162.56 23⇑PKIKP **PKPdf 18 27 44.4 +1.5**
ESDC Sonseca Array 162.59 22 PKP **PKPdf 18 27 43.5 +0.6**
comp=Z,0.8nm,0.7s,baz=342,slow=1.5,SNR=6.3
ESDC Sonseca Array 162.59 22 PKPdf 18 27 42.0 -0.8
TORD Torodi Ar. Bea 169.10 165 PKP **PKPdf 18 27 48.5 -0.2**
comp=Z,1.1nm,0.8s,baz=110,slow=2.0,SNR=5.2
TORD PKPab **PKPab 18 29 01.4 +1.4**
comp=Z,1.8nm,0.7s,baz=177,slow=3.6,SNR=3.9

ROM 03 18:25:17.7±0.0, 42°.643N±0°.002×13°.339E±0°.004,
h10km, ML1.2/10, 3C-1D, Error ellipse: s-maj=0.2km
s-min=0.2km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.04**	**333**	P	Pg	18 25 20.1	+0.3
T1204				S	Sg	18 25 21.4	+0.1
T1204				AML	AML		
comp=E,518μm,0.8s							
T1204				AML	AML		
comp=N,662μm,0.1s							
T1243	**Rocca Santa Ma**	**0.10**	**56**	P	Pg	18 25 20.9	+0.6
T1243				S	Sg	18 25 22.8	+0.5
CAMP	**Campotosto**	**0.12**	**154**	P	Pg	18 25 21.2	+0.6
CAMP				S	Sg	18 25 23.4	+0.6
CAMP				AML	AML		
comp=N,105μm,0.4s							
CAMP				AML	AML		
comp=E,217μm,0.2s							
RM33	**Pellescritta (**	**0.16**	**215**	P	Pg	18 25 22.0	+0.6
RM33				S	Sg	18 25 24.8	+1.0
RM33				AML	AML		
comp=E,146μm,1.4s							
RM33				AML	AML		
comp=N,126μm,0.3s							
RM33				AML	AML		
comp=E,147μm,1.4s							
RM33				AML	AML		
comp=N,126μm,0.3s							
TERO	**Teramo**	**0.20**	**96**	P	Pg	18 25 22.5	+0.7
TERO				S	Sg	18 25 25.6	+0.9
TERO				AML	AML		
comp=E,104μm,0.6s							
TERO				AML	AML		
comp=N,131μm,0.6s							
T1247	**Pizzolo (AQ)**	**0.20**	**189**	P	Pg	18 25 22.7	+0.7
T1247				S	Sg	18 25 26.2	+1.3
T1247				AML	AML		
comp=E,228μm,0.1s							
T1247				AML	AML		
comp=N,234μm,0.3s							
T1241	**Roccafluvione,**	**0.22**	**18**	P	Pg	18 25 23.0	+0.7
T1241				S	Sg	18 25 26.8	+1.2
T1241				AML	AML		
comp=E,63μm,0.7s							
T1241				AML	AML		
comp=N,40μm,0.5s							
T1241				AML	AML		
comp=N,42μm,1.5s							
LNSS	**Leonessa**	**0.22**	**260**	P	Pg	18 25 23.1	+0.7
LNSS				S	Sg	18 25 26.7	+1.2
LNSS				AML	AML		
comp=E,68μm,1.3s							
LNSS				AML	AML		
comp=N,62μm,1.6s							
LNSS				AML	AML		
comp=E,68μm,1.3s							
NRCA	**Norcia**	**0.25**	**319**	P	Pg	18 25 23.6	+0.7
NRCA				S	Sg	18 25 27.6	+1.2
NRCA				AML	AML		
comp=N,177μm,1.2s							
NRCA				AML	AML		
comp=E,168μm,1.2s							
GIGS	**Gran Sasso**	**0.26**	**139**	P	Pg	18 25 23.7	+0.8
GIGS				S	Sb	18 25 27.9	-1.1
MC2	**Monte Cornacci**	**0.29**	**338**	P	Pg	18 25 24.4	+0.7
MC2				S	Sb	18 25 29.1	-1.0
T1217	**Poggiodomo (PG**	**0.31**	**283**	P	Pg	18 25 24.5	+0.6
T1217				AML	AML		
comp=E,80μm,1.6s							
T1217				AML	AML		
comp=N,70μm,1.6s							
T1216	**Preci, Frazion**	**0.34**	**316**	⇑P	Pg	18 25 25.1	+0.6
T1215	**Vallo di Nera,**	**0.38**	**295**	P	Pg	18 25 25.7	+0.4
T1215				AML	AML		
comp=E,105μm,1.6s							
T1215				AML	AML		
comp=N,53μm,1.6s							
GUMA	**Gualdo di Mace**	**0.42**	**360**	⇑P	Pb	18 25 27.2	-0.1
FDMO	**Fiordimonte**	**0.43**	**335**	⇓P	Pb	18 25 27.0	-0.5
FDMO				AML	AML		
comp=N,33μm,0.3s							
FDMO				AML	AML		
comp=E,31μm,0.8s							
CSP1	**Cessapalombo**	**0.46**	**348**	P	Pb	18 25 27.4	-0.6
T0110	**Collepietro**	**0.53**	**142**	⇑P	Pg	18 25 28.4	+0.5

*HVO **03** 18:28:26±1.4, 19°.97N±0°.04×155°.52W±0°.03, h41km±4km,*
ML2.6, ML2.3/26(NEIC), Error ellipse: s-maj=5.3km
s-min=4.3km az=187.0
NEIC 03 18:28:24.1±1.8, 19°.97N±0°.04×155°.53W±0°.04, h51km±3km,
Error ellipse: s-maj=6.4km s-min=4.3km az=211.0,
Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPAH	**Hawaii Prepara**	**0.17**	**291**		Sn	18 28 37.8	-0.7
HPAH	**Hawaii Prepara**	**0.17**	**291**		Pn	18 28 32.9	+0.5
POHA	**Pohakuloa**	**0.21**	**180**	Pn	Pn	18 28 32.9	0.0
HMH	**Humu'ula Sheep**	**0.37**	**173**		Pn	18 28 35.1	+0.8
HMH					Sn	18 28 41.5	-0.1
HMH	**Humu'ula Sheep**	**0.37**	**173**	IAML		18 28 41.8	
comp=N,283nm,0.6s							
HMH				IAML		18 28 42.1	
comp=E,264nm,0.5s							
HUH	**Hualalai**	**0.40**	**225**		Pn	18 28 35.6	+1.0
HUH	**Hualalai**	**0.40**	**225**		Sn	18 28 41.3	-0.9
HUH	**Hualalai**	**0.40**	**225**	IAML		18 28 35.7	
comp=N,307nm,3.9s							
HUH				IAML		18 28 36.8	
comp=E,289nm,3.0s							
MLOA	**Mauna Loa Obse**	**0.43**	**186**	Pn	Pn	18 28 35.6	+0.5
MWH	**Moku'aweowe**	**0.49**	**187**		Pn	18 28 36.2	+0.4
MWH					Sn	18 28 43.7	-0.5
MWH	**Moku'aweowe**	**0.49**	**187**	IAML		18 28 49.0	
comp=N,310nm,2.8s							
MWH				IAML		18 28 49.2	
comp=E,271nm,2.9s							
MLH	**Mauna Loa**	**0.49**	**164**		Pn	18 28 36.3	+0.6
MLH					Sn	18 28 43.2	-0.6
MLH	**Mauna Loa**	**0.49**	**164**	IAML		18 28 52.1	
comp=N,161nm,2.5s							
KHLU	**Kahalu`u**	**0.51**	**222**		Pn	18 28 36.3	+0.7
KHLU					Sn	18 28 43.5	-0.5
KHLU	**Kahalu`u**	**0.51**	**222**	IAML		18 28 43.9	
comp=N,168nm,0.3s							
KHLU				IAML		18 28 44.0	
comp=E,221nm,0.1s							
RSD	**Rainshed**	**0.56**	**155**		Sn	18 28 44.3	-0.7
RSD	**Rainshed**	**0.56**	**155**		Pn	18 28 37.0	+0.8
UWE	**Uwekahuna**	**0.59**	**158**		Sn	18 28 45.1	-0.6
UWB	**Uwekahuna B**	**0.59**	**156**		Pn	18 28 37.1	+0.4
UWB				IAML		18 28 45.2	
comp=N,190nm,1.0s							
UWB	**Uwekahuna B**	**0.59**	**156**		Sn	18 28 44.8	-1.0
UWB	**Uwekahuna B**	**0.59**	**156**	IAML		18 28 38.3	
comp=E,109nm,1.9s							
SBLHI	**Steaming Bluff**	**0.59**	**155**		Sn	18 28 44.7	-1.1
AIN	**Ainahou**	**0.60**	**173**		Pn	18 28 37.5	+0.7
AIN					Sn	18 28 45.6	-0.3
AIN	**Ainahou**	**0.60**	**173**	IAML		18 28 57.3	
comp=N,274nm,2.7s							
HATHI	**Halema'uma'u T**	**0.60**	**155**		Pn	18 28 37.2	+0.4
HATHI					Sn	18 28 44.9	-1.0
CPH	**Captain Cook**	**0.60**	**217**		Sn	18 28 45.0	-0.7
PUH	**Pauahi**	**0.66**	**153**	IAML		18 28 58.6	
comp=E,162nm,1.8s							
PUH	**Pauahi**	**0.66**	**153**		Pn	18 28 37.9	+0.3
PUH					Sn	18 28 46.3	-0.9
KNHH	**Kane Nui o Ham**	**0.68**	**150**		Pn	18 28 38.1	+0.4
KNHH					Sn	18 28 46.7	-0.9
NPOC	**North of Pu'u**	**0.70**	**145**		Sn	18 28 47.1	-0.8
HLP	**Hilina Pali**	**0.70**	**163**		Sn	18 28 47.4	-0.6
KHU	**Kahuku**	**0.72**	**186**		Sn	18 28 47.9	-1.0
KHU	**Kahuku**	**0.72**	**186**		Pn	18 28 38.9	+0.4
KHU	**Kahuku**	**0.72**	**186**	IAML		18 28 47.5	
comp=E,357nm,3.1s							
KHU				IAML		18 28 47.5	
comp=N,259nm,2.5s							
HTC	**Hot Caves**	**0.74**	**170**		Pn	18 28 39.1	+0.6

*NOU **03** 18:28:32.9, 23°.68S×179°.33W, h541km, mb4.6/62, South*
of Fiji Islands
*NEIC **03** 18:28:32.6±1.7, 23°.7S±0°.1×179°.45W±0°.05, h517km±9km,*
mb4.7/40, Error ellipse: s-maj=16.1km s-min=4.5km
az=163.0
*IDC **03** 18:28:34.1±1.2, 23°.65S×179°.70W, h518km±12km,*
mb4.0/11, mbtmp5.0/16, Error ellipse: s-maj=14.6km
s-min=12.1km az=63.0
ISC 03 18:28:34.0±0.4, 23°.71S±0°.05×179°.54W±0°.06, h536km,
n171, σ1$52/182, mb4.7/32, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.49**	**7**	P	**P**	**18 30 07.1**	**-0.3**
RIZ	**Raoul Island**	**5.70**	**166**	P	**P**	**18 30 06.9**	**-2.2**
RIZ				S	**S**	**18 31 30.8**	**+3.9**
RAO	**Raoul Island**	**5.71**	**166**	P	**P**	**18 30 09.3**	**+0.2**
324nm,0.3s,baz=262,slow=23,SNR=7.2							
RAO	**Raoul Island**	**5.71**	**166**	P	**P**	**18 30 07.7**	**-1.5**
RAO	**Raoul Island**	**5.71**	**166**	P	**P**	**18 30 10.0**	**+0.9**
GLKZ	**Green Lake**	**5.72**	**166**	P	**P**	**18 30 07.3**	**-1.9**
GLKZ				S	**S**	**18 31 24.1**	**-3.1**
MSVF	**Nonsavu**	**6.36**	**339**	P	**P**	**18 30 14.8**	**-0.7**
23nm,0.3s,baz=193,slow=5.6,SNR=71							
MSVF	**Nonsavu**	**6.36**	**339**	P	**P**	**18 30 14.1**	**-1.4**
MSVF	**Nonsavu**	**6.36**	**339**	P	**P**	**18 30 15.0**	**-0.5**
TAVE	**Taveuni**	**6.97**	**357**	P	**P**	**18 30 21.9**	**+0.6**
NIUE	**Niue**	**10.06**	**65**	P	**P**	**18 30 49.1**	**-3.3**
NIUE	**Niue**	**10.06**	**65**	P	**P**	**18 30 52.1**	**-0.3**
MARNC	**Mare, Loyalty**	**11.70**	**278**	P	**P**	**18 31 08.3**	**-1.1**
MARNC	**Mare, Loyalty**	**11.70**	**278**	P	**P**	**18 31 08.9**	**-0.5**
PINNC	**Pines Island,**	**12.03**	**273**	P	**P**	**18 31 12.9**	**+0.1**
PINNC	**Pines Island,**	**12.03**	**273**	P	**P**	**18 31 13.2**	**+0.4**
AFI	**Afiamalu**	**12.20**	**38**	P	**P**	**18 31 13.6**	**-1.1**
47nm,0.3s,baz=204,slow=23,SNR=10.0							
AFI				S	**S**	**18 33 22.6**	**-4.5**
52nm,0.7s,baz=202,slow=23,SNR=5.9							
AFI	**Afiamalu

HAZ	Te Kaha	14.19 189	P	P	18 31 34.5	-0.6
HAZ			S	S	18 34 01.4	-2.9
AWAZ	Awhitu Peninsu	14.22 199	P	P	18 31 35.5	+0.1
RUGZ	Raukumara Rang	14.41 189	P	P	18 31 37.6	+0.1
RUGZ			S	S	18 34 08.7	-0.2
TWGZ	Tauwhareparae	14.58 188	P	P	18 31 40.8	+1.6
TWGZ			S	S	18 34 08.5	-3.4
URZ	Urewera	14.79 190	P	P	18 31 40.8	-0.5
	10nm,0.4s,baz=345,slow=3.8,SNR=16					
URZ			S	S	18 34 12.0	-3.7
	8.7nm,0.7s,baz=160,slow=21,SNR=7.4					
URZ	Urewera	14.79 190	P	P	18 31 40.4	-0.8
URZ	Urewera	14.79 190	P	P	18 31 39.9	-1.4
URZ			S	S	18 34 09.7	-6.0
URZ	Urewera	14.79 190	P	P	18 31 38.3	-3.0
MWZ	Matawai	14.80 189	P	P	18 31 38.8	-2.6
MWZ			S	S	18 34 15.2	-0.7
KOUNC	Koumac, New Ca	15.32 279	P	P	18 31 43.9	-3.1
KOUNC			IAmb	IAmb	18 32 26.2	
	comp=Z,11nm,0.8s					
HIZ	Hauiti	15.52 197	P	P	18 31 49.1	+0.3
BKZ	Black Stump Fm	15.78 191	P	P	18 31 48.9	-2.7
BKZ			IAmb	IAmb	18 31 54.0	
	comp=Z,14nm,0.6s					
BKZ	Black Stump Fm	15.78 191	P	P	18 31 48.9	-2.7
KHEZ	Kahui Hut	16.48 198	P	P	18 31 57.9	-0.5
BFZ	Birch Farm	17.30 191		P	18 32 03.6	-2.2
BFZ			IAmb	IAmb	18 32 07.3	
	comp=Z,24nm,0.6s					
BFZ	Birch Farm	17.30 191	P	P	18 32 03.4	-2.5
MSWZ	Moikau Station	18.19 193	P	P	18 32 11.4	-2.6
SNZO	South Karori	18.21 194	P	P	18 32 12.9	-1.2
SNZO	South Karori	18.21 194	P	P	18 32 13.7	-0.5
QRZ	Quartz Range	18.33 199	P	P	18 32 15.0	-0.3
QRZ	Quartz Range	18.33 199	P	P	18 32 15.2	-0.1
PLWZ	Palliser	18.34 193	P	P	18 32 13.6	-1.8
NNZ	Nelson	18.44 197		P	18 32 14.4	-1.9
TUWZ	Tuamarina	18.50 196	P	P	18 32 14.5	-2.3
CMWZ	Cape Campbell	18.74 195	P	P	18 32 17.2	-1.8
BSWZ	Blackbirch Sta	18.78 195	P	P	18 32 18.2	-1.2
THZ	Tophouse	19.08 198	P	P	18 32 21.9	-0.3
KHZ	Kahutara	19.53 195	P	P	18 32 24.5	-1.7
KHZ			IAmb	IAmb	18 32 29.3	
	comp=Z,22nm,0.6s					
KHZ	Kahutara	19.53 195	P	P	18 32 24.6	-1.6
LTZ	Lake Taylor	20.20 198	P	P	18 32 30.3	-2.1
OXZ	Oxford	20.77 198	P	P	18 32 34.8	-2.7
MQZ	McQueen's Vall	20.96 196	P	P	18 32 39.0	-0.2
MQZ			IAmb	IAmb	18 32 43.2	
	comp=Z,14nm,0.6s					
RPZ	Rata Peaks	21.41 199	P	P	18 32 43.4	+0.1
	comp=Z,32nm,0.5s,baz=340,slow=2.0,SNR=18					
	comp=Z,32nm,0.5s					
RPZ	Rata Peaks	21.41 199	P	P	18 32 43.8	+0.5
RPZ	Rata Peaks	21.41 199	P	P	18 32 42.0	-1.3
FOZ	Fox Glacier	21.64 201	P	P	18 32 45.4	+0.1
FOZ			IAmb	IAmb	18 32 47.4	
	comp=Z,29nm,0.8s					
LBZ	Lake Benmore	22.28 200	P	P	18 32 48.8	-2.3
LBZ			IAmb	IAmb	18 33 01.0	
	comp=Z,32nm,1.5s					
JCZ	Jackson Bay	22.47 202	P	P	18 32 52.3	-0.5
WKZ	Wanaka	23.05 201	P	P	18 32 56.4	-1.6
WKZ			IAmb	IAmb	18 33 08.5	
	comp=Z,15nm,0.7s					
MLZ	Mavora Lakes	23.83 202	P	P	18 33 04.3	-0.6
MLZ			IAmb	IAmb	18 33 05.2	
	comp=Z,12nm,0.9s					
HNR	Honiara	24.20 302	P	P	18 33 08.0	-0.5
	comp=Z,614nm,0.7s,baz=111,slow=3.2,SNR=2.3					
DCZ	Deep Cove	24.25 203	P	P	18 33 08.2	-0.4
DCZ			IAmb	IAmb	18 33 09.6	
	comp=Z,18nm,0.7s					
WHZ	Wether Hill Ro	24.35 202	P	P	18 33 10.4	+1.0
ARMA	Armidale	26.49 249	P	P	18 33 30.0	+1.3
EIDS	Eidsvold	26.76 260	P	P	18 33 31.3	+0.2
EIDS			IAmb	IAmb	18 33 32.1	
	comp=Z,17nm,0.6s					
EIDS	Eidsvold	26.76 260	P	P	18 33 31.2	+0.2
RMQ	Roma	28.81 258	P	P	18 33 49.9	+0.9
TV1H	Townsville Har	31.60 272	P	P	18 34 13.2	+0.2
CMSA	Cobar Meteorol	31.68 248	P	P	18 34 13.8	+0.1
CTA	Charters Tower	31.90 270	P	P	18 34 16.0	+0.3
	comp=Z,49nm,0.4s,baz=95,slow=10,SNR=18					
	comp=Z,49nm,0.4s					
CTA	Charters Tower	31.90 270	P	P	18 34 16.2	+0.5
CTAO	Charters Tower	31.90 270	P	P	18 34 15.8	+0.1
CTAO	Charters Tower	31.90 270	P	P	18 34 16.2	+0.5
QLP	Quilpie	32.86 257	P	P	18 34 23.5	-0.2
KRVT	Keravat (AS076	33.53 301	P	P	18 34 28.5	-1.0
	comp=Z,29nm,0.6s,baz=187,slow=3.4,SNR=7.0					
	comp=Z,29nm,0.6s					
MTSU	Mount Surprise	34.16 272	P	P	18 34 35.1	+0.3
PMG	Port Moresby	34.84 288	P	P	18 34 40.1	-0.4
PMG	Port Moresby	34.84 288	P	P	18 34 40.7	+0.2
STKA	Stephens Creek	35.19 248	P	P	18 34 43.0	-0.2
	comp=Z,2.9nm,0.5s,baz=87,slow=11,SNR=9.4					
	comp=Z,2.9nm,0.5s					
STKA	Stephens Creek	35.19 248	P	P	18 34 43.5	+0.3
INKA	Innaminka	35.90 255	P	P	18 34 50.3	+1.1
COEN	Coen	36.51 279	P	P	18 34 54.5	+0.2
COEN	Coen	36.51 279	P	P	18 34 54.8	+0.5
LCRK	Leigh Creek	38.05 250	P	P	18 35 06.9	+0.2
MANU	Manus Island	38.60 299	P	P	18 35 11.0	-0.4
BBOO	Buckleboo	39.91 247	P	P	18 35 21.2	-0.6
OOD	Oodnadatta	40.37 254	P	P	18 35 26.4	+0.9
MULG	Mulgathing	41.64 251	P	P	18 35 35.2	-0.4
AS01	Alice Springs	42.45 260	P	P	18 35 41.9	-0.2
AS31	Alice Springs	42.49 260	P	P	18 35 41.8	-0.6
ASAR	Alice Springs	42.49 260	P	P	18 35 42.3	-0.1
	comp=Z,14nm,0.8s,baz=94,slow=7.4,SNR=226					
ASAR			S	S	18 41 24.4	-1.6
	comp=Z,0.9nm,0.7s,baz=95,slow=15,SNR=7.8					
	comp=Z,14nm,0.8s					
ASAR	Alice Springs	42.49 260	P	P	18 35 41.0	-1.4
WR0	Warramunga Arr	42.66 266	P	P	18 35 42.8	-1.0
WR0			IAmb	IAmb	18 35 43.8	
	comp=Z,15nm,0.9s					
WB2	Warramunga Arr	42.83 266	P	P	18 35 44.6	-0.6
WB2			IAmb	IAmb	18 35 45.2	
	comp=Z,26nm,0.8s					
WB0	Warramunga Arr	42.84 266	P	P	18 35 44.3	-0.8
WB0			IAmb	IAmb	18 35 45.3	
	comp=Z,31nm,0.7s					
WRAB	Tennant Creek	42.84 266	P	P	18 35 44.2	-0.9
WRAB			IAmb	IAmb	18 35 45.2	
	comp=Z,25nm,0.9s					
WRAB	Tennant Creek	42.84 266	P	P	18 35 44.4	-0.8
WRA	Warramunga Arr	42.84 266	P	P	18 35 44.6	-0.6
	comp=Z,26nm,0.6s,baz=90,slow=6.2,SNR=594					
WRA			S	S	18 41 28.6	-2.4
	comp=Z,2.7nm,0.8s,baz=102,slow=13,SNR=8.2					
	comp=Z,26nm,0.6s					
WRA	Warramunga Arr	42.84 266	P	P	18 35 44.0	-1.3
SMPI	Sarmi	45.80 292	P	P	18 36 07.7	-0.3
	comp=Z,8.5nm,1.6s					
FORT	Forrest	46.78 249	P	P	18 36 13.1	-2.2
FORT			IAmb	IAmb	18 36 14.4	
	comp=Z,36nm,1.1s					
FORT	Forrest	46.78 249	P	P	18 36 14.7	-0.6
WRKA	Warakurna	47.30 257	P	P	18 36 19.0	-0.3
MTN	Manton Dam	47.87 274	P	P	18 36 22.6	-1.0
MTN			IAmb	IAmb	18 36 23.4	
	comp=Z,13nm,0.8s					
MTN	Manton Dam	47.87 274	P	P	18 36 23.1	-0.5
KNRA	Kununurra	49.11 269	P	P	18 36 32.7	-0.2
KNRA			IAmb	IAmb	18 36 33.8	
	comp=Z,26nm,0.9s					
KNRA	Kununurra	49.11 269	P	P	18 36 33.0	+0.1
FAKI	Fak Fak	50.94 286	P	P	18 36 46.0	-0.3
FITZ	Fitzroy Crossi	51.27 265	P	P	18 36 48.5	-0.1
FITZ	Fitzroy Crossi	51.27 265	P	P	18 36 48.9	+0.3
SIJI	Sorong	52.78 288	P	P	18 36 59.6	0.0
	comp=Z,33nm,0.6s,baz=73,slow=9.0,SNR=47					
	comp=Z,33nm,0.6s					
AAI	Ambon	54.18 283	P	P	18 37 08.7	-0.8
	comp=Z,11nm,0.8s					
SBA	Scott Base	54.60 184	P	P	18 37 13.3	+1.9
VNDA	Vanda	54.61 185	P	P	18 37 13.6	+2.1
	comp=Z,2.6nm,0.6s,baz=6.6,slow=6.6,SNR=34					
	comp=Z,2.6nm,0.6s					
SOEI	Soe	55.25 275	P	P	18 37 18.3	+1.1
SOEI			IAmb	IAmb	18 37 28.9	
	comp=Z,30nm,1.0s					
MEEK	Meekatharra	55.58 253	P	P	18 37 18.5	-0.7
BATI	Baumata	55.64 274	P	P	18 37 21.4	+1.7
	comp=Z,18nm,0.5s,baz=149,slow=2.1,SNR=6.8					
	comp=Z,18nm,0.5s					
BATI	Baumata	55.64 274	P	P	18 37 21.9	+2.2
	comp=Z,20nm,1.0s					
LBMI	Labuha	56.19 286	P	P	18 37 22.3	-1.2
	comp=Z,12nm,1.1s					
BLDU	Ballidu	56.49 248	P	P	18 37 24.6	-0.8
SANI	Sanana	56.88 284	P	P	18 37 27.0	-1.2
	comp=Z,9.8nm,0.6s					
MORW	Morawa	57.34 250	P	P	18 37 31.5	+0.3
EDFI	Ende, Flores	57.99 274	P	P	18 37 35.5	-0.4
GTOI	Gorontalo	60.75 285	P	P	18 37 56.7	+2.5
PLAI	Plampang	61.54 273	P	P	18 37 59.4	0.0
QSPA	South Pole Qui	66.38 180	P	P	18 38 31.0	+1.5
QSPA			IAmb	IAmb	18 38 32.4	
	comp=Z,14nm,0.9s					
BELA	Belgrano 2	76.57 173	P	P	18 39 29.3	+0.6
MAW	Mawson	78.08 200	P	P	18 39 38.8	+1.8
	comp=Z,5.9nm,0.9s,baz=132,slow=6.5,SNR=16					
	comp=Z,5.9nm,0.9s					
MAW	Mawson	78.08 200	P	P	18 39 38.8	+1.8
KS19	Wonju Array Si	78.44 320	P	P	18 39 38.0	-1.4
NVAR	Mina Array Bea	84.32 44	P	P	18 40 12.1	+2.3
	comp=Z,0.3nm,0.6s,baz=215,slow=7.6,SNR=2.1					
TROLL	Troll, Antarti	84.53 181	P	P	18 40 10.9	+0.6
SNAA	Sanae	84.85 179	P	P	18 40 11.9	+0.2
VNA3	Neumayer Olymp	85.05 177	P	P	18 40 12.9	+0.2
VNA1	Neumayer--Stat	85.70 177	P	P	18 40 16.3	+0.6
LCMT	Little Creek M	86.83 47	P	P	18 40 21.5	-0.3
TXAR	Lajitas Array	89.97 58	P	P	18 40 39.6	+3.0
	comp=Z,0.6nm,0.7s,baz=223,slow=5.5,SNR=7.5					
	comp=Z,0.6nm,0.7s					
HHC	Hu-ho-hao-te	90.58 315	*e*P	P	18 40 38.9	-0.3
PZH	PanZhiHua	90.96 298	P	P	18 40 42.6	+1.3
ARCES	ARCESS Array B	131.78 348	PKP	PKPdf	18 46 46.3	+0.9
	comp=Z,5.4nm,1.0s,baz=49,slow=2.4,SNR=3.9					
FINES	FINESS Array B	138.40 342	SKPbc	SKiKP	18 49 45.2	-0.2
	comp=Z,2.0nm,0.9s,baz=17,slow=2.0,SNR=5.2					
NOA	NORSAR Array B	141.95 352	PKhKP	PKPpre	18 47 01.1	
	comp=Z,0.8nm,0.8s,baz=16,slow=4.8,SNR=3.2					
AKASG	Malin Array Be	145.04 328	PKP	PKPdf	18 47 11.1	+1.0
	comp=Z,1.4nm,0.5s,baz=43,slow=4.5,SNR=9.5					
AKASG			SKPbc	SKiKP	18 50 01.7	+2.3
	comp=Z,0.9nm,0.5s,baz=50,slow=2.5,SNR=4.7					
BRTR	Keskin Array B	147.80 308	PKPbc	PKPbc	18 47 19.5	+0.5
	comp=Z,0.7nm,0.7s,baz=140,slow=6.4,SNR=3.8					
EKA	Eskdalemuir Ar	148.30 4	PKPbc	PKPbc	18 47 20.1	+0.6
	comp=Z,0.5nm,0.5s,baz=353,slow=4.2,SNR=4.0					
CLL	Collm	150.79 344		PKPbc	18 47 26.1	+0.5
CLL	Collm	150.79 344	*i* PKPbc	PKiKP	18 47 26.7	+0.7
	comp=Z,5.0nm,0.7s					
BRG	Berggiesshubel	150.93 342	*i* PKP	PKiKP	18 47 27.0	+0.7
BRG			Amp		18 47 28.5	
	comp=Z,4.0nm,0.8s					
GERES	GERESS Array B	152.82 341	PKPbc	PKiKP	18 47 31.1	+0.7
	comp=Z,0.2nm,0.5s,baz=336,slow=4.3,SNR=2.5					

*IDC **03** 18:39:48.7±2.0, 7°.25S×129°.23E, h161km±25km, mb3.4/1, mbtmp4.0/6, Error ellipse: s-maj=26.0km s-min=18.8km az=113.0*

ISC 03 18:39:48.5±0.8, 7°.24S±0°.06×129°.27E±0°.07, h200km, n18, σ1§23/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.15	110	P	Pn	18 40 29.7	+1.1
BNDI	Bandanaira	2.77	13	P	Pn	18 40 36.5	+1.0
FAKI	Fak Fak	5.21	35	P	Pn	18 41 03.9	-1.8
MTN	Manton Dam	5.87	162	P	Pn	18 41 15.2	+1.1
KDU	Kakadu	6.27	150	P	Pn	18 41 20.7	+1.4
BATI	Baumata	6.28	242	P	Pn	18 41 20.6	+1.2
	9.4nm,0.5s,baz=69,slow=3.3,SNR=6.0						
BATI				S	Sn	18 42 28.7	-2.7
	12nm,0.4s,baz=130,slow=11,SNR=3.6						
SIJI	Sorong	6.63	18	P	Pn	18 41 24.1	+0.1
	2.2nm,0.2s,baz=158,slow=22,SNR=18						
SIJI				S	Sn	18 42 32.8	-7.0
	6.8nm,0.2s,baz=217,slow=22,SNR=10.0						
KNRA	Kununurra	8.40	183	P	Pn	18 41 47.7	+0.6
FITZ	Fitzroy Crossi	11.36	198	P	Pn	18 42 25.1	-0.2
	2.6nm,0.6s,baz=24,slow=10.0,SNR=27						
FITZ				S	Sn	18 44 25.8	-6.3
	4.5nm,0.5s,baz=142,slow=20,SNR=11						
FITZ	Fitzroy Crossi	11.36	198	P	Pn	18 42 25.1	-0.2
WRAB	Tennant Creek	13.55	159	P	Pn	18 42 53.4	+0.4
WRA	Warramunga Arr	13.56	159	P	Pn	18 42 53.2	+0.2
	1.5nm,0.5s,baz=337,slow=13,SNR=16						
WRA				S	S	18 45 18.3	-5.9
	2.5nm,0.5s,baz=332,slow=22,SNR=7.2						
BKB	Balikpapan	13.69	295	P	Pn	18 42 54.6	-0.1
COEN	Coen	15.21	117	P	P	18 43 17.9	+4.1
ASAR	Alice Springs	16.93	165	P	Pn	18 43 37.4	+3.2
	7.7nm,0.6s,baz=344,slow=10,SNR=85						
ASAR				S	S	18 46 39.4	+0.1
	0.8nm,0.6s,baz=344,slow=26,SNR=5.1						
AS01	Alice Springs	16.94	165	P	Pn	18 43 38.0	+3.8
WRKA	Warakurna	17.73	183	P	Pn	18 43 46.4	+3.0
MKAR	Makanchi Array	68.03	327	P	P	18 50 30.4	+4.2
	0.8nm,0.8s,baz=117,slow=7.2,SNR=5.1						
	0.8nm,0.8s						

*NEIC **03** 18:45:44.2±0.7, 32°.9S±0°.1×178°.78W±0°.08, h10km±1km, mb4.3/8, Error ellipse: s-maj=22.9km s-min=11.1km az=352.0*

*IDC **03** 18:46:04.7±14.0, 32°.78S×179°.19W, h180km±122km, mb3.9/5, mbtmp4.4/5, Error ellipse: s-maj=63.4km s-min=20.3km az=64.0*

ISC 03 18:45:48.0±0.8, 32°.78S±0°.09×178°.8W±0°.1, h45km, n27, σ1§34/27, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.59	12	Pn	Pn	18 46 39.0	-2.1
OUZ	Omahuta	6.78	247	Pn	Pn	18 47 23.0	-1.9
BFZ	Birch Farm	8.84	205	Pn	Pn	18 47 50.2	-2.9
PLWZ	Palliser	9.98	207	Pn	Pn	18 48 06.1	-2.6
CTA	Charters Tower	33.60	283	P	P	18 52 25.5	+1.3
	3.0nm,0.7s,baz=118,slow=11,SNR=8.7						
	3.0nm,0.7s						
CTAO	Charters Tower	33.60	283	P	P	18 52 24.5	+0.3
KRVT	Keravat (AS076	39.32	310	P	P	18 53 14.1	+1.2
	24nm,0.7s,baz=208,slow=2.6,SNR=6.2						
	24nm,0.7s						
COEN	Coen	39.35	289	P	P	18 53 14.8	+1.6
COEN				IAmb	IAmb	18 53 47.1	
	comp=Z,8.0nm,1.1s						
AS31	Alice Springs	42.37	270	P	P	18 53 38.0	-0.1
ASAR	Alice Springs	42.37	270	P	P	18 53 38.6	+0.5
	comp=Z,2.9nm,0.7s,baz=110,slow=7.5,SNR=32						
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	42.37	270	P	P	18 53 37.0	-1.0
WB2	Warramunga Arr	43.57	275	P	P	18 53 48.0	+0.2
WRA	Warramunga Arr	43.58	275	P	P	18 53 48.2	+0.4
	comp=Z,3.4nm,0.6s,baz=114,slow=7.9,SNR=58						
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	43.58	275	P	P	18 53 47.4	-0.5
WB0	Warramunga Arr	43.61	275	P	P	18 53 48.2	+0.1
WB0				IAmb	IAmb	18 53 48.7	
	comp=Z,5.2nm,0.8s						
QSPA	South Pole Qui	57.34	180	P	P	18 55 33.7	+2.4
	2.1nm,0.7s,baz=47,slow=1.0,SNR=12						
	comp=Z,1.2nm,0.7s						
QSPA	South Pole Qui	57.34	180	P	P	18 55 32.4	+1.2
QSPA				IAmb	IAmb	18 55 40.5	
	comp=Z,3.1nm,0.9s						
TROLL	Troll, Antarti	75.50	180	P	P	18 57 28.3	+1.1
SNAA	Sanae	75.80	179	P	P	18 57 29.7	+0.8
SNAA	Sanae	75.80	179	P	P	18 57 29.6	+0.7
SNAA				IAmb	IAmb	18 57 47.4	
	comp=Z,2.6nm,1.2s						
VNA3	Neumayer Olymp	75.98	176	P	P	18 57 30.6	+0.7
VNA2	Neumayer--Watz	76.41	177	P	P	18 57 33.3	+1.1
	baz=172,slow=6.0						
FINES	FINESS Array B	147.12	338	PKPbc	PKPbc	19 05 24.9	-0.4
	comp=Z,5.2nm,0.7s,baz=39,slow=4.3,SNR=28						
NB2	NORSAR Subarra	150.98	350	PKP	PKPbc	19 05 34.7	-0.4
	comp=Z,1.3nm,0.7s,baz=16,slow=2.6						
NOA	NORSAR Array B	150.98	350	PKPbc	PKPbc	19 05 35.0	-0.1
	comp=Z,2.0nm,0.7s,baz=15,slow=4.1,SNR=9.6						
BRTR	Keskin Array B	153.05	294	PKPbc	PKPbc	19 05 40.0	-0.7
	comp=Z,0.5nm,0.6s,baz=132,slow=4.2,SNR=3.9						
TORD	Torodi Ar. Bea	160.46	181	PKPab	PKPab	19 06 24.6	+0.3
	comp=Z,15nm,0.6s,baz=198,slow=2.5,SNR=5.1						

*SOME **03** 18:54:17.7, 40°.67N×78°.23E, h15km*
*KRNET **03** 18:54:18.2±0.1, 40°.81N×78°.27E, mb2.3*
*NNC **03** 18:54:21.9±1.8, 40°.87N×78°.29E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=13.3km s-min=11.4km az=156.0*

ISC 03 18:54:15.8±2.7, 40°.6N±0°.1×78°.20E±0°.06, h8km±17km, n23, σ1§68/38, 12C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.16	345	⇓*i*P	Pb	18 54 37.1	-1.2
	baz=39						
TARG				⇓*i*S	Sb	18 54 51.1	-2.5
	baz=39						
NRN	Naryn	1.86	297	⇓*i*P	Pg	18 54 52.7	+1.3
	baz=90						
NRN				⇓*i*S	Sg	18 55 17.4	+2.0
	baz=90						
ULHL	Ulahol	2.20	319	⇓*i*P	Pb	18 54 56.6	+0.7
	baz=14						
ULHL				⇓*i*S	Sb	18 55 24.9	+1.5
	baz=14						
ANVS	Anan'yevo	2.21	350	⇑*i*P	Pb	18 54 55.6	-0.5
	baz=47						
ANVS				⇑*i*S	Sb	18 55 23.1	-0.5
	baz=47						
SATY	Saty	2.45	4	*e*P	Pg	18 55 02.4	-0.4
	2.2nm,0.2s						
SATY				*e*S	Sg	18 55 34.5	-0.1
	12nm,0.6s						
SATY	Saty	2.45	4	Pg	Pg	18 55 02.4	-0.4
	2.2nm,0.2s						
SATY				Lg	Lg	18 55 34.5	
	12nm,0.6s						
BOOM	Boomskoye usch	2.53	319	⇓*i*P	Pb	18 55 01.1	-0.4
	baz=15						
BOOM				⇓*i*S	Sb	18 55 32.3	-0.6
	baz=15						
UZB	Uzynbulak	2.61	13	*e*P	Pb	18 55 04.3	+1.5
	0.6nm,0.3s						
UZB				*e*S	Sg	18 55 37.7	-1.9
	7.7nm,0.5s						
UZB	Uzynbulak	2.61	13	Pg	Pb	18 55 04.3	+1.5
	0.6nm,0.3s						
UZB				Lg	Lg	18 55 37.7	
	7.7nm,0.5s						
MDOK	Medeo	2.69	342	*e*P	Pb	18 55 06.4	+2.1
	2.3nm,0.3s						
MDOK				*e*S	Sg	18 55 41.4	-0.9
	11nm,0.6s						
MDOK	Medeo	2.69	342	⇑Pn	Pb	18 55 04.7	+0.5
	2.3nm,0.5s						
MDOK				Pg	Pb	18 55 06.4	+2.1
	2.3nm,0.3s						
MDOK				⇑Lg	Lg	18 55 40.9	
	12nm,0.6s						
MDOK				Lg	Lg	18 55 41.4	
	11nm,0.6s						
SHLS	Shalkode	2.72	20	*e*P	Pg	18 55 07.5	-0.3
	1.4nm,0.5s						
SHLS				*e*S	Sg	18 55 43.3	+0.3
	8.3nm,0.5s						
SHLS	Shalkode	2.72	20	Pg	Pg	18 55 07.5	-0.3
	1.4nm,0.5s						
SHLS				Lg	Lg	18 55 43.3	
	8.3nm,0.5s						
KURS	Kuram	2.88	360	*e*P	Pb	18 55 08.2	+0.9
	1.6nm,0.5s						
KURS				*e*S	Sb	18 55 44.8	+2.1
	5.0nm,0.8s						
KURS	Kuram	2.88	360	Pg	Pb	18 55 08.2	+0.9
	1.6nm,0.5s						
KURS				Lg	Lg	18 55 44.8	
	5.0nm,0.8s						
PDGK	Podgornoye	2.88	19	⇑Pn	Pb	18 55 06.5	-1.0
	2.7nm,1.1s						
PDGK				⇑Lg	Lg	18 55 44.3	
	3.6nm,0.6s						
TKM2	Tokmak 2	3.02	321	⇑*i*P	Pb	18 55 08.0	-1.9
	baz=18						
TKM2				⇑*e*S	Sb	18 55 44.4	-2.6
	baz=18						
TKM2	Tokmak 2	3.02	321	⇑Pn	Pb	18 55 09.8	-0.1
	0.8nm,0.3s						
TKM2				⇑Lg	Lg	18 55 52.9	
	2.6nm,0.5s						
UCH	Uchtor	3.21	301	⇑*i*P	Pb	18 55 11.7	-1.5
	baz=98						
UCH				⇑*i*S	Sb	18 55 50.4	-2.2
	baz=98						
KTBS	Karatobe	3.30	341	*e*P	Pb	18 55 16.9	+2.3
	1.8nm,0.2s						
KTBS				*e*S	Sg	18 55 59.6	-2.1
	10nm,0.3s						
KTBS	Karatobe	3.30	341	Pg	Pb	18 55 16.9	+2.3
	1.8nm,0.2s						
KTBS				Lg	Lg	18 55 59.9	
	10nm,0.3s						
KUU	Kurty	3.56	338	*e*P	Pb	18 55 20.8	+1.8
	0.8nm,0.4s						
KUU				*e*S	Sb	18 56 06.2	+3.8
	4.9nm,0.6s						
KUU	Kurty	3.56	338	Pg	Pb	18 55 20.8	+1.8
	0.8nm,0.4s						
KUU				Lg	Lg	18 56 06.2	
	4.9nm,0.6s						

*NEIC **03** 18:59:25.5±2.3, 18°.8N±0°.1×145°.1E±0°.2, h186km±9km, mb4.1/14, Error ellipse: s-maj=22.7km s-min=13.8km az=71.0*

*IDC **03** 18:59:28.3±2.6, 18°.74N×145°.65E, h222km±27km, mb3.2/11, mbtmp3.8/13, Error ellipse: s-maj=27.5km s-min=14.2km az=87.0*

ISC 03 18:59:27.3±0.6, 18°.77N±0°.07×145°.3E±0°.1, h200km, n32, σ1§46/33, mb3.8/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.16	184	P	Pn	19 00 44.8	+0.9

comp=Z,3.0nm,0.5s,baz=109,slow=11,SNR=3.8
comp=Z,3.0nm,0.5s
NRIK **Noril'sk** 61.40 340 P **P** 19 09 21.1 -0.9
H21K **Melozitna Rive** 61.59 25 P **P** 19 09 23.3 0.0
H21K IAmb IAmb 19 09 51.6
comp=Z,5.3nm,1.5s
BPAW **Bear Paw Mtn.** 61.88 27 P **P** 19 09 24.0 -1.3
BPAW IAmb IAmb 19 10 05.1
comp=Z,5.2nm,1.4s
MLY **Manley** 62.24 26 P **P** 19 09 27.0 -0.6
MCK **McKinley** 62.67 27 P **P** 19 09 29.8 -0.7
H24K **Noodor Dome** 63.60 25 P **P** 19 09 34.4 -2.2
H24K IAmb IAmb 19 09 37.1
comp=Z,5.0nm,1.4s
ILAR **Eielson Array** 63.77 26 P **P** 19 09 35.0 -2.7
comp=Z,0.4nm,0.5s,baz=248,slow=4.6,SNR=4.4
comp=Z,0.4nm,0.5s
BMAR **Burnt Mountain** 65.22 24 P **P** 19 09 46.3 -0.8
BCAR **Beaver Creek A** 65.73 29 P **P** 19 09 49.7 -0.7
KKAR **Karatay Array** 66.40 310 P **P** 19 09 54.8 -0.2
ABKAR **Akbulak array** 73.00 317 P **P** 19 10 34.3 -0.8
ABKAR IAmb IAmb 19 11 15.9
comp=Z,2.2nm,1.2s
NVAR **Mina Array Bea** 83.43 52 P **P** 19 11 31.8 -1.1
comp=Z,0.3nm,0.5s,baz=272,slow=5.2,SNR=3.7
comp=Z,0.3nm,0.5s
FINES **FINESS Array B** 86.64 335 P **P** 19 11 45.8 -2.3
comp=Z,1.0nm,0.5s,baz=79,slow=5.3,SNR=7.8
comp=Z,1.0nm,0.5s

*AEIC **03** 19:08:33±1.0, 51.°7N±0.°2×176.°45E±0.°08, h26km±9km, ML3.5/10, Error ellipse: s-maj=35.1km s-min=4.0km az=189.0*
*NEIC **03** 19:08:33.8±1.0, 51.°54N±0.°10×176.°36E±0.°04, h36km±49km, Error ellipse: s-maj=14.0km s-min=3.0km az=174.0*
*IDC **03** 19:08:35.2±3.9, 51.°74N×176.°45E, h50km±31km, mb3.4/9, mbtmp3.6/9, Error ellipse: s-maj=30.0km s-min=19.5km az=175.0*
ISC 03 19:08:32.9±0.8, 51.°6N±0.°1×176.°39E±0.°05, h31km, n25, σ0§95/23, mb3.7/9, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	1.36	74		Pn	19 08 56.2	+0.4
LSPA	**Little Sitkin**	1.40	75		Pn	19 08 57.1	+0.7
LSPA					Sb	19 09 15.3	-0.7
SHEM	**Shemya Is, Ala**	1.81	310	P	Pn	19 09 02.6	+0.7
650nm,0.3s,baz=145,slow=2.6,SNR=148
SHEM				S	Sn	19 09 24.7	+1.0
675nm,0.4s,baz=282,slow=22,SNR=15
SHEM				LR	LR	19 09 40.7	
comp=Z,160nm,21.6s,baz=168,slow=37
SMY	**Shemya**	1.81	310		Pn	19 09 02.8	+0.9
SMY					Sn	19 09 24.6	+1.0
AMKA	**Amchitka**	1.83	96		Pn	19 09 02.0	-0.3
CESW	**Semis' Southwe**	2.00	80		Pn	19 09 05.7	+1.2
CESW					Sn	19 09 29.9	+1.5
TASE	**Tanaga Southea**	3.47	84		Pn	19 09 26.8	+1.9
KIWB	**Kanaga Island**	4.03	84	Pn	Pn	19 09 33.2	+0.9
ADK	**Adak**	4.31	84	Pn	Pn	19 09 37.1	+0.7
ILAR	**Eielson Array**	23.00	41	P	P	19 13 33.8	-1.0
0.4nm,0.5s,baz=247,slow=8.1,SNR=6.1
0.4nm,0.5s
KLR	**Kul'dur**	28.21	283	P	P	19 14 22.9	+0.3
0.8nm,0.5s,baz=71,slow=4.5,SNR=5.2
0.8nm,0.5s
H11N2	**WAKE ISLAND Hy**	32.67	197	T	T	19 50 00.9	
baz=11,slow=76,SNR=56
H11N3	**WAKE ISLAND Hy**	32.68	197	T	T	19 49 59.9	
baz=11,slow=76,SNR=61
H11N1	**WAKE ISLAND Hy**	32.69	197	T	T	19 50 02.3	
baz=11,slow=76,SNR=53
H11S1	**WAKE ISLAND Hy**	33.90	197	T	T	19 51 17.9	
baz=10,slow=76,SNR=19
H11S3	**WAKE ISLAND Hy**	33.91	197	T	T	19 51 37.4	
baz=10,slow=76,SNR=11
H11S2	**WAKE ISLAND Hy**	33.92	197	T	T	19 51 26.3	
baz=10,slow=76,SNR=8.3
SONM	**Songino Array**	43.83	294	P	P	19 16 36.6	+0.7
0.9nm,0.5s,baz=46,slow=7.9,SNR=6.2
0.9nm,0.5s
MKAR	**Makanchi Array**	57.50	306	P	P	19 18 17.9	-1.0
0.8nm,0.7s,baz=57,slow=7.0,SNR=5.5
0.8nm,0.7s
TXAR	**Lajitas Array**	61.57	78	P	P	19 18 47.3	+0.1
0.2nm,0.4s,baz=299,slow=4.0,SNR=2.9
0.2nm,0.4s
NOA	**NORSAR Array B**	67.08	352	P	P	19 19 21.6	-1.2
0.7nm,0.9s,baz=8.1,slow=6.3,SNR=2.1
0.7nm,0.9s
AKASG	**Malin Array Sta**	74.33	339	P	P	19 20 06.1	-0.8
0.5nm,0.4s,baz=23,slow=6.3,SNR=5.4
0.5nm,0.4s
WRA	**Warramunga Arr**	80.17	220	P	P	19 20 39.8	-0.2
0.3nm,0.8s,baz=28,slow=5.6,SNR=1.7
0.3nm,0.8s
ASAR	**Alice Springs**	83.70	219	P	P	19 20 59.3	+0.8
0.3nm,0.6s,baz=18,slow=5.5,SNR=5.2
0.3nm,0.6s
MAW	**Mawson**	144.82	218	PKP	PKPdf	19 28 05.0	-0.1
1.5nm,0.7s,baz=98,slow=3.6,SNR=8.8

HEL 03 19:10:33.2±0.2, 68.°00N×33.°69E, h0km, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	0.38	105	PG	Pg	19 10 40.0	-0.4
LVZ				SG	Sg	19 10 45.1	-0.1
VRF	**Varrio**	1.57	263	PN	Pn	19 11 02.1	-0.2
baz=79
VRF				MSG		19 11 20.1	
comp=Z,2.1nm,0.2s
VRF				SN	Sn	19 11 22.9	-0.3
OLKF	**Oulanka, Finla**	2.38	227	PN	Pn	19 11 12.5	-0.9
OLKF				SN	Sn	19 11 40.6	-2.5
MSF	**Maaselka**	2.78	223	SN	Sn	19 11 52.4	-0.9
ARA0	**ARCESS Array S**	3.35	301	PB	Pn	19 11 29.2	+2.4
baz=122
ARA0				SB	Sb	19 12 11.6	-3.1

HEL 03 19:11:39.0±0.1, 63.°65N×26.°09E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUF	**Merijarvi**	0.94	321	PG	Pg	19 11 55.4	-1.6
OUF				MSG		19 12 07.8	
comp=Z,2.4nm,0.2s
OUF				SB	Sg	19 12 08.3	-0.8
OBF0	**Syolatti, Pyha**	1.18	317	PG	Pg	19 12 00.5	-1.1
OBF0				SG	Sg	19 12 17.2	+0.3
OBF4	**Vikkela, Lumij**	1.25	340	PG	Pg	19 12 01.6	-1.3
OBF4				SG	Sg	19 12 18.3	-0.7
OUL	**Oulu**	1.45	357	SN	Sn	19 12 27.4	+1.4
OUL	**Oulu**	1.45	357	PG	Pn	19 12 05.1	-1.3
OUL				SG	Sg	19 12 23.5	-1.9
KAF	**Kangasniemi**	1.54	176	PG	Pn	19 12 07.3	-0.4
KAF				MSG		19 12 25.4	
comp=Z,2.0nm,0.2s
KAF				SN	Sn	19 12 27.8	-0.7
KEF	**Keuruu**	1.59	201	PG	Pn	19 12 07.5	-0.8
KEF				MSG		19 12 26.7	
comp=Z,3.3nm,0.2s
KEF				SG	Sn	19 12 28.4	-1.1
VAF	**Ylistaro**	1.66	250	PG	Pn	19 12 09.2	-0.1
baz=68
VAF				MSG		19 12 28.5	
comp=Z,3.9nm,0.2s
VAF				SG	Sn	19 12 30.1	-1.1
RMF	**Romuvaara**	1.79	70	SB	Sg	19 12 36.7	+0.2
RMF	**Romuvaara**	1.79	70	PG	Pn	19 12 11.4	+0.3
RMF				SN	Sg	19 12 36.7	+0.2
FIA0	**FINESS Array S**	2.21	180	PG	Pb	19 12 18.5	-1.3
baz=359
FIA0				SG	Sb	19 12 47.1	-0.6
BURU	**Burvik**	2.27	297	PG	Pb	19 12 19.8	-1.0
BURU				SG	Sb	19 12 48.8	-0.6
UMAU	**Umeaa**	2.42	278	PB	Pn	19 12 20.5	+0.8
UMAU				SG	Sb	19 12 52.2	-1.3
JOF	**Joensuu**	2.47	105	PG	Pb	19 12 22.7	-1.5
JOF				SG	Sb	19 12 54.2	-0.9
TOF	**Tornio**	2.56	344	MSG		19 12 54.4	
comp=Z,1.6nm,0.2s
TOF				SG	Sb	19 12 58.2	+0.7
MSF	**Maaselka**	2.60	28	SG	Sb	19 12 58.3	-0.6
KU6	**Riekki**	2.89	33	MSG		19 13 04.0	
comp=Z,0.7nm,0.2s
KU6				SG	Sb	19 13 05.8	-1.3
RNF	**Rovaniemi**	2.97	359	SG	Sb	19 13 09.3	-0.3
HUSU	**Husum**	3.10	267	SN	Sn	19 13 07.7	+1.0
RAF	**Rauma**	3.32	219	SG	Sb	19 13 20.2	+0.8
LANU	**Lannavaara**	4.73	341	PN	Pn	19 12 52.8	+1.3

*NOU **03** 19:28:17.0, 37.°19S×179.°66E, h0km, MLv3.9/8, Off E. Coast of N. Island, N.Z.*
*WEL **03** 19:28:24.9±1.1, 37.°S±4.°×17.°9E±.°, h20km±7km, M3.3/35, ML3.6/43, MLv3.3/35, Error ellipse: s-maj=0.0km s-min=0.0km az=99.5*
ISC 03 19:28:22.3±2.7, 37.°22S±0.°08×179.°2E±0.°1, h10km±11km, n67, σ0§96/76, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	0.81	245	P	Pg	19 28 38.3	+0.4
MXZ				S	Sg	19 28 47.2	-1.1
MXZ	**Matakaoa Point**	0.81	245	P	Pg	19 28 38.2	+0.4
WMGZ	**Waiomatatini S**	0.88	227	P	Pn	19 28 41.7	+1.1
WMGZ				S	Sb	19 28 53.8	+2.4
PKGZ	**Pakihiroa**	1.13	234	P	Pg	19 28 44.9	+0.9
PKGZ				S	Sb	19 28 59.1	+0.3
PUZ	**Puketiti**	1.15	222	P	Pg	19 28 45.4	+1.1
PUZ				S	Sb	19 28 59.5	+0.4
HAZ	**Te Kaha**	1.27	245	P	Pn	19 28 45.6	-0.4
TWGZ	**Tauwhareparae**	1.37	226	P	Pg	19 28 49.0	+0.3
TWGZ				S	Sn	19 29 06.9	+1.1
RUGZ	**Raukumara Rang**	1.44	238	P	Pb	19 28 49.4	+0.2
RUGZ				S	Sn	19 29 07.3	-0.2
CNGZ	**Carnagh Statio**	1.50	212	P	Pg	19 28 51.2	+0.2
TKGZ	**Te Karaka**	1.63	221	P	Pb	19 28 52.2	-0.3
MWZ	**Matawai**	1.75	230	P	Pn	19 28 53.4	+0.7
RIGZ	**Rimuhau**	1.88	217	P	Pn	19 28 55.4	+0.9
RIGZ				S	Sn	19 29 17.6	-0.7
WHRZ	**Whale Island**	1.90	250	P	Pn	19 28 55.7	+1.0
RAGZ	**Rawiri**	1.92	228	P	Pn	19 28 55.9	+0.9
RAGZ				S	Sn	19 29 18.3	-1.0
URZ	**Urewera**	1.97	238	P	Pn	19 28 56.5	+0.8
URZ				S	Sn	19 29 19.1	-1.4
URZ	**Urewera**	1.97	238	P	Pn	19 28 56.5	+0.8
SNGZ	**Shannon Statio**	2.16	223	P	Pn	19 28 58.9	+0.6
KNZ	**Kokohu**	2.17	214	P	Pn	19 28 58.5	0.0
MHGZ	**Mahia Peninsul**	2.19	208	P	Pn	19 28 59.3	+0.6
RTZ	**Ruatahuna**	2.26	231	P	Pn	19 29 00.5	+0.8
MUGZ	**Murupara**	2.31	236	P	Pn	19 29 00.8	+0.4
RAHZ	**Arahi**	2.39	224	P	Pn	19 29 03.1	+1.6
MTHZ	**Maungataniwha**	2.49	228	P	Pn	19 29 03.8	+0.9
NMHZ	**Naumai**	2.67	225	P	Pn	19 29 06.4	+1.0
KMRZ	**Kaimai**	2.68	256	P	Pb	19 29 09.5	-0.9
ARHZ	**Aropaoanui**	2.69	220	P	Pn	19 29 05.9	+0.3
MRHZ	**Matea Rd**	2.74	233	P	Pn	19 29 07.0	+0.7
KUZ	**Kuaotunu**	2.85	279	P	Pn	19 29 06.6	-1.1
KUZ	**Kuaotunu**	2.85	279	P	Pn	19 29 07.6	-0.1
BKZ	**Black Stump Fm**	2.90	227	P	Pn	19 29 08.9	+0.4
BKZ	**Black Stump Fm**	2.90	227	P	Pn	19 29 08.9	+0.4
WHTZ	**Whakaora**	2.96	240	P	Pb	19 29 13.4	-1.7
CKHZ	**Cape Kidnapper**	2.96	214	P	Pn	19 29 09.0	-0.3
MCHZ	**McNeill Hill**	2.98	221	P	Pn	19 29 09.6	0.0
TOZ	**Tahuroa Road**	3.00	259	P	Pn	19 29 09.4	-0.5
KWHZ	**Kaweka Forest**	3.11	224	P	Pn	19 29 11.1	-0.4
KAHZ	**Kahuranaki**	3.16	215	P	Pn	19 29 11.7	-0.4
GRZ	**Great Barrier**	3.18	287	P	Pn	19 29 12.8	+0.5
MKAZ	**Moumakai**	3.25	271	P	Pn	19 29 12.4	-0.9
WIAZ	**Waiheke Island**	3.30	276	P	Pn	19 29 14.4	+0.4
TMVZ	**Te Maari**	3.36	235	P	Pn	19 29 15.2	+0.3
BHHZ	**Black Hill Sta**	3.36	227	P	Pn	19 29 15.2	+0.3
ETVZ	**East Tongariro**	3.37	234	P	Pn	19 29 15.1	+0.1
NTVZ	**North Tongarir**	3.37	235	P	Pn	19 29 15.1	+0.1
KRVZ	**Karewarewa**	3.39	235	P	Pn	19 29 15.8	+0.5
OTVZ	**Oturere**	3.41	234	P	Pn	19 29 15.4	-0.2
NNVZ	**North Ngauruho**	3.42	235	P	Pn	19 29 16.3	+0.4
SNVZ	**South Ngauruho**	3.44	234	P	Pn	19 29 16.2	+0.2
NGZ	**Ngauruhoe**	3.46	235	P	Pn	19 29 16.2	-0.1
TUVZ	**Tukino**	3.48	233	P	Pn	19 29 16.7	+0.2
MBAZ	**Motutapu North**	3.49	276	P	Pn	19 29 17.6	+1.0
MOVZ	**Moawhango**	3.50	230	P	Pn	19 29 16.4	-0.3
TWVZ	**Taurewa**	3.51	237	P	Pn	19 29 17.4	+0.4
ABAZ	**Army Bay**	3.57	279	P	Pn	19 29 18.8	+1.0
PNHZ	**Pukenui**	3.58	220	P	Pn	19 29 17.1	-0.8
HIZ	**Hauiti**	3.69	248	P	Pn	19 29 20.3	+1.0
TSZ	**Takapari Road**	3.82	221	P	Pn	19 29 19.9	-1.2
WCZ	**Waipu Caves**	4.13	287	P	Pn	19 29 25.6	+0.3
BFZ	**Birch Farm**	4.16	213	P	Pn	19 29 24.1	-1.7
WAZ	**Wanganui**	4.18	231	P	Pn	19 29 26.6	+0.5
MRZ	**Mangatainoka R**	4.46	218	P	Pn	19 29 28.0	-1.9
PKE	**Pukeiti**	4.57	243	P	Pn	19 29 34.4	+2.9
KHEZ	**Kahui Hut**	4.59	242	P	Pn	19 29 31.5	-0.3
OUZ	**Omahuta**	4.97	292	P	Pn	19 29 37.5	+0.5
OUZ	**Omahuta**	4.97	292	P	Pn	19 29 37.4	+0.5
QRZ	**Quartz Range**	6.33	233	P	Pn	19 29 53.6	-2.0
CTZ	**Chatham Island**	7.24	155	P	Pn	19 30 10.6	+2.6

*ANF **03** 19:37:46.7±0.3, 32.°87N×115.°63W, h20km±2km, ML2.2/7, Error ellipse: s-maj=3.9km s-min=2.2km az=159.0*
*ECX **03** 19:37:48.2±0.6, 32.°84N×115.°64W, h12km±2km, MD2.3, ML2.5*
ISC 03 19:37:46.1±1.0, 32.°81N±0.°02×115.°60W±0.°02, h19km±2km, n27, σ1§02/45, 10C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK2	**Cook Ranch 2**	0.12	289	*i* P	Pg	19 37 50.5	+0.3
WESC	**Westside Schoo**	0.12	245	⇑*e*P	Pg	19 37 50.8	+0.6
WESC				*e*S	Sg	19 37 53.7	+0.8
DREC	**Desert Rsrch C**	0.13	93	⇑*e*P	Pg	19 37 51.6	+1.4
SGL	**Mount Signal**	0.19	213	⇓*i*P	Pg	19 37 52.0	+0.9
SGL				*i* S	Sg	19 37 55.5	+1.0
SWSC	**Sam W. Stewart**	0.22	308	P	Pg	19 37 51.6	+0.1
baz=126,SNR=97
SWSC				S	Sb	19 37 54.5	+0.5
baz=126
SWSC	**Sam W. Stewart**	0.22	308	⇑*i*P	Pg	19 37 51.7	+0.2
SWSC				*e*S	Sb	19 37 54.6	+0.5
YUH2	**Yuha Desert**	0.32	239	⇑*e*P	Pb	19 37 53.8	+0.6
YUH2				*e*S	Sb	19 37 58.4	+0.4
CRR	**Carrizo Plain**	0.32	284	⇑*i*P	Pb	19 37 53.6	+0.3
COA	**Coachella**	0.40	83	⇓*i*P	Pn	19 37 56.1	-0.8
RMX	**La Rumorosa**	0.46	243	⇑*e*P	Pb	19 37 56.3	+0.6
RMX				*e*S	Sb	19 38 02.6	+0.4
RMX				*e*		19 38 03.1	
RMX				IAML		19 38 03.1	
comp=E,215nm,0.2s
IKP	**In-Ko-Pah, Jac**	0.46	250	P	Pb	19 37 56.2	+0.6
baz=66,SNR=24
IKP				S	Sb	19 38 03.0	+0.7
baz=66
IKP	**In-Ko-Pah, Jac**	0.46	250	⇑*e*P	Pb	19 37 56.3	+0.6
IKP				*e*S	Sb	19 38 02.8	+0.6
CPBX	**Cerro Prieto**	0.46	148	*e*P	Pn	19 37 57.6	-0.1
CPBX				⇑*e*		19 38 07.0	
CPBX				IAML		19 38 07.0	
comp=E,1μm,0.1s
CPBX				⇓*e*		19 38 08.0	
CPBX				IAML		19 38 08.0	
comp=N,2μm,0.2s
SALX	**Saltillo**	0.55	134	*e*P	Pg	19 37 58.2	+0.9
GLA	**Glamis**	0.69	70	P	Pg	19 38 00.3	+0.4
baz=252,SNR=24
GLA				S	Sg	19 38 09.4	+0.4
baz=252
MONP2	**Monument Peak**	0.70	277	P	Pg	19 38 00.3	+0.3
baz=94,SNR=23
MONP2				S	Sb	19 38 09.4	+0.3
baz=94
MONP2	**Monument Peak**	0.70	277	⇑*i*P	Pg	19 38 00.4	+0.3
MONP2				*e*S	Sb	19 38 09.3	+0.3
RHX	**Rio Hardy**	0.72	158	⇓*e*P	Pg	19 38 01.0	+0.6
RHX				*e*S	Sn	19 38 11.9	0.0
BC3	**Big Chuckawall**	0.85	8	P	Pg	19 38 03.0	+0.2
baz=190,SNR=37
BC3				S	Sb	19 38 13.1	-0.4
baz=190
BAR	**Barrett**	0.92	262	*e*P	Pb	19 38 03.6	+0.2
BAR				*e*S	Sg	19 38 16.0	-0.1
MATG	**Mataguay Scout**	0.96	294	⇑*e*P	Pb	19 38 04.1	-0.2
CBX	**Cerro Bola**	1.03	241	*e*P	Pg	19 38 06.2	0.0
PFO	**Pinyon Flats O**	1.08	318	P	Pb	19 38 05.4	-0.8
baz=138,SNR=14
PFO				S	Sb	19 38 19.1	-0.8
baz=138
SJX	**San Joaquin**	1.09	196	*e*P	Pn	19 38 03.6	-2.8
SJX				*e*S	Sb	19 38 15.5	-4.6
SDRC	**San Diego Road**	1.14	267	*e*P	Pn	19 38 06.9	-0.1
SDRC				*e*S	Sb	19 38 21.5	0.0
109C	**Camp Elliot, M**	1.27	274	S	Sb	19 38 25.9	+0.5
baz=92
ECBX	**El Chinero**	1.41	161	*e*P	Pb	19 38 12.8	+0.9
ECBX				*e*S	Sg	19 38 31.9	+0.1

*NEIC **03** 19:45:06.1±1.9, 14.°50S±0.°08×76.°4W±0.°1, h10km±2km, Error ellipse: s-maj=23.9km s-min=4.2km az=238.0*
*IDC **03** 19:45:07.2±1.7, 14.°38S×76.°40W, h0km, mb3.5/1, mbtmp3.8/6, ML3.8/5, MS3.1/6, Error ellipse: s-maj=46.8km s-min=16.5km az=61.0*
*ARE **03** 19:45:08±2.4, 14.°43S±0.°08×76.°3W±0.°1, h18km±6km, ML4.4, mb4.4/3(NEIC), Error ellipse: s-maj=18.0km s-min=8.1km az=58.0*
ISC 03 19:45:07.5±0.9, 14.°63S±0.°08×76.°6W±0.°1, h23km, n41, σ1§63/35, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	2.64	354	Pn	Pn	19 45 48.7	-0.1
28nm,0.3s,baz=165,slow=11,SNR=19
NNA				LR	LR	19 46 10.3	
comp=Z,38nm,18.4s,baz=72,slow=26
NNA				Lg	Lg	19 46 23.3	
124nm,0.3s,baz=234,slow=18,SNR=14
37nm,0.3s
NNA	**Nana**	2.64	354	Pn	Pn	19 45 46.7	-2.1
AP01	**Chacalluta**	7.03	123	Pn	Pn	19 46 48.2	-0.9
PB12	**IPOC Station P**	7.17	124	Pn	Pn	19 46 50.7	-0.4
ATAH	**Atahualpa**	7.66	346	Pn	Pn	19 46 58.6	+0.4
0.4nm,0.3s,baz=168,slow=9.3,SNR=1.7
ATAH				LR	LR	19 49 40.6	
comp=Z,126nm,18.8s,baz=119,slow=37
1.6nm,0.4s
PB16	**IPOC Station P**	7.71	120	Pn	Pn	19 47 00.1	+1.2
LPAZ	**La Paz**	8.30	103	Pn	Pn	19 47 09.9	+2.8
1.5nm,0.3s,baz=301,slow=8.9,SNR=27
LPAZ				LR	LR	19 50 45.7	
comp=Z,107nm,21.7s,baz=306,slow=41
6.7nm,0.5s
LPAZ	**La Paz**	8.30	103	Pn	Pn	19 47 09.2	+2.1
TA01	**Diego Aracena**	8.48	135	Pn	Pn	19 47 07.8	-1.2
GO01	**Chusmiza**	8.64	126		Pn	19 47 11.7	0.0
GO01					Sn	19 48 48.0	-0.8
PATCX	**Punta Patache**	8.67	136	Pn	Pn	19 47 09.7	-2.1
PB08	**IPOC Station P**	8.95	129		Pn	19 47 15.8	0.0
PB08					Sn	19 48 52.5	-3.7
PB02	**IPOC Station P**	9.19	137	Pn	Pn	19 47 18.3	-0.6
PB01	**IPOC Station P**	9.28	134		Pn	19 47 21.0	+1.0
PB07	**IPOC Station P**	9.49	139	Pn	Pn	19 47 22.0	-1.1
PB04	**IPOC Station P**	9.78	143	Pn	Pn	19 47 27.5	+0.4
PB09	**IPOC Station P**	9.96	137		Pn	19 47 28.2	-1.2
PB09					Sn	19 49 19.1	-1.5
PB10	**IPOC Station P**	10.50	148	Pn	Pn	19 47 36.9	+0.1
MCRA	**Macar, Loja**	10.73	342		Pn	19 47 37.5	-2.4
LVC	**Limon Verde**	10.75	139	Pn	Pn	19 47 43.1	+2.6
0.8nm,0.3s,baz=320,slow=7.9,SNR=2.4
LVC				Lg	Lg	19 50 40.6	
0.3nm,0.3s,baz=123,slow=22,SNR=4.1
LVC				LR	LR	19 51 13.2	
comp=Z,79nm,19.1s,baz=310,slow=34
2.0nm,0.4s
LVC	**Limon Verde**	10.75	139	Pn	Pn	19 47 39.7	-0.8
PB15	**IPOC Station P**	10.85	143	Pn	Pn	19 47 41.7	-0.1
BOSC	**San Juan Bosco**	11.56	350		Pn	19 47 50.1	-1.4
BOSC					Sn	19 49 57.8	-2.3
SLOR	**San Lorenzo -**	13.94	352	Pn	Pn	19 48 21.4	-2.9
SIV	**San Ignacio**	15.01	97	Pn	Pn	19 48 39.6	+1.2
baz=280,slow=18,SNR=2.3
SIV				LR	LR	19 54 46.4	
comp=Z,227nm,18.8s,baz=282,slow=39
0.5nm,0.3s
H03N1	**Juan Fernandez**	18.85	186	T	T	20 09 04.9	
baz=8.0,slow=74,SNR=1187
VA01	**Torpederas**	18.85	167	P	P	19 49 26.2	+0.2
VA01				IAmb	IAmb	19 49 29.6	
comp=Z,97nm,1.1s
H03N2	**Juan Fernandez**	18.85	186	T	T	20 09 01.5	
baz=8.0,slow=74,SNR=892
H03N3	**Juan Fernandez**	18.87	186	T	T	20 09 03.6	
baz=8.0,slow=74,SNR=990
MT01	**Popeta**	19.75	167	P	P	19 49 36.8	+1.0
MT01				IAmb	IAmb	19 49 37.2	
comp=Z,12nm,1.2s
PCRV	**Puerto La Cruz**	27.34	26	LR	LR	20 01 24.0	
comp=Z,133nm,19.1s,slow=36
TXAR	**Lajitas Array**	50.94	329	P	P	19 54 09.8	+2.4
comp=Z,0.2nm,0.3s,baz=150,slow=5.2,SNR=3.6
comp=Z,0.2nm,0.3s
TORD	**Torodi Ar. Bea**	82.23	74	P	P	19 57 28.9	+1.3
comp=Z,17nm,0.6s,baz=264,slow=5.3,SNR=5.2
H11N3	**WAKE ISLAND Hy**	19.44	285	T	T	22 14 52.8	
baz=96,slow=74,SNR=164
H11N2	**WAKE ISLAND Hy**	19.45	285	T	T	22 14 49.9	
baz=96,slow=74,SNR=135
H11N1	**WAKE ISLAND Hy**	19.45	285	T	T	22 14 42.2	
baz=96,slow=74,SNR=49
H11S2	**WAKE ISLAND Hy**	19.49	283	T	T	22 14 47.0	
baz=97,slow=75,SNR=90
H11S1	**WAKE ISLAND Hy**	19.50	283	T	T	22 14 50.9	
baz=97,slow=75,SNR=76
H11S3	**WAKE ISLAND Hy**	19.51	283	T	T	22 14 48.3	
baz=97,slow=75,SNR=91
SONM	**Songino Array**	146.80	356	PKPbc	PKPab	20 04 50.1	+0.9
comp=Z,1.0nm,0.6s,baz=342,slow=2.2,SNR=7.8
PZH	**PanZhiHua**	168.08	7	PKP	PKPdf	20 05 12.7	-0.4

*UCR **03** 19:49:45.5±1.1, 12.°61N×88.°90W, h18km±6km, ML3.6*
*SNET **03** 19:49:45.4±1.1, 12.°62N×88.°89W, h18km±6km, ML3.6*
ISC 03 19:49:43.1±2.4, 12.°5N±0.°1×88.°90W±0.°05, h10km, n21, σ0§50/27, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	1.02	21	*e*P	Pg	19 50 02.8	0.0
COEB	**Comit de Eme**	1.02	21	*e*P	Pg	19 50 02.8	0.0
COEG	**Centro de Oper**	1.07	1	*e*P	Pg	19 50 04.0	+0.1
COEG	**Centro de Oper**	1.07	1	*e*P	Pg	19 50 04.0	+0.1
PACA	**Pacayal**	1.08	31	*e*P	Pg	19 50 04.6	+0.6
PACA				*e*S	Sb	19 50 18.5	+0.3
PACA

*IDC **03** 20:16:57.2±1.8, 7°.92S×74°.60W, h149km±22km, mb3.5/5, mbtmp3.9/9, Error ellipse: s-maj=24.0km s-min=11.7km az=52.0*
*NEIC **03** 20:16:58.4±1.9, 7°.78S±0°.08×74°.65W±0°.07, h150km±11km, mb4.3/17, Error ellipse: s-maj=12.3km s-min=9.7km az=193.0*
*VAO **03** 20:17:05.7±0.9, 7°.88S×73°.86W, h151km±5km, mbR4.2*
ISC 03 20:16:57.1±0.5, 7°.87S±0°.05×74°.60W±0°.06, h151km, n52, σ1ᵍ63/52, mb4.3/14, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.88**	**86**	*eP*	**Pn**	**20 17 32.5**	**+1.6**
ATAH	**Atahualpa**	**3.83**	**281**	P	**Pn**	**20 17 55.7**	**0.0**
	38nm,0.5s,baz=40,slow=3.6,SNR=72						
ATAH				S	**Sn**	**20 18 41.1**	**0.0**
	291nm,0.7s,baz=32,slow=21,SNR=24						
NNA	**Nana**	**4.66**	**208**	P	**Pn**	**20 18 06.4**	**+0.3**
	16nm,0.3s,baz=30,slow=7.2,SNR=7.9						
NNA				S	**Sn**	**20 18 59.0**	**-0.9**
	36nm,0.3s,baz=15,slow=4.8,SNR=4.7						
NNA	**Nana**	**4.66**	**208**		**Pn**	**20 18 07.8**	**+1.7**
TBTG	**Tabatinga, AM**	**5.92**	**52**	*eP*	**Pn**	**20 18 23.1**	**+0.2**
BOSC	**San Juan Bosco**	**6.08**	**320**		**Pn**	**20 18 20.9**	**-4.2**
MCRA	**Macar, Loja**	**6.36**	**303**		Pn	20 18 24.3	-4.4
ARNL	**Arenillas**	**6.93**	**308**	Pn	**Pn**	**20 18 34.5**	**-1.8**
SLOR	**San Lorenzo -**	**8.08**	**331**	Pn	**Pn**	**20 18 49.7**	**-2.5**
ETMB	**Extrema**	**8.51**	**104**	*eP*	**Pn**	**20 18 56.0**	**-1.4**
LPAZ	**La Paz**	**10.49**	**144**	P	**Pn**	**20 19 23.8**	**-0.4**
	0.5nm,0.4s,baz=291,slow=8.9,SNR=2.1						
LPAZ				S	**S**	**20 21 21.0**	**-0.7**
	2.6nm,0.7s,baz=133,slow=13,SNR=3.6						
LPAZ	**La Paz**	**10.49**	**144**	Pn	**Pn**	**20 19 21.5**	**-2.7**
PB07	**IPOC Station P**	**14.51**	**162**	Pn	**P**	**20 20 17.2**	**-0.9**
PB09	**IPOC Station P**	**14.78**	**160**	Pn	**Pn**	**20 20 18.0**	**-1.0**
VILB	**Vilhena**	**15.03**	**111**	*eP*	**P**	**20 20 22.2**	**-1.6**
SIV	**San Ignacio**	**15.49**	**123**	P	**P**	**20 20 28.5**	**-0.4**
	1.1nm,0.4s,baz=301,slow=17,SNR=5.9						
PTLB	**Pontes e Lacer**	**16.90**	**118**	*eP*	**Pn**	**20 20 46.2**	**+1.3**
SDV	**Santo Domingo**	**17.10**	**13**	*eP*	**Pn**	**20 20 53.7**	**+6.2**
BOAV	**Boa Vista**	**17.35**	**55**	*eP*	**Pn**	**20 20 52.0**	**+1.6**
BAUV	**El Baul**	**17.93**	**21**		**Pn**	**20 20 56.5**	**-0.7**
BAUV				IAmb	IAmb	20 21 38.4	
	comp=Z,20nm,1.2s						
PDRB	**Porto dos Gac**	**18.00**	**103**	*eP*	**Pn**	**20 20 58.1**	**+0.1**
CLDB	**Colider**	**18.79**	**101**	*eP*	**Pn**	**20 21 05.8**	**-1.5**
ITTB	**Itaituba**	**19.07**	**81**	*eP*	**Pn**	**20 21 09.3**	**-1.3**
NPGB	**Novo Progresso**	**19.09**	**89**	*eP*	**Pn**	**20 21 08.7**	**-2.2**
HDC	**Heredia**	**20.12**	**332**	*eP*	Pn	20 21 32.1	+9.0
SALV	**Santo Antonio**	**20.14**	**115**	*eP*	Pn	20 21 21.9	-1.2
MALB	**Monte Alegre**	**21.11**	**75**	*eP*	**P**	**20 21 32.3**	**+2.2**
AC05	**El Transito**	**21.25**	**169**	P	**P**	**20 21 32.7**	**+1.1**
AQDB	**Aquidauana**	**22.17**	**126**	*eP*	**P**	**20 21 42.7**	**+1.7**
SNDB	**Serra Nova Dou**	**23.31**	**102**	*eP*	**P**	**20 21 51.7**	**-0.2**
CELP	**Cerrillos**	**26.96**	**17**	P	**P**	**20 22 25.1**	**+0.4**
DR12	**Loma Pena Alta**	**26.98**	**11**	P	**P**	**20 22 23.9**	**-1.1**
SJG	**San Juan**	**27.12**	**18**	P	**P**	**20 22 28.7**	**+2.5**
	comp=Z,11nm,0.4s,baz=341,slow=22,SNR=5.5						
CUPR	**Culebra, Puert**	**27.58**	**19**	P	**P**	**20 22 29.1**	**-1.2**
PLCA	**Paso Flores**	**32.93**	**174**	P	**P**	**20 23 18.3**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=340,slow=12,SNR=1.6						
	comp=Z,0.8nm,0.5s						
152A	**Waverly Hall**	**41.45**	**347**	P	**P**	**20 24 29.0**	**0.0**
152A				IAmb	IAmb	20 24 30.4	
	comp=Z,5.0nm,0.8s						
BIRD	**Birdtown, Kers**	**42.64**	**353**	P	**P**	**20 24 38.8**	**+0.1**
BIRD				IAmb	IAmb	20 24 40.1	
	comp=Z,7.2nm,1.0s						
Y49A	**Blount Mountai**	**42.98**	**346**	P	**P**	**20 24 40.7**	**-0.8**
Y49A				IAmb	IAmb	20 24 41.4	
	comp=Z,8.5nm,1.2s						
U59A	**Littleton**	**44.09**	**356**	P	**P**	**20 24 48.9**	**-1.3**
U59A				IAmb	IAmb	20 25 12.8	
	comp=Z,10nm,1.1s						
T57A	**Hurt**	**44.84**	**355**	P	**P**	**20 24 56.8**	**+0.6**
S57A	**Dark Hollow, R**	**45.57**	**355**	P	**P**	**20 25 03.0**	**+1.0**
S57A				IAmb	IAmb	20 25 03.6	
	comp=Z,5.7nm,0.6s						
TXAR	**Lajitas Array**	**46.38**	**324**	P	**P**	**20 25 10.2**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=159,slow=12,SNR=4.7						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**46.38**	**324**	P	**P**	**20 25 09.6**	**+0.9**
TX31	**Lajitas Ar. Si**	**46.38**	**324**	P	**P**	**20 25 09.5**	**+0.9**
HHAR	**Hobbs**	**47.53**	**339**	P	**P**	**20 25 17.2**	**-0.1**
HHAR				IAmb	IAmb	20 25 17.8	
	comp=Z,10nm,1.3s						
S39A	**Bolivar**	**48.58**	**340**	P	**P**	**20 25 24.6**	**-0.7**
AHID	**Auburn Hatcher**	**60.37**	**330**	P	**P**	**20 26 49.5**	**-1.1**
AHID				IAmb	IAmb	20 27 03.8	
	comp=Z,3.6nm,0.8s						
DBIC	**Dimbokro**	**71.03**	**80**	P	**P**	**20 27 58.5**	**-0.7**
	comp=Z,2.2nm,0.4s,baz=275,slow=5.8,SNR=6.9						
	comp=Z,2.2nm,0.4s						
YKA	**Yellowknife Ar**	**76.59**	**342**	P	**P**	**20 28 31.6**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=143,slow=5.8,SNR=2.6						
	comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.58**	**75**	P	**P**	**20 28 42.1**	**-0.6**
	comp=Z,15nm,0.6s,baz=263,slow=4.7,SNR=5.2						
ILAR	**Eielson Array**	**89.64**	**336**	P	**P**	**20 29 37.4**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=135,slow=3.6,SNR=4.5						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**140.32**	**225**	PKP	**PKPdf**	**20 36 10.0**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=130,slow=1.8,SNR=4.6						

*IDC **03** 20:32:10.9±7.5, 31°.58S×179°.65W, h377km±82km, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=92.3km s-min=32.5km az=4.0*
*WEL **03** 20:32:12.1±0.9, 32°S±7°×17°9W±1°7, h303km±13km, M4.4/12, mB4.7/7, ML4.6/8, MLv4.8/12, Mw(mB)3.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=108.8*
ISC 03 20:32:08.7±0.9, 31°.43S±0°.08×179°.4W±0°.1, h350km, n31, σ1ᵍ70/43, mb3.4/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.53**	**32**	P	**Pn**	**20 33 02.9**	**-1.2**
GLKZ				S	**S**	**20 33 46.7**	**-1.9**
RIZ	**Raoul Island**	**2.54**	**31**	P	**Pn**	**20 33 05.0**	**+0.8**
MXZ	**Matakaoa Point**	**6.39**	**196**	P	**Pn**	**20 33 45.6**	**+1.8**
MXZ				S	**S**	**20 35 00.1**	**-1.0**
GRZ	**Great Barrier**	**6.41**	**220**	P	**Pn**	**20 33 47.1**	**+3.0**
WMGZ	**Waiomatatini S**	**6.61**	**195**	P	**Pn**	**20 33 46.8**	**+0.3**
WMGZ				S	**S**	**20 35 04.8**	**-1.1**
HAZ	**Te Kaha**	**6.71**	**199**	P	**Pn**	**20 33 48.4**	**+0.8**
HAZ				S	**S**	**20 35 07.0**	**-0.9**
PKGZ	**Pakihiroa**	**6.76**	**197**	P	**Pn**	**20 33 49.3**	**+1.1**
PKGZ				S	**S**	**20 35 07.6**	**-1.4**
WCZ	**Waipu Caves**	**6.86**	**227**	P	**Pn**	**20 33 52.6**	**+3.2**
RUGZ	**Raukumara Rang**	**6.94**	**199**	P	**Pn**	**20 33 51.9**	**+1.5**
RUGZ				S	**S**	**20 35 11.3**	**-1.7**
OUZ	**Omahuta**	**6.94**	**235**	P	**Pn**	**20 33 52.9**	**+2.5**
TWGZ	**Tauwhareparae**	**7.05**	**197**	P	**Pn**	**20 33 54.9**	**+3.2**
TWGZ				S	**S**	**20 35 15.3**	**-0.1**
CNGZ	**Carnagh Statio**	**7.29**	**195**	P	**Pn**	**20 33 56.1**	**+1.7**
MWZ	**Matawai**	**7.32**	**199**	P	**Pn**	**20 33 55.4**	**+0.6**
MWZ				S	**S**	**20 35 19.7**	**-1.4**
URZ	**Urewera**	**7.38**	**202**	P	**Pn**	**20 33 56.4**	**+1.0**
	10nm,0.3s,baz=348,slow=4.8,SNR=25						
URZ				S	**S**	**20 35 20.8**	**-1.3**
	11nm,0.3s,baz=319,slow=1.2,SNR=14						
URZ	**Urewera**	**7.38**	**202**	P	**Pn**	**20 33 55.6**	**+0.2**
URZ				S	**S**	**20 35 20.9**	**-1.3**
RAGZ	**Rawiri**	**7.50**	**199**	P	**Pn**	**20 33 57.5**	**+0.6**
RIGZ	**Rimuhau**	**7.61**	**197**	P	**Pn**	**20 33 58.4**	**+0.2**
MUGZ	**Murupara**	**7.68**	**203**	P	**Pn**	**20 33 59.6**	**+0.5**
MUGZ				S	**S**	**20 35 26.9**	**-2.0**
SNGZ	**Shannon Statio**	**7.79**	**199**	P	**Pn**	**20 34 00.9**	**+0.6**
SNGZ				S	**S**	**20 35 30.9**	**-0.3**
STKA	**Stephens Creek**	**33.05**	**259**	P	**P**	**20 38 12.2**	**-0.5**
	1.8nm,0.7s,baz=109,slow=9.6,SNR=3.3						
	1.8nm,0.7s						
ASAR	**Alice Springs**	**41.83**	**269**	P	**P**	**20 39 24.0**	**-1.8**
	0.3nm,0.3s,baz=106,slow=7.6,SNR=7.0						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**42.92**	**274**	P	**P**	**20 39 31.9**	**-2.5**
	0.7nm,0.3s,baz=111,slow=8.0,SNR=4.6						
	0.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**51.13**	**271**	P	**P**	**20 40 35.5**	**-1.8**
	0.6nm,0.3s,baz=129,slow=6.5,SNR=1.5						
	0.6nm,0.3s						
TROLL	**Troll, Antarti**	**76.83**	**181**	P	**P**	**20 43 24.4**	**+2.0**
SNAA	**Sanae**	**77.15**	**179**	P	**P**	**20 43 25.5**	**+1.4**
VNA3	**Neumayer Olymp**	**77.35**	**177**	P	**P**	**20 43 26.7**	**+1.5**
VNA2	**Neumayer--Watz**	**77.77**	**177**	P	**P**	**20 43 29.5**	**+2.1**
	baz=181,slow=5.0						
VNA1	**Neumayer--Stat**	**78.01**	**177**	P	**P**	**20 43 30.5**	**+1.9**
FINES	**FINESS Array B**	**145.67**	**338**	PKPbc	**PKPdf**	**20 51 04.7**	**-0.3**
	2.2nm,0.4s,baz=50,slow=3.8,SNR=33						
NOA	**NORSAR Array B**	**149.56**	**350**	PKPbc	**PKPdf**	**20 51 15.0**	**+3.5**
	0.5nm,0.5s,baz=17,slow=4.2,SNR=2.0						
BRTR	**Keskin Array B**	**151.98**	**296**	PKPbc	**PKPbc**	**20 51 21.8**	**-1.1**
	0.3nm,0.5s,baz=96,slow=5.8,SNR=2.0						

*IDC **03** 20:32:22.4±2.2, 7°.62S×128°.85E, h153km±28km, mb2.9/1, mbtmp3.6/6, Error ellipse: s-maj=25.4km s-min=21.2km az=118.0*
ISC 03 20:32:20.8±0.9, 7°.70S±0°.06×129°.04E±0°.09, h150km, n6, σ3ᵍ09/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.87**	**244**	P	**Pn**	**20 33 47.3**	**+1.4**
	20nm,0.3s,baz=94,slow=6.4,SNR=25						
BATI				S	**Sn**	**20 34 50.7**	**-1.7**
	11nm,0.3s,baz=29,slow=22,SNR=6.9						
SIJI	**Sorong**	**7.13**	**18**	P	**Pn**	**20 34 03.8**	**+1.0**
	1.1nm,0.2s,baz=280,slow=24,SNR=2.0						
SIJI				S	**Sn**	**20 35 18.6**	**-4.1**
	1.2nm,0.2s,baz=232,slow=23,SNR=1.3						
FITZ	**Fitzroy Crossi**	**10.86**	**197**	P	**Pn**	**20 34 53.1**	**+0.9**
	1.3nm,0.2s,baz=24,slow=10,SNR=34						
FITZ				S	**Sn**	**20 36 47.4**	**-4.9**
	0.7nm,0.3s,baz=286,slow=14,SNR=1.4						
WRA	**Warramunga Arr**	**13.21**	**158**	P	**Pn**	**20 35 24.9**	**+2.1**
	0.3nm,0.4s,baz=325,slow=13,SNR=24						
WRA				S	**Sn**	**20 37 47.2**	**-1.9**
	1.0nm,0.3s,baz=334,slow=22,SNR=9.7						
ASAR	**Alice Springs**	**16.55**	**164**	P	**Pn**	**20 36 08.7**	**+4.3**
	0.4nm,0.5s,baz=341,slow=9.2,SNR=7.4						
ASAR				S	**S**	**20 39 06.7**	**-1.7**
	0.4nm,0.8s,baz=347,slow=25,SNR=2.1						
MKAR	**Makanchi Array**	**68.29**	**327**	P	**P**	**20 43 05.8**	**+0.2**
	0.2nm,0.5s,baz=127,slow=8.1,SNR=2.0						
	0.2nm,0.5s						

DJA 03 20:47:25.5±0.4, 11°S±5°×12°2E±°, h92km±19km, M3.6/9, mb3.6/6, MLv3.6/9, South of Timor

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.96**	**317**	P	Pn	20 47 57.7	+0.4
WSI				S	Sn	20 48 21.6	+0.1
BATI	**Baumata**	**2.16**	**66**	P	Pn	20 48 00.2	+0.2
BATI				S	Sn	20 48 27.4	+1.1
EDFI	**Ende, Flores**	**2.35**	**1**	P	Pn	20 48 01.8	-0.7
MMRI	**Maumere**	**2.52**	**13**	P	Pn	20 48 05.2	+0.5
MMRI				S	Sn	20 48 34.5	-0.3
SOEI	**Soe**	**2.90**	**63**	P	Pn	20 48 09.7	-0.1
SOEI				S	Sn	20 48 44.0	+0.1
PLAI	**Plampang**	**4.45**	**300**	P	Pn	20 48 31.5	+0.8
BSSI	**Bau Bau, Buton**	**5.07**	**347**	P	Pn	20 48 38.9	-0.2
	0.0nm5.3nm,0.7s						
TWSI	**Taliwang, Sumb**	**5.26**	**296**	P	Pn	20 48 41.8	0.0
	0.1nm8.2nm,1.7s						

*EAF **03** 20:59:37.3±2.2, 0°.41N×29°.90E, h20km±10km, MD3.8*
ISC 03 20:59:36.5±0.9, 0°.10N±0°.07×30°.28E±0°.04, h10km, n7, σ1ᵍ07/12, 1C, Uganda

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIL	**Kilembe**	**0.29**	**291⇑**	*eP*	**Pg**	**20 59 42.9**	**+0.5**
KIL				*eS*	**Sg**	**20 59 46.1**	**-0.2**
MBAR	**Mbarara**	**0.83**	**146**	*i P*	**Pb**	**20 59 54.4**	**+1.2**
MBAR				*eS*	**Sb**	**21 00 04.9**	**+0.4**
MBAR	**Mbarara**	**0.83**	**146**	*i P*	**Pb**	**20 59 54.3**	**+1.0**
MBAR				*eS*	**Sb**	**21 00 05.0**	**+0.4**
ENT	**Entebbe**	**2.20**	**91**	*eP*	**Pg**	**21 00 19.0**	**+0.3**
ENT				*eS*	**Sg**	**21 00 47.5**	**+0.3**
LODK	**Lodwar**	**6.06**	**57**	*eP*	**Pn**	**21 01 06.0**	**-0.3**
LODK				*eS*	**Sn**	**21 02 15.2**	**-0.7**
KMBO	**Kilima Mbogo**	**7.08**	**100**	*eP*	Pn	21 01 27.5	+7.0
KARM1	**KARONGA**	**10.61**	**160**	*i P*	**Pn**	**21 02 08.7**	**-0.1**
KARM1				S	**Sn**	**21 04 05.4**	**-2.5**

*DJA **03** 21:01:44.8±0.2, 4°S±3°×13°4E±°, h10km, M4.3/11, mb4.4/10, mB5.5/2, MLv4.3/11, Mw(mB)4.9/2*
*IDC **03** 21:01:47.5±2.9, 4°.25S×133°.39E, h45km±32km, mb3.6/2, mbtmp3.9/7, ML3.8/5, MS3.1/5, Error ellipse: s-maj=46.7km s-min=14.4km az=75.0*
ISC 03 21:01:43.5±0.8, 4°.21S±0°.06×133°.98E±0°.06, h35km, n22, σ2ᵍ95/23, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.15**	**307**	P	**Pn**	**21 02 17.6**	**+0.7**
FAKI				S	**Sn**	**21 02 42.9**	**+0.5**
SRPI	**Serui, Papua**	**3.25**	**44**	P	**Pn**	**21 02 32.1**	**+0.1**
SRPI				S	**Sn**	**21 03 09.5**	**0.0**
BNDI	**Bandanaira**	**4.07**	**266**	P	**Pn**	**21 02 47.9**	**+4.5**
BNDI				S	**Sn**	**21 03 36.3**	**+6.5**
SIJI	**Sorong**	**4.29**	**321**	P	**Pn**	**21 02 46.6**	**+0.3**
	2.6nm,0.3s,baz=65,slow=21,SNR=8.1						
SIJI				S	**Sn**	**21 03 31.5**	**-3.7**
	26nm,0.4s,baz=200,slow=24,SNR=7.4						
SIJI				LR	LR	21 04 44.9	
	comp=Z,102nm,19.5s,baz=198,slow=45						
	9.4nm,0.2s						
SAUI	**Saumlaki**	**4.59**	**215**	P	Pn	21 02 58.7	+8.2
AAI	**Ambon**	**5.79**	**275**	P	**Pn**	**21 03 10.1**	**+3.1**
	0.2nm31nm,0.6s						
GENI	**Genyem**	**6.39**	**76**	P	**Pn**	**21 03 17.3**	**+2.1**
	3.0nm12μm76nm,0.6s						
NLAI	**Namlea**	**6.93**	**278**	P	Pn	21 03 40.4	+18
LBMI	**Labuha**	**7.38**	**299**	P	**Pn**	**21 03 30.7**	**+1.8**
	0.1nm16nm,0.7s						
MMPI	**Merauke**	**7.64**	**124**	P	Pn	21 03 39.4	+6.9
	0.1nm14nm,0.6s						
TNTI	**Ternate**	**8.25**	**307**	P	**Pn**	**21 03 41.6**	**+0.7**
	23nm,1.0s						
SANI	**Sanana**	**8.26**	**285**	P	**Pn**	**21 03 41.8**	**+0.9**
	11nm,0.7s						
BATI	**Baumata**	**11.83**	**239**	P	**Pn**	**21 04 27.2**	**-2.8**
	1.5nm,0.3s,baz=90,slow=4.0,SNR=2.4						
	4.1nm,0.3s						
EDFI	**Ende, Flores**	**13.01**	**249**	P	**P**	**21 04 52.0**	**-4.1**
	10nm,0.9s						
PMG	**Port Moresby**	**14.07**	**112**	LR	LR	21 11 01.1	
	comp=Z,95nm,19.9s,baz=234,slow=38						
WRA	**Warramunga Arr**	**15.64**	**179**	P	**P**	**21 05 23.2**	**-2.0**
	0.2nm,0.3s,baz=354,slow=13,SNR=7.1						
WRA				S	**Sn**	**21 08 11.4**	**-2.3**
	5.3nm,0.7s,baz=351,slow=24,SNR=9.0						
	0.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**16.03**	**210**	P	**Pn**	**21 05 25.4**	**-1.1**
	0.5nm,0.3s,baz=23,slow=9.9,SNR=16						
FITZ				S	**Sn**	**21 08 20.0**	**-3.2**
	9.6nm,0.6s,baz=218,slow=18,SNR=14						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**19.34**	**180**	P	**Pn**	**21 06 09.1**	**+1.7**
	0.4nm,0.3s,baz=4.1,slow=10,SNR=40						
ASAR				S	**S**	**21 09 40.8**	**-2.3**
	2.3nm,0.9s,baz=360,slow=28,SNR=4.6						
	3.2nm,0.7s						
CTA	**Charters Tower**	**19.80**	**144**	P	**Pn**	**21 06 17.9**	**+5.0**
	2.8nm,0.8s,baz=291,slow=14,SNR=2.4						
CTA				LR	LR	21 13 39.9	
	comp=Z,140nm,19.8s,baz=272,slow=35						
	2.8nm,0.8s						
GUMO	**Guam**	**20.73**	**31**	LR	LR	21 15 20.0	
	comp=Z,13nm,19.1s,baz=250,slow=39						
MKAR	**Makanchi Array**	**68.17**	**324**	P	**P**	**21 12 41.2**	**+0.9**
	1.3nm,0.9s,baz=112,slow=9.2,SNR=5.4						
	1.3nm,0.9s						
BVAR	**Borovoye Array**	**77.89**	**326**	LR	LR	21 50 14.5	
	comp=Z,25nm,18.3s,baz=32,slow=38						

*NDI **03** 21:16:01.7±1.4, 24°.78N×94°.70E, h112km±14km, ML3.6*
*IDC **03** 21:16:02.6±4.1, 24°.65N×95°.03E, h85km±40km, mb3.1/5, mbtmp3.4/6, Error ellipse: s-maj=83.0km s-min=18.3km az=66.0*

ISC 03 21:16:01.6±1.3, 24°.70N±0°.09×94°.71E±0°.08, h82km±14km, n15, σ1ᵍ45/22, mb3.4/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.15**	**332**	*eP*	**Pn**	**21 16 23.3**	**+0.6**
KOHI				*eS*	**Sn**	**21 16 40.8**	**+2.1**
KOHI				IAML		21 16 41.2	
	comp=N,577nm,0.4s						
KOHI				IAML		21 16 41.5	
	comp=E,595nm,0.4s						
MOKO	**MOKOCHONG**	**1.62**	**354**	*eP*	**Pn**	**21 16 28.7**	**-0.1**
MOKO				*eS*	**Sn**	**21 16 49.3**	**0.0**
MOKO				IAML		21 16 54.9	
	comp=E,922nm,0.2s						
MOKO				IAML		21 16 55.1	
	comp=N,961nm,0.5s						
JORH	**JORHAT**	**2.08**	**349**	*eP*	**Pn**	**21 16 34.7**	**+0.1**
JORH				*ex*	x	21 17 06.9	
JORH				IAML		21 17 07.5	
	comp=E,2μm,0.2s						
TEZP	**TEZPUR**	**2.57**	**318**	*eP*	**Pn**	**21 16 40.7**	**-0.5**
TEZP				*eS*	**Sn**	**21 17 10.0**	**-1.6**
TEZP				IAML		21 17 10.5	
	comp=E,713nm,0.1s						
TEZP				IAML		21 17 11.1	
	comp=N,722nm,0.3s						
ITAN	**ITANAGAR**	**2.59**	**340**	*eP*	**Pn**	**21 16 41.0**	**-0.4**
ITAN				*eS*	**Sn**	**21 17 10.7**	**-1.4**
ITAN				IAML		21 17 23.4	
	comp=N,487nm,0.4s						
ITAN				IAML		21 17 23.6	
	comp=E,425nm,0.0s						
SHL	**Shillong**	**2.70**	**289**	*eP*	**Pn**	**21 16 44.1**	**+1.0**
SHL				*eS*	**Sn**	**21 17 14.6**	**-0.4**
SHL				IAML		21 17 16.1	
	comp=E,210nm,0.1s						
SHL				IAML		21 17 19.4	
	comp=E,219nm,0.1s						
LKP	**Lekhapani**	**2.82**	**21**	*eP*	**Pn**	**21 16 45.6**	**+1.1**
ZIRO	**ZIRO**	**2.92**	**345**	*eP*	**Pn**	**21 16 44.8**	**-1.2**
ZIRO				*eS*	**Sn**	**21 17 17.3**	**-3.0**
GUWA	**GUWAHATI**	**3.11**	**299**	*eP*	**Pn**	**21 16 48.8**	**+0.4**
GUWA				*eS*	**Sn**	**21 17 22.7**	**-1.8**
GUWA				IAML		21 17 23.5	
	comp=N,104nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.36**	**147**	P	**Pn**	**21 17 44.8**	**-1.6**
	comp=N,0.3nm,0.4s,baz=318,slow=13,SNR=5.9						
MKAR	**Makanchi Array**	**24.18**	**339**	P	**P**	**21 21 12.2**	**+2.1**
	comp=N,0.3nm,0.4s,baz=154,slow=9.1,SNR=9.0						
	comp=N,0.3nm,0.4s						
SONM	**Songino Array**	**24.88**	**19**	P	**P**	**21 21 17.0**	**+0.4**
	comp=N,0.4nm,0.5s,baz=194,slow=11,SNR=3.6						
	comp=N,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**30.14**	**348**	P	**P**	**21 22 05.2**	**+1.8**
	comp=N,0.3nm,0.4s,baz=140,slow=9.4,SNR=2.0						
	comp=N,0.3nm,0.4s						
WRA	**Warramunga Arr**	**58.79**	**135**	P	**P**	**21 25 50.4**	**-1.1**
	comp=N,0.7nm,1.1s,baz=324,slow=7.3,SNR=7.6						
	comp=N,0.7nm,1.1s						
ASAR	**Alice Springs**	**61.28**	**139**	P	**P**	**21 26 08.0**	**-0.5**
	comp=N,0.3nm,0.5s,baz=316,slow=6.4,SNR=2.4						
	comp=N,0.3nm,0.5s						

*IDC **03** 21:21:25.2±1.9, 9°.98N×91°.65E, h0km, mb3.6/6, mbtmp3.5/7, ML3.7/1, MS2.7/1, Error ellipse: s-maj=66.9km s-min=20.9km az=63.0*
ISC 03 21:21:29.0±1.7, 10°.0N±0°.2×91°.7E±0°.3, h24km, n11, σ0ᵍ34/7, mb3.5/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.93**	**39**	Pn	**Pn**	**21 24 04.0**	**-0.1**
	0.2nm,0.3s,baz=236,slow=16,SNR=5.4						
	0.5nm,0.6s						
PALK	**Pallekele**	**11.21**	**257**	Sn	Sn	21 25 54.8	-18
	1.4nm,0.3s,baz=91,slow=20,SNR=5.4						
PALK				LR	LR	21 27 41.0	
	comp=Z,39nm,19.6s,baz=188,slow=34						
H08S3	**Diego Garcia H**	**25.96**	**228**	T	T	21 53 51.8	
	baz=47,slow=75,SNR=260						
H08S2	**Diego Garcia H**	**25.96**	**228**	T	T	21 53 54.6	
	baz=47,slow=75,SNR=171						
H08S1	**Diego Garcia H**	**25.97**	**228**	T	T	21 53 39.3	
	baz=47,slow=75,SNR=97						
MKAR	**Makanchi Array**	**37.51**	**349**	P	**P**	**21 28 40.8**	**-0.2**
	0.7nm,0.6s,baz=164,slow=8.9,SNR=6.8						
	0.7nm,0.6s						
SONM	**Songino Array**	**39.68**	**16**	P	**P**	**21 28 59.3**	**0.0**
	0.6nm,0.8s,baz=194,slow=6.1,SNR=2.1						

comp=E,430nm,0.3s
YUK *i* S **Sn** **21 22 48.5 +0.1**
YUK A A 21 22 49.3
comp=E,3μm,0.5s
YUK A A 21 22 49.3
comp=E,4μm,0.5s
RUSJ Misakicho 1.20 352 ⇓ *i*PN **Pn** **21 22 35.2 +0.7**
RUSJ *i* S **Sn** **21 22 51.6 +2.0**
JOB Onbets 1.20 270 *e*P **Pn** **21 22 34.3 -0.2**
JOB *e*S **Sn** **21 22 49.8 +0.2**
JAR Ashorobuto 1.30 288 P **Pn** **21 22 36.0 0.0**
JAR *e*S **Sn** **21 22 52.1 0.0**
JTKR Abashiri--Toko 1.55 313 *e*P **Pn** **21 22 40.1 +0.8**
JCH Churui 1.58 260 *e*P **Pn** **21 22 39.4 -0.3**
JCH *e*S **Sn** **21 22 58.7 -0.2**
ERM Erimo 1.93 243 Pn **Pn** **21 22 46.1 +1.6**
ERM Erimo 1.93 243 PN **Pn** **21 22 46.1 +1.6**
JEM Erimo 1.93 243 Pn **Pn** **21 22 46.6 +2.1**
KUR Kuril'sk 2.89 36 *e*PN **Pn** **21 22 58.1 +0.4**
KUR *e*S **Sn** **21 23 33.4 +2.3**
KUR pmax pmax
comp=Z,92nm,0.4s
KUR smax smax
comp=E,303nm,0.5s
KUR smax smax
comp=N,155nm,0.4s
KUR Kuril'sk 2.89 36 *e*P **Pn** **21 22 58.1 +0.4**
KUR AMB AMB 21 23 01.3
comp=N,70nm,0.3s
KUR *e*S **Sn** **21 23 31.5 +0.4**
KUR A A 21 23 45.8
comp=N,160nm,0.4s
KUR A A 21 23 45.8
comp=N,360nm,0.4s
JEW Eniwo 2.96 270 Pn **Pn** **21 22 59.5 +0.9**
JTM Tenmabayashi 3.92 239 Pn **Pn** **21 23 12.2 +0.4**
YSS Yuzh-Sakhalins 4.48 335 *e*PN **Pn** **21 23 22.4 +3.0**
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 4.48 335 *e*P **Pn** **21 23 21.7 +2.3**
YSS AMB AMB 21 23 22.6
MJAR Matsushiro Arr 8.47 224 P **Pn** **21 24 13.8 -0.5**
comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=6.8
comp=Z,1.8nm,0.6s
KLR Kul'dur 11.43 308 P Pn 21 24 58.7 +4.0
comp=Z,0.1nm,0.3s,baz=103,slow=15,SNR=5.5
comp=Z,4.1nm,1.0s
KLR Kul'dur 11.43 308 *e*P **Pn** **21 24 56.8 +2.1**
PETK Petropavlovsk- 13.06 34 LR LR 21 30 28.6
comp=Z,61nm,18.1s,baz=158,slow=37
KSRS Korea Array 14.47 254 LR LR 21 30 44.0
comp=Z,44nm,21.9s,baz=120,slow=35
SONM Songino Array 27.68 294 P **P** **21 27 58.1 -0.2**
comp=Z,1.4nm,0.8s,baz=76,slow=8.3,SNR=6.8
comp=Z,1.4nm,0.8s
SONM Songino Array 27.68 294 P **P** **21 27 58.1 -0.2**
H11N2 WAKE ISLAND Hy 29.32 135 T T 21 59 06.2
baz=328,slow=76,SNR=451
H11N1 WAKE ISLAND Hy 29.33 135 T T 21 59 09.3
baz=328,slow=76,SNR=523
H11N3 WAKE ISLAND Hy 29.34 135 T T 21 59 11.0
baz=328,slow=76,SNR=429
H11S1 WAKE ISLAND Hy 30.24 137 T T 22 00 16.5
baz=329,slow=76,SNR=534
H11S3 WAKE ISLAND Hy 30.25 137 T T 22 00 21.7
baz=329,slow=76,SNR=531
H11S2 WAKE ISLAND Hy 30.26 137 T T 22 00 16.6
baz=329,slow=76,SNR=419
J20K Nowinta River 39.74 37 P **P** **21 29 43.4 +0.9**
IMAR Indian Mountai 40.02 34 P **P** **21 29 45.3 +0.5**
H21K Melozitna Rive 40.39 34 P **P** **21 29 48.6 +0.8**
H21K IAmb IAmb 21 29 49.0
comp=Z,6.6nm,1.4s
ZALV Zalesovo Beam 40.53 308 P **P** **21 29 49.2 +0.1**
comp=Z,0.9nm,0.8s,baz=109,slow=7.8,SNR=2.7
comp=Z,0.9nm,0.8s
CAST Castle Rocks 40.64 38 P **P** **21 29 50.9 +0.9**
CAST IAmb IAmb 21 29 53.0
comp=Z,2.5nm,0.8s
H23K Yukon River 41.74 34 P **P** **21 30 00.1 +1.1**
H23K IAmb IAmb 21 30 11.2
comp=Z,8.5nm,1.5s
H24K Noodor Dome 42.42 34 P **P** **21 30 04.9 +0.4**
H24K IAmb IAmb 21 30 22.7
comp=Z,4.9nm,1.3s
ILAR Eielson Array 42.88 36 P **P** **21 30 09.2 +0.9**
comp=Z,0.7nm,0.7s,baz=252,slow=7.0,SNR=6.2
comp=Z,0.7nm,0.7s
PRP Porcupine Dome 43.41 34 P **P** **21 30 13.8 +1.2**
BMAR Burnt Mountain 43.69 32 P **P** **21 30 15.2 +0.4**
MK31 Makanchi Array 43.89 298 P **P** **21 30 16.4 -0.2**
MK31 Makanchi Array 43.89 298 P **P** **21 30 16.4 -0.2**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 43.89 298 P **P** **21 30 15.1 -1.5**
comp=Z,1.8nm,0.8s,baz=76,slow=9.1,SNR=9.2
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 43.89 298 P **P** **21 30 16.1 -0.5**
MKAR Makanchi Array 43.89 298 P **P** **21 30 16.1 -0.5**
MAKZ Makanchi 44.09 298 P **P** **21 30 17.1 -1.1**
MAKZ IAmb IAmb 21 30 20.4
comp=Z,3.5nm,1.0s
MAKZ Makanchi 44.09 298 P **P** **21 30 17.1 -1.1**
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 44.98 304 P **P** **21 30 25.4 +0.2**
KURK Kurchatov 44.98 304 *e*P **P** **21 30 25.4 +0.2**
K27K Chicken 45.04 36 P **P** **21 30 25.3 -0.2**
K27K IAmb IAmb 21 30 53.7
comp=Z,6.0nm,1.4s
KURBB Kurchatov Arra 45.07 304 P **P** **21 30 25.4 -0.5**
comp=Z,1.6nm,0.8s,baz=74,slow=8.8,SNR=8.6
comp=Z,1.6nm,0.8s
L27K Beaver Creek, 45.29 38 P **P** **21 30 28.4 +0.8**
L27K IAmb IAmb 21 30 40.7
comp=Z,2.4nm,1.0s
BCAR Beaver Creek A 45.31 38 P **P** **21 30 28.4 +0.6**
CMAR Chiang Mai Arr 46.11 253 P **P** **21 30 33.9 -0.6**
comp=Z,0.4nm,0.5s,baz=40,slow=8.1,SNR=2.2
CMAR LR LR 21 49 33.6
comp=Z,16nm,21.0s,baz=175,slow=36
comp=Z,0.4nm,0.5s
KKAR Karatay Array 53.02 298 P **P** **21 31 26.5 -0.4**
KKAR Karatay Array 53.02 298 P **P** **21 31 26.5 -0.4**
EUNU Eureka 53.89 10 P **P** **21 31 32.2 -0.7**
ABKAR Akbulak array 56.63 309 P **P** **21 31 52.5 -0.4**
FIA1 FINESS Array S 65.06 333 P **P** **21 32 49.4 -0.6**
FINES FINESS Array B 65.06 333 P **P** **21 32 49.6 -0.3**
comp=Z,3.2nm,0.6s,baz=39,slow=8.2,SNR=19
comp=Z,3.2nm,0.6s
FINES FINESS Array B 65.06 333 P **P** **21 32 49.2 -0.7**
VORR Voronezh 66.25 319 *e*P **P** **21 32 59.5 +1.7**
PALK Pallekele 66.67 258 LR LR 22 03 59.3
comp=Z,33nm,18.6s,baz=225,slow=38
KBZ Khabaz 69.43 311 P **P** **21 33 18.4 +0.5**
comp=Z,2.3nm,0.9s,baz=97,slow=8.1,SNR=4.7
comp=Z,2.3nm,0.9s
NC204 NORSAR Array S 69.86 339 P **P** **21 33 20.1 -0.2**
NB2 NORSAR Subarra 69.93 338 P **P** **21 33 20.6 -0.2**
comp=Z,0.9nm,0.6s,baz=33,slow=6.5
NOA NORSAR Array B 69.93 338 P **P** **21 33 20.4 -0.4**
comp=Z,1.8nm,0.7s,baz=34,slow=6.1,SNR=9.6
comp=Z,1.8nm,0.7s
AKASG Malin Array Be 71.52 323 P **P** **21 33 30.1 -0.4**
comp=Z,2.1nm,0.6s,baz=42,slow=6.0,SNR=8.7
comp=Z,2.1nm,0.6s
BUR08 Bucovina Ar. S 75.56 323 P **P** **21 33 54.3 -0.2**
BUR08 IAmb IAmb 21 34 13.2
comp=Z,3.4nm,1.2s
BRTR Keskin Array B 77.22 313 P **P** **21 34 04.5 +0.4**
comp=Z,0.4nm,0.7s,baz=30,slow=5.7,SNR=3.7
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 84.13 55 P **P** **21 34 41.8 +0.6**
comp=Z,0.2nm,0.6s,baz=316,slow=7.0,SNR=3.5
comp=Z,0.2nm,0.6s
H03N2 Juan Fernandez 144.19 90 T T 00 22 45.9
baz=302,slow=77,SNR=7.8
H03N3 Juan Fernandez 144.21 90 T T 00 22 46.8
baz=302,slow=77,SNR=11
H03N1 Juan Fernandez 144.21 90 T T 00 22 48.9
baz=302,slow=77,SNR=9.8

*DDA **03** 21:29:59.9±0.0, 34.°70N×27.°26E, h2km±3km, ML1.9*
*ATH **03** 21:30:00.3, 34.°55N×26.°71E, h15km±2km, ML2.6/4, Error*
ellipse: s-maj=4.2km s-min=2.4km az=18.0
*THE **03** 21:30:02.6, 34.°67N×26.°67E, h19km±3km, ML2.4/3, Error*
ellipse: s-maj=3.8km s-min=1.7km az=349.0
*NIC **03** 21:30:04.6±0.0, 34.°63N×27.°20E, h14km±3km, Ml3.3/4*
ISC 03 21:29:56.8±1.8, 34.°64N±0.°06×26.°75E±0.°03, h2km±12km, n27, σ1§68/45, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.65**	**318**	P	**Pn**	**21 30 13.6**	**+0.5**
ZKR				S	**Sn**	**21 30 23.0**	**-0.9**
615nm,0.5s							
ZKR	**Zakros**	**0.65**	**318**	P	**Pn**	**21 30 13.5**	**+0.5**
ZKR				S	**Sn**	**21 30 23.1**	**-0.7**
ZKR				AML	AML	21 30 23.8	
comp=N,969μm,0.6s							
ZKR				AML	AML	21 30 24.2	
comp=E,1541μm,0.6s							
STIA	**Sitia Lasithi**	**0.78**	**316**	P	**Pn**	**21 30 15.7**	**+0.9**
STIA				S	**Sn**	**21 30 26.5**	**-0.6**
STIA	**Sitia Lasithi**	**0.78**	**316**	P	**Pn**	**21 30 15.7**	**+0.9**
STIA				S	**Sn**	**21 30 26.9**	**-0.2**
STIA				AML	AML	21 30 28.4	
comp=E,978μm,0.9s							
STIA				AML	AML	21 30 30.5	
comp=N,1126μm,0.8s							
FRMA	**Ierapetra Chan**	**0.92**	**295**	P	**Pb**	**21 30 16.5**	**+1.1**
FRMA				S	**Sb**	**21 30 28.0**	**0.0**
FRMA				AML	AML	21 30 29.4	
comp=N,635μm,0.7s							
FRMA				AML	AML	21 30 30.5	
comp=E,861μm,0.5s							
KARP	**Karpathos**	**0.97**	**20**	P	**Pn**	**21 30 20.0**	**+2.5**
KARP				S	**Sn**	**21 30 32.6**	**+0.7**
comp=E,340nm,0.4s							
KARP	**Karpathos**	**0.97**	**20**	P	**Pn**	**21 30 20.0**	**+2.5**
KARP				S	**Sn**	**21 30 35.5**	**+3.6**
KARP				AML	AML	21 30 39.0	
comp=E,0.6nm,0.5s							
KARP				AML	AML	21 30 39.0	
comp=E,0.6nm,0.5s							
KARP				AML	AML	21 30 40.1	
comp=E,0.8nm,0.5s							
KARP				AML	AML	21 30 40.1	
comp=E,0.8nm,0.5s							
KARP	**Karpathos**	**0.97**	**20**	P	**Pn**	**21 30 19.9**	**+2.4**
KARP				AML	AML	21 30 39.4	
comp=N,582μm,0.4s							
KARP				AML	AML	21 30 40.5	
comp=E,733μm,0.4s							
KSTL	**Kastelli Herak**	**1.53**	**296**	P	**Pn**	**21 30 23.6**	**-1.5**
IDI	**Anoyia**	**1.66**	**294**	P	**Pn**	**21 30 28.8**	**+1.8**
IDI				S	**Sn**	**21 30 48.4**	**-0.5**
comp=E,40nm,0.5s							
IDI	**Anoyia**	**1.66**	**294**	P	**Pb**	**21 30 29.6**	**+1.4**
ARG	**Arkhangelos**	**1.94**	**35**	P	**Pg**	**21 30 34.3**	**+0.3**
ARG				S	**Sg**	**21 30 57.4**	**-1.6**
ARG	**Arkhangelos**	**1.94**	**35**	P	**Pg**	**21 30 34.2**	**+0.3**
ARG				S	**Sg**	**21 30 57.7**	**-1.3**
THR3	**Thira Island,**	**2.08**	**329**	P	**Pn**	**21 30 32.9**	**+0.2**
THR5	**Thira Island,**	**2.11**	**328**	P	**Pn**	**21 30 33.0**	**-0.2**
TURN	**Turunc**	**2.46**	**29**	P	**Pb**	**21 30 39.8**	**-1.8**
TURN				*i* AML	AML	21 31 10.0	
comp=E,5.1nm,0.8s							
TURN				S	**Sb**	**21 31 10.1**	**-2.3**
TURN				*i* AML	AML	21 31 18.0	
comp=E,11nm,0.6s							
KSL	**Kastellorizon**	**2.76**	**56**	P	**Pn**	**21 30 45.0**	**+2.8**
KSL	**Kastellorizon**	**2.76**	**56**	P	**Pn**	**21 30 44.9**	**+2.8**
KSL				S	**Sn**	**21 31 15.8**	**-0.3**
AKAS	**Kas**	**2.82**	**55**	P	**Pn**	**21 30 44.3**	**+1.2**
AKAS				S	**Sn**	**21 31 16.6**	**-1.2**
AKAS				*i* AML	AML	21 31 21.0	
comp=E,21nm,0.7s							
AKAS				*i* AML	AML	21 31 23.0	
comp=E,38nm,0.5s							
TAVA	**DENIZLI_Tavas**	**3.32**	**31**	P	**Pn**	**21 30 52.0**	**+2.0**
TAVA				S	**Sn**	**21 31 28.5**	**-1.6**
TAVA				*i* AML	AML	21 31 33.0	
comp=E,2.5nm,0.2s							
TAVA				*i* AML	AML	21 31 36.0	
comp=E,1.7nm,0.2s							
GOLH	**Golhisar**	**3.46**	**41**	P	**Pn**	**21 30 53.5**	**+1.8**
GOLH				S	**Sn**	**21 31 34.1**	**+0.8**
GOLH				*i* AML	AML	21 31 37.0	
comp=E,7.7nm,0.4s							
GOLH				*i* AML	AML	21 31 40.0	
comp=E,7.3nm,0.5s							
AKMS	**Akamas**	**4.61**	**84**	P	**Pn**	**21 31 09.4**	**+1.9**
AKMS				S	**Sn**	**21 31 59.4**	**-2.3**
AKMS				AML	AML	21 32 01.4	
comp=E,0.1nm,0.3s							
AKMS				AML	AML	21 32 01.4	
comp=E,0.1nm,0.3s							
AKMS				AML	AML	21 32 07.4	
comp=E,0.1nm,0.8s							
AKMS				AML	AML	21 32 07.4	
comp=E,0.1nm,0.8s							
ALFC	**Alefka**	**4.84**	**82**	P	**Pn**	**21 31 12.8**	**+2.1**
ALFC				S	**Sn**	**21 32 05.0**	**-2.3**
ALFC				AML	AML	21 32 08.2	
comp=E,0.1nm,0.4s							
ALFC				AML	AML	21 32 08.2	
comp=E,0.1nm,0.4s							
ALFC				AML	AML	21 32 08.4	
comp=E,0.1nm,0.2s							
ALFC				AML	AML	21 32 08.4	
comp=E,0.1nm,0.2s							
OSC2	**CSNet OBS 4**	**4.85**	**107**	S	**Sn**	**21 32 05.6**	**-1.8**
ASGA	**Asgata**	**5.36**	**87**	P	**Pn**	**21 31 19.5**	**+1.8**
ASGA				S	**Sn**	**21 32 18.7**	**-1.3**
ASGA				AML	AML	21 32 21.4	
comp=E,0.1nm,0.3s							
ASGA				AML	AML	21 32 21.4	
comp=E,0.1nm,0.3s							
ASGA				AML	AML	21 32 27.2	
comp=E,0.1nm,0.4s							
ASGA				AML	AML	21 32 27.2	
comp=E,0.1nm,0.4s							
CSS	**Mathiatis**	**5.42**	**85**	S	**Sn**	**21 32 20.7**	**-1.1**
MVOU	**Mavrovouni**	**5.67**	**84**	S	**Sn**	**21 32 27.4**	**-0.4**

*NEIC **03** 21:56:21.9±1.3, 15.°5S±0.°1×167.°48E±0.°08, h114km±9km, mb4.4/17, Error ellipse: s-maj=18.9km s-min=6.9km az=150.0*
*IDC **03** 21:56:23.5±9.3, 15.°51S×166.°85E, h86km±74km, mb3.9/4, mbtmp4.3/5, ML4.3/1, MS3.0/1, Error ellipse: s-maj=135.7km s-min=53.6km az=73.0*
*NOU **03** 21:56:23.6, 15.°50S×167.°57E, h97km, MLv4.5/11, Vanuatu Islands*
ISC 03 21:56:22.3±1.0, 15.°5S±0.°1×167.°5E±0.°1, h124km, n43, σ1§10/43, mb4.4/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.31**	**162**	P	**Pn**	**21 57 00.3**	**+0.4**
LIFNC	**LIFOU**	**5.25**	**182**	Pn	**Pn**	**21 57 37.6**	**-1.0**
KOUNC	**Koumac, New Ca**	**5.85**	**211**	Pn	**Pn**	**21 57 46.9**	**0.0**
KOUNC	**Koumac, New Ca**	**5.85**	**211**	P	**Pn**	**21 57 48.8**	**+2.0**
MARNC	**Mare, Loyalty**	**5.97**	**175**	Pn	**Pn**	**21 57 46.8**	**-1.6**
YATNC	**Mamie plateau,**	**6.54**	**185**	P	**Pn**	**21 57 55.8**	**-0.3**
DZM	**Mont Dzumac**	**6.60**	**188**	P	**Pn**	**21 57 58.1**	**+1.1**
6.5nm,0.3s,baz=8.1,slow=12,SNR=34							
DZM				S	**Sn**	**21 59 09.8**	**-1.1**
6.5nm,0.4s,baz=316,slow=23,SNR=1.3							
32nm,0.5s							
DZM	**Mont Dzumac**	**6.60**	**188**	Pn	**Pn**	**21 57 57.2**	**+0.2**
DZM	**Mont Dzumac**	**6.60**	**188**	P	**Pn**	**21 57 58.2**	**+1.2**
NOUC	**Port Laguerre**	**6.65**	**189**	P	**Pn**	**21 58 00.3**	**+2.7**
ONTNC	**Ouen Toro**	**6.83**	**188**	Pn	**Pn**	**21 57 59.9**	**-0.2**
ONTNC	**Ouen Toro**	**6.83**	**188**	P	**Pn**	**21 58 02.0**	**+2.0**
OUENC	**Ouen Island, N**	**6.90**	**185**	Pn	**Pn**	**21 58 01.1**	**+0.2**
OUENC	**Ouen Island, N**	**6.90**	**185**	P	**Pn**	**21 58 02.6**	**+1.7**
PINNC	**Pines Island,**	**7.07**	**180**	Pn	**Pn**	**21 58 02.5**	**-0.7**
MSVF	**Nonsavu**	**10.39**	**104**	LR	LR	22 02 59.7	
comp=Z,68nm,18.6s,baz=181,slow=36							
EIDS	**Eidsvold**	**18.20**	**235**	P	**Pn**	**22 00 26.2**	**-0.9**
EIDS				IAmb	IAmb	22 00 29.5	
comp=Z,13nm,0.7s							
CTA	**Charters Tower**	**20.69**	**254**	P	**P**	**22 00 51.1**	**-1.7**
comp=Z,1.7nm,0.3s,baz=96,slow=9.2,SNR=2.3							
comp=Z,1.7nm,0.3s							
STKA	**Stephens Creek**	**28.64**	**231**	P	**P**	**22 02 08.2**	**+1.0**
comp=Z,2.5nm,0.5s,baz=42,slow=8.3,SNR=5.7							
comp=Z,2.5nm,0.5s							
STKA	**Stephens Creek**	**28.64**	**231**	P	**P**	**22 02 07.2**	**-0.1**
ODZ	**Otahua Downs**	**29.57**	**175**	P	**P**	**22 02 15.7**	**+0.3**
ODZ				IAmb	IAmb	22 02 28.2	
comp=Z,10.0nm,1.1s							
WR0	**Warramunga Arr**	**31.63**	**257**	P	**P**	**22 02 32.6**	**-1.3**
WR0				IAmb	IAmb	22 03 00.2	
comp=Z,11nm,1.4s							
WB0	**Warramunga Arr**	**31.76**	**257**	P	**P**	**22 02 33.4**	**-1.6**
WB0				IAmb	IAmb	22 02 35.1	
comp=Z,14nm,1.2s							
WB2	**Warramunga Arr**	**31.81**	**257**	P	**P**	**22 02 33.9**	**-1.6**
WB2				IAmb	IAmb	22 03 01.9	
comp=Z,6.2nm,1.1s							
WRA	**Warramunga Arr**	**31.82**	**257**	P	**P**	**22 02 35.1**	**-0.4**
comp=Z,1.4nm,0.6s,baz=84,slow=8.0,SNR=24							
comp=Z,1.4nm,0.6s							
WRA	**Warramunga Arr**	**31.82**	**257**	P	**P**	**22 02 33.9**	**-1.7**
AS31	**Alice Springs**	**32.57**	**250**	P	**P**	**22 02 42.0**	**-0.1**
AS31				IAmb	IAmb	22 02 43.1	
comp=Z,2.7nm,0.6s							
ASAR	**Alice Springs**	**32.57**	**250**	P	**P**	**22 02 42.1**	**0.0**
comp=Z,5.5nm,0.6s,baz=78,slow=9.0,SNR=62							
comp=Z,5.5nm,0.6s							
BBOO	**Buckleboo**	**33.25**	**233**	P	**P**	**22 02 49.1**	**+1.2**
FORT	**Forrest**	**39.06**	**240**	P	**P**	**22 03 36.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.05**	**260**	P	**P**	**22 03 45.9**	**+0.2**
PSA00	**Pilbara Seismi**	**45.41**	**255**	P	**P**	**22 04 28.1**	**-0.8**
MBWA	**Marble Bar**	**45.52**	**255**	P	**P**	**22 04 29.3**	**-0.5**
MBWA				IAmb	IAmb	22 04 42.0	
comp=Z,22nm,1.3s							
NWAO	**Narrogin (SRO)**	**48.51**	**240**	P	**P**	**22 04 52.7**	**-0.2**
MORW	**Morawa**	**49.10**	**245**	P	**P**	**22 04 57.7**	**+0.3**
MORW				IAmb	IAmb	22 05 31.6	
comp=Z,15nm,1.3s							
VNDA	**Vanda**	**62.09**	**181**	P	**P**	**22 06 30.4**	**+0.9**
SBA	**Scott Base**	**62.36**	**180**	P	**P**	**22 06 33.0**	**+1.7**
SBA				IAmb	IAmb	22 06 34.4	
comp=Z,4.4nm,1.1s							
KIWB	**Kanaga Island**	**68.40**	**10**	P	**P**	**22 07 10.6**	**+0.1**
QSPA	**South Pole Qui**	**74.53**	**180**	P	**P**	**22 07 48.2**	**+0.9**
TROLL	**Troll, Antarti**	**92.11**	**185**	P	**P**	**22 09 17.5**	**+0.1**
SNAA	**Sanae**	**92.79**	**183**	P	**P**	**22 09 20.1**	**-0.4**
VNA3	**Neumayer Olymp**	**93.44**	**181**	P	**P**	**22 09 22.9**	**-0.6**
VNA2	**Neumayer--Watz**	**93.71**	**182**	P	**P**	**22 09 24.4**	**-0.2**
baz=170,slow=5.0							

*NEIC **03** 22:32:16.9±2.8, 55.°54N±0.°02×135.°07W±0.°09, h10km±7km, Error ellipse: s-maj=7.7km s-min=3.3km az=84.0*
*PGC **03** 22:32:18.0±3.5, 55.°54N×134.°96W, h20km, ML3.0/5, 170km Sse of Sitka, Ak Southeastern Alaska*
ISC 03 22:32:16.4±1.3, 55.°52N±0.°04×135.°02W±0.°07, h9km, n32, σ1§64/40, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRAG	**Craig**	**1.08**	**92**		**Pg**	**22 32 36.8**	**-0.3**
CRAG				IAML		22 32 58.8	
comp=N,218nm,0.5s							
SIT	**Sitka**	**1.55**	**354**	Pn	**Pn**	**22 32 43.7**	**-0.3**
SIT				IAML		22 33 07.6	
comp=E,79nm,0.4s							
LIB	**Langara Island**	**1.70**	**137**	Pn	**Pn**	**22 32 46.0**	**-0.2**
LIB				Sg	**Sb**	**22 33 10.4**	**+1.2**
LIB	**Langara Island**	**1.70**	**137**	Pn	**Pn**	**22 32 46.0**	**-0.2**
LIB				Sg	**Sb**	**22 33 10.4**	**+1.2**
WRAK	**Wrangell Islan**	**1.75**	**58**	Pn	**Pn**	**22 32 46.7**	**-0.2**
WRAK				IAML		22 33 11.5	
comp=E,169nm,0.5s							
NDB	**Naden**	**1.98**	**142**	Pn	**Pn**	**22 32 51.7**	**+1.7**
NDB				Sg	**Sg**	**22 33 19.9**	**0.0**
NDB	**Naden**	**1.98**	**142**	Pn	**Pn**	**22 32 51.7**	**+1.7**
NDB				Sg	**Sg**	**22 33 19.9**	**0.0**
DIB	**Dawson Inlet,**	**2.76**	**146**	Pn	**Pn**	**22 33 00.5**	**-0.2**
DIB				Sn	**Sn**	**22 33 32.4**	**-1.7**
DIB	**Dawson Inlet,**	**2.76**	**146**	Pn	**Pn**	**22 33 00.9**	**+0.2**
DIB				IAML		22 34 01.2	
comp=N,51nm,4.4s							
DIB				IAML		22 34 30.1	
comp=E,45nm,4.3s							
DIB	**Dawson Inlet,**	**2.76**	**146**	Pn	**Pn**	**22 33 00.5**	**-0.2**
DIB				Sn	**Sn**	**22 33 32.4**	**-1.7**
JIS	**Juneau Island**	**2.78**	**7**	Pn	**Pn**	**22 33 01.4**	**+0.3**
JIS				IAML		22 33 45.9	
comp=E,24nm,0.8s							
RUBB	**Prince Rupert**	**3.00**	**112**	Sn	**Sn**	**22 33 37.8**	**-2.2**
RUBB				Sg	**Sb**	**22 33 50.0**	**+3.4**
RUBB	**Prince Rupert**	**3.00**	**112**	Pn	**Pn**	**22 33 04.6**	**+0.6**
RUBB				IAML		22 33 36.0	
comp=E,33nm,4.5s							
RUBB				IAML		22 34 47.7	
comp=N,37nm,4.0s							
RUBB	**Prince Rupert**	**3.00**	**112**	Sn	**Sn**	**22 33 37.8**	**-2.2**
RUBB				Sg	**Sb**	**22 33 50.0**	**+3.4**
T35M	**Bob Quinn**	**3.04**	**59**	Sg	**Sb**	**22 33 50.7**	**+3.1**
T35M	**Bob Quinn**	**3.04**	**59**	Sg	**Sb**	**22 33 50.7**	**+3.1**
BESE	**Bessie Mountai**	**3.07**	**2**	Pn	**Pn**	**22 33 05.2**	**+0.1**
GRNB	**Grenville Isla**	**3.38**	**118**	Sn	**Sn**	**22 33 47.5**	**-2.1**
GRNB	**Grenville Isla**	**3.38**	**118**	Pn	**Pn**	**22 33 08.6**	**-0.7**
GRNB	**Grenville Isla**	**3.38**	**118**	Sn	**Sn**	**22 33 47.5**	**-2.1**
HWKB	**Hawksbury Isla**	**3.92**	**117**	Sn	**Sn**	**22 34 01.6**	**-1.3**
HWKB	**Hawksbury Isla**	**3.92**	**117**	Sn	**Sn**	**22 34 01.6**	**-1.3**
HG4B	**Hotspring**	**3.95**	**144**	Pn	**Pn**	**22 33 17.2**	**+0.2**
DLBC	**Dease Lake**	**4.00**	**41**	Sg	**Sg**	**22 34 21.5**	**-3.2**
TABL	**Table Mountain**	**5.91**	**329**	Pn	**Pn**	**22 33 44.8**	**+0.6**
LOGN	**Logan Glacier**	**6.19**	**332**	Pn	**Pn**	**22 33 49.1**	**+1.2**
CTGM	**Chitina Glacie**	**6.39**	**331**	Pn	**Pn**	**22 33 52.0**	**+1.3**
ISLE	**Juniper Island**	**6.40**	**326**	Pn	**Pn**	**22 33 51.1**	**+0.2**
BARN	**Barnard Glacie**	**6.56**	**331**	Pn	**Pn**	**22 33 54.2**	**+1.1**
TGL	**Tana Glacier**	**6.68**	**325**	Pn	**Pn**	**22 33 53.7**	**-0.9**
MCARA	**McCarthy VSAT**	**7.22**	**328**	Pn	**Pn**	**22 34 04.0**	**+2.0**
GLB	**Gilahina Butte**	**7.51**	**326**	Pn	**Pn**	**22 34 06.7**	**+0.7**

*NEIC **03** 22:33:41.7±1.6, 6.°25S±0.°07×145.°80E±0.°07, h121km±6km, mb4.5/43, Error ellipse: s-maj=10.5km s-min=9.0km az=137.0*
*IDC **03** 22:33:41.2±0.8, 6.°27S×145.°92E, h121km±7km, mb4.1/15, mbtmp4.5/19, MS3.4/3, Error ellipse: s-maj=18.5km s-min=9.4km az=77.0*
*DJA **03** 22:33:43.5±0.4, 6.°5±3.°×14.°6E±.°, h131km±5km, M4.6/31, mb4.5/31, mB5.1/7, MLv4.8/2, Mw(mB)4.5/7, MwMwp5.4/1, Mwp5.6/1*
ISC 03 22:33:41.4±0.4, 6.°28S±0.°05×145.°86E±0.°07, h121km, n106, σ1§12/111, mb4.5/34, 2C-2D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.37**	**158**	P	**Pn**	**22 34 33.0**	**+0.4**
263nm,0.4s,baz=5.5,slow=5.1,SNR=83							
PMG				S	**Sn**	**22 35 11.0**	**-1.1**
407nm,0.4s,baz=72,slow=5.5,SNR=8.8							
PMG	**Port Moresby**	**3.37**	**158**	Pn	**Pn**	**22 34 32.5**	**0.0**
MANU	**Manus Island**	**4.46**	**20**	Pn	**Pn**	**22 34 48.0**	**+0.8**
COEN	**Coen**	**8.08**	**199**	Pn	**Pn**	**22 35 36.5**	**+0.6**
SMPI	**Sarmi**	**8.30**	**301**	P	**Pn**	**22 35 40.7**	**+1.7**
1μm12nm,1.2s							
CTA	**Charters Tower**	**13.74**	**178**	P	**Pn**	**22 36 52.0**	**+0.8**
4.4nm,0

WRA LR LR 22 45 05.6
comp=Z,128nm,19.0s,baz=30,slow=39
WRA Warramunga Arr 17.60 218 P **P** **22 37 37.4 -1.1**
AAI Ambon 17.78 277 P **Pn** **22 37 43.6 +2.2**
comp=Z,54nm,0.7s
NLAI Namlea 18.93 278 P **Pn** **22 37 55.4 +0.3**
comp=Z,16nm,0.9s
LBMI Labuha 19.15 286 P **Pn** **22 37 56.6 -1.1**
comp=Z,36nm,0.9s
KNRA Kununurra 19.19 239 P **P** **22 37 54.7 -1.1**
KNRA IAmb IAmb 22 38 26.7
comp=Z,16nm,0.8s
EIDS Eidsvold 19.63 166 P **P** **22 38 01.1 +0.5**
EIDS IAmb IAmb 22 38 03.8
comp=Z,18nm,0.8s
SANI Sanana 20.25 281 P Pn 22 38 09.5 -1.0
comp=Z,1μmcomp=Z,31nm,0.7s
AS31 Alice Springs 20.76 212 P **P** **22 38 11.8 -1.0**
ASAR Alice Springs 20.77 212 P **P** **22 38 12.1 -0.8**
comp=Z,4.9nm,0.8s,baz=41,slow=9.0,SNR=43
ASAR pP **pP** **22 38 36.7 +1.5**
comp=Z,6.3nm,0.8s,baz=45,slow=11,SNR=5.8
ASAR S **S** **22 41 55.2 -2.9**
comp=Z,2.3nm,0.9s,baz=31,slow=22,SNR=4.8
ASAR PcP **PcP** **22 42 18.4 +0.9**
comp=Z,1.5nm,0.7s,baz=62,slow=2.1,SNR=5.0
ASAR LR LR 22 47 24.4
comp=Z,115nm,18.6s,baz=54,slow=40
comp=Z,4.9nm,0.8s
ASAR Alice Springs 20.77 212 P **P** **22 38 11.6 -1.3**
FITZ Fitzroy Crossi 22.96 237 P **P** **22 38 34.6 -1.0**
comp=Z,4.4nm,0.6s,baz=58,slow=9.2,SNR=16
comp=Z,4.4nm,0.6s
FITZ Fitzroy Crossi 22.96 237 P **P** **22 38 34.5 -1.1**
EDFI Ende, Flores 24.09 263 P **P** **22 38 47.2 +1.2**
comp=Z,4.6nm,1.4s
ARMA Armidale 24.62 168 P **P** **22 38 51.3 +0.6**
ARMA IAmb IAmb 22 39 08.6
comp=Z,23nm,1.4s
LIFNC LIFOU 25.25 127 P **P** **22 38 57.1 +0.8**
STKA Stephens Creek 25.78 188 P **P** **22 39 00.9 -0.1**
comp=Z,9.3nm,0.7s,baz=346,slow=9.3,SNR=10
comp=Z,9.3nm,0.7s
STKA Stephens Creek 25.78 188 P **P** **22 39 01.2 +0.2**
YULB Yu-li 38.02 322 P **P** **22 40 47.5 -0.6**
TPUB Ta-pu 38.37 321 P **P** **22 40 49.9 -1.0**
OUZ Omahuta 38.49 142 P **P** **22 40 52.0 +0.2**
JMN Monobe 41.37 345 P **P** **22 41 14.1 -1.6**
URZ Urewera 42.61 143 LR LR 22 57 12.5
comp=Z,36nm,20.8s,baz=51,slow=33
JHS Saijyo 42.78 345 P **P** **22 41 26.5 -0.5**
JHS IAmb IAmb 22 42 10.1
comp=Z,14nm,1.2s
MJAR Matsushiro Arr 43.19 351 P **P** **22 41 29.4 -1.0**
comp=Z,3.4nm,1.0s,baz=184,slow=7.4,SNR=4.8
comp=Z,3.4nm,1.0s
MSWZ Moikau Station 43.70 148 P **P** **22 41 34.8 +0.4**
BFZ Birch Farm 43.73 146 P **P** **22 41 35.2 +0.6**
BFZ IAmb IAmb 22 41 36.4
comp=Z,11nm,0.7s
SDSI Sungai Dareh 44.64 275 P **P** **22 41 41.7 -0.6**
comp=Z,5.6nm,0.9s
KSRS Korea Array 46.62 340 P **P** **22 41 56.8 -0.6**
comp=Z,6.2nm,0.8s,baz=160,slow=8.5,SNR=16
comp=Z,6.2nm,0.8s
TIA Tai'an 50.13 330 P **P** **22 42 24.2 -0.2**
USA0B Ussuriysk Arra 51.78 347 P **P** **22 42 36.1 -0.5**
USA0B IAmb IAmb 22 42 57.8
comp=Z,15nm,1.2s
USRK Ussuriysk Ar. 51.78 347 P **P** **22 42 36.8 +0.2**
comp=Z,5.0nm,0.6s,baz=176,slow=7.1,SNR=16
comp=Z,5.0nm,0.6s
USRK Ussuriysk Ar. 51.78 347 P **P** **22 42 36.0 -0.6**
HNS HongShan 52.28 329 ⇑P **P** **22 42 40.8 +0.4**
CMAR Chiang Mai Arr 52.38 299 P **P** **22 42 42.8 +1.2**
comp=Z,8.0nm,0.7s,baz=123,slow=6.0,SNR=57
comp=Z,8.0nm,0.7s
CMAR Chiang Mai Arr 52.38 299 P **P** **22 42 42.0 +0.4**
CHTO Chiang Mai 52.53 299 P **P** **22 42 42.3 -0.3**
XAN Xi'an 53.18 321 P **P** **22 42 47.2 0.0**
XAN pP pP 22 43 01.3 -15
BJT Baijiatuau 53.58 332 P **P** **22 42 49.8 -0.2**
PZH PanZhiHua 53.75 309 P **P** **22 42 54.3 +2.7**
HHC Hu-ho-hao-te 56.48 329 *e*P **P** **22 43 12.7 +1.8**
LZH Lanzhou 57.69 320 ⇓P **P** **22 43 20.7 +1.1**
LZH pP pP 22 43 49.4 +0.7
PEA0B Petropavlovsk- 60.00 8 P **P** **22 43 34.7 -0.3**
PETK Petropavlovsk- 60.00 8 P **P** **22 43 34.8 -0.3**
comp=Z,6.7nm,0.8s,baz=159,slow=6.8,SNR=13
comp=Z,6.7nm,0.8s
PETK Petropavlovsk- 60.00 8 P **P** **22 43 35.3 +0.2**
GTA Gaotai 62.23 321 ⇓P **P** **22 43 51.6 +1.0**
GTA pP pP 22 44 21.4 +1.4
GTA sP sP 22 44 37.1 +3.8
LSA Lhasa 63.50 307 P **P** **22 43 58.1 -1.5**
ULN Ulaanbaatar 63.81 332 P **P** **22 43 59.9 -1.0**
ULN IAmb IAmb 22 44 02.7
comp=Z,4.8nm,0.8s
SONM Songino Array 64.10 332 P **P** **22 44 02.6 -0.1**
comp=Z,2.7nm,0.9s,baz=152,slow=6.2,SNR=12
comp=Z,2.7nm,0.9s
SONM Songino Array 64.10 332 P **P** **22 44 02.7 -0.1**
SONM IAmb IAmb 22 44 05.1
comp=Z,7.4nm,1.4s
VNDA Vanda 71.71 176 P **P** **22 44 50.5 +0.8**
comp=Z,1.0nm,0.7s,baz=320,slow=6.4,SNR=9.1
VNDA pP **pP** **22 45 20.4 -0.1**
comp=Z,1.0nm,0.7s,baz=331,slow=8.0,SNR=3.8
comp=Z,1.0nm,0.7s
WMQ Urumqi 72.26 320 ⇑*i*P **P** **22 44 55.0 +1.3**
MK31 Makanchi Array 76.99 321 P **P** **22 45 21.2 +0.3**
MK31 IAmb IAmb 22 45 22.4
comp=Z,11nm,1.1s
MKAR Makanchi Array 76.99 321 P **P** **22 45 21.3 +0.4**
comp=Z,7.8nm,0.8s,baz=97,slow=7.3,SNR=44
comp=Z,7.8nm,0.8s
MKAR Makanchi Array 76.99 321 P **P** **22 45 21.0 +0.1**
MAKZ Makanchi 77.19 321 P **P** **22 45 21.8 -0.2**
ZAA0 Zalesovo Array 78.64 328 P **P** **22 45 28.9 -0.9**
ZALV Zalesovo Beam 78.64 328 P **P** **22 45 29.4 -0.4**
comp=Z,2.4nm,0.6s,baz=104,slow=6.3,SNR=12
comp=Z,2.4nm,0.6s
ZALV Zalesovo Beam 78.64 328 P **P** **22 45 28.7 -1.1**
KSH Kashi 78.72 312 P **P** **22 45 32.4 +1.6**
KSH PcP **PcP** **22 45 43.8 +4.6**
KSH pP pP 22 46 03.7 +1.8
NIL Nilore 79.17 306 P **P** **22 45 32.7 -0.5**
AAK Ala-Archa 80.73 315 P **P** **22 45 41.1 -0.5**
KURK Kurchatov 80.75 324 P **P** **22 45 40.2 -1.1**
KURK IAmb IAmb 22 45 42.5
comp=Z,11nm,0.8s
KBL Kabul 82.77 306 P **P** **22 45 51.8 -0.8**
KBL IAmb IAmb 22 45 52.6
comp=Z,3.8nm,0.8s
J20K Nowinta River 83.10 22 P **P** **22 45 53.6 +0.3**
J20K IAmb IAmb 22 45 54.4
comp=Z,3.3nm,0.7s
CAST Castle Rocks 83.53 24 P **P** **22 45 54.9 -0.7**
CAST IAmb IAmb 22 45 56.5
comp=Z,4.0nm,0.9s
KK31 Karatay Array 83.67 315 P **P** **22 45 56.6 -0.2**
KKAR Karatay Array 83.67 315 P **P** **22 45 56.5 -0.2**
IMAR Indian Mountai 84.15 21 P **P** **22 45 58.4 -0.2**
TRF Thorofare Moun 84.27 24 P **P** **22 45 59.2 -0.3**
TRF IAmb IAmb 22 46 28.8
comp=Z,7.1nm,1.3s
BPAW Bear Paw Mtn. 84.28 23 P **P** **22 45 58.3 -1.1**
H21K Melozitna Rive 84.33 21 P **P** **22 45 59.1 -0.4**
H21K IAmb IAmb 22 46 17.6
comp=Z,10nm,1.5s
I21K Tanana 84.40 22 P **P** **22 45 59.0 -0.9**
I21K IAmb IAmb 22 46 01.4
comp=Z,5.9nm,0.9s
MLY Manley 84.80 22 P **P** **22 46 01.8 -0.2**
MLY IAmb IAmb 22 46 02.8
comp=Z,8.2nm,0.8s
RND Reindeer 84.83 24 P **P** **22 46 01.2 -1.0**
RND IAmb IAmb 22 46 02.1
comp=Z,8.5nm,0.7s
MCK McKinley 84.94 24 P **P** **22 46 01.7 -1.0**
MCK IAmb IAmb 22 46 02.8
comp=Z,10nm,1.0s
NRIK Noril'sk 85.19 342 P **P** **22 46 02.9 -0.9**
comp=Z,4.4nm,0.6s,baz=149,slow=5.3,SNR=5.8
comp=Z,4.4nm,0.6s
DHY Denali Highway 85.31 25 P **P** **22 46 04.3 -0.4**
DHY IAmb IAmb 22 46 05.4
comp=Z,5.3nm,0.7s
ILAR Eielson Array 86.18 23 P **P** **22 46 07.6 -1.2**
comp=Z,5.5nm,0.6s,baz=251,slow=5.1,SNR=45
comp=Z,5.5nm,0.6s
BRVK Borovoye 86.39 324 P **P** **22 46 09.7 -0.4**
BRVK IAmb IAmb 22 46 11.0
comp=Z,4.7nm,0.9s
GEYT Alibeck 92.03 308 P **P** **22 46 36.4 -0.7**
comp=Z,1.0nm,0.5s,baz=157,slow=8.0,SNR=3.5
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 92.04 319 P **P** **22 46 34.6 -2.1**
NOA NORSAR Array B 115.78 337 PKP **PKiKP** **22 52 08.0 -1.4**
comp=Z,0.4nm,0.6s,baz=52,slow=2.0,SNR=2.2
GERES GERESS Array B 121.48 325 PKP **PKPdf** **22 52 20.8 0.0**
comp=Z,0.5nm,0.6s,baz=103,slow=2.9,SNR=7.1
PLCA Paso Flores 122.51 148 PKP **PKPdf** **22 52 23.2 +0.2**
comp=Z,1.6nm,0.7s,baz=182,slow=1.2,SNR=7.0
LPAZ La Paz 139.58 124 PKP **PKPdf** **22 52 56.4 -0.2**
comp=Z,1.7nm,0.9s,baz=264,slow=3.4,SNR=4.4
TORD Torodi Ar. Bea 144.06 284 PKP PKPbc 22 53 02.3 +0.3
comp=Z,16nm,0.6s,baz=70,slow=3.0,SNR=5.2
BAUV El Baul 146.30 83 **PKPdf** **22 53 08.0 +0.3**
KOWA Kowa 149.29 288 PKPbc **PKPdf** **22 53 14.0 +1.4**
DBIC Dimbokro 150.90 272 PKPbc **PKPbc** **22 53 21.2 +0.3**
comp=Z,11nm,0.9s,baz=102,slow=3.3,SNR=7.9
BDFB Brasilia 154.25 148 PKPbc **PKPbc** **22 53 28.5 0.0**
comp=Z,4.3nm,0.7s,baz=126,slow=3.7,SNR=4.7

DJA 03 22:49:14.2±1.1, 10°S±4°×11°8E±°, h25km±10km, M3.8/11, mb3.8/1, MLv3.7/11, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.89**	**353**	P	Pn	22 49 31.2	0.0
PLAI				S	Sn	22 49 43.5	+0.1
TWSI	**Taliwang, Sumb**	**1.39**	**314**	P	Pn	22 49 37.5	-0.6
TWSI				S	Sn	22 49 55.7	0.0
DNP	**Denpasar**	**2.84**	**291**	P	Pn	22 49 58.2	+0.2
DNP				S	Sn	22 50 32.2	+0.8
IGBI	**Denpasar**	**2.85**	**288**	P	Pn	22 49 58.6	+0.4
SRBI	**Singaraja**	**3.10**	**301**	P	Pn	22 50 02.1	+0.5
EDFI	**Ende, Flores**	**3.87**	**76**	P	Pn	22 50 12.0	-0.3
JAGI	**Jajag, Banyuwa**	**3.90**	**288**	P	Pn	22 50 11.9	-0.6
BSSI	**Bau Bau, Buton**	**4.39**	**36**	P	Pn	22 50 19.4	+0.1
KMMI	**Kalianget**	**4.70**	**304**	P	Pn	22 50 24.0	+0.4
BKSI	**Bulukumba**	**4.90**	**27**	P	Pn	22 50 26.7	+0.4
SOEI	**Soe**	**6.29**	**91**	P	Pn	22 50 24.6	-21

*IDC **03** 22:52:59.7±1.6, 26°.82N×130°.13E, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/4, Error ellipse: s-maj=41.4km s-min=21.2km az=43.0*
*JMA **03** 22:53:00.8±0.1, 27°.0N±0°.3×130°.3E±0°.4, h61km±4km, MV3.6/19, NEAR MINAMI-DAITOJIMA IS*

ISC 03 22:52:59.1±0.8, 26°.98N±0°.03×130°.31E±0°.04, h10km, n24, σ1°23/36, mb3.9/4, MS3.4/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.36**	**139**	P	**Pg**	**22 53 24.0**	**-1.2**
JKDJ				S	**Sn**	**22 53 41.0**	**-1.1**
JZK	**Kikaishima**	**1.36**	**347**	P	**Pg**	**22 53 24.3**	**-1.0**
JZK				S	**Sn**	**22 53 41.1**	**-1.1**
JMZ	**Minamidaito 2**	**1.42**	**145**	P	**Pb**	**22 53 24.3**	**-1.4**
JMZ				S	**Sn**	**22 53 42.1**	**-1.6**
JTK	**Tokunoshima**	**1.45**	**304**	P	**Pb**	**22 53 25.4**	**-0.9**
JTK				S	**Sn**	**22 53 43.4**	**-1.2**
JAM	**Amami Oshima**	**1.55**	**336**	P	**Pb**	**22 53 26.8**	**-1.2**
JAM				S	**Sn**	**22 53 46.0**	**-1.1**
JOKE	**Okinoerabujima**	**1.60**	**284**	P	**Pb**	**22 53 27.3**	**-1.4**
JOKE				S	**Sn**	**22 53 47.3**	**-0.9**
JAMN	**Amaminishikomi**	**1.61**	**321**	P	**Pb**	**22 53 27.3**	**-1.6**
JAMN				S	**Sn**	**22 53 47.1**	**-1.3**
JYRO	**Yoronjima**	**1.66**	**272**	P	**Pb**	**22 53 28.6**	**-1.2**
JYRO				S	**Sn**	**22 53 48.8**	**-0.9**
JOW	**Kunigami**	**1.83**	**266**	Pn	**Pn**	**22 53 30.2**	**-0.4**
	38nm,0.3s,baz=114,slow=22,SNR=16						
JOW				Sn	**Sn**	**22 53 52.6**	**-1.2**
	53nm,0.3s,baz=217,slow=29,SNR=19						
JOW	**Kunigami**	**1.83**	**266**	P	**Pb**	**22 53 30.9**	**-1.7**
JOW				S	**Sn**	**22 53 52.6**	**-1.2**
JIH	**Iheya**	**2.09**	**272**	P	**Pn**	**22 53 34.1**	**-0.2**
JIH				S	**Sn**	**22 53 59.8**	**-0.6**
JNTH	**Nagotoyohara**	**2.10**	**258**	P	**Pn**	**22 53 34.4**	**0.0**
JNTH				S	**Sn**	**22 53 58.8**	**-1.8**
JTAJ	**Takarajima**	**2.37**	**336**	P	**Pn**	**22 53 38.2**	**+0.1**
JTAJ				S	**Sn**	**22 54 05.4**	**-1.9**
JJT3	**Tamagusuku3**	**2.41**	**250**	P	**Pn**	**22 53 39.1**	**+0.4**
JJT3				S	**Sn**	**22 54 07.3**	**-1.1**
JAGN	**Aguni-jima**	**2.77**	**263**	P	**Pn**	**22 53 43.7**	**+0.1**
JAGN				S	**Sn**	**22 54 16.2**	**-0.9**
JKE	**Kume jima 2**	**3.22**	**259**	P	**Pn**	**22 53 50.2**	**+0.4**
JKE				S	**Sn**	**22 54 27.7**	**-0.6**
SONM	**Songino Array**	**27.98**	**324**	LR	LR	23 10 57.8	
	comp=Z,57nm,18.6s,baz=35,slow=38						
KRVT	**Keravat (AS076**	**37.53**	**143**	LR	LR	23 16 32.3	
	comp=Z,23nm,18.2s,baz=138,slow=38						
MKAR	**Makanchi Array**	**42.44**	**311**	P	**P**	**23 00 56.8**	**+2.7**
	0.8nm,0.9s,baz=116,slow=8.2,SNR=3.7						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**46.81**	**175**	P	**P**	**23 01 29.9**	**+0.7**
	1.5nm,0.7s,baz=354,slow=8.4,SNR=14						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**50.47**	**176**	P	**P**	**23 01 58.5**	**+1.2**
	1.2nm,0.8s,baz=5.5,slow=11,SNR=10						
	1.2nm,0.8s						
AKTO	**Aktyubinsk**	**58.63**	**314**	LR	LR	23 28 58.5	
	comp=Z,40nm,19.4s,baz=353,slow=37						
BRTR	**Keskin Array B**	**78.03**	**308**	P	**P**	**23 04 59.8**	**+1.4**
	0.8nm,0.8s,baz=65,slow=7.0,SNR=6.1						
	0.8nm,0.8s						
OPO	**Ambohidratompo**	**92.38**	**250**	LR	LR	23 48 05.8	
	comp=Z,37nm,18.3s,baz=274,slow=36						

*NEIC **03** 23:29:44.2±0.9, 18°.9N±0°.1×145°.8E±0°.7, h193km±26km, mb3.9/9, Error ellipse: s-maj=94.2km s-min=15.7km az=92.0*
*IDC **03** 23:29:46.1±22.0, 18°.87N×146°.00E, h227km±200km, mb3.5/5, mbtmp4.1/5, Error ellipse: s-maj=135.9km s-min=25.8km az=76.0*

ISC 03 23:29:42.8±2.4, 18°.9N±0°.1×146°.1E±0°.6, h200km, n16, σ0°38/17, mb3.9/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB0	**Warramunga Arr**	**40.11**	**197**	P	**P**	**23 36 59.8**	**+0.6**
WB0				IAmb	IAmb	23 37 00.5	
	comp=Z,4.1nm,0.5s						
WR0	**Warramunga Arr**	**40.25**	**197**	P	**P**	**23 37 00.1**	**-0.3**
WR0				IAmb	IAmb	23 37 09.7	
	comp=Z,3.4nm,0.9s						
WRAB	**Tennant Creek**	**40.28**	**197**	P	**P**	**23 37 01.2**	**+0.6**
WB2	**Warramunga Arr**	**40.29**	**197**	P	**P**	**23 37 01.2**	**+0.5**
WB2				IAmb	IAmb	23 37 08.6	
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**40.29**	**197**	P	**P**	**23 37 00.9**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=19,slow=8.5,SNR=32						
WRA				PcP	**PcP**	**23 39 00.7**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=15,slow=3.5,SNR=2.1						
	comp=Z,1.6nm,0.3s						
WRA	**Warramunga Arr**	**40.29**	**197**	P	**P**	**23 37 00.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**41.92**	**210**	P	**P**	**23 37 13.6**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=15,slow=6.9,SNR=20						
	comp=Z,1.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.92**	**210**	P	**P**	**23 37 13.7**	**-0.2**
ASAR	**Alice Springs**	**43.95**	**196**	P	**P**	**23 37 30.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=12,slow=8.0,SNR=5.0						
	comp=Z,0.3nm,0.3s						
MBWA	**Marble Bar**	**47.47**	**214**	P	**P**	**23 37 57.3**	**-0.5**
MBWA				IAmb	IAmb	23 38 11.1	
	comp=Z,3.6nm,0.8s						
MORW	**Morawa**	**55.84**	**212**	P	**P**	**23 38 59.6**	**0.0**
MKAR	**Makanchi Array**	**58.63**	**314**	P	**P**	**23 39 19.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=90,slow=6.2,SNR=5.2						
	comp=Z,0.6nm,0.6s						
BRVK	**Borovoye**	**66.65**	**320**	P	**P**	**23 40 11.8**	**0.0**
BRVK				IAmb	IAmb	23 40 14.0	
	comp=Z,1.2nm,0.7s						
KKAR	**Karatay Array**	**66.96**	**310**	P	**P**	**23 40 14.3**	**+0.2**
ABKAR	**Akbulak array**	**73.48**	**317**	P	**P**	**23 40 53.4**	**-0.1**
FINES	**FINESS Array B**	**86.88**	**335**	P	**P**	**23 42 04.2**	**-0.5**
	comp=Z,2.9nm,1.0s,baz=57,slow=4.4,SNR=8.7						
	comp=Z,2.9nm,1.0s						

MAN 03 23:39:08.5, 16°.10N×121°.80E, h23km, mb4.1, ML2.9, MS2.5, 2C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.42**	**211**	⇑*e*P	Pn	23 39 18.5	-0.7
BALP				*e*S	Sn	23 39 25.8	-0.4
SMPP	**San Manuel, Pa**	**1.08**	**273**	⇑*e*P	Pn	23 39 28.0	-0.3
SMPP				*e*S	Sb	23 39 41.8	-0.4
PALP	**Palanan**	**1.13**	**32**	⇓*e*P	Pb	23 39 34.0	+4.6
PALP				*e*S	Sn	23 39 46.1	+2.4
SAMP	**Sagada Mountai**	**1.30**	**319**	⇓*e*P	Pn	23 39 30.7	-0.6
SAMP				*e*S	Sb	23 39 48.9	+0.3
JCNP	**Jose Panganiba**	**2.00**	**154**	⇓*e*P	Pn	23 39 42.0	+1.1
JCNP				*e*S	Sn	23 40 05.9	+0.6

IDC 04 00:10:39.7±1.8, 3°.08N×125°.99E, h0km, mb3.6/4, mbtmp3.7/4, MS3.7/1, Error ellipse: s-maj=116.1km s-min=23.6km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.04**	**181**	P	P	00 15 26.4	+1.1
	1.2nm,0.4s,baz=7.1,slow=10,SNR=9.0						
	1.2nm,0.4s						
WRA	**Warramunga Arr**	**24.30**	**161**	P	P	00 15 58.8	-0.3
	1.6nm,0.7s,baz=338,slow=10,SNR=16						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**27.67**	**164**	P	P	00 16 29.6	-0.1
	0.4nm,0.5s,baz=342,slow=7.2,SNR=9.7						
	0.4nm,0.5s						
JCJ	**Chichijima**	**28.47**	**31**	LR	LR	00 26 39.7	
	comp=Z,155nm,21.3s,baz=125,slow=34						
MKAR	**Makanchi Array**	**57.68**	**326**	P	P	00 20 31.9	-0.2
	0.4nm,0.4s,baz=126,slow=7.2,SNR=7.4						
	0.4nm,0.4s						

*NEIC **04** 00:18:31.2±2.7, 18°.8S±0°.3×173°.63W±0°.04, h106km±16km, mb4.3/16, Error ellipse: s-maj=42.0km s-min=3.3km az=187.0*
*IDC **04** 00:18:56.2±9.7, 18°.19S×175°.55W, h242km±60km, mb3.5/5, mbtmp4.1/7, Error ellipse: s-maj=159.2km s-min=28.3km az=139.0*

ISC 04 00:18:31.3±0.8, 18°.8S±0°.2×173°.71W±0°.06, h100km, n30, σ1°69/31, mb4.2/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.59**	**95**	Pn	**Pn**	**00 19 24.3**	**-0.7**
NIUE				Sn	**Sn**	**00 20 04.7**	**-1.9**
MSVF	**Nonsavu**	**7.90**	**277**	P	**Pn**	**00 20 25.4**	**+1.8**
	7.4nm,0.5s,baz=109,slow=16,SNR=11						
RAR	**Rarotonga**	**13.32**	**103**	P	**Pn**	**00 21 37.6**	**+1.2**
PINNC	**Pines Island,**	**18.02**	**255**	P	**P**	**00 22 35.6**	**+1.1**
PINNC				IAmb	IAmb	00 22 46.5	
	comp=Z,27nm,1.1s						
DZM	**Mont Dzumac**	**18.87**	**257**	P	**P**	**00 22 44.0**	**0.0**
	comp=Z,3.0nm,0.6s,baz=81,slow=16,SNR=5.3						
DZM	**Mont Dzumac**	**18.87**	**257**		**P**	**00 22 44.4**	**+0.5**
URZ	**Urewera**	**20.95**	**201**	P	**P**	**00 23 04.8**	**-1.4**
URZ				IAmb	IAmb	00 23 10.6	
	comp=Z,19nm,1.0s						
BFZ	**Birch Farm**	**23.43**	**199**	P	**P**	**00 23 31.9**	**+0.3**
BFZ				IAmb	IAmb	00 23 42.0	
	comp=Z,14nm,1.1s						
PLWZ	**Palliser**	**24.55**	**200**	P	**P**	**00 23 40.1**	**-1.6**
QRZ	**Quartz Range**	**24.91**	**205**	P	**P**	**00 23 45.6**	**+0.7**
QRZ				IAmb	IAmb	00 23 54.6	
	comp=Z,8.9nm,1.1s						
THZ	**Tophouse**	**25.56**	**204**	P	**P**	**00 23 51.3**	**+0.4**
KHZ	**Kahutara**	**25.89**	**202**	P	**P**	**00 23 53.3**	**-0.5**
KHZ				IAmb	IAmb	00 24 09.0	
	comp=Z,8.3nm,1.0s						
LTZ	**Lake Taylor**	**26.67**	**203**	P	**P**	**00 23 58.3**	**-2.6**
LTZ				IAmb	IAmb	00 23 58.6	
	comp=Z,9.2nm,0.9s						
CTA	**Charters Tower**	**37.71**	**261**	P	**P**	**00 25 35.5**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=72,slow=9.6,SNR=5.5						
	comp=Z,2.2nm,0.3s						
BBOO	**Buckleboo**	**46.91**	**242**	P	**P**	**00 26 49.8**	**-2.1**
WR0	**Warramunga Arr**	**48.66**	**260**	P	**P**	**00 27 04.0**	**-1.7**
WR0				IAmb	IAmb	00 27 12.1	
	comp=Z,3.9nm,1.1s						
WB0	**Warramunga Arr**	**48.83**	**260**	P	**P**	**00 27 05.5**	**-1.4**
WB2	**Warramunga Arr**	**48.84**	**260**	P	**P**	**00 27 05.1**	**-2.0**
WB2				IAmb	IAmb	00 27 21.5	
	comp=Z,4.9nm,1.1s						
AS31	**Alice Springs**	**48.84**	**255**	P	**P**	**00 27 05.7**	**-1.4**
ASAR	**Alice Springs**	**48.85**	**255**	P	**P**	**00 27 05.5**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=89,slow=8.7,SNR=23						
ASAR				PcP	**PcP**	**00 28 32.9**	**+2.6**
	comp=Z,0.5nm,0.5s,baz=104,slow=4.0,SNR=2.3						
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**48.85**	**255**	P	**P**	**00 27 06.5**	**-0.6**
WRA	**Warramunga Arr**	**48.85**	**260**	P	**P**	**00 27 04.8**	**-2.3**
	comp=Z,1.7nm,0.5s,baz=95,slow=7.6,SNR=39						
	comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**48.85**	**260**	P	**P**	**00 27 05.0**	**-2.1**
MTN	**Manton Dam**	**53.23**	**268**	P	**P**	**00 27 38.6**	**-1.3**
KNRA	**Kununurra**	**54.83**	**264**	P	**P**	**00 27 50.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**57.27**	**260**	P	**P**	**00 28 08.1**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=84,slow=5.5,SNR=1.5						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**71.24**	**180**	P	**P**	**00 29 43.6**	**+4.0**
ILAR	**Eielson Array**	**85.84**	**11**	P	P	00 31 05.3	+6.0
	comp=Z,0.3nm,0.5s,baz=222,slow=5.3,SNR=2.2						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**148.53**	**317**	PKPbc	**PKPab**	**00 38 11.0**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=78,slow=3.7,SNR=4.6						
GERES	**GERESS Array B**	**149.45**	**350**	PKPbc	**PKPab**	**00 38 14.2**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=36,slow=3.7,SNR=5.2						

IDC 04 00:19:25.1±4.5, 5°.31S×152°.35E, h45km±39km, mb3.3/2, mbtmp3.5/2, MS3.4/1, Error ellipse: s-maj=69.6km s-min=26.2km az=98.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.04**	**342**	P	Pn	00 19 43.5	+0.1
	1μm,0.3s,baz=175,slow=11,SNR=130						
KRVT				S	Sn	00 19 57.1	+0.3
	1μm,0.4s,baz=182,slow=20,SNR=31						
WRA	**Warramunga Arr**	**22.77**	**229**	P	P	00 24 23.7	-0.3
	0.6nm,0.5s,baz=54,slow=10,SNR=6.6						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**25.48**	**222**	P	P	00 24 49.3	0.0
	0.6nm,0.5s,baz=60,slow=8.7,SNR=9.3						
	0.6nm,0.5s						
LEM	**Lembang**	**44.50**	**266**	LR	LR	00 49 50.7	
	comp=Z,43nm,18.4s,baz=137,slow=41						
TORD	**Torodi Ar. Bea**	**150.03**	**287**	PKPbc	PKPbc	00 39 11.5	-0.4

ISC 04 00:21:31.7±0.6, 20°79N±0°08×145°3E±0°1, h35km, n68, σ1§85/58, mb4.3/28, MS3.6/4, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**6.88**	**336**	P	**Pn**	**00 23 08.3**	**-1.7**
	5.8nm,0.3s,baz=218,slow=19,SNR=2.3						
JCJ				Sn	**Sn**	**00 24 24.2**	**-2.9**
	8.4nm,0.3s,baz=113,slow=22,SNR=2.2						
	67nm,0.9s						
JGF	**Kuroka**	**16.31**	**336**	P	**P**	**00 25 22.3**	**+1.6**
JHS	**Saijyo**	**17.74**	**325**	P	**P**	**00 25 37.7**	**+1.2**
H11S3	**WAKE ISLAND Hy**	**20.31**	**93**	T	T	00 46 03.2	
	baz=280,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**20.32**	**93**	T	T	00 46 01.1	
	baz=280,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**20.32**	**89**	T	T	00 45 57.7	
	baz=276,slow=74,SNR=29						
H11N2	**WAKE ISLAND Hy**	**20.33**	**89**	T	T	00 45 54.4	
	baz=276,slow=74,SNR=20						
H11S2	**WAKE ISLAND Hy**	**20.33**	**93**	T	T	00 45 59.9	
	baz=280,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**20.34**	**89**	T	T	00 45 56.2	
	baz=276,slow=74,SNR=24						
KSRS	**Korea Array**	**22.41**	**322**	P	**P**	**00 26 28.6**	**+1.4**
	3.5nm,0.8s,baz=149,slow=9.2,SNR=9.9						
KSRS				LR	LR	00 34 56.6	
	comp=Z,125nm,20.6s,baz=135,slow=36						
	3.5nm,0.8s						
KSRS	**Korea Array**	**22.41**	**322**	P	**P**	**00 26 28.6**	**+1.4**
HNR	**Honiara**	**33.32**	**153**	LR	LR	00 40 40.5	
	comp=Z,1μm,20.9s,baz=344,slow=35						
SONM	**Songino Array**	**41.27**	**320**	P	**P**	**00 29 12.9**	**-0.7**
	0.8nm,0.5s,baz=130,slow=7.9,SNR=6.3						
	0.8nm,0.5s						
SONM	**Songino Array**	**41.27**	**320**	P	**P**	**00 29 14.1**	**+0.5**
WB0	**Warramunga Arr**	**41.69**	**195**	P	**P**	**00 29 16.8**	**-0.3**
WB0				IAmb	IAmb	00 29 27.5	
	comp=Z,6.0nm,0.9s						
WR0	**Warramunga Arr**	**41.84**	**195**	P	**P**	**00 29 20.1**	**+1.7**
WR0				IAmb	IAmb	00 29 38.2	
	comp=Z,7.0nm,1.1s						
WB2	**Warramunga Arr**	**41.87**	**195**	P	**P**	**00 29 17.9**	**-0.7**
WB2				IAmb	IAmb	00 29 45.9	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**41.87**	**195**	P	**P**	**00 29 17.8**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=18,slow=8.7,SNR=18						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**41.87**	**195**	P	**P**	**00 29 17.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**43.17**	**208**	P	**P**	**00 29 29.6**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=38,slow=8.2,SNR=16						
	comp=Z,2.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**43.17**	**208**	P	**P**	**00 29 29.6**	**+0.4**
FITZ				IAmb	IAmb	00 29 54.1	
	comp=Z,16nm,1.5s						
CMAR	**Chiang Mai Arr**	**43.58**	**275**	P	**P**	**00 29 35.2**	**+2.5**
	comp=Z,1.2nm,0.3s,baz=75,slow=6.9,SNR=4.9						
	comp=Z,1.2nm,0.3s						
ASAR	**Alice Springs**	**45.55**	**195**	P	**P**	**00 29 47.0**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=18,slow=6.8,SNR=7.4						
	comp=Z,0.7nm,0.6s						
DZM	**Mont Dzumac**	**47.35**	**153**	P	**P**	**00 29 59.5**	**-3.0**
	comp=Z,1.6nm,0.6s,baz=335,slow=14,SNR=1.9						
	comp=Z,1.6nm,0.6s						
DZM	**Mont Dzumac**	**47.35**	**153**	P	**P**	**00 30 00.1**	**-2.4**
DZM				IAmb	IAmb	00 30 10.9	
	comp=Z,4.3nm,0.8s						
OUENC	**Ouen Island, N**	**47.83**	**153**	P	**P**	**00 30 06.8**	**+0.7**
OUENC				IAmb	IAmb	00 30 23.9	
	comp=Z,7.5nm,0.7s						
TAPN	**Taplejung**	**52.57**	**289**	*eP*	**P**	**00 30 43.9**	**+1.5**
	comp=Z,12nm,0.4s						
RAMN	**Ramite**	**53.60**	**289**	*eP*	**P**	**00 30 51.2**	**+1.2**
FORT	**Forrest**	**53.87**	**198**	P	**P**	**00 30 50.9**	**-0.5**
JIRN	**Jiri**	**53.88**	**290**	*eP*	**P**	**00 30 53.7**	**+1.5**
	comp=Z,14nm,0.5s						
GUN	**Gumba**	**54.12**	**290**	*eP*	**P**	**00 30 55.0**	**+1.1**
	comp=Z,9.7nm,0.4s						
PKI	**Pulchoki**	**54.58**	**290**	*eP*	**P**	**00 30 58.1**	**+0.9**
	comp=Z,6.6nm,0.4s						
PKIN	**Phulchoki**	**54.59**	**290**	*eP*	**P**	**00 30 58.2**	**+1.0**
	comp=Z,8.4nm,0.5s						
DMN	**Daman**	**54.84**	**290**	*eP*	**P**	**00 31 00.1**	**+1.1**
GKN	**Gorkha**	**55.20**	**290**	*eP*	**P**	**00 31 02.7**	**+1.2**
DANN	**Dangsing**	**55.93**	**291**	*eP*	**P**	**00 31 08.6**	**+1.7**
	comp=Z,57nm,0.5s						
ZALV	**Zalesovo Beam**	**56.12**	**322**	P	**P**	**00 31 05.4**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=97,slow=6.1,SNR=4.4						
ZALV				LR	LR	00 55 32.9	
	comp=Z,59nm,18.4s,baz=54,slow=36						
	comp=Z,0.6nm,0.5s						
MK31	**Makanchi Array**	**56.73**	**313**	P	**P**	**00 31 13.0**	**+1.0**
MKAR	**Makanchi Array**	**56.73**	**313**	P	**P**	**00 31 10.9**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=83,slow=7.6,SNR=7.6						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**56.73**	**313**	P	**P**	**00 31 13.3**	**+1.2**
SII	**Sitkinak Islan**	**56.74**	**35**	P	P	00 31 16.8	+5.0
MAKZ	**Makanchi**	**56.95**	**313**	P	**P**	**00 31 14.8**	**+1.2**
MAKZ				IAmb	IAmb	00 31 16.9	
	comp=Z,5.2nm,1.2s						
N18K	**Kilae Creek**	**56.95**	**30**	P	**P**	**00 31 17.3**	**+4.0**
MORW	**Morawa**	**57.02**	**211**	P	**P**	**00 31 13.3**	**-0.8**
Q19K	**Cape Douglas,**	**57.57**	**33**	P	**P**	**00 31 15.2**	**-2.6**
NRIK	**Noril'sk**	**59.52**	**340**	LR	LR	01 01 04.2	
	comp=Z,35nm,18.4s,baz=90,slow=40						
I21K	**Tanana**	**59.96**	**26**	P	**P**	**00 31 35.8**	**+1.7**
I21K				IAmb	IAmb	00 31 43.3	
	comp=Z,5.2nm,0.9s						
BPAW	**Bear Paw Mtn.**	**60.08**	**27**	P	**P**	**00 31 34.8**	**-0.3**
BPAW				IAmb	IAmb	00 31 40.7	
	comp=Z,4.9nm,0.9s						
MLY	**Manley**	**60.42**	**26**	P	**P**	**00 31 37.6**	**+0.1**
MLY				IAmb	IAmb	00 31 43.6	
	comp=Z,4.7nm,1.2s						
I23K	**Minto, Yukon-K**	**61.02**	**26**	P	**P**	**00 31 45.6**	**+4.2**
I23K				IAmb	IAmb	00 31 50.6	
	comp=Z,5.9nm,1.4s						
BOOM	**Boomskoye usch**	**61.19**	**308**	P	**P**	**00 31 45.9**	**+2.6**
H24K	**Noodor Dome**	**61.78**	**25**	P	**P**	**00 31 50.0**	**+3.4**
H24K				IAmb	IAmb	00 31 59.9	
	comp=Z,2.9nm,1.1s						
TOLK	**Toolik Lake Re**	**61.82**	**22**	P	**P**	**00 31 50.1**	**+3.3**
ILAR	**Eielson Array**	**61.97**	**27**	P	P	00 31 40.6	-7.2
	comp=Z,0.2nm,0.3s,baz=262,slow=6.0,SNR=1.9						
	comp=Z,0.2nm,0.3s						
SCRK	**Sand Creek**	**63.08**	**28**	P	**P**	**00 31 56.5**	**+1.1**
SCRK				IAmb	IAmb	00 32 08.1	
	comp=Z,4.0nm,1.0s						
J26L	**Joseph Creek**	**63.34**	**27**	P	**P**	**00 31 59.4**	**+2.3**
J26L				IAmb	IAmb	00 32 02.6	
	comp=Z,3.8nm,0.8s						
BRVK	**Borovoye**	**64.68**	**320**	IAmb	IAmb	00 32 05.8	
	comp=Z,4.4nm,1.1s						
BRVK				P	**P**	**00 32 07.0**	**+1.1**
KK31	**Karatay Array**	**65.13**	**309**	P	**P**	**00 32 09.2**	**0.0**
KKAR	**Karatay Array**	**65.13**	**309**	P	**P**	**00 32 09.2**	**0.0**
KKAR	**Karatay Array**	**65.13**	**309**	P	**P**	**00 32 09.0**	**-0.1**
CHGR	**Chuyangaron**	**66.70**	**304**	P	**P**	**00 32 19.7**	**+0.2**
CHGR				IAmb	IAmb	00 32 35.7	
	comp=Z,8.1nm,0.8s						
ABKAR	**Akbulak array**	**71.54**	**316**	P	**P**	**00 32 49.4**	**+0.3**
ARCES	**ARCESS Array B**	**80.39**	**342**	P	**P**	**00 33 36.8**	**-2.3**
	comp=Z,1.4nm,0.6s,baz=72,slow=8.6,SNR=1.1						
	comp=Z,1.4nm,0.6s						
PNTR	**Pine Nut**	**81.01**	**52**	P	**P**	**00 33 45.9**	**+2.5**
PNTR				IAmb	IAmb	00 34 22.5	
	comp=Z,7.3nm,0.9s						
NVAR	**Mina Array Bea**	**82.18**	**52**	P	P	00 33 43.4	-6.2
	comp=Z,0.3nm,0.5s,baz=280,slow=5.3,SNR=4.8						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**84.82**	**335**	P	**P**	**00 33 58.6**	**-3.7**
	comp=Z,1.1nm,0.4s,baz=66,slow=4.7,SNR=17						
	comp=Z,1.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**130.81**	**310**	PKP	**PKPdf**	**00 40 37.6**	**-2.6**
	comp=Z,15nm,0.6s,baz=54,slow=1.3,SNR=5.1						
LPAZ	**La Paz**	**148.06**	**88**	PKPbc	**PKPdf**	**00 41 10.9**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=266,slow=3.8,SNR=5.1						

*NOU **04** 00:41:11.5, 37°15S×179°67E, h5km, MLv4.1/9, Off E. Coast of N. Island, N.Z.*
*NEIC **04** 00:41:12.2±1.0, 37°3S±0°2×179°6E±0°1, h10km±2km, mb4.4/8, Error ellipse: s-maj=29.3km s-min=17.0km az=168.0*
*IDC **04** 00:41:16.1±2.0, 35°88S×178°94E, h0km, mb4.3/2, mbtmp4.3/2, MS3.9/3, Error ellipse: s-maj=82.1km s-min=45.4km az=17.0*
*WEL **04** 00:41:17.4±1.8, 37°3S±9°×17°9E±1°2, h8km±11km, M3.7/34, ML4.0/11, MLv3.7/34, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0*

ISC 04 00:41:13.8±1.5, 37°21S±0°05×179°56E±0°07, h19km±4km, n129, σ1§44/136, mb4.2/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.06**	**250**	P	**Pb**	**00 41 33.1**	**-0.4**
MXZ	**Matakaoa Point**	**1.06**	**250**	P	**Pb**	**00 41 33.0**	**-0.4**
MXZ				S	**Sb**	**00 41 43.5**	**-3.4**
MXZ	**Matakaoa Point**	**1.06**	**250**	P	**Pb**	**00 41 33.3**	**-0.1**
WMGZ	**Waiomatatini S**	**1.09**	**236**	P	**Pg**	**00 41 36.4**	**+1.4**
WMGZ				S	**Sg**	**00 41 49.9**	**+0.5**
PUZ	**Puketiti**	**1.34**	**230**	P	**Pg**	**00 41 40.4**	**+0.7**
PUZ				S	**Sg**	**00 41 56.6**	**-0.8**
PKGZ	**Pakihiroa**	**1.36**	**240**	P	**Pg**	**00 41 39.4**	**-0.6**
PKGZ				S	**Sn**	**00 41 55.3**	**0.0**
HAZ	**Te Kaha**	**1.52**	**248**	P	**Pn**	**00 41 40.0**	**+0.2**
HAZ				S	**Sn**	**00 41 58.6**	**-0.4**
TWGZ	**Tauwhareparae**	**1.58**	**232**	P	**Pg**	**00 41 43.8**	**-0.5**
TWGZ				S	**Sb**	**00 42 02.6**	**+0.6**
CNGZ	**Carnagh Statio**	**1.66**	**220**	P	**Pg**	**00 41 46.0**	**+0.2**
RUGZ	**Raukumara Rang**	**1.68**	**243**	P	**Pb**	**00 41 44.2**	**+0.2**
TKGZ	**Te Karaka**	**1.83**	**227**	P	**Pb**	**00 41 47.4**	**+0.8**
WIZ	**White Island**	**1.92**	**260**	P	**Pn**	**00 41 45.0**	**-0.3**
MWZ	**Matawai**	**1.96**	**235**	P	**Pb**	**00 41 48.2**	**-0.7**
RIGZ	**Rimuhau**	**2.06**	**223**	P	**Pb**	**00 41 49.9**	**-0.6**
RAGZ	**Rawiri**	**2.13**	**232**	P	**Pb**	**00 41 50.8**	**-0.9**
RAGZ				S	**Sn**	**00 42 14.1**	**-0.2**
WHRZ	**Whale Island**	**2.15**	**252**	P	**Pn**	**00 41 50.1**	**+1.5**
URZ	**Urewera**	**2.21**	**241**		**Pn**	**00 41 51.2**	**+1.9**
URZ	**Urewera**	**2.21**	**241**	P	**Pn**	**00 41 51.1**	**+1.8**
URZ	**Urewera**	**2.21**	**241**	P	**Pb**	**00 41 51.6**	**-1.4**
MHGZ	**Mahia Peninsul**	**2.33**	**213**	P	**Pb**	**00 41 54.4**	**-0.8**
KNZ	**Kokohu**	**2.34**	**219**	P	**Pn**	**00 41 53.2**	**+2.0**
SNGZ	**Shannon Statio**	**2.35**	**228**	P	**Pb**	**00 41 53.7**	**-1.8**
EDRZ	**Edgecumbe**	**2.41**	**247**	P	**Pn**	**00 41 54.0**	**+1.8**
OPRZ	**Ohinepanea**	**2.47**	**254**	P	**Pn**	**00 41 53.7**	**+0.7**
RTZ	**Ruatahuna**	**2.48**	**235**	P	**Pb**	**00 41 55.6**	**-2.1**
MUGZ	**Murupara**	**2.54**	**239**	P	**Pn**	**00 41 55.4**	**+1.5**
RAHZ	**Arahi**	**2.59**	**228**	P	**Pn**	**00 41 57.1**	**+2.4**
RAHZ				S	**Sn**	**00 42 26.2**	**+0.6**
WHHZ	**Waihua**	**2.61**	**224**	P	**Pn**	**00 41 57.0**	**+2.1**
MYRZ	**Mayor Island**	**2.65**	**268**	P	**Pn**	**00 41 55.8**	**+0.3**
RRRZ	**Republican Roa**	**2.66**	**244**	P	**Pn**	**00 41 57.7**	**+2.1**
MTHZ	**Maungataniwha**	**2.70**	**232**	P	**Pn**	**00 41 58.4**	**+2.3**
KARZ	**Kaharoa**	**2.75**	**252**	P	**Pn**	**00 41 58.0**	**+1.2**
HSRZ	**Hossack Road**	**2.85**	**246**	P	**Pn**	**00 42 00.7**	**+2.5**
NMHZ	**Naumai**	**2.87**	**228**	P	**Pb**	**00 42 01.8**	**-2.6**
ARHZ	**Aropaoanui**	**2.88**	**224**	P	**Pn**	**00 42 00.8**	**+2.3**
ALRZ	**Allen Road**	**2.88**	**241**	P	**Pn**	**00 42 00.1**	**+1.5**
MRHZ	**Matea Rd**	**2.96**	**236**	P	**Pn**	**00 42 01.8**	**+2.0**
BKZ	**Black Stump Fm**	**3.11**	**230**		**Pn**	**00 42 03.1**	**+1.3**
BKZ	**Black Stump Fm**	**3.11**	**230**	P	**Pn**	**00 42 03.5**	**+1.7**
BKZ	**Black Stump Fm**	**3.11**	**230**	P	**Pn**	**00 42 03.8**	**+2.0**
KUZ	**Kuaotunu**	**3.11**	**277**	P	**Pn**	**00 42 00.9**	**-0.9**
KUZ	**Kuaotunu**	**3.11**	**277**	P	**Pn**	**00 42 00.7**	**-1.0**
CKHZ	**Cape Kidnapper**	**3.12**	**218**	P	**Pn**	**00 42 03.8**	**+1.8**
MCHZ	**McNeill Hill**	**3.17**	**224**	P	**Pn**	**00 42 04.6**	**+2.0**
TOZ	**Tahuroa Road**	**3.27**	**260**	P	**Pn**	**00 42 03.7**	**-0.2**
KWHZ	**Kaweka Forest**	**3.31**	**227**	P	**Pn**	**00 42 05.8**	**+1.2**
KAHZ	**Kahuranaki**	**3.33**	**218**	P	**Pn**	**00 42 06.4**	**+1.6**
RITZ	**Rihia Road**	**3.41**	**238**	P	**Pn**	**00 42 08.2**	**+2.3**
GRZ	**Great Barrier**	**3.43**	**285**	P	**Pn**	**00 42 06.2**	**+0.1**
MKAZ	**Moumakai**	**3.52**	**270**	P	**Pn**	**00 42 06.7**	**-0.6**
PXZ	**Pawanui**	**3.52**	**216**	P	**Pn**	**00 42 08.2**	**+0.8**
BHHZ	**Black Hill Sta**	**3.57**	**229**	P	**Pn**	**00 42 09.5**	**+1.4**
WIAZ	**Waiheke Island**	**3.57**	**275**	P	**Pn**	**00 42 07.6**	**-0.4**
TMVZ	**Te Maari**	**3.59**	**237**	P	**Pn**	**00 42 09.5**	**+1.1**
ETVZ	**East Tongariro**	**3.59**	**237**	P	**Pn**	**00 42 09.8**	**+1.3**
NTVZ	**North Tongarir**	**3.60**	**237**	P	**Pn**	**00 42 09.7**	**+1.2**
KRVZ	**Karewarewa**	**3.62**	**238**	P	**Pn**	**00 42 10.0**	**+1.1**
OTVZ	**Oturere**	**3.64**	**236**	P	**Pn**	**00 42 10.5**	**+1.4**
NNVZ	**North Ngauruho**	**3.65**	**237**	P	**Pn**	**00 42 11.5**	**+2.1**
WTVZ	**West Tongariro**	**3.66**	**238**	P	**Pn**	**00 42 11.7**	**+2.3**
SNVZ	**South Ngauruho**	**3.66**	**236**	P	**Pn**	**00 42 10.7**	**+1.2**
NGZ	**Ngauruhoe**	**3.69**	**237**	P	**Pn**	**00 42 11.2**	**+1.4**
MOVZ	**Moawhango**	**3.71**	**233**	P	**Pn**	**00 42 11.3**	**+1.2**
ETAZ	**East Tamaki Re**	**3.71**	**273**	P	**Pn**	**00 42 10.9**	**+0.8**
TWVZ	**Taurewa**	**3.74**	**239**	P	**Pn**	**00 42 12.9**	**+2.4**
WPHZ	**Waipukurau**	**3.75**	**220**	P	**Pn**	**00 42 11.8**	**+1.2**
MBAZ	**Motutapu North**	**3.76**	**275**	P	**Pn**	**00 42 11.0**	**+0.3**
WNVZ	**Wahianoa**	**3.77**	**235**	P	**Pn**	**00 42 12.0**	**+1.1**
PNHZ	**Pukenui**	**3.77**	**223**	P	**Pn**	**00 42 11.9**	**+1.1**
PRHZ	**Porangahau**	**3.81**	**216**	P	**Pn**	**00 42 12.9**	**+1.4**
ABAZ	**Army Bay**	**3.84**	**278**	P	**Pn**	**00 42 12.8**	**+1.0**
AWAZ	**Awhitu Peninsu**	**3.93**	**271**	P	**Pn**	**00 42 14.3**	**+1.2**
HIZ	**Hauiti**	**3.94**	**249**	P	**Pn**	**00 42 15.2**	**+2.0**
HIZ	**Hauiti**	**3.94**	**249**	P	**Pn**	**00 42 14.1**	**+0.9**
WTAZ	**Waiatarua**	**4.00**	**273**	P	**Pn**	**00 42 15.3**	**+1.3**
TSZ	**Takapari Road**	**4.00**	**224**	P	**Pn**	**00 42 14.6**	**+0.5**
DVHZ	**Dannevirke**	**4.07**	**220**	P	**Pn**	**00 42 16.0**	**+1.1**
BFZ	**Birch Farm**	**4.32**	**216**	Pn	**Pn**	**00 42 18.2**	**-0.2**
BFZ				Sn	**Sn**	**00 43 07.0**	**-1.3**
BFZ	**Birch Farm**	**4.32**	**216**	P	**Pn**	**00 42 18.5**	**+0.1**
BFZ	**Birch Farm**	**4.32**	**216**	P	**Pn**	**00 42 18.7**	**+0.3**
POWZ	**Post Office Ro**	**4.34**	**222**	P	**Pn**	**00 42 21.0**	**+2.3**
PRWZ	**Pori Road**	**4.36**	**219**	P	**Pn**	**00 42 20.1**	**+1.3**
WAZ	**Wanganui**	**4.40**	**233**	P	**Pn**	**00 42 21.5**	**+2.0**
TIWZ	**Tintock**	**4.57**	**218**	P	**Pn**	**00 42 22.4**	**+0.6**
MRZ	**Mangatainoka R**	**4.64**	**221**	P	**Pn**	**00 42 22.4**	**-0.3**
PKE	**Pukeiti**	**4.82**	**244**	P	**Pn**	**00 42 29.2**	**+4.0**
TMWZ	**Te Maipa**	**4.82**	**215**	P	**Pn**	**00 42 25.1**	**-0.2**
KHEZ	**Kahui Hut**	**4.84**	**243**	P	**Pn**	**00 42 29.5**	**+3.9**
HOWZ	**Holdsworth Sta**	**4.84**	**219**	P	**Pn**	**00 42 25.5**	**-0.1**
OGWZ	**Otaki Gorge**	**4.96**	**222**	P	**Pn**	**00 42 27.5**	**+0.3**
MTW	**Mount Morrison**	**5.05**	**217**	P	**Pn**	**00 42 27.7**	**-0.6**
KIW	**Kapiti Island**	**5.14**	**223**	P	**Pn**	**00 42 29.9**	**+0.3**
TRWZ	**Traveller**	**5.15**	**215**	P	**Pn**	**00 42 28.6**	**-1.1**
OUZ	**Omahuta**	**5.22**	**291**	P	**Pn**	**00 42 31.2**	**+0.5**
OUZ	**Omahuta**	**5.22**	**291**	P	**Pn**	**00 42 32.0**	**+1.3**
	33nm,0.5s						
PAWZ	**Paruwai Farm**	**5.25**	**216**	P	**Pn**	**00 42 30.6**	**-0.6**
MSWZ	**Moikau Station**	**5.37**	**217**		**Pn**	**00 42 31.9**	**-0.9**
MSWZ				Sn	**Sn**	**00 43 31.1**	**-2.9**
MSWZ	**Moikau Station**	**5.37**	**217**	P	**Pn**	**00 42 32.0**	**-0.8**
PLWZ	**Palliser**	**5.48**	**216**	Pn	**Pn**	**00 42 33.6**	**-0.8**
PLWZ				Sn	**Sn**	**00 43 32.5**	**-4.4**
PLWZ	**Palliser**	**5.48**	**216**	P	**Pn**	**00 42 33.5**	**-0.8**
SNZO	**South Karori**	**5.56**	**221**	Pn	**Pn**	**00 42 34.1**	**-1.3**
BSWZ	**Blackbirch Sta**	**6.29**	**223**	Pn	**Pn**	**00 42 44.5**	**-0.9**
BSWZ	**Blackbirch Sta**	**6.29**	**223**	P	**Pn**	**00 42 45.4**	**-0.1**
TKNZ	**Takaka Hill**	**6.39**	**231**	P	**Pn**	**00 42 47.2**	**+0.4**
QRZ	**Quartz Range**	**6.56**	**234**	Pn	**Pn**	**00 42 48.0**	**-1.1**
QRZ	**Quartz Range**	**6.56**	**234**	P	**Pn**	**00 42 48.9**	**-0.2**
	24nm,1.1s						
THZ	**Tophouse**	**6.87**	**227**	Pn	**Pn**	**00 42 52.0**	**-1.4**
KHZ	**Kahutara**	**6.96**	**220**	Pn	**Pn**	**00 42 53.9**	**-0.7**
KHZ	**Kahutara**	**6.96**	**220**	P	**Pn**	**00 42 55.6**	**+1.0**
	10nm,1.4s						
CTZ	**Chatham Island**	**7.14**	**157**	P	Pn	00 43 03.8	+6.8
LTZ	**Lake Taylor**	**7.89**	**223**	Pn	**Pn**	**00 43 05.8**	**-1.6**
MQZ	**McQueen's Vall**	**8.35**	**217**	Pn	**Pn**	**00 43 12.2**	**-1.4**
LBZ	**Lake Benmore**	**10.09**	**222**	Pn	**Pn**	**00 43 36.3**	**-1.2**
DZM	**Mont Dzumac**	**18.88**	**319**	LR	LR	00 51 27.6	
	comp=Z,79nm,19.0s,baz=200,slow=35						
TOO	**Toolangi**	**26.99**	**259**	P	**P**	**00 46 52.6**	**-1.7**
COEN	**Coen**	**39.80**	**296**	P	**P**	**00 48 45.5**	**-0.2**
COEN				IAmb	IAmb	00 48 59.8	
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**41.24**	**276**	P	**P**	**00 48 57.9**	**+0.3**
ASAR	**Alice Springs**	**41.24**	**276**	P	**P**	**00 48 57.6**	**0.0**
	comp=Z,2.8nm,0.6s,baz=120,slow=8.1,SNR=26						
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**41.24**	**276**	P	**P**	**00 48 57.4**	**-0.3**
WB2	**Warramunga Arr**	**42.84**	**281**	P	**P**	**00 49 10.4**	**-0.3**
WB2				IAmb	IAmb	00 49 20.3	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	**42.85**	**281**	P	**P**	**00 49 10.2**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=122,slow=7.7,SNR=32						
WRA				PcP	**PcP**	**00 51 04.4**	**+2.7**
	comp=Z,0.5nm,0.7s,baz=111,slow=2.9,SNR=2.6						
	comp=Z,2.7nm,0.6s						
WRA	**Warramunga Arr**	**42.85**	**281**	P	**P**	**00 49 10.4**	**-0.4**
WB0	**Warramunga Arr**	**42.90**	**281**	P	**P**	**00 49 11.0**	**-0.2**
WB0				IAmb	IAmb	00 49 11.1	
	comp=Z,3.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**50.72**	**277**	P	**P**	**00 50 11.9**	**-0.5**
FITZ				IAmb	IAmb	00 50 28.6	
	comp=Z,14nm,1.5s						
MORW	**Morawa**	**52.94**	**259**	P	**P**	**00 50 28.5**	**-0.4**
PLCA	**Paso Flores**	**79.33**	**133**	LR	LR	01 22 52.8	
	comp=Z,192nm,18.8s,baz=338,slow=31						
LVC	**Limon Verde**	**92.32**	**121**	LR	LR	01 28 51.7	
	comp=Z,85nm,18.8s,baz=219,slow=31						
FINES	**FINESS Array B**	**150.62**	**334**	PKPbc	**PKiKP**	**01 01 05.4**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=42,slow=4.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**155.96**	**185**	PKPab	PKPab	01 01 44.5	+10
	comp=Z,0.3nm,0.7s,baz=169,slow=4.2,SNR=1.7						

*NEIC **04** 00:55:44.1±0.8, 23°2S±0°1×175°3W±0°2, h22km±9km, mb4.0/7, Error ellipse: s-maj=28.7km s-min=9.2km az=135.0*
*IDC **04** 00:55:45.1±5.4, 23°30S×175°85W, h0km, mb4.0/5, mbtmp4.0/5, MS3.1/1, Error ellipse: s-maj=182.4km s-min=41.0km az=141.0*

ISC 04 00:55:45.5±0.8, 23°2S±0°2×175°2W±0°1, h35km, n16, σ1§38/13, mb4.0/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.38**	**51**	Pn	**Pn**	**00 57 17.6**	**+0.5**
MSVF	**Nonsavu**	**8.34**	**309**	LR	LR	01 00 42.1	
	comp=Z,148nm,20.7s,baz=121,slow=37						
RAR	**Rarotonga**	**14.40**	**85**	Pn	**Pn**	**00 59 05.8**	**-1.2**
URZ	**Urewera**	**16.42**	**202**	Pn	**Pn**	**00 59 32.2**	**-1.0**
URZ				IAmb	IAmb	00 59 43.6	
	comp=Z,8.3nm,1.2s						
BKZ	**Black Stump Fm**	**17.44**	**202**		**P**	**00 59 46.3**	**-0.7**
BKZ				IAmb	IAmb	00 59 50.5	
	comp=Z,9.0nm,0.7s						
CTA	**Charters Tower**	**35.91**	**267**	P	**P**	**01 02 42.9**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=108,slow=6.4,SNR=1.4						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**46.52**	**259**	P	**P**	**01 04 09.4**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=94,slow=8.5,SNR=7.0						
	comp=Z,0.6nm,0.7s						
WB2	**Warramunga Arr**	**46.87**	**264**	P	**P**	**01 04 11.2**	**-1.4**
WB0	**Warramunga Arr**	**46.87**	**264**	P	**P**	**01 04 11.6**	**-1.0**
WB0				IAmb	IAmb	01 04 17.4	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**46.88**	**264**	P	**P**	**01 04 11.3**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=102,slow=7.9,SNR=7.9						
	comp=Z,0.7nm,0.8s						

	baz=286						
FUSS			eS	Sn	01 14 06.0	-0.4	
	baz=286						
TIPB	**Shuangxi**	**1.57 324**	P	**Pn**	01 13 46.9	+0.4	
	baz=331						
TIPB			eS	Sn	01 14 05.6	-0.7	
	baz=331						
CHGB	**Renai**	**1.57 283**	P	**Pn**	01 13 47.3	+0.6	
	baz=279						
CHGB			eS	Sn	01 14 06.6	0.0	
	baz=279						
EDH	**Donghe**	**1.59 243**	eP	**Pn**	01 13 46.6	-0.2	
	baz=234						
JISG	**Ishigakijimahi**	**1.60 56**	P	**Pn**	01 13 46.3	-0.5	
JISG			S	**Sn**	01 14 05.3	-1.6	
EHD	**Haiduan**	**1.60 250**	eP	**Pn**	01 13 46.3	-0.6	
	baz=240						
WUSB	**Renai**	**1.61 281**	eP	**Pn**	01 13 47.8	+0.6	
	baz=276						
WUSB			eS	Sn	01 14 07.2	-0.2	
	baz=276						
TWT	**Tachien**	**1.62 290**	eP	**Pb**	01 13 48.5	-0.6	
	baz=277						
TWT			eS	Sb	01 14 09.1	-0.2	
	baz=277						
LDUT	**Ludao**	**1.63 231**	P	**Pn**	01 13 47.3	+0.1	
	baz=228						
LDUT			eS	Sn	01 14 05.5	-2.2	
	baz=228						
TDCB	**Techi**	**1.64 290**	eP	**Pn**	01 13 47.8	+0.3	
	baz=277						
TDCB			eS	Sn	01 14 07.9	-0.3	
	baz=277						
SXI1	**Grass Mountain**	**1.65 328**	P	**Pn**	01 13 47.6	0.0	
	baz=335						
SXI1			S	Sn	01 14 06.6	-1.6	
	baz=335						
YHNB	**Yeheng**	**1.65 306**	P	**Pn**	01 13 48.5	+0.9	
	baz=290						
YHNB			eS	Sn	01 14 07.6	-0.8	
	baz=290						
NSK	**Sanguang**	**1.67 306**	P	**Pn**	01 13 47.8	-0.1	
	baz=291						
NSK			eS	Sn	01 14 08.1	-0.7	
	baz=291						
NWF	**Wu-fen Shan**	**1.68 325**	eP	**Pn**	01 13 48.4	+0.4	
	baz=321						
NWF			eS	Sn	01 14 07.9	-1.0	
	baz=321						
TWA	**Mucha**	**1.72 318**	eP	**Pb**	01 13 50.5	-0.1	
	baz=315						
SSLB	**Suanglung**	**1.74 273**	eP	**Pn**	01 13 49.1	+0.3	
	baz=269						
SSLB			eS	Sn	01 14 10.8	+0.4	
	baz=269						
NHDH	**Xindian Distri**	**1.74 316**	eP	**Pn**	01 13 48.0	-0.8	
	baz=324						
ELDTW	**Lidau**	**1.76 253**	eP	**Pn**	01 13 49.5	+0.3	
	baz=241						
ELDTW			eS	Sn	01 14 09.5	-1.5	
	baz=241						
LONT	**Longtian**	**1.77 244**	eP	**Pn**	01 13 49.8	+0.7	
	baz=235						
LONT			eS	Sn	01 14 10.9	-0.2	
	baz=235						
SMLT	**Sun Moon Lake**	**1.79 276**	eP	**Pn**	01 13 50.7	+1.0	
	baz=265						
WCS	**Beigang Elemen**	**1.81 282**	eP	**Pn**	01 13 49.6	-0.1	
	baz=278						
NFF	**Wufeng Townshi**	**1.83 301**	eP	**Pn**	01 13 51.0	+0.9	
	baz=296						
NFF			eS	Sn	01 14 12.0	-0.8	
	baz=296						
WHP	**Taichung City**	**1.83 289**	eP	**Pb**	01 13 52.2	-0.3	
	baz=277						
TYC	**Yuchr**	**1.83 277**	eP	**Pn**	01 13 50.9	+0.8	
	baz=273						
TWGBT	**Beinan**	**1.85 242**	eP	**Pn**	01 13 50.3	0.0	
	baz=232						
TWGBT			eS	Sn	01 14 12.5	-0.6	
	baz=232						
YM01	**YM01**	**1.85 321**	eP	**Pn**	01 13 51.0	+0.7	
	baz=318						
TWG	**Pinlang**	**1.85 242**	eP	**Pn**	01 13 50.6	+0.3	
	baz=232						
TWG			eS	Sn	01 14 12.4	-0.8	
	baz=232						
ALS	**Alishan**	**1.88 265**	eP	**Pn**	01 13 52.2	+1.2	
	baz=260						
ALS			eS	Sn	01 14 14.4	0.0	
	baz=260						
LIOB	**Emei**	**1.92 300**	eP	**Pb**	01 13 53.3	-0.7	
	baz=287						
LIOB			eS	Sb	01 14 16.4	-1.2	
	baz=287						
NSTT	**Nanjuang**	**1.92 299**	eP	**Pb**	01 13 53.1	-1.0	
	baz=286						
NSTT			eS	Sn	01 14 16.0	+1.0	
	baz=286						
JTJ	**Tarama**	**1.94 61**	P	**Pn**	01 13 51.5	0.0	
JTJ			S	**Sn**	01 14 14.3	-0.9	
TWY	**Chenhua**	**1.94 324**	eP	**Pn**	01 13 52.1	+0.7	
	baz=321						
WJS	**Zhushan**	**1.95 274**	eP	**Pb**	01 13 53.9	-0.5	
	baz=266						
STYH	**Taoyuan**	**1.98 255**	eP	**Pn**	01 13 52.2	+0.2	
	baz=245						
STYH			eS	Sn	01 14 15.4	-0.8	
	baz=245						
WNT	**Mingjian**	**1.99 276**	eP	**Pb**	01 13 53.9	-1.3	
	baz=272						
NSY	**Sanyi**	**2.04 291**	eP	**Pb**	01 13 55.1	-0.9	
	baz=287						
TCU	**Taichung**	**2.04 283**	eP	**Pb**	01 13 55.4	-0.6	
	baz=278						
TCU			eS	Sb	01 14 20.7	-0.2	
	baz=278						
LAY	**Lan-yu**	**2.04 216**	eP	**Pn**	01 13 52.6	-0.3	
	baz=222						
NMLH	**Miaoli**	**2.06 294**	eP	**Pn**	01 13 54.6	+1.5	
	baz=290						
ECL	**Taimali**	**2.06 238**	eP	**Pn**	01 13 53.3	+0.1	
	baz=245						
ECL			eS	Sn	01 14 17.0	-1.3	
	baz=245						
WCKO	**Fanlu**	**2.07 263**	eP	**Pb**	01 13 56.3	-0.3	
	baz=260						
TPUB	**Ta-pu**	**2.08 259**	eP	**Pb**	01 13 55.5	-1.2	
	baz=251						
TPUB			eS	Sb	01 14 20.6	-1.4	
	baz=251						
WTP	**Ta-pu**	**2.10 258**	eP	**Pb**	01 13 56.1	-1.0	
	baz=255						
WDLH	**Douliu**	**2.12 270**	eP	**Pb**	01 13 57.1	-0.3	
	baz=267						
WDJ	**Dajia District**	**2.12 288**	eP	**Pb**	01 13 56.2	-1.2	
	baz=284						
WCHH	**Zhanghua**	**2.13 281**	eP	**Pb**	01 13 56.3	-1.3	
	baz=276						
WCHH			eS	Sb	01 14 22.6	-1.0	
	baz=276						
CHN1	**Nanshi**	**2.19 257**	eP	**Pb**	01 13 57.6	-1.1	
	baz=254						
TWK	**Hsinying**	**2.21 259**	eP	**Pb**	01 13 57.8	-1.2	
	baz=256						
CHY	**Chiayi**	**2.23 265**	eP	**Pn**	01 13 56.6	+1.1	
	baz=262						
SSD	**Sandimen**	**2.25 245**	eP	**Pb**	01 13 58.2	-1.4	
	baz=239						
EAST	**Anshuo**	**2.26 235**	eP	**Pn**	01 13 56.6	+0.6	
	baz=240						
WRL	**Guolierlin Hig**	**2.27 276**	eP	**Pn**	01 13 57.2	+1.1	
	baz=264						
MASBT	**Mashibuluo**	**2.31 242**	eP	**Pn**	01 13 57.9	+1.3	
	baz=234						
ICHU	**Yijhu**	**2.38 262**	eP	**Pb**	01 14 00.1	-1.8	
	baz=259						
SLIU	**Shizi**	**2.40 232**	eP	**Pn**	01 13 58.4	+0.5	
	baz=231						
WSL	**Shuilin Townsh**	**2.41 266**	eP	**Pn**	01 13 58.6	+0.6	
	baz=263						
SCZT	**Fangliau**	**2.44 238**	eP	**Pn**	01 14 00.3	+1.8	
	baz=236						
JMJ2	**Miyako jima3**	**2.49 65**	P	**Pn**	01 13 59.4	+0.3	
JMJ2			S	**Sn**	01 14 28.0	-0.9	
JMJ	**Miyako jima 2**	**2.49 63**	eP	**Pn**	01 13 59.3	+0.2	
	baz=66						
JMJ			eS	Sn	01 14 26.0	-3.0	
	baz=66						
TWKBT	**Hengchun**	**2.57 227**	eP	**Pn**	01 14 01.9	+1.7	
	baz=226						
TWK1	**Hengchun**	**2.57 228**	eP	**Pn**	01 14 02.1	+1.9	
	baz=218						
TWK1			eS	Sn	01 14 31.9	+1.0	
	baz=218						
TSCK	**Chigu Township**	**2.60 258**	eP	**Pn**	01 14 02.2	+1.6	
	baz=256						
WDGT	**Dungji**	**2.96 262**	eP	**Pn**	01 14 07.1	+1.6	
	baz=259						
PHUB	**P'eng-hu**	**3.01 267**	eP	**Pn**	01 14 08.1	+1.9	
	baz=276						
PNG	**Penghu**	**3.02 268**	eP	**Pn**	01 14 08.1	+1.7	
	baz=277						
VWUC	**VWUC**	**3.35 293**	eP	**Pn**	01 14 11.3	+0.3	
	baz=290						
MATB	**Ma-tsu**	**3.59 313**	eP	**Pn**	01 14 14.7	+0.4	
	baz=310						
KNM	**Kinmen**	**4.10 281**	eP	**Pn**	01 14 24.5	+3.3	
	baz=277						
KNMB	**Chin-men Tao**	**4.14 281**	eP	**Pn**	01 14 22.1	+0.3	
	baz=278						

*IDC **04** 01:19:06.5±0.9, 35.°98S×73.°24W, h0km, mb4.1/7, mbtmp4.1/8, ML3.7/1, MS3.6/7, Error ellipse: s-maj=34.6km s-min=18.6km az=85.0*

*NEIC **04** 01:19:06.5±1.5, 35.°91S±0.°04×73.°5W±0.°1, h9km±2km, mb4.3/10, Mwr4.2/52, ML4.2(GUC), Error ellipse: s-maj=12.1km s-min=5.2km az=86.0*

*NEIC **04** 01:19:06.7, 35.°93S×73.°48W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.24; $M_{\theta\theta}$0.25; $M_{\phi\phi}$0.99; $M_{r\theta}$-0.41; $M_{\theta\phi}$0.68; $M_{r\phi}$-2.20; Fault plane solution: $M_0$2.60000×10^{15} NP1:ϕ_s13.35000°, δ75.46000°, λ-100.03000°. NP2:ϕ_s228.50000°, δ17.60000°, λ-56.13000°. Principal axes: T 2.6103, Plg30.0000°, Azm112.0000°; N -0.0173, Plg10.0000°, Azm16.0000°; P -2.5930, Plg58.0000°, Azm270.0000°;*

*GUC **04** 01:19:07.3±0.6, 35.°89S×73.°54W, h27km±4km, ML4.2*

ISC 04 01:19:05.8±1.9, **35.°87S**±0.°05×**73.°44W**±0.°08, **h1**km±12km, **n80**, σ0:**80**/81, **mb4.4**/10, **MS3.6**/7, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.90**	**167**	Pg	**Pg**	**01 19 23.3**	**+0.4**
BI05				Sg	**Sg**	**01 19 34.4**	**-0.2**
BI05	**Punta Hualpn**	**0.90**	**167**	eP	**Pg**	**01 19 22.9**	**-0.1**
BI05				i S	**Sg**	**01 19 34.6**	**0.0**
BI05				IAML		01 19 36.9	
	comp=N,15μm,0.5s						
CCSP	**San Pedro de C**	**1.00**	**165**	i S	**Sg**	**01 19 37.7**	**-0.4**
CCSP				IAML		01 19 39.8	
	comp=N,27μm,0.5s						
GO05	**Huala**	**1.50**	**56**		**Pn**	**01 19 33.7**	**-0.3**
GO05	**Huala**	**1.50**	**56**	eP	**Pn**	**01 19 33.1**	**-0.9**
GO05				i S	**Sn**	**01 19 53.4**	**-0.9**
ML02	**Panimavida**	**1.65**	**87**		**Pn**	**01 19 36.4**	**+0.5**
ML02	**Panimavida**	**1.65**	**87**	eP	**Pn**	**01 19 36.4**	**+0.5**
ML02				i S	**Sn**	**01 19 57.4**	**-0.3**
ML02				IAML		01 20 06.0	
	comp=N,3μm,0.4s						
BO03	**Pichilemu**	**1.83**	**42**	eP	**Pn**	**01 19 38.7**	**+0.3**
BO03				i S	**Sn**	**01 20 02.3**	**0.0**
BO02	**Sierra Bellavi**	**2.43**	**64**	Pn	**Pn**	**01 19 47.9**	**+1.2**
BO01	**Tunca**	**2.43**	**53**		**Pn**	**01 19 47.9**	**+1.2**
VA05	**Santo Domingo**	**2.67**	**35**		**Pn**	**01 19 50.4**	**+0.4**
VA05	**Santo Domingo**	**2.67**	**35**	eP	**Pn**	**01 19 50.2**	**+0.2**
VA05				i S	**Sn**	**01 20 22.2**	**-0.9**
VA05				IAML		01 20 38.2	
	comp=N,788nm,0.2s						
MT01	**Popeta**	**2.69**	**43**		**Pn**	**01 19 50.7**	**+0.4**
MT01	**Popeta**	**2.69**	**43**	eP	**Pn**	**01 19 50.3**	**0.0**
MT09	**Talagante**	**2.91**	**45**		**Pn**	**01 19 53.7**	**+0.4**
MT09	**Talagante**	**2.91**	**45**	eP	**Pn**	**01 19 53.9**	**+0.6**
MT09				i S	**Sn**	**01 20 29.5**	**+0.5**
MT09				IAML		01 20 46.2	
	comp=N,630nm,0.5s						
BO04	**La Punta**	**2.99**	**52**		**Pn**	**01 19 55.8**	**+1.3**
VA01	**Torpederas**	**3.21**	**28**	Pn	**Pn**	**01 19 57.1**	**-0.2**
MT02	**Curacav**	**3.23**	**37**	Pn	**Pn**	**01 19 57.3**	**-0.3**
MT02	**Curacav**	**3.23**	**37**	eP	**Pn**	**01 19 57.7**	**0.0**
MT02				i S	**Sn**	**01 20 36.1**	**-0.6**
MT05	**Renca**	**3.33**	**43**		**Pn**	**01 20 00.0**	**+0.9**
MT05	**Renca**	**3.33**	**43**	i S	**Sn**	**01 20 39.2**	**-0.1**
LMEL	**Las Melosas**	**3.34**	**54**		**Pn**	**01 20 01.7**	**+2.3**
MT03	**Universidad Ad**	**3.38**	**46**		**Pn**	**01 20 00.9**	**+1.0**
ROC1	**El Roble**	**3.52**	**35**		**Pn**	**01 20 02.2**	**+0.3**
ROCH	**El Roble**	**3.52**	**35**	eP	**Pn**	**01 20 02.3**	**+0.4**
ROCH				i S	**Sn**	**01 20 44.3**	**0.0**
PEL	**Peldehue**	**3.55**	**41**	Pn	**Pn**	**01 20 02.9**	**+0.8**
VA06	**Catapilco**	**3.75**	**29**		**Pn**	**01 20 05.0**	**+0.2**
VA06	**Catapilco**	**3.75**	**29**	eP	**Pn**	**01 20 04.8**	**0.0**
LR03	**Panguipulli**	**3.85**	**167**		**Pn**	**01 20 05.8**	**-0.4**
VA03	**San Esteban**	**3.92**	**38**		**Pn**	**01 20 08.1**	**+0.8**
VA03	**San Esteban**	**3.92**	**38**	eP	**Pn**	**01 20 08.0**	**+0.8**
LR04	**Corral**	**4.00**	**180**	Pn	**Pn**	**01 20 06.5**	**-1.7**
GO06	**Curarrehue**	**4.02**	**158**	Pn	**Pn**	**01 20 08.6**	**-0.1**
CO02	**Combarbal**	**5.08**	**24**	Pn	**Pn**	**01 20 23.5**	**+0.2**
LL04	**Puerto Octay**	**5.09**	**171**		**Pn**	**01 20 21.8**	**-1.5**
LL03	**Petrohue**	**5.32**	**172**	Pn	**Pn**	**01 20 26.0**	**-0.4**
PLCA	**Paso Flores**	**5.36**	**156**	Pn	**Pn**	**01 20 27.6**	**+0.6**
	comp=N,0.6nm,0.3s,baz=309,slow=10,SNR=14						
	comp=N,2.2nm,0.5s						
PLCA	**Paso Flores**	**5.36**	**156**	Pn	**Pn**	**01 20 27.2**	**+0.2**
CO06	**Fray Jorge**	**5.40**	**17**		**Pn**	**01 20 27.1**	**-0.4**
CO03	**El Pedregal**	**5.52**	**25**	Pn	**Pn**	**01 20 29.9**	**+0.6**
GO04	**Tololo Observa**	**6.10**	**22**		**Pn**	**01 20 37.3**	**-0.1**
CO01	**Juntas del Tor**	**6.52**	**26**		**Pn**	**01 20 43.2**	**+0.1**
LL02	**Futaleuf**	**7.41**	**171**	Pn	**Pn**	**01 20 55.1**	**0.0**
AC05	**El Transito**	**7.51**	**22**		**Pn**	**01 20 57.1**	**+0.5**
AC04	**Llanos de Chal**	**7.91**	**15**	Pn	**Pn**	**01 21 01.3**	**-0.6**
TRQA	**Tornquist**	**9.43**	**107**	Pn	**Pn**	**01 21 21.6**	**-1.3**
AC02	**Maricunga**	**9.73**	**23**	Pn	**Pn**	**01 21 27.3**	**-0.2**
PB01	**IPOC Station P**	**15.18**	**14**	P	**P**	**01 22 47.2**	**+0.4**
PB01				IAmb	IAmb	01 22 50.8	
	comp=Z,9.7nm,0.8s						
PB16	**IPOC Station P**	**17.81**	**12**		**Pn**	**01 23 15.5**	**-0.1**
LPAZ	**La Paz**	**20.07**	**15**	P	Pn	01 23 44.2	+1.2
	comp=Z,1.6nm,0.7s,baz=167,slow=7.8,SNR=7.6						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**20.07**	**15**	P	**P**	**01 23 40.8**	**-0.5**
AQDB	**Aquidauana**	**21.85**	**50**	P	**P**	**01 23 57.7**	**-2.2**
AQDB				IAmb	IAmb	01 24 06.7	
	comp=Z,14nm,0.9s						
SIV	**San Ignacio**	**22.67**	**32**	P	**P**	**01 24 09.8**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=223,slow=13,SNR=12						
	comp=Z,5.1nm,0.8s						
PMSA	**Palmer Station**	**29.48**	**172**	LR	LR	01 37 30.0	
	comp=Z,81nm,18.3s,baz=24,slow=38						
BDFB	**Brasilia**	**30.34**	**55**	LR	LR	01 38 39.0	
	comp=Z,177nm,18.6s,baz=358,slow=39						
RPN	**Rapa Nui**	**31.68**	**276**	LR	LR	01 35 32.5	
	comp=Z,112nm,18.4s,baz=105,slow=31						
BAUV	**El Baul**	**44.87**	**8**	P	**P**	**01 27 20.4**	**-1.5**
MDP	**Montagnes des**	**45.19**	**30**	LR	LR	01 48 34.2	
	comp=Z,54nm,18.8s,baz=194,slow=39						
VNA3	**Neumayer Olymp**	**48.08**	**157**	P	**P**	**01 27 46.9**	**+0.4**
VNA3	**Neumayer Olymp**	**48.08**	**157**	PcP	**PcP**	**01 29 14.1**	**-0.1**
VNA1	**Neumayer--Stat**	**48.42**	**156**	P	**P**	**01 27 49.9**	**+0.8**
VNA2	**Neumayer--Watz**	**48.75**	**156**	P	**P**	**01 27 52.1**	**+0.4**
	baz=291,slow=9.2						
VNA2	**Neumayer--Watz**	**48.75**	**156**	PcP	**PcP**	**01 29 16.5**	**-0.1**
SNAA	**Sanae**	**50.30**	**157**	P	**P**	**01 28 04.0**	**+0.4**
SNAA	**Sanae**	**50.30**	**157**	P	**P**	**01 28 03.2**	**-0.5**
SNAA				IAmb	IAmb	01 28 04.8	
	comp=Z,7.7nm,1.0s						
TROLL	**Troll, Antarti**	**52.00**	**158**	P	**P**	**01 28 16.9**	**+0.4**
QSPA	**South Pole Qui**	**54.37**	**180**	P	**P**	**01 28 33.8**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=143,slow=2.0,SNR=12						
	comp=Z,4.5nm,0.9s						
QSPA	**South Pole Qui**	**54.37**	**180**	P	**P**	**01 28 32.9**	**-1.1**
TXAR	**Lajitas Array**	**70.83**	**332**	P	**P**	**01 30 25.8**	**+1.6**
	comp=Z,11nm,0.4s,baz=152,slow=8.7,SNR=9.5						
MAW	**Mawson**	**71.71**	**164**	P	**P**	**01 30 29.4**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=246,slow=9.6,SNR=6.3						
	comp=Z,2.8nm,0.9s						
SUR	**Sutherland**	**74.93**	**119**	LR	LR	02 02 04.4	
	comp=Z,28nm,18.3s,baz=270,slow=34						
DBIC	**Dimbokro**	**76.86**	**72**	P	**P**	**01 31 00.2**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=310,slow=7.9,SNR=3.6						
	comp=Z,2.4nm,0.6s						
TSUM	**Tsumeb**	**79.80**	**106**	LR	LR	02 00 56.1	
	comp=Z,38nm,20.8s,baz=164,slow=32						
BOSA	**Boshof**	**80.21**	**118**	P	**P**	**01 31 17.9**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=148,slow=3.5,SNR=3.3						
	comp=Z,3.0nm,0.9s						
NVAR	**Mina Array Bea**	**84.78**	**326**	P	**P**	**01 31 44.3**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=148,slow=7.6,SNR=6.2						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**85.92**	**71**	P	**P**	**01 31 47.0**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=209,slow=5.5,SNR=3.5						
LSZ	**Lusaka**	**90.30**	**109**	LR	LR	02 08 18.4	
	comp=Z,50nm,18.0s,baz=180,slow=33						
NRIK	**Noril'sk**	**144.88**	**12**	PKP	**PKPdf**	**01 38 43.1**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=16,slow=6.1,SNR=3.6						
PZH	**PanZhiHua**	**169.79**	**155**	PKP	**PKPdf**	**01 39 15.1**	**-0.6**

RSNC 04 01:37:38.1±1.1, **6.°79N**×**73.°13W**, **h145**km±5km, **ML3.1, Mw3.6, 5C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**195**	⇑ i P	Pn	01 37 57.7	-0.4
BARC				eS	Sn	01 38 12.6	-0.7
BARC				i		01 38 13.4	
	comp=Z,261nm,0.3s						
BRRC	**Barranca, Sant**	**0.66**	**298**	⇑ i P	Pn	01 37 59.7	-0.1
BRRC				eS	Sn	01 38 16.5	+0.3
BRRC				i		01 38 21.0	
	comp=Z,374nm,0.1s						
PAMC	**Pamplona, Colo**	**0.69**	**38**	⇑ i P	Pn	01 38 00.6	+0.1
PAMC				eS	Sn	01 38 17.4	-0.2
PAMC				i		01 38 19.7	
	comp=Z,396nm,0.5s						
RUSC	**La Rusia**	**0.90**	**177**	⇑ i P	Pn	01 38 01.7	-0.4
	comp=Z,250nm,0.4s						
RUSC				eS	Sn	01 38 19.4	-1.0
RUSC				i		01 38 20.8	
	comp=Z,250nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.34**	**259**	i P	Pn	01 38 04.3	-1.4
PTBC				eS	Sn	01 38 24.8	-1.9
PTBC				i		01 38 30.0	
	comp=Z,128nm,0.1s						
TAMC	**Tame, Arauca**	**1.38**	**105**	⇑ i P	Pn	01 38 06.1	+0.1
TAMC				eS	Sn	01 38 27.4	+0.1
TAMC				i		01 38 28.2	
	comp=Z,81nm,0.6s						
OCAC	**Ocana**	**1.45**	**352**	⇓ eP	Pn	01 38 06.1	-0.8
OCAC				eS	Sn	01 38 27.6	-1.3
OCAC				i		01 38 29.9	
	comp=Z,489nm,0.4s						
SPBC	**San Pablo de B**	**1.47**	**220**	eP	Pn	01 38 06.7	-0.4
SPBC				eS	Sn	01 38 28.5	-0.8
SPBC				i		01 38 29.8	
	comp=Z,258nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**292**	eP	Pn	01 38 10.7	-0.5
ZARC				eS	Sn	01 38 36.5	-0.1
ZARC				i		01 38 42.1	
	comp=Z,318nm,0.6s						
NORC	**Norcasia**	**2.12**	**235**	eP	Pn	01 38 13.8	-0.6
NORC				eS	Sn	01 38 41.4	-0.8
NORC				i		01 38 49.5	
	comp=Z,73nm,0.2s						
CHIC	**Chingaza**	**2.23**	**196**	eP	Pn	01 38 16.0	-0.1
CHIC				eS	Sn	01 38 42.9	-2.4
CHIC				i		01 38 49.6	
	comp=Z,47nm,0.5s						
ROSC	**El Rosal**	**2.27**	**211**	eP	Pn	01 38 18.2	+1.5
ROSC				eS	Sn	01 38 46.7	+0.5
HELC	**Santa Helena**	**2.46**	**256**	eP	Pn	01 38 19.6	+0.7
HELC				eS	Sn	01 38 50.2	+0.1
HELC				i		01 38 56.6	
	comp=Z,60nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**292**	eP	Pn	01 38 18.0	-1.8
UREC				eS	Sn	01 38 49.1	-2.9
UREC				i		01 39 03.7	
	comp=Z,122nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.72**	**235**	eP	Pn	01 38 22.4	+0.2
GUY2C				eS	Sn	01 38 56.9	+0.9
GUY2C				i		01 39 02.8	
	comp=Z,58nm,0.3s						
VILC	**Villavicencio,**	**2.72**	**192**	eP	Pn	01 38 21.2	-0.7
VILC				eS	Sn	01 38 55.1	-0.6
VILC				i		01 39 04.8	
	comp=Z,61nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.76**	**159**	⇓ i P	Pn	01 38 20.9	-1.4
PTGC				eS	Sn	01 38 53.4	-2.9
PTGC				i		01 38 56.6	
	comp=Z,82nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.01**	**252**	eP	Pn	01 38 25.9	+0.3
CBOC				eS	Sn	01 39 01.7	-0.5
CBOC				i		01 39 11.6	
	comp=Z,19nm,0.4s						
DBBC	**Dabeiba**	**3.07**	**274**	eP	Pn	01 38 27.4	+1.2
DBBC				eS	Sn	01 39 02.2	-1.2
ANIL	**Santa Ana**	**3.22**	**225**	eP	Pn	01 38 29.3	+0.9
ANIL				eS	Sn	01 39 08.0	+0.8
ANIL				i		01 39 13.8	
	comp=Z,151nm,0.3s						
ARGC	**Ariguani, Magd**	**3.24**	**340**	eP	Pn	01 38 29.0	+0.7
ARGC				eS	Sn	01 39 07.1	-0.1
ARGC				i		01 39 14.5	
	comp=Z,23nm,0.3s						
PRAC	**Prado**	**3.52**	**210**	eP	Pn	01 38 31.4	-0.7
PRAC				eS	Sn	01 39 13.0	-0.9
PRAC				i		01 39 20.3	
	comp=Z,48nm,0.6s						
PLMC	**San Jos del P**	**3.66**	**239**	eP	Pn	01 38 34.1	+0.3
SJCC	**San Jacinto, C**	**3.69**	**327**	⇓ eP	Pn	01 38 32.1	-2.1
SJCC				eS	Sn	01 39 13.9	-4.0
SJCC				i		01 39 22.0	
	comp=Z,21nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.21**	**3**	eP	Pn	01 38 38.4	-2.7
CRJC				eS	Sn	01 39 23.7	-6.2
CRJC				i		01 39 31.3	
	comp=Z,22nm,0.2s						
YOTC	**Yotoco, Valle**	**4.25**	**229**	eP	Pn	01 38 41.2	-0.4
YOTC				i		01 39 42.0	
	comp=Z,4.1nm,0.4s						
GUVC	**San Jose del G**	**4.25**	**173**	eP	Pn	01 38 40.5	-1.0

KRER	Koryakskii	0.92 285	eP		Pn	01 48 07.3 +0.8
PET	Petropavlovsk	0.96 267	Pn		Pn	01 48 06.8 +0.1
PET			Sn		Sn	01 48 20.2 +1.0
PET	Petropavlovsk	0.96 267	ePN		Pn	01 48 06.9 +0.1
PET			eS		Sn	01 48 19.6 +0.3
PET			pmax	pmax		
	comp=Z,2μm,0.8s					
PET			smax	smax		
	comp=E,5μm,0.8s					
PET			smax	smax		
	comp=N,4μm,0.7s					
KOK	Koryaka	0.99 283	Pn		Pn	01 48 07.9 +0.7
KOK			S		Sn	01 48 20.6 +0.5
KOK	Koryaka	0.99 283	eP		Pn	01 48 07.9 +0.7
KOK			eS		Sn	01 48 20.6 +0.5
KRX	Arik	0.99 287	PN		Pn	01 48 07.8 +0.4
KRX			S		Sn	01 48 20.6 +0.2
KRX	Arik	0.99 287	eP		Pn	01 48 07.8 +0.4
KRX			eS		Sn	01 48 20.6 +0.2
KII	Karymskiy	1.07 334	PN		Pn	01 48 08.9 +0.6
KII	Karymskiy	1.07 334	eP		Pn	01 48 08.9 +0.6
RUS	Russkaya	1.23 239	PN		Pn	01 48 10.8 +0.3
RUS			S		Sn	01 48 26.2 +0.3
RUS	Russkaya	1.23 239	eP		Pn	01 48 10.8 +0.3
RUS			eS		Sn	01 48 26.2 +0.3
KRMR	Karymshinskiy	1.30 260	PN		Pn	01 48 12.0 +0.6
KRMR			S		Sn	01 48 28.4 +0.8
KRMR	Karymshinskiy	1.30 260	eP		Pn	01 48 12.0 +0.6
KRMR			eS		Sn	01 48 28.4 +0.8
MTVR	Mutnovka	1.39 245	PN		Pn	01 48 13.6 +0.9
MTVR	Mutnovka	1.39 245	eP		Pn	01 48 13.6 +0.9
GRL	Gorelyy	1.42 249	PN		Pn	01 48 14.4 +1.3
GRL			S		Sn	01 48 32.2 +1.5
GRL	Gorelyy	1.42 249	eP		Pn	01 48 14.4 +1.3
GRL			eS		Sn	01 48 32.2 +1.5
GNL	Ganaly	1.51 295	PN		Pn	01 48 15.3 +1.0
GNL			S		Sn	01 48 35.1 +2.3
GNL	Ganaly	1.51 295	eP		Pn	01 48 15.3 +1.0
GNL			eS		Sn	01 48 35.1 +2.3
PEA0B	Petropavlovsk-	1.53 272			Pn	01 48 15.8 +1.2
PEA0B			Sn		Sn	01 48 34.7 +1.4
PEA0B	Petropavlovsk-	1.53 272	PN		Pn	01 48 15.8 +1.2
PEA0B						01 48 34.7
PETK	Petropavlovsk-	1.53 272	P		Pn	01 48 15.4 +0.8
	comp=N,242nm,0.4s,baz=89,slow=18,SNR=1595					
PETK			S		Sn	01 48 34.1 +0.8
	comp=N,445nm,0.5s,baz=266,slow=36,SNR=12					
PETK	Petropavlovsk-	1.53 272			Pn	01 48 15.1 +0.5
ASAK	Asacha	1.58 245	PN		Pn	01 48 16.7 +1.3
ASAK			S		Sn	01 48 36.9 +2.2
ASAK	Asacha	1.58 245	eP		Pn	01 48 16.7 +1.3
ASAK			eS		Sn	01 48 36.9 +2.2
MKZ	Mys Kozlova	1.72 30	PN		Pn	01 48 16.9 -0.2
MKZ			S		Sn	01 48 36.7 -1.2
MKZ	Mys Kozlova	1.72 30	eP		Pn	01 48 16.9 -0.2
MKZ			eS		Sn	01 48 36.7 -1.2
KDTR	Khodutka, Kamc	1.84 227	PN		Pn	01 48 19.6 +0.9
KDTR			S		Sn	01 48 42.5 +1.8
KDTR	Khodutka, Kamc	1.84 227	eP		Pn	01 48 19.6 +0.9
KDTR			eS		Sn	01 48 42.5 +1.8
APC	Apacha	1.87 266	PN		Pn	01 48 21.3 +2.1
APC			S		Sn	01 48 44.7 +3.2
APC	Apacha	1.87 266	eP		Pn	01 48 21.3 +2.1
APC			eS		Sn	01 48 44.7 +3.2
TUMR	Tumrok	2.21 359	PN		Pn	01 48 25.9 +2.0
TUMR			S		Sn	01 48 52.0 +2.0
TUMR	Tumrok	2.21 359	eP		Pn	01 48 25.9 +2.0
TUMR			eS		Sn	01 48 52.0 +2.0
KMNR	Kamenistaya	2.68 360	PN		Pn	01 48 34.2 +3.8
KMNR	Kamenistaya	2.68 360	eP		Pn	01 48 34.2 +3.8
KPT	Kopyto	2.89 360	PN		Pn	01 48 36.3 +3.0
KPT	Kopyto	2.89 360	P		Pn	01 48 36.3 +3.0
KLY	Klyuchi	3.25 4	PN		Pn	01 48 41.5 +3.4
KLY	Klyuchi	3.25 4	eP		Pn	01 48 41.5 +3.4
SRDR	Sredinnyy	3.26 355	PN		Pn	01 48 39.9 +1.6
SRDR	Sredinnyy	3.26 355	eP		Pn	01 48 39.9 +1.6
KBTR	Krutoberegovo	3.47 25	PN		Pn	01 48 42.6 +1.4
KBTR	Krutoberegovo	3.47 25	i P		Pn	01 48 42.6 +1.4
KBG	Krutoberegovo	3.49 23	PN		Pn	01 48 43.5 +2.2
KBG			S		Sn	01 49 24.2 +2.9
KBG	Krutoberegovo	3.49 23	eP		Pn	01 48 43.5 +2.2
KBG			eS		Sn	01 49 24.2 +2.9
SKR	Severo-Kuril's	3.51 228	ePN		Pn	01 48 43.9 +2.3
SKR			eS		Sn	01 49 23.1 +1.3
SKR			pmax	pmax		
	comp=Z,40nm,0.8s					
SKR			smax	smax		
	comp=E,203nm,0.7s					
SKR			smax	smax		
	comp=N,267nm,0.7s					
BDR	Baidarnaya	3.54 9	PN		Pn	01 48 45.0 +2.9
BDR	Baidarnaya	3.54 9	eP		Pn	01 48 45.0 +2.9
SRKR	Sorokina	3.62 8	PN		Pn	01 48 46.1 +2.8
SRKR	Sorokina	3.62 8	eP		Pn	01 48 46.1 +2.8
BKI	Bering	3.99 55	PN		Pn	01 48 49.1 +0.9
BKI	Bering	3.99 55	eP		Pn	01 48 49.1 +0.9
BKI			eS		Sn	01 49 30.5 -3.1
ERM	Erimo	15.94 233	i P		Pn	01 51 28.9 -1.7
KLR	Kul'dur	18.22 269	P		Pn	01 52 01.4 +2.5
	comp=N,0.8nm,0.4s,baz=84,slow=10,SNR=2.9					
KLR			LR		LR	01 59 03.0
	comp=N,44nm,20.8s,baz=251,slow=37					
JSD	Sado	21.39 234	P		P	01 52 33.4 +0.2
MJA0	Matsu Arr-Jizo	22.59 232	eP		P	01 52 47.2 +1.1
MJA0			pmax	pmax		
	comp=Z,9.0nm,0.8s					
MJB9	Matsu-Tunnel	22.61 232	P		P	01 52 47.3 +1.0
MJB9			IAmb	IAmb		01 52 51.2
	comp=Z,18nm,0.8s					
MAJO	Matsushiro	22.61 232	P		P	01 52 46.8 +0.5
MAJO	Matsushiro	22.61 232	P		P	01 52 46.8 +0.5
MAJO			pmax	pmax		
	comp=Z,19nm,0.9s					
MJAR	Matsushiro Arr	22.61 232	P		P	01 52 47.2 +1.0
	comp=Z,9.2nm,0.8s,baz=21,slow=12,SNR=12					
MJAR			LR		LR	02 02 10.3
	comp=Z,56nm,19.4s,baz=53,slow=38					
	comp=Z,9.2nm,0.8s					
K20K	Telida	25.59 48	P		P	01 53 16.4 +2.3
K20K			IAmb	IAmb		01 53 34.0
	comp=Z,5.9nm,1.0s					
J20K	Nowinta River	25.61 46	P		P	01 53 15.5 +1.3
J20K			IAmb	IAmb		01 53 38.4
	comp=Z,9.5nm,1.3s					
IMAR	Indian Mountai	25.95 42	P		P	01 53 18.2 +0.9
KDAK	Kodiak Island	26.73 61	P		P	01 53 25.9 +1.6
	comp=Z,5.5nm,0.9s,baz=275,slow=11,SNR=5.0					
	comp=Z,5.5nm,0.9s					
BPAW	Bear Paw Mtn.	26.99 47	P		P	01 53 28.6 +1.9
BPAW			IAmb	IAmb		01 53 29.8
	comp=Z,8.4nm,1.3s					
KSRS	Korea Array	27.29 248	LR		LR	02 03 58.5
	comp=Z,27nm,20.2s,baz=75,slow=36					
TOLK	Toolik Lake Re	27.92 37	P		P	01 53 36.4 +1.4
TOLK			IAmb	IAmb		01 53 50.0
	comp=Z,10nm,1.4s					
WRH	Wood River Hil	28.25 46	P		P	01 53 40.0 +2.1
HDA	Harding Lake	28.75 46	P		P	01 53 44.0 +1.7
ILAR	Eielson Array	28.76 45	P		P	01 53 44.3 +1.8
	comp=Z,1.4nm,0.7s,baz=263,slow=8.4,SNR=16					
ILAR			LR		LR	02 05 56.8
	comp=Z,24nm,18.6s,baz=96,slow=38					
	comp=Z,1.4nm,0.7s					
ILAR	Eielson Array	28.76 45	P		P	01 53 44.2 +1.7
SCM	Sheep Creek Mo	28.77 51	P		P	01 53 44.5 +1.9
SCM			IAmb	IAmb		01 54 26.1
	comp=Z,13nm,1.4s					
SCM	Sheep Creek Mo	28.77 51	P		P	01 53 44.6 +1.9
SCM			pmax	pmax		
	comp=Z,13nm,1.4s					
PRP	Porcupine Dome	29.32 44	P		P	01 53 49.0 +1.5
PRP			IAmb	IAmb		01 53 50.5
	comp=Z,3.6nm,0.9s					
H11N2	WAKE ISLAND Hy	33.69 169	T		T	02 30 06.5
	baz=353,slow=76,SNR=655					
H11N3	WAKE ISLAND Hy	33.70 169	T		T	02 30 06.8
	baz=353,slow=76,SNR=401					
H11N1	WAKE ISLAND Hy	33.70 169	T		T	02 30 10.2
	baz=353,slow=76,SNR=595					
INK	Inuvik	33.82 38	P		P	01 54 28.5 +1.7
	comp=Z,0.8nm,0.5s,baz=324,slow=12,SNR=5.4					
	comp=Z,0.8nm,0.5s					
H11S1	WAKE ISLAND Hy	34.87 169	T		T	02 31 40.3
	baz=352,slow=76,SNR=69					
H11S3	WAKE ISLAND Hy	34.88 169	T		T	02 31 39.2
	baz=352,slow=76,SNR=121					
H11S2	WAKE ISLAND Hy	34.89 169	T		T	02 31 36.3
	baz=352,slow=76,SNR=27					
GUMO	Guam	41.25 203	LR		LR	02 12 44.1
	comp=Z,17nm,19.7s,baz=280,slow=36					
ZALV	Zalesovo Beam	42.86 303	LR		LR	02 13 49.9
	comp=Z,30nm,20.9s,baz=44,slow=36					
YKA	Yellowknife Ar	43.11 43	LR		LR	02 17 12.0
	comp=Z,35nm,18.5s,baz=8.0,slow=41					
DGZ	Jazzator, Alta	43.75 296	i P		P	01 55 48.7 -1.7
DGZ			pmax	pmax		
	comp=Z,1.0nm,0.9s					
KURK	Kurchatov	47.81 302	i P		P	01 56 18.3 -3.8
KURK			pmax	pmax		
	comp=Z,1.0nm,0.8s					
MK31	Makanchi Array	48.24 296	i P		P	01 56 23.4 -2.1
MKAR	Makanchi Array	48.24 296	P		P	01 56 24.0 -1.5
	comp=Z,0.5nm,0.5s,baz=52,slow=6.1,SNR=7.6					
	comp=Z,0.5nm,0.5s					
ARU	Arti	53.46 317	LR		LR	02 23 37.3
	comp=Z,23nm,18.6s,baz=100,slow=40					
ARU	Arti	53.46 317	d i P		P	01 57 02.1 -2.5
ARU						01 58 07.0
ARU						01 59 00.5
ARU			S		S	02 04 30.9 -2.5
ARU			SS		SS	02 08 06.5 -6.7
ARU			pmax	pmax		
	comp=Z,6.0nm,1.7s					
KIRV	Kirov	55.45 324	LR		LR	02 23 44.4
	comp=Z,48nm,18.7s,baz=352,slow=39					
NVAR	Mina Array Bea	55.66 70	P		P	01 57 23.9 +2.8
	comp=Z,0.3nm,0.6s,baz=298,slow=7.8,SNR=2.4					
	comp=Z,0.3nm,0.6s					
VES	Vestal, Richgr	57.02 73	P		P	01 57 31.4 +0.8
PDAR	Pinedale Array	57.45 61	P		P	01 57 36.6 +2.8
	comp=Z,0.9nm,0.8s,baz=321,slow=2.1,SNR=6.1					
	comp=Z,0.9nm,0.8s					
FINES	FINESS Array B	60.16 337	P		P	01 57 50.9 -1.1
	comp=Z,0.9nm,0.4s,baz=46,slow=6.4,SNR=10					
	comp=Z,0.9nm,0.4s					
FINES	FINESS Array B	60.16 337	i P		P	01 57 50.5 -1.5
FINES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
BELG	Belogornoye	60.78 320	i P		P	01 57 54.1 -2.2
BELG			pmax	pmax		
	comp=Z,1.0nm,1.0s					
NOA	NORSAR Array B	63.58 344	P		P	01 58 13.8 -1.1
	comp=Z,0.3nm,0.6s,baz=19,slow=7.5,SNR=4.3					
	comp=Z,0.3nm,0.6s					
NOA	NORSAR Array B	63.58 344	eP		P	01 58 13.6 -1.4
AKASG	Malin Array Be	68.67 329	P		P	01 58 46.5 -1.2
	comp=Z,0.7nm,0.3s,baz=30,slow=6.7,SNR=5.3					
	comp=Z,0.7nm,0.3s					
AKASG	Malin Array Be	68.67 329	eP		P	01 58 47.3 -0.4
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.3s					
TXAR	Lajitas Array	70.56 67	P		P	01 59 02.1 +2.3
	comp=Z,0.9nm,0.5s,baz=298,slow=5.0,SNR=30					
	comp=Z,0.9nm,0.5s					
CLL	Collm	72.40 339	eP		P	01 59 08.0 -2.4
CLL			e*PP		pP	01 59 22.0 -1.9
CLL	Collm	72.40 339	eP		P	01 59 12.0 +1.6
BUR08	Bucovina Ar. S	72.61 330	P		P	01 59 11.7 -0.2
MLR	Muntele Rosu	74.30 328	P		P	01 59 22.7 +0.8
MLR			IAmb	IAmb		01 59 23.7
	comp=Z,3.0nm,0.6s					
MLR	Muntele Rosu	74.30 328	P		P	01 59 22.7 +0.8
MLR			pmax	pmax		
	comp=Z,3.0nm,0.6s					
GERES	GERESS Array B	74.56 338	P		P	01 59 23.4 +0.1
	comp=Z,0.5nm,0.5s,baz=44,slow=7.1,SNR=3.6					
	comp=Z,0.5nm,0.5s					
WRA	Warramunga Arr	76.11 205	P		P	01 59 32.4 +0.1
	comp=Z,0.4nm,0.7s,baz=19,slow=6.1,SNR=2.6					
	comp=Z,0.4nm,0.7s					
ASAR	Alice Springs	79.78 204	P		P	01 59 53.7 +1.0
	comp=Z,0.4nm,0.5s,baz=27,slow=8.3,SNR=4.3					
ASAR			LR		LR	02 38 57.4
	comp=Z,18nm,18.0s,baz=192,slow=38					
	comp=Z,0.4nm,0.5s					
RAYN	Ar Rayn	85.13 303	P		P	02 00 20.2 -0.6
RAYN	Ar Rayn	85.13 303	P		P	02 00 20.2 -0.6
RAYN			pmax	pmax		
	comp=Z,3.0nm,0.7s					
ESDC	Sonseca Array	86.61 348	P		P	02 00 28.4 +0.4
	comp=Z,2.2nm,0.9s,baz=0.5,slow=4.5,SNR=12					
	comp=Z,2.2nm,0.9s					
ESDC	Sonseca Array	86.61 348	P		P	02 00 26.8 -1.1
ESDC			IAmb	IAmb		02 00 29.8
	comp=Z,2.7nm,1.1s					
KEST	Kesra	88.00 337	P		P	02 00 34.5 -0.2
	comp=Z,2.1nm,0.9s,baz=50,slow=3.0,SNR=6.2					
	comp=Z,2.1nm,0.9s					

NNC ***04*** *01:48:28.0±8.9, 37°.75N×71°.57E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=81.2km s-min=43.6km az=163.0*

ISC 04 01:48:28.8±3.4, 37°.5N±0°.2×71°.5E±0°.1, h109km, n9, σ1§44/11, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.96	19	P	Pn	01 49 42.5	+1.2
	SNR=40						
UCH	Uchtor	5.29	25	P	Pn	01 49 47.0	+1.1
	SNR=7.7						
EKS2	Erkin-Say	5.48	18	P	Pn	01 49 50.5	+2.4
	SNR=11						
AAK	Ala-Archa	5.66	23	P	Pn	01 49 52.0	+1.5
	SNR=7.1						
KK31	Karatay Array	5.69	353	⇓Pn	Pn	01 49 51.9	+1.0
	2.4nm,0.3s,baz=175,slow=13,SNR=44						
KK31				⇑Sn	Sn	01 50 55.2	+0.3
	2.4nm,0.5s,baz=169,slow=23,SNR=8.9						
USP	Ospenovka	6.23	21	P	Pn	01 49 58.9	+0.7
	SNR=6.5						
TKM2	Tokmak 2	6.29	29	⇓Pn	Pn	01 49 59.6	+0.5
	1.5nm,0.5s						
TKM2				⇑Sn	Sn	01 51 07.9	-1.8
	1.7nm,0.7s						
AB31	Akbulak array	14.46	328	P	Pn	01 51 47.1	-1.0
	0.5nm,0.4s,baz=156,slow=11,SNR=19						
AKTO	Aktyubinsk	16.17	328	⇑P	P	01 52 10.3	-0.4
	0.7nm,0.7s						

NEIC ***04*** *02:13:52.3±1.3, 10°.6S±0°.1×161°.7E±0°.1, h56km±14km, mb4.3/9, Error ellipse: s-maj=23.5km s-min=13.4km az=216.0*

IDC ***04*** *02:14:10.7±9.0, 9°.93S×160°.52E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=247.4km s-min=43.9km az=116.0*

ISC 04 02:13:52.0±0.8, 10°.5S±0°.1×161°.7E±0°.1, h61km, n18, σ1§80/16, mb4.2/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.05	302	Pn	Pn	02 14 25.0	+0.8
HNR				Sn	Sn	02 14 47.0	-1.7
LIFNC	LIFOU	11.50	153	Pn	Pn	02 16 36.2	+2.7
DZM	Mont Dzumac	12.35	159	Pn	P	02 16 51.9	-3.3
MARNC	Mare, Loyalty	12.47	152	Pn	Pn	02 16 45.8	-1.0
OUENC	Ouen Island, N	12.81	158	Pn	P	02 16 58.2	-2.0
PINNC	Pines Island,	13.21	156	Pn	P	02 17 02.8	-2.0
TARA	Tarawa	16.24	44		P	02 17 38.6	+0.2
PATS	Pohnpei	17.57	349		Pn	02 17 53.3	+0.3
COEN	Coen	18.43	257	P	P	02 18 03.3	+0.5
COEN				IAmb	IAmb	02 18 08.3	
	comp=Z,18nm,1.1s						
CAN	Canberra	27.27	203	P	P	02 19 33.4	+2.7
CAN				IAmb	IAmb	02 19 48.4	
	comp=Z,23nm,1.3s						
WB0	Warramunga Arr	27.89	248	P	P	02 19 36.2	-0.3
WB0				IAmb	IAmb	02 20 01.9	
	comp=Z,7.1nm,1.1s						
WB2	Warramunga Arr	27.97	247	P	P	02 19 36.1	-1.1
WRA	Warramunga Arr	27.98	247	P	P	02 19 56.0	+19
	comp=Z,1.3nm,0.6s,baz=76,slow=9.3,SNR=3.6						
	comp=Z,1.3nm,0.6s						
WRA	Warramunga Arr	27.98	247	P	P	02 19 37.9	+0.6
ASAR	Alice Springs	29.55	240	P	P	02 20 11.1	+20
	comp=Z,0.3nm,0.3s,baz=60,slow=9.9,SNR=4.2						
	comp=Z,0.3nm,0.3s						
FITZ	Fitzroy Crossi	35.70	254	P	P	02 20 43.8	-1.2
FITZ				IAmb	IAmb	02 21 22.8	
	comp=Z,5.4nm,1.1s						
SONM	Songino Array	75.94	325	P	P	02 25 52.9	+20
	comp=Z,0.9nm,0.8s,baz=134,slow=6.2,SNR=3.8						
	comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	79.48	180	P	P	02 25 52.7	+0.8
QSPA				IAmb	IAmb	02 26 10.8	
	comp=Z,3.7nm,1.2s						

RSNC 04 02:44:38.5±0.3, 6°.78N×73°.17W, h154km±3km, ML1.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.19	185	eS	Sn	02 45 13.9	-1.7
BRRC	Barranca, Sant	0.63	301	eP	Pn	02 45 00.6	-0.4
BRRC				eS	Sn	02 45 17.6	-0.5
BRRC				i		02 45 20.2	
	comp=Z,4.1nm,0.1s						
BRRC	Barranca, Sant	0.63	301	eP	Pn	02 45 00.7	-0.3
BRRC				eS	Sn	02 45 17.6	-0.5
BRRC				i		02 45 21.5	
	comp=Z,4.1nm,0.3s						
PAMC	Pamplona, Colo	0.72	40	eP	Pn	02 45 01.6	-0.5
PAMC	Pamplona, Colo	0.72	40	eP	Pn	02 45 01.6	-0.5
RUSC	La Rusia	0.89	175	eP	Pn	02 45 02.9	-0.5
RUSC				eS	Sn	02 45 21.6	-0.7
RUSC				i		02 45 22.6	
	comp=Z,3.6nm,0.3s						
RUSC	La Rusia	0.89	175	eP	Pn	02 45 03.0	-0.4
RUSC				eS	Sn	02 45 22.0	-0.3
RUSC				i		02 45 22.6	
	comp=Z,3.6nm,0.3s						
PTBC	PUERTO BERRIO,	1.30	259	eP	Pn	02 45 05.9	-0.5
PTBC				eS	Sn	02 45 27.2	-0.5
PTBC				i		02 45 31.6	
	comp=Z,2.1nm,0.1s						
PTBC	PUERTO BERRIO,	1.30	259	eP	Pn	02 45 05.9	-0.5
PTBC				eS	Sn	02 45 27.2	-0.5
PTBC				i		02 45 30.1	
	comp=Z,1.7nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	293	eS	Sn	02 45 36.9	-0.5
CUSE	Cuicocha Este	8.29	219	eP	Pn	02 46 30.4	-5.8
CUSE				i		02 46 56.4	
	comp=Z,109nm,0.3s						

BJI ***04*** *02:44:39.7±0.0, 54°.28N×161°.97W, h8km, mb4.7/24, mB5.1/8*

IDC ***04*** *02:44:41.7±0.6, 54°.47N×161°.94W, h0km, mb4.5/34, mbtmp4.4/38, ML3.9/4, MS3.6/43, Error ellipse: s-maj=15.7km s-min=10.4km az=165.0*

MOS ***04*** *02:44:42.6±0.9, 54°.43N×161°.66W, h19km, mb5.0/56, Error ellipse: s-maj=10.5km s-min=5.1km az=89.6*

AEIC ***04*** *02:44:45±1.7, 54°.33N±0°.05×161°.56W±0°.06, h36km±6km, ML4.3, mb4.9/131(NEIC), ML4.5/12(NEIC), Mwr4.2/11(NEIC), Error ellipse: s-maj=6.8km s-min=4.6km az=170.0*

NEIC ***04*** *02:44:45, 54°.33N×161°.56W, h32km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.38; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-1.32; $M_{r\theta}$1.82; $M_{\theta\phi}$-0.77; $M_{\phi r}$0.72; Fault plane solution: $M_0$2.50000×10^{15} NP1:φs55.89000°, δ72.82000°, λ112.63000°. NP2:φs181.20000°, δ28.14000°, λ38.78000°. Principal axes: T 2.6252, Plg56.0000°, Azm355.0000°; N -0.2720, Plg22.0000°, Azm229.0000°; P -2.3532, Plg24.0000°, Azm128.0000°;*

NEIC ***04*** *02:44:46.9±1.6, 54°.39N±0°.05×161°.59W±0°.05, h33km±5km Error ellipse: s-maj=6.9km s-min=4.4km az=168.0*

ANF ***04*** *02:44:46.0±0.9, 54°.32N×161°.60W, h23km±6km, ML4.8/13, ML4.8/13, Error ellipse: s-maj=4.3km s-min=2.6km az=167.0*

ISC 04 02:44:47.0±0.9, 54°.42N±0°.05×161°.65W±0°.03, h39km±8km, n738, σ1§08/733, mb4.8/161, MS3.6/42, 26C-21D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.65	327		Pn	02 44 59.6	-0.3
DRIA					Sn	02 45 08.9	0.0
DT1	Dutton Round H	0.78	332		Pn	02 45 01.2	-0.3
HAG	Hague Volcano	0.91	351		Pn	02 45 03.8	+0.4
HAG	Hague Volcano	0.91	351	P	Pn	02 45 03.8	+0.4
PS4A	Pavlof South-4	0.94	353		Pn	02 45 04.0	+0.3
PVV	Pavlof Volcano	0.96	355		Pn	02 45 04.3	+0.3
PS1A	Pavlof South-1	1.00	357		Pn	02 45 05.1	+0.5
PN7A	Pavlof North-7	1.03	349		Pn	02 45 06.2	+1.2
FALS	False Pass	1.12	294		Pn	02 45 06.2	+0.1
FALS	False Pass	1.12	294	P	Pn	02 45 06.2	+0.1
	baz=116						
FALS				S	Sn	02 45 22.2	+1.9
	baz=116						
SDPT	Sand Point	1.15	36		Pn	02 45 07.0	+0.5
SDPT					Sn	02 45 22.8	+1.7
SDPT	Sand Point	1.15	36	P	Pn	02 45 07.1	+0.5
	baz=213						
SDPT				S	Sn	02 45 22.9	+1.8
	baz=213						
ISLZ	Isanotski Laza	1.24	285		Pn	02 45 07.7	-0.1
ISLZ					Sn	02 45 23.9	+0.6
BRPK	Brown Peak	1.24	281		Pn	02 45 07.6	-0.2
CNBA	Chernabura Isl	1.26	71		Pn	02 45 07.7	-0.4
CNBA					Sn	02 45 23.1	-0.7
CHNA	Chernabura Isl	1.27	70	P	Pn	02 45 07.6	-0.6
	baz=248						
CHNA				S	Sn	02 45 23.4	-0.5
	baz=248						
ISNN	Isanotski Nort	1.30	289		Pn	02 45 09.9	+1.2
SSLS	Shishaldin Sou	1.40	283		Pn	02 45 10.7	+0.7
SSLN	Shishaldin Nor	1.42	287		Pn	02 45 11.5	+1.2
SSLW	Shishaldin Wes	1.48	285		Pn	02 45 12.0	+0.9
SSBA	Shishaldin	1.48	285		Pn	02 45 12.2	+1.0
SSBA					Sn	02 45 31.4	+2.0
WESN	West Dahl Nort	1.72	276		Pn	02 45 15.4	+1.0
WESP	Westdahl Peak	1.79	274		Pn	02 45 16.0	+0.5
WEBT	Westdahl Beart	1.82	277		Pn	02 45 16.8	+1.1
WECS	Westdahl Cape	1.83	275		Pn	02 45 16.4	+0.5
AKSA	Akutan Strait	2.39	265		Pn	02 45 24.2	+0.6
AKUT	Akutan	2.43	265		Pn	02 45 24.9	+0.7
AKUT	Akutan	2.43	265	IAML		02 46 06.2	
	comp=N,2μm,0.6s						
AKUT				IAML		02 46 06.8	
	comp=E,2μm,0.7s						
AKLV	Akutan Long Va	2.54	266		Pn	02 45 26.4	+0.7
ZRO	Akutan Zero	2.56	264		Pn	02 45 26.9	+0.9
AKMO	Akutan Morgan	2.58	264		Pn	02 45 27.0	+0.8
AKMO					Sn	02 45 57.4	+1.1
AKRB	Akutan Reef Bi	2.61	265		Pn	02 45 27.7	+1.1
CHGN	Chignik	2.64

baz=216
OKTU Okmok Mt. Tuli 3.92 257 Pn 02 45 45.4 +0.7
OKSO Okmok South 4.00 257 Pn 02 45 45.6 -0.1
R17K Ugashik Creek 4.37 40 Pn 02 45 52.6 +1.8
R17K Ugashik Creek 4.37 40 P Pn 02 45 52.7 +2.0
baz=224
NIKH Nikolski High 4.52 254 Pn 02 45 53.1 +0.3
NIKH Nikolski High 4.52 254 P Pn 02 45 52.6 -0.2
baz=70
SII Sitkinak Islan 4.75 60 Pn 02 45 56.6 +0.5
SII Sitkinak Islan 4.75 60 IAML 02 47 15.0
comp=N,683nm,1.1s
SII Sitkinak Islan 4.75 60 P Pn 02 45 55.9 -0.2
baz=245
Q17K Contact Creek 5.01 37 P Pn 02 46 01.0 +1.4
baz=221
CNTC Contact Creek 5.01 37 Pn 02 46 01.0 +1.3
P16K Nushagak River 5.04 22 Pn 02 46 01.2 +1.2
P16K Nushagak River 5.04 22 P Pn 02 46 01.5 +1.6
baz=204
Q16K King Salmon 5.08 31 Pn 02 46 00.8 +0.3
Q16K King Salmon 5.08 31 P Pn 02 45 60.0 -0.5
baz=214
KELA Mount Kelaz 5.19 37 Pn 02 46 03.1 +1.0
KAKN Katmai Knife C 5.34 41 Pn 02 46 05.6 +1.4
OHAK Old Harbor 5.49 56 Pn 02 46 05.7 -0.3
OHAK Old Harbor 5.49 56 P Pn 02 46 05.6 -0.4
baz=242
OHAK Sb Sn 02 47 30.9 +23
baz=242
O16K Kokwok River B 5.54 19 Pn 02 46 08.0 +1.2
O16K Kokwok River B 5.54 19 P Pn 02 46 08.0 +1.2
baz=201
P17K Kvichak River 5.58 29 Pn 02 46 09.4 +2.1
P17K Kvichak River 5.58 29 P Pn 02 46 09.6 +2.3
baz=212
SPIA Saint Paul Isl 5.58 303 P Pn 02 46 09.2 +1.8
baz=117
KAHC Katmai Hardscr 5.61 38 Pn 02 46 09.6 +1.7
KAHC Katmai Hardscr 5.61 38 Pn 02 46 09.6 +1.7
Q18K Katmai Hardscr 5.61 38 P Pn 02 46 09.3 +1.5
baz=223
O17K Koliganek Bris 5.91 23 Pn 02 46 12.6 +0.7
O17K Koliganek Bris 5.91 23 P Pn 02 46 13.2 +1.3
baz=206
KDAK Kodiak Island 6.09 53 Pn Pn 02 46 13.8 -0.5
comp=N,4.6nm,0.3s,baz=262,slow=6.8,SNR=59
KDAK Sn Sn 02 47 20.1 -2.5
baz=153,slow=14
comp=N,18nm,0.5s
KDAK Kodiak Island 6.09 53 Pn 02 46 14.1 -0.3
KDAK Kodiak Island 6.09 53 P Pn 02 46 13.8 -0.5
baz=239
P18K Big Mountain, 6.10 33 Pn 02 46 15.9 +1.4
P18K Big Mountain, 6.10 33 P Pn 02 46 16.5 +2.0
baz=217
N16K Nishlik Lake 6.27 13 Pn 02 46 18.3 +1.5
N16K Nishlik Lake 6.27 13 P Pn 02 46 18.6 +1.9
baz=195
N16K S Sn 02 47 29.7 +2.6
baz=195
Q19K Cape Douglas, 6.31 41 Pn 02 46 18.6 +1.2
Q19K Cape Douglas, 6.31 41 P Pn 02 46 18.6 +1.2
baz=227
O18K Koktuh Hills 6.48 30 Pn 02 46 22.2 +2.5
O18K Koktuh Hills 6.48 30 P Pn 02 46 21.9 +2.3
baz=215
Q20K Shuyak Island 6.62 47 P Pn 02 46 22.2 +0.6
baz=234
SYI Shuyak Island 6.62 47 Pn 02 46 22.4 +0.8
N18K Kilae Creek 7.00 24 Pn 02 46 27.8 +0.9
N18K Kilae Creek 7.00 24 P Pn 02 46 27.7 +0.9
baz=208
O19K Port Alsworth 7.02 31 Pn 02 46 26.6 -0.5
O19K Port Alsworth 7.02 31 P Pn 02 46 28.8 +1.7
baz=217
IVE Iliamna Volcan 7.31 36 Pn 02 46 30.5 -0.6
SVW2 Sparrevohn 7.44 23 Pn 02 46 34.3 +1.4
N19K Bonanza Creek 7.47 28 Pn 02 46 35.5 +2.1
N19K Bonanza Creek 7.47 28 P Pn 02 46 35.8 +2.5
baz=214
O20K Slope Mountain 7.49 37 Pn 02 46 34.6 +1.0
O20K Slope Mountain 7.49 37 P Pn 02 46 36.1 +2.5
baz=224
CNPM China Poot 7.65 44 Pn 02 46 36.3 +0.6
RSO Redoubt South 7.72 35 Pn 02 46 38.0 +1.1
NCT North Crescent 7.74 34 Pn 02 46 37.6 +0.5
BRLK Bradley Lake 7.93 43 Pn 02 46 39.9 +0.3
BRSE Bradley Lake S 7.98 44 Pn 02 46 40.6 +0.3
BRSE Bradley Lake S 7.98 44 P Pn 02 46 40.1 -0.2
baz=232
M19K Big River Lodg 8.42 24 Pn 02 46 48.2 +1.9
M19K Big River Lodg 8.42 24 P Pn 02 46 48.6 +2.3
baz=210
N20K Mount Spurr 8.45 33 P Pn 02 46 47.8 +1.0
baz=220
SPCR Spurr Chakacha 8.45 33 P Pn 02 46 47.7 +0.9
baz=220
SPU Mount Spurr 8.49 33 Pn 02 46 48.4 +1.1
SPCP Crater Peak Br 8.52 33 Pn 02 46 49.1 +1.3
L19K White Mountain 8.56 22 Pn 02 46 49.2 +1.0
L19K White Mountain 8.56 22 P Pn 02 46 49.2 +1.0
baz=207
SLKM Skilak Lake 8.66 41 Pn 02 46 50.0 +0.4
SEW Seward 8.72 44 Pn 02 46 50.7 +0.4
SEW Seward 8.72 44 P Pn 02 46 50.9 +0.6
baz=234
M20K Styx River 8.72 28 Pn 02 46 51.4 +0.8
M20K Styx River 8.72 28 P Pn 02 46 53.5 +2.9
baz=214
O22K Cooper Landing 8.84 42 P Pn 02 46 53.2 +1.3
baz=231
TT01 Tatalina 9.00 17 Pn 02 46 55.0 +0.9
TTA Tatalina 9.02 17 Pn 02 46 55.4 +0.8
TTA Tatalina 9.02 17 P Pn 02 46 55.5 +1.0
baz=201
L20K Farewell, AK 9.04 24 Pn 02 46 55.5 +0.7
L20K Farewell, AK 9.04 24 P Pn 02 46 56.7 +1.9
baz=210
SUA Susitna One 9.12 35 Pn 02 46 56.6 +0.6
SUA Susitna One 9.12 35 P Pn 02 46 56.6 +0.6
baz=224
RC01 Rabbit Creek A 9.22 39 Pn 02 46 57.3 0.0
RC01 Rabbit Creek A 9.22 39 P Pn 02 46 57.7 +0.5
baz=228
SKT Skwentna 9.26 31 Pn 02 46 59.2 +1.3
SKT Skwentna 9.26 31 P Pn 02 47 00.1 +2.2
baz=219
ADK Adak 9.38 260 Pn Pn 02 47 00.1 +0.6
ADK Adak 9.38 260 P Pn 02 47 00.1 +0.6
M22K Willow 9.54 35 Pn 02 47 02.7 +1.1
M22K Willow 9.54 35 P Pn 02 47 02.2 +0.6
baz=224
PWL Port Wells 9.61 42 Pn 02 47 02.4 -0.2
PWL Port Wells 9.61 42 P Pn 02 47 02.4 -0.2
baz=233,SNR=6.3
K20K Telida 9.77 21 Pn 02 47 06.0 +1.1
K20K Telida 9.77 21 P Pn 02 47 06.1 +1.3
baz=207
PMR Palmer 9.77 38 P Pn 02 47 05.6 +0.8
baz=228
PPLA Purkeypile 9.81 26 Pn 02 47 07.9 +2.4
PPLA Purkeypile 9.81 26 P Pn 02 47 07.9 +2.4
baz=214
KNK Knik Glacier 9.90 40 Pn 02 47 06.4 -0.2
KNK Knik Glacier 9.90 40 P Pn 02 47 06.8 +0.2
baz=230
CUT Chulitna 9.97 32 Pn 02 47 07.5 +0.1
CUT Chulitna 9.97 32 P Pn 02 47 07.3 -0.2
baz=221,SNR=7.1
HIN Hinchinbrook I 10.12 48 Pn 02 47 08.7 -0.9
GLI Glacier Island 10.12 44 Pn 02 47 08.9 -0.6
GLI Glacier Island 10.12 44 P Pn 02 47 09.4 -0.2
baz=236
SML Sawmill 10.20 38 Pn 02 47 09.7 -1.0
SML Sawmill 10.20 38 P Pn 02 47 10.0 -0.7
baz=229
CAST Castle Rocks 10.28 25 Pn 02 47 12.1 +0.4
CAST Castle Rocks 10.28 25 P Pn 02 47 12.9 +1.2
baz=213
FID Port Fidalgo 10.31 46 Pn 02 47 10.8 -1.3
M23K Glacier View 10.41 39 P Pn 02 47 12.8 -0.8
baz=231,SNR=9.4
J20K Nowinta River 10.50 18 Pn Pn 02 47 15.3 +0.6
J20K Nowinta River 10.50 18 P Pn 02 47 16.0 +1.3
baz=204
EYAK Cordova Ski Ar 10.52 48 Pn 02 47 14.4 -0.6
EYAK Cordova Ski Ar 10.52 48 P Pn 02 47 14.4 -0.6
baz=241,SNR=10
SCM Sheep Creek Mo 10.59 40 Pn Pn 02 47 15.1 -0.9
SCM Sheep Creek Mo 10.59 40 P Pn 02 47 15.1 -0.9
SCM Sheep Creek Mo 10.59 40 P Pn 02 47 15.2 -0.9
baz=231
CHUM Lake Minchumin 10.62 23 P Pn 02 47 18.2 +1.9
baz=211
GCSA Galena City Sc 10.63 11 P Pn 02 47 18.8 +2.3
baz=195
KTH Kantishna Hill 10.68 27 Pn 02 47 17.6 +0.3
GAMB Gambell 10.70 335 P Pn 02 47 19.5 +2.1
baz=147
TRF Thorofare Moun 10.77 28 Pn 02 47 18.8 +0.2
TRF Thorofare Moun 10.77 28 P Pn 02 47 18.9 +0.3
baz=218
DIV Divide 10.80 45 Pn 02 47 17.6 -1.3
WAT1 Susitna Watana 10.83 34 P Pn 02 47 17.4 -1.8
baz=224
KAIM Kayak Island 10.84 52 Pn Pn 02 47 19.6 +0.2
KAIM Kayak Island 10.84 52 P Pn 02 47 19.8 +0.4
baz=246,SNR=7.6
RAGM Ragged Mountai 10.91 50 Pn 02 47 20.4 0.0
WAT6 Susitna Watana 10.92 36 P Pn 02 47 18.9 -1.8
baz=227
KLU Klutina 10.93 43 P Pn 02 47 19.9 -0.8
baz=236,SNR=12
HMT Hamilton 11.08 51 Pn 02 47 22.6 -0.1
BPAW Bear Paw Mtn. 11.12 25 Pn Pn 02 47 23.4 +0.2
BPAW Bear Paw Mtn. 11.12 25 P Pn 02 47 24.5 +1.3
baz=214
RND Reindeer 11.15 31 Pn 02 47 23.9 +0.2
RND Reindeer 11.15 31 P Pn 02 47 23.9 +0.2
M24K Tolsona, Glenn 11.19 40 Pn Pn 02 47 24.3 +0.1
M24K Tolsona, Glenn 11.19 40 P Pn 02 47 23.3 -0.9
baz=233,SNR=10
BMRM Bremner River 11.21 47 Pn 02 47 23.9 -0.6
BMRM Bremner River 11.21 47 P Pn 02 47 23.5 -1.0
baz=241,SNR=7.6
BERG Berg Lake 11.36 51 Pn 02 47 26.2 -0.3
MCK McKinley 11.37 30 Pn 02 47 25.8 -0.9
MCK McKinley 11.37 30 P Pn 02 47 25.8 -0.9
MCK McKinley 11.37 30 P Pn 02 47 25.5 -1.2
baz=220
DHY Denali Highway 11.38 35 Pn Pn 02 47 25.2 -1.7
DHY Denali Highway 11.38 35 P Pn 02 47 24.9 -2.0
baz=226,SNR=6.7
N25K Chitina, Valde 11.53 45 Pn 02 47 28.3 -0.6
N25K Chitina, Valde 11.53 45 P Pn 02 47 28.3 -0.6
baz=238,SNR=12
BWN Browne 11.57 27 Pn 02 47 30.1 +0.8
TNA Tin City 11.60 347 P Pn 02 47 31.8 +2.0
baz=161
HARP HAARP 11.74 41 P Pn 02 47 31.5 -0.2
baz=234
WAX Waxell Ridge 11.77 52 Pn 02 47 31.9 -0.2
GLB Gilahina Butte 11.78 46 Pn 02 47 31.2 -1.0
I21K Tanana 11.82 20 Pn 02 47 33.5 +0.8
I21K Tanana 11.82 20 P Pn 02 47 33.9 +1.1
baz=208
VRDI Verde Repeater 11.83 47 Pn Pn 02 47 33.0 0.0
TGL Tana Glacier 11.90 50 Pn 02 47 34.1 +0.2
MLY Manley 11.96 23 Pn Pn 02 47 34.7 0.0
MLY Manley 11.96 23 P Pn 02 47 36.1 +1.4
baz=212
PAX Paxson 11.97 38 Pn Pn 02 47 34.2 -0.7
PAX Paxson 11.97 38 P Pn 02 47 34.2 -0.7
PAX Paxson 11.97 38 P Pn 02 47 33.8 -1.2
baz=231,SNR=17
NEA2 Nenana 12.01 27 Pn 02 47 36.3 +1.0
NEA2 Nenana 12.01 27 P Pn 02 47 34.7 -0.6
baz=217
ISLE Juniper Island 12.06 51 Pn 02 47 36.1 -0.1
MCARA McCarthy VSAT 12.08 47 Pn 02 47 36.6 +0.2
MCARA McCarthy VSAT 12.08 47 P Pn 02 47 36.5 +0.2
baz=243
MESA MESA 12.09 54 Pn 02 47 35.8 -0.8
MESA MESA 12.09 54 P Pn 02 47 35.8 -0.8
baz=250
H21K Melozitna Rive 12.09 18 Pn 02 47 37.1 +0.7
H21K Melozitna Rive 12.09 18 P Pn 02 47 37.5 +1.0
baz=205
WRH Wood River Hil 12.18 29 Pn 02 47 35.1 -2.6
IMAR Indian Mountai 12.23 15 Pn Pn 02 47 39.2 +0.8
YAH Yahtse 12.25 53 Pn 02 47 38.8 0.0
I23K Minto, Yukon-K 12.38 25 Pn 02 47 38.5 -1.9
I23K Minto, Yukon-K 12.38 25 P Pn 02 47 39.8 -0.5
baz=215
CCB Clear Creek Bu 12.39 29 Pn 02 47 37.7 -2.8
K24K Donnelly Dome 12.41 34 P Pn 02 47 40.4 -0.4
baz=228,SNR=15
HDA Harding Lake 12.46 31 Pn 02 47 38.9 -2.6
HDA Harding Lake 12.46 31 P Pn 02 47 38.7 -2.8
baz=223,SNR=11
MDM Murphy Dome 12.52 27 Pn 02 47 39.9 -2.4
BARN Barnard Glacie 12.54 50 Pn 02 47 42.7 -0.2
COLA College 12.55 28 *i* P Pn 02 47 41.2 -1.5
TABL Table Mountain 12.55 53 Pn 02 47 42.9 -0.1
H22K Ishtalitna Cre 12.57 20 P Pn 02 47 44.0 +1.0
baz=208
M26K Nabesna, AK 12.59 43 Pn 02 47 43.3 0.0
M26K Nabesna, AK 12.59 43 P Pn 02 47 42.7 -0.6
baz=239,SNR=13
MENT Mentasta 12.60 40 Pn 02 47 42.9 -0.5
CTG Chitna Glacier 12.65 51 P Pn 02 47 44.1 -0.1
baz=247,SNR=9.9
CTGM Chitina Glacie 12.65 51 Pn 02 47 44.0 -0.3
RIDG Independent Ri 12.68 36 Pn 02 47 43.1 -1.4
RIDG Independent Ri 12.68 36 P Pn 02 47 42.6 -1.9
baz=230,SNR=14
IL31 12.75 30 Pn 02 47 42.4 -3.0
ILAR Eielson Array 12.75 30 Pn Pn 02 47 42.0 -3.4
comp=N,0.3nm,0.3s,baz=217,slow=13,SNR=13
ILAR Sn Sn 02 49 58.0 -7.7
comp=N,0.1nm,0.3s,baz=219,slow=14,SNR=1.4
ILAR LR LR 02 53 07.1
comp=N,400nm,18.4s,baz=246,slow=40
comp=N,0.7nm,0.4s
ILAR Eielson Array 12.75 30 Pn Pn 02 47 44.5 -0.9
LOGN Logan Glacier 12.75 52 Pn 02 47 44.5 -1.2
G21K Allakaket 12.76 15 P Pn 02 47 46.7 +1.0
baz=202
L26K Log Cabin Wild 12.79 40 Pn 02 47 46.2 +0.2
L26K Log Cabin Wild 12.79 40 P Pn 02 47 46.4 +0.3
baz=236
PCA Pinnacle 12.87 55 Pn 02 47 47.0 -0.1
PINM Pinnacle 12.87 55 P Pn 02 47 46.8 -0.4
baz=253
DOT Dot Lake 12.89 37 Pn 02 47 45.8 -1.7
H23K Yukon River 12.90 23 Pn Pn 02 47 46.9 -0.6
H23K Yukon River 12.90 23 P Pn 02 47 48.0 +0.5
baz=213
M27K Edge Creek, AK 13.02 44 Pn 02 47 49.1 -0.2
M27K Edge Creek, AK 13.02 44 P Pn 02 47 48.5 -0.8
baz=241
J25K Salcha River, 13.09 32 Pn 02 47 47.5 -2.6
J25K Salcha River, 13.09 32 P Pn 02 47 47.5 -2.6
baz=226
O28M Mount Upton 13.11 52 P Pn 02 47 50.6 0.0
baz=250,SNR=19
SCRK Sand Creek 13.12 36 Pn 02 47 48.2 -2.5
SCRK Sand Creek 13.12 36 P Pn 02 47 48.1 -2.6
baz=231
BCPM Bancas Point 13.13 56 Pn 02 47 50.4 -0.2
PNL Peninsula 13.17 58 P Pn 02 47 51.1 -0.1
baz=256
H24K Noodor Dome 13.30 25 Pn Pn 02 47 52.3 -0.7
H24K Noodor Dome 13.30 25 P Pn 02 47 51.9 -1.1
baz=217
YUK3 Moose Creek 13.36 48 P Pn 02 47 53.9 -0.1
baz=246,SNR=18
L27K Beaver Creek, 13.39 42 Pn 02 47 53.5 -0.7
L27K Beaver Creek, 13.39 42 P Pn 02 47 53.7 -0.6
baz=238,SNR=10.0
BCAR Beaver Creek A 13.41 42 Pn Pn 02 47 53.7 -0.8
F21K Alatna River 13.43 14 P Pn 02 47 56.4 +1.7
baz=201
G22K Bettles 13.46 17 P Pn 02 47 56.8 +1.7
baz=206
BVCY Beaver Creek 13.46 45 P Pn 02 47 55.7 +0.5
baz=243
G23K Bananza Creek 13.55 20 P Pn 02 47 57.3 +0.9
baz=210
J26L Joseph Creek 13.60 35 Pn 02 47 56.2 -1.0
J26L Joseph Creek 13.60 35 P Pn 02 47 55.8 -1.4
baz=230
PRP Porcupine Dome 13.69 29 Pn 02 47 55.2 -3.2
PRP Porcupine Dome 13.69 29 P Pn 02 47 54.7 -3.6
baz=223
O29M Mount Kennedy 13.73 55 P Pn 02 47 59.8 +0.9
baz=254,SNR=18
K27K Chicken 13.83 38 Pn 02 47 57.9 -2.2
K27K Chicken 13.83 38 P Pn 02 47 59.1 -1.1
baz=235
F22K John River 13.88 15 P Pn 02 48 02.1 +1.2
baz=203
COLD Coldfoot 13.97 19 Pn Pn 02 48 02.5 +0.5
COLD Coldfoot 13.97 19 P Pn 02 48 03.0 +0.9
baz=208
P29M Windy Craggy 13.98 58 Pn 02 48 02.8 +0.5
P29M Windy Craggy 13.98 58 P Pn 02 48 02.0 -0.4
baz=258
YUK4 Talbot Arm 14.01 51 P Pn 02 48 03.8 +1.0
baz=250
YUK6 Outpost Mounta 14.01 53 P Pn 02 48 02.8 0.0
baz=252
G24K Hadweenzic Riv 14.10 24 P Pn 02 48 02.2 -1.6
baz=216
H25K Birch Creek 14.17 27 P Pn 02 48 03.7 -1.0
baz=220
I26K Coal Creek Min 14.26 33 P Pn 02 48 02.3 -3.6
baz=228
HYT Haines Junctio 14.38 54 Pn Pn 02 48 07.8 +0.1
HYT Haines Junctio 14.38 54 P Pn 02 48 07.1 -0.7
baz=254
P30M Million Dollar 14.47 57 P Pn 02 48 07.9 -1.0
baz=257
G25K Bearman Lake 14.48 25 P Pn 02 48 08.2 -0.8
baz=218
M29M Somme Creek 14.49 47 P Pn 02 48 08.6 -0.6
baz=246,SNR=20
SHEM Shemya Is, Ala 14.49 273 LR LR 02 52 32.6
comp=N,106nm,21.0s,baz=350,slow=33
EGAK Eagle 14.59 37 Pn 02 48 08.3 -2.2
EGAK Eagle 14.59 37 P Pn 02 48 08.9 -1.5
baz=234
PLBC Pleasant Camp 14.64 60 P Pn 02 48 12.4 +1.2
baz=260,SNR=7.5
F24K Squaw Lake 14.68 21 P Pn 02 48 11.5 -0.2
baz=213
N30M Aishikik Lake 14.76 52 P Pn 02 48 11.4 -1.4
baz=252
E23K Chandalar 14.81 18 P Pn 02 48 12.9 -0.6
baz=208
DAWY Dawson 14.84 41 Pn 02 48 12.8 -1.1
DAWY Dawson 14.84 41 P Pn 02 48 12.7 -1.2
baz=239
L29M L29M 14.90 45 P Pn 02 48 14.5 -0.2
baz=245
I27K Kandik River 14.94 33 P Pn 02 48 13.6 -1.6
baz=231
E24K Your Creek 15.04 19 P Pn 02 48 16.7 +0.3
baz=211
O30N Mendenhall 15.04 55 P Pn 02 48 16.4 -0.1
baz=256
SKAG Skagway 15.17 60 Pn Pn 02 48 18.6 +0.5
SKAG Skagway 15.17 60 P Pn 02 48 18.3 +0.2
baz=262
G26K Porcupine Rive 15.22 27 P Pn 02 48 19.1 +0.3
baz=223
F25K Christian Rive 15.24 24 P Pn 02 48 19.2 0.0
baz=218
TOLK Toolik Lake Re 15.34 17 Pn Pn 02 48 21.2 +0.8
TOLK Toolik Lake Re 15.34 17 P Pn 02 48 22.1 +1.7
baz=207
N31M Braeburn, Yuko 15.37 52 Pn 02 48 20.9 +0.1
N31M Braeburn, Yuko 15.37 52 P Pn 02 48 21.0 +0.3
baz=254
H27K Steamboat Moun 15.37 32 P P 02 48 23.3 -1.7
baz=229
D23K Nanushuk River 15.45 15 P Pn 02 48 23.4 +1.7
baz=204
K29M Barlow Dome 15.47 43 P Pn 02 48 22.4 +0.3
baz=243
R32K Eaglecrest 15.47 65 P Pn 02 48 23.8 +1.6
baz=267
JIS Juneau Island 15.55 65 P Pn 02 48 23.1 +0.1
WHY Whitehorse 15.59 56 Pn 02 48 23.9 +0.1
WHY Whitehorse 15.59 56 P Pn 02 48 22.8 -1.0
baz=258
E25K Arctic Village 15.68 23 P Pn 02 48 25.8 +0.9
baz=216
F26K Sheenjek River 15.69 25 P Pn 02 48 24.5 -0.3
baz=220
G27K Doyon Strip 15.72 30 P Pn 02 48 25.5 +0.2
baz=227
D24K Happy Valley 15.92 17 P Pn 02 48 28.4 +0.6
baz=208
I29M Ogilvie Camp, 15.92 37 Pn Pn 02 48 27.5 -0.3
P32M Atlin 16.00 60 P Pn 02 48 28.4 -0.5
baz=263
M31M Drury Creek, Y 16.20 50 Pn 02 48 31.7 +0.3
M31M Drury Creek, Y 16.20 50 P Pn 02 48 32.7 +1.3
baz=253
C23K Itkillik River 16.26 14 P Pn 02 48 32.7 +0.6
baz=203
C24K Franklin Bluff 16.44 16 P Pn 02 48 34.2 -0.1
baz=207
D25K Kavik River 16.51 19 P Pn 02 48 34.3 -1.0
baz=213
P33M Teslin, Yukon 16.52 58 Pn 02 48 35.9 +0.2
P33M Teslin, Yukon 16.52 58 P P 02 48 37.4 -0.4
baz=262
FARO Faro, Yukon 16.67 51 P Pn 02 48 37.7 +0.3
FARO Faro, Yukon 16.67 51 P Pn 02 48 38.2 +0.8
baz=255
EPYK Eagle Plains 17.01 35 P Pn 02 48 41.1 -0.6
EPYK Eagle Plains 17.01 35 P Pn 02 48 41.4 -0.3
baz=237,SNR=16
C26K Camden Bay 17.29 20 P Pn 02 48 44.3 -0.7
baz=214
R33M Jennings River 17.38 61 P P 02 48 47.8 +0.5
baz=266
G30M tAoh Zraii Nji 17.52 34 P Pn 02 48 46.0 -1.9
baz=236,SNR=12
MMPY Sheldon Lake, 17.71 50 P P 02 48 51.7 +0.8
baz=256
T35M Bob Quinn 17.80 69 P Pn 02 48 51.4 -0.1
baz=275
DLBC Dease Lake 17.84 64 P P 02 48 54.9 +2.4
comp=N,0.1nm,0.3s,baz=278,slow=14,SNR=2.2
DLBC LR LR 02 54 56.3
comp=N,90nm,20.6s,baz=261,slow=34
comp=N,2.3nm,0.8s
WTLY Watson Lake, Y 18.52 59 P P 02 48 59.5 -0.2
WTLY Watson Lake, Y 18.52 59 P Pn 02 49 00.8 +0.6
baz=266
F31M Tsiigehtchic 18.58 35 P P 02 48 58.4 -1.9
baz=239
TGTN Hyland Airport 18.90 54 P Pn 02 49 05.8 +1.0
baz=263
INK Inuvik 19.11 32 P P 02 49 05.3 -0.7
comp=N,0.6nm,0.3s,baz=258,slow=13,SNR=23
INK LR LR 02 57 07.9
comp=N,255nm,20.3s,baz=238,slow=39
comp=N,10nm,0.7s
INK Inuvik 19.11 32 P P 02 49 04.1 -1.9
INK Inuvik 19.11 32 P P 02 49 05.4 -0.6
baz=237
BBB Bella Bella 20.06 83 LR LR 02 55 26.0
comp=N,97nm,19.3s,baz=246,slow=32
C36M Paulatuk 22.63 34 P P 02 49 42.9 -1.2
baz=248
PET Petropavlovsk 23.32 283 *ce* P P 02 49 51.5 +0.3
PET pmax pmax
comp=Z,27nm,1.3s
A36M Sachs Harbour 23.43 28 P P 02 49 50.4 -1.8
A36M IAmb IAmb 02 49 56.5
comp=Z,25nm,0.8s
PEA0B Petropavlovsk- 23.84 284 *i* P P 02 49 55.1 -1.1
PETK Petropavlovsk- 23.84 284 P P 02 49 55.3 -0.9
comp=Z,10.0nm,0.5s,baz=78,slow=13,SNR=43
PETK LR LR 02 59 07.6
comp=Z,91nm,19.3s,baz=80,slow=37
comp=Z,10.0nm,0.5s
SEY Seymchan 24.85 309 P P 02 50 04.0 -1.3
comp=Z,1.1nm,0.5s,baz=180,slow=15,SNR=2.2
comp=Z,1.1nm,0.5s
SEY Seymchan 24.85 309 *i* P P 02 50 05.7 +0.4
SEY pmax pmax

comp=Z,4.0nm,1.1s
YKA Yellowknife Ar 25.37 52 P P 02 50 11.6 +1.6
YKA comp=Z,1.9nm,0.6s,baz=272,slow=9.0,SNR=9.8
LR LR 03 00 54.2
comp=Z,72nm,19.1s,baz=240,slow=38
comp=Z,1.9nm,0.6s
EDM Edmonton 28.10 72 P P 02 50 35.1 +0.4
EDM Edmonton 28.10 72 P P 02 50 35.1 +0.4
EDM pmax pmax
comp=Z,8.0nm,1.1s
NEW Newport 28.10 84 LR LR 02 59 30.8
comp=Z,92nm,20.7s,baz=294,slow=32
YBH Yreka Blue Hor 28.55 100 LR LR 02 59 29.7
comp=Z,113nm,20.3s,baz=289,slow=31
RES Resolute Bay 32.48 27 LR LR 03 05 24.1
comp=Z,104nm,19.6s,baz=246,slow=38
NVAR Mina Array Bea 33.27 101 P **P 02 51 23.5 +2.8**
NVAR comp=Z,0.5nm,0.7s,baz=295,slow=9.1,SNR=4.9
PcP **PcP 02 54 03.3 +1.1**
NVAR comp=Z,0.3nm,0.6s,baz=298,slow=3.8,SNR=2.4
LR LR 03 02 14.4
comp=Z,92nm,20.6s,baz=268,slow=31
comp=Z,0.5nm,0.7s
TIXI Tiksi 33.43 327 LR LR 03 06 42.1
comp=Z,124nm,20.0s,baz=182,slow=40
ELK Elko 33.52 95 LR LR 03 02 34.9
comp=Z,98nm,18.9s,baz=358,slow=32
YHH Holmes Hill 33.62 85 P P 02 51 23.4 -0.4
YAK Yakutsk 35.33 311 P P 02 51 36.9 -1.1
YAK comp=Z,12nm,0.4s,baz=336,slow=4.2,SNR=5.1
LR LR 03 06 53.7
comp=Z,120nm,21.3s,baz=90,slow=38
comp=Z,12nm,0.4s
YAK Yakutsk 35.33 311 *ceP* **P 02 51 37.4 -0.6**
YAK pmax pmax
comp=Z,28nm,0.6s
PDAR Pinedale Array 35.57 87 P P 02 51 41.9 +1.3
comp=Z,0.5nm,0.6s,baz=301,slow=5.0,SNR=6.9
PDAR LR LR 03 06 03.2
comp=Z,61nm,18.3s,baz=27,slow=36
comp=Z,0.5nm,0.6s
SRU San Rafael Swe 37.33 93 P P 02 51 54.4 -1.1
SRU San Rafael Swe 37.33 93 P P 02 51 54.4 -1.1
SRU pmax pmax
comp=Z,3.0nm,0.7s
PFO Pinyon Flats O 37.74 105 LR LR 03 04 32.4
comp=Z,88nm,20.8s,baz=356,slow=31
RSSD Black Hills 37.96 81 P P 02 52 00.9 0.0
RSSD Black Hills 37.96 81 P P 02 52 00.9 0.0
RSSD pmax pmax
comp=Z,3.0nm,0.6s
O20A White River Ci 37.99 90 P P 02 52 02.9 +1.7
PV13 Radium Mtn., P 38.96 92 P P 02 52 08.7 -0.6
KLR Kul'dur 40.10 291 P P 02 52 17.2 -1.2
comp=Z,1.5nm,0.6s,baz=78,slow=9.2,SNR=5.4
KLR LR LR 03 08 55.2
comp=Z,49nm,21.7s,baz=7.0,slow=36
comp=Z,1.5nm,0.6s
AGMN Agassiz Nation 40.17 71 P P 02 52 18.2 -0.9
AGMN IAmb IAmb 02 52 20.8
comp=Z,14nm,0.8s
AGMN Agassiz Nation 40.17 71 P P 02 52 19.9 +0.8
baz=304
B35A Bob, Littlefor 41.31 69 P P 02 52 28.6 +0.2
B35A IAmb IAmb 02 52 30.3
comp=Z,12nm,0.7s
H11N2 WAKE ISLAND Hy 42.10 227 T T 03 37 20.2
baz=27,slow=76,SNR=334
H11N3 WAKE ISLAND Hy 42.11 227 T T 03 37 23.9
baz=27,slow=76,SNR=380
H11N1 WAKE ISLAND Hy 42.12 227 T T 03 37 22.1
baz=27,slow=76,SNR=274
ECSD EROS Data Cent 42.46 77 P P 02 52 38.2 +0.4
baz=308
ANMO Albuquerque 42.54 94 PcP **PcP 02 54 32.5 +1.7**
comp=Z,0.3nm,0.3s,baz=333,slow=4.5,SNR=3.7
ANMO Albuquerque 42.54 94 *i P* **P 02 52 42.7 +3.8**
ANMO pmax pmax
comp=Z,8.0nm,3.8s
EYMN Ely 42.77 69 P P 02 52 41.0 +0.7
baz=306,SNR=5.5
H11S1 WAKE ISLAND Hy 43.27 227 T T 03 38 50.9
baz=26,slow=76,SNR=319
H11S2 WAKE ISLAND Hy 43.28 227 T T 03 38 50.9
baz=26,slow=76,SNR=170
H11S3 WAKE ISLAND Hy 43.29 227 T T 03 38 52.2
baz=26,slow=76,SNR=202
I37A Lemond, Waseca 44.10 74 P P 02 52 51.5 +0.5
I37A IAmb IAmb 02 52 54.1
comp=Z,16nm,0.9s
MJA0 Matsu Arr-Jizo 44.30 272 *eP* **P 02 52 52.9 +0.1**
MJA0 pmax pmax
comp=Z,3.0nm,0.7s
MJAR Matsushiro Arr 44.33 272 P P 02 52 52.5 -0.5
comp=Z,2.9nm,0.6s,baz=32,slow=5.8,SNR=6.9
MJAR LR LR 03 11 39.9
comp=Z,15nm,19.9s,baz=39,slow=37
comp=Z,2.9nm,0.6s
MJB9 Matsu-Tunnel 44.33 272 P P 02 52 52.8 -0.2
MJB9 IAmb IAmb 02 52 54.5
comp=Z,34nm,1.4s
MAJO Matsushiro 44.33 272 P P 02 52 52.0 -1.0
MAJO IAmb IAmb 02 52 53.5
comp=Z,34nm,1.4s
MAJO Matsushiro 44.33 272 P P 02 52 52.0 -1.0
MAJO pmax pmax
comp=Z,34nm,1.4s
FRB Frobisher Bay 44.54 39 LR LR 03 12 07.8
comp=Z,146nm,20.9s,baz=208,slow=37
N35A Tabor 44.84 79 P P 02 52 56.9 -0.1
G40A Rib Lake 45.10 71 P P 02 52 58.6 -0.5
G40A IAmb IAmb 02 53 00.5
comp=Z,10nm,0.6s
COWI Conover 45.17 69 P P 02 52 59.7 +0.1
COWI IAmb IAmb 02 53 00.8
comp=Z,10.0nm,0.6s
I40A Norwalk 45.74 73 P P 02 53 03.5 -0.6
F42A Maple Grove Fa 45.93 69 P P 02 53 06.2 +0.6
KAN05 Bluff City Nor 46.06 85 S 02 59 51.6 +2.4
E43A Lone Tree Farm 46.16 68 P P 02 53 07.2 -0.1
E43A IAmb IAmb 02 53 09.3
comp=Z,17nm,0.8s
JFWS Jewell Farm 46.57 73 P P 02 53 09.3 -1.3
JFWS IAmb IAmb 02 53 11.3
comp=Z,10.0nm,0.7s
JFWS Jewell Farm 46.57 73 P P 02 53 09.4 -1.3
JFWS pmax pmax
comp=Z,10.0nm,0.7s
JFWS Jewell Farm 46.57 73 P P 02 53 10.6 0.0
baz=310
I42A Draeger Farm, 46.69 72 P P 02 53 11.7 +0.2
NRIK Noril'sk 46.77 333 P P 02 53 11.2 -0.6
comp=Z,4.3nm,0.7s,baz=62,slow=8.6,SNR=5.6
comp=Z,4.3nm,0.7s
NRIK Noril'sk 46.77 333 P P 02 53 11.7 -0.1
NRIK Noril'sk 46.77 333 *eP* **P 02 53 12.9 +1.1**
NRIK pmax pmax
comp=Z,4.0nm,0.7s
CN2 Changchun 46.84 288 *eP* **P 02 53 12.2 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
P38A Dawn 46.87 79 P P 02 53 11.9 -1.1
P38A IAmb IAmb 02 53 14.2
comp=Z,11nm,0.6s
DAG Danmarks Havn 46.99 11 *i P* **P 02 53 13.0 -0.4**
L42A Oliver, Polo 47.49 74 P P 02 53 17.2 -0.6
L42A IAmb IAmb 02 53 18.2
comp=Z,11nm,0.8s
K43A Burlington 47.78 72 P P 02 53 19.4 -0.6
P40A Paris 47.78 78 P P 02 53 20.0 -0.1
P40A IAmb IAmb 02 53 21.0
comp=Z,13nm,0.7s
TXAR Lajitas Array 48.24 97 P P 02 53 25.6 +1.8
comp=Z,0.3nm,0.5s,baz=308,slow=6.4,SNR=10
TXAR PcP **PcP 02 54 51.3 +0.9**
comp=Z,0.7nm,0.8s,baz=242,slow=1.1,SNR=5.8
TXAR LR LR 03 11 59.8
comp=Z,69nm,18.1s,baz=352,slow=34
comp=Z,0.3nm,0.5s
R40A Maddies Statio 48.49 80 P P 02 53 25.0 -0.6
R40A IAmb IAmb 02 53 25.8
comp=Z,8.4nm,0.6s
U38A Gravette 48.55 83 P P 02 53 26.3 +0.2
U38A IAmb IAmb 02 53 26.7
comp=Z,5.2nm,0.7s
HDIL Hopedale 48.66 75 P P 02 53 27.5 +0.6
HDIL Hopedale 48.66 75 P P 02 53 27.0 +0.2
baz=312,SNR=16
P43A Skaggs, Pawnee 49.15 76 P P 02 53 31.0 +0.4
CCM Cathedral Cave 49.24 79 P P 02 53 31.1 -0.3
baz=313
MGMO Mountain Grove 49.27 81 P P 02 53 31.5 -0.2
O44A Mansfield 49.40 75 P P 02 53 33.2 +0.7
KSRS Korea Array 49.67 280 P P 02 53 35.1 +0.6
comp=Z,3.7nm,0.6s,baz=51,slow=7.2,SNR=11
KSRS LR LR 03 15 50.3
comp=Z,26nm,18.1s,baz=50,slow=38
comp=Z,3.7nm,0.6s
SFIN Lafayette 50.02 74 P P 02 53 37.6 +0.4
SFIN IAmb IAmb 02 53 38.4
comp=Z,12nm,0.7s
SFIN Lafayette 50.02 74 P P 02 53 37.6 +0.4
baz=313,SNR=5.5
FCAR Ozark Folk Cen 50.24 82 P P 02 53 38.4 -0.6
FCAR IAmb IAmb 02 53 39.0
comp=Z,8.2nm,1.0s
MIAR Mount Ida 50.34 84 P P 02 53 40.2 +0.5
baz=315
L48A N Adams 50.44 71 P P 02 53 40.8 +0.3
L48A IAmb IAmb 02 53 41.5
comp=Z,10.0nm,0.6s
N47A Urbana 50.46 73 P P 02 53 40.6 0.0
OLIL Olney 50.57 76 P P 02 53 41.5 +0.1
S44A Carbondale 50.63 78 P P 02 53 41.9 0.0
S44A IAmb IAmb 02 53 43.7
comp=Z,10.0nm,0.6s
SIUC Southern Illin 50.64 78 P P 02 53 41.9 0.0
SIUC IAmb IAmb 02 53 43.8
comp=Z,12nm,0.7s
SCHQ Schefferville 50.69 48 P P 02 53 43.0 +0.9
comp=Z,4.7nm,0.6s,baz=277,slow=8.5,SNR=3.7
comp=Z,4.7nm,0.6s
O48B Farmland 51.19 73 P P 02 53 45.2 -0.8
baz=313,SNR=15
N49A Columbus Grove 51.27 71 P P 02 53 46.9 +0.2
N49A IAmb IAmb 02 53 47.2
comp=Z,9.8nm,0.6s
USIN University of 51.35 77 P P 02 53 47.7 +0.4
P48A Milroy 51.58 74 P P 02 53 48.9 -0.1
P48A IAmb IAmb 02 53 49.2
comp=Z,13nm,0.8s
XLT XiLinHaoTe 51.87 294 *eP* **P 02 53 51.6 +0.4**
XLT pmax pmax
comp=Z,11nm,1.0s
XLT pmax pmax
comp=Z,170nm,5.7s
P49A Miami Univ. Ec 51.93 73 P P 02 53 51.3 -0.3
P49A Miami Univ. Ec 51.93 73 P P 02 53 50.9 -0.7
baz=314,SNR=8.4
WCI Wyandotte Cave 51.95 75 P P 02 53 51.6 -0.1
baz=314
T47A Sharon Grove 52.35 77 P P 02 53 55.0 +0.2
ACSO Alum Creek Sta 52.41 71 P P 02 53 55.2 0.0
baz=314
WVT Waverly 52.54 78 P P 02 53 57.0 +0.8
WVT Waverly 52.54 78 P P 02 53 57.0 +0.8
WVT pmax pmax
comp=Z,20nm,0.6s
WVT Waverly 52.54 78 P P 02 53 56.6 +0.4
baz=315
ERPA Erie 52.75 68 P P 02 53 57.9 +0.2
baz=313
OXF Oxford 52.78 81 P P 02 53 58.2 +0.3
OXF IAmb IAmb 02 53 58.9
comp=Z,17nm,0.9s
OXF Oxford 52.78 81 P P 02 53 58.3 +0.3
OXF pmax pmax
comp=Z,17nm,0.9s
OXF Oxford 52.78 81 P P 02 53 58.2 +0.3
baz=316
M53A WI Miller and 52.85 69 P P 02 53 58.4 0.0
baz=314
R50A Paris 53.02 74 P P 02 54 00.1 +0.5
Q51A Peebles 53.05 73 P P 02 53 59.7 -0.2
Y45A Yeager Farm, C 53.17 82 P P 02 54 01.4 +0.6
Y45A IAmb IAmb 02 54 03.7
comp=Z,9.3nm,0.6s
N53A Lisbon 53.20 69 P P 02 54 01.0 0.0
N53A IAmb IAmb 02 54 01.8
comp=Z,22nm,1.2s
PLAL Pickwick Lake 53.21 80 P P 02 54 01.2 0.0
PLAL IAmb IAmb 02 54 01.5
comp=Z,7.4nm,0.6s
P52A Corning 53.30 71 P P 02 54 01.5 -0.2
baz=314
WVNY West Valley, N 53.30 66 P P 02 54 02.1 +0.4
WVNY IAmb IAmb 02 54 02.7
comp=Z,15nm,0.8s
O53A New Philadelph 53.38 70 P P 02 54 02.0 -0.3
baz=314
V48A Smith Brothers 53.39 78 P P 02 54 02.6 +0.1
CLTN Cedars of Leba 53.42 77 P P 02 54 03.0 +0.3
CLTN IAmb IAmb 02 54 04.6
comp=Z,21nm,1.1s
U49A Red Boiling Sp 53.44 77 P P 02 54 03.2 +0.4
U49A IAmb IAmb 02 54 03.3
comp=Z,6.6nm,0.6s
T50A Nancy 53.62 75 P P 02 54 04.3 +0.2
T50A IAmb IAmb 02 54 04.9
comp=Z,9.7nm,0.7s
ULN Ulaanbaatar 53.77 303 P P 02 54 04.9 -0.4
ULN IAmb IAmb 02 54 05.7
comp=Z,6.4nm,0.7s
ULN Ulaanbaatar 53.77 303 P P 02 54 04.9 -0.4
ULN pmax pmax
comp=Z,6.0nm,0.7s
M55A Ridgway 53.86 67 P P 02 54 06.2 +0.3
M55A IAmb IAmb 02 54 06.8
comp=Z,12nm,0.7s
S51A Beattyville 53.88 74 P P 02 54 05.5 -0.5
S51A IAmb IAmb 02 54 06.7
comp=Z,12nm,0.9s
O54A Avella 53.88 70 P P 02 54 05.7 -0.3
LONY Lake Ozonia 53.89 62 P P 02 54 05.7 -0.3
baz=314
SONM Songino Array 54.11 304 P P 02 54 07.9 +0.2
comp=Z,5.6nm,0.8s,baz=45,slow=7.0,SNR=20
SONM PcP **PcP 02 55 12.6 +0.5**
comp=Z,1.8nm,0.7s,baz=100,slow=2.4,SNR=4.4
SONM LR LR 03 19 40.4
comp=Z,102nm,18.2s,baz=24,slow=39
comp=Z,5.6nm,0.8s
SONM Songino Array 54.11 304 P P 02 54 07.9 +0.2
Z47A Carrollton 54.50 81 P P 02 54 10.5 -0.1
MCWV Mont Chateau 54.54 70 P P 02 54 10.6 -0.2
baz=315
W50A Signal Mountai 54.64 77 P P 02 54 11.6 0.0
W50A IAmb IAmb 02 54 12.3
comp=Z,7.9nm,0.7s
TZTN Tazewell 54.68 75 P P 02 54 11.8 -0.1
baz=316
BINY Binghamton 54.84 65 P P 02 54 13.0 0.0
baz=314
CPCT Cooper Cave 54.91 77 P P 02 54 13.0 -0.6
CPCT IAmb IAmb 02 54 14.0
comp=Z,10.0nm,1.0s
SSPA Standing Stone 54.92 68 P P 02 54 13.4 -0.1
SSPA IAmb IAmb 02 54 14.3
comp=Z,8.6nm,0.7s
SSPA Standing Stone 54.92 68 P P 02 54 13.7 +0.2
baz=315
FPAL Fort Paine 54.94 78 P P 02 54 13.6 -0.3
V52A Sevierville 55.16 76 P P 02 54 15.1 -0.2
V52A IAmb IAmb 02 54 16.0
comp=Z,8.7nm,0.7s
LBNH Lisbon 55.51 61 P P 02 54 17.7 0.0
baz=315
V53A Saluda 55.72 75 P P 02 54 19.4 -0.1
V53A IAmb IAmb 02 54 20.3
comp=Z,20nm,1.3s
BLA Blacksburg 55.96 72 P P 02 54 21.2 +0.1
baz=316
BG3 Lake Jocassee 56.14 76 P P 02 54 22.5 +0.1
BG3 IAmb IAmb 02 54 22.9
comp=Z,8.2nm,0.7s
ARA0 ARCESS Array S 56.24 357 *eP* **P 02 54 22.7 0.0**
ARCES ARCESS Array B 56.24 357 P P 02 54 21.7 -0.9
comp=Z,5.5nm,0.7s,baz=36,slow=7.8,SNR=12
ARCES PcP **PcP 02 55 19.7 0.0**
comp=Z,5.6nm,1.0s,baz=25,slow=4.0,SNR=4.2
ARCES LR LR 03 18 34.2
comp=Z,39nm,20.0s,baz=296,slow=36
comp=Z,5.5nm,0.7s
TRO Tromso 56.26 360 *eP* **P 02 54 22.8 +0.2**
TRO IAmb IAmb 02 54 23.1
comp=Z,88nm,1.8s
KNGR Kungurtug, Tuv 56.26 311 *i P* **P 02 54 23.5 +0.3**
KNGR pmax pmax
comp=Z,5.0nm,0.3s
JETT Jettan, Norway 56.32 359 *eP* **P 02 54 23.4 +0.1**
JETT IAmb IAmb 02 54 24.0
comp=Z,21nm,0.7s
HHC Hu-ho-hao-te 56.39 295 *eP* **P 02 54 27.7 +3.5**
HHC pmax pmax
comp=Z,230nm,6.3s
KTK1 Kautokeino 56.83 358 *eP* **P 02 54 26.1 -0.7**
KTK1 IAmb IAmb 02 54 27.4
comp=Z,156nm,2.0s
HRV Adam Dziewonsk 56.94 62 P P 02 54 27.6 -0.3
baz=316
KMSC Kings Mountain 56.94 75 P P 02 54 27.7 -0.4
KMSC IAmb IAmb 02 54 28.5
comp=Z,9.6nm,0.7s
KMSC Kings Mountain 56.94 75 P P 02 54 27.6 -0.5
baz=317
GOGA Godfrey 56.99 78 P P 02 54 27.9 -0.5
baz=317
HODGE Hodges 57.08 76 P P 02 54 28.6 -0.4
HODGE IAmb IAmb 02 54 29.2
comp=Z,9.8nm,0.6s
V58A Windy Hill, Pi 57.71 72 P P 02 54 34.0 +0.5
V58A IAmb IAmb 02 54 34.2
comp=Z,12nm,0.8s
T59A Double "B" Far 57.72 70 P P 02 54 33.2 -0.3
T59A IAmb IAmb 02 54 34.4
comp=Z,9.5nm,0.6s
STEI Steigen 57.94 1 *eP* **P 02 54 34.3 -0.3**
STEI IAmb IAmb 02 54 35.3
comp=Z,85nm,1.7s
NJ2 Nanjing 58.73 282 *eP* **P 02 54 38.0 -2.6**
NJ2 pmax pmax
comp=Z,11nm,0.5s
CNNC Cliffs of the 58.79 72 P P 02 54 41.1 0.0
baz=317
ZALV Zalesovo Beam 58.90 321 P P 02 54 40.9 -0.6
comp=Z,0.8nm,0.4s,baz=30,slow=9.2,SNR=1.9
ZALV PcP **PcP 02 55 29.7 -0.7**
comp=Z,0.5nm,0.4s,baz=7.1,slow=5.8,SNR=1.7
ZALV LR LR 03 22 47.7
comp=Z,66nm,18.1s,baz=46,slow=39
comp=Z,0.8nm,0.4s
NHSC New Hope 59.08 75 P P 02 54 43.2 +0.2
baz=318
MOR8 Moi Rana 59.70 2 *eP* **P 02 54 45.5 -1.4**
MSF Maaselka 59.72 355 P P 02 54 46.4 -0.6
MSF pmax pmax
comp=Z,26nm,1.4s
LYN LuoYang 60.48 289 *eP* **P 02 54 49.3 -3.3**
LYN pmax pmax
comp=Z,10.0nm,0.8s
DGZ Jazzator, Alta 61.21 316 *i P* **P 02 54 57.7 +0.1**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
PRGR Permogore 62.30 346 *eP* **P 02 55 03.1 -1.4**
PRGR pmax pmax
comp=Z,11nm,0.7s
AKN Aaknes 63.40 6 *eP* **P 02 55 12.4 +0.5**
DOMB Dombas 63.65 5 *eP* **P 02 55 13.4 -0.2**
DOMB IAmb IAmb 02 55 14.1
comp=Z,13nm,0.8s
KURK Kurchatov 63.76 322 *ceP* **P 02 55 14.1 -0.3**
KURK pmax pmax
comp=Z,6.0nm,2.5s
KURBB Kurchatov Arra 63.87 322 P P 02 55 14.4 -0.7
comp=Z,1.8nm,0.9s,baz=33,slow=6.4,SNR=8.4
comp=Z,1.8nm,0.9s
LZH Lanzhou 63.98 296 *eP* **P 02 55 14.7 -1.6**
LZH sP pP 02 55 23.9 -4.0
LZH pmax pmax
comp=Z,14nm,1.5s
FIA1 FINESS Array S 64.32 356 P P 02 55 17.2 -0.7
FINES FINESS Array B 64.32 356 P P 02 55 17.4 -0.5
comp=Z,14nm,0.6s,baz=17,slow=7.6,SNR=89
comp=Z,14nm,0.6s
FINES FINESS Array B 64.32 356 P P 02 55 17.1 -0.7
NC204 NORSAR Array S 64.49 4 P P 02 55 19.1 0.0
BVAR Borovoye Array 64.56 328 P P 02 55 19.2 -0.4
comp=Z,2.5nm,0.6s,baz=38,slow=7.5,SNR=16
BVAR LR LR 03 26 01.0
comp=Z,75nm,18.2s,baz=38,slow=38
comp=Z,2.5nm,0.6s
BRVK Borovoye 64.57 328 P P 02 55 19.7 +0.1
BRVK Borovoye 64.57 328 P P 02 55 19.7 +0.1
BRVK pmax pmax
comp=Z,7.0nm,1.2s
NC303 NORSAR Array S 64.57 4 P P 02 55 19.4 -0.2
NC303 IAmb IAmb 02 55 20.4
comp=Z,9.7nm,0.8s
KIRV Kirov 64.59 343 P P 02 55 19.4 -0.3
comp=Z,13nm,0.6s,baz=333,slow=1.3,SNR=8.3
KIRV LR LR 03 27 25.8
comp=Z,46nm,18.0s,baz=3.9,slow=40
comp=Z,13nm,0.6s
NC405 NORSAR Array S 64.69 4 P P 02 55 20.3 0.0
ARU Arti 64.74 337 P P 02 55 20.2 -0.4
comp=Z,6.1nm,0.5s,baz=353,slow=6.0,SNR=10
ARU LR LR 03 26 46.8
comp=Z,51nm,19.0s,baz=112,slow=39
comp=Z,6.1nm,0.5s
ARU Arti 64.74 337 P P 02 55 20.0 -0.6
ARU IAmb IAmb 02 55 20.7
comp=Z,7.7nm,0.7s
ARU Arti 64.74 337 *c iP* **P 02 55 20.1 -0.6**
ARU 02 55 55.2
ARU 02 57 40.2
ARU S **S 03 03 58.8 +0.9**
ARU SS **SS 03 08 05.8 -2.5**
ARU pmax pmax
comp=Z,8.0nm,0.7s
NB2 NORSAR Subarra 64.75 4 P P 02 55 20.5 -0.3
comp=Z,3.7nm,0.7s,baz=357,slow=6.5
NB2 NORSAR Subarra 64.75 4 P P 02 55 20.5 -0.3
baz=357,slow=6.5
NOA NORSAR Array B 64.75 4 P P 02 55 20.6 -0.3
comp=Z,7.2nm,0.8s,baz=356,slow=6.6,SNR=27
NOA LR LR 03 23 44.8
comp=Z,16nm,19.0s,baz=295,slow=36
comp=Z,7.2nm,0.8s
NOA NORSAR Array B 64.75 4 *eP* **P 02 55 20.4 -0.3**
NOA pmax pmax
comp=Z,7.0nm,0.8s
RAF Rauma 64.87 358 *eP* **P 02 55 21.2 -0.3**
SKAR Skarslia 64.97 5 *eP* **P 02 55 22.4 +0.2**
SKAR IAmb IAmb 02 55 23.2
comp=Z,10nm,0.7s
NC602 NORSAR Array S 65.06 4 *eP* **P 02 55 22.9 +0.2**
MK31 Makanchi Array 65.59 317 *i P* **P 02 55 25.7 -0.8**
MKAR Makanchi Array 65.59 317 P P 02 55 25.6 -0.9
comp=Z,2.1nm,0.8s,baz=41,slow=6.6,SNR=10
MKAR LR LR 03 26 48.2
comp=Z,68nm,18.1s,baz=74,slow=39
comp=Z,2.1nm,0.8s
ODD1 Odda 65.63 6 *eP* **P 02 55 26.8 +0.3**
WMQ Urumqi 65.75 312 *eP* P 02 55 33.9 +6.3
KONO Kongsberg 66.06 5 *ceP* **P 02 55 30.2 +1.0**
KONO pmax pmax
comp=Z,22nm,1.7s
KONO Kongsberg 66.06 5 *eP* **P 02 55 29.6 +0.4**
SNART Snartemo 67.23 6 *eP* **P 02 55 37.2 +0.6**
AFI Afiamalu 68.60 191 LR LR 03 19 52.0
comp=Z,28nm,19.9s,baz=38,slow=31
OBN Obninsk 69.81 349 *deP* **P 02 55 52.0 -0.7**
OBN *i* 02 56 17.1
OBN *e* 02 58 32.0
OBN *eS* **S 03 05 04.3 +5.5**
OBN pmax pmax
comp=Z,18nm,1.1s
OBN MLR MLR
comp=Z,53nm,16.0s
PABE Paberze 70.34 357 P P 02 55 55.9 -0.1
PABE Paberze 70.34 357 *eP* **P 02 55 56.2 +0.2**
AKTO Aktyubinsk 70.36 334 P P 02 55 56.2 -0.1
comp=Z,6.1nm,0.8s,baz=36,slow=5.3,SNR=22
AKTO LR LR 03 30 12.0
comp=Z,43nm,19.0s,baz=11,slow=39
comp=Z,6.1nm,0.8s
IIGN Ignalina 70.40 355 *eP* **P 02 55 56.7 +0.3**
BELG Belogornoye 70.80 342 P P 02 55 58.2 -0.7
comp=Z,10nm,0.7s,baz=294,slow=0.8,SNR=5.2

BELG LR LR 03 30 21.9
comp=Z,64nm,20.0s,baz=142,slow=39
comp=Z,10nm,0.7s
ABKAR Akbulak array 70.94 333 P **P** **02 56 00.0 +0.2**
ABKAR IAmb IAmb 02 56 00.6
comp=Z,8.9nm,0.9s
ABKAR Akbulak array 70.94 333 P **P** **02 55 59.8 0.0**
HNR Honiara 71.35 220 LR LR 03 20 11.4
comp=Z,593nm,20.8s,baz=108,slow=30
TARG Taragay, Kyrgy 71.59 317 P **P** **02 56 02.9 -1.5**
TARG pmax pmax
comp=Z,5.0nm,1.2s
AAK Ala-Archa 72.10 320 LR LR 03 29 59.6
comp=Z,87nm,20.6s,baz=28,slow=38
AAK Ala-Archa 72.10 320 *ce*P **P** **02 56 06.8 -0.3**
AAK pmax pmax
comp=Z,5.0nm,1.7s
PPT Papeete 72.44 168 LR LR 03 20 17.8
comp=Z,42nm,20.1s,baz=330,slow=29
VORR Voronezh 72.85 347 *e*P **P** **02 56 11.8 +0.6**
VORR pmax pmax
comp=Z,20nm,0.3s
KK31 Karatay Array 73.15 323 P **P** **02 56 12.7 -0.5**
KK31 Karatay Array 73.15 323 P **P** **02 56 12.7 -0.5**
KK31 pmax pmax
comp=Z,8.0nm,1.4s
KKAR Karatay Array 73.15 323 P **P** **02 56 12.7 -0.4**
KKAR Karatay Array 73.15 323 P **P** **02 56 13.0 -0.2**
KKAR IAmb IAmb 02 56 13.7
comp=Z,7.8nm,1.4s
KKAR Karatay Array 73.15 323 P **P** **02 56 13.0 -0.2**
KKAR pmax pmax
comp=Z,8.0nm,1.4s
KSH Kashi 74.21 317 P **P** **02 56 23.2 +3.6**
KSH pP pP 02 56 31.6 +0.2
KSH pmax pmax
comp=Z,11nm,0.9s
CLL Collm 74.55 3 *i* P **P** **02 56 21.1 -0.1**
CLL pmax pmax
comp=Z,10.0nm,1.1s
CLL Collm 74.55 3 *i* P **P** **02 56 21.1 -0.1**
comp=Z,10.0nm,1.1s
AKASG Malin Array Be 74.85 353 P **P** **02 56 22.2 -0.7**
comp=Z,13nm,0.7s,baz=9.8,slow=5.8,SNR=32
AKASG LR LR 03 32 04.4
comp=Z,54nm,18.3s,baz=353,slow=38
comp=Z,13nm,0.7s
AKBB Malin Array Si 74.85 353 P **P** **02 56 22.2 -0.7**
AKBB Malin Array Si 74.85 353 P **P** **02 56 22.2 -0.7**
AKBB pmax pmax
comp=Z,28nm,1.2s
BRG Berggiesshubel 75.01 3 *i* P **P** **02 56 24.4 +0.5**
BRG Amp 02 56 25.8
comp=Z,8.6nm,0.9s
BRG Berggiesshubel 75.01 3 *i* P **P** **02 56 24.3 +0.5**
BRG pmax pmax
comp=Z,9.0nm,1.0s
KSP Ksiaz 75.09 1 *e*P **P** **02 56 24.3 -0.1**
MOX Moxa 75.15 4 P **P** **02 56 25.4 +0.7**
MOX pmax pmax
comp=Z,15nm,1.2s
CHVC Chvalec 75.34 2 *e*P **P** **02 56 26.1 +0.2**
PVCC Panska Ves 75.38 2 *e*P **P** **02 56 26.5 +0.5**
PVCC Panska Ves 75.38 2 *e*P **P** **02 56 26.5 +0.5**
OSTC Ostas 75.38 1 *e*P **P** **02 56 26.2 +0.2**
UPC Upice 75.42 2 *e*P **P** **02 56 26.8 +0.5**
UPC Upice 75.42 2 *e*P **P** **02 56 26.8 +0.5**
DPC Dobruska-Polom 75.59 1 *e*P **P** **02 56 27.7 +0.4**
DPC Dobruska-Polom 75.59 1 *e*P **P** **02 56 27.7 +0.4**
NKC Novy Kostel 75.60 4 *e*P **P** **02 56 27.5 +0.2**
NKC Novy Kostel 75.60 4 *e*P **P** **02 56 27.5 +0.2**
BTK Batken 75.71 321 P **P** **02 56 28.2 0.0**
BTK Batken 75.71 321 P **P** **02 56 28.2 0.0**
BTK pmax pmax
comp=Z,7.0nm,1.1s
OJC Ojcow 75.72 359 *e*P **P** **02 56 26.1 -2.0**
WLF Walferdange 75.78 8 P **P** **02 56 28.8 +0.5**
WLF pmax pmax
comp=Z,16nm,1.1s
KRLC Kraliky 75.87 1 *e*P **P** **02 56 29.4 +0.5**
KRLC Kraliky 75.87 1 *e*P **P** **02 56 29.4 +0.5**
PRU Pruhonice 75.91 3 *e*P **P** **02 56 29.4 +0.3**
PRU Pruhonice 75.91 3 *e*P **P** **02 56 29.4 +0.3**
LVV L'vov 76.02 356 *e*P **P** **02 56 30.0 +0.3**
MORC Moravsky Berou 76.17 1 ⇑P **P** **02 56 31.2 +0.5**
MORC Moravsky Berou 76.17 1 P **P** **02 56 31.1 +0.5**
MORC IAmb IAmb 02 56 31.9
comp=Z,7.2nm,0.8s
MORC Moravsky Berou 76.17 1 P **P** **02 56 31.1 +0.5**
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 76.17 1 *e*P **P** **02 56 30.8 +0.2**
VRAC Vranov 76.63 1 ⇑P **P** **02 56 33.7 +0.5**
VRAC Vranov 76.63 1 *e*P **P** **02 56 33.7 +0.5**
KHC Kasperske Hory 76.74 3 P **P** **02 56 34.9 +1.1**
KHC IAmb IAmb 02 56 35.7
comp=Z,23nm,1.3s
KHC Kasperske Hory 76.74 3 P **P** **02 56 34.9 +1.1**
KHC pmax pmax
comp=Z,23nm,1.3s
KHC Kasperske Hory 76.74 3 *e*P **P** **02 56 34.5 +0.6**
LANS Liptovska Anna 76.80 359 *e*P **P** **02 56 35.7 +1.5**
LANS pmax pmax
comp=Z,15nm,1.6s
GAR Garm 76.82 321 P **P** **02 56 34.8 +0.3**
GAR IAmb IAmb 02 56 35.5
comp=Z,20nm,1.1s
KRUC Moravsky 76.88 1 *e*P **P** **02 56 34.7 +0.1**
KOLS Kolonicke sedl 76.97 357 *e*P **P** **02 56 36.2 +1.1**
KOLS pmax pmax
comp=Z,11nm,1.3s
CRVS Cervenica-Dubn 77.02 358 *e*P **P** **02 56 35.7 +0.3**
CRVS pmax pmax
comp=Z,14nm,1.0s
GEC2 GERESS Array S 77.03 3 P **P** **02 56 35.2 -0.4**
GERES GERESS Array B 77.03 3 P **P** **02 56 36.1 +0.6**
comp=Z,2.9nm,0.6s,baz=359,slow=3.9,SNR=38
comp=Z,2.9nm,0.6s
GERES GERESS Array B 77.03 3 P **P** **02 56 35.7 +0.2**
CKRC Cesky Krumlov 77.08 3 *e*P **P** **02 56 36.0 +0.3**
JAVC Velka Javorina 77.09 0 *e*P **P** **02 56 37.3 +1.5**
UZH Uzhgorod 77.27 357 ⇑*i*P P 02 56 30.8 -5.9
UZH *i* 02 56 32.9
UZH *e* 02 56 47.7
ECH Echery 77.30 8 P **P** **02 56 36.9 -0.1**
ECH IAmb IAmb 02 56 38.3
comp=Z,11nm,0.8s
ECH Echery 77.30 8 P **P** **02 56 36.9 -0.1**
ECH pmax pmax
comp=Z,11nm,0.8s
SMOL Smolenice 77.44 1 *e*P **P** **02 56 38.9 +1.2**
SMOL pmax pmax
comp=Z,6.0nm,1.1s
VYHS Vyhne 77.46 360 *e*P **P** **02 56 38.4 +0.6**
VYHS pmax pmax
comp=Z,11nm,1.1s
CHGR Chuyangaron 77.55 322 P **P** **02 56 38.5 -0.1**
CHGR Chuyangaron 77.55 322 P **P** **02 56 38.5 -0.1**
CHGR pmax pmax
comp=Z,26nm,0.8s
SIJI Sorong 77.57 251 P **P** **02 56 39.1 +0.2**
comp=Z,30nm,0.3s,baz=190,slow=1.7,SNR=12
MODS Modra-Piesok 77.58 1 *e*P **P** **02 56 39.6 +1.1**
MODS pmax pmax
comp=Z,36nm,1.2s
ZST Bratislava 77.75 1 *e*P **P** **02 56 40.1 +0.7**
ZST pmax pmax
comp=Z,46nm,1.1s
TRPA Tarpa 77.76 357 ⇑P **P** **02 56 40.2 +0.7**
CONA Conrad Observa 78.00 2 *i* P **P** **02 56 41.9 +0.9**
comp=Z,8.1nm,0.6s,SNR=6.4
PSZ Piszkesteto 78.03 359 ⇓P **P** **02 56 42.4 +1.4**
PSZ Piszkesteto 78.03 359 P **P** **02 56 41.6 +0.5**
PSZ IAmb IAmb 02 56 43.8
comp=Z,7.9nm,1.0s
PSZ Piszkesteto 78.03 359 P **P** **02 56 41.6 +0.5**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
MOA Molln 78.05 3 *i* P **P** **02 56 40.8 -0.3**
comp=Z,4.1nm,0.7s
BUR08 Bucovina Ar. S 78.14 355 P **P** **02 56 41.3 -0.5**
BUR08 IAmb IAmb 02 56 42.6
comp=Z,5.1nm,0.6s
BURAR Bucovina Array 78.17 355 ⇑P **P** **02 56 42.1 +0.1**
BURAR Bucovina Array 78.17 355 P **P** **02 56 42.5 +0.5**
BURAR IAmb IAmb 02 56 43.0
comp=Z,8.9nm,0.6s
BIOA Bad Ischl, Aus 78.18 3 *i* P **P** **02 56 42.5 +0.6**
comp=Z,3.7nm,0.6s
RONA Rosalia, Austr 78.24 1 *i* P **P** **02 56 43.4 +1.2**
comp=Z,2.5nm,0.5s
MOTA Moosalm 78.42 5 *i* P **P** **02 56 43.9 +0.5**
comp=Z,9.8nm,0.7s
WATA Walderalm 78.46 5 *i* P **P** **02 56 44.1 +0.5**
comp=Z,5.8nm,0.5s
WTTA Wattenberg 78.53 5 *i* P **P** **02 56 44.8 +0.7**
comp=Z,15nm,0.6s,SNR=9.0
SQTA Sankt Quirin 78.55 5 *i* P **P** **02 56 44.8 +0.7**
comp=Z,14nm,0.6s,SNR=5.2
MILM Milestii Mici 78.65 353 ⇓P **P** **02 56 44.0 -0.4**
ARSA Arzberg 78.67 2 *i* P **P** **02 56 45.5 +0.9**
comp=Z,6.6nm,0.6s
FETA Feichten 78.73 5 *e*P **P** **02 56 46.0 +0.9**
comp=Z,5.9nm,0.7s
KBA Koelnbreinsper 78.79 3 *e*P **P** **02 56 46.5 +1.1**
comp=Z,14nm,0.6s
BIZ Bicaz 78.80 355 ⇑P **P** **02 56 46.1 +0.8**
VASR Vaslui 79.00 353 ⇓P **P** **02 56 46.5 +0.1**
ABTA Abfaltersbach 79.08 4 *e*P **P** **02 56 48.3 +1.4**
comp=Z,7.4nm,0.8s
DRGR 79.09 357 ⇓P **P** **02 56 47.5 +0.5**
FUORN Ofenpass-Fuorn 79.10 6 P **P** **02 56 48.0 +0.7**
FUORN IAmb IAmb 02 56 48.8
comp=Z,5.2nm,0.6s
TAPN Taplejung 79.19 302 *e*P **P** **02 56 47.9 -0.2**
comp=Z,16nm,0.5s
TESR Tescani 79.20 354 ⇓P **P** **02 56 47.5 +0.1**
SOKA Soboth 79.24 2 *i* P **P** **02 56 48.7 +0.9**
comp=Z,7.8nm,0.5s,SNR=5.4
MYKA Terra Mystica 79.25 3 *e*P **P** **02 56 49.0 +1.2**
comp=Z,4.2nm,0.5s
CLUD Cludinico 79.39 4 P **P** **02 56 48.3 -0.2**
OBKA Obir 79.39 3 *i* P **P** **02 56 49.3 +0.7**
comp=Z,29nm,0.5s,SNR=18
GROS Grobnik 79.46 2 *i* P **P** **02 56 49.5 +0.5**
GHRR 79.60 354 ⇑P **P** **02 56 50.5 +0.9**
GUN Gumba 79.62 304 *e*P **P** **02 56 50.5 0.0**
comp=Z,18nm,0.5s
CADS Cadrg 79.65 3 *i* P **P** **02 56 49.7 -0.3**
JIRN Jiri 79.68 303 *e*P **P** **02 56 51.0 +0.1**
comp=Z,34nm,0.5s
MORH Mrgy, Hungar 79.74 360 ⇑P **P** **02 56 50.9 +0.5**
DOPR Dopca 79.81 355 ⇓P **P** **02 56 52.1 +1.2**
CRNS Crni Vrh 79.81 3 *i* P **P** **02 56 50.6 -0.3**
KIV Kislovodsk 79.82 342 ⇑P **P** **02 56 51.4 +0.3**
KIV Kislovodsk 79.82 342 P **P** **02 56 51.5 +0.4**
KIV IAmb IAmb 02 56 52.8
comp=Z,11nm,0.9s
KIV Kislovodsk 79.82 342 *e*P **P** **02 56 51.0 0.0**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,35nm,19.0s
VRI Vrincioaia 79.83 354 ⇑P **P** **02 56 51.4 +0.4**
PLOR Plostina 79.85 354 ⇓P **P** **02 56 51.5 +0.4**
COVR Voineasa-Covas 79.89 354 ⇓P **P** **02 56 52.5 +1.2**
KBZ Khabaz 80.00 342 P **P** **02 56 52.5 +0.7**
comp=Z,10nm,0.9s,baz=302,slow=2.4,SNR=18
KBZ LR LR 03 36 27.2
comp=Z,28nm,18.3s,baz=18,slow=39
comp=Z,10nm,0.9s
KBZ Khabaz 80.00 342 *e*P **P** **02 56 52.9 +1.1**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
SLCR Slobozia Conac 80.04 353 ⇑P **P** **02 56 52.8 +0.7**
RAMN Ramite 80.07 303 *e*P **P** **02 56 52.6 -0.2**
comp=Z,19nm,0.5s
MLR Muntele Rosu 80.25 355 ⇑P **P** **02 56 54.3 +0.9**
DANN Dangsing 80.27 306 *e*P **P** **02 56 54.1 +0.1**
comp=Z,53nm,0.6s
BZS Buzias 80.30 358 ⇑P **P** **02 56 53.8 +0.3**
VOIR 80.35 355 ⇓P **P** **02 56 54.3 +0.4**
VOIR 80.35 355 P **P** **02 56 54.4 +0.5**
VOIR pmax pmax
comp=Z,6.0nm,0.9s
TLCR 80.37 353 ⇑P **P** **02 56 54.3 +0.5**
NIL Nilore 80.37 316 P **P** **02 56 54.5 +0.4**
NIL IAmb IAmb 02 56 55.4
comp=Z,19nm,1.0s
NIL Nilore 80.37 316 P **P** **02 56 54.5 +0.4**
NIL pmax pmax
comp=Z,19nm,1.0s
BNI Bardonecchia 80.41 8 P **P** **02 56 54.7 +0.5**
BNI IAmb IAmb 02 56 57.5
comp=Z,19nm,1.5s
BNI Bardonecchia 80.41 8 P **P** **02 56 54.7 +0.5**
BNI pmax pmax
comp=Z,19nm,1.5s
CFR Carcaliu 80.43 353 ⇓P **P** **02 56 54.0 -0.1**
TEOL Teolo 80.43 5 P **P** **02 56 54.6 +0.4**
ARR Arges 80.44 356 ⇑P **P** **02 56 54.9 +0.6**
GZR Gura Zlata 80.49 357 ⇑P **P** **02 56 55.1 +0.5**
CMAR Chiang Mai Arr 80.52 288 P **P** **02 56 55.1 0.0**
comp=Z,4.1nm,0.7s,baz=16,slow=5.5,SNR=26
comp=Z,4.1nm,0.7s
CMAR Chiang Mai Arr 80.52 288 *e*P **P** **02 56 55.3 +0.2**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
TPGR Topolog 80.73 353 ⇑P **P** **02 56 56.1 +0.3**
ZEI Tsey 80.73 341 *e*P **P** **02 56 55.7 -0.4**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
FRGS Fruska Gora 80.79 359 ⇓P **P** **02 56 56.7 +0.6**
HARR Harsova 80.93 353 ⇓P **P** **02 56 57.0 +0.2**
ONI Oni 81.01 342 P **P** **02 56 58.1 +0.7**
ONI Oni 81.01 342 P **P** **02 56 58.1 +0.7**
ONI pmax pmax
comp=Z,7.0nm,1.2s
HERR Herculane 81.01 357 ⇓P **P** **02 56 57.5 +0.3**
BRDH Bariadhala 81.03 296 LR LR 03 39 16.4
comp=Z,81nm,18.1s,baz=143,slow=40
TIRR Tirgusor 81.12 353 ⇑P **P** **02 56 58.1 +0.3**
MDVR Moldovita 81.13 358 ⇓P **P** **02 56 58.6 +0.6**
KBL Kabul 81.24 320 P **P** **02 56 58.2 -0.7**
KBL IAmb IAmb 02 56 58.5
comp=Z,8.2nm,0.8s
KBL Kabul 81.24 320 P **P** **02 56 58.2 -0.7**
KBL pmax pmax
comp=Z,8.0nm,0.8s
HUMR Humele 81.26 355 ⇑P **P** **02 56 59.8 +1.2**
DIVS Divibare 81.85 359 P **P** **02 57 02.0 +0.2**
DIVS IAmb IAmb 02 57 03.1
comp=Z,7.1nm,0.9s
GEYT Alibeck 81.87 329 P **P** **02 57 02.9 +0.9**
comp=Z,6.4nm,0.8s,baz=330,slow=5.6,SNR=11
comp=Z,6.4nm,0.8s
GEYT Alibeck 81.87 329 P **P** **02 57 01.9 -0.1**
GEYT IAmb IAmb 02 57 03.5
comp=Z,11nm,1.0s
GYA0B ALIBECK ARRAY 81.87 329 P **P** **02 57 01.6 -0.4**
GYA0B IAmb IAmb 02 57 03.5
comp=Z,10nm,1.0s
BLKB Belogradchik 82.26 357 ⇓P **P** **02 57 03.7 -0.2**
BOVS Bovan 82.28 358 ⇓P **P** **02 57 03.7 -0.3**
GNI Garni 83.11 340 P **P** **02 57 10.2 +1.6**
comp=Z,5.0nm,0.6s,baz=343,slow=16,SNR=4.5
GNI LR LR 03 38 37.1
comp=Z,50nm,19.3s,baz=1.5,slow=39
comp=Z,5.0nm,0.6s
GNI Garni 83.11 340 P **P** **02 57 09.2 +0.6**
GNI IAmb IAmb 02 57 11.0
comp=Z,6.4nm,0.8s
GNI Garni 83.11 340 *ce*P **P** **02 57 10.0 +1.4**
GNI pmax pmax
comp=Z,8.0nm,0.9s
KTUT Trabzon 83.21 344 ⇓P **P** **02 57 09.8 +1.0**
DIKM Dikmen 83.21 347 ⇓P **P** **02 57 10.1 +1.3**
VTS Vitosha 83.25 356 P **P** **02 57 08.2 -1.0**
VTS Vitosha 83.25 356 P **P** **02 57 08.2 -1.0**
VTS pmax pmax
comp=Z,4.0nm,1.0s
PDG Podgorica 83.52 359 ⇓P **P** **02 57 10.8 +0.4**
PDG Podgorica 83.52 359 P **P** **02 57 09.3 -1.1**
ESDC Sonseca Array 84.33 17 P **P** **02 57 15.4 +0.7**
comp=Z,3.8nm,1.0s,baz=346,slow=5.2,SNR=18
comp=Z,3.8nm,1.0s
ESDC Sonseca Array 84.33 17 P **P** **02 57 13.5 -1.2**
ALN Alexandroupoli 84.83 354 P **P** **02 57 17.4 +0.3**
ALN IAmb IAmb 02 57 18.3
comp=Z,18nm,1.4s
ALN Alexandroupoli 84.83 354 P **P** **02 57 17.4 +0.3**
ALN pmax pmax
comp=Z,18nm,1.4s
ANTO Ankara 85.27 349 P **P** **02 57 20.4 +1.0**
ANTO Ankara 85.27 349 P **P** **02 57 20.4 +1.0**
ANTO pmax pmax
comp=Z,14nm,0.8s
BR131 Keskin Array S 85.31 348 P **P** **02 57 19.0 -0.7**
BR131 Keskin Array S 85.31 348 P **P** **02 57 19.0 -0.7**
BR131 pmax pmax
comp=Z,13nm,0.9s
BRTR Keskin Array B 85.31 348 P **P** **02 57 20.2 +0.5**
comp=Z,6.3nm,0.8s,baz=34,slow=2.2,SNR=47
BRTR LR LR 03 40 48.4
comp=Z,33nm,18.7s,baz=322,slow=40
comp=Z,6.3nm,0.8s
BRTR Keskin Array B 85.31 348 P **P** **02 57 19.6 -0.1**
BORA Eskisehir 85.50 351 P **P** **02 57 21.0 +0.4**
BORA IAmb IAmb 02 57 21.8
comp=Z,12nm,1.0s
LIT Litokhoron 85.78 357 P **P** **02 57 22.0 +0.1**
LIT IAmb IAmb 02 57 22.8
comp=Z,7.1nm,0.8s
LIT Litokhoron 85.78 357 P **P** **02 57 22.0 +0.1**
LIT pmax pmax
comp=Z,7.0nm,0.8s
BNN Bunyan 85.89 346 P **P** **02 57 22.5 -0.1**
TIP Timpagrande 86.76 1 ⇓P **P** **02 57 27.5 +0.7**
MMAI Mount Meron Ar 91.69 346 LR LR 03 43 60.0
comp=Z,9.5nm,19.1s,baz=184,slow=39
WRA Warramunga Arr 91.96 238 P **P** **02 57 50.6 -0.6**
comp=Z,1.1nm,0.9s,baz=39,slow=5.7,SNR=5.9
comp=Z,1.1nm,0.9s
WRA Warramunga Arr 91.96 238 *e*P **P** **02 57 52.1 +0.8**
WRA pmax pmax
comp=Z,1.0nm,0.9s
URZ Urewera 94.10 197 LR LR 03 30 42.5
comp=Z,43nm,21.8s,baz=96,slow=29
FITZ Fitzroy Crossi 94.90 246 LR LR 03 39 04.2
comp=Z,15nm,20.7s,baz=12,slow=34
ASAR Alice Springs 95.32 236 P **P** **02 58 05.5 -1.2**
comp=Z,0.4nm,0.6s,baz=30,slow=4.1,SNR=4.8
comp=Z,0.4nm,0.6s
MDP Montagnes des 96.77 72 LR LR 03 44 14.0
comp=Z,21nm,19.0s,baz=213,slow=37
BOSA Boshof 153.73 346 PKPbc **PKPbc** **03 04 39.9 -1.5**
comp=Z,2.6nm,0.9s,baz=117,slow=2.3,SNR=1.4

SOME ***04*** *02:47:51.9, 41.°77N×81.°57E, h5km*
NNC ***04*** *02:47:53.0±1.4, 41.°69N×81.°49E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=10.2km s-min=8.2km az=6.0
ISC 04 02:47:53.6±2.2, 41.°74N±0.°09×81.°42E±0.°07, h10km, n35,
σ1ºº90/56, 3C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.03**	**315**	*e*P		**Pn**		**02 48 28.6**	**+0.6**
SHLS	20nm,0.2s			*e*S		**Sb**		**02 48 54.6**	**-1.4**
	72nm,0.5s								
SHLS	**Shalkode**	**2.03**	**315**	Pg		**Pn**		**02 48 28.6**	**+0.6**
SHLS	20nm,0.2s			Lg		Lg		02 48 54.6	
	72nm,0.5s								
PDGK	**Podgornoye**	**2.14**	**319**	⇓Pg		**Pb**		**02 48 33.2**	**+0.7**
PDGK	7.1nm,0.3s			⇑Lg		Lg		02 49 03.0	
	45nm,0.5s								
UZB	**Uzynbulak**	**2.27**	**309**	*e*P		**Pg**		**02 48 36.5**	**-0.6**
UZB	11nm,0.4s			*e*S		**Sg**		**02 49 08.8**	**+2.3**
	31nm,0.4s								
UZB	**Uzynbulak**	**2.27**	**309**	Pg		**Pg**		**02 48 36.5**	**-0.6**
UZB	11nm,0.4s			Lg		Lg		02 49 08.8	
	31nm,0.4s								
SATY	**Saty**	**2.59**	**302**	*e*P		**Pg**		**02 48 42.0**	**-1.3**
SATY	13nm,0.4s			*e*S		**Sg**		**02 49 18.7**	**+1.7**
	44nm,0.5s								
SATY	**Saty**	**2.59**	**302**	Pg		**Pg**		**02 48 42.0**	**-1.3**
SATY	13nm,0.4s			Lg		Lg		02 49 18.7	
	44nm,0.5s								
ZHN	**Zhinishke**	**2.63**	**304**	*e*P		**Pg**		**02 48 42.9**	**-1.1**
ZHN	21nm,0.2s			*e*S		**Sg**		**02 49 19.8**	**+1.7**
	68nm,0.2s								
ZHN	**Zhinishke**	**2.63**	**304**	Pg		**Pg**		**02 48 42.9**	**-1.1**
ZHN	21nm,0.2s			Lg		Lg		02 49 19.8	
	68nm,0.2s								
KPKS	**Kokpek**	**2.66**	**312**	*e*P		**Pb**		**02 48 42.4**	**+1.1**
KPKS	11nm,0.3s			*e*S		**Sg**		**02 49 18.8**	**-0.2**
	31nm,0.7s								
KPKS	**Kokpek**	**2.66**	**312**	Pg		**Pb**		**02 48 42.4**	**+1.1**
KPKS	11nm,0.3s			Lg		Lg		02 49 18.8	
	31nm,0.7s								
DJR	**Jarkent**	**2.86**	**336**	*e*P		**Pb**		**02 48 45.2**	**+0.4**
DJR	0.9nm,0.2s			*e*S		**Sg**		**02 49 24.0**	**-1.4**
	19nm,0.4s								
DJR	**Jarkent**	**2.86**	**336**	Pg		**Pb**		**02 48 45.2**	**+0.4**
DJR	0.9nm,0.2s			Lg		Lg		02 49 24.0	
	19nm,0.4s								
KURS	**Kuram**	**2.97**	**307**	*e*P		**Pg**		**02 48 49.2**	**-1.3**
KURS	8.9nm,0.6s			*e*S		**Sg**		**02 49 30.7**	**+1.7**
	15nm,0.4s								
KURS	**Kuram**	**2.97**	**307**	Pg		**Pg**		**02 48 49.2**	**-1.3**
KURS	8.9nm,0.6s			Lg		Lg		02 49 30.7	
	15nm,0.4s								
BLB	**Baldybastay**	**3.20**	**319**	*e*P		**Pb**		**02 48 51.8**	**+1.2**
BLB	6.9nm,0.3s			*e*S		**Sg**		**02 49 35.2**	**-1.2**
	20nm,0.3s								
BLB	**Baldybastay**	**3.20**	**319**	Pg		**Pb**		**02 48 51.8**	**+1.2**
BLB	6.9nm,0.3s			Lg		Lg		02 49 35.2	
	20nm,0.3s								
MDOK	**Medeo**	**3.53**	**295**	*e*P		**Pg**		**02 48 58.8**	**-2.5**
MDOK	3.2nm,0.3s			*e*S		**Sg**		**02 49 47.0**	**-0.1**
	7.3nm,0.6s								
MDOK	**Medeo**	**3.53**	**295**	Pg		**Pg**		**02 48 58.8**	**-2.5**
MDOK	3.2nm,0.3s			Lg		Lg		02 49 47.0	
	7.3nm,0.6s								
TNSS	**Tian-Shan**	**3.56**	**293**	*e*P		**Pg**		**02 48 59.8**	**-2.0**
TNSS	3.8nm,0.4s			*e*S		**Sg**		**02 49 49.0**	**+1.1**
	6.5nm,0.4s								
TNSS	**Tian-Shan**	**3.56**	**293**	Pg		**Pg**		**02 48 59.8**	**-2.0**
TNSS	3.8nm,0.4s			Lg		Lg		02 49 49.0	
	6.5nm,0.4s								
ARXS	**Arharly**	**3.62**	**314**	*e*P		**Pb**		**02 48 59.9**	**+2.2**
ARXS	2.7nm,0.4s			*e*S		**Sg**		**02 49 48.6**	**-1.1**
	14nm,0.6s								
ARXS	**Arharly**	**3.62**	**314**	Pg		**Pb**		**02 48 59.9**	**+2.2**
ARXS	2.7nm,0.4s			Lg		Lg		02 49 48.6	
	14nm,0.6s								
CHKK	**Chushkaly**	**3.89**	**304**	*e*P		**Pg**		**02 49 05.3**	**-2.8**
CHKK	1.3nm,0.1s			*e*S		**Sg**		**02 49 57.9**	**-0.6**
	6.2nm,0.3s								
CHKK	**Chushkaly**	**3.89**	**304**	Pg		**Pg**		**02 49 05.3**	**-2.8**
CHKK				Lg		Lg		02 49 57.9	
TDK	**Taldyqorghan**	**3.93**	**327**	*e*P		**Pb**		**02 49 05.2**	**+2.2**
TDK	58nm,0.2s			*e*S		**Sg**		**02 49 58.1**	**-1.8**
	56nm,0.3s								
MTBS	**Maitube**	**3.95**	**292**	*e*P		**Pg**		**02 49 07.4**	**-1.8**
MTBS	3.3nm,0.3s			*e*S		**Sg**		**02 50 01.5**	**+1.1**
	7.1nm,0.4s								
KTBS	**Karatobe**	**4.01**	**301**	*e*P		**Pg**		**02 49 09.4**	**-1.0**
KTBS	3.0nm,0.5s			*e*S		**Sg**		**02 50 04.8**	**+2.4**
	19nm,0.5s								

KST	**Kastek**	**4.25**	**290**	*e*P	**Pb**	**02 49 10.3**	**+1.8**
	3.2nm,0.5s						
KST				*e*S	**Sg**	**02 50 06.8**	**-3.1**
	5.7nm,0.7s						
KST	**Kastek**	**4.25**	**290**	Pg	**Pb**	**02 49 10.3**	**+1.8**
	3.2nm,0.5s						
KST				Lg	Lg	02 50 06.8	
	5.7nm,0.7s						
KUU	**Kurty**	**4.31**	**302**	*e*P	**Pb**	**02 49 12.1**	**+2.6**
	2.0nm,0.4s						
KUU				*e*S	**Sg**	**02 50 09.4**	**-2.7**
	7.4nm,0.7s						
DGS	**Degeres**	**4.44**	**292**	*e*P	**Pg**	**02 49 15.2**	**-3.4**
	2.8nm,0.5s						
DGS				*e*S	**Sg**	**02 50 14.9**	**-1.2**
	4.8nm,0.6s						
DGS	**Degeres**	**4.44**	**292**	Pg	**Pg**	**02 49 15.2**	**-3.4**
	2.8nm,0.5s						
DGS				Lg	Lg	02 50 14.9	
	4.8nm,0.6s						
TKM2	**Tokmak 2**	**4.47**	**287**	⇑Pn	**Pn**	**02 49 00.1**	**-1.6**
	0.9nm,0.3s						
TKM2				⇓Pg	**Pg**	**02 49 17.8**	**-1.6**
	1.9nm,0.5s						
TKM2				⇓Lg	Lg	02 50 18.2	
	4.0nm,0.5s						
MK31	**Makanchi Array**	**5.10**	**7**	Pn	**Pn**	**02 49 12.3**	**+2.2**
	0.2nm,0.3s,baz=190,slow=13,SNR=22						
MK31				Pg	**Pg**	**02 49 27.5**	**-3.7**
MK31				⇑Sn	**Sn**	**02 50 11.7**	**+2.7**
	0.3nm,0.2s,baz=188,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	02 50 31.9	
	0.7nm,0.3s,baz=187,slow=28,SNR=6.4						

NEIC ***04*** *02:48:52.7±1.4, 54°.40N±0°.02×161°.61W±0°.05, h28km±10km, Error ellipse: s-maj=4.5km s-min=3.2km az=57.0*

AEIC 04 02:48:52±1.2**, 54°.39N**±0°.07×**161°.66W**±0°.04**, h18**km±6km**, ML3.1**/35**, Error ellipse: s-maj=9.5km s-min=3.8km az=178.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.68**	**329**		Pg	02 49 05.5	+0.2
DT1	**Dutton Round H**	**0.80**	**333**		Pb	02 49 07.0	-0.5
HAG	**Hague Volcano**	**0.94**	**351**		Pb	02 49 09.8	0.0
PS4A	**Pavlof South-4**	**0.96**	**353**		Pb	02 49 10.1	-0.1
PVV	**Pavlof Volcano**	**0.99**	**356**		Pb	02 49 10.6	0.0
PN7A	**Pavlof North-7**	**1.06**	**349**		Pn	02 49 12.0	-0.1
FALS	**False Pass**	**1.13**	**295**		Pn	02 49 12.2	-0.7
FALS					Sb	02 49 26.0	-1.2
SDPT	**Sand Point**	**1.18**	**35**		Pn	02 49 13.4	-0.2
SDPT					Sb	02 49 28.6	-0.1
BRPK	**Brown Peak**	**1.24**	**283**		Pn	02 49 13.7	-0.8
ISLZ	**Isanotski Laza**	**1.24**	**286**		Pn	02 49 14.0	-0.6
CNBA	**Chernabura Isl**	**1.28**	**69**		Pn	02 49 13.3	-1.7
CNBA					Sb	02 49 30.1	-1.4
ISNN	**Isanotski Nort**	**1.31**	**291**		Pn	02 49 15.8	+0.3
ISNN					Sb	02 49 33.5	+0.9
SSLS	**Shishaldin Sou**	**1.40**	**284**		Pn	02 49 16.9	+0.2
SSLN	**Shishaldin Nor**	**1.43**	**288**		Pn	02 49 17.5	+0.4
SSLW	**Shishaldin Wes**	**1.49**	**286**		Pn	02 49 18.3	+0.4
SSBA	**Shishaldin**	**1.49**	**286**		Pn	02 49 18.3	+0.4
SSBA					Sb	02 49 37.5	-0.2
WTUG	**Tugumak**	**1.65**	**287**		Pn	02 49 20.7	+0.6
WESN	**West Dahl Nort**	**1.72**	**277**		Pn	02 49 21.5	+0.5
WESP	**Westdahl Peak**	**1.79**	**274**		Pn	02 49 22.6	+0.4
AKSA	**Akutan Strait**	**2.38**	**265**		Pn	02 49 29.6	-0.6
AKGG	**Akutan Green G**	**2.55**	**267**		Pn	02 49 32.1	-0.3
UNV	**Unalaska Valle**	**2.91**	**261**		Pn	02 49 37.0	-0.3
MTBL	**Makushin Table**	**2.98**	**264**		Pn	02 49 38.5	0.0
MNAT	**Makushin Natee**	**3.00**	**262**		Pn	02 49 38.4	-0.3
MCIR	**Makushin Cirqu**	**3.11**	**264**		Pn	02 49 40.3	+0.1
KDAK	**Kodiak Island**	**6.11**	**53**		Pn	02 50 20.4	-0.9

ISU ***04*** *03:10:43, 41°.06N×72°.44E, h30km*
KRNET ***04*** *03:10:43.6±0.1, 41°.06N×72°.34E, h21km, mb3.2*
SOME ***04*** *03:10:49.5, 41°.23N×72°.40E, h10km*
NNC ***04*** *03:10:51.0±1.3, 41°.32N×72°.50E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=13.0km s-min=3.7km az=1.0*

ISC 04 03:10:43.5±1.1**, 41°.07N**±0°.02×**72°.40E**±0°.02**, h6**km±10km**, n54,** σ1§**26**/86**, 21C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**0.32**	**186**	P	**Pb**	**03 10 51.4**	**-0.1**
ANR				S	**Sb**	**03 10 57.3**	**+0.4**
TSTA	**Tashata**	**0.49**	**173**	P	**Pb**	**03 10 53.9**	**-0.7**
TSTA				S	**Sb**	**03 11 01.6**	**-0.5**
OHH	**Osh**	**0.62**	**152**	⇑*e*P	**Pg**	**03 10 55.8**	**+0.4**
	baz=48						
OHH				⇑*e*S	**Sb**	**03 11 04.7**	**-1.0**
	baz=48						
ARK	**Arkit**	**0.80**	**336**	⇓*e*P	**Pg**	**03 10 58.8**	**-0.1**
	baz=39						
ARK				⇓*i*S	**Sg**	**03 11 09.6**	**+0.4**
	baz=39						
FRG	**Fergana**	**0.84**	**214**	P	**Pn**	**03 11 02.6**	**+0.8**
FRG				S	**Sn**	**03 11 14.7**	**+0.3**
CHMI	**Chimion**	**1.04**	**220**	P	**Pb**	**03 11 03.8**	**-0.1**
TRKS	**Terek-Say**	**1.05**	**296**	⇓*e*P	**Pg**	**03 11 01.5**	**-2.2**
	baz=95						
TRKS				⇓*e*S	**Sg**	**03 11 15.0**	**-2.4**
	baz=95						
MINT	**Mingtut**	**1.24**	**241**	P	**Pn**	**03 11 06.1**	**-1.2**
MINT				S	**Sn**	**03 11 24.8**	**+0.5**
AML	**Almayashu**	**1.44**	**42**	P	**Pg**	**03 11 11.9**	**+0.8**
	SNR=36						
BTK	**Batken**	**1.57**	**231**	⇑*e*P	**Pn**	**03 11 11.9**	**-0.1**
	baz=30						
BTK				⇑*e*S	**Sn**	**03 11 32.2**	**-0.5**
	baz=30						
BTK	**Batken**	**1.57**	**231**	P	**Pb**	**03 11 12.9**	**-0.1**
BTK				S	**Sg**	**03 11 35.4**	**+1.4**
ARLS	**Aral**	**1.65**	**61**	⇓*e*P	**Pb**	**03 11 14.4**	**+0.1**
	baz=61						
ARLS				⇓*e*S	**Sg**	**03 11 37.0**	**+0.6**
	baz=61						
CHMG	**Chimgan**	**1.86**	**286**	P	**Pg**	**03 11 18.6**	**-0.6**
EKS2	**Erkin-Say**	**1.89**	**32**	P	**Pg**	**03 11 21.4**	**+1.5**
	SNR=6.7						
EKS2	**Erkin-Say**	**1.89**	**32**	⇑*e*P	**Pb**	**03 11 18.3**	**-0.2**
	baz=33						
EKS2				⇑*e*S	**Sg**	**03 11 43.4**	**-1.0**
	baz=33						
CHRV	**Charvak**	**1.93**	**288**	P	**Pg**	**03 11 20.0**	**-0.5**
CHRV				S	**Sg**	**03 11 47.1**	**+1.6**
UCH	**Uchtor**	**1.96**	**53**	P	**Pg**	**03 11 22.0**	**+0.9**
	SNR=50						
UCH	**Uchtor**	**1.96**	**53**	⇑*e*P	**Pb**	**03 11 19.4**	**-0.5**
	baz=54						
UCH				⇑*e*S	**Sg**	**03 11 45.7**	**-0.9**
	baz=54						
DZA	**Taraz**	**1.99**	**337**	*e*P	**Pg**	**03 11 24.1**	**+2.5**
	66nm,0.1s						
DZA				*e*S	**Sg**	**03 11 49.5**	**+2.2**
	178nm,0.3s						
DZA	**Taraz**	**1.99**	**337**	P	**Pg**	**03 11 24.1**	**+2.5**
	66nm,0.1s						
DZA				S	**Sg**	**03 11 49.5**	**+2.2**
	178nm,0.3s						
AAK	**Ala-Archa**	**2.21**	**44**	P	**Pg**	**03 11 26.3**	**+0.4**
	SNR=8.5						
AAK	**Ala-Archa**	**2.21**	**44**	⇑*e*P	**Pb**	**03 11 22.9**	**-1.1**
	baz=45						
AAK				⇑*e*S	**Sb**	**03 11 51.5**	**-0.2**
	baz=45						
KK31	**Karatay Array**	**2.47**	**326**	⇑Pg	**Pg**	**03 11 30.4**	**-0.4**
	1.4nm,0.2s,baz=137,slow=15,SNR=8.1						
KK31				⇑Lg	Lg	03 12 01.9	
	29nm,0.5s,baz=137,slow=28,SNR=21						
KKAR	**Karatay Array**	**2.47**	**326**	⇑*e*P	**Pn**	**03 11 25.5**	**+1.2**
	baz=27						
KKAR				⇑*e*S	**Sn**	**03 11 56.1**	**+1.3**
	baz=27						
KBK	**Karagaybulak**	**2.48**	**49**	P	**Pg**	**03 11 33.3**	**+2.3**
	SNR=10.0						
KBK	**Karagaybulak**	**2.48**	**49**	⇓*e*P	**Pb**	**03 11 26.5**	**-2.0**
	baz=50						
KBK				⇓*e*S	**Sb**	**03 11 57.8**	**-1.5**
	baz=50						
CHMS	**Chumysh**	**2.60**	**41**	⇑Pg	**Pg**	**03 11 33.1**	**-0.3**
	7.0nm,0.6s						
CHMS				⇑Lg	Lg	03 12 07.1	
	11nm,0.5s						
GAR	**Garm**	**2.61**	**218**	⇑*e*P	**Pn**	**03 11 27.4**	**+1.1**
	baz=18						
GAR				⇑*e*S	**Sn**	**03 11 59.3**	**+0.9**
	baz=18						
USP	**Ospenovka**	**2.69**	**35**	P	**Sg**	**03 12 11.4**	**+1.4**
	SNR=6.4						
TKM2	**Tokmak 2**	**3.02**	**51**	⇓Pn	**Pb**	**03 11 36.1**	**-1.6**
	1.9nm,0.4s						
TKM2				⇑Pg	**Pg**	**03 11 42.0**	**+0.7**
	2.5nm,0.4s						
TKM2				⇓Lg	Lg	03 12 21.0	
	10nm,0.5s						
KST	**Kastek**	**3.31**	**52**	*e*P	**Pg**	**03 11 48.0**	**+1.2**
	4.3nm,0.4s						
KST				*e*S	**Sg**	**03 12 30.4**	**+0.7**
	19nm,0.6s						
KST	**Kastek**	**3.31**	**52**	Pg	**Pg**	**03 11 48.0**	**+1.2**
	4.3nm,0.4s						
KST				Lg	Lg	03 12 30.4	
	19nm,0.6s						
DGS	**Degeres**	**3.32**	**48**	*e*P	**Pg**	**03 11 47.7**	**+0.7**
	3.6nm,0.7s						
DGS				*e*S	**Sg**	**03 12 30.4**	**+0.5**
	12nm,0.8s						
DGS	**Degeres**	**3.32**	**48**	Pg	**Pg**	**03 11 47.7**	**+0.7**
	3.6nm,0.7s						
DGS				Lg	Lg	03 12 30.4	
	12nm,0.8s						
KRBS	**Karabastau**	**3.57**	**42**	*e*P	**Pg**	**03 11 52.0**	**0.0**
	1.3nm,0.2s						
KRBS				*e*S	**Sg**	**03 12 37.3**	**-0.9**
	13nm,0.8s						
KRBS	**Karabastau**	**3.57**	**42**	Pg	**Pg**	**03 11 52.0**	**0.0**
	1.3nm,0.2s						
KRBS				Lg	Lg	03 12 37.3	
	13nm,0.8s						
MTBS	**Maitube**	**3.64**	**54**	*e*P	**Pg**	**03 11 55.2**	**+2.1**
	3.0nm,0.2s						
MTBS				*e*S	**Sg**	**03 12 42.5**	**+2.3**
	9.2nm,0.3s						
MTBS	**Maitube**	**3.64**	**54**	Pg	**Pg**	**03 11 55.2**	**+2.1**
	3.0nm,0.2s						
MTBS				Lg	Lg	03 12 42.5	
	9.2nm,0.3s						
TNSS	**Tian-Shan**	**3.92**	**58**	*e*P	**Pg**	**03 11 59.7**	**+1.2**
	2.5nm,0.5s						
TNSS				*e*S	**Sg**	**03 12 50.1**	**+0.9**
	4.0nm,0.6s						
TNSS	**Tian-Shan**	**3.92**	**58**	Pg	**Pg**	**03 11 59.7**	**+1.2**
	2.5nm,0.5s						
TNSS				Lg	Lg	03 12 50.1	
	4.0nm,0.6s						
MDOK	**Medeo**	**4.04**	**57**	*e*P	**Pg**	**03 12 01.1**	**+0.2**
	4.1nm,0.6s						
MDOK				*e*S	**Sg**	**03 12 52.7**	**-0.6**
	4.3nm,0.5s						
MDOK	**Medeo**	**4.04**	**57**	Pg	**Pg**	**03 12 01.1**	**+0.2**
	4.1nm,0.6s						
MDOK				Lg	Lg	03 12 52.7	
	4.3nm,0.5s						
KUU	**Kurty**	**4.05**	**45**	*e*P	**Pg**	**03 12 01.7**	**+0.6**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**03 12 53.4**	**-0.3**
	12nm,0.4s						
KTBS	**Karatobe**	**4.13**	**49**	*e*P	**Pg**	**03 12 03.7**	**+1.2**
	2.3nm,0.4s						
KTBS				*e*S	**Sg**	**03 12 56.8**	**+0.8**
	25nm,0.5s						
BTLS	**Baital**	**4.15**	**16**	*e*P	**Pg**	**03 12 02.5**	**-0.4**
	2.2nm,0.3s						
BTLS				*e*S	**Sg**	**03 12 54.9**	**-1.8**
	5.8nm,0.7s						
CHKK	**Chushkaly**	**4.39**	**49**	*e*P	**Pg**	**03 12 07.2**	**-0.4**
	1.6nm,0.2s						
CHKK				*e*S	**Sg**	**03 13 03.2**	**-1.2**
	7.7nm,0.5s						
CHKK	**Chushkaly**	**4.39**	**49**	Pg	**Pg**	**03 12 07.2**	**-0.4**
	1.6nm,0.2s						
CHKK				Lg	Lg	03 13 03.2	
	7.7nm,0.5s						
ARXS	**Arharly**	**5.09**	**50**	*e*P	**Pg**	**03 12 19.6**	**-1.3**
	3.8nm,0.5s						
ARXS				*e*S	**Sg**	**03 13 24.8**	**-2.0**
	9.0nm,0.5s						
ARXS	**Arharly**	**5.09**	**50**	Pg	**Pg**	**03 12 19.6**	**-1.3**
	3.8nm,0.5s						
ARXS				Lg	Lg	03 13 24.8	
	9.0nm,0.5s						
KPKS	**Kokpek**	**5.24**	**61**	*e*P	**Pg**	**03 12 25.5**	**+1.6**
	2.6nm,0.3s						
KPKS				*e*S	**Sg**	**03 13 34.2**	**+2.4**
	9.8nm,0.6s						
UZB	**Uzynbulak**	**5.34**	**65**	*e*P	**Pg**	**03 12 24.4**	**-1.4**
	1.4nm,0.6s						
UZB				*e*S	**Sg**	**03 13 32.4**	**-2.7**
	2.3nm,0.2s						
BLB	**Baldybastay**	**5.41**	**54**	*e*P	**Pg**	**03 12 26.3**	**-0.8**
	6.8nm,0.4s						
BLB				*e*S	**Sg**	**03 13 35.8**	**-1.4**
	7.0nm,0.6s						
PDGK	**Podgornoye**	**5.73**	**64**	⇑Lg	Lg	03 13 48.6	
	7.6nm,1.0s						
OTUK	**Ortayu**	**7.17**	**360**	⇑Lg	Lg	03 14 32.2	

ISU ***04*** *03:14:24, 40°.70N×72°.06E, h20km*
KRNET ***04*** *03:14:25.8±0.1, 40°.85N×71°.77E, h35km, mb2.5*

ISC 04 03:14:25.7±1.3**, 40°.86N**±0°.03×**71°.79E**±0°.04**, h14**km±11km**, n13,** σ1§**49**/24**, 13C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSTA	**Tashata**	**0.59**	**118**	P	**Pg**	**03 14 38.0**	**+0.6**
CHMI	**Chimion**	**0.63**	**199**	P	**Pg**	**03 14 36.8**	**-1.2**
CHMI				S	**Sg**	**03 14 45.7**	**-0.6**
TRKS	**Terek-Say**	**0.83**	**324**	⇑*i*P	**Pn**	**03 14 43.9**	**+0.8**
	baz=24						
TRKS				⇑*i*S	**Sn**	**03 14 57.1**	**+1.9**
	baz=24						
OHH	**Osh**	**0.83**	**114**	⇓*i*P	**Pn**	**03 14 44.7**	**+1.7**
	baz=12						
OHH				⇓*i*S	**Sn**	**03 14 58.5**	**+3.5**
	baz=12						
BTK	**Batken**	**1.09**	**223**	⇑*i*P	**Pn**	**03 14 47.3**	**+0.7**
	baz=23						
BTK				⇑*i*S	**Sn**	**03 15 03.0**	**+1.5**
	baz=23						
ARLS	**Aral**	**2.15**	**62**	⇓*i*P	**Pn**	**03 15 01.4**	**+0.1**
	baz=62						
ARLS				⇓*i*S	**Sn**	**03 15 27.5**	**-0.3**
	baz=62						
GAR	**Garm**	**2.18**	**212**	⇑*i*P	**Pn**	**03 15 01.1**	**-0.5**
	baz=12						
GAR				⇑*i*S	**Sn**	**03 15 26.7**	**-1.7**
	baz=12						
EKS2	**Erkin-Say**	**2.33**	**39**	⇓*i*P	**Pn**	**03 15 03.6**	**-0.1**
	baz=39						
EKS2				⇓*i*S	**Sn**	**03 15 31.1**	**-1.2**
	baz=39						
KK31	**Karatay Array**	**2.43**	**337**	⇑Pg	**Pg**	**03 15 14.1**	**+1.7**
	0.2nm,0.3s,baz=156,slow=15						
KK31				⇓Lg	Lg	03 15 45.8	
	0.8nm,0.3s,baz=161,slow=30,SNR=5.9						
KKAR	**Karatay Array**	**2.43**	**337**	⇑*i*P	**Pn**	**03 15 04.6**	**-0.4**
	baz=38						
KKAR				⇑*i*S	**Sn**	**03 15 32.9**	**-1.7**
	baz=38						
UCH	**Uchtor**	**2.46**	**55**	⇓*i*P	**Pn**	**03 15 05.5**	**-0.2**
	baz=55						
UCH				⇓*i*S	**Sn**	**03 15 34.5**	**-1.3**
	baz=55						
AAK	**Ala-Archa**	**2.69**	**48**	⇑*i*P	**Pn**	**03 15 08.6**	**-0.1**
	baz=48						
AAK				⇑*i*S	**Sn**	**03 15 39.7**	**-1.4**
	baz=48						
TKM2	**Tokmak 2**	**3.51**	**53**	⇑*i*P	**Pn**	**03 15 19.3**	**-0.7**
	baz=53						
TKM2				⇑*i*S	**Sn**	**03 15 58.9**	**-2.5**
	baz=53						

GCG ***04*** *03:27:58.4±0.6, 16°.56N×92°.63W, h140km±44km, MD4.1*
MEX ***04*** *03:28:03.5±0.6, 15°.80N×92°.53W, h193km±5km, MD4.1*

ISC 04 03:28:03.8±1.6**, 15°.82N**±0°.07×**92°.68W**±0°.05**, h181**km±10km**, n20,** σ1§**48**/39**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.53**	**258**	*e*P	**Pn**	**03 28 29.0**	**+0.2**
PCIG				*e*S	**Sn**	**03 28 49.4**	**+1.5**
CCIG	**Comitan**	**0.70**	**49**	*e*P	**Pn**	**03 28 29.4**	**-0.5**
CCIG				*e*S	**Sn**	**03 28 48.4**	**-1.6**
PAVE	**Pavencul**	**0.79**	**142**	*e*P	**Pn**	**03 28 29.6**	**-0.9**
PAVE				*e*S	**Sn**	**03 28 49.8**	**-1.2**
PATR	**El Naranjo**	**0.82**	**148**	*e*P	**Pn**	**03 28 29.3**	**-1.5**
PATR				*e*S	**Sn**	**03 28 50.5**	**-0.9**
CHUJ	**Union Juarez**	**0.91**	**142**	*e*P	**Pn**	**03 28 30.2**	**-1.1**
CHUJ				*e*S	**Sn**	**03 28 52.5**	**0.0**
THIG		**0.99**	**156**	*e*P	**Pn**	**03 28 31.0**	**-0.6**
THIG				*e*S	**Sn**	**03 28 52.5**	**-0.5**
TGIG		**1.04**	**336**	*e*P	**Pn**	**03 28 32.8**	**+0.8**
TGIG				*e*S	**Sn**	**03 28 54.4**	**+0.5**
CARR	**Arriaga**	**1.26**	**290**	*e*P	**Pn**	**03 28 34.6**	**+1.0**
CARR				*e*S	**Sn**	**03 28 58.1**	**+1.5**
STG3	**Santiaguito 3,**	**1.54**	**136**	*e*P	**Pn**	**03 28 35.6**	**-0.9**
STG3				*e*S	**Sn**	**03 29 03.8**	**+2.1**
NILT	**Santiago Nilte**	**2.00**	**292**	*e*P	**Pn**	**03 28 41.6**	**+0.7**
NILT				*e*S	**Sn**	**03 29 10.5**	**+0.7**
UXUV	**UXUV**	**2.05**	**317**	*e*P	**Pn**	**03 28 42.0**	**+0.6**
UXUV				*e*S	**Sn**	**03 29 10.7**	**0.0**
FUG	**Fuego 3**	**2.24**	**127**	*e*P	**Pn**	**03 28 42.9**	**-0.9**
FUG				*e*S	**Sn**	**03 29 17.9**	**+3.0**
PCG	**Pacaya**	**2.46**	**125**	*e*P	**Pn**	**03 28 46.2**	**-0.2**
PCG				*e*S	**Sn**	**03 29 22.5**	**+3.2**
CMIG	**Matias Romero**	**2.46**	**301**	*e*P	**Pn**	**03 28 46.8**	**+0.7**
CMIG				*e*S	**Sn**	**03 29 19.4**	**+0.3**
NBG	**Las Nubes**	**2.57**	**118**	*e*P	**Pn**	**03 28 46.1**	**-1.6**
HUIG	**Huatulco**	**3.30**	**270**	*e*P	**Pn**	**03 28 55.8**	**-0.4**
HUIG				*e*S	**Sn**	**03 29 35.0**	**-2.0**
NEUV	**Arroyo Zacate**	**3.53**	**303**	*e*P	**Pn**	**03 28 59.5**	**+0.4**
NEUV				*e*S	**Sn**	**03 29 40.1**	**-2.2**
VHO	**Vista Hermosa**	**4.08**	**288**	*e*P	**Pn**	**03 29 08.2**	**+2.0**
VHO				*e*S	**Sn**	**03 29 54.1**	**-0.9**
PEIG	**Puerto Escondi**	**4.30**	**273**	*i*P	**Pn**	**03 29 09.1**	**+0.3**
PEIG				*e*S	**Sn**	**03 29 59.5**	**-0.2**
JAUV	**Jalcomulco**	**5.28**	**313**	*e*P	**Pn**	**03 29 22.9**	**+1.4**
JAUV				*e*S	**Sn**	**03 30 18.7**	**-3.9**

IDC ***04*** *03:55:11.8±1.0, 54°.86S×29°.95W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=46.7km s-min=23.7km az=76.0*

ISC 04 03:55:13.1±1.0**, 54°.9S**±0°.2×**30°.0W**±0°.3**, h10**km**, n7,** σ1§**00**/7**, mb3.8**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.47**	**156**	P	**P**	**03 59 50.7**	**+0.2**
	0.7nm,0.8s,baz=307,slow=12,SNR=6.6						
	0.7nm,0.8s						
QSPA	**South Pole Qui**	**35.38**	**180**	P	**P**	**04 02 07.4**	**-1.3**
	1.2nm,0.9s,baz=176,slow=2.2,SNR=2.3						
	1.2nm,0.9s						
VNDA	**Vanda**	**47.67**	**183**	P	**P**	**04 03 49.8**	**+1.0**
	0.7nm,0.7s,baz=192,slow=6.7,SNR=8.0						
	0.7nm,0.7s						
LPAZ	**La Paz**	**48.41**	**307**	P	**P**	**04 03 56.0**	**+0.1**
	1.0nm,0.5s,baz=145,slow=16,SNR=6.2						
	1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.85**	**32**	P	**P**	**04 06 41.4**	**-0.5**
	0.2nm,0.6s,baz=197,slow=4.2,SNR=1.6						
ILAR	**Eielson Array**	**148.16**	**314**	PKPbc	**PKPbc**	**04 14 57.4**	**-0.2**
	0.6nm,0.5s,baz=124,slow=1.5,SNR=8.6						
SONM	**Songino Array**	**152.23**	**86**	PKPbc	**PKiKP**	**04 15 09.5**	**+1.1**
	0.4nm,0.5s,baz=218,slow=2.2,SNR=3.6						

RSNC ***04*** *04:07:03.8±1.0, 6°.82N×73°.14W, h144km±4km, ML3.1*
IDC ***04*** *04:07:07.1±5.9, 6°.57N×73°.64W, h183km±36km, mb2.8/1, mbtmp3.3/1, Error ellipse: s-maj=118.6km s-min=41.0km az=72.0*

ISC 04 04:07:01.7±1.0**, 6°.87N**±0°.03×**73°.09W**±0°.04**, h155**km±7km**, n33,** σ1§**18**/56**, 1C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**199**	⇓*i*P	**Pn**	**04 07 23.1**	**0.0**
BARC				*e*S	**Sn**	**04 07 38.1**	**-1.2**
BARC				*i*		04 07 39.5	
	comp=Z,498nm,0.5s						
PAMC	**Pamplona, Colo**	**0.61**	**39**	⇓*i*P	**Pn**	**04 07 25.9**	**+1.1**
PAMC				*e*S	**Sn**	**04 07 42.9**	**+0.6**
PAMC				*i*		04 07 44.9	
	comp=Z,325nm,0.4s						
BRRC	**Barranca, Sant**	**0.67**	**291**	⇓*i*P	**Pn**	**04 07 24.9**	**+0.5**
BRRC				*e*S	**Sn**	**04 07 41.7**	**-0.1**
BRRC				*i*		04 07 44.9	
	comp=Z,345nm,0.4s						
RUSC	**La Rusia**	**0.97**	**180**	*e*P	**Pn**	**04 07 27.1**	**-0.1**
RUSC				*e*S	**Sn**	**04 07 45.3**	**-1.5**
RUSC				*i*		04 07 47.4	
	comp=Z,320nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**108**	⇓*i*P	**Pn**	**04 07 31.5**	**+1.3**
TAMC				*e*S	**Sn**	**04 07 53.0**	**+0.9**
TAMC				*i*		04 07 53.6	
	comp=Z,129nm,0.6s						
OCAC	**Ocana**	**1.38**	**350**	*e*P	**Pn**	**04 07 31.3**	**+0.7**
OCAC				*e*S	**Sn**	**04 07 52.9**	**+0.1**
OCAC				*i*		04 07 55.1	
	comp=Z,238nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	*e*P	**Pn**	**04 07 29.6**	**-0.9**
PTBC				*e*S	**Sn**	**04 07 51.5**	**-1.2**
PTBC				*i*		04 07 56.1	
	comp=Z,281nm,0.3s						
SPBC	**San Pablo de B**	**1.55**	**219**	⇑*e*P	**Pn**	**04 07 32.1**	**-0.2**
SPBC				*e*S	**Sn**	**04 07 54.2**	**-1.6**
SPBC				*i*		04 07 56.3	
	comp=Z,306nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.86**	**290**	*e*P	**Pn**	**04 07 36.0**	**+0.4**
ZARC				*e*S	**Sn**	**04 08 01.9**	**+0.3**
ZARC				*i*		04 08 06.5	
	comp=Z,215nm,0.5s						
NORC	**Norcasia**	**2.19**	**234**	*e*P	**Pn**	**04 07 39.6**	**+0.2**
NORC				*e*S	**Sn

PRAC *i* 04 08 45.0
comp=Z,56nm,0.2s
SJCC San Jacinto, C 3.66 326 *eP* **Pn 04 07 57.6 -0.1**
SJCC *eS* **Sn 04 08 39.8 -1.4**
SJCC *i* 04 08 48.6
comp=Z,17nm,0.3s
PLMC San Jos del P 3.73 239 *eP* **Pn 04 07 59.4 +0.7**
PLMC *i* 04 08 48.2
comp=Z,34nm,0.4s
LCBC Los crdobas, 3.81 302 *eP* **Pn 04 08 00.2 +0.6**
LCBC *eS* **Sn 04 08 43.7 -0.8**
LCBC *i* 04 08 52.9
comp=Z,30nm,0.3s
CRJC Cerrejon, Guaj 4.13 3 *eP* **Pn 04 08 03.3 -0.6**
CRJC *eS* **Sn 04 08 49.3 -3.1**
CRJC *i* 04 09 00.7
comp=Z,25nm,0.3s
YOTC Yotoco, Valle 4.33 229 *eP* **Pn 04 08 06.3 -0.2**
YOTC *i* 04 09 06.1
comp=Z,7.8nm,0.3s
URIC Uribia, Colomb 4.93 13 *eP* **Pn 04 08 14.0 -0.3**
URIC *i* 04 09 12.0
comp=Z,5.4nm,0.2s
FLOC Florencia 5.84 206 *eP* **Pn 04 08 26.3 -0.1**
BBAC Balboa, Cauca 6.35 221 *eP* **Pn 04 08 34.0 +0.6**
BBAC *i* 04 09 47.7
comp=Z,4.1nm,0.3s
GCUF Volcan Galeras 7.03 217 *eP* **Pn 04 08 43.7 +1.0**
GCUF *i* 04 09 15.6
comp=Z,2.2nm,0.3s
TXAR Lajitas Array 36.46 312 P **P 04 13 52.9 +0.8**
comp=Z,0.3nm,0.8s,baz=117,slow=11,SNR=3.6
comp=Z,0.3nm,0.8s
WRA Warramunga Arr 150.39 241 PKPbc **PKiKP 04 26 35.9 -0.7**
comp=Z,2.8nm,1.3s,baz=107,slow=2.8,SNR=9.3

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*NEIC **04** 04:15:16.9±1.6, 3°.25N±0°.03×83°.11W±0°.10, h10km±1km, mb4.2/7, Error ellipse: s-maj=16.5km s-min=5.6km az=274.0*
*UPA **04** 04:15:23.4±1.0, 3°.82N×83°.20W, h15km±185km, MW3.8*
ISC 04 04:15:16.5±0.9, 3°.37N±0°.06×82°.95W±0°.07, h10km, n88, σ2°25/93, mb4.2/3, 5C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAPC	**Malpelo**	**1.48**	**65⇓**	*iP*	**Pn**	**04 15 41.1**	**-2.1**
MAPC				*eS*	**Sn**	**04 15 57.6**	**-5.0**
MAPC				*i*		04 15 59.4	
	comp=Z,1μm,0.2s						
CACAO	**El Cacao, Vera**	**4.46**	**28⇑**	*eP*	**Pn**	**04 16 26.2**	**+1.9**
CACAO				*eS*	**Sn**	**04 17 14.4**	**-1.9**
GR1C	**Gorgona, Isla**	**4.79**	**94**	*eP*	**Pn**	**04 16 28.8**	**0.0**
GR1C				*i*		04 17 25.7	
	comp=Z,822nm,0.5s						
DVD	**David**	**5.05**	**6**	*eP*	**Pn**	**04 16 32.2**	**-0.3**
AZU	**Azuero**	**5.13**	**31**	*eP*	**Pn**	**04 16 35.9**	**+2.4**
AZU	**Azuero**	**5.13**	**31⇑**	*eP*	**Pn**	**04 16 35.9**	**+2.4**
AZU				*eS*	**Sn**	**04 17 30.6**	**-2.2**
CHIT3	**Chitre**	**5.20**	**29⇑**	*eP*	**Pn**	**04 16 36.9**	**+2.4**
CHIT3				*eS*	**Sn**	**04 17 33.0**	**-1.6**
BRU2	**Volcan**	**5.39**	**3**	Pn	**Pn**	**04 16 38.8**	**+1.6**
OTAV	**Otavalo**	**5.47**	**125**	Pn	**Pn**	**04 16 37.8**	**-0.7**
MALC	**Bahia Malaga**	**5.63**	**83**	*eP*	**Pn**	**04 16 41.8**	**+1.3**
MALC				*eS*	**Sn**	**04 17 43.0**	**-2.3**
MALC				*i*		04 17 49.8	
	comp=Z,27nm,0.3s						
PNME	**Penonome**	**5.71**	**27**	*eP*	**Pn**	**04 16 44.6**	**+3.2**
PNME				*eS*	**Sn**	**04 17 44.5**	**-2.6**
SRBA	**San Rafael, Bu**	**5.84**	**356**		**Pn**	**04 16 43.8**	**+0.4**
SRBA	**San Rafael, Bu**	**5.84**	**356**	*eP*	**Pn**	**04 16 43.7**	**+0.4**
BBAC	**Balboa, Cauca**	**5.85**	**103**	*eP*	**Pn**	**04 16 43.3**	**-0.2**
BBAC				*i*		04 17 55.9	
	comp=Z,20nm,0.4s						
VTON	**El Valle, Cocl**	**5.92**	**28**	*eP*	**Pn**	**04 16 48.0**	**+3.6**
VTON				*eS*	**Sn**	**04 17 52.2**	**-0.1**
GCUF	**Volcan Galeras**	**5.99**	**111**	*eP*	**Pn**	**04 16 46.6**	**+0.9**
PEZE	**Perez Zeledon,**	**6.02**	**353**	Pn	**Pn**	**04 16 46.4**	**+0.6**
PEZE	**Perez Zeledon,**	**6.02**	**353**	*eP*	**Pn**	**04 16 46.2**	**+0.5**
SLOR	**San Lorenzo -**	**6.03**	**132**		**Pn**	**04 16 47.4**	**+1.1**
CDM	**Cerro de Muert**	**6.20**	**353**	*eP*	**Pn**	**04 16 48.4**	**-0.2**
CDM				*eP*	Pb	04 16 48.8	-16
SOLC	**Bahia Solano**	**6.20**	**63**	*eP*	**Pn**	**04 16 49.3**	**+1.0**
SOLC				*eS*	**Sn**	**04 17 56.2**	**-3.1**
CRUC	**La Cruz**	**6.25**	**107**	*eP*	**Pn**	**04 16 50.6**	**+1.3**
LCR2	**La Lucha 2**	**6.42**	**351**	*eP*	**Pn**	**04 16 51.5**	**+0.2**
RIMA	**Rio Macho**	**6.42**	**352**		**Pn**	**04 16 51.7**	**+0.3**
RIMA	**Rio Macho**	**6.42**	**352**	*eP*	**Pn**	**04 16 51.7**	**+0.3**
MRVA	**Moravia de Chi**	**6.43**	**356**	*eP*	**Pn**	**04 16 53.4**	**+1.9**
JACO	**JACO, Garabito**	**6.48**	**345**	Pn	**Pn**	**04 16 52.1**	**+0.1**
JACO	**JACO, Garabito**	**6.48**	**345**	*eP*	**Pn**	**04 16 52.6**	**+0.6**
UPA	**Univ. de Panam**	**6.52**	**31**	*eP*	**Pn**	**04 16 56.0**	**+3.3**
UPA	**Univ. de Panam**	**6.52**	**31⇑**	*iP*	**Pn**	**04 16 56.0**	**+3.3**
BCIP	**Isla Barro Col**	**6.53**	**28**	Pn	**Pn**	**04 16 56.2**	**+3.5**
BCIP	**Isla Barro Col**	**6.53**	**28**	*eP*	**Pn**	**04 16 56.0**	**+3.2**
RAFA	**San Farael, Vo**	**6.60**	**353**	*eP*	**Pn**	**04 16 55.9**	**+1.9**
VTCV	**VTCV, Calle Va**	**6.61**	**353**	*eP*	**Pn**	**04 16 55.9**	**+1.8**
YOTC	**Yotoco, Valle**	**6.62**	**85**	*eP*	**Pn**	**04 16 55.1**	**+1.1**
YOTC				*eS*	**Sn**	**04 18 05.2**	**-4.4**
YOTC				*i*		04 18 09.4	
	comp=Z,22nm,0.5s						
LAFE	**Finca La Fe, P**	**6.69**	**343**	*eP*	**Pn**	**04 16 54.5**	**-0.3**
HDC	**Heredia**	**6.69**	**350**	Pn	**Pn**	**04 16 56.2**	**+1.2**
PLMC	**San Jos del P**	**6.82**	**77**	*eP*	**Pn**	**04 16 58.9**	**+2.1**
PLMC				*i*		04 18 21.2	
	comp=Z,38nm,0.4s						
COHC	**Cochancay**	**6.87**	**147**	Pn	**Pn**	**04 16 57.4**	**0.0**
INDI	**Punta indio, G**	**6.93**	**339**	*eP*	**Pn**	**04 16 59.0**	**+0.7**
GRZA	**Playa Garza**	**7.03**	**338**	*eP*	**Pn**	**04 17 00.4**	**+0.8**
UPD2	**Meteti**	**7.11**	**43**	*eP*	**Pn**	**04 17 04.6**	**+4.0**
DUNO	**Dulce Nombre,**	**7.13**	**339**		**Pn**	**04 17 01.9**	**+1.0**
DUNO	**Dulce Nombre,**	**7.13**	**339**	*eP*	**Pn**	**04 17 02.0**	**+1.0**
JTS	**Las Juntas de**	**7.16**	**344**	Pn	**Pn**	**04 17 01.8**	**+0.4**
JTS	**Las Juntas de**	**7.16**	**344**	*eP*	**Pn**	**04 17 02.5**	**+1.1**
SAJU	**San Juanillo,**	**7.20**	**338**	*eP*	**Pn**	**04 17 02.0**	**+0.1**
CBOC	**Ciudad Bolivar**	**7.34**	**70**	*eP*	**Pn**	**04 17 06.1**	**+2.1**
ORTG	**Ortega, Santa**	**7.38**	**340**	Pn	**Pn**	**04 17 05.0**	**+0.5**
ORTG	**Ortega, Santa**	**7.38**	**340**	*eP*	**Pn**	**04 17 05.8**	**+1.3**
COVE	**Coope Vega, Sa**	**7.44**	**349**	Pn	**Pn**	**04 17 06.3**	**+1.0**
COVE	**Coope Vega, Sa**	**7.44**	**349**	*eP*	**Pn**	**04 17 07.7**	**+2.4**
CUI	**Cuipilapa**	**7.57**	**343**	*eP*	**Pn**	**04 17 09.2**	**+2.2**
ANIL	**Santa Ana**	**7.61**	**81**	*eP*	**Pn**	**04 17 10.2**	**+2.4**
HORNC	**Hornillas**	**7.62**	**343**	*eP*	**Pn**	**04 17 10.3**	**+2.5**
GUAB	**Guayabo de Bag**	**7.63**	**343**	*eP*	**Pn**	**04 17 10.5**	**+2.5**
VMAR	**Armenia, Volca**	**7.70**	**344**	*eP*	**Pn**	**04 17 12.0**	**+3.2**
VRLE	**La Escondida,**	**7.75**	**342**	*eP*	**Pn**	**04 17 11.9**	**+2.3**
HZTE	**Horizontes, Gu**	**7.75**	**340**	Pn	**Pn**	**04 17 11.8**	**+2.2**
HZTE	**Horizontes, Gu**	**7.75**	**340**	*eP*	**Pn**	**04 17 12.1**	**+2.6**
HZTE				*eP*	Pb	04 17 12.3	-19
GUY2C	**Guyana, Caldas**	**7.78**	**76**	*eP*	**Pn**	**04 17 13.7**	**+3.4**
GUY2C				*i*		04 18 49.5	
	comp=Z,21nm,0.5s						
GB1A	**Borinquen Arri**	**7.79**	**342**	*eP*	**Pn**	**04 17 12.2**	**+2.1**
BOSC	**San Juan Bosco**	**7.86**	**145**		**Pn**	**04 17 11.9**	**+0.7**
HELC	**Santa Helena**	**7.90**	**69**	*eP*	**Pn**	**04 17 15.2**	**+3.2**
PRAC	**Prado**	**8.05**	**87**	*eP*	**Pn**	**04 17 17.0**	**+3.3**
PRAC				*eS*	**Sn**	**04 18 45.9**	**+1.0**
PRAC				*i*		04 18 51.4	
	comp=Z,10nm,0.6s						
MCRA	**Macar, Loja**	**8.25**	**159**	Pn	**Pn**	**04 17 15.6**	**-0.8**
NORC	**Norcasia**	**8.34**	**75**	*eP*	Pn	04 17 23.2	+5.5
UREC	**San Jos de Ur**	**8.56**	**59**	*eP*	**Pn**	**04 17 24.8**	**+4.1**
ROSC	**El Rosal**	**8.73**	**80**	Pn	**Pn**	**04 17 26.5**	**+3.2**
ACON	**Acoyapa**	**8.82**	**346**	Pn	**Pn**	**04 17 27.1**	**+2.9**
PTBC	**PUERTO BERRIO,**	**9.02**	**69**	*eP*	Pn	04 17 32.7	+5.7
ZARC	**Zaragoza, Cauc**	**9.03**	**63**	*eP*	**Pn**	**04 17 31.3**	**+4.2**
SPBC	**San Pablo de B**	**9.13**	**75**	*eP*	Pn	04 17 37.4	+8.8
BOAB	**BOACO BROADBAN**	**9.41**	**344**	Pn	**Pn**	**04 17 33.4**	**+1.1**
CNGN	**Cerro Negro**	**9.80**	**338**	Pn	**Pn**	**04 17 39.8**	**+2.1**
BRRC	**Barranca, Sant**	**9.91**	**68⇑**	*eP*	**Pn**	**04 17 43.7**	**+4.5**
MATN	**Matagalpa**	**9.94**	**343**	Pn	**Pn**	**04 17 41.1**	**+1.4**
CRIN	**San Cristobal**	**10.12**	**337**	Pn	**Pn**	**04 17 43.7**	**+1.6**
RUSC	**La Rusia**	**10.14**	**75**	*eP*	Pn	04 17 48.2	+5.4
OCAC	**Ocana**	**10.73**	**63**	*eP*	**Pn**	**04 17 54.9**	**+4.5**
PAMC	**Pamplona, Colo**	**10.94**	**68**	*eP*	**Pn**	**04 17 57.9**	**+4.3**
MTO3	**Montecristo**	**12.65**	**330**	Pn	Pn	04 18 23.1	+6.2
BAUV	**El Baul**	**15.81**	**69**	Pn	**Pn**	**04 19 01.9**	**+2.5**
BAUV				IAmb	IAmb	04 19 22.6	
	comp=Z,30nm,1.3s						
HATO	**Hato, Curacao**	**16.38**	**57**	Pn	**P**	**04 19 08.9**	**-0.7**
TLIG	**Tlapa**	**20.82**	**314**		**P**	**04 19 56.1**	**-2.5**
TLIG				IAmb	IAmb	04 20 05.5	
	comp=Z,12nm,1.3s						
LPAZ	**La Paz**	**24.41**	**144**	P	**P**	**04 20 35.4**	**-0.8**
LPAZ				IAmb	IAmb	04 20 40.0	
	comp=Z,5.4nm,0.8s						
GO01	**Chusmiza**	**26.59**	**150**	P	**P**	**04 20 56.5**	**+0.9**
GO01				IAmb	IAmb	04 21 27.3	
	comp=Z,6.1nm,1.1s						
LCAR	**Lake Charles**	**33.41**	**348**	P	**P**	**04 21 55.2**	**-0.2**
LCAR				IAmb	IAmb	04 21 58.5	
	comp=Z,5.3nm,1.0s						

IDC 04 04:26:30.8±12.0, 1°.90S×141°.02E, h0km, mb3.8/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=181.2km s-min=103.0km az=173.0, Ninigo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.08**	**200**	P	P	04 30 54.2	-1.0
	0.1nm,0.3s,baz=23,slow=12,SNR=7.2						
	1.3nm,1.1s						
ASAR	**Alice Springs**	**22.71**	**197**	P	P	04 31 34.0	-0.4
	0.3nm,0.4s,baz=28,slow=11,SNR=7.0						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**29.82**	**179**	P	P	04 32 40.7	+1.0
	4.2nm,0.8s,baz=329,slow=5.9,SNR=2.9						
	4.2nm,0.8s						

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*SEA **04** 04:29:22.6±2.5, 45°.163N±0°.008×122°.91W±0°.03, h24km±6km, ML3.0/27, ML2.8/38(NEIC), Error ellipse: s-maj=3.0km s-min=0.6km az=109.0*
NEIC 04 04:29:23.1±2.6, 45°.15N±0°.02×122°.91W±0°.03, h23km±6km, Error ellipse: s-maj=3.0km s-min=2.8km az=54.0, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYES	**Ewing Young ES**	**0.21**	**329**		Pb	04 29 28.4	-0.3
EYES					Sb	04 29 32.0	-0.4
G04A	**Mulino**	**0.31**	**80**		Pb	04 29 29.8	-0.3
G04A					Sb	04 29 34.9	0.0
COLT	**Colton High Sc**	**0.33**	**87**		Pb	04 29 30.2	-0.3
COLT					Sb	04 29 35.8	+0.2
MONO	**Monmouth DOGAM**	**0.38**	**219**		Pb	04 29 31.3	+0.1
MONO					Sb	04 29 38.2	+1.4
MRIN	**Marion BPA Sit**	**0.38**	**157**		Pb	04 29 31.1	-0.1
MRIN					Sb	04 29 37.3	+0.5
KEEL	**Keeler**	**0.40**	**1**		Pb	04 29 31.3	-0.3
KEEL					Sb	04 29 37.7	+0.4
WPO	**West Portland**	**0.43**	**11**		Pb	04 29 31.6	-0.5
PGO	**Gresham**	**0.45**	**45**		Pb	04 29 32.0	-0.4
PGO					Sb	04 29 39.0	+0.2
HUBA	**Hudson Bay Hig**	**0.51**	**20**		Pb	04 29 33.0	-0.5
ROSS	**Ross**	**0.54**	**19**		Pb	04 29 33.3	-0.6
ROSS					Sb	04 29 41.2	-0.1
HEBO	**Mount Hebo**	**0.60**	**276**		Pb	04 29 34.5	-0.5
HEBO					Sb	04 29 43.6	+0.4
HEBO	**Mount Hebo**	**0.60**	**276**	IAML		04 29 45.6	
	comp=E,458nm,0.3s						
HEBO				IAML		04 29 46.6	
	comp=N,423nm,0.4s						
BULL	**Bull Run Dam**	**0.61**	**61**		Pb	04 29 34.6	-0.5
COR	**Corvallis**	**0.63**	**207**		Pb	04 29 35.2	-0.3
COR					Sn	04 29 45.0	-1.0
COR	**Corvallis**	**0.63**	**207**	IAML		04 29 53.0	
	comp=N,371nm,0.6s						
COR				IAML		04 29 54.0	
	comp=N,316nm,0.6s						
KMOR	**Kings Mountain**	**0.63**	**320**		Pb	04 29 34.8	-0.8
H04A	**Detroit Lake**	**0.69**	**132**		Pb	04 29 35.7	-0.9
H04A					Sb	04 29 45.1	-0.6
MPOR	**Mary's Peak**	**0.79**	**215**		Pb	04 29 37.9	-0.4
TDH	**Tom, Dick, Har**	**0.80**	**80**		Pb	04 29 37.7	-0.8
HIYU	**Hiyu Mountain**	**0.83**	**70**		Pb	04 29 38.3	-0.6
F04A	**Amboy**	**0.85**	**24**		Pb	04 29 38.0	-1.2
TIMB	**Timberline**	**0.87**	**77**		Pb	04 29 39.0	-0.6
PALME	**Palmer Lift, M**	**0.87**	**76**		Pb	04 29 39.3	-0.5
TOLO	**Toledo BPA CRE**	**0.90**	**234**		Pb	04 29 39.6	-0.3
HOOD	**Mount Hood Mea**	**0.90**	**79**		Pb	04 29 39.5	-0.7
HOOD	**Mount Hood Mea**	**0.90**	**79**	IAML		04 29 53.1	
	comp=N,435nm,0.2s						
HOOD				IAML		04 29 56.5	
	comp=E,384nm,0.5s						
VLL	**Laurance Lake**	**0.92**	**70**		Pb	04 29 39.9	-0.6
VBEM	**Beaver Butte**	**0.94**	**95**		Pb	04 29 40.4	-0.4
BROR	**Big Rock Looko**	**0.94**	**160**		Pb	04 29 39.8	-0.9
BUCK	**Buck Mountain**	**0.96**	**183**		Pb	04 29 40.3	-0.7
BUCK	**Buck Mountain**	**0.96**	**183**	IAML		04 29 56.3	
	comp=E,334nm,0.6s						
B023	**Clatskanie**	**0.97**	**353**		Pb	04 29 39.9	-1.3
B023					Sb	04 29 53.1	-0.3
MTMW	**Mount Mitchell**	**1.00**	**29**		Pn	04 29 40.5	-1.3
RVW	**Rose Valley**	**1.00**	**7**		Pn	04 29 40.4	-1.4
SHRK	**Shell Rock**	**1.02**	**72**		Pn	04 29 41.6	-0.5
VFP	**Flag Point**	**1.03**	**80**		Pn	04 29 41.8	-0.5
B022	**Seaside**	**1.08**	**319**		Pn	04 29 41.8	-0.9
B203	**Quarry, Mount**	**1.09**	**21**		Pn	04 29 42.0	-1.0
FL2	**Flat Top 2**	**1.11**	**20**		Pn	04 29 42.5	-0.9
SWF2	**Southwest Flan**	**1.14**	**25**		Pn	04 29 42.8	-0.9
CDFW	**Cedar Flats**	**1.14**	**32**		Pn	04 29 42.7	-0.9
HSR	**South Ridge**	**1.14**	**26**		Pn	04 29 43.3	-0.5
SHW	**Mount Saint He**	**1.14**	**24**		Pn	04 29 43.1	-0.7
PRLK	**Prince Lake**	**1.16**	**144**		Pb	04 29 44.3	-0.2
SEPW	**September Lobe**	**1.16**	**25**		Pn	04 29 43.6	-0.6
ESD	**East Dome**	**1.17**	**27**		Pn	04 29 43.7	-0.5
VALT	**Mount Saint He**	**1.18**	**25**		Pn	04 29 43.6	-0.7
BOLM	**Sugar Bowl**	**1.18**	**26**		Pn	04 29 43.9	-0.5
STD	**Studebaker Rid**	**1.19**	**24**		Pn	04 29 43.6	-0.7
GULW	**Guler Mountain**	**1.20**	**50**		Pn	04 29 44.2	-0.4
SOSW	**Source of Smit**	**1.22**	**26**		Pn	04 29 44.1	-0.7
B202	**Windy Ridge, M**	**1.22**	**26**		Pn	04 29 43.9	-0.9
ERK	**Elk Rock**	**1.22**	**19**		Pn	04 29 44.0	-0.9
JRO	**Jston Ridge Ob**	**1.22**	**23**		Pn	04 29 44.2	-0.7
B201	**Coldwater, Mou**	**1.24**	**21**		Pn	04 29 44.2	-0.8
TCBUT	**Trout Creek Bu**	**1.27**	**135**		Pb	04 29 46.2	-0.3
HUOR	**Husband**	**1.28**	**143**		Pn	04 29 46.2	+0.4
WIFE	**Three Sisters-**	**1.34**	**144**		Pb	04 29 47.3	-0.4
BMW	**Boistfort Moun**	**1.34**	**351**		Pn	04 29 45.7	-0.8
ASR	**Mount Adams--S**	**1.36**	**42**		Pn	04 29 47.0	+0.2
HBO	**Huckleberry Mo**	**1.37**	**162**		Pn	04 29 47.2	+0.3
RNO	**Roman Nose**	**1.38**	**206**		Pn	04 29 47.4	+0.5
MOON	**Moon Mountain**	**1.41**	**141**		Pb	04 29 48.7	-0.1
E03A	**Lebam**	**1.47**	**342**		Pn	04 29 47.8	-0.3
B019	**Raymond**	**1.59**	**341**		Pn	04 29 50.3	+0.5
VTHM	**Trough**	**1.66**	**88**		Pb	04 29 52.5	-0.5
GLK	**Glacier Lake**	**1.68**	**32**		Pn	04 29 51.9	+0.7
ASBU	**Astronaut Butt**	**1.73**	**140**		Pb	04 29 54.2	0.0
LON	**Longmire**	**1.77**	**25**		Pn	04 29 52.8	+0.4
LON				IAML		04 30 16.4	
	comp=N,94nm,0.6s						
LON				IAML		04 30 16.4	
	comp=E,103nm,0.6s						
LON	**Longmire**	**1.77**	**25**		Pn	04 29 53.4	+1.0
KWBU	**Kawak Butte, N**	**1.81**	**140**		Pb	04 29 55.3	-0.3
WPW	**White Pass**	**1.81**	**31**		Pn	04 29 54.2	+1.2
REMR	**Mount Rainier-**	**1.83**	**24**		Pn	04 29 54.2	+1.0
RCM	**Mount Rainier-**	**1.87**	**26**		Pn	04 29 55.1	+1.0
B941	**Kapowsin**	**1.90**	**14**		Pn	04 29 54.5	+0.6
B017	**Montesano**	**1.90**	**346**		Pn	04 29 55.2	+1.2
RCS	**Mount Rainier-**	**1.91**	**25**		Pn	04 29 55.7	+1.3
OBSR	**Observation Ro**	**1.91**	**23**		Pn	04 29 55.6	+1.2
SVIC	**Surveyors Ice**	**1.92**	**141**		Pb	04 29 56.2	-1.3
PANH	**Panhandle Gap,**	**1.92**	**27**		Pn	04 29 55.7	+1.1
GHW	**Garrison Hill**	**1.94**	**13**		Pn	04 29 55.4	+0.8
PINE	**Pine Mountain**	**1.96**	**133**	Pn	Pn	04 29 55.9	+0.9
FMW	**Mount Fremont**	**1.98**	**25**		Pn	04 29 56.9	-1.6
SR41	**SR410 Landslid**	**1.98**	**28**		Pn	04 29 56.6	+1.3
TMBU	**Tom Butte, New**	**2.00**	**140**		Pb	04 29 59.4	+0.6
TRW	**Toppenish Ridg**	**2.01**	**55**		Pb	04 29 57.5	-1.5
DBO	**Dodson Butte**	**2.05**	**187**	Pn	Pn	04 29 57.1	+0.9
D05A	**Enumclaw**	**2.13**	**17**	Pn	Pn	04 29 58.1	+0.8
D05A				IAML		04 30 13.0	
	comp=N,43nm,3.3s						
D05A				IAML		04 30 29.6	
	comp=E,43nm,0.9s						
GSM	**Grass Mountain**	**2.19**	**20**		Pb	04 30 00.4	-1.7
F07A	**Phinny Hill Vi**	**2.22**	**69**		Pn	04 30 00.1	+1.6
F07A				IAML		04 30 36.8	
	comp=E,76nm,0.8s						
EBG	**Ellensburg**	**2.40**	**42**		Pn	04 30 02.8	+1.9
GMW	**Gold Mountain**	**2.40**	**2**		Pn	04 30 03.2	+2.3
RATT	**Rattlesnake La**	**2.40**	**18**		Pb	04 30 03.5	-2.1
GNW	**Green Mountain**	**2.41**	**1**		Pn	04 30 03.0	+1.9
SP2	**Seward Park 2**	**2.45**	**10**		Pb	04 30 04.6	-1.8
HDW	**Hoodsport**	**2.50**	**358**		Pn	04 30 04.3	+2.0
HUMO	**Hull Mountain**	**2.54**	**181**	Pn	Pn	04 30 04.9	+1.9
C04A	**Brinnon**	**2.57**	**359**		Pn	04 30 05.5	+2.3
BENWA	**Benson Ranch**	**2.62**	**57**		Pn	04 30 05.7	+1.8
LTY	**Liberty**	**2.62**	**36**		Pn	04 30 05.1	+1.1
LTY				IAML		04 30 42.6	
	comp=N,27nm,0.6s						
LTY				IAML		04 30 49.5	
	comp=E,24nm,2.3s						
RSW	**Rattlesnake Hi**	**2.63**	**61**		Pn	04 30 05.8	+1.6
I07A	**Izee**	**2.66**	**113**		Pn	04 30 05.1	+0.5
HAWA	**Hanford**	**2.67**	**61**		Pn	04 30 05.7	+1.1
HAWA				IAML		04 30 50.3	
	comp=E,28nm,1.1s						
HAWA				IAML		04 30 52.1	
	comp=E,40nm,1.0s						
OSD	**Olympics--Snow**	**2.73**	**349**		Pn	04 30 01.4	-4.2
H2OWA	**Water**	**2.74**	**62**		Pn	04 30 07.3	+1.8
HTW	**Haystack Looko**	**2.77**	**16**		Pn	04 30 08.9	+2.9
G08A	**Pilot Rock**	**2.79**	**86**		Pn	04 30 07.2	+0.8
K05A	**Summer Lake**	**2.83**	**148**	Pn	Pn	04 30 06.7	-0.3
WIW	**Wooded Island**	**2.84**	**62**		Pn	04 30 08.7	+1.8
E08A	**Dider Farm, El**	**3.00**	**62**	Pn	Pn	04 30 08.7	-0.6
SAW	**Saint Andrews**	**3.52**	**42**		Pn	04 30 17.8	+1.5
E09A	**Wood Farm, Sta**	**3.60**	**66**		Pn	04 30 17.7	+0.3
J08A	**Circle Bar Ran**	**3.66**	**118**		Pn	04 30 18.5	+0.2
BMO	**Blue Mountains**	**3.98**	**92**		Pn	04 30 23.6	+0.7
BMO				IAML		04 31 46.4	
	comp=E,8.0nm,4.5s						
BMO				IAML		04 32 42.0	
	comp=E,9.2nm,3.9s						
CHMT	**Chamberlain Mo**	**6.95**	**72**		Pn	04 31 04.6	+1.0

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*IDC **04** 04:41:02.6±31.0, 3°.73N×126°.43E, h0km, mb3.8/4, mbtmp3.9/4, Error ellipse: s-maj=536.8km s-min=113.8km az=147.0*
*DJA **04** 04:41:14.8±0.5, 3°.N±3°×12°.7E±°, h10km, M3.6/5, mb3.8/1, MLv3.5/5*
ISC 04 04:41:14.8±3.5, 3°.1N±0°.5×126°.9E±0°.4, h44km, n6, σ0°33/6, mb3.6/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.44**	**294**	P	**Pn**	**04 41 38.2**	**-0.3**
SGSI				S	**Sn**	**04 41 56.6**	**+0.4**
GTOI	**Gorontalo**	**4.54**	**238**	P	Pn	04 42 26.6	+5.5
FITZ	**Fitzroy Crossi**	**21.09**	**183**	P	**P**	**04 45 55.4**	**-0.2**
	1.3nm,0.8s,baz=11,slow=10,SNR=1.5						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**24.04**	**162**	P	**P**	**04 46 26.2**	**+0.2**
	2.1nm,0.6s,baz=342,slow=9.4,SNR=21						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**27.47**	**166**	P	**P**	**04 46 57.0**	**0.0**
	0.3nm,0.3s,baz=332,slow=9.4,SNR=1.7						
	0.3nm,0.3s						
STKA	**Stephens Creek**	**37.49**	**159**	P	**P**	**04 48 24.6**	**+0.1**
	1.8nm,0.4s,baz=345,slow=8.2,SNR=6.2						
	1.8nm,0.4s						

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*KRSC **04** 05:15:51.2±1.4, 52°.89N×160°.26E, h50km±13km, ML4.1*
*IDC **04** 05:15:53.5±6.4, 53°.16N×159°.90E, h34km±68km, mb3.4/3, mbtmp3.6/3, MS3.2/1, Error ellipse: s-maj=93.1km s-min=40.9km az=30.0*
*MOS **04** 05:15:53.2±1.0, 52°.94N×160°.09E, h61km, mb4.0/1, Error ellipse: s-maj=9.5km s-min=6.5km az=87.9*
**ISC 04 05:15:52.9±1.0, 52°.90N±0°.04×160°.18E±0°.04, h45km±7km, n73, σ1°

KMNR	Kamenistaya	2.86	1	PN	Pn	05 16 37.8	+1.8
KMNR	Kamenistaya	2.86	1	*e*P	Pn	05 16 37.8	+1.8
ESO	Esso	3.15	345	PN	Pn	05 16 41.9	+2.0
ESO	Esso	3.15	345	*e*P	Pn	05 16 41.9	+2.0
SKR	Severo-Kuril's	3.36	230	*e*PN	Pn	05 16 46.7	+3.9
SKR				*e*S	Sn	05 17 25.2	+3.8
SKR				pmax	pmax		
	comp=Z,23nm,0.9s						
SKR				smax	smax		
	comp=N,54nm,0.8s						
SKR				smax	smax		
	comp=E,59nm,0.5s						
SRDR	Sredinnyy	3.43	356	PN	Pn	05 16 45.6	+1.7
SRDR	Sredinnyy	3.43	356	*e*P	Pn	05 16 45.6	+1.7
KBTR	Krutoberegovo	3.65	24	PN	Pn	05 16 49.3	+2.5
KBTR				S	Sn	05 17 30.9	+2.4
KBTR	Krutoberegovo	3.65	24	*e*P	Pn	05 16 49.3	+2.5
KBTR				*e*S	Sn	05 17 30.9	+2.4
BDR	Baidarnaya	3.72	9	*e*S	Sn	05 17 33.8	+3.4
SRKR	Sorokina	3.80	8	PN	Pn	05 16 51.7	+2.8
SRKR	Sorokina	3.80	8	*e*P	Pn	05 16 51.7	+2.8
BKI	Bering	4.12	54	PN	Pn	05 16 54.4	+1.2
BKI	Bering	4.12	54	*e*P	Pn	05 16 54.4	+1.2
BKI				*e*S	Sn	05 17 36.1	-3.9
SEY	Seymchan	10.87	341	*i* PN	Pn	05 18 22.5	-3.1
TIXI	Tiksi	23.28	335	LR	LR	05 30 10.7	
	comp=E,58nm,19.6s,baz=255,slow=37						
H11N2	WAKE ISLAND Hy	33.52	168	T	T	05 58 20.2	
	baz=352,slow=76,SNR=76						
H11N3	WAKE ISLAND Hy	33.53	168	T	T	05 58 21.4	
	baz=352,slow=76,SNR=69						
H11N1	WAKE ISLAND Hy	33.53	169	T	T	05 58 21.5	
	baz=352,slow=76,SNR=67						
H11S1	WAKE ISLAND Hy	34.70	169	T	T	05 59 50.5	
	baz=352,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	34.71	169	T	T	05 59 42.2	
	baz=352,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	34.72	169	T	T	05 59 47.2	
	baz=352,slow=76,SNR=5.8						
DGZ	Jazzator, Alta	43.80	296	*i* P	P	05 23 52.0	-2.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	Kurchatov	47.88	302	*i* P	P	05 24 23.7	-2.3
FINES	FINESS Array B	60.32	337	P	P	05 25 55.7	-0.7
	comp=Z,1.0nm,0.7s,baz=54,slow=7.1,SNR=3.4						
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	63.74	344	P	P	05 26 19.3	-0.1
	comp=Z,0.3nm,0.5s,baz=24,slow=6.7,SNR=1.6						
	comp=Z,0.3nm,0.5s						
KIV	Kislovodsk	69.61	317	*e*P	P	05 26 53.9	-3.3
TXAR	Lajitas Array	70.66	67	P	P	05 27 06.3	+2.5
	comp=Z,0.2nm,0.4s,baz=304,slow=6.1,SNR=5.1						
	comp=Z,0.2nm,0.4s						

*JMA **04** 05:16:39.6±0.1, 32°.5N±0°.4×140°.5E±0°.8, h65km, MV3.7/27, E OFF HACHIJOJIMA ISLAND*
*IDC **04** 05:16:41.0±4.2, 32°.43N×140°.14E, h108km±36km, mb3.4/5, mbtmp3.6/6, Error ellipse: s-maj=48.4km s-min=30.0km az=69.0*
ISC 04 05:16:38.2±1.3, 32°.46N±0°.08×140°.4E±0°.1, h85km±8km, n18, σ0°99/24, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.55	271	P	Pn	05 16 53.8	+0.8
JAOM				S	Sn	05 17 04.0	+0.1
JHCJ	Hachijojimakas	0.80	320	P	Pn	05 16 55.6	+0.2
JHCJ				S	Sn	05 17 07.8	-0.4
JHJ2	Mitsune	0.82	323	P	Pn	05 16 56.1	+0.5
JHJ2				S	Sn	05 17 07.7	-0.9
JMKN	Mikurajimanish	1.59	334	P	Pn	05 17 05.5	+0.6
JMKN				S	Sn	05 17 24.7	-0.4
JMYK	Miyake Tsubota	1.76	336	P	Pn	05 17 08.3	+1.3
BSO1	Boso 1	2.24	12	P	Pn	05 17 13.6	+0.6
BSO1				S	Sn	05 17 38.6	-1.0
BSO3	Boso 3	2.34	2	P	Pn	05 17 15.5	+1.0
BSO3				S	Sn	05 17 42.1	-0.3
JIM2	Oshima 3	2.40	340	P	Pn	05 17 16.4	+0.8
BSO4	Boso 4	2.53	359	P	Pn	05 17 18.7	+1.5
JIZS	Izushimoda	2.59	331	P	Pn	05 17 19.5	+1.3
TK02	Tokai 2	2.68	304	P	Pn	05 17 20.5	+1.5
MJAR	Matsushiro Arr	4.46	337	P	Pn	05 17 45.3	+1.8
	2.9nm,0.5s,baz=157,slow=12,SNR=5.3						
SONM	Songino Array	29.91	311	P	P	05 22 37.5	-0.5
	0.2nm,0.3s,baz=101,slow=7.8,SNR=2.4						
	0.2nm,0.3s						
SONM	Songino Array	29.91	311	P	P	05 22 37.5	-0.5
MKAR	Makanchi Array	45.99	306	P	P	05 24 52.0	-0.9
	0.3nm,0.4s,baz=87,slow=10.0,SNR=4.7						
	0.3nm,0.4s						
WRA	Warramunga Arr	52.43	187	P	P	05 25 41.9	-0.2
	0.4nm,0.7s,baz=4.5,slow=7.5,SNR=1.9						
	0.4nm,0.7s						
FINES	FINESS Array B	72.48	333	P	P	05 27 54.7	-0.6
	3.6nm,1.0s,baz=38,slow=9.3,SNR=5.4						
	3.6nm,1.0s						
TXAR	Lajitas Array	93.58	52	P	P	05 29 46.4	+1.2
	0.1nm,0.5s,baz=262,slow=3.4,SNR=4.1						
	0.1nm,0.5s						

*IDC **04** 05:55:52.9±2.1, 18°.62S×177°.56W, h589km±22km, mb3.5/7, mbtmp4.4/9, Error ellipse: s-maj=27.9km s-min=20.8km az=114.0*
*NEIC **04** 05:55:53.8±0.6, 18°.2S±0°.2×177°.6W±0°.2, h603km±19km, mb4.2/16, Error ellipse: s-maj=32.3km s-min=18.9km az=209.0*
ISC 04 05:55:53.6±0.7, 18°.4S±0°.1×177°.7W±0°.1, h600km, n33, σ0°92/32, mb4.3/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.13	278	P	P	05 57 20.3	+0.2
	39nm,0.5s,baz=217,slow=12,SNR=68						
AFI	Afiamalu	7.18	53	P	P	05 57 44.2	-1.3
NIUE	Niue	7.36	97	P	P	05 57 46.8	-0.2
PINNC	Pines Island,	14.58	251	P	P	05 58 56.9	-1.1
DZM	Mont Dzumac	15.37	253	P	P	05 59 04.3	-1.0
	2.3nm,0.6s,baz=118,slow=19,SNR=5.6						
OUZ	Omahuta	18.50	203	P	P	05 59 35.0	+1.4
URZ	Urewera	20.35	192	P	P	05 59 47.6	-2.7
	3.6nm,0.4s,baz=349,slow=3.6,SNR=7.7						
	3.6nm,0.4s						
CTAO	Charters Tower	34.08	261	P	P	06 01 49.9	-0.2
CTAO				IAmb	IAmb	06 01 50.7	
	comp=Z,7.1nm,0.8s						
PMG	Port Moresby	35.23	280	P	P	06 02 01.1	+1.4
	comp=Z,11nm,0.5s,baz=56,slow=11,SNR=4.9						
	comp=Z,11nm,0.5s						
COEN	Coen	37.82	271	P	P	06 02 21.6	+0.7
COEN				IAmb	IAmb	06 02 22.3	
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	39.04	242	P	P	06 02 30.8	+0.3
	comp=Z,1.9nm,0.3s,baz=83,slow=8.6,SNR=7.7						
	comp=Z,1.9nm,0.3s						
STKA	Stephens Creek	39.04	242	P	P	06 02 30.4	0.0
BBOO	Buckleboo	43.81	242	P	P	06 03 07.7	-0.3
WR0	Warramunga Arr	45.06	260	P	P	06 03 16.0	-1.8
WR0				IAmb	IAmb	06 03 18.6	
	comp=Z,9.4nm,1.3s						
WB0	Warramunga Arr	45.22	260	P	P	06 03 18.5	-0.5
WB2	Warramunga Arr	45.24	260	P	P	06 03 18.6	-0.5
WB2				IAmb	IAmb	06 03 19.1	
	comp=Z,7.3nm,0.6s						
WRAB	Tennant Creek	45.24	260	P	P	06 03 19.1	-0.1
WRAB				IAmb	IAmb	06 03 48.2	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	45.25	260	P	P	06 03 18.7	-0.5
	comp=Z,4.6nm,0.4s,baz=99,slow=6.7,SNR=170						
	comp=Z,4.6nm,0.4s						
WRA	Warramunga Arr	45.25	260	P	P	06 03 18.7	-0.5
AS31	Alice Springs	45.35	255	P	P	06 03 19.8	-0.2
AS31				IAmb	IAmb	06 03 20.2	
	comp=Z,4.3nm,1.2s						
ASAR	Alice Springs	45.36	255	P	P	06 03 19.7	-0.3
	comp=Z,6.2nm,0.4s,baz=94,slow=7.3,SNR=100						
	comp=Z,6.2nm,0.4s						
ASAR	Alice Springs	45.36	255	P	P	06 03 19.3	-0.7
MTN	Manton Dam	49.50	269	P	P	06 03 50.4	-0.6
FITZ	Fitzroy Crossi	53.66	261	P	P	06 04 20.6	-0.1
NWAO	Narrogin (SRO)	59.63	242	P	P	06 05 01.6	+0.2
NWAO				IAmb	IAmb	06 05 06.2	
	comp=Z,49nm,1.5s						
VNDA	Vanda	60.06	185	P	P	06 05 04.5	+1.0
QSPA	South Pole Qui	71.70	180	P	P	06 06 16.4	+0.5
QSPA				IAmb	IAmb	06 06 55.3	
	comp=Z,6.2nm,1.5s						
PETK	Petropavlovsk-	74.30	345	P	P	06 06 31.5	+0.9
	comp=Z,1.6nm,0.6s,baz=157,slow=7.8,SNR=2.7						
	comp=Z,1.6nm,0.6s						
ILAR	Eielson Array	86.17	13	P	P	06 07 31.8	-0.1
	comp=Z,0.3nm,0.4s,baz=218,slow=4.9,SNR=5.2						
	comp=Z,0.3nm,0.4s						
ARCES	ARCESS Array B	126.88	350	PKP	PKiKP	06 13 51.0	+0.9
	comp=Z,3.6nm,1.0s,baz=30,slow=2.4,SNR=1.2						
AKASG	Malin Array Be	141.29	333	PKhKP	PKPpre	06 14 12.8	
	comp=Z,0.3nm,0.4s,baz=42,slow=4.2,SNR=4.2						
BRTR	Keskin Array B	145.60	315	PKPbc	PKPab	06 14 27.6	-0.8
	comp=Z,0.5nm,0.4s,baz=90,slow=1.2,SNR=4.4						
GERES	GERESS Array B	148.22	346	PKPbc	PKiKP	06 14 34.8	+0.4
	comp=Z,1.1nm,0.9s,baz=46,slow=3.9,SNR=5.0						

*SOME **04** 05:58:42.8, 43°.17N×78°.28E, h10km*
*NNC **04** 05:58:42.3±1.2, 43°.34N×78°.31E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=52.1km s-min=5.9km az=174.0*
*KRNET **04** 05:58:42.5±0.1, 43°.18N×78°.30E, h13km, mb3.0*
ISC 04 05:58:43.3±0.8, 43°.17N±0°.02×78°.28E±0°.02, h10km, n41, σ1°30/81, 10C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURS	Kuram	0.33	345	*e*P	Pg	05 58 49.2	-0.7
KURS	baz=43						
				*e*S	Sg	05 58 53.7	-0.5
KURS	baz=43						
KURS	Kuram	0.33	345	*e*P	Pg	05 58 49.2	-0.7
KURS	16nm,0.1s						
				*e*S	Sg	05 58 53.6	-0.5
KURS	90nm,0.2s						
KPKS	Kokpek	0.41	45	*e*P	Pg	05 58 50.5	-1.0
KPKS	baz=44						
				*e*S	Sg	05 58 56.0	-1.0
KPKS	baz=44						
KPKS	Kokpek	0.41	45	*e*P	Pg	05 58 50.5	-1.0
KPKS	26nm,0.1s						
				*e*S	Sg	05 58 56.0	-1.0
KPKS	231nm,0.1s						
UZB	Uzynbulak	0.54	93	*e*P	Pg	05 58 52.7	-1.1
UZB	baz=93						
				*e*S	Sg	05 58 59.6	-1.4
UZB	baz=93						
UZB	Uzynbulak	0.54	93	*e*P	Pg	05 58 52.7	-1.1
UZB	6.5nm,0.1s						
				*e*S	Sg	05 58 59.6	-1.4
UZB	70nm,0.1s						
ANVS	Anan'yevo	0.60	229	⇑*e*P	Pg	05 58 54.4	-0.5
ANVS	baz=30						
				⇑*e*S	Sg	05 59 02.7	-0.1
ANVS	baz=30						
KOTS	Kotyrbulak	0.86	274	*e*P	Pg	05 58 59.3	-0.6
KOTS	baz=74						
				*e*S	Sb	05 59 11.1	-0.9
KOTS	baz=74						
KOTS	Kotyrbulak	0.86	274	*e*P	Pg	05 58 59.3	-0.6
KOTS	8.0nm,0.3s						
				*e*S	Sb	05 59 11.1	-0.9
KOTS	48nm,0.3s						
SHLS	Shalkode	0.86	91	*e*P	Pn	05 59 04.8	+3.2
SHLS	2.2nm,0.1s						
				*e*S	Sn	05 59 20.7	+6.4
SHLS	15nm,0.1s						
PDGK	Podgornoye	0.90	80	⇓P	Pg	05 58 59.2	-1.3
PDGK	2.1nm,0.3s						
				⇑S	Sg	05 59 10.6	-1.6
PDGK	7.0nm,0.5s						
MDOK	Medeo	0.90	270	*e*P	Pg	05 58 59.9	-0.9
MDOK	baz=70						
				*e*S	Sb	05 59 12.5	-0.9
MDOK	baz=70						
MDOK	Medeo	0.90	270	*e*P	Pg	05 58 59.9	-0.9
MDOK	4.8nm,0.2s						
				*e*S	Sb	05 59 12.4	-0.9
MDOK	16nm,0.2s						
MDOK	Medeo	0.90	270	P	Pg	05 58 59.4	-1.3
MDOK	2.7nm,0.4s						
				⇓S	Sg	05 59 12.4	-0.1
MDOK	11nm,0.4s						
BLB	Baldybastay	0.93	9	*e*P	Pg	05 59 00.1	-1.2
BLB	18nm,0.1s						
				*e*S	Sg	05 59 12.3	-1.2
BLB	95nm,0.3s						
TNSS	Tian-Shan	0.99	263	*e*P	Pg	05 59 01.3	-1.1
TNSS	baz=63						
				*e*S	Sg	05 59 14.9	-0.3
TNSS	baz=63						
TNSS	Tian-Shan	0.99	263	*e*P	Pg	05 59 01.3	-1.1
TNSS	2.6nm,0.1s						
				*e*S	Sg	05 59 14.9	-0.3
TNSS	19nm,0.3s						
ARXS	Arharly	1.09	342	*e*P	Pg	05 59 03.1	-1.2
ARXS	1.6nm,0.1s						
				*e*S	Sg	05 59 17.4	-1.1
ARXS	22nm,0.2s						
CHKK	Chushkaly	1.16	306	*e*P	Pb	05 59 04.5	-1.0
CHKK	baz=6.0						
				*e*S	Sb	05 59 19.8	-0.9
CHKK	baz=6.0						
CHKK	Chushkaly	1.16	306	*e*P	Pb	05 59 04.5	-1.0
CHKK	3.0nm,0.1s						
				*e*S	Sb	05 59 19.8	-0.9
CHKK	16nm,0.2s						
IZV	Izvestkoviy	1.23	264	*e*P	Pg	05 59 07.2	+0.2
IZV	0.1nm,0.1s						
				*e*S	Sn	05 59 24.6	+1.1
IZV	35nm,0.6s						
KNOS	Konyrlen	1.35	28	*e*P	Pg	05 59 08.9	-0.4
KNOS	3.0nm,0.1s						
				*e*S	Sg	05 59 27.4	+0.6
KNOS	30nm,0.4s						
MTBS	Maitube	1.36	269	*e*P	Pb	05 59 08.6	-0.3
MTBS	5.5nm,0.2s						
				*e*S	Sg	05 59 27.7	+0.7
MTBS	14nm,0.4s						
TARG	Taragay, Kyrgy	1.49	194	⇓*e*P	Pn	05 59 10.2	-0.3
TARG	baz=95						
				⇓*i*S	Sg	05 59 30.7	-0.4
TARG	baz=95						
KTMS	Ketmen	1.53	79	*e*P	Pg	05 59 12.3	-0.5
KTMS	0.9nm,0.1s						
				*e*S	Sg	05 59 33.1	+0.5
KTMS	5.7nm,0.3s						
KUU	Kurty	1.59	298	*e*P	Pb	05 59 12.0	-0.7
KUU	9.4nm,0.2s						
				*e*S	Sb	05 59 32.9	0.0
KUU	45nm,0.3s						
DJR	Jarkent	1.59	43	*e*P	Pb	05 59 11.7	-1.1
DJR	4.9nm,0.1s						
				*e*S	Sb	05 59 32.5	-0.5
DJR	15nm,0.2s						
KST	Kastek	1.71	266	*e*P	Pb	05 59 14.4	-0.4
KST	baz=66						
				*e*S	Sg	05 59 37.8	-0.3
KST	baz=66						
KST	Kastek	1.71	266	*e*P	Pb	05 59 14.4	-0.4
KST	4.2nm,0.3s						
				*e*S	Sg	05 59 37.8	-0.3
KST	7.6nm,0.5s						
ULHL	Ulahol	1.77	239	⇑*e*P	Pb	05 59 15.5	-0.4
ULHL	baz=39						
				⇑*i*S	Sg	05 59 39.2	-0.9
ULHL	baz=39						
TDK	Taldyqorghan	1.83	3	*e*P	Pg	05 59 17.3	-1.1
TDK	41nm,0.2s						
				*e*S	Sg	05 59 41.9	-0.2
TDK	111nm,0.3s						
DGS	Degeres	1.84	273	*e*P	Pb	05 59 16.4	-0.7
DGS	7.7nm,0.2s						
				*e*S	Sb	05 59 40.7	+0.5
DGS	22nm,0.4s						
BOOM	Boomskoye usch	1.85	249	⇑*e*P	Pb	05 59 17.2	-0.2
BOOM	baz=49						
				⇑*i*S	Sg	05 59 42.3	-0.6
BOOM	baz=49						
KRBS	Karabastau	1.97	286	*e*P	Pb	05 59 18.4	-0.9
KRBS	baz=86						
				*e*S	Sb	05 59 44.7	+0.8
KRBS	baz=86						
KRBS	Karabastau	1.97	286	*e*P	Pb	05 59 18.4	-0.9
KRBS	14nm,0.2s						
				*e*S	Sb	05 59 44.7	+0.8
KRBS	18nm,0.3s						
TKM2	Tokmak 2	1.99	264	⇓*e*P	Pb	05 59 19.7	+0.1
TKM2	baz=64						
				⇓*e*S	Sg	05 59 46.2	-0.9
TKM2	baz=64						
TKM2	Tokmak 2	1.99	264	⇑Pn	Pb	05 59 19.4	-0.3
TKM2	1.8nm,0.4s						
				⇓Sn	Sg	05 59 46.9	-0.2
TKM2	8.7nm,0.4s						
NRN	Naryn	2.43	225	⇓*e*P	Pn	05 59 24.7	+1.4
NRN	baz=25						
				⇓*e*S	Sb	05 59 56.0	-1.3
NRN	baz=25						
UCH	Uchtor	2.94	252	⇑*e*P	Pb	05 59 32.8	-3.2
UCH	baz=53						
				⇑*i*S	Sb	06 00 08.8	-3.3
UCH	baz=53						
BTLS	Baital	3.58	303	*e*P	Pb	05 59 46.1	-0.5
BTLS	0.7nm,0.4s						
				*e*S	Sb	06 00 31.4	+1.3
BTLS	2.7nm,0.3s						
MK31	Makanchi Array	4.60	37	Pg	Pb	06 00 01.4	-2.7
	0.1nm,0.3s,baz=216,slow=11,SNR=4.3						
MK31				⇓Lg	Lg	06 01 04.9	
	0.2nm,0.2s,baz=223,slow=30,SNR=5.2						

*JMA **04** 06:16:43.4±0.6, 36°N±2°×12°9E±°, h26km, MV2.8/6, S KOREAN PENINSULA REG*
*KMA **04** 06:16:44.0±0.0, 35°.76N×129°.19E, h17km, Error ellipse: s-maj=0.6km s-min=0.4km az=300.0*
ISC 04 06:16:42.8±0.9, 35°.78N±0°.03×129°.20E±0°.04, h10km, n34, σ0°61/37, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	Daegu	0.25	267	P	Pg	06 16 49.6	+1.8
	SNR=204						
YOCB	Yeongcheon	0.28	314	P	Pb	06 16 50.4	+0.5
	SNR=63						
KSPHA	Pohang	0.43	19	P	Pb	06 16 53.2	+0.6
	SNR=70						
MIYA	Miryang-si	0.47	232	P	Pb	06 16 53.1	0.0
	SNR=7.7						
KSDAU	Deagu-acc	0.48	283	P	Pb	06 16 53.7	+0.3
	SNR=31						
KSBUS	Busan	0.54	188	P	Pb	06 16 54.1	-0.2
	SNR=47						
KSCHR	CHANGNYEONG	0.62	248	P	Pb	06 16 55.8	0.0
	SNR=13						
KSADO	Andong	0.66	342	P	Pn	06 16 57.0	-1.3
	SNR=30						
EUSB	Uiseong	0.71	324	P	Pn	06 16 58.0	-0.9
	SNR=8.9						
YODB	Yeongdeok	0.77	13	P	Pn	06 16 59.0	-0.8
	SNR=24						
YEYB	Yeongyang	0.85	354	P	Pn	06 17 00.4	-0.4
	SNR=69						
KSGUM	GUMI	0.87	302	P	Pn	06 17 00.7	-0.3
	SNR=7.8						
EURB	Uiryeong-eup	0.87	239	P	Pn	06 17 00.1	-1.0
	SNR=10.0						
KSULJ	Uljin	0.94	10	P	Pn	06 17 01.8	-0.2
	SNR=68						
KSGIC	Gimchen	0.94	289	P	Pn	06 17 01.6	-0.4
	SNR=34						
KSSAJ	Sangju	1.05	307	P	Pn	06 17 03.7	+0.1
	SNR=10						
DUSB	Deogyusan	1.16	276	P	Pn	06 17 05.5	+0.3
	SNR=29						
CHYB	Chungyang	1.18	349	P	Pg	06 17 06.0	+0.5
	SNR=14						
HAMB	Hamyang	1.21	258	P	Pg	06 17 06.1	0.0
	SNR=18						
YOJB	Youngju	1.22	333	P	Pg	06 17 06.7	+0.4
	SNR=21						
JTU	Tsushima	1.26	173	P	Pn	06 17 06.2	-0.3
JTU				S	Sb	06 17 22.4	-0.6
KSMGY	Mungyeong	1.27	314	P	Pg	06 17 07.4	+0.2
	SNR=9.6						
OKCB	Cheongsan-myeo	1.27	297	P	Pg	06 17 07.5	+0.3
	SNR=9.2						
KSBON	Boeun	1.34	303	P	Pg	06 17 09.0	+0.5
	SNR=26						
KSTBA	Taebaek	1.35	352	P	Pg	06 17 09.2	+0.4
	SNR=46						
YKDB	Yokjido	1.38	214	P	Pg	06 17 09.0	-0.4
	SNR=9.1						
JTSM	Tsushimamitsus	1.45	174	P	Pn	06 17 08.8	-0.2
JTSM				S	Sn	06 17 27.9	-0.1
IMWB	Imwonan-gil	1.46	4	P	Pg	06 17 11.0	+0.2
	SNR=16						
KSCHJ	Chungju	1.47	318	P	Pg	06 17 11.0	-0.1
	SNR=10						
KSJEO	Jeonju	1.56	276	P	Pg	06 17 12.2	-0.5
	SNR=20						
JECH	Jecheon	1.60	330	P	Pg	06 17 13.1	-0.4
	SNR=6.1						
JHGM	Hagimishima	1.88	121	*e*S	Sn	06 17 38.3	-0.3
JII	Iki	2.03	167	*e*P	Pn	06 17 18.2	+1.2
JII				*e*S	Sn	06 17 43.2	+0.9
JTY	Toyota	2.15	134	*e*S	Sn	06 17 45.2	-0.3

IDC 04 06:20:01.8±3.8, 21°.53S×175°.86W, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=305.0km s-min=65.7km az=160.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.24	257	P	P	06 28 29.6	+0.5
	1.5nm,0.5s,baz=97,slow=7.9,SNR=28						
ASAR				PcP	PcP	06 30 04.0	-0.9
	0.4nm,0.7s,baz=101,slow=4.8,SNR=2.1						
	1.5nm,0.5s						
WRA	Warramunga Arr	46.44	263	P	P	06 28 30.1	-0.7
	1.1nm,0.8s,baz=97,slow=8.4,SNR=6.6						
	1.1nm,0.8s						
AKASG	Malin Array Be	144.87	332	PKP	PKPdf	06 39 40.5	-0.2
	0.6nm,0.4s,baz=43,slow=3.9,SNR=5.0						

*IDC **04** 06:29:17.6±2.9, 21°.78N×121°.59E, h0km, mb3.5/4, mbtmp3.5/4, MS2.7/4, Error ellipse: s-maj=252.9km s-min=24.1km az=63.0*
*TAP **04** 06:29:19.0, 22°.13N×121°.46E, h29km, ML4.0, C*
*ASIES **04** 06:29:19.0, 22°.18N×121°.40E, h32km, MW3.8*
*JMA **04** 06:29:21.0±0.4, 22°N±1°×12°2E±°, h44km, MV4.3/13, TAIWAN REGION*
ISC 04 06:29:19.1±0.8, 22°.15N±0°.03×121°.44E±0°.02, h26km±7km, n124, σ1°18/154, mb3.4/4, 4C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.15	136	*i* P	Pb	06 29 25.0	+0.6
LAY	baz=126						
				i S	Sb	06 29 28.3	+0.4
LYUB	Lan-yu	0.20	137	*i* P	Pb	06 29 24.4	-0.5
LYUB	baz=138						
				i S	Sb	06 29 27.4	-1.3
LDUT	Ludao	0.53	3	⇑*i* P	Pb	06 29 29.8	0.0
LDUT	baz=9.0						
				S	Sb	06 29 37.4	+0.3
TSEB	Hengchuen, Pin	0.56	244	⇑*i* P	Pn	06 29 30.9	-0.4
TSEB	baz=257						
				S	Sn	06 29 38.8	-0.9
SMST	Manzhou Townsh	0.57	257	P	Pb	06 29 30.5	0.0
S

baz=261
TWK1 S Sb 06 29 39.1 -0.6
baz=261
ECL Taimali 0.64 315 P Pb 06 29 31.1 -0.5
baz=305
ECL eS Sb 06 29 38.2 -1.9
baz=305
HEN Hengchun 0.67 258 P Pn 06 29 32.3 -0.5
baz=266
HEN eS Sb 06 29 40.6 -0.4
baz=266
TWGBT Beinan 0.75 334 P Pb 06 29 32.9 -0.6
baz=321
TWGBT eS Sb 06 29 42.1 -1.2
baz=321
TWG Pinlang 0.75 333 P Pb 06 29 33.1 -0.5
baz=321
TWG eS Sb 06 29 42.0 -1.4
baz=321
SCZT Fangliau 0.79 287⇓iP Pb 06 29 33.8 -0.4
baz=293
LONT Longtian 0.81 339 eP Pb 06 29 34.2 -0.4
baz=324
LONT eS Sn 06 29 45.6 -0.4
baz=324
EDH Donghe 0.83 351 eP Pn 06 29 35.0 -0.2
baz=357
EDH eS Sn 06 29 46.5 0.0
baz=357
MASBT Mashibuluo 0.88 302⇓iP Pb 06 29 35.0 -0.7
baz=302
TSMG Majia 0.92 307 eP Pn 06 29 36.2 -0.2
baz=312
SSD Sandimen 0.96 309 eP Pb 06 29 36.4 -0.6
baz=314
WLCH Liuqiu 1.00 282 eP Pn 06 29 40.6 +3.2
baz=283
EHD Haiduan 1.02 348 eP Pb 06 29 37.0 -1.2
baz=336
FULB Fuli 1.06 353 eP Pb 06 29 38.2 -0.5
baz=359
FULB eS Sn 06 29 51.9 -0.3
baz=359
ELDTW Lidau 1.11 340 eP Pn 06 29 38.1 -1.0
baz=339
KAU Kaohsiung 1.13 292 eP Pb 06 29 41.2 +1.3
baz=293
SCST Cishan 1.14 310 eP Pb 06 29 40.9 +0.7
baz=313
TWM1 Shoushan 1.16 306 eP Pb 06 29 42.6 +2.2
baz=306
STYH Taoyuan 1.19 329 eP Pb 06 29 41.0 0.0
baz=335
STYH eS Sb 06 29 55.5 -0.4
baz=335
EYUL Yuli 1.20 355 eP Pb 06 29 41.1 -0.1
baz=342
SGST Jiashian 1.22 320 eP Pb 06 29 41.4 -0.2
baz=321
SGST eS Sb 06 29 57.3 +0.4
baz=321
YULB Yu-li 1.25 354 eP Pb 06 29 41.2 -0.8
baz=343
SHHT Tainan City 1.33 311 eP Pb 06 29 44.3 +0.9
baz=311
CHN1 Nanshi 1.33 321 eP Pb 06 29 44.0 +0.5
baz=321
CHN1 eS Sb 06 30 02.8 +2.7
baz=321
WTP Ta-pu 1.33 325 eP Pb 06 29 43.8 +0.3
baz=325
HGSD Ruisui 1.34 359 eP Pn 06 29 42.3 +0.2
baz=3.0
CHN3 Shinhua 1.36 313 eP Pb 06 29 44.4 +0.5
baz=313
EHY Hungye 1.36 355 eP Pn 06 29 42.0 -0.4
baz=342
EHY eS Sb 06 30 01.9 +1.0
baz=342
TPUB Ta-pu 1.37 327 eP Pb 06 29 44.3 +0.2
baz=327
TPUB eS Sb 06 30 03.4 +2.2
baz=327
YUS Yu-Shan 1.41 342 eP Pb 06 29 44.0 -1.1
baz=341
YUS eS Sn 06 30 01.2 -0.4
baz=341
ALS Alishan 1.48 337 eP Pb 06 29 45.2 -0.9
baz=336
ALS eS Sb 06 30 07.3 +2.7
baz=336
WCKO Fanlu 1.50 329 eP Pb 06 29 45.4 -0.9
baz=337
WCKO eS Sb 06 30 06.6 +1.7
baz=337
EGFH Guangfu 1.52 360 eP Pb 06 29 45.5 -1.1
baz=345
TSCK Chigu Township 1.60 309 eP Pn 06 29 46.1 +0.4
baz=296
TSCK eS Sb 06 30 07.8 +0.1
baz=296
CHN5 Tsauling 1.61 334 eP Pb 06 29 47.1 -1.1
baz=333
CHN5 eS Sb 06 30 09.2 +1.2
baz=333
ICHU Yijhu 1.61 319 eP Pb 06 29 47.2 -1.1
baz=318
CHY Chiayi 1.64 325 eP Pb 06 29 48.4 -0.3
baz=325
CHY eS Sb 06 30 08.7 -0.2
baz=325
CHN2 Minshiung 1.64 327 eP Pb 06 29 48.5 -0.1
baz=311
CHN8 Yiju 1.65 317 eP Pb 06 29 47.9 -0.9
baz=316
ESL Shilin 1.66 360 eP Pb 06 29 48.0 -1.0
baz=347
ESL eS Sb 06 30 08.2 -1.3
baz=347
SSLB Suanglung 1.69 345 eP Pb 06 29 48.9 -0.7
baz=343
WDLH Douliu 1.75 332 eP Pb 06 29 49.6 -0.8
baz=316
WDLH eS Sb 06 30 12.7 +0.7
baz=316
WSL Shuilin Townsh 1.77 321 eP Pn 06 29 48.4 +0.3
baz=320
WSL eS Sb 06 30 10.6 -2.0
baz=320
WJS Zhushan 1.79 339 eP Pb 06 29 51.5 +0.3
baz=323
SMLT Sun Moon Lake 1.80 344 eP Pb 06 29 51.9 +0.5
baz=328
SMLT eS Sb 06 30 13.9 +0.3
baz=328
OWD Renai 1.82 352 eP Pb 06 29 50.1 -1.6
baz=360
TYC Yuchr 1.83 343 eP Pb 06 29 51.7 -0.2
baz=328
TYC eS Sb 06 30 13.1 -1.3
baz=328
WNT Mingjian 1.86 338 eP Pb 06 29 52.3 -0.1
baz=322
WSF Szhu 1.86 323 eP Pb 06 29 50.9 -1.5
baz=322
WUSB Renai 1.86 351 eP Pn 06 29 50.5 +1.1
baz=357
CHGB Renai 1.92 353 eP Pb 06 29 52.0 -1.6
baz=359
TWD Chiawan 1.93 4 eP Pn 06 29 50.7 +0.5
baz=10.0
WCS Beigang Elemen 1.96 346 eP Pn 06 29 51.8 +1.1
baz=330
WDGT Dungji 1.98 304 eP Pn 06 29 51.5 +0.5
baz=304
WDGT eS Sn 06 30 14.5 -0.5
baz=304
WHF Hehuan Shan 2.00 355 eP Pn 06 29 52.6 +1.1
baz=3.0
WRL Guolierlin Hig 2.00 331 eP Pn 06 29 51.8 +0.6
baz=330
ETL Fush Village 2.01 5 eP Pn 06 29 51.6 +0.2
baz=11
NACB Ninganchiao 2.02 4 eP Pn 06 29 52.2 +0.7
baz=11
ETLH Xiulin Townshi 2.05 1 eP Pn 06 29 52.6 +0.6
baz=359
TWT Tachien 2.11 353 eP Pb 06 29 56.1 -0.7

TDCB Techi 2.11 353 eP Pb 06 29 55.3 -1.5
WHP Taichung City 2.17 348 eP Pb 06 29 56.8 -1.0
baz=355
PHUB P'eng-hu 2.19 309 P Pn 06 29 54.4 +0.5
baz=308
PHUB eS Sn 06 30 19.7 -0.5
baz=308
PNG Penghu 2.24 310 eP Pn 06 29 54.8 +0.3
baz=309
PNG eS Sn 06 30 20.1 -1.2
baz=309
EWUT Wuta 2.31 8 eP Pn 06 29 55.9 +0.4
baz=13
NSY Sanyi 2.34 345 eP Pb 06 29 59.6 -1.1
baz=329
LATG Datong 2.38 2 eP Pn 06 29 58.7 +2.1
baz=359
TWC Suao 2.48 9 eP Pn 06 29 59.4 +1.6
baz=12
ENTT Nioudou 2.48 3 eP Pn 06 29 59.0 +1.1
NFF Wufeng Townshi 2.49 353 eP Pb 06 30 00.4 -2.9
baz=335
NSTT Nanjuang 2.51 351 eP Pb 06 30 00.7 -2.8
baz=335
YHNB Yeheng 2.51 359 eP Pn 06 30 00.5 +2.1
baz=6.0
LIOB Emei 2.52 351 eP Pb 06 30 01.6 -2.1
baz=335
NSK Sanguang 2.52 358 eP Pn 06 30 00.1 +1.6
baz=6.0
FUSB Fushanzhiwuyua 2.60 3 eP Pn 06 30 01.3 +1.7
YOJ Yonaguni jima 2.72 32 eP Pn 06 30 01.0 -0.1
baz=29
YOJ Yonaguni jima 2.72 32 eP Pn 06 30 02.6 +1.5
YOJ eS Sn 06 30 32.9 -0.3
TIPB Shuangxi 2.83 7 eP Pn 06 30 05.2 +2.5
baz=354
HATJ Hateruma jima 2.89 48 P Pn 06 30 04.7 +1.2
HATJ S Sn 06 30 36.6 -0.8
NWF Wu-fen Shan 2.93 6 eP Pn 06 30 07.1 +3.1
baz=355
SXI1 Grass Mountain 2.96 8 eP Pn 06 30 06.9 +2.4
baz=355
YM01 YM01 2.99 2 eP Pb 06 30 08.3 -3.4
baz=359
IRIF Iriomote-Funau 3.03 44 P Pn 06 30 06.9 +1.5
IRIF eS Sn 06 30 40.9 0.0
JKRS Kuro-shima 3.15 48 P Pn 06 30 08.5 +1.5
JKRS eS Sn 06 30 43.3 -0.5
JIJ Ishigaki jima 3.33 48 P Pn 06 30 10.3 +0.9
JIJ S Sn 06 30 46.5 -1.6
VWUC VWUC 3.37 328 eP Pn 06 30 10.3 +0.3
baz=326
KNM Kinmen 3.57 310 eP Pn 06 30 14.4 +1.6
baz=308
PTMZ Houxiangcun 3.58 324 eP Pn 06 30 13.6 +0.6
baz=323
JISG Ishigakijimahi 3.59 47 eS Sn 06 30 53.6 -1.0
KNMB Chin-men Tao 3.63 310 eP Pn 06 30 13.7 0.0
baz=309
ZPLA Ao Xiou 3.83 298 eP Pn 06 30 16.4 0.0
baz=298
JTJ Tarama 3.89 50 P Pn 06 30 18.5 +1.3
JTJ S Sn 06 31 01.4 -0.7
DSXP Dongshan 4.01 294 eP Pn 06 30 18.7 -0.2
baz=293
AXDP Jialang 4.20 311 eP Pn 06 30 21.7 +0.2
baz=310
MATB Ma-tsu 4.21 341 eP Pn 06 30 22.5 +0.9
baz=328
JMJ2 Miyako jima3 4.41 53 eP Pn 06 30 25.6 +1.3
JMJ2 eS Sn 06 31 13.9 -0.9
JIKM Ikemajima 4.46 51 eP Pn 06 30 26.2 +1.2
JIKM S Sn 06 31 15.0 -1.0
MHZQ Yeshan 4.51 331 eP Pn 06 30 25.9 +0.2
baz=329
LYJJ Jianjiangzhen 4.64 341 eP Pn 06 30 28.6 +1.0
baz=339
SXFK Yanhouchang 5.47 321 eP Pn 06 30 39.0 +0.1
baz=319
DAV Davao City (W) 15.51 164 LR LR 06 38 39.9
comp=Z,45nm,18.9s,baz=5.0,slow=37
KSRS Korea Array 16.25 19 LR LR 06 38 22.1
comp=Z,15nm,22.0s,baz=55,slow=33
MJAR Matsushiro Arr 20.44 42 LR LR 06 42 47.9
comp=Z,23nm,19.2s,baz=214,slow=39
LZH Lanzhou 20.67 316 eP Pn 06 34 02.9 +3.3
LZH pP sP 06 34 10.9 +3.8
CMAR Chiang Mai Arr 21.41 264 LR LR 06 42 30.9
comp=Z,19nm,18.8s,baz=20,slow=37
CN2 Changchun 21.85 8 eP P 06 34 12.7 +3.1
MKAR Makanchi Array 39.98 318 P P 06 36 56.6 +5.1
0.8nm,0.8s,baz=114,slow=9.8,SNR=4.9
0.8nm,0.8s
ZALV Zalesovo Beam 42.09 328 P P 06 37 14.5 +5.9
0.9nm,0.5s,baz=123,slow=10,SNR=2.3
0.9nm,0.5s
H11N1 WAKE ISLAND Hy 42.41 85 T T 07 22 28.8
baz=282,slow=75,SNR=20
H11N2 WAKE ISLAND Hy 42.41 85 T T 07 22 26.9
baz=282,slow=75,SNR=32
H11N3 WAKE ISLAND Hy 42.42 85 T T 07 22 25.9
baz=282,slow=75,SNR=26
H11S3 WAKE ISLAND Hy 42.47 86 T T 07 22 29.6
baz=283,slow=75,SNR=96
H11S1 WAKE ISLAND Hy 42.48 86 T T 07 22 30.1
baz=283,slow=75,SNR=106
H11S2 WAKE ISLAND Hy 42.49 86 T T 07 22 30.6
baz=283,slow=75,SNR=99
WRA Warramunga Arr 43.69 162 P P 06 37 20.8 -1.2
0.4nm,0.8s,baz=344,slow=8.9,SNR=4.7
0.4nm,0.8s
ASAR Alice Springs 47.12 164 P P 06 37 49.1 -0.1
0.1nm,0.4s,baz=353,slow=7.0,SNR=1.7
0.1nm,0.4s

*NNC **04** 07:07:32.5±0.4,50°.01N×78°.75E, h0km, mb3.4, mpv2.9,*
Error ellipse: s-maj=7.5km s-min=2.3km az=79.0,
Suspected Mining explosion.
*IDC **04** 07:07:33.7±1.1,50°.07N×78°.80E, h0km, mbtmp3.3/2,*
ML2.6/2, Error ellipse: s-maj=13.9km s-min=6.7km
az=64.0
ISC 04 07:07:33.7±1.0, 50°.03N±0°.05×78°.78E±0°.07, h0km, n18,
σ0§82/28, 14C-12D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**344**	⇑P	**Pg**	**07 07 44.1**	**-0.8**
KUR07				⇓S	**Sg**	**07 07 52.6**	**+0.1**
KUR06	**Kurchatov Arra**	**0.60**	**344**	⇑P	**Pg**	**07 07 44.4**	**-0.9**
KUR06				⇑S	**Sg**	**07 07 53.3**	**+0.2**
KUR14	**Kurchatov Arra**	**0.60**	**349**	⇓P	**Pg**	**07 07 44.2**	**-1.1**
KUR14				⇓S	**Sg**	**07 07 53.3**	**+0.2**
KUR15	**Kurchatov Arra**	**0.61**	**347**	⇑P	**Pg**	**07 07 44.3**	**-1.1**
KUR15				⇑S	**Sg**	**07 07 53.5**	**+0.1**
KURBB	**Kurchatov Arra**	**0.62**	**345**	Pg	**Pg**	**07 07 44.8**	**-0.9**
2.7nm,0.3s,baz=166,slow=18,SNR=163							
KURBB				Lg	Lg	07 07 53.5	
2.8nm,0.3s,baz=161,slow=34,SNR=16							
KURBB	**Kurchatov Arra**	**0.62**	**345**	⇑P	**Pg**	**07 07 44.8**	**-0.9**
30nm,0.3s							
KURBB				⇓S	**Sg**	**07 07 54.9**	**+1.3**
113nm,0.6s							
KUR16	**Kurchatov Arra**	**0.63**	**344**	⇑P	**Pg**	**07 07 44.8**	**-1.0**
KUR16				⇓S	**Sg**	**07 07 53.9**	**-0.1**
KUR05	**Kurchatov Arra**	**0.64**	**346**	⇑P	**Pg**	**07 07 44.8**	**-1.1**
KUR05				⇓S	**Sg**	**07 07 54.1**	**-0.1**
KUR17	**Kurchatov Arra**	**0.64**	**342**	⇓P	**Pg**	**07 07 45.2**	**-0.8**
KUR17				⇑S	**Sg**	**07 07 54.4**	**+0.1**
KUR04	**Kurchatov Arra**	**0.66**	**347**	⇓P	**Pg**	**07 07 45.1**	**-1.2**
KUR04				⇓S	**Sg**	**07 07 54.8**	**0.0**
KURK	**Kurchatov**	**0.70**	**352**	⇓P	**Pg**	**07 07 46.3**	**-0.9**
12nm,0.4s							
KURK				⇑S	**Sg**	**07 07 56.5**	**+0.3**
45nm,0.6s							
MK31	**Makanchi Array**	**3.99**	**143**	Pn	**Pn**	**07 08 36.9**	**+0.7**
0.2nm,0.1s,baz=328,slow=12,SNR=90							
MK31				⇑Pg	**Pb**	**07 08 45.0**	**+0.1**
0.4nm,0.2s,baz=329,slow=12,SNR=28							
MK31				Lg	Lg	07 09 40.0	
13nm,0.5s,baz=333,slow=28,SNR=15							
MKAR	**Makanchi Array**	**3.99**	**143**	Pn	**Pn**	**07 08 36.9**	**+0.7**
0.5nm,0.3s,baz=324,slow=10,SNR=4.1							
MKAR				Pg	**Pb**	**07 08 44.1**	**-0.8**
1.0nm,0.3s,baz=325,slow=13,SNR=9.8							
MKAR				Lg	Lg	07 09 39.5	
2.2nm,0.3s,baz=323,slow=25,SNR=17							
0.7nm,0.2s							
OTUK	**Ortayu**	**4.59**	**250**	⇓Pn	**Pn**	**07 08 44.0**	**-0.4**
1.1nm,0.2s							
OTUK				⇑Pg	**Pb**	**07 08 55.6**	**+0.6**
0.8nm,0.5s							
OTUK				⇓Lg	Lg	07 09 57.4	
7.1nm,0.6s							
I46RU	**ZALESOVO INFRA**	**5.42**	**41**	I		07 40 00.0	
baz=224,slow=330,SNR=1.9							
ZALV	**Zalesovo Beam**	**5.42**	**41**	Pn	**Pn**	**07 08 57.2**	**+1.5**
0.8nm,0.3s,baz=232,slow=14,SNR=11							
ZALV				Lg	Lg	07 10 21.3	
0.1nm,0.3s,baz=219,slow=20,SNR=2.2							
2.4nm,0.2s							
PDGK	**Podgornoye**	**6.72**	**176**	⇑Lg	Lg	07 11 05.3	
8.0nm,0.7s							
TKM2	**Tokmak 2**	**7.44**	**198**	⇑Lg	Lg	07 11 25.5	
5.4nm,0.8s							

IDC 04 07:09:47.5±3.2, 31°.12S×178°.81W, h0km, mb3.9/2,
mbtmp3.8/3, ML3.0/1, Error ellipse: s-maj=69.7km
s-min=48.1km az=111.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.87**	**204**	Pn	Pn	07 11 42.1	-1.1
0.2nm,0.3s,baz=332,slow=15,SNR=1.3							
URZ				Sn	Sn	07 13 06.1	-6.9
0.9nm,0.3s,baz=306,slow=21,SNR=9.3							
3.7nm,0.8s							
ASAR	**Alice Springs**	**42.38**	**268**	P	P	07 17 43.8	-0.1
0.6nm,0.4s,baz=105,slow=7.7,SNR=9.1							
0.6nm,0.4s							
WRA	**Warramunga Arr**	**43.44**	**273**	P	P	07 17 52.4	0.0
0.9nm,0.3s,baz=112,slow=8.0,SNR=27							
0.9nm,0.3s							
FINES	**FINESS Array B**	**145.58**	**339**	PKPbc	PKPdf	07 29 26.4	-0.6
2.7nm,0.8s,baz=34,slow=5.4,SNR=3.9							

IDC 04 07:16:40.2±5.8, 26°.08S×69°.81E, h0km, mb3.7/4,
mbtmp3.7/4, MS3.3/4, Error ellipse: s-maj=153.9km
s-min=40.2km az=58.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.49**	**256**	LR	LR	07 39 36.4	
comp=Z,55nm,18.2s,baz=18,slow=35							
SUR	**Sutherland**	**42.92**	**250**	LR	LR	07 41 19.0	
comp=Z,53nm,18.2s,baz=153,slow=34							
CMAR	**Chiang Mai Arr**	**52.55**	**36**	P	P	07 25 55.4	-0.2
0.5nm,0.3s,baz=226,slow=7.3,SNR=8.5							
0.5nm,0.3s							
ASAR	**Alice Springs**	**57.67**	**103**	P	P	07 26 33.1	+0.3
0.6nm,0.8s,baz=262,slow=6.5,SNR=5.0							
0.6nm,0.8s							
WRA	**Warramunga Arr**	**59.20**	**99**	P	P	07 26 43.1	-0.3
0.7nm,0.7s,baz=250,slow=7.4,SNR=5.3							
0.7nm,0.7s							
DAV	**Davao City (W)**	**63.34**	**67**	LR	LR	07 50 54.8	
comp=Z,18nm,21.8s,baz=166,slow=32							
MKAR	**Makanchi Array**	**73.40**	**9**	P	P	07 28 14.0	+0.1
0.5nm,0.8s,baz=195,slow=9.0,SNR=3.5							
0.5nm,0.8s							
GUMO	**Guam**	**82.91**	**71**	LR	LR	08 06 08.2	
comp=Z,7.1nm,18.1s,baz=180,slow=36							

*AEIC **04** 07:20:49±1.4, 51°.8N±0°.2×172°.16W±0°.07, h14km±7km,*
Error ellipse: s-maj=24.4km s-min=4.7km az=170.0
NEIC 04 07:20:49.8±1.7, 52°.9N±0°.1×172°.52W±0°.06, h12km±2km,
ML3.5/6, ML3.2(AEIC), Error ellipse: s-maj=17.9km
s-min=3.8km az=167.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.12**	**239**		Pb	07 21 11.0	-0.1
KOFP					Sn	07 21 27.4	+0.7
NIKH	**Nikolski High**	**2.22**	**86**		Pn	07 21 26.0	-0.4
NIKH					Sn	07 21 54.2	+0.4
GSTR	**Great Sitkin T**	**2.29**	**252**	Pn	Pn	07 21 26.8	-0.6
GSTD	**Great Sitkin T**	**2.36**	**252**		Pn	07 21 28.1	-0.2
GSTD					Sn	07 21 59.0	+1.8
ADK	**Adak**	**2.73**	**251**		Pn	07 21 33.6	+0.2
ADK	**Adak**	**2.73**	**251**	IAML		07 22 13.9	
189nm,0.6s							
ADK				IAML		07 22 15.2	
168nm,0.3s							
OKFG	**Magazine Ridge**	**2.83**	**77**		Pn	07 21 34.6	-0.1
MNAT	**Makushin Natee**	**3.65**	**71**		Pn	07 21 46.8	+0.9
UNV	**Unalaska Valle**	**3.74**	**72**		Pn	07 21 47.9	+0.7
AKUT	**Akutan**	**4.23**	**70**	Pn	Pn	07 21 55.1	+1.2
AKUT				IAML		07 22 29.5	
comp=E,45nm,2.2s							
CNBA	**Chernabura Isl**	**7.90**	**70**	Pn	Pn	07 22 42.8	-1.5

*IDC **04** 07:38:45.9±1.1, 20°.15S×178°.14W, h570km±12km,*
mb4.0/26, mbtmp4.9/31, Error ellipse: s-maj=11.4km
s-min=8.5km az=144.0
*NOU **04** 07:38:46.5, 20°.29S×178°.09W, h581km, mb4.7/35, Fiji Islands Region*
*NEIC **04** 07:38:46.5±2.6, 20°.2S±0°.1×178°.22W±0°.07, h570km±6km,*
mb4.6/59, Error ellipse: s-maj=16.5km s-min=10.1km
az=182.0
ISC 04 07:38:45.8±0.3, 20°.09S±0°.06×178°.16W±0°.05, h569km,
n446, σ1§17/482, mb4.6/62, 48C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**1.95**	**341**	P	**P**	**07 40 01.1**	**+3.9**
TAVE	**Taveuni**	**3.75**	**333**	P	**P**	**07 40 11.4**	**+4.0**
MSVF	**Nonsavu**	**4.29**	**303**	P	**P**	**07 40 15.1**	**+3.8**
234nm,0.6s,baz=127,slow=5.9,SNR=270							
MSVF	**Nonsavu**	**4.29**	**303**	P	**P**	**07 40 15.1**	**+3.8**
NIUE	**Niue**	**7.83**	**84**	P	**P**	**07 40 43.6**	**+1.1**
AFI	**Afiamalu**	**8.66**	**46**	P	**P**	**07 40 49.8**	**-1.0**
43nm,0.6s,baz=259,slow=7.8,SNR=8.2							
AFI				S	**S**	**07 42 29.2**	**-4.1**
46nm,0.7s,baz=41,slow=19,SNR=2.2							
AFI	**Afiamalu**	**8.66**	**46**	P	**P**	**07 40 51.2**	**+0.3**
RAO	**Raoul Island**	**9.12**	**179**	P	**P**	**07 40 53.3**	**-1.8**
198nm,0.3s,baz=265,slow=15,SNR=4.3							
RTV	**Rentapao**	**12.90**	**278**	P	**P**	**07 41 35.3**	**+1.6**
MARNC	**Mare, Loyalty**	**12.99**	**261**	P	**P**	**07 41 34.5**	**-0.1**
MARNC	**Mare, Loyalty**	**12.99**	**261**	P	**P**	**07 41 35.0**	**+0.4**
DVP	**Devils Point**	**13.13**	**278**	P	**P**	**07 41 37.7**	**+1.5**
PINNC	**Pines Island,**	**13.64**	**257**	P	**P**	**07 41 41.9**	**+0.6**
PINNC	**Pines Island,**	**13.64**	**257**	P	**P**	**07 41 42.1**	**+0.7**
LIFNC	**LIFOU**	**13.71**	**265**	P	**P**	**07 41 41.2**	**-0.8**
LIFNC	**LIFOU**	**13.71**	**265**	P	**P**	**07 41 41.4**	**-0.6**
YATNC	**Mamie plateau,**	**14.09**	**259**	P	**P**	**07 41 45.9**	**0.0**
OUENC	**Ouen Island, N**	**14.18**	**258**	P	**P**	**07 41 47.0**	**+0.3**
OUENC	**Ouen Island, N**	**14.18**	**258**	P	**P**	**07 41 47.0**	**+0.3**
DZM	**Mont Dzumac**	**14.51**	**259**	eP	**P**	**07 41 49.4**	**-0.8**
68nm,0.7s							
DZM				eS	**S**	**07 44 17.2**	**-4.4**
46nm,1.3s							
DZM	**Mont Dzumac**	**14.51**	**259**	P	**P**	**07 41 50.4**	**+0.3**
37nm,0.5s,baz=82,slow=17,SNR=33							
DZM	**Mont Dzumac**	**14.51**	**259**	P	**P**	**07 41 50.6**	**+0.5**
DZM	**Mont Dzumac**	**14.51**	**259**	P	**P**	**07 41 50.8**	**+0.6**
ONTNC	**Ouen Toro**	**14.52**	**259**	P	**P**	**07 41 50.4**	**+0.3**
ONTNC	**Ouen Toro**	**14.52**	**259**	P	**P**	**07 41 50.5**	**+0.3**
NOUC	**Port Laguerre**	**14.64**	**259**	P	**P**	**07 41 51.7**	**+0.3**
KOUNC	**Koumac, New Ca**	**16.48**	**265**	P	**P**	**07 42 10.7**	**+1.6**
KOUNC	**Koumac, New Ca**	**16.48**	**265**	P	**P**	**07 42 10.6**	**+1.6**
OUZ	**Omahuta**	**16.73**	**204**	P	**P**	**07 42 13.3**	**+2.2**
OUZ				IAmb	IAmb	07 42 15.9	
comp=Z,19nm,0.9s							
OUZ	**Omahuta**	**16.73**	**204**	P	**P**	**07 42 13.0**	**+1.9**
GRZ	**Great Barrier**	**17.05**	**198**	P	**P**	**07 42 13.9**	**0.0**
RAR	**Rarotonga**	**17.25**	**97**	P	**P**	**07 42 15.9**	**0.0**
comp=Z,17nm,0.7s,baz=226,slow=9.0,SNR=4.1							
RAR	**Rarotonga**	**17.25**	**97**	P	**P**	**07 42 16.4**	**+0.5**
KUZ	**Kuaotunu**	**17.43**	**197**	P	**P**	**07 42 19.0**	**+1.6**
MXZ	**Matakaoa Point**	**17.68**	**189**	P	**P**	**07 42 16.9**	**-2.8**
WMGZ	**Waiomatatini S**	**17.91**	**189**	P	**P**	**07 42 22.5**	**+0.7**
WMGZ				S	**S**	**07 45 19.2**	**+1.7**
MKAZ	**Moumakai**	**17.93**	**198**	P	**P**	**07 42 22.0**	**+0.1**
HAZ	**Te Kaha**	**17.95**	**190**	P	**P**	**07 42 21.6**	**-0.6**
HAZ				S	**S**	**07 45 19.6**	**+1.5**

RUGZ Raukumara Rang 18.17 191 P **P** 07 42 25.3 +0.9
PUZ Puketiti 18.18 189 P **P** 07 42 25.7 +1.4
PUZ S **S** 07 45 22.9 +0.9
TGRZ Tauranga 18.23 194 P **P** 07 42 28.5 +3.8
OPRZ Ohinepanea 18.28 193 P **P** 07 42 27.3 +2.2
KMRZ Kaimai 18.42 195 P **P** 07 42 30.0 +3.5
MWZ Matawai 18.56 191 P **P** 07 42 27.6 -0.1
MWZ S **S** 07 45 28.6 +0.5
URZ Urewera 18.56 192 P **P** 07 42 26.3 -1.4
comp=Z,5.8nm,0.3s,baz=340,slow=3.2,SNR=15
URZ S **S** 07 45 28.4 +0.4
comp=Z,7.2nm,0.6s,baz=149,slow=21,SNR=9.8
URZ Urewera 18.56 192 P **P** 07 42 26.3 -1.4
URZ S **S** 07 45 27.7 -0.4
URZ Urewera 18.56 192 P **P** 07 42 26.6 -1.1
TLZ Tolley Road 18.98 195 P **P** 07 42 35.1 +3.5
RATZ Rangitukua 19.43 194 P **P** 07 42 38.2 +2.5
BKZ Black Stump Fm 19.56 193 P **P** 07 42 34.2 -2.7
BKZ IAmb IAmb 07 42 48.7
comp=Z,12nm,1.1s
BKZ Black Stump Fm 19.56 193 P **P** 07 42 34.7 -2.2
BKZ S **S** 07 45 46.3 +2.1
BHHZ Black Hill Sta 19.96 193 P **P** 07 42 39.3 -1.2
BHHZ S **S** 07 45 54.3 +3.8
PXZ Pawanui 20.33 191 P **P** 07 42 42.9 -0.8
PXZ S **S** 07 46 00.9 +4.7
TSZ Takapari Road 20.53 193 P **P** 07 42 48.1 +2.5
TSZ S **S** 07 46 04.8 +5.3
BFZ Birch Farm 21.07 192 P **P** 07 42 51.5 +1.1
MRZ Mangatainoka R 21.19 193 P **P** 07 42 50.3 -1.2
QRZ Quartz Range 22.14 199 P **P** 07 42 59.7 -0.3
KHZ Kahutara 23.34 196 P **P** 07 43 09.5 -1.1
PPT2 Papeete2 27.15 90 *e*P **P** 07 43 45.2 +0.5
comp=Z,85nm,1.3s
PPT2 *e*LR LR 07 51 22.7
PPT Papeete 27.16 89 P **P** 07 43 44.5 -0.2
comp=Z,32nm,0.4s,baz=37,slow=6.1,SNR=12
comp=Z,32nm,0.4s
PPTF Pamatai, Papee 27.16 90 P **P** 07 43 45.1 +0.3
TIAR Tiarei 27.37 90 *e*P **P** 07 43 47.7 +1.1
comp=Z,7.4nm,1.0s
WHZ Wether Hill Ro 28.16 201 P **P** 07 43 54.3 +1.3
EIDS Eidsvold 28.82 254 P **P** 07 43 59.2 +0.1
EIDS IAmb IAmb 07 44 00.4
comp=Z,12nm,1.2s
ARMA Armidale 29.11 243 P **P** 07 44 02.5 +0.8
ARMA IAmb IAmb 07 44 11.8
comp=Z,27nm,1.4s
VAH Vaihoa 29.46 86 *e*P **P** 07 44 04.4 -0.4
comp=Z,42nm,0.9s
CTA Charters Tower 33.38 264 P **P** 07 44 39.0 +0.8
comp=Z,8.5nm,0.4s,baz=102,slow=10.0,SNR=5.0
comp=Z,8.5nm,0.4s
CTAO Charters Tower 33.38 264 P **P** 07 44 38.7 +0.5
CTAO IAmb IAmb 07 44 39.1
comp=Z,8.6nm,0.5s
TOO Toolangi 36.02 233 P **P** 07 45 00.2 +0.3
COEN Coen 37.41 273 P **P** 07 45 12.3 +0.7
COEN IAmb IAmb 07 45 13.1
comp=Z,19nm,1.1s
STKA Stephens Creek 37.83 244 P **P** 07 45 15.6 +0.8
comp=Z,3.5nm,0.5s,baz=87,slow=9.7,SNR=13
STKA PcP **PcP** 07 47 15.0 -1.2
comp=Z,1.6nm,0.4s,baz=95,slow=2.7,SNR=3.0
comp=Z,3.5nm,0.5s
STKA Stephens Creek 37.83 244 P **P** 07 45 15.3 +0.5
MANU Manus Island 38.15 294 P **P** 07 45 19.1 +1.5
comp=Z,8.2nm,0.7s
BBOO Buckleboo 42.60 243 P **P** 07 45 52.5 -0.2
BBOO IAmb IAmb 07 46 30.0
comp=Z,50nm,1.5s
WR0 Warramunga Arr 44.32 262 P **P** 07 46 06.0 -0.3
WR0 IAmb IAmb 07 46 06.9
comp=Z,9.3nm,0.5s
AS01 Alice Springs 44.42 256 P **P** 07 46 07.2 +0.1
AS31 Alice Springs 44.47 256 P **P** 07 46 06.8 -0.7
ASAR Alice Springs 44.47 256 P **P** 07 46 07.3 -0.1
comp=Z,14nm,0.7s,baz=96,slow=7.8,SNR=180
ASAR PcP **PcP** 07 47 37.9 -0.6
comp=Z,4.8nm,0.6s,baz=106,slow=4.0,SNR=9.1
ASAR ScP **ScP** 07 50 37.3 +0.5
comp=Z,1.9nm,0.8s,baz=109,slow=3.8,SNR=6.9
ASAR S **S** 07 51 57.4 -4.6
comp=Z,3.0nm,0.9s,baz=87,slow=14,SNR=11
comp=Z,14nm,0.7s
ASAR Alice Springs 44.47 256 P **P** 07 46 06.8 -0.7
WB0 Warramunga Arr 44.49 262 P **P** 07 46 03.8 -3.8
WB2 Warramunga Arr 44.50 262 P **P** 07 46 04.8 -2.9
WB2 IAmb IAmb 07 46 07.9
comp=Z,24nm,1.1s
WB1 Warramunga Ar. 44.50 262 P **P** 07 46 07.2 -0.5
WRAB Tennant Creek 44.50 262 P **P** 07 46 06.1 -1.6
WRAB IAmb IAmb 07 46 07.8
comp=Z,16nm,0.9s
WRAB Tennant Creek 44.50 262 P **P** 07 46 07.6 -0.1
WRA Warramunga Arr 44.51 262 P **P** 07 46 07.2 -0.6
comp=Z,6.8nm,0.3s,baz=98,slow=7.2,SNR=265
WRA PcP **PcP** 07 47 38.5 -0.2
comp=Z,3.8nm,0.9s,baz=89,slow=4.0,SNR=4.8
WRA S **S** 07 51 58.5 -4.0
comp=Z,4.0nm,1.0s,baz=96,slow=12,SNR=12
comp=Z,6.8nm,0.3s
WRA Warramunga Arr 44.51 262 P **P** 07 46 06.1 -1.6
MTN Manton Dam 49.01 270 P **P** 07 46 41.2 -0.5
MTN Manton Dam 49.01 270 P **P** 07 46 41.4 -0.3
FORT Forrest 49.32 246 P **P** 07 46 42.8 -1.0
FORT IAmb IAmb 07 46 43.7
comp=Z,16nm,0.7s
WRKA Warakurna 49.43 254 P **P** 07 46 44.6 -0.2
KNRA Kununurra 50.54 266 P **P** 07 46 51.8 -1.0
KNRA IAmb IAmb 07 46 53.4
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 52.93 262 P **P** 07 47 09.8 -0.2
SIJI Sorong 52.99 285 P **P** 07 47 11.1 +0.5
comp=Z,46nm,0.7s,baz=112,slow=9.7,SNR=9.9
comp=Z,46nm,0.7s
SOEI Soe 56.34 272 P **P** 07 47 34.9 +0.8
SANI Sanana 57.36 281 P **P** 07 47 41.0 +0.1
comp=Z,27nm,1.2s
PSA00 Pilbara Seismi 57.62 257 P **P** 07 47 41.1 -1.5
PSA00 IAmb IAmb 07 47 42.6
comp=Z,19nm,0.8s
VNDA Vanda 58.30 185 P **P** 07 47 46.8 +0.6
NWAO Narrogin (SRO) 58.42 243 P **P** 07 47 47.2 -0.6
NWAO IAmb IAmb 07 48 18.6
comp=Z,42nm,1.3s
MORW Morawa 59.85 247 P **P** 07 47 57.0 -0.4
GIRL Giralia 62.52 254 P **P** 07 48 15.1 +0.1
JHJ Hachijo jima 2 66.43 322 P **P** 07 48 39.7 +0.3
comp=Z,69nm,0.4s,baz=62,slow=23,SNR=11
JGF Kuroka 69.60 322 P **P** 07 48 58.3 -0.3
JGF IAmb IAmb 07 48 59.2
comp=Z,12nm,0.7s
JOW Kunigami 69.79 310 P **P** 07 49 00.3 +0.5
comp=Z,19nm,0.5s,baz=98,slow=14,SNR=3.2
comp=Z,19nm,0.5s
MJAR Matsushiro Arr 69.80 324 P **P** 07 48 59.6 -0.1
comp=Z,16nm,0.7s,baz=156,slow=6.1,SNR=34
comp=Z,16nm,0.7s
MAJO Matsushiro 69.80 324 P **P** 07 49 00.0 +0.3
MAJO IAmb IAmb 07 49 00.5
comp=Z,19nm,0.6s
MAJO Matsushiro 69.80 324 P **P** 07 48 59.9 +0.2
MJB9 Matsu-Tunnel 69.80 324 P **P** 07 49 01.0 +1.3
MJB9 IAmb IAmb 07 49 01.5
comp=Z,19nm,0.6s
QSPA South Pole Qui 69.97 180 P **P** 07 49 00.4 -0.1
JHS Saijyo 71.70 319 P **P** 07 49 10.9 0.0
LEM Lembang 72.90 269 P **P** 07 49 18.7 +0.2
comp=Z,53nm,0.9s,baz=340,slow=23,SNR=5.7
comp=Z,53nm,0.9s
NIKH Nikolski High 73.20 6 P **P** 07 49 15.4 -3.7
baz=189
TPUB Ta-pu 73.63 303 P **P** 07 49 21.3 -1.0
TPUB Ta-pu 73.63 303 P **P** 07 49 21.3 -1.0
UNV Unalaska Valle 74.31 7 P **P** 07 49 24.0 -1.4
baz=191
PETK Petropavlovsk- 75.84 345 P **P** 07 49 33.6 -0.3
comp=Z,14nm,0.7s,baz=134,slow=8.5,SNR=22
comp=Z,14nm,0.7s
PETK Petropavlovsk- 75.84 345 P **P** 07 49 34.2 +0.3
CHNA Chernabura Isl 76.29 11 P **P** 07 49 35.3 -1.0
baz=198
KSRS Korea Array 76.48 319 P **P** 07 49 38.8 +0.9
comp=Z,4.8nm,0.6s,baz=128,slow=6.2,SNR=14
comp=Z,4.8nm,0.6s
SDPT Sand Point 76.64 10 P **P** 07 49 37.2 -1.1
baz=197
CHGN Chignik 77.90 11 P **P** 07 49 44.6 -0.4
baz=199
CHIR Chirikof Islan 78.00 13 P **P** 07 49 45.4 -0.2
baz=202
USA0B Ussuriysk Arra 78.55 326 P **P** 07 49 49.6 +0.8
USA0B IAmb IAmb 07 49 50.9
comp=Z,21nm,0.9s
USRK Ussuriysk Ar. 78.55 326 P **P** 07 49 50.2 +1.4
comp=Z,16nm,0.7s,baz=112,slow=4.5,SNR=15
comp=Z,16nm,0.7s
USRK Ussuriysk Ar. 78.55 326 P **P** 07 49 49.3 +0.5
MURC Murrieta 78.89 48 P **P** 07 49 52.3 +1.3
baz=237
MONP2 Monument Peak 79.05 49 P **P** 07 49 52.4 +0.3
baz=237
R16K Pilot Point 79.25 11 P **P** 07 49 52.1 -0.1
baz=200
PFO Pinyon Flats O 79.42 48 P **P** 07 49 54.7 +0.8
baz=237
TPFO Pinon Flats 79.42 48 P **P** 07 49 54.1 +0.2
baz=237
R17K Ugashik Creek 79.54 12 P **P** 07 49 53.6 -0.2
baz=201
OHAK Old Harbor 79.79 13 P **P** 07 49 54.7 -0.3
baz=204
CWC Cottonwood Cre 79.86 45 P **P** 07 49 57.5 +1.3
baz=236
MPMC Manual Prospec 80.04 46 P **P** 07 49 58.8 +1.6
baz=236
YBH Yreka Blue Hor 80.07 39 P **P** 07 49 58.6 +1.6
comp=Z,4.4nm,0.8s,baz=174,slow=3.0,SNR=14
comp=Z,4.4nm,0.8s
YBH Yreka Blue Hor 80.07 39 P **P** 07 49 58.5 +1.5
MDJ Mudanjiang 80.10 325 P **P** 07 49 58.4 +1.4
MDJ Mudanjiang 80.10 325 P **P** 07 49 58.7 +1.7
comp=Z,21nm,0.9s
Q17K Contact Creek 80.22 12 P **P** 07 49 56.9 -0.6
baz=201,SNR=9.8
KDAK Kodiak Island 80.46 14 P **P** 07 49 58.9 +0.3
comp=Z,11nm,1.0s,baz=283,slow=3.3,SNR=4.9
comp=Z,11nm,1.0s
KDAK Kodiak Island 80.46 14 P **P** 07 49 58.8 +0.3
baz=204
Q16K King Salmon 80.47 11 P **P** 07 49 58.2 -0.3
baz=200
P16K Nushagak River 80.56 10 P **P** 07 49 57.8 -1.3
baz=199
IRM Iron Mountain 80.63 48 P **P** 07 50 00.3 +0.3
baz=238
Q18K Katmai Hardscr 80.75 12 P **P** 07 49 59.9 -0.3
baz=202,SNR=6.8
TUQ Turquoise Moun 80.77 47 P **P** 07 50 00.7 -0.2
baz=237
SHOC Shoshone, Teco 80.78 47 P **P** 07 49 59.4 -1.3
baz=237
NVAR Mina Array Bea 80.83 43 P **P** 07 50 02.3 +1.0
comp=Z,2.1nm,0.8s,baz=224,slow=9.2,SNR=21
comp=Z,2.1nm,0.8s
P17K Kvichak River 80.99 11 P **P** 07 50 00.9 -0.4
baz=201
O16K Kokwok River B 81.08 10 P **P** 07 50 00.4 -1.3
baz=199,SNR=5.4
TPNV Topopah Spring 81.36 46 P **P** 07 50 04.5 +0.6
baz=237
P18K Big Mountain, 81.40 12 P **P** 07 50 02.1 -1.3
baz=202
O17K Koliganek Bris 81.42 11 P **P** 07 50 03.2 -0.2
baz=200
MOD Modoc Plateau 81.60 40 P **P** 07 50 06.4 +1.3
K05A Summer Lake 81.74 39 P **P** 07 50 07.5 +1.8
K05A IAmb IAmb 07 50 08.1
comp=Z,13nm,1.0s
N16K Nishlik Lake 81.81 10 P **P** 07 50 06.0 +0.5
baz=198,SNR=11
O18K Koktuh Hills 81.83 11 P **P** 07 50 05.2 -0.4
baz=202
CN2 Changchun 81.89 322 *e*P P 07 50 00.3 -5.9
MAW Mawson 81.89 200 P **P** 07 50 06.1 +0.2
comp=Z,0.7nm,0.5s,baz=126,slow=8.7,SNR=2.2
comp=Z,0.7nm,0.5s
BNX BinXian 82.01 325 ⇑P **P** 07 50 07.1 +0.3
P19K Oil Pt 82.03 12 P **P** 07 50 06.3 -0.3
baz=204
KLR Kul'dur 82.10 329 P **P** 07 50 07.7 +0.5
comp=Z,5.0nm,0.8s,baz=118,slow=4.0,SNR=8.4
comp=Z,5.0nm,0.8s
O19K Port Alsworth 82.32 12 P **P** 07 50 07.8 -0.3
O19K Port Alsworth 82.32 12 P **P** 07 50 07.7 -0.3
baz=203,SNR=10
HOM Homer 82.37 13 P **P** 07 50 08.3 0.0
baz=205
PRN Pahroc Range 82.42 46 P **P** 07 50 10.5 +1.2
N18K Kilae Creek 82.48 11 P **P** 07 50 08.7 -0.2
baz=201
R11A Troy Canyon, C 82.57 45 P **P** 07 50 10.4 +0.3
baz=237
BRLK Bradley Lake 82.63 14 P **P** 07 50 09.8 +0.1
BRLK IAmb IAmb 07 50 10.3
comp=Z,22nm,0.9s
BRSE Bradley Lake S 82.64 14 P **P** 07 50 09.6 -0.1
baz=206
TUC Tucson 82.85 52 P **P** 07 50 11.8 +0.4
baz=241
N19K Bonanza Creek 82.86 11 P **P** 07 50 10.4 -0.4
N19K IAmb IAmb 07 50 11.0
comp=Z,9.9nm,0.8s
N19K Bonanza Creek 82.86 11 P **P** 07 50 10.5 -0.3
baz=202,SNR=5.9
SVW2 Sparrevohn 82.93 11 P **P** 07 50 11.0 -0.1
IPM Ipoh 82.93 277 P **P** 07 50 12.7 +0.5
comp=Z,36nm,0.7s
SEW Seward 83.26 14 P **P** 07 50 13.2 +0.5
baz=207
I07A Izee 83.36 38 P **P** 07 50 14.7 +0.9
N20K Mount Spurr 83.66 12 P **P** 07 50 13.8 -1.0
baz=204
SPCR Spurr Chakacha 83.66 12 P **P** 07 50 14.1 -0.7
baz=204
M19K Big River Lodg 83.89 11 P **P** 07 50 15.5 -0.4
M19K IAmb IAmb 07 50 16.3
comp=Z,7.1nm,0.7s
M19K Big River Lodg 83.89 11 P **P** 07 50 15.6 -0.2
baz=202,SNR=5.1
L19K White Mountain 84.07 11 P **P** 07 50 16.5 -0.2
baz=202,SNR=7.6
RC01 Rabbit Creek A 84.08 13 P **P** 07 50 16.5 -0.3
baz=204
M20K Styx River 84.11 12 P **P** 07 50 16.7 -0.3
baz=204
BBB Bella Bella 84.12 28 P **P** 07 50 17.8 +0.7
comp=Z,31nm,1.1s,baz=174,slow=9.2,SNR=3.0
comp=Z,31nm,1.1s
PWL Port Wells 84.19 14 P **P** 07 50 17.2 -0.2
baz=208
SUA Susitna One 84.20 13 P **P** 07 50 17.6 +0.1
baz=206
PSI Prapat 84.31 275 P **P** 07 50 18.4 -0.8
comp=Z,4.5nm,0.3s,baz=144,slow=1.0,SNR=6.6
comp=Z,4.5nm,0.3s
GLI Glacier Island 84.49 15 P **P** 07 50 18.7 -0.1
GLI IAmb IAmb 07 50 19.3
comp=Z,21nm,0.8s
GLI Glacier Island 84.49 15 P **P** 07 50 18.8 -0.1
baz=209,SNR=5.9
SKT Skwentna 84.50 12 P **P** 07 50 18.3 -0.6
baz=205
L20K Farewell, AK 84.52 11 P **P** 07 50 18.3 -0.7
baz=203
EYAK Cordova Ski Ar 84.53 15 P **P** 07 50 18.5 -0.5
baz=210
TTA Tatalina 84.57 10 P **P** 07 50 19.2 -0.1
baz=201,SNR=7.0
M22K Willow 84.59 13 P **P** 07 50 18.9 -0.3
baz=206,SNR=7.8
KNK Knik Glacier 84.65 14 P **P** 07 50 19.0 -0.6
baz=208,SNR=5.6
PMR Palmer 84.66 13 P **P** 07 50 19.1 -0.5
PMR IAmb IAmb 07 50 20.8
comp=Z,25nm,1.4s
PMR Palmer 84.66 13 P **P** 07 50 18.8 -0.8
baz=207,SNR=7.1
SML Sawmill 85.03 14 P **P** 07 50 21.6 +0.2
baz=208
M23K Glacier View 85.15 14 P **P** 07 50 21.9 -0.1
baz=208
HNS HongShan 85.16 313 ⇓P **P** 07 50 23.1 +0.5
BMRM Bremner River 85.18 16 P **P** 07 50 22.4 +0.2
BMRM IAmb IAmb 07 50 22.7
comp=Z,11nm,0.8s
BMRM Bremner River 85.18 16 P **P** 07 50 22.6 +0.4
baz=211
MESA MESA 85.22 17 P **P** 07 50 23.0 +0.4
baz=214
SCM Sheep Creek Mo 85.28 14 P **P** 07 50 23.0 +0.3
baz=209,SNR=7.1
K20K Telida 85.30 11 P **P** 07 50 22.2 -0.5
baz=203,SNR=6.6
KLU Klutina 85.31 15 P **P** 07 50 23.2 +0.3
baz=210
LYN LuoYang 85.38 309 ⇓*i*P **P** 07 50 23.9 +0.1
WRAK Wrangell Islan 85.41 24 P **P** 07 50 23.9 +0.6
baz=222
BJI Beijing 85.50 315 P **P** 07 50 24.3 +0.2
PINM Pinnacle 85.64 18 P **P** 07 50 24.0 -0.5
baz=215
CAST Castle Rocks 85.71 11 P **P** 07 50 23.0 -1.7
baz=204,SNR=13
N25K Chitina, Valde 85.73 15 P **P** 07 50 24.9 0.0
N25K Chitina, Valde 85.73 15 P **P** 07 50 24.7 -0.2
baz=211
M24K Tolsona, Glenn 85.78 14 P **P** 07 50 25.5 +0.4
baz=210
WAT6 Susitna Watana 85.84 14 P **P** 07 50 25.3 -0.2
baz=208
WAT1 Susitna Watana 85.89 13 P **P** 07 50 26.3 +0.8
baz=208
SEY Seymchan 85.95 347 P **P** 07 50 25.6 -0.1
comp=Z,12nm,0.6s,baz=149,slow=5.7,SNR=33
comp=Z,12nm,0.6s
P29M Windy Craggy 86.02 19 P **P** 07 50 26.2 0.0
baz=218
J20K Nowinta River 86.04 10 P **P** 07 50 25.9 -0.3
baz=203
CTG Chitna Glacier 86.05 17 P **P** 07 50 26.6 +0.1
baz=214
CTGM Chitina Glacie 86.05 17 P **P** 07 50 26.7 +0.3
CTGM IAmb IAmb 07 50 27.6
comp=Z,7.1nm,0.8s
TRF Thorofare Moun 86.08 12 P **P** 07 50 25.5 -1.2
baz=206,SNR=14
CHUM Lake Minchumin 86.09 11 P **P** 07 50 25.7 -0.7
baz=204
HLID Hailey 86.12 41 P **P** 07 50 28.0 +0.8
baz=238,SNR=5.3
GCSA Galena City Sc 86.15 9 P **P** 07 50 27.0 +0.4
baz=200
O28M Mount Upton 86.21 18 P **P** 07 50 27.7 +0.2
baz=215
HARP HAARP 86.28 15 P **P** 07 50 27.5 +0.2
baz=211
O29M Mount Kennedy 86.30 19 P **P** 07 50 28.1 +0.4
baz=217
PLBC Pleasant Camp 86.31 20 P **P** 07 50 28.1 +0.6
baz=219
DHY Denali Highway 86.36 14 P **P** 07 50 27.8 -0.1
baz=209
BPAW Bear Paw Mtn. 86.54 12 P **P** 07 50 27.7 -0.9
BPAW Bear Paw Mtn. 86.54 12 P **P** 07 50 28.0 -0.5
baz=206
MCK McKinley 86.61 13 P **P** 07 50 28.2 -0.7
baz=207,SNR=11
P30M Million Dollar 86.65 19 P **P** 07 50 29.5 +0.3
baz=218
PAX Paxson 86.70 14 P **P** 07 50 29.0 -0.4
baz=211
M26K Nabesna, AK 86.81 16 P **P** 07 50 29.8 -0.2
baz=213
YUK6 Outpost Mounta 86.88 18 P **P** 07 50 30.5 0.0
baz=217
S34M Telegraph Cree 86.95 23 P **P** 07 50 31.5 +0.9
baz=224
YUK3 Moose Creek 86.96 17 P **P** 07 50 31.3 +0.5
baz=215,SNR=11
TXAR Lajitas Array 86.96 57 P **P** 07 50 32.9 +1.4
comp=Z,1.0nm,0.8s,baz=222,slow=6.8,SNR=14
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 86.96 57 P **P** 07 50 32.5 +1.0
HYT Haines Junctio 87.04 19 P **P** 07 50 31.5 +0.4
baz=218
M27K Edge Creek, AK 87.06 16 P **P** 07 50 31.7 +0.5
M27K IAmb IAmb 07 50 32.7
comp=Z,12nm,1.1s
M27K Edge Creek, AK 87.06 16 P **P** 07 50 31.5 +0.3
baz=214
YUK4 Talbot Arm 87.12 18 P **P** 07 50 32.4 +0.8
baz=217
NEW Newport 87.13 36 P **P** 07 50 32.2 +0.4
baz=235
L26K Log Cabin Wild 87.25 15 P **P** 07 50 32.0 +0.1
baz=212
ANMO Albuquerque 87.27 51 P **P** 07 50 32.8 -0.1
baz=243
P32M Atlin 87.29 21 P **P** 07 50 32.7 +0.5
baz=221
Q32M Nakina River 87.31 22 P **P** 07 50 32.7 +0.2
baz=222
I21K Tanana 87.34 11 P **P** 07 50 32.3 +0.1
baz=204,SNR=12
K24K Donnelly Dome 87.35 14 P **P** 07 50 32.2 -0.2
baz=210,SNR=7.1
NEA2 Nenana 87.35 12 P **P** 07 50 31.3 -1.0
baz=207
BVCY Beaver Creek 87.37 16 P **P** 07 50 32.9 +0.3
baz=215
MLY Manley 87.43 11 P **P** 07 50 31.8 -0.9
baz=206,SNR=13
O30N Mendenhall 87.43 19 P **P** 07 50 33.2 +0.4
baz=219
RIDG Independent Ri 87.50 14 P **P** 07 50 32.8 -0.3
baz=211
XLT XiLinHaoTe 87.54 319 *e*P **P** 07 50 33.7 -0.1
HDA Harding Lake 87.62 13 P **P** 07 50 33.1 -0.5
baz=209,SNR=11
H21K Melozitna Rive 87.64 10 P **P** 07 50 33.4 -0.3
H21K IAmb IAmb 07 50 35.2
comp=Z,5.7nm,0.7s
H21K Melozitna Rive 87.64 10 P **P** 07 50 33.1 -0.6
baz=204,SNR=11
L27K Beaver Creek, 87.66 16 P **P** 07 50 34.4 +0.5
baz=214,SNR=5.4
N30M Aishikik Lake 87.66 18 P **P** 07 50 34.1 +0.1
baz=218
BCAR Beaver Creek A 87.67 16 P **P** 07 50 34.0 0.0
WHY Whitehorse 87.72 20 P **P** 07 50 34.3 0.0
baz=220
DLBC Dease Lake 87.74 23 P **P** 07 50 34.8 +0.4
comp=Z,3.6nm,0.9s,baz=215,slow=6.7,SNR=4.8
comp=Z,3.6nm,0.9s
DLBC Dease Lake 87.74 23 P **P** 07 50 34.9 +0.4
baz=224
XAN Xi'an 87.77 307 P **P** 07 50 35.6 +0.5
XAN pP pP 07 52 30.2 -7.9
IMAR Indian Mountai 87.78 10 P **P** 07 50 33.8 -0.5
I23K Minto, Yukon-K 87.79 12 P **P** 07 50 33.8 -0.6
baz=207,SNR=5.6
TCOL CIGO, UAF Yank 87.84 12 P **P** 07 50 33.5 -1.1
baz=208,SNR=6.5
COLA College 87.84 12 P **P** 07 50 33.7 -0.9
baz=208
SCRK Sand Creek 87.91 14 P **P** 07 50 34.9 -0.2
baz=212
ILAR Eielson Array 87.95 13 P **P** 07 50 34.4 -0.8
comp=Z,7.3nm,0.9s,baz=226,slow=5.8,SNR=27
comp=Z,7.3nm,0.9s
M29M Somme Creek 88.05 17 P **P** 07 50 36.2 +0.4
baz=217,SNR=9.5
P33M Teslin, Yukon 88.05 21 P **P** 07 50 35.9 +0.1
baz=222
N31M Braeburn, Yuko 88.08 19 P **P** 07 50 35.6 -0.2
baz=219
R33M Jennings River 88.09 22 P **P** 07 50 36.1 +0.1
baz=224
H22K Ishtalitna Cre 88.09 11 P **P** 07 50 35.1 -0.7
baz=205,SNR=15
TROLL Troll, Antarti 88.14 180 P **P** 07 50 34.7 -1.5
J25K Salcha River, 88.14 14 P **P** 07 50 35.5 -0.6
baz=211
POKR Poker Plat Res 88.14 12 P **P** 07 50 34.7 -1.4
baz=209
S22A 4UR Ranch, Cre 88.26 49 P **P** 07 50 36.9 -0.7
baz=243
G21K Allakaket 88.31 10 P **P** 07 50 36.5 -0.3
baz=203

H23K	Yukon River	88.36	11	P		P	07 50 36.9	-0.2
	baz=207							
K27K	Chicken	88.41	15	P		P	07 50 37.5	+0.2
	baz=214							
J26L	Joseph Creek	88.45	14	P		P	07 50 38.0	+0.4
J26L	Joseph Creek	88.45	14	P		P	07 50 37.6	0.0
	baz=212,SNR=14							
VNA3	Neumayer Olymp	88.56	176	P		P	07 50 37.3	-0.8
N32M	Quiet Lake	88.67	20	P		P	07 50 39.0	+0.3
	baz=222							
L29M	L29M	88.68	17	P		P	07 50 39.2	+0.6
	baz=217,SNR=17							
BW06	Boulder Array	88.77	43	P		P	07 50 40.2	+0.4
	baz=241							
PD31	Pinedale Array	88.77	43	P		P	07 50 40.2	+0.5
PDAR	Pinedale Array	88.77	43	P		P	07 50 39.8	0.0
	comp=Z,1.4nm,0.6s,baz=210,slow=3.5,SNR=15							
	comp=Z,1.4nm,0.6s							
PDAR	Pinedale Array	88.77	43	P		P	07 50 39.6	-0.2
BOZ	Bozeman (W)	88.87	40	P		P	07 50 41.1	+1.0
	baz=240							
PRP	Porcupine Dome	88.89	13	P		P	07 50 39.9	+0.2
	baz=210							
HHC	Hu-ho-hao-te	88.96	314	*e*P		P	07 50 39.7	-0.9
F21K	Alatna River	88.97	9	P		P	07 50 39.9	+0.1
	baz=203							
VNA2	Neumayer--Watz	89.00	177	P		P	07 50 39.4	-0.8
	baz=192,slow=4.6							
G22K	Bettles	89.01	10	P		P	07 50 40.4	+0.4
	baz=205							
M31M	Drury Creek, Y	89.05	19	P		P	07 50 40.3	-0.1
	baz=221							
G23K	Bananza Creek	89.07	11	P		P	07 50 40.4	0.0
	baz=206							
DAWY	Dawson	89.11	16	P		P	07 50 40.4	-0.2
DAWY				IAmb		IAmb	07 50 41.7	
	comp=Z,9.9nm,0.9s							
DAWY	Dawson	89.11	16	P		P	07 50 40.9	+0.3
	baz=216,SNR=9.7							
VNA1	Neumayer--Stat	89.22	177	P		P	07 50 40.2	-0.9
I26K	Coal Creek Min	89.23	14	P		P	07 50 41.3	+0.3
	baz=213							
EGAK	Eagle	89.25	15	P		P	07 50 41.3	+0.1
EGAK				IAmb		IAmb	07 50 42.1	
	comp=Z,9.6nm,0.8s							
EGAK	Eagle	89.25	15	P		P	07 50 41.3	+0.1
	baz=214,SNR=9.0							
FARO	Faro, Yukon	89.39	19	P		P	07 50 42.2	+0.2
	baz=222							
K29M	Barlow Dome	89.43	17	P		P	07 50 42.9	+0.7
	baz=218,SNR=9.1							
F22K	John River	89.44	10	P		P	07 50 42.4	+0.4
	baz=204							
COLD	Coldfoot	89.51	11	P		P	07 50 43.0	+0.7
COLD				IAmb		IAmb	07 50 43.6	
	comp=Z,7.4nm,0.8s							
COLD	Coldfoot	89.51	11	P		P	07 50 42.5	+0.1
	baz=206,SNR=6.9							
G24K	Hadweenzic Riv	89.53	12	P		P	07 50 42.5	0.0
	baz=209							
MAYO	Mayo, Yukon	89.69	18	P		P	07 50 43.9	+0.6
	baz=219,SNR=6.5							
I27K	Kandik River	89.83	14	P		P	07 50 44.1	+0.2
	baz=214							
CMAR	Chiang Mai Arr	89.84	290	P		P	07 50 46.5	+1.5
	comp=Z,7.6nm,0.9s,baz=119,slow=2.7,SNR=6.6							
	comp=Z,7.6nm,0.9s							
CHTO	Chiang Mai	89.97	290	P		P	07 50 46.9	+1.3
F24K	Squaw Lake	90.18	11	P		P	07 50 45.8	+0.3
	baz=208							
MMPY	Sheldon Lake,	90.34	20	P		P	07 50 46.9	+0.5
	baz=223							
E23K	Chandalar	90.35	10	P		P	07 50 46.7	+0.4
	baz=207							
H27K	Steamboat Moun	90.37	14	P		P	07 50 47.3	+0.8
	baz=214							
PZH	PanZhiHua	90.39	298	P		P	07 50 47.7	+0.2
I29M	Ogilvie Camp,	90.43	16	P		P	07 50 46.4	-0.3
	baz=217,SNR=5.5							
G26K	Porcupine Rive	90.48	13	P		P	07 50 47.1	+0.3
	baz=212							
TGTN	Hyland Airport	90.55	22	P		P	07 50 47.7	+0.4
	baz=226							
F25K	Christian Rive	90.66	12	P		P	07 50 48.4	+0.7
	baz=210							
BMAR	Burnt Mountain	90.73	12	P		P	07 50 48.8	+0.7
G27K	Doyon Strip	90.82	14	P		P	07 50 48.7	+0.2
	baz=214							
TOLK	Toolik Lake Re	90.88	10	P		P	07 50 50.9	+2.1
	baz=207							
D23K	Nanushuk River	91.00	10	P		P	07 50 49.7	+0.5
	baz=206							
EPYK	Eagle Plains	91.63	15	P		P	07 50 52.4	+0.2
	baz=218							
C23K	Itkillik River	91.80	9	P		P	07 50 53.3	+0.5
	baz=206							
G30M	tAoh Zraii Nji	92.24	15	P		P	07 50 54.7	-0.3
	baz=219,SNR=7.0							
F31M	Tsiigehtchic	93.21	16	P		P	07 50 59.0	-0.3
	baz=221							
INK	Inuvik	93.92	15	P		P	07 51 02.1	-0.4
	comp=Z,2.3nm,0.9s,baz=282,slow=2.8,SNR=5.1							
	comp=Z,2.3nm,0.9s							
INK	Inuvik	93.92	15	P		P	07 51 02.1	-0.4
	baz=221							
ZALV	Zalesovo Beam	110.08	321	PKiKP		PKiKP	07 56 11.0	-1.9
	comp=Z,1.3nm,0.5s,baz=91,slow=1.5,SNR=5.7							
MK31	Makanchi Array	110.81	314	PKiKP		PKiKP	07 56 13.0	-1.6
MKAR	Makanchi Array	110.81	314	Pdiff		Pdif	07 52 22.9	+4.4
	comp=Z,0.5nm,0.9s,baz=93,slow=2.9,SNR=3.7							
MKAR				PKiKP		PKiKP	07 56 13.2	-1.5
	comp=Z,1.6nm,0.6s,baz=211,slow=0.3,SNR=20							
KURK	Kurchatov	113.59	318	PKiKP		PKiKP	07 56 17.3	-2.4
KURBB	Kurchatov Arra	113.65	317	PKiKP		PKiKP	07 56 18.1	-1.7
	comp=Z,2.1nm,0.7s,baz=97,slow=1.9,SNR=30							
KURBB				SKP			07 59 00.7	
	comp=Z,0.3nm,0.7s,baz=104,slow=2.1,SNR=4.9							
GEYT	Alibeck	128.44	303	PKP		PKPdf	07 56 49.2	+0.5
	comp=Z,1.5nm,0.4s,baz=172,slow=1.0,SNR=4.1							
ARCES	ARCESS Array B	128.50	350	PKP		PKPdf	07 56 46.4	-1.4
	comp=Z,3.3nm,0.6s,baz=53,slow=1.1,SNR=13							
FINES	FINESS Array B	135.34	344	PKP		PKPdf	07 56 58.5	-2.4
	comp=Z,3.4nm,0.7s,baz=106,slow=4.2,SNR=5.9							
NB2	NORSAR Subarra	138.56	353	PKP		PKPdf	07 56 57.1	-10
	comp=Z,1.5nm,0.6s,baz=28,slow=4.0							
NOA	NORSAR Array B	138.56	353	PKhKP		PKPpre	07 56 57.4	
	comp=Z,0.9nm,0.7s,baz=21,slow=4.3,SNR=5.8							
NACGM	Naroch	140.44	338	*e*PKiKP		PKPdf	07 57 05.2	-5.3
	baz=39							
AKASG	Malin Array Be	142.59	331	PKhKP		PKPpre	07 57 10.4	
	comp=Z,16nm,0.6s,baz=43,slow=4.5,SNR=102							
AKASG				SKP			07 59 56.2	
	comp=Z,0.7nm,0.5s,baz=40,slow=3.1,SNR=5.1							
AKBB	Malin Array Si	142.59	331	PKPdf		PKPdf	07 57 11.1	-3.3
LODK	Lodwar	143.36	247	PKPdf		PKPab	07 57 15.6	+0.3
DIKM	Dikmen	144.49	315	⇑P		PKPdf	07 57 18.3	+0.3
BZK	Bozkurt	145.18	316	⇑P		PKPdf	07 57 18.4	-0.7
BZK	Bozkurt	145.18	316	PKPdf		PKPdf	07 57 18.4	-0.7
VASR	Vaslui	146.08	327	⇑P		PKPbc	07 57 22.8	+0.1
BR131	Keskin Array S	146.46	313			PKPdf	07 57 23.5	+1.9
BRTR	Keskin Array B	146.46	313	PKPbc		PKPdf	07 57 23.2	+1.6
	comp=Z,8.4nm,0.7s,baz=131,slow=4.2,SNR=34							
BRTR	Keskin Array B	146.46	313			PKPdf	07 57 22.9	+1.3
VLDR	Vladesti	146.46	326	⇑P		PKPbc	07 57 24.0	+0.3
TLCR		146.49	324	⇑P		PKPdf	07 57 23.2	+1.9
BUR08	Bucovina Ar. S	146.62	331			PKPbc	07 57 24.3	0.0
BURAR	Bucovina Array	146.63	331	⇑P		PKPbc	07 57 24.1	-0.2
GHRR		146.67	327	⇑P		PKPbc	07 57 24.3	+0.1
BIZ	Bicaz	146.71	329	⇑P		PKPbc	07 57 24.5	+0.2
OJC	Ojcow	146.73	339	*e*PKPbc		PKPdf	07 57 22.3	+0.8
OJC	Ojcow	146.73	339	PKPdf		PKPdf	07 57 22.2	+0.8
TESR	Tescani	146.74	328	⇑P		PKPbc	07 57 24.1	-0.4
CFR	Carcaliu	146.87	325	⇑P		PKPbc	07 57 24.7	-0.1
TPGR	Topolog	146.92	324	⇑P		PKPbc	07 57 24.9	-0.1
ANTO	Ankara	146.97	313	⇑P		PKPbc	07 57 25.4	0.0
ANTO	Ankara	146.97	313			PKPbc	07 57 25.3	0.0
VRI	Vrincioaia	147.15	327	⇑P		PKPbc	07 57 25.1	-0.4
PLOR	Plostina	147.20	327	⇑P		PKPdf	07 57 24.8	+2.3
NIE	Niedzica	147.23	338	*e*PKPbc		PKPbc	07 57 25.9	+0.2
KSP	Ksiaz	147.26	343	*e*PKPbc		PKPbc	07 57 25.7	0.0
HARR	Harsova	147.29	325	⇑P		PKPbc	07 57 25.9	0.0
TRPA	Tarpa	147.41	334	⇑P		PKPbc	07 57 26.0	-0.1
TRPA	Tarpa	147.41	334	PKP		PKPbc	07 57 25.8	-0.3
OZUR		147.46	328	⇑P		PKPbc	07 57 26.5	+0.1
OSTC	Ostas	147.54	343	⇑*e*PKP		PKPbc	07 57 26.6	+0.2
CHVC	Chvalec	147.56	343	⇑*e*PKP		PKPbc	07 57 26.0	-0.5
OKC	Ostrava-Krasne	147.60	340	⇑*e*PKP		PKPbc	07 57 26.2	-0.4
OKC				*ex*		x	07 57 35.7	
CLL	Collm	147.63	347			PKPbc	07 57 26.4	-0.3
CLL	Collm	147.63	347	⇓*i*PKPbc		PKPbc	07 57 26.3	-0.3
	comp=Z,36nm,0.9s							
CLL				⇑*i*PKPab		PKPab	07 57 30.4	-0.5
	comp=Z,17nm,0.9s							
UPC	Upice	147.64	343	⇑*e*PKP		PKPbc	07 57 26.6	-0.1
DPC	Dobruska-Polom	147.69	343	⇑*e*PKP		PKPbc	07 57 26.7	-0.2
DPC				*e*PKPAB		PKPab	07 57 31.1	-0.1
DOPR	Dopca	147.75	329	⇑P		PKPbc	07 57 27.0	-0.1
ISR	Istrita	147.75	326	⇑P		PKPbc	07 57 27.2	0.0
MLR	Muntele Rosu	147.80	327	⇑P		PKPbc	07 57 26.8	-0.6
MLR	Muntele Rosu	147.80	327			PKPbc	07 57 26.8	-0.6
KRLC	Kraliky	147.81	342	⇑*e*PKP		PKPbc	07 57 26.7	-0.5
KRLC				*e*PKPAB		PKPab	07 57 31.2	-0.5
BRG	Berggiesshubel	147.83	346	*i* PKP		PKPbc	07 57 27.0	-0.1
BRG				Amp			07 57 27.9	
	comp=Z,14nm,0.7s							
BRG				*i* x		x	07 57 31.7	
BRG				Amp			07 57 32.2	
	comp=Z,12nm,0.7s							
MORC	Moravsky Berou	147.84	341	PKPbc		PKPbc	07 57 27.1	-0.1
MORC	Moravsky Berou	147.84	341	*e*PKP		PKPbc	07 57 27.0	-0.3
SECR		148.05	327	⇑P		PKPbc	07 57 28.3	+0.4
MAUC	Maruska	148.11	340	⇑*e*PKP		PKPbc	07 57 26.8	-1.2
MAUC				*e*PKPAB		PKPab	07 57 33.7	+0.7
VOIR		148.29	328	⇑P		PKPbc	07 57 28.1	-0.4
DRGR		148.38	332	⇑P		PKPdf	07 57 27.0	+2.6
PRU	Pruhonice	148.50	344	⇑*e*PKP		PKPbc	07 57 28.2	-0.6
PRU				*e*PKPAB		PKPab	07 57 33.9	-0.6
GOPC	GO Pecny, Ondr	148.51	344	⇑*e*PKP		PKPbc	07 57 28.6	-0.3
GOPC				*e*PKPAB		PKPab	07 57 34.5	0.0
ARR	Arges	148.54	328	⇑P		PKPbc	07 57 28.8	-0.4
VRAC	Vranov	148.55	341	*e*PKP		PKPbc	07 57 28.7	-0.3
JAVC	Velka Javorina	148.61	340	*e*PKP		PKPbc	07 57 29.9	+0.7
PSZ	Piszkesteto	148.63	336	⇑P		PKPdf	07 57 26.7	+1.9
PSZ	Piszkesteto	148.63	336			PKPbc	07 57 28.8	-0.5
PSZ	Piszkesteto	148.63	336	PKP		PKPbc	07 57 29.3	0.0
NKC	Novy Kostel	148.77	347	⇑*e*PKP		PKPbc	07 57 29.4	-0.1
KRUC	Moravsky	148.83	341	*e*PKP		PKPbc	07 57 29.3	-0.4
LOT	Lotru	148.91	329	⇑P		PKPbc	07 57 29.4	-0.8
SIRR	Siria	149.25	333	⇑P		PKPbc	07 57 29.2	-1.6
MEM	Membach	149.37	355	*d*PKiKP		PKPbc	07 57 30.4	-0.5
BTNL	Ternell	149.38	355	*d*PKiKP		PKPbc	07 57 30.4	-0.6
GZR	Gura Zlata	149.41	330	⇑P		PKPbc	07 57 29.8	-1.5
KHC	Kasperske Hory	149.54	345			PKPbc	07 57 31.2	-0.2
KHC				PKPab		PKPab	07 57 39.1	+0.2
KHC	Kasperske Hory	149.54	345	⇑*e*PKP		PKPbc	07 57 30.7	-0.7
KHC				*e*PKPAB		PKPab	07 57 39.0	+0.2
CKRC	Cesky Krumlov	149.64	344	⇑*e*PKP		PKPbc	07 57 31.5	-0.1
CKRC				*e*PKPAB		PKPab	07 57 39.0	-0.2
BMRD	Maredsous	149.77	356	*d*PKiKP		PKPbc	07 57 31.4	-0.5
GEC2	GERESS Array S	149.77	344			PKPbc	07 57 31.3	-0.8
GERES	GERESS Array B	149.77	344	PKPbc		PKPbc	07 57 31.8	-0.3
	comp=Z,5.4nm,0.7s,baz=48,slow=2.0,SNR=36							
BZS	Buzias	149.77	332	⇑P		PKPbc	07 57 30.3	-1.8
HERR	Herculane	149.97	330	⇑P		PKPbc	07 57 31.4	-1.1
CONA	Conrad Observa	150.00	341	*e*P		PKPbc	07 57 32.3	-0.3
	comp=Z,10nm,0.6s							
CONA				*i* P		PKPab	07 57 41.6	+0.7
	comp=Z,5.8nm,0.8s							
RONA	Rosalia, Austr	150.07	340	*e*P		PKPbc	07 57 32.4	-0.3
	comp=Z,14nm,0.5s							
MDVR	Moldovita	150.37	331	⇓P		PKPbc	07 57 31.8	-1.7
MORH	Mrgy, Hungar	150.52	336	⇑P		PKPbc	07 57 31.8	-1.9
MORH	Mrgy, Hungar	150.52	336	PKP		PKPbc	07 57 33.1	-0.6
MOA	Molln	150.53	343	*i* P		PKPab	07 57 44.4	+1.4
	comp=Z,3.8nm,0.6s							
BLKB	Belogradchik	150.77	328	⇑P		PKPbc	07 57 32.8	-1.7
KOVH	Kovagotottos	150.83	336	PKP		PKPbc	07 57 34.0	-0.4
BIOA	Bad Ischl, Aus	150.85	344	*i* P		PKPbc	07 57 33.4	-1.1
	comp=Z,6.6nm,0.8s							
BIOA				*i* P		PKPab	07 57 44.8	+0.4
	comp=Z,10nm,0.6s							
VTS	Vitosha	151.21	326	⇓P		PKPbc	07 57 34.1	-1.6
BOVS	Bovan	151.24	329	⇑P		PKPbc	07 57 33.9	-1.6
SOKA	Soboth	151.37	341	*i* P		PKPbc	07 57 34.6	-1.2
	comp=Z,6.1nm,0.9s							
SOKA				*e*P		PKPab	07 57 46.3	-0.3
	comp=Z,6.8nm,1.1s							
OBKA	Obir	151.67	341	*e*P		PKPab	07 57 47.5	-0.4
	comp=Z,4.0nm,0.9s							
DIVS	Divibare	151.68	332			PKPbc	07 57 36.1	-0.4
DIVS				PKPab		PKPab	07 57 49.8	+1.7
WATA	Walderalm	151.69	346	*e*P		PKPbc	07 57 35.4	-1.2
WATA				*e*P		PKPab	07 57 48.0	-0.1
RETA	Reutte	151.73	347	*e*P		PKPbc	07 57 36.5	0.0
WTTA	Wattenberg	151.75	346	*e*P		PKPbc	07 57 35.7	-1.0
WTTA				*e*P		PKPab	07 57 48.5	+0.2
MOTA	Moosalm	151.79	347	*e*P		PKPbc	07 57 36.1	-0.7
MOTA				*e*P		PKPab	07 57 48.4	-0.1
MYKA	Terra Mystica	151.82	343	*e*P		PKPbc	07 57 35.2	-1.6
	comp=Z,5.9nm,0.5s							
MYKA				*i* P		PKPab	07 57 48.0	-0.6
	comp=Z,4.0nm,0.5s							
SQTA	Sankt Quirin	151.88	346	*e*P		PKPbc	07 57 35.5	-1.5
	comp=Z,3.9nm,0.4s							
ABTA	Abfaltersbach	152.02	344	*i* P		PKPbc	07 57 35.9	-1.3
	comp=Z,11nm,0.5s							
ABTA				*i* P		PKPab	07 57 49.2	-0.2
	comp=Z,6.9nm,0.6s							
FETA	Feichten	152.18	347	*e*P		PKPdf	07 57 29.4	-1.0
	comp=Z,5.8nm,1.0s							
FETA				*i* P		PKPbc	07 57 37.1	-0.6
	comp=Z,6.6nm,0.9s							
FETA				*e*P		PKPab	07 57 50.5	+0.3
	comp=Z,4.2nm,0.8s							
FUORN	Ofenpass-Fuorn	152.66	347	PKPdf		PKPdf	07 57 30.5	-0.8
FUORN						PKPbc	07 57 38.7	-0.1
FUORN				PKPab		PKPab	07 57 53.0	+0.6
ESDC	Sonseca Array	159.85	13	PKPab		PKPab	07 58 23.3	-0.1
	comp=Z,3.0nm,1.1s,baz=347,slow=4.0,SNR=8.2							

UPA 04 07:45:25.2±0.3, 8°74N×82°93W, h30km±4km, MW2.7, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.24	77	⇑*i*P	Pb	07 45 32.4	+0.3
BRU2				*i* S	Sb	07 45 37.8	+1.1
BCO2	Palmira	0.40	93	⇑*e*P	Pb	07 45 34.4	+0.2
BCO2				*e*S	Sn	07 45 41.4	-0.4
CNI2	El Empalme, Bo	0.82	34	*e*P	Pn	07 45 39.4	-1.4

*IDC **04** 07:45:46.7±1.9, 14°30N×121°12E, h0km, mb3.9/5, mbtmp3.9/5, MS3.6/3, Error ellipse: s-maj=235.4km s-min=19.1km az=64.0*
*MAN **04** 07:46:06.5, 14°11N×120°42E, h156km, mb4.1, ML2.9, MS2.5*
ISC 04 07:46:06.0±1.0, 14°1N±0°1×120°5E±0°1, h150km, n13, σ3°05/12, mb3.8/5, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.42	214	⇑*i*P	Pn	07 46 29.7	+2.7
LUBP				*i* S	Sn	07 46 46.9	+4.0
TGY	Tagaytay City	0.44	87	⇑*i*P	Pn	07 46 34.0	+6.9
TGY				*e*S	Sn	07 46 47.4	+4.2
LQP	Lukban	1.02	88	⇓*i*P	Pn	07 46 33.1	+1.9
LQP				*i* S	Sn	07 46 53.8	+3.4
PCPH	Palayan	1.58	22	*e*P	Pn	07 46 37.7	+1.2
JCNP	Jose Panganiba	2.15	84	⇓*i*P	Pn	07 46 43.5	+0.6
PSI	Prapat	24.06	244	LR	LR	08 00 18.0	
	comp=Z,74nm,18.6s,baz=176,slow=35						
BATI	Baumata	24.34	172	LR	LR	08 03 04.1	
	comp=Z,94nm,18.4s,baz=316,slow=42						
WRA	Warramunga Arr	36.45	158	P	P	07 52 53.2	-3.4
	1.5nm,0.5s,baz=339,slow=8.7,SNR=17						
	1.5nm,0.5s						
ASAR	Alice Springs	39.75	161	P	P	07 53 21.1	-3.1
	1.8nm,0.4s,baz=335,slow=7.3,SNR=42						
	1.8nm,0.4s						
MKAR	Makanchi Array	45.60	324	P	P	07 54 10.4	-0.8
	0.2nm,0.4s,baz=139,slow=6.1,SNR=4.3						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	48.62	333	P	P	07 54 32.5	-2.0
	0.7nm,0.4s,baz=132,slow=5.5,SNR=2.1						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	49.76	326	P	P	07 54 42.2	-0.9
	0.4nm,0.4s,baz=125,slow=8.4,SNR=8.1						
	0.4nm,0.4s						
BORG	Borgarnes	96.24	345	LR	LR	08 46 44.9	
	comp=Z,52nm,19.1s,baz=200,slow=38						

*IDC **04** 07:47:48.9±1.5, 23°23S×174°78W, h0km, mb3.9/5, mbtmp3.9/6, ML5.4/1, MS3.5/11, Error ellipse: s-maj=67.6km s-min=26.5km az=163.0*
ISC 04 07:47:54.1±1.2, 23°1S±0°3×174°9W±0°2, h30km, n17, σ1°03/8, mb3.8/5, MS3.6/9, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.55	308	Pn	Pn	07 49 56.0	0.0
	1.3nm,0.3s,baz=127,slow=15,SNR=7.8						
MSVF				LR	LR	07 52 38.8	
	comp=Z,598nm,18.5s,baz=152,slow=34						
	7.7nm,0.6s						
RAR	Rarotonga	14.11	85	LR	LR	07 55 00.6	
	comp=Z,92nm,21.7s,baz=264,slow=31						
DZM	Mont Dzumac	17.30	270	LR	LR	07 57 57.6	
	comp=Z,164nm,18.2s,baz=198,slow=35						
PPT	Papeete	24.33	81	LR	LR	07 59 53.4	
	comp=Z,48nm,20.6s,baz=286,slow=30						
HNR	Honiara	27.70	295	LR	LR	08 03 52.9	
	comp=Z,1μm,18.1s,baz=172,slow=35						
PMG	Port Moresby	38.80	284	LR	LR	08 08 40.0	
	comp=Z,59nm,18.1s,baz=331,slow=32						
ASAR	Alice Springs	46.81	259	P	P	07 56 21.2	-0.2
	0.6nm,0.5s,baz=96,slow=7.1,SNR=12						
ASAR				LR	LR	08 14 41.2	
	comp=Z,80nm,19.2s,baz=131,slow=34						
	0.6nm,0.5s						
WRA	Warramunga Arr	47.17	264	P	P	07 56 23.5	-0.7
	1.4nm,0.7s,baz=96,slow=8.4,SNR=13						
WRA				LR	LR	08 14 50.0	
	comp=Z,71nm,18.9s,baz=142,slow=34						
	1.4nm,0.7s						
FITZ	Fitzroy Crossi	55.60	263	LR	LR	08 19 36.7	
	comp=Z,58nm,18.1s,baz=118,slow=34						
SIJI	Sorong	56.73	285	LR	LR	08 22 23.3	
	comp=Z,18nm,18.7s,baz=26,slow=36						
RPN	Rapa Nui	58.86	109	LR	LR	08 19 24.8	
	comp=Z,17nm,18.4s,baz=334,slow=32						
NVAR	Mina Array Bea	80.99	42	P	P	08 00 05.3	-0.9
	0.8nm,1.0s,baz=228,slow=7.6,SNR=4.5						
	0.8nm,1.0s						
BBB	Bella Bella	85.39	27	LR	LR	08 37 16.9	
	comp=Z,32nm,18.5s,baz=45,slow=35						
TXAR	Lajitas Array	86.06	56	P	P	08 00 33.1	+0.8
	0.4nm,0.9s,baz=198,slow=5.7,SNR=3.1						
	0.4nm,0.9s						
CMAR	Chiang Mai Arr	93.73	288	P	P	08 01 09.9	+1.4
	0.7nm,0.3s,baz=129,slow=3.3,SNR=8.3						
	0.7nm,0.3s						
AKASG	Malin Array Be	146.72	332	PKPbc	PKPdf	08 07 30.9	-0.2
	0.9nm,0.6s,baz=42,slow=4.1,SNR=5.8						
BRTR	Keskin Array B	150.77	311	PKPbc	PKPbc	08 07 42.8	-1.0
	0.7nm,0.6s,baz=126,slow=3.4,SNR=3.9						

*ANF **04** 08:02:25.7±0.2, 58°47N×137°28W, h0km, ML3.9/34, Error ellipse: s-maj=3.5km s-min=1.6km az=18.0*
*AEIC **04** 08:02:25±1.5, 58°51N±0°03×137°38W±0°05, h0km±6km, Error ellipse: s-maj=4.8km s-min=3.2km az=215.0*
*NEIC **04** 08:02:26.7±1.6, 58°53N±0°03×137°36W±0°05, h3km±7km, Error ellipse: s-maj=4.8km s-min=3.2km az=211.0*
*PGC **04** 08:02:27.3±0.4, 58°57N×137°38W, h1km, ML3.8, ML3.7/13, 137km Wsw of Haines, Ak Southeastern Alaska*
ISC 04 08:02:25.3±0.8, 58°52N±0°03×137°39W±0°02, h10km, n310, σ2°34/362, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R31K	City Hall, Gus	0.87	96		Pb	08 02 42.2	-0.2
R31K					Sb	08 02 54.9	+0.7
R31K	City Hall, Gus	0.87	96	P	Pg	08 02 42.0	0.0
	baz=279						
R31K				S	Sg	08 02 52.1	-1.3
	baz=279						
PLBC	Pleasant Camp	1.08	29		Pb	08 02 45.9	-0.1
PLBC					Sg	08 02 59.8	-0.2
PLBC	Pleasant Camp	1.08	29		Pb	08 02 45

HYT			Sg	Sb	08 03 37.4 +1.5
HYT	Haines Junctio	2.31 359	P	Pn	08 03 05.3 +1.8
	baz=178,SNR=98				
O30N	Mendenhall	2.35 16		Pn	08 03 05.7 +1.7
O30N	Mendenhall	2.35 16	P	Pn	08 03 05.7 +1.7
	baz=196,SNR=124				
SAMH	Samovar Hills	2.37 314	Pn	Pb	08 03 06.9 -1.2
YUK6	Outpost Mounta	2.48 349		Pn	08 03 08.2 +2.2
YUK6				Sb	08 03 39.6 -1.1
YUK6	Outpost Mounta	2.48 349	Pn	Pn	08 03 07.8 +1.8
YUK6			Sg	Sb	08 03 41.9 +1.2
YUK6	Outpost Mounta	2.48 349	P	Pn	08 03 08.2 +2.2
	baz=168,SNR=46				
WHY	Whitehorse	2.50 30		Pn	08 03 08.0 +1.9
WHY	Whitehorse	2.50 30	Pn	Pn	08 03 07.9 +1.9
WHY			Sg	Sb	08 03 43.1 +2.1
WHY	Whitehorse	2.50 30	P	Pn	08 03 07.6 +1.6
	baz=212,SNR=248				
YUK5	Granite Creek	2.63 355		Pn	08 03 10.5 +2.6
YUK5	Granite Creek	2.63 355	Pn	Pn	08 03 10.5 +2.6
O28M	Mount Upton	2.67 329		Pn	08 03 10.5 +2.0
O28M	Mount Upton	2.67 329	Pn	Pn	08 03 10.0 +1.4
O28M			Sg	Sb	08 03 48.1 +1.9
O28M	Mount Upton	2.67 329	P	Pn	08 03 09.8 +1.3
	baz=146,SNR=82				
Q32M	Nakina River	2.71 78		Pn	08 03 10.9 +1.9
Q32M	Nakina River	2.71 78	P	Pn	08 03 10.1 +1.2
	baz=263,SNR=7.8				
TABL	Table Mountain	2.72 317		Pn	08 03 11.5 +2.4
TABL	Table Mountain	2.72 317	IAML		08 04 00.4
	comp=N,320nm,0.6s				
TABL			IAML		08 04 06.9
	comp=E,231nm,0.9s				
TABL	Table Mountain	2.72 317	Pn	Pn	08 03 11.1 +1.9
TABL			Sg	Sb	08 03 49.8 +2.3
MESA	MESA	2.87 307		Pn	08 03 13.5 +2.3
MESA	MESA	2.87 307	Pn	Pn	08 03 12.5 +1.3
MESA			Sg	Sb	08 03 55.3 +3.5
MESA	MESA	2.87 307	P	Pn	08 03 12.9 +1.7
	baz=123,SNR=16				
P33M	Teslin, Yukon	2.89 52		Pn	08 03 12.9 +1.5
P33M	Teslin, Yukon	2.89 52	Pn	Pn	08 03 13.3 +2.0
P33M			Sg	Sb	08 03 54.6 +2.2
P33M	Teslin, Yukon	2.89 52	P	Pn	08 03 12.2 +0.8
	baz=236,SNR=43				
P33M			Sb	Sb	08 03 54.9 +2.6
	baz=236				
YAH	Yahtse	2.89 312		Pn	08 03 14.1 +2.6
YAH	Yahtse	2.89 312	IAML		08 04 00.5
	comp=N,216nm,0.5s				
YAH			IAML		08 04 19.6
	comp=E,202nm,0.9s				
YUK4	Talbot Arm	2.91 348	Pn	Pb	08 03 15.4 -1.9
YUK4	Talbot Arm	2.91 348	P	Pb	08 03 15.5 -1.7
	baz=168,SNR=59				
LOGN	Logan Glacier	2.95 323		Pn	08 03 14.5 +2.2
LOGN	Logan Glacier	2.95 323	IAML		08 04 00.3
	comp=N,200nm,0.6s				
LOGN			IAML		08 04 07.6
	comp=E,164nm,0.6s				
LOGN	Logan Glacier	2.95 323	Pn	Pn	08 03 14.2 +1.9
LOGN			Sg	Sb	08 03 53.5 -0.7
N30M	Aishikik Lake	2.95 3		Pn	08 03 14.6 +2.4
N30M	Aishikik Lake	2.95 3	Pn	Pn	08 03 14.1 +1.9
N30M			Sg	Sb	08 03 57.2 +3.1
N30M	Aishikik Lake	2.95 3	P	Pn	08 03 14.0 +1.8
	baz=183,SNR=77				
N31M	Braeburn, Yuko	3.08 14		Pn	08 03 16.5 +2.5
N31M	Braeburn, Yuko	3.08 14	IAML		08 04 08.0
	comp=N,217nm,0.9s				
N31M			IAML		08 04 14.5
	comp=E,278nm,0.6s				
N31M	Braeburn, Yuko	3.08 14	Pn	Pn	08 03 16.9 +2.9
N31M			Pg	Pb	08 03 22.0 +1.8
N31M			Sg	Sb	08 04 00.4 +2.5
N31M	Braeburn, Yuko	3.08 14	P	Pn	08 03 16.6 +2.5
	baz=196,SNR=36				
BAGL	Bagley Icefiel	3.11 312		Pn	08 03 17.1 +2.9
CTGM	Chitina Glacie	3.16 323		Pn	08 03 17.5 +2.3
CTGM	Chitina Glacie	3.16 323	IAML		08 04 10.9
	comp=N,174nm,0.4s				
CTGM			IAML		08 04 16.3
	comp=E,129nm,1.2s				
CTGM	Chitina Glacie	3.16 323	Pn	Pn	08 03 17.4 +2.2
CTGM			Sg	Sb	08 04 00.4 +0.1
CTG	Chitna Glacier	3.17 322	P	Pn	08 03 17.1 +1.9
	baz=139,SNR=31				
SNH	Sunshine Point	3.25 303		Pb	08 03 20.4 -2.6
ISLE	Juniper Island	3.27 312		Pn	08 03 19.0 +2.3
ISLE			IAML		08 04 26.1
	comp=N,220nm,0.8s				
BARN	Barnard Glacie	3.34 322		Pn	08 03 20.1 +2.5
BARN			IAML		08 04 09.6
	comp=N,158nm,0.4s				
U33K	Whale Pass	3.34 134		Pn	08 03 20.1 +2.7
S34M	Telegraph Cree	3.37 98	Pn	Pn	08 03 20.1 +2.3
WAX	Waxell Ridge	3.39 307		Pn	08 03 20.3 +2.0
N32M	Quiet Lake	3.42 38		Pn	08 03 20.5 +1.9
N32M	Quiet Lake	3.42 38	Pn	Pn	08 03 20.4 +1.8
N32M			Sg	Sb	08 04 11.6 +4.1
N32M	Quiet Lake	3.42 38	P	Pn	08 03 20.2 +1.6
	baz=221				
R33M	Jennings River	3.44 72		Pn	08 03 20.7 +1.7
R33M	Jennings River	3.44 72	Pn	Pn	08 03 20.5 +1.6
R33M	Jennings River	3.44 72	P	Pn	08 03 20.6 +1.6
	baz=258,SNR=6.0				
WRAK	Wrangell Islan	3.44 126		Pn	08 03 20.6 +1.8
WRAK			IAML		08 04 19.9
	comp=N,98nm,1.8s				
WRAK			IAML		08 04 27.1
	comp=N,110nm,0.7s				
KIAG	Kiagna River	3.49 316		Pn	08 03 21.7 +2.0
KIAG	Kiagna River	3.49 316	Pn	Pn	08 03 21.1 +1.5
KIAG			Sg	Sb	08 04 09.6 +0.1
GRIN	Grindle Hills	3.51 303		Pn	08 03 23.1 +3.3
BALM	Baldy	3.56 317		Pn	08 03 22.6 +2.0
BALM	Baldy	3.56 317	Pn	Pn	08 03 22.4 +1.8
BALM			Sg	Sb	08 04 12.2 +0.7
KHIT	Khitrov Hills	3.56 305		Pn	08 03 22.5 +1.9
TGL	Tana Glacier	3.56 311		Pn	08 03 22.6 +2.0
TGL	Tana Glacier	3.56 311	IAML		08 04 15.9
	comp=N,110nm,0.7s				
TGL			IAML		08 04 36.5
	comp=E,141nm,0.8s				
YUK3	Moose Creek	3.61 336		Pn	08 03 24.1 +2.7
YUK3	Moose Creek	3.61 336	Pn	Pn	08 03 23.7 +2.3
YUK3			Sg	Sb	08 04 18.0 +4.9
YUK3	Moose Creek	3.61 336	P	Pn	08 03 24.6 +3.2
	baz=153,SNR=10				
SUCK	Suckling Hills	3.63 298		Pn	08 03 23.7 +2.2
SUCK			IAML		08 04 35.8
	comp=N,126nm,0.8s				
SUCK			IAML		08 04 48.9
	comp=E,106nm,0.9s				
PTPK	Patty Peak	3.70 318		Pn	08 03 25.5 +2.8
PTPK	Patty Peak	3.70 318	Pn	Pn	08 03 24.9 +2.3
PTPK			Sg	Sb	08 04 17.8 +2.0
YUK2	White River	3.71 334		Pn	08 03 25.1 +2.5
YUK2	White River	3.71 334	Pn	Pn	08 03 23.8 +1.3
YUK2			Sg	Sb	08 04 20.8 +5.0
BERG	Berg Lake	3.73 303		Pn	08 03 25.8 +2.9
NICHA	Nichawak Mount	3.78 300		Pn	08 03 26.2 +2.6
CRAG	Craig	3.85 141		Pn	08 03 24.5 +0.1
CRAG			IAML		08 04 30.8
	comp=N,85nm,2.1s				
DLBC	Dease Lake	3.87 88	Pn	Pn	08 03 26.8 +2.0
DLBC			IAML		08 04 38.2
	comp=E,70nm,0.6s				
DLBC	Dease Lake	3.87 88	Pn	Pn	08 03 27.0 +2.3
DLBC			Sg	Sg	08 04 27.6 -1.7
KAIM	Kayak Island	3.88 294	Pn	Pn	08 03 27.3 +2.5
KAIM			IAML		08 03 59.9
	comp=N,139nm,2.9s				
KAIM			IAML		08 04 46.4
	comp=E,125nm,2.1s				
KAIM	Kayak Island	3.88 294	P	Pn	08 03 26.8 +1.9
	baz=108				
HMT	Hamilton	3.96 300		Pn	08 03 28.3 +2.4
M29M	Somme Creek	3.97 353		Pn	08 03 28.7 +2.4
M29M	Somme Creek	3.97 353	Pn	Pn	08 03 28.7 +2.4
M29M			Sn	Sn	08 04 14.2 +1.3
M29M	Somme Creek	3.97 353	P	Pn	08 03 28.9 +2.6
	baz=172,SNR=42				
M31M	Drury Creek, Y	3.98 21	Pn	Pn	08 03 29.0 +2.6
M31M			IAML		08 04 38.4
	comp=E,93nm,0.9s				
M31M	Drury Creek, Y	3.98 21	Pn	Pn	08 03 28.8 +2.4
M31M			Sg	Sg	08 04 30.2 -2.8
M31M	Drury Creek, Y	3.98 21	P	Pn	08 03 28.8 +2.4
	baz=203,SNR=10.0				
MCARA	McCarthy VSAT	4.04 318		Pn	08 03 30.1 +3.1
MCARA	McCarthy VSAT	4.04 318	IAML		08 04 32.4
	comp=N,122nm,0.8s				
MCARA			IAML		08 04 41.8
	comp=E,126nm,0.8s				
MCARA	McCarthy VSAT	4.04 318	P	Pn	08 03 29.7 +2.7
	baz=133,SNR=12				
VRDI	Verde Repeater	4.09 314		Pn	08 03 29.7 +1.8
VRDI	Verde Repeater	4.09 314	IAML		08 04 55.8
	comp=N,59nm,1.2s				
T35M	Bob Quinn	4.12 109	Pn	Pn	08 03 30.1 +1.8
RAGM	Ragged Mountai	4.16 300		Pn	08 03 31.0 +2.1
FARO	Faro, Yukon	4.23 27		Pn	08 03 33.0 +3.2
FARO			IAML		08 04 47.6
	comp=N,102nm,1.0s				
FARO	Faro, Yukon	4.23 27	Sg	Sb	08 04 35.8 +5.1
FARO	Faro, Yukon	4.23 27	P	Pn	08 03 32.6 +2.9
	baz=210				
BVCY	Beaver Creek	4.27 338	Pn	Pn	08 03 32.8 +2.5
BVCY			Pg	Pb	08 03 43.3 +3.0
BVCY			Sg	Sg	08 04 39.1 -3.1
BVCY	Beaver Creek	4.27 338	P	Pn	08 03 33.0 +2.7
	baz=154				
GOAT	Goat Mountain	4.27 302		Pn	08 03 32.3 +2.0
GLB	Gilahina Butte	4.36 315		Pn	08 03 33.8 +2.2
BMRM	Bremner River	4.40 307		Pn	08 03 34.4 +2.3
BMRM	Bremner River	4.40 307	P	Pn	08 03 34.6 +2.5
	baz=120				
M27K	Edge Creek, AK	4.45 332		Pn	08 03 35.4 +2.6
M27K	Edge Creek, AK	4.45 332	IAML		08 04 54.6
	comp=E,65nm,0.9s				
M27K			IAML		08 04 56.5
	comp=N,72nm,1.1s				
M27K	Edge Creek, AK	4.45 332	Pn	Pn	08 03 35.3 +2.5
M27K			Sg	Sg	08 04 43.8 -4.1
M27K	Edge Creek, AK	4.45 332	P	Pn	08 03 35.4 +2.6
	baz=148,SNR=6.0				
L29M	L29M	4.62 356		Pn	08 03 37.6 +2.5
L29M	L29M	4.62 356	P	Pn	08 03 37.9 +2.8
	baz=175,SNR=31				
EYAK	Cordova Ski Ar	4.72 299		Pn	08 03 38.4 +2.1
EYAK	Cordova Ski Ar	4.72 299	P	Pn	08 03 38.0 +1.6
	baz=112				
N25K	Chitina, Valde	4.76 314		Pn	08 03 39.6 +2.6
N25K	Chitina, Valde	4.76 314	P	Pn	08 03 39.4 +2.4
	baz=127				
M26K	Nabesna, AK	4.78 327		Pn	08 03 39.7 +2.4
M26K	Nabesna, AK	4.78 327	P	Pn	08 03 40.1 +2.8
	baz=142				
DIV	Divide	4.97 305		Pn	08 03 41.1 +1.2
DIV	Divide	4.97 305	Pn	Pn	08 03 41.5 +1.5
DIV			Sg	Sb	08 04 53.6 +1.5
HIN	Hinchinbrook I	5.02 296	Pn	Pn	08 03 42.5 +2.0
HIN			IAML		08 05 15.2
	comp=N,63nm,1.2s				
HIN			IAML		08 05 19.6
	comp=E,61nm,0.7s				
BC03		5.04 337		Pn	08 03 43.3 +2.5
BCAR	Beaver Creek A	5.04 337		Pn	08 03 44.0 +3.0
L27K	Beaver Creek,	5.05 336		Pn	08 03 43.6 +2.6
L27K	Beaver Creek,	5.05 336	Pn	Pn	08 03 42.6 +1.6
L27K			Pg	Pb	08 03 57.3 +3.6
L27K	Beaver Creek,	5.05 336	P	Pn	08 03 44.1 +3.1
	baz=152				
MMPY	Sheldon Lake,	5.10 34	Pn	Pn	08 03 44.2 +2.5
MMPY			Pg	Pg	08 03 59.6 -3.3
MMPY			Sg	Sg	08 05 04.6 -4.3
MMPY	Sheldon Lake,	5.10 34	P	Pn	08 03 44.7 +2.9
	baz=219,SNR=17				
FID	Port Fidalgo	5.13 300		Pn	08 03 44.3 +2.3
FID			IAML		08 05 16.2
	comp=E,32nm,0.7s				
FID			IAML		08 05 24.2
	comp=N,26nm,1.3s				
MAYO	Mayo, Yukon	5.15 7		Pn	08 03 46.2 +3.9
MAYO	Mayo, Yukon	5.15 7	Sg	Sg	08 05 05.1 -5.2
MAYO	Mayo, Yukon	5.15 7	P	Pn	08 03 45.4 +3.1
	baz=189				
KLU	Klutina	5.22 308		Pn	08 03 46.2 +2.8
KLU			IAML		08 05 18.4
	comp=E,50nm,0.9s				
KLU			IAML		08 05 20.5
	comp=N,47nm,0.7s				
KLU	Klutina	5.22 308	P	Pn	08 03 45.8 +2.5
	baz=121,SNR=8.9				
K29M	Barlow Dome	5.34 359		Pn	08 03 47.9 +2.8
K29M	Barlow Dome	5.34 359	Pn	Pn	08 03 47.4 +2.3
K29M			Sn	Sn	08 04 44.4 -2.3
K29M	Barlow Dome	5.34 359	P	Pn	08 03 47.7 +2.6
	baz=179,SNR=20				
L26K	Log Cabin Wild	5.38 330		Pn	08 03 48.6 +3.1
L26K			IAML		08 05 29.6
	comp=E,26nm,0.5s				
L26K			IAML		08 05 36.6
	comp=N,26nm,1.1s				
L26K	Log Cabin Wild	5.38 330	P	Pn	08 03 48.4 +2.9
	baz=144,SNR=5.9				
MENT	Mentasta	5.41 328		Pn	08 03 48.6 +2.7
MENT			IAML		08 05 38.4
	comp=N,29nm,1.3s				
GLI	Glacier Island	5.46 300		Pn	08 03 48.1 +1.6
GLI	Glacier Island	5.46 300	P	Pn	08 03 48.3 +1.8
	baz=111				
TGTN	Hyland Airport	5.48 53	Sg	Sg	08 05 17.1 -3.7
TGTN	Hyland Airport	5.48 53	P	Pn	08 03 49.1 +2.3
	baz=241				
DAWY	Dawson	5.65 351		Pn	08 03 51.9 +2.6
DAWY	Dawson	5.65 351	Pn	Pn	08 03 51.7 +2.5
DAWY			Sn	Sn	08 04 52.6 -1.4
DAWY			Sg	Sg	08 05 20.4 -6.0
DAWY	Dawson	5.65 351	P	Pn	08 03 52.0 +2.8
	baz=169,SNR=44				
M24K	Tolsona, Glenn	5.66 313		Pn	08 03 52.0 +2.7
M24K	Tolsona, Glenn	5.66 313	P	Pn	08 03 52.4 +3.1
	baz=125				
PAX	Paxson	5.97 322		Pn	08 03 55.6 +2.0
PAX	Paxson	5.97 322	P	Pn	08 03 56.7 +3.1
	baz=135				
J29M	Klondike Camp	5.97 357	Sn	Sn	08 05 02.5 +0.5
SCM	Sheep Creek Mo	5.97 308		Pn	08 03 56.4 +2.8
SCM	Sheep Creek Mo	5.97 308	P	Pn	08 03 56.3 +2.7
	baz=119				
K27K	Chicken	5.97 340		Pn	08 03 56.0 +2.5
K27K	Chicken	5.97 340	Pn	Pn	08 03 55.3 +1.7
K27K			Sg	Sg	08 05 30.2 -6.6
K27K	Chicken	5.97 340	P	Pn	08 03 56.7 +3.1
	baz=156				
DIB	Dawson Inlet,	6.00 150	Pn	Pn	08 03 56.9 +2.9
PWL	Port Wells	6.02 298	Pn	Pn	08 03 55.4 +1.2
PWL	Port Wells	6.02 298	P	Pn	08 03 55.7 +1.4
	baz=108				
DOT	Dot Lake	6.08 331		Pn	08 03 56.7 +1.7
M23K	Glacier View	6.12 307	P	Pn	08 03 58.3 +2.7
	baz=118,SNR=14				
KNK	Knik Glacier	6.27 302		Pn	08 04 00.6 +2.9
KNK	Knik Glacier	6.27 302	P	Pn	08 04 00.1 +2.4
	baz=112,SNR=9.6				
SCRK	Sand Creek	6.33 333		Pn	08 04 01.7 +3.0
SCRK	Sand Creek	6.33 333	P	Pn	08 04 01.4 +2.7
	baz=147				
RIDG	Independent Ri	6.36 329		Pn	08 04 01.6 +2.7
RIDG	Independent Ri	6.36 329	P	Pn	08 04 01.9 +2.9
	baz=142				
SML	Sawmill	6.38 306		Pn	08 04 01.8 +2.6
SML	Sawmill	6.38 306	P	Pn	08 04 01.6 +2.4
	baz=116,SNR=6.6				
SEW	Seward	6.38 290	Pn	Pn	08 04 00.4 +1.2
SEW	Seward	6.38 290	P	Pn	08 04 00.4 +1.2
	baz=99				
WAT6	Susitna Watana	6.53 313		Pn	08 04 03.5 +2.2
WAT6	Susitna Watana	6.53 313	P	Pn	08 04 03.8 +2.4
	baz=124				
EGAK	Eagle	6.53 346		Pn	08 04 04.4 +3.1
EGAK	Eagle	6.53 346	P	Pn	08 04 04.3 +3.1
	baz=162,SNR=15				
PMR	Palmer	6.64 303	Pn	Pn	08 04 05.6 +2.9
PMR	Palmer	6.64 303	P	Pn	08 04 05.2 +2.5
	baz=112				
K24K	Donnelly Dome	6.67 326	P	Pn	08 04 06.1 +2.8
	baz=139				
DHY	Denali Highway	6.69 317		Pn	08 04 06.2 +2.7
DHY	Denali Highway	6.69 317	P	Pn	08 04 06.5 +3.0
	baz=128				
J26L	Joseph Creek	6.69 336		Pn	08 04 07.0 +3.5
J26L	Joseph Creek	6.69 336	P	Pn	08 04 06.3 +2.8
	baz=151				
RC01	Rabbit Creek A	6.74 298		Pn	08 04 06.5 +2.3
RC01	Rabbit Creek A	6.74 298	P	Pn	08 04 06.3 +2.1
	baz=107				
SLKM	Skilak Lake	6.83 292		Pn	08 04 06.7 +1.4
I29M	Ogilvie Camp,	6.88 357		Pn	08 04 09.4 +3.3
I29M	Ogilvie Camp,	6.88 357	P	Pn	08 04 10.0 +3.9
	baz=176				
WAT1	Susitna Watana	6.98 313	P	Pn	08 04 11.5 +4.0
	baz=123				
BRLK	Bradley Lake	7.06 286	Pn	Pn	08 04 09.8 +1.3
M22K	Willow	7.13 302	P	Pn	08 04 11.4 +1.9
	baz=111				
J25K	Salcha River,	7.20 331		Pn	08 04 13.8 +3.3
J25K	Salcha River,	7.20 331	P	Pn	08 04 12.9 +2.4
	baz=144				
CNPM	China Poot	7.22 284	Pn	Pn	08 04 12.3 +1.6
SUA	Susitna One	7.32 299	P	Pn	08 04 14.6 +2.4
	baz=108				
I26K	Coal Creek Min	7.33 341		Pn	08 04 14.6 +2.4
I26K	Coal Creek Min	7.33 341	P	Pn	08 04 15.6 +3.4
	baz=155				
I27K	Kandik River	7.38 346	Pn	Pn	08 04 14.8 +1.8
I27K			Sn	Sn	08 05 33.9 -2.8
I27K	Kandik River	7.38 346	P	Pn	08 04 17.4 +4.5
	baz=162				
RND	Reindeer	7.42 316		Pn	08 04 16.2 +2.6
CUT	Chulitna	7.46 307		Pn	08 04 16.6 +2.7
CUT	Chulitna	7.46 307	P	Pn	08 04 17.4 +3.4
	baz=116,SNR=5.6				
FNBB	Fort Nelson	7.50 81	Pn	Pn	08 04 16.6 +2.0
FNBB			Sn	Sn	08 05 39.1 -0.5
IL31		7.72 328	Pn	Pn	08 04 21.4 +3.9
ILAR	Eielson Array	7.72 328	Pn	Pn	08 04 20.6 +3.0
SKT	Skwentna	7.84 302		Pn	08 04 20.9 +1.7
SKT	Skwentna	7.84 302	P	Pn	08 04 21.2 +1.9
	baz=110				
WRH	Wood River Hil	7.86 324	Pn	Pn	08 04 22.2 +2.8
NBC5	NorthernBC 5	7.88 91	Sg	Sg	08 06 31.9 -5.8
CCB	Clear Creek Bu	7.90 325	Pn	Pn	08 04 22.3 +2.3
SPCP	Crater Peak Br	7.92 297		Pn	08 04 22.1 +1.7
O20K	Slope Mountain	7.95 288	P	Pn	08 04 21.9 +1.1
	baz=95				
H27K	Steamboat Moun	7.97 348		Pn	08 04 23.1 +2.1
H27K	Steamboat Moun	7.97 348	Pn	Pn	08 04 23.1 +2.1
TRF	Thorofare Moun	7.98 314		Pn	08 04 23.9 +2.7
TRF	Thorofare Moun	7.98 314	P	Pn	08 04 24.7 +3.4
	baz=122,SNR=14				
PRP	Porcupine Dome	7.99 335		Pn	08 04 24.0 +2.6
RSO	Redoubt South	8.06 291	Pn	Pn	08 04 23.9 +1.5
KDAK	Kodiak Island	8.07 271	Pn	Pn	08 04 24.6 +2.2
KDAK	Kodiak Island	8.07 271	P	Pn	08 04 23.9 +1.5
	baz=78				
BWN	Browne	8.10 319		Pn	08 04 25.2 +2.4
NEA2	Nenana	8.25 322		Pn	08 04 27.2 +2.4
NEA2	Nenana	8.25 322	P	Pn	08 04 26.8 +2.0
	baz=132				
KTH	Kantishna Hill	8.27 313		Pn	08 04 27.9 +2.7
Q19K	Cape Douglas,	8.47 280		Pn	08 04 30.2 +2.3
PPLA	Purkeypile	8.47 307		Pn	08 04 30.9 +2.9
PPLA	Purkeypile	8.47 307	P	Pn	08 04 30.9 +2.9
	baz=114				
G30M	tAoh Zraii Nji	8.51 3	P	Pn	08 04 30.7 +2.3
	baz=184				
M20K	Styx River	8.53 300		Pn	08 04 30.1 +1.4
M20K	Styx River	8.53 300	P	Pn	08 04 29.2 +0.5
	baz=106				
G27K	Doyon Strip	8.55 349	Pn	Pn	08 04 30.3 +1.4
G27K			Sn	Sn	08 06 00.8 -4.5
G27K	Doyon Strip	8.55 349	P	Pn	08 04 31.6 +2.6
	baz=165				
OHAK	Old Harbor	8.57 268		Pn	08 04 29.9 +0.7
OHAK	Old Harbor	8.57 268	P	Pn	08 04 29.9 +0.7
	baz=74				
BPAW	Bear Paw Mtn.	8.60 316	P	Pn	08 04 32.3 +2.7
	baz=124				
CAST	Castle Rocks	8.66 311	P	Pn	08 04 32.7 +2.2
	baz=118				
I23K	Minto, Yukon-K	8.72 325	P	Pn	08 04 34.4 +3.2
	baz=134				
N19K	Bonanza Creek	8.95 292	P	Pn	08 04 36.8 +2.3
	baz=97				
G26K	Porcupine Rive	8.95 344	P	Pn	08 04 36.2 +1.8
	baz=158				
CHUM	Lake Minchumin	8.98 313		Pn	08 04 36.8 +2.0
CHUM	Lake Minchumin	8.98 313	P	Pn	08 04 36.7 +2.0
	baz=120,SNR=11				
L20K	Farewell, AK	9.04 303	P	Pn	08 04 38.0 +2.3
	baz=108				
MLY	Manley	9.08 322	P	Pn	08 04 38.5 +2.3
	baz=130				
M19K	Big River Lodg	9.11 299		Pn	08 04 37.8 +1.2
M19K	Big River Lodg	9.11 299	P	Pn	08 04 37.8 +1.2
	baz=104				
KAHC	Katmai Hardscr	9.20 278		Pn	08 04 39.8 +1.8
Q18K	Katmai Hardscr	9.20 278	P	Pn	08 04 40.0 +2.0
	baz=83				
L19K	White Mountain	9.39 300		Pn	08 04 41.6 +1.1
L19K	White Mountain	9.39 300	P	Pn	08 04 41.6 +1.1
	baz=105				
K20K	Telida	9.44 308		Pn	08 04 42.6 +1.4
K20K	Telida	9.44 308	P	Pn	08 04 42.8 +1.7
	baz=113				
BM03	Burnt Mountain	9.51 343		Pn	08 04 43.6 +1.5
BMAR	Burnt Mountain	9.52 343	Pn	Pn	08 04 45.3 +3.1
I21K	Tanana	9.58 320		Pn	08 04 46.0 +3.0
I21K	Tanana	9.58 320	P	Pn	08 04 45.7 +2.6
	baz=127				
F26K	Sheenjek River	9.70 345	P	Pn	08 04 46.8 +2.2
	baz=158				
J20K	Nowinta River	9.83 312		Pn	08 04 48.0 +1.6
J20K	Nowinta River	9.83 312	P	Pn	08 04 48.7 +2.3
	baz=117,SNR=9.4				
INK	Inuvik	9.97 8	P	Pn	08 04 52.8 +4.4
	baz=192				
TTA	Tatalina	10.12 304	P	Pn	08 04 51.2 +0.7
	baz=107				
H21K	Melozitna Rive	10.14 321		Pn	08 04 54.0 +3.2
H21K	Melozitna Rive	10.14 321	P	Pn	08 04 52.8 +2.0
	baz=128				
F24K	Squaw Lake	10.19 337	P	Pn	08 04 53.2 +1.8
	baz=147				
O17K	Koliganek Bris	10.20 285	P	Pn	08 04 52.9 +1.5
	baz=88				
COLD	Coldfoot	10.49 332	P	Pn	08 05 00.1 +4.6
	baz=140				
E24K	Your Creek	10.79 337	P	Pn	08 05 03.6 +4.0
	baz=147				
G21K	Allakaket	10.91 324	P	Pn	08 05 04.0 +2.8
	baz=130				
N16K	Nishlik Lake	11.03 289	P	Pn	08 05 04.4 +1.5
	baz=91				
C27K	Jago River	11.48 349	P	Pn	08 05 13.6 +4.6
	baz=163				
TOLK	Toolik Lake Re	11.48 337	P	Pn	08 05 10.8 +1.7
	baz=146				

GUC 04 08:15:12.7±0.7, 30°39S×72°09W, h34km±4km, ML3.8, 1C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.49	126	⇓	iP	Pb	08 15 22.2	-1.0
CO06					eS	Sb	08 15 27.8	-2.7
CO06					IAML		08 15 31.5	
	comp=N,9μm,0.2s							
CO05	La Serena	0.87	58	⇓	iP	Pn	08

CO03				IAML		08 15 54.8	
	comp=N,3μm,0.1s						
CO01	**Juntas del Tor**	**1.78**	**77**	*e*P	Pb	08 15 43.4	-1.4
CO01				*i* S	Sb	08 16 06.5	-0.4
LCO	**Las Campanas**	**1.83**	**42**	*e*P	Pn	08 15 43.6	+1.7
LCO				*i* S	Sb	08 16 07.0	-1.3
AC05	**El Transito**	**2.21**	**46**	⇑*i*P	Pn	08 15 49.5	+2.5
AC05				*i* S	Sb	08 16 16.7	-2.5
AC05				IAML		08 16 24.1	
	comp=N,468nm,0.7s						
VA03	**San Esteban**	**2.71**	**151**	*e*P	Pn	08 15 56.9	+2.9
VA03				*e*S	Sb	08 16 36.4	+2.9
ROCH	**El Roble**	**2.74**	**161**	*e*P	Pn	08 15 56.3	+1.9
MT02	**Curacav**	**2.98**	**164**	*e*P	Pn	08 15 59.2	+1.7
MT09	**Talagante**	**3.51**	**165**	*e*P	Pn	08 16 07.4	+2.5
BO04	**La Punta**	**3.81**	**161**	*e*P	Pn	08 16 11.3	+2.4
BO03	**Pichilemu**	**4.10**	**179**	*e*P	Pn	08 16 13.8	+0.9
AC01	**Pan de Azucar**	**4.42**	**18**	*e*P	Pn	08 16 17.2	-0.2
GO05	**Huala**	**4.61**	**178**	*e*P	Pn	08 16 20.5	+0.5

*GEN **04** 08:19:33.0, 44°.71N×6°.77E, h4km, Ml2.4*
*ROM **04** 08:19:33.2±0.2, 44°.701N±0°.006×6°.75E±0°.02, h8km±1km, ML2.3/5, Error ellipse: s-maj=1.6km s-min=0.6km az=258.0*
*STR **04** 08:19:33.8±0.3, 45°N±1°×°±°, h4km±3km, MLv2.7/36, Error ellipse: s-maj=0.0km s-min=0.0km az=66.6, preliminary*
*LDG **04** 08:19:34.2±0.1, 44°.71N×6°.81E, h2km, Md2.7/3, Ml2.9/21, Error ellipse: s-maj=1.6km s-min=1.2km az=64.0*

ISC 04 08:19:33.7±0.8, 44°.71N±0°.01×6°.78E±0°.01, h9km±5km, n116, σ1°19/202, 9C-4D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.01**	**343**	*e*Pg	**Pg**	**08 19 35.1**	**-0.4**
MBDF				*e*Sg	**Sg**	**08 19 35.8**	**-1.0**
	9μm,0.2s						
CREF	**Crivoux**	**0.20**	**214**	Pg	**Pg**	**08 19 37.4**	**-0.5**
CREF				Sg	**Sg**	**08 19 40.1**	**-0.6**
RRL	**Rocca Remolon**	**0.21**	**3**	P	**Pg**	**08 19 38.3**	**+0.2**
RRL				S	**Sg**	**08 19 41.6**	**+0.6**
RRL	**Rocca Remolon**	**0.21**	**3**	P	**Pg**	**08 19 38.3**	**+0.2**
RRL				S	**Sg**	**08 19 41.7**	**+0.6**
SURF	**Saint Ours**	**0.23**	**174**	P	**Pg**	**08 19 38.2**	**-0.3**
SURF				S	**Sg**	**08 19 42.1**	**+0.3**
SURF	**Saint Ours**	**0.23**	**174**	Pg	**Pg**	**08 19 38.2**	**-0.3**
SURF				Sg	**Sg**	**08 19 42.1**	**+0.3**
JAUF	**Jausiers**	**0.28**	**184**	Pg	**Pg**	**08 19 39.1**	**-0.3**
JAUF				Sg	**Sg**	**08 19 43.4**	**+0.1**
OGAG	**Argentiere**	**0.31**	**213**	P	**Pg**	**08 19 37.5**	**-2.4**
OGAG				S	**Sg**	**08 19 40.2**	**-3.8**
OGAG	**Argentiere**	**0.31**	**213**	⇑Pg	**Pg**	**08 19 37.5**	**-2.4**
OGAG				Sg	**Sg**	**08 19 40.3**	**-3.8**
PZZ	**Stroppo**	**0.32**	**130**	P	**Pg**	**08 19 39.9**	**-0.2**
PZZ				S	**Sg**	**08 19 44.5**	**+0.2**
PZZ	**Stroppo**	**0.32**	**130**	P	**Pg**	**08 19 40.0**	**-0.2**
PZZ				S	**Sg**	**08 19 45.4**	**+1.1**
BNI	**Bardonecchia**	**0.35**	**348**	P	**Pg**	**08 19 40.5**	**-0.2**
BNI				S	**Sg**	**08 19 46.0**	**+0.8**
BNI	**Bardonecchia**	**0.35**	**348**	P	**Pg**	**08 19 40.8**	**+0.2**
BNI				S	**Sg**	**08 19 46.2**	**+1.0**
BNI				AML	AML		
	comp=E,290μm,1.1s						
BNI				AML	AML		
	comp=N,202μm,0.8s						
BNI				AML	AML		
	comp=E,291μm,1.1s						
BNI				AML	AML		
	comp=N,202μm,0.8s						
BNI				AML	AML		
	comp=N,256μm,0.1s						
BNI				AML	AML		
	comp=E,391μm,1.1s						
BHB	**Bricherasio**	**0.37**	**69**	P	**Pg**	**08 19 41.3**	**+0.3**
BHB				S	**Sg**	**08 19 46.7**	**+0.8**
BHB	**Bricherasio**	**0.37**	**69**	P	**Pg**	**08 19 41.3**	**+0.3**
OGMO	**Fort Saint-Gob**	**0.50**	**352**	P	**Pg**	**08 19 43.7**	**+0.3**
OGMO				S	**Sg**	**08 19 50.9**	**+0.9**
OGMO	**Fort Saint-Gob**	**0.50**	**352**	Pg	**Pg**	**08 19 43.6**	**+0.2**
OGMO				Sg	**Sg**	**08 19 50.8**	**+0.8**
ISO	**Isola**	**0.56**	**160**	P	**Pg**	**08 19 44.4**	**-0.3**
ISO				S	**Sg**	**08 19 51.9**	**-0.2**
ISO	**Isola**	**0.56**	**160**	⇓Pg	**Pg**	**08 19 44.4**	**-0.3**
ISO				Sg	**Sg**	**08 19 51.8**	**-0.2**
ENAUX	**Enaux**	**0.60**	**180**	Pg	**Pg**	**08 19 45.3**	**-0.1**
ENAUX				Sg	**Sg**	**08 19 54.0**	**+0.7**
STV	**Sant Anna di V**	**0.61**	**140**	P	**Pg**	**08 19 45.1**	**-0.4**
STV				S	**Sg**	**08 19 53.9**	**+0.4**
STV	**Sant Anna di V**	**0.61**	**140**	P	**Pg**	**08 19 45.2**	**-0.4**
STV				S	**Sg**	**08 19 54.0**	**+0.4**
ENR	**Entracque**	**0.67**	**136**	P	**Pg**	**08 19 46.4**	**-0.3**
ENR				S	**Sg**	**08 19 55.8**	**+0.4**
ENR	**Entracque**	**0.67**	**136**	P	**Pg**	**08 19 46.3**	**-0.3**
ENR				S	**Sg**	**08 19 55.8**	**+0.4**
ORIF	**Oris-en-Rattie**	**0.67**	**288**	*e*Pg	**Pg**	**08 19 46.2**	**-0.5**
ORIF				*e*Sg	**Sg**	**08 19 54.5**	**-0.9**
	comp=E,123nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.67**	**288**	⇑Pg	**Pg**	**08 19 46.2**	**-0.5**
ORIF				Sg	**Sg**	**08 19 54.6**	**-0.9**
GDM	**Grand'Maison**	**0.68**	**317**	⇑Pg	**Pg**	**08 19 46.7**	**-0.2**
GDM				Sg	**Sg**	**08 19 55.4**	**-0.4**
OGDI	**Digne**	**0.69**	**210**	P	**Pb**	**08 19 48.4**	**+0.4**
OGDI	**Digne**	**0.69**	**210**	⇓Pg	**Pb**	**08 19 48.4**	**+0.4**
SPIF	**crte de Spivo**	**0.73**	**153**	⇓Pg	**Pg**	**08 19 47.7**	**-0.2**
SPIF				Sg	**Sg**	**08 19 57.4**	**-0.1**
LPG	**La Plagne**	**0.79**	**359**	*e*Pg	**Pg**	**08 19 48.8**	**-0.1**
LPG	**La Plagne**	**0.79**	**359**	*e*Pn	**Pn**	**08 19 51.3**	**0.0**
LPG				*e*Sg	**Sg**	**08 19 59.6**	**+0.4**
	comp=E,33nm,0.2s						
LSD	**Lago del Serru**	**0.79**	**19**	P	**Pg**	**08 19 48.7**	**-0.2**
LSD				S	**Sg**	**08 19 59.1**	**-0.2**
LSD	**Lago del Serru**	**0.79**	**19**	P	**Pg**	**08 19 48.7**	**-0.2**
LPL	**La Plagne**	**0.80**	**358**	*e*Pg	**Pg**	**08 19 49.3**	**0.0**
LPL	**La Plagne**	**0.80**	**358**	*e*Pn	**Pn**	**08 19 51.5**	**0.0**
LPL				*e*Sg	**Sg**	**08 20 00.7**	**+0.9**
	comp=E,31nm,0.2s						
MVIF	**Mont Vial**	**0.86**	**162**	P	**Pg**	**08 19 50.6**	**+0.4**
MVIF				S	**Sb**	**08 20 02.5**	**-0.1**
MVIF	**Mont Vial**	**0.86**	**162**	Pg	**Pg**	**08 19 50.1**	**-0.2**
TURF	**col de Turini**	**0.86**	**149**	P	**Pg**	**08 19 49.9**	**-0.4**
TURF				S	**Sg**	**08 20 02.0**	**+0.5**
TURF	**col de Turini**	**0.86**	**149**	Pg	**Pg**	**08 19 49.9**	**-0.4**
TURF				Sg	**Sb**	**08 20 02.1**	**-0.5**
MONC	**Moncucco Torin**	**0.89**	**66**	P	**Pb**	**08 19 51.9**	**+0.4**
MONC				S	**Sn**	**08 20 06.6**	**+0.9**
MONC	**Moncucco Torin**	**0.89**	**66**	P	**Pb**	**08 19 51.8**	**+0.3**
MONC				AML	AML		
	comp=E,371μm,0.5s						
MONC				AML	AML		
	comp=N,452μm,0.3s						
GRN	**Grenoble**	**0.90**	**306**	⇑Pg	**Pg**	**08 19 51.2**	**+0.1**
GRN				Sg	**Sg**	**08 20 03.5**	**+0.6**
SAOF	**Saorge**	**0.92**	**142**	P	**Pg**	**08 19 50.9**	**-0.5**
SAOF				S	**Sg**	**08 20 03.4**	**+0.2**
SAOF	**Saorge**	**0.92**	**142**	P	**Pg**	**08 19 50.9**	**-0.5**
SAOF				S	**Sg**	**08 20 03.7**	**+0.4**
SAOF				AML	AML		
	comp=N,257μm,0.4s						
SAOF				AML	AML		
	comp=E,386μm,0.8s						
SAOF	**Saorge**	**0.92**	**142**	⇓Pg	**Pg**	**08 19 50.9**	**-0.5**
SAOF				Sg	**Sg**	**08 20 03.6**	**+0.4**
BLAF	**les Blancs**	**0.93**	**215**	⇑Pg	**Pg**	**08 19 51.7**	**+0.1**
CALF	**Calern**	**0.97**	**174**	Pg	**Pg**	**08 19 52.4**	**+0.1**
CALF				Pn	**Pn**	**08 19 54.8**	**+1.2**
CALF				Sg	**Sg**	**08 20 05.4**	**+0.5**
SBF	**Sospel**	**0.97**	**151**	*e*Pg	**Pg**	**08 19 52.0**	**-0.4**
SBF				*e*Sg	**Sg**	**08 20 05.1**	**+0.1**
	comp=E,182nm,0.2s						
ESCA	**l'Escarene**	**0.98**	**154**	P	**Pb**	**08 19 53.0**	**+0.1**
ESCA				S	**Sb**	**08 20 06.7**	**+0.7**
ESCA	**l'Escarene**	**0.98**	**154**	⇑Pg	**Pg**	**08 19 52.5**	**-0.1**
RSL	**Roselend**	**0.98**	**354**	P	**Pg**	**08 19 53.0**	**+0.4**
RSL	**Roselend**	**0.98**	**354**	Pg	**Pg**	**08 19 53.0**	**+0.4**
MGRO	**Montegrosso**	**1.00**	**132**	P	**Pg**	**08 19 52.3**	**-0.6**
MGRO				S	**Sg**	**08 20 06.0**	**+0.1**
TRIGF	**Trigance**	**1.00**	**196**	⇑Pg	**Pg**	**08 19 53.2**	**+0.3**
TRIGF				Pn	**Pn**	**08 19 55.3**	**+1.2**
TRIGF				Sn	**Sn**	**08 20 09.9**	**+1.5**
MLYF	**Mely**	**1.02**	**225**	Pg	**Pg**	**08 19 53.9**	**+0.5**
CIRO	**Champorcher**	**1.05**	**32**	P	**Pg**	**08 19 53.7**	**-0.3**
CIRO				S	**Sg**	**08 20 07.8**	**+0.2**
CIRO	**Champorcher**	**1.05**	**32**	P	**Pg**	**08 19 53.7**	**-0.3**
CIRO				S	**Sb**	**08 20 08.4**	**+0.1**
TRAV	**Traversella**	**1.05**	**40**	P	**Pg**	**08 19 53.6**	**-0.4**
TRAV				S	**Sg**	**08 20 07.4**	**-0.3**
TRAV	**Traversella**	**1.05**	**40**	P	**Pg**	**08 19 53.6**	**-0.4**
TRAV				S	**Sg**	**08 20 07.6**	**-0.1**
MRGE	**Morge**	**1.08**	**11**	P	**Pg**	**08 19 54.1**	**-0.4**
MRGE	**Morge**	**1.08**	**11**	P	**Pg**	**08 19 54.0**	**-0.4**
MRGE				AML	AML		
	comp=N,119μm,1.0s						
MRGE				AML	AML		
	comp=E,77μm,0.4s						
BURY	**Giardini Botan**	**1.09**	**149**	P	**Pg**	**08 19 54.2**	**-0.3**
RORO	**Rocca Rossa**	**1.10**	**123**	P	**Pg**	**08 19 53.8**	**-1.0**
RORO				S	**Sg**	**08 20 08.6**	**-0.5**
ROTM	**Rocchetta Tana**	**1.13**	**83**	P	**Pn**	**08 19 56.0**	**+0.2**
IMI	**Imperia**	**1.13**	**135**	P	**Pg**	**08 19 54.6**	**-0.9**
IMI				S	**Sg**	**08 20 10.2**	**0.0**
IMI	**Imperia**	**1.13**	**135**	P	**Pg**	**08 19 55.0**	**-0.5**
IMI				S	**Sg**	**08 20 10.1**	**-0.1**
IMI				AML	AML		
	comp=N,478μm,0.6s						
IMI				AML	AML		
	comp=E,408μm,0.8s						
SMRF	**Simiane la Rot**	**1.14**	**230**	*e*Pg	**Pg**	**08 19 55.7**	**+0.2**
SMRF	**Simiane la Rot**	**1.14**	**230**	*e*P	**Pn**	**08 19 57.1**	**+1.2**
SMRF				*e*Sg	**Sg**	**08 20 10.6**	**+0.4**
	comp=E,86nm,0.3s						
REMY	**Saint-Rhmy-en**	**1.16**	**13**	P	**Pg**	**08 19 55.6**	**-0.3**
CANO	**Canova, Maglio**	**1.16**	**115**	P	**Pg**	**08 19 55.4**	**-0.7**
CANO				S	**Sg**	**08 20 10.4**	**-0.7**
BSTF	**la Bastide-des**	**1.16**	**225**	Pg	**Pn**	**08 19 57.8**	**+1.6**
BSTF				Sg	**Sn**	**08 20 14.4**	**+2.1**
OGSM	**Saint Maurice**	**1.18**	**320**	Pg	**Pg**	**08 19 56.2**	**-0.2**
QLNO	**Quiliano**	**1.19**	**109**	P	**Pg**	**08 19 55.8**	**-0.8**
QLNO	**Quiliano**	**1.19**	**109**	P	**Pg**	**08 19 55.7**	**-0.8**
QLNO				S	**Sg**	**08 20 11.2**	**-0.7**
QLNO				AML	AML		
	comp=N,173μm,1.2s						
QLNO				AML	AML		
	comp=E,192μm,0.3s						
RUSF	**Rustrel**	**1.21**	**231**	Pn	**Pn**	**08 19 57.6**	**+0.7**
RUSF				Sg	**Sn**	**08 20 15.1**	**+1.7**
PCP	**Piancastagn**	**1.27**	**97**	P	**Pg**	**08 19 57.2**	**-1.0**
PCP	**Piancastagn**	**1.27**	**97**	P	**Pg**	**08 19 57.0**	**-1.1**
PCP				S	**Sb**	**08 20 14.6**	**+0.1**
ARTF	**Artigues**	**1.33**	**212**	⇑Pn	**Pn**	**08 19 59.0**	**+0.5**
ARTF				Sg	**Sn**	**08 20 17.1**	**+0.8**
FLAF	**Flassans-sur-l**	**1.38**	**196**	Pn	**Pb**	**08 20 00.2**	**+0.5**
LMR	**La Mourre**	**1.39**	**188**	*e*Pg	**Pn**	**08 19 59.8**	**+0.4**
LMR				*e*Sn	**Sb**	**08 20 16.7**	**-1.1**
	comp=E,39nm,0.2s						
SATI	**Passo dei Sala**	**1.39**	**33**	P	**Pn**	**08 20 00.2**	**+0.4**
VIVF	**Saint-Julien-l**	**1.50**	**276**	*e*Pn	**Pn**	**08 20 00.8**	**-0.2**
VIVF	**Saint-Julien-l**	**1.50**	**276**	*e*Pg	**Pg**	**08 20 03.0**	**+0.4**
VIVF				*e*Sg	**Sb**	**08 20 22.3**	**+1.2**
	comp=E,33nm,0.3s						
MMK	**Mattmark**	**1.58**	**32**	P	**Pn**	**08 20 03.1**	**+1.0**
MMK				AML	AML		
	comp=E,55μm,0.4s						
MMK				AML	AML		
	comp=N,44μm,1.6s						
OG35	**Corcelles**	**1.58**	**328**	⇑Pn	**Pb**	**08 20 03.5**	**+0.3**
CABF	**La Chapelle**	**1.96**	**346**	*e*Pn	**Pn**	**08 20 08.7**	**+1.4**
CABF	**La Chapelle**	**1.96**	**346**	*e*Pg	**Pg**	**08 20 11.2**	**-0.1**
CABF				*e*Sg	**Sg**	**08 20 36.2**	**-0.5**
	comp=N,9.2nm,0.2s						
LASF	**Ste Croix**	**2.19**	**254**	*e*Pn	**Pn**	**08 20 10.2**	**-0.1**
LASF	**Ste Croix**	**2.19**	**254**	*e*Pg	**Pb**	**08 20 14.8**	**+1.3**
LASF				*e*Sn	**Sn**	**08 20 36.8**	**-0.8**
	comp=N,4.6nm,0.2s						
LASF				*e*Sg	**Sg**	**08 20 43.6**	**-0.4**
CHMF	**Charmoille**	**2.54**	**358**	Pn	**Pn**	**08 20 15.5**	**+0.3**
PGF	**Pioggiola**	**2.70**	**143**	*e*Pn	**Pn**	**08 20 16.9**	**-0.5**
PGF				*e*Sn	**Sn**	**08 20 48.2**	**-2.1**
	comp=N,12nm,0.2s						
SMF	**Signal de Mont**	**2.82**	**314**	*e*Pn	**Pn**	**08 20 18.8**	**-0.3**
SMF	**Signal de Mont**	**2.82**	**314**	*e*Pg	**Pg**	**08 20 27.1**	**-0.7**
SMF				*e*Sn	**Sn**	**08 20 52.0**	**-1.2**
SMF				*e*Sg	**Sb**	**08 21 02.4**	**+3.4**
	comp=N,7.5nm,0.2s						
HINF	**Hinteralfeld**	**3.10**	**1**	*e*Pn	**Pn**	**08 20 23.4**	**+0.4**
HINF	**Hinteralfeld**	**3.10**	**1**	*e*Pg	**Pg**	**08 20 32.0**	**-1.2**
AVF	**Avril sur Loir**	**3.17**	**312**	*e*Pn	**Pn**	**08 20 23.3**	**-0.5**
AVF				*e*Sn	**Sn**	**08 21 00.0**	**-1.8**
AVF				*e*Sg	**Sg**	**08 21 13.4**	**-2.2**
	comp=N,3.5nm,0.3s						
LOR	**Lormes**	**3.27**	**323**	*e*Pn	**Pn**	**08 20 25.9**	**+0.7**
	baz=127						
LOR				*e*Sn	**Sn**	**08 21 02.7**	**-1.5**
	baz=176						
LOR				*e*Sg	**Sg**	**08 21 18.5**	**-0.1**
	baz=170						
SLE	**Schleitheim**	**3.28**	**21**	Pn	**Pn**	**08 20 26.7**	**+1.4**
SSF	**Saint Saulge**	**3.28**	**317**	*e*Pn	**Pn**	**08 20 26.7**	**+1.4**
SSF				*e*Sn	**Sn**	**08 21 02.0**	**-2.4**
SSF				*e*Sg	**Sg**	**08 21 16.9**	**-2.0**
	comp=N,10nm,0.3s						
HAU	**Haudompre**	**3.31**	**355**	*e*Pn	**Pn**	**08 20 26.5**	**+0.8**
HAU	**Haudompre**	**3.31**	**355**	*e*Pg	**Pb**	**08 20 34.7**	**+2.1**
HAU				*e*Sn	**Sn**	**08 21 03.3**	**-1.9**
HAU				*e*Sg	**Sg**	**08 21 17.2**	**-2.7**
BGF	**Bois d'Agland**	**3.32**	**305**	*e*Pn	**Pn**	**08 20 26.7**	**+0.8**
BGF				*e*Sn	**Sn**	**08 21 03.0**	**-2.4**
	comp=N,59nm,0.8s						
CAF	**Calviac**	**3.36**	**275**	*e*Pn	**Pn**	**08 20 27.2**	**+0.7**
CAF				*e*Sn	**Sn**	**08 21 05.5**	**-1.0**
	comp=N,1.1nm,0.2s						
MTLF	**Montolieu**	**3.56**	**249**	*e*Pn	**Pn**	**08 20 29.3**	**+0.1**
MTLF				*e*Sn	**Sn**	**08 21 09.7**	**-1.8**
	comp=N,2.1nm,0.2s						
TCF	**Toulx Ste Croi**	**3.58**	**298**	*e*Pn	**Pn**	**08 20 30.4**	**+1.0**
TCF				*e*Sn	**Sn**	**08 21 10.0**	**-1.8**
TCF				*e*Sg	**Sb**	**08 21 24.4**	**+3.7**
	comp=N,1.6nm,0.2s						
SFTF	**Sexfontaines**	**3.69**	**342**	*e*Pn	**Pn**	**08 20 30.9**	**-0.1**
SFTF				*e*Sn	**Sn**	**08 21 12.1**	**-2.6**
	comp=N,5.8nm,0.3s						
CDF	**Champ du Feu**	**3.72**	**5**	*e*Pn	**Pn**	**08 20 31.8**	**+0.4**
CDF	**Champ du Feu**	**3.72**	**5**	*e*Pg	**Pg**	**08 20 43.0**	**-1.9**
CDF				*e*Sn	**Sn**	**08 21 12.8**	**-2.6**
	comp=N,1.3nm,0.2s						
RJF	**Les Rejaudoux**	**3.78**	**281**	*e*Pn	**Pn**	**08 20 32.8**	**+0.6**
FNEB	**Nbias**	**3.83**	**243**	Pn	**Pn**	**08 20 33.5**	**+0.6**
PAGF	**Fort de Pagny**	**3.91**	**350**	*e*Pn	**Pn**	**08 20 34.6**	**+0.6**
PAGF				*e*Sn	**Sn**	**08 21 16.9**	**-3.1**
	comp=N,4.3nm,0.2s						
SAVF	**Savonnieres en**	**4.07**	**344**	*e*P	**Pn**	**08 20 38.4**	**+2.3**
SAVF				*e*Sn	**Sn**	**08 21 20.5**	**-3.3**
	comp=N,2.6nm,0.2s						
MFF	**Saint Martin d**	**5.21**	**294**	*e*P	**Pn**	**08 20 53.9**	**+2.1**
GIVF	**Givet**	**5.55**	**347**	*e*Pn	**Pn**	**08 20 55.9**	**-0.6**
GIVF				*e*Sn	**Sn**	**08 21 55.8**	**-4.7**
	comp=N,2.5nm,0.2s						
ETSF	**Etsaut**	**5.61**	**254**	*e*P	**Pn**	**08 21 01.0**	**+3.6**
ETSF				*e*Sn	**Sn**	**08 21 58.3**	**-3.7**
	comp=N,0.4nm,0.3s						

IDC 04 08:20:49.2±2.8, 54°.32N×86°.13E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=20.0km s-min=12.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**245**	I		08 25 25.4	
	0.1nm,0.8s,baz=61,slow=330,SNR=34						
ZALV	**Zalesovo Beam**	**0.86**	**245**	Pg	Pg	08 21 05.1	-0.5
	1.6nm,0.3s,baz=64,slow=17,SNR=10.0						
ZALV				Lg	Lg	08 21 17.0	
	3.8nm,0.3s,baz=66,slow=29,SNR=21						
KURBB	**Kurchatov Arra**	**5.94**	**234**	Pn	Pn	08 22 20.1	+1.8
	0.2nm,0.3s,baz=55,slow=14,SNR=5.7						
KURBB				Lg	Lg	08 24 01.7	
	0.5nm,0.3s,baz=53,slow=28,SNR=4.1						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**7.92**	**199**	Pn	Pn	08 22 45.2	-0.4
	0.1nm,0.3s,baz=21,slow=11,SNR=3.4						
MKAR				Lg	Lg	08 25 02.1	
	0.1nm,0.3s,baz=20,slow=26,SNR=2.7						
	0.2nm,0.3s						

*NOU **04** 08:28:10.8, 37°.09S×179°.86E, h0km, MLv3.7/7, Off E. Coast of N. Island, N.Z.*
*WEL **04** 08:28:19.6±0.7, 37°S±4°×17°9E±°, h20km, M3.2/33, ML3.5/42, MLv3.2/33, Error ellipse: s-maj=0.0km s-min=0.0km az=100.6*

ISC 04 08:28:18.2±2.6, 37°.16S±0°.08×179°.3E±0°.1, h15km±11km, n64, σ0°86/75, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.89**	**243**	P	**Pb**	**08 28 35.1**	**-0.3**
MXZ				S	**Sb**	**08 28 45.3**	**-1.7**
MXZ	**Matakaoa Point**	**0.89**	**243**	P	**Pb**	**08 28 35.3**	**0.0**
WMGZ	**Waiomatatini S**	**0.96**	**227**	P	**Pn**	**08 28 38.4**	**+1.1**
WMGZ				S	**Sn**	**08 28 52.1**	**+1.4**
PKGZ	**Pakihiroa**	**1.21**	**233**	P	**Pg**	**08 28 41.5**	**-0.1**
PKGZ				S	**Sb**	**08 28 57.1**	**+0.6**
PUZ	**Puketiti**	**1.23**	**222**	P	**Pg**	**08 28 41.9**	**-0.1**
PUZ				S	**Sg**	**08 28 58.3**	**+0.3**
HAZ	**Te Kaha**	**1.35**	**243**	P	**Pn**	**08 28 42.2**	**-0.3**
HAZ				S	**Sb**	**08 29 01.2**	**+1.0**
TWGZ	**Tauwhareparae**	**1.46**	**225**	P	**Pb**	**08 28 45.4**	**+0.2**
TWGZ				S	**Sg**	**08 29 05.0**	**-0.3**
RUGZ	**Raukumara Rang**	**1.52**	**238**	P	**Pb**	**08 28 46.4**	**+0.2**
RUGZ				S	**Sn**	**08 29 05.2**	**+0.6**
CNGZ	**Carnagh Statio**	**1.58**	**213**	P	**Pb**	**08 28 47.6**	**+0.5**
TKGZ	**Te Karaka**	**1.72**	**222**	P	**Pn**	**08 28 48.3**	**+0.7**
MWZ	**Matawai**	**1.83**	**230**	P	**Pn**	**08 28 50.0**	**+0.8**
MWZ				S	**Sn**	**08 29 11.0**	**-1.1**
RIGZ	**Rimuhau**	**1.96**	**218**	P	**Pn**	**08 28 51.8**	**+0.8**
WHRZ	**Whale Island**	**1.98**	**249**	P	**Pb**	**08 28 53.3**	**-0.6**
RAGZ	**Rawiri**	**2.00**	**228**	P	**Pn**	**08 28 52.7**	**+1.1**
URZ	**Urewera**	**2.05**	**237**	P	**Pn**	**08 28 53.1**	**+0.9**
URZ				S	**Sn**	**08 29 17.1**	**-0.5**
URZ	**Urewera**	**2.05**	**237**	P	**Pn**	**08 28 53.3**	**+1.1**
SNGZ	**Shannon Statio**	**2.24**	**223**	P	**Pn**	**08 28 55.4**	**+0.6**
SNGZ				S	**Sn**	**08 29 21.7**	**-0.6**
KNZ	**Kokohu**	**2.26**	**214**	P	**Pn**	**08 28 55.0**	**-0.1**
MHGZ	**Mahia Peninsul**	**2.27**	**208**	P	**Pn**	**08 28 55.9**	**+0.6**
OPRZ	**Ohinepanea**	**2.29**	**252**	P	**Pn**	**08 28 55.6**	**+0.2**
RTZ	**Ruatahuna**	**2.34**	**231**	P	**Pn**	**08 28 57.6**	**+1.3**
RTZ				S	**Sn**	**08 29 24.3**	**-0.5**
MUGZ	**Murupara**	**2.40**	**236**	P	**Pn**	**08 28 56.5**	**-0.5**
MYRZ	**Mayor Island**	**2.44**	**266**	P	**Pn**	**08 28 57.7**	**+0.1**
RAHZ	**Arahi**	**2.48**	**224**	P	**Pn**	**08 28 59.0**	**+0.9**
TGRZ	**Tauranga**	**2.48**	**256**	P	**Pn**	**08 28 58.2**	**+0.1**
RRRZ	**Republican Roa**	**2.50**	**241**	P	**Pn**	**08 28 59.4**	**+1.0**
WHHZ	**Waihua**	**2.51**	**220**	P	**Pn**	**08 28 59.1**	**+0.5**
KARZ	**Kaharoa**	**2.58**	**250**	P	**Pn**	**08 29 00.2**	**+0.8**
MTHZ	**Maungataniwha**	**2.58**	**228**	P	**Pn**	**08 29 00.3**	**+0.8**
PRRZ	**Plateau Road**	**2.66**	**239**	P	**Pn**	**08 29 01.5**	**+0.9**
ALRZ	**Allen Road**	**2.73**	**238**	P	**Pn**	**08 29 02.1**	**+0.6**
KMRZ	**Kaimai**	**2.76**	**255**	P	**Pn**	**08 29 02.2**	**+0.2**
NMHZ	**Naumai**	**2.76**	**225**	P	**Pn**	**08 29 03.0**	**+1.0**
ARHZ	**Aropaoanui**	**2.78**	**220**	P	**Pn**	**08 29 02.5**	**+0.4**
KUZ	**Kuaotunu**	**2.90**	**277**	P	**Pn**	**08 29 02.4**	**-1.4**
KUZ	**Kuaotunu**	**2.90**	**277**	P	**Pn**	**08 29 02.4**	**-1.4**
BKZ	**Black Stump Fm**	**2.98**	**227**	P	**Pn**	**08 29 05.4**	**+0.3**
BKZ	**Black Stump Fm**	**2.98**	**227**	P	**Pn**	**08 29 05.2**	**+0.1**
CKHZ	**Cape Kidnapper**	**3.04**	**214**	P	**Pn**	**08 29 05.4**	**-0.4**
MCHZ	**McNeill Hill**	**3.07**	**221**	P	**Pn**	**08 29 06.4**	**+0.2**
TOZ	**Tahuroa Road**	**3.08**	**258**	P	**Pn**	**08 29 05.5**	**-0.7**
KWHZ	**Kaweka Forest**	**3.20**	**224**	P	**Pn**	**08 29 08.5**	**+0.5**
GRZ	**Great Barrier**	**3.22**	**285**	P	**Pn**	**08 29 08.2**	**0.0**
KAHZ	**Kahuranaki**	**3.25**	**215**	P	**P

KURBB	Kurchatov Arra	5.87	235	Pn	Pn	08 56 49.0 +1.2
	0.2nm,0.3s,baz=50,slow=13,SNR=5.1					
	0.9nm,0.3s					
MKAR	Makanchi Array	7.83	200	Pn	Pn	08 57 15.7 +1.0
	0.3nm,0.3s,baz=26,slow=13,SNR=11					
	0.5nm,0.2s					

IDC 04 08:56:51.8±3.1, 54°21N×87°36E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=27.4km s-min=16.4km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.52	261	I		09 04 16.3	
	baz=79,slow=327,SNR=5.9						
ZALV	Zalesovo Beam	1.52	261	Pg	Pn	08 57 18.4	-1.7
	1.2nm,0.3s,baz=83,slow=18,SNR=5.3						
ZALV				Lg	Lg	08 57 40.2	
	1.9nm,0.3s,baz=79,slow=28,SNR=6.3						
KURBB	Kurchatov Arra	6.48	240	Pn	Pn	08 58 29.1	+0.8
	0.1nm,0.3s,baz=55,slow=14,SNR=7.1						
	0.8nm,0.2s						
MKAR	Makanchi Array	8.09	206	Pn	Pn	08 58 51.5	+1.1
	0.3nm,0.3s,baz=28,slow=14,SNR=6.7						
MKAR				Sn	Sn	09 00 22.3	-0.3
	0.2nm,0.3s,baz=16,slow=25,SNR=4.7						
MKAR				Lg	Lg	09 01 09.2	
	baz=27,slow=32,SNR=5.1						
	0.6nm,0.5s						

*TUL **04** 09:10:37.9±2.1, 36°43N±0°02×96°94W±0°03, h6km±6km, ML3.7, mb_Lg3.5/95(NEIC), Error ellipse: s-maj=3.3km s-min=2.0km az=61.0*
*ANF **04** 09:10:37.9±0.6, 36°42N×96°94W, h3km±4km, ML4.2/21, Error ellipse: s-maj=2.5km s-min=2.0km az=57.0*
*NEIC **04** 09:10:37.5±1.7, 36°43N±0°02×96°92W±0°04, h9km±4km, Error ellipse: s-maj=5.5km s-min=2.7km az=67.0*
ISC 04 09:10:38.0±0.7, 36°41N±0°02×96°95W±0°02, h8km±4km, n167, σ0°69/166, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK048	Pawnee Station	0.01	21	Pg	Pg	09 10 39.2	-0.2
OK048				Sg	Sg	09 10 39.9	-0.4
OK050	Pawnee Station	0.03	241		Pg	09 10 39.5	+0.1
OK050				Sg	Sg	09 10 40.5	0.0
OK046	Pawnee Station	0.03	113		Pg	09 10 39.5	+0.1
OK046				Sg	Sg	09 10 40.5	0.0
OK045	Pawnee Station	0.04	25		Pg	09 10 39.4	-0.1
OK045				Sg	Sg	09 10 40.3	-0.4
OK044	Pawnee Station	0.13	107	Pg	Pg	09 10 41.1	+0.3
OK044				Sg	Sg	09 10 43.1	+0.5
OK051	E0350 and S346	0.13	43	Pg	Pg	09 10 40.9	+0.1
OK051				Sg	Sg	09 10 42.7	0.0
OK049	E0420 Rd and N	0.29	269	Pg	Pg	09 10 44.0	+0.3
OK049				Sg	Sg	09 10 48.0	+0.5
OK033	Mehan	0.37	179	Pg	Pg	09 10 45.7	+0.6
OK034	N. Norfolk Rd.	0.44	155	Pg	Pg	09 10 47.1	+0.5
OK031	S. Brethren Rd	0.47	169	Pg	Pg	09 10 47.5	+0.5
T35A	Sooner Cattle	0.61	35		Pg	09 10 49.7	-0.1
T35A				Sg	Sg	09 10 57.5	-0.4
T35B	Sooner Cattle	0.61	35	P	Pg	09 10 49.7	-0.1
	baz=216,SNR=117						
T35B				S	Sg	09 10 57.6	-0.3
	baz=216						
KAN13	South Haven SW	0.74	325	Pg	Pg	09 10 52.0	-0.1
KAN13				Sg	Sg	09 11 01.7	0.0
OK029	Liberty Lake	0.74	214	Pg	Pg	09 10 52.5	+0.3
OK005	Luther M Schoo	0.78	195		Pg	09 10 53.1	+0.1
OK025	Westminster Rd	0.89	201	Pg	Pg	09 10 55.1	+0.1
KAN09	Caldwell North	0.90	324	Pg	Pg	09 10 55.0	-0.3
KAN17	Caldwell West	0.91	314	Pg	Pg	09 10 55.3	-0.2
OK011	Prague	0.95	167	Pg	Pg	09 10 56.5	+0.3
KS20	Mayfield South	0.95	329	Pg	Pg	09 10 55.9	-0.3
KAN14	Manchester OK	0.98	304	Pg	Pg	09 10 56.5	-0.4
KAN01	Argonia South	0.99	319	Pg	Pg	09 10 56.5	-0.4
KAN05	Bluff City Nor	1.02	313	Pg	Pg	09 10 57.4	-0.1
KS21	Milan North St	1.05	327	Pg	Pg	09 10 57.6	-0.5
TUL1	Leonard	1.06	118		Pg	09 10 58.0	-0.3
TUL1	Leonard	1.06	118	P	Pg	09 10 57.9	-0.3
	baz=300,SNR=770						
TUL1				S	Sg	09 11 11.6	-0.4
	baz=300						
OKCSW	OKLAHOMA CITY	1.08	202		Pg	09 10 58.3	-0.4
OK032	Salt Plains WL	1.09	291	Pg	Pg	09 10 58.4	-0.5
KAN06	Argonia West S	1.11	319	Pg	Pg	09 10 58.8	-0.5
KAN08	Anthony NE Sta	1.16	315	Pg	Pg	09 10 59.8	-0.4
KAN10	Anthony SW Sta	1.17	308	Pg	Pg	09 10 59.9	-0.4
FNO	Franklin	1.21	198		Pg	09 11 00.4	-0.8
KAN16	Harper SW Stat	1.21	313	Pg	Pg	09 11 00.6	-0.6
KAN12	Harper NE Stat	1.22	317	Pg	Pg	09 11 01.0	-0.5
OK035	E0210 Rd and N	1.45	282		Pn	09 11 04.8	+0.3
OK038	West end E0370	1.45	273		Pn	09 11 04.8	+0.2
U32A	Winter Ranch,	1.66	270		Pn	09 11 08.2	+0.8
U32A	Winter Ranch,	1.66	270	P	Pn	09 11 08.2	+0.8
	baz=88,SNR=55						
U32A				S	Sg	09 11 31.1	-0.1
	baz=88						
X34A	Smith Ranch, M	1.94	202		Pb	09 11 13.0	-0.7
X34A				IAmb_Lg		09 11 42.1	
	comp=Z,230nm,0.8s						
U38A	Gravette	2.06	88		Pn	09 11 14.2	+1.2
U38A	Gravette	2.06	88	P	Pn	09 11 14.3	+1.3
	baz=270,SNR=374						
U38A				Sb	Sg	09 11 43.1	-1.2
	baz=270						
X37A	Clayton	2.23	144	IAmb_Lg		09 11 52.3	
	comp=Z,180nm,1.0s						
X37A	Clayton	2.23	144	P	Pn	09 11 16.2	+1.0
	baz=326,SNR=879						
X37A				Sb	Sg	09 11 48.7	-0.8
	baz=326						
WMOK	Wichita Mounta	2.24	222	Pn	Pn	09 11 16.4	+1.0
WMOK	Wichita Mounta	2.24	222	P	Pn	09 11 16.5	+1.0
	baz=41,SNR=179						
WMOK				S	Sb	09 11 45.8	-0.9
	baz=41						
HHAR	Hobbs	2.43	92	Pn	Pn	09 11 19.1	+1.1
HHAR	Hobbs	2.43	92	P	Pn	09 11 19.2	+1.1
	baz=274						
R32A	Long Quarter,	2.45	326	Pn	Pn	09 11 19.2	+0.8
R32A	Long Quarter,	2.45	326	P	Pn	09 11 18.5	+0.2
	baz=144						
R32A				S	Sn	09 11 49.7	+1.2
	baz=144						
KSU1	Kansas State U	2.70	6	IAmb_Lg		09 12 10.3	
	comp=Z,130nm,0.7s						
KSU1	Kansas State U	2.70	6	P	Pn	09 11 23.1	+1.4
	baz=186,SNR=26						
KSU1				Sb	Sb	09 12 00.8	+1.0
	baz=186						
Z35A	Perchaven, San	3.08	185	Pn	Pn	09 11 28.2	+1.3
Z35A	Perchaven, San	3.08	185	P	Pn	09 11 28.3	+1.3
	baz=4.6,SNR=21						
S39A	Bolivar	3.17	65	Pn	Pn	09 11 29.2	+1.0
S39A				IAmb_Lg		09 12 25.5	
	comp=Z,87nm,0.8s						
S39A	Bolivar	3.17	65	P	Pn	09 11 29.6	+1.4
	baz=248,SNR=13						
CBKS	Cedar Bluff	3.27	318	Pn	Pn	09 11 30.1	+0.5
CBKS	Cedar Bluff	3.27	318	P	Pn	09 11 30.1	+0.5
	baz=136,SNR=12						
CBKS				Sb	Sb	09 12 18.6	+2.4
	baz=136						
MIAR	Mount Ida	3.32	123	P	Pn	09 11 31.3	+1.1
	baz=306,SNR=34						
Z38A	Mt. Pleasant	3.53	152	Pn	Pn	09 11 34.0	+0.8
Z38A	Mt. Pleasant	3.53	152	P	Pn	09 11 34.1	+0.9
	baz=334,SNR=20						
MGMO	Mountain Grove	3.83	77	Pn	Pn	09 11 38.4	+1.1
MGMO				IAmb_Lg		09 12 42.5	
	comp=Z,118nm,0.7s						
FCAR	Ozark Folk Cen	3.94	96	Pn	Pn	09 11 39.2	+0.5
FCAR				IAmb_Lg		09 12 44.7	
	comp=Z,108nm,0.8s						
WHAR	Wooly Hollow	3.94	105	Pn	Pn	09 11 39.2	+0.3
UALR	University of	4.09	112	Pn	Pn	09 11 41.9	+1.0
UALR				IAmb_Lg		09 12 52.2	
	comp=Z,110nm,0.7s						
AMTX	Amarillo	4.15	250	Pn	Pn	09 11 43.0	+1.3
AMTX				IAmb_Lg		09 13 00.2	
	comp=Z,90nm,0.7s						
AMTX	Amarillo	4.15	250	P	Pn	09 11 42.9	+1.3
	baz=67						
WLAR	White Oak Lake	4.16	130	Pn	Pn	09 11 42.4	+0.7
WLAR				IAmb_Lg		09 12 51.2	
	comp=Z,98nm,0.8s						
R40A	Maddies Statio	4.17	62	Pn	Pn	09 11 42.7	+0.7
R40A	Maddies Statio	4.17	62	P	Pn	09 11 42.7	+0.7
	baz=245,SNR=51						
P38A	Dawn	4.19	39	Pn	Pn	09 11 42.9	+0.7
P38A				IAmb_Lg		09 12 54.6	
	comp=Z,85nm,0.8s						
N33A	J Bar K, Exete	4.34	355	Pn	Pn	09 11 44.8	+0.5
N33A				IAmb_Lg		09 13 03.4	
	comp=Z,71nm,0.8s						
ABTX	Abilene, Hawle	4.38	211	Pn	Pn	09 11 45.7	+0.8
WHTX	Lake Whitney,	4.43	186	Pn	Pn	09 11 46.0	+0.6
WHTX	Lake Whitney,	4.43	186	P	Pn	09 11 46.0	+0.6
	baz=5.3,SNR=30						
237A	Washetta, Mont	4.50	168	Pn	Pn	09 11 46.7	+0.3
237A	Washetta, Mont	4.50	168	P	Pn	09 11 46.7	+0.3
	baz=348,SNR=32						
N35A	Tabor	4.56	13	P	Pn	09 11 48.0	+0.7
	baz=193						
LCAR	Lake Charles	4.69	92	Pn	Pn	09 11 49.3	+0.2
LCAR	Lake Charles	4.69	92	P	Pn	09 11 49.6	+0.4
	baz=276,SNR=17						
CCM	Cathedral Cave	4.84	68	Pn	Pn	09 11 51.5	+0.4
CCM	Cathedral Cave	4.84	68	P	Pn	09 11 51.2	+0.1
	baz=252,SNR=9.8						
CCAR	Cane Creek	4.92	119	Pn	Pn	09 11 53.0	+0.8
CCAR				IAmb_Lg		09 13 24.8	
	comp=Z,91nm,0.8s						
CCAR	Cane Creek	4.92	119	P	Pn	09 11 52.9	+0.8
	baz=302,SNR=19						
P40A	Paris	4.97	50	IAmb_Lg		09 13 12.3	
	comp=Z,99nm,0.8s						
BGNE	Belgrade	5.08	350	Pn	Pn	09 11 54.7	+0.3
BGNE				IAmb_Lg		09 13 27.0	
	comp=Z,96nm,0.7s						
BGNE	Belgrade	5.08	350	P	Pn	09 11 54.8	+0.4
	baz=169,SNR=13						
KSCO	Kaye Shedlock'	5.20	302	Pn	Pn	09 11 56.3	+0.1
KSCO				IAmb_Lg		09 13 36.6	
	comp=Z,67nm,0.9s						
N38A	Joes South For	5.25	32	Pn	Pn	09 11 57.0	+0.1
PBMO	Poplar Bluff	5.26	84	Pn	Pn	09 11 57.2	+0.3
PBMO				IAmb_Lg		09 13 29.2	
	comp=Z,92nm,0.8s						
MSTX	Muleshoe	5.36	245	Pn	Pn	09 11 59.0	+0.7
MSTX	Muleshoe	5.36	245	P	Pn	09 11 59.0	+0.7
	baz=61,SNR=9.4						
435B	Jarrell	5.64	186	Pn	Pn	09 12 02.2	+0.1
435B				IAmb_Lg		09 13 50.3	
	comp=Z,44nm,0.7s						
435B	Jarrell	5.64	186	S	Sn	09 13 06.5	-0.6
	baz=5.2						
PEBM	Pemiscott Bayo	5.73	91	Pn	Pn	09 12 03.5	+0.2
SLM	Saint Louis	5.78	65	IAmb_Lg		09 13 42.9	
	comp=Z,61nm,0.8s						
143A	Socs Landing,	5.88	127	Pn	Pn	09 12 05.5	+0.1
143A				IAmb_Lg		09 13 59.3	
	comp=Z,60nm,0.8s						
OGNE	Ogallala	6.03	320	Pn	Pn	09 12 08.2	+0.7
OGNE				IAmb_Lg		09 13 51.6	
	comp=Z,87nm,0.8s						
OGNE	Ogallala	6.03	320	P	Pn	09 12 08.3	+0.7
	baz=137,SNR=15						
T25A	Trinidad	6.04	279	Pn	Pn	09 12 08.0	+0.2
T25A				IAmb_Lg		09 13 52.0	
	comp=Z,77nm,0.9s						
HALT	Halls	6.17	92	IAmb_Lg		09 14 08.0	
	comp=Z,94nm,0.8s						
GLAT	Glass	6.18	89	Pn	Pn	09 12 09.8	+0.3
SCIA	State Center	6.21	27	IAmb_Lg		09 14 07.0	
	comp=Z,44nm,0.7s						
HICK	Hickman	6.22	87	Pn	Pn	09 12 11.1	+1.1
S44A	Carbondale	6.28	76	Pn	Pn	09 12 11.6	+0.7
S44A				IAmb_Lg		09 13 56.1	
	comp=Z,83nm,0.9s						
S44A	Carbondale	6.28	76	P	Pn	09 12 11.6	+0.7
	baz=261,SNR=14						
JCT	Junction City	6.38	203	Pn	Pn	09 12 12.1	-0.3
JCT				IAmb_Lg		09 14 13.2	
	comp=Z,57nm,0.8s						
JCT	Junction City	6.38	203	P	Pn	09 12 12.1	-0.3
	baz=21,SNR=8.5						
N41A	Harden Midland	6.42	46	Pn	Pn	09 12 12.8	0.0
W45A	Hickory Valley	6.43	99	Pn	Pn	09 12 13.7	+0.7
OXF	Oxford	6.44	105	Pn	Pn	09 12 13.5	+0.4
OXF	Oxford	6.44	105	P	Pn	09 12 12.2	-0.9
	baz=290						
HKT	Hockley	6.51	171	Pn	Pn	09 12 14.2	+0.1
UTMT	University of	6.52	88	Pn	Pn	09 12 15.0	+0.8
Y45A	Yeager Farm, C	6.58	111	Pn	Pn	09 12 15.4	+0.4
Y45A				IAmb_Lg		09 14 17.6	
	comp=Z,68nm,0.9s						
P43A	Skaggs, Pawnee	6.69	59	Pn	Pn	09 12 16.2	-0.4
P43A				IAmb_Lg		09 14 09.9	
	comp=Z,85nm,0.9s						
Q44A	Meyer Farm, Va	6.76	66	Pn	Pn	09 12 18.9	+1.4
SDCO	Great Sand Dun	6.97	284	Pn	Pn	09 12 21.5	+0.9
SDCO	Great Sand Dun	6.97	284	P	Pn	09 12 21.5	+0.9
	baz=98,SNR=13						
Q24A	Divide	6.99	294	Pn	Pn	09 12 21.1	+0.1
Q24A				IAmb_Lg		09 14 28.1	
	comp=Z,51nm,1.1s						
K38A	Parkersburg	7.01	26	IAmb_Lg		09 14 26.2	
	comp=Z,60nm,0.8s						
L40A	Anamosa	7.18	36	Pn	Pn	09 12 23.7	+0.4
L40A				IAmb_Lg		09 14 23.8	
	comp=Z,48nm,0.8s						
HDIL	Hopedale	7.29	53	Pn	Pn	09 12 24.4	-0.4
HDIL				IAmb_Lg		09 14 40.5	
	comp=Z,70nm,0.8s						
ECSD	EROS Data Cent	7.32	2	Pn	Pn	09 12 25.7	+0.5
PLAL	Pickwick Lake	7.36	99	Pn	Pn	09 12 25.3	-0.4
WVT	Waverly	7.37	89	Pn	Pn	09 12 26.1	+0.2
WVT				IAmb_Lg		09 14 39.0	
	comp=Z,34nm,0.9s						
OLIL	Olney	7.40	69	IAmb_Lg		09 14 40.2	
	comp=Z,55nm,0.9s						
USIN	University of	7.57	75	IAmb_Lg		09 14 49.6	
	comp=Z,49nm,1.0s						
735A	Kenedy	7.57	186	Pn	Pn	09 12 30.1	+1.4
ISCO	Idaho Springs	7.62	299	Pn	Pn	09 12 30.7	+1.0
ISCO	Idaho Springs	7.62	299	P	Pn	09 12 29.8	+0.1
	baz=114,SNR=6.0						
T47A	Sharon Grove	7.93	83	Pn	Pn	09 12 33.6	+0.1
T47A	Sharon Grove	7.93	83	P	Pn	09 12 33.6	+0.1
	baz=269						
L42A	Oliver, Polo	7.94	43	IAmb_Lg		09 14 52.4	
	comp=Z,50nm,1.0s						
Z47A	Carrollton	7.97	111	Pn	Pn	09 12 35.2	+1.1
I37A	Lemond, Waseca	8.06	19	IAmb_Lg		09 15 05.2	
	comp=Z,30nm,0.7s						
SUSD	Miller	8.17	350	IAmb_Lg		09 15 04.8	
	comp=Z,28nm,0.7s						
JFWS	Jewell Farm	8.30	36	IAmb_Lg		09 15 04.0	
	comp=Z,37nm,0.7s						
833A	Chaparral WMA,	8.32	195	Pn	Pn	09 12 39.4	+0.3
P46A	Rosedale	8.33	64	IAmb_Lg		09 15 02.3	
	comp=Z,46nm,0.8s						
N23A	Red Feather La	8.34	305	Pn	Pn	09 12 40.0	+0.5
Y22D	IRIS PASSCAL I	8.49	257	IAmb_Lg		09 15 30.7	
	comp=Z,36nm,0.8s						
M44A	Midewin, Midew	8.54	52	IAmb_Lg		09 15 07.9	
	comp=Z,31nm,0.8s						
WCI	Wyandotte Cave	8.68	75	Pn	Pn	09 12 45.3	+1.5
SFIN	Lafayette	8.69	60	IAmb_Lg		09 15 10.9	
	comp=Z,30nm,0.7s						
I40A	Norwalk	8.90	31	IAmb_Lg		09 15 25.9	
	comp=Z,24nm,0.7s						
U49A	Red Boiling Sp	9.00	86	Pn	Pn	09 12 49.1	+0.9
TX31	Lajitas Ar. Si	9.04	221	Pn	Pn	09 12 49.0	+0.1
K43A	Burlington	9.15	44	IAmb_Lg		09 15 31.5	
	comp=Z,55nm,1.0s						
RSSD	Black Hills	9.41	327	Pn	Pn	09 12 54.4	+0.3
P48A	Milroy	9.60	68	Pn	Pn	09 12 56.5	+0.1
K22A	Casper	9.67	313	IAmb_Lg		09 15 58.4	
	comp=Z,37nm,1.1s						
I42A	Draeger Farm,	9.67	37	Pn	Pn	09 12 57.9	+0.4
T50A	Nancy	9.74	83	Pn	Pn	09 12 57.6	-0.8
F36A	Milaca	9.79	14	Pn	Pn	09 12 57.8	-1.2
250A	Grady	9.89	113	Pn	Pn	09 12 60.0	-0.4
G40A	Rib Lake	10.21	28	Pn	Pn	09 13 04.6	-0.2
S51A	Beattyville	10.75	79	Pn	Pn	09 13 12.4	+0.2
TZTN	Tazewell	10.79	85	Pn	Pn	09 13 12.1	-0.7
V52A	Sevierville	10.81	89	Pn	Pn	09 13 12.1	-1.0
BW06	Boulder Array	11.61	307	Pn	Pn	09 13 23.2	-1.0
PDAR	Pinedale Array	11.61	307	Pn	Pn	09 13 23.5	-0.7
P52A	Corning	12.12	70	Pn	Pn	09 13 31.1	+0.1
B35A	Bob, Littlefor	12.18	10	Pn	Pn	09 13 30.9	-0.8
EYMN	Ely	12.21	18	Pn	Pn	09 13 32.5	+0.3
E43A	Lone Tree Farm	12.44	34	Pn	Pn	09 13 35.0	-0.2
S54A	Dingess, Beckl	12.56	79	Pn	Pn	09 13 36.6	-0.4
S54A	Dingess, Beckl	12.56	79	P	Pn	09 13 36.9	-0.2
	baz=268						
S54A				P	Pn	09 13 36.9	-0.2
	baz=268						

IDC 04 09:15:56.2±2.1, 30°62N×41°65W, h0km, mb3.7/4, mbtmp3.7/4, MS3.3/10, Error ellipse: s-maj=121.7km s-min=29.6km az=24.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	Babate	28.00	119	LR	LR	09 30 20.2	
	comp=Z,52nm,20.9s,baz=351,slow=31						
MDT	Midelt	31.48	76	LR	LR	09 32 49.1	
	comp=Z,39nm,20.1s,baz=278,slow=32						
SADO	Sadowa	32.55	306	LR	LR	09 33 29.9	
	comp=Z,31nm,19.4s,baz=16,slow=32						
DBIC	Dimbokro	41.91	117	LR	LR	09 39 38.1	
	comp=Z,28nm,19.1s,baz=334,slow=34						
TORD	Torodi Ar. Bea	43.51	104	P	P	09 24 01.6	-0.1
	1.7nm,1.0s,baz=284,slow=7.1,SNR=3.7						
	1.7nm,1.0s						
H10N2	ASCENSION HYDR	46.26	141	T	T	10 13 52.6	
	baz=328,slow=75,SNR=146						
H10N3	ASCENSION HYDR	46.26	141	T	T	10 13 56.2	
	baz=328,slow=75,SNR=130						
H10N1	ASCENSION HYDR	46.28	141	T	T	10 13 48.5	
	baz=328,slow=75,SNR=155						
H10S3	ASCENSION HYDR	47.11	142	T	T	10 14 59.6	
	baz=254,slow=74,SNR=27						
H10S2	ASCENSION HYDR	47.12	142	T	T	10 14 51.8	
	baz=326,slow=74,SNR=14						
ANMO	Albuquerque	53.81	293	LR	LR	09 46 06.5	
	comp=Z,35nm,19.4s,baz=83,slow=34						
PDAR	Pinedale Array	54.44	303	P	P	09 25 25.4	-0.2
	1.4nm,0.7s,baz=87,slow=8.2,SNR=14						
PDAR				LR	LR	09 48 36.4	
	comp=Z,31nm,18.5s,baz=86,slow=36						
	1.4nm,0.7s						
ELK	Elko	59.03	302	LR	LR	09 48 32.6	
	comp=Z,33nm,20.8s,baz=65,slow=33						
NVAR	Mina Array Bea	61.97	300	P	P	09 26 18.4	0.0
	0.4nm,0.6s,baz=83,slow=6.7,SNR=5.3						
NVAR				LR	LR	09 52 18.6	
	comp=Z,49nm,18.9s,baz=44,slow=35						
	0.4nm,0.6s						
PFO	Pinyon Flats O	62.12	294	LR	LR	09 50 41.2	
	comp=Z,36nm,21.1s,baz=127,slow=34						
ILAR	Eielson Array	68.85	334	P	P	09 27 02.2	0.0
	0.5nm,0.7s,baz=66,slow=7.0,SNR=6.4						
	0.5nm,0.7s						
MBAR	Mbarara	75.19	100	LR	LR	09 59 54.8	
	comp=Z,26nm,18.2s,baz=332,slow=35						

IDC 04 09:26:36.7±2.6, 53°58N×86°98E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=25.3km s-min=14.7km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.34	287	I		09 33 42.8	
	baz=104,slow=330,SNR=5.3						
ZALV	Zalesovo Beam	1.34	287	Pg	Pg	09 27 00.4	-2.0
	0.5nm,0.3s,baz=107,slow=11,SNR=6.9						
ZALV				Lg	Lg	09 27 20.4	
	0.9nm,0.3s,baz=108,slow=28,SNR=18						
KURBB	Kurchatov Arra	5.99	244	Pn	Pn	09 28 06.9	+0.4
	baz=53,slow=16,SNR=4.7						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.43	206	Pn	Pn	09 28 28.2	+1.9
	0.1nm,0.3s,baz=28,slow=14,SNR=5.0						
MKAR				Lg	Lg	09 30 30.1	
	0.1nm,0.3s,baz=27,slow=29,SNR=4.1						
	0.2nm,0.3s						

IDC 04 09:39:30.3±3.1, 42°81N×132°76E, h0km, mbtmp3.4/2, ML3.3/2, Error ellipse: s-maj=29.8km s-min=20.2km az=100.0, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	1.50	338	Pg	Pn	09 39 58.1	-0.4
	59nm,0.3s,baz=165,slow=15,SNR=432						
USRK				Lg	Lg	09 40 17.4	
	14nm,0.3s,baz=156,slow=22,SNR=6.6						
I45RU	USSURIYSK INFR	1.51	338	I		09 49 53.4	
	baz=157,slow=329,SNR=3.2						
KLR	Kul'dur	6.46	354	Pn	Pn	09 41 07.5	+0.8
	0.5nm,0.3s,baz=174,slow=15,SNR=6.7						
	1.2nm,0.4s						
KSRS	Korea Array	6.50	216	Pn	Pn	09 41 07.0	-0.2
	1.0nm,0.3s,baz=32,slow=16,SNR=7.2						
	1.6nm,0.4s						

*NEIC **04** 09:39:41.0±1.3, 17°8S±0°2×178°2W±0°2, h625km±15km, mb4.3/22, Error ellipse: s-maj=33.1km s-min=21.7km az=181.0*
*IDC **04** 09:39:42.4±1.5, 18°05S×178°35W, h633km±17km, mb3.2/10, mbtmp4.2/12, Error ellipse: s-maj=24.3km s-min=13.2km az=150.0*
ISC 04 09:39:39.7±0.5, 18°0S±0°1×178°23W±0°09, h600km, n49, σ1°28/52, mb4.2/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.55	274	P	P	09 41 06.5	+4.2
	42nm,0.7s,baz=127,slow=3.1,SNR=48						
AFI	Afiamalu	7.44	58	P	P	09 41 34.8	+0.9
NIUE	Niue	7.95	99	P	P	09 41 38.0	-0.5
MARNC	Mare, Loyalty	13.38	253	P	P	09 42 33.4	+1.1
LIFNC

comp=Z,17nm,0.6s,baz=87,slow=8.5,SNR=240
ASAR PcP **PcP** **09 48 29.9 -1.2**
comp=Z,1.9nm,0.4s,baz=102,slow=3.8,SNR=10
ASAR S **S** **09 52 55.0 -3.4**
comp=Z,0.7nm,0.9s,baz=76,slow=18,SNR=5.7
comp=Z,17nm,0.6s
MTN Manton Dam 48.96 268 P **P** **09 47 32.8 -0.3**
MTN IAmb IAmb 09 47 36.6
comp=Z,15nm,1.1s
FORT Forrest 50.11 245 P **P** **09 47 40.6 -0.6**
KNRA Kununurra 50.64 264 P **P** **09 47 44.9 -0.5**
KNRA IAmb IAmb 09 47 45.5
comp=Z,12nm,0.8s
FITZ Fitzroy Crossi 53.17 261 P **P** **09 48 02.9 -0.5**
FITZ IAmb IAmb 09 48 04.8
comp=Z,17nm,1.5s
PSA00 Pilbara Seismi 58.04 255 P **P** **09 48 36.2 -0.8**
VNDA Vanda 60.34 185 P **P** **09 48 50.7 -0.6**
comp=Z,0.6nm,0.5s,baz=344,slow=6.5,SNR=10
comp=Z,0.6nm,0.5s
VNDA Vanda 60.34 185 P **P** **09 48 52.8 +1.5**
MORW Morawa 60.59 246 P **P** **09 48 52.7 -1.1**
MORW IAmb IAmb 09 49 21.0
comp=Z,13nm,1.3s
QSPA South Pole Qui 72.03 180 P **P** **09 50 04.4 +0.6**
QSPA IAmb IAmb 09 50 05.2
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 79.39 44 P **P** **09 50 45.5 +0.5**
comp=Z,0.6nm,0.6s,baz=224,slow=8.2,SNR=7.3
comp=Z,0.6nm,0.6s
MAW Mawson 83.80 200 P **P** **09 51 06.9 +0.3**
comp=Z,1.4nm,0.6s,baz=153,slow=3.8,SNR=6.2
comp=Z,1.4nm,0.6s
TXAR Lajitas Array 85.92 58 P **P** **09 51 18.9 +1.2**
comp=Z,0.8nm,0.8s,baz=218,slow=6.0,SNR=8.8
comp=Z,0.8nm,0.8s
ILAR Eielson Array 85.97 13 P **P** **09 51 15.8 -1.2**
comp=Z,0.3nm,0.4s,baz=218,slow=4.9,SNR=8.1
comp=Z,0.3nm,0.4s
PDAR Pinedale Array 87.32 43 P **P** **09 51 23.8 -0.4**
comp=Z,0.3nm,0.5s,baz=202,slow=2.7,SNR=3.9
comp=Z,0.3nm,0.5s
CMAR Chiang Mai Arr 89.08 290 P **P** **09 51 33.5 +0.9**
comp=Z,1.4nm,0.8s,baz=126,slow=2.8,SNR=6.2
comp=Z,1.4nm,0.8s
TROLL Troll, Antarti 90.19 180 P **P** **09 51 36.5 -0.4**
SNAA Sanae 90.47 179 P **P** **09 51 37.4 -0.8**
VNA3 Neumayer Olymp 90.61 176 P **P** **09 51 38.4 -0.2**
VNA2 Neumayer--Watz 91.05 177 P **P** **09 51 41.2 +0.5**
baz=183,slow=3.2
VNA1 Neumayer--Stat 91.28 177 P **P** **09 51 41.7 0.0**
MKAR Makanchi Array 109.34 314 PKiKP **PKiKP** **09 57 00.4 -2.3**
comp=Z,0.3nm,0.4s,baz=158,slow=1.7,SNR=4.5
BRTR Keskin Array B 144.99 315 PKP **PKPdf** **09 58 09.9 0.0**
comp=Z,1.4nm,0.6s,baz=132,slow=3.5,SNR=9.1
GEC2 GERESS Array S 147.77 345 **PKPdf** **09 58 11.2 -3.0**
GERES GERESS Array B 147.77 345 **PKPdf** **09 58 11.1 -3.2**

*BER **04** 10:00:23.4±1.2, 67°.09N×20°.97E, h0km, ML1.5, Suspected explosion*
HEL 04 10:00:21.6±0.3, 67°.20N×20°.68E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.88**	**137**	PG	Pg	10 00 37.3	-1.1
ERTU				SG	Sg	10 00 48.5	-1.3
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	10 00 38.9	-1.2
baz=285							
PAJU				SB	Sg	10 00 52.4	-0.2
LANU	**Lannavaara**	**0.99**	**30**	PG	Pg	10 00 39.6	-0.9
baz=213							
KLF	**Kolari**	**1.28**	**87**	PG	Pg	10 00 44.6	-1.5
baz=274							
KLF				SB	Sg	10 01 01.9	-0.7
HEF	**Hetta**	**1.66**	**42**	*e*P	Pn	10 00 51.4	-0.5
HEF				*e*S	Sn	10 01 13.7	-0.2
HEF	**Hetta**	**1.66**	**42**	PG	Pn	10 00 50.8	-1.1
HEF				MSG		10 01 11.1	
comp=Z,2.3nm,0.2s							
HEF				SN	Sn	10 01 13.6	-0.2
KALU	**Kalix**	**1.72**	**140**	PG	Pn	10 00 52.9	+0.2
KALU				SG	Sn	10 01 15.1	-0.2
KIF	**Kilpisjarvi**	**1.81**	**1**	*e*P	Pb	10 00 55.1	-0.5
KIF				*e*S	Sg	10 01 19.9	+0.2
KIF	**Kilpisjarvi**	**1.81**	**1**	PG	Pb	10 00 54.8	-0.7
KIF				MSG		10 01 16.8	
comp=Z,2.9nm,0.2s							
KIF				SG	Sg	10 01 19.8	0.0
TOF	**Tornio**	**1.84**	**126**	PG	Pn	10 00 54.6	+0.3
TOF				MSG		10 01 16.6	
comp=Z,5.9nm,0.2s							
KTK1	**Kautokeino**	**2.06**	**27**	*e*P	Pn	10 00 58.5	+1.1
KTK1				*e*		10 01 26.5	
KTK1				IAML		10 01 27.4	
comp=Z,7.6nm,0.4s							
KTK1	**Kautokeino**	**2.06**	**27**	PG	Pn	10 00 58.5	+1.1
FAUS	**Fauske**	**2.10**	**277**	*e*P	Pb	10 00 59.3	-1.2
FAUS				*e*S	Sb	10 01 26.6	-0.5
FAUS				IAML		10 01 29.1	
comp=Z,5.8nm,0.4s							
RNF	**Rovaniemi**	**2.19**	**103**	PG	Pn	10 00 59.8	+0.7
baz=286							
RNF				SG	Sb	10 01 29.4	-0.1
STEI	**Steigen**	**2.21**	**292**	*e*P	Pb	10 01 02.0	-0.4
STEI				*e*		10 01 30.8	
STEI				IAML		10 01 33.7	
comp=Z,6.3nm,0.5s							
SGF	**Sodankyl**	**2.28**	**81**	SG	Sb	10 01 32.0	-0.1
BURU	**Burvik**	**2.65**	**173**	SG	Sb	10 01 43.1	+0.4
OUL	**Oulu**	**3.00**	**133**	PN	Pn	10 01 08.5	-1.8
OBF4	**Vikkela, Lumij**	**3.00**	**141**	PN	Pn	10 01 10.2	-0.1
OBF4	**Vikkela, Lumij**	**3.00**	**141**	PG	Pn	10 01 10.2	-0.1
OBF0	**Syolatti, Pyha**	**3.08**	**150**	PG	Pb	10 01 16.3	-0.9
OBF0	**Syolatti, Pyha**	**3.08**	**150**	PG	Pb	10 01 16.3	-0.9
KEV	**Kevo**	**3.47**	**39**	SN	Sn	10 01 58.8	+0.4
VRF	**Varrio**	**3.48**	**77**	PG	Pb	10 01 24.4	+0.4
VRF				SB	Sb	10 02 04.3	-2.4
OLKF	**Oulanka, Finla**	**3.57**	**100**	PB	Pb	10 01 22.4	-3.1
VAF	**Ylistaro**	**4.26**	**168**	PB	Pb	10 01 32.9	-4.3
VAF				SG	Sg	10 02 33.8	-4.5
VAF	**Ylistaro**	**4.26**	**168**	PB	Pb	10 01 32.9	-4.3

*KOLA **04** 10:00:29.3, 64°.65N×30°.59E, h0km, ML2.1*
HEL 04 10:00:27.1±0.2, 64°.69N×30°.74E, h0km, ML1.8, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.59**	**217**	PG	Pg	10 00 37.8	-0.5
baz=33							
KU6	**Riekki**	**1.39**	**346**	PN	Pg	10 00 52.6	-1.2
baz=165							
KU6				MSG		10 01 08.8	
comp=Z,5.0nm,0.2s							
KU6				SB	Sg	10 01 10.8	-0.9
MSF	**Maaselka**	**1.42**	**331**	PG	Pn	10 00 52.9	-1.3
MSF				SG	Sg	10 01 11.6	-1.1
OLKF	**Oulanka, Finla**	**1.73**	**342**	PG	Pn	10 00 58.4	-0.1
JOF	**Joensuu**	**1.79**	**172**	PG	Pn	10 00 59.3	0.0
JOF				SN	Sn	10 01 22.4	-0.3
OUL	**Oulu**	**2.10**	**283**	PG	Pn	10 01 04.7	+1.2
baz=100							
OUL				SG	Sb	10 01 31.6	-1.1
OUF	**Merijarvi**	**2.62**	**266**	PB	Pn	10 01 11.4	+0.9
OUF				MSG		10 01 44.3	
comp=Z,7.9nm,0.2s							
OUF				SG	Sb	10 01 46.6	-0.8
RNF	**Rovaniemi**	**2.75**	**317**	PG	Pb	10 01 15.8	-1.2
RNF				SG	Sb	10 01 52.7	+1.5
TOF	**Tornio**	**3.03**	**300**	PB	Pn	10 01 18.4	+2.2
TOF				MSG		10 01 56.0	
comp=Z,2.4nm,0.2s							
APA0	**Apatity Array**	**3.07**	**16**	S	Sn	10 01 55.1	+1.0
VRF	**Varrio**	**3.11**	**352**	PB	Pn	10 01 18.5	+1.2
VRF				MSG		10 01 58.3	
comp=Z,1.9nm,0.2s							
OBF8	**Ulkokalla**	**3.17**	**267**	PB	Pb	10 01 21.8	-2.5
KALU	**Kalix**	**3.32**	**294**	PN	Pn	10 01 18.2	-1.9
LVZ	**Lovozero**	**3.59**	**24**	P	Pn	10 01 26.9	+2.9
LVZ				S	Sn	10 02 09.4	+2.4
LVZ	**Lovozero**	**3.59**	**24**	PG	Pb	10 01 31.9	+0.5
KEF	**Keuruu**	**3.65**	**229**	PB	Pb	10 01 28.8	-3.6
KLF	**Kolari**	**3.77**	**316**	SG	Sb	10 02 23.7	+3.1
VJF	**Virojoki**	**4.42**	**201**	SG	Sg	10 02 45.0	-3.8
UMAU	**Umeaa**	**4.46**	**264**	PN	Pn	10 01 37.7	+1.9
HEF	**Hetta**	**4.68**	**326**	SG	Sb	10 02 51.2	+4.4
ARCES	**ARCESS Array B**	**5.28**	**340**	P	Pn	10 01 48.2	+1.1
ARCES				S	Sn	10 02 47.9	-0.7

*THE **04** 10:52:12.7, 42°.21N×21°.47E, h1km±4km, ML2.6/6, Error ellipse: s-maj=7.2km s-min=1.0km az=343.0*
*SKO **04** 10:52:14.0, 41°.99N×21°.48E, h15km*
*NEIC **04** 10:52:14.6±1.8, 42°.00N±0°.03×21°.56E±0°.05, h9km±7km, ML3.1(SKO), Error ellipse: s-maj=5.1km s-min=3.5km az=110.0*
*PDG **04** 10:52:14.4±0.4, 41°.99N×21°.48E, h9km, ML2.8/12, Error ellipse: s-maj=0.8km s-min=0.8km az=90.0*
*BEO **04** 10:52:15.5±0.3, 42°.02N×21°.49E, h4km±2km, ML2.4/9*
ISC 04 10:52:14.6±0.8, 42°.02N±0°.02×21°.49E±0°.02, h7km±5km, n75, σ0=92/120, 20C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.06**	**221**	*e*Pg	**Pg**	**10 52 16.2**	**-0.1**
SKO				*e*Sg	**Sg**	**10 52 17.9**	**+0.4**
SKO	**Skopje**	**0.06**	**221**	⇓*i*Pg	**Pg**	**10 52 16.5**	**+0.3**
SKO				*i* Sg	**Sg**	**10 52 17.6**	**+0.1**
STIP	**Stip**	**0.61**	**122**	*i* Pg	**Pn**	**10 52 28.6**	**-1.0**
STIP				*i* Sg	**Sn**	**10 52 40.0**	**+0.2**
BARS	**Barje**	**0.83**	**17**	*e*Pg	**Pg**	**10 52 30.6**	**0.0**
BARS				*e*Sg	**Sb**	**10 52 42.7**	**-0.1**
BARS	**Barje**	**0.83**	**17**	*i* Pg	**Pg**	**10 52 30.7**	**0.0**
BARS				*i* Sg	**Sb**	**10 52 43.2**	**+0.3**
PHP	**Peshkopia**	**0.85**	**247**	P	**Pg**	**10 52 29.9**	**-1.0**
BOSS	**Bosilegrad**	**0.88**	**57**	*e*Pg	**Pg**	**10 52 31.7**	**+0.3**
BOSS				*e*Sg	**Sg**	**10 52 43.2**	**+0.4**
OHR	**Ohrid**	**1.04**	**210**	*e*Pg	**Pb**	**10 52 34.4**	**-0.6**
OHR	**Ohrid**	**1.04**	**210**	⇑*i*Pg	**Pb**	**10 52 34.3**	**-0.6**
OHR				*i* Sg	**Sb**	**10 52 48.5**	**-0.3**
OHR				*e*Lg	Lg	10 52 48.7	
comp=E,450nm,0.5s							
OHR				*e*Lg	Lg	10 52 49.5	
comp=N,318nm,0.3s							
VAY	**Valandovo**	**1.07**	**130**	*e*Pn	**Pn**	**10 52 35.7**	**-0.2**
VAY	**Valandovo**	**1.07**	**130**	*i* Pg	**Pn**	**10 52 35.8**	**-0.2**
VAY				*i* Sg	**Sn**	**10 52 49.9**	**-1.1**
VAY				*e*Lg	Lg	10 52 53.0	
comp=E,95nm,0.5s							
VAY				*e*Lg	Lg	10 52 53.0	
comp=N,116nm,0.7s							
SELS	**Selova**	**1.23**	**347**	*e*Pg	**Pn**	**10 52 37.5**	**-0.7**
SELS				*e*Sg	**Sg**	**10 52 54.5**	**+0.3**
GRG	**Griva**	**1.26**	**147**	P	**Pb**	**10 52 38.3**	**-0.3**
GRG				S	**Sn**	**10 52 59.6**	**+3.8**
comp=N,205nm,0.5s							
GRG	**Griva**	**1.26**	**147**	⇑*i*Pg	**Pn**	**10 52 38.0**	**-0.6**
GRG				*i* Sg	**Sn**	**10 52 55.8**	**0.0**
PVY	**Plav**	**1.27**	**297**	*e*Pg	**Pn**	**10 52 37.5**	**-1.4**
PVY				*i* Sg	**Sn**	**10 52 57.6**	**+1.3**
KNT	**Kendrikon**	**1.36**	**128**	P	**Pn**	**10 52 39.5**	**-0.4**
KNT				S	**Sg**	**10 53 01.0**	**+2.8**
comp=N,88nm,0.6s							
KNT	**Kendrikon**	**1.36**	**128**	*i* Pg	**Pb**	**10 52 39.8**	**-0.5**
KNT				*i* Sg	**Sg**	**10 52 59.0**	**+0.8**
TIR	**Tirane**	**1.39**	**242**	⇑P	**Pg**	**10 52 42.1**	**+0.9**
TIR	**Tirane**	**1.39**	**242**	Pn	**Pg**	**10 52 40.6**	**-0.6**
TIR	**Tirane**	**1.39**	**242**	*e*Pg	**Pg**	**10 52 41.7**	**+0.5**
TIR				*e*Sg	**Sg**	**10 53 00.6**	**+1.4**
TIR	**Tirane**	**1.39**	**242**	*i* Pn	**Pg**	**10 52 42.4**	**+1.2**
VTS	**Vitosha**	**1.43**	**64**	⇑P	**Pb**	**10 52 41.4**	**-0.1**
VTS	**Vitosha**	**1.43**	**64**	Pn	**Pn**	**10 52 39.8**	**-1.2**
VTS					**Sn**	**10 52 59.5**	**-0.6**
VTS	**Vitosha**	**1.43**	**64**	*e*Pg	**Pg**	**10 52 41.9**	**-0.1**
VTS				*e*Sg	**Sn**	**10 52 59.3**	**-0.8**
VTS	**Vitosha**	**1.43**	**64**	*i* Pg	**Pg**	**10 52 41.8**	**-0.1**
VTS				*i* Sg	**Sg**	**10 53 01.0**	**+0.6**
IVA	**Berane**	**1.46**	**306**	*e*Pg	**Pn**	**10 52 40.9**	**-0.5**
IVA				*i* Sg	**Sg**	**10 53 03.7**	**+2.2**
ZAPS	**Zavoj**	**1.51**	**33**	*e*Pg	**Pg**	**10 52 44.0**	**+0.4**
ZAPS				*e*Sg	**Sg**	**10 53 04.6**	**+1.4**
BOVS	**Bovan**	**1.63**	**6**	⇑P	**Pn**	**10 52 43.0**	**-0.6**
BOVS				⇑S	**Sn**	**10 53 04.6**	**-0.2**
BOVS	**Bovan**	**1.63**	**6**	*e*Pg	**Pn**	**10 52 43.6**	**0.0**
PDG	**Podgorica**	**1.71**	**285**	Pn	**Pb**	**10 52 45.2**	**-1.0**
PDG				⇑S	**Sg**	**10 53 08.7**	**-0.8**
PDG	**Podgorica**	**1.71**	**285**	*e*Pn	**Pb**	**10 52 46.4**	**+0.1**
PDG				*i* Sg	**Sg**	**10 53 10.1**	**+0.5**
TTG	**Podgorica**	**1.71**	**285**	⇓*i*Pn	**Pb**	**10 52 45.3**	**-1.0**
TTG				*i* Sn	**Sg**	**10 53 10.3**	**+0.8**
KZN	**Kozani**	**1.72**	**173**	P	**Pb**	**10 52 46.2**	**-0.3**
KZN				S	**Sg**	**10 53 11.1**	**+1.3**
comp=N,80nm,0.5s							
DRME	**Dracevica, Mon**	**1.73**	**276**	⇑*i*Pn	**Pb**	**10 52 45.5**	**-1.0**
DRME				*i* Sn	**Sg**	**10 53 10.6**	**+0.6**
THE	**Thessaloniki**	**1.77**	**141**	*e*Pn	**Pb**	**10 52 46.2**	**-1.1**
SRS	**Serrai**	**1.81**	**119**	P	**Pn**	**10 52 46.3**	**+0.1**
SRS				S	**Sg**	**10 53 11.9**	**-1.0**
comp=N,50nm,0.9s							
SRS	**Serrai**	**1.81**	**119**	*i* Pn	**Pn**	**10 52 46.6**	**+0.4**
SRS				*e*Sn	**Sn**	**10 53 09.6**	**+0.1**
BLKB	**Belogradchik**	**1.83**	**28**	⇑P	**Pn**	**10 52 46.9**	**+0.5**
BLKB				⇑S	**Sn**	**10 53 10.2**	**+0.4**
SOH	**Sokhos**	**1.84**	**130**	*i* Pn	**Pb**	**10 52 47.5**	**-1.1**
SOH				*e*Sg	**Sg**	**10 53 12.8**	**-0.8**
ZAGS	**Zajecar**	**1.88**	**17**	*e*Pg	**Pb**	**10 52 48.2**	**-0.9**
ZAGS				*e*Sg	**Sg**	**10 53 14.3**	**-0.5**
BUM	**Brajici-Budva**	**1.95**	**279**	⇓*i*Pn	**Pb**	**10 52 48.9**	**-1.6**
BUM				*i* Sn	**Sg**	**10 53 16.1**	**-1.2**
GRUS	**Gruza**	**1.96**	**343**	*e*Pn	**Pn**	**10 52 48.6**	**+0.5**
CEME	**Cevo**	**1.98**	**286**	⇑*i*Pn	**Pb**	**10 52 49.4**	**-1.6**
CEME				*i* Sn	**Sg**	**10 53 16.8**	**-1.4**
LSK	**Leskovik**	**1.98**	**200**	P	**Pb**	**10 52 49.4**	**-1.6**
LSK				S	**Sg**	**10 53 17.9**	**-0.3**
comp=N,170nm,0.7s							
NKME	**Niksic**	**2.02**	**293**	*e*Pn	**Pn**	**10 52 50.0**	**+0.9**
NKME				*i* Sn	**Sb**	**10 53 17.9**	**+0.8**
PLE	**Pljevlja**	**2.03**	**311**	⇑*i*Pn	**Pn**	**10 52 50.1**	**+0.8**
PLE				*i* Sn	**Sb**	**10 53 18.1**	**+0.7**
LIT	**Litokhoron**	**2.06**	**158**	Pn	**Pn**	**10 52 49.5**	**-0.1**
LIT	**Litokhoron**	**2.06**	**158**	*i* Pn	**Pn**	**10 52 50.2**	**+0.7**
UPM	**Unac-Piva**	**2.25**	**303**	⇓*i*Pn	**Pn**	**10 52 53.1**	**+0.8**
UPM				*i* Sn	**Sb**	**10 53 22.4**	**-1.2**
HCY	**Herceg Novi**	**2.27**	**282**	⇓*i*Pn	**Pn**	**10 52 53.3**	**+0.9**
HCY				*i* Sn	**Sb**	**10 53 23.7**	**-0.3**
TRUS	**Trudelj**	**2.34**	**341**	*e*Pn	**Pn**	**10 52 53.6**	**+0.1**
DIVS	**Divibare**	**2.35**	**333**	Pn	**Pn**	**10 52 54.1**	**+0.4**
BRY	**Bratogost**	**2.36**	**293**	⇑*i*Pn	**Pn**	**10 52 54.6**	**+0.8**
BRY				*i* Sn	**Sb**	**10 53 25.9**	**-0.8**
BBLS	**Lazići**	**2.40**	**321**	*e*Pn	**Pn**	**10 52 54.8**	**+0.5**
KEK	**Kerkira**	**2.63**	**210**	Pn	**Pn**	**10 52 57.0**	**-0.5**
MDVR	**Moldovita**	**2.77**	**3**	⇑P	**Pn**	**10 52 59.7**	**+0.3**
HERR	**Herculane**	**2.94**	**13**	⇑P	**Pn**	**10 52 02.1**	**+0.4**
RDO	**Rodhopi**	**3.16**	**105**	Pn	**Pn**	**10 53 04.6**	**0.0**
FRGS	**Fruska Gora**	**3.37**	**339**	⇑P	**Pn**	**10 53 08.1**	**+0.5**
GZR	**Gura Zlata**	**3.50**	**15**	⇑P	**Pn**	**10 53 10.5**	**+1.0**
ALN	**Alexandroupoli**	**3.60**	**107**	Pn	**Pn**	**10 53 10.6**	**-0.1**
VOIR		**4.28**	**36**	⇑P	**Pn**	**10 53 20.3**	**+0.1**
TIP	**Timpagrande**	**4.58**	**233**	Pn	**Pn**	**10 53 23.7**	**-0.6**
MORH	**Mrgy, Hungar**	**4.67**	**335**	⇑P	**Pn**	**10 53 26.7**	**+1.2**
CUC	**Castrocucco**	**4.75**	**247**	Pn	**Pn**	**10 53 26.2**	**-0.4**
ITM	**Ithomi**	**4.84**	**176**	Pn	**Pn**	**10 53 26.5**	**-1.3**
PSZ	**Piszkesteto**	**6.01**	**350**	Pn	**Pn**	**10 53 42.5**	**-1.4**
NRCA	**Norcia**	**6.25**	**280**	Pn	**Pn**	**10 53 47.4**	**+0.1**
FDMO	**Fiordimonte**	**6.29**	**282**	Pn	**Pn**	**10 53 48.2**	**+0.5**

*UPA **04** 11:08:22.9±1.4, 9°.34N×84°.75W, h1km±6km, MW4.1*

*NEIC **04** 11:08:26.1±1.3, 9°.27N±0°.02×84°.49W±0°.03, h13km±7km, Md4.3(UCR), Error ellipse: s-maj=5.3km s-min=2.2km az=126.0*
*UCR **04** 11:08:27.0±1.2, 9°.30N×84°.46W, h12km±3km, MW4.5, mb4.3(NEIC), Fault plane solution: NP1:φs=268.59000°, δ=26.81000°, λ=67.35000°.*
*INET **04** 11:08:27.0±1.9, 9°.38N×84°.39W, h2km±10km, MW3.8*
ISC 04 11:08:26.1±1.2, 9°.32N±0°.03×84°.49W±0°.02, h8km±10km, n108, σ1=917/141, 6C-19D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACO	**JACO, Garabito**	**0.37**	**334**	Pg	**Pb**	**11 08 35.0**	**0.0**
JACO	**JACO, Garabito**	**0.37**	**334**	⇓*e*P	**Pb**	**11 08 35.0**	**0.0**
JACO				*e*S	**Sb**	**11 08 41.5**	**+0.5**
JACO	**JACO, Garabito**	**0.37**	**334**	*e*P	**Pb**	**11 08 35.1**	**0.0**
EDDO	**Dominical**	**0.62**	**96**	⇓*e*P	**Pb**	**11 08 38.8**	**-0.5**
LAFE	**Finca La Fe, P**	**0.63**	**319**	⇓*e*P	**Pn**	**11 08 40.2**	**-1.2**
LAFE	**Finca La Fe, P**	**0.63**	**319**	*e*P	**Pn**	**11 08 40.2**	**-1.2**
LCR2	**La Lucha 2**	**0.64**	**49**	⇓*e*P	**Pg**	**11 08 38.7**	**+0.3**
SJS	**Escuela Geolog**	**0.75**	**35**	⇓*e*P	**Pb**	**11 08 40.9**	**-0.6**
CDM	**Cerro de Muert**	**0.76**	**72**	⇓*e*P	**Pg**	**11 08 40.7**	**0.0**
CDM	**Cerro de Muert**	**0.76**	**72**	*e*P	**Pg**	**11 08 40.7**	**0.0**
CDM				*e*S	**Sb**	**11 08 52.2**	**-0.2**
RIMA	**Rio Macho**	**0.76**	**55**	Pg	**Pg**	**11 08 40.8**	**0.0**
RIMA				Sg	**Sb**	**11 08 51.6**	**-0.8**
RIMA	**Rio Macho**	**0.76**	**55**	⇓*e*P	**Pg**	**11 08 40.8**	**0.0**
RIMA	**Rio Macho**	**0.76**	**55**	*e*P	**Pg**	**11 08 40.8**	**0.0**
HDC	**Heredia**	**0.77**	**29**	Pg	**Pb**	**11 08 41.4**	**-0.4**
HDC				Sg	**Sb**	**11 08 52.8**	**+0.3**
HDC	**Heredia**	**0.77**	**29**	⇓*e*P	**Pb**	**11 08 41.4**	**-0.4**
HDC	**Heredia**	**0.77**	**29**	⇓*i*P	**Pb**	**11 08 41.5**	**-0.4**
HDC				*e*S	**Sb**	**11 08 52.6**	**+0.1**
HDC3	**Heredia 3**	**0.77**	**29**	⇓*e*P	**Pb**	**11 08 41.4**	**-0.5**
HDC3	**Heredia 3**	**0.77**	**29**	*e*P	**Pb**	**11 08 41.4**	**-0.5**
HDC3				*e*S	**Sb**	**11 08 51.9**	**-0.7**
OCM	**Ochomogo**	**0.77**	**43**	⇓*e*P	**Pg**	**11 08 40.9**	**-0.1**
PEZE	**Perez Zeledon,**	**0.81**	**86**	Pg	**Pg**	**11 08 41.3**	**-0.3**
PEZE					**Sn**	**11 08 54.7**	**-1.4**
PEZE	**Perez Zeledon,**	**0.81**	**86**	⇓*e*P	**Pg**	**11 08 41.3**	**-0.3**
PEZE	**Perez Zeledon,**	**0.81**	**86**	*e*P	**Pg**	**11 08 41.4**	**-0.3**
CRPO	**Crater poas**	**0.91**	**17**	⇓*e*P	**Pg**	**11 08 43.7**	**+0.1**
RAFA	**San Farael, Vo**	**0.92**	**47**	⇓*e*P	**Pg**	**11 08 44.0**	**+0.1**
VTRT	**Volcan Turrial**	**0.96**	**46**	*e*P	**Pg**	**11 08 44.6**	**-0.1**
VTCV	**VTCV, Calle Va**	**1.00**	**49**	⇓*e*P	**Pg**	**11 08 45.2**	**-0.1**
JTS	**Las Juntas de**	**1.06**	**335**	Pn	**Pg**	**11 08 46.3**	**-0.3**
JTS	**Las Juntas de**	**1.06**	**335**	*e*P	**Pg**	**11 08 46.2**	**-0.3**
JTS	**Las Juntas de**	**1.06**	**335**	*e*P	**Pg**	**11 08 46.4**	**-0.1**
JTS				*e*S	**Sg**	**11 08 56.9**	**-3.5**
JTS	**Las Juntas de**	**1.06**	**335**	*e*P	**Pg**	**11 08 46.3**	**-0.3**
EDPN	**Palmar Norte**	**1.08**	**109**	⇓*e*P	**Pb**	**11 08 46.6**	**-0.6**
SRBA	**San Rafael, Bu**	**1.12**	**95**		**Pb**	**11 08 46.9**	**-0.9**
SRBA					**Sn**	**11 09 03.0**	**-0.9**
SRBA	**San Rafael, Bu**	**1.12**	**95**	⇓*e*P	**Pb**	**11 08 46.9**	**-0.9**
INDI	**Punta indio, G**	**1.13**	**299**	*e*P	**Pb**	**11 08 46.8**	**-1.1**
RIFO	**Rio Frio, Sara**	**1.14**	**30**	⇓*e*P	**Pb**	**11 08 47.6**	**-0.4**
FORC	**Fortuna**	**1.15**	**351**	*e*P	**Pn**	**11 08 48.2**	**-0.3**
FORC				*e*S	**Sn**	**11 09 05.4**	**+0.9**
MRVA	**Moravia de Chi**	**1.15**	**64**	⇓*e*P	**Pb**	**11 08 47.3**	**-1.0**
EDBA	**Buenos Aires**	**1.21**	**97**	⇑*e*P	**Pn**	**11 08 48.1**	**-1.3**
NICO	**Nicoya**	**1.24**	**311**	*e*P	**Pg**	**11 08 49.7**	**-0.1**
DUNO	**Dulce Nombre,**	**1.24**	**307**	Pn	**Pn**	**11 08 48.5**	**-1.3**
DUNO	**Dulce Nombre,**	**1.24**	**307**	*e*P	**Pn**	**11 08 48.4**	**-1.3**
DUNO	**Dulce Nombre,**	**1.24**	**307**	*e*P	**Pn**	**11 08 49.0**	**-0.8**
BATAN	**Batan**	**1.34**	**55**	Pn	**Pn**	**11 08 50.9**	**-0.3**
BATAN	**Batan**	**1.34**	**55**	*e*P	**Pb**	**11 08 51.1**	**-0.4**
BATAN				*e*S	**Sg**	**11 09 10.9**	**+1.6**
POTG	**Potrero Grande**	**1.38**	**101**	⇓*e*P	**Pn**	**11 08 51.2**	**-0.6**
COVE	**Coope Vega, Sa**	**1.39**	**4**	Pn	**Pn**	**11 08 51.7**	**-0.1**
COVE	**Coope Vega, Sa**	**1.39**	**4**	*e*P	**Pb**	**11 08 52.0**	**-0.4**
ORTG	**Ortega, Santa**	**1.40**	**317**	Pn	**Pb**	**11 08 52.0**	**-0.6**
ORTG	**Ortega, Santa**	**1.40**	**317**	*e*P	**Pn**	**11 08 51.3**	**-0.8**
ORTG	**Ortega, Santa**	**1.40**	**317**	*e*P	**Pg**	**11 08 52.8**	**-0.2**
ACAL	**Aguas Claras**	**1.41**	**338**	⇓*e*P	**Pb**	**11 08 52.3**	**-0.4**
ACAL				*e*S	**Sg**	**11 09 11.3**	**-0.1**
SAJU	**San Juanillo,**	**1.41**	**302**	*e*P	**Pg**	**11 08 56.0**	**+2.9**
PTJ1	**Puerto Jimnez**	**1.41**	**124**	*e*P	**Pn**	**11 08 51.5**	**-0.6**
PTEN	**Parque Tenorio**	**1.47**	**341**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACO	**JACO, Garabito**	**0.40**	**331**	⇓*eP*	**Pg**	**11 10 01.3**	**+0.7**
JACO				*eS*	**Sb**	**11 10 07.9**	**-0.3**
EDDO	**Dominical**	**0.59**	**95**	⇓*iP*	**Pb**	**11 10 05.1**	**-0.1**
EDDO				*eS*	**Sb**	**11 10 14.0**	**+0.4**
LCR2	**La Lucha 2**	**0.62**	**46**	⇓*iP*	**Pg**	**11 10 05.0**	**+0.2**
LAFE	**Finca La Fe, P**	**0.66**	**318**	*eP*	**Pb**	**11 10 06.5**	**+0.1**
LAFE				*eS*	**Sb**	**11 10 16.8**	**+1.1**
CDM	**Cerro de Muert**	**0.73**	**71**	⇓*iP*	**Pg**	**11 10 07.1**	**+0.2**
CDM				*eS*	**Sb**	**11 10 18.9**	**+0.9**
SJS	**Escuela Geolog**	**0.74**	**33**	⇓*iP*	**Pg**	**11 10 07.2**	**0.0**
RIMA	**Rio Macho**	**0.74**	**52**	*iP*	**Pg**	**11 10 07.1**	**-0.1**
OCM	**Ochomogo**	**0.76**	**40**	⇓*iP*	**Pg**	**11 10 07.3**	**-0.2**
OCM				*eS*	**Sb**	**11 10 19.0**	**+0.2**
HDC	**Heredia**	**0.77**	**26**	*eP*	**Pg**	**11 10 07.5**	**-0.1**
HDC				*eS*	**Sb**	**11 10 18.6**	**-0.3**
HDC3	**Heredia 3**	**0.77**	**27**	⇓*iP*	**Pg**	**11 10 07.8**	**+0.1**
HDC3				*eS*	**Sb**	**11 10 18.4**	**-0.4**
PEZE	**Perez Zeledon,**	**0.78**	**85**	⇓*eP*	**Pg**	**11 10 07.7**	**0.0**
RAFA	**San Farael, Vo**	**0.91**	**45**	⇓*iP*	**Pg**	**11 10 10.3**	**0.0**
RAFA				*eS*	**Sn**	**11 10 24.7**	**-0.5**
CRPO	**Crater poas**	**0.91**	**15**	*eP*	**Pg**	**11 10 10.2**	**-0.1**
CRPO				*eS*	**Sb**	**11 10 24.2**	**+1.1**
VTCV	**VTCV, Calle Va**	**0.99**	**47**	⇓*iP*	**Pg**	**11 10 11.6**	**-0.2**
JTS	**Las Juntas de**	**1.09**	**334**	*eP*	**Pg**	**11 10 12.7**	**-1.0**
SRBA	**San Rafael, Bu**	**1.09**	**94**	*eP*	**Pg**	**11 10 13.7**	**0.0**
MRVA	**Moravia de Chi**	**1.13**	**63**	*eP*	**Pg**	**11 10 13.9**	**-0.5**
MRVA				*eS*	**Sn**	**11 10 30.4**	**0.0**
RIFO	**Rio Frio, Sara**	**1.13**	**28**	*eP*	**Pb**	**11 10 13.8**	**-0.7**
RIFO				*eS*	**Sb**	**11 10 29.6**	**+0.4**
INDI	**Punta indio, G**	**1.17**	**298**	*eP*	**Pb**	**11 10 13.2**	**-1.8**
FORC	**Fortuna**	**1.17**	**350**	*eP*	**Pb**	**11 10 15.0**	**0.0**
FORC				*eS*	**Sn**	**11 10 31.3**	**+0.1**
EDBA	**Buenos Aires**	**1.18**	**97**	*eP*	**Pb**	**11 10 15.1**	**-0.2**
NICO	**Nicoya**	**1.27**	**310**	*eP*	**Pn**	**11 10 16.1**	**-0.4**
POTG	**Potrero Grande**	**1.35**	**101**	*eP*	**Pn**	**11 10 17.4**	**-0.3**
COVE	**Coope Vega, Sa**	**1.40**	**2**	*eP*	**Pn**	**11 10 17.9**	**-0.5**
ACAL	**Aguas Claras**	**1.43**	**337**	⇓*iP*	**Pn**	**11 10 18.8**	**0.0**
ACAL				*eS*	**Sn**	**11 10 38.0**	**+0.2**
ORTG	**Ortega, Santa**	**1.44**	**317**	*eP*	**Pn**	**11 10 19.4**	**+0.5**
ORTG				*eS*	**Sb**	**11 10 38.9**	**+0.9**
PTEN	**Parque Tenorio**	**1.49**	**340**	*eP*	**Pn**	**11 10 20.0**	**+0.4**
PTEN				*eS*	**Sg**	**11 10 40.6**	**0.0**
CUI	**Cuipilapa**	**1.51**	**333**	⇑*iP*	**Pn**	**11 10 20.0**	**+0.2**
CUI				*eS*	**Sn**	**11 10 39.6**	**0.0**
COLC	**Colonia**	**1.53**	**332**	*eP*	**Pn**	**11 10 20.9**	**+0.8**
COLC				*eS*	**Sb**	**11 10 41.0**	**+0.2**
HORNC	**Hornillas**	**1.56**	**333**	*eP*	**Pn**	**11 10 20.7**	**0.0**
GUAB	**Guayabo de Bag**	**1.58**	**331**	*eP*	**Pn**	**11 10 21.2**	**+0.3**
LIM1	**Limonal**	**1.58**	**331**	*eP*	**Pn**	**11 10 21.0**	**0.0**
LIM1				*eS*	**Sb**	**11 10 43.2**	**+0.9**
VERA	**Finca Concepci**	**1.59**	**345**	*eP*	**Pn**	**11 10 21.2**	**+0.3**
VMAR	**Armenia, Volca**	**1.63**	**337**	*eP*	**Pn**	**11 10 20.8**	**-0.7**
GPS2	**Hotel Rincn d**	**1.68**	**329**	*eP*	**Pn**	**11 10 22.4**	**+0.2**
GPS3	**Bodega del ICE**	**1.69**	**328**	*eP*	**Pn**	**11 10 22.1**	**-0.3**
GPS3				*eS*	**Sb**	**11 10 45.5**	**+0.2**
VRLE	**La Escondida,**	**1.72**	**329**	⇓*iP*	**Pn**	**11 10 23.1**	**+0.3**
LAPC	**Finca la Perla**	**1.74**	**327**	*eP*	**Pn**	**11 10 23.1**	**+0.2**
BUEV	**Buena Vista**	**1.75**	**328**	*eP*	**Pn**	**11 10 23.7**	**+0.5**
GB1A	**Borinquen Arri**	**1.76**	**328**	*eP*	**Pn**	**11 10 23.7**	**+0.3**
GBS3	**Finca Las Img**	**1.76**	**326**	*eP*	**Pn**	**11 10 24.1**	**+0.7**
NBG	**Las Nubes**	**7.79**	**313**	*eP*	Pb	11 12 13.6	+5.6
PCG	**Pacaya**	**7.85**	**311**	*eP*	**Pb**	**11 12 09.5**	**+0.4**
FUG	**Fuego 3**	**8.07**	**310**	*eP*	Pb	11 12 05.5	-7.2
STG3	**Santiaguito 3,**	**8.78**	**308**	*eP*	**Pn**	**11 11 59.9**	**-0.1**

*ANF **04** 11:26:13.9±0.1, 60.°29N×151.°25W, h56km±4km, ML3.5/78, ML3.5/79, Error ellipse: s-maj=1.4km s-min=1.0km az=139.0*
*IDC **04** 11:26:13.3±2.3, 60.°23N×151.°31W, h41km±34km, mb3.1/2, mbtmp3.5/6, ML3.4/4, Error ellipse: s-maj=61.6km s-min=13.6km az=113.0*
*NEIC **04** 11:26:13.8±1.2, 60.°32N±0.°03×151.°30W±0.°05, h66km±8km, Error ellipse: s-maj=4.0km s-min=3.3km az=134.0*
*AEIC **04** 11:26:14±1.2, 60.°31N±0.°02×151.°27W±0.°05, h64km±6km, ML3.2, ML3.4/171(NEIC), Error ellipse: s-maj=3.9km s-min=3.4km az=120.0*

ISC 04 11:26:14.2±0.9, 60.°31N±0.°03×151.°26W±0.°02, h67km±7km, n347, σ0.984/355, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPN	**Captain Cook N**	**0.46**	**6**		**Pn**	**11 26 26.9**	**+0.5**
CAPN	**Captain Cook N** baz=188,SNR=9.7	**0.46**	**6**	P	**Pn**	**11 26 26.7**	**+0.4**
CAPN				S	**Sn**	**11 26 33.9**	**-1.3**
SLKM	**Skilak Lake** baz=188	**0.55**	**69**		**Pn**	**11 26 26.4**	**-0.9**
SLKM					**Sn**	**11 26 36.3**	**-0.6**
BRLK	**Bradley Lake**	**0.58**	**161**		**Pn**	**11 26 27.1**	**-0.5**
BRLK					**Sn**	**11 26 37.1**	**-0.3**
BRLK	**Bradley Lake** comp=E,2μm,0.1s	**0.58**	**161**	IAML		11 26 40.6	
BRSE	**Bradley Lake S**	**0.63**	**155**		**Pn**	**11 26 27.7**	**-0.4**
BRSE					**Sn**	**11 26 38.3**	**0.0**
BRSE	**Bradley Lake S** baz=335,SNR=47	**0.63**	**155**	P	**Pn**	**11 26 27.7**	**-0.4**
HOM	**Homer**	**0.68**	**197**		**Pn**	**11 26 28.6**	**-0.1**
HOM					**Sn**	**11 26 39.9**	**+0.6**
HOM	**Homer** baz=15	**0.68**	**197**	P	**Pn**	**11 26 28.6**	**-0.1**
O20K	**Slope Mountain**	**0.72**	**252**		**Pn**	**11 26 28.5**	**-0.6**
O20K					**Sn**	**11 26 39.5**	**-0.7**
O20K	**Slope Mountain** baz=70,SNR=22	**0.72**	**252**	P	**Pn**	**11 26 28.5**	**-0.6**
O20K	baz=70			S	**Sn**	**11 26 39.0**	**-1.2**
RDSO	**Redoubt South**	**0.75**	**282**		**Pn**	**11 26 28.4**	**-1.2**
RSO	**Redoubt South**	**0.76**	**282**	Pn	**Pn**	**11 26 28.6**	**-1.1**
RED	**Redoubt Volcan**	**0.76**	**279**		**Pn**	**11 26 28.4**	**-1.2**
RED					**Sn**	**11 26 39.8**	**-1.2**
DFR	**Drift River**	**0.76**	**292**		**Pn**	**11 26 28.4**	**-1.2**
DFR					**Sn**	**11 26 40.0**	**-1.1**
O22K	**Cooper Landing**	**0.78**	**77**		**Pn**	**11 26 29.5**	**-0.3**
O22K	**Cooper Landing** comp=E,2μm,0.7s	**0.78**	**77**	IAML		11 26 53.5	
O22K	**Cooper Landing** baz=259,SNR=102	**0.78**	**77**	P	**Pn**	**11 26 29.5**	**-0.3**
O22K	baz=259			S	**Sn**	**11 26 40.6**	**-0.7**
CNPM	**China Poot**	**0.79**	**179**		**Pn**	**11 26 29.6**	**-0.3**
CNPM					**Sn**	**11 26 41.7**	**+0.1**
CNPM	**China Poot** comp=N,2μm,0.4s	**0.79**	**179**	IAML		11 26 42.3	
RDWB	**Redoubt West**	**0.80**	**283**		**Pn**	**11 26 29.0**	**-1.2**
RDWB					**Sn**	**11 26 40.7**	**-1.4**
RDJH	**Redoubt Jeurge**	**0.81**	**291**		**Pn**	**11 26 29.3**	**-1.1**
RDJH					**Sn**	**11 26 41.4**	**-0.9**
NCT	**North Crescent**	**0.86**	**288**		**Pn**	**11 26 29.9**	**-1.0**
NCT					**Sn**	**11 26 42.4**	**-0.9**
SEW	**Seward**	**0.93**	**102**		**Pn**	**11 26 31.0**	**-0.5**
SEW	**Seward** baz=284,SNR=106	**0.93**	**102**	P	**Pn**	**11 26 31.0**	**-0.5**
SEW	baz=284			S	**Sn**	**11 26 43.3**	**-1.1**
IVE	**Iliamna Volcan**	**0.93**	**252**		**Pn**	**11 26 30.8**	**-0.9**
IVE					**Sn**	**11 26 43.6**	**-1.0**
SPU	**Mount Spurr**	**0.96**	**336**		**Pn**	**11 26 31.1**	**-0.9**
ILS	**Iliamna Low So**	**0.97**	**249**		**Pn**	**11 26 31.6**	**-0.7**
FIS	**Fire Island**	**0.98**	**31**		**Pn**	**11 26 32.7**	**+0.5**
FIS	**Fire Island** comp=E,889nm,0.5s	**0.98**	**31**	IAML		11 26 54.5	
FIS	comp=N,893nm,0.5s			IAML		11 26 56.0	
N20K	**Mount Spurr** baz=153,SNR=54	**1.01**	**333**	P	**Pn**	**11 26 31.8**	**-0.8**
N20K	baz=153			S	**Sn**	**11 26 45.7**	**-0.7**
SPCR	**Spurr Chakacha**	**1.01**	**333**		**Pn**	**11 26 31.8**	**-0.8**
SPCR	**Spurr Chakacha** baz=153,SNR=38	**1.01**	**333**	P	**Pn**	**11 26 31.9**	**-0.8**
SPCR	baz=153			S	**Sn**	**11 26 45.7**	**-0.7**
SPCN	**Chakachatna No**	**1.02**	**334**		**Pn**	**11 26 32.2**	**-0.6**
CKL	**Chakachamna La**	**1.03**	**330**		**Pn**	**11 26 32.4**	**-0.6**
SPCG	**Spurr Capps Gl**	**1.05**	**340**		**Pn**	**11 26 32.8**	**-0.5**
SPCG					**Sn**	**11 26 47.3**	**-0.2**
CGLM	**Capps Glacier**	**1.06**	**340**		**Pn**	**11 26 32.9**	**-0.5**
RC01	**Rabbit Creek A**	**1.08**	**43**		**Pn**	**11 26 33.0**	**-0.5**
RC01	**Rabbit Creek A** comp=E,703nm,0.3s	**1.08**	**43**	IAML		11 26 49.1	
RC01	comp=N,658nm,0.3s			IAML		11 26 50.3	
RC01	**Rabbit Creek A** baz=225,SNR=132	**1.08**	**43**	P	**Pn**	**11 26 33.1**	**-0.5**
RC01	baz=225			S	**Sn**	**11 26 47.6**	**-0.4**
BGL	**Barrier Glacie**	**1.10**	**330**		**Pn**	**11 26 33.5**	**-0.4**
SUA	**Susitna One**	**1.18**	**12**		**Pn**	**11 26 34.5**	**-0.4**
SUA	comp=N,387nm,0.9s			IAML		11 26 51.5	
SUA	**Susitna One** baz=193	**1.18**	**12**	P	**Pn**	**11 26 34.6**	**-0.4**
SUA	baz=193			S	**Sn**	**11 26 49.9**	**-0.5**
OPT	**Oil Point**	**1.19**	**237**		**Pn**	**11 26 34.6**	**-0.3**
P19K	**Oil Pt**	**1.19**	**237**		**Pn**	**11 26 34.6**	**-0.4**
P19K	**Oil Pt** baz=55,SNR=22	**1.19**	**237**	P	**Pn**	**11 26 34.5**	**-0.4**
P19K	baz=55			S	**Sn**	**11 26 49.7**	**-0.8**
STLK	**Strandline Lak**	**1.22**	**347**		**Pn**	**11 26 35.3**	**-0.1**
AU22	**Augustine Moun**	**1.42**	**229**		**Pn**	**11 26 37.7**	**-0.2**
AU2	**Augustine Isla**	**1.43**	**229**		**Pn**	**11 26 37.8**	**-0.2**
AUL	**Augustine Lava**	**1.44**	**231**		**Pn**	**11 26 38.2**	**0.0**
AUQ	**Augustine Qik'**	**1.45**	**230**		**Pn**	**11 26 38.3**	**-0.1**
AUH	**Augustine H**	**1.46**	**230**		**Pn**	**11 26 38.5**	**0.0**
AUCH	**Augustine Cone**	**1.46**	**230**		**Pn**	**11 26 38.5**	**0.0**
O19K	**Port Alsworth**	**1.53**	**267**		**Pn**	**11 26 38.4**	**-0.9**
O19K	**Port Alsworth** baz=84,SNR=118	**1.53**	**267**	P	**Pn**	**11 26 38.4**	**-0.9**
O19K	baz=84			S	**Sn**	**11 26 57.5**	**-0.9**
PWL	**Port Wells**	**1.54**	**68**		**Pn**	**11 26 39.1**	**-0.5**
PWL	**Port Wells** comp=E,591nm,0.5s	**1.54**	**68**	IAML		11 27 01.1	
PWL	**Port Wells** baz=251,SNR=82	**1.54**	**68**	P	**Pn**	**11 26 39.1**	**-0.5**
PWL	baz=251			S	**Sn**	**11 26 58.2**	**-0.6**
M22K	**Willow**	**1.55**	**20**		**Pn**	**11 26 39.6**	**0.0**
M22K	**Willow** comp=N,547nm,0.3s	**1.55**	**20**	IAML		11 27 00.2	
M22K	comp=E,571nm,0.5s			IAML		11 27 06.3	
M22K	**Willow** baz=202,SNR=50	**1.55**	**20**	P	**Pn**	**11 26 39.6**	**0.0**
M22K	baz=202			S	**Sn**	**11 26 59.0**	**+0.2**
PMR	**Palmer**	**1.65**	**38**		**Pn**	**11 26 40.5**	**-0.5**
PMR	**Palmer** baz=220,SNR=49	**1.65**	**38**	P	**Pn**	**11 26 40.5**	**-0.5**
PMR	baz=220			S	**Sn**	**11 27 00.1**	**-1.2**
N19K	**Bonanza Creek**	**1.67**	**289**		**Pn**	**11 26 40.4**	**-1.0**
N19K	**Bonanza Creek** comp=N,312nm,0.3s	**1.67**	**289**	IAML		11 27 01.3	
N19K	comp=E,517nm,0.4s			IAML		11 27 01.5	
N19K	**Bonanza Creek** baz=106,SNR=36	**1.67**	**289**	P	**Pn**	**11 26 40.4**	**-1.0**
N19K	baz=106			S	**Sn**	**11 27 00.9**	**-1.0**
SKT	**Skwentna**	**1.68**	**356**		**Pn**	**11 26 41.7**	**+0.3**
SKT	**Skwentna** comp=N,393nm,0.4s	**1.68**	**356**	IAML		11 27 04.2	
SKT	comp=E,326nm,0.4s			IAML		11 27 04.3	
SKT	**Skwentna** baz=176,SNR=51	**1.68**	**356**	P	**Pn**	**11 26 41.7**	**+0.3**
SKT	baz=176			S	**Sn**	**11 27 02.3**	**+0.3**
KNK	**Knik Glacier**	**1.76**	**50**		**Pn**	**11 26 42.2**	**-0.3**
KNK	**Knik Glacier** baz=233,SNR=100	**1.76**	**50**	P	**Pn**	**11 26 42.2**	**-0.3**
KNK	baz=233			S	**Sn**	**11 27 03.4**	**-0.6**
SYI	**Shuyak Island**	**1.80**	**199**		**Pn**	**11 26 43.3**	**+0.3**
Q20K	**Shuyak Island** baz=18	**1.80**	**199**	P	**Pn**	**11 26 43.2**	**+0.1**
M20K	**Styx River**	**1.82**	**331**		**Pn**	**11 26 43.4**	**0.0**
M20K	**Styx River** baz=150,SNR=55	**1.82**	**331**	P	**Pn**	**11 26 43.1**	**-0.2**
Q19K	**Cape Douglas,**	**1.84**	**222**		**Pn**	**11 26 43.6**	**+0.1**
Q19K	**Cape Douglas,** baz=40,SNR=35	**1.84**	**222**	P	**Pn**	**11 26 43.7**	**+0.1**
GHO	**Glory Hole Cre**	**1.85**	**37**		**Pn**	**11 26 43.4**	**-0.4**
GHO	comp=N,246nm,0.6s			IAML		11 27 11.0	
GHO	comp=E,255nm,0.5s			IAML		11 27 14.2	
O18K	**Koktuh Hills**	**2.03**	**259**		**Pn**	**11 26 44.9**	**-1.2**
O18K	**Koktuh Hills** comp=N,191nm,0.8s	**2.03**	**259**	IAML		11 27 17.1	
O18K	**Koktuh Hills** baz=75	**2.03**	**259**	P	**Pn**	**11 26 45.0**	**-1.2**
O18K	baz=75			S	**Sn**	**11 27 09.1**	**-1.4**
SML	**Sawmill**	**2.07**	**42**		**Pn**	**11 26 46.1**	**-0.6**
SML	comp=N,140nm,0.5s			IAML		11 27 14.6	
SML	**Sawmill** baz=225,SNR=30	**2.07**	**42**	P	**Pn**	**11 26 46.3**	**-0.4**
SML	baz=225			S	**Sn**	**11 27 10.0**	**-1.4**
GLI	**Glacier Island**	**2.13**	**73**		**Pn**	**11 26 46.0**	**-1.5**
GLI	**Glacier Island** baz=256,SNR=16	**2.13**	**73**	P	**Pn**	**11 26 45.8**	**-1.7**
GLI	baz=256			S	**Sn**	**11 27 11.3**	**-1.7**
CUT	**Chulitna**	**2.15**	**12**		**Pn**	**11 26 47.5**	**-0.3**
CUT	**Chulitna** comp=E,260nm,0.7s	**2.15**	**12**	IAML		11 27 25.4	
CUT	comp=N,231nm,0.5s			IAML		11 27 41.4	
M19K	**Big River Lodg**	**2.21**	**318**		**Pn**	**11 26 48.0**	**-0.4**
M19K	**Big River Lodg** baz=135,SNR=26	**2.21**	**318**	P	**Pn**	**11 26 48.1**	**-0.4**
P18K	**Big Mountain,**	**2.21**	**247**		**Pn**	**11 26 47.6**	**-0.9**
P18K	**Big Mountain,** baz=63,SNR=12	**2.21**	**247**	P	**Pn**	**11 26 47.6**	**-0.9**
SVW2	**Sparrevohn**	**2.27**	**292**		**Pn**	**11 26 47.8**	**-1.5**
SVW2	**Sparrevohn** comp=N,110nm,0.3s	**2.27**	**292**	IAML		11 27 16.7	
M23K	**Glacier View**	**2.27**	**48**		**Pn**	**11 26 49.0**	**-0.4**
M23K	**Glacier View** baz=231,SNR=63	**2.27**	**48**	P	**Pn**	**11 26 49.0**	**-0.4**
N18K	**Kilae Creek**	**2.32**	**281**		**Pn**	**11 26 49.0**	**-1.1**
N18K	comp=E,201nm,0.6s			IAML		11 27 16.1	
N18K	comp=N,131nm,0.7s			IAML		11 27 16.1	
N18K	**Kilae Creek** baz=97,SNR=39	**2.32**	**281**	P	**Pn**	**11 26 49.0**	**-1.1**
HIN	**Hinchinbrook I**	**2.37**	**86**		**Pn**	**11 26 49.3**	**-1.4**
FID	**Port Fidalgo**	**2.40**	**77**		**Pn**	**11 26 49.1**	**-2.0**
JPK	**Jack Peak**	**2.41**	**70**		**Pn**	**11 26 50.1**	**-1.2**
SCM	**Sheep Creek Mo**	**2.45**	**50**		**Pn**	**11 26 51.4**	**-0.4**
SCM	comp=E,203nm,0.5s			IAML		11 27 21.6	
SCM	comp=N,162nm,0.6s			IAML		11 27 21.6	
SCM	**Sheep Creek Mo** baz=233,SNR=18	**2.45**	**50**	P	**Pn**	**11 26 51.4**	**-0.4**
L20K	**Farewell, AK**	**2.51**	**331**		**Pn**	**11 26 52.3**	**-0.4**
L20K	**Farewell, AK** baz=149	**2.51**	**331**	P	**Pn**	**11 26 52.4**	**-0.3**
VMT	**TAPS Tl Valdez**	**2.53**	**70**		**Pn**	**11 26 52.0**	**-0.8**
KAHC	**Katmai Hardscr**	**2.54**	**231**		**Pn**	**11 26 52.4**	**-0.7**
Q18K	**Katmai Hardscr** baz=47	**2.54**	**231**	P	**Pn**	**11 26 52.4**	**-0.7**
L19K	**White Mountain**	**2.56**	**319**		**Pn**	**11 26 53.0**	**-0.2**
L19K	**White Mountain** baz=136,SNR=14	**2.56**	**319**	P	**Pn**	**11 26 53.1**	**-0.2**
KDAK	**Kodiak Island** comp=N,2.8nm,0.3s,baz=64,slow=6.3,SNR=210	**2.63**	**196**	P	**Pn**	**11 26 53.0**	**-1.2**
KDAK	comp=N,28nm,0.3s,baz=47,slow=12,SNR=5.1			S	**Sn**	**11 27 21.9**	**-3.0**
KDAK	**Kodiak Island** comp=N,7.9nm,0.2s	**2.63**	**196**		**Pn**	**11 26 53.1**	**-1.1**
KDAK	**Kodiak Island** comp=N,121nm,0.7s	**2.63**	**196**	IAML		11 27 36.5	
KDAK	comp=N,103nm,0.6s			IAML		11 27 36.7	
KDAK	**Kodiak Island** baz=14	**2.63**	**196**	P	**Pn**	**11 26 53.0**	**-1.2**
Q23K	**Middleton Isla**	**2.63**	**108**		**Pn**	**11 26 53.4**	**-0.8**
Q23K	comp=E,150nm,3.4s			IAML		11 27 33.7	
Q23K	comp=N,146nm,2.2s			IAML		11 27 48.5	
Q23K	**Middleton Isla** baz=292	**2.63**	**108**	P	**Pn**	**11 26 53.4**	**-0.8**
PPLA	**Purkeypile**	**2.63**	**351**		**Pn**	**11 26 53.6**	**-0.7**
PPLA	**Purkeypile** baz=170	**2.63**	**351**	P	**Pn**	**11 26 54.6**	**+0.2**
MID	**Middleton Isla**	**2.63**	**108**	Pn	**Pn**	**11 26 53.8**	**-0.5**
MID	comp=E,138nm,1.6s			IAML		11 27 37.2	
MID	comp=N,140nm,3.6s			IAML		11 28 30.8	
EYAK	**Cordova Ski Ar**	**2.74**	**83**		**Pn**	**11 26 54.0**	**-1.7**
EYAK	**Cordova Ski Ar** baz=268	**2.74**	**83**	P	**Pn**	**11 26 54.0**	**-1.7**
KAKN	**Katmai Knife C**	**2.81**	**226**		**Pn**	**11 26 56.5**	**-0.2**
DIV	**Divide**	**2.82**	**71**		**Pn**	**11 26 55.8**	**-1.0**
WAT6	**Susitna Watana** baz=218	**2.84**	**35**	P	**Pn**	**11 26 57.0**	**-0.2**
WAT1	**Susitna Watana**	**2.84**	**26**		**Pn**	**11 26 57.1**	**0.0**
WAT1	**Susitna Watana** baz=209	**2.84**	**26**	P	**Pn**	**11 26 56.9**	**-0.2**
P17K	**Kvichak River**	**2.85**	**249**		**Pn**	**11 26 56.9**	**-0.3**
P17K	**Kvichak River** baz=64	**2.85**	**249**	P	**Pn**	**11 26 56.9**	**-0.3**
KLU	**Klutina**	**2.86**	**63**		**Pn**	**11 26 56.9**	**-0.6**
KLU	**Klutina** baz=248,SNR=61	**2.86**	**63**	P	**Pn**	**11 26 56.9**	**-0.6**
O17K	**Koliganek Bris**	**2.98**	**262**		**Pn**	**11 26 57.8**	**-1.1**
O17K	**Koliganek Bris** baz=77,SNR=6.0	**2.98**	**262**	P	**Pn**	**11 26 57.8**	**-1.1**
ANCK	**Angle Creek**	**3.04**	**228**		**Pn**	**11 26 59.8**	**0.0**
M24K	**Tolsona, Glenn**	**3.05**	**52**		**Pn**	**11 27 00.1**	**+0.1**
M24K	**Tolsona, Glenn** comp=N,102nm,0.5s	**3.05**	**52**	IAML		11 27 46.7	
M24K	**Tolsona, Glenn** baz=236,SNR=30	**3.05**	**52**	P	**Pn**	**11 27 00.0**	**+0.1**
CNTC	**Contact Creek**	**3.14**	**231**		**Pn**	**11 27 01.1**	**-0.1**
Q17K	**Contact Creek** baz=47	**3.14**	**231**	P	**Pn**	**11 27 00.8**	**-0.5**
CAST	**Castle Rocks**	**3.14**	**353**		**Pn**	**11 27 01.0**	**-0.2**
CAST	**Castle Rocks** baz=173,SNR=13	**3.14**	**353**	P	**Pn**	**11 27 00.8**	**-0.4**
TRF	**Thorofare Moun**	**3.18**	**8**		**Pn**	**11 27 02.1**	**+0.2**
TRF	**Thorofare Moun** comp=E,52nm,1.0s	**3.18**	**8**	IAML		11 28 09.1	
TRF	comp=N,67nm,1.0s			IAML		11 28 10.1	
TRF	**Thorofare Moun** baz=189,SNR=34	**3.18**	**8**	P	**Pn**	**11 27 02.4**	**+0.5**
Q16K	**King Salmon**	**3.20**	**242**		**Pn**	**11 27 02.2**	**+0.2**
Q16K	**King Salmon** baz=57,SNR=6.7	**3.20**	**242**	P	**Pn**	**11 27 01.4**	**-0.6**
PS12	**TAPS Pump St12**	**3.21**	**66**		**Pn**	**11 27 01.8**	**-0.3**
GOAT	**Goat Mountain**	**3.25**	**82**		**Pn**	**11 27 01.1**	**-1.6**
KTH	**Kantishna Hill**	**3.26**	**3**		**Pn**	**11 27 03.2**	**+0.4**
KTH	**Kantishna Hill** comp=N,83nm,0.8s	**3.26**	**3**	IAML		11 27 48.7	
KTH	comp=E,70nm,1.0s			IAML		11 28 04.9	
OHAK	**Old Harbor**	**3.27**	**200**		**Pn**	**11 27 01.4**	**-1.5**
OHAK	**Old Harbor** comp=N,55nm,0.5s	**3.27**	**200**	IAML		11 27 38.2	
OHAK	comp=E,50nm,1.1s			IAML		11 28 00.2	
OHAK	**Old Harbor** baz=18	**3.27**	**200**	P	**Pn**	**11 27 01.4**	**-1.5**
RAGM	**Ragged Mountai**	**3.27**	**86**		**Pn**	**11 27 01.2**	**-1.8**
RND	**Reindeer**	**3.31**	**19**		**Pn**	**11 27 03.3**	**-0.2**
PS11	**TAPS Pump St11**	**3.31**	**55**		**Pn**	**11 27 03.8**	**+0.2**
DHY	**Denali Highway**	**3.33**	**32**		**Pn**	**11 27 04.3**	**+0.3**
DHY	**Denali Highway** comp=N,58nm,0.4s	**3.33**	**32**	IAML		11 27 44.6	
DHY	comp=E,66nm,0.4s			IAML		11 27 45.6	
DHY	**Denali Highway** baz=216,SNR=13	**3.33**	**32**	P	**Pn**	**11 27 03.6**	**-0.3**
K20K	**Telida**	**3.33**	**338**		**Pn**	**11 27 03.7**	**-0.1**
K20K	**Telida** baz=155,SNR=15	**3.33**	**338**	P	**Pn**	**11 27 03.5**	**-0.3**
BMRM	**Bremner River**	**3.34**	**76**		**Pn**	**11 27 02.4**	**-1.6**
BMRM	**Bremner River** baz=262,SNR=6.3	**3.34**	**76**	P	**Pn**	**11 27 02.4**	**-1.6**
KAIM	**Kayak Island**	**3.45**	**93**		**Pn**	**11 27 04.3**	**-1.0**
KAIM	**Kayak Island** baz=280	**3.45**	**93**	P	**Pn**	**11 27 04.3**	**-1.0**
TT01	**Tatalina**	**3.46**	**321**		**Pn**	**11 27 05.3**	**-0.2**
TTA	**Tatalina**	**3.47**	**321**		**Pn**	**11 27 05.3**	**-0.5**
TTA	**Tatalina** baz=137	**3.47**	**321**	P	**Pn**	**11 27 05.3**	**-0.5**
HMT	**Hamilton**	**3.48**	**87**		**Pn**	**11 27 04.5**	**-1.3**
N25K	**Chitina, Valde**	**3.50**	**65**		**Pn**	**11 27 05.3**	**-0.8**
N25K	**Chitina, Valde** comp=N,107nm,0.6s	**3.50**	**65**	IAML		11 27 46.5	
N25K	**Chitina, Valde** baz=251,SNR=12	**3.50**	**65**	P	**Pn**	**11 27 05.4**	**-0.8**
O16K	**Kokwok River B**	**3.51**	**261**		**Pn**	**11 27 05.2**	**-1.0**
O16K	**Kokwok River B** baz=75,SNR=5.5	**3.51**	**261**	P	**Pn**	**11 27 05.2**	**-1.0**
MCK	**McKinley**	**3.60**	**17**		**Pn**	**11 27 07.9**	**+0.4**
MCK	comp=N,42nm,1.1s			IAML		11 28 22.7	
MCK	**McKinley** baz=199,SNR=8.5	**3.60**	**17**	P	**Pn**	**11 27 08.8**	**+1.3**
HARP	**HAARP**	**3.61**	**52**		**Pn**	**11 27 07.7**	**+0.1**
HARP	**HAARP** baz=237,SNR=10	**3.61**	**52**	P	**Pn**	**11 27 07.6**	**+0.1**
CHUM	**Lake Minchumin**	**3.62**	**353**		**Pn**	**11 27 07.5**	**-0.2**
CHUM	**Lake Minchumin** baz=172,SNR=21

MCARA	McCarthy VSAT	4.17	71	P		Pn	11 27 14.1	-1.1
	baz=259							
WAX	Waxell Ridge	4.18	84			Pn	11 27 13.3	-2.1
TGL	Tana Glacier	4.19	80			Pn	11 27 13.6	-2.0
TGL				IAML			11 28 02.1	
	comp=E,55nm,0.4s							
TGL				IAML			11 28 03.5	
	comp=N,62nm,0.4s							
SNH	Sunshine Point	4.20	88			Pn	11 27 15.0	-0.7
SNH				IAML			11 28 04.8	
	comp=E,65nm,0.7s							
K24K	Donnelly Dome	4.35	34			Pn	11 27 19.5	+1.8
K24K	Donnelly Dome	4.35	34	P		Pn	11 27 19.5	+1.8
	baz=219,SNR=54							
PTPK	Patty Peak	4.40	75			Pn	11 27 17.6	-1.0
NEA2	Nenana	4.42	12			Pn	11 27 18.1	-0.5
NEA2	Nenana	4.42	12	P		Pn	11 27 18.4	-0.1
	baz=194,SNR=6.4							
ISLE	Juniper Island	4.43	82			Pn	11 27 15.9	-2.9
ISLE				IAML			11 28 08.6	
	comp=E,51nm,0.6s							
ISLE				IAML			11 28 12.0	
	comp=N,51nm,0.7s							
WRH	Wood River Hil	4.43	18			Pn	11 27 18.9	+0.2
KIAG	Kiagna River	4.43	78			Pn	11 27 17.5	-1.4
BALM	Baldy	4.45	77			Pn	11 27 17.5	-1.5
MENT	Mentasta	4.46	51			Pn	11 27 18.6	-0.6
MENT				IAML			11 28 27.9	
	comp=E,43nm,0.6s							
MENT				IAML			11 28 34.2	
	comp=N,43nm,0.6s							
M26K	Nabesna, AK	4.50	59			Pn	11 27 19.2	-0.5
M26K	Nabesna, AK	4.50	59	IAML			11 28 11.0	
	comp=E,42nm,0.6s							
M26K	Nabesna, AK	4.50	59	P		Pn	11 27 19.5	-0.2
	baz=246,SNR=11							
HDA	Harding Lake	4.58	24			Pn	11 27 21.0	+0.3
HDA				IAML			11 28 14.9	
	comp=E,38nm,0.3s							
HDA	Harding Lake	4.58	24	P		Pn	11 27 21.1	+0.3
	baz=208,SNR=29							
RIDG	Independent Ri	4.58	39			Pn	11 27 21.3	+0.5
RIDG	Independent Ri	4.58	39	IAML			11 28 16.9	
	comp=N,42nm,0.6s							
RIDG				IAML			11 28 49.0	
	comp=E,36nm,1.4s							
RIDG	Independent Ri	4.58	39	P		Pn	11 27 21.3	+0.5
	baz=224,SNR=44							
CCB	Clear Creek Bu	4.64	19			Pn	11 27 21.5	0.0
L26K	Log Cabin Wild	4.65	51			Pn	11 27 21.9	+0.2
L26K				IAML			11 28 35.6	
	comp=E,24nm,0.6s							
L26K				IAML			11 28 43.5	
	comp=N,25nm,0.5s							
L26K	Log Cabin Wild	4.65	51	P		Pn	11 27 21.8	0.0
	baz=238,SNR=13							
PS08	TAPS Pump Stn8	4.72	24			Pn	11 27 23.0	+0.3
YAH	Yahtse	4.73	85	Pn		Pn	11 27 20.2	-2.8
YAH				IAML			11 28 16.2	
	comp=N,44nm,0.4s							
YAH				IAML			11 28 18.9	
	comp=E,37nm,0.6s							
MLY	Manley	4.74	3			Pn	11 27 22.9	-0.2
MLY	Manley	4.74	3	P		Pn	11 27 22.9	-0.2
	baz=183,SNR=8.9							
DOT	Dot Lake	4.77	42			Pn	11 27 23.2	-0.2
BARN	Barnard Glacie	4.78	77			Pn	11 27 23.0	-0.7
BARN				IAML			11 28 18.3	
	comp=N,37nm,0.5s							
BARN				IAML			11 28 18.4	
	comp=E,32nm,0.5s							
TCOL	CIGO, UAF Yank	4.84	17			Pn	11 27 24.6	+0.3
TCOL	CIGO, UAF Yank	4.84	17	P		Pn	11 27 24.6	+0.3
	baz=201,SNR=31							
COLA	College	4.84	18			Pn	11 27 24.4	+0.1
COLA	College	4.84	18	P		Pn	11 27 24.6	+0.3
	baz=201							
MDM	Murphy Dome	4.87	15			Pn	11 27 24.9	+0.2
I21K	Tanana	4.90	356			Pn	11 27 25.3	+0.2
I21K				IAML			11 28 59.8	
	comp=N,14nm,2.5s							
I21K	Tanana	4.90	356	P		Pn	11 27 25.3	+0.2
	baz=176							
IL31		4.91	22			Pn	11 27 25.5	+0.2
ILAR	Eielson Array	4.91	22	P		Pn	11 27 25.6	+0.3
	comp=N,4.6nm,0.3s,baz=204,slow=14,SNR=266							
ILAR				S		Sn	11 28 16.2	-4.6
	comp=N,2.4nm,0.6s,baz=218,slow=25,SNR=5.6							
	comp=N,9.6nm,0.3s							
ILAR	Eielson Array	4.91	22	Pn		Pn	11 27 25.4	+0.1
CTG	Chitna Glacier	4.93	78	P		Pn	11 27 25.2	-0.5
	baz=267							
CTGM	Chitina Glacie	4.93	78			Pn	11 27 25.5	-0.3
CTGM				IAML			11 28 21.2	
	comp=E,20nm,0.9s							
CTGM				IAML			11 28 21.3	
	comp=N,32nm,0.4s							
I23K	Minto, Yukon-K	4.93	9			Pn	11 27 25.9	+0.3
I23K	Minto, Yukon-K	4.93	9	P		Pn	11 27 25.9	+0.3
	baz=191							
M27K	Edge Creek, AK	4.96	62			Pn	11 27 26.2	0.0
M27K	Edge Creek, AK	4.96	62	IAML			11 28 24.9	
	comp=E,13nm,3.1s							
M27K				IAML			11 28 25.2	
	comp=N,16nm,2.4s							
M27K	Edge Creek, AK	4.96	62	P		Pn	11 27 26.1	-0.1
	baz=250							
SCRK	Sand Creek	5.01	40			Pn	11 27 26.3	-0.6
SCRK	Sand Creek	5.01	40	P		Pn	11 27 26.4	-0.4
	baz=226,SNR=14							
TABL	Table Mountain	5.02	84			Pn	11 27 25.4	-1.7
TABL				IAML			11 28 22.3	
	comp=E,31nm,0.3s							
TABL				IAML			11 28 24.8	
	comp=N,34nm,0.7s							
CHX	Chaix Hills	5.07	88			Pn	11 27 27.2	-0.4
LOGN	Logan Glacier	5.09	80			Pn	11 27 26.6	-1.3
LOGN				IAML			11 28 25.4	
	comp=E,31nm,0.4s							
LOGN				IAML			11 28 26.7	
	comp=N,32nm,0.4s							
J25K	Salcha River,	5.11	30			Pn	11 27 28.2	+0.1
J25K	Salcha River,	5.11	30	IAML			11 28 27.4	
	comp=N,16nm,0.4s							
J25K				IAML			11 28 27.6	
	comp=E,19nm,0.3s							
J25K	Salcha River,	5.11	30	P		Pn	11 27 28.4	+0.4
	baz=215,SNR=67							
POKR	Poker Plat Res	5.13	18			Pn	11 27 28.2	-0.1
POKR				IAML			11 28 26.6	
	comp=N,14nm,0.8s							
POKR	Poker Plat Res	5.13	18	P		Pn	11 27 28.6	+0.3
	baz=202,SNR=9.6							
GCSA	Galena City Sc	5.15	332	P		Pn	11 27 28.6	0.0
	baz=147,SNR=9.4							
SAMH	Samovar Hills	5.23	87			Pn	11 27 29.8	0.0
L27K	Beaver Creek,	5.27	54			Pn	11 27 29.9	-0.4
L27K				IAML			11 28 47.3	
	comp=E,10nm,4.6s							
L27K	Beaver Creek,	5.27	54	P		Pn	11 27 29.9	-0.4
	baz=243							
YUK2	White River	5.27	69			Pn	11 27 29.9	-0.5
BC03		5.29	54			Pn	11 27 30.2	-0.2
BCAR	Beaver Creek A	5.29	54	Pn		Pn	11 27 29.9	-0.6
H21K	Melozitna Rive	5.41	353			Pn	11 27 32.0	-0.2
H21K	Melozitna Rive	5.41	353	P		Pn	11 27 32.3	+0.1
	baz=172							
BVCY	Beaver Creek	5.43	63			Pn	11 27 32.3	-0.1
BVCY	Beaver Creek	5.43	63	P		Pn	11 27 32.2	-0.3
	baz=252							
YUK3	Moose Creek	5.45	70			Pn	11 27 32.3	-0.6
YUK3	Moose Creek	5.45	70	P		Pn	11 27 32.3	-0.6
	baz=259							
O28M	Mount Upton	5.48	80			Pn	11 27 33.1	-0.3
O28M	Mount Upton	5.48	80	P		Pn	11 27 32.5	-0.9
	baz=270,SNR=9.5							
PCA	Pinnacle	5.49	87			Pn	11 27 32.5	-0.9
PINM	Pinnacle	5.50	87	P		Pn	11 27 32.5	-0.9
	baz=277							
CHGN	Chignik	5.51	226	Pn		Pn	11 27 33.1	-0.4
J26L	Joseph Creek	5.52	37			Pn	11 27 33.5	-0.2
J26L	Joseph Creek	5.52	37	P		Pn	11 27 33.6	-0.2
	baz=224,SNR=36							
H23K	Yukon River	5.59	7			Pn	11 27 34.5	-0.1
H23K	Yukon River	5.59	7	P		Pn	11 27 34.9	+0.3
	baz=189							
H22K	Ishtalitna Cre	5.60	360	P		Pn	11 27 35.0	+0.2
	baz=180							
K27K	Chicken	5.69	45			Pn	11 27 35.8	-0.2
K27K	Chicken	5.69	45	P		Pn	11 27 35.6	-0.3
	baz=233							
H24K	Noodor Dome	5.75	14			Pn	11 27 37.2	+0.4
H24K	Noodor Dome	5.75	14	P		Pn	11 27 37.1	+0.2
	baz=197							
IM03		5.80	350			Pn	11 27 36.2	-1.2
IMAR	Indian Mountai	5.80	350	Pn		Pn	11 27 38.9	+1.4
PRP	Porcupine Dome	5.84	24			Pn	11 27 38.4	+0.2
PRP	Porcupine Dome	5.84	24	P		Pn	11 27 38.5	+0.3
	baz=209,SNR=18							
PNL	Peninsula	5.99	91			Pn	11 27 39.3	-0.8
PNL	Peninsula	5.99	91	P		Pn	11 27 39.3	-0.8
	baz=281							
I26K	Coal Creek Min	6.24	33			Pn	11 27 43.4	0.0
I26K	Coal Creek Min	6.24	33	P		Pn	11 27 43.5	+0.1
	baz=220							
YUK4	Talbot Arm	6.26	75	P		Pn	11 27 43.8	-0.1
	baz=265							
O29M	Mount Kennedy	6.30	85	P		Pn	11 27 44.5	-0.1
	baz=276							
G21K	Allakaket	6.31	352	P		Pn	11 27 45.0	+0.6
	baz=170							
YUK6	Outpost Mounta	6.38	79			Pn	11 27 45.5	-0.1
YUK6	Outpost Mounta	6.38	79	P		Pn	11 27 45.3	-0.3
	baz=270							
G23K	Bananza Creek	6.45	4			Pn	11 27 46.5	+0.1
G23K	Bananza Creek	6.45	4	P		Pn	11 27 46.7	+0.3
	baz=186,SNR=7.4							
H25K	Birch Creek	6.46	20			Pn	11 27 47.0	+0.6
H25K	Birch Creek	6.46	20	P		Pn	11 27 46.6	+0.2
	baz=205							
EGAK	Eagle	6.47	42			Pn	11 27 46.2	-0.4
EGAK	Eagle	6.47	42	P		Pn	11 27 46.1	-0.4
	baz=231,SNR=8.3							
M29M	Somme Creek	6.51	65			Pn	11 27 46.9	-0.4
M29M	Somme Creek	6.51	65	P		Pn	11 27 46.6	-0.7
	baz=257							
G24K	Hadweenzic Riv	6.63	13	P		Pn	11 27 48.6	-0.2
	baz=197							
DAWY	Dawson	6.71	51			Pn	11 27 49.6	-0.3
DAWY	Dawson	6.71	51	P		Pn	11 27 49.2	-0.6
	baz=241,SNR=7.4							
HYT	Haines Junctio	6.80	80	Pn		Pn	11 27 51.2	0.0
HYT	Haines Junctio	6.80	80	P		Pn	11 27 51.0	-0.3
	baz=272							
P29M	Windy Craggy	6.82	90			Pn	11 27 51.0	-0.5
P29M	Windy Craggy	6.82	90	P		Pn	11 27 51.3	-0.2
	baz=282,SNR=5.2							
FYU	Fort Yukon	6.83	21	Pn		Pn	11 27 52.1	+0.6
L29M	L29M	6.84	60			Pn	11 27 51.7	-0.1
L29M	L29M	6.84	60	P		Pn	11 27 51.6	-0.1
	baz=252							
G25K	Bearman Lake	6.87	17			Pn	11 27 51.8	-0.3
G25K	Bearman Lake	6.87	17	P		Pn	11 27 52.0	0.0
	baz=202							
I27K	Kandik River	6.89	35			Pn	11 27 52.3	-0.1
I27K	Kandik River	6.89	35	P		Pn	11 27 52.3	-0.1
	baz=224,SNR=6.9							
COLD	Coldfoot	6.96	3	Pn		Pn	11 27 54.0	+0.7
COLD	Coldfoot	6.96	3	P		Pn	11 27 53.5	+0.2
	baz=184							
SDPT	Sand Point	6.99	229	Pn		Pn	11 27 52.8	-1.0
SDPT	Sand Point	6.99	229	P		Pn	11 27 52.8	-1.0
	baz=41							
N30M	Aishikik Lake	7.01	74	P		Pn	11 27 52.3	-1.7
	baz=267							
CHNA	Chernabura Isl	7.08	223	P		Pn	11 27 54.2	-0.9
	baz=36							
CNBA	Chernabura Isl	7.09	223	Pn		Pn	11 27 53.5	-1.6
H27K	Steamboat Moun	7.38	32			Pn	11 27 58.6	-0.5
H27K	Steamboat Moun	7.38	32	P		Pn	11 27 58.4	-0.6
	baz=221							
G26K	Porcupine Rive	7.44	23	P		Pn	11 27 59.9	+0.1
	baz=210							
O30N	Mendenhall	7.50	80	P		Pn	11 28 00.2	-0.5
	baz=273							
PLBC	Pleasant Camp	7.54	90	P		Pn	11 28 01.1	-0.2
	baz=283							
F25K	Christian Rive	7.71	16	P		Pn	11 28 03.7	+0.1
	baz=201							
BMAR	Burnt Mountain	7.72	20	Pn		Pn	11 28 03.6	-0.1
I29M	Ogilvie Camp,	7.79	44			Pn	11 28 04.5	-0.1
G27K	Doyon Strip	7.79	29	P		Pn	11 28 04.2	-0.5
	baz=218							
F26K	Sheenjek River	8.04	20	P		Pn	11 28 08.1	+0.1
	baz=206							
FARO	Faro, Yukon	8.84	70	Pn		Pn	11 28 18.3	-0.7
EPYK	Eagle Plains	8.91	41	Pn		Pn	11 28 19.1	-0.8
DLBC	Dease Lake	10.98	91	P		Pn	11 28 48.5	+0.2
	comp=E,0.1nm,0.3s,baz=263,slow=8.1,SNR=1.0							
	comp=E,2.0nm,0.9s							
INK	Inuvik	11.07	36	P		Pn	11 28 48.7	-0.5
	comp=E,0.2nm,0.3s,baz=234,slow=13,SNR=6.5							
	comp=E,1.3nm,0.7s							
NVAR	Mina Array Bea	30.13	122	P		P	11 32 20.0	+2.5
	comp=E,0.2nm,0.7s,baz=340,slow=5.0,SNR=2.4							
	comp=E,0.2nm,0.7s							
TXAR	Lajitas Array	44.29	113	P		P	11 34 17.9	+0.8
	comp=E,0.4nm,0.8s,baz=337,slow=6.9,SNR=4.7							
	comp=E,0.4nm,0.8s							

*NEIC **04** 11:28:43.2±0.7,21°.6S±0°.3×178°.8W±0°.2,h577km±22km, mb4.1/15,Error ellipse: s-maj=45.6km s-min=25.9km az=198.0*

*IDC **04** 11:28:43.2±1.9,21°.72S×178°.91W,h577km±19km,mb3.2/7, mbtmp4.1/9,Error ellipse: s-maj=36.9km s-min=15.3km az=153.0*

ISC 04 11:28:45.6±0.8,21°.4S±0°.2×179°.1W±0°.1,h602km,n33, σ0s87/33,mb4.0/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.54	323	P		P	11 30 13.6	-1.7
	30nm,0.5s,baz=159,slow=4.8,SNR=55							
MSVF	Nonsavu	4.54	323	P		P	11 30 13.4	-1.9
MARNC	Mare, Loyalty	12.00	267	P		P	11 31 23.6	-0.8
PINNC	Pines Island,	12.55	262	P		P	11 31 28.9	-1.0
URZ	Urewera	17.12	190	P		P	11 32 07.0	-5.8
	2.6nm,0.3s,baz=30,slow=3.1,SNR=10.0							
EIDS	Eidsvold	27.64	256	P		P	11 33 47.1	+0.2
EIDS				IAmb	IAmb		11 33 51.7	
	comp=Z,6.0nm,1.1s							
CTAO	Charters Tower	32.40	266	P		P	11 34 28.8	+0.9
CTAO				IAmb	IAmb		11 34 32.9	
	comp=Z,8.3nm,1.1s							
STKA	Stephens Creek	36.49	245	P		P	11 35 01.9	+0.2
	comp=Z,2.7nm,0.8s,baz=59,slow=5.9,SNR=3.4							
	comp=Z,2.7nm,0.8s							
STKA	Stephens Creek	36.49	245	P		P	11 35 01.7	0.0
STKA				IAmb	IAmb		11 35 29.4	
	comp=Z,3.1nm,1.4s							
COEN	Coen	36.64	275	P		P	11 35 04.1	+1.0
COEN				IAmb	IAmb		11 35 23.4	
	comp=Z,14nm,1.4s							
BBOO	Buckleboo	41.24	244	P		P	11 35 38.2	-1.6
WR0	Warramunga Arr	43.29	263	P		P	11 35 55.6	-0.4
WR0				IAmb	IAmb		11 35 56.1	
	comp=Z,4.0nm,1.1s							
AS31	Alice Springs	43.33	258	P		P	11 35 56.5	+0.2
AS31				IAmb	IAmb		11 35 57.0	
	comp=Z,1.4nm,0.7s							
ASAR	Alice Springs	43.33	258	P		P	11 35 56.5	+0.2
	comp=Z,5.1nm,0.8s,baz=95,slow=7.9,SNR=75							
ASAR				PcP		PcP	11 37 31.8	+0.6
	comp=Z,0.7nm,0.5s,baz=106,slow=4.0,SNR=7.5							
ASAR				S		S	11 41 43.2	+1.5
	comp=Z,0.6nm,1.0s,baz=93,slow=16,SNR=4.1							
	comp=Z,5.1nm,0.8s							
ASAR	Alice Springs	43.33	258	P		P	11 35 56.3	0.0
WB0	Warramunga Arr	43.46	263	P		P	11 35 57.1	-0.2
WB0				IAmb	IAmb		11 36 14.8	
	comp=Z,7.0nm,1.2s							
WB2	Warramunga Arr	43.47	263	P		P	11 35 57.3	-0.1
WB2				IAmb	IAmb		11 35 58.0	
	comp=Z,6.2nm,1.0s							
WRA	Warramunga Arr	43.48	263	P		P	11 35 57.1	-0.3
	comp=Z,2.3nm,0.5s,baz=97,slow=7.8,SNR=110							
	comp=Z,2.3nm,0.5s							
WRA	Warramunga Arr	43.48	263	P		P	11 35 57.3	-0.1
FORT	Forrest	48.01	247	P		P	11 36 31.3	-0.2
MTN	Manton Dam	48.17	272	P		P	11 36 33.2	+0.3
MTN				IAmb	IAmb		11 36 36.8	
	comp=Z,17nm,1.2s							
KNRA	Kununurra	49.59	267	P		P	11 36 43.6	+0.2
PSA00	Pilbara Seismi	56.48	258	P		P	11 37 31.8	-0.3
QSPA	South Pole Qui	68.67	180	P		P	11 38 48.8	-1.0
NVAR	Mina Array Bea	82.38	44	P		P	11 40 06.7	+0.6
	comp=Z,0.5nm,0.7s,baz=229,slow=6.8,SNR=4.6							
	comp=Z,0.5nm,0.7s							
TXAR	Lajitas Array	88.39	58	P		P	11 40 35.8	+0.8
	comp=Z,0.5nm,0.8s,baz=198,slow=3.7,SNR=5.6							
	comp=Z,0.5nm,0.8s							
ILAR	Eielson Array	89.42	13	P		P	11 40 38.9	+0.1
	comp=Z,0.2nm,0.6s,baz=213,slow=5.0,SNR=1.4							
	comp=Z,0.2nm,0.6s							
CMAR	Chiang Mai Arr	89.46	290	P		P	11 40 41.5	+1.4
	comp=Z,1.1nm,0.3s,baz=125,slow=3.6,SNR=8.2							
	comp=Z,1.1nm,0.3s							
ARCES	ARCESS Array B	129.62	349	PKP		PKPdf	11 46 46.6	+0.2
	comp=Z,1.6nm,0.6s,baz=64,slow=2.8,SNR=5.7							
HFS	Hagfors	140.26	350	PKhKP		PKPpre	11 47 00.3	
	comp=Z,0.9nm,0.3s,baz=90,slow=3.0,SNR=9.0							
AKASG	Malin Array Be	143.29	330	PKP		PKPdf	11 47 10.7	-1.5
	comp=Z,1.2nm,0.4s,baz=40,slow=4.7,SNR=10.0							
BRTR	Keskin Array B	146.68	311	PKPbc		PKPbc	11 47 20.9	-0.3
	comp=Z,1.0nm,0.7s,baz=108,slow=4.0,SNR=5.4							
CLL	Collm	148.69	345	*i* PKPbc		PKPbc	11 47 26.2	+0.4
	comp=Z,9.0nm,1.3s							

HEL 04 11:29:02.4,67°.80N×20°.00E,h0km,ML1.8,Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.16	279	*i* P	Pg	11 29 08.1	+2.7
RATU				*i* S	Sg	11 29 11.6	+4.2
KUA	Kurravaara	0.20	39	*i* P	Pg	11 29 06.4	+0.1
KUA				*i* S	Sg	11 29 08.4	-0.5
NIKU	Nikkaluokta	0.37	281	*i* P	Pb	11 29 12.1	+0.2
NIKU				*i* S	Sb	11 29 18.3	+0.1
KOVU	Salmi	0.43	8	*i* P	Pg	11 29 11.2	+0.6
KOVU				*i* S	Sg	11 29 16.5	+0.3
SALU	Saltoluokta	0.71	234	*i* P	Pb	11 29 18.4	+0.7
DUNU	Dundret	0.71	162	*i* P	Pg	11 29 16.7	+0.7
LANU	Lannavaara	0.79	71	*e*P	Pg	11 29 16.9	-0.7
LANU				*e*S	Sg	11 29 26.1	-1.7
MASU	Masugnsbyn	0.84	113	*i* P	Pg	11 29 18.1	-0.3
MASU				*i* S	Sg	11 29 28.8	-0.5
KIF	Kilpisjarvi	1.25	13	*e*P	Pb	11 29 26.7	-0.1
KIF	Kilpisjarvi	1.25	13	*e*PB	Pn	11 29 27.0	0.0
	baz=191						
KIF				MSG		11 29 41.3	
	comp=Z,12nm,0.2s						
KIF				*e*S	Sg	11 29 42.4	0.0
PAJU	Pajala	1.43	121	*e*P	Pn	11 29 28.2	-1.4
	baz=304						
PAJU				*e*SB	Sg	11 29 46.7	-1.6
HEF	Hetta	1.50	64	*e*P	Pn	11 29 29.8	-0.8
HEF	Hetta	1.50	64	*e*P	Pn	11 29 29.4	-1.2
HEF				MSG		11 29 47.5	
	comp=Z,5.7nm,0.2s						
HEF				*e*SB	Sg	11 29 48.7	-1.9
ERTU	Ertsjaerv	1.51	145	*e*P	Pn	11 29 30.2	-0.5
ERTU				*e*SB	Sg	11 29 50.9	0.0
KLF	Kolari	1.63	109	*e*PG	Pn	11 29 31.9	-0.4
KLF				*e*SB	Sn	11 29 52.8	-1.1
KTK1	Kautokeino	1.71	43	*e*PG	Pn	11 29 33.5	+0.1
KTK1				*e*SN	Sg	11 29 57.1	-0.1
KALU	Kalix	2.36	144	*e*P	Pb	11 29 44.0	-1.7
	baz=327						
KALU				*e*SB	Sb	11 30 14.3	-1.0
TOF	Tornio	2.42	133	*e*PB	Pb	11 29 45.1	-1.7
TOF				MSG		11 30 14.2	
	comp=Z,4.5nm,0.2s						
TOF				*e*SB	Sb	11 30 16.2	-1.0
SGF	Sodankyl	2.52	95	*e*PB	Pb	11 29 46.7	-1.8
SGF				*e*SG	Sb	11 30 19.2	-0.8
RNF	Rovaniemi	2.63	114	*e*PB	Pb	11 29 48.2	-2.1
RNF				*e*SB	Sb	11 30 21.8	-1.3
ARA0	ARCESS Array S	2.66	47	*e*SB	Sn	11 30 21.5	+2.0
KEV	Kevo	3.22	49	*e*S	Sn	11 30 33.3	+0.2
KEV				MSG		11 30 36.7	
	comp=Z,2.8nm,0.2s						
OUL	Oulu	3.61	136	*e*S	Sn	11 30 40.4	-2.3
OBF4	Vikkela, Lumij	3.64	143	*e*S	Sn	11 30 42.4	-1.0
UMAU	Umeaa	3.94	176	*e*S	Sn	11 30 50.6	-0.3
OLKF	Oulanka, Finla	3.97	108	*e*PG	Pb	11 30 14.1	+1.0
KU6	Riekki	4.28	110	*e*P	Pn	11 30 10.4	+1.6

HEL 04 11:29:50.2±0.1,63°.98N×28°.12E,h0km,ML1.7, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	Romuvaara	0.83	72	PB	Pg	11 30 05.9	-0.2
RMF				SB	Sg	11 30 17.3	+0.4
OUL	Oulu	1.47	320	PN	Pn	11 30 17.5	-0.4
OUF	Merijarvi	1.53	286	PN	Pn	11 30 18.1	-0.7
OUF				MSG		11 30 36.1	
	comp=Z,7.1nm,0.2s						
OUF				SN	Sn	11 30 38.7	-0.7
OBF4	Vikkela, Lumij	1.55	304	PN	Pn	11 30 18.7	-0.4
	baz=120						
OBF0	Syolatti, Pyha	1.77	289	*e*S	Sb	11 30 45.8	-0.5
OBF0	Syolatti, Pyha	1.77	289	PG	Pn	11 30 22.5	+0.5
OBF0				SG	Sb	11 30 45.8	-0.5
JOF	Joensuu	1.79	125	PG	Pn	11 30 22.4	+0.2
	baz=307						
JOF				SN	Sb	11 30 46.2	-0.4
MSF	Maaselka	1.98	11	*e*S	Sb	11 30 52.0	-0.2
MSF	Maaselka	1.98	11	PG	Pn	11 30 25.9	+0.9
MSF				SG	Sb	11 30 52.0	-0.2

IDC 04 12:08:41.0±2.7, 6°39S×129°86E, h104km±38km, mb2.9/1, mbtmp3.4/5, Error ellipse: s-maj=63.0km s-min=20.3km az=95.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.66**	**14**	P	Pn	12 10 02.3	-0.4
	4.6nm,0.3s,baz=70,slow=23,SNR=11						
SIJI				S	Sn	12 11 01.2	-5.2
	6.2nm,0.3s,baz=255,slow=23,SNR=7.7						
FITZ	**Fitzroy Crossi**	**12.35**	**199**	P	Pn	12 11 34.9	+1.6
	0.6nm,0.3s,baz=29,slow=12,SNR=9.7						
FITZ				S	Sn	12 13 47.3	-1.8
	1.2nm,0.8s,baz=246,slow=17,SNR=2.1						
WRA	**Warramunga Arr**	**14.16**	**163**	P	Pn	12 11 57.9	+1.0
	0.1nm,0.2s,baz=344,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**17.61**	**168**	P	P	12 12 38.1	-1.3
	0.3nm,0.5s,baz=348,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	**67.64**	**327**	P	P	12 19 26.9	+0.1
	0.2nm,0.5s,baz=115,slow=6.5,SNR=1.7						
	0.2nm,0.5s						

*MOS **04** 12:13:45.6±1.1, 34°.66N×141°.37E, h10km, mb5.3/91, MS5.4/24, Error ellipse: s-maj=6.6km s-min=3.8km az=120.9*

*IDC **04** 12:13:45.7±0.4, 34°.63N×141°.38E, h0km, mb4.9/37, mbtmp4.9/41, ML3.5/3, MS4.9/72, Error ellipse: s-maj=12.2km s-min=9.3km az=90.0*

*BJI **04** 12:13:47.3±0.0, 34°.91N×141°.51E, h29km, mb4.9/73, mB5.2/54, Ms5.5/76, Ms7 5.3/72*

*JMA **04** 12:13:48.9±0.4, 35°N±1°×14°1E±°, h36km±2km, MD5.3/34, MW5.2/34, SE OFF BOSO PENINSULA*

*NIED **04** 12:13:48.9, 34°.71N×141°.36E, h36km, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr=1.97; Mθθ=3.07; Mφφ=5.04; Mrθ=0.60; Mrφ=2.61; Mθφ=0.86; Fault plane solution: M0=4.92000×10^16 NP1: φs=331.00000°, δ=78.00000°, λ=-178.00000°. NP2: φs=241.00000°, δ=88.00000°, λ=-12.00000°.*

*NEIC **04** 12:13:49.0±1.6, 34°.73N±0°.05×141°.44E±0°.08, h19km±3km, mb5.2/324, Mww5.2 Error ellipse: s-maj=9.6km s-min=7.2km az=102.0*

*GCMT **04** 12:13:51.0±0.2, 34°.68N±0°.01×141°.34E±0°.01, h16km, MW5.2/125, Moment Tensor Solution. s63, c96; s125, c215; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.12±.01; Mθθ=-0.51±.01; Mφφ=0.62±.01; Mrθ=0.42±.04; Mrφ=0.35±.01; Mθφ=0.27±.03; Best double couple: M0=0.83700×10^17 NP1:φs=238.00000°, δ85.00000°, λ=-38.00000°. NP2:φs=332.00000°, δ52.00000°, λ=-174.00000°. Principal axes: T 0.8790, Plg22.0000°, Azm291.0000°; N -0.0830, Plg52.0000°, Azm52.0000°; P -0.7950, Plg29.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 12:13:52, 34°.73N×141°.43E, h18km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^16Nm; Mrr=2.60; Mθθ=4.68; Mφφ=7.29; Mrθ=0.47; Mrφ=3.47; Mθφ=1.57; Fault plane solution: M0=7.46000×10^16 NP1: φs=240.00000°, δ=85.00000°, λ=7.00000°. NP2:φs=150.00000°, δ=83.00000°, λ=175.00000°. Principal axes: T 8.4606, Plg8.0000°, Azm105.0000°; N -2.8435, Plg82.0000°, Azm279.0000°; P -5.6172, Plg1.0000°, Azm15.0000°;*

ISC 04 12:13:48.6±0.5, 34°.70N±0°.03×141°.43E±0°.03, h19km±1km, h20km:pP-P, n1179, σ1946/1096, mb5.1/278, MS5.2/118, 46C-31D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.38**	**263**	P	**Pb**	**12 13 56.9**	**+0.4**
BSO3	**Boso 3**	**0.77**	**278**	P	**Pb**	**12 14 02.9**	**-0.3**
BSO3				*e*X		12 14 12.3	
BSO4	**Boso 4**	**0.95**	**288**	P	**Pb**	**12 14 05.7**	**-0.6**
BSO4				X		12 14 16.8	
KTR	**Katsuura**	**1.02**	**296**	P	**Pb**	**12 14 06.4**	**-1.3**
I30JP	**ISUMI INFRASON**	**1.10**	**304**	Pn	**Pn**	**12 14 08.9**	**-0.1**
	baz=132,slow=32						
I30JP				Sn	**Sb**	**12 14 21.6**	**-1.4**
CHOJ	**Chosi**	**1.11**	**335**	P	**Pn**	**12 14 08.0**	**-1.1**
CHOJ				*e*S	**Sb**	**12 14 20.7**	**-2.5**
CHOJ	**Chosi**	**1.11**	**335**	A	A	12 14 08.0	
	comp=E,118nm,5.4s,comp=E,65nm,7.5s						
JKUC	**kamogawauchiur**	**1.11**	**295**	P	**Pn**	**12 14 07.6**	**-1.6**
JKUC				*e*S	**Sb**	**12 14 19.7**	**-3.6**
JKUC	**kamogawauchiur**	**1.11**	**295**	A	A	12 14 07.6	
	comp=E,198nm,3.2s,comp=E,149nm,5.5s						
JCN	**Nagara**	**1.24**	**306**	P	**Pn**	**12 14 10.1**	**-0.7**
JCN	**Nagara**	**1.24**	**306**	A	A	12 14 10.1	
	comp=E,344nm,2.9s,comp=E,340nm,3.8s						
JSMT	**Sammumatsuo**	**1.24**	**320**	P	**Pn**	**12 14 10.7**	**-0.2**
JSMT	**Sammumatsuo**	**1.24**	**320**	A	A	12 14 10.7	
	comp=E,353nm,6.9s,comp=E,427nm,7.4s						
JIHU	**Itakohorinouch**	**1.47**	**330**	A	A	12 14 13.1	
	comp=E,224nm,5.9s,comp=E,177nm,2.2s						
JYO	**Yokosk**	**1.54**	**290**	A	A	12 14 14.0	
	comp=E,170nm,7.6s,comp=E,175nm,7.8s						
JIM2	**Oshima 3**	**1.65**	**271**	P	**Pn**	**12 14 14.9**	**-1.7**
JIM2				*e*S	**Sn**	**12 14 34.2**	**-3.0**
JIM2	**Oshima 3**	**1.65**	**271**	A	A	12 14 14.9	
	comp=E,59nm,5.0s,comp=E,55nm,7.8s						
JMYK	**Miyake Tsubota**	**1.68**	**248**	P	**Pn**	**12 14 16.6**	**-0.3**
JMYK	**Miyake Tsubota**	**1.68**	**248**	A	A	12 14 16.6	
	comp=E,72nm,3.6s,comp=E,78nm,3.3s						
TOK	**Tokyo**	**1.69**	**306**	A	A	12 14 16.2	
	comp=E,244nm,3.4s,comp=E,246nm,5.1s						
JMKN	**Mikurajimanish**	**1.72**	**243**	P	**Pn**	**12 14 16.3**	**-1.2**
JMKN				*e*S	**Sn**	**12 14 35.9**	**-3.1**
JMKN	**Mikurajimanish**	**1.72**	**243**	A	A	12 14 16.3	
	comp=E,43nm,6.5s,comp=E,30nm,7.2s						
JTHY	**Toshimahigashi**	**1.78**	**265**	A	A	12 14 17.4	
	comp=E,69nm,6.0s,comp=E,62nm,4.3s						
JHYU	**Hitachinakayam**	**1.78**	**337**	A	A	12 14 17.8	
	comp=E,61nm,3.7s,comp=E,49nm,3.1s						
JNIO	**Niijimaoohara**	**1.81**	**260**	A	A	12 14 18.0	
	comp=E,68nm,2.4s,comp=E,66nm,4.8s						
JYT	**Yasato**	**1.83**	**327**	Pn	**Pn**	**12 14 18.0**	**-1.0**
JYT	**Yasato**	**1.83**	**327**	A	A	12 14 18.5	
	comp=E,29nm,5.0s,comp=E,31nm,4.2s						
JSKK	**Shikinejimakit**	**1.87**	**259**	A	A	12 14 18.8	
	comp=E,48nm,5.3s,comp=E,40nm,5.3s						
JKO	**Kozu shima**	**1.97**	**256**	A	A	12 14 20.2	
	comp=E,73nm,3.4s,comp=E,71nm,3.2s						
JOD2	**Odawara 2**	**2.01**	**287**	A	A	12 14 20.7	
	comp=E,42nm,4.9s,comp=E,79nm,4.2s						
JHTM	**Izuhatsuma**	**2.01**	**278**	A	A	12 14 20.7	
	comp=E,49nm,1.2s,comp=E,44nm,4.8s						
JHO	**Hitachi**	**2.04**	**340**	A	A	12 14 21.6	
	comp=E,51nm,4.9s,comp=E,31nm,4.7s						
JSGW	**Sagamiharawaka**	**2.04**	**297**	A	A	12 14 21.1	
	comp=E,47nm,5.2s,comp=E,49nm,7.5s						
JHJ2	**Mitsune**	**2.08**	**221**	Pn	**Pn**	**12 14 21.9**	**-0.5**
JHJ2	**Mitsune**	**2.08**	**221**	P	**Pn**	**12 14 22.7**	**+0.3**
JHJ2	**Mitsune**	**2.08**	**221**	A	A	12 14 22.1	
	comp=E,55nm,5.1s,comp=E,60nm,4.7s						
JHJ	**Hachijo jima 2**	**2.09**	**222**	Pn	**Pn**	**12 14 21.7**	**-0.8**
	274nm,0.3s,baz=56,slow=3.4,SNR=113						
JHJ				Sn	**Sn**	**12 14 48.6**	**+0.6**
	604nm,0.3s,baz=58,slow=18,SNR=10						
JHU	**Hanno**	**2.10**	**304**	A	A	12 14 22.2	
	comp=E,32nm,7.5s,comp=E,39nm,7.2s						
JIZS	**Izushimoda**	**2.11**	**271**	A	A	12 14 22.1	
	comp=E,20nm,7.9s,comp=E,21nm,5.4s						
JHCJ	**Hachijojimakas**	**2.12**	**220**	A	A	12 14 22.7	
	comp=E,28nm,9.9s,comp=E,33nm,5.5s						
JFNN	**Fujinakano**	**2.31**	**283**	A	A	12 14 25.0	
	comp=E,37nm,3.6s,comp=E,49nm,3.7s						
JAG	**Ashikaga**	**2.36**	**317**	A	A	12 14 26.0	
	comp=E,26nm,3.5s,comp=E,20nm,4.7s						
JRY	**Ryogami san**	**2.45**	**303**	A	A	12 14 27.2	
	comp=E,31nm,8.1s,comp=E,23nm,4.7s						
JFFD	**Fukushimafurud**	**2.49**	**344**	A	A	12 14 28.1	
	comp=E,41nm,5.8s,comp=E,30nm,3.5s						
JYN	**Shimob**	**2.50**	**289**	A	A	12 14 27.8	
	comp=E,29nm,7.4s,comp=E,31nm,8.3s						
JSB	**Shiboa**	**2.58**	**332**	A	A	12 14 29.2	
	comp=E,78nm,4.5s,comp=E,86nm,3.8s						
JAOM	**Aogashimamukai**	**2.63**	**213**	A	A	12 14 30.2	
	comp=E,45nm,4.9s,comp=E,30nm,6.4s						
JSG	**Sagara**	**2.68**	**270**	A	A	12 14 30.3	
	comp=E,37nm,4.6s,comp=E,51nm,4.0s						
SHZ3	**Shizuoka 3**	**2.68**	**279**	A	A	12 14 30.3	
	comp=E,20nm,7.8s,comp=E,21nm,5.7s						
JFK	**Kawauchi**	**2.70**	**351**	A	A	12 14 31.2	
	comp=E,31nm,5.1s,comp=E,18nm,13.9s						
JKT	**Katashina**	**2.72**	**320**	A	A	12 14 31.2	
	comp=E,14nm,3.6s,comp=E,19nm,3.5s						
JKKS	**Kakegawashinom**	**2.84**	**272**	A	A	12 14 32.6	
	comp=E,37nm,4.5s,comp=E,31nm,3.8s						
JGK	**Kuni**	**2.94**	**310**	A	A	12 14 34.2	
	comp=E,26nm,4.4s,comp=E,28nm,4.0s						
JNT	**Takato**	**2.94**	**294**	A	A	12 14 34.1	
	comp=E,14nm,4.9s,comp=E,29nm,4.7s						
JNY	**Yasuok**	**3.00**	**284**	A	A	12 14 35.0	
	comp=E,12nm,9.3s,comp=E,22nm,4.7s						
JFY	**Yanaizu**	**3.04**	**333**	A	A	12 14 35.9	
	comp=E,25nm,4.4s,comp=E,28nm,5.5s						
JMST	**Minamisoumatoc**	**3.05**	**352**	A	A	12 14 36.2	
	comp=E,20nm,4.1s,comp=E,11nm,6.1s						
HMMJ	**Hamamatsu 2**	**3.06**	**274**	A	A	12 14 35.8	
	comp=E,8.0nm,5.2s,comp=E,9.0nm,4.7s						
JUON	**Uonuma**	**3.16**	**323**	A	A	12 14 37.4	
	comp=E,24nm,5.4s,comp=E,16nm,5.4s						
JMM	**Marumori**	**3.20**	**351**		**Pn**	**12 14 36.5**	**-1.4**
JMM	**Marumori**	**3.20**	**351**	A	A	12 14 38.4	
	comp=E,19nm,4.2s,comp=E,15nm,6.1s						
MJAR	**Matsushiro Arr**	**3.21**	**306**	Pn	**Pn**	**12 14 38.4**	**+0.5**
	6.2nm,0.3s,baz=107,slow=10,SNR=164						
MJAR				Sn	**Sb**	**12 15 20.0**	**-3.6**
	6.9nm,0.3s,baz=308,slow=21,SNR=7.7						
	159nm,0.8s						
JNG	**Nsakai**	**3.21**	**303**	A	A	12 14 37.9	
	comp=E,15nm,4.4s,comp=E,17nm,4.4s						
MAJO	**Matsushiro**	**3.21**	**306**	Pn	**Pn**	**12 14 38.9**	**+0.9**
MAJO	**Matsushiro**	**3.21**	**306**	P	**Pn**	**12 14 38.9**	**+0.9**
MAJO	**Matsushiro**	**3.21**	**306**	P	**Pn**	**12 14 40.2**	**+2.2**
MJB9	**Matsu-Tunnel**	**3.21**	**306**		**Pn**	**12 14 39.8**	**+1.8**
JSSY	**Shinshiroyabe**	**3.24**	**275**	A	A	12 14 38.3	
	comp=E,9.0nm,8.6s,comp=E,9.0nm,6.6s						
JYAR	**Yonezawaarcadi**	**3.37**	**342**	A	A	12 14 40.6	
	comp=E,47nm,6.2s,comp=E,35nm,3.5s						
JGF	**Kuroka**	**3.46**	**286**	Pn	**Pn**	**12 14 42.2**	**+0.8**
JGF	**Kuroka**	**3.46**	**286**	A	A	12 14 41.4	
	comp=E,11nm,10.5s,comp=E,14nm,5.8s						
JAO	**Obara**	**3.48**	**281**	A	A	12 14 41.7	
	comp=E,13nm,12.5s,comp=E,19nm,4.8s						
JAA	**Atsumi**	**3.54**	**270**	A	A	12 14 42.5	
	comp=E,8.0nm,10.9s,comp=E,9.0nm,4.3s						
JNS	**Sasagawa**	**3.55**	**332**	A	A	12 14 43.1	
	comp=E,23nm,6.8s,comp=E,22nm,12.2s						
JJN	**Nakama**	**3.58**	**313**	A	A	12 14 43.3	
	comp=E,28nm,6.4s,comp=E,30nm,4.4s						
JIZZ	**Izumozaki**	**3.59**	**323**	A	A	12 14 43.4	
	comp=E,63nm,4.4s,comp=E,64nm,3.9s						
JIKH	**Ishinomakikobu**	**3.61**	**0**	A	A	12 14 44.2	
	comp=E,15nm,5.4s,comp=E,17nm,5.7s						
INU	**Inuyama**	**3.68**	**281**	Pn	**Pn**	**12 14 44.6**	**+0.2**
INU	**Inuyama**	**3.68**	**281**	P	**Pn**	**12 14 46.7**	**+2.2**
JYS	**Shirataka**	**3.69**	**343**	A	A	12 14 45.1	
	comp=E,28nm,5.7s,comp=E,26nm,2.3s						
JGN	**Niukaw**	**3.69**	**296**	A	A	12 14 44.7	
	comp=E,10.0nm,9.0s,comp=E,18nm,5.4s						
JOU	**Okura**	**3.71**	**351**	A	A	12 14 45.6	
	comp=E,42nm,3.4s,comp=E,26nm,3.7s						
JICN	**Ichinomiyachia**	**3.82**	**280**	A	A	12 14 46.4	
	comp=E,14nm,4.9s,comp=E,25nm,4.4s						
JTT	**Ttatey**	**3.84**	**301**	A	A	12 14 46.9	
	comp=E,25nm,3.6s,comp=E,26nm,6.3s						
JIE	**Ise**	**3.91**	**267**	A	A	12 14 47.9	
	comp=E,7.0nm,12.6s,comp=E,9.0nm,16.1s						
JOFO	**Osakifurukawao**	**3.92**	**354**	A	A	12 14 48.5	
	comp=E,107nm,3.5s,comp=E,102nm,5.3s						
JYTA	**Yamagatataniai**	**3.95**	**284**	A	A	12 14 48.3	
	comp=E,7.0nm,9.8s,comp=E,9.0nm,5.0s						
JKMT	**Kesennumamotoy**	**4.11**	**0**	A	A	12 14 51.2	
	comp=E,16nm,3.9s,comp=E,6.0nm,7.3s						
JYA	**Atsumi**	**4.13**	**341**	A	A	12 14 51.3	
	comp=E,34nm,4.4s,comp=E,18nm,3.9s						
JAW	**Awa shima**	**4.14**	**336**	A	A	12 14 51.4	
	comp=E,16nm,4.4s,comp=E,31nm,4.3s						
JEG	**Eigenji**	**4.17**	**277**	A	A	12 14 51.4	
	comp=E,8.0nm,8.1s,comp=E,10.0nm,4.6s						
JSD	**Sado**	**4.20**	**323**	Pn	**Pn**	**12 14 51.6**	**0.0**
JSD	**Sado**	**4.20**	**323**	A	A	12 14 52.1	
	comp=E,10.0nm,6.7s,comp=E,6.0nm,8.3s						
JMK	**Ichinoseki**	**4.25**	**358**	A	A	12 14 53.2	
	comp=E,13nm,7.9s,comp=E,6.0nm,3.7s						
JYK	**Kaneyama**	**4.30**	**349**	A	A	12 14 53.8	
	comp=E,18nm,3.3s,comp=E,11nm,4.0s						
OFUJ	**Ofunato**	**4.38**	**2**	A	A	12 14 55.1	
	comp=E,19nm,5.0s,comp=E,10.0nm,8.8s						
JJH	**Hakui**	**4.38**	**302**	A	A	12 14 54.5	
	comp=E,14nm,6.8s,comp=E,13nm,3.8s						
JKG	**Kaga**	**4.45**	**292**	A	A	12 14 55.4	
	comp=E,10.0nm,9.6s,comp=E,18nm,8.6s						
JYYZ	**Yamagatayuza**	**4.48**	**345**	A	A	12 14 56.2	
	comp=E,68nm,6.3s,comp=E,79nm,4.5s						
JFM	**Mihama**	**4.54**	**282**	A	A	12 14 56.7	
	comp=E,5.0nm,8.0s,comp=E,12nm,6.1s						
JRG	**Rokugo**	**4.73**	**352**	A	A	12 14 59.9	
	comp=E,27nm,5.4s,comp=E,17nm,12.2s						
JTB	**Tobi-shima**	**4.73**	**342**	A	A	12 14 59.8	
	comp=E,25nm,5.1s,comp=E,15nm,3.9s						
JHE	**Heguri**	**4.74**	**271**	A	A	12 14 59.4	
	comp=E,10.0nm,5.3s,comp=E,8.0nm,7.7s						
JOM	**Ohasama**	**4.77**	**359**	A	A	12 15 00.5	
	comp=E,14nm,5.8s,comp=E,9.0nm,6.6s						
JWT	**Wachi**	**4.99**	**278**	Pn	**Pn**	**12 15 02.6**	**+0.2**
JTM	**Tenmabayashi**	**6.09**	**357**	Pn	**Pn**	**12 15 16.6**	**-0.9**
JMN	**Monobe**	**6.33**	**263**	Pn	**Pn**	**12 15 20.7**	**-0.3**
JHS	**Saijyo**	**6.85**	**275**	Pn	**Pn**	**12 15 28.2**	**+0.3**
ERM	**Erimo**	**7.43**	**10**	Pn	**Pn**	**12 15 33.8**	**-2.1**
ERM	**Erimo**	**7.43**	**10**	P	**Pn**	**12 15 33.8**	**-2.1**
ERM	**Erimo**	**7.43**	**10**	P	**Pn**	**12 15 32.8**	**-3.1**
JCJ	**Chichijima**	**7.61**	**175**	Pn	**Pn**	**12 15 36.0**	**-2.4**
	209nm,0.4s,baz=5.9,slow=10,SNR=28						
JCJ				Sn	**Sn**	**12 16 58.0**	**-6.0**
	28nm,0.3s,baz=288,slow=20,SNR=1.3						
JCJ				LR	LR	12 18 44.0	
	comp=Z,4μm,18.1s,baz=356,slow=40						
JCJ	**Chichijima**	**7.61**	**175**	Pn	**Pn**	**12 15 36.5**	**-1.9**
JCJ	**Chichijima**	**7.61**	**175**	P	**Pn**	**12 15 36.8**	**-1.6**
JEW	**Eniwo**	**8.13**	**0**	Pn	**Pn**	**12 15 44.5**	**-1.0**
JNU	**Nakatsue**	**8.91**	**263**	Pn	**Pn**	**12 15 55.0**	**-1.3**
NMR	**Nemuro--Hokkai**	**9.28**	**20**	*e*P	Pn	12 15 56.1	-5.2
JSU	**Suzuyama**	**9.74**	**254**	Pn	**Pn**	**12 16 06.9**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**9.93**	**19**	*e*P	**Pn**	**12 16 05.9**	**-4.3**
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				MLR	MLR		
	comp=Z,5μm,12.0s						
TEY	**Ternei**	**10.97**	**342⇑**	*e*P	**Pn**	**12 16 23.4**	**-1.0**
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,40nm,1.0s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
MSHR	**Mys Shultsa**	**11.24**	**317**	*d iP*	**Pn**	**12 16 29.6**	**+1.5**
KSRS	**Korea Array**	**11.28**	**288**	Pn	**Pn**	**12 16 32.6**	**+4.0**
	comp=E,0.4nm,0.3s,baz=102,slow=14,SNR=44						
KSAR	**Wonju Array Be**	**11.30**	**288**	Pn	**Pn**	**12 16 27.3**	**-1.7**
KSAR	**Wonju Array Be**	**11.30**	**288**	P	**Pn**	**12 16 27.3**	**-1.7**
KS19	**Wonju Array Si**	**11.33**	**288**		**Pn**	**12 16 27.8**	**-1.6**
TJN	**Taejon**	**11.59**	**282**	Pn	**Pn**	**12 16 32.9**	**0.0**
TJN	**Taejon**	**11.59**	**282**	P	**Pn**	**12 16 32.9**	**0.0**
TJN	**Taejon**	**11.59**	**282**	P	**Pn**	**12 16 31.6**	**-1.3**
KUR	**Kuril'sk**	**11.62**	**23⇑**	*e*P	**Pn**	**12 16 32.9**	**-0.3**
USA0B	**Ussuriysk Arra**	**11.96**	**325**	Pn	**Pn**	**12 16 37.9**	**-0.1**
USA0B	**Ussuriysk Arra**	**11.96**	**325**	P	**Pn**	**12 16 37.9**	**-0.1**
USRK	**Ussuriysk Ar.**	**11.96**	**325**	Pn	**Pn**	**12 16 38.2**	**+0.2**
	comp=E,0.8nm,0.3s,baz=135,slow=12,SNR=56						
USRK				LR	LR	12 20 59.8	
	comp=E,2μm,21.5s,baz=132,slow=36						
	comp=E,74nm,0.9s						
USRK	**Ussuriysk Ar.**	**11.96**	**325**	Pn	**Pn**	**12 16 37.9**	**-0.1**
YSS	**Yuzh-Sakhalins**	**12.29**	**4**	Pn	**Pn**	**12 16 40.2**	**-2.2**
YSS	**Yuzh-Sakhalins**	**12.29**	**4**	*e*P	**Pn**	**12 16 39.3**	**-3.1**
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				MLR	MLR		
	comp=Z,12μm,15.0s						
YSS				MLR	MLR		
	comp=N,8μm,16.0s						
YSS	**Yuzh-Sakhalins**	**12.29**	**4**	P	**Pn**	**12 16 40.9**	**-1.5**
MDJ	**Mudanjiang**	**13.45**	**321**	Pn	**Pn**	**12 16 58.2**	**-0.1**
MDJ	**Mudanjiang**	**13.45**	**321**	P	**Pn**	**12 16 57.4**	**-0.9**
MDJ				pmax	pmax		
	comp=N,21nm,1.3s						
MDJ				pmax	pmax		
	comp=N,790nm,7.7s						
MDJ				LR	LR		
	comp=N,12μm,18.2s						
MDJ				LR	LR		
	comp=N,8μm,19.1s						
MDJ				LR	LR		
	comp=N,15μm,13.6s						
MDJ	**Mudanjiang**	**13.45**	**321**	P	**Pn**	**12 16 58.4**	**+0.1**
UGL	**Uglegorsk**	**14.38**	**2**	*e*P	**P**	**12 17 19.6**	**+1.8**
UGL				pmax	pmax		
	comp=Z,200nm,1.4s						
UGL				MLR	MLR		
	comp=N,10μm,15.0s						
UGL				MLR	MLR		
	comp=E,20μm,15.0s						
UGL				MLR	MLR		
	comp=Z,15μm,15.0s						
CN2	**Changchun**	**15.34**	**311⇑**	P	**Pn**	**12 17 23.8**	**-0.2**
CN2				sP	pP	12 17 32.0	-0.9
CN2				S	**Sn**	**12 20 13.1**	**-0.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,20μm,15.0s						
CN2				LR	LR		
	comp=Z,6μm,15.0s						
CN2				LR	LR		
	comp=Z,7μm,16.0s						
BNX	**BinXian**	**15.35**	**320⇑**	P	**Pn**	**12 17 21.8**	**-2.3**
BNX				S	**Sn**	**12 20 10.9**	**-2.6**
BNX				pmax	pmax		
	comp=Z,100nm,1.1s						
BNX				pmax	pmax		
	comp=Z,630nm,4.4s						
BNX				LR	LR		
	comp=Z,10μm,16.7s						
BNX				LR	LR		
	comp=Z,7μm,16.2s						
BNX				LR	LR		
	comp=Z,10μm,13.2s						
SNY	**Shenyang**	**15.71**	**302⇓**	P	**Pn**	**12 17 28.1**	**-0.7**
SNY				pmax	pmax		
	comp=Z,51nm,0.9s						
SNY				pmax	pmax		
	comp=Z,480nm,4.9s						
SNY				LR	LR		
	comp=Z,17μm,15.7s						
SNY				LR	LR		
	comp=Z,8μm,15.1s						
SNY				LR	LR		
	comp=Z,8μm,13.6s						
TYV	**Tymovskoe**	**16.18**	**3**	*e*P	**Pn**	**12 17 31.8**	**-2.9**
TYV				*e*S	**Sn**	**12 20 29.7**	**-3.9**
TYV				pmax	pmax		
	comp=Z,1μm,4.8s						
TYV				pmax	pmax		
	comp=Z,123nm,1.0s						
TYV				smax	smax		
	comp=N,4μm,4.1s						
TYV				smax	smax		
	comp=E,2μm,4.1s						
TYV				smax	smax		
	comp=E,23nm,1.3s						
TYV				MLR	MLR		
	comp=N,14μm,14.0s						
TYV				MLR	MLR		
	comp=Z,18μm,14.0s						
KLR	**Kul'dur**	**16.19**	**337**	Pn	**Pn**	**12 17 33.4**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=133,slow=12,SNR=13						
KLR				LR	LR	12 24 17.1	
	comp=Z,7μm,18.2s,baz=152,slow=39						
	comp=Z,13nm,0.9s						
DL2	**Dalian**	**16.41**	**291**	P	**P**	**12 17 39.4**	**-1.0**
DL2				S	**Sn**	**12 20 44.6**	**+5.4**
DL2				pmax	pmax		
	comp=Z,54nm,0.7s						
DL2				pmax	pmax		
	comp=Z,2μm,6.1s						
DL2				LR	LR		
	comp=Z,16μm,15.9s						
DL2				LR	LR		
	comp=Z,7μm,21.2s						
DL2				LR	LR		
	comp=Z,10μm,18.2s						
SSE	**Sheshan**	**17.38**	**264**	P	**Pn**	**12 17 49.2**	**-0.8**
SSE				S	**Sn**	**12 21 05.8**	**+3.0**
SSE				pmax	pmax		
	comp=Z,14nm,0.8s						
SSE				pmax	pmax		
	comp=Z,810nm,5.7s						
SSE				LR	LR		
	comp=Z,7μm,18.0s						
SSE				LR	LR		
	comp=Z,5μm,19.1s						
NJ2	**Nanjing**	**19.04**	**268**	*e*P	**Pn**	**12 18 10.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=Z,8μm,14.5s						
NJ2				LR	LR		
	comp=Z,5μm,11.4s						
NJ2				LR	LR		
	comp=Z,7μm,11.2s						
BJI	**Beijing**	**20.74**	**292**	P	**P**	**12 18 26.4**	**-1.6**
BJI				sP	**pwP**	**12 18 39.4**	**+1.0**
BJI				S	**S**	**12 22 11.9**	**-6.8**
BJI				sS	Sn	12 22 23.2	-0.7
BJI				PcP	**PcP**	**12 22 37.1**	**+0.1**
BJI				pmax	pmax		
	comp=Z,16nm,1.3s						
BJI				pmax	pmax

HIA pmax pmax
comp=Z,32nm,0.9s
PEA0B Petropavlovsk- 21.73 27 P **P 12 18 39.2 +0.7**
PEA0B IAmb IAmb 12 19 00.3
comp=Z,80nm,1.2s
PEA0B Petropavlovsk- 21.73 27 P **P 12 18 39.2 +0.7**
PEA0B pmax pmax
comp=Z,80nm,1.2s
PETK Petropavlovsk- 21.73 27 P **P 12 18 39.4 +0.9**
comp=Z,6.5nm,0.9s,baz=218,slow=6.1,SNR=4.1
comp=Z,6.5nm,0.9s
PETK Petropavlovsk- 21.73 27 P **P 12 18 38.9 +0.4**
HNS HongShan 21.75 285 ⇓P **P 12 18 36.2 -2.7**
HNS PP **PnPn 12 19 01.9 +1.9**
HNS S **S 12 22 41.9 +3.2**
HNS SS **SnSn 12 23 05.4 +1.9**
HNS pmax pmax
comp=Z,30nm,1.0s
HNS LR LR
comp=Z,8μm,13.7s
HNS LR LR
comp=Z,10μm,13.0s
HNS LR LR
comp=Z,12μm,13.3s
PET Petropavlovsk 22.03 28 P **P 12 18 40.5 -1.2**
PET IAmb IAmb 12 18 59.0
comp=Z,97nm,1.4s
PET Petropavlovsk 22.03 28 *e*P **P 12 18 43.8 +2.1**
PET *e*S **S 12 22 39.1 -4.6**
PET pmax pmax
comp=Z,46nm,1.2s
PET pmax pmax
comp=Z,500nm,10.7s
PET pmax pmax
comp=Z,600nm,8.7s
PET MLR MLR
comp=Z,2μm,17.0s
PET MLR MLR
comp=Z,2μm,16.0s
WHN Wuhan 23.16 267 ⇓P **P 12 18 53.5 -0.3**
WHN S **S 12 22 59.4 -5.0**
WHN LR LR
comp=Z,28μm,18.9s
WHN LR LR
comp=Z,7μm,13.7s
WHN LR LR
comp=Z,24μm,14.2s
TIY Taiyuan 23.55 286 P **P 12 18 58.4 +0.6**
TIY S **S 12 23 13.8 +2.8**
TIY pmax pmax
comp=Z,350nm,4.9s
TIY LR LR
comp=Z,5μm,11.7s
TIY LR LR
comp=Z,4μm,15.8s
TIY LR LR
comp=Z,8μm,13.7s
LYN LuoYang 23.80 278 ⇑P **P 12 18 58.4 -1.8**
LYN sP pwP 12 19 09.4 -1.2
LYN S **S 12 23 11.3 -3.6**
LYN SS **SnSn 12 23 58.1 +4.2**
LYN pmax pmax
comp=Z,10.0nm,1.4s
LYN pmax pmax
comp=Z,630nm,4.4s
LYN LR LR
comp=Z,15μm,20.3s
LYN LR LR
comp=Z,6μm,19.6s
LYN LR LR
comp=Z,9μm,13.7s
HHC Hu-ho-hao-te 24.32 293 *e*P **P 12 19 05.4 +0.3**
HHC PP **PnPn 12 19 40.2 +4.9**
HHC S **S 12 23 18.7 -4.7**
HHC pmax pmax
comp=Z,19nm,0.6s
HHC pmax pmax
comp=Z,400nm,6.1s
HHC LR LR
comp=Z,12μm,16.5s
HHC LR LR
comp=Z,8μm,14.3s
HHC LR LR
comp=Z,9μm,14.3s
BTO Baotou 25.48 293 *e*P **P 12 19 16.6 +1.0**
BTO S **S 12 23 45.1 +3.3**
BTO LR LR
comp=Z,28μm,17.7s
BTO LR LR
comp=Z,19μm,14.7s
XAN Xi'an 26.79 278 P **P 12 19 26.0 -1.4**
XAN pP sP 12 19 35.3 +1.6
XAN S **S 12 24 00.9 -1.6**
XAN pmax pmax
comp=Z,25nm,1.4s
XAN LR LR
comp=Z,12μm,21.2s
XAN LR LR
comp=Z,8μm,21.2s
XAN LR LR
comp=Z,7μm,15.1s
H11N2 WAKE ISLAND Hy 27.01 117 T T 12 47 43.0
baz=309,slow=75,SNR=80
H11N1 WAKE ISLAND Hy 27.02 117 T T 12 47 42.9
baz=309,slow=75,SNR=89
H11N3 WAKE ISLAND Hy 27.03 117 T T 12 47 44.7
baz=309,slow=75,SNR=83
ENH Enshi 27.24 270 P **P 12 19 30.5 -1.0**
ENH IAmb IAmb 12 19 35.6
comp=Z,30nm,0.8s
H11S1 WAKE ISLAND Hy 27.64 119 T T 12 48 39.0
baz=312,slow=75,SNR=91
H11S3 WAKE ISLAND Hy 27.64 119 T T 12 48 36.6
baz=312,slow=75,SNR=67
H11S2 WAKE ISLAND Hy 27.66 119 T T 12 48 38.0
baz=312,slow=75,SNR=69
YAK Yakutsk 28.35 348 P **P 12 19 41.2 +0.2**
comp=Z,26nm,0.6s,baz=340,slow=0.9,SNR=15
YAK LR LR 12 31 50.8
comp=Z,6μm,18.2s,baz=159,slow=38
comp=Z,26nm,0.6s
YAK Yakutsk 28.35 348 P **P 12 19 41.0 -0.1**
YAK Yakutsk 28.35 348 *e*P **P 12 19 40.8 -0.2**
YAK *e**PP **pP 12 19 45.6 -0.3**
YAK *e* 12 20 28.7
YAK *e* 12 22 54.7
YAK *e*S **S 12 24 29.2 +2.7**
YAK *e*SS **SnSn 12 25 46.5 +2.1**
YAK pmax pmax
comp=Z,50nm,1.0s
YAK pmax pmax
comp=N,25nm,1.0s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=Z,66nm,1.1s
YAK pmax pmax
comp=N,63nm,1.3s
YAK pmax pmax
comp=E,35nm,1.2s
YAK smax smax
comp=N,1μm,3.2s
YAK smax smax
comp=E,366nm,3.3s
YAK MLR MLR
comp=Z,4μm,14.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,1μm,14.0s
ULN Ulaanbaatar 28.74 308 P **P 12 19 45.8 +0.9**
ULN Ulaanbaatar 28.74 308 P **P 12 19 45.8 +0.9**
ULN pmax pmax
comp=Z,22nm,1.0s
ULN Ulaanbaatar 28.74 308 P **P 12 19 46.4 +1.6**
ULN P **P 12 19 46.4 +1.6**
SEY Seymchan 29.08 10 P **P 12 19 49.1 +1.6**
comp=Z,9.0nm,0.9s,baz=202,slow=6.9,SNR=15
comp=Z,9.0nm,0.9s
SEY Seymchan 29.08 10⇑*e*P **P 12 19 48.6 +1.1**
SEY pmax pmax
comp=Z,12nm,0.9s
SONM Songino Array 29.16 307 P **P 12 19 49.3 +0.7**
comp=Z,16nm,0.9s,baz=112,slow=9.1,SNR=63
SONM ScP **ScP 12 26 37.0 +0.7**
comp=Z,2.3nm,1.1s,baz=39,slow=5.7,SNR=4.2
SONM LR LR 12 32 03.7
comp=Z,5μm,20.1s,baz=108,slow=38
comp=Z,16nm,0.9s
SONM Songino Array 29.16 307 P **P 12 19 49.4 +0.8**
SONM Songino Array 29.16 307 P **P 12 19 49.4 +0.8**
SONM pmax pmax
comp=Z,22nm,1.0s
SHEM Shemya Is, Ala 29.35 42 LR LR 12 28 10.1
comp=Z,1μm,21.1s,baz=233,slow=29
BOD Bodaibo 29.54 330 *e*P **P 12 19 51.2 -0.4**
BOD pmax pmax
comp=Z,130nm,1.3s
LZH Lanzhou 30.55 284 *e*P **P 12 20 01.2 +0.1**
LZH pP sP 12 20 08.6 +1.2
LZH sP pwP 12 20 15.8 +4.0
LZH S **S 12 25 04.3 +2.3**
LZH pmax pmax
comp=Z,25nm,1.5s
LZH LR LR
comp=Z,8μm,15.5s
LZH LR LR
comp=Z,6μm,16.1s
LZH LR LR
comp=Z,9μm,15.5s
GYA Guiyang 30.92 264 ⇑P **P 12 20 03.3 -1.1**
GYA S **S 12 25 03.9 -3.9**
GYA pmax pmax
comp=Z,25nm,0.5s
GYA LR LR
comp=Z,4μm,14.7s
GYA LR LR
comp=Z,3μm,16.4s
GYA LR LR
comp=Z,3μm,14.4s
DAV Davao City (W) 31.14 212 LR LR 12 30 57.6
comp=Z,826nm,21.5s,baz=56,slow=33
IRK Irkutsk 31.72 315 *e*P **P 12 20 10.7 -0.3**
IRK pmax pmax
comp=Z,77nm,3.3s
CD2 Chengdu 31.77 274 P **P 12 20 10.4 -1.3**
CD2 pP pwP 12 20 20.9 -1.3
CD2 sP sP 12 20 25.4 +7.3
CD2 S **S 12 25 19.4 -1.5**
CD2 sS sS 12 25 36.4 +8.9
CD2 pmax pmax
comp=Z,110nm,0.6s
CD2 pmax pmax
comp=Z,2μm,2.8s
CD2 LR LR
comp=Z,18μm,7.3s
CD2 LR LR
comp=Z,15μm,6.6s
ZAK Zakamensk 31.78 311 *e*P **P 12 20 11.2 -0.4**
ZAK pmax pmax
comp=Z,34nm,1.2s
QIZ Qiongzhong 32.05 249 P **P 12 20 14.3 +0.1**
QIZ S **S 12 25 23.1 -2.1**
QIZ LR LR
comp=Z,3μm,19.1s
QIZ LR LR
comp=Z,3μm,21.5s
QIZ LR LR
comp=Z,2μm,12.7s
GTA Gaotai 33.33 291 ⇓P **P 12 20 25.9 +0.5**
GTA pP pwP 12 20 36.2 0.0
GTA sP sP 12 20 39.4 +7.6
GTA S **S 12 25 43.6 -1.6**
GTA pmax pmax
comp=Z,22nm,1.3s
GTA pmax pmax
comp=Z,230nm,8.4s
GTA LR LR
comp=Z,6μm,16.3s
GTA LR LR
comp=Z,5μm,18.7s
GTA LR LR
comp=Z,5μm,19.1s
KMI Kunming 34.69 265 ⇑P **P 12 20 37.8 +0.3**
KMI S **S 12 26 01.2 -5.5**
KMI pmax pmax
comp=Z,23nm,0.5s
KMI LR LR
comp=Z,2μm,13.8s
KMI LR LR
comp=Z,5μm,15.2s
KMI LR LR
comp=Z,5μm,14.9s
PZH PanZhiHua 34.95 267 P **P 12 20 40.3 +0.7**
PZH S **S 12 26 11.3 +0.9**
PZH ScP **ScP 12 26 54.8 -1.5**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,120nm,5.3s
PZH LR LR
comp=Z,5μm,16.5s
PZH LR LR
comp=Z,4μm,17.3s
PZH LR LR
comp=Z,4μm,16.6s
BILL Bilibino 36.26 15⇓*e*P **P 12 20 51.4 +1.2**
BILL *e* 12 22 14.9
BILL pmax pmax
comp=Z,10.0nm,0.9s
BILL MLR MLR
comp=Z,2μm,16.0s
SIJI Sorong 36.64 197 P **P 12 20 53.1 -0.8**
comp=Z,20nm,0.8s,baz=358,slow=10,SNR=7.3
SIJI LR LR 12 33 45.6
comp=Z,2μm,18.6s,baz=348,slow=33
comp=Z,20nm,0.8s
MANU Manus Island 36.97 170 P **P 12 20 55.5 -1.1**
MANU Manus Island 36.97 170 P **P 12 20 55.6 -1.1**
TIXI Tiksi 37.61 354 LR LR 12 39 15.6
comp=Z,2μm,18.9s,baz=270,slow=41
TIXI Tiksi 37.61 354 P **P 12 21 00.8 -0.7**
TIXI Tiksi 37.61 354⇓*e*P **P 12 21 01.3 -0.2**
TIXI pmax pmax
comp=Z,20nm,1.0s
UBPT Khong Chiam 37.62 248 P **P 12 21 00.9 -1.4**
GOMU GeErMu 37.73 286 P **P 12 21 03.4 -0.1**
GOMU PP **PP 12 22 29.0 -0.6**
GOMU S **S 12 26 51.2 -2.0**
GOMU pmax pmax
comp=Z,36nm,1.2s
GOMU pmax pmax
comp=Z,420nm,5.0s
GOMU LR LR
comp=Z,3μm,15.6s
GOMU LR LR
comp=Z,2μm,19.3s
GOMU LR LR
comp=Z,2μm,18.3s
FAKI Fak Fak 38.40 195 P **P 12 21 08.0 -0.9**
FAKI Fak Fak 38.40 195 P **P 12 21 08.3 -0.5**
SANI Sanana 39.33 205 P **P 12 21 15.8 -0.8**
CHTO Chiang Mai 40.78 258 P **P 12 21 28.1 -0.7**
CHTO Chiang Mai 40.78 258 P **P 12 21 28.1 -0.7**
CHTO Chiang Mai 40.78 258 P **P 12 21 28.4 -0.3**
CHTO Chiang Mai 40.78 258 P **P 12 21 28.6 -0.2**
UNV Unalaska Valle 40.83 46 P **P 12 21 28.1 -0.6**
baz=264
CMAR Chiang Mai Arr 40.97 258 P **P 12 21 29.4 -0.9**
comp=Z,2.8nm,0.4s,baz=50,slow=7.1,SNR=24
CMAR ScP **ScP 12 27 20.9 +1.8**
comp=Z,1.0nm,0.4s,baz=24,slow=3.4,SNR=9.5
CMAR LR LR 12 40 17.6
comp=Z,737nm,19.5s,baz=60,slow=39
comp=Z,2.8nm,0.4s
CMAR Chiang Mai Arr 40.97 258 P **P 12 21 30.5 +0.1**
CMAR Chiang Mai Arr 40.97 258 *i* P **P 12 21 30.1 -0.2**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CM31 Chiang Mai Arr 40.97 258 P **P 12 21 30.5 +0.2**
DGZ Jazzator, Alta 41.81 308*c i*P **P 12 21 37.6 +0.6**
DGZ pmax pmax
comp=Z,120nm,1.0s
WMQ Urumqi 41.95 299 *e*P **P 12 21 39.7 +1.5**
WMQ pP pwP 12 21 46.9 -1.9
WMQ S **S 12 27 54.8 -0.9**
WMQ sS sS 12 28 14.1 +12
WMQ pmax pmax
comp=Z,68nm,1.1s
WMQ pmax pmax
comp=Z,13nm,3.7s
WMQ LR LR
comp=Z,10μm,14.9s
WMQ LR LR
comp=Z,2μm,16.1s
WMQ LR LR
comp=Z,2μm,17.3s
SBUM Sibu 42.05 227 P **P 12 21 38.2 -0.9**
LSA Lhasa 42.49 278 P **P 12 21 44.4 +1.2**
LSA Lhasa 42.49 278 P **P 12 21 44.4 +1.2**
LSA pmax pmax
comp=Z,11nm,1.0s
LSA Lhasa 42.49 278 P **P 12 21 43.9 +0.7**
ZAA0 Zalesovo Array 43.53 314 P **P 12 21 50.1 -0.6**
ZAA0 IAmb IAmb 12 21 55.8
comp=Z,34nm,0.9s
ZALV Zalesovo Beam 43.53 314 P **P 12 21 51.0 +0.4**
comp=Z,31nm,0.9s,baz=89,slow=6.9,SNR=22
ZALV PcP **PcP 12 23 38.9 +0.7**
comp=Z,3.6nm,0.5s,baz=98,slow=3.8,SNR=7.0
ZALV LR LR 12 39 36.9
comp=Z,878nm,18.3s,baz=94,slow=36
comp=Z,31nm,0.9s
ZALV Zalesovo Beam 43.53 314 P **P 12 21 50.0 -0.7**
ZALV Zalesovo Beam 43.53 314 *i* P **P 12 21 53.2 +2.5**
ZALV pmax pmax
comp=Z,31nm,0.9s
ANM Nome 43.59 30 P **P 12 21 50.6 -0.5**
ANM IAmb IAmb 12 22 10.8
comp=Z,39nm,1.2s
ANM Nome 43.59 30 P **P 12 21 50.6 -0.5**
ANM pmax pmax
comp=Z,39nm,1.2s
ANM Nome 43.59 30 P **P 12 21 50.4 -0.6**
baz=253
ZSN Zaisan 43.59 305 *e*P **P 12 21 52.0 +0.6**
ZSN pmax pmax
comp=Z,20nm,0.9s
ZSN Zaisan 43.59 305 *e*P **P 12 21 52.0 +0.6**
comp=Z,20nm,0.9s,baz=305
PMG Port Moresby 44.20 172 P **P 12 21 57.1 +0.7**
comp=Z,43nm,1.1s,baz=342,slow=7.8,SNR=7.1
PMG LR LR 12 40 19.0
comp=Z,454nm,18.6s,baz=1.0,slow=36
comp=Z,43nm,1.1s
PMG Port Moresby 44.20 172 P **P 12 21 56.6 +0.2**
PMG IAmb IAmb 12 21 58.7
comp=Z,58nm,1.1s
PMG Port Moresby 44.20 172*d i*P **P 12 21 57.4 +1.0**
PMG pmax pmax
comp=Z,48nm,1.0s
PMG Port Moresby 44.20 172 P **P 12 21 57.7 +1.3**
KAPI Kappang 44.47 212 P **P 12 21 58.4 -0.3**
KAPI IAmb IAmb 12 22 17.5
comp=Z,38nm,1.1s
KAPI Kappang 44.47 212 P **P 12 21 58.4 -0.3**
KAPI pmax pmax
comp=Z,38nm,1.1s
KAPI Kappang 44.47 212 P **P 12 21 59.6 +0.9**
BRDH Bariadhala 44.89 268 LR LR 12 44 00.7
comp=Z,4μm,18.2s,baz=69,slow=40
CNBA Chernabura Isl 44.94 45 P **P 12 22 01.9 0.0**
NRIK Noril'sk 45.40 336 P **P 12 22 06.0 +0.5**
comp=Z,36nm,1.1s,baz=108,slow=9.6,SNR=23
NRIK LR LR 12 43 52.8
comp=Z,3μm,18.1s,baz=112,slow=40
comp=Z,36nm,1.1s
NRIK Noril'sk 45.40 336 P **P 12 22 06.0 +0.5**
NRIK IAmb IAmb 12 22 07.7
comp=Z,44nm,1.1s
NRIK Noril'sk 45.40 336*c i*P **P 12 22 05.9 +0.5**
NRIK pmax pmax
comp=Z,50nm,1.1s
MK31 Makanchi Array 45.41 304 P **P 12 22 06.1 +0.2**
MK31 IAmb IAmb 12 22 11.0
comp=Z,23nm,0.9s
MK31 Makanchi Array 45.41 304 P **P 12 22 06.1 +0.2**
MK31 pmax pmax
comp=Z,23nm,0.9s
MKAR Makanchi Array 45.41 304 P **P 12 22 06.2 +0.4**
comp=Z,15nm,0.7s,baz=89,slow=8.5,SNR=75
MKAR LR LR 12 42 40.1
comp=Z,2μm,18.1s,baz=100,slow=38
comp=Z,15nm,0.7s
MKAR Makanchi Array 45.41 304 P **P 12 22 05.6 -0.3**
MKAR Makanchi Array 45.41 304 *i* P **P 12 22 06.0 +0.1**
MKAR pmax pmax
comp=Z,24nm,0.9s
RDOG Red Dog Mine 45.59 26 P **P 12 22 06.6 -0.3**
baz=252
MAKZ Makanchi 45.62 304 P **P 12 22 07.3 -0.3**
MAKZ IAmb IAmb 12 22 12.8
comp=Z,28nm,0.8s
MAKZ Makanchi 45.62 304 P **P 12 22 07.3 -0.3**
MAKZ pmax pmax
comp=Z,28nm,0.9s
CHGN Chignik 45.65 43 P **P 12 22 07.3 -0.3**
baz=268
N16K Nishlik Lake 45.77 37 P **P 12 22 06.1 -2.4**
baz=264
O16K Kokwok River B 46.02 38 P **P 12 22 09.2 -1.2**
baz=265
SRIT Nakonsritamara 46.27 246 P **P 12 22 13.9 +0.9**
SRIT IAmb IAmb 12 22 25.8
comp=Z,51nm,1.6s
SEM Semipalatinsk 46.40 309 *e*P **P 12 22 12.7 -1.2**
SEM Semipalatinsk 46.40 309 *e*P **P 12 22 12.8 -1.2**
baz=309
O17K Koliganek Bris 46.54 38 P **P 12 22 14.0 -0.5**
baz=266
Q16K King Salmon 46.70 39 P **P 12 22 16.2 +0.5**
baz=267
Q17K Contact Creek 47.09 40 P **P 12 22 18.7 -0.3**
baz=268
SOEI Soe 47.11 203 P **P 12 22 18.2 -1.4**
SOEI Soe 47.11 203 P **P 12 22 19.5 -0.1**
GCSA Galena City Sc 47.20 31 P **P 12 22 19.1 -0.5**
baz=261
N18K Kilae Creek 47.20 37 P **P 12 22 21.4 +1.6**
N18K IAmb IAmb 12 22 34.7
comp=Z,32nm,1.2s
N18K Kilae Creek 47.20 37 P **P 12 22 19.3 -0.5**
baz=266
CHIR Chirikof Islan 47.21 43 P **P 12 22 19.4 -0.5**
baz=271
RAMN Ramite 47.23 276 *e*Pg **P 12 22 20.2 -0.5**
comp=Z,141nm,1.0s
HNR Honiara 47.26 155 LR LR 12 40 03.8
comp=Z,1μm,21.6s,baz=332,slow=33
JIRN Jiri 47.29 277 *e*Pg **P 12 22 21.3 0.0**
comp=Z,86nm,0.7s
TTA Tatalina 47.34 34 P **P 12 22 21.7 +0.8**
TTA Tatalina 47.34 34 P **P 12 22 21.7 +0.8**
TTA pmax pmax
comp=Z,14nm,1.2s
TTA Tatalina 47.34 34 P **P 12 22 20.1 -0.8**
baz=264
SVW2 Sparrevohn 47.38 36 P **P 12 22 22.4 +1.2**
KURK Kurchatov 47.41 310 P **P 12 22 21.1 -0.4**
KURK Kurchatov 47.41 310*c i*P **P 12 22 21.6 +0.1**
KURK pmax pmax
comp=Z,68nm,1.1s
KURK Kurchatov 47.41 310 P **P 12 22 21.5 0.0**
GUN Gumba 47.45 278 *e*Pg **P 12 22 22.9 +0.4**
comp=Z,118nm,0.9s
P18K Big Mountain, 47.46 38 P **P 12 22 21.4 -0.5**
P18K Big Mountain, 47.46 38 P **P 12 22 20.8 -1.1**
baz=268
KURBB Kurchatov Arra 47.48 310 P **P 12 22 22.0 0.0**
comp=Z,39nm,0.9s,baz=86,slow=8.1,SNR=82
KURBB LR LR 12 43 40.8
comp=Z,2μm,20.0s,baz=61,slow=38
comp=Z,39nm,0.9s
KURBB Kurchatov Arra 47.48 310 P **P 12 22 21.6 -0.4**
O18K Koktuh Hills 47.49 38 P **P 12 22 20.9 -1.1**
O18K IAmb IAmb 12 22 40.3
comp=Z,31nm,1.1s
O18K Koktuh Hills 47.49 38 P **P 12 22 21.9 -0.2**
baz=268
Q18K Katmai Hardscr 47.56 39 P **P 12 22 22.5 -0.2**
baz=269
BATI Baumata 47.73 204 LR LR 12 41 44.8
comp=Z,275nm,21.4s,baz=20,slow=35
L19K White Mountain 47.81 35 P **P 12 22 25.0 +0.5**
L19K IAmb IAmb 12 22 39.1
comp=Z,32nm,1.2s
L19K White Mountain 47.81 35 P **P 12 22 23.6 -0.9**
baz=266

KDU	Kakadu	47.88	192	P		P	12 22 25.5	+0.1	
N19K	Bonanza Creek	47.90	36	P		P	12 22 25.4	+0.1	
	baz=267								
PDGK	Podgornoye	47.91	300	P		P	12 22 24.9	-0.8	
O19K	Port Alsworth	47.95	37	P		P	12 22 25.3	-0.2	
	baz=268								
PKI	Pulchoki	47.96	278	*e*Pg		P	12 22 26.3	-0.2	
	comp=Z,42nm,0.8s								
PKIN	Phulchoki	47.97	278	*e*Pg		P	12 22 25.9	-0.6	
	comp=Z,28nm,0.8s								
SHLS	Shalkode	47.97	300	*e*P		P	12 22 22.9	-3.2	
SHLS				pmax		pmax			
	comp=Z,19nm,1.1s								
SHLS	Shalkode	47.97	300	*e*P		P	12 22 22.9	-3.2	
	comp=Z,19nm,1.1s,baz=299								
M19K	Big River Lodg	48.01	35	P		P	12 22 28.2	+2.2	
	baz=266								
DMN	Daman	48.19	278	*e*Pg		P	12 22 28.2	0.0	
	comp=Z,74nm,1.2s								
K20K	Telida	48.26	33	P		P	12 22 30.0	+2.0	
K20K				IAmb		IAmb	12 22 42.7		
	comp=Z,29nm,1.1s								
K20K	Telida	48.26	33	P		P	12 22 27.1	-0.8	
	baz=265								
Q19K	Cape Douglas,	48.27	39	P		P	12 22 26.9	-1.2	
	baz=270								
MTN	Manton Dam	48.28	194	P		P	12 22 28.1	-0.4	
MTN	Manton Dam	48.28	194	P		P	12 22 28.3	-0.2	
L20K	Farewell, AK	48.28	34	P		P	12 22 27.9	-0.3	
	baz=266								
UZB	Uzynbulak	48.29	300	*e*P		P	12 22 27.6	-1.0	
UZB	Uzynbulak	48.29	300	*e*P		P	12 22 27.7	-1.0	
	baz=300								
J20K	Nowinta River	48.30	32	P		P	12 22 27.7	-0.5	
J20K				IAmb		IAmb	12 22 42.8		
	comp=Z,36nm,1.1s								
J20K	Nowinta River	48.30	32	P		P	12 22 27.4	-0.8	
	baz=264								
COEN	Coen	48.41	178	P		P	12 22 29.2	-0.4	
COEN	Coen	48.41	178	P		P	12 22 31.3	+1.7	
GKN	Gorkha	48.42	278	*e*Pg		P	12 22 30.1	+0.2	
	comp=Z,85nm,0.9s								
KPKS	Kokpek	48.46	300	*e*P		P	12 22 29.1	-0.8	
KPKS	Kokpek	48.46	300	*e*P		P	12 22 29.1	-0.8	
	baz=300								
OHAK	Old Harbor	48.48	41	P		P	12 22 30.9	+1.3	
OHAK				IAmb		IAmb	12 22 50.6		
	comp=Z,42nm,1.2s								
OHAK	Old Harbor	48.48	41	P		P	12 22 28.6	-1.1	
	baz=272								
P19K	Oil Pt	48.49	38	P		P	12 22 28.6	-1.2	
	baz=269								
M20K	Styx River	48.60	35	P		P	12 22 29.2	-1.5	
M20K				IAmb		IAmb	12 22 45.4		
	comp=Z,15nm,1.0s								
M20K	Styx River	48.60	35	P		P	12 22 30.8	+0.1	
	baz=268								
IMAR	Indian Mountai	48.66	30	P		P	12 22 31.6	+0.6	
SATY	Saty	48.75	300	*e*P		P	12 22 32.0	-0.1	
SATY				pmax		pmax			
	comp=Z,15nm,1.4s								
SATY	Saty	48.75	300	*e*P		P	12 22 32.0	-0.1	
	comp=Z,15nm,1.4s,baz=300								
O20K	Slope Mountain	48.80	37	P		P	12 22 31.0	-1.2	
	baz=270								
G21K	Allakaket	48.82	29	P		P	12 22 31.4	-0.9	
	baz=263,SNR=6.6								
KDAK	Kodiak Island	48.84	41	P		P	12 22 33.1	+0.7	
	comp=Z,14nm,0.8s,baz=269,slow=6.7,SNR=8.4								
	comp=Z,14nm,0.8s								
KDAK	Kodiak Island	48.84	41	P		P	12 22 33.3	+0.8	
KDAK	Kodiak Island	48.84	41	P		P	12 22 33.3	+0.8	
KDAK				pmax		pmax			
	comp=Z,35nm,1.0s								
KDAK	Kodiak Island	48.84	41	P		P	12 22 32.2	-0.2	
	baz=272								
ARXS	Arharly	48.92	301	*e*P		P	12 22 34.4	+1.0	
F21K	Alatna River	48.92	28	P		P	12 22 31.6	-1.3	
	baz=262								
Q20K	Shuyak Island	48.92	39	P		P	12 22 31.2	-1.8	
	baz=271								
DANN	Dangsing	49.00	279	*e*Pg		P	12 22 34.7	+0.2	
	comp=Z,148nm,1.0s								
H21K	Melozitna Rive	49.01	30	P		P	12 22 33.5	-0.2	
H21K	Melozitna Rive	49.01	30	P		P	12 22 32.4	-1.3	
	baz=264,SNR=9.1								
N20K	Mount Spurr	49.02	36	P		P	12 22 32.4	-1.5	
	baz=269								
SPCR	Spurr Chakacha	49.02	36	P		P	12 22 31.7	-2.1	
	baz=269								
CHUM	Lake Minchumin	49.08	32	P		P	12 22 33.8	-0.4	
	baz=266								
PPLA	Purkeypile	49.08	34	P		P	12 22 32.5	-1.9	
PPLA	Purkeypile	49.08	34	P		P	12 22 36.5	+2.1	
	baz=267								
SPU	Mount Spurr	49.09	36	P		P	12 22 33.4	-1.0	
CAST	Castle Rocks	49.16	33	P		P	12 22 33.3	-1.5	
CAST				IAmb		IAmb	12 22 49.6		
	comp=Z,37nm,1.3s								
CAST	Castle Rocks	49.16	33	P		P	12 22 33.7	-1.2	
	baz=267,SNR=6.5								
I21K	Tanana	49.31	31	P		P	12 22 35.9	-0.1	
I21K				IAmb		IAmb	12 22 50.9		
	comp=Z,39nm,1.2s								
I21K	Tanana	49.31	31	P		P	12 22 35.3	-0.6	
	baz=266								
SKT	Skwentna	49.36	35	P		P	12 22 37.8	+1.3	
SKT				IAmb		IAmb	12 22 50.1		
	comp=Z,29nm,1.2s								
SKT	Skwentna	49.36	35	P		P	12 22 36.6	+0.2	
	baz=269								
F22K	John River	49.46	28	P		P	12 22 37.3	+0.2	
	baz=264,SNR=7.6								
TARG	Taragay, Kyrgy	49.48	298	P		P	12 22 37.0	-1.1	
TARG	Taragay, Kyrgy	49.48	298	P		P	12 22 37.0	-1.1	
TARG				pmax		pmax			
	comp=Z,47nm,1.1s								
CHKK	Chushkaly	49.58	301	*e*P		P	12 22 38.4	0.0	
CHKK	Chushkaly	49.58	301	*e*P		P	12 22 38.4	0.0	
	baz=301								
H22K	Ishtalitna Cre	49.62	30	P		P	12 22 37.4	-0.9	
	baz=266,SNR=6.8								
G22K	Bettles	49.66	28	P		P	12 22 40.4	+1.9	
	baz=265								
BPAW	Bear Paw Mtn.	49.68	32	IAmb		IAmb	12 23 11.5		
	comp=Z,53nm,1.9s								
BPAW	Bear Paw Mtn.	49.68	32	P		P	12 22 36.7	-2.1	
	baz=268								
MDOK	Medeo	49.69	300	P		P	12 22 40.2	+0.8	
MDOK	Medeo	49.69	300	*e*P		P	12 22 39.5	+0.1	
	baz=300								
PYUN	Piuthan	49.73	279	*e*Pg		P	12 22 40.0	+0.1	
	comp=Z,205nm,1.0s								
SUA	Susitna One	49.73	36	P		P	12 22 44.0	+4.7	
	baz=270								
BRSE	Bradley Lake S	49.75	38	P		P	12 22 37.8	-1.7	
	baz=271								
AAA	Alma-Ata	49.78	300	*e*P		P	12 22 39.2	-0.7	
AAA	Alma-Ata	49.78	300	*e*P		P	12 22 39.2	-0.7	
	baz=300								
TNSS	Tian-Shan	49.79	300	*e*P		P	12 22 41.1	+0.7	
TNSS	Tian-Shan	49.79	300	*e*P		P	12 22 41.2	+0.7	
	baz=300								
MLY	Manley	49.83	31	IAmb		IAmb	12 22 54.6		
	comp=Z,26nm,1.1s								
MLY	Manley	49.83	31	P		P	12 22 38.5	-1.4	
	baz=267,SNR=13								
TRF	Thorofare Moun	49.96	33	P		P	12 22 42.8	+1.6	
TRF	Thorofare Moun	49.96	33	P		P	12 22 40.3	-0.9	
	baz=269								
M22K	Willow	50.03	35	P		P	12 22 41.7	+0.3	
M22K	Willow	50.03	35	P		P	12 22 40.5	-0.9	
	baz=270								
KUU	Kurty	50.03	301	*e*P		P	12 22 41.3	-0.5	
KUU				pmax		pmax			
	comp=Z,33nm,1.1s								
KUU	Kurty	50.03	301	*e*P		P	12 22 41.4	-0.5	
	comp=Z,33nm,1.1s,baz=301								
D23K	Nanushuk River	50.18	26	P		P	12 22 42.6	+0.1	
	baz=264								
COLD	Coldfoot	50.19	28	IAmb		IAmb	12 22 57.1		
	comp=Z,48nm,1.8s								
COLD	Coldfoot	50.19	28	P		P	12 22 42.4	-0.2	
	baz=266								
RC01	Rabbit Creek A	50.22	36	P		P	12 22 42.9	0.0	
	baz=271								
G23K	Bananza Creek	50.22	29	P		P	12 22 41.5	-1.4	
	baz=266,SNR=7.1								
O22K	Cooper Landing	50.24	37	P		P	12 22 41.9	-1.1	
	baz=272								
C23K	Itkillik River	50.30	25	P		P	12 22 42.8	-0.6	
	baz=263								
BWN	Browne	50.35	32	P		P	12 22 44.0	+0.2	
H23K	Yukon River	50.37	30	P		P	12 22 44.7	+0.6	
	baz=267,SNR=14								
SEW	Seward	50.39	37	P		P	12 22 44.6	+0.4	
	baz=272								
I23K	Minto, Yukon-K	50.42	31	P		P	12 22 45.1	+0.7	
	baz=268								
E23K	Chandalar	50.48	27	P		P	12 22 45.5	+0.6	
	baz=266,SNR=18								
ULHL	Ulahol	50.49	299	P		P	12 22 46.5	+1.0	
	SNR=7.3								
PMR	Palmer	50.50	35	P		P	12 22 45.0	+0.1	
PMR				IAmb		IAmb	12 22 58.2		
	comp=Z,32nm,1.2s								
PMR	Palmer	50.50	35	P		P	12 22 45.1	+0.1	
PMR				pmax		pmax			
	comp=Z,32nm,1.2s								
PMR	Palmer	50.50	35	P		P	12 22 45.5	+0.5	
	baz=271								
NEA2	Nenana	50.53	32	IAmb		IAmb	12 22 59.5		
	comp=Z,51nm,1.3s								
NEA2	Nenana	50.53	32	P		P	12 22 44.1	-1.2	
	baz=269,SNR=16								
TOLK	Toolik Lake Re	50.55	26	P		P	12 22 45.3	-0.1	
TOLK				IAmb		IAmb	12 23 04.0		
	comp=Z,39nm,1.4s								
TOLK	Toolik Lake Re	50.55	26	P		P	12 22 44.4	-0.9	
	baz=265,SNR=5.9								
MCK	McKinley	50.57	33	P		P	12 22 45.7	+0.1	
MCK				IAmb		IAmb	12 22 59.4		
	comp=Z,30nm,1.2s								
MCK	McKinley	50.57	33	P		P	12 22 45.7	+0.1	
MCK				pmax		pmax			
	comp=Z,30nm,1.2s								
MCK	McKinley	50.57	33	P		P	12 22 44.6	-1.0	
	baz=270								
RND	Reindeer	50.61	33	IAmb		IAmb	12 22 59.3		
	comp=Z,27nm,1.0s								
WAT1	Susitna Watana	50.75	34	P		P	12 22 46.4	-0.6	
	baz=271								
TKM2	Tokmak 2	50.78	300	P		P	12 22 49.7	+2.0	
	SNR=31								
TKM2	Tokmak 2	50.78	300	P		P	12 22 48.1	+0.3	
KNK	Knik Glacier	50.83	36	IAmb		IAmb	12 23 06.0		
	comp=Z,26nm,0.9s								
KNK	Knik Glacier	50.83	36	P		P	12 22 44.5	-3.0	
	baz=272								
SML	Sawmill	50.88	35	IAmb		IAmb	12 23 02.8		
	comp=Z,30nm,0.8s								
SML	Sawmill	50.88	35	P		P	12 22 46.9	-1.0	
	baz=272								
MDM	Murphy Dome	50.89	31	P		P	12 22 49.1	+1.1	
MDM				IAmb		IAmb	12 23 02.3		
	comp=Z,46nm,1.1s								
E24K	Your Creek	50.91	27	P		P	12 22 46.9	-1.2	
	baz=266,SNR=10								
PWL	Port Wells	50.91	36	P		P	12 22 49.0	+0.8	
PWL				IAmb		IAmb	12 23 05.1		
	comp=Z,30nm,0.9s								
PWL	Port Wells	50.91	36	P		P	12 22 46.5	-1.7	
	baz=273								
C24K	Franklin Bluff	50.95	25	P		P	12 22 47.7	-0.6	
	baz=265								
TCOL	CIGO, UAF Yank	51.05	31	P		P	12 22 50.5	+1.4	
TCOL				IAmb		IAmb	12 23 20.0		
	comp=Z,76nm,1.8s								
TCOL	CIGO, UAF Yank	51.05	31	P		P	12 22 48.4	-0.7	
	baz=270								
COLA	College	51.05	31	P		P	12 22 48.8	-0.3	
COLA				IAmb		IAmb	12 23 20.0		
	comp=Z,75nm,1.8s								
COLA	College	51.05	31⇓	*e*P		P	12 22 51.5	+2.4	
COLA				pmax		pmax			
	comp=Z,29nm,1.7s								
COLA	College	51.05	31	P		P	12 22 49.3	+0.2	
	baz=270								
H24K	Noodor Dome	51.05	30	IAmb		IAmb	12 23 04.0		
	comp=Z,45nm,1.6s								
H24K	Noodor Dome	51.05	30	P		P	12 22 49.8	+0.6	
	baz=269,SNR=11								
CCB	Clear Creek Bu	51.07	32	P		P	12 22 51.0	+1.7	
F24K	Squaw Lake	51.10	28	P		P	12 22 49.5	-0.1	
	baz=268								
WAT6	Susitna Watana	51.13	34	P		P	12 22 49.0	-0.9	
	baz=272								
M23K	Glacier View	51.16	35	P		P	12 22 49.5	-0.5	
	baz=272								
POKR	Poker Plat Res	51.23	31	P		P	12 22 50.6	0.0	
	baz=270								
G24K	Hadweenzic Riv	51.24	29	P		P	12 22 50.5	0.0	
	baz=269,SNR=9.1								
BRZS	Berezniki	51.28	310	*e*P		P	12 22 50.3	-0.8	
BRZS	Berezniki	51.28	310	*e*P		P	12 22 50.4	-0.8	
	baz=309								
DHY	Denali Highway	51.28	34	P		P	12 22 50.6	-0.5	
	baz=272								
KBK	Karagaybulak	51.31	300	P		P	12 22 53.4	+1.7	
	SNR=13								
SGDS	Sogindy	51.34	301	*e*P		P	12 22 52.0	+0.3	
SGDS				pmax		pmax			
	comp=Z,19nm,1.8s								
SGDS	Sogindy	51.34	301	*e*P		P	12 22 52.0	+0.3	
	comp=Z,18nm,1.8s,baz=301								
SCM	Sheep Creek Mo	51.35	35	P		P	12 22 52.7	+1.2	
SCM				IAmb		IAmb	12 23 05.4		
	comp=Z,49nm,1.2s								
SCM	Sheep Creek Mo	51.35	35	P		P	12 22 52.7	+1.2	
SCM				pmax		pmax			
	comp=Z,49nm,1.2s								
SCM	Sheep Creek Mo	51.35	35	P		P	12 22 51.4	-0.2	
	baz=273								
CHMS	Chumysh	51.37	300	P		P	12 22 53.3	+1.4	
	SNR=5.3								
CHMS	Chumysh	51.37	300	*i* P		P	12 22 52.4	+0.5	
CHMS				pmax		pmax			
	comp=Z,31nm,1.4s								
BTLS	Baital	51.37	303	*e*P		P	12 22 51.6	-0.2	
BTLS				pmax		pmax			
	comp=Z,19nm,1.7s								
BTLS	Baital	51.37	303	*e*P		P	12 22 51.7	-0.2	
	comp=Z,19nm,1.7s,baz=303								
KSH	Kashi	51.40	296	P		P	12 22 57.2	+4.9	
KSH				sP		pwP	12 23 13.8	+11	
KSH				S		S	12 30 17.0	+5.9	
KSH				pmax		pmax			
	comp=Z,15nm,1.2s								
KSH				LR		LR			
	comp=Z,5μm,17.2s								
KSH				LR		LR			
	comp=Z,4μm,15.8s								
KSH				LR		LR			
	comp=Z,2μm,17.5s								
HDA	Harding Lake	51.44	32	P		P	12 22 51.0	-1.1	
HDA				IAmb		IAmb	12 23 07.4		
	comp=Z,22nm,1.0s								
HDA	Harding Lake	51.44	32	P		P	12 22 51.4	-0.7	
	baz=271								
IL31		51.47	31	P		P	12 22 52.6	+0.4	
IL31				IAmb		IAmb	12 23 05.5		
	comp=Z,21nm,1.0s								
ILAR	Eielson Array	51.47	31	P		P	12 22 53.0	+0.7	
	comp=Z,5.0nm,0.8s,baz=265,slow=6.0,SNR=29								
ILAR				LR		LR	12 47 58.9		
	comp=Z,439nm,18.7s,baz=268,slow=40								
	comp=Z,5.0nm,0.8s								
ILAR	Eielson Array	51.47	31	P		P	12 22 52.6	+0.3	
ILAR	Eielson Array	51.47	31	P		P	12 22 53.0	+0.7	
USP	Ospenovka	51.48	301	P		P	12 22 54.1	+1.4	
	SNR=12								
GLI	Glacier Island	51.51	36	P		P	12 22 52.2	-0.5	
	baz=274								
KNRA	Kununurra	51.52	196	P		P	12 22 52.8	-0.3	
AAK	Ala-Archa	51.64	300	P		P	12 22 55.5	+1.3	
	SNR=8.8								
AAK	Ala-Archa	51.64	300	P		P	12 22 54.7	+0.7	
	comp=Z,5.4nm,0.8s,baz=106,slow=5.4,SNR=20								
AAK				LR		LR	12 46 28.5		
	comp=Z,2μm,18.0s,baz=84,slow=38								
	comp=Z,5.4nm,0.8s								
AAK	Ala-Archa	51.64	300	P		P	12 22 53.9	-0.2	
AAK				IAmb		IAmb	12 23 21.6		
	comp=Z,21nm,1.1s								
AAK	Ala-Archa	51.64	300 *c*	*i* P		P	12 22 54.8	+0.7	
AAK				pmax		pmax			
	comp=Z,20nm,1.3s								
AAK	Ala-Archa	51.64	300	P		P	12 22 55.4	+1.3	
AAK				P		P	12 22 55.4	+1.3	
AAK	Ala-Archa	51.64	300	*i* P		P	12 22 55.9	+1.8	
	SNR=7.4								
UCH	Uchtor	51.73	300	P		P	12 22 56.6	+1.4	
	SNR=15								
D25K	Kavik River	51.74	26	P		P	12 22 55.5	+1.2	
	baz=268								
G25K	Bearman Lake	51.78	29	P		P	12 22 54.9	+0.4	
	baz=270,SNR=7.0								
FID	Port Fidalgo	51.83	36	P		P	12 22 54.7	-0.3	
OTUK	Ortayu	51.83	307	P		P	12 22 55.1	-0.2	
M24K	Tolsona, Glenn	51.88	35	P		P	12 22 56.9	+1.4	
M24K				IAmb		IAmb	12 23 09.8		
	comp=Z,28nm,0.9s								
M24K	Tolsona, Glenn	51.88	35	P		P	12 22 54.7	-0.7	
	baz=273								
H25K	Birch Creek	51.90	29	P		P	12 22 55.3	-0.1	
	baz=270,SNR=5.2								
F25K	Christian Rive	51.97	28	P		P	12 22 56.8	+0.7	
	baz=270,SNR=13								
K24K	Donnelly Dome	51.98	33	P		P	12 22 57.8	+1.7	
	baz=272								
E25K	Arctic Village	52.00	27	P		P	12 22 56.1	-0.2	
	baz=269,SNR=9.3								
PRP	Porcupine Dome	52.03	30	P		P	12 22 55.4	-1.3	
	baz=271								
KLU	Klutina	52.04	36	IAmb		IAmb	12 23 09.9		
	comp=Z,37nm,1.4s								
KLU	Klutina	52.04	36	P		P	12 22 56.4	-0.3	
	baz=274								
J25K	Salcha River,	52.12	32	P		P	12 22 55.6	-1.7	
	baz=272								
EKS2	Erkin-Say	52.15	300	P		P	12 22 59.2	+1.4	
	SNR=7.1								
PAX	Paxson	52.16	34	P		P	12 22 57.7	+0.2	
	baz=273								
BVA0	Borovoye Array	52.17	314	*i* P		P	12 22 57.5	-0.2	
BVAR	Borovoye Array	52.17	314	P		P	12 22 58.6	+0.9	
	comp=Z,10nm,1.0s,baz=90,slow=7.4,SNR=33								
BVAR				LR		LR	12 46 41.7		
	comp=Z,1μm,19.7s,baz=73,slow=38								
	comp=Z,10nm,1.0s								
EYAK	Cordova Ski Ar	52.20	37	P		P	12 22 56.6	-1.1	
	baz=275								
LEM	Lembang	52.20	224	P		P	12 22 58.0	-0.5	
	comp=Z,14nm,0.5s,baz=307,slow=20,SNR=1.8								
LEM				LR		LR	12 44 27.6		
	comp=Z,434nm,21.6s,baz=360,slow=35								
	comp=Z,14nm,0.5s								
BRVK	Borovoye	52.23	314	P		P	12 22 58.1	0.0	
BRVK				IAmb		IAmb	12 23 05.1		
	comp=Z,23nm,1.0s								
BRVK	Borovoye	52.23	314 *c*	*i* P		P	12 22 58.5	+0.3	
BRVK				pmax		pmax			
	comp=Z,40nm,1.7s								
BRVK	Borovoye	52.23	314	P		P	12 22 58.4	+0.3	
C26K	Camden Bay	52.27	25	P		P	12 22 55.7	-2.4	
	baz=268								
HARP	HAARP	52.34	34	P		P	12 22 58.6	-0.2	
	baz=274								
AML	Almayashu	52.34	300	P		P	12 23 00.8	+1.1	
	SNR=44								
BMAR	Burnt Mountain	52.38	28	P		P	12 23 00.4	+1.3	
RIDG	Independent Ri	52.39	33	P		P	12 22 57.1	-2.1	
	baz=273								
F26K	Sheenjek River	52.54	28	P		P	12 23 00.1	-0.2	
	baz=271,SNR=21								
MTSU	Mount Surprise	52.61	177	P		P	12 23 03.3	+2.1	
GSI	Gunungsitoli	52.64	241	P		P	12 23 01.5	-0.1	
N25K	Chitina, Valde	52.66	35	P		P	12 23 00.5	-0.8	
	baz=275								
C27K	Jago River	52.69	25	P		P	12 22 59.7	-1.6	
	baz=270								
G26K	Porcupine Rive	52.70	29	P		P	12 23 00.8	-0.6	
	baz=272,SNR=5.9								
BMRM	Bremner River	52.72	36	IAmb		IAmb	12 23 12.2		
	comp=Z,28nm,1.0s								
BMRM	Bremner River	52.72	36	P		P	12 22 59.5	-2.2	
	baz=276								
DOT	Dot Lake	52.75	33	P		P	12 23 01.4	-0.4	
DOT				IAmb		IAmb	12 23 14.2		
	comp=Z,65nm,1.8s								
SCRK	Sand Creek	52.76	32	P		P	12 23 01.5	-0.6	
SCRK				IAmb		IAmb	12 23 15.5		
	comp=Z,29nm,1.2s								
SCRK	Sand Creek	52.76	32	P		P	12 23 00.7	-1.3	
	baz=274,SNR=11								
J26L	Joseph Creek	52.91	32	P		P	12 23 03.3	+0.2	
J26L	Joseph Creek	52.91	32	P		P	12 23 01.8	-1.2	
	baz=274,SNR=7.7								
MENT	Mentasta	52.96	34	P		P	12 23 04.5	+1.0	
I26K	Coal Creek Min	53.03	31	P		P	12 23 03.2	-0.6	
	baz=274								
GLB	Gilahina Butte	53.05	35	P		P	12 23 06.4	+2.2	
GLB				IAmb		IAmb	12 23 22.2		
	comp=Z,26nm,1.2s								
L26K	Log Cabin Wild	53.12	33	IAmb		IAmb	12 23 19.1		
	comp=Z,26nm,0.9s								
L26K	Log Cabin Wild	53.12	33	P		P	12 23 03.9	-0.7	
	baz=275								
VRDI	Verde Repeater	53.25	36	P		P	12 23 07.8	+2.0	
VRDI				IAmb		IAmb	12 23 33.4		
	comp=Z,26nm,1.1s								
M26K	Nabesna, AK	53.34	34	P		P	12 23 07.3	+1.0	
M26K				IAmb		IAmb	12 23 24.4		
	comp=Z,71nm,1.9s								
M26K	Nabesna, AK	53.34	34	P		P	12 23 05.0	-1.2	
	baz=276								
MCARA	McCarthy VSAT	53.44	35	P		P	12 23 06.8	-0.2	
MCARA				IAmb		IAmb	12 23 35.0		
	comp=Z,33nm,1.0s								
MCARA	McCarthy VSAT	53.44	35	P		P	12 23 05.3	-1.6	
	baz=277								
E27K	Coleen River	53.49	27	P		P	12 23 05.1	-2.1	
	baz=273,SNR=8.9								
G27K	Doyon Strip	53.54	29	P		P	12 23 03.7	-4.0	
	baz=274								
K27K	Chicken	53.59	32	IAmb		IAmb	12 23 53.5		
	comp=Z,28nm,1.3s								
K27K	Chicken	53.59	32	P		P	12 23 05.9	-2.1	
	baz=276								
TGL	Tana Glacier	53.61	36	P		P	12 23 09.1	+0.8	
TGL				IAmb		IAmb	12 23 24.8		
	comp=Z,24nm,1.1s								
H27K	Steamboat Moun	53.63	29	P		P	12 23 08.6	+0.

WB0	Warramunga Arr	54.58	188	P	P	12 23 14.8	-0.9
YUK3	Moose Creek	54.60	35	P	P	12 23 12.3	-3.4
	baz=278						
FITZ	Fitzroy Crossi	54.61	199	LR	LR	12 46 22.2	
	comp=Z,266nm,19.3s,baz=20,slow=36						
FITZ	Fitzroy Crossi	54.61	199	P	P	12 23 14.9	-1.0
FITZ				IAmb	IAmb	12 23 19.3	
	comp=Z,24nm,1.0s						
FITZ	Fitzroy Crossi	54.61	199	P	P	12 23 18.3	+2.4
CTA	Charters Tower	54.67	174	P	P	12 23 15.7	-0.7
	comp=Z,6.4nm,0.8s,baz=337,slow=8.1,SNR=2.8						
CTA				LR	LR	12 45 26.7	
	comp=Z,563nm,21.3s,baz=346,slow=35						
	comp=Z,6.4nm,0.8s						
WRAB	Tennant Creek	54.74	188	P	P	12 23 14.6	-2.2
WRAB	Tennant Creek	54.74	188	P	P	12 23 14.6	-2.2
WRAB				pmax	pmax		
	comp=Z,119nm,1.2s						
WRAB	Tennant Creek	54.74	188	P	P	12 23 16.7	-0.2
WR0	Warramunga Arr	54.75	188	P	P	12 23 15.5	-1.4
WB2	Warramunga Arr	54.75	188	P	P	12 23 15.9	-1.0
WRA	Warramunga Arr	54.75	188	P	P	12 23 16.3	-0.7
	comp=Z,69nm,1.0s,baz=7.2,slow=7.5,SNR=41						
WRA				LR	LR	12 47 19.2	
	comp=Z,432nm,18.2s,baz=27,slow=37						
	comp=Z,69nm,1.0s						
WRA	Warramunga Arr	54.75	188	P	P	12 23 16.4	-0.7
WRA	Warramunga Arr	54.75	188	*i* P	P	12 23 16.2	-0.7
WRA				pmax	pmax		
	comp=Z,70nm,1.0s						
DAWY	Dawson	54.76	32	P	P	12 23 16.8	+0.2
DAWY	Dawson	54.76	32	P	P	12 23 15.8	-0.8
	baz=278						
WB1	Warramunga Ar.	54.77	188	P	P	12 23 16.7	-0.4
O28M	Mount Upton	54.89	36	P	P	12 23 18.6	+0.7
	baz=279						
QIS	Mount Isa	54.98	182	P	P	12 23 18.3	-0.2
I29M	Ogilvie Camp,	55.05	30	P	P	12 23 18.6	0.0
I29M				IAmb	IAmb	12 23 32.9	
	comp=Z,23nm,1.1s						
I29M	Ogilvie Camp,	55.05	30	P	P	12 23 14.6	-4.0
	baz=278,SNR=9.4						
BCPM	Bancas Point	55.30	37	P	P	12 23 20.9	+0.4
M29M	Somme Creek	55.42	34	P	P	12 23 18.3	-3.2
	baz=280,SNR=9.9						
L29M	L29M	55.46	33	P	P	12 23 19.5	-2.2
	baz=280,SNR=12						
PNL	Peninsula	55.47	37	P	P	12 23 20.0	-1.7
	baz=281						
YUK4	Talbot Arm	55.53	35	P	P	12 23 18.8	-3.6
	baz=280						
EPYK	Eagle Plains	55.55	29	P	P	12 23 23.0	+0.7
EPYK	Eagle Plains	55.55	29	P	P	12 23 22.0	-0.3
	baz=278,SNR=19						
K29M	Barlow Dome	55.61	32	P	P	12 23 20.1	-2.8
	baz=280						
G30M	tAoh Zraii Nji	55.66	28	P	P	12 23 21.8	-1.2
	baz=278,SNR=18						
YUK6	Outpost Mounta	55.74	36	P	P	12 23 21.5	-2.5
	baz=281						
GAR	Garm	55.74	297	P	P	12 23 24.5	+0.3
O29M	Mount Kennedy	55.76	36	P	P	12 23 22.5	-1.4
	baz=281						
HYT	Haines Junctio	56.17	36	P	P	12 23 27.7	+0.8
HYT	Haines Junctio	56.17	36	P	P	12 23 23.2	-3.8
	baz=282						
N30M	Aishikik Lake	56.24	35	P	P	12 23 24.6	-2.7
	baz=282						
P29M	Windy Craggy	56.30	37	IAmb	IAmb	12 24 06.1	
	comp=Z,26nm,1.1s						
P29M	Windy Craggy	56.30	37	P	P	12 23 26.0	-1.8
	baz=282						
MAYO	Mayo, Yukon	56.37	32	P	P	12 23 28.9	+0.8
	baz=281						
INK	Inuvik	56.46	26	P	P	12 23 29.9	+1.2
	comp=Z,9.9nm,0.8s,baz=301,slow=5.7,SNR=22						
INK				LR	LR	12 52 26.6	
	comp=Z,920nm,18.1s,baz=266,slow=41						
	comp=Z,9.9nm,0.8s						
INK	Inuvik	56.46	26	P	P	12 23 29.8	+1.2
INK				IAmb	IAmb	12 23 45.2	
	comp=Z,21nm,1.1s						
INK	Inuvik	56.46	26	P	P	12 23 29.8	+1.2
INK				pmax	pmax		
	comp=Z,21nm,1.2s						
INK	Inuvik	56.46	26	P	P	12 23 26.6	-2.1
	baz=280,SNR=7.8						
F31M	Tsiigehtchic	56.53	27	P	P	12 23 28.0	-1.1
	baz=280,SNR=6.8						
P30M	Million Dollar	56.58	36	P	P	12 23 31.3	+1.6
	baz=282						
N31M	Braeburn, Yuko	56.85	35	P	P	12 23 32.3	+0.7
N31M				IAmb	IAmb	12 23 46.5	
	comp=Z,20nm,0.9s						
N31M	Braeburn, Yuko	56.85	35	P	P	12 23 33.8	+2.2
	baz=282						
O30N	Mendenhall	56.86	36	P	P	12 23 31.8	+0.1
	baz=283						
SVE	Sverdlovsk	56.92	320	*de*P	P	12 23 32.8	+0.7
SVE				*e*S	S	12 31 26.9	+2.1
SVE				pmax	pmax		
	comp=Z,76nm,1.1s						
SVE				MLR	MLR		
	comp=Z,3μm,15.0s						
PLBC	Pleasant Camp	57.02	37	P	P	12 23 35.0	+2.2
	baz=283						
M31M	Drury Creek, Y	57.34	34	P	P	12 23 34.7	-0.3
M31M				IAmb	IAmb	12 23 49.3	
	comp=Z,25nm,1.3s						
M31M	Drury Creek, Y	57.34	34	P	P	12 23 35.6	+0.6
	baz=283						
WHY	Whitehorse	57.47	35	IAmb	IAmb	12 23 50.7	
	comp=Z,14nm,0.9s						
WHY	Whitehorse	57.47	35	P	P	12 23 35.6	-0.5
	baz=284						
SKAG	Skagway	57.54	37	P	P	12 23 33.8	-2.6
	baz=284						
FARO	Faro, Yukon	57.80	33	P	P	12 23 37.5	-0.8
	baz=284						
ARU	Arti	58.13	320	P	P	12 23 40.2	-0.5
	comp=Z,60nm,1.0s,baz=95,slow=4.7,SNR=50						
ARU				LR	LR	12 51 37.9	
	comp=Z,2μm,18.4s,baz=70,slow=39						
	comp=Z,60nm,1.0s						
ARU	Arti	58.13	320	P	P	12 23 39.9	-0.7
ARU	Arti	58.13	320	*c i* P	P	12 23 40.8	+0.2
ARU				S	S	12 31 45.2	+4.5
ARU				SS	SS	12 35 31.7	0.0
ARU				pmax	pmax		
	comp=Z,99nm,1.2s						
ARU				MLR	MLR		
	comp=Z,2μm,16.0s						
HYBB	Hyderabad (bro	58.19	270	*e*P	P	12 23 41.5	-0.1
HYBB				*es*P	pwP	12 23 50.7	-1.4
HYBB				*e*PcP	PcP	12 24 33.1	+0.1
HYBB				*e*S	S	12 31 42.1	-0.4
N32M	Quiet Lake	58.20	35	P	P	12 23 40.9	-0.2
	baz=285						
KBL	Kabul	58.29	292	P	P	12 23 41.4	-1.0
KBL				IAmb	IAmb	12 23 47.8	
	comp=Z,48nm,1.5s						
KBL	Kabul	58.29	292	P	P	12 23 41.4	-1.0
KBL				pmax	pmax		
	comp=Z,48nm,1.5s						
KBL	Kabul	58.29	292	P	P	12 23 43.1	+0.7
	SNR=15						
KBL				P	P	12 23 43.1	+0.7
	SNR=15						
P32M	Atlin	58.30	37	P	P	12 23 40.7	-1.1
	baz=285						
RK1H	Rockhampton Ha	58.40	170	P	P	12 23 43.4	+0.6
A36M	Sachs Harbour	58.42	21	IAmb	IAmb	12 24 04.4	
	comp=Z,27nm,0.9s						
A36M	Sachs Harbour	58.42	21	P	P	12 23 39.8	-2.6
	baz=285						
AS01	Alice Springs	58.48	188	P	P	12 23 43.9	+0.5
ASAR	Alice Springs	58.48	188	P	P	12 23 42.8	-0.6
	comp=Z,22nm,1.0s,baz=10,slow=5.3,SNR=49						
ASAR				LR	LR	12 46 15.2	
	comp=Z,594nm,21.9s,baz=3.5,slow=33						
	comp=Z,22nm,1.0s						
P33M	Teslin, Yukon	58.57	36	IAmb	IAmb	12 23 58.4	
	comp=Z,33nm,1.2s						
P33M	Teslin, Yukon	58.57	36	P	P	12 23 41.4	-2.3
	baz=286						
MMPY	Sheldon Lake,	58.64	33	P	P	12 23 42.4	-1.8
	baz=286						
KOUNC	Koumac, New Ca	59.08	155	P	P	12 23 49.5	+1.9
Q32M	Nakina River	59.19	37	P	P	12 23 46.2	-2.0
	baz=287						
MBWA	Marble Bar	59.26	204	P	P	12 23 48.8	0.0
MBWA				IAmb	IAmb	12 23 57.4	
	comp=Z,29nm,1.1s						
MBWA	Marble Bar	59.26	204	P	P	12 23 48.3	-0.5
AB31	Akbulak array	59.47	311	*i* P	P	12 23 50.0	-0.1
ABKAR	Akbulak array	59.47	311	P	P	12 23 49.7	-0.4
C36M	Paulatuk	59.54	24	IAmb	IAmb	12 24 00.8	
	comp=Z,18nm,0.7s						
C36M	Paulatuk	59.54	24	P	P	12 23 48.1	-2.1
	baz=288						
PSA00	Pilbara Seismi	59.60	203	P	P	12 23 50.6	-0.6
PSA00	Pilbara Seismi	59.60	203	P	P	12 23 52.2	+1.0
R33M	Jennings River	59.70	36	P	P	12 23 49.3	-2.4
	baz=288						
WRAK	Wrangell Islan	59.91	40	P	P	12 23 50.3	-2.7
	baz=288						
S34M	Telegraph Cree	60.08	38	P	P	12 23 53.3	-0.8
	baz=288						
AKTO	Aktyubinsk	60.26	313	P	P	12 23 55.3	-0.2
	comp=Z,15nm,0.9s,baz=76,slow=4.7,SNR=22						
AKTO				LR	LR	12 52 31.4	
	comp=Z,1μm,18.3s,baz=73,slow=39						
	comp=Z,15nm,0.9s						
TGTN	Hyland Airport	60.31	33	P	P	12 23 54.8	-0.9
	baz=288						
EIDS	Eidsvold	60.44	170	P	P	12 23 56.9	+0.1
EIDS	Eidsvold	60.44	170	P	P	12 23 57.9	+1.1
DLBC	Dease Lake	60.46	37	P	P	12 23 57.5	+0.6
DLBC				IAmb	IAmb	12 24 20.9	
	comp=Z,31nm,1.3s						
DLBC	Dease Lake	60.46	37	P	P	12 23 56.4	-0.5
	baz=289						
WRKA	Warakurna	60.70	194	P	P	12 23 58.4	-0.3
T35M	Bob Quinn	60.83	39	P	P	12 23 58.4	-0.9
	baz=290						
QLP	Quilpie	61.00	177	P	P	12 24 00.8	+0.1
NOUC	Port Laguerre	61.23	154	P	P	12 24 04.3	+2.0
RMQ	Roma	61.24	173	P	P	12 24 03.7	+1.4
DZM	Mont Dzumac	61.25	153	*e*P	P	12 24 04.5	+1.9
	comp=Z,87nm,1.2s						
DZM				*e*S	S	12 32 21.8	0.0
	comp=Z,172nm,23.6s						
DZM				*e*LR	LR	12 42 14.4	
	comp=Z,2μm,23.2s						
DZM	Mont Dzumac	61.25	153	LR	LR	12 49 06.4	
	comp=Z,1μm,19.9s,baz=360,slow=35						
DZM	Mont Dzumac	61.25	153	P	P	12 24 02.3	-0.2
DZM	Mont Dzumac	61.25	153	P	P	12 24 04.8	+2.2
WRGLY	Wrigley	61.84	31	P	P	12 24 05.6	-0.3
	baz=292						
PALK	Pallekele	61.91	259	P	P	12 24 07.9	+0.7
PALK	Pallekele	61.91	259	P	P	12 24 07.9	+0.7
PALK				pmax	pmax		
	comp=Z,43nm,1.1s						
PALK	Pallekele	61.91	259	P	P	12 24 08.2	+1.0
PALK				P	P	12 24 08.2	+1.0
INKA	Innaminka	62.10	181	P	P	12 24 07.7	-0.4
KIRV	Kirov	62.13	324	P	P	12 24 08.1	+0.1
	comp=Z,35nm,0.9s,baz=46,slow=1.5,SNR=20						
KIRV				LR	LR	12 53 45.4	
	comp=Z,2μm,18.3s,baz=61,slow=39						
	comp=Z,35nm,0.9s						
KIRV	Kirov	62.13	324	*c i* P	P	12 24 08.5	+0.6
OOD	Oodnadatta	62.39	186	P	P	12 24 10.2	+0.2
EUNU	Eureka	62.49	8	P	P	12 24 10.7	+0.5
EUNU				IAmb	IAmb	12 24 13.1	
	comp=Z,22nm,1.1s						
MSVF	Nonsavu	62.69	140	LR	LR	12 51 13.6	
	comp=Z,210nm,18.7s,baz=326,slow=36						
MSVF	Nonsavu	62.69	140	P	P	12 24 13.7	+1.4
MSVF				IAmb	IAmb	12 24 17.2	
	comp=Z,24nm,1.1s						
MSVF	Nonsavu	62.69	140	P	P	12 24 13.7	+1.4
MSVF				pmax	pmax		
	comp=Z,24nm,1.2s						
MSVF	Nonsavu	62.69	140	P	P	12 24 14.2	+1.9
PRGR	Permogore	62.74	328	*e*P	P	12 24 11.8	-0.2
PRGR				*e*		12 24 46.6	
PRGR				*e*		12 26 30.7	
PRGR				pmax	pmax		
	comp=Z,41nm,1.3s						
SPITS	Spitsbergen Ar	62.81	349	LR	LR	12 56 01.1	
	comp=Z,2μm,18.2s,baz=8.0,slow=40						
NOR	Nord	63.38	356	*e*P	P	12 24 16.5	+0.5
NOR				IAmb	IAmb	12 24 37.1	
	comp=Z,274nm,3.0s						
HRA	Herat	63.49	295	P	P	12 24 16.9	-0.9
HRA				IAmb	IAmb	12 24 36.4	
	comp=Z,13nm,0.9s						
PCHI	Peechi	63.63	265	*e*P	P	12 24 19.3	+0.7
MEEK	Meekatharra	64.72	203	P	P	12 24 25.3	-0.2
APA	Apatity	64.82	336	‖ *i* P	P	12 24 25.8	+0.1
APA				pmax	pmax		
	comp=Z,25nm,0.9s						
APA				MLR	MLR		
	comp=Z,4μm,16.0s						
RES	Resolute Bay	64.86	14	LR	LR	12 55 51.2	
	comp=Z,846nm,19.3s,baz=337,slow=39						
RES	Resolute Bay	64.86	14	P	P	12 24 26.4	+0.7
RES	Resolute Bay	64.86	14	P	P	12 24 26.4	+0.7
RES				pmax	pmax		
	comp=Z,33nm,1.2s						
LCRK	Leigh Creek	64.87	183	P	P	12 24 26.8	+0.5
GEYT	Alibeck	65.00	300	P	P	12 24 28.1	+0.7
	comp=Z,15nm,1.0s,baz=64,slow=3.4,SNR=17						
GEYT				LR	LR	12 54 46.8	
	comp=Z,2μm,18.6s,baz=84,slow=38						
	comp=Z,15nm,1.0s						
GEYT	Alibeck	65.00	300	IAmb	IAmb	12 24 29.4	
	comp=Z,17nm,0.9s						
GYA0B	ALIBECK ARRAY	65.00	300	P	P	12 24 27.4	+0.1
GYA0B				IAmb	IAmb	12 24 29.4	
	comp=Z,17nm,1.1s						
MULG	Mulgathing	65.00	187	P	P	12 24 27.3	+0.1
ARMA	Armidale	65.48	170	P	P	12 24 30.9	+0.5
ARMA				IAmb	IAmb	12 24 33.4	
	comp=Z,28nm,1.1s						
ARMA	Armidale	65.48	170	P	P	12 24 31.9	+1.5
BELG	Belogornoye	65.53	318	LR	LR	12 55 59.6	
	comp=Z,2μm,18.4s,baz=81,slow=39						
BELG	Belogornoye	65.53	318	*ce*P	P	12 24 29.9	-0.6
BELG				pmax	pmax		
	comp=Z,15nm,1.2s						
AFI	Afiamalu	65.64	129	LR	LR	12 52 53.6	
	comp=Z,440nm,18.1s,baz=330,slow=36						
KLMR	Klimovskoe	65.74	328	*e*P	P	12 24 30.8	-0.9
KLMR				pmax	pmax		
	comp=Z,52nm,1.4s						
KLMR	Klimovskoe	65.74	328	*e*P	P	12 24 30.9	-0.8
KLMR				AMP		12 24 33.9	
	comp=Z,52nm,1.4s						
KLMR				LQ	LQ	12 46 19.0	
KLMR				LQ	LQ	12 46 19.0	
KLMR				LR	LR	12 47 50.3	
KLMR				AMP		13 02 31.4	
	comp=Z,894nm,12.9s						
YKA	Yellowknife Ar	65.82	30	P	P	12 24 32.2	0.0
	comp=Z,4.3nm,0.9s,baz=292,slow=6.8,SNR=5.2						
	comp=Z,4.3nm,0.9s						
YKA	Yellowknife Ar	65.82	30	P	P	12 24 32.9	+0.7
YKA	Yellowknife Ar	65.82	30	*i* P	P	12 24 33.7	+1.5
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMSA	Cobar Meteorol	66.01	176	P	P	12 24 35.0	+1.4
ARCES	ARCESS Array B	66.19	340	P	P	12 24 35.0	+0.5
	comp=Z,12nm,1.0s,baz=33,slow=12,SNR=7.0						
ARCES				LR	LR	12 57 36.2	
	comp=Z,1μm,18.0s,baz=58,slow=40						
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	66.19	340	P	P	12 24 34.7	+0.2
ARCES	ARCESS Array B	66.19	340	P	P	12 24 34.7	+0.2
ARCES				pmax	pmax		
	comp=Z,134nm,2.0s						
STKA	Stephens Creek	66.22	180	P	P	12 24 35.1	+0.1
	comp=Z,8.9nm,0.9s,baz=347,slow=9.3,SNR=7.6						
STKA				LR	LR	12 55 01.2	
	comp=Z,463nm,19.4s,baz=7.2,slow=37						
	comp=Z,8.9nm,0.9s						
STKA	Stephens Creek	66.22	180	P	P	12 24 35.5	+0.4
STKA	Stephens Creek	66.22	180	P	P	12 24 35.5	+0.4
STKA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
STKA	Stephens Creek	66.22	180	P	P	12 24 35.9	+0.9
FORT	Forrest	66.34	193	P	P	12 24 35.8	0.0
FORT	Forrest	66.34	193	P	P	12 24 35.8	0.0
WAPA	Wapiti River	67.19	38	P	P	12 24 41.2	0.0
MANA	Manning	67.19	36	P	P	12 24 41.2	+0.1
WHYH	Whyalla	67.47	184	P	P	12 24 43.9	+1.0
MORW	Morawa	67.81	204	P	P	12 24 45.6	+0.4
MORW				IAmb	IAmb	12 25 12.5	
	comp=Z,24nm,1.1s						
MORW	Morawa	67.81	204	P	P	12 24 45.4	+0.2
HTT	Hallett	67.81	182	P	P	12 24 47.2	+2.0
NEEM	North Greenlan	67.86	3	*e*P	P	12 24 46.4	+1.1
NEEM				IAmb	IAmb	12 24 53.5	
	comp=Z,41nm,1.1s						
LLLB	Lillooet	67.94	43	P	P	12 24 45.9	0.0
LLLB				IAmb	IAmb	12 25 11.6	
	comp=Z,26nm,1.3s						
DAG	Danmarks Havn	68.10	355	*i* P	P	12 24 47.0	+0.5
DAG				IAmb	IAmb	12 24 48.6	
	comp=Z,25nm,1.1s						
VALR	Valaam	69.07	331	*ce*P	P	12 24 52.6	-0.2
VALR				pmax	pmax		
	comp=Z,53nm,0.9s						
MOS	Moscow	69.14	324	*e*P	P	12 24 51.9	-1.4
MOS				*e*		12 27 35.3	
MOS				pmax	pmax		
	comp=Z,100nm,1.0s						
MOS				pmax	pmax		
	comp=Z,54nm,0.8s						
VRH	Novokhopyorsk	69.33	318	*e*P	P	12 24 53.9	-0.6
VRH				pmax	pmax		
	comp=Z,40nm,1.4s						
VRH				MLR	MLR		
	comp=Z,2μm,15.0s						
KLBR	Kellerberrin	69.60	201	P	P	12 24 56.1	-0.2
MAK	Makhachkala	69.92	309	*e*P	P	12 24 52.4	-5.9
MAK				*e*PPP	PPP	12 29 10.6	
MAK				*e*SSS	SSS	12 41 48.8	
OBN	Obninsk	69.98	324	LR	LR	12 58 13.8	
	comp=Z,382nm,18.1s,baz=62,slow=38						
OBN	Obninsk	69.98	324	*de*P	P	12 24 59.1	+0.6
OBN				*e*		12 25 23.4	
OBN				*e*		12 27 32.6	
OBN				*i* S	SKiKP	12 34 37.6	-6.2
OBN				*i* SS	SS	12 38 38.2	+2.2
OBN				pmax	pmax		
	comp=Z,72nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2μm,17.0s						
LPSR	Galich'ya Gora	70.11	321	*e*P	P	12 24 59.1	-0.2
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,3μm,16.0s						
LTY	Liberty	70.26	46	IAmb	IAmb	12 25 37.3	
	comp=Z,17nm,1.1s						
VORR	Voronezh	70.44	320	*e*P	P	12 25 02.8	+1.4
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
B08A	Colville Reser	70.49	44	IAmb	IAmb	12 25 15.7	
	comp=Z,24nm,1.1s						
H04A	Detroit Lake	70.62	49	P	P	12 25 01.5	-1.2
H04A				IAmb	IAmb	12 25 16.2	
	comp=Z,19nm,1.0s						
HOOD	Mount Hood Mea	70.63	48	P	P	12 25 01.8	-1.1
VSR	Storozhevoye	70.70	319	*e*P	P	12 25 01.8	-1.2
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VSR				MLR	MLR		
	comp=Z,3μm,15.0s						
FIA1	FINESS Array S	70.89	333	P	P	12 25 03.2	-0.7
FINES	FINESS Array B	70.89	333	P	P	12 25 03.9	-0.1
	comp=Z,26nm,1.0s,baz=46,slow=8.2,SNR=21						
FINES				LR	LR	13 00 09.9	
	comp=Z,2μm,18.4s,baz=51,slow=39						
	comp=Z,26nm,1.0s						
FINES	FINESS Array B	70.89	333	P	P	12 25 03.7	-0.2
FINES	FINESS Array B	70.89	333	*i* P	P	12 25 04.8	+0.9
FINES				pmax	pmax		
	comp=Z,25nm,1.0s						
GROC	Groznyy	70.89	310	*e*P	P	12 25 04.9	+0.6
GROC				*e*		12 25 25.5	
GROC				pmax	pmax		
	comp=Z,122nm,1.1s						
NWAO	Narrogin (SRO)	71.00	201	LR	LR	12 54 45.6	
	comp=Z,168nm,22.0s,baz=168,slow=35						
NWAO	Narrogin (SRO)	71.00	201	P	P	12 25 05.0	+0.1
NWAO	Narrogin (SRO)	71.00	201	P	P	12 25 05.0	+0.1
NWAO				pmax	pmax		
	comp=Z,33nm,1.0s						
NWAO	Narrogin (SRO)	71.00	201	P	P	12 25 04.9	+0.1
ZKTA	Zakatala	71.14	308	P	P	12 25 06.7	+0.8
LKRN	Lenkeran, Azer	71.15	304	P	P	12 25 06.7	+0.8
EDM	Edmonton	71.17	38	P	P	12 25 06.3	+0.4
EDM	Edmonton	71.17	38	P	P	12 25 06.3	+0.4
EDM				pmax	pmax		
	comp=Z,28nm,0.9s						
MNGR	Mingechevir, A	71.27	307	P	P	12 25 07.4	+0.8
C09A	Chrisman Ranch	71.38	44	IAmb	IAmb	12 25 21.1	
	comp=Z,19nm,0.9s						
D08A	Wollman Farm,	71.39	45	IAmb	IAmb	12 25 21.2	
	comp=Z,16nm,1.1s						
WSAR	Wadi Sarin	71.50	286	P	P	12 25 09.7	+1.3
WBK	Wadi Bani Khal	71.55	285	P	P	12 25 10.1	+1.5
WBK				P	P	12 25 10.1	+1.5
BIDO	Bidbid	71.76	286	P	P	12 25 11.6	+1.7
	SNR=6.2						
BIDO				P	P	12 25 11.6	+1.7
	SNR=6.2						
YBH	Yreka Blue Hor	71.77	52	P	P	12 25 09.1	-0.7
YBH	Yreka Blue Hor	71.77	52	P	P	12 25 09.1	-0.7
YBH				pmax	pmax		
	comp=Z,12nm,1.2s						
NEW	Newport	71.80	44	P	P	12 25 09.4	-0.4
NEW				IAmb	IAmb	12 25 23.6	
	comp=Z,17nm,0.9s						
NEW	Newport	71.80	44	P	P	12 25 09.4	-0.4
NEW	Newport	71.80	44	P	P	12 25 05.9	-3.9
	baz=302						
GANJ	Ganja	71.83	307	P	P	12 25 10.8	+0.7
PINE	Pine Mountain	71.84	49	P	P	12 25 10.9	+0.6
PINE				IAmb	IAmb	12 25 24.0	
	comp=Z,27nm,0.9s						
BRAT	Ballarat	71.92	178	P	P	12 25 12.5	+2.3
SHME	Shamm	72.04	290	P	P	12 25 12.5	+1.0
SHME				P	P	12 25 12.5	+1.0
SHME	Shamm	72.04	290	*i* P	P	12 25 12.8	+1.3
	SNR=6.7						
SMDO	Samad	72.05	286	P	P	12 25 13.3	+1.5
SMDO				P	P	12 25 13.3	+1.5
E09A	Wood Farm, Sta	72.13	46	IAmb	IAmb	12 25 25.9	
	comp=Z,27nm,1.3s						
MEF	Metsahovi	72.30	332	*e*P	P	12 25 14.2	+1.8
MASF	Masafi	72.37	289	P	P	12 25 14.7	+1.1
MASF				P	P	12 25 14.7	+1.1
HOQ	Hoqain	72.37	287	P	P	12 25 14.9	+1.4
	SNR=5.6						
HOQ				P	P	12 25 14.9	+1.4
	SNR=5.6						
K05A	Summer Lake	72.42	50	P	P	12 25 14.9	+1.1
K05A				IAmb	IAmb	12 25 28.6	
	comp=Z,43nm,1.3s						
KBZ	Khabaz	72.44	311	P	P	12 25 14.4	+0.9
	comp=Z,37nm,0.9s,baz=

SNR=9.7
VSU Vasula 72.48 330 *d i* P **P 12 25 14.7 +1.2**
VSU pmax pmax
comp=Z,116nm,1.1s
UOSS Minazif 72.55 289 P **P 12 25 14.0 -0.6**
UOSS IAmb IAmb 12 25 16.6
comp=Z,14nm,0.9s
UOSS Minazif 72.55 289 P **P 12 25 15.7 +1.1**
UOSS P **P 12 25 15.7 +1.1**
I07A Izee 72.58 48 P **P 12 25 14.6 0.0**
HATD Hatta, Dubai 72.67 288 P **P 12 25 16.6 +1.3**
HATD P **P 12 25 16.6 +1.3**
HATD Hatta, Dubai 72.67 288 *i* P **P 12 25 17.0 +1.7**
SNR=6.6
ONI Oni 72.69 310 P **P 12 25 14.6 -0.6**
ONI IAmb IAmb 12 25 18.5
comp=Z,36nm,1.2s
ONI Oni 72.69 310 P **P 12 25 14.6 -0.6**
ONI pmax pmax
comp=Z,36nm,1.2s
SOHO SOHO 72.70 288 P **P 12 25 16.6 +1.1**
SOHO P **P 12 25 16.6 +1.1**
SOHO SOHO 72.70 288 *i* P **P 12 25 17.0 +1.5**
SNR=8.9
RAF Rauma 72.76 334 *e*P **P 12 25 16.9 +1.7**
ASHO Ashiyiah 72.80 288 P **P 12 25 17.0 +0.9**
ASHO P **P 12 25 17.0 +0.9**
NEY Neytrino 72.80 311⇓*e*P **P 12 25 18.1 +2.1**
NEY pmax pmax
comp=Z,6.0nm,1.1s
BSY Bisya 72.89 286 P **P 12 25 19.0 +2.3**
SNR=7.4
BSY P **P 12 25 19.0 +2.3**
SNR=7.4
NAZ Nazwa, Dubai 72.95 289 P **P 12 25 17.9 +0.9**
SUMG Summit 73.02 360 IAmb IAmb 12 25 28.7
comp=Z,30nm,1.1s
SUMG Summit 73.02 360 *e*P **P 12 25 19.3 +2.3**
SUMG IAmb IAmb 12 25 26.6
comp=Z,35nm,1.0s
ARQ Araqi 73.12 287 P **P 12 25 19.0 +1.0**
ARQ P **P 12 25 19.0 +1.0**
GNI Garni 73.12 307 LR LR 13 00 22.1
comp=Z,2µm,19.5s,baz=60,slow=38
GNI Garni 73.12 307 *c i* P **P 12 25 18.1 +0.2**
GNI Garni 73.12 307 *c i* P **P 12 25 19.8 +1.8**
GNI pmax pmax
comp=Z,58nm,1.7s
GNI Garni 73.12 307 P **P 12 25 20.3 +2.3**
GNI P **P 12 25 20.3 +2.3**
WALA Waterton Lakes 73.16 42 IAmb IAmb 12 25 31.9
comp=Z,20nm,1.1s
MHTO MHTO 73.18 284 P **P 12 25 19.4 +1.0**
SNR=6.1
MHTO P **P 12 25 19.4 +1.0**
SNR=6.1
MOD Modoc Plateau 73.22 50 P **P 12 25 18.4 -0.1**
ALNE Al Ain 73.36 288 P **P 12 25 20.6 +1.2**
SNR=5.5
ALNE P **P 12 25 20.6 +1.2**
SNR=5.5
ALNE Al Ain 73.36 288 P **P 12 25 19.7 +0.3**
ASUD Al Ashush, Dub 73.40 289 P **P 12 25 21.1 +1.5**
ASUD Al Ashush, Dub 73.40 289 P **P 12 25 20.5 +0.9**
BMO Blue Mountains 73.51 47 P **P 12 25 21.2 +1.1**
BMO Blue Mountains 73.51 47 P **P 12 25 21.2 +1.1**
BMO pmax pmax
comp=Z,15nm,1.2s
J08A Circle Bar Ran 73.60 48 IAmb IAmb 12 25 43.1
comp=Z,23nm,1.3s
ORV Oroville 73.68 53 P **P 12 25 21.1 +0.1**
ORV Oroville 73.68 53 P **P 12 25 21.1 +0.1**
ORV pmax pmax
comp=Z,9.0nm,0.9s
JTMT Jette 73.68 43 IAmb IAmb 12 25 33.9
comp=Z,19nm,0.9s
DQM DQM 74.07 283 P **P 12 25 25.1 +1.5**
BEKR Beckworth 74.26 52 P **P 12 25 24.8 +0.1**
RAO Raoul Island 74.29 144 LR LR 12 59 15.4
comp=Z,279nm,18.2s,baz=328,slow=37
AFDM Forest Hills D 74.34 53 P **P 12 25 25.3 +0.3**
MSO Missoula 74.39 44 P **P 12 25 25.5 +0.3**
MSO IAmb IAmb 12 25 38.7
comp=Z,23nm,1.4s
MSO Missoula 74.39 44 P **P 12 25 23.1 -2.1**
baz=304
MNK Minsk 74.44 326 *i* P **P 12 25 24.1 -1.0**
MNK *i* 12 28 10.7
MNK *i* PPP PPP 12 29 56.1
MNK *i* S **S 12 34 59.4 +0.7**
MNK *i* SS **SS 12 39 45.4 +1.2**
MNK *i* SSS SSS 12 43 07.6
MNK pmax pmax
comp=N,58nm,1.1s
MNK pmax pmax
comp=Z,49nm,1.1s
MNK pmax pmax
comp=E,8.0nm,1.1s
MNK MLR MLR
comp=E,230nm,15.0s
MNK MLR MLR
comp=Z,2µm,19.0s
MNK Minsk 74.44 326 *i* P **P 12 25 24.2 -1.0**
comp=E,8.0nm,1.1s
MNK *i* P **P 12 25 24.2 -1.0**
comp=N,58nm,1.1s
MNK *i* P **P 12 25 24.2 -1.0**
comp=Z,49nm,1.1s,baz=52
MNK *i* PP **PP 12 28 10.7 -0.3**
MNK *i* PPP PPP 12 29 56.1
MNK *i* S **S 12 34 59.5 +0.7**
MNK *i* SS **SS 12 39 45.4 +1.2**
MNK *i* SSS SSS 12 43 07.6
MNK *i* LQ LQ 12 53 09.2
MNK *i* LR LR 12 57 56.0
MNK *i* LRM MLR 13 01 51.1
comp=E,230nm,15.3s
MNK *i* LRM MLR 13 02 03.8
comp=Z,2µm,19.2s
SOC Sochi 74.47 312 *e*P **P 12 25 25.1 -0.5**
SOC *e* 12 28 15.8
SOC *e*PPP PPP 12 29 58.1
SOC *e*S **S 12 35 00.9 +1.4**
SOC *e*SS **SS 12 39 47.7 +2.3**
SOC pmax pmax
comp=Z,6.0nm,0.5s
SOC MLR MLR
comp=Z,2µm,17.0s
ISAL Salakas 74.55 328 *e*P **P 12 25 27.3 +1.5**
IIGN Ignalina 74.65 328 *e*P **P 12 25 27.8 +1.4**
NACGM Naroch 74.69 327⇓*e*P **P 12 25 27.8 +1.2**
baz=51
MPK Martis Peak 74.78 53 P **P 12 25 27.2 -0.6**
MPK IAmb IAmb 12 25 50.9
comp=Z,27nm,1.1s
PAHR Pah Rah Range 74.98 52 P **P 12 25 28.9 +0.1**
VCNR Virginia City 75.03 53 P **P 12 25 29.0 -0.2**
JRN Qarnain Island 75.16 290 P **P 12 25 29.9 +0.1**
ANN Anapa 75.17 314 *e*P **P 12 25 29.4 -0.1**
ANN *e**PP **pP 12 25 31.4 -3.1**
ANN *e*PPP PPP 12 30 01.8
ANN *e*S **S 12 35 10.4 +3.2**
ANN pmax pmax
comp=Z,23nm,0.8s
PNTR Pine Nut 75.17 53 P **P 12 25 31.2 +1.1**
MFID Camas Ranch 75.19 47 P **P 12 25 30.1 +0.2**
GEVA Gevas 75.20 306 IAmb IAmb 12 25 33.3
comp=Z,35nm,1.4s
CMB Columbia Colle 75.22 54 P **P 12 25 29.8 -0.3**
CMB IAmb IAmb 12 25 42.6
comp=Z,14nm,0.9s
CMB Columbia Colle 75.22 54 P **P 12 25 29.8 -0.3**
CMB pmax pmax
comp=Z,14nm,1.0s
YERR Yerington 75.46 53 IAmb IAmb 12 25 43.7
comp=Z,23nm,1.1s
PABE Paberze 75.53 329 *e*P **P 12 25 32.9 +1.4**
WAKR Walker 75.59 53 P **P 12 25 32.5 +0.1**
WAKR IAmb IAmb 12 25 45.2
comp=Z,30nm,1.6s
FFC Flin Flon 75.66 32 P **P 12 25 32.3 0.0**
FFC IAmb IAmb 12 25 44.3
comp=Z,16nm,0.8s
FFC Flin Flon 75.66 32 P **P 12 25 32.3 0.0**
FFC pmax pmax
comp=Z,16nm,0.9s
GURO Guroymak-BITLI 75.75 307 IAmb IAmb 12 25 36.7
comp=Z,32nm,1.2s
KOPT Kop Dagi 75.94 309 IAmb IAmb 12 25 38.2
comp=Z,39nm,1.4s
HLID Hailey 75.95 47 P **P 12 25 33.1 -1.3**
HLID Hailey 75.95 47 P **P 12 25 33.1 -1.3**
baz=305
BMN Battle Mountai 75.97 50 P **P 12 25 32.8 -1.7**
BMN IAmb IAmb 12 25 47.5
comp=Z,13nm,0.8s
BMN Battle Mountai 75.97 50 P **P 12 25 32.8 -1.7**
BMN pmax pmax
comp=Z,13nm,0.8s
EGMT Eagleton 76.02 41 P **P 12 25 33.2 -1.3**
EGMT IAmb IAmb 12 25 48.9
comp=Z,33nm,1.1s
EGMT Eagleton 76.02 41 P **P 12 25 35.5 +1.0**
baz=307
BCYI Bear Canyon 76.13 46 P **P 12 25 35.4 0.0**
NC405 NORSAR Array S 76.13 337 P **P 12 25 34.8 0.0**
NC303 NORSAR Array S 76.16 338 P **P 12 25 35.8 +0.8**
AKASG Malin Array Be 76.16 323 P **P 12 25 34.6 -0.5**
comp=Z,9.2nm,0.7s,baz=47,slow=6.1,SNR=46
AKASG LR LR 13 02 52.2
comp=Z,2µm,18.2s,baz=54,slow=39
comp=Z,9.2nm,0.7s
AKASG Malin Array Be 76.16 323 P **P 12 25 34.7 -0.5**
AKASG Malin Array Be 76.16 323 P **P 12 25 34.7 -0.5**
AKASG pmax pmax
comp=Z,13nm,1.2s
AKBB Malin Array Si 76.16 323 P **P 12 25 33.6 -1.5**
AKBB IAmb IAmb 12 25 36.4
comp=Z,21nm,0.9s
AKBB Malin Array Si 76.16 323⇑*i* P **P 12 25 35.2 +0.1**
AKBB pmax pmax
comp=Z,25nm,1.0s
KVN Kaiserville 76.17 52 IAmb IAmb 12 25 48.4
comp=Z,18nm,0.9s
HFS Hagfors 76.22 336 LR LR 13 02 56.2
comp=Z,2µm,18.2s,baz=46,slow=39
NC204 NORSAR Array S 76.31 338 P **P 12 25 35.5 -0.3**
MDPB Devils Postpil 76.31 54 P **P 12 25 35.2 -1.4**
NB2 NORSAR Subarra 76.34 338 P **P 12 25 36.1 0.0**
comp=Z,37nm,1.4s,baz=39,slow=5.9
NB2 NORSAR Subarra 76.34 338 P **P 12 25 36.1 0.0**
baz=39,slow=5.9
NOA NORSAR Array B 76.34 338 P **P 12 25 36.5 +0.4**
comp=Z,9.6nm,1.0s,baz=39,slow=5.8,SNR=15
NOA LR LR 13 03 08.8
comp=Z,2µm,18.8s,baz=30,slow=39
comp=Z,9.6nm,1.0s
LHV Little Huntoon 76.35 53 P **P 12 25 36.8 +0.3**
LHV IAmb IAmb 12 25 49.8
comp=Z,19nm,0.9s
OMMB Old Mammoth Mi 76.37 54 P **P 12 25 35.8 -1.2**
NVAR Mina Array Bea 76.38 53 P **P 12 25 38.2 +1.2**
comp=Z,9.8nm,1.0s,baz=287,slow=4.9,SNR=37
NVAR LR LR 12 57 15.9
comp=Z,333nm,18.3s,baz=294,slow=34
comp=Z,9.8nm,1.0s
NVAR Mina Array Bea 76.38 53 P **P 12 25 37.4 +0.4**
BOZ Bozeman (W) 76.41 44 P **P 12 25 35.2 -1.7**
baz=306
NV11 Mina Array Sit 76.48 53 P **P 12 25 36.8 -0.6**
NV11 IAmb IAmb 12 26 06.4
comp=Z,26nm,1.5s
SIM Simferopol' 77.01 316 *e*P **P 12 25 39.2 -0.9**
SIM *e* 12 28 36.5
SIM *e*S **S 12 35 27.7 +0.2**
SIM *e*SS **SS 12 40 25.7 +2.1**
SIM pmax pmax
comp=Z,25nm,1.1s
SIM pmax pmax
comp=Z,64nm,18.6s
SIM smax smax
comp=N,111nm,14.7s
SIM MLR MLR
comp=Z,481nm,16.7s
ELK Elko 77.05 49 P **P 12 25 40.9 +0.2**
ELK Elko 77.05 49 P **P 12 25 40.9 +0.2**
ELK pmax pmax
comp=Z,10.0nm,0.9s
YHL Hebgen Lake 77.10 44 P **P 12 25 41.3 +0.3**
VES Vestal, Richgr 77.29 55 P **P 12 25 42.3 +0.5**
baz=304
PKM Mcpherson Peak 77.31 56 P **P 12 25 44.1 +1.8**
baz=304
DMTO DMTO 77.32 283 P **P 12 25 42.9 +0.7**
DOK Doka 77.49 284 P **P 12 25 43.7 +0.5**
DOK P **P 12 25 43.7 +0.5**
CWC Cottonwood Cre 77.63 54 P **P 12 25 43.3 -0.7**
baz=304
GMN Gold Mountain 77.69 53 P **P 12 25 43.7 -0.7**
H17A Grant Village 77.72 44 P **P 12 25 46.1 +1.6**
baz=307
ISA Isabella, Lake 77.80 55 P **P 12 25 43.8 -1.0**
baz=304
IMW Indian Meadow 77.81 45 P **P 12 25 44.7 -0.3**
ARVC Arvin 77.86 56 P **P 12 25 44.1 -0.9**
baz=304
FXWY Fox Creek 77.91 45 IAmb IAmb 12 26 11.2
comp=Z,37nm,1.8s
MOOW Moose Ponds 78.01 45 P **P 12 25 45.4 -0.6**
MOOW IAmb IAmb 12 26 13.0
comp=Z,33nm,1.8s
RLMT Red Lodge 78.03 43 P **P 12 25 47.5 +1.4**
baz=308
RBK Rabkut 78.03 283 P **P 12 25 46.9 +0.6**
TPAW Teton Pass 78.05 45 P **P 12 25 46.8 +0.6**
WHFO Wadi Hawf 78.16 284 P **P 12 25 46.9 0.0**
WHFO P **P 12 25 46.9 0.0**
R11A Troy Canyon, C 78.19 52 P **P 12 25 46.8 -0.3**
baz=305
SFJD Kangerlussuaq 78.21 5 LR LR 13 04 47.0
comp=Z,775nm,18.4s,baz=352,slow=39
MPMC Manual Prospec 78.24 54 P **P 12 25 46.7 -0.7**
baz=304
DIKM Dikmen 78.28 313⇑P **P 12 25 48.6 +1.4**
BGU Big Grassy Mou 78.31 48 P **P 12 25 47.1 -0.5**
WCT Wildcat Mounta 78.40 53 P **P 12 25 48.0 -0.1**
FURC Furnace Creek, 78.43 54 P **P 12 25 48.1 0.0**
baz=305
LRMC Laurel Mtn Rad 78.44 55 P **P 12 25 49.7 +1.3**
baz=304
S11A Rachel 78.49 52 P **P 12 25 48.5 -0.2**
S11A IAmb IAmb 12 26 22.3
comp=Z,26nm,1.2s
TPNV Topopah Spring 78.56 53 P **P 12 25 50.2 +1.1**
TPNV Topopah Spring 78.56 53 P **P 12 25 50.2 +1.1**
TPNV pmax pmax
comp=Z,12nm,1.0s
TPNV Topopah Spring 78.56 53 P **P 12 25 51.2 +2.1**
baz=305
EDW2 Edwards Air Fo 78.56 56 P **P 12 25 50.7 +1.7**
baz=304
DGMT Dagmar 78.66 38 P **P 12 25 49.5 +0.3**
baz=310
GWY Greenwater Val 78.72 54 P **P 12 25 51.0 +1.0**
GWY IAmb IAmb 12 26 10.6
comp=Z,20nm,1.2s
RAR Rarotonga 78.78 126 LR LR 12 57 44.3
comp=Z,411nm,19.0s,baz=302,slow=34
HWUT Hardware Ranch 78.80 47 P **P 12 25 51.7 +1.3**
HWUT IAmb IAmb 12 26 15.2
comp=Z,20nm,1.1s
DUG Dugway, Tooele 78.88 49 P **P 12 25 51.3 +0.5**
DUG IAmb IAmb 12 26 05.4
comp=Z,14nm,0.8s
DUG Dugway, Tooele 78.88 49 P **P 12 25 51.3 +0.5**
DUG pmax pmax
comp=Z,14nm,0.8s
DUG Dugway, Tooele 78.88 49 P **P 12 25 50.5 -0.2**
baz=306
FRB Frobisher Bay 79.04 13 LR LR 13 04 21.0
comp=Z,819nm,19.4s,baz=346,slow=38
PRN Pahroc Range 79.08 52 P **P 12 25 52.0 +0.1**
PRN IAmb IAmb 12 26 04.1
comp=Z,16nm,1.0s
GSC Goldstone, Bar 79.13 55 P **P 12 25 52.5 +0.4**
baz=305
SHOC Shoshone, Teco 79.14 54 P **P 12 25 51.1 -1.0**
baz=305
BFSC Mount Baldy Ra 79.15 56 P **P 12 25 51.2 -1.1**
baz=305
TCUT Toone Canyon 79.19 47 P **P 12 25 51.5 -1.1**
TCUT IAmb IAmb 12 26 07.2
comp=Z,16nm,0.9s
LVV L'vov 79.28 324 *e*P **P 12 25 53.8 +1.3**
LVV MLR MLR
comp=N,2µm,18.0s
LVV MLR MLR
comp=E,2µm,18.0s
LVV MLR MLR
comp=Z,2µm,18.0s
BW06 Boulder Array 79.30 45 P **P 12 25 54.2 +1.1**
baz=308
PD31 Pinedale Array 79.30 45 P **P 12 25 51.4 -1.7**
PDAR Pinedale Array 79.30 45 P **P 12 25 54.2 +1.1**
comp=Z,1.4nm,0.5s,baz=296,slow=0.6,SNR=15
comp=Z,1.4nm,0.5s
PDAR Pinedale Array 79.30 45 P **P 12 25 52.1 -1.0**
JLU Jordanelle 79.47 48 P **P 12 25 53.3 -0.8**
JLU IAmb IAmb 12 26 12.9
comp=Z,38nm,1.6s
SHPR Sheep Range 79.53 53 P **P 12 25 53.6 -0.9**
TUQ Turquoise Moun 79.64 54 P **P 12 25 55.8 +0.8**
baz=305,SNR=6.7
HEC Hector,Ludlow 79.71 55 P **P 12 25 57.6 +2.2**
baz=305,SNR=5.5
URZ Urewera 79.78 152 LR LR 12 56 46.3
comp=Z,491nm,22.0s,baz=55,slow=32
MURC Murrieta 79.83 56 P **P 12 25 57.1 +1.1**
baz=305
BORG Borgarnes 79.96 353 LR LR 13 03 48.5
comp=Z,400nm,19.3s,baz=6.1,slow=38
TCRU Three Creeks R 80.04 50 P **P 12 25 55.9 -1.3**
CCUT Cedar City 80.09 51 P **P 12 25 56.8 -0.7**
CCUT IAmb IAmb 12 26 16.4
comp=Z,16nm,1.1s
TESR Tescani 80.14 320⇑P **P 12 25 57.8 +0.4**
BUR08 Bucovina Ar. S 80.14 322 P **P 12 25 56.8 -0.7**
BIZ Bicaz 80.14 321⇑P **P 12 25 58.6 +1.3**
BURAR Bucovina Array 80.15 322⇓P **P 12 25 58.5 +1.0**
BURAR Bucovina Array 80.15 322 P **P 12 25 57.9 +0.4**
BURAR Bucovina Array 80.15 322⇓P **P 12 25 58.5 +1.0**
V12A Nelson 80.19 53 P **P 12 25 57.6 -0.3**
V12A IAmb IAmb 12 26 18.8
comp=Z,21nm,1.3s
GMRC Granite Mounta 80.19 55 P **P 12 25 55.9 -2.1**
baz=306
MVU Marysvale 80.25 50 P **P 12 25 58.5 +0.1**
TPGR Topolog 80.26 318⇑P **P 12 25 56.5 -1.4**
MSU Marysvale 80.27 50 P **P 12 25 58.9 +0.4**
MSU Marysvale 80.27 50 P **P 12 25 58.9 +0.4**
PFO Pinyon Flats O 80.33 56 LR LR 12 59 43.4
comp=Z,830nm,18.2s,baz=300,slow=34
PFO Pinyon Flats O 80.33 56 P **P 12 25 58.5 -0.2**
PFO Pinyon Flats O 80.33 56 P **P 12 25 58.5 -0.2**
PFO pmax pmax
comp=Z,11nm,1.0s
PFO Pinyon Flats O 80.33 56 P **P 12 25 57.2 -1.6**
baz=305
TPFO Pinon Flats 80.33 56 P **P 12 26 00.1 +1.3**
baz=305
TMUT Trail Mountain 80.40 49 P **P 12 25 60.0 +0.7**
TMUT IAmb IAmb 12 26 18.1
comp=Z,21nm,1.4s
BR131 Keskin Array S 80.42 312 *d i* P **P 12 26 00.2 +1.1**
BR131 Keskin Array S 80.42 312 P **P 12 25 59.6 +0.5**
SNR=11
BR131 P **P 12 25 59.6 +0.5**
SNR=11
BRTR Keskin Array B 80.42 312 P **P 12 26 00.1 +1.1**
comp=Z,6.6nm,0.8s,baz=99,slow=3.9,SNR=26
BRTR LR LR 13 06 43.6
comp=Z,682nm,18.2s,baz=80,slow=40
comp=Z,6.6nm,0.8s
BRTR Keskin Array B 80.42 312 P **P 12 25 59.6 +0.5**
BELC Belle Mtn. Jos 80.42 55 P **P 12 25 59.9 +0.7**
baz=306
LCMT Little Creek M 80.48 52 IAmb IAmb 12 26 18.4
comp=Z,19nm,1.0s
TIRR Tirgusor 80.52 318⇑P **P 12 25 59.2 -0.2**
TIRR Tirgusor 80.52 318⇑P **P 12 25 59.2 -0.2**
VRI Vrincioaia 80.52 320⇑P **P 12 26 01.8 +2.4**
VRI Vrincioaia 80.52 320⇑P **P 12 26 01.8 +2.4**
MTPU Mount Pierson 80.55 50 IAmb IAmb 12 26 20.9
comp=Z,29nm,1.4s
P17A Butcher Ranch, 80.59 48 IAmb IAmb 12 26 14.7
comp=Z,20nm,0.9s
RDMU Red Mountain 80.63 47 IAmb IAmb 12 26 03.7
comp=Z,32nm,1.2s
Q16A Castle Valley 80.66 49 P **P 12 26 01.6 +1.1**
Q16A IAmb IAmb 12 26 15.2
comp=Z,17nm,1.0s
KOLS Kolonicke sedl 80.72 324 *e*P **P 12 26 01.7 +1.3**
KOLS pmax pmax
comp=Z,9.0nm,1.2s
MONP2 Monument Peak 80.77 56 P **P 12 26 01.8 +0.6**
baz=306
P18A Preston Nutter 80.80 48 P **P 12 26 01.8 +0.4**
P18A IAmb IAmb 12 26 27.8
comp=Z,21nm,1.1s
PKCU Pink Cliffs 80.82 51 IAmb IAmb 12 26 39.8
comp=Z,29nm,1.3s
OZUR 80.86 321⇑P **P 12 26 03.2 +2.0**
IRM Iron Mountain 80.90 55 P **P 12 26 01.6 -0.1**
baz=306,SNR=7.6
UZH Uzhgorod 80.92 324⇓*i* P P 12 25 56.5 -4.9
UZH *i* 12 25 57.9
SRU San Rafael Swe 80.94 49 IAmb IAmb 12 26 14.9
comp=Z,26nm,0.7s
BC3 Big Chuckawall 80.99 55 P **P 12 26 04.3 +2.1**
baz=306,SNR=7.2
OJC Ojcow 80.99 326 *e*P **P 12 26 01.6 -0.2**
OJC Ojcow 80.99 326 IAmb IAmb 12 26 03.1
comp=Z,35nm,1.2s
ISR Istrita 81.10 319⇑P **P 12 26 04.6 +2.0**
ISR Istrita 81.10 319⇑P **P 12 26 04.6 +2.0**
K22A Casper 81.12 44 P **P 12 26 04.8 +2.0**
baz=310
IKP In-Ko-Pah, Jac 81.12 56 P **P 12 26 04.9 +1.9**
baz=306
CRVS Cervenica-Dubn 81.13 325 *e*P **P 12 26 03.6 +1.0**
CRVS pmax pmax
comp=Z,38nm,1.5s
TRPA Tarpa 81.14 324⇓P **P 12 26 04.1 +1.6**
TRPA Tarpa 81.14 324 P **P 12 26 04.2 +1.6**
SWSC Sam W. Stewart 81.16 56 P **P 12 26 04.8 +1.8**
baz=306
MLR Muntele Rosu 81.18 320 LR LR 13 06 30.5
comp=Z,3µm,18.0s,baz=42,slow=39
MLR Muntele Rosu 81.18 320 P **P 12 26 06.1 +3.0**
W13A Hualapai Mount 81.19 53 P **P 12 26 03.5 +0.1**
NIE Niedzica 81.32 326 *e*P **P 12 26 05.5 +1.8**
PDMCI Parker Dam,Lak 81.49 54 P **P 12 26 05.2 +0.5**
baz=306,SNR=5.2
BLYC Blythe 81.56 55 IAmb IAmb 12 26 48.2
comp=Z,27nm,1.4s
RSSD Black Hills 81.56 41 P **P 12 26 07.1 +1.9**
baz=311
RAYN Ar Rayn 81.56 293 P **P 12 26 04.8 -0.6**
RAYN Ar Rayn 81.56 293 P **P 12 26 04.8 -0.6**
RAYN pmax pmax
comp=Z,61nm,1.5s
RAYN Ar Rayn 81.56 293 P **P 12 26 06.8 +1.4**
RAYN Ar Rayn 81.56 293 *i* P **P 12 26 06.6 +1.2**
SNR=24
VOIR 81.69 320⇑P **P 12 26 06.9 +1.2**
VOIR 81.69 320⇑P **P 12 26 06.9 +1.2**
O20A White River Ci 81.70 47 P **P 12 26 05.4 -0.6**
O20A IAmb IAmb 12 26 31.1
comp=Z,57nm,1.9s
O20A White River Ci 81.70 47 P **P 12 26 07.4 +1.4**
baz=309
GLA Glamis 81.76 56 P **P 12 26 06.4 +0.1**
GLA IAmb IAmb 12 26 35.3
comp=Z,15nm,0.9s
GLA Glamis 81.76 56 P **P 12 26 06.4 +0.1**
GLA pmax pmax
comp=Z,15nm,1.0s
GLA Glamis 81.76 56 P **P 12 26 06.2 -0.1**
baz=306
LANS Liptovska Anna 81.89 326 *e*P **P 12 26 09.1 +2.4**
LANS pmax pmax
comp=Z,8.0nm,1.3s
ARR Arges 81.95 321⇑P **P 12 26 08.9 +1.8**
DRGR 81.97 323⇑P **P 12 26 07.4 +0.2**
DRGR 81.97 323⇑P **P 12 26 07.4 +0.2**

OKC Ostrava-Krasne 82.01 327 *eP* **P 12 26 08.0 +0.8**
OKC MLR MLR
comp=Z,2μm,13.9s
OKC Ostrava-Krasne 82.01 327 *eP* **P 12 26 08.0 +0.8**
OKC AMS AMS 13 08 10.0
comp=Z,2μm,13.9s
KSP Ksiaz 82.09 328 *eP* **P 12 26 09.0 +1.4**
MORC Moravsky Berou 82.32 327 ⇓P **P 12 26 09.4 +0.4**
MORC Moravsky Berou 82.32 327 P **P 12 26 09.2 +0.3**
MORC Moravsky Berou 82.32 327 P **P 12 26 09.2 +0.3**
MORC pmax pmax
comp=Z,10.0nm,1.1s
MORC Moravsky Berou 82.32 327 *eP* **P 12 26 10.3 +1.4**
OSTC Ostas 82.34 328 AMS AMS 13 07 30.0
comp=Z,2μm,15.2s
CHVC Chvalec 82.39 328 AMS AMS 13 07 40.0
comp=Z,2μm,16.0s
DPC Dobruska-Polom 82.44 328 *eP* **P 12 26 11.3 +1.8**
DPC MLR MLR
comp=Z,2μm,17.0s
DPC Dobruska-Polom 82.44 328 *eP* **P 12 26 11.3 +1.8**
DPC AMS AMS 13 06 00.0
comp=Z,2μm,17.0s
KRLC Kraliky 82.44 328 *eP* **P 12 26 10.8 +1.3**
KRLC MLR MLR
comp=Z,2μm,18.0s
KRLC Kraliky 82.44 328 *eP* **P 12 26 10.8 +1.3**
KRLC *ex* x 12 26 20.5
KRLC AMS AMS 13 14 30.0
comp=Z,2μm,18.0s
PV11 David Mesa, Pa 82.46 48 P **P 12 26 10.8 +0.8**
UPC Upice 82.46 328 *eP* **P 12 26 11.1 +1.5**
UPC MLR MLR
comp=Z,3μm,15.6s
UPC Upice 82.46 328 *eP* **P 12 26 11.1 +1.5**
UPC AMS AMS 13 07 40.0
comp=Z,3μm,15.6s
MAUC Maruska 82.49 327 AMS AMS 13 06 50.0
comp=Z,3μm,12.4s
PV07 Paradox Valley 82.51 48 IAmb IAmb 12 26 29.8
comp=Z,16nm,1.1s
PSZ Piszkesteto 82.57 325 ⇑P **P 12 26 11.5 +1.3**
PSZ Piszkesteto 82.57 325 P **P 12 26 10.4 +0.2**
PSZ IAmb IAmb 12 26 12.7
comp=Z,20nm,1.1s
PSZ Piszkesteto 82.57 325 P **P 12 26 10.4 +0.2**
PSZ pmax pmax
comp=Z,20nm,1.1s
PSZ Piszkesteto 82.57 325 P **P 12 26 11.8 +1.6**
N23A Red Feather La 82.57 45 P **P 12 26 11.3 +0.6**
N23A IAmb IAmb 12 26 36.3
comp=Z,31nm,1.4s
N23A Red Feather La 82.57 45 P **P 12 26 10.2 -0.5**
baz=310
PV13 Radium Mtn., P 82.58 48 P **P 12 26 11.2 +0.5**
RPZ Rata Peaks 82.58 159 LR LR 13 00 18.3
comp=Z,173nm,20.7s,baz=333,slow=34
WUAZ Wupatki 82.58 52 P **P 12 26 10.7 0.0**
WUAZ IAmb IAmb 12 26 31.8
comp=Z,21nm,1.1s
WUAZ Wupatki 82.58 52 P **P 12 26 09.5 -1.2**
baz=308,SNR=11
VYHS Vyhne 82.66 326 *eP* **P 12 26 12.1 +1.5**
VYHS pmax pmax
comp=Z,10.0nm,1.0s
PV15 Paradox Valley 82.67 48 P **P 12 26 11.4 +0.2**
PV15 IAmb IAmb 12 26 29.9
comp=Z,20nm,1.0s
AGMN Agassiz Nation 82.85 34 P **P 12 26 10.9 -0.7**
baz=316
GZR Gura Zlata 82.90 321 ⇑P **P 12 26 12.5 +0.5**
GZR Gura Zlata 82.90 321 ⇑P **P 12 26 12.5 +0.5**
SMCO Snowmass 83.06 47 IAmb IAmb 12 26 20.3
comp=Z,27nm,1.6s
PVCC Panska Ves 83.06 329 AMS AMS 13 10 50.0
comp=Z,2μm,16.0s
BRG Berggiesshubel 83.07 330 *eP* **P 12 26 13.9 +1.1**
BRG Amp 12 26 17.1
comp=Z,11nm,1.2s
BRG *ex* x 12 26 24.4
BRG Amp 12 26 26.5
comp=Z,6.7nm,1.0s
BRG *ex* x 12 44 01.4
BRG Amp 12 44 03.4
comp=Z,2.5nm,0.8s
BRG *ex* x 12 44 59.1
BRG *ex* x 12 46 01.5
BRG Amp 12 46 24.4
comp=Z,7.5nm,1.0s
BRG Amp 13 07 30.0
comp=N,1.4nm,14.2s
BRG Amp 13 07 32.0
comp=E,2.1nm,16.0s
BRG Amp 13 07 35.0
comp=Z,2.5nm,16.5s
BRG Berggiesshubel 83.07 330 *eP* **P 12 26 13.8 +1.1**
BRG pmax pmax
comp=Z,11nm,1.2s
BRG MLR MLR
comp=N,1μm,14.2s
BRG MLR MLR
comp=E,2μm,16.0s
BRG MLR MLR
comp=Z,2μm,16.5s
VRAC Vranov 83.09 327 LR LR 13 08 32.8
comp=Z,1μm,18.3s,baz=30,slow=40
VRAC Vranov 83.09 327 *eP* **P 12 26 14.4 +1.5**
CLL Collm 83.13 330 IAmb IAmb 12 26 15.1
comp=Z,26nm,1.3s
CLL Collm 83.13 330 ⇓*iP* **P 12 26 13.9 +0.9**
CLL pmax pmax
comp=Z,16nm,1.0s
CLL Collm 83.13 330 ⇓*iP* **P 12 26 13.9 +0.9**
comp=Z,16nm,1.0s
CLL *i* PP **PP 12 29 26.3 +2.9**
CLL *e*S **S 12 36 36.0 +4.3**
CLL *e*PS **PnS 12 37 18.0 -5.2**
CLL *e*PPS PPS 12 37 54.0
CLL *e*SS **SS 12 42 00.0 +5.4**
CLL *e*SSS SSS 12 45 30.0
SMOL Smolenice 83.29 326 *eP* **P 12 26 16.0 +2.1**
MMAI Mount Meron Ar 83.33 306 LR LR 13 07 01.7
comp=Z,1μm,19.4s,baz=292,slow=38
KRUC Moravsky 83.36 327 *eP* **P 12 26 15.7 +1.5**
MVCO Mesa Verde 83.37 49 P **P 12 26 15.1 +0.3**
MVCO Mesa Verde 83.37 49 P **P 12 26 14.5 -0.4**
baz=309,SNR=10
GOPC GO Pecny, Ondr 83.43 329 *eP* **P 12 26 16.2 +1.6**
GOPC MLR MLR
comp=Z,2μm,16.6s
GOPC MLR MLR
comp=Z,2μm,15.5s
GOPC GO Pecny, Ondr 83.43 329 *eP* **P 12 26 16.2 +1.6**
GOPC AMS AMS 13 08 20.0
comp=Z,2μm,16.6s
HERR Herculane 83.43 321 ⇑P **P 12 26 15.5 +0.8**
PRU Pruhonice 83.48 329 *eP* **P 12 26 15.7 +0.9**
PRU MLR MLR
comp=Z,3μm,17.3s
PRU Pruhonice 83.48 329 *eP* **P 12 26 15.7 +0.9**
PRU AMS AMS 13 11 20.0
comp=Z,3μm,17.3s
CSS Mathiatis 83.51 308 P **P 12 26 14.2 -1.1**
PIX Pinacate 83.58 56 P **P 12 26 15.8 +0.2**
PIX IAmb IAmb 12 26 34.8
comp=Z,21nm,1.1s
PPT Papeete 83.58 116 LR LR 12 58 41.9
comp=Z,242nm,19.6s,baz=307,slow=32
TREC Trest 83.59 328 AMS AMS 13 11 30.0
comp=Z,2μm,17.1s
PPT2 Papeete2 83.59 116 *e*LR LR 12 52 36.0
comp=Z,604nm,25.8s
214A Organ Pipe Nat 83.78 55 IAmb IAmb 12 26 36.9
comp=Z,35nm,1.5s
214A Organ Pipe Nat 83.78 55 P **P 12 26 18.2 +1.4**
baz=307
MDVR Moldovita 83.86 322 ⇑P **P 12 26 17.9 +0.9**
W18A Petrified Fore 83.89 51 P **P 12 26 15.7 -1.7**
baz=308
S22A 4UR Ranch, Cre 84.06 48 IAmb IAmb 12 26 38.2
comp=Z,23nm,1.2s
S22A 4UR Ranch, Cre 84.06 48 P **P 12 26 16.0 -2.4**
baz=310,SNR=12
BLKB Belogradchik 84.16 320 ⇑P **P 12 26 19.9 +1.4**
NKC Novy Kostel 84.18 330 *eP* **P 12 26 19.7 +1.3**
NKC MLR MLR
comp=Z,2μm,16.7s
NKC Novy Kostel 84.18 330 *eP* **P 12 26 19.7 +1.3**
NKC AMS AMS 13 07 20.0
comp=Z,2μm,16.7s
MPLH Magyarpolny 84.22 325 P **P 12 26 19.8 +1.1**
RDO Rodhopi 84.28 317 P **P 12 26 18.6 -0.4**
RDO IAmb IAmb 12 26 21.7
comp=Z,17nm,1.2s
Q24A Divide 84.28 46 P **P 12 26 19.9 +0.3**
baz=311
RZN Rozhen 84.38 318 *eP* **P 12 26 21.5 +1.7**
MORH Mrgy, Hungar 84.38 324 ⇑P **P 12 26 20.0 +0.5**
MORH Mrgy, Hungar 84.38 324 P **P 12 26 20.0 +0.5**
F33A 5 Mile Ranch, 84.40 36 P **P 12 26 20.1 +0.5**
F33A 5 Mile Ranch, 84.40 36 P **P 12 26 20.3 +0.7**
baz=316
RONA Rosalia, Austr 84.40 326 *eP* **P 12 26 21.6 +1.9**
comp=Z,29nm,1.2s,SNR=8.0
CONA Conrad Observa 84.43 327 *eP* **P 12 26 21.6 +1.7**
comp=Z,21nm,1.2s,SNR=7.9
CKRC Cesky Krumlov 84.46 328 *eP* **P 12 26 21.1 +1.2**
CKRC *ex* x 12 26 27.6
KHC Kasperske Hory 84.54 329 P **P 12 26 20.3 0.0**
KHC IAmb IAmb 12 26 22.8
comp=Z,21nm,1.2s
KHC Kasperske Hory 84.54 329 P **P 12 26 20.3 0.0**
KHC pmax pmax
comp=Z,21nm,1.2s
KHC Kasperske Hory 84.54 329 *eP* **P 12 26 20.7 +0.4**
KHC *ep*P **sP 12 26 28.4 +1.2**
KHC AMS AMS 13 09 10.0
comp=Z,2μm,16.1s
VTS Vitosha 84.56 319 ⇑P **P 12 26 22.2 +1.6**
VTS Vitosha 84.56 319 P **P 12 26 20.9 +0.2**
VTS Vitosha 84.56 319 P **P 12 26 20.9 +0.2**
VTS pmax pmax
comp=Z,28nm,1.0s
VTS Vitosha 84.56 319 *eP* **P 12 26 22.5 +1.8**
FRGS Fruska Gora 84.56 323 ⇓P **P 12 26 21.8 +1.3**
BOVS Bovan 84.66 321 ⇓P **P 12 26 21.2 +0.2**
GERES GERESS Array B 84.70 328 P **P 12 26 21.2 0.0**
comp=Z,4.7nm,0.8s,baz=35,slow=4.9,SNR=20
GERES LR LR 13 07 35.4
comp=Z,1μm,18.8s,baz=40,slow=38
comp=Z,4.7nm,0.8s
GERES GERESS Array B 84.70 328 P **P 12 26 21.7 +0.5**
GERES GERESS Array B 84.70 328 P **P 12 26 21.7 +0.5**
KOVH Kovagotottos 84.73 324 P **P 12 26 21.8 +0.5**
SDCO Great Sand Dun 84.86 47 P **P 12 26 22.1 -0.4**
SDCO IAmb IAmb 12 26 53.8
comp=Z,29nm,1.6s
SDCO Great Sand Dun 84.86 47 P **P 12 26 23.5 +1.0**
baz=311
SDCO Great Sand Dun 84.86 47 P **P 12 26 21.5 -1.0**
baz=311,SNR=8.2
TUC Tucson 84.93 54 P **P 12 26 24.2 +1.5**
TUC IAmb IAmb 12 26 42.7
comp=Z,13nm,1.1s
TUC Tucson 84.93 54 P **P 12 26 24.2 +1.5**
TUC pmax pmax
comp=Z,13nm,1.2s
TUC Tucson 84.93 54 P **P 12 26 23.4 +0.7**
baz=308
MMB Musomiste 84.99 318 *eP* **P 12 26 23.7 +1.0**
ARSA Arzberg 85.09 326 *i P* **P 12 26 24.3 +1.2**
comp=Z,9.3nm,1.2s
EYMN Ely 85.09 33 P **P 12 26 22.8 -0.2**
baz=319
KKB Krupnik 85.15 319 *eP* **P 12 26 25.3 +1.8**
MOA Molln 85.21 327 *eP* **P 12 26 25.3 +1.6**
comp=Z,18nm,1.7s
DIVS Divibare 85.22 322 P **P 12 26 24.0 +0.1**
DIVS IAmb IAmb 12 26 26.3
comp=Z,20nm,1.2s
TAOE Nuku Hiva Isla 85.59 104 *eP* **P 12 26 27.2 +1.0**
comp=Z,69nm,23.6s
TAOE Nuku Hiva Isla 85.59 104 *e*S **S 12 36 55.6 -1.9**
comp=Z,200nm,27.6s
TAOE Nuku Hiva Isla 85.59 104 *e*LR LR 12 53 31.3
comp=Z,795nm,28.6s
BIOA Bad Ischl, Aus 85.61 328 *i P* **P 12 26 27.1 +1.5**
comp=Z,6.2nm,0.6s
EIL Elat 85.66 303 LR LR 13 09 26.3
comp=Z,724nm,19.0s,baz=60,slow=39
KSCO Kaye Shedlock' 85.73 45 P **P 12 26 26.8 +0.2**
KSCO Kaye Shedlock' 85.73 45 P **P 12 26 24.8 -1.8**
baz=312
ECSD EROS Data Cent 85.74 38 P **P 12 26 26.2 -0.2**
ECSD IAmb IAmb 12 26 40.5
comp=Z,8.2nm,0.8s
ECSD EROS Data Cent 85.74 38 P **P 12 26 24.8 -1.6**
baz=316
SOKA Soboth 85.74 326 *eP* **P 12 26 27.5 +1.1**
comp=Z,21nm,1.2s,SNR=13
T25A Trinidad 85.92 47 P **P 12 26 26.9 -0.8**
T25A IAmb IAmb 12 26 46.2
comp=Z,26nm,1.4s
T25A Trinidad 85.92 47 P **P 12 26 26.3 -1.4**
baz=311
ANMO Albuquerque 86.08 50 LR LR 13 07 24.0
comp=Z,302nm,18.1s,baz=318,slow=37
ANMO Albuquerque 86.08 50 P **P 12 26 27.3 -1.2**
ANMO IAmb IAmb 12 26 48.6
comp=Z,18nm,1.4s
ANMO Albuquerque 86.08 50 P **P 12 26 27.3 -1.2**
ANMO pmax pmax
comp=Z,18nm,1.4s
ANMO Albuquerque 86.08 50 P **P 12 26 28.8 +0.3**
baz=310
ANMO Albuquerque 86.08 50 P **P 12 26 27.6 -0.8**
baz=310
LEGS Legarje 86.15 326 *i P* **P 12 26 28.9 +0.5**
BTNL Ternell 86.37 333 *d*PcP **P 12 26 30.4 +1.0**
MEM Membach 86.40 333 *d*PcP **PcP 12 26 30.9 -1.1**
MYKA Terra Mystica 86.41 327 *i P* **P 12 26 28.7 -1.0**
comp=Z,2.3nm,0.6s
GBAS Gorenja Brezov 86.57 326 *i P* **P 12 26 30.7 +0.3**
BGNE Belgrade 86.58 41 P **P 12 26 31.8 +1.2**
baz=315
121A Cookes Peak, D 86.77 52 P **P 12 26 33.0 +1.1**
baz=310
JAVS Javornik 86.77 326 *i P* **P 12 26 31.4 -0.2**
WATA Waldalmen 86.78 328 *i P* **P 12 26 34.6 +2.9**
comp=Z,3.6nm,0.5s
PDG Podgorica 86.79 321 ⇑P **P 12 26 29.4 -2.1**
WTTA Wattenberg 86.81 328 *i P* **P 12 26 33.6 +1.8**
comp=Z,3.6nm,0.7s
BCLA Clavier 86.81 334 *d*PcP **P 12 26 32.0 +0.5**
ABTA Abfaltersbach 86.82 328 *i P* **P 12 26 32.3 +0.5**
comp=Z,3.6nm,0.6s
CLUD Cludinico 86.88 327 IAmb IAmb 12 26 43.4
comp=Z,14nm,1.0s
BGES Gesves 86.92 334 *d*PcP **P 12 26 32.8 +0.8**
MOTA Moosalm 86.97 329 *i P* **P 12 26 33.8 +1.2**
comp=Z,2.8nm,0.6s
RETA Reutte 87.01 329 *i P* **P 12 26 34.7 +2.0**
comp=Z,12nm,1.0s
RCHB Rochefort 87.06 334 *d*PcP **P 12 26 33.0 +0.2**
BMRD Maredsous 87.11 334 *d*PcP **P 12 26 33.6 +0.6**
STAL STALIGIAL 87.11 327 IAmb IAmb 12 27 12.3
comp=Z,18nm,1.3s
TBI Tubuai 87.32 121 *e*LR LR 12 54 18.7
comp=Z,484nm,26.2s
BFO Black Forest 87.35 331 P **P 12 26 32.6 -1.6**
BFO Black Forest 87.35 331 P **P 12 26 32.6 -1.6**
BFO pmax pmax
comp=Z,35nm,1.5s
FETA Feichten 87.39 329 *i P* **P 12 26 35.3 +0.7**
comp=Z,5.9nm,1.1s
DAVA Damuels 87.54 329 *eP* **P 12 26 36.5 +1.2**
comp=Z,12nm,1.1s
SCHQ Schefferville 87.57 16 P **P 12 26 36.4 +1.2**
comp=Z,8.2nm,0.8s,baz=349,slow=3.2,SNR=5.4
SCHQ LR LR 13 07 57.0
comp=Z,538nm,20.8s,baz=358,slow=37
comp=Z,8.2nm,0.8s
FUORN Ofenpass-Fuorn 87.90 329 IAmb IAmb 12 26 39.6
comp=Z,9.1nm,1.1s
DAVOX Davos/Dischmat 87.94 329 LR LR 13 12 04.8
comp=Z,2μm,18.2s,baz=62,slow=40
MURB Monte Urbino 89.49 325 IAmb IAmb 12 27 15.1
comp=Z,16nm,0.9s
NRCA Norcia 89.54 325 P **P 12 26 45.5 +0.7**
NRCA IAmb IAmb 12 26 47.1
comp=Z,23nm,1.2s
CAMP Campotosto 89.62 324 P **P 12 26 44.1 -1.1**
LPL La Plagne 90.26 330 *eP* **P 12 26 49.2 +0.9**
LPL pmax pmax
comp=Z,8.0nm,1.0s
LPIG La Paz 90.33 60 LR LR 13 06 34.0
comp=Z,158nm,18.1s,baz=335,slow=35
TX31 Lajitas Ar. Si 91.53 52 P **P 12 26 54.3 0.0**
TX31 Lajitas Ar. Si 91.53 52 P **P 12 26 54.8 +0.5**
baz=312
TX32 Lajitas Array 91.53 52 P **P 12 26 53.4 -0.9**
TXAR Lajitas Array 91.53 52 P **P 12 26 55.0 +0.7**
comp=Z,1.4nm,0.8s,baz=298,slow=3.1,SNR=17
TXAR LR LR 13 06 52.9
comp=Z,467nm,18.5s,baz=320,slow=35
comp=Z,1.4nm,0.8s
TXAR Lajitas Array 91.53 52 P **P 12 26 54.0 -0.3**
TXAR Lajitas Array 91.53 52 P **P 12 26 55.0 +0.7**
R40A Maddies Statio 91.96 39 P **P 12 26 54.6 -1.4**
CAF Calviac 92.60 332 *eP* **P 12 27 00.6 +1.7**
CAF pmax pmax
comp=Z,18nm,1.1s
CCM Cathedral Cave 92.67 39 P **P 12 26 59.8 +0.6**
baz=319
CCM Cathedral Cave 92.67 39 P **P 12 26 59.3 0.0**
baz=319
SADO Sadowa 92.75 28 LR LR 13 11 19.5
comp=Z,364nm,20.9s,baz=360,slow=37
VAE Valguarnera 92.94 321 LR LR 13 13 18.9
comp=Z,838nm,18.0s,baz=33,slow=38
KEST Kesra 96.89 323 LR LR 13 15 20.8
comp=Z,787nm,18.5s,baz=323,slow=38
ESDC Sonseca Array 99.39 334 LR LR 13 16 31.9
comp=Z,574nm,18.1s,baz=30,slow=38
TORD Torodi Ar. Bea 118.97 314 PKP **PKPdf 12 32 35.5 -1.0**
comp=Z,0.7nm,0.8s,baz=40,slow=1.0,SNR=3.0
TORD PKKPbc **PKKPbc 12 42 51.7 +1.9**
comp=Z,1.9nm,1.1s,baz=200,slow=3.8,SNR=5.5
QSPA South Pole Qui 124.44 180 PKP **PKPdf 12 32 45.0 -0.5**
comp=Z,2.8nm,0.7s,baz=232,slow=0.8,SNR=17
QSPA South Pole Qui 124.44 180 **PKPdf 12 32 45.3 -0.2**
SDV Santo Domingo 127.09 41 *eP* **PKiKP 12 32 55.5 +2.6**
BELA Belgrano 2 136.69 181 PKPdf **PKPdf 12 33 09.1 +0.8**
CZSB Cruzeiro do Su 138.73 57 *eP* **PKiKP 12 33 15.4 -0.7**
MALB Monte Alegre 144.19 28 *eP* **PKiKP 12 33 27.8 +0.5**
SHEL Horse Pasture 145.18 294 PKPbc **PKPbc 12 33 23.1 -1.8**
SHEL Horse Pasture 145.18 294 PKP2 **PKPbc 12 33 23.2 -1.8**
PB12 IPOC Station P 147.58 69 **PKPdf 12 33 27.1 -2.3**
PB12 PKPab **PKiKP 12 33 33.7 -0.5**
LPAZ La Paz 147.80 63 PKPbc **PKPbc 12 33 33.2 -0.2**
comp=Z,4.1nm,0.6s,baz=354,slow=7.0,SNR=12
LPAZ La Paz 147.80 63 PKPdf **PKPdf 12 33 28.3 -2.2**
LPAZ PKPab **PKiKP 12 33 35.4 0.0**
LPAZ La Paz 147.80 63 PKIKP **PKPdf 12 33 28.3 -2.2**
LPAZ 12 33 35.4
LPAZ La Paz 147.80 63 *eP* **PKPbc 12 33 33.5 +0.1**
PB16 IPOC Station P 148.04 67 PKPab **PKiKP 12 33 35.8 0.0**
NPGB Novo Progresso 148.43 33 *eP* **PKiKP 12 33 35.5 -0.5**
GO01 Chusmiza 149.06 69 **PKiKP 12 33 38.2 +0.5**
PB08 IPOC Station P 149.36 70 PKPab **PKiKP 12 33 38.5 +0.3**
PB01 IPOC Station P 149.60 72 PKPab **PKiKP 12 33 38.1 -0.3**
PRPB Paraua pebas 149.77 23 *eP* **PKPbc 12 33 37.8 0.0**
PB15 IPOC Station P 150.75 75 PKPdf **PKPdf 12 33 31.0 -3.6**
VILB Vilhena 150.79 47 *eP* **PKPbc 12 33 38.2 -2.0**
LVC Limon Verde 150.89 74 PKPdf **PKPdf 12 33 32.5 -2.6**
LVC Limon Verde 150.89 74 PKIKP **PKPdf 12 33 32.5 -2.6**
LVC Limon Verde 150.89 74 *eP* **PKPbc 12 33 38.2 -2.5**
RCBR Riachuelo 151.17 354 *eP* **PKPbc 12 33 39.4 -1.8**
CLDB Colider 151.55 38 *eP* **PKPbc 12 33 40.3 -1.7**
PDRB Porto dos Gac 151.69 40 *eP* **PKPbc 12 33 40.5 -1.8**
GO04 Tololo Observa 152.49 90 **PKiKP 12 33 44.3 0.0**
SMTB Santa Maria do 152.99 20 *eP* **PKPbc 12 33 42.5 -2.7**
PTLB Pontes e Lacer 153.37 49 *eP* **PKPbc 12 33 42.5 -3.4**
BO02 Sierra Bellavi 153.59 100 PKPdf **PKPdf 12 33 35.5 -2.8**
BO02 **sPKPdf 12 33 45.6 +0.4**
BBSD Serra de San D 153.70 54 *eP* **PKPbc 12 33 43.0 -3.7**
LMEL Las Melosas 153.89 97 PKPdf **PKPdf 12 33 35.7 -3.3**
PLCA Paso Flores 154.08 113 PKPbc **PKiKP 12 33 48.3 +1.3**
comp=Z,1.4nm,0.8s,baz=220,slow=3.3,SNR=3.1
PLCA Paso Flores 154.08 113 *eP* **PKPbc 12 33 44.4 -2.6**
GDU01 Guandu, BA 159.09 3 *eP* **PKPdf 12 33 51.4 +5.4**
AQDB Aquidauana 159.28 51 *eP* **PKPdf 12 33 50.7 +4.7**
ANTJ Antonio Joao (160.15 55 *eP* **PKPdf 12 33 52.1 +5.1**

IDC 04 12:13:55.9±5.5, 5°.88S×139°.88E, h0km, mb4.1/1, mbtmp3.7/4, ML3.5/3, MS3.9/3, Error ellipse: s-maj=85.3km s-min=27.5km az=158.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.98**	**201**	Pn	Pn	Pn	12 17 27.0	-2.0
0.3nm,0.3s,baz=22,slow=13,SNR=13								
WRA				Sn	Sn	Sn	12 20 18.1	+2.3
0.1nm,0.3s,baz=22,slow=22,SNR=2.3								
WRA				LR	LR	LR	12 23 52.3	
comp=Z,162nm,20.3s,baz=72,slow=40								
0.5nm,0.4s								
CTA	**Charters Tower**	**15.42**	**157**	LR	LR	LR	12 23 54.4	
comp=Z,148nm,18.7s,baz=82,slow=39								
FITZ	**Fitzroy Crossi**	**18.45**	**228**	P	P	P	12 18 14.7	+1.5
0.1nm,0.3s,baz=68,slow=9.4,SNR=4.1								
FITZ				S		Sn	12 21 40.8	+0.6
1.1nm,0.6s,baz=185,slow=11,SNR=1.6								
1.7nm,0.9s								
ASAR	**Alice Springs**	**18.59**	**197**	P	P	P	12 18 14.6	-0.3
0.2nm,0.3s,baz=31,slow=9.4,SNR=13								
0.7nm,0.6s								
GUMO	**Guam**	**19.97**	**14**	LR	LR	LR	12 25 05.8	
comp=Z,3μm,20.2s,baz=10,slow=34								
STKA	**Stephens Creek**	**25.91**	**177**	P	P	P	12 19 30.0	+0.2
2.7nm,0.8s,baz=0.0,slow=14,SNR=2.1								
2.7nm,0.8s								

MOS ***04*** *12:17:41.1±1.1, 34°.58N×141°.38E, h10km, mb5.0/16, Error ellipse: s-maj=13.1km s-min=6.8km az=118.6*
BJI ***04*** *12:17:42.9±0.0, 34°.65N×141°.43E, h19km, mb4.5/25, mB5.2/11, Ms5.3/7, Ms7 5.0/8*
IDC ***04*** *12:17:42.0±0.6, 34°.66N×141°.44E, h0km, mb4.3/20, mbtmp4.3/24, ML3.2/3, Error ellipse: s-maj=17.0km s-min=14.5km az=90.0*
NEIC ***04*** *12:17:44.4±2.1, 34°.62N±0°.02×141°.45E±0°.07, h16km±4km, mb4.7/60, Error ellipse: s-maj=8.0km s-min=2.6km az=103.0*
JMA ***04*** *12:17:45.3±0.5, 35°N±1°×14°1E±°, h35km±2km, MV3.9/32, SE OFF BOSO PENINSULA*

ISC 04 12:17:45.2±0.4, 34°.60N±0°.04×141°.43E±0°.05, h27km, n164, σ1°**25**/161**, mb4.7**/62**, 2C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.37**	**278**	*e*P	**Pn**	**Pn**	**12 17 53.6**	**-0.8**
BSO3	**Boso 3**	**0.78**	**285**	P	**Pn**	**Pn**	**12 17 59.8**	**-0.4**
BSO3				X			12 18 09.5	
BSO4	**Boso 4**	**0.98**	**294**	*e*P	**Pn**	**Pn**	**12 18 02.6**	**-0.5**
BSO4				X			12 18 12.9	
KTR	**Katsuura**	**1.06**	**301**	*e*P	**Pn**	**Pn**	**12 18 03.5**	**-0.9**
JKUC	**kamogawauchiur**	**1.15**	**299**	P	**Pn**	**Pn**	**12 18 04.4**	**-1.2**
JKUC				*e*S	**Sn**	**Sn**	**12 18 17.3**	**-3.1**
I30JP	**ISUMI INFRASON**	**1.16**	**308**	Pn	**Pb**	**Pb**	**12 18 08.6**	**+2.0**
baz=146,slow=47								
CHOJ	**Chosi**	**1.20**	**337**	P	**Pn**	**Pn**	**12 18 04.8**	**-1.4**
JCN	**Nagara**	**1.29**	**309**	*e*P	**Pn**	**Pn**	**12 18 06.7**	**-0.8**
JSMT	**Sammumatsuo**	**1.31**	**323**	*e*P	**Pn**	**Pn**	**12 18 06.3**	**-1.5**
JMYK	**Miyake Tsubota**	**1.64**	**251**	*e*P	**Pn**	**Pn**	**12 18 12.9**	**+0.5**
JMYK				*e*S	**Sb**	**Sb**	**12 18 32.9**	**-2.3**
JMKN	**Mikurajimanish**	**1.68**	**246**	P	**Pn**	**Pn**	**12 18 13.3**	**+0.6**
JYT	**Yasato**	**1.91**	**329**	Pn	**Pn**	**Pn**	**12 18 15.3**	**-0.7**
JHJ2	**Mitsune**	**2.00**	**223**	Pn	**Pn**	**Pn**	**12 18 17.7**	**+0.5**
JHJ	**Hachijo jima 2**	**2.01**	**223**	Pn	**Pb**	**Pb**	**12 18 19.8**	**-1.3**
52nm,0.3s,baz=17,slow=19,SNR=1.5								
JHJ				Sn	**Sb**	**Sb**	**12 18 46.0**	**+0.2**
136nm,0.3s,baz=173,slow=23,SNR=5.7								
150nm,0.3s								
MJAR	**Matsushiro Arr**	**3.26**	**307**	Pn	**Pn**	**Pn**	**12 18 35.6**	**+1.1**
2.7nm,0.3s,baz=102,slow=14,SNR=12								
24nm,0.6s								
MAJO	**Matsushiro**	**3.26**	**307**	Pn	**Pn**	**Pn**	**12 18 35.5**	**+0.9**
MAJO	**Matsushiro**	**3.26**	**307**	P	**Pn**	**Pn**	**12 18 35.5**	**+0.9**
MJB9	**Matsu-Tunnel**	**3.27**	**307**	Pn	**Pn**	**Pn**	**12 18 36.3**	**+1.6**
JMM	**Marumori**	**3.30**	**351**	Pn	**Pn**	**Pn**	**12 18 33.2**	**-1.8**
JGF	**Kuroka**	**3.48**	**288**	Pn	**Pn**	**Pn**	**12 18 38.7**	**+1.0**
INU	**Inuyama**	**3.70**	**283**	Pn	**Pn**	**Pn**	**12 18 39.7**	**-0.9**

JSD	**Sado**	**4.28**	**324**	Pn	**Pn**	**12 18 48.5**	**0.0**
JTM	**Tenmabayashi**	**6.18**	**357**	Pn	**Pn**	**12 19 12.6**	**-2.1**
JCJ	**Chichijima**	**7.51**	**175**	Pn	**Pn**	**12 19 33.9**	**+0.9**
	47nm,0.3s,baz=211,slow=5.9,SNR=2.1						
JCJ				Sn	**Sn**	**12 20 54.7**	**-2.5**
	4.1nm,0.3s,baz=300,slow=20,SNR=1.3						
JCJ	**Chichijima**	**7.51**	**175**	Pn	**Pn**	**12 19 32.4**	**-0.5**
JEW	**Eniwo**	**8.23**	**0**	Pn	**Pn**	**12 19 40.6**	**-2.2**
NMR	**Nemuro--Hokkai**	**9.38**	**20**	*e*P	Pn	12 19 52.5	-6.0
YUK	**Yuzh-Kuril'sk**	**10.03**	**19**	*e*P	Pn	12 20 02.2	-5.2
YUK				pmax	pmax		
	comp=E,143nm,0.4s						
YUK				pmax	pmax		
	comp=Z,238nm,0.4s						
YUK				pmax	pmax		
	comp=N,94nm,0.1s						
KSRS	**Korea Array**	**11.30**	**288**	Pn	Pn	12 20 29.7	+4.9
	comp=N,0.1nm,0.3s,baz=100,slow=14,SNR=5.4						
USA0B	**Ussuriysk Arra**	**12.04**	**326**	Pn	**Pn**	**12 20 33.1**	**-1.9**
USA0B	**Ussuriysk Arra**	**12.04**	**326**	P	**Pn**	**12 20 33.1**	**-1.9**
USRK	**Ussuriysk Ar.**	**12.04**	**326**	Pn	**Pn**	**12 20 34.1**	**-0.8**
	comp=N,0.5nm,0.3s,baz=130,slow=12,SNR=13						
	comp=N,18nm,0.8s						
YSS	**Yuzh-Sakhalins**	**12.38**	**4**	*e*P	**Pn**	**12 20 36.0**	**-3.6**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2	**Changchun**	**15.40**	**311**	*e*P	**P**	**12 21 22.7**	**-2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**16.27**	**337**	Pn	**Pn**	**12 21 28.3**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=338,slow=17,SNR=1.9						
SSLB	**Suanglung**	**20.83**	**244**	P	**P**	**12 22 23.9**	**-0.9**
SSLB				IAmb	IAmb	12 22 44.9	
	comp=Z,26nm,1.1s						
TWG	**Pinlang**	**21.32**	**242**	P	**P**	**12 22 27.4**	**-2.7**
TWG				IAmb	IAmb	12 22 31.8	
	comp=Z,56nm,1.4s						
ZEA	**Zeya**	**21.59**	**337**	*e*P	**P**	**12 22 30.7**	**-2.0**
ZEA				pmax	pmax		
	comp=N,30nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.9s						
HHC	**Hu-ho-hao-te**	**24.36**	**294**	*e*P	**P**	**12 23 02.6**	**+1.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,180nm,7.1s						
XAN	**Xi'an**	**26.79**	**278**	P	**P**	**12 23 23.3**	**+0.2**
XAN				pP	pP	12 23 29.1	-0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**26.97**	**117**	T	T	12 51 34.7	
	baz=309,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**26.98**	**117**	T	T	12 51 33.6	
	baz=309,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**26.99**	**117**	T	T	12 51 34.4	
	baz=309,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**27.60**	**119**	T	T	12 52 30.9	
	baz=312,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**27.60**	**119**	T	T	12 52 25.9	
	baz=312,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy**	**27.62**	**119**	T	T	12 52 30.6	
	baz=312,slow=76,SNR=22						
YAK	**Yakutsk**	**28.45**	**348**	P	**P**	**12 23 37.4**	**-0.1**
YAK				IAmb	IAmb	12 23 53.0	
	comp=Z,22nm,0.8s						
YAK	**Yakutsk**	**28.45**	**348**	P	**P**	**12 23 37.3**	**-0.1**
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
ULN	**Ulaanbaatar**	**28.79**	**308**	P	**P**	**12 23 40.4**	**-0.5**
ULN	**Ulaanbaatar**	**28.79**	**308**	P	**P**	**12 23 40.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**29.21**	**308**	P	**P**	**12 23 46.2**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=104,slow=8.8,SNR=5.4						
	comp=Z,4.1nm,0.9s						
BOD	**Bodaibo**	**29.62**	**330**	*e*P	**P**	**12 23 47.5**	**-0.4**
BOD				pmax	pmax		
	comp=Z,27nm,1.1s						
CD2	**Chengdu**	**31.77**	**274**	*e*P	**P**	**12 24 07.2**	**-0.1**
PZH	**PanZhiHua**	**34.94**	**268**	P	**P**	**12 24 37.3**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.2s						
FAKI	**Fak Fak**	**38.30**	**195**	P	**P**	**12 25 03.0**	**-0.6**
FAKI				IAmb	IAmb	12 25 32.6	
	comp=Z,11nm,1.0s						
NIKH	**Nikolski High**	**39.40**	**47**	P	**P**	**12 25 10.8**	**-1.7**
CMAR	**Chiang Mai Arr**	**40.95**	**258**	P	**P**	**12 25 26.1**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=48,slow=8.2,SNR=2.3						
	comp=Z,0.9nm,0.5s						
WMQ	**Urumqi**	**41.99**	**299**	*e*P	**P**	**12 25 33.9**	**-0.2**
WMQ				pP	pP	12 25 39.2	-1.2
WMQ				S	**S**	**12 31 55.0**	**+3.8**
WMQ				ScS	**ScS**	**12 35 32.3**	**-2.5**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=Z,2μm,14.3s						
WMQ				LR	LR		
	comp=Z,2μm,16.7s						
SAUI	**Saumlaki**	**43.42**	**195**	P	**P**	**12 25 45.6**	**-0.2**
ZAA0	**Zalesovo Array**	**43.59**	**314**	P	**P**	**12 25 46.5**	**-0.3**
ZALV	**Zalesovo Beam**	**43.59**	**314**	P	**P**	**12 25 46.2**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=50,slow=7.7,SNR=3.2						
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**43.59**	**314**	P	**P**	**12 25 47.0**	**+0.2**
ZALV	**Zalesovo Beam**	**43.59**	**314**	P	**P**	**12 25 47.0**	**+0.2**
CNBA	**Chernabura Isl**	**45.01**	**45**	P	**P**	**12 25 58.8**	**+0.7**
CNBA				IAmb	IAmb	12 26 14.5	
	comp=Z,11nm,0.8s						
MK31	**Makanchi Array**	**45.45**	**304**	P	**P**	**12 26 00.9**	**-0.9**
MK31	**Makanchi Array**	**45.45**	**304**	P	**P**	**12 26 01.0**	**-0.9**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**45.45**	**304**	P	**P**	**12 26 02.5**	**+0.7**
	comp=Z,4.6nm,0.9s,baz=91,slow=10,SNR=6.6						
	comp=Z,4.6nm,0.9s						
MKAR	**Makanchi Array**	**45.45**	**304**	P	**P**	**12 26 01.2**	**-0.6**
MAKZ	**Makanchi**	**45.67**	**304**	P	**P**	**12 26 03.2**	**-0.4**
MAKZ				IAmb	IAmb	12 26 07.9	
	comp=Z,7.6nm,0.9s						
MAKZ	**Makanchi**	**45.67**	**304**	⇑P	**P**	**12 26 04.8**	**+1.3**
SOEI	**Soe**	**47.02**	**203**	P	**P**	**12 26 12.8**	**-1.7**
HNR	**Honiara**	**47.18**	**155**	P	**P**	**12 26 15.5**	**-0.1**
HNR	**Honiara**	**47.18**	**155**	P	**P**	**12 26 15.5**	**-0.1**
HNR				pmax	pmax		
	comp=Z,114nm,1.1s						
KURK	**Kurchatov**	**47.47**	**310**	P	**P**	**12 26 17.6**	**+0.1**
KURK				IAmb	IAmb	12 26 34.3	
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**47.47**	**310**	P	**P**	**12 26 17.6**	**+0.1**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURBB	**Kurchatov Arra**	**47.53**	**310**	P	**P**	**12 26 21.1**	**+3.0**
	comp=Z,6.2nm,0.8s,baz=84,slow=8.0,SNR=6.4						
K20K	**Telida**	**48.35**	**33**	P	**P**	**12 26 25.5**	**+1.3**
K20K				IAmb	IAmb	12 26 46.6	
	comp=Z,5.7nm,0.9s						
IMAR	**Indian Mountai**	**48.75**	**30**	P	**P**	**12 26 28.2**	**+1.0**
KDAK	**Kodiak Island**	**48.92**	**40**	P	**P**	**12 26 28.8**	**+0.2**
KDAK	**Kodiak Island**	**48.92**	**40**	P	**P**	**12 26 28.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,54nm,1.5s						
H21K	**Melozitna Rive**	**49.10**	**30**	P	**P**	**12 26 29.9**	**0.0**
H21K				IAmb	IAmb	12 26 48.3	
	comp=Z,14nm,1.4s						
SPU	**Mount Spurr**	**49.18**	**36**	P	**P**	**12 26 29.2**	**-1.4**
TARG	**Taragay, Kyrgy**	**49.52**	**298**	P	**P**	**12 26 33.4**	**-0.6**
TARG				IAmb	IAmb	12 27 02.0	
	comp=Z,8.8nm,0.9s						
TARG	**Taragay, Kyrgy**	**49.52**	**298**	P	**P**	**12 26 33.4**	**-0.6**
TARG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
H23K	**Yukon River**	**50.46**	**30**	P	**P**	**12 26 41.1**	**+0.8**
H23K				IAmb	IAmb	12 26 54.2	
	comp=Z,8.1nm,1.0s						
RND	**Reindeer**	**50.70**	**33**	P	**P**	**12 26 43.4**	**+1.2**
RND	**Reindeer**	**50.70**	**33**	P	**P**	**12 26 43.4**	**+1.2**
RND				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDM	**Murphy Dome**	**50.98**	**31**	P	**P**	**12 26 44.6**	**+0.4**
MDM				IAmb	IAmb	12 27 03.9	
	comp=Z,11nm,1.1s						
COLA	**College**	**51.14**	**31**	⇑P	**P**	**12 26 46.9**	**+1.6**
KNRA	**Kununurra**	**51.43**	**196**	P	**P**	**12 26 48.2**	**+0.2**
SCM	**Sheep Creek Mo**	**51.44**	**35**	P	**P**	**12 26 48.2**	**+0.5**
SCM				IAmb	IAmb	12 27 21.6	
	comp=Z,16nm,1.2s						
SCM	**Sheep Creek Mo**	**51.44**	**35**	P	**P**	**12 26 48.2**	**+0.5**
SCM				pmax	pmax		
	comp=Z,16nm,1.2s						
ILAR	**Eielson Array**	**51.55**	**31**	P	**P**	**12 26 49.5**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=261,slow=5.9,SNR=4.4						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**51.55**	**31**	P	**P**	**12 26 49.0**	**+0.6**
BVAR	**Borovoye Array**	**52.24**	**314**	P	**P**	**12 26 53.3**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=98,slow=7.6,SNR=3.2						
	comp=Z,1.5nm,0.8s						
BMAR	**Burnt Mountain**	**52.47**	**28**	P	**P**	**12 26 54.0**	**-1.3**
DOT	**Dot Lake**	**52.83**	**33**	P	**P**	**12 26 58.6**	**+0.6**
SCRK	**Sand Creek**	**52.84**	**32**	P	**P**	**12 26 58.8**	**+0.5**
J26L	**Joseph Creek**	**52.99**	**32**	P	**P**	**12 26 59.8**	**+0.5**
L26K	**Log Cabin Wild**	**53.20**	**33**	P	**P**	**12 27 03.0**	**+2.2**
L26K				IAmb	IAmb	12 27 14.9	
	comp=Z,6.8nm,1.1s						
K27K	**Chicken**	**53.68**	**32**	P	**P**	**12 27 04.2**	**-0.1**
KK31	**Karatay Array**	**54.38**	**302**	P	**P**	**12 27 10.9**	**+1.2**
KK31				IAmb	IAmb	12 27 11.9	
	comp=Z,7.4nm,1.1s						
KK31	**Karatay Array**	**54.38**	**302**	P	**P**	**12 27 10.9**	**+1.2**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**54.38**	**302**	P	**P**	**12 27 10.5**	**+0.8**
KKAR	**Karatay Array**	**54.38**	**302**	P	**P**	**12 27 10.5**	**+0.8**
WB0	**Warramunga Arr**	**54.48**	**188**	P	**P**	**12 27 10.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**54.52**	**199**	P	**P**	**12 27 10.3**	**-0.4**
FITZ				IAmb	IAmb	12 27 23.4	
	comp=Z,8.2nm,0.9s						
TABL	**Table Mountain**	**54.56**	**36**	P	**P**	**12 27 11.8**	**+0.8**
TABL				IAmb	IAmb	12 27 14.8	
	comp=Z,19nm,1.4s						
CTAO	**Charters Tower**	**54.58**	**174**	P	**P**	**12 27 10.5**	**-0.7**
CTAO	**Charters Tower**	**54.58**	**174**	P	**P**	**12 27 10.5**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,37nm,1.5s						
WRAB	**Tennant Creek**	**54.65**	**188**	P	**P**	**12 27 11.3**	**-0.3**
WRAB	**Tennant Creek**	**54.65**	**188**	P	**P**	**12 27 11.4**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WR0	**Warramunga Arr**	**54.65**	**188**	P	**P**	**12 27 11.1**	**-0.6**
WB2	**Warramunga Arr**	**54.66**	**188**	P	**P**	**12 27 11.6**	**-0.2**
WRA	**Warramunga Arr**	**54.66**	**188**	P	**P**	**12 27 12.7**	**+0.9**
	comp=Z,14nm,0.9s,baz=6.7,slow=7.6,SNR=14						
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**54.66**	**188**	P	**P**	**12 27 11.8**	**0.0**
WRA	**Warramunga Arr**	**54.66**	**188**	P	**P**	**12 27 11.8**	**0.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EPYK	**Eagle Plains**	**55.64**	**29**	P	**P**	**12 27 20.3**	**+1.8**
EPYK				IAmb	IAmb	12 27 31.2	
	comp=Z,12nm,0.9s						
MAYO	**Mayo, Yukon**	**56.46**	**32**	P	**P**	**12 27 23.9**	**-0.4**
MAYO				IAmb	IAmb	12 28 08.5	
	comp=Z,3.6nm,0.7s						
INK	**Inuvik**	**56.55**	**26**	P	**P**	**12 27 25.9**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=340,slow=3.6,SNR=5.1						
	comp=Z,1.9nm,0.7s						
INK	**Inuvik**	**56.55**	**26**	P	**P**	**12 27 25.8**	**+1.0**
INK				IAmb	IAmb	12 27 33.5	
	comp=Z,6.2nm,1.1s						
INK	**Inuvik**	**56.55**	**26**	P	**P**	**12 27 25.8**	**+1.0**
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CHGR	**Chuyangaron**	**56.75**	**297**	P	**P**	**12 27 27.1**	**+0.3**
CHGR	**Chuyangaron**	**56.75**	**297**	P	**P**	**12 27 27.2**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,22nm,0.7s						
ARU	**Arti**	**58.20**	**320**	P	**P**	**12 27 37.1**	**+0.4**
	comp=Z,2.9nm,0.3s,baz=121,slow=1.3,SNR=5.0						
	comp=Z,2.9nm,0.3s						
ARU	**Arti**	**58.20**	**320**	P	**P**	**12 27 37.4**	**+0.7**
ARU				IAmb	IAmb	12 27 38.2	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**58.38**	**188**	P	**P**	**12 27 38.2**	**-0.1**
ASAR	**Alice Springs**	**58.38**	**188**	P	**P**	**12 27 39.4**	**+1.1**
	comp=Z,6.0nm,0.8s,baz=6.5,slow=6.4,SNR=10.0						
	comp=Z,6.0nm,0.8s						
ASAR	**Alice Springs**	**58.38**	**188**	P	**P**	**12 27 38.8**	**+0.5**
ABKAR	**Akbulak array**	**59.53**	**311**	P	**P**	**12 27 45.6**	**-0.4**
AKTO	**Aktyubinsk**	**60.32**	**313**	P	**P**	**12 27 51.9**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=85,slow=12,SNR=4.1						
	comp=Z,3.6nm,0.8s						
EIDS	**Eidsvold**	**60.34**	**170**	P	**P**	**12 27 52.4**	**+0.7**
EIDS				IAmb	IAmb	12 27 54.5	
	comp=Z,9.8nm,0.9s						
GEYT	**Alibeck**	**65.04**	**300**	P	**P**	**12 28 24.6**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=60,slow=3.5,SNR=2.3						
	comp=Z,1.7nm,0.5s						
FORT	**Forrest**	**66.24**	**193**	P	**P**	**12 28 29.7**	**-0.9**
FINES	**FINESS Array B**	**70.97**	**333**	P	**P**	**12 29 00.4**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=43,slow=8.6,SNR=3.7						
	comp=Z,3.7nm,0.8s						
NEW	**Newport**	**71.87**	**44**	P	**P**	**12 29 07.4**	**+1.7**
NEW				IAmb	IAmb	12 29 19.4	
	comp=Z,8.1nm,1.2s						
NEW	**Newport**	**71.87**	**44**	P	**P**	**12 29 07.4**	**+1.7**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PINE	**Pine Mountain**	**71.91**	**49**	P	**P**	**12 29 08.2**	**+1.9**
PINE				IAmb	IAmb	12 29 31.4	
	comp=Z,21nm,1.4s						
KBZ	**Khabaz**	**72.50**	**311**	P	**P**	**12 29 10.6**	**+1.1**
	comp=Z,6.3nm,0.9s,baz=35,slow=3.7,SNR=3.6						
	comp=Z,6.3nm,0.9s						
BEKR	**Beckworth**	**74.33**	**52**	P	**P**	**12 29 22.0**	**+1.5**
WAKR	**Walker**	**75.66**	**53**	P	**P**	**12 29 30.3**	**+2.0**
WAKR				IAmb	IAmb	12 29 37.9	
	comp=Z,10nm,1.4s						
LRM	**Limekiln Ridge**	**75.89**	**44**	P	**P**	**12 29 31.1**	**+1.5**
AKASG	**Malin Array Be**	**76.23**	**323**	P	**P**	**12 29 31.1**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=45,slow=6.0,SNR=7.1						
	comp=Z,1.8nm,0.6s						
KVN	**Kaiserville**	**76.24**	**52**	P	**P**	**12 29 32.8**	**+1.2**
KVN				IAmb	IAmb	12 29 34.1	
	comp=Z,3.8nm,0.8s						
KVN	**Kaiserville**	**76.24**	**52**	P	**P**	**12 29 32.8**	**+1.2**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	**NORSAR Array B**	**76.43**	**338**	P	**P**	**12 29 32.6**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=39,slow=5.7,SNR=2.6						
	comp=Z,1.2nm,0.6s						
NVAR	**Mina Array Bea**	**76.45**	**53**	P	**P**	**12 29 34.6**	**+1.8**
	comp=Z,2.3nm,0.7s,baz=284,slow=5.9,SNR=11						
	comp=Z,2.3nm,0.7s						
PDAR	**Pinedale Array**	**79.37**	**45**	P	**P**	**12 29 49.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=222,slow=1.2,SNR=2.7						
	comp=Z,0.6nm,0.7s						
NLU	**North Lily Min**	**79.55**	**49**	P	**P**	**12 29 51.6**	**+1.6**
SHPR	**Sheep Range**	**79.59**	**53**	P	**P**	**12 29 52.3**	**+2.0**
CCUT	**Cedar City**	**80.15**	**51**	P	**P**	**12 29 54.6**	**+1.2**
BRTR	**Keskin Array B**	**80.47**	**312**	P	**P**	**12 29 57.1**	**+2.2**
	comp=Z,1.9nm,0.8s,baz=90,slow=4.4,SNR=4.2						
	comp=Z,1.9nm,0.8s						
RDMU	**Red Mountain**	**80.70**	**47**	P	**P**	**12 29 56.6**	**+0.4**
RDMU				IAmb	IAmb	12 29 60.0	
	comp=Z,8.5nm,1.1s						
SRU	**San Rafael Swe**	**81.01**	**48**	P	**P**	**12 29 58.9**	**+1.0**
SRU				IAmb	IAmb	12 30 00.7	
	comp=Z,6.6nm,0.8s						
SRU	**San Rafael Swe**	**81.01**	**48**	P	**P**	**12 29 58.9**	**+1.0**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PV23	**Carpenter Ridg**	**82.35**	**48**	P	**P**	**12 30 06.4**	**+1.3**
PV10	**Paradox Valley**	**82.38**	**48**	P	**P**	**12 30 04.4**	**-0.8**
PV13	**Radium Mtn., P**	**82.65**	**48**	P	**P**	**12 30 07.7**	**+1.2**
PV13				IAmb	IAmb	12 30 25.6	
	comp=Z,19nm,1.3s						
WUAZ	**Wupatki**	**82.65**	**52**	P	**P**	**12 30 06.3**	**-0.2**
WUAZ				IAmb	IAmb	12 30 19.8	
	comp=Z,11nm,1.4s						
CLL	**Collm**	**83.21**	**330**	*e*P	**P**	**12 30 09.0**	**+0.1**
CLL	**Collm**	**83.21**	**330**	*e*P	**P**	**12 30 09.0**	**+0.1**
TXAR	**Lajitas Array**	**91.60**	**52**	P	**P**	**12 30 50.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=288,slow=3.8,SNR=3.8						
	comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**124.35**	**180**	PKP	**PKPdf**	**12 36 41.1**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=287,slow=4.5,SNR=2.5						
LPAZ	**La Paz**	**147.85**	**63**	PKPbc	**PKPbc**	**12 37 29.8**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=263,slow=1.8,SNR=4.7						

TIF ***04*** *12:40:04.6, 41.°65N×43.°26E, h20km*
DDA ***04*** *12:40:07.4±0.0, 40.°19N×42.°75E, h7km±4km, ML1.7*
ISC 04 12:40:05.2±1.0, 41.°61N±0.°02×43.°22E±0.°02, h8km±9km,
n20, σ0.°94/36, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKRG	**Bakuriani**	**0.27**	**57**	P	**Pg**	**12 40 10.3**	**-0.4**
BKRG				S	**Sg**	**12 40 14.3**	**0.0**
AKH	**Akhalkalaki**	**0.29**	**135**	P	**Pg**	**12 40 11.9**	**+0.9**
AKH				S	**Sg**	**12 40 16.6**	**+1.8**
AZMN	**Azmana**	**0.30**	**170**	P	**Pg**	**12 40 10.0**	**-1.2**
AZMN				S	**Sg**	**12 40 15.3**	**+0.1**
ABS	**Abastumani**	**0.34**	**295**	P	**Pg**	**12 40 12.4**	**+0.6**
ABS				S	**Sb**	**12 40 18.5**	**-0.7**
BRNG	**Burnasheti**	**0.46**	**89**	P	**Pg**	**12 40 14.3**	**+0.2**
BRNG				S	**Sg**	**12 40 21.5**	**+1.4**
ALIG	**Mtskhetisjvari**	**0.59**	**33**	P	**Pg**	**12 40 15.8**	**-0.8**
ALIG				S	**Sg**	**12 40 23.6**	**-0.7**
TKB	**Tkibuli**	**0.76**	**347**	P	**Pg**	**12 40 19.3**	**-0.5**
TKB				S	**Sg**	**12 40 29.8**	**+0.2**
DMNI	**Dmanisi**	**0.78**	**111**	P	**Pg**	**12 40 19.8**	**-0.5**
DMNI				S	**Sg**	**12 40 30.4**	**-0.1**
EAK	**Akyaka**	**0.97**	**162**	P	**Pg**	**12 40 21.1**	**-2.8**
EAK				*i* AML	AML	12 40 36.0	
	comp=E,58nm,0.3s						
EAK				S	**Sg**	**12 40 36.2**	**-0.3**
EAK				*i* AML	AML	12 40 56.0	
	comp=N,35nm,0.5s						
ONI	**Oni**	**0.99**	**10**	P	**Pg**	**12 40 23.3**	**-1.0**
ONI				S	**Sg**	**12 40 37.0**	**-0.2**
DAGI	**Agillar**	**1.12**	**242**	P	**Pg**	**12 40 26.9**	**+0.3**
DAGI				S	**Sb**	**12 40 42.9**	**+1.3**
DAGI				*i* AML	AML	12 40 46.0	
	comp=E,18nm,0.5s						
DAGI				*i* AML	AML	12 40 47.0	
	comp=N,18nm,0.5s						
BATM	**Batumi**	**1.14**	**270**	P	**Pg**	**12 40 26.6**	**-0.6**
BATM				S	**Sb**	**12 40 42.9**	**+0.6**
BTNK	**Botanikuri**	**1.19**	**86**	P	Pg	12 40 18.7	-9.2
DBOC	**Borcka**	**1.20**	**258**	P	**Pg**	**12 40 27.3**	**-0.9**
DBOC				S	**Sb**	**12 40 44.7**	**+0.9**
DBOC				*i* AML	AML	12 40 47.0	
	comp=E,45nm,0.4s						
DBOC				*i* AML	AML	12 41 25.0	
	comp=N,1.1nm,0.6s						
DBAD	**Bademkaya**	**1.29**	**243**	P	**Pg**	**12 40 29.9**	**-0.1**
DBAD				S	**Sb**	**12 40 47.7**	**+1.1**
DBAD				*i* AML	AML	12 40 52.0	
	comp=N,56nm,0.4s						
DBAD				*i* AML	AML	12 40 54.0	
	comp=E,33nm,0.6s						
PNSH	**Pansheti**	**1.46**	**45**	P	Pn	12 40 26.7	-5.3
PNSH				S	**Sb**	**12 40 51.4**	**0.0**
DGRG	**David-gareji**	**1.62**	**95**	P	**Pn**	**12 40 33.9**	**-0.3**
DGRG				S	**Sb**	**12 40 56.7**	**+0.5**
SHTL	**Shatili**	**1.78**	**53**	P	**Pn**	**12 40 36.9**	**+0.5**
SHTL				S	**Sn**	**12 41 00.1**	**+0.9**
EATA	**Eleskirt**	**1.83**	**198**	P	**Pn**	**12 40 37.2**	**-0.2**
LGD	**Lagodekhi**	**2.27**	**83**	P	**Pb**	**12 40 45.7**	**-0.8**
LGD				S	**Sb**	**12 41 16.4**	**+1.6**

PRU ***04*** *12:41:34.2±0.0, 42.°87N×13.°09E, h0km, M4.1*
ROM ***04*** *12:41:35.4±0.1, 42.°855N±0.°003×13.°121E±0.°004, h8km, ML3.6/79, Mw3.4, Error ellipse: s-maj=0.3km s-min=0.2km az=70.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.89; $M_{\theta\theta}$0.47; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.46; $M_{\theta\phi}$-1.00; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.40022×10^{14} NP1:ϕ_s345.00000°, δ54.00000°, λ-42.00000°. NP2:ϕ_s103.00000°, δ57.00000°, λ-136.00000°.*
LDG ***04*** *12:41:36.9±0.1, 42.°72N×13.°13E, h9km, Ml3.1/23 Error ellipse: s-maj=4.5km s-min=2.7km az=48.0*
NEIC ***04*** *12:41:36.5±2.3, 42.°85N±0.°03×13.°00E±0.°06, h10km±2km, Error ellipse: s-maj=8.0km s-min=5.5km az=256.0*
BGR ***04*** *12:41:39.8±0.7, 42.°96N×13.°21E, h10km, ML3.7/4, Error ellipse: s-maj=15.6km s-min=12.2km az=169.0*
ISC 04 12:41:36.0±0.7, 42.°85N±0.°01×13.°09E±0.°01, h5km±4km,
n261, σ1.9°65/335, 39C-27D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**135**	Pg	**Pg**	**12 41 36.5**	**-0.6**
NRCA	**Norcia**	**0.02**	**135**	⇓P	**Pg**	**12 41 37.1**	**0.0**
NRCA				S	**Sg**	**12 41 38.0**	**+0.1**
NRCA				AML	AML		
NRCA				AML

comp=E,25000µm,0.8s
CESI AML AML
comp=N,70650µm,0.3s
AM05 Amandola Campo 0.23 56 ⇑P Pg 12 41 40.4 -0.1
AM05 S **Sg 12 41 43.9 +0.4**
AM05 AML AML
comp=N,3005µm,0.3s
AM05 AML AML
comp=E,11200µm,0.8s
AM05 AML AML
comp=E,40550µm,0.8s
AM05 AML AML
comp=N,10850µm,0.6s
T1204 Amatrice, Fraz 0.24 136 ⇓P Pg 12 41 40.9 +0.2
T1204 S **Sg 12 41 44.8 +1.0**
T1204 AML AML
comp=N,28750µm,0.7s
T1204 AML AML
comp=E,42200µm,0.3s
T1204 AML AML
comp=E,42150µm,0.3s
T1241 Roccafluvione, 0.25 88 ⇑P Pg 12 41 40.8 -0.1
T1241 S **Sg 12 41 44.3 +0.2**
T1241 AML AML
comp=N,57950µm,0.7s
T1241 AML AML
comp=E,32900µm,1.2s
T1241 AML AML
comp=N,56450µm,0.8s
T1241 AML AML
comp=E,34300µm,1.2s
LNSS Leonessa 0.25 189 ⇑P Pg 12 41 41.2 +0.3
LNSS S **Sg 12 41 45.4 +1.3**
LNSS AML AML
comp=N,35350µm,0.5s
LNSS AML AML
comp=E,42400µm,0.4s
CSP1 Cessapalombo 0.26 19 ⇑P Pg 12 41 40.9 -0.2
CSP1 S **Sg 12 41 44.6 +0.2**
CSP1 AML AML
comp=E,55550µm,1.3s
CSP1 AML AML
comp=N,54200µm,0.4s
CSP1 AML AML
comp=E,55500µm,1.3s
CSP1 AML AML
comp=N,54150µm,0.4s
GUMA Gualdo di Mace 0.28 40 ⇑P Pg 12 41 41.5 +0.1
GUMA S **Sg 12 41 46.1 +1.0**
GUMA AML AML
comp=E,66450µm,0.2s
GUMA AML AML
GUMA AML AML
comp=E,67450µm,0.6s
GUMA AML AML
comp=E,66450µm,0.2s
GUMA AML AML
comp=N,99350µm,0.5s
T1243 Rocca Santa Ma 0.30 120 ⇓P Pg 12 41 41.6 -0.2
T1243 S **Sg 12 41 46.4 +0.5**
SEF1 Sefro 0.32 340 ⇓P Pg 12 41 42.1 0.0
SEF1 S **Sg 12 41 47.4 +1.1**
SEF1 AML AML
comp=E,27150µm,0.3s
SEF1 AML AML
comp=N,27950µm,0.3s
SEF1 AML AML
comp=N,27900µm,0.3s
PIO1 Pioraco 0.34 346 P Pg 12 41 42.6 +0.1
PIO1 AML AML
comp=E,10800µm,0.4s
PIO1 AML AML
comp=E,10850µm,0.4s
PIO1 AML AML
comp=N,18750µm,0.6s
MDAR Monte D'Aria 0.35 6 ⇑P Pg 12 41 42.5 -0.3
MDAR S **Sg 12 41 47.8 +0.5**
RM33 Pellescritta (0.35 165 ⇑P Pg 12 41 42.9 +0.1
RM33 S **Sg 12 41 48.7 +1.3**
RM33 AML AML
comp=E,28650µm,0.3s
RM33 AML AML
comp=N,54400µm,0.2s
RM33 AML AML
comp=E,28600µm,0.3s
RM33 AML AML
comp=E,27850µm,0.3s
RM33 AML AML
comp=N,54600µm,0.2s
RM33 AML AML
comp=E,27850µm,0.3s
FIU1 Fiuminata 0.36 341 P Pg 12 41 42.9 -0.1
FIU1 S **Sg 12 41 49.0 +1.3**
FIU1 AML AML
comp=N,6090µm,1.3s
FIU1 AML AML
comp=E,11950µm,0.4s
SSM1 San Severino M 0.39 9 P Pg 12 41 43.2 -0.2
CAMP Campotosto 0.39 143 Pg **Pg 12 41 43.4 -0.2**
CAMP Sg **Sg 12 41 49.8 +1.2**
CAMP Campotosto 0.39 143 ⇑P Pg 12 41 43.3 -0.2
CAMP S **Sg 12 41 49.3 +0.6**
CAMP AML AML
comp=E,7665µm,0.3s
CAMP AML AML
comp=N,8020µm,0.6s
GAG1 Gagliole 0.39 357 P Pg 12 41 43.5 0.0
GAG1 AML AML
comp=E,34500µm,0.6s
GAG1 AML AML
comp=N,35250µm,1.1s
GAG1 AML AML
comp=E,34450µm,0.6s
T1246 Crognaleto (TE 0.40 132 P Pg 12 41 43.4 -0.2
T1246 S **Sg 12 41 49.5 +0.6**
MNTP Montappone 0.40 44 P Pg 12 41 44.0 +0.3
MNTP S **Sb 12 41 51.0 -0.9**
MNTP AML AML
comp=E,34150µm,0.7s
MNTP AML AML
comp=N,24700µm,0.4s
MNTP AML AML
comp=E,34150µm,0.7s
MNTP AML AML
comp=N,24750µm,0.4s
MTL1 Matelica 0.41 351 P Pg 12 41 44.0 +0.1
SNTG Esanatoglia 0.42 345 ⇓P Pg 12 41 43.9 -0.2
SNTG AML AML
comp=N,7140µm,0.3s
SNTG AML AML
comp=E,6985µm,1.4s
SNTG AML AML
comp=N,7265µm,1.0s
SNTG AML AML
comp=E,7125µm,1.4s
SNTG AML AML
comp=N,7140µm,0.3s
T1247 Pizzolo (AQ) 0.43 160 P Pg 12 41 44.3 0.0
T1247 S **Sg 12 41 51.4 +1.4**
TERO Teramo 0.44 121 ⇑P Pg 12 41 44.0 -0.4
TERO S **Sg 12 41 50.7 +0.5**
TERO AML AML
comp=E,10595µm,0.3s
TERO AML AML
comp=N,19350µm,0.2s
TERO AML AML
comp=E,9375µm,0.3s
TERO AML AML
comp=N,17850µm,0.2s
CESX Cesi 0.45 238 Pg 12 41 44.5 -0.1
CESX Cesi 0.45 238 ⇑P Pg 12 41 44.7 +0.1
CESX AML AML
comp=N,7955µm,0.5s
CESX AML AML
comp=E,8710µm,0.6s
ATCC AVT- Casa Cast 0.47 315 ⇓P Pg 12 41 45.1 +0.1
ATCC AML AML
comp=N,10340µm,0.4s
ATCC AML AML
comp=N,10345µm,0.4s
ATCC AML AML
comp=E,11050µm,0.6s
EL6 Elcito 0.48 1 ⇑P Pg 12 41 44.9 -0.4
EL6 AML AML
comp=E,19250µm,0.2s
EL6 AML AML
comp=N,21300µm,0.2s
TRE1 Treia 0.49 19 P Pg 12 41 45.5 +0.1
TRE1 AML AML
comp=N,18100µm,0.3s
TRE1 AML AML
comp=E,19950µm,1.5s
TRE1 AML AML
comp=N,18150µm,0.3s
GIGS Gran Sasso 0.53 138 ⇑P Pg 12 41 45.5 -0.7
GIGS AML AML
comp=E,1665µm,1.2s
GIGS AML AML
comp=N,1550µm,0.5s
CING Cingoli 0.53 8 ⇑P Pg 12 41 45.8 -0.4
CING AML AML
comp=N,6280µm,1.0s
CING AML AML
comp=E,8390µm,0.4s
AQU L'Aquila 0.54 155 Pg **Pg 12 41 46.1 -0.3**
AQU Sg **Sg 12 41 55.0 +1.5**
AQU L'Aquila 0.54 155 ⇑P Pg 12 41 46.1 -0.3
AQU S **Sg 12 41 54.6 +1.1**
AQU AML AML
comp=E,7340µm,0.8s
AQU AML AML
comp=N,5115µm,1.2s
AQU AML AML
comp=E,6895µm,0.8s
AQU AML AML
comp=N,5110µm,1.2s
AQU AML AML
comp=N,5195µm,1.2s
FIAM Fiamignano 0.58 178 ⇑P Pg 12 41 46.8 -0.4
FIAM S **Sg 12 41 55.5 +0.8**
FIAM AML AML
comp=N,5500µm,0.3s
FIAM AML AML
comp=E,5200µm,0.9s
MURB Monte Urbino 0.59 315 Pg 12 41 47.1 -0.1
MURB Monte Urbino 0.59 315 ⇓P Pg 12 41 47.2 -0.1
MURB AML AML
comp=E,11300µm,0.3s
MURB AML AML
comp=N,12550µm,0.3s
MURB AML AML
comp=N,12750µm,0.3s
MURB AML AML
comp=E,12400µm,0.3s
MURB AML AML
comp=E,11350µm,0.3s
MMUR Monte Murano 0.60 353 P Pg 12 41 47.2 -0.2
CADA Capodarco di F 0.60 55 P Pb 12 41 48.4 -0.5
CADA AML AML
comp=N,20600µm,0.6s
CADA AML AML
comp=E,18000µm,0.4s
TRTR Tortoreto Alta 0.60 94 ⇑P Pg 12 41 48.3 +0.7
TRTR AML AML
comp=E,14300µm,0.4s
TRTR AML AML
comp=N,16600µm,0.8s
CIMA Civitanova Mar 0.62 43 P Pb 12 41 48.7 -0.6
SSFR Montelago di S 0.63 339 P Pg 12 41 47.2 -0.9
SSFR AML AML
comp=N,12100µm,0.3s
SSFR AML AML
comp=E,10850µm,0.2s
SSFR AML AML
comp=N,11750µm,0.8s
SSFR AML AML
comp=E,11400µm,0.3s
ATFO Monte Foce - G 0.64 324 ⇓P Pg 12 41 48.1 -0.3
ATFO AML AML
comp=N,3445µm,0.9s
ATFO AML AML
comp=E,5510µm,0.5s
ATTE AVT- Monte Tez 0.65 303 ⇓P Pg 12 41 48.2 -0.2
ATTE AML AML
comp=E,3320µm,1.1s
ATTE AML AML
comp=N,2805µm,0.4s
PP3 Marolino 0.65 35 P Pg 12 41 48.8 +0.3
PP3 AML AML
comp=E,15450µm,0.3s
PP3 AML AML
comp=N,17300µm,0.4s
PP3 AML AML
comp=N,17350µm,0.4s
PP3 AML AML
comp=E,15150µm,0.3s
ARVD Arcevia 0.66 350 P Pg 12 41 48.1 -0.5
ARVD S **Sg 12 41 58.3 +1.1**
ARVD AML AML
comp=E,4355µm,1.3s
ARVD AML AML
comp=N,3230µm,0.5s
FAGN Fagnano 0.69 148 ⇓P Pg 12 41 48.5 -0.6
FAGN AML AML
comp=N,10560µm,0.4s
FAGN AML AML
comp=E,13750µm,0.4s
VCEL Villa Celiera 0.71 129 ⇑P Pg 12 41 49.3 -0.4
VCEL AML AML
comp=E,5780µm,0.3s
VCEL AML AML
comp=N,6005µm,0.5s
VCEL AML AML
comp=N,6010µm,0.5s
FRON Frontone 0.72 338 P Pg 12 41 49.3 -0.6
MGAB Montegabbione 0.72 275 P Pg 12 41 50.1 +0.2
MGAB AML AML
comp=E,6360µm,0.4s
MGAB AML AML
comp=E,5975µm,0.6s
MGAB AML AML
comp=N,10570µm,0.5s
MGAB AML AML
comp=N,11735µm,0.5s
ATVO AVT- Monte Val 0.73 317 ⇓P Pg 12 41 49.6 -0.5
ATVO AML AML
comp=N,2210µm,1.6s
ATVO AML AML
comp=E,1925µm,0.4s
SRES S.Oreste - Sor 0.75 215 P Pg 12 41 50.0 -0.3
SRES AML AML
comp=E,3480µm,0.4s
SRES AML AML
comp=N,2485µm,0.6s
ATMI Monte Miggiano 0.78 309 P Pg 12 41 51.0 +0.1
ATMI AML AML
comp=E,6405µm,0.9s
ATMI AML AML
comp=N,8475µm,1.4s
ATPI Pietralunga - 0.79 320 ⇓P Pg 12 41 50.6 -0.4
ATPI AML AML
comp=E,2930µm,0.6s
ATPI AML AML
comp=N,2405µm,0.6s
ATPI AML AML
comp=N,2400µm,0.6s
COR1 Corinaldo 0.79 355 ⇑P Pg 12 41 51.4 +0.4
COR1 AML AML
comp=E,9165µm,1.2s
COR1 AML AML
comp=N,8850µm,1.0s
COR1 AML AML
comp=E,4950µm,0.9s
COR1 AML AML
comp=N,8800µm,0.9s
COR1 AML AML
comp=E,9160µm,1.2s
COR1 AML AML
comp=N,8845µm,0.9s
COR1 AML AML
comp=E,8500µm,1.6s
COR1 AML AML
comp=N,8785µm,0.9s
COR1 AML AML
comp=E,9160µm,1.2s
COR1 AML AML
comp=N,8845µm,1.0s
COR1 AML AML
comp=N,8795µm,0.9s
AOI Ancona 0.79 28 ⇑P Pg 12 41 50.7 -0.5
AOI AML AML
comp=E,6060µm,0.3s
AOI AML AML
comp=N,4430µm,0.3s
PIEI Pieia 0.80 329 ⇓P Pg 12 41 50.5 -0.8
PIEI AML AML
comp=E,2260µm,0.3s
PIEI AML AML
comp=N,1955µm,0.3s
T0110 Collepietro 0.80 141 ⇑P Pg 12 41 50.3 -1.1
T0110 AML AML
comp=E,5380µm,0.4s
T0110 AML AML
comp=N,5790µm,1.1s
MPAG Monte Paganucc 0.82 343 ⇓P Pg 12 41 51.0 -0.6
MPAG S **Sb 12 42 03.7 -0.3**
MPAG AML AML
comp=N,4135µm,0.3s
MPAG AML AML
comp=E,6860µm,0.4s
PCRQ Pietralacroce 0.82 23 P Pb 12 41 52.5 -0.2
PTQR Pietraquaria 0.86 165 ⇓P Pg 12 41 51.6 -0.7
PTQR AML AML
comp=N,1220µm,0.4s
PTQR AML AML
comp=E,1540µm,1.2s
SENI Senigallia 0.86 7 P Pg 12 41 52.4 -0.1
SENI AML AML
comp=E,13400µm,0.4s
SENI AML AML
comp=N,13450µm,1.2s
SENI AML AML
comp=N,13450µm,1.2s
SENI AML AML
comp=E,13400µm,0.4s
APEC Apecchio 0.86 325 ⇑P Pg 12 41 52.6 +0.1
MTCE Montecelio 0.86 198 ⇓P Pg 12 41 51.8 -0.8
MTCE AML AML
comp=E,1810µm,0.5s
MTCE AML AML
comp=N,1375µm,1.6s
SACS San Casciano d 0.87 270 ⇓P Pg 12 41 52.9 +0.2
SACS AML AML
comp=E,2885µm,0.8s
SACS AML AML
comp=N,3420µm,0.7s
SACS AML AML
comp=E,3005µm,0.8s
SACS AML AML
comp=E,2890µm,0.8s
SACS AML AML
comp=N,3470µm,0.8s
FSSB Fossombrone 0.87 345 ⇓P Pg 12 41 52.1 -0.6
FSSB S **Sb 12 42 05.7 +0.1**
FSSB AML AML
comp=N,20950µm,0.4s
FSSB AML AML
comp=E,10250µm,0.4s
CERT Cerreto 0.90 185 ⇑P Pg 12 41 52.0 -1.3
CERT AML AML
comp=N,2540µm,0.5s
CERT AML AML
comp=E,4825µm,0.4s
BADI Badiali 0.91 317 P Pg 12 41 52.8 -0.6
PE3 Peglio 0.95 333 ⇑P Pg 12 41 53.9 -0.4
CAFI Castiglion Fio 0.95 301 P Pg 12 41 54.0 -0.3
LATE Laterza 0.98 257 Pg 12 41 54.5 -0.2
LATE Laterza 0.98 257 P Pg 12 41 54.9 +0.2
RCAV Rocca di Cave 1.01 186 P Pg 12 41 54.2 -1.0
RCAV AML AML
comp=N,3020µm,1.6s
RCAV AML AML
comp=E,3435µm,1.1s
SSP9 Sansepolcro 1.01 316 P Pg 12 41 55.4 0.0
INTR Introdacqua 1.03 144 ⇑P Pg 12 41 54.1 -1.6
INTR AML AML
comp=E,2465µm,1.0s
INTR AML AML
comp=E,2µm,1.0s
INTR AML AML
comp=N,3880µm,0.8s
INTR AML AML
comp=N,3µm,0.8s
SF03 Valle Cupa 1.04 268 P Pg 12 41 56.1 +0.2
SF11 Podere del Sol 1.04 272 P Pg 12 41 56.2 +0.3
VVLD Villa Vallelon 1.05 158 P Pg 12 41 55.8 -0.3
VVLD AML AML
comp=N,1650µm,0.6s
VVLD AML AML
comp=E,2040µm,0.8s
SF04 Casetta 1.05 270 AML AML
comp=E,1260µm,0.1s
SF04 AML AML
comp=E,1260µm,0.1s
SF04 AML AML
comp=N,1772µm,0.1s
SF04 AML AML
comp=N,1772µm,0.1s
GUAR Guarcino 1.07 171 ⇑P Pg 12 41 56.6 +0.2
GUAR AML AML
comp=N,2465µm,0.5s
GUAR AML AML
comp=E,2000µm,0.4s
RMP Rome, Mte Porz 1.08 196 P Pg 12 41 57.2 +0.6
SF13 Bagnolo 1.08 269 P Pg 12 41 56.9 +0.1
SF14 Selvena 1.09 266 P Pg 12 41 57.2 +0.3
CPGN Carpegna, Ital 1.11 330 P Pg 12 41 57.2 0.0
CPGN AML AML
comp=N,2990µm,0.6s
CPGN AML AML
comp=E,2780µm,1.6s
CPGN AML AML
comp=N,2945µm,0.8s
CPGN AML AML
CPGN AML AML
comp=E,2785µm,1.6s
CPGN AML AML
comp=N,2950µm,0.8s
CPGN AML AML
comp=N,2990µm,0.6s
CPGN AML AML
PESA Pesaro 1.11 350 P Pg 12 41 57.2 0.0
PESA AML AML
comp=N,4050µm,0.6s
PESA AML AML
comp=E,4270µm,0.9s
VIVA Pratoni del Vi 1.12 192 P Pg 12 41 57.7 +0.2
MA9 Marino 1.12 197 P Pb 12 41 57.9 0.0
RDP Rocca di Papa 1.12 195 P Pg 12 41 58.2 +0.7
SF01 Poggio Pratacc 1.13 269 P Pg 12 41 57.7 +0.2
SF01 AML AML
comp=E,1456µm,0.4s
SF01 AML AML
comp=N,1975µm,0.5s
SF01 AML AML
comp=E,1454µm,0.4s
TOLF Tolfa 1.13 226 ⇑P Pb 12 41 56.9 -1.0
TOLF AML AML
comp=E,1120µm,0.6s
TOLF AML AML
comp=N,1110µm,0.5s
SAMA S.Maria delle 1.13 199 P Pb 12 41 56.6 -1.3
CRE Caprese Michel 1.14 313 ⇓P Pg 12 41 57.2 -0.5
CRE AML AML
comp=N,1120µm,1.2s
CRE AML AML
comp=E,1032µm,0.7s
LPEL Lama dei Pelig 1.14 134 P Pg 12 41 57.0 -0.7
RSM Repubblica di 1.18 337 P Pb 12 41 58.8 0.0
ARCI Arcidosso 1.19 271 P Pb 12 41 58.6 -0.5
LAV9 Lanuvio 1.21 194 P Pb 12 41 58.7 -0.5
POFI Posta Fibreno 1.22 158 P Pb 12 41 58.2 -1.3
LRP Arpino 1.25 163 P Pn 12 42 00.2 +0.1
GIUL Giuliano Di Ro 1.29 175 P Pn 12 41 59.4 -1.2
GIUL AML AML
comp=E,1014µm,1.1s
GIUL AML AML
comp=N,1104µm,0.7s
ASQU Asqua 1.34 315 P Pn 12 42 00.8 -0.6
RNI2 Rionero Sannit 1.39 145 P Pn 12 42 01.3 -0.7
RNI2 AML AML
comp=E,1445µm,1.2s
RNI2 AML AML
comp=N,1140µm,0.9s
RNI2 AML AML
comp=N,1180µm,0.9s
RNI2 AML AML
comp=E,1485µm,1.3s
SFI Santa Sofia 1.39 320 P Pn 12 42 01.7 -0.3

SFI AML AML
comp=E,677µm,0.5s
SFI AML AML
comp=N,578µm,0.6s
CERA Filignano 1.43 151 P **Pn 12 42 01.3 -1.2**
FRES Fresagrandinar 1.46 126 P **Pb 12 42 03.6 +0.1**
CSNT Castellina Chi 1.46 296 P **Pn 12 42 02.7 -0.3**
MAON Monte Argentar 1.51 254 P **Pn 12 42 02.8 -0.7**
OSSC Osservatorio P 1.51 297 **Pn 12 42 02.1 -1.5**
OSSC Osservatorio P 1.51 297 P **Pn 12 42 02.4 -1.3**
RUFI Rufina 1.52 311 P **Pn 12 42 03.4 -0.4**
LMD Lutirano 1.59 321 P **Pn 12 42 05.3 +0.6**
TRIF Trifonti 1.63 280 P **Pn 12 42 05.2 -0.1**
CASP Castiglione de 1.64 269 **Pn 12 42 04.6 -0.8**
CASP Castiglione de 1.64 269 ⇑P **Pn 12 42 04.7 -0.7**
CASP AML AML
comp=E,123µm,0.6s
CASP AML AML
comp=N,128µm,0.9s
VAGA Valle Agricola 1.67 149 P **Pb 12 42 07.1 0.0**
BSSO Busso 1.71 139 ⇑P **Pg 12 42 09.0 +0.2**
BRIS BRISIGHELLA 1.74 319 ⇑P **Pb 12 42 08.5 +0.2**
MSC Monte Massico 1.78 158 P **Pn 12 42 08.1 +0.8**
CIGN Sant'Elia a Pi 1.80 131 P **Pb 12 42 09.7 +0.4**
MODR Mondragone 1.80 161 P **Pn 12 42 08.0 +0.5**
MPPT Montemurlo 1.83 308 P **Pn 12 42 08.6 +0.5**
MELA Melanico ??? S 1.89 126 P **Pn 12 42 09.8 +0.9**
BRJN Brijuni 2.11 13 ⇓P **Pn 12 42 11.5 -0.4**
APRC Apricena 2.12 120 P **Pn 12 42 12.8 +0.8**
APRC AML AML
comp=E,444µm,0.3s
APRC AML AML
comp=N,619µm,1.1s
PAOL Paolisi 2.12 148 **Pn 12 42 11.2 -0.9**
ZCCA Zocca 2.15 315 Pn **Pn 12 42 11.7 -0.8**
MAIM Mastiano 2.17 300 AML AML
comp=E,166µm,0.6s
MAIM AML AML
comp=N,208µm,0.5s
BDI Bagni Di Lucca 2.19 305 P **Pn 12 42 12.4 -0.5**
SGRT San Giovanni R 2.25 118 **Pn 12 42 13.4 -0.4**
SGRT San Giovanni R 2.25 118 P **Pn 12 42 14.7 +0.8**
SGRT AML AML
comp=N,473µm,1.0s
SGRT AML AML
comp=E,486µm,0.8s
VLC Villacollemand 2.37 305 **Pn 12 42 14.1 -1.3**
EQUI Equi 2.51 303 AML AML
comp=N,125µm,0.6s
EQUI AML AML
comp=E,89µm,0.6s
TEOL Teolo 2.71 338 **Pn 12 42 20.6 +0.5**
SKDS Skadanscina 2.78 13 *e*Pn **Pn 12 42 20.1 -1.0**
SKDS *e*Sn **Sn 12 42 54.1 -0.9**
SKDS IAML 12 42 55.2
comp=Z,78nm,0.3s
MSSA Maissana 2.98 301 Pn **Pn 12 42 23.8 -0.1**
PGF Pioggiola 3.03 266 *e*Pn **Pn 12 42 24.5 -0.1**
PGF *e*Sn **Sn 12 42 59.3 -2.1**
comp=Z,16nm,0.5s
BOJS Bojanci 3.08 30 P **Pn 12 42 26.3 +1.2**
BOJS AML AML
comp=E,451µm,0.8s
BOJS AML AML
comp=N,478µm,0.5s
JAVS Javornik 3.12 13 *i* Pn **Pn 12 42 25.0 -0.9**
SABO M.te Sabotino 3.15 6 ⇓P **Pn 12 42 25.7 -0.5**
SABO AML AML
comp=E,1640µm,0.4s
SABO AML AML
comp=N,2210µm,0.6s
SABO AML AML
comp=E,424µm,0.4s
SABO AML AML
comp=N,581µm,0.5s
AMUR Altamura 3.26 125 P **Pn 12 42 28.3 +0.6**
DOSS Dosso del Somm 3.33 336 P **Pn 12 42 29.4 +0.6**
SALO Salr 3.33 327 **Pn 12 42 27.4 -1.2**
SALO Salr 3.33 327 P **Pb 12 42 30.2 +1.6**
LJU Ljubljana 3.35 17 P **Pn 12 42 28.3 -0.7**
CTI Castel Tesino 3.36 343 **Pn 12 42 28.9 -0.3**
CTI Castel Tesino 3.36 343 P **Pn 12 42 29.5 +0.3**
MPRI Monte Prat 3.39 359 P **Pn 12 42 29.5 0.0**
MPRI AML AML
comp=E,279µm,0.6s
MPRI AML AML
comp=N,452µm,0.8s
ROBS Robic 3.41 5 *i* Pn **Pn 12 42 29.1 -0.6**
MAGA Magasa 3.42 330 P **Pn 12 42 30.6 +0.7**
MAGA AML AML
comp=N,490µm,0.4s
MAGA AML AML
comp=E,622µm,0.6s
STAL STALIGIAL 3.42 356 **Pn 12 42 29.6 -0.3**
STAL STALIGIAL 3.42 356 ⇑P **Pn 12 42 29.8 -0.1**
STAL AML AML
comp=E,312µm,1.2s
STAL AML AML
comp=N,254µm,0.9s
LUSI Trento, Gardas 3.47 334 P **Pn 12 42 31.8 +1.1**
CIMO Cimolais 3.49 353 P **Pn 12 42 30.7 -0.2**
CIMO AML AML
comp=E,82µm,0.5s
CIMO AML AML
comp=N,97µm,0.8s
CIMO AML AML
comp=E,94µm,1.0s
CIMO AML AML
comp=N,103µm,0.7s
CUC Castrocucco 3.51 143 **Pn 12 42 34.1 +3.0**
PTCC Patocco-Chiusa 3.56 3 P **Pn 12 42 31.2 -0.7**
PTCC AML AML
comp=E,186µm,0.3s
PTCC AML AML
comp=N,182µm,0.3s
PRED Cave del Predi 3.61 5 **Pn 12 42 32.5 0.0**
CLUD Cludinico 3.61 358 **Pn 12 42 32.6 +0.1**
CLUD Cludinico 3.61 358 AML AML
comp=N,206µm,0.7s
CLUD AML AML
comp=E,199µm,1.2s
ZOU Zoufplan 3.71 359 AML AML
comp=N,184µm,1.0s
ZOU AML AML
comp=E,216µm,1.4s
ZOU AML AML
comp=E,230µm,1.4s
ZOU AML AML
comp=N,209µm,0.9s
ACOM Acomizza, Ital 3.71 4 AML AML
comp=N,354µm,0.4s
ACOM AML AML
comp=E,352µm,0.3s
MYKA Terra Mystica 3.80 6 *i* Pn **Pn 12 42 35.4 +0.2**
comp=E,5.2nm,0.2s,SNR=8.5
MYKA *e*Sn **Sn 12 43 20.4 +0.1**
comp=E,26nm,0.5s
ABTA Abfaltersbach 3.92 354 *e*Pn **Pn 12 42 37.6 +0.8**
comp=E,93nm,0.6s,SNR=49
ABTA *i* Sn **Sn 12 43 23.1 -0.1**
comp=E,27nm,0.5s
SOKA Soboth 4.07 19 *e*Pn **Pn 12 42 39.6 +0.7**
comp=E,1.6nm,0.4s
SOKA *e*Sn **Sn 12 43 24.9 -2.0**
comp=E,5.8nm,0.3s
KBA Koelnbreinsper 4.23 2 *i* Pn **Pn 12 42 42.0 +0.8**
comp=E,9.8nm,0.3s
KBA *i* Sn **Sn 12 43 30.0 -1.0**
comp=E,34nm,0.4s
KBA Koelnbreinsper 4.23 2 *e*Pn **Pn 12 42 42.0 +0.8**
KBA *e*Sn **Sn 12 43 30.3 -0.8**
SBF Sospel 4.25 286 *e*Pn **Pn 12 42 41.1 -0.2**
SBF *e*Sn **Sn 12 43 27.2 -4.1**
comp=E,4.7nm,0.3s
FUORN Ofenpass-Fuorn 4.28 333 **Pn 12 42 43.9 +2.0**
FETA Feichten 4.50 339 *i* Pn **Pn 12 42 46.0 +1.2**
comp=E,14nm,0.7s,SNR=11
TUE Stuetta 4.50 325 **Pn 12 42 42.1 -2.8**
WTTA Wattenberg 4.53 347 *i* Pn **Pn 12 42 47.2 +1.9**
comp=E,7.3nm,0.3s
WTTA *e*Sn **Sn 12 43 40.9 +2.5**
comp=E,16nm,0.4s
WTTA Wattenberg 4.53 347 *e*Pn **Pn 12 42 47.1 +1.8**
PDG Podgorica 4.56 93 Pn **Pn 12 42 46.6 +1.1**
SQTA Sankt Quirin 4.57 344 *e*Pn **Pn 12 42 48.1 +2.3**
comp=E,13nm,0.3s,SNR=6.4
SQTA *e*Sn **Sn 12 43 40.5 +1.2**
comp=E,32nm,0.4s
TIP Timpagrande 4.60 142 Pn **Pn 12 42 44.7 -1.4**
WATA Walderalm 4.61 347 *i* Pn **Pn 12 42 48.5 +2.1**
comp=E,16nm,0.5s,SNR=6.0
WATA *i* Sn **Sn 12 43 43.0 +2.6**
comp=E,12nm,0.3s
MOTA Moosalm 4.71 343 *i* Pn **Pn 12 42 49.9 +2.1**
comp=E,8.3nm,0.4s,SNR=7.0
MOTA *e*Sn **Sn 12 43 45.5 +2.7**
comp=E,12nm,0.4s
ARSA Arzberg 4.73 21 *i* Pn **Pn 12 42 47.9 +0.1**
comp=E,3.1nm,0.3s
ARSA *e*Sn **Sn 12 43 39.4 -3.6**
comp=E,11nm,0.3s
ARSA Arzberg 4.73 21 *e*Pn **Pn 12 42 48.2 +0.4**
ARSA *e*Sn **Sn 12 43 39.3 -3.6**
LMR La Mourre 4.85 278 *e*Pn **Pn 12 42 48.7 -0.8**
LMR *e*Sn **Sn 12 43 43.8 -2.1**
comp=E,1.0nm,0.2s
BIOA Bad Ischl, Aus 4.86 4 *e*Pn **Pn 12 42 49.6 0.0**
comp=E,16nm,0.3s,SNR=9.5
BIOA *e*Sn **Sn 12 43 46.2 0.0**
comp=E,46nm,0.5s
RJOB Jochberg 4.89 358 *e*Pn **Pn 12 42 52.0 +1.8**
RJOB *e*Sn **Sn 12 43 44.9 -2.3**
SCTE Santa Cesarea 4.90 123 Pn **Pn 12 42 50.3 +0.1**
RETA Reutte 4.92 341 *i* Pn **Pn 12 42 52.4 +1.8**
comp=E,2.9nm,0.2s
RETA *i* Sn **Sn 12 43 48.9 +1.0**
comp=E,8.9nm,0.4s
MBDF Montbardon 4.95 294 *e*Pn **Pn 12 42 50.8 -0.2**
MBDF *e*Sn **Sn 12 43 45.3 -3.3**
comp=E,0.9nm,0.5s
PLONS Plons/SG 4.96 329 *e*Pn **Pn 12 42 54.6 +3.5**
OBER Oberstdorf 4.97 337 *e*Pn **Pn 12 42 54.5 +3.3**
OBER *e*Sn **Sn 12 43 48.9 -0.1**
DAVA Damuels 4.99 334 *e*Pn **Pn 12 42 53.9 +2.3**
comp=E,8.3nm,0.3s,SNR=7.9
DAVA *e*Sn **Sn 12 43 48.3 -1.3**
comp=E,15nm,0.4s
DAVA Damuels 4.99 334 *e*Pn **Pn 12 42 55.2 +3.6**
MOA Molln 5.07 9 *i* Pn **Pn 12 42 52.6 +0.1**
comp=E,4.2nm,0.3s
MOA *i* Sn **Sn 12 43 50.2 -1.3**
comp=E,6.4nm,0.2s
BNI Bardonecchia 5.13 298 **Pn 12 42 52.5 -1.0**
DIVS Divibare 5.17 74 Pn **Pn 12 42 56.0 +1.9**
TIR Tirane 5.26 104 Pn **Pn 12 42 56.8 +1.6**
UBR Ueberruh 5.27 337 *e*Pn Pn 12 42 59.8 +4.4
UBR *e*Sn **Sn 12 43 58.5 +2.1**
LPG La Plagne 5.27 302 *e*Pn **Pn 12 42 55.6 0.0**
LPG *e*Sn **Sn 12 43 53.7 -3.2**
comp=E,3.6nm,0.3s
LPL La Plagne 5.29 302 *e*Pn **Pn 12 42 55.7 -0.1**
LPL *e*Sn **Sn 12 43 55.0 -2.3**
comp=E,4.0nm,0.3s
RONA Rosalia, Austr 5.35 24 *i* Pn **Pn 12 42 57.3 +0.9**
comp=E,2.1nm,0.2s
RONA *i* Sn **Sn 12 43 56.5 -2.0**
comp=E,6.7nm,0.4s
SENIN Lac Senin/Sane 5.43 312 Pn **Pn 12 42 57.5 -0.1**
CONA Conrad Observa 5.44 20 *i* Pn **Pn 12 42 57.8 +0.1**
comp=E,2.8nm,0.2s
CONA *e*Sn **Sn 12 43 58.3 -2.4**
comp=E,7.4nm,0.3s
SMRF Simiane la Rot 5.59 284 *e*Pn **Pn 12 42 59.4 -0.3**
SMRF *e*Sn **Sn 12 43 59.3 -5.0**
comp=E,0.8nm,0.3s
ORIF Oris-en-Rattie 5.61 294 *e*Pn **Pn 12 42 59.6 -0.4**
ORIF *e*Sn **Sn 12 44 02.8 -2.0**
comp=E,5.5nm,0.5s
SLE Schleitheim 5.89 328 *e*Pn **Pn 12 43 04.8 +1.0**
BALST Balsthal 5.89 321 *e*Pn **Pn 12 43 05.6 +1.7**
BALST *e*Sn **Sn 12 44 11.9 +0.1**
METMA Mettma DE 5.94 327 *e*Pn **Pn 12 43 05.2 +0.7**
METMA *e*Sn **Sn 12 44 10.2 -2.7**
KEK Kerkira 5.94 120 Pn **Pn 12 43 06.1 +1.6**
GEC2 GERESS Array S 6.01 4 Pn **Pn 12 43 05.1 -0.4**
GEC2 GERESS Array S 6.01 4 *e*Pn **Pn 12 43 04.9 -0.7**
GEC2 *e*Pg **Pg 12 43 31.0 -0.1**
GEC2 *e*Sn **Sn 12 44 11.6 -3.1**
GERES GERESS Array B 6.01 4 **Pn 12 43 04.7 -0.9**
CKRC Cesky Krumlov 6.03 8 *e*PN **Pn 12 43 04.8 -1.0**
CKRC *e*SN **Sn 12 44 11.7 -3.5**
BERGE Lenzkirch (DE) 6.10 327 *e*Pn **Pn 12 43 07.5 +0.7**
BERGE *e*Sn **Sn 12 44 14.6 -2.3**
CABF La Chapelle 6.25 309 *e*Pn **Pn 12 43 08.8 0.0**
CABF *e*Sn **Sn 12 44 17.4 -3.2**
comp=E,4.0nm,0.4s
KHC Kasperske Hory 6.29 3 **Pn 12 43 08.6 -0.8**
KHC Kasperske Hory 6.29 3 *e*PN **Pn 12 43 08.5 -0.8**
KHC *e*SN **Sn 12 44 17.6 -4.0**
WET Wettzell 6.30 359 *e*Pn **Pn 12 43 08.6 -0.8**
WET *e*Sn **Sn 12 44 17.0 -4.7**
VIVF Saint-Julien-l 6.41 291 *e*Pn **Pn 12 43 09.9 -1.1**
BFO Black Forest 6.42 330 Pn **Pn 12 43 11.1 0.0**
BFO Black Forest 6.42 330 *e*Pn **Pn 12 43 12.4 +1.3**
BFO *e*Sn **Sn 12 44 21.5 -3.2**
MDVR Moldovita 6.53 70 ⇓P **Pg 12 43 36.8 -4.2**
MDVR ⇑S Sn 12 43 43.6 -44
HINF Hinteralfeld 6.63 321 *e*Pn **Pn 12 43 14.0 0.0**
HINF *e*Sn **Sn 12 44 26.0 -4.0**
comp=E,15nm,0.5s
BZS Buzias 6.72 63 ⇓P Pg 12 43 52.3 +7.7
BZS ⇓S Sn 12 44 09.3 -23
ECH Echery 6.79 324 **Pn 12 43 16.0 -0.2**
ECH Echery 6.79 324 *e*Pn **Pn 12 43 16.8 +0.6**
ECH *e*Sn **Sn 12 44 31.4 -2.5**
LASF Ste Croix 6.83 283 *e*Pn **Pn 12 43 15.6 -1.2**
LASF *e*Sn **Sn 12 44 28.5 -6.4**
comp=E,4.0nm,0.8s
CDF Champ du Feu 6.90 326 *e*Pn **Pn 12 43 17.9 +0.2**
CDF *e*Sn **Sn 12 44 32.9 -3.6**
comp=E,4.9nm,0.1s
HAU Haudompre 7.01 320 *e*Pn **Pn 12 43 18.9 -0.2**
HAU *e*Sn **Sn 12 44 35.3 -3.8**
comp=E,25nm,0.6s
SIRR Siria 7.01 58 ⇓P Pg 12 44 01.5 +11
SIRR ⇓S Sn 12 44 26.2 -13
PRU Pruhonice 7.21 7 *e*SN **Sn 12 44 39.8 -4.3**
NKC Novy Kostel 7.40 357 *e*SN **Sn 12 44 43.9 -4.9**
GZR Gura Zlata 7.42 67 ⇑P Pb 12 43 50.4 +5.3
GZR ⇑S Sn 12 44 07.4 -42
VTS Vitosha 7.47 88 Pn **Pn 12 43 27.8 +2.2**
LIT Litokhoron 7.57 108 Pn **Pn 12 43 29.5 +2.6**
SMF Signal de Mont 7.60 303 *e*Pn **Pn 12 43 25.9 -1.4**
SMF *e*Sn **Sn 12 44 50.3 -3.5**
comp=E,0.5nm,0.1s
KEST Kesra 7.68 203 Pn **Pn 12 43 29.1 +0.7**
PAGF Fort de Pagny 7.69 320 *e*Pn **Pn 12 43 27.7 -0.8**
PAGF *e*Sn **Sn 12 44 50.8 -5.1**
comp=E,2.1nm,0.2s
SFTF Sexfontaines 7.79 316 *e*Pn **Pn 12 43 29.0 -0.8**
baz=138
LOR Lormes 7.89 307 *e*Pn **Pn 12 43 32.0 +0.7**
baz=125
LOR *e*Sn **Sn 12 44 56.4 -4.5**
comp=E,3.7nm,0.4s
AVF Avril sur Loir 7.97 303 *e*P **Pn 12 43 36.1 +3.8**
AVF *e*Sn **Sn 12 44 58.0 -4.7**
comp=E,1.8nm,0.4s
MTLF Montolieu 7.98 277 *e*Pn **Pn 12 43 31.5 -0.9**
MTLF Montolieu 7.98 277 *e*P Pn 12 43 37.0 +4.6
MTLF *e*Sn **Sn 12 44 56.8 -6.2**
comp=E,1.0nm,0.4s
SSF Saint Saulge 8.00 305 *e*Pn **Pn 12 43 32.1 -0.6**
SSF *e*Sn **Sn 12 44 58.0 -5.5**
comp=E,1.4nm,0.2s
SAVF Savonnieres en 8.02 319 *e*Pn **Pn 12 43 32.3 -0.7**
BGF Bois d'Agland 8.19 300 *e*Pn **Pn 12 43 33.4 -1.9**
CAF Calviac 8.23 288 *e*Pn **Pn 12 43 35.2 -0.8**
CLL Collm 8.46 360 Pn **Pn 12 43 38.8 -0.3**
CLL Collm 8.46 360 *e*Pn **Pn 12 43 38.0 -1.1**
CLL *e*Sn Sn 12 44 55.0 -20
CLL *ex* x 12 45 11.0
CLL *e*Sg **Sg 12 46 00.0 -7.4**
comp=Z,11nm,1.1s
CLL *ex* x 12 46 18.0
TCF Toulx Ste Croi 8.50 298 *e*Pn **Pn 12 43 38.7 -0.9**
BAIF Baives 9.46 323 *e*Pn **Pn 12 43 51.7 -1.0**
BAIF Baives 9.46 323 *e*P **Pn 12 43 57.0 +4.3**
BAIF *e*Sn **Sn 12 45 34.5 -4.9**
comp=Z,2.2nm,0.3s
MLR Muntele Rosu 9.61 70 Pn **Pn 12 43 55.4 +0.5**
NC602 NORSAR Array S 17.94 358 **Pn 12 45 44.4 -1.4**
NC602 IAmb IAmb 12 46 23.2
comp=Z,24nm,1.2s
FINES FINESS Array B 20.18 18 P **P 12 46 09.6 -1.4**
ABKAR Akbulak array 32.71 62 P **P 12 48 10.2 +1.1**
GEYT Alibeck 34.33 83 P **P 12 48 24.0 +0.6**
GEYT IAmb IAmb 12 48 28.3
comp=Z,2.1nm,0.8s
GYAOB ALIBECK ARRAY 34.33 83 P **P 12 48 24.2 +0.8**
MKAR Makanchi Array 47.79 60 P **P 12 50 16.2 +2.2**

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*DJA **04** 12:52:26.2±2.9, 3°S±11°×13°1E±1°2, h198km±36km, M3.3/7, mb3.5/1, MLv3.2/7*
*IDC **04** 12:52:27.2±1.5, 3°09S×130°59E, h0km, mb3.9/2, mbtmp3.6/5, ML3.5/3, MS4.1/1, Error ellipse: s-maj=64.2km s-min=22.3km az=87.0*
ISC 04 12:52:31.1±1.1, 3°06S±0°08×130°72E±0°07, h35km, n11, σ2°37/8, Seram

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.54**	**85**	P		**Pn**	**12 52 58.3**	**+2.2**
BNDI	**Bandanaira**	**1.66**	**209**	P		Pn	12 53 02.6	+4.8
MSAI	**Masohi**	**1.81**	**261**	P		Pn	12 53 07.5	+7.7
SIJI	**Sorong**	**2.25**	**14**	Pn		**Pn**	**12 53 06.3**	**+0.4**
	2.9nm,0.3s,baz=259,slow=23,SNR=12							
SIJI					Sn	**Sn**	**12 53 30.0**	**-2.5**
	7.6nm,0.3s,baz=174,slow=6.3,SNR=8.2							
	5.2nm,0.3s							
LBMI	**Labuha**	**4.02**	**307**	P		**Pn**	**12 53 32.3**	**+2.1**
SANI	**Sanana**	**4.83**	**282**	P		**Pn**	**12 53 42.5**	**+1.1**
FITZ	**Fitzroy Crossi**	**15.75**	**198**	Pn		**Pn**	**12 56 07.7**	**-2.7**
	0.1nm,0.3s,baz=18,slow=11,SNR=9.5							
	0.3nm,0.3s							
WRA	**Warramunga Arr**	**17.14**	**168**	P		**Pn**	**12 56 26.6**	**-1.6**
	0.3nm,0.3s,baz=351,slow=11,SNR=13							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**20.71**	**172**	P		Pn	12 57 10.7	-0.5
	6.2nm,0.5s,baz=351,slow=11,SNR=214							
	6.2nm,0.5s							
NWAO	**Narrogin (SRO)**	**32.28**	**202**	LR		LR	13 12 51.0	
	comp=Z,313nm,19.6s,baz=228,slow=38							
MKAR	**Makanchi Array**	**65.37**	**326**	P		**P**	**13 03 11.4**	**+1.2**
	0.4nm,0.5s,baz=123,slow=8.4,SNR=5.7							
	0.4nm,0.5s							

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*TEH **04** 13:02:02.6, 37°33N×56°92E, h9km, ML3.6*
*IDC **04** 13:02:03.5±2.6, 37°33N×56°76E, h0km, mb3.3/1, mbtmp3.6/2, ML3.4/1, Error ellipse: s-maj=33.0km s-min=15.8km az=179.0*
ISC 04 13:02:03.4±0.9, 37°34N±0°06×56°96E±0°03, h10km, n59, σ2°17/58, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	**0.50**	**45**	*e*Pn		**Pn**	**13 02 15.7**	**-1.1**
MRVT	**Maraveh tapeh**	**0.76**	**295**	*e*Pg		**Pb**	**13 02 18.2**	**-0.6**
MRVT				*e*Sg		**Sn**	**13 02 29.8**	**-2.1**
ISFR	**Sfrayin**	**0.88**	**109**	*e*Pg		**Pn**	**13 02 21.7**	**-0.4**
ISFR				*e*			13 02 47.4	
comp=Z,19µm,0.5s								
SBZV	**Sabzevar**	**1.08**	**151**	*e*Pg		**Pn**	**13 02 23.9**	**-1.0**
GEYT	**Alibeck**	**1.09**	**57**	Pg		**Pn**	**13 02 26.6**	**+1.8**
	comp=Z,68nm,0.3s,baz=241,slow=18,SNR=103							
GEYT				Lg		Lg	13 02 43.6	
	comp=Z,62nm,0.3s,baz=230,slow=38,SNR=11							
IMND	**Minoodasht**	**1.24**	**267**	*e*Pg		**Pg**	**13 02 26.2**	**-1.0**
IMND				*e*			13 02 52.9	
comp=Z,10µm,0.4s								
IEMG	**Emamgholi**	**1.35**	**86**	*e*Pg		**Pg**	**13 02 30.2**	**+0.9**
IEMG				*e*			13 02 58.9	
comp=Z,9µm,0.3s								
SHRO	**Shahrood**	**1.55**	**210**	*e*Pn		**Pn**	**13 02 30.3**	**-0.9**
IAKL	**Akhelmad**	**1.62**	**117**	*e*Pn		**Pg**	**13 02 34.3**	**-0.1**
IAKL				*e*			13 03 13.6	
comp=Z,8µm,0.4s								
IPAY	**Payeh**	**1.86**	**118**	*e*Pn		**Pg**	**13 02 38.4**	**-0.7**
IPAY				*e*			13 03 15.4	
comp=Z,6µm,0.5s								
IKRD	**Kardeh**	**2.12**	**105**	*e*		**Pg**	**13 02 46.9**	**+2.8**
comp=Z,5µm,0.6s								
IMOG	**Moghan**	**2.27**	**122**	*e*Pn		**Pb**	**13 02 44.4**	**-0.3**
IMOG				*e*			13 03 06.6	
comp=Z,2µm,0.6s								
IGLO	**Ghaloghah**	**2.65**	**252**	*e*Pn		**Pb**	**13 02 48.2**	**-2.8**
IGLO				*e*			13 03 36.8	
comp=Z,5µm,0.6s								
TBHD	**Torbat heydari**	**2.66**	**136**	*e*Pn		**Pb**	**13 02 50.3**	**-0.9**
TBHD				*e*			13 03 42.2	
comp=Z,1µm,0.9s								
IMYA	**Miami**	**2.71**	**111**	*e*Pn		**Pb**	**13 02 49.7**	**-2.4**
JRKH	**Jarkhoshk**	**3.08**	**117**	*e*Pn		**Pb**	**13 02 55.2**	**-3.1**
IANJ	**Anjilo**	**3.09**	**234**	*e*Pn		**Pb**	**13 02 54.3**	**-4.3**
IANJ				*e*			13 03 48.5	
comp=Z,1µm,0.7s								
ISHM	**Shahmirzad**	**3.33**	**244**	*e*Pn		**Pb**	**13 02 58.7**	**-4.0**
ISHM				*e*			13 03 58.5	
comp=Z,2µm,0.4s								
TNSJ	**Nastanj**	**3.38**	**185**	*e*Pn		**Pn**	**13 02 58.5**	**+2.1**
TNSJ				*e*			13 04 00.2	
comp=Z,3µm,0.7s								
TBJM	**Torbat-e-JAM**	**3.42**	**126**	*e*Pn		**Pb**	**13 03 00.3**	**-3.9**
TABS	**Tabas**	**3.69**	**178**	*e*Pn		**Pn**	**13 03 02.9**	**+2.3**
TKDS	**Koohdasht(Taba**	**3.72**	**178**	*e*Pn		**Pn**	**13 03 03.6**	**+2.5**
TKDS				*e*			13 04 14.3	
comp=Z,1µm,0.5s								
ILAS	**Lasjerd**	**3.78**	**240**	*e*			13 03 17.9	
comp=Z,962nm,0.3s								
ILAS				*e*Pn		**Pn**	**13 03 04.0**	**+2.1**
IPRN	**Peran**	**3.87**	**255**	*e*Pn		**Pn**	**13 03 04.4**	**+1.3**
AFRZ	**Afriz**	**4.25**	**156**	*e*Pn		**Pn**	**13 03 10.9**	**+2.5**
TPRV	**Parvadeh(Tabas**	**4.31**	**183**	*e*Pn		**Pn**	**13 03 11.4**	**+2.3**
IDMV	**Damavand**	**4.35**	**248**	*e*		**Pg**	**13 03 29.1**	**+2.5**
comp=Z,799nm,0.8s								
DAMV	**Damavand**	**4.37**	**248**	*e*Pn		Pb	13 03 14.1	-6.3
SHRT	**Shahrakht**	**4.58**	**143**	*e*Pn		**Pn**	**13 03 15.1**	**+2.3**
ITEG	**Tejag**	**4.67**	**161**	*e*Pn		**Pn**	**13 03 16.6**	**+2.4**
ITEG				*e*			13 03 18.8	
comp=Z,539nm,0.4s								
IMON	**Monand**	**4.70**	**151**	*e*Pn		**Pn**	**13 03 18.2**	**+3.7**
IVRN	**Varamin**	**4.84**	**243**	*e*Pn		**Pn**	**13 03 18.4**	**+2.1**
ISFB	**Sefidab**	**4.86**	**234**	*e*Pn		**Pn**	**13 03 18.5**	**+1.9**
CHTH	**Charan**	**4.91**	**255**	*e*Pn		**Pn**	**13 03 19.1**	**+1.7**
BAGH	**Bagheran - Bir**	**4.91**	**157**	*e*Pn		**Pn**	**13 03 20.0**	**+2.5**
ANAR	**Anarak**	**4.92**	**213**	*e*Pn		**Pn**	**13 03 18.9**	**+1.4**
KRSH	**Karshahi**	**5.17**	**231**	*e*Pn		**Pn**	**13 03 22.7**	**+1.7**
IDAH	**Dahanechah**	**5.17**	**152**	*e*Pn		**Pn**	**13 03 23.8**	**+2.7**
YZKH	**Yazd**	**5.31**	**202**	*e*Pn		**Pn**	**13 03 24.1**	**+1.2**
GHVR	**GHOM**	**5.41**	**240**	*e*Pn		**Pn**	**13 03 25.4**	**+1.2**
GIDE	**GILAN DEYLAMAN**	**5.65**	**268**	*e*Pn		**Pn**	**13 03 28.7**	**+1.1**
BSRN	**Basiran**	**5.65**	**161**	*e*Pn		**Pn**	**13 03 29.8**	**+2.2**
NASN	**Na'in**	**5.67**	**218**	*e*Pn		**Pn**	**13 03 28.9**	**+0.9**
IZEF	**Zefreh**	**5.84**	**222**	*e*Pn		**Pn**	**13 03 31.8**	**+1.5**
IBAF	**Bafgh**	**5.85**	**192**	*e*Pn		**Pn**	**13 03 32.6**	**+2.2**
IKLH	**Kolahrood**	**5.96**	**229**	*e*Pn		**Pn**	**13 03 33.6**	**+1.7**
IKLH				*e*			13 04 03.1	
comp=Z,175nm,0.4s								
IRAZ	**Razeghan**	**5.99**	**253**	*e*Pn		**Pn**	**13 03 34.1**	**+1.7**
ISAD	**Sadrabad**	**6.05**	**207**	*e*Pn		**Pn**	**13 03 34.7**	**+1.5**
QABG	**Abgarm-Qazvin**	**6.16**	**257**	*e*Pn		**Pn**	**13 03 37.0**	**+2.3**
IMEH	**Mehriz**	**6.25**	**199**	*e*Pn		**Pn**	**13 03 37.8**	**+1.9**
ZNJK	**Zanjan**	**6.66**	**267**	*e*Pn		**Pn**	**13 03 44.1**	**+2.6**
IRAM	**Ramesheh**	**6.69**	**216**	*e*Pn		**Pn**	**13 03 44.0**	**+2.1**
KHGB	**Koh Gabri**	**6.96**	**183**	*e*Pn		**Pn**	**13 03 49.2**	**+3.5**
GRMI	**Germi**	**7.30**	**284**	*e*Pn		**Pn**	**13 03 49.9**	**-0.3**
ISRB	**Sarab**	**7.40**	**277**	*e*Pn		**Pn**	**13 03 53.4**	**+1.8**
IHRS	**Heris**	**7.91**	**280**	*e*Pn		**Pn**	**13 04 00.4**	**+1.7**
AMIS	**Naft Sefid**	**8.49**	**230**	*e*Pn		**Pn**	**13 04 09.1**	**+2.6**
KBZ	**Khabaz**	**12.45**	**305**	Pn		**Pn**	**13 05 00.6**	**0.0**
comp=Z,0.2nm,0.3s,baz=90,slow=10,SNR=1.5								
comp=Z,0.8nm,0.3s								
MKAR	**Makanchi Array**	**20.96**	**55**	P		Pn	13 06 50.4	+1.3
comp=Z,0.9nm,0.5s,baz=245,slow=9.4,SNR=16								
comp=Z,0.9nm,0.5s								

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*MDD **04** 13:09:46.8±1.2, 32°28N×7°75W, h0km, Mb4.1/5, M_mb3.4/5, Error ellipse: s-maj=10.4km s-min=7.8km az=47.0*

*INMG **04** 13:09:49.0±1.2, 32.°32N×7.°83W, h12km±6km, ML2.4, Error ellipse: s-maj=4.3km s-min=3.2km az=150.0*

ISC 04 13:09:49.3±3.5, 32.°5N±0.°2×7.°69W±0.°09, h10km, n18, σ1§38/32, 5C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVE	**Averroes**	**0.88**	**15**	P	**Pn**	**13 10 08.5**	**+0.8**
AVE				S	**Sn**	**13 10 25.1**	**+4.5**
IFR	**Ifrane**	**2.40**	**63**	P	**Pg**	**13 10 34.1**	**-1.2**
IFR				S	**Sg**	**13 11 08.4**	**+2.0**
PFVI	**Vila Bisbo**	**4.77**	**349**	*e*Pn	**Pn**	**13 11 02.2**	**+1.0**
PFVI				*e*Sn	**Sn**	**13 11 56.0**	**-0.5**
MORF	**Marmelete**	**4.91**	**351**	*e*Pn	**Pn**	**13 11 03.6**	**+0.4**
MORF				*e*Sn	**Sn**	**13 11 59.1**	**-0.9**
MORF				A	A	13 12 11.4	
	2.8nm,0.6s						
PVAQ	**Vaqueiros**	**4.94**	**360**	*e*Pn	**Pn**	**13 11 04.2**	**+0.6**
PVAQ				*e*Sn	**Sn**	**13 12 00.6**	**-0.2**
PVAQ				A	A	13 12 01.8	
	4.6nm,0.6s						
EGRO	**El Granado**	**5.08**	**2**	Pn	**Pn**	**13 11 04.9**	**-0.5**
EGRO				⇑*i*Vmb_V		13 11 08.6	
	143nm,SNR=1.3						
EGRO				Sn	**Sn**	**13 12 03.5**	**-0.5**
PTEO	**Sao Teotonio**	**5.16**	**351**	*e*Pn	**Pn**	**13 11 06.5**	**0.0**
PCVE	**Castro Verde**	**5.18**	**357**	*e*Pn	**Pn**	**13 11 07.7**	**+0.9**
PCVE				*e*Sn	**Sn**	**13 12 06.2**	**-0.4**
PCVE				A	A	13 12 08.8	
	4.7nm,0.6s						
EMIN	**Mina Concepcio**	**5.37**	**9**	Pn	**Pn**	**13 11 09.5**	**0.0**
EMIN				⇑*i*Vmb_V		13 11 11.5	
	143nm,SNR=1.6						
EMIN				Sn	**Sn**	**13 12 09.4**	**-2.0**
MESJ	**Messejana**	**5.40**	**356**	*e*Pn	**Pn**	**13 11 11.1**	**+1.3**
MESJ				*e*Sn	**Sn**	**13 12 11.4**	**-0.6**
MESJ				A	A	13 12 13.5	
	2.3nm,0.5s						
PNCL	**Nicolau / Gran**	**5.69**	**353**	*e*Pn	**Pn**	**13 11 14.7**	**+0.8**
PNCL				*e*Sn	**Sn**	**13 12 18.1**	**-1.2**
PNCL				A	A	13 12 26.2	
	2.1nm,0.7s						
PBAR	**Barrancos**	**5.74**	**5**	*e*Pn	**Pn**	**13 11 15.4**	**+0.9**
PBAR				*e*Sn	**Sn**	**13 12 19.9**	**-0.5**
PBAR				A	A	13 12 24.4	
	2.2nm,0.5s						
ECAB	**El Cabril**	**5.91**	**18**	Pn	**Pn**	**13 11 16.6**	**-0.3**
ECAB				⇑*i*Vmb_V		13 11 20.4	
	60nm,SNR=0.7						
ECAB				Sn	**Sn**	**13 12 22.6**	**-2.1**
EADA	**Adamuz**	**6.25**	**23**	Pn	**Pn**	**13 11 21.8**	**+0.3**
EADA				⇑*i*Vmb_V		13 11 23.6	
	56nm,SNR=0.6						
EADA				Sn	**Sn**	**13 12 30.4**	**-2.5**
EBAD	**Badajoz**	**6.32**	**5**	Pn	**Pn**	**13 11 22.7**	**+0.2**
EBAD				⇑*i*Vmb_V		13 11 25.1	
	110nm,SNR=1.2						
EBAD				Sn	**Sn**	**13 12 33.1**	**-1.6**
PESTR	**Estremoz**	**6.41**	**1**	*e*Pn	**Pn**	**13 11 24.8**	**+1.1**
PMTG	**Montargil**	**6.62**	**356**	*e*Pn	**Pn**	**13 11 27.0**	**+0.4**
PMRV	**Marv??o**	**6.97**	**2**	*e*Pn	**Pn**	**13 11 32.2**	**+0.8**

*ANF **04** 13:10:44.4±0.4, 35.°89N×96.°69W, h6km, ML3.7/12, Error ellipse: s-maj=3.8km s-min=3.0km az=168.0*
*TUL **04** 13:10:44.4±0.6, 35.°86N±0.°01×96.°68W±0.°02, h6km±5km, ML3.3, mb_Lg3.1/62(NEIC), Error ellipse: s-maj=2.6km s-min=1.5km az=82.0*
*NEIC **04** 13:10:44.5±0.7, 35.°863N±0.°010×96.°69W±0.°01, h9km±4km, Error ellipse: s-maj=1.9km s-min=1.2km az=124.0*

ISC 04 13:10:44.4±1.0, 35.°87N±0.°02×96.°68W±0.°02, h10km±7km, n83, σ0§66/68, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK034	**N. Norfolk Rd.**	**0.14**	**350**	Pg	**Pg**	**13 10 47.8**	**+0.1**
OK034				Sg	**Sg**	**13 10 49.8**	**-0.2**
OK031	**S. Brethren Rd**	**0.15**	**304**	Pg	**Pg**	**13 10 47.8**	**0.0**
OK033	**Mehan**	**0.27**	**311**	Pg	**Pg**	**13 10 50.1**	**+0.2**
OK011	**Prague**	**0.38**	**180**	Pg	**Pg**	**13 10 52.0**	**+0.1**
OK044	**Pawnee Station**	**0.51**	**350**	Pg	**Pg**	**13 10 54.5**	**+0.1**
OK046	**Pawnee Station**	**0.56**	**341**		**Pg**	**13 10 55.4**	**+0.1**
OK050	**Pawnee Station**	**0.58**	**335**		**Pg**	**13 10 55.7**	**0.0**
OK048	**Pawnee Station**	**0.59**	**339**	Pg	**Pg**	**13 10 55.9**	**+0.1**
OK025	**Westminster Rd**	**0.60**	**242**	Pg	**Pg**	**13 10 55.9**	**-0.3**
OK045	**Pawnee Station**	**0.61**	**341**		**Pg**	**13 10 56.4**	**+0.1**
OK029	**Liberty Lake**	**0.63**	**264**	Pg	**Pg**	**13 10 56.6**	**-0.1**
OK051	**E0350 and S346**	**0.65**	**349**	Pg	**Pg**	**13 10 57.0**	**0.0**
TUL1	**Leonard**	**0.72**	**86**	Pg	**Pg**	**13 10 58.3**	**-0.1**
TUL1	**Leonard**	**0.72**	**86**	P	**Pg**	**13 10 58.2**	**-0.1**
	baz=266,SNR=221						
TUL1				S	**Sg**	**13 11 08.2**	**+0.3**
	baz=266						
OK049	**E0420 Rd and N**	**0.74**	**317**	Pg	**Pg**	**13 10 58.6**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**0.77**	**233**	Pg	**Pg**	**13 10 58.8**	**-0.5**
FNO	**Franklin**	**0.84**	**224**	Pg	**Pg**	**13 11 00.0**	**-0.7**
T35A	**Sooner Cattle**	**1.06**	**7**		**Pg**	**13 11 04.1**	**-0.6**
T35B	**Sooner Cattle**	**1.06**	**7**	P	**Pg**	**13 11 04.2**	**-0.6**
	baz=188						
T35B				S	**Sg**	**13 11 18.6**	**+0.1**
	baz=188						
KAN13	**South Haven SW**	**1.31**	**331**		**Pn**	**13 11 08.8**	**-0.1**
KAN17	**Caldwell West**	**1.46**	**324**	Pn	**Pn**	**13 11 11.4**	**+0.5**
KAN09	**Caldwell North**	**1.47**	**330**	Pn	**Pn**	**13 11 11.7**	**+0.6**
KAN14	**Manchester OK**	**1.50**	**317**		**Pn**	**13 11 11.9**	**+0.5**
KS20	**Mayfield South**	**1.53**	**333**	Pn	**Pn**	**13 11 12.4**	**+0.5**
OK032	**Salt Plains WL**	**1.55**	**308**		**Pn**	**13 11 12.4**	**+0.3**
KAN01	**Argonia South**	**1.55**	**326**	Pn	**Pn**	**13 11 12.7**	**+0.6**
KAN05	**Bluff City Nor**	**1.57**	**323**	Pn	**Pn**	**13 11 12.7**	**+0.4**
X34A	**Smith Ranch, M**	**1.57**	**217**		**Pn**	**13 11 13.1**	**+0.6**
X37A	**Clayton**	**1.67**	**140**	Pn	**Pn**	**13 11 14.2**	**+0.5**
X37A	**Clayton**	**1.67**	**140**	P	**Pn**	**13 11 14.8**	**+1.1**
	baz=320,SNR=110						
X37A				Sb	**Sg**	**13 11 38.3**	**+0.3**
	baz=320						
KAN06	**Argonia West S**	**1.67**	**326**		**Pn**	**13 11 14.3**	**+0.5**
KAN08	**Anthony NE Sta**	**1.71**	**323**		**Pn**	**13 11 14.8**	**+0.5**
KAN16	**Harper SW Stat**	**1.75**	**321**	Pn	**Pn**	**13 11 15.6**	**+0.6**
KAN12	**Harper NE Stat**	**1.78**	**324**	Pn	**Pn**	**13 11 16.0**	**+0.7**
U38A	**Gravette**	**1.94**	**72**		**Pn**	**13 11 17.5**	**0.0**
U38A	**Gravette**	**1.94**	**72**	P	**Pn**	**13 11 19.0**	**+1.5**
	baz=253,SNR=43						
U38A				Sb	**Sg**	**13 11 46.0**	**-0.9**
	baz=253						
U32A	**Winter Ranch,**	**1.95**	**286**		**Pn**	**13 11 17.9**	**+0.4**
U32A	**Winter Ranch,**	**1.95**	**286**	P	**Pn**	**13 11 19.1**	**+1.5**
	baz=105,SNR=20						
U32A				Sb	**Sg**	**13 11 46.1**	**-0.9**
	baz=105						
WMOK	**Wichita Mounta**	**2.05**	**237**	P	**Pn**	**13 11 20.5**	**+1.4**
	baz=56,SNR=33						
WMOK				S	**Sb**	**13 11 46.6**	**-0.8**
	baz=56						
Z35A	**Perchaven, San**	**2.57**	**191**	IAmb_Lg		13 12 08.8	
	comp=Z,52nm,1.1s						
MIAR	**Mount Ida**	**2.87**	**117**		**Pn**	**13 11 30.4**	**+0.3**
MIAR	**Mount Ida**	**2.87**	**117**	P	**Pn**	**13 11 31.5**	**+1.3**
	baz=298,SNR=19						
Z38A	**Mt. Pleasant**	**2.95**	**151**	Pn	**Pn**	**13 11 31.3**	**-0.1**
R32A	**Long Quarter,**	**3.02**	**328**	P	**Pn**	**13 11 32.5**	**+0.1**
	baz=147						
R32A				S	**Sn**	**13 12 09.9**	**+1.2**
	baz=147						
S39A	**Bolivar**	**3.25**	**55**	IAmb_Lg		13 12 30.2	
	comp=Z,53nm,0.7s						
S39A	**Bolivar**	**3.25**	**55**	P	**Pn**	**13 11 37.6**	**+2.0**
	baz=237,SNR=6.1						
WHAR	**Wooly Hollow**	**3.63**	**98**		**Pn**	**13 11 40.6**	**0.0**
WLAR	**White Oak Lake**	**3.66**	**125**	IAmb_Lg		13 12 46.2	
	comp=Z,37nm,1.0s						
FCAR	**Ozark Folk Cen**	**3.70**	**88**	IAmb_Lg		13 12 41.4	
	comp=Z,31nm,0.8s						
UALR	**University of**	**3.71**	**106**	Pn	**Pn**	**13 11 42.2**	**+0.3**
MGMO	**Mountain Grove**	**3.78**	**69**	IAmb_Lg		13 12 54.1	
	comp=Z,30nm,0.7s						
WHTX	**Lake Whitney,**	**3.92**	**190**	Pn	**Pn**	**13 11 45.0**	**+0.3**
237A	**Washetta, Mont**	**3.92**	**169**	Pn	**Pn**	**13 11 45.1**	**+0.3**
ABTX	**Abilene, Hawle**	**4.06**	**218**	Pn	**Pn**	**13 11 46.9**	**+0.2**
ABTX				IAmb_Lg		13 12 56.9	
	comp=Z,28nm,0.9s						
ABTX	**Abilene, Hawle**	**4.06**	**218**	S	**Sn**	**13 12 35.4**	**+1.1**
	baz=36						
R40A	**Maddies Statio**	**4.28**	**54**	Pn	**Pn**	**13 11 49.8**	**+0.1**
R40A				IAmb_Lg		13 13 01.0	
	comp=Z,44nm,0.7s						
NATX	**Nacogdoches**	**4.43**	**157**	IAmb_Lg		13 13 14.2	
	comp=Z,30nm,0.8s						
LCAR	**Lake Charles**	**4.48**	**86**	Pn	**Pn**	**13 11 52.7**	**+0.2**
LCAR				IAmb_Lg		13 13 14.1	
	comp=Z,25nm,0.8s						
P38A	**Dawn**	**4.51**	**33**	IAmb_Lg		13 13 07.1	
	comp=Z,35nm,0.7s						
P38A	**Dawn**	**4.51**	**33**	S	**Sn**	**13 12 46.4**	**+1.2**
	baz=214						
CCM	**Cathedral Cave**	**4.87**	**62**	Pn	**Pn**	**13 11 58.0**	**+0.2**
CCM				IAmb_Lg		13 13 26.8	
	comp=Z,44nm,0.8s						
N33A	**J Bar K, Exete**	**4.90**	**353**	Pn	**Pn**	**13 11 58.2**	**0.0**
N35A	**Tabor**	**5.05**	**9**	Pn	**Pn**	**13 12 00.3**	**0.0**
N35A				IAmb_Lg		13 13 32.7	
	comp=Z,42nm,0.9s						
PBMO	**Poplar Bluff**	**5.13**	**78**	IAmb_Lg		13 13 30.2	
	comp=Z,42nm,0.8s						
P40A	**Paris**	**5.18**	**44**	Pn	**Pn**	**13 12 02.2**	**+0.1**
P40A				IAmb_Lg		13 13 29.0	
	comp=Z,37nm,0.7s						
MSTX	**Muleshoe**	**5.35**	**251**	IAmb_Lg		13 13 34.4	
	comp=Z,21nm,1.0s						
MSTX	**Muleshoe**	**5.35**	**251**	S	**Sn**	**13 13 06.0**	**-0.2**
	baz=68						
N38A	**Joes South For**	**5.62**	**28**	Pn	**Pn**	**13 12 08.2**	**+0.2**
N38A				IAmb_Lg		13 13 56.9	
	comp=Z,41nm,0.8s						
BGNE	**Belgrade**	**5.65**	**349**	IAmb_Lg		13 13 58.4	
	comp=Z,47nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.68**	**305**	IAmb_Lg		13 13 59.5	
	comp=Z,24nm,0.8s						
JCT	**Junction City**	**5.97**	**207**	IAmb_Lg		13 13 59.8	
	comp=Z,21nm,0.8s						
L34A	**Svendsen Farm,**	**6.10**	**2**	IAmb_Lg		13 14 03.1	
	comp=Z,39nm,0.7s						
S44A	**Carbondale**	**6.23**	**71**	IAmb_Lg		13 14 04.6	
	comp=Z,39nm,0.7s						
T25A	**Trinidad**	**6.35**	**284**	IAmb_Lg		13 14 14.7	
	comp=Z,19nm,0.9s						
OGNE	**Ogallala**	**6.58**	**322**	IAmb_Lg		13 14 12.8	
	comp=Z,28nm,0.8s						
SCIA	**State Center**	**6.61**	**23**	IAmb_Lg		13 14 16.6	
	comp=Z,25nm,0.7s						
N41A	**Harden Midland**	**6.66**	**42**	S	**Sn**	**13 13 36.8**	**-1.5**
	baz=225						
Q24A	**Divide**	**7.41**	**297**	IAmb_Lg		13 14 44.0	
	comp=Z,15nm,0.8s						
K38A	**Parkersburg**	**7.42**	**23**	IAmb_Lg		13 14 45.6	
	comp=Z,23nm,0.7s						
L40A	**Anamosa**	**7.51**	**33**	IAmb_Lg		13 14 40.3	
	comp=Z,21nm,0.9s						
L42A	**Oliver, Polo**	**8.21**	**40**	IAmb_Lg		13 15 02.4	
	comp=Z,20nm,0.8s						
PHWY	**Pilot Hill**	**8.75**	**311**	IAmb_Lg		13 15 24.8	
	comp=Z,11nm,0.8s						
N23A	**Red Feather La**	**8.83**	**307**	IAmb_Lg		13 15 46.1	
	comp=Z,16nm,0.8s						

*SOME **04** 13:23:29.8, 39.°18N×73.°35E, h0km*
*NNC **04** 13:23:32.4±1.5, 39.°16N×73.°40E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=13.5km s-min=7.5km az=155.0*
*KRNET **04** 13:23:38.6±0.1, 39.°29N×72.°61E, h27km, mb3.5*

ISC 04 13:23:26.3±1.4, 39.°04N±0.°07×73.°33E±0.°04, h10km, n44, σ1§79/79, 17C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.27**	**291**	⇑*e*P	**Pn**	**13 23 49.2**	**-1.1**
	baz=87						
DRK				⇑*e*S	**Sb**	**13 24 05.7**	**-1.2**
	baz=87						
OHH	**Osh**	**1.54**	**344**	⇑*e*P	**Pn**	**13 23 55.9**	**+2.0**
	baz=6.0						
OHH				⇑*e*S	**Sg**	**13 24 16.9**	**+1.0**
	baz=6.0						
BTK	**Batken**	**2.19**	**298**	⇑*e*P	**Pn**	**13 24 05.6**	**+2.7**
	baz=0.0						
BTK				⇑*e*S	**Sn**	**13 24 33.8**	**+3.7**
	baz=0.0						
GAR	**Garm**	**2.35**	**270**	⇑*e*P	**Pn**	**13 24 07.4**	**+2.3**
	baz=61						
GAR				⇑*e*S	**Sn**	**13 24 36.7**	**+2.7**
	baz=61						
ARLS	**Aral**	**2.92**	**15**	⇑*e*P	**Pb**	**13 24 17.3**	**-1.2**
	baz=27						
ARLS				⇑*e*S	**Sb**	**13 24 54.5**	**+0.2**
	baz=27						
TRKS	**Terek-Say**	**3.00**	**327**	⇑*e*P	**Pn**	**13 24 16.4**	**+2.4**
	baz=34						
TRKS				⇑*e*S	**Sn**	**13 24 52.6**	**+2.5**
	baz=34						
UCH	**Uchtor**	**3.31**	**15**	⇑*e*P	**Pn**	**13 24 23.0**	**+4.4**
	baz=26						
UCH				⇑*e*S	**Sb**	**13 25 04.2**	**-1.6**
	baz=26						
TKM2	**Tokmak 2**	**4.24**	**23**	⇑Pn	Pn	13 24 37.3	+6.2
	4.2nm,0.7s						
TKM2				⇑Pg	**Pg**	**13 24 48.5**	**+1.0**
	6.8nm,0.7s						
TKM2				⇓Lg	Lg	13 25 40.8	
	6.8nm,0.7s						
KST	**Kastek**	**4.47**	**26**	*e*P	**Pg**	**13 24 50.8**	**-1.1**
	baz=33						
KST				*e*S	**Sg**	**13 25 49.5**	**-0.2**
	baz=33						
KST	**Kastek**	**4.47**	**26**	*e*P	**Pg**	**13 24 50.8**	**-1.1**
	2.9nm,0.4s						
KST				*e*S	**Sg**	**13 25 49.5**	**-0.2**
	14nm,0.7s						
KST	**Kastek**	**4.47**	**26**	Pg	**Pg**	**13 24 50.8**	**-1.1**
	2.9nm,0.4s						
KST				Lg	Lg	13 25 49.9	
	14nm,0.7s						
SGDS	**Sogindy**	**4.52**	**12**	*e*P	**Pg**	**13 24 50.7**	**-2.1**
	1.6nm,0.6s						
SGDS				*e*S	**Sg**	**13 25 48.8**	**-2.5**
	6.3nm,0.8s						
DGS	**Degeres**	**4.58**	**23**	*e*P	**Pg**	**13 24 54.0**	**-0.1**
	baz=30						
DGS				*e*S	**Sg**	**13 25 54.9**	**+1.4**
	baz=30						
DGS	**Degeres**	**4.58**	**23**	*e*P	**Pg**	**13 24 54.0**	**-0.1**
	2.7nm,0.5s						
DGS				*e*S	**Sg**	**13 25 54.9**	**+1.4**
	12nm,0.8s						
KK31	**Karatay Array**	**4.58**	**333**	Pn	Pn	13 24 41.5	+5.8
	0.9nm,0.3s,baz=141,slow=12,SNR=24						
KK31				⇑Sn	**Sb**	**13 25 36.2**	**-5.9**
	4.4nm,0.5s,baz=152,slow=24,SNR=7.0						
MTBS	**Maitube**	**4.71**	**29**	*e*P	**Pg**	**13 24 55.2**	**-1.2**
	baz=36						
MTBS				*e*S	**Sg**	**13 25 57.4**	**0.0**
	baz=36						
MTBS	**Maitube**	**4.71**	**29**	*e*P	**Pg**	**13 24 55.2**	**-1.2**
	3.9nm,0.2s						
MTBS				*e*S	**Sg**	**13 25 57.4**	**0.0**
	9.0nm,0.4s						
MTBS	**Maitube**	**4.71**	**29**	Pg	**Pg**	**13 24 55.2**	**-1.2**
	3.9nm,0.2s						
MTBS				Lg	Lg	13 25 57.7	
	9.0nm,0.4s						
TNSS	**Tian-Shan**	**4.84**	**33**	*e*P	**Pg**	**13 24 59.2**	**+0.2**
	baz=40						
TNSS				*e*S	**Sg**	**13 26 03.8**	**+2.1**
	baz=40						
TNSS	**Tian-Shan**	**4.84**	**33**	*e*P	**Pg**	**13 24 59.1**	**+0.2**
	3.3nm,0.4s						
TNSS				*e*S	**Sg**	**13 26 03.8**	**+2.1**
	6.4nm,0.8s						
TNSS	**Tian-Shan**	**4.84**	**33**	Pg	**Pg**	**13 24 59.2**	**+0.2**
	3.3nm,0.4s						
TNSS				Lg	Lg	13 26 04.8	
	6.4nm,0.8s						
KRBS	**Karabastau**	**4.97**	**20**	*e*P	**Pg**	**13 25 01.2**	**-0.3**
	baz=27						
KRBS				*e*S	**Sg**	**13 26 07.8**	**+1.9**
	baz=27						
KRBS	**Karabastau**	**4.97**	**20**	*e*P	**Pg**	**13 25 01.2**	**-0.3**
	3.2nm,0.5s						
KRBS				*e*S	**Sg**	**13 26 07.9**	**+1.9**
	5.8nm,0.7s						
KRBS	**Karabastau**	**4.97**	**20**	Pg	**Pg**	**13 25 01.2**	**-0.3**
	3.2nm,0.5s						
KRBS				Lg	Lg	13 26 07.9	
	5.8nm,0.7s						
MDOK	**Medeo**	**4.99**	**33**	*e*P	**Pg**	**13 24 59.7**	**-2.1**
	baz=39						
MDOK				*e*S	**Sg**	**13 26 05.0**	**-1.3**
	baz=39						
MDOK	**Medeo**	**4.99**	**33**	*e*P	**Pg**	**13 24 59.7**	**-2.1**
	2.8nm,0.5s						
MDOK				*e*S	**Sg**	**13 26 04.9**	**-1.3**
	8.6nm,0.8s						
MDOK	**Medeo**	**4.99**	**33**	Pg	**Pg**	**13 24 59.2**	**-2.5**
	5.3nm,0.7s						
MDOK				Pg	**Pg**	**13 24 59.7**	**-2.1**
	2.8nm,0.5s						
MDOK				Lg	Lg	13 26 06.0	
	11nm,0.8s						
MDOK				Lg	Lg	13 26 06.2	
	8.6nm,0.8s						
KOTS	**Kotyrbulak**	**5.07**	**33**	*e*P	**Pg**	**13 25 02.9**	**-0.5**
	baz=39						
KOTS				*e*S	**Sg**	**13 26 10.4**	**+1.3**
	baz=39						
KOTS	**Kotyrbulak**	**5.07**	**33**	*e*P	**Pg**	**13 25 02.9**	**-0.5**
	2.3nm,0.3s						
KOTS				*e*S	**Sg**	**13 26 10.3**	**+1.3**
	22nm,0.7s						
KOTS	**Kotyrbulak**	**5.07**	**33**	Pg	**Pg**	**13 25 02.9**	**-0.5**
KOTS				Lg	Lg	13 26 10.3	
KUU	**Kurty**	**5.35**	**24**	*e*P	**Pg**	**13 25 07.8**	**-0.9**
	baz=30						
KUU				*e*S	**Sg**	**13 26 17.8**	**-0.2**
	baz=30						
KUU	**Kurty**	**5.35**	**24**	*e*P	**Pg**	**13 25 07.8**	**-0.9**
	2.4nm,0.6s						
KUU				*e*S	**Sg**	**13 26 17.8**	**-0.2**
	11nm,0.6s						
CHKK	**Chushkaly**	**5.54**	**29**	*e*P	**Pg**	**13 25 11.7**	**-0.6**
	baz=34						
CHKK				*e*S	**Sg**	**13 26 25.3**	**+1.2**
	baz=34						
CHKK	**Chushkaly**	**5.54**	**29**	*e*P	**Pg**	**13 25 11.7**	**-0.6**
	1.3nm,0.1s						
CHKK				*e*S	**Sg**	**13 26 25.3**	**+1.2**
	7.1nm,0.2s						
SATY	**Saty**	**5.55**	**42**	*e*P	**Pg**	**13 25 11.7**	**-0.9**
	baz=47						
SATY				*e*S	**Sg**	**13 26 25.6**	**+1.1**
	baz=47						
SATY	**Saty**	**5.55**	**42**	*e*P	**Pg**	**13 25 11.7**	**-0.9**
	5.4nm,0.9s						
SATY				*e*S	**Sg**	**13 26 25.6**	**+1.1**
	7.6nm,1.3s						
SATY	**Saty**	**5.55**	**42**	Pg	**Pg**	**13 25 11.7**	**-0.9**
	5.4nm,0.9s						
SATY				Lg	Lg	13 26 25.6	
	7.6nm,1.3s						
UZB	**Uzynbulak**	**5.94**	**45**	*e*P	**Pg**	**13 25 17.4**	**-2.7**
	baz=49						
UZB				*e*S	**Sg**	**13 26 35.0**	**-2.0**
	baz=49						
UZB	**Uzynbulak**	**5.94**	**45**	*e*P	**Pg**	**13 25 17.4**	**-2.7**
	1.1nm,0.3s						
UZB				*e*S	**Sg**	**13 26 35.0**	**-2.0**
	2.7nm,1.0s						
KPKS	**Kokpek**	**5.98**	**41**	*e*P	**Pg**	**13 25 20.7**	**-0.2**
	baz=46						
KPKS				*e*S	**Sg**	**13 26 39.9**	**+1.5**
	baz=46						
KPKS	**Kokpek**	**5.98**	**41**	*e*P	**Pg**	**13 25 20.6**	**-0.2**
	3.3nm,0.4s						
KPKS				*e*S	**Sg**	**13 26 39.9**	**+1.5**
	8.4nm,0.5s						
ARXS	**Arharly**	**6.17**	**32**	*e*P	**Pg**	**13 25 21.7**	**-2.7**
	2.6nm,0.7s						
ARXS				*e*S	**Sg**	**13 26 42.8**	**-1.5**
	3.5nm,0.7s						
ARXS	**Arharly**	**6.17**	**32**	Pg	**Pg**	**13 25 21.7**	**-2.7**
	2.6nm,0.7s						
ARXS				Lg	Lg	13 26 42.8	
BLB	**Baldybastay**	**6.36**	**36**	*e*P	**Pg**	**13 25 25.3**	**-2.7**
	2.4nm,0.6s						
BLB				*e*S	**Sg**	**13 26 48.7**	**-1.6**
	4.7nm,0.6s						

*NAO **04** 13:29:01.5±1.3, 77.°15N×19.°05E, h12km±12km, ML2.8*
*BER **04** 13:29:03.8±3.0, 77.°19N×19.°22E, h15km±14km, ML2.6, ML2.8(NAO), Confirmed Earthquake*
*IEPN **04** 13:29:03.0, 77.°31N×19.°73E, h10km*

ISC 04 13:29:00.8±1.2, 77.°24N±0.°04×19.°51E±0.°03, h11km±10km, n24, σ1§36/40, 1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.92**	**257**	Pg	**Pg**	**13 29 16.8**	**-1.8**
HSPB				Lg	Lg	13 29 29.8	
HSPB	**Hornsund (broa**	**0.92**	**257**	*e*P	**Pg**	**13 29 18.4**	**-0.2**
HSPB				*e*S	**Sg**	**13 29 30.2**	**-0.4**
HSPB				IAML		13 29 30.7	
	comp=Z,155nm,0.2s						
SPA0	**Spitsbergen Ar**	**1.16**	**326**	Pn	**Pb**	**13 29 23.1**	**+0.3**
	baz=147,slow=18						
SPA0				Lg	Lg	13 29 39.7	
	baz=156,slow=37						
SPA0	**Spitsbergen Ar**	**1.16**	**326**	Pn	**Pb**	**13 29 23.1**	**+0.3**
	baz=147,slow=18						
SPA0				Sg	**Sn**	**13 29 39.7**	**+0.9**
	baz=156,slow=37						
SPA0	**Spitsbergen Ar**	**1.16**	**326**	⇓*i*P	**Pb**	**13 29 22.9**	**+0.1**
SPA0				*i*S	**Sb**	**13 29 38.0**	**+0.1**
BRBA	**Barentsburg A**	**1.40**	**308**	Pn	**Pn**	**13 29 26.8**	**+0.5**
BRBA				Lg	Lg	13 29 44.1	
BRBA	**Barentsburg A**	**1.40**	**308**	*e*P	**Pn**	**13 29 27.3**	**+1.0**
BRBA				*e*S	**Sn**	**13 29 44.6**	**-0.1**
BRBA				IAML		13 29 48.0	
	comp=Z,162nm,0.2s						
BRBB	**Barentsburg B**	**1.43**	**310**	Pn	**Pn**	**13 29 27.1**	**+0.5**
BRBB				Lg	Lg	13 29 46.2	
BRBB	**Barentsburg B**	**1.43**	**310**	*e*P	**Pn**	**13 29 27.3**	**+0.7**
BR

*NORS **04** 13:31:29.3±0.0, 43°.80N×43°.54E, h22km, MPVA4.2*
*MOS **04** 13:31:30.7±0.0, 43°.76N×43°.53E, h20km, MPVA4.0*
*AZER **04** 13:31:32.2±13.0, 43°.78N×43°.35E, h10km±999km, Error ellipse: s-maj=2443.0km s-min=70.5km az=319.0*
ISC 04 13:31:31.4±0.8, 43°.73N±0°.02×43°.52E±0°.01, h15km±5km, n107, σ1♀33/206, 2C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTC	**Kuba-Taba**	**0.12 319**		⇑*i*PG	**Pg**	**13 31 34.5**	**-0.4**
KBTC				*e*S	**Sg**	**13 31 38.4**	**+1.2**
KBTC	**Kuba-Taba**	**0.12 319**		*i* Pg	**Pg**	**13 31 34.4**	**-0.5**
KBTC				*e*Sg	**Sg**	**13 31 38.1**	**+0.9**
KBZ	**Khabaz**	**0.45 270**		*i* PG	**Pg**	**13 31 40.0**	**-0.3**
KBZ				*i* S	**Sb**	**13 31 47.6**	**+0.1**
KBZ	**Khabaz**	**0.45 270**		*i* Pg	**Pg**	**13 31 40.0**	**-0.3**
KBZ				*i* Sg	**Sb**	**13 31 47.6**	**+0.1**
LSNR	**Lesken**	**0.50 153**		*e*PG	**Pg**	**13 31 40.7**	**-0.7**
LSNR				*e*S	**Sb**	**13 31 49.5**	**+0.3**
LSNR	**Lesken**	**0.50 153**		*e*Pg	**Pg**	**13 31 40.7**	**-0.7**
LSNR				*e*Sg	**Sb**	**13 31 49.5**	**+0.3**
STDR	**Stavd-Durt**	**0.54 132**		*e*PG	**Pg**	**13 31 41.1**	**-0.9**
STDR				*e*S	**Sb**	**13 31 50.7**	**+0.6**
STDR	**Stavd-Durt**	**0.54 132**		*e*Pg	**Pg**	**13 31 41.1**	**-0.9**
STDR				*e*Sg	**Sb**	**13 31 50.7**	**+0.6**
PRTR	**Priterechnaya**	**0.56 87**		*e*PG	**Pg**	**13 31 41.0**	**-1.4**
PRTR				*e*S	**Sb**	**13 31 49.8**	**-0.8**
PRTR	**Priterechnaya**	**0.56 87**		*e*Pg	**Pg**	**13 31 41.0**	**-1.4**
PRTR				*e*Sg	**Sb**	**13 31 49.9**	**-0.8**
BEYR	**Belyy Ugol+**	**0.58 300**		*i* PG	**Pg**	**13 31 42.2**	**-0.6**
BEYR				*e*S	**Sg**	**13 31 50.7**	**+0.2**
BEYR	**Belyy Ugol+**	**0.58 300**		*i* Pg	**Pg**	**13 31 42.2**	**-0.6**
BEYR				*e*Sg	**Sg**	**13 31 50.5**	**-0.1**
SHA1	**Shidzhatmaz**	**0.62 271**		*e*PG	**Pg**	**13 31 43.5**	**-0.2**
SHA1				*e*S	**Sb**	**13 31 53.4**	**+0.6**
SHA1	**Shidzhatmaz**	**0.62 271**		*e*Pg	**Pg**	**13 31 43.2**	**-0.5**
SHA1				*e*Sg	**Sb**	**13 31 53.4**	**+0.6**
KIV0	**Kislovodsk Arr**	**0.64 291**		*i* Pg	**Pg**	**13 31 43.3**	**-0.6**
KIV0				*e*Sg	**Sg**	**13 31 52.5**	**+0.2**
KIV	**Kislovodsk**	**0.64 291**		*e*PG	**Pg**	**13 31 43.4**	**-0.6**
KIV				*e*S	**Sg**	**13 31 52.1**	**-0.4**
KIV	**Kislovodsk**	**0.64 291**		*e*Pg	**Pg**	**13 31 43.3**	**-0.7**
KIV				*e*Sg	**Sg**	**13 31 52.7**	**+0.1**
NEY	**Neytrino**	**0.75 231**		*ce*PG	**Pb**	**13 31 45.9**	**-0.4**
NEY				*i* S	**Sb**	**13 31 56.5**	**+0.1**
NEY				pmax	pmax		
	comp=Z,15nm,0.7s						
NEY	**Neytrino**	**0.75 231**		*e*Pg	**Pg**	**13 31 45.8**	**-0.2**
NEY				*e*Pg	**Pb**	**13 31 45.9**	**-0.4**
NEY				*e*Sg	**Sb**	**13 31 56.3**	**-0.1**
NEY				*e*Sg	**Sb**	**13 31 56.5**	**+0.1**
KORR	**Kora**	**0.76 148**		*e*PG	**Pb**	**13 31 46.3**	**-0.1**
KORR				*e*S	**Sn**	**13 31 58.2**	**-0.7**
KORR	**Kora**	**0.76 148**		*e*Pg	**Pb**	**13 31 46.3**	**-0.1**
KORR				*e*Sg	**Sn**	**13 31 58.2**	**-0.7**
ARNR	**Ardon**	**0.78 134**		*e*PG	**Pb**	**13 31 46.2**	**-0.6**
ARNR				*e*S	**Sn**	**13 31 58.9**	**-0.6**
ARNR	**Ardon**	**0.78 134**		*e*Pg	**Pb**	**13 31 46.2**	**-0.6**
ARNR				*e*Sg	**Sn**	**13 31 58.9**	**-0.6**
BTKR	**Batakoyurt**	**0.83 115**		*e*PG	**Pg**	**13 31 46.7**	**-0.8**
BTKR				*e*S	**Sb**	**13 31 59.1**	**+0.6**
BTKR	**Batakoyurt**	**0.83 115**		*e*Pg	**Pg**	**13 31 46.7**	**-0.8**
BTKR				*e*Sg	**Sb**	**13 31 59.1**	**+0.6**
DIGR	**Digorskoe uzhe**	**0.83 177**		*e*PG	**Pg**	**13 31 46.3**	**-1.2**
DIGR				*e*S	**Sg**	**13 31 57.5**	**-1.0**
DIGR	**Digorskoe uzhe**	**0.83 177**		*e*Pg	**Pg**	**13 31 46.1**	**-1.4**
DIGR				*e*Sg	**Sg**	**13 31 57.4**	**-1.0**
TRKR	**Terskaya**	**0.88 90**		⇓*e*PG	**Pg**	**13 31 47.1**	**-1.4**
TRKR	**Terskaya**	**0.88 90**		*e*Pg	**Pg**	**13 31 47.1**	**-1.4**
TRKR				*e*Sg	**Sb**	**13 31 59.5**	**-0.5**
LACR	**Lac**	**1.07 147**		*e*PG	**Pg**	**13 31 50.7**	**-1.3**
LACR				*e*S	**Sn**	**13 32 06.7**	**+0.1**
LACR	**Lac**	**1.07 147**		*e*Pg	**Pg**	**13 31 50.4**	**-1.6**
LACR				*e*Sg	**Sn**	**13 32 06.7**	**+0.1**
VLKR	**Vladikavkaz**	**1.09 128**		*e*PG	**Pg**	**13 31 51.7**	**-0.7**
VLKR				*e*S	**Sn**	**13 32 08.1**	**+1.1**
VLKR	**Vladikavkaz**	**1.09 128**		*e*Pg	**Pg**	**13 31 51.7**	**-0.7**
VLKR				*e*Sg	**Sn**	**13 32 08.1**	**+1.1**
ALER	**Alexandrovskoy**	**1.12 338**		*e*PG	**Pb**	**13 31 52.4**	**-0.2**
ALER				*e*S	**Sb**	**13 32 07.6**	**+0.6**
ALER	**Alexandrovskoy**	**1.12 338**		*e*Pg	**Pb**	**13 31 52.4**	**-0.2**
ALER				*e*Sg	**Sb**	**13 32 07.6**	**+0.6**
ONI	**Oni**	**1.14 182**		P	**Pb**	**13 31 52.4**	**-0.5**
ONI				S	**Sn**	**13 32 08.5**	**+0.2**
ONI	**Oni**	**1.14 182**		⇓PG	**Pb**	**13 31 52.4**	**-0.5**
ONI				S	**Sn**	**13 32 08.5**	**+0.2**
KMGR	**Komgaron**	**1.19 124**		*e*PG	**Pb**	**13 31 52.9**	**-0.8**
KMGR				*e*S	**Sn**	**13 32 11.2**	**+1.6**
KMGR	**Komgaron**	**1.19 124**		*e*Pg	**Pb**	**13 31 52.9**	**-0.8**
KMGR				*e*Sg	**Sn**	**13 32 11.2**	**+1.6**
PNSH	**Pansheti**	**1.36 143**		P	**Pn**	**13 31 54.8**	**-1.2**
PNSH				S	**Sb**	**13 32 12.9**	**-1.0**
PNSH	**Pansheti**	**1.36 143**		PG	**Pn**	**13 31 54.8**	**-1.2**
PNSH				S	**Sb**	**13 32 12.9**	**-1.0**
NVNR	**Nevinnomyssk**	**1.43 309**		*e*PG	**Pb**	**13 31 57.7**	**0.0**
NVNR				*e*S	**Sb**	**13 32 16.3**	**+0.6**
NVNR	**Nevinnomyssk**	**1.43 309**		*e*Pg	**Pb**	**13 31 57.7**	**0.0**
NVNR				*e*Sg	**Sb**	**13 32 16.3**	**+0.6**
TKB	**Tkibuli**	**1.43 196**		P	**Pg**	**13 31 58.9**	**+0.1**
TKB				S	**Sg**	**13 32 19.6**	**+2.1**
TKB	**Tkibuli**	**1.43 196**		PG	**Pg**	**13 31 58.9**	**+0.1**
TKB				S	**Sg**	**13 32 19.5**	**+2.1**
DOMR	**Dombai**	**1.44 253**		*e*PG	**Pn**	**13 31 57.1**	**-0.1**
DOMR				*e*S	**Sg**	**13 32 17.5**	**-0.5**
DOMR	**Dombai**	**1.44 253**		*e*Pg	**Pn**	**13 31 57.1**	**-0.1**
DOMR				*e*Sg	**Sg**	**13 32 17.5**	**-0.5**
GUDG	**Gudauri**	**1.45 151**		P	**Pn**	**13 31 57.2**	**-0.1**
GUDG				S	**Sg**	**13 32 17.0**	**-1.1**
GUDG	**Gudauri**	**1.45 151**		PG	**Pn**	**13 31 57.2**	**-0.1**
GUDG				S	**Sg**	**13 32 17.0**	**-1.1**
SHTL	**Shatili**	**1.61 131**		P	**Pn**	**13 31 57.9**	**-1.5**
SHTL				S	**Sn**	**13 32 19.6**	**-0.4**
ALIG	**Mtskhetisjvari**	**1.62 177**		P	**Pg**	**13 32 00.9**	**-0.2**
ALIG				S	**Sg**	**13 32 24.6**	**+0.9**
ARXR	**Arkhyz**	**1.64 265**		⇓*e*PN	**Pb**	**13 32 01.7**	**+0.3**
ARXR				*e*S	**Sg**	**13 32 25.7**	**+1.6**
ARXR				pmax	pmax		
	comp=Z,268nm,0.9s						
ARXR	**Arkhyz**	**1.64 265**		*e*Pg	**Pn**	**13 32 00.7**	**+0.9**
ARXR				*e*Sg	**Sb**	**13 32 22.2**	**+0.4**
GROC	**Groznyy**	**1.74 107**		PN	**Pn**	**13 32 01.5**	**+0.4**
GROC				*e*		13 32 26.1	
GROC				pmax	pmax		
	comp=Z,51nm,0.5s						
GROC				smax	smax		
	comp=E,111nm,0.4s						
GROC				smax	smax		
	comp=N,301nm,0.6s						
GROC				smax	smax		
	comp=N,280nm,0.6s						
GROC	**Groznyy**	**1.74 107**		*e*Pg	**Pn**	**13 32 01.3**	**+0.1**
GROC				*e*Sg	**Sb**	**13 32 24.1**	**-0.7**
AHMR	**Akhmetovskaya**	**1.84 284**		*e*PN	**Pn**	**13 32 01.5**	**-1.0**
AHMR	**Akhmetovskaya**	**1.84 284**		*e*Pg	**Pn**	**13 32 01.5**	**-1.0**
AHMR				*e*Sg	**Sn**	**13 32 25.2**	**-0.3**
BKRG	**Bakuriani**	**1.97 180**		P	**Pb**	**13 32 07.5**	**+0.5**
BKRG				S	**Sg**	**13 32 35.4**	**+0.7**
BKRG	**Bakuriani**	**1.97 180**		PN	**Pb**	**13 32 07.5**	**+0.5**
BKRG				S	**Sg**	**13 32 35.4**	**+0.7**
ABS	**Abastumani**	**2.04 195**		P	**Pb**	**13 32 07.3**	**-1.0**
ABS				S	**Sg**	**13 32 35.1**	**-1.8**
ABS	**Abastumani**	**2.04 195**		PN	**Pb**	**13 32 07.3**	**-1.0**
ABS				S	**Sg**	**13 32 35.1**	**-1.8**
BRNG	**Burnasheti**	**2.12 174**		P	**Pg**	**13 32 10.3**	**-1.7**
LABN	**Labinsk**	**2.21 295**		*e*PN	**Pn**	**13 32 07.6**	**0.0**
LABN				*e*S	**Sn**	**13 32 32.4**	**-2.2**
LABN	**Labinsk**	**2.21 295**		*e*Pg	**Pn**	**13 32 07.6**	**0.0**
LABN				*e*Sg	**Sn**	**13 32 32.4**	**-2.2**
AKH	**Akhalkalaki**	**2.32 180**		P	**Pg**	**13 32 14.4**	**-1.4**
AKH				S	**Sg**	**13 32 45.3**	**-0.5**
AKH	**Akhalkalaki**	**2.32 180**		*e*PN	**Pb**	**13 32 10.9**	**-2.1**
AKH				*e*S	**Sn**	**13 32 39.2**	**+1.7**
AKH	**Akhalkalaki**	**2.32 180**		*e*Pn	**Pb**	**13 32 10.8**	**-2.1**
AKH				*e*Sn	**Sn**	**13 32 39.2**	**+1.7**
AZMN	**Azmana**	**2.42 184**		P	**Pn**	**13 32 10.2**	**-0.4**
AZMN				S	**Sg**	**13 32 47.5**	**-1.5**
DMNI	**Dmanisi**	**2.45 168**		P	**Pn**	**13 32 12.0**	**+1.0**
DMNI	**Dmanisi**	**2.45 168**		PN	**Pn**	**13 32 12.0**	**+1.0**
GUZR	**Guzeripl'**	**2.47 277**		*e*PN	**Pn**	**13 32 13.2**	**+1.9**
GUZR				*e*S	**Sn**	**13 32 41.2**	**0.0**
GUZR	**Guzeripl'**	**2.47 277**		*e*Pn	**Pn**	**13 32 13.2**	**+1.9**
GUZR				*e*Sn	**Sn**	**13 32 41.2**	**0.0**
DBC	**Dubki**	**2.52 105**		*e*PN	**Pn**	**13 32 11.1**	**-0.8**
DBC				*e*S	**Sn**	**13 32 42.5**	**+0.1**
DBC	**Dubki**	**2.52 105**		*e*Pn	**Pn**	**13 32 11.1**	**-0.8**
DBC				*e*Sn	**Sn**	**13 32 42.5**	**+0.1**
VSLR	**Vesyoloye**	**2.54 265**		*e*PN	**Pn**	**13 32 11.0**	**-1.2**
VSLR				*e*S	**Sn**	**13 32 42.8**	**-0.1**
VSLR	**Vesyoloye**	**2.54 265**		*e*Pn	**Pn**	**13 32 11.0**	**-1.2**
VSLR				*e*Sn	**Sn**	**13 32 42.8**	**-0.1**
UNCR	**Uncukul**	**2.60 112**		*e*PN	**Pn**	**13 32 10.9**	**-2.1**
UNCR				*e*S	**Sn**	**13 32 42.4**	**-2.0**
UNCR	**Uncukul**	**2.60 112**		*e*Pn	**Pn**	**13 32 10.9**	**-2.1**
UNCR				*e*Sn	**Sn**	**13 32 42.4**	**-2.0**
KRNR	**Karanay**	**2.63 109**		*e*PN	**Pn**	**13 32 11.9**	**-1.6**
KRNR				*e*S	**Sn**	**13 32 43.6**	**-1.7**
KRNR	**Karanay**	**2.63 109**		*e*Pn	**Pn**	**13 32 11.9**	**-1.6**
KRNR				*e*Sn	**Sn**	**13 32 43.6**	**-1.7**
DGRG	**David-gareji**	**2.66 148**		P	**Pn**	**13 32 14.5**	**+0.7**
DGRG				S	**Sg**	**13 32 54.1**	**-2.6**
DGRG	**David-gareji**	**2.66 148**		PN	**Pn**	**13 32 14.5**	**+0.7**
DGRG				S	**Sg**	**13 32 54.2**	**-2.6**
SOC	**Sochi**	**2.76 268**		*e*PN	**Pn**	**13 32 14.0**	**-1.2**
SOC				*e*		13 32 20.7	
SOC				*e*PPP	PPP	13 32 24.3	
SOC				*e*		13 32 48.3	
SOC				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,52nm,12.0s						
BUJR	**Buynaksk**	**2.77 108**		*e*PN	**Pn**	**13 32 16.8**	**+1.4**
BUJR				*e*S	**Sn**	**13 32 50.0**	**+1.4**
BUJR	**Buynaksk**	**2.77 108**		*e*Pn	**Pn**	**13 32 16.8**	**+1.4**
BUJR				*e*Sn	**Sn**	**13 32 50.0**	**+1.4**
ARKR	**Arakani**	**2.78 113**		*e*PN	**Pn**	**13 32 16.8**	**+1.3**
ARKR				*e*S	**Sn**	**13 32 48.3**	**-0.6**
ARKR	**Arakani**	**2.78 113**		*e*Pn	**Pn**	**13 32 16.8**	**+1.3**
ARKR				*e*Sn	**Sn**	**13 32 48.3**	**-0.6**
GNBR	**Gunib**	**2.86 117**		*e*PN	**Pn**	**13 32 17.5**	**+0.9**
GNBR				*e*S	**Sn**	**13 32 51.0**	**+0.2**
GNBR	**Gunib**	**2.86 117**		*e*Pn	**Pn**	**13 32 17.5**	**+0.9**
GNBR				*e*Sn	**Sn**	**13 32 51.0**	**+0.2**
ERBR	**Yeremizino-Bor**	**2.94 314**		*e*PN	**Pn**	**13 32 17.6**	**0.0**
ERBR				*e*S	**Sn**	**13 32 54.0**	**+1.4**
ERBR	**Yeremizino-Bor**	**2.94 314**		*e*Pn	**Pn**	**13 32 17.6**	**0.0**
DDFL	**Dedoflistskaro**	**2.98 139**		P	**Pg**	**13 32 30.4**	**+1.8**
DDFL				S	**Sg**	**13 33 14.8**	**+7.6**
DDFL	**Dedoflistskaro**	**2.98 139**		PN	**Pg**	**13 32 30.4**	**+1.8**
DDFL				S	**Sg**	**13 33 14.8**	**+7.6**
LZRR	**Lazarevskoye**	**3.00 275**		*e*PN	**Pn**	**13 32 16.7**	**-1.7**
LZRR				*e*S	**Sn**	**13 32 53.7**	**-0.5**
LZRR	**Lazarevskoye**	**3.00 275**		*e*Pn	**Pn**	**13 32 16.7**	**-1.7**
LZRR				*e*Sn	**Sn**	**13 32 53.7**	**-0.5**
QZX	**Qazax, Azerbai**	**3.00 152**		P	**Pb**	**13 32 24.5**	**-0.1**
QZX				S	**Sb**	**13 33 03.3**	**+2.2**
MAK	**Makhachkala**	**3.01 103**		*e*PN	**Pn**	**13 32 18.8**	**+0.3**
MAK				*e*		13 32 26.0	
MAK				*e*S	**Sn**	**13 32 57.5**	**+3.2**
MAK				*e*		13 33 04.1	
MAK				*e*		13 33 10.9	
MAK				pmax	pmax		
	comp=Z,174nm,0.3s						
MAK				smax	smax		
	comp=E,310nm,0.4s						
MAK				smax	smax		
	comp=E,346nm,0.3s						
MAK				MLR	MLR		
	comp=Z,488nm,2.0s						
GOYR	**Goytkh**	**3.03 281**		*e*PN	**Pn**	**13 32 19.1**	**+0.2**
GOYR				*e*S	**Sn**	**13 32 56.2**	**+1.3**
GOYR	**Goytkh**	**3.03 281**		*e*Pn	**Pn**	**13 32 19.1**	**+0.2**
KMKR	**Kumukh**	**3.08 120**		*e*PN	**Pn**	**13 32 17.1**	**-2.6**
KMKR				*e*S	**Sn**	**13 32 54.3**	**-2.1**
ZKTA	**Zakatala**	**3.10 131**		P	**Pb**	**13 32 26.0**	**-0.3**
ZKTA				S	**Sb**	**13 33 06.4**	**+2.5**
GDB	**GEDABAY**	**3.43 150**		P	**Pb**	**13 32 30.9**	**-1.2**
GDB				S	**Sb**	**13 33 13.7**	**0.0**
GNI	**Garni**	**3.69 165**		*e*PN	**Pn**	**13 32 29.7**	**+1.6**
GNI				*e*S	**Sn**	**13 33 12.2**	**+0.7**
GNI	**Garni**	**3.69 165**		*e*Pn	**Pn**	**13 32 29.7**	**+1.6**
GNI				*e*Sn	**Sn**	**13 33 12.2**	**+0.7**
GANJ	**Ganja**	**3.72 145**		S	**Sb**	**13 33 23.2**	**+1.5**
AKT	**Akhty**	**3.84 124**		*e*PN	**Pn**	**13 32 30.8**	**+0.7**
AKT				*e*S	**Sn**	**13 33 15.0**	**0.0**
AKT	**Akhty**	**3.84 124**		*e*Pn	**Pn**	**13 32 30.8**	**+0.7**
AKT				*e*Sn	**Sn**	**13 33 15.0**	**0.0**

*BJI **04** 14:00:40.7±0.0, 27°.81N×142°.25E, h30km, mb5.1/72, mB5.5/62, Ms5.4/85, Ms7 5.3/81*
*MOS **04** 14:00:42.4±0.9, 27°.88N×141°.76E, h18km, mb5.8/92, MS5.2/30, Error ellipse: s-maj=6.4km s-min=3.5km az=110.2*
*NEIC **04** 14:00:46.5, 27°.88N×141°.95E, h35km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-2.15; $M_{r\theta}$0.75; $M_{\theta\phi}$0.02; $M_{\phi r}$1.79; Fault plane solution: $M_0$3.15000×10^{17} NP1:ϕ_s12.65000°, δ64.17000°, λ98.71000°. NP2:ϕ_s173.28000°, δ27.16000°, λ72.62000°. Principal axes: T 3.4340, Plg70.0000°, Azm301.0000°; N -0.6787, Plg8.0000°, Azm189.0000°; P -2.7553, Plg19.0000°, Azm96.0000°;*
*IDC **04** 14:00:47.2±1.1, 27°.85N×141°.81E, h40km±9km, mb5.1/52, mbtmp5.3/57, ML4.1/5, MS5.0/86 Error ellipse: s-maj=10.8km s-min=6.3km az=84.0*
*NEIC **04** 14:00:47.1±1.7, 27°.85N±0°.05×141°.94E±0°.08, h35km±1km, mb5.6/421, Ms_20 5.3/240, Mwb5.6/69, Mww5.7/35, Error ellipse: s-maj=12.8km s-min=7.3km az=253.0*
*NEIC **04** 14:00:47.1, 27°.89N×141°.96E, h30km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.88; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-3.98; $M_{r\theta}$1.50; $M_{\theta\phi}$0.08; $M_{\phi r}$2.10; Fault plane solution: $M_0$4.71000×10^{17} NP1:ϕ_s163.00000°, δ33.00000°, λ60.00000°. NP2:ϕ_s17.00000°, δ61.00000°, λ108.00000°. Principal axes: T 4.8632, Plg68.0000°, Azm323.0000°; N -0.3385, Plg16.0000°, Azm188.0000°; P -4.5247, Plg15.0000°, Azm94.0000°;*
*NIED **04** 14:00:48.7, 27°.73N×142°.09E, h43km, MW5.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}2.33; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-2.70; $M_{r\theta}$1.49; $M_{\theta\phi}$-0.37; $M_{\phi r}$2.01; Fault plane solution: $M_0$3.58000×10^{17} NP1: ϕ_s166.00000°, δ28.00000°, λ52.00000°. NP2:ϕ_s27.00000°, δ68.00000°, λ108.00000°.*
*JMA **04** 14:00:48.7±0.1, 27°.7N±0°.8×14°.2E±°, h43km, MD5.8/37, MW5.8/37, NEAR CHICHIJIMA ISLAND*
JMA Felt II J1 at NEAR CHICHIJIMA ISLAND .
*GCMT **04** 14:00:50.1±0.1, 27°.86N±0°.01×142°.13E±0°.01, h43km, MW5.7/166, Moment Tensor Solution. s156, c301; s166, c367; Duration: 1♀8 Moment tensor: Scale 10^{17} Nm; M_{rr}4.36±.05; $M_{\theta\theta}$0.31±.04; $M_{\phi\phi}$-4.67±.04; $M_{r\theta}$0.61±.04; $M_{\theta\phi}$0.06±.03; $M_{\phi r}$2.50±.04; Best double couple: $M_0$5.20100×10^{17} NP1:ϕ_s7.00000°, δ60.00000°, λ98.00000°. NP2:ϕ_s171.00000°, δ31.00000°, λ77.00000°. Principal axes: T 5.0840, Plg74.0000°, Azm297.0000°; N 0.2360, Plg7.0000°, Azm183.0000°; P -5.3180, Plg15.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 14:00:46.9±0.2, 27°.86N±0°.02×141°.89E±0°.03, h40km±2km, h40km:pP-P, n1647, σ1♀39/1821, mb5.6/405, MS5.3/251, 124C-30D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.81 161**		P	**Pn**	**14 01 01.4**	**-0.4**
CBIJ				S	**Sn**	**14 01 10.3**	**-2.3**
CBIJ	**Chichi jima**	**0.81 161**		A	A	14 01 01.4	
	comp=E,491nm,2.0s,comp=E,539nm,1.4s						
JCJ	**Chichijima**	**0.81 161**		Pn	**Pn**	**14 01 01.3**	**-0.5**
	3μm,0.3s,baz=7.2,slow=6.0,SNR=827						
JCJ				Sn	**Sn**	**14 01 11.6**	**-1.0**
	21μm,0.3s,baz=225,slow=13,SNR=42						
JCJ				LR	LR	14 01 30.9	
	comp=Z,75μm,21.7s,baz=106,slow=53						
JCJ	**Chichijima**	**0.81 161**			**Pn**	**14 01 01.1**	**-0.7**
JCJ				Sn	**Sn**	**14 01 10.8**	**-1.8**
JHH2	**Haha-jima-NKT2**	**1.25 168**		P	**Pn**	**14 01 07.9**	**+0.1**
JHH2				S	**Sn**	**14 01 21.8**	**-1.7**
JHH2	**Haha-jima-NKT2**	**1.25 168**		A	A	14 01 07.9	
	comp=E,284nm,2.9s,comp=E,199nm,0.7s						
JAOM	**Aogashimamukai**	**4.94 339**		*e*P	**Pn**	**14 01 55.8**	**-2.8**
JAOM	**Aogashimamukai**	**4.94 339**		A	A	14 01 55.8	
	comp=E,36nm,5.3s,comp=E,26nm,6.2s						
JHCJ	**Hachijojimakas**	**5.50 341**		*e*S	**Sn**	**14 03 07.6**	**-0.5**
JHCJ	**Hachijojimakas**	**5.50 341**		A	A	14 03 07.6	
	comp=E,13nm,5.2s,comp=E,11nm,6.2s						
JHJ2	**Mitsune**	**5.53 342**		P	**Pn**	**14 02 06.7**	**0.0**
JHJ2	**Mitsune**	**5.53 342**		*e*P	**Pn**	**14 02 07.4**	**+0.7**
JHJ2				*e*S	**Sn**	**14 03 08.5**	**-0.4**
JHJ2	**Mitsune**	**5.53 342**		A	A	14 02 07.4	
	comp=E,19nm,7.4s,comp=E,16nm,5.6s						
JHJ	**Hachijo jima 2**	**5.54 341**		Pn	**Pn**	**14 02 06.5**	**-0.3**
	58nm,0.3s,baz=250,slow=19,SNR=36						
JHJ				Sn	**Sn**	**14 03 07.8**	**-1.5**
	335nm,0.3s,baz=58,slow=23,SNR=5.9						
JHJ				LR	LR	14 04 36.5	
	comp=Z,9μm,18.1s,baz=168,slow=42 161nm,0.4s						
JMKN	**Mikurajimanish**	**6.33 342**		*e*P	**Pn**	**14 02 17.7**	**+0.1**
JMKN				*e*S	**Sn**	**14 03 27.9**	**-0.7**
JMKN	**Mikurajimanish**	**6.33 342**		A	A	14 02 17.7	
	comp=E,14nm,6.0s,comp=E,17nm,4.7s						
JMYK	**Miyake Tsubota**	**6.50 343**		*e*P	**Pn**	**14 02 20.2**	**+0.3**
JMYK				*e*S	**Sn**	**14 03 31.2**	**-1.5**
JMYK	**Miyake Tsubota**	**6.50 343**		A	A	14 02 20.2	
	comp=E,24nm,5.0s,comp=E,20nm,6.0s						
JKO	**Kozu shima**	**6.73 340**		A	A	14 02 30.3	
	comp=E,40nm,3.1s,comp=E,23nm,3.9s						
BSO1	**Boso 1**	**6.81 354**		*e*P	**Pn**	**14 02 23.8**	**+0.1**
BSO1				*e*S	**Sn**	**14 03 38.6**	**-1.2**
JSKK	**Shikinejimakit**	**6.85 341**		A	A	14 02 31.8	
	comp=E,15nm,3.6s,comp=E,13nm,5.4s						
JNIO	**Niijimaoohara**	**6.85 342**		A	A	14 02 31.8	
	comp=E,21nm,5.6s,comp=E,23nm,4.8s						
JTHY	**Toshimahigashi**	**7.00 342**		A	A	14 02 33.9	
	comp=E,18nm,4.8s,comp=E,31nm,6.8s						
TK02	**Tokai 2**	**7.03 331**		*e*P	**Pn**	**14 02 30.5**	**+3.5**
JIM2	**Oshima 3**	**7.15 343**		A	A	14 02 36.0	
	comp=E,12nm,4.4s,comp=E,13nm,4.5s						
TTO1	**TONANKAI O.B.S**	**7.23 324**		*e*P	**Pn**	**14 02 33.4**	**+3.7**
JIZS	**Izushimoda**	**7.30 340**		A	A	14 02 38.2	
	comp=E,8.0nm,4.9s,comp=E,6.0nm,5.5s						
JKUC	**kamogawauchiur**	**7.42 349**		A	A	14 02 39.4	
	comp=E,14nm,6.4s,comp=E,14nm,6.3s						
JHTM	**Izuhatsuma**	**7.49 342**		A	A	14 02 40.7	
	comp=E,10.0nm,4.5s,comp=E,11nm,5.3s						
JSG	**Sagara**	**7.49 336**		A	A	14 02 41.0	
	comp=E,13nm,5.0s,comp=E,21nm,3.7s						
JYO	**Yokosk**	**7.58 346**		A	A	14 02 41.9	
	comp=E,14nm,9.9s,comp=E,17nm,5.3s						
JKKS	**Kakegawashinom**	**7.63 335**		A	A	14 02 42.9	
	comp=E,21nm,5.1s,comp=E,18nm,4.3s						
JCN	**Nagara**	**7.67 350**		A	A	14 02 43.0	
	comp=E,30nm,5.7s,comp=E,24nm,6.5s						
JOD2	**Odawara 2**	**7.75 343**		*e*P	**Pn**	**14 02 37.0**	**-0.2**
JOD2	**Odawara 2**	**7.75 343**		A	A	14 02 37.0	
	comp=E,6.0nm,4.2s,comp=E,6.0nm,5.7s						
JFNN	**Fujinakano**	**7.80 340**		A	A	14 02 45.1	
	comp=E,12nm,3.4s,comp=E,13nm,3.9s						
SHZ3	**Shizuoka 3**	**7.84 337**		A	A	14 02 45.7	
	comp=E,5.0nm,6.2s,comp=E,5.0nm,4.9s						
JSMT	**Sammumatsuo**	**7.85 351**		A	A	14 02 45.4	
	comp=E,38nm,5.0s,comp=E,32

TATO	**Taipei**	**18.50 266**	P	**Pn**	**14 05 03.1 +3.0**
TATO			P	**Pn**	**14 05 03.1 +3.0**
NACB	**Ninganchiao**	**18.61 263**	P	**P**	**14 05 00.1 -0.9**
YSS	**Yuzh-Sakhalins**	**19.07 2**	P	**P**	**14 05 04.9 -0.9**
YSS	**Yuzh-Sakhalins**	**19.07 2**	*e*P	**Pn**	**14 05 07.5 +0.7**
YSS			*e*S	**Sn**	**14 08 38.5 -0.9**
YSS			pmax	pmax	
	comp=Z,5μm,5.7s				
YSS			pmax	pmax	
	comp=Z,270nm,1.3s				
YSS			smax	smax	
	comp=E,3μm,8.9s				
YSS			MLR	MLR	
	comp=N,2μm,13.0s				
YSS			MLR	MLR	
	comp=Z,2μm,13.0s				
YULB	**Yu-li**	**19.09 261**		**Pn**	**14 05 07.7 +0.3**
SSLB	**Suanglung**	**19.28 263**	P	**Pn**	**14 05 09.8 +0.2**
SSLB			IAmb	IAmb	14 05 16.8
	comp=Z,296nm,0.9s				
MDJ	**Mudanjiang**	**19.40 333**	P	**P**	**14 05 09.3 -0.1**
MDJ	**Mudanjiang**	**19.40 333**	P	**Pn**	**14 05 11.4 +0.5**
MDJ			S	**S**	**14 08 42.5 -4.2**
MDJ			pmax	pmax	
	comp=Z,58nm,1.1s				
MDJ			pmax	pmax	
	comp=Z,1μm,11.8s				
MDJ			LR	LR	
	comp=Z,2μm,19.5s				
MDJ			LR	LR	
	comp=Z,6μm,17.9s				
MDJ			LR	LR	
	comp=Z,6μm,20.8s				
TWG	**Pinlang**	**19.47 260**		**Pn**	**14 05 12.0 +0.1**
DL2	**Dalian**	**20.14 308**	P	**P**	**14 05 17.3 -0.3**
DL2			S	Sn	14 09 06.9 +1.5
DL2			pmax	pmax	
	comp=Z,33nm,0.8s				
DL2			pmax	pmax	
	comp=Z,910nm,8.0s				
DL2			LR	LR	
	comp=Z,7μm,17.8s				
DL2			LR	LR	
	comp=Z,8μm,21.0s				
DL2			LR	LR	
	comp=Z,11μm,19.2s				
NJ2	**Nanjing**	**20.38 287**	*e*P	**P**	**14 05 21.4 +1.1**
NJ2			sP	**pwP**	**14 05 35.1 +0.6**
NJ2			S	Sn	14 09 11.4 +0.1
NJ2			sS	**sS**	**14 09 19.2 -2.8**
NJ2			pmax	pmax	
	comp=Z,51nm,1.0s				
NJ2			LR	LR	
	comp=Z,6μm,16.7s				
NJ2			LR	LR	
	comp=Z,5μm,21.6s				
NJ2			LR	LR	
	comp=Z,8μm,16.7s				
SNY	**Shenyang**	**20.43 318**	⇓P	**P**	**14 05 21.2 +0.5**
SNY			S	Sn	14 09 13.0 +0.6
SNY			pmax	pmax	
	comp=Z,60nm,0.7s				
SNY			pmax	pmax	
	comp=Z,480nm,4.5s				
SNY			LR	LR	
	comp=Z,5μm,17.5s				
SNY			LR	LR	
	comp=Z,5μm,12.9s				
SNY			LR	LR	
	comp=Z,7μm,23.9s				
CN2	**Changchun**	**20.69 325**	*e*P	Pn	14 05 26.2 +0.2
CN2			sP	pP	14 05 33.0 +0.6
CN2			S	**S**	**14 09 13.0 +0.6**
CN2			pmax	pmax	
	comp=Z,400nm,3.0s				
CN2			LR	LR	
	comp=Z,4μm,16.0s				
CN2			LR	LR	
	comp=Z,7μm,16.0s				
CN2			LR	LR	
	comp=Z,6μm,17.0s				
QZH	**Quanzhou**	**21.07 267**	⇑*i*P	**P**	**14 05 30.5 +2.8**
QZH			S	Sn	14 09 25.9 -1.9
QZH			LR	LR	
	comp=Z,2μm,15.6s				
QZH			LR	LR	
	comp=Z,5μm,18.0s				
QZH			LR	LR	
	comp=Z,4μm,17.5s				
UGL	**Uglegorsk**	**21.18 0**	*e*P	**P**	**14 05 30.2 +1.5**
UGL			*e*S	**S**	**14 09 17.5 -4.5**
UGL			pmax	pmax	
	comp=Z,4μm,5.0s				
UGL			pmax	pmax	
	comp=Z,430nm,0.9s				
UGL			smax	smax	
	comp=E,120nm,1.2s				
UGL			smax	smax	
	comp=N,140nm,1.5s				
UGL			MLR	MLR	
	comp=E,5μm,16.0s				
BNX	**BinXian**	**21.22 331**	⇑P	**P**	**14 05 27.5 -1.7**
BNX			S	**S**	**14 09 24.1 +1.2**
BNX			sS	Sn	14 09 28.6 -2.6
BNX			pmax	pmax	
	comp=E,27nm,0.7s				
BNX			pmax	pmax	
	comp=E,1μm,5.1s				
BNX			LR	LR	
	comp=E,3μm,15.3s				
BNX			LR	LR	
	comp=E,3μm,10.7s				
BNX			LR	LR	
	comp=E,4μm,16.9s				
KNMB	**Chin-men Tao**	**21.36 266**	P	**P**	**14 05 34.1 +3.3**
JCNP	**Jose Panganiba**	**22.39 237**	⇑*i*P	**P**	**14 05 44.1 +2.1**
TIA	**Tai'an**	**22.54 298**	⇓P	**P**	**14 05 42.2 -1.3**
TIA			S	**S**	**14 09 45.0 -3.1**
TIA			pmax	pmax	
	comp=E,58nm,0.8s				
TIA			LR	LR	
	comp=E,4μm,21.8s				
TIA			LR	LR	
	comp=E,7μm,21.0s				
TIA			LR	LR	
	comp=E,10μm,21.1s				
KLR	**Kul'dur**	**22.72 343**	P	**P**	**14 05 44.6 -0.6**
	comp=E,125nm,0.6s,baz=146,slow=9.4,SNR=143				
KLR			LR	LR	14 14 29.4
	comp=E,4μm,21.7s,baz=158,slow=36				
	comp=E,125nm,0.6s				
KLR	**Kul'dur**	**22.72 343**	*c i*P	**P**	**14 05 44.7 -0.5**
KLR			pmax	pmax	
	comp=Z,311nm,1.3s				
TYV	**Tymovskoe**	**22.98 1**	*e*P	P	14 05 58.0 +10
TYV			pmax	pmax	
	comp=Z,65nm,1.2s				
TYV			pmax	pmax	
	comp=Z,2μm,4.5s				
TGY	**Tagaytay City**	**23.83 239**	LR	LR	14 14 22.8
	comp=Z,6μm,19.8s,baz=119,slow=34				
WHN	**Wuhan**	**24.17 283**	⇑P	**P**	**14 06 01.3 +1.8**
WHN			sP	**pwP**	**14 06 13.9 -0.6**
WHN			S	**S**	**14 10 16.1 +1.1**
WHN			pmax	pmax	
	comp=Z,80nm,0.7s				
WHN			LR	LR	
	comp=Z,15μm,26.5s				
TABP	**Talibon, Bohol**	**24.20 226**	⇓*e*P	**P**	**14 06 01.6 +1.8**
WAKE	**Wake Island**	**24.21 105**	P	**P**	**14 05 58.0 -2.0**
H11N2	**WAKE ISLAND Hy**	**24.24 104**	T	T	14 30 52.1
	baz=296,slow=74,SNR=165				
H11N1	**WAKE ISLAND Hy**	**24.24 104**	T	T	14 30 50.5
	baz=296,slow=74,SNR=12				
H11N3	**WAKE ISLAND Hy**	**24.25 104**	T	T	14 30 53.8
	baz=296,slow=74,SNR=340				
LLP	**Lapu-Lapu**	**24.26 227**	*e*P	**P**	**14 06 01.9 +1.5**
BJT	**Baijiatuau**	**24.45 306**	P	**P**	**14 06 02.0 0.0**
BJT	**Baijiatuau**	**24.45 306**	IAMs_20	IAMs_20	14 16 00.5
	comp=Z,9μm,19.0s				
BJT	**Baijiatuau**	**24.45 306**	P	**P**	**14 06 02.0 0.0**
BJT			pmax	pmax	
	comp=Z,45nm,1.4s				
BJT			MLR	MLR	
	comp=Z,9μm,19.0s				
BJI	**Beijing**	**24.45 306**	P	**P**	**14 06 01.6 -0.4**
BJI			PcP	**PcP**	**14 09 41.5 +1.5**
BJI			S	**S**	**14 10 19.1 -0.3**
BJI			pmax	pmax	
	comp=Z,10.0nm,0.7s				
BJI			pmax	pmax	
	comp=Z,600nm,6.7s				
BJI			LR	LR	
	comp=Z,740nm,14.6s				
BJI			LR	LR	
	comp=Z,7μm,16.2s				
BJI			LR	LR	
	comp=Z,10μm,16.3s				
BIPH	**Bislig**	**24.47 220**	⇓*e*P	**P**	**14 06 01.9 -0.4**
GHBP	**Garcia Hernand**	**24.55 226**	⇑*i*P	**P**	**14 06 04.4 +1.3**
H11S3	**WAKE ISLAND Hy**	**24.59 107**	T	T	14 31 19.0
	baz=297,slow=75,SNR=823				
H11S1	**WAKE ISLAND Hy**	**24.59 107**	T	T	14 31 19.3
	baz=297,slow=75,SNR=475				
H11S2	**WAKE ISLAND Hy**	**24.61 107**	T	T	14 31 20.3
	baz=297,slow=75,SNR=560				
HNS	**HongShan**	**24.72 300**	⇓P	**P**	**14 06 02.9 -1.5**
HNS			S	**S**	**14 10 18.7 -5.0**
HNS			LR	LR	
	comp=Z,7μm,17.8s				
HNS			LR	LR	
	comp=Z,6μm,20.4s				
HNS			LR	LR	
	comp=Z,9μm,21.5s				
TBP	**Tagbilaran**	**24.80 227**	⇑*e*P	**P**	**14 06 04.9 -0.4**
SKR	**Severo-Kuril's**	**25.22 22**	*e*P	**P**	**14 06 09.2 +0.4**
SKR			*e*S	**S**	**14 10 37.9 +6.5**
SKR			pmax	pmax	
	comp=Z,200nm,3.1s				
SKR			pmax	pmax	
	comp=Z,72nm,1.7s				
SKR			MLR	MLR	
	comp=Z,900nm,16.0s				
CGP	**Cagayan de Oro**	**25.23 223**	⇓*e*P	**P**	**14 06 10.9 +1.7**
LSIP	**Lazi, Siquijor**	**25.37 226**	*e*P	**P**	**14 06 11.1 +0.6**
SNPH	**Sibulan**	**25.47 227**	⇑*i*P	**P**	**14 06 15.0 +3.6**
DAV	**Davao City (W)**	**25.82 220**	LR	LR	14 14 36.8
	comp=Z,3μm,21.1s,baz=51,slow=32				
LYN	**LuoYang**	**25.98 292**	⇑P	**P**	**14 06 13.6 -2.3**
LYN			PP	**PnPn**	**14 06 57.4 +2.8**
LYN			S	**S**	**14 10 35.6 -8.2**
LYN			pmax	pmax	
	comp=Z,20nm,0.7s				
LYN			pmax	pmax	
	comp=Z,870nm,7.2s				
LYN			LR	LR	
	comp=Z,3μm,17.5s				
LYN			LR	LR	
	comp=Z,8μm,18.6s				
LYN			LR	LR	
	comp=Z,11μm,18.4s				
XLT	**XiLinHaoTe**	**26.18 314**	*e*P	**P**	**14 06 16.9 -0.8**
XLT			sP	sP	14 06 30.6 -1.0
XLT			PP	**PnPn**	**14 06 59.8 +2.3**
XLT			PcP	**PcP**	**14 09 42.8 -1.2**
XLT			S	**S**	**14 10 41.0 -6.0**
XLT			sS	sS	14 11 00.9 -4.0
XLT			SS	**SnSn**	**14 11 53.5 +5.4**
XLT			ScP	**ScP**	**14 13 20.6 0.0**
XLT			pmax	pmax	
	comp=Z,24nm,0.6s				
XLT			pmax	pmax	
	comp=Z,930nm,9.1s				
XLT			LR	LR	
	comp=Z,4μm,18.3s				
XLT			LR	LR	
	comp=Z,5μm,22.4s				
CTBH	**Cotabato--PC H**	**26.47 222**	⇑*i*P	**P**	**14 06 23.2 +2.8**
PAGZ	**Pagadian**	**26.51 225**	⇑*e*P	**P**	**14 06 22.2 +1.4**
TIY	**Taiyuan**	**26.55 299**	P	**P**	**14 06 19.0 -2.1**
TIY			S	**S**	**14 10 45.5 -7.4**
TIY			pmax	pmax	
	comp=Z,600nm,8.3s				
TIY			LR	LR	
	comp=Z,4μm,15.1s				
TIY			LR	LR	
	comp=Z,5μm,22.7s				
TIY			LR	LR	
	comp=Z,7μm,14.4s				
HIA	**Hailar**	**27.32 327**	P	**P**	**14 06 27.3 -0.6**
HIA			IAmb	IAmb	14 07 01.9
	comp=Z,171nm,1.3s				
HIA	**Hailar**	**27.32 327**	P	**P**	**14 06 27.3 -0.6**
HIA			pmax	pmax	
	comp=Z,171nm,1.3s				
HIA			MLR	MLR	
	comp=Z,3μm,18.0s				
PEA0	**Petropavlovsk-**	**27.81 21**	P	**P**	**14 06 32.5 +0.4**
PEA0B	**Petropavlovsk-**	**27.81 21**	⇓*e*P	**P**	**14 06 34.0 +1.9**
PETK	**Petropavlovsk-**	**27.81 21**	P	**P**	**14 06 32.0 -0.1**
	comp=Z,5.1nm,0.7s,baz=198,slow=9.1,SNR=4.2				
PETK			LR	LR	14 18 15.1
	comp=Z,2μm,20.8s,baz=197,slow=38				
	comp=Z,5.1nm,0.7s				
ZEA	**Zeya**	**28.01 341**	*ce*P	**P**	**14 06 35.0 +1.1**
ZEA			*e*S	**S**	**14 11 15.4 0.0**
ZEA			pmax	pmax	
	comp=E,50nm,1.2s				
ZEA			pmax	pmax	
	comp=N,140nm,0.6s				
ZEA			pmax	pmax	
	comp=Z,260nm,0.6s				
ZEA			pmax	pmax	
	comp=E,200nm,4.2s				
ZEA			pmax	pmax	
	comp=N,300nm,5.3s				
ZEA			pmax	pmax	
	comp=Z,600nm,3.6s				
ZEA			smax	smax	
	comp=Z,1μm,8.3s				
ZEA			smax	smax	
	comp=E,500nm,5.8s				
ZEA			smax	smax	
	comp=N,1μm,6.7s				
ZEA			MLR	MLR	
	comp=E,2μm,16.0s				
HHC	**Hu-ho-hao-te**	**28.04 305**	*e*P	**P**	**14 06 35.9 +1.4**
HHC			PP	**PnPn**	**14 07 26.0 +3.2**
HHC			S	**S**	**14 11 16.3 -0.1**
HHC			pmax	pmax	
	comp=E,17nm,0.5s				
HHC			pmax	pmax	
	comp=E,540nm,6.8s				
HHC			LR	LR	
	comp=E,7μm,15.4s				
HHC			LR	LR	
	comp=E,12μm,15.6s				
HHC			LR	LR	
	comp=E,19μm,16.8s				
PET	**Petropavlovsk**	**28.04 22**	P	**P**	**14 06 32.8 -1.4**
PET			IAmb	IAmb	14 06 53.7
	comp=Z,264nm,1.7s				
PET	**Petropavlovsk**	**28.04 22**	*e*P	**P**	**14 06 29.8 -4.4**
PET			*e*S	**S**	**14 11 10.2 -5.7**
PET			pmax	pmax	
	comp=Z,33nm,0.8s				
PET			pmax	pmax	
	comp=Z,700nm,16.9s				
PET			pmax	pmax	
	comp=Z,600nm,14.9s				
PET			MLR	MLR	
	comp=Z,3μm,16.0s				
PET			MLR	MLR	
	comp=Z,3μm,20.0s				
PPR	**Puerto Princes**	**28.27 235**	⇑*i*P	P	14 06 42.7 +6.1
GULI	**GuiLin**	**28.27 272**	P	**P**	**14 06 34.7 -1.9**
GULI			S	**S**	**14 11 18.7 -1.5**
GULI			LR	LR	
	comp=Z,2μm,16.1s				
GULI			LR	LR	
	comp=Z,3μm,16.5s				
GULI			LR	LR	
	comp=Z,5μm,17.3s				
ENH	**Enshi**	**28.38 283**	P	**P**	**14 06 36.2 -1.3**
ENH			IAMs_20	IAMs_20	14 17 08.4
	comp=Z,7μm,22.0s				
SGSI	**Sangihe**	**28.66 216**	P	**P**	**14 06 40.8 +0.7**
	comp=Z,2μmcomp=Z,135nm,0.6s				
XAN	**Xi'an**	**28.86 291**	⇑P	**P**	**14 06 41.1 -0.7**
XAN			pP	pP	14 06 50.5 -0.9
XAN			S	**S**	**14 11 28.8 -0.5**
XAN			SS	**SnSn**	**14 13 00.4 +7.0**
XAN			pmax	pmax	
	comp=Z,87nm,0.7s				
XAN			pmax	pmax	
	comp=Z,790nm,8.6s				
XAN			LR	LR	
	comp=Z,4μm,17.9s				
XAN			LR	LR	
	comp=Z,6μm,19.2s				
XAN			LR	LR	
	comp=Z,10μm,16.3s				
BTO	**Baotou**	**29.09 304**	*e*P	**P**	**14 06 41.2 -2.6**
BTO			S	**S**	**14 11 28.5 -4.4**
BTO			LR	LR	
	comp=Z,15μm,18.6s				
BTO			LR	LR	
	comp=Z,17μm,18.4s				
SMPI	**Sarmi**	**29.84 186**	P	**P**	**14 06 50.9 +0.4**
	comp=Z,1μmcomp=Z,48nm,1.8s				
TNTI	**Ternate**	**30.32 210**	P	**P**	**14 06 55.4 +0.6**
TNTI	**Ternate**	**30.32 210**	P	**P**	**14 06 55.9 +1.1**
	comp=Z,2μmcomp=Z,1μmcomp=Z,54nm,0.9s				
GENI	**Genyem**	**30.33 183**	P	P	14 07 02.1 +7.3
SIJI	**Sorong**	**30.34 201**	P	**P**	**14 06 54.7 -0.2**
	comp=Z,14nm,0.6s,baz=1.8,slow=15,SNR=11				
SIJI			LR	LR	14 16 47.9
	comp=Z,2μm,20.4s,baz=356,slow=32				
	comp=Z,14nm,0.6s				
QIZ	**Qiongzhong**	**30.62 260**	P	**P**	**14 06 57.4 0.0**
QIZ			pP	**pP**	**14 07 06.8 -0.3**
QIZ			sP	**sP**	**14 07 10.4 -0.9**
QIZ			S	**S**	**14 11 57.4 +0.3**
QIZ			pmax	pmax	
	comp=Z,20nm,2.6s				
QIZ			LR	LR	
	comp=Z,1μm,15.9s				
QIZ			LR	LR	
	comp=Z,3μm,19.1s				
QIZ			LR	LR	
	comp=Z,6μm,25.5s				
GYA	**Guiyang**	**31.31 276**	⇑P	**P**	**14 07 03.5 -0.1**
GYA			pP	pP	14 07 12.5 -0.8
GYA			S	**S**	**14 12 07.3 -0.8**
GYA			pmax	pmax	
	comp=Z,24nm,0.5s				
GYA			LR	LR	
	comp=Z,4μm,16.0s				
GYA			LR	LR	
	comp=Z,7μm,19.4s				
GYA			LR	LR	
	comp=Z,9μm,19.1s				
LBMI	**Labuha**	**31.53 208**	P	**P**	**14 07 05.9 +0.5**
	comp=Z,2μmcomp=Z,116nm,1.2s				
MYLDM	**Lahad Datu**	**31.68 229**	IAMs_20	IAMs_20	14 20 36.4
	comp=Z,6μm,19.0s				
FAKI	**Fak Fak**	**31.98 198**	P	**P**	**14 07 08.8 -0.6**
FAKI	**Fak Fak**	**31.98 198**	P	**P**	**14 07 08.8 -0.6**
	comp=Z,2μmcomp=Z,571nmcomp=Z,36nm,0.8s				
CIT	**Chita**	**32.11 327**	*e*P	**P**	**14 07 11.0 +0.8**
CIT			*e*		14 07 21.3
KMSI	**Cibinong**	**32.11 215**	P	**P**	**14 07 11.6 +1.1**
	comp=Z,356nm,0.7s				
GTOI	**Gorontalo**	**32.56 217**	P	**P**	**14 07 14.8 +0.3**
	comp=Z,1μmcomp=Z,105nm,1.2s				
KKM	**Kota Kinabalu**	**32.63 233**	P	**P**	**14 07 15.5 +0.3**
KKM			IAMs_20	IAMs_20	14 20 00.6
	comp=Z,6μm,20.0s				
LZH	**Lanzhou**	**33.13 294**	⇑P	**P**	**14 07 18.4 -1.2**
LZH			pP	pP	14 07 24.6 -4.7
LZH			sP	sP	14 07 28.8 -4.7
LZH			S	**S**	**14 12 35.1 -1.3**
LZH			pmax	pmax	
	comp=Z,50nm,1.5s				
LZH			pmax	pmax	
	comp=Z,210nm,4.8s				
LZH			LR	LR	
	comp=Z,4μm,15.5s				
LZH			LR	LR	
	comp=Z,8μm,15.8s				
LZH			LR	LR	
	comp=Z,11μm,16.1s				
CD2	**Chengdu**	**33.26 285**	P	**P**	**14 07 20.0 -0.6**
CD2			pP	pP	14 07 30.8 +0.5
CD2			sP	pwP	14 07 35.8 0.0
CD2			PP	**PP**	**14 08 36.4 +0.2**
CD2			S	**S**	**14 12 40.0 +1.7**
CD2			sS	sS	14 12 55.6 -0.7
CD2			pmax	pmax	
	comp=Z,2μm,3.2s				
CD2			LR	LR	
	comp=Z,9μm,8.1s				
CD2			LR	LR	
	comp=Z,13μm,7.9s				
CD2			LR	LR	
	comp=Z,14μm,10.9s				
MRSI	**Marisa**	**33.28 218**	P	**P**	**14 07 22.3 +1.6**
	comp=Z,3μmcomp=Z,4μmcomp=Z,573nm,0.8s				
SPMM	**Sapulut**	**33.40 231**	P	**P**	**14 07 23.0 +1.1**
KRVT	**Keravat (AS076**	**33.44 161**	LR	LR	14 20 04.4
	comp=Z,1μm,20.5s,baz=122,slow=35				
SANI	**Sanana**	**33.45 210**	P	**P**	**14 07 21.0 -1.2**
	comp=Z,2μmcomp=Z,1μmcomp=Z,122nm,0.9s				
MSAI	**Masohi**	**33.45 204**	P	P	14 07 28.0 +5.8
ULN	**Ulaanbaatar**	**33.59 316**	P	**P**	**14 07 22.7 -0.6**
ULN	**Ulaanbaatar**	**33.59 316**	IAMs_20	IAMs_20	14 21 37.1
	comp=Z,4μm,19.0s				
ULN	**Ulaanbaatar**	**33.59 316**	P	**P**	**14 07 22.7 -0.6**
ULN			pmax	pmax	
	comp=Z,34nm,1.2s				
ULN			MLR	MLR	
	comp=Z,4μm,19.0s				
ULN	**Ulaanbaatar**	**33.59 316**	P	**P**	**14 07 22.8 -0.6**
ULN			P	**P**	**14 07 22.8 -0.6**
SONM	**Songino Array**	**33.98 316**	P	**P**	**14 07 25.6 -1.2**
	comp=Z,13nm,0.5s,baz=126,slow=8.6,SNR=48				
SONM			PcP	**PcP**	**14 10 05.0 +0.8**
	comp=Z,6.0nm,0.6s,baz=119,slow=2.6,SNR=5.6				
SONM			ScP	**ScP**	**14 13 45.8 -0.2**
	comp=Z,3.4nm,0.7s,baz=140,slow=3.4,SNR=5.2				
SONM			LR	LR	14 22 09.9
	comp=Z,5μm,18.5s,baz=114,slow=38				
	comp=Z,13nm,0.5s				
SONM	**Songino Array**	**33.98 316**	P	**P**	**14 07 25.5 -1.2**
SONM	**Songino Array**	**33.98 316**	P	**P**	**14 07 25.5 -1.3**
SONM			pmax	pmax	
	comp=Z,47nm,1.5s				
AAI	**Ambon**	**34.03 205**	P	P	14 07 33.4 +6.1
LUWI	**Luwuk**	**34.11 216**	P	**P**	**14 07 27.6 -0.3**
LUWI	**Luwuk**	**34.11 216**	P	**P**	**14 07 27.7 -0.3**
	comp=Z,3μmcomp=Z,5μmcomp=Z,440nm,1.1s				
SHEM	**Shemya Is, Ala**	**34.45 35**	LR	LR	14 19 11.9
	comp=Z,1μm,21.9s,baz=230,slow=32				
APSI	**Ampana**	**34.59 218**	P	**P**	**14 07 32.6 +0.4**
KMI	**Kunming**	**35.05 275**	⇑P	**P**	**14 07 37.3 +0.9**
KMI			pP	pP	14 07 47.6 +1.5
KMI			S	**S**	**14 13 05.2 -1.1**
KMI			pmax	pmax	
	comp=Z,23nm,0.9s				
KMI			LR	LR	
	comp=Z,3μm,16.5s				
KMI			LR	LR	
	comp=Z,5μm,16.6s				
KMI			LR	LR	
	comp=Z,5μm,17.9s				
YAK	**Yakutsk**	**35.12 350**	P	**P**	**14 07 36.2 0.0**
	comp=Z,62nm,0.6s,baz=165,slow=0.8,SNR=29				
YAK			PcP	**PcP**	**14 10 07.0 0.0**
	comp=Z,12nm,0.6s,baz=113,slow=3.0,SNR=2.9				
YAK			LR	LR	14 22 21.6
	comp=Z,3μm,21.0s,baz=146,slow=37				
	comp=Z,62nm,0.6s				
YAK	**Yakutsk**	**35.12 350**	P	**P**	**14 07 35.9 -0.3**
YAK	**Yakutsk**	**35.12 350**	*c i*P	**P**	**14 07 36.2 0.0**
YAK			*e**PP	**pP**	**14 07 46.6 -0.4**
YAK			*e*		14 08 48.7
YAK			*e*PPP	PPP	14 09 09.7
YAK			*e*		14 10 07.2
YAK			*e*S	**S**	**14 13 07.3 +1.2**
YAK			*e*SS	**SnSn**	**14 15 26.4 +1.7**
YAK			*e*SSS	SSS	14 15 44.1
YAK			pmax	pmax	
	comp=Z,82nm,0.9s				
YAK			pmax	pmax	
	comp=N,13nm,0.7s				
YAK			pmax	pmax	
	comp=E,7.0nm,0.7s				
YAK			pmax	pmax	

comp=Z,108nm,1.6s
YAK pmax pmax
comp=N,81nm,1.6s
YAK pmax pmax
comp=E,57nm,1.6s
YAK smax smax
comp=N,206nm,2.8s
YAK smax smax
comp=E,159nm,2.8s
YAK Yakutsk 35.12 350 P P 14 07 35.5 -0.7
YAK pP **pP 14 07 47.1 +0.2**
PZH PanZhiHua 35.63 277 ⇓P **P 14 07 41.8 +0.5**
PZH pP **pP 14 07 51.6 +0.6**
PZH sP **sP 14 07 55.5 +0.3**
PZH S **S 14 13 13.6 -1.5**
PZH sS **sS 14 13 30.7 -2.6**
PZH ScP **ScP 14 13 48.9 -3.4**
PZH pmax pmax
comp=E,20nm,0.7s
PZH pmax pmax
comp=E,400nm,4.8s
PZH LR LR
comp=E,5μm,19.0s
PZH LR LR
comp=E,5μm,18.7s
PZH LR LR
comp=E,5μm,18.8s
SEY Seymchan 35.74 8 P **P 14 07 42.5 +1.0**
comp=E,38nm,0.8s,baz=189,slow=7.7,SNR=96
SEY LR LR 14 23 13.7
comp=E,2μm,21.9s,baz=169,slow=38
comp=E,38nm,0.8s
SEY Seymchan 35.74 8*c i*P **P 14 07 42.4 +0.8**
SEY pmax pmax
comp=Z,32nm,0.8s
BOD Bodaibo 35.76 335 *e*P **P 14 07 42.0 +0.3**
BOD pmax pmax
comp=Z,244nm,0.8s
MIDW Midway 35.84 80 IAMs_20 IAMs_20 14 19 15.3
comp=Z,4μm,19.0s
UBPT Khong Chiam 35.97 257 P **P 14 07 45.3 +1.2**
UBPT IAmb IAmb 14 08 02.0
comp=Z,138nm,1.9s
GTA Gaotai 36.58 299 ⇑P **P 14 07 47.6 -1.6**
GTA pP pP 14 07 53.9 -5.3
GTA sP sP 14 07 56.8 -6.4
GTA PP **PP 14 09 16.7 +3.9**
GTA S **S 14 13 26.9 -2.4**
GTA ScP **ScP 14 13 55.9 +0.4**
GTA pmax pmax
comp=Z,8.0nm,0.6s
GTA pmax pmax
comp=Z,450nm,6.4s
GTA LR LR
comp=Z,3μm,17.9s
GTA LR LR
comp=Z,4μm,22.7s
GTA LR LR
comp=Z,5μm,24.7s
ZAK Zakamensk 36.86 318 *e*P **P 14 07 50.4 -1.1**
ZAK pmax pmax
comp=Z,52nm,1.3s
PMG Port Moresby 37.40 171 P **P 14 07 57.7 +1.6**
comp=Z,12nm,0.7s,baz=343,slow=9.4,SNR=4.0
PMG S **S 14 13 36.9 -4.9**
comp=Z,7.5nm,0.8s,baz=246,slow=19,SNR=1.3
comp=Z,12nm,0.7s
SBUM Sibu 37.97 233 P **P 14 08 01.9 +0.8**
SBUM Sibu 37.97 233 P **P 14 08 03.0 +1.9**
KIWB Kanaga Island 38.80 40 P **P 14 08 08.6 +1.0**
KAPI Kappang 39.05 217 P **P 14 08 11.0 +1.0**
comp=Z,12nm,0.3s,baz=164,slow=3.4,SNR=9.1
KAPI LR LR 14 22 46.3
comp=Z,912nm,21.8s,baz=22,slow=34
comp=Z,12nm,0.3s
KAPI Kappang 39.05 217 P **P 14 08 10.8 +0.7**
KAPI IAmb IAmb 14 08 51.6
comp=Z,141nm,1.2s
KAPI Kappang 39.05 217 P **P 14 08 10.8 +0.7**
KAPI pmax pmax
comp=Z,141nm,1.3s
KAPI Kappang 39.05 217 P **P 14 08 11.1 +1.0**
KAPI pP **pwP 14 08 30.3 +6.6**
ADK Adak 39.08 41 P **P 14 08 10.3 +0.4**
ADK IAmb IAmb 14 08 37.0
comp=Z,120nm,1.1s
ADK Adak 39.08 41 P **P 14 08 10.3 +0.4**
ADK pmax pmax
comp=Z,120nm,1.1s
CHTO Chiang Mai 40.28 267 P **P 14 08 20.0 -0.4**
CHTO Chiang Mai 40.28 267 IAMs_20 IAMs_20 14 24 51.1
comp=Z,4μm,20.0s
CHTO Chiang Mai 40.28 267 P **P 14 08 20.0 -0.4**
CHTO pmax pmax
comp=Z,27nm,0.9s
CHTO MLR MLR
comp=Z,4μm,20.0s
CHTO Chiang Mai 40.28 267 P **P 14 08 20.9 +0.5**
CHTO P **P 14 08 20.9 +0.5**
CHTO Chiang Mai 40.28 267 P **P 14 08 19.5 -0.9**
CHTO pP **pP 14 08 31.4 +1.1**
CM31 Chiang Mai Arr 40.41 266 P **P 14 08 21.5 0.0**
CM31 Chiang Mai Arr 40.41 266 P **P 14 08 22.5 +1.0**
CM31 P **P 14 08 22.5 +1.0**
SNR=8.5
CMAR Chiang Mai Arr 40.41 266 P **P 14 08 22.1 +0.6**
comp=Z,7.8nm,0.6s,baz=76,slow=5.3,SNR=73
CMAR PcP **PcP 14 10 25.1 +1.0**
comp=Z,3.6nm,0.6s,baz=55,slow=3.0,SNR=4.7
CMAR LR LR 14 25 05.5
comp=Z,4μm,20.3s,baz=75,slow=36
comp=Z,7.8nm,0.6s
CMAR Chiang Mai Arr 40.41 266 P **P 14 08 21.5 +0.1**
LKP Lekhapani 40.62 280 *e*P **P 14 08 23.5 +0.4**
LKP IAmb IAmb 14 08 24.7
comp=Z,145nm,0.6s
MMRI Maumere 40.97 210 P **P 14 08 26.3 +0.3**
MMRI IAmb IAmb 14 08 54.5
comp=Z,173nm,0.9s
HNR Honiara 40.99 152 LR LR 14 24 40.6
comp=Z,16μm,20.7s,baz=326,slow=35
SOEI Soe 41.11 207 P **P 14 08 26.6 -0.7**
SOEI IAmb IAmb 14 09 10.7
comp=Z,158nm,0.9s
COEN Coen 41.59 178 P **P 14 08 31.2 +0.2**
COEN IAmb IAmb 14 08 48.6
comp=Z,95nm,0.9s
BATI Baumata 41.76 208 P **P 14 08 32.3 -0.2**
comp=Z,146nm,0.5s,baz=29,slow=0.0,SNR=46
BATI S **S 14 14 40.6 -6.6**
comp=Z,11nm,0.5s,baz=300,slow=20,SNR=1.4
BATI LR LR 14 24 21.5
comp=Z,701nm,19.9s,baz=43,slow=34
comp=Z,146nm,0.5s
MTN Manton Dam 41.79 196 P **P 14 08 31.7 -0.9**
MOKO MOKOCHONG 42.00 279 *e*P **P 14 08 33.9 -0.8**
MOKO IAmb IAmb 14 08 36.7
comp=Z,40nm,0.6s
JORH JORHAT 42.14 280 *e*P **P 14 08 35.7 +0.2**
ZIRO ZIRO 42.32 281 *e*P **P 14 08 37.1 -0.2**
ZIRO IAmb IAmb 14 08 39.3
comp=Z,160nm,0.2s
KOHI KOHIMA 42.50 279 *e*P **P 14 08 37.4 -1.3**
KOHI IAmb IAmb 14 08 40.1
comp=Z,18nm,0.6s
KOHI *i* x x 14 22 59.9
ITAN ITANAGAR 42.51 281 *e*P **P 14 08 39.0 +0.3**
ITAN IAmb IAmb 14 08 40.7
comp=Z,57nm,0.6s
BILL Bilibino 42.77 13 P **P 14 08 40.0 -0.1**
BILL IAmb IAmb 14 08 59.0
comp=Z,342nm,2.0s
BILL Bilibino 42.77 13*d i*P **P 14 08 40.6 +0.5**
BILL *e* 14 10 20.6
BILL pmax pmax
comp=Z,33nm,0.8s
IMP Imphal 42.86 277 *e*P **P 14 08 39.1 -2.4**
IMP IAmb IAmb 14 08 46.6
comp=Z,32nm,1.1s
IMP *i* x x 14 22 27.7
TEZP TEZPUR 43.43 280 *e*P **P 14 08 46.1 +0.1**
TEZP IAmb IAmb 14 08 46.9
comp=Z,82nm,0.6s
NIKH Nikolski High 43.97 41 P **P 14 08 49.5 -0.5**
baz=255

SRIT Nakonsritamara 44.22 253 P **P 14 08 53.3 +0.8**
SRIT IAmb IAmb 14 09 15.6
comp=Z,122nm,1.0s
LSA Lhasa 44.22 285 IAMs_20 IAMs_20 14 29 06.7
comp=Z,4μm,18.0s
LSA Lhasa 44.22 285 P **P 14 08 54.4 +1.5**
LSA S **S 14 15 18.6 -5.6**
LSA LR LR
comp=Z,780nm,18.5s
LSA LR LR
comp=Z,2μm,14.2s
LSA LR LR
comp=Z,2μm,15.0s
LSA Lhasa 44.22 285 P **P 14 08 53.2 +0.2**
LSA P **P 14 08 53.2 +0.2**
LSA Lhasa 44.22 285 P **P 14 08 49.5 -3.5**
TIXI Tiksi 44.42 354 P **P 14 08 53.6 +0.2**
comp=Z,38nm,0.5s,baz=90,slow=23,SNR=33
TIXI LR LR 14 28 29.8
comp=Z,1μm,19.6s,baz=181,slow=37
comp=Z,38nm,0.5s
TIXI Tiksi 44.42 354 P **P 14 08 53.2 -0.1**
TIXI Tiksi 44.42 354*c i*P **P 14 08 53.4 0.0**
TIXI pmax pmax
comp=Z,38nm,0.8s
SPIA Saint Paul Isl 44.48 35 P **P 14 08 54.7 +0.6**
baz=249
MYKOM Kota Tinggi 44.65 241 P **P 14 08 56.1 +0.2**
MYKOM IAmb IAmb 14 09 09.6
comp=Z,57nm,0.8s
MYKOM IAMs_20 IAMs_20 14 25 22.2
comp=Z,3μm,20.0s
MYKOM Kota Tinggi 44.65 241 P **P 14 08 58.0 +2.1**
JAGI Jajag, Banyuwa 45.00 221 P **P 14 08 57.5 -1.2**
KNRA Kununurra 45.11 198 P **P 14 08 59.6 +0.1**
KULM Kulim 45.13 248 P **P 14 09 00.2 +0.4**
KULM IAmb IAmb 14 09 23.0
comp=Z,86nm,1.0s
KULM IAMs_20 IAMs_20 14 26 18.7
comp=Z,3μm,20.0s
IPM Ipoh 45.28 247 P **P 14 09 00.8 -0.2**
IPM IAmb IAmb 14 09 23.6
comp=Z,65nm,0.8s
IPM IAMs_20 IAMs_20 14 24 60.0
comp=Z,3μm,21.0s
BRDH Bariadhala 45.48 275 P **P 14 09 03.6 +1.1**
comp=Z,128nm,0.3s,baz=270,slow=20,SNR=1.7
BRDH LR LR 14 28 59.1
comp=Z,4μm,20.1s,baz=117,slow=37
comp=Z,128nm,0.3s
UNV Unalaska Valle 45.55 41 P **P 14 09 02.5 0.0**
baz=256
UNV S **S 14 15 40.9 -0.9**
baz=256
WMQ Urumqi 45.92 305 *e*P **P 14 09 05.7 -0.1**
WMQ pP sP 14 09 18.0 -1.9
WMQ sP pwP 14 09 22.6 +1.7
WMQ PcP **PcP 14 10 43.4 +1.1**
WMQ S S 14 15 57.1 +9.5
WMQ sS sS 14 16 07.6 +1.3
WMQ ScS **ScS 14 18 56.2 -2.2**
WMQ LR LR
comp=Z,2μm,22.3s
WMQ LR LR
comp=Z,3μm,20.5s
WMQ LR LR
comp=Z,3μm,27.5s
DHUB DHUBRI 46.02 280 *e*P **P 14 09 05.7 -1.0**
DHUB IAmb IAmb 14 09 07.3
comp=Z,43nm,1.1s
AKUT Akutan 46.03 40 P **P 14 09 05.9 -0.5**
DGZ Jazzator, Alta 46.55 313*c i*P **P 14 09 10.1 -0.6**
DGZ pmax pmax
comp=Z,32nm,0.9s
GAMB Gambell 46.55 26 P **P 14 09 11.7 +1.4**
baz=242
GAMB S **S 14 15 57.2 +1.4**
baz=242
UGM Wanagama 46.74 225 P **P 14 09 12.6 +0.2**
FALS False Pass 47.53 40 P **P 14 09 18.2 +0.2**
baz=258
TAPN Taplejung 47.68 283 *e*P **P 14 09 19.9 -0.1**
comp=Z,19nm,0.4s
BKNI Bangkinang 47.76 242 IAMs_20 IAMs_20 14 28 44.4
comp=Z,3μm,20.0s
LEM Lembang 47.81 229 P **P 14 09 21.3 +0.4**
comp=Z,170nm,0.9s,baz=96,slow=5.5,SNR=16
LEM LR LR 14 30 51.4
comp=Z,928nm,20.4s,baz=22,slow=38
comp=Z,170nm,0.9s
DGPR DIGLIPUR 47.82 262 *e*P **P 14 09 21.0 +0.2**
DGPR IAmb IAmb 14 09 22.5
comp=Z,79nm,0.5s
CTA Charters Tower 47.86 174 P **P 14 09 21.4 +0.4**
comp=Z,8.1nm,0.6s,baz=16,slow=7.7,SNR=14
CTA LR LR 14 29 05.9
comp=Z,708nm,22.0s,baz=356,slow=36
comp=Z,8.1nm,0.6s
CTAO Charters Tower 47.86 174 P **P 14 09 20.9 0.0**
CTAO Charters Tower 47.86 174 P **P 14 09 20.9 0.0**
CTAO pmax pmax
comp=Z,40nm,1.0s
WB0 Warramunga Arr 47.90 190 P **P 14 09 21.1 -0.2**
PSI Prapat 47.96 246 LR LR 14 27 21.5
comp=Z,2μm,21.6s,baz=51,slow=33
ZSN Zaisan 48.05 310 *e*P **P 14 09 21.6 -0.7**
ZSN Zaisan 48.05 310 *e*P **P 14 09 21.6 -0.7**
baz=310
WR0 Warramunga Arr 48.07 189 P **P 14 09 22.3 -0.3**
WRAB Tennant Creek 48.07 190 P **P 14 09 22.4 -0.2**
WRAB Tennant Creek 48.07 190 P **P 14 09 22.4 -0.2**
WRAB pmax pmax
comp=Z,263nm,1.0s
WRAB Tennant Creek 48.07 190 P **P 14 09 21.1 -1.5**
WB2 Warramunga Arr 48.08 190 P **P 14 09 22.4 -0.3**
WRA Warramunga Arr 48.08 190 P **P 14 09 22.7 0.0**
comp=Z,90nm,0.6s,baz=11,slow=8.5,SNR=394
WRA ScP **ScP 14 14 41.4 0.0**
comp=Z,4.0nm,1.0s,baz=2.0,slow=4.5,SNR=4.0
WRA S **S 14 16 15.6 -3.1**
comp=Z,10nm,1.1s,baz=11,slow=13,SNR=5.1
WRA LR LR 14 27 35.9
comp=Z,769nm,21.4s,baz=8.0,slow=34
comp=Z,90nm,0.6s
WRA Warramunga Arr 48.08 190 P **P 14 09 22.6 -0.1**
FITZ Fitzroy Crossi 48.33 201 P **P 14 09 25.1 +0.5**
comp=Z,23nm,0.9s,baz=34,slow=7.3,SNR=84
comp=Z,23nm,0.9s
FITZ Fitzroy Crossi 48.33 201 P **P 14 09 24.6 0.0**
FITZ IAmb IAmb 14 09 46.7
comp=Z,91nm,0.9s
RAMN Ramite 48.73 283 *e*P **P 14 09 27.8 -0.3**
comp=Z,53nm,0.6s
ZAA0 Zalesovo Array 48.74 319 P **P 14 09 26.3 -1.2**
ZAA0 IAmb IAmb 14 11 13.5
comp=Z,46nm,0.8s
ZALV Zalesovo Beam 48.74 319 P **P 14 09 26.6 -0.9**
comp=Z,15nm,0.5s,baz=101,slow=7.3,SNR=40
ZALV PcP **PcP 14 10 52.5 +0.5**
comp=Z,52nm,0.7s,baz=106,slow=3.7,SNR=13
ZALV ScP **ScP 14 14 42.9 -0.9**
comp=Z,2.3nm,0.6s,baz=124,slow=5.0,SNR=3.6
ZALV LR LR 14 30 35.6
comp=Z,3μm,19.0s,baz=98,slow=37
comp=Z,15nm,0.5s
ZALV Zalesovo Beam 48.74 319 P **P 14 09 25.8 -1.7**
TNA Tin City 48.80 25 P **P 14 09 28.2 +0.4**
baz=245
TNA S **S 14 16 28.2 +0.4**
baz=245
JIRN Jiri 48.91 284 *e*P **P 14 09 29.8 +0.2**
comp=Z,73nm,0.5s
GUN Gumba 49.12 284 *e*P **P 14 09 31.1 -0.1**
comp=Z,39nm,0.5s
SDPT Sand Point 49.28 40 P **P 14 09 30.9 -0.6**
SDPT Sand Point 49.28 40 P **P 14 09 30.9 -0.6**
baz=261,SNR=14
SDPT S **S 14 16 34.6 -0.3**
baz=261
MNAI Manna 49.34 236 P **P 14 09 32.3 -0.2**
ANM Nome 49.40 27 P **P 14 09 33.4 +1.1**
ANM IAmb IAmb 14 09 50.0
comp=Z,58nm,1.0s
ANM Nome 49.40 27 P **P 14 09 33.4 +1.1**
ANM pmax pmax
comp=Z,59nm,1.0s

ANM Nome 49.40 27 P **P 14 09 34.0 +1.7**
baz=248
ANM S **S 14 16 37.9 +1.7**
baz=248
PKI Pulchoki 49.61 284 *e*P **P 14 09 34.1 -0.8**
comp=Z,15nm,0.5s
PKIN Phulchoki 49.62 284 *e*P **P 14 09 34.8 -0.1**
comp=Z,18nm,0.5s
CNBA Chernabura Isl 49.70 40 P **P 14 09 35.0 +0.2**
CNBA IAmb IAmb 14 09 36.8
comp=Z,64nm,0.7s
CNBA IAMs_20 IAMs_20 14 27 00.8
comp=Z,2μm,22.0s
CHNA Chernabura Isl 49.71 40 P **P 14 09 34.7 -0.1**
baz=262,SNR=16
CHNA S **S 14 16 39.2 -1.6**
baz=262
MK31 Makanchi Array 49.79 309 P **P 14 09 34.1 -1.6**
MK31 Makanchi Array 49.79 309 P **P 14 09 34.1 -1.6**
MK31 pmax pmax
comp=Z,24nm,0.9s
MKAR Makanchi Array 49.79 309 P **P 14 09 34.6 -1.0**
comp=Z,11nm,0.7s,baz=86,slow=9.9,SNR=88
MKAR PcP **PcP 14 10 56.8 +0.8**
comp=Z,17nm,0.6s,baz=73,slow=4.8,SNR=8.8
MKAR ScP **ScP 14 14 47.7 -0.8**
comp=Z,3.8nm,0.6s,baz=78,slow=4.7,SNR=5.9
MKAR LR LR 14 31 37.8
comp=Z,6μm,19.4s,baz=109,slow=37
MKAR PKPPKP **P'P'df 14 40 29.3 -5.1**
comp=Z,0.9nm,1.1s,baz=325,slow=1.5,SNR=3.5
comp=Z,11nm,0.7s
MKAR Makanchi Array 49.79 309 P **P 14 09 34.0 -1.6**
DMN Daman 49.86 284 *e*P **P 14 09 35.8 -0.9**
comp=Z,33nm,0.4s
GSI Gunungsitoli 49.92 246 P **P 14 09 37.1 +0.1**
MAKZ Makanchi 50.00 309 P **P 14 09 36.4 -0.9**
MAKZ Makanchi 50.00 309 P **P 14 09 36.4 -0.9**
MAKZ pmax pmax
comp=Z,44nm,1.2s
MAKZ MLR MLR
comp=Z,6μm,20.0s
MAKZ Makanchi 50.00 309 P **P 14 09 35.9 -1.4**
MAKZ pP **sP 14 09 50.2 -1.3**
GKN Gorkha 50.16 284 *e*P **P 14 09 39.1 +0.2**
comp=Z,31nm,0.5s
BOK Bokaro 50.21 279 *e*P **P 14 09 39.0 -0.1**
BOK IAmb IAmb 14 09 43.6
comp=Z,21nm,0.5s
BOK *i* x x 14 30 31.5
CHGN Chignik 50.58 39 P **P 14 09 41.1 -0.3**
CHGN IAmb IAmb 14 09 43.9
comp=Z,40nm,0.6s
CHGN Chignik 50.58 39 P **P 14 09 40.5 -0.9**
baz=262,SNR=19
DANN Dangsing 50.83 285 *e*P **P 14 09 44.0 -0.1**
comp=Z,58nm,0.6s
N16K Nishlik Lake 51.13 33 P **P 14 09 47.0 +1.4**
baz=258,SNR=32
N16K S **S 14 17 01.4 +0.9**
baz=258
R16K Pilot Point 51.22 37 P **P 14 09 48.0 +1.8**
baz=261
P16K Nushagak River 51.24 35 P **P 14 09 47.6 +1.3**
baz=260
P16K S **S 14 17 02.9 +0.9**
baz=260
O16K Kokwok River B 51.29 34 P **P 14 09 48.0 +1.3**
baz=259,SNR=12
O16K S **S 14 17 02.9 +0.2**
baz=259
PYUN Piuthan 51.55 285 *e*P **P 14 09 49.2 -0.2**
comp=Z,89nm,0.5s
RDOG Red Dog Mine 51.63 23 P **P 14 09 49.5 +0.4**
baz=248
AS31 Alice Springs 51.80 189 P **P 14 09 50.7 -0.2**
ASAR Alice Springs 51.81 189 P **P 14 09 50.6 -0.4**
comp=Z,5.5nm,0.4s,baz=5.9,slow=5.8,SNR=154
ASAR ScP **ScP 14 14 56.2 -1.2**
comp=Z,4.3nm,1.1s,baz=33,slow=2.2,SNR=3.3
ASAR S **S 14 17 10.1 -0.4**
comp=Z,1.1nm,0.7s,baz=15,slow=18,SNR=4.2
comp=Z,5.5nm,0.4s
ASAR Alice Springs 51.81 189 P **P 14 09 50.3 -0.7**
O17K Koliganek Bris 51.82 34 P **P 14 09 51.9 +1.2**
baz=260,SNR=14
O17K S **S 14 17 10.8 +0.9**
baz=260
NRIK Noril'sk 51.84 338 P **P 14 09 51.2 +0.5**
comp=Z,99nm,0.8s,baz=110,slow=9.2,SNR=105
NRIK LR LR 14 32 56.5
comp=Z,3μm,18.1s,baz=116,slow=37
comp=Z,99nm,0.8s
NRIK Noril'sk 51.84 338 P **P 14 09 50.7 0.0**
NRIK Noril'sk 51.84 338*c i*P **P 14 09 51.1 +0.4**
NRIK pmax pmax
comp=Z,116nm,0.9s
R17K Ugashik Creek 51.86 37 P **P 14 09 51.7 +0.7**
baz=262
R17K S **S 14 17 09.5 -1.2**
baz=262
Q16K King Salmon 51.87 36 P **P 14 09 51.0 0.0**
baz=261
Q16K S **S 14 17 12.4 +1.7**
baz=261
PDGK Podgornoye 51.89 305 P **P 14 09 50.0 -1.6**
SHLS Shalkode 51.92 305 *e*P **P 14 09 47.6 -4.3**
SHLS pmax pmax
comp=Z,44nm,2.8s
SHLS Shalkode 51.92 305 *e*P **P 14 09 47.7 -4.2**
comp=Z,44nm,2.8s,baz=305
P17K Kvichak River 52.06 35 P **P 14 09 53.6 +1.2**
baz=261,SNR=18
P17K S **S 14 17 14.0 +0.8**
baz=261
CHIR Chirikof Islan 52.08 39 P **P 14 09 53.3 +0.7**
CHIR Chirikof Islan 52.08 39 P **P 14 09 53.4 +0.7**
baz=264,SNR=5.2
CHIR S **S 14 17 14.1 +0.5**
baz=264
Q17K Contact Creek 52.21 36 P **P 14 09 52.9 -0.8**
baz=262,SNR=7.0
Q17K S **S 14 17 13.2 -2.4**
baz=262
UZB Uzynbulak 52.24 305 *e*P **P 14 09 54.3 0.0**
UZB pmax pmax
comp=Z,25nm,2.7s
UZB Uzynbulak 52.24 305 *e*P **P 14 09 52.5 -1.8**
baz=305
KURK Kurchatov 52.26 314 P **P 14 09 53.0 -1.1**
KURK IAmb IAmb 14 10 46.7
comp=Z,149nm,1.2s
KURK Kurchatov 52.26 314 IAMs_20 IAMs_20 14 32 23.2
comp=Z,3μm,22.0s
KURK Kurchatov 52.26 314*c i*P **P 14 09 53.4 -0.7**
KURK pmax pmax
comp=Z,40nm,1.0s
KURK Kurchatov 52.26 314 P **P 14 09 52.9 -1.1**
KURK P **P 14 09 52.9 -1.1**
KURK Kurchatov 52.26 314 P **P 14 09 52.7 -1.4**
KURK pP **sP 14 10 06.3 -2.4**
KURBB Kurchatov Arra 52.32 314 P **P 14 09 53.5 -1.0**
comp=Z,20nm,0.5s,baz=89,slow=8.0,SNR=94
KURBB LR LR 14 32 50.1
comp=Z,3μm,20.7s,baz=74,slow=37
comp=Z,20nm,0.5s
KPKS Kokpek 52.46 305 *e*P **P 14 09 54.8 -1.1**
KPKS pmax pmax
comp=Z,10.0nm,0.8s
KPKS Kokpek 52.46 305 *e*P **P 14 09 54.1 -1.8**
baz=305
N18K Kilae Creek 52.57 33 P **P 14 09 57.0 +0.7**
N18K IAmb IAmb 14 10 27.0
comp=Z,70nm,1.2s
N18K Kilae Creek 52.57 33 P **P 14 09 57.7 +1.4**
baz=260,SNR=10
N18K S **S 14 17 22.1 +1.8**
baz=260
SATY Saty 52.70 304 *e*P **P 14 09 55.9 -1.8**
SATY pmax pmax
comp=Z,37nm,2.8s
SATY Saty 52.70 304 *e*P **P 14 09 55.9 -1.8**
comp=Z,37nm,2.8s,baz=305
P18K Big Mountain, 52.70 35 P **P 14 09 57.6 +0.3**
P18K IAmb IAmb 14 10 10.8
comp=Z,88nm,1.0s
P18K Big Mountain, 52.70 35 P **P 14 09 57.9 +0.6**

baz=262,SNR=12
P18K S **S** **14 17 21.9 -0.3**

baz=262
Q18K Katmai Hardscr 52.72 36 P **P** **14 09 57.3 -0.2**
baz=263,SNR=11
O18K **Koktuh Hills 52.78 34** P **P** **14 09 58.6 +0.8**
O18K IAmb IAmb 14 10 12.7

comp=Z,114nm,1.2s
O18K Koktuh Hills 52.78 34 P **P** **14 09 59.5 +1.7**
baz=262
O18K S **S** **14 17 25.0 +1.9**

baz=262
SVW2 Sparrevohn 52.79 33 P **P** **14 09 58.7 +0.8**
TTA Tatalina 52.92 30 P **P** **14 09 59.1 +0.3**
TTA Tatalina 52.92 30 P **P** **14 09 59.1 +0.3**
TTA pmax pmax

comp=Z,37nm,1.2s
TTA Tatalina 52.92 30 P **P** **14 09 59.7 +0.9**
baz=259,SNR=8.9
GCSA Galena City Sc 52.93 28 P **P** **14 09 58.4 -0.4**
baz=256,SNR=5.8
GCSA S **S** **14 17 25.3 +0.3**

baz=256
SII Sitkinak Islan 52.94 39 P **P** **14 09 59.3 +0.2**
SII IAMs_20 IAMs_20 14 29 27.6

comp=Z,2μm,21.0s
SII Sitkinak Islan 52.94 39 P **P** **14 09 59.7 +0.6**
baz=265,SNR=5.5
SII S **S** **14 17 25.7 +0.3**

baz=265
ARXS Arharly 53.02 306 *e*P **P** **14 09 58.6 -1.3**
MBWA Marble Bar 53.24 206 P **P** **14 10 01.5 -0.1**
MBWA Marble Bar 53.24 206 P **P** **14 10 01.6 +0.1**
MBWA P **P** **14 10 01.6 +0.1**
O19K Port Alsworth 53.27 34 P **P** **14 10 01.8 +0.5**
O19K IAmb IAmb 14 10 15.9

comp=Z,106nm,1.0s
O19K Port Alsworth 53.27 34 P **P** **14 10 02.8 +1.5**
baz=262,SNR=16
O19K S **S** **14 17 31.2 +1.6**

baz=262
N19K Bonanza Creek 53.27 33 P **P** **14 10 02.6 +1.1**
N19K Bonanza Creek 53.27 33 P **P** **14 10 03.0 +1.5**
baz=262,SNR=11
N19K S **S** **14 17 32.0 +2.0**

baz=262
TARG Taragay, Kyrgy 53.28 303 P **P** **14 10 00.6 -1.7**
TARG Taragay, Kyrgy 53.28 303 P **P** **14 10 00.6 -1.7**
TARG pmax pmax

comp=Z,34nm,0.9s
L19K White Mountain 53.31 31 P **P** **14 10 02.7 +1.0**
L19K White Mountain 53.31 31 P **P** **14 10 03.1 +1.4**
baz=260,SNR=16
L19K S **S** **14 17 31.6 +1.2**

baz=260
Q19K Cape Douglas, 53.46 36 P **P** **14 10 02.1 -0.8**
Q19K Cape Douglas, 53.46 36 P **P** **14 10 02.4 -0.4**
baz=264
M19K Big River Lodg 53.48 32 P **P** **14 10 03.5 +0.6**
M19K Big River Lodg 53.48 32 P **P** **14 10 04.2 +1.3**
baz=261
OHAK Old Harbor 53.49 38 P **P** **14 10 02.7 -0.3**
OHAK IAmb IAmb 14 10 24.6

comp=Z,51nm,0.8s
OHAK Old Harbor 53.49 38 P **P** **14 10 02.5 -0.5**
baz=265,SNR=7.7
OHAK S **S** **14 17 31.6 -1.1**

baz=265
PSA00 Pilbara Seismi 53.57 206 P **P** **14 10 04.0 +0.1**
PSA00 IAmb IAmb 14 10 27.8

comp=Z,54nm,1.0s
PSA00 Pilbara Seismi 53.57 206 P **P** **14 10 03.3 -0.7**
PSA00 IAmb IAmb 14 10 27.8

comp=Z,25nm,0.9s
CHKK Chushkaly 53.66 306 *e*P **P** **14 10 03.2 -1.3**
CHKK Chushkaly 53.66 306 *e*P **P** **14 10 03.2 -1.3**
baz=306
EIDS Eidsvold 53.66 170 P **P** **14 10 04.4 -0.2**
EIDS IAmb IAmb 14 10 31.0

comp=Z,119nm,1.8s
MDOK Medeo 53.68 305 *i* P **P** **14 10 03.9 -1.0**
MDOK Medeo 53.68 305 *i* P **P** **14 10 04.0 -1.0**
baz=305
P19K Oil Pt 53.74 35 P **P** **14 10 04.6 -0.3**
P19K IAmb IAmb 14 10 18.6

comp=Z,115nm,1.1s
P19K Oil Pt 53.74 35 P **P** **14 10 05.3 +0.4**
baz=264
P19K S **S** **14 17 34.7 -1.6**

baz=264
TNSS Tian-Shan 53.77 305 *e*P **P** **14 10 05.8 0.0**
TNSS Tian-Shan 53.77 305 *e*P **P** **14 10 05.8 0.0**
baz=305
AAA Alma-Ata 53.77 305 *e*P **P** **14 10 04.5 -0.9**
AAA Alma-Ata 53.77 305 *e*P **P** **14 10 04.5 -0.9**
baz=305
L20K Farewell, AK 53.81 31 P **P** **14 10 07.0 +1.7**
baz=261,SNR=16
L20K S **S** **14 17 38.3 +1.2**

baz=261
K20K Telida 53.86 30 P **P** **14 10 06.3 +0.6**
K20K IAmb IAmb 14 10 20.8

comp=Z,85nm,0.9s
K20K Telida 53.86 30 P **P** **14 10 07.7 +1.9**
baz=260,SNR=43
K20K S **S** **14 17 40.4 +2.6**

baz=260
KDAK Kodiak Island 53.91 37 P **P** **14 10 06.4 +0.4**
comp=Z,32nm,0.6s,baz=272,slow=4.2,SNR=36
KDAK LR LR 14 31 05.2

comp=Z,3μm,21.4s,baz=268,slow=34
comp=Z,32nm,0.6s
KDAK Kodiak Island 53.91 37 P **P** **14 10 06.2 +0.1**
KDAK Kodiak Island 53.91 37 IAMs_20 IAMs_20 14 30 53.9
comp=Z,2μm,20.0s
KDAK Kodiak Island 53.91 37 P **P** **14 10 06.2 +0.1**
KDAK pmax pmax

comp=Z,193nm,1.4s
KDAK Kodiak Island 53.91 37 P **P** **14 10 06.8 +0.7**
baz=266
KDAK S **S** **14 17 38.1 -0.4**

baz=266
KDAK Kodiak Island 53.91 37 P **P** **14 10 05.4 -0.7**
KDAK pP **pP** **14 10 16.2 -1.3**
J20K Nowinta River 53.97 29 P **P** **14 10 07.9 +1.4**
J20K IAmb IAmb 14 10 21.0

comp=Z,55nm,0.8s
J20K Nowinta River 53.97 29 P **P** **14 10 08.3 +1.9**
baz=260,SNR=47
J20K S **S** **14 17 41.1 +1.9**

baz=260
M20K Styx River 54.07 32 P **P** **14 10 07.9 +0.6**
M20K IAMs_20 IAMs_20 14 28 46.3

comp=Z,2μm,22.0s
M20K Styx River 54.07 32 P **P** **14 10 08.5 +1.2**
baz=262
M20K S **S** **14 17 42.6 +1.8**

baz=262
RSO Redoubt South 54.07 34 P **P** **14 10 07.6 +0.1**
Q20K Shuyak Island 54.07 36 P **P** **14 10 07.2 -0.1**
baz=265
O20K Slope Mountain 54.09 34 P **P** **14 10 07.1 -0.4**
baz=264
KUU Kurty 54.12 306 *e*P **P** **14 10 06.1 -1.8**
KUU pmax pmax

comp=Z,24nm,0.6s
KUU Kurty 54.12 306 *e*P **P** **14 10 06.1 -1.8**
comp=Z,24nm,0.6s,baz=306
LIFNC LIFOU 54.22 150 P **P** **14 10 08.7 0.0**
LIFNC IAMs_20 IAMs_20 14 29 58.0

comp=Z,2μm,21.0s
N20K Mount Spurr 54.42 33 P **P** **14 10 11.5 +1.6**
baz=264,SNR=8.7
N20K S **S** **14 17 46.4 +0.9**

baz=264
SPCR Spurr Chakacha 54.42 33 P **P** **14 10 11.5 +1.6**
baz=264,SNR=6.3
SPCR S **S** **14 17 45.5 +0.1**

baz=264
IMAR Indian Mountai 54.48 27 P **P** **14 10 11.2 +1.0**
SPU Mount Spurr 54.49 33 P **P** **14 10 10.6 +0.2**
HOM Homer 54.55 35 P **P** **14 10 10.8 +0.1**
baz=265
PPLA Purkeypile 54.64 31 P **P** **14 10 13.1 +1.6**
baz=262,SNR=9.9
PPLA S **S** **14 17 50.0 +1.5**

baz=262
G21K Allakaket 54.68 26 P **P** **14 10 13.3 +1.7**
baz=258,SNR=23
G21K S **S** **14 17 50.0 +1.2**

baz=258
CHUM Lake Minchumin 54.72 30 P **P** **14 10 13.8 +1.9**
baz=262,SNR=19
CHUM S **S** **14 17 51.0 +1.8**

baz=262
CNPM China Poot 54.74 35 P **P** **14 10 12.0 -0.2**
CNPM IAmb IAmb 14 10 23.5

comp=Z,60nm,0.8s
CAST Castle Rocks 54.76 30 P **P** **14 10 13.2 +1.0**
CAST IAmb IAmb 14 10 28.4

comp=Z,50nm,0.8s
CAST Castle Rocks 54.76 30 P **P** **14 10 13.5 +1.3**
baz=262,SNR=52
CAST S **S** **14 17 49.2 -0.6**

baz=262
TKM2 Tokmak 2 54.77 305 P **P** **14 10 13.2 +0.4**
SNR=13
TKM2 Tokmak 2 54.77 305 P **P** **14 10 12.7 -0.2**
H21K Melozitna Rive 54.80 27 P **P** **14 10 14.0 +1.5**
H21K IAmb IAmb 14 10 31.0

comp=Z,74nm,1.1s
H21K Melozitna Rive 54.80 27 P **P** **14 10 14.4 +1.9**
baz=260,SNR=28
H21K S **S** **14 17 50.8 +0.5**

baz=260
A21K Barrow 54.81 20 P **P** **14 10 12.9 +0.5**
A21K Barrow 54.81 20 P **P** **14 10 12.7 +0.3**
baz=252
SKT Skwentna 54.83 32 P **P** **14 10 13.0 +0.2**
SKT Skwentna 54.83 32 P **P** **14 10 13.0 +0.2**
baz=264,SNR=12
SKT S **S** **14 17 51.8 +1.0**

baz=264
F21K Alatna River 54.83 25 P **P** **14 10 14.1 +1.3**
baz=258,SNR=14
F21K S **S** **14 17 51.5 +0.7**

baz=258
CAPN Captain Cook N 54.89 34 P **P** **14 10 14.1 +0.9**
baz=265
BRLK Bradley Lake 54.94 35 P **P** **14 10 13.2 -0.4**
BRLK IAmb IAmb 14 10 32.8

comp=Z,38nm,0.8s
KSH Kashi 54.96 300 P **P** **14 10 17.0 +2.7**
KSH pP pwP 14 10 29.5 -0.2
KSH S S **14 17 57.6 +4.0**
KSH pmax pmax

comp=Z,9.0nm,0.9s
KSH LR LR

comp=Z,2μm,22.0s
KSH LR LR

comp=Z,2μm,22.3s
KSH LR LR

comp=Z,3μm,23.0s
NOUC Port Laguerre 54.99 152 P **P** **14 10 15.0 +0.7**
NOUC pP **pwP** **14 10 26.5 -1.2**
NOUC sP **sP** **14 10 34.2 +4.2**
BRSE Bradley Lake S 55.01 35 P **P** **14 10 14.2 +0.1**
baz=266,SNR=7.2
DZM Mont Dzumac 55.02 152 *e*P **P** **14 10 14.8 +0.2**
comp=Z,400nm,1.4s
DZM *e*S **S** **14 17 55.6 +1.3**

comp=Z,1μm,28.8s
DZM *e*LR LR 14 26 16.0

comp=Z,6μm,24.1s
DZM Mont Dzumac 55.02 152 LR LR 14 30 45.7
comp=Z,3μm,21.7s,baz=3.5,slow=33
DZM Mont Dzumac 55.02 152 P **P** **14 10 14.8 +0.2**
DZM Mont Dzumac 55.02 152 P **P** **14 10 15.3 +0.7**
DZM pP **pwP** **14 10 26.9 -1.2**
DZM sP **sP** **14 10 34.9 +4.6**
I21K Tanana 55.06 28 P **P** **14 10 15.1 +0.7**
I21K IAmb IAmb 14 10 32.3

comp=Z,75nm,1.1s
I21K Tanana 55.06 28 P **P** **14 10 16.0 +1.6**
baz=261,SNR=34
I21K S **S** **14 17 57.2 +3.4**

baz=261
SUA Susitna One 55.15 33 P **P** **14 10 14.9 -0.3**
SUA Susitna One 55.15 33 P **P** **14 10 14.8 -0.4**
baz=265
DDI Dehra Dun 55.17 289 *i* x x 14 32 48.0
KBK Karagaybulak 55.27 304 P **P** **14 10 16.4 0.0**
SNR=12
KTH Kantishna Hill 55.29 30 P **P** **14 10 16.6 +0.4**
KTH IAmb IAmb 14 10 41.1

comp=Z,81nm,1.4s
BPAW Bear Paw Mtn. 55.33 29 P **P** **14 10 16.9 +0.5**
BPAW Bear Paw Mtn. 55.33 29 P **P** **14 10 17.6 +1.2**
baz=263,SNR=17
BPAW S **S** **14 17 59.6 +2.0**

baz=263
F22K John River 55.38 25 P **P** **14 10 18.5 +1.8**
baz=259,SNR=12
F22K S **S** **14 17 59.6 +1.4**

baz=259
SGDS Sogindy 55.40 305 *e*P **P** **14 10 15.9 -1.4**
SGDS Sogindy 55.40 305 *e*P **P** **14 10 15.9 -1.4**
baz=306
H22K Ishtalitna Cre 55.42 27 P **P** **14 10 18.7 +1.7**
baz=261,SNR=20
H22K S **S** **14 18 00.6 +2.0**

baz=261
CUT Chulitna 55.46 32 P **P** **14 10 17.1 -0.1**
CUT IAmb IAmb 14 11 35.1

comp=Z,95nm,1.2s
CUT Chulitna 55.46 32 P **P** **14 10 17.6 +0.4**
baz=264
M22K Willow 55.47 32 P **P** **14 10 17.3 0.0**
baz=265,SNR=11
M22K S **S** **14 17 56.0 -3.3**

baz=265
OUENC Ouen Island, N 55.49 152 P **P** **14 10 18.5 +0.5**
USP Ospenovka 55.52 305 P **P** **14 10 17.9 -0.2**
SNR=8.9
G22K Bettles 55.54 26 P **P** **14 10 18.7 +1.0**
baz=260,SNR=26
G22K S **S** **14 18 00.7 +0.6**

baz=260
MLY Manley 55.56 28 P **P** **14 10 18.9 +0.9**
MLY IAmb IAmb 14 10 32.4

comp=Z,43nm,0.9s
MLY Manley 55.56 28 P **P** **14 10 19.6 +1.6**
baz=262,SNR=32
MLY S **S** **14 18 02.0 +1.4**

baz=262
TRF Thorofare Moun 55.56 30 P **P** **14 10 18.5 +0.3**
TRF IAmb IAmb 14 10 32.2

comp=Z,50nm,0.9s
TRF Thorofare Moun 55.56 30 P **P** **14 10 18.4 +0.2**
baz=264,SNR=19
TRF S **S** **14 18 00.8 -0.1**

baz=264
O22K Cooper Landing 55.57 34 P **P** **14 10 17.9 -0.1**
O22K IAMs_20 IAMs_20 14 31 50.0

comp=Z,2μm,22.0s
O22K Cooper Landing 55.57 34 P **P** **14 10 18.3 +0.2**
baz=266
RC01 Rabbit Creek A 55.60 33 P **P** **14 10 18.4 +0.1**
RC01 IAmb IAmb 14 10 37.5

comp=Z,82nm,1.2s
RC01 Rabbit Creek A 55.60 33 P **P** **14 10 18.4 +0.1**
baz=266,SNR=8.0
RC01 S **S** **14 17 59.4 -1.8**

baz=266
AAK Ala-Archa 55.61 304 P **P** **14 10 17.9 -0.9**
SNR=8.6
AAK Ala-Archa 55.61 304 P **P** **14 10 18.2 -0.7**
comp=Z,4.6nm,0.5s,baz=121,slow=4.1,SNR=21
AAK PcP **PcP** **14 11 19.0 +0.7**
comp=Z,13nm,0.6s,baz=114,slow=3.7,SNR=5.8
AAK LR LR 14 35 52.4

comp=Z,2μm,18.8s,baz=79,slow=38
comp=Z,4.6nm,0.5s
AAK Ala-Archa 55.61 304 P **P** **14 10 17.5 -1.4**
AAK Ala-Archa 55.61 304 P **P** **14 10 17.5 -1.4**
AAK pmax pmax

comp=Z,28nm,1.1s
AAK MLR MLR

comp=Z,2μm,20.0s
AAK Ala-Archa 55.61 304 P **P** **14 10 18.3 -0.6**
AAK P **P** **14 10 18.3 -0.6**
AAK Ala-Archa 55.61 304 *i* P **P** **14 10 18.6 -0.3**
SNR=13

AAK Ala-Archa 55.61 304 P **P** **14 10 17.0 -1.9**
AAK pP **pP** **14 10 30.2 +1.1**
BTLS Baital 55.63 307 *e*P **P** **14 10 17.4 -1.4**
BTLS pmax pmax

comp=Z,16nm,1.1s
BTLS Baital 55.63 307 *e*P **P** **14 10 17.4 -1.4**
baz=308
UCH Uchtor 55.65 304 P **P** **14 10 19.4 -0.1**
SNR=20
SEW Seward 55.68 34 P **P** **14 10 18.4 -0.5**
SEW IAmb IAmb 14 10 35.1

comp=Z,81nm,0.8s
SEW Seward 55.68 34 P **P** **14 10 18.8 0.0**
baz=267,SNR=9.8
SEW S **S** **14 18 00.8 -1.4**

baz=267
SMLA Simla 55.71 290 *e*P **P** **14 10 18.9 -0.7**
PMR Palmer 55.93 33 P **P** **14 10 20.1 -0.5**
PMR IAmb IAmb 14 10 34.5

comp=Z,72nm,0.8s
PMR Palmer 55.93 33 P **P** **14 10 20.1 -0.5**
PMR pmax pmax

comp=Z,72nm,0.8s
PMR Palmer 55.93 33 P **P** **14 10 20.7 +0.1**
baz=266,SNR=28
PMR S **S** **14 18 02.2 -3.3**

baz=266
BWN Browne 56.00 29 P **P** **14 10 22.1 +1.0**
G23K Bananza Creek 56.08 26 P **P** **14 10 23.7 +2.0**
baz=262,SNR=66
G23K S **S** **14 18 09.9 +2.4**

baz=262
BRZS Berezniki 56.09 313 *e*P **P** **14 10 20.8 -1.2**
BRZS pmax pmax

comp=Z,5.0nm,0.4s
BRZS Berezniki 56.09 313 *e*P **P** **14 10 20.8 -1.2**
comp=Z,5.1nm,0.4s,baz=314
COLD Coldfoot 56.09 26 P **P** **14 10 23.1 +1.4**
baz=261,SNR=18
COLD S **S** **14 18 10.8 +3.3**

baz=261
JHNI Jhansi 56.10 283 *e*P **P** **14 10 20.0 -2.5**
EKS2 Erkin-Say 56.13 304 P **P** **14 10 21.2 -1.3**
SNR=6.6
I23K Minto, Yukon-K 56.15 28 P **P** **14 10 23.4 +1.2**
I23K Minto, Yukon-K 56.15 28 P **P** **14 10 23.6 +1.5**
baz=263,SNR=16
I23K S **S** **14 18 12.0 +3.7**

baz=263
H23K Yukon River 56.16 27 P **P** **14 10 23.7 +1.5**
H23K IAmb IAmb 14 10 42.6

comp=Z,155nm,1.8s
H23K Yukon River 56.16 27 P **P** **14 10 24.0 +1.7**
baz=263,SNR=35
H23K S **S** **14 18 11.7 +3.2**

baz=263
MCK McKinley 56.19 30 P **P** **14 10 22.8 +0.3**
MCK IAmb IAmb 14 10 38.3

comp=Z,71nm,1.1s
MCK McKinley 56.19 30 P **P** **14 10 22.8 +0.3**
MCK pmax pmax

comp=Z,71nm,1.1s
MCK McKinley 56.19 30 P **P** **14 10 23.2 +0.7**
baz=265,SNR=27
MCK S **S** **14 18 08.6 -0.4**

baz=265
RND Reindeer 56.20 30 P **P** **14 10 22.9 +0.2**
RND IAmb IAmb 14 10 24.8

comp=Z,43nm,0.9s
RND Reindeer 56.20 30 P **P** **14 10 22.9 +0.2**
RND pmax pmax

comp=Z,43nm,0.9s
D23K Nanushuk River 56.20 24 P **P** **14 10 24.2 +1.7**
baz=260,SNR=14
D23K S **S** **14 18 09.5 +0.6**

baz=260
NEA2 Nenana 56.22 29 P **P** **14 10 24.0 +1.3**
NEA2 IAmb IAmb 14 10 39.9

comp=Z,109nm,1.0s
NEA2 Nenana 56.22 29 P **P** **14 10 23.8 +1.1**
baz=264,SNR=54
NEA2 S **S** **14 18 08.8 -0.5**

baz=264
KNK Knik Glacier 56.24 33 P **P** **14 10 22.9 0.0**
KNK IAmb IAmb 14 10 43.0

comp=Z,90nm,0.9s
KNK Knik Glacier 56.24 33 P **P** **14 10 22.9 0.0**
baz=267,SNR=21
KNK S **S** **14 18 08.9 -0.8**

baz=267
AML Almayashu 56.27 304 P **P** **14 10 23.8 -0.1**
SNR=29
PWL Port Wells 56.27 34 P **P** **14 10 23.4 +0.2**
PWL IAmb IAmb 14 10 36.6

comp=Z,102nm,1.0s
PWL IAMs_20 IAMs_20 14 32 55.6

comp=Z,2μm,21.0s
PWL Port Wells 56.27 34 P **P** **14 10 23.2 +0.1**
baz=267,SNR=12
PWL S **S** **14 18 08.3 -1.8**

baz=267
WAT1 Susitna Watana 56.29 31 P **P** **14 10 23.5 +0.2**
baz=266
WAT1 S **S** **14 18 09.3 -1.1**

baz=266
SML Sawmill 56.32 32 P **P** **14 10 23.9 +0.3**
SML IAmb IAmb 14 10 55.7

comp=Z,89nm,1.0s
SML IAMs_20 IAMs_20 14 32 34.0

comp=Z,2μm,22.0s
SML Sawmill 56.32 32 P **P** **14 10 23.6 +0.1**
baz=267,SNR=20
SML S **S** **14 18 10.8 -0.1**

baz=267
C23K Itkillik River 56.39 23 P **P** **14 10 25.6 +1.9**
baz=259,SNR=12
C23K S **S** **14 18 12.9 +1.6**

baz=259
E23K Chandalar 56.44 25 P **P** **14 10 26.5 +2.2**
baz=261,SNR=27
E23K S **S** **14 18 14.1 +1.8**

baz=261
OTUK Ortayu 56.46 311 P **P** **14 10 23.8 -0.9**
TOLK Toolik Lake Re 56.55 24 P **P** **14 10 26.3 +1.3**
TOLK IAmb IAmb 14 11 01.8

comp=Z,66nm,1.0s
TOLK Toolik Lake Re 56.55 24 P **P** **14 10 26.8 +1.8**
baz=261,SNR=9.5
TOLK S **S** **14 18 13.6 0.0**

baz=261
MDM Murphy Dome 56.61 29 P **P** **14 10 26.6 +1.1**
MDM IAmb IAmb 14 10 39.6

comp=Z,37nm,0.7s
M23K Glacier View 56.61 32 P **P** **14 10 26.0 +0.5**
baz=267,SNR=18
M23K S **S** **14 18 15.3 +0.7**

baz=267
WRH Wood River Hil 56.63 29 P **P** **14 10 26.0 +0.5**
WAT6 Susitna Watana 56.65 31 P **P** **14 10 26.2 +0.2**
baz=267,SNR=22
WAT6 S **S** **14 18 14.3 -1.0**

baz=267
TCOL CIGO, UAF Yank 56.76 29 P **P** **14 10 27.5 +1.0**
TCOL IAmb IAmb 14 10 41.9

comp=Z,40nm,0.8s
TCOL CIGO, UAF Yank 56.76 29 P **P** **14 10 27.6 +1.1**
baz=265,SNR=8.5
TCOL S **S** **14 18 16.3 0.0**

baz=265
COLA College 56.76 29 P **P** **14 10 27.5 +1.0**
COLA IAmb IAmb 14 10 41.9

comp=Z,41nm,0.8s
COLA College 56.76 29 P **P** **14 10 27.5 +1.0**
COLA pmax pmax

comp=Z,41nm,0.9s
COLA College 56.76 29 P **P** **14 10 27.4 +0.9**
baz=265
COLA S **S** **14 18 15.9 -0.5**

baz=265
COLA College 56.76 29 P **P** **14 10 27.1 +0.6**
COLA pP **sP** **14 10 41.0 -1.0**
CCB Clear Creek Bu 56.76 29 P **P** **14 10 26.0 -0.5**
CCB IAmb IAmb 14 10 40.3

comp=Z,83nm,1.7s
SCM Sheep Creek Mo 56.80 32 P **P** **14 10 27.5 +0.5**
SCM Sheep Creek Mo 56.80 32 P **P** **14 10 27.5 +0.5**
SCM pmax pmax

comp=Z,156nm,1.0s
SCM Sheep Creek Mo 56.80 32 P **P 14 10 27.9 +1.0**
baz=268,SNR=25
SCM S **S 14 18 15.0 -2.3**
baz=268
H24K Noodor Dome 56.84 28 P **P 14 10 28.3 +1.1**
H24K Noodor Dome 56.84 28 P **P 14 10 28.8 +1.7**
baz=264,SNR=21
H24K S **S 14 18 20.2 +2.6**
baz=264
DHY Denali Highway 56.84 31 P **P 14 10 27.6 +0.2**
DHY Denali Highway 56.84 31 P **P 14 10 27.7 +0.4**
baz=267,SNR=7.1
DHY S **S 14 18 16.9 -1.0**
baz=267
E24K Your Creek 56.86 25 P **P 14 10 29.0 +1.7**
baz=262,SNR=22
E24K S **S 14 18 20.4 +2.6**
baz=262
GLI Glacier Island 56.88 34 P **P 14 10 27.8 +0.3**
GLI IAmb IAmb 14 10 40.7
comp=Z,72nm,0.7s
GLI Glacier Island 56.88 34 P **P 14 10 28.2 +0.7**
baz=268,SNR=18
GLI S **S 14 18 17.2 -1.0**
baz=268
D24K Happy Valley 56.89 24 P **P 14 10 29.1 +1.7**
baz=261
POKR Poker Plat Res 56.96 28 P **P 14 10 28.3 +0.4**
POKR Poker Plat Res 56.96 28 P **P 14 10 28.0 +0.1**
baz=265
POKR S **S 14 18 20.7 +1.6**
baz=265
F24K Squaw Lake 57.02 26 P **P 14 10 30.0 +1.6**
baz=263,SNR=31
F24K S **S 14 18 23.1 +3.3**
baz=263
C24K Franklin Bluff 57.02 23 P **P 14 10 29.4 +1.1**
baz=261
G24K Hadweenzic Riv 57.09 27 P **P 14 10 30.6 +1.8**
baz=264,SNR=31
G24K S **S 14 18 23.2 +2.5**
baz=264
HDA Harding Lake 57.12 29 P **P 14 10 28.8 -0.3**
HDA IAmb IAmb 14 10 41.9
comp=Z,47nm,1.0s
HDA Harding Lake 57.12 29 P **P 14 10 29.2 +0.1**
baz=266,SNR=18
HDA S **S 14 18 19.7 -1.5**
baz=266
HDA S **S 14 18 19.7 -1.5**
baz=266
HIN Hinchinbrook I 57.16 34 P **P 14 10 30.2 +0.7**
HIN IAMs_20 IAMs_20 14 33 09.1
comp=Z,3µm,22.0s
IL31 57.17 29 P **P 14 10 29.0 -0.3**
IL31 IAmb IAmb 14 10 42.8
comp=Z,55nm,1.0s
ILAR Eielson Array 57.17 29 P **P 14 10 29.3 -0.1**
comp=Z,22nm,1.0s,baz=261,slow=6.1,SNR=138
ILAR LR LR 14 35 33.1
comp=Z,558nm,19.1s,baz=250,slow=36
ILAR PKP2bc 14 40 31.8
comp=Z,0.6nm,0.9s,baz=149,slow=2.1,SNR=4.5
comp=Z,22nm,1.0s
ILAR Eielson Array 57.17 29 P **P 14 10 29.0 -0.4**
FID Port Fidalgo 57.18 34 P **P 14 10 29.5 -0.1**
FID IAmb IAmb 14 10 43.4
comp=Z,94nm,1.0s
Q23K Middleton Isla 57.23 35 P **P 14 10 30.8 +0.9**
baz=270
MSVF Nonsavu 57.28 138 LR LR 14 30 21.3
comp=Z,2µm,21.8s,baz=315,slow=31
BVA0 Borovoye Array 57.30 317 *i* P **P 14 10 29.7 -0.9**
BVAR Borovoye Array 57.30 317 P **P 14 10 30.0 -0.6**
comp=Z,41nm,0.5s,baz=92,slow=7.7,SNR=170
BVAR PcP **PcP 14 11 25.2 +0.8**
comp=Z,30nm,0.7s,baz=83,slow=4.6,SNR=4.2
BVAR LR LR 14 36 04.6
comp=Z,2µm,19.4s,baz=83,slow=37
comp=Z,41nm,0.5s
M24K Tolsona, Glenn 57.36 32 P **P 14 10 31.1 +0.3**
M24K IAmb IAmb 14 11 53.4
comp=Z,124nm,1.2s
M24K Tolsona, Glenn 57.36 32 P **P 14 10 31.5 +0.7**
baz=268,SNR=5.9
M24K S **S 14 18 23.4 -1.1**
baz=268
BRVK Borovoye 57.37 317 P **P 14 10 30.2 -0.8**
BRVK IAmb IAmb 14 11 07.9
comp=Z,65nm,0.8s
BRVK Borovoye 57.37 317 IAMs_20 IAMs_20 14 35 44.0
comp=Z,2µm,19.0s
BRVK Borovoye 57.37 317 P **P 14 10 30.2 -0.8**
BRVK pmax pmax
comp=Z,65nm,0.9s
BRVK MLR MLR
comp=Z,2µm,19.0s
BRVK Borovoye 57.37 317 P **P 14 10 30.7 -0.3**
BRVK P **P 14 10 30.7 -0.3**
BRVK Borovoye 57.37 317 P **P 14 10 30.2 -0.8**
KLU Klutina 57.46 33 P **P 14 10 32.2 +0.5**
KLU IAmb IAmb 14 10 45.4
comp=Z,56nm,0.6s
KLU Klutina 57.46 33 P **P 14 10 32.6 +0.9**
baz=269,SNR=29
KLU S **S 14 18 27.0 +1.1**
baz=269
EYAK Cordova Ski Ar 57.53 34 P **P 14 10 32.8 +0.8**
baz=270,SNR=7.8
K24K Donnelly Dome 57.60 30 P **P 14 10 33.2 +0.7**
baz=268,SNR=8.8
K24K S **S 14 18 28.8 +1.3**
baz=268
G25K Bearman Lake 57.64 27 P **P 14 10 35.0 +2.3**
baz=265,SNR=18
G25K S **S 14 18 32.4 +4.6**
baz=265
RIM Rim 57.65 84 P **P 14 10 32.8 -0.9**
PAX Paxson 57.71 31 P **P 14 10 34.3 +1.0**
baz=268,SNR=14
PAX S **S 14 18 27.1 -2.0**
baz=268
H25K Birch Creek 57.71 27 P **P 14 10 34.9 +1.7**
baz=266,SNR=19
H25K S **S 14 18 33.0 +4.1**
baz=266
BHPL Bhopal 57.76 281 *e*P **P 14 10 31.7 -2.6**
BHPL IAmb IAmb 14 10 34.8
comp=Z,13nm,0.5s
BHPL *i* x x 14 34 44.5
D25K Kavik River 57.78 23 P **P 14 10 35.6 +1.8**
baz=264,SNR=14
D25K S **S 14 18 31.4 +1.6**
baz=264
PRP Porcupine Dome 57.79 28 P **P 14 10 33.1 -0.8**
PRP Porcupine Dome 57.79 28 P **P 14 10 34.3 +0.4**
baz=267
PRP S **S 14 18 29.8 -0.4**
baz=267
J25K Salcha River, 57.81 29 P **P 14 10 32.9 -1.1**
J25K Salcha River, 57.81 29 P **P 14 10 33.6 -0.4**
baz=268,SNR=10
J25K S **S 14 18 30.7 +0.4**
baz=268
HARP HAARP 57.84 32 P **P 14 10 35.6 +1.4**
baz=269,SNR=10
DZA Taraz 57.87 305 *e*P **P 14 10 33.2 -1.5**
DZA Taraz 57.87 305 *e*P **P 14 10 33.3 -1.5**
baz=305
F25K Christian Rive 57.88 26 P **P 14 10 37.0 +2.5**
baz=265,SNR=45
F25K S **S 14 18 35.8 +4.6**
baz=265
E25K Arctic Village 57.95 25 P **P 14 10 37.4 +2.4**
baz=265,SNR=37
E25K S **S 14 18 35.5 +3.4**
baz=265
FYU Fort Yukon 57.97 27 P **P 14 10 36.6 +1.6**
RIDG Independent Ri 58.01 30 P **P 14 10 35.6 +0.2**
RIDG IAmb IAmb 14 11 20.2
comp=Z,66nm,1.1s
RIDG Independent Ri 58.01 30 P **P 14 10 35.9 +0.5**
baz=268,SNR=9.8
RIDG S **S 14 18 32.1 -0.8**
baz=268
RAGM Ragged Mountai 58.07 34 P **P 14 10 36.5 +0.6**
RAGM IAmb IAmb 14 10 50.5
comp=Z,80nm,0.9s
BMRM Bremner River 58.10 33 P **P 14 10 37.3 +1.2**
baz=270,SNR=28
N25K Chitina, Valde 58.10 33 P **P 14 10 36.8 +0.7**
N25K IAmb IAmb 14 11 06.6
comp=Z,104nm,1.6s
N25K Chitina, Valde 58.10 33 P **P 14 10 37.4 +1.2**
baz=270,SNR=8.6
N25K S **S 14 18 36.4 +2.2**
baz=270
KAIM Kayak Island 58.20 35 P **P 14 10 38.1 +1.4**
KAIM Kayak Island 58.20 35 P **P 14 10 37.6 +0.8**
baz=271
HMT Hamilton 58.27 34 P **P 14 10 37.9 +0.6**
HMT IAmb IAmb 14 10 51.7
comp=Z,55nm,1.0s
BMAR Burnt Mountain 58.28 26 P **P 14 10 39.2 +2.0**
NIL Nilore 58.30 294 P **P 14 10 37.3 -0.6**
NIL IAMs_20 IAMs_20 14 38 45.5
comp=Z,2µm,21.0s
NIL Nilore 58.30 294 P **P 14 10 37.3 -0.6**
NIL pmax pmax
comp=Z,250nm,1.9s
NIL MLR MLR
comp=Z,2µm,21.0s
NIL Nilore 58.30 294 P **P 14 10 37.5 -0.4**
NIL P **P 14 10 37.5 -0.4**
C26K Camden Bay 58.35 23 P **P 14 10 40.0 +2.3**
baz=265
C26K S **S 14 18 39.1 +2.0**
baz=265
DOT Dot Lake 58.35 30 P **P 14 10 38.1 +0.3**
DOT IAmb IAmb 14 10 53.6
comp=Z,36nm,0.8s
SCRK Sand Creek 58.39 30 P **P 14 10 38.6 +0.4**
SCRK IAmb IAmb 14 10 52.6
comp=Z,63nm,0.7s
SCRK Sand Creek 58.39 30 P **P 14 10 38.8 +0.6**
baz=269,SNR=42
SCRK S **S 14 18 37.3 -0.9**
baz=269
KK31 Karatay Array 58.43 305 P **P 14 10 37.7 -0.9**
KK31 IAmb IAmb 14 11 19.2
comp=Z,38nm,0.8s
KK31 Karatay Array 58.43 305 P **P 14 10 37.7 -0.9**
KK31 pmax pmax
comp=Z,38nm,0.9s
KKAR Karatay Array 58.43 305 P **P 14 10 37.5 -1.1**
KKAR Karatay Array 58.43 305 P **P 14 10 37.8 -0.9**
KKAR IAmb IAmb 14 11 19.2
comp=Z,38nm,0.8s
KKAR Karatay Array 58.43 305 P **P 14 10 37.8 -0.9**
KKAR pmax pmax
comp=Z,38nm,0.9s
F26K Sheenjek River 58.46 25 P **P 14 10 40.7 +2.2**
baz=267,SNR=51
F26K S **S 14 18 42.7 +4.0**
baz=267
GLB Gilahina Butte 58.48 33 P **P 14 10 39.4 +0.7**
GLB IAmb IAmb 14 11 09.1
comp=Z,73nm,1.2s
GLB IAMs_20 IAMs_20 14 34 11.8
comp=Z,2µm,22.0s
MENT Mentasta 58.51 31 P **P 14 10 39.8 +0.9**
MENT IAmb IAmb 14 11 12.3
comp=Z,42nm,0.9s
SUCK Suckling Hills 58.52 34 P **P 14 10 40.0 +0.9**
SUCK IAmb IAmb 14 10 51.5
comp=Z,59nm,0.9s
SUCK IAMs_20 IAMs_20 14 34 27.1
comp=Z,2µm,19.0s
BERG Berg Lake 58.55 34 P **P 14 10 40.0 +0.8**
G26K Porcupine Rive 58.56 26 P **P 14 10 41.0 +1.9**
baz=268,SNR=40
G26K S **S 14 18 43.8 +3.9**
baz=268
J26L Joseph Creek 58.59 29 P **P 14 10 39.6 +0.2**
J26L IAmb IAmb 14 10 54.8
comp=Z,62nm,0.8s
J26L Joseph Creek 58.59 29 P **P 14 10 39.7 +0.2**
baz=269,SNR=56
J26L S **S 14 18 39.4 -1.1**
baz=269
VRDI Verde Repeater 58.65 33 P **P 14 10 40.5 +0.4**
VRDI IAmb IAmb 14 10 57.9
comp=Z,126nm,1.5s
VRDI IAMs_20 IAMs_20 14 34 13.5
comp=Z,2µm,21.0s
L26K Log Cabin Wild 58.67 31 P **P 14 10 40.6 +0.5**
L26K IAmb IAmb 14 11 05.4
comp=Z,88nm,1.6s
L26K Log Cabin Wild 58.67 31 P **P 14 10 41.5 +1.5**
baz=270,SNR=14
L26K S **S 14 18 41.7 +0.1**
baz=270
ARMA Armidale 58.70 170 P **P 14 10 40.7 +0.1**
ARMA IAmb IAmb 14 12 13.8
comp=Z,112nm,1.9s
C27K Jago River 58.74 23 P **P 14 10 42.3 +1.9**
baz=266,SNR=41
C27K S **S 14 18 44.3 +2.0**
baz=266
BGLC Bering Glacier 58.77 34 P **P 14 10 41.9 +1.2**
baz=272
I26K Coal Creek Min 58.77 28 P **P 14 10 40.1 -0.5**
I26K Coal Creek Min 58.77 28 P **P 14 10 40.3 -0.4**
baz=269
HYB Hyderabad 58.83 274 *e*P **P 14 10 41.3 -0.5**
HYBB Hyderabad (bro 58.83 274 IVmB_BB 14 10 41.6
comp=Z,277nm,5.5s
HYBB *e*P **P 14 10 42.7 +0.8**
HYBB *e*S **S 14 18 46.4 +1.6**
HYBB IVMs_BB IVMs_BB 14 34 54.7
comp=Z,337nm,22.2s
M26K Nabesna, AK 58.84 32 P **P 14 10 42.0 +0.7**
M26K Nabesna, AK 58.84 32 P **P 14 10 42.5 +1.2**
baz=271,SNR=5.8
M26K S **S 14 18 46.2 +2.3**
baz=271
MCARA McCarthy VSAT 58.85 33 P **P 14 10 41.9 +0.6**
MCARA IAMs_20 IAMs_20 14 34 20.9
comp=Z,2µm,22.0s
MCARA McCarthy VSAT 58.85 33 P **P 14 10 42.5 +1.2**
baz=272,SNR=16
TGL Tana Glacier 58.97 34 P **P 14 10 42.6 +0.4**
TGL IAmb IAmb 14 10 56.6
comp=Z,82nm,1.0s
TGL IAMs_20 IAMs_20 14 36 39.9
comp=Z,2µm,20.0s
WAX Waxell Ridge 58.97 34 P **P 14 10 43.2 +1.0**
SNH Sunshine Point 58.99 34 P **P 14 10 43.2 +1.0**
SNH IAMs_20 IAMs_20 14 34 40.4
comp=Z,2µm,22.0s
ISLE Juniper Island 59.22 34 P **P 14 10 44.5 +0.5**
ISLE IAmb IAmb 14 11 00.9
comp=Z,79nm,1.0s
ISLE IAMs_20 IAMs_20 14 36 47.5
comp=Z,2µm,20.0s
K27K Chicken 59.23 30 P **P 14 10 45.3 +1.4**
baz=271
L27K Beaver Creek, 59.37 31 P **P 14 10 45.7 +0.9**
L27K IAMs_20 IAMs_20 14 37 21.4
comp=Z,2µm,20.0s
L27K Beaver Creek, 59.37 31 P **P 14 10 46.1 +1.3**
baz=272,SNR=12
L27K S **S 14 18 53.5 +2.9**
baz=272
M27K Edge Creek, AK 59.37 32 P **P 14 10 45.7 +0.7**
M27K IAmb IAmb 14 11 05.5
comp=Z,61nm,1.2s
M27K IAMs_20 IAMs_20 14 34 54.4
comp=Z,2µm,21.0s
M27K Edge Creek, AK 59.37 32 P **P 14 10 46.1 +1.2**
baz=272,SNR=8.0
M27K S **S 14 18 52.7 +1.8**
baz=272
GAR Garm 59.37 301 P **P 14 10 44.3 -1.1**
BCAR Beaver Creek A 59.39 31 P **P 14 10 46.0 +1.0**
G27K Doyon Strip 59.40 27 P **P 14 10 46.9 +1.9**
baz=270,SNR=11
G27K S **S 14 18 53.8 +2.8**
baz=270
STKA Stephens Creek 59.41 180 P **P 14 10 45.4 0.0**
comp=Z,6.5nm,0.5s,baz=14,slow=5.9,SNR=28
STKA LR LR 14 36 33.8
comp=Z,907nm,21.5s,baz=3.2,slow=36
comp=Z,6.5nm,0.5s
STKA Stephens Creek 59.41 180 P **P 14 10 45.1 -0.3**
STKA Stephens Creek 59.41 180 P **P 14 10 45.1 -0.3**
STKA pmax pmax
comp=Z,5.0nm,0.8s
I27K Kandik River 59.42 28 P **P 14 10 46.6 +1.5**
baz=270,SNR=13
I27K S **S 14 18 52.2 +1.0**
baz=270
MESA MESA 59.43 34 P **P 14 10 45.3 -0.2**
MESA IAMs_20 IAMs_20 14 34 30.2
comp=Z,2µm,20.0s
MESA MESA 59.43 34 P **P 14 10 46.6 +1.0**
baz=273
E27K Coleen River 59.44 25 P **P 14 10 47.4 +2.1**
baz=269,SNR=27
E27K S **S 14 18 54.9 +3.5**
baz=269
H27K Steamboat Moun 59.45 27 P **P 14 10 47.0 +1.6**
baz=270,SNR=56
H27K S **S 14 18 55.3 +3.7**
baz=270
YAH Yahtse 59.52 34 P **P 14 10 45.8 -0.5**
YAH IAMs_20 IAMs_20 14 34 15.5
comp=Z,2µm,22.0s
BARN Barnard Glacie 59.53 33 P **P 14 10 46.7 +0.5**
EGAK Eagle 59.62 29 P **P 14 10 46.9 +0.3**
EGAK IAmb IAmb 14 11 05.7
comp=Z,63nm,1.4s
EGAK Eagle 59.62 29 P **P 14 10 47.2 +0.7**
baz=271,SNR=8.0
EGAK S **S 14 18 54.4 +0.7**
baz=271
CTG Chitna Glacier 59.69 33 P **P 14 10 48.2 +1.0**
baz=273,SNR=7.5
CTGM Chitina Glacie 59.69 33 P **P 14 10 48.0 +0.7**
CTGM IAMs_20 IAMs_20 14 35 35.9
comp=Z,2µm,20.0s
FORT Forrest 59.79 194 P **P 14 10 47.6 -0.4**
TABL Table Mountain 59.82 34 IAMs_20 IAMs_20 14 34 24.3
comp=Z,2µm,21.0s
BVCY Beaver Creek 59.84 32 P **P 14 10 48.8 +0.7**
baz=273,SNR=8.1
BVCY S **S 14 18 53.0 -3.7**
baz=273
LOGN Logan Glacier 59.86 34 IAMs_20 IAMs_20 14 37 07.5
comp=Z,2µm,20.0s
YUK3 Moose Creek 60.06 32 P **P 14 10 50.8 +0.9**
baz=274,SNR=12
YUK3 S **S 14 18 58.3 -1.7**
baz=274
O28M Mount Upton 60.26 34 P **P 14 10 52.5 +1.1**
baz=274
O28M S **S 14 19 04.6 +1.9**
baz=274
PINM Pinnacle 60.29 34 P **P 14 10 52.0 +0.8**
baz=275
CHGR Chuyangaron 60.33 301 P **P 14 10 51.1 -0.9**
CHGR Chuyangaron 60.33 301 P **P 14 10 51.1 -0.9**
CHGR pmax pmax
comp=Z,98nm,0.7s
DAWY Dawson 60.41 30 P **P 14 10 53.0 +1.0**
DAWY IAmb IAmb 14 11 12.9
comp=Z,73nm,1.3s
DAWY Dawson 60.41 30 P **P 14 10 53.5 +1.4**
baz=273,SNR=15
DAWY S **S 14 19 01.5 -2.5**
baz=273
BBOO Buckleboo 60.59 186 P **P 14 10 52.8 -0.7**
BCPM Bancas Point 60.61 34 P **P 14 10 53.4 0.0**
BCPM IAmb IAmb 14 11 13.8
comp=Z,87nm,1.1s
BCPM IAMs_20 IAMs_20 14 34 04.2
comp=Z,2µm,22.0s
PNL Peninsula 60.76 35 P **P 14 10 55.2 +0.8**
baz=276
I29M Ogilvie Camp, 60.80 28 P **P 14 10 55.4 +0.8**
I29M IAmb IAmb 14 11 10.9
comp=Z,70nm,1.1s
I29M Ogilvie Camp, 60.80 28 P **P 14 10 56.0 +1.4**
baz=273,SNR=21
I29M S **S 14 19 12.4 +3.5**
baz=273
J29M Klondike Camp 60.90 29 IAMs_20 IAMs_20 14 36 39.9
comp=Z,2µm,21.0s
J29M Klondike Camp 60.90 29 P **P 14 10 56.6 +1.2**
baz=274,SNR=6.6
J29M S **S 14 19 12.2 +1.9**
baz=274
M29M Somme Creek 60.95 32 P **P 14 10 57.3 +1.6**
baz=275,SNR=25
M29M S **S 14 19 13.0 +1.9**
baz=275
YUK4 Talbot Arm 60.96 33 P **P 14 10 57.6 +1.6**
baz=275,SNR=21
L29M L29M 61.05 31 P **P 14 10 58.4 +2.0**
baz=275,SNR=30
L29M S **S 14 19 15.3 +3.1**
baz=275
O29M Mount Kennedy 61.10 34 P **P 14 10 58.5 +1.6**
baz=276,SNR=11
O29M S **S 14 19 15.2 +2.1**
baz=276
YUK6 Outpost Mounta 61.14 33 P **P 14 10 58.7 +1.4**
baz=276
YUK6 S **S 14 19 15.5 +1.7**
baz=276
AFI Afiamalu 61.15 127 LR LR 14 31 16.2
comp=Z,741nm,21.6s,baz=318,slow=30
AFI Afiamalu 61.15 127 P **P 14 10 58.4 +0.7**
AFI IAmb IAmb 14 11 14.7
comp=Z,38nm,0.8s
AFI Afiamalu 61.15 127 P **P 14 10 58.4 +0.7**
AFI pmax pmax
comp=Z,38nm,0.9s
PALK Pallekele 61.20 263 LR LR 14 37 09.9
comp=Z,1µm,21.1s,baz=158,slow=36
PALK Pallekele 61.20 263 P **P 14 10 59.0 +0.9**
PALK Pallekele 61.20 263 P **P 14 10 59.0 +0.9**
PALK pmax pmax
comp=Z,36nm,1.2s
PALK Pallekele 61.20 263 P **P 14 10 59.0 +0.9**
K29M Barlow Dome 61.25 30 P **P 14 10 59.7 +1.9**
baz=275,SNR=29
K29M S **S 14 19 16.7 +1.8**
baz=275
EPYK Eagle Plains 61.39 27 P **P 14 10 59.8 +1.2**
EPYK Eagle Plains 61.39 27 P **P 14 11 00.2 +1.6**
baz=274,SNR=39
KBL Kabul 61.45 296 P **P 14 10 58.5 -1.3**
KBL IAmb IAmb 14 11 44.6
comp=Z,52nm,1.2s
KBL Kabul 61.45 296 P **P 14 10 58.5 -1.3**
KBL pmax pmax
comp=Z,52nm,1.3s
KBL Kabul 61.45 296 P **P 14 10 58.8 -1.0**
SNR=9.0
KBL P **P 14 10 58.8 -1.0**
SNR=9.0
G30M tAoh Zraii Nji 61.54 26 P **P 14 11 00.9 +1.3**
baz=274,SNR=45
G30M S **S 14 19 21.1 +2.8**
baz=274
HYT Haines Junctio 61.57 33 P **P 14 11 01.4 +1.3**
HYT IAmb IAmb 14 11 18.1
comp=Z,60nm,1.0s
HYT Haines Junctio 61.57 33 P **P 14 11 00.8 +0.7**
baz=277,SNR=22
HYT S **S 14 19 22.1 +3.1**
baz=277
P29M Windy Craggy 61.60 35 P **P 14 11 01.6 +1.5**
P29M IAmb IAmb 14 11 15.4
comp=Z,60nm,0.9s
P29M Windy Craggy 61.60 35 P **P 14 11 01.1 +1.0**
baz=277,SNR=8.0
P29M S **S 14 19 21.0 +1.8**
baz=277
N30M Aishikik Lake 61.70 33 P **P 14 11 02.1 +1.3**
baz=277,SNR=8.6
N30M S **S 14 19 22.5 +2.1**
baz=277
MORW Morawa 61.78 206 P **P 14 11 01.7 0.0**
P30M Million Dollar 61.92 34 P **P 14 11 04.0 +1.7**
baz=277
MAYO Mayo, Yukon 62.00 30 P **P 14 11 04.0 +1.3**
MAYO Mayo, Yukon 62.00 30 P **P 14 11 04.6 +1.9**

baz=276,SNR=9.5
O30N Mendenhall 62.26 33 P **P 14 11 06.0 +1.4**
baz=278,SNR=6.7
O30N S **S 14 19 29.2 +1.6**
baz=278
PLBC Pleasant Camp 62.31 35 P **P 14 11 05.9 +1.1**
baz=278,SNR=16
PLBC S **S 14 19 31.6 +3.5**
baz=278
N31M Braeburn, Yuko 62.31 32 P **P 14 11 06.5 +1.5**
N31M IAmb IAmb 14 11 21.5
comp=Z,66nm,0.9s
N31M Braeburn, Yuko 62.31 32 P **P 14 11 06.4 +1.5**
baz=278,SNR=22
INK Inuvik 62.44 25 P **P 14 11 06.2 +0.7**
comp=Z,12nm,0.6s,baz=294,slow=5.6,SNR=58
INK LR LR 14 38 57.1
comp=Z,397nm,21.8s,baz=264,slow=37
comp=Z,12nm,0.6s
INK Inuvik 62.44 25 P **P 14 11 05.9 +0.4**
INK Inuvik 62.44 25 P **P 14 11 05.9 +0.4**
INK pmax pmax
comp=Z,87nm,1.0s
INK Inuvik 62.44 25 P **P 14 11 06.3 +0.8**
baz=276,SNR=11
INK S **S 14 19 30.0 +0.6**
baz=276
F31M Tsiigehtchic 62.45 26 P **P 14 11 06.4 +0.8**
baz=276
F31M S **S 14 19 30.1 +0.5**
baz=276
SVE Sverdlovsk 62.46 322*de*P **P 14 11 06.0 +0.1**
SVE *e*S **S 14 19 25.7 -4.4**
SVE pmax pmax
comp=Z,129nm,1.5s
SVE MLR MLR
comp=Z,1μm,18.0s
POO Poona 62.55 277 *e*P **P 14 11 06.4 -0.7**
POO IAmb IAmb 14 11 08.5
comp=Z,19nm,0.8s
R31K City Hall, Gus 62.79 36 P **P 14 11 09.0 +0.9**
baz=279
SKAG Skagway 62.84 35 P **P 14 11 09.4 +1.1**
SKAG IAmb IAmb 14 11 28.5
comp=Z,62nm,1.1s
SKAG Skagway 62.84 35 P **P 14 11 08.6 +0.3**
baz=279
M31M Drury Creek, Y 62.87 32 P **P 14 11 09.5 +0.9**
M31M IAmb IAmb 14 11 24.7
comp=Z,88nm,1.1s
M31M IAMs_20 IAMs_20 14 37 59.9
comp=Z,2μm,20.0s
M31M Drury Creek, Y 62.87 32 P **P 14 11 10.1 +1.5**
baz=278,SNR=33
M31M S **S 14 19 37.4 +2.3**
baz=278
WHY Whitehorse 62.87 33 P **P 14 11 09.8 +1.1**
WHY IAmb IAmb 14 11 23.3
comp=Z,54nm,0.9s
WHY Whitehorse 62.87 33 P **P 14 11 09.9 +1.2**
baz=279,SNR=15
WHY S **S 14 19 39.0 +3.7**
baz=279
CAN Canberra 63.20 173 P **P 14 11 11.7 +0.7**
CAN IAmb IAmb 14 11 56.5
comp=Z,92nm,1.4s
CAN Canberra 63.20 173 P **P 14 11 11.7 +0.7**
CAN pmax pmax
comp=Z,92nm,1.4s
SIT Sitka 63.25 37 P **P 14 11 11.8 +0.7**
SIT Sitka 63.25 37 P **P 14 11 11.8 +0.7**
SIT pmax pmax
comp=Z,34nm,1.0s
SIT Sitka 63.25 37 P **P 14 11 11.7 +0.7**
baz=280
FARO Faro, Yukon 63.34 31 P **P 14 11 12.7 +0.9**
FARO IAmb IAmb 14 11 27.8
comp=Z,76nm,1.1s
FARO Faro, Yukon 63.34 31 P **P 14 11 12.5 +0.7**
baz=279,SNR=24
FARO S **S 14 19 42.6 +1.5**
baz=279
R32K Eaglecrest 63.45 36 P **P 14 11 12.9 +0.4**
baz=280
JIS Juneau Island 63.52 36 P **P 14 11 13.8 +1.0**
JIS IAMs_20 IAMs_20 14 33 52.3
comp=Z,3μm,21.0s
S32K Killisnoo 63.57 37 P **P 14 11 13.3 +0.1**
baz=281
PCHI Peechi 63.59 268⇑ *e*P **P 14 11 13.9 -0.2**
PCHI *e*S S 14 19 22.0 -23
P32M Atlin 63.62 34 P **P 14 11 13.4 -0.2**
baz=280
N32M Quiet Lake 63.65 33 P **P 14 11 15.0 +1.1**
baz=280
ARU Arti 63.66 322 P **P 14 11 13.8 0.0**
comp=Z,49nm,0.4s,baz=93,slow=2.2,SNR=56
ARU LR LR 14 40 30.8
comp=Z,2μm,20.3s,baz=73,slow=38
comp=Z,49nm,0.4s
ARU Arti 63.66 322 P **P 14 11 13.4 -0.4**
ARU IAMs_20 IAMs_20 14 40 07.2
comp=Z,2μm,21.0s
ARU Arti 63.66 322*c i*P **P 14 11 13.7 -0.2**
ARU 14 11 50.1
ARU 14 13 29.2
ARU PPP PPP 14 15 02.3
ARU S **S 14 19 51.2 +6.1**
ARU 14 21 06.7
ARU SS **SS 14 23 50.4 -2.2**
ARU pmax pmax
comp=Z,79nm,0.9s
ARU MLR MLR
comp=Z,2μm,21.0s
ARU Arti 63.66 322 P **P 14 11 13.1 -0.8**
P33M Teslin, Yukon 63.95 34 P **P 14 11 16.7 +0.8**
P33M IAmb IAmb 14 11 30.9
comp=Z,46nm,1.0s
P33M Teslin, Yukon 63.95 34 P **P 14 11 17.3 +1.4**
baz=281,SNR=12
P33M S **S 14 19 49.1 +0.3**
baz=281
MMPY Sheldon Lake, 64.23 31 P **P 14 11 18.1 +0.5**
baz=281,SNR=15
MMPY S **S 14 19 54.2 +2.1**
baz=281
AB31 Akbulak array 64.38 314 *i* P **P 14 11 17.9 -0.8**
ABKAR Akbulak array 64.38 314 P **P 14 11 17.8 -0.9**
ABKAR Akbulak array 64.38 314 P **P 14 11 17.8 -0.9**
ABKAR IAmb IAmb 14 11 19.7
comp=Z,43nm,0.7s
Q32M Nakina River 64.47 35 P **P 14 11 20.5 +1.1**
baz=282
T33K Petersburg 64.57 37 P **P 14 11 20.8 +1.0**
baz=282
U33K Whale Pass 64.63 38 P **P 14 11 21.4 +1.2**
baz=282
A36M Sachs Harbour 64.65 20 P **P 14 11 20.7 +0.6**
A36M IAmb IAmb 14 11 35.5
comp=Z,94nm,1.1s
A36M Sachs Harbour 64.65 20 P **P 14 11 20.7 +0.6**
baz=282,SNR=6.4
A36M S **S 14 19 58.6 +1.7**
baz=282
CRAG Craig 64.77 39 P **P 14 11 22.5 +1.4**
CRAG IAmb IAmb 14 11 39.6
comp=Z,100nm,1.2s
CRAG Craig 64.77 39 P **P 14 11 21.2 +0.1**
baz=283
NWAO Narrogin (SRO) 64.84 203 P **P 14 11 21.9 +0.2**
NWAO Narrogin (SRO) 64.84 203 P **P 14 11 21.9 +0.2**
NWAO pmax pmax
comp=Z,125nm,1.1s
NWAO Narrogin (SRO) 64.84 203 P **P 14 11 22.1 +0.4**
NWAO P **P 14 11 22.1 +0.4**
NWAO Narrogin (SRO) 64.84 203 P **P 14 11 21.1 -0.7**
WRAK Wrangell Islan 64.98 38 P **P 14 11 22.6 +0.1**
baz=283
R33M Jennings River 65.04 34 P **P 14 11 24.5 +1.5**
baz=283
R33M S **S 14 20 05.2 +2.9**
baz=283
TOO Toolangi 65.18 177 P **P 14 11 23.7 -0.2**
TOO IAmb IAmb 14 12 15.3
comp=Z,77nm,1.4s
TOO Toolangi 65.18 177 P **P 14 11 23.7 -0.2**
TOO pmax pmax
comp=Z,77nm,1.4s
S34M Telegraph Cree 65.29 36 P **P 14 11 26.0 +1.5**
baz=283,SNR=6.8
AKTO Aktyubinsk 65.30 316 P **P 14 11 23.9 -0.8**
comp=Z,82nm,0.6s,baz=87,slow=7.8,SNR=139
AKTO LR LR 14 41 45.7
comp=Z,3μm,18.2s,baz=79,slow=38
comp=Z,82nm,0.6s
AKTO Aktyubinsk 65.30 316 P **P 14 11 23.8 -0.9**
C36M Paulatuk 65.63 23 P **P 14 11 26.6 +0.1**
C36M Paulatuk 65.63 23 P **P 14 11 26.9 +0.4**
baz=284
C36M S **S 14 20 08.7 -0.3**
baz=284
V35K Ketchikan 65.64 39 P **P 14 11 27.5 +0.7**
baz=284
DIB Dawson Inlet, 65.67 41 P **P 14 11 27.3 +0.3**
DIB IAmb IAmb 14 11 44.1
comp=Z,101nm,1.2s
DLBC Dease Lake 65.73 35 LR LR 14 37 08.4
comp=Z,2μm,22.0s,baz=282,slow=33
DLBC Dease Lake 65.73 35 P **P 14 11 28.5 +1.0**
DLBC IAmb IAmb 14 11 42.3
comp=Z,50nm,1.1s
DLBC Dease Lake 65.73 35 P **P 14 11 29.4 +1.9**
baz=284,SNR=7.2
TGTN Hyland Airport 65.84 32 P **P 14 11 29.8 +1.7**
baz=284,SNR=25
TGTN S **S 14 20 14.5 +2.6**
baz=284
WTLY Watson Lake, Y 65.94 33 P **P 14 11 30.3 +1.6**
baz=284
T35M Bob Quinn 65.97 37 P **P 14 11 30.1 +1.1**
baz=284
T35M S **S 14 20 15.4 +1.8**
baz=284
HRA Herat 66.86 298 P **P 14 11 34.1 -1.2**
GRNB Grenville Isla 66.96 40 P **P 14 11 34.1 -1.2**
GRNB IAmb IAmb 14 11 49.4
comp=Z,62nm,1.1s
WRGLY Wrigley 67.54 29 P **P 14 11 39.9 +1.1**
baz=287
WRGLY S **S 14 20 34.4 +2.2**
baz=287
KIRV Kirov 67.91 326 P **P 14 11 41.8 +0.7**
comp=Z,264nm,0.6s,baz=72,slow=1.2,SNR=8.4
KIRV LR LR 14 44 35.3
comp=Z,2μm,18.0s,baz=76,slow=39
KIRV Kirov 67.91 326*c i*P **P 14 11 41.7 +0.5**
FLDN Fort Liard 68.45 32 P **P 14 11 46.3 +1.7**
baz=288
BBB Bella Bella 68.51 41 LR LR 14 37 35.5
comp=Z,602nm,21.9s,baz=288,slow=32
BBB Bella Bella 68.51 41 P **P 14 11 44.8 -0.2**
RAO Raoul Island 68.59 143 LR LR 14 38 45.9
comp=Z,456nm,20.4s,baz=336,slow=33
PRGR Permogore 68.75 329 *e*P **P 14 11 45.2 -1.2**
PRGR *e* 14 12 04.6
PRGR *e* 14 14 18.9
PRGR pmax pmax
comp=Z,115nm,0.8s
GEYT Alibeck 68.87 303 P **P 14 11 47.1 -0.5**
comp=Z,5.7nm,0.6s,baz=46,slow=4.3,SNR=12
GEYT LR LR 14 44 12.7
comp=Z,2μm,21.4s,baz=86,slow=38
comp=Z,5.7nm,0.6s
GEYT Alibeck 68.87 303 P **P 14 11 46.5 -1.2**
GYA0B ALIBECK ARRAY 68.87 303 P **P 14 11 47.0 -0.6**
EUNU Eureka 69.18 8 P **P 14 11 49.1 +0.3**
EUNU IAmb IAmb 14 11 50.9
comp=Z,53nm,0.7s
ALE Alert 69.21 3 P **P 14 11 48.9 -0.1**
ALE pP **pP 14 12 00.8 +0.6**
OUZ Omahuta 69.53 153 IAMs_20 IAMs_20 14 39 11.5
comp=Z,2μm,21.0s
SPA0 Spitsbergen Ar 69.58 350 *e*P **P 14 11 52.5 +1.2**
SPA0 IAmb IAmb 14 11 53.3
comp=Z,56nm,1.1s
SPB2 Spitsbergen Ar 69.58 350 P **P 14 11 50.8 -0.5**
SPB2 IAmb IAmb 14 11 53.5
comp=Z,58nm,1.0s
SPITS Spitsbergen Ar 69.58 350 P **P 14 11 52.2 +0.9**
comp=Z,18nm,0.6s,baz=84,slow=7.6,SNR=21
SPITS LR LR 14 44 36.0
comp=Z,571nm,19.4s,baz=12,slow=38
comp=Z,18nm,0.6s
SPITS Spitsbergen Ar 69.58 350 P **P 14 11 51.9 +0.6**
SPITS pmax pmax
comp=Z,163nm,1.5s
KBS Kingsbay 69.74 351 P **P 14 11 52.7 +0.4**
KBS IAmb IAmb 14 11 54.1
comp=Z,45nm,0.8s
KBS Kingsbay 69.74 351 P **P 14 11 52.7 +0.4**
KBS pmax pmax
comp=Z,45nm,0.8s
KBS Kingsbay 69.74 351 *e*P **P 14 11 53.0 +0.8**
KBS IAmb IAmb 14 11 53.9
comp=Z,46nm,0.8s
KBS Kingsbay 69.74 351 *e*P **P 14 11 53.5 +1.3**
NOR Nord 70.20 357 *i* P **P 14 11 55.5 +0.4**
NOR IAmb IAmb 14 11 59.9
comp=Z,35nm,1.5s
HSPB Hornsund (broa 70.48 349 *e*P **P 14 11 58.7 +1.8**
HSPB Hornsund (broa 70.48 349 *e*P **P 14 11 58.1 +1.2**
HSPB IAmb IAmb 14 11 59.2
comp=Z,44nm,0.7s
LVZ Lovozero 70.67 337 IAMs_20 IAMs_20 14 47 34.6
comp=Z,2μm,19.0s
LVZ Lovozero 70.67 337⇓ *e*P **P 14 11 58.9 +0.7**
LVZ pmax pmax
comp=Z,195nm,3.5s
BELG Belogornoye 70.91 320 P **P 14 11 59.9 +0.1**
comp=Z,143nm,0.6s,baz=322,slow=1.4,SNR=59
BELG LR LR 14 45 13.7
comp=Z,1μm,18.4s,baz=97,slow=38
comp=Z,143nm,0.6s
BELG Belogornoye 70.91 320*c i*P **P 14 11 59.8 0.0**
BELG pmax pmax
comp=Z,18nm,0.6s
APA Apatity 71.24 337⇓ *i*P **P 14 11 59.6 -2.0**
APA *i* 14 12 18.7
APA *i* 14 14 38.0
APA *i* S **S 14 21 11.0 -4.7**
APA *i* SS **SS 14 25 46.0 -3.3**
APA pmax pmax
comp=Z,80nm,0.8s
RES Resolute Bay 71.38 14 LR LR 14 45 47.5
comp=Z,239nm,20.3s,baz=297,slow=38
RES Resolute Bay 71.38 14 P **P 14 12 02.8 +0.5**
RES Resolute Bay 71.38 14 P **P 14 12 02.8 +0.5**
RES pmax pmax
comp=Z,23nm,0.9s
BJO1 Bjornoya 71.43 346 *e*P **P 14 12 03.1 +0.5**
YKA Yellowknife Ar 71.59 28 P **P 14 12 04.0 +0.3**
comp=Z,16nm,0.6s,baz=295,slow=6.5,SNR=34
comp=Z,16nm,0.6s
YKA Yellowknife Ar 71.59 28 P **P 14 12 03.4 -0.4**
KLMR Klimovskoe 71.79 330*c i*P **P 14 12 05.1 +0.1**
KLMR *e* 14 14 40.4
KLMR S **S 14 21 28.3 +6.1**
KLMR pmax pmax
comp=Z,73nm,0.8s
KLMR MLR MLR
comp=Z,1μm,19.0s
KLMR Klimovskoe 71.79 330⇑ *i*P **P 14 12 05.2 +0.2**
KLMR ⇓ *i*P **P 14 12 05.2 +0.2**
KLMR ⇓ *i*P **P 14 12 05.2 +0.2**
KLMR AMP 14 12 06.0
comp=Z,73nm,0.8s
KLMR *e*PP **PP 14 14 40.5 -3.7**
KLMR S **S 14 21 28.3 +6.1**
KLMR S **S 14 21 28.3 +6.1**
KLMR SS SS 14 26 12.8 +15
KLMR SS SS 14 26 12.8 +15
KLMR LR LR 14 38 29.7
KLMR AMP 14 47 07.3
comp=Z,1μm,19.4s
KEV Kevo 72.17 341 P **P 14 12 07.3 +0.2**
KEV Kevo 72.17 341 P **P 14 12 07.3 +0.2**
KEV pmax pmax
comp=Z,285nm,2.0s
KEV MLR MLR
comp=Z,2μm,20.0s
WAPA Wapiti River 72.38 36 P **P 14 12 08.7 0.0**
WAPA IAmb IAmb 14 12 23.0
comp=Z,85nm,1.0s
MANA Manning 72.54 34 P **P 14 12 09.8 +0.2**
HAMF Hammerfest 72.62 342 *e*P **P 14 12 10.4 +0.7**
HAMF IAmb IAmb 14 12 10.5
comp=Z,60nm,0.8s
LLLB Lillooet 72.71 42 P **P 14 12 10.8 +0.1**
ARA0 ARCESS Array S 72.73 341 *e*P **P 14 12 11.0 +0.5**
ARA0 IAmb IAmb 14 12 11.9
comp=Z,44nm,0.7s
ARCES ARCESS Array B 72.73 341 P **P 14 12 11.2 +0.8**
comp=Z,28nm,0.6s,baz=71,slow=7.4,SNR=102
ARCES LR LR 14 48 10.2
comp=Z,2μm,19.6s,baz=58,slow=39
comp=Z,28nm,0.6s
ARCES ARCESS Array B 72.73 341 P **P 14 12 11.3 +0.8**
ARCES ARCESS Array B 72.73 341 P **P 14 12 11.3 +0.8**
ARCES pmax pmax
comp=Z,244nm,1.8s
NLWA Neilton Lookou 72.74 45 P **P 14 12 11.1 +0.1**
NLWA IAmb IAmb 14 12 29.9
comp=Z,54nm,0.9s
HIZ Hauiti 72.88 153 IAMs_20 IAMs_20 14 38 53.2
comp=Z,2μm,22.0s
MSF Maaselka 73.57 337 P **P 14 12 16.5 +1.0**
MSF pmax pmax
comp=Z,86nm,0.8s
URZ Urewera 73.58 152 LR LR 14 38 59.2
comp=Z,640nm,21.6s,baz=62,slow=31
KTK1 Kautokeino 73.69 341 *e*P **P 14 12 16.2 0.0**
KTK1 IAmb IAmb 14 12 17.3
comp=Z,30nm,0.8s
BRLDA Berland Lookou 73.81 37 P **P 14 12 17.7 +0.4**
BRLDA IAmb IAmb 14 12 30.2
comp=Z,200nm,1.7s
WBK Wadi Bani Khal 73.83 287 P **P 14 12 17.3 -0.6**
WBK P **P 14 12 17.3 -0.6**
WSAR Wadi Sarin 73.86 288 P **P 14 12 16.7 -1.3**
comp=Z,7.7nm,0.7s,baz=196,slow=2.9,SNR=7.8
WSAR LR LR 14 48 23.6
comp=Z,906nm,20.7s,baz=96,slow=39
comp=Z,7.7nm,0.7s
WSAR Wadi Sarin 73.86 288 P **P 14 12 15.6 -2.4**
QRZ Quartz Range 74.02 156 P **P 14 12 18.5 +0.2**
QRZ IAMs_20 IAMs_20 14 40 34.5
comp=Z,2μm,22.0s
BKZ Black Stump Fm 74.09 153 P **P 14 12 18.4 -0.4**
BKZ IAmb IAmb 14 12 34.6
comp=Z,105nm,1.7s
BKZ IAMs_20 IAMs_20 14 42 16.4
comp=Z,1μm,20.0s
TULEG Thule 74.12 7 P **P 14 12 18.9 +0.4**
TULEG Thule 74.12 7 *i* P **P 14 12 18.0 -0.5**
TULEG IAmb IAmb 14 12 20.0
comp=Z,49nm,0.7s
JETT Jettan, Norway 74.17 342 *e*P **P 14 12 19.9 +1.0**
JETT IAmb IAmb 14 12 20.9
comp=Z,62nm,0.7s
BIDO Bidbid 74.17 288 P **P 14 12 19.4 -0.4**
BIDO P **P 14 12 19.4 -0.4**
SMDO Samad 74.42 288 P **P 14 12 20.5 -0.8**
SMDO P **P 14 12 20.5 -0.8**
TRO Tromso 74.52 342 *e*P **P 14 12 21.7 +0.8**
TRO IAmb IAmb 14 12 22.2
comp=Z,37nm,0.7s
KBO Bosley Butte 74.53 50 P **P 14 12 22.2 +0.6**
RAR Rarotonga 74.55 125 LR LR 14 38 34.2
comp=Z,1μm,21.7s,baz=304,slow=30
MAK Makhachkala 74.57 311*c i*P P 14 12 16.7 -5.0
MAK *e* 14 15 13.5
MAK *e*S **SKiKP 14 21 45.0 +0.5**
MAK *e*SS **SS 14 26 42.8 +1.5**
MAK pmax pmax
comp=Z,263nm,1.1s
MAK MLR MLR
comp=Z,5μm,18.0s
NEEM North Greenlan 74.64 3 *i* P **P 14 12 22.8 +0.9**
NEEM IAmb IAmb 14 12 24.5
comp=Z,84nm,0.8s
JMDO Jabal Madar 74.66 287 P **P 14 12 21.7 -1.0**
JMDO P **P 14 12 21.7 -1.0**
NNZ Nelson 74.67 156 P **P 14 12 21.8 -0.3**
NNZ IAMs_20 IAMs_20 14 41 37.5
comp=Z,1μm,22.0s
BANOM Banah 74.73 291 P **P 14 12 23.1 +0.1**
BANOM Banah 74.73 291 P **P 14 12 23.5 +0.5**
VRH Novokhopyorsk 74.75 320 *e*P **P 14 12 22.3 -0.3**
VRH pmax pmax
comp=Z,130nm,0.6s
SHME Shamm 74.81 292 P **P 14 12 22.9 -0.6**
SHME P **P 14 12 22.9 -0.6**
SHME Shamm 74.81 292 *i* P **P 14 12 24.0 +0.6**
SNR=12
HOQ Hoqain 74.83 289 P **P 14 12 22.7 -0.9**
SNR=10
HOQ P **P 14 12 22.7 -0.9**
SNR=10
DAG Danmarks Havn 74.92 355 *i* P **P 14 12 22.0 -1.2**
DAG IAmb IAmb 14 12 25.2
comp=Z,12nm,0.6s
KSXB Camp Six Broad 74.92 51 P **P 14 12 23.4 -0.5**
MOS Moscow 74.93 325 *e*P **P 14 12 21.0 -2.5**
MOS *e* 14 12 35.3
MOS *e*S **S 14 21 55.1 -2.8**
MOS pmax pmax
comp=Z,133nm,0.9s
MOS pmax pmax
comp=Z,1μm,3.1s
MOS smax smax
comp=E,1μm,4.5s
MOS smax smax
comp=N,2μm,4.4s
MOS MLR MLR
comp=Z,3μm,18.0s
THZ Tophouse 74.98 156 P **P 14 12 24.2 +0.3**
THZ IAMs_20 IAMs_20 14 41 26.8
comp=Z,2μm,22.0s
MASF Masafi 75.06 291 P **P 14 12 24.5 -0.5**
MASF P **P 14 12 24.5 -0.5**
MSFE Esma-Masafi 75.07 291 P **P 14 12 24.3 -0.8**
KRPM Rodgers 75.10 51 P **P 14 12 24.0 -0.9**
KRPM IAmb IAmb 14 12 43.2
comp=Z,176nm,1.7s
UOSS Minazif 75.20 291 P **P 14 12 24.2 -1.4**
UOSS Minazif 75.20 291 P **P 14 12 24.3 -1.4**
UOSS P **P 14 12 24.3 -1.4**
UOSS Minazif 75.20 291 P **P 14 12 25.7 0.0**
HUMO Hull Mountain 75.23 50 P **P 14 12 25.4 -0.3**
HUMO IAmb IAmb 14 12 39.5
comp=Z,82nm,1.6s
HUMO IAMs_20 IAMs_20 14 38 49.7
comp=Z,2μm,21.0s
SNZO South Karori 75.24 155 IAMs_20 IAMs_20 14 40 38.7
comp=Z,1μm,22.0s
SOHO SOHO 75.26 290 P **P 14 12 25.4 -0.7**
SOHO SOHO 75.26 290 *i* P **P 14 12 26.0 -0.1**
SNR=17
BSY Bisya 75.27 288 P **P 14 12 25.6 -0.5**
BSY P **P 14 12 25.6 -0.5**
BFZ Birch Farm 75.29 154 P **P 14 12 25.1 -0.6**
BFZ IAmb IAmb 14 12 40.4
comp=Z,52nm,0.9s
HATD Hatta, Dubai 75.31 290 P **P 14 12 25.9 -0.5**
HATD Hatta, Dubai 75.31 290 *i* P **P 14 12 27.0 +0.6**
SNR=8.9
MHTO MHTO 75.34 286 P **P 14 12 25.9 -0.7**
MHTO P **P 14 12 25.9 -0.7**
ASHO Ashiyiah 75.43 290 P **P 14 12 27.4 +0.3**
ASHO P **P 14 12 27.4 +0.3**
ASHO Ashiyiah 75.43 290 *i* P **P 14 12 27.1 0.0**
SNR=7.9
MSWZ Moikau Station 75.53 155 P **P 14 12 26.5 -0.6**
ARQ Araqi 75.59 289 P **P 14 12 28.2 +0.2**
SNR=7.3
GROC Groznyy 75.62 311 *e*P **P 14 12 27.8 0.0**
GROC *e* 14 12 39.6
GROC pmax pmax
comp=Z,110nm,1.2s
LTZ Lake Taylor 75.66 157 P **P 14 12 28.5 +0.7**
PLWZ Palliser 75.67 155 P **P 14 12 27.1 -0.8**
LPSR Galich'ya Gora 75.68 322 *e*P **P 14 12 28.0 +0.1**
LPSR pmax pmax
comp=Z,60nm,0.6s
KMRM Mail Ridge 75.70 52 P **P 14 12 30.0 +1.6**
KMRM IAmb IAmb 14 13 01.3
comp=Z,147nm,1.7s

OBN Obninsk 75.75 325 P **P** **14 12 28.5 +0.3**
comp=Z,27nm,0.7s,baz=42,slow=3.1,SNR=28
OBN LR LR 14 49 11.0
comp=Z,853nm,18.3s,baz=60,slow=38
comp=Z,27nm,0.7s
OBN Obninsk 75.75 325 P **P** **14 12 28.4 +0.1**
OBN Obninsk 75.75 325 *c iP* **P** **14 12 28.6 +0.3**
OBN *e* 14 12 42.9
OBN *e* 14 15 16.8
OBN *e*PPP PPP 14 17 03.1
OBN *i* S **S** **14 22 12.9 +5.8**
OBN pmax pmax
comp=Z,114nm,0.7s
OBN MLR MLR
comp=Z,3μm,18.0s
YBH Yreka Blue Hor 75.76 50 LR LR 14 39 26.1
comp=Z,2μm,21.6s,baz=318,slow=31
YBH Yreka Blue Hor 75.76 50 P **P** **14 12 29.6 +0.8**
YBH Yreka Blue Hor 75.76 50 P **P** **14 12 29.6 +0.8**
YBH pmax pmax
comp=Z,35nm,1.0s
KHZ Kahutara 75.78 156 IAMs_20 IAMs_20 14 42 57.0
comp=Z,2μm,20.0s
FAQ Al Faqa, Dubai 75.79 291 P **P** **14 12 29.3 +0.2**
FAQ P **P** **14 12 29.3 +0.2**
FAQ Al Faqa, Dubai 75.79 291 P **P** **14 12 28.6 -0.5**
HAWA Hanford 75.87 45 P **P** **14 12 29.4 +0.2**
HAWA IAmb IAmb 14 12 41.8
comp=Z,124nm,1.8s
ALNE Al Ain 75.94 290 P **P** **14 12 30.0 0.0**
SNR=7.2
ALNE P **P** **14 12 30.0 0.0**
SNR=7.2
ALNE Al Ain 75.94 290 *i* P **P** **14 12 29.9 -0.1**
SNR=6.7
VORR Voronezh 75.95 321 *e*P **P** **14 12 30.1 +0.6**
VORR pmax pmax
comp=Z,70nm,0.4s
KCPM Cahto Peak 76.01 52 P **P** **14 12 31.3 +1.0**
KCPM IAmb IAmb 14 12 43.9
comp=Z,112nm,1.2s
ASUD Al Ashush, Dub 76.06 291 P **P** **14 12 31.1 +0.5**
ASUD Al Ashush, Dub 76.06 291 P **P** **14 12 31.0 +0.5**
OXZ Oxford 76.06 158 IAMs_20 IAMs_20 14 42 23.6
comp=Z,2μm,21.0s
RPZ Rata Peaks 76.09 159 LR LR 14 42 27.7
comp=Z,993nm,21.9s,baz=341,slow=33
RPZ Rata Peaks 76.09 159 P **P** **14 12 31.2 +1.0**
RPZ IAmb IAmb 14 12 56.6
comp=Z,86nm,1.2s
DQM DQM 76.14 285 P **P** **14 12 28.8 -2.4**
DQM P **P** **14 12 28.8 -2.4**
VSR Storozhevoye 76.18 321 *e*P **P** **14 12 30.6 -0.2**
VSR pmax pmax
comp=Z,80nm,0.6s
PUL Pulkovo 76.33 331 *c e*P **P** **14 12 32.4 +0.9**
PUL pmax pmax
comp=Z,140nm,0.8s
EDM Edmonton 76.36 37 P **P** **14 12 32.7 +0.8**
EDM IAmb IAmb 14 12 47.1
comp=Z,117nm,1.3s
EDM Edmonton 76.36 37 P **P** **14 12 32.7 +0.8**
EDM pmax pmax
comp=Z,117nm,1.3s
LBZ Lake Benmore 76.42 160 IAMs_20 IAMs_20 14 41 16.8
comp=Z,1μm,22.0s
NEW Newport 76.52 42 LR LR 14 40 43.2
comp=Z,895nm,21.6s,baz=306,slow=31
NEW Newport 76.52 42 P **P** **14 12 33.6 +0.8**
NEW IAmb IAmb 14 12 51.1
comp=Z,54nm,1.1s
NEW Newport 76.52 42 IAMs_20 IAMs_20 14 39 57.9
comp=Z,2μm,22.0s
NEW Newport 76.52 42 P **P** **14 12 33.7 +0.8**
NEW pmax pmax
comp=Z,54nm,1.1s
NEW Newport 76.52 42 P **P** **14 12 33.4 +0.5**
baz=297,SNR=15
MQZ McQueen's Vall 76.61 158 IAMs_20 IAMs_20 14 42 50.0
comp=Z,1μm,20.0s
STEI Steigen 76.66 342 *e*P **P** **14 12 34.0 +0.7**
STEI IAmb IAmb 14 12 34.2
comp=Z,56nm,0.7s
LOF Lofoten 76.98 342 *e*P **P** **14 12 34.9 -0.1**
LOF IAmb IAmb 14 12 37.9
comp=Z,24nm,0.8s
UMZA Um Al Zommool 76.99 289 P **P** **14 12 35.0 -0.9**
UMZA P **P** **14 12 35.0 -0.9**
FAUS Fauske 77.02 341 *e*P **P** **14 12 36.1 +0.8**
FAUS IAmb IAmb 14 12 36.7
comp=Z,48nm,0.7s
FIA1 FINESS Array S 77.14 334 P **P** **14 12 36.4 +0.4**
FINES FINESS Array B 77.14 334 P **P** **14 12 36.6 +0.5**
comp=Z,66nm,0.6s,baz=72,slow=5.4,SNR=265
FINES LR LR 14 50 23.5
comp=Z,1μm,18.6s,baz=50,slow=39
comp=Z,66nm,0.6s
FINES FINESS Array B 77.14 334 P **P** **14 12 36.4 +0.3**
MCCM Marconi Confer 77.15 54 P **P** **14 12 35.9 -0.7**
MCCM IAMs_20 IAMs_20 14 39 37.4
comp=Z,1μm,21.0s
KBZ Khabaz 77.30 313 P **P** **14 12 37.7 +0.4**
comp=Z,25nm,0.8s,baz=100,slow=2.6,SNR=46
KBZ LR LR 14 50 32.0
comp=Z,2μm,19.0s,baz=70,slow=39
comp=Z,25nm,0.8s
KBZ Khabaz 77.30 313 *c iP* **P** **14 12 37.0 -0.2**
KBZ pmax pmax
comp=Z,58nm,1.0s
MOD Modoc Plateau 77.31 49 P **P** **14 12 38.3 +0.6**
MOD IAMs_20 IAMs_20 14 40 32.3
comp=Z,1μm,21.0s
KVAR Kislovodsk Arr 77.33 313 P **P** **14 12 38.9 +1.3**
comp=Z,4.3nm,0.4s,baz=270,slow=19
KVAR LR LR 14 51 06.3
comp=Z,682nm,19.1s,slow=39
comp=Z,4.3nm,0.4s
KIV Kislovodsk 77.33 313 P **P** **14 12 38.3 +0.8**
KIV Kislovodsk 77.33 313 *e*P **P** **14 12 37.8 +0.2**
KIV *e*S **S** **14 22 28.8 +3.8**
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,2μm,19.0s
KIV Kislovodsk 77.33 313 *i* P **P** **14 12 38.4 +0.8**
SNR=16
ONI Oni 77.44 312 P **P** **14 12 38.5 +0.3**
ONI IAmb IAmb 14 13 24.1
comp=Z,54nm,1.0s
ONI Oni 77.44 312 P **P** **14 12 38.5 +0.3**
ONI pmax pmax
comp=Z,54nm,1.0s
ORV Oroville 77.52 52 P **P** **14 12 38.9 +0.3**
ORV IAmb IAmb 14 12 56.4
comp=Z,74nm,1.1s
ORV IAMs_20 IAMs_20 14 39 33.0
comp=Z,1μm,21.0s
ORV Oroville 77.52 52 P **P** **14 12 38.9 +0.3**
ORV pmax pmax
comp=Z,75nm,1.1s
NEY Neytrino 77.62 312 *e*P **P** **14 12 40.2 +0.8**
NEY pmax pmax
comp=Z,4.0nm,0.8s
GNI Garni 77.64 309 P **P** **14 12 40.8 +1.4**
comp=Z,10.0nm,0.6s,baz=170,slow=3.7,SNR=7.3
GNI LR LR 14 50 37.7
comp=Z,2μm,18.4s,baz=77,slow=38
comp=Z,10.0nm,0.6s
GNI Garni 77.64 309 P **P** **14 12 39.7 +0.2**
GNI IAmb IAmb 14 13 13.2
comp=Z,127nm,1.2s
GNI Garni 77.64 309 IAMs_20 IAMs_20 14 50 16.8
comp=Z,1μm,19.0s
GNI Garni 77.64 309 P **P** **14 12 39.7 +0.2**
GNI pmax pmax
comp=Z,127nm,1.3s
GNI MLR MLR
comp=Z,1μm,19.0s
AKH Akhalkalaki 77.93 310 P **P** **14 12 40.1 -1.0**
BMO Blue Mountains 77.95 46 P **P** **14 12 41.5 +0.4**
BMO IAmb IAmb 14 12 56.1
comp=Z,78nm,1.1s
BMO IAMs_20 IAMs_20 14 39 33.0
comp=Z,2μm,22.0s
BMO Blue Mountains 77.95 46 P **P** **14 12 41.5 +0.4**
BMO pmax pmax
comp=Z,78nm,1.2s
WALA Waterton Lakes 78.03 41 P **P** **14 12 42.4 +0.9**
WALA IAmb IAmb 14 12 57.2
comp=Z,134nm,1.5s
MOR8 Moi Rana 78.11 341 *e*P **P** **14 12 40.8 -0.6**
MOR8 IAmb IAmb 14 12 41.4
comp=Z,125nm,0.6s
AFDM Forest Hills D 78.15 52 P **P** **14 12 42.6 +0.4**
AFDM IAmb IAmb 14 12 55.4
comp=Z,113nm,1.5s
BEKR Beckworth 78.17 51 P **P** **14 12 42.9 +0.4**
BEKR IAmb IAmb 14 13 00.4
comp=Z,59nm,0.9s
WVOR Wild Horse Val 78.19 48 P **P** **14 12 42.6 +0.1**
WVOR IAmb IAmb 14 12 56.9
comp=Z,186nm,1.9s
WVOR Wild Horse Val 78.19 48 P **P** **14 12 42.6 +0.1**
WVOR pmax pmax
comp=Z,186nm,1.9s
KONS Konsvik 78.25 341 *e*P **P** **14 12 42.7 +0.6**
KONS IAmb IAmb 14 12 44.6
comp=Z,22nm,0.9s
MZR Muzera 78.27 290 P **P** **14 12 42.5 -0.6**
MZR P **P** **14 12 42.5 -0.6**
MZR Muzera 78.27 290 *i* P **P** **14 12 43.5 +0.4**
SNR=9.2
GHWR Ruwais 78.36 291 P **P** **14 12 43.0 -0.6**
GHWR P **P** **14 12 43.0 -0.6**
STOK Stokkvaagen 78.40 341 *e*P **P** **14 12 43.7 +0.8**
MEF Metsahovi 78.53 333 *e*P **P** **14 12 44.8 +1.0**
SHAO Shalim 78.59 284 P **P** **14 12 44.4 -0.5**
VSU Vasula 78.60 331 *d iP* **P** **14 12 43.6 -0.6**
VSU Vasula 78.60 331 *e*P **P** **14 12 45.4 +1.2**
MPK Martis Peak 78.66 52 P **P** **14 12 45.5 +0.2**
MPK IAmb IAmb 14 13 03.6
comp=Z,125nm,1.1s
EMB Emerald Bay 78.75 52 P **P** **14 12 46.2 +0.4**
EMB IAmb IAmb 14 12 59.0
comp=Z,138nm,1.5s
SAO San Andreas Ge 78.78 54 P **P** **14 12 46.1 +0.4**
SAO IAMs_20 IAMs_20 14 40 03.6
comp=Z,1μm,21.0s
SAO San Andreas Ge 78.78 54 P **P** **14 12 46.1 +0.4**
SAO pmax pmax
comp=Z,59nm,1.4s
PAHR Pah Rah Range 78.92 51 P **P** **14 12 47.1 +0.6**
PAHR IAmb IAmb 14 13 04.6
comp=Z,93nm,1.3s
VCNR Virginia City 78.92 51 P **P** **14 12 47.2 +0.6**
CMB Columbia Colle 78.97 53 P **P** **14 12 47.2 +0.5**
CMB IAmb IAmb 14 13 04.8
comp=Z,72nm,1.1s
CMB IAMs_20 IAMs_20 14 41 00.4
comp=Z,2μm,21.0s
CMB Columbia Colle 78.97 53 P **P** **14 12 47.3 +0.5**
CMB pmax pmax
comp=Z,72nm,1.1s
PNTR Pine Nut 79.05 52 P **P** **14 12 47.9 +0.5**
PNTR IAmb IAmb 14 13 08.6
comp=Z,51nm,0.8s
RAF Rauma 79.06 335 *e*P **P** **14 12 47.3 +0.6**
MSO Missoula 79.09 43 P **P** **14 12 47.5 +0.1**
MSO Missoula 79.09 43 P **P** **14 12 47.8 +0.5**
baz=299
SHMA Al-Shehemyia 79.12 293 P **P** **14 12 47.0 -0.7**
BBGB Big Mountain B 79.16 54 P **P** **14 12 49.0 +1.1**
BBGB IAmb IAmb 14 13 06.8
comp=Z,136nm,1.2s
JMIC Jan Mayen 79.22 351 LR LR 14 49 40.6
comp=Z,233nm,18.3s,baz=53,slow=37
SLWR Sila 79.30 292 P **P** **14 12 46.9 -1.7**
SLWR P **P** **14 12 46.9 -1.7**
DMTO DMTO 79.30 284 P **P** **14 12 48.9 +0.1**
YERR Yerington 79.34 52 P **P** **14 12 49.5 +0.6**
YERR IAmb IAmb 14 13 07.2
comp=Z,112nm,1.2s
SOC Sochi 79.41 314 *e*P **P** **14 12 48.2 -0.8**
SOC *e* 14 15 49.6
SOC *e*PPP PPP 14 17 37.8
SOC *e*S **S** **14 22 47.1 0.0**
SOC *e*SS **SS** **14 28 00.7 +6.5**
SOC *e*SSS SSS 14 31 15.7
SOC pmax pmax
comp=Z,34nm,0.9s
SOC MLR MLR
comp=Z,2μm,18.0s
WAKR Walker 79.42 52 P **P** **14 12 50.3 +0.9**
WAKR IAmb IAmb 14 13 02.1
comp=Z,130nm,1.7s
PMPB Monarch Peak 79.49 55 P **P** **14 12 50.5 +0.9**
PMPB IAmb IAmb 14 13 20.8
comp=Z,127nm,1.3s
DOK Doka 79.61 286 P **P** **14 12 49.0 -1.5**
MTSE Matsula 79.68 332 *e*P **P** **14 12 51.1 +1.0**
SUMG Summit 79.83 0 P **P** **14 12 52.1 +0.9**
SUMG Summit 79.83 0 P **P** **14 12 52.1 +0.9**
SUMG Summit 79.83 0 *i* P **P** **14 12 52.3 +1.1**
SUMG IAmb IAmb 14 12 53.7
comp=Z,47nm,0.9s
RYN Ryan 80.00 52 P **P** **14 12 53.3 +0.8**
RYN IAmb IAmb 14 13 10.2
comp=Z,73nm,1.2s
NSS Namsos 80.01 340 *e*P **P** **14 12 51.9 +0.1**
NSS IAmb IAmb 14 12 52.9
comp=Z,58nm,0.7s
RBK Rabkut 80.03 285 P **P** **14 12 52.2 -0.6**
RBK P **P** **14 12 52.2 -0.6**
BMN Battle Mountai 80.06 50 P **P** **14 12 53.5 +0.7**
BMN IAmb IAmb 14 13 10.6
comp=Z,67nm,1.3s
BMN Battle Mountai 80.06 50 P **P** **14 12 53.5 +0.7**
BMN pmax pmax
comp=Z,67nm,1.3s
MDPB Devils Postpil 80.08 53 P **P** **14 12 53.4 +0.3**
KVN Kaiserville 80.10 51 P **P** **14 12 53.8 +0.7**
KVN IAmb IAmb 14 13 06.3
comp=Z,78nm,1.2s
KVN Kaiserville 80.10 51 P **P** **14 12 53.8 +0.7**
KVN pmax pmax
comp=Z,78nm,1.2s
PAGB Antelope Grade 80.11 55 P **P** **14 12 53.8 +0.8**
OMMB Old Mammoth Mi 80.14 53 P **P** **14 12 54.0 +0.5**
LHV Little Huntoon 80.19 52 P **P** **14 12 54.4 +1.1**
LHV IAmb IAmb 14 13 07.2
comp=Z,156nm,1.5s
WHFO Wadi Hawf 80.22 285 P **P** **14 12 52.9 -1.0**
NV09 Mina Array Sit 80.22 52 P **P** **14 12 54.5 +0.7**
GURO Guroymak-BITLI 80.23 308 P **P** **14 12 54.1 +0.4**
PPT Papeete 80.23 116 LR LR 14 41 42.8
comp=Z,2μm,21.1s,baz=268,slow=31
NV02 Mina Array Sit 80.25 52 P **P** **14 12 54.6 +0.7**
PPT2 Papeete2 80.25 116 *e*P **P** **14 12 54.5 +0.6**
comp=Z,186nm,29.8s
PPT2 Papeete2 80.25 116 *e*S **S** **14 22 57.1 +0.4**
comp=Z,224nm,21.5s
PPT2 *e*SS **SS** **14 28 09.3 +0.6**
comp=Z,758nm,28.5s
PPT2 *e*LR LR 14 37 55.6
comp=Z,4μm,21.8s
MLAC Mammoth, Mammo 80.25 53 P **P** **14 12 54.8 +0.9**
baz=298
NV01 Mina Array Sit 80.25 52 P **P** **14 12 54.6 +0.7**
NVAR Mina Array Bea 80.25 52 P **P** **14 12 55.0 +1.1**
comp=Z,23nm,0.7s,baz=287,slow=5.6,SNR=58
comp=Z,23nm,0.7s
NVAR Mina Array Bea 80.25 52 P **P** **14 12 54.8 +0.9**
ANN Anapa 80.26 316 *e*P **P** **14 12 52.6 -0.9**
ANN *e*PP **PcP** **14 12 57.9 -2.7**
ANN *e*S **S** **14 23 00.1 +4.1**
ANN pmax pmax
comp=Z,87nm,1.4s
AAL Aland 80.28 334 *e*P **P** **14 12 53.8 +0.5**
NV11 Mina Array Sit 80.35 52 P **P** **14 12 54.9 +0.6**
MNK Minsk 80.36 327 *i* P **P** **14 12 54.9 +1.1**
MNK *i* 14 13 00.8
MNK *i* 14 15 59.2
MNK *i* PPP PPP 14 17 48.5
MNK *i* S **S** **14 23 03.7 +7.1**
MNK pmax pmax
comp=Z,169nm,0.8s
MNK pmax pmax
comp=N,71nm,1.0s
MNK pmax pmax
comp=E,12nm,1.0s
MNK MLR MLR
comp=E,263nm,19.0s
MNK MLR MLR
comp=N,3μm,20.0s
MNK MLR MLR
comp=Z,2μm,24.0s
MNK Minsk 80.36 327 *i* P **P** **14 12 54.9 +1.1**
comp=E,12nm,1.0s
MNK *i* P **P** **14 12 54.9 +1.1**
comp=N,71nm,1.0s
MNK *i* P **P** **14 12 54.9 +1.1**
comp=Z,169nm,0.8s,baz=55
MNK *i* PcP **PcP** **14 13 00.8 0.0**
MNK *i* PP **PP** **14 15 59.3 +2.8**
MNK *i* PPP PPP 14 17 48.5
MNK *i* S **S** **14 23 03.8 +7.1**
MNK *i* SS SS 14 28 19.8 +12
MNK *i* SSS SSS 14 31 47.4
MNK *i* LQ LQ 14 44 03.1
MNK *i* LR LR 14 48 46.4
MNK *i* LRM MLR 14 50 16.9
comp=E,263nm,19.0s
MNK *i* LRM MLR 14 50 41.4
comp=N,3μm,19.7s
MNK *i* LRM MLR 14 50 46.4
comp=Z,2μm,23.6s
HLID Hailey 80.39 46 P **P** **14 12 55.6 +1.0**
HLID IAMs_20 IAMs_20 14 41 11.6
comp=Z,2μm,22.0s
HLID Hailey 80.39 46 P **P** **14 12 55.2 +0.7**
baz=299,SNR=30
VOG Valley Oaks Go 80.46 54 P **P** **14 12 55.5 +0.8**
baz=298
SMMC Simmler 80.48 55 P **P** **14 12 56.2 +1.2**
baz=297,SNR=5.1
ISAL Salakas 80.56 329 *e*P **P** **14 12 56.3 +1.4**
IIGN Ignalina 80.64 329 *e*P **P** **14 12 57.0 +1.6**
NACGM Naroch 80.64 328 *i* P **P** **14 12 56.3 +0.9**
BCYI Bear Canyon 80.66 45 P **P** **14 12 56.5 +0.5**
PKM Mcpherson Peak 80.81 55 P **P** **14 12 58.1 +1.2**
baz=298,SNR=10
Q09A Carvers 80.83 51 P **P** **14 12 57.1 +0.2**
Q09A IAmb IAmb 14 14 07.1
comp=Z,46nm,0.8s
ABTO Aybut 80.88 285 P **P** **14 12 56.9 -0.5**
ABTO P **P** **14 12 56.9 -0.5**
VES Vestal, Richgr 80.90 54 P **P** **14 12 57.4 +0.3**
baz=298,SNR=6.1
EGMT Eagleton 80.94 40 P **P** **14 12 57.5 +0.2**
EGMT IAmb IAmb 14 13 10.4
comp=Z,135nm,1.6s
EGMT IAMs_20 IAMs_20 14 41 19.9
comp=Z,1μm,20.0s
EGMT Eagleton 80.94 40 P **P** **14 12 57.8 +0.6**
baz=302,SNR=7.5
TIN Tinemaha, Big 80.94 53 P **P** **14 12 58.4 +0.8**
baz=298,SNR=5.9
SLIT Slitere, Latvi 80.99 332 *e*P **P** **14 12 57.6 +0.5**
BCW Bitter Crk WRg 81.08 55 P **P** **14 12 58.6 +0.3**
BCW IAmb IAmb 14 13 13.7
comp=Z,110nm,1.1s
BOZ Bozeman (W) 81.10 43 P **P** **14 12 58.9 +0.6**
BOZ Bozeman (W) 81.10 43 P **P** **14 12 58.9 +0.6**
BOZ pmax pmax
comp=Z,77nm,1.6s
BOZ Bozeman (W) 81.10 43 P **P** **14 12 58.9 +0.6**
baz=301,SNR=20
TPH Tonopah 81.17 52 P **P** **14 12 59.1 +0.3**
TPH Tonopah 81.17 52 P **P** **14 12 59.1 +0.3**
TPH pmax pmax
comp=Z,312nm,1.1s
FFC Flin Flon 81.23 32 P **P** **14 12 58.7 +0.2**
FFC IAmb IAmb 14 13 19.9
comp=Z,55nm,1.1s
FFC Flin Flon 81.23 32 P **P** **14 12 58.7 +0.2**
FFC pmax pmax
comp=Z,55nm,1.1s
ELK Elko 81.23 49 LR LR 14 44 11.9
comp=Z,2μm,20.2s,baz=298,slow=32
ELK Elko 81.23 49 P **P** **14 13 00.1 +0.9**
ELK IAmb IAmb 14 13 12.6
comp=Z,70nm,1.4s
ELK Elko 81.23 49 P **P** **14 13 00.1 +0.9**
ELK pmax pmax
comp=Z,70nm,1.4s
MZP Montezuma Peak 81.23 52 P **P** **14 12 59.7 +0.5**
SCO Scoresbysund 81.25 355 P **P** **14 12 59.6 +1.2**
SCO Scoresbysund 81.25 355 P **P** **14 12 59.6 +1.2**
LCH Last Change Ra 81.27 53 P **P** **14 12 59.7 +0.4**
VSVD Vaisvydziai 81.30 330 *e*P **P** **14 12 59.8 +1.0**
CWC Cottonwood Cre 81.34 53 P **P** **14 13 00.2 +0.5**
baz=298
SCZ2 Santa Cruz Isl 81.35 56 P **P** **14 12 60.0 +0.3**
baz=298
UPP Uppsala 81.38 335 *e*P **P** **14 12 59.5 +0.3**
ARVC Arvin 81.41 55 P **P** **14 13 00.7 +0.7**
baz=298
ISA Isabella, Lake 81.42 54 P **P** **14 13 00.5 +0.5**
baz=298,SNR=6.6
TBLU Trondheim 81.46 340 *e*P **P** **14 12 58.2 -1.4**
TBLU IAmb IAmb 14 12 59.2
comp=Z,43nm,0.6s
GMN Gold Mountain 81.51 52 P **P** **14 13 01.1 +0.4**
PABE Paberze 81.58 329 P **P** **14 13 00.8 +0.4**
PABE Paberze 81.58 329 *e*P **P** **14 13 01.3 +1.0**
GRAC Grapevine Rang 81.58 53 P **P** **14 13 01.4 +0.6**
GRAC Grapevine Rang 81.58 53 P **P** **14 13 02.0 +1.2**
baz=298,SNR=6.3
OSI Osito Audit: C 81.73 55 P **P** **14 13 02.6 +0.9**
baz=298
SNCC San Nicolas Is 81.78 57 P **P** **14 13 02.2 +0.3**
baz=298
AK03 Malin Array Si 81.83 324 P **P** **14 13 01.6 -0.2**
AKASG Malin Array Be 81.85 324 P **P** **14 13 01.8 -0.1**
comp=Z,49nm,0.5s,baz=51,slow=5.5,SNR=276
AKASG LR LR 14 52 35.3
comp=Z,2μm,19.5s,baz=55,slow=38
comp=Z,49nm,0.5s
AKASG Malin Array Be 81.85 324 P **P** **14 13 01.5 -0.3**
AKASG IAmb IAmb 14 13 02.4
comp=Z,56nm,0.7s
AKASG Malin Array Be 81.85 324 P **P** **14 13 01.5 -0.3**
AKASG pmax pmax
comp=Z,56nm,0.7s
AKBB Malin Array Si 81.85 324 P **P** **14 13 01.6 -0.2**
AKBB Malin Array Si 81.85 324 P **P** **14 13 01.6 -0.2**
AKBB pmax pmax
comp=Z,93nm,0.6s
AK01 Malin Array Si 81.86 324 P **P** **14 13 01.7 -0.2**
AK04 Malin Array Si 81.86 324 P **P** **14 13 01.8 -0.2**
AK22 Malin Array Si 81.89 324 P **P** **14 13 01.8 -0.2**
MPMC Manual Prospec 81.94 54 P **P** **14 13 03.7 +0.8**
baz=299,SNR=16
CCAC Calif City Air 81.99 55 P **P** **14 13 03.5 +0.5**
CCAC IAmb IAmb 14 13 21.3
comp=Z,70nm,1.0s
LRMC Laurel Mtn Rad 82.08 54 P **P** **14 13 03.9 +0.4**
baz=298,SNR=21
EDW2 Edwards Air Fo 82.14 55 P **P** **14 13 04.7 +0.9**
baz=298,SNR=9.0
PBUR Paburge 82.16 331 *e*P **P** **14 13 04.2 +0.9**
R11A Troy Canyon, C 82.17 51 P **P** **14 13 04.6 +0.6**
R11A IAmb IAmb 14 13 22.4
comp=Z,103nm,1.5s
R11A Troy Canyon, C 82.17 51 P **P** **14 13 05.0 +0.9**
baz=299,SNR=44
DECC Green Verdugo 82.19 55 P **P** **14 13 04.1 0.0**
baz=298
FURC Furnace Creek, 82.19 53 P **P** **14 13 04.6 +0.7**
baz=299,SNR=6.4
WCT Wildcat Mounta 82.20 53 P **P** **14 13 04.3 +0.2**
SIM Simferopol' 82.22 317 *e*P **P** **14 13 03.0 -0.9**
SIM *e* 14 13 08.8
SIM *e*S **S** **14 23 13.2 -3.2**
SIM pmax pmax
comp=Z,37nm,0.7s
SIM smax smax
comp=N,148nm,18.6s
PASC Pasadena Art C 82.33 55 P **P** **14 13 05.0 +0.2**
PASC IAmb IAmb 14 13 21.8
comp=Z,76nm,1.4s
PASC Pasadena Art C 82.33 55 IAMs_20 IAMs_20 14 41 34.8
comp=Z,1μm,22.0s
H17A Grant Village 82.36 44 P **P** **14 13 07.1 +2.1**
baz=302,SNR=14

LKWY Lake 82.38 43 P **P 14 13 05.4 +0.2**
LKWY IAmb IAmb 14 13 23.7
comp=Z,55nm,0.9s
LKWY Lake 82.38 43 P **P 14 13 05.4 +0.2**
LKWY pmax pmax
comp=Z,55nm,0.9s
TPNV Topopah Spring 82.39 52 P **P 14 13 05.6 +0.4**
TPNV IAmb IAmb 14 13 33.5
comp=Z,44nm,0.9s
TPNV IAMs_20 IAMs_20 14 43 23.8
comp=Z,972nm,21.0s
TPNV Topopah Spring 82.39 52 P **P 14 13 05.6 +0.4**
TPNV pmax pmax
comp=Z,44nm,0.9s
TPNV Topopah Spring 82.39 52 P **P 14 13 06.0 +0.7**
baz=299,SNR=34
S11A Rachel 82.40 51 P **P 14 13 05.8 +0.6**
S11A IAmb IAmb 14 13 45.6
comp=Z,153nm,1.5s
IMW Indian Meadow 82.40 44 P **P 14 13 05.8 +0.5**
IMW IAMs_20 IAMs_20 14 42 08.6
comp=Z,1μm,22.0s
GWY Greenwater Val 82.46 53 P **P 14 13 05.9 +0.3**
GWY IAmb IAmb 14 13 28.2
comp=Z,62nm,1.0s
FMP Fort Macarthur 82.47 56 P **P 14 13 05.7 +0.2**
baz=298
FXWY Fox Creek 82.48 44 P **P 14 13 06.6 +1.0**
FXWY IAMs_20 IAMs_20 14 43 30.7
comp=Z,2μm,22.0s
CIS Catalina Islan 82.53 56 P **P 14 13 06.2 +0.4**
baz=298
NC301 NORSAR Array S 82.54 338 P **P 14 13 05.2 -0.1**
NC301 IAmb IAmb 14 13 06.5
comp=Z,63nm,0.8s
ECR Eagle Creek 82.57 45 P **P 14 13 06.4 +0.3**
NC300 NORSAR Array S 82.57 338 P **P 14 13 05.5 0.0**
NC300 IAmb IAmb 14 13 06.8
comp=Z,46nm,0.8s
NC302 NORSAR Array S 82.58 338 P **P 14 13 05.4 -0.1**
NC302 IAmb IAmb 14 13 06.8
comp=Z,61nm,0.8s
NC405 NORSAR Array S 82.58 338 P **P 14 13 05.6 +0.1**
MOOW Moose Ponds 82.59 44 P **P 14 13 07.4 +1.1**
TPAW Teton Pass 82.60 45 P **P 14 13 07.5 +1.2**
HFS Hagfors 82.62 337 LR LR 14 54 00.1
comp=Z,1μm,18.6s,baz=45,slow=39
SCI2 San Clemente I 82.63 57 P **P 14 13 08.3 +2.0**
baz=298
VIKU Vikbolandet 82.66 334 *e*P **P 14 13 06.3 +0.3**
BFSC Mount Baldy Ra 82.68 55 P **P 14 13 06.9 +0.1**
baz=299
REDW Red Top Meadow 82.73 45 P **P 14 13 07.7 +0.7**
REDW IAmb IAmb 14 13 27.3
comp=Z,58nm,1.3s
DOMB Dombas 82.74 340 *e*P **P 14 13 06.9 +0.5**
DOMB IAmb IAmb 14 13 07.7
comp=Z,98nm,0.6s
LOHW Long Hollow 82.75 44 P **P 14 13 07.2 +0.1**
LOHW IAMs_20 IAMs_20 14 43 39.0
comp=Z,2μm,22.0s
RLMT Red Lodge 82.77 42 P **P 14 13 08.2 +1.1**
RLMT IAmb IAmb 14 13 21.1
comp=Z,86nm,1.4s
RLMT Red Lodge 82.77 42 P **P 14 13 08.4 +1.3**
baz=302,SNR=20
NB201 NORSAR Array S 82.77 338 P **P 14 13 06.4 -0.1**
NB201 IAmb IAmb 14 13 24.3
comp=Z,90nm,1.1s
GSC Goldstone, Bar 82.79 54 P **P 14 13 07.5 +0.3**
GSC Goldstone, Bar 82.79 54 P **P 14 13 07.5 +0.3**
GSC pmax pmax
comp=Z,47nm,1.2s
GSC Goldstone, Bar 82.79 54 P **P 14 13 08.1 +0.9**
baz=299,SNR=14
MOL Molde 82.79 340 *e*P **P 14 13 06.4 -0.2**
MOL IAmb IAmb 14 13 08.2
comp=Z,56nm,1.0s
NB2 NORSAR Subarra 82.80 338 P **P 14 13 06.5 -0.2**
comp=Z,493nm,2.5s,baz=43,slow=5.1
NB2 NORSAR Subarra 82.80 338 P **P 14 13 06.5 -0.2**
baz=43,slow=5.1
NOA NORSAR Array B 82.80 338 P **P 14 13 06.6 -0.2**
comp=Z,44nm,0.7s,baz=49,slow=4.8,SNR=149
NOA PP **PP 14 16 14.6 -1.8**
comp=Z,5.2nm,0.8s,baz=43,slow=7.9,SNR=4.1
NOA LR LR 14 53 31.0
comp=Z,2μm,21.8s,baz=45,slow=38
comp=Z,44nm,0.7s
RRX Edison Barstow 82.86 54 P **P 14 13 08.5 +1.0**
baz=299
SHOC Shoshone, Teco 82.88 53 P **P 14 13 08.1 +0.5**
baz=299
AHID Auburn Hatcher 82.89 45 P **P 14 13 08.3 +0.6**
NC602 NORSAR Array S 82.92 338 *e*P **P 14 13 07.0 -0.3**
NC602 IAmb IAmb 14 13 07.3
comp=Z,19nm,0.9s
NBO00 NORSAR Array S 82.95 338 P **P 14 13 07.4 -0.1**
NBO00 IAmb IAmb 14 13 08.6
comp=Z,38nm,0.8s
PRN Pahroc Range 83.00 51 P **P 14 13 09.0 +0.6**
PRN IAmb IAmb 14 13 25.9
comp=Z,43nm,1.0s
DUG Dugway, Tooele 83.11 48 P **P 14 13 09.3 +0.4**
DUG IAmb IAmb 14 13 28.0
comp=Z,36nm,0.8s
DUG Dugway, Tooele 83.11 48 P **P 14 13 10.1 +1.2**
baz=301,SNR=17
ELS Elsinore Mount 83.14 56 P **P 14 13 08.8 -0.2**
ELS IAmb IAmb 14 13 22.0
comp=Z,74nm,1.4s
HWUT Hardware Ranch 83.19 46 P **P 14 13 10.1 +0.8**
HWUT IAmb IAmb 14 13 22.9
comp=Z,75nm,1.2s
HWUT IAMs_20 IAMs_20 14 44 34.8
comp=Z,1μm,20.0s
BBRC Big Bear Solar 83.21 55 P **P 14 13 10.3 +0.7**
baz=299
DIKM Dikmen 83.23 314 ⇑P **P 14 13 10.5 +1.2**
AKN Aaknes 83.26 340 *e*P **P 14 13 09.7 +0.7**
AKN IAmb IAmb 14 13 10.5
comp=Z,49nm,0.7s
ICESG Greenland Ices 83.33 1 *i* P **P 14 13 10.5 +0.9**
ICESG IAmb IAmb 14 13 11.7
comp=Z,81nm,1.1s
MURC Murrieta 83.33 56 P **P 14 13 10.4 +0.4**
baz=299
TUQ Turquoise Moun 83.35 53 P **P 14 13 10.7 +0.5**
baz=300,SNR=18
HEC Hector,Ludlow 83.36 54 P **P 14 13 11.0 +0.9**
baz=299,SNR=8.5
SHPR Sheep Range 83.36 52 P **P 14 13 10.6 +0.3**
TBI Tubuai 83.51 121 *e*P **P 14 13 11.9 +1.1**
comp=Z,139nm,29.5s
TBI Tubuai 83.51 121 *e*S **S 14 23 29.7 -0.2**
comp=Z,555nm,28.8s
TBI *e*SS **SS 14 28 57.9 +0.9**
comp=Z,410nm,27.8s
TBI Tubuai 83.51 121 *e*LR LR 14 39 26.2
comp=Z,6μm,25.0s
TAOE Nuku Hiva Isla 83.60 103 *e*P **P 14 13 13.3 +1.6**
comp=Z,140nm,29.3s
TAOE Nuku Hiva Isla 83.60 103 *e*S **S 14 23 30.6 -0.9**
comp=Z,384nm,24.9s
TAOE *e*SS **SS 14 28 59.3 +0.5**
comp=Z,561nm,26.3s
TAOE Nuku Hiva Isla 83.60 103 *e*LR LR 14 39 29.4
comp=Z,4μm,24.2s
LAO LASA Array 83.68 40 P **P 14 13 10.5 -1.1**
baz=304
LAO LASA Array 83.68 40 P **P 14 13 11.9 +0.3**
baz=304
109C Camp Elliot, M 83.74 56 IAMs_20 IAMs_20 14 45 17.1
comp=Z,897nm,21.0s
109C Camp Elliot, M 83.74 56 P **P 14 13 13.1 +1.0**
baz=299
OSL Oslo 83.78 338 *e*P **P 14 13 12.3 +0.6**
OSL IAmb IAmb 14 13 12.9
comp=Z,60nm,0.6s
DGMT Dagmar 83.79 38 P **P 14 13 12.2 +0.2**
DGMT Dagmar 83.79 38 P **P 14 13 12.3 +0.2**
baz=306
DGMT Dagmar 83.79 38 P **P 14 13 12.7 +0.6**
baz=306,SNR=5.1
PD01 Pinedale Array 83.83 45 P **P 14 13 12.4 -0.2**
PD04 Pinedale Array 83.84 45 P **P 14 13 12.8 +0.1**

BW06 Boulder Array 83.85 45 P **P 14 13 12.9 +0.1**
BW06 Boulder Array 83.85 45 P **P 14 13 13.2 +0.5**
baz=302,SNR=18
PD31 Pinedale Array 83.85 45 P **P 14 13 12.7 0.0**
PDAR Pinedale Array 83.85 45 P **P 14 13 13.2 +0.4**
comp=Z,9.8nm,0.8s,baz=277,slow=2.4,SNR=46
PDAR LR LR 14 45 27.8
comp=Z,2μm,20.8s,baz=292,slow=32
comp=Z,9.8nm,0.8s
PDAR Pinedale Array 83.85 45 P **P 14 13 12.9 +0.2**
PFO Pinyon Flats O 83.86 55 LR LR 14 43 28.9
comp=Z,1μm,21.6s,baz=268,slow=30
PFO Pinyon Flats O 83.86 55 P **P 14 13 12.9 +0.1**
PFO IAmb IAmb 14 13 30.7
comp=Z,50nm,1.1s
PFO Pinyon Flats O 83.86 55 IAMs_20 IAMs_20 14 43 16.3
comp=Z,2μm,21.0s
PFO Pinyon Flats O 83.86 55 P **P 14 13 12.9 +0.1**
PFO pmax pmax
comp=Z,50nm,1.1s
PFO Pinyon Flats O 83.86 55 P **P 14 13 13.6 +0.8**
baz=299,SNR=7.8
GMRC Granite Mounta 83.86 54 P **P 14 13 13.7 +0.8**
baz=300,SNR=15
BZK Bozkurt 83.86 314 ⇑P **P 14 13 11.1 -1.4**
TPFO Pinon Flats 83.86 55 P **P 14 13 13.6 +0.7**
baz=299,SNR=8.3
BELC Belle Mtn. Jos 84.00 55 P **P 14 13 13.8 +0.2**
baz=300,SNR=22
SKAR Skarslia 84.01 339 *e*P **P 14 13 13.5 +0.5**
SKAR IAmb IAmb 14 13 14.0
comp=Z,24nm,0.8s
BAR Barrett 84.16 56 P **P 14 13 14.0 -0.3**
KIS Kishinev 84.18 321 ⇑*i*P **P 14 13 13.5 -0.5**
comp=Z,320nm,4.2s
KIS *e*L L 14 52 40.0
KIS LRM MLR 14 55 18.0
comp=Z,2μm,18.0s
KIS Kishinev 84.18 321 ⇑P **P 14 13 14.0 0.0**
KIS Kishinev 84.18 321 *c i*P **P 14 13 13.5 -0.5**
KIS pmax pmax
comp=Z,300nm,4.2s
MILM Milestii Mici 84.23 321 ⇑P **P 14 13 14.1 -0.2**
MILM Milestii Mici 84.23 321 *c i*P **P 14 13 13.7 -0.5**
MILM *e* 14 23 31.0
MILM pmax pmax
comp=Z,140nm,0.6s
MILM MLR MLR
comp=Z,2μm,17.0s
MONP2 Monument Peak 84.24 56 P **P 14 13 15.3 +0.4**
baz=300,SNR=6.4
FOO Floro 84.29 341 *e*P **P 14 13 14.9 +0.7**
FOO IAmb IAmb 14 13 15.9
comp=Z,34nm,0.5s
HYA Hoyanger 84.29 340 *e*P **P 14 13 14.9 +0.7**
HYA IAmb IAmb 14 13 15.5
comp=Z,62nm,0.7s
BNN Bunyan 84.30 311 P **P 14 13 13.8 -1.2**
MVU Marysvale 84.38 49 P **P 14 13 16.1 +0.6**
KONO Kongsberg 84.38 338 P **P 14 13 14.4 -0.3**
KONO IAmb IAmb 14 13 29.8
comp=Z,90nm,1.6s
KONO Kongsberg 84.38 338 IAMs_20 IAMs_20 14 53 55.0
comp=Z,2μm,20.0s
KONO Kongsberg 84.38 338 P **P 14 13 14.4 -0.3**
KONO pmax pmax
comp=Z,90nm,1.7s
KONO MLR MLR
comp=Z,2μm,20.0s
KONO Kongsberg 84.38 338 *e*P **P 14 13 14.8 0.0**
IRM Iron Mountain 84.54 54 P **P 14 13 17.0 +0.9**
baz=300,SNR=11
BC3 Big Chuckawall 84.57 55 P **P 14 13 16.8 +0.3**
baz=300,SNR=18
IKP In-Ko-Pah, Jac 84.59 56 P **P 14 13 16.6 +0.1**
baz=300
RAYN Ar Rayn 84.60 294 P **P 14 13 16.4 -0.2**
RAYN Ar Rayn 84.60 294 IAMs_20 IAMs_20 14 55 43.3
comp=Z,1μm,20.0s
RAYN Ar Rayn 84.60 294 P **P 14 13 16.4 -0.2**
RAYN pmax pmax
comp=Z,87nm,0.7s
RAYN Ar Rayn 84.60 294 *i* P **P 14 13 16.9 +0.2**
SNR=117
NEE2 Needles Airpor 84.61 54 P **P 14 13 16.9 +0.4**
baz=300
SWSC Sam W. Stewart 84.67 56 P **P 14 13 17.4 +0.6**
baz=300
DRBR Darabani 84.68 323 ⇑P **P 14 13 16.2 -0.3**
YUH Yuha Desert 84.72 56 P **P 14 13 17.3 +0.3**
YUH IAmb IAmb 14 13 31.1
comp=Z,43nm,1.2s
IAS Iasi 84.77 321 ⇑P **P 14 13 17.2 +0.2**
IAS Iasi 84.77 321 ⇑P **P 14 13 17.2 +0.2**
LEOM Leova 84.80 321 ⇓P **P 14 13 17.8 +0.7**
LEOM Leova 84.80 321 ⇓P **P 14 13 17.8 +0.7**
VASR Vaslui 84.96 321 ⇑P **P 14 13 18.3 +0.3**
SFJD Kangerlussuaq 84.96 5 LR LR 14 57 55.2
comp=Z,278nm,18.9s,baz=342,slow=40
SFJD Kangerlussuaq 84.96 5 P **P 14 13 17.9 +0.4**
SFJD IAmb IAmb 14 13 19.4
comp=Z,37nm,0.8s
SFJD Kangerlussuaq 84.96 5 P **P 14 13 18.0 +0.4**
SFJD pmax pmax
comp=Z,37nm,0.8s
SFJD Kangerlussuaq 84.96 5 *e*P **P 14 13 18.1 +0.5**
SFJD IAmb IAmb 14 13 19.3
comp=Z,41nm,0.8s
ESJX Sierra Juarez 85.02 56 P **P 14 13 19.2 +0.4**
LVV L'vov 85.05 325 *e*P **P 14 13 18.4 0.0**
LVV *e* 14 16 42.2
LVV *e*S **S 14 23 42.2 -2.6**
LVV MLR MLR
comp=E,2μm,20.0s
LVV MLR MLR
comp=N,700nm,22.0s
LVV MLR MLR
comp=Z,2μm,20.0s
ASK Askoy 85.13 340 *e*P **P 14 13 18.8 +0.3**
ASK IAmb IAmb 14 13 21.3
comp=Z,109nm,0.9s
ODD1 Odda 85.14 339 *e*P **P 14 13 18.9 +0.2**
BER Bergen 85.17 340 *e*P **P 14 13 19.4 +0.8**
BER IAmb IAmb 14 13 19.7
comp=Z,29nm,0.7s
DEL Delary 85.17 334 *e*P **P 14 13 18.9 +0.1**
PDMCI Parker Dam,Lak 85.19 54 P **P 14 13 19.8 +0.4**
baz=300,SNR=5.8
BLYC Blythe 85.19 54 P **P 14 13 19.3 -0.1**
BLYC IAmb IAmb 14 13 34.4
comp=Z,38nm,1.1s
TLCR 85.22 319 ⇑P **P 14 13 19.7 +0.4**
TLCR 85.22 319 ⇑P **P 14 13 19.7 +0.4**
VLDR Vladesti 85.26 320 ⇓P **P 14 13 20.4 +1.0**
BIR Birlad 85.27 321 ⇑P **P 14 13 20.4 +0.9**
BIR Birlad 85.27 321 ⇑P **P 14 13 20.4 +0.9**
BR102 Keskin Array S 85.28 313 P **P 14 13 19.6 -0.3**
BR131 Keskin Array S 85.29 313 P **P 14 13 19.4 -0.6**
BR131 IAmb IAmb 14 13 35.3
comp=Z,46nm,0.8s
BR131 Keskin Array S 85.29 313 P **P 14 13 19.4 -0.6**
BR131 pmax pmax
comp=Z,46nm,0.8s
BR131 Keskin Array S 85.29 313 P **P 14 13 20.0 0.0**
SNR=25
BR131 P **P 14 13 20.0 0.0**
SNR=25
BRTR Keskin Array B 85.29 313 P **P 14 13 19.7 -0.3**
comp=Z,13nm,0.6s,baz=100,slow=3.3,SNR=61
BRTR LR LR 14 54 50.1
comp=Z,1μm,21.0s,baz=78,slow=38
comp=Z,13nm,0.6s
BRTR Keskin Array B 85.29 313 P **P 14 13 19.5 -0.5**
BRTR Keskin Array B 85.29 313 P **P 14 13 19.5 -0.5**
GLA Glamis 85.32 55 P **P 14 13 21.0 +0.9**
baz=300,SNR=7.3
VARL Varlezi 85.36 320 ⇑P **P 14 13 21.0 +1.0**
BEL Belsk 85.36 328 *e*P **P 14 13 20.7 +0.8**
BEL *e*sP **sP 14 13 34.9 -0.3**
SCTR Scanteiesti 85.41 320 ⇑P **P 14 13 21.5 +1.3**
GHRR 85.51 321 ⇓P **P 14 13 21.7 +0.9**
BLS5 Blasjo 85.58 339 *e*P **P 14 13 20.9 +0.1**
BLS5 IAmb IAmb 14 13 22.6
comp=Z,41nm,0.9s
FRB Frobisher Bay 85.59 13 LR LR 14 54 55.7

comp=Z,391nm,20.8s,baz=336,slow=38
CFR Carcaliu 85.62 320 ⇑P **P 14 13 21.3 0.0**
CFR Carcaliu 85.62 320 ⇑P **P 14 13 21.3 0.0**
TPGR Topolog 85.64 319 ⇑P **P 14 13 21.8 +0.4**
TESR Tescani 85.67 321 ⇑P **P 14 13 21.6 0.0**
BIZ Bicaz 85.72 322 ⇑P **P 14 13 22.1 +0.4**
BSD Bornholm Skovb 85.72 333 *e*P **P 14 13 22.0 +0.4**
BSD Bornholm Skovb 85.72 333 *e*P **P 14 13 21.6 0.0**
BSD IAmb IAmb 14 13 21.9
comp=Z,80nm,0.8s
DY2G Dye2 85.76 3 *i* P **P 14 13 22.4 +0.5**
DY2G IAmb IAmb 14 13 23.7
comp=Z,30nm,0.7s
ANTO Ankara 85.76 313 P **P 14 13 23.3 +1.1**
ANTO IAmb IAmb 14 13 26.2
comp=Z,25nm,0.6s
ANTO Ankara 85.76 313 IAMs_20 IAMs_20 14 56 48.5
comp=Z,1μm,19.0s
ANTO Ankara 85.76 313 P **P 14 13 23.3 +1.1**
ANTO pmax pmax
comp=Z,25nm,0.6s
BUR07 Bucovina Ar. S 85.76 323 P **P 14 13 22.3 +0.2**
BUR06 Bucovina Ar. S 85.77 323 P **P 14 13 22.4 +0.2**
PANC Panciu 85.77 320 ⇑P **P 14 13 23.3 +1.3**
BUR08 Bucovina Ar. S 85.78 323 P **P 14 13 22.3 +0.1**
BUR08 IAmb IAmb 14 13 23.6
comp=Z,34nm,0.7s
K22A Casper 85.78 43 P **P 14 13 22.3 -0.1**
K22A IAmb IAmb 14 13 42.2
comp=Z,65nm,1.0s
K22A Casper 85.78 43 P **P 14 13 22.9 +0.5**
baz=304
K22A Casper 85.78 43 P **P 14 13 23.1 +0.8**
baz=304,SNR=8.1
BURAR Bucovina Array 85.79 323 ⇓P **P 14 13 23.0 +0.8**
BURAR Bucovina Array 85.79 323 P **P 14 13 22.3 +0.1**
BURAR Bucovina Array 85.79 323 ⇓P **P 14 13 23.0 +0.8**
HOMB Homborsund 85.80 337 *e*P **P 14 13 21.9 +0.1**
HOMB IAmb IAmb 14 13 23.7
comp=Z,39nm,0.9s
TIRR Tirgusor 85.88 319 ⇑P **P 14 13 22.0 -0.5**
TIRR Tirgusor 85.88 319 ⇑P **P 14 13 22.0 -0.5**
TIRR Tirgusor 85.88 319 P **P 14 13 22.1 -0.4**
TIRR Tirgusor 85.88 319 P **P 14 13 22.2 -0.4**
TIRR pmax pmax
comp=Z,243nm,1.6s
ODBI Odobesti 85.89 320 ⇑P **P 14 13 24.5 +1.9**
RWWY Rawlins 85.90 45 P **P 14 13 23.2 +0.1**
VRI Vrincioaia 86.01 321 ⇑P **P 14 13 23.6 +0.3**
VRI Vrincioaia 86.01 321 ⇑P **P 14 13 23.6 +0.3**
HARR Harsova 86.02 319 ⇑P **P 14 13 23.8 +0.5**
HARR Harsova 86.02 319 ⇑P **P 14 13 23.8 +0.5**
GKP Gorka Klasztor 86.02 330 *e*P **P 14 13 23.3 +0.2**
GKP *e*sP **sP 14 13 37.8 -0.5**
GKP Gorka Klasztor 86.02 330 *e*P **P 14 13 23.9 +0.8**
PLOR Plostina 86.06 321 ⇑P **P 14 13 23.7 +0.1**
PLOR Plostina 86.06 321 ⇑P **P 14 13 23.7 +0.1**
O20A White River Ci 86.11 46 P **P 14 13 23.8 -0.3**
O20A IAmb IAmb 14 13 44.3
comp=Z,63nm,1.1s
O20A White River Ci 86.11 46 P **P 14 13 24.4 +0.3**
baz=304,SNR=14
KMY Karmoy 86.13 339 *e*P **P 14 13 24.1 +0.6**
GRER 86.16 320 ⇑P **P 14 13 25.9 +2.0**
SNART Snartemo 86.18 338 *e*P **P 14 13 24.2 +0.4**
SNART IAmb IAmb 14 13 24.4
comp=Z,125nm,0.8s
BISRR Bisoca 86.21 320 ⇑P **P 14 13 25.0 +0.7**
113A Mohawk Valley, 86.23 55 P **P 14 13 24.9 +0.3**
113A IAmb IAmb 14 13 39.4
comp=Z,33nm,0.9s
COP Copenhagen 86.30 334 *e*P **P 14 13 24.6 +0.2**
COVR Voineasa-Covas 86.32 321 ⇑P **P 14 13 24.9 +0.1**
OZUR 86.40 321 ⇑P **P 14 13 25.8 +0.6**
AMRR Amara 86.41 319 ⇑P **P 14 13 25.7 +0.5**
AMRR Amara 86.41 319 ⇑P **P 14 13 25.7 +0.5**
RSSD Black Hills 86.42 41 P **P 14 13 25.5 -0.1**
RSSD Black Hills 86.42 41 IAMs_20 IAMs_20 14 47 25.8
comp=Z,963nm,22.0s
RSSD Black Hills 86.42 41 P **P 14 13 25.5 -0.1**
RSSD pmax pmax
comp=Z,231nm,2.0s
RSSD Black Hills 86.42 41 P **P 14 13 25.4 -0.2**
baz=306
RSSD Black Hills 86.42 41 P **P 14 13 25.8 +0.3**
baz=306
ICOR Ion Corvin 86.43 319 ⇓P **P 14 13 26.2 +0.8**
GOET G??ttrup 86.49 336 *i* P **P 14 13 26.1 +0.8**
GOET IAmb IAmb 14 13 26.4
comp=Z,175nm,0.6s
KOLS Kolonicke sedl 86.50 325 *e*P **P 14 13 25.9 +0.3**
KOLS pmax pmax
comp=Z,15nm,0.8s
WUAZ Wupatki 86.51 52 P **P 14 13 26.7 +0.6**
WUAZ IAmb IAmb 14 13 46.7
comp=Z,57nm,1.1s
WUAZ IAMs_20 IAMs_20 14 45 35.9
comp=Z,1μm,22.0s
WUAZ Wupatki 86.51 52 P **P 14 13 27.2 +1.1**
baz=302,SNR=18
ISR Istrita 86.56 320 ⇑P **P 14 13 26.7 +0.7**
ISR Istrita 86.56 320 ⇑P **P 14 13 26.7 +0.7**
ARCR ARCALIA 86.58 323 ⇑P **P 14 13 27.1 +1.1**
MDND Maddock 86.62 36 P **P 14 13 27.0 +0.9**
baz=309
MDND Maddock 86.62 36 P **P 14 13 27.1 +0.9**
baz=309
BMR Baia Mare 86.67 323 ⇑P **P 14 13 26.8 +0.4**
BMR Baia Mare 86.67 323 ⇑P **P 14 13 26.8 +0.4**
MLR Muntele Rosu 86.68 321 ⇑P **P 14 13 25.8 -0.9**
MLR Muntele Rosu 86.68 321 P **P 14 13 26.3 -0.3**
comp=Z,10nm,0.5s,baz=315,slow=2.9,SNR=16
MLR LR LR 14 55 06.0
comp=Z,2μm,19.6s,baz=55,slow=38
comp=Z,10nm,0.5s
MLR Muntele Rosu 86.68 321 P **P 14 13 26.3 -0.3**
MLR Muntele Rosu 86.68 321 ⇑P **P 14 13 25.8 -0.9**
UZH Uzhgorod 86.69 325 *e*P **P 14 13 27.7 +1.2**
UZH *i* 14 13 32.1
UZH *e* 14 13 37.1
UZH *i* S **S 14 23 58.7 -2.1**
UZH MLR MLR
comp=N,150nm,17.0s
DOPR Dopca 86.70 321 ⇑P **P 14 13 27.3 +0.7**
BORG Borgarnes 86.77 353 LR LR 14 52 44.3
comp=N,114nm,19.4s,baz=16,slow=36
E28A Huff 86.83 38 P **P 14 13 27.4 +0.1**
baz=308
TRPA Tarpa 86.88 324 ⇑P **P 14 13 27.5 +0.1**
TRPA Tarpa 86.88 324 P **P 14 13 27.7 +0.3**
SECR 86.88 320 ⇑P **P 14 13 27.8 +0.2**
OJC Ojcow 86.90 327 *e*P **P 14 13 26.1 -1.4**
OJC *e*sP **sP 14 13 40.8 -2.0**
OJC *e*PP **PP 14 16 48.5 -1.5**
OJC Ojcow 86.90 327 P **P 14 13 25.8 -1.7**
OJC IAmb IAmb 14 13 41.7
comp=Z,71nm,1.1s
OJC Ojcow 86.90 327 P **P 14 13 25.8 -1.7**
OJC pmax pmax
comp=Z,71nm,1.1s
CRVS Cervenica-Dubn 86.94 325 *e*P **P 14 13 27.9 +0.2**
CRVS pmax pmax
comp=Z,79nm,1.3s
MUD Monsted U'grnd 86.95 336 *e*P **P 14 13 27.9 +0.4**
MUD IAmb IAmb 14 13 28.4
comp=Z,48nm,0.8s
SULR 86.99 320 ⇑P **P 14 13 28.6 +0.6**
ASF Jabal al Asfar 87.01 305 P **P 14 13 27.9 -0.6**
comp=Z,5.9nm,0.8s,baz=216,slow=2.4,SNR=5.3
comp=Z,5.9nm,0.8s
ASF Jabal al Asfar 87.01 305 P **P 14 13 28.0 -0.6**
PIX Pinacate 87.08 56 P **P 14 13 29.0 +0.3**
PIX IAmb IAmb 14 13 51.6
comp=Z,37nm,1.1s
N23A Red Feather La 87.14 45 P **P 14 13 30.2 +1.0**
baz=305,SNR=16
MDB Medias 87.14 322 ⇑P **P 14 13 30.3 +1.5**
MDB Medias 87.14 322 ⇑P **P 14 13 30.3 +1.5**
NIE Niedzica 87.18 326 *e*P **P 14 13 29.5 +0.6**
NIE *e*sP **sP 14 13 44.2 -0.1**
PRD Provadia 87.21 318 *e*P **P 14 13 30.0 +0.9**
VOIR 87.21 321 ⇑P **P 14 13 28.9 -0.3**
VOIR 87.21 321 ⇑P **P 14 13 28.9 -0.3**
MTUR Matau 87.33 321 ⇑P P 14 13 44.1 +14

214A	**Organ Pipe Nat**	**87.34**	**55**	P	**P**	**14 13 30.7**	**+0.7**
214A				IAmb	IAmb	14 13 45.2	
	comp=Z,57nm,1.0s						
214A	**Organ Pipe Nat**	**87.34**	**55**	P	**P**	**14 13 31.3**	**+1.2**
	baz=301,SNR=12						
SMCO	**Snowmass**	**87.46**	**47**	P	**P**	**14 13 30.9**	**0.0**
SMCO				IAmb	IAmb	14 13 54.5	
	comp=Z,83nm,1.4s						
ARR	**Arges**	**87.48**	**321**	⇑P	**P**	**14 13 31.2**	**+0.7**
MVCO	**Mesa Verde**	**87.55**	**49**	P	**P**	**14 13 31.6**	**+0.4**
	baz=304						
DRGR		**87.64**	**323**	⇑P	**P**	**14 13 31.1**	**-0.1**
DRGR		**87.64**	**323**	⇑P	**P**	**14 13 31.1**	**-0.1**
MMAI	**Mount Meron Ar**	**87.65**	**306**	P	**P**	**14 13 31.4**	**-0.1**
	comp=Z,7.9nm,0.6s,baz=61,slow=6.8,SNR=20						
MMAI				LR	LR	14 57 27.3	
	comp=Z,1μm,19.7s,baz=280,slow=39						
	comp=Z,7.9nm,0.6s						
HUMR	**Humele**	**87.81**	**320**	⇑P	**P**	**14 13 31.8**	**-0.1**
W18A	**Petrified Fore**	**87.85**	**51**	P	**P**	**14 13 32.5**	**-0.1**
W18A	**Petrified Fore**	**87.85**	**51**	P	**P**	**14 13 33.1**	**+0.5**
	baz=303						
COPA	**Copaceanca**	**87.91**	**320**	⇑P	**P**	**14 13 32.3**	**-0.2**
LOT	**Lotru**	**87.91**	**322**	⇑P	**P**	**14 13 32.4**	**-0.2**
OKC	**Ostrava-Krasne**	**87.94**	**327**	*e*P	**P**	**14 13 32.7**	**+0.2**
OKC				AMS	AMS	14 56 10.0	
	comp=Z,1μm,17.6s						
X18A	**Snowflake**	**88.02**	**52**	P	**P**	**14 13 33.4**	**-0.1**
CSS	**Mathiatis**	**88.07**	**309**	P	**P**	**14 13 32.2**	**-1.3**
CSS				IAmb	IAmb	14 13 58.9	
	comp=Z,32nm,0.8s						
KSP	**Ksiaz**	**88.12**	**329**	*e*P	**P**	**14 13 33.6**	**+0.2**
KSP				*es*P	**sP**	**14 13 48.3**	**-0.3**
KSP				*e*PP	**PP**	**14 16 59.2**	**-0.5**
AGMN	**Agassiz Nation**	**88.24**	**34**	P	**P**	**14 13 33.6**	**-0.4**
AGMN				IAMs_20	IAMs_20	14 48 41.1	
	comp=Z,930nm,21.0s						
AGMN	**Agassiz Nation**	**88.24**	**34**	P	**P**	**14 13 34.0**	**+0.1**
	baz=312						
AGMN	**Agassiz Nation**	**88.24**	**34**	P	**P**	**14 13 33.9**	**-0.1**
	baz=312						
MORC	**Moravsky Berou**	**88.27**	**328**	⇑P	**P**	**14 13 34.1**	**-0.1**
MORC	**Moravsky Berou**	**88.27**	**328**	P	**P**	**14 13 33.8**	**-0.3**
MORC				IAmb	IAmb	14 13 36.7	
	comp=Z,18nm,0.7s						
MORC	**Moravsky Berou**	**88.27**	**328**	P	**P**	**14 13 33.8**	**-0.3**
MORC				pmax	pmax		
	comp=Z,18nm,0.7s						
MORC	**Moravsky Berou**	**88.27**	**328**	*e*P	**P**	**14 13 34.0**	**-0.1**
OSTC	**Ostas**	**88.36**	**329**	*e*P	**P**	**14 13 34.2**	**-0.3**
OSTC				AMS	AMS	14 57 00.0	
	comp=Z,2μm,19.0s						
S22A	**4UR Ranch, Cre**	**88.36**	**48**	P	**P**	**14 13 36.2**	**+1.1**
	baz=304,SNR=7.7						
PSZ	**Piszkesteto**	**88.37**	**325**	⇑P	**P**	**14 13 34.9**	**+0.2**
PSZ	**Piszkesteto**	**88.37**	**325**	P	**P**	**14 13 34.4**	**-0.3**
PSZ	**Piszkesteto**	**88.37**	**325**	P	**P**	**14 13 34.4**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,178nm,1.8s						
PSZ				MLR	MLR		
	comp=Z,2μm,20.0s						
PSZ	**Piszkesteto**	**88.37**	**325**	P	**P**	**14 13 34.8**	**+0.1**
ISP	**Isparta**	**88.37**	**312**	IAMs_20	IAMs_20	14 56 29.5	
	comp=Z,1μm,22.0s						
CHVC	**Chvalec**	**88.41**	**329**	*e*P	**P**	**14 13 34.7**	**-0.1**
CHVC				AMS	AMS	14 57 00.0	
	comp=Z,2μm,17.3s						
MAUC	**Maruska**	**88.42**	**327**	*e*P	**P**	**14 13 34.7**	**-0.1**
MAUC				AMS	AMS	14 57 50.0	
	comp=Z,2μm,17.0s						
KRLC	**Kraliky**	**88.43**	**328**	*e*P	**P**	**14 13 34.9**	**0.0**
KRLC				AMS	AMS	14 56 20.0	
	comp=Z,2μm,17.8s						
GHAJ	**Ghor Haditha**	**88.43**	**305**	IAMs_20	IAMs_20	14 58 23.9	
	comp=Z,753nm,19.0s						
DPC	**Dobruska-Polom**	**88.45**	**329**	*e*P	**P**	**14 13 35.2**	**+0.2**
DPC				AMS	AMS	14 57 30.0	
	comp=Z,2μm,16.1s						
VLAD	**Vladila**	**88.46**	**320**	⇑P	**P**	**14 13 34.9**	**-0.1**
UPC	**Upice**	**88.48**	**329**	AMS	AMS	14 57 50.0	
	comp=Z,2μm,14.0s						
GZR	**Gura Zlata**	**88.49**	**322**	⇑P	**P**	**14 13 34.7**	**-0.6**
GZR	**Gura Zlata**	**88.49**	**322**	⇑P	**P**	**14 13 34.7**	**-0.6**
VYHS	**Vyhne**	**88.52**	**326**	*e*P	**P**	**14 13 35.8**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,43nm,0.8s						
SIRR	**Siria**	**88.53**	**323**	⇑P	**P**	**14 13 35.5**	**+0.1**
TUC	**Tucson**	**88.62**	**54**	P	**P**	**14 13 35.8**	**-0.4**
TUC	**Tucson**	**88.62**	**54**	IAMs_20	IAMs_20	14 46 06.1	
	comp=Z,1μm,21.0s						
TUC	**Tucson**	**88.62**	**54**	P	**P**	**14 13 35.8**	**-0.4**
TUC				pmax	pmax		
	comp=Z,24nm,1.2s						
TUC	**Tucson**	**88.62**	**54**	P	**P**	**14 13 36.9**	**+0.7**
	baz=302						
SRE	**Strehaia**	**88.72**	**321**	⇑P	**P**	**14 13 37.4**	**+1.1**
SRE	**Strehaia**	**88.72**	**321**	⇑P	**P**	**14 13 37.4**	**+1.1**
Q24A	**Divide**	**88.74**	**46**	P	**P**	**14 13 37.3**	**+0.3**
	baz=305						
JAVC	**Velka Javorina**	**88.84**	**327**	*e*P	**P**	**14 13 38.0**	**+1.1**
BZS	**Buzias**	**88.97**	**323**	⇑P	**P**	**14 13 37.1**	**-0.4**
BZS	**Buzias**	**88.97**	**323**	⇑P	**P**	**14 13 37.1**	**-0.4**
MSEY	**Mahe Island**	**88.99**	**264**	P	**P**	**14 13 37.9**	**-0.3**
MSEY				IAmb	IAmb	14 13 39.1	
	comp=Z,28nm,0.8s						
MSEY	**Mahe Island**	**88.99**	**264**	P	**P**	**14 13 37.9**	**-0.3**
MSEY				pmax	pmax		
	comp=Z,29nm,0.8s						
MSEY	**Mahe Island**	**88.99**	**264**	P	**P**	**14 13 38.8**	**+0.6**
MSEY	**Mahe Island**	**88.99**	**264**	P	**P**	**14 13 38.6**	**+0.4**
HERR	**Herculane**	**89.01**	**322**	⇑P	**P**	**14 13 36.8**	**-0.9**
VRAC	**Vranov**	**89.04**	**328**	LR	LR	14 56 26.2	
	comp=Z,1μm,19.2s,baz=50,slow=38						
VRAC	**Vranov**	**89.04**	**328**	*e*P	**P**	**14 13 38.0**	**+0.2**
BUD	**Budapest**	**89.10**	**325**	P	**P**	**14 13 38.1**	**+0.1**
PUNG	**Punghina**	**89.11**	**321**	⇑P	**P**	**14 13 38.1**	**0.0**
SUSD	**Miller**	**89.11**	**39**	P	**P**	**14 13 38.3**	**+0.1**
	baz=309						
PVCC	**Panska Ves**	**89.12**	**329**	*e*P	**P**	**14 13 37.6**	**-0.5**
PVCC				AMS	AMS	14 58 50.0	
	comp=Z,2μm,16.6s						
BRG	**Berggiesshubel**	**89.16**	**330**	⇑*i*P	**P**	**14 13 38.1**	**-0.1**
BRG				Amp		14 13 40.6	
	comp=Z,16nm,0.6s						
BRG				pP	**sP**	**14 13 52.1**	**-1.4**
BRG				Amp		14 13 54.6	
	comp=Z,26nm,1.2s						
BRG				PP	**PP**	**14 17 06.4**	**-1.6**
BRG				Amp		14 17 13.6	
	comp=Z,10nm,1.0s						
BRG	**Berggiesshubel**	**89.16**	**330**	SS	SS	14 30 17.0	-0.2
BRG				Amp		14 58 21.0	
	comp=Z,1.2nm,21.0s						
BRG				Amp		14 58 26.0	
	comp=E,0.7nm,18.8s						
BRG				Amp		14 58 26.0	
	comp=N,0.8nm,18.5s						
BRG	**Berggiesshubel**	**89.16**	**330**	⇑*i*P	**P**	**14 13 38.1**	**-0.1**
BRG						14 17 06.3	
BRG				SS	SS	14 30 17.0	-0.2
BRG				pmax	pmax		
	comp=Z,16nm,0.6s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,1μm,21.0s						
SMOL	**Smolenice**	**89.19**	**327**	*e*P	**P**	**14 13 39.3**	**+0.8**
SDCO	**Great Sand Dun**	**89.22**	**47**	P	**P**	**14 13 39.2**	**0.0**
SDCO				IAmb	IAmb	14 13 59.2	
	comp=Z,38nm,1.5s						
SDCO	**Great Sand Dun**	**89.22**	**47**	P	**P**	**14 13 40.2**	**+1.0**
	baz=305						
SDCO	**Great Sand Dun**	**89.22**	**47**	P	**P**	**14 13 40.2**	**+1.0**
	baz=305						
SRO	**Srobarova**	**89.23**	**326**	*e*P	**P**	**14 13 39.1**	**+0.5**
CLL	**Collm**	**89.25**	**331**	P	**P**	**14 13 37.9**	**-0.8**
CLL				IAmb	IAmb	14 13 40.5	
	comp=Z,65nm,1.4s						
CLL				IAMs_20	IAMs_20	14 58 31.4	
	comp=Z,1μm,20.0s						
CLL	**Collm**	**89.25**	**331**	*i* P	**P**	**14 13 37.8**	**-0.9**
CLL				*e**PP	**PcP**	**14 13 43.0**	**+2.9**
CLL				*e*S	**ScS**	**14 24 31.0**	**+1.1**
CLL				pmax	pmax		
	comp=Z,71nm,1.5s						
CLL				MLR	MLR		
	comp=Z,1μm,19.0s						
CLL	**Collm**	**89.25**	**331**	*i* P	**P**	**14 13 37.8**	**-0.9**
	comp=Z,71nm,1.5s						
CLL				*e*PcP	**PcP**	**14 13 43.0**	**+2.9**
CLL				*e*pP	**pP**	**14 13 49.0**	**-1.6**
CLL				*e*PP	**PP**	**14 17 08.0**	**-0.8**
CLL				*ex*	x	14 17 28.0	
CLL				*e*PPP	PPP	14 19 06.0	
CLL				*e*SKSac	**SKSac**	**14 24 03.0**	**-2.5**
CLL				*e*S	**ScS**	**14 24 31.0**	**+1.1**
CLL				*ex*	x	14 25 18.0	
CLL				*e*PS	**PnS**	**14 25 30.0**	**-3.4**
CLL				*ex*	x	14 26 48.0	
CLL				*e*SS	**SS**	**14 30 27.0**	**+8.4**
CLL				*ex*	x	14 35 12.0	
CLL				*e*SSSS		14 37 06.0	
CLL				Lm	MLR	14 57 00.0	
	comp=N,700nm,20.1s						
CLL				Lm	MLR	14 57 00.0	
	comp=E,1μm,19.5s						
CLL				Lm	MLR	14 57 00.0	
	comp=Z,1μm,19.0s						
B35A	**Bob, Littlefor**	**89.26**	**33**	P	**P**	**14 13 38.6**	**-0.1**
B35A				IAmb	IAmb	14 14 09.3	
	comp=Z,68nm,1.4s						
B35A	**Bob, Littlefor**	**89.26**	**33**	P	**P**	**14 13 38.8**	**0.0**
	baz=313						
KRUC	**Moravsky**	**89.31**	**328**	*e*P	**P**	**14 13 39.1**	**+0.1**
KDZ	**Kurdzhali**	**89.31**	**318**	*e*P	**P**	**14 13 37.5**	**-1.7**
MODS	**Modra-Piesok**	**89.36**	**327**	*e*P	**P**	**14 13 39.8**	**+0.5**
MODS				pmax	pmax		
	comp=Z,78nm,1.2s						
ALN	**Alexandroupoli**	**89.39**	**317**	P	**P**	**14 13 38.7**	**-0.8**
ALN	**Alexandroupoli**	**89.39**	**317**	P	**P**	**14 13 38.7**	**-0.8**
ALN				pmax	pmax		
	comp=Z,14nm,0.7s						
GOPC	**GO Pecny, Ondr**	**89.46**	**329**	*e*P	**P**	**14 13 39.4**	**-0.3**
GOPC				AMS	AMS	14 58 20.0	
	comp=Z,2μm,15.5s						
MDVR	**Moldovita**	**89.46**	**322**	⇑P	**P**	**14 13 39.5**	**-0.4**
OGNE	**Ogallala**	**89.50**	**43**	P	**P**	**14 13 40.3**	**+0.1**
	baz=307						
PRU	**Pruhonice**	**89.52**	**329**	*e*P	**P**	**14 13 39.7**	**-0.2**
PRU				*ep*P	**sP**	**14 13 54.3**	**-1.0**
PRU				AMS	AMS	14 58 30.0	
	comp=Z,2μm,16.4s						
RDO	**Rodhopi**	**89.55**	**317**	P	**P**	**14 13 39.4**	**-0.8**
CSKK	**Cskako**	**89.56**	**326**	P	**P**	**14 13 40.1**	**-0.1**
ZST	**Bratislava**	**89.57**	**327**	*e*P	**P**	**14 13 41.1**	**+0.9**
TREC	**Trest**	**89.57**	**328**	*e*P	**P**	**14 13 39.3**	**-1.0**
TREC				AMS	AMS	14 57 20.0	
	comp=Z,2μm,18.1s						
BLKB	**Belogradchik**	**89.67**	**321**	⇑P	**P**	**14 13 40.6**	**-0.2**
RZN	**Rozhen**	**89.70**	**318**	*e*P	**P**	**14 13 40.6**	**-0.6**
VTS	**Vitosha**	**89.98**	**320**	⇑P	**P**	**14 13 42.6**	**+0.1**
VTS	**Vitosha**	**89.98**	**320**	P	**P**	**14 13 42.4**	**-0.1**
VTS	**Vitosha**	**89.98**	**320**	P	**P**	**14 13 42.4**	**-0.1**
VTS				pmax	pmax		
	comp=Z,17nm,0.8s						
VTS	**Vitosha**	**89.98**	**320**	*e*P	**P**	**14 13 41.6**	**-0.9**
MPLH	**Magyarpolny**	**90.05**	**326**	P	**P**	**14 13 42.3**	**-0.3**
TIH	**Tihany**	**90.06**	**325**	P	**P**	**14 13 42.2**	**-0.4**
MORH	**Mrgy, Hungar**	**90.14**	**324**	⇑P	**P**	**14 13 42.6**	**-0.3**
MORH	**Mrgy, Hungar**	**90.14**	**324**	P	**P**	**14 13 42.3**	**-0.6**
ANMO	**Albuquerque**	**90.19**	**50**	LR	LR	14 49 11.1	
	comp=Z,644nm,20.1s,baz=300,slow=32						
ANMO	**Albuquerque**	**90.19**	**50**	IAMs_20	IAMs_20	14 49 08.5	
	comp=Z,838nm,20.0s						
ANMO	**Albuquerque**	**90.19**	**50**	⇑*e*P	**P**	**14 13 44.5**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANMO	**Albuquerque**	**90.19**	**50**	P	**P**	**14 13 44.3**	**+0.6**
	baz=305						
ANMO	**Albuquerque**	**90.19**	**50**	P	**P**	**14 13 43.9**	**+0.3**
	baz=305						
BOVS	**Bovan**	**90.20**	**321**	⇑P	**P**	**14 13 41.9**	**-1.4**
FRGS	**Fruska Gora**	**90.24**	**323**	⇑P	**P**	**14 13 43.5**	**+0.1**
NKC	**Novy Kostel**	**90.28**	**330**	*e*P	**P**	**14 13 43.2**	**-0.3**
NKC				AMS	AMS	14 57 40.0	
	comp=Z,1μm,17.9s						
T25A	**Trinidad**	**90.28**	**47**	P	**P**	**14 13 44.4**	**+0.3**
	baz=306						
RONA	**Rosalia, Austr**	**90.30**	**327**	*e*P	**P**	**14 13 44.0**	**+0.3**
	comp=Z,17nm,0.7s,SNR=9.0						
KSCO	**Kaye Shedlock'**	**90.30**	**45**	P	**P**	**14 13 44.2**	**+0.1**
	baz=307						
MOX	**Moxa**	**90.34**	**331**	P	**P**	**14 13 43.7**	**-0.1**
MOX				pmax	pmax		
	comp=Z,16nm,2.8s						
CONA	**Conrad Observa**	**90.35**	**327**	*e*P	**P**	**14 13 44.4**	**+0.4**
	comp=Z,22nm,0.7s,SNR=16						
Y22D	**IRIS PASSCAL I**	**90.36**	**51**	IAMs_20	IAMs_20	14 51 53.3	
	comp=Z,882nm,21.0s						
Y22D	**IRIS PASSCAL I**	**90.36**	**51**	P	**P**	**14 13 45.5**	**+1.0**
	baz=304						
Y22F	**Passcal Instru**	**90.36**	**51**	P	**P**	**14 13 44.3**	**-0.1**
	baz=304						
Y22A	**Socorro**	**90.41**	**51**	P	**P**	**14 13 45.7**	**+1.0**
	baz=304						
CKRC	**Cesky Krumlov**	**90.46**	**328**	*e*P	**P**	**14 13 44.2**	**-0.2**
KOVH	**Kovagotottos**	**90.51**	**325**	P	**P**	**14 13 44.3**	**-0.3**
KKB	**Krupnik**	**90.55**	**319**	*e*P	**P**	**14 13 43.6**	**-1.3**
KHC	**Kasperske Hory**	**90.57**	**329**	P	**P**	**14 13 44.6**	**-0.3**
KHC				IAmb	IAmb	14 13 45.9	
	comp=Z,25nm,0.6s						
KHC	**Kasperske Hory**	**90.57**	**329**	P	**P**	**14 13 44.6**	**-0.3**
KHC				pmax	pmax		
	comp=Z,25nm,0.6s						
KHC	**Kasperske Hory**	**90.57**	**329**	*e*P	**P**	**14 13 44.4**	**-0.5**
KHC				*ep*P	**pP**	**14 13 57.5**	**+0.6**
KHC				AMS	AMS	14 59 00.0	
	comp=Z,2μm,14.4s						
EYMN	**Ely**	**90.62**	**33**	IAMs_20	IAMs_20	14 50 11.8	
	comp=Z,1μm,21.0s						
EYMN	**Ely**	**90.62**	**33**	P	**P**	**14 13 45.6**	**+0.4**
	baz=315						
121A	**Cookes Peak, D**	**90.63**	**52**	P	**P**	**14 13 45.8**	**+0.1**
121A				IAmb	IAmb	14 14 07.0	
	comp=Z,37nm,1.1s						
121A	**Cookes Peak, D**	**90.63**	**52**	P	**P**	**14 13 47.3**	**+1.6**
	baz=304						
121A	**Cookes Peak, D**	**90.63**	**52**	P	**P**	**14 13 46.5**	**+0.8**
	baz=304,SNR=7.6						
GEC2	**GERESS Array S**	**90.72**	**329**	P	**P**	**14 13 45.1**	**-0.6**
GEC2				IAmb	IAmb	14 13 46.3	
	comp=Z,22nm,0.7s						
GERES	**GERESS Array B**	**90.72**	**329**	P	**P**	**14 13 45.1**	**-0.6**
	comp=Z,18nm,0.6s,baz=36,slow=4.0,SNR=59						
GERES				PP	**PP**	**14 17 20.7**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=57,slow=8.1,SNR=3.5						
GERES				LR	LR	14 58 42.7	
	comp=Z,2μm,18.0s,baz=55,slow=38						
	comp=Z,18nm,0.6s						
DIVS	**Divibare**	**90.84**	**322**	P	**P**	**14 13 45.7**	**-0.6**
ECSD	**EROS Data Cent**	**90.86**	**38**	P	**P**	**14 13 46.2**	**-0.2**
ECSD				IAmb	IAmb	14 14 00.8	
	comp=Z,30nm,1.1s						
ECSD	**EROS Data Cent**	**90.86**	**38**	P	**P**	**14 13 46.2**	**-0.2**
	baz=311						
ECSD	**EROS Data Cent**	**90.86**	**38**	P	**P**	**14 13 46.9**	**+0.6**
	baz=311						
ARSA	**Arzberg**	**90.99**	**327**	*e*P	**P**	**14 13 46.8**	**-0.1**
	comp=Z,12nm,0.7s,SNR=9.5						
F36A	**Milaca**	**91.07**	**35**	P	**P**	**14 13 46.9**	**-0.4**
F36A				IAmb	IAmb	14 14 17.6	
	comp=Z,27nm,1.1s						
F36A	**Milaca**	**91.07**	**35**	P	**P**	**14 13 47.5**	**+0.3**
	baz=313						
MOA	**Molln**	**91.17**	**328**	*i* P	**P**	**14 13 47.8**	**+0.1**
	comp=Z,12nm,0.8s,SNR=9.1						
GRA1	**Grafenberg Arr**	**91.21**	**330**	IAMs_20	IAMs_20	14 58 32.3	
	comp=Z,1μm,18.0s						
GRFO	**Grafenberg**	**91.21**	**330**	IAMs_20	IAMs_20	14 58 33.3	
	comp=Z,1μm,18.0s						
BGNE	**Belgrade**	**91.50**	**41**	P	**P**	**14 13 49.3**	**-0.1**
BGNE	**Belgrade**	**91.50**	**41**	P	**P**	**14 13 49.6**	**+0.2**
	baz=310						
BGNE	**Belgrade**	**91.50**	**41**	P	**P**	**14 13 48.9**	**-0.6**
	baz=310						
BIOA	**Bad Ischl, Aus**	**91.58**	**328**	*i* P	**P**	**14 13 49.6**	**0.0**
	comp=Z,20nm,1.0s,SNR=12						
PERS	**Pernice**	**91.62**	**326**	*i* P	**P**	**14 13 49.6**	**-0.3**
SOKA	**Soboth**	**91.63**	**327**	*e*P	**P**	**14 13 49.7**	**-0.2**
	comp=Z,37nm,0.7s,SNR=30						
SPMN	**Marine on St.**	**91.87**	**35**	P	**P**	**14 13 51.3**	**+0.3**
	baz=314						
SPMN	**Marine on St.**	**91.87**	**35**	P	**P**	**14 13 51.3**	**+0.3**
	baz=314						
KARP	**Karpathos**	**91.89**	**312**	IAMs_20	IAMs_20	15 02 20.8	
	comp=Z,1μm,21.0s						
EKA	**Eskdalemuir Ar**	**91.90**	**341**	LR	LR	15 00 17.2	
	comp=Z,337nm,18.2s,baz=32,slow=39						
EPT	**El Paso**	**91.95**	**52**	IAMs_20	IAMs_20	14 49 24.0	
	comp=Z,1μm,21.0s						
OBKA	**Obir**	**91.99**	**327**	*e*P	**P**	**14 13 50.9**	**-0.7**
	comp=Z,26nm,0.8s,SNR=6.0						
PDKS	**Podkum**	**92.08**	**326**	*i* P	**P**	**14 13 51.4**	**-0.6**
L34A	**Svendsen Farm,**	**92.15**	**39**	P	**P**	**14 13 51.9**	**-0.4**
L34A	**Svendsen Farm,**	**92.15**	**39**	P	**P**	**14 13 52.4**	**0.0**
	baz=311						
KBA	**Koelnbreinsper**	**92.16**	**328**	*e*P	**P**	**14 13 51.8**	**-0.7**
	comp=Z,18nm,0.7s						
CBKS	**Cedar Bluff**	**92.20**	**43**	P	**P**	**14 13 52.8**	**0.0**
	baz=309						
MYKA	**Terra Mystica**	**92.34**	**327**	*e*P	**P**	**14 13 52.2**	**-1.0**
	comp=Z,35nm,0.6s,SNR=22						
PDG	**Podgorica**	**92.35**	**321**	⇑P	**P**	**14 13 52.7**	**-0.5**
PDG	**Podgorica**	**92.35**	**321**	P	**P**	**14 13 52.4**	**-0.9**
PDG				IAmb	IAmb	14 13 53.3	
	comp=Z,22nm,0.8s						
PDG				IAMs_20	IAMs_20	15 02 16.0	
	comp=Z,1μm,19.0s						
I37A	**Lemond, Waseca**	**92.39**	**36**	P	**P**	**14 13 53.7**	**+0.3**
SANT	**Santorini**	**92.50**	**314**	IAMs_20	IAMs_20	15 00 51.8	
	comp=Z,800nm,20.0s						
PRED	**Cave del Predi**	**92.51**	**327**	P	**P**	**14 13 52.7**	**-1.3**
ATD	**Arta Tunnel**	**92.53**	**284**	LR	LR	14 55 03.9	
	comp=Z,424nm,21.3s,baz=65,slow=35						
ATD	**Arta Tunnel**	**92.53**	**284**	P	**P**	**14 13 52.8**	**-1.9**
BTNL	**Ternell**	**92.64**	**334**	*d*P	**P**	**14 13 54.1**	**-0.4**
JAVS	**Javornik**	**92.66**	**326**	*i* P	**P**	**14 13 53.8**	**-1.0**
TIR	**Tirane**	**92.72**	**320**	⇑P	**P**	**14 13 54.9**	**-0.1**
TIR	**Tirane**	**92.72**	**320**	⇑P	**P**	**14 13 54.9**	**-0.1**
STU	**Stuttgart**	**92.78**	**331**	IAMs_20	IAMs_20	15 02 55.8	
	comp=Z,811nm,18.0s						
ABTA	**Abfaltersbach**	**92.79**	**328**	*e*P	**P**	**14 13 54.0**	**-1.3**
	comp=Z,34nm,0.7s,SNR=19						
WATA	**Walderalm**	**92.80**	**329**	*i* P	**P**	**14 13 54.6**	**-0.8**
	comp=Z,13nm,0.6s,SNR=5.6						
WTTA	**Wattenberg**	**92.82**	**329**	*i* P	**P**	**14 13 55.0**	**-0.6**
	comp=Z,13nm,0.7s,SNR=9.1						
CLUD	**Cludinico**	**92.83**	**327**	P	**P**	**14 13 53.9**	**-1.5**
MOTA	**Moosalm**	**93.01**	**329**	*e*P	**P**	**14 13 55.5**	**-0.9**
	comp=Z,16nm,0.7s,SNR=5.7						
SQTA	**Sankt Quirin**	**93.05**	**329**	*i* P	**P**	**14 13 56.0**	**-0.5**
	comp=Z,18nm,0.6s,SNR=6.8						
STAL	**STALIGIAL**	**93.05**	**327**	P	**P**	**14 13 55.0**	**-1.5**
RETA	**Reutte**	**93.06**	**329**	*i* P	**P**	**14 13 56.3**	**-0.3**
	comp=Z,16nm,0.6s,SNR=9.1						
G40A	**Rib Lake**	**93.15**	**34**	P	**P**	**14 13 57.0**	**+0.1**
	baz=316						
MSTX	**Muleshoe**	**93.23**	**49**	P	**P**	**14 13 57.2**	**-0.4**
	baz=307						
LPIG	**La Paz**	**93.36**	**61**	LR	LR	14 48 27.7	
	comp=Z,1μm,21.1s,baz=308,slow=31						
WLF	**Walferdange**	**93.36**	**333**	IAMs_20	IAMs_20	15 02 56.9	
	comp=Z,1μm,20.0s						
WLF	**Walferdange**	**93.36**	**333**	*d*P	**P**	**14 13 58.0**	**+0.2**
AMTX	**Amarillo**	**93.40**	**48**	P	**P**	**14 13 59.0**	**+0.7**
AMTX	**Amarillo**	**93.40**	**48**	P	**P**	**14 13 59.1**	**+0.8**
	baz=308						
AMTX	**Amarillo**	**93.40**	**48**	P	**P**	**14 13 58.1**	**-0.2**
	baz=308						
BMRD	**Maredsous**	**93.40**	**334**	*d*P	**P**	**14 13 57.7**	**-0.2**
FETA	**Feichten**	**93.42**	**329**	*i* P	**P**	**14 13 57.9**	**-0.4**
	comp=Z,13nm,0.7s,SNR=14						
BFO	**Black Forest**	**93.49**	**331**	P	**P**	**14 13 58.0**	**-0.4**
BFO				IAMs_20	IAMs_20	15 01 04.5	
	comp=Z,1μm,20.0s						
BFO	**Black Forest**	**93.49**	**331**	P	**P**	**14 13 58.0**	**-0.4**
BFO				pmax	pmax		
	comp=Z,31nm,0.7s						
IDI	**Anoyia**	**93.52**	**313**	P	**P**	**14 13 58.1**	**-0.8**
	comp=Z,5.1nm,0.5s,baz=34,slow=6.6,SNR=9.7						
IDI				LR	LR	15 01 21.2	
	comp=Z,644nm,19.5s,baz=46,slow=39						
	comp=Z,5.1nm,0.5s						
IDI	**Anoyia**	**93.52**	**313**	IAMs_20	IAMs_20	15 01 10.0	
	comp=Z,932nm,22.0s						
DAVA	**Damuels**	**93.60**	**330**	*i* P	**P**	**14 13 58.8**	**-0.4**
	comp=Z,33nm,0.7s,SNR=7.8						
DOU	**Dourbes**	**93.63**	**334**	*d*P	**P**	**14 13 58.7**	**-0.3**
CTI	**Castel Tesino**	**93.71**	**328**	P	**P**	**14 13 58.3**	**-1.3**
CTI				IAmb	IAmb	14 14 13.7	
	comp=Z,26nm,1.2s

VLC	Villacollemand	95.71	327		IAMs_20	IAMs_20	15 05 45.6	
	comp=Z,1μm,18.0s							
TIP	Timpagrande	95.94	320	⇑P		P	14 14 10.0	+0.1
TIP	Timpagrande	95.94	320	P		P	14 14 09.6	-0.3
TIP				IAmb		IAmb	14 14 31.3	
	comp=Z,29nm,1.2s							
TIP				IAMs_20		IAMs_20	15 04 59.2	
	comp=Z,909nm,19.0s							
ABTX	Abilene, Hawle	96.12	48	P		P	14 14 11.3	+0.5
	baz=309							
CLF	Chambon-Foret	96.21	334	P		P	14 14 11.1	+0.2
LPL	La Plagne	96.36	330	*eP*		P	14 14 10.7	-1.2
LPL				pmax		pmax		
	comp=Z,16nm,0.7s							
TUL1	Leonard	96.47	44		IAMs_20	IAMs_20	14 56 30.1	
	comp=Z,1μm,21.0s							
BNI	Bardonecchia	96.75	330	P		P	14 14 12.8	-0.7
BNI				IAmb		IAmb	14 14 14.1	
	comp=Z,11nm,0.6s							
BNI	Bardonecchia	96.75	330	P		P	14 14 12.8	-0.7
BNI				pmax		pmax		
	comp=Z,11nm,0.6s							
R40A	Maddies Statio	96.95	40	P		P	14 14 14.2	-0.2
	baz=314							
CEL	Celeste	97.06	320	P		P	14 14 13.9	-1.0
CEL				IAMs_20		IAMs_20	15 04 47.0	
	comp=Z,1μm,21.0s							
JCT	Junction City	97.34	50	P		Pdif	14 14 16.8	+0.3
	baz=308							
SSB	Saint Sauveur	97.50	331		IAMs_20	IAMs_20	15 04 20.5	
	comp=Z,1μm,18.0s							
CCM	Cathedral Cave	97.69	40	P		P	14 14 17.7	-0.1
	baz=314							
WHTX	Lake Whitney,	97.96	48	P		P	14 14 19.1	0.0
	baz=310							
SFIN	Lafayette	98.27	36	P		P	14 14 19.9	-0.4
	baz=318							
MFF	Saint Martin d	98.31	335	*eP*		Pdif	14 14 21.5	+1.1
MFF				pmax		pmax		
	comp=Z,74nm,1.9s							
SADO	Sadowa	98.59	28	LR		LR	14 58 19.3	
	comp=Z,484nm,22.0s,baz=354,slow=35							
RAFF	Raffo Rosso	98.65	320	P		P	14 14 22.0	-0.1
MIAR	Mount Ida	98.73	43	P		P	14 14 22.4	-0.1
	baz=312							
O48B	Farmland	99.35	35	P		Pdif	14 14 25.0	-0.1
	baz=319							
ERPA	Erie	100.36	30	P		Pdif	14 14 28.5	-1.1
	baz=323							
LONY	Lake Ozonia	100.54	26	P		Pdif	14 14 29.4	-1.0
	baz=328							
WVT	Waverly	100.98	39	P		Pdif	14 14 31.2	-1.3
	baz=317							
O53A	New Philadelph	101.28	32	P		Pdif	14 14 32.7	-1.0
	baz=322							
MAHO	Mahon	101.90	328		IAMs_20	IAMs_20	15 05 54.2	
	comp=Z,1μm,18.0s							
KEST	Kesra	102.52	322	P		Pdif	14 14 40.0	+0.6
	comp=Z,4.8nm,0.8s,baz=357,slow=12,SNR=4.4							
KMBO	Kilima Mbogo	103.46	276		IAMs_20	IAMs_20	15 00 24.2	
	comp=Z,584nm,20.0s							
CART	Cartagena	106.17	330		IAMs_20	IAMs_20	15 08 11.2	
	comp=Z,880nm,21.0s							
MBAR	Mbarara	108.92	280		IAMs_20	IAMs_20	15 07 26.8	
	comp=Z,598nm,21.0s							
MAW	Mawson	111.40	204	PKiKP		PKiKP	14 19 15.5	-0.3
	comp=Z,1.0nm,0.7s,baz=39,slow=3.0,SNR=4.3							
BBSR	BB Station	114.98	25		IAMs_20	IAMs_20	15 06 00.0	
	comp=Z,518nm,20.0s							
QSPA	South Pole Qui	117.63	180			PKPdf	14 19 27.5	-0.4
QSPA	South Pole Qui	117.63	180		IAMs_20	IAMs_20	15 12 19.6	
	comp=Z,955nm,22.0s							
JTS	Las Juntas de	120.89	57		IAMs_20	IAMs_20	15 02 15.4	
	comp=Z,642nm,21.0s							
HDC	Heredia	121.70	56	*eP*		PKiKP	14 19 38.2	+0.6
TOA0	Torodi Ar. Sit	123.88	311			PKPdf	14 19 41.1	-0.3
TOA0	Torodi Ar. Sit	123.88	311	P		PKPdf	14 19 41.4	0.0
TORD	Torodi Ar. Bea	123.88	311	PKP		PKPdf	14 19 41.2	-0.2
	comp=Z,9.3nm,0.7s,baz=28,slow=1.7,SNR=56							
BCIP	Isla Barro Col	125.37	54		IAMs_20	IAMs_20	15 07 42.5	
	comp=Z,797nm,21.0s							
KOWA	Kowa	126.48	318			PKPdf	14 19 46.4	-0.1
NVL	N'lazarevskaya	128.86	199	*e*PKiKP		PKiKP	14 19 50.0	+0.1
NVL				pmax		pmax		
	comp=Z,5.0nm,0.7s							
NVL				MLR		MLR		
	comp=Z,499nm,20.0s							
BELA	Belgrano 2	129.88	181	PKPdf		PKPdf	14 19 50.9	-0.1
TROLL	Troll, Antarti	130.59	195	PKPdf		PKiKP	14 19 53.3	-0.3
SDV	Santo Domingo	131.78	45	*eP*		PKiKP	14 19 58.0	+0.2
SNAA	Sanae	132.05	194	PKPdf		PKPdf	14 19 55.3	-0.1
SNAA	Sanae	132.05	194	PKPdf		PKPdf	14 19 55.1	-0.3
SNAA	Sanae	132.05	194	PKiKP		PKPdf	14 19 55.1	-0.3
FDF	Fort de France	132.13	31		IAMs_20	IAMs_20	15 12 29.7	
	comp=Z,799nm,22.0s							
OTAV	Otavalo	132.29	61	*eP*		PKiKP	14 19 59.8	+0.7
MPOM	Morne Pois Mar	132.51	31		IAMs_20	IAMs_20	15 15 51.9	
	comp=Z,591nm,21.0s							
DBIC	Dimbokro	132.98	312	PKhKP		PKPpre	14 19 50.8	
	comp=Z,3.3nm,1.0s,baz=130,slow=2.6,SNR=3.6							
DBIC				PKP		PKPdf	14 19 59.4	+0.6
	comp=Z,7.0nm,0.6s,baz=329,slow=1.7,SNR=8.3							
DBIC	Dimbokro	132.98	312			PKPdf	14 19 58.9	+0.1
DBIC	Dimbokro	132.98	312	PKiKP		PKPdf	14 19 58.9	+0.1
TIC	Toumodi	133.11	312⇑	*e*PKiKP		PKiKP	14 20 00.0	-0.3
	comp=Z,16nm,0.5s							
KIC	Kosan Boka	133.14	311⇑	*i*PKiKP		PKPdf	14 19 59.5	+0.4
	comp=Z,17nm,0.6s							
BAUV	El Baul	133.33	43			PKPdf	14 19 59.1	-0.4
LIC	Lamto	133.43	312⇑	*e*PKiKP		PKPdf	14 19 59.5	-0.1
	comp=Z,29nm,0.9s							
VNA2	Neumayer--Watz	133.58	193	PKPdf		PKPdf	14 19 58.5	+0.4
	baz=126,slow=1.4							
VNA3	Neumayer Olymp	133.77	192	PKPdf		PKPdf	14 19 58.5	0.0
VNA1	Neumayer--Stat	133.97	193	PKPdf		PKiKP	14 20 00.4	+0.2
TBTG	Tabatinga, AM	141.65	58	*eP*		PKiKP	14 20 17.4	-0.2
BOAV	Boa Vista	142.98	39	*eP*		PKiKP	14 20 19.0	-1.4
GO10	Punta Arenas	144.95	145			PKPdf	14 20 19.8	+0.3
MG05	Puerto Natales	144.95	142			PKPdf	14 20 19.7	+0.3
MACA	Manacapuru-AM	147.33	45	*eP*		PKPbc	14 20 26.7	-0.3
COYC	Coyhaique	147.85	132	PKPbc		PKPbc	14 20 28.1	+0.6
AY01	Puyuhuapi	147.87	130	PKPbc		PKPbc	14 20 27.7	+0.1
ETMB	Extrema	148.04	61	*eP*		PKPdf	14 20 27.2	+1.4
LL02	Futaleuf	148.82	128			PKPbc	14 20 30.5	+0.4
MCPB	Macapa, AP	149.56	28	*eP*		PKPdf	14 20 30.4	+2.1
SAML	Samuel	149.78	56			PKPbc	14 20 33.0	-0.3
SAML	Samuel	149.78	56	PKP2		PKPbc	14 20 33.0	-0.3
MALB	Monte Alegre	149.87	34	*eP*		PKPbc	14 20 31.9	-1.6
LPAZ	La Paz	149.97	74	PKP		PKPdf	14 20 31.2	+1.7
	comp=Z,31nm,0.7s,baz=304,slow=1.8,SNR=65							
LPAZ				PKPbc		PKiKP	14 20 35.6	+0.2
	comp=Z,31nm,0.7s,baz=4.5,slow=5.6,SNR=52							
LPAZ	La Paz	149.97	74			PKPbc	14 20 33.6	-0.9
LPAZ	La Paz	149.97	74	*eP*		PKPdf	14 20 31.3	+1.7
PLCA	Paso Flores	150.46	124	PKPbc		PKiKP	14 20 35.5	+0.4
	comp=Z,20nm,0.9s,baz=229,slow=3.5,SNR=29							
PLCA	Paso Flores	150.46	124			PKPbc	14 20 34.8	+0.5
PLCA	Paso Flores	150.46	124	PKiKP		PKPbc	14 20 34.8	+0.5
PLCA	Paso Flores	150.46	124	*eP*		PKPdf	14 20 30.6	+1.6
BO01	Tunca	151.12	111			PKPbc	14 20 36.1	+0.2
ITTB	Itaituba	151.23	39	*eP*		PKPdf	14 20 31.3	+0.4
ROC1	El Roble	151.24	108			PKPbc	14 20 36.3	-0.3
LCO	Las Campanas	151.36	100			PKPbc	14 20 36.6	-0.4
LCO	Las Campanas	151.36	100	PKiKP		PKPbc	14 20 36.7	-0.4
CO03	El Pedregal	151.50	104			PKPbc	14 20 36.7	-0.4
PEL	Peldehue	151.51	109			PKPbc	14 20 36.7	-0.3
PEL	Peldehue	151.51	109	PKiKP		PKPbc	14 20 36.7	-0.3
LVC	Limon Verde	151.69	86	*eP*		PKPdf	14 20 33.5	+1.8
TMAB	Tom-Au,PA,Br	152.91	22	*eP*		PKPdf	14 20 34.7	+1.3
ZON	Zonda	153.24	105			PKPbc	14 20 40.1	-0.8
ZON	Zonda	153.24	105	PKiKP		PKPbc	14 20 40.1	-0.8
NPGB	Novo Progresso	153.62	41	*eP*		PKPdf	14 20 37.0	+2.5
ROSB	Rosrio	154.52	14	*eP*		PKPdf	14 20 38.8	+3.1
VILB	Vilhena	154.59	59	*eP*		PKPdf	14 20 38.8	+3.0
PRPB	Parauapebas	155.73	29	*eP*		PKPdf	14 20 39.7	+2.3
PDRB	Porto dos Gac	156.21	51	*eP*		PKPdf	14 20 39.7	+1.7
CLDB	Colider	156.30	48	*eP*		PKPdf	14 20 40.4	+2.3
BBSD	Serra de San D	156.70	68	*eP*		PKPdf	14 20 41.3	+2.8
PTLB	Pontes e Lacer	156.92	62	*eP*		PKPdf	14 20 41.3	+2.5
BBRB	Robore, Bolivi	157.90	69	*eP*		PKPdf	14 20 43.5	+3.6
SMTB	Santa Maria do	159.09	27	*eP*		PKPdf	14 20 43.1	+1.6
SNDB	Serra Nova Dou	159.94	41	*eP*		PKPdf	14 20 45.4	+2.9
MURT	Porto Murtinho	161.25	75	*eP*		PKPdf	14 20 47.4	+3.7
ANTJ	Antonio Joao (	162.76	74	*eP*		PKPdf	14 20 46.5	+1.2
CPUP	Villa Florida	162.81	89	PKP		PKPdf	14 20 45.1	0.0
	comp=Z,1.8nm,0.8s,baz=14,slow=4.2,SNR=3.0							
SDBA	SAO DESIDERIO	163.36	24	*eP*		PKPdf	14 20 50.6	+4.5
C2SB	Chapadao do Su	163.74	59	*eP*		PKPdf	14 20 50.8	+4.6
RPRD	Ribas do Rio P	164.00	66	*eP*		PKPdf	14 20 51.1	+4.6
BDFB	Brasilia	164.76	39	PKPab		PKPab	14 21 42.8	-0.2
	comp=Z,2.1nm,0.5s,baz=31,slow=5.9,SNR=3.2							
BDFB	Brasilia	164.76	39	*eP*		PKPdf	14 20 50.8	+3.5
TRCB	Terra Rica	165.93	72	*eP*		PKPdf	14 20 51.8	+3.6
CPSB	Cacapava Do Su	166.36	104	*eP*		PKPdf	14 20 52.0	+3.8
PCMB	Pacaembu	166.53	65	*eP*		PKPdf	14 20 51.1	+2.5
NAN01	Guarapari, ES	169.86	11	*eP*		PKPdf	14 20 54.2	+3.4
VAS01	Vassouras-RJ	172.63	42	*eP*		PKPdf	14 20 57.0	+4.8

MAN 04 14:02:52.8, 9°.34N×125°.32E, h42km, mb4.0, ML2.7, MS2.3, 2C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.47	21	⇓*i*P	Pn	14 03 04.2	+0.9
SCPH				*i* S	Sn	14 03 13.0	+2.5
GHBP	Garcia Hernand	1.03	286	⇓*i*P	Pn	14 03 11.5	+0.7
GHBP				*i* S	Sn	14 03 25.5	+1.5
CGP	Cagayan de Oro	1.08	215	⇑*i*P	Pn	14 03 12.1	+0.6
CGP				*i* S	Sn	14 03 25.7	+0.4
TABP	Talibon, Bohol	1.23	307	⇑*i*P	Pn	14 03 14.0	+0.5
TABP				*i* S	Sn	14 03 28.8	-0.1
TBP	Tagbilaran	1.48	284	*e*P	Pn	14 03 18.2	+1.2
TBP				*i* S	Sn	14 03 37.4	+2.2
BIPH	Bislig	1.54	138	⇓*i*P	Pn	14 03 19.1	+1.3
BIPH				*i* S	Sn	14 03 37.7	+1.1
LLP	Lapu-Lapu	1.65	306	⇓*e*P	Pn	14 03 21.5	+2.2
LLP				*i* S	Sn	14 03 41.7	+2.3
LSIP	Lazi, Siquijor	1.68	263	⇓*e*P	Pn	14 03 20.3	+0.6
LSIP				*i* S	Sn	14 03 41.2	+1.1
SNPH	Sibulan	2.06	270	⇓*i*P	Pn	14 03 26.4	+1.4
SNPH				*i* S	Sn	14 03 49.8	+0.3
KCP	Kidapawan	2.33	186	⇓*e*P	Pn	14 03 21.9	-6.8
PAGZ	Pagadian	2.43	232	*e*P	Pn	14 03 31.6	+1.6
PAGZ				*i* S	Sn	14 03 58.0	-0.5

*IDC **04** 14:19:15.9±0.9, 33°.61N×75°.47E, h0km, mb3.9/10, mbtmp3.8/14, ML3.5/4, Error ellipse: s-maj=25.8km s-min=15.2km az=59.0*
*NDI **04** 14:19:17.6±2.7, 34°.05N×75°.53E, h33km, ML3.7, mb4.3(NEIC)*
*NEIC **04** 14:19:21.6±1.1, 33°.75N±0°.06×75°.7E±0°.1, h35km±1km, mb4.3/7, Error ellipse: s-maj=16.3km s-min=10.4km az=100.0*

ISC 04 14:19:21.3±0.6, 33°.71N±0°.05×75°.66E±0°.09, h35km, n38, σ1°89/44, mb3.9/15, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	1.28	178	*e*PN	Pn	14 19 44.0	+1.4
THN				*e*SN	Sn	14 20 04.5	+6.0
NIL	Nilore	2.01	269	Pn	Pn	14 19 53.9	+1.2
DDI	Dehra Dun	3.95	148	*e*P	Pn	14 20 22.7	+3.3
DDI				*e*S	Sn	14 21 06.2	+1.7
DDI				IAML		14 21 09.3	
	comp=N,206nm,0.3s						
DDI				IAML		14 21 29.5	
	comp=E,250nm,0.3s						
KBL	Kabul	5.55	280	Pn	Pn	14 20 42.2	+0.6
GAR	Garm	6.81	322	Pn	Pn	14 20 58.5	-0.3
TARG	Taragay, Kyrgy	8.18	11		Pn	14 21 19.1	+1.3
JHNI	Jhansi	8.59	162	*e*P	Pn	14 21 21.1	-2.1
JHNI				*e*P	Pn	14 21 21.8	-1.4
JHNI				*e*S	Sn	14 22 53.0	-5.9
AAK	Ala-Archa	8.96	354	Pn	Pn	14 21 30.7	+2.4
	comp=E,0.5nm,0.3s,baz=170,slow=14,SNR=5.4						
	comp=E,1.3nm,0.3s						
KK31	Karatay Array	10.21	338		Pn	14 21 44.6	-0.6
KKAR	Karatay Array	10.21	338		Pn	14 21 45.0	-0.3
KKAR	Karatay Array	10.21	338		Pn	14 21 44.6	-0.6
BHPL	Bhopal	10.55	171	*e*S	Sn	14 23 42.2	-4.8
MK31	Makanchi Array	14.00	19	Pn	Pn	14 22 36.5	-0.6
MKAR	Makanchi Array	14.00	19	Pn	Pn	14 22 38.2	+1.1
	comp=E,0.1nm,0.3s,baz=203,slow=13,SNR=2.5						
MKAR				Sn	Sn	14 25 10.6	-0.6
	comp=E,0.1nm,0.3s,baz=201,slow=20,SNR=4.5						
	comp=E,0.3nm,0.6s						
MKAR	Makanchi Array	14.00	19	Pn	Pn	14 22 37.1	0.0
HYBB	Hyderabad (bro	16.43	170	*e*P	Pn	14 23 09.3	0.0
HYBB				*e*S	S	14 26 22.3	+0.4
KURBB	Kurchatov Arra	17.03	6	P	Pn	14 23 15.1	-1.4
	comp=E,0.2nm,0.3s,baz=196,slow=11,SNR=8.3						
	comp=E,0.6nm,0.3s						
ABKAR	Akbulak array	19.43	328	P	P	14 23 43.6	-0.8
BVAR	Borovoye Array	19.67	351	P	P	14 23 46.3	-0.8
	comp=E,0.2nm,0.3s,baz=162,slow=11,SNR=4.0						
	comp=E,0.5nm,0.5s						
AKTO	Aktyubinsk	21.14	327	P	P	14 24 03.5	+0.5
	comp=E,2.8nm,0.7s,baz=122,slow=11,SNR=7.3						
	comp=E,2.8nm,0.7s						
ZAA0	Zalesovo Array	21.25	15	P	P	14 24 03.3	-0.8
ZAA0				IAmb	IAmb	14 24 07.6	
	comp=Z,7.2nm,1.5s						
ZALV	Zalesovo Beam	21.25	15	P	P	14 24 03.9	-0.2
	comp=Z,2.6nm,0.4s,baz=202,slow=9.5,SNR=12						
	comp=Z,2.6nm,0.4s						
ZALV	Zalesovo Beam	21.25	15	P	P	14 24 03.3	-0.8
CMAR	Chiang Mai Arr	25.76	120	P	P	14 24 49.6	+0.8
	comp=Z,1.4nm,0.5s,baz=314,slow=10,SNR=10.0						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	27.01	49	P	P	14 25 02.2	+2.3
	comp=Z,0.3nm,0.5s,baz=240,slow=12,SNR=2.2						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	41.91	327	P	P	14 27 08.2	+0.2
	comp=Z,6.5nm,1.0s,baz=134,slow=11,SNR=4.1						
	comp=Z,6.5nm,1.0s						
ARCES	ARCESS Array B	45.17	338	P	P	14 27 35.2	+1.0
	comp=Z,2.1nm,0.7s,baz=104,slow=8.9,SNR=5.9						
	comp=Z,2.1nm,0.7s						
NB201	NORSAR Array S	48.84	324	P	P	14 28 02.4	-0.6
NOA	NORSAR Array B	48.88	324	P	P	14 28 03.1	-0.3
	comp=Z,0.5nm,0.5s,baz=97,slow=7.2,SNR=2.0						
	comp=Z,0.5nm,0.5s						
TORD	Torodi Ar. Bea	69.56	272	P	P	14 30 25.4	-1.7
	comp=Z,0.3nm,0.4s,baz=40,slow=5.8,SNR=5.5						
	comp=Z,0.3nm,0.4s						
WB0	Warramunga Arr	77.19	124	P	P	14 31 10.8	-1.0
WB0				IAmb	IAmb	14 31 40.2	
	comp=Z,8.6nm,1.3s						
WRA	Warramunga Arr	77.27	125	P	P	14 31 12.7	+0.5
	comp=Z,0.8nm,0.5s,baz=323,slow=5.8,SNR=22						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	77.27	125	P	P	14 31 11.2	-1.0
WRAB	Tennant Creek	77.28	125	P	P	14 31 12.7	+0.5
WRAB				IAmb	IAmb	14 31 16.7	
	comp=Z,6.7nm,1.4s						
WB2	Warramunga Arr	77.28	125	P	P	14 31 12.2	-0.1
WB2				IAmb	IAmb	14 31 14.4	
	comp=Z,6.7nm,1.1s						
AS31	Alice Springs	79.53	128	P	P	14 31 24.6	-0.1
AS31				IAmb	IAmb	14 31 50.4	
	comp=Z,2.0nm,1.4s						
ASAR	Alice Springs	79.53	128	P	P	14 31 24.9	+0.3
	comp=Z,0.6nm,0.6s,baz=318,slow=5.8,SNR=13						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	79.53	128	P	P	14 31 25.4	+0.8

*NEIC **04** 14:36:42.0±2.1, 18°.69S±0°.06×71°.01W±0°.05, h14km±6km, Error ellipse: s-maj=9.1km s-min=5.5km az=154.0*
*GUC **04** 14:36:43.7±0.6, 18°.56S×70°.97W, h31km±6km, ML3.4*

ISC 04 14:36:39.9±1.9, 18°.65S±0°.05×71°.11W±0°.07, h7km±11km, n39, σ0°95/50, mb4.2/3, 6C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	IPOC Station P	0.75	87	Pg	Pg	14 36 54.7	+0.5
PB12				Sg	Sg	14 37 04.1	+0.1
PB12	IPOC Station P	0.75	87	⇓*i*P	Pg	14 36 54.9	+0.7
PB12				*i* S	Sg	14 37 03.5	-0.4
AP01	Chacalluta	0.78	69		Pg	14 36 55.2	+0.3
AP01				Sg	Sg	14 37 04.4	-0.7
AP01	Chacalluta	0.78	69	*e*P	Pg	14 36 55.2	+0.3
AP01				*e*S	Sg	14 37 04.0	-1.2
PB16	IPOC Station P	1.56	79		Pn	14 37 07.6	-0.9
PB16	IPOC Station P	1.56	79	⇓*i*P	Pn	14 37 07.9	-0.6
PB16				*i* S	Sn	14 37 27.2	-2.1
PB16				IAML		14 37 37.0	
	comp=N,553nm,0.4s						
TA02	Huaiquique	1.86	150		Pn	14 37 12.8	+0.7
TA02	Huaiquique	1.86	150	*e*P	Pn	14 37 13.2	+1.1
TA02				*e*S	Sn	14 37 36.8	+0.9
TA02				IAML		14 37 47.1	
	comp=E,526nm,0.3s						
GO01	Chusmiza	2.08	119		Pn	14 37 16.5	+0.9
GO01	Chusmiza	2.08	119⇑	*e*P	Pn	14 37 17.2	+1.5
GO01				*e*S	Sn	14 37 43.5	+1.4
GO01				IAML		14 37 49.1	
	comp=E,602nm,0.1s						
TA01	Diego Aracena	2.10	155		Pn	14 37 15.7	+0.2
TA01	Diego Aracena	2.10	155⇑	*i*P	Pn	14 37 15.9	+0.5
TA01				IAML		14 37 53.8	
	comp=E,350nm,0.8s						
PATCX	Punta Patache	2.34	157		Pn	14 37 19.0	+0.1
PATCX	Punta Patache	2.34	157⇑	*i*P	Pn	14 37 19.2	+0.3
PATCX				*e*S	Sn	14 37 47.1	-0.9
PATCX				IAML		14 38 05.8	
	comp=E,261nm,0.6s						
PB08	IPOC Station P	2.37	129	*e*P	Pn	14 37 20.8	+1.2
PB08				*i* S	Sb	14 37 51.5	-1.4
PB08				IAML		14 37 56.2	
	comp=E,248nm,0.4s						
PB01	IPOC Station P	2.83	148		Pn	14 37 25.9	+0.3
PB01	IPOC Station P	2.83	148	*e*P	Pn	14 37 26.3	+0.6
PB01				*e*S	Sn	14 37 59.1	-0.9
PB01				IAML		14 38 19.7	
	comp=E,163nm,0.3s						
PB02	IPOC Station P	2.89	157		Pn	14 37 26.8	+0.3
PB02	IPOC Station P	2.89	157⇑	*i*P	Pn	14 37 27.0	+0.5
PB02				*e*S	Sn	14 37 59.5	-2.2
PB07	IPOC Station P	3.27	160	*e*P	Pn	14 37 32.0	+0.2
PB09	IPOC Station P	3.59	151	*e*P	Pn	14 37 37.6	+1.5
LPAZ	La Paz	3.69	51	Pn	Pn	14 37 38.4	+0.4
PB04	IPOC Station P	3.77	166	Pn	Pn	14 37 37.9	-0.8
PB04	IPOC Station P	3.77	166⇑	*i*P	Pn	14 37 38.0	-0.7
PB06	IPOC Station P	4.29	161		Pn	14 37 45.1	-0.6
PB06	IPOC Station P	4.29	161⇑	*i*P	Pn	14 37 45.2	-0.6
LVC	Limon Verde	4.45	153	Pn	Pn	14 37 49.2	+1.1
PB15	IPOC Station P	4.79	162		Pn	14 37 51.9	-0.8
PB10	IPOC Station P	4.87	174	*e*P	Pn	14 37 51.9	-1.7
GO02	Mina Guanaco	6.63	168	Pn	Pn	14 38 17.1	-1.0
AC02	Maricunga	8.35	168	Pn	Pn	14 38 41.0	-0.8
TRQA	Tornquist	20.92	159	P	P	14 41 23.5	+0.4
PLCA	Paso Flores	22.01	179	P	P	14 41 36.0	+1.1
PLCA				IAmb	IAmb	14 41 45.2	
	comp=Z,14nm,1.4s						
SNAA	Sanae	65.63	161	P	P	14 47 24.0	-0.4
SNAA	Sanae	65.63	161	P	P	14 47 23.6	-0.9
SNAA				IAmb	IAmb	14 47 43.3	
	comp=Z,3.1nm,1.4s						
TROLL	Troll, Antarti	67.35	161	P	P	14 47 35.3	-0.2
PAGB	Antelope Grade	71.34	320	P	P	14 48 01.3	+0.7
MOOW	Moose Ponds	71.93	331	P	P	14 48 05.5	+1.3
MOOW				IAmb	IAmb	14 48 46.0	
	comp=Z,2.3nm,1.4s						
PZH	PanZhiHua	169.77	39	PKP	PKPdf	14 56 48.7	-0.5

IDC 04 14:47:39.6±5.8, 11°.61N×144°.76E, h50km±65km, mb3.2/3, mbtmp3.4/3, Error ellipse: s-maj=192.5km s-min=19.9km az=106.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.97	3	P	Pn	14 48 10.4	-0.2
	25nm,0.3s,baz=147,slow=8.0,SNR=12						
GUMO				S	Sn	14 48 34.7	+0.6
	39nm,0.3s,baz=337,slow=23,SNR=11						
WRA	Warramunga Arr	32.99	198	P	P	14 54 09.6	-0.5
	0.5nm,0.7s,baz=20,slow=9.6,SNR=5.0						
	0.5nm,0.7s						
ASAR	Alice Springs	36.63	197	P	P	14 54 41.8	+0.3
	0.2

mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=43.9km s-min=28.3km az=56.0
TAP ***04*** *15:53:24.7, 23.°95N×122.°41E, h28km, ML3.6, D*
JMA ***04*** *15:53:25.0±0.2, 24.°N±1.°×122.°4E±0.°3, h20km±3km, MV3.3/14, TAIWAN REGION*
ISC 04 15:53:24.6±1.1, **23.°92N**±0.°02×**122.°36E**±0.°02, **h23**km±11km, **n139**, σ0§**82**/237, **mb3.4**/4, **7C-3D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=261	**0.70**	**275**	P	**Pn**	**15 53 38.7**	**-0.4**
HWA	baz=261			S	**Sn**	**15 53 49.3**	**+0.1**
TEYL	**Yanliau Villag** baz=255	**0.70**	**266**	P	**Pn**	**15 53 39.0**	**-0.2**
TEYL	baz=255			*e*S	**Sn**	**15 53 49.8**	**+0.4**
ETL	**Fush Village** baz=286	**0.72**	**290**	P	**Pb**	**15 53 38.6**	**+0.1**
TWD	**Chiawan** baz=280	**0.72**	**283**	⇑*i*P	**Pb**	**15 53 38.2**	**-0.3**
TWD	baz=280			*i* S	**Sb**	**15 53 48.3**	**+0.3**
NACB	**Ninganchiao** baz=273	**0.75**	**290**	⇑P	**Pb**	**15 53 38.8**	**-0.3**
NACB	baz=273			S	**Sb**	**15 53 49.4**	**+0.6**
EWUT	**Wuta** baz=310	**0.75**	**315**	P	**Pb**	**15 53 38.5**	**-0.5**
EWUT	baz=310			S	**Sn**	**15 53 50.3**	**-0.3**
JYNG	**Yonagunijimaku**	**0.75**	**45**	P	**Pb**	**15 53 38.9**	**-0.2**
JYNG				*e*S	**Sb**	**15 53 47.9**	**-1.0**
TEGC	**Jichi Village** baz=253	**0.78**	**255**	P	**Pn**	**15 53 40.1**	**-0.2**
TEGC	baz=253			S	**Sn**	**15 53 51.4**	**+0.1**
ETM	**Tongmen** baz=262	**0.80**	**274**	P	**Pb**	**15 53 39.4**	**-0.5**
ETM	baz=262			S	**Sn**	**15 53 52.1**	**+0.4**
YOJ	**Yonaguni jima** baz=56	**0.80**	**47**	P	**Pb**	**15 53 39.8**	**-0.1**
YOJ	baz=56			S	**Sb**	**15 53 49.5**	**-0.8**
YOJ	**Yonaguni jima**	**0.80**	**47**	P	**Pb**	**15 53 39.7**	**-0.2**
YOJ				S	**Sb**	**15 53 49.6**	**-0.8**
TWC	**Suao** baz=322	**0.83**	**326**	⇓*i*P	**Pb**	**15 53 39.5**	**-1.0**
TWC	baz=322			*i* S	**Sb**	**15 53 50.4**	**-0.9**
ETLH	**Xiulin Townshi** baz=275	**0.86**	**290**	P	**Pb**	**15 53 40.7**	**-0.2**
ETLH	baz=275			S	**Sn**	**15 53 54.1**	**+0.8**
ESL	**Shilin** baz=261	**0.86**	**263**	*i* P	**Pb**	**15 53 40.2**	**-0.6**
ESL	baz=261			*i* S	**Sb**	**15 53 51.8**	**-0.2**
EGFH	**Guangfu** baz=252	**0.89**	**254**	P	**Pb**	**15 53 41.3**	**-0.1**
EGFH	baz=252			*i* S	**Sn**	**15 53 54.3**	**+0.2**
HGSD	**Ruisui** baz=243	**0.96**	**244**	P	**Pb**	**15 53 42.3**	**-0.3**
HGSD	baz=243			S	**Sb**	**15 53 54.8**	**-0.1**
LATG	**Datong** baz=305	**0.98**	**309**	⇑P	**Pb**	**15 53 42.6**	**-0.5**
LATG	baz=305			S	**Sn**	**15 53 57.1**	**+0.7**
EGS	baz=322	**1.01**	**337**	*i* P	**Pb**	**15 53 43.9**	**+0.5**
EGS	baz=322			*i* S	**Sn**	**15 53 58.0**	**+1.1**
ILA	**Ilan** baz=323	**1.02**	**327**	*i* P	**Pb**	**15 53 43.6**	**0.0**
ILA	baz=323			S	**Sn**	**15 53 56.9**	**-0.2**
TWE	**Neicheng** baz=318	**1.02**	**322**	*i* P	**Pn**	**15 53 43.3**	**-0.3**
TWE	baz=318			*i* S	**Sn**	**15 53 58.5**	**+1.2**
ENTT	**Nioudou** baz=298	**1.02**	**315**	*i* P	**Pn**	**15 53 42.6**	**-1.1**
ENTT	baz=298			*i* S	**Sb**	**15 53 55.9**	**-0.9**
WHF	**Hehuan Shan** baz=268	**1.03**	**283**	*i* P	**Pb**	**15 53 43.3**	**-0.8**
WHF	baz=268			S	**Sb**	**15 53 57.4**	**0.0**
EHY	**Hungye** baz=261	**1.04**	**247**	*i* P	**Pn**	**15 53 43.5**	**-0.4**
EHY	baz=261			*i* S	**Sn**	**15 53 57.5**	**-0.2**
NTC	**Toucheng** baz=329	**1.05**	**333**	*e*P	**Pn**	**15 53 44.1**	**+0.1**
NTC	baz=329			*i* S	**Sn**	**15 53 58.9**	**+0.8**
FUSS	**Fushou** baz=285	**1.08**	**288**	*i* P	**Pn**	**15 53 44.5**	**-0.1**
FUSS	baz=285			S	**Sn**	**15 53 59.4**	**+0.4**
OWD	**Renai** baz=270	**1.09**	**272**	*i* P	**Pn**	**15 53 44.7**	**+0.1**
OWD	baz=270			*i* S	**Sn**	**15 53 59.4**	**+0.3**
CHGB	**Renai** baz=265	**1.10**	**278**	⇑P	**Pn**	**15 53 44.4**	**-0.5**
CHGB	baz=265			S	**Sb**	**15 53 58.9**	**-0.2**
FUSB	**Fushanzhiwuyua** baz=316	**1.10**	**320**	P	**Pn**	**15 53 44.7**	**0.0**
FUSB	baz=316			S	**Sn**	**15 54 00.1**	**+0.8**
YULB	**Yu-li** baz=241	**1.11**	**242**	⇑P	**Pn**	**15 53 44.5**	**-0.3**
YULB	baz=241			S	**Sb**	**15 53 59.0**	**-0.2**
EYUL	**Yuli** baz=239	**1.11**	**240**	*i* P	**Pb**	**15 53 45.1**	**-0.1**
EYUL	baz=239			*i* S	**Sn**	**15 54 00.2**	**+0.7**
TWT	**Tachien** baz=273	**1.14**	**287**	*i* P	**Pb**	**15 53 45.7**	**0.0**
TWT	baz=273			S	**Sn**	**15 54 01.0**	**+0.6**
TWB1	**Santiao Chiao** baz=340	**1.14**	**343**	*i* P	**Pn**	**15 53 44.9**	**-0.4**
TWB1	baz=340			*i* S	**Sn**	**15 54 00.2**	**0.0**
WUSB	**Renai** baz=271	**1.14**	**274**	P	**Pn**	**15 53 45.2**	**-0.2**
WUSB	baz=271			*e*S	**Sn**	**15 54 00.4**	**0.0**
TDCB	**Techi** baz=273	**1.15**	**287**	P	**Pb**	**15 53 45.9**	**-0.1**
TDCB	baz=273			S	**Sn**	**15 54 01.4**	**+0.7**
TIPB	**Shuangxi** baz=332	**1.16**	**335**	*i* P	**Pn**	**15 53 45.4**	**-0.2**
TIPB	baz=332			*i* S	**Sb**	**15 54 00.7**	**0.0**
YHNB	**Yeheng** baz=306	**1.17**	**310**	P	**Pn**	**15 53 45.9**	**+0.1**
YHNB	baz=306			S	**Sn**	**15 54 01.9**	**+0.8**
NSK	**Sanguang** baz=306	**1.19**	**310**	*i* P	**Pn**	**15 53 45.0**	**-1.0**
NSK	baz=306			*i* S	**Sn**	**15 54 01.5**	**-0.1**
FULB	**Fuli** baz=223	**1.21**	**234**	*i* P	**Pn**	**15 53 45.7**	**-0.6**
FULB	baz=223			S	**Sn**	**15 54 01.9**	**-0.1**
SXI1	**Grass Mountain** baz=336	**1.25**	**339**	P	**Pn**	**15 53 46.5**	**-0.4**
SXI1	baz=336			S	**Sn**	**15 54 03.0**	**-0.2**
NWF	**Wu-fen Shan** baz=332	**1.27**	**335**	*i* P	**Pn**	**15 53 46.8**	**-0.3**
NWF	baz=332			*i* S	**Sb**	**15 54 04.7**	**+0.8**
TWA	**Mucha** baz=323	**1.28**	**326**	⇓*i*P	**Pb**	**15 53 48.1**	**+0.1**
TWA	baz=323			*i* S	**Sb**	**15 54 05.8**	**+1.8**
NHDH	**Xindian Distri** baz=320	**1.29**	**324**	*i* P	**Pb**	**15 53 48.6**	**+0.3**
NHDH	baz=320			*i* S	**Sb**	**15 54 05.4**	**+0.9**
SSLB	**Suanglung** baz=263	**1.30**	**265**	P	**Pn**	**15 53 47.2**	**-0.3**
SSLB	baz=263			S	**Sn**	**15 54 03.7**	**-0.4**
EHD	**Haiduan** baz=223	**1.31**	**235**	P	**Pn**	**15 53 46.2**	**-1.3**
IRIF	**Iriomote-Funau**	**1.32**	**71**	*i* P	**Pb**	**15 53 48.5**	**-0.2**
IRIF				*e*S	**Sb**	**15 54 06.5**	**+1.4**
HATJ	**Hateruma jima**	**1.32**	**84**	P	**Pb**	**15 53 48.7**	**-0.2**
HATJ				S	**Sb**	**15 54 06.0**	**+0.6**
WCS	**Beigang Elemen** baz=266	**1.34**	**276**	P	**Pn**	**15 53 47.5**	**-0.5**
WCS	baz=266			*e*S	**Sb**	**15 54 07.0**	**+1.3**
SMLT	**Sun Moon Lake** baz=267	**1.34**	**269**	*i* P	**Pn**	**15 53 48.6**	**+0.5**
SMLT	baz=267			*i* S	**Sb**	**15 54 06.8**	**+0.8**
NFF	**Wufeng Townshi** baz=299	**1.34**	**302**	P	**Pn**	**15 53 48.4**	**+0.3**
NFF	baz=299			*e*S	**Sb**	**15 54 06.0**	**0.0**
WHP	**Taichung City** baz=274	**1.35**	**286**	*i* P	**Pb**	**15 53 49.1**	**-0.1**
EDH	**Donghe** baz=218	**1.35**	**226**	*e*P	**Pn**	**15 53 48.1**	**0.0**
EDH	baz=218			S	**Sn**	**15 54 04.2**	**-1.2**
YUS	**Yu-Shan** baz=251	**1.36**	**252**	*i* P	**Pn**	**15 53 49.1**	**+0.4**
YUS	baz=251			*i* S	**Sn**	**15 54 06.1**	**-0.2**
TAP	**Taipei** baz=322	**1.36**	**325**	*i* P	**Pb**	**15 53 49.7**	**+0.2**
TAP	baz=322			*i* S	**Sb**	**15 54 07.1**	**+0.6**
TYC	**Yuchr** baz=268	**1.38**	**270**	⇑*i*P	**Pn**	**15 53 48.7**	**+0.1**
TYC	baz=268			S	**Sn**	**15 54 05.8**	**-0.2**
YM01	**YM01** baz=342	**1.42**	**330**	P	**Pn**	**15 53 49.7**	**+0.5**
YM01	baz=342			S	**Sb**	**15 54 08.2**	**0.0**
LIOB	**Emei** baz=286	**1.43**	**301**	*i* P	**Pb**	**15 53 50.7**	**+0.1**
LIOB	baz=286			S	**Sb**	**15 54 09.8**	**+1.4**
ELDTW	**Lidau** baz=239	**1.43**	**240**	*i* P	**Pn**	**15 53 49.1**	**-0.2**
ELDTW	baz=239			*i* S	**Sn**	**15 54 06.4**	**-1.1**
NSTT	**Nanjuang** baz=286	**1.43**	**300**	⇓*i*P	**Pb**	**15 53 50.6**	**-0.1**
NSTT	baz=286			*i* S	**Sb**	**15 54 08.9**	**+0.4**
TWS1	**Kuangyinshan** baz=321	**1.46**	**324**	*i* P	**Pb**	**15 53 50.5**	**-0.7**
TWS1	baz=321			*i* S	**Sb**	**15 54 09.4**	**+0.1**
ANP	**Anpu** baz=326	**1.48**	**329**	*i* P	**Pn**	**15 53 50.5**	**+0.5**
ANP	baz=326			*e*S	**Sn**	**15 54 07.8**	**-0.9**
ALS	**Alishan** baz=253	**1.48**	**255**	*i* P	**Pb**	**15 53 51.3**	**-0.4**
ALS	baz=253			*i* S	**Sb**	**15 54 10.2**	**-0.1**
LDUT	**Ludao** baz=215	**1.49**	**214**	*i* P	**Pn**	**15 53 49.6**	**-0.4**
LDUT	baz=215			*i* S	**Sn**	**15 54 07.3**	**-1.4**
NTST	**Danshui** baz=340	**1.50**	**326**	*e*P	**Pn**	**15 53 50.7**	**+0.6**
NCU	**National Centr** baz=311	**1.50**	**315**	P	**Pb**	**15 53 51.2**	**-0.6**
NCU	baz=311			S	**Sb**	**15 54 11.6**	**+1.1**
WJS	**Zhushan** baz=265	**1.50**	**267**	*e*P	**Pb**	**15 53 51.0**	**-0.8**
WJS	baz=265			*e*S	**Sb**	**15 54 13.5**	**+3.0**
LONT	**Longtian** baz=242	**1.52**	**229**	P	**Pn**	**15 53 50.7**	**+0.3**
LONT	baz=242			S	**Sn**	**15 54 09.4**	**-0.1**
TWY	**Chenhua** baz=330	**1.52**	**333**	*i* P	**Pb**	**15 53 51.9**	**-0.3**
TWY	baz=330			*e*S	**Sn**	**15 54 08.7**	**-0.9**
SBCB	**Hsinchu** baz=303	**1.53**	**305**	P	**Pb**	**15 53 51.7**	**-0.7**
JKRS	**Kuro-shima**	**1.54**	**78**	P	**Pb**	**15 53 51.8**	**-0.7**
WNT	**Mingjian** baz=267	**1.54**	**269**	*i* P	**Pb**	**15 53 52.8**	**+0.3**
WNT	baz=267			S	**Sb**	**15 54 13.3**	**+1.8**
NSY	**Sanyi** baz=287	**1.55**	**289**	*i* P	**Pb**	**15 53 52.6**	**-0.1**
HSN	**Hsinchu** baz=305	**1.55**	**305**	P	**Pn**	**15 53 51.7**	**+0.8**
TCU	**Taichung** baz=276	**1.56**	**279**	*i* P	**Pb**	**15 53 53.0**	**+0.1**
TCU	baz=276			*e*S	**Sb**	**15 54 11.6**	**-0.6**
NMLH	**Miaoli** baz=290	**1.56**	**294**	*e*P	**Pb**	**15 53 53.0**	**+0.1**
NMLH	baz=290			*e*S	**Sb**	**15 54 12.6**	**+0.3**
CHN5	**Tsauling** baz=247	**1.58**	**259**	P	**Pn**	**15 53 51.9**	**+0.5**
CHN5	baz=247			S	**Sb**	**15 54 12.1**	**-0.7**
TWGBT	**Beinan** baz=240	**1.61**	**227**	P	**Pn**	**15 53 51.7**	**0.0**
TWGBT	baz=240			S	**Sn**	**15 54 11.4**	**-0.3**
TWG	**Pinlang** baz=240	**1.61**	**228**	*i* P	**Pn**	**15 53 51.7**	**-0.1**
TWG	baz=240			*i* S	**Sn**	**15 54 11.8**	**0.0**
WDJ	**Dajia District** baz=283	**1.63**	**286**	P	**Pb**	**15 53 53.6**	**-0.5**
WDJ	baz=283			*e*S	**Sb**	**15 54 15.2**	**+0.9**
STYH	**Taoyuan** baz=234	**1.64**	**243**	P	**Pn**	**15 53 52.0**	**0.0**
STYH	baz=234			S	**Sn**	**15 54 12.8**	**+0.4**
WCHH	**Zhanghua** baz=288	**1.66**	**276**	*i* P	**Pb**	**15 53 54.1**	**-0.4**
WCHH	baz=288			S	**Sb**	**15 54 17.0**	**+1.9**
WCKO	**Fanlu** baz=253	**1.68**	**254**	P	**Pb**	**15 53 53.9**	**-1.0**
WCKO	baz=253			S	**Sb**	**15 54 15.4**	**-0.3**
JIJ	**Ishigaki jima**	**1.69**	**74**	P	**Pn**	**15 53 53.0**	**+0.2**
JIJ				*e*S	**Sb**	**15 54 15.5**	**-0.2**
WDLH	**Douliu** baz=261	**1.69**	**263**	P	**Pb**	**15 53 54.6**	**-0.4**
WDLH	baz=261			*e*S	**Sb**	**15 54 16.9**	**+1.0**
TPUB	**Ta-pu** baz=238	**1.71**	**249**	P	**Pb**	**15 53 54.8**	**-0.6**
TPUB	baz=238			S	**Sb**	**15 54 17.4**	**+1.1**
WTP	**Ta-pu** baz=247	**1.74**	**248**	*i* P	**Pb**	**15 53 55.2**	**-0.7**
WTP	baz=247			*i* S	**Sb**	**15 54 18.2**	**+0.8**
CHN2	**Minshiung** baz=256	**1.77**	**258**	*i* P	**Pb**	**15 53 56.6**	**+0.1**
CHN2	baz=256			S	**Sb**	**15 54 19.8**	**+1.5**
CHY	**Chiayi** baz=256	**1.83**	**257**	*e*P	**Pb**	**15 53 57.0**	**-0.3**
CHY	baz=256			*e*S	**Sb**	**15 54 20.4**	**+0.5**
SGST	**Jiashian** baz=234	**1.83**	**243**	*i* P	**Pn**	**15 53 56.0**	**+1.2**
SGST	baz=234			S	**Sb**	**15 54 19.7**	**-0.4**
CHN1	**Nanshi** baz=246	**1.84**	**247**	*i* P	**Pb**	**15 53 57.2**	**-0.3**
CHN1	baz=246			S	**Sb**	**15 54 21.4**	**+1.3**
TWK	**Hsinying** baz=248	**1.84**	**250**	*i* P	**Pb**	**15 53 57.1**	**-0.5**
TWK	baz=248			S	**Sb**	**15 54 19.9**	**-0.4**
ECL	**Taimali** baz=225	**1.85**	**225**	*e*P	**Pn**	**15 53 54.9**	**-0.1**
ECL	baz=225			S	**Sn**	**15 54 15.7**	**-1.9**
WTCT	**Ta-ch'eng** baz=267	**1.91**	**269**	*i* P	**Pb**	**15 53 57.7**	**-1.1**
WTCT	baz=267			*i* S	**Sb**	**15 54 22.6**	**+0.5**
SSD	**Sandimen** baz=229	**1.97**	**234**	*e*P	**Pn**	**15 53 58.2**	**+1.5**
SSD	baz=229			*e*S	**Sb**	**15 54 22.9**	**-1.2**
WSF	**Szhu** baz=260	**1.98**	**262**	*i* P	**Pb**	**15 53 58.9**	**-1.1**
WSF	baz=260			S	**Sb**	**15 54 25.0**	**+0.7**
TSMG	**Majia** baz=225	**1.99**	**233**	*e*P	**Pn**	**15 53 57.9**	**+1.0**
ICHU	**Yijhu** baz=253	**1.99**	**254**	P	**Pb**	**15 53 58.9**	**-1.3**
ICHU	baz=253			S	**Sb**	**15 54 25.1**	**+0.6**
SCST	**Cishan** baz=228	**2.00**	**240**	*e*P	**Pb**	**15 54 00.5**	**+0.2**
SCST	baz=228			*e*S	**Sb**	**15 54 26.6**	**+1.8**
LAY	**Lan-yu** baz=203	**2.01**	**202**	*e*P	**Pn**	**15 53 56.8**	**-0.5**
LAY	baz=203			*e*S	**Sn**	**15 54 19.8**	**-2.0**
CHN3	**Shinhua** baz=245	**2.02**	**246**	*e*S	**Sb**	**15 54 26.4**	**+1.1**
LYUB	**Lan-yu** baz=201	**2.04**	**201**	*e*P	**Pn**	**15 53 56.9**	**-0.6**
MASBT	**Mashibuluo** baz=223	**2.05**	**231**	*e*P	**Pn**	**15 53 58.7**	**+0.9**
CHN8	**Yiju** baz=253	**2.06**	**254**	P	**Pb**	**15 53 59.7**	**-1.6**
CHN8	baz=253			S	**Sb**	**15 54 26.3**	**-0.1**
SHHT	**Tainan City** baz=244	**2.06**	**245**	*e*P	**Pb**	**15 54 01.2**	**-0.1**
SSHA	**Shanhua** baz=247	**2.06**	**248**	*e*P	**Pn**	**15 53 59.1**	**+1.3**
SSHA	baz=247			*e*S	**Sb**	**15 54 26.3**	**-0.2**
EAST	**Anshuo** baz=222	**2.07**	**223**	*e*P	**Pn**	**15 53 59.2**	**+1.2**
TAWH	**Dawu Township** baz=231	**2.08**	**221**	*e*P	**Pn**	**15 53 57.0**	**-1.1**
TWM1	**Shoushan** baz=238	**2.09**	**239**	*e*P	**Pb**	**15 54 02.5**	**+0.6**
SCZT	**Fangliau** baz=218	**2.22**	**227**	*e*P	**Pn**	**15 54 01.0**	**+0.9**
SLIU	**Shizi** baz=229	**2.22**	**221**	*e*P	**Pn**	**15 54 01.1**	**+0.9**
TSCK	**Chigu Township** baz=249	**2.23**	**250**	*e*P	**Pn**	**15 54 01.0**	**+0.8**
TSCK	baz=249			*e*S	**Sn**	**15 54 28.6**	**+1.6**
JTJ	**Tarama**	**2.25**	**71**	P	**Pn**	**15 54 02.2**	**+1.6**
JTJ				S	**Sb**	**15 54 29.9**	**-2.2**
WLCH	**Liuqiu** baz=244	**2.40**	**230**	*e*P	**Pb**	**15 54 07.3**	**+0.1**
TSEB	**Hengchuen, Pin** baz=224	**2.42**	**214**	*e*S	**Sn**	**15 54 33.8**	**+2.1**
TWKBT	**Hengchun** baz=217	**2.43**	**216**	*e*P	**Pn**	**15 54 03.6**	**+0.6**
TWKBT	baz=217			*e*S	**Sn**	**15 54 32.6**	**+0.5**
TWK1	**Hengchun** baz=217	**2.43**	**217**	*e*P	**Pn**	**15 54 04.1**	**+1.1**
TWK1	baz=217			*e*S	**Sn**	**15 54 32.7**	**+0.6**
WDGT	**Dungji** baz=255	**2.57**	**256**	*e*P	**Pn**	**15 54 06.1**	**+1.2**
PHUB	**P'eng-hu** baz=260	**2.59**	**262**	*e*P	**Pn**	**15 54 06.2**	**+1.0**
PHUB	baz=260			*e*S	**Sn**	**15 54 36.3**	**+0.4**
PNG	**Penghu** baz=261	**2.60**	**263**	P	**Pn**	**15 54 06.2**	**+1.0**
PNG	baz=261			*e*S	**Sn**	**15 54 37.6**	**+1.5**
JIRB	**Irabujima**	**2.72**	**70**	*e*P	**Pn**	**15 54 08.3**	**+1.3**
JIKM	**Ikemajima**	**2.81**	**69**	P	**Pn**	**15 54 09.3**	**+1.0**
JIKM				*e*S	**Sn**	**15 54 43.3**	**+1.8**
JMJ2	**Miyako jima3**	**2.83**	**72**	P	**Pn**	**15 54 09.6**	**+1.2**
VWUC	**VWUC** baz=291	**2.86**	**293**	*e*P	**Pn**	**15 54 08.8**	**-0.2**
JOGS	**Gusukube**	**2.90**	**73**	P	**Pn**	**15 54 11.7**	**+2.2**
MATB	**Ma-tsu** baz=314	**3.13**	**316**	*e*P	**Pn**	**15 54 12.0**	**-0.6**
PTMZ	**Houxiangcun** baz=290	**3.16**	**291**	*e*P	**Pn**	**15 54 13.6**	**+0.6**
LYJJ	**Jianjiangzhen** baz=317	**3.53**	**319**	*e*P	**Pn**	**15 54 17.4**	**-0.6**
XPSS	**Dashiqiu** baz=335	**3.59**	**327**	*e*P	**Pn**	**15 54 18.8**	**-0.1**
KNM	**Kinmen** baz=278	**3.62**	**279**	*e*P	**Pn**	**15 54 21.0**	**+1.6**
KNMB	**Chin-men Tao** baz=279	**3.67**	**279**	*e*P	**Pn**	**15 54 19.9**	**-0.2**
AXDP	**Jialang** baz=284	**4.12**	**285**	*e*P	**Pn**	**15 54 25.9**	**-0.4**
ZPLA	**Ao Xicun** baz=271	**4.22**	**271**	*e*P	**Pn**	**15 54 28.0**	**+0.3**
DSXP	**Dongshan** baz=268	**4.53**	**268**	*e*P	**Pn**	**15 54 32.5**	**+0.6**
SXFK	**Yanhouchang** baz=300	**4.94**	**301**	*e*P	**Pn**	**15 54 37.4**	**-0.2**
PACPP	**Pamplona Cagay**	**5.51**	**190**	⇑*i*P	**Pn**	**15 54 46.1**	**+0.8**
JOW	**Kunigami** 1.1nm,0.3s,baz=124,slow=18,SNR=4.5 14nm,0.8s	**6.08**	**60**	Pn	**Pn**	**15 54 52.3**	**-0.9**
SONM	**Songino Array** 0.7nm,0.7s,baz=149,slow=11,SNR=3.7 0.7nm,0.7s	**27.04**	**336**	P	**P**	**15 59 04.7**	**-0.7**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=99,slow=7.8,SNR=6.1 0.2nm,0.4s	**39.28**	**316**	P	**P**	**16 00 51.5**	**-0.3**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=115,slow=6.8,SNR=2.1 0.3nm,0.3s	**41.06**	**327**	P	**P**	**16 01 04.0**	**-2.3**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=343,slow=7.4,SNR=1.9	**48.61**	**166**	P	**P**	**16 02 07.8**	**+1.1**

TEH ***04*** *16:05:46.9, 28.°27N×53.°01E, h12km, ML3.4*
DSN ***04*** *16:05:49.4±2.1, 27.°93N×53.°00E, h10km, ML3.3/5, Error ellipse: s-maj=32.6km s-min=19.6km az=50.0*
OMAN ***04*** *16:05:51.0±1.0, 28.°07N×53.°06E, h25km, mb4.8/6, ml3.5/8, Error ellipse: s-maj=8.9km s-min=4.9km az=162.0*
ISC 04 16:05:47.1±0.8, **28.°22N**±0.°04×**53.°06E**±0.°04, **h14**km, **n57**, σ1§**60**/78, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	**Qir**	**0.26**	**357**	*e*Pg	**Pg**	**16 05 51.4**	**-1.2**
QIR1				*e*Sg	**Sg**	**16 05 55.6**	**-0.8**
JHRM	**Jahrom**	**0.54**	**58**	*e*Pg	**Pg**	**16 05 57.5**	**-0.2**
JHRM	comp=Z,59μm,0.6s			*e*		16 06 14.3	
LMD1	**Lamerd**	**0.88**	**174**	*e*Sg	**Sn**	**16 06 18.5**	**+0.8**
LMD1				*e*Pg	**Pn**	**16 06 04.9**	**-0.2**
LMD1	comp=Z,22μm,0.3s			*e*		16 06 28.7	
LAR1	**LAR**	**1.28**	**115**	*e*Pg	**Pg**	**16 06 13.3**	**+1.5**
SHI	**Shiraz**	**1.50**	**341**	*e*Pg	**Pn**	**16 06 14.2**	**+0.5**
SHI	comp=Z,5μm,0.5s			*e*		16 06 38.4	
AHBU	**AHRAM**	**1.68**	**293**	*e*Pg	**Pn**	**16 06 17.6**	**+1.5**
AHBU	comp=Z,99nm,0.4s			*e*		16 06 45.1	
KAZ1	**Kazerun**	**1.88**	**319**	*e*Pg	**Pn**	**16 06 22.1**	**+3.3**
GENO	**Geno**	**2.87**	**106**	*e*Pn	**Pb**	**16 06 36.1**	**-2.2**
SHMA	**Al-Shehemyia**	**3.01**	**219**	P	**Pn**	**16 06 35.8**	**+1.5**
SHMA				S	**Sn**	**16 07 11.6**	**+1.5**
KLNJ	**Kolanjah**	**3.06**	**336**	*e*Pn	**Pn**	**16 06 36.3**	**+0.9**
IMEH	**Mehriz**	**3.44**	**23**	*e*Pn	**Pn**	**16 06 42.1**	**+1.7**

SHME	Shamm	3.49	128	P	Pn	16 06 42.9	+1.9
SHME				S	Sn	16 07 23.8	+1.6
IRAM	Ramesheh	3.63	351	*e*Pn	Pn	16 06 44.5	+1.5
IRAM				*e*		16 06 56.7	
	comp=Z,349nm,0.6s						
KHGB	Koh Gabri	3.68	53	*e*Pn	Pn	16 06 45.8	+2.1
KHGB				*e*		16 07 51.8	
	comp=Z,372nm,0.7s						
BANOM	Banah	3.68	128	P	Pn	16 06 45.7	+2.1
BANOM				S	Sn	16 07 29.4	+2.5
BANOM	Banah	3.68	128	P	Pn	16 06 45.8	+2.1
KRBR	Kerman	3.68	61	*e*Pn	Pn	16 06 45.8	+1.9
MASF	Masafi	3.96	135	P	Pn	16 06 47.3	-0.2
MASF				S	Sn	16 07 35.1	+1.2
MSFE	Esma-Masafi	3.97	135	P	Pn	16 06 46.7	-0.9
SMRA	Abu-Samra	4.00	211	P	Pn	16 06 49.4	+1.5
SMRA				S	Sn	16 07 35.5	+0.9
IBAF	Bafgh	4.00	32	*e*Pn	Pn	16 06 50.1	+2.0
KHNJ	Kahnooj	4.11	93	*e*Pn	Pn	16 06 52.4	+2.9
ASUD	Al Ashush, Dub	4.12	150	P	Pn	16 06 51.4	+1.8
	SNR=9.2						
ASUD				S	Sn	16 07 39.1	+1.5
UOSS	Minazif	4.31	138	P	Pn	16 06 53.0	+0.8
UOSS				S	Sn	16 07 41.9	-0.4
UOSS	Minazif	4.31	138	P	Pn	16 06 53.7	+1.5
SLWR	Sila	4.31	197	P	Pn	16 06 52.5	+0.3
SLWR				S	Sn	16 07 41.4	-0.9
HATD	Hatta, Dubai	4.36	140	P	Pn	16 06 54.4	+1.5
HATD				S	Sn	16 07 43.3	-0.2
HATD	Hatta, Dubai	4.36	140	P	Pn	16 06 51.9	-1.0
YZKH	Yazd	4.36	17	*e*Pn	Pn	16 06 55.0	+2.0
ASHO	Ashiyiah	4.43	142	P	Pn	16 06 55.6	+1.7
	SNR=7.6						
ASHO				S	Sn	16 07 45.2	-0.1
ASHO	Ashiyiah	4.43	142	P	Pn	16 06 54.3	+0.3
ASHO				S	Sn	16 07 44.8	-0.5
NASN	Na'in	4.57	357	*e*Pn	Pn	16 06 57.2	+1.1
IZEF	Zefreh	4.70	352	*e*Pn	Pn	16 06 58.5	+0.6
AMIS	Naft Sefid	4.75	317	*e*Pn	Pn	16 07 00.1	+1.9
KBAM	BAM	4.82	78	*e*		16 07 03.8	
	comp=Z,437nm,0.3s						
KBAM				*e*Pn	Pn	16 07 01.9	+2.5
JASK	Jask - Hormozg	4.88	118	P	Pn	16 07 00.7	+0.6
JASK				S	Sn	16 07 57.2	+0.8
ANAR	Anarak	4.99	6	*e*Pn	Pn	16 07 03.7	+2.0
MZR	Muzera	5.21	176	P	Pn	16 07 05.9	+1.3
MZR				S	Sn	16 08 05.1	+0.6
IKLH	Kolahrood	5.24	346	*e*Pn	Pn	16 07 06.0	+0.7
ARQ	Araqi	5.78	147	P	Pn	16 07 13.4	+0.9
ARQ				S	Sn	16 08 18.3	-0.2
KRSH	Karshahi	5.79	352	*e*Pn	Pn	16 07 13.5	+0.8
UMZA	Um Al Zommool	5.80	160	P	Pn	16 07 13.4	+0.7
UMZA				S	Sn	16 08 16.5	-2.6
HOQ	Hoqain	6.00	139	P	Pn	16 07 17.0	+1.6
KHMZ	Khomeyn	6.11	335	*e*Pn	Pn	16 07 18.7	+1.5
ISFB	Sefidab	6.15	354	*e*Pn	Pn	16 07 18.1	+0.5
TABS	Tabas	6.44	32	*e*Pn	Pn	16 07 23.2	+1.7
BSY	Bisya	6.61	145	P	Pn	16 07 25.0	+1.1
BSY				S	Sn	16 08 36.0	-3.1
ASAO	Ashtian	6.82	338	*e*Pn	Pn	16 07 28.8	+1.8
SMDO	Samad	6.83	138	P	Pn	16 07 28.3	+1.3
	SNR=7.2						
SMDO				S	Sn	16 08 42.9	-1.7
WSAR	Wadi Sarin	7.06	133	P	Pn	16 07 30.5	+0.5
	SNR=9.6						
WSAR				S	Sn	16 08 47.1	-3.0
JMDO	Jabal Madar	7.40	141	P	Pn	16 07 36.8	+2.1
JMDO				S	Sn	16 08 55.1	-3.4
WBK	Wadi Bani Khal	7.73	135	P	Pn	16 07 39.3	+0.1
SHRO	Shahrood	8.14	17	*e*Pn	Pn	16 07 46.9	+1.9
RAYN	Ar Rayn	8.26	237	P	Pn	16 07 45.1	-1.4
SNGE	Sanandaj	8.40	326	*e*Pn	Pn	16 07 50.6	+1.9
MHTO	MHTO	8.47	147	P	Pn	16 07 49.8	+0.4
DOK	Doka	9.61	174	P	Pn	16 08 03.4	-1.6

*IDC **04** 16:12:29.7±2.6, 22°.62S×179°.65W, h536km±33km, mb2.9/6, mbtmp4.1/8, Error ellipse: s-maj=26.1km s-min=17.6km az=146.0*
*NEIC **04** 16:12:31.5±1.8, 22°.7S±0°.1×179°.46W±0°.09, h573km±10km, mb4.4/21, Error ellipse: s-maj=19.7km s-min=10.7km az=156.0*

ISC 04 16:12:32.0±0.5, **22°.66S**±0°.10×**179°.53W**±0°.08, **h579**km, **n76**, σ1§**35**/75, **mb4.2**/16, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.40	335	P	P	16 14 08.1	+0.9
	10nm,0.4s,baz=95,slow=22,SNR=69						
MSVF	Nonsavu	5.40	335	P	P	16 14 07.5	+0.4
RAO	Raoul Island	6.72	168	P	P	16 14 18.1	-0.3
NIUE	Niue	9.65	70	P	P	16 14 46.8	-0.2
AFI	Afiamalu	11.39	42	P	P	16 15 02.7	-2.0
	12nm,0.4s,baz=256,slow=17,SNR=2.5						
AFI	Afiamalu	11.39	42	P	P	16 15 02.5	-2.2
MARNC	Mare, Loyalty	11.60	273	P	P	16 15 06.1	-0.5
PINNC	Pines Island,	12.03	268	P	P	16 15 10.8	-0.2
LIFNC	LIFOU	12.44	276	P	P	16 15 13.8	-1.5
OUZ	Omahuta	13.88	204	P	P	16 15 30.6	+0.9
GRZ	Great Barrier	14.23	197	P	P	16 15 33.9	+0.7
KUZ	Kuaotunu	14.63	195	P	P	16 15 37.2	+0.2
MXZ	Matakaoa Point	14.97	187	P	P	16 15 39.4	-1.0
ETAZ	East Tamaki Re	15.03	197	P	P	16 15 43.1	+2.2
MKAZ	Moumakai	15.11	197	P	P	16 15 42.2	+0.5
AWAZ	Awhitu Peninsu	15.22	198	P	P	16 15 43.2	+0.5
URZ	Urewera	15.82	190	P	P	16 15 45.7	-2.6
	8.9nm,0.3s,baz=342,slow=2.8,SNR=16						
URZ	Urewera	15.82	190	P	P	16 15 45.6	-2.8
URZ				IAmb	IAmb	16 15 48.3	
	comp=Z,16nm,0.8s						
URZ	Urewera	15.82	190	P	P	16 15 45.8	-2.6
MWZ	Matawai	15.83	189	P	P	16 15 47.1	-1.5
RIGZ	Rimuhau	16.16	188	P	P	16 15 50.3	-1.4
TLZ	Tolley Road	16.18	194	P	P	16 15 51.4	-0.5
RAHZ	Arahi	16.46	189	P	P	16 15 53.5	-0.9
HIZ	Hauiti	16.52	196	P	P	16 15 56.2	+1.3
BKZ	Black Stump Fm	16.80	191	P	P	16 15 54.9	-2.6
BKZ				IAmb	IAmb	16 15 58.5	
	comp=Z,17nm,1.0s						
BKZ	Black Stump Fm	16.80	191	P	P	16 15 55.1	-2.4
OTVZ	Oturere	16.96	193	P	P	16 15 57.8	-1.3
KWHZ	Kaweka Forest	17.07	191	P	P	16 15 57.8	-2.1
VRZ	Vera Road	17.12	195	P	P	16 16 02.7	+2.3
BHHZ	Black Hill Sta	17.19	192	P	P	16 15 58.7	-2.4
KRHZ	Kereru	17.29	191	P	P	16 16 00.3	-1.6
PNHZ	Pukenui	17.58	191	P	P	16 16 03.0	-1.5
PXZ	Pawanui	17.59	189	P	P	16 16 02.9	-1.7
WPHZ	Waipukurau	17.69	190	P	P	16 16 04.6	-0.9
TSZ	Takapari Road	17.77	191	P	P	16 16 04.6	-1.6
DVHZ	Dannevirke	17.96	191	P	P	16 16 07.1	-0.9
BFZ	Birch Farm	18.32	190	P	P	16 16 09.6	-1.7
MRZ	Mangatainoka R	18.42	192	P	P	16 16 10.7	-1.4
OGWZ	Otaki Gorge	18.65	193	P	P	16 16 12.0	-2.2
HOWZ	Holdsworth Sta	18.66	192	P	P	16 16 13.3	-1.1
TRWZ	Traveller	19.11	191	P	P	16 16 17.8	-0.6
PAWZ	Paruwai Farm	19.15	192	P	P	16 16 17.7	-1.1
MSWZ	Moikau Station	19.21	192	P	P	16 16 18.6	-0.8
TCW	Tory Channel	19.22	194	P	P	16 16 19.0	-0.4
QRZ	Quartz Range	19.32	198	P	P	16 16 21.4	+1.1
PLWZ	Palliser	19.36	192	P	P	16 16 20.2	-0.6
TKNZ	Takaka Hill	19.39	197	P	P	16 16 20.5	-0.5
NNZ	Nelson	19.45	196	P	P	16 16 20.8	-0.6
TUWZ	Tuamarina	19.51	195	P	P	16 16 22.2	+0.2
RPZ	Rata Peaks	22.40	198	P	P	16 16 47.1	-0.9
	comp=Z,11nm,1.1s,baz=300,slow=20,SNR=1.3						
	comp=Z,11nm,1.1s						
WKZ	Wanaka	24.03	200	P	P	16 17 00.8	-1.7
PPTF	Pamatai, Papee	28.55	85	P	P	16 17 41.8	-0.8
CAN	Canberra	30.15	238	P	P	16 17 57.1	+0.9
CTAO	Charters Tower	31.93	268	P	P	16 18 11.3	-0.2
CTAO				IAmb	IAmb	16 18 45.9	
	comp=Z,24nm,1.4s						
TOO	Toolangi	33.50	236	P	P	16 18 24.4	-0.2
STKA	Stephens Creek	35.60	247	P	P	16 18 42.2	+0.2
	comp=Z,1.0nm,0.4s,baz=120,slow=8.0,SNR=5.1						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	35.60	247	P	P	16 18 42.3	+0.2
BBOO	Buckleboo	40.34	246	P	P	16 19 19.9	-0.7
ASAR	Alice Springs	42.68	259	P	P	16 19 39.5	+0.4
	comp=Z,0.6nm,0.8s,baz=97,slow=7.7,SNR=4.1						
WB0	Warramunga Arr	42.93	265	P	P	16 19 40.4	-0.7
WB0				IAmb	IAmb	16 20 10.9	
	comp=Z,5.5nm,1.1s						
WB2	Warramunga Arr	42.93	265	P	P	16 19 40.5	-0.6
WB2				IAmb	IAmb	16 19 46.0	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	42.94	265	P	P	16 19 40.3	-0.9
	comp=Z,0.3nm,0.6s,baz=97,slow=8.2,SNR=16						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	42.94	265	P	P	16 19 40.5	-0.6
KNRA	Kununurra	49.14	269	P	P	16 20 28.2	+0.1
KNRA				IAmb	IAmb	16 20 30.6	
	comp=Z,23nm,1.4s						
VNDA	Vanda	55.65	185	P	P	16 21 15.7	+2.2
	comp=Z,0.6nm,0.8s,baz=357,slow=8.3,SNR=3.6						
	comp=Z,0.6nm,0.8s						
VNDA	Vanda	55.65	185	P	P	16 21 13.6	+0.1
NVAR	Mina Array Bea	83.56	44	P	P	16 24 02.5	+2.1
	comp=Z,0.3nm,0.5s,baz=235,slow=8.9,SNR=4.3						
	comp=Z,0.3nm,0.5s						
K20K	Telida	88.04	11	P	P	16 24 20.1	-0.8
K20K				IAmb	IAmb	16 24 51.6	
	comp=Z,5.3nm,1.5s						
SCM	Sheep Creek Mo	88.07	15	P	P	16 24 21.9	+0.7
SCM				IAmb	IAmb	16 24 44.9	
	comp=Z,16nm,1.5s						
CAST	Castle Rocks	88.47	12	P	P	16 24 22.6	-0.3
CAST				IAmb	IAmb	16 24 25.6	
	comp=Z,4.0nm,1.2s						
TLIG	Tlapa	88.65	70	P	P	16 24 24.7	-0.2
TLIG				IAmb	IAmb	16 25 03.5	
	comp=Z,4.8nm,1.0s						
TRF	Thorofare Moun	88.85	13	P	P	16 24 24.5	-0.4
TRF				IAmb	IAmb	16 24 25.0	
	comp=Z,4.3nm,1.0s						
TXAR	Lajitas Array	89.41	58	P	P	16 24 30.4	+2.2
	comp=Z,0.7nm,0.8s,baz=236,slow=5.9,SNR=5.5						
	comp=Z,0.7nm,0.8s						
M27K	Edge Creek, AK	89.87	17	P	P	16 24 30.4	+0.8
AKASG	Malin Array Be	144.16	329	PKP	PKPbc	16 31 01.1	-0.8
	comp=Z,0.6nm,0.4s,baz=46,slow=4.7,SNR=6.6						
CLL	Collm	149.79	344	*e*PKPbc	PKPbc	16 31 17.0	-0.1

*IDC **04** 16:32:04.3±2.0, 7°.70S×127°.97E, h134km±22km, mb3.3/5, mbtmp4.0/10, Error ellipse: s-maj=28.5km s-min=15.5km az=83.0*
*NEIC **04** 16:32:07.2±2.2, 7°.8S±0°.2×127°.81E±0°.04, h152km±15km, mb4.7/5, Error ellipse: s-maj=23.0km s-min=5.4km az=173.0*

ISC 04 16:32:05.7±0.7, **7°.79S**±0°.06×**127°.83E**±0°.07, **h150**km, **n31**, σ1§**82**/34, **mb3.7**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.44	93	Pn	Pn	16 33 00.6	+1.9
SOEI	Soe	4.03	241	Pn	Pn	16 33 07.7	+1.2
BATI	Baumata	4.77	239	P	Pn	16 33 17.3	+1.2
	29nm,0.4s,baz=59,slow=2.3,SNR=12						
BATI				S	Sn	16 34 09.8	-1.2
	184nm,0.4s,baz=25,slow=21,SNR=40						
MMRI	Maumere	5.60	261	Pn	Pn	16 33 27.6	+0.5
MTN	Manton Dam	5.99	147	Pn	Pn	16 33 33.6	+1.4
SIJI	Sorong	7.68	27	P	Pn	16 33 52.2	-2.6
	9.4nm,0.3s,baz=212,slow=9.9,SNR=20						
KNRA	Kununurra	7.89	173		Pn	16 33 58.3	+0.5
FITZ	Fitzroy Crossi	10.47	192	P	Pn	16 34 30.6	-1.3
	3.9nm,0.3s,baz=24,slow=10,SNR=55						
FITZ				S	Sn	16 36 23.1	-4.7
	14nm,0.5s,baz=328,slow=20,SNR=9.6						
FITZ	Fitzroy Crossi	10.47	192		Pn	16 34 30.5	-1.4
WB0	Warramunga Arr	13.50	153	Pn	Pn	16 35 10.5	-0.9
WRAB	Tennant Creek	13.63	153	Pn	Pn	16 35 12.3	-0.7
WRA	Warramunga Arr	13.63	153	P	Pn	16 35 11.7	-1.3
	4.0nm,0.4s,baz=322,slow=15,SNR=78						
WRA				S	Sn	16 37 36.9	-7.2
	10nm,0.6s,baz=335,slow=22,SNR=13						
WRA	Warramunga Arr	13.63	153		Pn	16 35 11.8	-1.2
WB2	Warramunga Arr	13.64	153	Pn	Pn	16 35 11.8	-1.3
WR0	Warramunga Arr	13.74	152	Pn	Pn	16 35 13.5	-0.9
MBWA	Marble Bar	15.43	210		Pn	16 35 36.5	+1.0
PSA00	Pilbara Seismi	15.72	208	Pn	Pn	16 35 39.0	-0.1
AS31	Alice Springs	16.83	160	Pn	Pn	16 35 55.0	+2.4
ASAR	Alice Springs	16.83	160	P	P	16 35 53.2	+1.0
	6.4nm,0.3s,baz=338,slow=11,SNR=308						
ASAR				S	S	16 38 54.5	-5.4
	1.9nm,0.6s,baz=322,slow=17,SNR=7.5						
ASAR	Alice Springs	16.83	160	Pn	Pn	16 35 54.9	+2.2
UGM	Wanagama	17.15	268		P	16 35 57.3	+1.5
XMIS	Christmas Isla	22.06	261	P	P	16 36 48.9	+0.2
FORT	Forrest	22.88	179	P	P	16 36 57.5	+1.2
FORT				IAmb	IAmb	16 37 01.6	
	comp=Z,90nm,1.8s						
MORW	Morawa	23.91	206	P	P	16 37 06.8	+1.0
MORW				IAmb	IAmb	16 37 31.8	
	comp=Z,38nm,1.8s						
BBOO	Buckleboo	26.05	164	P	P	16 37 26.8	+1.7
STKA	Stephens Creek	27.18	154	P	P	16 37 35.8	+0.5
	comp=Z,0.7nm,0.4s,baz=350,slow=11,SNR=1.6						
	comp=Z,0.7nm,0.4s						
CMAR	Chiang Mai Arr	38.63	313	P	P	16 39 15.3	+0.6
	comp=Z,0.2nm,0.4s,baz=134,slow=7.8,SNR=1.1						
	comp=Z,0.2nm,0.4s						
USRK	Ussuriysk Ar.	51.88	4	P	P	16 40 57.5	-1.1
	comp=Z,0.8nm,0.5s,baz=177,slow=6.0,SNR=4.8						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	58.53	343	P	P	16 41 46.3	-0.2
	comp=Z,0.3nm,0.5s,baz=155,slow=7.9,SNR=2.2						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	71.94	173	P	P	16 43 13.3	+1.1
	comp=Z,0.4nm,0.7s,baz=315,slow=8.9,SNR=5.7						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	82.20	180	P	P	16 44 10.2	+0.4
QSPA				IAmb	IAmb	16 46 43.7	
	comp=Z,20nm,2.0s						

*SOME **04** 16:46:50.8, 39°.75N×76°.12E, h5km*
*NNC **04** 16:46:53.5±2.7, 39°.71N×76°.53E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=19.5km s-min=17.8km az=121.0*
*KRNET **04** 16:46:54.8±0.1, 39°.93N×76°.41E, mb3.6*

ISC 04 16:46:57.4±2.7, **40°.0N**±0°.1×**76°.27E**±0°.04, **h2**km±12km, **n57**, σ1§**29**/91, **21C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.47	352	⇑*e*P	Pn	16 47 23.3	-1.9
	baz=47						
NRN				⇑*e*S	Sn	16 47 43.7	-1.5
	baz=47						
TARG	Taragay, Kyrgy	2.10	33	⇑*e*P	Pn	16 47 32.3	-1.7
	baz=30						
TARG				⇑*e*S	Sn	16 47 59.4	-1.5
	baz=30						
ULHL	Ulahol	2.27	359	P	Pb	16 47 38.5	-0.7
	SNR=27						
ULHL	Ulahol	2.27	359	⇑*e*P	Pn	16 47 35.4	-0.7
	baz=57						
ULHL				⇑*e*S	Sn	16 48 05.1	+0.4
	baz=57						
BOOM	Boomskoye usch	2.52	354	⇓*e*P	Pn	16 47 39.0	-0.6
	baz=52						
BOOM				⇓*e*S	Sn	16 48 11.3	+0.3
	baz=52						
UCH	Uchtor	2.61	330	P	Pn	16 47 40.6	-0.4
	SNR=21						
UCH	Uchtor	2.61	330	⇑*e*P	Pn	16 47 40.7	-0.4
	baz=29						
UCH				⇑*e*S	Sn	16 48 14.7	+1.2
	baz=29						
KBK	Karagaybulak	2.86	340	P	Pn	16 47 44.8	+0.7
	SNR=15						
KBK	Karagaybulak	2.86	340	⇑*e*P	Pn	16 47 44.0	-0.1
	baz=38						
KBK				⇑*e*S	Sn	16 48 20.1	+0.9
	baz=38						
AML	Almayashu	2.91	319	P	Pn	16 47 43.9	-1.0
	SNR=14						
AAK	Ala-Archa	2.98	334	P	Pn	16 47 45.1	-0.7
	SNR=9.3						
AAK	Ala-Archa	2.98	334	⇑*e*P	Pn	16 47 45.7	-0.1
	baz=33						
AAK				⇑*e*S	Sn	16 48 23.1	+1.0
	baz=33						
TKM2	Tokmak 2	2.99	350	P	Pn	16 47 47.3	+1.3
	SNR=8.5						
TKM2	Tokmak 2	2.99	350	⇑*e*P	Pn	16 47 45.7	-0.2
	baz=49						
TKM2				⇑*e*S	Sn	16 48 22.7	+0.3
	baz=49						
TKM2	Tokmak 2	2.99	350	⇑Pn	Pn	16 47 47.1	+1.2
	2.2nm,0.3s						
TKM2				⇓Pg	Pb	16 47 53.9	+2.5
	7.1nm,0.5s						
TKM2				⇑Sn	Sg	16 48 32.7	-0.7
	18nm,0.5s						
ANVS	Anan'yevo	3.00	20	⇑*e*P	Pn	16 47 45.1	-0.9
	baz=18						
ANVS				⇑*e*S	Sn	16 48 21.4	-1.2
	baz=18						
KST	Kastek	3.07	356	*e*P	Pb	16 47 53.1	+0.2
	6.9nm,0.7s						
KST				*e*S	Sg	16 48 37.8	+1.6
	34nm,0.6s						
TNSS	Tian-Shan	3.10	9	*e*P	Pb	16 47 52.9	-0.6
	24nm,0.5s						
TNSS				*e*S	Sg	16 48 37.7	+0.7
	19nm,0.4s						
TNSS	Tian-Shan	3.10	9	Pg	Pb	16 47 52.9	-0.6
	24nm,0.5s						
TNSS				Lg	Lg	16 48 38.6	
	19nm,0.4s						
MTBS	Maitube	3.15	2	*e*P	Pb	16 47 54.2	0.0
	20nm,0.4s						
MTBS				*e*S	Sg	16 48 40.1	+1.3
	26nm,0.5s						
MTBS	Maitube	3.15	2	Pg	Pb	16 47 54.2	0.0
	20nm,0.4s						
MTBS				Lg	Lg	16 48 40.1	
	26nm,0.5s						
CHMS	Chumysh	3.23	340	P	Pn	16 47 49.7	+0.6
	SNR=7.5						
CHMS	Chumysh	3.23	340	⇓*e*P	Pn	16 47 49.0	-0.1
	baz=38						
CHMS				⇓*e*S	Sn	16 48 28.8	+0.7
	baz=38						
MDOK	Medeo	3.24	10	*e*P	Pb	16 47 55.2	-0.5
	11nm,0.7s						
MDOK				*e*S	Sg	16 48 41.3	-0.1
	31nm,0.8s						
MDOK	Medeo	3.24	10	⇓Pn	Pn	16 47 49.5	+0.1
	4.6nm,0.8s						
MDOK				Pg	Pb	16 47 55.2	-0.5
	11nm,0.7s						
MDOK				Lg	Lg	16 48 42.0	
	31nm,0.8s						
MDOK				⇓Lg	Lg	16 48 42.1	
	34nm,0.7s						
EKS2	Erkin-Say	3.28	326	P	Pb	16 47 55.8	-0.5
	SNR=5.5						
EKS2	Erkin-Say	3.28	326	⇑*e*P	Pn	16 47 49.9	+0.1
	baz=25						
EKS2				⇑*e*S	Sn	16 48 30.5	+1.1
	baz=25						
DGS	Degeres	3.29	354	*e*P	Pb	16 47 57.2	+0.8
	19nm,0.4s						
DGS				*e*S	Sg	16 48 45.1	+2.2
	35nm,0.6s						
DGS	Degeres	3.29	354	Pg	Pb	16 47 57.2	+0.8
	19nm,0.4s						
DGS				Lg	Lg	16 48 45.1	
	35nm,0.6s						
KOTS	Kotyrbulak	3.32	11	*e*P	Pb	16 47 57.0	0.0
	11nm,0.5s						
KOTS				*e*S	Sg	16 48 45.1	+1.1
	80nm,0.5s						
KOTS	Kotyrbulak	3.32	11	Pg	Pb	16 47 57.0	0.0
	11nm,0.5s						
KOTS				Lg	Lg	16 48 45.6	
	80nm,0.5s						
SATY	Saty	3.47	27	*e*P	Pb	16 48 00.2	+0.6
	6.4nm,0.6s						
SATY				*e*S	Sg	16 48 50.3	+1.3
	22nm,0.6s						
SATY	Saty	3.47	27	Pg	Pb	16 48 00.2	+0.6
	6.4nm,0.6s						
SATY				Lg	Lg	16 48 50.3	
	22nm,0.6s						
USP	Ospenovka	3.55	339	P	Pn	16 47 54.4	+0.9
	SNR=6.2						
ZHN	Zhinishke	3.58	26	*e*P	Pb	16 48 01.9	+0.4
	5.7nm,0.1s						
ZHN				*e*S	Sg	16 48 53.4	+1.0
	16nm,0.8s						
ZHN	Zhinishke	3.58	26	Pg	Pb	16 48 01.9	+0.4
	5.7nm,0.1s						
ZHN				Lg	Lg	16 48 52.8	
	16nm,0.8s						
SGDS	Sogindy	3.69	341	*e*P	Pb	16 48 02.9	-0.3
	3.8nm,0.5s						
SGDS				*e*S	Sg	16 48 54.6	-1.2
	11nm,0.5s						
KRBS	Karabastau	3.75	353	*e*P	Pb	16 48 04.4	+0.1
	11nm,0.3s						
KRBS				*e*S	Sg	16 48 57.4	-0.3
	6.5nm,0.4s						
KRBS	Karabastau	3.75	353	Pg	Pb	16 48 04.8	+0.6
	11nm,0.3s						
KRBS				Lg	Lg	16 48 57.3	
	6.5nm,0.4s						
UZB	Uzynbulak	3.78	32	*e*P	Pb	16 48 04.1	-0.8
	2.4nm,0.6s						
UZB				*e*S	Sg	16 48 57.2	-1.7
	16nm,0.6s						
UZB	Uzynbulak	3.78	32	Pg	Pb	16 48 04.1	-0.8
	2.4nm,0.6s						
UZB				Lg	Lg	16 48 58.4	
	16nm,0.6s						
KURS	Kuram	3.79	21	*e*P	Pb	16 48 05.7	+0.8
	2.4nm,0.3s						
KURS				*e*S	Sg	16 48 59.7	+0.7
	22nm,0.6s						
KURS	Kuram	3.79	21	Pg	Pb	16 48 05.7	+0.8
	2.4nm,0.3s						
KURS				Lg	Lg	16 48 59.7	
	22nm,0.6s						
CHKK	Chushkaly	3.91	8	*e*P	Pb	16 48 07.9	+0.8
	6.1nm,0.4s						
CHKK				*e*S	Sg	16 49 03.8	+0.7
	14nm,0.5s						
CHKK

DJR			eS		Sg	16 49 38.7	-1.7
	5.3nm,0.5s						
BTLS	**Baital**	**5.32 343**	eP		**Pb**	16 48 32.7	+1.6
	3.0nm,0.9s						
BTLS			eS		**Sg**	16 49 45.6	-2.7
	18nm,0.7s						

*IDC **04** 16:56:05.5±1.7, 7°.90S×113°.59E, h173km±16km, mb3.8/22, mbtmp4.3/26, Error ellipse: s-maj=13.4km s-min=8.6km az=70.0*
*NEIC **04** 16:56:05.0±2.9, 8°.08S±0°.07×113°.49E±0°.07, h169km±4km, mb4.4/39, Error ellipse: s-maj=11.8km s-min=7.3km az=221.0*
*DJA **04** 16:56:06.0±0.3, 8°.5±4°×11°.3E±°, h156km±5km, M4.6/25, mb4.9/15, mB5.1/12, MLv4.8/25, Mw(mB)4.4/12*
ISC 04 16:56:04.9±0.3, 8°.07S±0°.05×113°.48E±0°.05, h169km, n159, σ1§44/158, mb4.2/41, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**0.78**	**121**	Pn	**Pn**	**16 56 30.1**	**+0.2**
JAGI				Sn	**Sn**	**16 56 48.8**	**-0.3**
JAGI	**Jajag, Banyuwa**	**0.78**	**121**	P	**Pn**	**16 56 30.2**	**+0.3**
JAGI	**Jajag, Banyuwa**	**0.78**	**121**	P	**Pn**	**16 56 30.6**	**+0.7**
KMMI	**Kalianget**	**1.12**	**26**	P	**Pn**	**16 56 33.5**	**+1.0**
PWJI	**Pagerwojo**	**1.66**	**272**	P	**Pn**	**16 56 37.7**	**+0.2**
SRBI	**Singaraja**	**1.72**	**91**	P	**Pn**	**16 56 39.8**	**+1.6**
DNP	**Denpasar**	**1.82**	**109**	P	**Pn**	**16 56 40.2**	**+1.0**
TBJI	**Tambak Boyo**	**2.04**	**308**	P	**Pn**	**16 56 42.8**	**+1.2**
PCJI	**Pacitan**	**2.28**	**267**	P	**Pn**	**16 56 44.5**	**+0.1**
BWJI	**Bawean**	**2.35**	**340**	P	**Pn**	**16 56 46.8**	**+1.6**
UGM	**Wanagama**	**2.93**	**273**		**Pn**	**16 56 52.0**	**-0.2**
UGM	**Wanagama**	**2.93**	**273**	P	**Pn**	**16 56 52.0**	**-0.2**
UGM	**Wanagama**	**2.93**	**273**	P	**Pn**	**16 56 52.7**	**+0.5**
TWSI	**Taliwang, Sumb**	**3.44**	**101**	P	**Pn**	**16 56 58.3**	**-0.2**
PLAI	**Plampang**	**4.32**	**100**	P	**Pn**	**16 57 09.5**	**-0.3**
PLAI	**Plampang**	**4.32**	**100**	P	**Pn**	**16 57 10.7**	**+0.9**
BBKI	**Banjar Baru**	**4.78**	**17**	P	**Pn**	**16 57 17.8**	**+2.0**
	1.0nm3μm305nm,0.8s						
JCJI	**Jatiwangi**	**5.40**	**287**	P	**Pn**	**16 57 24.4**	**+0.5**
	2.2nm662nm,0.8s						
PBKI	**Pangkalan Bun**	**5.63**	**341**	P	**Pn**	**16 57 28.4**	**+1.5**
	2.6nm6μm716nm,1.0s						
LEM	**Lembang**	**5.94**	**282**	P	**Pn**	**16 57 32.4**	**+1.3**
	624nm,0.7s,baz=49,slow=8.7,SNR=190						
CNJI	**Cibinong**	**6.33**	**276**	P	**Pn**	**16 57 35.4**	**-0.8**
	6μm375nm,0.6s						
CBJI	**Citeko**	**6.78**	**284**	P	**Pn**	**16 57 41.2**	**-0.8**
	10μm767nm,0.7s						
KAPI	**Kappang**	**6.94**	**64**	P	**Pn**	**16 57 46.9**	**+2.7**
	30nm,0.6s,baz=247,slow=8.9,SNR=23						
KAPI	**Kappang**	**6.94**	**64**	Pn	**Pn**	**16 57 43.6**	**-0.6**
KAPI	**Kappang**	**6.94**	**64**	P	**Pn**	**16 57 46.8**	**+2.7**
SKJI	**Sukabumi**	**6.94**	**278**	P	**Pn**	**16 57 45.4**	**+1.1**
	1.4nm6μm242nm,0.5s						
BKSI	**Bulukumba**	**7.14**	**68**	P	Pn	16 57 52.8	+5.9
	0.2nm640nm68nm,0.8s						
BSSI	**Bau Bau, Buton**	**7.22**	**75**	P	**Pn**	**16 57 50.2**	**+2.2**
	0.2nm656nm50nm,0.6s						
MTKI	**Muara Teweh, K**	**7.22**	**11**	P	**Pn**	**16 57 49.6**	**+1.6**
	0.5nm2μm144nm,0.9s						
SPSI	**Sidrap Palu**	**7.47**	**57**	P	**Pn**	**16 57 55.4**	**+4.1**
	0.1nm24nm,0.6s						
BNSI	**Bone**	**7.53**	**61**	P	Pn	16 57 58.1	+6.0
	0.1nm28nm,0.8s						
BKB	**Balikpapan**	**7.58**	**27**		**Pn**	**16 57 54.2**	**+1.5**
BKB	**Balikpapan**	**7.58**	**27**	P	Pn	16 58 07.0	+14
XMI	**Christmas Isla**	**8.04**	**252**	P	**Pn**	**16 57 57.1**	**-1.7**
TTSI	**Tana Toraja**	**8.05**	**52**	P	Pn	16 58 05.9	+7.0
	0.1nm551nm24nm,0.6s						
EDFI	**Ende, Flores**	**8.15**	**95**	P	**Pn**	**16 57 59.7**	**-0.7**
	0.4nm2μm66nm,0.6s						
STKI	**Sintang**	**8.32**	**346**	P	**Pn**	**16 58 04.7**	**+2.1**
	0.4nm3μm114nm,1.0s						
MMRI	**Maumere**	**8.69**	**94**		**Pn**	**16 58 07.4**	**0.0**
MMRI	**Maumere**	**8.69**	**94**	P	**Pn**	**16 58 08.6**	**+1.2**
	0.8nm2μm154nm,0.5s						
MMRI	**Maumere**	**8.69**	**94**	P	**Pn**	**16 58 07.8**	**+0.4**
KASI	**Kota Agung**	**9.27**	**285**	P	**Pn**	**16 58 17.1**	**+2.1**
	97nm,0.7s						
PPBI	**Pangkal Pinang**	**9.37**	**308**	P	**Pn**	**16 58 17.7**	**+1.3**
BATI	**Baumata**	**10.28**	**103**	P	**Pn**	**16 58 27.6**	**-0.7**
	45nm,0.3s,baz=316,slow=2.6,SNR=30						
BATI				S	**Sn**	**17 00 14.8**	**-7.8**
	47nm,0.4s,baz=3.7,slow=8.5,SNR=4.3						
SBUM	**Sibu**	**10.53**	**353**	Pn	**Pn**	**16 58 33.0**	**+1.5**
SOEI	**Soe**	**10.79**	**100**	Pn	**Pn**	**16 58 33.8**	**-1.4**
SOEI	**Soe**	**10.79**	**100**	P	**Pn**	**16 58 36.4**	**+1.2**
MNAI	**Manna**	**11.09**	**289**	Pn	**Pn**	**16 58 37.4**	**-1.5**
MNAI	**Manna**	**11.09**	**289**	P	**Pn**	**16 58 37.9**	**-1.0**
MYLDM	**Lahad Datu**	**14.09**	**21**		**P**	**16 59 21.1**	**+1.3**
KKM	**Kota Kinabalu**	**14.29**	**11**	P	**Pn**	**16 59 20.5**	**+0.7**
KKM	**Kota Kinabalu**	**14.29**	**11**	P	**P**	**16 59 22.6**	**+0.5**
MBWA	**Marble Bar**	**14.35**	**156**	P	**Pn**	**16 59 19.7**	**-0.7**
MBWA	**Marble Bar**	**14.35**	**156**	P	**Pn**	**16 59 20.0**	**-0.4**
GIRL	**Giralia**	**14.51**	**177**	P	**Pn**	**16 59 23.0**	**+0.6**
GIRL	**Giralia**	**14.51**	**177**	P	**Pn**	**16 59 22.8**	**+0.4**
PSA00	**Pilbara Seismi**	**14.76**	**156**	Pn	**Pn**	**16 59 23.3**	**-2.3**
PSA00	**Pilbara Seismi**	**14.76**	**156**	P	**Pn**	**16 59 26.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**15.47**	**131**	P	**Pn**	**16 59 34.5**	**+0.2**
	20nm,0.9s,baz=313,slow=7.8,SNR=31						
FITZ				S	Sn	17 02 15.9	-11
	23nm,0.5s,baz=16,slow=24,SNR=12						
FITZ	**Fitzroy Crossi**	**15.47**	**131**	P	**Pn**	**16 59 33.4**	**-1.0**
FITZ				IAmb	IAmb	16 59 35.6	
	comp=Z,24nm,1.0s						
FITZ	**Fitzroy Crossi**	**15.47**	**131**	P	**P**	**16 59 34.9**	**-0.2**
KNRA	**Kununurra**	**16.75**	**118**	P	**P**	**16 59 49.3**	**+0.1**
KNRA	**Kununurra**	**16.75**	**118**	P	**Pn**	**16 59 51.0**	**+1.1**
MTN	**Manton Dam**	**18.00**	**107**	P	**P**	**17 00 03.3**	**+0.4**
MTN	**Manton Dam**	**18.00**	**107**	P	**Pn**	**17 00 06.1**	**+1.4**
RPSI	**Rantau Prapat**	**18.03**	**306**	P	**Pn**	**17 00 05.5**	**+0.4**
PSI	**Prapat**	**18.09**	**306**	P	**Pn**	**17 00 05.5**	**-0.5**
	comp=Z,5.5nm,0.4s,baz=215,slow=4.7,SNR=4.6						
GSI	**Gunungsitoli**	**18.39**	**300**	P	**Pn**	**17 00 08.6**	**-0.7**
MEEK	**Meekatharra**	**19.10**	**166**	P	**Pn**	**17 00 16.8**	**-0.8**
SIJI	**Sorong**	**19.11**	**69**	P	**P**	**17 00 14.6**	**-0.5**
	comp=Z,7.6nm,0.9s,baz=283,slow=9.6,SNR=4.6						
KDU	**Kakadu**	**19.24**	**105**	P	**Pn**	**17 00 20.2**	**+0.9**
FAKI	**Fak Fak**	**19.37**	**76**	P	**P**	**17 00 18.4**	**+0.5**
MORW	**Morawa**	**21.03**	**174**	P	**P**	**17 00 36.5**	**+1.1**
WRKA	**Warakurna**	**22.02**	**142**	P	**P**	**17 00 46.2**	**+0.3**
WB0	**Warramunga Arr**	**23.36**	**122**	P	**P**	**17 00 58.4**	**0.0**
WB0				IAmb	IAmb	17 01 35.9	
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**23.40**	**122**	P	**P**	**17 00 59.2**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=300,slow=11,SNR=48						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**23.40**	**122**	P	**P**	**17 00 58.4**	**-0.3**
WRAB	**Tennant Creek**	**23.40**	**122**	P	**P**	**17 00 59.4**	**+0.6**
WB2	**Warramunga Arr**	**23.41**	**122**	P	**P**	**17 00 58.9**	**0.0**
WB2				IAmb	IAmb	17 01 28.6	
	comp=Z,8.7nm,1.1s						
WR0	**Warramunga Arr**	**23.57**	**122**	P	**P**	**17 01 00.6**	**+0.3**
WR0				IAmb	IAmb	17 01 34.5	
	comp=Z,10.0nm,1.1s						
ASAR	**Alice Springs**	**24.97**	**131**	P	**P**	**17 01 13.3**	**+0.3**
	comp=Z,4.6nm,0.5s,baz=306,slow=8.7,SNR=122						
	comp=Z,4.6nm,0.5s						
AS31	**Alice Springs**	**24.98**	**131**	P	**P**	**17 01 13.0**	**-0.1**
AS31				IAmb	IAmb	17 01 50.6	
	comp=Z,2.7nm,0.4s						
AS01	**Alice Springs**	**25.01**	**131**	P	**P**	**17 01 13.1**	**-0.3**
	comp=Z,7.9nm,0.7s						
FORT	**Forrest**	**26.39**	**151**	P	**P**	**17 01 27.1**	**+1.5**
OOD	**Oodnadatta**	**28.73**	**136**	P	**P**	**17 01 47.4**	**+0.8**
MULG	**Mulgathing**	**29.32**	**142**	P	**P**	**17 01 52.3**	**+0.5**
CM31	**Chiang Mai Arr**	**30.01**	**332**	P	**P**	**17 01 58.5**	**+0.6**
CM31				IAmb	IAmb	17 01 59.7	
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.01**	**332**	P	**P**	**17 01 58.7**	**+0.8**
	comp=Z,4.8nm,0.7s,baz=163,slow=8.1,SNR=52						
CMAR				ScP	**ScP**	**17 08 22.1**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=177,slow=3.2,SNR=10						
	comp=Z,4.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.01**	**332**	P	**P**	**17 01 58.2**	**+0.3**
CHTO	**Chiang Mai**	**30.32**	**332**	P	**P**	**17 02 00.6**	**0.0**
MTSU	**Mount Surprise**	**31.61**	**112**	P	**P**	**17 02 12.8**	**+0.7**
LCRK	**Leigh Creek**	**32.12**	**137**	P	**P**	**17 02 17.4**	**+1.1**
INKA	**Innaminka**	**32.36**	**131**	P	**P**	**17 02 20.1**	**+1.6**
CTA	**Charters Tower**	**33.89**	**114**	P	**P**	**17 02 35.0**	**+3.1**
	comp=Z,11nm,1.3s						
HTT	**Hallett**	**34.49**	**141**	P	**P**	**17 02 37.8**	**+0.9**
	comp=Z,28nm,2.7s						
STKA	**Stephens Creek**	**35.28**	**136**	P	**P**	**17 02 44.0**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=314,slow=9.3,SNR=13						
	comp=Z,2.1nm,0.4s						
STKA	**Stephens Creek**	**35.28**	**136**	P	**P**	**17 02 44.1**	**+0.5**
PALK	**Pallekele**	**36.06**	**294**	P	**P**	**17 02 49.8**	**-0.7**
PALK				IAmb	IAmb	17 03 30.6	
	comp=Z,15nm,1.1s						
PZH	**PanZhiHua**	**36.21**	**342**	P	**P**	**17 02 54.4**	**+2.7**
ENH	**Enshi**	**38.31**	**354**	P	**P**	**17 03 09.0**	**-0.3**
ENH				IAmb	IAmb	17 03 15.9	
	comp=Z,6.5nm,0.5s						
NJ2	**Nanjing**	**40.23**	**7**	**eP**	**P**	**17 03 29.5**	**+4.5**
LZH	**Lanzhou**	**44.85**	**349**	**eP**	**P**	**17 04 02.9**	**+0.4**
LZH				pP	pP	17 04 10.0	-30
KSRS	**Korea Array**	**47.26**	**16**	P	**P**	**17 04 20.4**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=203,slow=8.1,SNR=7.1						
	comp=Z,1.8nm,0.7s						
BJT	**Baijiatuau**	**47.91**	**3**	P	**P**	**17 04 25.6**	**-0.5**
BJT				IAmb	IAmb	17 04 26.3	
	comp=Z,8.0nm,0.5s						
INU	**Inuyama**	**48.56**	**26**	P	**P**	**17 04 29.4**	**-1.8**
HHC	**Hu-ho-hao-te**	**48.71**	**358**	**eP**	**P**	**17 04 35.6**	**+3.3**
GTA	**Gaotai**	**48.91**	**346**	**eP**	**P**	**17 04 34.5**	**+0.6**
GTA				pP	pP	17 04 39.5	-32
GTA				sP	sP	17 04 42.0	-49
JGF	**Kuroka**	**48.92**	**26**	P	**P**	**17 04 31.9**	**-2.1**
JGF				IAmb	IAmb	17 05 14.0	
	comp=Z,10nm,1.1s						
MAJO	**Matsushiro**	**50.09**	**26**	P	**P**	**17 04 40.6**	**-2.1**
MAJO				IAmb	IAmb	17 04 41.1	
	comp=Z,6.3nm,0.7s						
MJAR	**Matsushiro Arr**	**50.09**	**26**	P	**P**	**17 04 40.6**	**-2.1**
	comp=Z,4.0nm,0.6s,baz=204,slow=8.4,SNR=10						
	comp=Z,4.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**50.09**	**26**	P	**P**	**17 04 41.1**	**-1.6**
MJB9				IAmb	IAmb	17 04 48.2	
	comp=Z,21nm,1.5s						
XLT	**XiLinHaoTe**	**51.78**	**2**	**eP**	**P**	**17 04 55.0**	**-0.3**
USA0B	**Ussuriysk Arra**	**54.66**	**16**	P	**P**	**17 05 13.9**	**-2.2**
USA0B				IAmb	IAmb	17 05 16.2	
	comp=Z,8.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.66**	**16**	P	**P**	**17 05 15.4**	**-0.7**
	comp=Z,6.1nm,0.7s,baz=204,slow=5.2,SNR=18						
	comp=Z,6.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**54.66**	**16**	P	**P**	**17 05 14.2**	**-1.9**
SONM	**Songino Array**	**56.01**	**354**	P	**P**	**17 05 25.5**	**-0.5**
	comp=Z,5.9nm,0.7s,baz=177,slow=8.3,SNR=36						
	comp=Z,5.9nm,0.7s						
SONM	**Songino Array**	**56.01**	**354**	P	**P**	**17 05 25.0**	**-1.0**
SONM				IAmb	IAmb	17 05 26.0	
	comp=Z,3.8nm,0.7s						
WMQ	**Urumqi**	**56.69**	**338**	**eP**	**P**	**17 05 33.1**	**+2.3**
KLR	**Kul'dur**	**59.27**	**14**	P	**P**	**17 05 46.9**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=191,slow=4.4,SNR=7.5						
	comp=Z,2.4nm,0.6s						
YSS	**Yuzh-Sakhalins**	**60.66**	**23**	P	**P**	**17 05 57.4**	**-0.6**
MKAR	**Makanchi Array**	**61.27**	**336**	P	**P**	**17 06 01.2**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=151,slow=6.3,SNR=1.5						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	**61.27**	**336**	P	**P**	**17 06 01.9**	**-0.3**
KKAR	**Karatay Array**	**64.17**	**326**	P	**P**	**17 06 19.9**	**-1.5**
BFZ	**Birch Farm**	**64.21**	**131**	P	**P**	**17 06 21.9**	**+0.1**
VOI	**Vohitsoka**	**65.43**	**250**	P	**P**	**17 06 30.1**	**-0.1**
KURBB	**Kurchatov Arra**	**65.83**	**336**	P	**P**	**17 06 30.2**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=151,slow=4.4,SNR=7.3						
	comp=Z,0.9nm,0.8s						
ZAA0	**Zalesovo Array**	**66.35**	**342**	P	**P**	**17 06 33.6**	**-1.6**
ZAA0				IAmb	IAmb	17 06 39.8	
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**66.35**	**342**	P	**P**	**17 06 34.9**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=141,slow=5.3,SNR=6.8						
	comp=Z,1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**66.35**	**342**	P	**P**	**17 06 33.5**	**-1.7**
MAW	**Mawson**	**68.31**	**199**	P	**P**	**17 06 48.9**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=49,slow=6.5,SNR=15						
	comp=Z,2.4nm,0.6s						
MAW	**Mawson**	**68.31**	**199**	P	**P**	**17 06 48.5**	**+1.2**
GEYT	**Alibeck**	**68.92**	**316**	P	**P**	**17 06 50.0**	**-1.8**
BVAR	**Borovoye Array**	**70.99**	**334**	P	**P**	**17 07 03.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=145,slow=11,SNR=8.2						
	comp=Z,0.7nm,0.7s						
YAK	**Yakutsk**	**71.02**	**8**	P	**P**	**17 07 02.5**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=122,slow=0.8,SNR=5.1						
	comp=Z,1.8nm,0.5s						
YAK	**Yakutsk**	**71.02**	**8**	P	**P**	**17 07 02.3**	**-1.6**
BRVK	**Borovoye**	**71.06**	**334**	P	**P**	**17 07 03.3**	**-1.1**
PETK	**Petropavlovsk-**	**71.55**	**26**	P	**P**	**17 07 07.2**	**-0.2**
RAYN	**Ar Rayn**	**73.41**	**297**	P	**P**	**17 07 17.0**	**-2.1**
ABKAR	**Akbulak array**	**73.72**	**327**	P	**P**	**17 07 18.7**	**-1.5**
VNDA	**Vanda**	**73.79**	**170**	P	**P**	**17 07 20.8**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=300,slow=8.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
SBA	**Scott Base**	**74.83**	**170**	P	**P**	**17 07 28.1**	**+1.9**
KIBK	**Kibwezi**	**75.25**	**270**	P	**P**	**17 07 29.6**	**-0.4**
KIBK				IAmb	IAmb	17 07 30.4	
	comp=Z,3.5nm,0.6s						
AKTO	**Aktyubinsk**	**75.42**	**327**	P	**P**	**17 07 29.5**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=99,slow=6.4,SNR=4.2						
	comp=Z,1.0nm,0.5s						
KMBO	**Kilima Mbogo**	**76.20**	**271**	P	**P**	**17 07 34.9**	**-0.7**
KMBO				IAmb	IAmb	17 07 36.5	
	comp=Z,4.2nm,1.2s						
SEY	**Seymchan**	**76.79**	**17**	P	**P**	**17 07 36.2**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=188,slow=5.0,SNR=5.8						
	comp=Z,1.9nm,0.7s						
LODK	**Lodwar**	**78.74**	**275**	P	**P**	**17 07 49.0**	**-0.4**
POGA	**Pongola**	**79.06**	**244**	P	**P**	**17 07 51.0**	**+0.2**
TIXI	**Tiksi**	**80.21**	**5**	P	**P**	**17 07 55.4**	**-0.5**
QSPA	**South Pole Qui**	**81.92**	**180**	P	**P**	**17 08 06.9**	**+1.5**
	comp=Z,1.6nm,0.7s,baz=258,slow=1.5,SNR=14						
	comp=Z,1.6nm,0.7s						
BOSA	**Boshof**	**84.64**	**242**	P	**P**	**17 08 20.5**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=126,slow=4.7,SNR=6.2						
	comp=Z,2.2nm,0.6s						
BOSA	**Boshof**	**84.64**	**242**	P	**P**	**17 08 20.1**	**0.0**
BOSA				IAmb	IAmb	17 08 20.5	
	comp=Z,16nm,1.4s						
LBTB	**Lobatse**	**84.73**	**246**	P	**P**	**17 08 20.5**	**-0.1**
LBTB				IAmb	IAmb	17 08 21.1	
	comp=Z,5.9nm,0.7s						
BRTR	**Keskin Array B**	**87.36**	**311**	P	**P**	**17 08 32.2**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=119,slow=4.8,SNR=5.8						
	comp=Z,1.0nm,0.9s						
TROLL	**Troll, Antarti**	**88.71**	**197**	P	**P**	**17 08 40.6**	**+1.6**
SNAA	**Sanae**	**90.38**	**196**	P	**P**	**17 08 48.1**	**+1.4**
SNAA	**Sanae**	**90.38**	**196**	P	**P**	**17 08 48.4**	**+1.7**
	comp=Z,1.8nm,0.7s,baz=196,slow=3.1,SNR=13						
	comp=Z,1.8nm,0.7s						
VNA2	**Neumayer--Watz**	**92.02**	**196**	P	**P**	**17 08 55.6**	**+1.3**
	baz=110,slow=3.5						
CPUP	**Villa Florida**	**144.66**	**194**	PKP	**PKPdf**	**17 15 22.3**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=143,slow=4.9,SNR=11						
BDFB	**Brasilia**	**150.15**	**218**	PKPbc	**PKPbc**	**17 15 37.4**	**+0.5**
	comp=Z,7.2nm,0.6s,baz=136,slow=2.6,SNR=7.8						
LPAZ	**La Paz**	**155.75**	**176**	PKPab	**PKPab**	**17 16 08.8**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=88,slow=1.4,SNR=8.0						

*JMA **04** 16:57:15.3±0.3, 43°.N±1°×14°.7E±°, h32km±3km, MV3.7/35, E OFF HOKKAIDO*
*SKHL **04** 16:57:17.8±0.5, 43°.50N×146°.90E, h41km±3km, mb4.3/3*
ISC 04 16:57:15.3±2.1, 43°.46N±0°.10×146°.92E±0°.08, h18km±6km, n13, σ0§55/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.86**	**264**	**eP**	**Pg**	**16 57 31.8**	**-0.4**
NEM2				eS	**Sg**	**16 57 43.9**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.88**	**265**	*i* P	**Pn**	**16 57 32.2**	**-0.4**
NMR				AMB	AMB	16 57 32.6	
	100nm,0.2s						
NMR				eS	**Sb**	**16 57 43.4**	**+0.2**
NMR				A	A	16 57 46.1	
	490nm,0.2s						
NMR				A	A	16 57 46.1	
	290nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.96**	**307**	**eP**	**Pn**	**16 57 33.7**	**-0.1**
YUK				AMB	AMB	16 57 34.2	
	380nm,0.3s						
YUK				eS	**Sb**	**16 57 45.6**	**-0.2**
YUK				A	A	16 57 50.1	
	2μm,0.5s						
YUK				A	A	16 57 50.1	
	1μm,0.5s						
JKHN	**Kushirohamanak**	**1.34**	**254**	**eP**	**Pn**	**16 57 39.0**	**0.0**
JRA	**Rausu**	**1.39**	**291**	**eP**	**Pn**	**16 57 39.9**	**+0.1**
JNSB	**Nemuroshibetsu**	**1.43**	**284**	**eP**	**Pn**	**16 57 40.4**	**+0.1**
JNSB				eS	**Sn**	**16 57 58.6**	**0.0**
AKK	**Akkeshi**	**1.58**	**255**	**eP**	**Pn**	**16 57 42.6**	**+0.2**
JNK	**Nakash**	**1.61**	**275**	**eP**	**Pn**	**16 57 42.5**	**-0.2**
JNK				eS	**Sn**	**16 58 02.6**	**-0.4**
JAK	**Akkeshi**	**1.69**	**255**	**eP**	**Pn**	**16 57 43.2**	**-0.6**
KUR	**Kuril'sk**	**1.90**	**21**	**eP**	**Pn**	**16 57 47.5**	**+0.8**
KUR				AMB	AMB	16 57 47.9	
	80nm,0.3s						
KUR				eS	**Sn**	**16 58 09.2**	**-1.0**
KUR				A	A	16 58 11.9	
	160nm,0.3s						
KUR				A	A	16 58 11.9	
	160nm,0.3s						
JTKR	**Abashiri--Toko**	**2.25**	**284**	**eP**	**Pn**	**16 57 52.6**	**+1.1**
JAR	**Ashorobuto**	**2.31**	**267**	**eP**	**Pn**	**16 57 53.0**	**+0.7**
JAR				eS	**Sn**	**16 58 20.5**	**+0.3**
JOB	**Onbets**	**2.33**	**257**	**eP**	**Pn**	**16 57 53.2**	**+0.7**
JOB				eS	**Sn**	**16 58 20.8**	**+0.1**

TAP 04 17:13:43.1, 24°.86N×121°.88E, h109km, ML2.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.04**	**267**	**eP**	Pn	17 13 58.1	0.0
	baz=266						
TIPB	**Shuangxi**	**0.12**	**337**	*i* P	Pn	17 13 58.1	-0.2
	baz=337						
TWB1	**Santiao Chiao**	**0.18**	**33**	**eP**	Pn	17 13 58.3	-0.1
	baz=36						
NWF	**Wu-fen Shan**	**0.23**	**337**	**eP**	Pn	17 13 58.5	-0.2
	baz=337						
WFSB	**Wu-fen Shan**	**0.23**	**337**	*i* P	Pn	17 13 58.5	0.0
	baz=337						
TWE	**Neicheng**	**0.23**	**235**	P	Pn	17 13 59.2	+0.6
	baz=224						
TWE				S	Sn	17 14 11.6	+1.5
	baz=224						
SXI1	**Grass Mountain**	**0.24**	**359**	**eP**	Pn	17 13 58.9	+0.2
	baz=353						
TWC	**Suao**	**0.25**	**186**	**eP**	Pn	17 14 00.2	+1.6
	baz=184						
FUSB	**Fushanzhiwuyua**	**0.28**	**250**	*i* P	Pn	17 13 59.1	+0.3
	baz=262						
FUSB				eS	Sn	17 14 10.6	0.0
	baz=262						
TWA	**Mucha**	**0.29**	**295**	**eP**	Pn	17 13 58.9	+0.1
	baz=295						
TWA				*i* S	Sn	17 14 10.9	+0.3
	baz=295						
NHDH	**Xindian Distri**	**0.34**	**288**	*i* P	Pn	17 13 59.1	+0.2
	baz=277						
NHDH				S	Sn	17 14 11.0	+0.2
	baz=277						
ENTT	**Nioudou**	**0.36**	**233**	**eP**	Pn	17 13 58.5	-0.6
	baz=241						
ENTT				eS	Sn	17 14 11.3	+0.3
	baz=241						
TATO	**Taipei**	**0.37**	**288**	**eP**	Pn	17 13 59.6	+0.5
	baz=282						
YM01	**YM01**	**0.40**	**316**	**eP**	Pn	17 13 59.4	+0.1
	baz=326						
LATG	**Datong**	**0.45**	**225**	**eP**	Pn	17 14 00.4	+0.7
	baz=231						
LATG				eS	Sn	17 14 13.0	+0.8
	baz=231						
TWS1	**Kuangyinshan**	**0.48**	**300**	P	Pn	17 14 00.5	+0.7
	baz=292						
YHNB	**Yeheng**	**0.49**	**248**	**eP**	Pn	17 14 00.0	0.0
	baz=

QIR1 *e* 17 20 33.7
comp=Z,58μm,0.2s
JHRM Jahrom 0.59 58 *e*Pg **Pg 17 20 32.8 -0.4**
JHRM *e* 17 20 47.0
comp=Z,83μm,0.3s
LMD1 Lamerd 0.86 171 *e*Pg **Pb 17 20 39.4 +1.1**
LMD1 *e* 17 21 04.4
comp=Z,24μm,0.5s
LAR1 LAR 1.31 113 *e*Pn **Pb 17 20 47.0 +0.9**
LAR1 *e* 17 21 15.6
comp=Z,31μm,0.4s
SHI Shiraz 1.51 343 *e*Pg **Pn 17 20 49.6 +1.2**
SHI *e* 17 21 13.2
comp=Z,4μm,0.5s
AHBU AHRAM 1.65 294 *e*Pn **Pn 17 20 50.4 +0.2**
AHBU *e* 17 21 19.9
comp=Z,99nm,0.4s
KAZ1 Kazerun 1.87 320 *e*Pn **Pn 17 20 54.3 +1.0**
GENO Geno 2.91 105 *e*Pn **Pn 17 21 09.1 +1.4**
GENO *e* 17 22 16.7
comp=Z,1μm,0.6s
SHMA Al-Shehemyia 2.96 219 P **Pb 17 21 13.9 -0.1**
SHMA S **Sn 17 21 45.9 +2.5**
KLNJ Kolanjah 3.07 337 *e*Pn **Pn 17 21 10.9 +0.9**
KLNJ *e* 17 22 15.5
comp=Z,960nm,0.7s
IMEH Mehriz 3.48 23 *e*Pn **Pn 17 21 17.4 +1.8**
IMEH *e* 17 22 19.1
comp=Z,297nm,0.6s
SHME Shamm 3.51 127 P **Pn 17 21 15.8 +0.1**
NGRK Negar Kerman 3.57 65 *e*Pn **Pn 17 21 18.3 +1.4**
NGRK *e* 17 22 27.8
comp=Z,401nm,0.6s
IRAM Ramesheh 3.65 352 *e*Pn **Pn 17 21 18.6 +0.7**
BANOM Banah 3.70 127 P **Pn 17 21 20.3 +1.9**
SNR=7.0
BANOM S **Sn 17 22 05.2 +3.3**
BANOM Banah 3.70 127 P **Pn 17 21 19.7 +1.2**
KHGB Koh Gabri 3.73 53 *e*Pn **Pn 17 21 20.5 +1.5**
KHGB *e* 17 22 39.9
comp=Z,352nm,0.8s
KRBR Kerman 3.74 61 *e*Pn **Pn 17 21 20.6 +1.4**
TVBK TV Kerman 3.74 61 *e*Pn **Pn 17 21 21.1 +1.9**
TVBK *e* 17 21 37.9
comp=Z,699nm,0.5s
SMRA Abu-Samra 3.95 210 P **Pn 17 21 23.2 +1.4**
MASF Masafi 3.98 134 P **Pn 17 21 24.1 +1.9**
SNR=6.9
MASF S **Sn 17 22 09.6 +0.9**
MSFE Esma-Masafi 3.98 134 P **Pn 17 21 24.1 +1.7**
IBAF Bafgh 4.05 33 *e*Pn **Pn 17 21 25.2 +1.8**
IBAF *e* 17 21 27.0
comp=Z,414nm,0.2s
ASUD Al Ashush, Dub 4.11 149 P **Pn 17 21 26.1 +2.0**
ASUD S **Sn 17 22 11.9 -0.1**
SLWR Sila 4.27 196 P **Pn 17 21 27.4 +1.2**
SLWR S **Sn 17 22 16.3 +0.4**
CHMN Cheshme madani 4.30 66 *e*Pn **Pn 17 21 28.2 +1.2**
CHMN *e* 17 22 47.8
comp=Z,242nm,0.5s
UOSS Minazif 4.32 138 P **Pn 17 21 29.7 +2.8**
UOSS S **Sn 17 22 16.3 -0.7**
UOSS Minazif 4.32 138 P **Pn 17 21 27.8 +1.0**
HATD Hatta, Dubai 4.37 139 P **Pn 17 21 29.8 +2.3**
HATD S **Sn 17 22 18.4 +0.1**
HATD Hatta, Dubai 4.37 139 P **Pn 17 21 30.4 +2.9**
YZKH Yazd 4.40 18 *e*Pn **Pn 17 21 32.3 +4.2**
ASHO Ashiyiah 4.43 141 P **Pn 17 21 29.5 +1.0**
ASHO S **Sn 17 22 19.9 -0.1**
ASHO Ashiyiah 4.43 141 P **Pn 17 21 30.8 +2.3**
ASHO S **Sn 17 22 18.1 -1.9**
MZWR Madinat Zayed 4.48 170 P **Pn 17 21 30.7 +1.6**
MZWR S **Sn 17 22 20.3 -0.8**
NASN Na'in 4.60 358 *e*Pn **Pn 17 21 32.3 +1.3**
IZEF Zefreh 4.73 353 *e*Pn **Pn 17 21 33.4 +0.7**
ALNE Al Ain 4.80 148 P **Pn 17 21 35.4 +1.9**
ALNE S **Sn 17 22 29.1 +0.1**
KBAM BAM 4.87 78 *e*Pn **Pn 17 21 37.0 +2.4**
KBAM *e* 17 21 38.6
comp=Z,469nm,0.3s
JASK Jask - Hormozg 4.91 117 *e*Pn **Pn 17 21 36.2 +1.2**
JASK Jask - Hormozg 4.91 117 P **Pn 17 21 36.2 +1.2**
JASK S **Sn 17 22 32.6 +0.9**
ANAR Anarak 5.02 7 *e*Pn **Pn 17 21 37.6 +0.9**
MZR Muzera 5.18 175 P **Pn 17 21 41.3 +2.5**
MZR S **Sn 17 22 38.3 -0.1**
MZR Muzera 5.18 175 P **Pn 17 21 40.0 +1.2**
IKLH Kolahrood 5.26 347 *e*Pn **Pn 17 21 41.4 +1.4**
ARQ Araqi 5.78 146 P **Pn 17 21 48.5 +1.5**
SNR=12
ARQ S **Sn 17 22 52.0 -1.1**
UMZA Um Al Zommool 5.79 160 P **Pn 17 21 47.9 +0.8**
UMZA S **Sn 17 22 51.2 -2.1**
KRSH Karshahi 5.81 353 *e*Pn **Pn 17 21 48.1 +0.6**
HOQ Hoqain 6.00 139 P **Pn 17 21 51.8 +1.7**
HOQ S **Sn 17 22 56.7 -1.9**
KHMZ Khomeyn 6.12 335 *e*Pn **Pn 17 21 53.4 +1.6**
TABS Tabas 6.49 32 *e*Pn **Pn 17 21 58.2 +1.4**
BSY Bisya 6.61 144 P **Pn 17 21 59.7 +1.2**
BSY S **Sn 17 23 11.0 -2.7**
ASAO Ashtian 6.83 339 *e*Pn **Pn 17 22 03.5 +1.8**
SMDO Samad 6.84 137 P **Pn 17 22 02.6 +0.9**
SNR=10.0
SMDO S **Sn 17 23 18.2 -1.1**
IDOB Doab 6.95 325 *e*Pn **Pn 17 22 03.8 +0.5**
WSAR Wadi Sarin 7.07 133 P **Pn 17 22 05.3 +0.6**
SNR=15
WSAR S **Sn 17 23 21.5 -3.5**
JMDO Jabal Madar 7.40 140 P **Pn 17 22 11.6 +2.2**
JMDO S **Sn 17 23 29.5 -3.7**
IKOM Komasi 7.60 323 *e*Pn **Pn 17 22 11.8 -0.3**
WBK Wadi Bani Khal 7.74 135 P **Pn 17 22 13.9 0.0**
WBK S **Sn 17 23 38.9 -2.6**
NGCH Negor - Chabah 7.79 109 P **Pn 17 22 15.3 +0.8**
SHRO Shahrood 8.18 17 *e*Pn **Pn 17 22 21.9 +1.8**
RAYN Ar Rayn 8.20 237 P **Pn 17 22 20.1 -0.2**
RAYN Ar Rayn 8.20 237 P **Pn 17 22 19.4 -1.0**
SNGE Sanandaj 8.40 326 *e*Pn **Pn 17 22 25.4 +2.2**
MHTO MHTO 8.47 147 P **Pn 17 22 24.9 +1.0**
DOK Doka 9.58 174 P **Pn 17 22 38.4 -0.8**
SNR=6.5
WHFO Wadi Hawf 10.25 176 P **Pn 17 22 46.8 -1.6**
ABTO Aybut 10.79 179 P **Pn 17 22 55.0 -0.8**

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*IDC **04** 17:34:04.7±1.4, 13°.65N×90°.50W, h0km, mb4.0/2, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=165.0km s-min=23.2km az=46.0*
*NEIC **04** 17:34:06.5±2.8, 13°.49N±0°.10×91°.01W±0°.07, h4km±11km, Md4.0(SNET), Error ellipse: s-maj=16.0km s-min=7.1km az=209.0*
*SNET **04** 17:34:09.1±0.8, 13°.54N×90°.81W, h8km, ML4.0*
*GCG **04** 17:34:15.0±0.5, 13°.99N×91°.00W, h58km±12km, MD4.3*
ISC 04 17:34:06.2±2.0, 13°.45N±0°.06×90°.92W±0°.05, h6km±12km, n55, σ1°.41/59, 2C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.98**	**18**	*e*P	**Pn**	**17 34 27.4**	**+0.6**
FUG	**Fuego 3**	**0.99**	**4**	‖*e*P	**Pb**	**17 34 27.3**	**+1.4**
NUBE	**Las Nubes**	**1.19**	**68**	‖*e*P	**Pg**	**17 34 28.8**	**-0.3**
NUBE				*e*S	**Sg**	**17 34 43.7**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.24**	**62**	*e*P	**Pg**	**17 34 30.0**	**0.0**
SLOZ				*e*S	**Sb**	**17 34 45.5**	**-0.8**
NBG	**Las Nubes**	**1.26**	**26**	*e*P	**Pn**	**17 34 32.3**	**+1.7**
NBG				*e*S	**Sn**	**17 34 50.1**	**+2.1**
RTAL	**Retalhuleu**	**1.31**	**325**		**Pn**	**17 34 30.3**	**-0.7**
CEVE	**Cerro Verde**	**1.31**	**73**	*e*P	**Pg**	**17 34 30.9**	**-0.4**
CEVE				*e*S	**Sn**	**17 34 48.8**	**-0.5**
RTR	**El Retiro**	**1.31**	**70**	*e*P	**Pg**	**17 34 31.2**	**-0.2**
SBLS	**San Blas**	**1.31**	**73**	⇑*e*P	**Pg**	**17 34 31.0**	**-0.4**
SNJE	**San Jose**	**1.34**	**72**	*e*P	**Pg**	**17 34 31.5**	**-0.4**
STG3	**Santiaguito 3,**	**1.40**	**333**	*e*P	**Pn**	**17 34 32.4**	**-0.2**
STG3				*e*S	**Sb**	**17 34 48.7**	**-2.5**
BOQS	**Boqueron**	**1.62**	**80**	*e*P	**Pn**	**17 34 35.9**	**+0.4**
SNET	**Serv Nac Est T**	**1.66**	**82**		**Pn**	**17 34 35.8**	**0.0**
LFU	**La Fuente**	**1.78**	**80**	*e*P	**Pn**	**17 34 38.2**	**+0.7**
MTO3	**Montecristo**	**1.78**	**58**		**Pn**	**17 34 38.1**	**+0.4**
MTO3	**Montecristo**	**1.78**	**58**	‖*e*P	**Pn**	**17 34 38.4**	**+0.6**
LFRS	**El Faro**	**1.81**	**84**	*e*P	**Pn**	**17 34 38.5**	**+0.5**
SJTE	**Alcalda de S**	**1.86**	**85**	*e*P	**Pn**	**17 34 39.4**	**+0.6**
ESQI	**Esquipulas**	**1.88**	**54**		**Pn**	**17 34 40.0**	**+1.0**
ESQI	**Esquipulas**	**1.88**	**54**	‖*e*P	**Pn**	**17 34 40.3**	**+1.2**
HUEH	**Huehuetenango**	**1.94**	**343**		**Pn**	**17 34 39.6**	**-0.3**
PAVA	**Las Pavas**	**1.94**	**82**	*e*P	**Pn**	**17 34 40.5**	**+0.6**
COEG	**Centro de Oper**	**1.99**	**85**	⇑*e*P	**Pn**	**17 34 41.3**	**+0.8**
MRL	**Marmol**	**2.01**	**36**	*e*P	**Pb**	**17 34 43.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**2.14**	**83**	*e*P	**Pn**	**17 34 43.3**	**+0.7**
COEB	**Comit de Eme**	**2.32**	**89**	*e*P	**Pn**	**17 34 46.2**	**+1.1**
PACA	**Pacayal**	**2.52**	**89**	*e*P	**Pn**	**17 34 49.0**	**+1.1**
LCND	**La Caada**	**2.95**	**92**	*e*P	**Pn**	**17 34 54.6**	**+1.0**
CNCH	**Conchagua**	**3.00**	**93**	*e*P	**Pn**	**17 34 55.6**	**+1.1**
CCIG	**Comitan**	**3.05**	**337**		**Pn**	**17 34 57.4**	**+2.2**
PETF	**Flores**	**3.59**	**16**	Pn	**Pn**	**17 35 02.9**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.59**	**80**	Pn	**Pn**	**17 35 05.4**	**+2.8**
CRIN	**San Cristobal**	**3.84**	**101**		**Pn**	**17 35 06.8**	**+0.9**
CNGN	**Cerro Negro**	**4.22**	**102**	Pn	**Pn**	**17 35 11.6**	**+0.5**
MATN	**Matagalpa**	**4.89**	**96**		**Pn**	**17 35 20.4**	**0.0**
BOAB	**BOACO BROADBAN**	**5.21**	**100**		**Pn**	**17 35 24.4**	**-0.4**
CMIG	**Matias Romero**	**5.27**	**314**	Pn	**Pn**	**17 35 25.2**	**-0.3**
	1.0nm,0.3s,baz=130,slow=11,SNR=12						
CMIG				Sn	**Sn**	**17 36 27.0**	**+0.3**
	3.0nm,0.3s,baz=124,slow=11,SNR=5.0 3.3nm,0.4s						
HZTE	**Horizontes, Gu**	**5.87**	**117**	Pn	**Pn**	**17 35 34.5**	**+0.7**
ORTG	**Ortega, Santa**	**6.16**	**119**		**Pn**	**17 35 39.5**	**+1.6**
DUNO	**Dulce Nombre,**	**6.28**	**122**		**Pn**	**17 35 42.7**	**+3.3**
JTS	**Las Juntas de**	**6.63**	**118**	Pn	**Pn**	**17 35 45.7**	**+1.4**
TEIG	**Tepich**	**7.19**	**20**		**Pn**	**17 35 53.1**	**+1.2**
JACO	**JACO, Garabito**	**7.20**	**121**	Pn	**Pn**	**17 35 56.6**	**+4.6**
RIMA	**Rio Macho**	**7.82**	**117**		**Pn**	**17 36 03.6**	**+2.8**
SRBA	**San Rafael, Bu**	**8.51**	**119**		**Pn**	**17 36 12.3**	**+2.0**
SOR	**Soroa**	**11.95**	**38**	Pn	**Pn**	**17 36 57.1**	**0.0**
TXAR	**Lajitas Array**	**19.74**	**325**	P	**P**	**17 38 38.4**	**+1.5**
	0.2nm,0.3s,baz=151,slow=12,SNR=15 1.1nm,0.6s						
BNM	**Barren Site**	**25.06**	**328**	P	**P**	**17 39 31.4**	**-0.3**
NVAR	**Mina Array Bea**	**34.76**	**321**	P	**P**	**17 40 57.7**	**0.0**
	1.7nm,0.7s,baz=135,slow=9.0,SNR=14						
NVAR				PcP	**PcP**	**17 43 32.7**	**+1.3**
	0.7nm,0.7s,baz=133,slow=5.3,SNR=4.4 1.7nm,0.7s						
SIV	**San Ignacio**	**41.55**	**134**	P	**P**	**17 41 53.0**	**-2.0**
	0.8nm,0.5s,baz=317,slow=8.2,SNR=5.8 0.8nm,0.5s						
H03N2	**Juan Fernandez**	**48.01**	**166**	T	T	18 34 15.2	
	baz=347						
H03N1	**Juan Fernandez**	**48.02**	**166**	T	T	18 34 17.8	
	baz=347						
H03N3	**Juan Fernandez**	**48.03**	**166**	T	T	18 34 17.3	
	baz=347						
MKAR	**Makanchi Array**	**119.72**	**5**	PKP	**PKPdf**	**17 52 55.0**	**-2.6**
	0.4nm,0.8s,baz=11,slow=1.5,SNR=2.6						
CMAR	**Chiang Mai Arr**	**146.84**	**343**	PKPbc	**PKPdf**	**17 53 48.5**	**-0.2**
	1.5nm,0.7s,baz=344,slow=3.2,SNR=13						

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*NNC **04** 17:43:30.8±4.2, 41°.70N×83°.55E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=27.6km s-min=11.3km az=145.0*
SOME 04 17:43:23.3, 42°.55N×84°.25E, h5km, 9C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.00**	**289**	*e*P	Pg	17 44 20.8	+0.1
	6.0nm,0.3s						
KTMS				*e*S	Sg	17 45 01.4	+1.9
	7.2nm,0.2s						
SHLS	**Shalkode**	**3.57**	**281**	*e*P	Pb	17 44 24.0	-3.0
	5.5nm,0.4s						
SHLS				*e*S	Sb	17 45 08.3	-2.4
	34nm,0.2s						
PDGK	**Podgornoye**	**3.58**	**284**	⇑Pg	Pg	17 44 34.7	+2.8
	8.7nm,0.6s						
PDGK				⇑Sn	Sb	17 45 06.8	-4.1
	7.9nm,0.6s						
PDGK				⇓Lg	Lg	17 45 20.0	
	17nm,0.7s						
DJR	**Jarkent**	**3.70**	**300**	*e*P	Pg	17 44 32.1	-2.1
	1.2nm,0.1s						
DJR				*e*S	Sg	17 45 21.4	-0.9
	3.5nm,0.3s						
UZB	**Uzynbulak**	**3.89**	**281**	*e*P	Pb	17 44 34.5	+2.0
	4.5nm,0.3s						
UZB				*e*S	Sg	17 45 26.0	-2.2
	22nm,0.6s						
KPKS	**Kokpek**	**4.18**	**285**	*e*P	Pg	17 44 41.7	-1.7
	5.5nm,0.2s						
KPKS				*e*S	Sg	17 45 38.2	+0.6
	37nm,0.3s						
SATY	**Saty**	**4.33**	**279**	*e*P	Pb	17 44 41.9	+2.0
	3.5nm,0.3s						
SATY				*e*S	Sg	17 45 38.6	-3.7
	18nm,0.7s						
MK31	**Makanchi Array**	**4.47**	**342**	Pn	Pg	17 44 49.2	+0.4
	0.1nm,0.2s,baz=177,slow=11,SNR=12						
MK31				⇑Sn	Sg	17 45 50.1	+3.4
	1.7nm,0.5s						
MK31				⇑Lg	Lg	17 46 20.3	
	7.3nm,0.6s,baz=168,slow=27,SNR=5.1						
BLB	**Baldybastay**	**4.49**	**292**	*e*P	Pg	17 44 48.8	-0.4
	9.7nm,0.3s						
BLB				*e*S	Sg	17 45 50.6	+3.3
	15nm,0.3s						
MAKZ	**Makanchi**	**4.55**	**340**	⇑Sn	Sg	17 45 52.6	+3.0
	1.3nm,0.3s						
MAKZ				⇑Lg	Lg	17 46 17.2	
	5.2nm,0.5s						
ZSN	**Zaisan**	**4.92**	**5**	*e*P	Pg	17 44 56.6	-0.9
	1.4nm,0.2s						
ZSN				*e*S	Sg	17 46 04.7	+3.5
	5.2nm,0.7s						
ARXS	**Arharly**	**4.97**	**292**	*e*P	Pg	17 44 56.5	-2.0
	3.8nm,0.6s						
ARXS				*e*S	Sg	17 46 04.3	+1.5
	7.8nm,0.5s						
MDOK	**Medeo**	**5.33**	**279**	*e*P	Pb	17 44 59.5	+2.5
	2.6nm,0.3s						
MDOK				*e*S	Sg	17 46 08.9	-5.5
	11nm,0.6s						
MDOK	**Medeo**	**5.33**	**279**	Lg	Lg	17 46 12.2	
	14nm,0.8s						
TNSS	**Tian-Shan**	**5.40**	**278**	*e*P	Pb	17 45 02.0	+3.8
	0.6nm,0.1s						
TNSS				*e*S	Sg	17 46 11.7	-4.9
	4.1nm,0.6s						
KUU	**Kurty**	**5.93**	**286**	*e*P	Pg	17 45 12.8	-4.1
	0.9nm,0.1s						
KUU				*e*S	Sg	17 46 31.6	-2.2
	3.1nm,0.2s						
KST	**Kastek**	**6.12**	**277**	*e*P	Pg	17 45 16.3	-4.1
	2.1nm,0.4s						
KST				*e*S	Sg	17 46 38.1	-1.6
	15nm,0.4s						
TKM2	**Tokmak 2**	**6.38**	**276**	⇑Lg	Lg	17 46 41.5	
	4.8nm,0.5s						
KURBB	**Kurchatov Arra**	**8.98**	**336**	⇑Lg	Lg	17 48 36.2	
	4.8nm,0.5s						
KURK	**Kurchatov**	**9.04**	**337**	⇑Lg	Lg	17 48 42.6	
	4.9nm,0.9s						

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*IDC **04** 17:44:14.6±2.6, 23°.07N×143°.25E, h117km±28km, mb3.5/6, mbtmp3.9/8, Error ellipse: s-maj=95.4km s-min=15.8km az=78.0*
*NEIC **04** 17:44:15.9±1.4, 23°.1N±0°.2×143°.1E±0°.3, h123km±19km, mb4.2/8, Error ellipse: s-maj=47.6km s-min=12.1km az=66.0*
*JMA **04** 17:44:20.8±0.6, 23°N±2°×14°3E±°, h166km, MV4.3/8, IOTO ISLANDS REGION*
ISC 04 17:44:14.0±1.2, 22°.99N±0°.07×143°.1E±0°.3, h100km, n22, σ1°.57/27, mb4.1/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**3.73**	**347**	*e*P	**Pn**	**17 45 12.6**	**+3.0**
JHH2				*e*S	**Sn**	**17 45 53.0**	**+0.4**
CBIJ	**Chichi jima**	**4.18**	**348**	*e*P	**Pn**	**17 45 19.1**	**+3.5**
CBIJ				*e*S	**Sn**	**17 46 03.6**	**+0.2**
JCJ	**Chichijima**	**4.18**	**348**	P	**Pn**	**17 45 15.8**	**+0.1**
JCJ				S	**Sn**	**17 46 03.5**	**+0.1**
	68nm,0.3s,baz=286,slow=24,SNR=11						
JCJ	**Chichijima**	**4.18**	**348**		**Pn**	**17 45 17.6**	**+2.0**
JCJ				Sn	**Sn**	**17 46 00.3**	**-3.1**
JHS	**Saijyo**	**14.82**	**326**	Pn	**Pn**	**17 47 38.3**	**-0.1**
JMM	**Marumori**	**14.96**	**353**	Pn	**Pn**	**17 47 38.9**	**-1.3**
KSRS	**Korea Array**	**19.46**	**321**	P	**P**	**17 48 34.1**	**+1.3**
	1.0nm,0.6s,baz=136,slow=11,SNR=4.4						
WB0	**Warramunga Arr**	**43.34**	**192**	P	**P**	**17 52 06.1**	**-0.3**
WB0				IAmb	IAmb	17 52 24.1	
	comp=Z,5.8nm,1.1s						
WR0	**Warramunga Arr**	**43.50**	**192**	P	**P**	**17 52 07.2**	**-0.5**
WRAB	**Tennant Creek**	**43.51**	**192**	P	**P**	**17 52 07.6**	**-0.2**
WRAB				IAmb	IAmb	17 52 09.3	
	comp=Z,3.7nm,0.8s						
WB2	**Warramunga Arr**	**43.52**	**192**	P	**P**	**17 52 07.6**	**-0.2**
WB2				IAmb	IAmb	17 52 09.4	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**43.52**	**192**	P	**P**	**17 52 07.5**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=15,slow=9.1,SNR=42						
WRA				PcP	**PP**	**17 53 53.7**	**+2.5**
	comp=Z,0.4nm,0.9s,baz=13,slow=3.3,SNR=1.1 comp=Z,0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**44.26**	**204**	P	**P**	**17 52 13.0**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=23,slow=7.9,SNR=13 comp=Z,0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**44.26**	**204**	P	**P**	**17 52 13.2**	**-0.6**
FITZ				IAmb	IAmb	17 52 39.2	
	comp=Z,5.3nm,1.2s						
AS31	**Alice Springs**	**47.23**	**192**	P	**P**	**17 52 36.1**	**-1.0**
ASAR	**Alice Springs**	**47.23**	**192**	P	**P**	**17 52 36.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=11,slow=6.4,SNR=18 comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**47.23**	**192**	P	**P**	**17 52 36.3**	**-0.9**
MKAR	**Makanchi Array**	**53.79**	**312**	P	**P**	**17 53 25.0**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=90,slow=8.1,SNR=2.0 comp=Z,0.3nm,0.6s						
STKA	**Stephens Creek**	**54.57**	**182**	P	**P**	**17 53 33.0**	**+1.0**
FORT	**Forrest**	**55.38**	**196**	P	**P**	**17 53 36.4**	**-1.4**
KURBB	**Kurchatov Arra**	**56.55**	**316**	P	**P**	**17 53 44.3**	**-1.7**
	comp=Z,1.6nm,0.3s,baz=97,slow=7.3,SNR=2.4 comp=Z,1.6nm,0.3s						
BVAR	**Borovoye Array**	**61.66**	**319**	P	**P**	**17 54 19.7**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=105,slow=6.7,SNR=7.1 comp=Z,0.8nm,0.5s						

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*IDC **04** 18:11:45.2±2.0, 7°.40S×130°.12E, h59km±20km, mb3.5/4, mbtmp4.1/9, ML4.2/5, Error ellipse: s-maj=27.5km s-min=14.8km az=113.0*
*NEIC **04** 18:11:50.1±2.1, 7°.66S±0°.05×129°.97E±0°.07, h108km±12km, mb4.1/7, Error ellipse: s-maj=12.1km s-min=5.4km az=121.0*
ISC 04 18:11:49.5±0.7, 7°.66S±0°.06×129°.99E±0°.05, h100km, n47, σ2°.55/56, mb4.0/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.34**	**104**	Pn	**Pn**	**18 12 15.7**	**+1.9**
SAUI				Sn	**Sn**	**18 12 30.9**	**-1.3**
BNDI	**Bandanaira**	**3.11**	**358**	P	**Pn**	**18 12 35.2**	**-1.6**
FAKI	**Fak Fak**	**5.22**	**26**	Pn	Pn	18 12 59.9	-5.3
FAKI				Sn	Sn	18 13 52.3	-12
MTN	**Manton Dam**	**5.28**	**168**		**Pn**	**18 13 08.4**	**+2.4**
MTN				Sn	**Sn**	**18 14 07.7**	**+2.1**
SOEI	**Soe**	**6.03**	**249**		**Pn**	**18 13 17.2**	**+0.9**
SOEI				Sn	**Sn**	**18 14 24.3**	**+0.2**
SOEI	**Soe**	**6.03**	**249**	P	**Pn**	**18 13 17.6**	**+1.3**
	27nm,0.6s						
BATI	**Baumata**	**6.74**	**247**	P	**Pn**	**18 13 26.6**	**+0.6**
	10nm,0.3s,baz=90,slow=12,SNR=27						
BATI				S	**Sn**	**18 14 42.5**	**+1.2**
	25nm,0.4s,baz=107,slow=19,SNR=6.3 21nm,0.4s						
SIJI	**Sorong**	**6.86**	**11**	P	Pn	18 13 20.8	-6.8
	3.0nm,0.3s,baz=180,slow=20,SNR=56						
SIJI				S	Sn	18 14 32.7	-12
	16nm,0.2s,baz=180,slow=20,SNR=7.9 12nm,0.2s						
MMRI	**Maumere**	**7.73**	**262**	Pn	**Pn**	**18 13 35.2**	**-4.2**
MMRI	**Maumere**	**7.73**	**262**	P	**Pn**	**18 13 41.0**	**+1.6**
	18nm,0.8s						
KNRA	**Kununurra**	**8.06**	**188**		**Pn**	**18 13 45.0**	**+1.1**
KNRA				Sn	**Sn**	**18 15 12.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**11.21**	**202**	P	**Pn**	**18 14 25.4**	**-1.3**
	2.4nm,0.3s,baz=21,slow=9.3,SNR=73						
FITZ				S	**Sn**	**18 16 27.6**	**-2.4**
	9.5nm,0.4s,baz=72,slow=20,SNR=13 6.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**11.21**	**202**	P	**Pn**	**18 14 26.1**	**-0.6**
	11nm,0.6s						
PLAI	**Plampang**	**12.14**	**264**	P	**Pn**	**18 14 40.1**	**+1.0**
	23nm,1.0s						
WB0	**Warramunga Arr**	**12.78**	**161**		**Pn**	**18 14 46.8**	**-0.7**
WB0					**Sn**	**18 17 03.8**	**-4.3**
WRAB	**Tennant Creek**	**12.92**	**161**	P	**Pn**	**18 14 49.1**	**-0.3**
	5.2nm,1.4s						
WRA	**Warramunga Arr**	**12.92**	**161**	P	**Pn**	**18 14 48.4**	**-1.0**
	1.0nm,0.3s,baz=341,slow=14,SNR=53						
WRA				S	**Sn**	**18 17 05.8**	**-5.8**
	9.3nm,0.7s,baz=343,slow=23,SNR=9.7 1.8nm,0.3s						
WRA	**Warramunga Arr**	**12.92**	**161**		**Pn**	**18 14 46.8**	**-2.6**
WRA					**Sn**	**18 17 08.4**	**-3.2**
WB2	**Warramunga Arr**	**12.93**	**161**	Pn	**Pn**	**18 14 48.4**	**-1.1**
WB2					**Sn**	**18 17 06.4**	**-5.4**
WB1	**Warramunga Ar.**	**12.94**	**161**	P	**Pn**	**18 14 49.3**	**-0.4**
WR0	**Warramunga Arr**	**13.00**	**161**	Pn	**Pn**	**18 14 49.3**	**-1.2**
WR0					**Sn**	**18 17 08.3**	**-5.3**
COEN	**Coen**	**14.38**	**117**	Pn	**Pn**	**18 15 08.2**	**-0.2**
COEN	**Coen**	**14.38**	**117**	P	**Pn**	**18 15 09.6**	**+1.1**
	16nm,1.7s						
QIS	**Mount Isa**	**15.85**	**145**	P	**Pn**	**18 15 27.9**	**+0.9**
	7.4nm,0.8s						
AS31	**Alice Springs**	**16.36**	**167**		**Pn**	**18 15 33.2**	**-0.1**
ASAR	**Alice Springs**	**16.36**	**167**	P	**P**	**18 15 34.2**	**-0.2**
	0.7nm,0.3s,baz=347,slow=11,SNR=60						
ASAR				S	**Sn**	**18 18 33.9**	**-0.9**
	1.6nm,0.6s,baz=352,slow=25,SNR=6.3 2.6nm,0.6s						
ASAR	**Alice Springs**	**16.36**	**167**		**Pn**	**18 15 33.6**	**+0.3**
AS01	**Alice Springs**	**16.37**	**167**	P	**P**	**18 15 34.1**	**-0.4**
	7.4nm,0.8s						
MBWA	**Marble Bar**	**16.69**	**215**		**Pn**	**18 15 36.2**	**-1.1**
MBWA				IAmb	IAmb	18 16 21.1	
	comp=Z,24nm,1.4s						
MBWA	**Marble Bar**	**16.69**	**215**	P	**P**	**18 15 40.7**	**+2.7**
	comp=Z,5.3nm,0.9s						
PSA00	**Pilbara Seismi**	**16.95**	**214**		**Pn**	**18 15 39.2**	**-1.4**
PSA00				IAmb	IAmb	18

Error ellipse: s-maj=3.6km s-min=2.6km az=8.9, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**0.31**	**202**	‖Pg	Pg	19 09 26.8	+1.0
KNGR				Sg	Sg	19 09 29.9	0.0
ERNS	**Erzin**	**1.74**	**250**	Pg	Pb	19 09 52.2	-0.1
ERNS				Sg	Sg	19 10 16.3	+0.6
KZLR	**Kyzyl**	**2.20**	**293**	Pg	Pg	19 10 02.5	+0.7
KZLR				Sg	Sg	19 10 32.9	+2.5
MOY	**Mondy**	**2.21**	**68**	Pg	Pg	19 10 02.6	+0.5
MOY				Sg	Sg	19 10 32.7	+2.0
ZAK	**Zakamensk**	**3.59**	**96**	Pn	Pn	19 10 19.6	+3.5
ZAK				Pg	Pg	19 10 26.9	-1.6
ZAK				Sg	Sg	19 11 13.2	-1.8
DJOS	**Djoyskaya Sosn**	**4.35**	**298**	Pg	Pg	19 10 45.5	+2.4
DJOS				Sg	Sg	19 11 44.9	+5.5
CERR	**Cheremushki**	**4.36**	**299**	Pg	Pg	19 10 45.8	+2.5
CERR				Sg	Sg	19 11 41.2	+1.4
DJO	**Djoy, Khakassi**	**4.45**	**298**	Pn	Pn	19 10 31.6	+3.8
DJO				Pg	Pg	19 10 45.4	+0.5
DJO				Sg	Sg	19 11 41.8	-0.6
MINR	**Mina**	**4.54**	**334**	Pg	Pg	19 10 49.9	+3.2
MINR				Sg	Sg	19 11 54.6	+9.1
GZLN	**Zheleznogorsk**	**5.98**	**339**	Pg	Pg	19 11 13.3	-0.8
GZLN				Sg	Sg	19 12 34.7	+3.2
CUR	**Chagan-Uzun**	**6.02**	**266**	Pn	Pn	19 10 52.8	+3.2
CUR				Pg	Pg	19 11 16.0	+0.9
CUR				Sg	Sg	19 12 34.1	+1.1
LUZB	**Luzhba, Kemero**	**6.07**	**301**	Sg	Sg	19 12 33.5	-1.1
ULGR	**Ulagan, Altay**	**6.19**	**271**	Pn	Pn	19 10 59.7	+7.9
ULGR				Pg	Pg	19 11 16.2	-2.1
ULGR				Sg	Sg	19 12 34.0	-4.4
TASR	**Tashtagol**	**6.37**	**291**	Sg	Sg	19 12 42.7	-1.5
CHBI	**Chibit, Altay**	**6.52**	**269**	Sg	Sg	19 12 49.5	+0.5
ARTR	**Artybash**	**6.59**	**282**	Sg	Sg	19 12 47.3	-4.0
DGZ	**Jazzator, Alta**	**6.69**	**264**	Sg	Sg	19 12 52.5	-1.9
ULN	**Ulaanbaatar**	**6.81**	**113**	Sg	Sg	19 12 53.2	-5.3

*KRSC **04** 19:50:20.8±2.0, 51°.61N×155°.30E, h348km±15km, ML4.4*
*MOS **04** 19:50:21.5±1.2, 51°.94N×154°.84E, h347km, mb3.8/2, Error ellipse: s-maj=15.0km s-min=9.2km az=61.2*
*IDC **04** 19:50:21.8±1.6, 51°.97N×154°.43E, h326km±15km, mb3.1/11, mbtmp3.7/13, Error ellipse: s-maj=18.5km s-min=13.4km az=2.0*

ISC 04 19:50:22.2±0.6, 51°.86N±0°.07×154°.89E±0°.07, h350km, n61, σ2°54/76, mb3.3/13, 3C-7D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.41**	**146**	PN	**Pn**	**19 51 07.5**	**-2.3**
SKR				S	**S**	**19 51 43.0**	**-5.0**
SKR	**Severo-Kuril's**	**1.41**	**146**	*eP*	**Pn**	**19 51 07.5**	**-2.3**
SKR				*eS*	**S**	**19 51 43.0**	**-5.0**
APC	**Apacha**	**1.75**	**52**	PN	**Pn**	**19 51 10.5**	**-1.2**
APC				S	**S**	**19 51 47.2**	**-4.3**
APC	**Apacha**	**1.75**	**52**	*eP*	**Pn**	**19 51 10.5**	**-1.2**
APC				*eS*	**S**	**19 51 47.2**	**-4.3**
KDTR	**Khodutka, Kamc**	**1.98**	**90**	PN	**Pn**	**19 51 11.5**	**-1.7**
KDTR				S	**S**	**19 51 48.9**	**-5.4**
KDTR	**Khodutka, Kamc**	**1.98**	**90**	*eP*	**Pn**	**19 51 11.5**	**-1.7**
KDTR				*eS*	**S**	**19 51 48.9**	**-5.4**
GRL	**Gorelyy**	**2.08**	**69**	*eS*	**S**	**19 51 53.7**	**-2.1**
MTVR	**Mutnovka**	**2.12**	**72**	*eS*	**S**	**19 51 54.5**	**-1.9**
PEA0B	**Petropavlovsk-**	**2.12**	**53**	‖*e*PN	**Pn**	**19 51 13.4**	**-0.8**
PETK	**Petropavlovsk-**	**2.12**	**53**	P	**Pn**	**19 51 12.7**	**-1.6**
PETK	7.5nm,0.6s,baz=222,slow=5.1,SNR=23			S	S	19 51 38.1	-18
	2.4nm,0.3s,baz=129,slow=3.2,SNR=8.6						
RUS	**Russkaya**	**2.31**	**74**	PN	**Pn**	**19 51 14.3**	**-1.3**
RUS				S	**S**	**19 51 54.9**	**-3.7**
RUS	**Russkaya**	**2.31**	**74**	*eP*	**Pn**	**19 51 14.3**	**-1.3**
RUS				*eS*	**S**	**19 51 54.9**	**-3.7**
GNL	**Ganaly**	**2.61**	**44**	PN	**Pn**	**19 51 17.3**	**-0.8**
GNL	**Ganaly**	**2.61**	**44**	*eP*	**Pn**	**19 51 17.3**	**-0.8**
KOK	**Koryaka**	**2.70**	**56**	PN	**Pn**	**19 51 19.4**	**+0.5**
KOK	**Koryaka**	**2.70**	**56**	*eP*	**Pn**	**19 51 19.4**	**+0.5**
KRX	**Arik**	**2.74**	**55**	PN	**Pn**	**19 51 19.1**	**-0.2**
KRX	**Arik**	**2.74**	**55**	*eP*	**Pn**	**19 51 19.1**	**-0.2**
UGLR	**Uglovaya**	**2.76**	**59**	*eS*	**S**	**19 52 05.0**	**-0.5**
KRER	**Koryakskii**	**2.76**	**57**	PN	**Pn**	**19 51 20.4**	**+0.9**
KRER	**Koryakskii**	**2.76**	**57**	*eP*	**Pn**	**19 51 20.4**	**+0.9**
SMAR	**Somma**	**2.77**	**58**	PN	**Pn**	**19 51 20.1**	**+0.5**
SMAR	**Somma**	**2.77**	**58**	*eP*	**Pn**	**19 51 20.1**	**+0.5**
SDLR	**Sedlovina**	**2.82**	**58**	PN	**Pn**	**19 51 20.3**	**+0.3**
SDLR	**Sedlovina**	**2.82**	**58**	*eP*	**Pn**	**19 51 20.3**	**+0.3**
NLC	**Nalytchevo**	**3.02**	**63**	PN	**Pn**	**19 51 21.4**	**-0.1**
NLC	**Nalytchevo**	**3.02**	**63**	*eP*	**Pn**	**19 51 21.4**	**-0.1**
SPN	**Mys Shipunski**	**3.38**	**66**	PN	**Pn**	**19 51 23.6**	**-1.2**
SPN				S	**S**	**19 52 09.8**	**-5.6**
SPN	**Mys Shipunski**	**3.38**	**66**	*eP*	**Pn**	**19 51 23.6**	**-1.2**
SPN				*eS*	**S**	**19 52 09.8**	**-5.6**
TUMR	**Tumrok**	**4.64**	**40**	PN	**Pn**	**19 51 38.1**	**+0.2**
TUMR	**Tumrok**	**4.64**	**40**	*eP*	**Pn**	**19 51 38.1**	**+0.2**
KBTR	**Krutoberegovo**	**6.38**	**44**	PN	**Pn**	**19 51 55.9**	**-1.3**
KBTR				S	**S**	**19 53 09.4**	**-5.0**
KBTR	**Krutoberegovo**	**6.38**	**44**	*eP*	**Pn**	**19 51 55.9**	**-1.3**
KBTR				*eS*	**S**	**19 53 09.4**	**-5.0**
BKI	**Bering**	**7.41**	**59**	PN	**Pn**	**19 52 09.8**	**+0.8**
BKI				S	**S**	**19 53 30.9**	**-5.2**
BKI	**Bering**	**7.41**	**59**	*eP*	**Pn**	**19 52 09.8**	**+0.8**
BKI				*eS*	**S**	**19 53 30.9**	**-5.2**
SEY	**Seymchan**	**11.18**	**354**	P	**Pn**	**19 52 53.7**	**-0.1**
	1.4nm,0.6s,baz=183,slow=17,SNR=4.8						
ERM	**Erimo**	**12.68**	**224**	‖*e*PN	**Pn**	**19 53 12.3**	**+0.4**
KLR	**Kul'dur**	**14.93**	**269**	P	**Pn**	**19 53 37.6**	**-0.4**
	4.7nm,0.7s,baz=69,slow=12,SNR=15						
KLR	**Kul'dur**	**14.93**	**269**	‖*iP*	**Pn**	**19 53 39.2**	**+1.2**
YAK	**Yakutsk**	**16.99**	**317**	P	**Pn**	**19 53 60.0**	**-1.7**
	8.7nm,0.5s,baz=283,slow=0.7,SNR=12						
YAK	**Yakutsk**	**16.99**	**317**	‖*eP*	**Pn**	**19 54 00.7**	**-1.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.6s						
MAJO	**Matsushiro**	**19.36**	**224**	⇑*eP*	**P**	**19 54 25.3**	**+1.9**
ILAR	**Eielson Array**	**31.92**	**44**	P	**P**	**19 56 17.6**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=271,slow=9.5,SNR=7.9						
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**31.92**	**44**	*eP*	**P**	**19 56 17.3**	**+1.4**
DGZ	**Jazzator, Alta**	**41.32**	**295**	‖*eP*	**P**	**19 57 35.7**	**+1.0**
KURK	**Kurchatov**	**45.64**	**300**	*deP*	**P**	**19 58 07.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KURBB	**Kurchatov Arra**	**45.74**	**300**	P	**P**	**19 58 09.0**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=62,slow=7.8,SNR=12						
	comp=Z,1.4nm,0.6s						
MK31	**Makanchi Array**	**45.78**	**294**	*c iP*	**P**	**19 58 09.3**	**-0.5**
MKAR	**Makanchi Array**	**45.78**	**294**	P	**P**	**19 58 09.2**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=62,slow=7.2,SNR=14						
MKAR				PcP	**PcP**	**19 59 39.2**	**-1.4**
	comp=Z,0.1nm,0.5s,baz=54,slow=3.5,SNR=1.4						
	comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**48.62**	**307**	P	**P**	**19 58 30.8**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=52,slow=9.3,SNR=5.8						
	comp=Z,0.8nm,0.6s						
ARU	**Arti**	**52.10**	**316**	P	**P**	**19 58 56.5**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=63,slow=6.8,SNR=5.9						
	comp=Z,1.7nm,0.3s						
ARU	**Arti**	**52.10**	**316**	*c iP*	**P**	**19 58 56.1**	**-0.9**
ARU						20 00 59.5	
ARU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KK31	**Karatay Array**	**54.64**	**297**	P	**P**	**19 59 11.9**	**-3.7**
	comp=Z,0.2nm,0.2s,baz=169,slow=13,SNR=22						
KK31				‖S	S	20 00 10.6	-377
	comp=Z,0.4nm,0.3s,baz=164,slow=23,SNR=6.2						
NVAR	**Mina Array Bea**	**59.16**	**66**	P	**P**	**19 59 51.6**	**+4.3**
	comp=Z,0.3nm,0.5s,baz=280,slow=7.1,SNR=2.1						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**60.89**	**57**	P	**P**	**20 00 02.1**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=325,slow=1.4,SNR=7.9						
	comp=Z,0.7nm,0.7s						
AKASG	**Malin Array Be**	**67.94**	**326**	P	**P**	**20 00 43.5**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=29,slow=6.6,SNR=4.4						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**73.72**	**200**	P	**P**	**20 01 20.1**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=17,slow=6.2,SNR=5.3						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**73.72**	**200**	*eP*	**P**	**20 01 20.7**	**+2.2**
TXAR	**Lajitas Array**	**74.04**	**63**	P	**P**	**20 01 23.8**	**+3.3**
	comp=Z,0.5nm,0.6s,baz=304,slow=5.3,SNR=6.8						
	comp=Z,0.5nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**77.42**	**200**	P	**P**	**20 01 41.9**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=10,slow=5.2,SNR=8.0						
	comp=Z,0.5nm,0.6s						
PLCA	**Paso Flores**	**147.20**	**88**	PKPbc	**PKPab**	**20 09 27.0**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=299,slow=10,SNR=1.7						

*IDC **04** 20:24:43.2±0.7, 58°.70S×25°.17W, h0km, mb4.2/8, mbtmp4.2/8, MS3.3/4, Error ellipse: s-maj=25.7km s-min=19.9km az=76.0*
*NEIC **04** 20:24:45.0±1.3, 58°.92S±0°.08×24°.9W±0°.2, h10km±1km, mb4.3/10, Error ellipse: s-maj=18.2km s-min=12.7km az=252.0*

ISC 04 20:24:45.9±0.6, 58°.90S±0°.09×24°.9W±0°.1, h18km, n51, σ1°76/49, mb4.2/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.88**	**301**	Pn	Pn	20 26 43.4	+3.9
ORCD	**Orcadas**	**10.15**	**251**	Pn	**Pn**	**20 27 11.0**	**+0.6**
VNA1	**Neumayer--Stat**	**13.69**	**156**	P	**Pn**	**20 28 00.1**	**+1.4**
VNA1				S	Sn	20 30 21.9	-8.1
VNA3	**Neumayer Olymp**	**13.89**	**159**	P	**Pn**	**20 28 02.1**	**+0.6**
VNA3				S	Sn	20 30 20.7	-14
VNA2	**Neumayer--Watz**	**14.08**	**156**	P	**Pn**	**20 28 05.0**	**+0.9**
	baz=321,slow=14						
VNA2				S	Sn	20 30 30.0	-10
SNAA	**Sanae**	**15.63**	**154**	P	**Pn**	**20 28 23.1**	**-1.9**
SNAA				S	Sn	20 31 07.3	-10
SNAA	**Sanae**	**15.63**	**154**	Pn	**Pn**	**20 28 22.4**	**-2.6**
	2.1nm,0.3s,baz=328,slow=13,SNR=38						
SNAA				Sn	**Sn**	**20 31 08.8**	**-8.7**
	0.2nm,0.3s,baz=327,slow=19,SNR=3.2						
SNAA				LR	LR	20 33 37.9	
	comp=Z,69nm,18.8s,baz=194,slow=34						
SNAA	**Sanae**	**15.63**	**154**		**Pn**	**20 28 26.7**	**+1.7**
SNAA				IAmb	IAmb	20 28 36.4	
	comp=Z,7.7nm,0.6s						
SNAA				Sn	Sn	20 31 06.2	-11
SNAA				PcP	**PcP**	**20 33 25.3**	**+0.2**
TROLL	**Troll, Antarti**	**17.15**	**151**	P	**P**	**20 28 47.1**	**+1.2**
PMSA	**Palmer Station**	**19.13**	**236**	LR	LR	20 34 38.0	
	comp=Z,70nm,18.4s,baz=89,slow=31						
BELA	**Belgrano 2**	**19.34**	**186**	P	**P**	**20 29 09.6**	**-0.3**
BELA				IAmb	IAmb	20 29 51.1	
	comp=Z,8.5nm,0.6s						
QSPA	**South Pole Qui**	**31.35**	**180**	P	**P**	**20 31 07.1**	**+2.1**
	comp=Z,2.9nm,0.6s,baz=201,slow=12,SNR=29						
	comp=Z,2.9nm,0.6s						
QSPA	**South Pole Qui**	**31.35**	**180**	P	**P**	**20 31 06.4**	**+1.3**
QSPA				IAmb	IAmb	20 31 07.6	
	comp=Z,3.3nm,0.7s						
PLCA	**Paso Flores**	**33.76**	**282**	P	**P**	**20 31 24.6**	**-1.7**
	comp=Z,2.7nm,1.0s,baz=153,slow=8.3,SNR=2.9						
	comp=Z,2.7nm,1.0s						
PLCA	**Paso Flores**	**33.76**	**282**	P	**P**	**20 31 24.7**	**-1.6**
GO06	**Curarrehue**	**35.09**	**283**	P	**P**	**20 31 36.6**	**-1.2**
GO06				IAmb	IAmb	20 31 53.1	
	comp=Z,6.7nm,1.2s						
MAW	**Mawson**	**37.14**	**141**	P	**P**	**20 31 56.9**	**+2.0**
	comp=Z,1.3nm,0.7s,baz=253,slow=10,SNR=6.1						
	comp=Z,1.3nm,0.7s						
MAW	**Mawson**	**37.14**	**141**	P	**P**	**20 31 55.0**	**+0.1**
SBA	**Scott Base**	**43.31**	**184**	P	**P**	**20 32 49.4**	**+3.5**
VNDA	**Vanda**	**43.77**	**182**	P	**P**	**20 32 52.1**	**+2.5**
	comp=Z,2.7nm,0.7s,baz=179,slow=8.1,SNR=25						
	comp=Z,2.7nm,0.7s						
VNDA	**Vanda**	**43.77**	**182**	P	**P**	**20 32 51.1**	**+1.5**
VNDA				IAmb	IAmb	20 32 53.0	
	comp=Z,3.7nm,0.8s						
BOSA	**Boshof**	**45.61**	**71**	P	**P**	**20 33 05.6**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=209,slow=8.4,SNR=5.1						
	comp=Z,1.3nm,0.5s						
BOSA	**Boshof**	**45.61**	**71**	P	**P**	**20 33 05.8**	**+0.8**
BOSA				IAmb	IAmb	20 33 46.4	
	comp=Z,13nm,1.4s						
LPAZ	**La Paz**	**53.02**	**305**	P	**P**	**20 34 01.4**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=135,slow=4.3,SNR=4.0						
	comp=Z,0.8nm,0.5s						
NNA	**Nana**	**60.69**	**298**	LR	LR	20 59 21.3	
	comp=Z,17nm,21.0s,baz=67,slow=34						
TOA0	**Torodi Ar. Sit**	**74.99**	**27**	P	**P**	**20 36 26.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**74.99**	**27**	P	**P**	**20 36 26.2**	**+0.4**
	comp=Z,4.2nm,0.6s,baz=198,slow=6.3,SNR=42						
TORD				LR	LR	21 02 07.4	
	comp=Z,35nm,19.9s,baz=216,slow=30						
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**95.89**	**161**	P	**P**	**20 38 11.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=183,slow=4.6,SNR=6.6						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**122.86**	**299**	PKP	**PKPdf**	**20 43 38.9**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=116,slow=6.1,SNR=3.7						
FINES	**FINESS Array B**	**126.34**	**28**	PKP	**PKPdf**	**20 43 45.4**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=222,slow=6.6,SNR=11						
ARCES	**ARCESS Array B**	**133.14**	**22**	PKP	**PKPdf**	**20 43 57.6**	**-1.0**
	comp=Z,3.0nm,0.8s,baz=222,slow=1.2,SNR=7.1						
YKA	**Yellowknife Ar**	**139.09**	**315**	PKP	**PKPdf**	**20 44 09.4**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=137,slow=1.8,SNR=7.1						
ZALV	**Zalesovo Beam**	**142.46**	**66**	PKhKP	PKPpre	20 44 13.6	
	comp=Z,0.4nm,0.4s,baz=155,slow=4.8,SNR=2.4						
A36M	**Sachs Harbour**	**147.27**	**326**		**PKPbc**	**20 44 26.1**	**-0.2**
SONM	**Songino Array**	**149.59**	**90**	PKPbc	**PKiKP**	**20 44 33.5**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=214,slow=2.8,SNR=9.3						
M27K	**Edge Creek, AK**	**149.98**	**304**	PKPbc	**PKiKP**	**20 44 33.7**	**-0.9**
VRDI	**Verde Repeater**	**150.23**	**301**		**PKPbc**	**20 44 34.0**	**-0.4**
K27K	**Chicken**	**150.66**	**307**	PKPbc	**PKiKP**	**20 44 34.9**	**-0.9**
N25K	**Chitina, Valde**	**150.88**	**301**		**PKiKP**	**20 44 36.1**	**-0.4**
J26L	**Joseph Creek**	**151.43**	**307**		**PKiKP**	**20 44 37.1**	**-0.4**
SCRK	**Sand Creek**	**151.44**	**306**		**PKiKP**	**20 44 37.2**	**-0.4**
RIDG	**Independent Ri**	**151.73**	**306**		**PKiKP**	**20 44 37.9**	**-0.2**
J25K	**Salcha River,**	**152.21**	**307**		**PKiKP**	**20 44 38.4**	**-0.7**
PRP	**Porcupine Dome**	**152.51**	**309**		**PKiKP**	**20 44 39.2**	**-0.6**
DHY	**Denali Highway**	**152.61**	**303**		**PKiKP**	**20 44 39.5**	**-0.6**
SML	**Sawmill**	**152.62**	**300**		**PKiKP**	**20 44 39.3**	**-0.6**
IL31		**152.88**	**307**		**PKiKP**	**20 44 40.1**	**-0.1**
ILAR	**Eielson Array**	**152.88**	**307**	PKPbc	**PKiKP**	**20 44 39.9**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=147,slow=4.2,SNR=23						
WRH	**Wood River Hil**	**153.30**	**306**		**PKiKP**	**20 44 40.6**	**-0.6**
MCK	**McKinley**	**153.47**	**304**		**PKPbc**	**20 44 40.6**	**-1.0**
TOLK	**Toolik Lake Re**	**154.62**	**315**		**PKiKP**	**20 44 43.7**	**-0.2**

*ISK **04** 20:42:07.8, 38°.33N×22°.18E, h5km±1km, ML3.3/27*
*IDC **04** 20:42:09.5±1.0, 38°.30N×22°.27E, h0km, mb3.6/7, mbtmp3.6/11, ML2.9/3, MS3.4/1, Error ellipse: s-maj=19.7km s-min=16.4km az=155.0*
*THE **04** 20:42:10.5, 38°.29N×22°.16E, h8km, ML3.7/8, Error ellipse: s-maj=0.8km s-min=0.5km az=259.0*
*ATH **04** 20:42:10.4, 38°.29N×22°.15E, h11km±1km, ML3.5/17, Error ellipse: s-maj=1.4km s-min=0.6km az=278.0*

ISC 04 20:42:10.5±0.8, 38°.29N±0°.02×22°.18E±0°.02, h7km±5km, n133, σ0°93/161, mb3.6/6, 19C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIK	**Aliki, Aigiali**	**0.06**	**240**	P	**Pg**	**20 42 12.3**	**+0.1**
ALIK				S	**Sg**	**20 42 14.0**	**+0.6**
SERG	**Sergoula**	**0.15**	**322**	P	**Pg**	**20 42 13.4**	**-0.4**
SERG				S	**Sg**	**20 42 15.9**	**-0.1**
	69μm,0.2s						
SERG	**Sergoula**	**0.15**	**322**	P	**Pg**	**20 42 13.3**	**-0.4**
SERG				S	**Sg**	**20 42 16.0**	**+0.1**
SERG				AML	AML	20 42 16.1	
SERG				AML	AML	20 42 16.2	
LAKA	**Lakka**	**0.17**	**252**	P	**Pg**	**20 42 13.7**	**-0.2**
LAKA				S	**Sg**	**20 42 16.5**	**+0.3**
	42μm,0.3s						
LAKA	**Lakka**	**0.17**	**252**	P	**Pg**	**20 42 13.7**	**-0.2**
LAKA				S	**Sg**	**20 42 16.6**	**+0.4**
LAKA				AML	AML	20 42 24.0	
LAKA				AML	AML	20 42 25.0	
KLV	**Kalavryta, Ach**	**0.25**	**185**	P	**Pg**	**20 42 15.4**	**-0.1**
KLV				S	**Sg**	**20 42 19.1**	**+0.3**
KLV	**Kalavryta, Ach**	**0.25**	**185**	P	**Pg**	**20 42 15.4**	**-0.1**
EFP	**Efpalio**	**0.25**	**302**	P	**Pg**	**20 42 15.1**	**-0.4**
EFP				S	**Sg**	**20 42 19.1**	**+0.2**
	19μm,0.4s						
EFP	**Efpalio**	**0.25**	**302**	P	**Pg**	**20 42 15.1**	**-0.4**
EFP				S	**Sg**	**20 42 18.9**	**0.0**
EFP				AML	AML	20 42 19.5	
	comp=E,49357μm,0.3s						
EFP				AML	AML	20 42 30.5	
	comp=N,26608μm,0.5s						
UPR	**University Cam**	**0.31**	**269**	P	**Pg**	**20 42 16.5**	**-0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLFA	**Delphi**	**0.31**	**53**	P	**Pg**	**20 42 16.4**	**-0.3**
DLFA				S	**Sg**	**20 42 21.1**	**+0.3**
DLFA				AML	AML	20 42 28.9	
	comp=N,17575μm,0.3s						
DLFA				AML	AML	20 42 29.1	
	comp=E,18873μm,0.3s						
GUR	**Goura**	**0.38**	**160**	P	**Pg**	**20 42 17.6**	**-0.3**
GUR				S	**Sg**	**20 42 24.1**	**+1.3**
THAL	**Thalero**	**0.46**	**123**	P	**Pg**	**20 42 19.5**	**+0.1**
THAL				S	**Sg**	**20 42 25.8**	**+0.4**
	comp=E,6μm,0.3s						
THAL	**Thalero**	**0.46**	**123**	P	**Pg**	**20 42 19.6**	**+0.2**
THAL				AML	AML	20 42 39.3	
	comp=E,26088μm,0.4s						
THAL				AML	AML	20 42 39.8	
	comp=N,17250μm,0.3s						
DRO	**Drossia**	**0.50**	**228**	P	**Pg**	**20 42 19.8**	**-0.4**
DRO				S	**Sg**	**20 42 27.3**	**+0.6**
	comp=N,7μm,0.2s						
DRO	**Drossia**	**0.50**	**228**	P	**Pg**	**20 42 19.8**	**-0.4**
AXAR	**Agios Charalam**	**0.61**	**38**	P	**Pg**	**20 42 21.6**	**-0.6**
AXAR				S	**Sb**	**20 42 31.5**	**-0.7**
	comp=N,13μm,0.3s						
PVO	**Paravola**	**0.61**	**303**	P	**Pg**	**20 42 21.7**	**-0.5**
PVO	**Paravola**	**0.61**	**303**	P	**Pg**	**20 42 21.9**	**-0.3**
RLS	**Riolos of Patr**	**0.61**	**248**	P	**Pg**	**20 42 21.5**	**-0.7**
RLS	**Riolos of Patr**	**0.61**	**248**	P	**Pg**	**20 42 21.6**	**-0.7**
RLS				S	**Sg**	**20 42 30.4**	**+0.3**
RLS				AML	AML	20 42 40.8	
	comp=E,4190μm,0.2s						
RLS				AML	AML	20 42 41.3	
	comp=N,6096μm,0.2s						
EVR	**Evrytania**	**0.69**	**335**	P	**Pg**	**20 42 22.9**	**-0.9**
EVR				S	**Sb**	**20 42 33.7**	**-1.0**
	comp=N,7μm,0.4s						
EVR	**Evrytania**	**0.69**	**335**	P	**Pg**	**20 42 23.0**	**-0.8**
EVR				S	**Sg**	**20 42 32.4**	**-0.4**
EVR				AML	AML	20 42 42.5	
	comp=E,9785μm,0.4s						
EVR				AML	AML	20 42 43.5	
	comp=N,13079μm,0.3s						
LOUT	**Loutraki**	**0.70**	**116**	P	**Pg**	**20 42 23.8**	**-0.1**
LOUT	**Loutraki**	**0.70**	**116**	P	**Pg**	**20 42 23.8**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.72**	**357**	P	**Pg**	**20 42 24.0**	**-0.4**
MAKR				S	**Sb**	**20 42 35.2**	**-0.4**
	comp=N,14μm,0.2s						
MAKR	**Makrakomi, Fth**	**0.72**	**357**	P	**Pg**	**20 42 24.2**	**-0.3**
MAKR				S	**Sg**	**20 42 34.3**	**+0.5**
MAKR				AML	AML	20 42 37.5	
	comp=N,25471μm,0.3s						
MAKR				AML	AML	20 42 38.6	
	comp=E,31151μm,0.2s						
LKR	**Lokris**	**0.74**	**61**	P	**Pg**	**20 42 23.5**	**-1.2**
VIL2	**Platees**	**0.86**	**95**	P	**Pb**	**20 42 28.1**	**+0.3**
VIL2				S	**Sn**	**20 42 40.9**	**-1.0**
VIL2				AML	AML	20 42 51.2	
	comp=N,4274μm,0.4s						
VIL2				AML	AML	20 42 57.4	
	comp=E,6726μm,0.5s						
VILL	**Villia**	**0.90**	**98**	P	**Pg**	**20 42 27.9**	**+0.1**
EPID	**Epidavros**	**1.00**	**132**	P	**Pg**	**20 42 29.1**	**-0.7**
EPID	**Epidavros**	**1.00**	**132**	P	**Pg**	**20 42 29.1**	**-0.7**
ITM	**Ithomi**	**1.13**	**190**	PN	**Pg**	**20 42 30.9**	**-1.2**
ITM	**Ithomi**	**1.13**	**190**	P	**Pg**	**20 42 30.9**	**-1.2**
ITM	**Ithomi**	**1.13**	**190**	P	**Pg**	**20 42 30.9**	**-1.2**
KRND

comp=E,4.9nm,0.3s,baz=175,slow=24,SNR=2.4
comp=E,3.2nm,0.3s

IDI	**Anoyia**	**3.70**	**143**	PN	**Pn**	**20 43 08.7 +0.5**
GVD	**Gavdhos**	**3.77**	**155**	PN	**Pn**	**20 43 10.1 +1.0**
BLCB	**Balcova**	**3.83**	**87**	PN	**Pn**	**20 43 09.9 +0.1**
RDO	**Rodhopi**	**3.85**	**41**	PN	**Pn**	**20 43 09.6 -0.6**
RZN	**Rozhen**	**3.91**	**29**	P	**Pn**	**20 43 11.2 0.0**
GELI	**Tayfur-Gelibol**	**3.94**	**56**	PN	**Pn**	**20 43 10.9 -0.5**
ALN	**Alexandroupoli**	**3.96**	**48**	PN	**Pn**	**20 43 11.2 -0.5**
GCAM	**G?zelcaml?**	**4.04**	**97**	PN	**Pn**	**20 43 13.4 +0.7**
KDZ	**Kurdzhali**	**4.18**	**36**	PN	**Pn**	**20 43 12.9 -1.7**
BODT	**Bodrum**	**4.25**	**105**	PN	**Pn**	**20 43 15.9 +0.2**
PLD	**Plovdiv**	**4.27**	**26**	PN	**Pn**	**20 43 15.8 -0.1**
TIP	**Timpagrande**	**4.33**	**283**	⇑P	**Pn**	**20 43 18.6 +1.8**
TIP				⇑S	**Sn**	**20 44 11.0 +3.4**
VTS	**Vitosha**	**4.40**	**10**	⇑P	**Pn**	**20 43 18.3 +0.5**
VTS				⇓S	**Sn**	**20 44 09.7 +0.4**
VTS	**Vitosha**	**4.40**	**10**	P	Pn	20 43 07.7 -10
AYDB	**Zeytinkoy-Aydi**	**4.52**	**93**	PN	**Pn**	**20 43 20.5 +1.0**
ZKR	**Zakros**	**4.54**	**133**	PN	**Pn**	**20 43 20.6 +1.0**
PDG	**Podgorica**	**4.70**	**333**	⇑P	**Pn**	**20 43 23.4 +1.7**
PDG				⇑S	**Sn**	**20 44 18.8 +2.3**
MATE	**Matera**	**4.85**	**301**	⇓P	**Pn**	**20 43 26.2 +2.4**
YER	**Yerkesik**	**4.98**	**102**	PN	**Pn**	**20 43 26.4 +0.7**
TURN	**Turunc**	**5.05**	**106**	PN	**Pn**	**20 43 27.9 +1.2**
BLKB	**Belogradchik**	**5.34**	**4**	⇑P	**Pn**	**20 43 30.8 +0.2**
BOVS	**Bovan**	**5.35**	**356**	⇑P	**Pn**	**20 43 30.7 -0.1**
VAE	**Valguarnera**	**6.20**	**265**	Pn	**Pn**	**20 43 44.2 +1.7**
	comp=E,0.6nm,0.3s,baz=156,slow=21,SNR=1.8					
VAE				Sn	**Sn**	**20 44 57.7 +4.1**
	comp=E,1.0nm,0.3s,baz=18,slow=15,SNR=2.2					
	comp=E,1.5nm,0.3s					
FRGS	**Fruska Gora**	**7.08**	**346**	⇑P	**Pn**	**20 43 56.3 +1.7**
GZR	**Gura Zlata**	**7.11**	**3**	⇓P	**Pn**	**20 43 55.2 +0.2**
VOIR		**7.45**	**16**	⇑P	**Pn**	**20 44 00.9 +1.2**
MLR	**Muntele Rosu**	**7.72**	**20**	⇑P	**Pn**	**20 44 04.4 +1.0**
MLR	**Muntele Rosu**	**7.72**	**20**	Pn	**Pn**	**20 44 04.9 +1.4**
	comp=E,1.7nm,0.8s,baz=171,slow=13					
PLOR	**Plostina**	**8.25**	**22**	⇑P	**Pn**	**20 44 11.4 +0.7**
VRI	**Vrincioaia**	**8.29**	**23**	⇑P	**Pn**	**20 44 11.7 +0.6**
MORH	**Mrgy. Hungar**	**8.34**	**343**	⇑P	**Pn**	**20 44 11.7 -0.1**
BRTR	**Keskin Array B**	**9.04**	**77**	Pn	**Pn**	**20 44 23.4 +1.9**
	comp=E,0.3nm,0.3s,baz=256,slow=13,SNR=8.5					
	comp=E,0.5nm,0.4s					
ESDC	**Sonseca Array**	**20.35**	**282**	P	**P**	**20 46 48.4 +0.9**
	comp=E,1.5nm,0.8s,baz=76,slow=10,SNR=10					
	comp=E,1.5nm,0.8s					
HFS	**Hagfors**	**22.52**	**349**	P	**P**	**20 47 10.2 -0.3**
	comp=E,0.8nm,0.4s,baz=141,slow=9.3,SNR=6.0					
	comp=E,0.8nm,0.4s					
EKA	**Eskdalemuir Ar**	**24.10**	**323**	P	**P**	**20 47 26.7 +0.2**
	comp=E,0.5nm,0.5s,baz=122,slow=9.3,SNR=2.4					
	comp=E,0.5nm,0.5s					
TORD	**Torodi Ar. Bea**	**30.96**	**222**	P	**P**	**20 48 29.1 +0.8**
	comp=E,0.8nm,0.7s,baz=33,slow=8.8,SNR=6.1					
	comp=E,0.8nm,0.7s					
MKAR	**Makanchi Array**	**44.13**	**59**	P	**P**	**20 50 18.8 -0.7**
	comp=E,0.9nm,0.4s,baz=276,slow=7.5,SNR=33					
	comp=E,0.9nm,0.4s					
ZALV	**Zalesovo Beam**	**44.64**	**48**	P	**P**	**20 50 22.1 -1.4**
	comp=E,0.7nm,0.3s,baz=267,slow=7.6,SNR=5.4					
	comp=E,0.7nm,0.3s					
TSUM	**Tsumeb**	**57.35**	**185**	LR	LR	21 21 31.7
	comp=E,36nm,19.4s,baz=123,slow=41					
SONM	**Songino Array**	**59.37**	**51**	P	**P**	**20 52 13.2 -0.3**
	comp=E,0.2nm,0.4s,baz=289,slow=8.0,SNR=2.2					
	comp=E,0.2nm,0.4s					

*ISK **04** 20:46:53.6, 38°.32N×22°.15E, h8km, ML3.1/13*
*DDA **04** 20:46:54.0±0.0, 38°.33N×22°.21E, h51km, ML2.9*
*ATH **04** 20:46:55.1, 38°.29N×22°.17E, h10km±1km, ML3.2/28, Error ellipse: s-maj=1.3km s-min=0.5km az=271.0*
*THE **04** 20:46:55.4, 38°.29N×22°.18E, h7km, ML3.2/11, Error ellipse: s-maj=0.9km s-min=0.4km az=251.0*
*IDC **04** 20:46:59.3±3.4, 38°.26N×22°.31E, h34km±32km, mb3.4/6, mbtmp3.5/10, ML3.1/4, Error ellipse: s-maj=21.8km s-min=16.1km az=159.0*

ISC 04 20:46:55.1±0.8, 38°.30N±0°.02×22°.18E±0°.02, h10km±5km, n110, σ0°99/143, mb3.7/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIK	**Aliki, Aigiali**	**0.06**	**237**	P	**Pg**	**20 46 57.0**	**-0.2**
ALIK				S	**Sg**	**20 46 59.0**	**+0.3**
SERG	**Sergoula**	**0.15**	**321**	P	**Pg**	**20 46 58.2**	**-0.3**
SERG				S	**Sg**	**20 47 00.8**	**0.0**
	80μm,0.2s						
SERG	**Sergoula**	**0.15**	**321**	P	**Pg**	**20 46 58.2**	**-0.3**
SERG				S	**Sg**	**20 47 00.8**	**0.0**
SERG				AML	AML	20 47 01.0	
SERG				AML	AML	20 47 01.3	
LAKA	**Lakka**	**0.17**	**251**	P	**Pg**	**20 46 58.7**	**0.0**
LAKA				S	**Sg**	**20 47 01.6**	**+0.4**
	18μm,0.3s						
LAKA	**Lakka**	**0.17**	**251**	P	**Pg**	**20 46 58.5**	**-0.2**
LAKA				S	**Sg**	**20 47 01.5**	**+0.2**
LAKA				AML	AML	20 47 06.3	
	comp=N,44537μm,0.3s						
LAKA				AML	AML	20 47 08.2	
	comp=E,55859μm,0.5s						
EFP	**Efpalio**	**0.25**	**301**	P	**Pg**	**20 46 59.8**	**-0.4**
EFP				S	**Sg**	**20 47 04.4**	**+0.7**
	comp=E,12μm,0.4s						
EFP	**Efpalio**	**0.25**	**301**	P	**Pg**	**20 46 59.9**	**-0.3**
EFP				S	**Sg**	**20 47 04.1**	**+0.5**
EFP				AML	AML	20 47 04.4	
	comp=E,32356μm,0.4s						
EFP				AML	AML	20 47 08.4	
	comp=N,19180μm,0.4s						
KLV	**Kalavryta, Ach**	**0.25**	**185**	P	**Pg**	**20 47 00.2**	**-0.1**
KLV	**Kalavryta, Ach**	**0.25**	**185**	P	**Pg**	**20 47 00.0**	**-0.2**
KLV				S	**Sg**	**20 47 04.0**	**+0.3**
KLV				AML	AML	20 47 07.6	
	comp=N,3028μm,0.6s						
KLV				AML	AML	20 47 11.3	
	comp=E,1935μm,0.4s						
DLFA	**Delphi**	**0.31**	**54**	P	**Pg**	**20 47 01.1**	**-0.2**
DLFA				S	**Sg**	**20 47 06.0**	**+0.5**
DLFA				AML	AML	20 47 06.2	
	comp=N,12913μm,0.2s						
DLFA				AML	AML	20 47 06.4	
	comp=E,17356μm,0.2s						
UPR	**University Cam**	**0.31**	**268**	P	**Pg**	**20 47 01.5**	**+0.2**
UPR				S	**Sg**	**20 47 06.4**	**+1.0**
THAL	**Thalero**	**0.46**	**124**	P	**Pg**	**20 47 04.3**	**+0.2**
THAL				S	**Sg**	**20 47 10.6**	**+0.4**
	comp=E,3μm,0.2s						
THAL	**Thalero**	**0.46**	**124**	P	**Pg**	**20 47 04.3**	**+0.2**
THAL				S	**Sg**	**20 47 10.4**	**+0.3**
THAL				AML	AML	20 47 19.8	
	comp=E,8059μm,0.2s						
THAL				AML	AML	20 47 21.6	
	comp=N,7459μm,0.4s						
DRO	**Drossia**	**0.51**	**227**	P	**Pg**	**20 47 04.5**	**-0.4**
DRO				S	**Sb**	**20 47 13.0**	**-0.6**
	comp=N,4μm,0.4s						
DRO	**Drossia**	**0.51**	**227**	P	**Pg**	**20 47 04.6**	**-0.3**
DRO				S	**Sg**	**20 47 11.1**	**-0.4**
DRO				AML	AML	20 47 19.0	
	comp=E,8584μm,0.4s						
DRO				AML	AML	20 47 20.2	
	comp=N,7736μm,0.5s						
AXAR	**Agios Charalam**	**0.60**	**39**	P	**Pg**	**20 47 06.3**	**-0.5**
AXAR				S	**Sb**	**20 47 16.0**	**-0.4**
	comp=N,16μm,0.4s						
PVO	**Paravola**	**0.60**	**302**	P	**Pg**	**20 47 06.3**	**-0.5**
PVO				S	**Sb**	**20 47 16.4**	**0.0**
	comp=N,2μm,0.4s						
PVO	**Paravola**	**0.60**	**302**	P	**Pg**	**20 47 06.3**	**-0.5**
PVO				S	**Sg**	**20 47 14.9**	**+0.1**
RLS	**Riolos of Patr**	**0.61**	**247**	P	**Pg**	**20 47 06.5**	**-0.4**
RLS				S	**Sb**	**20 47 16.6**	**0.0**
	comp=N,1μm,0.4s						
RLS	**Riolos of Patr**	**0.61**	**247**	P	**Pg**	**20 47 06.6**	**-0.4**
RLS				S	**Sg**	**20 47 14.6**	**-0.3**
RLS				AML	AML	20 47 18.7	
	comp=E,2220μm,0.4s						
RLS				AML	AML	20 47 18.9	
	comp=N,2570μm,0.4s						
EVR	**Evrytania**	**0.69**	**335**	P	**Pg**	**20 47 07.7**	**-0.7**
EVR				S	**Sb**	**20 47 18.3**	**-0.6**
	comp=N,5μm,0.4s						
EVR	**Evrytania**	**0.69**	**335**	P	**Pg**	**20 47 07.8**	**-0.6**
EVR				S	**Sg**	**20 47 17.2**	**-0.2**
EVR				AML	AML	20 47 19.9	
	comp=N,9988μm,0.3s						
EVR				AML	AML	20 47 20.5	
	comp=E,9991μm,0.5s						
LOUT	**Loutraki**	**0.70**	**116**	P	**Pg**	**20 47 08.2**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.72**	**357**	P	**Pg**	**20 47 08.9**	**-0.1**
MAKR				S	**Sb**	**20 47 20.0**	**+0.3**
MAKR	**Makrakomi, Fth**	**0.72**	**357**	P	**Pg**	**20 47 08.8**	**-0.2**
MAKR				S	**Sg**	**20 47 18.2**	**-0.2**
MAKR				AML	AML	20 47 22.1	
	comp=N,36205μm,0.3s						
MAKR				AML	AML	20 47 23.5	
	comp=E,30736μm,0.3s						
VIL2	**Platees**	**0.86**	**95**	P	**Pb**	**20 47 12.0**	**-0.2**
VIL2				S	**Sn**	**20 47 24.9**	**-1.2**
VIL2				AML	AML	20 47 28.7	
	comp=N,2404μm,0.3s						
VIL2				AML	AML	20 47 32.4	
	comp=E,3547μm,0.7s						
VILL	**Villia**	**0.90**	**98**	P	**Pg**	**20 47 12.6**	**+0.1**
VILL				S	**Sb**	**20 47 25.5**	**+0.5**
	comp=E,2μm,0.4s						
EPID	**Epidavros**	**1.01**	**132**	P	**Pg**	**20 47 13.9**	**-0.6**
EPID				S	**Sn**	**20 47 29.4**	**-0.3**
	comp=E,775nm,0.5s						
EPID	**Epidavros**	**1.01**	**132**	P	**Pg**	**20 47 13.8**	**-0.6**
ITM	**Ithomi**	**1.13**	**190**	PN	**Pb**	**20 47 15.9**	**-0.9**
ITM	**Ithomi**	**1.13**	**190**	P	**Pb**	**20 47 15.8**	**-1.0**
ITM	**Ithomi**	**1.13**	**190**	P	**Pb**	**20 47 15.6**	**-1.2**
ITM				AML	AML	20 47 43.6	
	comp=E,768μm,0.6s						
ITM				AML	AML	20 47 46.8	
	comp=N,920μm,0.7s						
KRND	**KRANIDI**	**1.19**	**140**	P	**Pb**	**20 47 17.5**	**-0.3**
KRND	**KRANIDI**	**1.19**	**140**	P	**Pb**	**20 47 17.6**	**-0.2**
KRND				AML	AML	20 47 36.3	
	comp=N,2312μm,0.6s						
KRND				AML	AML	20 47 37.8	
	comp=E,3921μm,0.6s						
LTHK	**Lithakia**	**1.21**	**242**	P	**Pn**	**20 47 17.4**	**-0.7**
LTHK	**Lithakia**	**1.21**	**242**	P	**Pn**	**20 47 17.2**	**-1.0**
LTHK				AML	AML	20 47 46.1	
	comp=E,2079μm,0.5s						
LTHK				AML	AML	20 47 46.3	
	comp=N,1789μm,0.4s						
EVGI	**Lefkada island**	**1.24**	**286**	P	**Pn**	**20 47 17.8**	**-0.8**
EVGI	**Lefkada island**	**1.24**	**286**	P	**Pn**	**20 47 17.8**	**-0.8**
ATH	**Athens Observa**	**1.25**	**104**	P	**Pn**	**20 47 18.6**	**-0.2**
ATH				S	**Sg**	**20 47 35.4**	**-0.1**
ATH				AML	AML	20 47 42.4	
	comp=E,880μm,0.5s						
ATH				AML	AML	20 47 50.0	
	comp=N,858μm,0.4s						
VLS	**Valsamata**	**1.26**	**265**	P	**Pn**	**20 47 17.8**	**-1.0**
VLS	**Valsamata**	**1.26**	**265**	P	**Pn**	**20 47 17.8**	**-1.0**
VLS				AML	AML	20 47 45.1	
	comp=E,700μm,0.3s						
VLS				AML	AML	20 47 47.7	
	comp=N,994μm,0.4s						
PSDA	**Pessada-Kefalo**	**1.27**	**262**	P	**Pn**	**20 47 17.9**	**-1.1**
PSDA	**Pessada-Kefalo**	**1.27**	**262**	P	**Pn**	**20 47 17.9**	**-1.1**
THL	**Klokotos Trika**	**1.27**	**354**	P	**Pb**	**20 47 19.1**	**-0.1**
THL	**Klokotos Trika**	**1.27**	**354**	P	**Pn**	**20 47 18.8**	**-0.2**
THL				AML	AML	20 47 39.9	
	comp=E,4416μm,0.4s						
THL				AML	AML	20 47 41.5	
	comp=N,2219μm,0.3s						
FSK	**Fiskardo**	**1.28**	**278**	P	**Pb**	**20 47 19.2**	**-0.2**
FSK	**Fiskardo**	**1.28**	**278**	P	**Pn**	**20 47 18.9**	**-0.2**
FSK				AML	AML	20 47 48.4	
	comp=E,1224μm,0.6s						
FSK				AML	AML	20 47 49.7	
	comp=N,1075μm,1.0s						
LKD2	**Lefkada island**	**1.29**	**293**	P	**Pn**	**20 47 18.9**	**-0.4**
LKD2	**Lefkada island**	**1.29**	**293**	P	**Pn**	**20 47 19.0**	**-0.4**
LKD2				AML	AML	20 47 45.2	
	comp=N,1542μm,0.8s						
LKD2				AML	AML	20 47 47.0	
	comp=E,2210μm,0.5s						
NEO	**Neokhori**	**1.30**	**39**	P	**Pn**	**20 47 19.5**	**+0.1**
NEO	**Neokhori**	**1.30**	**39**	P	**Pn**	**20 47 19.4**	**+0.1**
NEO				AML	AML	20 47 41.5	
	comp=E,1613μm,0.3s						
NEO				AML	AML	20 47 42.0	
	comp=N,1901μm,0.3s						
TSLK	**Tsoukalades, L**	**1.31**	**294**	P	**Pb**	**20 47 19.7**	**-0.1**
TSLK				AML	AML	20 47 48.0	
	comp=E,1651μm,0.7s						
TSLK				AML	AML	20 47 48.1	
	comp=N,1309μm,1.1s						
ATHU	**Athens Univers**	**1.31**	**104**	P	**Pn**	**20 47 19.5**	**0.0**
XOR	**Xorichti**	**1.33**	**36**	P	**Pn**	**20 47 19.1**	**-0.8**
XOR	**Xorichti**	**1.33**	**36**	P	**Pn**	**20 47 19.0**	**-0.8**
XOR				AML	AML	20 47 42.8	
	comp=E,1056μm,0.8s						
XOR				AML	AML	20 47 44.2	
	comp=N,1449μm,0.5s						
VLY	**Voula,Athens**	**1.35**	**109**	P	**Pn**	**20 47 20.2**	**+0.1**
VLY	**Voula,Athens**	**1.35**	**109**	P	**Pb**	**20 47 20.4**	**-0.1**
VLY				AML	AML	20 47 44.7	
	comp=N,894μm,0.9s						
VLY				AML	AML	20 47 52.5	
	comp=E,837μm,0.7s						
PTL	**Penteli**	**1.35**	**100**	P	**Pb**	**20 47 20.3**	**-0.3**
PTL	**Penteli**	**1.35**	**100**	P	**Pn**	**20 47 20.0**	**-0.1**
PTL				S	**Sb**	**20 47 37.9**	**0.0**
PTL				AML	AML	20 47 45.0	
	comp=E,931μm,0.6s						
PTL				AML	AML	20 47 46.6	
	comp=N,757μm,0.7s						
KEF4	**Livadi, Kephal**	**1.38**	**269**	P	**Pn**	**20 47 20.1**	**-0.4**
LRSO	**Larissa Observ**	**1.38**	**7**	P	**Pn**	**20 47 20.7**	**+0.2**
DION	**Dionisos Attik**	**1.40**	**98**	P	**Pb**	**20 47 21.2**	**-0.1**
DION	**Dionisos Attik**	**1.40**	**98**	P	**Pb**	**20 47 21.3**	**-0.1**
DION				S	**Sb**	**20 47 39.3**	**0.0**
DION				AML	AML	20 47 45.8	
	comp=N,1563μm,0.5s						
DION				AML	AML	20 47 48.1	
	comp=E,1850μm,0.4s						
TYRN	**Tyrnavos**	**1.41**	**2**	P	**Pn**	**20 47 21.0**	**0.0**
KEF3	**Kipouria, Keph**	**1.45**	**267**	P	**Pn**	**20 47 20.9**	**-0.4**
KYMI	**Kymi, Euboea I**	**1.54**	**77**	P	**Pn**	**20 47 22.9**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.54**	**77**	P	**Pn**	**20 47 22.7**	**0.0**
KYMI				AML	AML	20 47 48.4	
	comp=E,482μm,0.4s						
KYMI				AML	AML	20 47 49.1	
	comp=N,628μm,0.6s						
ALNA	**Alonissos**	**1.57**	**57**	P	**Pn**	**20 47 22.7**	**-0.3**
VLI	**Veliai**	**1.69**	**159**	P	**Pn**	**20 47 25.0**	**+0.3**
VLI	**Veliai**	**1.69**	**159**	P	**Pn**	**20 47 24.9**	**+0.3**
VLI				AML	AML	20 47 54.5	
	comp=N,774μm,0.7s						
VLI				AML	AML	20 47 59.1	
	comp=E,629μm,0.6s						
JAN	**Janina**	**1.71**	**323**	P	**Pb**	**20 47 26.2**	**-0.5**
JAN				AML	AML	20 47 57.9	
	comp=N,1060μm,0.4s						
JAN				AML	AML	20 47 58.8	
	comp=E,1033μm,0.4s						
LIT	**Litokhoron**	**1.82**	**8**	P	**Pn**	**20 47 23.9**	**-2.6**
LIT				*i* AML	AML	20 47 59.0	
	comp=E,244nm,0.6s						
LIT				*i* AML	AML	20 48 00.0	
	comp=E,319nm,0.5s						
KTHR	**Kythira**	**2.13**	**162**	P	**Pb**	**20 47 32.6**	**-1.3**
KTHA	**Kythira Island**	**2.15**	**161**	PN	**Pn**	**20 47 31.7**	**+0.6**
KTHA				SN	**Sn**	**20 47 58.5**	**+0.6**
KEK	**Kerkira**	**2.33**	**308**	P	**Pb**	**20 47 36.0**	**-1.3**
HORT	**Hortiatis**	**2.41**	**17**	PN	**Pn**	**20 47 34.1**	**-0.6**
OUR	**Ouranopolis**	**2.47**	**34**	PN	**Pn**	**20 47 35.1**	**-0.4**
OUR				SN	**Sn**	**20 48 05.5**	**-0.2**
GRG	**Griva**	**2.66**	**4**	PN	**Pn**	**20 47 37.8**	**-0.4**
KNT	**Kendrikon**	**2.92**	**11**	PN	**Pn**	**20 47 41.7**	**+0.1**
APE	**Apeiranthos**	**2.93**	**114**	PN	**Pn**	**20 47 42.2**	**+0.4**
APE	**Apeiranthos**	**2.93**	**114**	P	**Pn**	**20 47 39.1**	**-2.7**
OHR	**Ohrid**	**3.01**	**340**	*i* Pn	**Pb**	**20 47 46.5**	**-2.3**
SIGR	**SIGRI**	**3.02**	**71**	PN	**Pn**	**20 47 43.2**	**+0.2**
VAY	**Valandovo**	**3.04**	**6**	*i* Pn	**Pn**	**20 47 43.2**	**0.0**
CHOS	**Chios island**	**3.05**	**87**	PN	**Pn**	**20 47 44.3**	**+0.8**
IMMV	**Iera Moni Meta**	**3.18**	**152**	PN	**Pn**	**20 47 45.6**	**+0.4**
KOCA	**Canakkale, Ayv**	**3.31**	**67**	P	**Pn**	**20 47 45.7**	**-1.4**
KOCA				S	**Sn**	**20 48 23.9**	**-2.7**
BOZC	**Bozcaada**	**3.39**	**62**	PN	**Pn**	**20 47 48.2**	**+0.1**
BOZC	**Bozcaada**	**3.39**	**62**	P	**Pn**	**20 47 44.4**	**-3.7**
STIP	**Stip**	**3.39**	**0**	*i* Pn	**Pn**	**20 47 49.3**	**+1.1**
ZEYE	**Izmir, Urla-Ze**	**3.40**	**90**	P	**Pn**	**20 47 48.3**	**0.0**
GADA	**Gvkgeada**	**3.45**	**56**	PN	**Pn**	**20 47 48.7**	**-0.3**
URLA	**Izmir**	**3.47**	**88**	PN	**Pn**	**20 47 49.5**	**+0.2**
URLA	**Izmir**	**3.47**	**88**	P	**Pn**	**20 47 48.3**	**-1.0**
URLA				*i* AML	AML	20 48 58.0	
	comp=E,24nm,1.0s						
URLA				*i* AML	AML	20 48 58.0	
	comp=E,24nm,1.3s						
MMB	**Musomiste**	**3.50**	**19**	P	**Pn**	**20 47 49.9**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**3.69**	**66**	P	**Pn**	**20 47 50.3**	**-2.0**
IDI	**Anoyia**	**3.71**	**143**	Pn	**Pn**	**20 47 53.9**	**+1.3**
	comp=E,0.7nm,0.3s,baz=322,slow=14,SNR=2.8						
IDI				Sn	**Sn**	**20 48 33.4**	**-3.0**
	comp=E,1.3nm,0.3s,baz=303,slow=21,SNR=1.8						
	comp=E,3.1nm,0.3s						
IDI	**Anoyia**	**3.71**	**143**	PN	**Pn**	**20 47 53.2**	**+0.6**
RZN	**Rozhen**	**3.91**	**29**	P	**Pn**	**20 47 55.9**	**+0.5**
USAK	**Uak-Merkez**	**5.38**	**83**	P	**Pn**	**20 48 15.4**	**-0.2**
USAK				*i* AML	AML	20 51 14.0	
	comp=E,24nm,5.6s						
TVSB	**Tavsanli**	**5.80**	**76**	P	**Pn**	**20 48 18.0**	**-3.3**
VAE	**Valguarnera**	**6.20**	**265**	Pn	**Pn**	**20 48 29.8**	**+3.1**
	comp=E,0.4nm,0.3s,baz=350,slow=11,SNR=1.8						
VAE				Sn	**Sn**	**20 49 40.6**	**+2.9**
	comp=E,0.3nm,0.3s,baz=28,slow=13,SNR=1.3						
	comp=E,3.0nm,0.5s						
MLR	**Muntele Rosu**	**7.72**	**20**	Pn	**Pn**	**20 48 50.1**	**+2.5**
	comp=E,0.2nm,0.3s,baz=310,slow=23,SNR=2.3						
	comp=E,0.9nm,0.5s						
BRTR	**Keskin Array B**	**9.04**	**77**	Pn	**Pn**	**20 49 08.6**	**+2.8**
	comp=E,0.2nm,0.3s,baz=259,slow=13,SNR=8.3						
	comp=E,0.5nm,0.4s						
ESDC	**Sonseca Array**	**20.35**	**282**	P	Pn	20 51 33.4	-0.4
	comp=E,1.1nm,0.7s,baz=75,slow=11,SNR=9.2						
	comp=E,1.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**24.10**	**323**	P	**P**	**20 52 13.1**	**+2.3**
	comp=E,0.3nm,0.4s,baz=122,slow=9.4,SNR=3.5						
	comp=E,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**30.96**	**221**	P	**P**	**20 53 13.8**	**+1.2**
	comp=E,0.4nm,0.5s,baz=33,slow=8.5,SNR=6.2						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**44.12**	**59**	P	**P**	**20 55 03.4**	**-0.3**
	comp=E,1.0nm,0.4s,baz=276,slow=7.0,SNR=33						
	comp=E,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**44.64**	**48**	P	**P**	**20 55 07.2**	**-0.4**
	comp=E,0.8nm,0.4s,baz=292,slow=7.6,SNR=3.9						
	comp=E,0.8nm,0.4s						
SONM	**Songino Array**	**59.37**	**51**	P	**P**	**20 56 57.8**	**+0.1**
	comp=E,0.3nm,0.5s,baz=276,slow=7.0,SNR=2.2						
	comp=E,0.3nm,0.5s						

*SKHL **04** 21:03:12.9±0.1, 44°.50N×148°.50E, h45km±4km, mb4.3/3*
*JMA **04** 21:03:14.4±0.6, 44°.N±2°×14°.8E±°, h0km, MV3.7/21, SE OFF ETOROFU*

ISC 04 21:03:11.3±3.7, 44°.4N±0°.1×148°.5E±0°.2, h55km, n15, σ1°61/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.92**	**329**	*e*P	**Pn**	**21 03 28.1**	**0.0**
KUR				AMB	AMB	21 03 29.2	
	210nm,0.3s						
KUR				*e*S	**Sn**	**21 03 39.5**	**-1.0**
KUR				A	A	21 03 43.1	
	860nm,0.3s						
KUR				A	A	21 03 43.1	
	630nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.96**	**259**	*e*P	**Pn**	**21 03 42.8**	**+0.7**
YUK				AMB	AMB	21 03 44.0	
	80nm,0.2s						
YUK				*e*S	**Sn**	**21 04 05.1**	**-0.5**
YUK				A	A	21 04 11.3	
	330nm,0.4s						
YUK				A	A	21 04 11.3	
	240nm,0.4s						
NEM2	**Nemuro 2**	**2.29**	**243**	*e*P	**Pn**	**21 03 46.8**	**+0.2**
NEM2				*e*S	**Sn**	**21 04 10.6**	**-2.8**
NMR	**Nemuro--Hokkai**	**2.29**	**243**	*e*P	**Pn**	**21 03 46.8**	**+0.2**
NMR				AMB	AMB	21 03 48.4	
	30nm,0.4s						
NMR				*e*S	**Sn**	**21 04 12.3**	**-1.3**
NMR				A	A	21 04 16.2	
	100nm,0.3s						
NMR				A	A	21 04 16.2	
	70nm,0.3s						
JRA	**Rausu**	**2.50**	**260**	*e*P	**Pn**	**21 03 51.5**	**+2.0**
JNSB	**Nemuroshibetsu**	**2.63**	**257**	*e*P	**Pn**	**21 03 53.3**	**+2.1**
JKHN	**Kushirohamanak**	**2.79**	**242**	*e*P	**Pn**	**21 03 54.0**	**+0.6**
JNK	**Nakash**	**2.88**	**254**	*e*P	**Pn**	**21 03 56.3**	**+1.6**
AKK	**Akkeshi**	**3.03**	**243**	*e*P	**Pn**	**21 03 57.5**	**+0.8**
AKK				*e*S	**Sn**	**21 04 30.4**	**-1.3**
JAK	**Akkeshi**	**3.13**	**244**	*e*P	**Pn**	**21 03 58.8**	**+0.7**
JAR	**Ashorobuto**	**3.63**	**253**	*e*P	**Pn**	**21 04 07.5**	**+2.6**
JOB	**Onbets

comp=Z,10nm,1.4s
KDAK Kodiak Island 17.74 59 P P 21 35 24.2 -2.5
M20K Styx River 18.48 45 P P 21 35 34.2 -0.6
CNPM China Poot 18.73 53 P P 21 35 36.2 -1.3
BRLK Bradley Lake 18.95 53 P P 21 35 39.0 -0.9
BRLK IAmb IAmb 21 36 04.2
comp=Z,13nm,1.3s
SKT Skwentna 19.22 46 P P 21 35 42.8 -0.1
SKT IAmb IAmb 21 35 49.1
comp=Z,6.2nm,1.2s
SUA Susitna One 19.43 48 P P 21 35 44.7 -0.5
SUA IAmb IAmb 21 36 05.1
comp=Z,9.1nm,1.4s
SEW Seward 19.72 52 P P 21 35 47.6 -0.7
IMAR Indian Mountai 20.06 34 P Pn 21 35 53.4 -1.3
TRF Thorofare Moun 20.26 42 P P 21 35 54.6 +0.3
TRF IAmb IAmb 21 36 07.3
comp=Z,9.8nm,1.4s
SML Sawmill 20.63 48 P P 21 35 58.2 +0.1
SML IAmb IAmb 21 36 01.6
comp=Z,7.1nm,1.3s
SCM Sheep Creek Mo 21.10 48 P P 21 36 02.4 -0.7
SCM IAmb IAmb 21 36 14.8
comp=Z,11nm,1.2s
DHY Denali Highway 21.39 45 P P 21 36 06.5 +0.2
N25K Chitina, Valde 22.33 49 P P 21 36 16.5 +0.3
N25K IAmb IAmb 21 36 36.2
comp=Z,6.9nm,1.4s
VRDI Verde Repeater 22.82 50 P P 21 36 21.1 -0.2
VRDI IAmb IAmb 21 36 24.3
comp=Z,9.8nm,1.4s
J26L Joseph Creek 23.41 42 P P 21 36 25.6 -1.0
CTGM Chitina Glacie 23.81 51 P P 21 36 29.9 -0.5
L27K Beaver Creek, 23.85 46 P P 21 36 31.0 +0.4
LOGN Logan Glacier 23.96 52 P P 21 36 30.9 -0.9
LOGN IAmb IAmb 21 36 33.7
comp=Z,2.6nm,0.6s
KURK Kurchatov 57.52 312 P P 21 41 05.0 -0.3
MK31 Makanchi Array 58.45 307 P P 21 41 11.2 -0.6
MK31 IAmb IAmb 21 41 38.9
comp=Z,2.9nm,1.4s
MKAR Makanchi Array 58.45 307 P P 21 41 11.0 -0.8
ABKAR Abkulak array 66.61 321 P P 21 42 06.1 +0.1
ABKAR Abkulak array 66.61 321 P P 21 42 06.3 +0.3
ABKAR IAmb IAmb 21 42 09.7
comp=Z,1.2nm,0.9s
BUR08 Bucovina Ar. S 78.41 342 P P 21 43 17.1 +1.0
BUR08 IAmb IAmb 21 43 25.9
comp=Z,4.0nm,1.4s
BURAR Bucovina Array 78.43 342 P P 21 43 17.0 +0.8

NOU 04 21:32:30.0, 16°.07S×167°.83E, h81km, MLv3.5/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.68**	**168**	P	Pn	21 32 58.0	+0.3
RTV	**Rentapao**	**1.81**	**162**	P	Pn	21 32 59.4	0.0
YATNC	**Mamie plateau,**	**6.02**	**188**	P	Pn	21 33 56.8	+0.2
DZM	**Mont Dzumac**	**6.11**	**192**	P	Pn	21 33 57.5	-0.3

*NEIC **04** 22:18:22.0±1.4, 20°.05S±0°.2×177°.5W±0°.1, h562km±8km, mb4.2/22, Error ellipse: s-maj=22.4km s-min=14.6km az=189.0*
*IDC **04** 22:18:24.2±2.1, 19°.87S×177°.71W, h582km±22km, mb3.5/9, mbtmp4.4/11, Error ellipse: s-maj=24.7km s-min=21.0km az=167.0*

ISC 04 22:18:21.7±0.6, 20°.2S±0°.1×177°.48W±0°.08, h550km, n53, σ1§55/54, mb4.2/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.89**	**299**	P	**P**	**22 19 51.9**	**+1.1**
	8.0nm,0.5s,baz=322,slow=21,SNR=19						
MSVF				S	**S**	**22 21 09.9**	**+6.6**
	1.6nm,0.2s,baz=232,slow=23,SNR=1.2						
NIUE	**Niue**	**7.20**	**82**	P	**P**	**22 20 12.4**	**+0.8**
PINNC	**Pines Island,**	**14.25**	**258**	P	**P**	**22 21 22.7**	**-0.8**
OUENC	**Ouen Island, N**	**14.79**	**259**	P	**P**	**22 21 31.1**	**+2.1**
DZM	**Mont Dzumac**	**15.12**	**260**	P	**P**	**22 21 33.7**	**+1.2**
	15nm,0.6s,baz=69,slow=12,SNR=48						
DZM	**Mont Dzumac**	**15.12**	**260**	P	**P**	**22 21 34.1**	**+1.5**
DZM				IAmb	IAmb	22 21 35.3	
	comp=Z,14nm,0.6s						
ONTNC	**Ouen Toro**	**15.13**	**259**	P	**P**	**22 21 33.6**	**+1.1**
ONTNC				IAmb	IAmb	22 21 39.7	
	comp=Z,18nm,1.2s						
KOUNC	**Koumac, New Ca**	**17.11**	**266**	P	**P**	**22 21 51.0**	**-0.5**
KOUNC				IAmb	IAmb	22 21 54.0	
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**29.41**	**254**	P	**P**	**22 23 40.4**	**-0.7**
EIDS				IAmb	IAmb	22 23 58.7	
	comp=Z,9.2nm,1.3s						
ARMA	**Armidale**	**29.65**	**244**	P	**P**	**22 23 42.7**	**-0.5**
ARMA				IAmb	IAmb	22 23 44.3	
	comp=Z,13nm,1.1s						
CTA	**Charters Tower**	**34.01**	**264**	P	**P**	**22 24 19.8**	**-0.7**
	comp=Z,14nm,0.5s,baz=96,slow=9.8,SNR=24						
	comp=Z,14nm,0.5s						
CTAO	**Charters Tower**	**34.01**	**264**	P	**P**	**22 24 19.6**	**-0.8**
COEN	**Coen**	**38.05**	**273**	P	**P**	**22 24 53.2**	**-0.7**
STKA	**Stephens Creek**	**38.37**	**244**	P	**P**	**22 24 55.9**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=86,slow=10,SNR=8.2						
	comp=Z,3.4nm,0.5s						
STKA	**Stephens Creek**	**38.37**	**244**	P	**P**	**22 24 55.6**	**-0.6**
BBOO	**Buckleboo**	**43.13**	**243**	P	**P**	**22 25 32.9**	**-1.1**
BBOO				IAmb	IAmb	22 25 51.0	
	comp=Z,28nm,1.3s						
WR0	**Warramunga Arr**	**44.94**	**262**	P	**P**	**22 25 46.5**	**-1.7**
AS31	**Alice Springs**	**45.07**	**256**	P	**P**	**22 25 48.0**	**-1.2**
AS31				IAmb	IAmb	22 25 48.9	
	comp=Z,3.4nm,0.8s						
ASAR	**Alice Springs**	**45.07**	**256**	P	**P**	**22 25 48.4**	**-0.9**
	comp=Z,11nm,0.5s,baz=92,slow=7.8,SNR=164						
	comp=Z,11nm,0.5s						
WB0	**Warramunga Arr**	**45.11**	**262**	P	**P**	**22 25 48.2**	**-1.3**
WRA	**Warramunga Arr**	**45.13**	**262**	P	**P**	**22 25 48.2**	**-1.5**
	comp=Z,6.7nm,0.3s,baz=97,slow=7.6,SNR=304						
	comp=Z,6.7nm,0.3s						
WRA	**Warramunga Arr**	**45.13**	**262**	P	**P**	**22 25 47.7**	**-2.0**
FORT	**Forrest**	**49.87**	**246**	P	**P**	**22 26 23.4**	**-1.6**
FITZ	**Fitzroy Crossi**	**53.56**	**262**	P	**P**	**22 26 51.0**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=124,slow=2.4,SNR=10						
	comp=Z,2.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.56**	**262**	P	**P**	**22 26 50.6**	**-1.1**
PSA00	**Pilbara Seismi**	**58.22**	**257**	P	**P**	**22 27 22.9**	**-1.1**
PSA00	**Pilbara Seismi**	**58.22**	**257**	P	**P**	**22 27 22.6**	**-1.3**
PSA00				IAmb	IAmb	22 27 40.9	
	comp=Z,20nm,1.5s						
VNDA	**Vanda**	**58.27**	**185**	P	**P**	**22 27 24.7**	**+1.4**
MBWA	**Marble Bar**	**58.40**	**257**	P	**P**	**22 27 23.2**	**-2.0**
MBWA				IAmb	IAmb	22 27 24.6	
	comp=Z,7.8nm,0.9s						
MORW	**Morawa**	**60.40**	**247**	P	**P**	**22 27 37.2**	**-1.3**
MORW				IAmb	IAmb	22 27 45.7	
	comp=Z,10nm,1.1s						
QSPA	**South Pole Qui**	**69.88**	**180**	P	**P**	**22 28 38.8**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=89,slow=0.3,SNR=9.3						
	comp=Z,1.8nm,0.7s						
QSPA	**South Pole Qui**	**69.88**	**180**	P	**P**	**22 28 38.8**	**+1.4**
QSPA				IAmb	IAmb	22 28 39.9	
	comp=Z,2.9nm,0.8s						
BELA	**Belgrano 2**	**79.80**	**173**	P	**P**	**22 29 32.8**	**+0.2**
MAW	**Mawson**	**82.02**	**200**	P	**P**	**22 29 45.1**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=118,slow=2.8,SNR=2.5						
	comp=Z,0.8nm,0.6s						
MAW	**Mawson**	**82.02**	**200**	P	**P**	**22 29 44.2**	**+0.1**
TXAR	**Lajitas Array**	**86.47**	**57**	P	**P**	**22 30 07.6**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=224,slow=3.8,SNR=3.7						
	comp=Z,0.2nm,0.6s						
BCAR	**Beaver Creek A**	**87.59**	**15**	P	**P**	**22 30 09.6**	**-1.6**
CCB	**Clear Creek Bu**	**87.61**	**12**	P	**P**	**22 30 10.1**	**-1.0**
CCB				IAmb	IAmb	22 30 28.9	
	comp=Z,3.9nm,1.5s						
IMAR	**Indian Mountai**	**87.77**	**9**	P	**P**	**22 30 10.4**	**-1.4**
TROLL	**Troll, Antarti**	**88.04**	**180**	P	**P**	**22 30 14.4**	**+0.9**
VNA3	**Neumayer Olymp**	**88.42**	**176**	P	**P**	**22 30 15.4**	**+0.4**
VNA2	**Neumayer--Watz**	**88.87**	**177**	P	**P**	**22 30 17.7**	**+0.6**
	baz=181,slow=4.8						
VNA1	**Neumayer--Stat**	**89.09**	**176**	P	**P**	**22 30 18.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**90.47**	**289**	P	**P**	**22 30 24.8**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=123,slow=3.3,SNR=1.0						
	comp=Z,0.8nm,0.3s						
KKAR	**Karatay Array**	**119.43**	**309**	PKPdf	**PKPdf**	**22 36 07.9**	**-1.1**
AKASG	**Malin Array Be**	**142.97**	**332**	PKP	**PKPdf**	**22 36 49.4**	**-3.4**
	comp=Z,0.7nm,0.3s,baz=40,slow=4.1,SNR=9.1						
BRTR	**Keskin Array B**	**146.99**	**313**	PKPbc	**PKPdf**	**22 36 59.2**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=108,slow=3.2,SNR=5.9						
BRTR	**Keskin Array B**	**146.99**	**313**	PKPbc	**PKPdf**	**22 37 02.6**	**+2.3**
BUR08	**Bucovina Ar. S**	**147.01**	**331**		**PKPbc**	**22 37 03.4**	**+0.4**
BURAR	**Bucovina Array**	**147.03**	**331**	PKPbc	**PKPbc**	**22 37 03.1**	**+0.1**
CLL	**Collm**	**147.87**	**348**	*i* PKPbc	**PKPbc**	**22 37 04.9**	**0.0**
	comp=Z,5.0nm,0.7s						
GERES	**GERESS Array B**	**150.03**	**345**	PKPbc	**PKPbc**	**22 37 09.1**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=57,slow=3.6,SNR=5.9						
TORD	**Torodi Ar. Bea**	**172.96**	**173**	PKPab	**PKPab**	**22 39 00.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=175,slow=4.2,SNR=1.6						

*IDC **04** 22:22:25.6±1.5, 2°.73S×139°.27E, h0km, mb3.9/5, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=68.7km s-min=22.7km az=87.0*
*DJA **04** 22:22:26.3±0.6, 3°.5S±6°.×13°.9E±°, h10km, M4.0/3, MLv4.0/3*
*NEIC **04** 22:22:30.4±1.4, 2°.65S±0°.09×139°.44E±0°.09, h48km±8km, mb4.2/11, Error ellipse: s-maj=14.5km s-min=10.8km az=137.0*

ISC 04 22:22:30.4±0.6, 2°.83S±0°.06×139°.40E±0°.06, h46km, n28, σ1§95/31, mb4.2/7, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.80**	**73**	P	**Pn**	**22 22 42.9**	**-2.4**
GENI				S	**Sn**	**22 22 55.5**	**-0.7**
SMPI	**Sarmi**	**1.08**	**320**	P	**Pn**	**22 22 46.6**	**-2.6**
WAMI	**Wamena**	**1.25**	**213**	P	**Pn**	**22 22 49.9**	**-1.6**
FAKI	**Fak Fak**	**7.15**	**269**	Pn	**Pn**	**22 24 12.9**	**+0.5**
SAUI	**Saumlaki**	**9.55**	**237**	Pn	**Pn**	**22 24 47.1**	**+1.7**
COEN	**Coen**	**11.67**	**162**	Pn	**Pn**	**22 25 15.7**	**+1.3**
KNRA	**Kununurra**	**16.52**	**219**	Pn	**Pn**	**22 26 18.8**	**-0.2**
KNRA				IAmb	IAmb	22 26 45.9	
	comp=Z,34nm,1.4s						
SOEI	**Soe**	**16.54**	**245**	Pn	**Pn**	**22 26 18.9**	**-0.5**
SOEI				IAmb	IAmb	22 26 35.8	
	comp=Z,16nm,0.7s						
WR0	**Warramunga Arr**	**17.68**	**195**	P	**P**	**22 26 34.6**	**+0.8**
WR0				IAmb	IAmb	22 27 00.1	
	comp=Z,6.2nm,0.7s						
WRA	**Warramunga Arr**	**17.71**	**196**	P	**P**	**22 26 35.7**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=18,slow=13,SNR=7.4						
WRA				S	**Sn**	**22 29 43.9**	**-6.5**
	comp=Z,1.8nm,0.8s,baz=12,slow=23,SNR=5.0						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**17.71**	**196**	Pn	**Pn**	**22 26 32.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**20.30**	**221**	P	**P**	**22 27 01.8**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=34,slow=15,SNR=2.9						
FITZ				S	**S**	**22 30 44.7**	**-3.2**
	comp=Z,3.1nm,0.9s,baz=176,slow=12,SNR=2.8						
	comp=Z,1.7nm,0.8s						
AS31	**Alice Springs**	**21.39**	**194**	P	**P**	**22 27 16.0**	**+1.7**
ASAR	**Alice Springs**	**21.39**	**194**	P	**P**	**22 27 16.9**	**+2.6**
	comp=Z,1.8nm,0.7s,baz=22,slow=10,SNR=6.1						
ASAR				S	**S**	**22 31 11.6**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=2.9,slow=27,SNR=2.0						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**21.39**	**194**	P	**P**	**22 27 15.2**	**+0.9**
EIDS	**Eidsvold**	**25.07**	**154**	P	**P**	**22 27 50.9**	**+0.2**
EIDS				IAmb	IAmb	22 27 54.9	
	comp=Z,22nm,1.4s						
MBWA	**Marble Bar**	**26.43**	**225**	P	**P**	**22 28 03.2**	**+0.1**
MBWA				IAmb	IAmb	22 28 09.7	
	comp=Z,6.5nm,1.0s						
BJT	**Baijiatuau**	**47.67**	**336**	P	P	22 30 56.7	-5.6
MK31	**Makanchi Array**	**70.31**	**322**	P	**P**	**22 33 38.8**	**-0.4**
MK31				IAmb	IAmb	22 33 57.1	
	comp=Z,3.9nm,1.5s						
MKAR	**Makanchi Array**	**70.31**	**322**	P	**P**	**22 33 40.2**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=104,slow=7.7,SNR=11						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**70.31**	**322**	P	**P**	**22 33 38.1**	**-1.1**
VNDA	**Vanda**	**75.60**	**175**	P	**P**	**22 34 12.0**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=325,slow=7.4,SNR=11						
	comp=Z,1.4nm,0.7s						
VNDA	**Vanda**	**75.60**	**175**	P	**P**	**22 34 11.5**	**+1.6**
NRIK	**Noril'sk**	**80.03**	**344**	P	**P**	**22 34 35.9**	**+1.2**
	comp=Z,1.8nm,0.4s,baz=126,slow=4.3,SNR=3.9						
	comp=Z,1.8nm,0.4s						
NRIK	**Noril'sk**	**80.03**	**344**	P	**P**	**22 34 33.6**	**-1.0**
NRIK				IAmb	IAmb	22 34 37.5	
	comp=Z,2.8nm,0.6s						
QSPA	**South Pole Qui**	**87.12**	**180**	P	**P**	**22 35 12.1**	**+0.8**
BMAR	**Burnt Mountain**	**87.25**	**22**	P	**P**	**22 35 11.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**136.95**	**286**	PKP	**PKiKP**	**22 41 52.1**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=54,slow=2.8,SNR=4.1						

ISK 04 22:25:58.5, 37°.11N×30°.55E, h5km, ML1.5/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.19**	**236**	PG	Pg	22 26 02.9	+0.5
ANTB	**Antalya**	**0.23**	**159**	PG	Pg	22 26 04.1	+1.2
ANTB				SG	Sg	22 26 08.1	+2.2
ELL	**Elmali**	**0.63**	**235**	PG	Pb	22 26 12.4	+0.3
ELL				SG	Sb	22 26 22.1	+0.9
CAME	**Cameli-Denizli**	**1.01**	**261**	PG	Pb	22 26 18.9	+0.3
CAME				SG	Sn	22 26 34.3	+0.1

*SKO **04** 22:27:47.0, 41°.14N×20°.17E, h10km*
TIR 04 22:27:44.6, 41°.12N×20°.21E, h0km±1km, Ml1.9, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**312**	*i* Pg	Pg	22 27 51.9	+0.7
TIR				*i* Sg	Sb	22 27 59.2	-0.5
TIR	**Tirane**	**0.35**	**312**	P	Pg	22 27 52.0	+0.7
	baz=312						
TIR				S	Sb	22 27 58.2	-1.5
	baz=312						
TIR				AMP			
	comp=E,0.6nm,0.2s,baz=312						
OHR	**Ohrid**	**0.45**	**90**	*i* Pg	Pb	22 27 55.9	+0.6
OHR				*i* Sg	Sb	22 28 03.4	+0.9
OHR				*e*Lg	Lg	22 28 03.7	
	comp=N,102nm,0.3s						
OHR				*e*Lg	Lg	22 28 04.1	
	comp=E,150nm,0.5s						
PHP	**Peshkopia**	**0.59**	**17**	P	Pb	22 27 57.2	-0.6
	baz=16						
PHP				S	Sb	22 28 06.6	-0.2
	baz=16						
PHP				AMP			
	comp=N,0.3nm,0.2s,baz=16						
LSK	**Leskovik**	**1.01**	**163**	S	Sn	22 28 20.1	-0.8
	baz=162						
SRN	**Sarande**	**1.25**	**187**	P	Pn	22 28 09.7	+0.5
	baz=188						
SRN				S	Sn	22 28 28.4	+1.8
	baz=188						
BCI	**Bajram Curri**	**1.25**	**355**	P	Pn	22 28 09.6	+0.3
	baz=356						
BCI				S	Sn	22 28 28.6	+1.7
	baz=356						
STIP	**Stip**	**1.59**	**68**	*i* Pg	Pg	22 28 20.9	+5.7
STIP				*i* Sg	Sg	22 28 44.4	+8.6

*NORS **04** 22:38:15.5±0.0, 42°.68N×46°.79E, h49km, MPVA4.2*
*MOS **04** 22:38:17.3±0.0, 42°.76N×46°.63E, h64km±1km, MPVA4.1*
*DRS **04** 22:38:17.8±0.0, 42°.84N×45°.98E, h28km*
ISC 04 22:38:19.2±1.2, 42°.76N±0°.03×46°.60E±0°.03, h61km±6km, n92, σ1§15/164, 5C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNCR	**Uncukul**	**0.15**	**108**	⇓*i* P	**Pn**	**22 38 28.0**	**-0.6**
UNCR				*e*S	**Sn**	**22 38 36.3**	**+0.9**
UNCR				pmax	pmax		
	comp=Z,418nm,0.2s						
UNCR				smax	smax		
	comp=N,1μm,0.4s						
UNCR	**Uncukul**	**0.15**	**108**	*i* Pg	**Pn**	**22 38 28.1**	**-0.6**
UNCR				*e*Sg	**Sn**	**22 38 35.5**	**0.0**
KRNR	**Karanay**	**0.24**	**74**	⇓*i* P	**Pn**	**22 38 28.2**	**-0.9**
KRNR				*e*S	**Sn**	**22 38 36.7**	**+0.3**
KRNR				pmax	pmax		
	comp=Z,241nm,0.1s						
KRNR				smax	smax		
	comp=E,2μm,0.3s						
KRNR	**Karanay**	**0.24**	**74**	*i* Pg	**Pn**	**22 38 28.3**	**-0.9**
KRNR				*e*Sg	**Sn**	**22 38 36.3**	**0.0**
DLMR	**Dylym**	**0.31**	**5**	⇓*i* P	**Pn**	**22 38 29.0**	**-0.5**
DLMR				*e*S	**Sn**	**22 38 38.2**	**+1.2**
DLMR				pmax	pmax		
	comp=Z,282nm,0.1s						
DLMR				smax	smax		
	comp=N,2μm,0.5s						
DLMR	**Dylym**	**0.31**	**5**	*i* Pg	**Pn**	**22 38 29.1**	**-0.5**
DLMR				*e*Sg	**Sn**	**22 38 37.9**	**+0.8**
DBC	**Dubki**	**0.31**	**34**	*c i* P	**Pn**	**22 38 28.7**	**-0.9**
DBC				*i* S	**Sn**	**22 38 37.7**	**+0.5**
DBC				pmax	pmax		
	comp=Z,254nm,0.4s						
DBC	**Dubki**	**0.31**	**34**	*i* Pg	**Pn**	**22 38 28.8**	**-0.9**
DBC				*e*Sg	**Sn**	**22 38 37.0**	**-0.1**
ARKR	**Arakani**	**0.34**	**118**	⇓*i* P	**Pn**	**22 38 29.1**	**-0.7**
ARKR				*e*S	**Sn**	**22 38 38.2**	**+0.8**
ARKR				pmax	pmax		
	comp=Z,397nm,0.2s						
ARKR				smax	smax		
	comp=E,2μm,0.3s						
ARKR	**Arakani**	**0.34**	**118**	*i* Pg	**Pn**	**22 38 29.2**	**-0.7**
ARKR				*e*Sg	**Sn**	**22 38 37.7**	**+0.2**
BUJR	**Buynaksk**	**0.38**	**80**	⇓*i* P	**Pn**	**22 38 29.6**	**-0.6**
BUJR				*e*S	**Sn**	**22 38 39.6**	**+1.5**
BUJR				pmax	pmax		
	comp=Z,284nm,0.4s						
BUJR				smax	smax		
	comp=N,1μm,0.2s						
BUJR	**Buynaksk**	**0.38**	**80**	*i* Pg	**Pn**	**22 38 29.6**	**-0.6**
BUJR				*e*Sg	**Sn**	**22 38 39.3**	**+1.2**
GNBR	**Gunib**	**0.46**	**144**	⇓*i* P	**Pn**	**22 38 30.5**	**-0.4**
GNBR				*e*S	**Sn**	**22 38 40.6**	**+1.1**
GNBR				pmax	pmax		
	comp=Z,174nm,0.1s						
GNBR				smax	smax		
	comp=N,1μm,0.2s						
GNBR	**Gunib**	**0.46**	**144**	*i* Pg	**Pn**	**22 38 30.6**	**-0.4**
GNBR				*e*Sg	**Sn**	**22 38 40.2**	**+0.8**
MAK	**Makhachkala**	**0.70**	**73**	⇓*i* P	**Pn**	**22 38 33.2**	**-0.3**
MAK				*e*		22 38 45.6	
MAK				pmax	pmax		
	comp=Z,212nm,0.3s						
MAK				smax	smax		
	comp=N,906nm,0.3s						
MAK				smax	smax		
	comp=N,759nm,0.3s						
MAK	**Makhachkala**	**0.70**	**73**	*e*Pg	**Pn**	**22 38 33.2**	**-0.3**
MAK				*e*Sg	**Sn**	**22 38 43.6**	**-0.3**
GROC	**Groznyy**	**0.73**	**307**	*e*P	**Pn**	**22 38 34.4**	**+0.5**
GROC				*e*S	**Sn**	**22 38 46.5**	**+1.8**
GROC	**Groznyy**	**0.73**	**307**	*e*Pg	**Pn**	**22 38 34.4**	**+0.5**
GROC				*e*Sg	**Sn**	**22 38 46.5**	**+1.8**
KMKR	**Kumukh**	**0.73**	**149**	*i* P	**Pn**	**22 38 33.8**	**-0.4**
KMKR				*e*S	**Sn**	**22 38 45.7**	**+0.7**
KMKR	**Kumukh**	**0.73**	**149**	*i* Pg	**Pn**	**22 38 33.8**	**-0.4**
KMKR				*e*Sg	**Sn**	**22 38 45.7**	**+0.7**
KANR	**Karaman**	**0.79**	**56**	*e*P	**Pn**	**22 38 34.6**	**+0.1**
KANR				*e*S	**Sn**	**22 38 47.4**	**+1.6**
KANR				pmax	pmax		
	comp=Z,536nm,0.6s						
KANR				smax	smax		
	comp=N,770nm,0.7s						
KANR	**Karaman**	**0.79**	**56**	*e*Pg	**Pn**	**22 38 34.6**	**+0.1**
KANR				*e*Sg	**Sn**	**22 38 47.1**	**+1.3**
SGKR	**Sergokala**	**0.84**	**111**	*e*P	**Pn**	**22 38 34.9**	**-0.4**
SGKR				*e*S	**Sn**	**22 38 48.1**	**+0.9**
SGKR				pmax	pmax		
	comp=Z,5.0nm,0.1s						
SGKR				smax	smax		
	comp=E,852nm,0.5s						
SGKR	**Sergokala**	**0.84**	**111**	*e*Pg	**Pn**	**22 38 34.9**	**-0.4**
SGKR				*e*Sg	**Sn**	**22 38 48.0**	**+0.9**
LGD	**Lagodekhi**	**0.96**	**196**	P	**Pn**	**22 38 36.3**	**-0.6**
LGD				S	**Sn**	**22 38 50.6**	**+0.7**
LGD	**Lagodekhi**	**0.96**	**196**	P	**Pn**	**22 38 36.3**	**-0.6**
LGD				S	**Sn**	**22 38 50.6**	**+0.7**
URKR	**Urkarakh**	**0.97**	**127**	*e*P	**Pn**	**22 38 36.5**	**-0.6**
URKR				*e*S	**Sn**	**22 38 50.7**	**+0.4**
URKR				pmax	pmax		
	comp=Z,172nm,0.3s						
URKR				smax	smax		
	comp=E,297nm,0.2s						
URKR	**Urkarakh**	**0.97**	**127**	*e*Pg	**Pn**	**22 38 36.5**	**-0.6**
URKR				*e*Sg	**Sn**	**22 38 50.3**	**0.0**
SHTL	**Shatili**	**1.07**	**265**	P	**Pn**	**22 38 37.7**	**-0.7**
KMGR	**Komgaron**	**1.30**	**284**	*i* P	**Pn**	**22 38 42.3**	**+0.9**
KMGR				*e*S	**Sn**	**22 38 59.3**	**+1.4**
KMGR	**Komgaron**	**1.30**	**284**	*i* Pg	**Pn**	**22 38 42.3**	**+0.9**
KMGR				*e*Sg	**Sn**	**22 38 59.3**	**+1.4**
DDFL	**Dedoflistskaro**	**1.36**	**195**	P	**Pn**	**22 38 44.2**	**+2.0**
DDFL	**Dedoflistskaro**	**1.36**	**195**	P	**Pn**	**22 38 44.2**	**+2.0**
VLKR	**Vladikavkaz**	**1.44**	**282**	*e*P	**Pn**	**22 38 43.2**	**+0.1**
VLKR				*e*S	**Sn**	**22 39 02.4**	**+1.3**
VLKR	**Vladikavkaz**	**1.44**	**282**	*e*Pg	**Pn**	**22 38 43.2**	**+0.1**
VLKR				*e*Sg	**Sn**	**22 39 02.4**	**+1.3**
PNSH	**Pansheti**	**1.46**	**266**	P	**Pn**	**22 38 43.6**	**0.0**
PNSH	**Pansheti**	**1.46**	**266**	P	**Pn**	**22 38 43.6**	**0.0**
DRN	**Derbent**	**1.48**	**119**	*e*P	**Pn**	**22 38 43.6**	**0.0**
DRN				*e*S	**Sn**	**22 39 03.5**	**+1.5**
DRN	**Derbent**	**1.48**	**119**	*e*Pg	**Pn**	**22 38 43.6**	**0.0**
DRN				*e*Sg	**Sn**	**22 39 03.5**	**+1.5**
AKT	**Akhty**	**1.54**	**146**	*e*P	**Pn**	**22 38 43.8**	**-0.7**
AKT				*e*S	**Sn**	**22 39 03.9**	**+0.4**
AKT				pmax	pmax		
	comp=Z,94nm,0.3s						
AKT				smax	smax		
	comp=E,281nm,0.3s						
AKT	**Akhty**	**1.54**	**146**	*e*Pg	**Pn**	**22 38 43.8**	**-0.7**
AKT				*e*Sg	**Sn**	**22 39 03.2**	**-0.3**
GUDG	**Gudauri**	**1.59**	**260**	P	**Pn**	**22 38 46.4**	**+1.0**
GUDG	**Gudauri

DMNI	**Dmanisi**	**2.29**	**232**	P	**Pn**	**22 38 53.2**	**-1.6**
ONI	**Oni**	**2.32**	**267**	P	**Pn**	**22 38 55.1**	**-0.1**
ONI	**Oni**	**2.32**	**267**	P	**Pn**	**22 38 55.1**	**-0.1**
BKRG	**Bakuriani**	**2.49**	**247**	P	**Pn**	**22 38 56.9**	**-0.7**
BKRG	**Bakuriani**	**2.49**	**247**	P	**Pn**	**22 38 56.9**	**-0.7**
KBTC	**Kuba-Taba**	**2.55**	**295**	*e*P	**Sn**	**22 38 57.6**	**-0.7**
KBTC				*e*S	**Sn**	**22 39 27.9**	**-0.3**
KBTC	**Kuba-Taba**	**2.55**	**295**	*e*Pn	**Sn**	**22 38 57.6**	**-0.7**
KBTC				*e*Sn	**Sn**	**22 39 27.9**	**-0.3**
KBZ	**Khabaz**	**2.87**	**291**	*c i*P	**Pn**	**22 39 01.0**	**-1.5**
KBZ	**Khabaz**	**2.87**	**291**	*i* Pn	**Pn**	**22 39 01.0**	**-1.5**
KBZ				*e*Sn	**Sn**	**22 39 33.5**	**-2.3**
NEY	**Neytrino**	**2.88**	**281**	*e*P	**Pn**	**22 39 02.2**	**-0.7**
NEY				*e*S	**Sn**	**22 39 36.1**	**-0.3**
NEY	**Neytrino**	**2.88**	**281**	*e*Pn	**Pn**	**22 39 02.1**	**-0.7**
NEY				*e*Sn	**Sn**	**22 39 36.1**	**-0.3**
GNI	**Garni**	**2.96**	**209**	*e*P	**Pn**	**22 39 03.8**	**-0.1**
GNI				*e*S	**Sn**	**22 39 36.1**	**-2.2**
BEYR	**Belyy Ugol+**	**3.02**	**296**	*e*P	**Pn**	**22 39 03.4**	**-1.3**
BEYR				*e*S	**Sn**	**22 39 37.2**	**-2.5**
BEYR	**Belyy Ugol+**	**3.02**	**296**	*e*Pn	**Pn**	**22 39 03.4**	**-1.3**
BEYR				*e*Sn	**Sn**	**22 39 37.1**	**-2.5**
SHA1	**Shidzhatmaz**	**3.04**	**290**	*c i*P	**Pn**	**22 39 03.7**	**-1.4**
SHA1	**Shidzhatmaz**	**3.04**	**290**	*e*Pn	**Pn**	**22 39 03.7**	**-1.4**
SHA1				*e*Sn	**Sn**	**22 39 38.4**	**-1.9**
KIV	**Kislovodsk**	**3.09**	**294**	*e*P	**Pn**	**22 39 04.3**	**-1.3**
KIV				*e*S	**Sn**	**22 39 38.9**	**-2.5**
ALER	**Alexandrovskoy**	**3.33**	**308**	*e*P	**Pn**	**22 39 08.2**	**-0.7**
ALER				*e*S	**Sn**	**22 39 45.7**	**-1.6**
ALER	**Alexandrovskoy**	**3.33**	**308**	*e*Pn	**Pn**	**22 39 08.2**	**-0.7**
ALER				*e*Sn	**Sn**	**22 39 45.7**	**-1.6**
GOF	**Gofitskoye**	**3.44**	**313⇑**	*e*P	**Pn**	**22 39 09.3**	**-1.1**
GOF				*e*S	**Sn**	**22 39 48.9**	**-1.0**
GOF				pmax	pmax		
	comp=Z,14nm,0.4s						
GOF				smax	smax		
	comp=E,34nm,0.4s						
GOF				smax	smax		
	comp=N,56nm,0.6s						
GOF	**Gofitskoye**	**3.44**	**313**	*e*Pn	**Pn**	**22 39 09.5**	**-0.8**
GOF				*e*Sn	**Sn**	**22 39 48.9**	**-1.0**
NVNR	**Nevinnomyssk**	**3.83**	**300**	*e*P	**Pn**	**22 39 14.8**	**-0.9**
NVNR				*e*S	**Sn**	**22 39 58.9**	**-0.6**
AHMR	**Akhmetovskaya**	**4.28**	**291**	*e*P	**Pn**	**22 39 21.5**	**-0.3**
AHMR				*e*S	**Sn**	**22 40 10.6**	**+0.2**
AHMR	**Akhmetovskaya**	**4.28**	**291**	*e*Pn	**Pn**	**22 39 21.5**	**-0.3**
GUZR	**Guzeripl'**	**4.88**	**287**	*e*P	**Pn**	**22 39 30.5**	**+0.4**
GUZR				*e*S	**Sn**	**22 40 25.4**	**+0.1**

*TRN **04** 22:44:38.2, 10°.43N×62°.40W, h1km, MD4.0*
*FUNV **04** 22:44:39.4, 10°.45N×62°.31W, h2km, MW3.8*

ISC 04 22:44:39.1±1.3, 10°.43N±0°.05×62°.37W±0.03, h8km±10km, n34, σ1§28/46, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.89**	**286⇓**	*e*P	**Pg**	**22 44 56.0**	**-0.2**
CRUV				*e*S	**Sg**	**22 45 08.5**	**+0.9**
TPP	**Pointe-a-Pierr**	**0.91**	**97**	*e*P	**Pb**	**22 44 57.2**	**0.0**
TRN	**Trinidad (W)**	**0.98**	**77**	*e*P	**Pg**	**22 44 57.2**	**-0.7**
COAV	**Cumanacoa**	**1.46**	**259**	*e*P	**Pg**	**22 45 07.0**	**-0.1**
COAV				*e*S	**Sn**	**22 45 28.4**	**+3.0**
GRFF	**Grenada Fort F**	**1.72**	**21**	*e*P	**Pn**	**22 45 09.9**	**+0.5**
GRFF				*e*S	**Sg**	**22 45 34.2**	**-0.4**
CUMV	**Cumana_UDO**	**1.79**	**270**	*e*P	**Pn**	**22 45 11.6**	**+1.2**
GRGR	**Grenville**	**1.83**	**23**	*e*P	**Pb**	**22 45 12.3**	**-0.6**
GRGR				*e*S	**Sn**	**22 45 35.1**	**+0.7**
TOSP	**Speyside**	**2.00**	**64**	*e*P	**Pn**	**22 45 13.9**	**+0.7**
PCRV	**Puerto La Cruz**	**2.24**	**264**	*e*P	**Pn**	**22 45 17.3**	**+0.6**
PCRV				*e*S	**Sn**	**22 45 45.0**	**+0.4**
PRGV	**PARIAGUAN**	**2.79**	**234**	*e*P	**Pn**	**22 45 25.1**	**+0.9**
PRGV				*e*S	**Sn**	**22 45 58.9**	**+0.9**
SVB	**Belmont**	**3.03**	**21**	*e*P	**Pn**	**22 45 27.9**	**+0.4**
SVB				*e*S	**Sn**	**22 46 05.3**	**+1.4**
MCLT	**Moule a Chique**	**3.54**	**23**	*e*P	**Pn**	**22 45 34.9**	**+0.3**
MCLT				*e*S	**Sn**	**22 46 16.4**	**-0.3**
SLBI	**Saint Lucia, B**	**3.82**	**21**	*e*P	**Pn**	**22 45 38.5**	**+0.2**
SLBI	**Saint Lucia, B**	**3.82**	**21**	*e*S	**Sn**	**22 46 24.3**	**+0.8**
MERV	**Las Mercedes**	**4.04**	**253**	*e*P	**Pn**	**22 45 42.2**	**+0.8**
MERV				*e*S	**Sn**	**22 46 28.3**	**-0.7**
MPOM	**Morne Pois Mar**	**4.25**	**20**	*e*P	**Pn**	**22 45 45.0**	**+0.7**
MPOM	**Morne Pois Mar**	**4.25**	**20**	*e*S	**Sn**	**22 46 33.8**	**-0.4**
BIM	**Bigot**	**4.25**	**17**	*e*P	**Pn**	**22 45 45.2**	**+0.8**
BIM	**Bigot**	**4.25**	**17**	*e*S	**Sn**	**22 46 34.4**	**+0.2**
FUNV	**FUNVISIS**	**4.37**	**271**	*e*P	**Pn**	**22 45 46.1**	**+0.2**
FDF	**Fort de France**	**4.44**	**15**	*e*P	**Pn**	**22 45 47.4**	**+0.5**
FDF	**Fort de France**	**4.44**	**15**	*e*S	**Sn**	**22 46 38.3**	**-0.5**
TACV	**Tcata**	**4.59**	**267**	*e*P	**Pn**	**22 45 49.4**	**+0.4**
TACV				*e*S	**Sn**	**22 46 40.5**	**-2.1**
CACV	**CAICARA DEL OR**	**5.01**	**236**	*e*P	Pn	22 45 48.7	-5.9
CACV				*e*S	Sn	22 46 41.8	-11
DSLB	**Salisbury**	**5.06**	**10**	*e*P	**Pn**	**22 45 55.9**	**+0.5**
BENV	**Beln**	**5.17**	**265**	*e*P	**Pn**	**22 45 57.6**	**+0.6**
BENV				*e*S	**Sn**	**22 46 54.7**	**-2.2**
TDBA	**Terre de Bas,**	**5.43**	**7**	*e*P	**Pn**	**22 46 02.0**	**+1.5**
MAGL	**Barre de l'ile**	**5.59**	**11**	*e*P	**Pn**	**22 46 03.1**	**+0.5**
CBE	**Ff, Capester**	**5.65**	**7**	*e*P	**Pn**	**22 46 05.1**	**+1.5**
BAUV	**El Baul**	**5.78**	**256**	*e*P	**Pn**	**22 46 05.8**	**+0.5**
BAUV	**El Baul**	**5.78**	**256**	*e*P	**Pn**	**22 46 05.0**	**-0.3**
BAUV				*e*S	**Sn**	**22 47 09.4**	**-2.5**
MAPV	**Macapo**	**6.02**	**265**	*e*P	**Pn**	**22 46 09.0**	**+0.3**
MAPV				*e*S	**Sn**	**22 47 13.4**	**-4.5**
ANBD	**Bethesda, Anti**	**6.60**	**5**	*e*P	**Pn**	**22 46 18.6**	**+2.0**
ANBD	**Bethesda, Anti**	**6.60**	**5**	*e*S	**Sn**	**22 47 30.9**	**-1.2**

*AEIC **04** 22:45:07±0.5, 53°.81N±0°.09×165°.14W±0°.08, h54km±8km, Error ellipse: s-maj=14.6km s-min=4.9km az=157.0*

NEIC 04 22:45:06.9±0.8, 53°.7N±0°.1×165°.1W±0°.1, h54km±26km, ML3.0/8, ML2.9(AEIC), Error ellipse: s-maj=23.7km s-min=5.8km az=151.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.57**	**318**		Pn	22 45 18.9	-0.2
AKUT	**Akutan**	**0.60**	**315**		Pn	22 45 19.2	-0.3
AKUT				IAML		22 45 22.1	
	comp=E,661nm,0.2s						
AKUT				Sn	Sn	22 45 28.7	+0.1
ZRO	**Akutan Zero**	**0.66**	**305**		Pn	22 45 20.1	-0.3
AKMO	**Akutan Morgan**	**0.68**	**304**		Pn	22 45 20.3	-0.3
AKLV	**Akutan Long Va**	**0.69**	**310**		Pn	22 45 20.2	-0.6
AKRB	**Akutan Reef Bi**	**0.73**	**305**		Pn	22 45 20.7	-0.5
WESP	**Westdahl Peak**	**0.80**	**14**		Pn	22 45 21.9	-0.3
WECS	**Westdahl Cape**	**0.83**	**11**		Pn	22 45 22.2	-0.3
UNV	**Unalaska Valle**	**0.87**	**279**		Pn	22 45 22.9	0.0
WESN	**West Dahl Nort**	**0.90**	**18**		Pn	22 45 23.4	0.0
MNAT	**Makushin Natee**	**0.98**	**281**		Pn	22 45 24.1	-0.4
MTBL	**Makushin Table**	**0.99**	**285**		Pn	22 45 24.5	-0.1
MGOD	**Makushin Gods**	**1.08**	**275**		Pn	22 45 26.0	+0.2
MCIR	**Makushin Cirqu**	**1.11**	**283**		Pn	22 45 26.3	0.0
SSLS	**Shishaldin Sou**	**1.18**	**31**		Pn	22 45 27.0	-0.1
BRPK	**Brown Peak**	**1.21**	**39**		Pn	22 45 27.6	+0.1
SSLN	**Shishaldin Nor**	**1.26**	**29**		Pn	22 45 28.3	+0.1
ISLZ	**Isanotski Laza**	**1.28**	**37**		Pn	22 45 28.3	-0.2
ISNN	**Isanotski Nort**	**1.35**	**33**		Pn	22 45 29.7	+0.4
FALS	**False Pass**	**1.49**	**39**		Pn	22 45 31.3	+0.1
OKFG	**Magazine Ridge**	**1.73**	**261**		Pn	22 45 34.8	+0.3
OKSO	**Okmok South**	**1.89**	**260**		Pn	22 45 36.6	-0.1
NIKH	**Nikolski High**	**2.40**	**253**	Pn	Pn	22 45 44.7	+1.1
SDPT	**Sand Point**	**3.13**	**57**		Pn	22 45 54.0	+0.4
SDPT				Sn	Sn	22 46 28.9	-0.8
SDPT				IAML		22 46 36.7	
	comp=E,50nm,1.6s						
SDPT				IAML		22 46 43.5	
	comp=N,44nm,0.9s						
CNBA	**Chernabura Isl**	**3.39**	**69**		Pn	22 45 57.0	-0.2
CNBA				IAML		22 46 55.9	
	comp=E,24nm,3.7s						
CHGN	**Chignik**	**4.62**	**53**	Pn	Pn	22 46 15.6	+1.6
ADK	**Adak**	**7.29**	**260**	Pn	Pn	22 46 52.3	+1.7
O18K	**Koktuh Hills**	**8.18**	**37**	Pn	Pn	22 47 03.7	+0.9
N19K	**Bonanza Creek**	**9.12**	**35**	Pn	Pn	22 47 16.8	+1.1
M19K	**Big River Lodg**	**9.97**	**30**	Pn	Pn	22 47 27.9	+0.6
KTH	**Kantishna Hill**	**12.27**	**31**	Pn	Pn	22 47 56.1	-2.6

*GUC **04** 23:00:16.8±0.7, 23°.71S×68°.14W, h131km±4km, ML4.2*
*NEIC **04** 23:00:16.9±1.3, 23°.71S±0°.05×68°.13W±0°.05, h122km±5km, mb4.4/20, ML4.2(GUC), Error ellipse: s-maj=6.9km s-min=5.7km az=209.0*
*VAO **04** 23:00:17.4±0.5, 23°.49S×67°.94W, h117km, mb4.3*
*IDC **04** 23:00:17.4±1.4, 23°.60S×67°.91W, h121km±11km, mb3.8/8, mbtmp4.2/10, Error ellipse: s-maj=22.2km s-min=17.8km az=8.0*

ISC 04 23:00:16.4±0.6, 23°.69S±0°.03×68°.10W±0°.05, h123km±6km, n124, σ1§37/149, mb4.3/12, 6C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.73**	**354**		**Pn**	**23 00 37.3**	**+0.6**
AF01				Sn	Sn	23 00 52.6	+0.5
AF01	**San Pedro de A**	**0.73**	**354⇓**	*i*P	**Pn**	**23 00 37.5**	**+0.8**
AF01				*i* S	**Sn**	**23 00 53.1**	**+1.0**
AF01				IAML		23 00 54.5	
	comp=N,9μm,0.3s						
LVC	**Limon Verde**	**1.31**	**325**	P	**Pn**	**23 00 43.4**	**+1.1**
	comp=N,212nm,0.4s,baz=155,slow=9.1,SNR=1046						
LVC				S	**Sn**	**23 01 03.2**	**+1.3**
	comp=N,1μm,0.3s,baz=270,slow=22,SNR=22						
LVC	**Limon Verde**	**1.31**	**325**	Pn	**Pn**	**23 00 43.4**	**+1.1**
LVC				Sn	**Sn**	**23 01 02.5**	**+0.6**
LVC	**Limon Verde**	**1.31**	**325**	*e*P	**Pn**	**23 00 43.0**	**+0.7**
LVC				*e*S	**Sn**	**23 01 02.9**	**+1.0**
LVC	**Limon Verde**	**1.31**	**325**	*e*P	**Pn**	**23 00 43.2**	**+0.9**
PB15	**IPOC Station P**	**1.35**	**290**		**Pn**	**23 00 43.0**	**+0.4**
PB15				Sn	**Sn**	**23 01 02.5**	**+0.1**
PB15	**IPOC Station P**	**1.35**	**290⇑**	*i*P	**Pn**	**23 00 43.4**	**+0.8**
PB15				*e*S	**Sn**	**23 01 03.0**	**+0.6**
PB06	**IPOC Station P**	**1.67**	**305**		**Pn**	**23 00 47.0**	**+0.8**
PB06				Sn	**Sn**	**23 01 08.7**	**-0.3**
PB06	**IPOC Station P**	**1.67**	**305⇑**	*i*P	**Pn**	**23 00 47.0**	**+0.8**
PB06				*e*S	**Sn**	**23 01 09.5**	**+0.5**
PB06				IAML		23 01 11.3	
	comp=N,3μm,0.2s						
GO02	**Mina Guanaco**	**2.00**	**223**	Pn	**Pn**	**23 00 50.8**	**+0.4**
GO02				Sn	**Sn**	**23 01 16.7**	**+0.4**
GO02	**Mina Guanaco**	**2.00**	**223⇑**	*i*P	**Pn**	**23 00 51.0**	**+0.6**
GO02				*e*S	**Sn**	**23 01 17.0**	**+0.6**
GO02				IAML		23 01 18.4	
	comp=N,1μm,0.2s						
PB09	**IPOC Station P**	**2.16**	**330**	Pn	**Pn**	**23 00 53.2**	**+1.0**
PB09				Sn	**Sn**	**23 01 19.8**	**+0.3**
PB09	**IPOC Station P**	**2.16**	**330⇓**	*i*P	**Pn**	**23 00 53.7**	**+1.5**
PB09				*e*S	**Sn**	**23 01 20.7**	**+1.1**
PB09				IAML		23 01 24.6	
	comp=E,597nm,0.2s						
PB10	**IPOC Station P**	**2.26**	**274**	Pn	**Pn**	**23 00 53.4**	**+0.1**
PB10				Sn	**Sn**	**23 01 20.2**	**-1.4**
PB10	**IPOC Station P**	**2.26**	**274⇑**	*i*P	**Pn**	**23 00 53.4**	**+0.1**
PB10				*e*S	**Sn**	**23 01 20.6**	**-1.0**
PB14	**IPOC Station P**	**2.31**	**246**		**Pn**	**23 00 53.8**	**-0.3**
PB14	**IPOC Station P**	**2.31**	**246⇑**	*i*P	**Pn**	**23 00 53.9**	**-0.3**
PB14				*e*S	**Sn**	**23 01 22.5**	**-0.6**
PB04	**IPOC Station P**	**2.32**	**305**	Pn	**Pn**	**23 00 54.3**	**+0.1**
PB04	**IPOC Station P**	**2.32**	**305**	*e*P	**Pn**	**23 00 54.5**	**+0.3**
PB04				*e*S	**Sn**	**23 01 21.7**	**-1.5**
PB04				IAML		23 01 24.1	
	comp=N,1μm,0.3s						
PB07	**IPOC Station P**	**2.56**	**319**		**Pn**	**23 00 57.3**	**+0.1**
PB07	**IPOC Station P**	**2.56**	**319⇓**	*i*P	**Pn**	**23 00 57.8**	**+0.6**
PB07				*e*S	**Sn**	**23 01 27.9**	**-0.7**
PB07				IAML		23 01 32.5	
	comp=N,920nm,0.3s						
PB02	**IPOC Station P**	**2.88**	**324**		**Pn**	**23 01 01.1**	**-0.3**
PB02	**IPOC Station P**	**2.88**	**324⇓**	*i*P	**Pn**	**23 01 01.6**	**+0.2**
PB02				*e*S	**Sn**	**23 01 34.9**	**-1.2**
PB02				IAML		23 01 42.0	
	comp=E,1μm,0.3s						
PB01	**IPOC Station P**	**2.93**	**334**	Pn	**Pn**	**23 01 01.9**	**-0.1**
PB01	**IPOC Station P**	**2.93**	**334⇓**	*e*P	**Pn**	**23 01 02.1**	**+0.2**
PB01				*e*S	**Sn**	**23 01 37.1**	**0.0**
PB01				IAML		23 01 38.5	
	comp=E,917nm,0.4s						
AC02	**Maricunga**	**3.27**	**196**	Pn	**Pn**	**23 01 07.4**	**+0.6**
AC02	**Maricunga**	**3.27**	**196⇑**	*i*P	**Pn**	**23 01 07.6**	**+0.8**
AC02				*e*S	**Sn**	**23 01 46.0**	**+0.2**
AC02				IAML		23 01 51.3	
	comp=E,156nm,0.3s						
AC01	**Pan de Azucar**	**3.34**	**222**	Pn	**Pn**	**23 01 05.8**	**-1.5**
AC01	**Pan de Azucar**	**3.34**	**222**	*e*P	**Pn**	**23 01 05.9**	**-1.4**
AC01				*e*S	**Sn**	**23 01 44.5**	**-2.2**
PATCX	**Punta Patache**	**3.43**	**326**	Pn	**Pn**	**23 01 07.5**	**-1.0**
PATCX	**Punta Patache**	**3.43**	**326**	*e*P	**Pn**	**23 01 07.7**	**-0.8**
PATCX				*e*S	**Sn**	**23 01 41.3**	**-7.5**
TA01	**Diego Aracena**	**3.66**	**328**	Pn	**Pn**	**23 01 10.1**	**-1.3**
PB08	**IPOC Station P**	**3.66**	**344**	Pn	**Pn**	**23 01 12.4**	**+0.5**
PB08	**IPOC Station P**	**3.66**	**344⇓**	*e*P	**Pn**	**23 01 12.5**	**+0.6**
PB08				*e*S	**Sn**	**23 01 52.9**	**-1.9**
GO01	**Chusmiza**	**4.13**	**345**	Pn	**Pn**	**23 01 18.0**	**-0.2**
AC06	**Mina Casimiro**	**4.19**	**209**	Pn	**Pn**	**23 01 16.4**	**-2.1**
PB12	**IPOC Station P**	**5.46**	**337**	Pn	**Pn**	**23 01 33.6**	**-2.1**
PB16	**IPOC Station P**	**5.49**	**346**	Pn	**Pn**	**23 01 36.0**	**-0.5**
AC05	**El Transito**	**5.49**	**200**	Pn	**Pn**	**23 01 33.6**	**-2.5**
CO01	**Juntas del Tor**	**6.51**	**195**	Pn	**Pn**	**23 01 48.0**	**-2.0**
GO04	**Tololo Observa**	**6.90**	**200**		**Pn**	**23 01 51.0**	**-4.2**
LPAZ	**La Paz**	**7.36**	**360**	P	**Pn**	**23 02 02.6**	**+0.8**
	comp=E,4.4nm,0.4s,baz=163,slow=4.4,SNR=26						
LPAZ				S	**Sn**	**23 03 25.6**	**+1.3**
	comp=E,2.1nm,0.6s,baz=198,slow=13,SNR=1.3						
LPAZ	**La Paz**	**7.36**	**360**	Pn	**Pn**	**23 02 01.4**	**-0.5**
CO03	**El Pedregal**	**7.49**	**197**	Pn	**Pn**	**23 01 59.8**	**-3.2**
BBSD	**Serra de San D**	**9.54**	**49**	*e*P	**Pn**	**23 02 28.6**	**-2.1**
MURT	**Porto Murtinho**	**9.89**	**80**	*e*P	**Pn**	**23 02 33.8**	**-1.5**
SIV	**San Ignacio**	**10.11**	**42**	P	**Pn**	**23 02 35.1**	**-3.3**
	comp=E,9.8nm,0.3s,baz=224,slow=10,SNR=59						
SIV				S	**Sn**	**23 04 24.0**	**-6.0**
	comp=E,1.8nm,0.3s,baz=171,slow=13,SNR=3.3						
LMEL	**Las Melosas**	**10.29**	**190**	Pn	**Pn**	**23 02 39.5**	**-1.4**
AZCA	**Azaras, Argent**	**11.75**	**114**	*e*P	**Pn**	**23 03 00.6**	**+0.5**
PTLB	**Pontes e Lacer**	**11.76**	**47**	*e*P	**Pn**	**23 02 58.4**	**-2.0**
ITQB	**Itaqui**	**11.86**	**123**	*e*P	**Pn**	**23 03 02.5**	**+1.0**
AQDB	**Aquidauana**	**11.93**	**77**	*e*P	**Pn**	**23 03 01.6**	**-0.9**
VILB	**Vilhena**	**13.04**	**36**	*e*P	**Pn**	**23 03 16.6**	**-0.5**
RPRD	**Ribas do Rio P**	**13.72**	**79**	*e*P	**Pn**	**23 03 26.5**	**+0.7**
ETMB	**Extrema**	**13.91**	**8**	*e*P	**Pn**	**23 03 27.0**	**-1.3**
SALV	**Santo Antonio**	**14.00**	**59**	*e*P	**Pn**	**23 03 28.4**	**-1.1**
TRCB	**Terra Rica**	**14.24**	**90**	*e*P	**Pn**	**23 03 33.2**	**+0.6**
CPSB	**Cacapava Do Su**	**14.67**	**120**	*e*P	**P**	**23 03 40.4**	**-0.3**
ITAB	**Concordia**	**14.85**	**107**	Pn	**Pn**	**23 03 39.9**	**-0.2**
ITAB	**Concordia**	**14.85**	**107**	*e*P	**P**	**23 03 41.6**	**-1.1**
PLTB	**Pedras Altas**	**15.13**	**125**	Pn	**Pn**	**23 03 44.3**	**+0.6**
PLTB				IAmb	IAmb	23 03 50.9	
	comp=Z,35nm,1.5s						
PLTB	**Pedras Altas**	**15.13**	**125**	*e*P	**P**	**23 03 44.7**	**-1.2**
TRQA	**Tornquist**	**15.25**	**161**		**P**	**23 03 47.6**	**+0.5**
PDRB	**Porto dos Gac**	**16.16**	**44**	*e*P	**Pn**	**23 03 55.9**	**-0.6**
FRTB	**Fartura**	**17.00**	**93**	*e*P	**Pn**	**23 04 06.2**	**-0.6**
CLDB	**Colider**	**17.31**	**45**	*e*P	**P**	**23 04 08.7**	**-1.4**
TIJ01	**Guaruva-PR**	**17.45**	**99**	*e*P	**P**	**23 04 11.1**	**-0.6**
BB19B	**Bebedouro**	**18.28**	**86**	*e*P	**P**	**23 04 21.0**	**+0.2**
RCLB	**Rio Claro- Sao**	**18.97**	**90**	*e*P	**P**	**23 04 28.8**	**+0.5**
PET01	**Itanhaem-SP**	**19.03**	**96**	*e*P	**P**	**23 04 29.1**	**+0.2**
VAO	**Valinhos**	**19.41**	**92**	*e*P	**P**	**23 04 32.7**	**-0.4**
IPMB	**Ipameri, GO**	**19.42**	**77**	*e*P	**P**	**23 04 33.3**	**+0.1**
SNDB	**Serra Nova Dou**	**19.76**	**57**	*e*P	**P**	**23 04 35.0**	**-1.8**
BDFB	**Brasilia**	**20.52**	**71**	P	**P**	**23 04 43.5**	**-1.6**
	comp=Z,13nm,0.6s,baz=254,slow=10,SNR=21						
	comp=Z,13nm,0.6s						
BDFB	**Brasilia**	**20.52**	**71**	P	**P**	**23 04 44.0**	**-1.1**
BDFB				IAmb	IAmb	23 04 45.0	
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	**20.52**	**71**	*e*P	**P**	**23 04 44.4**	**-0.6**
NPGB	**Novo Progresso**	**20.58**	**39**	*e*P	**P**	**23 04 44.0**	**-1.7**
PARB	**Paraibuna**	**20.61**	**94**	*e*P	**P**	**23 04 45.9**	**-0.1**
PMNB	**Patos De Minas**	**20.84**	**80**	*e*P	**P**	**23 04 47.3**	**-1.2**
MACA	**Manacapuru-AM**	**21.63**	**20**	*e*P	**P**	**23 04 55.7**	**-1.1**
MAN01	**Angra dos Reis**	**22.18**	**93**	*e*P	**P**	**23 05 01.4**	**-1.3**
MCRA	**Macar, Loja**	**22.36**	**327**	P	**P**	**23 05 04.8**	**+0.3**
ITTB	**Itaituba**	**22.61**	**34**	*e*P	**P**	**23 05 04.7**	**-2.2**
DIAM	**Diamantina, MG**	**23.41**	**81**	*e*P	**P**	**23 05 14.0**	**-0.6**
MC01	**Montes Claros**	**23.69**	**77**	*e*P	**P**	**23 05 15.6**	**-1.4**
DUB01	**Friburgo-RJ**	**23.74**	**91**	*e*P	**P**	**23 05 17.0**	**-0.5**
SMTB	**Santa Maria do**	**24.54**	**56**	*e*P	**P**	**23 05 23.1**	**-1.7**
SDBA	**SAO DESIDERIO**	**24.70**	**67**	*e*P	**P**	**23 05 25.3**	**-0.9**
PRPB	**Parauapebas**	**24.75**	**48**	*e*P	**P**	**23 05 25.8**	**-0.8**
MALB	**Monte Alegre**	**25.51**	**34**	*e*P	**P**	**23 05 32.2**	**-1.2**
OTAV	**Otavalo**	**25.82**	**336**	*e*P	**P**	**23 05 37.6**	**+0.8**
RIB01	**Linhares ES**	**26.12**	**86**	*e*P	**P**	**23 05 38.2**	**-0.8**
NAN01	**Guarapari, ES**	**26.76**	**83**	*e*P	**P**	**23 05 43.8**	**-1.0**
GUA01	**Guaratinga, BA**	**27.45**	**80**	*e*P	**P**	**23 05 50.3**	**-0.7**
MCPB	**Macapa, AP**	**27.93**	**36**	*e*P	**P**	**23 05 54.7**	**-0.5**
CMC01	**Camacan, BA**	**28.14**	**78**	*e*P	**P**	**23 05 56.3**	**-0.7**
GDU01	**Guandu, BA**	**28.72**	**75**	*e*P	**P**	**23 06 01.2**	**-1.0**
BAUV	**El Baul**	**32.43**	**0**	P	**P**	**23 06 34.8**	**-0.1**
BAUV				IAmb	IAmb	23 06 39.8	
	comp=Z,9.3nm,1.1s						
SDV	**Santo Domingo**	**32.47**	**355**	P	**P**	**23 06 35.5**	**+0.1**
TX32	**Lajitas Array**	**62.84**	**325**	P	**P**	**23 10 29.5**	**+0.2**
TXAR	**Lajitas Array**	**62.84**	**325**	P	**P**	**23 10 30.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=150,slow=8.0,SNR=7.9						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**62.84**	**325**	P	**P**	**23 10 30.0**	**+0.7**
TX31	**Lajitas Ar. Si**	**62.85**	**325**	P	**P**	**23 10 29.9**	**+0.6**
CCM	**Cathedral Cave**	**65.15**	**340**	P	**P**	**23 10 44.5**	**+0.4**
CCM				IAmb	IAmb	23 10 44.7	
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**68.66**	**72**	P	**P**	**23 11 07.2**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=214,slow=6.5,SNR=4.5						
	comp=Z,2.9nm,0.6s						
DBIC	**Dimbokro**	**68.66**	**72**	P	**P**	**23 11 07.0**	**+0.2**
TRQ	**Mont Tremblant**	**69.82**	**355**	P	**P**	**23 11 13.3**	**-0.1**
TRQ				IAmb	IAmb	23 11 19.7	
	comp=Z,7.6nm,1.2s						
I42A	**Draeger Farm,**	**69.91**	**344**	P	**P**	**23 11 14.1**	**+0.2**
BGNE	**Belgrade**	**70.51**	**336**	P	**P**	**23 11 18.4**	**+0.8**
PDAR	**Pinedale Array**	**76.37**	**330**	P	**P**	**23 11 53.6**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=137,slow=15,SNR=3.5						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**76.37**	**330**	P	**P**	**23 11 53.1**	**+0.9**
TOA0	**Torodi Ar. Sit**	**77.39**	**70**	P	**P**	**23 11 58.5**	**+0.3**
TOA0				IAmb	IAmb	23 11 59.5	
	comp=Z,6.8nm,1.3s						
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**23 11 58.7**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=259,slow=5.8,SNR=85						
	comp=Z,1.9n

CMAR	**Chiang Mai Arr**	**20.35 357**	P	**P**		**00 47 53.8**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=186,slow=9.6,SNR=16						
CMAR			LR	LR		00 55 38.3	
	comp=Z,55nm,19.7s,baz=175,slow=36						
	comp=Z,2.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.35 357**	P	**P**		**00 47 53.1**	**-0.4**
PALK	**Pallekele**	**21.23 296**	LR	LR		00 55 30.0	
	comp=Z,58nm,18.5s,baz=234,slow=35						
H08S2	**Diego Garcia H**	**27.83 257**	T	T		01 17 54.1	
	baz=80,slow=75,SNR=74						
H08S3	**Diego Garcia H**	**27.84 257**	T	T		01 17 52.3	
	baz=80,slow=75,SNR=63						
H08S1	**Diego Garcia H**	**27.85 257**	T	T		01 17 53.2	
	baz=80,slow=75,SNR=41						
FITZ	**Fitzroy Crossi**	**29.92 124**	P	**P**		**00 49 23.9**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=190,slow=5.2,SNR=3.4						
	comp=Z,3.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.92 124**	P	**P**		**00 49 23.4**	**-1.5**
LSA	**Lhasa**	**32.61 346**	P	**P**		**00 49 47.7**	**-1.2**
LSA			IAmb	IAmb		00 49 51.9	
	comp=Z,4.8nm,0.6s						
WB0	**Warramunga Arr**	**38.09 120**	P	**P**		**00 50 33.1**	**-2.6**
WB0			IAmb	IAmb		00 50 35.6	
	comp=Z,6.8nm,0.9s						
WRA	**Warramunga Arr**	**38.11 120**	P	**P**		**00 50 33.9**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=304,slow=8.9,SNR=14						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**38.11 120**	P	**P**		**00 50 34.7**	**-1.2**
WB2	**Warramunga Arr**	**38.12 120**	P	**P**		**00 50 34.6**	**-1.4**
WB2			IAmb	IAmb		00 50 35.5	
	comp=Z,7.8nm,1.1s						
WR0	**Warramunga Arr**	**38.29 120**	P	**P**		**00 50 36.1**	**-1.3**
WR0			IAmb	IAmb		00 50 37.6	
	comp=Z,7.4nm,0.9s						
ASAR	**Alice Springs**	**39.36 126**	P	**P**		**00 50 46.0**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=301,slow=7.8,SNR=18						
ASAR			LR	LR		01 08 24.1	
	comp=Z,29nm,18.8s,baz=54,slow=38						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**39.36 126**	P	**P**		**00 50 45.4**	**-1.0**
KSRS	**Korea Array**	**47.09 31**	P	**P**		**00 51 48.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=231,slow=10,SNR=2.0						
KSRS			LR	LR		01 15 19.8	
	comp=Z,30nm,18.8s,baz=190,slow=41						
	comp=Z,1.4nm,0.6s						
STKA	**Stephens Creek**	**49.25 132**	P	**P**		**00 52 06.4**	**+1.1**
	comp=Z,3.6nm,1.1s,baz=317,slow=10,SNR=3.5						
	comp=Z,3.6nm,1.1s						
STKA	**Stephens Creek**	**49.25 132**	P	**P**		**00 52 04.6**	**-0.7**
BOOM	**Boomskoye usch**	**49.28 337**	P	**P**		**00 52 06.5**	**+0.9**
BOOM			IAmb	IAmb		00 52 07.8	
	comp=Z,2.4nm,0.7s						
SONM	**Songino Array**	**49.96 6**	P	**P**		**00 52 11.5**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=187,slow=8.9,SNR=16						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	**49.96 6**	P	**P**		**00 52 11.2**	**+0.6**
MK31	**Makanchi Array**	**51.00 345**	P	**P**		**00 52 19.2**	**+0.8**
MK31			IAmb	IAmb		00 52 20.1	
	comp=Z,5.9nm,0.8s						
MKAR	**Makanchi Array**	**51.00 345**	P	**P**		**00 52 19.4**	**+1.0**
	comp=Z,7.3nm,0.6s,baz=148,slow=8.1,SNR=70						
	comp=Z,7.3nm,0.6s						
MKAR	**Makanchi Array**	**51.00 345**	P	**P**		**00 52 19.3**	**+0.9**
MAKZ	**Makanchi**	**51.09 344**	P	**P**		**00 52 19.9**	**+0.8**
MAKZ			IAmb	IAmb		00 52 20.8	
	comp=Z,3.9nm,0.8s						
USA0B	**Ussuriysk Arra**	**54.22 28**	P	**P**		**00 52 42.0**	**-0.3**
USRK	**Ussuriysk Ar.**	**54.22 28**	P	**P**		**00 52 42.3**	**+0.1**
	comp=Z,8.8nm,0.8s,baz=219,slow=6.1,SNR=16						
	comp=Z,8.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.22 28**	P	**P**		**00 52 41.1**	**-1.1**
GEYT	**Alibeck**	**55.36 320**	P	**P**		**00 52 51.2**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=150,slow=6.3,SNR=3.9						
	comp=Z,1.5nm,0.8s						
KURK	**Kurchatov**	**55.57 344**	P	**P**		**00 52 51.0**	**-0.9**
ZAA0	**Zalesovo Array**	**57.15 349**	P	**P**		**00 53 02.5**	**-0.5**
ZAA0			IAmb	IAmb		00 53 04.5	
	comp=Z,3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**57.15 349**	P	**P**		**00 53 02.6**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=178,slow=4.5,SNR=15						
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**57.15 349**	P	**P**		**00 53 02.4**	**-0.6**
ABKAR	**Akbulak array**	**61.58 331**	P	**P**		**00 53 33.4**	**-0.3**
KBZ	**Khabaz**	**68.22 319**	P	**P**		**00 54 18.0**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=113,slow=7.3,SNR=4.1						
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**73.22 313**	P	**P**		**00 54 47.9**	**0.0**
	comp=Z,0.5nm,0.9s,baz=142,slow=5.4,SNR=2.5						
	comp=Z,0.5nm,0.9s						
BURAR	**Bucovina Array**	**81.17 319**	P	**P**		**00 55 32.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**81.19 319**	P	**P**		**00 55 31.8**	**-0.5**
BUR08			IAmb	IAmb		00 55 46.3	
	comp=Z,7.6nm,1.4s						
VTS	**Vitosha**	**81.54 313**	P	**P**		**00 55 33.1**	**-1.3**
VTS			IAmb	IAmb		00 55 42.4	
	comp=Z,4.4nm,1.2s						
FINES	**FINESS Array B**	**84.05 332**	P	**P**		**00 55 47.5**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=86,slow=5.7,SNR=6.4						
	comp=Z,2.7nm,0.9s						
FINES	**FINESS Array B**	**84.05 332**	P	**P**		**00 55 46.6**	**-0.2**
ARCES	**ARCESS Array B**	**86.43 340**	P	**P**		**00 56 00.1**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=69,slow=6.0,SNR=1.5						
	comp=Z,1.2nm,0.6s						
TXAR	**Lajitas Array**	**144.79 37**	PKP	**PKPdf**		**01 02 54.0**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=250,slow=0.9,SNR=29						

*IDC **05** 01:08:15.6±0.9, 34°.92N×24°.92E, h0km, mb3.9/10, mbtmp3.8/16, ML3.7/6, Error ellipse: s-maj=16.0km s-min=8.2km az=83.0*
*ISK **05** 01:08:16.6, 35°.01N×24°.86E, h8km, ML3.5/26*
*NEIC **05** 01:08:16.9±2.2, 35°.00N±0°.03×24°.91E±0°.03, h10km±1km, mb3.9/6, ML3.3(THE), ML3.5(ATH), Error ellipse: s-maj=5.9km s-min=4.5km az=216.0*
*ATH **05** 01:08:16.8, 34°.98N×24°.88E, h15km±1km, ML3.5/14, Error ellipse: s-maj=1.3km s-min=0.7km az=176.0*
*THE **05** 01:08:17.0, 35°.00N×24°.88E, h11km, ML3.3/8, Error ellipse: s-maj=0.8km s-min=0.4km az=338.0*
*DDA **05** 01:08:23.0±0.0, 35°.08N×24°.95E, h35km, MW3.7*
*HLW **05** 01:08:27.1, 34°.18N×25°.28E, h6km±17km, Md3.2, Ml3.6*

ISC 05 01:08:16.7±0.8, 34°.97N±0°.03×24°.90E±0°.02, h12km±4km, n121, σ1°.34/151, mb3.8/13, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.09**	**305**	P	**Pg**	**01 08 19.4**	**-0.1**
SIVA				S	**Sg**	**01 08 21.1**	**-0.5**
	244μm,0.3s						
SIVA	**Sivas**	**0.09**	**305**	P	**Pg**	**01 08 19.4**	**-0.1**
SIVA				S	**Sg**	**01 08 21.2**	**-0.3**
SIVA				AML	AML	01 08 21.4	
SIVA				AML	AML	01 08 22.2	
TMBK	**Timbaki Herakl**	**0.15**	**314**	P	**Pg**	**01 08 20.5**	**+0.1**
TMBK	**Timbaki Herakl**	**0.15**	**314**	P	**Pg**	**01 08 20.6**	**+0.1**
TMBK				S	**Sg**	**01 08 23.4**	**+0.5**
IDI	**Anoyia**	**0.32**	**359**	Pg	**Pg**	**01 08 22.8**	**-0.5**
	463nm,0.3s,baz=172,slow=11,SNR=5622						
IDI				Lg	Lg	01 08 27.6	
	baz=318,slow=15						
IDI	**Anoyia**	**0.32**	**359**	PG	**Pg**	**01 08 22.9**	**-0.5**
IDI				SG	**Sg**	**01 08 27.6**	**-0.2**
IDI	**Anoyia**	**0.32**	**359**	Pg	**Pg**	**01 08 22.1**	**-1.2**
IDI				Sg	**Sg**	**01 08 27.4**	**-0.3**
IDI	**Anoyia**	**0.32**	**359**	P	**Pg**	**01 08 22.8**	**-0.5**
IDI				S	**Sg**	**01 08 27.6**	**-0.2**
	19μm,0.2s						
IDI	**Anoyia**	**0.32**	**359**	P	**Pg**	**01 08 22.9**	**-0.5**
IDI				S	**Sg**	**01 08 27.6**	**-0.2**
IDI				AML	AML	01 08 28.1	
	comp=E,36354μm,0.2s						
IDI				AML	AML	01 08 28.9	
	comp=N,40352μm,0.3s						
IACM	**Heraklion**	**0.37**	**22**	P	**Pg**	**01 08 23.9**	**-0.2**
IACM	**Heraklion**	**0.37**	**22**	P	**Pg**	**01 08 23.9**	**-0.2**
IACM				S	**Sb**	**01 08 29.6**	**-1.2**
IACM				AML	AML	01 08 36.6	
	comp=E,46152μm,0.3s						
IACM				AML	AML	01 08 39.8	
	comp=N,46778μm,0.5s						
HRKL	**Herakleio**	**0.38**	**26**	PG	**Pg**	**01 08 24.4**	**0.0**
HRKL	**Herakleio**	**0.38**	**26**	P	**Pg**	**01 08 24.3**	**-0.1**
HRKL	**Herakleio**	**0.38**	**26**	P	**Pg**	**01 08 24.3**	**-0.1**
HRKL				S	**Sb**	**01 08 30.1**	**-1.2**
HRKL				AML	AML	01 08 35.7	
	comp=N,59159μm,0.5s						
HRKL				AML	AML	01 08 36.0	
	comp=E,72150μm,0.5s						
PRNS	**Prines Rethymn**	**0.52**	**321**	P	**Pg**	**01 08 26.6**	**-0.3**
PRNS				S	**Sb**	**01 08 34.5**	**-0.6**
	comp=E,2μm,0.4s						
GVDS	**Gavdos**	**0.68**	**260**	PG	**Pg**	**01 08 30.4**	**+0.5**
GVDS				SG	**Sb**	**01 08 40.7**	**+1.0**
GVDS	**Gavdos**	**0.68**	**260**	P	**Pg**	**01 08 30.1**	**+0.2**
GVDS				S	**Sb**	**01 08 40.8**	**+1.0**
	comp=E,6μm,0.2s						
GVD	**Gavdhos**	**0.68**	**260**	PG	**Pg**	**01 08 30.2**	**+0.2**
GVD				SG	**Sg**	**01 08 39.8**	**+0.9**
GVD	**Gavdhos**	**0.68**	**260**	P	**Pg**	**01 08 29.6**	**-0.4**
GVD				S	**Sg**	**01 08 39.8**	**+0.9**
	comp=E,7μm,0.3s						
GVD	**Gavdhos**	**0.68**	**260**	P	**Pg**	**01 08 29.7**	**-0.2**
GVD				S	**Sg**	**01 08 38.7**	**-0.2**
GVD				AML	AML	01 08 43.9	
	comp=E,12683μm,0.2s						
GVD				AML	AML	01 08 45.2	
	comp=N,15915μm,0.3s						
FRMA	**Ierapetra Chan**	**0.69**	**86**	P	**Pn**	**01 08 32.0**	**-0.2**
FRMA				S	**Sn**	**01 08 43.7**	**+0.9**
	comp=N,562nm,0.5s						
FRMA	**Ierapetra Chan**	**0.69**	**86**	P	**Pn**	**01 08 31.9**	**-0.4**
FRMA				S	**Sn**	**01 08 42.6**	**-0.2**
FRMA				AML	AML	01 08 45.5	
	comp=E,2976μm,0.3s						
FRMA				AML	AML	01 08 46.0	
	comp=N,3277μm,0.2s						
CHAN	**Chania**	**0.89**	**308**	P	**Pg**	**01 08 33.0**	**-1.0**
CHAN				S	**Sg**	**01 08 45.1**	**-0.6**
CHAN				AML	AML	01 08 52.5	
	comp=N,4220μm,0.6s						
CHAN				AML	AML	01 08 53.7	
	comp=E,5823μm,0.4s						
IMMV	**Iera Moni Meta**	**0.90**	**304**	PG	**Pg**	**01 08 32.8**	**-1.4**
IMMV				SG	**Sg**	**01 08 45.7**	**-0.2**
IMMV	**Iera Moni Meta**	**0.90**	**304**	P	**Pg**	**01 08 32.6**	**-1.5**
IMMV				S	**Sg**	**01 08 45.9**	**0.0**
	comp=E,4μm,0.3s						
IMMV	**Iera Moni Meta**	**0.90**	**304**	P	**Pg**	**01 08 32.8**	**-1.4**
IMMV				S	**Sg**	**01 08 45.4**	**-0.6**
IMMV				AML	AML	01 08 47.0	
	comp=E,7467μm,0.3s						
IMMV				AML	AML	01 08 47.1	
	comp=N,6051μm,0.2s						
ZKR	**Zakros**	**1.09**	**82**	PN	**Pg**	**01 08 37.5**	**-0.3**
ZKR	**Zakros**	**1.09**	**82**	P	**Pg**	**01 08 37.3**	**-0.4**
ZKR				S	**Sn**	**01 08 53.0**	**+0.2**
	comp=N,888nm,0.4s						
ZKR	**Zakros**	**1.09**	**82**	P	**Pg**	**01 08 37.3**	**-0.4**
ZKR				S	**Sg**	**01 08 51.4**	**-0.5**
ZKR				AML	AML	01 08 55.8	
	comp=E,2111μm,0.7s						
ZKR				AML	AML	01 09 03.5	
	comp=N,1128μm,0.4s						
RODP	**Rodopos**	**1.11**	**303**	PG	**Pb**	**01 08 36.4**	**-1.4**
RODP	**Rodopos**	**1.11**	**303**	P	**Pb**	**01 08 36.4**	**-1.4**
SANT	**Santorini**	**1.47**	**18**	PN	**Pn**	**01 08 43.4**	**+0.3**
SANT	**Santorini**	**1.47**	**18**		**Pn**	**01 08 42.3**	**-0.8**
SANT	**Santorini**	**1.47**	**18**	P	**Pn**	**01 08 42.8**	**-0.4**
SANT				S	**Sb**	**01 09 02.8**	**0.0**
SANT				AML	AML	01 09 07.7	
	comp=N,842μm,0.3s						
SANT				AML	AML	01 09 08.9	
	comp=E,2030μm,0.2s						
SAP3	**Santorini-Thir**	**1.51**	**14**	P	**Pn**	**01 08 43.5**	**0.0**
ANKY	**Antikythira Is**	**1.59**	**305**	P	**Pn**	**01 08 45.3**	**+0.7**
ANKY				S	**Sg**	**01 09 07.3**	**-0.5**
ANKY	**Antikythira Is**	**1.59**	**305**	P	**Pn**	**01 08 45.2**	**+0.6**
ANKY				S	**Sn**	**01 09 05.2**	**+0.2**
ANKY				AML	AML	01 09 12.8	
	comp=N,1047μm,0.3s						
ANKY				AML	AML	01 09 13.5	
	comp=E,1671μm,0.6s						
MHLO	**Agia Marina, M**	**1.77**	**347**	P	**Pn**	**01 08 47.8**	**+0.7**
MHLO				S	**Sn**	**01 09 09.9**	**+0.4**
MHLO				AML	AML	01 09 17.0	
	comp=N,4195μm,0.5s						
MHLO				AML	AML	01 09 18.1	
	comp=E,5138μm,0.4s						
KARP	**Karpathos**	**1.94**	**72**	PN	**Pb**	**01 08 51.4**	**-0.6**
KARP	**Karpathos**	**1.94**	**72**	Pn	**Pn**	**01 08 49.7**	**+0.2**
KARP	**Karpathos**	**1.94**	**72**	P	**Pb**	**01 08 52.4**	**+0.4**
KARP	**Karpathos**	**1.94**	**72**	P	**Pb**	**01 08 52.4**	**+0.4**
KTHA	**Kythira Island**	**1.98**	**311**	PN	**Pn**	**01 08 50.8**	**+0.8**
KTHA	**Kythira Island**	**1.98**	**311**	P	**Pn**	**01 08 51.0**	**+1.0**
KTHA				S	**Sb**	**01 09 16.3**	**-0.9**
KTHA				AML	AML	01 09 23.2	
	comp=N,750μm,0.4s						
KTHA				AML	AML	01 09 25.6	
	comp=E,1025μm,0.5s						
KTHR	**Kythira**	**2.01**	**310**	P	**Pn**	**01 08 51.7**	**+1.2**
KTHR				S	**Sb**	**01 09 17.3**	**-1.0**
KTHR				AML	AML	01 09 23.0	
	comp=N,1682μm,0.3s						
KTHR				AML	AML	01 09 23.2	
	comp=E,2760μm,0.4s						
APE	**Apeiranthos**	**2.16**	**14**	PN	**Pn**	**01 08 52.8**	**+0.2**
KOSK	**Kos Island**	**2.46**	**43**	PN	**Pn**	**01 08 57.9**	**+1.4**
KOSK	**Kos Island**	**2.46**	**43**	P	**Pn**	**01 08 56.1**	**-0.4**
NIS1	**Nisyros Isl.**	**2.47**	**48**	PN	**Pn**	**01 08 58.5**	**+1.7**
BODT	**Bodrum**	**2.86**	**42**	PN	**Pn**	**01 09 03.4**	**+1.2**
ARG	**Arkhangelos**	**2.91**	**64**	PN	**Pn**	**01 09 05.3**	**+2.5**
ARG	**Arkhangelos**	**2.91**	**64**	Pn	**Pn**	**01 09 03.7**	**+0.9**
BDRM	**Kayabasi**	**2.94**	**44**	P	**Pn**	**01 09 05.3**	**+2.1**
TURN	**Turunc**	**3.26**	**55**	PN	**Pn**	**01 09 09.7**	**+2.1**
TURN	**Turunc**	**3.26**	**55**	P	**Pn**	**01 09 09.0**	**+1.4**
ITM	**Ithomi**	**3.27**	**313**	Pn	**Pn**	**01 09 09.4**	**+1.6**
GCAM	**G?zelcaml?**	**3.32**	**34**	P	**Pn**	**01 09 09.7**	**+1.3**
SLUM	**Salum**	**3.47**	**176**	P	**Pn**	**01 09 10.5**	**-0.1**
	baz=182						
YER	**Yerkesik**	**3.49**	**51**	PN	**Pn**	**01 09 13.6**	**+2.7**
ZEYE	**Izmir, Urla-Ze**	**3.51**	**21**	P	Pn	01 09 06.2	-4.9
CHOS	**Chios island**	**3.54**	**15**	PN	**Pn**	**01 09 13.2**	**+1.7**
DALY	**Dalyan (Mula)**	**3.56**	**58**	PN	**Pn**	**01 09 14.7**	**+2.9**
MULA	**Mugla, Merkez-**	**3.59**	**49**	P	**Pn**	**01 09 14.4**	**+2.2**
AYDN	**Tasoluk**	**3.61**	**41**	P	**Pn**	**01 09 16.3**	**+3.8**
URLA	**Izmir**	**3.65**	**21**	P	Pn	01 09 07.8	-5.2
FETY	**Fethiye**	**3.79**	**63**	PN	**Pn**	**01 09 16.7**	**+1.8**
BLCB	**Balcova**	**3.82**	**26**	PN	**Pn**	**01 09 17.3**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**3.83**	**38**	PN	**Pn**	**01 09 17.9**	**+2.3**
AKAS	**Kas**	**4.04**	**70**	PN	**Pn**	**01 09 20.0**	**+1.6**
AKAS	**Kas**	**4.04**	**70**	Pn	**Pn**	**01 09 17.9**	**-0.5**
AKAS	**Kas**	**4.04**	**70**	P	**Pn**	**01 09 17.4**	**-1.0**
CAME	**Cameli-Denizli**	**4.08**	**60**	PN	**Pn**	**01 09 21.6**	**+2.6**
TAVA	**DENIZLI_Tavas**	**4.09**	**51**	P	**Pn**	**01 09 22.0**	**+2.9**
MATC	**Matruh**	**4.11**	**151**	P	**Pn**	**01 09 18.4**	**-0.8**
	baz=149						
CAEL	**Denizli, Camel**	**4.18**	**58**	P	**Pn**	**01 09 23.4**	**+3.0**
APMY	**Acipayam-Deniz**	**4.35**	**54**	PN	**Pn**	**01 09 25.4**	**+2.7**
GOLH	**Golhisar**	**4.40**	**58**	P	**Pn**	**01 09 26.4**	**+3.0**
ELL	**Elmali**	**4.44**	**65**	PN	**Pn**	**01 09 26.8**	**+2.8**
ELL	**Elmali**	**4.44**	**65**	Pn	**Pn**	**01 09 24.4**	**+0.4**
MANT	**Manisa**	**4.58**	**39**	P	**Pn**	**01 09 29.0**	**+3.0**
KORT	**Korkueli**	**4.86**	**64**	PN	**Pn**	**01 09 32.4**	**+2.6**
KORT	**Korkueli**	**4.86**	**64**	P	**Pn**	**01 09 33.4**	**+3.6**
KORT				S	**Sn**	**01 10 27.8**	**+1.7**
KORT				*i* AML	AML	01 10 47.0	
	comp=E,9.0nm,0.7s						
USAK	**Uak-Merkez**	**4.99**	**40**	P	**Pn**	**01 09 34.3**	**+2.8**
PASA	**Karahalli, USA**	**5.00**	**46**	P	**Pn**	**01 09 34.0**	**+2.4**
KZIL	**AFYON_Kizioren**	**5.34**	**51**	P	**Pn**	**01 09 37.2**	**+0.8**
LIT	**Litokhoron**	**5.47**	**340**	Pn	**Pn**	**01 09 38.1**	**+0.1**
SWA2		**5.72**	**175**	P	**Pn**	**01 09 41.0**	**-0.5**
	baz=178						
SWA2				S	Sn	01 10 35.6	-12
	baz=178						
KEK	**Kerkira**	**6.24**	**321**	Pn	**Pn**	**01 09 49.4**	**+0.8**
SCTE	**Santa Cesarea**	**7.22**	**317**	Pn	**Pn**	**01 10 01.2**	**-0.7**
RYAN	**Fayoum**	**7.43**	**141**	P	**Pn**	**01 10 04.6**	**-0.4**
	baz=138						
TIP	**Timpagrande**	**7.75**	**305**	Pn	**Pn**	**01 10 08.2**	**-1.2**
GLL	**Jalalah**	**7.88**	**131**	P	**Pn**	**01 10 10.0**	**-1.1**
	baz=128						
BRTR	**Keskin Array B**	**8.42**	**53**	Pn	**Pn**	**01 10 21.6**	**+2.9**
	comp=E,0.1nm,0.3s,baz=227,slow=15,SNR=6.3						
	comp=E,0.8nm,0.7s						
PDG	**Podgorica**	**8.66**	**331**	Pn	**Pn**	**01 10 20.9**	**-0.8**
CUC	**Castrocucco**	**8.79**	**307**	Pn	**Pn**	**01 10 23.0**	**-0.6**
RAFF	**Raffo Rosso**	**8.82**	**288**	Pn	**Pn**	**01 10 24.1**	**+0.1**
MMAI	**Mount Meron Ar**	**8.94**	**100**	Pn	**Pn**	**01 10 26.8**	**+1.2**
	comp=E,0.9nm,0.3s,baz=298,slow=13,SNR=6.3						
MMAI				Sn	**Sn**	**01 12 06.0**	**-0.3**
	comp=E,0.9nm,0.3s,baz=292,slow=25,SNR=2.2						
	comp=E,0.8nm,0.4s						
GHAJ	**Ghor Haditha**	**9.66**	**109**	Pn	**Pn**	**01 10 34.0**	**-1.5**
SGRT	**San Giovanni R**	**9.88**	**316**	Pn	**Pn**	**01 10 37.0**	**-1.5**
EIL	**Elat**	**10.01**	**119**	Pn	**Pn**	**01 10 40.8**	**+0.5**
	comp=E,0.5nm,0.3s,baz=254,slow=5.4,SNR=2.1						
EIL				Sn	**Sn**	**01 12 29.8**	**-2.7**
	comp=E,0.3nm,0.3s,baz=52,slow=22,SNR=1.3						
	comp=E,2.6nm,0.6s						
AKASG	**Malin Array Be**	**16.04**	**10**	Pn	**Pn**	**01 12 03.7**	**+1.8**
	comp=E,1.1nm,0.3s,baz=202,slow=11,SNR=10						
	comp=E,0.4nm,0.4s						
AKASG	**Malin Array Be**	**16.04**	**10**	Pn	**Pn**	**01 12 01.8**	**-0.2**
AKBB	**Malin Array Si**	**16.04**	**10**	Pn	**Pn**	**01 12 02.2**	**+0.2**
AKBB				IAmb	IAmb	01 12 07.4	
	comp=Z,4.4nm,0.8s						
GERES	**GERESS Array B**	**16.15**	**333**	Pn	**P**	**01 12 05.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=123,slow=18,SNR=3.1						
	comp=Z,0.5nm,0.7s						
KBZ	**Khabaz**	**16.42**	**52**	Pn	**P**	**01 12 10.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=241,slow=5.3,SNR=6.1						
	comp=Z,3.0nm,0.9s						
ESDC	**Sonseca Array**	**23.38**	**290**	P	**P**	**01 13 27.8**	**+2.6**
	comp=Z,0.9nm,0.8s,baz=81,slow=9.8,SNR=7.3						
	comp=Z,0.9nm,0.8s						
FINES	**FINESS Array B**	**26.51**	**1**	P	**P**	**01 13 54.3**	**+0.6**
	comp=Z,7.3nm,1.1s,baz=160,slow=12,SNR=4.7						
	comp=Z,7.3nm,1.1s						
EKA	**Eskdalemuir Ar**	**28.08**	**325**	P	**P**	**01 14 09.6**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=117,slow=9.8,SNR=6.0						
	comp=Z,0.5nm,0.4s						
ABKAR	**Akbulak array**	**29.36**	**50**	P	**P**	**01 14 18.2**	**-1.2**
ABKAR				IAmb	IAmb	01 14 56.8	
	comp=Z,1.9nm,1.1s						
TOA0	**Torodi Ar. Sit**	**30.20**	**230**	P	**P**	**01 14 27.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**30.20**	**230**	P	**P**	**01 14 28.0**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=35,slow=8.2,SNR=9.4						
	comp=Z,1.2nm,0.7s						
LODK	**Lodwar**	**32.85**	**160**	P	**P**	**01 14 48.5**	**-2.0**
LODK				IAmb	IAmb	01 15 11.0	
	comp=Z,3.5nm,1.2s						
ARCES	**ARCESS Array B**	**34.62**	**0**	P	**P**	**01 15 05.7**	**+0.3**
	comp=Z,2.8nm,1.0s,baz=186,slow=9.8,SNR=4.5						
	comp=Z,2.8nm,1.0s						
KURBB	**Kurchatov Arra**	**41.41**	**51**	P	**P**	**01 16 04.7**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=279,slow=8.4,SNR=5.3						
	comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**44.06**	**56**	P	**P**	**01 16 25.1**	**+0.7**
MK31				IAmb	IAmb	01 16 30.2	
	comp=Z,2.6nm,1.3s						
MKAR	**Makanchi Array**	**44.06**	**56**	P	**P**	**01 16 24.9**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=261,slow=9.2,SNR=7.3						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**44.06**	**56**	P	**P**	**01 16 24.0**	**-0.4**
ZALV	**Zalesovo Beam**	**45.29**	**46**	P	**P**	**01 16 33.6**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=254,slow=10,SNR=2.7						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**45.29**	**46**	P	**P**	**01 16 32.9**	**-1.1**
SCHQ	**Schefferville**	**63.20**	**320**	P	**P**	**01 18 44.3**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=50,slow=3.8,SNR=6.5						
	comp=Z,3.4nm,0.5s						
YKA	**Yellowknife Ar**	**77.57**	**342**	P	**P**	**01 20 12.5**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=33,slow=4.9,SNR=7.1						
	comp=Z,0.3nm,0.4s						

IDC 05 01:33:53.3±8.6, 7°.22S×129°.59E, h102km±93km, mb3.2/1, mbtmp3.9/5, ML3.8/4, Error ellipse: s-maj=75.8km s-min=27.5km az=28.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.57**	**243**	P	Pn	01 35 29.1	+1.7
	2.4nm,0.3s,baz=110,slow=18,SNR=1.4						
BATI				S	Sn	01 36 40.6

MDCT				eS	Sn	02 04 55.9	+2.0
BIM	**Bigot**	**0.92**	**212**	eP	Pn	02 04 43.4	+1.5
BIM				eS	Sn	02 04 56.6	+2.4
MAGL	**Barre de l'ile**	**0.94**	**313**	eP	Pn	02 04 43.6	+1.5
MAGL				eS	Sn	02 04 56.4	+2.0
TDBA	**Terre de Bas,**	**1.16**	**298**	eP	Pn	02 04 46.7	+1.6
TDBA				eS	Sn	02 05 02.1	+2.3
TBG	**Guadaloupe-3**	**1.17**	**298**	eP	Pn	02 04 46.8	+1.6
TBG				eS	Sn	02 05 02.5	+2.5
CBE	**Ff, Capester**	**1.25**	**307**	eP	Pn	02 04 48.1	+1.8
CBE				eS	Sn	02 05 04.3	+2.1
SLBI	**Saint Lucia, B**	**1.33**	**197**	eP	Pn	02 04 48.2	+0.7
SLBI				eS	Sn	02 05 05.5	+1.4
SLCP	**Castries, St.**	**1.35**	**197**	eP	Pn	02 04 48.9	+1.2
SLCP				eS	Sn	02 05 05.7	+1.2
ABD	**La Joyeuse, An**	**1.46**	**323**	eP	Pn	02 04 51.0	+1.8
ABD				eS	Sn	02 05 09.2	+2.2
MCLT	**Moule a Chique**	**1.63**	**193**	eP	Pn	02 04 52.5	+1.0
MCLT				eS	Sn	02 05 13.4	+2.1
ANBD	**Bethesda, Anti**	**2.08**	**327**	eP	Pn	02 04 59.3	+1.8
ANBD				eS	Sn	02 05 23.5	+1.3
SVB	**Belmont**	**2.13**	**198**	eP	Pn	02 05 00.5	+2.1
SVB				eS	Sn	02 05 25.1	+1.5
MBFL	**Flemmings, Mon**	**2.13**	**312**	eP	Pn	02 05 00.9	+2.5
MBFL				eS	Sn	02 05 25.4	+1.8
ANWB	**Willy Bob**	**2.62**	**334**	eP	Pn	02 05 06.3	+1.3
ANWB				eS	Sn	02 05 36.6	+1.0
GRGR	**Grenville**	**3.33**	**199**	eP	Pn	02 05 16.6	+1.9
GRGR				eS	Sn	02 05 54.9	+1.8
TOSP	**Speyside**	**3.99**	**179**	eP	Pn	02 05 27.4	+3.6
TOSP				eS	Sn	02 06 09.2	-0.1

*IDC **05** 02:47:58.9±6.8, 21°.81S×169°.59E, h0km, mb3.6/3, mbtmp3.6/3, MS3.1/2, Error ellipse: s-maj=309.1km s-min=38.9km az=151.0*
*NOU **05** 02:48:01.8, 20°.63S×169°.80E, h50km, MLv4.0/14, Vanuatu Islands*
ISC 05 02:48:01.7±1.0, 20°.72S±0°.09×169°.8E±0°.1, h35km, n18, σ1º03/15, mb3.7/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.84**	**245**	P	**Pn**	**02 48 30.6**	**-0.1**
LIFNC	**LIFOU**	**2.42**	**268**	P	**Pn**	**02 48 38.1**	**-0.6**
PINNC	**Pines Island,**	**2.91**	**229**	P	**Pn**	**02 48 45.0**	**-0.4**
YATNC	**Mamie plateau,**	**3.04**	**243**	P	**Pn**	**02 48 47.6**	**+0.3**
RTV	**Rentapao**	**3.19**	**335**	P	**Pn**	**02 48 49.0**	**-0.4**
OUENC	**Ouen Island, N**	**3.25**	**238**	P	**Pn**	**02 48 50.6**	**+0.4**
DZM	**Mont Dzumac**	**3.42**	**246**	P	**Pn**	**02 48 53.6**	**+0.9**
ONTNC	**Ouen Toro**	**3.51**	**243**	P	**Pn**	**02 48 54.7**	**+0.9**
NOUC	**Port Laguerre**	**3.56**	**247**	P	**Pn**	**02 48 55.2**	**+0.8**
KOUNC	**Koumac, New Ca** 37nm,0.5s	**5.19**	**271**	P	**Pn**	**02 49 18.5**	**+1.7**
MSVF	**Nonsavu** 24nm,1.6s	**8.32**	**70**	P	**Pn**	**02 50 00.6**	**+0.7**
ODZ	**Otahua Downs** 36nm,2.9s	**24.27**	**179**	P	**P**	**02 53 14.3**	**-1.2**
STKA	**Stephens Creek** comp=Z,64nm,18.5s,baz=24,slow=36	**27.56**	**240**	LR	LR	03 03 57.4	
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=103,slow=8.3,SNR=2.4 0.5nm,0.7s	**33.24**	**265**	P	**P**	**02 54 34.6**	**-1.2**
ASAR	**Alice Springs** 0.9nm,0.8s,baz=83,slow=9.0,SNR=6.7 0.9nm,0.8s	**33.33**	**258**	P	**P**	**02 54 35.8**	**-0.8**
MJAR	**Matsushiro Arr** comp=Z,11nm,21.6s,baz=176,slow=33	**64.31**	**332**	LR	LR	03 24 09.2	
ILAR	**Eielson Array** 0.2nm,0.7s,baz=229,slow=5.4,SNR=4.2 0.2nm,0.7s	**91.47**	**17**	P	P	03 01 11.5	+7.6
GERES	**GERESS Array B** 0.3nm,0.7s,baz=48,slow=1.5,SNR=4.1	**146.04**	**331**	PKPbc	**PKiKP**	**03 07 42.8**	**+1.6**

ISC 05 03:08:35.4±2.9, 6°.74S×146°.78E, h0km, mb4.0/2, mbtmp4.0/4, ML1.4/1, MS3.3/2, Error ellipse: s-maj=52.2km s-min=21.7km az=71.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 6.2nm,0.3s,baz=27,slow=4.5,SNR=12	**2.67**	**172**	Pn	Pn	03 09 19.4	-0.3
PMG	19nm,0.3s,baz=340,slow=15,SNR=6.8			Lg	Lg	03 09 60.0	
PMG	comp=Z,35nm,20.7s,baz=10,slow=36 38nm,0.4s			LR	LR	03 10 11.4	
WRA	**Warramunga Arr** 1.4nm,0.4s,baz=42,slow=12,SNR=22	**17.83**	**221**	P	Pn	03 12 45.3	+0.1
ASAR	**Alice Springs** 2.2nm,0.5s,baz=51,slow=9.3,SNR=40 2.2nm,0.5s	**20.89**	**215**	P	P	03 13 19.4	0.0
FITZ	**Fitzroy Crossi** 4.8nm,0.5s,baz=70,slow=9.6,SNR=20 4.8nm,0.5s	**23.49**	**239**	P	P	03 13 46.3	-0.8
DZM	**Mont Dzumac** comp=Z,31nm,18.4s,baz=52,slow=36	**24.34**	**131**	LR	LR	03 22 58.5	
OPO	**Ambohidratompo** comp=Z,33nm,18.7s,baz=89,slow=37	**96.89**	**250**	LR	LR	04 07 50.3	
TORD	**Torodi Ar. Bea** 0.6nm,0.8s,baz=71,slow=2.7,SNR=5.4	**145.05**	**283**	PKPbc	PKPab	03 28 15.5	+0.2

*IDC **05** 03:11:28.1±1.4, 38°.26S×177°.21E, h168km±4km, mb2.9/1, mbtmp3.4/1, Error ellipse: s-maj=55.1km s-min=42.3km az=4.0*
*WEL **05** 03:11:29.8±0.8, 38°S±4°×17°7E±°, h131km±6km, M3.3/51, ML3.5/8, MLv3.3/51, Error ellipse: s-maj=0.0km s-min=0.0km az=56.8*
ISC 05 03:11:26.9±1.0, 37°.59S±0°.05×177°.28E±0°.06, h163km±6km, n101, σ1º16/107, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.09**	**309**	P	**Pn**	**03 11 48.5**	**-0.1**
WHRZ	**Whale Island**	**0.36**	**222**	P	**Pn**	**03 11 48.9**	**-0.3**
HAZ	**Te Kaha**	**0.43**	**113**	P	**Pn**	**03 11 49.3**	**-0.1**
HAZ				S	**Sn**	**03 12 04.6**	**-2.0**
RUGZ	**Raukumara Rang**	**0.49**	**140**	P	**Pn**	**03 11 49.5**	**-0.3**
RUGZ				S	**Sn**	**03 12 05.1**	**-2.4**
MARZ	**Manawahe**	**0.62**	**230**	P	**Pn**	**03 11 51.0**	**+0.6**
OPRZ	**Ohinepanea**	**0.63**	**245**	P	**Pn**	**03 11 50.5**	**+0.2**
OPRZ				S	**Sn**	**03 12 06.9**	**-1.5**
EDRZ	**Edgecumbe**	**0.67**	**219**	P	**Pn**	**03 11 51.4**	**+0.7**
URZ	**Urewera** 332nm,0.3s,baz=64,slow=3.0,SNR=512	**0.69**	**191**	P	**Pn**	**03 11 51.0**	**+0.3**
URZ	93nm,0.2s,baz=345,slow=3.7,SNR=16			S	**Sn**	**03 12 08.0**	**-1.0**
URZ	**Urewera**	**0.69**	**191**	P	**Pn**	**03 11 51.1**	**+0.4**
URZ				S	**Sn**	**03 12 08.5**	**-0.6**
PKGZ	**Pakihiroa**	**0.70**	**116**	P	**Pn**	**03 11 51.5**	**+0.6**
PKGZ				S	**Sn**	**03 12 08.5**	**-0.7**
MWZ	**Matawai**	**0.77**	**165**	P	**Pn**	**03 11 52.1**	**+0.8**
TWGZ	**Tauwhareparae**	**0.81**	**137**	P	**Pn**	**03 11 52.9**	**+1.3**
MXZ	**Matakaoa Point**	**0.82**	**89**	P	**Pn**	**03 11 51.8**	**+0.3**
LIRZ	**Lichensteins R**	**0.82**	**239**	P	**Pn**	**03 11 52.5**	**+0.9**
MYRZ	**Mayor Island**	**0.88**	**290**	P	**Pn**	**03 11 51.9**	**-0.1**
PUZ	**Puketiti**	**0.92**	**122**	P	**Pn**	**03 11 53.1**	**+0.8**
RAGZ	**Rawiri**	**0.92**	**173**	P	**Pn**	**03 11 53.4**	**+1.1**
KARZ	**Kaharoa**	**0.93**	**242**	P	**Pn**	**03 11 53.2**	**+0.9**
WMGZ	**Waiomatatini S**	**0.93**	**105**	P	**Pn**	**03 11 53.2**	**+0.8**
TKGZ	**Te Karaka**	**0.96**	**152**	P	**Pn**	**03 11 53.7**	**+1.1**
RRRZ	**Republican Roa**	**0.96**	**218**	P	**Pn**	**03 11 53.6**	**+0.9**
MUGZ	**Murupara**	**0.98**	**204**	P	**Pn**	**03 11 53.6**	**+0.8**
RTZ	**Ruatahuna**	**1.05**	**193**	P	**Pn**	**03 11 54.2**	**+0.8**
KMRZ	**Kaimai**	**1.09**	**256**	P	**Pn**	**03 11 54.6**	**+0.9**
HSRZ	**Hossack Road**	**1.09**	**228**	P	**Pn**	**03 11 55.4**	**+1.7**
HRRZ	**Handcock Road**	**1.12**	**224**	P	**Pn**	**03 11 55.2**	**+1.3**
PRRZ	**Plateau Road**	**1.15**	**217**	P	**Pn**	**03 11 55.2**	**+1.0**
CNGZ	**Carnagh Statio**	**1.16**	**141**	P	**Pn**	**03 11 56.1**	**+1.9**
RIGZ	**Rimuhau**	**1.18**	**161**	P	**Pn**	**03 11 56.1**	**+1.6**
SNGZ	**Shannon Statio**	**1.20**	**178**	P	**Pn**	**03 11 55.9**	**+1.3**
ALRZ	**Allen Road**	**1.22**	**217**	P	**Pn**	**03 11 56.1**	**+1.3**
WPRZ	**Whakapapatarin**	**1.28**	**223**	P	**Pn**	**03 11 56.8**	**+1.5**
MTHZ	**Maungataniwha**	**1.31**	**195**	P	**Pn**	**03 11 56.6**	**+1.0**
RAHZ	**Arahi**	**1.34**	**186**	P	**Pn**	**03 11 57.5**	**+1.6**
TOZ	**Tahuroa Road**	**1.42**	**264**	P	**Pn**	**03 11 57.7**	**+1.1**
MRHZ	**Matea Rd**	**1.42**	**208**	P	**Pn**	**03 11 57.7**	**+1.0**
KUTZ	**Kaahu Road**	**1.46**	**231**	P	**Pn**	**03 11 58.6**	**+1.5**
KNZ	**Kokohu**	**1.47**	**168**	P	**Pn**	**03 11 58.5**	**+1.4**
WHHZ	**Waihua**	**1.49**	**181**	P	**Pn**	**03 11 59.0**	**+1.6**
KUZ	**Kuaotunu**	**1.50**	**303**	P	**Pn**	**03 11 57.1**	**-0.4**
NMHZ	**Naumai**	**1.56**	**194**	P	**Pn**	**03 11 59.9**	**+1.8**
HATZ	**Hinemaiaia**	**1.60**	**215**	P	**Pn**	**03 11 59.8**	**+1.2**
MHGZ	**Mahia Peninsul**	**1.64**	**163**	P	**Pn**	**03 12 00.6**	**+1.7**
WATZ	**Wairara**	**1.66**	**227**	P	**Pn**	**03 12 00.7**	**+1.6**
ARHZ	**Aropaoanui**	**1.69**	**187**	P	**Pn**	**03 12 01.0**	**+1.6**
BKZ	**Black Stump Fm**	**1.69**	**201**	P	**Pn**	**03 12 00.4**	**+0.9**
MKAZ	**Moumakai**	**1.75**	**285**	P	**Pn**	**03 12 00.9**	**+0.8**
RITZ	**Rihia Road**	**1.78**	**218**	P	**Pn**	**03 12 02.1**	**+1.6**
WIAZ	**Waiheke Island**	**1.89**	**294**	P	**Pn**	**03 12 01.9**	**+0.4**
MCHZ	**McNeill Hill**	**1.91**	**194**	P	**Pn**	**03 12 03.4**	**+1.6**
KWHZ	**Kaweka Forest**	**1.96**	**200**	P	**Pn**	**03 12 03.5**	**+1.1**
TMVZ	**Te Maari**	**1.97**	**219**	P	**Pn**	**03 12 04.0**	**+1.4**
GRZ	**Great Barrier**	**1.98**	**312**	P	**Pn**	**03 12 02.4**	**-0.2**
ETAZ	**East Tamaki Re**	**1.98**	**288**	P	**Pn**	**03 12 03.7**	**+1.1**
ETVZ	**East Tongariro**	**1.98**	**218**	P	**Pn**	**03 12 04.0**	**+1.3**
OTVZ	**Oturere**	**2.02**	**218**	P	**Pn**	**03 12 04.7**	**+1.4**
SNVZ	**South Ngauruho**	**2.05**	**218**	P	**Pn**	**03 12 05.0**	**+1.4**
NGZ	**Ngauruhoe**	**2.06**	**219**	P	**Pn**	**03 12 05.2**	**+1.6**
MBAZ	**Motutapu North**	**2.07**	**292**	P	**Pn**	**03 12 04.5**	**+0.9**
TWVZ	**Taurewa**	**2.07**	**224**	P	**Pn**	**03 12 05.0**	**+1.3**
CKHZ	**Cape Kidnapper**	**2.08**	**184**	P	**Pn**	**03 12 05.0**	**+1.3**
HIZ	**Hauiti**	**2.12**	**243**	P	**Pn**	**03 12 06.0**	**+1.8**
BHHZ	**Black Hill Sta**	**2.13**	**206**	P	**Pn**	**03 12 05.0**	**+0.7**
FWVZ	**Far West T-bar**	**2.15**	**219**	P	**Pn**	**03 12 06.0**	**+1.2**
AWAZ	**Awhitu Peninsu**	**2.16**	**283**	P	**Pn**	**03 12 05.8**	**+1.1**
KRHZ	**Kereru**	**2.17**	**199**	P	**Pn**	**03 12 05.5**	**+0.7**
MOVZ	**Moawhango**	**2.18**	**213**	P	**Pn**	**03 12 05.4**	**+0.5**
WNVZ	**Wahianoa**	**2.18**	**217**	P	**Pn**	**03 12 06.0**	**+1.0**
KAHZ	**Kahuranaki**	**2.23**	**188**	P	**Pn**	**03 12 06.9**	**+1.4**
WTAZ	**Waiatarua**	**2.25**	**286**	P	**Pn**	**03 12 07.0**	**+1.2**
PKVZ	**Pokaka**	**2.28**	**221**	P	**Pn**	**03 12 07.2**	**+1.1**
PXZ	**Pawanui**	**2.46**	**187**	P	**Pn**	**03 12 09.2**	**+1.0**
PNHZ	**Pukenui**	**2.47**	**200**	P	**Pn**	**03 12 08.8**	**+0.4**
WPHZ	**Waipukurau**	**2.56**	**195**	P	**Pn**	**03 12 09.9**	**+0.5**
TSZ	**Takapari Road**	**2.68**	**202**	P	**Pn**	**03 12 11.1**	**+0.4**
PRHZ	**Porangahau**	**2.72**	**190**	P	**Pn**	**03 12 12.0**	**+0.7**
WAZ	**Wanganui**	**2.81**	**219**	P	**Pn**	**03 12 14.0**	**+1.6**
WCZ	**Waipu Caves**	**2.87**	**304**	P	**Pn**	**03 12 13.6**	**+0.4**
PRWZ	**Porí Road**	**3.13**	**199**	P	**Pn**	**03 12 17.1**	**+0.7**
BFZ	**Birch Farm**	**3.19**	**194**	P	**Pn**	**03 12 17.2**	**0.0**
MRZ	**Mangatainoka R**	**3.34**	**203**	P	**Pn**	**03 12 18.5**	**-0.5**
CPWZ	**Castlepoint**	**3.42**	**194**	P	**Pn**	**03 12 18.6**	**-1.4**
OGWZ	**Otaki Gorge**	**3.62**	**206**	P	**Pn**	**03 12 22.2**	**-0.3**
TMWZ	**Te Maipa**	**3.68**	**197**	P	**Pn**	**03 12 22.9**	**-0.4**
KIW	**Kapiti Island**	**3.75**	**209**	P	**Pn**	**03 12 23.6**	**-0.7**
OUZ	**Omahuta**	**3.79**	**307**	P	**Pn**	**03 12 25.4**	**+0.5**
MTW	**Mount Morrison**	**3.83**	**201**	P	**Pn**	**03 12 23.1**	**-2.1**
CAW	**Cannon Point**	**3.91**	**205**	P	**Pn**	**03 12 25.4**	**-0.9**
TRWZ	**Traveller**	**4.00**	**197**	P	**Pn**	**03 12 26.9**	**-0.6**
MSWZ	**Moikau Station**	**4.13**	**202**	P	**Pn**	**03 12 28.0**	**-1.2**
DUWZ	**D'Urville Isla**	**4.14**	**218**	P	**Pn**	**03 12 28.7**	**-0.5**
PLWZ	**Palliser**	**4.28**	**201**	P	**Pn**	**03 12 29.7**	**-1.3**
TCW	**Tory Channel**	**4.30**	**212**	P	**Pn**	**03 12 30.0**	**-1.3**
TUWZ	**Tuamarina**	**4.62**	**213**	P	**Pn**	**03 12 34.0**	**-1.5**
MRNZ	**Matariki Terra**	**5.17**	**221**	P	**Pn**	**03 12 41.6**	**-1.1**
THZ	**Tophouse**	**5.37**	**218**	P	**Pn**	**03 12 44.9**	**-0.4**
GVZ	**Greta Valley S**	**6.28**	**210**	P	**Pn**	**03 12 55.7**	**-1.7**
TMZ	**Timaru**	**8.28**	**213**	P	**Pn**	**03 13 21.9**	**-2.0**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=128,slow=6.7,SNR=8.0 0.2nm,0.3s	**41.14**	**283**	P	**P**	**03 18 56.4**	**+1.1**
ARCES	**ARCESS Array B** 3.7nm,1.0s,baz=64,slow=2.8,SNR=6.4	**144.56**	**343**	PKPbc	**PKPdf**	**03 30 42.6**	**-0.2**
FINES	**FINESS Array B** 1.6nm,0.9s,baz=49,slow=4.2,SNR=7.1	**150.13**	**332**	PKPbc	**PKiKP**	**03 30 59.3**	**+1.1**

*IDC **05** 03:29:12.4±0.5, 29°.26S×61°.04E, h0km, mb4.3/18, mbtmp4.3/19, ML4.7/1, MS4.0/59, Error ellipse: s-maj=17.7km s-min=15.4km az=58.0*
*NEIC **05** 03:29:14.2±1.0, 29°.26S±0°.09×61°.0E±0°.1, h10km±1km, mb4.7/29, Error ellipse: s-maj=17.9km s-min=14.0km az=241.0*
*GCMT **05** 03:29:16.2±0.2, 29°.22S±0°.01×60°.77E±0°.03, h12km, MW5.0/95, Moment Tensor Solution. s41,c45; s95,c119; Duration: 0 Moment tensor; Scale 10^{16}Nm; M_{rr}-2.67±.09; $M_{\theta\theta}$2.67±.07; $M_{\phi\phi}$0.00±.10; $M_{r\theta}$0.43±.26; $M_{\theta\phi}$0.63±.08; $M_{r\phi}$2.00±.40; Best double couple: $M_0$3.35700×10^{16} NP1:ϕ_s230.00000°, δ60.00000°, λ-120.00000°. NP2: ϕ_s99.00000°, δ41.00000°, λ-49.00000°. Principal axes: T 2.9730, Plg11.0000°, Azm341.0000°; N 0.7650, Plg26.0000°, Azm246.0000°; P -3.7410, Plg62.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 03:29:14.6±0.4, 29°.31S±0°.08×60°.99E±0°.08, h14km, n129, σ1º02/74, mb4.6/31, MS4.1/60, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.40**	**328**	Pn	**Pn**	**03 31 25.3**	**-4.5**
ROCAM	**Rodrigues Isla**	**9.75**	**13**	Pn	**Pn**	**03 31 34.7**	**+0.2**
VOI	**Vohitsoka**	**14.77**	**297**		**Pn**	**03 32 42.9**	**-0.4**
AIS	**Amsterdam Isla**	**16.19**	**126**	Pn	**Pn**	**03 33 00.2**	**-1.4**
ABPO	**Ambohimpanom**	**16.19**	**306**	P	**Pn**	**03 33 01.9**	**-0.1**
OPO	**Ambohidratompo** 0.3nm,0.3s,baz=120,slow=13,SNR=10	**16.52**	**307**	Pn	**Pn**	**03 33 05.1**	**-1.1**
OPO	0.2nm,0.3s,baz=258,slow=15,SNR=7.1			Sn	Sn	03 35 56.6	-13
OPO	comp=Z,341nm,19.5s,baz=3.5,slow=32 2.4nm,0.4s			LR	LR	03 38 01.8	
H08S1	**Diego Garcia H** baz=204,slow=76,SNR=47	**24.11**	**29**	T	T	03 59 12.5	
H08S2	**Diego Garcia H** baz=204,slow=76,SNR=49	**24.12**	**29**	T	T	03 59 12.9	
H08S3	**Diego Garcia H** baz=204,slow=76,SNR=99	**24.13**	**29**	T	T	03 59 13.8	
DGAR	**Diego Garcia**	**24.31**	**29**	P	**P**	**03 34 33.0**	**+1.1**
BOSA	**Boshof** 5.8nm,1.0s,baz=94,slow=13,SNR=3.8	**31.20**	**262**	P	**P**	**03 35 34.3**	**+0.6**
BOSA	comp=Z,122nm,20.5s,baz=101,slow=32 5.8nm,1.0s			LR	LR	03 46 06.7	
LBTB	**Lobatse** comp=Z,86nm,20.4s,baz=98,slow=32	**31.71**	**269**	LR	LR	03 46 03.7	
LSZ	**Lusaka**	**33.28**	**288**	P	**P**	**03 35 51.5**	**-0.5**
LSZ	comp=Z,16nm,1.2s			IAmb	IAmb	03 35 55.9	
SUR	**Sutherland** comp=Z,104nm,19.3s,baz=102,slow=33	**34.49**	**255**	LR	LR	03 47 57.9	
KMBO	**Kilima Mbogo** comp=Z,11nm,21.3s,baz=88,slow=32	**36.02**	**317**	LR	LR	03 48 20.7	
MAW	**Mawson** comp=Z,350nm,18.1s,baz=354,slow=31	**38.34**	**179**	LR	LR	03 49 15.3	
MBAR	**Mbarara** comp=Z,265nm,19.7s,baz=125,slow=34	**40.58**	**309**	LR	LR	03 52 08.6	
TSUM	**Tsumeb** comp=Z,111nm,19.6s,baz=134,slow=34	**40.64**	**274**	LR	LR	03 52 11.9	
TSUM	**Tsumeb**	**40.64**	**274**	P	**P**	**03 36 55.4**	**+0.8**
PALK	**Pallekele** comp=Z,8.5nm,0.7s,baz=252,slow=3.2,SNR=1.6 comp=Z,8.5nm,0.7s	**41.02**	**31**	P	**P**	**03 36 57.2**	**-0.4**
ATD	**Arta Tunnel** comp=Z,407nm,20.1s,baz=154,slow=32	**44.22**	**334**	LR	LR	03 52 55.5	
H01W2	**Cape Leeuwin H** baz=261,slow=75,SNR=32	**44.93**	**111**	T	T	04 25 07.8	
H01W3	**Cape Leeuwin H** baz=261,slow=75,SNR=33	**44.93**	**111**	T	T	04 25 08.1	
H01W1	**Cape Leeuwin H** baz=261,slow=75,SNR=32	**44.95**	**111**	T	T	04 25 09.1	
NWAO	**Narrogin (SRO)** comp=Z,93nm,19.3s,baz=268,slow=32	**47.80**	**109**	LR	LR	03 54 33.4	
PSI	**Prapat** comp=Z,74nm,21.3s,baz=222,slow=30	**48.36**	**55**	LR	LR	03 53 17.4	
LEM	**Lembang** comp=Z,41nm,18.9s,baz=136,slow=32	**49.22**	**72**	LR	LR	03 55 50.4	
WSAR	**Wadi Sarin** comp=Z,113nm,21.9s,baz=195,slow=30	**52.30**	**357**	LR	LR	03 54 59.7	
TROLL	**Troll, Antarti**	**52.78**	**199**	P	**P**	**03 38 26.6**	**-2.4**
SNAA	**Sanae**	**54.28**	**200**	P	**P**	**03 38 38.1**	**-1.8**
SNAA	**Sanae** comp=Z,1.3nm,0.7s,baz=101,slow=5.3,SNR=8.1	**54.28**	**200**	P	**P**	**03 38 40.4**	**+0.5**
SNAA	comp=Z,208nm,20.8s,baz=18,slow=31 comp=Z,1.3nm,0.7s			LR	LR	03 57 02.5	
SNAA	**Sanae** comp=Z,9.4nm,1.5s	**54.28**	**200**	P	**P**	**03 38 41.0**	**+1.1**
SNAA				IAmb	IAmb	03 38 50.4	
RAYN	**Ar Rayn**	**54.60**	**342**	P	**P**	**03 38 42.3**	**-0.4**
RAYN	comp=Z,7.9nm,1.3s			IAmb	IAmb	03 38 45.6	
VNA2	**Neumayer--Watz** baz=82,slow=7.0	**55.55**	**202**	P	**P**	**03 38 49.7**	**+0.7**
VNA3	**Neumayer Olymp**	**56.33**	**202**	P	**P**	**03 38 53.5**	**-1.2**
BRDH	**Bariadhala** comp=Z,183nm,21.0s,baz=268,slow=33	**59.52**	**33**	LR	LR	04 01 28.0	
FITZ	**Fitzroy Crossi** comp=Z,44nm,18.3s,baz=253,slow=33	**59.60**	**95**	LR	LR	04 01 38.9	
CMAR	**Chiang Mai Arr** comp=Z,1.6nm,0.3s,baz=232,slow=7.0,SNR=11 comp=Z,1.6nm,0.3s	**59.97**	**42**	P	**P**	**03 39 21.5**	**+0.7**
KOLN	**Koldanda**	**60.74**	**23**	eP	**P**	**03 39 25.4**	**-0.7**
PYUN	**Piuthan** comp=Z,88nm,0.8s	**60.84**	**22**	eP	**P**	**03 39 26.2**	**-0.6**
QSPA	**South Pole Qui** comp=Z,3.6nm,0.8s,baz=223,slow=2.2,SNR=14	**60.85**	**180**	P	**P**	**03 39 26.7**	**+0.4**
QSPA	comp=Z,270nm,21.1s,baz=277,slow=33 comp=Z,3.6nm,0.8s			LR	LR	04 02 16.0	
QSPA	**South Pole Qui** comp=Z,7.6nm,1.0s	**60.85**	**180**	P	**P**	**03 39 26.4**	**0.0**
QSPA				IAmb	IAmb	03 39 42.2	
DMN	**Daman**	**61.12**	**24**	eP	**P**	**03 39 28.4**	**-0.4**
PKI	**Pulchoki**	**61.20**	**25**	eP	**P**	**03 39 28.5**	**-0.9**
GKN	**Gorkha** comp=Z,49nm,0.8s	**61.32**	**24**	eP	**P**	**03 39 29.3**	**-0.7**
DANN	**Dangsing** comp=Z,72nm,0.8s	**61.33**	**23**	eP	**P**	**03 39 29.4**	**-0.8**
KKN	**Kakani**	**61.35**	**25**	eP	**P**	**03 39 29.9**	**-0.4**
JIRN	**Jiri** comp=Z,19nm,0.6s	**61.57**	**25**	eP	**P**	**03 39 31.6**	**-0.4**
GUN	**Gumba** comp=Z,58nm,1.0s	**61.68**	**25**	eP	**P**	**03 39 32.7**	**0.0**
NIL	**Nilore**	**63.69**	**11**	P	**P**	**03 39 45.1**	**-0.5**
EIL	**Elat** comp=Z,215nm,19.4s,baz=208,slow=33	**63.70**	**335**	LR	LR	04 04 00.9	
VNDA	**Vanda** comp=Z,1.0nm,0.6s,baz=293,slow=5.4,SNR=8.2	**63.92**	**166**	P	**P**	**03 39 47.0**	**+0.4**
VNDA	comp=Z,346nm,18.3s,baz=250,slow=34 comp=Z,1.0nm,0.6s			LR	LR	04 05 52.3	
ASAR	**Alice Springs** comp=Z,4.3nm,0.8s,baz=243,slow=6.0,SNR=31	**64.55**	**104**	P	**P**	**03 39 51.0**	**-0.6**
ASAR	comp=Z,33nm,21.0s,baz=202,slow=32 comp=Z,4.3nm,0.8s			LR	LR	04 03 56.6	
AS31	**Alice Springs**	**64.55**	**104**	P	**P**	**03 39 50.1**	**-1.5**
SBA	**Scott Base**	**64.80**	**167**	P	**P**	**03 39 52.2**	**-0.1**
SBA	comp=Z,4.8nm,1.1s			IAmb	IAmb	03 40 17.1	
WRA	**Warramunga Arr** comp=Z,5.9nm,1.0s,baz=246,slow=5.9,SNR=15	**66.38**	**100**	P	**P**	**03 40 03.2**	**-0.3**
WRA	comp=Z,126nm,21.6s,baz=180,slow=32 comp=Z,5.9nm,1.0s			LR	LR	04 04 27.4	
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**03 40 03.0**	**-0.5**
MMAI	**Mount Meron Ar** comp=Z,143nm,19.4s,baz=330,slow=33	**66.56**	**337**	LR	LR	04 05 57.4	
STKA	**Stephens Creek** comp=Z,3.1nm,0.7s,baz=274,slow=3.7,SNR=3.5	**67.83**	**115**	P	**P**	**03 40 12.0**	**-0.5**
STKA	comp=Z,62nm,18.5s,baz=216,slow=32 comp=Z,3.1nm,0.7s			LR	LR	04 05 51.6	
KSH	**Kashi**	**69.88**	**12**	P	**P**	**03 40 22.2**	**-2.8**
KSH				sP	sP	03 40 30.9	+1.9
GNI	**Garni** comp=Z,204nm,20.0s,baz=178,slow=34	**70.74**	**347**	LR	LR	04 09 48.5	
TOA0	**Torodi Ar. Sit**	**71.08**	**298**	P	**P**	**03 40 32.4**	**-0.3**
TOA0	comp=Z,14nm,1.4s			IAmb	IAmb	03 40 36.1	
TORD	**Torodi Ar. Bea** comp=Z,5.3nm,1.1s,baz=122,slow=5.1,SNR=13	**71.08**	**298**	P	**P**	**03 40 32.3**	**-0.4**
TORD	comp=Z,307nm,19.3s,baz=200,slow=36 comp=Z,5.3nm,1.1s			LR	LR	04 11 27.3	
KK31	**Karatay Array**	**72.59**	**7**	P	**P**	**03 40 41.3**	**+0.1**
KK31	comp=Z,7.1nm,1.0s			IAmb	IAmb	03 40 42.8	
KKAR	**Karatay Array**	**72.59**	**7**	P	**P**	**03 40 41.6**	**+0.4**
KKAR	**Karatay Array**	**72.59**	**7**	P	**P**	**03 40 41.4**	**+0.2**
KKAR	comp=Z,7.1nm,1.0s			IAmb	IAmb	03 40 42.8	
DBIC	**Dimbokro** comp=Z,8.9nm,1.1s,baz=90,slow=4.0,SNR=4.4	**72.62**	**288**	P	**P**	**03 40 42.9**	**+0.8**
DBIC	comp=Z,50nm,19.9s,baz=142,slow=35 comp=Z,8.9nm,1.1s			LR	LR	04 11 52.4	
AAK	**Ala-Archa** comp=Z,86nm,21.9s,baz=198,slow=33	**72.66**	**10**	LR	LR	04 09 16.5	
AAK	**Ala-Archa**	**72.66**	**10**	P	**P**	**03 40 41.9**	**+0.1**
AAK	comp=Z,8.0nm,1.0s			IAmb	IAmb	03 40 45.4	
BOOM	**Boomskoye usch**	**72.76**	**12**	P	**P**	**03 40 42.5**	**0.0**
BOOM	comp=Z,9.4nm,1.1s			IAmb	IAmb	03 40 45.6	
BRTR	**Keskin Array B** comp=Z,1.0nm,0.8s,

ZALV Zalesovo Beam 85.44 14 P **P 03 41 51.6 +0.3**
comp=Z,4.0nm,0.7s,baz=213,slow=4.4,SNR=12
ZALV LR LR 04 16 54.1
comp=Z,77nm,18.1s,baz=217,slow=34
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 85.44 14 P **P 03 41 51.3 0.0**
BBTS Babate 86.56 289 LR LR 04 19 21.9
comp=Z,108nm,20.0s,baz=108,slow=35
SONM Songino Array 86.95 29 P **P 03 41 59.4 +0.3**
comp=Z,0.3nm,0.4s,baz=235,slow=5.2,SNR=5.3
SONM LR LR 04 18 24.6
comp=Z,116nm,21.5s,baz=150,slow=34
comp=Z,0.3nm,0.4s
MDT Midelt 87.64 310 LR LR 04 21 29.3
comp=Z,137nm,18.2s,baz=118,slow=36
VRAC Vranov 87.70 333 LR LR 04 22 05.6
comp=Z,42nm,18.2s,baz=152,slow=36
GERES GERESS Array B 88.53 331 P **P 03 42 07.2 +0.7**
comp=Z,0.7nm,0.9s,baz=134,slow=7.6,SNR=4.2
comp=Z,0.7nm,0.9s
DAVOX Davos/Dischmat 88.68 328 LR LR 04 21 52.0
comp=Z,28nm,21.2s,baz=144,slow=36
URZ Urewera 90.14 135 LR LR 04 15 58.2
comp=Z,170nm,18.9s,baz=306,slow=31
KSRS Korea Array 91.29 47 LR LR 04 23 43.4
comp=Z,19nm,18.4s,baz=275,slow=36
ESDC Sonseca Array 91.39 316 P **P 03 42 21.1 +0.9**
comp=Z,3.5nm,1.1s,baz=111,slow=4.3,SNR=9.2
ESDC LR LR 04 22 48.8
comp=Z,78nm,20.9s,baz=122,slow=35
comp=Z,3.5nm,1.1s
KLMR Klimovskoe 91.54 350 *e*P P 03 42 14.8 -5.4
KLMR AMP 03 42 22.8
comp=Z,28nm,1.5s
DZM Mont Dzumac 91.94 117 *e*SS SS 03 59 34.8 +1.9
comp=Z,75nm,24.9s
DZM Mont Dzumac 91.94 117 *e*LR LR 04 11 50.8
comp=Z,98nm,23.6s
DZM Mont Dzumac 91.94 117 LR LR 04 17 17.2
comp=Z,69nm,19.3s,baz=230,slow=31
FINES FINESS Array B 94.76 344 LR LR 04 25 39.2
comp=Z,64nm,19.6s,baz=137,slow=36
HFS Hagfors 97.19 338 LR LR 04 26 55.5
comp=Z,70nm,18.1s,baz=99,slow=36
MJAR Matsushiro Arr 97.65 52 LR LR 04 27 41.9
comp=Z,22nm,18.4s,baz=232,slow=36
USRK Ussuriysk Ar. 97.69 43 LR LR 04 24 37.2
comp=Z,30nm,20.3s,baz=172,slow=34
NOA NORSAR Array B 98.68 338 LR LR 04 27 30.9
comp=Z,44nm,19.4s,baz=130,slow=36
CPUP Villa Florida 99.03 233 LR LR 04 17 52.6
comp=Z,29nm,19.2s,baz=152,slow=30
PPT2 Papeete2 124.82 144 *e*LR LR 04 27 04.2
comp=Z,91nm,23.2s
ILAR Eielson Array 140.44 18 PKP **PKPdf 03 48 41.5 -1.1**
comp=Z,0.8nm,1.0s,baz=298,slow=2.3,SNR=5.0
YKA Yellowknife Ar 146.69 356 PKPbc **PKPdf 03 48 53.5 -0.1**
comp=Z,12nm,1.1s,baz=355,slow=2.7,SNR=13
PDAR Pinedale Array 164.56 333 PKP **PKPdf 03 49 18.6 +0.4**
comp=Z,2.5nm,0.9s,baz=122,slow=1.9,SNR=14
TXAR Lajitas Array 166.61 274 PKP **PKPdf 03 49 21.9 +1.8**
comp=Z,1.2nm,0.8s,baz=140,slow=2.1,SNR=13

*MDD **05** 03:51:31.3±1.1, 36°.60N×9°.78W, h17km±6km, mb_Lg1.8/6, Error ellipse: s-maj=8.8km s-min=6.7km az=38.0*
*CNRM **05** 03:51:32.0, 37°.76N×5°.89W, h0km*
INMG 05 03:51:32.1±1.1, 36°.64N×9.77W, h14km±4km, ML1.4, 1C, Error ellipse: s-maj=5.4km s-min=4.2km az=53.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.90**	**56**	*e*P	Pb	03 51 48.4	-1.2
PFVI				*e*S	Sg	03 52 00.6	-0.8
MORF	**Marmelete**	**1.11**	**53**	*e*P	Pb	03 51 51.5	-1.7
MORF				*e*S	Sb	03 52 05.8	-1.8
MORF				IAML		03 52 07.1	
	comp=N,6.3nm,0.1s						
MORF	**Marmelete**	**1.11**	**53**	*e*P	Pb	03 51 51.5	-1.7
MORF				*e*S	Sb	03 52 06.5	-1.1
MORF				A	A	03 52 07.2	
	comp=N,3.6nm,0.1s						
PTEO	**Sao Teotonio**	**1.23**	**42**	*e*P	Pn	03 51 53.4	-1.5
PTEO				*e*S	Sb	03 52 09.1	-1.9
PCVE	**Castro Verde**	**1.70**	**54**	*e*Pn	Pn	03 51 59.9	-1.5
PCVE				*e*Sn	Sn	03 52 21.0	-2.0
PCVE				A	A	03 52 22.4	
	comp=N,1.4nm,0.2s						
MESJ	**Messejana**	**1.72**	**45**	*e*P	Pn	03 51 59.8	-1.9
MESJ				*e*S	Sn	03 52 20.5	-3.0
MESJ				IAML		03 52 22.2	
	comp=N,1.4nm,0.1s						
MESJ	**Messejana**	**1.72**	**45**	*e*Pn	Pn	03 51 59.9	-1.8
MESJ				*e*Sn	Sn	03 52 20.7	-2.8
MESJ				A	A	03 52 26.0	
	comp=N,1.6nm,0.2s						
PNCL	**Nicolau / Gran**	**1.77**	**33**	*e*Pn	Pn	03 52 00.9	-1.5
PNCL				*e*Sn	Sn	03 52 21.8	-2.9
PNCL				A	A	03 52 23.4	
	comp=N,2.2nm,0.3s						
PVAQ	**Vaqueiros**	**1.81**	**64**	*e*Pn	Pn	03 52 01.1	-1.8
PVAQ				*e*Sn	Sn	03 52 23.1	-2.6
PVAQ				A	A	03 52 25.6	
	comp=N,1.5nm,0.1s						
PVAQ	**Vaqueiros**	**1.81**	**64**	P	Pn	03 51 57.5	-5.4
PVAQ				S	Sn	03 52 22.4	-3.2
EGRO	**El Granado**	**2.04**	**63**	P	Pn	03 52 04.9	-1.1
EGRO				S	Sn	03 52 28.9	-2.3
EGRO				*i* Vmb_Lg		03 52 36.4	
PBEJ	**Beja**	**2.06**	**47**	*e*Sn	Sn	03 52 28.4	-3.3
PBEJ				A	A	03 52 29.5	
	comp=N,1.2nm,0.2s						
PMAFR	**Mafra**	**2.35**	**9**	*e*Sn	Sn	03 52 35.9	-3.0
EVO	**Evora**	**2.35**	**36**	*e*Pn	Pn	03 52 08.3	-2.0
EVO				*e*Sn	Sn	03 52 35.6	-3.4
EVO				A	A	03 52 36.6	
	comp=N,1.9nm,0.1s						
PBAR	**Barrancos**	**2.66**	**54**	*e*Sn	Sn	03 52 43.3	-3.3
EMIN	**Mina Concepcio**	**2.72**	**64**	P	Pn	03 52 13.7	-1.6
EMIN				S	Sn	03 52 44.7	-3.3
PMTG	**Montargil**	**2.72**	**26**	*e*Pn	Pn	03 52 13.8	-1.6
PMTG				*e*Sn	Sn	03 52 44.6	-3.5
PESTR	**Estremoz**	**2.82**	**37**	*e*Sn	Sn	03 52 47.4	-3.1
PSBE	**So Bento**	**2.98**	**15**	*e*Sn	Sn	03 52 51.4	-3.0
EBAD	**Badajoz**	**3.04**	**45**	P	Pn	03 52 17.3	-2.6
EBAD				S	Sn	03 52 52.4	-3.6
EBAD				*i* Vmb_Lg		03 52 53.2	
ESPR	**Espera**	**3.15**	**85**	P	Pn	03 52 19.4	-1.9
ESPR				S	Sn	03 52 54.8	-3.9
ESPR				*i* Vmb_Lg		03 52 56.2	
PMRV	**Marv??o**	**3.36**	**33**	*e*Pn	Pn	03 52 22.8	-1.4
PMRV				*e*Sn	Sn	03 52 59.7	-4.2
ECAB	**El Cabril**	**3.75**	**66**	P	Pn	03 52 27.6	-2.0
ECAB				S	Sn	03 53 09.3	-4.3
ECAB				*i* Vmb_Lg		03 53 11.1	
EADA	**Adamuz**	**4.41**	**68**	S	Sn	03 53 24.7	-5.1
EADA				*i* Vmb_Lg		03 53 27.8	
EPLA	**Plasencia**	**4.49**	**39**	S	Sn	03 53 27.5	-4.2
EPLA				*i* Vmb_Lg		03 53 30.5	
EQES	**Quesada**	**5.47**	**76**	S	Sn	03 53 51.0	-5.1
MD31	**MD31**	**5.58**	**131**	P	Pn	03 52 50.0	-4.8
MD31				S	Sn	03 53 47.0	-12
MDT	**Midelt**	**5.71**	**130**	P	Pn	03 52 50.3	-6.3
MDT				S	Sn	03 53 48.3	-14

IDC 05 04:02:24.7±2.0, 2°.83N×125°.81E, h0km, mb3.5/4, mbtmp3.6/4, MS2.9/1, Error ellipse: s-maj=131.8km s-min=25.6km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.79**	**180**	P	Pn	04 07 09.3	-0.8
	1.8nm,0.8s,baz=21,slow=8.6,SNR=1.8						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**24.13**	**160**	P	P	04 07 42.0	-0.6
	0.9nm,0.4s,baz=336,slow=11,SNR=14						
WRA				LR	LR	04 18 06.5	
	comp=Z,32nm,21.4s,baz=86,slow=39						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**27.49**	**164**	P	P	04 08 13.1	+0.1
	0.3nm,0.4s,baz=339,slow=7.0,SNR=6.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**57.78**	**326**	P	P	04 12 17.4	-0.4
	0.1nm,0.3s,baz=114,slow=8.0,SNR=4.3						
	0.1nm,0.3s						

HEL 05 04:05:53.6±0.3, 67°.87N×20°.21E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.70**	**74**	PG	Pg	04 06 05.9	-1.0
LANU				SG	Sg	04 06 15.2	-0.8
KIF	**Kilpisjarvi**	**1.16**	**11**	*e*P	Pg	04 06 15.9	0.0
KIF	**Kilpisjarvi**	**1.16**	**11**	PN	Pn	04 06 17.4	+0.4
KIF				MSG		04 06 30.2	
	comp=Z,4.0nm,0.2s						
KIF				SB	Sg	04 06 30.9	-0.1
HEF	**Hetta**	**1.40**	**66**	*e*P	Pn	04 06 19.6	-0.8
HEF	**Hetta**	**1.40**	**66**	PG	Pn	04 06 19.2	-1.2
HEF				MSG		04 06 35.9	
	comp=Z,3.8nm,0.2s						
HEF				SG	Sg	04 06 37.1	-1.5
PAJU	**Pajala**	**1.41**	**126**	PG	Pn	04 06 18.4	-2.0
PAJU				SG	Sg	04 06 36.9	-1.7
KLF	**Kolari**	**1.58**	**112**	PN	Pn	04 06 23.0	+0.2
KLF				SN	Sn	04 06 43.1	-0.7
KTK1	**Kautokeino**	**1.60**	**43**	SN	Sg	04 06 46.5	+1.4
TRO	**Tromso**	**1.83**	**346**	SG	Sb	04 06 51.4	0.0
KALU	**Kalix**	**2.37**	**147**	SG	Sb	04 07 06.4	-0.4
TOF	**Tornio**	**2.42**	**136**	PG	Pn	04 06 35.3	+1.0
TOF				MSG		04 07 05.1	
	comp=Z,2.1nm,0.2s						
ARA0	**ARCESS Array S**	**2.56**	**47**	PG	Pn	04 06 38.1	+1.8
	baz=228						
ARA0				SG	Sn	04 07 09.9	+1.8
RNF	**Rovaniemi**	**2.59**	**117**	PB	Pn	04 06 38.4	+1.8
RNF				SG	Sb	04 07 11.7	-1.4
KEV	**Kevo**	**3.11**	**49**	SB	Sn	04 07 24.2	+2.5
KEV				MSG		04 07 25.1	
	comp=Z,1.2nm,0.2s						
KEV	**Kevo**	**3.11**	**49**	SN	Sn	04 07 24.2	+2.5
VRF	**Varrio**	**3.57**	**88**	SN	Sn	04 07 28.4	-4.6
OLKF	**Oulanka, Finla**	**3.92**	**109**	PG	Pb	04 07 01.8	-1.6
OLKF	**Oulanka, Finla**	**3.92**	**109**	SG	Pb	04 07 01.8	-1.6
KU6	**Riekki**	**4.23**	**111**	PB	Pn	04 07 03.8	+4.6
KU6	**Riekki**	**4.23**	**111**	SG	Pn	04 07 03.8	+4.6

HEL 05 04:05:54.6±0.2, 67°.59N×33°.84E, h0km, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**45**	PG	Pg	04 06 02.7	-0.2
	baz=225						
LVZ				SG	Sg	04 06 08.0	-0.6
VRF	**Varrio**	**1.62**	**277**	PG	Pn	04 06 24.0	-0.5
VRF				MSG		04 06 43.3	
	comp=Z,2.0nm,0.2s						
VRF				SG	Sn	04 06 43.6	-2.4
OLKF	**Oulanka, Finla**	**2.17**	**236**	PG	Pb	04 06 33.6	-1.1
	baz=55						
KU6	**Riekki**	**2.22**	**227**	PG	Pb	04 06 34.2	-1.3
	baz=46						
KU6				MSG		04 07 00.4	
	comp=Z,0.9nm,0.2s						
TOF	**Tornio**	**4.05**	**252**	PG	Pb	04 07 07.8	+1.0
TOF	**Tornio**	**4.05**	**252**	SG	Pb	04 07 07.8	+1.0

*INET **05** 04:16:00.7±0.4, 12°.29N×87°.54W, h44km±7km, ML3.5*
*UCR **05** 04:16:00.8±1.3, 12°.32N×87°.66W, h24km±8km, ML3.5*
*SNET **05** 04:16:00.8±1.3, 12°.33N×87°.66W, h24km±8km, ML3.6*
ISC 05 04:15:58.4±1.7, 12°.22N±0°.10×87°.58W±0°.05, h20km±7km, n36, σ0°.58/50, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.70**	**47**	*e*P	**Pn**	**04 16 13.6**	**+0.3**
CRIN				*e*S	**Sn**	**04 16 24.2**	**+0.6**
TEL3	**Telica 3**	**0.80**	**64**	*e*P	**Pn**	**04 16 14.4**	**-0.1**
CNGN	**Cerro Negro**	**0.91**	**72**	*e*P	**Pn**	**04 16 14.9**	**-1.1**
CNGN				*e*S	**Sb**	**04 16 28.1**	**+1.0**
CNGN				IAML		04 16 32.2	
	comp=N,1μm,0.3s						
COPN	**Copaltepe**	**0.97**	**92**	*e*P	**Pn**	**04 16 16.9**	**0.0**
MOMN	**Momotombo**	**1.03**	**80**	*e*P	**Pn**	**04 16 17.5**	**-0.2**
CNCH	**Conchagua**	**1.08**	**347**	*e*P	**Pn**	**04 16 18.2**	**-0.3**
CNCH				*e*S	**Sb**	**04 16 32.2**	**+0.1**
CNCH				IAML		04 16 34.8	
	comp=Z,4μm,0.2s						
CNCH	**Conchagua**	**1.08**	**347**	*e*P	**Pn**	**04 16 18.2**	**-0.3**
CNCH				*e*S	**Sb**	**04 16 32.2**	**+0.1**
CNCH				IAML		04 16 34.8	
	comp=Z,4μm,0.2s						
LCND	**La Caada**	**1.12**	**344**	*e*P	**Pn**	**04 16 18.8**	**-0.2**
LCND				*e*S	**Sb**	**04 16 33.0**	**-0.4**
LCND				IAML		04 16 37.0	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**1.12**	**344**	*e*P	**Pn**	**04 16 18.8**	**-0.2**
LCND				*e*S	**Sb**	**04 16 33.0**	**-0.4**
LCND				IAML		04 16 37.0	
	comp=Z,1μm,0.3s						
MGAN	**Managua**	**1.31**	**93**	*e*P	**Pn**	**04 16 21.6**	**+0.1**
WILN	**Americas 2**	**1.36**	**92**	*e*P	**Pn**	**04 16 22.3**	**0.0**
HUEN		**1.38**	**85**	*e*P	**Pn**	**04 16 22.3**	**-0.2**
PACA	**Pacayal**	**1.44**	**330**	*e*P	**Pn**	**04 16 24.2**	**+0.8**
PACA				*e*S	**Sb**	**04 16 41.9**	**-0.6**
PACA	**Pacayal**	**1.44**	**330**	*e*P	**Pn**	**04 16 24.2**	**+0.8**
PACA				*e*S	**Sb**	**04 16 41.9**	**-0.6**
PACA	**Pacayal**	**1.44**	**330**	*e*P	**Pn**	**04 16 23.8**	**+0.4**
COEB	**Comit de Eme**	**1.57**	**324**	*e*P	**Pn**	**04 16 25.9**	**+0.6**
COEB				*e*S	**Sn**	**04 16 44.2**	**-0.8**
COEB	**Comit de Eme**	**1.57**	**324**	*e*P	**Pn**	**04 16 25.9**	**+0.6**
COEB				*e*S	**Sn**	**04 16 44.2**	**-0.8**
PQSS	**Presa 15 de Se**	**1.69**	**326**	*e*P	**Pn**	**04 16 27.6**	**+0.8**
PQSS				*e*S	**Sn**	**04 16 48.0**	**+0.1**
PQSS	**Presa 15 de Se**	**1.69**	**326**	*e*P	**Pn**	**04 16 27.6**	**+0.8**
PQSS				*e*S	**Sn**	**04 16 48.0**	**+0.1**
MATN	**Matagalpa**	**1.76**	**66**	*e*P	**Pn**	**04 16 27.4**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.85**	**323**	*e*P	**Pn**	**04 16 29.9**	**+0.9**
SCLA	**Alcaldia de Sa**	**1.85**	**323**	*e*P	**Pn**	**04 16 29.9**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.85**	**9**	*e*P	**Pn**	**04 16 29.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.85**	**9**	*e*P	**Pn**	**04 16 29.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.85**	**9**	*e*P	**Pn**	**04 16 29.1**	**0.0**
RCON	**San Juan de Ri**	**1.87**	**48**	*e*P	**Pn**	**04 16 29.9**	**+0.4**
COEG	**Centro de Oper**	**1.88**	**318**	*e*P	**Pn**	**04 16 29.1**	**-0.3**
COEG				*e*S	**Sn**	**04 16 51.5**	**-1.2**
COEG				IAML		04 16 55.1	
	comp=Z,250nm,0.4s						
COEG	**Centro de Oper**	**1.88**	**318**	*e*P	**Pn**	**04 16 29.1**	**-0.3**
COEG				*e*S	**Sn**	**04 16 51.5**	**-1.2**
COEG				IAML		04 16 55.1	
	comp=Z,250nm,0.4s						
SJTE	**Alcalda de S**	**1.96**	**315**	*e*P	**Pn**	**04 16 30.8**	**+0.1**
SJTE	**Alcalda de S**	**1.96**	**315**	*e*P	**Pn**	**04 16 30.8**	**+0.1**
PAVA	**Las Pavas**	**1.99**	**318**	*e*P	**Pn**	**04 16 31.3**	**+0.3**
PAVA				*e*S	**Sn**	**04 16 55.8**	**+0.5**
PAVA	**Las Pavas**	**1.99**	**318**	*e*P	**Pn**	**04 16 31.3**	**+0.3**
PAVA				*e*S	**Sn**	**04 16 55.8**	**+0.5**
LFRS	**El Faro**	**2.01**	**314**	*e*P	**Pn**	**04 16 31.9**	**+0.6**
LFRS	**El Faro**	**2.01**	**314**	*e*P	**Pn**	**04 16 31.9**	**+0.6**
CEVE	**Cerro Verde**	**2.55**	**309**	IAML		04 17 19.4	
	comp=Z,318nm,0.4s						
CEVE	**Cerro Verde**	**2.55**	**309**	IAML		04 17 19.4	
	comp=Z,318nm,0.4s						

*IDC **05** 04:38:14.8±0.9, 27°.79N×141°.93E, h0km, mb3.8/6, mbtmp3.8/6, MS2.8/4, Error ellipse: s-maj=37.2km s-min=14.4km az=84.0*
*JMA **05** 04:38:20.8±0.2, 28°.N±2°.×14°.3E±°, h29km, MV3.9/7, NEAR CHICHIJIMA ISLAND*
ISC 05 04:38:20.7±0.7, 27°.83N±0°.05×142°.1E±0°.3, h42km, n22, σ1°.26/16, mb3.8/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.74**	**173**	P	**Pn**	**04 38 34.1**	**-0.6**
CBIJ				S	**Sn**	**04 38 43.4**	**-1.4**
JCJ	**Chichijima**	**0.74**	**173**	Pn	**Pn**	**04 38 33.1**	**-1.6**
	322nm,0.3s,baz=301,slow=21,SNR=67						
JCJ				Sn	**Sn**	**04 38 43.3**	**-1.6**
	1μm,0.3s,baz=182,slow=23,SNR=35						
JHH2	**Haha-jima-NKT2**	**1.20**	**176**	*e*P	**Pn**	**04 38 40.8**	**-0.2**
JHH2				*e*S	**Sn**	**04 38 56.3**	**+0.2**
BSO1	**Boso 1**	**6.87**	**352**	*e*P	**Pn**	**04 39 57.8**	**-0.5**
BSO1				*e*S	**Sn**	**04 41 12.7**	**-2.2**
JRY	**Ryogami san**	**8.60**	**342**	*e*P	**Pn**	**04 40 24.5**	**+1.9**
JOW	**Kunigami**	**12.32**	**269**	LR	LR	04 45 11.6	
	comp=Z,57nm,20.0s,baz=132,slow=34						
KSRS	**Korea Array**	**15.29**	**312**	LR	LR	04 47 25.5	
	comp=Z,27nm,19.3s,baz=130,slow=36						
H11N2	**WAKE ISLAND Hy**	**24.06**	**104**	T	T	05 08 38.1	
	baz=295,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**24.06**	**104**	T	T	05 08 30.8	
	baz=295,slow=75,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**24.08**	**104**	T	T	05 08 34.8	
	baz=295,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**24.41**	**107**	T	T	05 08 51.6	
	baz=297,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**24.42**	**107**	T	T	05 08 55.3	
	baz=297,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**24.43**	**107**	T	T	05 08 55.9	
	baz=297,slow=75,SNR=25						
CMAR	**Chiang Mai Arr**	**40.58**	**266**	LR	LR	05 02 05.9	
	comp=Z,10nm,19.0s,baz=340,slow=35						
WRA	**Warramunga Arr**	**48.08**	**190**	P	**P**	**04 46 55.4**	**-0.9**
	0.9nm,0.4s,baz=9.0,slow=8.0,SNR=24						
	0.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**48.36**	**201**	P	**P**	**04 46 57.5**	**-1.0**
	1.3nm,0.8s,baz=355,slow=11						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**51.80**	**190**	P	**P**	**04 47 24.4**	**-0.2**
	0.2nm,0.4s,baz=1.1,slow=4.8,SNR=1.9						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**57.11**	**29**	P	**P**	**04 48 02.2**	**-0.4**
	0.4nm,0.7s,baz=252,slow=5.6,SNR=2.7						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**77.25**	**334**	P	**P**	**04 50 10.6**	**+0.3**
	4.0nm,1.1s,baz=65,slow=5.3,SNR=9.8						
	4.0nm,1.1s						
NVAR	**Mina Array Bea**	**80.13**	**52**	P	**P**	**04 50 28.4**	**+1.6**
	0.5nm,0.6s,baz=303,slow=5.7,SNR=5.5						
	0.5nm,0.6s						
NOA	**NORSAR Array B**	**82.90**	**338**	LR	LR	05 32 45.7	
	comp=Z,6.0nm,19.5s,baz=340,slow=40						
LPAZ	**La Paz**	**149.81**	**74**	PKPbc	**PKiKP**	**04 58 08.6**	**0.0**
	0.7nm,0.5s,baz=0.0,slow=3.0,SNR=4.1						

*DDA **05** 05:04:44.7±0.0, 38°.78N×26°.49E, h7km±2km, ML2.9*
*ISK **05** 05:04:44.1, 38°.78N×26°.48E, h2km, ML3.0/20*
*ATH **05** 05:04:45.4, 38°.77N×26°.47E, h18km±2km, ML2.7/5, Error ellipse: s-maj=2.4km s-min=1.1km az=61.0*
*THE **05** 05:04:45.4, 38°.78N×26°.45E, h13km, ML2.6/6, Error ellipse: s-maj=0.8km s-min=0.3km az=276.0*
ISC 05 05:04:44.8±0.9, 38°.78N±0°.02×26°.50E±0°.02, h17km±7km, n46, σ0°.55/68, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOCM	**Foa**	**0.19**	**109**	PG	**Pg**	**05 04 49.2**	**-0.2**
FOCM				SG	**Sg**	**05 04 53.0**	**+0.4**
URLA	**Izmir**	**0.42**	**170**	PG	**Pg**	**05 04 52.5**	**-0.9**
URLA				SG	**Sb**	**05 05 00.3**	**+0.4**
DIKL	**Dikili**	**0.43**	**47**	PG	**Pg**	**05 04 53.7**	**+0.1**
ZEDA	**zmir-Bergama**	**0.49**	**67**	P	**Pg**	**05 04 54.0**	**-0.6**
ZEDA				S	**Sg**	**05 05 01.8**	**+0.5**
PRK	**Paraskevi**	**0.50**	**339**	P	**Pb**	**05 04 55.2**	**0.0**
PRK				S	**Sb**	**05 05 02.7**	**+0.4**
	1μm,0.2s						
PRK	**Paraskevi**	**0.50**	**339**	P	**Pb**	**05 04 55.4**	**+0.2**
PRK				S	**Sb**	**05 05 02.5**	**+0.2**
PRK				AML	AML	05 05 07.4	
	comp=E,2511μm,0.3s						
PRK				AML	AML	05 05 07.7	
	comp=N,1588μm,0.3s						
CHOS	**Chios island**	**0.52**	**222**	PG	**Pb**	**05 04 55.5**	**0.0**
CHOS				SG	**Sb**	**05 05 02.9**	**+0.1**
CHOS	**Chios island**	**0.52**	**222**	P	**Pg**	**05 04 55.2**	**0.0**
CHOS				S	**Sb**	**05 05 02.7**	**-0.1**
	comp=N,1μm,0.2s						
CHOS	**Chios island**	**0.52**	**222**	P	**Pb**	**05 04 55.4**	**-0.2**
CHOS				S	**Sb**	**05 05 02.4**	**-0.4**
CHOS				AML	AML	05 05 07.5	
	comp=E,2585μm,0.3s						
CHOS				AML	AML	05 05 07.6	
	comp=N,1484μm,0.2s						
ZEYE	**İzmir, Urla-Ze**	**0.54**	**180**	P	**Pb**	**05 04 55.7**	**-0.1**
ZEYE				S	**Sb**	**05 05 03.3**	**+0.2**
ZEYE				*i* AML	AML	05 05 06.0	
	comp=N,929nm,0.5s						
ZEYE				*i* AML	AML	05 05 09.0	
	comp=N,685nm,0.2s						
BLCB	**Balcova**	**0.58**	**132**	PG	**Pg**	**05 04 56.4**	**+0.2**
BLCB	**Balcova**	**0.58**	**132**	P	**Pb**	**05 04 57.0**	**+0.6**
BLCB				S	**Sn**	**05 05 06.1**	**-1.2**
SIGR	**SIGRI**	**0.67**	**311**	PG	**Pg**	**05 04 57.6**	**-0.3**
SIGR	**SIGRI**	**0.67**	**311**	P	**Pg**	**05 04 57.5**	**-0.3**
SIGR				S	**Sb**	**05 05 07.1**	**+0.2**
	comp=N,420nm,0.2s						
SIGR	**SIGRI**	**0.67**	**311**	P	**Pg**	**05 04 57.5**	**-0.3**
SIGR				S	**Sg**	**05 05 06.6**	**-0.1**
SIGR				AML	AML	05 05 10.1	
	comp=N,707μm,0.3s						
SIGR				AML	AML	05 05 10.2	
	comp=E,967μm,0.3s						
GPNR	**Gulpinar-Canak**	**0.74**	**337**	PG	**Pg**	**05 04 59.5**	**+0.3**
PSRA	**Psara**	**0.77**	**253**	P	**Pg**	**05 04 60.0**	**+0.2**
PSRA				S	**Sg**	**05 05 10.0**	**+0.1**
PSRA				AML	AML	05 05 13.8	
	comp=N,1826μm,0.3s						
PSRA				AML	AML	05 05 14.4	
	comp=E,1925μm,0.3s						
KOCA	**Canakkale, Ayv**	**0.78**	**339**	P	**Pb**	**05 04 59.9**	**0.0**
KOCA				S	**Sn**	**05 05 12.1**	**-0.3**
KOCA				*i* AML	AML	05 05 13.0	
	comp=E,1μm,0.4s						
KOCA				*i* AML	AML	05 05 14.0	
	comp=E,448nm,0.3s						
DGB	**zmir**	**0.78**	**157**	P	**Pb**	**05 04 59.7**	**-0.2**
DGB

MRMT	Marmara Adasi	2.01	25	PN	Pn	05 05 19.3	+1.2
ALN	Alexandroupoli	2.15	351	PN	Pb	05 05 22.3	-0.9
YER	Yerkesik	2.16	139	PN	Pb	05 05 22.8	-0.7
UKOP	Uzunkopru-Edir	2.35	2	PN	Pb	05 05 25.6	-1.1
TVSB	Tavsanli	2.40	73	PN	Pb	05 05 26.2	-1.4
ARMT	Armutlu	2.55	45	PN	Pb	05 05 28.6	-1.6

*NEIC **05** 05:06:48.8±2.8, 48°.5N±0°.1×178°.4E±0°.2, h15km±8km, Error ellipse: s-maj=20.1km s-min=18.6km az=160.0*
*IDC **05** 05:07:27.6±5.8, 51°.77N×179°.74W, h74km±67km, mb3.3/5, mbtmp3.7/7, ML3.8/2, MS3.4/4, Error ellipse: s-maj=64.0km s-min=32.5km az=165.0*
*AEIC **05** 05:07:29±2.7, 51°.7N±0°.1×179°.80W±0°.07, h83km±5km, ML3.5, mb3.8/38(NEIC), Error ellipse: s-maj=21.2km s-min=5.9km az=184.0*

ISC 05 05:07:28.9±1.0, 51°.7N±0°.1×179°.87W±0°.04, h100km, n82, σ0s75/82, mb3.7/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	Semis' Rag'd T	0.35	308		Pn	05 07 43.6	-0.2
CERB	Semis' Cerberu	0.39	308		Pn	05 07 54.9	+11
CEPE	Semis' Perret	0.41	313		Pn	05 07 43.9	-0.2
CESW	Semis' Southwe	0.41	301		Pn	05 07 43.8	-0.3
CEAP	Semis' Anvil P	0.46	313		Pn	05 07 44.3	-0.1
CEAP					Sn	05 07 56.3	+0.3
CETU	Semis' Tuman	0.48	305		Pn	05 07 44.4	-0.2
AMKA	Amchitka	0.60	239		Pn	05 07 45.5	0.0
GANO	Gareloi North	0.68	79		Pn	05 07 46.0	-0.1
GALAA	Gareloi Lava P	0.69	84		Pn	05 07 46.2	0.0
GANE	Gareloi Northe	0.69	79		Pn	05 07 46.2	0.0
GAEA	Gareloi East	0.70	82		Pn	05 07 46.5	+0.1
LSSE	Little Sitkin	1.00	285		Pn	05 07 49.7	+0.4
LSPA	Little Sitkin	1.00	286		Pn	05 07 49.8	+0.4
LSSA	Little Sitkin	1.04	285		Pn	05 07 50.0	+0.2
LSNW	Little Sitkin	1.04	286		Pn	05 07 49.9	+0.2
TANO	Tanaga North	1.11	78		Pn	05 07 50.7	+0.2
TASE	Tanaga Southea	1.15	82		Pn	05 07 51.1	+0.1
TAFP	Tanaga Falls P	1.19	79		Pn	05 07 51.4	-0.1
TAFP					Sn	05 08 07.7	-0.8
TAFL	Tanaga Flats	1.23	86		Pn	05 07 52.0	+0.2
KICM	Kanaga Island	1.68	81		Pn	05 07 57.6	+0.3
KIKV	Kanaga Island	1.69	83		Pn	05 07 57.6	+0.2
KIWB	Kanaga Island	1.70	83		Pn	05 07 57.4	-0.2
ADK	Adak	1.99	83		Pn	05 08 01.0	-0.3
GSCK	Great Sitkin C	2.32	81		Pn	05 08 05.5	-0.1
GSTD	Great Sitkin T	2.34	80		Pn	05 08 05.6	-0.3
GSTD					Sn	05 08 33.7	-0.6
GSMY	Great Sitkin M	2.39	80		Pn	05 08 06.3	-0.2
GSTR	Great Sitkin T	2.40	79	Pn	Pn	05 08 06.3	-0.3
SHEM	Shemya Is, Ala	3.85	288	P	Pn	05 08 26.2	+0.2
SHEM	3.1nm,0.3s,baz=90,slow=8.1,SNR=2.0			S	Sn	05 09 10.0	-0.3
	57nm,0.8s,baz=299,slow=23,SNR=1.7						
	78nm,0.8s						
SPIA	Saint Paul Isl	7.85	42	Pn	Pn	05 09 22.2	+2.0
UNV	Unalaska Valle	8.39	70	Pn	Pn	05 09 28.0	+0.5
SDPT	Sand Point	12.10	65	Pn	Pn	05 10 16.4	-1.2
CNBA	Chernabura Isl	12.53	68	Pn	Pn	05 10 22.3	-1.1
SVW2	Sparrevohn	16.32	45		P	05 11 13.9	+1.0
SVW2				IAmb	IAmb	05 11 45.8	
	comp=Z,8.2nm,1.4s						
OHAK	Old Harbor	16.36	60	Pn	Pn	05 11 10.6	-1.6
KDAK	Kodiak Island	16.82	58	P	Pn	05 11 15.3	-2.6
	comp=Z,0.7nm,0.3s,baz=258,slow=1.8,SNR=19						
	comp=Z,3.5nm,0.6s						
KDAK	Kodiak Island	16.82	58	Pn	Pn	05 11 16.0	-1.9
TTA	Tatalina	16.98	39		P	05 11 20.4	0.0
TTA				IAmb	IAmb	05 11 25.9	
	comp=Z,7.8nm,1.4s						
L19K	White Mountain	17.10	42		P	05 11 23.0	+1.4
M19K	Big River Lodg	17.17	44		P	05 11 23.3	+0.9
M19K				IAmb	IAmb	05 11 31.7	
	comp=Z,6.5nm,1.2s						
CNPM	China Poot	17.86	53		Pn	05 11 30.8	+0.2
K20K	Telida	17.96	40		Pn	05 11 32.5	+0.7
J20K	Nowinta River	18.34	37		Pn	05 11 36.8	+0.5
J20K				IAmb	IAmb	05 12 01.6	
	comp=Z,6.5nm,1.4s						
SKT	Skwentna	18.45	45		Pn	05 11 37.8	+0.1
PPLA	Purkeypile	18.52	42		Pn	05 11 38.9	+0.3
PPLA				IAmb	IAmb	05 11 39.6	
	comp=Z,11nm,1.4s						
SUA	Susitna One	18.63	47		P	05 11 38.5	+0.1
SUA				IAmb	IAmb	05 11 43.0	
	comp=Z,6.9nm,1.0s						
CAST	Castle Rocks	18.79	41		Pn	05 11 41.3	-0.4
CAST				IAmb	IAmb	05 11 42.5	
	comp=Z,3.1nm,0.7s						
SEW	Seward	18.87	52		Pn	05 11 42.1	-0.4
KTH	Kantishna Hill	19.32	41	P	Pn	05 11 47.2	-0.7
IMAR	Indian Mountai	19.47	33	P	Pn	05 11 48.5	-1.1
BPAW	Bear Paw Mtn.	19.52	39	P	Pn	05 11 49.1	-1.2
BPAW				IAmb	IAmb	05 11 49.8	
	comp=Z,3.1nm,0.7s						
TRF	Thorofare Moun	19.54	42	P	Pn	05 11 49.3	-1.3
TRF				IAmb	IAmb	05 11 54.1	
	comp=Z,5.1nm,0.9s						
PWL	Port Wells	19.58	50	P	P	05 11 48.3	-0.4
PWL				IAmb	IAmb	05 11 59.8	
	comp=Z,9.8nm,1.4s						
H21K	Melozitna Rive	19.61	34	P	Pn	05 11 50.7	-0.6
H21K				IAmb	IAmb	05 11 54.4	
	comp=Z,4.3nm,0.8s						
I21K	Tanana	19.66	36	P	Pn	05 11 50.6	-1.1
I21K				IAmb	IAmb	05 11 54.8	
	comp=Z,8.8nm,1.2s						
MLY	Manley	20.04	37	P	P	05 11 54.5	+0.8
MLY				IAmb	IAmb	05 11 55.6	
	comp=Z,4.0nm,1.0s						
SCM	Sheep Creek Mo	20.30	47	P	P	05 11 55.6	-0.9
DHY	Denali Highway	20.63	44	P	P	05 12 00.2	0.0
DHY				IAmb	IAmb	05 12 01.3	
	comp=Z,4.0nm,1.0s						
WRH	Wood River Hil	20.83	40	P	P	05 12 01.0	-1.1
M24K	Tolsona, Glenn	20.89	47	P	P	05 12 03.0	+0.1
M24K				IAmb	IAmb	05 12 45.3	
	comp=Z,5.9nm,0.9s						
MDM	Murphy Dome	20.97	39	P	P	05 12 03.5	-0.2
CCB	Clear Creek Bu	21.01	40	P	P	05 12 03.5	-0.5
ILAR	Eielson Array	21.42	40	P	P	05 12 08.7	+0.2
	comp=Z,0.4nm,0.6s,baz=239,slow=7.4,SNR=6.8						
	comp=Z,0.4nm,0.6s						
PAX	Paxson	21.43	45	P	P	05 12 09.5	+0.8
PAX				IAmb	IAmb	05 12 10.7	
	comp=Z,6.9nm,1.2s						
H24K	Noodor Dome	21.48	37	P	P	05 12 09.3	+0.2
GLB	Gilahina Butte	21.85	49	P	P	05 12 12.4	-0.7
RIDG	Independent Ri	21.92	43	P	P	05 12 12.9	-0.9
RIDG				IAmb	IAmb	05 12 56.4	
	comp=Z,7.6nm,1.4s						
DOT	Dot Lake	22.23	44	P	P	05 12 16.6	-0.5
DOT				IAmb	IAmb	05 12 39.2	
	comp=Z,5.9nm,1.5s						
SCRK	Sand Creek	22.35	43	P	P	05 12 17.5	-1.0
BARN	Barnard Glacie	22.82	51	P	P	05 12 23.9	+0.6
BARN				IAmb	IAmb	05 12 39.5	
	comp=Z,5.9nm,1.4s						
M27K	Edge Creek, AK	22.91	48	P	P	05 12 24.2	+0.1
M27K				IAmb	IAmb	05 12 38.6	
	comp=Z,5.3nm,1.4s						
L27K	Beaver Creek,	23.07	46	P	P	05 12 25.6	+0.1
BCAR	Beaver Creek A	23.09	46	P	P	05 12 26.1	+0.4
K27K	Chicken	23.18	43	P	P	05 12 27.4	+0.9
BMAR	Burnt Mountain	23.35	34	P	P	05 12 28.4	+0.4
EGAK	Eagle	23.75	42	P	P	05 12 32.2	+0.5
INK	Inuvik	27.59	36	LR	LR	05 24 02.8	
	comp=Z,64nm,19.8s,baz=18,slow=36						
YKA	Yellowknife Ar	35.50	47	P	P	05 14 15.3	-0.2
	comp=Z,0.6nm,0.6s,baz=280,slow=7.5,SNR=4.4						
	comp=Z,0.6nm,0.6s						
NVAR	Mina Array Bea	44.17	82	P	P	05 15 29.0	+1.2
	comp=Z,0.6nm,0.6s,baz=304,slow=6.9,SNR=7.0						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	46.85	72	P	P	05 15 48.6	-0.2
	comp=Z,0.8nm,0.7s,baz=316,slow=3.0,SNR=9.7						
PDAR				LR	LR	05 32 27.3	
	comp=Z,37nm,20.4s,baz=32,slow=32						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	53.33	313	LR	LR	05 41 13.1	
	comp=Z,64nm,20.0s,baz=335,slow=38						
ANMO	Albuquerque	53.68	78	LR	LR	05 37 12.4	

	comp=Z,21nm,21.1s,baz=44,slow=33						
TXAR	Lajitas Array	59.26	81	P	P	05 17 20.6	+0.7
	comp=Z,0.6nm,0.6s,baz=300,slow=5.1,SNR=11						
	comp=Z,0.6nm,0.6s						

*IDC **05** 05:15:52.3±2.5, 25°.31S×179°.87E, h520km±29km, mb3.2/6, mbtmp4.1/8, Error ellipse: s-maj=46.8km s-min=17.0km az=166.0*

ISC 05 05:15:50.9±0.9, 25°.2S±0°.2×179°.9E±0°.1, h500km, n13, σ0s74/11, mb3.8/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.71	282	P	P	05 18 38.0	+0.9
	4.9nm,0.8s,baz=281,slow=23,SNR=5.8						
URZ	Urewera	13.20	190	P	P	05 18 42.1	+0.2
	5.9nm,0.4s,baz=322,slow=1.7,SNR=9.3						
CTA	Charters Tower	31.40	272	P	P	05 21 30.7	+0.3
	3.6nm,0.3s,baz=89,slow=11,SNR=6.8						
	3.6nm,0.3s						
STKA	Stephens Creek	34.14	250	P	P	05 21 53.7	+0.1
	1.2nm,0.5s,baz=97,slow=17,SNR=3.9						
	1.2nm,0.5s						
ASAR	Alice Springs	41.72	262	P	P	05 22 55.7	-0.1
	1.4nm,0.4s,baz=88,slow=7.2,SNR=26						
ASAR				S	S	05 28 35.6	-0.7
	0.2nm,0.5s,baz=95,slow=13,SNR=4.3						
	1.4nm,0.4s						
WRA	Warramunga Arr	42.22	268	P	P	05 22 59.3	-0.4
	2.0nm,0.5s,baz=99,slow=6.8,SNR=30						
	2.0nm,0.5s						
NVAR	Mina Array Bea	85.79	44	P	P	05 27 37.6	+0.5
	0.3nm,0.6s,baz=232,slow=7.3,SNR=3.7						
	0.3nm,0.6s						
TXAR	Lajitas Array	91.23	58	P	P	05 28 02.9	+0.3
	0.3nm,0.8s,baz=199,slow=6.1,SNR=4.1						
	0.3nm,0.8s						
ARCES	ARCESS Array B	133.16	348	PKP	PKiKP	05 34 09.0	-0.8
	3.3nm,0.8s,baz=20,slow=3.9,SNR=4.2						
NB2	NORSAR Subarra	143.38	351	PKP	PKPbc	05 34 24.6	-1.2
	comp=Z,0.5nm,0.5s,baz=14,slow=3.3						
NOA	NORSAR Array B	143.38	351	PKP	PKPbc	05 34 24.6	-1.2
	comp=Z,1.1nm,0.7s,baz=9.7,slow=2.2,SNR=4.1						
HFS	Hagfors	143.83	348	PKP	PKPbc	05 34 26.2	-1.0
	comp=Z,5.0nm,0.5s,baz=58,slow=3.7,SNR=17						
AKASG	Malin Array Be	146.02	326	PKPbc	PKPbc	05 34 32.8	-1.3
	comp=Z,1.0nm,0.4s,baz=46,slow=4.1,SNR=5.9						

*INET **05** 05:19:29.6±0.8, 11°.38N×86°.95W, h15km±7km, ML3.4*
*SNET **05** 05:19:31.8±1.0, 11°.49N×86°.82W, h35km±903km, ML3.0*
*UCR **05** 05:19:32.2±2.3, 11°.64N×86°.78W, h20km±14km, MW4.0*

ISC 05 05:19:30.2±1.7, 11°.52N±0°.05×86°.86W±0°.05, h8km±13km, n29, σ0s67/40, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.71	22	eP	Pb	05 19 45.9	+1.0
WILN	Americas 2	0.92	46	eP	Pg	05 19 48.5	+0.6
MOMN	Momotombo	0.94	19	eP	Pb	05 19 48.9	+0.1
CNGN	Cerro Negro	0.99	9	eP	Pg	05 19 48.9	-0.3
CNGN				eS	Sn	05 20 05.7	+1.0
CNGN				IAML		05 20 09.2	
	comp=N,813nm,0.3s						
TEL3	Telica 3	1.05	1	eP	Pg	05 19 50.5	+0.1
HUEN		1.06	39	eP	Pg	05 19 50.3	-0.2
CRIN	San Cristobal	1.19	351	⇑P	Pg	05 19 52.5	-0.6
CRIN	San Cristobal	1.19	351	eP	Pg	05 19 52.5	-0.6
CRIN				eS	Sb	05 20 09.6	+0.9
GPS2	Hotel Rincn d	1.66	117	eP	Pg	05 20 01.9	-0.3
MATN	Matagalpa	1.68	33	eP	Pn	05 19 59.2	-0.7
ACON	Acoyapa	1.71	75	eP	Pn	05 19 58.4	-1.9
COLC	Colonia	1.83	117	eP	Pn	05 20 02.4	+0.4
CUI	Cuipilapa	1.87	117	eP	Pn	05 20 01.6	-1.0
NICO	Nicoya	1.95	135	eP	Pb	05 20 05.8	-0.3
CNCH	Conchagua	1.99	332	eP	Pn	05 20 03.8	-0.5
CNCH				eS	Sn	05 20 28.9	-0.6
CNCH	Conchagua	1.99	332	eP	Pn	05 20 03.8	-0.5
CNCH				eS	Sn	05 20 28.9	-0.6
LCND	La Caada	2.05	331	eP	Pn	05 20 04.1	-0.8
LCND	La Caada	2.05	331	eP	Pn	05 20 04.1	-0.8
LCND				eS	Sn	05 20 30.5	-0.2
LCND				IAML		05 20 35.6	
	comp=Z,196nm,0.3s						
VERA	Finca Concepci	2.06	108	eP	Pn	05 20 04.4	-0.7
JTS	Las Juntas de	2.23	123	eP	Pn	05 20 08.0	+0.4
PACA	Pacayal	2.41	324	eP	Pn	05 20 10.4	+0.3
PACA				eS	Sn	05 20 40.1	+0.2
PACA	Pacayal	2.41	324	eP	Pn	05 20 10.4	+0.3
PACA				eS	Sn	05 20 40.1	+0.2
COEB	Comit de Eme	2.56	321	eP	Pn	05 20 12.0	-0.1
COEB				eS	Sn	05 20 42.9	-0.6
COEB	Comit de Eme	2.56	321	eP	Pn	05 20 12.0	-0.1
COEB				eS	Sn	05 20 42.9	-0.6
COEB				IAML		05 20 52.8	
	comp=Z,51nm,0.3s						
COEG	Centro de Oper	2.87	317	eP	Pn	05 20 16.1	-0.3
COEG				eS	Sn	05 20 50.8	-0.4
COEG	Centro de Oper	2.87	317	eP	Pn	05 20 16.1	-0.3
COEG				eS	Sn	05 20 50.8	-0.4
COEG				IAML		05 20 54.9	
	comp=Z,38nm,0.3s						
PAVA	Las Pavas	2.98	317	eP	Pn	05 20 18.4	+0.5
PAVA	Las Pavas	2.98	317	eP	Pn	05 20 18.4	+0.5
LCR2	La Lucha 2	3.31	122	eP	Pn	05 20 23.9	+1.3

*ISN **05** 05:22:02.8±0.3, 36°.71N×43°.60E, h16km, ML2.6*
*DDA **05** 05:22:04.0±0.0, 37°.06N×43°.31E, h16km±6km, ML2.9*

ISC 05 05:22:01.6±2.4, 36°.96N±0°.10×43°.42E±0°.06, h11km±25km, n5, σ0s67/10, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	HAKKARI	0.64	21	P	Pb	05 22 15.0	0.0
HAKT				S	Sb	05 22 24.2	0.0
HAKT				i AML	AML	05 22 26.0	
	comp=N,498nm,0.5s						
HAKT				i AML	AML	05 22 26.0	
	comp=E,818nm,0.2s						
YOVA	Hakkari_Yksek	0.94	47	P	Pn	05 22 20.5	-0.4
YOVA				S	Sn	05 22 35.1	+0.7
MIDY	Mardin/Midyat-	1.68	286	P	Pn	05 22 30.7	-0.3
MIDY				S	Sn	05 22 52.0	-0.5
MIDY				i AML	AML	05 22 57.0	
	comp=N,252nm,0.5s						
MIDY				i AML	AML	05 22 58.0	
	comp=E,100nm,0.8s						
IKRK	Kirkuk	1.72	154	ePg	Pg	05 22 34.6	0.0
	baz=335						
IKRK				eSg	Sg	05 22 56.8	-0.1
IKRK				AML	AML	05 23 00.4	
	comp=N,136nm,0.5s						
IKRK				AML	AML	05 23 08.2	
	comp=E,94nm,0.4s						
MARD	Mardin	2.14	280	P	Pn	05 22 38.5	+1.2
MARD				S	Sn	05 23 03.4	-0.6
MARD				i AML	AML	05 23 10.0	
	comp=E,90nm,0.4s						
MARD				i AML	AML	05 23 17.0	
	comp=E,130nm,0.6s						

OTT 05 05:35:17.6±0.1, 59°.29N×74°.39W, h18km, MN3.5/9, 183km southeast from Puvirnituq, Qc Boothia Ungava Seismic Zone., Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGQ	Kangiqsujuaq	2.60	27	SN	Sn	05 36 28.9	-0.9
FRB	Frobisher Bay	5.27	30	PN	Pn	05 36 34.7	-0.6
FRB				SN	Sn	05 37 31.4	-4.2
FRB				LG	Lg	05 37 60.0	
FRB				Trac		05 38 12.9	
	comp=Z,65nm,0.7s						
SCHQ	Schefferville	6.08	134	PN	Pn	05 36 44.9	-1.6
SCHQ				SN	Sn	05 37 50.7	-4.8
SCHQ				LG	Lg	05 38 26.3	
SCHQ				Trac		05 38 43.5	
	comp=Z,151nm,1.1s						
WEMQ	Wemindji, Queb	6.56	199	PN	Pn	05 36 51.0	-2.1
WEMQ				SN	Sn	05 38 02.1	-5.2
WEMQ				LG	Lg	05 38 39.0	
WEMQ				Trac		05 38 39.8	
	comp=Z,96nm,1.0s						
NMSQ	Nemaska Statio	7.65	188	PN	Pn	05 37 06.8	-1.2
NMSQ				SN	Sn	05 38 28.5	-5.6
NMSQ				LG	Lg	05 39 13.2	
NMSQ				Trac		05 39 40.7	
	comp=Z,15nm,0.4s						
VIMO	Victor Mine	8.33	223	PN	Pn	05 37 15.8	-1.5
VIMO				SN	Sn	05 38 43.8	-7.0
VIMO				Trac		05 39 46.5	
	comp=Z,59nm,0.9s						
CHGQ	Chibougamau	9.40	180	SN	Sn	05 39 06.7	-10
MATQ	Matagami	9.73	193	PN	Pn	05 37 34.7	-1.9
MATQ				SN	Sn	05 39 17.4	-7.9
MATQ				Trac		05 40 24.2	
	comp=Z,9.5nm,0.4s						
SMQ	Clarke City	10.11	151	PN	Pn	05 37 40.2	-1.4
SMQ				SN	Sn	05 39 25.7	-8.7
SMQ				Trac		05 40 34.7	
	comp=Z,4.3nm,0.3s						
FCC	Fort Churchill	10.16	276	PN	Pn	05 37 39.2	-3.2
FCC				SN	Sn	05 39 24.8	-11
FCC				Trac		05 40 45.2	
	comp=Z,385nm,2.6s						
ILON	Igloolik, Nuna	10.61	346	PN	Pn	05 37 47.7	-0.7
ICQ	Pointe Anglais	10.62	154	PN	Pn	05 37 46.2	-2.5
ICQ				SN	Sn	05 39 38.0	-9.1
ICQ				Trac		05 41 17.1	
	comp=Z,1μm,4.2s						
BACQ	Baie-Comeau	10.65	157	PN	Pn	05 37 47.8	-1.3
BACQ				SN	Sn	05 39 39.9	-7.9
CNQ	Baie Comeau	10.66	157	PN	Pn	05 37 47.5	-1.7
CNQ				SN	Sn	05 39 39.7	-8.3
CNQ				Trac		05 41 02.2	
	comp=Z,4.3nm,0.4s						
KAPO	Kapuskasing	10.93	209	PN	Pn	05 37 53.5	+0.6
KAPO				Trac		05 41 16.1	
	comp=Z,147nm,2.0s						
NATG	Natashquan Que	11.21	139	PN	Pn	05 37 54.7	-2.0
NATG				SN	Sn	05 39 53.3	-8.1
NATG				Trac		05 41 05.7	
	comp=Z,54nm,0.7s						
NATG				LG	Lg	05 41 07.3	
VLDQ	Val d'Or	11.34	190	PN	Pn	05 37 54.3	-4.2
VLDQ				SN	Sn	05 39 52.8	-12
VLDQ				Trac		05 40 30.9	
	comp=Z,343nm,3.0s						
VLDQ				LG	Lg	05 41 09.8	
CLRN	Clyde River	11.49	10	PN	Pn	05 37 59.0	-1.5
CLRN				SN	Sn	05 39 56.0	-12
CLRN				LG	Lg	05 41 10.2	
CLRN				Trac		05 41 12.9	
	comp=Z,138nm,1.5s						

*IDC **05** 05:52:59.9±1.0, 30°.46N×142°.22E, h0km, mb3.6/6, mbtmp3.6/7, ML2.8/1, Error ellipse: s-maj=39.6km s-min=22.3km az=91.0*

ISC 05 05:53:03.5±1.0, 30°.6N±0°.1×142°.1E±0°.2, h23km, n7, σ1s55/7, mb3.5/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.80	333	Pn	Pn	05 54 40.1	-1.8
	0.2nm,0.3s,baz=154,slow=11,SNR=7.5						
	1.4nm,0.3s						
MKAR	Makanchi Array	48.27	307	P	P	06 01 44.0	+1.2
	0.3nm,0.6s,baz=100,slow=7.5,SNR=2.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	50.75	189	P	P	06 02 00.9	-0.9
	0.5nm,0.5s,baz=6.9,slow=7.8,SNR=8.8						
	0.5nm,0.5s						
ASAR	Alice Springs	54.48	189	P	P	06 02 28.6	-0.7
	0.2nm,0.5s,baz=10.0,slow=6.2,SNR=4.9						
	0.2nm,0.5s						
ILAR	Eielson Array	54.75	30	P	P	06 02 30.5	-0.4
	0.4nm,0.7s,baz=265,slow=8.2,SNR=5.1						
	0.4nm,0.7s						
FINES	FINESS Array B	74.83	333	P	P	06 04 43.6	+1.9
	1.9nm,0.8s,baz=33,slow=8.3,SNR=3.8						
	1.9nm,0.8s						
NVAR	Mina Array Bea	78.46	52	P	P	06 05 03.3	+0.2
	0.2nm,0.5s,baz=280,slow=5.1,SNR=2.2						
	0.2nm,0.5s						

*SOME **05** 06:02:32.5, 42°.75N×81°.45E, h5km*

NNC 05 06:02:13.6±41.0, 40°.98N×76°.48E, h16km±147km, mb3.2, mpv3.0, 1C-1D, Error ellipse: s-maj=370.7km s-min=291.3km az=136.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.26	9	⇓P	Pg	06 02 59.8	+2.8
	21nm,0.4s						
KNDC				⇑S	Sb	06 03 23.4	+1.4
	28nm,0.6s						
UZB	Uzynbulak	2.88	40	eP	Pg	06 03 06.9	-1.9
	1.0nm,0.2s						
UZB				eS	Sn	06 03 31.5	-1.9
	1.4nm,0.1s						
UZB	Uzynbulak	2.88	40	P	Pg	06 03 06.9	-1.9
	0.7nm,0.5s						
UZB				S	Sn	06 03 31.5	-1.9
	1.4nm,0.4s						
KPKS	Kokpek	2.98	33	eP	Pg	06 03 12.0	+1.4
	1.8nm,0.1s						
KPKS				eS	Sb	06 03 40.5	-2.0
	4.1nm,0.0s						
KPKS	Kokpek	2.98	33	Pg	Pg	06 03 12.0	+1.4
	1.8nm,0.1s						
KPKS				Lg	Lg	06 03 40.5	
	4.6nm,0.5s						
BLB	Baldybastay	3.45	25	eP	Pg	06 03 20.2	+0.5
	2.0nm,0.0s						
BLB				eS	Sb	06 03 54.6	-1.5
	2.1nm,0.0s						
BLB	Baldybastay	3.45	25	Pg	Pg	06 03 20.2	+0.5
	1.6nm,0.3s						
BLB				Lg	Lg	06 03 54.6	
	2.0nm,0.4s						

*VAO **05** 06:17:21.1±0.4, 29°.25S×69°.93W, h10km, mb4.3*
*SJA **05** 06:17:23.7±0.9, 29°.25S×70°.35W, h124km±3km, ML4.4, MW4.3*
*NEIC **05** 06:17:24.3±2.4, 29°.25S±0°.05×70°.40W±0°.09, h126km±11km, mb4.4/5, ML4.6(GUC), Error ellipse: s-maj=11.6km s-min=7.3km az=105.0*
*GUC **05** 06:17:25.0±0.8, 29°.29S×70°.31W, h108km±3km, ML4.6*
*IDC **05** 06:17:26.2±0.6, 29°.18S×70°.03W, h121km±5km, mb4.0/9, mbtmp4.3/13, MS3.1/8, Error ellipse: s-maj=19.9km s-min=

GO04 IAML 06 18 05.5
comp=N,24μm,0.2s
GO04 Tololo Observa 0.99 205 *eP* **Pn 06 17 47.0 -0.3**
GO04 *eS* **Sn 06 18 04.4 +0.7**
CO05 La Serena 1.02 231 *eP* **Pn 06 17 47.5 +0.2**
CO05 La Serena 1.02 231 ⇑*iP* **Pn 06 17 47.2 -0.1**
CO05 *i* S **Sn 06 18 03.8 -0.1**
CO05 IAML 06 18 05.7
comp=E,11μm,0.1s
AROD Rodeo 1.16 140 *eP* **Pn 06 17 49.2 +0.1**
AC04 Llanos de Chal 1.25 328 Pn **Pn 06 17 50.0 +0.1**
AC04 Llanos de Chal 1.25 328 ⇓*iP* **Pn 06 17 50.0 +0.1**
AC04 *i* S **Sn 06 18 08.8 +0.4**
AC04 Llanos de Chal 1.25 328 *eP* **Pn 06 17 49.9 +0.1**
AC04 *eS* **Sn 06 18 09.7 +1.4**
AC04 IAML 06 18 13.6
comp=Z,2μm,0.4s
ACDV Cuesta del Vie 1.38 131 *eP* **Pn 06 17 52.0 +0.6**
ACDV *eS* **Sn 06 18 12.3 +1.3**
ACDV IAML 06 18 13.9
comp=Z,2μm,0.2s
CO03 El Pedregal 1.59 191 **Pn 06 17 53.8 0.0**
CO03 El Pedregal 1.59 191 ⇓*iP* **Pn 06 17 53.9 +0.1**
CO03 *i* S **Sn 06 18 15.9 +0.5**
CO03 IAML 06 18 17.6
comp=E,9μm,0.1s
CO03 El Pedregal 1.59 191 *eP* **Pn 06 17 53.8 0.0**
CO03 *eS* **Sn 06 18 16.2 +0.8**
CO03 IAML 06 18 18.1
comp=Z,3μm,0.2s
ACCO Cerro Coronel 1.70 140 *eP* **Pn 06 17 56.0 +0.6**
ACCO *eP* **Pn 06 17 56.3 +0.9**
CO06 Fray Jorge 1.80 219 **Pn 06 17 56.0 -0.3**
CO06 Fray Jorge 1.80 219 *eP* **Pn 06 17 55.9 -0.4**
CO06 *i* S **Sn 06 18 19.3 -0.4**
AC06 Mina Casimiro 1.91 359 **Pn 06 17 57.4 -0.3**
AC06 Mina Casimiro 1.91 359 ⇓*iP* **Pn 06 17 57.4 -0.3**
AC06 *i* S **Sn 06 18 20.5 -1.7**
AC06 IAML 06 18 23.6
comp=N,3μm,0.5s
VCA Vinchina 1.93 74 *eP* **Pn 06 17 58.0 0.0**
VCA *eS* **Sn 06 18 24.1 +1.2**
VCA IAML 06 18 26.1
comp=Z,4μm,0.3s
CO02 Combarbal 2.01 197 Pn **Pn 06 17 58.9 0.0**
CO02 Combarbal 2.01 197 ⇓*iP* **Pn 06 17 58.7 -0.2**
CO02 *i* S **Sn 06 18 23.7 -0.9**
CO02 Combarbal 2.01 197 *eP* **Pn 06 17 58.0 -1.0**
CO02 *eP* **Pn 06 17 58.8 -0.2**
CO02 *eS* **Sn 06 18 24.7 +0.1**
CO02 IAML 06 18 26.0
comp=Z,4μm,0.7s
RTLL Cerro Villicun 2.60 142 *eP* **Pn 06 18 06.6 +0.2**
RTLL *eS* **Sn 06 18 37.6 -0.3**
AC02 Maricunga 2.65 24 **Pn 06 18 07.4 -0.2**
AC02 Maricunga 2.65 24 ⇓*iP* **Pn 06 18 07.4 -0.2**
AC02 *eS* **Sn 06 18 38.9 -0.9**
AC02 IAML 06 18 41.5
comp=E,2μm,0.5s
AC02 Maricunga 2.65 24 *eP* **Pn 06 18 07.0 -0.6**
AC02 *eS* Sn 06 18 27.7 -12
AC02 IAML 06 18 41.2
comp=Z,1μm,0.5s
RTLS Leoncito 2.67 161 *eP* **Pn 06 18 08.0 +0.5**
RTLS *eS* **Sn 06 18 40.1 +0.2**
RTLS IAML 06 18 42.3
comp=Z,621nm,0.2s
ZON Zonda 2.67 148 **Pn 06 18 07.4 0.0**
ZON Zonda 2.67 148 *eP* **Pn 06 18 07.0 -0.4**
ZON *eS* **Sn 06 18 39.7 +0.1**
ZON IAML 06 18 44.2
comp=Z,591nm,0.3s
TINO Tinogasta 2.70 64 *eP* **Pn 06 18 07.8 -0.1**
TINO *eP* **Pn 06 18 08.0 +0.1**
TINO *eS* **Sn 06 18 35.2 -5.3**
ACLC CERRO LA CRUZ 2.95 94 *eP* **Pn 06 18 10.3 -0.8**
ACLC *eS* **Sn 06 18 46.5 +0.3**
ACLC IAML 06 18 47.2
comp=Z,1μm,0.6s
RTCV Cerro Valdivia 3.00 150 *eP* **Pn 06 18 12.0 +0.3**
RTCV *eP* **Pn 06 18 12.2 +0.6**
RTCV *eP* **Pn 06 18 12.3 +0.6**
RTCV *eS* **Sn 06 18 48.2 +0.9**
AC01 Pan de Azucar 3.12 355 Pn **Pn 06 18 12.1 -1.2**
AC01 Pan de Azucar 3.12 355 ⇓*iP* **Pn 06 18 12.2 -1.2**
AC01 *eS* Sn 06 18 40.6 -10
AC01 IAML 06 18 56.0
comp=E,2μm,0.9s
AC01 Pan de Azucar 3.12 355 *eP* **Pn 06 18 12.0 -1.3**
AC01 *eP* **Pn 06 18 12.2 -1.2**
AC01 *eS* Sn 06 18 35.2 -15
AC01 IAML 06 18 42.3
comp=Z,902nm,0.6s
AC01 *eS* **Sn 06 18 48.9 -1.4**
VA06 Catapilco 3.38 194 **Pn 06 18 15.7 -1.0**
VA06 Catapilco 3.38 194 ⇓*iP* **Pn 06 18 15.8 -0.8**
VA06 *i* S **Sn 06 18 53.9 -2.3**
VA06 IAML 06 18 55.8
comp=N,2μm,0.4s
APLL PUNTA DE LOS L 3.48 110 *eP* **Pn 06 18 17.0 -1.0**
VA03 San Esteban 3.48 183 **Pn 06 18 17.7 -0.4**
VA03 San Esteban 3.48 183 ⇓*iP* **Pn 06 18 17.9 -0.2**
VA03 *eS* **Sn 06 18 59.2 +0.4**
VA03 IAML 06 19 00.9
comp=N,2μm,0.7s
VA03 San Esteban 3.48 183 *eP* **Pn 06 18 17.9 -0.2**
VA03 *eS* **Sn 06 19 00.2 +1.4**
VA03 IAML 06 19 04.6
comp=Z,864nm,0.6s
ASAL Salagasta 3.54 159 *eP* **Pn 06 18 19.0 +0.1**
ASAL *eS* **Sn 06 19 01.4 +1.2**
ROCH El Roble 3.73 189 *eP* **Pn 06 18 20.1 -1.4**
ROCH *eP* **Pn 06 18 20.1 -1.4**
ROCH *i* S **Sn 06 19 03.0 -1.9**
ROCH *eS* **Sn 06 19 05.0 0.0**
ROCH IAML 06 19 11.2
comp=E,759nm,0.5s
ROC1 El Roble 3.74 189 **Pn 06 18 20.1 -1.6**
ROC1 El Roble 3.74 189 *eP* **Pn 06 18 20.0 -1.6**
ROC1 *eS* **Sn 06 19 04.8 -0.3**
ARCO CERRO ARCO 3.75 162 *eP* **Pn 06 18 22.0 +0.3**
ARCO IAML 06 19 11.4
comp=Z,328nm,0.2s
PEL Peldehue 3.87 185 Pn **Pn 06 18 22.4 -0.8**
PEL Peldehue 3.87 185 *eP* **Pn 06 18 23.0 -0.2**
VA01 Torpederas 3.91 197 Pn **Pn 06 18 21.4 -2.2**
VA01 Torpederas 3.91 197 *eP* **Pn 06 18 21.3 -2.3**
MT02 Curacav 4.03 190 Pn **Pn 06 18 23.7 -1.6**
MT02 Curacav 4.03 190 *eP* **Pn 06 18 23.8 -1.5**
MT02 *i* S **Sn 06 19 08.4 -3.4**
CYA Choya 4.05 79 *eP* **Pn 06 18 24.1 -1.6**
CYA IAML 06 19 11.2
comp=Z,295nm,0.5s
MT05 Renca 4.12 185 **Pn 06 18 25.7 -0.9**
MT05 Renca 4.12 185 *eS* **Sn 06 19 13.7 -0.2**
MT05 *eS* **Sn 06 19 13.7 -0.2**
MT05 IAML 06 19 22.2
comp=Z,459nm,1.1s
GO02 Mina Guanaco 4.15 9 Pn **Pn 06 18 25.7 -1.6**
GO02 Mina Guanaco 4.15 9 ⇓*iP* **Pn 06 18 25.7 -1.6**
MT03 Universidad Ad 4.21 182 **Pn 06 18 27.1 -0.7**
VA05 Santo Domingo 4.51 194 *eP* **Pn 06 18 29.4 -2.3**
VA05 *i* S **Sn 06 19 19.1 -4.0**
MT09 Talagante 4.52 187 **Pn 06 18 30.1 -1.9**
PB14 IPOC Station P 4.63 359 Pn **Pn 06 18 31.1 -2.7**
BO01 Tunca 5.14 187 *eS* **Sn 06 19 34.8 -3.7**
BO01 *eS* **Sn 06 19 34.8 -3.7**
BO01 IAML 06 20 01.2
comp=Z,121nm,1.2s
BO02 Sierra Bellavi 5.51 184 Pn **Pn 06 18 43.4 -1.9**
LVC Limon Verde 6.76 11 P **Pn 06 18 59.5 -3.0**
comp=Z,15nm,0.3s,baz=164,slow=8.5,SNR=51
LVC S **Sn 06 20 13.5 -4.8**
comp=Z,39nm,0.5s,baz=299,slow=22,SNR=1.4
LVC LR LR 06 22 24.1
comp=Z,27nm,18.2s,baz=176,slow=45
LVC Limon Verde 6.76 11 *eP* **Pn 06 18 59.4 -3.0**
H03N1 Juan Fernandez 8.44 238 T T 06 26 54.0
baz=58,SNR=276
H03N2 Juan Fernandez 8.45 238 T T 06 27 29.5
baz=58,slow=74,SNR=277
H03N3 Juan Fernandez 8.45 238 T T 06 27 28.1
baz=58,slow=74,SNR=224
GO06 Curarrehue 10.33 185 Pn **Pn 06 19 46.2 -4.2**
PB16 IPOC Station P 10.92 4 Pn **Pn 06 19 55.1 -3.8**
TRQA Tornquist 11.18 144 Pn **Pn 06 19 58.6 -3.2**
PLCA Paso Flores 11.43 181 P **Pn 06 20 03.5 -1.8**
comp=Z,4.1nm,0.6s,baz=353,slow=11,SNR=25
PLCA LR LR 06 24 19.9
comp=Z,45nm,20.0s,baz=342,slow=36
PLCA Paso Flores 11.43 181 **Pn 06 20 01.8 -3.4**
PLCA Paso Flores 11.43 181 *eP* **Pn 06 20 03.2 -2.0**
CPUP Villa Florida 11.87 79 P Pn 06 20 06.2 -4.8
comp=Z,3.1nm,0.6s,baz=257,slow=11,SNR=6.5
CPUP LR LR 06 25 23.6
comp=Z,50nm,19.2s,baz=251,slow=41
CPUP Villa Florida 11.87 79 Pn 06 20 05.7 -5.3
ITQB Itaqui 11.94 95 Pn **Pn 06 20 08.5 -3.6**
ITQB Itaqui 11.94 95 *eP* **Pn 06 20 08.0 -4.0**
AZCA Azaras, Argent 12.65 88 *eP* **Pn 06 20 17.0 -4.2**
LPAZ La Paz 13.08 9 P **Pn 06 20 25.3 -2.3**
comp=Z,18nm,0.7s,baz=168,slow=5.1,SNR=78
LPAZ LR LR 06 26 23.6
comp=Z,21nm,21.4s,baz=147,slow=42
LPAZ La Paz 13.08 9 Pn **Pn 06 20 24.0 -3.5**
LPAZ La Paz 13.08 9 *eP* **Pn 06 20 25.3 -2.3**
RODS Rosario do Sul 13.18 98 *eP* **Pn 06 20 24.6 -3.5**
UNIS Unistalda (Bra 13.33 93 *eP* **Pn 06 20 26.6 -3.6**
MURT Porto Murtinho 13.75 59 *eP* **Pn 06 20 31.6 -4.0**
PLTB Pedras Altas 14.62 104 Pn **Pn 06 20 44.8 -1.9**
PLTB Pedras Altas 14.62 104 *eP* **Pn 06 20 43.8 -2.9**
CPSB Cacapava Do Su 14.70 99 *eP* **Pn 06 20 43.8 -3.9**
ANTJ Antonio Joao (14.80 64 *eP* **Pn 06 20 46.1 -2.9**
BBSD Serra de San D 14.97 39 *eP* **Pn 06 20 48.3 -2.9**
ALGR Alto Alegre (B 15.14 92 *eP* **Pn 06 20 49.5 -3.8**
MCR1 Marechal Candi 15.30 76 *eP* **Pn 06 20 52.5 -2.9**
FRBT Francisco Belt 15.65 82 *eP* **Pn 06 20 57.1 -2.5**
SIV San Ignacio 15.73 35 P **Pn 06 20 57.4 -3.3**
comp=Z,6nm,0.4s,baz=240,slow=5.8,SNR=9.2
AQDB Aquidauana 15.89 60 **Pn 06 20 59.5 -3.1**
AQDB IAmb IAmb 06 21 01.7
comp=Z,15nm,1.1s
AQDB Aquidauana 15.89 60 *eP* **Pn 06 20 59.2 -3.4**
ITAB Concordia 16.16 87 *eP* **Pn 06 21 04.0 -1.9**
COYC Coyhaique 16.33 184 P **Pn 06 21 06.9 -0.9**
COYC IAmb IAmb 06 21 08.8
comp=Z,22nm,0.9s
PTGB Pitanga 16.89 79 *eP* **Pn 06 21 13.1 -1.9**
CNLB Canela 16.99 95 *eP* **P 06 21 16.1 0.0**
TRCB Terra Rica 17.15 72 *eP* **Pn 06 21 19.1 +0.9**
PTLB Pontes e Lacer 17.20 39 *eP* **Pn 06 21 19.3 +0.7**
TER01 Tubaro-SC 18.57 93 *eP* **P 06 21 33.8 +0.3**
PCMB Pacaembu 18.82 70 *eP* **P 06 21 36.8 +0.6**
FRTB Fartura 19.51 77 *eP* **P 06 21 44.5 +0.7**
PET01 Itanhaem-SP 21.15 82 *eP* **P 06 22 02.6 +1.2**
CZSB Cruzeiro do Su 21.55 354 *eP* **P 06 22 12.3 +6.6**
RCLB Rio Claro- Sao 21.60 77 *eP* **P 06 22 07.1 +0.9**
PDRB Porto dos Gac 21.67 39 *eP* **P 06 22 09.2 +2.3**
MG05 Puerto Natales 22.44 184 P **P 06 22 15.7 +1.1**
MG05 IAmb IAmb 06 22 26.7
comp=Z,22nm,0.9s
CLDB Colider 22.79 39 *eP* **P 06 22 21.7 +3.3**
IPMB Ipameri, GO 23.12 66 *eP* **P 06 22 23.4 +1.7**
EFI East Falkland 24.18 161 P **P 06 22 30.8 0.0**
PMNB Patos De Minas 24.26 69 *eP* **P 06 22 36.4 +4.4**
BDFB Brasilia 24.62 61 P **P 06 22 33.3 -2.0**
comp=Z,2.1nm,0.7s,baz=241,slow=13,SNR=1.9
comp=Z,2.1nm,0.7s
BDFB Brasilia 24.62 61 *eP* **P 06 22 38.7 +3.3**
SNDB Serra Nova Dou 24.70 50 *eP* **P 06 22 39.2 +3.2**
USHA Ushuaia 25.57 177 P **P 06 22 42.5 -0.9**
comp=Z,41nm,0.8s,baz=280,slow=0.6,SNR=2.1
comp=Z,41nm,0.8s
NPGB Novo Progresso 26.23 35 *eP* **P 06 22 54.7 +4.9**
CAM01 Campos-RJ 26.86 81 *eP* **P 06 22 58.5 +3.1**
MACA Manacapuru-AM 27.54 21 *eP* **P 06 23 06.7 +5.2**
JANB Januaria 27.85 65 *eP* **P 06 23 08.5 +4.1**
RPN Rapa Nui 34.34 264 LR LR 06 35 37.5
comp=Z,52nm,18.6s,baz=350,slow=32
RUSC La Rusia 35.07 355 *eP* **P 06 24 09.3 +1.3**
RUSC *eS* S 06 24 34.6 -298
RUSC *i* 06 24 35.7
comp=Z,2.3nm,0.4s
HELC Santa Helena 35.62 351 *eP* **P 06 24 13.7 +1.1**
HELC *i* 06 24 54.3
comp=Z,1.9nm,0.6s
PMSA Palmer Station 35.73 175 LR LR 06 36 51.0
comp=Z,29nm,21.2s,baz=27,slow=32
PTBC PUERTO BERRIO, 35.83 353 *eP* **P 06 24 12.6 -1.5**
VNA3 Neumayer Olymp 53.21 159 P **P 06 26 31.7 +0.3**
VNA1 Neumayer--Stat 53.48 159 P **P 06 26 33.9 +0.6**
VNA2 Neumayer--Watz 53.83 159 P **P 06 26 36.1 +0.2**
baz=282,slow=8.0
SNAA Sanae 55.43 159 P **P 06 26 47.3 -0.2**
SNAA Sanae 55.43 159 P **P 06 26 47.0 -0.6**
comp=Z,5.9nm,0.5s,baz=280,slow=7.0,SNR=92
comp=Z,5.9nm,0.5s
TROLL Troll, Antarti 57.15 159 P **P 06 26 59.9 +0.1**
TXAR Lajitas Array 66.41 328 P **P 06 28 03.5 +1.1**
comp=Z,1.2nm,0.6s,baz=154,slow=8.8,SNR=20
TXAR pP **pP 06 28 31.4 -0.1**
comp=Z,0.9nm,0.9s,baz=148,slow=7.4,SNR=4.6
TXAR sP **sP 06 28 45.0 +0.8**
comp=Z,2.3nm,0.8s,baz=147,slow=8.4,SNR=12
comp=Z,1.2nm,0.6s
DBIC Dimbokro 72.29 72 P **P 06 28 37.5 -1.3**
comp=Z,3.0nm,0.8s,baz=180,slow=4.0,SNR=2.5
comp=Z,3.0nm,0.8s
MAW Mawson 77.28 163 P **P 06 29 07.2 +0.6**
comp=Z,3.1nm,0.9s,baz=231,slow=5.7,SNR=6.3
comp=Z,3.1nm,0.9s
PDAR Pinedale Array 80.26 332 P **P 06 29 23.9 +0.4**
comp=Z,0.8nm,0.5s,baz=134,slow=7.5,SNR=10
comp=Z,0.8nm,0.5s
BOSA Boshof 80.96 118 P **P 06 29 26.2 -1.4**
comp=Z,2.0nm,0.7s,baz=228,slow=3.0,SNR=5.3
comp=Z,2.0nm,0.7s
TORD Torodi Ar. Bea 81.21 70 P **P 06 29 27.8 -1.1**
comp=Z,0.8nm,0.7s,baz=280,slow=5.6,SNR=10.0
TORD pP **pP 06 29 59.9 0.0**
comp=Z,2.4nm,0.7s,baz=267,slow=5.2,SNR=3.5
comp=Z,0.8nm,0.7s
RPZ Rata Peaks 88.19 220 LR LR 06 59 02.8
comp=Z,77nm,20.7s,baz=103,slow=28
LSZ Lusaka 89.85 107 LR LR 07 08 14.0
comp=Z,29nm,18.6s,baz=168,slow=34
WRA Warramunga Arr 125.59 209 PKP **PKPdf 06 36 12.9 -0.9**
comp=Z,1.6nm,0.7s,baz=150,slow=1.7,SNR=18
H11S2 WAKE ISLAND Hyl 27.20 272 T T 08 55 57.1
baz=115,slow=75,SNR=5.1
H11S1 WAKE ISLAND Hyl 27.21 272 T T 08 56 03.4
baz=115,slow=75,SNR=5.5
H11S3 WAKE ISLAND Hyl 27.22 272 T T 08 56 01.8
baz=115,slow=75,SNR=4.6
KURBB Kurchatov Arra 148.36 39 PKPbc **PKPbc 06 36 57.8 -0.1**
comp=Z,1.8nm,0.5s,baz=301,slow=3.0,SNR=9.0
KURBB pPKPbc **pPKPbc 06 37 30.7 +0.5**
comp=Z,0.8nm,0.5s,baz=301,slow=3.3,SNR=1.8
ZALV Zalesovo Beam 149.43 29 PKPbc **PKPbc 06 37 00.2 -0.3**
comp=Z,5.5nm,0.5s,baz=301,slow=3.0,SNR=11
ZALV pPKPbc **pPKPbc 06 37 32.7 -0.1**
comp=Z,2.1nm,0.6s,baz=332,slow=2.1,SNR=2.4
MKAR Makanchi Array 152.44 43 PKPbc **PKPbc 06 37 07.1 -0.7**
comp=Z,1.3nm,0.7s,baz=319,slow=1.9,SNR=9.4

*INMG **05** 06:18:47.1±1.0,35°.23N×4°.10W,h64km±9km,ML1.9,Error ellipse: s-maj=4.9km s-min=4.3km az=65.0*

CNRM 05 06:18:46.9,35°.23N×4°.06W,h23km,ml2.2,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.10**	**99**	P	Pb	06 18 45.4	-6.0
PALE				S	Sb	06 18 48.5	-5.9
AKLM	**AKL**	**0.74**	**167**	P	Pb	06 18 59.2	-2.0
AKLM	**AKL**	**0.74**	**167**	P	Pb	06 18 59.0	-2.2
AKLM				S	Sb	06 19 09.1	-1.7
CHEFC	**Chefchaouen**	**1.06**	**264**	P	Pn	06 19 06.1	-0.2
CHEFC	**Chefchaouen**	**1.06**	**264**	P	Pn	06 19 04.9	-1.4
CHEFC				S	Sn	06 19 20.6	+0.3
TAF	**Taforalt**	**1.41**	**107**	P	Pn	06 19 06.7	-4.6
TAF				S	Sn	06 19 24.8	-4.4
JBK	**JBK**	**1.52**	**126**	P	Pn	06 19 12.0	-0.9
JBK	**JBK**	**1.52**	**126**	P	Pn	06 19 09.8	-3.0
JBK				S	Sn	06 19 28.0	-4.0
LCRM	**LCR**	**1.68**	**203**	P	Pb	06 19 17.1	-0.1
LCRM	**LCR**	**1.68**	**203**	P	Pb	06 19 17.1	-0.1
MD31	**MD31**	**2.43**	**194**	P	Pn	06 19 24.5	-0.8
MD31				S	Sn	06 19 53.8	-0.5
MDT	**Midelt**	**2.46**	**191**	P	Pn	06 19 25.2	-0.4
MDT	**Midelt**	**2.46**	**191**	P	Pn	06 19 25.2	-0.4
MDT				S	Sn	06 19 53.8	-1.1
ZHG	**ZHG**	**2.78**	**231**	P	Pn	06 19 29.4	-0.7
ZHG				S	Sn	06 20 05.3	+2.4
PVAQ	**Vaqueiros**	**3.66**	**307**	*eP*	Pn	06 19 39.0	-3.1
PVAQ				*eS*	Sn	06 20 21.2	-3.4
PVAQ				A	A	06 20 24.1	
2.9nm,0.6s							
PVAQ	**Vaqueiros**	**3.66**	**307**	P	Pn	06 19 38.5	-3.7
PVAQ				S	Sn	06 20 19.3	-5.3
PBAR	**Barrancos**	**3.79**	**322**	*eS*	Sn	06 20 24.1	-3.6
PBAR				A	A	06 20 34.5	
1.6nm,0.5s							
PCVE	**Castro Verde**	**4.00**	**308**	*eP*	Pn	06 19 45.5	-1.3
PCVE				*eS*	Sn	06 20 29.6	-3.4
PCVE				A	A	06 20 36.4	
2.1nm,0.7s							
MESJ	**Messejana**	**4.24**	**309**	*eS*	Sn	06 20 35.2	-3.6
MESJ				A	A	06 20 42.4	
2.3nm,0.2s							
EVO	**Evora**	**4.57**	**317**	*eP*	Pn	06 19 52.1	-2.5
EVO				*eS*	Sn	06 20 43.5	-3.4
EVO				A	A	06 20 44.5	
1.8nm,0.5s							
PESTR	**Estremoz**	**4.60**	**323**	*eP*	Pn	06 19 53.4	-1.6
PNCL	**Nicolau / Gran**	**4.60**	**310**	*eP*	Pn	06 19 53.8	-1.2
PNCL				*eS*	Sn	06 20 44.1	-3.6
PMRV	**Marv??o**	**4.96**	**329**	*eP*	Pn	06 19 59.1	-0.8
PMTG	**Montargil**	**5.07**	**320**	*eP*	Pn	06 19 59.5	-2.0
OUK	**Oukaimeden**	**5.13**	**220**	P	Pn	06 20 01.5	-1.1
OUK				S	Sn	06 20 59.1	-2.1
PSBE	**So Bento**	**5.70**	**320**	*eP*	Pn	06 20 07.9	-2.2

*VIE **05** 06:27:02.9±0.1,47°.17N×11°.35E,h7km±1km,mb1.8/10, ml2.6/17,Error ellipse: s-maj=1.0km s-min=0.8km az=3.0 3 km N of Fulpmes felt 3-4 ems98 at Fulpmes / Tyrol*
*ROM **05** 06:27:03.2±0.1,47°.170N±0°.007×11°.406E±0°.009, h6km,ML2.3/14,Error ellipse: s-maj=0.8km s-min=0.6km az=333.0*
*PRU **05** 06:27:04.9±0.0,47°.26N×11°.39E,h0km,Fulpmes*
*BGR **05** 06:27:06.0±0.3,47°.20N×11°.36E,h10km,ML2.3/9,Error ellipse: s-maj=7.8km s-min=3.3km az=162.0*

ISC 05 06:27:03.1±0.8,47°.17N±0°.02×11°.38E±0°.01,h9km±6km, n59,σ1§03/97,2C-4D,Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.13**	**294**	*i* Pg	**Pg**	**06 27 05.8**	**-0.3**
162nm,0.1s,SNR=189							
SQTA				*eS*g	**Sg**	**06 27 07.4**	**-0.8**
793nm,0.2s							
WTTA	**Wattenberg**	**0.20**	**62**	*i* Pg	**Pg**	**06 27 07.5**	**+0.2**
95nm,0.1s,SNR=183							
WTTA				*eS*g	**Sg**	**06 27 10.5**	**+0.3**
195nm,0.1s							
WTTA	**Wattenberg**	**0.20**	**62**	*eP*g	**Pg**	**06 27 07.5**	**+0.2**
SNR=138							
WTTA				*eS*g	**Sg**	**06 27 10.9**	**+0.7**
SNR=6.7							
WTTA	**Wattenberg**	**0.20**	**62**	⇑P	**Pg**	**06 27 07.5**	**+0.2**
WTTA				S	**Sg**	**06 27 10.4**	**+0.3**
WTTA				AML	AML		
comp=E,879μm,0.6s							
WTTA				AML	AML		
comp=N,1260μm,0.2s							
WATA	**Walderalm**	**0.21**	**39**	*i* Pg	**Pg**	**06 27 07.7**	**+0.2**
comp=N,75nm,0.1s,SNR=82							
WATA				*eS*g	**Sg**	**06 27 10.7**	**+0.1**
comp=N,84nm,0.1s							
ROSI	**Rosskopf**	**0.24**	**175**	⇓P	**Pg**	**06 27 08.6**	**+0.5**
ROSI				S	**Sg**	**06 27 12.6**	**+1.2**
ROSI				AML	AML		
comp=N,674μm,0.2s							
ROSI				AML	AML		
comp=E,479μm,0.2s							
MOTA	**Moosalm**	**0.26**	**313**	*i* Pg	**Pg**	**06 27 08.0**	**-0.3**
comp=E,7.9nm,0.1s,SNR=42							
MOTA				*eS*g	**Sg**	**06 27 11.6**	**-0.3**
comp=E,73nm,0.1s							
FETA	**Feichten**	**0.47**	**252**	*eP*g	**Pg**	**06 27 12.1**	**-0.2**
comp=E,24nm,0.2s,SNR=55							
FETA				*eS*g	**Sg**	**06 27 17.8**	**-0.6**
comp=E,18nm,0.1s							
RETA	**Reutte**	**0.53**	**307**	*eP*g	**Pg**	**06 27 12.4**	**-1.0**
comp=E,1.2nm,0.1s,SNR=4.1							
RETA				*eS*g	**Sg**	**06 27 19.4**	**-0.9**
comp=E,12nm,0.1s							
RISI	**Rein**	**0.53**	**115**	P	**Pb**	**06 27 13.8**	**-0.8**
RISI				S	**Sb**	**06 27 21.3**	**-1.2**
RISI				AML	AML		
comp=E,308μm,0.7s							
RISI				AML	AML		
comp=N,810μm,0.4s							
RISI				AML	AML		
comp=N,809μm,0.4s							
RISI				AML	AML		
comp=N,809μm,1.6s							
BRES	**Bressanone**	**0.53**	**152**	⇓P	**Pb**	**06 27 14.2**	**-0.6**
BRES				S	**Sb**	**06 27 21.5**	**-1.1**
APPI	**Appiano**	**0.70**	**189**	P	**Pb**	**06 27 17.1**	**-0.4**
APPI				S	**Sb**	**06 27 27.5**	**+0.2**
APPI				AML	AML		
comp=E,101μm,1.3s							
APPI				AML	AML		
comp=N,92μm,0.6s							
APPI				AML	AML		
comp=E,101μm,1.3s							
APPI				AML	AML		
comp=N,92μm,0.6s							
KOSI	**Kohlern**	**0.71**	**180**	⇓P	**Pb**	**06 27 17.3**	**-0.4**
KOSI				S	**Sb**	**06 27 28.3**	**+0.7**
KOSI				AML	AML		
comp=N,77μm,0.6s							
KOSI				AML	AML		
comp=E,78μm,1.3s							
KOSI				AML	AML		
comp=N,77μm,1.4s							
MOSI	**Grossmontoni**	**0.79**	**226**	⇓P	**Pb**	**06 27 19.0**	**-0.3**
MOSI				S	**Sb**	**06 27 30.3**	**+0.1**
MOSI				AML	AML		
comp=E,308μm,1.3s							
MOSI				AML	AML		
comp=N,354μm,0.4s							
MOSI				AML	AML		
comp=E,308μm,0.7s							
ABTA	**Abfaltersbach**	**0.88**	**118**	*i* Pg	**Pb**	**06 27 20.3**	**-0.4**
comp=E,4.3nm,0.1s,SNR=4.8							
ABTA				*eS*g	**Sb**	**06 27 31.7**	**-0.9**
comp=E,5.5nm,0.1s,SNR=6.1							
AGOR	**Agordo**	**1.00**	**152**	⇑P	**Pn**	**06 27 23.3**	**-0.1**
AGOR				S	**Sn**	**06 27 37.8**	**+0.1**
AGOR				AML	AML		
comp=E,111μm,1.3s							
AGOR				AML	AML		
comp=N,152μm,0.4s							
AGOR				AML	AML		
comp=E,111μm,1.3s							
UBR	**Ueberruh**	**1.00**	**301**	*eP*g	**Pn**	**06 27 25.4**	**+1.9**
SNR=11							
UBR				*eS*g	**Sn**	**06 27 36.9**	**-0.9**
SNR=3.0							
DAVA	**Damuels**	**1.03**	**277**	*eP*g	**Pg**	**06 27 22.1**	**-0.8**
comp=E,1.2nm,0.1s							
DAVA				*eS*g	**Sb**	**06 27 37.3**	**+0.4**
comp=E,8.9nm,0.2s,SNR=9.3							
DAVOX	**Davos/Dischmat**	**1.10**	**250**	AML	AML		
comp=N,58μm,0.4s							
DAVOX				AML	AML		
comp=E,88μm,1.1s							
RJOB	**Jochberg**	**1.12**	**59**	*eP*g	**Pn**	**06 27 27.3**	**+2.2**
SNR=3.7							
GAGG	**Gaggia**	**1.12**	**195**	P	**Pn**	**06 27 25.1**	**-0.1**
GAGG				S	**Sn**	**06 27 40.0**	**-0.9**
CIMO	**Cimolais**	**1.13**	**139**	P	**Pn**	**06 27 24.7**	**-0.4**
CIMO				S	**Sn**	**06 27 40.3**	**-0.5**
CIMO				AML	AML		
comp=E,31μm,1.5s							
CIMO				AML	AML		
comp=N,38μm,0.3s							

CIMO				AML	AML		
	comp=E,31μm,1.5s						
CIMO				AML	AML		
	comp=N,38μm,0.3s						
CIMO				AML	AML		
	comp=E,31μm,0.5s						
CTI	**Castel Tesino**	**1.14**	**170**	P	**Pn**	**06 27 25.0**	**-0.3**
CTI				S	**Sn**	**06 27 41.0**	**-0.1**
CTI				AML	AML		
	comp=E,230μm,0.3s						
CTI				AML	AML		
	comp=N,278μm,0.2s						
CTI				AML	AML		
	comp=N,278μm,0.2s						
CTI				AML	AML		
	comp=E,231μm,0.3s						
LUSI	**Trento, Gardas**	**1.25**	**194**	P	**Pn**	**06 27 26.6**	**-0.2**
LUSI				AML	AML		
	comp=E,102μm,0.6s						
LUSI				AML	AML		
	comp=N,148μm,0.1s						
CLUD	**Cludinico**	**1.25**	**124**	S	**Sn**	**06 27 44.0**	**+0.1**
ZOU	**Zoufplan**	**1.25**	**119**	P	**Pn**	**06 27 26.7**	**-0.3**
ZOU				AML	AML		
	comp=E,69μm,0.8s						
ZOU				AML	AML		
	comp=N,68μm,0.8s						
VARN	**Col Varnada, M**	**1.28**	**157**	P	**Pn**	**06 27 27.1**	**-0.2**
VARN				AML	AML		
	comp=E,221μm,0.3s						
VARN				AML	AML		
	comp=N,130μm,0.4s						
VARN				AML	AML		
	comp=N,130μm,1.6s						
DOSS	**Dosso del Somm**	**1.29**	**186**	P	**Pb**	**06 27 27.9**	**+0.2**
DOSS				S	**Sn**	**06 27 45.3**	**+0.2**
DOSS				AML	AML		
	comp=E,228μm,1.2s						
DOSS				AML	AML		
	comp=N,186μm,0.3s						
CGRP	**Cima Grappa**	**1.32**	**167**	AML	AML		
	comp=E,91μm,1.6s						
CGRP				AML	AML		
	comp=E,91μm,0.4s						
CGRP				AML	AML		
	comp=N,100μm,1.0s						
CGRP				AML	AML		
	comp=E,91μm,0.4s						
CGRP				AML	AML		
	comp=N,100μm,1.0s						
CGRP				AML	AML		
	comp=N,100μm,1.0s						
KBA	**Koelnbreinsper**	**1.35**	**93**	*e*Pg	**Pb**	**06 27 28.3**	**-0.3**
	comp=N,11nm,0.1s,SNR=4.5						
PLONS	**Plons/SG**	**1.37**	**266**	*e*Pg	**Pg**	**06 27 30.9**	**+1.5**
	SNR=3.8						
PLONS				*e*Sg	**Sn**	**06 27 51.5**	**+4.6**
	SNR=3.9						
ROVR	**Rover Verones**	**1.54**	**188**	P	**Pb**	**06 27 31.4**	**-0.4**
ROVR				AML	AML		
	comp=E,40μm,0.9s						
ROVR				AML	AML		
	comp=N,64μm,0.2s						
ROVR				AML	AML		
	comp=E,40μm,0.9s						
ROVR				AML	AML		
	comp=E,40μm,1.1s						
ACOM	**Acomizza, Ital**	**1.59**	**112**	AML	AML		
	comp=E,74μm,1.1s						
ACOM				AML	AML		
	comp=E,74μm,1.1s						
ACOM				AML	AML		
	comp=N,80μm,1.5s						
ACOM				AML	AML		
	comp=N,80μm,0.5s						
BIOA	**Bad Ischl, Aus**	**1.62**	**70**	Pg	**Pg**	**06 27 34.5**	**+0.3**
	comp=N,4.5nm,0.2s						
BIOA				Sg	**Sg**	**06 27 58.2**	**+3.0**
	comp=N,7.0nm,0.2s						
MYKA	**Terra Mystica**	**1.64**	**108**	*e*Pg	**Pg**	**06 27 33.8**	**-0.9**
	comp=N,2.5nm,0.2s						
CADS	**Cadrg**	**1.88**	**119**	*e*Sn	**Sg**	**06 28 06.0**	**+2.6**
GORS	**Gorjuse**	**1.99**	**114**	*e*Pn	**Pg**	**06 27 40.9**	**-0.4**
GORS				*i* Sn	**Sg**	**06 28 09.2**	**+2.2**
FUSIO	**Fusio**	**2.00**	**250**	S	**Sg**	**06 28 07.0**	**-0.3**
SLE	**Schleitheim**	**2.05**	**288**	*e*Sg	**Sg**	**06 28 08.1**	**-0.8**
	SNR=9.9						
VOJS	**Vojsko**	**2.07**	**122**	*e*Sn	**Sg**	**06 28 10.5**	**+0.9**
MOA	**Molln**	**2.07**	**70**	Sg	**Sg**	**06 28 10.9**	**+1.2**
	comp=N,3.2nm,0.2s						
MOA	**Molln**	**2.07**	**70**	*e*Pn	**Pg**	**06 27 42.0**	**-0.8**
	SNR=1.2						
MOA				*e*Sg	**Sg**	**06 28 10.7**	**+1.0**
	SNR=2.5						
WET	**Wettzell**	**2.22**	**26**	*e*Pn	**Pn**	**06 27 41.0**	**+0.9**
	SNR=2.6						
WET				*e*Sn	**Sn**	**06 28 08.1**	**+0.4**
	SNR=4.6						
WET				*e*Sg	**Sg**	**06 28 14.0**	**-0.3**
	SNR=0.9						
SULZ	**Cheisacher**	**2.25**	**280**	*e*Sg	**Sg**	**06 28 15.4**	**0.0**
	SNR=1.9						
JAVS	**Javornik**	**2.25**	**124**	*e*Pn	**Pg**	**06 27 44.6**	**-1.7**
JAVS				*e*Sn	**Sg**	**06 28 14.0**	**-1.4**
GEC2	**GERESS Array S**	**2.29**	**42**	*e*Sn	**Sn**	**06 28 10.9**	**+1.3**
	SNR=3.0						
GEC2				*e*Sg	**Sg**	**06 28 15.8**	**-0.9**
	SNR=1.4						
BFO	**Black Forest**	**2.36**	**301**	*e*Pn	**Pb**	**06 27 45.0**	**-0.9**
	SNR=1.2						
BFO				*e*Pg	**Pg**	**06 27 50.0**	**+1.6**
	SNR=1.9						
BFO				*e*Sn	**Sn**	**06 28 10.2**	**-1.1**
	SNR=3.2						
BFO				*e*Sg	**Sg**	**06 28 19.2**	**+0.2**
	SNR=1.8						
KHC	**Kasperske Hory**	**2.45**	**36**	*e*PG	**Pb**	**06 27 47.7**	**+0.2**
KHC				*e*SG	**Sg**	**06 28 20.6**	**-1.4**
	comp=N,5.1nm,0.3s						
BALST	**Balsthal**	**2.52**	**275**	*e*Sg	**Sg**	**06 28 23.4**	**-0.5**
	SNR=2.5						
CKRC	**Cesky Krumlov**	**2.57**	**49**	*e*SG	**Sg**	**06 28 23.8**	**-1.9**
	comp=N,5.0nm,0.4s						
ROTZ	**Rotzenmuhle**	**2.66**	**12**	*e*Pg	**Pg**	**06 27 53.6**	**-0.5**
	SNR=1.5						
ROTZ				*e*Sn	**Sn**	**06 28 17.8**	**-0.7**
	SNR=4.1						
ROTZ				*e*Sg	**Sg**	**06 28 27.1**	**-1.4**
	SNR=1.3						
MANZ	**Manzenberg**	**2.86**	**9**	*e*Sn	**Sn**	**06 28 22.7**	**-0.9**
	SNR=2.1						
WERN	**Wernitzgruen**	**3.19**	**12**	*e*Sn	**Sn**	**06 28 31.4**	**-0.3**
	SNR=1.6						
GUNZ	**Gunzen**	**3.26**	**11**	*e*Sn	**Sn**	**06 28 32.6**	**-0.8**
	SNR=1.5						
GUNZ				*e*Sg	**Sg**	**06 28 48.0**	**+0.3**
	SNR=2.2						
TANN	**Tannenbergstha**	**3.33**	**12**	*e*Sn	**Sn**	**06 28 35.7**	**+0.6**
	SNR=2.3						
TANN				*e*Sg	**Sg**	**06 28 49.6**	**-0.3**
	SNR=1.5						
WERD	**Werda**	**3.34**	**10**	*e*Sn	**Sn**	**06 28 35.5**	**+0.2**
	SNR=1.6						
WERD				*e*Sg	**Sg**	**06 28 50.3**	**0.0**
	SNR=1.9						
PLN	**Plauen**	**3.36**	**9**	*e*Sg	**Sg**	**06 28 50.6**	**-0.3**
	SNR=1.5						
MOX	**Moxa**	**3.48**	**2**	*e*Sn	**Sn**	**06 28 38.0**	**-0.8**
	SNR=2.5						
TNS	**Taunus Mts**	**3.62**	**329**	*e*Pn	**Pn**	**06 28 00.6**	**+1.2**
	SNR=2.0						
TNS				*e*Sn	**Sn**	**06 28 42.3**	**0.0**
	SNR=1.2						
TNS				*e*Sg	**Sg**	**06 28 59.2**	**-0.2**
	SNR=1.5						

IDC 05 06:34:52.9±2.4, 54°.17N×86°.28E, h0km, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=18.9km s-min=11.7km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**256**	I		06 40 50.0	
	baz=75,slow=330,SNR=1.8						
ZALV	**Zalesovo Beam**	**0.89**	**256**	Pg	Pg	06 35 08.7	-1.2
	1.6nm,0.3s,baz=74,slow=17,SNR=11						
ZALV				Lg	Lg	06 35 22.3	
	2.7nm,0.3s,baz=77,slow=29,SNR=15						
ZALV				Rg	Rg	06 35 27.1	
	43nm,1.1s,baz=78,slow=34,SNR=8.1						
KURBB	**Kurchatov Arra**	**5.92**	**236**	Pn	Pn	06 36 22.9	+1.1
	0.1nm,0.3s,baz=53,slow=13,SNR=13						
KURBB				Lg	Lg	06 38 02.9	
	0.1nm,0.3s,baz=48,slow=32,SNR=1.9						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	06 36 48.5	+0.8
	0.1nm,0.3s,baz=24,slow=14,SNR=6.3						
MKAR				Lg	Lg	06 39 01.2	
	0.1nm,0.3s,baz=21,slow=28,SNR=3.7						
	0.3nm,0.4s						

*GCG **05** 06:35:42.8±2.0, 13°.55N×92°.96W, h42km±914km, MD3.5*
*MEX **05** 06:35:42.3±0.5, 13°.63N×93°.07W, h42km±259km, MD4.0*
ISC 05 06:35:39.6±2.6, 13°.70N±0°.10×92°.94W±0°.08, h17km±13km, n13, σ1°.41/25, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.36**	**29**	*e*P	**Pg**	**06 36 05.3**	**-0.6**
PATR	**El Naranjo**	**1.56**	**26**	*e*P	**Pb**	**06 36 07.8**	**-0.4**
PATR				*e*S	**Sb**	**06 36 28.1**	**+0.2**
CHUJ	**Union Juarez**	**1.60**	**30**	*e*P	**Pb**	**06 36 08.4**	**-0.5**
CHUJ				*e*S	**Sb**	**06 36 28.3**	**-0.6**
PAVE	**Pavencul**	**1.66**	**26**	*e*P	**Pb**	**06 36 09.2**	**-0.6**
PAVE				*e*S	**Sb**	**06 36 30.8**	**+0.3**
STG3	**Santiaguito 3,**	**1.66**	**53**	*e*P	**Pg**	**06 36 10.7**	**-1.0**
STG3				*e*S	**Sg**	**06 36 34.7**	**+1.4**
PCIG		**2.01**	**352**	*e*P	**Pn**	**06 36 13.2**	**+0.5**
PCIG				*i* S	**Sn**	**06 36 36.6**	**-0.8**
FUG	**Fuego 3**	**2.16**	**70**	*e*P	**Pb**	**06 36 17.5**	**-1.0**
FUG				*e*S	**Sb**	**06 36 44.7**	**-0.4**
PCG	**Pacaya**	**2.36**	**73**	*e*P	**Pb**	**06 36 21.0**	**-0.9**
PCG				*e*S	**Sb**	**06 36 50.7**	**-0.2**
NBG	**Las Nubes**	**2.66**	**70**	*e*P	**Pb**	**06 36 26.3**	**-0.8**
NBG				*e*S	**Sb**	**06 37 00.0**	**+0.5**
CCIG	**Comitan**	**2.68**	**17**	*e*P	**Pb**	**06 36 26.7**	**-0.6**
CCIG				*e*S	**Sb**	**06 36 58.1**	**-1.8**
TGIG		**3.06**	**357**	*e*P	**Pn**	**06 36 29.9**	**+2.5**
TGIG				*e*S	**Sn**	**06 37 04.8**	**+1.2**
UXUV	**UXUV**	**3.78**	**342**	*e*P	**Pn**	**06 36 40.2**	**+3.1**
UXUV				*e*S	**Sn**	**06 37 20.0**	**-1.2**
CMIG	**Matias Romero**	**3.85**	**331**	*e*P	**Pn**	**06 36 39.6**	**+1.5**
CMIG				*e*S	**Sn**	**06 37 20.2**	**-3.0**

*IDC **05** 06:56:26.5±2.4, 6°.85S×130°.35E, h0km, mb3.6/1, mbtmp4.1/3, ML4.5/2, MS2.8/2, Error ellipse: s-maj=133.9km s-min=32.5km az=70.0*
ISC 05 06:56:37.4±1.6, 7°.2S±0°.1×130°.4E±0°.2, h78km, n12, σ3°.72/13, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.66**	**173**	P	**Pn**	**06 58 03.0**	**+4.0**
KDU	**Kakadu**	**5.83**	**160**	P	**Pn**	**06 58 03.8**	**+2.5**
KNRA	**Kununurra**	**8.58**	**191**	P	**Pn**	**06 58 42.0**	**+3.1**
FITZ	**Fitzroy Crossi**	**11.79**	**203**	P	**Pn**	**06 59 22.4**	**-0.2**
WRA	**Warramunga Arr**	**13.24**	**164**	Pn	**Pn**	**06 59 39.9**	**-2.4**
	2.5nm,0.3s,baz=347,slow=14,SNR=65						
WRA				Sn	**Sn**	**07 02 02.6**	**-5.2**
	1.0nm,0.3s,baz=336,slow=22,SNR=8.7						
	5.9nm,0.4s						
QIS	**Mount Isa**	**16.00**	**147**	P	**Pn**	**07 00 18.6**	**+0.7**
ASAR	**Alice Springs**	**16.72**	**169**	P	**Pn**	**07 00 27.2**	**+0.3**
	1.2nm,0.3s,baz=345,slow=9.5,SNR=54						
ASAR				S	**Sn**	**07 03 27.4**	**-4.9**
	0.7nm,0.5s,baz=0.0,slow=29,SNR=4.9						
	2.4nm,0.4s						
AS01	**Alice Springs**	**16.73**	**169**	P	**Pn**	**07 00 27.9**	**+0.9**
WRKA	**Warakurna**	**17.86**	**186**	P	**Pn**	**07 00 43.5**	**+2.7**
OOD	**Oodnadatta**	**21.09**	**167**	P	**P**	**07 01 21.5**	**+5.9**
KSRS	**Korea Array**	**44.47**	**357**	LR	LR	07 27 15.1	
	comp=Z,3.7nm,18.1s,baz=105,slow=42						
MKAR	**Makanchi Array**	**68.60**	**327**	P	**P**	**07 07 29.5**	**-2.6**
	0.2nm,0.3s,baz=116,slow=7.1,SNR=4.5						
MKAR				LR	LR	07 40 00.9	
	comp=Z,20nm,18.2s,baz=52,slow=38						
	0.2nm,0.3s						

*WEL **05** 06:57:00.45°.18S×167°.37E, h123km, ML4.7, Mw4.5, Moment Tensor Solution. s7 Moment tensor: Scale 1015 Nm; Mrr6.02; Mθθ-5.78; Mφφ-0.25; Mrθ-0.61; Mrφ0.51; Mθφ-1.25; Fault plane solution: M0 6.07000×1015 NP1: φs106.00000°, δ44.00000°, λ106.00000°. NP2: φs264.00000°, δ48.00000°, λ75.00000°. Principal axes: T -584.3900, Plg79.0000°, Azm105.0000°; N 629.9800, Plg11.0000°, Azm274.0000°; P -45.5900, Plg2.0000°, Azm5.0000°;*
*NOU **05** 06:57:24.8, 45°.13S×167°.36E, h144km, MLv5.0/13, South Island, New Zealand*
*IDC **05** 06:57:26.4±0.7, 44°.94S×167°.54E, h126km±6km, mb4.0/9, mbtmp4.4/11, MS3.1/6, Error ellipse: s-maj=13.5km s-min=10.0km az=155.0*
*NEIC **05** 06:57:26.5±1.9, 45°.09S±0°.08×167°.4E±0°.1, h118km±3km, mb4.4/15, ML4.7(WEL), Error ellipse: s-maj=13.8km s-min=8.8km az=130.0*
*WEL **05** 06:57:27.7±1.2, 45°.5S±7°×16°.7E±°, h103km±8km, M4.7/9, MLv4.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=137.1*
ISC 05 06:57:26.2±0.6, 45°.09S±0°.05×167°.49E±0°.05, h123km±4km, n160, σ1°.30/169, mb4.3/16, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.44**	**212**		**Pn**	**06 57 43.6**	**-0.5**
DCZ				Sn	**Sn**	**06 57 55.9**	**-1.8**
DCZ	**Deep Cove**	**0.44**	**212**	P	**Pn**	**06 57 43.6**	**-0.5**
DCZ				S	**Sn**	**06 57 56.2**	**-1.6**
MSZ	**Milford Sound**	**0.52**	**37**	P	**Pn**	**06 57 45.9**	**+1.2**
MSZ				S	**Sn**	**06 58 00.3**	**+1.7**
MLZ	**Mavora Lakes**	**0.53**	**122**		**Pn**	**06 57 45.4**	**+0.7**
MLZ				Sn	**Sn**	**06 57 59.1**	**+0.3**
MLZ	**Mavora Lakes**	**0.53**	**122**	P	**Pn**	**06 57 45.4**	**+0.7**
MLZ				S	**Sn**	**06 57 59.2**	**+0.5**
WHZ	**Wether Hill Ro**	**0.86**	**158**		**Pn**	**06 57 47.5**	**+0.2**
WHZ	**Wether Hill Ro**	**0.86**	**158**	P	**Pn**	**06 57 47.5**	**+0.2**
WHZ				S	**Sn**	**06 58 02.9**	**-0.4**
WKZ	**Wanaka**	**1.12**	**77**		**Pn**	**06 57 51.4**	**+1.6**
WKZ	**Wanaka**	**1.12**	**77**	P	**Pn**	**06 57 51.4**	**+1.6**
WKZ				S	**Sn**	**06 58 09.0**	**+1.4**
PYZ	**Puysegur Point**	**1.21**	**207**		**Pn**	**06 57 49.7**	**-0.9**
PYZ	**Puysegur Point**	**1.21**	**207**	P	**Pn**	**06 57 49.7**	**-0.9**
PYZ				S	**Sn**	**06 58 06.2**	**-3.1**
PYZ	**Puysegur Point**	**1.21**	**207**	P	**Pn**	**06 57 50.0**	**-0.7**
EAZ	**Earnscleugh**	**1.30**	**97**	P	**Pn**	**06 57 52.8**	**+1.2**
EAZ				S	**Sn**	**06 58 11.1**	**+0.3**
JCZ	**Jackson Bay**	**1.38**	**43**	P	**Pn**	**06 57 53.7**	**+1.2**
JCZ	**Jackson Bay**	**1.38**	**43**	P	**Pn**	**06 57 53.8**	**+1.2**
TUZ	**Tuapeka**	**1.74**	**121**	P	**Pn**	**06 57 57.6**	**+1.0**
APZ	**The Paps**	**1.77**	**169**	P	**Pn**	**06 57 56.7**	**-0.5**
SYZ	**Scrubby Hill**	**1.85**	**142**	P	**Pn**	**06 57 58.4**	**+0.4**
SYZ	**Scrubby Hill**	**1.85**	**142**	P	**Pn**	**06 57 58.4**	**+0.4**
LBZ	**Lake Benmore**	**2.05**	**71**	Pn	**Pn**	**06 58 00.7**	**+0.3**
LBZ	**Lake Benmore**	**2.05**	**71**	P	**Pn**	**06 58 00.8**	**+0.3**
ODZ	**Otahua Downs**	**2.24**	**90**		**Pn**	**06 58 03.4**	**+0.5**
ODZ	**Otahua Downs**	**2.24**	**90**	P	**Pn**	**06 58 03.3**	**+0.5**
ODZ	**Otahua Downs**	**2.24**	**90**	P	**Pn**	**06 58 03.4**	**+0.5**
FOZ	**Fox Glacier**	**2.29**	**48**		**Pn**	**06 58 03.4**	**0.0**
FOZ	**Fox Glacier**	**2.29**	**48**	P	**Pn**	**06 58 03.4**	**0.0**
HHSZ	**Highcliff Hill**	**2.33**	**111**	P	**Pn**	**06 58 04.7**	**+0.8**
TMZ	**Timaru**	**2.61**	**75**	P	**Pn**	**06 58 07.5**	**0.0**
GCSZ	**Gaunt Creek Bo**	**2.71**	**50**	P	**Pn**	**06 58 08.4**	**-0.4**
ARCZ	**Arundel**	**2.88**	**68**	P	**Pn**	**06 58 10.6**	**-0.4**
RPZ	**Rata Peaks**	**2.91**	**63**	P	**Pn**	**06 58 11.1**	**-0.2**
	313nm,0.4s,baz=217,slow=5.2,SNR=308						
RPZ				S	**Sn**	**06 58 45.0**	**-1.1**
	948nm,0.5s,baz=33,slow=17,SNR=58						
RPZ	**Rata Peaks**	**2.91**	**63**	P	**Pn**	**06 58 11.2**	**-0.2**
RPZ	**Rata Peaks**	**2.91**	**63**	P	**Pn**	**06 58 11.3**	**-0.1**
WVZ	**Waitaha Valley**	**3.09**	**50**	P	**Pn**	**06 58 13.2**	**-0.6**
MHCZ	**Mount Hutt**	**3.32**	**63**	P	**Pn**	**06 58 16.4**	**-0.4**
WACZ	**Wakanui South**	**3.32**	**71**	P	**Pn**	**06 58 16.6**	**-0.2**
RACZ	**Rakaia**	**3.60**	**69**	P	**Pn**	**06 58 20.3**	**-0.2**
INZ	**Inchbonnie**	**3.71**	**52**	P	**Pn**	**06 58 21.4**	**-0.6**
OXZ	**Oxford**	**3.72**	**63**		**Pn**	**06 58 21.5**	**-0.6**
OXZ	**Oxford**	**3.72**	**63**	P	**Pn**	**06 58 21.4**	**-0.7**
MQZ	**McQueen's Vall**	**3.96**	**71**	Pn	**Pn**	**06 58 26.0**	**+0.8**
MQZ	**McQueen's Vall**	**3.96**	**71**	P	**Pn**	**06 58 24.8**	**-0.4**
AKCZ	**Akaroa Harbour**	**4.07**	**74**	P	**Pn**	**06 58 26.7**	**0.0**
LTZ	**Lake Taylor**	**4.16**	**58**	Pn	**Pn**	**06 58 27.1**	**-0.8**
LTZ	**Lake Taylor**	**4.16**	**58**	P	**Pn**	**06 58 27.0**	**-0.9**
AMCZ	**Amberley**	**4.18**	**65**	P	**Pn**	**06 58 27.9**	**-0.3**
OKCZ	**Okains Bay**	**4.22**	**73**	P	**Pn**	**06 58 29.4**	**+0.6**
GVZ	**Greta Valley S**	**4.53**	**64**	P	**Pn**	**06 58 32.4**	**-0.5**
DSZ	**Denniston Nort**	**4.59**	**45**	P	**Pn**	**06 58 33.0**	**-0.8**
KHZ	**Kahutara**	**5.14**	**61**	Pn	**Pn**	**06 58 41.3**	**+0.3**
KHZ	**Kahutara**	**5.14**	**61**	P	**Pn**	**06 58 40.3**	**-0.7**
KHZ	**Kahutara**	**5.14**	**61**	P	**Pn**	**06 58 41.7**	**+0.7**
THZ	**Tophouse**	**5.16**	**52**	Pn	**Pn**	**06 58 40.7**	**-0.7**
THZ	**Tophouse**	**5.16**	**52**	P	**Pn**	**06 58 40.4**	**-1.0**
MRNZ	**Matariki Terra**	**5.33**	**48**	P	**Pn**	**06 58 42.8**	**-0.8**
QRZ	**Quartz Range**	**5.64**	**43**		Pn	06 58 42.8	-5.1
QRZ	**Quartz Range**	**5.64**	**43**	P	**Pn**	**06 58 47.7**	**-0.2**
TKNZ	**Takaka Hill**	**5.70**	**47**	P	**Pn**	**06 58 48.6**	**0.0**
BSWZ	**Blackbirch Sta**	**5.75**	**56**	Pn	**Pn**	**06 58 49.3**	**0.0**
BSWZ	**Blackbirch Sta**	**5.75**	**56**	P	**Pn**	**06 58 48.6**	**-0.7**
NNZ	**Nelson**	**5.79**	**50**	Pn	**Pn**	**06 58 51.7**	**+1.9**
NNZ	**Nelson**	**5.79**	**50**	P	**Pn**	**06 58 49.7**	**-0.1**
CMWZ	**Cape Campbell**	**5.93**	**58**	Pn	**Pn**	**06 58 52.7**	**+1.0**
CMWZ	**Cape Campbell**	**5.93**	**58**	P	**Pn**	**06 58 53.4**	**+1.7**
TUWZ	**Tuamarina**	**5.97**	**54**		**Pn**	**06 58 52.6**	**+0.4**
TUWZ	**Tuamarina**	**5.97**	**54**	P	**Pn**	**06 58 51.5**	**-0.7**
TCW	**Tory Channel**	**6.30**	**54**	P	**Pn**	**06 58 56.6**	**-0.1**
DUWZ	**D'Urville Isla**	**6.38**	**50**	P	**Pn**	**06 58 57.4**	**-0.3**
SNZO	**South Karori**	**6.49**	**57**	P	**Pn**	**06 58 59.6**	**+0.4**
WEL	**Wellington**	**6.54**	**57**	P	**Pn**	**06 59 00.2**	**+0.3**
PLWZ	**Palliser**	**6.67**	**61**	Pn	**Pn**	**06 59 01.0**	**-0.7**
PLWZ	**Palliser**	**6.67**	**61**	P	**Pn**	**06 59 00.5**	**-1.2**
MSWZ	**Moikau Station**	**6.75**	**60**	P	**Pn**	**06 59 02.0**	**-0.8**
CAW	**Cannon Point**	**6.83**	**57**	P	**Pn**	**06 59 02.5**	**-1.4**
PAWZ	**Paruwai Farm**	**6.88**	**60**	P	**Pn**	**06 59 04.3**	**-0.3**
KIW	**Kapiti Island**	**6.89**	**55**	P	**Pn**	**06 59 04.3**	**-0.3**
OGWZ	**Otaki Gorge**	**7.07**	**56**	P	**Pn**	**06 59 06.1**	**-1.0**
HOWZ	**Holdsworth Sta**	**7.22**	**57**	P	**Pn**	**06 59 08.3**	**-0.9**
TMWZ	**Te Maipa**	**7.33**	**60**	P	**Pn**	**06 59 09.1**	**-1.5**
NMEZ	**Namu Road**	**7.39**	**42**	P	**Pn**	**06 59 12.2**	**+0.8**
NBEZ	**Newall Road No**	**7.50**	**41**	P	**Pn**	**06 59 13.8**	**+0.9**
KHEZ	**Kahui Hut**	**7.55**	**42**	P	**Pn**	**06 59 14.0**	**+0.3**
KHEZ	**Kahui Hut**	**7.55**	**42**	P	**Pn**	**06 59 13.6**	**-0.1**
PREZ	**Palmer Road**	**7.58**	**43**	P	**Pn**	**06 59 14.6**	**+0.5**
NEZ	**North Egmont**	**7.61**	**42**	P	**Pn**	**06 59 15.9**	**+1.4**
LREZ	**Lake Rotokare**	**7.61**	**45**	P	**Pn**	**06 59 17.0**	**+2.6**
PKE	**Pukeiti**	**7.62**	**42**	P	**Pn**	**06 59 16.6**	**+2.0**
WAZ	**Wanganui**	**7.69**	**49**	P	**Pn**	**06 59 18.4**	**+2.9**
DREZ	**Durham Road**	**7.72**	**43**	P	**Pn**	**06 59 17.2**	**+1.3**
MHEZ	**Mangahewa**	**7.87**	**43**	P	**Pn**	**06 59 21.4**	**+3.5**
VRZ	**Vera Road**	**8.05**	**45**	P	**Pn**	**06 59 20.5**	**+0.3**
PKVZ	**Pokaka**	**8.22**	**48**	P	**Pn**	**06 59 26.0**	**+3.3**
TRVZ	**Turoa**	**8.32**	**49**	P	**Pn**	**06 59 27.1**	**+2.9**
WNVZ	**Wahianoa**	**8.33**	**49**	P	**Pn**	**06 59 26.5**	**+2.2**
MOVZ	**Moawhango**	**8.36**	**50**	P	**Pn**	**06 59 24.7**	**+0.2**
FWVZ	**Far West T-bar**	**8.36**	**49**	P	**Pn**	**06 59 28.0**	**+3.3**
TWVZ	**Taurewa**	**8.43**	**47**	P	**Pn**	**06 59 26.7**	**+1.1**
NGZ	**Ngauruhoe**	**8.44**	**48**	P	**Pn**	**06 59 28.3**	**+2.6**
HIZ	**Hauiti**	**8.57**	**42**	P	**Pn**	**06 59 26.4**	**-1.0**
HIZ	**Hauiti**	**8.57**	**42**	P	**Pn**	**06 59 26.5**	**-0.8**
KAHZ	**Kahuranaki**	**8.73**	**56**	P	**Pn**	**06 59 28.8**	**-0.7**
RAHZ	**Arahi**	**9.44**	**53**	P	**Pn**	**06 59 42.8**	**+3.8**
TOZ	**Tahuroa Road**	**9.50**	**42**	P	**Pn**	**06 59 40.0**	**+0.2**
AWAZ	**Awhitu Peninsu**	**9.67**	**36**	P	**Pn**	**06 59 42.2**	**+0.2**
WTAZ	**Waiatarua**	**9.75**	**36**	P	**Pn**	**06 59 44.1**	**+0.8**
MKAZ	**Moumakai**	**9.86**	**39**	P	**Pn**	**06 59 44.7**	**0.0**
RVAZ	**Riverhead Bore**	**9.89**	**35**	P	**Pn**	**06 59 45.1**	**0.0**
URZ	**Urewera**	**9.92**	**50**	P	**Pn**	**06 59 43.1**	**-2.4**
	12nm,0.5s,baz=320,slow=8.1,SNR=8.5						
URZ				S	**Sn**	**07 01 26.8**	**-8.1**
	31nm,0.8s,baz=98,slow=22,SNR=8.5						
URZ				LR	LR	07 04 06.5	
	comp=Z,50nm,20.5s,baz=275,slow=41						
URZ	**Urewera**	**9.92**	**50**	P	**Pn**	**06 59 43.8**	**-1.7**
MBAZ	**Motutapu North**	**10.02**	**37**	P	**Pn**	**06 59 48.9**	**+2.0**
KUZ	**Kuaotunu**	**10.40**	**40**	P	**Pn**	**06 59 51.7**	**-0.2**
KUZ	**Kuaotunu**	**10.40**	**40**	P	**Pn**	**06 59 51.8**	**-0.2**
WCZ	**Waipu Caves**	**10.52**	**32**	P	**Pn**	**06 59 55.4**	**+1.8**
HAZ	**Te Kaha**	**10.65**	**50**	P	**Pn**	**06 59 54.3**	**-1.0**
OUZ	**Omahuta**	**10.91**	**27**	Pn	**Pn**	**06 59 59.8**	**+1.1**
OUZ	**Omahuta**	**10.91**	**27**	P	**Pn**	**06 59 59.9**	**+1.1**
OUZ	**Omahuta**	**10.91**	**27**	P	**Pn**

baz=161,slow=6.0
VNA1 **Neumayer--Stat** 64.53 182 P **P** 07 07 49.3 +0.1
GO09 **Cerro Castillo** 71.00 145 P **P** 07 08 31.2 +1.0
GO09 IAmb IAmb 07 09 14.4
comp=Z,22nm,1.3s
PLCA **Paso Flores** 79.99 139 P **P** 07 09 22.7 +1.0
comp=Z,2.8nm,0.7s,baz=195,slow=4.0,SNR=14
PLCA pP **pP** 07 09 54.2 +1.2
comp=Z,2.4nm,1.0s,baz=220,slow=7.3,SNR=2.6
comp=Z,2.8nm,0.7s
H08S2 **Diego Garcia H** 88.16 261 T T 08 47 01.0
baz=135,slow=76,SNR=30
H08S1 **Diego Carcia H** 88.17 261 T T 08 47 02.4
baz=135,slow=76,SNR=26
H08S3 **Diego Garcia H** 88.17 261 T T 08 47 02.8
baz=135,slow=76,SNR=38
CMAR **Chiang Mai Arr** 88.63 298 P **P** 07 10 06.2 +0.7
comp=Z,2.4nm,0.4s,baz=156,slow=3.0,SNR=13
comp=Z,2.4nm,0.4s
KURBB **Kurchatov Arra** 122.41 311 PKP **PKPdf** 07 16 04.7 -1.2
comp=Z,1.7nm,0.7s,baz=115,slow=1.7,SNR=14
BRTR **Keskin Array B** 145.87 278 PKPbc **PKPdf** 07 16 50.1 +0.1
comp=Z,2.5nm,0.9s,baz=126,slow=4.2,SNR=7.0
BRTR pPKPbc **pPKPdf** 07 17 22.9 -0.5
comp=Z,1.2nm,0.7s,baz=150,slow=5.3,SNR=3.0
TORD **Torodi Ar. Bea** 145.94 205 PKPbc **PKPdf** 07 16 50.5 -0.2
comp=Z,13nm,0.6s,baz=156,slow=1.9,SNR=80
TORD pPKPbc **pPKPdf** 07 17 23.7 -0.5
comp=Z,2.8nm,0.7s,baz=170,slow=2.3,SNR=3.0
ARCES **ARCESS Array B** 148.98 335 PKPbc **PKPbc** 07 16 57.3 -1.0
comp=Z,5.0nm,0.6s,baz=84,slow=2.4,SNR=16
AKASG **Malin Array Bra** 151.75 297 PKPbc **PKPbc** 07 17 04.7 -0.7
comp=Z,1.3nm,0.5s,baz=76,slow=2.3,SNR=11
FINES **FINESS Array B** 152.26 320 PKPbc **PKPbc** 07 17 05.6 -0.6
comp=Z,6.3nm,0.7s,baz=78,slow=3.5,SNR=19

BJI ***05*** *07:00:52.9±0.0,52°.16N×178°.41E,h109km,mb4.9/44, mB5.1/18*
AEIC ***05*** *07:00:52.7±3.7,52°.0N±0°.1×178°.35E±0°.10,h124km±5km, Error ellipse: s-maj=19.6km s-min=8.5km az=185.0*
NEIC ***05*** *07:00:55.4±1.8,52°.0N±0°.1×178°.45E±0°.09,h112km±5km, mb4.6/140,ML4.5/40(AEIC),Error ellipse: s-maj=19.0km s-min=8.2km az=183.0*
MOS ***05*** *07:00:55.3±1.2,52°.02N×178°.43E,h125km,mb4.5/32, Error ellipse: s-maj=9.9km s-min=7.3km az=110.7*
IDC ***05*** *07:00:56.3±0.6,52°.02N×178°.48E,h119km±4km,mb4.1/27, mbtmp4.5/30,MS3.2/17,Error ellipse: s-maj=12.9km s-min=8.0km az=167.0*
ISC 05 07:00:55.2±0.5,51°.83N±0°.06×178°.46E±0°.03,h114km±3km, h115km:pP-P,n507,σ1s03/505,mb4.5/119,19C-5D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	0.12	16		Pn	07 01 10.5	-0.5
LSSE	**Little Sitkin**	0.12	34		Pn	07 01 10.4	-0.6
LSNW	**Little Sitkin**	0.14	15		Pn	07 01 10.3	-0.8
LSPA	**Little Sitkin**	0.14	29		Pn	07 01 10.4	-0.6
LSPA					Sn	07 01 22.1	-0.8
CESW	**Semis' Southwe**	0.69	84		Pn	07 01 13.4	-0.4
AMKA	**Amchitka**	0.69	130		Pn	07 01 13.9	0.0
CEPE	**Semis' Perret**	0.75	79		Pn	07 01 14.0	-0.4
CERAA	**Semis' Rag'd T**	0.76	84		Pn	07 01 14.1	-0.4
GASW	**Gareloi Southw**	1.67	91		Pn	07 01 24.2	0.0
GASW					Sn	07 01 47.0	+0.7
GANE	**Gareloi Northe**	1.72	89		Pn	07 01 24.6	-0.2
GALAA	**Gareloi Lava P**	1.72	91		Pn	07 01 25.0	+0.1
GAEA	**Gareloi East**	1.74	90		Pn	07 01 25.0	0.0
TASE	**Tanaga Southea**	2.17	89		Pn	07 01 30.4	-0.2
TAFP	**Tanaga Falls P**	2.21	87		Pn	07 01 30.6	-0.4
TAFP					Sn	07 01 58.4	0.0
KIMD	**Kanaga Island**	2.67	90		Pn	07 01 36.8	-0.2
KICM	**Kanaga Island**	2.70	86		Pn	07 01 37.3	0.0
KIKV	**Kanaga Island**	2.71	87		Pn	07 01 37.6	+0.1
KIWB	**Kanaga Island**	2.72	88		Pn	07 01 37.6	0.0
SHEM	**Shemya Is, Ala**	2.83	290	P	Pn	07 01 38.0	-0.9
	709nm,0.5s,baz=48,slow=4.8,SNR=75						
SHEM				S	Sn	07 02 11.2	-1.4
	592nm,0.5s,baz=277,slow=15,SNR=27						
SHEM				LR	LR	07 02 29.2	
	comp=Z,431nm,19.4s,baz=327,slow=33						
SMY	**Shemya**	2.83	290		Sn	07 02 10.0	-2.6
SMY	**Shemya**	2.83	290	Pn	Pn	07 01 37.7	-1.2
SMY	**Shemya**	2.83	290	P	Pn	07 01 37.7	-1.2
ADK	**Adak**	3.01	87	Pn	Pn	07 01 40.9	-0.5
ADK	**Adak**	3.01	87	P	Pn	07 01 40.9	-0.5
ADK	**Adak**	3.01	87	P	Pn	07 01 41.1	-0.3
GSMY	**Great Sitkin M**	3.40	84		Pn	07 01 46.1	-0.5
GSTR	**Great Sitkin T**	3.40	83		Pn	07 01 46.4	-0.2
KOSE	**Korovin Southe**	4.65	81		Pn	07 02 03.7	+0.4
NIKH	**Nikolski High**	7.85	77		Pn	07 02 47.1	+0.7
NIKH	**Nikolski High**	7.85	77	P	Pn	07 02 46.4	0.0
	baz=268						
OKSP	**Okmok Steeple**	8.21	75		Pn	07 02 52.1	+0.8
OKSO	**Okmok South**	8.29	74		Pn	07 02 53.7	+1.2
OKTU	**Okmok Mt. Tuli**	8.37	74		Pn	07 02 54.8	+1.3
SPIA	**Saint Paul Isl**	8.47	46		Pn	07 02 55.9	+1.1
SPIA	**Saint Paul Isl**	8.47	46	P	Pn	07 02 56.5	+1.6
	baz=237,SNR=5.1						
MGOD	**Makushin Gods**	9.10	72		Pn	07 03 04.3	+0.9
MNAT	**Makushin Natee**	9.22	71		Pn	07 03 06.2	+1.1
UNV	**Unalaska Valle**	9.32	72	Pn	Pn	07 03 07.4	+1.0
UNV	**Unalaska Valle**	9.32	72	P	Pn	07 03 07.2	+0.8
	baz=265						
UNV	**Unalaska Valle**	9.32	72	P	Pn	07 03 06.8	+0.4
ZRO	**Akutan Zero**	9.66	70		Pn	07 03 13.0	+2.0
AKGG	**Akutan Green G**	9.67	70		Pn	07 03 12.3	+1.2
AKUT	**Akutan**	9.79	70		Pn	07 03 14.3	+1.7
ISLZ	**Isanotski Laza**	11.06	68		Pn	07 03 31.2	+1.3
PEA0B	**Petropavlovsk-**	12.72	284	*ce*P	Pn	07 03 51.9	+0.2
PETK	**Petropavlovsk-**	12.72	284	P	Pn	07 03 51.4	-0.4
	16nm,0.8s,baz=120,slow=16,SNR=13						
PETK				S	Sn	07 06 08.6	-3.0
	4.0nm,0.5s,baz=127,slow=20,SNR=7.4						
PETK	**Petropavlovsk-**	12.72	284	Pn	Pn	07 03 53.0	+1.3
PETK	**Petropavlovsk-**	12.72	284	P	Pn	07 03 53.0	+1.3
CNBA	**Chernabura Isl**	13.45	69	Pn	Pn	07 03 58.3	-2.8
CHGN	**Chignik**	14.27	63	Pn	Pn	07 04 10.9	-0.8
R16K	**Pilot Point**	14.95	58	P	Pn	07 04 20.4	0.0
	baz=258						
P16K	**Nushagak River**	15.13	52	P	Pn	07 04 23.3	+0.7
	baz=252						
O16K	**Kokwok River B**	15.26	50	P	Pn	07 04 24.9	+0.7
	baz=250,SNR=5.9						
N16K	**Nishlik Lake**	15.29	47	P	Pn	07 04 25.0	+0.5
	baz=246						
R17K	**Ugashik Creek**	15.59	58	P	Pn	07 04 28.7	+0.3
	baz=260						
Q16K	**King Salmon**	15.69	54	P	Pn	07 04 29.9	+0.3
	baz=256,SNR=10						
CHIR	**Chirikof Islan**	15.78	65	Pn	Pn	07 04 27.6	-3.1
O17K	**Koliganek Bris**	15.80	50	P	Pn	07 04 31.2	+0.2
	baz=251,SNR=10.0						
P17K	**Kvichak River**	15.94	53	P	P	07 04 33.3	-0.6
	baz=254,SNR=18						
Q17K	**Contact Creek**	15.98	56	P	Pn	07 04 33.5	+0.2
	baz=258,SNR=14						
Q18K	**Katmai Hardscr**	16.52	55	P	P	07 04 40.6	+0.1
	baz=258,SNR=14						
P18K	**Big Mountain,**	16.59	53	P	P	07 04 42.4	+1.2
P18K				IAmb	IAmb	07 04 56.8	
	comp=Z,22nm,1.0s						
P18K	**Big Mountain,**	16.59	53	P	P	07 04 41.1	-0.2
	baz=255						
SII	**Sitkinak Islan**	16.63	63	P	Pn	07 04 41.4	+0.2
	baz=266						
SII	**Sitkinak Islan**	16.63	63	P	Pn	07 04 38.9	-2.3
N18K	**Kilae Creek**	16.68	48	P	P	07 04 42.9	+0.7
N18K				IAmb	IAmb	07 04 48.1	
	comp=Z,19nm,0.8s						
N18K	**Kilae Creek**	16.68	48	P	P	07 04 42.6	+0.4
	baz=250,SNR=15						
O18K	**Koktuh Hills**	16.73	51	P	P	07 04 43.3	+0.5
	baz=254						
SVW2	**Sparrevohn**	16.97	47	P	P	07 04 46.7	+1.3
OHAK	**Old Harbor**	17.19	61	P	P	07 04 45.1	-2.6
OHAK				IAmb	IAmb	07 05 12.9	
	comp=Z,32nm,1.0s						
O19K	**Port Alsworth**	17.26	50	P	Pn	07 04 49.4	+0.6
	baz=254,SNR=20						
Q19K	**Cape Douglas,**	17.27	55	P	Pn	07 04 49.1	+0.1
	baz=258						
BILL	**Bilibino**	17.30	345	*i*P	Pn	07 04 50.5	+1.2
BILL				*e*S	Sn	07 08 02.1	+0.3
BILL				pmax	pmax		
	comp=Z,26nm,0.8s						
N19K	**Bonanza Creek**	17.37	48	P	Pn	07 04 51.6	+1.3
N19K				IAmb	IAmb	07 04 55.2	
	comp=Z,40nm,0.8s						
N19K	**Bonanza Creek**	17.37	48	P	Pn	07 04 50.8	+0.5
	baz=252,SNR=32						
TTA	**Tatalina**	17.55	41		Pn	07 04 52.7	+0.4
TTA	**Tatalina**	17.55	41	P	Pn	07 04 52.7	+0.4
TTA				pmax	pmax		
	comp=Z,13nm,0.8s						
TTA	**Tatalina**	17.55	41	P	Pn	07 04 52.1	-0.2
	baz=243,SNR=11						
KDAK	**Kodiak Island**	17.63	59	P	P	07 04 50.2	-2.4
	comp=Z,11nm,0.3s,baz=285,slow=3.9,SNR=93						
KDAK	**Kodiak Island**	17.63	59	P	P	07 04 50.4	-2.2
KDAK				IAmb	IAmb	07 05 10.7	
	comp=Z,62nm,1.3s						
KDAK	**Kodiak Island**	17.63	59	P	P	07 04 50.4	-2.2
KDAK				pmax	pmax		
	comp=Z,62nm,1.3s						
P19K	**Oil Pt**	17.64	53	P	Pn	07 04 53.8	+0.3
P19K	**Oil Pt**	17.64	53	P	Pn	07 04 53.4	0.0
	baz=257,SNR=12						
L19K	**White Mountain**	17.71	44	P	Pn	07 04 54.3	+0.1
L19K				IAmb	IAmb	07 04 57.4	
	comp=Z,39nm,1.2s						
L19K	**White Mountain**	17.71	44	P	P	07 04 53.7	+0.2
	baz=247						
SEY	**Seymchan**	17.77	319	P	P	07 04 52.5	-1.6
	comp=Z,1.2nm,0.6s,baz=75,slow=20,SNR=2.4						
M19K	**Big River Lodg**	17.80	45		P	07 04 54.1	-0.3
M19K	**Big River Lodg**	17.80	45	P	P	07 04 54.4	-0.1
	baz=248						
M19K	**Big River Lodg**	17.80	45	IAML		07 05 40.1	
	comp=N,9.1nm,0.8s						
Q20K	**Shuyak Island**	17.85	56	P	P	07 04 54.5	-0.6
	baz=261						
O20K	**Slope Mountain**	18.05	51	P	Pn	07 04 57.8	-0.5
	baz=256,SNR=15						
GCSA	**Galena City Sc**	18.15	35	P	Pn	07 04 58.8	-0.6
	baz=237,SNR=9.4						
L20K	**Farewell, AK**	18.24	44	P	Pn	07 05 00.0	-0.6
	baz=247						
M20K	**Styx River**	18.35	46	P	Pn	07 05 01.4	-0.5
	baz=250						
HOM	**Homer**	18.43	53	P	P	07 05 01.8	+0.4
HOM	**Homer**	18.43	53	P	P	07 05 01.8	+0.4
	baz=259						
K20K	**Telida**	18.53	41	P	Pn	07 05 03.3	-0.7
	baz=245						
N20K	**Mount Spurr**	18.55	48	P	Pn	07 05 03.7	-0.6
	baz=253,SNR=12						
SPCR	**Spurr Chakacha**	18.55	48	P	Pn	07 05 03.8	-0.5
	baz=253,SNR=9.9						
CNPM	**China Poot**	18.61	54	P	P	07 05 03.4	+0.1
J20K	**Nowinta River**	18.87	39	P	P	07 05 06.5	+0.3
	baz=242						
BRSE	**Bradley Lake S**	18.90	53	P	P	07 05 05.7	-0.7
	baz=259,SNR=15						
CAPN	**Captain Cook N**	18.92	50	P	P	07 05 06.0	-0.7
	baz=256						
SKT	**Skwentna**	19.09	46	P	P	07 05 09.5	+0.8
SKT	**Skwentna**	19.09	46	P	P	07 05 09.1	+0.5
	baz=252						
PPLA	**Purkeypile**	19.12	43	P	P	07 05 09.7	+0.6
	baz=249						
SUA	**Susitna One**	19.30	48	P	P	07 05 10.7	-0.2
	baz=254						
CAST	**Castle Rocks**	19.37	42	P	P	07 05 11.9	+0.4
	baz=247						
CHUM	**Lake Minchumin**	19.46	40	P	P	07 05 13.1	+0.6
	baz=246						
O22K	**Cooper Landing**	19.54	51	P	P	07 05 12.8	-0.7
	baz=258,SNR=7.6						
SEW	**Seward**	19.60	52	P	P	07 05 13.4	-0.7
SEW				IAmb	IAmb	07 05 19.5	
	comp=Z,30nm,0.9s						
SEW	**Seward**	19.60	52	P	P	07 05 13.2	-0.9
	baz=260,SNR=9.8						
RC01	**Rabbit Creek A**	19.67	50	P	P	07 05 14.4	-0.5
	baz=257						
CUT	**Chulitna**	19.79	46	P	P	07 05 15.8	-0.3
	baz=252						
BPAW	**Bear Paw Mtn.**	20.09	41	P	P	07 05 19.5	+0.2
	baz=247						
H21K	**Melozitna Rive**	20.09	35	P	P	07 05 19.5	+0.2
	baz=241						
TRF	**Thorofare Moun**	20.13	43	P	P	07 05 19.8	-0.2
	baz=250						
I21K	**Tanana**	20.16	37	P	P	07 05 20.6	+0.5
	baz=243						
G21K	**Allakaket**	20.29	33	P	P	07 05 21.6	+0.1
	baz=238						
PWL	**Port Wells**	20.29	51	P	P	07 05 20.1	-1.4
	baz=259						
SML	**Sawmill**	20.50	48	P	P	07 05 23.7	-0.1
	baz=256						
MLY	**Manley**	20.57	38	P	P	07 05 24.5	0.0
	baz=245						
WAT1	**Susitna Watana**	20.68	45	P	P	07 05 26.1	+0.4
	baz=254						
F21K	**Alatna River**	20.69	31	P	P	07 05 26.1	+0.3
	baz=236						
H22K	**Ishtalitna Cre**	20.72	36	P	P	07 05 26.6	+0.5
	baz=242						
MCK	**McKinley**	20.80	42	P	P	07 05 27.1	+0.1
	baz=251						
GLI	**Glacier Island**	20.89	51	IAmb	IAmb	07 05 43.7	
	comp=Z,32nm,0.7s						
GLI	**Glacier Island**	20.89	51	P	P	07 05 27.3	-0.7
	baz=260,SNR=6.0						
WAT6	**Susitna Watana**	20.97	46	P	P	07 05 29.3	+0.4
	baz=255						
NEA2	**Nenana**	21.05	40	P	P	07 05 29.2	-0.4
	baz=248						
Q23K	**Middleton Isla**	21.06	55	P	P	07 05 29.7	-0.1
	baz=265						
HIN	**Hinchinbrook I**	21.10	52	IAmb	IAmb	07 05 30.5	
	comp=Z,24nm,0.9s						
I23K	**Minto, Yukon-K**	21.15	39	P	P	07 05 31.2	+0.5
	baz=247						
G22K	**Bettles**	21.18	33	P	P	07 05 30.7	-0.2
	baz=240						
DHY	**Denali Highway**	21.26	45	P	P	07 05 32.1	0.0
	baz=254						
F22K	**John River**	21.27	31	P	P	07 05 31.9	-0.1
	baz=237						
H23K	**Yukon River**	21.36	37	P	P	07 05 32.9	-0.1
	baz=245						
EYAK	**Cordova Ski Ar**	21.49	52	IAmb	IAmb	07 05 36.5	
	comp=Z,36nm,1.1s						
EYAK	**Cordova Ski Ar**	21.49	52	P	P	07 05 34.1	-0.3
	baz=263						
KLU	**Klutina**	21.56	49	P	P	07 05 33.8	-1.4
	baz=260						
M24K	**Tolsona, Glenn**	21.56	48	P	P	07 05 34.7	-0.5
	baz=258						
DIV	**Divide**	21.57	51	IAmb	IAmb	07 05 40.5	
	comp=Z,31nm,1.2s						
G23K	**Bananza Creek**	21.59	34	P	P	07 05 35.2	-0.2
	baz=249						
TCOL	**CIGO, UAF Yank**	21.63	40	P	P	07 05 35.4	-0.4
	baz=249						
COLA	**College**	21.64	40	*i* P	P	07 05 37.0	+1.2
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	**College**	21.64	40	P	P	07 05 35.5	-0.4
	baz=249						
COLD	**Coldfoot**	21.78	33	P	P	07 05 36.8	-0.5
	baz=241						
HDA	**Harding Lake**	21.84	42	P	P	07 05 38.0	-0.1
	baz=252						
POKR	**Poker Plat Res**	21.89	40	P	P	07 05 38.0	-0.6
	baz=249						
ILAR	**Eielson Array**	21.99	41	P	P	07 05 37.4	-2.2
	comp=Z,2.2nm,0.6s,baz=252,slow=9.3,SNR=6.9						
ILAR				ScP	ScP	07 12 57.1	-2.6
	comp=Z,1.0nm,0.7s,baz=271,slow=3.1,SNR=8.9						
ILAR				LR	LR	07 14 28.5	
	comp=Z,44nm,18.3s,baz=337,slow=37						
	comp=Z,2.2nm,0.6s						
H24K	**Noodor Dome**	21.99	38	P	P	07 05 39.4	-0.3
	baz=247						
PAX	**Paxson**	22.07	46	P	P	07 05 39.5	-1.1
	baz=257						
KAIM	**Kayak Island**	22.08	54	P	P	07 05 41.1	+0.5
KAIM	**Kayak Island**	22.08	54	P	P	07 05 40.6	0.0
	baz=266,SNR=13						
HARP	**HAARP**	22.09	47	P	P	07 05 39.7	-1.0
	baz=259						
BMRM	**Bremner River**	22.11	51	P	P	07 05 39.7	-1.3
	baz=263						
K24K	**Donnelly Dome**	22.15	43	P	P	07 05 40.1	-1.3
	baz=254						
N25K	**Chitina, Valde**	22.20	49	P	P	07 05 41.0	-1.0
	baz=261						
E23K	**Chandalar**	22.39	31	P	P	07 05 43.3	-0.5
	baz=240						
BERG	**Berg Lake**	22.48	53	IAmb	IAmb	07 05 46.2	
	comp=Z,36nm,0.8s						
G24K	**Hadweenzic Riv**	22.49	36	P	P	07 05 44.6	-0.2
	baz=246						
A21K	**Barrow**	22.53	21	P	P	07 05 45.6	+0.5
	baz=223						
RIDG	**Independent Ri**	22.54	44	P	P	07 05 44.7	-0.6
	baz=256						
D23K	**Nanushuk River**	22.54	29	P	P	07 05 44.9	-0.4
	baz=236						
VRDI	**Verde Repeater**	22.70	51	P	P	07 05 45.6	-1.4
VRDI				IAmb	IAmb	07 05 49.3	
	comp=Z,20nm,0.7s						
F24K	**Squaw Lake**	22.70	34	P	P	07 05 46.2	-0.7
	baz=243,SNR=6.0						
TOLK	**Toolik Lake Re**	22.70	30	P	P	07 05 47.4	+0.5
TOLK				IAmb	IAmb	07 05 49.7	
	comp=Z,12nm,0.8s						
TOLK	**Toolik Lake Re**	22.70	30	P	P	07 05 46.4	-0.5
	baz=239,SNR=5.9						
E24K	**Your Creek**	22.77	32	P	P	07 05 47.2	-0.3
	baz=241						
PRP	**Porcupine Dome**	22.78	39	P	P	07 05 46.6	-1.2
	baz=251						
DOT	**Dot Lake**	22.85	44		PcP	07 09 35.7	+0.7
SNH	**Sunshine Point**	22.89	53	IAmb	IAmb	07 06 33.0	
	comp=Z,57nm,1.4s						
MCARA	**McCarthy VSAT**	22.92	50	IAmb	IAmb	07 05 50.1	
	comp=Z,32nm,0.8s						
MCARA	**McCarthy VSAT**	22.92	50	P	P	07 05 48.2	-0.8
	baz=263,SNR=16						
H25K	**Birch Creek**	22.93	37	P	P	07 05 48.2	-0.8
	baz=249						
TGL	**Tana Glacier**	22.94	52	IAmb	IAmb	07 05 50.9	
	comp=Z,33nm,0.7s						
SCRK	**Sand Creek**	22.96	44	P	P	07 05 47.7	-1.9
	baz=256						
G25K	**Bearman Lake**	23.02	36	P	P	07 05 48.6	-1.3
	baz=247						
L26K	**Log Cabin Wild**	23.03	46	P	P	07 05 49.8	-0.3
	baz=259						
C23K	**Itkillik River**	23.06	27	P	P	07 05 50.1	-0.1
	baz=235						
M26K	**Nabesna, AK**	23.08	48	P	P	07 05 49.8	-0.8
	baz=261						
ISLE	**Juniper Island**	23.17	52	IAmb	IAmb	07 05 52.9	
	comp=Z,20nm,0.8s						
D24K	**Happy Valley**	23.21	29	P	P	07 05 50.7	-0.9
	baz=239						
FYU	**Fort Yukon**	23.26	37	P	P	07 05 49.9	-2.3
FYU				IAmb	IAmb	07 06 19.6	
	comp=Z,18nm,1.0s						
J26L	**Joseph Creek**	23.27	42	P	P	07 05 51.0	-1.4
	baz=256						
MESA	**MESA**	23.34	54	P	P	07 05 52.1	-1.1
	baz=267,SNR=12						
YAH	**Yahtse**	23.45	53	IAmb	IAmb	07 05 56.0	
	comp=Z,35nm,0.8s						
F25K	**Christian Rive**	23.51	34	P	P	07 05 53.7	-0.8
	baz=246						
C24K	**Franklin Bluff**	23.55	28	P	P	07 05 54.6	-0.1
	baz=238						
YSS	**Yuzh-Sakhalins**	23.58	272	*e*P	P	07 05 55.9	+0.7
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
M27K	**Edge Creek, AK**	23.59	48	IAmb	IAmb	07 05 57.2	
	comp=Z,17nm,0.8s						
M27K	**Edge Creek, AK**	23.59	48	P	P	07 05 54.8	-0.6
	baz=262,SNR=6.7						
I26K	**Coal Creek Min**	23.66	41	P	P	07 05 55.2	-0.5
	baz=254						
CTG	**Chitna Glacier**	23.69	52	P	P	07 05 55.4	-0.9
	baz=266,SNR=19						
L27K	**Beaver Creek,**	23.72	46	P	P	07 05 55.3	-1.1
	baz=261						
E25K	**Arctic Village**	23.76	33	P	P	07 05 56.7	0.0
	baz=245						
K27K	**Chicken**	23.80	44	P	P	07 05 56.6	-0.4
	baz=258						
G26K	**Porcupine Rive**	23.94	36	P	P	07 05 57.9	-0.3
	baz=250,SNR=8.1						
D25K	**Kavik River**	24.05	30	P	P	07 05 59.3	+0.1
	baz=242,SNR=9.7						
BVCY	**Beaver Creek**	24.07	48	P	P	07 05 58.8	-0.7
	baz=263,SNR=5.4						
F26K	**Sheenjek River**	24.08	35	P	P	07 05 59.3	-0.3
	baz=248,SNR=10						
PCA	**Pinnacle**	24.18	54	IAmb	IAmb	07 06 27.7	
	comp=Z,28nm,0.8s						
PINM	**Pinnacle**	24.18	54	P	P	07 05 59.6	-1.0
	baz=269,SNR=8.3						
YUK3	**Moose Creek**	24.18	50	P	P	07 05 59.7	-1.0
	baz=265,SNR=43						
O28M	**Mount Upton**	24.24	52	P	P	07 06 00.2	-1.2
	baz=268,SNR=66						
EGAK	**Eagle**	24.35	42	P	P	07 06 01.1	-0.9
	baz=258						
I27K	**Kandik River**	24.36	40	P	P	07 06 01.2	-0.9
	baz=255						
H27K	**Steamboat Moun**	24.56	39	P	P	07 06 03.6	-0.4
	baz=254						
PNL	**Peninsula**	24.61	55	P	P	07 06 03.2	-1.2
	baz=271						
G27K	**Doyon Strip**	24.68	37	P	P	07 06 05.0	0.0
	baz=253						
C26K	**Camden Bay**	24.78	29	P	P	07 06 05.8	0.0
	baz=242						
DAWY	**Dawson**	24.96	44	IAmb	IAmb	07 06 10.3	
	comp=Z,17nm,0.7s						
DAWY	**Dawson**	24.96	44	P	P	07 06 06.8	-0.8
	baz=261,SNR=6.7						
YUK4	**Talbot Arm**	25.02	51	P	P	07 06 08.4	+0.1
	baz=268,SNR=65						
C27K	**Jago River**	25.02	31	P	P	07 06 06.9	-1.2
	baz=244						
O29M	**Mount Kennedy**	25.02	53	P	P	07 06 07.2	-1.1
	baz=270,SNR=6.7						
YUK6	**Outpost Mounta**	25.14	52	P	P	07 06 08.5	-1.0
	baz=269,SNR=15						
E27K	**Coleen River**	25.16	34	P	P	07 06 09.1	-0.2
	baz=250						
M29M	**Somme Creek**	25.18	48	P	P	07 06 08.6	-1.1
	baz=265,SNR=16	

SKAG	Skagway	26.68	55	P	P	07 06 22.4	-0.7
	baz=274						
G30M	tAoh Zraii Nji	26.80	38	P	P	07 06 23.5	-0.6
	baz=258						
WHY	Whitehorse	26.85	52	P	P	07 06 24.1	-0.6
	baz=272						
SIT	Sitka	26.95	60	P	P	07 06 23.9	-1.6
	baz=279						
M31M	Drury Creek, Y	27.06	49	IAmb	IAmb	07 06 32.0	
	comp=Z,10nm,0.7s						
M31M	Drury Creek, Y	27.06	49	P	P	07 06 25.7	-0.9
	baz=270,SNR=10						
R32K	Eaglecrest	27.22	58	P	P	07 06 26.4	-1.6
	baz=277						
JIS	Juneau Island	27.29	58	IAmb	IAmb	07 06 29.3	
	comp=Z,12nm,0.9s						
S32K	Killisnoo	27.30	59	P	P	07 06 26.5	-2.1
	baz=279						
P32M	Atlin	27.50	55	P	P	07 06 30.0	-0.4
	baz=275						
FARO	Faro, Yukon	27.55	49	P	P	07 06 30.6	-0.3
	baz=271						
N32M	Quiet Lake	27.71	51	P	P	07 06 31.4	-0.9
	baz=273						
YAK	Yakutsk	27.83	311	LR	LR	07 16 11.1	
	comp=Z,30nm,21.1s,baz=90,slow=33						
F31M	Tsiigehtchic	27.84	38	P	P	07 06 32.0	-1.3
	baz=260						
P33M	Teslin, Yukon	27.89	53	P	P	07 06 32.1	-1.9
	baz=275						
INK	Inuvik	28.08	36	P	P	07 06 35.5	0.0
	comp=Z,2.0nm,0.6s,baz=232,slow=7.9,SNR=9.4						
INK				LR	LR	07 18 22.4	
	comp=Z,36nm,18.2s,baz=360,slow=38						
	comp=Z,2.0nm,0.6s						
INK	Inuvik	28.08	36	P	P	07 06 34.3	-1.2
	baz=259						
Q32M	Nakina River	28.30	56	P	P	07 06 37.0	-0.8
	baz=278						
U33K	Whale Pass	28.32	62	P	P	07 06 37.0	-0.7
	baz=282						
MMPY	Sheldon Lake,	28.52	48	P	P	07 06 39.3	-0.3
	baz=272,SNR=5.9						
WRAK	Wrangell Islan	28.68	61	P	P	07 06 40.2	-0.7
	baz=282						
R33M	Jennings River	28.91	55	P	P	07 06 41.8	-1.3
	baz=278,SNR=6.6						
S34M	Telegraph Cree	29.05	58	P	P	07 06 43.0	-1.2
	baz=280						
V35K	Ketchikan	29.33	63	P	P	07 06 45.4	-1.2
	baz=285						
KLR	Kul'dur	29.41	284	P	P	07 06 47.5	0.0
	comp=Z,14nm,0.7s,baz=65,slow=8.2,SNR=45						
	comp=Z,14nm,0.7s						
KLR	Kul'dur	29.41	284	*ce*P	P	07 06 46.7	-0.8
KLR				pmax	pmax		
	comp=Z,14nm,0.6s						
DLBC	Dease Lake	29.54	57	P	P	07 06 47.7	-0.9
	comp=Z,3.9nm,0.7s,baz=289,slow=9.6,SNR=10						
DLBC				LR	LR	07 19 03.6	
	comp=Z,81nm,18.0s,baz=290,slow=37						
	comp=Z,3.9nm,0.7s						
DLBC	Dease Lake	29.54	57	P	P	07 06 47.1	-1.5
	baz=280						
T35M	Bob Quinn	29.70	60	P	P	07 06 48.3	-1.7
	baz=282						
TGTN	Hyland Airport	29.99	50	P	P	07 06 51.4	-1.1
	baz=276						
ZEA	Zeya	30.49	294	*e*P	P	07 06 56.4	-0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
A36M	Sachs Harbour	31.53	30	P	P	07 07 05.5	-0.4
	baz=261						
USRK	Ussuriysk Ar.	31.55	275	P	P	07 07 06.4	+0.1
	comp=Z,6.6nm,0.8s,baz=49,slow=7.4,SNR=19						
USRK				PcP	PcP	07 09 57.1	+1.0
	comp=Z,4.7nm,0.7s,baz=38,slow=3.4,SNR=12						
	comp=Z,6.6nm,0.8s						
C36M	Paulatuk	31.62	35	P	P	07 07 05.6	-1.1
	baz=267						
WRGLY	Wrigley	32.04	46	P	P	07 07 09.3	-1.1
	baz=277						
MJAR	Matsushiro Arr	32.19	258	P	P	07 07 13.9	+1.8
	comp=Z,2.0nm,0.6s,baz=58,slow=6.1,SNR=6.9						
MJAR				LR	LR	07 18 33.1	
	comp=Z,14nm,21.3s,baz=40,slow=33						
	comp=Z,2.0nm,0.6s						
BBB	Bella Bella	32.27	68	LR	LR	07 18 58.0	
	comp=Z,31nm,21.9s,baz=9.5,slow=34						
H11N2	WAKE ISLAND Hy	33.29	200	T	T	07 42 47.8	
	baz=11,slow=76,SNR=45						
H11N3	WAKE ISLAND Hy	33.30	200	T	T	07 43 07.3	
	baz=11,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	33.31	200	T	T	07 42 49.1	
	baz=11,slow=76,SNR=47						
H11S1	WAKE ISLAND Hy	34.52	200	T	T	07 44 32.0	
	baz=10,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	34.54	200	T	T	07 44 34.2	
	baz=10,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	34.54	200	T	T	07 44 33.7	
	baz=10,slow=76,SNR=10						
YKA	Yellowknife Ar	36.16	46	P	P	07 07 46.3	+0.3
	comp=Z,2.8nm,0.7s,baz=284,slow=7.4,SNR=7.8						
YKA				pP	pP	07 08 13.1	+1.9
	comp=Z,2.8nm,0.7s,baz=280,slow=8.3,SNR=4.6						
YKA				S	S	07 13 19.1	+2.1
	comp=Z,2.5nm,0.9s,baz=298,slow=15,SNR=3.5						
YKA				LR	LR	07 23 21.8	
	comp=Z,54nm,19.5s,baz=318,slow=37						
	comp=Z,2.8nm,0.7s						
KSRS	Korea Array	37.93	268	P	P	07 08 03.2	+1.9
	comp=Z,5.2nm,0.9s,baz=56,slow=9.1,SNR=9.6						
KSRS				PcP	PcP	07 10 15.4	+0.7
	comp=Z,2.4nm,0.8s,baz=43,slow=1.8,SNR=6.6						
	comp=Z,5.2nm,0.9s						
NEW	Newport	40.32	69	LR	LR	07 25 33.6	
	comp=Z,24nm,18.5s,baz=288,slow=37						
NEW	Newport	40.32	69	P	P	07 08 20.2	-0.9
NEW				IAmb	IAmb	07 08 20.9	
	comp=Z,9.6nm,1.1s						
NEW	Newport	40.32	69	P	P	07 08 20.2	-0.9
NEW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NEW	Newport	40.32	69	P	P	07 08 19.6	-1.5
	baz=300,SNR=5.4						
YBH	Yreka Blue Hor	40.50	80	LR	LR	07 23 03.6	
	comp=Z,24nm,18.1s,baz=310,slow=33						
YBH	Yreka Blue Hor	40.50	80	P	P	07 08 23.4	+0.7
YBH				IAmb	IAmb	07 08 25.0	
	comp=Z,6.7nm,0.9s						
YBH	Yreka Blue Hor	40.50	80	P	P	07 08 23.4	+0.7
YBH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XLT	XiLinHaoTe	41.42	285	⇓*i*P	P	07 08 30.9	+0.7
XLT				pP	pP	07 08 59.9	+3.7
XLT				sP	sP	07 09 02.9	-6.3
XLT				PcP	PcP	07 10 26.8	+0.8
XLT				pmax	pmax		
	comp=Z,24nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,4.2s						
WALA	Waterton Lakes	41.76	66	P	P	07 08 31.4	-1.5
WALA				IAmb	IAmb	07 08 49.9	
	comp=Z,13nm,1.5s						
MOD	Modoc Plateau	41.87	79	IAmb	IAmb	07 08 36.0	
	comp=Z,5.5nm,0.6s						
MSO	Missoula	42.91	69	P	P	07 08 40.7	-1.6
	baz=303						
BEKR	Beckworth	43.04	81	P	P	07 08 43.5	0.0
BEKR				pP	pP	07 09 09.5	-0.2
NRIK	Noril'sk	43.14	329	P	P	07 08 44.1	+0.4
	comp=Z,7.3nm,0.8s,baz=61,slow=8.2,SNR=4.7						
	comp=Z,7.3nm,0.8s						
NRIK	Noril'sk	43.14	329	*ce*P	P	07 08 43.3	-0.4
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MPK	Martis Peak	43.59	82	IAmb	IAmb	07 08 49.6	
	comp=Z,24nm,1.3s						
BJI	Beijing	43.61	280	P	P	07 08 48.8	+1.0
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
PAHR	Pah Rah Range	43.73	81	P	P	07 08 49.2	+0.2
PAHR				IAmb	IAmb	07 08 51.0	
	comp=Z,18nm,1.5s						
PAHR					pP	07 09 14.4	-0.9
VCNR	Virginia City	43.82	81	P	P	07 08 50.5	+0.7
VCNR					pP	07 09 16.9	+0.8
VCNR				IAmb	IAmb	07 09 18.5	
	comp=Z,5.8nm,0.8s						
PNTR	Pine Nut	43.98	81	P	P	07 08 52.1	+1.0
YERR	Yerington	44.26	81	P	P	07 08 53.6	+0.3
YERR					pP	07 09 20.6	+1.0
YERR				IAmb	IAmb	07 09 21.4	
	comp=Z,9.9nm,1.3s						
LRM	Limekiln Ridge	44.32	69	P	P	07 08 52.4	-1.3
WAKR	Walker	44.44	82	P	P	07 08 55.6	+0.8
WAKR				IAmb	IAmb	07 08 56.5	
	comp=Z,11nm,1.3s						
WAKR					pP	07 09 21.6	+0.6
HLID	Hailey	44.45	73	P	P	07 08 54.1	-0.7
HLID	Hailey	44.45	73	P	P	07 08 53.3	-1.4
	baz=306,SNR=7.5						
ULN	Ulaanbaatar	44.52	294	P	P	07 08 53.6	-1.6
ULN				IAmb	IAmb	07 08 56.3	
	comp=Z,8.2nm,0.9s						
ULN	Ulaanbaatar	44.52	294	*ce*P	P	07 08 54.7	-0.5
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BCYI	Bear Canyon	44.62	72	P	P	07 08 55.5	-0.6
EGMT	Eagleton	44.65	65	P	P	07 08 54.7	-1.5
	baz=303						
SONM	Songino Array	44.91	295	P	P	07 08 58.9	+0.7
	comp=Z,4.9nm,0.6s,baz=58,slow=9.3,SNR=22						
SONM				PcP	PcP	07 10 38.2	+0.5
	comp=Z,2.7nm,0.7s,baz=56,slow=2.7,SNR=8.8						
SONM				ScP	ScP	07 14 19.7	+0.4
	comp=Z,1.4nm,0.7s,baz=64,slow=3.4,SNR=5.5						
	comp=Z,4.9nm,0.6s						
SONM	Songino Array	44.91	295	P	P	07 08 58.1	-0.2
SONM	Songino Array	44.91	295	P	P	07 08 58.1	-0.2
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KVN	Kaiserville	44.92	81	P	P	07 08 58.4	-0.2
KVN				pP	pP	07 09 25.0	0.0
BOZ	Bozeman (W)	44.92	69	P	P	07 08 57.0	-1.5
BOZ	Bozeman (W)	44.92	69	P	P	07 08 57.0	-1.5
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOZ	Bozeman (W)	44.92	69	P	P	07 08 56.5	-1.9
	baz=305,SNR=7.5						
RYN	Ryan	44.92	81	P	P	07 08 57.9	-0.6
RYN				IAmb	IAmb	07 08 59.8	
	comp=Z,9.2nm,1.2s						
RYN					pP	07 09 24.3	-0.7
LHV	Little Huntoon	45.17	82	IAmb	IAmb	07 09 03.3	
	comp=Z,12nm,1.4s						
NVAR	Mina Array Bea	45.18	81	P	P	07 09 01.3	+0.6
	comp=Z,3.4nm,0.7s,baz=293,slow=7.6,SNR=28						
NVAR				pP	pP	07 09 28.4	+1.3
	comp=Z,2.8nm,0.6s,baz=301,slow=8.3,SNR=10						
NVAR				ScP	ScP	07 14 19.2	-1.4
	comp=Z,0.7nm,0.7s,baz=327,slow=4.6,SNR=6.1						
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	45.18	81	P	P	07 09 01.0	+0.4
NVAR					pP	07 09 26.8	-0.2
MDPB	Devils Postpil	45.21	83	IAmb	IAmb	07 09 02.8	
	comp=Z,6.3nm,0.8s						
ZAK	Zakamensk	45.25	299	*e*P	P	07 09 00.4	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NV11	Mina Array Sit	45.27	81	P	P	07 09 00.8	-0.5
NV11					pP	07 09 27.8	+0.1
ELK	Elko	45.63	77	LR	LR	07 26 05.8	
	comp=Z,35nm,18.1s,baz=312,slow=33						
YHB	Horse Butte	45.66	70	IAmb	IAmb	07 09 04.2	
	comp=Z,7.4nm,0.8s						
HHC	Hu-ho-hao-te	45.92	284	*e*P	P	07 09 07.1	+0.8
HHC				pmax	pmax		
	comp=Z,28nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
DSP	Deep Springs	46.05	82	P	P	07 09 07.2	0.0
DSP					pP	07 09 33.9	+0.4
DSP				IAmb	IAmb	07 09 36.5	
	comp=Z,13nm,1.3s						
HNS	HongShan	46.15	278	⇓P	P	07 09 09.1	+1.2
HNS				pmax	pmax		
	comp=Z,24nm,0.8s						
H17A	Grant Village	46.23	70	P	P	07 09 06.8	-2.1
	baz=306						
LCH	Last Change Ra	46.34	82	IAmb	IAmb	07 09 38.4	
	comp=Z,9.2nm,1.3s						
VES	Vestal, Richgr	46.35	85	P	P	07 09 07.6	-2.0
	baz=311						
HVU	Hansel Valley	46.48	74	IAmb	IAmb	07 09 12.1	
	comp=Z,3.4nm,0.5s						
PKM	Mcpherson Peak	46.52	86	P	P	07 09 08.7	-2.4
	baz=312						
RLMT	Red Lodge	46.56	68	P	P	07 09 09.3	-2.1
	baz=306						
CWC	Cottonwood Cre	46.58	83	P	P	07 09 09.5	-2.1
	baz=310						
GRAC	Grapevine Rang	46.66	82	P	P	07 09 10.1	-2.0
	baz=310						
R11A	Troy Canyon, C	46.90	80	P	P	07 09 13.8	-0.3
	baz=309,SNR=11						
NJ2	Nanjing	47.10	269	*e*P	P	07 09 16.3	+0.9
NJ2				pmax	pmax		
	comp=Z,17nm,1.0s						
MPMC	Manual Prospec	47.19	83	P	P	07 09 15.4	-1.0
	baz=311,SNR=5.6						
WCT	Wildcat Mounta	47.25	82	P	P	07 09 15.9	-0.8
WCT					pP	07 09 42.8	-0.5
FURC	Furnace Creek,	47.31	82	P	P	07 09 16.2	-0.8
	baz=311						
TPNV	Topopah Spring	47.38	81	IAmb	IAmb	07 09 19.1	
	comp=Z,7.5nm,0.9s						
TPNV	Topopah Spring	47.38	81	P	P	07 09 17.2	-0.6
	baz=310,SNR=7.6						
DUG	Dugway, Tooele	47.42	76	P	P	07 09 17.4	-0.7
DUG					pP	07 09 44.4	-0.2
DUG	Dugway, Tooele	47.42	76	P	P	07 09 17.4	-0.7
DUG				*PP	pP	07 09 44.4	-0.2
DUG	Dugway, Tooele	47.42	76	P	P	07 09 17.2	-0.9
	baz=309,SNR=6.0						
LRMC	Laurel Mtn Rad	47.45	84	P	P	07 09 16.9	-1.4
	baz=311						
GWY	Greenwater Val	47.61	83	P	P	07 09 19.8	+0.2
GWY				pP	pP	07 09 45.9	-0.2
GWY				IAmb	IAmb	07 09 48.0	
	comp=Z,8.3nm,1.0s						
EDW2	Edwards Air Fo	47.65	85	P	P	07 09 18.3	-1.5
	baz=312						
BW06	Boulder Array	47.79	71	P	P	07 09 19.1	-1.9
	baz=308						
PD31	Pinedale Array	47.79	71	P	P	07 09 19.3	-1.7
PD31					pP	07 09 46.9	-0.7
PDAR	Pinedale Array	47.79	71	P	P	07 09 20.1	-0.9
	comp=Z,1.9nm,0.7s,baz=317,slow=4.0,SNR=17						
PDAR				pP	pP	07 09 48.5	+1.0
	comp=Z,1.7nm,0.6s,baz=309,slow=3.4,SNR=6.7						
PDAR				ScP	ScP	07 14 29.6	-2.0
	comp=Z,0.5nm,0.9s,baz=328,slow=5.3,SNR=4.4						
	comp=Z,1.9nm,0.7s						
PRN	Pahroc Range	47.82	80	IAmb	IAmb	07 09 49.7	
	comp=Z,7.0nm,0.9s						
DECC	Green Verdugo	47.85	86	P	P	07 09 20.2	-1.1
	baz=312						
SHOC	Shoshone, Teco	48.04	83	P	P	07 09 21.6	-1.1
	baz=311						
GSC	Goldstone, Bar	48.11	84	P	P	07 09 23.6	+0.2
GSC				IAmb	IAmb	07 09 24.6	
	comp=Z,8.5nm,0.6s						
GSC				pP	pP	07 09 49.5	-0.4
GSC	Goldstone, Bar	48.11	84	P	P	07 09 22.4	-1.0
	baz=311,SNR=5.6						
FMP	Fort Macarthur	48.24	86	P	P	07 09 22.2	-1.9
	baz=312						
TUQ	Turquoise Moun	48.56	83	P	P	07 09 25.8	-1.0
	baz=311						
HEC	Hector,Ludlow	48.71	84	P	P	07 09 26.9	-1.1
	baz=312						
TMUT	Trail Mountain	48.95	76	IAmb	IAmb	07 10 00.1	
	comp=Z,3.6nm,0.7s						
MURC	Murrieta	48.99	86	P	P	07 09 29.2	-0.9
	baz=312						
RDMU	Red Mountain	49.13	73	IAmb	IAmb	07 09 31.8	
	comp=Z,11nm,1.1s						
GMRC	Granite Mounta	49.15	83	P	P	07 09 30.4	-1.0
	baz=312						
LCMT	Little Creek M	49.18	79	IAmb	IAmb	07 10 00.2	
	comp=Z,5.6nm,1.1s						
LYN	LuoYang	49.37	277	⇓P	P	07 09 32.8	-0.1
LYN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BELC	Belle Mtn. Jos	49.47	84	P	P	07 09 32.0	-1.8
	baz=312						
IRM	Iron Mountain	49.89	84	P	P	07 09 35.5	-1.3
	baz=312						
MONP2	Monument Peak	49.95	86	P	P	07 09 35.6	-1.9
	baz=313						
BC3	Big Chuckawall	50.03	84	P	P	07 09 36.3	-1.8
	baz=313						
O20A	White River Ci	50.19	73	P	P	07 09 37.7	-1.6
	baz=310						
GLA	Glamis	50.83	84	P	P	07 09 43.6	-0.3
	baz=313						
WHN	Wuhan	50.93	271	⇑P	P	07 09 45.3	+0.7
WHN				pmax	pmax		
	comp=Z,54nm,0.8s						
PV11	David Mesa, Pa	50.99	75	IAmb	IAmb	07 10 14.4	
	comp=Z,6.2nm,0.6s						
N23A	Red Feather La	51.07	71	P	P	07 09 44.9	-1.0
	baz=310						
PV13	Radium Mtn., P	51.11	75	IAmb	IAmb	07 09 46.5	
	comp=Z,7.9nm,0.6s						
WUAZ	Wupatki	51.30	80	P	P	07 09 47.1	-0.5
	baz=312						
XAN	Xi'an	51.90	279	P	P	07 09 52.0	+0.1
XAN				pP	pP	07 10 20.9	+2.0
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
MVCO	Mesa Verde	51.92	76	P	P	07 09 51.5	-0.8
	baz=311						
ISCO	Idaho Springs	51.96	72	P	P	07 09 51.6	-1.0
	baz=310						
ZALV	Zalesovo Beam	52.47	312	P	P	07 09 54.7	-1.1
	comp=Z,0.6nm,0.3s,baz=30,slow=8.9,SNR=2.5						
ZALV				PcP	PcP	07 11 05.0	+0.2
	comp=Z,6.5nm,0.7s,baz=22,slow=4.0,SNR=15						
ZALV				LR	LR	07 31 58.4	
	comp=Z,14nm,19.3s,baz=50,slow=36						
	comp=Z,0.6nm,0.3s						
W18A	Petrified Fore	52.56	79	P	P	07 09 55.9	-1.1
	baz=312						
S22A	4UR Ranch, Cre	52.58	74	P	P	07 09 56.6	-0.5
	baz=311						
214A	Organ Pipe Nat	52.82	84	P	P	07 09 57.0	-1.7
	baz=314						
SDCO	Great Sand Dun	53.37	73	P	P	07 10 01.8	-1.2
	baz=312						
GTA	Gaotai	53.81	290	⇓P	P	07 10 06.3	+0.3
GTA				pmax	pmax		
	comp=Z,18nm,0.7s						
TUC	Tucson	53.82	82	P	P	07 10 05.9	-0.2
TUC				pP	pP	07 10 32.1	-1.0
TUC				IAmb	IAmb	07 10 35.0	
	comp=Z,4.2nm,1.0s						
TUC	Tucson	53.82	82	P	P	07 10 05.9	-0.2
TUC				*PP	pP	07 10 32.1	-1.0
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	Tucson	53.82	82	P	P	07 10 05.0	-1.1
	baz=314						
DGZ	Jazzator, Alta	53.90	307	*i* P	P	07 10 04.8	-1.7
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
T25A	Trinidad	54.42	73	P	P	07 10 08.8	-1.8
	baz=312						
ECSD	EROS Data Cent	54.55	62	P	P	07 10 09.5	-1.6
	baz=311						
CBKS	Cedar Bluff	56.04	69	P	P	07 10 21.3	-0.7
	baz=312						
ARCES	ARCESS Array B	57.34	349	P	P	07 10 30.0	-0.6
	comp=Z,3.7nm,0.7s,baz=31,slow=7.2,SNR=8.8						
	comp=Z,3.7nm,0.7s						
ARCES	ARCESS Array B	57.34	349	P	P	07 10 30.0	-0.6
KURK	Kurchatov	57.46	312	P	P	07 10 30.9	-0.8
KURK	Kurchatov	57.46	312	*ce*P	P	07 10 31.5	-0.2
KURK				pmax	pmax		
	comp=Z,19nm,1.0s						
MSTX	Muleshoe	57.55	75	P	P	07 10 32.2	-0.5
	baz=314						
KURBB	Kurchatov Arra	57.56	312	S	S	07 18 23.3	+2.3
	comp=Z,0.5nm,0.8s,baz=44,slow=11,SNR=4.6						
AMTX	Amarillo	57.57	73	P	P	07 10 32.2	-0.6
	baz=314						
WMQ	Urumqi	57.65	301	*e*P	P	07 10 35.7	+2.4
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
MKAR	Makanchi Array	58.40	307	P	P	07 10 37.5	-1.0
	comp=Z,4.4nm,0.6s,baz=51,slow=6.7,SNR=41						
	comp=Z,4.4nm,0.6s						
MAKZ	Makanchi	58.55	307	P	P	07 10 38.0	-1.3
MAKZ				IAmb	IAmb	07 10 39.3	
	comp=Z,7.4nm,0.7s						
MAKZ	Makanchi	58.55	307	P	P	07 10 38.1	-1.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JFWS	Jewell Farm	58.55	59	P	P	07 10 38.4	-1.1
	baz=314						
GOMU	GeErMu	58.89	290	P	P	07 10 42.0	-0.4
GOMU				pP	pP	07 11 08.7	-1.3
GOMU				sP	sP	07 11 23.8	+1.2
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMOK	Wichita Mounta	59.39	72	P	P	07 10 44.9	-0.5
	baz=315						
BVAR	Borovoye Array	59.42	318	LR	LR	07 37 27.6	
	comp=Z,27nm,18.5s,baz=49,slow=37						
BRVK	Borovoye	59.44	318	P	P	07 10 45.0	-0.4
BRVK	Borovoye	59.44	318	P	P	07 10 45.0	-0.4
BRVK				pmax	pmax		
	comp=Z,11nm,0.6s						
TX31	Lajitas Ar. Si	60.26	79	P	P	07 10 51.4	-0.2
TX32	Lajitas Array	60.26	79	P	P	07 10 50.9	-0.6
TX32				IAmb	IAmb	07 11 21.1	
	comp=Z,3.8nm,1.1s						
TXAR	Lajitas Array	60.26	79	P	P	07 10 51.4	-0.2
	comp=Z,1.2nm,0.5s,baz=309,slow=5.1,SNR=37						
TXAR				ScP	ScP	07 15 24.6	-1.3
	comp=Z,0.5nm,0.8s,baz=287,slow=2.9,SNR=4.8						
	comp=Z,1.2nm,0.5s						
TXAR	Lajitas Array	60.26	79	P	P	07 10 51.2	-0.3
PRGR	Permogore	60.82	336	*e*P	P	07 10 53.7	-1.0
PRGR				pmax	pmax		
	comp=Z,22nm,1.0s						
ARU	Arti	61.30	327	P	P	07 10 57.7	-0.3
ARU	Arti	61.30	327	*c i* P	P	07 10 58.1	+0.1
ARU				*PP	pP	07 11 26.0	+0.6
ARU						07 13 14.7	
ARU				S	S	07 19 11.7	+2.8
ARU				SS	SS	07 23 15.5	+5.3
ARU				pmax	pmax		
	comp=Z,23nm,0.7s						
PZH	PanZhiHua	61.59	277	P	P	07 11 01.0	+0.5
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
SFIN	Lafayette	62.01	60	P	P	07 11 02.3	-0.7
	baz=316						
WHTX	Lake Whitney,	62.11	73	P	P	07 11 03.2	-0.6
	baz=316						
KIRV	Kirov	62.40	333	*ce*P	P	07 11 06.3	+1.0
MIAR	Mount Ida	62.56	68	P	P	07 11 06.1	-0.7
	baz=316						
TARG	Taragay, Kyrgy	64.27	305	P	P	07 11 17.1	-1.4
TARG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TKM2	Tokmak 2	64.49	307	⇑Pn	P	07 11 19.1	-0.5
	comp=Z,9.1nm,1

comp=Z,5.0nm,1.1s
SIJI Sorong 65.81 234 P **P 07 11 28.6 +0.5**
comp=Z,27nm,0.5s,baz=180,slow=24,SNR=36
ABKAR Akbulak array 66.53 321 P **P 07 11 32.1 -0.2**
ABKAR Akbulak array 66.53 321 IAmb IAmb 07 11 33.6
comp=Z,18nm,1.2s
KSH Kashi 66.85 305 P **P 07 11 38.6 +3.9**
KSH pmax pmax
comp=Z,11nm,0.6s
NB2 NORSAR Subarra 67.02 353 P **P 07 11 33.9 -1.4**
comp=Z,0.7nm,0.6s,baz=7.0,slow=6.5
NOA NORSAR Array B 67.02 353 P **P 07 11 34.2 -1.1**
comp=Z,1.0nm,0.6s,baz=11,slow=6.4,SNR=4.9
NOA pP **pP 07 12 03.6 +0.5**
comp=Z,3.6nm,0.9s,baz=8.6,slow=6.4,SNR=6.4
comp=Z,1.0nm,0.6s
TKL Tuckaleechee C 67.25 61 LR LR 07 39 30.8
comp=Z,39nm,19.6s,baz=170,slow=34
BELG Belogornoye 68.22 330 *i* P **P 07 11 42.8 -0.1**
BELG pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 68.82 338 *e*P **P 07 11 45.2 -1.4**
OBN *e* 07 14 18.2
OBN pmax pmax
comp=Z,8.0nm,1.0s
BTK Batken 69.00 308 IAmb IAmb 07 11 49.4
comp=Z,12nm,0.8s
BTK Batken 69.00 308 P **P 07 11 48.7 +0.6**
BTK pmax pmax
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 69.27 274 P **P 07 11 50.7 +0.7**
comp=Z,2.9nm,0.5s,baz=24,slow=7.2,SNR=17
comp=Z,2.9nm,0.5s
GUN Gumba 70.10 290 *e*P **P 07 11 56.2 +0.8**
comp=Z,85nm,0.6s
JIRN Jiri 70.10 290 *e*P **P 07 11 56.2 +0.8**
comp=Z,85nm,0.8s
RAMN Ramite 70.39 289 *e*P **P 07 11 57.6 +0.5**
KKN Kakani 70.54 290 *e*P **P 07 11 58.6 +0.7**
comp=Z,8.3nm,0.8s
PKI Pulchoki 70.63 290 *e*P **P 07 11 59.0 +0.4**
comp=Z,51nm,0.6s
PKIN Phulchoki 70.63 290 *e*P **P 07 11 59.0 +0.5**
comp=Z,47nm,0.6s
GKN Gorkha 70.75 291 *e*P **P 07 11 59.3 +0.2**
comp=Z,79nm,0.8s
DMN Daman 70.77 290 *e*P **P 07 11 59.9 +0.5**
comp=Z,46nm,0.8s
DANN Dangsing 71.00 292 *e*P **P 07 12 01.4 +0.7**
comp=Z,82nm,0.8s
MNK Minsk 71.23 342 *i* P **P 07 12 00.1 -1.2**
MNK *i* *PP **pP 07 12 29.9 +0.5**
MNK *i* 07 14 39.4
MNK *i* PPP PPP 07 16 23.4
MNK *i* S **S 07 21 08.3 -0.6**
MNK *i* SS **SS 07 25 45.6 +1.9**
MNK pmax pmax
comp=Z,12nm,0.9s
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK pmax pmax
comp=N,53nm,0.8s
MNK MLR MLR
comp=E,175nm,19.0s
MNK MLR MLR
comp=Z,83nm,15.0s
MNK MLR MLR
comp=N,6μm,21.0s
MNK Minsk 71.23 342 *i* P **P 07 12 00.2 -1.2**
comp=E,4.0nm,0.8s
MNK *i* P **P 07 12 00.2 -1.2**
comp=N,53nm,0.8s
MNK *i* P **P 07 12 00.2 -1.2**
comp=Z,12nm,0.8s,baz=19
MNK *i* pP **pP 07 12 30.0 +0.5**
MNK *i* PP **PP 07 14 39.5 -0.5**
MNK *i* PPP PPP 07 16 23.4
MNK *i* S **S 07 21 08.4 -0.6**
MNK *i* SS **SS 07 25 45.6 +1.9**
MNK *i* SSS SSS 07 29 05.5
MNK *i* LRM MLR 07 46 10.7
comp=E,175nm,18.6s
MNK *i* LRM MLR 07 46 14.1
comp=Z,83nm,15.2s
MNK *i* LRM MLR 07 46 16.6
comp=N,6μm,21.2s
KOLN Koldanda 71.53 291 *e*P **P 07 12 03.5 -0.3**
PYUN Piuthan 71.63 292 *e*P **P 07 12 04.8 +0.4**
comp=N,66nm,0.8s
NIL Nilore 72.74 303 P **P 07 12 11.1 +0.3**
NIL Nilore 72.74 303 P **P 07 12 11.1 +0.3**
NIL pmax pmax
comp=Z,22nm,1.0s
KBL Kabul 74.20 306 P **P 07 12 18.7 -0.8**
KBL Kabul 74.20 306 P **P 07 12 18.7 -0.8**
KBL pmax pmax
comp=Z,20nm,0.7s
AKASG Malin Array Be 74.57 340 P **P 07 12 19.9 -1.2**
comp=Z,2.0nm,0.5s,baz=22,slow=6.2,SNR=7.3
AKASG pP **pP 07 12 50.4 +1.0**
comp=Z,3.3nm,0.6s,baz=21,slow=6.3,SNR=6.7
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 74.57 340 *i* P **P 07 12 21.8 +0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 74.57 340 *ce*P **P 07 12 21.0 -0.1**
MTN Manton Dam 76.29 228 P **P 07 12 32.0 +0.7**
GEYT Alibeck 76.58 315 P **P 07 12 33.4 +0.6**
comp=Z,7.2nm,0.9s,baz=333,slow=5.5,SNR=8.9
comp=Z,7.2nm,0.9s
GEYT Alibeck 76.58 315 IAmb IAmb 07 12 34.4
comp=Z,14nm,1.1s
KIV Kislovodsk 77.22 329 *e*P **P 07 12 36.4 0.0**
KIV pmax pmax
comp=Z,7.0nm,0.8s
KBZ Khabaz 77.35 329 P **P 07 12 38.0 +1.0**
comp=Z,4.5nm,0.8s,baz=56,slow=5.1,SNR=8.2
comp=Z,4.5nm,0.8s
SHA1 Shidzhatmaz 77.42 329 *i* P **P 07 12 37.5 -0.2**
ZEI Tsey 77.86 328 *e*P **P 07 12 39.6 -0.6**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
BUR08 Bucovina Ar. S 78.29 342 IAmb IAmb 07 12 44.7
comp=Z,5.1nm,0.8s
TRPA Tarpa 78.31 344 ⇑P **P 07 12 40.9 -1.3**
BURAR Bucovina Array 78.31 342 ⇑P **P 07 12 41.4 -1.0**
BURAR Bucovina Array 78.31 342 P **P 07 12 42.0 -0.4**
BURAR IAmb IAmb 07 12 44.7
comp=Z,4.3nm,0.7s
BURAR Bucovina Array 78.31 342 P **P 07 12 41.4 -1.0**
BIZ Bicaz 78.79 341 ⇑P **P 07 12 44.9 0.0**
GNI Garni 79.93 326 LR LR 07 52 00.5
comp=Z,16nm,18.1s,baz=336,slow=38
VOIR 80.44 341 ⇑P **P 07 12 53.3 -0.7**
VOIR 80.44 341 P **P 07 12 53.7 -0.2**
VOIR pmax pmax
comp=Z,4.0nm,0.8s
GZR Gura Zlata 80.91 343 ⇑P **P 07 12 56.2 -0.2**
WB0 Warramunga Arr 81.01 222 IAmb IAmb 07 12 58.4
comp=Z,10.0nm,0.8s
WR0 Warramunga Arr 81.12 221 IAmb IAmb 07 12 58.9
comp=Z,8.4nm,0.8s
WRAB Tennant Creek 81.17 222 *ce*P **P 07 12 58.3 +0.4**
WRAB pmax pmax
comp=Z,10.0nm,1.7s
WB2 Warramunga Arr 81.18 221 IAmb IAmb 07 12 59.4
comp=Z,12nm,0.8s
WRA Warramunga Arr 81.19 222 P **P 07 12 58.5 +0.5**
comp=Z,6.2nm,0.7s,baz=32,slow=6.1,SNR=52
comp=Z,6.2nm,0.7s
WRA Warramunga Arr 81.19 222 *i* P **P 07 12 58.5 +0.5**
WRA pmax pmax
comp=Z,7.0nm,0.7s
HERR Herculane 81.47 343 ⇑P **P 07 12 56.5 -2.9**
BOVS Bovan 82.81 343 ⇑P **P 07 13 05.0 -1.3**
FITZ Fitzroy Crossi 83.42 230 P **P 07 13 10.8 +1.2**
comp=Z,11nm,0.8s,baz=29,slow=4.5,SNR=21
FITZ LR LR 07 45 00.9
comp=Z,33nm,21.0s,baz=97,slow=32
comp=Z,11nm,0.8s
FITZ Fitzroy Crossi 83.42 230 P **P 07 13 10.7 +1.1**
FITZ IAmb IAmb 07 13 11.7
comp=Z,10nm,0.8s
BRTR Keskin Array B 83.80 333 P **P 07 13 11.6 -0.1**
comp=Z,1.5nm,0.6s,baz=30,slow=2.9,SNR=6.3
comp=Z,1.5nm,0.6s
BRTR Keskin Array B 83.80 333 *i* P **P 07 13 13.1 +1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 84.70 220 P **P 07 13 17.1 +1.0**
comp=Z,3.8nm,0.7s,baz=22,slow=5.3,SNR=36
comp=Z,3.8nm,0.7s
STKA Stephens Creek 89.41 211 P **P 07 13 40.7 +2.1**
comp=Z,6.7nm,0.6s,baz=355,slow=7.3,SNR=16
comp=Z,6.7nm,0.6s
STKA Stephens Creek 89.41 211 P **P 07 13 40.0 +1.4**
STKA Stephens Creek 89.41 211 P **P 07 13 40.0 +1.4**
STKA pmax pmax
comp=Z,2.0nm,0.7s
TORD Torodi Ar. Bea 115.23 357 PKP **PKiKP 07 19 22.1 -1.1**
comp=Z,1.1nm,0.5s,baz=353,slow=2.3,SNR=8.5
DBIC Dimbokro 121.66 4 PKP **PKPdf 07 19 34.9 -0.7**
comp=Z,1.5nm,0.5s,baz=25,slow=2.6,SNR=7.6
VNDA Vanda 129.50 185 PKP **PKiKP 07 19 49.9 +0.5**
comp=Z,1.1nm,1.1s,baz=328,slow=3.0,SNR=4.4
CPUP Villa Florida 131.23 81 SKPbc **SKPbc 07 23 06.4 -1.2**
comp=Z,2.7nm,0.7s,baz=117,slow=6.8,SNR=4.7
PLCA Paso Flores 132.74 105 PKP **PKPdf 07 19 55.9 -0.1**
comp=Z,1.8nm,0.9s,baz=242,slow=5.0,SNR=3.5
PLCA SKPbc **SKPab 07 23 13.6 -0.7**
comp=Z,3.3nm,0.9s,baz=284,slow=4.9,SNR=5.9
MAW Mawson 145.79 218 PKPbc **PKPab 07 20 20.3 +0.2**
comp=Z,11nm,0.8s,baz=82,slow=4.4,SNR=36
BOSA Boshof 149.38 309 PKPbc **PKPbc 07 20 30.9 +0.4**
comp=Z,11nm,0.6s,baz=37,slow=2.5,SNR=33
TROLL Troll, Antarti 159.67 184 PKPab **PKPab 07 21 18.5 +0.3**
SNAA Sanae 160.08 179 PKPab **PKPab 07 21 20.0 0.0**
VNA3 Neumayer Olymp 160.18 172 PKPab **PKPab 07 21 20.7 +0.4**
VNA2 Neumayer--Watz 160.65 174 PKPab **PKPab 07 21 23.0 +0.7**
baz=187,slow=3.0
VNA1 Neumayer--Stat 160.86 173 PKPab **PKPab 07 21 23.6 +0.3**

*NEIC **05** 07:04:05.5±0.5, 63°.85N±0°.04×148°.89W±0°.10,*
h123km±6km, Error ellipse: s-maj=6.5km s-min=5.7km
az=125.0
AEIC 05 07:04:05±0.6, **63°.84N**±0°.01×**148°.90W**±0°.09, **h122**km±5km,
ML2.6/148, **ML2.5**/102(NEIC), **Error ellipse: s-maj=6.1km**
s-min=0.6km az=75.0, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**0.11**	**188**		Pn	07 04 22.4	+0.7
MCK					Sn	07 04 34.8	+0.5
BWN	**Browne**	**0.41**	**323**		Sn	07 04 36.5	+0.5
BWN	**Browne**	**0.41**	**323**		Pn	07 04 23.4	+0.7
RND	**Reindeer**	**0.44**	**177**		Pn	07 04 23.3	+0.4
RND	**Reindeer**	**0.44**	**177**	IAML		07 04 26.4	
RND	comp=N,26nm,0.1s			IAML		07 04 26.9	
	comp=E,17nm,0.1s						
WRH	**Wood River Hil**	**0.72**	**29**		Pn	07 04 25.2	+0.6
WRH					Sn	07 04 39.9	+0.3
TRF	**Thorofare Moun**	**0.73**	**238**		Pn	07 04 25.8	+0.8
TRF					Sn	07 04 41.4	+1.3
NEA2	**Nenana**	**0.76**	**354**		Pn	07 04 25.3	+0.4
NEA2					Sn	07 04 39.9	-0.2
CCB	**Clear Creek Bu**	**0.94**	**30**		Pn	07 04 26.9	+0.4
CCB	**Clear Creek Bu**	**0.94**	**30**	IAML		07 04 43.1	
	comp=E,59nm,0.5s						
KTH	**Kantishna Hill**	**0.95**	**253**		Pn	07 04 27.5	+0.8
KTH	**Kantishna Hill**	**0.95**	**253**	IAML		07 04 44.1	
	comp=E,68nm,0.4s						
KTH				IAML		07 04 44.2	
	comp=N,104nm,0.8s						
BPAW	**Bear Paw Mtn.**	**0.96**	**287**		Pn	07 04 27.2	+0.5
BPAW					Sn	07 04 43.2	-0.1
BPAW	**Bear Paw Mtn.**	**0.96**	**287**	IAML		07 04 43.7	
	comp=E,150nm,0.6s						
HDA	**Harding Lake**	**1.03**	**55**		Pn	07 04 27.9	+0.5
HDA	**Harding Lake**	**1.03**	**55**	IAML		07 04 45.7	
	comp=N,58nm,0.7s						
WAT1	**Susitna Watana**	**1.03**	**171**		Pn	07 04 27.9	+0.4
DHY	**Denali Highway**	**1.03**	**138**		Pn	07 04 28.3	+0.7
DHY					Sn	07 04 45.8	+1.1
DHY	**Denali Highway**	**1.03**	**138**	IAML		07 04 46.7	
	comp=E,139nm,0.4s						
DHY				IAML		07 04 46.8	
	comp=N,168nm,0.4s						
TCOL	**CIGO, UAF Yank**	**1.13**	**23**		Pn	07 04 29.0	+0.6
COLA	**College**	**1.13**	**23**		Pn	07 04 28.9	+0.6
PS08	**TAPS Pump Stn8**	**1.15**	**51**		Pn	07 04 29.7	+1.1
MDM	**Murphy Dome**	**1.16**	**14**		Pn	07 04 29.4	+0.6
MDM	**Murphy Dome**	**1.16**	**14**	IAML		07 04 47.0	
	comp=E,51nm,0.6s						
IL01		**1.28**	**42**		Pn	07 04 30.3	+0.3
IL31		**1.28**	**42**		Pn	07 04 30.3	+0.3
ILAR	**Eielson Array**	**1.28**	**42**		Pn	07 04 30.2	+0.2
IL03	**Eielson Array**	**1.29**	**43**		Pn	07 04 30.4	+0.3
I23K	**Minto, Yukon-K**	**1.33**	**352**		Pn	07 04 31.3	+0.8
WAT6	**Susitna Watana**	**1.37**	**157**		Pn	07 04 31.8	+0.6
K24K	**Donnelly Dome**	**1.38**	**90**		Pn	07 04 31.9	+0.7
POKR	**Poker Plat Res**	**1.43**	**26**		Pn	07 04 32.3	+0.6
POKR	**Poker Plat Res**	**1.43**	**26**	IAML		07 04 52.3	
	comp=E,29nm,0.8s						
MLY	**Manley**	**1.44**	**327**		Pn	07 04 32.3	+0.5
PS10	**TAPS Pump St10**	**1.46**	**105**		Pn	07 04 33.7	+1.6
CAST	**Castle Rocks**	**1.48**	**255**		Pn	07 04 32.7	+0.4
CAST	**Castle Rocks**	**1.48**	**255**	IAML		07 04 53.7	
	comp=N,41nm,0.6s						
PS07	**TAPS Pump Stn7**	**1.50**	**10**		Pn	07 04 33.3	+0.8
CHUM	**Lake Minchumin**	**1.51**	**273**		Pn	07 04 33.3	+0.7
CUT	**Chulitna**	**1.57**	**204**		Pn	07 04 34.1	+0.8
J25K	**Salcha River,**	**1.73**	**62**		Pn	07 04 35.7	+0.5
J25K	**Salcha River,**	**1.73**	**62**	IAML		07 04 59.2	
	comp=E,68nm,0.4s						
PPLA	**Purkeypile**	**1.76**	**239**		Pn	07 04 36.6	+0.8
PAX	**Paxson**	**1.77**	**118**		Pn	07 04 36.4	+0.6
RIDG	**Independent Ri**	**1.80**	**91**		Pn	07 04 36.7	+0.6
I21K	**Tanana**	**1.89**	**317**		Pn	07 04 37.8	+0.6
I21K	**Tanana**	**1.89**	**317**	IAML		07 05 02.8	
	comp=N,20nm,1.1s						
H23K	**Yukon River**	**2.01**	**352**		Pn	07 04 39.4	+0.7
H24K	**Noodor Dome**	**2.05**	**12**		Pn	07 04 39.8	+0.7
PS06	**TAPS Pump Stn6**	**2.05**	**350**		Pn	07 04 40.0	+0.9
SML	**Sawmill**	**2.06**	**172**		Pn	07 04 39.9	+0.6
SML	**Sawmill**	**2.06**	**172**	IAML		07 05 14.4	
	comp=E,57nm,0.7s						
M23K	**Glacier View**	**2.13**	**165**		Pn	07 04 40.5	+0.4
M24K	**Tolsona, Glenn**	**2.14**	**143**		Pn	07 04 41.0	+0.8
M24K	**Tolsona, Glenn**	**2.14**	**143**	IAML		07 05 15.7	
	comp=E,55nm,0.8s						
M24K				IAML		07 05 16.1	
	comp=N,46nm,0.8s						
SCM	**Sheep Creek Mo**	**2.14**	**160**		Pn	07 04 40.7	+0.4
DOT	**Dot Lake**	**2.16**	**93**		Pn	07 04 40.6	+0.1
M22K	**Willow**	**2.17**	**196**		Pn	07 04 41.6	+1.0
SCRK	**Sand Creek**	**2.18**	**84**		Pn	07 04 41.1	+0.3
SCRK	**Sand Creek**	**2.18**	**84**	IAML		07 05 09.9	
	comp=N,51nm,0.3s						
SCRK				IAML		07 05 11.2	
	comp=E,25nm,0.6s						
PRP	**Porcupine Dome**	**2.22**	**39**		Pn	07 04 41.9	+0.5
PRP	**Porcupine Dome**	**2.22**	**39**	IAML		07 05 10.3	
	comp=N,12nm,0.4s						
PRP				IAML		07 05 11.1	
	comp=E,18nm,0.5s						
SKT	**Skwentna**	**2.22**	**214**		Pn	07 04 41.6	+0.3
SKT	**Skwentna**	**2.22**	**214**	IAML		07 05 14.7	
	comp=E,45nm,0.3s						
SKT				IAML		07 05 15.3	
	comp=N,54nm,0.3s						
HARP	**HAARP**	**2.23**	**129**		Pn	07 04 41.8	+0.4
PMR	**Palmer**	**2.26**	**183**		Pn	07 04 43.8	+2.0
PMR	**Palmer**	**2.26**	**183**	IAML		07 05 17.9	
	comp=E,47nm,0.3s						
PMR				IAML		07 05 20.8	
	comp=N,27nm,0.6s						
H22K	**Ishtalitna Cre**	**2.32**	**334**		Pn	07 04 43.2	+0.7
J20K	**Nowinta River**	**2.34**	**281**		Pn	07 04 43.2	+0.6
J20K	**Nowinta River**	**2.34**	**281**	IAML		07 05 12.8	
	comp=N,25nm,0.6s						
J20K				IAML		07 05 12.8	
	comp=E,25nm,0.6s						
K20K	**Telida**	**2.36**	**260**		Pn	07 04 43.6	+0.5
K20K	**Telida**	**2.36**	**260**	IAML		07 05 13.7	
	comp=N,10nm,0.6s						
K20K				IAML		07 05 14.1	
	comp=E,12nm,1.1s						
J26L	**Joseph Creek**	**2.43**	**72**		Pn	07 04 44.5	+0.6
J26L	**Joseph Creek**	**2.43**	**72**	IAML		07 05 15.4	
	comp=N,31nm,0.6s						
KNK	**Knik Glacier**	**2.45**	**175**		Pn	07 04 44.7	+0.6
H21K	**Melozitna Rive**	**2.48**	**319**		Pn	07 04 44.9	+0.5
H21K	**Melozitna Rive**	**2.48**	**319**	IAML		07 05 20.9	
	comp=E,11nm,4.0s						
MENT	**Mentasta**	**2.50**	**109**		Pn	07 04 45.6	+0.8
MENT	**Mentasta**	**2.50**	**109**	IAML		07 05 20.8	
	comp=N,34nm,0.4s						
MENT				IAML		07 05 22.8	
	comp=E,24nm,0.5s						
SUA	**Susitna One**	**2.54**	**200**		Pn	07 04 47.4	+2.0
SUA	**Susitna One**	**2.54**	**200**	IAML		07 05 25.4	
	comp=N,37nm,0.9s						
SUA				IAML		07 05 25.9	
	comp=E,34nm,1.1s						
L26K	**Log Cabin Wild**	**2.63**	**106**		Pn	07 04 47.0	+0.5
L20K	**Farewell, AK**	**2.64**	**241**		Pn	07 04 47.4	+0.7
STLK	**Strandline Lak**	**2.71**	**211**		Pn	07 04 48.3	+0.7
KLU	**Klutina**	**2.73**	**148**		Pn	07 04 47.8	0.0
KLU	**Klutina**	**2.73**	**148**	IAML		07 05 32.4	
	comp=N,27nm,0.6s						
KLU				IAML		07 05 38.3	
	comp=E,21nm,0.6s						
H25K	**Birch Creek**	**2.76**	**27**		Pn	07 04 48.9	+0.8
M20K	**Styx River**	**2.76**	**227**		Pn	07 04 48.5	+0.3
M20K	**Styx River**	**2.76**	**227**	IAML		07 05 14.8	
	comp=N,18nm,1.2s						
M20K				IAML		07 05 19.7	
	comp=E,16nm,2.4s						
RC01	**Rabbit Creek A**	**2.79**	**188**		Pn	07 04 50.0	+1.5
I26K	**Coal Creek Min**	**2.88**	**57**		Pn	07 04 50.1	+0.4
I26K	**Coal Creek Min**	**2.88**	**57**	IAML		07 05 27.4	
	comp=N,19nm,1.2s						
I26K				IAML		07 06 08.3	
	comp=E,10nm,4.6s						
WASW	**Wrangell South**	**2.89**	**129**		Pn	07 04 50.4	+0.3
G23K	**Bananza Creek**	**2.92**	**351**		Pn	07 04 50.9	+0.6
G24K	**Hadweenzic Riv**	**2.93**	**11**		Pn	07 04 50.9	+0.6
SPCG	**Spurr Capps Gl**	**2.94**	**211**		Pn	07 04 51.5	+0.9
IM03		**2.98**	**318**		Pn	07 04 51.5	+0.5
IMAR	**Indian Mountai**	**2.98**	**318**		Pn	07 04 50.8	-0.2
IM01	**Indian Mountai**	**2.98**	**319**		Pn	07 04 51.4	+0.4
N25K	**Chitina, Valde**	**2.99**	**137**		Pn	07 04 52.0	+0.8
N25K	**Chitina, Valde**	**2.99**	**137**	IAML		07 05 45.8	
	comp=E,12nm,1.4s						
N25K				IAML		07 06 29.8	
	comp=N,11nm,3.2s						
SPCP	**Crater Peak Br**	**2.99**	**212**		Pn	07 04 52.3	+0.9
PWL	**Port Wells**	**3.00**	**175**		Pn	07 04 51.7	+0.4
K27K	**Chicken**	**3.02**	**83**		Pn	07 04 52.0	+0.6
K27K	**Chicken**	**3.02**	**83**	IAML		07 05 29.6	
	comp=E,22nm,0.8s						
SPU	**Mount Spurr**	**3.04**	**210**		Pn	07 04 52.2	+0.3
M26K	**Nabesna, AK**	**3.05**	**116**		Pn	07 04 51.7	-0.2
M26K	**Nabesna, AK**	**3.05**	**116**	IAML		07 05 32.1	
	comp=E,9.4nm,3.3s						
M26K				IAML		07 05 42.0	
	comp=N,9.2nm,0.3s						
SPBG	**Spurr Blockage**	**3.05**	**213**		Pn	07 04 53.3	+1.3
DIV	**Divide**	**3.08**	**151**	Pn	Pn	07 04 51.4	-1.1
GLI	**Glacier Island**	**3.09**	**163**		Pn	07 04 52.1	-0.4
FYU	**Fort Yukon**	**3.14**	**28**	Pn	Pn	07 04 53.5	+0.5
G25K	**Bearman Lake**	**3.16**	**21**		Pn	07 04 53.7	+0.4
M19K	**Big River Lodg**	**3.18**	**235**	IAML		07 05 20.9	
	comp=E,13nm,3.0s						
BC01	**Beaver Creek A**	**3.27**	**101**		Pn	07 04 54.8	-0.1
L27K	**Beaver Creek,**	**3.27**	**101**		Pn	07 04 54.8	0.0
L27K	**Beaver Creek,**	**3.27**	**101**	IAML		07 05 34.8	
	comp=N,9.7nm,0.6s						
L27K				IAML		07 05 58.2	
	comp=E,12nm,2.1s						
BC03		**3.29**	**101**		Pn	07 04 55.0	+0.1
BCAR	**Beaver Creek A**	**3.29**	**101**	Pn	Pn	07 04 54.9	-0.2
FID	**Port Fidalgo**	**3.30**	**159**		Pn	07 04 55.3	0.0
G21K	**Allakaket**	**3.31**	**326**		Pn	07 04 56.0	+0.6
GLB	**Gilahina Butte**	**3.36**	**133**		Pn	07 04 56.9	+0.8
O22K	**Cooper Landing**	**3.40**	**187**		Pn	07 04 57.2	+0.7
SLKM	**Skilak Lake**	**3.40**	**191**		Pn	07 04 57.4	+0.8
COLD	**Coldfoot**	**3.44**	**352**		Pn	07 04 57.7	+0.6
EGAK	**Eagle**	**3.50**	**71**		Pn	07 04 57.9	+0.1
EGAK	**Eagle**	**3.50**	**71**	IAML		07 05 40.2	
	comp=E,11nm,0.8s						
EGAK				IAML		07 06 03.0	
	comp=E,12nm,1.1s						
BMRM	**Bremner River**	**3.51**	**143**		Pn	07 04 57.9	-0.1
M27K	**Edge Creek, AK**	**3.52**	**112**		Pn	07 04 59.1	+0.8
M27K	**Edge Creek, AK**	**3.52**	**112**	IAML		07 06 03.9	
	comp=E,10nm,2.1s						
M27K				IAML		07 06 33.6	
	comp=N,14nm,1.5s						
I27K	**Kandik River**	**3.59**	**57**		Pn	07 04 59.5	+0.4
EYAK	**Cordova Ski Ar**	**3.62**	**155**		Pn	07 04 59.7	+0.3
HIN	**Hinchinbrook I**	**3.64**	**161**		Pn	07 04 59.5	-0.2
VRDI	**Verde Repeater**	**3.64**	**134**		Pn	07 05 00.6	+0.7
MCARA	**McCarthy VSAT**	**3.67**	**130**		Pn	07 05 01.3	+1.3
DFR	**Drift River**	**3.71**	**210**		Pn	07 05 00.1	-0.7
DFR	**Drift River**	**3.71**	**210**		Pn	07 04 59.6	-1.1
F24K	**Squaw Lake**	**3.72**	**6**		Pn	07 05 01.3	+0.6
SEW	**Seward**	**3.76**	**184**		Pn	07 05 01.8	+0.5
G26K	**Porcupine Rive**	**3.78**	**32**		Pn	07 05 01.9	+0.4
GOAT	**Goat Mountain**	**3.81**	**147**		Pn	07 05 02.0	0.0
H27K	**Steamboat Moun**	**3.94**	**49**		Pn	07 05 04.2	+0.5
PTPK	**Patty Peak**	**4.00**	**129**		Pn	07 05 05.8	+1.2
BM03	**Burnt Mountain**	**4.01**	**24**		Pn	07 05 04.9	+0.3
BMAR	**Burnt Mountain**	**4.02**	**24**	Pn	Pn	07 05 05.0	+0.3
HMT	**Hamilton**	**4.14**	**146**		Pn	07 05 06.3	-0.1
BALM	**Baldy**	**4.15**	**130**		Pn	07 05 06.9	+0.4
DAWY	**Dawson**	**4.20**	**83**		Pn	07 05 07.3	+0.1
KIAG	**Kiagna River**	**4.22**	**131**		Pn	07 05 09.7	+2.1
YUK2	**White River**	**4.23**	**116**		Pn	07 05 08.3	+0.7
BERG	**Berg Lake**	**4.23**	**142**		Pn	07 05 07.8	+0.2
E24K	**Your Creek**	**4.25**	**2**		Pn	07 05 08.6	+0.7
NICHA	**Nichawak Mount**	**4.30**	**145**		Pn	07 05 09.2	+0.7
KHIT	**Khitrov Hills**	**4.32**	**140**		Pn	07 05 09.3	+0.4
F26K	**Sheenjek River**	**4.34**	**25**		Pn	07 05 09.3	+0.4
YUK3	**Moose Creek**	**4.39**	**114**		Pn	07 05 10.5	+0.6
GRIN	**Grindle Hills**	**4.43**	**141**		Pn	07 05 10.7	+0.4
SNH	**Sunshine Point**	**4.65**	**139**		Pn	07 05 13.6	+0.3
LOGN	**Logan Glacier**	**4.76**	**126**		Pn	07 05 16.7	+1.9
M29M	**Somme Creek**	**4.94**	**102**		Pn	07 05 17.7	+0.6
K29M	**Barlow Dome**	**5.04**	**85**		Pn	07 05 19.0	+0.5
E27K	**Coleen River**	**5.28**	**31**		Pn	07 05 21.4	-0.1

*OTT **05** 07:08:41.8±0.3, 72°.76N×54°.34W, h18km, ML3.8/3,*
Western Greenland. 563km northeast from Clyde River,
Nu Eastern Arctic Background Seismic Zone.
*DNK **05** 07:08:44.2±2.6, 72°.68N×54°.38W, h30km±10km, ML2.6*
ISC 05 07:08:38.1±0.7, **72°.78N**±0°.05×**54°.35W**±0°.05, **h10**km, **n20,**
σ3$19/36, 2C-1D, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPNV	**Upernavik**	**0.53**	**271**	⇑*i*P	**Pn**	**07 08 54.9**	**+3.2**
UPNV				*i* S	**Sn**	**07 09 02.8**	**+2.0**
UPNV				IAML		07 09 04.1	
	comp=Z,2μm,0.3s						
NUUG	**Nuugaatsiaq**	**1.30**	**164**	⇓*i*P	**Pg**	**07 09 05.2**	**+2.2**
NUUG				*i* S	**Sn**	**07 09 20.7**	**+1.1**
NUUG				IAML		07 09 22.0	
	comp=Z,438nm,0.3s						
ILULI	**Ilulissat**	**3.74**	**162**	*i* P	**Pn**	**07 09 38.2**	**+2.5**
ILULI				IAML		07 10 35.1	
	comp=Z,46nm,0.4s						
**ILUL

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**5.95**	**166**	*i* P	**Pn**	**07 10 07.1**	**+1.0**
SFJD				*e*S	**Sn**	**07 11 09.5**	**-4.7**
SFJD				IAML		07 11 24.6	
	comp=Z,12nm,0.4s						
SFJD	**Kangerlussuaq**	**5.95**	**166**	PN	**Pn**	**07 10 07.0**	**+1.0**
SFJD				SN	**Sn**	**07 11 11.9**	**-2.3**
SFJD				Trac		07 11 35.1	
	comp=Z,2.3nm,0.5s						
ICESG	**Greenland Ices**	**6.06**	**120**	*i* P	**Pn**	**07 10 10.0**	**+2.0**
ICESG				*i* S	**Sn**	**07 11 14.4**	**-3.0**
ICESG				IAML		07 11 49.0	
	comp=Z,53nm,0.4s						
DY2G	**Dye2**	**6.93**	**152**	*i* P	**Pn**	**07 10 23.2**	**+3.5**
DY2G				*e*S	**Sn**	**07 11 33.9**	**-4.7**
DY2G				IAML		07 11 40.8	
	comp=Z,9.0nm,0.4s						
NUUK	**Nuuk**	**8.70**	**172**	*i* P	**Pn**	**07 10 43.2**	**-0.4**
ILON	**Igloolik, Nuna**	**9.49**	**262**	PN	**Pn**	**07 10 56.0**	**+1.4**
ILON				SN	**Sn**	**07 12 37.9**	**-3.3**
ILON				Trac		07 12 48.8	
	comp=Z,150nm,1.4s						
DBG	**Daneborg**	**9.71**	**65**	*i* P	**Pn**	**07 11 00.6**	**+3.1**
DBG				*i* S	**Sn**	**07 12 44.0**	**-2.4**
DBG				IAML		07 13 00.1	
	comp=Z,2.9nm,0.4s						
DAG	**Danmarks Havn**	**10.05**	**50**	*i* P	**Pn**	**07 11 04.2**	**+2.0**
DAG				*i* S	**Sn**	**07 12 49.1**	**-5.5**
DAG				IAML		07 12 52.3	
	comp=Z,7.5nm,0.4s						
EUNU	**Eureka**	**10.28**	**329**	PN	**Pn**	**07 11 07.9**	**+2.6**
EUNU				SN	**Sn**	**07 12 54.8**	**-5.6**
EUNU				Trac		07 13 04.2	
	comp=Z,253nm,2.6s						
SCO	**Scoresbysund**	**10.39**	**87**	*i* P	**Pn**	**07 11 07.1**	**+0.3**
SCO				*e*S	Sn	07 12 51.5	-12
SCO				IAML		07 13 39.3	
	comp=Z,2.9nm,0.5s						
FRB	**Frobisher Bay**	**10.45**	**217**	PN	**Pn**	**07 11 12.0**	**+4.4**
FRB				SN	**Sn**	**07 12 58.8**	**-5.7**
FRB				Trac		07 13 12.0	
	comp=Z,320nm,2.3s						
RES	**Resolute Bay**	**11.35**	**299**	PN	**Pn**	**07 11 19.4**	**-0.6**
RES				SN	**Sn**	**07 13 20.8**	**-5.9**
RES				Trac		07 13 29.7	
	comp=Z,106nm,2.0s						
NOR	**Nord**	**11.79**	**26**	*i* P	**Pn**	**07 11 26.9**	**+1.0**
NOR				IAML		07 13 36.3	
	comp=Z,3.7nm,0.4s						

IDC 05 07:12:21.1±1.9, 0°.69N×125°.42E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=176.3km s-min=26.8km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.30**	**157**	P	P	07 17 20.1	-0.2
	0.6nm,0.4s,baz=335,slow=11,SNR=14						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**25.58**	**162**	P	P	07 17 53.0	+0.8
	0.5nm,0.5s,baz=343,slow=11,SNR=9.1						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**35.84**	**156**	P	P	07 19 21.7	-0.9
	2.0nm,0.7s,baz=344,slow=15,SNR=3.7						
	2.0nm,0.7s						
MKAR	**Makanchi Array**	**59.33**	**327**	P	P	07 22 25.0	0.0
	0.1nm,0.4s,baz=123,slow=7.3,SNR=2.1						
	0.1nm,0.4s						

*VAO **05** 07:22:22.7±0.4, 31°.57S×72°.50W, h10km, mb4.2*
*SJA **05** 07:22:33.6±0.8, 30°.69S×71°.68W, h11km±2km, ML4.2, MW3.8*
*IDC **05** 07:22:39.3±0.8, 30°.73S×71°.19W, h45km±6km, mb4.1/7, mbtmp4.2/11, ML3.8/4, MS3.1/6, Error ellipse: s-maj=26.0km s-min=16.2km az=92.0*
*GUC **05** 07:22:39.1±0.8, 30°.71S×71°.37W, h48km±2km, ML4.4*
*NEIC **05** 07:22:39.4±2.5, 30°.68S±0°.04×71°.46W±0°.09, h40km±16km, mb4.0/4, ML4.4(GUC), Error ellipse: s-maj=10.7km s-min=5.1km az=98.0*

ISC 05 07:22:37.2±0.6, 30°.69S±0°.02×71°.45W±0°.03, h32km±4km, n173, σ2°.34/224, mb4.3/7, 3C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.16**	**276**		**Pn**	**07 22 47.5**	**+4.0**
CO06	**Fray Jorge**	**0.16**	**276**	⇑*i*P	**Pn**	**07 22 47.5**	**+4.0**
CO06				IAML		07 22 55.5	
	comp=E,21μm,0.1s						
CO02	**Combarbal**	**0.64**	**143**		**Pn**	**07 22 51.1**	**+0.8**
CO02	**Combarbal**	**0.64**	**143**	⇓*i*P	**Pn**	**07 22 51.5**	**+1.3**
CO02				*e*S	**Sn**	**07 23 00.3**	**+1.0**
CO02	**Combarbal**	**0.64**	**143**	*e*P	**Pn**	**07 22 51.0**	**+0.8**
CO02				*e*P	**Pn**	**07 22 51.2**	**+1.0**
CO02				IAML		07 23 05.4	
	comp=Z,9μm,0.4s						
CO03	**El Pedregal**	**0.67**	**103**		**Pn**	**07 22 51.6**	**+1.0**
CO03	**El Pedregal**	**0.67**	**103**	⇓*i*P	**Pn**	**07 22 51.6**	**+1.0**
CO03				*e*S	**Sn**	**07 23 00.8**	**+0.8**
CO03				IAML		07 23 02.8	
	comp=E,32μm,0.1s						
CO03	**El Pedregal**	**0.67**	**103**	*e*P	**Pn**	**07 22 51.0**	**+0.4**
CO03				*e*P	**Pb**	**07 22 51.2**	**+0.7**
CO03				*e*S	**Sn**	**07 23 01.2**	**+1.2**
CO03				IAML		07 23 01.7	
	comp=Z,8μm,0.3s						
GO04	**Tololo Observa**	**0.76**	**47**		**Pb**	**07 22 53.7**	**+1.5**
GO04	**Tololo Observa**	**0.76**	**47**	*e*P	**Pb**	**07 22 53.4**	**+1.2**
GO04				*e*S	**Sn**	**07 23 04.3**	**+1.7**
GO04	**Tololo Observa**	**0.76**	**47**	*e*P	**Pn**	**07 22 51.2**	**-0.8**
GO04				*e*S	**Sn**	**07 23 04.6**	**+2.1**
CO05	**La Serena**	**0.79**	**13**		**Pb**	**07 22 54.7**	**+2.1**
CO05	**La Serena**	**0.79**	**13**	⇓*i*P	**Pb**	**07 22 54.4**	**+1.9**
CO05				*e*S	**Sn**	**07 23 04.9**	**+2.0**
CO05				IAML		07 23 09.9	
	comp=E,12μm,0.3s						
CO01	**Juntas del Tor**	**1.37**	**59**		**Pb**	**07 23 02.7**	**+0.3**
CO01	**Juntas del Tor**	**1.37**	**59**	⇓*i*P	**Pb**	**07 23 02.6**	**+0.3**
CO01				*e*S	**Sb**	**07 23 20.0**	**+0.4**
CO01				IAML		07 23 20.9	
	comp=N,9μm,0.3s						
CO01	**Juntas del Tor**	**1.37**	**59**	*e*P	**Pb**	**07 23 02.6**	**+0.3**
CO01				*e*S	**Sb**	**07 23 20.6**	**+1.0**
CO01				IAML		07 23 24.2	
	comp=Z,3μm,0.1s						
AROD	**Rodeo**	**1.78**	**73**	*e*P	**Pb**	**07 23 09.8**	**+0.3**
AROD				*e*S	**Sn**	**07 23 27.2**	**-0.7**
LCO	**Las Campanas**	**1.80**	**21**		**Pb**	**07 23 08.6**	**-1.1**
LCO	**Las Campanas**	**1.80**	**21**	*e*P	**Pb**	**07 23 08.3**	**-1.3**
LCO				*e*S	**Sb**	**07 23 30.8**	**-1.1**
LCO	**Las Campanas**	**1.80**	**21**	*e*P	**Pb**	**07 23 08.0**	**-1.6**
LCO				IAML		07 23 38.3	
	comp=Z,8μm,0.2s						
VA06	**Catapilco**	**1.87**	**176**		**Pb**	**07 23 08.9**	**-1.7**
VA06	**Catapilco**	**1.87**	**176**	*e*P	**Pb**	**07 23 08.8**	**-1.8**
VA06				*e*S	**Sb**	**07 23 32.6**	**-1.0**
VA06				IAML		07 23 35.4	
	comp=E,4μm,0.3s						
ACCO	**Cerro Coronel**	**2.05**	**88**	*e*P	**Pb**	**07 23 13.0**	**-1.1**
ACCO				*e*P	**Pb**	**07 23 13.9**	**-0.2**
ACCO				IAML		07 23 48.5	
	comp=Z,743nm,3.1s						
ACDV	**Cuesta del Vie**	**2.08**	**76**	*e*P	**Pb**	**07 23 14.0**	**-0.3**
ACDV				*e*S	**Sn**	**07 23 27.7**	**-7.2**
ACDV				IAML		07 23 27.7	
	comp=Z,595nm,0.5s						
AC05	**El Transito**	**2.11**	**29**		**Pb**	**07 23 13.6**	**-1.3**
AC05	**El Transito**	**2.11**	**29**	⇓*i*P	**Pb**	**07 23 13.5**	**-1.5**
AC05				*e*S	**Sb**	**07 23 39.3**	**-1.4**
AC05				IAML		07 23 45.0	
	comp=N,4μm,0.1s						
AC05	**El Transito**	**2.11**	**29**	*e*P	**Pb**	**07 23 13.0**	**-1.9**
AC05				*e*S	**Sb**	**07 23 41.7**	**+0.9**
AC05				IAML		07 23 48.6	
	comp=Z,2μm,0.8s						
RTLS	**Leoncito**	**2.15**	**121**	*e*P	**Pb**	**07 23 14.0**	**-1.6**
RTLS				*e*P	**Pn**	**07 23 14.8**	**+3.7**
RTLS				*e*S	**Sb**	**07 23 44.6**	**+2.6**
RTLS				IAML		07 23 46.0	
	comp=Z,323nm,0.3s						
VA03	**San Esteban**	**2.20**	**160**		**Pn**	**07 23 14.0**	**+2.3**
VA03	**San Esteban**	**2.20**	**160**	⇑*e*P	**Pn**	**07 23 13.9**	**+2.3**
VA03				*e*S	**Sn**	**07 23 40.3**	**+2.4**
VA03				IAML		07 23 48.8	
	comp=E,4μm,0.2s						
VA03	**San Esteban**	**2.20**	**160**	*e*P	**Pn**	**07 23 14.0**	**+2.3**
VA03				*e*P	**Pn**	**07 23 14.0**	**+2.3**
VA03				*e*S	**Sb**	**07 23 43.2**	**-0.2**
VA03				IAML		07 23 55.1	
	comp=Z,1μm,0.3s						
ROCH	**El Roble**	**2.30**	**171**	*e*P	**Pn**	**07 23 15.1**	**+1.9**
ROCH				*e*S	**Sb**	**07 23 45.1**	**-1.3**
ROCH				IAML		07 23 50.8	
	comp=N,3μm,0.4s						
ROC1	**El Roble**	**2.31**	**171**		**Pn**	**07 23 15.3**	**+2.0**
ROC1	**El Roble**	**2.31**	**171**	*e*P	**Pn**	**07 23 15.0**	**+1.7**
ROC1				*e*S	**Sn**	**07 23 43.4**	**+2.7**
VA01	**Torpederas**	**2.33**	**184**		**Pn**	**07 23 14.6**	**+1.2**
VA01	**Torpederas**	**2.33**	**184**	*e*P	**Pn**	**07 23 14.6**	**+1.2**
AC04	**Llanos de Chal**	**2.50**	**8**		**Pn**	**07 23 18.5**	**+2.8**
AC04	**Llanos de Chal**	**2.50**	**8**	*e*P	**Pn**	**07 23 18.3**	**+2.6**
AC04				IAML		07 23 58.6	
	comp=E,2μm,0.2s						
AC04	**Llanos de Chal**	**2.50**	**8**	*e*P	**Pn**	**07 23 18.0**	**+2.3**
AC04				*e*P	**Pn**	**07 23 18.2**	**+2.5**
AC04				*e*S	**Sb**	**07 23 50.7**	**-1.1**
AC04				IAML		07 23 58.3	
	comp=Z,1μm,0.5s						
ZON	**Zonda**	**2.52**	**110**		**Pb**	**07 23 19.6**	**-2.3**
ZON	**Zonda**	**2.52**	**110**	*e*P	**Pb**	**07 23 19.7**	**-2.1**
ZON				*e*S	**Sb**	**07 23 56.2**	**+3.7**
ZON				IAML		07 23 58.0	
	comp=Z,672nm,0.3s						
PEL	**Peldehue**	**2.53**	**165**		**Pn**	**07 23 18.5**	**+2.3**
PEL	**Peldehue**	**2.53**	**165**	*e*P	**Pn**	**07 23 18.4**	**+2.3**
PEL				*e*S	**Sn**	**07 23 48.8**	**+2.9**
PEL				IAML		07 24 00.9	
	comp=N,1μm,0.6s						
PEL	**Peldehue**	**2.53**	**165**	*e*P	**Pn**	**07 23 18.0**	**+1.9**
PEL				*e*S	**Sn**	**07 23 49.2**	**+3.3**
MT02	**Curacav**	**2.57**	**174**		**Pn**	**07 23 19.1**	**+2.4**
MT02	**Curacav**	**2.57**	**174**	*e*P	**Pn**	**07 23 18.1**	**+1.5**
MT02				IAML		07 24 02.2	
	comp=E,1μm,0.8s						
MT02	**Curacav**	**2.57**	**174**	*e*P	**Pn**	**07 23 13.7**	**-3.0**
MT02				*e*P	**Pn**	**07 23 18.0**	**+1.3**
MT02				*e*P	**Pn**	**07 23 18.2**	**+1.5**
MT02				*e*S	**Sb**	**07 23 54.4**	**+0.5**
MT02				IAML		07 23 59.8	
	comp=Z,984nm,0.4s						
RTLL	**Cerro Villicun**	**2.63**	**105**	*e*P	Pn	07 23 09.8	-7.7
RTLL				*e*P	**Pn**	**07 23 20.6**	**+3.1**
RTLL				*e*S	**Sb**	**07 23 55.5**	**-0.1**
RTCV	**Cerro Valdivia**	**2.75**	**116**	*e*P	**Pb**	**07 23 23.7**	**-2.0**
RTCV				*e*P	**Pb**	**07 23 24.0**	**-1.7**
RTCV				*e*S	Sb	07 24 13.7	+15
MT05	**Renca**	**2.76**	**168**		**Pn**	**07 23 21.7**	**+2.4**
MT05	**Renca**	**2.76**	**168**	*e*P	**Pn**	**07 23 21.5**	**+2.2**
MT05				*e*S	**Sn**	**07 23 54.4**	**+2.9**
MT05				IAML		07 24 08.2	
	comp=E,3μm,0.4s						
MT05	**Renca**	**2.76**	**168**	*e*P	**Pn**	**07 23 16.2**	**-3.1**
MT05				*e*P	**Pn**	**07 23 21.0**	**+1.7**
MT05				*e*S	**Sn**	**07 23 46.2**	**-5.4**
MT05				*e*S	**Sn**	**07 24 00.2**	**+8.6**
MT05				IAML		07 24 09.6	
	comp=Z,926nm,0.8s						
FCH	**Farellones**	**2.81**	**160**	*i* P	**Pn**	**07 23 23.1**	**+2.9**
FCH				IAML		07 24 04.2	
	comp=E,863nm,0.4s						
MT03	**Universidad Ad**	**2.90**	**164**		**Pn**	**07 23 23.9**	**+2.5**
MT03	**Universidad Ad**	**2.90**	**164**	*e*P	**Pn**	**07 23 23.9**	**+2.5**
MT03				IAML		07 24 11.2	
	comp=E,2μm,0.4s						
MT03	**Universidad Ad**	**2.90**	**164**	*e*P	**Pn**	**07 23 24.0**	**+2.6**
MT03				*e*S	**Sb**	**07 24 00.2**	**-3.3**
MT03				IAML		07 24 11.6	
	comp=Z,842nm,0.3s						
ASAL	**Salagasta**	**2.92**	**131**	*e*P	**Pn**	**07 23 25.0**	**+3.4**
ASAL				*e*S	**Sb**	**07 24 04.6**	**+0.5**
ASAL				IAML		07 24 22.2	
	comp=Z,600nm,0.6s						
VA05	**Santo Domingo**	**2.96**	**183**		**Pn**	**07 23 23.1**	**+1.1**
VA05	**Santo Domingo**	**2.96**	**183**	*e*P	**Pn**	**07 23 23.0**	**+1.0**
VA05				IAML		07 24 24.3	
	comp=E,2μm,0.4s						
ARCO	**CERRO ARCO**	**3.03**	**136**	*e*P	**Pn**	**07 23 22.2**	**-0.9**
ARCO				*e*P	**Pn**	**07 23 27.4**	**+4.3**
ARCO				*e*S	**Sb**	**07 24 13.3**	**+6.1**
ARCO				IAML		07 24 14.9	
	comp=Z,735nm,0.7s						
MT09	**Talagante**	**3.10**	**173**		**Pn**	**07 23 26.3**	**+2.2**
MT09	**Talagante**	**3.10**	**173**	*e*P	**Pn**	**07 23 26.1**	**+2.0**
MT09				*e*S	**Sn**	**07 24 01.6**	**+1.5**
MT09				IAML		07 24 15.0	
	comp=N,1μm,0.3s						
MT01	**Popeta**	**3.17**	**177**		**Pn**	**07 23 26.6**	**+1.7**
MT01	**Popeta**	**3.17**	**177**	*e*P	**Pn**	**07 23 26.4**	**+1.5**
MT01				IAML		07 24 14.2	
	comp=N,764nm,0.3s						
MT01	**Popeta**	**3.17**	**177**	*e*P	**Pn**	**07 23 26.4**	**+1.5**
MT01				*e*S	**Sb**	**07 24 07.2**	**-3.8**
MT01				IAML		07 24 15.8	
	comp=Z,570nm,0.4s						
AAGR	**Agrelo**	**3.26**	**138**	*e*P	**Pn**	**07 23 30.0**	**+3.7**
AAGR				*e*S	**Sb**	**07 24 19.6**	**+5.7**
AAGR				IAML		07 24 21.0	
	comp=Z,496nm,0.4s						
LMEL	**Las Melosas**	**3.32**	**162**		**Pn**	**07 23 30.6**	**+3.5**
LMEL	**Las Melosas**	**3.32**	**162**	*e*P	**Pn**	**07 23 30.4**	**+3.3**
LMEL				*e*S	**Sn**	**07 24 09.7**	**+4.2**
LMEL				IAML		07 24 22.0	
	comp=N,920nm,0.4s						
BO04	**La Punta**	**3.36**	**168**	⇑*i*P	**Pn**	**07 23 29.7**	**+2.1**
BO04				*e*S	**Sn**	**07 24 08.3**	**+1.9**
BO04				IAML		07 24 24.1	
	comp=N,758nm,0.5s						
VCA	**Vinchina**	**3.43**	**56**	*e*P	**Pn**	**07 23 33.0**	**+4.4**
VCA				*e*S	**Sb**	**07 24 16.2**	**-2.4**
AVFE	**Valle Fertil**	**3.44**	**90**	*e*P	**Pn**	**07 23 31.2**	**+2.6**
AVFE				*e*S	**Sb**	**07 24 18.2**	**-0.7**
AVFE				IAML		07 24 22.3	
	comp=Z,790nm,0.4s						
AC06	**Mina Casimiro**	**3.46**	**16**		**Pn**	**07 23 31.5**	**+2.6**
AC06	**Mina Casimiro**	**3.46**	**16**	*i* P	**Pn**	**07 23 31.2**	**+2.3**
AC06				IAML		07 24 30.1	
	comp=E,970nm,0.2s						
BO01	**Tunca**	**3.70**	**175**	*e*P	**Pn**	**07 23 33.7**	**+1.4**
BO01	**Tunca**	**3.70**	**175**	*e*P	**Pn**	**07 23 34.2**	**+2.0**
BO01				*e*S	**Sn**	**07 24 16.2**	**+1.4**
BO01				*e*S	**Sb**	**07 24 22.2**	**-4.1**
BO01				IAML		07 24 36.5	
	comp=Z,205nm,0.5s						
BO03	**Pichilemu**	**3.82**	**186**	*e*P	**Pn**	**07 23 33.9**	**+0.1**
ACLC	**CERRO LA CRUZ**	**4.09**	**73**	*e*P	**Pn**	**07 23 41.0**	**+3.2**
ACLC				*e*S	**Sn**	**07 24 27.7**	**+2.9**
ACLC				*e*S	**Sn**	**07 24 28.4**	**+3.6**
ACLC				IAML		07 24 37.6	
	comp=Z,1μm,0.8s						
BO02	**Sierra Bellavi**	**4.13**	**172**	*e*P	**Pn**	**07 23 40.2**	**+2.1**
BO02	**Sierra Bellavi**	**4.13**	**172**	*e*P	**Pn**	**07 23 40.0**	**+1.9**
BO02				*e*P	**Pn**	**07 23 40.4**	**+2.2**
BO02				*e*S	**Sn**	**07 24 29.7**	**+4.3**
BO02				IAML		07 24 52.5	
	comp=Z,500nm,0.7s						
ACHE	**Chepes**	**4.14**	**98**	*e*P	**Pn**	**07 23 40.0**	**+1.7**
ACHE				*e*S	**Sn**	**07 24 31.6**	**+5.9**
APLL	**PUNTA DE LOS L**	**4.25**	**87**	*e*P	Pn	07 23 27.1	-13
APLL				*e*S	**Sb**	**07 24 37.6**	**-4.7**
TINO	**Tinogasta**	**4.28**	**53**	*e*P	**Pn**	**07 23 44.6**	**+4.3**
TINO				*e*S	**Sb**	**07 24 36.7**	**-6.4**
GO05	**Huala**	**4.33**	**185**	*e*P	**Pn**	**07 23 41.0**	**+0.2**
GO05	**Huala**	**4.33**	**185**	*e*P	**Pn**	**07 23 41.0**	**+0.2**
GO05				*e*S	**Sb**	**07 24 40.2**	**-4.1**
AC02	**Maricunga**	**4.35**	**28**	*e*P	**Pn**	**07 23 44.6**	**+3.0**
AC02	**Maricunga**	**4.35**	**28**	*e*P	**Pn**	**07 23 44.7**	**+3.1**
AC02				*e*S	**Sn**	**07 24 37.2**	**+5.8**
AC02				IAML		07 24 55.7	
	comp=Z,394nm,0.7s						
AC01	**Pan de Azucar**	**4.59**	**10**		**Pn**	**07 23 44.9**	**+0.5**
AC01	**Pan de Azucar**	**4.59**	**10**	*e*P	**Pn**	**07 23 45.0**	**+0.6**
AC01	**Pan de Azucar**	**4.59**	**10**	*e*P	**Pn**	**07 23 45.1**	**+0.6**
AC01				*e*S	**Sb**	**07 24 46.7**	**-5.2**
AC01				*e*S	**Sb**	**07 24 49.2**	**-2.7**
AC01				IAML		07 25 07.2	
	comp=Z,239nm,0.4s						
RFA	**San Rafael**	**4.78**	**149**	*e*P	**Pn**	**07 23 49.2**	**+2.1**
RFA				*e*P	**Pn**	**07 23 49.3**	**+2.2**
RFA				*e*S	**Sb**	**07 25 02.7**	**+5.3**
RFA				IAML		07 25 11.0	
	comp=Z,90nm,0.9s						
MRA	**San Martin**	**5.18**	**111**	*e*P	**Pn**	**07 23 54.5**	**+1.8**
MRA				*e*S	**Sn**	**07 24 48.7**	**-2.8**
MRA				*e*S	**Sn**	**07 24 51.2**	**-0.3**
MRA				IAML		07 25 00.0	
	comp=Z,511nm,1.0s						
GO02	**Mina Guanaco**	**5.75**	**17**		**Pn**	**07 24 02.1**	**+1.5**
PB14	**IPOC Station P**	**6.11**	**9**		**Pn**	**07 24 06.2**	**+0.5**
H03N1	**Juan Fernandez**	**6.90**	**245**	T	T	07 31 13.7	
	baz=74,slow=72,SNR=1731						
VA04	**Juan Fernndez**	**6.92**	**243**		**Pn**	**07 24 17.0**	**+0.6**
H03N2	**Juan Fernandez**	**6.92**	**245**	T	T	07 31 08.3	
	baz=74,slow=72,SNR=1562						
H03N3	**Juan Fernandez**	**6.92**	**245**	T	T	07 31 07.2	
	baz=74,slow=72,SNR=1594						
H03S3	**Juan Fernandez**	**7.05**	**242**	T	T	07 31 21.4	
	baz=64,SNR=7.7						
H03S1	**Juan Fernandez**	**7.05**	**242**	T	T	07 31 24.4	
	baz=64,SNR=15						
H03S2	**Juan Fernandez**	**7.07**	**242**	T	T	07 31 26.5	
	baz=64,SNR=8.9						
LVC	**Limon Verde**	**8.36**	**16**	P	**Pn**	**07 24 36.2**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=197,slow=6.7,SNR=16						
LVC				LR	LR	07 27 55.4	
	comp=Z,103nm,19.2s,baz=206,slow=38						
	comp=Z,1.9nm,0.3s						
LVC	**Limon Verde**	**8.36**	**16**	*e*P	**Pn**	**07 24 37.9**	**+1.2**
PLCA	**Paso Flores**	**10.05**	**176**	P	**Pn**	**07 24 58.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=5.1						
PLCA				LR	LR	07 28 48.4	
	comp=Z,96nm,20.6s,baz=326,slow=37						
	comp=Z,0.6nm,0.4s						
TRQA	**Tornquist**	**10.72**	**136**		**Pn**	**07 25 08.3**	**-0.3**
TRQA	**Tornquist**	**10.72**	**136**	*e*P	Pn	07 24 56.5	-12
ITQB	**Itaqui**	**12.87**	**89**	Pn	**Pn**	**07 25 36.0**	**-1.9**
ITQB	**Itaqui**	**12.87**	**89**	*e*P	**Pn**	**07 25 37.3**	**-0.6**
CPUP	**Villa Florida**	**13.15**	**74**	LR	LR	07 31 03.7	
	comp=Z,49nm,21.2s,baz=222,slow=39						
CPUP	**Villa Florida**	**13.15**	**74**	Pn	**Pn**	**07 25 40.6**	**-1.2**
AZCA	**Azaras, Argent**	**13.73**	**83**	*e*P	**Pn**	**07 25 52.9**	**+3.1**
RODS	**Rosario do Sul**	**14.01**	**93**	*e*P	**Pn**	**07 25 53.4**	**-0.2**
UNIS	**Unistalda (Bra**	**14.30**	**88**	*e*P	**Pn**	**07 25 57.2**	**-0.3**
LPAZ	**La Paz**	**14.65**	**13**	P	**Pn**	**07 26 04.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=172,slow=4.4,SNR=12						
	comp=Z,2.3nm,0.5s						
LPAZ	**La Paz**	**14.65**	**13**		**Pn**	**07 26 04.2**	**+1.3**
LPAZ	**La Paz**	**14.65**	**13**	*e*P	**Pn**	**07 26 05.4**	**+2.4**
PLTB	**Pedras Altas**	**15.30**	**99**	*e*P	**Pn**	**07 26 09.0**	**-2.0**
CPSB	**Cacapava Do Su**	**15.52**	**94**	*e*P	**Pn**	**07 26 11.2**	**-2.6**
CRSM	**Crissiumal (Br**	**15.54**	**83**	*e*P	**Pn**	**07 26 15.8**	**+1.7**
ALGR	**Alto Alegre (B**	**16.11**	**88**	*e*P	**Pn**	**07 26 21.4**	**-0.1**
ANTJ	**Antonio Joao (**	**16.31**	**62**	*e*P	**P**	**07 26 26.4**	**-0.3**
FRBT	**Francisco Belt**	**16.85**	**78**	*e*P	**Pn**	**07 26 31.8**	**+0.9**
ITAB	**Concordia**	**17.25**	**83**	*e*P	**Pn**	**07 26 36.1**	**+0.3**
SIV	**San Ignacio**	**17.44**	**35**	P	**Pn**	**07 26 38.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=206,slow=8.8,SNR=27						
SIV				LR	LR	07 33 09.2	
	comp=Z,55nm,18.3s,baz=104,slow=36						
	comp=Z,4.7nm,0.7s						
AQDB	**Aquidauana**	**17.45**	**58**	*e*P	**P**	**07 26 40.1**	**+0.8**
CNLB	**Canela**	**17.89**	**91**	*e*P	**Pn**	**07 26 42.7**	**-1.0**
PTGB	**Pitanga**	**18.16**	**76**	*e*P	**P**	**07 26 47.8**	**+0.7**
PTLB	**Pontes e Lacer**	**18.91**	**39**	*e*P	**P**	**07 26 55.4**	**+0.1**
TER01	**Tubaro-SC**	**19.52**	**89**	*e*P	**P**	**07 27 00.5**	**-1.6**
PCMB	**Pacaembu**	**20.23**	**68**	*e*P	**P**	**07 27 10.0**	**+0.2**
VILB	**Vilhena**	**20.48**	**33**	*e*P	**P**	**07 27 13.3**	**+0.7**
SALV	**Santo Antonio**	**20.60**	**48**	*e*P	**P**	**07 27 14.3**	**+0.5**
FRTB	**Fartura**	**20.80**	**75**	*e*P	**P**	**07 27 16.2**	**+0.2**
ETMB	**Extrema**	**21.34**	**14**	*e*P	**P**	**07 27 22.7**	**+1.0**
PET01	**Itanhaem-SP**	**22.35**	**79**	*e*P	**P**	**07 27 33.5**	**+0.9**
CZSB	**Cruzeiro do Su**	**22.88**	**357**	*e*P	**P**	**07 27 34.5**	**-3.7**
VAO	**Valinhos**	**23.11**	**77**	*e*P	**P**	**07 27 40.0**	**-0.8**
PDRB	**Porto dos Gac**	**23.38**	**39**	*e*P	**P**	**07 27 43.6**	**+0.4**
CLDB	**Colider**	**24.50**	**40**	*e*P	**P**	**07 27 53.7**	**-0.1**
IPMB	**Ipameri, GO**	**24.60**	**64**	*e*P	**P**	**07 27 53.8**	**-1.0**
PMNB	**Patos De Minas**	**25.69**	**68**	*e*P	**P**	**07 28 04.1**	**-0.6**
BDFB	**Brasilia**	**26.16**	**60**	P	**P**	**07 28 08.0**	**-1.0**

YATNC **Mamie plateau, 3.96 196** P **Pn 07 24 22.0 -0.7**
DZM **Mont Dzumac 4.11 201** Pn **Pn 07 24 21.4 -3.4**
3.5nm,0.4s,baz=167,slow=19,SNR=27
DZM Sn **Sn 07 25 12.5 +0.6**
5.9nm,0.3s,baz=138,slow=24,SNR=3.6
DZM Mont Dzumac 4.11 201 P **Pn 07 24 23.4 -1.4**
NOUC **Port Laguerre 4.19 203** P **Pn 07 24 24.4 -1.4**
KOUNC **Koumac, New Ca 4.25 237** P **Pn 07 24 27.4 +0.8**
OUENC **Ouen Island, N 4.32 195** P **Pn 07 24 27.0 -0.6**
ONTNC **Ouen Toro 4.33 200** P **Pn 07 24 27.2 -0.5**
MSVF Nonsavu 9.51 89 Pn **Pn 07 25 41.5 +2.6**
0.6nm,0.3s,baz=272,slow=12,SNR=11
MSVF LR LR 07 28 45.7
comp=Z,99nm,18.3s,baz=135,slow=34
16nm,0.8s
HNR Honiara 11.77 317 LR LR 07 30 05.1
comp=Z,602nm,18.2s,baz=29,slow=34
AFI Afiamalu 19.84 80 LR LR 07 34 08.2
comp=Z,22nm,19.2s,baz=53,slow=32
STKA Stephens Creek 27.47 235 P **P 07 29 07.1 -0.3**
1.1nm,0.6s,baz=67,slow=13,SNR=1.7
1.1nm,0.6s
WRA Warramunga Arr 31.89 261 P **P 07 29 47.0 +0.3**
0.2nm,0.7s,baz=84,slow=8.4,SNR=2.0
0.2nm,0.7s
ASAR Alice Springs 32.31 254 P **P 07 29 50.5 +0.1**
0.4nm,0.4s,baz=76,slow=8.8,SNR=7.7
ASAR LR LR 07 41 58.0
comp=Z,54nm,18.9s,baz=164,slow=35
0.4nm,0.4s

INET ***05*** *07:25:06.0±1.4, 12°.50N×87°.82W, h15km±12km, MW4.6*
SNET ***05*** *07:25:06.0±1.1, 12°.71N×87°.71W, h83km±16km, ML4.8*
UCR ***05*** *07:25:07.1±1.6, 12°.52N×87°.81W, h32km±6km, ML4.5, mb4.6(NEIC)*
IDC ***05*** *07:25:07.1±0.8, 12°.85N×87°.49W, h87km±6km, mb4.0/16, mbtmp4.4/18, MS3.3/27, Error ellipse: s-maj=20.3km s-min=10.0km az=52.0*
GCG ***05*** *07:25:07.6±1.8, 12°.99N×88°.04W, h223km±77km, MD4.5*
NEIC ***05*** *07:25:08.1±2.4, 12°.69N±0°.07×87°.62W±0°.07, h87km±8km, mb4.6/238, Md4.8(SNET), Error ellipse: s-maj=12.1km s-min=7.4km az=217.0*
ISC 05 07:25:06.7±0.5,**12°.67N**±0°.04×**87°.68W**±0°.04,**h84**km±4km,
h85km:**pP-P,n482,**σ1§**18**/426,**mb4.6**/116,**9D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.61**	**88**		**Pn**	**07 25 22.1**	**+0.2**
CRIN	**San Cristobal**	**0.61**	**88**	‖ *i*P	**Pn**	**07 25 22.0**	**+0.2**
CRIN	**San Cristobal**	**0.61**	**88**	*e*P	**Pn**	**07 25 22.0**	**+0.2**
CRIN				*e*S	**Sn**	**07 25 34.0**	**+0.7**
CNCH	**Conchagua**	**0.62**	**346**	*i* P	**Pn**	**07 25 21.5**	**-0.5**
CNCH				*e*S	**Sn**	**07 25 33.2**	**-0.2**
CNCH	**Conchagua**	**0.62**	**346**	*i* P	**Pn**	**07 25 21.5**	**-0.5**
CNCH				*e*S	**Sn**	**07 25 33.2**	**-0.2**
LCND	**La Caada**	**0.66**	**342**	‖ *i*P	**Pn**	**07 25 22.0**	**-0.4**
LCND				*e*S	**Sn**	**07 25 34.1**	**+0.1**
LCND				IAML		07 25 36.9	
	comp=Z,19μm,0.2s						
LCND	**La Caada**	**0.66**	**342**	‖ *i*P	**Pn**	**07 25 22.0**	**-0.4**
LCND				*e*S	**Sn**	**07 25 34.1**	**+0.1**
LCND				IAML		07 25 36.9	
	comp=Z,19μm,0.2s						
TEL3	**Telica 3**	**0.82**	**97**	*e*P	**Pn**	**07 25 23.7**	**-0.3**
TELN	**Telica**	**0.83**	**95**	*e*P	**Pn**	**07 25 24.0**	**-0.1**
VSM	**San Miguel**	**0.95**	**322**	‖ *i*P	**Pn**	**07 25 25.5**	**-0.2**
VSM	**San Miguel**	**0.95**	**322**	‖ *i*P	**Pn**	**07 25 25.5**	**-0.2**
CNGN	**Cerro Negro**	**0.97**	**100**		**Pn**	**07 25 24.5**	**-1.2**
CNGN	**Cerro Negro**	**0.97**	**100**	‖ *i*P	**Pn**	**07 25 24.3**	**-1.4**
CNGN	**Cerro Negro**	**0.97**	**100**	*e*P	**Pn**	**07 25 24.3**	**-1.4**
CNGN				*e*S	**Sn**	**07 25 38.3**	**-1.6**
PACA	**Pacayal**	**1.01**	**321**	*e*P	**Pn**	**07 25 26.4**	**+0.1**
PACA				*e*S	**Sn**	**07 25 41.3**	**+0.4**
PACA	**Pacayal**	**1.01**	**321**	*e*P	**Pn**	**07 25 26.4**	**+0.1**
PACA				*e*S	**Sn**	**07 25 41.3**	**+0.4**
MOMN	**Momotombo**	**1.14**	**103**	*e*P	**Pn**	**07 25 27.3**	**-0.4**
COEB	**Comit de Eme**	**1.17**	**315**	*e*P	**Pn**	**07 25 27.9**	**-0.2**
COEB				*e*S	**Sn**	**07 25 44.5**	**+0.2**
COEB				IAML		07 25 45.3	
	comp=Z,13μm,0.6s						
COEB	**Comit de Eme**	**1.17**	**315**	*e*P	**Pn**	**07 25 27.9**	**-0.2**
COEB				*e*S	**Sn**	**07 25 44.5**	**+0.2**
COEB				IAML		07 25 45.3	
	comp=Z,13μm,0.6s						
COPN	**Copaltepe**	**1.17**	**115**	*e*P	**Pn**	**07 25 27.7**	**-0.3**
CAHU	**Cacacuatique**	**1.21**	**335**	*i* P	**Pn**	**07 25 28.7**	**-0.1**
CAHU	**Cacacuatique**	**1.21**	**335**	*i* P	**Pn**	**07 25 28.7**	**-0.1**
PQSS	**Presa 15 de Se**	**1.28**	**318**	*e*P	**Pn**	**07 25 29.2**	**-0.2**
PQSS				*e*S	**Sn**	**07 25 47.2**	**+0.8**
PQSS	**Presa 15 de Se**	**1.28**	**318**	*e*P	**Pn**	**07 25 29.2**	**-0.2**
PQSS				*e*S	**Sn**	**07 25 47.2**	**+0.8**
BRAN	**Las Pilas**	**1.29**	**88**	*e*P	**Pn**	**07 25 31.2**	**+1.6**
APYN	**Apoyeque**	**1.37**	**109**	*e*P	**Pn**	**07 25 30.3**	**-0.2**
APYN				*e*S	**Sn**	**07 25 47.8**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.43**	**16**	Pn	**Pn**	**07 25 32.4**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.43**	**16**	‖ *i*P	**Pn**	**07 25 32.4**	**+1.0**
TGUH				*e*S	**Sn**	**07 25 51.5**	**+1.4**
TGUH	**Tegucigalpa,Un**	**1.43**	**16**	‖ *i*P	**Pn**	**07 25 32.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.43**	**16**	‖ *i*P	**Pn**	**07 25 32.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.43**	**16**	*e*P	**Pn**	**07 25 32.5**	**+1.1**
SCLA	**Alcaldia de Sa**	**1.45**	**315**	*e*P	**Pn**	**07 25 31.1**	**-0.5**
SCLA	**Alcaldia de Sa**	**1.45**	**315**	*e*P	**Pn**	**07 25 31.1**	**-0.5**
SNVI	**San Vicente**	**1.47**	**310**	*e*S	**Sn**	**07 25 50.8**	**-0.1**
SNVI	**San Vicente**	**1.47**	**310**	*e*S	**Sn**	**07 25 50.8**	**-0.1**
MGAN	**Managua**	**1.49**	**110**	*e*P	**Pn**	**07 25 31.9**	**-0.1**
MGAN				*e*P	**Pn**	**07 25 32.2**	**+0.2**
COEG	**Centro de Oper**	**1.50**	**309**	*e*P	**Pn**	**07 25 31.9**	**-0.4**
COEG				*e*S	**Sn**	**07 25 52.6**	**+1.0**
COEG	**Centro de Oper**	**1.50**	**309**	*e*P	**Pn**	**07 25 31.9**	**-0.4**
COEG				*e*S	**Sn**	**07 25 52.6**	**+1.0**
HUEN		**1.51**	**103**	*e*P	**Pn**	**07 25 32.1**	**-0.1**
CRUN	**El Crucero**	**1.51**	**117**	*e*P	**Pn**	**07 25 30.3**	**-2.1**
WILN	**Americas 2**	**1.54**	**109**	*e*P	**Pn**	**07 25 32.8**	**+0.1**
SJTE	**Alcalda de S**	**1.60**	**306**	*e*P	**Pn**	**07 25 33.4**	**-0.1**
SJTE				*e*S	**Sn**	**07 25 53.8**	**-0.1**
SJTE	**Alcalda de S**	**1.60**	**306**	*e*P	**Pn**	**07 25 33.4**	**-0.1**
SJTE				*e*S	**Sn**	**07 25 53.8**	**-0.1**
PAVA	**Las Pavas**	**1.60**	**310**	*e*P	**Pn**	**07 25 33.2**	**-0.4**
PAVA				*e*S	**Sn**	**07 25 54.4**	**+0.4**
PAVA	**Las Pavas**	**1.60**	**310**	*e*P	**Pn**	**07 25 33.2**	**-0.4**
PAVA				*e*S	**Sn**	**07 25 54.4**	**+0.4**
MASN	**Masaya**	**1.64**	**114**	*e*P	**Pn**	**07 25 33.8**	**-0.2**
LFRS	**El Faro**	**1.65**	**305**	*e*P	**Pn**	**07 25 34.1**	**0.0**
LFRS	**El Faro**	**1.65**	**305**	*e*P	**Pn**	**07 25 34.1**	**0.0**
P5NO	**Presa 5 de nov**	**1.68**	**321**	*i* P	**Pn**	**07 25 34.2**	**-0.2**
P5NO				*e*S	**Sn**	**07 25 56.0**	**+0.4**
LBRS	**Las Brisas**	**1.70**	**309**	*e*P	**Pn**	**07 25 35.5**	**+0.7**
LBRS	**Las Brisas**	**1.70**	**309**	*e*P	**Pn**	**07 25 35.5**	**+0.7**
MATN	**Matagalpa**	**1.73**	**81**		**Pn**	**07 25 35.4**	**+0.2**
MATN	**Matagalpa**	**1.73**	**81**	*e*P	**Pn**	**07 25 35.3**	**+0.1**
LFU	**La Fuente**	**1.76**	**307**	*e*P	**Pn**	**07 25 36.1**	**+0.5**
LFU				*e*S	**Sn**	**07 25 58.6**	**+1.0**
LFU	**La Fuente**	**1.76**	**307**	*e*P	**Pn**	**07 25 36.1**	**+0.5**
LFU				*e*S	**Sn**	**07 25 58.6**	**+1.0**
SNET	**Serv Nac Est T**	**1.82**	**304**	Pn	**Pn**	**07 25 36.5**	**+0.1**
SNET	**Serv Nac Est T**	**1.82**	**304**	*e*P	**Pn**	**07 25 35.8**	**-0.6**
SNET				*e*S	**Sn**	**07 25 58.5**	**-0.5**
SNET	**Serv Nac Est T**	**1.82**	**304**	*e*P	**Pn**	**07 25 35.8**	**-0.6**
SNET				*e*S	**Sn**	**07 25 58.5**	**-0.5**
SNET	**Serv Nac Est T**	**1.82**	**304**	*e*P	**Pn**	**07 25 36.3**	**-0.1**
UEES	**Universidad Ev**	**1.84**	**304**	*e*P	**Pn**	**07 25 36.8**	**+0.1**
UEES				*e*S	**Sn**	**07 25 59.7**	**+0.2**
UEES	**Universidad Ev**	**1.84**	**304**	*e*P	**Pn**	**07 25 36.8**	**+0.1**
UEES				*e*S	**Sn**	**07 25 59.7**	**+0.2**
BOAB	**BOACO BROADBAN**	**.98**	**96**	Pn	**Pn**	**07 25 38.3**	**-0.1**
BOAB	**BOACO BROADBAN**	**.98**	**96**	*e*P	**Pn**	**07 25 38.3**	**-0.1**
CEDA	**San Andres**	**2.02**	**304**	*e*P	**Pn**	**07 25 39.2**	**+0.3**
CEDA	**San Andres**	**2.02**	**304**	*e*P	**Pn**	**07 25 39.2**	**+0.3**
CEVE	**Cerro Verde**	**2.22**	**301**	IAML		07 26 14.8	
	comp=Z,5μm,0.4s						
CEVE	**Cerro Verde**	**2.22**	**301**	IAML		07 26 14.8	
	comp=Z,5μm,0.4s						
SBLS	**San Blas**	**2.22**	**302**	*e*P	**Pn**	**07 25 42.3**	**+0.4**
SBLS	**San Blas**	**2.22**	**302**	*e*P	**Pn**	**07 25 42.3**	**+0.4**
SNJE	**San Jose**	**2.22**	**302**	*e*P	**Pn**	**07 25 42.5**	**+0.7**
SNJE	**San Jose**	**2.22**	**302**	*e*P	**Pn**	**07 25 42.5**	**+0.7**
RTR	**El Retiro**	**2.27**	**303**	*e*P	**Pn**	**07 25 42.8**	**+0.3**
RTR	**El Retiro**	**2.27**	**303**	*e*P	**Pn**	**07 25 42.8**	**+0.3**
MTO3	**Montecristo**	**2.37**	**316**		**Pn**	**07 25 44.1**	**+0.3**
MTO3	**Montecristo**	**2.37**	**316**	*e*P	**Pn**	**07 25 44.5**	**+0.6**
MTO3	**Montecristo**	**2.37**	**316**	*e*P	**Pn**	**07 25 44.5**	**+0.6**
NUBE	**Las Nubes**	**2.38**	**301**	*e*P	**Pn**	**07 25 43.2**	**-0.8**
NUBE				*e*S	**Sn**	**07 26 12.5**	**0.0**
NUBE	**Las Nubes**	**2.38**	**301**	*e*P	**Pn**	**07 25 43.2**	**-0.8**
NUBE				*e*S	**Sn**	**07 26 12.5**	**0.0**
ACON	**Acoyapa**	**2.54**	**106**		**Pn**	**07 25 45.8**	**-0.2**
ACON	**Acoyapa**	**2.54**	**106**	*e*P	**Pn**	**07 25 45.9**	**-0.1**
ACON	**Acoyapa**	**2.54**	**106**	*e*P	**Pn**	**07 25 45.8**	**-0.2**
HZTE	**Horizontes, Gu**	**2.82**	**134**		**Pn**	**07 25 51.1**	**+1.4**
HZTE	**Horizontes, Gu**	**2.82**	**134**	*e*P	**Pn**	**07 25 50.7**	**+1.0**
HZTE				*e*S	**Sn**	**07 26 23.0**	**+0.2**
MRL	**Marmol**	**3.09**	**321**	*e*P	**Pn**	**07 25 55.5**	**+2.0**
MRL				*e*S	**Sn**	**07 26 34.5**	**+4.9**
VMAR	**Armenia, Volca**	**3.11**	**126**	*e*P	**Pn**	**07 25 53.7**	**0.0**
ORTG	**Ortega, Santa**	**3.16**	**136**	Pn	**Pn**	**07 25 55.3**	**+0.9**
NBG	**Las Nubes**	**3.22**	**307**	*e*P	**Pn**	**07 25 57.5**	**+2.2**
SAJU	**San Juanillo,**	**3.23**	**143**	*e*P	**Pn**	**07 25 55.1**	**-0.1**
VERA	**Finca Concepci**	**3.29**	**123**	*e*P	**Pn**	**07 25 55.9**	**-0.2**
PCG	**Pacaya**	**3.32**	**301**	*e*P	**Pn**	**07 25 58.1**	**+1.4**
PCG				*e*S	**Sn**	**07 26 40.1**	**+4.8**
ESPN	**Las Esperanzas**	**3.33**	**98**		**Pn**	**07 25 57.2**	**+0.6**
DUNO	**Dulce Nombre,**	**3.35**	**140**		**Pn**	**07 25 57.5**	**+0.6**
INDI	**Punta indio, G**	**3.51**	**142**	*e*P	**Pn**	**07 25 59.6**	**+0.5**
FUG	**Fuego 3**	**3.55**	**300**	*e*P	**Pn**	**07 26 01.3**	**+1.7**
FUG				*e*S	**Sn**	**07 26 42.2**	**+1.5**
JTS	**Las Juntas de**	**3.57**	**131**	Pn	**Pn**	**07 26 01.1**	**+1.2**
JTS	**Las Juntas de**	**3.57**	**131**	*e*P	**Pn**	**07 26 00.2**	**+0.4**
JTS	**Las Juntas de**	**3.57**	**131**	*e*P	**Pn**	**07 26 00.9**	**+1.1**
COVE	**Coope Vega, Sa**	**3.75**	**121**		**Pn**	**07 26 02.6**	**+0.3**
COVE	**Coope Vega, Sa**	**3.75**	**121**	*e*P	**Pn**	**07 26 02.2**	**0.0**
LAFE	**Finca La Fe, P**	**3.94**	**136**	*e*P	**Pn**	**07 26 05.0**	**+0.2**
JACO	**JACO, Garabito**	**4.21**	**135**	Pn	**Pn**	**07 26 10.7**	**+2.1**
JACO	**JACO, Garabito**	**4.21**	**135**	*e*P	**Pn**	**07 26 11.3**	**+2.7**
STG3	**Santiaguito 3,**	**4.29**	**299**	*e*P	**Pn**	**07 26 12.0**	**+2.2**
STG3				*e*S	**Sn**	**07 26 58.9**	**+0.1**
RTAL	**Retalhuleu**	**4.32**	**296**	Pn	**Pn**	**07 26 10.8**	**+0.8**
HDC	**Heredia**	**4.39**	**127**		**Pn**	**07 26 12.6**	**+1.5**
HDC	**Heredia**	**4.39**	**127**	*e*P	**Pn**	**07 26 13.3**	**+2.2**
HDC	**Heredia**	**4.39**	**127**	*e*P	**Pn**	**07 26 13.8**	**+2.7**
HUEH	**Huehuetenango**	**4.55**	**306**		**Pn**	**07 26 15.8**	**+2.5**
LCR2	**La Lucha 2**	**4.63**	**129**	*e*P	**Pn**	**07 26 16.3**	**+1.8**
PETF	**Flores**	**4.72**	**334**		**Pn**	**07 26 17.9**	**+2.5**
RIMA	**Rio Macho**	**4.73**	**127**		**Pn**	**07 26 17.4**	**+1.6**
CDM	**Cerro de Muert**	**4.94**	**129**	*e*P	**Pn**	**07 26 20.6**	**+1.7**
SRBA	**San Rafael, Bu**	**5.45**	**128**	*e*P	**Pn**	**07 26 27.0**	**+1.5**
PRVC	**Isla de Provid**	**6.19**	**83**	*e*P	**Pn**	**07 26 37.2**	**+1.7**
BRU2	**Volcan**	**6.23**	**128**	Pn	**Pn**	**07 26 37.9**	**+1.6**
BRU2	**Volcan**	**6.23**	**128**	*e*P	**Pn**	**07 26 37.7**	**+1.4**
TEIG	**Tepich**	**7.53**	**356**	Pn	**Pn**	**07 26 56.3**	**+2.5**
TEIG	**Tepich**	**7.53**	**356**	*e*P	**Pn**	**07 26 56.2**	**+2.5**
TEIG	**Tepich**	**7.53**	**356**	*e*P	**Pn**	**07 26 56.2**	**+2.5**
CMIG	**Matias Romero**	**8.23**	**303**	P	**Pn**	**07 27 04.5**	**+1.1**
	comp=Z,6.6nm,0.5s,baz=149,slow=12,SNR=17						
CMIG				S	**Sn**	**07 28 33.4**	**-1.4**
	comp=Z,5.2nm,0.3s,baz=32,slow=22,SNR=1.9						
BCIP	**Isla Barro Col**	**8.45**	**114**	Pn	**Pn**	**07 27 06.0**	**-0.4**
BCIP	**Isla Barro Col**	**8.45**	**114**	*e*P	**Pn**	**07 27 07.5**	**+1.1**
SOR	**Soroa**	**11.00**	**23**	Pn	**Pn**	**07 27 45.0**	**+3.9**
MTDJ	**Mount Denham**	**11.22**	**59**	Pn	**Pn**	**07 27 47.3**	**+3.0**
MTDJ	**Mount Denham**	**11.22**	**59**	*e*P	**Pn**	**07 27 47.9**	**+3.6**
SJCC	**San Jacinto, C**	**12.56**	**101**	*e*P	**Pn**	**07 28 03.3**	**+0.9**
GUY2C	**Guyana, Caldas**	**14.23**	**120**	*e*P	**P**	**07 28 31.2**	**+1.6**
CRJC	**Cerrejon, Guaj**	**14.57**	**95**	*e*P	**P**	**07 28 33.6**	**+0.6**
BBAC	**Balboa, Cauca**	**14.79**	**135**	*e*P	**P**	**07 28 37.7**	**+2.2**
GCUF	**Volcan Galeras**	**15.30**	**137**	*e*P	**P**	**07 28 43.9**	**+2.4**
ROSC	**El Rosal**	**15.32**	**119**	LR	LR	07 34 36.7	
	comp=Z,50nm,21.9s,baz=44,slow=37						
URIC	**Uribia, Colomb**	**15.36**	**92**	*e*P	P	07 28 53.9	+12
OTAV	**Otavalo**	**15.38**	**143**	P	**P**	**07 28 43.6**	**+1.3**
OTAV	**Otavalo**	**15.38**	**143**	*e*P	**P**	**07 28 45.1**	**+2.8**
TULM	**Tulcn-Chalpat**	**15.40**	**140**	*e*P	**P**	**07 28 46.9**	**+4.2**
PAMC	**Pamplona, Colo**	**15.67**	**108**	*e*P	**P**	**07 28 45.6**	**0.0**
CHIC	**Chingaza**	**15.93**	**119**	*e*P	**P**	**07 28 49.8**	**+1.4**
SLOR	**San Lorenzo -**	**16.13**	**145**	P	**P**	**07 28 54.0**	**+3.3**
SDV	**Santo Domingo**	**17.16**	**101**	P	**Pn**	**07 29 00.9**	**-0.5**
	comp=Z,4.4nm,0.3s,baz=271,slow=6.1,SNR=4.7						
SDV				LR	LR	07 35 48.5	
	comp=Z,98nm,21.9s,baz=273,slow=38						
PTGC	**Puerto Gaitan,**	**17.52**	**117**	*e*P	**P**	**07 29 05.2**	**-0.3**
BOSC	**San Juan Bosco**	**18.18**	**149**	P	**Pn**	**07 29 16.5**	**+2.8**
BRAL	**Brewton**	**18.41**	**2**	P	**P**	**07 29 15.6**	**+0.3**
	baz=182						
MCRA	**Macar, Loja**	**18.59**	**155**	*e*P	**Pn**	**07 29 20.1**	**+1.5**
352A	**Blakely**	**18.89**	**7**	P	**P**	**07 29 20.9**	**+0.4**
352A				IAmb	IAmb	07 29 25.4	
	comp=Z,57nm,1.0s						
344A	**Westbrook Farm**	**18.90**	**352**	P	**Pn**	**07 29 22.6**	**+0.6**
344A				IAmb	IAmb	07 29 24.1	
	comp=Z,30nm,0.8s						
833A	**Chaparral WMA,**	**19.03**	**327**	P	**P**	**07 29 22.6**	**+0.6**
833A	**Chaparral WMA,**	**19.03**	**327**	P	**P**	**07 29 22.5**	**+0.6**
	baz=142,SNR=6.5						
TIGA	**Tifton**	**19.05**	**11**	P	**Pn**	**07 29 24.4**	**+0.6**
TIGA	**Tifton**	**19.05**	**11**	P	**Pn**	**07 29 24.5**	**+0.6**
	baz=192,SNR=6.1						
342A	**Flagon Creek P**	**19.10**	**348**	P	**Pn**	**07 29 25.2**	**+0.8**
342A				IAmb	IAmb	07 29 25.9	
	comp=Z,25nm,0.9s						
VBMS	**Vicksburg**	**19.63**	**353**	IAmb	IAmb	07 29 35.7	
	comp=Z,44nm,1.2s						
VBMS	**Vicksburg**	**19.63**	**353**	P	**Pn**	**07 29 30.5**	**-0.1**
	baz=172						
BAUV	**El Baul**	**19.64**	**99**	P	**P**	**07 29 26.9**	**-1.8**
NATX	**Nacogdoches**	**20.05**	**342**	IAmb	IAmb	07 29 39.8	
	comp=Z,30nm,0.8s						
NATX	**Nacogdoches**	**20.05**	**342**	P	Pn	07 29 34.6	-1.0
	baz=160						
435B	**Jarrell**	**20.21**	**335**	IAmb	IAmb	07 29 44.0	
	comp=Z,16nm,0.6s						
LRAL	**Lakeview Retre**	**20.28**	**2**	P	Pn	07 29 37.3	-0.9
LRAL				IAmb	IAmb	07 29 41.7	
	comp=Z,15nm,0.8s						
LRAL	**Lakeview Retre**	**20.28**	**2**	P	**P**	**07 29 36.4**	**+0.9**
	baz=182,SNR=6.8						
Z47A	**Carrollton**	**20.43**	**359**	P	**P**	**07 29 38.3**	**+1.1**
Z47A				IAmb	IAmb	07 29 44.6	
	comp=Z,39nm,1.2s						
Z51A	**Franklin**	**20.68**	**6**	IAmb	IAmb	07 29 44.5	
	comp=Z,24nm,0.6s						
JCT	**Junction City**	**20.97**	**330**	P	**P**	**07 29 43.6**	**+0.5**
	baz=145,SNR=6.8						
GOGA	**Godfrey**	**21.00**	**10**	P	Pn	07 29 45.2	-1.4
GOGA	**Godfrey**	**21.00**	**10**	P	**P**	**07 29 44.2**	**+0.9**
	baz=191,SNR=18						
OBIP	**Obispado Ponce**	**21.00**	**73**	P	**P**	**07 29 42.8**	**-0.6**
OBIP				IAmb	IAmb	07 30 13.5	
	comp=Z,49nm,1.3s						
SJG	**San Juan**	**21.44**	**73**	P	**P**	**07 29 47.6**	**-0.5**
	comp=Z,9.6nm,0.4s,baz=251,slow=14,SNR=4.1						
SJG				LR	LR	07 38 09.4	
	comp=Z,96nm,21.1s,baz=272,slow=37						
	comp=Z,9.6nm,0.4s						
NHSC	**New Hope**	**21.46**	**17**	P	**P**	**07 29 49.7**	**+1.5**
	baz=200						
WLAR	**White Oak Lake**	**21.50**	**348**	IAmb	IAmb	07 29 51.7	
	comp=Z,17nm,0.7s						
ATAH	**Atahualpa**	**21.73**	**154**	P	**P**	**07 29 54.1**	**+2.4**
	comp=Z,7.7nm,0.8s,baz=314,slow=4.3,SNR=5.9						
	comp=Z,7.7nm,0.8s						
OXF	**Oxford**	**21.80**	**356**	P	**P**	**07 29 51.6**	**-0.2**
	baz=175						
FPAL	**Fort Paine**	**21.85**	**5**	IAmb	IAmb	07 30 15.4	
	comp=Z,26nm,1.3s						
MTP	**Monte Pirata**	**21.99**	**73**	P	**P**	**07 29 54.3**	**+0.2**
MTP				IAmb	IAmb	07 29 56.1	
	comp=Z,31nm,0.8s						
HODGE	**Hodges**	**22.02**	**12**	IAmb	IAmb	07 29 56.8	
	comp=Z,26nm,0.6s						
HPIG		**22.04**	**313**	P	**P**	**07 29 56.5**	**+1.8**
TXAR	**Lajitas Array**	**22.26**	**321**	P	**P**	**07 29 57.2**	**+0.2**
	comp=Z,5.7nm,0.6s,baz=140,slow=9.6,SNR=78						
TXAR				PcP	**PcP**	**07 33 50.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=132,slow=6.6,SNR=5.0						
TXAR				ScP	**ScP**	**07 37 20.8**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=145,slow=5.4,SNR=16						
TXAR				LR	LR	07 41 21.6	
	comp=Z,17nm,19.0s,baz=132,slow=44						
	comp=Z,5.7nm,0.6s						
TX31	**Lajitas Ar. Si**	**22.26**	**321**	P	**P**	**07 29 57.2**	**+0.3**
TX31				IAmb	IAmb	07 30 00.6	
	comp=Z,25nm,0.7s						
CUPR	**Culebra, Puert**	**22.29**	**73**	P	**P**	**07 29 57.0**	**-0.1**
JSC	**Jenkinsville**	**22.29**	**14**	P	**P**	**07 29 58.1**	**+1.1**
JSC				IAmb	IAmb	07 30 00.9	
	comp=Z,19nm,0.9s						
Z35A	**Perchaven, San**	**22.35**	**339**	IAmb	IAmb	07 30 01.4	
	comp=Z,24nm,0.7s						
UALR	**University of**	**22.41**	**350**	IAmb	IAmb	07 30 21.9	
	comp=Z,25nm,1.3s						
MIAR	**Mount Ida**	**22.42**	**347**	P	**P**	**07 29 58.6**	**+0.1**
	baz=165,SNR=18						
SWET	**Sewanee**	**22.50**	**4**	IAmb	IAmb	07 30 01.1	
	comp=Z,23nm,1.0s						
W50A	**Signal Mountai**	**22.53**	**5**	IAmb	IAmb	07 30 01.8	
	comp=Z,20nm,0.5s						
W52A	**Murphy**	**22.58**	**8**	IAmb	IAmb	07 30 22.6	
	comp=Z,20nm,1.1s						
STVI	**Saint Thomas**	**22.60**	**73**	P	**P**	**07 30 00.9**	**+0.4**
PAULI	**Pauline**	**22.68**	**13**	IAmb	IAmb	07 30 03.1	
	comp=Z,19nm,0.5s						
ABTX	**Abilene, Hawle**	**22.68**	**333**	P	**P**	**07 30 01.4**	**+0.1**
	baz=148,SNR=5.4						
PCRV	**Puerto La Cruz**	**22.72**	**94**	P	**P**	**07 30 02.2**	**+0.4**
	comp=Z,13nm,0.6s,baz=222,slow=5.6,SNR=21						
PCRV				LR	LR	07 41 31.1	
	comp=Z,33nm,18.1s,slow=44						
	comp=Z,13nm,0.6s						
CPCT	**Cooper Cave**	**22.86**	**7**	P	**P**	**07 30 04.0**	**+1.0**
X37A	**Clayton**	**22.91**	**344**		**P**	**07 30 04.2**	**+0.7**
X37A				IAmb	IAmb	07 30 05.8	
	comp=Z,51nm,1.4s						
KMSC	**Kings Mountain**	**23.09**	**13**	IAmb	IAmb	07 30 07.5	
	comp=Z,26nm,0.7s						
KMSC	**Kings Mountain**	**23.09**	**13**	P	**P**	**07 30 05.8**	**+0.5**
	baz=196,SNR=7.1						
TKL	**Tuckaleechee C**	**23.15**	**8**	P	**P**	**07 30 05.3**	**-0.6**
	comp=Z,11nm,0.5s,baz=184,slow=11,SNR=24						
	comp=Z,11nm,0.5s						
TKL	**Tuckaleechee C**	**23.15**	**8**	IAmb	IAmb	07 30 07.9	
	comp=Z,18nm,0.7s						
V53A	**Saluda**	**23.31**	**10**	IAmb	IAmb	07 30 34.4	
	comp=Z,21nm,0.9s						
CLTN	**Cedars of Leba**	**23.35**	**3**	IAmb	IAmb	07 30 10.1	
	comp=Z,17nm,0.7s						
WVT	**Waverly**	**23.36**	**360**	P	**P**	**07 30 07.0**	**-0.7**
	baz=180						
FCAR	**Ozark Folk Cen**	**23.46**	**351**	IAmb	IAmb	07 30 09.3	
	comp=Z,12nm,0.7s						
LCAR	**Lake Charles**	**23.50**	**353**	P	**P**	**07 30 08.4**	**-0.7**
LCAR				IAmb	IAmb	07 30 09.0	
	comp=Z,12nm,0.6s						
V55A	**Taylorsville**

SSPA	Standing Stone	29.15	15	P	P	07 30 59.6	-0.2
	baz=200						
M53A	WI Miller and	29.30	11	P	P	07 31 01.4	+0.2
	baz=194						
KSCO	Kaye Shedlock'	29.39	336	IAmb	IAmb	07 31 02.8	
	comp=Z,8.1nm,0.6s						
KSCO	Kaye Shedlock'	29.39	336	P	P	07 31 02.0	-0.1
	baz=149						
SDCO	Great Sand Dun	29.61	331	P	P	07 31 05.5	+1.2
SDCO	Great Sand Dun	29.61	331	P	P	07 31 04.8	+0.6
	baz=143,SNR=8.1						
AAM	Ann Arbor	29.72	6	P	P	07 31 04.0	-0.8
	baz=188						
M57A	Sunshine Farm,	30.01	16	IAmb	IAmb	07 31 09.1	
	comp=Z,13nm,0.8s						
214A	Organ Pipe Nat	30.02	314	P	P	07 31 07.3	-0.4
	baz=124						
BGNE	Belgrade	30.06	344	P	P	07 31 07.5	-0.3
	baz=159,SNR=6.5						
ERPA	Erie	30.09	11	P	P	07 31 07.4	-0.7
	baz=195						
JFWS	Jewell Farm	30.21	356	P	P	07 31 09.3	+0.2
	baz=175						
S22A	4UR Ranch, Cre	30.26	329	P	P	07 31 10.7	+0.6
	baz=140,SNR=13						
PAL	Palisades	30.70	21	P	P	07 31 13.5	+0.1
	baz=207						
MVCO	Mesa Verde	30.73	326	IAmb	IAmb	07 31 16.8	
	comp=Z,6.1nm,0.7s						
MVCO	Mesa Verde	30.73	326	P	P	07 31 14.3	+0.1
	baz=137,SNR=6.5						
OGNE	Ogallala	30.85	339	P	P	07 31 15.5	+0.6
	baz=152						
ETMB	Extrema	30.88	135	eP	P	07 31 15.2	-0.2
BINY	Binghamton	31.12	17	IAmb	IAmb	07 31 22.1	
	comp=Z,14nm,0.9s						
BINY	Binghamton	31.12	17	P	P	07 31 17.3	+0.1
	baz=202						
WUAZ	Wupatki	31.23	321	P	P	07 31 18.7	+0.2
	baz=131						
ISCO	Idaho Springs	31.32	333	P	P	07 31 18.4	-0.9
	baz=145						
L59A	Walton	31.39	18	IAmb	IAmb	07 31 21.3	
	comp=Z,16nm,0.8s						
K57A	Scipio Center	31.47	16	P	P	07 31 20.0	-0.2
I37A	Lemond, Waseca	31.62	352	IAmb	IAmb	07 31 21.4	
	comp=Z,9.6nm,0.6s						
PV10	Paradox Valley	31.88	327	IAmb	IAmb	07 31 47.7	
	comp=Z,9.2nm,0.8s						
ECSD	EROS Data Cent	31.89	348	IAmb	IAmb	07 31 25.0	
	comp=Z,8.3nm,0.8s						
ECSD	EROS Data Cent	31.89	348	P	P	07 31 22.7	-1.3
	baz=163,SNR=9.1						
PV23	Carpenter Ridg	31.92	327	IAmb	IAmb	07 31 49.2	
	comp=Z,13nm,1.0s						
GLMI	Grayling	32.15	4	P	P	07 31 24.2	-2.0
	baz=186						
PDMCI	Parker Dam,Lak	32.27	316	P	P	07 31 27.7	+0.4
	baz=125						
N23A	Red Feather La	32.36	334	P	P	07 31 28.5	+0.1
	baz=145						
L61B	Northampton	32.40	21	P	P	07 31 27.8	-0.6
	baz=208						
SPMN	Marine on St.	32.73	353	P	P	07 31 29.5	-1.8
	baz=171,SNR=7.9						
O20A	White River Ci	32.81	330	IAmb	IAmb	07 31 57.0	
	comp=Z,13nm,1.0s						
O20A	White River Ci	32.81	330	P	P	07 31 33.2	+0.9
	baz=141,SNR=10						
BC3	Big Chuckawall	32.81	314	P	P	07 31 32.5	+0.3
	baz=123						
SADO	Sadowa	32.81	11	LR	LR	07 43 52.5	
	comp=Z,30nm,19.9s,baz=194,slow=34						
SUSD	Miller	33.10	345	P	P	07 31 33.8	-0.8
	baz=160						
SRU	San Rafael Swe	33.21	327	IAmb	IAmb	07 31 37.3	
	comp=Z,6.7nm,0.6s						
LCMT	Little Creek M	33.34	321	P	P	07 31 37.4	+0.4
MTPU	Mount Pierson	33.39	323	IAmb	IAmb	07 31 41.7	
	comp=Z,5.8nm,0.7s						
Q16A	Castle Valley	33.42	326	IAmb	IAmb	07 31 40.3	
	comp=Z,6.3nm,0.7s						
P18A	Preston Nutter	33.44	327	IAmb	IAmb	07 32 01.6	
	comp=Z,6.5nm,1.0s						
F36A	Milaca	33.45	353	IAmb	IAmb	07 31 36.7	
	comp=Z,6.1nm,0.7s						
PFO	Pinyon Flats O	33.49	313	P	P	07 31 37.2	-1.0
	baz=122						
109C	Camp Elliot, M	33.59	312	P	P	07 31 36.5	-2.5
	baz=120						
MVU	Marysvale	33.72	324	IAmb	IAmb	07 31 42.0	
	comp=Z,8.2nm,0.9s						
LONY	Lake Ozonia	33.75	17	P	P	07 31 40.1	-0.1
LONY				IAmb	IAmb	07 31 40.3	
	comp=Z,6.1nm,0.7s						
LONY	Lake Ozonia	33.75	17	P	P	07 31 39.4	-0.8
	baz=203						
CCUT	Cedar City	33.77	322	P	P	07 31 42.3	+1.7
K22A	Casper	34.05	335	P	P	07 31 43.3	+0.3
	baz=146						
RSSD	Black Hills	34.34	339	P	P	07 31 46.3	+0.8
RSSD	Black Hills	34.34	339	P	P	07 31 46.0	+0.4
	baz=151						
MPU	Maple Canyon	34.45	327	IAmb	IAmb	07 31 48.2	
	comp=Z,6.5nm,0.7s						
LPAZ	La Paz	34.66	146	P	P	07 31 49.8	+0.8
	comp=Z,2.0nm,0.5s,baz=335,slow=6.2,SNR=16						
LPAZ				PcP	PcP	07 34 21.6	-0.1
	comp=Z,1.0nm,0.5s,baz=20,slow=4.5,SNR=5.1						
LPAZ				LR	LR	07 47 39.7	
	comp=Z,20nm,19.9s,baz=243,slow=39						
	comp=Z,2.0nm,0.5s						
LPAZ	La Paz	34.66	146	P	P	07 31 49.6	+0.6
PSUT	Pine Spring	34.70	323	P	P	07 31 50.0	+1.3
PSUT				IAmb	IAmb	07 31 52.5	
	comp=Z,4.0nm,0.7s						
JLU	Jordanelle	34.78	327	IAmb	IAmb	07 31 50.9	
	comp=Z,4.3nm,0.7s						
CTU	Camp Tracy	35.00	327	IAmb	IAmb	07 31 54.1	
	comp=Z,4.7nm,0.7s						
TPNV	Topopah Spring	35.20	318	P	P	07 31 53.2	+0.2
	baz=126						
DUG	Dugway, Tooele	35.22	326	P	P	07 31 53.0	-0.1
	baz=134						
BW06	Boulder Array	35.47	332	P	P	07 31 55.2	-0.2
	baz=141						
PDAR	Pinedale Array	35.47	332	P	P	07 31 55.5	+0.1
	comp=Z,2.3nm,0.7s,baz=126,slow=9.8,SNR=24						
PDAR				pP	pP	07 32 16.2	+1.2
	comp=Z,1.5nm,0.7s,baz=134,slow=8.4,SNR=5.2						
PDAR				PcP	PcP	07 34 21.9	-1.3
	comp=Z,0.4nm,0.5s,baz=145,slow=5.4,SNR=3.9						
PDAR				LR	LR	07 48 37.8	
	comp=Z,27nm,20.1s,baz=112,slow=40						
	comp=Z,2.3nm,0.7s						
MPMC	Manual Prospec	35.52	316	P	P	07 31 55.6	-0.2
	baz=123						
HWUT	Hardware Ranch	35.57	329	P	P	07 31 57.0	+0.9
R11A	Troy Canyon, C	35.63	321	P	P	07 31 56.3	-0.4
	baz=128						
PKME	Peaks-Kenny Pk	36.06	22	P	P	07 32 00.3	+0.3
	baz=211						
AGMN	Agassiz Nation	36.16	351	IAmb	IAmb	07 31 59.9	
	comp=Z,6.9nm,0.7s						
AGMN	Agassiz Nation	36.16	351	P	P	07 31 59.9	-1.0
	baz=166,SNR=6.0						
AHID	Auburn Hatcher	36.20	330	P	P	07 32 02.3	+0.8
HVU	Hansel Valley	36.32	328	IAmb	IAmb	07 32 04.3	
	comp=Z,5.9nm,0.6s						
MDND	Maddock	36.46	346	P	P	07 32 03.0	-0.3
	baz=160,SNR=9.6						
SNOW	Snow King Moun	36.57	331	P	P	07 32 06.1	+1.4
LOHW	Long Hollow	36.61	332	IAmb	IAmb	07 32 09.2	
	comp=Z,4.4nm,0.6s						
MOOW	Moose Ponds	36.78	332	IAmb	IAmb	07 32 09.0	
	comp=Z,6.2nm,0.7s						
GO01	Chusmiza	36.93	150	IAmb	IAmb	07 32 16.1	
	comp=Z,6.2nm,0.7s						
ELK	Elko	36.96	324	LR	LR	07 51 10.3	
	comp=Z,19nm,20.9s,baz=123,slow=42						
RLMT	Red Lodge	37.21	334	IAmb	IAmb	07 32 11.5	
	comp=Z,5.6nm,0.6s						
RLMT	Red Lodge	37.21	334	P	P	07 32 09.9	-0.1
	baz=144,SNR=8.2						
YMP	Mirror Lake Pl	37.29	333	IAmb	IAmb	07 32 49.0	
	comp=Z,7.5nm,1.0s						
NVAR	Mina Array Bea	37.39	319	P	P	07 32 13.2	+1.6
	comp=Z,2.5nm,0.7s,baz=127,slow=7.1,SNR=26						
NVAR				pP	pP	07 32 33.4	+1.8
	comp=Z,2.2nm,0.7s,baz=137,slow=7.3,SNR=6.4						
NVAR				PcP	PcP	07 34 29.2	+0.2
	comp=Z,0.9nm,0.6s,baz=132,slow=3.8,SNR=7.4						
NVAR				ScP	ScP	07 38 09.4	+0.5
	comp=Z,1.4nm,0.8s,baz=124,slow=4.3,SNR=13						
	comp=Z,2.5nm,0.7s						
NVAR	Mina Array Bea	37.39	319	P	P	07 32 11.1	-0.6
LHV	Little Huntoon	37.42	318	IAmb	IAmb	07 32 15.6	
	comp=Z,5.0nm,0.8s						
YMR	Madison River	37.59	332	IAmb	IAmb	07 32 16.6	
	comp=Z,8.8nm,0.8s						
GCMT	Greycliff	37.91	335	P	P	07 32 16.2	+0.3
DGMT	Dagmar	38.24	342	P	P	07 32 18.8	+0.3
	baz=153,SNR=12						
YERR	Yerington	38.31	319	IAmb	IAmb	07 32 22.0	
	comp=Z,4.8nm,0.6s						
HLID	Hailey	38.44	328	P	P	07 32 20.5	+0.2
	baz=135,SNR=9.4						
PNTR	Pine Nut	38.60	319	P	P	07 32 23.5	+1.7
PNTR				IAmb	IAmb	07 32 28.8	
	comp=Z,4.2nm,0.7s						
BOZ	Bozeman (W)	38.61	333	IAmb	IAmb	07 32 23.2	
	comp=Z,7.1nm,0.6s						
BOZ	Bozeman (W)	38.61	333	P	P	07 32 22.6	+0.8
	baz=140,SNR=14						
PDRB	Porto dos Gac	39.06	127	eP	P	07 32 24.5	-1.2
BEKR	Beckworth	39.52	319	P	P	07 32 30.7	+1.2
EGMT	Eagleton	39.76	337	P	P	07 32 31.7	+0.4
EGMT				IAmb	IAmb	07 32 57.0	
	comp=Z,6.0nm,0.7s						
EGMT	Eagleton	39.76	337	P	P	07 32 31.2	-0.1
	baz=145						
WVOR	Wild Horse Val	39.99	324	IAmb	IAmb	07 32 35.4	
	comp=Z,7.4nm,0.7s						
J08A	Circle Bar Ran	40.48	325	IAmb	IAmb	07 32 42.0	
	comp=Z,3.5nm,0.6s						
MSO	Missoula	40.59	332	IAmb	IAmb	07 33 01.8	
	comp=Z,9.3nm,1.2s						
MSO	Missoula	40.59	332	P	P	07 32 37.7	-0.4
	baz=138						
F10A	Beach Ranch, E	41.55	329	IAmb	IAmb	07 33 10.8	
	comp=Z,6.9nm,0.8s						
PINE	Pine Mountain	42.16	324	IAmb	IAmb	07 32 53.0	
	comp=Z,7.4nm,0.8s						
KHMM	Horse Mountain	42.23	318	P	P	07 32 52.3	+0.6
KHMM				IAmb	IAmb	07 32 53.1	
	comp=Z,8.2nm,0.7s						
WALA	Waterton Lakes	42.27	334	P	P	07 32 52.2	+0.3
WALA				IAmb	IAmb	07 32 53.6	
	comp=Z,4.3nm,0.7s						
HAWA	Hanford	43.02	328	IAmb	IAmb	07 32 57.7	
	comp=Z,8.8nm,1.1s						
NEW	Newport	43.11	331	P	P	07 32 57.3	-1.3
	comp=Z,1.5nm,0.4s,baz=134,slow=9.5,SNR=7.5						
NEW				LR	LR	07 52 45.5	
	comp=Z,45nm,18.7s,baz=115,slow=38						
	comp=Z,1.5nm,0.4s						
NEW	Newport	43.11	331	P	P	07 32 57.5	-1.1
	baz=135						
D08A	Wollman Farm,	43.15	329	P	P	07 32 58.8	-0.1
D08A				IAmb	IAmb	07 33 00.1	
	comp=Z,9.2nm,0.7s						
H04A	Detroit Lake	43.41	324	P	P	07 33 01.7	+0.6
H04A				IAmb	IAmb	07 33 28.9	
	comp=Z,20nm,1.5s						
FFC	Flin Flon	43.43	348	P	P	07 33 00.7	-0.3
FFC				IAmb	IAmb	07 33 01.3	
	comp=Z,10nm,0.7s						
RPN	Rapa Nui	44.80	208	LR	LR	07 46 30.1	
	comp=Z,42nm,21.9s,baz=48,slow=28						
SCHQ	Schefferville	45.13	17	P	P	07 33 12.7	-1.9
	comp=Z,16nm,0.6s,baz=223,slow=6.7,SNR=14						
SCHQ				LR	LR	07 51 40.5	
	comp=Z,49nm,21.4s,baz=116,slow=36						
	comp=Z,16nm,0.6s						
EDM	Edmonton	45.32	339	P	P	07 33 15.5	-0.6
EDM				IAmb	IAmb	07 33 16.5	
	comp=Z,13nm,1.1s						
AQDB	Aquidauana	45.54	136	eP	P	07 33 17.0	-1.3
LLLB	Lillooet	46.98	331	IAmb	IAmb	07 33 29.8	
	comp=Z,7.1nm,0.6s						
BDFB	Brasilia	48.28	125	P	P	07 33 38.4	-1.5
	comp=Z,1.6nm,0.5s,baz=271,slow=11,SNR=4.1						
BDFB				PcP	PcP	07 35 04.4	-1.3
	comp=Z,1.3nm,0.4s,baz=293,slow=3.4,SNR=3.1						
	comp=Z,1.6nm,0.5s						
CPUP	Villa Florida	48.73	143	PcP	PcP	07 35 06.5	-0.4
	comp=Z,1.8nm,0.5s,baz=317,slow=4.6,SNR=3.1						
CPUP				LR	LR	07 53 26.2	
	comp=Z,14nm,20.3s,baz=330,slow=35						
CPUP	Villa Florida	48.73	143	P	P	07 33 41.3	-1.6
BBB	Bella Bella	51.01	329	LR	LR	08 01 26.6	
	comp=Z,44nm,18.1s,baz=25,slow=43						
ITQB	Itaqui	51.66	145	eP	P	07 34 04.8	-0.2
FRB	Frobisher Bay	52.75	11	LR	LR	07 58 21.5	
	comp=Z,62nm,18.2s,baz=172,slow=38						
YKA	Yellowknife Ar	53.34	345	P	P	07 34 14.8	-2.2
	comp=Z,2.3nm,0.6s,baz=147,slow=6.6,SNR=12						
YKA				pP	pP	07 34 36.8	-1.1
	comp=Z,1.7nm,0.7s,baz=135,slow=8.1,SNR=2.9						
YKA				LR	LR	07 58 03.7	
	comp=Z,51nm,18.9s,baz=136,slow=37						
	comp=Z,2.3nm,0.6s						
PLCA	Paso Flores	55.45	164	P	P	07 34 32.7	0.0
	comp=Z,4.9nm,0.8s,baz=349,slow=9.3,SNR=11						
	comp=Z,4.9nm,0.8s						
PLCA	Paso Flores	55.45	164	eP	P	07 34 33.5	+0.8
DLBC	Dease Lake	55.61	335	IAmb	IAmb	07 34 35.3	
	comp=Z,5.4nm,0.9s						
DLBC	Dease Lake	55.61	335	P	P	07 34 33.6	0.0
	baz=127,SNR=5.8						
U33K	Whale Pass	55.66	331	P	P	07 34 34.8	+1.0
	baz=123						
R33M	Jennings River	56.58	335	P	P	07 34 39.9	-0.7
	baz=127						
Q32M	Nakina River	56.87	334	P	P	07 34 42.3	-0.4
	baz=125						
N32M	Quiet Lake	58.47	336	P	P	07 34 53.1	-0.6
	baz=125						
MMPY	Sheldon Lake,	58.66	338	P	P	07 34 54.1	-0.9
	baz=128						
O30N	Mendenhall	59.48	335	P	P	07 35 00.3	-0.4
	baz=122						
SFJD	Kangerlussuaq	59.56	16	LR	LR	08 00 34.0	
	comp=Z,30nm,18.1s,baz=200,slow=36						
COYC	Coyhaique	59.66	167	P	P	07 35 02.0	0.0
N30M	Aishikik Lake	60.25	335	P	P	07 35 05.6	-0.4
	baz=121						
MAYO	Mayo, Yukon	60.94	338	P	P	07 35 10.2	-0.4
	baz=124						
M29M	Somme Creek	61.32	336	P	P	07 35 12.7	-0.6
	baz=120						
L29M	L29M	61.53	336	P	P	07 35 13.3	-1.3
	baz=121						
CTG	Chitna Glacier	61.81	334	P	P	07 35 16.1	-0.6
	baz=117						
RES	Resolute Bay	62.13	358	LR	LR	08 06 17.5	
	comp=Z,30nm,18.0s,baz=17,slow=40						
DAWY	Dawson	62.50	337	P	P	07 35 19.8	-1.4
	baz=120						
INK	Inuvik	62.93	343	LR	LR	08 06 01.0	
	comp=Z,30nm,18.3s,baz=156,slow=39						
L27K	Beaver Creek,	62.97	336	P	P	07 35 23.1	-1.1
	baz=117						
M26K	Nabesna, AK	63.16	335	P	P	07 35 24.7	-0.8
	baz=116						
BMRM	Bremner River	63.25	333	P	P	07 35 25.0	-1.2
	baz=114						
N25K	Chitina, Valde	63.51	333	P	P	07 35 26.6	-1.2
	baz=114						
K27K	Chicken	63.52	336	P	P	07 35 26.5	-1.3
	baz=118						
L26K	Log Cabin Wild	63.58	335	P	P	07 35 27.0	-1.3
	baz=116						
EYAK	Cordova Ski Ar	63.60	332	P	P	07 35 27.7	-0.6
	baz=112						
KLU	Klutina	64.04	333	P	P	07 35 30.7	-0.7
	baz=113						
I27K	Kandik River	64.09	338	P	P	07 35 30.7	-0.9
	baz=119						
SCRK	Sand Creek	64.25	336	P	P	07 35 31.7	-1.0
	baz=116						
J26L	Joseph Creek	64.31	337	P	P	07 35 32.5	-0.7
	baz=116						
H27K	Steamboat Moun	64.36	339	P	P	07 35 33.0	-0.3
	baz=119						
PAX	Paxson	64.43	335	P	P	07 35 32.1	-1.8
	baz=114						
RIDG	Independent Ri	64.49	336	P	P	07 35 33.1	-1.2
	baz=115						
I26K	Coal Creek Min	64.52	337	P	P	07 35 33.6	-0.7
	baz=117						
G27K	Doyon Strip	64.69	339	P	P	07 35 34.1	-1.4
	baz=119						
SCM	Sheep Creek Mo	64.79	333	P	P	07 35 34.7	-1.6
	baz=111						
K24K	Donnelly Dome	64.90	335	P	P	07 35 36.0	-0.8
	baz=114						
M23K	Glacier View	64.95	333	P	P	07 35 35.5	-1.8
	baz=111						
J25K	Salcha River,	65.07	336	P	P	07 35 36.7	-1.3
J25K	Salcha River,	65.07	336	P	P	07 35 36.7	-1.3
	baz=114						
G26K	Porcupine Rive	65.50	339	P	P	07 35 39.3	-1.3
	baz=117						
PRP	Porcupine Dome	65.50	337	P	P	07 35 38.5	-2.4
	baz=115						
PMR	Palmer	65.51	333	P	P	07 35 39.1	-1.7
	baz=110						
HDA	Harding Lake	65.61	336	P	P	07 35 39.4	-2.1
	baz=113						
BRSE	Bradley Lake S	65.68	330	P	P	07 35 41.4	-0.5
	baz=107						
ILAR	Eielson Array	65.73	336	P	P	07 35 40.6	-1.6
	comp=Z,1.0nm,0.8s,baz=151,slow=5.5,SNR=22						
ILAR				pP	pP	07 36 03.1	-0.7
	comp=Z,1.3nm,0.9s,baz=120,slow=5.1,SNR=4.9						
	comp=Z,1.0nm,0.8s						
H25K	Birch Creek	65.93	338	P	P	07 35 42.6	-0.9
	baz=115						
F26K	Sheenjek River	65.97	340	P	P	07 35 42.3	-1.4
	baz=117						
KDAK	Kodiak Island	66.06	328	LR	LR	08 05 15.6	
	comp=Z,22nm,19.0s,baz=103,slow=36						
POKR	Poker Plat Res	66.08	336	P	P	07 35 43.2	-1.3
	baz=113						
COLA	College	66.15	336	P	P	07 35 43.2	-1.6
	baz=112						
TCOL	CIGO, UAF Yank	66.15	336	P	P	07 35 43.1	-1.8
	baz=112						
MCK	McKinley	66.17	335	P	P	07 35 43.1	-2.0
	baz=111						
G25K	Bearman Lake	66.24	338	P	P	07 35 44.5	-0.9
	baz=115						
F25K	Christian Rive	66.43	339	P	P	07 35 46.3	-0.4
	baz=115						
H24K	Noodor Dome	66.53	337	P	P	07 35 46.4	-1.0
	baz=112						
NEA2	Nenana	66.53	336	P	P	07 35 46.2	-1.2
	baz=111						
E25K	Arctic Village	66.64	340	P	P	07 35 47.3	-0.7
	baz=116						
G24K	Hadweenzic Riv	66.72	338	P	P	07 35 47.3	-1.2
	baz=113						
SKT	Skwentna	66.72	333	P	P	07 35 47.2	-1.3
	baz=107						
C27K	Jago River	66.72	342	P	P	07 35 47.4	-1.1
	baz=118						
N20K	Mount Spurr	66.80	332	P	P	07 35 47.8	-1.4
	baz=106						
I23K	Minto, Yukon-K	66.84	336	P	P	07 35 47.9	-1.4
I23K				IAmb	IAmb	07 36 11.4	
	comp=Z,14nm,1.5s						
I23K	Minto, Yukon-K	66.84	336	P	P	07 35 48.5	-0.8
	baz=111						
BPAW	Bear Paw Mtn.	67.15	335	P	P	07 35 49.8	-1.4
	baz=109						
F24K	Squaw Lake	67.19	339	P	P	07 35 50.1	-1.4
	baz=113						
PPLA	Purkeypile	67.28	333	P	P	07 35 50.6	-1.7
	baz=107						
MLY	Manley	67.35	336	P	P	07 35 51.4	-1.2
MLY	Manley	67.35	336	P	P	07 35 51.1	-1.5
	baz=109						
CAST	Castle Rocks	67.40	334	P	P	07 35 50.6	-2.3
	baz=108						
M20K	Styx River	67.42	332	P	P	07 35 51.8	-1.3
	baz=106						
D25K	Kavik River	67.42	341	P	P	07 35 51.4	-1.5
	baz=115						
Q18K	Katmai Hardscr	67.51	329	P	P	07 35 52.4	-1.4
	baz=103						
N19K	Bonanza Creek	67.76	331	P	P	07 35 53.6	-1.7
	baz=104						
P18K	Big Mountain,	67.79	329	P	P	07 35 53.9	-1.5
	baz=103						
I21K	Tanana	67.90	336	P	P	07 35 54.0	-2.0
	baz=108						
L20K	Farewell, AK	67.92	333	P	P	07 35 54.3	-1.8
	baz=105						
E23K	Chandalar	68.00	339	P	P	07 35 55.9	-0.8
	baz=112						
R17K	Ugashik Creek	68.02	327	P	P	07 35 55.4	-1.4
	baz=101						
TOLK	Toolik Lake Re	68.21	340	P	P	07 35 56.5	-1.3
	baz=112						
K20K	Telida	68.23	334	P	P	07 35 56.1	-2.0
	baz=106						
C24K	Franklin Bluff	68.34	341	P	P	07 35 57.6	-1.0
	baz=113						
H21K	Melozitna Rive	68.38	336	P	P	07 35 57.3	-1.7
	baz=108						
J20K	Nowinta River	68.49	334	P	P	07 35 58.2	-1.4
	baz=106						
F22K	John River	68.72	338	P	P	07 36 00.5	-0.6
	baz=109						
O17K	Koliganek Bris	68.80	329	P	P	07 36 00.7	-0.9
	baz=101						
G21K	Allakaket	68.91	337	P	P	07 36 01.5	-0.8
	baz=107						
C23K	Itkillik River	69.00	341	P	P	07 36 01.7	-1.0
	baz=111						
F21K	Alatna River	69.11	338	P	P	07 36 03.0	-0.5
	baz=108						
JMIC	Jan Mayen	74.57	20	LR	LR	08 09 29.0	
	comp=Z,21nm,18.2s,baz=203,slow=36						
ESDC	Sonseca Array	77.22	52	pP	pP	07 37 10.5	-3.6
	comp=Z,2.5nm,0.9s,baz=283,slow=6.0,SNR=6.7						
ESDC				LR	LR	08 05 53.0	
	comp=Z,12nm,19.0s,baz=278,slow=32						
MDT	Midelt	77.48	59	LR	LR	08 10 41.3	
	comp=Z,20nm,18.6s,baz=305,slow=35						
SPITS	Spitsbergen Ar	80.53	12	LR	LR	08 16 36.3	
	comp=Z,59nm,18.1s,baz=236,slow=38						
NOA	NORSAR Array B	83.28	29	pP	pP	07 37 44.2	-2.2
	comp=Z,1.5nm,0.8s,baz=285,slow=5.0,SNR=4.2						
DAVOX	Davos/Dischmat	85.98	43	LR	LR	08 09 21.7	
	comp=Z,25nm,19.9s,baz=264,slow=31						
ARCES	ARCESS Array B	86.05	19	P	P	07 37 35.4	-2.2
	comp=Z,2.3nm,0.8s,baz=287,slow=6.2,SNR=3.7						
	comp=Z,2.3nm,0.8s						
TORD	Torodi Ar. Bea	86.58	77	LR	LR	08 11 18.0	
	comp=Z,14nm,22.0s,baz=216,slow=32						
BOSA	Boshof	115.99	116	PKP	PKPdf	07 43 38.7	-1.9
	comp=Z,1.1nm,0.5s,baz=271,slow=3.4,SNR=3.2						
WRA	Warramunga Arr	139.12	254	PKhKP	PKPpre	07 44 17.9	
	comp=Z,0.5nm,0.6s,baz=93,slow=3.1,SNR=8.1						
WRA				PKP	PKPdf

DRK				⇑*iS*		**Sb**	**07 30 39.6**	**-0.1**
	baz=73							
BTK	**Batken**	**1.85**	**285**	⇑*iP*		**Pb**	**07 30 39.0**	**-0.3**
BTK	baz=89			⇑*iS*		**Sg**	**07 31 05.2**	**+0.3**
	baz=89							
GAR	**Garm**	**2.28**	**256**	⇑*eP*		**Pn**	**07 30 43.8**	**+0.7**
GAR	baz=60			⇑*iS*		**Sb**	**07 31 13.3**	**-1.5**
	baz=60							
TRKS	**Terek-Say**	**2.47**	**322**	⇑*iP*		**Pn**	**07 30 47.5**	**+1.8**
TRKS	baz=23			⇑*iS*		**Sb**	**07 31 19.8**	**-0.5**
	baz=23							
AML	**Almayashu**	**2.57**	**9**	P		**Pb**	**07 30 52.7**	**+1.0**
	SNR=115							
UCH	**Uchtor**	**2.83**	**21**	P		**Pb**	**07 30 56.1**	**0.0**
	SNR=25							
UCH	**Uchtor**	**2.83**	**21**	⇑*eP*		**Pb**	**07 30 53.2**	**-2.9**
	baz=19							
UCH				⇑*iS*		**Sb**	**07 31 29.4**	**-1.6**
	baz=19							
NRN	**Naryn**	**2.85**	**49**	⇓*iP*		**Pn**	**07 30 52.1**	**+1.0**
	baz=46							
NRN				⇓*iS*		**Sn**	**07 31 27.5**	**+1.9**
	baz=46							
EKS2	**Erkin-Say**	**3.10**	**9**	P		**Pb**	**07 31 00.7**	**+0.1**
	SNR=16							
EKS2	**Erkin-Say**	**3.10**	**9**	⇑*eP*		**Pn**	**07 30 57.1**	**+2.7**
	baz=7.0							
EKS2				⇑*iS*		**Sb**	**07 31 36.2**	**-2.4**
	baz=7.0							
AAK	**Ala-Archa**	**3.21**	**18**	P		**Pb**	**07 31 01.7**	**-0.8**
	SNR=17							
AAK	**Ala-Archa**	**3.21**	**18**	*i* P		**Pn**	**07 30 58.2**	**+2.3**
	baz=16							
AAK				*i* S		**Sb**	**07 31 38.4**	**-3.2**
	baz=16							
KBK	**Karagaybulak**	**3.35**	**23**	⇓*eP*		**Pn**	**07 31 00.3**	**+2.4**
	baz=22							
KBK				⇓*iS*		**Sn**	**07 31 41.5**	**+3.7**
	baz=22							
TAS	**Tashkent**	**3.41**	**302**	⇑*iP*		**Pn**	**07 31 01.2**	**+2.6**
	baz=3.0							
TAS				⇑*iS*		**Sb**	**07 31 43.3**	**-4.1**
	baz=3.0							
CHMS	**Chumysh**	**3.61**	**19**	P		**Pb**	**07 31 07.1**	**-2.1**
	SNR=18							
CHMS	**Chumysh**	**3.61**	**19**	⇓Pn		**Pb**	**07 31 07.1**	**-2.1**
	15nm,0.3s							
CHMS				⇑Lg		Lg	07 32 05.5	
	14nm,0.7s							
TKM2	**Tokmak 2**	**3.80**	**28**	P		**Pb**	**07 31 09.6**	**-3.0**
	SNR=9.1							
TKM2	**Tokmak 2**	**3.80**	**28**	⇑Pn		**Pb**	**07 31 09.5**	**-3.1**
	3.6nm,0.5s							
TKM2				⇑Sn		**Sb**	**07 32 01.1**	**+2.3**
	5.0nm,0.5s							
TKM2				⇑Lg		Lg	07 32 10.4	
	16nm,0.7s							
KK31	**Karatay Array**	**4.03**	**331**	⇓Pn		**Pb**	**07 31 12.9**	**-3.5**
	1.0nm,0.3s,baz=159,slow=14,SNR=18							
KK31				Sn		**Sb**	**07 32 03.1**	**-2.1**
	18nm,0.5s,baz=152,slow=24,SNR=7.7							
KKAR	**Karatay Array**	**4.03**	**331**	⇑*eP*		**Pn**	**07 31 10.1**	**+3.0**
	baz=32							
KKAR				⇑*iS*		**Sn**	**07 31 58.9**	**+4.6**
	baz=32							
KST	**Kastek**	**4.05**	**31**	*e*P		**Pg**	**07 31 21.0**	**-1.8**
	3.8nm,0.2s							
KST				*e*S		**Sg**	**07 32 16.3**	**+1.1**
	16nm,0.3s							
DGS	**Degeres**	**4.14**	**28**	*e*P		**Pg**	**07 31 22.8**	**-1.9**
	4.0nm,0.2s							
DGS				*e*S		**Sg**	**07 32 19.0**	**+0.7**
	20nm,1.1s							
MTBS	**Maitube**	**4.31**	**34**	*e*P		**Pg**	**07 31 26.6**	**-1.2**
	7.1nm,0.1s							
MTBS				*e*S		**Sg**	**07 32 25.5**	**+1.8**
	22nm,0.2s							
IZV	**Izvestkoviy**	**4.32**	**36**	*e*P		**Pg**	**07 31 26.3**	**-1.7**
	4.5nm,0.0s							
IZV				*e*S		**Sg**	**07 32 24.8**	**+1.0**
	27nm,0.9s							
TNSS	**Tian-Shan**	**4.47**	**38**	*e*P		**Pg**	**07 31 29.3**	**-1.7**
	8.8nm,0.1s							
TNSS				*e*S		**Sg**	**07 32 30.0**	**+1.0**
	8.4nm,0.0s							
KRBS	**Karabastau**	**4.51**	**24**	*e*P		**Pg**	**07 31 29.4**	**-2.4**
	2.7nm,0.1s							
KRBS				*e*S		**Sg**	**07 32 30.8**	**+0.5**
	8.9nm,0.0s							
MDOK	**Medeo**	**4.62**	**38**	*e*P		**Pg**	**07 31 31.3**	**-2.5**
	8.5nm,0.0s							
MDOK				*e*S		**Sg**	**07 32 33.7**	**+0.1**
	15nm,0.2s							
MDOK	**Medeo**	**4.62**	**38**	Pg		**Pb**	**07 31 28.0**	**+1.6**
	6.2nm,0.5s							
MDOK				Lg		Lg	07 32 33.9	
	17nm,0.9s							
KOTS	**Kotyrbulak**	**4.70**	**38**	*e*P		**Pg**	**07 31 33.5**	**-1.8**
	3.7nm,0.2s							
KOTS				*e*S		**Sg**	**07 32 37.4**	**+1.2**
	24nm,0.2s							
KTBS	**Karatobe**	**4.89**	**32**	*e*P		**Pg**	**07 31 36.3**	**-2.7**
	5.6nm,0.1s							
KTBS				*e*S		**Sg**	**07 32 42.1**	**-0.2**
	19nm,0.6s							
CHKK	**Chushkaly**	**5.13**	**33**	*e*P		**Pg**	**07 31 40.9**	**-2.7**
	2.3nm,0.1s							
CHKK				*e*S		**Sg**	**07 32 50.1**	**0.0**
	7.0nm,0.1s							
SATY	**Saty**	**5.26**	**47**	*e*P		**Pg**	**07 31 43.5**	**-2.5**
	3.6nm,0.1s							
SATY				*e*S		**Sg**	**07 32 54.3**	**+0.3**
	13nm,0.2s							
KURS	**Kuram**	**5.42**	**42**	*e*P		**Pg**	**07 31 47.4**	**-1.6**
	6.6nm,0.4s							
KURS				*e*S		**Sg**	**07 33 01.2**	**+2.1**
	9.7nm,0.3s							
BTLS	**Baital**	**5.49**	**7**	*e*P		**Pg**	**07 31 48.9**	**-1.5**
	2.2nm,1.1s							
BTLS				*e*S		**Sg**	**07 33 03.5**	**+2.2**
	5.8nm,0.1s							
UZB	**Uzynbulak**	**5.67**	**49**	*e*P		**Pg**	**07 31 51.5**	**-2.3**
	1.4nm,0.5s							
UZB				*e*S		**Sg**	**07 33 08.3**	**+1.1**
	5.1nm,0.1s							
KPKS	**Kokpek**	**5.68**	**45**	*e*P		**Pg**	**07 31 51.8**	**-2.2**
	2.6nm,0.0s							
KPKS				*e*S		**Sg**	**07 33 08.8**	**+1.3**
	6.5nm,0.1s							
BLB	**Baldybastay**	**6.01**	**40**	*e*P		**Pg**	**07 31 56.4**	**-3.9**
	2.2nm,0.6s							
BLB				*e*S		**Sg**	**07 33 16.7**	**-1.4**
	6.1nm,0.3s							

IDC 05 07:30:18.2±2.6, 53°.70N×86°.81E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=22.9km s-min=13.9km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**283**	I		07 38 20.0	
	baz=100,slow=332,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.21**	**283**	Pg	Pg	07 30 40.4	-1.0
	0.8nm,0.3s,baz=102,slow=16,SNR=4.3						
ZALV				Lg	Lg	07 30 56.9	
	1.5nm,0.3s,baz=104,slow=30,SNR=12						
ZALV				Rg	Rg	07 31 02.8	
	1.4nm,0.3s,baz=105,slow=28,SNR=4.8						
KURBB	**Kurchatov Arra**	**5.95**	**242**	Pn	Pn	07 31 49.3	+1.8
	0.1nm,0.3s,baz=56,slow=13,SNR=5.6						
KURBB				Lg	Lg	07 33 27.6	
	0.1nm,0.3s,baz=62,slow=35,SNR=2.2						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.49**	**205**	Pn	Pn	07 32 09.5	+0.8
	0.1nm,0.3s,baz=25,slow=12,SNR=5.7						
MKAR				Lg	Lg	07 34 14.4	
	baz=27,slow=23,SNR=2.6						
	0.2nm,0.3s						

*MEX **05** 07:32:21.4±0.5, 14°.34N×93°.18W, h21km±49km, MD4.0*
*GCG **05** 07:32:21.5±0.3, 14°.89N×93°.08W, h52km±27km, MD3.7*
ISC 05 07:32:19.4±2.4, 14°.55N±0°.10×93°.14W±0°.06, h11km±13km, n12, σ0°.88/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.92**	**67**	*e*P	**Pb**	**07 32 37.7**	**+0.3**
THIG				*e*S	**Sb**	**07 32 49.5**	**-0.1**
PATR	**El Naranjo**	**1.04**	**57**	*e*P	**Pb**	**07 32 39.6**	**0.0**
PATR				*e*S	**Sb**	**07 32 54.1**	**+0.7**
PAVE	**Pavencul**	**1.13**	**56**	*e*P	**Pn**	**07 32 41.1**	**-0.3**
PAVE				*e*S	**Sb**	**07 32 56.8**	**+0.9**
CHUJ	**Union Juarez**	**1.14**	**62**	*e*P	**Pn**	**07 32 41.0**	**-0.5**
CHUJ				*e*S	**Sb**	**07 32 56.6**	**+0.5**
PCIG		**1.15**	**356**	*e*P	**Pg**	**07 32 42.0**	**+0.6**
PCIG				*e*S	**Sn**	**07 32 56.6**	**-0.5**
STG3	**Santiaguito 3,**	**1.53**	**84**	*e*P	**Pn**	**07 32 46.4**	**-0.5**
STG3				*e*S	**Sn**	**07 33 05.8**	**-1.0**
CCIG	**Comitan**	**1.97**	**29**	*e*P	**Pg**	**07 32 57.0**	**-0.3**
CCIG				*i* S	**Sb**	**07 33 21.0**	**+0.8**
TGIG		**2.21**	**0**	*e*P	**Pb**	**07 32 59.3**	**-0.2**
TGIG				*e*S	**Sb**	**07 33 25.8**	**-1.2**
FUG	**Fuego 3**	**2.23**	**92**	*e*P	**Pn**	**07 32 56.7**	**+0.2**
FUG				*e*S	**Sn**	**07 33 23.8**	**-0.4**
PCG	**Pacaya**	**2.46**	**93**	*e*P	**Pn**	**07 32 60.0**	**+0.3**
PCG				*e*S	**Sn**	**07 33 30.3**	**+0.4**
UXUV	**UXUV**	**2.92**	**341**	*e*P	**Pb**	**07 33 09.4**	**-2.0**
UXUV				*e*S	**Sn**	**07 33 42.6**	**+1.8**
CMIG	**Matias Romero**	**3.03**	**327**	*e*P	**Pn**	**07 33 08.7**	**+1.4**
CMIG				*e*S	**Sn**	**07 33 43.1**	**-0.5**

*IDC **05** 07:53:00.0±3.5, 53°.62N×90°.72E, h0km, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=31.7km s-min=23.6km az=74.0*
ISC 05 07:53:02.7±3.6, 53°.6N±0°.1×90°.5E±0°.2, h10km, n7, σ3°.89/8, 2C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.39**	**279**	I		08 19 20.0	
	baz=90,slow=330,SNR=2.0						
ZAA0	**Zalesovo Array**	**3.39**	**279**	⇓Pn	**Pb**	**07 54 01.5**	**-1.3**
	2.1nm,0.8s,baz=100,slow=17						
ZAA0				⇑Sn	**Sg**	**07 54 49.1**	**-2.5**
	14nm,0.9s,baz=93,slow=24						
ZALV	**Zalesovo Beam**	**3.39**	**279**	Pn	**Pn**	**07 53 57.7**	**+2.1**
	1.1nm,0.3s,baz=91,slow=14,SNR=14						
ZALV				Lg	Lg	07 54 51.4	
	2.5nm,0.3s,baz=91,slow=27,SNR=8.4						
	3.5nm,0.4s						
KURBB	**Kurchatov Arra**	**7.94**	**253**	Pn	**Pn**	**07 54 58.1**	**0.0**
	0.2nm,0.3s,baz=65,slow=14,SNR=8.1						
KURBB				Sn	**Sn**	**07 56 34.4**	**+6.6**
	0.1nm,0.3s,baz=68,slow=25,SNR=13						
KURBB				Lg	Lg	07 57 16.8	
	baz=67,slow=32,SNR=4.9						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**7.94**	**253**	⇑Pn	**Pb**	**07 55 16.1**	**-4.1**
	45nm,0.3s						
MKAR	**Makanchi Array**	**8.59**	**221**	Pn	**Pn**	**07 55 07.9**	**+0.9**
	0.2nm,0.3s,baz=31,slow=14,SNR=6.5						
MKAR				Sn	**Sn**	**07 56 45.4**	**+1.6**
	0.1nm,0.3s,baz=31,slow=26,SNR=3.5						
MKAR				Lg	Lg	07 57 33.5	
	baz=49,slow=31						
	0.3nm,0.4s						
SONM	**Songino Array**	**11.59**	**113**	Lg	Lg	07 58 51.9	
	baz=305,slow=28						

KRSC 05 08:02:26.1±1.0, 53°.82N×159°.08E, h173km±9km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.30**	**45**	P	Pn	08 02 50.6	+1.2
KRX	**Arik**	**0.53**	**209**	P	Pn	08 02 51.4	+1.0
KRX				S	Sn	08 03 10.0	+1.0
KRER	**Koryakskii**	**0.56**	**201**	P	Pn	08 02 51.7	+1.1
KRER				S	Sn	08 03 10.8	+1.5
SDLR	**Sedlovina**	**0.56**	**192**	P	Pn	08 02 51.5	+1.0
SMAR	**Somma**	**0.58**	**197**	P	Pn	08 02 51.9	+1.2
KOK	**Koryaka**	**0.59**	**207**	P	Pn	08 02 51.7	+1.1
AVH	**Avacha**	**0.59**	**200**	P	Pn	08 02 51.8	+1.2
UGLR	**Uglovaya**	**0.63**	**194**	P	Pn	08 02 52.0	+1.1
NLC	**Nalytchevo**	**0.67**	**166**	P	Pn	08 02 51.8	+0.9
NLC				S	Sn	08 03 10.6	+0.7
GNL	**Ganaly**	**0.69**	**260**	P	Pn	08 02 51.3	+0.2
GNL				S	Sn	08 03 09.9	-0.4
PET	**Petropavlovsk**	**0.84**	**198**	P	Pn	08 02 52.8	+0.9
PET				S	Sn	08 03 12.5	+0.8
SPN	**Mys Shipunski**	**0.92**	**142**	P	Pn	08 02 53.0	+0.5
SPN				S	Sn	08 03 12.8	+0.1
KRMR	**Karymshinskiy**	**1.15**	**210**	P	Pn	08 02 55.0	+0.8
KRMR				S	Sn	08 03 16.8	+0.9
GRL	**Gorelyy**	**1.41**	**206**	P	Pn	08 02 58.1	+1.4
GRL				S	Sn	08 03 21.9	+1.6
RUS	**Russkaya**	**1.43**	**194**	P	Pn	08 02 57.4	+0.6
RUS				S	Sn	08 03 20.1	-0.3
MTVR	**Mutnovka**	**1.45**	**202**	P	Pn	08 02 58.9	+1.8
MTVR				S	Sn	08 03 22.9	+1.9
TUMR	**Tumrok**	**1.59**	**23**	P	Pn	08 03 00.0	+1.6
TUMR				S	Sn	08 03 25.1	+1.6
ASAK	**Asacha**	**1.61**	**207**	P	Pn	08 03 00.0	+1.4
ASAK				S	Sn	08 03 25.1	+1.4
MKZ	**Mys Kozlova**	**1.72**	**64**	P	Pn	08 03 00.6	+1.0
MKZ				S	Sn	08 03 24.8	-0.7
KMNR	**Kamenistaya**	**2.05**	**19**	P	Pn	08 03 04.8	+1.6
KDTR	**Khodutka, Kamc**	**2.11**	**197**	S	Sn	08 03 31.7	-1.3
ESO	**Esso**	**2.12**	**354**	P	Pn	08 03 04.6	+0.7
KOZ	**Kozyrevsk**	**2.29**	**11**	P	Pn	08 03 06.6	+0.8
SRDR	**Sredinnyy**	**2.53**	**8**	P	Pn	08 03 10.0	+1.4
KLY	**Klyuchi**	**2.65**	**19**	P	Pn	08 03 12.6	+2.5
KBTR	**Krutoberegovo**	**3.22**	**40**	P	Pn	08 03 17.8	+0.9
BKI	**Bering**	**4.25**	**68**	S	Sn	08 04 20.1	+0.1

*IDC **05** 08:12:58.5±0.9, 24°.79S×179°.98E, h495km±9km, mb3.8/18, mbtmp4.7/21, Error ellipse: s-maj=12.2km s-min=10.5km az=83.0*
*NEIC **05** 08:12:59.3±2.0, 24°.8S±0°.1×179°.95W±0°.08, h504km±8km, mb4.7/25, Error ellipse: s-maj=17.5km s-min=7.9km az=152.0*
ISC 05 08:12:58.5±0.4, 24°.81S±0°.06×180°.00W±0°.06, h496km, n100, σ1°.31/103, mb4.4/29, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.80**	**158**	P	**P**	**08 14 25.1**	**+1.7**
	145nm,0.3s,baz=11,slow=19,SNR=1.9						
RAO				S	**S**	**08 15 32.2**	**-0.5**
	169nm,0.3s,baz=0.0,slow=20,SNR=1.9						
RAO	**Raoul Island**	**4.80**	**158**	P	**P**	**08 14 24.8**	**+1.4**
MSVF	**Nonsavu**	**7.27**	**345**	P	**P**	**08 14 47.1**	**-0.3**
	23nm,0.3s,baz=183,slow=19,SNR=67						
MSVF				S	**S**	**08 16 16.7**	**+0.1**
	4.4nm,0.6s,baz=195,slow=20,SNR=0.8						
NIUE	**Niue**	**10.95**	**61**	P	**P**	**08 15 25.5**	**-0.5**
NIUE					**S**	**08 17 30.6**	**+3.3**
MARNC	**Mare, Loyalty**	**11.50**	**284**	P	**P**	**08 15 32.9**	**+1.1**
PINNC	**Pines Island,**	**11.71**	**278**	P	**P**	**08 15 36.3**	**+2.3**
OUZ	**Omahuta**	**11.77**	**207**	P	**P**	**08 15 35.4**	**+1.0**
DZM	**Mont Dzumac**	**12.74**	**280**	*e*P	**P**	**08 15 45.6**	**+0.5**
	32nm,1.1s						
DZM				*e*S	**S**	**08 18 01.6**	**-0.8**
	164nm,25.4s						
DZM	**Mont Dzumac**	**12.74**	**280**	P	**P**	**08 15 46.1**	**+1.0**
	8.4nm,0.7s,baz=82,slow=16,SNR=17						
DZM				S	**S**	**08 18 06.4**	**+4.0**
	6.3nm,1.1s,baz=108,slow=20,SNR=3.3						
DZM	**Mont Dzumac**	**12.74**	**280**	P	**P**	**08 15 46.8**	**+1.7**
AFI	**Afiamalu**	**13.32**	**37**	S	S	08 18 03.1	-11
	11nm,0.5s,baz=276,slow=20,SNR=2.0						
URZ	**Urewera**	**13.64**	**190**	P	**P**	**08 15 51.9**	**-2.3**
	3.1nm,0.3s,baz=12,slow=9.7,SNR=11						
URZ				S	**S**	**08 18 18.6**	**-0.5**
	30nm,0.8s,baz=349,slow=20,SNR=12						
URZ	**Urewera**	**13.64**	**190**	P	**P**	**08 15 53.3**	**-0.9**
PRWZ	**Pori Road**	**16.07**	**191**	P	**P**	**08 16 24.0**	**+4.3**
MSWZ	**Moikau Station**	**17.03**	**192**	P	**P**	**08 16 28.5**	**-1.2**
QRZ	**Quartz Range**	**17.15**	**200**	P	**P**	**08 16 30.1**	**-0.8**
PLWZ	**Palliser**	**17.18**	**192**	P	**P**	**08 16 28.2**	**-3.0**
TKNZ	**Takaka Hill**	**17.22**	**198**	P	**P**	**08 16 30.6**	**-1.0**
NNZ	**Nelson**	**17.27**	**197**	P	**P**	**08 16 29.5**	**-2.5**
NNZ	**Nelson**	**17.27**	**197**	P	**P**	**08 16 31.4**	**-0.7**
TUWZ	**Tuamarina**	**17.33**	**195**	P	**P**	**08 16 31.1**	**-1.5**
TUWZ	**Tuamarina**	**17.33**	**195**	P	**P**	**08 16 30.7**	**-1.9**
MRNZ	**Matariki Terra**	**17.61**	**198**	P	**P**	**08 16 34.2**	**-1.1**
BSWZ	**Blackbirch Sta**	**17.62**	**195**	P	**P**	**08 16 34.6**	**-0.7**
THZ	**Tophouse**	**17.91**	**197**	P	**P**	**08 16 36.9**	**-1.2**
DSZ	**Denniston Nort**	**18.21**	**200**	P	**P**	**08 16 40.7**	**-0.2**
KHZ	**Kahutara**	**18.36**	**195**	P	**P**	**08 16 40.9**	**-1.2**
GVZ	**Greta Valley S**	**19.00**	**196**	P	**P**	**08 16 46.8**	**-1.2**
LTZ	**Lake Taylor**	**19.03**	**198**	P	**P**	**08 16 47.0**	**-1.3**
RPZ	**Rata Peaks**	**20.24**	**199**	P	**P**	**08 16 57.6**	**-1.7**
	8.7nm,0.5s,baz=15,slow=2.6,SNR=11						
	8.7nm,0.5s						
ARMA	**Armidale**	**25.72**	**251**	P	**P**	**08 17 49.0**	**+0.2**
ARMA				IAmb	IAmb	08 17 54.8	
	comp=Z,13nm,1.1s						
EIDS	**Eidsvold**	**26.18**	**263**	P	**P**	**08 17 53.2**	**+0.5**
EIDS				IAmb	IAmb	08 17 54.2	
	comp=Z,21nm,1.0s						
CAN	**Canberra**	**28.70**	**241**	P	**P**	**08 18 16.0**	**+1.2**
CAN				IAmb	IAmb	08 18 57.4	
	comp=Z,47nm,1.5s						
CTA	**Charters Tower**	**31.49**	**272**	P	**P**	**08 18 39.2**	**+0.1**
	comp=Z,27nm,0.3s,baz=99,slow=9.8,SNR=82						
	comp=Z,27nm,0.3s						
CTAO	**Charters Tower**	**31.49**	**272**	P	**P**	**08 18 39.7**	**+0.6**
TOO	**Toolangi**	**31.97**	**238**	P	**P**	**08 18 43.4**	**+0.4**
TOO				IAmb	IAmb	08 19 12.1	
	comp=Z,51nm,1.4s						
TAU	**Tasmania Unive**	**32.32**	**228**	P	**P**	**08 18 46.8**	**+0.9**
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**08 19 04.0**	**+0.4**
	comp=Z,5.4nm,0.4s,baz=91,slow=10,SNR=35						
	comp=Z,5.4nm,0.4s						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**08 19 04.0**	**+0.4**
PMG	**Port Moresby**	**34.80**	**290**	P	**P**	**08 19 07.1**	**0.0**
	comp=Z,35nm,0.9s,baz=85,slow=5.7,SNR=4.3						
	comp=Z,35nm,0.9s						
COEN	**Coen**	**36.27**	**280**	P	**P**	**08 19 19.9**	**+0.5**
COEN				IAmb	IAmb	08 19 20.8	
	comp=Z,21nm,0.9s						
BBOO	**Buckleboo**	**39.10**	**248**	P	**P**	**08 19 41.9**	**-0.5**
BBOO				IAmb	IAmb	08 19 43.4	
	comp=Z,48nm,1.5s						
AS31	**Alice Springs**	**41.90**	**262**	P	**P**	**08 20 04.8**	**-0.2**
ASAR	**Alice Springs**	**41.90**	**262**	P	**P**	**08 20 04.7**	**-0.3**
	comp=Z,14nm,0.8s,baz=100,slow=8.0,SNR=79						
ASAR				ScP	**ScP**	**08 24 53.4**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=115,slow=3.6,SNR=3.1						
	comp=Z,14nm,0.8s						
ASAR	**Alice Springs**	**41.90**	**262**	P	**P**	**08 20 04.8**	**-0.2**
WR0	**Warramunga Arr**	**42.17**	**267**	P	**P**	**08 20 06.4**	**-0.8**
WR0				IAmb	IAmb	08 20 07.1	
	comp=Z,17nm,0.8s						
WB2	**Warramunga Arr**	**42.34**	**267**	P	**P**	**08 20 08.0**	**-0.6**
WB2				IAmb	IAmb	08 20 08.6	
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**42.35**	**267**	P	**P**	**08 20 07.5**	**-1.0**
WRAB				IAmb	IAmb	08 20 08.5	
	comp=Z,25nm,0.8s						
WB0	**Warramunga Arr**	**42.35**	**267**	P	**P**	**08 20 08.0**	**-0.6**
WRA	**Warramunga Arr**	**42.35**	**267**	P	**P**	**08 20 07.7**	**-1.0**
	comp=Z,10nm,0.3s,baz=100,slow=6.6,SNR=174						
WRA				PcP	**PcP**	**08 21 48.1**	**-2.8**
	comp=Z,1.4nm,0.9s,baz=97,slow=3.5,SNR=2.6						
WRA				ScP	**ScP**	**08 24 55.1**	**+1.0**
	comp=Z,3.6nm,1.0s,baz=103,slow=4.1,SNR=10						
WRA				S	**S**	**08 25 52.4**	**-1.2**
	comp=Z,3.4nm,0.9s,baz=105,slow=14,SNR=9.7						
	comp=Z,10nm,0.3s						
WRA	**Warramunga Arr**	**42.35**	**267**	P	**P**	**08 20 06.9**	**-1.8**
FORT	**Forrest**	**46.00**	**250**	P	**P**	**08 20 35.4**	**-1.4**
KNRA	**Kununurra**	**48.69**	**271**	P	**P**	**08 20 56.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P	**P**	**08 21 12.4**	**-0.1**
	comp=Z,22nm,0.8s,baz=107,slow=13,SNR=23						
	comp=Z,22nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.77**	**266**	IAmb	IAmb	08 21 13.8	
	comp=Z,26nm,0.8s						
VNDA	**Vanda**	**53.48**	**185**	P	**P**	**08 21 32.3**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=9.0,slow=8.4,SNR=8.8						
	comp=Z,1.2nm,0.8s						
NWAO	**Narrogin (SRO)**	**54.87**	**246**	P	**P**	**08 21 41.6**	**0.0**
	comp=Z,7.8nm,0.8s,baz=59,slow=12,SNR=2.1						
	comp=Z,7.8nm,0.8s						
SOEI	**Soe**	**54.93**	**276**	IAmb	IAmb	08 21 53.3	
	comp=Z,62nm,1.0s						
MBWA	**Marble Bar**	**55.22**	**261**	P	**P**	**08 21 43.5**	**-0.9**
MBWA				IAmb	IAmb	08 21 44.3	
	comp=Z,15nm,1.1s						
MORW	**Morawa**	**56.57**	**250**	P	**P**	**08 21 52.9**	**-0.7**
QSPA	**South Pole Qui**	**65.28**	**180**	P	**P**	**08 22 51.9**	**+1.4**
QSPA				IAmb	IAmb	08 22 52.5	
	comp=Z,6.3nm,0.8s						
MJAR	**Matsushiro Arr**	**72.64**	**326**	P	**P**	**08 23 34.6**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=151,slow=6.0,SNR=9.1						
	comp=Z,4.0nm,0.8s						
BELA	**Belgrano 2**	**75.54**	**173**	P	**P**	**08 23 50.4**	**-0.7**
MAW	**Mawson**	**76.91**	**200**	P	**P**	**08 23 59.7**	**+1.0**
	comp=Z,3.8nm,0.9s,baz=136,slow=5.8,SNR=13						
	comp=Z,3.8nm,0.9s						
MAW	**Mawson**	**76.91**	**200**	P	**P**	**08 23 59.8**	**+1.1**
KSRS	**Korea Array**	**78.94**	**320**	P	**P**	**08 24 10.3**	**+0.2**
	comp=Z,2.2nm,0.6s,ba

comp=Z,1.2nm,0.6s,baz=186,slow=4.1,SNR=6.7

IDC 05 08:14:26.4±2.8, 6°20S×130°62E, h75km±36km, mb3.5/1, mbtmp3.8/5, ML3.7/4, MS3.2/1, Error ellipse: s-maj=69.7km s-min=20.7km az=93.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.33**	**7**	P	Pn	08 15 43.6	0.0
	6.0nm,0.3s,baz=192,slow=19,SNR=8.8						
SIJI				S	Sn	08 16 38.5	-5.2
	28nm,0.2s,baz=271,slow=23,SNR=10.0						
	12nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.79**	**202**	P	Pn	08 17 26.6	+1.3
	0.6nm,0.3s,baz=38,slow=14,SNR=17						
FITZ				S	Sn	08 19 43.3	-2.6
	2.9nm,0.6s,baz=178,slow=14,SNR=5.2						
	1.8nm,0.4s						
WRA	**Warramunga Arr**	**14.13**	**166**	P	Pn	08 17 41.8	-1.4
	0.2nm,0.3s,baz=356,slow=13,SNR=10.0						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.65**	**170**	P	Pn	08 18 28.8	+1.3
	0.2nm,0.3s,baz=349,slow=13,SNR=12						
	0.7nm,0.6s						
CTA	**Charters Tower**	**20.52**	**134**	LR	LR	08 28 11.2	
	comp=Z,61nm,18.9s,baz=86,slow=40						
MKAR	**Makanchi Array**	**67.90**	**326**	P	P	08 25 17.0	-0.1
	0.5nm,0.5s,baz=116,slow=7.2,SNR=9.7						
	0.5nm,0.5s						

*IDC **05** 08:15:29.2±2.8, 54°24N×87°10E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=23.5km s-min=17.5km az=59.0*
*NNC **05** 08:15:52.2±66.0, 54°08N×85°73E, h0km, mb3.5, mpv2.4, Error ellipse: s-maj=420.8km s-min=119.9km az=75.0, Suspected Mining explosion.*

ISC 05 08:15:32.3±3.1, 54°2N±0°1×86°8E±0°1, h0km, n13, σ1°48/17, 8C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.19**	**260**	I		08 24 10.0	
	baz=78,slow=329,SNR=5.9						
ZAA0	**Zalesovo Array**	**1.20**	**260**	⇑S	**Sn**	**08 16 13.8**	**+0.7**
	1.1nm,0.3s,baz=82,slow=27						
ZAA0	**Zalesovo Array**	**1.20**	**260**	⇑P	**Pg**	**08 15 54.1**	**-1.0**
	0.2nm,0.3s,baz=73,slow=14						
ZAA0				⇑S	**Sn**	**08 16 13.8**	**+0.7**
	1.1nm,0.3s,baz=82,slow=27						
ZAA0	**Zalesovo Array**	**1.20**	**260**	⇑P	**Pg**	**08 15 54.1**	**-1.0**
	0.2nm,0.3s,baz=73,slow=14						
ZALV	**Zalesovo Beam**	**1.20**	**260**	Pg	**Pg**	**08 15 53.5**	**-1.7**
	1.9nm,0.3s,baz=74,slow=16,SNR=12						
ZALV				Lg	Lg	08 16 13.2	
	1.7nm,0.3s,baz=65,slow=25,SNR=4.5						
KURK	**Kurchatov**	**6.08**	**239**	⇑Sn	**Sg**	**08 18 47.6**	**+0.1**
	5.4nm,1.3s						
KURK	**Kurchatov**	**6.08**	**239**	⇑Pn	**Sn**	**08 18 11.4**	**-2.2**
	2.0nm,1.1s						
KURK				⇑Sn	**Sg**	**08 18 47.6**	**+0.1**
	5.4nm,1.3s						
KURK	**Kurchatov**	**6.08**	**239**	⇑Pn	**Sn**	**08 18 11.4**	**-2.2**
	2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**6.18**	**238**	Pn	**Pn**	**08 17 05.2**	**+0.4**
	0.1nm,0.3s,baz=55,slow=14,SNR=8.2						
KURBB				Sn	**Sn**	**08 18 16.8**	**+0.6**
	baz=55,slow=24,SNR=1.8						
KURBB				Lg	Lg	08 18 51.7	
	baz=54,slow=30,SNR=2.5						
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**6.18**	**238**	⇓Sn	**Sn**	**08 18 18.4**	**+2.3**
	1.8nm,0.5s,baz=123,slow=16						
KURBB	**Kurchatov Arra**	**6.18**	**238**	⇓Pn	**Pn**	**08 17 06.1**	**+1.4**
	2.4nm,1.1s,baz=134,slow=18						
KURBB				⇓Sn	**Sn**	**08 18 18.4**	**+2.3**
	1.8nm,0.5s,baz=123,slow=16						
KURBB	**Kurchatov Arra**	**6.18**	**238**	⇓Pn	**Pn**	**08 17 06.1**	**+1.4**
	2.4nm,1.1s,baz=134,slow=18						
MKAR	**Makanchi Array**	**7.92**	**203**	Pn	**Pn**	**08 17 28.8**	**+0.2**
	0.2nm,0.3s,baz=27,slow=13,SNR=6.7						
MKAR				Sn	**Sn**	**08 18 59.0**	**+0.1**
	0.1nm,0.3s,baz=29,slow=33,SNR=3.3						
MKAR				Lg	Lg	08 19 43.6	
	baz=26,slow=27,SNR=2.1						
	0.3nm,0.3s						

*IDC **05** 08:21:23.1±0.9, 40°94N×51°13E, h0km, mb4.0/11, mbtmp4.1/22, ML3.6/7, MS2.9/9, Error ellipse: s-maj=17.8km s-min=8.5km az=165.0*
*AZER **05** 08:21:25.9±0.3, 40°64N×51°55E, h60km, Error ellipse: s-maj=3.6km s-min=2.7km az=256.0*
*MOS **05** 08:21:26.4±1.4, 40°97N×51°42E, h51km, mb4.4/8, Error ellipse: s-maj=6.4km s-min=4.7km az=37.1*
*TEH **05** 08:21:27.1, 40°83N×51°48E, h40km, ML4.1*

ISC 05 08:21:27.3±0.6, 40°89N±0°04×51°55E±0°04, h64km±7km, n188, σ2°12/238, mb4.2/17, 13C-11D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**1.17**	**246**	Pg	**Pn**	**08 21 49.2**	**+1.6**
GALA				Sg	**Sn**	**08 22 07.9**	**+5.2**
NDR	**Nardaran**	**1.23**	**256**	*e*Pg	**Pn**	**08 21 50.1**	**+1.7**
NDR	**Nardaran**	**1.23**	**256**	Pg	**Pn**	**08 21 50.2**	**+1.7**
	SNR=146						
NDR				Sg	**Sn**	**08 22 09.0**	**+4.8**
GOBA	**Gobu**	**1.47**	**251**	*e*Pg	**Pn**	**08 21 53.6**	**+2.0**
GOBA	**Gobu**	**1.47**	**251**	Pg	**Pn**	**08 21 53.6**	**+2.0**
	SNR=33						
GOBA				Sg	**Sn**	**08 22 14.0**	**+4.1**
ATGJ	**Altiaghaj**	**1.98**	**270**	Pn	**Pn**	**08 21 59.3**	**+0.6**
	SNR=10						
ATGJ				Sn	**Sn**	**08 22 24.9**	**+2.4**
GBS	**Qobustan**	**2.02**	**261**	*e*Pn	**Pn**	**08 22 00.3**	**+1.3**
GBS	**Qobustan**	**2.02**	**261**	Pn	**Pn**	**08 22 00.3**	**+1.3**
	SNR=33						
GBS				Sn	**Sn**	**08 22 25.9**	**+2.7**
SIZA	**Siyzn**	**2.02**	**276**	*e*Pn	**Pn**	**08 22 00.8**	**+1.7**
SIZA	**Siyzn**	**2.02**	**276**	Pn	**Pn**	**08 22 00.8**	**+1.7**
	SNR=32						
SIZA				Sn	**Sn**	**08 22 26.7**	**+3.4**
ALIB	**Äli-Bayra**	**2.15**	**245**	*e*Pn	**Pn**	**08 22 01.7**	**+0.9**
ALIB	**Äli-Bayra**	**2.15**	**245**	Pn	**Pn**	**08 22 01.8**	**+0.9**
ALIB				Sg	**Sn**	**08 22 31.8**	**+5.3**
PQL	**Pirkuli**	**2.25**	**268**	*e*Pn	**Pn**	**08 22 02.7**	**+0.5**
PQL	**Pirkuli**	**2.25**	**268**	Pn	**Pn**	**08 22 02.8**	**+0.5**
	SNR=56						
PQL				Sn	**Sn**	**08 22 29.4**	**+0.4**
QUBA	**Quba, Azerbaij**	**2.36**	**282**	Pn	**Pn**	**08 22 04.4**	**+0.8**
	SNR=7.7						
QUBA				Sn	**Sn**	**08 22 33.8**	**+2.3**
QUB	**Quba**	**2.46**	**283**	*e*Pn	**Pn**	**08 22 04.4**	**-0.7**
IML	**Ismayilli**	**2.56**	**269**	*e*Pn	**Pn**	**08 22 06.4**	**0.0**
IML	**Ismayilli**	**2.56**	**269**	Pn	**Pn**	**08 22 06.4**	**0.0**
	SNR=14						
IML				Sn	**Sn**	**08 22 36.1**	**-0.3**
QSAR	**Qusar**	**2.56**	**285**	*e*Pn	**Pn**	**08 22 07.0**	**+0.6**
QSAR	**Qusar**	**2.56**	**285**	Pn	**Pn**	**08 22 07.1**	**+0.6**
	SNR=5.6						
QSAR				Sn	**Sn**	**08 22 39.1**	**+2.7**
XNQ	**Khinaliq**	**2.60**	**277**	*e*Pn	**Pn**	**08 22 06.9**	**-0.1**
XNQ	**Khinaliq**	**2.60**	**277**	Pn	**Pn**	**08 22 07.0**	**-0.1**
	SNR=95						
XNQ				Sn	**Sn**	**08 22 38.0**	**+0.4**
SAAT	**Saatly**	**2.60**	**248**	Sn	**Sn**	**08 22 38.0**	**+0.6**
KDMR	**Kurdemir**	**2.61**	**260**	Sn	**Sn**	**08 22 37.6**	**-0.1**
QBL	**Gabala**	**2.82**	**272**	*e*Pn	**Pn**	**08 22 09.3**	**-0.6**
QBL	**Gabala**	**2.82**	**272**	Pn	**Pn**	**08 22 09.4**	**-0.6**
	SNR=7.7						
QBL				Sn	**Sn**	**08 22 41.9**	**-0.9**
GLBA	**Clilabad**	**2.93**	**237**	*e*Pn	**Pn**	**08 22 10.1**	**-1.3**
GLBA	**Clilabad**	**2.93**	**237**	Pn	**Pn**	**08 22 10.1**	**-1.3**
GLBA				Sn	**Sn**	**08 22 42.5**	**-2.9**
ZRD	**Zardab**	**3.01**	**260**	*e*Pn	**Pn**	**08 22 12.2**	**-0.3**
ZRD	**Zardab**	**3.01**	**260**	Pn	**Pn**	**08 22 12.2**	**-0.3**
ZRD				Sn	**Sn**	**08 22 46.8**	**-0.5**
LKRN	**Lenkeran, Azer**	**3.05**	**225**	P	**Pn**	**08 22 11.9**	**-1.1**
LKRN	**Lenkeran, Azer**	**3.05**	**225**	*e*Pn	**Pn**	**08 22 11.9**	**-1.1**
LKRN	**Lenkeran, Azer**	**3.05**	**225**	Pn	**Pn**	**08 22 11.9**	**-1.1**
	SNR=14						
LKRN				Sn	**Sn**	**08 22 44.6**	**-3.8**
ASTR	**Astara**	**3.15**	**223**	Pn	**Pn**	**08 22 13.2**	**-1.3**
	SNR=37						
ASTR				Sn	**Sn**	**08 22 46.6**	**-4.3**
YRD	**Yardimli**	**3.22**	**233**	Pn	**Pn**	**08 22 14.0**	**-1.5**
	SNR=5.7						
YRD				Sn	**Sn**	**08 22 48.3**	**-4.5**
GAS1	**Astara - Iran**	**3.26**	**221**	*e*Pn	**Pn**	**08 22 14.8**	**-1.1**
GAS1				*e*		08 22 50.0	
	comp=Z,5μm,0.4s						
BLQ	**Beylaqan**	**3.27**	**250**	Pn	**Pn**	**08 22 14.2**	**-1.8**
BLQ				Sn	**Sn**	**08 22 50.3**	**-3.4**
SEKA	**Sheki**	**3.31**	**277**	P	**Pn**	**08 22 16.2**	**-0.4**
SEKA	**Sheki**	**3.31**	**277**	Pn	**Pn**	**08 22 16.2**	**-0.4**
	SNR=42						
SEKA				Sn	**Sn**	**08 22 53.7**	**-1.1**
LRK	**Lerik**	**3.34**	**229**	Pn	**Pn**	**08 22 15.4**	**-1.8**
	SNR=18						
LRK				Sn	**Sn**	**08 22 52.0**	**-3.8**
BRDA	**Brd**	**3.39**	**261**	Pn	**Pn**	**08 22 17.8**	**+0.2**
BRDA				Sn	**Sn**	**08 22 56.9**	**+0.3**
MNGR	**Mingechevir, A**	**3.39**	**269**	P	**Pn**	**08 22 17.5**	**-0.2**
MNGR	**Mingechevir, A**	**3.39**	**269**	Pn	**Pn**	**08 22 17.6**	**-0.2**
	SNR=7.7						
MNGR				Sn	**Sn**	**08 22 56.8**	**+0.2**
AGDM	**Agdam**	**3.48**	**258**	Pn	**Pn**	**08 22 17.8**	**-1.1**
	SNR=7.4						
AGDM				Sn	**Sn**	**08 22 56.4**	**-2.5**
GRMI	**Germi**	**3.50**	**235**	*e*Pn	**Pn**	**08 22 16.4**	**-2.9**
GRMI				*e*		08 22 56.7	
	comp=N,99nm,0.2s						
QRD	**Qoradiz**	**3.54**	**248**	Pn	**Pn**	**08 22 18.3**	**-1.5**
QRD				Sn	**Sn**	**08 22 56.3**	**-4.1**
MAK	**Makhachkala**	**3.66**	**306**	*e*P	Pn	08 22 24.3	+3.0
MAK				*e*S	**Sn**	**08 23 08.0**	**+4.8**
MAK				pmax	pmax		
	comp=Z,221nm,0.3s						
MAK				smax	smax		
	comp=E,302nm,0.7s						
MAK				smax	smax		
	comp=E,354nm,0.4s						
MAK				MLR	MLR		
	comp=Z,520nm,3.0s						
GNBR	**Gunib**	**3.75**	**295**	*i* P	**Pn**	**08 22 23.5**	**+0.8**
GNBR				pmax	pmax		
	comp=Z,77nm,0.9s						
GNBR				MLR	MLR		
	comp=Z,118nm,2.0s						
ZKTA	**Zakatala**	**3.79**	**283**	P	**Pn**	**08 22 23.4**	**+0.2**
ZKTA	**Zakatala**	**3.79**	**283**	Pn	**Pn**	**08 22 23.5**	**+0.2**
	SNR=4.5						
ZKTA				Sn	**Sn**	**08 23 07.6**	**+1.0**
GANJ	**Ganja**	**3.98**	**268**	P	**Pn**	**08 22 23.8**	**-2.0**
GANJ	**Ganja**	**3.98**	**268**	Pn	**Pn**	**08 22 23.8**	**-2.0**
	SNR=12						
GANJ				Sn	**Sn**	**08 23 06.6**	**-4.6**
LGD	**Lagodekhi**	**4.11**	**285**	P	**Pn**	**08 22 27.5**	**0.0**
DDFL	**Dedoflistskaro**	**4.14**	**279**	P	**Pn**	**08 22 30.6**	**+2.6**
ISRB	**Sarab**	**4.29**	**226**	*e*Pn	**Pn**	**08 22 29.5**	**-0.8**
ISRB				*e*		08 23 19.8	
	comp=Z,1μm,0.3s						
IHRS	**Heris**	**4.33**	**235**	*e*Pn	**Pn**	**08 22 30.1**	**-0.7**
IHRS				*e*		08 22 30.6	
	comp=Z,2μm,0.2s						
GDB	**GEDABAY**	**4.40**	**270**	Pn	**Pn**	**08 22 29.8**	**-1.9**
	SNR=4.9						
GDB				Sn	**Sn**	**08 23 16.8**	**-5.0**
IGZV	**Ghazvin**	**4.62**	**193**	*e*Pn	**Pn**	**08 22 35.8**	**+1.1**
IGZV				*e*		08 23 24.7	
	comp=Z,1μm,0.2s						
IPRN	**Peran**	**4.68**	**172**	*e*Pn	**Pn**	**08 22 35.1**	**-0.4**
QZX	**Qazax, Azerbai**	**4.68**	**274**	Pn	**Pn**	**08 22 33.9**	**-1.5**
	SNR=12						
QZX				Sn	**Sn**	**08 23 25.9**	**-2.5**
ORD	**Ordubad**	**4.70**	**247**	Pn	**Pn**	**08 22 34.6**	**-1.1**
	SNR=5.8						
ORD				Sn	**Sn**	**08 23 25.3**	**-3.7**
IMND	**Minoodasht**	**4.71**	**139**	*e*Pn	**Pn**	**08 22 36.7**	**+1.0**
IGLO	**Ghaloghah**	**4.73**	**157**	*e*Pn	**Pn**	**08 22 36.3**	**0.0**
IGLO				*e*		08 23 31.4	
	comp=Z,3μm,0.7s						
ZNJK	**Zanjan**	**4.77**	**209**	*e*Pn	**Pn**	**08 22 35.3**	**-1.6**
MRVT	**Maraveh tapeh**	**4.78**	**131**	*e*Pn	**Pn**	**08 22 38.1**	**+1.4**
MRVT				*e*Pn	Pn	08 22 38.2	+1.5
IBST	**Bostanabad**	**4.82**	**230**	*e*Pn	**Pn**	**08 22 36.5**	**-1.0**
SBZ	**Shahbuz**	**4.83**	**254**	Pn	**Pn**	**08 22 34.4**	**-3.1**
SBZ				Sn	**Sn**	**08 23 31.4**	**-0.8**
GROC	**Groznyy**	**4.87**	**300**	*e*P	**Pn**	**08 22 37.3**	**-0.6**
GROC				S	**Sn**	**08 23 31.0**	**-1.9**
GROC				pmax	pmax		
	comp=Z,75nm,0.9s						
GROC				MLR	MLR		
	comp=Z,323nm,1.0s						
IHSH	**Hashtrud**	**4.89**	**224**	*e*Pn	**Pn**	**08 22 37.4**	**-1.2**
IHSH				*e*		08 22 37.9	
	comp=Z,1μm,0.1s						
ITBZ	**Tabriz**	**4.95**	**239**	*e*Pn	**Pn**	**08 22 37.0**	**-2.2**
ITBZ				*e*		08 23 33.9	
	comp=Z,838nm,0.3s						
NAX	**Nakhchivan**	**4.96**	**252**	P	**Pn**	**08 22 37.1**	**-2.1**
NAX	**Nakhchivan**	**4.96**	**252**	Pn	**Pn**	**08 22 37.1**	**-2.1**
NAX				S	**Sn**	**08 23 34.2**	**-1.1**
CHTH	**Charan**	**4.99**	**184**	*e*Pn	**Pn**	**08 22 40.1**	**+0.3**
IMRD	**Marand**	**5.00**	**246**	*e*Pn	**Pn**	**08 22 39.3**	**-0.6**
IMRD				*e*		08 23 35.8	
	comp=Z,2μm,0.3s						
GNI	**Garni**	**5.24**	**264**	Pn	**Pn**	**08 22 43.3**	**+0.1**
	comp=Z,17nm,0.7s,baz=16,slow=1.9,SNR=5.9						
GNI				Sn	**Sn**	**08 23 43.0**	**+0.6**
	comp=Z,3.7nm,0.3s,baz=76,slow=19,SNR=6.1						
GNI				LR	LR	08 24 27.4	
	comp=Z,18nm,20.0s,baz=68,slow=37						
IMHD	**Mahdasht**	**5.24**	**188**	*e*Pn	**Pn**	**08 22 44.5**	**+1.3**
IMHD				*e*		08 23 00.4	
	comp=Z,583nm,0.4s						
ISHM	**Shahmirzad**	**5.26**	**164**	*e*Pn	**Pn**	**08 22 44.3**	**+0.8**
DAMV	**Damavand**	**5.26**	**176**	*e*Pn	**Pn**	**08 22 43.5**	**-0.1**
ISHB	**Shabestar**	**5.27**	**242**	*e*Pn	**Pn**	**08 22 41.8**	**-1.9**
IDMV	**Damavand**	**5.32**	**176**	*e*Pn	**Pn**	**08 22 45.7**	**+1.3**
IDMV				*e*		08 23 46.4	
	comp=Z,964nm,0.6s						
IFIR	**Firoozkooh**	**5.33**	**169**	*e*Pn	**Pn**	**08 22 45.8**	**+1.3**
IFIR				*e*		08 23 47.0	
	comp=Z,2μm,0.2s						
IAZR	**Azarshahr**	**5.38**	**235**	*e*Pn	**Pn**	**08 22 45.0**	**-0.2**
MAKU	**Maku**	**5.48**	**256**	*e*Pn	**Pn**	**08 22 43.6**	**-2.9**
BJRD	**Bojnurd**	**5.55**	**123**	*e*Pn	**Pn**	**08 22 48.4**	**+1.0**
DMNI	**Dmanisi**	**5.58**	**277**	P	**Pn**	**08 22 45.7**	**-2.0**
ILAS	**Lasjerd**	**5.61**	**168**	*e*Pn	**Pn**	**08 22 49.5**	**+1.2**
ILAS				*e*		08 23 54.9	
	comp=Z,1μm,0.2s						
IANJ	**Anjilo**	**5.72**	**160**	*e*Pn	**Pn**	**08 22 51.0**	**+1.1**
IANJ				*e*		08 24 01.2	
	comp=Z,976nm,0.4s						
GEYT	**Alibeck**	**5.88**	**118**	Pn	**Pn**	**08 22 54.4**	**+2.6**
	comp=Z,4.2nm,0.3s,baz=304,slow=17,SNR=15						
GEYT				Pg		08 23 20.2	
	comp=Z,4.1nm,0.3s,baz=302,slow=14,SNR=6.2						
GEYT				Lg	Lg	08 24 41.6	
	comp=Z,4.4nm,0.3s,baz=318,slow=27,SNR=2.0						
GEYT				LR	LR	08 25 16.4	
	comp=Z,67nm,18.4s,baz=328,slow=38						
	comp=Z,6.1nm,0.3s						
IVRN	**Varamin**	**5.89**	**179**	*e*Pn	**Pn**	**08 22 53.1**	**+1.1**
IVRN				*e*		08 23 08.2	
	comp=Z,433nm,0.4s						
SHRO	**Shahrood**	**6.01**	**143**	*e*Pn	**Pn**	**08 22 54.9**	**+1.2**
ZEI	**Tsey**	**6.02**	**291**	*e*P	**Pn**	**08 22 54.3**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ONI	**Oni**	**6.29**	**288**	P	Pn	08 23 01.0	+3.5
ISFR	**Sfrayin**	**6.32**	**125**	*e*Pn	**Pn**	**08 22 59.9**	**+1.9**
GHVR	**GHOM**	**6.40**	**182**	*e*Pn	**Pn**	**08 22 59.3**	**+0.3**
ASAO	**Ashtian**	**6.45**	**191**	*e*Pn	**Pn**	**08 22 59.2**	**-0.6**
IEMG	**Emamgholi**	**6.52**	**120**	*e*Pn	**Pn**	**08 23 00.9**	**+0.1**
IEMG				*e*		08 25 27.8	
	comp=Z,865nm,0.5s						
SBZV	**Sabzevar**	**6.53**	**132**	*e*Pn	**Pn**	**08 23 02.2**	**+1.3**
ISFB	**Sefidab**	**6.55**	**175**	*e*Pn	**Pn**	**08 23 02.5**	**+1.4**
SNGE	**Sanandaj**	**6.67**	**211**	*e*Pn	**Pn**	**08 23 01.1**	**-1.7**
KRSH	**Karshahi**	**6.92**	**176**	*e*Pn	**Pn**	**08 23 09.1**	**+2.8**
KBZ	**Khabaz**	**7.01**	**297**	Pn	**Pn**	**08 23 04.7**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=128,slow=12,SNR=3.8						
KBZ				Sn	Sn	08 24 16.1	-9.4
	comp=Z,0.9nm,0.3s,baz=90,slow=9.1,SNR=3.5						
	comp=Z,2.0nm,0.3s						
KBZ	**Khabaz**	**7.01**	**297**	*i* P	**Pn**	**08 23 06.3**	**-0.9**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KBZ				MLR	MLR		
	comp=Z,31nm,9.0s						
IAKL	**Akhelmad**	**7.07**	**125**	*e*Pn	**Pn**	**08 23 09.9**	**+1.5**
SHA1	**Shidzhatmaz**	**7.18**	**296**	*i* P	**Pn**	**08 23 07.7**	**-2.0**
KIV	**Kislovodsk**	**7.24**	**298**	*e*P	**Pn**	**08 23 09.4**	**-1.0**
KIV				*e*S	**Sn**	**08 24 28.9**	**-2.3**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KHMZ	**Khomeyn**	**7.25**	**191**	*e*Pn	**Pn**	**08 23 14.1**	**+3.3**
IPAY	**Payeh**	**7.32**	**125**	*e*Pn	**Pn**	**08 23 13.3**	**+1.6**
IMOG	**Moghan**	**7.75**	**126**	*e*Pn	**Pn**	**08 23 19.1**	**+1.5**
TNSJ	**Nastanj**	**8.00**	**148**	*e*Pn	**Pn**	**08 23 22.3**	**+1.4**
IMYA	**Miami**	**8.09**	**121**	*e*Pn	**Pn**	**08 23 22.9**	**+0.8**
NASN	**Na'in**	**8.14**	**173**	*e*Pn	**Pn**	**08 23 23.4**	**+0.4**
TABS	**Tabas**	**8.48**	**147**	*e*Pn	**Pn**	**08 23 29.8**	**+2.3**
TKDS	**Koohdasht(Taba**	**8.51**	**147**	*e*Pn	**Pn**	**08 23 29.8**	**+1.9**
TPRV	**Parvadeh(Tabas**	**8.86**	**151**	*e*Pn	**Pn**	**08 23 34.5**	**+1.9**
AFRZ	**Afriz**	**9.54**	**139**	*e*Pn	**Pn**	**08 23 44.5**	**+2.6**
ITEG	**Tejag**	**9.84**	**142**	*e*Pn	**Pn**	**08 23 48.5**	**+2.4**
AB31	**Akbulak array**	**10.25**	**33**	P	**Pn**	**08 23 50.8**	**-0.6**
AB31				S	**Sn**	**08 25 41.1**	**-3.5**
AB31	**Akbulak array**	**10.25**	**33**	⇓P	**Pn**	**08 23 50.8**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=211,slow=13,SNR=85						
AB31				S	**Sn**	**08 25 41.1**	**-3.5**
	comp=Z,4.2nm,0.3s,baz=211,slow=23,SNR=10						
AKTO	**Aktyubinsk**	**10.56**	**23**	Pn	**Pn**	**08 23 54.4**	**-1.2**
	comp=Z,2.4nm,0.3s,baz=205,slow=11,SNR=30						
AKTO				Sn	**Sn**	**08 25 46.2**	**-6.0**
	comp=Z,4.7nm,0.3s,baz=343,slow=19,SNR=17						
AKTO				LR	LR	08 28 44.3	
	comp=Z,56nm,19.7s,baz=199,slow=42						
	comp=Z,4.3nm,0.3s						
AKTO	**Aktyubinsk**	**10.56**	**23**	P	**Pn**	**08 23 55.6**	**0.0**
AKTO				S	**Sn**	**08 25 46.4**	**-5.8**
AKTO	**Aktyubinsk**	**10.56**	**23**	⇑P	**Pn**	**08 23 55.1**	**-0.6**
	comp=Z,2.0nm,0.3s						
AKTO				⇑S	**Sn**	**08 25 46.4**	**-5.8**
	comp=Z,36nm,0.7s						
BSRN	**Basiran**	**10.79**	**143**	*e*Pn	**Pn**	**08 24 01.1**	**+2.0**
BELG	**Belogornoye**	**11.82**	**348**	Pn	**Pn**	**08 24 11.5**	**-1.3**
	comp=Z,23nm,0.3s,baz=353,slow=2.2,SNR=27						
BELG				Sn	Sn	08 26 12.0	-11
	comp=Z,3.0nm,0.3s,baz=163,slow=19,SNR=11						
BELG	**Belogornoye**	**11.82**	**348**	*i* P	**Pn**	**08 24 12.7**	**0.0**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BELG				MLR	MLR		
	comp=Z,9.0nm,7.0s						
VRH	**Novokhopyorsk**	**12.36**	**330**	*e*P	**Pn**	**08 24 18.1**	**-2.0**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR	**Storozhevoye**	**13.42**	**324**	*e*P	Pn	08 24 29.6	-5.0
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
BR131	**Keskin Array S**	**13.72**	**271**	*i* P	**Pn**	**08 24 38.3**	**-0.6**
BRTR	**Keskin Array B**	**13.72**	**271**	Pn	**Pn**	**08 24 38.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=92,slow=12,SNR=4.6						
	comp=Z,1.2nm,0.6s						
CHGR	**Chuyangaron**	**13.73**	**94**	P	**Pn**	**08 24 41.1**	**+2.2**
LPSR	**Galich'ya Gora**	**14.54**	**328**	*e*P	**Pn**	**08 24 45.2**	**-4.1**
LPSR				pmax	pmax		
	comp=Z,40nm,1.3s						
MMAI	**Mount Meron Ar**	**15.10**	**244**	Pn	**Pn**	**08 24 58.3**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=44,slow=6.8,SNR=1.8						
MMAI				LR	LR	08 32 27.8	
	comp=Z,40nm,18.0s,baz=122,slow=45						
ARU	**Arti**	**16.21**	**14**	Pn	**Pn**	**08 25 08.9**	**-1.8**
	baz=173,slow=17,SNR=3.6						
ARU				Sn	Sn	08 27 56.0	-13
	baz=351,slow=23,SNR=6.4						
ARU				LR	LR	08 33 55.2	
	comp=Z,41nm,18.4s,baz=166,slow=46						
	comp=Z,4.3nm,0.3s						
ARU	**Arti**	**16.21**	**14**	*c i* P	**P**	**08 25 13.1**	**+0.3**
ARU				S	**S**	**08 28 14.7**	**-4.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AAK	**Ala-Archa**	**17.20**	**77**	Pn	**P**	**08 25 26.9**	**+2.8**
	comp=Z,0.6nm,0.3s,baz=252,slow=8.9,SNR=9.1						
	comp=Z,4.9nm,0.6s						
OBN	**Obninsk**	**17.35**	**330**	⇑ *e*P	**P**	**08 25 25.3**	**-0.1**
OBN				*e*S	**Sn**	**08 28 35

comp=Z,11nm,0.6s
KURK Kurchatov 21.17 53 P P 08 26 10.4 +3.4
KURK S Sn 08 30 12.0 +3.2
KLMR Klimovskoe 21.31 344 *eP* **P 08 26 07.1 -1.4**
KLMR pmax pmax
comp=Z,11nm,0.7s
KLMR Klimovskoe 21.31 344 *eP* **P 08 26 07.2 -1.3**
KLMR AMP 08 26 09.1
comp=Z,11nm,0.7s
GZR Gura Zlata 21.42 292 ⇑P **P 08 26 10.0 +0.2**
IDI Anoyia 21.68 264 P **P 08 26 12.7 +0.1**
comp=Z,3.3nm,0.3s,baz=41,slow=11,SNR=1.8
comp=Z,3.3nm,0.3s
BOVS Bovan 22.20 287 ⇓P **P 08 26 18.7 +0.5**
BZS Buzias 22.24 292 ⇑P **P 08 26 19.1 +0.6**
BZS Buzias 22.24 292 ⇑P **P 08 26 19.1 +0.6**
MKAR Makanchi Array 22.85 65 P **P 08 26 29.3 +4.2**
comp=Z,1.4nm,0.5s,baz=261,slow=9.3,SNR=14
comp=Z,1.4nm,0.5s
VSU Vasula 23.59 327 *i* P **P 08 26 33.5 +1.6**
VSU pmax pmax
comp=Z,89nm,1.1s
PDG Podgorica 24.10 284 ⇓P **P 08 26 38.3 +1.5**
FINES FINESS Array B 25.74 332 P **P 08 26 52.8 +1.3**
comp=Z,4.7nm,0.5s,baz=132,slow=8.7,SNR=26
comp=Z,4.7nm,0.5s
ZALV Zalesovo Beam 25.75 48 P **P 08 26 56.1 +4.5**
comp=Z,0.8nm,0.3s,baz=251,slow=9.0,SNR=4.5
comp=Z,0.8nm,0.3s
VRAC Vranov 25.88 301 LR LR 08 39 12.2
comp=Z,49nm,18.3s,baz=54,slow=42
DGZ Jazzator, Alta 26.52 58 *i* P **P 08 27 03.1 +4.3**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 27.75 299 P **P 08 27 11.2 +1.5**
comp=Z,0.5nm,0.5s,baz=105,slow=9.7,SNR=4.3
comp=Z,0.5nm,0.5s
CLL Collm 28.38 305 *i* P **P 08 27 18.6 +3.3**
CLL Collm 28.38 305 *i* P **P 08 27 18.6 +3.3**
CLL *i* x x 08 27 24.7
APA Apatity 28.52 346 ⇓*i* P **P 08 27 15.3 -1.0**
APA *i* S **S 08 31 54.0 -5.3**
APA *i* SS **SnSn 08 33 23.0 -0.8**
APA pmax pmax
comp=Z,6.0nm,1.0s
APA MLR MLR
comp=Z,600nm,11.0s
HFS Hagfors 30.22 322 P **P 08 27 32.8 +1.3**
comp=Z,2.8nm,0.4s,baz=117,slow=8.9,SNR=24
comp=Z,2.8nm,0.4s
NB2 NORSAR Subarra 31.69 323 P **P 08 27 45.4 +1.0**
comp=Z,1.0nm,0.6s,baz=114,slow=8.6
NOA NORSAR Array B 31.69 323 P **P 08 27 44.7 +0.3**
comp=Z,1.4nm,0.7s,baz=114,slow=8.4,SNR=6.2
comp=Z,1.4nm,0.7s
NOA NORSAR Array B 31.69 323 *eP* **P 08 27 45.4 +1.0**
NOA pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 31.79 343 P **P 08 27 46.9 +1.8**
comp=Z,6.1nm,1.0s,baz=143,slow=8.5,SNR=7.5
comp=Z,6.1nm,1.0s
ARCES ARCESS Array B 31.79 343 *eP* **P 08 27 48.4 +3.2**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
NRIK Noril'sk 34.17 22 LR LR 08 45 25.3
comp=Z,25nm,19.6s,baz=162,slow=42
ESDC Sonseca Array 41.76 287 P **P 08 29 11.1 +0.9**
comp=Z,2.9nm,0.9s,baz=66,slow=8.3,SNR=13
ESDC LR LR 08 49 19.9
comp=Z,14nm,18.2s,baz=322,slow=40
comp=Z,2.9nm,0.9s
ZEA Zeya 50.52 48 *eP* P 08 30 28.0 +9.3
TORD Torodi Ar. Bea 51.43 252 P **P 08 30 26.2 +0.2**
comp=Z,0.4nm,0.4s,baz=44,slow=7.7,SNR=3.8
comp=Z,0.4nm,0.4s
BILL Bilibino 60.99 23 *eP* **P 08 31 36.5 +3.1**
BILL pmax pmax
comp=Z,5.0nm,0.9s

*REY **05** 08:22:39.9, 64°.68N×17°.45W, h3km*
*IDC **05** 08:22:40.7±1.0, 64°.60N×17°.36W, h0km, mb3.7/6, mbtmp3.7/6, MS3.0/3, Error ellipse: s-maj=37.2km s-min=22.0km az=49.0*
ISC 05 08:22:41.1±0.7, 64°.68N±0°.02×17°.44W±0°.03, h10km, n31, σ1°.84/39, mb3.9/6, Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IKIS	**Kista**	**0.05**	**266**	S			**Sg**	**08 22 42.4**	**-2.5**
IKIS	baz=265			P			**Pg**	**08 22 41.2**	**-2.1**
	baz=265								
IDYN	**Dyngjuhals**	**0.12**	**16**	P			**Pg**	**08 22 42.9**	**-1.1**
	baz=18								
IVON	**Vonarskard**	**0.13**	**268**	P			**Pg**	**08 22 42.9**	**-1.3**
	baz=268								
IVON				S			**Sg**	**08 22 45.7**	**-0.8**
	baz=268								
IDJK	**Dyngjujokull**	**0.20**	**153**	P			**Pg**	**08 22 44.3**	**-1.0**
	baz=152								
IGRF	**Grimsfjall**	**0.28**	**164**	P			**Pg**	**08 22 45.7**	**-1.1**
	baz=163								
IGRF				S			**Sg**	**08 22 49.9**	**-0.8**
	baz=163								
IHUS	**Husbondi**	**0.40**	**194**	P			**Pg**	**08 22 47.6**	**-1.3**
	baz=193								
IHUS				S			**Sb**	**08 22 53.8**	**-2.6**
	baz=193								
THOR	**Thorvaldshraun**	**0.42**	**52**	P			**Pg**	**08 22 48.0**	**-1.3**
	baz=52								
THOR				S			**Sb**	**08 22 54.8**	**-2.2**
	baz=52								
ISKR	**Skrokkalda**	**0.42**	**254**	P			**Pg**	**08 22 47.8**	**-1.6**
	baz=254								
IVOT	**Vottur**	**0.42**	**164**	P			**Pg**	**08 22 48.0**	**-1.4**
	baz=164								
IKRE	**Kreppuhraun**	**0.47**	**76**	P			**Pg**	**08 22 48.6**	**-1.7**
	baz=76								
IJOK	**Jokulheimar**	**0.50**	**223**	P			**Pg**	**08 22 49.2**	**-1.5**
	baz=223								
IJOK				S			**Sg**	**08 22 55.8**	**-1.5**
	baz=223								
IASK	**Askja**	**0.51**	**42**	P			**Pg**	**08 22 49.4**	**-1.6**
	baz=42								
IMKO	**Mokollar**	**0.56**	**57**	P			**Pg**	**08 22 50.3**	**-1.7**
	baz=57								
IMKO				S			**Sb**	**08 22 59.0**	**-2.0**
	baz=57								
IIEY	**Innrieyrar**	**0.66**	**207**	P			**Pg**	**08 22 51.8**	**-1.9**
	baz=207								
ISVA	**Svartarkot**	**0.67**	**7**	P			**Pg**	**08 22 52.1**	**-1.9**
	baz=7.2								
ISVA				S			**Sg**	**08 23 02.1**	**-0.6**
	baz=7.2								
IKAL	**Kalfafell**	**0.74**	**188**	P			**Pg**	**08 22 53.1**	**-2.2**
	baz=188								
IVSH	**V-Sauoahnukur**	**0.75**	**79**	P			**Pg**	**08 22 53.3**	**-2.2**
	baz=79								
IVSH				S			**Sg**	**08 23 03.8**	**-1.5**
	baz=79								
IVAT	**Vatnsfell**	**0.81**	**233**	P			**Pg**	**08 22 54.6**	**-2.0**
	baz=233								
IADA	**Aoalbol**	**0.87**	**66**	P			**Pg**	**08 22 55.2**	**-2.6**
	baz=66								
IADA				S			**Sb**	**08 23 08.8**	**-1.1**
	baz=66								
IFAG	**Fagurholsmyri**	**0.88**	**156**	P			**Pg**	**08 22 55.5**	**-2.4**
	baz=156								
ISTE	**Stelbrattur**	**0.95**	**282**	P			**Pg**	**08 22 56.4**	**-3.0**
	baz=282								
IMEL	**Melhnausar**	**0.96**	**20**	P			**Pg**	**08 22 56.8**	**-2.6**
	baz=20								
NOA	**NORSAR Array B**	**13.51**	**92**	LR			LR	08 31 02.0	
	comp=Z,28nm,18.1s,baz=10.0,slow=37								
DAVOX	**Davos/Dischmat**	**23.31**	**127**	LR			LR	08 37 16.6	
	comp=Z,46nm,19.5s,baz=288,slow=38								
ESDC	**Sonseca Array**	**26.25**	**156**	P			**P**	**08 28 17.6**	**+1.4**
	0.7nm,0.8s,baz=349,slow=10,SNR=4.3								
	0.7nm,0.8s								
GNI	**Garni**	**42.81**	**94**	LR			LR	08 48 52.7	
	comp=Z,24nm,18.2s,baz=280,slow=37								
ILAR	**Eielson Array**	**45.69**	**332**	P			**P**	**08 31 04.2**	**+2.8**
	1.4nm,1.1s,baz=19,slow=5.7,SNR=7.5								
ILAR				PcP			**PcP**	**08 32 40.6**	**+1.5**
	0.6nm,1.0s,baz=12,slow=4.6,SNR=3.9								
	1.4nm,1.1s								
KURBB	**Kurchatov Arra**	**48.13**	**58**	P			**P**	**08 31 21.1**	**+0.4**
	1.6nm,1.0s,baz=324,slow=9.2,SNR=3.1								
	1.6nm,1.0s								
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P			**P**	**08 31 58.7**	**-0.1**
	1.1nm,0.7s,baz=355,slow=6.4,SNR=5.4								
	1.1nm,0.7s								
PDAR	**Pinedale Array**	**53.19**	**293**	P			**P**	**08 31 59.9**	**+0.6**
	1.5nm,0.9s,baz=49,slow=6.2,SNR=9.8								
	1.5nm,0.9s								
TXAR	**Lajitas Array**	**62.30**	**280**	P			**P**	**08 33 04.9**	**+1.6**
	0.7nm,0.9s,baz=54,slow=4.6,SNR=4.7								
	0.7nm,0.9s								

*IDC **05** 08:40:33.2±0.6, 55°.14S×128°.95W, h0km, mb4.3/11, mbtmp4.3/11, MS4.8/40, Error ellipse: s-maj=25.0km s-min=17.2km az=151.0*
*NEIC **05** 08:40:35.0±2.0, 55°.2S±0°.2×128°.8W±0°.2, h10km±1km, mb5.0/21, Mwc5.4(GCMT), Error ellipse: s-maj=28.0km s-min=18.8km az=159.0*
*GCMT **05** 08:40:39.0±0.1, 55°.40S±0°.01×128°.93W±0°.01, h16km, MW5.4/144, Moment Tensor Solution. s110,c192; s144,c260; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-0.15±.02; Mθθ 1.04±.02; Mφφ-0.89±.02; Mrθ-0.20±.05; Mθφ 1.22±.02; Mφr-0.04±.05; Best double couple: M0 1.56800×10^17 NP1.φs289.00000°, δ87.00000°, λ6.00000°. NP2.φs199.00000°, δ84.00000°, λ177.00000°. Principal axes: T 1.6530, Plg6.0000°, Azm154.0000°; N -0.1750, Plg83.0000°, Azm314.0000°; P -1.4830, Plg2.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 08:40:34.9±0.5, 55°.2S±0°.1×128°.8W±0°.1, h10km, n100, σ1°.09/46, mb4.8/19, MS5.0/44, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**31.39**	**35**	LR			LR	08 56 38.1	
	comp=Z,579nm,20.7s,baz=204,slow=31								
PMSA	**Palmer Station**	**32.34**	**134**	LR			LR	08 56 21.3	
	comp=Z,3μm,21.9s,baz=255,slow=29								
VNDA	**Vanda**	**32.50**	**202**	P			**P**	**08 47 06.8**	**+1.7**
	1.5nm,0.8s,baz=94,slow=9.8,SNR=10								
VNDA				LR			LR	08 56 06.3	
	comp=Z,820nm,21.9s,baz=82,slow=29								
	1.5nm,0.8s								
VNDA	**Vanda**	**32.50**	**202**	P			**P**	**08 47 07.7**	**+2.7**
QSPA	**South Pole Qui**	**35.01**	**180**	P			**P**	**08 47 27.2**	**0.0**
	3.7nm,0.9s,baz=100,slow=1.8,SNR=9.7								
QSPA				LR			LR	09 00 27.2	
	comp=Z,4μm,18.4s,baz=86,slow=34								
	3.7nm,0.9s								
QSPA	**South Pole Qui**	**35.01**	**180**	P			**P**	**08 47 27.7**	**+0.5**
QSPA				IAmb			IAmb	08 47 39.2	
	comp=Z,23nm,1.0s								
TBI	**Tubuai**	**35.30**	**326**	*eP*			P	08 47 15.9	-14
	comp=Z,135nm,31.2s								
TBI				*eS*			S	08 52 48.6	-15
	comp=Z,217nm,28.0s								
TBI				*e*LR			LR	08 56 37.6	
	comp=Z,5μm,29.0s								
TBI	**Tubuai**	**35.30**	**326**	*eT*			T	09 24 34.3	
	comp=Z,131nm,0.3s								
RPZ	**Rata Peaks**	**39.55**	**261**	LR			LR	09 00 21.4	
	comp=Z,3μm,21.4s,baz=120,slow=30								
URZ	**Urewera**	**39.66**	**272**	LR			LR	09 01 00.5	
	comp=Z,2μm,19.6s,baz=166,slow=31								
PLCA	**Paso Flores**	**40.37**	**94**	P			**P**	**08 48 12.4**	**-0.2**
	comp=Z,2.4nm,1.1s,baz=202,slow=19,SNR=4.9								
PLCA				LR			LR	09 01 14.3	
	comp=Z,1μm,18.1s,baz=226,slow=31								
	comp=Z,2.4nm,1.1s								
PLCA	**Paso Flores**	**40.37**	**94**	P			**P**	**08 48 12.7**	**0.0**
H03S2	**Juan Fernandez**	**40.38**	**79**	T			T	09 31 10.9	
	baz=221,SNR=556								
H03S1	**Juan Fernandez**	**40.38**	**79**	T			T	09 31 12.2	
	baz=221,SNR=657								
H03S3	**Juan Fernandez**	**40.39**	**79**	T			T	09 31 11.4	
	baz=221,SNR=555								
H03N3	**Juan Fernandez**	**40.66**	**79**	T			T	09 31 29.2	
	baz=224,slow=72,SNR=2081								
H03N2	**Juan Fernandez**	**40.66**	**79**	T			T	09 31 24.3	
	baz=224,slow=72,SNR=1954								
H03N1	**Juan Fernandez**	**40.67**	**79**	T			T	09 31 27.9	
	baz=224,slow=72,SNR=418								
PPT2	**Papeete2**	**40.74**	**329**	*eP*			P	08 48 01.4	-14
PPT2	comp=Z,108nm,27.2s								
				eS			S	08 54 10.9	-15
PPT2	comp=Z,527nm,26.2s								
				*e*LR			LR	08 59 09.0	
	comp=Z,6μm,26.2s								
PPT2	**Papeete2**	**40.74**	**329**	*eT*			T	09 31 19.3	
	comp=Z,2.3nm,0.3s								
PPT	**Papeete**	**40.76**	**329**	LR			LR	09 01 03.0	
	comp=Z,2μm,18.9s,baz=150,slow=30								
RAR	**Rarotonga**	**41.10**	**313**	LR			LR	09 00 43.8	
	comp=Z,758nm,19.7s,baz=195,slow=30								
VAH	**Vaihoa**	**42.43**	**332**	*eT*			T	09 33 27.6	
	comp=Z,197nm,0.3s								
VNA3	**Neumayer Olymp**	**46.79**	**157**	P			**P**	**08 49 02.9**	**-1.1**
TAOE	**Nuku Hiva Isla**	**47.06**	**345**	*eS*			S	08 55 43.6	-15
	comp=Z,515nm,24.4s								
TAOE				*e*LR			LR	09 02 06.0	
	comp=Z,4μm,25.4s								
VNA2	**Neumayer--Watz**	**47.53**	**158**	P			**P**	**08 49 09.0**	**-0.7**
	baz=215,slow=9.0								
VNA1	**Neumayer--Stat**	**47.54**	**157**	P			**P**	**08 49 09.1**	**-0.6**
SNAA	**Sanae**	**47.91**	**160**	P			**P**	**08 49 11.5**	**-1.1**
SNAA	**Sanae**	**47.91**	**160**	LR			LR	09 08 29.4	
	comp=Z,2μm,19.7s,baz=223,slow=35								
SNAA	**Sanae**	**47.91**	**160**	P			**P**	**08 49 11.9**	**-0.8**
SNAA				IAmb			IAmb	08 49 27.0	
	comp=Z,10nm,1.1s								
TROLL	**Troll, Antarti**	**48.64**	**162**	P			**P**	**08 49 17.9**	**-0.5**
AFI	**Afiamalu**	**52.90**	**304**	LR			LR	09 06 10.1	
	comp=Z,517nm,19.4s,baz=168,slow=29								
LVC	**Linn Verde**	**54.61**	**79**	LR			LR	09 07 29.8	
	comp=Z,306nm,20.1s,baz=220,slow=30								
PLTB	**Pedras Altas**	**56.36**	**98**	P			**P**	**08 50 16.1**	**+0.1**
PLTB				IAmb			IAmb	08 50 24.0	
	comp=Z,15nm,1.0s								
MAW	**Mawson**	**57.24**	**185**	P			**P**	**08 50 22.3**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=183,slow=7.3,SNR=3.6								
MAW				LR			LR	09 12 44.1	
	comp=Z,648nm,21.1s,baz=166,slow=34								
	comp=Z,1.5nm,0.6s								
ONTNC	**Ouen Toro**	**57.61**	**277**	P			**P**	**08 50 24.8**	**-0.1**
PB16	**IPOC Station P**	**57.69**	**75**	P			**P**	**08 50 24.8**	**-1.3**
PB16				IAmb			IAmb	08 50 48.4	
	comp=Z,17nm,1.4s								
DZM	**Mont Dzumac**	**57.80**	**277**	*e*LR			LR	09 07 03.6	
	comp=Z,1μm,29.0s								
DZM	**Mont Dzumac**	**57.80**	**277**	P			**P**	**08 50 27.3**	**+0.9**
DZM				IAmb			IAmb	08 50 38.0	
	comp=Z,26nm,1.4s								
CPUP	**Villa Florida**	**58.33**	**91**	P			**P**	**08 50 29.4**	**-0.4**
	comp=Z,2.5nm,1.1s,baz=225,slow=8.6,SNR=2.4								
	comp=Z,2.5nm,1.1s								
LPAZ	**La Paz**	**60.11**	**75**	P			**P**	**08 50 42.5**	**-0.5**
	comp=Z,7.2nm,1.0s,baz=168,slow=2.2,SNR=13								
LPAZ				LR			LR	09 10 36.3	
	comp=Z,340nm,19.1s,baz=210,slow=30								
	comp=Z,7.2nm,1.0s								
LPAZ	**La Paz**	**60.11**	**75**	P			**P**	**08 50 43.1**	**+0.1**
LPAZ				IAmb			IAmb	08 51 02.1	
	comp=Z,16nm,1.2s								
ATAH	**Atahualpa**	**62.35**	**60**	LR			LR	09 11 24.2	
	comp=Z,2μm,22.0s,baz=214,slow=30								
MCRA	**Macar, Loja**	**63.99**	**57**	P			**P**	**08 51 09.0**	**+0.6**
MCRA				IAmb			IAmb	08 51 18.0	
	comp=Z,10.0nm,1.3s								
STKA	**Stephens Creek**	**64.30**	**251**	LR			LR	09 13 20.8	
	comp=Z,1μm,21.7s,baz=130,slow=31								
SIV	**San Ignacio**	**64.31**	**81**	LR			LR	09 14 25.5	
	comp=Z,176nm,19.3s,baz=206,slow=32								
OTAV	**Otavalo**	**68.72**	**56**	P			**P**	**08 51 39.5**	**+0.2**
OTAV				IAmb			IAmb	08 51 49.9	
	comp=Z,25nm,1.7s								
BDFB	**Brasilia**	**72.06**	**92**	LR			LR	09 21 18.5	
	comp=Z,851nm,18.3s,baz=205,slow=34								
ROSC	**El Rosal**	**74.71**	**57**	P			**P**	**08 52 17.1**	**+1.9**
	comp=Z,2.5nm,0.4s,baz=229,slow=9.3,SNR=1.5								
ROSC				LR			LR	09 19 20.2	
	comp=Z,753nm,19.5s,baz=226,slow=31								
	comp=Z,2.5nm,0.4s								
AS31	**Alice Springs**	**74.93**	**250**	P			**P**	**08 52 14.1**	**-1.9**
ASAR	**Alice Springs**	**74.93**	**250**	P			**P**	**08 52 14.2**	**-1.8**
	comp=Z,8.5nm,0.9s,baz=140,slow=5.4,SNR=33								
ASAR				LR			LR	09 21 07.4	
	comp=Z,1μm,19.2s,baz=138,slow=32								
	comp=Z,8.5nm,0.9s								
ASAR	**Alice Springs**	**74.93**	**250**	P			**P**	**08 52 14.1**	**-1.9**
H01W1	**Cape Leeuwin H**	**75.41**	**229**	T			T	10 15 54.4	
	baz=148,slow=76,SNR=188								
H01W2	**Cape Leeuwin H**	**75.42**	**229**	T			T	10 15 54.0	
	baz=148,slow=76,SNR=207								
H01W3	**Cape Leeuwin H**	**75.43**	**229**	T			T	10 15 54.8	
	baz=148,slow=76,SNR=166								
NWAO	**Narrogin (SRO)**	**75.70**	**232**	LR			LR	09 17 45.6	
	comp=Z,839nm,20.2s,baz=14,slow=30								
WR0	**Warramunga Arr**	**77.57**	**253**	P			**P**	**08 52 30.7**	**-0.3**
WR0				IAmb			IAmb	08 52 41.6	
	comp=Z,18nm,1.1s								
WB2	**Warramunga Arr**	**77.69**	**253**	P			**P**	**08 52 30.8**	**-0.9**
WB2				IAmb			IAmb	08 52 53.0	
	comp=Z,19nm,1.1s								
WRA	**Warramunga Arr**	**77.70**	**253**	P			**P**	**08 52 30.9**	**-0.9**
	comp=Z,8.4nm,1.1s,baz=142,slow=5.4,SNR=20								
WRA				LR			LR	09 23 05.6	
	comp=Z,828nm,19.4s,baz=131,slow=33								
	comp=Z,8.4nm,1.1s								
WB0	**Warramunga Arr**	**77.81**	**253**	P			**P**	**08 52 31.9**	**-0.4**
PMG	**Port Moresby**	**78.95**	**269**	LR			LR	09 23 57.5	
	comp=Z,500nm,18.7s,baz=138,slow=33								
SDV	**Santo Domingo**	**80.01**	**58**	LR			LR	09 24 36.8	
	comp=Z,352nm,18.7s,baz=172,slow=33								
LPIG	**La Paz**	**80.52**	**17**	LR			LR	09 20 14.3	
	comp=Z,332nm,18.1s,baz=198,slow=30								
FITZ	**Fitzroy Crossi**	**83.89**	**247**	LR			LR	09 24 55.7	
	comp=Z,777nm,21.9s,baz=138,slow=32								
FITZ	**Fitzroy Crossi**	**83.89**	**247**	P			**P**	**08 53 04.2**	**-0.7**
PCRV	**Puerto La Cruz**	**84.12**	**63**	LR			LR	09 26 44.5	
	comp=Z,1μm,18.1s,slow=33								
MDP	**Montagnes des**	**86.30**	**76**	LR			LR	09 28 41.7	
	comp=Z,214nm,19.9s,baz=196,slow=33								
TXAR	**Lajitas Array**	**86.88**	**22**	P			**P**	**08 53 20.7**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=183,slow=5.0,SNR=5.7								
	comp=Z,0.7nm,0.9s								
RCBR	**Riachuelo**	**86.91**	**96**	LR			LR	09 29 00.6	
	comp=Z,395nm,20.7s,baz=350,slow=33								
SUR	**Sutherland**	**88.98**	**155**	LR			LR	09 31 37.3	
	comp=Z,299nm,18.1s,baz=179,slow=34								
PFO	**Pinyon Flats O**	**89.05**	**10**	LR			LR	09 23 55.9	
	comp=Z,613nm,21.4s,baz=205,slow=29								
SJG	**San Juan**	**90.13**	**58**	LR			LR	09 28 59.3	
	comp=Z,238nm,20.3s,baz=248,slow=32								
H11S2	**WAKE ISLAND Hy**	**91.36**	**301**	T			T	10 34 50.4	
	baz=148,slow=75,SNR=88								
H11S3	**WAKE ISLAND Hy**	**91.38**	**301**	T			T	10 34 58.6	
	baz=148,slow=75,SNR=49								
H11S1	**WAKE ISLAND Hy**	**91.38**	**301**	T			T	10 34 51.7	
	baz=148,slow=75,SNR=30								
BATI	**Baumata**	**91.50**	**250**	LR			LR	09 31 01.7	
	comp=Z,1μm,20.2s,baz=158,slow=33								
H11N3	**WAKE ISLAND Hy**	**92.31**	**302**	T			T	10 36 05.8	
	baz=148,slow=76,SNR=31								
H11N1	**WAKE ISLAND Hy**	**92.31**	**302**	T			T	10 36 05.9	
	baz=148,slow=76,SNR=25								
H11N2	**WAKE ISLAND Hy**	**92.33**	**302**	T			T	10 36 07.0	
	baz=148,slow=76,SNR=26								
BOSA	**Boshof**	**93.63**	**157**	LR			LR	09 33 12.6	
	comp=Z,823nm,18.9s,baz=192,slow=34								
NVAR	**Mina Array Bea**	**93.66**	**8**	P			**P**	**08 53 52.5**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=195,slow=9.0,SNR=2.9								
NVAR				LR			LR	09 26 48.2	
	comp=Z,618nm,20.5s,baz=195,slow=30								
	comp=Z,0.5nm,0.9s								
SIJI	**Sorong**	**94.98**	**261**	LR			LR	09 36 35.9	
	comp=Z,342nm,18.0s,baz=144,slow=35								
YBH	**Yreka Blue Hor**	**96.67**	**5**	LR			LR	09 28 46.9	
	comp=Z,728nm,19.0s,baz=184,slow=30								
LBTB	**Lobatse**	**97.18**	**157**	LR			LR	09 34 10.8	
	comp=Z,722nm,19.1s,baz=192,slow=33								
KAPI	**Kappang**	**97.93**	**249**	LR			LR	09 34 58.3	
	comp=Z,597nm,20.6s,baz=156,slow=33								
PDAR	**Pinedale Array**	**98.93**	**14**	LR			LR	09 30 42.2	
	comp=Z,473nm,20.0s,baz=211,slow=30								
H02S1	**DAWSON INLET T**	**108.05**	**358**	T			T	10 55 48.8	
	SNR=4.7								
ILAR	**Eielson Array**	**120.41**	**351**	PKP			**PKPdf**	**08 59 24.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=197,slow=1.6,SNR=14								
TORD	**Torodi Ar. Bea**	**123.23**	**118**	PKP			**PKPdf**	**08 59 30.4**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=217,slow=0.9,SNR=2.6								
PETK	**Petropavlovsk-**	**123.73**	**316**	PKP			**PKPdf**	**08 59 31.0**	**-0.6**
	comp=Z,2.8nm,0.5s,baz=121,slow=7.8,SNR=2.5								
ESDC	**Sonseca Array**	**140.69**	**90**	PKP			**PKPdf**	**09 00 04.6**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=253,slow=1.5,SNR=4.5								
ESDC	**Sonseca Array**	**140.69**	**90**				**PKPdf**	**09 00 02.0**	**-2.0**
TIXI	**Tiksi**	**144.66**	**328**	PKPdf			**PKPab**	**09 00 08.9**	**+0.2**
ULN	**Ulaanbaatar**	**145.33**	**282**				**PKPbc**	**09 00 11.8**	**-0.2**
KEST	**Kesra**	**145.47**	**107**	PKPbc			**PKPab**	**09 00 13.5**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=322,slow=6.3,SNR=4.1								
SONM	**Songino Array**	**145.68**	**281**	PKPbc			**PKPab**	**09 00 13.2**	**-0.2**
	comp=Z,12nm,0.9s,baz=136,slow=3.2,SNR=19								
SONM	**Songino Array**	**145.68**	**281**	PKPdf			**PKPdf**	**09 00 12.6**	**-0.1**
RAYN	**Ar Rayn**	**148.11**	**170**				**PKPbc**	**09 00 19.6**	**-0.9**
ZALV	**Zalesovo Beam**	**160.58**	**280**	PKPab			**PKPab**	**09 01 14.1**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=107,slow=5.1,SNR=4.9								
BVAR	**Borovoye Array**	**168.54**	**267**	PKPab			**PKPab**	**09 01 48.7**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=131,slow=6.5,SNR=1.5								

*NOU **05** 08:44:56.3, 37°.36S×179°.02E, h6km, MLv3.5/6, Off E. Coast of N. Island, N.Z.*
*WEL **05** 08:45:04.2, 38°.

KK31 Karatay Array 6.68 358 PN **Pn 09 01 10.8 -0.3**
KK31 Karatay Array 6.68 358 P **Pn 09 01 10.8 -0.3**
3.9nm,0.3s,baz=187,slow=12,SNR=210
KK31 S **Sn 09 02 22.6 -4.4**
43nm,0.4s,baz=188,slow=24,SNR=11
AAK Ala-Archa 6.81 23 P **Pn 09 01 13.3 +0.4**
SNR=6.3
AAK Ala-Archa 6.81 23 P **Pn 09 01 12.7 -0.2**
7.7nm,0.3s,baz=172,slow=7.0,SNR=14
AAK S **Sn 09 02 27.3 -3.1**
23nm,0.5s,baz=148,slow=23,SNR=12
KBK Karagaybulak 6.98 26 P **Pn 09 01 16.0 +0.8**
SNR=5.0
SMLA Simla 7.44 133 *e*P **Pn 09 01 22.4 +1.2**
SMLA *e*S **Sn 09 02 42.3 -2.8**
SMLA IAML 09 02 46.0
comp=N,335nm,0.3s
SMLA IAML 09 02 47.3
comp=E,543nm,0.3s
TKM2 Tokmak 2 7.45 28 P **Pn 09 01 21.2 -0.1**
SNR=17
DDI Dehra Dun 8.55 133 *e*S **Sn 09 03 07.7 -3.9**
DDI IAML 09 03 16.2
comp=N,291nm,0.3s
DDI IAML 09 03 18.6
comp=E,200nm,0.3s
NDI New Delhi 9.39 143 *e*P **Pn 09 01 48.5 +1.8**
NDI *e*S **Sn 09 03 27.0 -4.6**
GEYT Alibeck 10.28 282 P **Pn 09 01 57.4 -0.8**
comp=E,6.2nm,0.6s,baz=91,slow=9.9,SNR=10.0
GEYT S **Sn 09 03 48.4 -4.3**
comp=E,5.6nm,0.5s,baz=88,slow=16,SNR=2.7
AJM Ajmer 10.42 161 *e*P **Pn 09 01 57.0 -3.1**
AJM *i* S **Sn 09 03 50.0 -6.3**
JHNI Jhansi 12.75 147 *e*P **Pn 09 02 31.0 +1.1**
JHNI *i* x x 09 02 36.9
JHNI *e*S Sn 09 04 43.6 -8.2
PYUN Piuthan 13.19 126 *e*P **Pn 09 02 35.1 -0.5**
comp=E,38nm,0.3s
MKAR Makanchi Array 13.42 36 P **Pn 09 02 37.9 -0.3**
comp=E,2.3nm,0.6s,baz=217,slow=11,SNR=18
DANN Dangsing 13.54 123 *e*P **Pn 09 02 40.4 +0.3**
comp=E,33nm,0.3s
BHPL Bhopal 14.31 155 *e*P **P 09 02 53.6 +2.4**
BHPL *e*S **Sn 09 05 21.5 -7.7**
BHPL IAML 09 05 28.0
comp=E,26nm,0.2s
BHPL IAML 09 05 28.6
comp=N,17nm,0.4s
GKN Gorkha 14.36 122 *e*P **Pn 09 02 50.6 +0.5**
comp=N,36nm,0.4s
DMN Daman 14.93 122 *e*P **Pn 09 02 58.2 +1.0**
comp=N,55nm,0.4s
AB31 Akbulak array 15.10 332 P **Pn 09 02 57.8 -1.1**
comp=N,1.9nm,0.4s,baz=144,slow=10,SNR=124
AB31 ⇑S S 09 05 32.5 -15
comp=N,1.4nm,0.4s,baz=149,slow=23,SNR=8.7
PKIN Phulchoki 15.14 121 *e*P **Pn 09 03 00.5 +0.6**
PKI Pulchoki 15.16 121 *e*P **Pn 09 03 00.5 +0.3**
KURBB Kurchatov Arra 15.23 19 P **Pn 09 02 59.4 -1.1**
comp=N,0.5nm,0.4s,baz=208,slow=10,SNR=11
GUN Gumba 15.28 119 *e*P **Pn 09 03 02.5 +0.9**
comp=N,23nm,0.3s
KURK Kurchatov 15.34 19 P **Pn 09 02 59.4 -2.4**
JIRN Jiri 15.64 120 *e*P **P 09 03 07.6 +1.3**
comp=N,73nm,0.5s
RAMN Ramite 16.37 121 *e*P **Pn 09 03 15.3 +0.5**
comp=N,55nm,0.6s
BVAR Borovoye Array 16.61 359 P **P 09 03 17.0 +0.7**
comp=N,1.1nm,0.3s,baz=166,slow=10,SNR=19
BRVK Borovoye 16.64 359 *ce*P **P 09 03 17.4 +0.7**
BRVK pmax pmax
comp=Z,8.0nm,1.3s
AKTO Aktyubinsk 16.79 331 P **P 09 03 19.6 +1.2**
comp=Z,17nm,0.5s,baz=141,slow=10,SNR=44
AKTO Aktyubinsk 16.79 331 ⇑P **P 09 03 18.4 +0.1**
comp=Z,38nm,0.9s
TAPN Taplejung 16.91 118 *e*P **Pn 09 03 22.5 +1.2**
comp=Z,36nm,0.4s
LSA Lhasa 18.26 106 P **Pn 09 03 39.0 +1.6**
GOMU GeErMu 19.30 84 P **P 09 03 48.2 +2.0**
ZALV Zalesovo Beam 20.04 25 P **P 09 03 54.0 +0.5**
comp=Z,3.7nm,0.5s,baz=220,slow=11,SNR=8.9
comp=Z,3.7nm,0.5s
ZALV Zalesovo Beam 20.04 25 P **P 09 03 54.0 +0.5**
ZEI Tsey 21.67 295 *e*P **P 09 04 14.1 +3.0**
ZEI pmax pmax
comp=Z,4.0nm,1.4s
ARU Arti 21.67 341 P **P 09 04 11.2 +0.5**
comp=Z,5.8nm,0.2s,baz=162,slow=8.9,SNR=7.2
comp=Z,5.8nm,0.2s
ARU Arti 21.67 341 *d*P **P 09 04 10.6 -0.1**
ARU S **S 09 07 58.2 +0.5**
ARU pmax pmax
comp=Z,11nm,0.7s
KBZ Khabaz 22.54 298 *i*P **P 09 04 19.0 -0.2**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 22.73 298 *e*P **P 09 04 17.8 -3.2**
KIV pmax pmax
comp=Z,8.0nm,1.1s
BELG Belogornoye 22.88 322 *i*P **P 09 04 22.4 +0.2**
BELG pmax pmax
comp=Z,4.0nm,0.9s
KIRV Kirov 26.26 334 P **P 09 04 53.2 +0.6**
comp=Z,11nm,0.5s,baz=148,slow=15,SNR=3.8
comp=Z,11nm,0.5s
SONM Songino Array 28.47 55 P **P 09 05 13.5 +0.8**
comp=Z,0.8nm,0.5s,baz=269,slow=9.1,SNR=4.4
comp=Z,0.8nm,0.5s
MMAI Mount Meron Ar 29.24 274 P **P 09 05 20.1 +0.5**
comp=Z,2.1nm,0.4s,baz=14,slow=14,SNR=10
comp=Z,2.1nm,0.4s
BRTR Keskin Array B 29.35 288 P **P 09 05 21.6 +1.0**
comp=Z,0.7nm,0.6s,baz=112,slow=11,SNR=2.7
comp=Z,0.7nm,0.6s
OBN Obninsk 29.93 320 *e*P **P 09 05 24.9 -0.3**
OBN pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 30.52 118 P **P 09 05 32.0 +1.2**
comp=Z,1.5nm,0.5s,baz=302,slow=8.6,SNR=10
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 32.91 309 P **P 09 05 52.2 +0.9**
comp=Z,2.2nm,0.5s,baz=81,slow=7.1,SNR=20
AKASG PP **PnPn 09 07 08.1 +0.1**
comp=Z,0.8nm,0.6s,baz=83,slow=11,SNR=5.0
comp=Z,2.2nm,0.5s
AKASG Malin Array Be 32.91 309 *ce*P **P 09 05 52.7 +1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
MNK Minsk 34.48 315 *i*P **P 09 06 02.3 -2.5**
MNK *i* 09 08 44.1
MNK *i* S **S 09 11 15.8 -3.2**
MNK pmax pmax
comp=Z,11nm,0.7s
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=N,19nm,0.7s
MNK MLR MLR
comp=Z,69nm,16.0s
MNK MLR MLR
comp=N,10μm,19.0s
MNK MLR MLR
comp=E,69nm,17.0s
MNK Minsk 34.48 315 *i*P **P 09 06 02.4 -2.5**
comp=E,4.0nm,1.0s
MNK *i*P **P 09 06 02.4 -2.5**
comp=N,19nm,0.7s
MNK *i*P **P 09 06 02.4 -2.5**
comp=Z,11nm,0.7s,baz=284
MNK *i*pP pP 09 06 21.1 -23
MNK *i*PP sP 09 07 14.5 +8.5
MNK *i*S **S 09 11 15.8 -3.2**
MNK *i*sS ScP 09 11 48.7 -14
MNK *i*SS SnSn 09 13 22.8 -31
MNK *i*LQ LQ 09 17 04.2
MNK *i*LR LR 09 19 35.0
MNK *i*LRM MLR 09 20 48.0
comp=Z,69nm,16.1s
MNK *i*LRM MLR 09 20 53.5
comp=E,69nm,16.8s
MNK *i*LRM MLR 09 20 53.5
comp=N,10μm,19.3s
FINES FINESS Array B 37.49 326 P **P 09 06 30.3 0.0**
comp=N,1.8nm,0.3s,baz=124,slow=8.9,SNR=10
comp=N,1.8nm,0.3s
FINES FINESS Array B 37.49 326 *i*P **P 09 06 31.7 +1.4**
FINES pmax pmax
comp=Z,2.0nm,0.3s
NJ2 Nanjing 39.60 82 *e*P P 09 06 53.5 +5.3
ARCES ARCESS Array B 41.18 338 P **P 09 07 02.0 +1.3**
comp=Z,5.5nm,0.7s,baz=111,slow=8.1,SNR=23
comp=Z,5.5nm,0.7s
KTK1 Kautokeino 41.65 336 *e*P **P 09 07 05.4 +0.9**
KTK1 IAmb IAmb 09 07 12.4
comp=Z,48nm,1.3s
HAMF Hammerfest 42.26 339 *e*P **P 09 07 11.2 +1.8**
HAMF IAmb IAmb 09 07 13.2
comp=Z,48nm,1.1s
HFS Hagfors 43.06 322 P **P 09 07 15.5 -0.5**
comp=Z,6.4nm,0.6s,baz=108,slow=9.3,SNR=16
comp=Z,6.4nm,0.6s
FAUS Fauske 43.82 333 *e*P **P 09 07 23.7 +1.7**
MOR8 Moi Rana 43.83 331 *e*P **P 09 07 22.8 +0.7**
MOR8 IAmb IAmb 09 07 23.0
comp=Z,13nm,0.8s
NB2 NORSAR Subarra 44.38 323 P **P 09 07 27.0 +0.4**
comp=Z,8.1nm,0.9s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.38 323 P **P 09 07 27.0 +0.4**
baz=96,slow=7.9
NOA NORSAR Array B 44.38 323 P **P 09 07 27.4 +0.8**
comp=Z,3.5nm,0.6s,baz=97,slow=7.8,SNR=19
comp=Z,3.5nm,0.6s
BFO Black Forest 46.49 305 *i*P P 09 07 49.4 +6.1
KBS Kingsbay 48.66 347 *ce*P P 09 08 06.4 +6.8
KBS pmax pmax
comp=Z,49nm,1.3s
KMBO Kilima Mbogo 48.69 227 P **P 09 08 01.3 +0.4**
comp=Z,0.3nm,0.7s,baz=72,slow=19,SNR=9.9
comp=Z,0.3nm,0.7s
EKA Eskdalemuir Ar 52.27 316 P **P 09 08 28.8 +1.9**
comp=Z,0.9nm,0.6s,baz=82,slow=7.2,SNR=2.1
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 57.40 298 P **P 09 09 04.5 +0.6**
comp=Z,0.4nm,0.5s,baz=74,slow=9.5,SNR=2.4
comp=Z,0.4nm,0.5s
TORD Torodi Ar. Bea 65.60 269 P **P 09 09 58.1 -1.1**
comp=Z,2.0nm,0.4s,baz=50,slow=6.0,SNR=26
comp=Z,2.0nm,0.4s
INK Inuvik 74.00 9 P **P 09 10 50.4 +0.9**
comp=Z,1.2nm,0.5s,baz=330,slow=4.7,SNR=12
comp=Z,1.2nm,0.5s
ILAR Eielson Array 74.89 16 P **P 09 10 53.5 -1.2**
comp=Z,0.3nm,0.8s,baz=316,slow=5.1,SNR=3.3
comp=Z,0.3nm,0.8s
BOSA Boshof 77.61 220 P **P 09 11 11.2 +0.5**
comp=Z,2.4nm,0.8s,baz=33,slow=6.2,SNR=3.7
comp=Z,2.4nm,0.8s
YKA Yellowknife Ar 81.33 3 P **P 09 11 31.1 +1.0**
comp=Z,1.2nm,0.5s,baz=348,slow=5.2,SNR=12
comp=Z,1.2nm,0.5s
WRA Warramunga Arr 82.04 122 P **P 09 11 34.2 -0.3**
comp=Z,1.1nm,0.5s,baz=325,slow=4.8,SNR=38
comp=Z,1.1nm,0.5s
ASAR Alice Springs 84.30 125 P **P 09 11 45.7 -0.3**
comp=Z,1.4nm,0.6s,baz=309,slow=4.9,SNR=30
comp=Z,1.4nm,0.6s
PLCA Paso Flores 149.69 250 PKPbc **PKPbc 09 19 03.5 +1.1**
comp=Z,2.5nm,1.0s,baz=104,slow=4.2,SNR=4.3

WEL 05 09:02:33.8±1.1, 34°S±23°×17°9E±3°2, h266km±27km, M3.8/6, ML4.0/12, MLv3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=122.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.16**	**191**	P	Pn	09 03 27.7	-1.1
MXZ				S	S	09 04 13.3	+0.7
HAZ	**Te Kaha**	**3.45**	**197**	P	Pn	09 03 32.0	0.0
HAZ				S	S	09 04 19.2	+0.8
PKGZ	**Pakihiroa**	**3.51**	**193**	P	Pn	09 03 33.1	+0.3
PKGZ				S	S	09 04 19.4	-0.4
PUZ	**Puketiti**	**3.66**	**190**	P	Pn	09 03 34.5	+0.1
PUZ				S	S	09 04 22.9	+0.2
RUGZ	**Raukumara Rang**	**3.67**	**197**	P	Pn	09 03 35.1	+0.4
MWZ	**Matawai**	**4.06**	**197**	P	Pn	09 03 39.2	+0.2
MWZ				S	S	09 04 30.7	-0.2
CNGZ	**Carnagh Statio**	**4.08**	**189**	P	Pn	09 03 40.2	+1.1
TKGZ	**Te Karaka**	**4.09**	**193**	P	Pn	09 03 39.4	+0.1
TKGZ				S	S	09 04 31.7	+0.2
URZ	**Urewera**	**4.10**	**202**	P	Pn	09 03 39.2	-0.2
URZ				S	S	09 04 32.1	+0.3
MUGZ	**Murupara**	**4.41**	**204**	P	Pn	09 03 43.2	+0.2
MUGZ				S	S	09 04 38.7	+0.4
SNGZ	**Shannon Statio**	**4.53**	**197**	P	Pn	09 03 43.1	-1.3
SNGZ				S	S	09 04 41.9	+1.0
MRHZ	**Matea Rd**	**4.85**	**205**	P	Pn	09 03 48.2	-0.1
NMHZ	**Naumai**	**4.97**	**201**	P	Pn	09 03 50.2	+0.5
ARHZ	**Aropaoanui**	**5.07**	**198**	P	Pn	09 03 50.1	-0.7
ARHZ				S	S	09 04 52.0	-0.5
MCHZ	**McNeill Hill**	**5.32**	**200**	P	Pn	09 03 54.0	+0.2
MCHZ				S	S	09 04 59.0	+1.0

DDA 05 09:06:31.6±0.0, 38°47N×29°15E, h7km±3km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USAK	**Uak-Merkez**	**0.27**	**338**	P	Pg	09 06 36.3	-0.6
USAK				S	Sg	09 06 41.5	+0.9
USAK				*i* AML	AML	09 06 49.0	
	comp=E,32nm,0.5s						
PASA	**Karahalli, USA**	**0.29**	**113**	P	Pg	09 06 37.8	+0.4
PASA				S	Sg	09 06 42.5	+1.2
MANT	**Manisa**	**0.46**	**273**	P	Pg	09 06 41.1	+0.5
MANT				S	Sb	09 06 50.0	+0.7
MANT				*i* AML	AML	09 06 57.0	
	comp=E,8.7nm,1.0s						

ISK 05 09:07:09.4, 38°32N×27°25E, h22km, ML1.6/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.17**	**291**	PG	Pb	09 07 14.6	-0.4
BLCB				SG	Sb	09 07 18.5	-0.4
AYDB	**Zeytinkoy-Aydi**	**0.63**	**127**	PG	Pb	09 07 22.4	+0.5
AYDB				SG	Sn	09 07 31.8	-0.8
CHOS	**Chios island**	**0.94**	**274**	PG	Pn	09 07 27.8	+0.4
CHOS				SG	Sn	09 07 41.2	+1.0

*JMA **05** 09:08:38.8±0.2, 24°.9N±0°.6×122°.5E±0°.3, h1km±1km, MV2.8/9, NW OFF ISHIGAKIJIMA IS*
*TAP **05** 09:08:39.6, 24°.85N×122°.46E, h4km, ML3.5, D*
ISC 05 09:08:39.7±1.1, 24°85N±0°.04×122°47E±0°.02, h5km±11km, n46, σ0°56/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**290**	P	**Pg**	**09 08 48.1**	**-0.5**
	baz=290						
TWB1				S	**Sg**	**09 08 54.6**	**0.0**
	baz=290						
EGS		**0.48**	**270**	*e*P	**Pg**	**09 08 48.9**	**-0.1**
	baz=269						
NTC	**Toucheng**	**0.58**	**271**	P	**Pg**	**09 08 50.7**	**-0.1**
	baz=270						
JYNG	**Yonaguni jimaku**	**0.59**	**132**	P	**Pg**	**09 08 51.0**	**0.0**
JYNG				S	**Sg**	**09 08 59.4**	**+0.8**
SXI1	**Grass Mountain**	**0.59**	**295**	P	**Pg**	**09 08 50.9**	**-0.1**
	baz=294						
SXI1				S	**Sg**	**09 08 59.2**	**+0.5**
	baz=294						
TIPB	**Shuangxi**	**0.59**	**282**	P	**Pg**	**09 08 50.8**	**-0.3**
	baz=282						
TIPB				*e*S	**Sg**	**09 08 59.5**	**+0.7**
	baz=282						
TWC	**Suao**	**0.61**	**247**	*e*P	**Pg**	**09 08 51.3**	**-0.1**
	baz=246						
YOJ	**Yonaguni jima**	**0.63**	**128**	P	**Pg**	**09 08 51.5**	**-0.2**
	baz=127						
YOJ				S	**Sg**	**09 09 00.1**	**+0.3**
	baz=127						
YOJ	**Yonaguni jima**	**0.63**	**128**	P	**Pg**	**09 08 51.5**	**-0.2**
YOJ				S	**Sg**	**09 09 00.2**	**+0.3**
NWF	**Wu-fen Shan**	**0.66**	**290**	P	**Pg**	**09 08 52.4**	**0.0**
	baz=289						
NWF				*e*S	**Sg**	**09 09 01.4**	**+0.4**
	baz=289						
WFSB	**Wu-fen Shan**	**0.66**	**290**	*i* P	**Pb**	**09 08 52.6**	**-1.0**
	baz=289						
WFSB				S	**Sg**	**09 09 01.4**	**+0.5**
	baz=289						
TNOU	**National Taiwa**	**0.70**	**296**	*i* P	**Pg**	**09 08 53.0**	**-0.1**
	baz=295						
TNOU				*e*S	**Sg**	**09 09 02.4**	**+0.2**
	baz=295						
TWE	**Neicheng**	**0.74**	**260**	*e*P	**Pg**	**09 08 53.6**	**-0.2**
	baz=259						
EWUT	**Wuta**	**0.74**	**237**	*e*P	**Pg**	**09 08 53.0**	**-0.9**
	baz=237						
FUSB	**Fushanzhiwuyua**	**0.80**	**264**	P	**Pg**	**09 08 54.6**	**-0.5**
	baz=263						
TWA	**Mucha**	**0.81**	**280**	*e*P	**Pg**	**09 08 55.1**	**-0.1**
	baz=279						
ENTT	**Nioudou**	**0.84**	**256**	*e*P	**Pg**	**09 08 55.0**	**-0.9**
	baz=255						
NHDH	**Xindian Distri**	**0.86**	**278**	*e*P	**Pg**	**09 08 56.0**	**-0.2**
	baz=277						
NHDH				*e*S	**Sg**	**09 09 07.7**	**+0.3**
	baz=277						
YM08	**YM08**	**0.86**	**293**	*i* P	**Pg**	**09 08 56.1**	**-0.1**
	baz=293						
YM01	**YM01**	**0.86**	**290**	P	**Pg**	**09 08 56.2**	**-0.1**
	baz=290						
TAP	**Taipei**	**0.89**	**283**	*e*P	**Pg**	**09 08 56.4**	**-0.4**
	baz=282						
LATG	**Datong**	**0.91**	**250**	P	**Pg**	**09 08 56.9**	**-0.2**
	baz=249						
ANP	**Anpu**	**0.92**	**292**	*e*P	**Pg**	**09 08 57.1**	**-0.3**
	baz=291						
NTST	**Danshui**	**0.97**	**289**	*e*P	**Pg**	**09 08 58.0**	**-0.4**
	baz=288						
TWS1	**Kuangyinshan**	**0.98**	**285**	*e*P	**Pb**	**09 08 58.8**	**-0.3**
	baz=285						
YHNB	**Yeheng**	**1.01**	**260**	P	**Pg**	**09 08 58.5**	**-0.5**
	baz=259						
NSK	**Sanguang**	**1.02**	**261**	*e*P	**Pg**	**09 08 57.8**	**-1.5**
	baz=260						
NACB	**Ninganchiao**	**1.04**	**230**	P	**Pg**	**09 08 59.2**	**-0.3**
	baz=229						
ETLH	**Xiulin Townshi**	**1.10**	**235**	*e*P	**Pg**	**09 09 00.3**	**-0.5**
	baz=234						
TWD	**Chiawan**	**1.10**	**226**	*e*P	**Pg**	**09 09 00.3**	**-0.5**
	baz=225						
NFF	**Wufeng Townshi**	**1.24**	**260**	*e*P	**Pg**	**09 09 01.7**	**-1.8**
	baz=260						
IRIF	**Iriomote-Funau**	**1.26**	**114**	P	**Pg**	**09 09 03.1**	**-0.7**
IRIF				S	**Sg**	**09 09 20.1**	**-0.1**
WHF	**Hehuan Shan**	**1.30**	**238**	*e*P	**Pg**	**09 09 04.2**	**-0.4**
	baz=237						
TDCB	**Techi**	**1.33**	**244**	*e*P	**Pg**	**09 09 03.9**	**-1.3**
	baz=243						
LIOB	**Emei**	**1.33**	**262**	*e*P	**Pb**	**09 09 06.1**	**+0.9**
	baz=261						
NSTT	**Nanjuang**	**1.35**	**261**	*e*P	**Pb**	**09 09 06.2**	**+0.8**
	baz=260						
CHGB	**Renai**	**1.41**	**237**	*e*P	**Pn**	**09 09 06.0**	**-0.2**
	baz=236						
HATJ	**Hateruma jima**	**1.45**	**123**	P	**Pn**	**09 09 06.8**	**+0.3**
HATJ				S	**Sg**	**09 09 26.2**	**-0.2**
OWD	**Renai**	**1.47**	**233**	*e*P	**Pn**	**09 09 06.5**	**-0.5**
	baz=232						
WHP	**Taichung City**	**1.50**	**248**	*e*P	**Pg**	**09 09 08.3**	**-0.1**
	baz=247						
WUSB	**Renai**	**1.50**	**236**	P	**Pn**	**09 09 07.4**	**+0.2**
	baz=235						
JKRS	**Kuro-shima**	**1.53**	**113**	P	**Pn**	**09 09 07.5**	**-0.1**
JKRS				S	**Sn**	**09 09 28.2**	**+0.4**
JIJ	**Ishigaki jima**	**1.60**	**107**	P	**Pn**	**09 09 08.3**	**-0.2**
JIJ				S	**Sn**	**09 09 29.7**	**+0.1**
SSLB	**Suanglung**	**1.74**	**233**	*e*P	**Pn**	**09 09 11.1**	**+0.6**
	baz=232						
TYC	**Yuchr**	**1.74**	**238**	*e*P	**Pn**	**09 09 10.9**	**+0.5**
	baz=237						
YULB	**Yu-li**	**1.80**	**217**	*e*P	**Pn**	**09 09 11.2**	**-0.1**
	baz=216						

*IDC **05** 09:09:09.0±6.1, 24°.02S×179°.85E, h547km±48km, mb3.0/5, mbtmp3.9/7, Error ellipse: s-maj=119.0km s-min=22.5km az=152.0*
ISC 05 09:09:08.6±1.5, 24°1S±0°3×179°9E±0°2, h550km, n10, σ1°06/9, mb3.5/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.54**	**344**	P	**P**	**09 10 52.1**	**-0.2**
	4.4nm,0.5s,baz=162,slow=5.4,SNR=12						
DZM	**Mont Dzumac**	**12.57**	**276**	P	**P**	**09 11 54.1**	**+0.9**
	4.4nm,0.7s,baz=79,slow=20,SNR=12						
CTA	**Charters Tower**	**31.41**	**271**	P	**P**	**09 14 45.3**	**0.0**
	2.2nm,0.4s,baz=87,slow=11,SNR=6.7						
	2.2nm,0.4s						
ASAR	**Alice Springs**	**41.95**	**261**	P	**P**	**09 16 11.3**	**-0.5**
	1.0nm,0.9s,baz=94,slow=7.1,SNR=4.7						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**42.33**	**266**	P	**P**	**09 16 14.4**	**-0.4**
	0.9nm,0.4s,baz=97,slow=8.4,SNR=40						
	0.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**50.75**	**266**	P	**P**	**09 17 18.5**	**0.0**
	1.1nm,0.5s,baz=113,slow=7.7,SNR=1.6						
	1.1nm,0.5s						
TXAR	**Lajitas Array**	**90.57**	**58**	P	**P**	**09 21 13.7**	**+1.1**
	0.2nm,0.7s,baz=220,slow=6.8,SNR=2.6						
	0.2nm,0.7s						
HFS	**Hagfors**	**142.69**	**349**	PKP	**PKPdf**	**09 27 36.8**	**-2.1**
	2.4nm,0.5s,baz=45,slow=2.0,SNR=15						
AKASG	**Malin Array Be**	**145.07**	**327**	PKPbc	PKPbc	09 27 44.5	+0.4
	0.3nm,0.3s,baz=46,slow=2.6,SNR=4.2						
MMAI	**Mount Meron Ar**	**147.71**	**294**	PKPbc	**PKiKP**	**09 27 53.7**	**+0.2**
	1.0nm,0.4s,baz=156,slow=2.0,SNR=2.6						

*NEIC **05** 09:09:34.0±1.4, 27°.7S±0°.1×175°.84W±0°.05, h43km±9km, mb4.3/19, Error ellipse: s-maj=16.3km s-min=2.4km az=160.0*
*GCMT **05** 09:09:37.0±0.3, 27°74S±0°.03×175°.81W±0°.02, h18km, MW5.0/87, Moment Tensor Solution. s29,c35; s87,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.10±.23; $M_{\theta\theta}$-0.71±.14; $M_{\phi\phi}$-3.39±.14; $M_{r\theta}$-0.31±.40; $M_{\theta\phi}$-0.45±.09; $M_{\phi r}$0.91±.28; Best double couple: $M_0$3.89700×10^{16} NP1:ϕ_s4.00000°, δ52.00000°, λ83.00000°. NP2: ϕ_s194.00000°, δ39.00000°, λ98.00000°. Principal axes: T 4.2350, Plg82.0000°, Azm239.0000°; N -0.6790, Plg5.0000°, Azm8.0000°; P -3.5580, Plg6.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **05** 09:09:43.0±2.3, 28°.07S×176°.57W, h86km±19km, mb3.7/13, mbtmp4.0/17, MS4.4/15 Error ellipse: s-maj=20.4km s-min=18.3km az=114.0*
ISC 05 09:09:36.9±0.5, 27°90S±0°07×176°32W±0°08, h37km, n74, σ1°71/55, mb4.0/19, MS4.5/15, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**226**	P	Pn	09 10 11.5	+4.2
	672nm,0.3s,baz=68,slow=16,SNR=12						
RAO				S	**Sn**	**09 10 37.5**	**+7.1**
	2μm,0.4s,baz=87,slow=20,SNR=9.6						
RAO	**Raoul Island**	**1.94**	**226**	Pn	**Pn**	**09 10 10.7**	**+3.4**
NIUE	**Niue**	**10.56**	**35**	Pn	Pn	09 11 55.2	-11
MSVF	**Nonsavu**	**11.37**	**332**	P	Pn	09 12 24.1	+7.2
	6.0nm,0.9s,baz=201,slow=8.6,SNR=2.4						
MSVF				LR	LR	09 16 08.4	
	comp=Z,1μm,18.7s,baz=154,slow=34						
URZ	**Urewera**	**11.70**	**206**	P	**Pn**	**09 12 22.1**	**+0.9**
	5.5nm,0.5s,baz=78,slow=18,SNR=1.6						
URZ				S	**Sn**	**09 14 26.3**	**-4.1**
	17nm,0.7s,baz=84,slow=18,SNR=2.5						
AFI	**Afiamalu**	**14.56**	**18**	Pn	Pn	09 12 52.1	-8.3
PLWZ	**Palliser**	**15.28**	**205**	Pn	**Pn**	**09 13 11.1**	**+1.3**
MARNC	**Mare, Loyalty**	**15.58**	**291**	Pn	**Pn**	**09 13 14.4**	**+0.6**
PINNC	**Pines Island,**	**15.60**	**286**		**Pn**	**09 13 14.1**	**+0.1**
TUWZ	**Tuamarina**	**15.67**	**208**	Pn	**Pn**	**09 13 12.4**	**-2.5**
OUENC	**Ouen Island, N**	**16.18**	**286**		**Pn**	**09 13 22.2**	**+0.6**
RAR	**Rarotonga**	**16.46**	**70**	LR	LR	09 18 37.9	
	comp=Z,2μm,19.8s,baz=259,slow=32						
RAR	**Rarotonga**	**16.46**	**70**	Pn	Pn	09 13 15.3	-10
RAR				IAmb	IAmb	09 13 25.9	
	comp=Z,20nm,0.9s						
ONTNC	**Ouen Toro**	**16.56**	**286**	Pn	**P**	**09 13 27.1**	**-1.5**

ONTNC				IAmb	IAmb	09 13 46.0	
	comp=Z,13nm,1.0s						
LIFNC	**LIFOU**	**16.56 292**			**Pn**	**09 13 25.2**	**-1.2**
LIFNC				IAmb	IAmb	09 13 31.2	
	comp=Z,24nm,1.0s						
DZM	**Mont Dzumac**	**16.66 287**		*e*Pn	**P**	**09 13 31.5**	**+1.7**
	comp=Z,74nm,1.7s						
DZM				*e*LR	LR	09 17 24.2	
	comp=Z,2μm,27.4s						
DZM	**Mont Dzumac**	**16.66 287**		P	**Pn**	**09 13 27.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=108,slow=13,SNR=1.6						
DZM				LR	LR	09 19 02.6	
	comp=Z,1μm,18.9s,baz=108,slow=34						
DZM	**Mont Dzumac**	**16.66 287**			**P**	**09 13 29.1**	**-0.7**
DZM				IAmb	IAmb	09 13 57.0	
	comp=Z,14nm,1.1s						
RPZ	**Rata Peaks**	**18.77 210**		P	**P**	**09 13 51.7**	**-1.1**
	comp=Z,3.1nm,0.4s,baz=76,slow=17,SNR=1.9						
RPZ				S	Sn	09 17 04.3	-18
	comp=Z,16nm,1.0s,baz=116,slow=6.6,SNR=2.8						
TBI	**Tubuai**	**24.62 85**		*e*LR	LR	09 20 42.4	
	comp=Z,1μm,21.2s						
PPT2	**Papeete2**	**26.66 73**		*e*LR	LR	09 21 28.2	
	comp=Z,930nm,20.8s						
EIDS	**Eidsvold**	**29.20 267**		P	**P**	**09 15 33.6**	**-1.5**
EIDS				IAmb	IAmb	09 15 51.2	
	comp=Z,5.6nm,1.0s						
CTA	**Charters Tower**	**34.96 275**		P	**P**	**09 16 26.6**	**+1.0**
	comp=Z,2.3nm,0.5s,baz=101,slow=9.4,SNR=2.0						
	comp=Z,2.3nm,0.5s						
CTAO	**Charters Tower**	**34.96 275**		P	**P**	**09 16 25.7**	**+0.1**
CTAO				IAmb	IAmb	09 16 51.9	
	comp=Z,4.7nm,1.1s						
STKA	**Stephens Creek**	**36.53 253**		P	**P**	**09 16 38.8**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=98,slow=14,SNR=1.6						
STKA				LR	LR	09 30 42.0	
	comp=Z,605nm,19.5s,baz=93,slow=35						
	comp=Z,0.8nm,0.5s						
TAOE	**Nuku Hiva Isla**	**39.00 68**		*e*LR	LR	09 27 05.9	
	comp=Z,700nm,20.8s						
AS31	**Alice Springs**	**44.77 264**		P	**P**	**09 17 46.4**	**-0.8**
ASAR	**Alice Springs**	**44.77 264**		P	**P**	**09 17 46.5**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=92,slow=6.9,SNR=14						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**44.77 264**		P	**P**	**09 17 46.3**	**-0.9**
WB2	**Warramunga Arr**	**45.53 269**		P	**P**	**09 17 53.0**	**-0.2**
WB2				IAmb	IAmb	09 18 06.8	
	comp=Z,8.2nm,1.1s						
WRA	**Warramunga Arr**	**45.54 269**		P	**P**	**09 17 52.2**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=111,slow=6.6,SNR=11						
WRA				LR	LR	09 35 09.4	
	comp=Z,355nm,19.7s,baz=103,slow=34						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**45.54 269**		P	**P**	**09 17 52.5**	**-0.8**
WB0	**Warramunga Arr**	**45.55 269**		P	**P**	**09 17 52.8**	**-0.6**
WB0				IAmb	IAmb	09 18 06.9	
	comp=Z,8.7nm,1.1s						
FORT	**Forrest**	**48.15 252**		P	**P**	**09 18 12.4**	**-1.1**
SBA	**Scott Base**	**50.63 185**		P	**P**	**09 18 30.4**	**-1.3**
VNDA	**Vanda**	**50.72 186**		LR	LR	09 36 11.4	
	comp=Z,261nm,21.1s,baz=27,slow=31						
VNDA	**Vanda**	**50.72 186**		P	**P**	**09 18 31.9**	**-0.6**
VNDA				IAmb	IAmb	09 18 57.5	
	comp=Z,1.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.89 267**		P	**P**	**09 18 54.5**	**-2.3**
	comp=Z,2.4nm,0.9s,baz=126,slow=8.7,SNR=2.5						
	comp=Z,2.4nm,0.9s						
NWAO	**Narrogin (SRO)**	**56.68 247**		LR	LR	09 41 49.5	
	comp=Z,320nm,19.3s,baz=301,slow=34						
RPN	**Rapa Nui**	**58.70 106**		LR	LR	09 38 49.8	
	comp=Z,427nm,19.7s,baz=250,slow=30						
QSPA	**South Pole Qui**	**62.20 180**		LR	LR	09 42 48.3	
	comp=Z,411nm,20.5s,baz=38,slow=32						
QSPA	**South Pole Qui**	**62.20 180**		P	**P**	**09 19 51.8**	**-2.7**
GIRL	**Giralia**	**62.27 258**		P	**P**	**09 19 53.5**	**-2.0**
LEM	**Lembang**	**74.53 270**		LR	LR	09 54 11.1	
	comp=Z,272nm,20.2s,baz=112,slow=36						
SBUM	**Sibu**	**74.84 281**		P	**P**	**09 21 11.8**	**-2.3**
SBUM				IAmb	IAmb	09 21 19.8	
	comp=Z,3.4nm,1.0s						
MAW	**Mawson**	**75.15 200**		P	**P**	**09 21 14.6**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=109,slow=8.2,SNR=3.6						
MAW				LR	LR	09 52 44.7	
	comp=Z,281nm,19.8s,baz=119,slow=34						
	comp=Z,0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**77.06 324**		P	**P**	**09 21 27.4**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=142,slow=6.2,SNR=2.1						
	comp=Z,0.7nm,0.5s						
TROLL	**Troll, Antarti**	**80.36 180**		P	**P**	**09 21 45.1**	**+1.1**
SNAA	**Sanae**	**80.59 178**		P	**P**	**09 21 46.3**	**+1.1**
SNAA	**Sanae**	**80.59 178**		P	**P**	**09 21 43.0**	**-2.3**
SNAA				IAmb	IAmb	09 22 04.9	
	comp=Z,4.3nm,1.1s						
H03S2	**Juan Fernandez**	**80.61 123**		T	T	10 50 14.0	
	baz=244						
H03S1	**Juan Fernandez**	**80.62 123**		T	T	10 50 16.0	
	baz=244						
H03S3	**Juan Fernandez**	**80.63 123**		T	T	10 50 18.6	
	baz=244						
VNA3	**Neumayer Olymp**	**80.68 176**		P	**P**	**09 21 46.0**	**+0.3**
VNA2	**Neumayer--Watz**	**81.14 176**		P	**P**	**09 21 49.3**	**+1.2**
	baz=178,slow=4.0						
VNA1	**Neumayer--Stat**	**81.36 176**		P	**P**	**09 21 50.5**	**+1.3**
PLCA	**Paso Flores**	**83.12 133**		P	**P**	**09 22 01.1**	**+1.9**
	comp=Z,1.7nm,0.9s,baz=197,slow=5.1,SNR=3.3						
	comp=Z,1.7nm,0.9s						
PETK	**Petropavlovsk-**	**83.79 345**		P	**P**	**09 22 03.0**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=173,slow=3.6,SNR=1.5						
	comp=Z,2.3nm,0.9s						
YBH	**Yreka Blue Hor**	**85.17 37**		LR	LR	09 52 58.4	
	comp=Z,334nm,21.2s,baz=259,slow=30						
NVAR	**Mina Array Bea**	**85.41 42**		P	**P**	**09 22 10.9**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=225,slow=8.9,SNR=5.9						
	comp=Z,0.8nm,0.8s						
PSI	**Prapat**	**86.66 275**		LR	LR	10 04 06.4	
	comp=Z,166nm,18.0s,baz=104,slow=38						
TXAR	**Lajitas Array**	**89.80 56**		P	**P**	**09 22 33.1**	**+1.2**
	comp=Z,0.5nm,1.0s,baz=219,slow=7.0,SNR=3.8						
TXAR				LR	LR	09 56 52.2	
	comp=Z,243nm,18.6s,baz=229,slow=31						
	comp=Z,0.5nm,1.0s						
CMIG	**Matias Romero**	**90.57 71**		LR	LR	09 54 17.8	
	comp=Z,180nm,19.6s,baz=222,slow=29						
PDAR	**Pinedale Array**	**93.32 43**		P	**P**	**09 22 49.4**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=173,slow=2.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**95.18 12**		P	**P**	**09 22 57.1**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=226,slow=3.6,SNR=2.4						
	comp=Z,0.4nm,0.9s						
MKAR	**Makanchi Array**	**117.28 311**		PKP	**PKiKP**	**09 28 19.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=101,slow=3.2,SNR=2.0						
FINES	**FINESS Array B**	**143.27 342**		PKhKP	PKPpre	09 29 03.0	
	comp=Z,5.2nm,1.0s,baz=63,slow=6.4,SNR=4.9						
NB2	**NORSAR Subarra**	**146.48 353**		PKP	**PKPab**	**09 29 14.9**	**+0.4**
	comp=Z,2.0nm,1.0s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**146.48 353**		PKPbc	**PKPbc**	**09 29 13.2**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=8.6,slow=5.8,SNR=1.7						
HFS	**Hagfors**	**147.06 351**		PKPbc	**PKPbc**	**09 29 14.9**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=46,slow=4.3,SNR=5.4						
AKASG	**Malin Array Be**	**150.12 327**		PKPbc	**PKPbc**	**09 29 23.0**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=40,slow=2.9,SNR=12						
ASF	**Jabal al Asfar**	**151.00 287**		PKPbc	**PKPbc**	**09 29 25.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=89,slow=7.8,SNR=5.7						
BRTR	**Keskin Array B**	**152.58 303**		PKPbc	**PKiKP**	**09 29 29.7**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=105,slow=3.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**165.20 172**		PKPab	**PKPab**	**09 30 35.2**	**+0.2**
	comp=Z,2.6nm,1.0s,baz=161,slow=3.5,SNR=8.0						

SOME ***05*** *09:16:18.5, 41.°60N×74.°43E, h10km*
KRNET ***05*** *09:16:19.3±0.1, 41.°66N×74.°45E, h17km, mb2.7*
ISC 05 09:16:17.9±1.5, 41.°60N±0.°05×74.°44E±0.°03, h8km±13km, n24, σ1°17/48, 13C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.28**	**341**	⇓*iP*	**Pg**	**09 16 23.7**	**+0.3**
	baz=34						
ARLS				⇓*iS*	**Sg**	**09 16 26.9**	**-0.3**
	baz=34						
UCH	**Uchtor**	**0.63**	**5**	⇓*iP*	**Pg**	**09 16 30.4**	**+0.3**
	baz=5.0						
UCH				⇓*iS*	**Sg**	**09 16 38.6**	**+0.2**
	baz=5.0						
AAK	**Ala-Archa**	**1.04**	**2**	⇓*iP*	**Pb**	**09 16 37.9**	**-0.3**
	baz=2.0						
AAK				⇓*iS*	**Sb**	**09 16 51.2**	**-0.8**
	baz=2.0						
KBK	**Karagaybulak**	**1.12**	**19**	⇓*iP*	**Pb**	**09 16 39.3**	**-0.3**
	baz=20						
KBK				⇓*iS*	**Sb**	**09 16 53.7**	**-0.7**
	baz=20						
EKS2	**Erkin-Say**	**1.17**	**335**	⇓*iP*	**Pb**	**09 16 39.8**	**-0.6**
	baz=34						
EKS2				⇓*iS*	**Sb**	**09 16 55.2**	**-0.6**
	baz=34						
NRN	**Naryn**	**1.18**	**98**	⇑*iP*	**Pb**	**09 16 41.1**	**+0.4**
	baz=1.0						
NRN				⇑*iS*	**Sb**	**09 16 56.8**	**+0.6**
	baz=1.0						
BOOM	**Boomskoye usch**	**1.43**	**51**	⇑*iP*	**Pb**	**09 16 44.8**	**0.0**
	baz=53						
BOOM				⇑*iS*	**Sb**	**09 17 03.4**	**+0.2**
	baz=53						
ULHL	**Ulahol**	**1.49**	**64**	⇑*iP*	**Pb**	**09 16 46.2**	**+0.3**
	baz=66						
ULHL				⇑*iS*	**Sb**	**09 17 05.7**	**+0.7**
	baz=66						
TKM2	**Tokmak 2**	**1.57**	**33**	⇑*iP*	**Pb**	**09 16 47.3**	**0.0**
	baz=34						
TKM2				⇑*iS*	**Sb**	**09 17 07.5**	**+0.1**
	baz=34						
USP	**Ospenovka**	**1.67**	**1**	⇑*iP*	**Pb**	**09 16 48.6**	**-0.2**
	baz=1.0						
USP				⇑*iS*	**Sb**	**09 17 10.4**	**+0.5**
	baz=1.0						
KST	**Kastek**	**1.83**	**38**	*e*P	**Pb**	**09 16 52.4**	**+0.7**
	1.0nm,0.2s						
KST				*e*S	**Sg**	**09 17 17.0**	**+0.4**
	6.6nm,0.0s						
DGS	**Degeres**	**1.91**	**31**	*e*P	**Pb**	**09 16 54.0**	**+1.0**
	1.2nm,0.2s						
DGS				*e*S	**Sg**	**09 17 20.1**	**+0.7**
	4.8nm,0.1s						
MTBS	**Maitube**	**2.12**	**43**	*e*P	**Pb**	**09 16 56.9**	**+0.3**
	2.3nm,0.4s						
MTBS				*e*S	**Sg**	**09 17 24.7**	**-1.3**
	8.4nm,0.3s						
IZV	**Izvestkoviy**	**2.15**	**48**	*e*P	**Pb**	**09 16 58.0**	**+0.8**
	0.1nm,0.1s						
IZV				*e*S	**Sg**	**09 17 27.0**	**-0.1**
	6.9nm,0.1s						
KRBS	**Karabastau**	**2.28**	**23**	*e*P	**Pb**	**09 17 00.4**	**+1.1**
	5.6nm,0.2s						
KRBS				*e*S	**Sg**	**09 17 31.1**	**-0.1**
	10nm,0.3s						
TNSS	**Tian-Shan**	**2.35**	**51**	*e*P	**Pb**	**09 17 01.9**	**+1.2**
	5.2nm,0.1s						
TNSS				*e*S	**Sg**	**09 17 33.2**	**-0.1**
	1.9nm,0.1s						
MDOK	**Medeo**	**2.48**	**50**	*e*P	**Pb**	**09 17 04.4**	**+1.7**
	3.7nm,0.3s						
MDOK				*e*S	**Sg**	**09 17 38.2**	**+0.6**
	4.0nm,0.3s						
TARG	**Taragay, Kyrgy**	**2.52**	**86**	⇑*e*P	**Pb**	**09 17 02.6**	**-1.0**
	baz=87						
TARG				⇑*e*S	**Sb**	**09 17 34.1**	**-0.8**
	baz=87						
KOTS	**Kotyrbulak**	**2.56**	**50**	*e*P	**Pg**	**09 17 06.4**	**-0.6**
	4.6nm,0.2s						
KOTS				*e*S	**Sg**	**09 17 41.2**	**+1.0**
	21nm,0.1s						
KTBS	**Karatobe**	**2.68**	**37**	*e*P	**Pb**	**09 17 07.3**	**+1.2**
	3.7nm,0.1s						
KTBS				*e*S	**Sg**	**09 17 42.9**	**-1.1**
	30nm,0.2s						
KK31	**Karatay Array**	**3.28**	**299**	⇑Pn	**Pb**	**09 17 18.1**	**+1.9**
	1.0nm,0.6s,baz=126,slow=17,SNR=11						
KK31				Sn	**Sg**	**09 18 01.4**	**-1.8**
	1.4nm,0.5s,baz=121,slow=27,SNR=8.6						
SATY	**Saty**	**3.28**	**62**	*e*P	**Pb**	**09 17 18.2**	**+1.9**
	3.0nm,0.5s						
SATY				*e*S	**Sg**	**09 18 01.6**	**-1.6**
	4.5nm,0.1s						
KPKS	**Kokpek**	**3.65**	**58**	*e*P	**Pb**	**09 17 24.8**	**+2.2**
	2.3nm,0.0s						
KPKS				*e*S	**Sg**	**09 18 12.7**	**-2.3**
	7.1nm,0.3s						
BLB	**Baldybastay**	**3.88**	**49**	*e*P	**Pb**	**09 17 28.3**	**+1.8**
	2.9nm,0.4s						
BLB				*e*S	**Sg**	**09 18 18.5**	**-3.8**
	3.7nm,0.3s						

IDC ***05*** *09:17:36.6±1.9, 6.°82S×131.°16E, h0km, mb4.0/1, mbtmp4.2/5, ML4.2/4, MS4.2/3, Error ellipse: s-maj=73.1km s-min=24.5km az=86.0*
DJA ***05*** *09:17:42.3±0.3, 7.°S±3.°×13.°1E±.°, h112km±11km, M4.3/7, mb4.1/5, mB5.0/2, MLv4.4/7, Mw(mB)4.4/2, MwMwp5.1/2, Mwp5.4/2*
ISC 05 09:17:42.0±0.8, 6.°54S±0.°06×131.°37E±0.°09, h100km, n28, σ2°77/25, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.44**	**183**	P	**Pn**	**09 18 07.5**	**-0.1**
BNDI	**Bandanaira**	**2.48**	**324**	P	**Pn**	**09 18 20.9**	**0.0**
FAKI	**Fak Fak**	**3.70**	**14**	P	**Pn**	**09 18 39.6**	**+2.4**
FAKI	**Fak Fak**	**3.70**	**14**	P	**Pn**	**09 18 40.0**	**+2.8**
KRAI	**Karang Ratu**	**4.36**	**317**	P	**Pn**	**09 18 48.7**	**+2.5**
SIJI	**Sorong**	**5.63**	**359**	Pn	**Pn**	**09 19 05.5**	**+2.1**
	4.6nm,0.3s,baz=180,slow=20,SNR=22						
SIJI				Sn	**Sn**	**09 20 04.5**	**-2.4**
	5.1nm,0.3s,baz=260,slow=22,SNR=10						
	12nm,0.3s						
SIJI	**Sorong**	**5.63**	**359**	P	**Pn**	**09 19 05.2**	**+1.8**
	0.4nm2μm7.7nm,0.4s						
KDU	**Kakadu**	**6.21**	**170**	P	**Pn**	**09 19 10.0**	**-1.1**
MTN	**Manton Dam**	**6.27**	**182**	P	**Pn**	**09 19 12.1**	**+0.1**
KNRA	**Kununurra**	**9.44**	**196**	P	**Pn**	**09 19 54.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**12.78**	**205**	Pn	**Pn**	**09 20 37.2**	**-2.9**
	3.0nm,0.3s,baz=32,slow=11,SNR=52						
FITZ				Sn	Sn	09 22 45.5	-15
	0.4nm,0.3s,baz=297,slow=21,SNR=1.9						
	5.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.78**	**205**	P	**Pn**	**09 20 38.7**	**-1.4**
WRAB	**Tennant Creek**	**13.62**	**168**	P	**Pn**	**09 20 48.3**	**-2.9**
WRA	**Warramunga Arr**	**13.63**	**168**	Pn	**Pn**	**09 20 46.9**	**-4.4**
	1.0nm,0.3s,baz=348,slow=13,SNR=27						
WRA				Sn	Sn	09 23 04.0	-17
	0.6nm,0.3s,baz=358,slow=23,SNR=2.9						
	2.2nm,0.5s						
PLAI	**Plampang**	**13.67**	**260**	P	**Pn**	**09 20 49.4**	**-2.4**
	23nm,1.0s						
COEN	**Coen**	**13.75**	**123**	P	**Pn**	**09 20 51.2**	**-1.6**
QIS	**Mount Isa**	**16.06**	**151**	P	**P**	**09 21 23.2**	**-0.4**
ASAR	**Alice Springs**	**17.20**	**172**	Pn	**Pn**	**09 21 34.9**	**-1.3**
	0.6nm,0.3s,baz=345,slow=9.5,SNR=38						
ASAR				Sn	Sn	09 24 33.9	-14
	0.3nm,0.3s,baz=0.6,slow=27,SNR=7.2						
	1.3nm,0.5s						
AS01	**Alice Springs**	**17.21**	**172**	P	**P**	**09 21 35.6**	**-0.7**
WRKA	**Warakurna**	**18.63**	**189**	P	**Pn**	**09 21 53.5**	**+0.1**
KRVT	**Keravat (AS076**	**20.68**	**85**	LR	LR	09 32 14.0	
	comp=Z,486nm,20.4s,baz=259,slow=42						
OOD	**Oodnadatta**	**21.53**	**170**	P	**P**	**09 22 26.8**	**+3.6**
MULG	**Mulgathing**	**23.75**	**174**	P	**P**	**09 22 49.8**	**+4.5**
FORT	**Forrest**	**24.32**	**187**	P	**P**	**09 22 54.9**	**+4.6**
LCRK	**Leigh Creek**	**24.64**	**166**	P	**P**	**09 22 59.0**	**+5.7**
MKAR	**Makanchi Array**	**68.60**	**326**	P	P	09 28 42.1	+7.9
	1.0nm,0.6s,baz=115,slow=7.4,SNR=8.4						
	1.0nm,0.6s						
GEYT	**Alibeck**	**80.96**	**310**	LR	LR	10 12 07.3	
	comp=Z,218nm,20.3s,baz=182,slow=40						
OBN	**Obninsk**	**98.07**	**325**	LR	LR	10 19 06.9	
	comp=Z,87nm,21.5s,baz=32,slow=38						

SOME ***05*** *09:43:23.8, 39.°67N×75.°10E, h0km*
NNC ***05*** *09:43:27.8±4.0, 39.°63N×75.°73E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=35.8km s-min=26.4km az=101.0*
KRNET ***05*** *09:43:31.3±0.1, 39.°68N×75.°64E, mb3.1*
ISC 05 09:43:31.6±2.1, 39.°84N±0.°08×75.°47E±0.°04, h3km±17km, n39, σ1°40/63, 8C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.64**	**14**	⇓*iP*	**Pg**	**09 44 03.1**	**0.0**
	baz=8.0						
NRN				⇓*iS*	**Sg**	**09 44 28.0**	**+3.7**
	baz=8.0						
OHH	**Osh**	**2.17**	**289**	⇓*iP*	**Pg**	**09 44 13.0**	**-0.2**
	baz=92						
OHH				⇓*iS*	**Sg**	**09 44 42.7**	**+1.4**
	baz=92						
ARLS	**Aral**	**2.20**	**337**	⇑*iP*	**Pg**	**09 44 13.8**	**0.0**
	baz=36						
ARLS				⇑*iS*	**Sg**	**09 44 44.3**	**+2.0**
	baz=36						
ULHL	**Ulahol**	**2.47**	**13**	⇑*iP*	**Pb**	**09 44 16.6**	**-0.2**
	baz=10.0						
ULHL				⇑*iS*	**Sb**	**09 44 49.2**	**+1.4**
	baz=10.0						
UCH	**Uchtor**	**2.49**	**343**	⇑*iP*	**Pb**	**09 44 17.8**	**+0.5**
	baz=42						
UCH				⇑*iS*	**Sg**	**09 44 51.8**	**+0.1**
	baz=42						
TARG	**Taragay, Kyrgy**	**2.59**	**42**	⇑*iP*	**Pb**	**09 44 17.0**	**-1.9**
	baz=38						
TARG				⇑*iS*	**Sb**	**09 44 49.8**	**-1.5**
	baz=38						
BOOM	**Boomskoye usch**	**2.67**	**7**	⇓*iP*	**Pb**	**09 44 19.4**	**-0.8**
	baz=4.0						
BOOM				⇓*iS*	**Sb**	**09 44 54.3**	**+0.9**
	baz=4.0						
AAK	**Ala-Archa**	**2.89**	**346**	⇓*iP*	**Pb**	**09 44 23.2**	**-0.7**
	baz=44						
AAK				⇓*iS*	**Sb**	**09 45 00.6**	**+0.8**
	baz=44						
TKM2	**Tokmak 2**	**3.08**	**2**	⇓Pn	**Pb**	**09 44 25.3**	**-1.9**
	2.4nm,0.3s						
TKM2				⇓Sn	**Sb**	**09 45 07.2**	**+2.0**
	28nm,0.8s						
KST	**Kastek**	**3.22**	**6**	*e*P	**Pb**	**09 44 28.6**	**-0.9**
	3.7nm,0.1s						
KST				*e*S	**Sg**	**09 45 15.3**	**+0.3**
	26nm,0.1s						
KST	**Kastek**	**3.22**	**6**	Pg	**Pb**	**09 44 28.6**	**-0.9**
	3.5nm,0.6s						
KST				Lg	Lg	09 45 15.3	
	26nm,0.8s						
IZV	**Izvestkoviy**	**3.31**	**15**	*e*P	**Pb**	**09 44 30.9**	**-0.2**
	6.6nm,0.3s						
IZV				*e*S	**Sg**	**09 45 19.6**	**+1.8**
	34nm,0.0s						
IZV	**Izvestkoviy**	**3.31**	**15**	Pg	**Pb**	**09 44 31.0**	**0.0**
	8.3nm,0.8s						
IZV				Lg	Lg	09 45 19.6	
	33nm,0.9s						
MTBS	**Maitube**	**3.36**	**12**	*e*P	**Pb**	**09 44 31.6**	**-0.4**
	3.2nm,0.0s						
MTBS				*e*S	**Sg**	**09 45 20.5**	**+0.9**
	20nm,0.2s						
MTBS	**Maitube**	**3.36**	**12**	Pg	**Pb**	**09 44 31.6**	**-0.4**
	3.2nm,0.4s						
MTBS				Lg	Lg	09 45 20.5	
	20nm,1.0s						
TNSS	**Tian-Shan**	**3.38**	**19**	*e*P	**Pb**	**09 44 30.6**	**-1.8**
	6.9nm,0.1s						
TNSS				*e*S	**Sg**	**09 45 19.1**	**-1.1**
	11nm,0.0s						
TNSS	**Tian-Shan**	**3.38**	**19**	Pg	**Pb**	**09 44 30.6**	**-1.8**
	6.9nm,0.6s						
TNSS				Lg	Lg	09 45 19.1	
	9.6nm,0.9s						
DGS	**Degeres**	**3.41**	**4**	*e*P	**Pb**	**09 44 31.1**	**-1.6**
	6.4nm,0.1s						
DGS				*e*S	**Sg**	**09 45 19.5**	**-1.5**
	9.2nm,0.0s						
DGS	**Degeres**	**3.41**	**4**	Pg	**Pb**	**09 44 31.1**	**-1.6**
	6.4nm,0.6s						
DGS				Lg	Lg	09 45 19.5	
	12nm,1.8s						
MDOK	**Medeo**	**3.52**	**19**	*e*P	**Pb**	**09 44 34.0**	**-0.8**
	4.7nm,0.2s						
MDOK				*e*S	**Sg**	**09 45 24.9**	**+0.1**
	22nm,0.1s						
MDOK	**Medeo**	**3.52**	**19**	Pg	**Pb**	**09 44 32.5**	**-2.2**
	7.4nm,0.6s						
MDOK				Lg	Lg	09 45 22.2	
	22nm,1.6s						
KOTS	**Kotyrbulak**	**3.61**	**19**	*e*P	**Pb**	**09 44 35.3**	**-0.8**
	5.6nm,0.1s						
KOTS				*e*S	**Sg**	**09 45 27.3**	**-0.2**
	31nm,0.7s						
KOTS	**Kotyrbulak**	**3.61**	**19**	Pg	**Pb**	**09 44 34.1**	**-2.0**
	4.7nm,0.6s						
KOTS				Lg	Lg	09 45 25.2	
	28nm,0.9s						
KRBS	**Karabastau**	**3.85**	**2**	*e*P	**Pb**	**09 44 39.2**	**-1.1**
	2.4nm,0.5s						
KRBS				*e*S	**Sg**	**09 45 34.0**	**-1.4**
	2.4nm,0.4s						
KRBS	**Karabastau**	**3.85**	**2**	Pg	**Pb**	**09 44 39.2**	**-1.1**
	2.4nm,0.5s						
KRBS				Lg	Lg	09 45 34.0	
	2.4nm,0.7s						
KTBS	**Karatobe**	**3.97**	**13**	*e*P	**Pb**	**09 44 42.6**	**+0.3**
	3.4nm,0.1s						
KTBS				*e*S	**Sg**	**09 45 39.5**	**+0.3**
	25nm,0.1s						
KTBS	**Karatobe**	**3.97**	**13**	Pg	**Pb**	**09 44 42.6**	**+0.3**
	3.4nm,0.6s						
KTBS				Lg	Lg	09 45 39.5	
	25nm,0.7s						
CHKK	**Chushkaly**	**4.17**	**15**	*e*P	**Pb**	**09 44 46.4**	**+0.8**
	3.5nm,0.2s						
CHKK				*e*S	**Sg**	**09 45 45.9**	**+0.4**
	21nm,0.2s						
CHKK	**Chushkaly**	**4.17**	**15**	Pg	**Pb**	**09 44 46.4**	**+0.8**
	3.7nm,0.5s						
CHKK

CO03 IAML 09 50 14.4
comp=E,1μm,0.5s
CO02 Combarbal 1.41 142 *eP* **Pb 09 49 52.1 -0.3**
CO02 *eS* **Sg 09 50 10.8 -0.3**
CO02 IAML 09 50 15.2
comp=N,4μm,0.3s
LCO Las Campanas 1.58 47 *eP* **Pn 09 49 54.7 +0.3**
LCO *eS* **Sb 09 50 16.1 +0.3**
CO01 Juntas del Tor 1.68 86 *eP* **Pb 09 49 56.8 -0.3**
CO01 IAML 09 50 23.2
comp=N,511nm,0.5s
AC05 El Transito 1.98 51 *i P* **Pn 09 50 00.7 +0.9**
AC05 *eS* **Sb 09 50 26.9 -0.1**
AC05 IAML 09 50 33.4
comp=E,538nm,0.4s
AC04 Llanos de Chal 2.06 24 *eP* **Pn 09 50 00.0 -0.8**
AC04 IAML 09 50 44.2
comp=N,268nm,0.6s
VA06 Catapilco 2.53 166 *eP* **Pn 09 50 07.2 0.0**
VA06 *eS* **Sn 09 50 35.3 -3.0**
VA06 IAML 09 50 59.4
comp=E,539nm,0.7s
VA03 San Esteban 2.94 155 *eP* **Pn 09 50 15.0 +2.1**
VA03 *eS* **Sn 09 50 49.5 +1.0**
VA03 IAML 09 51 04.7
comp=E,337nm,0.4s
ROCH El Roble 2.99 163 *eP* **Pn 09 50 14.1 +0.3**
ROCH IAML 09 51 09.5
comp=N,306nm,0.3s
AC06 Mina Casimiro 3.10 29 *eP* **Pn 09 50 15.2 +0.1**
AC06 IAML 09 51 12.0
comp=E,106nm,0.4s
PEL Peldehue 3.24 160 *eP* **Pn 09 50 18.1 +1.0**
PEL IAML 09 51 14.6
comp=E,159nm,0.3s
MT03 Universidad Ad 3.62 160 *eP* **Pn 09 50 23.7 +1.4**
MT01 Popeta 3.81 170 *eP* **Pn 09 50 24.5 -0.4**
VNA3 Neumayer Olymp 52.97 159 P **P 09 58 43.2 +0.7**
VNA2 Neumayer--Watz 53.61 158 P **P 09 58 47.6 +0.5**
baz=284,slow=8.0
SNAA Sanae 55.20 159 P **P 09 58 59.3 +0.4**

*IDC **05** 09:56:39.0±2.2, 32°.55S×178°.42W, h0km, mb3.9/4, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=45.8km s-min=31.4km az=82.0*
ISC 05 09:56:44.6±1.8, 32°.6S±0°.1×178°.5W±0°.3, h33km, n8, σ1§05/7, mb3.9/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.66**	**211**	Pn	**Pn**	**09 58 18.5**	**-1.5**
	1.2nm,0.3s,baz=332,slow=3.3,SNR=9.1						
URZ				Sn	**Sn**	**09 59 36.0**	**+1.3**
	3.8nm,0.3s,baz=297,slow=17,SNR=12						
	2.8nm,0.3s						
CTA	**Charters Tower**	**33.77**	**283**	P	**P**	**10 03 23.4**	**0.0**
	3.1nm,0.7s,baz=107,slow=14,SNR=1.9						
	3.1nm,0.7s						
ASAR	**Alice Springs**	**42.59**	**270**	P	**P**	**10 04 37.9**	**+0.2**
	1.3nm,0.8s,baz=109,slow=7.6,SNR=14						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**43.77**	**275**	P	**P**	**10 04 47.5**	**+0.2**
	1.1nm,0.4s,baz=114,slow=7.9,SNR=43						
	1.1nm,0.4s						
VNDA	**Vanda**	**45.85**	**186**	P	**P**	**10 05 03.5**	**+0.5**
	0.3nm,0.6s,baz=34,slow=7.3,SNR=1.7						
	0.3nm,0.6s						
VNA3	**Neumayer Olymp**	**76.13**	**176**	P	P	10 08 38.3	+10
VNA2	**Neumayer--Watz**	**76.56**	**177**	P	P	10 08 41.0	+10
	baz=167,slow=6.0						
FINES	**FINESS Array B**	**147.05**	**338**	PKPbc	**PKPdf**	**10 16 21.4**	**+0.3**
	2.9nm,0.8s,baz=35,slow=5.1,SNR=4.2						

GCMT 05 09:58:34.0±0.5, 41°.14S±0°.03×89°.20W±0°.03, h19km±1km, MW4.8/72, Moment Tensor Solution. s15,c17; s72,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.83±.16; Mθθ0.98±.13; Mφφ-0.15±.10; Mrθ-0.17±.24; Mθφ-2.07±.09; Mφr0.02±.21; **Best double couple:** M0 2.15300×10^{16} **NP1:**φs83.00000°, δ88.00000°, λ-174.00000°. **NP2:**φs352.00000°, δ84.00000°, λ-2.00000°. **Principal axes:** T 2.5680, Plg2.0000°, Azm217.0000°; N -0.8290, Plg84.0000°, Azm103.0000°; P -1.7390, Plg6.0000°, Azm308.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**48.35**	**155**	P	P	10 07 08.3	-5.7
VNA1	**Neumayer--Stat**	**48.88**	**154**	P	P	10 07 12.7	-5.3
VNA2	**Neumayer--Watz**	**49.13**	**155**	P	P	10 07 15.4	-4.6
	baz=259,slow=9.0						
SNAA	**Sanae**	**50.44**	**156**	P	P	10 07 23.4	-6.5
TROLL	**Troll, Antarti**	**51.99**	**157**	P	P	10 07 36.0	-5.6

*ISK **05** 10:09:21.2, 38°.84N×43°.60E, h16km, ML2.9/10*
*DDA **05** 10:09:21.9±0.0, 38°.91N×43°.54E, h7km±6km, ML2.7*
ISC 05 10:09:21.8±1.2, 38°.88N±0°.03×43°.58E±0°.03, h6km±11km, n18, σ1§46/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.32**	**208**	PG	**Pb**	**10 09 29.3**	**-0.7**
VANB				SG	**Sb**	**10 09 35.2**	**-0.2**
CLDR	**Caldiran**	**0.38**	**45**	PG	**Pg**	**10 09 28.9**	**-0.3**
CLDR				SG	**Sb**	**10 09 35.8**	**-1.4**
OZAP	**Van, Ozalp-Mer**	**0.39**	**123**	P	**Pg**	**10 09 29.5**	**+0.1**
OZAP				S	**Sb**	**10 09 38.1**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.67**	**264**	P	**Pg**	**10 09 34.7**	**0.0**
ADCV				S	**Sb**	**10 09 45.4**	**-0.3**
AKDM	**Akdamar-Van**	**0.72**	**221**	PG	**Pg**	**10 09 35.0**	**-0.7**
AKDM				SG	**Sb**	**10 09 45.6**	**-1.5**
AGRB	**Hanur-Agry**	**0.83**	**327**	PG	**Pn**	**10 09 38.9**	**-1.4**
MLAZ	**Malazgirt-MUS**	**0.84**	**289**	PG	**Pb**	**10 09 38.8**	**-0.2**
KOTA	**Agri, Merkez-K**	**0.97**	**343**	P	**Pb**	**10 09 40.7**	**-0.4**
KOTA				S	**Sn**	**10 09 56.2**	**-0.1**
IGDI	**IGDIR**	**1.06**	**21**	P	**Pb**	**10 09 42.0**	**-0.6**
IGDI				S	**Sn**	**10 10 00.9**	**+2.5**
TASB	**TASBURUN-IGDIR**	**1.22**	**25**	PN	**Pb**	**10 09 44.8**	**-0.5**
BLIS	**Bitlis-Merkez**	**1.24**	**249**	P	**Pn**	**10 09 44.0**	**-1.7**
BLIS				S	**Sg**	**10 10 01.1**	**-0.4**
BLIS				*i* AML	AML	10 10 02.0	
	comp=N,149nm,0.5s						
PERV	**Siirt/Pervari-**	**1.24**	**222**	P	**Pg**	**10 09 46.2**	**+0.7**
PERV				S	**Sn**	**10 10 06.6**	**+3.8**
PERV				*i* AML	AML	10 10 07.0	
	comp=E,154nm,0.7s						
PERV				*i* AML	AML	10 10 09.0	
	comp=N,95nm,0.5s						
GURO	**Guroymak-BITLI**	**1.25**	**255**	PN	**Pn**	**10 09 44.9**	**-1.1**
EATA	**Eleskirt**	**1.30**	**320**	P	**Pn**	**10 09 45.8**	**-0.9**
EATA				S	**Sg**	**10 10 06.6**	**+3.0**
YOVA	**Hakkari_Yksek**	**1.40**	**156**	P	**Pn**	**10 09 46.9**	**-1.2**
YOVA				S	**Sg**	**10 10 08.6**	**+1.6**
GNI	**Garni**	**1.56**	**35**	PN	**Pn**	**10 09 49.4**	**-0.8**
CUKT	**Cukurca**	**1.63**	**179**	PN	**Pn**	**10 09 49.4**	**-1.7**
SVAN	**Silvan-Diyarba**	**2.00**	**250**	PN	**Pn**	**10 09 55.1**	**-1.1**

*MOS **05** 10:21:20.2±0.7, 30°.43N×138°.28E, h436km, mb4.1/20, Error ellipse: s-maj=11.8km s-min=6.5km az=106.0*
*JMA **05** 10:21:20.2±0.2, 30°N±2'×13°9E±°, h464km, MV4.1/21, NEAR TORISHIMA IS*
*IDC **05** 10:21:20.7±0.6, 30°.45N×138°.43E, h427km±7km, mb3.5/27, mbtmp4.3/34, Error ellipse: s-maj=11.1km s-min=7.1km az=89.0*
*NEIC **05** 10:21:22.0±1.1, 30°.47N±0°.10×138°.3E±0°.1, h431km±8km, mb4.1/64, Error ellipse: s-maj=16.2km s-min=13.4km az=112.0*
ISC 05 10:21:21.7±0.4, 30°.43N±0°.05×138°.44E±0°.06, h440km, n184, σ1§17/194, mb4.0/65, 7C-1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.88**	**23**	*eP*	**P**	**10 22 27.4**	**+0.5**
JHCJ				*eS*	**S**	**10 23 18.6**	**-1.3**
JHJ	**Hachijo jima 2**	**2.92**	**23**	P	**P**	**10 22 26.9**	**-0.2**
	146nm,0.3s,baz=72,slow=22,SNR=32						
JHJ				S	**S**	**10 23 18.1**	**-2.4**
	141nm,0.4s,baz=332,slow=17,SNR=4.0						
JHJ2	**Mitsune**	**2.92**	**23**		**P**	**10 22 27.6**	**+0.4**
JHJ2	**Mitsune**	**2.92**	**23**	*eP*	**P**	**10 22 27.8**	**+0.6**
JMKN	**Mikurajimanish**	**3.59**	**16**	P	**P**	**10 22 32.8**	**+0.4**
JMKN				*eS*	**S**	**10 23 27.4**	**-2.8**
JIE	**Ise**	**4.21**	**340**	P	**P**	**10 22 40.1**	**+2.2**
CBIJ	**Chichi jima**	**4.67**	**134**	P	**P**	**10 22 41.4**	**-1.0**
CBIJ				*eS*	**S**	**10 23 44.6**	**-3.6**
JCJ	**Chichijima**	**4.67**	**134**	P	**P**	**10 22 41.1**	**-1.4**
	100nm,0.6s,baz=299,slow=13,SNR=14						
JCJ				S	**S**	**10 23 43.2**	**-5.0**
	176nm,0.3s,baz=160,slow=23,SNR=13						
JCJ	**Chichijima**	**4.67**	**134**		**P**	**10 22 41.5**	**-1.0**
BSO1	**Boso 1**	**4.72**	**26**	P	**P**	**10 22 41.8**	**-0.3**
BSO1				*eS*	**S**	**10 23 45.7**	**-2.2**
JOD2	**Odawara 2**	**4.85**	**6**	*eP*	**P**	**10 22 45.1**	**+1.2**
INU	**Inuyama**	**5.05**	**347**	P	**P**	**10 22 44.7**	**-1.1**
JMN	**Monobe**	**5.08**	**312**	P	**P**	**10 22 44.7**	**-1.5**
JTO	**Tosashimizu**	**5.38**	**298**	*eP*	**P**	**10 22 51.0**	**+1.8**
JRY	**Ryogami san**	**5.58**	**4**	P	**P**	**10 22 51.0**	**-0.3**
JRY				*eS*	**S**	**10 23 59.8**	**-4.7**
JYT	**Yasato**	**5.96**	**14**		**P**	**10 22 53.5**	**-1.5**
MJAR	**Matsushiro Arr**	**6.10**	**358**	P	**P**	**10 22 55.6**	**-0.8**
	10nm,0.5s,baz=177,slow=11,SNR=29						
MJAR				S	**S**	**10 24 09.2**	**-4.9**
	2.8nm,0.6s,baz=132,slow=8.2,SNR=4.3						
MAJO	**Matsushiro**	**6.10**	**358**		**P**	**10 22 56.1**	**-0.4**
MAJO	**Matsushiro**	**6.10**	**358**	*i* P	**P**	**10 22 56.1**	**-0.4**
MJB9	**Matsu-Tunnel**	**6.10**	**358**	P	**P**	**10 22 57.1**	**+0.6**
JSJ	**Shimokoshiki**	**7.59**	**282**	*eP*	**P**	**10 23 13.6**	**+1.1**
JSD	**Sado**	**7.59**	**359**	P	**P**	**10 23 11.4**	**-0.9**
JMM	**Marumori**	**7.67**	**14**	P	**P**	**10 23 13.1**	**-0.2**
JMK	**Ichinoseki**	**8.80**	**14**	P	**P**	**10 23 25.7**	**+0.1**
JOW	**Kunigami**	**9.62**	**251**	P	**P**	**10 23 36.0**	**+1.3**
	15nm,0.7s,baz=101,slow=5.2,SNR=3.7						
JTM	**Tenmabayashi**	**10.55**	**11**	P	**P**	**10 23 45.5**	**+0.8**
JOT	**Ohata**	**11.13**	**10**	*eP*	**P**	**10 23 51.7**	**+0.8**
KSRS	**Korea Array**	**11.19**	**312**	P	**P**	**10 23 52.4**	**+0.7**
	6.5nm,0.5s,baz=126,slow=10,SNR=26						
KS19	**Wonju Array Si**	**11.25**	**312**	P	**P**	**10 23 52.5**	**+0.1**
JOSM	**Okushiri--Mats**	**11.66**	**4**	*eP*	**P**	**10 23 58.0**	**+1.3**
ERM	**Erimo**	**12.17**	**17**	P	**P**	**10 24 03.9**	**+1.6**
ERM	**Erimo**	**12.17**	**17**	P	**P**	**10 24 03.9**	**+1.6**
JEW	**Eniwo**	**12.62**	**10**	P	**P**	**10 24 08.7**	**+1.5**
USRK	**Ussuriysk Ar.**	**14.66**	**341**	P	**P**	**10 24 29.0**	**-0.2**
	1.2nm,0.3s,baz=153,slow=8.5,SNR=14						
USA0B	**Ussuriysk Arra**	**14.66**	**341**	P	**P**	**10 24 29.2**	**0.0**
USA0B	**Ussuriysk Arra**	**14.66**	**341**	P	**P**	**10 24 29.2**	**0.0**
NACB	**Ninganchiao**	**16.21**	**251**	P	**P**	**10 24 44.4**	**-1.6**
YULB	**Yu-li**	**16.81**	**249**	P	**P**	**10 24 51.3**	**-1.0**
NJ2	**Nanjing**	**16.83**	**281**	*eP*	**P**	**10 24 51.1**	**-1.3**
TIA	**Tai'an**	**18.71**	**294**	⇑P	**P**	**10 25 10.2**	**-1.5**
KLR	**Kul'dur**	**19.45**	**347**	P	**P**	**10 25 19.0**	**+0.6**
	3.1nm,0.5s,baz=152,slow=8.2,SNR=8.5						
KLR	**Kul'dur**	**19.45**	**347**	*i* P	**P**	**10 25 17.8**	**-0.6**
KLR				pmax	pmax		
	comp=Z,25nm,5.1s						
XLT	**XiLinHaoTe**	**22.23**	**313**	*eP*	**P**	**10 25 44.5**	**+0.6**
HHC	**Hu-ho-hao-te**	**24.10**	**303**	*eP*	**P**	**10 26 01.4**	**+0.7**
ENH	**Enshi**	**24.96**	**277**	P	**P**	**10 26 08.0**	**-0.4**
PEA0B	**Petropavlovsk-**	**26.66**	**26**	P	**P**	**10 26 24.6**	**+1.4**
PEA0B	**Petropavlovsk-**	**26.66**	**26**	P	**P**	**10 26 24.6**	**+1.4**
PETK	**Petropavlovsk-**	**26.66**	**26**	P	**P**	**10 26 24.7**	**+1.5**
PETK	**Petropavlovsk-**	**26.66**	**26**	P	**P**	**10 26 24.7**	**+1.5**
PET	**Petropavlovsk**	**26.97**	**27**	P	**P**	**10 26 27.0**	**+1.2**
LZH	**Lanzhou**	**29.37**	**290**	⇑P	**P**	**10 26 47.2**	**-0.2**
LZH				pP	PP	10 28 05.7	+0.5
ULN	**Ulaanbaatar**	**29.65**	**315**	P	**P**	**10 26 48.5**	**-1.2**
ULN				IAmb	IAmb	10 26 50.5	
	comp=Z,5.4nm,0.9s						
ULN	**Ulaanbaatar**	**29.65**	**315**	P	**P**	**10 26 48.5**	**-1.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CD2	**Chengdu**	**29.76**	**280**	P	**P**	**10 26 50.2**	**-0.6**
SONM	**Songino Array**	**30.04**	**314**	P	**P**	**10 26 53.0**	**0.0**
	comp=Z,1.4nm,0.4s,baz=128,slow=8.1,SNR=10.0						
	comp=Z,1.4nm,0.4s						
SONM	**Songino Array**	**30.04**	**314**	P	**P**	**10 26 52.0**	**-1.0**
SONM	**Songino Array**	**30.04**	**314**	P	**P**	**10 26 52.0**	**-1.0**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SIJI	**Sorong**	**31.87**	**194**	P	**P**	**10 27 09.9**	**+0.9**
	comp=Z,6.3nm,0.6s,baz=121,slow=16,SNR=4.8						
	comp=Z,6.3nm,0.6s						
PZH	**PanZhiHua**	**32.41**	**272**	P	**P**	**10 27 13.3**	**-0.4**
GTA	**Gaotai**	**32.71**	**297**	⇑P	**P**	**10 27 15.9**	**-0.3**
FAKI	**Fak Fak**	**33.69**	**191**	P	**P**	**10 27 25.6**	**+1.1**
FAKI				IAmb	IAmb	10 27 50.5	
	comp=Z,11nm,1.0s						
SEY	**Seymchan**	**33.73**	**11**	P	**P**	**10 27 23.6**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=197,slow=17,SNR=4.6						
	comp=Z,2.3nm,0.8s						
GOMU	**GeErMu**	**36.67**	**291**	P	**P**	**10 27 49.6**	**-0.3**
CM31	**Chiang Mai Arr**	**37.70**	**261**	P	**P**	**10 27 58.1**	**0.0**
CMAR	**Chiang Mai Arr**	**37.70**	**261**	P	**P**	**10 27 58.5**	**+0.4**
	comp=Z,6.2nm,0.6s,baz=59,slow=6.5,SNR=39						
	comp=Z,6.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.70**	**261**	P	**P**	**10 27 57.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**37.70**	**261**	P	**P**	**10 27 57.5**	**-0.7**
BILL	**Bilibino**	**41.04**	**16**	*eP*	**P**	**10 28 25.4**	**+0.8**
BILL				pmax	pmax		
	comp=Z,12nm,1.2s						
WMQ	**Urumqi**	**41.98**	**303**	*eP*	**P**	**10 28 33.9**	**+1.3**
DGZ	**Jazzator, Alta**	**42.59**	**312**	*i P*	**P**	**10 28 37.5**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ODAN	**Odare**	**44.64**	**279**	*eP*	**P**	**10 28 53.9**	**0.0**
ZALV	**Zalesovo Beam**	**44.82**	**318**	P	**P**	**10 28 53.8**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=104,slow=8.7,SNR=4.3						
ZALV				PcP	**PcP**	**10 30 27.1**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=117,slow=5.0,SNR=2.7						
	comp=Z,1.0nm,0.3s						
RAMN	**Ramite**	**45.29**	**279**	*eP*	**P**	**10 28 58.7**	**-0.2**
	comp=Z,34nm,0.6s						
JIRN	**Jiri**	**45.43**	**280**	*eP*	**P**	**10 29 00.6**	**+0.5**
	comp=Z,57nm,0.3s						
GUN	**Gumba**	**45.62**	**281**	*eP*	**P**	**10 29 01.9**	**+0.3**
	comp=Z,37nm,0.4s						
MK31	**Makanchi Array**	**45.83**	**307**	P	**P**	**10 29 02.2**	**-0.3**
MK31	**Makanchi Array**	**45.83**	**307**	P	**P**	**10 29 02.2**	**-0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**45.83**	**307**	P	**P**	**10 29 02.0**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=93,slow=8.8,SNR=26						
MKAR				PcP	**PcP**	**10 30 30.9**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=85,slow=5.1,SNR=5.8						
MKAR				ScP	**ScP**	**10 33 40.2**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=90,slow=1.4,SNR=3.4						
	comp=Z,2.1nm,0.5s						
MKAR	**Makanchi Array**	**45.83**	**307**	P	**P**	**10 29 02.3**	**-0.2**
PKI	**Pulchoki**	**46.12**	**280**	*eP*	**P**	**10 29 05.0**	**-0.4**
	comp=Z,5.5nm,0.4s						
PKIN	**Phulchoki**	**46.13**	**280**	*eP*	**P**	**10 29 05.1**	**-0.3**
PSI	**Prapat**	**46.37**	**241**	P	**P**	**10 29 07.2**	**0.0**
	comp=Z,4.1nm,0.4s,baz=28,slow=17,SNR=3.0						
	comp=Z,4.1nm,0.4s						
RPSI	**Rantau Prapat**	**46.44**	**241**	P	**P**	**10 29 07.2**	**-0.4**
GKN	**Gorkha**	**46.65**	**281**	*eP*	**P**	**10 29 09.1**	**-0.2**
	comp=Z,11nm,0.3s						
KNRA	**Kununurra**	**46.78**	**193**	P	**P**	**10 29 10.8**	**+0.8**
KNRA				IAmb	IAmb	10 29 11.8	
	comp=Z,9.4nm,0.8s						
DANN	**Dangsing**	**47.30**	**282**	*eP*	**P**	**10 29 14.7**	**+0.4**
	comp=Z,30nm,0.4s						
LEM	**Lembang**	**47.39**	**224**	P	**P**	**10 29 14.4**	**-0.5**
	comp=Z,29nm,0.6s,baz=109,slow=14,SNR=8.8						
	comp=Z,29nm,0.6s						
KOLN	**Koldanda**	**47.60**	**281**	*eP*	**P**	**10 29 16.5**	**0.0**
	comp=Z,5.6nm,0.9s						
PYUN	**Piuthan**	**48.02**	**282**	*eP*	**P**	**10 29 19.9**	**+0.2**
KURK	**Kurchatov**	**48.31**	**313**	P	**P**	**10 29 20.7**	**-0.5**
KURK				IAmb	IAmb	10 29 21.5	
	comp=Z,6.4nm,0.6s						
KURK	**Kurchatov**	**48.31**	**313**	P	**P**	**10 29 20.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NRIK	**Noril'sk**	**48.35**	**338**	P	**P**	**10 29 20.9**	**-0.3**
	comp=Z,6.0nm,0.4s,baz=105,slow=10.0,SNR=2.9						
	comp=Z,2.6nm,0.4s						
NRIK	**Noril'sk**	**48.35**	**338**	P	**P**	**10 29 21.3**	**+0.1**
NRIK	**Noril'sk**	**48.35**	**338**	*i* P	**P**	**10 29 20.5**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,12nm,1.9s						
GSI	**Gunungsitoli**	**48.36**	**241**	P	**P**	**10 29 22.2**	**+0.1**
TARG	**Taragay, Kyrgy**	**49.37**	**301**	P	**P**	**10 29 27.5**	**-2.3**
TARG	**Taragay, Kyrgy**	**49.37**	**301**	P	**P**	**10 29 27.5**	**-2.3**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**49.80**	**196**	P	**P**	**10 29 33.1**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=41,slow=11,SNR=1.8						
	comp=Z,0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**49.80**	**196**	P	**P**	**10 29 33.1**	**+0.5**
WB0	**Warramunga Arr**	**50.06**	**185**	P	**P**	**10 29 35.2**	**+0.6**
WB0				IAmb	IAmb	10 30 09.1	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**50.23**	**185**	P	**P**	**10 29 36.4**	**+0.6**
WRAB	**Tennant Creek**	**50.23**	**185**	P	**P**	**10 29 36.4**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WB2	**Warramunga Arr**	**50.24**	**185**	P	**P**	**10 29 36.5**	**+0.6**
WRA	**Warramunga Arr**	**50.24**	**185**	P	**P**	**10 29 36.1**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=0.6,slow=7.8,SNR=55						
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**50.24**	**185**	P	**P**	**10 29 36.4**	**+0.5**
WRA	**Warramunga Arr**	**50.24**	**185**	P	**P**	**10 29 36.4**	**+0.5**
WR0	**Warramunga Arr**	**50.24**	**185**	P	**P**	**10 29 36.4**	**+0.5**
BOOM	**Boomskoye usch**	**50.64**	**302**	P	**P**	**10 29 38.8**	**-0.1**
BOOM				IAmb	IAmb	10 30 06.3	
	comp=Z,14nm,0.9s						
BOOM	**Boomskoye usch**	**50.64**	**302**	P	**P**	**10 29 38.8**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**51.08**	**298**	P	**P**	**10 29 45.8**	**+3.7**
AAK	**Ala-Archa**	**51.68**	**302**	*ceP*	**P**	**10 29 45.7**	**-0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHIR	**Chirikof Islan**	**52.06**	**41**	P	**P**	**10 29 50.1**	**+1.3**
N19K	**Bonanza Creek**	**52.83**	**35**	P	**P**	**10 29 56.5**	**+2.1**
K20K	**Telida**	**53.21**	**31**	P	**P**	**10 29 59.0**	**+2.0**
K20K				IAmb	IAmb	10 29 59.7	
	comp=Z,6.7nm,0.7s						
J20K	**Nowinta River**	**53.25**	**30**	P	**P**	**10 29 59.3**	**+2.1**
J20K				IAmb	IAmb	10 29 59.8	
	comp=Z,5.9nm,0.8s						
BRVK	**Borovoye**	**53.43**	**316**	P	**P**	**10 29 58.3**	**-0.4**
BRVK				IAmb	IAmb	10 29 59.3	
	comp=Z,8.6nm,1.2s						
BRVK	**Borovoye**	**53.43**	**316**	P	**P**	**10 29 58.3**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KDAK	**Kodiak Island**	**53.73**	**38**	P	**P**	**10 30 01.2**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=330,slow=13,SNR=13						
	comp=Z,4.2nm,0.6s						
AS31	**Alice Springs**	**53.96**	**185**	P	**P**	**10 30 03.7**	**+0.8**
ASAR	**Alice Springs**	**53.96**	**185**	P	**P**	**10 30 03.5**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=15,slow=13,SNR=31						
	comp=Z,1.4nm,0.6s						
CAST	**Castle Rocks**	**54.10**	**31**	P	**P**	**10 30 04.2**	**+0.8**
MBWA	**Marble Bar**	**54.36**	**202**	P	**P**	**10 30 06.5**	**+0.9**
MBWA				IAmb	IAmb	10 30 06.9	
	comp=Z,5.6nm,0.7s						
KK31	**Karatay Array**	**54.49**	**304**	P	**P**	**10 30 06.1**	**-0.4**
KK31				IAmb	IAmb	10 30 07.1	
	comp=Z,8.1nm,0.8s						
KK31	**Karatay Array**	**54.49**	**304**	P	**P**	**10 30 06.1**	**-0.4**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	**54.49**	**304**	P	**P**	**10 30 06.2**	**-0.2**
KKAR				IAmb	IAmb	10 30 07.1	
	comp=Z,8.1nm,0.8s						
KKAR	**Karatay Array**	**54.49**	**304**	P	**P**	**10 30 06.3**	**-0.1**
KKAR	**Karatay Array**	**54.49**	**304**	P	**P**	**10 30 06.2**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PSA00	**Pilbara Seismi**	**54.71**	**201**	P	**P**	**10 30 09.2**	**+1.0**
PSA00				IAmb	IAmb	10 30 46.8	
	comp=Z,11nm,1.4s						
GAR	**Garm**	**55.48**	**299**	P	**P**	**10 30 13.6**	**0.0**
GAR				IAmb	IAmb	10 30 14.1	
	comp=Z,11nm,0.8s						
RND	**Reindeer**	**55.56**	**31**	P	**P**	**10 30 14.4**	**+0.7**
RND				IAmb	IAmb	10 30 14.9	
	comp=Z,7.1nm,1.1s						
RND	**Reindeer**	**55.56**	**31**	P	**P**	**10 30 14.4**	**+0.7**
RND				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KNK	**Knik Glacier**	**55.77**	**34**	P	**P**	**10 30 16.2**	**+1.1**
KNK				IAmb	IAmb	10 30 16.7	
	comp=Z,5.3nm,0.7s						
ILAR	**Eielson Array**	**56.41**	**30**	P	**P**	**10 30 19.4**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=259,slow=5.4,SNR=8.5						
	comp=Z,0.6nm,0.6s						
CHGR	**Chuyangaron**	**56.44**	**299**	P	**P**	**10 30 20.2**	**-0.1**
CHGR				pmax	pmax		
	comp=Z,47nm,0.7s						
RIDG	**Independent Ri**	**57.34**	**31**	P	**P**	**10 30 26.7**	**+0.7**
BMRM	**Bremner River**	**57.65**	**34**	IAmb	IAmb	10 30 33.1	
	comp=Z,8.2nm,0.9s						
DOT	**Dot Lake**	**57.70

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	77.98	322	P	P	10 32 32.4	-0.7
	comp=Z,1.6nm,0.4s,baz=50,slow=5.4,SNR=10						
	comp=Z,1.6nm,0.4s						
AKBB	Malin Array Si	77.98	322	*ce*P	P	10 32 33.1	0.0
HFS	Hagfors	79.05	335	P	P	10 32 38.2	-0.5
	comp=Z,4.9nm,0.7s,baz=94,slow=4.6,SNR=15						
	comp=Z,4.9nm,0.7s						
NB2	NORSAR Subarra	79.28	337	P	P	10 32 39.6	-0.3
	comp=Z,1.2nm,0.6s,baz=45,slow=5.3						
NOA	NORSAR Array B	79.28	337	P	P	10 32 39.6	-0.3
	comp=Z,2.3nm,0.7s,baz=47,slow=5.6,SNR=6.7						
	comp=Z,2.3nm,0.7s						
RAYN	Ar Rayn	80.83	292	P	P	10 32 49.0	+0.2
RAYN				IAmb	IAmb	10 32 49.6	
	comp=Z,7.2nm,1.1s						
RAYN	Ar Rayn	80.83	292	P	P	10 32 49.0	+0.2
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NVAR	Mina Array Bea	81.00	51	P	P	10 32 51.0	+1.3
	comp=Z,0.3nm,0.5s,baz=284,slow=6.6,SNR=4.6						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	81.33	311	P	P	10 32 51.0	-0.3
	comp=Z,3.5nm,0.8s,baz=104,slow=4.2,SNR=12						
	comp=Z,3.5nm,0.8s						
BRTR	Keskin Array B	81.33	311	*ce*P	P	10 32 51.4	+0.1
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR08	Bucovina Ar. S	81.90	321	P	P	10 32 53.9	-0.1
BUR08				IAmb	IAmb	10 32 55.0	
	comp=Z,4.9nm,0.9s						
HVU	Hansel Valley	82.73	46	P	P	10 32 59.7	+1.3
HVU				IAmb	IAmb	10 33 01.0	
	comp=Z,2.7nm,0.8s						
HVU	Hansel Valley	82.73	46	P	P	10 32 59.7	+1.3
HVU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HWUT	Hardware Ranch	83.58	45	P	P	10 33 04.0	+1.3
HWUT				IAmb	IAmb	10 33 05.3	
	comp=Z,2.7nm,0.8s						
CTU	Camp Tracy	83.99	46	P	P	10 33 05.2	+0.4
PDAR	Pinedale Array	84.11	43	P	P	10 33 06.1	+0.7
	comp=Z,0.2nm,0.4s,baz=278,slow=2.6,SNR=2.5						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	96.16	51	P	P	10 34 02.9	+1.2
	comp=Z,0.2nm,0.6s,baz=295,slow=3.6,SNR=3.5						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	119.92	310	PKP	PKPdf	10 39 21.2	-0.6
	comp=Z,0.2nm,0.5s,baz=99,slow=1.0,SNR=1.9						

IDC ***05*** *11:02:37.9±0.9, 53°.56N×160°.47E, h0km, mb3.6/7, mbtmp3.6/7, MS3.7/2, Error ellipse: s-maj=29.8km s-min=19.6km az=157.0*

KRSC ***05*** *11:02:41.8±1.1, 53°.31N×160°.58E, h51km±11km, ML4.0*

ISC 05 11:02:41.8±1.4, 53°.41N±0°.04×160°.59E±0°.04, h28km±10km, n43, σ1°35/54, mb3.5/7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.46	228	*eP*	Pn	11 02 53.5	+0.9
SPN				*eS*	Sn	11 02 59.9	+0.1
KII	Karymskiy	0.92	313	*eP*	Pn	11 03 00.7	+1.7
KII				*eS*	Sn	11 03 12.9	+1.5
SDLR	Sedlovina	1.03	263	*eP*	Pn	11 03 01.6	+1.1
SDLR				*eS*	Sn	11 03 14.4	+0.3
UGLR	Uglovaya	1.08	260	*eP*	Pb	11 03 02.5	+0.6
UGLR				*eS*	Sn	11 03 15.8	+0.6
SMAR	Somma	1.08	263	*eP*	Pn	11 03 02.3	+1.0
KRER	Koryakskii	1.11	265	*eP*	Pb	11 03 03.0	+0.6
KRER				*eS*	Sn	11 03 17.0	+0.9
AVH	Avacha	1.12	263	*eP*	Pb	11 03 03.1	+0.6
AVH				*eS*	Sn	11 03 17.3	+1.1
KRX	Arik	1.16	268	*eP*	Pb	11 03 03.4	+0.1
KRX				*eS*	Sn	11 03 17.3	-0.1
KOK	Koryaka	1.18	265	*eP*	Pb	11 03 03.7	+0.2
KOK				*eS*	Sn	11 03 18.0	+0.4
PET	Petropavlovsk	1.23	252	*eP*	Pb	11 03 03.9	-0.4
PET				*eS*	Sn	11 03 18.3	-0.4
MKZ	Mys Kozlova	1.33	30	*eP*	Pb	11 03 07.2	+1.1
MKZ				*eS*	Sb	11 03 24.1	+1.4
KRMR	Karymshinskiy	1.59	250	*eP*	Pb	11 03 09.1	-1.4
KRMR				*eS*	Sn	11 03 27.4	-0.3
RUS	Russkaya	1.59	233	*eP*	Pn	11 03 08.5	+0.4
RUS				*eS*	Sn	11 03 26.3	-1.4
GNL	Ganaly	1.60	281	*eP*	Pb	11 03 10.3	-0.5
MTVR	Mutnovka	1.73	238	*eP*	Pn	11 03 11.0	+0.9
MTVR				*eS*	Sn	11 03 30.4	-0.9
GRL	Gorelyy	1.75	242	*eP*	Pb	11 03 11.7	-1.5
GRL				*eS*	Sn	11 03 31.8	+0.1
PETK	Petropavlovsk-	1.76	261	Pn	Pn	11 03 11.1	+0.6
	23nm,0.3s,baz=83,slow=18,SNR=675						
PETK				Sn	Sb	11 03 33.9	-1.2
	19nm,0.3s,baz=93,slow=17,SNR=12						
TUMR	Tumrok	1.90	352	*eP*	Pb	11 03 16.4	+0.6
TUMR				*eS*	Sb	11 03 40.2	+1.2
ASAK	Asacha	1.93	239	*eP*	Pn	11 03 14.4	+1.6
ASAK				*eS*	Sn	11 03 37.1	+1.0
APC	Apacha	2.12	258	*eP*	Pb	11 03 17.7	-1.8
APC				*eS*	Sn	11 03 42.2	+1.4
KDTR	Khodutka, Kamc	2.22	225	*eS*	Sn	11 03 43.3	+0.2
KMNR	Kamenistaya	2.36	355	*eP*	Pb	11 03 23.5	-0.2
KOZ	Kozyrevsk	2.69	351	*eP*	Pb	11 03 27.3	-1.9
ESO	Esso	2.75	337	*eP*	Pb	11 03 27.5	-2.7
KLY	Klyuchi	2.91	1	*eP*	Pb	11 03 30.7	-2.2
SRDR	Sredinnyy	2.96	351	*eP*	Pb	11 03 30.6	-3.2
KBTR	Krutoberegovo	3.09	24	*eP*	Pb	11 03 33.1	-2.9
BDR	Baidarnaya	3.19	6	*eP*	Pb	11 03 34.3	-3.4
BKI	Bering	3.63	58	*eS*	Sn	11 04 18.0	+0.1
H11N2	WAKE ISLAND Hy	33.97	169	T	T	11 45 41.7	
	baz=354,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	33.98	169	T	T	11 45 55.3	
	baz=354,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	33.98	169	T	T	11 45 53.7	
	baz=354,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	35.16	170	T	T	11 47 10.4	
	baz=353						
H11S3	WAKE ISLAND Hy	35.17	170	T	T	11 46 56.7	
	baz=353						
H11S2	WAKE ISLAND Hy	35.17	170	T	T	11 47 22.1	
	baz=353						
MKAR	Makanchi Array	48.28	296	P	P	11 11 18.3	-1.9
	0.3nm,0.4s,baz=58,slow=6.5,SNR=4.6						
MKAR				LR	LR	11 32 23.2	
	comp=Z,43nm,18.1s,baz=296,slow=37						
	0.3nm,0.4s						
NVAR	Mina Array Bea	55.35	71	P	P	11 12 14.6	+1.3
	0.3nm,0.8s,baz=295,slow=8.5,SNR=2.4						
	0.3nm,0.8s						
FINES	FINESS Array B	59.95	337	P	P	11 12 43.7	-1.2
	2.8nm,0.9s,baz=29,slow=8.7,SNR=5.2						
	2.8nm,0.9s						
TXAR	Lajitas Array	70.24	67	P	P	11 13 53.4	+1.1
	0.1nm,0.5s,baz=307,slow=4.5,SNR=3.7						
	0.1nm,0.5s						
EKA	Eskdalemuir Ar	70.79	350	P	P	11 13 54.9	-0.3
	0.7nm,0.5s,baz=20,slow=5.5,SNR=4.0						
	0.7nm,0.5s						
WRA	Warramunga Arr	76.49	205	P	P	11 14 29.7	+0.8
	0.4nm,0.9s,baz=13,slow=5.7,SNR=5.6						
	0.4nm,0.9s						
ASAR	Alice Springs	80.17	205	P	P	11 14 49.5	+0.2
	0.3nm,0.8s,baz=17,slow=4.7,SNR=4.4						
	0.3nm,0.8s						
EIL	Elat	84.78	315	LR	LR	11 59 00.5	
	comp=Z,53nm,18.2s,baz=78,slow=40						

IDC ***05*** *11:02:59.2±0.4, 58°.76S×25°.25W, h0km, mb4.6/12, mbtmp4.6/14, ML4.3/2, MS3.7/31, Error ellipse: s-maj=17.9km s-min=15.2km az=51.0*

MOS ***05*** *11:03:03.5±1.0, 58°.79S×25°.34W, h34km, mb5.1/7, Error ellipse: s-maj=24.0km s-min=10.9km az=108.0*

BJI ***05*** *11:03:05.0±0.0, 58°.90S×25°.10W, h30km, mB5.6/1, Ms5.4/1, Ms7 5.2/1*

NEIC ***05*** *11:03:05.3±1.4, 58°.82S±0°.09×25°.3W±0°.2, h35km±1km, mb5.1/63, Error ellipse: s-maj=15.8km s-min=13.3km az=229.0*

ISC 05 11:03:05.0±0.3, 58°.76S±0°.05×25°.21W±0°.06, h36km±3km, n413, σ0°87/399, mb5.0/44, MS3.8/33, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.68	301		Pn	11 04 54.9	+0.8
HOPE	Hope Point	7.68	301	P	Pn	11 04 54.9	+0.8
ORCD	Orcadas	10.04	250	Pn	Pn	11 05 26.7	+0.2
VNA1	Neumayer--Stat	13.88	156	P	Pn	11 06 17.4	-1.3
VNA3	Neumayer Olymp	14.07	159	P	Pn	11 06 19.5	-1.9
VNA2	Neumayer--Watz	14.27	156	P	Pn	11 06 22.1	-2.0
	baz=320,slow=13						
SNAA	Sanae	15.83	154	P	Pn	11 06 43.2	-1.5
SNAA				S	Sn	11 09 23.9	-15
SNAA	Sanae	15.83	154	Pn	Pn	11 06 43.4	-1.4
	2.7nm,0.3s,baz=318,slow=14,SNR=93						
SNAA				Sn	Sn	11 09 23.1	-16
	0.8nm,0.3s,baz=310,slow=15,SNR=4.6						
SNAA				LR	LR	11 11 36.3	
	comp=Z,301nm,19.4s,baz=351,slow=33						
	5.8nm,0.3s						
SNAA	Sanae	15.83	154		Pn	11 06 43.7	-1.1
SNAA	Sanae	15.83	154	P	Pn	11 06 43.7	-1.1
SNAA				pmax	pmax		
	comp=Z,18nm,0.9s						
TROLL	Troll, Antarti	17.34	151	P	Pn	11 07 03.7	-0.2
PMSA	Palmer Station	19.08	235	P	P	11 07 23.5	-0.5
	comp=Z,0.4nm,0.3s,baz=150,slow=7.2,SNR=2.3						
PMSA				LR	LR	11 13 45.4	
	comp=Z,268nm,18.9s,baz=74,slow=34						
	comp=Z,12nm,0.9s						
PMSA	Palmer Station	19.08	235	P	P	11 07 23.5	-0.5
PMSA				IAmb	IAmb	11 07 32.3	
	comp=Z,164nm,1.8s						
BELA	Belgrano 2	19.46	186	P	P	11 07 27.8	-0.3
EFI	East Falkland	19.88	277	P	P	11 07 33.7	+0.9
EFI	East Falkland	19.88	277	P	P	11 07 33.7	+0.9
EFI				pmax	pmax		
	comp=Z,365nm,2.0s						
MG01	Puerto William	23.22	261	P	P	11 08 08.2	-0.2
MG01				IAmb	IAmb	11 08 24.9	
	comp=Z,151nm,1.8s						
USHA	Ushuaia	23.68	261	P	P	11 08 11.8	-1.0
	comp=Z,20nm,0.6s,baz=124,slow=3.5,SNR=8.8						
	comp=Z,20nm,0.6s						
MG02	Cerro Sombrero	25.09	264	P	P	11 08 24.7	-1.1
GO10	Punta Arenas	25.84	262	P	P	11 08 31.7	-1.0
MG04	Isla Riesco	26.27	263	P	P	11 08 36.5	0.0
MG04				IAmb	IAmb	11 08 50.5	
	comp=Z,62nm,1.2s						
MG05	Puerto Natales	27.39	264	P	P	11 08 45.5	-1.1
MG05				IAmb	IAmb	11 08 45.6	
	comp=Z,19nm,0.6s						
GO09	Cerro Castillo	27.53	265	P	P	11 08 46.3	-1.6
GO09				IAmb	IAmb	11 08 50.8	
	comp=Z,68nm,1.6s						
TRQA	Tornquist	31.41	295	P	P	11 09 22.8	+0.4
TRQA				IAmb	IAmb	11 09 49.9	
	comp=Z,47nm,1.7s						
TRQA	Tornquist	31.41	295	*e*P	P	11 09 22.8	+0.4
QSPA	South Pole Qui	31.48	180	LR	LR	11 21 22.5	
	comp=Z,160nm,21.2s,baz=190,slow=35						
QSPA	South Pole Qui	31.48	180	P	P	11 09 24.0	+1.1
QSPA				IAmb	IAmb	11 09 24.3	
	comp=Z,16nm,0.7s						
QSPA	South Pole Qui	31.48	180	P	P	11 09 22.9	-0.1
AY01	Puyuhuapi	32.02	275	P	P	11 09 27.6	0.0
AY01				IAmb	IAmb	11 09 28.8	
	comp=Z,73nm,1.9s						
PLTB	Pedras Altas	33.11	312	P	P	11 09 36.9	-0.4
PLTB				IAmb	IAmb	11 10 43.9	
	comp=Z,54nm,1.8s						
PLTB	Pedras Altas	33.11	312	*e*P	P	11 09 36.5	-0.8
PLCA	Paso Flores	33.58	282	P	P	11 09 40.5	-0.9
	comp=Z,5.3nm,0.7s,baz=135,slow=8.1,SNR=22						
PLCA				PcP	PcP	11 12 20.8	-0.3
	comp=Z,1.1nm,0.7s,baz=45,slow=13,SNR=1.7						
PLCA				LR	LR	11 22 22.3	
	comp=Z,92nm,19.8s,baz=116,slow=35						
	comp=Z,5.3nm,0.7s						
PLCA	Paso Flores	33.58	282	P	P	11 09 41.4	0.0
PLCA	Paso Flores	33.58	282	*e*P	P	11 09 41.4	0.0
PLCA	Paso Flores	33.58	282	P	P	11 09 39.9	-1.6
PLCA				pP	pP	11 09 48.9	-2.2
PLCA				sP	pwP	11 09 54.2	+0.5
CPSB	Cacapava Do Su	34.26	313	*e*P	P	11 09 47.4	+0.1
CNLB	Canela	34.30	318	*e*P	P	11 09 48.0	+0.2
LL04	Puerto Octay	34.40	280	P	P	11 09 48.6	+0.2
LL04				IAmb	IAmb	11 10 20.1	
	comp=Z,40nm,1.8s						
GO06	Curarrehue	34.91	283	P	P	11 09 51.9	-1.1
LR04	Corral	35.68	280	P	P	11 09 59.5	0.0
ITQB	Itaqui	36.15	310	*e*P	P	11 10 02.5	-1.1
ITAB	Concordia	36.65	318	P	P	11 10 08.1	+0.2
MAW	Mawson	37.35	141	P	P	11 10 13.1	-0.2
	comp=Z,5.3nm,0.8s,baz=235,slow=9.0,SNR=9.1						
MAW				PcP	PcP	11 12 31.5	0.0
	comp=Z,2.5nm,0.8s,baz=338,slow=10,SNR=2.9						
MAW				LR	LR	11 23 52.7	
	comp=Z,169nm,19.8s,baz=263,slow=34						
	comp=Z,5.3nm,0.8s						
BI05	Punta Hualpn	37.94	284	P	P	11 10 19.0	+0.3
BO02	Sierra Bellavi	38.28	288	P	P	11 10 20.6	-1.1
BO01	Tunca	38.75	288	P	P	11 10 25.0	-0.5
BO01				IAmb	IAmb	11 10 44.5	
	comp=Z,27nm,1.4s						
BO04	La Punta	38.83	289	P	P	11 10 26.0	-0.3
BO04				IAmb	IAmb	11 10 27.0	
	comp=Z,17nm,0.5s						
PTGB	Pitanga	38.95	319	*e*P	P	11 10 26.2	-1.1
MT09	Talagante	39.19	289	P	P	11 10 29.0	-0.4
MT09				IAmb	IAmb	11 10 30.0	
	comp=Z,24nm,0.5s						
MT01	Popeta	39.25	289	P	P	11 10 29.5	-0.3
MT01				IAmb	IAmb	11 10 48.5	
	comp=Z,96nm,1.9s						
CPUP	Villa Florida	39.41	311	LR	LR	11 27 35.2	
	comp=Z,78nm,19.4s,baz=151,slow=38						
CPUP	Villa Florida	39.41	311	P	P	11 10 29.8	-1.3
CPUP	Villa Florida	39.41	311	P	P	11 10 29.8	-1.3
CPUP				pmax	pmax		
	comp=Z,29nm,2.0s						
PEL	Peldehue	39.55	290	P	P	11 10 32.7	+0.3
PEL	Peldehue	39.55	290	P	P	11 10 32.7	+0.3
PEL				pmax	pmax		
	comp=Z,90nm,1.3s						
PEL	Peldehue	39.55	290	P	P	11 10 32.0	-0.3
PEL				sP	sP	11 10 46.1	-0.5
VA05	Santo Domingo	39.60	289	P	P	11 10 32.5	-0.1
VA05				IAmb	IAmb	11 10 49.5	
	comp=Z,65nm,1.1s						
MT02	Curacav	39.68	289	P	P	11 10 33.1	-0.2
MT02				IAmb	IAmb	11 10 48.7	
	comp=Z,37nm,1.1s						
VA03	San Esteban	39.80	291	P	P	11 10 37.2	+2.8
ROC1	El Roble	39.85	290	P	P	11 10 35.5	+0.4
ROC1				IAmb	IAmb	11 11 07.5	
	comp=Z,19nm,0.6s						
VA06	Catapilco	40.33	290	P	P	11 10 38.9	+0.2
VA06				IAmb	IAmb	11 10 56.0	
	comp=Z,83nm,1.4s						
SUR	Sutherland	40.44	70	LR	LR	11 23 42.2	
	comp=Z,124nm,20.3s,baz=216,slow=31						
RIB01	Linhares ES	40.92	338	*e*P	P	11 10 44.4	+0.7
CO02	Combarbal	41.29	291	P	P	11 10 47.2	+0.4
SJMB	Sao Joao De Ma	41.67	337	*e*P	P	11 10 50.6	+0.7
CO01	Juntas del Tor	41.87	293	IAmb	IAmb	11 11 08.7	
	comp=Z,17nm,0.8s						
NAN01	Guarapari, ES	42.30	339	*e*P	P	11 10 55.5	+0.5
AC05	El Transito	42.91	294	P	P	11 10 59.9	-0.1
AC05				IAmb	IAmb	11 11 17.0	
	comp=Z,76nm,1.6s						
LCO	Las Campanas	42.96	294	P	P	11 10 59.9	-0.7
LCO				IAmb	IAmb	11 11 39.3	
	comp=Z,31nm,1.1s						
LCO	Las Campanas	42.96	294	P	P	11 10 59.9	-0.7
LCO				pmax	pmax		
	comp=Z,31nm,1.2s						
PMNB	Patos De Minas	43.06	330	*e*P	P	11 11 03.3	+2.0
SBA	Scott Base	43.44	184	P	P	11 11 04.2	+0.6
SBA	Scott Base	43.44	184	P	P	11 11 04.2	+0.6
SBA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SBA	Scott Base	43.44	184	P	P	11 11 04.4	+0.8
SBA				pP	pP	11 11 14.8	+1.5
GUA01	Guaratinga, BA	43.47	339	*e*P	P	11 11 05.6	+1.2
AC04	Llanos de Chal	43.82	294	P	P	11 11 06.8	-0.4
AC04				IAmb	IAmb	11 12 06.8	
	comp=Z,86nm,1.4s						
VNDA	Vanda	43.91	182	P	P	11 11 08.3	+1.0
	comp=Z,11nm,0.6s,baz=186,slow=6.8,SNR=89						
VNDA				PcP	PcP	11 12 53.6	+0.9
	comp=Z,2.1nm,0.8s,baz=258,slow=3.8,SNR=3.0						
VNDA				LR	LR	11 29 13.8	
	comp=Z,66nm,18.6s,baz=180,slow=36						
	comp=Z,11nm,0.6s						
VNDA	Vanda	43.91	182	P	P	11 11 08.6	+1.3
VNDA	Vanda	43.91	182	P	P	11 11 08.6	+1.3
VNDA				pmax	pmax		
	comp=Z,12nm,0.7s						
VNDA	Vanda	43.91	182	P	P	11 11 06.9	-0.5
VNDA				pP	pP	11 11 17.4	+0.3
VNDA				sP	sP	11 11 23.3	+2.7
AC02	Maricunga	44.06	297	P	P	11 11 09.6	-0.1
MC01	Montes Claros	44.20	334	*e*P	P	11 11 10.9	+0.5
CMC01	Camacan, BA	44.61	340	*e*P	P	11 11 14.3	+0.7
CCD	Concordia, Ant	44.81	169	P	P	11 11 14.0	-1.0
CCD				sP	sP	11 11 32.3	+4.0
GO02	Mina Guanaco	45.70	298	P	P	11 11 22.0	-0.5
GO02				IAmb	IAmb	11 13 05.5	
	comp=Z,51nm,1.7s						
BOSA	Boshof	45.71	71	P	P	11 11 22.0	-0.4
	comp=Z,1.1nm,0.6s,baz=214,slow=3.7,SNR=4.2						
BOSA				PcP	PcP	11 13 00.4	+0.5
	comp=Z,3.8nm,0.9s,baz=211,slow=3.4,SNR=2.6						
BOSA				LR	LR	11 26 12.2	
	comp=Z,109nm,18.3s,baz=202,slow=30						
	comp=Z,1.1nm,0.6s						
BOSA	Boshof	45.71	71	P	P	11 11 22.8	+0.4
BOSA				IAmb	IAmb	11 11 27.5	
	comp=Z,70nm,1.9s						
BOSA	Boshof	45.71	71	P	P	11 11 22.8	+0.4
BOSA				pmax	pmax		
	comp=Z,70nm,1.9s						
JANB	Januaria	45.88	334	*e*P	P	11 11 24.5	+0.7
GDU01	Guandu, BA	46.23	340	*e*P	P	11 11 26.8	+0.4
BDFB	Brasilia	46.25	329	P	P	11 11 26.7	0.0
	comp=Z,3.6nm,0.5s,baz=161,slow=7.2,SNR=5.3						
BDFB				PcP	PcP	11 13 02.0	+0.2
	comp=Z,2.7nm,0.5s,baz=236,slow=5.4,SNR=3.3						
BDFB				LR	LR	11 28 08.9	
	comp=Z,85nm,21.2s,baz=148,slow=33						
	comp=Z,3.6nm,0.5s						
BDFB	Brasilia	46.25	329	*e*P	P	11 11 27.8	+1.1
LVC	Limon Verde	47.59	300	LR	LR	11 32 11.1	
	comp=Z,48nm,20.7s,baz=160,slow=37						
SDBA	SAO DESIDERIO	48.58	334	*e*P	P	11 11 45.7	+0.9
PB07	IPOC Station P	48.80	300	P	P	11 11 45.4	-1.2
LBTB	Lobatse	48.87	69	LR	LR	11 28 09.6	
	comp=Z,199nm,20.6s,baz=232,slow=31						
NBAN	Anadia - AL	49.70	346	*e*P	P	11 11 53.7	+0.4
PTLB	Pontes e Lacer	49.99	315	*e*P	P	11 11 56.0	+0.6
TSUM	Tsumeb	50.17	57	LR	LR	11 28 47.9	
	comp=Z,82nm,20.6s,baz=153,slow=31						
TSUM	Tsumeb	50.17	57	P	P	11 11 58.3	+1.3
SIV	San Ignacio	50.22	313	LR	LR	11 31 22.7	
	comp=Z,47nm,21.8s,baz=155,slow=34						
GO01	Chusmiza	50.29	302	IAmb	IAmb	11 12 49.4	
	comp=Z,26nm,1.8s						
H10S2	ASCENSION HYDR	50.34	14	T	T	12 06 20.7	
	baz=187,slow=74,SNR=30						
H10S3	ASCENSION HYDR	50.34	14	T	T	12 06 30.7	
	baz=33,slow=74,SNR=255						
SNDB	Serra Nova Dou	50.66	326	*e*P	P	11 12 01.1	+0.6
CASY	Casey	50.99	159	P	P	11 12 03.1	+0.7
H10N1	ASCENSION HYDR	51.46	14	T	T	12 07 54.0	
	baz=180,slow=71,SNR=20						
H10N3	ASCENSION HYDR	51.46	14	T	T	12 07 45.3	
	baz=180,slow=71,SNR=169						
H10N2	ASCENSION HYDR	51.48	14	T	T	12 07 46.7	
	baz=180,slow=71,SNR=24						
PB16	IPOC Station P	51.60	302	P	P	11 12 07.6	-0.7
PB16				IAmb	IAmb	11 12 17.3	
	comp=Z,33nm,2.0s						
SMTB	Santa Maria do	52.64	332	*e*P	P	11 12 16.8	+1.5
PDRB	Porto dos Gac	52.70	320	*e*P	P	11 12 14.7	-1.1
LPAZ	La Paz	52.81	305	P	P	11 12 16.6	-0.7
	comp=Z,2.1nm,0.4s,baz=147,slow=6.3,SNR=13						
LPAZ				PcP	PcP	11 13 26.2	-0.2
	comp=Z,1.2nm,0.3s,baz=96,slow=2.5,SNR=2.0						
	comp=Z,2.1nm,0.4s						
LPAZ	La Paz	52.81	305	P	P	11 12 16.8	-0.5
LPAZ	La Paz	52.81	305	*e*P	P	11 12 16.8	-0.5
LPAZ	La Paz	52.81	305	P	P	11 12 16.0	-1.3
CLDB	Colider	53.08	321	*e*P	P	11 12 17.7	-0.9
RCBR	Riachuelo	53.44	347	LR	LR	11 32 26.0	
	comp=Z,64nm,18.7s,baz=318,slow=33						
RCBR	Riachuelo	53.44	347	P	P	11 12 23.0	+1.7
DRV	Dumont d'Urvil	54.40	173	P	P	11 12 27.0	-0.6
DRV				pP	sP	11 12 40.7	-0.4
PRPB	Parauapebas	55.78	330	*e*P	P	11 12 39.2	+1.0
NPGB	Novo Progresso	56.54	323	*e*P	P	11 12 42.9	-0.7
ROSB	Rosrio	57.64	337	*e*P	P	11 12 51.9	+0.6
LSZ	Lusaka	58.44	65	LR	LR	11 34 50.9	
	comp=Z,152nm,19.4s,baz=168,slow=33						
NNA	Nana	60.48	298	LR	LR	11 37 29.7	
	comp=Z,66nm,21.6s,baz=162,slow=34						
MALB	Monte Alegre	61.13	326	*e*P	P	11 13 15.5	0.0
MCPB	Macapa, AP	61.94	329	*e*P	P	11 13 21.5	+0.5
RPN	Rapa Nui	64.24	260	LR	LR	11 35 09.9	
	comp=Z,38nm,20.8s,baz=82,slow=30						
ATAH	Atahualpa	65.47	299	LR	LR	11 41 38.4	
	comp=Z,38nm,21.0s,baz=176,slow=35						
BO

comp=Z,24nm,20.0s,baz=245,slow=31
MDT Midelt 92.84 17 LR LR 11 53 33.6
comp=Z,51nm,18.6s,baz=188,slow=33
TAOE Nuku Hiva Isla 94.97 244 *e*LR LR 11 47 05.5
comp=Z,141nm,26.0s
ASAR Alice Springs 96.07 161 P **P 11 16 27.8 -0.9**
comp=Z,2.2nm,0.7s,baz=183,slow=4.1,SNR=41
ASAR PKiKP **PKiKP 11 21 06.4 -0.6**
comp=Z,0.4nm,0.9s,baz=180,slow=1.6,SNR=5.6
ASAR PKKPbc **PKKPbc 11 33 12.9 0.0**
comp=Z,0.4nm,0.4s,baz=17,slow=3.1,SNR=6.1
comp=Z,2.2nm,0.7s
ESDC Sonseca Array 99.66 16 LR LR 11 55 25.5
comp=Z,34nm,19.6s,baz=156,slow=32
WRA Warramunga Arr 99.79 161 P **Pdif 11 16 43.9 -1.5**
comp=Z,0.5nm,0.9s,baz=194,slow=4.2,SNR=5.8
WRA PKiKP **PKiKP 11 21 12.9 -0.8**
comp=Z,0.3nm,0.9s,baz=217,slow=1.2,SNR=1.1
WRA PKKP **PKKPdf 11 33 04.3 -1.3**
comp=Z,0.3nm,0.4s,baz=357,slow=2.7,SNR=17
comp=Z,0.5nm,0.9s
WRAB Tennant Creek 99.80 161 *i* P **Pdif 11 16 43.7 -1.7**
WRAB pmax pmax
comp=Z,5.0nm,1.4s
OXF Oxford 107.10 309 P **PKiKP 11 21 28.3 +2.0**
baz=151
PAL Palisades 107.31 323 P **PKiKP 11 21 29.1 +2.7**
baz=156
WHTX Lake Whitney, 108.36 302 P **PKiKP 11 21 30.6 +1.8**
baz=149
TXAR Lajitas Array 108.96 295 PKiKP **PKiKP 11 21 29.6 -0.5**
comp=Z,0.2nm,0.6s,baz=147,slow=2.3,SNR=5.4
ERPA Erie 110.28 320 P **PKiKP 11 21 33.7 +1.6**
baz=153
MSTX Muleshoe 112.42 299 P **PKiKP 11 21 36.7 +0.2**
baz=147
AMTX Amarillo 112.69 300 P **PKiKP 11 21 37.1 +0.1**
baz=147
121A Cookes Peak, D 113.57 294 P **PKiKP 11 21 39.1 +0.3**
baz=146
TUC Tucson 114.83 292 P **PKiKP 11 21 41.4 +0.3**
baz=145
T25A Trinidad 115.79 299 P **PKPdf 11 21 43.1 +0.1**
baz=146
SHA1 Shidzhatmaz 116.46 49 *i* PKIKP **PKiKP 11 21 45.1 +1.0**
SDCO Great Sand Dun 116.78 299 P **PKiKP 11 21 45.5 +0.5**
baz=145
S22A 4UR Ranch, Cre 117.39 298 P **PKiKP 11 21 47.0 +0.8**
baz=145
IKP In-Ko-Pah, Jac 117.72 288 P **PKiKP 11 21 47.1 +0.4**
baz=144
WUAZ Wupatki 117.72 293 P **PKiKP 11 21 47.1 +0.4**
baz=144
MVCO Mesa Verde 117.73 296 P **PKiKP 11 21 47.0 +0.2**
baz=144
AKASG Malin Array Be 117.77 36 PKP **PKPdf 11 21 44.9 -1.2**
comp=Z,0.5nm,0.5s,baz=243,slow=1.0,SNR=2.3
SWSC Sam W. Stewart 117.80 288 P **PKiKP 11 21 47.0 +0.3**
baz=144
OGNE Ogallala 117.85 303 P **PKiKP 11 21 46.9 +0.2**
baz=145
MONP2 Monument Peak 118.07 288 P **PKiKP 11 21 48.1 +0.5**
baz=144
SCHQ Schefferville 118.08 334 PKP **PKPdf 11 21 45.7 -0.9**
comp=Z,2.2nm,0.5s,baz=110,slow=1.6,SNR=5.6
PDMCI Parker Dam,Lak 118.08 290 P **PKiKP 11 21 47.7 +0.4**
baz=144
BC3 Big Chuckawall 118.20 289 P **PKiKP 11 21 48.0 +0.3**
baz=144
IRM Iron Mountain 118.46 289 P **PKiKP 11 21 48.6 +0.6**
baz=144
TPFO Pinon Flats 118.66 288 P **PKiKP 11 21 49.1 +0.5**
baz=144
PFO Pinyon Flats O 118.67 288 P **PKiKP 11 21 49.1 +0.5**
baz=144
BELC Belle Mtn. Jos 118.75 289 P **PKiKP 11 21 49.2 +0.5**
baz=144
SCI2 San Clemente I 119.20 286 P **PKiKP 11 21 50.2 +0.8**
baz=144
GMRC Granite Mounta 119.21 289 P **PKiKP 11 21 50.2 +0.6**
baz=144
BBRC Big Bear Solar 119.42 288 P **PKiKP 11 21 50.6 +0.4**
baz=143
N23A Red Feather La 119.54 301 P **PKiKP 11 21 50.7 +0.4**
baz=144
FMP Fort Macarthur 119.66 287 P **PKiKP 11 21 51.2 +0.9**
baz=143
BFSC Mount Baldy Ra 119.76 288 P **PKPdf 11 21 50.4 -0.2**
baz=143
TUQ Turquoise Moun 119.86 290 P **PKiKP 11 21 51.1 +0.2**
baz=143
O20A White River Ci 119.97 299 P **PKiKP 11 21 51.2 +0.2**
baz=144
GSC Goldstone, Bar 120.19 289 P **PKiKP 11 21 51.8 +0.3**
baz=143
SRU San Rafael Swe 120.20 296 **PKPdf 11 21 51.5 +0.1**
SRU San Rafael Swe 120.20 296 PKIKP **PKPdf 11 21 51.5 +0.1**
SHPR Sheep Range 120.34 291 **PKiKP 11 21 52.9 +1.0**
SHOC Shoshone, Teco 120.40 290 P **PKiKP 11 21 52.6 +0.8**
baz=143
EDW2 Edwards Air Fo 120.44 288 P **PKiKP 11 21 52.6 +0.7**
baz=143
MVU Marysvale 120.52 295 **PKiKP 11 21 53.4 +1.1**
MNK Minsk 120.71 33 *i* PKIKP **PKPdf 11 21 48.6 -3.0**
MNK *i* 11 28 57.9
MNK *i* PS **PS 11 33 08.9 -2.3**
MNK *i* SS SS 11 39 47.3 -1.3
MNK *i* SSS SSS 11 44 15.6
MNK pmax pmax
comp=N,24nm,0.8s
MNK pmax pmax
comp=Z,6.0nm,0.6s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK MLR MLR
comp=Z,78nm,13.0s
MNK MLR MLR
comp=N,6μm,21.0s
MNK MLR MLR
comp=E,144nm,19.0s
MNK Minsk 120.71 33 *i* PKP **PKPdf 11 21 48.6 -3.0**
comp=E,2.0nm,0.8s
MNK *i* PKP **PKPdf 11 21 48.6 -3.0**
comp=N,24nm,0.8s
MNK *i* PKP **PKPdf 11 21 48.6 -3.0**
comp=Z,6.0nm,0.7s,baz=29
MNK *i* PP **PP 11 23 17.2 -3.6**
MNK *i* PPP PPP 11 25 51.2
MNK *i* SKS **SKSdf 11 28 58.0 -2.1**
MNK *i* PS **PS 11 33 09.0 -2.3**
MNK *i* SS **SS 11 39 47.4 -1.2**
MNK *i* SSS SSS 11 44 15.7
MNK *i* LR LR 12 11 13.6
MNK *i* LRM MLR 12 13 01.5
comp=Z,78nm,12.8s
MNK *i* LRM MLR 12 13 28.3
comp=N,6μm,21.1s
MNK *i* LRM MLR 12 13 47.5
comp=E,144nm,19.2s
RWWY Rawlins 120.74 300 **PKiKP 11 21 52.7 +0.1**
LRMC Laurel Mtn Rad 120.76 288 P **PKiKP 11 21 52.8 +0.1**
baz=143
MPMC Manual Prospec 121.13 289 P **PKiKP 11 21 53.8 +0.4**
baz=143
FURC Furnace Creek, 121.14 290 P **PKiKP 11 21 53.9 +0.7**
baz=143
K22A Casper 121.20 302 **PKPdf 11 21 53.3 +0.1**
TPNV Topopah Spring 121.22 291 P **PKiKP 11 21 54.3 +0.7**
baz=143
RSSD Black Hills 121.29 304 **PKPdf 11 21 53.5 +0.1**
RSSD Black Hills 121.29 304 PKIKP **PKPdf 11 21 53.5 +0.1**
ISA Isabella, Lake 121.30 288 P **PKiKP 11 21 54.4 +0.8**
baz=143
CWC Cottonwood Cre 121.72 289 P **PKiKP 11 21 55.0 +0.4**
baz=142
VES Vestal, Richgr 121.75 288 P **PKiKP 11 21 54.9 +0.5**
baz=142
R11A Troy Canyon, C 122.01 292 P **PKiKP 11 21 55.3 +0.2**
baz=142
DUG Dugway, Tooele 122.14 295 P **PKiKP 11 21 55.7 +0.5**
baz=142,SNR=5.1
HFS Hagfors 122.40 22 PKP **PKPdf 11 21 53.3 -1.3**
comp=E,1.4nm,0.6s,baz=159,slow=4.5,SNR=5.7
PD31 Pinedale Array 122.66 299 **PKPdf 11 21 55.9 -0.2**
PDAR Pinedale Array 122.66 299 PKP **PKPdf 11 21 54.7 -1.4**
comp=E,1.3nm,0.5s,baz=126,slow=5.6,SNR=27
NOA NORSAR Array B 122.78 20 PKP **PKPdf 11 21 55.4 -0.1**
comp=E,0.1nm,0.4s,baz=194,slow=1.7,SNR=4.0
CMAR Chiang Mai Arr 123.11 110 PKP **PKPdf 11 21 57.1 -0.3**
comp=E,1.6nm,0.7s,baz=234,slow=3.8,SNR=8.7
NVAR Mina Array Bea 123.39 290 PKP **PKiKP 11 21 58.5 +0.6**
comp=E,2.3nm,0.6s,baz=135,slow=3.1,SNR=25
LOHW Long Hollow 123.79 299 **PKiKP 11 21 58.9 +0.4**
VSU Vasula 123.86 30 *i* PKIKP **PKPdf 11 21 55.9 -1.6**
LAO LASA Array 124.26 305 P **PKiKP 11 21 59.4 +0.3**
baz=142
RLMT Red Lodge 124.37 301 P **PKiKP 11 21 59.8 +0.2**
baz=141
H17A Grant Village 124.39 300 P **PKiKP 11 22 00.4 +0.7**
baz=141
DGMT Dagmar 124.80 307 P **PKiKP 11 22 00.6 +0.5**
baz=142
HEL Helsinki 124.91 28 PKIKP **PKPdf 11 21 54.8 -4.6**
BELG Belogornoye 125.46 46 *i* PKIKP **PKPdf 11 22 00.6 -0.1**
BELG pmax pmax
comp=Z,3.0nm,1.3s
HLID Hailey 125.51 297 P **PKiKP 11 22 02.2 +0.4**
baz=140
BOZ Bozeman (W) 125.79 300 P **PKiKP 11 22 02.9 +0.6**
baz=140
FINES FINESS Array B 126.29 28 PKP **PKPdf 11 22 01.7 -0.3**
comp=Z,2.5nm,0.5s,baz=146,slow=2.6,SNR=24
EGMT Eagleton 126.82 303 P **PKiKP 11 22 05.1 +1.0**
baz=140
MSO Missoula 127.77 300 P **PKiKP 11 22 06.1 0.0**
baz=139,SNR=8.4
ABKAR Abkulak array 128.02 56 **PKiKP 11 22 06.3 -0.2**
ABKAR Abkulak array 128.02 56 **PKiKP 11 22 06.2 -0.2**
G08A Pilot Rock 128.94 295 **PKiKP 11 22 08.9 +0.4**
AAK Ala-Archa 129.85 71 *i* PKIKP **PKPdf 11 22 09.6 -0.1**
AAK pmax pmax
comp=Z,1.0nm,0.9s
PZH PanZhiHua 131.27 108 PKP **PKPdf 11 22 12.6 -0.3**
ARU Arti 132.70 49 PKIKP PKiKP 11 22 28.2 +13
ARCES ARCESS Array B 133.07 22 PKP **PKPdf 11 22 14.9 +0.1**
comp=Z,3.3nm,0.6s,baz=182,slow=1.6,SNR=13
BRVK Borovoye 135.28 59 *i* PKIKP **PKiKP 11 22 20.7 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
CD2 Chengdu 135.88 106 *e*PKP **PKPdf 11 22 21.8 +0.5**
MKAR Makanchi Array 136.70 73 PKP **PKPdf 11 22 21.8 -0.5**
comp=Z,0.4nm,0.5s,baz=204,slow=2.7,SNR=3.1
MKAR SKPbc **SKPbc 11 25 51.1 -0.7**
comp=Z,0.3nm,0.8s,baz=224,slow=7.0,SNR=3.8
WMQ Urumqi 137.37 80 *e*PKP **PKiKP 11 22 25.1 -0.5**
KURBB Kurchatov Arra 137.46 66 PKP **PKPdf 11 22 23.5 0.0**
comp=Z,1.1nm,0.6s,baz=228,slow=2.5,SNR=4.1
KURK Kurchatov 137.56 66 PKIKP **PKPdf 11 22 23.5 -0.2**
YKA Yellowknife Ar 138.88 315 PKhKP PKPpre 11 22 19.2
comp=Z,0.7nm,0.6s,baz=126,slow=3.5,SNR=5.1
YKA PKP **PKPdf 11 22 26.0 +0.3**
comp=Z,8.0nm,0.6s,baz=131,slow=2.3,SNR=33
XAN Xi'an 140.97 109 *e*PKP **PKiKP 11 22 35.7 +2.4**
XAN sPKP 11 22 49.9
ZALV Zalesovo Beam 142.55 66 PKhKP PKPpre 11 22 27.7
comp=Z,1.3nm,0.4s,baz=224,slow=3.8,SNR=3.8
WTLY Watson Lake, Y 143.13 306 **PKPdf 11 22 33.0 -0.6**
S32K Kilisnoo 144.25 299 P **PKPdf 11 22 35.8 +0.4**
baz=123
R32K Eaglecrest 144.65 300 P PKPbc 11 22 35.4 +0.2
baz=122,SNR=6.0
P33M Teslin, Yukon 144.90 304 P **PKPab 11 22 36.1 +0.1**
baz=120,SNR=16
P32M Atlin 144.98 303 P PKPbc 11 22 36.3 +0.1
baz=121,SNR=8.3
MMPY Sheldon Lake, 145.43 308 P **PKPab 11 22 38.2 +0.4**
baz=118
N32M Quiet Lake 145.48 305 P **PKPbc 11 22 37.9 +0.1**
baz=119
SKAG Skagway 145.62 302 **PKPab 11 22 39.3 +0.7**
SKAG Skagway 145.62 302 P **PKPab 11 22 38.8 +0.2**
baz=120
C36M Paulatuk 145.73 321 P **PKPab 11 22 38.8 +0.2**
baz=114
WHY Whitehorse 146.01 304 P **PKPbc 11 22 39.4 -0.1**
baz=119
PLBC Pleasant Camp 146.08 301 P **PKPbc 11 22 39.7 +0.1**
baz=120
FARO Faro, Yukon 146.10 307 P **PKPab 11 22 40.3 -0.1**
baz=118,SNR=5.7
HNS HongShan 146.48 112 ⇑PKPbc **PKPbc 11 22 41.8 +0.3**
M31M Drury Creek, Y 146.53 307 P **PKPbc 11 22 40.9 0.0**
baz=117,SNR=9.2
O30N Mendenhall 146.59 304 P **PKPab 11 22 41.9 -0.5**
baz=118
P30M Million Dollar 146.66 302 P **PKPab 11 22 42.2 -0.4**
baz=118
P29M Windy Craggy 146.78 301 P **PKPab 11 22 42.6 -0.5**
baz=119
N31M Braeburn, Yuko 146.79 305 P **PKPab 11 22 42.5 -0.5**
baz=117
A36M Sachs Harbour 147.07 326 P **PKPbc 11 22 42.4 +0.3**
baz=109
HYT Haines Junctio 147.23 303 P **PKPbc 11 22 43.2 +0.1**
baz=117
PNL Peninsula 147.54 300 P **PKPbc 11 22 43.9 +0.1**
baz=118
HHC Hu-ho-hao-te 147.58 104 *e*PKPbc **PKPdf 11 22 42.6 +0.7**
MAYO Mayo, Yukon 147.75 308 P **PKPbc 11 22 44.6 +0.3**
baz=114,SNR=5.5
YUK4 Talbot Arm 147.96 304 P **PKPbc 11 22 45.7 +0.6**
baz=116
PINM Pinnacle 148.12 301 P **PKPbc 11 22 45.9 +0.5**
baz=117
M29M Somme Creek 148.34 305 P **PKPbc 11 22 46.2 +0.2**
baz=114,SNR=8.4
F31M Tsiigehtchic 148.35 316 P **PKPbc 11 22 45.5 -0.2**
baz=110,SNR=9.5
O28M Mount Upton 148.39 302 P **PKPbc 11 22 46.7 +0.4**
baz=116,SNR=7.3
L29M L29M 148.47 307 P **PKPbc 11 22 46.6 +0.4**
baz=113,SNR=16
K29M Barlow Dome 148.51 308 P **PKPbc 11 22 46.4 0.0**
baz=113,SNR=11
INK Inuvik 148.56 317 P **PKPbc 11 22 46.3 +0.1**
baz=108
MESA MESA 148.92 300 P **PKPbc 11 22 47.6 0.0**
baz=116
YUK3 Moose Creek 148.93 304 P **PKPbc 11 22 47.7 +0.1**
baz=114
CTG Chitna Glacier 148.98 302 P **PKPbc 11 22 48.0 +0.3**
baz=115,SNR=8.7
EPYK Eagle Plains 149.10 313 P **PKPbc 11 22 47.7 0.0**
baz=109
G30M tAoh Zraii Nji 149.11 314 P **PKPbc 11 22 47.9 +0.2**
baz=109
MOY Mondy 149.25 79 *e*PKP2 **PKPbc 11 22 49.2 +0.6**
MOY pmax pmax
comp=Z,23nm,2.5s
BJI Beijing 149.26 110 PKPbc **PKPbc 11 22 48.9 +0.1**
BVCY Beaver Creek 149.36 305 P **PKPbc 11 22 48.7 +0.2**
baz=113
DAWY Dawson 149.36 308 P **PKPbc 11 22 48.2 -0.2**
baz=111
I29M Ogilvie Camp, 149.38 311 P **PKPbc 11 22 48.0 -0.4**
baz=110,SNR=5.7
ZAK Zakamensk 149.69 83 *e*PKP2 **PKPbc 11 22 49.4 -0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
SONM Songino Array 149.75 90 PKPbc **PKPbc 11 22 49.5 -0.5**
comp=Z,5.1nm,0.7s,baz=225,slow=2.8,SNR=18
M27K Edge Creek, AK 149.77 304 P **PKPbc 11 22 49.7 +0.1**
baz=112,SNR=9.6
MCARA McCarthy VSAT 149.90 302 P **PKPbc 11 22 50.1 +0.3**
baz=113
KAIM Kayak Island 149.93 299 P **PKiKP 11 22 50.6 -0.1**
baz=115
L27K Beaver Creek, 150.01 305 P **PKPbc 11 22 50.4 +0.4**
baz=111,SNR=17
VRDI Verde Repeater 150.02 301 **PKiKP 11 22 51.0 -0.2**
VRDI PKPab **PKPab 11 22 57.7 +1.4**
M26K Nabesna, AK 150.27 304 P **PKiKP 11 22 51.6 +0.1**
baz=112
EGAK Eagle 150.32 309 **PKPbc 11 22 51.0 +0.4**
EGAK Eagle 150.32 309 P **PKPbc 11 22 50.9 +0.2**
baz=109,SNR=8.3
NRIK Noril'sk 150.40 41 PKP **PKPdf 11 22 43.3 -2.1**
comp=Z,3.1nm,0.5s,baz=162,slow=4.1,SNR=4.9
NRIK PKPbc **PKPbc 11 22 50.5 -0.2**
comp=Z,3.6nm,0.6s,baz=180,slow=1.0,SNR=5.3
BMRM Bremner River 150.44 301 P **PKiKP 11 22 51.7 -0.1**
baz=113,SNR=5.9
K27K Chicken 150.46 307 P **PKiKP 11 22 51.7 0.0**
baz=110
L26K Log Cabin Wild 150.65 305 P **PKPbc 11 22 51.9 +0.3**
baz=110,SNR=13
N25K Chitina, Valde 150.68 302 P **PKiKP 11 22 52.7 +0.3**
baz=112,SNR=16
I27K Kandik River 150.76 310 P **PKiKP 11 22 52.4 0.0**
baz=107,SNR=26
EYAK Cordova Ski Ar 150.79 299 P **PKiKP 11 22 52.6 +0.1**
baz=113,SNR=12
H27K Steamboat Moun 150.91 312 P **PKiKP 11 22 52.7 0.0**
baz=106,SNR=41
G27K Doyon Strip 151.11 313 P **PKPbc 11 22 52.7 +0.2**
baz=105,SNR=11
HARP HAARP 151.21 303 P **PKPbc 11 22 53.1 +0.3**
baz=110
J26L Joseph Creek 151.22 308 P **PKiKP 11 22 53.6 +0.2**
baz=108,SNR=41
KLU Klutina 151.23 301 P **PKiKP 11 22 53.8 +0.3**
baz=112,SNR=5.7
SCRK Sand Creek 151.24 307 P **PKiKP 11 22 53.7 +0.2**
baz=108,SNR=38
I26K Coal Creek Min 151.29 309 P **PKiKP 11 22 53.4 0.0**
baz=107
E27K Coleen River 151.42 316 P **PKiKP 11 22 53.6 -0.1**
baz=103,SNR=19
RIDG Independent Ri 151.52 306 P **PKiKP 11 22 54.3 +0.3**
baz=108,SNR=43
GLI Glacier Island 151.53 299 P **PKPbc 11 22 53.7 +0.1**
baz=112
PAX Paxson 151.54 304 P **PKPbc 11 22 53.9 +0.2**
baz=109,SNR=14
M24K Tolsona, Glenn 151.56 302 P **PKiKP 11 22 54.8 +0.6**
baz=110,SNR=12
K24K Donnelly Dome 151.94 306 P **PKPbc 11 22 54.7 +0.2**
baz=108,SNR=5.7
G26K Porcupine Rive 151.97 313 P **PKiKP 11 22 54.9 +0.2**
baz=103,SNR=37
SCM Sheep Creek Mo 151.97 301 P **PKiKP 11 22 55.2 +0.2**
baz=110,SNR=6.3
J25K Salcha River, 152.00 307 P **PKiKP 11 22 55.1 +0.1**
baz=106,SNR=25
PWL Port Wells 152.08 299 P **PKiKP 11 22 55.3 +0.1**
baz=111,SNR=13
XLT XiLinHaoTe 152.09 105 *e*PKPbc **PKPbc 11 22 55.7 +0.1**
XLT AMB AMB
comp=Z,220nm,4.4s
M23K Glacier View 152.14 301 P **PKiKP 11 22 55.3 0.0**
baz=110
F26K Sheenjek River 152.26 314 P **PKiKP 11 22 56.1 +0.7**
baz=102,SNR=33
PRP Porcupine Dome 152.31 309 P **PKPbc 11 22 55.6 +0.2**
baz=105,SNR=23
SEW Seward 152.32 297 P **PKPbc 11 22 55.5 +0.1**
baz=112
KNK Knik Glacier 152.34 300 P **PKiKP 11 22 55.8 +0.1**
baz=110
DHY Denali Highway 152.40 304 P **PKiKP 11 22 56.3 +0.3**
baz=108,SNR=14
WAT6 Susitna Watana 152.40 303 P **PKiKP 11 22 56.0 0.0**
baz=108,SNR=24
SML Sawmill 152.41 301 P **PKPbc 11 22 55.9 +0.2**
baz=110
C27K Jago River 152.44 318 P **PKiKP 11 22 56.2 +0.5**
baz=98
JHJ Habhijo jima 2 152.45 152 PKPbc **PKPbc 11 22 55.1 -1.4**
comp=Z,96nm,1.0s,baz=260,slow=17,SNR=2.8
KSRS Korea Array 152.47 129 PKPbc **PKPbc 11 22 56.6 +0.1**
comp=Z,1.2nm,0.6s,baz=198,slow=0.9,SNR=3.3
KSRS PKPab **PKPab 11 23 06.7 -0.2**
comp=Z,2.3nm,0.8s,baz=259,slow=1.3,SNR=4.5
O22K Cooper Landing 152.58 298 P **PKiKP 11 22 56.2 +0.1**
baz=111
HDA Harding Lake 152.60 307 P **PKPbc 11 22 55.9 -0.1**
baz=106,SNR=14
H25K Birch Creek 152.60 311 P **PKiKP 11 22 56.4 +0.3**
baz=103,SNR=6.4
ILAR Eielson Array 152.67 307 PKPbc **PKPbc 11 22 56.0 0.0**
comp=Z,13nm,0.6s,baz=137,slow=6.0,SNR=158
PMR Palmer 152.70 300 P **PKPbc 11 22 56.4 +0.2**
baz=110,SNR=5.7
BRSE Bradley Lake S 152.79 296 P **PKPbc 11 22 56.6 +0.1**
baz=112
F25K Christian Rive 152.80 314 P **PKiKP 11 22 57.1 +0.6**
baz=101,SNR=17
RC01 Rabbit Creek A 152.81 299 P **PKiKP 11 22 56.9 +0.2**
baz=110,SNR=6.1
G25K Bearman Lake 152.82 312 P **PKiKP 11 22 57.3 +0.8**
baz=102,SNR=15
WAT1 Susitna Watana 152.84 303 P **PKPbc 11 22 56.7 +0.2**
baz=108
E25K Arctic Village 152.87 315 P **PKiKP 11 22 57.1 +0.5**
baz=100,SNR=22
KDAK Kodiak Island 152.89 291 P **PKPbc 11 22 56.8 +0.1**
baz=115
POKR Poker Plat Res 152.98 308 P **PKPbc 11 22 56.9 +0.2**
baz=104
OHAK Old Harbor 153.00 289 P **PKPbc 11 22 56.9 0.0**
baz=116
COLA College 153.10 307 **PKiKP 11 22 57.2 +0.1**
COLA College 153.10 307 PKIKP **PKiKP 11 22 57.2 +0.1**
COLA College 153.10 307 P **PKPbc 11 22 56.7 -0.2**
baz=104
TCOL CIGO, UAF Yank 153.10 307 P **PKPbc 11 22 56.8 -0.2**
baz=104,SNR=7.8
M22K Willow 153.20 300 P **PKiKP 11 22 57.8 +0.4**
baz=109,SNR=6.3
MCK McKinley 153.26 305 P **PKPbc 11 22 57.5 +0.1**
baz=106,SNR=17
H24K Noodor Dome 153.33 309 P **PKiKP 11 22 57.8 +0.1**
baz=102,SNR=8.6
D25K Kavik River 153.33 317 P **PKPbc 11 22 57.3 -0.1**
baz=97,SNR=10
G24K Hadweenzic Riv 153.34 311 P **PKiKP 11 22 58.3 +0.7**
baz=101,SNR=14
SUA Susitna One 153.39 299 P **PKiKP 11 22 58.3 +0.3**
baz=109
CUT Chulitna 153.47 301 P **PKiKP 11 22 58.5 +0.6**
baz=107
NEA2 Nenana 153.54 306 P **PKPbc 11 22 57.6 -0.4**
baz=104,SNR=16
CHIR Chirikof Islan 153.54 285 P **PKiKP 11 22 58.6 +0.3**
baz=117
F24K Squaw Lake 153.64 313 P **PKiKP 11 22 59.0 +0.7**
baz=99,SNR=6.3
TRF Thorofare Moun 153.77 304 P **PKiKP 11 22 59.0 +0.2**
baz=105,SNR=7.7
I23K Minto, Yukon-K 153.78 308 P **PKPbc 11 22 58.1 -0.4**
baz=103
Q19K Cape Douglas, 153.86 293 P **PKPbc 11 22 58.9 0.0**
baz=112
SKT Skwentna 153.91 300 P **PKPbc 11 22 58.9 0.0**
baz=107,SNR=9.9
P19K Oil Pt 153.93 294 P **PKPbc 11 22 58.8 -0.2**
baz=111
E24K Your Creek 153.94 314 P **PKiKP 11 22 59.5 +0.6**
baz=97,SNR=13
N20K Mount Spurr 153.97 298 P **PKPbc 11 22 59.0 -0.1**
baz=108
SPCR Spur Chakacha 153.97 298 P **PKiKP 11 22 59.5 +0.3**
baz=108
H23K Yukon River 154.00 309 P **PKPbc 11 22 59.1 +0.1**
baz=101
C24K Franklin Bluff 154.18 318 P **PKiKP 11 22 59.3 +0.1**
baz=94
D24K Happy Valley 154.18 317 P **PKPbc 11 22 59.3 +0.1**
baz=95
BPAW Bear Paw Mtn. 154.23 305 P **PKPbc 11 22 59.6 +0.1**
baz=104,SNR=22
MLY Manley 154.33 307 P **PKiKP 11 23 00.1 +0.3**
baz=102,SNR=6.3
G23K Bananza Creek 154.34 311 P **PKiKP 11 23 00.4 +0.7**
baz=99,SNR=9.6
E23K Chandalar 154.36 314 P **PKiKP 11 23 00.1 +0.3**
baz=96
TOLK Toolik Lake Re 154.41 316 P **PKiKP 11 23 00.3 +0.4**
baz=95,SNR=29
Q18K Katmai Hardscr 154.41 292 P **PKPbc 11 22 59.9 -0.2**
baz=112
PPLA Purkeypile 154.46 302 P **PKiKP 11 23 00.3 +0.1**
baz=105
COLD Coldfoot 154.49 312 P **PKiKP 11 23 00.7 +0.8**
baz=98,SNR=7.0
CAST Castle Rocks 154.54 303 P **PKPbc 11 22 59.8 -0.4**
baz=104,SNR=9.8
M20K Styx River 154.60 299 P **PKPbc 11 23 00.3 -0.1**
baz=107
O19K Port Alsworth 154.63 295 P **PKPbc 11 23 00.4 0.0**
baz=109
Q17K Contact Creek 154.69 290 P **PKPbc 11 23 00.5 -0.3**

baz=112
R17K Ugashik Creek 154.70 289 P **PKPbc 11 23 00.8 +0.1**
baz=114
CHUM Lake Minchumin 154.75 304 P **PKPbc 11 23 00.6 0.0**
baz=103
H22K Ishtalitna Cre 154.75 309 P **PKiKP 11 23 00.9 +0.3**
baz=100
P18K Big Mountain, 154.79 293 P **PKPbc 11 23 00.2 -0.6**
baz=111
D23K Nanushuk River 154.83 316 P **PKPbc 11 23 00.6 0.0**
baz=94
C23K Itkillik River 154.85 318 P **PKiKP 11 23 01.2 +0.5**
baz=92
I21K Tanana 154.88 307 P **PKiKP 11 23 01.0 +0.2**
baz=101
N19K Bonanza Creek 154.91 297 P **PKPbc 11 23 00.8 -0.4**
baz=108
O18K Koktuh Hills 154.94 294 P PKPbc 11 23 00.8 -0.3
baz=110
G22K Bettles 154.95 311 P **PKiKP 11 23 01.5 +0.6**
baz=97
CHGN Chignik 155.16 285 P PKPdf 11 23 01.8 +9.1
baz=115
M19K Big River Lodg 155.18 299 P PKPdf 11 23 01.9 +9.3
baz=106
Q16K King Salmon 155.22 291 P PKPdf 11 23 01.9 +9.1
baz=111
MJAR Matsushiro Arr 155.26 147 PKPab **PKPab 11 23 17.6 -1.2**
comp=Z,0.7nm,0.5s,baz=190,slow=5.9,SNR=2.4
F22K John River 155.28 313 P PKPdf 11 23 02.5 +10
baz=95
H21K Melozitna Rive 155.29 308 P PKPdf 11 23 02.4 +10
baz=99
K20K Telida 155.40 303 P PKPdf 11 23 02.2 +9.3
baz=103
CN2 Changchun 156.58 117 *e*PKP **PKPdf 11 22 55.7 +0.6**
PETK Petropavlovsk- 174.10 197 PKPab **PKPab 11 24 40.1 -1.0**
comp=Z,1.7nm,0.6s,baz=134,slow=4.2,SNR=6.1

IDC 05 11:27:12.7±2.6, 30°.54N×140°.36E, h0km, mb3.4/2, mbtmp3.3/4, ML2.3/2, MS3.3/1, Error ellipse: s-maj=184.9km s-min=20.9km az=84.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.62 349**		Pn	Pn	11 27 55.8	-0.6
	1.4nm,0.3s,baz=225,slow=17,SNR=1.3						
JHJ				Sn	Sn	11 28 27.7	-1.1
	5.7nm,0.3s,baz=198,slow=20,SNR=1.6						
	30nm,0.6s						
MJAR	**Matsushiro Arr**	**6.25 344**		Pn	Pn	11 28 47.8	+1.6
	0.1nm,0.3s,baz=157,slow=16,SNR=4.1						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**50.52 187**		P	P	11 36 12.7	-0.2
	0.3nm,0.5s,baz=4.0,slow=7.5,SNR=12						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**54.25 187**		P	P	11 36 40.4	-0.1
	0.2nm,0.7s,baz=359,slow=5.2,SNR=4.5						
	0.2nm,0.7s						
DZM	**Mont Dzumac**	**58.00 151**		LR	LR	11 59 52.9	
	comp=Z,28nm,19.4s,baz=212,slow=34						

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*IDC **05** 11:37:10.7±0.5, 1°.93S×123°.52E, h0km, mb4.1/20, mbtmp4.1/22, ML4.5/4, MS3.6/23, Error ellipse: s-maj=18.6km s-min=12.2km az=81.0*
*DJA **05** 11:37:14.9±0.3, 2°.S±2°×12°.4E±°, h18km±2km, M4.8/29, mb5.1/21, mB5.3/13, MLv5.0/29, Mw(mB)4.7/13, MwMwp4.7/1, Mwp5.0/1*
*NEIC **05** 11:37:16.4±1.7, 2°.02S±0°.06×123°.54E±0°.06, h30km±5km, mb4.5/18, Error ellipse: s-maj=9.4km s-min=7.2km az=222.0*

ISC 05 11:37:16.1±0.4, 2°.03S±0°.05×123°.53E±0°.05, h35km, n124, σ1§52/111, mb4.4/25, MS3.7/19, 6D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.23 322**			**Pn**	**11 37 37.6**	**+0.7**
LUWI				Sn	**Sn**	**11 37 54.8**	**+2.4**
LUWI	**Luwuk**	**1.23 322**		P	**Pn**	**11 37 35.9**	**-1.0**
APSI	**Ampana**	**2.18 301**		P	**Pn**	**11 37 50.5**	**+0.6**
SANI	**Sanana**	**2.46 91**		P	**Pn**	**11 37 51.5**	**-2.3**
KMSI	**Cibinong**	**2.62 10**		P	**Pn**	**11 37 56.5**	**+0.5**
GTOI	**Gorontalo**	**2.69 349**		P	**Pn**	**11 37 58.9**	**+1.9**
KKSI	**Kolaka, Sulawe**	**2.83 229**		P	**Pn**	**11 37 57.6**	**-1.4**
MRSI	**Marisa**	**2.95 327**		P	**Pn**	**11 38 00.7**	**+0.2**
NLAI	**Namlea**	**3.77 109**		P	**Pn**	**11 38 12.4**	**+0.6**
TTSI	**Tana Toraja**	**3.84 255**		P	**Pn**	**11 38 12.8**	**0.0**
BNSI	**Bone**	**4.15 235**		P	**Pn**	**11 38 16.9**	**-0.1**
TOLI2	**Tolitoli**	**4.15 319**			**Pn**	**11 38 17.7**	**+0.7**
LBMI	**Labuha**	**4.21 71**		P	**Pn**	**11 38 18.2**	**+0.4**
SPSI	**Sidrap Palu**	**4.22 243**		P	**Pn**	**11 38 18.8**	**+0.9**
MPSI	**Mapaga**	**4.32 303**		P	**Pn**	**11 38 19.5**	**+0.1**
BKSI	**Bulukumba**	**4.72 226**		P	**Pn**	**11 38 25.9**	**+1.1**
TNTI	**Ternate**	**4.74 54**			**Pn**	**11 38 25.6**	**+0.5**
TNTI	**Ternate**	**4.74 54**		P	**Pn**	**11 38 25.6**	**+0.5**
KAPI	**Kappang**	**4.79 232**		Pn	**Pn**	**11 38 26.6**	**+0.7**
	50nm,0.3s,baz=50,slow=5.4,SNR=43						
KAPI				Sn	**Sn**	**11 39 19.9**	**-0.4**
	45nm,0.3s,baz=107,slow=19,SNR=15						
KAPI				LR	LR	11 40 38.6	
	comp=Z,464nm,18.7s,baz=64,slow=43						
	128nm,0.4s						
KAPI	**Kappang**	**4.79 232**			**Pn**	**11 38 26.8**	**+0.9**
KAPI	**Kappang**	**4.79 232**		P	**Pn**	**11 38 26.3**	**+0.4**
PMSI	**Majene**	**4.83 252**		P	**Pn**	**11 38 27.2**	**+0.7**
AAI	**Ambon**	**4.95 110**		P	**Pn**	**11 38 30.9**	**+2.9**
KRAI	**Karang Ratu**	**5.03 105**		P	**Pn**	**11 38 31.7**	**+2.5**
	1.2nm4μm278nm,0.8s						
BSSI	**Bau Bau, Buton**	**5.09 216**		P	**Pn**	**11 38 30.2**	**+0.3**
	1.1nm3μm294nm,0.5s						
MSAI	**Masohi**	**5.55 104**		P	**Pn**	**11 38 39.3**	**+3.0**
	0.1nm985nm31nm,0.6s						
GAMI	**Galela, Maluku**	**5.74 48**		P	**Pn**	**11 38 39.6**	**+0.7**
	0.7nm3μm157nm,0.6s						
SGSI	**Sangihe**	**6.02 19**		P	**Pn**	**11 38 45.0**	**+2.3**
	1.1nm4μm139nm,0.7s						
SMKI	**Samarinda**	**6.51 284**		P	**Pn**	**11 38 52.0**	**+2.5**
	1.3nm9μm388nm,0.7s						
BKB	**Balikpapan**	**6.67 276**			**Pn**	**11 38 52.2**	**+0.5**
BKB	**Balikpapan**	**6.67 276**		P	**Pn**	**11 38 51.6**	**-0.1**
	1.2nm3μm308nm,0.6s						
MMRI	**Maumere**	**6.69 191**			**Pn**	**11 38 51.9**	**-0.1**
MMRI	**Maumere**	**6.69 191**		P	**Pn**	**11 38 51.5**	**-0.5**
	0.6nm135nm,0.7s						
BNDI	**Bandanaira**	**6.83 111**		P	**Pn**	**11 38 54.5**	**+0.6**
	1.3nm3μm35μm363nm,1.3s						
EDFI	**Ende, Flores**	**6.92 195**		P	**Pn**	**11 38 55.0**	**-0.3**
	0.2nm849nm26nm,0.8s						
SOEI	**Soe**	**7.71 175**			**Pn**	**11 39 07.8**	**+1.6**
SOEI	**Soe**	**7.71 175**		P	**Pn**	**11 39 08.6**	**+2.5**
	0.8nm2μm296nm,0.8s						
SIJI	**Sorong**	**7.82 82**		Pn	**Pn**	**11 39 07.4**	**-0.1**
	13nm,0.3s,baz=258,slow=10,SNR=36						
SIJI				Sn	**Sn**	**11 40 35.0**	**+0.1**
	1.1nm,0.3s,baz=180,slow=20,SNR=7.9						
SIJI				LR	LR	11 43 15.6	
	comp=Z,190nm,18.4s,baz=253,slow=47						
SIJI	**Sorong**	**7.82 82**		P	**Pn**	**11 39 07.3**	**-0.2**
BATI	**Baumata**	**8.13 179**		Pn	**Pn**	**11 39 12.4**	**+0.7**
	9.1nm,0.3s,baz=37,slow=20,SNR=15						
BATI	**Baumata**	**8.13 179**		P	**Pn**	**11 39 14.8**	**+3.1**
	102nm,0.9s						
DDMP	**Don Marcelino,**	**8.37 15**	‖	*e*P	**Pn**	**11 39 17.8**	**+2.8**
SKMP	**Bagumbayan, Su**	**8.55 7**	‖	*e*P	**Pn**	**11 39 18.6**	**+1.1**
MYLDM	**Lahad Datu**	**8.74 325**			**Pn**	**11 39 20.7**	**+0.5**
MYLDM	**Lahad Datu**	**8.74 325**		P	Pn	11 39 31.9	+12
FAKI	**Fak Fak**	**8.76 96**		Pn	**Pn**	**11 39 19.9**	**-0.5**
FAKI	**Fak Fak**	**8.76 96**		P	**Pn**	**11 39 19.0**	**-1.4**
	555nm55nm,1.0s						
DAV	**Davao City (W)**	**9.27 13**		LR	LR	11 43 52.8	
	comp=Z,344nm,18.9s,baz=166,slow=44						
MATI	**Mati**	**9.32 17**	‖	*e*P	Pn	11 39 33.1	+5.0
PAGZ	**Pagadian**	**9.81 359**	‖	*e*P	**Pn**	**11 39 39.1**	**+4.3**
BIPH	**Bislig**	**10.53 16**	‖	*e*P	**Pn**	**11 39 44.4**	**-0.3**
SBUM	**Sibu**	**12.15 291**		Pn	**Pn**	**11 40 07.0**	**+0.2**
SBUM	**Sibu**	**12.15 291**		P	**P**	**11 40 17.7**	**-1.3**
MTN	**Manton Dam**	**13.12 145**		Pn	**Pn**	**11 40 20.9**	**+0.7**
KNRA	**Kununurra**	**14.51 159**		Pn	**Pn**	**11 40 38.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**16.11 173**		Pn	**Pn**	**11 40 59.0**	**-1.0**
	0.3nm,0.3s,baz=7.0,slow=7.8,SNR=8.9						
FITZ				LR	LR	11 48 22.4	
	comp=Z,344nm,18.9s,baz=166,slow=42						
	4.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**16.11 173**			**Pn**	**11 40 59.4**	**-0.6**
LQP	**Lukban**	**16.16 353**	‖	*e*P	**Pn**	**11 41 00.3**	**-0.5**
GENI	**Genyem**	**16.64 92**		P	**P**	**11 41 08.4**	**-0.5**
	61nm,1.2s						
DSRI	**Dabo**	**19.00 274**		P	Pn	11 41 48.5	+13
MBWA	**Marble Bar**	**19.37 191**			**Pn**	**11 41 40.5**	**+0.2**
PSA00	**Pilbara Seismi**	**19.76 190**		P	**Pn**	**11 41 48.9**	**+4.0**
PSA00				IAmb	IAmb	11 41 49.3	
	comp=Z,16nm,1.2s						
PSA00	**Pilbara Seismi**	**19.76 190**		P	**Pn**	**11 41 48.9**	**+4.0**
WB0	**Warramunga Arr**	**20.59 150**		P	**P**	**11 41 53.0**	**+0.7**
WRAB	**Tennant Creek**	**20.70 150**		P	**P**	**11 41 53.2**	**-0.3**
WRAB				IAmb	IAmb	11 42 02.7	
	comp=Z,34nm,1.1s						
WRA	**Warramunga Arr**	**20.71 150**		P	**P**	**11 41 53.6**	**0.0**
	comp=Z,3.9nm,1.0s,baz=324,slow=11,SNR=18						
WRA				LR	LR	11 50 12.2	
	comp=Z,89nm,19.0s,baz=352,slow=38						
	comp=Z,3.9nm,1.0s						
WB2	**Warramunga Arr**	**20.71 150**		P	**P**	**11 41 54.0**	**+0.3**
WB2				IAmb	IAmb	11 42 02.8	
	comp=Z,34nm,1.1s						
WR0	**Warramunga Arr**	**20.82 150**		P	**P**	**11 41 55.3**	**+0.5**
WR0				IAmb	IAmb	11 42 08.6	
	comp=Z,26nm,1.0s						
SDSI	**Sungai Dareh**	**22.12 272**		P	P	11 42 19.7	+11
COEN	**Coen**	**22.75 122**		P	**P**	**11 42 13.8**	**-1.8**
COEN				IAmb	IAmb	11 42 25.1	
	comp=Z,18nm,1.0s						
AS31	**Alice Springs**	**23.74 156**		P	**P**	**11 42 24.9**	**-0.5**
AS31				IAmb	IAmb	11 42 32.9	
	comp=Z,6.0nm,0.8s						
ASAR	**Alice Springs**	**23.74 156**		P	**P**	**11 42 25.9**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=340,slow=15,SNR=13						
ASAR				PcP	**PcP**	**11 46 08.7**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=345,slow=1.8,SNR=1.6						
	comp=Z,2.2nm,0.9s						
ASAR	**Alice Springs**	**23.74 156**		P	**P**	**11 42 26.9**	**+1.6**
MNSI	**Mandailing Nat**	**24.11 276**		P	P	11 42 43.0	+14
RPSI	**Rantau Prapat**	**25.04 281**		P	**P**	**11 42 35.5**	**-1.8**
PSI	**Prapat**	**25.06 281**		P	**P**	**11 42 35.5**	**-2.1**
	comp=Z,3.3nm,0.5s,baz=179,slow=5.2,SNR=1.6						
	comp=Z,3.3nm,0.5s						
PSI	**Prapat**	**25.06 281**		P	sP	11 42 52.5	+0.6
	comp=Z,23nm,1.2s						
PSI				pP	**pP**	**11 42 43.0**	**-4.6**
	comp=Z,23nm,1.2s						
PSI				P	sP	11 42 52.5	+0.6
	comp=Z,23nm,1.2s						
FORT	**Forrest**	**28.92 172**		P	**P**	**11 43 13.4**	**+1.4**
FORT				IAmb	IAmb	11 43 18.8	
	comp=Z,14nm,0.8s						
JOW	**Kunigami**	**29.05 9**		LR	LR	11 54 55.1	
	comp=Z,54nm,21.9s,baz=281,slow=37						
CMAR	**Chiang Mai Arr**	**31.62 311**		P	**P**	**11 43 36.7**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=135,slow=6.6,SNR=7.0						
CMAR				LR	LR	11 58 26.5	
	comp=Z,80nm,19.7s,baz=135,slow=40						
	comp=Z,0.7nm,0.5s						
JCJ	**Chichijima**	**34.09 31**		P	**P**	**11 43 57.1**	**-0.4**
	comp=Z,47nm,0.7s,baz=232,slow=15,SNR=2.1						
JCJ				LR	LR	11 56 10.7	
	comp=Z,32nm,21.8s,baz=114,slow=34						
STKA	**Stephens Creek**	**34.23 152**		P	**P**	**11 43 58.2**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=301,slow=10,SNR=2.0						
	comp=Z,1.5nm,0.6s						
PZH	**PanZhiHua**	**35.31 325**		P	**P**	**11 44 10.0**	**+1.7**
XAN	**Xi'an**	**38.42 340**		*e*P	**P**	**11 44 34.2**	**-0.3**
XAN				pP	pP	11 44 44.1	-0.6
KSRS	**Korea Array**	**39.49 6**		P	**P**	**11 44 42.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=174,slow=8.1,SNR=4.2						
	comp=Z,1.3nm,0.8s						
BRDH	**Bariadhala**	**39.62 310**		LR	LR	12 02 21.0	
	comp=Z,92nm,21.5s,baz=105,slow=38						
MJAR	**Matsushiro Arr**	**40.74 18**		P	**P**	**11 44 52.1**	**-1.6**
	comp=Z,5.5nm,0.7s,baz=140,slow=7.8,SNR=2.7						
	comp=Z,5.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**44.05 347**		*e*P	**P**	**11 45 24.7**	**+4.0**
GTA	**Gaotai**	**46.63 335**		*e*P	P	11 45 53.4	+12
GTA				sP	sP	11 46 02.3	+6.5
USA0B	**Ussuriysk Arra**	**46.64 8**		P	**P**	**11 45 41.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**46.64 8**		P	**P**	**11 45 40.4**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=197,slow=5.1,SNR=16						
	comp=Z,2.9nm,0.5s						
KLR	**Kul'dur**	**51.55 7**		P	**P**	**11 46 17.4**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=196,slow=7.0,SNR=6.4						
KLR				LR	LR	12 07 23.9	
	comp=Z,40nm,21.3s,baz=188,slow=35						
	comp=Z,1.1nm,0.5s						
ULN	**Ulaanbaatar**	**51.73 346**		P	**P**	**11 46 20.1**	**-0.1**
ULN				IAmb	IAmb	11 46 21.2	
	comp=Z,4.6nm,0.8s						
ULN	**Ulaanbaatar**	**51.73 346**		P	**P**	**11 46 20.9**	**+0.7**
	comp=Z,28nm,1.4s						
SONM	**Songino Array**	**51.87 345**		P	**P**	**11 46 19.2**	**-1.9**
	comp=Z,3.6nm,0.7s,baz=163,slow=8.2,SNR=15						
SONM				LR	LR	12 08 59.1	
	comp=Z,41nm,21.1s,baz=88,slow=37						
	comp=Z,3.6nm,0.7s						
SONM	**Songino Array**	**51.87 345**		P	**P**	**11 46 21.3**	**+0.1**
SONM				IAmb	IAmb	11 46 22.1	
	comp=Z,3.9nm,0.8s						
WMQ	**Urumqi**	**55.79 329**		*e*P	**P**	**11 46 52.9**	**+3.0**
RPZ	**Rata Peaks**	**59.10 141**		LR	LR	12 13 58.6	
	comp=Z,124nm,18.1s,baz=278,slow=37						
MK31	**Makanchi Array**	**60.60 329**		P	**P**	**11 47 22.7**	**-0.7**
MK31				IAmb	IAmb	11 47 25.3	
	comp=Z,3.9nm,0.8s						
MKAR	**Makanchi Array**	**60.60 329**		P	**P**	**11 47 22.2**	**-1.2**
	comp=Z,4.3nm,0.8s,baz=117,slow=8.4,SNR=22						
MKAR				PcP	**PcP**	**11 48 07.7**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=129,slow=5.2,SNR=5.1						
	comp=Z,4.3nm,0.8s						
MKAR	**Makanchi Array**	**60.60 329**		P	**P**	**11 47 22.6**	**-0.8**
PETK	**Petropavlovsk-**	**61.94 23**		P	**P**	**11 47 31.2**	**-1.0**
	comp=Z,3.7nm,0.8s,baz=193,slow=5.9,SNR=3.0						
	comp=Z,3.7nm,0.8s						
PETK	**Petropavlovsk-**	**61.94 23**		P	**P**	**11 47 33.3**	**+1.0**
AAK	**Ala-Archa**	**62.63 321**		LR	LR	12 16 19.9	
	comp=Z,40nm,18.6s,baz=360,slow=38						
ZALV	**Zalesovo Beam**	**64.36 336**		P	**P**	**11 47 46.4**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=98,slow=11,SNR=4.1						
	comp=Z,0.6nm,0.3s						
KURK	**Kurchatov**	**64.98 330**		P	**P**	**11 47 51.6**	**-0.8**
SEY	**Seymchan**	**68.33 14**		P	**P**	**11 48 14.4**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=241,slow=4.0,SNR=6.0						
	comp=Z,3.7nm,0.8s						
BRVK	**Borovoye**	**70.55 329**		P	**P**	**11 48 28.1**	**+0.6**
ABKAR	**Akbulak array**	**74.65 323**		P	**P**	**11 48 53.4**	**+1.4**
NRIK	**Noril'sk**	**75.27 348**		P	**P**	**11 48 55.1**	**0.0**
	comp=Z,5.1nm,0.8s,baz=136,slow=6.1,SNR=5.8						
	comp=Z,5.1nm,0.8s						
MAW	**Mawson**	**77.28 200**		P	**P**	**11 49 08.4**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=35,slow=11,SNR=2.9						
MAW				LR	LR	12 23 19.4	
	comp=Z,34nm,18.2s,baz=41,slow=36						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**78.18 172**		P	**P**	**11 49 11.0**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=244,slow=7.8,SNR=1.9						
VNDA				LR	LR	12 23 02.1	
	comp=Z,48nm,18.8s,baz=324,slow=35						
	comp=Z,0.3nm,0.7s						
KVAR	**Kislovodsk Arr**	**84.80 314**		LR	LR	12 32 26.0	
	comp=Z,115nm,20.5s,baz=212,slow=39						
QSPA	**South Pole Qui**	**87.92 180**		LR	LR	12 29 20.8	
	comp=Z,45nm,19.2s,baz=340,slow=36						
KLMR	**Klimovskoe**	**88.83 331**		*e*P	**P**	**11 50 03.4**	**-2.9**
KLMR				AMP		11 50 04.4	
	comp=Z,19nm,1.9s						
EIL	**Elat**	**89.75 300**		LR	LR	12 36 11.2	
	comp=Z,27nm,18.2s,baz=260,slow=40						
BRTR	**Keskin Array B**	**91.19 310**		P	**P**	**11 50 18.4**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=138,slow=8.3,SNR=4.1						
	comp=Z,1.1nm,0.9s						
ILAR	**Eielson Array**	**91.64 25**		P	**P**	**11 50 18.4**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=242,slow=4.4,SNR=4.6						
ILAR				LR	LR	12 27 46.5	
	comp=Z,18nm,21.6s,baz=258,slow=33						
	comp=Z,0.2nm,0.5s						
AKASG	**Malin Array Be**	**94.29 321**		P	**P**	**11 50 31.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=85,slow=4.4,SNR=4.1						
	comp=Z,0.5nm,0.5s						
LSZ	**Lusaka**	**94.62 255**		LR	LR	12 29 28.5	
	comp=Z,49nm,18.5s,baz=133,slow=33						
ARCES	**ARCESS Array B**	**94.70 340**		LR	LR	12 36 42.7	
	comp=Z,32nm,19.9s,baz=248,slow=38						
BOSA	**Boshof**	**96.30 241**		LR	LR	12 28 20.7	
	comp=Z,47nm,20.9s,baz=159,slow=32						
LBTB	**Lobatse**	**96.33 245**		LR	LR	12 33 50.9	
	comp=Z,30nm,19.9s,baz=88,slow=35						
TORD	**Torodi Ar. Bea**	**121.43 284**		PKP	**PKPdf**	**11 56 06.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=70,slow=0.5,SNR=1.7						

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*JMA **05** 11:42:12.3±0.2, 35°.8N±0°.4×140°.1E±0°.7, h63km±1km, MV3.1/40, NORTHERN CHIBA PREF*
*IDC **05** 11:42:13.7±1.6, 35°.55N×139°.93E, h72km±16km, mb3.4/3, mbtmp3.7/4, Error ellipse: s-maj=24.7km s-min=7.7km az=71.0*

ISC 05 11:42:13.0±1.0, 35°.69N±0°.05×140°.02E±0°.05, h70km±8km, n24, σ0§98/26, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.21 269**		P	**Pn**	**11 42 23.4**	**-0.2**
JCN	**Nagara**	**0.31 151**		P	**Pn**	**11 42 24.1**	**-0.1**
JSMT	**Sammumatsuo**	**0.36 98**		*i* P	**Pn**	**11 42 23.8**	**-0.7**
JAG	**Ashikaga**	**0.86 328**		*i* P	**Pn**	**11 42 28.2**	**-1.6**
JOD2	**Odawara 2**	**0.87 241**		*i* P	**Pn**	**11 42 29.3**	**-0.6**
JOD2				S	**Sn**	**11 42 41.9**	**-0.5**
JRY	**Ryogami san**	**0.96 290**		*i* P	**Pn**	**11 42 30.7**	**-0.3**
BSO3	**Boso 3**	**0.98 155**		P	**Pn**	**11 42 30.1**	**-0.8**
BSO3				S	**Sn**	**11 42 44.9**	**+0.7**
JIM2	**Oshima 3**	**1.08 206**		P	**Pn**	**11 42 31.5**	**-1.0**
JFNN	**Fujinakano**	**1.19 246**		P	**Pn**	**11 42 33.6**	**-0.4**
JFNN				S	**Sn**	**11 42 50.0**	**+0.4**
JYN	**Shimob**	**1.21 261**		*i* P	**Pn**	**11 42 34.0**	**-0.3**
JYN				S	**Sn**	**11 42 50.9**	**+0.7**
JKT	**Katashina**	**1.24 330**		P	**Pn**	**11 42 33.0**	**-1.6**
BSO1	**Boso 1**	**1.30 142**		P	**Pn**	**11 42 33.8**	**-1.0**
BSO1				*e*S	**Sn**	**11 42 52.0**	**+0.7**
JIZS	**Izushimoda**	**1.34 224**		*i* P	**Pn**	**11 42 35.5**	**-0.4**
JIZS				S	**Sn**	**11 42 52.9**	**-0.2**
MJAR	**Matsushiro Arr**	**1.69 301**		P	**Pn**	**11 42 39.4**	**-1.1**
	30nm,0.3s,baz=126,slow=37,SNR=94						
MJAR				S	**Sn**	**11 43 02.2**	**+0.9**
	19nm,0.4s,baz=104,slow=18,SNR=4.3						
JHJ	**Hachijo jima 2**	**2.57 184**		P	**Pn**	**11 42 51.9**	**-0.5**
	61nm,0.3s,baz=57,slow=17,SNR=17						
JHJ				S	**Sn**	**11 43 20.6**	**-2.0**
	154nm,0.4s,baz=90,slow=20,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**28.49 117**		T	T	12 17 43.5	
	baz=308,slow=74,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**28.50 117**		T	T	12 17 56.9	
	baz=308,slow=74,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**28.51 117**		T	T	12 17 52.7	
	baz=308,slow=74,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**29.14 119**		T	T	12 18 21.5	
	baz=312,slow=75						
H11S3	**WAKE ISLAND Hy**	**29.14 119**		T	T	12 18 12.4	
	baz=312,slow=75						
H11S2	**WAKE ISLAND Hy**	**29.16 119**		T	T	12 18 13.6	
	baz=312,slow=75						
ILAR	**Eielson Array**	**51.23 32**		P	**P**	**11 51 10.4**	**+1.5**
	0.5nm,0.8s,baz=280,slow=6.3,SNR=4.4						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**55.59 186**		P	**P**	**11 51 40.3**	**-1.1**
	1.1nm,0.5s,baz=359,slow=7.5,SNR=33						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**59.32 187**		P	**P**	**11 52 08.3**	**+0.7**
	0.3nm,0.5s,baz=1.6,slow=9.2,SNR=4.1						
	0.3nm,0.5s						

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*BJI **05** 11:56:50.0±0.0, 36°.30N×142°.10E, h10km, mb4.6/13, mB4.8/6, Ms4.2/1, Ms7 4.2/2*
*IDC **05** 11:56:50.7±0.7, 36°.23N×141°.96E, h0km, mb3.9/17, mbtmp3.9/22, ML2.5/2, MS3.4/5, Error ellipse: s-maj=16.6km s-min=15.4km az=140.0*
*MOS **05** 11:56:52.0±0.9, 36°.23N×141°.94E, h20km, mb4.4/20, Error ellipse: s-maj=11.6km s-min=7.2km az=120.6*
*NEIC **05** 11:56:54.7±1.0, 36°.29N±0°.06×142°.1E±0°.1, h34km±9km, mb4.2/9, Error ellipse: s-maj=14.8km s-min=2.8km az=122.0*
*JMA **05** 11:56:55.3±0.2, 36°.3N±0°.4×14°.2E±°, h46km, MV3.9/38, FAR E OFF IBARAKI PREF*
*NIED **05** 11:56:55.3, 36°.32N×141°.80E, h46km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.64; Mθθ0.18; Mφφ-0.81; Mrθ0.22; Mrφ-0.50; Mθφ0.93; Fault plane solution: M0 1.27000×10^15 NP1: φs220.00000°, δ22.00000°, λ115.00000°. NP2: φs13.00000°, δ70.00000°, λ80.00000°.*

ISC 05 11:56:54.8±3.6, 36°.24N±0°.04×141°.94E±0°.06, h27km±26km, n98, σ1§34/96, mb4.2/34, MS3.5/5, 5C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.03 239**		P	**Pn**	**11 57 13.0**	**-0.4**
CHOJ				S	**Sn**	**11 57 25.7**	**-1.2**
JHYU	**Hitachinakayam**	**1.10

H11S3 WAKE ISLAND Hy 28.07 122 T T 12 32 59.4
baz=314,slow=75,SNR=13
H11S2 WAKE ISLAND Hy 28.09 122 T T 12 32 59.9
baz=314,slow=75,SNR=10
ULN Ulaanbaatar 28.16 305 P **P** **12 02 43.8 -1.1**
ULN Ulaanbaatar 28.16 305 *ce*P **P** **12 02 45.5 +0.7**
ULN pmax pmax
comp=Z,11nm,2.5s
SONM Songino Array 28.58 305 P **P** **12 02 48.3 -0.3**
comp=Z,4.9nm,0.8s,baz=101,slow=8.9,SNR=16
comp=Z,4.9nm,0.8s
SONM Songino Array 28.58 305 P **P** **12 02 47.2 -1.4**
SONM IAmb IAmb 12 02 50.7
comp=Z,4.1nm,1.0s
SONM Songino Array 28.58 305 P **P** **12 02 47.2 -1.4**
SONM pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 34.67 16 *e*P **P** **12 03 44.4 +2.7**
BILL pmax pmax
comp=Z,4.0nm,1.0s
TIXI Tiksi 36.13 353 *i*P **P** **12 03 54.8 +0.7**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
GOMU GeErMu 37.72 284 P **P** **12 04 06.7 -1.9**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
GOMU pmax pmax
comp=Z,120nm,5.0s
DGZ Jazzator, Alta 41.20 307 *i*P **P** **12 04 38.0 +0.8**
DGZ pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 41.52 257 P **P** **12 04 39.5 -0.5**
CHTO Chiang Mai 41.52 257 P **P** **12 04 39.5 -0.5**
CM31 Chiang Mai Arr 41.72 257 P **P** **12 04 41.2 -0.3**
CM31 IAmb IAmb 12 04 42.3
comp=Z,2.7nm,0.6s
CMAR Chiang Mai Arr 41.72 257 P **P** **12 04 41.3 -0.3**
comp=Z,0.9nm,0.7s,baz=45,slow=5.8,SNR=8.4
comp=Z,0.9nm,0.7s
CMAR Chiang Mai Arr 41.72 257 P **P** **12 04 40.8 -0.8**
CMAR Chiang Mai Arr 41.72 257 *i*P **P** **12 04 42.0 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
ZALV Zalesovo Beam 42.76 313 P **P** **12 04 49.6 -0.1**
comp=Z,1.0nm,0.3s,baz=96,slow=7.6,SNR=7.9
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 42.76 313 P **P** **12 04 48.4 -1.3**
ZALV Zalesovo Beam 42.76 313 *i*P **P** **12 04 50.0 +0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
NRIK Noril'sk 44.16 336 LR LR 12 24 53.5
comp=Z,60nm,18.6s,baz=172,slow=38
NRIK Noril'sk 44.16 336 *i*P **P** **12 05 01.7 +1.0**
NRIK pmax pmax
comp=Z,7.0nm,1.4s
MK31 Makanchi Array 44.90 303 P **P** **12 05 07.0 0.0**
MK31 IAmb IAmb 12 05 10.5
comp=Z,3.9nm,0.9s
MK31 Makanchi Array 44.90 303 P **P** **12 05 07.0 0.0**
MK31 pmax pmax
comp=Z,4.0nm,1.0s
MKAR Makanchi Array 44.90 303 P **P** **12 05 07.2 +0.2**
comp=Z,2.5nm,0.6s,baz=88,slow=9.8,SNR=19
MKAR LR LR 12 23 40.0
comp=Z,37nm,19.3s,baz=122,slow=36
comp=Z,2.5nm,0.6s
MKAR Makanchi Array 44.90 303 P **P** **12 05 07.1 +0.1**
KURK Kurchatov 46.76 309 P **P** **12 05 20.8 -0.7**
KURK Kurchatov 46.76 309 P **P** **12 05 20.8 -0.7**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KDAK Kodiak Island 47.41 41 P **P** **12 05 26.9 +0.5**
comp=Z,4.1nm,0.8s,baz=307,slow=5.1,SNR=2.1
comp=Z,4.1nm,0.8s
ILAR Eielson Array 49.94 32 P **P** **12 05 46.6 +0.7**
comp=Z,0.5nm,0.8s,baz=248,slow=7.1,SNR=5.1
comp=Z,0.5nm,0.8s
AAK Ala-Archa 51.24 299 *ce*P **P** **12 05 56.4 +0.2**
AAK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 51.48 313 *ce*P **P** **12 05 58.3 +0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 54.90 27 P **P** **12 06 23.6 +1.0**
comp=Z,0.8nm,0.5s,baz=333,slow=12,SNR=4.2
comp=Z,0.8nm,0.5s
WRAB Tennant Creek 56.33 189 *i*P **P** **12 06 34.3 +1.0**
WRA Warramunga Arr 56.34 189 P **P** **12 06 33.4 -0.1**
comp=Z,0.4nm,0.4s,baz=6.5,slow=7.4,SNR=11
comp=Z,0.4nm,0.4s
ARU Arti 57.24 319 *i*P **P** **12 06 39.0 -0.4**
ARU pmax pmax
comp=Z,2.0nm,0.9s
ABKAR Akbulak array 58.78 311 P **P** **12 06 50.0 -0.4**
ABKAR IAmb IAmb 12 06 51.1
comp=Z,1.3nm,0.7s
ASAR Alice Springs 60.06 189 P **P** **12 06 59.1 -0.3**
comp=Z,0.4nm,0.8s,baz=15,slow=5.2,SNR=4.8
comp=Z,0.4nm,0.8s
BELG Belogornoye 64.67 317 *i*P **P** **12 07 31.2 +1.2**
BELG pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 69.71 333 P **P** **12 08 02.0 +0.2**
comp=Z,3.1nm,0.9s,baz=72,slow=4.5,SNR=2.1
FINES LR LR 12 40 05.1
comp=Z,51nm,19.0s,baz=220,slow=37
comp=Z,3.1nm,0.9s
KBZ Khabaz 71.74 311 *i*P **P** **12 08 15.6 +1.1**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KIV Kislovodsk 71.75 311 *e*P **P** **12 08 15.6 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s
SHA1 Shidzhatmaz 71.88 311 *i*P **P** **12 08 16.4 +0.8**
NOA NORSAR Array B 75.08 338 P **P** **12 08 34.3 +0.4**
comp=Z,1.4nm,0.9s,baz=54,slow=4.6,SNR=3.2
comp=Z,1.4nm,0.9s
NVAR Mina Array Bea 75.12 53 P **P** **12 08 34.5 -0.3**
comp=Z,0.2nm,0.7s,baz=268,slow=4.5,SNR=2.1
comp=Z,0.2nm,0.7s
AKASG Malin Array Be 75.19 323 P **P** **12 08 34.5 -0.1**
comp=Z,1.3nm,0.5s,baz=44,slow=4.8,SNR=6.4
comp=Z,1.3nm,0.5s
AKASG Malin Array Be 75.19 323 *ce*P **P** **12 08 35.0 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
PDAR Pinedale Array 77.92 46 P **P** **12 08 50.5 0.0**
comp=Z,0.1nm,0.6s,baz=246,slow=1.6,SNR=1.6
comp=Z,0.1nm,0.6s
BRTR Keskin Array B 79.70 312 P **P** **12 09 00.5 +0.2**
comp=Z,0.8nm,0.8s,baz=63,slow=6.1,SNR=3.5
comp=Z,0.8nm,0.8s
BRTR Keskin Array B 79.70 312 *ce*P **P** **12 09 01.0 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
CRVS Cervenica-Dubn 80.11 325 *e*P **P** **12 09 01.4 -0.8**
CRVS *e* 12 09 11.9
MLR Muntele Rosu 80.27 320 LR LR 12 47 54.4
comp=Z,64nm,18.2s,baz=91,slow=38
CLL Collm 82.00 330 *e*P **P** **12 09 13.0 +0.9**
CLL Collm 82.00 330 *e*P **P** **12 09 13.0 +0.9**
GERES GERESS Array B 83.61 329 P **P** **12 09 19.6 -1.0**
comp=Z,0.3nm,0.3s,baz=37,slow=8.6,SNR=2.5
comp=Z,0.3nm,0.3s
TXAR Lajitas Array 90.27 53 P **P** **12 09 53.6 +0.1**
comp=Z,0.3nm,0.9s,baz=299,slow=5.6,SNR=2.0
comp=Z,0.3nm,0.9s
LPAZ La Paz 146.72 61 PKPbc **PKPbc** **12 16 35.5 +0.2**
comp=Z,0.8nm,0.5s,baz=2.9,slow=6.7,SNR=3.7

MAN 05 11:57:34.3, 9.87N×126.02E, h9km, mb4.5, ML3.4, MS3.2, 10D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.14**	**129**	‖ *e*P	Pg	11 57 38.2	+0.7
SCPH	**Surigao**	**0.53**	**260**	‖ *i*P	Pb	11 57 45.6	-0.1
SCPH				*i* S	Sn	11 57 55.4	-1.8
BUTP	**Butuan**	**0.98**	**203**	‖ *e*P	Pg	11 57 52.2	-0.9
MSLP	**Maasin**	**1.17**	**283**	‖ *e*P	Pb	11 57 56.8	0.0
TABP	**Talibon, Bohol**	**1.67**	**278**	‖ *e*P	Pn	11 58 02.7	-1.1
TABP				*e*S	Sn	11 58 25.1	-0.3
BIPH	**Bislig**	**1.71**	**168**	‖ *i*P	Pn	11 58 00.5	-3.8
BIPH				*i* S	Sn	11 58 24.8	-1.6
CGP	**Cagayan de Oro**	**1.92**	**223**	‖ *e*P	Pn	11 58 07.6	+0.3
CGP				*e*S	Sb	11 58 33.1	-0.6
TBP	**Tagbilaran**	**2.13**	**265**	*e*P	Pn	11 58 08.7	-1.4
TBP				*i* S	Sb	11 58 39.9	+0.1
CNP	**Catarman**	**2.94**	**333**	‖ *e*P	Pn	11 58 22.1	+0.9
PAGZ	**Pagadian**	**3.29**	**233**	‖ *e*P	Pn	11 58 28.2	+2.1
CNOP	**Candoni, Negro**	**3.33**	**270**	‖ *e*P	Pn	11 58 27.2	+0.6

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*MAN **05** 12:07:37.2, 6.57N×125.63E, h210km, mb4.7, ML3.5, MS3.4*
*IDC **05** 12:08:57.6±29.0, 0.02S×126.22E, h578km±83km, mb3.0/3, mbtmp4.2/5, Error ellipse: s-maj=425.3km s-min=88.3km az=165.0*
ISC 05 12:07:37.1±0.9, 6.43N±0.09×125.65E±0.10, h200km, n12, σ1§52/14, mb4.0/4, 2C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.33**	**168**	‖ *e*P	**Pn**	**12 08 05.9**	**+2.2**
MATI	**Mati**	**0.80**	**50**	‖ *e*P	**Pn**	**12 08 07.7**	**+2.1**
KCP	**Kidapawan**	**0.80**	**316**	‖ *e*P	**Pn**	**12 08 06.5**	**+0.8**
KCP				*i* S	**Sn**	**12 08 30.3**	**+2.4**
SKMP	**Bagumbayan, Su**	**1.10**	**275**	‖ *e*P	**Pn**	**12 08 08.9**	**+1.4**
CTBH	**Cotabato--PC H**	**1.60**	**300**	‖ *e*P	**Pn**	**12 08 12.2**	**+0.6**
BIPH	**Bislig**	**1.88**	**22**	‖ *i*P	**Pn**	**12 08 14.8**	**+0.3**
BIPH				*i* S	**Sn**	**12 08 43.3**	**-0.3**
PAGZ	**Pagadian**	**2.65**	**302**	‖ *e*P	**Pn**	**12 08 22.9**	**+0.3**
BATI	**Baumata**	**16.64**	**187**	P	**Pn**	**12 11 19.7**	**+0.4**
	25nm,0.4s,baz=82,slow=7.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.37**	**180**	P	**P**	**12 12 35.4**	**-1.6**
	2.5nm,0.3s,baz=2.3,slow=8.7,SNR=45						
WRA	**Warramunga Arr**	**27.57**	**162**	P	**P**	**12 13 04.0**	**-1.7**
	1.3nm,0.9s,baz=332,slow=10,SNR=20						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**30.98**	**165**	P	**P**	**12 13 34.5**	**-1.3**
	1.2nm,0.5s,baz=340,slow=7.3,SNR=39						
	1.2nm,0.5s						
STKA	**Stephens Creek**	**41.02**	**159**	P	**P**	**12 15 00.3**	**-0.5**
	1.9nm,0.3s,baz=342,slow=7.6,SNR=8.8						
	1.9nm,0.3s						

IDC 05 12:11:15.5±3.4, 15.34N×145.97E, h107km±27km, mb3.2/4, mbtmp3.6/5, Error ellipse: s-maj=50.8km s-min=24.6km az=95.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.05**	**212**	P	Pn	12 11 50.1	+1.1
	215nm,0.2s,baz=34,slow=3.6,SNR=80						
GUMO				S	Sn	12 12 14.8	+0.3
	116nm,0.3s,baz=343,slow=19,SNR=13						
GUMO	**Guam**	**2.05**	**212**	P	Pn	12 11 53.2	+4.2
H11N1	**WAKE ISLAND Hy**	**20.41**	**75**	T	T	12 37 22.9	
	baz=267						
H11N2	**WAKE ISLAND Hy**	**20.42**	**75**	T	T	12 37 00.7	
	baz=267						
H11N3	**WAKE ISLAND Hy**	**20.43**	**75**	T	T	12 37 10.3	
	baz=267						
WRA	**Warramunga Arr**	**36.88**	**198**	P	P	12 18 14.0	0.0
	0.6nm,0.9s,baz=12,slow=8.5,SNR=5.0						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**40.53**	**197**	P	P	12 18 44.1	-0.3
	0.1nm,0.4s,baz=22,slow=12,SNR=1.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**60.99**	**315**	P	P	12 21 18.1	+0.3
	1.2nm,0.4s,baz=93,slow=8.1,SNR=11						
	1.2nm,0.4s						
ILAR	**Eielson Array**	**66.53**	**26**	P	P	12 21 52.8	-0.9
	0.2nm,0.5s,baz=263,slow=5.6,SNR=1.9						
	0.2nm,0.5s						

IDC 05 12:14:39.0±4.7, 37.22N×78.74E, h0km, mb3.8/3, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=98.9km s-min=30.4km az=125.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**9.93**	**14**	Pn	Pn	12 17 05.9	+3.0
	0.4nm,0.3s,baz=202,slow=13,SNR=12						
MKAR				Sn	Sn	12 18 51.5	-3.6
	0.5nm,0.3s,baz=197,slow=24,SNR=6.7						
	0.4nm,0.4s						
GEYT	**Alibeck**	**16.36**	**279**	Pn	P	12 18 31.8	-1.4
	0.4nm,0.3s,baz=87,slow=12,SNR=4.2						
	2.7nm,0.5s						
FINES	**FINESS Array B**	**40.46**	**324**	P	P	12 22 18.7	-0.3
	2.0nm,0.9s,baz=112,slow=11,SNR=1.2						
	2.0nm,0.9s						
NOA	**NORSAR Array B**	**47.57**	**322**	P	P	12 23 15.9	-0.3
	0.5nm,0.5s,baz=88,slow=7.8,SNR=1.9						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**71.91**	**273**	P	P	12 26 04.2	-0.3
	0.5nm,0.5s,baz=50,slow=6.5,SNR=6.2						
	0.5nm,0.5s						

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*SNET **05** 12:24:19.4±0.9, 1.57N×83.72W, h0km±999km*
*IDC **05** 12:24:33.8±0.9, 2.82N×84.47W, h0km, mb4.0/8, mbtmp4.1/10, ML3.9/2, MS3.7/35, Error ellipse: s-maj=43.8km s-min=17.3km az=51.0*
*NEIC **05** 12:24:35.2±0.9, 2.74N±0.06×84.38W±0.03, h10km±2km, mb4.4/37, Error ellipse: s-maj=11.8km s-min=3.9km az=157.0*
*GCMT **05** 12:24:38.2±0.3, 2.64N±0.02×84.47W±0.02, h21km±1km, MW4.8/80, Moment Tensor Solution. s13,c13; s80,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.12±.09; $M_{\theta\theta}$0.72±.08; $M_{\phi\phi}$-0.60±.09; $M_{r\theta}$-0.01±.13; $M_{\theta\phi}$1.68±.08; $M_{r\phi}$0.19±.14; Best double couple: $M_0$1.81600×10^{16} NP1:ϕ_s191.00000°, δ88.00000°, λ-174.00000°. NP2: ϕ_s101.00000°, δ84.00000°, λ-2.00000°. Principal axes: T 1.8710, Plg3.0000°, Azm326.0000°; N -0.1110, Plg84.0000°, Azm208.0000°; P -1.7610, Plg6.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 12:24:37.2±0.5, 2.71N±0.07×84.36W±0.07, h26km, n155, σ1§83/106, mb4.3/23, MS3.8/30, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FLF1	**Flavio Alfaro-**	**5.45**	**124**	*e*P	**Pn**	**12 25 55.1**	**-1.7**
OTAV	**Otavalo**	**6.40**	**112**	Pn	**Pn**	**12 26 10.2**	**-0.1**
OTAV	**Otavalo**	**6.40**	**112**	*e*P	**Pn**	**12 26 10.1**	**-0.2**
SRBA	**San Rafael, Bu**	**6.55**	**9**		**Pn**	**12 26 11.8**	**-0.3**
SLOR	**San Lorenzo -**	**6.79**	**120**		**Pn**	**12 26 15.2**	**-0.4**
PAYG	**Puerto Ayora**	**6.81**	**240**	Pn	**Pn**	**12 26 15.1**	**-0.5**
PAYG	**Puerto Ayora**	**6.81**	**240**	*e*P	**Pn**	**12 26 16.0**	**+0.5**
TULM	**Tulcn-Chalpat**	**6.86**	**107**		**Pn**	**12 26 16.3**	**-0.5**
TULM	**Tulcn-Chalpat**	**6.86**	**107**	*e*P	**Pn**	**12 26 16.2**	**-0.5**
JACO	**JACO, Garabito**	**6.91**	**358**	Pn	**Pn**	**12 26 15.7**	**-1.2**
PIAT	**Ana Tenorio**	**7.12**	**121**	*e*P	**Pn**	**12 26 19.8**	**-0.4**
BBAC	**Balboa, Cauca**	**7.14**	**95**	*e*P	**Pn**	**12 26 22.7**	**+2.4**
GCUF	**Volcan Galeras**	**7.17**	**102**	*e*P	**Pn**	**12 26 21.2**	**+0.3**
BONI	**La Bonita**	**7.19**	**108**	*e*P	**Pn**	**12 26 23.4**	**+2.5**
HDC	**Heredia**	**7.25**	**2**		Pn	12 26 16.7	-5.0
BATAN	**Batan**	**7.40**	**8**		**Pn**	**12 26 20.5**	**-3.2**
DUNO	**Dulce Nombre,**	**7.41**	**351**		**Pn**	**12 26 22.7**	**-1.0**
CRUC	**La Cruz**	**7.49**	**99**	*e*P	**Pn**	**12 26 26.5**	**+1.3**
JTS	**Las Juntas de**	**7.55**	**356**		**Pn**	**12 26 25.2**	**-0.6**
JTS	**Las Juntas de**	**7.55**	**356**	*e*P	**Pn**	**12 26 23.9**	**-1.9**
ARNL	**Arenillas**	**7.55**	**145**	Pn	**Pn**	**12 26 24.1**	**-1.6**
ORTG	**Ortega, Santa**	**7.68**	**352**	Pn	**Pn**	**12 26 26.7**	**-0.8**
COVE	**Coope Vega, Sa**	**7.96**	**360**		**Pn**	**12 26 32.8**	**+1.6**
HZTE	**Horizontes, Gu**	**8.04**	**351**		**Pn**	**12 26 31.5**	**-1.0**
YOTC	**Yotoco, Valle**	**8.10**	**81**	*e*P	**Pn**	**12 26 30.2**	**-3.2**
BOSC	**San Juan Bosco**	**8.26**	**135**		**Pn**	**12 26 36.4**	**+0.7**
MCRA	**Macar, Loja**	**8.30**	**148**		**Pn**	**12 26 35.4**	**-0.6**
MCRA	**Macar, Loja**	**8.30**	**148**	*e*P	**Pn**	**12 26 34.0**	**-2.0**
PLMC	**San Jos del P**	**8.35**	**75**	*e*P	**Pn**	**12 26 38.6**	**+1.9**
FLOC	**Florencia**	**8.78**	**97**	*e*P	**Pn**	**12 26 43.6**	**+1.1**
GARC	**Garzon, Huila**	**8.88**	**93**	*e*P	Pn	12 26 56.5	+12
CBOC	**Ciudad Bolivar**	**8.89**	**69**	*e*P	**Pn**	**12 26 44.6**	**+0.3**
BETC	**Betania**	**8.91**	**90**	*e*P	**Pn**	**12 26 47.7**	**+3.3**
ACON	**Acoyapa**	**9.23**	**355**		**Pn**	**12 26 48.6**	**-0.1**
ACON	**Acoyapa**	**9.23**	**355**	*e*P	**Pn**	**12 26 50.6**	**+1.9**
GUY2C	**Guyana, Caldas**	**9.32**	**74**	*e*P	**Pn**	**12 26 52.4**	**+2.1**
HELC	**Santa Helena**	**9.46**	**68**	*e*P	**Pn**	**12 26 55.4**	**+3.2**
BOAB	**BOACO BROADBAN**	**9.76**	**352**	Pn	**Pn**	**12 26 54.1**	**-1.9**
NORC	**Norcasia**	**9.88**	**73**	*e*P	**Pn**	**12 27 01.4**	**+3.6**
PTLC	**Puerto Leguiza**	**9.89**	**105**	*e*P	**Pn**	**12 26 57.3**	**-0.5**
CNGN	**Cerro Negro**	**10.00**	**347**		**Pn**	**12 26 57.1**	**-2.2**
CNGN	**Cerro Negro**	**10.00**	**347**	*e*P	**Pn**	**12 26 58.6**	**-0.7**
UREC	**San Jos de Ur**	**10.12**	**60**	*e*P	Pn	12 27 08.3	+7.3
ROSC	**El Rosal**	**10.24**	**78**	LR	LR	12 31 02.3	
	comp=Z,394nm,18.8s,baz=250,slow=38						
MATN	**Matagalpa**	**10.27**	**351**		**Pn**	**12 27 05.3**	**+2.3**
CRIN	**San Cristobal**	**10.28**	**345**		**Pn**	**12 27 03.4**	**+0.2**
CRIN	**San Cristobal**	**10.28**	**345**	*e*P	**Pn**	**12 27 00.2**	**-2.9**
PTBC	**PUERTO BERRIO,**	**10.58**	**69**	*e*P	**Pn**	**12 27 09.5**	**+2.2**
ZARC	**Zaragoza, Cauc**	**10.59**	**63**	*e*P	Pn	12 27 14.1	+6.7
VILC	**Villavicencio,**	**10.74**	**82**	*e*P	**Pn**	**12 27 11.9**	**+2.4**
CHIC	**Chingaza**	**10.78**	**80**	*e*P	**Pn**	**12 27 11.1**	**+0.8**
CNCH	**Conchagua**	**11.04**	**342**	*e*P	**Pn**	**12 27 16.1**	**+2.3**
LCND	**La Caada**	**11.09**	**342**	*e*P	**Pn**	**12 27 16.9**	**+2.6**
PACA	**Pacayal**	**11.38**	**340**	*e*P	**Pn**	**12 27 22.1**	**+3.7**
ATAH	**Atahualpa**	**11.45**	**149**	Pn	**Pn**	**12 27 22.0**	**+2.4**
	0.4nm,0.3s,baz=22,slow=8.8,SNR=5.1						
ATAH				LR	LR	12 31 16.5	
	comp=Z,538nm,18.4s,baz=324,slow=35						
	8.4nm,0.7s						
SJCC	**San Jacinto, C**	**11.58**	**52**	*e*P	**Pn**	**12 27 25.7**	**+4.7**
TGUH	**Tegucigalpa,Un**	**11.63**	**346**	*e*P	**Pn**	**12 27 23.2**	**+1.3**
RUSC	**La Rusia**	**11.68**	**74**	*e*P	**Pn**	**12 27 21.0**	**-1.8**
COEG	**Centro de Oper**	**11.72**	**338**	*e*P	**Pn**	**12 27 25.3**	**+2.4**
LFRS	**El Faro**	**11.80**	**337**	*e*P	**Pn**	**12 27 26.8**	**+2.8**
PAVA	**Las Pavas**	**11.83**	**338**	*e*P	**Pn**	**12 27 27.3**	**+2.8**
P5NO	**Presa 5 de nov**	**12.02**	**339**	*e*P	**Pn**	**12 27 29.5**	**+2.6**
CEVE	**Cerro Verde**	**12.21**	**335**	*e*P	**Pn**	**12 27 33.0**	**+3.2**
CEVE				IAML		12 27 42.5	
	comp=Z,396nm,0.3s						
CEVE	**Cerro Verde**	**12.21**	**335**	*e*P	**Pn**	**12 27 32.9**	**+3.1**
CEVE				IAML		12 27 42.5	
	comp=Z,384nm,0.3s						
SBLS	**San Blas**	**12.22**	**335**	*e*P	**Pn**	**12 27 34.1**	**+4.2**
SNJE	**San Jose**	**12.24**	**335**	*e*P	**Pn**	**12 27 34.4**	**+4.2**
RTR	**El Retiro**	**12.28**	**335**	*e*P	**Pn**	**12 27 34.2**	**+3.5**
LOAL	**Lomas de Alarc**	**12.43**	**335**	*e*S		12 27 38.1	
SLOZ	**Alcaldia de Sa**	**12.45**	**335**	*e*S		12 27 38.7	
PAMC	**Pamplona, Colo**	**12.49**	**68**	*e*P	**Pn**	**12 27 36.4**	**+2.5**
MTO3	**Montecristo**	**12.62**	**337**		**Pn**	**12 27 35.6**	**+0.2**
MTO3	**Montecristo**	**12.62**	**337**	*e*P	**Pn**	**12 27 38.4**	**+3.1**
MTO3	**Montecristo**	**12.62**	**337**	IAML		12 27 40.9	
	comp=Z,33nm,0.3s						
SDV	**Santo Domingo**	**14.97**	**65**	LR	LR	12 33 38.1	
	comp=Z,237nm,21.8s,baz=252,slow=36						
CCIG	**Comitan**	**15.51**	**331**		**Pn**	**12 28 11.1**	**-3.3**
CCIG				IAmb	IAmb	12 28 29.3	
	comp=Z,42nm,1.2s						
CZSB	**Cruzeiro do Su**	**15.58**	**132**	*e*P	**Pn**	**12 28 13.9**	**-1.4**
NNA	**Nana**	**16.40**	**153**	Pn	**P**	**12 28 27.5**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=337,slow=6.1,SNR=3.6						
NNA				LR	LR	12 34 16.6	
	comp=Z,138nm,18.9s,baz=318,slow=35						
	comp=Z,10nm,0.6s						
CMIG	**Matias Romero**	**17.64**	**325**	LR	LR	12 34 09.8	
	comp=Z,289nm,21.5s,baz=149,slow=33						
TLIG	**Tlapa**	**20.30**	**318**	P	**P**	**12 29 10.2**	**-1.3**
TLIG				IAmb	IAmb	12 29 14.1	
	comp=Z,9.9nm,0.8s						
PCRV	**Puerto La Cruz**	**20.94**	**68**	P	Pn	12 29 20.5	-0.5
	comp=Z,14nm,0.9s,baz=303,slow=5.5,SNR=3.6						
	comp=Z,14nm,0.9s						
ETMB	**Extrema**	**21.95**	**125**	*e*P	**P**	**12 29 29.4**	**+0.3**
SJG	**San Juan**	**23.52**	**48**	LR	LR	12 38 59.5	
	comp=Z,67nm,19.8s,baz=248,slow=37						
BOAV	**Boa Vista**	**23.82**	**90**	*e*P	**P**	**12 29 46.7**	**-1.7**
MACA	**Manacapuru-AM**	**24.38**	**104**	*e*P	**P**	**12 29 54.5**	**+0.9**
060A	**Indiantown**	**24.49**	**9**	P	**P**	**12 29 53.5**	**-0.9**
LPAZ	**La Paz**	**24.77**	**140**	P	**P**	**12 29 59.4**	**+1.6**
	comp=Z,6.9nm,1.0s,baz=337,slow=6.3,SNR=13						
	comp=Z,6.9nm,1.0s						
LPAZ	**La Paz**	**24.77**	**140**	P	**P**	**12 29 57.5**	**-0.3**
LPAZ				IAmb	IAmb	12 30 03.1	
	comp=Z,13nm,1.1s						
LPAZ	**La Paz**	**24.77**	**140**	*e*P	**P**	**12 29 57.5**	**-0.3**
LPAZ	**La Paz**	**24.77**	**140**	*e*P	**P**	**12 29 58.4**	**+0.6**
PB12	**IPOC Station P**	**25.30**	**147**	P	**P**	**12 30 02.4**	**+0.4**
PB16	**IPOC Station P**	**25.52**	**146**	P	**P**	**12 30 04.3**	**-0.3**
LVC	**Limon Verde**	**29.34**	**150**	LR	LR	12 43 17.8	
	comp=Z,127nm,18.6s,baz=308,slow=38						
SIV	**San Ignacio**	**29.59**	**130**	LR	LR	12 42 53.6	
	comp=Z,539nm,18.9s,baz=291,slow=37						
NPGB	**Novo Progresso**	**30.53**	**109**	*e*P	**P**	**12 30 48.9**	**+0.1**
BBSD	**Serra de San D**	**30.66**	**131**	*e*P	**P**	**12 30 50.4**	**+0.5**
PDRB	**Porto dos Gac**	**30.94**	**118**	*e*P	**P**	**12 30 52.7**	**+0.3**
CLDB	**Colider**	**31.47**	**116**	*e*P	**P**	**12 30 57.0**	**-0.1**
MDP	**Montagnes des**	**31.73**	**85**	LR	LR	12 43 53.8	
	comp=Z,124nm,18.2s,baz=296,slow=36						
TXAR	**Lajitas Array**	**32.21**	**327**	P	**P**	**12 31 03.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=147,slow=9.1,SNR=7.8						
TXAR				PcP	**PcP**	**12 33 52.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=162,slow=5.1,SNR=3.4						
	comp=Z,0.5nm,0.7s						
TKL	**Tuckaleechee C**	**32.79**	**1**	LR	LR	12 43 21.9	
	comp=Z,109nm,18.9s,baz=192,slow=34						
LCAR	**Lake Charles**	**33.78**	**350**	P	**P**	**12 31 16.1**	**-0.9**
LCAR				IAmb	IAmb	12 31 17.1	
	comp=Z,5.5nm,0.9s						
MGMO	**Mountain Grove**	**35.04**	**349**	IAmb	IAmb	12 31 28.5	
	comp=Z,7.3nm,0.9s						
MURT	**Porto Murtinho**	**35.66**	**134**	*e*P	**P**	**12 31 34.7**	**+1.3**
CCM	**Cathedral Cave**	**35.74**	**351**	P	**P**	**12 31 33.0**	**-0.9**
S39A	**Bolivar**	**35.77**	**348**	IAmb	IAmb	12 31 34.4	
	comp=Z,6.9nm,0.8s						
AMTX	**Amarillo**	**35.83**	**335**	P	**P**	**12 31 34.2**	**-0.6**
AMTX				IAmb	IAmb	12 31 36.4	
	comp=Z,7.4nm,1.1s						
H03N2	**Juan Fernandez**	**36.32**	**172**	T	T	13 10 07.8	
	baz=351,slow=76,SNR=51						
H03N1	**Juan Fernandez**	**36.32**	**172**	T	T	13 10 10.0	
	baz=351,slow=76,SNR

NVAR LR LR 12 51 36.0
comp=Z,105nm,21.0s,baz=116,slow=35
comp=Z,1.7nm,0.7s
KVN Kaiserville 47.45 324 P **P** **12 33 09.7 -0.4**
KVN IAmb IAmb 12 33 10.9
comp=Z,2.8nm,0.9s
RCBR Riachuelo 49.13 100 LR LR 12 54 41.2
comp=Z,96nm,18.7s,baz=74,slow=37
YBH Yreka Blue Hor 51.87 324 LR LR 12 55 18.2
comp=Z,105nm,18.1s,baz=132,slow=36
NEW Newport 53.40 333 LR LR 12 57 24.9
comp=Z,81nm,18.3s,baz=124,slow=37
BBB Bella Bella 61.23 331 LR LR 13 03 40.7
comp=Z,31nm,19.5s,baz=76,slow=38
FRB Frobisher Bay 62.00 8 LR LR 13 01 28.5
comp=Z,74nm,18.6s,baz=224,slow=36
YKA Yellowknife Ar 63.75 345 LR LR 13 03 29.4
comp=Z,68nm,18.2s,baz=145,slow=37
DLBC Dease Lake 65.97 336 LR LR 13 05 47.9
comp=Z,71nm,18.4s,baz=153,slow=38
PPT Papeete 67.33 250 LR LR 12 56 58.3
comp=Z,127nm,18.3s,baz=66,slow=29
PMSA Palmer Station 68.96 171 LR LR 13 02 28.1
comp=Z,33nm,19.9s,baz=98,slow=33
RES Resolute Bay 72.17 357 LR LR 13 08 35.3
comp=Z,51nm,18.1s,baz=34,slow=37
INK Inuvik 73.35 343 P **P** **12 36 06.2 -0.1**
comp=Z,1.8nm,0.7s,baz=345,slow=3.8,SNR=5.4
INK LR LR 13 09 36.4
comp=Z,86nm,20.9s,baz=136,slow=37
comp=Z,1.8nm,0.7s
ILAR Eielson Array 76.11 337 P **P** **12 36 21.9 -0.6**
comp=Z,1.0nm,0.8s,baz=124,slow=4.3,SNR=8.2
ILAR LR LR 13 11 35.2
comp=Z,90nm,19.8s,baz=115,slow=37
comp=Z,1.0nm,0.8s
RAR Rarotonga 77.42 248 LR LR 13 03 52.3
comp=Z,30nm,21.4s,baz=170,slow=30
DBIC Dimbokro 79.27 84 LR LR 13 09 13.5
comp=Z,16nm,19.3s,baz=316,slow=34
TORD Torodi Ar. Bea 85.55 77 P **P** **12 37 14.9 +1.0**
comp=Z,0.4nm,0.7s,baz=305,slow=5.1,SNR=1.6
comp=Z,0.4nm,0.7s
NOA NORSAR Array B 90.36 29 LR LR 13 18 32.4
comp=Z,9.7nm,18.4s,baz=0.0,slow=36
FINES FINESS Array B 97.26 27 LR LR 13 27 03.1
comp=Z,29nm,18.0s,baz=254,slow=39
ASAR Alice Springs 137.55 237 PKP **PKiKP** **12 44 01.2 -0.5**
comp=Z,0.4nm,0.9s,baz=117,slow=2.8,SNR=2.1
WRA Warramunga Arr 138.53 243 PKP **PKPdf** **12 44 02.5 +0.8**
comp=Z,0.5nm,0.7s,baz=112,slow=2.0,SNR=5.3
PZH PanZhiHua 150.36 349 PKPbc **PKPdf** **12 44 21.0 -1.1**

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*IDC **05** 12:32:05.9±3.4, 5°.78S×145°.78E, h110km±34km, mb3.5/7, mbtmp3.9/10, Error ellipse: s-maj=29.5km s-min=22.4km az=104.0*

ISC 05 12:32:05.8±0.8, 5°.78S±0°.08×145°.7E±0°.1, h100km, n22, σ1§31/22, mb3.8/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.90**	**158**	P	**Pn**	**12 33 03.4**	**-0.2**
	33nm,0.4s,baz=30,slow=5.9,SNR=29						
PMG				S	**Sn**	**12 33 47.5**	**-0.9**
	42nm,0.3s,baz=152,slow=23,SNR=18						
PMG	**Port Moresby**	**3.90**	**158**	P	**Pn**	**12 33 03.7**	**+0.1**
COEN	**Coen**	**8.49**	**197**	P	**Pn**	**12 34 06.1**	**0.0**
SIJI	**Sorong**	**15.18**	**288**	P	**Pn**	**12 35 36.2**	**+1.1**
	5.1nm,0.5s,baz=122,slow=13,SNR=5.8						
PATS	**Pohnpei**	**17.78**	**45**	P	**Pn**	**12 36 09.7**	**+2.7**
	76nm,1.7s						
WRAB	**Tennant Creek**	**17.87**	**217**	P	**P**	**12 36 07.6**	**+0.2**
WRA	**Warramunga Arr**	**17.88**	**217**	P	**P**	**12 36 06.9**	**-0.7**
	1.8nm,0.7s,baz=34,slow=11,SNR=19						
WRA				S	S	12 39 17.5	-10
	0.2nm,0.7s,baz=39,slow=23,SNR=2.2						
AS01	**Alice Springs**	**21.06**	**211**	P	**P**	**12 36 42.8**	**+0.7**
ASAR	**Alice Springs**	**21.09**	**211**	P	**P**	**12 36 42.2**	**-0.1**
	0.9nm,0.8s,baz=39,slow=7.5,SNR=26						
	0.9nm,0.8s						
INKA	**Innaminka**	**22.34**	**192**	P	**P**	**12 36 57.5**	**+2.0**
FITZ	**Fitzroy Crossi**	**23.08**	**236**	P	**P**	**12 37 01.5**	**-1.6**
	1.0nm,0.6s,baz=57,slow=12,SNR=1.9						
	1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.08**	**236**	P	**P**	**12 37 03.7**	**+0.7**
OOD	**Oodnadatta**	**23.86**	**202**	P	**P**	**12 37 11.6**	**+1.5**
WRKA	**Warakurna**	**25.38**	**219**	P	**P**	**12 37 25.1**	**+1.1**
LCRK	**Leigh Creek**	**25.52**	**195**	P	**P**	**12 37 27.0**	**+1.8**
STKA	**Stephens Creek**	**26.25**	**188**	P	**P**	**12 37 31.6**	**-0.1**
	1.6nm,0.3s,baz=42,slow=10,SNR=3.9						
	1.6nm,0.3s						
MULG	**Mulgathing**	**26.72**	**203**	P	**P**	**12 37 37.7**	**+1.8**
USRK	**Ussuriysk Ar.**	**51.25**	**347**	P	**P**	**12 40 57.5**	**-1.8**
	0.5nm,0.5s,baz=175,slow=9.7,SNR=1.7						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**51.98**	**299**	P	**P**	**12 41 05.5**	**+0.2**
	2.1nm,0.5s,baz=122,slow=6.1,SNR=8.8						
	2.1nm,0.5s						
MKAR	**Makanchi Array**	**76.49**	**321**	P	**P**	**12 43 44.6**	**-0.3**
	0.5nm,0.6s,baz=121,slow=5.8,SNR=4.5						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**85.80**	**23**	P	**P**	**12 44 32.3**	**-1.5**
	1.1nm,0.7s,baz=245,slow=5.3,SNR=12						
	1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**143.76**	**284**	PKP	PKPab	12 51 28.1	+0.7
	0.2nm,0.4s,baz=54,slow=3.4,SNR=6.1						

DJA 05 13:12:36.2±1.2, 1°.N±4°.×12°.6E±°, h11km±10km, M3.8/13, mb4.0/2, MLv3.8/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.50**	**106**	P	Pn	13 13 03.2	+0.1
KMSI	**Cibinong**	**2.03**	**253**	P	Pn	13 13 10.6	+0.2
LBMI	**Labuha**	**2.40**	**139**	P	Pn	13 13 15.8	+0.3
SGSI	**Sangihe**	**2.52**	**351**	P	Pn	13 13 17.0	-0.1
GTOI	**Gorontalo**	**2.96**	**259**	P	Pn	13 13 24.5	+1.3
SANI	**Sanana**	**3.21**	**179**	P	Pn	13 13 25.3	-1.3
LUWI	**Luwuk**	**3.84**	**235**	P	Pn	13 13 35.5	+0.2
MRSI	**Marisa**	**4.04**	**260**	P	Pn	13 13 38.1	+0.1
NLAI	**Namlea**	**4.54**	**165**	P	Pn	13 13 44.5	-0.5
APSI	**Ampana**	**4.75**	**244**	P	Pn	13 13 49.4	+1.6
SPSI	**Sidrap Palu**	**7.99**	**230**	P	Pn	13 14 33.9	+1.5

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*IDC **05** 13:31:54.8±2.1, 22°.92N×93°.69E, h72km±21km, mb3.4/10, mbtmp3.7/11, MS2.6/2, Error ellipse: s-maj=21.2km s-min=13.4km az=40.0*

ISC 05 13:31:58.0±0.9, 23°.14N±0°.10×93°.34E±0°.10, h100km, n25, σ1§96/27, mb3.6/9, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**1.63**	**254**	P	**Pn**	**13 32 24.1**	**-1.7**
	134nm,0.3s,baz=89,slow=1.9,SNR=10						
BRDH				S	**Sn**	**13 32 48.8**	**+1.8**
	554nm,0.3s,baz=271,slow=22,SNR=5.4						
ODAN	**Odare**	**6.54**	**306**	*e*Pg	**Pn**	**13 33 31.5**	**-0.4**
ODAN				*e*Sn	**Sn**	**13 34 43.9**	**-1.4**
	27nm,0.4s						
TAPN	**Taplejung**	**6.60**	**311**	*e*Pn	**Pn**	**13 33 32.0**	**-0.7**
TAPN				*e*Sn	**Sn**	**13 34 46.1**	**-0.5**
	168nm,0.5s						
CMAR	**Chiang Mai Arr**	**7.01**	**131**	P	Pn	13 33 29.2	-8.9
	3.3nm,0.4s,baz=308,slow=13,SNR=23						
CMAR				LR	LR	13 36 35.2	
	comp=Z,35nm,21.1s,baz=310,slow=42						
RAMN	**Ramite**	**7.19**	**303**	*e*Pn	**Pn**	**13 33 40.2**	**-0.5**
RAMN				*e*Sn	Sn	13 34 57.9	-3.1
	82nm,0.4s						
JIRN	**Jiri**	**7.88**	**306**	*e*Pn	**Pn**	**13 33 48.8**	**-1.4**
JIRN				*e*Sn	Sn	13 35 14.8	-3.0
	34nm,0.3s						
GUN	**Gumba**	**8.24**	**307**	*e*Pn	**Pn**	**13 33 54.3**	**-0.8**
GUN				*e*Sn	**Sn**	**13 35 24.2**	**-2.5**
PKI	**Pulchoki**	**8.42**	**303**	*e*Pn	**Pn**	**13 33 56.2**	**-1.3**
PKI				*e*Sn	Sn	13 35 28.1	-2.9
PKIN	**Phulchoki**	**8.43**	**303**	*e*Pn	**Pn**	**13 33 56.1**	**-1.5**
KKN	**Kakani**	**8.63**	**304**	*e*Pn	**Pn**	**13 33 58.8**	**-1.5**
KKN				*e*Sn	Sn	13 35 33.1	-2.9
DMN	**Daman**	**8.67**	**303**	*e*Pn	**Pn**	**13 33 59.0**	**-1.9**
DMN				*e*Sn	Sn	13 35 33.3	-3.8
GKN	**Gorkha**	**9.23**	**303**	*e*Pn	**Pn**	**13 34 06.4**	**-1.9**
GKN				*e*Sn	Sn	13 35 46.0	-4.4
	75nm,0.3s						
KOLN	**Koldanda**	**9.93**	**300**	*e*Pn	**Pn**	**13 34 15.6**	**-2.4**
KOLN				*e*Sn	Sn	13 36 02.7	-5.0
DANN	**Dangsing**	**10.07**	**303**	*e*Pn	**Pn**	**13 34 17.4**	**-2.6**
DANN				*e*Sn	Sn	13 36 06.6	-4.6
PYUN	**Piuthan**	**10.56**	**300**	*e*Pn	**Pn**	**13 34 23.8**	**-2.8**
PYUN				*e*Sn	Sn	13 36 17.8	-5.2
	32nm,0.5s						
PSI	**Prapat**	**20.93**	**164**	P	Pn	13 36 31.3	-5.1
	2.2nm,0.3s,baz=334,slow=18,SNR=11						
PSI				LR	LR	13 44 07.2	
	comp=Z,25nm,21.9s,baz=248,slow=35						
	2.2nm,0.3s						
MKAR	**Makanchi Array**	**25.23**	**342**	P	**P**	**13 37 17.5**	**+3.0**
	0.5nm,0.6s,baz=146,slow=9.8,SNR=5.2						
	0.5nm,0.6s						
SONM	**Songino Array**	**26.77**	**20**	P	**P**	**13 37 29.5**	**+1.0**
	0.4nm,0.5s,baz=210,slow=8.0,SNR=1.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**29.77**	**341**	P	**P**	**13 37 56.2**	**+1.3**
	0.2nm,0.5s,baz=148,slow=5.5,SNR=1.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**58.60**	**134**	P	**P**	**13 41 41.3**	**-3.5**
	0.4nm,0.5s,baz=322,slow=7.4,SNR=16						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**60.98**	**137**	P	**P**	**13 41 58.0**	**-3.0**
	0.4nm,0.4s,baz=318,slow=6.9,SNR=20						
	0.4nm,0.4s						
GERES	**GERESS Array B**	**66.25**	**315**	P	**P**	**13 42 37.3**	**+1.8**
	0.5nm,0.5s,baz=62,slow=6.8,SNR=3.9						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**80.96**	**22**	P	**P**	**13 44 01.5**	**+0.3**
	0.2nm,0.6s,baz=335,slow=6.1,SNR=1.3						
	0.2nm,0.6s						
BOSA	**Boshof**	**83.34**	**235**	P	**P**	**13 44 14.9**	**+0.6**
	1.3nm,0.5s,baz=74,slow=3.0,SNR=3.7						
	1.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**86.41**	**283**	P	**P**	**13 44 32.0**	**+2.1**
	0.5nm,0.8s,baz=60,slow=2.9,SNR=3.6						
	0.5nm,0.8s						

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*IDC **05** 13:33:53.9±2.4, 5°.38S×151°.89E, h125km±12km, mb3.1/4, mbtmp3.6/5, MS2.6/1, Error ellipse: s-maj=72.0km s-min=16.0km az=121.0*

ISC 05 13:33:48.5±2.4, 5°.8S±0°.1×152°.6E±0°.3, h100km, n7, σ1§73/8, mb3.1/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.54**	**339**	P	**Pn**	**13 34 17.1**	**+1.7**
	67nm,0.6s,baz=252,slow=2.5,SNR=48						
KRVT				S	**Sn**	**13 34 34.8**	**-0.9**
	43nm,0.4s,baz=263,slow=19,SNR=5.6						
PMG	**Port Moresby**	**6.49**	**236**	P	**Pn**	**13 35 22.4**	**+1.0**
	11nm,0.8s,baz=52,slow=19,SNR=1.5						
PMG				S	**Sn**	**13 36 34.6**	**+0.6**
	20nm,0.8s,baz=53,slow=20,SNR=5.9						
WRA	**Warramunga Arr**	**22.66**	**230**	P	**P**	**13 38 41.2**	**-0.4**
	0.4nm,0.4s,baz=52,slow=9.8,SNR=9.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.30**	**223**	P	**P**	**13 39 07.7**	**+1.6**
	0.4nm,0.6s,baz=54,slow=9.2,SNR=13						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**29.02**	**243**	P	**P**	**13 39 36.6**	**-2.7**
	2.7nm,1.1s,baz=73,slow=7.6,SNR=1.9						
	2.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**58.09**	**296**	LR	LR	14 10 03.4	
	comp=Z,5.4nm,18.5s,baz=300,slow=38						
MKAR	**Makanchi Array**	**80.90**	**319**	P	**P**	**13 45 51.5**	**-0.2**
	0.1nm,0.4s,baz=123,slow=5.3,SNR=1.6						
	0.1nm,0.4s						

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*AEIC **05** 13:37:05±1.1, 60°.04N±0°.05×159°.10W±0°.09, h8km±6km, ML3.7, ML3.8/66(NEIC), Error ellipse: s-maj=7.4km s-min=6.4km az=185.0*
*NEIC **05** 13:37:06.4±0.7, 60°.06N±0°.05×159°.1W±0°.1, h13km±11km, Error ellipse: s-maj=9.5km s-min=7.3km az=97.0*

ISC 05 13:37:05.5±1.4, 60°.05N±0°.04×159°.12W±0°.07, h10km, n183, σ0§56/170, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N16K	**Nishlik Lake**	**0.46**	**23**		**Pg**	**13 37 14.2**	**-0.3**
O16K	**Kokwok River B**	**0.70**	**131**		**Pg**	**13 37 18.2**	**-0.7**
O17K	**Koliganek Bris**	**1.06**	**105**		**Pg**	**13 37 24.8**	**-1.1**
P16K	**Nushagak River**	**1.18**	**150**		**Pb**	**13 37 27.6**	**-0.2**
P17K	**Kvichak River**	**1.61**	**121**		**Pn**	**13 37 34.6**	**+0.6**
N18K	**Kilae Creek**	**1.73**	**67**		**Pn**	**13 37 35.9**	**+0.4**
N18K	**Kilae Creek**	**1.73**	**67**	IAML		13 37 58.8	
	comp=N,1μm,0.6s						
N18K				IAML		13 38 02.6	
	comp=E,897nm,0.9s						
N18K	**Kilae Creek**	**1.73**	**67**	P	**Pn**	**13 37 35.9**	**+0.4**
	baz=250						
Q16K	**King Salmon**	**1.87**	**136**		**Pn**	**13 37 38.2**	**+0.8**
O18K	**Koktuh Hills**	**1.98**	**94**		**Pn**	**13 37 39.2**	**+0.2**
O18K	**Koktuh Hills**	**1.98**	**94**	P	**Pn**	**13 37 39.2**	**+0.2**
	baz=278						
O18K				S	**Sb**	**13 38 05.5**	**-0.8**
	baz=278						
SVW2	**Sparrevohn**	**2.04**	**58**		**Pn**	**13 37 40.0**	**+0.1**
SVW2	**Sparrevohn**	**2.04**	**58**	IAML		13 38 11.3	
	comp=E,619nm,0.4s						
SVW2				IAML		13 38 15.7	
	comp=N,735nm,0.6s						
P18K	**Big Mountain,**	**2.08**	**107**		**Pn**	**13 37 40.5**	**0.0**
P18K	**Big Mountain,**	**2.08**	**107**	P	**Pn**	**13 37 40.5**	**0.0**
	baz=290						
PLK5	**Peulik 5**	**2.37**	**150**		**Pn**	**13 37 44.8**	**+0.5**
KELA	**Mount Kelaz**	**2.38**	**131**		**Pn**	**13 37 44.9**	**+0.3**
O19K	**Port Alsworth**	**2.41**	**85**		**Pn**	**13 37 45.0**	**+0.1**
O19K				IAML		13 38 25.1	
	comp=N,4μm,0.4s						
O19K				IAML		13 38 27.3	
	comp=E,3μm,0.5s						
O19K	**Port Alsworth**	**2.41**	**85**		**Sn**	**13 38 15.1**	**+0.7**
O19K	**Port Alsworth**	**2.41**	**85**		**Pn**	**13 37 45.3**	**+0.4**
O19K	**Port Alsworth**	**2.41**	**85**	P	**Pn**	**13 37 45.0**	**+0.1**
	baz=269						
O19K				S	**Sn**	**13 38 15.1**	**+0.7**
	baz=269						
N19K	**Bonanza Creek**	**2.42**	**70**		**Pn**	**13 37 45.4**	**+0.1**
N19K					**Sn**	**13 38 16.1**	**+1.2**
N19K	**Bonanza Creek**	**2.42**	**70**	IAML		13 38 28.2	
	comp=E,524nm,0.8s						
N19K	**Bonanza Creek**	**2.42**	**70**	P	**Pn**	**13 37 45.4**	**+0.1**
	baz=254						
N19K				S	**Sn**	**13 38 16.1**	**+1.2**
	baz=254						
CNTC	**Contact Creek**	**2.45**	**136**		**Pn**	**13 37 45.9**	**+0.3**
KAHC	**Katmai Hardscr**	**2.54**	**122**		**Pn**	**13 37 47.1**	**+0.4**
KAHC	**Katmai Hardscr**	**2.54**	**122**		**Pn**	**13 37 47.2**	**+0.4**
KAHC	**Katmai Hardscr**	**2.54**	**122**	P	**Pn**	**13 37 47.1**	**+0.4**
	baz=306						
PLK1	**Peulik 1**	**2.61**	**149**		**Pn**	**13 37 48.4**	**+0.8**
R16K	**Pilot Point**	**2.62**	**161**		**Pn**	**13 37 48.6**	**+0.8**
ANCK	**Angle Creek**	**2.64**	**133**		**Pn**	**13 37 48.4**	**+0.3**
KCG	**Knife Ck. Glac**	**2.71**	**129**		**Pn**	**13 37 49.3**	**+0.2**
PLK2	**Peulik 2**	**2.72**	**146**		**Pn**	**13 37 49.5**	**+0.4**
KAKN	**Katmai Knife C**	**2.73**	**128**		**Pn**	**13 37 49.6**	**+0.1**
KAWH	**Katmai**	**2.78**	**125**		**Pn**	**13 37 50.4**	**+0.3**
R17K	**Ugashik Creek**	**2.81**	**148**		**Pn**	**13 37 50.8**	**+0.4**
PLK4	**Peulik 4**	**2.82**	**148**		**Pn**	**13 37 50.9**	**+0.2**
KAPH	**Katmai Pasha**	**2.85**	**119**		**Pn**	**13 37 51.2**	**+0.1**
AUL	**Augustine Lava**	**2.96**	**101**		**Pn**	**13 37 53.2**	**+0.7**
AUCH	**Augustine Cone**	**2.96**	**101**		**Pn**	**13 37 53.3**	**+0.7**
AUH	**Augustine H**	**2.96**	**101**		**Pn**	**13 37 53.4**	**+0.8**
M19K	**Big River Lodg**	**2.96**	**49**		**Pn**	**13 37 52.8**	**+0.3**
M19K	**Big River Lodg**	**2.96**	**49**	IAML		13 38 40.9	
	comp=E,348nm,0.7s						
M19K				IAML		13 38 42.9	
	comp=N,284nm,0.9s						
M19K	**Big River Lodg**	**2.96**	**49**	P	**Pn**	**13 37 52.8**	**+0.3**
	baz=233						
L19K	**White Mountain**	**2.98**	**42**		**Pn**	**13 37 52.6**	**-0.1**
L19K	**White Mountain**	**2.98**	**42**	IAML		13 38 43.5	
	comp=N,226nm,0.6s						
L19K				IAML		13 38 45.4	
	comp=E,300nm,0.9s						
L19K	**White Mountain**	**2.98**	**42**	P	**Pn**	**13 37 52.6**	**-0.1**
	baz=226						
AUQ	**Augustine Qik'**	**2.98**	**101**		**Pn**	**13 37 53.6**	**+0.9**
OPT	**Oil Point**	**3.00**	**95**		**Pn**	**13 37 53.9**	**+0.9**
OPT	**Oil Point**	**3.00**	**95**	P	**Pn**	**13 37 53.9**	**+0.9**
	baz=280						
P19K	**Oil Pt**	**3.00**	**95**		**Pn**	**13 37 53.9**	**+0.8**
P19K	**Oil Pt**	**3.00**	**95**	P	**Pn**	**13 37 53.9**	**+0.8**
	baz=280						
Q19K	**Cape Douglas,**	**3.01**	**110**		**Pn**	**13 37 53.4**	**+0.2**
Q19K	**Cape Douglas,**	**3.01**	**110**	P	**Pn**	**13 37 53.4**	**+0.2**
	baz=294						
ILS	**Iliamna Low So**	**3.04**	**89**		**Pn**	**13 37 53.9**	**+0.2**
NCT	**North Crescent**	**3.12**	**78**		**Pn**	**13 37 55.1**	**+0.3**
RDWB	**Redoubt West**	**3.16**	**79**		**Pn**	**13 37 55.6**	**+0.2**
RED	**Redoubt Volcan**	**3.19**	**81**		**Pn**	**13 37 55.8**	**+0.1**
RDJH	**Redoubt Jeurge**	**3.19**	**78**		**Pn**	**13 37 55.7**	**0.0**
RDSO	**Redoubt South**	**3.21**	**80**		**Pn**	**13 37 56.1**	**+0.1**
TT01	**Tatalina**	**3.23**	**26**		**Pn**	**13 37 56.3**	**+0.1**
DFR	**Drift River**	**3.25**	**78**		**Pn**	**13 37 56.7**	**+0.2**
DFR	**Drift River**	**3.25**	**78**		**Pn**	**13 37 56.6**	**+0.2**
TTA	**Tatalina**	**3.25**	**26**		**Pn**	**13 37 56.5**	**-0.1**
TTA	**Tatalina**	**3.25**	**26**	P	**Pn**	**13 37 56.5**	**-0.1**
	baz=208						
O20K	**Slope Mountain**	**3.26**	**87**		**Pn**	**13 37 57.0**	**+0.4**
O20K	**Slope Mountain**	**3.26**	**87**	P	**Pn**	**13 37 57.0**	**+0.4**
	baz=272						
ANPB	**Aniakchak Plen**	**3.29**	**172**		**Pn**	**13 37 57.7**	**+0.7**
M20K	**Styx River**	**3.45**	**55**		**Pn**	**13 37 60.0**	**+0.7**
M20K	**Styx River**	**3.45**	**55**	IAML		13 39 02.7	
	comp=N,180nm,0.6s						
M20K				IAML		13 39 05.3	
	comp=E,272nm,0.8s						
M20K	**Styx River**	**3.45**	**55**	P	**Pn**	**13 37 60.0**	**+0.7**
	baz=240						
L20K	**Farewell, AK**	**3.51**	**44**		**Pn**	**13 37 59.9**	**-0.2**
L20K	**Farewell, AK**	**3.51**	**44**	P	**Pn**	**13 37 59.9**	**-0.2**
	baz=228						
CKL	**Chakachamna La**	**3.54**	**68**		**Pn**	**13 38 01.1**	**+0.6**
SPCR	**Spurr Chakacha**	**3.60**	**68**		**Pn**	**13 38 01.4**	**+0.1**
SPCR	**Spurr Chakacha**	**3.60**	**68**	P	**Pn**	**13 38 01.4**	**+0.1**
	baz=254						
CKN	**Chakachatna No**	**3.62**	**68**		**Pn**	**13 38 01.7**	**+0.1**
SPCP	**Crater Peak Br**	**3.64**	**67**		**Pn**	**13 38 02.4**	**+0.5**
SPCG	**Spurr Capps Gl**	**3.71**	**67**		**Pn**	**13 38 03.2**	**+0.4**
SYI	**Shuyak Island**	**3.74**	**110**		**Pn**	**13 38 03.2**	**+0.1**
CHGN	**Chignik**	**3.78**	**174**		**Pn**	**13 38 04.2**	**+0.4**
CHGN	**Chignik**	**3.78**	**174**	IAML		13 39 10.8	
	comp=E,122nm,0.6s						
CHGN	**Chignik**	**3.78**	**174**	P	**Pn**	**13 38 04.2**	**+0.4**
	baz=355						
STLK	**Strandline Lak**	**3.86**	**65**		**Pn**	**13 38 04.8**	**-0.1**
CNPM	**China Poot**	**4.02**	**94**		**Pn**	**13 38 07.1**	**0.0**
CNPM	**China Poot**	**4.02**	**94**	IAML		13 39 17.1	
	comp=N,100nm,1.0s						
KDAK	**Kodiak Island**	**4.08**	**121**		**Pn**	**13 38 09.3**	**+1.4**
K20K	**Telida**	**4.09**	**34**		**Pn**	**13 38 08.0**	**-0.1**
K20K	**Telida**	**4.09**	**34**	IAML		13 39 29.2	
	comp=E,109nm,1.1s						
K20K	**Telida**	**4.09**	**34**	P	**Pn**	**13 38 08.0**	**-0.1**
	baz=218						
BRLK	**Bradley Lake**	**4.16**	**90**		**Pn**	**13 38 09.0**	**0.0**
OHAK	**Old Harbor**	**4.17**	**130**		**Pn**	**13 38 09.9**	**+0.9**
OHAK	**Old Harbor**	**4.17**	**130**	P	**Pn**	**13 38 09.9**	**+0.9**
	baz=316						
SKT	**Skwentna**	**4.17**	**59**		**Pn**	**13 38 09.9**	**+0.8**
SKT	**Skwentna**	**4.17**	**59**	IAML		13 39 21.3	
	comp=E,118nm,1.1s						
SKT				IAML		13 39 26.3	
	comp=N,118nm,1.3s						
SKT	**Skwentna**	**4.17**	**59**	P	**Pn**	**13 38 09.9**	**+0.8**
	baz=246						
BRSE	**Bradley Lake S**	**4.23**	**91**		**Pn**	**13 38 10.2**	**+0.2**
BRSE	**Bradley Lake S**	**4.23**	**91**	P	**Pn**	**13 38 10.2**	**+0.2**
	baz=278						
SUA	**Susitna One**	**4.35**	**67**		**Pn**	**13 38 11.7**	**+0.1**
SUA				IAML		13 39 27.4	
	comp=N,104nm,1.0s						
SUA				IAML		13 39 28.0	
	comp=E,149nm,1.2s						
SII	**Sitkinak Islan**	**4.37**	**141**		**Pn**	**13 38 12.3**	**+0.5**
SII	**Sitkinak Islan**	**4.37**	**141**	IAML		13 39 29.8	
	comp=N,91nm,0.7s						
SII				IAML		13 39 36.8	
	comp=E,100nm,0.6s						
SII	**Sitkinak Islan**	**4.37**	**141**	P	**Pn**	**13 38 12.3**	**+0.5**
	baz=326						
PPLA	**Purkeypile**	**4.38**	**46**		**Pn**	**13 38 12.6**	**+0.5**
PPLA	**Purkeypile**	**4.38**	**46**	P	**Pn**	**13 38 12.6**	**+0.5**
	baz=232						
SLKM	**Skilak Lake**	**4.46**	**80**		**Pn**	**13 38 13.4**	**+0.3**
O22K	**Cooper Landing**	**4.70**	**81**		**Pn**	**13 38 16.5**	**+0.1**
O22K	**Cooper Landing**	**4.70**	**81**	P	**Pn**	**13 38 16.5**	**+0.1**
	baz=269						
RC01	**Rabbit Creek A**	**4.75**	**73**		**Pn**	**13 38 17.2**	**+0.2**
RC01	**Rabbit Creek A**	**4.75**	**73**	IAML		13 39 34.5	
	comp=N,112nm,0.8s						
RC01				IAML		13 39 35.1	
	comp=E,64nm,0.9s						
RC01	**Rabbit Creek A**	**4.75**	**73**	P	**Pn**	**13 38 17.2**	**+0.2**
	baz=261						
J20K	**Nowinta River**	**4.75**	**27**		**Pn**	**13 38 17.0**	**-0.1**
J20K	**Nowinta River**	**4.75**	**27**	IAML		13 39 48.1	
	comp=N,68nm,0.7s						
J20K				IAML		13 39 54.3	
	comp=E,69nm,0.8s			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I21K	Tanana	6.11	30	P	Pn	13 38 35.8	+0.1
	baz=216						
JPK	Jack Peak	6.26	75		Pn	13 38 37.7	-0.2
MLY	Manley	6.32	34		Pn	13 38 38.2	-0.4
MLY	Manley	6.32	34	P	Pn	13 38 38.2	-0.4
	baz=222						
H21K	Melozitna Rive	6.32	24		Pn	13 38 38.6	0.0
H21K	Melozitna Rive	6.32	24	P	Pn	13 38 38.6	0.0
	baz=210						
DHY	Denali Highway	6.38	57		Pn	13 38 39.5	-0.1
DHY	Denali Highway	6.38	57	P	Pn	13 38 39.4	-0.1
	baz=247						
IM03		6.43	20		Pn	13 38 39.9	-0.2
IMAR	Indian Mountai	6.43	20	Pn	Pn	13 38 39.6	-0.5
IM01	Indian Mountai	6.45	20		Pn	13 38 40.1	-0.3
KLU	Klutina	6.62	72		Pn	13 38 43.1	+0.2
I23K	Minto, Yukon-K	6.81	37		Pn	13 38 45.0	-0.2
I23K	Minto, Yukon-K	6.81	37	P	Pn	13 38 45.0	-0.2
	baz=226						
H22K	Ishtalitna Cre	6.84	28		Pn	13 38 45.5	-0.2
G21K	Allakaket	6.96	19		Pn	13 38 47.4	0.0
PAX	Paxson	7.15	60	Pn	Pn	13 38 51.0	+0.9
HDA	Harding Lake	7.17	47		Pn	13 38 52.1	+1.9
H23K	Yukon River	7.25	33		Pn	13 38 51.2	-0.1
H23K	Yukon River	7.25	33	P	Pn	13 38 51.3	-0.1
	baz=221						
F21K	Alatna River	7.62	17		Pn	13 38 56.7	+0.3
RIDG	Independent Ri	7.68	55		Pn	13 38 57.4	+0.1
RIDG	Independent Ri	7.68	55	P	Pn	13 38 57.4	+0.1
	baz=248						
H24K	Noodor Dome	7.73	37		Pn	13 38 57.1	-0.9
H24K	Noodor Dome	7.73	37	P	Pn	13 38 57.1	-0.9
	baz=226						
G23K	Bananza Creek	7.82	28		Pn	13 38 58.9	-0.3
J25K	Salcha River,	7.86	49		Pn	13 39 00.1	+0.4
DOT	Dot Lake	7.98	57		Pn	13 39 01.4	+0.1
SCRK	Sand Creek	8.13	55		Pn	13 39 03.5	+0.1
SCRK	Sand Creek	8.13	55	P	Pn	13 39 03.5	+0.1
	baz=248						
G24K	Hadweenzic Riv	8.46	33		Pn	13 39 07.7	-0.2
J26L	Joseph Creek	8.50	52		Pn	13 39 08.5	-0.1
J26L	Joseph Creek	8.50	52	P	Pn	13 39 08.5	-0.1
	baz=245						
I26K	Coal Creek Min	9.02	47		Pn	13 39 16.6	+1.0
BM03	Burnt Mountain	9.77	35		Pn	13 39 25.4	-0.5

ANF ***05*** *13:47:46.4±0.1, 33°.16N×115°.65W, h15km, ML3.4/29, Error ellipse: s-maj=1.5km s-min=1.3km az=150.0*
NEIC ***05*** *13:47:47.1±1.5, 33°.16N±0°.01×115°.65W±0°.01, h19km±1km, Error ellipse: s-maj=2.2km s-min=0.6km az=143.0*
PAS ***05*** *13:47:47.4±2.8, 33°.160N±0°.009×115°.64W±0°.01, h3km±5km, ML3.4/115, ML3.4/40(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=64.0*

ISC 05 13:47:47.0±0.9, 33°.15N±0°.01×115°.65W±0°.02, h18km±2km, n107, σ0°60/147, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	Westmorland, C	0.13	153		Pg	13 47 50.8	-0.3
WEMD					Sg	13 47 54.3	+0.6
SWSC	Sam W. Stewart	0.24	211	P	Pb	13 47 52.5	-0.2
	baz=32,SNR=1000						
SWSC				S	Sb	13 47 55.7	-0.7
	baz=32						
SUP	Superstition M	0.24	216		Pb	13 47 52.6	-0.1
SALN	Salton City	0.31	294		Pb	13 47 54.1	+0.2
SALN					Sb	13 47 59.2	+0.6
COK2	Cook Ranch 2	0.31	192		Pb	13 47 54.3	+0.3
COK2					Sb	13 47 59.9	+1.2
SNR	Schaffner Ranc	0.34	148		Pb	13 47 54.8	+0.2
CRR	Carrizo Plain	0.38	225		Sb	13 48 01.3	+0.5
DREC	Desert Rsrch C	0.39	153		Pb	13 47 56.0	+0.5
DREC					Sn	13 48 03.0	-1.7
WESC	Westside Schoo	0.40	190		Pb	13 47 55.8	+0.2
SLH	Sleepy Hollow	0.51	275		Pg	13 47 57.6	+0.4
SLH					Sb	13 48 05.2	+0.9
SGL	Mount Signal	0.51	187		Pb	13 47 57.3	-0.1
SGL					Sb	13 48 04.7	+0.3
BC3	Big Chuckawall	0.53	18		Pb	13 47 57.6	-0.2
BC3					Sb	13 48 05.3	+0.2
BC3	Big Chuckawall	0.53	18	P	Pb	13 47 57.5	-0.2
	baz=198,SNR=705						
BC3				S	Sg	13 48 04.5	-0.4
	baz=198						
COA	Coachella	0.53	123		Pg	13 47 57.8	+0.1
COA					Sn	13 48 06.5	-1.6
UABX	UABC, Campus M	0.55	161		Sn	13 48 08.0	-0.6
UABX	UABC, Campus M	0.55	161		Pg	13 47 58.7	+0.7
UABX	UABC, Campus M	0.55	161	IAML		13 48 08.3	
	comp=N,7μm,0.7s						
UABX				IAML		13 48 08.7	
	comp=E,7μm,0.8s						
CTW	Cottonwood Mou	0.55	341		Pg	13 47 58.1	0.0
CTW					Sg	13 48 06.0	+0.4
HAY	Hayfield	0.55	357		Pg	13 47 58.2	+0.1
HAY					Sg	13 48 06.4	+0.8
YUH	Yuha Desert	0.55	204		Pb	13 47 58.0	-0.2
YUH					Sb	13 48 05.7	0.0
RUN	Ruthven	0.60	108		Pb	13 47 58.7	-0.2
RUN					Sg	13 48 06.8	0.0
IKP	In-Ko-Pah, Jac	0.63	218		Pb	13 47 59.5	-0.1
IKP					Sb	13 48 08.2	+0.2
IKP	In-Ko-Pah, Jac	0.63	218	P	Pb	13 47 59.6	+0.1
	baz=38,SNR=125						
IKP				S	Sb	13 48 08.2	+0.2
	baz=38						
BORC	Borrego Spring	0.65	280		Pb	13 47 59.9	+0.1
BORC					Sg	13 48 09.1	+0.5
RMX	La Rumorosa	0.66	213		Pg	13 48 00.6	+0.5
RMX					Sg	13 48 09.7	+0.8
EMSC	East Mesa	0.70	126		Pb	13 48 00.6	0.0
EMSC					Sn	13 48 11.4	-0.8
MONP2	Monument Peak	0.70	248		Pb	13 48 00.8	+0.1
MONP2					Sg	13 48 10.4	+0.2
MONP2	Monument Peak	0.70	248	P	Pb	13 48 00.8	+0.1
	baz=68,SNR=183						
MONP2				S	Sg	13 48 10.4	+0.2
	baz=68						
GLA	Glamis	0.70	98		Pb	13 48 00.4	-0.3
GLA					Sb	13 48 09.8	-0.3
GLA	Glamis	0.70	98	IAML		13 48 11.7	
	comp=N,2μm,0.4s						
GLA	Glamis	0.70	98	P	Pb	13 48 00.5	-0.3
	baz=279,SNR=226						
GLA				S	Sb	13 48 09.7	-0.3
	baz=279						
CPBX	Cerro Prieto	0.79	158		Pb	13 48 01.4	-0.8
TPFO	Pinon Flats	0.81	304	P	Pb	13 48 02.5	-0.1
	baz=123,SNR=231						
XPFO	Pion Flat	0.81	304		Pb	13 48 02.5	-0.1
XPFO					Sb	13 48 13.3	0.0
PFO	Pinyon Flats O	0.81	304		Pb	13 48 02.6	-0.1
PFO					Sb	13 48 13.3	-0.2
PFO	Pinyon Flats O	0.81	304		Pb	13 48 02.7	-0.1
PFO				IAML		13 48 14.7	
	comp=N,1μm,0.6s						
PFO				IAML		13 48 15.0	
	comp=N,1μm,0.7s						
PFO	Pinyon Flats O	0.81	304	P	Pb	13 48 02.6	-0.1
	baz=123,SNR=296						
PFO				S	Sb	13 48 13.7	+0.2
	baz=123						
MATG	Mataguay Scout	0.83	273		Pb	13 48 03.0	0.0
MATG					Sg	13 48 14.5	+0.1
FRD	Ford Ranch, An	0.86	293		Pb	13 48 03.6	0.0
FRD					Sg	13 48 15.3	0.0
FRD	Ford Ranch, An	0.86	293		Pb	13 48 03.5	0.0
FRD					Sg	13 48 15.5	+0.1
BELC	Belle Mtn. Jos	0.89	341		Pb	13 48 03.9	-0.2
BELC					Sg	13 48 16.6	+0.3
BELC	Belle Mtn. Jos	0.89	341	P	Pb	13 48 03.9	-0.2
	baz=160,SNR=111						
BELC				S	Sg	13 48 16.3	0.0
	baz=160						
SNDA	J Saunders Pla	0.90	297		Pb	13 48 04.2	+0.1
SNDA					Sn	13 48 17.4	-0.1
BZNA	Buzz No.'s Pla	0.91	292		Pb	13 48 04.4	0.0
DNR	Dunn Ranch,Anz	0.92	297		Pb	13 48 04.5	+0.1
GUVIX	Guadalupe Vict	0.98	150		Pb	13 48 05.0	-0.4
BAR	Barrett	0.98	241		Pb	13 48 05.1	-0.3
BAR				IAML		13 48 19.7	
	comp=N,1μm,0.2s						
BAR				IAML		13 48 19.7	
	comp=E,910nm,0.2s						
TKX	Tecate	0.99	234		Sn	13 48 19.5	-0.2
TKX	Tecate	0.99	234		Pb	13 48 05.4	-0.3
TKX	Tecate	0.99	234	IAML		13 48 20.1	
	comp=E,1μm,0.2s						
TKX				IAML		13 48 20.1	
	comp=N,2μm,0.2s						
CRY	Cary Ranch	1.00	295		Pb	13 48 05.5	-0.3
CRY					Sn	13 48 19.9	0.0
TPC	Twentynine Pal	1.00	341		Pb	13 48 05.6	-0.3
EW2	E Wide Canyon	1.01	321		Pb	13 48 05.5	-0.4
EW2					Sn	13 48 19.7	-0.3
PLM	Palomar	1.03	281		Pb	13 48 06.2	-0.3
EML	El Monte Cty P	1.04	256		Pb	13 48 06.0	-0.5
EML					Sb	13 48 20.1	+0.5
IRM	Iron Mountain	1.09	23		Pn	13 48 07.6	+0.2
IRM	Iron Mountain	1.09	23	P	Pb	13 48 06.8	-0.6
	baz=203,SNR=1000						
IRM				Sg	Sg	13 48 23.2	+0.8
	baz=203						
DPP	Dos Picos Cty	1.09	262		Pn	13 48 06.9	-0.5
DPP					Sb	13 48 21.7	+0.3
BLAC	Blackrock camp	1.10	326		Pb	13 48 07.0	-0.7
BLAC					Sn	13 48 22.2	-0.2
BLYC	Blythe	1.12	57	Pg	Pb	13 48 08.0	+0.3
BLYC				IAML		13 48 26.0	
	comp=N,1μm,0.6s						
SDRC	San Diego Road	1.16	249		Sb	13 48 23.2	0.0
ESJX	Sierra Juarez	1.17	192		Sn	13 48 24.9	+0.6
ESJX	Sierra Juarez	1.17	192		Pn	13 48 08.6	0.0
ESJX	Sierra Juarez	1.17	192	IAML		13 48 25.2	
	comp=E,598nm,0.2s						
ESJX				IAML		13 48 26.1	
	comp=N,304nm,0.2s						
POB	Polly Butte	1.19	297		Pn	13 48 08.2	-0.7
CBX	Cerro Bola	1.20	226		Pn	13 48 09.1	+0.2
CBX				IAML		13 48 39.0	
	comp=E,408nm,0.8s						
DGR	Domenigoni Val	1.24	294		Pn	13 48 08.8	-0.7
109C	Camp Elliot, M	1.25	258	Pg	Pn	13 48 08.9	-0.6
109C				IAML		13 48 27.1	
	comp=N,900nm,0.3s						
109C				IAML		13 48 27.7	
	comp=E,641nm,0.3s						
109C	Camp Elliot, M	1.25	258	P	Pn	13 48 09.2	-0.4
	baz=77,SNR=13						
109C				S	Sb	13 48 25.9	+0.1
	baz=77						
BACC	Bachelor Mtn.	1.25	292		Pn	13 48 09.0	-0.6
BACC					Sg	13 48 27.7	+0.2
CPE	Camp Elliot	1.25	258		Pn	13 48 09.4	-0.2
HMTC	Hemet	1.26	296		Pn	13 48 09.1	-0.7
GORC	Green Oak Ranc	1.32	270		Pn	13 48 10.2	-0.4
GORC					Sn	13 48 27.5	-0.2
TJX	Tijuana	1.34	242		Pb	13 48 11.7	0.0
MURC	Murrieta	1.36	289		Pg	13 48 12.9	-0.5
MURC	Murrieta	1.36	289	P	Pn	13 48 10.7	-0.5
	baz=108						
MURC				Sb	Sg	13 48 30.4	-0.8
	baz=108						
DANC	Danby, Needles	1.50	9		Pg	13 48 15.7	-0.2
BBRC	Big Bear Solar	1.53	317	P	Pn	13 48 13.2	-0.5
	baz=136,SNR=13						
CCX	Cicese	1.54	214		Pb	13 48 14.8	-0.2
CCX				IAML		13 48 37.1	
	comp=N,291nm,0.5s						
CCX				IAML		13 48 50.8	
	comp=E,437nm,0.8s						
CCX	Cicese	1.54	214		Sb	13 48 34.8	+0.6
ELS	Elsinore Mount	1.56	289		Pn	13 48 13.2	-0.8
SME	Santa Rosa Min	1.57	296		Pn	13 48 13.8	-0.2
GMRC	Granite Mounta	1.63	360		Pg	13 48 18.1	-0.3
GMRC	Granite Mounta	1.63	360	P	Pn	13 48 14.2	-0.7
	baz=180						
PDMCI	Parker Dam,Lak	1.70	47	Pg	Pb	13 48 18.7	+0.9
	baz=228						
HEC	Hector,Ludlow	1.77	341	Pg	Pg	13 48 21.0	0.0
	baz=161,SNR=34						
NEE2	Needles Airpor	1.82	28	P	Pn	13 48 18.5	+1.0
	baz=208,SNR=23						
BFSC	Mount Baldy Ra	1.99	303	P	Pn	13 48 20.3	+0.4
	baz=122						
SSK	Sunset Peak	2.00	302		Pn	13 48 20.6	+0.5
TUQ	Turquoise Moun	2.29	354	Pg	Pg	13 48 30.2	-0.7
	baz=174,SNR=43						
CIS	Catalina Islan	2.33	277	Pb	Pb	13 48 29.0	+0.6
	baz=95						
CIS				Sb	Sb	13 48 59.0	+2.2
	baz=95						
GSC	Goldstone, Bar	2.35	336	Pg	Pg	13 48 31.7	-0.3
	baz=156,SNR=24						
Y14A	Wickenburg	2.35	70		Pn	13 48 26.6	+1.8
W13A	Hualapai Mount	2.43	37		Pn	13 48 27.5	+1.4
SCI2	San Clemente I	2.44	267	P	Pn	13 48 26.0	+0.1
	baz=85						
DECC	Green Verdugo	2.49	297	Pg	Pg	13 48 34.1	-0.7
	baz=115						
EDW2	Edwards Air Fo	2.60	312	Pg	Pg	13 48 36.3	-0.6
	baz=131,SNR=43						
EDW2				Sb	Sb	13 49 07.4	+2.7
	baz=131						
214A	Organ Pipe Nat	2.68	116	P	Pn	13 48 28.2	-1.1
	baz=298						
CCCA	Chr Cany lake	2.76	330		Pn	13 48 31.1	+0.7
SHOC	Shoshone, Teco	2.79	350	Pg	Pg	13 48 40.2	-0.3
	baz=169,SNR=7.2						
GWY	Greenwater Val	3.14	345		Pn	13 48 35.3	-0.4
MPMC	Manual Prospec	3.27	333	P	Pn	13 48 37.2	-0.3
	baz=152						
SHPR	Sheep Range	3.37	7		Pn	13 48 40.0	+1.1
ISA	Isabella, Lake	3.42	318	Pg	Pg	13 48 52.1	-0.5
	baz=136,SNR=6.9						
TPNV	Topopah Spring	3.82	353	Pg	Pg	13 48 59.4	-0.7
	baz=172						
R11A	Troy Canyon, C	5.18	1	Pg	Pg	13 49 25.3	-1.0
	baz=180						
121A	Cookes Peak, D	6.65	93	P	Pn	13 49 24.3	+0.3
	baz=278						

SKHL ***05*** *13:54:53.7±0.2, 44°.70N×148°.70E, h50km±2km, mb4.4/3*
JMA ***05*** *13:54:54.9±0.6, 44°.N±2°×14°.8E±°, h0km, MV4.0/22, SE OFF ETOROFU*

ISC 05 13:54:52.7±4.0, 44°.63N±0°.08×148°.8E±0°.2, h42km, n15, σ1°61/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.87	314	*i* P	Pn	13 55 08.2	-0.3
KUR				AMB	AMB	13 55 08.5	
	160nm,0.2s						
KUR				*e*S	Sn	13 55 18.9	-1.2
KUR				A	A	13 55 22.9	
	1μm,0.3s						
KUR				A	A	13 55 22.9	
	1μm,0.3s						
YUK	Yuzh-Kuril'sk	2.16	255	*i* P	Pn	13 55 26.5	+0.4
YUK				AMB	AMB	13 55 27.4	
	40nm,0.2s						
YUK				*e*S	Sn	13 55 51.2	-0.5
YUK				A	A	13 55 57.8	
	250nm,0.5s						
YUK				A	A	13 55 57.8	
	270nm,0.5s						
NEM2	Nemuro 2	2.52	241	*e*P	Pn	13 55 31.4	+0.4
NEM2				*e*S	Sn	13 55 58.5	-1.9
NMR	Nemuro--Hokkai	2.52	241	*e*P	Pn	13 55 31.1	0.0
NMR				AMB	AMB	13 55 33.5	
	20nm,0.2s						
NMR				*e*S	Sn	13 55 59.3	-1.3
NMR				A	A	13 56 04.4	
	50nm,0.3s						
NMR				A	A	13 56 04.4	
	60nm,0.3s						
JRA	Rausu	2.70	256	*e*P	Pn	13 55 35.2	+1.7
JNSB	Nemuroshibetsu	2.83	254	*e*P	Pn	13 55 37.2	+1.9
JNK	Nakash	3.09	252	*e*P	Pn	13 55 40.5	+1.6
JNK				*e*S	Sn	13 56 14.4	-0.2
AKK	Akkeshi	3.26	242	*e*P	Pn	13 55 41.7	+0.5
AKK				*e*S	Sn	13 56 17.1	-1.6
JAK	Akkeshi	3.36	242	*e*P	Pn	13 55 43.3	+0.6
JAK				*e*S	Sn	13 56 19.6	-1.6
JTKR	Abashiri--Toko	3.54	261	*e*P	Pn	13 55 46.6	+1.5
JAR	Ashorobuto	3.84	251	*e*P	Pn	13 55 52.2	+3.0
JKK2	Kamakawa 2	4.38	262	*e*P	Pn	13 55 59.1	+2.5
JCH	Churui	4.40	245	*e*P	Pn	13 55 58.3	+1.4
JNBK	Urakawa-nobuka	4.96	244	*e*P	Pn	13 56 06.0	+1.4
JOT	Ohata	6.51	243	*e*S	Sn	13 57 36.5	-2.5

ANF ***05*** *14:11:29.5±0.1, 33°.16N×115°.65W, h15km, ML3.0/19, Error ellipse: s-maj=1.5km s-min=1.1km az=129.0*
NEIC ***05*** *14:11:30.1±1.3, 33°.15N±0°.01×115°.65W±0°.02, h20km±3km, Error ellipse: s-maj=2.3km s-min=1.6km az=87.0*
PAS ***05*** *14:11:30.2±2.3, 33°.160N±0°.009×115°.64W±0°.01, h3km±5km, ML3.0/96, ML2.9/22(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=78.0*

ISC 05 14:11:30.2±0.9, 33°.15N±0°.01×115°.66W±0°.02, h18km±3km, n84, σ0°59/117, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	Westmorland, C	0.13	150		Pg	14 11 33.6	-0.5
WEMD					Sg	14 11 37.2	+0.5
ERRC	Elmore Ranch	0.14	257		Pg	14 11 34.4	+0.1
ERRC					Sg	14 11 38.0	+0.9
SWSC	Sam W. Stewart	0.24	211		Pb	14 11 35.4	-0.3
SWSC					Sg	14 11 39.4	0.0
SWSC	Sam W. Stewart	0.24	211	P	Pb	14 11 35.4	-0.3
	baz=32,SNR=507						
SWSC				S	Sb	14 11 39.0	-0.4
	baz=32						
SUP	Superstition M	0.24	216		Pb	14 11 35.5	-0.3
SUP					Sg	14 11 39.5	0.0
COK2	Cook Ranch 2	0.30	191		Pb	14 11 37.3	+0.3
COK2					Sb	14 11 42.8	+1.2
SALN	Salton City	0.30	296		Pg	14 11 37.0	+0.2
SALN					Sg	14 11 42.1	+0.8
CRR	Carrizo Plain	0.37	225		Pg	14 11 37.9	0.0
CRR					Sb	14 11 44.0	+0.3
DREC	Desert Rsrch C	0.39	153		Pb	14 11 39.0	+0.5
WESC	Westside Schoo	0.39	189		Pb	14 11 38.6	-0.1
WESC					Sb	14 11 45.9	+1.5
SGL	Mount Signal	0.50	187		Pg	14 11 40.1	-0.1
SGL					Sb	14 11 47.6	+0.2
SLH	Sleepy Hollow	0.50	275		Pg	14 11 40.5	+0.1
SLH					Sb	14 11 48.2	+0.8
COA	Coachella	0.53	122		Pg	14 11 40.7	-0.1
COA					Sb	14 11 49.6	+1.4
BC3	Big Chuckawall	0.53	19		Pg	14 11 40.4	-0.5
BC3					Sg	14 11 48.1	-0.1
BC3	Big Chuckawall	0.53	19	P	Pg	14 11 40.4	-0.5
	baz=198,SNR=225						
BC3				S	Sg	14 11 47.7	-0.4
	baz=198						
YUH	Yuha Desert	0.55	204		Pg	14 11 40.9	-0.2
YUH					Sb	14 11 48.8	+0.1
YUH	Yuha Desert	0.55	204	IAML		14 11 50.1	
	comp=N,406nm,0.6s						
YUH				IAML		14 11 50.2	
	comp=E,565nm,0.5s						
CTW	Cottonwood Mou	0.56	341		Pb	14 11 41.1	-0.3
CTW					Sg	14 11 49.1	+0.3
HAY	Hayfield	0.56	358		Pb	14 11 41.1	-0.3
HAY					Sb	14 11 49.2	+0.2
RUN	Ruthven	0.60	107		Pb	14 11 41.5	-0.6
RUN					Sb	14 11 49.7	-0.4
IKP	In-Ko-Pah, Jac	0.63	218		Pb	14 11 42.4	-0.2
IKP					Sg	14 11 51.3	+0.3
IKP	In-Ko-Pah, Jac	0.63	218	P	Pb	14 11 42.4	-0.2
	baz=37,SNR=70						
IKP				S	Sg	14 11 51.2	+0.2
	baz=37						
BORC	Borrego Spring	0.65	281		Pb	14 11 42.8	-0.2
BORC					Sb	14 11 51.7	+0.1
RMX	La Rumorosa	0.65	213		Pg	14 11 43.5	+0.4
RMX					Sg	14 11 52.6	+0.8
RMX	La Rumorosa	0.65	213	IAML		14 11 53.8	
	comp=N,519nm,0.5s						
MONP2	Monument Peak	0.69	249		Pb	14 11 43.7	-0.1
MONP2					Sb	14 11 53.3	+0.2
MONP2	Monument Peak	0.69	249	P	Pb	14 11 43.7	-0.1
	baz=68,SNR=99						
MONP2				S	Sb	14 11 53.3	+0.2
	baz=68						
EMSC	East Mesa	0.70	126		Pb	14 11 43.5	-0.2
EMSC					Sn	14 11 54.3	-1.1
GLA	Glamis	0.70	98		Pb	14 11 43.2	-0.7
GLA					Sb	14 11 53.2	-0.1
GLA	Glamis	0.70	98	IAML		14 11 55.7	
	comp=N,668nm,0.6s						
GLA	Glamis	0.70	98	P	Pb	14 11 43.2	-0.7
	baz=279,SNR=60						
GLA				S	Sb	14 11 52.6	-0.7
	baz=279						
XPFO	Pion Flat	0.81	305		Pb	14 11 45.4	-0.4
PFO	Pinyon Flats O	0.81	305		Pb	14 11 45.6	-0.2
PFO				IAML		14 11 57.6	
	comp=N,493nm,0.6s						
PFO				IAML		14 11 57.9	
	comp=N,408nm,0.6s						
PFO	Pinyon Flats O	0.81	305		Pb	14 11 45.5	-0.4
PFO	Pinyon Flats O	0.81	305	P	Pb	14 11 45.5	-0.4
	baz=123,SNR=160						
PFO				S	Sb	14 11 56.8	+0.2
	baz=123						
MATG	Mataguay Scout	0.83	274		Pb	14 11 45.9	-0.3
FRD	Ford Ranch, An	0.86	294		Pb	14 11 46.4	-0.3
FRD					Pn	14 11 58.6	+11
FRD	Ford Ranch, An	0.86	294		Pb	14 11 46.4	-0.3
FRD					Pn	14 11 58.4	+11
BELC	Belle Mtn. Jos	0.90	342		Pb	14 11 46.7	-0.5
BELC					Pn	14 11 59.5	+11
BELC	Belle Mtn. Jos	0.90	342	P	Pb	14 11 46.8	-0.5
	baz=160,SNR=47						
BELC				S	Sb	14 11 59.4	+0.4
	baz=160						
SNDA	J Saunders Pla	0.90	297		Pb	14 11 47.0	-0.2
SNDA					Pn	14 12 00.2	+12
BZNA	Buzz No.'s Pla	0.91	292		Pb	14 11 47.2	-0.3
DNR	Dunn Ranch,Anz	0.92	297		Pb	14 11 47.4	-0.2
BAR	Barrett	0.97	242		Pb	14 11 47.9	-0.7
BAR	Barrett	0.97	242		Sb	14 12 01.3	+0.2
TKX	Tecate	0.99	234		Sg	14 12 02.5	+0.1
CRY	Cary Ranch	0.99	295		Pb	14 11 48.4	-0.6
EW2	E Wide Canyon	1.01	322		Pb	14 11 48.3	-0.9
EW2					Sb	14 12 02.7	+0.6
TPC	Twentynine Pal	1.01	341		Pb	14 11 48.5	-0.7
PLM	Palomar	1.03	282		Pb	14 11 49.0	-0.6
EML	El Monte Cty P	1.03	256		Pb	14 11 48.8	-0.7
EML					Sb	14 12 02.8	+0.1
DPP	Dos Picos Cty	1.09	262		Pb	14 11 49.8	-0.7
DPP					Sb	14 12 04.6	+0.2
IRM	Iron Mountain	1.09	23		Pn	14 11 50.4	-0.2
IRM	Iron Mountain

GMRC	Granite Mounta	1.63 360		Pb	14 12 00.9	+1.1
GMRC	Granite Mounta	1.63 360	Pg	Pb	14 12 00.9	+1.1
	baz=180					
GMRC			Sb	Sb	14 12 21.5	+1.4
	baz=180					
113A	Mohawk Valley,	1.63 103		Pn	14 11 58.7	+0.7
PDMCI	Parker Dam,Lak	1.71 47	Pg	Pb	14 12 01.6	+0.6
	baz=228					
HEC	Hector,Ludlow	1.77 342	Pg	Pg	14 12 03.9	-0.3
	baz=161					
HEC			Sg	Sg	14 12 28.4	+1.1
	baz=161					
BFSC	Mount Baldy Ra	1.99 304	P	Pn	14 12 02.8	-0.3
	baz=122					
TUQ	Turquoise Moun	2.29 355	Pg	Pg	14 12 13.6	-0.6
	baz=174					
W13A	Hualapai Mount	2.44 37		Pn	14 12 10.2	+0.9
214A	Organ Pipe Nat	2.68 116	P	Pn	14 12 11.3	-1.2
	baz=298					
SHOC	Shoshone, Teco	2.79 350	Pg	Pg	14 12 22.9	-0.8
	baz=169					
TPNV	Topopah Spring	3.82 353	Pg	Pg	14 12 42.6	-0.8
	baz=172					
LCMT	Little Creek M	4.33 26		Pn	14 12 35.7	+0.4
LCH	Last Change Ra	4.39 339		Pn	14 12 36.9	+0.8
CCUT	Cedar City	4.78 22	Pn	Pn	14 12 42.1	+0.6

*DJA **05** 14:22:23.5±0.2,9°S±3°×12°4E±°,h116km±3km,M4.5/18, mB5.3/4,mb4.5/18,MLv4.4/13,Mw(mB)4.7/4*
*IDC **05** 14:22:23.6±1.2,9.04S×123.78E,h107km±13km,mb3.8/7, mbtmp4.2/9,MS2.9/2,Error ellipse: s-maj=29.5km s-min=15.4km az=61.0*
*NEIC **05** 14:22:24.4±2.2,9.08S±0.06×123.65E±0.06,h108km±7km, mb4.4/13,Error ellipse: s-maj=11.7km s-min=3.9km az=49.0*

ISC 05 14:22:23.4±0.5,9.13S±0.06×123.63E±0.06,h100km,n63, σ1§65/64,mb4.2/12,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.88	135		Pn	14 22 44.6	+1.8
SOEI	Soe	0.88	135	P	Pn	14 22 44.8	+2.0
SOEI				S	Sn	14 23 00.3	+3.0
BATI	Baumata	1.07	178	P	Pn	14 22 47.2	+2.5
	3µm,0.4s,baz=7.1,slow=2.4,SNR=923						
BATI				S	Sn	14 23 03.6	+3.0
	2µm,0.3s,baz=180,slow=20,SNR=9.5						
BATI	Baumata	1.07	178	P	Pn	14 22 46.8	+2.1
BATI				S	Sn	14 23 04.2	+3.5
MMRI	Maumere	1.46	290		Pn	14 22 50.4	+1.2
MMRI	Maumere	1.46	290	P	Pn	14 22 51.0	+1.8
MMRI				S	Sn	14 23 11.6	+2.8
EDFI	Ende, Flores	1.95	281	P	Pn	14 22 57.3	+1.8
BBSI	Bau Bau	3.77	344	P	Pn	14 23 22.6	+3.1
BSSI	Bau Bau, Buton	4.30	313	P	Pn	14 23 29.3	+2.6
BKSI	Bulukumba	5.14	317	P	Pn	14 23 40.0	+1.9
	0.1nm24nm,0.7s						
DBNI	Kabupaten Domp	5.29	276	P	Pn	14 23 41.3	+1.1
	0.8nm68nm,0.4s						
KAPI	Kappang	5.62	316	LR	LR	14 26 09.3	
	comp=Z,36nm,21.9s,baz=126,slow=40						
PLAI	Plampang	5.79	273	P	Pn	14 23 47.9	+1.0
	0.8nm3µm89nm,0.5s						
TWSI	Taliwang, Sumb	6.68	273	P	Pn	14 23 59.6	+0.6
SANI	Sanana	7.42	19	P	Pn	14 24 11.7	+2.7
	0.1nm13nm,0.8s						
KLNI	Mataram	7.48	275	P	Pn	14 24 09.6	-0.3
	0.3nm22nm,0.6s						
SAUI	Saumlaki	7.67	82	P	Pn	14 24 13.1	+0.6
	1.8nm356nm,1.2s						
KNRA	Kununurra	8.21	143	Pn	Pn	14 24 17.5	-2.3
MTN	Manton Dam	8.24	117	Pn	Pn	14 24 19.1	-1.1
IGBI	Denpasar	8.39	271	P	Pn	14 24 23.4	+1.2
	34nm,0.8s						
RTBI	Rangdo, Negare	8.61	274	P	Pn	14 24 24.6	-0.7
	44nm,1.0s						
FITZ	Fitzroy Crossi	9.13	168	P	Pn	14 24 29.8	-2.5
	13nm,0.4s,baz=355,slow=8.4,SNR=164						
FITZ				S	Sn	14 26 02.8	-10
	62nm,0.6s,baz=7.5,slow=11,SNR=4.5						
FITZ	Fitzroy Crossi	9.13	168	Pn	Pn	14 24 31.1	-1.2
JAGI	Jajag, Banyuwa	9.39	273	Pn	Pn	14 24 34.3	-1.6
GMJI	Gumukmas	10.11	274	P	Pn	14 24 42.6	-3.0
	19nm,1.3s						
FAKI	Fak Fak	10.56	55	Pn	Pn	14 24 50.3	-1.5
FAKI	Fak Fak	10.56	55	P	Pn	14 24 51.5	-0.3
	23nm,0.9s						
SIJI	Sorong	11.19	43	P	Pn	14 24 58.6	-1.7
	5.4nm,0.6s,baz=233,slow=20,SNR=6.8						
SIJI	Sorong	11.19	43	P	Pn	14 25 01.5	+1.2
	8.8nm,1.2s						
PCJI	Pacitan	12.35	273	P	Pn	14 25 13.6	-2.2
	63nm,1.3s						
MBWA	Marble Bar	12.54	197	Pn	Pn	14 25 17.0	-1.2
UGM	Wanagama	13.02	274	P	Pn	14 25 22.3	-2.4
	114nm,1.6s						
WRA	Warramunga Arr	14.92	137	P	Pn	14 25 45.0	-4.3
	3.2nm,0.3s,baz=319,slow=13,SNR=84						
WRA				S	Sn	14 28 18.0	-16
	11nm,0.8s,baz=317,slow=25,SNR=13						
GIRL	Giralia	16.18	213	P	Pn	14 26 05.3	+0.3
GIRL				IAmb	IAmb	14 26 27.9	
	comp=Z,20nm,0.8s						
CNJI	Cibinong	16.43	275	P	Pn	14 26 07.1	-1.1
	comp=Z,33nm,1.2s						
AS31	Alice Springs	17.48	147		P	14 26 19.8	-0.9
ASAR	Alice Springs	17.48	147	P	P	14 26 19.4	-1.3
	comp=Z,9.3nm,0.5s,baz=322,slow=12,SNR=198						
ASAR				S	Sn	14 29 20.4	-15
	comp=Z,2.6nm,0.5s,baz=309,slow=20,SNR=8.0						
ASAR	Alice Springs	17.48	147		P	14 26 19.2	-1.5
KASI	Kota Agung	19.31	279	P	P	14 26 39.9	-0.9
	comp=Z,28nm,0.8s						
COEN	Coen	19.74	106	P	P	14 26 46.1	+0.7
COEN				IAmb	IAmb	14 27 12.3	
	comp=Z,50nm,1.4s						
MORW	Morawa	21.08	199	P	P	14 27 00.0	+0.3
MORW				IAmb	IAmb	14 27 19.5	
	comp=Z,17nm,1.4s						
FORT	Forrest	21.93	170	P	P	14 27 07.5	-1.3
FORT				IAmb	IAmb	14 27 15.4	
	comp=Z,18nm,0.7s						
CTA	Charters Tower	24.42	119	P	P	14 27 31.5	-1.3
	comp=Z,3.9nm,0.8s,baz=306,slow=13,SNR=2.3						
	comp=Z,3.9nm,0.8s						
BBOO	Buckleboo	26.22	156	P	P	14 27 49.2	+0.2
STKA	Stephens Creek	28.11	146	P	P	14 28 05.8	-0.2
	comp=Z,2.2nm,0.4s,baz=319,slow=8.2,SNR=20						
	comp=Z,2.2nm,0.4s						
STKA	Stephens Creek	28.11	146	P	P	14 28 06.3	+0.4
CMAR	Chiang Mai Arr	36.67	318	P	P	14 29 21.3	+0.5
	comp=Z,0.7nm,0.5s,baz=144,slow=5.7,SNR=6.1						
	comp=Z,0.7nm,0.5s						
CMAR	Chiang Mai Arr	36.67	318	P	P	14 29 20.6	-0.2
MK31	Makanchi Array	66.74	330	P	P	14 33 03.0	-1.0
MK31				IAmb	IAmb	14 33 04.2	
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	66.74	330	P	P	14 33 03.6	-0.3
	comp=Z,2.3nm,0.5s,baz=134,slow=7.7,SNR=38						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	66.74	330	P	P	14 33 03.1	-0.8
MAW	Mawson	70.70	201	P	P	14 33 29.2	+1.0
ZALV	Zalesovo Beam	70.87	337	P	P	14 33 27.0	-2.4
	comp=Z,1.2nm,0.5s,baz=115,slow=6.7,SNR=6.3						
	comp=Z,1.2nm,0.5s						
ZALV	Zalesovo Beam	70.87	337	P	P	14 33 28.4	-1.0
VNDA	Vanda	71.18	172	P	P	14 33 31.2	+0.3
	comp=Z,0.4nm,0.7s,baz=318,slow=5.8,SNR=2.1						
	comp=Z,0.4nm,0.7s						
VNDA	Vanda	71.18	172	P	P	14 33 31.6	+0.7
KURBB	Kurchatov Arra	71.19	332	P	P	14 33 30.6	-0.8
	comp=Z,1.7nm,0.2s,baz=142,slow=5.7,SNR=6.2						
	comp=Z,1.7nm,0.2s						
SBA	Scott Base	72.14	171	P	P	14 33 37.8	+1.1
QSPA	South Pole Qui	80.86	180	P	P	14 34 27.0	+0.8
QSPA				IAmb	IAmb	14 34 29.6	
	comp=Z,4.8nm,1.4s						
KIRV	Kirov	89.63	330	LR	LR	15 17 26.7	
	comp=Z,21nm,21.8s,baz=307,slow=37						
SNAA	Sanae	92.07	195	P	P	14 35 21.9	+0.8
SNAA				IAmb	IAmb	14 35 39.4	
	comp=Z,5.7nm,1.5s						
CUT	Chulitna	96.21	28	P	P	14 35 39.6	-0.4
FYU	Fort Yukon	98.76	24	P	P	14 35 51.8	+0.4

*NEIC **05** 14:47:48.1±1.3,54.6N±0.1×164.8W±0.1,h13km±11km, Error ellipse: s-maj=24.2km s-min=1.0km az=151.0*

AEIC 05 14:47:47±1.6,54.5N±0.1×164.7W±0.1,h5km±7km,ML2.6, ML2.9/8(NEIC),Error ellipse: s-maj=21.8km s-min=2.0km az=154.0,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESN	West Dahl Nort	0.08	72		Pg	14 47 50.1	+1.3
WTUG	Tugumak	0.36	32		Pb	14 47 55.8	-0.1
SSLS	Shishaldin Sou	0.45	68		Pb	14 47 57.1	-0.4
SSLN	Shishaldin Nor	0.50	57		Pb	14 47 58.3	0.0
BRPK	Brown Peak	0.58	79		Pb	14 47 59.3	-0.3
ISLZ	Isanotski Laza	0.61	72		Pb	14 48 00.0	-0.2
ISNN	Isanotski Nort	0.62	62		Pb	14 48 00.6	+0.3
AKSA	Akutan Strait	0.70	235		Pb	14 48 02.3	+0.6
AKUT	Akutan	0.74	237		Pb	14 48 02.4	+0.1
FALS	False Pass	0.82	67		Pb	14 48 03.7	0.0
AKGG	Akutan Green G	0.82	246		Pb	14 48 03.3	-0.4
ZRO	Akutan Zero	0.86	239		Pb	14 48 04.5	0.0
UNV	Unalaska Valle	1.26	237		Pg	14 48 10.7	-0.5
MTBL	Makushin Table	1.28	244		Pb	14 48 12.0	+0.3
MNAT	Makushin Natee	1.33	241		Pg	14 48 12.4	0.0
MREP	Makushin Rep't	1.40	239		Pn	14 48 12.8	-0.4
MCIR	Makushin Cirqu	1.41	246		Pb	14 48 13.7	0.0
MGOD	Makushin Gods	1.47	240		Pn	14 48 13.6	-0.6
OKFG	Magazine Ridge	2.20	240		Pn	14 48 24.6	+0.4
SDPT	Sand Point	2.58	70		Pn	14 48 30.2	+0.9
SDPT	Sand Point	2.58	70	IAML		14 49 11.6	
	comp=N,69nm,1.1s						
CNBA	Chernabura Isl	2.99	83	Pn	Pn	14 48 35.0	0.0
CNBA				IAML		14 49 29.2	
	comp=E,25nm,2.2s						
CNBA				IAML		14 49 35.2	
	comp=N,20nm,3.1s						
CHGN	Chignik	4.00	61	Pn	Pn	14 48 50.9	+2.1
CHGN				IAML		14 49 43.8	
	comp=N,22nm,0.1s						
GSTR	Great Sitkin T	7.22	255	Pn	Pn	14 49 32.2	-0.9
KDAK	Kodiak Island	7.51	59	Pn	Pn	14 49 37.3	+0.2

*VIE **05** 14:50:53.4±0.6,49.73N×18.55E,h0km,mb2.6/1,ml2.1/1, Error ellipse: s-maj=6.7km s-min=3.5km az=163.0 24 km ESE of Ostrava Suspected Mining induced.*
*IPEC **05** 14:50:54.6±0.2,49.83N×18.55E,h1km,ML2.0/4,Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*PRU **05** 14:50:55.4±0.0,49.88N×18.43E,h0km,Mining Induced Event Csa, E=1.5e+05*

ISC 05 14:50:54.7±0.9,49.79N±0.04×18.50E±0.03,h0km,n20, σ0§87/37,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.23	283	*e*PG	Pg	14 51 00.0	+0.8
OKC				*e*SG	Sg	14 51 02.7	+0.5
	comp=Z,232nm,0.4s						
MAUC	Maruska	0.61	226	*e*PG	Pb	14 51 08.1	-0.1
MAUC				*e*SG	Sb	14 51 16.6	-0.7
	comp=Z,56nm,0.5s						
MORC	Moravsky Berou	0.62	269	*e*PG	Pg	14 51 06.9	+0.3
MORC				*e*SG	Sg	14 51 14.9	+0.3
MORC	Moravsky Berou	0.62	269	*e*Pg	Pg	14 51 06.9	+0.3
	baz=85						
MORC				*e*Sg	Sg	14 51 14.8	+0.2
	25nm,0.3s,baz=85						
OJC	Ojcow	0.94	62	*e*Pg	Pg	14 51 11.4	-1.3
OJC				*e*Sg	Sg	14 51 24.2	-0.8
NIE	Niedzica	1.23	107	*e*Pg	Pn	14 51 20.3	+1.2
NIE				*e*Sg	Sn	14 51 38.6	+2.2
VRAC	Vranov	1.33	250	*e*PG	Pg	14 51 20.3	+0.1
VRAC				*e*SG	Sg	14 51 37.6	+0.2
VRAC	Vranov	1.33	250	*e*Pg	Pg	14 51 20.2	+0.1
	baz=67						
VRAC				*e*Sg	Sg	14 51 37.6	+0.2
	21nm,0.4s,baz=67						
DPC	Dobruska-Polom	1.51	293	*e*PG	Pn	14 51 22.5	-0.6
DPC				*e*SG	Sg	14 51 42.4	-0.9
	comp=Z,12nm,0.3s						
KRUC	Moravsky	1.55	243	*e*PG	Pn	14 51 23.8	+0.2
KRUC				*e*SG	Sg	14 51 44.8	+0.2
KRUC	Moravsky	1.55	243	*e*Pg	Pn	14 51 23.8	+0.2
	baz=60						
KRUC				*e*Sg	Sg	14 51 44.8	+0.2
	10nm,0.3s,baz=60						
OSTC	Ostas	1.66	299	*e*PG	Pn	14 51 25.2	+0.1
OSTC				*e*SG	Sn	14 51 46.6	-0.5
UPC	Upice	1.76	295	*e*PG	Pn	14 51 26.7	+0.3
UPC				*e*SG	Sn	14 51 49.5	0.0
CHVC	Chvalec	1.77	298	*e*PG	Pn	14 51 26.9	+0.4
CHVC				*e*SG	Sn	14 51 49.5	-0.2
	comp=Z,11nm,0.4s						
KSP	Ksiaz	1.77	308	*e*Pg	Pn	14 51 26.7	+0.2
KSP				*e*Sg	Sn	14 51 48.7	-1.0
GOPC	GO Pecny, Ondr	2.41	274	*e*SG	Sb	14 52 09.1	0.0
CONA	Conrad Observa	2.55	224	*e*Pn	Pn	14 51 36.8	-0.5
	0.3nm,0.1s						
CONA				*e*Sn	Sn	14 52 06.9	-2.3
	0.9nm,0.2s						
PRU	Pruhonice	2.57	276	*e*SG	Sb	14 52 14.2	+0.5
CKRC	Cesky Krumlov	2.91	252	*e*SG	Sg	14 52 26.3	-1.8
	comp=Z,8.6nm,0.7s						
KHC	Kasperske Hory	3.28	260	*e*PG	Pb	14 51 55.0	+1.3
KHC				*e*SG	Sg	14 52 38.4	-1.5
	comp=Z,5.0nm,0.4s						

*IDC **05** 14:54:18.0±2.4,51.45N×176.54E,h0km,mb3.3/4, mbtmp3.5/5,ML3.8/1,MS2.7/2,Error ellipse: s-maj=63.1km s-min=22.2km az=1.0*
*AEIC **05** 14:54:22±1.3,51.6N±0.2×176.55E±0.08,h26km±9km, ML3.4,mb3.8/21(NEIC),Error ellipse: s-maj=28.6km s-min=4.4km az=191.0*
*NEIC **05** 14:54:24.4±1.6,51.6N±0.3×176.6E±0.1,h33km±20km, Error ellipse: s-maj=48.6km s-min=4.2km az=190.0*

ISC 05 14:54:23.0±1.3,51.6N±0.2×176.53E±0.06,h31km,n49, σ0§70/42,mb3.8/12,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.29	72		Pn	14 54 44.6	-0.3
LSNW	Little Sitkin	1.30	71		Pn	14 54 44.7	-0.3
LSPA	Little Sitkin	1.33	72		Pn	14 54 45.2	-0.2
AMKA	Amchitka	1.74	95		Pn	14 54 50.7	-0.4
SHEM	Shemya Is, Ala	1.90	309	Pn	Pn	14 54 53.6	+0.4
	86nm,0.3s,baz=136,slow=2.6,SNR=43						
SHEM				Sn	Sn	14 55 15.9	-0.1
	42nm,0.3s,baz=280,slow=23,SNR=10.0						
SHEM				LR	LR	14 55 27.1	
	comp=Z,117nm,18.2s,baz=16,slow=35						
SMY	Shemya	1.90	309		Pn	14 54 53.6	+0.4
CEPE	Semis' Perret	1.98	77		Pn	14 54 54.8	+0.5
GANO	Gareloi North	2.91	83		Pn	14 55 07.6	+0.4
TASE	Tanaga Southea	3.39	83		Pn	14 55 14.3	+0.6
TAFP	Tanaga Falls P	3.42	82		Pn	14 55 15.1	+0.9
KIWB	Kanaga Island	3.94	83	Pn	Pn	14 55 22.2	+1.0
ADK	Adak	4.23	83	Pn	Pn	14 55 25.8	+0.6
PETK	Petropavlovsk-	11.63	285	LR	LR	15 01 16.6	
	comp=Z,34nm,21.7s,baz=76,slow=36						
SDPT	Sand Point	14.19	66	Pn	Pn	14 57 41.8	+0.2
CNBA	Chernabura Isl	14.66	68	Pn	Pn	14 57 47.1	-0.8
KDAK	Kodiak Island	18.79	59	P	P	14 58 39.3	-0.2
	0.3nm,0.3s,baz=230,slow=2.3,SNR=12						
	1.7nm,0.5s						
KDAK	Kodiak Island	18.79	59	P	P	14 58 39.8	+0.2
KDAK				IAmb	IAmb	14 58 42.6	
	comp=Z,7.1nm,1.1s						
CNPM	China Poot	19.73	54	P	P	14 58 49.2	-0.5
CNPM				IAmb	IAmb	14 58 55.2	
	comp=Z,7.0nm,1.0s						
J20K	Nowinta River	19.83	39		P	14 58 51.8	+1.0
BRLK	Bradley Lake	19.95	53	P	P	14 58 51.2	-1.0
BRLK				IAmb	IAmb	14 59 15.0	
	comp=Z,6.8nm,1.1s						
SUA	Susitna One	20.37	48	P	P	14 58 57.9	+1.0
PWL	Port Wells	21.39	51	P	P	14 59 07.2	-0.5
PWL				IAmb	IAmb	14 59 11.1	
	comp=Z,6.4nm,1.1s						
SCM	Sheep Creek Mo	22.04	48	P	P	14 59 15.4	+0.7
DHY	Denali Highway	22.30	45	P	P	14 59 17.7	+0.1
DHY				IAmb	IAmb	14 59 41.2	
	comp=Z,2.7nm,0.8s						
WRH	Wood River Hil	22.38	41	P	P	14 59 17.4	-1.0
H24K	Noodor Dome	22.93	38	P	P	14 59 24.4	+0.3
H24K				IAmb	IAmb	14 59 36.1	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	22.97	41	P	P	14 59 24.1	-0.4
	comp=Z,0.3nm,0.6s,baz=242,slow=9.0,SNR=4.5						
	comp=Z,0.3nm,0.6s						
N25K	Chitina, Valde	23.29	49	P	P	14 59 29.5	+1.7
N25K				IAmb	IAmb	14 59 54.3	
	comp=Z,2.3nm,0.9s						
HMT	Hamilton	23.31	53	P	P	14 59 28.0	-0.1
J25K	Salcha River,	23.55	42	P	P	14 59 29.1	-1.2
GLB	Gilahina Butte	23.64	50	P	P	14 59 31.5	+0.2
GLB				IAmb	IAmb	14 59 46.6	
	comp=Z,2.7nm,0.9s						
DOT	Dot Lake	23.88	44	P	P	14 59 33.5	+0.1
SCRK	Sand Creek	23.98	44	P	P	14 59 34.5	0.0
J26L	Joseph Creek	24.28	42	P	P	14 59 37.4	+0.2
J26L				IAmb	IAmb	14 59 41.9	
	comp=Z,2.2nm,0.8s						
M27K	Edge Creek, AK	24.66	48	P	P	14 59 42.5	+1.8
L27K	Beaver Creek,	24.77	46	P	P	14 59 42.5	+0.9
BCAR	Beaver Creek A	24.79	46	P	P	14 59 42.2	+0.4
EGAK	Eagle	25.35	42	P	P	14 59 46.7	0.0
EGAK				IAmb	IAmb	15 00 04.0	
	comp=Z,2.6nm,0.8s						
I29M	Ogilvie Camp,	26.64	42	P	P	14 59 59.3	+0.8
I29M				IAmb	IAmb	15 00 13.7	
	comp=Z,2.2nm,0.9s						
KLR	Kul'dur	28.31	283	P	P	15 00 13.4	-0.1
	comp=Z,0.4nm,0.4s,baz=149,slow=14,SNR=1.7						
	comp=Z,0.4nm,0.4s						
H11N2	WAKE ISLAND Hy	32.67	197	T	T	15 35 58.5	
	baz=11,slow=76,SNR=99						
H11N3	WAKE ISLAND Hy	32.67	197	T	T	15 35 59.3	
	baz=11,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	32.68	197	T	T	15 35 59.8	
	baz=11,slow=76,SNR=85						
H11S1	WAKE ISLAND Hy	33.89	197	T	T	15 37 34.9	
	baz=11,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	33.90	197	T	T	15 37 28.7	
	baz=11,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	33.91	197	T	T	15 37 30.5	
	baz=11,slow=76,SNR=9.2						
JCJ	Chichijima	35.57	240	LR	LR	15 13 43.0	
	comp=Z,15nm,21.8s,baz=100,slow=33						
NVAR	Mina Array Bea	46.41	80	P	P	15 02 46.9	+0.2
	comp=Z,0.2nm,0.5s,baz=298,slow=7.7,SNR=2.1						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	57.59	306	P	P	15 04 09.0	-0.6
	comp=Z,0.4nm,0.8s,baz=49,slow=6.8,SNR=1.5						
	comp=Z,0.4nm,0.8s						

*NEIC **05** 15:02:10.8±1.6,20.3S±0.1×177.6W±0.1,h508km±6km, mb4.5/132,Error ellipse: s-maj=17.4km s-min=14.5km az=127.0*
*IDC **05** 15:02:11.4±1.4,20.35S×177.69W,h515km±14km, mb3.8/18,mbtmp4.7/22,Error ellipse: s-maj=15.6km s-min=10.5km az=133.0*
*NOU **05** 15:02:12.1,20.20S×177.52W,h541km,mb4.5/60,Fiji Islands Region*

ISC 05 15:02:11.6±0.6,20.27S±0.06×177.65W±0.06, h521km±6km,n494,σ1§10/472,mb4.5/82,23C-24D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.31	331	P	P	15 03 23.2	+2.9
TAVE	Taveuni	4.14	328	P	P	15 03 35.1	+2.4
MSVF	Nonsavu	4.79	301	P	P	15 03 39.4	+1.3
	17nm,0.4s,baz=143,slow=6.9,SNR=9.1						
MSVF				S	S	15 04 51.0	+2.3
	4.7nm,0.5s,baz=184,slow=22,SNR=0.7						
MSVF	Nonsavu	4.79	301	P	P	15 03 38.7	+0.6
FUTU	Fugatoga	5.95	356	P	P	15 03 50.2	+1.7
NIUE	Niue	7.37	82	P	P	15 04 01.7	-0.5
NIUE	Niue	7.37	82	P	P	15 04 04.4	+2.2
AFI	Afiamalu	8.46	42	P	P	15 04 12.0	-1.4
	78nm,0.5s,baz=154,slow=1.9,SNR=34						
AFI				S	S	15 05 45.7	-7.5
	145nm,0.4s,baz=202,slow=16,SNR=15						
AFI	Afiamalu	8.46	42	P	P	15 04 11.1	-2.3
AFI	Afiamalu	8.46	42	P	P	15 04 12.1	-1.3
GLKZ	Green Lake	8.95	182	P	P	15 04 15.0	-3.2
GLKZ				S	S	15 06 05.0	+2.8
FUNA	Funafuti	12.07	345	P	P	15 04 50.3	-0.7
RTV	Rentapao	13.40	278	P	P	15 05 05.4	+0.5
MARNC	Mare, Loyalty	13.45	262	P	P	15 05 04.8	-0.5
PINNC	Pines Island,	14.08	258	P	P	15 05 11.0	-0.9
PINNC	Pines Island,	14.08	258	P	P	15 05 12.7	+0.8
LIFNC	LIFOU	14.17	265	P	P	15 05 11.6	-1.2
LIFNC	LIFOU	14.17	265	P	P	15 05 14.4	+1.5
YATNC	Mamie plateau,	14.54	260	P	P	15 05 18.1	+1.4
DZM	Mont Dzumac	14.95	260	P	P	15 05 20.8	-0.3
	7.4nm,0.5s,baz=85,slow=23,SNR=2.1						
DZM	Mont Dzumac	14.95	260	P	P	15 05 22.2	+1.1
OUZ	Omahuta	16.77	206	P	P	15 05 38.5	-0.8
OUZ	Omahuta	16.77	206	P	P	15 05 41.8	+2.4
KOUNC	Koumac, New Ca	16.94	266	P	P	15 05 41.6	+0.4
KOUNC	Koumac, New Ca	16.94	266	P	P	15 05 43.2	+2.0
KUZ	Kuaotunu	17.41	198	P	P	15 05 46.0	+0.7
MXZ	Matakaoa Point	17.59	191	S	S	15 08 57.5	+15
MXZ	Matakaoa Point	17.59	191	P	P	15 05 47.6	+0.7
WMGZ	Waiomatatini S	17.82	190	P	P	15 05 50.3	+1.3
WMGZ				S	S	15 09 03.7	+17
HAZ	Te Kaha	17.87	192	P	P	15 05 49.9	+0.4
HAZ				S	S	15 09 05.8	+19
PUZ	Puketiti	18.09	190	P	P	15 05 53.0	+1.5
PUZ				S	S	15 09 09.8	+19
TGRZ	Tauranga	18.18	196	P	P	15 05 54.5	+2.2
TWGZ	Tauwhareparae	18.24

QLP Quilpie 35.44 252 P P 15 08 24.0 +0.1
MTSU Mount Surprise 35.94 267 P P 15 08 28.1 -0.1
COEN Coen 37.90 273 P P 15 08 43.0 -1.3
COEN Coen 37.90 273 P P 15 08 44.1 -0.2
STKA Stephens Creek 38.19 244 P P 15 08 46.1 -0.3
comp=Z,4.4nm,0.6s,baz=91,slow=12,SNR=20
STKA PcP **PcP 15 10 48.1 +0.4**
comp=Z,2.0nm,0.6s,baz=113,slow=6.8,SNR=4.8
comp=Z,4.4nm,0.6s
STKA Stephens Creek 38.19 244 P P 15 08 45.9 -0.6
STKA PcP **PcP 15 10 47.5 -0.1**
STKA Stephens Creek 38.19 244 P P 15 08 46.9 +0.4
INKA Innaminka 38.59 251 P P 15 08 50.7 +0.9
QIS Mount Isa 39.98 262 P P 15 09 00.9 -0.2
HTT Hallett 40.63 242 P P 15 09 06.3 +0.1
LCRK Leigh Creek 40.93 247 P P 15 09 08.8 +0.2
WAKE Wake Island 42.22 338 P P 15 09 18.5 -0.2
WAKE Wake Island 42.22 338 P P 15 09 18.3 -0.4
BBOO Buckleboo 42.95 243 P P 15 09 23.9 -0.5
BBOO Buckleboo 42.95 243 P P 15 09 24.2 -0.3
OOD Oodnadatta 43.07 251 P P 15 09 26.2 +0.7
MULG Mulgathing 44.51 247 P P 15 09 36.4 -0.3
WR0 Warramunga Arr 44.77 262 P P 15 09 37.7 -1.1
WR0 IAmb IAmb 15 09 39.1
comp=Z,9.6nm,0.4s
AS01 Alice Springs 44.85 256 P P 15 09 39.5 +0.1
AS31 Alice Springs 44.89 256 P P 15 09 39.4 -0.4
AS31 PcP **PcP 15 11 10.2 -0.1**
ASAR Alice Springs 44.90 256 P P 15 09 39.4 -0.4
comp=Z,26nm,0.8s,baz=87,slow=8.5,SNR=186
ASAR PcP **PcP 15 11 10.3 0.0**
comp=Z,4.5nm,0.7s,baz=109,slow=3.1,SNR=14
ASAR S **S 15 15 36.4 -3.2**
comp=Z,1.6nm,0.9s,baz=94,slow=15,SNR=9.3
comp=Z,26nm,0.8s
ASAR Alice Springs 44.90 256 P P 15 09 39.2 -0.5
ASAR PcP **PcP 15 11 10.5 +0.2**
WB0 Warramunga Arr 44.94 262 P P 15 09 39.4 -0.8
WB2 Warramunga Arr 44.95 262 P P 15 09 39.3 -0.9
WB2 IAmb IAmb 15 09 40.2
comp=Z,23nm,1.1s
WRAB Tennant Creek 44.95 262 P P 15 09 38.5 -1.7
WRAB IAmb IAmb 15 09 40.1
comp=Z,20nm,1.1s
WRAB Tennant Creek 44.95 262 P P 15 09 39.5 -0.7
WRA Warramunga Arr 44.96 262 P P 15 09 39.3 -1.0
comp=Z,7.5nm,0.4s,baz=97,slow=7.6,SNR=345
WRA PcP **PcP 15 11 10.1 -0.5**
comp=Z,2.5nm,0.7s,baz=94,slow=3.6,SNR=6.4
WRA S **S 15 15 36.0 -4.6**
comp=Z,1.0nm,0.9s,baz=96,slow=12,SNR=5.5
comp=Z,7.5nm,0.4s
WRA Warramunga Arr 44.96 262 P P 15 09 38.8 -1.5
KDU Kakadu 48.28 271 P P 15 10 04.9 -0.5
MTN Manton Dam 49.49 270 P P 15 10 13.4 -1.0
MTN Manton Dam 49.49 270 P P 15 10 13.4 -1.0
FORT Forrest 49.69 246 P P 15 10 14.8 -0.9
FORT Forrest 49.69 246 P P 15 10 15.0 -0.7
WRKA Warakurna 49.85 254 P P 15 10 16.5 -0.5
KNRA Kununurra 51.01 266 P P 15 10 24.7 -0.8
KNRA IAmb IAmb 15 10 25.5
comp=Z,17nm,0.7s
KNRA Kununurra 51.01 266 P P 15 10 25.1 -0.4
FAKI Fak Fak 51.77 283 P P 15 10 30.6 -0.6
FAKI IAmb IAmb 15 11 07.6
comp=Z,26nm,1.3s
FAKI Fak Fak 51.77 283 P P 15 10 30.8 -0.3
FITZ Fitzroy Crossi 53.39 262 P P 15 10 42.2 -0.4
FITZ Fitzroy Crossi 53.39 262 P P 15 10 42.5 -0.1
SOEI Soe 56.83 271 P P 15 11 07.1 +0.2
SOEI Soe 56.83 271 P P 15 11 08.0 +1.2
PSA00 Pilbara Seismi 58.04 257 P P 15 11 13.5 -1.4
PSA00 PcP **PcP 15 11 59.5 -0.4**
PSA00 Pilbara Seismi 58.04 257 P P 15 11 14.4 -0.5
MBWA Marble Bar 58.23 257 P P 15 11 15.5 -0.7
MBWA IAmb IAmb 15 11 16.3
comp=Z,15nm,0.9s
MBWA Marble Bar 58.23 257 P P 15 11 15.5 -0.7
MEEK Meekatharra 58.31 251 P P 15 11 15.9 -0.8
KLBR Kellerberrin 58.45 245 P P 15 11 17.3 -0.2
NWAO Narrogin (SRO) 58.77 243 P P 15 11 19.9 +0.3
NWAO IAmb IAmb 15 11 28.9
comp=Z,42nm,1.4s
NWAO Narrogin (SRO) 58.77 243 P P 15 11 20.0 +0.3
BLDU Ballidu 59.45 246 P P 15 11 23.7 -0.5
MUN Mundaring 59.72 244 P P 15 11 26.4 +0.4
MORW Morawa 60.22 247 P P 15 11 28.4 -1.0
MORW IAmb IAmb 15 11 29.8
comp=Z,41nm,1.4s
MORW Morawa 60.22 247 P P 15 11 29.1 -0.3
LUWI Luwuk 61.22 280 P P 15 11 35.5 -0.7
comp=Z,43nm,0.8s
GIRL Giralia 62.93 254 P P 15 11 47.4 +0.1
GIRL Giralia 62.93 254 P P 15 11 48.2 +1.0
TOLI2 Tolitoli 63.88 282 P P 15 11 52.9 -0.5
TOLI2 IAmb IAmb 15 11 54.0
comp=Z,11nm,0.9s
QSPA South Pole Qui 69.80 180 P P 15 12 30.4 +1.2
KKM Kota Kinabalu 70.02 285 P P 15 12 31.2 -0.3
KKM IAmb IAmb 15 12 33.9
comp=Z,13nm,1.0s
MJAR Matsushiro Arr 70.22 323 P P 15 12 31.8 -0.2
comp=Z,5.1nm,0.6s,baz=158,slow=5.7,SNR=12
comp=Z,5.1nm,0.6s
MAJO Matsushiro 70.23 323 P P 15 12 31.3 -0.8
MAJO IAmb IAmb 15 13 07.5
comp=Z,22nm,1.4s
MJB9 Matsu-Tunnel 70.23 323 P P 15 12 31.9 -0.1
MJB9 IAmb IAmb 15 13 08.4
comp=Z,21nm,1.4s
UGM Wanagama 70.30 269 P P 15 12 32.1 -0.9
JSU Suzuyama 71.60 315 P P 15 12 39.6 -0.7
JSU IAmb IAmb 15 13 22.6
comp=Z,28nm,1.2s
SSLB Suanglung 74.13 303 P P 15 12 53.8 -1.1
TPUB Ta-pu 74.13 303 P P 15 12 53.2 -1.7
UNV Unalaska Valle 74.43 7 P P 15 12 55.4 -0.5
YSS Yuzh-Sakhalins 75.84 333 P P 15 13 04.6 +0.7
YSS IAmb IAmb 15 13 06.9
comp=Z,24nm,0.9s
PEA0B Petropavlovsk- 76.14 345 P P 15 13 05.5 +0.1
PETK Petropavlovsk- 76.14 345 P P 15 13 05.6 +0.1
comp=Z,8.7nm,0.8s,baz=116,slow=7.6,SNR=15
comp=Z,8.7nm,0.8s
PETK Petropavlovsk- 76.14 345 P P 15 13 05.7 +0.2
KSRS Korea Array 76.94 318 P P 15 13 11.2 +1.0
comp=Z,2.7nm,0.7s,baz=128,slow=5.3,SNR=9.1
comp=Z,2.7nm,0.7s
CHGN Chignik 77.99 11 P P 15 13 15.6 +0.1
CHGN IAmb IAmb 15 13 18.8
comp=Z,9.7nm,0.8s
CHGN Chignik 77.99 11 P P 15 13 15.4 0.0
baz=198
CHIR Chirikof Islan 78.06 12 P P 15 13 15.5 -0.4
CHIR Chirikof Islan 78.06 12 P P 15 13 16.4 +0.5
baz=201
KMRM Mail Ridge 78.37 39 P P 15 13 18.6 +0.6
KMRM IAmb IAmb 15 13 21.3
comp=Z,23nm,0.9s
BFSC Mount Baldy Ra 78.69 47 P P 15 13 21.6 +1.6
baz=236
MONP2 Monument Peak 78.81 49 P P 15 13 22.8 +2.1
baz=237
EDW2 Edwards Air Fo 78.82 46 P P 15 13 22.5 +2.0
baz=236
IKP In-Ko-Pah, Jac 78.90 49 P P 15 13 23.2 +2.2
baz=237
ISA Isabella, Lake 78.94 45 P P 15 13 23.1 +1.9
baz=235
USA0B Ussuriysk Arra 78.96 326 P P 15 13 22.0 +1.0
USA0B IAmb IAmb 15 13 23.3
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 78.96 326 P P 15 13 22.6 +1.6
comp=Z,10nm,0.7s,baz=118,slow=3.6,SNR=30
comp=Z,10nm,0.7s
USRK Ussuriysk Ar. 78.96 326 P P 15 13 21.6 +0.7
SII Sitkinak Islan 79.05 13 P P 15 13 21.9 +0.7
SII IAmb IAmb 15 13 51.3
comp=Z,23nm,1.0s
SII Sitkinak Islan 79.05 13 P P 15 13 21.8 +0.7
baz=202
PFO Pinyon Flats O 79.17 48 P P 15 13 24.2 +1.6
comp=Z,4.9nm,0.8s,baz=264,slow=22,SNR=4.3
comp=Z,4.9nm,0.8s
PFO Pinyon Flats O 79.17 48 P P 15 13 24.4 +1.9
baz=237
TPFO Pinon Flats 79.17 48 P P 15 13 24.4 +1.9
baz=237
SWSC Sam W. Stewart 79.28 49 P P 15 13 25.6 +2.7
baz=237
LRMC Laurel Mtn Rad 79.37 46 P P 15 13 25.2 +1.7
baz=236
R17K Ugashik Creek 79.62 11 P P 15 13 24.3 +0.2
baz=200
CWC Cottonwood Cre 79.64 45 P P 15 13 26.9 +1.9
baz=235
BELC Belle Mtn. Jos 79.71 48 P P 15 13 27.4 +2.0
baz=237
MPMC Manual Prospec 79.82 46 P P 15 13 27.9 +1.9
baz=236
MYKOM Kota Tinggi 79.84 276 P P 15 13 26.5 +0.2
MYKOM IAmb IAmb 15 13 27.8
comp=Z,15nm,0.8s
OHAK Old Harbor 79.85 13 P P 15 13 25.5 +0.2
baz=203
GSC Goldstone, Bar 79.86 47 P P 15 13 28.2 +2.2
baz=236
TIN Tinemaha, Big 79.89 44 P P 15 13 28.4 +2.1
baz=235
BC3 Big Chuckawall 79.90 49 P P 15 13 28.9 +2.5
baz=237
YBH Yreka Blue Hor 79.91 38 P P 15 13 27.0 +0.8
YBH IAmb IAmb 15 13 29.2
comp=Z,13nm,0.9s
HEC Hector,Ludlow 79.92 47 P P 15 13 28.8 +2.4
baz=237
WAKR Walker 79.95 43 P P 15 13 27.9 +1.3
NJ2 Nanjing 79.99 309 eP P 15 13 29.4 +2.7
GLA Glamis 80.03 49 P P 15 13 29.3 +2.4
baz=238
BEKR Beckworth 80.18 41 P P 15 13 28.3 +0.5
GMRC Granite Mounta 80.37 47 P P 15 13 31.1 +2.3
baz=237
IRM Iron Mountain 80.39 48 P P 15 13 31.0 +2.2
baz=238
LHV Little Huntoon 80.40 43 IAmb IAmb 15 13 31.9
comp=Z,12nm,1.2s
GRAC Grapevine Rang 80.43 45 P P 15 13 31.2 +2.2
baz=236
KDAK Kodiak Island 80.52 13 P P 15 13 29.0 +0.2
KDAK IAmb IAmb 15 13 31.2
comp=Z,8.4nm,0.8s
KDAK Kodiak Island 80.52 13 P P 15 13 29.7 +0.9
baz=204
TUQ Turquoise Moun 80.54 47 P P 15 13 31.7 +2.1
baz=237
Q16K King Salmon 80.55 11 P P 15 13 29.1 +0.2
baz=200
NVAR Mina Array Bea 80.63 43 P P 15 13 32.2 +2.0
comp=Z,3.8nm,0.8s,baz=228,slow=9.2,SNR=24
comp=Z,3.8nm,0.8s
NVAR Mina Array Bea 80.63 43 P P 15 13 31.5 +1.3
Q18K Katmai Hardscr 80.83 12 P P 15 13 30.7 +0.1
baz=201
214A Organ Pipe Nat 80.91 51 P P 15 13 34.2 +2.6
baz=239
P17K Kvichak River 81.08 11 P P 15 13 31.9 +0.2
baz=200
TPNV Topopah Spring 81.15 45 P P 15 13 34.9 +2.0
baz=236
PDMCI Parker Dam,Lak 81.17 49 P P 15 13 35.4 +2.7
baz=238
O16K Kokwok River B 81.17 10 P P 15 13 31.9 -0.3
baz=198
Q19K Cape Douglas, 81.35 12 P P 15 13 33.2 0.0
baz=203
MOD Modoc Plateau 81.43 39 P P 15 13 34.9 +0.7
P18K Big Mountain, 81.48 11 P P 15 13 33.7 -0.1
baz=201
O17K Koliganek Bris 81.51 10 P P 15 13 33.7 -0.1
baz=199
MAW Mawson 81.89 200 P P 15 13 36.6 +0.7
comp=Z,1.5nm,0.6s,baz=142,slow=5.0,SNR=15
comp=Z,1.5nm,0.6s
N16K Nishlik Lake 81.91 9 P P 15 13 36.5 +0.5
baz=198
O18K Koktuh Hills 81.92 11 IAmb IAmb 15 13 37.2
comp=Z,17nm,1.0s
O18K Koktuh Hills 81.92 11 P P 15 13 36.0 0.0
baz=201
PRN Pahroc Range 82.20 46 IAmb IAmb 15 13 41.3
comp=Z,8.0nm,0.9s
R11A Troy Canyon, C 82.35 44 P P 15 13 40.7 +1.7
baz=237
O19K Port Alsworth 82.40 12 IAmb IAmb 15 13 39.3
comp=Z,21nm,0.8s
O19K Port Alsworth 82.40 12 P P 15 13 37.9 -0.5
baz=202
BNX BinXian 82.43 325 ⇑P P 15 13 39.5 +0.6
HOM Homer 82.44 13 P P 15 13 38.5 -0.1
baz=204
BMN Battle Mountai 82.46 42 IAmb IAmb 15 13 42.0
comp=Z,8.7nm,1.0s
KLR Kul'dur 82.50 329 P P 15 13 40.0 +0.8
comp=Z,3.6nm,0.8s,baz=118,slow=3.8,SNR=9.4
comp=Z,3.6nm,0.8s
N18K Kilae Creek 82.57 11 P P 15 13 39.4 +0.1
N18K Kilae Creek 82.57 11 P P 15 13 38.4 -0.9
baz=200
TUC Tucson 82.58 52 P P 15 13 42.5 +2.4
baz=240
O20K Slope Mountain 82.62 12 P P 15 13 39.0 -0.7
baz=204
BRSE Bradley Lake S 82.70 13 P P 15 13 40.3 +0.3
baz=205
N19K Bonanza Creek 82.94 11 P P 15 13 40.7 -0.6
baz=202
SVW2 Sparrevohn 83.01 11 P P 15 13 41.2 -0.3
I07A Izee 83.20 38 IAmb IAmb 15 13 46.0
comp=Z,8.9nm,1.0s
SEW Seward 83.32 14 P P 15 13 43.3 +0.3
baz=206
IPM Ipoh 83.43 277 P P 15 13 44.9 +0.1
O22K Cooper Landing 83.59 13 P P 15 13 44.1 -0.3
baz=206
N20K Mount Spurr 83.73 12 P P 15 13 44.8 -0.4
baz=204
SPCR Spurr Chakacha 83.73 12 P P 15 13 44.6 -0.6
baz=204
WUAZ Wupatki 83.74 49 P P 15 13 48.2 +2.2
baz=240
GAMB Gambell 83.90 3 P P 15 13 44.5 -1.3
baz=186
M19K Big River Lodg 83.97 11 P P 15 13 46.2 -0.1
baz=202
L19K White Mountain 84.15 11 P P 15 13 47.4 +0.2
baz=201
M20K Styx River 84.18 11 P P 15 13 47.2 -0.2
baz=203
PWL Port Wells 84.24 14 IAmb IAmb 15 13 48.6
comp=Z,8.8nm,0.8s
PWL Port Wells 84.24 14 P P 15 13 47.2 -0.4
baz=208
SUA Susitna One 84.27 13 P P 15 13 48.2 +0.3
SUA IAmb IAmb 15 13 49.8
comp=Z,11nm,0.8s
SUA Susitna One 84.27 13 P P 15 13 47.6 -0.3
baz=205
CRAG Craig 84.38 24 P P 15 13 48.4 0.0
baz=221
GLI Glacier Island 84.55 14 P P 15 13 49.3 +0.2
baz=209
SKT Skwentna 84.58 12 P P 15 13 49.3 +0.1
baz=204
EYAK Cordova Ski Ar 84.58 15 P P 15 13 49.9 +0.7
baz=210
L20K Farewell, AK 84.60 11 P P 15 13 49.3 -0.1
baz=202
M22K Willow 84.66 13 P P 15 13 50.0 +0.4
baz=206
TTA Tatalina 84.67 10 IAmb IAmb 15 13 51.5
comp=Z,12nm,1.2s
TTA Tatalina 84.67 10 P P 15 13 50.0 +0.2
baz=200
KNK Knik Glacier 84.71 14 IAmb IAmb 15 13 51.1
comp=Z,7.2nm,0.8s
KNK Knik Glacier 84.71 14 P P 15 13 50.0 +0.1
baz=207
PMR Palmer 84.72 13 P P 15 13 50.1 +0.1
baz=207
V35K Ketchikan 84.85 24 P P 15 13 51.9 +1.2
baz=223
121A Cookes Peak, D 84.91 53 P P 15 13 54.2 +2.3
baz=242
SML Sawmill 85.09 13 P P 15 13 52.0 +0.2
baz=207
M23K Glacier View 85.21 14 P P 15 13 52.6 +0.2
baz=208
CUT Chulitna 85.22 12 P P 15 13 52.4 +0.1
baz=206
BMRM Bremner River 85.23 15 IAmb IAmb 15 13 53.4
comp=Z,6.1nm,0.8s
BMRM Bremner River 85.23 15 P P 15 13 52.8 +0.3
baz=211
MESA MESA 85.25 17 P P 15 13 52.5 -0.3
baz=213
PPLA Purkeypile 85.29 11 P P 15 13 52.9 0.0
baz=204
SCM Sheep Creek Mo 85.33 14 IAmb IAmb 15 13 54.3
comp=Z,11nm,0.7s
SCM Sheep Creek Mo 85.33 14 P P 15 13 53.4 +0.4
baz=208
KLU Klutina 85.36 15 P P 15 13 53.6 +0.4
baz=210
WRAK Wrangell Islan 85.38 23 P P 15 13 53.9 +0.7
baz=222
K20K Telida 85.38 10 P P 15 13 52.6 -0.6
baz=202
F10A Beach Ranch, E 85.62 37 IAmb IAmb 15 13 56.9
comp=Z,16nm,0.9s
VRDI Verde Repeater 85.74 16 P P 15 13 55.2 0.0
VRDI IAmb IAmb 15 13 56.7
comp=Z,7.6nm,1.2s
TMUT Trail Mountain 85.76 45 IAmb IAmb 15 14 00.4
comp=Z,7.7nm,1.3s
N25K Chitina, Valde 85.78 15 IAmb IAmb 15 13 56.7
comp=Z,6.0nm,0.8s
N25K Chitina, Valde 85.78 15 P P 15 13 55.4 +0.2
baz=211
CAST Castle Rocks 85.79 11 IAmb IAmb 15 13 55.1
comp=Z,7.5nm,0.8s
CAST Castle Rocks 85.79 11 P P 15 13 54.9 -0.2
baz=204
M24K Tolsona, Glenn 85.84 14 P P 15 13 55.6 +0.1
baz=209
LYN LuoYang 85.87 309 ⇑iP P 15 13 56.6 +0.4
WAT6 Susitna Watana 85.90 13 P P 15 13 55.5 -0.3
baz=208
HLID Hailey 85.94 41 P P 15 13 58.7 +2.2
baz=237
WAT1 Susitna Watana 85.95 13 P P 15 13 55.8 -0.1
baz=207
MCARA McCarthy VSAT 85.98 16 P P 15 13 56.4 +0.3
baz=212
P29M Windy Craggy 86.03 19 P P 15 13 57.6 +1.3
baz=217
CTG Chitna Glacier 86.08 17 P P 15 13 57.4 +0.7
baz=214
SRU San Rafael Swe 86.13 46 IAmb IAmb 15 14 34.9
comp=Z,6.9nm,0.5s
KTH Kantishna Hill 86.13 12 IAmb IAmb 15 13 56.5
comp=Z,8.6nm,1.1s
J20K Nowinta River 86.13 10 P P 15 13 56.7 0.0
baz=202
TRF Thorofare Moun 86.16 12 IAmb IAmb 15 13 57.6
comp=Z,13nm,0.8s
TRF Thorofare Moun 86.16 12 P P 15 13 56.7 -0.3
baz=206
CHUM Lake Minchumin 86.17 11 P P 15 13 57.3 +0.4
baz=204
SRIT Nakonsritamara 86.22 281 P P 15 13 59.5 +1.3
O28M Mount Upton 86.23 17 P P 15 13 58.3 +0.6
baz=215
O29M Mount Kennedy 86.32 18 P P 15 13 58.8 +1.0
baz=216
PLBC Pleasant Camp 86.32 20 P P 15 13 58.4 +0.7
baz=218
DHY Denali Highway 86.42 13 P P 15 13 58.7 +0.4
baz=208
TX31 Lajitas Ar. Si 86.65 57 P P 15 14 01.8 +1.6
TX31 IAmb IAmb 15 14 02.9
comp=Z,12nm,0.8s
TXAR Lajitas Array 86.65 57 P P 15 14 02.2 +2.1
comp=Z,3.1nm,0.8s,baz=214,slow=6.9,SNR=26
comp=Z,3.1nm,0.8s
SKAG Skagway 86.65 20 P P 15 14 00.2 +1.0
baz=219
P30M Million Dollar 86.66 19 P P 15 14 00.1 +0.7
baz=218
MCK McKinley 86.68 12 IAmb IAmb 15 14 00.8
comp=Z,9.0nm,0.8s
MCK McKinley 86.68 12 P P 15 13 58.9 -0.4
baz=207,SNR=6.1
M26K Nabesna, AK 86.85 15 P P 15 14 00.8 +0.6
baz=212
S34M Telegraph Cree 86.93 23 P P 15 14 01.8 +1.2
baz=223
YUK3 Moose Creek 86.99 17 P P 15 14 01.8 +0.8
baz=215,SNR=9.0
NEW Newport 87.00 36 P P 15 14 02.9 +1.7
baz=235
ANMO Albuquerque 87.00 51 P P 15 14 01.7 -0.1
ANMO Albuquerque 87.00 51 P P 15 14 03.9 +2.1
baz=243
HYT Haines Junctio 87.05 18 P P 15 14 01.8 +0.5
baz=217
M27K Edge Creek, AK 87.10 16 IAmb IAmb 15 14 03.6
comp=Z,9.8nm,1.0s
M27K Edge Creek, AK 87.10 16 P P 15 14 01.8 +0.3
baz=213,SNR=7.3
YUK4 Talbot Arm 87.14 18 P P 15 14 03.0 +1.2
baz=216
P32M Atlin 87.28 21 P P 15 14 03.5 +1.2
baz=221
L26K Log Cabin Wild 87.30 15 P P 15 14 03.0 +0.7
baz=212
Q32M Nakina River 87.30 22 P P 15 14 03.9 +1.3
baz=222
K24K Donnelly Dome 87.41 14 P P 15 14 03.1 +0.3
baz=210
BVCY Beaver Creek 87.41 16 P P 15 14 03.4 +0.6
baz=214
NEA2 Nenana 87.42 12 IAmb IAmb 15 14 03.7
comp=Z,4.0nm,0.8s
NEA2 Nenana 87.42 12 P P 15 14 02.0 -0.8
baz=207
I21K Tanana 87.42 11 IAmb IAmb 15 14 03.8
comp=Z,7.7nm,0.7s
I21K Tanana 87.42 11 P P 15 14 02.6 -0.1
baz=204
O30N Mendenhall 87.44 19 P P 15 14 03.8 +0.8
baz=218
MLY Manley 87.51 11 P P 15 14 02.0 -1.2
MLY IAmb IAmb 15 14 03.5
comp=Z,5.9nm,0.6s
MLY Manley 87.51 11 P P 15 14 02.4 -0.9
baz=205,SNR=7.7
RIDG Independent Ri 87.56 14 P P 15 14 03.8 +0.3
baz=211
N30M Aishikik Lake 87.68 18 P P 15 14 04.9 +0.8
baz=218
HDA Harding Lake 87.69 13 P P 15 14 03.9 -0.1
baz=209,SNR=14
L27K Beaver Creek, 87.70 15 P P 15 14 04.8 +0.6
baz=213
DLBC Dease Lake 87.71 23 P P 15 14 05.5 +1.1
baz=224
H21K Melozitna Rive 87.73 10 P P 15 14 03.5 -0.7
H21K IAmb IAmb 15 14 05.6
comp=Z,4.9nm,0.8s
H21K Melozitna Rive 87.73 10 P P 15 14 04.3 +0.2
baz=203,SNR=6.5
WHY Whitehorse 87.73 20 P P 15 14 04.9 +0.5
baz=220
I23K Minto, Yukon-K 87.87 12 P P 15 14 04.8 0.0
baz=206
TCOL CIGO, UAF Yank 87.91 12 P P 15 14 05.1 +0.1
baz=208
COLA College 87.92 12 P P 15 14 04.1 -1.0
COLA College 87.92 12 P P 15 14 05.0 0.0
baz=208
MDM Murphy Dome 87.92 12 IAmb IAmb 15 14 05.6
comp=Z,9.4nm,0.8s
TROLL Troll, Antarti 87.96 180 P P 15 14 05.9 +0.3
SCRK Sand Creek 87.96 14 IAmb IAmb 15 14 06.5
comp=Z,4.8nm,1.1s
SCRK Sand Creek 87.96 14 P P 15 14 05.7 +0.2
baz=211
MSO Missoula 87.98 38 P P 15 14 07.8 +1.8
baz=237

S22A 4UR Ranch, Cre 88.02 49 IAmb IAmb 15 14 09.4
comp=Z,4.8nm,1.1s
S22A 4UR Ranch, Cre 88.02 49 P **P 15 14 08.4 +1.8**
baz=242
ILAR Eielson Array 88.02 13 P **P 15 14 05.3 -0.3**
comp=Z,3.4nm,0.7s,baz=220,slow=5.8,SNR=34
comp=Z,3.4nm,0.7s
P33M Teslin, Yukon 88.05 21 P **P 15 14 06.6 +0.7**
baz=221
R33M Jennings River 88.07 22 P **P 15 14 07.0 +0.9**
baz=223
M29M Somme Creek 88.08 17 P **P 15 14 06.8 +0.8**
baz=216,SNR=8.8
N31M Braeburn, Yuko 88.09 19 P **P 15 14 06.5 +0.4**
baz=219
O20A White River Ci 88.16 46 P **P 15 14 09.0 +1.9**
baz=241
H22K Ishtalitna Cre 88.18 10 P **P 15 14 06.5 +0.2**
baz=204,SNR=6.9
J25K Salcha River, 88.20 13 IAmb IAmb 15 14 07.6
comp=Z,4.4nm,0.8s
J25K Salcha River, 88.20 13 P **P 15 14 06.8 +0.3**
baz=210,SNR=5.9
POKR Poker Plat Res 88.21 12 P **P 15 14 06.1 -0.4**
baz=208,SNR=6.5
SNAA Sanae 88.23 178 P **P 15 14 06.3 -0.4**
IMW Indian Meadow 88.26 42 P **P 15 14 07.5 -0.1**
IMW IAmb IAmb 15 14 10.3
comp=Z,8.4nm,1.1s
XAN Xi'an 88.26 307 P **P 15 14 08.6 +1.1**
XAN pP PcP 15 14 24.4 +16
VNA3 Neumayer Olymp 88.35 176 P **P 15 14 07.4 +0.2**
G21K Allakaket 88.41 9 P **P 15 14 07.3 -0.1**
baz=203,SNR=6.8
H23K Yukon River 88.44 11 P **P 15 14 07.8 +0.3**
baz=206
K27K Chicken 88.45 15 P **P 15 14 08.7 +1.1**
baz=213
J26L Joseph Creek 88.51 14 IAmb IAmb 15 14 09.9
comp=Z,9.0nm,0.9s
J26L Joseph Creek 88.51 14 P **P 15 14 08.9 +0.9**
baz=212,SNR=11
BW06 Boulder Array 88.57 43 P **P 15 14 10.7 +1.7**
baz=240
PDAR Pinedale Array 88.57 43 P **P 15 14 09.5 +0.5**
comp=Z,1.7nm,0.6s,baz=223,slow=3.2,SNR=12
comp=Z,1.7nm,0.6s
N32M Quiet Lake 88.67 20 P **P 15 14 10.1 +1.4**
baz=221
BOZ Bozeman (W) 88.70 40 IAmb IAmb 15 14 12.1
comp=Z,5.9nm,0.9s
BOZ Bozeman (W) 88.70 40 P **P 15 14 11.0 +1.6**
baz=239
L29M L29M 88.71 17 P **P 15 14 09.9 +1.1**
baz=217,SNR=14
H17A Grant Village 88.73 41 P **P 15 14 11.6 +1.9**
baz=240
YHH Holmes Hill 88.76 41 IAmb IAmb 15 14 13.9
comp=Z,6.3nm,1.2s
VNA2 Neumayer--Watz 88.79 177 P **P 15 14 09.7 +0.4**
baz=185,slow=4.0
PRP Porcupine Dome 88.95 13 IAmb IAmb 15 14 12.2
comp=Z,4.3nm,1.0s
PRP Porcupine Dome 88.95 13 P **P 15 14 10.7 +0.6**
baz=210,SNR=6.0
SDCO Great Sand Dun 88.95 49 P **P 15 14 10.7 -0.3**
baz=243
VNA1 Neumayer--Stat 89.02 176 P **P 15 14 10.9 +0.6**
M31M Drury Creek, Y 89.07 19 P **P 15 14 11.1 +0.5**
baz=220
F21K Alatna River 89.07 9 P **P 15 14 10.6 +0.2**
baz=203
G22K Bettles 89.10 10 P **P 15 14 11.2 +0.7**
baz=204
DAWY Dawson 89.15 16 P **P 15 14 11.4 +0.4**
DAWY IAmb IAmb 15 14 12.6
comp=Z,7.3nm,0.8s
DAWY Dawson 89.15 16 P **P 15 14 11.2 +0.3**
baz=216,SNR=7.3
G23K Bananza Creek 89.16 11 P **P 15 14 11.3 +0.4**
baz=206
I26K Coal Creek Min 89.28 14 P **P 15 14 12.1 +0.6**
baz=212
EGAK Eagle 89.30 15 IAmb IAmb 15 14 13.0
comp=Z,9.2nm,0.8s
EGAK Eagle 89.30 15 P **P 15 14 11.7 +0.2**
baz=214,SNR=6.5
MSTX Muleshoe 89.31 53 P **P 15 14 13.5 +1.0**
baz=245
K29M Barlow Dome 89.46 17 P **P 15 14 13.4 +1.0**
baz=217,SNR=9.3
T25A Trinidad 89.46 50 P **P 15 14 15.4 +2.2**
baz=244
F22K John River 89.53 10 P **P 15 14 13.2 +0.7**
baz=204
COLD Coldfoot 89.59 10 IAmb IAmb 15 14 14.7
comp=Z,5.6nm,0.8s
COLD Coldfoot 89.59 10 P **P 15 14 13.5 +0.6**
baz=206,SNR=6.0
G24K Hadweenzic Riv 89.61 12 P **P 15 14 12.6 -0.3**
baz=208
I27K Kandik River 89.88 14 P **P 15 14 14.7 +0.4**
baz=214
RLMT Red Lodge 89.91 41 P **P 15 14 16.5 +1.4**
baz=241
F24K Squaw Lake 90.26 11 P **P 15 14 16.5 +0.5**
baz=208
MMPY Sheldon Lake, 90.34 20 P **P 15 14 17.6 +1.1**
baz=223
CM31 Chiang Mai Arr 90.35 289 P **P 15 14 18.3 +0.8**
CMAR Chiang Mai Arr 90.35 289 P **P 15 14 19.1 +1.6**
comp=Z,7.6nm,0.9s,baz=116,slow=2.8,SNR=55
comp=Z,7.6nm,0.9s
CMAR Chiang Mai Arr 90.35 289 P **P 15 14 18.4 +0.9**
H27K Steamboat Moun 90.43 14 P **P 15 14 17.7 +0.9**
baz=214
E23K Chandalar 90.44 10 P **P 15 14 16.9 +0.1**
baz=206
I29M Ogilvie Camp, 90.48 15 P **P 15 14 17.2 +0.2**
baz=216
TGTN Hyland Airport 90.54 21 P **P 15 14 18.2 +0.8**
baz=225
G26K Porcupine Rive 90.55 13 P **P 15 14 17.8 +0.6**
baz=212
E24K Your Creek 90.65 11 P **P 15 14 18.1 +0.3**
baz=207
F25K Christian Rive 90.74 12 P **P 15 14 18.8 +0.6**
baz=210
G27K Doyon Strip 90.88 13 P **P 15 14 19.4 +0.5**
baz=213
TOLK Toolik Lake Re 90.98 10 P **P 15 14 19.5 +0.2**
baz=206
EGMT Eagleton 91.04 38 P **P 15 14 22.0 +1.9**
baz=240
D23K Nanushuk River 91.09 9 P **P 15 14 20.3 +0.5**
baz=205
EPYK Eagle Plains 91.68 15 P **P 15 14 23.2 +0.6**
baz=218
G30M tAoh Zraii Nji 92.28 15 P **P 15 14 26.0 +0.7**
baz=218
LZH Lanzhou 92.90 307 *e*P **P 15 14 30.4 +1.4**
LZH pP pwP 15 16 29.1 +2.3
LZH sP sP 15 17 16.0 -0.3
F31M Tsiigehtchic 93.25 16 P **P 15 14 30.1 +0.5**
baz=221
INK Inuvik 93.97 15 P **P 15 14 33.1 +0.2**
baz=221
SONM Songino Array 95.80 319 P **P 15 14 42.9 +1.0**
comp=Z,0.5nm,0.5s,baz=136,slow=6.8,SNR=2.3
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 110.52 321 PKiKP **PKiKP 15 19 43.3 -1.0**
comp=Z,1.8nm,0.6s,baz=137,slow=1.9,SNR=8.7
MKAR Makanchi Array 111.28 313 PKiKP **PKiKP 15 19 45.1 -0.9**
comp=Z,1.5nm,0.6s,baz=139,slow=0.3,SNR=19
BRVK Borovoye 119.18 320 **PKPdf 15 19 59.7 -1.3**
KK31 Karatay Array 119.36 309 PKPdf **PKPdf 15 20 00.4 -1.3**
KKAR Karatay Array 119.36 309 PKPdf **PKPdf 15 20 00.5 -1.1**
ARU Arti 125.20 326 PKP **PKPdf 15 20 12.2 -0.2**
comp=Z,5.1nm,0.5s,baz=349,slow=3.1,SNR=7.7
ARU Arti 125.20 326 PKPdf **PKPdf 15 20 12.3 -0.1**
AKTO Aktyubinsk 127.12 319 PKP **PKPdf 15 20 16.4 +0.1**
comp=Z,2.6nm,0.6s,baz=77,slow=3.9,SNR=6.4
ARCES ARCESS Array B 128.76 350 PKP **PKPdf 15 20 18.3 -0.6**
comp=Z,3.1nm,0.7s,baz=20,slow=3.9,SNR=8.1
GEYT Alibeck 128.94 303 PKP **PKPdf 15 20 19.6 -0.6**
comp=Z,2.0nm,0.6s,baz=264,slow=1.3,SNR=5.7
FINES FINESS Array B 135.65 344 PKhKP PKPpre 15 20 18.9
comp=Z,3.5nm,0.9s,baz=0.0,slow=3.3,SNR=3.5

NB2 NORSAR Subarra 138.79 353 PKP PKPpre 15 20 28.4
comp=Z,3.4nm,1.1s,baz=17,slow=2.6
NOA NORSAR Array B 138.79 353 PKhKP PKPpre 15 20 27.3
comp=Z,0.9nm,0.6s,baz=20,slow=2.5,SNR=4.1
KBZ Khabaz 138.98 314 PKP **PKPdf 15 20 39.0 +0.4**
comp=Z,1.1nm,0.5s,baz=46,slow=5.6,SNR=2.6
HFS Hagfors 139.37 351 PKhKP PKPpre 15 20 30.3
comp=Z,2.7nm,0.4s,baz=63,slow=3.6,SNR=19
AKASG Malin Array Be 142.97 331 PKhKP PKPpre 15 20 42.4
comp=Z,11nm,0.5s,baz=42,slow=4.5,SNR=104
AKASG Malin Array Be 142.97 331 PKPpre 15 20 42.2
LODK Lodwar 143.74 247 PKPdf PKPab 15 20 46.5 -0.5
EKA Eskdalemuir Ar 144.75 5 PKP **PKPdf 15 20 48.5 0.0**
comp=Z,4.6nm,0.7s,baz=352,slow=3.2,SNR=9.0
TLCR 146.92 325 ⇓P **PKPbc 15 20 54.8 -0.5**
BRTR Keskin Array B 146.93 313 PKPbc **PKPbc 15 20 55.5 -0.3**
comp=Z,6.4nm,0.6s,baz=141,slow=4.9,SNR=31
BRTR Keskin Array B 146.93 313 **PKPdf 15 20 54.1 +1.2**
ASF Jabal al Asfar 146.96 298 PKPbc **PKPbc 15 20 56.3 +0.2**
comp=Z,8.8nm,0.7s,baz=67,slow=1.8,SNR=17
BURAR Bucovina Array 147.03 331 ⇑P **PKPbc 15 20 56.5 +0.8**
OJC Ojcow 147.07 339 *e*PKPbc **PKPbc 15 20 54.4 -1.3**
BIZ Bicaz 147.11 329 ⇓P **PKiKP 15 20 56.9 -0.8**
TESR Tescani 147.15 328 ⇓P **PKPbc 15 20 55.3 -0.7**
CFR Carcaliu 147.29 325 ⇓P **PKPbc 15 20 54.9 -1.4**
TPGR Topolog 147.34 325 ⇓P **PKPbc 15 20 57.1 +0.5**
ANTO Ankara 147.44 314 ⇓P **PKPbc 15 20 57.3 +0.2**
ANTO Ankara 147.44 314 PKPbc **PKPbc 15 20 57.0 -0.1**
VRI Vrincioaia 147.56 327 ⇓P **PKPbc 15 20 55.8 -1.3**
KSP Ksiaz 147.57 343 *e*PKPbc **PKPbc 15 20 57.8 +0.8**
NIE Niedzica 147.58 338 *e*PKPbc **PKiKP 15 20 58.0 -0.6**
HARR Harsova 147.72 325 ⇑P **PKPbc 15 20 58.3 +0.8**
TRPA Tarpa 147.78 334 ⇑P **PKPbc 15 20 57.5 0.0**
COVR Voineasa-Covas 147.83 328 ⇑P **PKPbc 15 20 58.0 +0.1**
CHVC Chvalec 147.87 344 *e*PKP **PKPbc 15 20 58.5 +0.7**
CLL Collm 147.92 347 ⇓*i*PKPbc **PKPbc 15 20 58.0 +0.2**
comp=Z,31nm,0.8s
CLL *i* PKPab **PKPab 15 21 02.0 -0.2**
comp=Z,9.0nm,0.9s
OKC Ostrava-Krasne 147.93 341 ⇑*e*PKP **PKPbc 15 20 58.6 +0.7**
MMAI Mount Meron Ar 147.99 300 PKPbc **PKPbc 15 20 59.4 +0.7**
comp=Z,7.9nm,0.5s,baz=74,slow=6.2,SNR=29
DPC Dobruska-Polom 148.01 343 ⇑*e*PKP **PKiKP 15 20 59.0 -0.5**
BRG Berggiesshubel 148.12 346 *i* PKP **PKiKP 15 20 59.2 -0.5**
BRG Amp 15 20 59.8
comp=Z,15nm,1.0s
BRG *i* x x 15 21 03.8
BRG Amp 15 21 05.3
comp=Z,7.6nm,0.7s
KRLC Kraliky 148.13 342 ⇑*e*PKP **PKPbc 15 20 58.8 +0.3**
DOPR Dopca 148.15 329 ⇑P **PKiKP 15 20 59.6 -0.3**
ISR Istrita 148.16 327 ⇑P **PKPbc 15 20 59.4 +0.7**
MORC Moravsky Berou 148.17 341 *e*PKP **PKPbc 15 20 59.2 +0.6**
MLR Muntele Rosu 148.21 328 ⇑P **PKPbc 15 20 59.0 +0.1**
MLR Muntele Rosu 148.21 328 PKPbc **PKPbc 15 20 58.5 -0.4**
comp=Z,4.8nm,0.6s,baz=197,slow=11,SNR=5.5
PVCC Panska Ves 148.30 345 ⇑*e*PKP **PKiKP 15 20 59.8 -0.2**
MAUC Maruska 148.44 341 ⇑*e*PKP **PKiKP 15 21 00.2 -0.2**
VOIR 148.69 328 ⇑P **PKPbc 15 21 00.2 +0.2**
PRU Pruhonice 148.80 345 ⇑*e*PKP **PKPbc 15 21 00.6 +0.5**
VRAC Vranov 148.87 342 PKPbc **PKPbc 15 21 00.7 +0.4**
comp=Z,4.7nm,0.7s,baz=267,slow=2.6,SNR=3.8
VRAC PKPab **PKPab 15 21 06.7 +0.5**
comp=Z,4.2nm,0.6s,baz=346,slow=4.2,SNR=3.0
VRAC Vranov 148.87 342 *e* **PKPab 15 21 06.7 +0.5**
VRAC Vranov 148.87 342 *e*PKP **PKiKP 15 21 01.0 -0.3**
JAVC Velka Javorina 148.94 340 *e*PKP **PKiKP 15 21 02.3 +0.8**
ARR Arges 148.95 329 ⇓P **PKiKP 15 21 02.4 +0.8**
PSZ Piszkesteto 148.98 337 ⇑P **PKiKP 15 21 01.3 -0.4**
NKC Novy Kostel 149.05 347 ⇑*e*PKP **PKPbc 15 21 00.9 +0.2**
EIL Elat 149.09 294 PKPbc **PKPbc 15 21 01.8 +0.4**
comp=Z,8.5nm,0.6s,baz=311,slow=11,SNR=6.4
KRUC Moravsky 149.15 342 *e* **PKPab 15 21 08.0 +0.6**
KRUC Moravsky 149.15 342 *e*PKP **PKiKP 15 21 01.5 -0.3**
MEM Membach 149.59 355 *d*PKiKP **PKiKP 15 21 02.5 -0.2**
SIRR Siria 149.62 333 ⇑P **PKiKP 15 21 02.8 -0.2**
BSTI Sart Tilman 149.65 356 *d*PKiKP **PKiKP 15 21 02.7 -0.1**
GZR Gura Zlata 149.81 331 ⇓P **PKPbc 15 21 01.4 -1.4**
KHC Kasperske Hory 149.83 345 ⇑*e*PKP **PKiKP 15 21 03.1 -0.2**
KHC *e*PKPAB **PKPab 15 21 10.9 +0.6**
BHOU Houvegnez 149.84 355 *d*PKiKP **PKiKP 15 21 03.2 -0.1**
CKRC Cesky Krumlov 149.94 344 ⇑*e*PKP **PKiKP 15 21 03.4 -0.1**
BMRD Maredsous 149.97 357 *d*PKiKP **PKPbc 15 21 03.2 +0.3**
GERES GERESS Array B 150.07 345 PKPbc **PKPbc 15 21 03.5 +0.2**
comp=Z,5.7nm,0.8s,baz=48,slow=2.0,SNR=20
RCHB Rochefort 150.09 356 *d*PKiKP **PKPbc 15 21 03.2 +0.1**
BZS Buzias 150.15 332 ⇑P **PKPbc 15 21 03.7 +0.3**
DOU Dourbes 150.19 357 *d*PKiKP **PKiKP 15 21 03.8 -0.1**
CONA Conrad Observa 150.32 342 *e*P **PKiKP 15 21 04.3 -0.2**
comp=Z,8.6nm,0.6s
HERR Herculane 150.36 330 ⇓P **PKPbc 15 21 03.8 -0.2**
RONA Rosalia, Austr 150.40 341 *e*P **PKiKP 15 21 04.7 +0.2**
comp=Z,14nm,0.6s
WLF Walferdange 150.52 355 *d*PKiKP **PKPbc 15 21 04.3 +0.1**
MDVR Moldovita 150.76 331 ⇓P **PKPbc 15 21 04.6 -0.3**
MOA Molln 150.85 343 *e*P **PKPbc 15 21 05.1 +0.1**
comp=Z,3.7nm,0.5s
MORH Mrgy, Hungar 150.88 336 ⇓P **PKPbc 15 21 04.5 -0.6**
BIOA Bad Ischl, Aus 151.16 344 *e*P **PKPbc 15 21 05.6 -0.1**
comp=Z,8.5nm,0.9s
BLKB Belogradchik 151.18 328 ⇓P **PKPbc 15 21 05.7 -0.2**
FRGS Fruska Gora 151.29 334 ⇓P **PKPbc 15 21 06.3 +0.2**
AKAS Kas 151.34 309 PKPbc **PKPbc 15 21 04.9 -1.7**
VTS Vitosha 151.62 326 ⇓P **PKPbc 15 21 07.2 +0.1**
VTS Vitosha 151.62 326 PKPbc **PKPbc 15 21 06.4 -0.7**
BOVS Bovan 151.64 330 ⇓P **PKPbc 15 21 06.1 -0.8**
SOKA Soboth 151.69 341 *e*P **PKPbc 15 21 06.5 -0.5**
comp=Z,3.9nm,0.7s
WTTA Wattenberg 152.03 346 *e*P **PKPbc 15 21 07.6 -0.3**
comp=Z,9.0nm,0.8s
DIVS Divibare 152.06 332 PKPbc **PKPbc 15 21 07.1 -0.8**
MYKA Terra Mystica 152.13 343 *e*P **PKPbc 15 21 07.4 -0.6**
comp=Z,2.6nm,0.5s
SQTA Sankt Quirin 152.17 347 *e*P **PKPbc 15 21 08.1 0.0**
comp=Z,6.5nm,0.8s
ABTA Abfaltersbach 152.32 345 *e*P **PKPbc 15 21 07.9 -0.5**
comp=Z,7.1nm,0.6s
DAVA Damuels 152.37 349 *e*P **PKiKP 15 21 08.9 +0.2**
comp=Z,9.1nm,0.8s
DAVOX Davos/Dischmat 152.85 349 PKPbc **PKPbc 15 21 09.3 -0.4**
comp=Z,5.7nm,0.6s,baz=93,slow=3.4,SNR=9.5
ESDC Sonseca Array 159.91 14 PKP **PKPdf 15 21 11.5 +0.4**
comp=Z,0.4nm,0.4s,baz=303,slow=2.1,SNR=3.5
ESDC PKPab **PKPab 15 21 52.4 -1.4**
comp=Z,0.9nm,0.6s,baz=273,slow=2.4,SNR=3.0
TORD Torodi Ar. Bea 172.89 175 PKP **PKPdf 15 21 20.8 -0.8**
comp=Z,2.1nm,0.9s,baz=283,slow=0.6,SNR=8.2
TORD PKPab **PKPab 15 22 52.1 +0.7**
comp=Z,0.4nm,0.6s,baz=170,slow=4.4,SNR=2.2

NEIC ***05*** *15:02:27.0±0.5, 36°.44N±0°.02×98°.77W±0°.04, h5km±7km, Error ellipse: s-maj=4.9km s-min=1.5km az=117.0*
NEIC ***05*** *15:02:26.4, 36°.43N×98°.76W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.07; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-1.16; $M_{r\theta}$-0.27; $M_{\theta\phi}$0.04; $M_{\phi r}$-0.01; Fault plane solution: $M_0$1.16000×10^{14} NP1:ϕ_s223.00000°, δ80.00000°, λ170.00000°. NP2:ϕ_s315.00000°, δ80.00000°, λ10.00000°. Principal axes: T 1.1598, Plg14.0000°, Azm179.0000°; N 0.0005, Plg76.0000°, Azm359.0000°; P -1.1602, Plg0.0000°, Azm269.0000°;*
ANF ***05*** *15:02:26.5±0.8, 36°.41N×98°.74W, h5km±6km, ML4.5/16 Error ellipse: s-maj=4.6km s-min=3.2km az=97.0*
TUL ***05*** *15:02:26.4±0.5, 36°.45N±0°.02×98°.78W±0°.05, h7km±7km, ML3.5, mb_Lg3.5/92(NEIC), Mwr3.3/8(SLM), Error ellipse: s-maj=5.6km s-min=2.8km az=95.0*
IDC ***05*** *15:02:28.2±2.2, 36°.48N×99°.18W, h0km, mb3.3/1, mbtmp3.2/4, ML3.7/3, Error ellipse: s-maj=29.3km s-min=14.4km az=85.0*

ISC 05 15:02:26.7±0.9, 36°.43N±0°.03×98°.74W±0°.03, h8km±6km, n119, $_o$0$\%$65/99, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK038	**West end E0370**	**0.04**	**353**	Pg	**Pg**	**15 02 28.3**	**-0.1**
OK038				Sg	**Sg**	**15 02 29.4**	**-0.1**
U32A	**Winter Ranch,**	**0.22**	**256**	Pg	**Pg**	**15 02 30.7**	**-0.5**
U32A	**Winter Ranch,**	**0.22**	**256**	P	**Pg**	**15 02 30.7**	**-0.5**
	baz=70,SNR=648						
U32A				S	**Sg**	**15 02 34.1**	**-0.1**
	baz=70						
OK035	**E0210 Rd and N**	**0.27**	**4**	Pg	**Pg**	**15 02 32.1**	**-0.1**

OK032 Salt Plains WL 0.56 49 Pg **Pg 15 02 37.5 -0.1**
KAN14 Manchester OK 0.81 50 **Pg 15 02 42.1 -0.3**
KAN10 Anthony SW Sta 0.86 37 Pg **Pg 15 02 42.9 -0.4**
KAN16 Harper SW Stat 0.96 34 Pg **Pg 15 02 44.6 -0.5**
KAN05 Bluff City Nor 0.97 46 **Pg 15 02 44.9 -0.4**
KAN17 Caldwell West 0.99 52 Pg **Pg 15 02 45.2 -0.5**
KAN08 Anthony NE Sta 1.00 38 **Pg 15 02 45.3 -0.7**
KAN12 Harper NE Stat 1.04 34 Pg **Pg 15 02 46.2 -0.6**
KAN01 Argonia South 1.06 47 Pg **Pg 15 02 46.6 -0.6**
KAN06 Argonia West S 1.07 41 **Pg 15 02 46.6 -0.8**
KAN09 Caldwell North 1.14 52 **Pg 15 02 47.8 -0.8**
OK049 E0420 Rd and N 1.15 91 Pg **Pg 15 02 48.4 -0.5**
KAN13 South Haven SW 1.16 60 **Pg 15 02 48.3 -0.8**
KS21 Milan North St 1.21 45 Pg **Pg 15 02 49.2 -0.8**
OK029 Liberty Lake 1.22 121 **Pg 15 02 49.2 -0.9**
OK050 Pawnee Station 1.42 91 **Pn 15 02 52.8 0.0**
OK025 Westminster Rd 1.42 127 **Pn 15 02 52.9 0.0**
OK048 Pawnee Station 1.45 90 **Pn 15 02 53.3 0.0**
OK045 Pawnee Station 1.46 89 **Pn 15 02 53.7 +0.2**
OK046 Pawnee Station 1.48 91 **Pn 15 02 53.8 +0.2**
OK033 Mehan 1.50 104 **Pn 15 02 54.1 +0.1**
OK051 E0350 and S346 1.53 87 **Pn 15 02 54.8 +0.3**
OK044 Pawnee Station 1.56 92 **Pn 15 02 55.2 +0.3**
FNO Franklin 1.60 137 **Pn 15 02 55.7 +0.4**
OK031 S. Brethren Rd 1.61 107 **Pn 15 02 55.9 +0.4**
OK034 N. Norfolk Rd. 1.69 104 **Pn 15 02 56.8 +0.2**
WMOK Wichita Mounta 1.69 181 Pn **Pn 15 02 56.1 -0.6**
WMOK Wichita Mounta 1.69 181 P **Pn 15 02 56.2 -0.5**
baz=0.1,SNR=153
WMOK S **Sn 15 03 18.9 +0.3**
baz=0.1
T35A Sooner Cattle 1.85 74 Pn **Pn 15 02 59.2 +0.3**
T35B Sooner Cattle 1.85 74 P **Pn 15 02 59.5 +0.6**
baz=256,SNR=184
T35B S **Sb 15 03 25.2 +1.0**
baz=256
R32A Long Quarter, 1.98 1 **Pn 15 03 01.2 +0.5**
R32A Long Quarter, 1.98 1 P **Pn 15 03 01.3 +0.5**
baz=182,SNR=94
R32A S **Sb 15 03 28.4 +0.3**
baz=182
TUL1 Leonard 2.44 102 Pn **Pn 15 03 07.4 +0.5**
TUL1 IAmb_Lg 15 03 42.8
comp=Z,132nm,0.7s
TUL1 Leonard 2.44 102 P **Pn 15 03 07.3 +0.4**
baz=283,SNR=29
TUL1 S **Sn 15 03 38.7 +1.8**
baz=283
CBKS Cedar Bluff 2.50 342 P **Pn 15 03 09.4 +1.5**
baz=162
CBKS S **Sb 15 03 42.6 -0.5**
baz=162
AMTX Amarillo 2.85 238 P **Pn 15 03 13.9 +1.1**
baz=56,SNR=17
KSU1 Kansas State U 3.15 32 IAmb_Lg 15 04 13.5
comp=Z,105nm,0.7s
X37A Clayton 3.30 123 Pn **Pn 15 03 19.3 +0.5**
X37A Clayton 3.30 123 P **Pn 15 03 19.2 +0.3**
baz=305,SNR=9.7
U38A Gravette 3.51 89 Pn **Pn 15 03 22.3 +0.7**
U38A IAmb_Lg 15 04 21.7
comp=Z,109nm,0.8s
HHAR Hobbs 3.87 91 Pn **Pn 15 03 26.9 +0.3**
HHAR IAmb_Lg 15 04 32.6
comp=Z,121nm,0.9s
ABTX Abilene, Hawle 3.87 191 Pn **Pn 15 03 26.7 0.0**
ABTX IAmb_Lg 15 04 35.3
comp=Z,83nm,0.7s
ABTX Abilene, Hawle 3.87 191 P **Pn 15 03 26.8 0.0**
baz=10
KSCO Kaye Shedlock' 4.02 311 Pn **Pn 15 03 27.8 -0.9**
KSCO IAmb_Lg 15 04 43.1
comp=Z,190nm,0.8s
MSTX Muleshoe 4.12 235 IAmb_Lg 15 04 41.8
comp=Z,136nm,0.8s
MSTX Muleshoe 4.12 235 P **Pn 15 03 29.5 -0.6**
baz=52
N33B J Bar K, Exete 4.41 13 S **Sn 15 04 25.2 -0.4**
baz=194
N33A J Bar K, Exete 4.41 13 Pn **Pn 15 03 33.4 -0.7**
N33A IAmb_Lg 15 04 56.1
comp=Z,128nm,1.0s
Z38A Mt. Pleasant 4.42 135 Pn **Pn 15 03 33.6 -0.6**
Z38A IAmb_Lg 15 04 53.5
comp=Z,102nm,1.0s
S39A Bolivar 4.51 72 Pn **Pn 15 03 35.4 +0.1**
S39A IAmb_Lg 15 04 58.0
comp=Z,97nm,0.8s
WHTX Lake Whitney, 4.56 166 Pn **Pn 15 03 36.3 +0.2**
WHTX Lake Whitney, 4.56 166 P **Pn 15 03 36.3 +0.2**
baz=347,SNR=10
T25A Trinidad 4.61 280 Pn **Pn 15 03 36.6 -0.4**
MIAR Mount Ida 4.61 113 Pn **Pn 15 03 37.2 +0.4**
MIAR IAmb_Lg 15 05 05.6
comp=Z,121nm,0.9s
BGNE Belgrade 4.99 5 Pn **Pn 15 03 41.7 -0.3**
BGNE IAmb_Lg 15 05 16.5
comp=Z,87nm,0.8s
BGNE Belgrade 4.99 5 P **Pn 15 03 41.6 -0.3**
baz=186
N35A Tabor 5.04 28 Pn **Pn 15 03 42.4 -0.3**
N35A Tabor 5.04 28 P **Pn 15 03 42.6 -0.1**
baz=210
237A Washetta, Mont 5.04 150 Pn **Pn 15 03 42.4 -0.3**
237A IAmb_Lg 15 05 19.0
comp=Z,86nm,0.9s
237A Washetta, Mont 5.04 150 S **Sn 15 04 40.2 -1.0**
baz=332
OGNE Ogallala 5.19 331 Pn **Pn 15 03 45.3 +0.5**
P38A Dawn 5.20 51 Pn **Pn 15 03 44.9 +0.1**
P38A IAmb_Lg 15 05 22.2
comp=Z,67nm,0.8s
P38A Dawn 5.20 51 P **Pn 15 03 45.2 +0.4**
baz=234
MGMO Mountain Grove 5.24 80 Pn **Pn 15 03 45.6 +0.1**
WHAR Wooly Hollow 5.36 100 Pn **Pn 15 03 48.2 +1.2**
WHAR IAmb_Lg 15 05 19.1
comp=Z,71nm,0.7s
WLAR White Oak Lake 5.36 119 IAmb_Lg 15 05 23.4
comp=Z,108nm,0.8s
FCAR Ozark Folk Cen 5.38 94 IAmb_Lg 15 05 26.1
comp=Z,69nm,0.7s
CPRX Cap Rock 5.42 233 Pn **Pn 15 03 47.3 -0.7**
UALR University of 5.46 106 IAmb_Lg 15 05 35.8
comp=Z,59nm,0.8s
R40A Maddies Statio 5.47 68 Pn **Pn 15 03 48.8 +0.2**
R40A IAmb_Lg 15 05 28.6
comp=Z,75nm,0.8s
SDCO Great Sand Dun 5.56 286 Pn **Pn 15 03 50.9 +0.8**
Q24A Divide 5.68 298 IAmb_Lg 15 05 24.2
comp=Z,81nm,0.8s
435B Jarrell 5.72 170 IAmb_Lg 15 05 42.2
comp=Z,84nm,0.8s
NATX Nacogdoches 5.76 143 IAmb_Lg 15 05 43.4
comp=Z,84nm,0.9s
CLN7 Carlsbad 7 5.80 228 Pn **Pn 15 03 53.5 +0.2**
L34A Svendsen Farm, 5.82 18 Pn **Pn 15 03 52.6 -0.8**
BRIGG Briggsdale 6.03 315 IAmb_Lg 15 05 44.3
comp=Z,91nm,0.8s
P40A Paris 6.12 58 Pn **Pn 15 03 56.9 -0.6**
P40A IAmb_Lg 15 05 45.9
comp=Z,118nm,0.8s
N38A Joes South For 6.12 43 Pn **Pn 15 03 57.4 -0.1**
N38A Joes South For 6.12 43 P **Pn 15 03 57.8 +0.3**
baz=227
K31A O'Neill 6.18 360 IAmb_Lg 15 05 53.7
comp=Z,94nm,0.8s
CCM Cathedral Cave 6.19 73 IAmb_Lg 15 05 49.0
comp=Z,65nm,0.8s
ISCO Idaho Springs 6.38 304 IAmb_Lg 15 05 52.1
comp=Z,47nm,0.8s
ANMO Albuquerque 6.46 259 Pn **Pn 15 04 00.6 -1.8**
comp=Z,0.3nm,0.3s,baz=76,slow=17,SNR=2.5
ANMO Pg **Pb 15 04 20.9 +1.4**
comp=Z,1.6nm,0.3s,baz=80,slow=16,SNR=12
ANMO Lg Lg 15 05 42.0
comp=Z,1.3nm,0.3s,baz=77,slow=18,SNR=1.6
comp=Z,0.7nm,0.3s
PBMO Poplar Bluff 6.69 85 IAmb_Lg 15 05 58.8
comp=Z,76nm,0.8s
SLM Saint Louis 7.10 69 IAmb_Lg 15 06 14.1
comp=Z,85nm,0.9s
PHWY Pilot Hill 7.15 315 IAmb_Lg 15 06 26.9
comp=Z,55nm,0.8s
PEBM Pemiscott Bayo 7.17 90 Pn **Pn 15 04 12.3 +0.3**

PEBM IAmb_Lg 15 06 30.1
comp=Z,97nm,0.7s
N23A Red Feather La 7.18 310 IAmb_Lg 15 06 28.3
comp=Z,86nm,0.8s
ECSD EROS Data Cent 7.47 12 Pn **Pn 15 04 14.4 -1.6**
ECSD EROS Data Cent 7.47 12 P **Pn 15 04 15.0 -1.0**
baz=194
S44A Carbondale 7.68 78 IAmb_Lg 15 06 33.0
comp=Z,63nm,1.0s
K38A Parkersburg 7.73 35 IAmb_Lg 15 06 44.7
comp=Z,87nm,0.7s
OXF Oxford 7.85 101 IAmb_Lg 15 06 52.1
comp=Z,58nm,1.1s
W45A Hickory Valley 7.86 97 IAmb_Lg 15 06 46.5
comp=Z,62nm,0.8s
SUSD Miller 8.00 359 IAmb_Lg 15 06 46.8
comp=Z,36nm,0.8s
833A Chaparral WMA, 8.11 184 IAmb_Lg 15 06 57.4
comp=Z,32nm,0.8s
TX31 Lajitas Ar. Si 8.20 212 Pn **Pn 15 04 26.0 -0.3**
TX31 Lajitas Ar. Si 8.20 212 P **Pn 15 04 25.8 -0.5**
baz=29,SNR=6.6
TX32 Lajitas Array 8.20 212 Pn Pn 15 04 25.8 -0.4
TXAR Lajitas Array 8.20 212 Pn **Pn 15 04 25.4 -0.8**
comp=Z,0.6nm,0.3s,baz=30,slow=11,SNR=30
TXAR Lg Lg 15 06 37.4
comp=Z,1.8nm,0.3s,baz=31,slow=25,SNR=4.5
comp=Z,1.0nm,0.4s
TXAR Lajitas Array 8.20 212 Pn **Pn 15 04 25.5 -0.7**
HDIL Hopedale 8.47 58 Pn **Pn 15 04 29.3 -0.4**
HDIL Hopedale 8.47 58 P **Pn 15 04 29.6 -0.1**
baz=244
I37A Lemond, Waseca 8.60 27 IAmb_Lg 15 07 04.6
comp=Z,43nm,0.8s
K22A Casper 8.64 318 IAmb_Lg 15 07 20.7
comp=Z,67nm,1.0s
RSSD Black Hills 8.68 334 IAmb_Lg 15 07 07.2
comp=Z,53nm,1.0s
L42A Oliver, Polo 8.97 49 IAmb_Lg 15 07 18.8
comp=Z,72nm,0.9s
JFWS Jewell Farm 9.20 43 Pn **Pn 15 04 39.2 -0.5**
JFWS IAmb_Lg 15 07 43.0
comp=Z,50nm,0.8s
T47A Sharon Grove 9.36 83 Pn **Pn 15 04 41.5 -0.4**
F33A 5 Mile Ranch, 9.57 10 IAmb_Lg 15 07 32.0
comp=Z,35nm,1.3s
I40A Norwalk 9.69 37 IAmb_Lg 15 07 37.6
comp=Z,36nm,0.9s
PDAR Pinedale Array 10.47 310 Pn **Pn 15 04 57.1 -0.3**
comp=Z,0.1nm,0.3s,baz=124,slow=14,SNR=2.5
PDAR Lg Lg 15 07 45.5
comp=Z,0.3nm,0.3s,baz=123,slow=28,SNR=1.8
comp=Z,0.4nm,0.7s
S51A Beattyville 12.16 80 Pn **Pn 15 05 18.9 -1.4**
ILAR Eielson Array 40.11 330 P **P 15 10 03.6 +1.1**
comp=Z,0.2nm,0.4s,baz=94,slow=9.1,SNR=2.4
comp=Z,0.2nm,0.4s

IDC 05 15:15:07.8±1.7, 29°.47S×60°.96E, h0km, mb3.6/4, mbtmp3.6/4, MS3.2/3, Error ellipse: s-maj=76.2km s-min=33.1km az=20.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**24.26**	**29**	T	T	15 45 08.3	
baz=205,slow=74,SNR=4.5							
H08S2	**Diego Garcia H**	**24.27**	**29**	T	T	15 45 08.9	
baz=205,slow=74,SNR=4.3							
H08S3	**Diego Garcia H**	**24.28**	**29**	T	T	15 45 09.9	
baz=205							
MAW	**Mawson**	**38.18**	**179**	LR	LR	15 34 01.3	
comp=Z,36nm,19.1s,baz=350,slow=30							
MBAR	**Mbarara**	**40.66**	**309**	LR	LR	15 36 26.4	
comp=Z,26nm,21.8s,baz=143,slow=31							
ATD	**Arta Tunnel**	**44.35**	**334**	LR	LR	15 39 12.8	
comp=Z,38nm,21.9s,baz=326,slow=33							
H01W2	**Cape Leeuwin H**	**44.90**	**111**	T	T	16 11 08.2	
baz=261							
H01W3	**Cape Leeuwin H**	**44.90**	**111**	T	T	16 11 06.5	
baz=261							
H01W1	**Cape Leeuwin H**	**44.91**	**111**	T	T	16 11 08.1	
baz=261							
CMAR	**Chiang Mai Arr**	**60.10**	**42**	P	P	15 25 17.0	-0.1
0.6nm,0.7s,baz=224,slow=7.7,SNR=2.0							
0.6nm,0.7s							
ASAR	**Alice Springs**	**64.54**	**104**	P	P	15 25 46.6	-0.3
0.4nm,0.7s,baz=251,slow=6.5,SNR=6.2							
0.4nm,0.7s							
WRA	**Warramunga Arr**	**66.38**	**100**	P	P	15 25 59.4	+0.5
1.0nm,1.0s,baz=243,slow=6.3,SNR=4.3							
1.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**71.13**	**298**	P	P	15 26 28.5	0.0
0.6nm,0.8s,baz=112,slow=6.9,SNR=3.9							
0.6nm,0.8s							

*IPEC **05** 15:17:39.8±0.2, 49°.86N×18°.59E, h1km, ML2.4/4, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0*
*VIE **05** 15:17:39.1±0.8, 49°.79N×18°.61E, h0km, mb2.4/4, ml2.8/4, Error ellipse: s-maj=8.2km s-min=5.3km az=151.0 26 km E of Ostrava Suspected Mining induced.*
*PRU **05** 15:17:40.2±0.0, 49°.88N×18°.52E, h0km, Mining Induced Event Csm, E=7.4e+05*

ISC 05 15:17:39.1±0.8, 49°.87N±0°.04×18°.56E±0°.03, h0km, n26, σ0°.99/48, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**263**	*e*PG	**Pb**	**15 17 45.9**	**-1.0**
OKC				*e*SG	**Sg**	**15 17 48.4**	**+0.6**
comp=Z,122nm,0.4s							
MORC	**Moravsky Berou**	**0.67**	**262**	*e*PG	**Pb**	**15 17 52.9**	**-0.7**
MORC				*e*SG	**Sg**	**15 18 01.5**	**+0.9**
MORC	**Moravsky Berou**	**0.67**	**262**	*e*Pg	**Pb**	**15 17 52.9**	**-0.7**
baz=82							
MORC				*e*Sg	**Sg**	**15 18 01.4**	**+0.9**
109nm,0.4s,baz=82							
MAUC	**Maruska**	**0.70**	**224**	*e*PG	**Pg**	**15 17 53.1**	**+0.7**
MAUC				*e*SG	**Sg**	**15 18 00.9**	**-0.5**
OJC	**Ojcow**	**0.87**	**66**	*e*Pg	**Pg**	**15 17 55.5**	**-0.3**
OJC				*e*Sg	**Sg**	**15 18 07.7**	**+0.7**
KRLC	**Kraliky**	**1.17**	**281**	*e*PG	**Pg**	**15 18 01.2**	**-0.3**
KRLC				*e*SG	**Sb**	**15 18 17.2**	**-0.7**
comp=Z,59nm,0.3s							
JAVC	**Velka Javorina**	**1.17**	**210**	*e*PG	**Pn**	**15 18 02.8**	**0.0**
JAVC	**Velka Javorina**	**1.17**	**210**	*e*Pg	**Pn**	**15 18 02.8**	**0.0**
baz=30							
NIE	**Niedzica**	**1.22**	**111**	*e*Pg	**Pn**	**15 18 03.4**	**0.0**
NIE				*e*Sg	**Sn**	**15 18 20.6**	**0.0**
VRAC	**Vranov**	**1.40**	**247**	*e*PG	**Pg**	**15 18 06.0**	**+0.1**
VRAC				*e*SG	**Sg**	**15 18 24.0**	**-0.1**
VRAC	**Vranov**	**1.40**	**247**	*e*Pg	**Pg**	**15 18 06.0**	**+0.1**
baz=66							
VRAC				*e*Sg	**Sg**	**15 18 23.9**	**-0.1**
34nm,0.2s,baz=66							
DPC	**Dobruska-Polom**	**1.52**	**289**	*e*PG	**Pb**	**15 18 08.0**	**-0.2**
DPC				*e*SG	**Sn**	**15 18 28.1**	**0.0**
comp=Z,29nm,0.3s							
KRUC	**Moravsky**	**1.63**	**241**	*e*PG	**Pn**	**15 18 09.5**	**+0.4**
KRUC				*e*SG	**Sn**	**15 18 30.9**	**+0.2**
KRUC	**Moravsky**	**1.63**	**241**	*e*Pg	**Pn**	**15 18 09.4**	**+0.4**
baz=60							
KRUC				*e*Sg	**Sn**	**15 18 30.8**	**+0.1**
31nm,0.2s,baz=60							
OSTC	**Ostas**	**1.66**	**295**	*e*PG	**Pg**	**15 18 10.9**	**+0.1**
OSTC				*e*SG	**Sg**	**15 18 32.3**	**0.0**
KSP	**Ksiaz**	**1.75**	**305**	*e*Pg	**Pb**	**15 18 11.7**	**-0.4**
KSP				*e*Sg	**Sb**	**15 18 34.5**	**-0.1**
UPC	**Upice**	**1.76**	**292**	*e*PG	**Pb**	**15 18 12.3**	**+0.1**
UPC				*e*SG	**Sg**	**15 18 36.0**	**+0.4**
comp=Z,18nm,0.4s							
CHVC	**Chvalec**	**1.76**	**295**	*e*PG	**Pb**	**15 18 12.3**	**0.0**
PRU	**Pruhonice**	**2.60**	**274**	*e*SG	**Sb**	**15 19 00.1**	**+1.1**
comp=Z,12nm,0.3s							
CONA	**Conrad Observa**	**2.64**	**224**	*e*Pn	**Pn**	**15 18 22.5**	**-0.4**
1.7nm,0.3s							
CONA				*e*Sn	**Sn**	**15 18 55.5**	**-0.2**
4.8nm,0.4s							
CKRC	**Cesky Krumlov**	**2.97**	**251**	*e*SG	**Sb**	**15 19 11.9**	**+2.1**
comp=Z,8.7nm,0.3s							
BRG	**Berggiesshubel**	**3.12**	**290**	Pg	**Pg**	**15 18 37.2**	**-1.7**
BRG				Sg	**Sg**	**15 19 18.8**	**-0.6**
BRG				Amp		15 19 22.2	
comp=Z,6.7nm,0.5s							
KHC	**Kasperske Hory**	**3.33**	**259**	*e*PN	**Pn**	**15 18 35.2**	**+2.7**
KHC				*e*PG	**Pb**	**15 18 40.8**	**+1.7**
KHC				*e*SG	**Sg**	**15 19 23.4**	**-2.7**
comp=Z,10nm,0.4s							
MOA	**Molln**	**3.48**	**236**	*e*Pn	**Pn**	**15 18 34.7**	**+0.1**
comp=Z,0.8nm,0.1s							
MOA				*e*Sg	**Sg**	**15 19 28.8**	**-2.1**
CLL	**Collm**	**3.82**	**294**	*e*Pg	**Pg**	**15 18 52.0**	**-0.3**
CLL				*ex*	x	15 18 58.0	
CLL				*e*Sg	**Sg**	**15 19 41.0**	**-0.8**
comp=Z,11nm,0.6s							
BIOA	**Bad Ischl, Aus**	**3.92**	**238**	*e*Pn	**Pn**	**15 18 41.1**	**+0.6**
comp=Z,1.6nm,0.2s							
BIOA				*e*Sn	**Sn**	**15 19 25.1**	**-2.2**
comp=Z,4.3nm,0.4s							

ROM 05 15:19:25.8±0.1, 42°.781N±0°.004×13°.201E±0°.006, h10km, ML1.2/3, 1D, Error ellipse: s-maj=0.5km s-min=0.4km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**353**	P	Pg	15 19 28.4	+0.2
T1245				S	Sg	15 19 30.0	0.0
T1245				AML	AML		
comp=E,194μm,1.5s							
T1245				AML	AML		
comp=N,229μm,0.2s							
T1202	**Accumoli, Fraz**	**0.08**	**167**	P	Pg	15 19 28.8	+0.6
T1202				S	Sg	15 19 30.1	+0.2
NRCA	**Norcia**	**0.08**	**309**	P	Pg	15 19 28.5	+0.3
NRCA				S	Sg	15 19 30.1	+0.2
NRCA				AML	AML		
comp=E,177μm,0.2s							
NRCA				AML	AML		
comp=E,178μm,0.2s							
NRCA				AML	AML		
comp=N,143μm,0.5s							
MC2	**Monte Cornacci**	**0.13**	**357**	P	Pg	15 19 29.4	+0.4
MC2				S	Sg	15 19 32.1	+0.8
T1204	**Amatrice, Fraz**	**0.14**	**141**	P	Pg	15 19 29.8	+0.8
T1241	**Roccafluvione,**	**0.18**	**66**	P	Pg	15 19 30.2	+0.5
T1241				S	Sg	15 19 33.6	+1.2
T1243	**Rocca Santa Ma**	**0.20**	**115**	P	Pg	15 19 30.5	+0.5
T1243				S	Sg	15 19 33.8	+0.9
T1215	**Vallo di Nera,**	**0.25**	**275**	P	Pg	15 19 31.5	+0.7
T1215				S	Sg	15 19 35.6	+1.4
CSP1	**Cessapalombo**	**0.31**	**0**	||P	Pg	15 19 32.6	+0.6
CSP1				AML	AML		
comp=E,88μm,1.6s							
CSP1				AML	AML		
comp=N,90μm,1.6s							
GIGS	**Gran Sasso**	**0.43**	**141**	S	Sg	15 19 40.0	+0.2
PP3	**Marolino**	**0.67**	**27**	S	Sg	15 19 46.0	-1.4
PIEI	**Pieia**	**0.90**	**327**	S	Sn	15 19 58.0	+0.4
NARO	**Abbazia di Nar**	**0.94**	**332**	P	Pn	15 19 45.6	+0.5
NARO				S	Sn	15 19 58.0	-0.7
OSSC	**Osservatorio P**	**1.61**	**298**	S	Sn	15 20 15.0	-0.2

*IDC **05** 15:19:45.0±2.6, 51°.64N×161°.41E, h0km, mb3.7/5, mbtmp3.7/7, ML3.1/2, MS2.4/1, Error ellipse: s-maj=68.1km s-min=35.7km az=65.0*
*KRSC **05** 15:19:53.0±1.1, 51°.34N×160°.28E, h56km±21km, ML4.3*
*MOS **05** 15:19:54.4±0.7, 51°.37N×160°.37E, h57km, mb3.9/1, Error ellipse: s-maj=16.0km s-min=5.7km az=108.9*

ISC 05 15:19:52.4±2.3, 51°.23N±0°.07×160°.32E±0°.07, h26km±17km, n54, σ1°.14/68, mb3.7/5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.52**	**293**	PN	**Pn**	**15 20 18.5**	**+0.7**
KDTR				S	**Sn**	**15 20 36.1**	**-0.6**
KDTR	**Khodutka, Kamc**	**1.52**	**293**	*e*P	**Pn**	**15 20 18.5**	**+0.7**
KDTR				*e*S	**Sn**	**15 20 36.1**	**-0.6**
RUS	**Russkaya**	**1.64**	**318**	PN	**Pn**	**15 20 20.1**	**+0.5**
RUS				S	**Sn**	**15 20 38.8**	**-1.1**
RUS	**Russkaya**	**1.64**	**318**	*e*P	**Pn**	**15 20 20.1**	**+0.5**
RUS				*e*S	**Sn**	**15 20 38.8**	**-1.1**
MTVR	**Mutnovka**	**1.82**	**314**	PN	**Pn**	**15 20 23.2**	**+1.0**
MTVR				S	**Sn**	**15 20 44.0**	**-0.6**
MTVR	**Mutnovka**	**1.82**	**314**	*e*P	**Pn**	**15 20 23.2**	**+1.0**
MTVR				*e*S	**Sn**	**15 20 44.0**	**-0.6**
SPN	**Mys Shipunski**	**1.88**	**355**	PN	**Pn**	**15 20 23.2**	**+0.3**
SPN				S	**Sn**	**15 20 44.4**	**-1.3**
SPN	**Mys Shipunski**	**1.88**	**355**	*e*P	**Pn**	**15 20 23.2**	**+0.3**
SPN				*e*S	**Sn**	**15 20 44.4**	**-1.3**
ASAK	**Asacha**	**1.89**	**308**	PN	**Pn**	**15 20 24.4**	**+1.3**
ASAK				S	**Sn**	**15 20 45.9**	**-0.3**
ASAK	**Asacha**	**1.89**	**308**	*e*P	**Pn**	**15 20 24.4**	**+1.3**
ASAK				*e*S	**Sn**	**15 20 45.9**	**-0.3**
GRL	**Gorelyy**	**1.92**	**314**	PN	**Pn**	**15 20 24.9**	**+1.4**
GRL	**Gorelyy**	**1.92**	**314**	*e*P	**Pn**	**15 20 24.9**	**+1.4**
PET	**Petropavlovsk**	**2.07**	**331**	*e*PN	**Pn**	**15 20 26.1**	**+0.7**
PET				*e*S	**Sn**	**15 20 49.6**	**-0.8**
PET				pmax	pmax		
comp=Z,90nm,0.5s							
PET				smax	smax		
comp=N,697nm,0.3s							
PET	**Petropavlovsk**	**2.07**	**331**	*e*P	**Pn**	**15 20 26.1**	**+0.7**
PET				*e*S	**Sn**	**15 20 49.6**	**-0.8**
KRMR	**Karymshinskiy**	**2.10**	**321**	PN	**Pn**	**15 20 26.6**	**+0.8**
KRMR				S	**Sn**	**15 20 50.6**	**-0.4**
KRMR	**Karymshinskiy**	**2.10**	**321**	*e*P	**Pn**	**15 20 26.6**	**+0.8**
KRMR				*e*S	**Sn**	**15 20 50.6**	**-0.4**
UGLR	**Uglovaya**	**2.18**	**336**	PN	**Pn**	**15 20 28.1**	**+0.9**
UGLR	**Uglovaya**	**2.18**	**336**	*e*P	**Pn**	**15 20 28.1**	**+0.9**
SDLR	**Sedlovina**	**2.23**	**337**	PN	**Pn**	**15 20 28.6**	**+0.8**
SDLR	**Sedlovina**	**2.23**	**337**	*e*P	**Pn**	**15 20 28.6**	**+0.8**
AVH	**Avacha**	**2.26**	**335**	PN	**Pn**	**15 20 29.2**	**+1.1**
AVH	**Avacha**	**2.26**	**335**	P	**Pn**	**15 20 29.2**	**+1.1**
KRER	**Koryakskii**	**2.29**	**336**	PN	**Pn**	**15 20 29.9**	**+1.2**
KRER	**Koryakskii**	**2.29**	**336**	*e*P	**Pn**	**15 20 29.9**	**+1.2**
KRX	**Arik**	**2.37**	**335**	PN	**Pn**	**15 20 30.6**	**+0.9**
KRX	**Arik**	**2.37**	**335**	*e*P	**Pn**	**15 20 30.6**	**+0.9**
PETK	**Petropavlovsk-**	**2.48**	**320**	Pn	**Pn**	**15 20 31.3**	**+0.2**
comp=N,9.9nm,0.3s,baz=118,slow=19,SNR=266							
PETK				Sn	**Sn**	**15 21 00.1**	**-0.3**
comp=N,24nm,0.3s,baz=103,slow=40,SNR=6.2							
PETK				LR	LR	15 21 58.0	
comp=N,84nm,21.5s,baz=116,slow=49							
comp=N,16nm,0.3s							
APC	**Apacha**	**2.58**	**312**	PN	**Pn**	**15 20 34.2**	**+1.7**
APC				S	**Sn**	**15 21 03.8**	**+0.7**
APC	**Apacha**	**2.58**	**312**	*e*P	**Pn**	**15 20 34.2**	**+1.7**
APC				*e*S	**Sn**	**15 21 03.8**	**+0.7**
SKR	**Severo-Kuril's**	**2.71**	**260**	*e*PN	**Pb**	**15 20 39.1**	**-1.1**
SKR				*e*S	**Sn**	**15 21 05.3**	**-0.9**
SKR				smax	smax		
comp=E,232nm,0.4s							
SKR				smax	smax		
comp=N,218nm,0.5s							
SKR	**Severo-Kuril's**	**2.71**	**260**	*e*P	**Pn**	**15 20 35.3**	**+1.0**
KII	**Karymskiy**	**2.86**	**350**	PN	**Pn**	**15 20 37.7**	**+1.3**
KII	**Karymskiy**	**2.86**	**350**	P	**Pn**	**15 20 37.7**	**+1.3**
GNL	**Ganaly**	**2.86**	**330**	PN	**Pn**	**15 20 38.1**	**+1.6**
GNL	**Ganaly**	**2.86**	**330**	*e*P	**Pn**	**15 20 38.1**	**+1.6**
MKZ	**Mys Kozlova**	**3.44**	**14**	PN	**Pn**	**15 20 44.8**	**+0.5**
MKZ	**Mys Kozlova**	**3.44**	**14**	*e*P	**Pn**	**15 20 44.8**	**+0.5**
TUMR	**Tumrok**	**4.06**	**359**	PN	**Pn**	**15 20 55.1**	**+2.2**
TUMR				S	**Sn**	**15 21 40.0**	**+0.3**
TUMR	**Tumrok**	**4.06**	**359**	*e*P	**Pn**	**15 20 55.1**	**+2.2**
TUMR				*e*S	**Sn**	**15 21 40.0**	**+0.3**
KBTR	**Krutoberegovo**	**5.20**	**16**	PN	**Pn**	**15 21 09.5**	**+1.0**
KBTR	**Krutoberegovo**	**5.20**	**16**	*e*P	**Pn**	**15 21 09.5**	**+1.0**
KLR	**Kul'dur**	**18.34**	**275**	P	**Pn**	**15 24 07.9**	**+3.2**
comp=N,0.1nm,0.3s,baz=40,slow=22,SNR=1.7							
comp=N,0.7nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**31.86**	**168**	T	T	16 00 42.8	
baz=353							
H11N3	**WAKE ISLAND Hy**	**31.88**	**168**	T	T	16 00 45.8	
baz=353							
H11N1	**WAKE ISLAND Hy**	**31.88**	**168**	T	T	16 00 49.0	
baz=353							
H11S1	**WAKE ISLAND Hy**	**33.04**	**169**	T	T	16 02 15.8	
baz=350							
H11S3	**WAKE ISLAND Hy**	**33.05**	**169**	T	T	16 02 11.0	
baz=350							
H11S2	**WAKE ISLAND Hy**	**33.06**	**169**	T	T	16 02 16.9	
baz=350							
KURK	**Kurchatov**	**48.85**	**303**	P	**P**	**15 28 35.1**	**-0.3**
KURBB	**Kurchatov Arra**	**48.95**	**303**	P	**P**	**15 28 35.0**	**-1.1**
comp=N,0.7nm,0.5s,baz=62,slow=7.8,SNR=4.1							
comp=N,0.7nm,0.5s							
MKAR	**Makanchi Array**	**49.11**	**297**	P	**P**	**15 28 35.8**	**-1.6**
comp=N,0.2nm,0.4s,baz=57,slow=6.3,SNR=5.9							
comp=N,0.2nm,0.4s							
BVAR	**Borovoye Array**	**51.67**	**310**	P	**P**	**15 28 54.2**	**-2.4**
comp=N,0.4nm,0.4s,baz=48,slow=7.6,SNR=5.1							
comp=N,0.4nm,0.4s							
ARU	**Arti**	**54.87**	**318**	P	**P**	**15 29 19.2**	**-0.9**
comp=N,2.6nm,0.4s,baz=45,slow=6.8,SNR=3.2							
comp=N,2.6nm,0.4s							
ASAR	**Alice Springs**	**78.12**	**205**	P	**P**	**15 31 49.8**	**+0.8**
comp=N,0.4nm,1.0s,baz=18,slow=6.7,SNR=1.9							
comp=N,0.4nm,1.0s							

*IDC **05** 15:49:44.1±1.4, 13°.59N×94°.31W, h0km, mb4.0/2, mbtmp4.0/3, ML4.3/1, MS3.4/1, Error ellipse: s-maj=157.7km s-min=27.3km az=55.0*
*GCG **05** 15:49:57.9±1.1, 16°.12N×92°.12W, h163km±36km, MD3.9*
*MEX **05** 15:50:01.6±1.0, 15°.49N×92°.33W, h174km±11km, MD4.4*
*NEIC **05** 15:50:01.2±1.6, 15°.61N±0°.09×92°.25W±0°.07, h170km±8km, mb4.4/26, Md4.4(MEX), Error ellipse: s-maj=13.8km s-min=10.0km az=197.0*

ISC 05 15:50:01.0±0.6, 15°.58N±0°.06×92°.38W±0°.05, h170km±6km, n104, σ1°.85/131, mb4.3/9, 1D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAVE	**Pavencul**	**0.43**	**152**	*i* P	**Pn**	**15 50 23.7**	**-1.0**
PAVE				*i* S	**Sn**	**15 50 41.1**	**-1.8**
PATR	**El Naranjo**	**0.48**	**162**	*i* P	**Pn**	**15 50 23.6**	**-1.3**
PATR				*i* S	**Sn**	**15 50 41.3**	**-2.0**
CHUJ	**Union Juarez**	**0.55**	**151**	*i* P	**Pn**	**15 50 24.0**	**-1.3**
THIG		**0.68**	**170**		**Pn**	**15 50 25.2**	**-0.4**
THIG		**0.68**	**170**	*i* P	**Pn**	**15 50 25.2**	**-0.4**
THIG				*i* S	**Sn**	**15 50 44.0**	**-0.6**
CCIG	**Comitan**	**0.74**	**19**	Pn	**Pn**	**15 50 26.3**	**+0.1**
CCIG	**Comitan**	**0.74**	**19**	*i* P	**Pn**	**15 50 26.3**	**+0.1**
PCIG		**0.81**	**279**		**Pn**	**15 50 26.7**	**+0.3**
PCIG		**0.81**	**279**	*i* P	**Pn**	**15 50 26.7**	**+0.3**
PCIG				*i* S	**Sn**	**15 50 45.7**	**-0.2**
HUEH	**Huehuetenango**	**0.89**	**107**	Pn	**Pn**	**15 50 25.8**	**-1.4**
STG3	**Santiaguito 3,**	**1.17**	**138**	||*i*P	**Pn**	**15 50 29.0**	**-0.4**
STG3				*e*S	**Sn**	**15 50 54.5**	**+3.3**
RTAL	**Retalhuleu**	**1.24**	**147**		**Pn**	**15 50 28.8**	**-1.0**
TGIG		**1.39**	**329**		**Pn**	**15 50 32.0**	**+0.8**
TGIG		**1.39**	**329**	*i* P	**Pn**	**15 50 32.0**	**+0.8**
CARR	**Arriaga**	**1.61**	**295**	*e*P	**Pn**	**15 50 33.7**	**+0.4**
CARR				*e*S	**Sn**	**15 50 58.4**	**+0.1**
FUG	**Fuego 3**	**1.87**	**127**	*e*P	**Pn**	**15 50 36.1**	**-0.1**
FUG				*e*S	**Sn**	**15 51 05.1**	**+1.8**
NBG	**Las Nubes**	**2.20**	**116**	*e*P	**Pn**	**15 50 39.8**	**-0.2**
NILT	**Santiago Nilte**	**2.36**	**295**	*e*P	**Pn**	**15 50 42.3**	**+0.8**
NILT				*e*S	**Sn**	**15 51 13.8**	**+0.9**
UXUV	**UXUV**	**2.42**	**316**	*i* P	**Pn**	**15 50 43.0**	**+0.7**
UXUV				*i* S	**Sn**	**15 51 13.7**	**-0.5**
MRL	**Marmol**	**2.65**	**100**	*e*P	**Pn**	**15 50 44.3**	**-1.0**
MRL				*e*S	**Sn**	**15 51 16.1**	**-3.4**
PETF	**Flores**	**2.76**	**61**	Pn	**Pn**	**15 50 44.7**	**-1.6**
CMIG	**Matias Romero**	**2.83**	**302**		**Pn**	**15 50 47.8**	**+0.5**
CMIG	**Matias Romero**	**2.83**	**302**	*i* P	**Pn**	**15 50 47.8**	**+0.5**
ESQI	**Esquipulas**	**3.11**	**109**	Pn	**Pn**	**15 50 48.4**	**-2.3**
MTO3	**Montecristo**	**3.15**	**111**	Pn	**Pn**	**15 50 48.9**	**-2.4**
HUIG	**Huatulco**	**3.59**	**274**		**Pn**	**15 50 55.9**	**-0.7**
HUIG	**Huatulco**	**3.59**	**274**	*e*P	**Pn**	**15 50 55.9**	**-0.7**
HUIG				*i* S	**Sn**	**15 51 35.5**	**-4.5**
NEUV	**Arroyo Zacate**	**3.90**	**303**	*e*P	**Pn**	**15 51 01.2**	**+0.6**
NEUV				*i* S	**Sn**	**15 51 45.4**	**-1.7**
OXIG	**Oaxaca**	**4.43**	**290**		**Pn**	**15 51 09.9**	**+2.3**
VHO	**Vista Hermosa**	**4.43**	**290**	*i* P	**Pn**	**15 51 09.9**	**+2.3**
VHO				*e*S	**Sn**	**15 51 57.3**	**-2.3**
PEIG	**Puerto Escondi**	**4.61**	**276**		**Pn**	**15 51 09.9**	**+0.2**
PEIG	**Puerto Escondi**	**4.61**	**276**	*i* P	**Pn**	**15 51 09.9**	**+0.2**
PEIG				*i* S	**Sn**	**15 52 03.1**	**-0.3**
YOIG	**Yosondua**	**5.12**	**285**		**Pn**	**15 51 18.4**	**+1.7**
YOIG	**Yosondua**	**5.12**	**285**	*e*P	**Pn**	**15 51 18.4**	**+1.7**
YOIG				*e*S	**Sn**	**15 52 14.5**	**-1.4**
TOIG	**Toxpalan**	**5.13**	**300**		**Pn**	**15 51 18.2**	**+1.5**
TOIG	**Toxpalan**	**5.13**	**300**	*e*P	**Pn**	**15 51 18.2**	**+1.5**
TOIG				*i* S	**Sn**	**15 52 13.9**	**-2.0**
TXIG	**Tlaxiaco**	**5.43**	**289**		**Pn**	**15 51 23.3**	**+2.6**
TXIG	**Tlaxiaco**	**5.43**	**289**	*i* P	**Pn**	**15 51 23.3**	**+2.6**
TXIG				*e*S	**Sn**	**15 52 20.9**	**-2.2**
TPIG	**Tehuac#an**	**5.54**	**301**		**Pn**	**15 51 23.1**	**+1.1**
TPIG	**Tehuac#an**	**5.54**	**301**	*e*P	**Pn**	**15 51 23.1**	**+1.1**
TPIG				*e*S	**Sn**	**15 52 21.7**	**-3.9**
PNIG	**Pinotepa**	**5.58**	**279**		**Pn**	**15 51 23.4**	**+0.9**
PNIG	**Pinotepa**	**5.58**	**279**	*e*P	**Pn**	**15 51 23.4**	**+0.9**
PNIG				*e*S	**Sn**	**15 52 24.8**	**-1.6**
JAUV	**Jalcomulco**	**5.66**	**312**	*e*P	**Pn**	**15 51 22.8**	**-0.6**
JAUV				*e*S	**Sn**	**15 52 24.7**	**-3.5**
FTIG	**Fresnillo de T**	**5.97**	**294**		**Pn**	**15 51 30.5**	**+2.8**
FTIG	**Fresnillo de T**	**5.97**	**294**	*e*P	**Pn**	**15 51 30.5**	**+2.8**
FTIG				*e*S	**Sn**	**15 52 33.4**	**-2.5**
TEIG	**Tepich**	**6

comp=Z,12nm,0.7s
TKL Tuckaleechee C 21.43 19 P P 15 54 34.9 -0.9
TKL IAmb IAmb 15 54 38.2
comp=Z,10nm,0.9s
U49A Red Boiling Sp 21.66 15 P P 15 54 37.2 -1.0
U49A IAmb IAmb 15 54 39.3
comp=Z,9.2nm,0.6s
V53A Saluda 21.77 21 P P 15 54 38.1 -1.2
V53A IAmb IAmb 15 54 42.3
comp=Z,20nm,1.2s
TZTN Tazewell 22.32 19 P P 15 54 44.4 -0.3
T50A Nancy 22.39 16 P P 15 54 44.5 -0.9
SBM South Baldy 22.67 327 P P 15 54 48.3 -0.1
S51A Beattyville 23.31 18 P P 15 54 52.4 -1.4
S51A IAmb IAmb 15 55 23.7
comp=Z,9.7nm,0.9s
PDAR Pinedale Array 30.84 335 LR LR 16 11 30.8
comp=Z,70nm,19.3s,baz=45,slow=41
NVAR Mina Array Bea 32.22 320 P **P 15 56 17.9 +4.4**
comp=Z,2.4nm,0.7s,baz=134,slow=9.0,SNR=22
comp=Z,2.4nm,0.7s
LPAZ La Paz 39.70 142 P **P 15 57 16.3 -1.3**
comp=Z,0.6nm,0.4s,baz=297,slow=2.3,SNR=2.3
comp=Z,0.6nm,0.4s
EDM Edmonton 41.03 341 P **P 15 57 27.0 -0.5**
EDM IAmb IAmb 15 57 28.9
comp=Z,6.5nm,0.4s
BCAR Beaver Creek A 58.45 336 P **P 15 59 39.3 +0.4**
BMAR Burnt Mountain 61.69 340 P **P 16 00 00.7 -0.1**
PPLA Purkeypile 62.66 334 P **P 16 00 08.2 +0.7**
K20K Telida 63.62 334 P **P 16 00 13.8 +0.2**
K20K IAmb IAmb 16 00 29.1
comp=Z,5.3nm,1.4s
WRA Warramunga Arr 135.40 257 PKP **PKiKP 16 09 02.7 -0.4**
comp=Z,0.2nm,0.6s,baz=86,slow=2.6,SNR=5.4
ASAR Alice Springs 135.82 252 PKP **PKPdf 16 09 02.4 +0.1**
comp=Z,0.1nm,0.5s,baz=92,slow=2.2,SNR=1.3

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*ARE **05** 16:06:13.7±5.9, 9.79S±0.07×74.98W±0.07, h169km±4km, Error ellipse: s-maj=0.0km s-min=0.0km az=163.0*
*MOS **05** 16:06:14.4±1.0, 9.69S×74.75W, h119km, mb5.1/18, Error ellipse: s-maj=10.5km s-min=6.8km az=103.3*
*NEIC **05** 16:06:14.2±2.5, 9.80S±0.07×74.85W±0.07, h103km±5km, mb5.3/419, ML5.1(ARE), Error ellipse: s-maj=10.2km s-min=9.5km az=81.0*
*IDC **05** 16:06:16.0±0.4, 9.79S×74.87W, h124km±3km, mb4.5/26, mbtmp4.9/33, MS3.5/11, Error ellipse: s-maj=9.4km s-min=7.8km az=113.0*
*VAO **05** 16:06:17.7±0.6, 9.80S×74.69W, h131km±5km, mb5.0*
*GCMT **05** 16:06:18.2±0.4, 9.63S±0.03×74.89W±0.04, h141km±5km, MW4.9/78, Moment Tensor Solution. s16,c17; s78,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~2.10±.11; $M_{\theta\theta}$~0.30±.12; $M_{\phi\phi}$2.40±.15; $M_{r\theta}$~0.65±.09; $M_{\theta\phi}$~0.45±.17; $M_{\phi r}$~0.64±.13; Best double couple: $M_0$2.47900×10^{16} NP1:φs9.00000°, δ55.00000°, λ-66.00000°. NP2: φs152.00000°, δ42.00000°, λ-120.00000°. Principal axes: T 2.5340, Plg7.0000°, Azm83.0000°; N -0.1100, Plg19.0000°, Azm175.0000°; P -2.4240, Plg69.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 16:06:15.6±0.3, 9.76S±0.04×74.87W±0.05, h122km±2km, h123km:pP-P, n990, σ1.09/873, mb5.2/268, 10C-3D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.94**	**221**	P	**Pn**	**16 07 01.7**	**+0.4**
	177nm,0.3s,baz=33,slow=10,SNR=54						
NNA				S	**Sn**	**16 07 35.1**	**-1.4**
	2μm,0.3s,baz=330,slow=23,SNR=21						
NNA				LR	LR	16 08 02.8	
	comp=Z,614nm,20.0s,baz=258,slow=37						
NNA	**Nana**	**2.94**	**221**	Pn	**Pn**	**16 07 01.1**	**-0.2**
NNA	**Nana**	**2.94**	**221**	*eP*	**Pn**	**16 06 59.8**	**-1.5**
ATAH	**Atahualpa**	**4.35**	**307**	P	**Pn**	**16 07 21.1**	**+0.8**
	377nm,0.4s,baz=87,slow=4.1,SNR=281						
ATAH				S	**Sn**	**16 08 07.2**	**-3.2**
	634nm,0.7s,baz=266,slow=19,SNR=5.3						
MCRA	**Macar, Loja**	**7.35**	**316**	Pn	**Pn**	**16 07 56.9**	**-3.5**
MCRA	**Macar, Loja**	**7.35**	**316**	*eP*	**Pn**	**16 07 57.7**	**-2.7**
TBTG	**Tabatinga, AM**	**7.41**	**42**	*eP*	**Pn**	**16 08 01.3**	**+0.2**
BOSC	**San Juan Bosco**	**7.48**	**331**		**Pn**	**16 07 58.5**	**-3.8**
ARNL	**Arenillas**	**8.04**	**320**		**Pn**	**16 08 06.5**	**-3.1**
ETMB	**Extrema**	**8.54**	**91**	*eP*	**Pn**	**16 08 15.0**	**-1.3**
LPAZ	**La Paz**	**9.23**	**135**	P	**Pn**	**16 08 26.2**	**-0.1**
	16nm,0.4s,baz=337,slow=18,SNR=35						
LPAZ				LR	LR	16 12 16.1	
	comp=Z,217nm,20.5s,baz=330,slow=39						
LPAZ	**La Paz**	**9.23**	**135**	Pn	**Pn**	**16 08 24.9**	**-1.4**
LPAZ	**La Paz**	**9.23**	**135**	*eP*	**Pn**	**16 08 24.1**	**-2.2**
LPAZ	**La Paz**	**9.23**	**135**	P	**Pn**	**16 08 24.9**	**-1.4**
LPAZ	**La Paz**	**9.23**	**135**	*eP*	**Pn**	**16 08 26.3**	**-0.1**
PIAT	**Ana Tenorio**	**9.33**	**339**	*eP*	**Pn**	**16 08 27.3**	**-0.1**
SLOR	**San Lorenzo -**	**9.66**	**338**		**Pn**	**16 08 31.8**	**-0.3**
PB12	**IPOC Station P**	**9.85**	**154**	Pn	**Pn**	**16 08 31.6**	**-2.5**
PTLC	**Puerto Leguiza**	**9.86**	**0**	*eP*	Pn	16 08 26.4	-7.9
PB16	**IPOC Station P**	**9.99**	**149**	Pn	**Pn**	**16 08 36.9**	**+0.4**
BONI	**La Bonita**	**10.48**	**345**	*eP*	**Pn**	**16 08 44.6**	**+1.7**
OTAV	**Otavalo**	**10.55**	**340**	Pn	**Pn**	**16 08 44.0**	**+0.1**
OTAV	**Otavalo**	**10.55**	**340**	P	**Pn**	**16 08 44.0**	**+0.1**
OTAV	**Otavalo**	**10.55**	**340**	*eP*	**Pn**	**16 08 46.8**	**+2.9**
FLF1	**Flavio Alfaro-**	**10.56**	**332**	*eP*	**Pn**	**16 08 44.3**	**+0.6**
TULM	**Tulcn-Chalpat**	**10.80**	**344**	*eP*	Pn	16 08 53.1	+5.8
GCUF	**Volcan Galeras**	**11.18**	**347**	*eP*	**Pn**	**16 08 54.9**	**+2.4**
GO01	**Chusmiza**	**11.28**	**152**	Pn	**Pn**	**16 08 51.9**	**-1.8**
CRUC	**La Cruz**	**11.44**	**349**	*eP*	**Pn**	**16 08 54.1**	**-1.7**
SAML	**Samuel**	**11.56**	**87**	Pn	**Pn**	**16 08 54.3**	**-2.8**
SAML	**Samuel**	**11.56**	**87**	P	**Pn**	**16 08 54.3**	**-2.8**
PB08	**IPOC Station P**	**11.71**	**153**		**Pn**	**16 08 57.0**	**-2.3**
GARC	**Garzon, Huila**	**11.88**	**357**	*eP*	**Pn**	**16 08 58.1**	**-3.4**
BBAC	**Balboa, Cauca**	**11.94**	**348**	*eP*	**Pn**	**16 09 01.3**	**-0.9**
PB01	**IPOC Station P**	**12.36**	**156**		**Pn**	**16 09 05.0**	**-2.6**
BETC	**Betania**	**12.37**	**357**	*eP*	**Pn**	**16 09 07.9**	**+0.2**
GUVC	**San Jose del G**	**12.42**	**10**	*eP*	**P**	**16 09 19.3**	**+4.1**
PB02	**IPOC Station P**	**12.46**	**158**		**Pn**	**16 09 06.0**	**-2.8**
PB07	**IPOC Station P**	**12.83**	**159**	Pn	**Pn**	**16 09 11.5**	**-2.3**
PB09	**IPOC Station P**	**13.14**	**156**		**Pn**	**16 09 17.6**	**-0.1**
PB04	**IPOC Station P**	**13.30**	**161**	Pn	**Pn**	**16 09 18.9**	**-1.0**
YOTC	**Yotoco, Valle**	**13.73**	**354**	*eP*	**Pn**	**16 09 23.9**	**-1.5**
VILC	**Villavicencio,**	**13.83**	**5**	*eP*	**Pn**	**16 09 24.6**	**-2.0**
LVC	**Limon Verde**	**14.00**	**157**	P	**Pn**	**16 09 29.5**	**+0.5**
	9.4nm,0.7s,baz=318,slow=7.2,SNR=4.7						
LVC				LR	LR	16 15 35.4	
	comp=Z,66nm,19.3s,baz=315,slow=40						
LVC	**Limon Verde**	**14.00**	**157**		**Pn**	**16 09 29.0**	**0.0**
LVC	**Limon Verde**	**14.00**	**157**	P	**Pn**	**16 09 29.0**	**0.0**
LVC	**Limon Verde**	**14.00**	**157**	*eP*	**Pn**	**16 09 29.6**	**+0.5**
PTGC	**Puerto Gaitan,**	**14.13**	**11**	*eP*	**P**	**16 09 33.0**	**-1.2**
CHIC	**Chingaza**	**14.34**	**5**	*eP*	**Pn**	**16 09 35.4**	**+2.0**
ROSC	**El Rosal**	**14.51**	**2**	P	**Pn**	**16 09 35.7**	**+0.1**
	5.1nm,0.4s,baz=302,slow=24,SNR=1.6						
ROSC	**El Rosal**	**14.51**	**2**	*eP*	**P**	**16 09 38.5**	**-0.4**
PLMC	**San Jos del P**	**14.63**	**354**	*eP*	**P**	**16 09 39.1**	**-0.7**
VILB	**Vilhena**	**14.73**	**104**	*eP*	**Pn**	**16 09 38.6**	**+0.5**
SIV	**San Ignacio**	**14.81**	**116**	P	**Pn**	**16 09 37.9**	**-1.2**
	197nm,0.5s,baz=291,slow=11,SNR=158						
GUY2C	**Guyana, Caldas**	**14.89**	**358**	*eP*	**Pn**	**16 09 39.7**	**-0.7**
NORC	**Norcasia**	**15.22**	**0**	*eP*	**P**	**16 09 46.0**	**-0.3**
MACA	**Manacapuru-AM**	**15.54**	**66**	*eP*	**Pn**	**16 09 46.2**	**-2.0**
CBOC	**Ciudad Bolivar**	**15.56**	**356**	*eP*	**Pn**	**16 09 47.3**	**-1.3**
RUSC	**La Rusia**	**15.65**	**7**	*eP*	**Pn**	**16 09 49.2**	**-0.7**
BBSD	**Serra de San D**	**15.71**	**120**	*eP*	**Pn**	**16 09 49.6**	**-0.7**
HELC	**Santa Helena**	**15.86**	**358**	*eP*	**P**	**16 09 54.8**	**+1.1**
GO02	**Mina Guanaco**	**16.12**	**163**	P	**P**	**16 09 56.3**	**-0.3**
PTBC	**PUERTO BERRIO,**	**16.19**	**1**	*eP*	**P**	**16 09 58.7**	**+1.6**
BARC	**Barichara**	**16.33**	**6**	*eP*	**P**	**16 10 01.1**	**+2.3**
PTLB	**Pontes e Lacer**	**16.36**	**112**	*eP*	**Pn**	**16 09 57.8**	**-0.5**
TAMC	**Tame, Arauca**	**16.38**	**11**	*eP*	**P**	**16 10 02.5**	**+3.4**
BRRC	**Barranca, Sant**	**16.79**	**4**	*eP*	**P**	**16 10 02.5**	**-1.2**
BBRB	**Robore, Bolivi**	**16.88**	**122**	*eP*	**P**	**16 10 03.9**	**-0.8**
PAMC	**Pamplona, Colo**	**17.12**	**7**	*eP*	**Pn**	**16 10 08.4**	**+0.4**
ZARC	**Zaragoza, Cauc**	**17.13**	**0**	*eP*	**P**	**16 10 06.8**	**-0.6**
UREC	**San Jos de Ur**	**17.41**	**358**	*eP*	**P**	**16 10 08.8**	**-1.7**
PAYG	**Puerto Ayora**	**17.79**	**300**	P	**Pn**	**16 10 15.9**	**+0.3**
AC02	**Maricunga**	**17.84**	**163**	P	**Pn**	**16 10 15.6**	**-1.0**
PDRB	**Porto dos Gac**	**17.93**	**98**	*eP*	**P**	**16 10 15.8**	**-0.4**
BOAV	**Boa Vista**	**18.71**	**51**	*eP*	**Pn**	**16 10 25.8**	**-0.8**
CLDB	**Colider**	**18.80**	**95**	*eP*	**P**	**16 10 25.1**	**-0.7**
SDV	**Santo Domingo**	**18.99**	**13**	P	**P**	**16 10 28.9**	**+0.9**
	54nm,0.6s,baz=211,slow=12,SNR=24						
SDV	**Santo Domingo**	**18.99**	**13**	*eP*	**P**	**16 10 28.2**	**+0.2**
SDV	**Santo Domingo**	**18.99**	**13**	*eP*	**Pn**	**16 10 29.4**	**-0.7**
BCIP	**Isla Barro Col**	**19.44**	**345**	P	**P**	**16 10 32.5**	**-0.1**
BCIP	**Isla Barro Col**	**19.44**	**345**	*eP*	**Pn**	**16 10 35.5**	**+0.4**
BCIP	**Isla Barro Col**	**19.44**	**345**	P	**P**	**16 10 32.5**	**-0.1**
NPGB	**Novo Progresso**	**19.49**	**84**	*eP*	**P**	**16 10 32.6**	**-0.7**
ARGC	**Ariguani, Magd**	**19.50**	**2**	*eP*	**Pn**	**16 10 36.3**	**+0.6**
SJCC	**San Jacinto, C**	**19.53**	**359**	*eP*	**Pn**	**16 10 38.5**	**+2.3**
SALV	**Santo Antonio**	**19.66**	**110**	*eP*	**P**	**16 10 34.4**	**-0.8**
ITTB	**Itaituba**	**19.73**	**76**	*eP*	**P**	**16 10 36.0**	**+0.1**
BAUV	**El Baul**	**19.78**	**20**	P	**P**	**16 10 37.1**	**+0.7**
MURT	**Porto Murtinho**	**20.38**	**128**	*eP*	**P**	**16 10 42.3**	**-0.5**
CO01	**Juntas del Tor**	**20.61**	**168**	P	**P**	**16 10 43.4**	**-2.1**
CRJC	**Cerrejon, Guaj**	**20.73**	**6**	*eP*	**P**	**16 10 42.4**	**-4.3**
AQDB	**Aquidauana**	**21.33**	**122**	P	**P**	**16 10 51.7**	**-1.4**
AQDB	**Aquidauana**	**21.33**	**122**	*eP*	**P**	**16 10 51.7**	**-1.4**
URIC	**Uribia, Colomb**	**21.51**	**8**	*eP*	**P**	**16 10 53.4**	**-1.5**
HDC	**Heredia**	**21.68**	**335**	*eP*	**P**	**16 11 00.3**	**+3.5**
ANTJ	**Antonio Joao (**	**21.82**	**126**	*eP*	**P**	**16 10 57.0**	**-1.3**
MALB	**Monte Alegre**	**21.94**	**70**	*eP*	**P**	**16 10 58.8**	**-0.7**
PCRV	**Puerto La Cruz**	**22.27**	**27**	P	**P**	**16 11 03.5**	**+0.7**
	15nm,0.5s,baz=191,slow=10,SNR=10						
	15nm,0.5s						
JTS	**Las Juntas de**	**22.30**	**333**	*i* P	**P**	**16 11 02.8**	**-0.4**
JTS				pmax	pmax		
	comp=Z,37nm,1.0s						
C2SB	**Chapadao do Su**	**23.14**	**115**	*eP*	**P**	**16 11 12.1**	**+0.8**
SNDB	**Serra Nova Dou**	**23.26**	**98**	*eP*	**P**	**16 11 11.8**	**-0.7**
CPUP	**Villa Florida**	**23.40**	**137**	P	**P**	**16 11 13.5**	**-0.2**
	comp=Z,12nm,0.8s,baz=322,slow=9.1,SNR=15						
CPUP				PcP	**PcP**	**16 14 56.8**	**0.0**
	comp=Z,3.2nm,0.8s,baz=342,slow=5.7,SNR=2.4						
	comp=Z,12nm,0.8s						
MT09	**Talagante**	**24.17**	**172**	P	**P**	**16 11 16.8**	**-3.9**
MCPB	**Macapa, AP**	**24.55**	**69**	*eP*	**P**	**16 11 24.2**	**0.0**
TRCB	**Terra Rica**	**24.93**	**124**	P	**P**	**16 11 24.8**	**-2.9**
TRCB	**Terra Rica**	**24.93**	**124**	*eP*	**P**	**16 11 26.9**	**-0.7**
PRPB	**Parauapebas**	**25.07**	**84**	*eP*	**P**	**16 11 28.6**	**-0.4**
GRGR	**Grenville**	**25.41**	**31**	P	**P**	**16 11 28.9**	**-3.0**
AZCA	**Azaras, Argent**	**25.46**	**138**	*eP*	**P**	**16 11 32.8**	**+0.5**
PCMB	**Pacaembu**	**25.56**	**120**	*eP*	**P**	**16 11 32.8**	**-0.5**
ITQB	**Itaqui**	**26.15**	**142**	P	**P**	**16 11 35.8**	**-2.7**
ITQB				IAmb	IAmb	16 12 09.2	
	comp=Z,55nm,0.8s						
ITQB	**Itaqui**	**26.15**	**142**	*eP*	**P**	**16 11 38.2**	**-0.3**
FRBT	**Francisco Belt**	**26.22**	**131**	*eP*	**P**	**16 11 39.1**	**-0.2**
PTGB	**Pitanga**	**26.32**	**127**	*eP*	**P**	**16 11 39.6**	**-0.5**
CRSM	**Crissiumal (Br**	**26.40**	**135**	*eP*	**P**	**16 11 40.7**	**-0.1**
SVB	**Belmont**	**26.58**	**31**	P	**P**	**16 11 38.6**	**-3.9**
SVB				IAmb	IAmb	16 11 47.5	
	comp=Z,66nm,0.5s						
MDP	**Montagnes des**	**26.62**	**57**	P	**P**	**16 11 43.5**	**+0.6**
	comp=Z,7.9nm,0.5s,baz=233,slow=12,SNR=11						
MDP				LR	LR	16 23 27.9	
	comp=Z,57nm,21.4s,baz=268,slow=39						
	comp=Z,7.9nm,0.5s						
UNIS	**Unistalda (Bra**	**26.71**	**139**	*eP*	**P**	**16 11 43.6**	**0.0**
BDFB	**Brasilia**	**26.83**	**105**	P	**P**	**16 11 44.9**	**0.0**
	comp=Z,13nm,0.5s,baz=275,slow=11,SNR=11						
BDFB				pP	**pP**	**16 12 12.8**	**+1.5**
	comp=Z,14nm,0.8s,baz=268,slow=15,SNR=4.1						
	comp=Z,13nm,0.5s						
BDFB	**Brasilia**	**26.83**	**105**	P	**P**	**16 11 42.9**	**-2.0**
BDFB	**Brasilia**	**26.83**	**105**	P	**P**	**16 11 42.9**	**-2.0**
BDFB				pmax	pmax		
	comp=Z,20nm,1.0s						
SMTB	**Santa Maria do**	**26.94**	**90**	*eP*	**P**	**16 11 45.8**	**0.0**
IPMB	**Ipameri, GO**	**27.12**	**110**	*eP*	**P**	**16 11 46.9**	**-0.6**
RODS	**Rosario do Sul**	**27.50**	**141**	*eP*	**P**	**16 11 51.4**	**+0.7**
TMAB	**Tom-Au,PA,Br**	**27.60**	**76**	*eP*	**P**	**16 11 54.1**	**+2.4**
ITAB	**Concordia**	**27.62**	**132**	P	**P**	**16 11 49.7**	**-2.0**
ITAB	**Concordia**	**27.62**	**132**	*eP*	**P**	**16 11 50.9**	**-0.8**
FRTB	**Faura**	**27.70**	**122**	*eP*	**P**	**16 11 52.0**	**-0.6**
BB19B	**Bebedouro**	**27.73**	**117**	*eP*	**P**	**16 11 52.1**	**-0.7**
ALGR	**Alto Alegre (B**	**27.91**	**136**	*eP*	**P**	**16 11 53.2**	**-1.2**
MLPR	**Magueyes Islan**	**28.61**	**16**	P	**P**	**16 11 59.9**	**-0.7**
MLPR				IAmb	IAmb	16 12 02.4	
	comp=Z,61nm,1.0s						
CRPR	**Cabo Rojo, PR**	**28.63**	**16**	P	**P**	**16 11 58.9**	**-1.8**
CRPR				IAmb	IAmb	16 12 02.5	
	comp=Z,37nm,0.7s						
CPSB	**Cacapava Do Su**	**28.66**	**139**	*eP*	**P**	**16 12 00.3**	**-0.7**
OBIP	**Obispado Ponce**	**28.80**	**16**	P	**P**	**16 11 59.4**	**-2.8**
OBIP				IAmb	IAmb	16 12 03.2	
	comp=Z,67nm,0.9s						
CELP	**Cerrillos**	**28.84**	**17**	IAmb	IAmb	16 12 04.5	
	comp=Z,78nm,0.8s						
PMNB	**Patos De Minas**	**28.89**	**111**	*eP*	**P**	**16 12 02.7**	**-0.5**
SJG	**San Juan**	**29.00**	**17**	P	**P**	**16 12 03.8**	**-0.1**
	comp=Z,27nm,0.3s,baz=195,slow=4.0,SNR=16						
	comp=Z,27nm,0.3s						
SJG	**San Juan**	**29.00**	**17**	P	**P**	**16 12 03.9**	**-0.1**
SJG				IAmb	IAmb	16 12 05.4	
	comp=Z,38nm,0.8s						
SJG	**San Juan**	**29.00**	**17**	P	**P**	**16 12 03.9**	**-0.1**
SJG				pmax	pmax		
	comp=Z,38nm,0.8s						
TIJ01	**Guaruva-PR**	**29.04**	**126**	*eP*	**P**	**16 12 04.8**	**+0.3**
RCLB	**Rio Claro- Sao**	**29.07**	**119**	*eP*	**P**	**16 12 04.1**	**-0.6**
HUMP	**Col San Antoni**	**29.12**	**18**	IAmb	IAmb	16 12 08.9	
	comp=Z,38nm,0.7s						
GCPR	**Guaynabo City**	**29.20**	**17**	IAmb	IAmb	16 12 11.2	
	comp=Z,35nm,0.7s						
CUPR	**Culebra, Puert**	**29.45**	**19**	P	**P**	**16 12 07.6**	**-0.4**
CUPR				IAmb	IAmb	16 12 09.1	
	comp=Z,48nm,0.8s						
PLTB	**Pedras Altas**	**29.47**	**141**	IAmb	IAmb	16 12 37.1	
	comp=Z,84nm,1.8s						
PLTB	**Pedras Altas**	**29.47**	**141**	*eP*	**P**	**16 12 08.1**	**+0.1**
SDBA	**SAO DESIDERIO**	**29.52**	**98**	*eP*	**P**	**16 12 08.8**	**0.0**
CNLB	**Canela**	**29.73**	**134**	*eP*	**P**	**16 12 09.8**	**-0.7**
VAO	**Valinhos**	**29.77**	**120**	*eP*	**P**	**16 12 10.1**	**-0.9**
PET01	**Itanhaem-SP**	**30.00**	**122**	*eP*	**P**	**16 12 11.9**	**-1.0**
JANB	**Januaria**	**30.29**	**103**	*eP*	**P**	**16 12 15.1**	**-0.5**
TRQA	**Tornquist**	**30.47**	**160**	*eP*	**P**	**16 12 17.5**	**+0.6**
TER01	**Tubaro-SC**	**30.54**	**131**	*eP*	**P**	**16 12 18.2**	**+0.5**
MC01	**Montes Claros**	**30.86**	**106**	*eP*	**P**	**16 12 20.2**	**-0.5**
PARB	**Paraibuna**	**31.04**	**119**	*eP*	**P**	**16 12 21.9**	**-0.3**
PLCA	**Paso Flores**	**31.09**	**174**	P	**P**	**16 12 22.5**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=349,slow=9.3,SNR=12						
PLCA				pP	**pP**	**16 12 51.1**	**+1.7**
	comp=Z,3.8nm,0.8s,baz=14,slow=8.2,SNR=4.3						
PLCA				PcP	**PcP**	**16 15 15.8**	**+0.8**
	comp=Z,4.3nm,0.6s,baz=353,slow=4.4,SNR=9.9						
	comp=Z,3.5nm,0.8s						
PLCA	**Paso Flores**	**31.09**	**174**	*eP*	**P**	**16 12 23.1**	**+0.8**
ROSB	**Rosrio**	**31.29**	**79**	*eP*	**P**	**16 12 24.3**	**-0.1**
DIAM	**Diamantina, MG**	**31.40**	**109**	*eP*	**P**	**16 12 25.0**	**-0.4**
MAN01	**Angra dos Reis**	**32.32**	**118**	*eP*	**P**	**16 12 33.0**	**-0.3**
TEIG	**Tepich**	**32.58**	**336**	P	**P**	**16 12 34.9**	**-0.6**
TEIG				IAmb	IAmb	16 12 37.4	
	comp=Z,44nm,0.8s						
TEIG	**Tepich**	**32.58**	**336**	P	**P**	**16 12 35.5**	**0.0**
TEIG				pP	**pP**	**16 13 04.2**	**+1.8**
TEIG				sP	**sP**	**16 13 14.8**	**-1.7**
CMIG	**Matias Romero**	**33.21**	**323**	P	**P**	**16 12 42.5**	**+1.4**
	comp=Z,12nm,0.7s,baz=136,slow=5.6,SNR=28						
CMIG				PcP	**PcP**	**16 15 21.0**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=137,slow=4.0,SNR=5.7						
	comp=Z,12nm,0.7s						
SJMB	**Sao Joao De Ma**	**33.79**	**109**	*eP*	**P**	**16 12 45.4**	**-0.8**
CAM01	**Campos-RJ**	**34.06**	**115**	*eP*	**P**	**16 12 47.9**	**-0.5**
ALF01	**Guarapari-ES**	**34.60**	**112**	*eP*	**P**	**16 12 52.7**	**-0.4**
NAN01	**Guarapari, ES**	**34.64**	**107**	*eP*	**P**	**16 12 53.3**	**-0.2**
RIB01	**Linhares ES**	**34.64**	**110**	*eP*	**P**	**16 12 53.2**	**-0.3**
GDU01	**Guandu, BA**	**34.76**	**100**	*eP*	**P**	**16 12 54.6**	**0.0**
GUA01	**Guaratinga, BA**	**34.77**	**105**	*eP*	**P**	**16 12 54.6**	**0.0**
CMC01	**Camacan, BA**	**34.92**	**103**	*eP*	**P**	**16 12 56.3**	**+0.4**
NBAN	**Anadia - AL**	**38.03**	**93**	*eP*	**P**	**16 13 22.6**	**+0.2**
DWPF	**Disney Wildern**	**38.17**	**351**	P	**P**	**16 13 22.7**	**-0.5**
	baz=170						
RCBR	**Riachuelo**	**38.79**	**87**	P	**P**	**16 13 28.4**	**-0.4**
	comp=Z,9.1nm,0.8s,baz=29,slow=18,SNR=2.4						
RCBR				LR	LR	16 30 17.9	
	comp=Z,80nm,19.8s,baz=82,slow=37						
	comp=Z,9.1nm,0.8s						
RCBR	**Riachuelo**	**38.79**	**87**	*eP*	**P**	**16 13 28.1**	**-0.7**
TIGA	**Tifton**	**41.80**	**349**	P	**P**	**16 13 53.2**	**0.0**
	baz=167						
BRAL	**Brewton**	**42.33**	**344**	P	**P**	**16 13 58.2**	**+0.7**
	baz=162						
154A	**Montrose**	**42.86**	**350**	P	**P**	**16 14 02.5**	**+0.8**
	baz=168,SNR=5.5						
NHSC	**New Hope**	**42.92**	**353**	P	**P**	**16 14 02.0**	**-0.2**
	baz=172						
152A	**Waverly Hall**	**43.22**	**348**	P	**P**	**16 14 05.0**	**+0.3**
	baz=166						
GOGA	**Godfrey**	**43.70**	**350**	P	**P**	**16 14 08.7**	**+0.2**
	baz=168,SNR=5.4						
GOGA	**Godfrey**	**43.70**	**350**	P	**P**	**16 14 08.8**	**+0.3**
	baz=168,SNR=5.4						
EFI	**East Falkland**	**44.00**	**165**	*i* P	**P**	**16 14 10.9**	**+0.2**
EFI				pmax	pmax		
	comp=Z,25nm,1.0s						
LRAL	**Lakeview Retre**	**44.09**	**345**	P	**P**	**16 14 11.7**	**0.0**
	baz=163,SNR=5.1						
LRAL	**Lakeview Retre**	**44.09**	**345**	P	**P**	**16 14 11.4**	**-0.2**
	baz=163,SNR=5.1						
HODGE	**Hodges**	**44.30**	**351**	P	**P**	**16 14 13.1**	**-0.2**
	baz=170,SNR=5.5						
HKT	**Hockley**	**44.33**	**334**	P	**P**	**16 14 11.6**	**-1.9**
HKT	**Hockley**	**44.33**	**334**	P	**P**	**16 14 11.6**	**-1.9**
HKT				pmax	pmax		
	comp=Z,22nm,1.1s						
HKT	**Hockley**	**44.33**	**334**	P	**P**	**16 14 15.4**	**+1.9**
	baz=150						
HKT	**Hockley**	**44.33**	**334**	P	**P**	**16 14 13.3**	**-0.2**
HKT				pP	**pP**	**16 14 43.9**	**+2.3**
HKT				sP	**sP**	**16 14 53.9**	**-1.5**
Z47A	**Carrollton**	**44.53**	**344**	P	**P**	**16 14 15.3**	**+0.2**
	baz=161						
833A	**Chaparral WMA,**	**44.67**	**329**	P	**P**	**16 14 17.8**	**+1.5**
	baz=144,SNR=9.4						
833A	**Chaparral WMA,**	**44.67**	**329**	P	**P**	**16 14 17.6**	**+1.3**
	baz=144,SNR=9.4						
Y49A	**Blount Mountai**	**44.74**	**346**	P	**P**	**16 14 16.4**	**-0.4**
	baz=164						
PAULI	**Pauline**	**44.82**	**352**	P	**P**	**16 14 18.4**	**+1.0**
	baz=170,SNR=5.0						
KMSC	**Kings Mountain**	**45.07**	**353**	P	**P**	**16 14 20.2**	**+0.8**
	baz=171,SNR=5.3						
KMSC	**Kings Mountain**	**45.07**	**353**	P	**P**	**16 14 20.2**	**+0.8**
	baz=171,SNR=5.3						
X51A	**Calhoun**	**45.08**	**348**	P	**P**	**16 14 19.4**	**-0.1**
	baz=166						
X51A				P	**P**	**16 14 19.4**	**-0.1**
	baz=166						
NATX	**Nacogdoches**	**45.42**	**336**	P	**P**	**16 14 23.9**	**+1.7**
	baz=152,SNR=6.4						
NATX	**Nacogdoches**	**45.42**	**336**	P	**P**	**16 14 23.8**	**+1.6**
	baz=152,SNR=6.4						
W52A	**Murphy**	**45.42**	**350**	P	**P**	**16 14 22.3**	**+0.1**
	baz=167						
X48A	**Hartselle**	**45.46**	**346**	P	**P**	**16 14 21.8**	**-0.6**
	baz=163						
V58A	**Windy Hill, Pi**	**45.48**	**355**	P	**P**	**16 14 23.0**	**+0.4**
	baz=174						
V58A				P	**P**	**16 14 23.0

comp=Z,64nm,0.9s
LCAR Lake Charles 48.09 342 IAmb IAmb 16 14 43.4
comp=Z,20nm,0.8s
X37A Clayton 48.19 337 IAmb IAmb 16 14 45.9
comp=Z,69nm,1.2s
X37A Clayton 48.19 337 P **P** **16 14 45.1 +1.4**
baz=152,SNR=19
T45B Paducah 48.29 345 P **P** **16 14 43.9 -0.5**
baz=162
R53A Hurricane 48.29 353 IAmb IAmb 16 14 45.3
comp=Z,103nm,1.7s
R53A Hurricane 48.29 353 P **P** **16 14 44.2 -0.2**
baz=171
R53A P **P** **16 14 44.2 -0.2**
baz=171
ABTX Abilene, Hawle 48.32 332 P **P** **16 14 46.1 +1.3**
ABTX Abilene, Hawle 48.32 332 P **P** **16 14 46.0 +1.2**
baz=146,SNR=22
ABTX Abilene, Hawle 48.32 332 P **P** **16 14 45.9 +1.1**
baz=146,SNR=22
R50A Paris 48.60 350 IAmb IAmb 16 14 47.0
comp=Z,22nm,0.7s
R50A Paris 48.60 350 P **P** **16 14 46.4 -0.4**
baz=168,SNR=7.6
R50A P **P** **16 14 46.4 -0.4**
baz=168,SNR=7.6
Q56A Snyder Ridge, 48.71 356 IAmb IAmb 16 14 49.7
comp=Z,28nm,0.8s
Q56A Snyder Ridge, 48.71 356 P **P** **16 14 48.9 +1.3**
baz=174,SNR=6.7
Q56A P **P** **16 14 48.9 +1.3**
baz=174,SNR=6.7
R49A Shelbyville 48.76 349 IAmb IAmb 16 14 48.5
comp=Z,32nm,1.2s
R49A Shelbyville 48.76 349 P **P** **16 14 48.0 +0.1**
baz=166
R49A P **P** **16 14 48.0 +0.1**
baz=166
Q54A Coxs Mills 48.80 354 IAmb IAmb 16 14 49.3
comp=Z,25nm,0.7s
Q54A Coxs Mills 48.80 354 P **P** **16 14 48.4 +0.1**
baz=172,SNR=6.5
Q54A P **P** **16 14 48.4 +0.1**
baz=172,SNR=6.5
WCI Wyandotte Cave 48.91 348 P **P** **16 14 48.1 -1.1**
WCI IAmb IAmb 16 14 49.4
comp=Z,45nm,1.2s
WCI Wyandotte Cave 48.91 348 P **P** **16 14 48.1 -1.1**
WCI pmax pmax
comp=Z,45nm,1.2s
WCI Wyandotte Cave 48.91 348 P **P** **16 14 48.7 -0.5**
baz=165
WCI Wyandotte Cave 48.91 348 P **P** **16 14 48.5 -0.7**
baz=165
S44A Carbondale 49.08 345 P **P** **16 14 50.0 -0.5**
baz=161,SNR=11
HHAR Hobbs 49.19 340 IAmb IAmb 16 14 52.6
comp=Z,76nm,1.4s
HHAR Hobbs 49.19 340 P **P** **16 14 51.4 0.0**
baz=155
P53A Whipple 49.36 353 IAmb IAmb 16 16 14.4
comp=Z,32nm,0.7s
P53A Whipple 49.36 353 P **P** **16 14 53.0 +0.4**
baz=172
P53A P **P** **16 14 53.0 +0.4**
baz=172
MCWV Mont Chateau 49.38 355 P **P** **16 14 53.5 +0.8**
baz=174
MCWV Mont Chateau 49.38 355 P **P** **16 14 53.2 +0.5**
baz=174
PSUB Penn St. - Bra 49.43 359 P **P** **16 14 54.3 +1.3**
baz=179
U38A Gravette 49.48 339 IAmb IAmb 16 14 55.2
comp=Z,16nm,0.8s
U38A Gravette 49.48 339 P **P** **16 14 53.8 +0.2**
baz=154,SNR=7.2
MVL Millersville 49.52 359 IAmb IAmb 16 14 56.1
comp=Z,38nm,0.8s
TUL1 Leonard 49.52 338 P **P** **16 14 54.6 +0.7**
baz=152,SNR=7.3
TUL1 Leonard 49.52 338 P **P** **16 14 54.4 +0.5**
baz=152,SNR=7.3
P52A Corning 49.60 353 IAmb IAmb 16 14 54.9
comp=Z,19nm,0.8s
P52A Corning 49.60 353 P **P** **16 14 54.1 -0.3**
baz=171
FVM French Village 49.67 344 P **P** **16 14 54.5 -0.5**
baz=160,SNR=9.6
TUPA Temple Univers 49.67 360 P **P** **16 14 56.0 +1.1**
baz=180,SNR=8.7
WMOK Wichita Mounta 49.71 334 **P** **16 14 55.0 -0.4**
WMOK Wichita Mounta 49.71 334 P **P** **16 14 55.0 -0.4**
WMOK pmax pmax
comp=Z,13nm,0.7s
WMOK Wichita Mounta 49.71 334 P **P** **16 14 55.4 +0.1**
baz=148,SNR=8.3
WMOK Wichita Mounta 49.71 334 P **P** **16 14 55.5 +0.1**
baz=148,SNR=8.3
OLIL Olney 49.79 346 P **P** **16 14 55.2 -0.7**
baz=163
PANJ Princeton 49.88 0 P **P** **16 14 57.8 +1.4**
baz=180,SNR=8.7
P49A Miami Univ. Ec 49.88 350 IAmb IAmb 16 14 56.1
comp=Z,24nm,0.8s
P49A Miami Univ. Ec 49.88 350 P **P** **16 14 55.5 -1.1**
baz=167,SNR=5.6
P49A Miami Univ. Ec 49.88 350 P **P** **16 14 55.7 -0.9**
baz=167,SNR=5.6
P48A Milroy 49.94 349 IAmb IAmb 16 14 56.7
comp=Z,27nm,0.8s
P48A Milroy 49.94 349 P **P** **16 14 55.8 -1.2**
baz=166,SNR=5.0
P48A P **P** **16 14 55.8 -1.2**
baz=166,SNR=5.0
CCM Cathedral Cave 49.97 343 P **P** **16 14 56.2 -1.0**
CCM IAmb IAmb 16 14 57.4
comp=Z,20nm,0.8s
CCM Cathedral Cave 49.97 343 P **P** **16 14 56.2 -1.0**
CCM pmax pmax
comp=Z,20nm,0.8s
CCM Cathedral Cave 49.97 343 P **P** **16 14 56.5 -0.7**
baz=159,SNR=9.2
CCM Cathedral Cave 49.97 343 P **P** **16 14 56.4 -0.8**
baz=159
O52A Adamsville 50.04 353 P **P** **16 14 57.3 -0.4**
baz=171
O52A P **P** **16 14 57.3 -0.4**
baz=171
O53A New Philadelph 50.10 354 P **P** **16 14 57.7 -0.4**
baz=172
LUPA Lehigh Univers 50.10 360 IAmb IAmb 16 15 00.3
comp=Z,30nm,0.9s
Q44A Meyer Farm, Va 50.17 346 P **P** **16 14 57.8 -0.9**
baz=162,SNR=20
SSPA Standing Stone 50.22 357 P **P** **16 14 59.4 +0.3**
SSPA IAmb IAmb 16 15 01.1
comp=Z,46nm,1.5s
SSPA Standing Stone 50.22 357 P **P** **16 14 59.3 +0.3**
baz=176
SSPA Standing Stone 50.22 357 P **P** **16 14 54.8 -4.2**
S39A Bolivar 50.26 341 IAmb IAmb 16 15 00.2
comp=Z,66nm,1.5s
S39A Bolivar 50.26 341 P **P** **16 14 58.8 -0.7**
baz=156,SNR=11
ACSO Alum Creek Sta 50.30 352 IAmb IAmb 16 15 02.2
comp=Z,16nm,0.8s
ACSO Alum Creek Sta 50.30 352 P **P** **16 14 59.3 -0.4**
baz=170
FOR Fordham 50.37 1 P **P** **16 15 00.9 +0.8**
baz=181
P46A Rosedale 50.44 348 P **P** **16 14 59.9 -0.8**
baz=164,SNR=8.7
O49A Covington 50.46 351 P **P** **16 15 00.0 -0.8**
baz=168
O49A P **P** **16 15 00.0 -0.8**
baz=168
R40A Maddies Statio 50.48 342 IAmb IAmb 16 15 01.4
comp=Z,28nm,1.0s
R40A Maddies Statio 50.48 342 P **P** **16 15 00.5 -0.6**
baz=158,SNR=12
PAL Palisades 50.52 1 P **P** **16 15 02.1 +0.9**
baz=181
PAL Palisades 50.52 1 P **P** **16 15 01.8 +0.6**
baz=181
ODNJ Ogdensburg 50.59 0 IAmb IAmb 16 16 19.4
comp=Z,51nm,1.5s
O48B Farmland 50.66 350 P **P** **16 15 01.8 -0.6**
baz=167,SNR=9.6
O48B Farmland 50.66 350 P **P** **16 15 01.6 -0.8**
baz=167,SNR=9.6
T35A Sooner Cattle 50.68 338 IAmb IAmb 16 15 04.2
comp=Z,80nm,1.6s
T35B Sooner Cattle 50.68 338 P **P** **16 15 03.0 +0.4**
baz=152,SNR=5.6
M57A Sunshine Farm, 50.88 358 IAmb IAmb 16 15 05.7
comp=Z,15nm,0.8s
MSTX Muleshoe 50.92 330 P **P** **16 15 04.0 -0.6**
MSTX IAmb IAmb 16 15 05.9
comp=Z,27nm,0.9s
MSTX Muleshoe 50.92 330 P **P** **16 15 04.1 -0.5**
baz=144,SNR=8.7
MSTX Muleshoe 50.92 330 P **P** **16 15 04.8 +0.1**
baz=144,SNR=8.7
P43A Skaggs, Pawnee 50.99 345 P **P** **16 15 04.7 -0.2**
baz=161,SNR=43
KSPA Keystone Colle 51.06 359 P **P** **16 15 06.7 +1.3**
baz=179
M55A Ridgway 51.09 356 IAmb IAmb 16 15 06.6
comp=Z,20nm,0.8s
M55A Ridgway 51.09 356 P **P** **16 15 06.1 +0.5**
baz=175
M55A P **P** **16 15 06.1 +0.5**
baz=175
AMTX Amarillo 51.14 332 IAmb IAmb 16 15 07.4
comp=Z,41nm,1.4s
AMTX Amarillo 51.14 332 P **P** **16 15 06.2 0.0**
baz=145,SNR=6.8
AMTX Amarillo 51.14 332 P **P** **16 15 06.3 0.0**
baz=145
SFIN Lafayette 51.15 348 P **P** **16 15 04.8 -1.2**
baz=164,SNR=14
SFIN Lafayette 51.15 348 P **P** **16 15 04.8 -1.2**
baz=164,SNR=14
N49A Columbus Grove 51.15 351 IAmb IAmb 16 15 06.3
comp=Z,28nm,0.9s
U32A Winter Ranch, 51.20 335 **P** **16 15 06.8 +0.3**
OK032 Salt Plains WL 51.24 336 IAmb IAmb 16 15 08.2
comp=Z,52nm,1.3s
KAN17 Caldwell West 51.27 336 IAmb IAmb 16 15 08.5
comp=Z,45nm,0.9s
KAN14 Manchester OK 51.28 336 IAmb IAmb 16 15 09.1
comp=Z,22nm,0.6s
N47A Urbana 51.36 350 P **P** **16 15 06.4 -1.2**
baz=166,SNR=9.6
N47A P **P** **16 15 06.4 -1.2**
baz=166,SNR=9.6
KAN05 Bluff City Nor 51.37 336 IAmb IAmb 16 15 09.9
comp=Z,40nm,0.8s
P40A Paris 51.56 343 IAmb IAmb 16 15 09.4
comp=Z,28nm,0.6s
P40A Paris 51.56 343 P **P** **16 15 08.5 -0.7**
baz=158,SNR=11
L59A Walton 51.69 360 P **P** **16 15 10.5 +0.4**
baz=180,SNR=10
L59A P **P** **16 15 10.5 +0.4**
baz=180,SNR=10
L56A Greenwood 51.70 357 P **P** **16 15 10.7 +0.6**
baz=177
L56A P **P** **16 15 10.7 +0.6**
baz=177
BINY Binghamton 51.71 359 P **P** **16 15 11.3 +1.1**
baz=179,SNR=7.4
BINY Binghamton 51.71 359 P **P** **16 15 11.3 +1.1**
baz=179,SNR=7.4
HDIL Hopedale 51.80 346 P **P** **16 15 09.9 -1.0**
baz=162,SNR=14
HDIL Hopedale 51.80 346 P **P** **16 15 10.0 -0.9**
baz=162,SNR=14
L61B Northampton 51.99 2 P **P** **16 15 12.7 +0.5**
baz=183
WVNY West Valley, N 52.02 356 IAmb IAmb 16 15 14.0
comp=Z,36nm,0.8s
WVNY West Valley, N 52.02 356 P **P** **16 15 13.3 +0.8**
baz=175,SNR=5.8
P38A Dawn 52.09 342 IAmb IAmb 16 15 13.5
comp=Z,31nm,0.8s
P38A Dawn 52.09 342 P **P** **16 15 12.6 -0.4**
baz=156,SNR=5.3
HRV Adam Dziewonsk 52.09 3 P **P** **16 15 14.0 +1.0**
baz=184
K57A Scipio Center 52.25 358 P **P** **16 15 14.8 +0.6**
K57A IAmb IAmb 16 15 15.3
comp=Z,26nm,0.7s
N41A Harden Midland 52.34 345 P **P** **16 15 14.2 -0.7**
baz=160,SNR=20
121A Cookes Peak, D 52.49 325 IAmb IAmb 16 15 18.8
comp=Z,26nm,0.8s
121A Cookes Peak, D 52.49 325 P **P** **16 15 17.7 +1.4**
baz=138,SNR=18
121A Cookes Peak, D 52.49 325 P **P** **16 15 17.7 +1.4**
baz=138,SNR=18
319A Douglas 52.53 322 IAmb IAmb 16 15 18.9
comp=Z,37nm,1.2s
KSU1 Kansas State U 52.65 339 P **P** **16 15 17.4 +0.2**
baz=153,SNR=6.2
KSU1 Kansas State U 52.65 339 P **P** **16 15 17.2 0.0**
baz=153,SNR=6.2
J55A Hilton 52.83 357 IAmb IAmb 16 15 19.6
comp=Z,28nm,0.8s
R32A Long Quarter, 52.84 337 P **P** **16 15 19.5 +0.9**
baz=150,SNR=7.5
J58A Remsen 52.86 360 IAmb IAmb 16 15 20.9
comp=Z,92nm,1.9s
J58A Remsen 52.86 360 P **P** **16 15 19.2 +0.6**
baz=179,SNR=5.4
J58A P **P** **16 15 19.2 +0.6**
baz=179,SNR=5.4
J61A Chester 52.89 2 IAmb IAmb 16 15 21.8
comp=Z,21nm,0.8s
ACCN Adirondack Com 52.90 1 IAmb IAmb 16 15 21.1
comp=Z,40nm,1.4s
J57A Williamstown 52.92 359 IAmb IAmb 16 16 27.1
comp=Z,16nm,0.5s
J59A Piesco 52.97 0 P **P** **16 15 20.0 +0.6**
baz=180,SNR=11
J59A P **P** **16 15 20.0 +0.6**
baz=180,SNR=11
FFD Franklin Falls 53.05 3 IAmb IAmb 16 15 22.0
comp=Z,35nm,0.7s
BNM Barren Site 53.06 327 P **P** **16 15 21.5 +0.9**
N38A Joes South For 53.08 343 P **P** **16 15 19.9 -0.4**
baz=157,SNR=18
L42A Oliver, Polo 53.27 346 P **P** **16 15 20.6 -1.0**
baz=162,SNR=8.8
NCB Newcomb 53.47 1 IAmb IAmb 16 15 24.6
comp=Z,17nm,0.7s
NCB Newcomb 53.47 1 P **P** **16 15 24.0 +0.8**
baz=181,SNR=7.5
MCVT Middlebury Col 53.48 2 P **P** **16 15 24.5 +1.3**
baz=182,SNR=6.6
ANMO Albuquerque 53.57 328 P **P** **16 15 24.3 0.0**
ANMO Albuquerque 53.57 328*ce* P **P** **16 15 25.0 +0.7**
ANMO pmax pmax
comp=Z,14nm,1.0s
ANMO Albuquerque 53.57 328 P **P** **16 15 25.1 +0.8**
baz=140,SNR=19
ANMO Albuquerque 53.57 328 P **P** **16 15 25.1 +0.8**
baz=140
ANMO Albuquerque 53.57 328 P **P** **16 15 24.1 -0.2**
CBKS Cedar Bluff 53.59 336 P **P** **16 15 25.0 +0.9**
baz=149
CBKS Cedar Bluff 53.59 336 P **P** **16 15 24.8 +0.6**
baz=149
I63A Otisfield 53.69 4 IAmb IAmb 16 15 26.5
comp=Z,19nm,0.7s
L40A Anamosa 53.70 345 P **P** **16 15 24.0 -0.9**
baz=160,SNR=12
LBNH Lisbon 53.81 3 P **P** **16 15 26.5 +0.9**
LBNH IAmb IAmb 16 15 27.7
comp=Z,30nm,0.7s
LBNH Lisbon 53.81 3 P **P** **16 15 26.5 +0.9**
LBNH pmax pmax
comp=Z,30nm,0.7s
LBNH Lisbon 53.81 3 P **P** **16 15 27.0 +1.4**
baz=184,SNR=6.7
LBNH Lisbon 53.81 3 P **P** **16 15 26.9 +1.3**
baz=184,SNR=6.7
N35A Tabor 53.89 341 P **P** **16 15 26.0 -0.3**
baz=154,SNR=22
DELO Deloro Mine 54.07 358 IAmb IAmb 16 15 28.5
comp=Z,19nm,0.7s
TUC Tucson 54.09 322 P **P** **16 15 28.1 +0.1**
TUC Tucson 54.09 322 P **P** **16 15 28.1 +0.1**
TUC pmax pmax
comp=Z,13nm,1.3s
TUC Tucson 54.09 322 P **P** **16 15 28.6 +0.6**
baz=134
SCIA State Center 54.10 343 P **P** **16 15 27.3 -0.4**
baz=158,SNR=6.6
SCIA State Center 54.10 343 P **P** **16 15 27.0 -0.7**
baz=158,SNR=6.6
LONY Lake Ozonia 54.12 0 P **P** **16 15 28.1 +0.2**
LONY IAmb IAmb 16 15 29.1
comp=Z,15nm,0.7s
LONY Lake Ozonia 54.12 0 P **P** **16 15 28.5 +0.7**
baz=180,SNR=5.4
H62A Milan 54.18 3 P **P** **16 15 29.4 +1.2**
baz=184
H62A P **P** **16 15 29.4 +1.2**
baz=184
T25A Trinidad 54.26 331 IAmb IAmb 16 15 31.3
comp=Z,41nm,0.9s
T25A Trinidad 54.26 331 P **P** **16 15 30.2 +0.9**
baz=143,SNR=20
JFWS Jewell Farm 54.27 346 P **P** **16 15 28.2 -0.7**
baz=161,SNR=9.7
JFWS Jewell Farm 54.27 346 P **P** **16 15 28.0 -0.9**
baz=161,SNR=9.7
BMNY Brushton-Moira 54.34 0 P **P** **16 15 30.3 +0.9**
baz=180,SNR=8.3
FRNY Flat Rock 54.35 1 P **P** **16 15 30.7 +1.2**
baz=182,SNR=17
G62A West of Eustis 54.86 4 P **P** **16 15 34.7 +1.5**
baz=185,SNR=12
G62A P **P** **16 15 34.7 +1.5**
baz=185,SNR=12
I42A Draeger Farm, 54.90 348 P **P** **16 15 32.9 -0.5**
baz=163,SNR=6.5
KSCO Kaye Shedlock' 54.97 334 P **P** **16 15 34.9 +0.7**
baz=146
PKME Peaks-Kenny Pk 54.99 5 P **P** **16 15 35.4 +1.3**
PKME Peaks-Kenny Pk 54.99 5 P **P** **16 15 35.4 +1.3**
baz=187,SNR=9.6
PKME Peaks-Kenny Pk 54.99 5 P **P** **16 15 35.3 +1.1**
baz=187,SNR=9.6
G65A Princeton 55.10 6 IAmb IAmb 16 15 36.9
comp=Z,33nm,0.8s
G65A Princeton 55.10 6 P **P** **16 15 36.2 +1.4**
baz=189,SNR=7.5
G65A P **P** **16 15 36.2 +1.4**
baz=189,SNR=7.5
214A Organ Pipe Nat 55.10 320 IAmb IAmb 16 15 37.4
comp=Z,33nm,1.2s
214A Organ Pipe Nat 55.10 320 P **P** **16 15 36.4 +1.2**
baz=132,SNR=7.2
L34A Svendsen Farm, 55.12 341 P **P** **16 15 34.8 -0.4**
baz=154,SNR=18
X18A Snowflake 55.18 325 IAmb IAmb 16 15 38.1
comp=Z,24nm,1.1s
BGNE Belgrade 55.24 339 P **P** **16 15 36.0 0.0**
baz=152,SNR=9.6
BGNE Belgrade 55.24 339 P **P** **16 15 36.0 0.0**
baz=152,SNR=9.6
SDCO Great Sand Dun 55.27 331 P **P** **16 15 37.5 +0.9**
SDCO IAmb IAmb 16 15 38.5
comp=Z,35nm,1.0s
SDCO Great Sand Dun 55.27 331 P **P** **16 15 37.5 +0.9**
baz=142,SNR=46
SDCO Great Sand Dun 55.27 331 P **P** **16 15 37.5 +0.9**
baz=142,SNR=46
I40A Norwalk 55.28 346 P **P** **16 15 35.6 -0.6**
baz=161,SNR=19
W18A Petrified Fore 55.48 325 IAmb IAmb 16 15 40.3
comp=Z,35nm,1.1s
W18A Petrified Fore 55.48 325 P **P** **16 15 39.1 +1.0**
baz=137,SNR=5.4
F62A Pittston Farm, 55.57 4 P **P** **16 15 39.3 +1.0**
baz=186
F62A P **P** **16 15 39.3 +1.0**
baz=186
F64A Sherman 55.67 6 IAmb IAmb 16 15 41.0
comp=Z,25nm,0.8s
F64A Sherman 55.67 6 P **P** **16 15 40.3 +1.3**
baz=188,SNR=6.8
F64A P **P** **16 15 40.3 +1.3**
baz=188,SNR=6.8
TRQ Mont Tremblant 55.72 0 P **P** **16 15 39.7 +0.3**
TRQ IAmb IAmb 16 15 41.5
comp=Z,17nm,0.8s
S22A 4UR Ranch, Cre 55.92 330 IAmb IAmb 16 15 43.1
comp=Z,27nm,1.4s
S22A 4UR Ranch, Cre 55.92 330 P **P** **16 15 41.9 +0.6**
baz=141,SNR=13
Q24A Divide 56.07 332 P **P** **16 15 42.7 +0.4**
baz=143
I37B Waseca 56.10 344 P **P** **16 15 41.2 -0.9**
baz=158,SNR=6.0
E63A Oxbow 56.22 5 P **P** **16 15 44.0 +1.1**
baz=188
E63A P **P** **16 15 44.0 +1.1**
baz=188
E62A Clayton Lake 56.32 4 P **P** **16 15 44.9 +1.3**
baz=186,SNR=10
E62A P **P** **16 15 44.9 +1.3**
baz=186,SNR=10
OGNE Ogallala 56.33 335 P **P** **16 15 44.6 +0.7**
baz=147,SNR=5.5
OGNE Ogallala 56.33 335 P **P** **16 15 44.5 +0.6**
baz=147,SNR=5.5
MVCO Mesa Verde 56.36 328 IAmb IAmb 16 15 46.0
comp=Z,34nm,1.4s
MVCO Mesa Verde 56.36 328 P **P** **16 15 45.0 +0.6**
baz=139,SNR=5.3
G40A Rib Lake 56.49 347 IAmb IAmb 16 15 47.6
comp=Z,28nm,1.2s
G40A Rib Lake 56.49 347 P **P** **16 15 44.3 -0.5**
baz=162,SNR=5.2
E46A Sault Ste Mari 56.50 352 IAmb IAmb 16 15 44.5
comp=Z,22nm,0.8s
K31A O'Neill 56.52 339 P **P** **16 15 45.0 -0.1**
WUAZ Wupatki 56.70 325 IAmb IAmb 16 15 49.1
comp=Z,37nm,0.9s
WUAZ Wupatki 56.70 325 P **P** **16 15 47.8 +1.1**
baz=136,SNR=27
ECSD EROS Data Cent 56.79 341 IAmb IAmb 16 15 47.4
comp=Z,31nm,1.1s
ECSD EROS Data Cent 56.79 341 P **P** **16 15 46.5 -0.5**
baz=154,SNR=15
ECSD EROS Data Cent 56.79 341 P **P** **16 15 46.5 -0.5**
baz=154,SNR=15
D62A Allapoint, All 56.82 5 P **P** **16 15 48.2 +1.1**
baz=187,SNR=14
D62A P **P** **16 15 48.2 +1.1**
baz=187,SNR=14
E43A Lone Tree Farm 56.92 350 P **P** **16 15 46.7 -1.2**
baz=166,SNR=5.6
ISCO Idaho Springs 56.95 332 P **P** **16 15 48.8 +0.2**
baz=143,SNR=6.6
ISCO Idaho Springs 56.95 332 P **P** **16 15 49.4 +0.8**
baz=143,SNR=6.6
COWI Conover 57.05 348 IAmb IAmb 16 15 49.1
comp=Z,29nm,0.8s
COWI Conover 57.05 348 P **P** **16 15 48.3 -0.6**
baz=163
SPMN Marine on St. 57.06 345 P **P** **16 15 48.4 -0.5**
baz=159,SNR=13
SPMN Marine on St. 57.06 345 P **P** **16 15 48.3 -0.6**
baz=159,SNR=13
GLA Glamis 57.10 320 P **P** **16 15 50.5 +1.1**
baz=131
SMCO Snowmass 57.10 331 IAmb IAmb 16 15 52.4
comp=Z,22nm,0.9s
BATG Bathurst New B 57.32 7 P **P** **16 15 51.6 +1.0**
BATG IAmb IAmb 16 15 52.1
comp=Z,21nm,0.8s
PV07 Paradox Valley 57.37 329 IAmb IAmb 16 15 53.2
comp=Z,22nm,1.1s
PDMCI Parker Dam,Lak 57.50 322 P **P** **16 15 53.5 +1.4**
baz=132
PV10 Paradox Valley 57.52 328 IAmb IAmb 16 15 53.6
comp=Z,19nm,0.9s
PV23 Carpenter Ridg 57.56 329 IAmb IAmb 16 15 55.2
comp=Z,14nm,0.7s
SWSC Sam W. Stewart 57.65 319 P **P** **16 15 54.6 +1.4**
baz=130
VLDQ Val d'Or 57.66 358 IAmb IAmb 16 15 53.8
comp=Z,12nm,0.7s
IKP In-Ko-Pah, Jac 57.66 319 P **P** **16 15 54.1 +0.7**
baz=130
F36A Milaca 57.84 345 P **P** **16 15 53.7 -0.6**
baz=158,SNR=15
D41A Chassel 57.87 349 P **P** **16 15 54.1 -0.3**
D41A IAmb IAmb 16 15 54.5
comp=Z,31nm,0.8s

BC3	Big Chuckawall	57.89	320	P	P	16 15 56.2 +1.1
	baz=131,SNR=11					
N23A	Red Feather La	57.98	333	P	P	16 15 56.3 +0.6
	baz=143					
MONP2	Monument Peak	58.02	319	P	P	16 15 56.8 +0.7
	baz=130					
IRM	Iron Mountain	58.02	321	P	P	16 15 56.9 +1.0
	baz=131,SNR=27					
PHWY	Pilot Hill	58.08	333	IAmb	IAmb	16 15 58.2
	comp=Z,24nm,1.1s					
SUSD	Miller	58.19	340	P	P	16 15 56.4 -0.4
	baz=152,SNR=5.6					
SUSD	Miller	58.19	340	P	P	16 15 56.6 -0.2
	baz=152,SNR=5.6					
BELC	Belle Mtn. Jos	58.45	320	P	P	16 16 00.0 +1.0
	baz=131,SNR=7.1					
O20A	White River Ci	58.46	330	IAmb	IAmb	16 16 00.8
	comp=Z,24nm,0.9s					
O20A	White River Ci	58.46	330	P	P	16 15 59.6 +0.6
	baz=141,SNR=6.5					
TPFO	Pinon Flats	58.49	319	P	P	16 16 00.3 +1.1
	baz=130					
PFO	Pinyon Flats O	58.50	319	P	P	16 16 00.4 +1.1
	baz=130,SNR=6.4					
PFO	Pinyon Flats O	58.50	319	P	P	16 15 54.1 -5.2
PFO				sP	sP	16 16 40.2 -2.1
F33A	5 Mile Ranch,	58.59	343	P	P	16 15 58.9 -0.7
	baz=155,SNR=7.4					
PKCU	Pink Cliffs	58.60	325	IAmb	IAmb	16 16 02.6
	comp=Z,37nm,1.2s					
GMRC	Granite Mounta	58.76	321	P	P	16 16 02.1 +1.0
	baz=131,SNR=10					
LCMT	Little Creek M	58.82	324	IAmb	IAmb	16 17 58.3
	comp=Z,15nm,0.8s					
SRU	San Rafael Swe	58.84	328	IAmb	IAmb	16 16 03.2
	comp=Z,22nm,0.9s					
MURC	Murrieta	58.97	319	P	P	16 16 03.4 +1.0
	baz=129					
P18A	Preston Nutter	59.08	329	IAmb	IAmb	16 16 06.7
	comp=Z,13nm,0.8s					
HEC	Hector,Ludlow	59.20	321	P	P	16 16 05.3 +1.2
	baz=131					
CCUT	Cedar City	59.27	325	IAmb	IAmb	16 16 07.3
	comp=Z,17nm,1.1s					
EYMN	Ely	59.31	347	IAmb	IAmb	16 16 04.5
	comp=Z,26nm,0.8s					
EYMN	Ely	59.31	347	P	P	16 16 03.8 -0.7
	baz=161					
EYMN	Ely	59.31	347	P	P	16 16 03.6 -0.9
	baz=161					
TMUT	Trail Mountain	59.34	328	P	P	16 16 06.2 +0.9
TUQ	Turquoise Moun	59.34	321	P	P	16 16 06.0 +0.9
	baz=131,SNR=5.1					
TCRU	Three Creeks R	59.51	326	IAmb	IAmb	16 16 08.4
	comp=Z,23nm,1.0s					
K22A	Casper	59.64	333	IAmb	IAmb	16 16 08.1
	comp=Z,17nm,0.6s					
K22A	Casper	59.64	333	P	P	16 16 07.3 +0.3
	baz=143,SNR=9.9					
K22A	Casper	59.64	333	P	P	16 16 07.6 +0.5
	baz=143,SNR=9.9					
BFSC	Mount Baldy Ra	59.67	319	P	P	16 16 08.0 +0.7
	baz=129					
RSSD	Black Hills	59.79	336	P	P	16 16 08.6 +0.5
RSSD				IAmb	IAmb	16 16 09.9
	comp=Z,32nm,1.2s					
RSSD	Black Hills	59.79	336	P	P	16 16 08.6 +0.5
RSSD				pmax	pmax	
	comp=Z,32nm,1.3s					
RSSD	Black Hills	59.79	336	P	P	16 16 08.9 +0.7
	baz=146,SNR=11					
RSSD	Black Hills	59.79	336	P	P	16 16 08.8 +0.7
	baz=146					
GSC	Goldstone, Bar	59.80	321	P	P	16 16 09.6 +1.3
	baz=130					
MPU	Maple Canyon	60.09	328	IAmb	IAmb	16 16 11.9
	comp=Z,15nm,1.0s					
B35A	Bob, Littlefor	60.22	346	P	P	16 16 10.1 -0.6
	baz=158,SNR=8.1					
PSUT	Pine Spring	60.23	325	IAmb	IAmb	16 16 13.4
	comp=Z,27nm,0.9s					
EDW2	Edwards Air Fo	60.28	320	P	P	16 16 12.4 +0.9
	baz=129					
JLU	Jordanelle	60.42	329	P	P	16 16 13.7 +1.1
JLU				IAmb	IAmb	16 16 14.4
	comp=Z,30nm,0.9s					
LRMC	Laurel Mtn Rad	60.47	320	P	P	16 16 13.9 +1.1
	baz=130,SNR=5.4					
TPNV	Topopah Spring	60.54	323	P	P	16 16 15.5 +2.2
	baz=132,SNR=8.3					
FURC	Furnace Creek,	60.60	322	P	P	16 16 14.5 +1.1
	baz=131					
E28A	Huff	60.64	340	P	P	16 16 14.5 +0.9
	baz=150,SNR=12					
WCT	Wildcat Mounta	60.66	322	IAmb	IAmb	16 16 16.5
	comp=Z,27nm,1.3s					
AGMN	Agassiz Nation	60.71	344	P	P	16 16 14.0 0.0
	baz=156,SNR=18					
AGMN	Agassiz Nation	60.71	344	P	P	16 16 13.7 -0.3
	baz=156,SNR=18					
DRLN	Deer Lake	60.71	13	P	P	16 16 14.8 +0.8
MPMC	Manual Prospec	60.72	321	P	P	16 16 15.1 +0.5
	baz=130,SNR=8.1					
DUG	Dugway, Tooele	60.84	327	P	P	16 16 16.3 +1.0
	baz=136,SNR=32					
ISA	Isabella, Lake	61.08	320	P	P	16 16 17.9 +1.0
	baz=129,SNR=6.1					
R11A	Troy Canyon, C	61.09	324	P	P	16 16 18.2 +1.2
	baz=133,SNR=26					
BW06	Boulder Array	61.12	331	P	P	16 16 17.1 -0.1
	baz=140,SNR=17					
PD31	Pinedale Array	61.12	331	P	P	16 16 17.2 0.0
PDAR	Pinedale Array	61.12	331	P	P	16 16 17.1 -0.2
	comp=Z,5.4nm,0.5s,baz=126,slow=8.0,SNR=54					
PDAR				PcP	PcP	16 16 58.4 -0.6
	comp=Z,2.3nm,0.6s,baz=125,slow=6.7,SNR=5.0					
	comp=Z,5.4nm,0.5s					
PDAR	Pinedale Array	61.12	331	P	P	16 16 16.3 -0.9
SBC	Santa Barbara	61.13	318	P	P	16 16 18.1 +1.0
	baz=128					
GRAC	Grapevine Rang	61.25	322	P	P	16 16 18.9 +1.0
	baz=131					
CWC	Cottonwood Cre	61.33	321	P	P	16 16 19.7 +1.0
	baz=130					
MDND	Maddock	61.40	341	P	P	16 16 19.7 +0.9
	baz=152					
MDND	Maddock	61.40	341	P	P	16 16 19.6 +0.9
	baz=152					
PKM	Mcpherson Peak	61.46	319	P	P	16 16 20.5 +0.9
	baz=128					
BGU	Big Grassy Mou	61.48	328	IAmb	IAmb	16 16 21.1
	comp=Z,20nm,0.9s					
VES	Vestal, Richgr	61.58	320	P	P	16 16 21.3 +1.2
	baz=129					
TIN	Tinemaha, Big	61.81	321	P	P	16 16 23.1 +1.2
	baz=130					
SMMC	Simmler	61.84	319	P	P	16 16 23.3 +1.3
	baz=128					
AHID	Auburn Hatcher	61.86	330	IAmb	IAmb	16 16 23.1
	comp=Z,23nm,0.8s					
HVU	Hansel Valley	61.97	329	IAmb	IAmb	16 16 24.1
	comp=Z,24nm,0.9s					
REDW	Red Top Meadow	62.19	331	P	P	16 16 24.8 +0.4
REDW				IAmb	IAmb	16 16 25.8
	comp=Z,27nm,1.4s					
SNOW	Snow King Moun	62.22	331	IAmb	IAmb	16 16 25.8
	comp=Z,12nm,0.6s					
LOHW	Long Hollow	62.26	331	IAmb	IAmb	16 16 26.1
	comp=Z,13nm,0.7s					
MLAC	Mammoth, Mammo	62.55	322	P	P	16 16 28.0 +1.1
	baz=130					
IMW	Indian Meadow	62.63	331	IAmb	IAmb	16 16 29.4
	comp=Z,48nm,1.4s					
OMMB	Old Mammoth Mi	62.64	321	IAmb	IAmb	16 16 29.6
	comp=Z,19nm,0.9s					
MDPB	Devils Postpil	62.70	321	P	P	16 16 28.9 +1.0
NVAR	Mina Array Bea	62.74	323	P	P	16 16 29.1 +1.0
	comp=Z,7.1nm,0.8s,baz=142,slow=7.4,SNR=46					
NVAR				PcP	PcP	16 17 05.9 +0.2
	comp=Z,2.7nm,0.7s,baz=137,slow=5.2,SNR=7.3					
	comp=Z,7.1nm,0.8s					
RLMT	Red Lodge	62.81	333	IAmb	IAmb	16 16 29.8
	comp=Z,17nm,0.8s					
RLMT	Red Lodge	62.81	333	P	P	16 16 28.6 +0.2
	baz=141,SNR=14					
H17A	Grant Village	62.84	332	P	P	16 16 29.6 +0.9
	baz=140,SNR=7.1					
LKWY	Lake	62.89	332	IAmb	IAmb	16 16 31.5
	comp=Z,19nm,0.8s					
YMR	Madison River	63.23	332	IAmb	IAmb	16 16 33.6
	comp=Z,36nm,0.9s					
YHH	Holmes Hill	63.27	332	IAmb	IAmb	16 16 33.8
	comp=Z,27nm,0.8s					
YHB	Horse Butte	63.40	332	IAmb	IAmb	16 16 34.5
	comp=Z,42nm,0.7s					
BMN	Battle Mountai	63.43	325	IAmb	IAmb	16 16 34.2
	comp=Z,21nm,0.7s					
WAKR	Walker	63.47	322	P	P	16 16 34.3 +1.3
WAKR				IAmb	IAmb	16 16 35.4
	comp=Z,37nm,1.5s					
DGMT	Dagmar	63.49	339	P	P	16 16 33.9 +1.3
	baz=147,SNR=7.2					
DGMT	Dagmar	63.49	339	P	P	16 16 33.7 +1.1
	baz=147,SNR=7.2					
YERR	Yerington	63.66	323	IAmb	IAmb	16 16 36.4
	comp=Z,17nm,0.8s					
PNTR	Pine Nut	63.94	322	IAmb	IAmb	16 16 38.5
	comp=Z,23nm,0.8s					
HLID	Hailey	64.09	329	P	P	16 16 37.6 +0.8
	baz=136,SNR=17					
VCNR	Virginia City	64.10	323	IAmb	IAmb	16 16 39.4
	comp=Z,24nm,0.8s					
PAHR	Pah Rah Range	64.20	323	P	P	16 16 39.0 +1.3
PAHR				IAmb	IAmb	16 16 40.0
	comp=Z,29nm,0.9s					
BOZ	Bozeman (W)	64.24	332	IAmb	IAmb	16 16 38.9
	comp=Z,16nm,0.7s					
BOZ	Bozeman (W)	64.24	332	P	P	16 16 38.4 +0.6
	baz=139,SNR=33					
SCHQ	Schefferville	64.70	5	P	P	16 16 40.5 +0.1
	comp=Z,24nm,0.9s,baz=196,slow=5.3,SNR=14					
	comp=Z,24nm,0.9s					
LRM	Limekiln Ridge	64.79	332	P	P	16 16 41.3 -0.2
EGMT	Eagleton	65.29	335	IAmb	IAmb	16 16 45.6
	comp=Z,27nm,0.8s					
EGMT	Eagleton	65.29	335	P	P	16 16 44.8 +0.4
	baz=142,SNR=6.0					
ORV	Oroville	65.38	322	IAmb	IAmb	16 16 47.5
	comp=Z,37nm,0.9s					
MOD	Modoc Plateau	66.15	324	IAmb	IAmb	16 16 51.9
	comp=Z,42nm,0.7s					
MSO	Missoula	66.23	332	P	P	16 16 51.7 +1.2
MSO				IAmb	IAmb	16 16 52.5
	comp=Z,33nm,0.9s					
MSO	Missoula	66.23	332	P	P	16 16 51.5 +1.0
	baz=137,SNR=19					
K05A	Summer Lake	67.01	325	IAmb	IAmb	16 16 58.2
	comp=Z,41nm,0.8s					
I07A	Izee	67.12	327	IAmb	IAmb	16 16 58.4
	comp=Z,43nm,0.8s					
F10A	Beach Ranch, E	67.21	329	IAmb	IAmb	16 16 58.9
	comp=Z,18nm,0.7s					
PINE	Pine Mountain	67.72	326	P	P	16 17 01.6 +1.5
PINE				IAmb	IAmb	16 17 02.5
	comp=Z,36nm,0.9s					
WALA	Waterton Lakes	67.86	333	IAmb	IAmb	16 17 01.9
	comp=Z,20nm,0.6s					
NEW	Newport	68.76	331	LR	LR	16 48 28.0
	comp=Z,58nm,18.7s,baz=54,slow=37					
NEW	Newport	68.76	331	P	P	16 17 06.8 +0.4
	baz=135,SNR=8.3					
LTY	Liberty	69.83	329	IAmb	IAmb	16 19 16.5
	comp=Z,61nm,1.6s					
D05A	Enumclaw	70.46	328	IAmb	IAmb	16 17 18.1
	comp=Z,39nm,0.8s					
EDM	Edmonton	70.76	337	IAmb	IAmb	16 17 19.2
	comp=Z,69nm,0.9s					
B06A	Marblemount	71.07	329	IAmb	IAmb	16 17 21.6
	comp=Z,33nm,0.8s					
DBIC	Dimbokro	71.63	80	P	P	16 17 23.6 -0.8
	comp=Z,4.2nm,0.4s,baz=231,slow=5.1,SNR=11					
	comp=Z,4.2nm,0.4s					
DBIC	Dimbokro	71.63	80	P	P	16 17 23.6 -0.8
DBIC	Dimbokro	71.63	80	P	P	16 17 23.6 -0.8
DBIC				pmax	pmax	
	comp=Z,13nm,1.0s					
DBIC	Dimbokro	71.63	80	P	P	16 17 23.8 -0.7
PPT	Papeete	72.63	255	LR	LR	16 43 21.5
	comp=Z,36nm,18.4s,baz=48,slow=31					
VNA3	Neumayer Olymp	72.96	162	P	P	16 17 31.8 +0.4
BRLDA	Berland Lookou	73.03	335	IAmb	IAmb	16 17 32.7
	comp=Z,37nm,0.9s					
VNA1	Neumayer--Stat	73.19	161	P	P	16 17 34.0 +1.3
KOWA	Kowa	74.26	72	LR	LR	16 47 50.2
	comp=Z,56nm,21.4s,baz=305,slow=34					
KOWA	Kowa	74.26	72	P	P	16 17 39.6 -0.3
NRS	Narsarsuaq	74.40	14	P	P	16 17 39.8 +0.1
NRS				IAmb	IAmb	16 17 51.6
	comp=Z,62nm,1.1s					
NRS	Narsarsuaq	74.40	14	P	P	16 17 39.8 +0.1
NRS				pmax	pmax	
	comp=Z,62nm,1.1s					
WAPA	Wapiti River	74.56	335	IAmb	IAmb	16 17 41.8
	comp=Z,33nm,0.8s					
SNAA	Sanae	75.17	162	P	P	16 17 44.4 +0.1
SNAA	Sanae	75.17	162	*c*eP	P	16 17 45.1 +0.8
SNAA				pmax	pmax	
	comp=Z,9.0nm,1.0s					
TROLL	Troll, Antarti	76.89	162	P	P	16 17 54.7 +0.6
AVE	Averroes	77.03	53	IAmb	IAmb	16 17 58.2
	comp=Z,61nm,0.8s					
PFVI	Vila Bisbo	77.37	48	*e*P	P	16 17 59.4 +2.2
	comp=Z,78nm,1.4s					
MORF	Marmelete	77.56	48	*e*P	P	16 17 59.6 +1.2
MORF				IAmb	IAmb	16 18 01.5
	comp=Z,35nm,1.0s					
MORF	Marmelete	77.56	48	*e*P	P	16 18 00.5 +2.2
	comp=Z,63nm,1.4s					
MORF	Marmelete	77.56	48	*e*P	P	16 17 59.6 +1.2
PTEO	Sao Teotonio	77.61	48	*e*P	P	16 18 01.6 +3.1
PNCL	Nicolau / Gran	77.97	48	*e*P	P	16 18 02.3 +1.8
PACT	Alcochete	78.00	47	*e*P	P	16 18 02.7 +2.1
	comp=Z,202nm,1.7s					
MESJ	Messejana	78.09	48	*e*P	P	16 18 02.5 +1.3
MESJ				IAmb	IAmb	16 18 03.6
	comp=Z,29nm,1.2s					
MESJ	Messejana	78.09	48	*e*P	P	16 18 02.9 +1.7
	comp=Z,37nm,1.5s					
PCVE	Castro Verde	78.14	48	*e*P	P	16 18 03.5 +2.0
	comp=Z,57nm,1.6s					
PVAQ	Vaqueiros	78.29	49	*e*P	P	16 18 04.2 +1.9
YKA	Yellowknife Ar	78.30	342	P	P	16 18 01.6 -0.1
	comp=Z,8.7nm,0.6s,baz=142,slow=5.9,SNR=33					
	comp=Z,8.7nm,0.6s					
PSBE	So Bento	78.32	46	*e*P	P	16 18 04.0 +1.6
	comp=Z,62nm,1.9s					
PBEJ	Beja	78.42	48	*e*P	P	16 18 04.8 +1.8
EVO	Evora	78.50	47	*e*P	P	16 18 04.8 +1.4
	comp=Z,28nm,1.0s					
PMTG	Montargil	78.55	47	*e*P	P	16 18 04.9 +1.2
	comp=Z,38nm,1.4s					
SFJD	Kangerlussuaq	78.56	9	*e*P	P	16 18 02.7 -0.3
PCAS	Casmilo, Conde	78.74	46	*e*P	P	16 18 06.0 +1.3
COI	Coimbra	78.86	46	*e*P	P	16 18 07.4 +2.1
	comp=Z,62nm,1.4s					
COI	Coimbra	78.86	46	IAmb	IAmb	16 18 07.7
	comp=Z,41nm,0.8s					
DY2G	Dye2	78.86	11	*i* P	P	16 18 05.1 0.0
DY2G				IAmb	IAmb	16 18 05.8
	comp=Z,49nm,0.7s					
PBAR	Barrancos	79.08	48	*e*P	P	16 18 08.2 +1.6
MDT	Midelt	79.08	54	LR	LR	16 51 50.7
	comp=Z,50nm,18.0s,baz=336,slow=35					
PTO	Porto	79.09	45	*e*P	P	16 18 07.6 +1.0
PMRV	Marv??o	79.29	47	*e*P	P	16 18 08.7 +1.0
	comp=Z,20nm,1.8s					
TOA0	Torodi Ar. Sit	79.34	75	P	P	16 18 08.2 -0.3
TORD	Torodi Ar. Bea	79.34	75	P	P	16 18 08.2 -0.2
	comp=Z,16nm,0.8s,baz=272,slow=6.0,SNR=35					
TORD				pP	pP	16 18 38.5 -1.3
	comp=Z,3.1nm,0.6s,baz=278,slow=4.0,SNR=1.4					
	comp=Z,16nm,0.8s					
PCBR	Castelo Branco	79.38	46	*e*P	P	16 18 09.1 +0.9
	comp=Z,26nm,1.8s					
PVIS	Viseu	79.42	45	*e*P	P	16 18 09.4 +0.9
MTE	Manteigas	79.55	46	*e*P	P	16 18 10.2 +1.0
	comp=Z,28nm,2.2s					
MTE	Manteigas	79.55	46	P	P	16 18 10.2 +1.0
MTE				IAmb	IAmb	16 18 10.8
	comp=Z,19nm,0.6s					
PGAV	Gavieira, Arco	79.64	44	*e*P	P	16 18 10.6 +0.9
FLDN	Fort Liard	79.67	338	P	P	16 18 10.0 +0.8
	baz=131					
PCAB	Cabril	79.71	44	*e*P	P	16 18 11.0 +1.0
	comp=Z,38nm,1.7s					
POLO	Lamas de Olo	79.74	45	*e*P	P	16 18 11.2 +0.9
	comp=Z,16nm,1.6s					
PVRL	Vila Real	79.76	45	*e*P	P	16 18 11.3 +1.0
	comp=Z,37nm,1.8s					
NVL	N'lazarevskaya	79.77	160	*e*P	P	16 18 10.4 +0.7
NVL				*e*S	S	16 28 10.6 +8.4
NVL				pmax	pmax	
	comp=Z,13nm,0.8s					
V35K	Ketchikan	80.17	331	P	P	16 18 12.9 +0.8
	baz=123,SNR=6.4					
MVO	Moncorvo	80.20	45	*e*P	P	16 18 13.9 +1.2
	comp=Z,41nm,1.5s					
QSPA	South Pole Qui	80.36	180	P	P	16 18 14.0 +0.8
	comp=Z,11nm,0.8s,baz=162,slow=1.1,SNR=72					
QSPA				pP	pP	16 18 45.7 +1.4
	comp=Z,6.7nm,0.9s,baz=137,slow=1.1,SNR=4.5					
	comp=Z,11nm,0.8s					
T35M	Bob Quinn	80.46	333	P	P	16 18 14.9 +1.3
	baz=125,SNR=15					
ILULI	Ilulissat	80.51	8	*e*P	P	16 18 13.7 0.0
PBRG	Braganca	80.64	45	*e*P	P	16 18 16.0 +1.0
	comp=Z,23nm,1.3s					
WRAK	Wrangell Islan	81.11	332	P	P	16 18 17.6 +0.6
	baz=123					
DLBC	Dease Lake	81.19	334	P	P	16 18 18.6 +1.0
	baz=125,SNR=8.8					
U33K	Whale Pass	81.31	331	P	P	16 18 19.0 +0.9
	baz=122					
S34M	Telegraph Cree	81.38	333	P	P	16 18 19.5 +1.0
	baz=124,SNR=8.3					
PAB	San Pablo	81.53	47	P	P	16 18 21.1 +1.3
PAB	San Pablo	81.53	47	P	P	16 18 21.1 +1.3
PAB				pmax	pmax	
	comp=Z,11nm,0.8s					
WRGLY	Wrigley	81.65	340	P	P	16 18 20.5 +0.7
	baz=132					
WTLY	Watson Lake, Y	81.66	336	P	P	16 18 21.1 +1.1
	baz=126					
ESDC	Sonseca Array	81.85	47	P	P	16 18 22.6 +1.2
	comp=Z,11nm,0.8s,baz=259,slow=6.1,SNR=43					
ESDC				pP	pP	16 18 53.3 +0.4
	comp=Z,4.1nm,0.9s,baz=252,slow=5.6,SNR=4.1					
ESDC				LR	LR	16 53 36.6
	comp=Z,67nm,18.1s,baz=316,slow=35					
	comp=Z,11nm,0.8s					
ESBB	Sonseca Array	81.85	47	IAmb	IAmb	16 18 24.1
	comp=Z,47nm,1.6s					
R33M	Jennings River	82.14	335	P	P	16 18 23.8 +1.1
	baz=124,SNR=13					
TGTN	Hyland Airport	82.31	337	P	P	16 18 24.7 +1.3
	baz=127,SNR=8.1					
ICESG	Greenland Ices	82.42	12	*i* P	P	16 18 23.7 -0.5
ICESG				IAmb	IAmb	16 18 25.4
	comp=Z,75nm,1.1s					
Q32M	Nakina River	82.46	334	P	P	16 18 25.2 +0.8
	baz=123,SNR=10					
S32K	Killisnoo	82.70	332	P	P	16 18 26.3 +1.0
	baz=121					
JIS	Juneau Island	83.03	333	IAmb	IAmb	16 18 29.1
	comp=Z,23nm,1.0s					
R32K	Eaglecrest	83.09	333	P	P	16 18 28.6 +1.2
	baz=121,SNR=8.4					
P33M	Teslin, Yukon	83.38	335	IAmb	IAmb	16 18 30.7
	comp=Z,22nm,1.0s					
P33M	Teslin, Yukon	83.38	335	P	P	16 18 29.8 +0.8
	baz=123,SNR=16					
BESE	Bessie Mountai	83.40	333	IAmb	IAmb	16 18 31.2
	comp=Z,36nm,1.0s					
P32M	Atlin	83.42	334	P	P	16 18 30.2 +1.0
	baz=122,SNR=7.9					
R31K	City Hall, Gus	83.72	332	P	P	16 18 31.0 +0.5
	baz=120					
N32M	Quiet Lake	83.99	336	P	P	16 18 32.7 +0.7
	baz=123					
SKAG	Skagway	84.06	333	P	P	16 18 33.4 +1.1
	baz=120					
MMPY	Sheldon Lake,	84.09	337	P	P	16 18 33.3 +0.9
	baz=124,SNR=16					
WHY	Whitehorse	84.48	335	P	P	16 18 35.0 +0.4
	baz=121,SNR=5.2					
PLBC	Pleasant Camp	84.52	333	P	P	16 18 36.0 +1.4
	baz=120,SNR=8.5					
FARO	Faro, Yukon	84.68	336	P	P	16 18 36.5 +1.0
	baz=122,SNR=10					
O30N	Mendenhall	85.05	334	P	P	16 18 38.5 +1.1
	baz=120,SNR=10					
M31M	Drury Creek, Y	85.08	336	P	P	16 18 38.4 +1.0
M31M	Drury Creek, Y	85.08	336	P	P	16 18 38.3 +0.8
	baz=122,SNR=8.6					
P30M	Million Dollar	85.11	334	P	P	16 18 38.7 +1.0
	baz=119					
RES	Resolute Bay	85.19	355	IAmb	IAmb	16 18 39.0
	comp=Z,17nm,0.8s					
P29M	Windy Craggy	85.21	333	P	P	16 18 38.9 +0.7
	baz=118,SNR=11					
N31M	Braeburn, Yuko	85.28	335	IAmb	IAmb	16 18 40.3
	comp=Z,28nm,0.8s					
N31M	Braeburn, Yuko	85.28	335	P	P	16 18 39.3 +0.9
	baz=120,SNR=21					
HYT	Haines Junctio	85.68	334	P	P	16 18 41.9 +1.3
	baz=119,SNR=6.4					
N30M	Aishikik Lake	85.81	335	P	P	16 18 42.4 +1.2
	baz=119,SNR=21					
O29M	Mount Kennedy	85.90	333	P	P	16 18 42.4 +0.7
	baz=118,SNR=8.1					
PNL	Peninsula	85.98	333	P	P	16 18 42.9 +0.9
	baz=117					
YUK6	Outpost Mounta	86.11	334	P	P	16 18 43.9 +1.1
	baz=118,SNR=9.5					
MAYO	Mayo, Yukon	86.39	337	P	P	16 18 44.8 +0.9
	baz=120					
YUK4	Talbot Arm	86.42	334	P	P	16 18 45.4 +1.1
	baz=118,SNR=30					
PINM	Pinnacle	86.56	333	P	P	16 18 45.8 +0.9
	baz=116					
MFF	Saint Martin d	86.73	42	*e*P	P	16 18 46.2 +0.3
MFF				pmax	pmax	
	comp=Z,11nm,0.5s					
O28M	Mount Upton	86.83	333	P	P	16 18 47.4 +1.0
	baz=116,SNR=10.0					
M29M	Somme Creek	86.85	335	P	P	16 18 47.4 +1.1
	baz=118,SNR=43					
L29M	L29M	87.03	336	P	P	16 18 47.9 +0.8
	baz=118,SNR=60					
TABL	Table Mountain	87.11	333	IAmb	IAmb	16 18 49.4
	comp=Z,28nm,0.9s					
K29M	Barlow Dome	87.14	337	P	P	16 18 48.1 +0.5
	baz=119,SNR=15					
VNDA	Vanda	87.33	190	P	P	16 18 49.3 +1.0
	comp=Z,2.6nm,0.8s,baz=119,slow=3.3,SNR=17					
VNDA				pP	pP	16 19 21.0 +1.2
	comp=Z,4.6nm,0.9s,baz=152,slow=3.7,SNR=9.4					
	comp=Z,2.6nm,0.8s					
VNDA	Vanda	87.33	190	P	P	16 18 49.5 +1.3
VNDA	Vanda	87.33	190	P	P	16 18 49.5 +1.3
VNDA				pmax	pmax	
	comp=Z,10.0nm,1.2s					
MESA	MESA	87.36	333	IAmb	IAmb	16 18 50.8
	comp=Z,21nm,0.9s					
MESA	MESA	87.36	333	P	P	16 18 49.7 +0.8
	baz=115,SNR=5.5					
YUK3	Moose Creek	87.39	334	P	P	16 18 49.8 +0.8
	baz=116,SNR=32					
CTGM	Chitina Glacie	87.42	333	IAmb	IAmb	16 18 51.0
	comp=Z,27nm,1.0s					
CTG	Chitna Glacier	87.42	333	P	P	16 18 49.9 +0.9
	baz

DAWY	Dawson	87.98 337	IAmb	IAmb	16 18 52.7	
	comp=Z,26nm,1.1s					
DAWY	Dawson	87.98 337	P	P	16 18 51.9	+0.3
	baz=117,SNR=12					
TGL	Tana Glacier	87.99 333	IAmb	IAmb	16 18 54.0	
	comp=Z,46nm,1.4s					
INK	Inuvik	88.03 341	P	P	16 18 51.5	-0.1
INK	Inuvik	88.03 341	P	P	16 18 51.5	-0.1
INK			pmax	pmax		
	comp=Z,40nm,0.8s					
INK	Inuvik	88.03 341	P	P	16 18 52.1	+0.5
	baz=123,SNR=27					
EPYK	Eagle Plains	88.08 339	IAmb	IAmb	16 18 53.2	
	comp=Z,24nm,0.9s					
EPYK	Eagle Plains	88.08 339	P	P	16 18 52.3	+0.3
	baz=120,SNR=10					
NEEM	North Greenlan	88.11 5	*i* P	P	16 18 53.1	+0.9
NEEM			IAmb	IAmb	16 18 53.9	
	comp=Z,89nm,0.8s					
I29M	Ogilvie Camp,	88.17 338	P	P	16 18 52.6	+0.3
	baz=118,SNR=9.5					
G30M	tAoh Zraii Nji	88.22 340	P	P	16 18 52.7	+0.1
	baz=120					
M27K	Edge Creek, AK	88.24 335	P	P	16 18 53.7	+0.8
	baz=115,SNR=27					
MCARA	McCarthy VSAT	88.33 333	IAmb	IAmb	16 18 55.0	
	comp=Z,30nm,0.8s					
MCARA	McCarthy VSAT	88.33 333	P	P	16 18 54.1	+0.9
	baz=114,SNR=18					
KAIM	Kayak Island	88.39 332	P	P	16 18 54.7	+1.2
	baz=112,SNR=6.2					
VRDI	Verde Repeater	88.46 333	IAmb	IAmb	16 18 55.4	
	comp=Z,26nm,1.0s					
HMT	Hamilton	88.48 332	P	P	16 18 54.6	+0.7
HMT			IAmb	IAmb	16 18 55.6	
	comp=Z,29nm,0.8s					
L27K	Beaver Creek,	88.52 335	P	P	16 18 54.8	+0.7
	baz=115,SNR=39					
RAGM	Ragged Mountai	88.69 332	IAmb	IAmb	16 18 56.5	
	comp=Z,38nm,1.4s					
M26K	Nabesna, AK	88.73 334	P	P	16 18 55.3	+0.2
	baz=114,SNR=5.4					
BMRM	Bremner River	88.88 333	IAmb	IAmb	16 18 57.2	
	comp=Z,17nm,1.1s					
BMRM	Bremner River	88.88 333	P	P	16 18 56.1	+0.2
	baz=112,SNR=6.2					
EGAK	Eagle	88.98 337	IAmb	IAmb	16 18 57.4	
	comp=Z,28nm,0.8s					
EGAK	Eagle	88.98 337	P	P	16 18 56.4	+0.2
	baz=116,SNR=21					
K27K	Chicken	89.03 336	P	P	16 18 57.5	+1.1
	baz=115					
N25K	Chitina, Valde	89.12 333	P	P	16 18 57.1	+0.1
	baz=112					
L26K	Log Cabin Wild	89.13 335	P	P	16 18 57.2	+0.3
	baz=114,SNR=7.1					
TSUM	Tsumeb	89.14 109	P	P	16 18 58.7	+0.5
EYAK	Cordova Ski Ar	89.24 332	P	P	16 18 57.7	+0.3
	baz=111					
DIV	Divide	89.46 333	IAmb	IAmb	16 18 59.6	
	comp=Z,23nm,0.8s					
I27K	Kandik River	89.51 338	P	P	16 18 58.7	0.0
	baz=115,SNR=10					
HIN	Hinchinbrook I	89.53 332	IAmb	IAmb	16 18 59.7	
	comp=Z,28nm,1.2s					
SUR	Sutherland	89.59 123	LR	LR	16 58 12.5	
	comp=Z,27nm,20.3s,baz=352,slow=35					
FID	Port Fidalgo	89.65 332	IAmb	IAmb	16 19 00.4	
	comp=Z,17nm,1.0s					
HARP	HAARP	89.66 334	P	P	16 18 59.5	+0.1
	baz=112					
KLU	Klutina	89.66 333	P	P	16 18 59.7	+0.1
	baz=111,SNR=31					
DOT	Dot Lake	89.68 335	IAmb	IAmb	16 19 00.7	
	comp=Z,15nm,1.0s					
H27K	Steamboat Moun	89.75 338	P	P	16 18 59.8	0.0
	baz=115,SNR=9.3					
SCRK	Sand Creek	89.77 336	P	P	16 19 00.5	+0.4
SCRK			IAmb	IAmb	16 19 01.3	
	comp=Z,45nm,1.6s					
SCRK	Sand Creek	89.77 336	P	P	16 19 00.3	+0.2
	baz=113,SNR=22					
J26L	Joseph Creek	89.81 336	IAmb	IAmb	16 19 01.6	
	comp=Z,30nm,1.0s					
J26L	Joseph Creek	89.81 336	P	P	16 19 00.5	+0.3
	baz=113,SNR=31					
I26K	Coal Creek Min	89.97 337	P	P	16 19 00.6	-0.2
	baz=114					
GLI	Glacier Island	89.98 332	IAmb	IAmb	16 19 01.6	
	comp=Z,18nm,0.9s					
GLI	Glacier Island	89.98 332	P	P	16 19 00.4	-0.5
	baz=110					
M24K	Tolsona, Glenn	90.00 334	P	P	16 19 01.7	+0.7
	baz=111,SNR=14					
PAX	Paxson	90.01 334	IAmb	IAmb	16 19 01.9	
	comp=Z,15nm,1.0s					
PAX	Paxson	90.01 334	P	P	16 19 00.9	-0.3
	baz=112,SNR=11					
RIDG	Independent Ri	90.03 335	IAmb	IAmb	16 19 02.5	
	comp=Z,53nm,1.7s					
RIDG	Independent Ri	90.03 335	P	P	16 19 01.4	+0.2
	baz=112,SNR=9.3					
G27K	Doyon Strip	90.04 339	P	P	16 19 01.1	-0.1
	baz=115,SNR=9.5					
DBG	Daneborg	90.39 13	*e*P	P	16 19 03.5	+0.9
SCM	Sheep Creek Mo	90.41 333	IAmb	IAmb	16 19 04.2	
	comp=Z,16nm,0.8s					
SCM	Sheep Creek Mo	90.41 333	P	P	16 19 03.3	+0.3
	baz=110,SNR=8.5					
K24K	Donnelly Dome	90.44 335	P	P	16 19 03.1	0.0
	baz=111					
PWL	Port Wells	90.54 332	IAmb	IAmb	16 19 04.3	
	comp=Z,15nm,1.1s					
PWL	Port Wells	90.54 332	P	P	16 19 03.5	-0.1
	baz=109,SNR=5.4					
J25K	Salcha River,	90.58 336	P	P	16 19 03.9	+0.1
	baz=112,SNR=19					
M23K	Glacier View	90.58 333	P	P	16 19 03.8	+0.1
	baz=110,SNR=6.1					
E27K	Coleen River	90.60 340	P	P	16 19 04.1	+0.3
	baz=115					
KNK	Knik Glacier	90.78 333	P	P	16 19 04.7	0.0
	baz=109					
SEW	Seward	90.83 331	IAmb	IAmb	16 19 05.5	
	comp=Z,17nm,0.9s					
SEW	Seward	90.83 331	P	P	16 19 04.6	-0.2
	baz=108					
WAT6	Susitna Watana	90.85 334	P	P	16 19 05.1	0.0
	baz=110,SNR=13					
SML	Sawmill	90.85 333	P	P	16 19 05.2	+0.2
SML	Sawmill	90.85 333	P	P	16 19 05.2	+0.2
	baz=109,SNR=16					
DHY	Denali Highway	90.86 334	P	P	16 19 04.9	-0.3
	baz=110					
G26K	Porcupine Rive	90.86 338	P	P	16 19 04.9	0.0
	baz=113					
BMRD	Maredsous	90.89 39	*d*P	P	16 19 04.8	-0.6
PRP	Porcupine Dome	90.97 337	IAmb	IAmb	16 19 06.9	
	comp=Z,18nm,1.2s					
PRP	Porcupine Dome	90.97 337	P	P	16 19 06.0	+0.4
	baz=112,SNR=12					
KEST	Kesra	90.98 54	P	P	16 19 07.8	+1.6
	comp=Z,8.2nm,0.6s,baz=272,slow=4.4,SNR=4.3					
	comp=Z,8.2nm,0.6s					
LPL	La Plagne	91.06 44	*e*P	P	16 19 06.9	+0.3
LPL			pmax	pmax		
	comp=Z,11nm,0.7s					
HDA	Harding Lake	91.14 336	P	P	16 19 06.1	-0.2
	baz=110,SNR=8.0					
ILAR	Eielson Array	91.24 336	P	P	16 19 06.7	-0.1
	comp=Z,3.0nm,0.7s,baz=153,slow=3.0,SNR=31					
ILAR			PP	PP	16 22 43.1	-2.4
	comp=Z,0.9nm,0.7s,baz=115,slow=5.2,SNR=4.6					
	comp=Z,3.0nm,0.7s					
ILAR	Eielson Array	91.24 336	P	P	16 19 06.8	+0.1
ILAR	Eielson Array	91.24 336	P	P	16 19 06.8	+0.1
RC01	Rabbit Creek A	91.26 332	IAmb	IAmb	16 19 07.5	
	comp=Z,17nm,0.6s					
RC01	Rabbit Creek A	91.26 332	P	P	16 19 07.0	+0.1
	baz=108,SNR=5.3					
WAT1	Susitna Watana	91.28 334	P	P	16 19 06.6	-0.3
	baz=109					
F26K	Sheenjek River	91.28 339	P	P	16 19 07.7	+0.8
	baz=113,SNR=7.8					
BRSE	Bradley Lake S	91.33 331	P	P	16 19 07.3	0.0
	baz=107,SNR=7.6					
H25K	Birch Creek	91.36 338	P	P	16 19 08.2	+1.0
	baz=111,SNR=11					
CCB	Clear Creek Bu	91.57 336	IAmb	IAmb	16 19 09.1	
	comp=Z,9.7nm,0.8s					
POKR	Poker Flat Res	91.58 336	P	P	16 19 08.5	+0.2
	baz=110					
RND	Reindeer	91.60 334	IAmb	IAmb	16 19 09.9	
	comp=Z,12nm,0.7s					
M22K	Willow	91.64 333	P	P	16 19 08.5	0.0
	baz=108					
G25K	Bearman Lake	91.64 338	P	P	16 19 09.3	+0.8
	baz=111,SNR=11					
COLA	College	91.66 336	P	P	16 19 08.4	-0.2
COLA	College	91.66 336	*i* P	P	16 19 08.4	-0.2
COLA			pmax	pmax		
	comp=Z,21nm,0.8s					
COLA	College	91.66 336	P	P	16 19 08.8	+0.2
	baz=109					
TCOL	CIGO, UAF Yank	91.67 336	P	P	16 19 08.8	+0.1
	baz=109					
KDAK	Kodiak Island	91.70 328	P	P	16 19 08.8	-0.2
KDAK			IAmb	IAmb	16 19 09.8	
	comp=Z,16nm,0.7s					
KDAK	Kodiak Island	91.70 328	P	P	16 19 08.8	-0.2
KDAK			pmax	pmax		
	comp=Z,16nm,0.7s					
KDAK	Kodiak Island	91.70 328	P	P	16 19 09.1	+0.2
	baz=106					
MCK	McKinley	91.74 335	IAmb	IAmb	16 19 10.1	
	comp=Z,8.9nm,0.8s					
MCK	McKinley	91.74 335	P	P	16 19 09.0	0.0
	baz=108,SNR=5.3					
F25K	Christian Rive	91.78 339	P	P	16 19 10.2	+1.0
	baz=111,SNR=5.5					
Q20K	Shuyak Island	91.83 329	P	P	16 19 10.1	+0.6
	baz=106					
SUA	Susitna One	91.84 332	P	P	16 19 10.1	+0.4
	baz=107					
C27K	Jago River	91.89 341	P	P	16 19 10.3	+0.7
	baz=113,SNR=8.7					
CUT	Chulitna	91.91 333	P	P	16 19 09.9	+0.1
	baz=107,SNR=6.0					
OHAK	Old Harbor	91.92 328	IAmb	IAmb	16 19 11.2	
	comp=Z,17nm,1.0s					
OHAK	Old Harbor	91.92 328	P	P	16 19 10.1	+0.2
	baz=105					
E25K	Arctic Village	91.94 339	P	P	16 19 10.8	+0.8
	baz=111,SNR=6.1					
H24K	Noodor Dome	92.00 337	IAmb	IAmb	16 19 11.5	
	comp=Z,14nm,0.9s					
H24K	Noodor Dome	92.00 337	P	P	16 19 10.5	+0.3
	baz=109,SNR=11					
NEA2	Nenana	92.07 335	IAmb	IAmb	16 19 11.5	
	comp=Z,27nm,1.2s					
NEA2	Nenana	92.07 335	P	P	16 19 10.5	-0.1
	baz=108,SNR=19					
G24K	Hadweenzic Riv	92.13 338	P	P	16 19 11.5	+0.7
	baz=110,SNR=8.0					
DAG	Danmarks Havn	92.16 11	*i* P	P	16 19 10.0	-0.7
DAG			IAmb	IAmb	16 19 11.1	
	comp=Z,15nm,0.6s					
TRF	Thorofare Moun	92.23 334	P	P	16 19 11.3	-0.2
TRF			IAmb	IAmb	16 19 11.8	
	comp=Z,6.7nm,0.7s					
TRF	Thorofare Moun	92.23 334	P	P	16 19 11.4	-0.2
	baz=107,SNR=6.8					
O20K	Slope Mountain	92.34 331	P	P	16 19 12.0	0.0
	baz=105					
SKT	Skwetna	92.35 333	P	P	16 19 11.8	-0.1
	baz=106,SNR=24					
I23K	Minto, Yukon-K	92.36 336	P	P	16 19 11.6	-0.2
	baz=108,SNR=8.7					
N20K	Mount Spurr	92.44 332	P	P	16 19 12.0	-0.4
	baz=106					
SPCR	Spurr Chakacha	92.44 332	P	P	16 19 12.0	-0.5
	baz=106					
P19K	Oil Pt	92.52 330	P	P	16 19 12.7	-0.1
	baz=105					
KTH	Kantishna Hill	92.53 334	IAmb	IAmb	16 19 13.5	
	comp=Z,14nm,1.0s					
Q19K	Cape Douglas,	92.54 329	P	P	16 19 12.8	-0.1
	baz=104,SNR=6.7					
F24K	Squaw Lake	92.56 338	P	P	16 19 13.6	+0.8
	baz=109,SNR=5.3					
H23K	Yukon River	92.64 337	P	P	16 19 13.1	-0.1
	baz=108					
D25K	Kavik River	92.65 340	P	P	16 19 13.7	+0.4
	baz=111,SNR=6.7					
BPAW	Bear Paw Mtn.	92.71 335	IAmb	IAmb	16 19 14.8	
	comp=Z,28nm,1.3s					
BPAW	Bear Paw Mtn.	92.71 335	P	P	16 19 13.2	-0.4
	baz=107,SNR=16					
MLY	Manley	92.88 336	P	P	16 19 13.8	-0.5
	baz=107,SNR=8.3					
PPLA	Purkeypile	92.89 333	P	P	16 19 14.1	-0.5
	baz=106,SNR=5.9					
E24K	Your Creek	92.96 339	P	P	16 19 15.1	+0.5
	baz=109					
CAST	Castle Rocks	92.99 334	P	P	16 19 14.2	-0.6
CAST			IAmb	IAmb	16 19 15.2	
	comp=Z,20nm,1.1s					
CAST	Castle Rocks	92.99 334	P	P	16 19 14.3	-0.6
	baz=106,SNR=13					
M20K	Styx River	93.05 332	IAmb	IAmb	16 19 15.5	
	comp=Z,9.2nm,1.0s					
M20K	Styx River	93.05 332	P	P	16 19 14.7	-0.6
	baz=105,SNR=5.9					
G23K	Bananza Creek	93.10 337	P	P	16 19 15.7	+0.4
	baz=107,SNR=6.9					
Q18K	Katmai Hardscr	93.17 329	P	P	16 19 15.5	-0.4
	baz=103					
CHUM	Lake Minchumin	93.22 334	P	P	16 19 15.2	-0.6
	baz=106					
COLD	Coldfoot	93.32 338	P	P	16 19 16.9	+0.7
	baz=107,SNR=5.0					
E23K	Chandalar	93.36 339	P	P	16 19 16.8	+0.2
	baz=108					
H22K	Ishtalitna Cre	93.38 336	P	P	16 19 16.3	-0.3
	baz=106					
N19K	Bonanza Creek	93.42 331	IAmb	IAmb	16 19 17.0	
	comp=Z,8.7nm,0.8s					
N19K	Bonanza Creek	93.42 331	P	P	16 19 16.2	-0.7
	baz=104,SNR=5.5					
D24K	Happy Valley	93.42 340	P	P	16 19 17.0	+0.3
	baz=108					
I21K	Tanana	93.43 336	P	P	16 19 16.3	-0.5
	baz=106					
P18K	Big Mountain,	93.45 330	P	P	16 19 16.3	-0.8
	baz=103					
DAVOX	Davos/Dischmat	93.46 43	P	P	16 19 16.7	-0.9
	comp=Z,4.7nm,0.7s,baz=205,slow=8.5,SNR=8.4					
	comp=Z,4.7nm,0.7s					
TOLK	Toolik Lake Re	93.52 339	P	P	16 19 17.3	+0.1
	baz=108					
Q17K	Contact Creek	93.53 328	P	P	16 19 17.3	-0.2
	baz=103,SNR=5.8					
L20K	Farewell, AK	93.54 333	P	P	16 19 16.6	-0.8
	baz=104,SNR=5.0					
O18K	Koktuh Hills	93.54 330	P	P	16 19 17.1	-0.3
	baz=103					
DAVA	Damuels	93.55 43	*e*P	P	16 19 18.1	+0.1
	comp=Z,3.4nm,2.7s					
C24K	Franklin Bluff	93.56 340	P	P	16 19 17.8	+0.6
	baz=108					
M19K	Big River Lodg	93.63 332	P	P	16 19 17.9	+0.1
	baz=104					
R17K	Ugashik Creek	93.65 328	P	P	16 19 18.0	0.0
	baz=102					
G22K	Bettles	93.72 337	P	P	16 19 19.0	+0.9
	baz=106					
K20K	Telda	93.84 334	IAmb	IAmb	16 19 19.2	
	comp=Z,12nm,1.3s					
K20K	Telida	93.84 334	P	P	16 19 18.2	-0.6
	baz=104					
H21K	Melozitna Rive	93.89 336	P	P	16 19 18.4	-0.5
	baz=105					
L19K	White Mountain	93.91 332	P	P	16 19 18.5	-0.7
	baz=103					
D23K	Nanushuk River	94.00 339	P	P	16 19 20.1	+0.7
	baz=107					
P17K	Kvichak River	94.01 329	P	P	16 19 19.3	-0.2
	baz=102					
Q16K	King Salmon	94.01 329	P	P	16 19 19.4	-0.1
	baz=102					
N18K	Kilae Creek	94.06 331	IAmb	IAmb	16 19 20.2	
	comp=Z,12nm,0.8s					
N18K	Kilae Creek	94.06 331	P	P	16 19 19.3	-0.5
	baz=102,SNR=6.3					
J20K	Nowinta River	94.07 334	P	P	16 19 19.4	-0.3
	baz=104					
FETA	Feichten	94.08 43	*e*P	P	16 19 21.4	+1.0
	comp=Z,5.5nm,1.0s					
F22K	John River	94.13 338	P	P	16 19 20.3	+0.3
	baz=105					
C23K	Itkillik River	94.23 340	P	P	16 19 20.7	+0.4
	baz=107,SNR=6.1					
G21K	Allakaket	94.38 337	P	P	16 19 21.2	0.0
	baz=104					
MOTA	Moosalm	94.38 43	*e*P	P	16 19 21.8	0.0
	comp=Z,6.0nm,0.7s					
SQTA	Sankt Quirin	94.43 43	*e*P	P	16 19 22.4	+0.4
	comp=Z,4.6nm,0.5s					
O17K	Koliganek Bris	94.46 330	P	P	16 19 21.3	-0.3
	baz=102					
CHGN	Chignik	94.47 326	P	P	16 19 21.7	0.0
	baz=101					
F21K	Alatna River	94.55 337	P	P	16 19 22.3	+0.4
	baz=104					
WATA	Walderalm	94.70 43	*e*P	P	16 19 23.3	+0.1
	comp=Z,6.7nm,1.0s					
WTTA	Wattenberg	94.73 43	*e*P	P	16 19 24.1	+0.7
	comp=Z,8.7nm,1.0s					
P16K	Nushagak River	94.76 329	P	P	16 19 22.6	-0.4
	baz=101					
O16K	Kokwok River B	94.92 330	P	P	16 19 23.4	-0.3
	baz=101					
NOR	Nord	95.17 7	*i* P	P	16 19 24.7	+0.2
NOR			IAmb	IAmb	16 19 25.9	
	comp=Z,5.7nm,0.9s					
ABTA	Abfaltersbach	95.24 44	*e*P	P	16 19 25.9	+0.2
	comp=Z,6.5nm,0.8s					
N16K	Nishlik Lake	95.41 330	P	P	16 19 25.9	-0.1
	baz=100					
SDPT	Sand Point	95.45 325	P	P	16 19 25.9	-0.4
	baz=99					
MYKA	Terra Mystica	95.99 44	*e*P	P	16 19 29.7	+0.6
	comp=Z,7.6nm,0.7s					
BIOA	Bad Ischl, Aus	96.13 43	*e*P	P	16 19 29.8	+0.2
	comp=Z,2.9nm,0.6s					
CLL	Collm	96.21 39	*i* P	P	16 19 29.4	-0.4
CLL	Collm	96.21 39	*i* P	P	16 19 29.4	-0.4
GERES	GERESS Array B	96.33 42	P	P	16 19 30.1	-0.5
	comp=Z,1.1nm,0.7s,baz=256,slow=4.0,SNR=6.7					
	comp=Z,1.1nm,0.7s					
NB2	NORSAR Subarra	96.56 29	P	P	16 19 32.2	+0.9
	comp=Z,14nm,1.4s,baz=262,slow=4.6					
NB2	NORSAR Subarra	96.56 29	P	P	16 19 32.2	+0.9
	baz=262,slow=4.6					
NOA	NORSAR Array B	96.56 29	P	P	16 19 31.3	+0.1
	comp=Z,1.8nm,0.8s,baz=259,slow=4.5,SNR=4.6					
	comp=Z,1.8nm,0.8s					
MOA	Molln	96.57 43	*e*P	P	16 19 32.1	+0.5
	comp=Z,7.9nm,0.8s					
OBKA	Obir	96.60 44	*e*P	P	16 19 31.8	0.0
	comp=Z,4.8nm,0.7s					
SOKA	Soboth	96.95 44	*e*P	P	16 19 34.3	+0.9
	comp=Z,3.3nm,1.0s					
ARSA	Arzberg	97.35 43	*e*P	Pdif	16 19 35.5	+0.3
	comp=Z,4.7nm,0.8s					
CONA	Conrad Observa	97.65 43	*e*P	Pdif	16 19 36.8	+0.3
	comp=Z,3.7nm,0.7s					
HFS	Hagfors	97.67 30	P	P	16 19 35.0	-1.2
	comp=Z,4.2nm,0.9s,baz=239,slow=8.2,SNR=2.7					
	comp=Z,4.2nm,0.9s					
HFS	Hagfors	97.67 30	P	P	16 19 35.0	-1.2
RONA	Rosalia, Austr	97.92 43	*e*P	Pdif	16 19 38.1	+0.4
	comp=Z,4.2nm,0.7s					
VRAC	Vranov	98.27 41	P	P	16 19 37.5	-1.7
	comp=Z,2.6nm,0.5s,baz=224,slow=7.2,SNR=3.5					
	comp=Z,2.6nm,0.5s					
ARCES	ARCESS Array B	102.71 21	P	Pdif	16 19 57.2	-1.3
	comp=Z,7.4nm,0.9s,baz=293,slow=4.8,SNR=3.8					
APA	Apatity	105.91 22	‖ *i* P	Pdif	16 20 03.5	-9.2
APA			pmax	pmax		
	comp=Z,8.0nm,1.1s					
TIXI	Tiksi	116.45 352	*i* PKIKP	PKPdf	16 24 42.8	-1.5
TIXI			pmax	pmax		
	comp=Z,20nm,1.4s					
KIV	Kislovodsk	116.48 46	*e*PKIKP	PKiKP	16 24 46.3	+1.0
KIV			pmax	pmax		
	comp=Z,7.0nm,1.0s					
KBZ	Khabaz	116.67 46	PKP	PKiKP	16 24 45.1	-0.4
	comp=Z,1.2nm,0.7s,baz=221,slow=2.9,SNR=4.8					
KBZ	Khabaz	116.67 46	*i* PKIKP	PKPdf	16 24 44.9	-0.6
KBZ			pmax	pmax		
	comp=Z,3.0nm,0.9s					
ARU	Arti	121.10 28	*i* PKIKP	PKiKP	16 24 53.3	-0.5
ARU					16 26 25.1	
ARU					16 31 54.7	
ARU			SS	SS	16 42 46.2	-1.3
YAK	Yakutsk	124.83 346	PKPdf	PKPdf	16 24 59.5	-1.1
YAK	Yakutsk	124.83 346	*c i* PKIKP	PKPdf	16 25 00.1	-0.6
YAK			pmax	pmax		
	comp=Z,15nm,1.3s					
ABKAR	Akbulak array	125.62 35	PKPdf	PKiKP	16 25 03.3	+0.3
STKA	Stephens Creek	125.87 219	PKP	PKiKP	16 25 04.0	0.0
	comp=Z,9.0nm,0.6s,baz=98,slow=3.6,SNR=26					
STKA	Stephens Creek	125.87 219	PKPdf	PKiKP	16 25 03.5	-0.6
BRVK	Borovoye	128.50 26	PKPdf	PKiKP	16 25 08.7	0.0
BRVK	Borovoye	128.50 26	*c i* PKIKP	PKiKP	16 25 08.0	-0.6
BRVK			pmax	pmax		
	comp=Z,4.0nm,1.0s					
BVAR	Borovoye Array	128.57 26	PKP	PKiKP	16 25 08.3	-0.5
	comp=Z,2.4nm,0.7s,baz=267,slow=2.7,SNR=21					
BVAR			pPKP	pPKPdf	16 25 42.0	+0.6
	comp=Z,1.9nm,0.8s,baz=323,slow=2.2,SNR=6.1					
GEYT	Alibeck	129.39 48	PKP	PKiKP	16 25 10.3	-0.6
	comp=Z,1.4nm,0.6s,baz=280,slow=8.9,SNR=3.6					
GEYT			pPKP	pPKPdf	16 25 44.5	+1.2
	comp=Z,2.0nm,0.7s,baz=240,slow=5.0,SNR=2.5					
ZALV	Zalesovo Beam	133.02 16	PKP	PKiKP	16 25 16.6	-1.0
	comp=Z,5.4nm,0.5s,baz=272,slow=1.9,SNR=29					
ZALV			pPKP	pPKPdf	16 25 49.4	-0.4
	comp=Z,5.1nm,0.7s,baz=274,slow=2.0,SNR=4.5					
WSAR	Wadi Sarin	133.65 67	PKP	PKiKP	16 25 18.7	-1.2
	comp=Z,5.2nm,0.7s,baz=254,slow=2.4,SNR=5.7					
KURK	Kurchatov	133.69 23	PKPdf	PKPdf	16 25 17.2	-0.6
KURK	Kurchatov	133.69 23	*c i* PKIKP	PKPdf	16 25 17.1	-0.8
KURK			pmax	pmax		
	comp=Z,7.0nm,1.0s					
KLR	Kul'dur	134.81 336	*c i* PKIKP	PKiKP	16 25 20.2	-1.3
KLR			pmax	pmax		
	comp=Z,2.0nm,0.8s					
AS31	Alice Springs	136.47 220		PKPpre	16 25 12.4	
AS31				PKPdf	16 25 23.6	-0.4
ASAR	Alice Springs	136.47 220	PKhKP	PKPpre	16 25 09.3	
	comp=Z,0.3nm,0.5s,baz=131,slow=3.6,SNR=13					
ASAR			PKP	PKPdf	16 25 23.9	0.0
	comp=Z,11nm,0.8s,baz=121,slow=1.3,SNR=41					
ASAR	Alice Springs	136.47 220	PKPpre	PKPpre	16 25 10.7	
ASAR			PKPdf	PKPdf	16 25 23.4	-0.6
ASAR	Alice Springs	136.47 220	PKiKP	PKPdf	16 25 24.0	0.0
CHGR	Chuyangaron	136.83 42	PKPdf	PKPdf	16 25 24.3	+0.1
CHGR	Chuyangaron	136.83 42	PKiKP	PKPdf	16 25 24.3	+0.1
GAR	Garm	137.41 41	PKPdf	PKPdf	16 25 25.2	-0.1
DGZ	Jazzator, Alta	137.54 17	*i* PKIKP	PKPdf	16 25 24.7	-0.6
DGZ			pmax	pmax		
	comp=Z,4.0nm,0.9s					
AAK	Ala-Archa	137.69 34	PKPdf	PKPdf	16 25 25.9	+0.1
AAK	Ala-Archa	137.69 34	*c i* PKIKP	PKiKP	16 25 27.0	-0.8
AAK			pmax	pmax		
	comp=Z,6.0nm,1.3s					
MKAR	Makanchi Array	138.29 24	PKhKP	PKPpre	16 25 16.0	
	comp=Z,0.3nm,0.5s,baz=321,slow=4.1,SNR=1.8					
MKAR			PKP	PKPdf	16 25 26.4	-0.2
	comp=Z,3.1nm,0.7s,baz=340,slow=2.0,SNR=3.6					
USRK	Ussuriysk Ar.	138.54 331	PKhKP	PKPpre	16 25 16.8	
	comp=Z,1.3nm,0.6s,baz=96,slow=1.4,SNR=6.0					
USRK			PKP	PKPdf	16 25 27.2	+0.2
	comp=Z,3.9nm,0

	comp=Z,1.8nm,1.0s,baz=340,slow=5.1,SNR=4.9						
WMQ	Urumqi	142.83	21	*e*PKP	PKPdf	16 25 35.1	+0.1
XLT	XiLinHaoTe	144.68	346	||*i*PKP	PKPbc	16 25 36.8	-0.5
XLT				sPKP		16 26 15.8	
KNRA	Kununurra	145.55	223		PKPbc	16 25 40.0	-0.7
KSRS	Korea Array	145.60	327	PKPbc	PKPab	16 25 40.1	-0.5
	comp=Z,43nm,1.0s,baz=38,slow=3.0,SNR=55						
KSRS				pPKPbc	pPKPbc	16 26 12.8	-0.2
	comp=Z,15nm,1.0s,baz=51,slow=4.3,SNR=5.8						
KSAR	Wonju Array Be	145.63	327	PKPdf	PKPdf	16 25 39.5	-0.4
KSAR	Wonju Array Be	145.63	327	PKIKP	PKPdf	16 25 39.5	-0.4
FITZ	Fitzroy Crossi	145.70	216		PKPbc	16 25 40.2	-0.9
MBWA	Marble Bar	146.09	205	PKPdf	PKPbc	16 25 41.0	-1.2
TJN	Taejon	146.69	326*c*	*i*PKIKP	PKPdf	16 25 41.2	-0.5
BJI	Beijing	148.28	344	PKPbc	PKPdf	16 25 42.6	-1.6
HHC	Hu-ho-hao-te	148.51	351	*e*PKPbc	PKiKP	16 25 49.2	-0.8
BTO	Baotou	148.97	353	*e*PKPbc	PKPbc	16 25 49.5	-0.2
FAKI	Fak Fak	150.19	246		PKiKP	16 25 53.1	-1.0
HNS	HongShan	151.15	344	⇑P	PKiKP	16 25 55.3	0.0
TIA	Tai'an	151.50	339	*e*P	PKPbc	16 25 54.8	-0.9
GOMU	GeErMu	152.06	18	PKPbc	PKPdf	16 25 52.1	+1.3
PYUN	Piuthan	152.31	46	*e*P	PKPdf	16 25 51.2	0.0
	comp=Z,79nm,1.0s						
DANN	Dangsing	152.70	44	*e*P	PKPdf	16 25 52.9	+1.0
	comp=Z,21nm,0.7s						
KOLN	Koldanda	152.94	46	*e*P	PKPdf	16 25 52.0	-0.1
HYBB	Hyderabad (bro	153.09	71	*e*P	PKiKP	16 25 59.7	-0.3
HYBB				*e*PP	PP	16 29 45.7	-0.1
GKN	Gorkha	153.52	44	*e*P	PKPdf	16 25 52.9	0.0
DMN	Daman	154.09	44	*e*P	PKPdf	16 25 54.1	+0.2
KKN	Kakani	154.09	44	*e*P	PKPdf	16 25 53.7	-0.1
PKIN	Phulchoki	154.31	44	*e*P	PKPdf	16 25 54.0	-0.2
PKI	Pulchoki	154.32	44	*e*P	PKPdf	16 25 53.7	-0.6
GUN	Gumba	154.42	43	*e*P	PKPdf	16 25 54.8	+0.4
NJ2	Nanjing	154.43	332	*e*PKPbc	PKPdf	16 25 56.5	+2.7
RAMN	Ramite	155.53	43	*e*P	PKPdf	16 25 55.9	+0.1
XAN	Xi'an	155.58	352	PKP	PKPdf	16 25 55.5	+0.1
XAN				pPKP	PKPab	16 26 21.3	-0.4
TAPN	Taplejung	156.00	41	*e*P	PKPdf	16 25 57.2	+0.7
CD2	Chengdu	158.91	3	*e*PKP	PKPdf	16 25 58.7	-1.0
PZH	PanZhiHua	163.04	10	PKP	PKPdf	16 26 03.6	-0.8
CMAR	Chiang Mai Arr	169.48	34	PKP	PKPdf	16 26 09.6	+0.1
	comp=Z,2.6nm,0.8s,baz=276,slow=1.6,SNR=23						
CMAR				pPKP	pPKPdf	16 26 42.9	+0.1
	comp=Z,1.2nm,1.0s,baz=298,slow=1.3,SNR=3.1						
CMAR				PKPab	PKPab	16 27 23.6	+0.7
	comp=Z,2.7nm,0.9s,baz=318,slow=5.4,SNR=13						
CMAR				pPKPab	pPKPab	16 27 58.2	+3.2
	comp=Z,1.0nm,0.6s,baz=321,slow=5.3,SNR=3.4						
CMAR				PP	PP	16 31 15.3	+3.5
	comp=Z,1.1nm,1.0s,baz=341,slow=4.6,SNR=4.5						
CMAR	Chiang Mai Arr	169.48	34	PKPdf	PKPdf	16 26 09.2	-0.3
CMAR				PKPab	PKPab	16 27 22.5	-0.4

NOU 05 16:08:23.4, 16°.37S×173°.45W, h0km, MLv4.3/8, Tonga Islands, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.93	34	P	Pn	16 09 10.6	-0.8
NIUE	Niue	4.30	129	P	Pn	16 09 30.0	-0.2
TAVE	Taveuni	6.20	266	P	Pn	16 09 55.4	-0.9
MSVF	Nonsavu	8.24	259	P	Pn	16 10 24.7	+0.3

*UCR **05** 16:51:39.9±1.1, 8°.98N×84°.04W, h27km±8km, MW3.6*
*INET **05** 16:51:40.1±0.4, 8°.99N×84°.04W, h15km±3km, ML3.1*

ISC 05 16:51:40.0±2.6, 9°.0N±0°.1×84°.05W±0°.05, h26km±11km, n17, σ0°63/23, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	Dominical	0.33	33	*e*P	Pb	16 51 47.3	-0.3
EDDO				*e*S	Sb	16 51 53.3	+0.5
PEZE	Perez Zeledon,	0.55	42	*e*P	Pb	16 51 50.9	-0.2
PEZE				*e*S	Sb	16 51 59.2	+0.5
PEZE	Perez Zeledon,	0.55	42	*e*P	Pb	16 51 51.0	-0.2
PEZE				*e*S	Sn	16 51 59.6	-0.9
CDM	Cerro de Muert	0.64	26	*e*P	Pb	16 51 52.4	-0.6
CDM				*e*S	Sb	16 52 02.3	+0.5
CDM	Cerro de Muert	0.64	26	*e*P	Pb	16 51 52.5	-0.4
LCR2	La Lucha 2	0.77	3	*e*P	Pb	16 51 54.1	-0.7
RIMA	Rio Macho	0.81	13	*e*P	Pb	16 51 54.5	-1.1
RIMA	Rio Macho	0.81	13	*e*P	Pb	16 51 54.9	-0.7
JACO	JACO, Garabito	0.92	319	*e*P	Pb	16 51 56.4	-0.8
JACO	JACO, Garabito	0.92	319	*e*P	Pb	16 51 56.5	-0.7
JACO				*e*S	Sb	16 52 09.2	+0.2
JACO				IAML		16 52 12.8	
	comp=E,591nm,0.4s						
HDC	Heredia	1.02	356	*e*P	Pn	16 51 59.5	+0.6
HDC3	Heredia 3	1.03	356	*e*P	Pn	16 51 59.3	+0.5
HDC3				*e*S	Sn	16 52 13.1	+0.7
LAFE	Finca La Fe, P	1.19	314	*e*P	Pn	16 52 00.5	-0.5
LAFE	Finca La Fe, P	1.19	314	*e*P	Pn	16 52 00.6	-0.3
JTS	Las Juntas de	1.59	326	*e*P	Pn	16 52 06.5	+0.1
JTS	Las Juntas de	1.59	326	*e*P	Pn	16 52 06.5	+0.1
DUNO	Dulce Nombre,	1.80	308	*e*P	Pb	16 52 13.1	+0.8

*DJA **05** 16:59:55.7±0.2, 2°.5±2°.×12°.5E±°, h10km, M4.4/25, mb4.8/15, mB4.9/10, MLv4.6/25, Mw(mB)4.2/10*
*NEIC **05** 16:59:58.7±1.3, 2°.02S±0°.05×124°.81E±0°.04, h46km±10km, mb4.3/14, Error ellipse: s-maj=9.6km s-min=1.6km az=145.0*
*IDC **05** 16:59:58.6±2.3, 1°.99S×124°.73E, h45km±27km, mb3.7/9, mbtmp4.0/11, ML4.1/4, MS2.9/4, Error ellipse: s-maj=24.1km s-min=17.6km az=61.0*

ISC 05 16:59:56.2±0.5, 2°.02S±0°.06×124°.80E±0°.05, h26km, n85, σ1°60/88, mb4.1/13, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	Sanana	1.19	91	P	Pn	17 00 15.4	-1.7
SANI	Sanana	1.19	91	P	Pn	17 00 15.4	-1.7
LUWI	Luwuk	2.25	296	Pn	Pn	17 00 31.7	0.0
LUWI	Luwuk	2.25	296	P	Pn	17 00 32.1	+0.3
LUWI	Luwuk	2.25	296	P	Pn	17 00 32.2	+0.4
NLAI	Namlea	2.59	118	P	Pn	17 00 37.9	+1.4
KMSI	Cibinong	2.71	342	P	Pn	17 00 39.0	+1.0
LBMI	Labuha	3.03	63	P	Pn	17 00 43.3	+0.8
GTOI	Gorontalo	3.19	326	P	Pn	17 00 48.1	+3.4
APSI	Ampana	3.34	289	P	Pn	17 00 47.9	+1.2
AAI	Ambon	3.77	116	P	Pn	17 00 55.9	+3.2
TNTI	Ternate	3.78	43	Pn	Pn	17 00 52.8	0.0
TNTI	Ternate	3.78	43	P	Pn	17 00 53.1	+0.3
TNTI	Ternate	3.78	43	P	Pn	17 00 53.3	+0.5
MRSI	Marisa	3.79	311	P	Pn	17 00 53.6	+0.7
KKSI	Kolaka, Sulawe	3.80	236	P	Pn	17 00 53.4	+0.3
KRAI	Karang Ratu	3.81	110	P	Pn	17 00 56.1	+2.8
BBSI	Bau Bau	4.10	213	P	Pn	17 00 59.3	+2.1
MSAI	Masohi	4.33	108	P	Pn	17 01 03.0	+2.7
GAMI	Galela, Maluku	4.86	38	P	Pn	17 01 09.5	+1.8
TTSI	Tana Toraja	5.08	258	P	Pn	17 01 11.8	+1.1
	0.4nm998nm84nm,0.8s						
TOLI2	Tolitoli	5.08	308	Pn	Pn	17 01 12.1	+1.4
BNSI	Bone	5.25	243	P	Pn	17 01 13.4	+0.4
	0.1nm376nm29nm,0.6s						
SPSI	Sidrap Palu	5.38	249	P	Pn	17 01 16.4	+1.5
	0.9nm5μm213nm,0.6s						
BNDI	Bandanaira	5.67	116	P	Pn	17 01 20.1	+1.3
	0.9nm3μm278nm,0.7s						
BNDI	Bandanaira	5.67	116	P	Pn	17 01 21.1	+2.3
BKSI	Bulukumba	5.71	235	P	Pn	17 01 21.0	+1.7
	0.2nm834nm55nm,0.6s						
KAPI	Kappang	5.85	239	P	Pn	17 01 22.6	+1.3
	9.5nm,0.3s,baz=64,slow=6.1,SNR=28						
KAPI				S	Sn	17 02 24.8	-2.7
	9.9nm,0.4s,baz=319,slow=20,SNR=1.5						
	47nm,0.5s						
KAPI	Kappang	5.85	239	Pn	Pn	17 01 22.2	+0.9
KAPI	Kappang	5.85	239	P	Pn	17 01 22.5	+1.3
	0.2nm548nm49nm,0.5s						
KAPI	Kappang	5.85	239	P	Pn	17 01 22.9	+1.6
BSSI	Bau Bau, Buton	5.94	226	P	Pn	17 01 24.5	+2.0
	0.2nm606nm62nm,0.8s						
PMSI	Majene	6.06	256	P	Pn	17 01 26.3	+2.1
	0.3nm1μm110nm,0.9s						
SIJI	Sorong	6.56	80	P	Pn	17 01 32.5	+1.4
	20nm,0.3s,baz=251,slow=11,SNR=90						
SIJI				S	Sn	17 02 43.5	-1.7
	14nm,0.4s,baz=64,slow=22,SNR=7.9						
SIJI				LR	LR	17 04 14.9	
	comp=Z,72nm,18.1s,baz=332,slow=39						
SIJI	Sorong	6.56	80	P	Pn	17 01 32.3	+1.2
	0.2nm1μm35nm,0.6s						
MMRI	Maumere	7.05	201		Pn	17 01 39.1	+1.4
MMRI	Maumere	7.05	201	P	Pn	17 01 39.6	+1.8
	0.2nm41nm,0.8s						
MMRI	Maumere	7.05	201	P	Pn	17 01 39.7	+1.9
EDFI	Ende, Flores	7.37	205	P	Pn	17 01 44.0	+1.8
	0.2nm614nm40nm,0.9s						
FAKI	Fak Fak	7.49	97		Pn	17 01 43.8	0.0
FAKI	Fak Fak	7.49	97	P	Pn	17 01 44.0	+0.2
	0.2nm28nm,1.1s						
FAKI	Fak Fak	7.49	97	P	Pn	17 01 44.1	+0.2
SOEI	Soe	7.70	184	Pn	Pn	17 01 47.1	+0.2
SOEI	Soe	7.70	184	P	Pn	17 01 49.8	+3.0
	0.2nm39nm,0.9s						
BKB	Balikpapan	7.94	275	Pn	Pn	17 01 51.9	+1.9
BKB	Balikpapan	7.94	275	P	Pn	17 01 52.6	+2.6
BATI	Baumata	8.21	188	P	Pn	17 01 56.8	+3.0
	3.6nm,0.3s,baz=8.3,slow=3.6,SNR=12						
BATI				LR	LR	17 05 12.6	
	comp=Z,103nm,18.9s,baz=42,slow=38						
DAV	Davao City (W)	9.06	5	LR	LR	17 05 21.3	
	comp=Z,78nm,19.0s,baz=198,slow=36						
MYLDM	Lahad Datu	9.53	319		Pn	17 02 13.2	+1.3
MYLDM	Lahad Datu	9.53	319	P	Pn	17 02 15.2	+3.4
	30nm,0.8s						
KKM	Kota Kinabalu	11.74	313	Pn	Pn	17 02 42.0	-0.1
MTN	Manton Dam	12.45	150		Pn	17 02 53.5	+1.8
MTN	Manton Dam	12.45	150	P	Pn	17 02 54.1	+2.3
KNRA	Kununurra	14.12	164	Pn	Pn	17 03 15.3	+0.7
KNRA	Kununurra	14.12	164	P	Pn	17 03 15.6	+1.0
GENI	Genyem	15.36	92	P	Pn	17 03 32.2	+0.8
FITZ	Fitzroy Crossi	16.00	177	P	Pn	17 03 41.2	+1.6
	0.1nm,0.3s,baz=27,slow=9.0,SNR=1.2						
FITZ				S	Sn	17 06 30.9	-5.4
	4.2nm,1.0s,baz=0.0,slow=20,SNR=3.9						
	2.4nm,0.9s						
FITZ	Fitzroy Crossi	16.00	177	Pn	Pn	17 03 38.3	-1.3
WB0	Warramunga Arr	19.98	153	P	P	17 04 26.7	-0.1
WRAB	Tennant Creek	20.10	153	P	P	17 04 27.8	-0.3
WRAB				IAmb	IAmb	17 04 32.9	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	20.10	153	P	P	17 04 28.7	+0.6
	comp=Z,17nm,0.7s,baz=330,slow=12,SNR=72						
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	20.10	153	P	P	17 04 27.6	-0.5
WB2	Warramunga Arr	20.11	153	P	P	17 04 28.6	+0.4
WB2				IAmb	IAmb	17 04 32.9	
	comp=Z,18nm,0.8s						
WR0	Warramunga Arr	20.21	153	P	P	17 04 29.6	+0.4
WR0				IAmb	IAmb	17 04 34.1	
	comp=Z,22nm,1.0s						
TPRI	Tanjung Pinang	20.48	278	P	P	17 04 33.2	+0.9
COEN	Coen	21.69	124	P	P	17 04 43.5	-1.8
COEN				IAmb	IAmb	17 05 08.4	
	comp=Z,22nm,1.2s						
AS31	Alice Springs	23.25	158	P	P	17 05 02.4	+0.6
ASAR	Alice Springs	23.25	158	P	P	17 05 02.4	+0.6
	comp=Z,7.0nm,0.8s,baz=338,slow=10,SNR=67						
ASAR				PcP	PcP	17 08 49.7	+0.5
	comp=Z,0.1nm,0.6s,baz=350,slow=4.7,SNR=1.3						
	comp=Z,7.0nm,0.8s						
ASAR	Alice Springs	23.25	158	P	P	17 05 02.1	+0.3
PMG	Port Moresby	23.41	109	P	P	17 05 04.9	+1.6
	comp=Z,23nm,0.8s,baz=293,slow=16,SNR=3.4						
	comp=Z,23nm,0.8s						
CM31	Chiang Mai Arr	32.59	310	P	P	17 06 25.1	-0.7
CM31				IAmb	IAmb	17 06 26.4	
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	32.59	310	P	P	17 06 24.8	-1.0
	comp=Z,0.2nm,0.3s,baz=133,slow=8.0,SNR=1.4						
CMAR				LR	LR	17 20 27.3	
	comp=Z,22nm,19.0s,baz=140,slow=38						
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	32.59	310	P	P	17 06 25.3	-0.5
KSRS	Korea Array	39.38	4	P	P	17 07 24.8	+1.1
	comp=Z,0.9nm,0.8s,baz=184,slow=10,SNR=2.1						
	comp=Z,0.9nm,0.8s						
USRK	Ussuriysk Ar.	46.47	7	P	P	17 08 21.1	+0.1
	comp=Z,0.8nm,0.6s,baz=189,slow=6.1,SNR=1.8						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	52.20	344	P	P	17 09 04.2	-0.6
	comp=Z,0.3nm,0.5s,baz=168,slow=7.4,SNR=1.6						
	comp=Z,0.3nm,0.5s						
MK31	Makanchi Array	61.27	328	P	P	17 10 09.8	+0.5
MK31				IAmb	IAmb	17 10 43.4	
	comp=Z,1.8nm,1.1s						
MKAR	Makanchi Array	61.27	328	P	P	17 10 07.5	-1.7
	comp=Z,0.4nm,0.6s,baz=118,slow=7.3,SNR=5.0						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	61.27	328	P	P	17 10 08.8	-0.5
MIDW	Midway	63.06	57	P	P	17 10 20.2	-1.3
YAK	Yakutsk	63.99	3	P	P	17 10 27.7	+0.7
ZAA0	Zalesovo Array	64.89	335	P	P	17 10 32.7	-0.4
ZAA0				IAmb	IAmb	17 10 57.0	
	comp=Z,2.3nm,1.1s						
ZALV	Zalesovo Beam	64.89	335	P	P	17 10 33.1	0.0
	comp=Z,0.5nm,0.5s,baz=146,slow=8.5,SNR=1.9						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	64.89	335	P	P	17 10 32.2	-0.9
KURK	Kurchatov	65.62	330	P	P	17 10 37.3	-0.6
KURK				IAmb	IAmb	17 10 51.2	
	comp=Z,3.7nm,0.9s						

MAN 05 17:22:49.4, 14°.66N×118°.87E, h14km, mb4.4, ML3.3, MS3.1, 2C-9D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	1.62	124	||*e*P	Pn	17 23 15.3	-2.3
LUBP				*e*S	Sn	17 23 35.3	-3.1
MACP	Maragondon, Ca	1.84	102	||*e*P	Pn	17 23 20.3	-0.2
BOLP	Bolinao	1.99	30	||*e*P	Pn	17 23 21.6	-1.0
TGY	Tagaytay City	2.08	105	||*e*P	Pn	17 23 24.1	+0.1
TGY				*i* S	Sb	17 23 52.0	-0.8
SMPP	San Manuel, Pa	2.29	50	||*e*P	Pn	17 23 27.4	+0.5
PCPH	Palayan	2.33	67	||*e*P	Pn	17 23 28.0	+0.6
PCPH				*e*S	Sb	17 24 00.2	+0.3
LQP	Lukban	2.65	102	||*e*P	Pn	17 23 31.0	-0.9
LQP				*i* S	Sb	17 24 07.9	-1.3
BALP	Baler	2.83	67	||*e*P	Pn	17 23 35.9	+1.7
BUSP	Coron	2.94	154	||*e*P	Pn	17 23 31.9	-3.8
SAMP	Sagada Mountai	3.10	39	||*e*P	Pn	17 23 38.9	+1.0
BOAC	Boac	3.13	112	||*e*P	Pn	17 23 38.5	+0.3

*IDC **05** 17:58:14.1±2.9, 18°.04S×174°.55W, h95km±32km, mb3.8/7, mbtmp4.2/8, Error ellipse: s-maj=34.3km s-min=29.8km az=2.0*
*NEIC **05** 17:58:16.1±1.3, 17°.97S±0°.09×174°.26W±0°.10, h134km±8km, mb4.5/19, Error ellipse: s-maj=15.3km s-min=10.9km az=132.0*

ISC 05 17:58:15.2±0.6, 17°.90S±0°.08×174°.29W±0°.08, h132km, n34, σ1°09/34, mb4.4/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.30	106	Pn	Pn	17 59 18.8	-0.2
NIUE					Sn	18 00 02.7	-5.8
AFI	Afiamalu	4.64	32	P	Pn	17 59 25.4	+1.7
	63nm,0.7s,baz=270,slow=3.0,SNR=3.0						
AFI				S	Sn	18 00 13.9	-3.0
	40nm,0.4s,baz=181,slow=7.7,SNR=4.9						
AFI	Afiamalu	4.64	32		Pn	17 59 25.0	+1.3
MSVF	Nonsavu	7.30	270	P	Pn	17 59 54.9	-4.4
	0.9nm,0.4s,baz=106,slow=7.4,SNR=1.6						
MSVF	Nonsavu	7.30	270	Pn	Pn	17 59 59.4	+0.1
FUNA	Funafuti	11.27	325	Pn	Pn	18 00 52.5	0.0
URZ	Urewera	21.64	199	P	P	18 02 54.4	-0.5
	8.3nm,0.5s,baz=40,slow=7.9,SNR=7.1						
	8.3nm,0.5s						
URZ	Urewera	21.64	199	P	P	18 02 54.8	-0.1
URZ				IAmb	IAmb	18 02 56.9	
	comp=Z,50nm,1.4s						
ARMA	Armidale	33.37	242	P	P	18 04 38.8	-2.3
ARMA				IAmb	IAmb	18 05 13.4	
	comp=Z,22nm,1.4s						
CTA	Charters Tower	37.32	260	P	P	18 05 14.5	-0.4
	comp=Z,2.2nm,0.7s,baz=96,slow=10,SNR=1.3						
	comp=Z,2.2nm,0.7s						
CTAO	Charters Tower	37.32	260	P	P	18 05 14.4	-0.5
CTAO				IAmb	IAmb	18 05 26.7	
	comp=Z,16nm,1.3s						
STKA	Stephens Creek	42.09	242	P	P	18 05 54.5	+0.2
	comp=Z,0.8nm,0.6s,baz=95,slow=16,SNR=2.8						
	comp=Z,0.8nm,0.6s						
STKA	Stephens Creek	42.09	242	P	P	18 05 54.0	-0.2
OPA	Opana	42.45	23	P	P	18 05 58.2	+1.0
MIDW	Midway	45.94	356	P	P	18 06 24.0	-0.8
BBOO	Buckleboo	46.85	242	P	P	18 06 30.8	-1.3
BBOO				IAmb	IAmb	18 06 46.4	
	comp=Z,26nm,1.4s						
WR0	Warramunga Arr	48.30	259	P	P	18 06 42.3	-1.1
WR0				IAmb	IAmb	18 06 46.1	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	48.46	259	P	P	18 06 45.0	+0.3
WB0				IAmb	IAmb	18 07 23.7	
	comp=Z,7.6nm,1.4s						
WB2	Warramunga Arr	48.48	259	P	P	18 06 44.9	0.0
WB2				IAmb	IAmb	18 07 04.5	
	comp=Z,8.8nm,1.3s						
WRA	Warramunga Arr	48.49	259	P	P	18 06 45.5	+0.5
	comp=Z,1.1nm,0.4s,baz=98,slow=6.9,SNR=43						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	48.49	259	P	P	18 06 45.4	+0.5
AS31	Alice Springs	48.57	254	P	P	18 06 45.5	0.0
AS31				IAmb	IAmb	18 06 47.0	
	comp=Z,3.2nm,0.6s						
ASAR	Alice Springs	48.57	254	P	P	18 06 46.0	+0.5
	comp=Z,9.8nm,0.6s,baz=89,slow=8.6,SNR=265						
	comp=Z,9.8nm,0.6s						
ASAR	Alice Springs	48.57	254	P	P	18 06 45.6	+0.1
KNRA	Kununurra	54.39	263	P	P	18 07 27.4	-1.5
FAKI	Fak Fak	54.44	279	P	P	18 07 29.0	-0.3
FITZ	Fitzroy Crossi	56.90	260	P	P	18 07 47.7	+0.9
	comp=Z,1.4nm,1.0s,baz=110,slow=7.4,SNR=1.3						
	comp=Z,1.4nm,1.0s						
FITZ	Fitzroy Crossi	56.90	260	P	P	18 07 47.7	+0.9
FITZ				IAmb	IAmb	18 08 21.4	
	comp=Z,6.4nm,1.2s						
QSPA	South Pole Qui	72.16	180	P	P	18 09 27.7	+2.4
	comp=Z,0.6nm,0.7s,baz=56,slow=3.6,SNR=1.9						
	comp=Z,0.6nm,0.7s						
QSPA	South Pole Qui	72.16	180	P	P	18 09 26.5	+1.1
MTPU	Mount Pierson	80.54	45	P	P	18 10 14.0	+0.7
MVU	Marysvale	80.77	45	P	P	18 10 14.3	-0.1
MVU				IAmb	IAmb	18 10 18.7	
	comp=Z,12nm,0.6s						
MSU	Marysvale	80.79	45		P	18 10 14.2	-0.3
DUG	Dugway, Tooele	81.26	43	P	P	18 10 17.0	+0.1
DUG				IAmb	IAmb	18 10 20.7	
	comp=Z,3.6nm,0.8s						

*ANF **05** 18:08:34.6±0.3, 37°.50N×118°.84W, h2km±2km, ML2.9/17, Error ellipse: s-maj=2.7km s-min=1.8km az=80.0*
*NEIC **05** 18:08:35.3±1.8, 37°.53N±0°.01×118°.84W±0°.01, h10km±1km, Error ellipse: s-maj=1.8km s-min=0.9km az=210.0*
*NCEDC **05** 18:08:35.0±1.8, 37°.54N±0°.01×118°.83W±0°.01, h6km±3km, ML3.2/23, ML2.6/78(NEIC), ML2.6/10(REN), Error ellipse: s-maj=1.8km s-min=1.6km az=208.0*
*REN **05** 18:08:35.0±1.8, 37°.53N±0°.01×118°.84W±0°.01, h7km±3km, Error ellipse: s-maj=1.8km s-min=1.5km az=202.0*

ISC 05 18:08:35.2±0.8, 37°.53N±0°.02×118°.84W±0°.02, h10km±5km, n157, σ0°77/166, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCVM	Convict Lake	0.06	6		Pg	18 08 36.8	-0.9
MLAC	Mammoth, Mammo	0.10	1		Pg	18 08 39.4	+1.3
MLAC	Mammoth, Mammo	0.10	1	P	Pg	18 08 37.5	-0.5
	baz=176,SNR=1000						
MLAC				S	Pg	18 08 39.3	+1.3
	baz=176						
MLCM	Laurel Creek C	0.10	323		Pg	18 08 37.6	-0.5
MDRNC	Doe Ridge	0.11	1		Pg	18 08 37.8	-0.4
MGPM	Gravel Pit	0.11	331		Pg	18 08 37.8	-0.4
MCBM	Casa Benchmark	0.12	337		Pg	18 08 38.0	-0.3
MCBM					Sg	18 08 40.5	-0.1
MCSM	Casa Diablo Ho	0.14	336		Pg	18 08 38.3	-0.3
OMMB	Old Mammoth Mi	0.15	302		Pg	18 08 38.4	-0.4
OMMB					Sg	18 08 40.6	-0.8
OMMB	Old Mammoth Mi	0.15	302	IAML		18 08 41.3	
	comp=N,2μm,0.2s						
MEMM	East Mammoth H	0.16	329		Pg	18 08 38.6	-0.2
MMLB	Mammoth Lakes	0.17	319		Pg	18 08 39.0	-0.1
MMPM	Mammoth Pass	0.17	298		Pg	18 08 38.8	-0.3
MLIM	Lincoln Peak	0.18	306		Pg	18 08 39.1	-0.1
MLIM					Sg	18 08 42.5	+0.5
ORC	Owens River	0.18	54		Pg	18 08 38.8	-0.4
WMD		0.18	120		Pg	18 08 38.8	-0.2
MMSM	Mammoth Summit	0.18	303		Pg	18 08 39.2	-0

GRAC	Grapevine Rang	1.29 114		Pb	18 08 59.7	+0.1
GRAC	Grapevine Rang	1.29 114	P	Pn	18 08 59.5	+0.1
	baz=296,SNR=105					
GRAC			S	Sg	18 09 17.4	+0.7
	baz=296					
CMB	Columbia Colle	1.33 293		Pn	18 08 59.2	-0.6
CMB	Columbia Colle	1.33 293	IAML		18 09 21.2	
	comp=E,176nm,0.3s					
SPG2	Springville 2	1.33 178		Pn	18 08 59.7	-0.2
TPH	Tonopah	1.39 67		Pn	18 09 00.9	+0.1
WLHM	Little Horse	1.44 163		Pn	18 09 01.7	+0.1
MCUB	Copperopolis B	1.48 288		Pn	18 09 02.2	+0.2
YERR	Yerington	1.49 348		Pb	18 09 03.1	0.0
YERR			IAML		18 09 44.5	
	comp=E,60nm,0.3s					
MCA	Marble Canyon	1.53 125		Pn	18 09 02.9	+0.3
SGV	South Grapevin	1.54 110		Pb	18 09 03.6	-0.3
KVN	Kaiserville	1.62 21		Pn	18 09 04.8	+0.7
KVN			IAML		18 09 28.2	
	comp=E,68nm,0.6s					
KVN			IAML		18 09 29.8	
	comp=N,94nm,0.5s					
PNTR	Pine Nut	1.67 339		Pb	18 09 05.7	-0.4
VES	Vestal, Richgr	1.70 187	Sb	Sg	18 09 29.0	-0.8
	baz=6.8					
PDRM	Domengine Ranc	1.71 226		Pb	18 09 06.9	+0.1
BRMM	Rolling Bench	1.73 247		Pb	18 09 07.2	+0.1
EMB	Emerald Bay	1.75 326		Pb	18 09 07.4	-0.2
EMB	Emerald Bay	1.75 326	IAML		18 09 49.1	
	comp=E,90nm,0.2s					
PARM	Anticline Ridg	1.76 224		Pb	18 09 07.4	-0.1
PKEM	Kettleman Hill	1.79 215		Pb	18 09 08.4	+0.3
BMSM	Mercy Hot Spri	1.79 241		Pb	18 09 08.1	-0.1
WASM	Alta Sierra Ca	1.80 173		Pb	18 09 08.3	-0.1
MPMC	Manual Prospec	1.83 143	Pg	Pb	18 09 09.2	+0.3
	baz=324,SNR=23					
MPMC			Sb	Sg	18 09 33.0	-0.9
	baz=324					
Q09A	Carvers	1.84 45		Pb	18 09 09.3	+0.2
WNMM	Nine Mile Cany	1.84 156		Pb	18 09 09.0	0.0
VCNR	Virginia City	1.87 340		Pb	18 09 09.6	-0.1
VCNR			IAML		18 10 03.0	
	comp=E,32nm,0.6s					
ISA	Isabella, Lake	1.89 171		Pb	18 09 09.7	-0.1
ISA	Isabella, Lake	1.89 171	Pb	Pb	18 09 09.7	-0.1
	baz=352,SNR=8.5					
ISA			Sb	Sb	18 09 34.7	+1.2
	baz=352					
WORM	Onyx Ranch	1.89 165		Pb	18 09 09.7	-0.2
FURC	Furnace Creek,	1.90 123	Pg	Pb	18 09 10.8	+0.8
	baz=305					
WCT	Wildcat Mounta	1.91 112		Pn	18 09 08.7	+0.7
WCT			IAML		18 09 38.4	
	comp=E,56nm,0.4s					
WCT			IAML		18 09 39.3	
	comp=N,55nm,0.5s					
SLD	San Luis Dam	1.96 257		Pb	18 09 10.3	-0.6
BAVM	Antelope Valle	1.96 244		Pb	18 09 10.4	-0.6
CMPM	Mikes Peak	1.98 266		Pb	18 09 11.2	-0.2
CTM	Castle Mountai	2.00 217		Pb	18 09 11.4	-0.4
HPCM	Pacheco Lake	2.00 257		Pb	18 09 10.9	-0.8
BBGB	Big Mountain B	2.00 242		Pb	18 09 11.8	0.0
COSM	Mount Oso	2.02 270		Pb	18 09 11.4	-0.7
PACP	Pacheco Peak	2.02 256		Pb	18 09 11.5	-0.6
PSMM	Smith Mountain	2.03 225		Pb	18 09 11.1	-1.1
PSRM	Scobie Ranch	2.03 215		Pb	18 09 11.7	-0.6
PMPB	Monarch Peak	2.05 231		Pb	18 09 12.5	-0.1
LRV	Little Rabbit	2.07 238		Pb	18 09 12.8	0.0
PHFM	Heflinger Ranc	2.07 218		Pb	18 09 12.6	-0.3
PMRM	Maxey Ranch	2.07 213		Pb	18 09 11.9	-1.0
PSTM	Stockdale Moun	2.09 221		Pb	18 09 12.2	-1.0
PKD	Bear Valley Ra	2.09 221		Pb	18 09 12.0	-1.3
PVCM	Vineyard Canyo	2.11 221		Pb	18 09 12.3	-1.3
BVL	Bear Valley	2.11 244		Pb	18 09 13.1	-0.5
THIS	South End of C	2.12 212		Pb	18 09 14.5	+0.7
GHS	Gilroy Hot Spr	2.13 259		Pb	18 09 13.1	-0.8
PKLM	Kerr Lake	2.13 215		Pn	18 09 12.0	+1.1
BPIM	Pinnacles	2.13 242		Pn	18 09 11.8	+0.9
TPNV	Topopah Spring	2.15 105		Pn	18 09 11.3	+0.1
TPNV			IAML		18 09 47.8	
	comp=N,41nm,0.7s					
TPNV			IAML		18 10 02.4	
	comp=N,32nm,0.9s					
TPNV	Topopah Spring	2.15 105	P	Pn	18 09 11.3	+0.1
	baz=287,SNR=42					
CDC	Canada Road	2.17 257		Pb	18 09 14.3	-0.3
PTRM	Twissleman Ran	2.17 211		Pn	18 09 13.0	+1.5
PWKM	Work Ranch	2.18 219		Pn	18 09 13.2	+1.7
TRAM	Private Proper	2.18 212		Pn	18 09 13.1	+1.5
SDH	Striped Hills	2.19 113		Pn	18 09 12.8	+1.1
PPO	Portuguese Can	2.19 221		Pb	18 09 13.7	-1.2
AFDM	Forest Hills D	2.20 311		Pb	18 09 14.6	-0.5
GWY	Greenwater Val	2.20 127		Pn	18 09 11.7	-0.2
GWY			IAML		18 09 50.7	
	comp=E,29nm,0.4s					
PAHR	Pah Rah Range	2.21 349		Pn	18 09 10.6	-1.6
SAO	San Andreas Ge	2.22 251		Pn	18 09 11.7	-0.4
BSGM	Shirttail Gulc	2.23 241		Pb	18 09 14.2	-1.5
CMLM	Mount Lewis	2.24 269		Pb	18 09 14.6	-1.2
LRMC	Laurel Mtn Rad	2.25 155	Pb	Pb	18 09 16.1	+0.1
	baz=336					
LRMC			Sb	Sg	18 09 45.9	-1.6
	baz=336					
SCZ	Santa Cruz	2.25 246		Pb	18 09 14.6	-1.5
FRP	Fremont Peak	2.26 251		Pn	18 09 14.1	+1.4
CPY	CP-1	2.30 104		Pn	18 09 13.8	+0.5
AMDNV	Amargosa	2.31 117		Pn	18 09 15.0	+1.6
ARVC	Arvin	2.40 180	Sb	Sb	18 09 49.6	+1.4
	baz=0.0					
SMMC	Simmler	2.40 203	P	Pn	18 09 14.6	0.0
	baz=22					
SMMC			S	Sn	18 09 45.2	+1.1
	baz=22					
S11A	Rachel	2.46 86		Pn	18 09 15.2	-0.3
S11A			IAML		18 10 50.4	
	comp=N,51nm,0.4s					
CCAC	Calif City Air	2.46 164		Pn	18 09 16.5	+1.0
BEKR	Beckworth	2.62 333		Pn	18 09 17.6	-0.2
BEKR			IAML		18 10 10.6	
	comp=N,21nm,0.3s					
BEKR			IAML		18 10 10.8	
	comp=E,32nm,0.3s					
R11A	Troy Canyon, C	2.70 71		Pb	18 09 23.6	-0.1
R11A	Troy Canyon, C	2.70 71	Pb	Pb	18 09 23.8	+0.1
	baz=253					
R11A			Sb	Sg	18 09 59.8	-2.1
	baz=253					
EDW2	Edwards Air Fo	2.73 165	Pg	Pg	18 09 26.3	-1.3
	baz=346					
GSC	Goldstone, Bar	2.76 143	Pn	Pn	18 09 19.6	0.0
GSC			IAML		18 09 42.9	
	comp=N,14nm,0.1s					
GSC			IAML		18 09 43.0	
	comp=E,28nm,0.1s					
ORV	Oroville	2.91 315	Pn	Pn	18 09 21.0	-0.5
ORV			IAML		18 10 08.8	
	comp=E,27nm,0.7s					
ORV			IAML		18 10 13.6	
	comp=N,17nm,0.8s					
OSI	Osito Audit: C	2.91 178	Sb	Sb	18 10 04.8	+1.8
	baz=358					
PRN	Pahroc Range	3.02 91	Pn	Pn	18 09 23.9	+0.7
PRN			IAML		18 10 16.7	
	comp=N,27nm,0.7s					
PRN			IAML		18 10 31.0	
	comp=E,21nm,1.0s					
SHPR	Sheep Range	3.12 108		Pn	18 09 24.8	+0.2
TUQ	Turquoise Moun	3.14 131	Pb	Pb	18 09 31.7	+0.4
	baz=313					
BMN	Battle Mountai	3.16 23		Pn	18 09 24.9	-0.3
LCMM	Colby Mountain	3.35 322		Pn	18 09 29.8	+2.0
DANC	Danby, Needles	4.02 135		Pn	18 09 33.7	-3.2
PSUT	Pine Spring	4.06 74		Pn	18 09 37.5	-0.1
ELK	Elko	4.26 40		Pn	18 09 40.0	-0.3
ELK			IAML		18 10 52.3	
	comp=E,4.3nm,0.5s					
ELK			IAML		18 10 53.7	
	comp=E,4.7nm,0.5s					
CCUT	Cedar City	4.35 88		Pn	18 09 43.4	+1.8

*IDC **05** 18:10:24.2±2.9, 39°.63S×178°.98E, h0km, mb3.5/2, mbtmp3.6/4, ML3.6/2, MS3.3/1, Error ellipse: s-maj=61.6km s-min=30.0km az=60.0*

*NOU **05** 18:10:26.1, 39°.57S×179°.11E, h121km, MLv4.3/9, Off E. Coast of N. Island, N.Z.*

*WEL **05** 18:10:26.4±0.8, 40°.S±4°.×17°.9E±°., h12km, M3.8/18, ML4.1/18, MLv3.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=111.2*

ISC 05 18:10:22.9±1.9, 39.70S±0°.03×179°.07E±0°.07, h6km±11km, n130, σ1s74/135, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	Mahia Peninsul	1.05	301	P	Pn	18 10 45.1	+0.9
KNZ	Kokohu	1.28	301	P	Pg	18 10 48.2	+0.8
CNGZ	Carnagh Statio	1.39	331	P	Pb	18 10 48.8	-0.4
RIGZ	Rimuhau	1.42	314	P	Pg	18 10 50.6	+0.5
CKHZ	Cape Kidnapper	1.54	271	P	Pg	18 10 53.4	+0.9
CKHZ				S	Sb	18 11 12.4	+0.8
WHHZ	Waihua	1.55	293	P	Pg	18 10 53.2	+0.5
WHHZ				S	Sb	18 11 12.2	+0.3
TKGZ	Te Karaka	1.58	322	P	Pb	18 10 52.0	-0.5
TKGZ				S	Sn	18 11 10.1	-1.9
SNGZ	Shannon Statio	1.63	304	P	Pg	18 10 53.7	-0.4
SNGZ				S	Sn	18 11 12.9	-0.4
ARHZ	Aropaoanui	1.67	284	P	Pg	18 10 55.0	+0.2
ARHZ				S	Sb	18 11 15.7	+0.5
KAHZ	Kahuranaki	1.70	266	P	Pg	18 10 55.7	+0.3
KAHZ				S	Sn	18 11 13.8	-1.3
RAHZ	Arahi	1.73	296	P	Pb	18 10 55.4	+0.4
PXZ	Pawanui	1.73	258	P	Pg	18 10 55.8	-0.3
PXZ				P	Pb	18 10 56.0	+0.9
TWGZ	Tauwhareparae	1.74	330	P	Pn	18 10 53.6	-0.1
TWGZ				S	Sn	18 11 13.8	-2.4
PUZ	Puketiti	1.74	338	P	Pn	18 10 52.8	-0.9
PUZ				S	Sn	18 11 11.5	-4.7
RAGZ	Rawiri	1.76	312	P	Pb	18 10 55.3	-0.3
RAGZ				S	Sn	18 11 15.7	-1.1
MWZ	Matawai	1.82	318	P	Pb	18 10 55.5	-1.0
MCHZ	McNeill Hill	1.85	277	P	Pg	18 10 57.9	-0.5
NMHZ	Naumai	1.86	288	P	Pb	18 10 57.8	+0.6
MTHZ	Maungataniwha	1.93	295	P	Pb	18 10 58.1	-0.3
WMGZ	Waiomatatini S	1.94	344	P	Pn	18 10 55.8	-0.6
RTZ	Ruatahuna	1.95	303	P	Pb	18 10 58.3	-0.5
PRHZ	Porangahau	1.96	252	P	Pb	18 10 58.7	-0.2
PKGZ	Pakihiroa	1.97	336	P	Pn	18 10 56.5	-0.3
RUGZ	Raukumara Rang	2.04	327	P	Pn	18 10 57.7	-0.2
WPHZ	Waipukurau	2.06	259	P	Pb	18 11 00.2	-0.4
KWHZ	Kaweka Forest	2.07	277	P	Pb	18 11 00.7	-0.1
BKZ	Black Stump Fm	2.07	284	P	Pb	18 11 00.5	-0.3
BKZ	Black Stump Fm	2.07	284	P	Pb	18 11 00.5	-0.3
KRHZ	Kereru	2.09	271	P	Pb	18 11 01.1	0.0
URZ	Urewera	2.10	313	Pn	Pb	18 10 59.7	-1.6
	50nm,0.3s,baz=291,slow=3.1,SNR=246						
URZ				Sn	Sn	18 11 24.2	-0.6
	121nm,0.3s,baz=139,slow=18,SNR=9.5						
	98nm,0.3s						
URZ	Urewera	2.10	313	P	Pb	18 10 59.9	-1.4
URZ	Urewera	2.10	313	P	Pb	18 11 00.0	-1.3
ANWZ	Angora Road	2.13	248	P	Pb	18 11 01.3	-0.6
MUGZ	Murupara	2.17	303	P	Pb	18 11 01.5	-1.0
HAZ	Te Kaha	2.19	332	P	Pn	18 10 59.6	-0.1
MXZ	Matakaoa Point	2.21	344	P	Pn	18 10 59.8	-0.3
MXZ	Matakaoa Point	2.21	344	P	Pn	18 11 00.0	-0.1
PNHZ	Pukenui	2.22	264	P	Pn	18 11 00.1	-0.2
DVHZ	Dannevirke	2.31	254	P	Pb	18 11 03.6	-1.4
BHHZ	Black Hill Sta	2.33	274	P	Pb	18 11 04.3	-1.1
BFZ	Birch Farm	2.38	245	P	Pb	18 11 04.0	-2.1
ALRZ	Allen Road	2.41	297	P	Pb	18 11 04.9	-1.7
RRRZ	Republican Roa	2.41	303	P	Pb	18 11 04.7	-2.0
TSZ	Takapari Road	2.42	260	P	Pb	18 11 05.3	-1.6
HATZ	Hinemaiaia	2.45	288	P	Pb	18 11 06.0	-1.3
PRWZ	Pori Road	2.53	249	P	Pb	18 11 06.4	-2.2
HRRZ	Handcock Road	2.53	300	P	Pb	18 11 06.5	-2.3
WPRZ	Whakapapatarin	2.55	297	P	Pb	18 11 06.9	-2.1
HLRZ	Highlands Stat	2.56	303	P	Pb	18 11 08.2	-1.1
MOVZ	Moawhango	2.58	275	P	Pb	18 11 08.3	-1.3
HSRZ	Hossack Road	2.60	301	P	Pb	18 11 07.4	-2.5
POWZ	Post Office Ro	2.63	254	P	Pb	18 11 08.3	-2.0
ETVZ	East Tongariro	2.66	281	P	Pb	18 11 09.5	-1.6
TIWZ	Tintock	2.67	245	P	Pb	18 11 08.6	-2.2
TMVZ	Te Maari	2.67	281	P	Pb	18 11 09.5	-1.7
TUVZ	Tukino	2.68	278	P	Pb	18 11 10.2	-1.2
OTVZ	Oturere	2.69	280	P	Pb	18 11 09.9	-1.6
RATZ	Rangitukua	2.69	287	P	Pb	18 11 09.4	-2.1
NTVZ	North Tongarir	2.70	282	P	Pb	18 11 09.8	-1.8
OPRZ	Ohinepanea	2.70	312	P	Pn	18 11 08.1	+1.3
SNVZ	South Ngauruho	2.71	280	P	Pb	18 11 10.2	-1.6
WNVZ	Wahianoa	2.71	277	P	Pb	18 11 10.4	-1.5
KATZ	Kakaramea	2.72	284	P	Pb	18 11 10.0	-2.0
KRVZ	Karewarewa	2.73	282	P	Pb	18 11 10.3	-1.8
WHVZ	Whangaehu Hut	2.73	278	P	Pb	18 11 10.5	-1.7
NNVZ	North Ngauruho	2.74	281	P	Pb	18 11 10.5	-1.8
NGZ	Ngauruhoe	2.74	280	P	Pb	18 11 10.5	-1.8
TRVZ	Turoa	2.76	277	P	Pb	18 11 10.8	-1.9
FWVZ	Far West T-bar	2.76	278	P	Pb	18 11 10.8	-1.9
WTVZ	West Tongariro	2.76	281	P	Pb	18 11 10.7	-1.9
WATZ	Wairara	2.78	290	P	Pn	18 11 10.0	+2.1
KUTZ	Kaahu Road	2.80	294	P	Pn	18 11 10.4	+2.2
TMWZ	Te Maipa	2.81	239	P	Pn	18 11 09.2	+0.9
MRZ	Mangatainoka R	2.84	249	P	Pn	18 11 10.4	+1.6
TWVZ	Taurewa	2.89	281	P	Pb	18 11 11.9	-2.9
HOWZ	Holdsworth Sta	2.97	245	P	Pn	18 11 11.5	+0.9
TRWZ	Traveller	3.09	236	P	Pn	18 11 13.1	+0.9
MTW	Mount Morrison	3.09	241	P	Pn	18 11 12.8	+0.6
WAZ	Wanganui	3.15	268	P	Pb	18 11 17.2	-2.1
OGWZ	Otaki Gorge	3.19	248	P	Pn	18 11 14.8	+1.3
PAWZ	Paruwai Farm	3.25	238	P	Pn	18 11 15.6	+1.2
CAW	Cannon Point	3.37	244	P	Pn	18 11 17.5	+1.5
MSWZ	Moikau Station	3.38	238	P	Pn	18 11 16.9	+0.8
KIW	Kapiti Island	3.39	249	P	Pn	18 11 18.0	+1.7
VRZ	Vera Road	3.39	278	P	Pn	18 11 19.2	+2.9
PLWZ	Palliser	3.46	236	P	Pn	18 11 17.7	+0.5
HIZ	Hauiti	3.49	288	P	Pn	18 11 20.1	+2.4
HIZ	Hauiti	3.49	288	P	Pn	18 11 20.0	+2.4
LREZ	Lake Rotokare	3.62	272	P	Pb	18 11 23.3	-3.9
SNZO	South Karori	3.70	243	P	Pn	18 11 23.8	+3.3
MHEZ	Mangahewa	3.73	278	P	Pb	18 11 25.5	-3.6
PREZ	Palmer Road	3.82	274	P	Pb	18 11 26.2	-4.5
NEZ	North Egmont	3.88	275	P	Pb	18 11 27.7	-4.0
KHEZ	Kahui Hut	3.93	274	P	Pb	18 11 28.5	-4.2
KUZ	Kuaotunu	3.96	317	P	Pn	18 11 24.3	+0.2
KUZ	Kuaotunu	3.96	317	P	Pn	18 11 24.3	+0.2
TCW	Tory Channel	3.96	246	P	Pn	18 11 24.8	+0.7
MKAZ	Moumakai	4.02	309	P	Pn	18 11 26.8	+1.9
DUWZ	D'Urville Isla	4.09	253	P	Pn	18 11 27.8	+1.8
TUWZ	Tuamarina	4.27	244	P	Pn	18 11 29.8	+1.4
AWAZ	Awhitu Peninsu	4.36	306	P	Pn	18 11 32.0	+2.4
BSWZ	Blackbirch Sta	4.43	241	P	Pn	18 11 31.1	+0.4
NNZ	Nelson	4.60	249	P	Pn	18 11 34.4	+1.4
TKNZ	Takaka Hill	4.86	252	P	Pn	18 11 38.7	+2.2
KHZ	Kahutara	4.99	235	P	Pn	18 11 38.0	-0.2
KHZ	Kahutara	4.99	235	P	Pn	18 11 38.3	+0.1
MRNZ	Matariki Terra	5.10	249	P	Pn	18 11 41.4	+1.5
THZ	Tophouse	5.12	244	P	Pn	18 11 40.3	+0.2
QRZ	Quartz Range	5.13	255	P	Pn	18 11 41.2	+1.0
QRZ	Quartz Range	5.13	255	P	Pn	18 11 41.1	+0.9
	46nm,1.0s						
CTZ	Chatham Island	5.17	143	P	Pn	18 11 42.8	+2.2
GVZ	Greta Valley S	5.60	232	P	Pn	18 11 48.9	+2.2
LTZ	Lake Taylor	5.98	237	P	Pn	18 11 53.6	+1.7
OKCZ	Okains Bay	6.04	226	P	Pn	18 11 53.2	+0.6
AKCZ	Akaroa Harbour	6.21	226	P	Pn	18 11 56.0	+0.9
MQZ	McQueen's Vall	6.25	228	P	Pn	18 11 56.5	+0.9
RPZ	Rata Peaks	7.22	234	Pn	Pn	18 12 09.8	+0.9
	0.4nm,0.3s,baz=51,slow=6.5,SNR=1.1						
RPZ				Sn	Sn	18 13 25.5	-5.6
	4.2nm,0.3s,baz=15,slow=17,SNR=16						
	6.9nm,0.9s						
ARCZ	Arundel	7.27	232	P	Pn	18 12 11.6	+2.1
TMZ	Timaru	7.61	229	P	Pn	18 12 14.8	+0.5
ODZ	Otahua Downs	8.21	227	P	Pn	18 12 23.9	+1.4
CTA	Charters Tower	34.24	295	LR	LR	18 31 34.3	
	comp=Z,47nm,18.4s,baz=206,slow=37						
ASAR	Alice Springs	41.18	279	P	P	18 18 10.3	+2.1
	0.7nm,0.9s,baz=120,slow=7.8,SNR=10						
	0.7nm,0.9s						
WRA	Warramunga Arr	43.00	284	P	P	18 18 24.4	+1.3
	0.4nm,0.7s,baz=125,slow=7.0,SNR=5.6						
	0.4nm,0.7s						
H03S2	Juan Fernandez	77.34	123	T	T	19 47 16.5	
	baz=229						
H03S1	Juan Fernandez	77.35	123	T	T	19 47 18.1	
	baz=229						
H03S3	Juan Fernandez	77.36	123	T	T	19 47 14.4	
	baz=229						
H03N3	Juan Fernandez	77.59	123	T	T	19 47 26.7	
	baz=233,slow=72,SNR=8.3						
H03N2	Juan Fernandez	77.59	123	T	T	19 47 31.1	
	baz=233,slow=72,SNR=8.1						
H03N1	Juan Fernandez	77.60	123	T	T	19 47 27.3	
	baz=233,slow=72,SNR=9.4						
TORD	Torodi Ar. Bea	153.45	186	PKPab	PKPab	18 30 36.7	+2.1
	0.5nm,0.7s,baz=176,slow=2.6,SNR=2.8						

*IDC **05** 18:22:10.5±2.1, 20°.86S×178°.03W, h512km±21km, mb3.1/8, mbtmp4.0/10, Error ellipse: s-maj=29.9km s-min=17.7km az=141.0*

ISC 05 18:22:08.9±0.9, 20°.9S±0°.2×177°.9W±0°.2, h495km, n13, σ0s96/13, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.95	309	P	P	18 23 37.1	+1.7
	7.5nm,0.5s,baz=137,slow=6.0,SNR=26						
URZ	Urewera	17.82	193	P	P	18 25 48.2	+0.6
	3.8nm,0.3s,baz=6.4,slow=3.2,SNR=7.3						
ASAR	Alice Springs	44.50	257	P	P	18 29 35.5	-0.4
	1.4nm,0.5s,baz=90,slow=8.1,SNR=43						
ASAR				PcP	PcP	18 31 08.7	-0.2
	0.5nm,0.9s,baz=106,slow=4.3,SNR=2.5						
	1.4nm,0.5s						
WRA	Warramunga Arr	44.62	262	P	P	18 29 36.0	-0.9
	0.5nm,0.5s,baz=98,slow=7.2,SNR=21						
	0.5nm,0.5s						
PETK	Petropavlovsk-	76.69	345	P	P	18 33 07.5	-0.6
	1.2nm,0.6s,baz=120,slow=5.5,SNR=5.2						
	1.2nm,0.6s						
NVAR	Mina Array Bea	81.27	43	P	P	18 33 33.6	+0.4
	0.3nm,0.5s,baz=224,slow=9.9,SNR=4.6						
	0.3nm,0.5s						
TXAR	Lajitas Array	87.21	57	P	P	18 34 03.9	+1.3
	0.2nm,0.3s,baz=198,slow=8.3,SNR=3.8						
	0.2nm,0.3s						
ILAR	Eielson Array	88.70	13	P	P	18 34 07.0	-1.5
	0.3nm,0.4s,baz=204,slow=6.5,SNR=4.2						
	0.3nm,0.4s						
PDAR	Pinedale Array	89.20	43	P	P	18 34 11.6	-0.2
	0.4nm,0.6s,baz=249,slow=4.1,SNR=4.7						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	90.33	290	P	P	18 34 17.3	+0.1
	0.4nm,0.4s,baz=72,slow=4.7,SNR=4.4						
	0.4nm,0.4s						
AKASG	Malin Array Be	143.41	331	PKP	PKPab	18 40 43.8	-0.7
	1.4nm,0.5s,baz=42,slow=4.3,SNR=12						
BRTR	Keskin Array B	147.17	312	PKPbc	PKPbc	18 40 56.1	-0.3
	0.5nm,0.7s,baz=21,slow=6.2,SNR=2.1						
GERES	GERESS Array B	150.62	344	PKPbc	PKiKP	18 41 04.5	-0.5
	0.2nm,0.3s,baz=44,slow=4.1,SNR=3.7						

*CRAAG **05** 18:28:23.5, 36°.37N×1°.63E, Ml2.8*

*MDD **05** 18:28:25.1±0.6, 36°.38N×1°.73E, h21km±14km, Mb3.6/7, M_mb2.8/6, Error ellipse: s-maj=15.9km s-min=5.1km az=138.0*

ISC 05 18:28:23.4±1.5, 36°.44N±0°.08×1°.64E±0°.08, h14km, n10, σ1s23/18, 6C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.17	211	P	Pg	18 28 27.5	0.0
ECHA	Ech Chlef	0.36	218	P	Pg	18 28 30.9	+0.2
EIBI	Ibiza	2.60	355	P	Pn	18 29 06.7	+1.7
EIBI				⇑iVmb_V		18 29 07.5	
	182nm,SNR=1.0						
EIBI				S	Sn	18 29 34.8	-1.6
EZAR	Zarzadilla de	3.02	299	P	Pn	18 29 10.4	-0.6
EZAR				S	Sn	18 29 46.8	-0.3
ETOB	Tobarra	3.36	312	P	Pn	18 29 17.1	+1.6
ETOB				⇑iVmb_V		18 29 17.9	
	58nm,SNR=0.9						
ETOB				S	Sn	18 29 54.9	-0.4
ETOS	Mallorca	3.45	15	P	Pn	18 29 17.1	+0.2
ETOS				⇑iVmb_V		18 29 17.7	
	33nm,SNR=1.2						
ETOS				S	Sn	18 29 55.9	-1.6
ECOL	Islas Columbre	3.54	348	P	Pn	18 29 19.0	+1.1
ECOL				S	Sn	18 29 58.2	-1.3
EBER	Berja	3.67	279	P	Pn	18 29 20.1	+0.1
EBER				⇑iVmb_V		18 29 22.5	
	107nm,SNR=0.7						
EBER				S	Sn	18 30 01.7	-1.4
EQES	Quesada	4.00	291	P	Pn	18 29 25.2	+0.7
EQES				⇑iVmb_V		18 29 27.2	
	79nm,SNR=1.4						
EQES				S	Sn	18 30 10.9	-0.3
EMOS	Mosqueruela	4.26	338	P	Pn	18 29 30.0	+2.0
EMOS				⇑iVmb_V		18 29 31.4	
	100nm,SNR=1.0						
EMOS				S	Sn	18 30 16.1	-1.5

*SOME **05** 18:39:19.0, 40°.15N×78°.65E, h20km*

*KRNET **05** 18:39:19.4±0.1, 40°.26N×78°.90E, mb3.6*

*NNC **05** 18:39:25.6±21.0, 40°.30N×79°.66E, h0km, mb3.9, mpv3.5, Error

KOTS Kotyrbulak 3.09 337 *e*P Pb 18 40 20.3 +0.5
12nm,0.3s
KOTS *e*S **Sg 18 41 04.1 +0.7**
156nm,0.6s
KURS Kuram 3.12 352 *e*P Pb 18 40 20.7 +0.5
23nm,0.3s
KURS *e*S **Sg 18 41 05.0 +0.6**
44nm,0.8s
MTBS Maitube 3.24 328 *e*P Pb 18 40 22.3 +0.1
15nm,0.5s
MTBS *e*S **Sg 18 41 07.9 -0.3**
33nm,0.8s
KTMS Ketmen 3.27 21 *e*P Pb 18 40 22.8 -0.1
4.2nm,0.4s
KTMS *e*S **Sg 18 41 08.5 -0.7**
32nm,0.6s
KST Kastek 3.37 323 *e*P Pb 18 40 24.6 0.0
11nm,0.8s
KST *e*S **Sg 18 41 12.4 0.0**
38nm,0.2s
TKM2 Tokmak 2 3.46 318 P Pn 18 40 22.1 +3.1
SNR=12
TKM2 Tokmak 2 3.46 318⇑*i*P Pn 18 40 18.9 -0.1
baz=18
TKM2 ⇑*i*S **Sn 18 41 02.2 +1.7**
baz=18
TKM2 Tokmak 2 3.46 318 ⇓Pn Pn 18 40 22.4 +3.4
13nm,0.6s
TKM2 ⇑Sn **Sg 18 41 15.0 -0.2**
20nm,0.6s
DGS Degeres 3.61 323 *e*P Pb 18 40 29.5 +0.8
11nm,1.0s
DGS *e*S **Sg 18 41 19.8 -0.4**
23nm,0.6s
KBK Karagaybulak 3.64 310 P Pb 18 40 30.6 +1.4
SNR=23
KBK Karagaybulak 3.64 310⇑*i*P Pn 18 40 21.4 -0.1
baz=10.0
KBK ⇑*e*S **Sn 18 41 06.8 +1.8**
baz=10.0
ARLS Aral 3.65 295⇓*i*P Pn 18 40 21.3 -0.3
baz=96
ARLS ⇓*i*S **Sn 18 41 06.5 +1.2**
baz=96
UCH Uchtor 3.68 301 P Pn 18 40 23.8 +1.6
SNR=7.7
CHKK Chushkaly 3.70 340 *e*P Pb 18 40 31.1 +1.1
4.5nm,0.4s
CHKK *e*S **Sg 18 41 22.9 0.0**
33nm,0.6s
BLB Baldybastay 3.70 357 *e*P Pb 18 40 31.4 +1.1
12nm,0.4s
BLB *e*S **Sg 18 41 22.9 -0.2**
41nm,0.8s
AAK Ala-Archa 3.90 306 P Pb 18 40 35.0 +1.3
SNR=17
AAK Ala-Archa 3.90 306 LR LR 18 42 17.0
comp=Z,58nm,18.6s,baz=92,slow=41
KUU Kurty 3.93 334 *e*P Pb 18 40 35.7 +1.7
5.9nm,0.5s
KUU *e*S **Sg 18 41 30.4 +0.1**
49nm,0.7s
CHMS Chumysh 3.97 312 P Pb 18 40 35.5 +0.8
SNR=15
DJR Jarkent 4.01 11 *e*P Pb 18 40 36.8 +1.4
7.6nm,0.8s
DJR *e*S **Sg 18 41 32.6 -0.2**
16nm,0.3s
KRBS Karabastau 4.02 326 *e*P Pb 18 40 36.1 +0.6
2.9nm,0.4s
KRBS *e*S **Sg 18 41 31.5 -1.7**
27nm,0.2s
USP Ospenovka 4.28 313 P Pb 18 40 41.1 +1.0
SNR=16
EKS2 Erkin-Say 4.37 303 P Pb 18 40 44.0 +2.4
SNR=6.1
KK31 Karatay Array 6.73 296 P Pb 18 41 27.6 +5.8
1.0nm,0.7s,baz=108,slow=15,SNR=8.8
KK31 ⇑S **Sg 18 42 55.3 -4.9**
2.2nm,0.6s,baz=115,slow=27,SNR=5.8
MKAR Makanchi Array 6.89 21 Pn **Pn 18 41 07.1 +1.1**
0.4nm,0.3s,baz=201,slow=12,SNR=21
MKAR Sn **Sn 18 42 23.7 -1.0**
0.3nm,0.3s,baz=199,slow=25,SNR=4.1
MKAR Lg Lg 18 42 58.5
0.1nm,0.3s,baz=203,slow=12,SNR=1.4
0.5nm,0.3s
ZALV Zalesovo Beam 14.16 15 Pn **Pn 18 42 46.6 +1.2**
0.1nm,0.3s,baz=202,slow=8.2,SNR=1.5
0.2nm,0.3s
ARU Arti 20.78 327 LR LR 18 52 23.9
comp=Z,62nm,19.1s,baz=265,slow=37
SONM Songino Array 21.11 60 P P 18 44 08.6 -1.2
0.5nm,0.6s,baz=246,slow=11,SNR=3.6
0.5nm,0.6s

IDC 05 18:39:29.0±2.2,3°.23S×139°.73E,h0km,mb3.1/2, mbtmp3.3/3,ML2.9/1,Error ellipse: s-maj=187.4km s-min=34.3km az=108.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.42**	**197**	P	Pn	18 43 33.4	-0.3
	baz=18,slow=13,SNR=4.8						
	1.3nm,1.1s						
ASAR	**Alice Springs**	**21.08**	**195**	P	P	18 44 15.0	-0.1
	0.3nm,0.8s,baz=26,slow=10,SNR=2.8						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**85.88**	**24**	P	P	18 52 10.6	+0.1
	0.2nm,0.4s,baz=249,slow=7.6,SNR=2.0						
	0.2nm,0.4s						

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*IDC **05** 18:47:47.5±0.6,41°.42S×85°.35W,h0km,mb4.3/13, mbtmp4.2/14,ML3.2/1,MS4.1/38,Error ellipse: s-maj=23.5km s-min=15.5km az=99.0*

*NEIC **05** 18:47:49.0±2.1,41°.4S±0°.1×85°.7W±0°.2,h10km±1km, mb5.2/207,Error ellipse: s-maj=20.3km s-min=17.9km az=278.0*

*GCMT **05** 18:47:50.0±0.3,41°.35S±0°.03×85°.74W±0°.02,h12km, MW4.9/90,Moment Tensor Solution. s34,c39; s90,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.07±.08; $M_{\theta\theta}$=0.73±.09; $M_{\phi\phi}$=2.33±.08; $M_{r\theta}$=-0.09±.40; $M_{\theta\phi}$=-0.65±.07; $M_{r\phi}$=0.51±.31; Best double couple: M_0=2.86100×10^{16} NP1:ϕ_s=162.00000°,δ50.00000°,λ=-88.00000°. NP2: ϕ_s=339.00000°,δ40.00000°,λ=-92.00000°. Principal axes: T 2.6040, Plg5.0000°, Azm251.0000°; N 0.5080, Plg1.0000°, Azm341.0000°; P -3.1180, Plg85.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 18:47:49.4±0.4,41°.38S±0°.07×85°.68W±0°.07,h14km,n353, σ1°.22/322,mb5.2/99,MS4.2/39,1D,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**9.24**	**38**	Pn	**Pn**	**18 50 00.7**	**-1.2**
H03S2				T	T	18 59 34.3	
	baz=211,SNR=1313						
H03S1	**Juan Fernandez**	**9.24**	**38**	T	T	18 59 46.7	
	baz=211						
H03S3	**Juan Fernandez**	**9.25**	**38**	T	T	18 59 46.5	
	baz=211						
H03N3	**Juan Fernandez**	**9.56**	**36**	T	T	18 59 50.4	
	baz=220,slow=77,SNR=114						
H03N2	**Juan Fernandez**	**9.57**	**36**	T	T	19 00 00.8	
	baz=220,slow=77,SNR=148						
H03N1	**Juan Fernandez**	**9.58**	**36**	Pn	**Pn**	**18 50 04.2**	**-2.3**
H03N1				T	T	19 00 06.9	
	baz=220,slow=77,SNR=114						
GO06	**Curarrehue**	**10.97**	**85**	Pn	**Pn**	**18 50 26.5**	**+0.6**
PLCA	**Paso Flores**	**11.44**	**92**	Pn	Pn	18 50 27.2	-5.2
PLCA	baz=267,slow=17,SNR=1.5			LR	LR	18 54 06.2	
	comp=Z,2μm,20.4s,baz=278,slow=34						
	1.3nm,1.1s						
PLCA	**Paso Flores**	**11.44**	**92**	Pn	**Pn**	**18 50 34.3**	**+1.9**
PLCA	**Paso Flores**	**11.44**	**92**	*e*P	**Pn**	**18 50 36.4**	**+4.0**
ROC1	**El Roble**	**14.37**	**59**	P	**P**	**18 51 21.5**	**+1.9**
TRQA	**Tornquist**	**18.52**	**87**	P	**Pn**	**18 52 06.0**	**+0.6**
AC02	**Maricunga**	**19.91**	**48**		**Pn**	**18 52 22.6**	**-0.1**
PB15	**IPOC Station P**	**22.65**	**42**	P	**P**	**18 52 51.2**	**+0.9**
LVC	**Limon Verde**	**23.43**	**42**	P	**P**	**18 52 58.5**	**0.0**
	4.0nm,0.9s,baz=215,slow=9.5,SNR=4.5						
LVC				LR	LR	19 00 48.2	
	comp=Z,462nm,19.2s,baz=212,slow=34						
	4.0nm,0.9s						
LVC	**Limon Verde**	**23.43**	**42**	P	**P**	**18 53 00.2**	**+1.7**
LVC	**Limon Verde**	**23.43**	**42**	*e*P	**P**	**18 52 58.8**	**+0.3**
RPN	**Rapa Nui**	**24.08**	**299**	LR	LR	18 59 56.4	
	comp=Z,587nm,20.7s,baz=135,slow=30						
PB01	**IPOC Station P**	**24.47**	**39**	P	**P**	**18 53 07.8**	**-0.3**
ITQB	**Itaqui**	**26.25**	**73**	*e*P	**P**	**18 53 25.3**	**+1.2**
PMSA	**Palmer Station**	**26.52**	**159**	LR	LR	19 01 02.5	
	comp=Z,146nm,19.8s,baz=326,slow=30						
PMSA	**Palmer Station**	**26.52**	**159**	*e*P	**P**	**18 53 26.3**	**+0.2**
PB16	**IPOC Station P**	**26.82**	**36**	P	**P**	**18 53 30.4**	**+0.5**
UNIS	**Unistalda (Bra**	**27.71**	**73**	*e*P	**P**	**18 53 38.2**	**+1.1**
CPUP	**Villa Florida**	**27.76**	**66**	LR	LR	19 03 47.9	
	comp=Z,936nm,20.9s,baz=234,slow=35						
CPUP	**Villa Florida**	**27.76**	**66**	P	**P**	**18 53 37.2**	**-0.5**
LPAZ	**La Paz**	**29.23**	**36**	P	**P**	**18 53 50.8**	**-0.8**
	2.6nm,0.7s,baz=180,slow=4.3,SNR=9.1						
	2.6nm,0.7s						
LPAZ	**La Paz**	**29.23**	**36**	P	**P**	**18 53 51.4**	**-0.1**
LPAZ	**La Paz**	**29.23**	**36**	*e*P	**P**	**18 53 52.3**	**+0.8**
CRSM	**Crissiumal (Br**	**29.36**	**72**	*e*P	**P**	**18 53 53.6**	**+1.7**
NNA	**Nana**	**30.29**	**17**	LR	LR	19 03 21.9	
	comp=Z,308nm,19.1s,baz=188,slow=31						
MURT	**Porto Murtinho**	**30.75**	**59**	*e*P	**P**	**18 54 04.3**	**+0.1**
ITAB	**Concordia**	**30.88**	**73**	*e*P	**P**	**18 54 06.1**	**+0.8**
ANTJ	**Antonio Joao (**	**31.56**	**61**	*e*P	**P**	**18 54 11.3**	**-0.1**
BBRB	**Robore, Bolivi**	**31.93**	**52**	*e*P	**P**	**18 54 14.2**	**-0.4**
BBSD	**Serra de San D**	**32.33**	**49**	*e*P	**P**	**18 54 18.3**	**+0.1**
TER01	**Tubaro-SC**	**32.34**	**78**	*e*P	**P**	**18 54 17.8**	**-0.4**
PTGB	**Pitanga**	**32.46**	**70**	*e*P	**P**	**18 54 20.6**	**+1.3**
AQDB	**Aquidauana**	**32.84**	**60**	P	**P**	**18 54 22.2**	**-0.4**
AQDB	**Aquidauana**	**32.84**	**60**	*e*P	**P**	**18 54 22.7**	**+0.1**
PTLB	**Pontes e Lacer**	**34.56**	**49**	*e*P	**P**	**18 54 38.2**	**+0.7**
ATAH	**Atahualpa**	**34.71**	**13**	LR	LR	19 05 27.3	
	comp=Z,237nm,20.3s,baz=194,slow=30						
PCMB	**Pacaembu**	**35.03**	**66**	*e*P	**P**	**18 54 42.1**	**+0.4**
ETMB	**Extrema**	**35.82**	**34**	*e*P	**P**	**18 54 48.7**	**+0.3**
C2SB	**Chapadao do Su**	**35.94**	**61**	*e*P	**P**	**18 54 50.0**	**+0.6**
VILB	**Vilhena**	**36.01**	**46**	*e*P	**P**	**18 54 50.2**	**+0.1**
PET01	**Itanhaem-SP**	**36.14**	**74**	*e*P	**P**	**18 54 51.6**	**+0.4**
SALV	**Santo Antonio**	**36.24**	**54**	*e*P	**P**	**18 54 52.3**	**+0.3**
VAO	**Valinhos**	**37.16**	**73**	*e*P	**P**	**18 54 59.5**	**-0.5**
BB19B	**Bebedouro**	**37.29**	**69**	*e*P	**P**	**18 55 02.4**	**+1.3**
PDRB	**Porto dos Gac**	**39.02**	**49**	*e*P	**P**	**18 55 15.8**	**+0.2**
CLDB	**Colider**	**40.15**	**49**	*e*P	**P**	**18 55 24.9**	**-0.1**
BDFB	**Brasilia**	**41.38**	**63**	P	**P**	**18 55 35.8**	**+0.6**
	2.0nm,0.6s,baz=243,slow=16,SNR=1.9						
BDFB				LR	LR	19 12 33.2	
	comp=Z,456nm,18.8s,baz=212,slow=36						
	2.0nm,0.6s						
BELA	**Belgrano 2**	**41.95**	**166**	P	**P**	**18 55 38.9**	**-0.3**
SNDB	**Serra Nova Dou**	**41.97**	**56**	*e*P	**P**	**18 55 40.0**	**0.0**
NPGB	**Novo Progresso**	**43.53**	**47**	*e*P	**P**	**18 55 52.3**	**-0.3**
SJMB	**Sao Joao De Ma**	**44.05**	**73**	*e*P	**P**	**18 55 57.6**	**+0.8**
JANB	**Januaria**	**44.30**	**66**	*e*P	**P**	**18 55 59.5**	**+0.5**
ITTB	**Itaituba**	**45.57**	**44**	*e*P	**P**	**18 56 08.1**	**-0.9**
SDBA	**SAO DESIDERIO**	**45.78**	**63**	*e*P	**P**	**18 56 11.4**	**+0.6**
SMTB	**Santa Maria do**	**46.68**	**57**	*e*P	**P**	**18 56 18.7**	**+0.9**
VNA3	**Neumayer Olymp**	**47.00**	**155**	P	**P**	**18 56 20.2**	**+0.7**
ROSC	**El Rosal**	**47.16**	**16**	LR	LR	19 14 42.3	
	comp=Z,344nm,18.0s,baz=227,slow=34						
CMC01	**Camacan, BA**	**47.45**	**71**	*e*P	**P**	**18 56 24.0**	**+0.3**
VNA1	**Neumayer--Stat**	**47.50**	**154**	P	**P**	**18 56 24.6**	**+1.2**
GDU01	**Guandu, BA**	**48.52**	**69**	*e*P	**P**	**18 56 32.3**	**+0.3**
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**18 56 34.7**	**+0.5**
	6.7nm,1.0s,baz=138,slow=3.9,SNR=13						
QSPA				LR	LR	19 14 39.8	
	comp=Z,65nm,18.9s,baz=138,slow=33						
	6.7nm,1.0s						
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**18 56 33.8**	**-0.4**
QSPA				IAmb	IAmb	18 56 49.6	
	comp=Z,35nm,1.6s						
SNAA	**Sanae**	**49.12**	**155**	P	**P**	**18 56 36.5**	**+0.4**
SNAA	**Sanae**	**49.12**	**155**	LR	LR	19 13 59.1	
	comp=Z,50nm,19.8s,baz=196,slow=32						
SNAA	**Sanae**	**49.12**	**155**	P	**P**	**18 56 35.6**	**-0.4**
SNAA				IAmb	IAmb	18 56 37.9	
	comp=Z,55nm,1.9s						
BOAV	**Boa Vista**	**49.21**	**34**	*e*P	**P**	**18 56 36.9**	**-0.4**
TROLL	**Troll, Antarti**	**50.71**	**156**	P	**P**	**18 56 48.7**	**+0.5**
MCPB	**Macapa, AP**	**50.89**	**46**	*e*P	**P**	**18 56 50.1**	**0.0**
SDV	**Santo Domingo**	**51.90**	**19**	LR	LR	19 17 07.2	
	comp=Z,112nm,20.6s,baz=177,slow=34						
SBA	**Scott Base**	**53.45**	**195**	P	**P**	**18 57 08.9**	**+0.6**
VNDA	**Vanda**	**54.53**	**194**	P	**P**	**18 57 17.8**	**+1.6**
	comp=Z,2.7nm,1.0s,baz=126,slow=6.3,SNR=10						
VNDA				LR	LR	19 16 55.2	
	comp=Z,147nm,19.4s,baz=128,slow=32						
	comp=Z,2.7nm,1.0s						
VNDA	**Vanda**	**54.53**	**194**	P	**P**	**18 57 17.6**	**+1.4**
MDP	**Montagnes des**	**55.23**	**41**	LR	LR	19 20 11.1	
	comp=Z,246nm,21.6s,baz=191,slow=35						
TBI	**Tubuai**	**55.59**	**268**	*e*LR	LR	19 13 34.0	
	comp=Z,704nm,28.8s						
MTO3	**Montecristo**	**55.60**	**356**	P	**P**	**18 57 24.8**	**0.0**
RCBR	**Riachuelo**	**56.64**	**65**	LR	LR	19 21 07.4	
	comp=Z,455nm,21.6s,baz=356,slow=35						
CMIG	**Matias Romero**	**58.80**	**350**	P	**P**	**18 57 47.3**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=199,slow=6.4,SNR=4.4						
CMIG				LR	LR	19 15 30.1	
	comp=Z,50nm,21.5s,baz=134,slow=28						
	comp=Z,0.8nm,0.4s						
PPT2	**Papeete2**	**59.10**	**273**	*e*S	**S**	**19 05 57.3**	**+0.9**
	comp=Z,202nm,27.5s						
PPT2				*e*SS	**SS**	**19 09 52.5**	**+2.1**
	comp=Z,76nm,29.0s						
PPT2				*e*LR	LR	19 15 11.2	
	comp=Z,782nm,27.2s						
PPT	**Papeete**	**59.11**	**273**	LR	LR	19 17 02.7	
	comp=Z,189nm,20.8s,baz=173,slow=30						
SJG	**San Juan**	**61.90**	**21**	LR	LR	19 24 40.0	
	comp=Z,86nm,18.0s,baz=248,slow=36						
SOR	**Soroa**	**63.89**	**3**	P	**P**	**18 58 21.0**	**-0.6**
RAR	**Rarotonga**	**64.58**	**263**	LR	LR	19 19 27.2	
	comp=Z,193nm,20.0s,baz=152,slow=29						
ZAIG	**Zacatecas**	**65.72**	**343**	P	**P**	**18 58 35.8**	**+1.9**
ZAIG				IAmb	IAmb	18 58 38.0	
	comp=Z,39nm,1.7s						
SLBS	**Sierra La Lagu**	**68.54**	**336**	P	**P**	**18 58 53.1**	**+1.7**
MAW	**Mawson**	**68.76**	**168**	P	**P**	**18 58 52.0**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=160,slow=9.2,SNR=5.6						
MAW				LR	LR	19 28 56.2	
	comp=Z,63nm,18.0s,baz=198,slow=36						
	comp=Z,2.7nm,0.9s						
MAW	**Mawson**	**68.76**	**168**	P	**P**	**18 58 51.5**	**-0.8**
URZ	**Urewera**	**70.63**	**236**	LR	LR	19 22 56.8	
	comp=Z,313nm,21.1s,baz=247,slow=30						
RPZ	**Rata Peaks**	**70.84**	**228**	LR	LR	19 24 08.3	
	comp=Z,164nm,18.7s,baz=112,slow=31						
TX32	**Lajitas Array**	**72.30**	**344**	P	**P**	**18 59 15.3**	**+0.9**
TXAR	**Lajitas Array**	**72.30**	**344**	P	**P**	**18 59 15.8**	**+1.5**
	comp=Z,5.1nm,0.8s,baz=165,slow=8.8,SNR=39						
	comp=Z,5.1nm,0.8s						
TXAR	**Lajitas Array**	**72.30**	**344**	P	**P**	**18 59 14.9**	**+0.5**
TX31	**Lajitas Ar. Si**	**72.31**	**344**	P	**P**	**18 59 15.2**	**+0.8**
TX31				IAmb	IAmb	18 59 24.1	
	comp=Z,29nm,1.0s						
TX31	**Lajitas Ar. Si**	**72.31**	**344**	P	**P**	**18 59 15.9**	**+1.5**
	baz=166						
JCT	**Junction City**	**72.69**	**347**	P	**P**	**18 59 16.9**	**+0.4**
JCT				IAmb	IAmb	18 59 19.5	
	comp=Z,42nm,1.5s						
JCT	**Junction City**	**72.69**	**347**	P	**P**	**18 59 18.1**	**+1.5**
	baz=169						
RAO	**Raoul Island**	**72.88**	**246**	LR	LR	19 23 03.3	
	comp=Z,137nm,20.0s,baz=130,slow=29						
152A	**Waverly Hall**	**73.69**	**1**	P	**P**	**18 59 21.6**	**-0.8**
152A				IAmb	IAmb	18 59 30.9	
	comp=Z,31nm,1.3s						
152A	**Waverly Hall**	**73.69**	**1**	P	**P**	**18 59 23.0**	**+0.6**
	baz=181						
146A	**Union**	**73.72**	**357**	P	**P**	**18 59 21.6**	**-1.0**
WHTX	**Lake Whitney,**	**73.81**	**350**	P	**P**	**18 59 21.9**	**-1.3**
WHTX				IAmb	IAmb	18 59 26.6	
	comp=Z,15nm,0.8s						
WHTX	**Lake Whitney,**	**73.81**	**350**	P	**P**	**18 59 24.1**	**+1.0**
	baz=171						
WHTX	**Lake Whitney,**	**73.81**	**350**	P	**P**	**18 59 24.2**	**+1.0**
	baz=171						
LRAL	**Lakeview Retre**	**74.06**	**359**	P	**P**	**18 59 24.8**	**+0.3**
LRAL				IAmb	IAmb	18 59 25.6	
	comp=Z,20nm,1.2s						
LRAL	**Lakeview Retre**	**74.06**	**359**	P	**P**	**18 59 25.1**	**+0.5**
	baz=179						
Z47A	**Carrollton**	**74.25**	**358**	P	**P**	**18 59 26.1**	**+0.5**
Z47A				IAmb	IAmb	18 59 28.9	
	comp=Z,30nm,0.8s						
GOGA	**Godfrey**	**74.45**	**2**	P	**P**	**18 59 26.4**	**-0.4**
GOGA	**Godfrey**	**74.45**	**2**	P	**P**	**18 59 27.4**	**+0.6**
	baz=182						
ABTX	**Abilene, Hawle**	**74.76**	**348**	P	**P**	**18 59 29.2**	**+0.6**
ABTX				IAmb	IAmb	18 59 43.6	
	comp=Z,44nm,1.8s						
Z38A	**Mt. Pleasant**	**74.77**	**352**	P	**P**	**18 59 28.9**	**+0.2**
Z38A				IAmb	IAmb	18 59 31.6	
	comp=Z,21nm,1.1s						
Y52A	**Lilburn**	**74.89**	**1**	P	**P**	**18 59 29.9**	**+0.5**
Y45A	**Yeager Farm, C**	**74.96**	**357**	P	**P**	**18 59 29.1**	**-0.7**
WLAR	**White Oak Lake**	**75.01**	**354**	P	**P**	**18 59 29.8**	**-0.2**
WLAR				IAmb	IAmb	19 00 20.5	
	comp=Z,31nm,1.0s						
Z35A	**Perchaven, San**	**75.11**	**350**	P	**P**	**18 59 30.3**	**-0.3**
Z35A				IAmb	IAmb	18 59 33.9	
	comp=Z,50nm,1.4s						
CCAR	**Cane Creek**	**75.14**	**355**	P	**P**	**18 59 30.8**	**0.0**
HODGE	**Hodges**	**75.31**	**3**	P	**P**	**18 59 29.9**	**-1.8**
HODGE				IAmb	IAmb	19 00 02.0	
	comp=Z,25nm,0.9s						
CLN7	**Carlsbad 7**	**75.31**	**344**	P	**P**	**18 59 32.2**	**+0.3**
HTMS	**Hat Mesa**	**75.33**	**344**	P	**P**	**18 59 32.1**	**0.0**
X48A	**Hartselle**	**75.47**	**359**	P	**P**	**18 59 32.7**	**0.0**
X48A				IAmb	IAmb	18 59 35.6	
	comp=Z,21nm,1.2s						
PAULI	**Pauline**	**75.92**	**3**	P	**P**	**18 59 34.3**	**-0.9**
PLAL	**Pickwick Lake**	**76.03**	**358**	P	**P**	**18 59 34.9**	**-0.9**
BG3	**Lake Jocassee**	**76.05**	**2**	P	**P**	**18 59 35.6**	**-0.4**
CASEE	**Lake Jocassee**	**76.05**	**2**	P	**P**	**18 59 36.6**	**+0.6**
	baz=182						
W52A	**Murphy**	**76.12**	**1**	P	**P**	**18 59 36.9**	**+0.5**
W52A	**Murphy**	**76.12**	**1**	P	**P**	**18 59 37.2**	**+0.8**
	baz=181						
SWET	**Sewanee**	**76.23**	**360**	P	**P**	**18 59 37.2**	**+0.1**
SWET				IAmb	IAmb	18 59 39.3	
	comp=Z,47nm,1.5s						
121A	**Cookes Peak, D**	**76.32**	**341**	P	**P**	**18 59 37.7**	**-0.1**
121A	**Cookes Peak, D**	**76.32**	**341**	P	**P**	**18 59 39.8**	**+2.0**
	baz=163						
121A	**Cookes Peak, D**	**76.32**	**341**	P	**P**	**18 59 39.2**	**+1.4**
	baz=163						
X34A	**Smith Ranch, M**	**76.43**	**350**	P	**P**	**18 59 38.4**	**+0.2**
X34A				IAmb	IAmb	18 59 40.2	
	comp=Z,28nm,1.2s						
CPCT	**Cooper Cave**	**76.47**	**1**	P	**P**	**18 59 38.1**	**-0.3**
WHAR	**Wooly Hollow**	**76.54**	**354**	P	**P**	**18 59 39.2**	**+0.5**
WHAR				IAmb	IAmb	18 59 40.1	
	comp=Z,19nm,1.0s						
MSTX	**Muleshoe**	**76.62**	**345**	P	**P**	**18 59 39.6**	**+0.2**
MSTX				IAmb	IAmb	18 59 41.3	
	comp=Z,27nm,1.0s						
MSTX	**Muleshoe**	**76.62**	**345**	P	**P**	**18 59 40.5**	**+1.1**
	baz=167						
MSTX	**Muleshoe**	**76.62**	**345**	P	**P**	**18 59 40.5**	**+1.1**
	baz=167						
TKL	**Tuckaleechee C**	**76.69**	**2**	LR	LR	19 27 28.3	
	comp=Z,85nm,21.7s,baz=140,slow=31						
WMOK	**Wichita Mounta**	**76.70**	**349**		**P**	**18 59 39.9**	**+0.2**
WMOK				IAmb	IAmb	18 59 41.4	
	comp=Z,32nm,1.8s						
WMOK	**Wichita Mounta**	**76.70**	**349**	P	**P**	**18 59 40.4**	**+0.7**
	baz=170						
V48A	**Smith Brothers**	**76.76**	**359**	P	**P**	**18 59 39.8**	**-0.2**
V48A				IAmb	IAmb	18 59 42.5	
	comp=Z,20nm,1.1s						
TUC	**Tucson**	**76.90**	**338**	P	**P**	**18 59 42.6**	**+1.6**
V55A	**Taylorsville**	**76.97**	**4**	P	**P**	**18 59 39.4**	**-1.8**
FNO	**Franklin**	**77.02**	**350**	P	**P**	**18 59 40.8**	**-0.7**
CLTN	**Cedars of Leba**	**77.10**	**359**	P	**P**	**18 59 42.0**	**+0.1**
CLTN				IAmb	IAmb	18 59 44.6	
	comp=Z,14nm,0.9s						
FCAR	**Ozark Folk Cen**	**77.13**	**355**	P	**P**	**18 59 41.9**	**-0.2**
FCAR				IAmb	IAmb	18 59 43.1	
	comp=Z,32nm,1.7s						
214A	**Organ Pipe Nat**	**77.15**	**337**	P	**P**	**18 59 44.0**	**+1.6**
214A				IAmb	IAmb	18 59 45.7	
	comp=Z,46nm,1.9s						
214A	**Organ Pipe Nat**	**77.15**	**337**	P	**P**	**18 59 44.4**	**+2.0**
	baz=160						
WVT	**Waverly**	**77.16**	**358**	P	**P**	**18 59 41.9**	**-0.4**
WVT				IAmb	IAmb	18 59 43.3	
	comp=Z,46nm,2.0s						
LCAR	**Lake Charles**	**77.24**	**355**	P	**P**	**18 59 42.5**	**-0.2**
AMTX	**Amarillo**	**77.31**	**347**	P	**P**	**18 59 43.8**	**+0.5**
AMTX				IAmb	IAmb	18 59 45.5	
	comp=Z,18nm,1.0s						
AMTX	**Amarillo**	**77.31**	**347**	P	**P**	**18 59 44.3**	**+1.1**
	baz=168						
OK025	**Westminster Rd**	**77.33**	**350**	P	**P**	**18 59 43.5**	**+0.2**
TUL1	**Leonard**	**77.48**	**352**		**P**	**18 59 44.0**	**0.0**
TUL1				IAmb	IAmb	18 59 45.4	
	comp=Z,22nm,1.0s						
TUL1	**Leonard**	**77.48**	**352**	P	**P**	**18 59 44.5**	**+0.4**
	baz=172						
TUL1	**Leonard**	**77.48**	**352**	P	**P**	**18 59 44.8**	**+0.8**
	baz=172						
U49A	**Red Boiling Sp**	**77.52**	**360**	P	**P**	**18 59 44.1**	**-0.2**
U49A				IAmb	IAmb	18 59 45.4	
	comp=Z,27nm,1.0s						
U49A	**Red Boiling Sp**	**77.52**	**360**	P	**P**	**18 59 44.4**	**+0.2**
	baz=180						
OK029	**Liberty Lake**	**77.56**	**350**	P	**P**	**18 59 44.3**	**-0.2**
BNM	**Barren Site**	**77.60**	**342**	P	**P**	**18 59 46.0**	**+1.0**
OK031	**S. Brethren Rd**	**77.64**	**351**	P	**P**	**18 59 44.7**	**-0.2**
HHAR	**Hobbs**	**77.66**	**353**	P	**P**	**18 59 43.4**	**-1.6**
HHAR				IAmb	IAmb	18 59 47.2	
	comp=Z,16nm,1.0s						
OK034	**N. Norfolk Rd.**	**77.68**	**351**	P	**P**	**18 59 44.0**	**-1.2**
LENM	**Lemitar**	**77.69**	**342**	P	**P**	**18 59 46.1**	**+0.6**
OK033	**Mehan**	**77.74**	**351**		**P**	**18 59 46.0**	**+0.5**
U38A	**Gravette**	**77.86**	**353**	P	**P**	**18 59 46.2**	**0.0**
T47A	**Sharon Grove**	**78.00**	**359**	P	**P**	**18 59 46.8**	**-0.2**
T47A				IAmb	IAmb	18 59 47.9	
	comp=

S51A	**Beattyville**	**78.67 2**	P	**P**		**18 59 50.0**	**-0.6**
KAN13	**South Haven SW**	**78.76 350**		**P**		**18 59 51.9**	**+0.7**
S44A	**Carbondale**	**78.77 357**	P	**P**		**18 59 50.8**	**-0.4**
X18A	**Snowflake**	**78.77 340**	P	**P**		**18 59 53.2**	**+1.7**
X18A			IAmb	IAmb		18 59 55.7	
	comp=Z,25nm,1.4s						
KAN14	**Manchester OK**	**78.77 350**	P	**P**		**18 59 52.1**	**+0.9**
KAN14			IAmb	IAmb		18 59 53.2	
	comp=Z,19nm,1.1s						
SIUC	**Southern Illin**	**78.79 357**	P	**P**		**18 59 50.1**	**-1.1**
GLA	**Glamis**	**78.79 335**	P	**P**		**18 59 52.6**	**+1.2**
GLA	**Glamis**	**78.79 335**	P	**P**		**18 59 53.7**	**+2.2**
	baz=158						
KAN17	**Caldwell West**	**78.83 350**		**P**		**18 59 51.5**	**0.0**
KAN09	**Caldwell North**	**78.90 350**		**P**		**18 59 52.2**	**+0.2**
KAN05	**Bluff City Nor**	**78.91 350**	P	**P**		**18 59 53.4**	**+1.4**
KAN01	**Argonia South**	**78.94 350**		**P**		**18 59 53.1**	**+0.9**
KAN01			IAmb	IAmb		18 59 56.0	
	comp=Z,24nm,0.9s						
KAN10	**Anthony SW Sta**	**78.95 350**	P	**P**		**18 59 53.1**	**+0.9**
KAN10			IAmb	IAmb		18 59 55.4	
	comp=Z,46nm,1.4s						
KS20	**Mayfield South**	**78.99 350**	P	**P**		**18 59 53.3**	**+0.9**
KS20			IAmb	IAmb		19 00 56.4	
	comp=Z,35nm,1.1s						
USIN	**University of**	**78.99 358**	P	**P**		**18 59 51.3**	**-1.1**
USIN			IAmb	IAmb		18 59 53.0	
	comp=Z,34nm,1.1s						
SWSC	**Sam W. Stewart**	**79.00 335**	P	**P**		**18 59 54.8**	**+2.3**
	baz=158						
S39A	**Bolivar**	**79.01 354**	P	**P**		**18 59 51.8**	**-0.7**
KAN08	**Anthony NE Sta**	**79.04 350**	P	**P**		**18 59 53.6**	**+0.9**
KAN06	**Argonia West S**	**79.04 350**	P	**P**		**18 59 52.2**	**-0.5**
KAN06			IAmb	IAmb		18 59 55.9	
	comp=Z,39nm,1.1s						
KAN16	**Harper SW Stat**	**79.05 350**	P	**P**		**18 59 52.7**	**0.0**
Y14A	**Wickenburg**	**79.06 337**	P	**P**		**18 59 54.8**	**+1.9**
KAN12	**Harper NE Stat**	**79.11 350**	P	**P**		**18 59 53.8**	**+0.7**
MONP2	**Monument Peak**	**79.15 334**	P	**P**		**18 59 55.2**	**+1.6**
	baz=157						
CCM	**Cathedral Cave**	**79.22 356**	P	**P**		**18 59 53.5**	**-0.2**
CCM			IAmb	IAmb		18 59 54.9	
	comp=Z,22nm,1.0s						
CCM	**Cathedral Cave**	**79.22 356**	P	**P**		**18 59 53.9**	**+0.3**
	baz=176						
WCI	**Wyandotte Cave**	**79.23 360**	P	**P**		**18 59 53.3**	**-0.4**
WCI			IAmb	IAmb		19 01 45.0	
	comp=Z,12nm,0.6s						
W18A	**Petrified Fore**	**79.27 340**	P	**P**		**18 59 54.6**	**+0.4**
W18A			IAmb	IAmb		18 59 57.1	
	comp=Z,46nm,1.9s						
W18A	**Petrified Fore**	**79.27 340**	P	**P**		**18 59 56.1**	**+1.9**
	baz=162						
R50A	**Paris**	**79.30 1**	P	**P**		**18 59 53.0**	**-1.1**
R50A			IAmb	IAmb		18 59 54.8	
	comp=Z,54nm,1.6s						
R49A	**Shelbyville**	**79.30 0**	P	**P**		**18 59 54.4**	**+0.3**
R49A			IAmb	IAmb		18 59 55.5	
	comp=Z,75nm,1.9s						
BLYC	**Blythe**	**79.34 336**	P	**P**		**18 59 56.1**	**+1.7**
BLYC			IAmb	IAmb		18 59 58.8	
	comp=Z,30nm,1.6s						
R40A	**Maddies Statio**	**79.52 355**	P	**P**		**18 59 54.0**	**-1.3**
BC3	**Big Chuckawall**	**79.54 335**	P	**P**		**18 59 57.5**	**+1.9**
	baz=158						
PDMCI	**Parker Dam,Lak**	**79.74 336**	P	**P**		**18 59 58.7**	**+2.2**
	baz=159						
PFO	**Pinyon Flats O**	**79.83 334**	P	**P**		**18 59 58.3**	**+1.1**
IRM	**Iron Mountain**	**79.91 336**	P	**P**		**19 00 00.1**	**+2.6**
	baz=158						
Q44A	**Meyer Farm, Va**	**79.96 357**	P	**P**		**18 59 57.0**	**-0.6**
Q44A			IAmb	IAmb		18 59 58.6	
	comp=Z,36nm,1.1s						
T25A	**Trinidad**	**80.00 345**	P	**P**		**18 59 58.8**	**+0.6**
T25A	**Trinidad**	**80.00 345**	P	**P**		**19 00 00.5**	**+2.3**
	baz=166						
BELC	**Belle Mtn. Jos**	**80.03 335**	P	**P**		**19 00 00.5**	**+2.1**
	baz=157						
WUAZ	**Wupatki**	**80.08 339**	P	**P**		**18 59 59.0**	**+0.4**
SUR	**Sutherland**	**80.19 125**	LR	LR		19 31 32.6	
	comp=Z,114nm,21.5s,baz=220,slow=33						
W13A	**Hualapai Mount**	**80.40 337**	P	**P**		**19 00 01.4**	**+1.0**
GMRC	**Granite Mounta**	**80.65 335**	P	**P**		**19 00 03.8**	**+2.1**
	baz=158						
P40A	**Paris**	**80.74 355**	P	**P**		**19 00 01.0**	**-0.8**
SDCO	**Great Sand Dun**	**80.81 344**	P	**P**		**19 00 03.6**	**+1.0**
HEC	**Hector,Ludlow**	**80.90 335**	P	**P**		**19 00 05.4**	**+2.5**
	baz=157						
P38A	**Dawn**	**80.94 354**	P	**P**		**19 00 02.3**	**-0.6**
P38A			IAmb	IAmb		19 00 03.7	
	comp=Z,18nm,0.9s						
MVCO	**Mesa Verde**	**80.96 342**	P	**P**		**19 00 04.3**	**+1.0**
MVCO			IAmb	IAmb		19 00 07.4	
	comp=Z,43nm,1.6s						
S22A	**4UR Ranch, Cre**	**81.09 343**	P	**P**		**19 00 05.6**	**+1.5**
S22A			IAmb	IAmb		19 00 09.1	
	comp=Z,34nm,1.4s						
S22A	**4UR Ranch, Cre**	**81.09 343**	P	**P**		**19 00 06.4**	**+2.3**
	baz=164						
TUQ	**Turquoise Moun**	**81.33 335**	P	**P**		**19 00 07.1**	**+1.8**
	baz=158						
GSC	**Goldstone, Bar**	**81.49 335**	P	**P**		**19 00 07.4**	**+1.4**
GSC	**Goldstone, Bar**	**81.49 335**	P	**P**		**19 00 07.9**	**+1.9**
	baz=157						
Q24A	**Divide**	**81.91 345**	P	**P**		**19 00 08.8**	**+0.3**
Q24A			IAmb	IAmb		19 00 11.5	
	comp=Z,45nm,1.8s						
Q24A	**Divide**	**81.91 345**	P	**P**		**19 00 10.2**	**+1.7**
	baz=165						
LRMC	**Laurel Mtn Rad**	**81.94 334**	P	**P**		**19 00 10.5**	**+2.1**
	baz=156						
LCMT	**Little Creek M**	**82.00 338**	P	**P**		**19 00 10.1**	**+1.4**
SHPR	**Sheep Range**	**82.08 336**	P	**P**		**19 00 11.5**	**+2.3**
GWY	**Greenwater Val**	**82.26 335**	P	**P**		**19 00 10.8**	**+0.6**
SZCU	**Shurtz Canyon**	**82.50 338**	P	**P**		**19 00 11.6**	**+0.1**
SZCU			IAmb	IAmb		19 00 16.1	
	comp=Z,39nm,1.5s						
CCUT	**Cedar City**	**82.53 338**	P	**P**		**19 00 12.7**	**+1.0**
MTPU	**Mount Pierson**	**82.67 339**	P	**P**		**19 00 12.3**	**-0.3**
MTPU			IAmb	IAmb		19 00 15.8	
	comp=Z,33nm,2.0s						
TPNV	**Topopah Spring**	**82.83 336**	P	**P**		**19 00 14.2**	**+1.1**
TPNV			IAmb	IAmb		19 00 17.8	
	comp=Z,44nm,1.9s						
PRN	**Pahroc Range**	**82.89 337**	P	**P**		**19 00 15.5**	**+2.1**
CWC	**Cottonwood Cre**	**82.94 334**	P	**P**		**19 00 15.8**	**+2.0**
	baz=156						
MSVF	**Nonsavu**	**83.05 253**	LR	LR		19 28 15.4	
	comp=Z,72nm,21.6s,baz=137,slow=29						
MSU	**Marysvale**	**83.11 339**	P	**P**		**19 00 15.9**	**+1.3**
Q16A	**Castle Valley**	**83.23 340**	P	**P**		**19 00 16.8**	**+1.6**
Q16A			IAmb	IAmb		19 00 18.4	
	comp=Z,31nm,1.5s						
SRU	**San Rafael Swe**	**83.25 341**	P	**P**		**19 00 15.7**	**+0.5**
GMN	**Gold Mountain**	**83.47 335**	P	**P**		**19 00 18.4**	**+2.0**
LCH	**Last Change Ra**	**83.53 335**	P	**P**		**19 00 17.8**	**+1.1**
LCH			IAmb	IAmb		19 00 20.0	
	comp=Z,23nm,1.9s						
PSUT	**Pine Spring**	**83.59 338**	P	**P**		**19 00 18.6**	**+1.6**
TMUT	**Trail Mountain**	**83.60 340**	P	**P**		**19 00 18.7**	**+1.5**
TMUT			IAmb	IAmb		19 00 20.3	
	comp=Z,14nm,1.2s						
P17A	**Butcher Ranch,**	**83.65 341**	P	**P**		**19 00 18.5**	**+1.2**
P18A	**Preston Nutter**	**83.67 341**	P	**P**		**19 00 18.1**	**+0.6**
P18A			IAmb	IAmb		19 00 20.5	
	comp=Z,37nm,1.8s						
O20A	**White River Ci**	**83.69 343**	P	**P**		**19 00 19.4**	**+1.9**
	baz=163						
DSP	**Deep Springs**	**83.76 335**	P	**P**		**19 00 18.5**	**+0.9**
DSP			IAmb	IAmb		19 00 22.1	
	comp=Z,28nm,1.7s						
MZP	**Montezuma Peak**	**83.87 335**	P	**P**		**19 00 20.3**	**+1.7**
R11A	**Troy Canyon, C**	**83.92 337**	P	**P**		**19 00 20.1**	**+1.4**
R11A			IAmb	IAmb		19 00 23.2	
	comp=Z,40nm,1.8s						
R11A	**Troy Canyon, C**	**83.92 337**	P	**P**		**19 00 21.1**	**+2.4**
	baz=158						
N23A	**Red Feather La**	**83.94 345**	P	**P**		**19 00 20.2**	**+1.3**
N23A			IAmb	IAmb		19 00 25.3	
	comp=Z,26nm,1.4s						
N23A	**Red Feather La**	**83.94 345**	P	**P**		**19 00 20.7**	**+1.9**
	baz=165						
TPH	**Tonopah**	**84.16 335**	P	**P**		**19 00 21.8**	**+1.8**
RDMU	**Red Mountain**	**84.41 342**	P	**P**		**19 00 22.8**	**+1.6**
NLU	**North Lily Min**	**84.44 340**	P	**P**		**19 00 21.6**	**+0.2**
NLU			IAmb	IAmb		19 00 24.8	
	comp=Z,36nm,1.9s						
BBTS	**Babate**	**84.62 65**	LR	LR		19 34 55.9	
	comp=Z,198nm,21.8s,baz=224,slow=34						
LHV	**Little Huntoon**	**84.73 335**	P	**P**		**19 00 23.0**	**+0.5**
NV11	**Mina Array Sit**	**84.78 335**	P	**P**		**19 00 24.5**	**+1.4**
NV11			IAmb	IAmb		19 00 26.4	
	comp=Z,27nm,1.9s						
NVAR	**Mina Array Bea**	**84.83 335**	P	**P**		**19 00 24.3**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=169,slow=5.1,SNR=8.5						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**84.83 335**	P	**P**		**19 00 24.4**	**+1.1**
DUG	**Dugway, Tooele**	**84.86 339**	P	**P**		**19 00 24.2**	**+0.8**
DUG			IAmb	IAmb		19 00 26.6	
	comp=Z,29nm,1.6s						
RYN	**Ryan**	**85.08 335**	P	**P**		**19 00 26.6**	**+2.1**
RYN			IAmb	IAmb		19 00 28.0	
	comp=Z,38nm,2.0s						
WAKR	**Walker**	**85.27 334**	P	**P**		**19 00 26.6**	**+1.1**
WAKR			IAmb	IAmb		19 02 36.5	
	comp=Z,30nm,1.9s						
I37A	**Lemond, Waseca**	**85.30 354**	P	**P**		**19 00 25.3**	**0.0**
I37A			IAmb	IAmb		19 00 27.5	
	comp=Z,28nm,1.1s						
ECSD	**EROS Data Cent**	**85.30 352**	P	**P**		**19 00 25.3**	**-0.1**
ECSD			IAmb	IAmb		19 00 27.6	
	comp=Z,20nm,1.2s						
KVN	**Kaiserville**	**85.33 335**	P	**P**		**19 00 27.0**	**+1.1**
BOSA	**Boshof**	**85.56 125**	P	**P**		**19 00 26.6**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=262,slow=4.1,SNR=4.9						
BOSA			LR	LR		19 34 00.1	
	comp=Z,106nm,20.9s,baz=210,slow=32						
	comp=Z,3.4nm,0.8s						
BOSA	**Boshof**	**85.56 125**	P	**P**		**19 00 26.3**	**-1.2**
BOSA			IAmb	IAmb		19 00 27.8	
	comp=Z,26nm,1.4s						
K22A	**Casper**	**85.74 345**	P	**P**		**19 00 29.3**	**+1.5**
K22A	**Casper**	**85.74 345**	P	**P**		**19 00 30.0**	**+2.3**
	baz=164						
ELK	**Elko**	**86.04 338**	P	**P**		**19 00 30.7**	**+1.4**
	comp=Z,4.9nm,1.1s,baz=172,slow=3.7,SNR=13						
	comp=Z,4.9nm,1.1s						
ELK	**Elko**	**86.04 338**	P	**P**		**19 00 31.2**	**+1.8**
ELK			IAmb	IAmb		19 00 32.4	
	comp=Z,24nm,1.5s						
AFDM	**Forest Hills D**	**86.18 333**	P	**P**		**19 00 30.0**	**+0.1**
BMN	**Battle Mountai**	**86.33 336**	P	**P**		**19 00 31.9**	**+1.2**
HVU	**Hansel Valley**	**86.34 340**	P	**P**		**19 00 31.5**	**+0.8**
HVU			IAmb	IAmb		19 00 34.2	
	comp=Z,24nm,1.6s						
BW06	**Boulder Array**	**86.50 343**	P	**P**		**19 00 31.4**	**-0.2**
BW06			IAmb	IAmb		19 00 34.0	
	comp=Z,17nm,1.4s						
PD31	**Pinedale Array**	**86.50 343**	P	**P**		**19 00 32.3**	**+0.7**
PD31			IAmb	IAmb		19 00 34.0	
	comp=Z,21nm,1.6s						
PDAR	**Pinedale Array**	**86.50 343**	P	**P**		**19 00 32.9**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=175,slow=5.5,SNR=15						
PDAR			LR	LR		19 32 45.6	
	comp=Z,74nm,21.0s,baz=44,slow=31						
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**86.50 343**	P	**P**		**19 00 32.1**	**+0.5**
RSSD	**Black Hills**	**86.70 347**	P	**P**		**19 00 32.9**	**+0.3**
RSSD			IAmb	IAmb		19 00 34.8	
	comp=Z,19nm,1.2s						
AHID	**Auburn Hatcher**	**86.85 342**	P	**P**		**19 00 34.5**	**+1.2**
AHID			IAmb	IAmb		19 00 37.0	
	comp=Z,23nm,1.4s						
TSUM	**Tsumeb**	**87.01 113**	LR	LR		19 35 08.9	
	comp=Z,125nm,19.0s,baz=208,slow=33						
REDW	**Red Top Meadow**	**87.36 342**	P	**P**		**19 00 37.0**	**+1.2**
TPAW	**Teton Pass**	**87.50 342**	P	**P**		**19 00 38.1**	**+1.6**
DBIC	**Dimbokro**	**87.52 79**	LR	LR		19 36 09.8	
	comp=Z,158nm,18.2s,baz=246,slow=33						
LOHW	**Long Hollow**	**87.54 342**	P	**P**		**19 00 38.1**	**+1.5**
LOHW			IAmb	IAmb		19 00 40.1	
	comp=Z,22nm,1.6s						
FXWY	**Fox Creek**	**87.66 342**	P	**P**		**19 00 38.0**	**+0.7**
FXWY			IAmb	IAmb		19 00 40.9	
	comp=Z,18nm,1.5s						
MOOW	**Moose Ponds**	**87.70 342**	P	**P**		**19 00 39.3**	**+1.9**
MOOW			IAmb	IAmb		19 00 40.0	
	comp=Z,19nm,1.8s						
IMW	**Indian Meadow**	**87.88 342**	P	**P**		**19 00 39.7**	**+1.4**
DZM	**Mont Dzumac**	**88.18 242**	*e*LR	LR		19 28 39.5	
	comp=Z,542nm,26.9s						
DZM	**Mont Dzumac**	**88.18 242**	LR	LR		19 32 01.2	
	comp=Z,180nm,21.1s,baz=199,slow=30						
LBTB	**Lobatse**	**88.32 122**	LR	LR		19 32 48.3	
	comp=Z,49nm,20.6s,baz=228,slow=31						
HLID	**Hailey**	**88.43 340**	P	**P**		**19 00 42.8**	**+2.0**
YMR	**Madison River**	**88.62 342**	P	**P**		**19 00 43.9**	**+2.2**
RLMT	**Red Lodge**	**88.67 344**	P	**P**		**19 00 43.2**	**+1.3**
RLMT			IAmb	IAmb		19 00 45.6	
	comp=Z,24nm,1.4s						
YHH	**Holmes Hill**	**88.71 342**	P	**P**		**19 00 43.9**	**+1.6**
YHL	**Hebgen Lake**	**88.84 342**	P	**P**		**19 00 44.0**	**+1.1**
BCYI	**Bear Canyon**	**88.87 340**	P	**P**		**19 00 43.0**	**+0.1**
QLMT	**Earthquake Lak**	**88.88 342**	P	**P**		**19 00 44.2**	**+1.3**
J08A	**Circle Bar Ran**	**89.38 337**	P	**P**		**19 00 44.9**	**-0.3**
J08A			IAmb	IAmb		19 02 00.1	
	comp=Z,30nm,1.8s						
BOZ	**Bozeman (W)**	**89.65 342**	P	**P**		**19 00 48.0**	**+1.6**
LRM	**Limekiln Ridge**	**90.06 342**	P	**P**		**19 00 50.0**	**+1.6**
PINE	**Pine Mountain**	**90.53 335**	P	**P**		**19 00 52.8**	**+2.1**
PINE			IAmb	IAmb		19 01 01.8	
	comp=Z,15nm,0.9s						
MSO	**Missoula**	**91.36 341**	P	**P**		**19 00 55.8**	**+1.5**
KOWA	**Kowa**	**93.33 74**	LR	LR		19 39 13.7	
	comp=Z,116nm,21.7s,baz=307,slow=33						
STKA	**Stephens Creek**	**95.07 219**	LR	LR		19 38 06.7	
	comp=Z,69nm,18.0s,baz=203,slow=32						
TOA0	**Torodi Ar. Sit**	**96.62 78**	P	**P**		**19 01 18.3**	**-0.8**
TOA0			IAmb	IAmb		19 01 20.4	
	comp=Z,10nm,1.4s						
TORD	**Torodi Ar. Bea**	**96.62 78**	P	**P**		**19 01 18.2**	**-0.9**
	comp=Z,2.1nm,1.0s,baz=222,slow=3.7,SNR=8.2						
TORD			LR	LR		19 41 54.1	
	comp=Z,104nm,19.1s,baz=208,slow=34						
	comp=Z,2.1nm,1.0s						
GERES	**GERESS Array B**	**125.13 53**	PKP	**PKPdf**		**19 06 48.5**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=186,slow=2.4,SNR=5.5						
BRTR	**Keskin Array B**	**134.70 71**	PKP	**PKPdf**		**19 07 05.8**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=253,slow=1.5,SNR=2.0						
KBZ	**Khabaz**	**142.54 69**	PKP	**PKPdf**		**19 07 21.7**	**+0.4**
	comp=Z,2.7nm,1.1s,baz=169,slow=3.8,SNR=4.2						
YAK	**Yakutsk**	**150.47 326**		**PKPbc**		**19 07 38.6**	**-0.9**
GEYT	**Alibeck**	**152.04 85**	PKP	**PKPdf**		**19 07 35.5**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=328,slow=5.1,SNR=1.4						
GEYT			PKPbc	**PKPbc**		**19 07 43.1**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=285,slow=5.7,SNR=5.6						
GEYT			PKPab	**PKPab**		**19 07 51.3**	**-2.2**
	comp=Z,6.5nm,1.1s,baz=284,slow=7.5,SNR=9.4						
GEYT	**Alibeck**	**152.04 85**	PKPdf	**PKPdf**		**19 07 36.7**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**152.04 85**		**PKPdf**		**19 07 37.3**	**-0.1**
ARU	**Arti**	**152.48 45**		**PKPdf**		**19 07 38.2**	**+0.9**
HYBB	**Hyderabad (bro**	**152.54 146**	*e*PKPdf	**PKPdf**		**19 07 38.5**	**-0.2**
HYBB			*e*SKSdf	**SKSdf**		**19 14 44.5**	**-1.2**
ABKAR	**Akbulak array**	**154.75 60**		**PKPdf**		**19 07 40.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**156.81 191**	PKP	**PKPdf**		**19 07 44.2**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=334,slow=3.5,SNR=1.7						
CMAR	**Chiang Mai Arr**	**156.81 191**		**PKPdf**		**19 07 43.8**	**-0.8**
CN2	**Changchun**	**157.03 286**	*e*PKP	**PKPdf**		**19 07 42.2**	**-1.8**
XLT	**XiLinHaoTe**	**163.80 286**	‖ *i*PKP	**PKPdf**		**19 07 55.7**	**+4.1**
XLT			AMB	AMB			
	comp=Z,58nm,5.8s						
XLT			LR	LR			
	comp=Z,26nm,15.5s						
XLT			LR	LR			
	comp=Z,160nm,13.0s						
XLT			LR	LR			
	comp=Z,260nm,15.5s						
PZH	**PanZhiHua**	**163.94 205**	PKP	**PKPdf**		**19 07 47.8**	**-4.6**
KSH	**Kashi**	**165.90 92**	PKP	**PKPdf**		**19 07 54.0**	**+0.4**
ZAA0	**Zalesovo Array**	**165.91 24**		**PKPdf**		**19 07 50.2**	**-2.7**
ZALV	**Zalesovo Beam**	**165.91 24**	PKP	**PKPdf**		**19 07 51.0**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=155,slow=8.2,SNR=5.7						
ZALV	**Zalesovo Beam**	**165.91 24**		**PKPdf**		**19 07 50.4**	**-2.6**
NRN	**Naryn**	**166.24 84**	PKPab	**PKPab**		**19 08 54.4**	**-1.0**
HHC	**Hu-ho-hao-te**	**166.99 273**	*e*PKP	**PKPdf**		**19 07 51.2**	**-3.2**
CD2	**Chengdu**	**167.07 219**	*e*PKP	**PKPdf**		**19 07 54.4**	**-0.3**
TARG	**Taragay, Kyrgy**	**167.62 83**		**PKPab**		**19 08 59.1**	**-2.5**
MKAR	**Makanchi Array**	**169.80 54**	PKPab	**PKPab**		**19 09 11.4**	**+0.9**
	comp=Z,0.2nm,0.9s,baz=282,slow=6.9,SNR=2.8						
WMQ	**Urumqi**	**174.53 61**	*e*PKP	**PKPdf**		**19 07 58.7**	**+0.4**

*JMA **05** 19:02:06.2±0.6, 34°N±2°×14°2E±°, h30km±2km, MV2.5/24, FAR SE OFF BOSO PEN*
*IDC **05** 19:02:12.9±2.9, 33°.69N×137°.05E, h0km, mb3.5/2, mbtmp3.2/3, ML1.7/1, Error ellipse: s-maj=258.4km s-min=24.7km az=104.0*

ISC 05 19:02:08.2±1.6, 34°.47N±0°.09×141°.6E±0°.1, h27km, n9, σ1§08/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.52**	**291**	P	**Pn**	**19 02 18.4**	**-1.0**
BSO3	**Boso 3**	**0.93**	**291**	*e*P	**Pb**	**19 02 25.4**	**-0.1**
BSO4	**Boso 4**	**1.14**	**297**	*e*P	**Pb**	**19 02 28.8**	**-0.3**
JKUC	**kamogawauchiur**	**1.32**	**302**	P	**Pn**	**19 02 30.9**	**0.0**
JKUC				*e*S	**Sb**	**19 02 48.8**	**+0.1**
CHOJ	**Chosi**	**1.36**	**335**	*e*P	**Pb**	**19 02 31.4**	**-1.6**
JMKN	**Mikurajimanish**	**1.74**	**251**	*e*S	**Sb**	**19 02 59.4**	**-1.4**
MJAR	**Matsushiro Arr**	**3.43**	**308**	Pn	**Pn**	**19 03 01.1**	**+1.2**
	0.1nm,0.3s,baz=195,slow=5.0,SNR=7.5						
MJAR				Sn	**Sn**	**19 03 41.0**	**+1.3**
	0.1nm,0.3s,baz=219,slow=35,SNR=2.0						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**54.55**	**188**	P	**P**	**19 11 34.8**	**+0.9**
	0.2nm,0.4s,baz=2.1,slow=7.4,SNR=8.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**58.27**	**188**	P	**P**	**19 12 00.5**	**+0.1**
	0.7nm,1.1s,baz=7.4,slow=8.7,SNR=2.1						
	0.7nm,1.1s						

*NEIC **05** 19:04:32.8±1.1, 43°.80N±0°.05×105°.30W±0°.05, h0km±1km, ML3.4/84, Error ellipse: s-maj=9.9km s-min=5.6km az=336.0*
*IDC **05** 19:04:36.2±6.7, 44°.03N×105°.78W, h20km±39km, mb3.8/2, mbtmp3.5/6, ML3.8/4, MS3.8/3, Error ellipse: s-maj=31.0km s-min=22.7km az=40.0*

ISC 05 19:04:33.1±0.8, 43°.78N±0°.05×105°.39W±0°.05, h0km, n85, σ1§02/83, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.04**	**70**	Pg	**Pg**	**19 04 51.2**	**-1.8**
K22A	**Casper**	**1.40**	**217**		**Pg**	**19 04 58.2**	**-1.6**
K22A				IAML		19 05 22.3	
	comp=E,510nm,0.3s						
K22A				IAML		19 05 23.3	
	comp=N,578nm,0.3s						
PHWY	**Pilot Hill**	**2.48**	**181**		**Pn**	**19 05 14.2**	**-0.8**
PHWY				IAML		19 05 52.6	
	comp=N,134nm,0.5s						
RWWY	**Rawlins**	**2.48**	**213**		**Pn**	**19 05 15.8**	**+0.9**
N23A	**Red Feather La**	**2.91**	**188**		**Pn**	**19 05 20.9**	**+0.1**
N23A				IAML		19 06 05.3	
	comp=N,148nm,0.7s						
N23A				IAML		19 06 08.3	
	comp=E,136nm,0.7s						
LAO	**LASA Array**	**2.97**	**349**		**Pn**	**19 05 22.5**	**+1.0**
RLMT	**Red Lodge**	**3.08**	**297**		**Pn**	**19 05 23.6**	**+0.4**
RLMT				IAML		19 06 16.3	
	comp=E,86nm,0.7s						
RLMT				IAML		19 06 17.1	
	comp=E,81nm,0.8s						
BW06	**Boulder Array**	**3.21**	**253**		**Pn**	**19 05 24.7**	**-0.2**
BW06				IAML		19 06 17.2	
	comp=E,71nm,0.8s						
BW06				IAML		19 06 22.3	
	comp=E,72nm,0.7s						
PD31	**Pinedale Array**	**3.21**	**253**		**Pn**	**19 05 25.8**	**+0.9**
PDAR	**Pinedale Array**	**3.21**	**253**	Pn	**Pn**	**19 05 25.9**	**+1.0**
	comp=E,4.5nm,0.3s,baz=73,slow=17,SNR=57						
PDAR				Lg	Lg	19 06 10.7	
	comp=E,25nm,0.3s,baz=70,slow=30,SNR=15						
	comp=E,9.3nm,0.5s						
PDAR	**Pinedale Array**	**3.21**	**253**		**Pn**	**19 05 25.5**	**+0.6**
BRIGG	**Briggsdale**	**3.29**	**166**		**Pn**	**19 05 25.6**	**-0.4**
BRIGG				IAML		19 06 16.6	
	comp=E,108nm,0.8s						
BRIGG				IAML		19 06 24.1	
	comp=N,120nm,1.1s						
YMP	**Mirror Lake Pl**	**3.55**	**287**		**Pn**	**19 05 30.7**	**+1.0**
GCMT	**Greycliff**	**3.65**	**305**		**Pn**	**19 05 31.6**	**+0.7**
LKWY	**Lake**	**3.69**	**284**		**Pn**	**19 05 31.8**	**+0.2**
LKWY				IAML		19 05 59.4	
	comp=N,55nm,0.5s						
LKWY				IAML		19 06 45.7	
	comp=N,43nm,0.8s						
OGNE	**Ogallala**	**3.77**	**138**		**Pn**	**

HRY	Holter Researc	5.41 305		Pn	19 05 55.9 +0.9
LRM	Limekiln Ridge	5.42 295		Pn	19 05 56.2 +0.8
JLU	Jordanelle	5.50 237		Pn	19 05 56.1 -0.4
P18A	Preston Nutter	5.51 223		Pn	19 05 57.1 +0.4
MDND	Maddock	5.74 43		Pn	19 06 01.7 +2.2
SPUT	South Promonto	5.77 247		Pn	19 05 58.5 -1.6
HVU	Hansel Valley	5.79 252		Pn	19 06 00.2 -0.1
BCYI	Bear Canyon	5.80 278	Pn	Pn	19 06 01.3 +0.8
P17A	Butcher Ranch,	5.88 225		Pn	19 06 00.6 -1.0
MPU	Maple Canyon	5.98 233		Pn	19 06 02.5 -0.5
SDCO	Great Sand Dun	6.03 181	Pn	Pn	19 06 03.4 -0.4
SRU	San Rafael Swe	6.05 221		Pn	19 06 03.5 -0.5
S22A	4UR Ranch, Cre	6.12 191	Pg	Pb	19 06 22.8 +2.1
TMUT	Trail Mountain	6.25 226		Pn	19 06 07.8 +1.0
NLU	North Lily Min	6.28 235		Pn	19 06 07.2 0.0
BGU	Big Grassy Mou	6.33 246	Pn	Pn	19 06 07.0 -0.9
ECSD	EROS Data Cent	6.36 87	Pn	Pn	19 06 09.1 +1.1
Q16A	Castle Valley	6.52 224		Pn	19 06 10.0 -0.3
CBKS	Cedar Bluff	6.54 137	Pn	Pn	19 06 11.0 +0.5
HLID	Hailey	6.55 271	Pn	Pn	19 06 12.5 +1.7
DUG	Dugway, Tooele	6.58 240		Pn	19 06 10.6 -0.7
T25A	Trinidad	6.67 173	Pn	Pn	19 06 09.7 -2.8
MSO	Missoula	6.75 300	Pn	Pn	19 06 13.1 -0.4
F33A	5 Mile Ranch,	6.79 69	Pn	Pn	19 06 15.5 +1.5
MVCO	Mesa Verde	6.97 201	Pn	Pn	19 06 17.3 +0.6
MSU	Marysvale	7.34 227		Pn	19 06 22.2 +0.5
MTPU	Mount Pierson	7.70 224	Pn	Pn	19 06 26.9 +0.2
ELK	Elko	7.91 251	Pn	Pn	19 06 31.3 +1.8
	comp=N,0.3nm,0.3s,baz=64,slow=10,SNR=2.8				
	comp=N,0.6nm,0.3s				
SZCU	Shurtz Canyon	8.50 226	Pn	Pn	19 06 37.0 -0.6
CCUT	Cedar City	8.68 227	Pn	Pn	19 06 39.6 -0.5
AMTX	Amarillo	9.34 161	Pn	Pn	19 06 48.6 -0.3
WUAZ	Wupatki	9.45 211	Pn	Pn	19 06 50.7 +0.1
KVN	Kaiserville	10.64 248	Pn	Pn	19 07 08.3 +1.4
NVAR	Mina Array Bea	11.11 246	Pn	Pn	19 07 15.3 +2.0
	comp=N,0.3nm,0.3s,baz=66,slow=32,SNR=5.2				
	comp=N,0.5nm,0.5s				
TXAR	Lajitas Array	14.48 174	Pn	P	19 08 05.7 -0.6
	comp=N,0.1nm,0.3s,baz=358,slow=11,SNR=2.8				
TXAR	Lg	Lg	Lg		19 12 11.7
	comp=N,0.1nm,0.3s,baz=350,slow=32,SNR=5.1				
	comp=N,0.2nm,0.3s				
BBB	Bella Bella	17.32 307	LR	LR	19 15 44.7
	comp=N,128nm,18.2s,baz=79,slow=39				
MDT	Midelt	75.07 59	LR	LR	19 48 57.5
	comp=N,145nm,18.2s,baz=222,slow=35				
ZALV	Zalesovo Beam	82.26 354	P	P	19 16 54.1 -1.8
	comp=N,0.6nm,0.5s,baz=20,slow=4.7,SNR=3.7				
	comp=N,0.6nm,0.5s				
MKAR	Makanchi Array	89.56 355	P	P	19 17 30.8 -1.5
	comp=N,0.4nm,0.6s,baz=23,slow=5.5,SNR=4.6				
	comp=N,0.4nm,0.6s				
GUMO	Guam	94.41 293	LR	LR	19 56 10.2
	comp=N,31nm,19.0s,baz=107,slow=33				

IDC 05 19:09:04.5±6.8, 6°62S×128°09E, h285km±87km, mb2.8/1, mbtmp3.6/4, Error ellipse: s-maj=85.7km s-min=24.8km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.64	231	P	Pn	19 10 29.9	+0.7
	14nm,0.3s,baz=60,slow=3.1,SNR=13						
BATI				S	S	19 11 36.4	-0.9
	3.9nm,0.3s,baz=54,slow=19,SNR=1.6						
WRA	Warramunga Arr	14.57	156	P	P	19 12 17.5	-0.2
	0.2nm,0.3s,baz=338,slow=11,SNR=5.2						
ASAR	Alice Springs	17.85	162	P	P	19 12 53.6	+0.2
	0.6nm,0.4s,baz=345,slow=12,SNR=17						
SONM	Songino Array	57.50	343	P	P	19 18 24.3	-0.1
	0.3nm,0.6s,baz=134,slow=8.3,SNR=2.0						
	0.3nm,0.6s						

OMAN 05 19:51:47.1±99.0, 26°60N×58°97E, h0km±999km, mb4.9/1, ml3.6/14, Error ellipse: s-maj=24.4km s-min=8.5km az=19.0
TEH 05 19:51:50.1, 26°39N×58°59E, h11km, ML3.8
DSN 05 19:52:01.3±7.7, 26°06N×57°83E, h10km, ML3.0/6, Error ellipse: s-maj=86.6km s-min=16.4km az=65.0
IDC 05 19:52:10.1±3.4, 26°23N×58°76E, h0km, mb3.9/4, mbtmp3.9/4, MS2.5/1, Error ellipse: s-maj=89.5km s-min=28.4km az=155.0

ISC 05 19:51:52.2±1.5, 26°37N±0°07×58°61E±0°06, h10km, n65, σ1§16/58, mb4.0/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	1.76	333	ePn	Pn	19 52 20.9	-2.0
KHNJ				e		19 53 14.6	
	comp=Z,9μm,0.6s						
CHBR	Chabahar	1.85	114	ePn	Pn	19 52 23.0	-1.1
CHBR				e		19 52 53.3	
	comp=Z,99nm,0.6s						
BANOM	Banah	2.13	258	ePn	Pn	19 52 28.0	+0.1
BANOM	Banah	2.13	258	P	Pn	19 52 29.0	+1.1
	SNR=9.5						
BANOM	Banah	2.13	258	P	Pn	19 52 28.4	+0.5
IBND	Bandar-abas	2.14	301	ePn	Pn	19 52 27.3	-0.7
IBND				e		19 53 49.3	
	comp=Z,7μm,0.6s						
SHME	Shamm	2.24	262	ePn	Pn	19 52 30.0	+0.5
SHME	Shamm	2.24	262	P	Pn	19 52 31.0	+1.6
	SNR=5.6						
SHME	Shamm	2.24	262	P	Pn	19 52 27.3	-2.1
GENO	Geno	2.41	296	ePn	Pn	19 52 31.6	-0.3
GENO				e		19 53 21.1	
	comp=Z,3μm,0.4s						
MASF	Masafi	2.43	246	P	Pn	19 52 33.9	+1.9
MSFE	Esma-Masafi	2.43	246	ePn	Pn	19 52 31.4	-0.7
MSFE	Esma-Masafi	2.43	246	P	Pn	19 52 30.0	-2.1
NGCH	Negor - Chabah	2.49	113	ePn	Pn	19 52 32.9	+0.1
NGCH	Negor - Chabah	2.49	113	P	Pn	19 52 26.2	-6.6
	SNR=8.9						
UOSS	Minazif	2.60	237	ePn	Pn	19 52 32.8	-1.5
UOSS	Minazif	2.60	237	P	Pn	19 52 35.8	+1.5
UOSS	Minazif	2.60	237	P	Pn	19 52 32.3	-2.0
HATD	Hatta, Dubai	2.72	236	ePn	Pn	19 52 34.5	-1.5
HATD	Hatta, Dubai	2.72	236	P	Pn	19 52 37.1	+1.1
HATD	Hatta, Dubai	2.72	236	P	Pn	19 52 34.8	-1.2
KBAM	BAM	2.75	357	ePn	Pn	19 52 35.0	-1.6
KBAM				e		19 53 41.1	
	comp=Z,5μm,0.9s						
ASHO	Ashiyiah	2.86	234	ePn	Pn	19 52 37.4	-0.5
ASHO	Ashiyiah	2.86	234	P	Pn	19 52 39.2	+1.3
	SNR=19						
ASHO	Ashiyiah	2.86	234	P	Pn	19 52 37.4	-0.5
BIDO	Bidbid	2.87	189	ePn	Pn	19 52 37.4	-0.8
BIDO	Bidbid	2.87	189	P	Pn	19 52 37.3	-0.8
HOQ	Hoqain	3.02	203	ePn	Pn	19 52 39.1	-1.1
HOQ	Hoqain	3.02	203	P	Pn	19 52 39.4	-0.8
	SNR=15						
SMDO	Samad	3.34	189	P	Pn	19 52 45.0	+0.3
	SNR=11						
ASUD	Al Ashush, Dub	3.44	240	ePn	Pn	19 52 44.8	-1.1
ALNE	Al Ain	3.47	229	ePn	Pn	19 52 46.5	+0.1
ALNE	Al Ain	3.47	229	P	Pn	19 52 48.5	+2.2
SRVN	Saravan	3.53	72	ePn	Pn	19 52 48.1	+0.8
ARQ	Araqi	3.57	213	P	Pn	19 52 50.0	+2.2
	SNR=51						
ZHDN	Zahedan	3.59	32	ePn	Pn	19 52 47.9	-0.2
ZHDN				e		19 53 13.0	
	comp=Z,734nm,0.4s						
NGRK	Negar Kerman	3.66	333	ePn	Pn	19 52 48.7	-0.6
ZHSF	Zahedan	3.75	30	ePn	Pn	19 52 51.6	+1.3
WBK	Wadi Bani Khal	3.76	175	ePn	Pn	19 52 50.4	0.0
WBK	Wadi Bani Khal	3.76	175	P	Pn	19 52 50.6	+0.2
	SNR=54						
BSY	Bisya	3.83	200	P	Pn	19 52 53.3	+1.9
	SNR=11						
TVBK	TV Kerman	3.95	336	ePn	Pn	19 52 52.4	-0.9
TVBK				e		19 53 36.6	
	comp=Z,1μm,0.5s						
JMDO	Jabal Madar	4.01	187	P	Pn	19 52 54.6	+0.8
KHGB	Koh Gabri	4.41	335	ePn	Pn	19 52 59.4	-0.1
UMZA	Um Al Zommool	4.81	222	ePn	Pn	19 53 05.0	+0.2
UMZA	Um Al Zommool	4.81	222	P	Pn	19 53 05.0	+0.2
NHDN	Nehbandan	5.16	14	ePn	Pn	19 53 09.3	-0.4
MHTO	MHTO	5.39	186	P	Pn	19 53 13.4	+0.6
BSRN	Basiran	5.59	4	ePn	Pn	19 53 16.1	+0.5
IKOO	Kooshah	6.04	3	ePn	Pn	19 53 19.7	-2.2
IKOO				e		19 53 44.5	
	comp=Z,342nm,0.2s						
IMEH	Mehriz	6.11	326	ePn	Pn	19 53 21.8	-1.0
ITEG	Tejag	6.50	1	ePn	Pn	19 53 27.2	-1.0
ITEG				e		19 53 53.7	
	comp=Z,385nm,0.5s						
TPRV	Parvadeh(Tabas	6.84	346	ePn	Pn	19 53 32.7	0.0
YZKH	Yazd	6.95	331	ePn	Pn	19 53 34.1	-0.1
TABS	Tabas	7.37	350	ePn	Pn	19 53 39.9	-0.1
SHRT	Shahrakht	7.39	11	ePn	Pn	19 53 41.3	+1.0
NASN	Na'in	8.16	323	ePn	Pn	19 53 50.9	-0.1
ISFB	Sefidab	9.67	327	ePn	Pn	19 54 11.2	-0.3
SHRO	Shahrood	9.84	348	ePn	Pn	19 54 15.4	+1.5
BRTR	Keskin Array B	24.71	309	P	P	19 57 35.0	+21
	comp=Z,3.8nm,0.9s,baz=129,slow=9.9,SNR=11						
	comp=Z,3.8nm,0.9s						
MKAR	Makanchi Array	27.68	36	P	P	19 58 00.8	+20
	comp=Z,0.7nm,0.8s,baz=231,slow=11,SNR=5.7						
	comp=Z,0.7nm,0.8s						
ZALV	Zalesovo Beam	33.68	28	P	P	19 58 52.3	+19
	comp=Z,0.7nm,0.4s,baz=235,slow=7.9,SNR=2.1						
	comp=Z,0.7nm,0.4s						
KMBO	Kilima Mbogo	34.24	220	LR	LR	20 12 41.7	
	comp=Z,7.7nm,21.0s,baz=94,slow=36						
TORD	Torodi Ar. Bea	54.77	268	P	P	20 01 42.8	+20
	comp=Z,0.8nm,0.6s,baz=58,slow=6.8,SNR=6.4						
	comp=Z,0.8nm,0.6s						
JHJ	Hachijo jima 2	69.16	63	LR	LR	20 36 13.5	
	comp=Z,512nm,21.4s,baz=78,slow=38						

IDC 05 19:59:02.8±0.9, 5°60N×61°42E, h0km, mb3.9/11, mbtmp3.9/11, MS3.7/29, Error ellipse: s-maj=34.3km s-min=17.8km az=36.0
NEIC 05 19:59:04.2±1.1, 5°4N±0°1×61°2E±0°1, h10km±1km, mb4.4/12, Error ellipse: s-maj=22.2km s-min=15.4km az=222.0

ISC 05 19:59:03.9±0.7, 5°4N±0°1×61°3E±0°1, h14km, n51, σ1§17/24, mb4.2/15, MS3.7/26, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.60	210		Pn	20 01 48.3	-0.9
WSAR	Wadi Sarin	17.91	352	LR	LR	20 08 40.7	
	comp=Z,169nm,19.9s,baz=194,slow=33						
ATD	Arta Tunnel	19.25	290	LR	LR	20 09 46.0	
	comp=Z,109nm,18.6s,baz=176,slow=33						
PALK	Pallekele	19.35	84	LR	LR	20 09 25.5	
	comp=Z,284nm,18.5s,baz=14,slow=32						
RAYN	Ar Rayn	23.59	321	P	P	20 04 14.2	-0.3
KMBO	Kilima Mbogo	24.90	256	P	P	20 04 26.6	-0.5
LODK	Lodwar	25.96	267	P	P	20 04 34.9	-1.5
OPO	Ambohidratompo	27.61	210	LR	LR	20 12 58.6	
	comp=Z,145nm,19.8s,baz=215,slow=30						
MBAR	Mbarara	31.12	260	LR	LR	20 18 16.3	
	comp=Z,98nm,18.2s,baz=52,slow=37						
BRDH	Bariadhala	33.93	57	LR	LR	20 19 33.2	
	comp=Z,370nm,18.8s,baz=265,slow=36						
EIL	Elat	34.66	317	LR	LR	20 19 13.8	
	comp=Z,152nm,19.0s,baz=124,slow=35						
MMAI	Mount Meron Ar	36.56	322	LR	LR	20 20 31.2	
	comp=Z,97nm,19.2s,baz=188,slow=35						
LSA	Lhasa	37.09	46	P	P	20 06 14.0	-0.5
LSA				IAmb	IAmb	20 06 22.5	
	comp=Z,6.2nm,1.3s						
PSI	Prapat	37.59	92	LR	LR	20 19 18.8	
	comp=Z,117nm,19.1s,baz=250,slow=32						
GNI	Garni	37.66	339	LR	LR	20 22 04.9	
	comp=Z,78nm,19.3s,baz=8.0,slow=37						
LSZ	Lusaka	38.73	237	LR	LR	20 20 52.9	
	comp=Z,186nm,18.7s,baz=62,slow=34						
AAK	Ala-Archa	38.86	16	LR	LR	20 22 55.2	
	comp=Z,141nm,20.1s,baz=240,slow=37						
CMAR	Chiang Mai Arr	38.92	67	P	P	20 06 30.1	+0.4
	comp=Z,0.8nm,0.9s,baz=266,slow=9.6,SNR=5.5						
CMAR				PcP	PcP	20 08 41.0	+0.6
	comp=Z,0.7nm,0.9s,baz=235,slow=5.5,SNR=4.1						
CMAR				LR	LR	20 21 10.4	
	comp=Z,48nm,20.6s,baz=270,slow=34						
	comp=Z,0.8nm,0.9s						
MATP	Matopo	41.22	230	LR	LR	20 22 07.2	
	comp=Z,411nm,21.1s,baz=60,slow=33						
BRTR	Keskin Array B	42.30	328	P	P	20 06 58.9	+1.5
	comp=Z,1.8nm,0.9s,baz=123,slow=11,SNR=7.5						
BRTR				LR	LR	20 24 40.8	
	comp=Z,94nm,19.1s,baz=118,slow=36						
	comp=Z,1.8nm,0.9s						
AKTO	Aktyubinsk	44.95	357	P	P	20 07 19.3	+0.9
	comp=Z,1.7nm,0.6s,baz=134,slow=9.0,SNR=3.5						
AKTO				LR	LR	20 26 17.5	
	comp=Z,70nm,20.6s,baz=174,slow=36						
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	45.02	20	LR	LR	20 28 09.0	
	comp=Z,86nm,18.4s,baz=268,slow=39						
LBTB	Lobatse	46.06	227	LR	LR	20 24 26.0	
	comp=Z,141nm,18.1s,baz=46,slow=33						
LEM	Lembang	47.78	104	LR	LR	20 23 52.5	
	comp=Z,64nm,19.7s,baz=245,slow=31						
BVAR	Borovoye Array	48.04	7	PcP	PcP	20 09 10.2	-0.2
	comp=Z,0.6nm,0.8s,baz=202,slow=6.2,SNR=2.9						
BOSA	Boshof	48.48	224	LR	LR	20 26 42.9	
	comp=Z,149nm,18.6s,baz=17,slow=34						
VTS	Vitosha	50.08	324	P	P	20 07 57.3	-1.4
VTS				IAmb	IAmb	20 08 00.6	
	comp=Z,3.5nm,0.9s						
MLR	Muntele Rosu	50.38	328	P	P	20 08 01.9	+1.0
MLR				IAmb	IAmb	20 08 06.1	
	comp=Z,7.9nm,1.3s						
ARU	Arti	50.92	358	LR	LR	20 30 23.4	
	comp=Z,61nm,18.4s,baz=314,slow=37						
ZALV	Zalesovo Beam	52.02	17	P	P	20 08 10.4	-2.5
	comp=Z,0.4nm,0.3s,baz=217,slow=8.7,SNR=1.2						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	52.50	335	P	P	20 08 14.7	-1.8
	comp=Z,0.3nm,0.4s,baz=66,slow=2.3,SNR=3.5						
	comp=Z,0.3nm,0.4s						
SUR	Sutherland	53.81	223	LR	LR	20 29 43.0	
	comp=Z,60nm,19.2s,baz=86,slow=34						
SONM	Songino Array	57.11	35	P	P	20 08 50.0	-0.1
	comp=Z,1.1nm,0.9s,baz=222,slow=5.8,SNR=3.0						
	comp=Z,1.1nm,0.9s						
MORC	Moravsky Berou	57.49	328	P	P	20 08 53.1	+0.4
MORC				IAmb	IAmb	20 08 57.5	
	comp=Z,5.0nm,1.3s						
TORD	Torodi Ar. Bea	59.23	282	P	P	20 09 07.6	+2.2
	comp=Z,0.3nm,0.9s,baz=119,slow=3.6,SNR=1.7						
TORD				LR	LR	20 34 18.0	
	comp=Z,28nm,18.5s,baz=237,slow=36						
	comp=Z,0.3nm,0.9s						
H01W3	Cape Leeuwin H	63.81	133	T	T	21 18 55.3	
	baz=298						
H01W2	Cape Leeuwin H	63.82	133	T	T	21 18 50.7	
	baz=298						
H01W1	Cape Leeuwin H	63.83	133	T	T	21 18 54.4	
	baz=298						
NOA	NORSAR Array B	66.88	336	LR	LR	20 39 54.0	
	comp=Z,20nm,20.0s,baz=300,slow=37						
FITZ	Fitzroy Crossi	67.58	112	P	P	20 10 02.0	+1.4
	comp=Z,3.4nm,0.9s,baz=281,slow=5.2,SNR=4.4						
	comp=Z,3.4nm,0.9s						
ESDC	Sonseca Array	67.61	311	P	P	20 10 00.9	+0.4
	comp=Z,2.2nm,1.0s,baz=83,slow=5.8,SNR=10						
	comp=Z,2.2nm,1.0s						
KSRS	Korea Array	68.19	52	LR	LR	20 42 43.5	
	comp=Z,34nm,18.3s,baz=280,slow=39						
MAW	Mawson	72.86	179	LR	LR	20 34 15.0	
	comp=Z,52nm,21.4s,baz=338,slow=29						
KLR	Kul'dur	73.17	40	LR	LR	20 43 01.7	
	comp=Z,110nm,19.6s,baz=265,slow=36						
WRA	Warramunga Arr	76.01	112	P	P	20 10 52.2	+0.8
	comp=Z,4.4nm,0.9s,baz=295,slow=4.4,SNR=18						
	comp=Z,4.4nm,0.9s						
WB2	Warramunga Arr	76.02	112	P	P	20 10 51.7	+0.3
WB0	Warramunga Arr	76.03	112	P	P	20 10 51.6	+0.2
WR0	Warramunga Arr	76.20	112	P	P	20 10 53.0	+0.6
ASAR	Alice Springs	76.36	116	P	P	20 10 54.3	+1.0
	comp=Z,2.3nm,0.8s,baz=286,slow=5.6,SNR=20						
	comp=Z,2.3nm,0.8s						
JCJ	Chichijima	79.43	64	LR	LR	20 46 40.4	
	comp=Z,21nm,20.5s,baz=202,slow=36						
PETK	Petropavlovsk-	89.53	37	LR	LR	20 54 41.3	
	comp=Z,47nm,18.4s,baz=325,slow=37						

NNC 05 20:03:19.6±4.1, 38°17N×73°05E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=29.6km s-min=20.9km az=173.0

IDC 05 20:03:20.1±3.9, 37°23N×71°77E, h162km±24km, mb3.4/7, mbtmp4.0/13, Error ellipse: s-maj=45.7km s-min=17.5km az=148.0
NEIC 05 20:03:23.1±0.9, 37°31N±0°07×71°9E±0°1, h198km±3km, mb4.2/7, Error ellipse: s-maj=13.2km s-min=9.8km az=78.0

ISC 05 20:03:22.0±0.5, 37°27N±0°05×71°90E±0°06, h200km, n61, σ1§67/66, mb3.9/9, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.13	325		Pn	20 04 02.4	+0.4
DRK	Karamyk	2.21	358	Pn	Pn	20 04 03.5	+0.4
CHGR	Chuyangaron	2.57	304	Pn	Pn	20 04 07.0	+0.3
BTK	Batken	2.91	343		Pn	20 04 12.9	+2.3
CEP	Cherat	3.43	180	P	Pn	20 04 18.8	+1.8
CEP				S	Sn	20 05 01.0	+1.0
KBL	Kabul	3.57	221	Pn	Pn	20 04 20.5	+1.8
CHCP	Chirah Chowk	3.77	162	P	Pn	20 04 22.3	+1.3
NIL	Nilore	3.77	163		Pn	20 04 22.6	+1.5
THW	Thamme Wali	4.46	182	P	Pn	20 04 30.0	+0.4
AML	Almayashu	5.05	15	P	Pn	20 04 37.4	0.0
	SNR=62						
UCH	Uchtor	5.35	21	P	Pn	20 04 41.4	+0.2
	SNR=45						
EKS2	Erkin-Say	5.58	14	P	Pn	20 04 44.1	+0.3
	SNR=17						
DZA	Taraz	5.64	356	Pg	Pn	20 04 45.2	+0.7
	81nm,0.2s						
DZA				Lg	Lg	20 05 46.6	
	464nm,0.5s						
AAK	Ala-Archa	5.72	20	P	Pn	20 04 46.1	+0.4
	SNR=35						
AAK	Ala-Archa	5.72	20	P	Pn	20 04 45.6	-0.1
	21nm,0.3s,baz=177,slow=5.9,SNR=70						
AAK				S	Sn	20 05 49.1	-2.9
	31nm,0.7s,baz=307,slow=20,SNR=28						
AAK	Ala-Archa	5.72	20		Pn	20 04 46.0	+0.3
THN	Thein Dam	5.75	146	eP	Pn	20 04 46.5	+0.5
THN				eS	Sn	20 05 50.0	-2.4
KBK	Karagaybulak	5.87	23	P	Pn	20 04 48.4	+0.8
	SNR=8.3						
KK31	Karatay Array	5.93	350	Pn	Pn	20 04 48.3	+0.1
KKAR	Karatay Array	5.93	350		Pn	20 04 48.3	+0.1
BOOM	Boomskoye usch	6.07	30	Pn	Pn	20 04 50.2	-0.1
CHMS	Chumysh	6.13	20	P	Pn	20 04 51.5	+0.7
	SNR=5.4						
CHMS	Chumysh	6.13	20	⇑Pg	Pn	20 04 50.5	-0.4
	15nm,1.0s						
CHMS				⇑Lg	Lg	20 05 59.1	
	20nm,1.1s						
USP	Ospenovka	6.32	18	P	Pn	20 04 53.8	+0.5
	SNR=6.5						
TKM2	Tokmak 2	6.32	25	P	Pn	20 04 53.6	+0.1
	SNR=6.2						
TKM2	Tokmak 2	6.32	25	⇑Pg	Pn	20 04 52.8	-0.7
	2.0nm,0.3s						
TKM2				⇓Lg	Lg	20 06 03.7	
	8.8nm,0.8s						
TARG	Taragay, Kyrgy	6.38	44	Pn	Pn	20 04 50.9	-3.6
KST	Kastek	6.56	27	Pg	Pn	20 04 58.7	+2.2
	4.8nm,0.6s						
KST				Lg	Lg	20 06 09.2	
	14nm,0.7s						
DGS	Degeres	6.66	25	Pg	Pn	20 04 57.7	-0.1
	5.3nm,0.6s						
DGS				Lg	Lg	20 06 07.5	
	4.6nm,0.9s						
DDI	Dehra Dun	8.61	142	eS	Sn	20 06 53.9	-6.2
GEYT	Alibeck	10.96	278	P	Pn	20 05 50.9	-2.6
	1.1nm,0.3s,baz=89,slow=6.6,SNR=8.0						
GEYT				S	Sn	20 07 50.2	-5.5
	1.7nm,0.4s,baz=110,slow=17,SNR=3.8						
MKAR	Makanchi Array	12.25	36	P	Pn	20 06 11.5	+1.6
	0.3nm,0.5s,baz=205,slow=9.8,SNR=4.2						
PYUN	Piuthan	13.06	131	eP	Pn	20 06 18.7	-1.7
	9.9nm,0.3s						
DANN	Dangsing	13.35	128	eP	Pn	20 06 23.1	-1.1
	9.3nm,0.3s						
DANN				eS	S	20 08 42.1	-11
KOLN	Koldanda	13.67	130	eP	Pn	20 06 27.3	-0.7
GKN	Gorkha	14.15	127	eP	Pn	20 06 33.7	-0.2
KURBB	Kurchatov Arra	14.17	17	P	Pn	20 06 34.9	+1.0
	1.6nm,0.8s,baz=206,slow=11,SNR=16						
KKN	Kakani	14.71	126	eP	Pn	20 06 40.8	0.0
ABKAR	Abkulak array	14.79	328	P	Pn	20 06 40.5	-0.9
PKIN	Phulchoki	14.93	126	eP	Pn	20 06 44.4	+0.8
	13nm,0.3s						
PKI	Pulchoki	14.94	126	eP	Pn	20 06 44.3	+0.5
	11nm,0.3s						
GUN	Gumba	15.01	124	eP	Pn	20 06 44.7	0.0
JIRN	Jiri	15.39	124	eP	Pn	20 06 50.0	+0.7
	24nm,0.4s						
BVAR	Borovoye Array	15.80	357	P	P	20 06 53.7	+0.3
	1.3nm,0.4s,baz=166,slow=11,SNR=17						
BRVK	Borovoye	15.83	356	P	Pn	20 06 54.6	+0.6
BRVK				IAmb	IAmb	20 06 57.5	
	comp=Z,2.4nm,0.4s						
AKTO	Aktyubinsk	16.50	327	P	Pn	20 07 02.8	+0.6
	comp=Z,9.6nm,0.4s,baz=129,slow=10.0,SNR=30						
AKTO				S	S	20 09 59.8	-3.7
	comp=Z,2.7nm,0.6s,baz=141,slow=24,SNR=5.4						
LSA	Lhasa	17.73	110	P	P	20 07 16.1	+0.8
ZAA0	Zalesovo Array	18.92	24	P	P	20 07 27.8	+0.3
ZAA0				IAmb	IAmb	20 07 28.9	
	comp=Z,5.2nm,0.5s						
ZALV	Zalesovo Beam	18.92	24	P	P	20 07 28.3	+0.8
	comp=Z,5.5nm,0.4s,baz=212,slow=10.

ISC 05 20:08:44.1±0.7,61°49N±0°02×147°23W±0°02,h33km±2km, n413,σ1°98/393,mb3.8/12,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCM	**Sheep Creek Mo**	**0.35**	**352**		**Pn**	**20 08 54.0**	**+1.1**
SCM	**Sheep Creek Mo**	**0.35**	**352**	Sg	**Sb**	**20 09 00.5**	**+2.1**
SCM				IAML		20 09 00.8	
	comp=E,15μm,0.6s						
SCM				IAML		20 09 00.8	
	comp=N,8μm,0.6s						
SCM	**Sheep Creek Mo**	**0.35**	**352**	P	**Pn**	**20 08 54.0**	**+1.1**
	baz=170,SNR=556						
SCM				S	**Sb**	**20 09 00.3**	**+1.8**
	baz=170						
M23K	**Glacier View**	**0.39**	**323**		**Pn**	**20 08 54.4**	**+1.0**
M23K					**Sn**	**20 09 01.3**	**+1.7**
M23K	**Glacier View**	**0.39**	**323**	P	**Pn**	**20 08 54.5**	**+1.0**
	baz=142,SNR=1000						
M23K				S	**Sn**	**20 09 01.1**	**+1.5**
	baz=142						
JPK	**Jack Peak**	**0.53**	**145**		**Pb**	**20 08 56.2**	**+1.0**
JPK					**Sn**	**20 09 04.2**	**+1.1**
VMT	**TAPS Tl Valdez**	**0.58**	**134**		**Pb**	**20 08 56.4**	**+0.4**
VMT					**Sb**	**20 09 04.7**	**+0.7**
KNK	**Knik Glacier**	**0.59**	**263**		**Pb**	**20 08 57.5**	**+1.3**
KNK	**Knik Glacier**	**0.59**	**263**	Sg	**Sb**	**20 09 06.3**	**+1.7**
KNK				IAML		20 09 06.9	
	comp=E,20μm,0.7s						
KNK				IAML		20 09 07.3	
	comp=N,18μm,0.7s						
KNK	**Knik Glacier**	**0.59**	**263**	P	**Pb**	**20 08 57.5**	**+1.3**
	baz=84,SNR=1000						
KNK				S	**Sb**	**20 09 06.2**	**+1.7**
	baz=84						
GLI	**Glacier Island**	**0.61**	**174**		**Pb**	**20 08 57.4**	**+0.9**
GLI	**Glacier Island**	**0.61**	**174**	Sg	**Sb**	**20 09 06.5**	**+1.5**
GLI				IAML		20 09 06.8	
	comp=E,13μm,0.7s						
GLI				IAML		20 09 07.2	
	comp=N,11μm,0.5s						
GLI	**Glacier Island**	**0.61**	**174**	P	**Pb**	**20 08 57.4**	**+0.9**
	baz=355,SNR=540						
GLI				S	**Sb**	**20 09 06.3**	**+1.3**
	baz=355						
SML	**Sawmill**	**0.62**	**302**		**Pb**	**20 08 57.4**	**+0.8**
SML	**Sawmill**	**0.62**	**302**	Sg	**Sb**	**20 09 06.5**	**+1.4**
SML				IAML		20 09 07.4	
	comp=E,8μm,0.6s						
SML				IAML		20 09 07.5	
	comp=N,7μm,0.6s						
SML	**Sawmill**	**0.62**	**302**	P	**Pb**	**20 08 57.4**	**+0.8**
	baz=121,SNR=1000						
SML				S	**Sb**	**20 09 06.5**	**+1.4**
	baz=121						
KLU	**Klutina**	**0.63**	**89**		**Pb**	**20 08 57.4**	**+0.6**
KLU	**Klutina**	**0.63**	**89**	Sg	**Sb**	**20 09 06.1**	**+0.6**
KLU				IAML		20 09 06.9	
	comp=E,15μm,0.3s						
KLU				IAML		20 09 07.1	
	comp=N,17μm,0.2s						
KLU	**Klutina**	**0.63**	**89**	P	**Pb**	**20 08 57.3**	**+0.6**
	baz=269,SNR=1000						
KLU				S	**Sb**	**20 09 06.2**	**+0.8**
	baz=269						
DIV	**Divide**	**0.79**	**116**		**Pn**	**20 08 59.3**	**+0.4**
M24K	**Tolsona, Glenn**	**0.80**	**38**		**Pb**	**20 09 00.5**	**+0.9**
M24K					**Sb**	**20 09 11.9**	**+1.7**
M24K	**Tolsona, Glenn**	**0.80**	**38**	IAML		20 09 12.6	
	comp=E,7μm,0.8s						
M24K				IAML		20 09 12.7	
	comp=N,8μm,0.7s						
M24K	**Tolsona, Glenn**	**0.80**	**38**	P	**Pb**	**20 09 00.5**	**+0.9**
	baz=218,SNR=1000						
M24K				S	**Sb**	**20 09 12.1**	**+2.0**
	baz=218						
FID	**Port Fidalgo**	**0.82**	**153**		**Pb**	**20 09 00.4**	**+0.4**
PWL	**Port Wells**	**0.83**	**221**		**Pb**	**20 09 00.5**	**+0.4**
PWL	**Port Wells**	**0.83**	**221**	Sg	**Sb**	**20 09 12.1**	**+1.2**
PWL	**Port Wells**	**0.83**	**221**	P	**Pb**	**20 09 00.7**	**+0.6**
	baz=41,SNR=752						
PWL				S	**Sb**	**20 09 11.8**	**+0.9**
	baz=41						
GHO	**Glory Hole Cre**	**0.86**	**290**		**Pb**	**20 09 01.2**	**+0.5**
GHO	**Glory Hole Cre**	**0.86**	**290**	IAML		20 09 13.9	
	comp=E,5μm,0.3s						
GHO				IAML		20 09 14.2	
	comp=N,4μm,0.5s						
PMR	**Palmer**	**0.92**	**277**		**Pb**	**20 09 02.1**	**+0.6**
PMR	**Palmer**	**0.92**	**277**	Sg	**Sb**	**20 09 14.5**	**+1.1**
PMR				IAML		20 09 15.3	
	comp=E,8μm,0.7s						
PMR				IAML		20 09 15.3	
	comp=N,6μm,0.7s						
PMR	**Palmer**	**0.92**	**277**	P	**Pb**	**20 09 02.2**	**+0.6**
	baz=96,SNR=399						
PMR				S	**Sb**	**20 09 14.5**	**+1.1**
	baz=96						
PS12	**TAPS Pump St12**	**1.00**	**90**		**Pn**	**20 09 02.6**	**+0.8**
PS11	**TAPS Pump St11**	**1.02**	**54**		**Pb**	**20 09 04.0**	**+0.7**
WAT6	**Susitna Watana**	**1.12**	**348**		**Pn**	**20 09 04.6**	**+1.0**
WAT6					**Sn**	**20 09 19.3**	**+1.3**
WAT6	**Susitna Watana**	**1.12**	**348**	P	**Pn**	**20 09 04.6**	**+1.0**
	baz=167,SNR=249						
WAT6				S	**Sn**	**20 09 19.0**	**+1.0**
	baz=167						
HIN	**Hinchinbrook I**	**1.15**	**162**		**Pb**	**20 09 06.0**	**+0.5**
HIN	**Hinchinbrook I**	**1.15**	**162**	Sg	**Sb**	**20 09 22.4**	**+2.4**
EYAK	**Cordova Ski Ar**	**1.19**	**142**		**Pb**	**20 09 06.4**	**+0.4**
EYAK	**Cordova Ski Ar**	**1.19**	**142**	P	**Pb**	**20 09 06.2**	**+0.2**
	baz=323,SNR=1000						
EYAK				S	**Sb**	**20 09 22.3**	**+1.3**
	baz=323						
N25K	**Chitina, Valde**	**1.27**	**83**		**Pn**	**20 09 06.8**	**+1.3**
N25K	**Chitina, Valde**	**1.27**	**83**	Sg	**Sn**	**20 09 22.3**	**+0.9**
N25K				IAML		20 09 26.2	
	comp=E,4μm,0.6s						
N25K	**Chitina, Valde**	**1.27**	**83**	P	**Pn**	**20 09 06.8**	**+1.3**
	baz=265,SNR=1000						
N25K				S	**Sn**	**20 09 22.5**	**+1.2**
	baz=265						
RC01	**Rabbit Creek A**	**1.27**	**253**		**Pb**	**20 09 07.9**	**+0.4**
RC01	**Rabbit Creek A**	**1.27**	**253**	Sg	**Sb**	**20 09 24.4**	**+0.8**
RC01	**Rabbit Creek A**	**1.27**	**253**	P	**Pb**	**20 09 08.0**	**+0.4**
	baz=71,SNR=792						
RC01				S	**Sb**	**20 09 24.3**	**+0.8**
	baz=71						
HARP	**HAARP**	**1.34**	**46**		**Pb**	**20 09 08.6**	**0.0**
HARP	**HAARP**	**1.34**	**46**	P	**Pb**	**20 09 08.5**	**-0.1**
	baz=227,SNR=1000						
HARP				S	**Sb**	**20 09 26.5**	**+1.0**
	baz=227						
BMRM	**Bremner River**	**1.37**	**111**		**Pn**	**20 09 08.0**	**+1.0**
BMRM	**Bremner River**	**1.37**	**111**	P	**Pn**	**20 09 07.9**	**+1.0**
	baz=293,SNR=1000						
BMRM				S	**Sb**	**20 09 27.0**	**+0.6**
	baz=293						
M22K	**Willow**	**1.41**	**282**		**Pb**	**20 09 09.4**	**-0.3**
M22K	**Willow**	**1.41**	**282**	P	**Pb**	**20 09 09.4**	**-0.3**
	baz=100,SNR=280						
M22K				Sb	**Sb**	**20 09 29.2**	**+1.9**
	baz=100						
FIS	**Fire Island**	**1.48**	**258**		**Pb**	**20 09 11.6**	**+0.6**
WAT1	**Susitna Watana**	**1.48**	**336**		**Pn**	**20 09 10.1**	**+1.7**
WAT1	**Susitna Watana**	**1.48**	**336**	P	**Pn**	**20 09 10.2**	**+1.8**
	baz=154						
WAT1				S	**Sb**	**20 09 29.3**	**-0.2**
	baz=154						
GOAT	**Goat Mountain**	**1.52**	**126**		**Pb**	**20 09 10.7**	**-1.0**
O22K	**Cooper Landing**	**1.58**	**231**		**Pb**	**20 09 12.1**	**-0.6**
O22K	**Cooper Landing**	**1.58**	**231**	P	**Pb**	**20 09 12.0**	**-0.6**
	baz=50,SNR=54						
DHY	**Denali Highway**	**1.60**	**358**		**Pn**	**20 09 11.9**	**+1.8**
DHY	**Denali Highway**	**1.60**	**358**	IAML		20 09 36.4	
	comp=N,4μm,0.4s						
DHY	**Denali Highway**	**1.60**	**358**	P	**Pn**	**20 09 11.9**	**+1.8**
	baz=177,SNR=1000						
DHY				S	**Sb**	**20 09 32.6**	**-0.3**
	baz=177						
GLB	**Gilahina Butte**	**1.64**	**90**		**Pn**	**20 09 12.1**	**+1.5**
GLB	**Gilahina Butte**	**1.64**	**90**	IAML		20 09 35.0	
	comp=E,4μm,0.4s						
RAGM	**Ragged Mountai**	**1.67**	**130**		**Pn**	**20 09 12.8**	**+1.9**
SUA	**Susitna One**	**1.69**	**271**		**Pb**	**20 09 13.6**	**-0.9**
SUA	**Susitna One**	**1.69**	**271**	IAML		20 09 37.7	
	comp=E,2μm,0.8s						
SUA				IAML		20 09 37.7	
	comp=N,3μm,0.7s						
SUA	**Susitna One**	**1.69**	**271**	P	**Pb**	**20 09 13.7**	**-0.9**
	baz=88,SNR=1000						
PAX	**Paxson**	**1.70**	**28**		**Pn**	**20 09 13.6**	**+2.1**
PAX	**Paxson**	**1.70**	**28**	P	**Pn**	**20 09 13.7**	**+2.1**
	baz=209,SNR=1000						
CUT	**Chulitna**	**1.71**	**304**		**Pb**	**20 09 14.2**	**-0.6**
CUT	**Chulitna**	**1.71**	**304**	P	**Pb**	**20 09 14.2**	**-0.6**
	baz=122,SNR=299						
SLKM	**Skilak Lake**	**1.76**	**237**		**Pb**	**20 09 14.6**	**-1.1**
SEW	**Seward**	**1.76**	**219**		**Pn**	**20 09 14.5**	**+2.3**
SEW	**Seward**	**1.76**	**219**	P	**Pn**	**20 09 13.9**	**+1.7**
	baz=38,SNR=122						
VRDI	**Verde Repeater**	**1.84**	**96**		**Pn**	**20 09 15.0**	**+1.6**
VRDI	**Verde Repeater**	**1.84**	**96**	IAML		20 09 40.9	
	comp=N,2μm,0.4s						
VRDI				IAML		20 09 41.6	
	comp=E,1μm,0.8s						
HMT	**Hamilton**	**1.85**	**127**		**Pn**	**20 09 15.0**	**+1.5**
MCARA	**McCarthy VSAT**	**2.02**	**91**		**Pn**	**20 09 18.2**	**+2.4**
MCARA	**McCarthy VSAT**	**2.02**	**91**	P	**Pn**	**20 09 17.9**	**+2.1**
	baz=274,SNR=626						
NICHA	**Nichawak Mount**	**2.03**	**127**		**Pn**	**20 09 17.3**	**+1.4**
CAPN	**Captain Cook N**	**2.04**	**251**	P	**Pn**	**20 09 17.7**	**+1.7**
	baz=68						
BERG	**Berg Lake**	**2.04**	**121**		**Pn**	**20 09 17.5**	**+1.5**
PS10	**TAPS Pump St10**	**2.06**	**19**		**Pb**	**20 09 19.4**	**-1.4**
RND	**Reindeer**	**2.07**	**339**		**Pn**	**20 09 19.3**	**+2.8**
RND	**Reindeer**	**2.07**	**339**	IAML		20 09 49.0	
	comp=E,2μm,0.5s						
KAIM	**Kayak Island**	**2.09**	**137**		**Pn**	**20 09 18.3**	**+1.6**
KAIM	**Kayak Island**	**2.09**	**137**	IAML		20 09 56.2	
	comp=N,1μm,0.8s						
KAIM				IAML		20 10 00.6	
	comp=E,1μm,0.7s						
KAIM	**Kayak Island**	**2.09**	**137**	P	**Pn**	**20 09 18.1**	**+1.4**
	baz=320,SNR=63						
SKT	**Skwentna**	**2.11**	**285**		**Pn**	**20 09 19.6**	**+2.6**
SKT	**Skwentna**	**2.11**	**285**	IAML		20 09 48.6	
	comp=N,2μm,0.3s						
SKT				IAML		20 09 49.0	
	comp=E,970nm,0.3s						
SKT	**Skwentna**	**2.11**	**285**	P	**Pn**	**20 09 19.6**	**+2.6**
	baz=102,SNR=1000						
Q23K	**Middleton Isla**	**2.11**	**168**		**Pn**	**20 09 19.5**	**+2.6**
Q23K	**Middleton Isla**	**2.11**	**168**	IAML		20 09 58.6	
	comp=E,1μm,0.8s						
Q23K				IAML		20 10 04.4	
	comp=N,1μm,0.8s						
Q23K	**Middleton Isla**	**2.11**	**168**	P	**Pn**	**20 09 18.9**	**+2.0**
	baz=349						
MENT	**Mentasta**	**2.20**	**47**		**Pn**	**20 09 20.4**	**+2.2**
MENT				IAML		20 09 52.5	
	comp=E,2μm,0.3s						
M26K	**Nabesna, AK**	**2.20**	**64**		**Pn**	**20 09 20.8**	**+2.5**
M26K	**Nabesna, AK**	**2.20**	**64**	IAML		20 09 50.2	
	comp=E,1μm,0.4s						
M26K				IAML		20 09 52.2	
	comp=N,1μm,0.7s						
M26K	**Nabesna, AK**	**2.20**	**64**	P	**Pn**	**20 09 20.8**	**+2.5**
	baz=247,SNR=224						
KHIT	**Khitrov Hills**	**2.21**	**117**		**Pn**	**20 09 20.5**	**+2.1**
STLK	**Strandline Lak**	**2.21**	**272**		**Pn**	**20 09 21.2**	**+2.8**
SUCK	**Suckling Hills**	**2.21**	**128**		**Pn**	**20 09 19.7**	**+1.3**
SUCK	**Suckling Hills**	**2.21**	**128**	IAML		20 09 54.7	
	comp=E,1μm,0.4s						
TGL	**Tana Glacier**	**2.26**	**107**		**Pn**	**20 09 20.9**	**+1.7**
TGL	**Tana Glacier**	**2.26**	**107**	IAML		20 09 56.4	
	comp=N,2μm,0.5s						
GRIN	**Grindle Hills**	**2.26**	**121**		**Pn**	**20 09 20.6**	**+1.5**
SPCG	**Spurr Capps Gl**	**2.31**	**267**		**Pn**	**20 09 22.4**	**+2.5**
PTPK	**Patty Peak**	**2.32**	**95**		**Pn**	**20 09 22.0**	**+2.0**
SPU	**Mount Spurr**	**2.35**	**265**		**Pn**	**20 09 22.3**	**+2.0**
BGLC	**Bering Glacier**	**2.37**	**124**	P	**Pn**	**20 09 22.4**	**+1.9**
	baz=307,SNR=16						
WAX	**Waxell Ridge**	**2.38**	**114**		**Pn**	**20 09 22.5**	**+1.8**
L26K	**Log Cabin Wild**	**2.38**	**48**		**Pn**	**20 09 23.6**	**+2.8**
L26K	**Log Cabin Wild**	**2.38**	**48**	IAML		20 10 03.0	
	comp=E,1μm,0.4s						
L26K				IAML		20 10 04.3	
	comp=N,896nm,0.5s						
L26K	**Log Cabin Wild**	**2.38**	**48**	P	**Pn**	**20 09 23.6**	**+2.8**
	baz=231,SNR=262						
MCK	**McKinley**	**2.39**	**341**		**Pn**	**20 09 24.1**	**+3.3**
MCK	**McKinley**	**2.39**	**341**	P	**Pn**	**20 09 24.0**	**+3.1**
	baz=160,SNR=265						
BALM	**Baldy**	**2.40**	**99**		**Pn**	**20 09 22.9**	**+1.8**
N20K	**Mount Spurr**	**2.42**	**265**	P	**Pn**	**20 09 23.3**	**+2.0**
	baz=81,SNR=50						
SPCR	**Spurr Chakacha**	**2.42**	**265**		**Pn**	**20 09 23.6**	**+2.3**
SPCR	**Spurr Chakacha**	**2.42**	**265**	P	**Pn**	**20 09 23.3**	**+2.0**
	baz=81,SNR=38						
K24K	**Donnelly Dome**	**2.42**	**15**		**Pb**	**20 09 25.1**	**-1.8**
KIAG	**Kiagna River**	**2.42**	**101**		**Pn**	**20 09 23.1**	**+1.6**
TRF	**Thorofare Moun**	**2.43**	**326**		**Pn**	**20 09 24.5**	**+3.0**
TRF	**Thorofare Moun**	**2.43**	**326**	IAML		20 10 00.6	
	comp=E,1μm,0.6s						
TRF				IAML		20 10 03.9	
	comp=N,1μm,0.8s						
TRF	**Thorofare Moun**	**2.43**	**326**	P	**Pn**	**20 09 24.5**	**+3.0**
	baz=143,SNR=312						
BRSE	**Bradley Lake S**	**2.46**	**226**		**Pn**	**20 09 23.9**	**+2.1**
BRSE	**Bradley Lake S**	**2.46**	**226**	P	**Pn**	**20 09 23.9**	**+2.1**
	baz=44,SNR=48						
BRSE				S	**Sn**	**20 09 53.5**	**+2.8**
	baz=44						
CKL	**Chakachamna La**	**2.48**	**265**		**Pn**	**20 09 24.3**	**+2.1**
BRLK	**Bradley Lake**	**2.50**	**228**		**Pn**	**20 09 24.6**	**+2.2**
RIDG	**Independent Ri**	**2.52**	**25**		**Pn**	**20 09 25.7**	**+3.1**
RIDG	**Independent Ri**	**2.52**	**25**	IAML		20 10 09.7	
	comp=E,851nm,0.9s						
RIDG	**Independent Ri**	**2.52**	**25**	P	**Pn**	**20 09 25.7**	**+3.1**
	baz=207,SNR=798						
SNH	**Sunshine Point**	**2.52**	**119**		**Pn**	**20 09 24.7**	**+2.1**
SNH	**Sunshine Point**	**2.52**	**119**	IAML		20 10 03.1	
	comp=E,805nm,0.4s						
SNH				IAML		20 10 12.5	
	comp=N,736nm,0.6s						
ISLE	**Juniper Island**	**2.54**	**108**		**Pn**	**20 09 24.6**	**+1.5**
ISLE	**Juniper Island**	**2.54**	**108**	IAML		20 10 05.0	
	comp=N,1μm,0.9s						
ISLE				IAML		20 10 14.4	
	comp=E,1μm,0.8s						
BARK	**Barkley Ridge**	**2.56**	**113**		**Pn**	**20 09 25.1**	**+1.9**
DOT	**Dot Lake**	**2.62**	**33**		**Pn**	**20 09 26.5**	**+2.5**
M27K	**Edge Creek, AK**	**2.68**	**69**		**Pn**	**20 09 27.9**	**+3.0**
M27K	**Edge Creek, AK**	**2.68**	**69**	P	**Pn**	**20 09 27.4**	**+2.5**
	baz=253,SNR=40						
KTH	**Kantishna Hill**	**2.69**	**322**		**Pn**	**20 09 28.0**	**+3.0**
KTH	**Kantishna Hill**	**2.69**	**322**	IAML		20 10 03.6	
	comp=N,945nm,0.6s						
KTH				IAML		20 10 17.3	
	comp=E,878nm,0.9s						
BAGL	**Bagley Icefiel**	**2.70**	**110**		**Pn**	**20 09 27.1**	**+2.0**
CYK	**Cape Yakataga**	**2.72**	**119**		**Pn**	**20 09 27.9**	**+2.6**
PPLA	**Purkeypile**	**2.72**	**303**		**Pn**	**20 09 27.9**	**+2.4**
PPLA	**Purkeypile**	**2.72**	**303**	P	**Pn**	**20 09 28.0**	**+2.4**
	baz=119,SNR=168						
BARN	**Barnard Glacie**	**2.72**	**97**		**Pn**	**20 09 27.9**	**+2.3**
BARN	**Barnard Glacie**	**2.72**	**97**	IAML		20 10 09.7	
	comp=N,900nm,0.8s						
BARN				IAML		20 10 13.3	
	comp=E,1μm,0.6s						
CNPM	**China Poot**	**2.79**	**227**		**Pn**	**20 09 29.2**	**+2.8**
DFR	**Drift River**	**2.80**	**254**		**Pn**	**20 09 28.7**	**+2.1**
DFR	**Drift River**	**2.80**	**254**		**Pn**	**20 09 28.5**	**+1.9**
M20K	**Styx River**	**2.84**	**281**		**Pn**	**20 09 29.5**	**+2.4**
RDJH	**Redoubt Jeurge**	**2.86**	**254**		**Pn**	**20 09 30.1**	**+2.7**
RSO	**Redoubt South**	**2.88**	**252**		**Pn**	**20 09 29.9**	**+2.1**
BWN	**Browne**	**2.88**	**340**		**Pn**	**20 09 30.3**	**+2.6**
CTG	**Chitna Glacier**	**2.90**	**98**	P	**Pn**	**20 09 29.8**	**+1.8**
	baz=283,SNR=299						
MESA	**MESA**	**2.90**	**115**		**Pn**	**20 09 29.6**	**+1.6**
MESA	**MESA**	**2.90**	**115**	IAML		20 10 20.5	
	comp=E,1μm,0.5s						
MESA	**MESA**	**2.90**	**115**	P	**Pn**	**20 09 29.7**	**+1.6**
	baz=299,SNR=150						
CTGM	**Chitina Glacie**	**2.90**	**98**		**Pn**	**20 09 30.2**	**+2.2**
CTGM	**Chitina Glacie**	**2.90**	**98**	IAML		20 10 18.1	
	comp=N,782nm,0.6s						
CTGM				IAML		20 10 18.6	
	comp=E,508nm,0.7s						
YAH	**Yahtse**	**2.91**	**110**		**Pn**	**20 09 30.0**	**+1.9**
YAH	**Yahtse**	**2.91**	**110**	IAML		20 10 15.7	
	comp=N,710nm,0.8s						
YAH				IAML		20 10 17.4	
	comp=E,595nm,0.6s						
SCRK	**Sand Creek**	**2.91**	**29**		**Pn**	**20 09 30.2**	**+2.1**
SCRK	**Sand Creek**	**2.91**	**29**	P	**Pn**	**20 09 30.2**	**+2.1**
	baz=212,SNR=230						
RDWB	**Redoubt West**	**2.91**	**252**		**Pn**	**20 09 30.2**	**+2.1**
NCT	**North Crescent**	**2.93**	**254**		**Pn**	**20 09 30.2**	**+1.9**
HDA	**Harding Lake**	**2.94**	**2**		**Pn**	**20 09 30.8**	**+2.4**
HDA	**Harding Lake**	**2.94**	**2**	IAML		20 10 12.4	
	comp=E,783nm,0.8s						
HDA				IAML		20 10 21.5	
	comp=N,1μm,0.6s						
HDA	**Harding Lake**	**2.94**	**2**	P	**Pn**	**20 09 30.8**	**+2.4**
	baz=182,SNR=857						
CAST	**Castle Rocks**	**2.97**	**313**		**Pn**	**20 09 31.2**	**+2.3**
CAST	**Castle Rocks**	**2.97**	**313**	IAML		20 10 10.1	
	comp=E,394nm,0.5s						
CAST	**Castle Rocks**	**2.97**	**313**	P	**Pn**	**20 09 31.3**	**+2.4**
	baz=129,SNR=257						
BC01	**Beaver Creek A**	**2.98**	**56**		**Pn**	**20 09 31.4**	**+2.4**
L27K	**Beaver Creek,**	**2.98**	**56**		**Pn**	**20 09 31.5**	**+2.5**
L27K	**Beaver Creek,**	**2.98**	**56**	P	**Pn**	**20 09 31.5**	**+2.5**
	baz=240,SNR=75						
BC03		**3.00**	**56**		**Pn**	**20 09 31.9**	**+2.7**
O20K	**Slope Mountain**	**3.00**	**244**		**Pn**	**20 09 32.5**	**+3.2**
O20K	**Slope Mountain**	**3.00**	**244**	P	**Pn**	**20 09 31.5**	**+2.3**
	baz=60,SNR=25						
WRH	**Wood River Hil**	**3.02**	**353**		**Pn**	**20 09 31.8**	**+2.3**
WRH	**Wood River Hil**	**3.02**	**353**	IAML		20 10 18.1	
	comp=E,518nm,0.5s						
WRH				IAML		20 10 22.0	
	comp=N,480nm,0.7s						
YUK2	**White River**	**3.06**	**82**		**Pn**	**20 09 32.6**	**+2.4**
PS08	**TAPS Pump Stn8**	**3.07**	**3**		**Pn**	**20 09 32.4**	**+2.1**
LOGN	**Logan Glacier**	**3.09**	**100**		**Pn**	**20 09 32.4**	**+1.8**
LOGN	**Logan Glacier**	**3.09**	**100**	IAML		20 10 19.3	
	comp=N,498nm,0.6s						
LOGN				IAML		20 10 19.8	
	comp=E,930nm,0.6s						
BPAW	**Bear Paw Mtn.**	**3.14**	**328**		**Pn**	**20 09 33.5**	**+2.4**
BPAW	**Bear Paw Mtn.**	**3.14**	**328**	IAML		20 10 25.9	
	comp=E,577nm,0.8s						
BPAW				IAML		20 10 27.5	
	comp=N,722nm,0.8s						
BPAW	**Bear Paw Mtn.**	**3.14**	**328**	P	**Pn**	**20 09 33.6**	**+2.4**
	baz=145,SNR=134						
BVCY	**Beaver Creek**	**3.15**	**70**		**Pn**	**20 09 33.7**	**+2.4**
BVCY	**Beaver Creek**	**3.15**	**70**	P	**Pn**	**20 09 34.0**	**+2.6**
	baz=255,SNR=31						
CCB	**Clear Creek Bu**	**3.18**	**356**		**Pn**	**20 09 33.9**	**+2.1**
CCB	**Clear Creek Bu**	**3.18**	**356**	IAML		20 10 29.2	
	comp=E,461nm,0.7s						
NEA2	**Nenana**	**3.23**	**346**		**Pn**	**20 09 34.4**	**+2.1**
NEA2	**Nenana**	**3.23**	**346**	IAML		20 10 27.1	
	comp=E,453nm,1.0s						
NEA2				IAML		20 10 27.8	
	comp=N,474nm,0.6s						
NEA2	**Nenana**	**3.23**	**346**	P	**Pn**	**20 09 34.4**	**+2.1**
	baz=164,SNR=34						
YUK3	**Moose Creek**	**3.25**	**82**	P	**Pn**	**20 09 33.6**	**+0.8**
	baz=268,SNR=68						
J25K	**Salcha River,**	**3.25**	**14**		**Pn**	**20 09 34.5**	**+1.8**
J25K	**Salcha River,**	**3.25**	**14**	IAML		20 10 30.7	
	comp=E,317nm,0.7s						
J25K	**Salcha River,**	**3.25**	**14**	P	**Pn**	**20 09 34.5**	**+1.8**
	baz=196,SNR=198						
L20K	**Farewell, AK**	**3.29**	**291**		**Pn**	**20 09 35.1**	**+1.9**
L20K	**Farewell, AK**	**3.29**	**291**	P	**Pn**	**20 09 35.2**	**+1.9**
	baz=105,SNR=211						
IL01		**3.30**	**3**		**Pn**	**20 09 35.1**	**+1.8**
ILAR	**Eielson Array**	**3.30**	**3**	P	**Pn**	**20 09 35.2**	**+1.8**
	comp=E,310nm,0.5s,baz=183,slow=12,SNR=296						
ILAR				S	**Sn**	**20 10 16.8**	**+5.4**
	comp=E,98nm,0.6s,baz=201,slow=16,SNR=8.5						
IL03	**Eielson Array**	**3.30**	**3**		**Pn**	**20 09 35.1**	**+1.8**
CHX	**Chaix Hills**	**3.32**	**113**		**Pn**	**20 09 35.8**	**+2.1**
CHUM	**Lake Minchumin**	**3.36**	**318**		**Pn**	**20 09 36.7**	**+2.5**
CHUM	**Lake Minchumin**	**3.36**	**318**	P	**Pn**	**20 09 36.7**	**+2.5**
	baz=134,SNR=79						
COLA	**College**	**3.41**	**356**		**Pn**	**20 09 37.1**	**+2.3**
COLA	**College**	**3.41**	**356**	P	**Pn**	**20 09 37.1**	**+2.3**
	baz=175						
TCOL	**CIGO, UAF Yank**	**3.41**	**355**		**Pn**	**20 09 37.8**	**+2.9**
TCOL	**CIGO, UAF Yank**	**3.41**	**355**	P	**Pn**	**20 09 37.2**	**+2.4**
	baz=175,SNR=30						
M19K	**Big River Lodg**	**3.44**	**280**		**Pn**	**20 09 37.2**	**+1.9**
SAMH	**Samovar Hills**	**3.44**	**110**		**Pn**	**20 09 38.2**	**+2.9**
J26L	**Joseph Creek**	**3.46**	**27**		**Pn**	**20 09 38.0**	**+2.4**
J26L	**Joseph Creek**	**3.46**	**27**	IAML		20 10 36.4	
	comp=N,283nm,0.6s						
J26L	**Joseph Creek**	**3.46**	**27**	P	**Pn**	**20 09 38.0**	**+2.4**
	baz=210,SNR=313						
K27K	**Chicken**

baz=274
J20K Nowinta River 4.16 313 Pn 20 09 47.2 +2.1
J20K Nowinta River 4.16 313 IAML 20 10 57.0
comp=N,259nm,0.8s
J20K IAML 20 10 58.0
comp=E,191nm,0.7s
J20K Nowinta River 4.16 313 P **Pn 20 09 47.3 +2.1**
baz=127,SNR=50
M29M Somme Creek 4.25 73 Pn 20 09 49.1 +2.6
M29M Somme Creek 4.25 73 P **Pn 20 09 49.2 +2.8**
baz=261,SNR=29
I26K Coal Creek Min 4.25 24 Pn 20 09 48.8 +2.4
I26K Coal Creek Min 4.25 24 IAML 20 11 07.5
comp=N,221nm,1.1s
I26K IAML 20 11 14.7
comp=E,229nm,0.8s
O18K Koktuh Hills 4.25 251 Pn 20 09 47.8 +1.3
O18K Koktuh Hills 4.25 251 IAML 20 11 05.9
comp=N,212nm,1.0s
PNL Peninsula 4.27 112 Pn 20 09 48.9 +2.1
PNL Peninsula 4.27 112 P **Pn 20 09 47.6 +0.9**
baz=299,SNR=8.0
I21K Tanana 4.28 332 Pn 20 09 49.4 +2.6
I21K Tanana 4.28 332 IAML 20 11 05.0
comp=E,147nm,1.0s
I21K IAML 20 11 08.1
comp=N,182nm,1.1s
I21K Tanana 4.28 332 P **Pn 20 09 49.2 +2.4**
baz=148,SNR=63
N18K Kilae Creek 4.28 263 Pn 20 09 48.1 +1.3
N18K Kilae Creek 4.28 263 P **Pn 20 09 48.2 +1.3**
baz=76,SNR=26
EGAK Eagle 4.30 37 P **Pn 20 09 49.6 +2.6**
baz=222,SNR=19
YUK6 Outpost Mounta 4.32 93 Pn 20 09 50.4 +2.8
YUK6 Outpost Mounta 4.32 93 P **Pn 20 09 49.1 +1.5**
baz=281
TT01 Tatalina 4.36 293 Pn 20 09 49.4 +1.5
TTA Tatalina 4.36 293 Pn 20 09 49.4 +1.4
TTA Tatalina 4.36 293 P **Pn 20 09 49.3 +1.3**
baz=106,SNR=22
H24K Noodor Dome 4.38 356 Pn 20 09 50.9 +2.7
H24K Noodor Dome 4.38 356 IAML 20 10 58.3
comp=E,243nm,0.7s
H24K IAML 20 11 11.8
comp=N,163nm,1.2s
H24K Noodor Dome 4.38 356 P **Pn 20 09 50.1 +1.9**
baz=176
O29M Mount Kennedy 4.39 102 P **Pn 20 09 49.8 +1.4**
baz=289,SNR=18
DAWY Dawson 4.43 51 Pn 20 09 51.6 +2.6
DAWY Dawson 4.43 51 IAML 20 11 11.4
comp=E,144nm,1.0s
DAWY IAML 20 11 11.6
comp=N,139nm,0.9s
DAWY Dawson 4.43 51 P **Pn 20 09 51.2 +2.3**
baz=238,SNR=9.5
H23K Yukon River 4.48 348 Pn 20 09 52.8 +3.3
H23K Yukon River 4.48 348 IAML 20 10 46.6
comp=N,162nm,1.0s
H23K IAML 20 11 14.4
comp=E,150nm,1.0s
H23K Yukon River 4.48 348 P **Pn 20 09 51.3 +1.8**
baz=166
P18K Big Mountain, 4.49 246 Pn 20 09 51.3 +1.7
YUK7 Dusty Glacier 4.53 98 Pn 20 09 52.9 +2.5
L29M L29M 4.55 65 Pn 20 09 53.4 +2.8
L29M L29M 4.55 65 P **Pn 20 09 53.0 +2.4**
baz=253,SNR=14
KDAK Kodiak Island 4.60 219 P **Pn 20 09 52.6 +1.4**
comp=E,12nm,0.4s,baz=69,slow=14,SNR=72
KDAK S **Sn 20 10 42.4 -1.0**
comp=E,30nm,0.6s,baz=0.0,slow=20,SNR=7.3
KDAK Kodiak Island 4.60 219 P **Pn 20 09 52.6 +1.4**
baz=34
HYT Haines Junctio 4.76 94 Pn 20 09 56.1 +2.6
HYT Haines Junctio 4.76 94 P **Pn 20 09 55.1 +1.6**
baz=282,SNR=11
H22K Ishtalitna Cre 4.79 339 Pn 20 09 56.3 +2.5
Q18K Katmai Hardscr 4.83 237 P **Pn 20 09 55.8 +1.4**
baz=51
I27K Kandik River 4.83 29 Pn 20 09 57.3 +2.9
I27K Kandik River 4.83 29 P **Pn 20 09 57.0 +2.6**
baz=214,SNR=25
H25K Birch Creek 4.84 7 Pn 20 09 57.6 +3.2
H25K Birch Creek 4.84 7 P **Pn 20 09 56.6 +2.2**
baz=188
N30M Aishikik Lake 4.86 86 Pn 20 09 56.4 +1.5
N30M Aishikik Lake 4.86 86 P **Pn 20 09 56.4 +1.5**
baz=275,SNR=32
H21K Melozitna Rive 4.87 332 Pn 20 09 57.0 +2.1
H21K Melozitna Rive 4.87 332 IAML 20 11 20.1
comp=E,118nm,0.7s
H21K Melozitna Rive 4.87 332 P **Pn 20 09 57.0 +2.1**
baz=147,SNR=73
P29M Windy Craggy 5.04 107 P **Pn 20 09 58.9 +1.7**
baz=296,SNR=28
K29M Barlow Dome 5.06 58 Pn 20 10 00.2 +2.6
K29M Barlow Dome 5.06 58 P **Pn 20 10 00.0 +2.4**
baz=246,SNR=13
P17K Kvichak River 5.12 247 Pn 20 10 00.2 +1.9
P17K Kvichak River 5.12 247 P **Pn 20 09 59.8 +1.5**
baz=60,SNR=13
O17K Koliganek Bris 5.15 255 Pn 20 10 00.3 +1.5
O17K Koliganek Bris 5.15 255 P **Pn 20 10 00.1 +1.3**
baz=66
P30M Million Dollar 5.21 101 Pn 20 10 01.3 +1.6
G24K Hadweenzic Riv 5.24 359 Pn 20 10 01.9 +1.9
G24K Hadweenzic Riv 5.24 359 P **Pn 20 10 01.8 +1.9**
baz=179,SNR=34
OHAK Old Harbor 5.28 219 Pn 20 10 01.5 +0.9
OHAK Old Harbor 5.28 219 P **Pn 20 10 01.4 +0.9**
baz=34
G25K Bearman Lake 5.32 5 Pn 20 10 03.1 +2.1
G25K Bearman Lake 5.32 5 P **Pn 20 10 02.9 +1.8**
baz=186
IM03 5.36 330 Pn 20 10 04.0 +2.4
IM01 Indian Mountai 5.37 330 Pn 20 10 04.1 +2.4
G23K Bananza Creek 5.39 348 Pn 20 10 04.4 +2.4
G23K Bananza Creek 5.39 348 P **Pn 20 10 04.1 +2.1**
baz=166
H27K Steamboat Moun 5.39 25 Pn 20 10 04.0 +2.1
H27K Steamboat Moun 5.39 25 P **Pn 20 10 04.1 +2.1**
baz=210,SNR=44
Q17K Contact Creek 5.43 237 P **Pn 20 10 03.9 +1.3**
baz=50
O30N Mendenhall 5.45 93 Pn 20 10 04.3 +1.4
O30N Mendenhall 5.45 93 P **Pn 20 10 04.5 +1.7**
baz=282
GCSA Galena City Sc 5.46 311 P **Pn 20 10 04.8 +1.8**
baz=122
N31M Braeburn, Yuko 5.49 85 P **Pn 20 10 05.4 +2.0**
baz=275
I29M Ogilvie Camp, 5.58 42 P **Pn 20 10 06.8 +2.1**
baz=230
G26K Porcupine Rive 5.69 14 Pn 20 10 08.2 +2.2
G26K Porcupine Rive 5.69 14 P **Pn 20 10 08.1 +2.1**
baz=197,SNR=48
O16K Kokwok River B 5.69 255 P **Pn 20 10 07.4 +1.3**
baz=66
N16K Nishlik Lake 5.71 265 Pn 20 10 08.1 +1.6
N16K Nishlik Lake 5.71 265 P **Pn 20 10 07.7 +1.3**
baz=75
PLBC Pleasant Camp 5.75 106 Pn 20 10 09.3 +2.4
PLBC Pleasant Camp 5.75 106 P **Pn 20 10 08.6 +1.7**
baz=295,SNR=16
G21K Allakaket 5.75 334 Pn 20 10 09.2 +2.2
G21K Allakaket 5.75 334 P **Pn 20 10 09.0 +2.1**
baz=148,SNR=18
G22K Bettles 5.77 343 P **Pn 20 10 09.3 +2.1**
baz=159
G27K Doyon Strip 5.87 22 Pn 20 10 10.5 +1.9
G27K Doyon Strip 5.87 22 P **Pn 20 10 10.5 +1.9**
baz=207,SNR=22
P16K Nushagak River 5.89 250 P **Pn 20 10 10.7 +1.7**
baz=61
COLD Coldfoot 5.91 349 P **Pn 20 10 11.2 +2.1**
baz=166,SNR=72
R17K Ugashik Creek 6.04 234 P **Pn 20 10 12.6 +1.6**
baz=47
WHY Whitehorse 6.05 92 P **Pn 20 10 12.6 +1.4**
baz=283
BM03 Burnt Mountain 6.06 10 Pn 20 10 13.9 +2.6
F24K Squaw Lake 6.06 358 Pn 20 10 13.9 +2.6
F24K Squaw Lake 6.06 358 P **Pn 20 10 13.1 +1.8**
baz=177
SII Sitkinak Islan 6.11 219 P **Pn 20 10 13.2 +1.3**
baz=33
F25K Christian Rive 6.17 6 Pn 20 10 15.2 +2.5
F25K Christian Rive 6.17 6 P **Pn 20 10 14.6 +1.8**
baz=187,SNR=58
SKAG Skagway 6.22 104 P **Pn 20 10 15.1 +1.6**
baz=294,SNR=7.4
F21K Alatna River 6.36 337 Pn 20 10 18.1 +2.8
F21K Alatna River 6.36 337 P **Pn 20 10 17.7 +2.3**
baz=152,SNR=23
F26K Sheenjek River 6.37 11 Pn 20 10 18.1 +2.6
F26K Sheenjek River 6.37 11 P **Pn 20 10 18.0 +2.4**
baz=193,SNR=48
E23K Chandalar 6.68 352 P **Pn 20 10 22.3 +2.5**
baz=170,SNR=40
E25K Arctic Village 6.70 5 Pn 20 10 22.1 +2.1
E25K Arctic Village 6.70 5 P **Pn 20 10 21.9 +1.9**
baz=187,SNR=46
EPYK Eagle Plains 6.74 39 P **Pn 20 10 22.4 +1.9**
baz=228,SNR=11
N32M Quiet Lake 6.82 87 Pn 20 10 23.2 +1.5
P32M Atlin 6.93 100 Pn 20 10 25.3 +2.1
P32M Atlin 6.93 100 P **Pn 20 10 25.0 +1.8**
baz=292
E27K Coleen River 7.14 17 Pn 20 10 27.9 +2.0
E27K Coleen River 7.14 17 P **Pn 20 10 28.0 +2.0**
baz=202,SNR=11
P33M Teslin, Yukon 7.16 94 P **Pn 20 10 27.2 +0.9**
baz=286
R32K Eaglecrest 7.16 111 P **Pn 20 10 28.1 +1.8**
baz=302,SNR=6.8
TOLK Toolik Lake Re 7.25 353 P **Pn 20 10 29.5 +1.9**
baz=171,SNR=12
G30M tAoh Zraii Nji 7.30 36 Pn 20 10 29.7 +1.4
G30M tAoh Zraii Nji 7.30 36 P **Pn 20 10 29.6 +1.4**
baz=226,SNR=5.5
SIT Sitka 7.54 121 P **Pn 20 10 32.6 +1.1**
baz=311
MMPY Sheldon Lake, 7.59 74 P **Pn 20 10 34.4 +2.2**
baz=268
S32K Killisnoo 7.59 116 Pn 20 10 34.1 +1.9
S32K Killisnoo 7.59 116 P **Pn 20 10 34.4 +2.1**
baz=307,SNR=6.6
D24K Happy Valley 7.73 356 P **Pn 20 10 37.2 +3.1**
baz=174,SNR=6.8
Q32M Nakina River 7.87 102 Pn 20 10 36.6 +0.4
Q32M Nakina River 7.87 102 P **Pn 20 10 37.9 +1.7**
baz=295,SNR=5.3
D25K Kavik River 7.88 2 P **Pn 20 10 40.7 +4.5**
baz=183,SNR=21
C27K Jago River 8.30 9 Pn 20 10 45.1 +3.2
C27K Jago River 8.30 9 P **Pn 20 10 43.7 +1.8**
baz=192,SNR=9.5
R33M Jennings River 8.31 97 Pn 20 10 44.1 +1.9
R33M Jennings River 8.31 97 P **Pn 20 10 43.2 +1.0**
baz=292
C23K Itkillik River 8.50 352 Pn 20 10 46.5 +2.0
C23K Itkillik River 8.50 352 P **Pn 20 10 47.7 +3.1**
baz=169
S34M Telegraph Cree 8.88 107 P **Pn 20 10 51.4 +1.4**
baz=300
INK Inuvik 8.96 34 P **Pn 20 10 53.5 +2.6**
comp=E,1.8nm,0.3s,baz=230,slow=27,SNR=10
INK S **Sn 20 12 32.9 +2.3**
comp=E,3.5nm,0.7s,baz=174,slow=19,SNR=1.5
INK Inuvik 8.96 34 P **Pn 20 10 53.0 +2.0**
baz=227
U33K Whale Pass 9.08 120 P **Pn 20 10 54.7 +2.2**
baz=312
DLBC Dease Lake 9.15 102 P **Pn 20 10 55.3 +1.7**
comp=E,1.6nm,0.3s,baz=340,slow=14,SNR=7.5
DLBC S **Sn 20 12 36.1 +0.8**
comp=E,3.7nm,0.6s,baz=326,slow=3.6,SNR=2.2
DLBC Dease Lake 9.15 102 P **Pn 20 10 55.2 +1.6**
baz=297
WRAK Wrangell Islan 9.21 117 P **Pn 20 10 56.5 +2.2**
baz=310
T35M Bob Quinn 9.79 110 P **Pn 20 11 03.5 +1.2**
baz=304
H02S1 DAWSON INLET T 11.48 130 P **Pn 20 11 26.3 +0.9**
C36M Paulatuk 12.37 41 P **Pn 20 11 38.3 +0.9**
baz=242
YKA Yellowknife Ar 15.27 72 P **P 20 12 19.8 -1.6**
comp=E,0.6nm,0.4s,baz=280,slow=10,SNR=4.1
RES Resolute Bay 22.52 33 P **P 20 13 41.6 +1.2**
comp=E,2.7nm,0.7s,baz=217,slow=10,SNR=1.7
comp=E,2.7nm,0.7s
SONM Songino Array 56.14 309 P **P 20 18 16.6 -3.4**
comp=E,0.4nm,0.5s,baz=40,slow=11,SNR=2.3
SONM pP **sP 20 18 34.9 -0.3**
comp=E,1.1nm,0.7s,baz=57,slow=5.5,SNR=4.8
comp=E,0.4nm,0.5s
NOA NORSAR Array B 56.69 12 P **P 20 18 22.6 -1.0**
comp=E,0.5nm,0.8s,baz=296,slow=8.6,SNR=3.0
comp=E,0.5nm,0.8s
FINES FINESS Array B 57.29 4 P **P 20 18 28.0 +0.3**
comp=E,2.6nm,0.6s,baz=354,slow=8.8,SNR=12
comp=E,2.6nm,0.6s
ZALV Zalesovo Beam 57.77 327 P **P 20 18 29.3 -2.0**
comp=E,0.6nm,0.5s,baz=125,slow=12,SNR=3.3
comp=E,0.6nm,0.5s
EKA Eskdalemuir Ar 60.13 23 P **P 20 18 45.7 -1.9**
comp=E,1.3nm,0.7s,baz=6.6,slow=7.4,SNR=3.7
comp=E,1.3nm,0.7s
BVAR Borovoye Array 61.99 335 P **P 20 18 59.7 -0.6**
comp=E,0.6nm,0.8s,baz=16,slow=11,SNR=4.4
comp=E,0.6nm,0.8s
KURBB Kurchatov Arra 62.41 329 P **P 20 19 02.5 -0.7**
comp=E,0.4nm,0.7s,baz=23,slow=6.0,SNR=4.2
comp=E,0.4nm,0.7s
MKAR Makanchi Array 64.95 325 P **P 20 19 19.5 -0.4**
comp=E,0.3nm,0.5s,baz=37,slow=6.1,SNR=2.5
comp=E,0.3nm,0.5s
AKASG Malin Array Be 68.13 2 P **P 20 19 39.8 -0.4**
comp=E,0.7nm,0.5s,baz=1.1,slow=6.5,SNR=4.6
comp=E,0.7nm,0.5s
ESDC Sonseca Array 74.86 29 P **P 20 20 20.9 -0.1**
comp=E,0.9nm,0.8s,baz=333,slow=4.8,SNR=7.3
comp=E,0.9nm,0.8s
CMAR Chiang Mai Arr 84.72 299 P **P 20 21 11.8 -2.7**
comp=E,0.3nm,0.5s,baz=7.8,slow=7.3,SNR=1.4
comp=E,0.3nm,0.5s

IDC 05 20:11:49.2±1.9, 1°.65N×126°.20E, h0km, mb3.2/4, mbtmp3.2/4, MS2.5/1, Error ellipse: s-maj=188.6km s-min=23.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.24**	**224**	LR	LR	20 17 25.1	
comp=Z,31nm,20.1s,baz=133,slow=36							
WRA	**Warramunga Arr**	**22.90**	**160**	P	P	20 16 55.2	+0.4
0.4nm,0.5s,baz=338,slow=11,SNR=7.7							
0.4nm,0.5s							
ASAR	**Alice Springs**	**26.26**	**164**	P	P	20 17 25.9	-0.5
0.1nm,0.4s,baz=348,slow=12,SNR=1.8							
0.1nm,0.4s							
MKAR	**Makanchi Array**	**58.96**	**326**	P	P	20 21 50.5	-0.1
0.2nm,0.4s,baz=110,slow=8.1,SNR=4.8							
0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**63.20**	**328**	P	P	20 22 19.4	+0.1
0.1nm,0.5s,baz=126,slow=6.9,SNR=2.5							
0.1nm,0.5s							

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*IDC **05** 20:30:45.5±2.5, 5°.83S×145°.87E, h114km±23km, mb3.5/10, mbtmp3.9/14, Error ellipse: s-maj=23.1km s-min=17.8km az=55.0*

ISC 05 20:30:44.3±0.9, 5°.74S±0°.09×145°.9E±0°.1, h100km, n21, σ1°.36/21, mb3.7/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.85**	**161**	P	**Pn**	**20 31 42.8**	**+1.3**
54nm,0.3s,baz=346,slow=6.5,SNR=46							
PMG				S	**Sn**	**20 32 25.8**	**0.0**
85nm,0.4s,baz=330,slow=20,SNR=27							
PMG	**Port Moresby**	**3.85**	**161**	P	**Pn**	**20 31 42.9**	**+1.4**
PMG	**Port Moresby**	**3.85**	**161**	P	**Pn**	**20 31 42.8**	**+1.3**
COEN	**Coen**	**8.59**	**198**	P	**Pn**	**20 32 48.0**	**+2.1**
CTA	**Charters Tower**	**14.27**	**179**	P	**Pn**	**20 34 02.5**	**+0.8**
4.2nm,0.9s,baz=353,slow=17,SNR=1.7							
KDU	**Kakadu**	**14.93**	**242**	P	**Pn**	**20 34 08.6**	**-1.6**
SIJI	**Sorong**	**15.38**	**288**	P	**Pn**	**20 34 18.2**	**+2.3**
6.7nm,0.7s,baz=37,slow=12,SNR=5.6							
WRAB	**Tennant Creek**	**18.02**	**217**	P	**Pn**	**20 34 48.7**	**+0.3**
WRA	**Warramunga Arr**	**18.04**	**217**	P	**P**	**20 34 46.4**	**-1.3**
0.8nm,0.7s,baz=36,slow=11,SNR=13							
KNRA	**Kununurra**	**19.49**	**238**	P	**P**	**20 35 02.9**	**-0.7**
ASAR	**Alice Springs**	**21.23**	**212**	P	**P**	**20 35 21.2**	**-1.1**
0.8nm,0.8s,baz=42,slow=7.3,SNR=5.4							
0.8nm,0.8s							
BATI	**Baumata**	**22.45**	**257**	P	**P**	**20 35 34.8**	**-0.5**
14nm,0.6s,baz=108,slow=9.6,SNR=4.2							
14nm,0.6s							
FITZ	**Fitzroy Crossi**	**23.27**	**236**	P	**P**	**20 35 41.6**	**-1.7**
2.9nm,0.6s,baz=56,slow=9.2,SNR=13							
2.9nm,0.6s							
STKA	**Stephens Creek**	**26.31**	**188**	P	**P**	**20 36 08.4**	**-2.3**
1.9nm,1.0s,baz=326,slow=11,SNR=2.1							
1.9nm,1.0s							
CMAR	**Chiang Mai Arr**	**52.15**	**299**	P	**P**	**20 39 46.1**	**+1.1**
1.4nm,0.8s,baz=118,slow=5.8,SNR=10							
1.4nm,0.8s							
VNDA	**Vanda**	**72.24**	**176**	P	**P**	**20 41 58.9**	**+0.7**
0.4nm,0.7s,baz=319,slow=11,SNR=3.0							
0.4nm,0.7s							
MKAR	**Makanchi Array**	**76.60**	**321**	P	**P**	**20 42 23.9**	**0.0**
0.6nm,0.7s,baz=120,slow=6.3,SNR=5.6							
0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**78.21**	**328**	P	**P**	**20 42 31.7**	**-1.0**
0.7nm,0.6s,baz=119,slow=5.4,SNR=2.7							
0.7nm,0.6s							
QSPA	**South Pole Qui**	**84.22**	**180**	P	**P**	**20 43 04.7**	**+0.2**
0.7nm,0.7s,baz=332,slow=1.8,SNR=9.2							
0.7nm,0.7s							
ILAR	**Eielson Array**	**85.68**	**23**	P	**P**	**20 43 10.9**	**-0.7**
1.4nm,0.7s,baz=247,slow=5.2,SNR=11							
1.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**143.96**	**284**	PKP	PKPab	20 50 07.5	+0.9
0.6nm,0.7s,baz=83,slow=1.7,SNR=5.9							

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*EAF **05** 20:33:34.6±5.3, 25°.01S×28°.62E, h0km±999km, MD3.4*
*BUL **05** 20:33:34.2±0.7, 21°.32S×33°.67E, h25km±32km, MD3.4*

PRE 05 20:33:29.1±1.5, 21°.15S×33°.72E, h10km, ML2.1, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.18**	**222**	*e*P	Pn	20 34 20.9	+1.6
MOPA				*e*S	Sn	20 34 56.2	-1.1
MOPA				IAML		20 34 59.3	
comp=Z,4.9nm,0.3s							
MOPA	**Mopani**	**3.18**	**222**	*i* P	Pb	20 34 22.6	-3.2
MOPA				*i* S	Sn	20 34 56.6	-0.7
MOPA	**Mopani**	**3.18**	**222**	*i* P	Pb	20 34 22.6	-3.2
MOPA				*i* S	Sn	20 34 56.6	-0.7
MUSN	**Musina, Limpop**	**3.76**	**252**	*e*P	Pn	20 34 28.0	+0.8
MUSN				*e*S	Sn	20 35 12.0	+0.4
MUSN				IAML		20 35 27.1	
comp=Z,4.2nm,0.8s							
MUSN	**Musina, Limpop**	**3.76**	**252**	*i* P	Pn	20 34 29.2	+2.0
MUSN				*i* S	Sn	20 35 09.7	-1.8
MUSN	**Musina, Limpop**	**3.76**	**252**	*i* P	Pn	20 34 29.2	+2.0
MUSN				*i* S	Sn	20 35 09.7	-1.8
BLWY	**Bulawayo**	**4.89**	**281**	*e*S	Sn	20 35 41.1	+1.5
BLWY				IAML		20 36 07.4	
comp=Z,13nm,0.9s							
BLWY	**Bulawayo**	**4.89**	**281**	*i* P	Pn	20 34 45.6	+2.7
BLWY				*i* S	Sn	20 35 38.2	-1.4
BLWY	**Bulawayo**	**4.89**	**281**	*i* P	Pn	20 34 45.6	+2.7
BLWY				*i* S	Sn	20 35 38.2	-1.4
MATP	**Matopo**	**4.93**	**278**	*i* P	Pn	20 34 46.1	+2.6
MATP				*i* S	Sn	20 35 39.1	-1.6
MATP	**Matopo**	**4.93**	**278**	*i* P	Pn	20 34 46.1	+2.6
MATP				*i* S	Sn	20 35 39.1	-1.6
LEPH	**Lephalale, Lim**	**6.10**	**243**	*e*P	Pn	20 35 00.1	+0.7
LEPH				*e*S	Sn	20 36 08.0	-1.4
LEPH				IAML		20 36 36.1	
comp=Z,3.8nm,0.7s							

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*NOU **05** 20:34:28.6, 37°.14S×180°.00W, h0km, MLv4.9/12, East of North Island, N.Z.*
*NEIC **05** 20:34:38.7±1.1, 37°.12S±0°.06×178°.9E±0°.1, h10km±1km, mb4.7/14, Error ellipse: s-maj=18.5km s-min=5.6km az=61.0*
*WEL **05** 20:34:42.2±1.6, 37°.5±9°.9×17°.9E±°, h20km±7km, M4.2/19, ML4.5/19, MLv4.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=75.8*
*IDC **05** 20:34:47.3±1.9, 37°.17S×178°.49E, h74km±15km, mb4.2/8, mbtmp4.4/10, MS3.5/10, Error ellipse: s-maj=17.8km s-min=16.8km az=166.0*

ISC 05 20:34:44.2±1.1, 37°.36S±0°.06×178°.82E±0°.08, h56km±8km, n180, σ1°.60/172, mb4.7/16, MS3.5/8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.45**	**244**		**Pn**	**20 34 53.4**	**-1.9**
MXZ	**Matakaoa Point**	**0.45**	**244**	P	**Pn**	**20 34 53.4**	**-1.9**
MXZ				S	**Sn**	**20 35 01.4**	**-2.0**
MXZ	**Matakaoa Point**	**0.45**	**244**	P	**Pn**	**20 34 53.6**	**-1.7**
WMGZ	**Waiomatatini S**	**0.56**	**215**	P	**Pn**	**20 34 56.9**	**+0.4**
WMGZ				S	**Sn**	**20 35 07.6**	**+2.2**
PKGZ	**Pakihiroa**	**0.79**	**228**	P	**Pn**	**20 34 59.7**	**+0.4**
PKGZ				S	**Sn**	**20 35 12.9**	**+2.4**
PUZ	**Puketiti**	**0.84**	**212**	P	**Pn**	**20 35 00.3**	**+0.4**
HAZ	**Te Kaha**	**0.91**	**244**	P	**Pn**	**20 35 00.4**	**-0.5**
TWGZ	**Tauwhareparae**	**1.05**	**219**	P	**Pn**	**20 35 03.8**	**+1.1**
RUGZ	**Raukumara Rang**	**1.09**	**236**	P	**Pn**	**20 35 04.3**	**+1.0**
CNGZ	**Carnagh Statio**	**1.22**	**203**	P	**Pn**	**20 35 06.1**	**+1.1**
WIZ	**White Island**	**1.31**	**262**	P	**Pn**	**20 35 04.8**	**-1.4**
WSRZ	**White Island S**	**1.32**	**263**	P	**Pn**	**20 35 06.1**	**-0.2**
TKGZ	**Te Karaka**	**1.32**	**215**	P	**Pn**	**20 35 06.0**	**-0.3**
MWZ	**Matawai**	**1.41**	**226**	P	**Pn**	**20 35 08.4**	**+0.9**
WHRZ	**Whale Island**	**1.54**	**251**	P	**Pn**	**20 35 11.3**	**+1.9**
RIGZ	**Rimuhau**	**1.58**	**212**	P	**Pn**	**20 35 11.0**	**+1.1**
RAGZ	**Rawiri**	**1.58**	**224**	P	**Pn**	**20 35 11.1**	**+1.1**
URZ	**Urewera**	**1.62**	**236**	P	**Pn**	**20 35 10.8**	**+0.4**
592nm,0.4s,baz=128,slow=2.7,SNR=281							
URZ				S	**Sn**	**20 35 32.3**	**+2.1**
1μm,0.5s,baz=316,slow=22,SNR=26							
URZ				LR	LR	20 36 03.4	
comp=Z,808nm,18.9s,baz=96,slow=50							
URZ	**Urewera**	**1.62**	**236**		**Pn**	**20 35 10.9**	**+0.5**
URZ	**Urewera**	**1.62**	**236**	P	**Pn**	**20 35 11.1**	**+0.7**
URZ				S	**Sn**	**20 35 32.1**	**+1.9**
URZ	**Urewera**	**1.62**	**236**	P	**Pn**	**20 35 11.4**	**+1.0**
EDRZ	**Edgecumbe**	**1.81**	**245**	P	**Pn**	**20 35 13.7**	**+0.7**
MARZ	**Manawahe**	**1.81**	**249**	P	**Pn**	**20 35 14.4**	**+1.3**
SNGZ	**Shannon Statio**	**1.84**	**219**	P	**Pn**	**20 35 14.3**	**+0.9**
OPRZ	**Ohinepanea**	**1.86**	**254**	P	**Pn**	**20 35 13.6**	**-0.1**
KNZ	**Kokohu**	**1.89**	**208**	P	**Pn**	**20 35 13.6**	**-0.2**
RTZ	**Ruatahuna**	**1.92**	**229**	P	**Pn**	**20 35 15.8**	**+1.3**
MHGZ	**Mahia Peninsul**	**1.93**	**202**	P	**Pn**	**20 35 14.9**	**+0.4**
MUGZ	**Murupara**	**1.97**	**235**	P	**Pn**	**20 35 16.2**	**+1.1**
LIRZ	**Lichensteins R**	**2.04**	**251**	P	**Pn**	**20 35 18.4**	**+2.4**
MYRZ	**Mayor Island**	**2.06**	**272**	P	**Pn**	**20 35 16.2**	**-0.2**
TGRZ	**Tauranga**	**2.07**	**259**	P	**Pn**	**20 35 17.3**	**+0.8**
RRRZ	**Republican Roa**	**2.07**	**241**	P	**Pn**	**20 35 17.8**	**+1.3**
OMRZ	**Omania**	**2.08**	**248**	P	**Pn**	**20 35 17.5**	**+0.9**
WHHZ	**Waihua**	**2.12**	**216**	P	**Pn**	**20 35 17.7**	**+0.5**
HLRZ	**Highlands Stat**	**2.15**	**245**	P	**Pn**	**20 35 20.4**	**+2.8**
KARZ	**Kaharoa**	**2.15**	**251**	P	**Pn**	**20 35 18.2**	**+0.6**
MTHZ	**Maungataniwha**	**2.16**	**226**	P	**Pn**	**20 35 18.7**	**+0.9**
PRRZ	**Plateau Road**	**2.23**	**239**	P	**Pn**	**20 35 19.4**	**+0.7**
HSRZ	**Hossack Road**	**2.25**	**244**	P	**Pn**	**20 35 20.6**	**+1.7**
HRRZ	**Handcock Road**	**2.25**	**242**	P	**Pn**	**20 35 22.7**	**+3.6**
ALRZ	**Allen Road**	**2.29**	**238**	P	**Pn**	**20 35 20.4**	**+0.8**
KMRZ	**Kaimai**	**2.34**	**257**	P	**Pn**	**20 35 21.8**	**+1.7**
NMHZ	**Naumai**	**2.35**	**222**	P	**Pn**	**20 35 21.4**	**+1.0**
ARHZ	**Aropaoanui**	**2.38**	**217**	P	**Pn**	**20 35 21.2**	**+0.5**
MRHZ	**Matea Rd**	**2.40**	**231**	P	**Pn**	**20 35 21.8**	**+0.8**
WPRZ	**Whakapapatarin**	**2.40**	**240**	P	Pn	20 35 25.7	+4.7
KUZ	**Kuaotunu**	**2.55**	**283**	P	**Pn**	**20 35 21.4**	**-1.7**
KUZ	**Kuaotunu**	**2.55**	**283**	P	**Pn**	**20 35 21.6**	**-1.5**
BKZ	**Black Stump Fm**	**2.57**	**225**	Pn	**Pn**	**20 35 23.9**	**+0.5**
BKZ	**Black Stump Fm**	**2.57**	**225**	P	**Pn**	**20 35 24.2**	**+0.8**
BKZ	**Black Stump Fm**	**2.57**	**225**	P	**Pn**	**20 35 24.4**	**+1.0**
KUTZ	**Kaahu Road**	**2.62**	**244**	P	**Pn**	**20 35 25.4**	**+1.3**
TOZ	**Tahuroa Road**	**2.66**	**261**	P	**Pn**	**20 35 24.4**	**-0.2**
MCHZ	**McNeill Hill**	**2.67**	**218**	P	**Pn**	**20 35 24.7**	**+0.1**
CKHZ	**Cape Kidnapper**	**2.67**	**210**	P	**Pn**	**20 35 24.0**	**-0.7**
KWHZ	**Kaweka Forest**	**2.79**	**222**	P	**Pn**	**20 35 26.3**	**-0.1**
RATZ	**Rangitukua**	**2.83**	**237**	P	**Pn**	**20 35 28.4**	**+1.4**
KAHZ	**Kahuranaki**	**2.87**	**211**	P	**Pn**	**20 35 26.6**	**-0.8**
GRZ	**Great Barrier**	**2.92**	**291**	P	**Pn**	**20 35 26.9**	**-1.2**

MKAZ Moumakai 2.93 274 P **Pn 20 35 27.5 -0.8**
KATZ Kakaramea 2.94 236 P **Pn 20 35 30.8 +2.3**
KRHZ Kereru 2.98 219 P **Pn 20 35 28.8 -0.2**
WIAZ Waiheke Island 3.00 280 P **Pn 20 35 28.5 -0.7**
TMVZ Te Maari 3.01 234 P **Pn 20 35 30.0 +0.5**
ETVZ East Tongariro 3.02 233 P **Pn 20 35 30.4 +0.8**
NTVZ North Tongariro 3.02 234 P **Pn 20 35 30.5 +0.9**
BHHZ Black Hill Sta 3.03 225 P **Pn 20 35 30.0 +0.3**
KRVZ Karewarewa 3.04 234 P **Pn 20 35 30.4 +0.5**
OTVZ Oturere 3.06 233 P **Pn 20 35 31.3 +1.0**
PXZ Pawanui 3.07 209 P **Pn 20 35 28.8 -1.4**
NNVZ North Ngauruho 3.08 234 P **Pn 20 35 33.9 +3.4**
WTVZ West Tongariro 3.09 234 P **Pn 20 35 32.6 +2.1**
SNVZ South Ngauruho 3.09 233 P **Pn 20 35 31.1 +0.4**
NGZ Ngauruhoe 3.11 233 P **Pn 20 35 31.8 +0.9**
ETAZ East Tamaki Re 3.13 276 P **Pn 20 35 30.8 -0.3**
MOVZ Moawhango 3.16 229 P **Pn 20 35 31.5 +0.1**
TWVZ Taurewa 3.16 236 P **Pn 20 35 32.8 +1.2**
WHVZ Whangaehu Hut 3.18 232 P **Pn 20 35 33.6 +1.6**
FWVZ Far West T-bar 3.19 233 P **Pn 20 35 32.9 +0.9**
MBAZ Motutapu North 3.19 280 P **Pn 20 35 31.4 -0.5**
WNVZ Wahianoa 3.20 231 P **Pn 20 35 32.4 +0.2**
TRVZ Turoa 3.22 232 P **Pn 20 35 34.8 +2.4**
PNHZ Pukenui 3.27 218 P **Pn 20 35 32.1 -0.9**
WPHZ Waipukurau 3.28 214 P **Pn 20 35 32.0 -1.0**
ABAZ Army Bay 3.28 282 P **Pn 20 35 32.8 -0.3**
EPAZ Eden Park BICE 3.29 277 P **Pn 20 35 33.4 +0.2**
HBAZ Herne Bay Bore 3.31 278 P **Pn 20 35 33.8 +0.4**
HIZ Hauiti 3.34 249 **Pn 20 35 35.6 +1.7**
HIZ Hauiti 3.34 249 P **Pn 20 35 35.5 +1.7**
HIZ Hauiti 3.34 249 P **Pn 20 35 35.6 +1.7**
AWAZ Awhitu Peninsu 3.35 274 P **Pn 20 35 34.0 +0.1**
WTAZ Waiatarua 3.42 276 P **Pn 20 35 35.1 +0.1**
RVAZ Riverhead Bore 3.44 279 P **Pn 20 35 35.3 +0.1**
DVHZ Dannevirke 3.59 214 P **Pn 20 35 35.7 -1.6**
VRZ Vera Road 3.65 240 P **Pn 20 35 39.4 +1.3**
WAZ Wanganui 3.84 230 P **Pn 20 35 41.3 +0.6**
POWZ Post Office Ro 3.85 217 P **Pn 20 35 40.0 -0.8**
WCZ Waipu Caves 3.87 290 P **Pn 20 35 40.8 -0.3**
BFZ Birch Farm 3.87 210 Pn **Pn 20 35 38.5 -2.6**
BFZ **Sn 20 36 23.0 -2.4**
PRWZ Pori Road 3.88 214 P **Pn 20 35 40.1 -1.2**
LREZ Lake Rotokare 4.05 238 P **Pn 20 35 45.4 +1.8**
CPWZ Castlepoint 4.08 209 P **Pn 20 35 42.7 -1.3**
PREZ Palmer Road 4.16 240 P Pn 20 35 49.3 +4.1
NEZ North Egmont 4.17 241 P **Pn 20 35 47.7 +2.3**
PKE Pukeiti 4.22 243 P **Pn 20 35 49.2 +3.2**
KHEZ Kahui Hut 4.24 241 P **Pn 20 35 49.1 +2.8**
KHEZ Kahui Hut 4.24 241 P **Pn 20 35 48.6 +2.3**
NBEZ Newall Road No 4.33 242 P **Pn 20 35 51.0 +3.5**
HOWZ Holdsworth Sta 4.37 215 P **Pn 20 35 46.7 -1.3**
NMEZ Namu Road 4.39 241 P Pn 20 35 53.7 +5.5
OUZ Omahuta 4.73 295 Pn **Pn 20 35 52.8 -0.1**
OUZ Omahuta 4.73 295 P **Pn 20 35 52.9 -0.1**
OUZ Omahuta 4.73 295 P **Pn 20 35 52.9 -0.1**
MSWZ Moikau Station 4.90 213 Pn **Pn 20 35 51.8 -3.5**
PLWZ Palliser 5.03 212 Pn **Pn 20 35 53.2 -3.8**
PLWZ **Sn 20 36 50.8 -3.0**
SNZO South Karori 5.07 218 Pn **Pn 20 35 55.7 -1.8**
SNZO South Karori 5.07 218 P **Pn 20 35 57.1 -0.5**
TUWZ Tuamarina 5.54 221 **Pn 20 36 01.8 -2.3**
NNZ Nelson 5.71 226 Pn **Pn 20 36 04.6 -1.7**
BSWZ Blackbirch Sta 5.79 220 Pn **Pn 20 36 05.5 -1.9**
QRZ Quartz Range 5.99 233 Pn **Pn 20 36 09.1 -1.1**
QRZ Sn **Sn 20 37 13.9 -3.5**
THZ Tophouse 6.34 224 Pn **Pn 20 36 11.9 -3.1**
KHZ Kahutara 6.48 217 Pn **Pn 20 36 15.4 -1.4**
KHZ Kahutara 6.48 217 P **Pn 20 36 15.7 -1.1**
CTZ Chatham Island 7.25 153 P **Pn 20 36 26.8 -0.7**
LTZ Lake Taylor 7.38 221 Pn **Pn 20 36 28.5 -0.8**
LTZ Lake Taylor 7.38 221 P **Pn 20 36 28.7 -0.6**
MQZ McQueen's Vall 7.88 215 Pn **Pn 20 36 32.3 -3.8**
OXZ Oxford 7.89 219 Pn **Pn 20 36 33.3 -2.9**
RPZ Rata Peaks 8.67 221 P **Pn 20 36 44.2 -2.7**
3.6nm,0.4s,baz=94,slow=0.9,SNR=9.2
RPZ S Sn 20 38 15.1 -8.0
14nm,0.4s,baz=304,slow=20,SNR=9.1
RPZ LR LR 20 40 57.4
comp=Z,424nm,21.1s,baz=50,slow=43
RPZ Rata Peaks 8.67 221 P **Pn 20 36 44.1 -2.7**
LBZ Lake Benmore 9.59 220 Pn **Pn 20 36 56.9 -2.5**
ODZ Otahua Downs 9.84 216 Pn **Pn 20 37 00.3 -2.5**
ODZ Otahua Downs 9.84 216 P **Pn 20 37 00.4 -2.4**
JCZ Jackson Bay 10.14 226 P **Pn 20 37 06.8 -0.3**
JCZ Jackson Bay 10.14 226 P **Pn 20 37 07.0 -0.1**
DZM Mont Dzumac 18.62 321 *e*LR LR 20 43 32.4
comp=Z,284nm,24.4s
DZM Mont Dzumac 18.62 321 P **P 20 38 56.2 -1.0**
6.4nm,1.1s,baz=110,slow=17,SNR=1.7
DZM LR LR 20 44 57.9
comp=Z,128nm,21.4s,baz=206,slow=33
MSVF Nonsavu 19.57 358 P **Pn 20 39 09.0 -0.3**
2.5nm,0.5s,baz=270,slow=20,SNR=4.8
MSVF LR LR 20 45 05.7
comp=Z,130nm,19.4s,baz=176,slow=32
RAR Rarotonga 24.56 55 LR LR 20 46 58.3
comp=Z,35nm,21.2s,baz=281,slow=30
TBI Tubuai 30.57 72 *e*T T 21 12 42.5
13nm,0.3s
STKA Stephens Creek 30.98 269 P **P 20 40 56.6 +0.4**
4.1nm,0.8s,baz=112,slow=10,SNR=6.7
STKA LR LR 20 52 26.5
comp=Z,98nm,18.5s,baz=199,slow=34
4.1nm,0.8s
STKA Stephens Creek 30.98 269 P **P 20 40 56.8 +0.6**
HNR Honiara 32.62 324 LR LR 20 53 30.3
comp=Z,286nm,18.8s,baz=2.5,slow=35
CTA Charters Tower 33.13 292 LR LR 20 53 17.0
comp=Z,94nm,19.0s,baz=88,slow=34
PPT2 Papeete2 34.03 63 *e*LR LR 20 50 12.6
comp=Z,91nm,25.8s
PPT Papeete 34.04 63 LR LR 20 52 10.6
comp=Z,33nm,21.6s,baz=201,slow=30
BBOO Buckleboo 35.06 264 P **P 20 41 31.9 +0.1**
BBOO IAmb IAmb 20 42 07.5
comp=Z,18nm,1.4s
COEN Coen 39.34 297 P **P 20 42 08.7 +0.6**
COEN IAmb IAmb 20 42 09.3
comp=Z,19nm,0.9s
AS31 Alice Springs 40.66 277 P **P 20 42 18.9 -0.3**
ASAR Alice Springs 40.66 277 P **P 20 42 17.8 -1.4**
comp=Z,5.1nm,0.8s,baz=119,slow=8.2,SNR=39
ASAR PcP **PcP 20 44 18.5 -1.6**
comp=Z,0.3nm,0.5s,baz=120,slow=4.3,SNR=1.8
ASAR S **S 20 48 21.3 -4.0**
comp=Z,0.3nm,0.6s,baz=126,slow=14,SNR=4.8
comp=Z,5.1nm,0.8s
KRVT Keravat (AS076 41.03 317 P **P 20 42 18.9 -3.2**
comp=Z,44nm,0.7s,baz=159,slow=18,SNR=2.5
comp=Z,44nm,0.7s
FORT Forrest 42.14 263 P **P 20 42 31.0 -0.2**
FORT IAmb IAmb 20 42 41.9
comp=Z,12nm,0.8s
WB2 Warramunga Arr 42.28 282 P **P 20 42 32.1 -0.3**
WB2 IAmb IAmb 20 42 32.7
comp=Z,14nm,0.6s
WRAB Tennant Creek 42.29 282 P **P 20 42 32.3 -0.1**
WRAB IAmb IAmb 20 42 32.7
comp=Z,12nm,0.6s
WRA Warramunga Arr 42.29 282 P **P 20 42 32.0 -0.4**
comp=Z,9.4nm,0.6s,baz=121,slow=7.8,SNR=150
WRA LR LR 20 59 44.9
comp=Z,84nm,19.1s,baz=186,slow=36
comp=Z,9.4nm,0.6s
WB0 Warramunga Arr 42.35 282 P **P 20 42 32.7 -0.2**
MTN Manton Dam 48.96 287 P **P 20 43 24.7 -0.4**
KNRA Kununurra 49.08 282 P **P 20 43 26.1 +0.1**
KNRA IAmb IAmb 20 43 26.6
comp=Z,10.0nm,0.8s
FITZ Fitzroy Crossi 50.15 277 LR LR 21 05 27.5
comp=Z,41nm,18.1s,baz=95,slow=37
FITZ Fitzroy Crossi 50.15 277 P **P 20 43 34.5 +0.3**
FITZ IAmb IAmb 20 43 41.0
comp=Z,6.4nm,1.0s
QSPA South Pole Qui 52.76 180 P **P 20 43 56.6 +3.4**
comp=Z,1.8nm,0.7s,baz=32,slow=2.6,SNR=7.6
comp=Z,1.8nm,0.7s
FAKI Fak Fak 54.72 297 P **P 20 44 07.0 -1.1**
BELA Belgrano 2 63.25 173 P **P 20 45 08.3 +2.0**
BELA IAmb IAmb 20 45 09.5
comp=Z,3.2nm,0.8s
SNAA Sanae 71.26 179 P **P 20 45 58.9 +1.8**
H03S2 Juan Fernandez 78.81 124 T T 22 13 20.9
baz=232
H03S1 Juan Fernandez 78.81 124 T T 22 13 24.2
baz=232
H03S3 Juan Fernandez 78.82 124 T T 22 13 26.7
baz=232
H03N3 Juan Fernandez 79.04 124 T T 22 13 34.7
baz=236,slow=72,SNR=35
H03N2 Juan Fernandez 79.04 124 T T 22 13 31.9
baz=236,slow=72,SNR=31
H03N1 Juan Fernandez 79.05 124 T T 22 13 24.8
baz=236,slow=72,SNR=30
PLCA Paso Flores 79.66 134 P **P 20 46 49.2 +3.4**
comp=Z,1.1nm,0.7s,baz=247,slow=8.1,SNR=3.5
comp=Z,1.1nm,0.7s
KSRS Korea Array 88.05 322 P **P 20 47 29.0 +0.8**
comp=Z,1.1nm,0.8s,baz=143,slow=5.4,SNR=2.6
comp=Z,1.1nm,0.8s
CMAR Chiang Mai Arr 93.28 291 P **P 20 47 52.7 -0.3**
comp=Z,0.6nm,0.3s,baz=150,slow=3.8,SNR=4.3
comp=Z,0.6nm,0.3s
MKAR Makanchi Array 120.09 308 PKP **PKPdf 20 53 27.6 -0.5**
comp=Z,1.0nm,1.1s,baz=86,slow=2.0,SNR=2.2
ARCES ARCESS Array B 144.69 344 PKP PKPbc 20 54 12.7 +0.3
comp=Z,2.7nm,0.7s,baz=56,slow=1.9,SNR=16
FINES FINESS Array B 150.49 333 PKPbc **PKPbc 20 54 27.9 -0.6**
comp=Z,2.8nm,0.5s,baz=39,slow=4.6,SNR=27
BRTR Keskin Array B 152.76 286 PKPbc **PKPbc 20 54 33.2 -1.5**
comp=Z,0.2nm,0.3s,baz=132,slow=2.1,SNR=2.6
TORD Torodi Ar. Bea 155.75 187 PKPab **PKPab 20 54 59.8 +1.0**
comp=Z,1.0nm,1.0s,baz=172,slow=3.5,SNR=5.4

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*TUL **05** 20:44:27.9±0.7, 36°.45N±0°.02×98°.78W±0°.05, h7km±7km, ML2.6, mb_Lg2.1/10(NEIC), Error ellipse: s-maj=5.6km s-min=3.3km az=104.0*

NEIC 05 20:44:27.6±0.7, 36°.45N±0°.02×98°.79W±0°.04, h15km±6km, Error ellipse: s-maj=4.8km s-min=2.9km az=108.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.05**	**53**	Pg	Pg	20 44 29.8	-0.6
U32A	**Winter Ranch,**	**0.18**	**248**	Pg	Pg	20 44 32.1	+0.1
OK035	**E0210 Rd and N**	**0.27**	**14**	Pg	Pg	20 44 33.6	+0.3
OK032	**Salt Plains WL**	**0.58**	**53**	Pg	Pg	20 44 39.0	-0.1
KAN14	**Manchester OK**	**0.83**	**52**	Pg	Pg	20 44 43.4	-0.4
KAN10	**Anthony SW Sta**	**0.87**	**39**	Pg	Pb	20 44 44.3	-0.2
KAN16	**Harper SW Stat**	**0.97**	**37**	Pg	Pb	20 44 46.0	-0.1
KAN05	**Bluff City Nor**	**0.99**	**48**	Pg	Pb	20 44 46.2	-0.2
KAN17	**Caldwell West**	**1.01**	**54**	Pg	Pb	20 44 46.7	-0.1
KAN08	**Anthony NE Sta**	**1.02**	**40**	Pg	Pb	20 44 46.9	0.0
KAN01	**Argonia South**	**1.08**	**49**	Pg	Pb	20 44 47.4	-0.7
KAN09	**Caldwell North**	**1.16**	**54**	Pg	Pb	20 44 49.6	+0.1
KAN09				IAmb_Lg		20 45 05.4	
	comp=Z,16nm,0.8s						
KAN13	**South Haven SW**	**1.20**	**62**	Pg	Pn	20 44 49.7	0.0
OK049	**E0420 Rd and N**	**1.20**	**92**		Pb	20 44 50.1	+0.1
KS20	**Mayfield South**	**1.26**	**51**	Pn	Pb	20 44 51.3	+0.3
OK029	**Liberty Lake**	**1.26**	**121**	Pn	Pb	20 44 51.4	+0.3
OK050	**Pawnee Station**	**1.46**	**92**		Pn	20 44 53.7	+0.2
OK048	**Pawnee Station**	**1.49**	**91**	Pn	Pb	20 44 54.8	-0.2
OK045	**Pawnee Station**	**1.50**	**90**		Pb	20 44 55.2	0.0
OK046	**Pawnee Station**	**1.52**	**91**		Pb	20 44 55.5	0.0
OK033	**Mehan**	**1.55**	**105**	Pn	Pn	20 44 55.2	+0.5
OK051	**E0350 and S346**	**1.58**	**87**	Pn	Pb	20 44 56.2	-0.2
OK044	**Pawnee Station**	**1.61**	**92**		Pb	20 44 56.6	-0.5
WMOK	**Wichita Mounta**	**1.71**	**180**	Pn	Pb	20 44 57.9	-0.8
WMOK				IAmb_Lg		20 45 21.6	
	comp=Z,5.4nm,1.1s						
OK034	**N. Norfolk Rd.**	**1.73**	**104**	Pn	Pn	20 44 57.7	+0.5
T35A	**Sooner Cattle**	**1.89**	**75**	Pn	Pn	20 45 00.4	+1.1
T35A				IAmb_Lg		20 45 30.3	
	comp=Z,8.1nm,0.8s						
X34A	**Smith Ranch, M**	**2.00**	**157**	Pg	Pb	20 45 03.8	0.0
X34A				IAmb_Lg		20 45 33.6	
	comp=Z,18nm,0.7s						
AMTX	**Amarillo**	**2.83**	**237**	Pn	Pn	20 45 13.2	+0.9
X37A	**Clayton**	**3.35**	**123**	Pn	Pn	20 45 19.6	+0.1
U38A	**Gravette**	**3.55**	**89**	Pn	Pn	20 45 22.7	+0.5
U38A				IAmb_Lg		20 46 23.2	
	comp=Z,8.2nm,1.0s						
MSTX	**Muleshoe**	**4.09**	**234**	IAmb_Lg		20 46 46.3	
	comp=Z,4.3nm,0.7s						

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*IDC **05** 20:53:34.5±0.5, 7°.35N×34°.07W, h0km, mb4.2/32, mbtmp4.2/34, ML4.5/2, MS4.9/84, Error ellipse: s-maj=15.7km s-min=10.5km az=144.0*

*MOS **05** 20:53:37.3±1.2, 7°.10N×34°.41W, h12km, mb5.2/22, MS5.0/40, Error ellipse: s-maj=7.5km s-min=6.1km az=53.9*

*BJI **05** 20:53:38.0±0.0, 7°.10N×34°.30W, h10km, mB5.1/2, Ms5.5/5, Ms7 5.3/5*

*NEIC **05** 20:53:39.7±2.0, 7°.14N±0°.09×34°.33W±0°.10, h10km±1km, mb5.2/346, Ms_20 5.3/327, Mwb5.5/75, Error ellipse: s-maj=16.9km s-min=15.0km az=131.0*

*NEIC **05** 20:53:41.2, 7°.13N×34°.44W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.17; $M_{\theta\theta}$=0.00; $M_{\phi\phi}$=0.17; $M_{r\theta}$=0.06; $M_{\theta\phi}$=-2.56; $M_{\phi r}$=0.28; Fault plane solution: M_0=2.58000×10^{17} NP1:ϕ_s=0.87000°, δ=88.30000°, λ=-6.45000°. NP2:ϕ_s=91.06000°, δ=83.55000°, λ=-178.29000°. Principal axes: T 2.6497, Plg=3.0000°, Azm=46.0000°; N -0.1512, Plg=83.0000°, Azm=166.0000°; P -2.4985, Plg=6.0000°, Azm=316.0000°;*

*GCMT **05** 20:53:44.7±0.1, 7°.30N±0°.01×34°.33W, h15km, MW5.7/167, Moment Tensor Solution. s150,c291; s167,c365; Duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.04±.04; $M_{\theta\theta}$=0.17±.04; $M_{\phi\phi}$=0.21±.04; $M_{r\theta}$=0.19±.07; $M_{\theta\phi}$=-4.41±.04; $M_{\phi r}$=0.56±.08; Best double couple: M_0=4.45200×10^{17} NP1:ϕ_s=181.00000°, δ=88.00000°, λ=7.00000°. NP2:ϕ_s=91.00000°, δ=83.00000°, λ=178.00000°. Principal axes: T 4.4960, Plg=7.0000°, Azm=46.0000°; N -0.0870, Plg=83.0000°, Azm=200.0000°; P -4.4090, Plg=3.0000°, Azm=316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 20:53:39.1±0.3, 7°.16N±0°.05×34°.36W±0°.05, h10km, n851, σ1.92/619, mb5.1/264, MS5.2/270, 25C-20D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.99**	**187**	Pn	**Pn**	**20 56 42.1**	**-1.9**
	6.8nm,0.3s,baz=148,slow=15,SNR=38						
RCBR				Sn	Sn	20 58 55.9	-13
	1.2nm,0.3s,baz=74,slow=15,SNR=1.4						
RCBR				LR	LR	21 00 35.4	
	comp=Z,11μm,19.4s,baz=162,slow=32						
	17nm,0.4s						
RCBR	**Riachuelo**	**12.99**	**187**	Pn	**Pn**	**20 56 43.4**	**-0.7**
RCBR	**Riachuelo**	**12.99**	**187**	P	**Pn**	**20 56 43.4**	**-0.7**
RCBR	**Riachuelo**	**12.99**	**187**	*e*P	**Pn**	**20 56 43.1**	**-1.0**
SACV	**Santiago Islan**	**13.09**	**53**	Pn	Pn	20 56 37.1	-8.2
ROSB	**Rosrio**	**13.96**	**225**	*e*P	**Pn**	**20 56 55.1**	**-2.0**
NBAN	**Anadia - AL**	**16.83**	**187**	*e*P	**P**	**20 57 37.5**	**+0.3**
MDP	**Montagnes des**	**18.29**	**265**	P	**Pn**	**20 57 53.3**	**+0.1**
	0.5nm,0.3s,baz=86,slow=14,SNR=9.3						
MDP				S	Sn	21 01 02.8	-15
	3.4nm,0.8s,baz=11,slow=16,SNR=1.8						
	15nm,0.9s						
BBTS	**Babate**	**19.02**	**65**	P	**P**	**20 58 00.7**	**-0.6**
	15nm,0.5s,baz=315,slow=20,SNR=1.3						
BBTS				LR	LR	21 03 30.4	
	comp=Z,5μm,21.7s,baz=244,slow=32						
PRPB	**Paraúapebas**	**20.33**	**230**	*e*P	**P**	**20 58 16.1**	**+0.4**
SMTB	**Santa Maria do**	**20.67**	**220**	*e*P	**P**	**20 58 19.8**	**+0.4**
MALB	**Monte Alegre**	**21.79**	**246**	*e*P	**P**	**20 58 31.6**	**+0.1**
SDBA	**SAO DESIDERIO**	**22.09**	**208**	*e*P	**P**	**20 58 34.5**	**-0.2**
CMC01	**Camacan, BA**	**22.95**	**193**	*e*P	**P**	**20 58 46.6**	**+2.7**
JANB	**Januaria**	**24.18**	**204**	*e*P	**P**	**20 58 56.9**	**+0.9**
GUA01	**Guaratinga, BA**	**24.20**	**193**	*e*P	**P**	**20 58 60.0**	**+3.9**
ITTB	**Itaituba**	**24.21**	**242**	*e*P	**P**	**20 58 56.4**	**+0.1**
H10N3	**ASCENSION HYDR**	**24.78**	**127**	T	T	21 24 44.9	
	baz=306,slow=76,SNR=696						
H10N2	**ASCENSION HYDR**	**24.79**	**127**	T	T	21 24 50.1	
	baz=306,slow=76,SNR=821						
H10N1	**ASCENSION HYDR**	**24.80**	**127**	T	T	21 24 45.8	
	baz=306,slow=76,SNR=798						
NPGB	**Novo Progresso**	**25.25**	**236**	*e*P	**P**	**20 59 05.8**	**0.0**
H10S3	**ASCENSION HYDR**	**25.33**	**129**	T	T	21 25 33.3	
	baz=306,slow=74,SNR=627						
H10S2	**ASCENSION HYDR**	**25.35**	**129**	T	T	21 25 34.8	
	baz=274,slow=74,SNR=241						
SNDB	**Serra Nova Dou**	**25.40**	**222**	*e*P	**P**	**20 59 07.7**	**+0.7**
MC01	**Montes Claros**	**25.54**	**202**	*e*P	**P**	**20 59 10.7**	**+2.4**
BDFB	**Brasilia**	**26.39**	**211**	P	**P**	**20 59 15.2**	**-0.8**
	20nm,1.0s,baz=26,slow=12,SNR=12						
BDFB				LR	LR	21 09 01.7	
	comp=Z,11μm,19.1s,baz=19,slow=35						
	20nm,1.0s						
BDFB	**Brasilia**	**26.39**	**211**	P	**P**	**20 59 15.6**	**-0.5**
BDFB	**Brasilia**	**26.39**	**211**	P	**P**	**20 59 15.6**	**-0.5**
BDFB				pmax	pmax		
	comp=Z,26nm,0.9s						
BOAV	**Boa Vista**	**26.49**	**261**	*e*P	**P**	**20 59 18.3**	**+1.3**
SJMB	**Sao Joao De Ma**	**26.57**	**195**	*e*P	**P**	**20 59 22.1**	**+4.6**
DIAM	**Diamantina, MG**	**26.91**	**200**	*e*P	**P**	**20 59 24.4**	**+3.5**
H05S1	**Guadeloupe/Mar**	**26.97**	**288**	T	T	21 27 28.8	
	SNR=23						
H05N1	**Guadeloupe/Mar**	**27.64**	**292**	T	T	21 28 15.4	
	SNR=13						
CLDB	**Colider**	**27.86**	**230**	*e*P	**P**	**20 59 30.3**	**+1.1**
MACA	**Manacapuru-AM**	**28.20**	**250**	*e*P	**P**	**20 59 34.8**	**+2.5**
IPMB	**Ipameri, GO**	**28.48**	**209**	*e*P	**P**	**20 59 38.4**	**+3.5**
PDRB	**Porto dos Gac**	**29.04**	**230**	*e*P	**P**	**20 59 41.0**	**+1.3**
DBIC	**Dimbokro**	**29.29**	**89**	P	P	20 59 34.8	-7.3
	comp=Z,4.5nm,1.0s,baz=231,slow=8.4,SNR=2.6						
DBIC				LR	LR	21 09 17.4	
	comp=Z,1μm,18.6s,baz=276,slow=32						
	comp=Z,4.5nm,1.0s						
PCRV	**Puerto La Cruz**	**30.07**	**278**	LR	LR	21 10 34.6	
	comp=Z,610nm,18.0s,slow=34						
PMOZ	**Porto Moniz, M**	**30.10**	**30**	*e*P	**P**	**20 59 50.6**	**+1.5**
PMOZ				*e*LR	LR	21 07 21.0	
	comp=Z,2μm,20.0s						
PMOZ	**Porto Moniz, M**	**30.10**	**30**	*e*T	T	21 30 28.0	
DUB01	**Friburgo-RJ**	**30.10**	**195**	*e*P	**P**	**20 59 53.9**	**+4.7**
FUL	**Funchal**	**30.11**	**30**	*e*P	**P**	**20 59 48.8**	**-0.3**
	comp=Z,165nm,1.6s						
FUL	**Funchal**	**30.11**	**30**	*e*T	T	21 30 35.0	
PMAR	**Madeira**	**30.16**	**30**	*e*T	T	21 30 44.4	
KOWA	**Kowa**	**30.66**	**74**	LR	LR	21 11 14.7	
	comp=Z,965nm,20.4s,baz=295,slow=35						
KOWA	**Kowa**	**30.66**	**74**	P	**P**	**20 59 50.3**	**-3.9**
SALV	**Santo Antonio**	**31.17**	**223**	*e*P	**P**	**20 59 59.8**	**+1.2**
C2SB	**Chapadao do Su**	**31.56**	**215**	*e*P	**P**	**21 00 05.5**	**+3.5**
MTP	**Monte Pirata**	**32.26**	**293**	P	**P**	**21 00 07.3**	**-1.0**
MTP				IAmb	IAmb	21 00 13.6	
	comp=Z,38nm,1.1s						
VILB	**Vilhena**	**32.53**	**232**	*e*P	**P**	**21 00 13.1**	**+2.5**
SJG	**San Juan**	**32.81**	**292**	P	**P**	**21 00 10.5**	**-2.5**
	comp=Z,4.2nm,0.4s,baz=126,slow=19,SNR=1.7						
SJG				LR	LR	21 10 45.5	
	comp=Z,4μm,21.7s,baz=108,slow=31						
	comp=Z,4.2nm,0.4s						
SJG	**San Juan**	**32.81**	**292**	IAMs_20	IAMs_20	21 10 11.3	
	comp=Z,4μm,22.0s						
PCMB	**Pacaembu**	**33.05**	**210**	*e*P	**P**	**21 00 17.5**	**+2.4**
CELP	**Cerrillos**	**33.20**	**292**	P	**P**	**21 00 16.9**	**+0.4**
PTLB	**Pontes e Lacer**	**33.28**	**227**	*e*P	**P**	**21 00 19.0**	**+1.9**
SGCB	**S£o Gabriel d**	**33.38**	**259**	*e*P	**P**	**21 00 21.5**	**+3.4**
BAUV	**El Baul**	**33.39**	**275**	P	**P**	**21 00 19.3**	**+1.1**
MLPR	**Magueyes Islan**	**33.60**	**292**	P	**P**	**21 00 18.7**	**-1.2**
MLPR				IAmb	IAmb	21 00 33.2	
	comp=Z,52nm,1.1s						
FRTB	**Fartura**	**33.77**	**206**	*e*P	**P**	**21 00 22.4**	**+1.0**
AQDB	**Aquidauana**	**34.56**	**217**	P	**P**	**21 00 28.8**	**+0.6**
AQDB	**Aquidauana**	**34.56**	**217**	*e*P	**P**	**21 00 29.5**	**+1.3**
TRCB	**Terra Rica**	**34.73**	**211**	*e*P	**P**	**21 00 31.3**	**+1.6**
SIV	**San Ignacio**	**35.05**	**229**	P	**P**	**21 00 33.1**	**+0.5**
	comp=Z,19nm,0.9s,baz=67,slow=8.4,SNR=17						
	comp=Z,19nm,0.9s						
BBRB	**Robore, Bolivi**	**35.63**	**224**	*e*P	**P**	**21 00 39.0**	**+1.5**
ANTJ	**Antonio Joao (**	**35.92**	**216**	*e*P	**P**	**21 00 40.8**	**+0.9**
ETMB	**Extrema**	**35.93**	**242**	*e*P	**P**	**21 00 41.7**	**+1.6**
SDV	**Santo Domingo**	**35.95**	**275**	P	**P**	**21 00 38.7**	**-1.8**
	comp=Z,5.2nm,0.4s,baz=64,slow=12,SNR=2.0						
SDV				LR	LR	21 15 45.9	
	comp=Z,1μm,19.4s,baz=90,slow=37						
	comp=Z,5.2nm,0.4s						
SDV	**Santo Domingo**	**35.95**	**275**	P	**P**	**21 00 41.1**	**+0.5**
SDV				IAmb	IAmb	21 00 51.3	
	comp=Z,36nm,1.3s						
SDV	**Santo Domingo**	**35.95**	**275**	*e*P	**P**	**21 00 44.4**	**+3.8**
TOA0	**Torodi Ar. Sit**	**35.96**	**78**	P	**P**	**21 00 37.8**	**-2.6**
TORD	**Torodi Ar. Bea**	**35.96**	**78**	P	P	21 00 34.5	-5.9
	comp=Z,3.8nm,0.6s,baz=272,slow=9.2,SNR=22						
TORD				LR	LR	21 13 27.6	
	comp=Z,2μm,21.6s,baz=252,slow=34						
	comp=Z,3.8nm,0.6s						
PTGB	**Pitanga**	**36.08**	**208**	*e*P	**P**	**21 00 42.9**	**+1.6**
MURT	**Porto Murtinho**	**36.61**	**218**	*e*P	**P**	**21 00 47.4**	**+1.5**
TBTG	**Tabatinga, AM**	**37.23**	**253**	*e*P	**P**	**21 00 54.8**	**+3.6**
URIC	**Uribia, Colomb**	**37.37**	**280**	*e*P	**P**	**21 00 53.6**	**+1.1**
MDT	**Midelt**	**37.60**	**43**	P	P	21 00 48.5	-5.8
	comp=Z,1.0nm,0.9s,baz=261,slow=10,SNR=3.4						
MDT				LR	LR	21 13 35.9	
	comp=Z,2μm,21.7s,baz=236,slow=32						
	comp=Z,1.0nm,0.9s						
FRBT	**Francisco Belt**	**37.62**	**208**	*e*P	**P**	**21 00 56.9**	**+2.5**
SDDR	**Presa de Saban**	**37.75**	**292**	P	**P**	**21 00 56.7**	**+1.0**
SDDR				IAmb	IAmb	21 01 05.5	
	comp=Z,50nm,1.2s						
SDDR				IAMs_20	IAMs_20	21 13 20.1	
	comp=Z,5μm,22.0s						
PFVI	**Vila Bisbo**	**37.81**	**34**	*e*S	S	21 06 57.6	+11
PAMC	**Pamplona, Colo**	**38.02**	**273**	*e*P	**P**	**21 01 01.4**	**+2.8**
MORF	**Marmelete**	**38.03**	**34**	*e*P	**P**	**21 00 59.0**	**+1.2**
MORF				*e*S	**S**	**21 06 56.6**	**

comp=Z,7.8nm,1.3s
CPUP Villa Florida 40.07 213 P **P 21 01 14.7 -0.2**
CPUP Villa Florida 40.07 213 P **P 21 01 14.7 -0.2**
CPUP pmax pmax
comp=Z,16nm,1.2s
PCAS Casmilo, Conde 40.11 31 *e*P **P 21 01 18.8 +3.6**
comp=Z,66nm,1.6s
PCAS *e*S **S 21 07 17.9 -3.7**
PMRV Marv??o 40.24 33 *e*P **P 21 01 17.2 +1.0**
comp=Z,70nm,1.6s
PMRV *e*S S 21 07 35.2 +12
PMRV *e*LR LR 21 11 50.7
comp=Z,1µm,20.0s
PMRV Marv??o 40.24 33 *e*T T 21 41 30.4
COI Coimbra 40.27 31 *e*S S 21 07 34.5 +11
COI Coimbra 40.27 31 P **P 21 01 17.4 +1.0**
COI IAmb IAmb 21 01 28.3
comp=Z,47nm,0.9s
COI Coimbra 40.27 31 P **P 21 01 17.4 +1.0**
COI pmax pmax
comp=Z,47nm,1.0s
COI MLR MLR
comp=Z,2µm,20.0s
SJCC San Jacinto, C 40.44 277 *e*P **P 21 01 15.9 -2.4**
PCBR Castelo Branco 40.49 32 *e*P **P 21 01 21.7 +3.4**
LPAZ La Paz 40.74 235 P **P 21 01 21.0 -0.3**
comp=Z,5.0nm,0.8s,baz=47,slow=8.6,SNR=12
LPAZ LR LR 21 17 48.2
comp=Z,4µm,19.1s,baz=59,slow=35
comp=Z,5.0nm,0.8s
LPAZ La Paz 40.74 235 P **P 21 01 20.9 -0.4**
LPAZ IAmb IAmb 21 01 39.0
comp=Z,44nm,1.1s
LPAZ La Paz 40.74 235 P **P 21 01 20.9 -0.4**
LPAZ pmax pmax
comp=Z,44nm,1.1s
AZCA Azaras, Argent 40.79 210 *e*P **P 21 01 21.9 +1.1**
GUY2C Guyana, Caldas 40.80 270 *e*P **P 21 01 21.7 0.0**
MTE Manteigas 40.86 32 *e*P **P 21 01 24.1 +2.7**
comp=Z,55nm,1.8s
MTE *e*S S 21 07 43.7 +11
MTE *e*LR LR 21 12 19.6
comp=Z,1µm,20.0s
PVIS Viseu 40.91 31 *e*P **P 21 01 24.5 +2.7**
comp=Z,41nm,1.8s
CZSB Cruzeiro do Su 41.00 250 *e*P **P 21 01 25.9 +3.1**
UNIS Unistalda (Bra 41.18 208 *e*P **P 21 01 26.9 +2.9**
TAM Tamanrasset 41.38 64 P **P 21 01 26.0 0.0**
TAM Tamanrasset 41.38 64 P **P 21 01 26.0 0.0**
TAM pmax pmax
comp=Z,16nm,1.1s
CBOC Ciudad Bolivar 41.39 271 *e*P **P 21 01 25.2 -1.0**
POLO Lamas de Olo 41.45 31 *e*P **P 21 01 28.5 +2.2**
comp=Z,23nm,1.8s
POLO *e*S **S 21 07 49.5 +7.9**
CPSB Cacapava Do Su 41.60 205 *e*P **P 21 01 31.3 +3.8**
PGAV Gavieira, Arco 41.66 30 *e*P **P 21 01 30.1 +2.1**
comp=Z,26nm,1.2s
PGAV *e*S **S 21 07 52.4 +7.7**
PGAV *e*LR LR 21 12 30.3
comp=Z,1µm,20.0s
MVO Moncorvo 41.69 31 *e*P **P 21 01 28.1 -0.1**
comp=Z,38nm,1.6s
MVO *e*S S 21 07 54.9 +10
MVO *e*LR LR 21 12 34.5
comp=Z,2µm,20.0s
PLMC San Jos del P 41.74 269 *e*P **P 21 01 29.8 +0.8**
PBRG Braganca 42.30 31 *e*P **P 21 01 34.8 +1.6**
comp=Z,50nm,1.8s
PBRG *e*S **S 21 08 01.9 +7.8**
RODS Rosario do Sul 42.32 207 *e*P **P 21 01 36.9 +3.6**
ESDC Sonseca Array 42.33 35 P **P 21 01 29.1 -4.3**
comp=Z,1.1nm,1.1s,baz=178,slow=13,SNR=2.9
ESDC LR LR 21 15 57.5
comp=Z,2µm,20.6s,baz=220,slow=32
comp=Z,1.1nm,1.1s
ITQB Itaqui 42.42 209 P **P 21 01 33.7 -0.5**
ITQB IAmb IAmb 21 01 57.7
comp=Z,118nm,1.5s
ITQB Itaqui 42.42 209 *e*P **P 21 01 38.1 +3.9**
PLTB Pedras Altas 42.85 204 P **P 21 01 36.4 -1.3**
PLTB IAmb IAmb 21 01 55.0
comp=Z,46nm,1.1s
PLTB Pedras Altas 42.85 204 *e*P **P 21 01 41.4 +3.7**
PB16 IPOC Station P 42.95 233 P **P 21 01 37.8 -1.6**
GCUF Volcan Galeras 43.25 264 *e*P P 21 01 49.4 +7.6
IMBA Imbabura, San 44.25 263 **P 21 01 53.3 +3.5**
OTAV Otavalo 44.50 263 **P 21 01 52.8 +1.0**
OTAV Otavalo 44.50 263 P **P 21 01 52.8 +1.0**
OTAV pmax pmax
comp=Z,21nm,1.3s
OTAV Otavalo 44.50 263 *e*P **P 21 01 55.7 +3.8**
PATCX Punta Patache 44.83 231 P **P 21 01 51.6 -2.2**
PATCX IAmb IAmb 21 02 10.8
comp=Z,34nm,1.1s
LVC Limon Verde 44.94 228 P **P 21 01 54.3 -0.7**
comp=Z,1.6nm,0.6s,baz=42,slow=11,SNR=3.8
LVC LR LR 21 21 12.0
comp=Z,6µm,19.6s,baz=61,slow=37
comp=Z,1.6nm,0.6s
LVC Limon Verde 44.94 228 P **P 21 01 53.0 -1.9**
LVC IAmb IAmb 21 02 20.4
comp=Z,68nm,1.8s
LVC Limon Verde 44.94 228 P **P 21 01 53.1 -1.9**
LVC pmax pmax
comp=Z,68nm,1.8s
LVC MLR MLR
comp=Z,6µm,19.0s
LVC Limon Verde 44.94 228 *e*P **P 21 01 58.0 +3.0**
HAL Halifax 45.18 331 P **P 21 01 54.9 -1.3**
HAL Halifax 45.18 331 P **P 21 01 54.9 -1.3**
HAL pmax pmax
comp=Z,102nm,1.8s
BOSC San Juan Bosco 45.22 258 P **P 21 01 56.4 -0.8**
BOSC IAmb IAmb 21 02 04.7
comp=Z,29nm,0.7s
PB15 IPOC Station P 45.71 228 P **P 21 01 59.7 -1.3**
COHC Cochancay 45.81 260 P **P 21 02 00.6 -1.1**
ATAH Atahualpa 46.16 253 LR LR 21 22 20.8
comp=Z,4µm,19.5s,baz=75,slow=37
NNA Nana 46.33 246 LR LR 21 21 24.3
comp=Z,5µm,19.2s,baz=60,slow=36
MCRA Macar, Loja 46.92 257 P **P 21 02 09.1 -1.4**
GO02 Mina Guanaco 46.99 226 P **P 21 02 10.5 -0.6**
EMMW East Machias 47.19 328 IAMs_20 IAMs_20 21 17 44.5
comp=Z,3µm,20.0s
LPA La Plata 47.40 207 *ce*P **P 21 02 10.5 -3.2**
LPA PP **PP 21 04 03.4 -1.7**
LPA PPP PPP 21 04 49.1
LPA S **S 21 09 12.0 +4.1**
LPA PKIKP **PKiKP 21 10 37.1 -0.2**
LPA SS **SS 21 12 41.1 +5.2**
AC02 Maricunga 47.72 224 P **P 21 02 16.1 -0.9**
BRYW Bryant College 47.74 322 IAMs_20 IAMs_20 21 17 00.0
comp=Z,2µm,22.0s
BRU2 Volcan 47.87 275 P **P 21 02 17.6 -0.3**
HRV Adam Dziewonsk 48.10 323 P **P 21 02 19.6 +0.4**
HRV Adam Dziewonsk 48.10 323 P **P 21 02 19.6 +0.4**
HRV pmax pmax
comp=Z,97nm,1.6s
HRV MLR MLR
comp=Z,2µm,22.0s
YLE Yale 48.25 321 IAMs_20 IAMs_20 21 17 43.5
comp=Z,2µm,19.0s
BATG Bathurst New B 48.27 331 P **P 21 02 20.7 +0.3**
WVL Waterville 48.28 326 IAMs_20 IAMs_20 21 18 02.4
comp=Z,3µm,20.0s
LFF La Frestale 48.41 33 *e*P **P 21 02 23.9 +2.4**
LFF pmax pmax
comp=Z,13nm,1.0s
QUA2 Belchertown 48.44 322 IAMs_20 IAMs_20 21 17 19.6
comp=Z,3µm,22.0s
PKME Peaks-Kenny Pk 48.53 327 IAMs_20 IAMs_20 21 17 29.1
comp=Z,3µm,21.0s
H09N1 TRISTAN DA CUN 48.60 156 T T 21 54 34.2
SNR=62
H09W1 TRISTAN DA CUN 48.62 156 T T 21 54 37.8
SNR=73
CNNC Cliffs of the 48.70 311 IAMs_20 IAMs_20 21 18 40.1
comp=Z,3µm,20.0s
PAL Palisades 48.70 320 IAMs_20 IAMs_20 21 17 01.3
comp=Z,2µm,21.0s
L61B Northampton 48.74 322 IAMs_20 IAMs_20 21 17 29.5
comp=Z,2µm,22.0s
TRNY Table Rock, Ra 48.97 320 P **P 21 02 27.2 +1.2**
TRNY IAmb IAmb 21 03 36.9
comp=Z,28nm,0.7s
RIMA Rio Macho 49.00 277 P **P 21 02 26.5 -0.2**
RIMA IAmb IAmb 21 02 34.4
comp=Z,44nm,1.6s
KEST Kesra 49.03 48 P P 21 02 21.0 -5.6
comp=Z,1.6nm,0.7s,baz=243,slow=11,SNR=3.0
KEST LR LR 21 21 54.9
comp=Z,3µm,21.6s,baz=200,slow=35
comp=Z,1.6nm,0.7s
KEST Kesra 49.03 48 P **P 21 02 24.6 -2.0**
MFF Saint Martin d 49.04 31 *e*P **P 21 02 29.4 +3.0**
MFF pmax pmax
comp=Z,51nm,1.9s
DWPF Disney Wildern 49.08 301 IAMs_20 IAMs_20 21 18 40.2
comp=Z,4µm,19.0s
G62A West of Eustis 49.17 327 P **P 21 02 27.9 +0.4**
G62A IAmb IAmb 21 02 39.6
comp=Z,55nm,1.3s
WUPA West Chester U 49.24 318 P **P 21 02 29.1 +1.1**
LBNH Lisbon 49.35 325 IAMs_20 IAMs_20 21 17 27.7
comp=Z,3µm,22.0s
LUPA Lehigh Univers 49.43 319 P **P 21 02 30.6 +1.2**
LUPA IAmb IAmb 21 02 35.8
comp=Z,17nm,1.0s
TRY Troy 49.50 322 IAMs_20 IAMs_20 21 18 14.6
comp=Z,2µm,21.0s
D62A Allapoint, All 49.61 329 P **P 21 02 31.2 +0.5**
D62A IAmb IAmb 21 02 43.1
comp=Z,51nm,1.2s
NHSC New Hope 49.62 308 IAMs_20 IAMs_20 21 18 19.4
comp=Z,3µm,22.0s
V58A Windy Hill, Pi 49.84 311 P **P 21 02 33.5 +0.9**
V58A IAmb IAmb 21 02 54.9
comp=Z,42nm,1.2s
VT1 Waterbury 49.88 324 IAMs_20 IAMs_20 21 18 07.5
comp=Z,2µm,21.0s
CO01 Juntas del Tor 50.41 221 P **P 21 02 38.7 +1.5**
CO01 IAmb IAmb 21 03 07.3
comp=Z,45nm,1.4s
J59A Piesco 50.42 322 P **P 21 02 37.2 +0.3**
S57A Dark Hollow, R 50.54 314 P **P 21 02 38.6 +0.7**
S57A IAmb IAmb 21 02 45.9
comp=Z,63nm,1.8s
BINY Binghamton 50.65 320 IAMs_20 IAMs_20 21 18 34.0
comp=Z,2µm,22.0s
FRNY Flat Rock 50.66 324 P **P 21 02 38.9 +0.2**
FRNY IAmb IAmb 21 02 50.5
comp=Z,48nm,1.5s
SSB Saint Sauveur 50.73 35 P **P 21 02 41.3 +2.0**
SSB IAmb IAmb 21 03 09.4
comp=Z,43nm,1.5s
SSB Saint Sauveur 50.73 35 P **P 21 02 41.3 +2.0**
SSB pmax pmax
comp=Z,43nm,1.5s
BOAB BOACO BROADBAND 50.77 280 P **P 21 02 40.7 +0.7**
J58A Remsen 50.84 322 P **P 21 02 41.0 +0.9**
J58A IAmb IAmb 21 02 46.8
comp=Z,50nm,1.6s
MATN Matagalpa 51.03 281 P **P 21 02 43.1 +1.0**
K57A Scipio Center 51.26 321 P **P 21 02 44.4 +1.0**
K57A IAmb IAmb 21 03 00.1
comp=Z,74nm,1.6s
DSB Dublin 51.27 21 IAMs_20 IAMs_20 21 19 25.6
comp=Z,3µm,21.0s
J57A Williamstown 51.30 322 P **P 21 02 44.0 +0.4**
BLA Blacksburg 51.37 313 IAMs_20 IAMs_20 21 18 47.9
comp=Z,2µm,22.0s
V55A Taylorsville 51.43 311 P **P 21 02 45.6 +0.9**
V55A IAmb IAmb 21 03 13.2
comp=Z,56nm,1.6s
L56A Greenwood 51.62 320 P **P 21 02 46.8 +0.7**
LATQ La Tuque 51.74 327 P **P 21 02 47.8 +1.0**
LATQ IAmb IAmb 21 02 58.4
comp=Z,52nm,1.3s
J56A Wolcott 51.76 321 P **P 21 02 46.6 -0.4**
J56A IAmb IAmb 21 03 08.8
comp=Z,66nm,1.8s
BNI Bardonecchia 51.84 36 IAMs_20 IAMs_20 21 21 42.6
comp=Z,2µm,19.0s
TRQ Mont Tremblant 52.02 325 P **P 21 02 48.9 -0.1**
TRQ IAmb IAmb 21 03 01.1
comp=Z,33nm,1.1s
M55A Ridgway 52.09 318 P **P 21 02 49.6 0.0**
M55A IAmb IAmb 21 03 01.6
comp=Z,44nm,1.4s
CRIN San Cristobal 52.12 280 P **P 21 02 50.2 -0.1**
U54A Nelsons Funny 52.13 311 P **P 21 02 50.4 +0.4**
U54A IAmb IAmb 21 03 17.4
comp=Z,34nm,1.3s
MMNY Mt. Morris Dam 52.14 320 P **P 21 02 50.8 +1.0**
MMNY IAmb IAmb 21 03 02.8
comp=Z,27nm,1.1s
PECO Prince Edward 52.19 322 P **P 21 02 50.8 +0.6**
PECO IAmb IAmb 21 02 59.7
comp=Z,29nm,1.1s
GOGA Godfrey 52.32 307 IAMs_20 IAMs_20 21 20 13.9
comp=Z,3µm,21.0s
TGUH Tegucigalpa,Un 52.37 282 P **P 21 02 51.6 -0.5**
TGUH IAmb IAmb 21 03 03.4
comp=Z,59nm,1.2s
TGUH IAMs_20 IAMs_20 21 22 22.4
comp=Z,2µm,21.0s
BG3 Lake Jocassee 52.43 309 P **P 21 02 52.5 +0.3**
BG3 IAmb IAmb 21 02 58.9
comp=Z,29nm,1.2s
WVNY West Valley, N 52.43 319 P **P 21 02 52.8 +0.8**
WVNY IAmb IAmb 21 03 04.7
comp=Z,50nm,1.2s
DELO Deloro Mine 52.88 322 P **P 21 02 56.0 +0.7**
DELO IAmb IAmb 21 03 04.5
comp=Z,47nm,1.5s
SENIN Lac Senin/Sane 52.93 35 IAMs_20 IAMs_20 21 22 08.6
comp=Z,2µm,21.0s
Y52A Lilburn 52.94 307 P **P 21 02 57.5 +1.6**
Y52A IAmb IAmb 21 03 07.5
comp=Z,84nm,1.9s
P53A Whipple 53.00 315 P **P 21 02 56.8 +0.6**
P53A IAmb IAmb 21 02 58.1
comp=Z,25nm,1.1s
LMEL Las Melosas 53.07 218 P **P 21 02 55.6 -1.4**
LMEL IAmb IAmb 21 03 04.8
comp=Z,45nm,1.4s
N53A Lisbon 53.18 317 P **P 21 02 58.7 +1.2**
N53A IAmb IAmb 21 03 00.0
comp=Z,28nm,1.1s
O53A New Philadelph 53.19 316 P **P 21 02 58.9 +1.1**
O53A IAmb IAmb 21 03 04.0
comp=Z,21nm,1.0s
O53A IAMs_20 IAMs_20 21 21 05.3
comp=Z,2µm,21.0s
CASP Castiglione de 53.25 41 P **P 21 02 58.1 0.0**
TKL Tuckaleechee C 53.30 310 P **P 21 02 56.5 -2.1**
comp=Z,5.1nm,0.9s,baz=92,slow=8.3,SNR=2.7
TKL LR LR 21 20 41.6
comp=Z,2µm,22.0s,baz=120,slow=30
comp=Z,5.1nm,0.9s
M53A WI Miller and 53.35 317 IAMs_20 IAMs_20 21 19 47.3
comp=Z,2µm,22.0s
Q52A Bidwell 53.41 314 P **P 21 03 00.4 +1.1**
Q52A IAmb IAmb 21 03 04.8
comp=Z,59nm,1.4s
BO04 La Punta 53.42 218 P **P 21 02 59.4 -0.1**
TZTN Tazewell 53.44 311 IAMs_20 IAMs_20 21 20 22.7
comp=Z,3µm,22.0s
VAE Valguarnera 53.47 48 LR LR 21 25 30.6
comp=Z,1µm,21.9s,baz=278,slow=36
MT09 Talagante 53.50 218 P **P 21 03 02.0 +1.8**
MT09 IAmb IAmb 21 03 15.8
comp=Z,42nm,1.1s
O52A Adamsville 53.57 315 P **P 21 03 01.5 +1.0**
O52A IAmb IAmb 21 03 06.8
comp=Z,41nm,1.2s
DOU Dourbes 53.72 30 *d*P **P 21 03 00.4 -1.0**
LATE Laterza 53.78 41 P **P 21 03 01.7 -0.3**
V51A Loudon 53.79 309 P **P 21 03 03.2 +1.0**
OSSC Osservatorio P 53.85 40 P **P 21 03 01.9 -0.5**
OSSC IAmb IAmb 21 03 33.5
comp=Z,54nm,1.5s
SADO Sadowa 53.94 322 LR LR 21 20 59.3
comp=Z,2µm,21.9s,baz=162,slow=30
BO01 Tunca 53.98 218 P **P 21 03 04.8 +1.3**
BO01 IAmb IAmb 21 03 18.8
comp=Z,21nm,1.1s
ESK Eskdalemuir 54.05 21 IAMs_20 IAMs_20 21 20 50.2
comp=Z,3µm,21.0s
BO02 Sierra Bellavi 54.07 217 P **P 21 03 02.6 -1.6**
EKA Eskdalemuir Ar 54.08 21 LR LR 21 21 12.2
comp=Z,2µm,21.9s,baz=226,slow=31
BGES Gesves 54.15 30 *dx* **P 21 03 08.5 +4.0**
SCHQ Schefferville 54.17 337 P **P 21 03 00.5 -4.1**
comp=Z,5.5nm,0.9s,baz=219,slow=14,SNR=2.1
SCHQ LR LR 21 24 00.2
comp=Z,2µm,18.9s,baz=141,slow=34
comp=Z,5.5nm,0.9s
P51A Williamsport 54.18 314 P **P 21 03 05.8 +0.9**
P51A IAmb IAmb 21 03 11.0
comp=Z,42nm,1.1s
TUE Stuetta 54.18 36 IAMs_20 IAMs_20 21 22 23.6
comp=Z,2µm,22.0s
Q51A Peebles 54.20 314 P **P 21 03 06.0 +0.8**
Q51A IAmb IAmb 21 04 25.8
comp=Z,28nm,0.7s
N51A Ashland 54.28 316 P **P 21 03 06.4 +0.7**
N51A IAmb IAmb 21 03 36.3
comp=Z,29nm,1.2s
W50A Signal Mountai 54.34 308 P **P 21 03 07.0 +0.8**
W50A IAmb IAmb 21 03 43.9
comp=Z,20nm,1.1s
ESQI Esquipulas 54.39 283 P **P 21 03 04.5 -2.5**
MTO3 Montecristo 54.40 283 P **P 21 03 06.0 -1.2**
MTO3 IAmb IAmb 21 03 16.8
comp=Z,26nm,1.4s
ACSO Alum Creek Sta 54.42 315 P **P 21 03 07.4 +0.7**
ACSO IAmb IAmb 21 03 12.8
comp=Z,22nm,1.0s
R50A Paris 54.64 312 P **P 21 03 09.7 +1.4**
R50A IAmb IAmb 21 03 14.4
comp=Z,34nm,1.3s
DAVOX Davos/Dischmat 54.65 36 LR LR 21 23 12.0
comp=Z,2µm,21.5s,baz=250,slow=33
MEM Membach 54.75 30 *d*P **P 21 03 09.0 +0.1**
BTNL Ternell 54.80 30 *dx* **P 21 03 11.4 +2.2**
SWET Sewanee 54.82 308 P **P 21 03 11.0 +1.2**
SWET IAmb IAmb 21 03 46.7
comp=Z,49nm,1.5s
CEL Celeste 54.84 48 IAMs_20 IAMs_20 21 25 31.3
comp=Z,2µm,22.0s
DAVA Damuels 54.92 35 *e*P **P 21 03 10.4 0.0**
comp=Z,26nm,1.3s
LRAL Lakeview Retre 55.04 305 P **P 21 03 12.6 +1.3**
LRAL IAmb IAmb 21 03 17.0
comp=Z,54nm,1.6s
LRAL IAMs_20 IAMs_20 21 22 00.9
comp=Z,3µm,20.0s
ML02 Panimavida 55.11 217 P **P 21 03 12.4 +0.7**
U49A Red Boiling Sp 55.12 310 P **P 21 03 12.7 +0.9**
K50A Casco 55.24 318 P **P 21 03 13.1 +0.5**
R49A Shelbyville 55.26 312 P **P 21 03 13.2 +0.4**
R49A IAmb IAmb 21 03 18.5
comp=Z,40nm,1.5s
FETA Feichten 55.28 36 *e*P **P 21 03 13.4 +0.4**
comp=Z,9.1nm,1.0s
CTI Castel Tesino 55.33 38 P **P 21 03 12.1 -1.2**
CTI IAmb IAmb 21 03 45.4
comp=Z,23nm,1.3s
CTI Castel Tesino 55.33 38 P **P 21 03 12.1 -1.2**
CTI pmax pmax
comp=Z,23nm,1.3s
P49A Miami Univ. Ec 55.38 314 P **P 21 03 11.7 -1.9**
P49A IAmb IAmb 21 03 28.8
comp=Z,58nm,1.6s
CLTN Cedars of Leba 55.41 309 P **P 21 03 12.6 -1.3**
CLTN IAmb IAmb 21 03 50.1
comp=Z,64nm,1.7s
X48A Hartselle 55.47 307 P **P 21 03 15.0 +0.6**
X48A IAmb IAmb 21 03 20.0
comp=Z,40nm,1.6s
RETA Reutte 55.54 36 *e*P **P 21 03 14.8 +0.1**
comp=Z,15nm,1.0s
SQTA Sankt Quirin 55.66 36 *e*P **P 21 03 17.4 +1.7**
comp=Z,24nm,1.0s
MOTA Moosalm 55.66 36 *e*P **P 21 03 17.8 +2.0**
comp=Z,12nm,1.0s
V48A Smith Brothers 55.67 309 P **P 21 03 16.7 +0.9**
V48A IAmb IAmb 21 03 21.6
comp=Z,51nm,1.4s
AAM Ann Arbor 55.73 317 P **P 21 03 15.9 -0.2**
AAM IAmb IAmb 21 03 46.7
comp=Z,34nm,0.9s
AAM IAMs_20 IAMs_20 21 22 35.3
comp=Z,2µm,19.0s
AAM Ann Arbor 55.73 317 P **P 21 03 15.9 -0.2**
AAM pmax pmax
comp=Z,33nm,0.9s
AAM MLR MLR
comp=Z,2µm,19.0s
TIP Timpagrande 55.80 47 IAMs_20 IAMs_20 21 26 01.7
comp=Z,2µm,22.0s
P48A Milroy 55.86 313 P **P 21 03 17.3 +0.2**
P48A IAmb IAmb 21 04 59.4
comp=Z,63nm,1.6s
WTTA Wattenberg 55.93 36 *e*P **P 21 03 17.5 -0.2**
comp=Z,14nm,1.3s
WATA Walderalm 55.93 36 *e*P **P 21 03 19.8 +2.2**
comp=Z,14nm,1.3s
Z47A Carrollton 55.95 305 P **P 21 03 16.8 -1.1**
WCI Wyandotte Cave 56.07 312 P **P 21 03 19.7 +1.1**
WCI Wyandotte Cave 56.07 312 IAMs_20 IAMs_20 21 22 38.4
comp=Z,2µm,20.0s
WCI Wyandotte Cave 56.07 312 P **P 21 03 19.7 +1.1**
WCI pmax pmax
comp=Z,11nm,0.9s
WCI MLR MLR
comp=Z,2µm,20.0s
L48A N Adams 56.11 316 P **P 21 03 19.1 +0.2**
ABTA Abfaltersbach 56.19 37 *e*P **P 21 03 20.9 +1.4**
comp=Z,28nm,1.2s
T47A Sharon Grove 56.28 310 P **P 21 03 21.0 +0.9**
T47A IAmb IAmb 21 03 25.8
comp=Z,37nm,1.1s
PLAL Pickwick Lake 56.43 307 P **P 21 03 22.0 +0.7**
PLAL IAmb IAmb 21 03 26.6
comp=Z,37nm,1.4s
PLAL IAMs_20 IAMs_20 21 22 41.8
comp=Z,2µm,22.0s
BLO Bloomington 56.56 313 P **P 21 03 21.4 -0.7**
BLO Bloomington 56.56 313 P **P 21 03 21.4 -0.7**
BLO pmax pmax
comp=Z,23nm,0.6s
WVT Waverly 56.57 309 P **P 21 03 22.9 +0.6**
WVT IAmb IAmb 21 03 27.3
comp=Z,32nm,1.4s
WVT Waverly 56.57 309 IAMs_20 IAMs_20 21 22 11.4
comp=Z,2µm,22.0s
WVT Waverly 56.57 309 P **P 21 03 22.9 +0.6**
WVT pmax pmax
comp=Z,32nm,1.4s
WVT MLR MLR
comp=Z,2µm,22.0s
146A Union 56.61 304 P **P 21 03 21.4 -1.2**
MYKA Terra Mystica 56.82 38 *e*P **P 21 03 24.7 +0.8**
comp=Z,36nm,1.3s
KBA Koelnbreinsper 56.85 37 *e*P **P 21 03 25.4 +1.2**
comp=Z,16nm,0.8s
GRFO Grafenberg 56.96 34 P **P 21 03 25.0 +0.2**
GRFO IAmb IAmb 21 03 37.5
comp=Z,30nm,1.1s
GRFO Grafenberg 56.96 34 P **P 21 03 25.0 +0.2**
GRFO pmax pmax
comp=Z,30nm,1.1s
GRFO MLR MLR
comp=Z,800nm,18.0s
GRA1 Grafenberg Arr 56.96 34 P **P 21 03 24.6 -0.2**
GRA1 IAmb IAmb 21 03 37.5
comp=Z,31nm,1.1s
GRF Grafenberg Arr 56.96 34 P **P 21 03 24.6 -0.2**
GRF pmax pmax
comp=Z,31nm,1.1s
GRF MLR MLR
comp=Z,800nm,18.0s
USIN University of 57.01 311 P **P 21 03 25.1 -0.2**
USIN IAmb IAmb 21 04 02.0
comp=Z,54nm,1.4s
CCIG Comitan 57.13 285 P **P 21 03 26.0 -0.7**
P46A Rosedale 57.21 313 P **P 21 03 27.4 +0.7**
Y45A Yeager Farm, C 57.31 306 P **P 21 03 27.5 0.0**
OBKA Obir 57.32 38 *e*P **P 21 03 29.2 +1.7**
comp=Z,26nm,1.7s
BIOA Bad Ischl, Aus 57.32 37 *e*P **P 21 03 28.2 +0.8**
comp=Z,18nm,1.0s
W45A Hickory Valley 57.36 307 P **P 21 03 27.3 -0.5**

OXF Oxford 57.37 307 IAMs_20 IAMs_20 21 24 19.4
comp=Z,2μm,19.0s
SFIN Lafayette 57.39 314 P **P** **21 03 28.8 +0.9**
SFIN IAmb IAmb 21 03 34.0
comp=Z,22nm,1.1s
GLMI Grayling 57.42 320 IAMs_20 IAMs_20 21 22 33.1
comp=Z,2μm,21.0s
TSUM Tsumeb 57.48 118 P **P** **21 03 24.9 -4.2**
comp=Z,0.6nm,0.3s,baz=292,slow=19,SNR=1.4
TSUM LR LR 21 22 31.5
comp=Z,799nm,20.8s,baz=290,slow=30
comp=Z,0.6nm,0.3s
TSUM Tsumeb 57.48 118 P **P** **21 03 26.9 -2.2**
TSUM IAmb IAmb 21 03 49.8
comp=Z,46nm,2.0s
OLIL Olney 57.57 312 P **P** **21 03 30.0 +0.7**
OLIL IAmb IAmb 21 03 35.4
comp=Z,36nm,1.1s
HALT Halls 57.68 308 P **P** **21 03 29.9 -0.2**
SOKA Soboth 57.69 38 *e*P **P** **21 03 29.0 -1.1**
comp=Z,17nm,1.2s
VBMS Vicksburg 57.72 304 P **P** **21 03 29.4 -1.0**
VBMS IAMs_20 IAMs_20 21 25 16.6
comp=Z,2μm,19.0s
344A Westbrook Farm 57.73 303 P **P** **21 03 29.4 -1.1**
MOA Molln 57.77 37 *e*P **P** **21 03 29.9 -0.7**
comp=Z,15nm,1.1s
GO06 Curarrehue 57.80 213 P **P** **21 03 31.1 +0.2**
GO06 IAmb IAmb 21 03 47.2
comp=Z,38nm,1.1s
GERES GERESS Array B 57.92 35 P P 21 03 25.5 -6.2
comp=Z,0.1nm,0.3s,baz=250,slow=5.1,SNR=9.0
comp=Z,0.1nm,0.3s
KHC Kasperske Hory 57.99 35 P **P** **21 03 31.5 -0.6**
KHC Kasperske Hory 57.99 35 *e*P P 21 03 40.0 +7.9
KHC *e*S **S** **21 11 41.0 +8.4**
KHC MLR MLR
comp=Z,2μm,26.4s
KHC Kasperske Hory 57.99 35 *e*P P 21 03 40.0 +7.9
KHC *e*x x 21 04 00.0
KHC *e*S **S** **21 11 41.0 +8.4**
KHC AMS AMS 21 23 40.0
comp=Z,2μm,26.4s
SIUC Southern Illin 58.10 310 P **P** **21 03 30.4 -2.6**
SIUC IAmb IAmb 21 03 38.2
comp=Z,22nm,0.9s
S44A Carbondale 58.12 310 P **P** **21 03 31.3 -1.9**
PLCA Paso Flores 58.12 212 P **P** **21 03 33.7 +0.5**
comp=Z,7.8nm,1.2s,baz=37,slow=4.6,SNR=5.6
comp=Z,7.8nm,1.2s
PLCA Paso Flores 58.12 212 P **P** **21 03 31.9 -1.2**
PLCA IAmb IAmb 21 03 49.8
comp=Z,35nm,1.4s
PLCA Paso Flores 58.12 212 P **P** **21 03 31.9 -1.2**
PLCA pmax pmax
comp=Z,35nm,1.4s
BORG Borgarnes 58.23 7 LR LR 21 22 48.9
comp=Z,846nm,20.1s,baz=195,slow=30
ARSA Arzberg 58.25 38 *e*P **P** **21 03 33.4 -0.5**
comp=Z,8.8nm,0.9s
CKRC Cesky Krumlov 58.26 36 *e*P **P** **21 03 36.6 +2.6**
CKRC *e*x x 21 03 43.0
CKRC *e*S S 21 11 46.0 +10
CKRC AMS AMS 21 24 30.0
comp=Z,2μm,20.0s
Q44A Meyer Farm, Va 58.31 312 P **P** **21 03 34.4 0.0**
Q44A IAmb IAmb 21 03 39.8
comp=Z,42nm,1.2s
143A Socs Landing, 58.55 304 P **P** **21 03 37.1 +0.8**
L44A Lake County Fo 58.60 316 IAMs_20 IAMs_20 21 26 06.3
comp=Z,2μm,18.0s
CONA Conrad Observa 58.76 37 *e*P **P** **21 03 37.6 +0.1**
comp=Z,22nm,1.3s
CLL Collm 58.78 33 *e*P **P** **21 03 39.0 +1.5**
CLL *e*S **S** **21 11 45.0 +2.3**
CLL MLR MLR
comp=Z,1μm,22.0s
CLL Collm 58.78 33 *e*P **P** **21 03 39.0 +1.5**
CLL *e*S **S** **21 11 45.0 +2.3**
CLL *e*(ScS) 21 13 36.0
CLL *e*SS SS 21 15 24.0 -12
CLL Lm MLR 21 25 00.0
comp=Z,1μm,22.0s
RONA Rosalia, Austr 58.92 38 *e*P **P** **21 03 37.8 -0.8**
comp=Z,30nm,1.2s
PRU Pruhonice 58.96 35 *e*P **P** **21 03 41.2 +2.4**
PRU *e*S **S** **21 11 52.6 +7.5**
PRU MLR MLR
comp=Z,1μm,18.3s
PRU Pruhonice 58.96 35 *e*P **P** **21 03 41.2 +2.4**
PRU *e*S **S** **21 11 52.6 +7.5**
PRU AMS AMS 21 24 30.0
comp=Z,1μm,18.3s
HDIL Hopedale 59.03 313 P **P** **21 03 38.6 -0.8**
HDIL IAMs_20 IAMs_20 21 23 49.7
comp=Z,2μm,22.0s
GOPC GO Pecny, Ondr 59.06 35 AMS AMS 21 24 30.0
comp=Z,1μm,21.0s
BRG Berggiesshubel 59.07 33 *e*P P 21 03 51.8 +12
BRG Amp 21 03 53.9
comp=Z,20nm,1.4s
BRG *e*x x 21 03 58.3
BRG Amp 21 04 00.5
comp=Z,26nm,1.6s
BRG *e*x x 21 04 27.3
BRG Amp 21 04 29.3
comp=Z,17nm,1.4s
BRG Berggiesshubel 59.07 33 SS SS 21 15 37.0 -3.5
BRG Amp 21 22 00.0
comp=Z,1.9nm,30.8s
BRG Amp 21 22 10.0
comp=E,1.1nm,24.0s
BRG Amp 21 22 18.0
comp=N,0.8nm,26.5s
BRG Berggiesshubel 59.07 33 *e*P P 21 03 51.8 +12
BRG *e* 21 03 58.2
BRG *e* 21 04 27.2
BRG S **S** **21 11 47.0 +0.5**
BRG SS **SS** **21 15 37.0 -3.5**
BRG pmax pmax
comp=Z,20nm,1.5s
BRG MLR MLR
comp=E,1μm,24.0s
BRG MLR MLR
comp=N,784nm,26.5s
LCAR Lake Charles 59.14 308 P **P** **21 03 40.1 -0.2**
LL04 Puerto Octay 59.24 213 P **P** **21 03 42.2 +1.4**
LL04 IAmb IAmb 21 03 46.3
comp=Z,46nm,1.6s
PVCC Panska Ves 59.24 34 AMS AMS 21 22 20.0
comp=Z,2μm,29.2s
KOVH Kovagotottos 59.35 40 P P 21 03 53.1 +12
EGYH Egyhazaskeszo 59.43 38 P P 21 03 53.6 +12
MPLH Magyarpolny 59.45 39 P P 21 03 53.3 +11
KRUC Moravsky 59.59 36 *e*P **P** **21 03 45.2 +2.0**
ZST Bratislava 59.62 37 *e*P **P** **21 03 45.4 +2.0**
ZST *e* 21 03 54.8
CCM Cathedral Cave 59.74 310 P **P** **21 03 44.6 +0.2**
CCM IAmb IAmb 21 03 48.9
comp=Z,28nm,1.3s
CCM Cathedral Cave 59.74 310 IAMs_20 IAMs_20 21 24 41.4
comp=Z,2μm,21.0s
CCM Cathedral Cave 59.74 310 P **P** **21 03 44.6 +0.2**
CCM pmax pmax
comp=Z,28nm,1.3s
CCM MLR MLR
comp=Z,2μm,21.0s
MORH Mrgy, Hungar 59.75 40 ⇑P **P** **21 03 44.6 +0.3**
MORH Mrgy, Hungar 59.75 40 P P 21 03 56.1 +12
L42A Oliver, Polo 59.77 315 P **P** **21 03 43.4 -1.1**
L42A IAmb IAmb 21 03 44.8
comp=Z,19nm,1.1s
UALR University of 59.77 306 P **P** **21 03 44.4 -0.3**
UALR IAmb IAmb 21 03 49.5
comp=Z,23nm,1.0s
CMIG Matias Romero 59.79 286 LR LR 21 28 13.2
comp=Z,441nm,21.8s,baz=71,slow=35
MODS Modra-Piesok 59.81 37 *e*P **P** **21 03 46.8 +2.1**
VRAC Vranov 59.82 36 ⇑P **P** **21 03 40.6 -4.1**
VRAC Vranov 59.82 36 LR LR 21 26 16.6
comp=Z,1μm,21.7s,baz=251,slow=33
VRAC Vranov 59.82 36 ⇑P **P** **21 03 40.6 -4.1**
VRAC Vranov 59.82 36 *e*P **P** **21 03 46.2 +1.5**
DIVS Divibare 59.83 43 P **P** **21 03 43.7 -1.4**
SMOL Smolenice 59.96 37 *e*P P 21 03 57.4 +12

CSKK Cskako 59.98 39 P P 21 04 00.7 +15
UPC Upice 60.04 35 AMS AMS 21 25 00.0
comp=Z,800nm,18.4s
DPC Dobruska-Polom 60.14 35 *e*P **P** **21 03 50.3 +3.3**
DPC *e* 21 03 57.2
DPC *e*S S 21 12 11.5 +11
DPC MLR MLR
comp=Z,1μm,24.2s
DPC Dobruska-Polom 60.14 35 *e*P **P** **21 03 50.3 +3.3**
DPC *e*x x 21 03 57.2
DPC *e*S S 21 12 11.5 +11
DPC AMS AMS 21 24 30.0
comp=Z,1μm,24.2s
WLAR White Oak Lake 60.16 305 P **P** **21 03 46.5 -0.8**
OSTC Ostas 60.18 35 AMS AMS 21 24 10.0
comp=Z,900nm,17.8s
N41A Harden Midland 60.21 313 P **P** **21 03 46.8 -0.8**
JAVC Velka Javorina 60.25 37 *e*P P 21 03 57.1 +9.3
KRLC Kraliky 60.27 35 *e*P **P** **21 03 50.7 +2.8**
KRLC MLR MLR
comp=Z,1μm,22.4s
KRLC Kraliky 60.27 35 *e*P **P** **21 03 50.7 +2.8**
KRLC AMS AMS 21 25 30.0
comp=Z,1μm,22.4s
MGMO Mountain Grove 60.28 309 P **P** **21 03 48.1 -0.1**
MGMO IAmb IAmb 21 03 52.8
comp=Z,36nm,1.2s
JFWS Jewell Farm 60.47 316 P **P** **21 03 49.7 +0.3**
JFWS IAmb IAmb 21 03 54.6
comp=Z,27nm,1.1s
JFWS Jewell Farm 60.47 316 IAMs_20 IAMs_20 21 25 49.9
comp=Z,2μm,19.0s
JFWS Jewell Farm 60.47 316 P **P** **21 03 49.7 +0.3**
JFWS pmax pmax
comp=Z,27nm,1.1s
JFWS MLR MLR
comp=Z,2μm,19.0s
MAUC Maruska 60.57 36 AMS AMS 21 26 30.0
comp=Z,1μm,16.8s
R40A Maddies Statio 60.58 310 P **P** **21 03 49.6 -0.5**
R40A IAmb IAmb 21 04 10.8
comp=Z,26nm,1.4s
MORC Moravsky Berou 60.58 36 P **P** **21 03 50.2 +0.2**
MORC IAmb IAmb 21 04 20.8
comp=Z,38nm,1.7s
MORC Moravsky Berou 60.58 36 P **P** **21 03 50.2 +0.2**
MORC pmax pmax
comp=Z,38nm,1.7s
MORC Moravsky Berou 60.58 36 *e*P **P** **21 03 49.5 -0.5**
RGN Rugen 60.67 30 IAMs_20 IAMs_20 21 26 41.1
comp=Z,1μm,20.0s
MIAR Mount Ida 60.72 306 P **P** **21 03 51.2 0.0**
MIAR pmax pmax
comp=Z,21nm,1.5s
MIAR MLR MLR
comp=Z,2μm,22.0s
P40A Paris 60.74 311 P **P** **21 03 50.5 -0.7**
P40A IAmb IAmb 21 03 55.6
comp=Z,35nm,1.2s
SFJD Kangerlussuaq 60.77 353 P **P** **21 03 46.7 -4.2**
comp=Z,8.7nm,1.0s,baz=116,slow=9.4,SNR=2.4
SFJD LR LR 21 22 46.6
comp=Z,830nm,20.8s,baz=170,slow=29
comp=Z,8.7nm,1.0s
VYHS Vyhne 60.80 38 *e*P **P** **21 03 53.6 +2.1**
BOVS Bovan 60.83 44 ⇑P **P** **21 03 54.1 +2.3**
L40A Anamosa 60.88 314 P **P** **21 03 51.8 -0.4**
L40A IAmb IAmb 21 03 56.5
comp=Z,21nm,1.1s
IDI Anoyia 60.90 54 ⇑P P 21 04 04.4 +12
IDI Anoyia 60.90 54 LR LR 21 30 42.8
comp=Z,781nm,21.0s,baz=254,slow=37
OKC Ostrava-Krasne 60.96 36 AMS AMS 21 26 10.0
comp=Z,1μm,19.8s
I40A Norwalk 61.05 317 P **P** **21 03 51.5 -1.8**
I40A IAmb IAmb 21 03 58.6
comp=Z,15nm,0.9s
NATX Nacogdoches 61.08 302 P **P** **21 03 53.1 -0.5**
NATX IAMs_20 IAMs_20 21 27 18.0
comp=Z,3μm,20.0s
PSZ Piszkesteto 61.21 39 ⇓P **P** **21 03 52.0 -2.4**
PSZ Piszkesteto 61.21 39 **P** **21 03 54.6 +0.2**
PSZ IAmb IAmb 21 04 07.5
comp=Z,41nm,1.3s
PSZ Piszkesteto 61.21 39 P **P** **21 03 54.6 +0.2**
PSZ pmax pmax
comp=Z,41nm,1.3s
PSZ MLR MLR
comp=Z,800nm,20.0s
PSZ Piszkesteto 61.21 39 P P 21 04 05.1 +11
MDVR Moldovita 61.23 42 ⇑P **P** **21 03 56.3 +1.8**
S39A Bolivar 61.23 309 P **P** **21 03 52.8 -1.8**
BZS Buzias 61.45 41 ⇑P **P** **21 03 56.6 +0.7**
BZS Buzias 61.45 41 ⇑P **P** **21 03 56.6 +0.7**
BLKB Belogradchik 61.49 44 ⇑P **P** **21 03 59.5 +3.1**
VTS Vitosha 61.57 45 ⇑P **P** **21 04 01.5 +4.5**
VTS Vitosha 61.57 45 P **P** **21 03 57.0 0.0**
VTS IAmb IAmb 21 04 26.5
comp=Z,24nm,1.6s
VTS Vitosha 61.57 45 P **P** **21 03 57.0 0.0**
VTS pmax pmax
comp=Z,24nm,1.6s
FRB Frobisher Bay 61.58 343 LR LR 21 26 41.3
comp=Z,1μm,21.8s,baz=143,slow=32
HKT Hockley 61.78 300 IAMs_20 IAMs_20 21 26 46.9
comp=Z,3μm,22.0s
HKT Hockley 61.78 300 *i*P P 21 04 05.1 +6.7
HKT pmax pmax
comp=Z,5.0nm,1.1s
P38A Dawn 61.87 311 P **P** **21 03 57.8 -1.2**
N38A Joes South For 61.96 313 P **P** **21 03 58.8 -0.7**
N38A IAmb IAmb 21 04 03.8
comp=Z,25nm,1.1s
KONO Kongsberg 62.00 24 IAMs_20 IAMs_20 21 25 46.4
comp=Z,2μm,22.0s
EFI East Falkland 62.04 196 IAMs_20 IAMs_20 21 29 39.5
comp=Z,2μm,20.0s
EFI East Falkland 62.04 196 *i*P **P** **21 03 59.0 -0.7**
EFI pmax pmax
comp=Z,32nm,1.1s
237A Washetta, Mont 62.08 302 P **P** **21 04 00.6 +0.2**
OJC Ojcow 62.09 36 P **P** **21 04 00.1 0.0**
OJC IAmb IAmb 21 04 11.8
comp=Z,23nm,1.3s
OJC Ojcow 62.09 36 P **P** **21 04 00.1 0.0**
OJC pmax pmax
comp=Z,23nm,1.3s
GZR Gura Zlata 62.14 42 ⇑P **P** **21 04 02.5 +1.8**
GZR Gura Zlata 62.14 42 ⇑P **P** **21 04 02.5 +1.8**
SCIA State Center 62.26 314 IAMs_20 IAMs_20 21 25 50.1
comp=Z,2μm,21.0s
LTVH Ltavrtes, Hu 62.27 40 P P 21 04 13.2 +12
DRGR 62.57 41 ⇑P **P** **21 04 03.9 +0.3**
DRGR 62.57 41 ⇑P **P** **21 04 03.9 +0.3**
TUL1 Leonard 62.77 307 P **P** **21 04 04.4 -0.6**
TUL1 IAMs_20 IAMs_20 21 26 36.6
comp=Z,1μm,20.0s
LOT Lotru 62.82 42 ⇑P **P** **21 04 07.6 +2.3**
TRPA Tarpa 62.94 39 ⇓P **P** **21 04 04.7 -1.1**
TRPA Tarpa 62.94 39 P P 21 04 16.9 +11
SPMN Marine on St. 62.96 317 P **P** **21 04 05.3 -0.8**
SPMN IAmb IAmb 21 04 10.9
comp=Z,13nm,0.9s
UZH Uzhgorod 62.97 38 *e*P P 21 04 11.0 +5.0
UZH *e* 21 04 17.8
UZH *e* 21 04 44.0
UZH *e* 21 06 29.7
UZH *e*S **S** **21 12 40.9 +4.7**
UZH *e*SS **SS** **21 16 41.8 +0.2**
EYMN Ely 63.02 321 IAMs_20 IAMs_20 21 26 29.3
comp=Z,2μm,19.0s
KOLS Kolonicke sedl 63.06 38 *e*P P 21 04 18.5 +12
ARR Arges 63.37 43 ⇓P **P** **21 04 10.0 +1.1**
435B Jarrell 63.40 301 P **P** **21 04 08.8 -0.4**
435B IAMs_20 IAMs_20 21 28 18.5
comp=Z,2μm,21.0s
WHTX Lake Whitney, 63.46 302 P **P** **21 04 07.9 -1.8**
WHTX IAmb IAmb 21 04 17.5
comp=Z,32nm,1.4s
Z35A Perchaven, San 63.49 304 P **P** **21 04 08.8 -1.1**
NB2 NORSAR Subarra 63.50 23 P **P** **21 04 11.5 +2.1**
comp=Z,36nm,2.0s,baz=232,slow=6.5
NOA NORSAR Array B 63.50 23 P P 21 04 04.5 -4.9
comp=Z,0.4nm,0.7s,baz=126,slow=16,SNR=2.1
NOA LR LR 21 27 24.4
comp=Z,1μm,21.3s,baz=230,slow=32
comp=Z,0.4nm,0.7s
T35A Sooner Cattle 63.54 308 P **P** **21 04 08.7 -1.4**
T35A IAmb IAmb 21 04 14.6
comp=Z,30nm,1.3s
OK031 S. Brethren Rd 63.61 307 IAMs_20 IAMs_20 21 27 13.9
comp=Z,1μm,21.0s
OK044 Pawnee Station 63.66 307 IAMs_20 IAMs_20 21 29 28.0
comp=Z,2μm,19.0s
VOIR 63.67 43 ⇓P **P** **21 04 12.1 +1.2**
VOIR 63.67 43 ⇓P **P** **21 04 12.1 +1.2**
OK033 Mehan 63.71 307 **P** **21 04 11.1 -0.1**
OK033 IAmb IAmb 21 04 16.4
comp=Z,23nm,0.9s
OK033 IAMs_20 IAMs_20 21 27 03.4
comp=Z,1μm,20.0s
OK051 E0350 and S346 63.72 307 P **P** **21 04 10.6 -0.7**
OK051 IAMs_20 IAMs_20 21 29 28.5
comp=Z,2μm,18.0s
N35A Tabor 63.75 312 P **P** **21 04 10.5 -0.9**
N35A IAmb IAmb 21 04 16.1
comp=Z,27nm,1.1s
OK046 Pawnee Station 63.75 307 **P** **21 04 11.1 -0.4**
OK046 IAmb IAmb 21 04 16.2
comp=Z,32nm,1.3s
OK046 IAMs_20 IAMs_20 21 29 36.5
comp=Z,2μm,21.0s
OK045 Pawnee Station 63.77 307 P **P** **21 04 11.5 -0.1**
OK045 IAmb IAmb 21 04 16.4
comp=Z,24nm,1.1s
OK045 IAMs_20 IAMs_20 21 29 40.1
comp=Z,2μm,20.0s
OK048 Pawnee Station 63.78 307 **P** **21 04 11.7 0.0**
OK048 IAMs_20 IAMs_20 21 29 37.3
comp=Z,2μm,19.0s
OK050 Pawnee Station 63.81 307 P **P** **21 04 12.2 +0.3**
OK050 IAmb IAmb 21 04 16.6
comp=Z,28nm,1.1s
OK050 IAMs_20 IAMs_20 21 29 32.0
comp=Z,2μm,20.0s
OK025 Westminster Rd 63.94 306 P **P** **21 04 11.8 -1.0**
OK025 IAMs_20 IAMs_20 21 28 24.6
comp=Z,2μm,20.0s
HFS Hagfors 63.95 24 LR LR 21 30 48.3
comp=Z,845nm,18.6s,baz=242,slow=35
KSU1 Kansas State U 64.07 310 P **P** **21 04 12.3 -1.2**
KSU1 IAmb IAmb 21 04 20.6
comp=Z,11nm,0.8s
KSU1 Kansas State U 64.07 310 IAMs_20 IAMs_20 21 31 09.0
comp=Z,1μm,20.0s
OK049 E0420 Rd and N 64.07 307 P **P** **21 04 13.2 -0.4**
OK049 IAmb IAmb 21 04 18.4
comp=Z,23nm,1.1s
OK049 IAMs_20 IAMs_20 21 27 34.9
comp=Z,1μm,20.0s
OK029 Liberty Lake 64.08 306 P **P** **21 04 13.5 -0.2**
MLR Muntele Rosu 64.29 43 ⇓P **P** **21 04 16.0 +0.9**
MLR Muntele Rosu 64.29 43 LR LR 21 31 15.8
comp=Z,725nm,19.4s,baz=264,slow=35
MLR Muntele Rosu 64.29 43 P **P** **21 04 14.3 -0.7**
MLR Muntele Rosu 64.29 43 P **P** **21 04 14.3 -0.7**
MLR pmax pmax
comp=Z,102nm,1.2s
MLR MLR MLR
comp=Z,1μm,22.0s
KAN13 South Haven SW 64.32 308 P **P** **21 04 15.1 -0.1**
OZUR 64.36 42 ⇑P **P** **21 04 16.8 +1.4**
MANT Manisa 64.45 51 P **P** **21 04 15.2 -1.2**
LVV L'vov 64.45 38 *e*P P 21 04 25.0 +9.1
BURAR Bucovina Array 64.46 40 ⇓P **P** **21 04 15.2 -0.8**
BURAR Bucovina Array 64.46 40 ⇓P **P** **21 04 15.2 -0.8**
L34A Svendsen Farm, 64.55 313 P **P** **21 04 15.8 -0.9**
KAN17 Caldwell West 64.55 308 P **P** **21 04 15.5 -1.2**
KAN01 Argonia South 64.56 308 P **P** **21 04 17.0 +0.1**
COVR Voineasa-Covas 64.57 42 ⇑P **P** **21 04 17.7 +1.0**
ISR Istrita 64.59 43 ⇑P **P** **21 04 18.5 +1.6**
ISR Istrita 64.59 43 ⇑P **P** **21 04 18.5 +1.6**
KAN05 Bluff City Nor 64.65 308 P **P** **21 04 16.8 -0.6**
KAN06 Argonia West S 64.66 308 P **P** **21 04 16.8 -0.7**
833A Chaparral WMA, 64.68 298 P **P** **21 04 16.4 -1.4**
833A IAmb IAmb 21 04 24.6
comp=Z,21nm,1.0s
KAN14 Manchester OK 64.69 307 P **P** **21 04 17.4 -0.3**
KAN08 Anthony NE Sta 64.75 308 P **P** **21 04 17.7 -0.3**
KAN16 Harper SW Stat 64.82 308 P **P** **21 04 16.1 -2.4**
KAN16 IAmb IAmb 21 04 23.9
comp=Z,21nm,0.8s
KAN10 Anthony SW Sta 64.82 308 P **P** **21 04 17.4 -1.1**
BIZ Bicaz 64.83 41 ⇓P **P** **21 04 18.6 +0.3**
OK032 Salt Plains WL 64.86 307 IAMs_20 IAMs_20 21 30 21.7
comp=Z,2μm,20.0s
PLOR Plostina 64.87 42 ⇓P P 21 04 08.7 -10
VRI Vrincioaia 64.92 42 ⇓P P 21 04 07.1 -12
WMOK Wichita Mounta 64.97 305 **P** **21 04 18.4 -1.2**
WMOK IAmb IAmb 21 06 32.7
comp=Z,6.7nm,0.4s
WMOK Wichita Mounta 64.97 305 IAMs_20 IAMs_20 21 28 53.8
comp=Z,3μm,20.0s
WMOK Wichita Mounta 64.97 305 P **P** **21 04 18.4 -1.2**
WMOK pmax pmax
comp=Z,7.0nm,0.4s
WMOK MLR MLR
comp=Z,3μm,20.0s
TESR Tescani 65.06 42 ⇑P **P** **21 04 19.9 0.0**
ECSD EROS Data Cent 65.15 315 P **P** **21 04 20.0 -0.6**
ECSD IAmb IAmb 21 04 37.6
comp=Z,37nm,1.9s
ECSD EROS Data Cent 65.15 315 IAMs_20 IAMs_20 21 28 51.8
comp=Z,1μm,20.0s
ELL Elmali 65.18 53 P **P** **21 04 21.3 +0.3**
ELL Elmali 65.18 53 P **P** **21 04 21.3 +0.3**
ELL pmax pmax
comp=Z,153nm,1.2s
OK038 West end E0370 65.22 307 P **P** **21 04 19.6 -1.6**
JCT Junction City 65.26 300 P **P** **21 04 21.0 -0.5**
JCT IAmb IAmb 21 04 29.5
comp=Z,17nm,1.1s
JCT IAMs_20 IAMs_20 21 28 25.7
comp=Z,2μm,22.0s
JCT Junction City 65.26 300 P **P** **21 04 21.0 -0.5**
JCT pmax pmax
comp=Z,17nm,1.2s
JCT MLR MLR
comp=Z,2μm,22.0s
ABTX Abilene, Hawle 65.38 303 P **P** **21 04 21.6 -0.7**
ABTX IAmb IAmb 21 04 26.8
comp=Z,16nm,1.1s
MBAR Mbarara 65.39 94 LR LR 21 31 03.4
comp=Z,267nm,21.6s,baz=264,slow=34
MBAR Mbarara 65.39 94 P **P** **21 04 22.7 -0.1**
MBAR Mbarara 65.39 94 P **P** **21 04 22.7 -0.1**
MBAR pmax pmax
comp=Z,15nm,1.6s
MBAR MLR MLR
comp=Z,400nm,19.0s
U32A Winter Ranch, 65.41 307 P **P** **21 04 21.6 -0.8**
U32A IAmb IAmb 21 04 27.5
comp=Z,20nm,0.8s
R32A Long Quarter, 65.54 309 P **P** **21 04 23.1 -0.1**
SUR Sutherland 65.57 130 LR LR 21 26 27.4
comp=Z,1μm,21.8s,baz=297,slow=30
TIRR Tirgusor 65.70 44 IAMs_20 IAMs_20 21 33 29.5
comp=Z,2μm,22.0s
BGNE Belgrade 65.72 312 P **P** **21 04 22.5 -1.8**
JMIC Jan Mayen 65.82 9 LR LR 21 26 47.3
comp=Z,383nm,21.3s,baz=206,slow=30
LSZ Lusaka 65.85 110 LR LR 21 26 46.5
comp=Z,463nm,21.4s,baz=300,slow=30
LSZ Lusaka 65.85 110 P **P** **21 04 24.7 -1.0**
LSZ Lusaka 65.85 110 P **P** **21 04 24.7 -1.0**
LSZ pmax pmax
comp=Z,14nm,1.2s
AGMN Agassiz Nation 65.90 320 IAMs_20 IAMs_20 21 30 28.5
comp=Z,1μm,20.0s
BORA Eskisehir 66.17 50 P **P** **21 04 27.7 +0.4**
CBKS Cedar Bluff 66.40 309 P **P** **21 04 28.0 -0.7**
CBKS IAMs_20 IAMs_20 21 29 29.6
comp=Z,2μm,20.0s
CBKS Cedar Bluff 66.40 309 P **P** **21 04 28.0 -0.7**
CBKS pmax pmax
comp=Z,41nm,1.3s
CBKS MLR MLR
comp=Z,2μm,20.0s
LBTB Lobatse 66.51 121 LR LR 21 28 10.4
comp=Z,551nm,21.5s,baz=282,slow=31

PABE Paberze 66.53 32 IAMs_20 IAMs_20 21 30 53.2
comp=Z,2µm,21.0s
MILM Milestii Mici 66.60 42 *d* iP **P** **21 04 31.0 +1.2**
MILM *i* 21 04 36.5
MILM MLR MLR
comp=Z,600nm,17.5s
KIS Kishinev 66.62 42 *e*P **P** **21 04 29.0 -0.9**
KIS *e*L L 21 28 35.0
KIS LRM MLR 21 32 01.0
comp=Z,200nm,22.0s
KIS Kishinev 66.62 42 *e*P **P** **21 04 29.0 -0.9**
KIS *e* 21 04 56.0
KIS *e* 21 13 37.0
MDUB Mudurnu 66.84 49 P **P** **21 04 30.2 -1.4**
ZAIG Zacatecas 67.19 292 P **P** **21 04 32.8 -1.6**
ZAIG IAmb IAmb 21 04 53.2
comp=Z,22nm,1.6s
AMTX Amarillo 67.35 305 P **P** **21 04 33.5 -1.4**
AMTX IAmb IAmb 21 04 39.7
comp=Z,19nm,1.1s
AMTX IAMs_20 IAMs_20 21 31 35.9
comp=Z,2µm,19.0s
BOSA Boshof 67.53 125 P P 21 04 30.9 -5.3
comp=Z,2.1nm,1.0s,baz=295,slow=7.8,SNR=3.7
BOSA LR LR 21 29 40.4
comp=Z,301nm,18.4s,baz=286,slow=32
comp=Z,2.1nm,1.0s
MATP Matopo 67.57 115 LR LR 21 29 47.0
comp=Z,372nm,20.2s,baz=250,slow=32
NACGM Naroch 67.81 33‖ *e*P **P** **21 04 39.4 +2.1**
baz=250
AK05 Malin Array Si 67.86 38 P **P** **21 04 36.8 -0.9**
AK05 IAmb IAmb 21 04 49.1
comp=Z,28nm,1.2s
AKASG Malin Array Be 67.89 38 P **P** **21 04 33.7 -4.2**
comp=Z,0.1nm,0.3s,baz=254,slow=5.7,SNR=6.3
AKASG LR LR 21 32 58.4
comp=Z,270nm,19.9s,baz=252,slow=35
comp=Z,0.1nm,0.3s
AKBB Malin Array Si 67.89 38 P **P** **21 04 39.1 +1.2**
AKBB IAmb IAmb 21 04 49.4
comp=Z,18nm,1.1s
AKBB Malin Array Si 67.89 38 P **P** **21 04 39.1 +1.2**
AKBB pmax pmax
comp=Z,18nm,1.1s
ANTO Ankara 67.94 50 P **P** **21 04 37.3 -1.2**
ANTO IAmb IAmb 21 04 51.8
comp=Z,25nm,1.2s
ANTO Ankara 67.94 50 P **P** **21 04 37.3 -1.2**
ANTO pmax pmax
comp=Z,25nm,1.3s
ANTO MLR MLR
comp=Z,500nm,20.0s
MSTX Muleshoe 68.14 304 P **P** **21 04 40.4 +0.5**
MSTX IAmb IAmb 21 04 45.1
comp=Z,20nm,1.2s
MDND Maddock 68.19 319 P **P** **21 04 39.4 -0.5**
TXAR Lajitas Array 68.50 299 P **P** **21 04 39.9 -2.4**
comp=Z,0.6nm,0.8s,baz=149,slow=7.4,SNR=4.8
comp=Z,0.6nm,0.8s
TX31 Lajitas Ar. Si 68.50 299 P **P** **21 04 40.8 -1.4**
TX32 Lajitas Array 68.50 299 P **P** **21 04 40.7 -1.6**
TX32 IAmb IAmb 21 05 08.9
comp=Z,23nm,1.8s
OGNE Ogallala 68.50 311 P **P** **21 04 40.2 -1.9**
OGNE IAMs_20 IAMs_20 21 29 25.5
comp=Z,2µm,22.0s
FCC Fort Churchill 68.51 331 P **P** **21 04 40.2 -1.4**
FCC Fort Churchill 68.51 331 P **P** **21 04 40.2 -1.4**
FCC pmax pmax
comp=Z,71nm,1.3s
EIL Elat 68.53 61 LR LR 21 35 15.2
comp=Z,2µm,21.2s,baz=289,slow=37
BR131 Keskin Array S 68.56 50 P **P** **21 04 41.3 -1.2**
BR131 IAmb IAmb 21 04 54.7
comp=Z,28nm,1.2s
BR131 Keskin Array S 68.56 50 P **P** **21 04 41.3 -1.2**
BR131 pmax pmax
comp=Z,28nm,1.3s
BRTR Keskin Array B 68.56 50 P **P** **21 04 38.0 -4.5**
comp=Z,1.0nm,0.8s,baz=289,slow=6.4,SNR=5.5
BRTR LR LR 21 36 37.2
comp=Z,390nm,19.7s,baz=256,slow=38
comp=Z,1.0nm,0.8s
E28A Huff 68.63 317 P **P** **21 04 41.2 -1.5**
KSCO Kaye Shedlock' 68.66 309 P **P** **21 04 42.9 -0.3**
MMAI Mount Meron Ar 69.17 58 LR LR 21 37 02.6
comp=Z,226nm,19.0s,baz=149,slow=38
LODK Lodwar 69.47 89 P **P** **21 04 47.8 -0.8**
T25A Trinidad 69.82 307 P **P** **21 04 52.4 +1.9**
T25A IAmb IAmb 21 04 56.4
comp=Z,18nm,1.2s
FINES FINESS Array B 69.89 26 P **P** **21 04 45.4 -4.7**
comp=Z,4.0nm,1.0s,baz=184,slow=17,SNR=1.6
FINES LR LR 21 31 43.6
comp=Z,1µm,21.2s,baz=252,slow=33
comp=Z,4.0nm,1.0s
DAG Danmarks Havn 70.09 4 *i* P P 21 04 58.0 +6.9
HPIG 70.14 296 P **P** **21 04 51.8 -0.8**
BNN Bunyan 70.14 51 P **P** **21 04 53.0 +0.7**
BRIGG Briggsdale 70.17 310 P **P** **21 04 52.1 -0.4**
BRIGG IAmb IAmb 21 04 58.4
comp=Z,32nm,1.3s
BRIGG IAMs_20 IAMs_20 21 32 44.5
comp=Z,1µm,20.0s
ASF Jabal al Asfar 70.37 59 LR LR 21 37 12.1
comp=Z,191nm,18.6s,baz=268,slow=37
RSSD Black Hills 70.48 314 IAMs_20 IAMs_20 21 35 09.7
comp=Z,1µm,19.0s
SDCO Great Sand Dun 70.75 307 P **P** **21 04 56.7 +0.5**
SDCO IAMs_20 IAMs_20 21 32 18.6
comp=Z,1µm,21.0s
ISCO Idaho Springs 71.06 310 IAMs_20 IAMs_20 21 32 29.7
comp=Z,2µm,20.0s
EPT El Paso 71.09 301 IAMs_20 IAMs_20 21 33 29.3
comp=Z,2µm,20.0s
PHWY Pilot Hill 71.12 311 IAMs_20 IAMs_20 21 35 23.6
comp=Z,1µm,18.0s
ANMO Albuquerque 71.26 304 LR LR 21 32 07.3
comp=Z,2µm,21.5s,baz=104,slow=32
ANMO Albuquerque 71.26 304 P **P** **21 04 59.0 -0.3**
ANMO Albuquerque 71.26 304 P **P** **21 04 59.0 -0.3**
ANMO pmax pmax
comp=Z,10.0nm,1.3s
ANMO MLR MLR
comp=Z,3µm,22.0s
DGMT Dagmar 71.33 319 P **P** **21 04 59.5 +0.2**
DGMT Dagmar 71.33 319 IAMs_20 IAMs_20 21 31 36.2
comp=Z,2µm,18.0s
FFC Flin Flon 71.33 326 P **P** **21 04 58.0 -1.1**
FFC IAmb IAmb 21 05 41.6
comp=Z,43nm,1.4s
FFC Flin Flon 71.33 326 IAMs_20 IAMs_20 21 30 43.2
comp=Z,2µm,22.0s
FFC Flin Flon 71.33 326 P **P** **21 04 58.0 -1.1**
FFC pmax pmax
comp=Z,43nm,1.5s
FFC MLR MLR
comp=Z,2µm,22.0s
BNM Barren Site 71.35 304 P **P** **21 05 00.0 +0.2**
N23A Red Feather La 71.43 311 P **P** **21 05 00.9 +0.5**
N23A IAmb IAmb 21 05 06.1
comp=Z,18nm,1.1s
S22A 4UR Ranch, Cre 71.79 307 P **P** **21 05 02.5 -0.1**
SBM South Baldy 71.79 303 P **P** **21 05 02.6 -0.2**
KMBO Kilima Mbogo 71.91 94 LR LR 21 34 49.0
comp=Z,10nm,20.0s,baz=236,slow=34
KMBO Kilima Mbogo 71.91 94 *i* P P 21 05 09.6 +6.0
SMCO Snowmass 72.04 309 P **P** **21 05 03.4 -0.8**
ANN Anapa 72.08 45 *e*P P 21 05 13.5 +10
ANN pmax pmax
comp=Z,67nm,1.4s
ANN MLR MLR
comp=Z,557nm,20.0s
121A Cookes Peak, D 72.22 302 P **P** **21 05 05.3 +0.2**
LAO LASA Array 72.39 317 P **P** **21 05 06.1 +0.4**
LAO IAMs_20 IAMs_20 21 31 50.3
comp=Z,1µm,20.0s
RWWY Rawlins 72.47 311 P **P** **21 05 06.7 +0.1**
RWWY IAmb IAmb 21 05 16.7
comp=Z,33nm,1.6s
RWWY IAMs_20 IAMs_20 21 32 05.4
comp=Z,2µm,22.0s
ARCES ARCESS Array B 73.07 19 P **P** **21 05 05.0 -4.2**
comp=Z,8.5nm,1.2s,baz=91,slow=7.2,SNR=2.4
ARCES LR LR 21 31 05.7
comp=Z,352nm,21.6s,baz=241,slow=31
comp=Z,8.5nm,1.2s
MVCO Mesa Verde 73.08 307 P **P** **21 05 10.8 +0.6**
MVCO IAMs_20 IAMs_20 21 35 01.2
comp=Z,1µm,21.0s
O20A White River Ci 73.10 310 P **P** **21 05 10.8 +0.6**
OBN Obninsk 73.28 35 LR LR 21 36 44.9
comp=Z,111nm,19.1s,baz=260,slow=36
OBN Obninsk 73.28 35‖ *i*P P 21 05 21.7 +11
OBN *e* 21 08 02.8
OBN pmax pmax
comp=Z,41nm,1.7s
OBN MLR MLR
comp=Z,527nm,19.0s
319A Douglas 73.44 301 P **P** **21 05 12.3 -0.1**
SOC Sochi 73.57 47 *e*P P 21 05 20.7 +8.1
SOC *e*PPP PPP 21 09 37.6
SOC pmax pmax
comp=Z,12nm,0.6s
SOC MLR MLR
comp=Z,365nm,21.0s
KOPT Kop Dagi 73.84 51 P **P** **21 05 15.6 +1.0**
MARD Mardin 73.88 53 P **P** **21 05 14.8 0.0**
W18A Petrified Fore 73.96 304 P **P** **21 05 14.3 -1.0**
MOS Moscow 74.00 34 *e*P P 21 05 24.9 +10
MOS pmax pmax
comp=Z,32nm,1.1s
X18A Snowflake 74.11 304 P **P** **21 05 15.4 -0.9**
VSR Storozhevoye 74.14 39 *e*P P 21 05 25.9 +10
VSR pmax pmax
comp=Z,30nm,1.6s
RDMU Red Mountain 74.14 310 P **P** **21 05 16.0 -0.4**
RDMU IAmb IAmb 21 05 22.0
comp=Z,40nm,1.4s
LPSR Galich'ya Gora 74.21 37 *e*P P 21 05 24.5 +8.3
LPSR pmax pmax
comp=Z,20nm,1.1s
VORR Voronezh 74.23 38 *e*P **P** **21 05 15.9 -0.5**
VORR pmax pmax
comp=Z,60nm,0.4s
BW06 Boulder Array 74.31 312 P **P** **21 05 17.2 -0.1**
BW06 IAMs_20 IAMs_20 21 32 52.0
comp=Z,2µm,22.0s
LPIG La Paz 74.31 293 LR LR 21 35 57.7
comp=Z,737nm,21.8s,baz=88,slow=34
PD31 Pinedale Array 74.31 312 P **P** **21 05 16.1 -1.2**
PDAR Pinedale Array 74.31 312 P **P** **21 05 15.2 -2.1**
comp=Z,2.6nm,0.9s,baz=97,slow=6.3,SNR=14
PDAR LR LR 21 33 35.8
comp=Z,1µm,21.5s,baz=120,slow=32
comp=Z,2.6nm,0.9s
RLMT Red Lodge 74.31 315 P **P** **21 05 17.3 0.0**
RLMT IAmb IAmb 21 05 22.9
comp=Z,44nm,1.8s
RLMT IAMs_20 IAMs_20 21 38 10.1
comp=Z,1µm,19.0s
P18A Preston Nutter 74.60 309 P **P** **21 05 19.5 +0.3**
P18A IAmb IAmb 21 05 25.2
comp=Z,25nm,1.2s
TUC Tucson 74.75 301 P **P** **21 05 19.7 -0.1**
TUC Tucson 74.75 301 IAMs_20 IAMs_20 21 37 20.0
comp=Z,1µm,19.0s
TUC Tucson 74.75 301 P **P** **21 05 19.7 -0.1**
TUC pmax pmax
comp=Z,13nm,1.2s
TUC MLR MLR
comp=Z,1µm,19.0s
SRU San Rafael Swe 74.78 308 P **P** **21 05 19.7 -0.4**
SRU San Rafael Swe 74.78 308 P **P** **21 05 19.7 -0.4**
SRU pmax pmax
comp=Z,18nm,1.2s
YMP Mirror Lake Pl 74.91 314 P **P** **21 05 20.9 0.0**
YMP IAmb IAmb 21 06 04.3
comp=Z,51nm,1.6s
GURO Guroymak-BITLI 74.94 52 P **P** **21 05 21.5 +0.5**
EGMT Eagleton 74.94 318 IAMs_20 IAMs_20 21 34 22.8
comp=Z,2µm,20.0s
P17A Butcher Ranch, 74.97 309 P **P** **21 05 20.4 -0.8**
P17A IAmb IAmb 21 05 30.5
comp=Z,32nm,1.6s
APA Apatity 75.02 22‖ *i*P **P** **21 05 19.7 -0.9**
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,2µm,18.0s
LKWY Lake 75.06 314 IAMs_20 IAMs_20 21 35 16.0
comp=Z,2µm,19.0s
PMSA Palmer Station 75.08 193 LR LR 21 35 23.5
comp=Z,442nm,21.8s,baz=24,slow=33
LOHW Long Hollow 75.14 313 P **P** **21 05 21.9 -0.2**
LOHW IAmb IAmb 21 05 32.0
comp=Z,21nm,1.2s
LOHW IAMs_20 IAMs_20 21 33 50.0
comp=Z,2µm,21.0s
SNOW Snow King Moun 75.23 313 P **P** **21 05 22.6 -0.1**
SNOW IAmb IAmb 21 05 32.8
comp=Z,31nm,1.3s
SNOW IAMs_20 IAMs_20 21 34 14.5
comp=Z,2µm,21.0s
MOOW Moose Ponds 75.25 313 P **P** **21 05 22.4 -0.3**
MOOW IAMs_20 IAMs_20 21 33 43.9
comp=Z,2µm,22.0s
YNR Norris Junctio 75.28 314 P **P** **21 05 23.0 +0.1**
Q16A Castle Valley 75.28 308 P **P** **21 05 21.3 -1.7**
REDW Red Top Meadow 75.30 313 P **P** **21 05 23.4 +0.4**
REDW IAmb IAmb 21 05 32.9
comp=Z,26nm,1.2s
REDW IAMs_20 IAMs_20 21 33 34.2
comp=Z,2µm,22.0s
WUAZ Wupatki 75.31 305 P **P** **21 05 23.0 -0.2**
WUAZ IAMs_20 IAMs_20 21 33 54.7
comp=Z,2µm,22.0s
TMUT Trail Mountain 75.33 309 P **P** **21 05 22.4 -1.0**
TMUT IAmb IAmb 21 05 50.4
comp=Z,50nm,2.0s
TPAW Teton Pass 75.38 313 P **P** **21 05 23.9 +0.3**
TPAW IAMs_20 IAMs_20 21 33 25.5
comp=Z,2µm,22.0s
IMW Indian Meadow 75.40 313 P **P** **21 05 24.0 +0.3**
IMW IAmb IAmb 21 05 33.8
comp=Z,20nm,1.1s
IMW IAMs_20 IAMs_20 21 33 48.0
comp=Z,2µm,22.0s
YHH Holmes Hill 75.40 314 P **P** **21 05 24.0 +0.3**
AHID Auburn Hatcher 75.44 312 P **P** **21 05 23.6 -0.2**
AHID IAmb IAmb 21 05 52.2
comp=Z,35nm,1.8s
AHID IAMs_20 IAMs_20 21 33 28.0
comp=Z,2µm,22.0s
FXWY Fox Creek 75.44 313 P **P** **21 05 23.1 -0.8**
FXWY IAMs_20 IAMs_20 21 33 50.1
comp=Z,2µm,21.0s
YMR Madison River 75.47 314 P **P** **21 05 22.7 -1.3**
SPITS Spitsbergen Ar 75.48 9 LR LR 21 31 17.9
comp=Z,598nm,21.5s,baz=212,slow=30
TCUT Toone Canyon 75.57 311 P **P** **21 05 22.1 -2.5**
TCUT IAmb IAmb 21 05 34.6
comp=Z,19nm,1.0s
LVZ Lovozero 75.57 21 IAMs_20 IAMs_20 21 31 34.0
comp=Z,2µm,22.0s
JLU Jordanelle 75.58 310 P **P** **21 05 25.4 +0.7**
JLU IAmb IAmb 21 05 35.3
comp=Z,56nm,1.8s
RES Resolute Bay 75.58 346 LR LR 21 36 24.5
comp=Z,564nm,19.2s,baz=128,slow=34
YHB Horse Butte 75.64 314 P **P** **21 05 25.5 +0.5**
YHB IAmb IAmb 21 05 32.8
comp=Z,16nm,1.1s
MPU Maple Canyon 75.69 309 P **P** **21 05 24.1 -1.2**
SHA1 Shidzhatmaz 75.71 47 *i* P P 21 05 35.1 +10
GEVA Gevas 75.73 52 P **P** **21 05 23.8 -1.8**
VRH Novokhopyorsk 75.73 39 *e*P P 21 05 32.4 +7.4
VRH pmax pmax
comp=Z,50nm,1.9s
KIV Kislovodsk 75.74 47 P **P** **21 05 25.4 0.0**
KIV IAmb IAmb 21 05 39.0
comp=Z,28nm,1.2s
KIV Kislovodsk 75.74 47 *e*P P 21 05 36.0 +11
KIV pmax pmax
comp=Z,20nm,1.0s
KVAR Kislovodsk Arr 75.75 47 LR LR 21 41 36.8
comp=Z,238nm,18.9s,baz=181,slow=38
CTU Camp Tracy 75.81 310 P **P** **21 05 26.4 +0.5**
KARS Kars 75.84 50 P **P** **21 05 25.1 -1.0**
KARS Kars 75.84 50 P **P** **21 05 25.1 -1.0**
KARS pmax pmax
comp=Z,231nm,1.8s
KBZ Khabaz 75.88 47 P **P** **21 05 21.4 -4.6**
comp=Z,1.8nm,1.2s,baz=170,slow=6.1,SNR=1.5
KBZ LR LR 21 41 40.0
comp=Z,232nm,19.6s,baz=286,slow=38
comp=Z,1.8nm,1.2s
KLMR Klimovskoe 75.94 29 *e*P **P** **21 05 25.5 -0.5**
KLMR S **S** **21 15 06.6 -2.2**
KLMR pmax pmax
comp=Z,41nm,1.2s
KLMR Klimovskoe 75.94 29 *e*P **P** **21 05 25.5 -0.5**
KLMR *e*P **P** **21 05 25.5 -0.5**
KLMR *e*P **P** **21 05 25.5 -0.5**
KLMR AMP 21 05 38.0
comp=Z,41nm,1.2s
KLMR *e*PP PP 21 08 27.8 +12
KLMR S **S** **21 15 06.6 -2.2**
KLMR S **S** **21 15 06.6 -2.2**
KLMR LQ LQ 21 28 27.3
KLMR LQ LQ 21 28 27.3
KLMR LR LR 21 31 56.2
KLMR AMP 21 35 29.9
comp=Z,886nm,18.9s
BOZ Bozeman (W) 76.01 315 P **P** **21 05 27.6 +0.6**
BOZ IAMs_20 IAMs_20 21 38 50.1
comp=Z,1µm,18.0s
BOZ Bozeman (W) 76.01 315 P **P** **21 05 27.6 +0.6**
BOZ pmax pmax
comp=Z,6.0nm,1.1s
BOZ MLR MLR
comp=Z,1µm,18.0s
NLU North Lily Min 76.02 309 P **P** **21 05 27.0 -0.3**
MTPU Mount Pierson 76.04 307 P **P** **21 05 27.9 +0.3**
MTPU IAmb IAmb 21 05 33.9
comp=Z,22nm,1.2s
MSU Marysvale 76.05 308 P **P** **21 05 28.6 +1.2**
MSU Marysvale 76.05 308 P **P** **21 05 28.7 +1.2**
GOF Gofitskoye 76.07 45‖ *e*P P 21 05 38.3 +11
MVU Marysvale 76.08 308 P **P** **21 05 27.8 +0.2**
ATD Arta Tunnel 76.12 80 LR LR 21 40 41.8
comp=Z,327nm,18.1s,baz=272,slow=37
ONI Oni 76.22 48 P **P** **21 05 28.4 +0.3**
ONI Oni 76.22 48 P **P** **21 05 28.4 +0.3**
ONI pmax pmax
comp=Z,10.0nm,0.9s
HRY Holter Researc 76.23 316 P **P** **21 05 28.7 +0.6**
TCRU Three Creeks R 76.26 308 P **P** **21 05 28.2 -0.5**
SPUT South Promonto 76.36 311 P **P** **21 05 29.5 +0.4**
214A Organ Pipe Nat 76.46 301 P **P** **21 05 29.3 -0.4**
214A IAmb IAmb 21 06 00.8
comp=Z,23nm,1.4s
ZEI Tsey 76.56 48 *e*P **P** **21 05 28.4 -1.8**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
DUG Dugway, Tooele 76.60 310 P **P** **21 05 29.8 -0.6**
DUG IAmb IAmb 21 05 40.9
comp=Z,52nm,1.8s
DUG IAMs_20 IAMs_20 21 35 35.4
comp=Z,2µm,21.0s
DUG Dugway, Tooele 76.60 310 P **P** **21 05 29.8 -0.6**
DUG pmax pmax
comp=Z,52nm,1.8s
DUG MLR MLR
comp=Z,2µm,21.0s
LRM Limekiln Ridge 76.60 315 P **P** **21 05 30.6 +0.1**
HVU Hansel Valley 76.63 311 P **P** **21 05 30.6 0.0**
HVU Hansel Valley 76.63 311 P **P** **21 05 30.6 0.0**
HVU pmax pmax
comp=Z,9.0nm,1.1s
Y14A Wickenburg 76.63 303 P **P** **21 05 30.0 -0.6**
SZCU Shurtz Canyon 76.74 307 P **P** **21 05 30.8 -0.6**
BGU Big Grassy Mou 76.79 310 P **P** **21 05 31.0 -0.5**
BGU IAmb IAmb 21 05 37.2
comp=Z,18nm,1.2s
EUNU Eureka 76.82 352 P **P** **21 05 33.4 +2.7**
EUNU IAmb IAmb 21 05 59.2
comp=Z,38nm,1.4s
MCMT McKenzie Canyo 76.83 314 P **P** **21 05 31.2 -0.5**
CCUT Cedar City 76.96 307 P **P** **21 05 33.4 +0.8**
CCUT IAmb IAmb 21 05 39.1
comp=Z,18nm,1.2s
GNI Garni 77.09 51 LR LR 21 42 15.5
comp=Z,162nm,19.9s,baz=276,slow=38
GNI Garni 77.09 51 P **P** **21 05 33.3 +0.1**
GNI IAmb IAmb 21 06 20.3
comp=Z,31nm,1.4s
GNI Garni 77.09 51 P **P** **21 05 33.3 +0.1**
GNI pmax pmax
comp=Z,31nm,1.5s
GNI MLR MLR
comp=Z,500nm,21.0s
BCYI Bear Canyon 77.20 314 P **P** **21 05 34.6 +0.8**
W13A Hualapai Mount 77.36 304 P **P** **21 05 34.2 -0.7**
PSUT Pine Spring 77.36 308 P **P** **21 05 35.4 +0.5**
MSO Missoula 77.69 316 IAMs_20 IAMs_20 21 36 48.4
comp=Z,2µm,20.0s
EDM Edmonton 77.71 323 P **P** **21 05 36.2 0.0**
EDM Edmonton 77.71 323 P **P** **21 05 36.2 0.0**
EDM pmax pmax
comp=Z,47nm,1.2s
WALA Waterton Lakes 77.78 319 P **P** **21 05 37.0 +0.2**
WALA IAmb IAmb 21 05 56.0
comp=Z,25nm,1.3s
BLYC Blythe 77.89 303 P **P** **21 05 37.3 -0.3**
HLID Hailey 77.90 313 P **P** **21 05 37.0 -0.7**
HLID IAMs_20 IAMs_20 21 35 10.0
comp=Z,2µm,22.0s
RAYN Ar Rayn 77.91 68 P **P** **21 05 37.7 -0.3**
RAYN Ar Rayn 77.91 68 P **P** **21 05 37.7 -0.3**
RAYN pmax pmax
comp=Z,20nm,1.7s
RAYN MLR MLR
comp=Z,1µm,21.0s
JTMT Jette 77.96 317 P **P** **21 05 37.4 -0.5**
GROC Groznyy 77.96 47 *e*P **P** **21 05 39.4 +1.6**
V12A Nelson 78.15 305 P **P** **21 05 38.8 -0.4**
GLA Glamis 78.16 302 P **P** **21 05 39.6 +0.5**
GLA Glamis 78.16 302 P **P** **21 05 39.6 +0.5**
GLA pmax pmax
comp=Z,18nm,1.3s
PRN Pahroc Range 78.30 307 P **P** **21 05 40.7 +0.7**
PRN IAmb IAmb 21 06 22.0
comp=Z,18nm,1.1s
SHPR Sheep Range 78.39 306 P **P** **21 05 40.7 +0.1**
ELK Elko 78.46 310 LR LR 21 37 53.2
comp=Z,1µm,19.2s,baz=100,slow=34
ELK Elko 78.46 310 P **P** **21 05 41.3 +0.4**
ELK IAmb IAmb 21 08 34.4
comp=Z,26nm,0.7s
ELK IAMs_20 IAMs_20 21 37 51.0
comp=Z,2µm,19.0s
ELK Elko 78.46 310 P **P** **21 05 41.3 +0.4**
ELK pmax pmax
comp=Z,26nm,0.7s
ELK MLR MLR
comp=Z,2µm,19.0s
R11A Troy Canyon, C 78.72 308 P **P** **21 05 42.8 +0.4**
S11A Rachel 78.86 307 P **P** **21 05 43.5 +0.4**
MFID Camas Ranch 78.92 313 IAMs_20 IAMs_20 21 35 54.2
comp=Z,1µm,22.0s
PRGR Permogore 78.98 29 *e*P **P** **21 05 41.0 -2.0**
PRGR pmax pmax
comp=Z,47nm,1.3s
PLID Pearl Lake 79.07 314 IAMs_20 IAMs_20 21 37 35.0
comp=Z,1µm,21.0s
YKA Yellowknife Ar 79.18 332 P **P** **21 05 40.0 -4.0**
comp=Z,1.2nm,0.7s,baz=105,slow=7.1,SNR=3.1
YKA LR LR 21 35 53.6
comp=Z,2µm,21.1s,baz=86,slow=32
comp=Z,1.2nm,0.7s
MAK Makhachkala 79.21 48 *e*P **P** **21 05 46.3 +1.6**
MAK *e* 21 08 48.9
MAK *e*S **S** **21 15 48.1 +3.3**
MAK MLR MLR
comp=Z,405nm,17.0s
TPNV Topopah Spring 79.26 306 P **P** **21 05 46.6 +1.3**
TPNV IAmb IAmb 21 06 19.6
comp=Z,28nm,1.4s
TPNV IAMs_20 IAMs_20 21 38 18.2
comp=Z,2µm,22.0s
TPNV Topopah Spring 79.26 306 P **P** **21 05 46.6 +1.3**
TPNV pmax pmax
comp=Z,28nm,1.4s
TPNV MLR MLR

comp=Z,2μm,22.0s
BELG Belogornoye 79.48 38 LR LR 21 38 16.3
comp=Z,517nm,21.9s,baz=302,slow=34
BELG Belogornoye 79.48 38 *i* P P 21 05 56.3 +10
BELG pmax pmax
comp=Z,5.0nm,1.4s
PFO Pinyon Flats O 79.51 303 LR LR 21 38 21.4
comp=Z,1μm,20.1s,baz=96,slow=34
PFO Pinyon Flats O 79.51 303 IAMs_20 IAMs_20 21 37 47.7
comp=Z,2μm,20.0s
WCT Wildcat Mounta 79.57 306 P **P** **21 05 48.0 +1.1**
WCT IAmb IAmb 21 06 22.1
comp=Z,54nm,1.7s
VNA1 Neumayer--Stat 79.61 171 pP pP 21 05 50.1 +1.7
GWY Greenwater Val 79.62 305 P **P** **21 05 48.6 +1.4**
GWY IAmb IAmb 21 06 18.0
comp=Z,35nm,1.6s
GSC Goldstone, Bar 79.75 305 P **P** **21 05 48.8 +0.9**
GSC Goldstone, Bar 79.75 305 P **P** **21 05 48.8 +0.9**
GSC pmax pmax
comp=Z,12nm,1.1s
NEW Newport 79.88 318 LR LR 21 36 38.3
comp=Z,1μm,21.8s,baz=88,slow=32
NEW Newport 79.88 318 P **P** **21 05 49.1 +0.9**
NEW Newport 79.88 318 IAMs_20 IAMs_20 21 36 16.4
comp=Z,2μm,21.0s
NEW Newport 79.88 318 P **P** **21 05 49.2 +0.9**
NEW pmax pmax
comp=Z,12nm,1.4s
NEW MLR MLR
comp=Z,2μm,21.0s
VNA3 Neumayer Olymp 79.95 172 pP pP 21 05 52.1 +1.8
BMN Battle Mountai 79.97 310 P **P** **21 05 50.0 +0.9**
BMN Battle Mountai 79.97 310 P **P** **21 05 50.0 +0.9**
BMN pmax pmax
comp=Z,25nm,0.5s
TPH Tonopah 80.02 307 P **P** **21 05 49.4 0.0**
TPH Tonopah 80.02 307 P **P** **21 05 49.4 0.0**
TPH pmax pmax
comp=Z,80nm,1.1s
RPN Rapa Nui 80.03 241 LR LR 21 38 27.8
comp=Z,1μm,18.3s,baz=78,slow=34
109C Camp Elliot, M 80.07 302 IAMs_20 IAMs_20 21 40 03.0
comp=Z,1μm,18.0s
GRAC Grapevine Rang 80.16 306 P **P** **21 05 50.9 +0.8**
GRAC IAmb IAmb 21 06 01.0
comp=Z,52nm,1.7s
BRLDA Berland Lookou 80.16 324 P **P** **21 05 50.3 +0.5**
BRLDA IAmb IAmb 21 05 59.6
comp=Z,26nm,1.1s
DSP Deep Springs 80.63 307 P **P** **21 05 53.0 +0.5**
KVN Kaiserville 80.68 308 P **P** **21 05 52.9 -0.1**
KVN Kaiserville 80.68 308 P **P** **21 05 52.9 -0.1**
KVN pmax pmax
comp=Z,6.0nm,0.5s
KIRV Kirov 80.69 32 LR LR 21 38 59.4
comp=Z,677nm,21.4s,baz=269,slow=34
KIRV Kirov 80.69 32 *i* P P 21 06 02.0 +10
NVAR Mina Array Bea 80.86 308 P **P** **21 05 52.1 -1.9**
comp=Z,0.4nm,0.3s,baz=83,slow=7.4,SNR=5.7
NVAR LR LR 21 38 12.5
comp=Z,631nm,21.7s,baz=102,slow=33
comp=Z,0.4nm,0.3s
WVOR Wild Horse Val 81.00 312 IAMs_20 IAMs_20 21 36 59.0
comp=Z,2μm,21.0s
ISA Isabella, Lake 81.10 305 P **P** **21 05 55.9 +0.8**
ISA Isabella, Lake 81.10 305 P **P** **21 05 55.9 +0.8**
ISA pmax pmax
comp=Z,13nm,1.2s
WAPA Wapiti River 81.25 325 P **P** **21 05 55.8 +0.3**
WAPA IAmb IAmb 21 06 04.8
comp=Z,23nm,1.1s
SNAA Sanae 81.36 170 P **P** **21 05 56.3 +0.6**
SNAA Sanae 81.36 170 LR LR 21 36 00.0
comp=Z,271nm,18.4s,baz=338,slow=31
SNAA Sanae 81.36 170 P **P** **21 05 57.2 +1.5**
SNAA Sanae 81.36 170 P **P** **21 05 57.2 +1.5**
SNAA pmax pmax
comp=Z,11nm,1.0s
WAKR Walker 81.74 308 P **P** **21 05 59.9 +1.2**
WAKR IAmb IAmb 21 06 26.4
comp=Z,28nm,1.7s
MOD Modoc Plateau 82.25 311 IAMs_20 IAMs_20 21 38 55.3
comp=Z,1μm,20.0s
BEKR Beckworth 82.39 309 P **P** **21 06 02.1 0.0**
CMB Columbia Colle 82.51 307 IAMs_20 IAMs_20 21 40 19.1
comp=Z,1μm,20.0s
TROLL Troll, Antarti 82.59 169 P **P** **21 06 02.6 +0.4**
C36M Paulatuk 83.25 339 IAMs_20 IAMs_20 21 39 37.1
comp=Z,2μm,20.0s
ORV Oroville 83.29 309 IAMs_20 IAMs_20 21 39 58.6
comp=Z,1μm,20.0s
A36M Sachs Harbour 83.52 342 IAMs_20 IAMs_20 21 39 46.2
comp=Z,2μm,21.0s
YBH Yreka Blue Hor 84.06 311 LR LR 21 39 45.5
comp=Z,1μm,21.8s,baz=93,slow=33
YBH Yreka Blue Hor 84.06 311 IAMs_20 IAMs_20 21 39 14.1
comp=Z,2μm,21.0s
HOPS Hopland Field 84.55 308 IAMs_20 IAMs_20 21 41 13.9
comp=Z,2μm,20.0s
BELA Belgrano 2 84.91 180 P **P** **21 06 16.5 +2.7**
BELA IAmb IAmb 21 06 33.8
comp=Z,36nm,1.7s
ARU Arti 85.71 34 LR LR 21 43 40.9
comp=Z,764nm,19.0s,baz=271,slow=35
ARU Arti 85.71 34 P **P** **21 06 18.1 -0.2**
ARU IAMs_20 IAMs_20 21 43 28.3
comp=Z,1μm,20.0s
ARU Arti 85.71 34 *d i* P P 21 06 26.9 +8.6
ARU S **S** **21 16 53.1 +2.3**
ARU SS **SS** **21 22 34.5 +7.6**
ARU pmax pmax
comp=Z,18nm,1.3s
ARU MLR MLR
comp=Z,1μm,19.0s
AKTO Aktyubinsk 86.05 40 LR LR 21 46 43.3
comp=Z,356nm,18.3s,baz=274,slow=37
BBB Bella Bella 86.70 322 LR LR 21 42 05.5
comp=Z,1μm,19.7s,baz=76,slow=34
INK Inuvik 86.78 338 LR LR 21 43 17.0
comp=Z,1μm,19.1s,baz=74,slow=34
SVE Sverdlovsk 86.79 33 *eP* P 21 06 35.2 +12
SVE pmax pmax
comp=Z,9.0nm,1.0s
DLBC Dease Lake 86.92 328 LR LR 21 40 36.9
comp=Z,1μm,21.8s,baz=82,slow=32
DLBC Dease Lake 86.92 328 P **P** **21 06 25.0 +0.6**
DLBC IAmb IAmb 21 06 50.1
comp=Z,29nm,1.4s
UOSS Minazif 87.53 65 IAMs_20 IAMs_20 21 48 16.6
comp=Z,965nm,21.0s
GEYT Alibeck 87.60 52 P **P** **21 06 23.8 -4.3**
comp=Z,0.4nm,0.4s,baz=309,slow=3.0,SNR=1.4
GEYT LR LR 21 49 21.8
comp=Z,121nm,18.6s,baz=296,slow=38
comp=Z,0.4nm,0.4s
P33M Teslin, Yukon 88.03 330 IAMs_20 IAMs_20 21 41 57.5
comp=Z,1μm,20.0s
WRAK Wrangell Islan 88.49 327 IAMs_20 IAMs_20 21 42 14.9
comp=Z,1μm,20.0s
JIS Juneau Island 89.20 329 IAMs_20 IAMs_20 21 43 47.7
comp=Z,1μm,19.0s
I29M Ogilvie Camp, 89.30 336 IAMs_20 IAMs_20 21 42 26.1
comp=Z,2μm,21.0s
J29M Klondike Camp 89.51 335 IAMs_20 IAMs_20 21 44 35.6
comp=Z,2μm,20.0s
WSAR Wadi Sarin 89.94 67 LR LR 21 49 07.4
comp=Z,691nm,19.5s,baz=292,slow=37
DAWY Dawson 90.11 335 P **P** **21 06 39.3 -0.1**
P29M Windy Craggy 90.57 330 IAMs_20 IAMs_20 21 46 36.8
comp=Z,1μm,18.0s
EGAK Eagle 90.63 336 IAMs_20 IAMs_20 21 43 19.2
comp=Z,1μm,21.0s
BCPM Bancas Point 91.41 331 IAMs_20 IAMs_20 21 44 34.9
comp=Z,1μm,20.0s
J26L Joseph Creek 91.70 336 P **P** **21 06 46.9 +0.2**
J26L IAmb IAmb 21 07 44.2
comp=Z,14nm,1.6s
J26L IAMs_20 IAMs_20 21 43 41.5
comp=Z,1μm,20.0s
M27K Edge Creek, AK 91.70 334 P **P** **21 06 46.0 -0.9**
M27K IAmb IAmb 21 07 12.0
comp=Z,14nm,1.4s
SCRK Sand Creek 92.06 335 IAMs_20 IAMs_20 21 44 03.0
comp=Z,1μm,22.0s
TOLK Toolik Lake Re 92.27 341 IAMs_20 IAMs_20 21 45 24.5
comp=Z,1μm,22.0s
J25K Salcha River, 92.39 336 IAMs_20 IAMs_20 21 45 03.6
comp=Z,1μm,20.0s
MCARA McCarthy VSAT 92.54 333 IAMs_20 IAMs_20 21 43 31.8
comp=Z,1μm,22.0s
VRDI Verde Repeater 92.79 333 IAMs_20 IAMs_20 21 43 40.4
comp=Z,2μm,22.0s
GLB Gilahina Butte 92.88 333 IAMs_20 IAMs_20 21 43 54.7
comp=Z,2μm,22.0s
ILAR Eielson Array 92.92 337 P **P** **21 06 48.7 -3.6**
comp=Z,0.3nm,0.7s,baz=100,slow=10,SNR=1.8
ILAR LR LR 21 47 21.0
comp=Z,1μm,18.6s,baz=62,slow=35
comp=Z,0.3nm,0.7s
BRVK Borovoye 93.02 36 IAMs_20 IAMs_20 21 48 07.8
comp=Z,698nm,20.0s
BRVK Borovoye 93.02 36 *ceP* P 21 07 03.9 +11
BRVK pmax pmax
comp=Z,6.0nm,1.3s
A21K Barrow 93.06 344 IAMs_20 IAMs_20 21 47 45.4
comp=Z,1μm,21.0s
BVAR Borovoye Array 93.09 36 LR LR 21 46 43.9
comp=Z,724nm,21.7s,baz=287,slow=34
HDA Harding Lake 93.09 336 IAMs_20 IAMs_20 21 46 26.4
comp=Z,1μm,19.0s
CCB Clear Creek Bu 93.34 337 IAMs_20 IAMs_20 21 46 24.8
comp=Z,2μm,20.0s
WRH Wood River Hil 93.52 337 IAMs_20 IAMs_20 21 47 26.7
comp=Z,1μm,19.0s
M24K Tolsona, Glenn 93.68 334 IAMs_20 IAMs_20 21 44 50.8
comp=Z,2μm,21.0s
NRIK Noril'sk 94.04 18 LR LR 21 49 52.6
comp=Z,394nm,19.1s,baz=314,slow=36
NRIK Noril'sk 94.04 18 *i P* P 21 07 09.3 +12
NRIK pmax pmax
comp=Z,3.0nm,1.0s
MCK McKinley 94.17 336 IAMs_20 IAMs_20 21 45 16.8
comp=Z,1μm,21.0s
BWN Browne 94.19 337 IAMs_20 IAMs_20 21 45 58.6
comp=Z,1μm,20.0s
Q23K Middleton Isla 94.79 332 IAMs_20 IAMs_20 21 46 03.1
comp=Z,1μm,20.0s
BPAW Bear Paw Mtn. 94.82 337 IAMs_20 IAMs_20 21 48 46.0
comp=Z,1μm,19.0s
TRF Thorofare Moun 94.84 336 IAMs_20 IAMs_20 21 45 48.5
comp=Z,808nm,21.0s
KTH Kantishna Hill 95.05 336 IAMs_20 IAMs_20 21 46 28.0
comp=Z,902nm,20.0s
CAST Castle Rocks 95.57 336 IAMs_20 IAMs_20 21 48 38.8
comp=Z,1μm,20.0s
SUA Susitna One 95.92 334 IAMs_20 IAMs_20 21 47 10.1
comp=Z,1μm,20.0s
K20K Telida 96.38 337 IAMs_20 IAMs_20 21 48 00.3
comp=Z,1μm,20.0s
RDOG Red Dog Mine 96.76 343 IAMs_20 IAMs_20 21 57 50.1
comp=Z,1μm,21.0s
QSPA South Pole Qui 97.19 180 LR LR 21 47 37.8
comp=Z,133nm,19.2s,baz=185,slow=33
N19K Bonanza Creek 97.83 335 IAMs_20 IAMs_20 21 50 22.5
comp=Z,951nm,19.0s
KDAK Kodiak Island 98.44 331 LR LR 21 52 23.7
comp=Z,2μm,18.0s,baz=79,slow=36
O18K Koktuh Hills 98.62 334 IAMs_20 IAMs_20 21 49 17.5
comp=Z,1μm,20.0s
KURBB Kurchatov Arra 98.65 36 LR LR 21 51 48.6
comp=Z,457nm,19.3s,baz=275,slow=36
KURK Kurchatov 98.67 36 *ceP* Pdif 21 07 27.5 +8.8
KURK pmax pmax
comp=Z,5.0nm,2.5s
AAK Ala-Archa 98.80 45 LR LR 21 51 57.1
comp=Z,327nm,22.0s,baz=312,slow=36
MAW Mawson 99.34 157 LR LR 21 45 53.4
comp=Z,278nm,18.4s,baz=268,slow=32
ANM Nome 99.76 341 IAMs_20 IAMs_20 21 48 27.5
comp=Z,921nm,22.0s
MAKZ Makanchi 102.26 39 IAMs_20 IAMs_20 21 51 12.6
comp=Z,1μm,22.0s
GAMB Gambell 102.31 342 IAMs_20 IAMs_20 21 51 44.0
comp=Z,890nm,20.0s
TAOE Nuku Hiva Isla 106.60 263 *e*LR LR 21 43 08.8
comp=Z,660nm,27.6s
YAK Yakutsk 109.91 8 IAMs_20 IAMs_20 21 44 36.2
comp=Z,639nm,19.0s
PALK Pallekele 113.67 79 IAMs_20 IAMs_20 22 02 31.9
comp=Z,640nm,20.0s
ULN Ulaanbaatar 115.51 28 IAMs_20 IAMs_20 22 01 36.2
comp=Z,632nm,21.0s
TBI Tubuai 115.83 248 *e*SS SS 21 29 30.6 +2.5
comp=Z,714nm,32.8s
TBI Tubuai 115.83 248 *e*LR LR 21 47 24.8
comp=Z,1μm,27.0s
PPT2 Papeete2 116.13 254 *e*SS SS 21 29 34.6 +2.1
comp=Z,1μm,35.8s
PPT2 Papeete2 116.13 254 *e*LR LR 21 47 33.0
comp=Z,692nm,18.0s
PEA0B Petropavlovsk- 119.09 352 *c i* PKIKP PKiKP 21 12 37.9 +9.5
KLR Kul'dur 122.54 11 *i* PKIKP PKiKP 21 12 44.0 +8.7
KLR pmax pmax
comp=Z,3.0nm,1.4s
HHC Hu-ho-hao-te 122.88 30 *e*PKP **PKPdf** **21 12 31.3 -4.9**
HHC LR LR
comp=Z,990nm,20.9s
HHC LR LR
comp=Z,750nm,19.0s
HHC LR LR
comp=Z,2μm,20.9s
CD2 Chengdu 124.87 44 *e*PKP **PKPdf** **21 12 38.4 -1.8**
BJT Baijiatuau 125.74 28 IAMs_20 IAMs_20 22 08 20.9
comp=Z,737nm,20.0s
PZH PanZhiHua 125.86 50 PKP **PKPdf** **21 12 41.1 -1.2**
CN2 Changchun 126.08 18 *e*PKP **PKPdf** **21 12 38.8 -3.3**
XAN Xi'an 126.26 38 *e*PKP **PKPdf** **21 12 42.4 -0.4**
XAN LR LR
comp=Z,520nm,22.7s
XAN LR LR
comp=Z,420nm,20.6s
XAN LR LR
comp=Z,750nm,24.0s
CMAR Chiang Mai Arr 127.38 60 PKP **PKPdf** **21 12 42.0 -3.2**
comp=Z,0.3nm,0.3s,baz=350,slow=3.1,SNR=1.2
KULM Kulim 133.43 76 IAMs_20 IAMs_20 22 02 25.6
comp=Z,459nm,22.0s
KKM Kota Kinabalu 147.84 67 IAMs_20 IAMs_20 22 20 30.7
comp=Z,418nm,22.0s
PSA00 Pilbara Seismi 151.27 123 **PKPdf** **21 13 27.1 -0.9**
PSA00 Pilbara Seismi 151.27 123 **PKPdf** **21 13 26.8 -1.1**
MBWA Marble Bar 151.35 122 **PKPdf** **21 13 26.4 -1.7**
DZM Mont Dzumac 155.05 231 *e*LR LR 22 05 33.7
comp=Z,2μm,24.1s
ASAR Alice Springs 160.09 147 PKP **PKPdf** **21 13 36.4 -3.3**
comp=Z,0.5nm,0.9s,baz=204,slow=2.0,SNR=3.7

BJI ***05*** *21:24:07.7±0.0, 8°.37S×128°.62E, h142km, mb4.7/30, mB4.9/16*
DJA ***05*** *21:24:15.7±0.2, 8°.S±2°×12°.8E±°, h129km±4km, M4.5/36, mB5.0/12, mb4.5/36, MLv4.8/17, Mw(mB)4.2/12*
IDC ***05*** *21:24:15.7±1.5, 7°.59S×128°.01E, h133km±13km, mb4.1/20, mbtmp4.6/24, MS4.7/1, Error ellipse: s-maj=14.1km s-min=9.1km az=96.0*
NEIC ***05*** *21:24:16.1±1.6, 7°.66S±0°.07×128°.08E±0°.02, h140km±8km, mb4.7/46, Error ellipse: s-maj=11.0km s-min=1.2km az=165.0*
ISC 05 21:24:15.7±0.3,**7°.70S**±0°.04×**128°.06E**±0°.05,**h142**km,**n166,**
σ1§**44**/177,**mb4.6**/40,**2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
SAUI	**Saumlaki**	**3.22**	**95**	Pn	**Pn**	**21 25 06.1**		**+0.6**
SAUI				Sn	**Sn**	**21 25 42.2**		**-2.0**
SAUI	**Saumlaki**	**3.22**	**95**	P	**Pn**	**21 25 04.4**		**-1.1**
BNDI	**Bandanaira**	**3.65**	**30**	P	**Pn**	**21 25 10.5**		**-0.6**
BNDI	**Bandanaira**	**3.65**	**30**	P	**Pn**	**21 25 09.9**		**-1.2**
AAI	**Ambon**	**3.99**	**2**	P	**Pn**	**21 25 15.2**		**-0.4**
SOEI	**Soe**	**4.27**	**241**		**Pn**	**21 25 19.7**		**+0.3**
SOEI	**Soe**	**4.27**	**241**	P	**Pn**	**21 25 19.9**		**+0.5**
SOEI	**Soe**	**4.27**	**241**	P	**Pn**	**21 25 20.2**		**+0.8**
KRAI	**Karang Ratu**	**4.36**	**4**	P	**Pn**	**21 25 21.2**		**+0.6**
MSAI	**Masohi**	**4.41**	**11**	P	**Pn**	**21 25 21.3**		**+0.1**
NLAI	**Namlea**	**4.53**	**348**	P	**Pn**	**21 25 24.1**		**+1.3**
BATI	**Baumata**	**5.01**	**240**	P	**Pn**	**21 25 29.7**		**+0.6**
	473nm,0.4s,baz=133,slow=3.4,SNR=113							
BATI				S	**Sn**	**21 26 25.7**		**-0.7**
	612nm,0.4s,baz=97,slow=21,SNR=26							
BATI	**Baumata**	**5.01**	**240**	P	**Pn**	**21 25 29.6**		**+0.5**
	3.3nm7μm571nm,0.6s							
MMRI	**Maumere**	**5.84**	**260**	Pn	**Pn**	**21 25 40.7**		**+0.5**
MMRI	**Maumere**	**5.84**	**260**	P	**Pn**	**21 25 40.3**		**+0.1**
	0.5nm80nm,0.6s							
MMRI	**Maumere**	**5.84**	**260**	P	**Pn**	**21 25 40.8**		**+0.6**
BBSI	**Bau Bau**	**5.88**	**292**	P	**Pn**	**21 25 42.5**		**+1.8**
	0.1nm1μm36nm,0.9s							
MTN	**Manton Dam**	**5.94**	**150**	Pn	**Pn**	**21 25 41.5**		**0.0**
MTN	**Manton Dam**	**5.94**	**150**	P	**Pn**	**21 25 41.7**		**+0.2**
SANI	**Sanana**	**5.98**	**340**	P	**Pn**	**21 25 43.0**		**+0.9**
	0.2nm598nm61nm,0.9s							
SANI	**Sanana**	**5.98**	**340**	P	**Pn**	**21 25 43.0**		**+0.9**
FAKI	**Fak Fak**	**6.32**	**41**		**Pn**	**21 25 44.5**		**-2.1**
FAKI	**Fak Fak**	**6.32**	**41**	P	**Pn**	**21 25 44.9**		**-1.7**
	0.4nm942nm55nm,0.7s							
FAKI	**Fak Fak**	**6.32**	**41**	P	**Pn**	**21 25 44.9**		**-1.7**
EDFI	**Ende, Flores**	**6.39**	**260**	P	**Pn**	**21 25 48.3**		**+0.6**
	0.1nm322nm10nm,0.8s							
KDU	**Kakadu**	**6.59**	**139**	P	**Pn**	**21 25 49.8**		**-0.4**
LBMI	**Labuha**	**7.04**	**355**	P	**Pn**	**21 25 58.2**		**+2.0**
	0.1nm578nm25nm,0.7s							
SIJI	**Sorong**	**7.50**	**25**	P	**Pn**	**21 26 01.8**		**-0.6**
	35nm,0.5s,baz=206,slow=9.9,SNR=20							
SIJI				S	**Sn**	**21 27 25.3**		**-0.9**
	25nm,0.4s,baz=26,slow=22,SNR=6.7							
SIJI	**Sorong**	**7.50**	**25**	P	**Pn**	**21 26 01.9**		**-0.6**
	0.2nm1μm45nm,0.8s							
KNRA	**Kununurra**	**7.96**	**175**		**Pn**	**21 26 07.2**		**-1.4**
KNRA	**Kununurra**	**7.96**	**175**	P	**Pn**	**21 26 07.7**		**-0.9**
BKSI	**Bulukumba**	**8.23**	**286**	P	**Pn**	**21 26 13.9**		**+1.6**
	26nm,0.8s							
LUWI	**Luwuk**	**8.46**	**321**	Pn	**Pn**	**21 26 15.4**		**+0.2**
BNSI	**Bone**	**8.56**	**292**	P	**Pn**	**21 26 17.9**		**+1.2**
	10nm,0.7s							
KAPI	**Kappang**	**8.68**	**287**	P	**Pn**	**21 26 19.1**		**+0.9**
	6.6nm,0.8s,baz=108,slow=14,SNR=4.5							
KAPI	**Kappang**	**8.68**	**287**	P	**Pn**	**21 26 19.9**		**+1.7**
	9.5nm,0.9s							
APSI	**Ampana**	**9.29**	**316**	P	**Pn**	**21 26 28.0**		**+1.6**
	16nm,1.1s							
DBNI	**Kabupaten Domp**	**9.69**	**265**	P	**Pn**	**21 26 33.2**		**+1.5**
	17nm,0.5s							
GTOI	**Gorontalo**	**9.69**	**328**	P	Pn	21 26 37.1		+5.3
	226nm20nm,0.9s							
PLAI	**Plampang**	**10.24**	**263**	P	**Pn**	**21 26 38.5**		**-0.6**
	33nm,0.8s							
FITZ	**Fitzroy Crossi**	**10.60**	**193**	P	**Pn**	**21 26 41.0**		**-2.9**
	40nm,0.4s,baz=28,slow=11,SNR=145							
FITZ				S	**Sn**	**21 28 33.9**		**-7.1**
	70nm,0.3s,baz=96,slow=11,SNR=10							
FITZ	**Fitzroy Crossi**	**10.60**	**193**		**Pn**	**21 26 40.8**		**-3.0**
TWSI	**Taliwang, Sumb**	**11.11**	**264**	P	**Pn**	**21 26 49.2**		**-1.5**
	9.5nm,1.5s							
TOLI2	**Tolitoli**	**11.37**	**320**		**Pn**	**21 26 56.1**		**+2.1**
MPSI	**Mapaga**	**11.40**	**314**	P	**Pn**	**21 26 55.8**		**+1.4**
	6.4nm,1.3s							
SGSI	**Sangihe**	**11.59**	**347**	P	**Pn**	**21 26 57.3**		**+0.4**
	2μm192nm,0.5s							
KLNI	**Mataram**	**11.87**	**266**	P	**Pn**	**21 27 02.8**		**+2.2**
	12nm,1.1s							
WRAB	**Tennant Creek**	**13.60**	**154**	Pn	**Pn**	**21 27 20.6**		**-2.3**
WRA	**Warramunga Arr**	**13.61**	**154**	P	**Pn**	**21 27 20.6**		**-2.4**
	32nm,0.5s,baz=330,slow=12,SNR=233							
WRA				S	Sn	21 29 42.3		-11
	119nm,0.8s,baz=325,slow=23,SNR=19							
JAGI	**Jajag, Banyuwa**	**13.79**	**266**	Pn	**Pn**	**21 27 25.9**		**+0.5**
JAGI	**Jajag, Banyuwa**	**13.79**	**266**	P	**Pn**	**21 27 26.8**		**+1.4**
	18nm,1.6s							
GMJI	**Gumukmas**	**14.49**	**267**	P	**Pn**	**21 27 34.8**		**+0.6**
	15nm,0.9s							
MBWA	**Marble Bar**	**15.62**	**210**		**Pn**	**21 27 47.4**		**-0.8**
MBWA	**Marble Bar**	**15.62**	**210**	P	**Pn**	**21 27 47.7**		**-0.5**
PSA00	**Pilbara Seismi**	**15.91**	**209**	Pn	**Pn**	**21 27 51.5**		**-0.3**
PSA00				IAmb	IAmb	21 27 57.3		
	comp=Z,48nm,0.9s							
PSA00	**Pilbara Seismi**	**15.91**	**209**		**Pn**	**21 27 50.5**		**-1.3**
PSA00				IAmb	IAmb	21 27 57.3		
	comp=Z,13nm,0.8s							
PSA00	**Pilbara Seismi**	**15.91**	**209**	P	**Pn**	**21 27 51.5**		**-0.3**
MYLDM	**Lahad Datu**	**15.96**	**323**		**Pn**	**21 27 52.4**		**0.0**
MYLDM				IAmb	IAmb	21 28 11.0		
	comp=Z,81nm,1.4s							
COEN	**Coen**	**16.09**	**114**	P	**P**	**21 27 55.3**		**+0.7**
PCJI	**Pacitan**	**16.73**	**267**	P	**P**	**21 28 00.1**		**-1.6**
	comp=Z,48nm,1.4s							
AS31	**Alice Springs**	**16.84**	**161**		**Pn**	**21 28 03.2**		**+0.1**
AS31				IAmb	IAmb	21 28 06.9		
	comp=Z,26nm,0.8s							
ASAR	**Alice Springs**	**16.84**	**161**	P	**Pn**	**21 28 02.9**		**-0.2**
	comp=Z,64nm,0.7s,baz=332,slow=9.3,SNR=229							
ASAR				S	**S**	**21 31 04.5**		**-6.5**
	comp=Z,18nm,0.6s,baz=325,slow=19,SNR=7.1							
AS01	**Alice Springs**	**16.85**	**161**	P	**P**	**21 28 02.9**		**-0.1**
QIS	**Mount Isa**	**16.98**	**140**	P	**Pn**	**21 28 05.6**		**+0.8**
WRKA	**Warakurna**	**17.24**	**179**	P	**Pn**	**21 28 08.1**		**+0.1**
KKM	**Kota Kinabalu**	**18.06**	**319**		**Pn**	**21 28 18.0**		**+0.2**
KKM				IAmb	IAmb	21 28 36.7		
	comp=Z,36nm,1.2s							
KKM	**Kota Kinabalu**	**18.06**	**319**	P	**Pn**	**21 28 18.3**		**+0.5**
	comp=Z,25nm,0.8s							
SBUM	**Sibu**	**18.75**	**302**	P	**Pn**	**21 28 25.6**		**-0.2**
SBUM				IAmb	IAmb	21 28 27.2		
	comp=Z,24nm,0.8s							
SBUM	**Sibu**	**18.75**	**302**	P	**Pn**	**21 28 26.1**		**+0.2**
	comp=Z,34nm,0.8s							
GIRL	**Giralia**	**19.95**	**220**		**Pn**	**21 28 39.2**		**-0.6**
GIRL	**Giralia**	**19.95**	**220**	P	**Pn**	**21 28 39.8**		**0.0**
MEEK	**Meekatharra**	**20.87**	**204**	P	**P**	**21 28 48.3**		**+1.7**
OOD	**Oodnadatta**	**21.25**	**161**	P	**P**	**21 28 53.1**		**+2.5**
CTA	**Charters Tower**	**21.50**	**127**	P	**P**	**21 28 56.1**		**+2.7**
	comp=Z,1.7nm,0.4s,baz=319,slow=9.3,SNR=1.4							
	comp=Z,1.7nm,0.4s							
CTAO	**Charters Tower**	**21.50**	**127**	P	**P**	**21 28 54.7**		**+1.3**
FORT	**Forrest**	**22.96**	**180**	P	**P**	**21 29 10.2**		**+2.4**
FORT	**Forrest**	**22.96**	**180**	P	**P**	**21 29 10.3**		**+2.5**
MULG	**Mulgathing**	**23.16**	**167**	P	**P**	**21 29 12.5**		**+2.9**
INKA	**Innaminka**	**23.27**	**150**	P	**P**	**21 29 13.7**		**+3.0**
MORW	**Morawa**	**24.09**	**207**	P	**P**	**21 29 20.6**		**+2.5**
MORW				IAmb	IAmb	21 29 21.8		
	comp=Z,22nm,0.9s							
MORW	**Morawa**	**24.09**	**207**	P	**P**	**21 29 20.8**		**+2.7**
QLP	**Quilpie**	**24.27**	**143**	P	**P**	**21 29 22.8**		**+3.0**
LCRK	**Leigh Creek**	**24.55**	**159**	P	**P**	**21 29 25.2**		**+2.9**
BBOO	**Buckleboo**	**26.07**	**165**	P	**P**	**21 29 36.6**		**+0.6**
BBOO				IAmb	IAmb	21 29 42.0		
	comp=Z,21nm,0.8s							
NWAO	**Narrogin (SRO)**	**27.04**	**200**	P	**P**	**21 29 46.6**		**+1.9**
	comp=Z,11nm,0.8s,baz=343,slow=9.7,SNR=2.1							
	comp=Z,11nm,0.8s							
NWAO	**Narrogin (SRO)**	**27.04**	**200**	P	**P**	**21 29 45.6**		**+0.9**
NWAO				IAmb	IAmb	21 29 58.8		
	comp=Z,30nm,1.2s							
STKA	**Stephens Creek**	**27.16**	**154**	P	**P**	**21 29 47.7**		**+1.9**
	comp=Z,15nm,0.6s,baz=324,slow=10,SNR=15							
	comp=Z,15nm,0.6s							
STKA	**Stephens Creek**	**27.16**	**154**	P	**P**	**21 29 48.2**		**+2.4**
STKA	**Stephens Creek**	**27.16**	**154**	P	**P**	**21 29 48.4**		**+2.6**
KULM	**Kulim**	**30.24**	**294**	P	**P**	**21 30 12.7**		**-0.6**
KULM				IAmb	IAmb	21 30 37.7		
	comp=Z,35nm,1.5s							
KULM	**Kulim**	**30.24**	**294**	P	**P**	**21 30 12.7**		**-0.6**
	comp=Z,13nm,1.5s							
RPSI	**Rantau Prapat**	**30.85**	**288**	P	**P**	**21 30 17.9**		**-0.8**
PSI	**Prapat**	**30.89**	**289**	P	**P**	**21 30 18.2**		**-1.0**
	comp=Z,36nm,0.9s,comp=Z,22nm,0.9s							
PSI				P	**P**	**21 30 18.2**		**-1.0**
	comp=Z,36nm,0.9s,comp=Z,22nm,0.9s							
TPUB	**Ta-pu**	**31.66**	**347**	P	**P**	**21 30 24.0**		**-1.6**
GSI	**Gunungsitoli**	**31.70**	**285**	P	**P**	**21 30 25.4**		**-0.7**
GSI				IAmb	IAmb	21 30 40.6		
	comp=Z,10nm,0.9s							
GSI	**Gunungsitoli**	**31.70**	**285**	P	**P**	**21 30 25.8**		**-0.3**
SSLB	**Suanglung**	**32.05**	**348**	P	**P**	**21 30 28.2**		**-1.0**
YHNB	**Yeheng**	**32.83**	**349**	P	**P**	**21 30 34.5**		**-1.4**
JOW	**Kunigami**	**34.33**	**0**	P	**P**	**21 30 48.5**		**-0.2**
	comp=Z,14nm,0.7s,baz=173,slow=8.5,SNR=4.9							
	comp=Z,14nm,0.7s							
JOW	**Kunigami**	**34.33**	**0**	P	**P**	**21 30 48.6**		**-0.2**
CMAR	**Chiang Mai Arr**	**38.74**	**312**	P	**P**	**21 31 27.1**		**+0.7**
	comp=Z,2.7nm,0.7s,baz=139,slow=7.1,SNR=22				

KMI pmax pmax
comp=Z,15nm,0.8s
JMN Monobe 41.57 7 P P 21 31 49.0 -0.4
ENH Enshi 41.76 336 P P 21 31 50.9 -0.2
PZH PanZhiHua 42.52 324 P P 21 32 00.6 +3.1
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,60nm,4.7s
JHS Saijyo 42.73 6 P P 21 31 58.8 0.0
KSRS Korea Array 44.92 360 P P 21 32 16.8 +0.5
comp=Z,7.6nm,0.6s,baz=178,slow=9.2,SNR=26
comp=Z,7.6nm,0.6s
MJAR Matsushiro Arr 45.03 12 P P 21 32 15.3 -1.9
comp=Z,2.3nm,0.6s,baz=162,slow=8.3,SNR=2.1
comp=Z,2.3nm,0.6s
XAN Xi'an 45.30 337 P **P 21 32 18.7 -0.7**
XAN pP pP 21 32 49.3 -0.9
BJT Baijiatuau 48.73 348 P **P 21 32 45.0 -0.9**
BJT IAmb IAmb 21 32 46.2
comp=Z,13nm,0.8s
BJI Beijing 48.75 348 P **P 21 32 45.4 -0.6**
BJI pP **pP 21 33 16.7 -0.4**
BJI sP **sP 21 33 32.5 +0.1**
BJI PcP **PcP 21 34 08.4 -0.4**
BJI pmax pmax
comp=Z,16nm,0.8s
BJI pmax pmax
comp=Z,91nm,5.8s
BJI LR LR
comp=Z,110nm,19.1s
BJI LR LR
comp=Z,480nm,19.4s
BJI LR LR
comp=Z,710nm,20.2s
HHC Hu-ho-hao-te 50.64 344 *e*P **P 21 33 01.3 +0.9**
HHC pmax pmax
comp=Z,40nm,0.8s
HHC pmax pmax
comp=Z,170nm,5.0s
LSA Lhasa 51.40 318 P **P 21 33 06.9 +0.2**
LSA IAmb IAmb 21 33 09.0
comp=Z,6.4nm,0.6s
LSA Lhasa 51.40 318 P **P 21 33 07.2 +0.4**
LSA pmax pmax
comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra 51.78 4 P **P 21 33 08.7 0.0**
USA0B IAmb IAmb 21 33 23.4
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 51.78 4 P **P 21 33 08.8 +0.1**
comp=Z,4.2nm,0.5s,baz=189,slow=7.8,SNR=19
comp=Z,4.2nm,0.5s
ODAN Odare 52.29 313 *e*P **P 21 33 12.9 -0.2**
comp=Z,2.7nm,0.5s
TAPN Taplejung 52.34 313 *e*P **P 21 33 13.2 -0.4**
comp=Z,12nm,0.4s
XLT XiLinHaoTe 52.49 349⇑*i*P **P 21 33 13.8 -0.3**
XLT pP pP 21 33 46.1 +0.8
XLT sP sP 21 34 02.1 +1.7
XLT ScP **ScP 21 38 06.2 -0.6**
XLT S **S 21 40 28.2 -1.5**
XLT pmax pmax
comp=Z,24nm,1.0s
XLT pmax pmax
comp=Z,110nm,5.1s
XLT LR LR
comp=Z,470nm,14.9s
XLT LR LR
comp=Z,560nm,22.8s
RAMN Ramite 52.92 312 *e*P **P 21 33 17.6 -0.1**
comp=Z,41nm,0.6s
JIRN Jiri 53.62 313 *e*P **P 21 33 22.4 -0.6**
comp=Z,14nm,0.6s
GUN Gumba 53.99 313 *e*P **P 21 33 25.1 -0.6**
comp=Z,36nm,0.5s
PKI Pulchoki 54.14 312 *e*P **P 21 33 26.0 -0.8**
comp=Z,17nm,0.5s
PKIN Phulchoki 54.15 312 *e*P **P 21 33 26.2 -0.6**
comp=Z,18nm,0.5s
KKN Kakani 54.36 312 *e*P **P 21 33 28.0 -0.2**
GKN Gorkha 54.95 312 *e*P **P 21 33 31.6 -0.8**
comp=Z,36nm,0.4s
KOLN Koldanda 55.59 311 *e*P **P 21 33 36.5 -0.5**
DANN Dangsing 55.78 312 *e*P **P 21 33 37.7 -0.8**
comp=Z,52nm,1.1s
PYUN Piuthan 56.22 311 *e*P **P 21 33 40.9 -0.6**
comp=Z,31nm,0.6s
KLR Kul'dur 56.78 3 P **P 21 33 44.2 -0.6**
comp=Z,1.4nm,0.7s,baz=191,slow=6.8,SNR=2.3
comp=Z,1.4nm,0.7s
ULN Ulaanbaatar 58.36 344 P **P 21 33 56.6 +0.6**
ULN IAmb IAmb 21 33 58.2
comp=Z,8.1nm,1.1s
SONM Songino Array 58.52 343 P **P 21 33 58.2 +1.1**
comp=Z,3.5nm,0.7s,baz=166,slow=8.5,SNR=7.6
SONM LR LR 22 00 35.8
comp=Z,693nm,21.8s,baz=332,slow=37
comp=Z,3.5nm,0.7s
NIL Nilore 66.23 312 P **P 21 34 48.5 -0.2**
NIL IAmb IAmb 21 34 48.9
comp=Z,7.9nm,0.5s
MK31 Makanchi Array 67.77 328 P **P 21 34 58.7 +0.6**
BOOM Boomskoye usch 68.87 321 P **P 21 35 05.9 +0.7**
BOOM IAmb IAmb 21 35 12.3
comp=Z,11nm,1.0s
YAK Yakutsk 69.53 1 P **P 21 35 08.7 +0.1**
comp=Z,6.7nm,0.4s,baz=356,slow=0.4,SNR=6.0
comp=Z,6.7nm,0.4s
YAK Yakutsk 69.53 1 P **P 21 35 08.2 -0.4**
AAK Ala-Archa 69.85 321 P **P 21 35 12.0 +0.8**
comp=Z,1.9nm,0.5s,baz=117,slow=7.0,SNR=5.7
comp=Z,1.9nm,0.5s
AAK Ala-Archa 69.85 321 P **P 21 35 11.2 0.0**
GAR Garm 70.81 316 P **P 21 35 16.6 -0.5**
ZAA0 Zalesovo Array 71.37 335 P **P 21 35 19.7 -0.3**
ZAA0 IAmb IAmb 21 35 20.3
comp=Z,5.9nm,0.6s
ZALV Zalesovo Beam 71.37 335 P **P 21 35 19.9 -0.1**
comp=Z,4.5nm,0.4s,baz=142,slow=5.5,SNR=16
comp=Z,4.5nm,0.4s
VNDA Vanda 72.00 173 P **P 21 35 25.0 +1.6**
comp=Z,0.5nm,0.5s,baz=318,slow=8.8,SNR=7.1
comp=Z,0.5nm,0.5s
KURBB Kurchatov Arra 72.11 329 P **P 21 35 24.6 +0.2**
comp=Z,4.3nm,0.6s,baz=128,slow=4.4,SNR=7.7
comp=Z,4.3nm,0.6s
SEY Seymchan 72.85 11 P **P 21 35 28.3 -0.3**
comp=Z,3.3nm,0.7s,baz=173,slow=4.1,SNR=7.9
comp=Z,3.3nm,0.7s
MAW Mawson 73.60 201 P **P 21 35 34.1 +1.1**
comp=Z,0.9nm,0.6s,baz=35,slow=3.5,SNR=3.0
comp=Z,0.9nm,0.6s
CRZF Crozet Islands 74.95 224 P **P 21 35 41.2 0.0**
TIXI Tiksi 79.18 0 P **P 21 36 03.6 -0.7**
comp=Z,3.7nm,0.4s,baz=90,slow=5.1
comp=Z,3.7nm,0.4s
TIXI Tiksi 79.18 0 P **P 21 36 03.8 -0.4**
TIXI IAmb IAmb 21 36 07.9
comp=Z,10nm,0.9s
GEYT Alibeck 79.20 311 P **P 21 36 04.8 -0.5**
comp=Z,1.2nm,0.5s,baz=124,slow=2.7,SNR=3.9
comp=Z,1.2nm,0.5s
NRIK Noril'sk 81.78 347 P **P 21 36 18.2 0.0**
comp=Z,3.0nm,0.4s,baz=106,slow=7.8,SNR=3.2
comp=Z,3.0nm,0.4s
NRIK Noril'sk 81.78 347 P **P 21 36 18.4 +0.3**
ABKAR Akbulak array 81.87 322 P **P 21 36 18.7 -0.3**
ARU Arti 85.29 329 P **P 21 36 36.2 -0.2**
ARU IAmb IAmb 21 36 36.6
comp=Z,13nm,0.9s
RAYN Ar Rayn 86.27 294 P **P 21 36 41.5 -0.6**
RAYN IAmb IAmb 21 36 42.5
comp=Z,4.5nm,0.7s
GURO Guroymak-BITLI 91.65 309 P **P 21 37 06.8 -0.5**
GURO IAmb IAmb 21 37 08.8
comp=Z,3.3nm,0.9s
TROLL Troll, Antarti 93.01 195 PcP **PcP 21 37 15.7 +2.3**
SNAA Sanae 94.53 194 PcP **PcP 21 37 22.3 +2.2**
ARCES ARCESS Array B 101.56 339 P **Pdif 21 37 50.2 -1.0**
comp=Z,2.2nm,0.8s,baz=81,slow=5.6,SNR=6.3
PDAR Pinedale Array 118.74 45 PKP **PKiKP 21 42 48.4 +0.7**
comp=Z,0.7nm,0.7s,baz=347,slow=0.5,SNR=4.8
TXAR Lajitas Array 126.93 59 PKP **PKiKP 21 43 05.0 +1.0**
comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=8.4
TORD Torodi Ar. Bea 127.05 281 PKP **PKiKP 21 43 04.5 0.0**
comp=Z,1.4nm,0.7s,baz=71,slow=1.9,SNR=7.4
PLCA Paso Flores 128.85 162 PKP **PKiKP 21 43 08.6 +1.0**
comp=Z,1.4nm,0.8s,baz=242,slow=2.5,SNR=3.8
CPUP Villa Florida 145.77 171 PKPbc **PKPab 21 43 40.6 +1.2**
comp=Z,2.1nm,0.5s,baz=146,slow=5.1,SNR=5.2
LPAZ La Paz 151.28 146 PKPbc **PKiKP 21 43 55.8 +1.1**
comp=Z,2.8nm,0.4s,baz=38,slow=6.6,SNR=15

BJI ***05*** *21:26:32.3±0.0, 34°.71N×141°.50E, h10km, mb4.6/58, mB4.9/36, Ms4.6/56, Ms7 4.5/54*
IDC ***05*** *21:26:32.4±0.5, 34°.67N×141°.72E, h0km, mb4.5/30, mbtmp4.5/35, ML3.6/3, MS4.1/12, Error ellipse: s-maj=13.9km s-min=12.9km az=137.0*
MOS ***05*** *21:26:33.8±0.9, 34°.70N×141°.71E, h23km, mb5.0/27, MS4.0/5, Error ellipse: s-maj=8.9km s-min=4.3km az=126.4*
NIED ***05*** *21:26:33.9, 34°.66N×141°.90E, h49km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; M_{rr}6.48; $M_{\theta\theta}$2.78; $M_{\phi\phi}$-9.26; $M_{r\theta}$-0.95; $M_{\phi\phi}$-5.43; $M_{\phi r}$1.98; Fault plane solution: $M_0$9.51000×10^15 NP1: ϕ_s229.00000°, δ48.00000°, λ133.00000°. NP2: ϕ_s355.00000°, δ57.00000°, λ53.00000°.*
JMA ***05*** *21:26:33.9±0.2, 34°.7N±0.6×14°.2E±°, h49km±2km, MD4.8/39, MV4.1/39, FAR E OFF KANTO*
NEIC ***05*** *21:26:33.8±1.5, 34°.70N±0°.05×141°.83E±0°.08, h10km±1km, mb4.9/76, Error ellipse: s-maj=11.7km s-min=8.4km az=89.0*
ISC 05 21:26:34.1±0.8, 34°.66N±0°.03×141°.83E±0°.04, h16km±4km, n289, σ1°49/308, mb4.8/108, MS4.5/27, 12C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.70**	**270**	P	**Pg**	**21 26 48.4**	**+0.7**
BSO3	**Boso 3**	**1.09**	**278**	*i* P	**Pb**	**21 26 54.4**	**-0.1**
BSO4	**Boso 4**	**1.27**	**286**	P	**Pn**	**21 26 56.8**	**-0.4**
BSO4				S	**Sb**	**21 27 12.6**	**-1.2**
CHOJ	**Chosi**	**1.31**	**323**	*i* P	**Pn**	**21 26 56.6**	**-1.2**
CHOJ				*e*S	**Sn**	**21 27 13.5**	**-1.5**
CHOJ	**Chosi**	**1.31**	**323**	A	A	21 26 56.6	
comp=E,10.0nm,6.6s,comp=E,10.0nm,6.3s							
KTR	**Katsuura**	**1.34**	**292**	P	**Pn**	**21 26 57.6**	**-0.5**
KTR				*e*S	**Sn**	**21 27 14.6**	**-1.0**
JKUC	**kamogawauchiur**	**1.43**	**291**	*i* P	**Pn**	**21 26 59.1**	**-0.3**
JKUC				S	**Sn**	**21 27 17.4**	**-0.5**
JKUC	**kamogawauchiur**	**1.43**	**291**	A	A	21 26 59.1	
comp=E,13nm,3.3s,comp=E,13nm,4.7s							
JSMT	**Sammumatsuo**	**1.50**	**311**	*e*P	**Pn**	**21 26 59.8**	**-0.6**
JSMT	**Sammumatsuo**	**1.50**	**311**	A	A	21 26 59.8	
comp=E,39nm,4.0s,comp=E,34nm,5.1s							
JCN	**Nagara**	**1.54**	**300**	A	A	21 27 00.2	
comp=E,41nm,4.1s,comp=E,38nm,2.8s							
JYO	**Yokosk**	**1.86**	**288**	A	A	21 27 05.0	
comp=E,19nm,4.3s,comp=E,13nm,5.6s							
JIM2	**Oshima 3**	**1.98**	**272**	*i* P	**Pn**	**21 27 06.0**	**-1.0**
JIM2				*e*S	**Sn**	**21 27 30.5**	**-0.9**
JIM2	**Oshima 3**	**1.98**	**272**	A	A	21 27 06.0	
comp=E,11nm,9.1s,comp=E,10.0nm,4.2s							
JMYK	**Miyake Tsubota**	**1.98**	**253**	P	**Pn**	**21 27 06.4**	**-0.5**
JMYK				*e*S	**Sn**	**21 27 30.5**	**-0.9**
JMYK	**Miyake Tsubota**	**1.98**	**253**	A	A	21 27 06.4	
comp=E,12nm,3.7s,comp=E,13nm,7.8s							
TOK	**Tokyo**	**1.98**	**302**	A	A	21 27 06.6	
comp=E,35nm,5.8s,comp=E,26nm,3.8s							
JMKN	**Mikurajimanish**	**2.00**	**248**	*i* P	**Pn**	**21 27 06.8**	**-0.5**
JMKN				*e*S	**Sn**	**21 27 30.7**	**-1.4**
JYT	**Yasato**	**2.06**	**320**	Pn	**Pn**	**21 27 07.1**	**-1.0**
JYT				Sn	**Sn**	**21 27 34.2**	**+0.7**
JHJ2	**Mitsune**	**2.27**	**228**	Pn	**Pn**	**21 27 11.0**	**-0.1**
JHJ2	**Mitsune**	**2.27**	**228**	*e*S	**Sn**	**21 27 38.1**	**-0.6**
JHJ	**Hachijo jima 2**	**2.29**	**229**	Pn	**Pn**	**21 27 11.0**	**-0.2**
113nm,0.3s,baz=72,slow=23,SNR=79							
JHJ				Sn	**Sn**	**21 27 36.0**	**-3.1**
205nm,0.3s,baz=77,slow=22,SNR=10							
224nm,0.3s							
JOD2	**Odawara 2**	**2.33**	**286**	*i* P	**Pn**	**21 27 10.9**	**-1.0**
JOD2				*e*S	**Sn**	**21 27 39.2**	**-1.0**
JIZS	**Izushimoda**	**2.43**	**272**	P	**Pn**	**21 27 12.4**	**-0.8**
JIZS				*e*S	**Sn**	**21 27 41.3**	**-1.4**
JAG	**Ashikaga**	**2.62**	**313**	*i* P	**Pn**	**21 27 15.6**	**-0.2**
JAG				*e*S	**Sn**	**21 27 45.6**	**-1.7**
JFNN	**Fujinakano**	**2.64**	**283**	P	**Pn**	**21 27 15.8**	**-0.3**
JFNN				*e*S	**Sn**	**21 27 47.3**	**-0.4**
JRY	**Ryogami san**	**2.75**	**300**	*i* P	**Pn**	**21 27 17.6**	**-0.1**
JRY				S	**Sn**	**21 27 50.0**	**-0.6**
JAOM	**Aogashimamukai**	**2.78**	**219**	*e*S	**Sn**	**21 27 50.8**	**-0.6**
JYN	**Shimob**	**2.82**	**288**	P	**Pn**	**21 27 18.1**	**-0.6**
JMM	**Marumori**	**3.31**	**346**	Pn	**Pn**	**21 27 23.9**	**-1.4**
MJAR	**Matsushiro Arr**	**3.50**	**304**	Pn	**Pn**	**21 27 26.8**	**-1.1**
2.6nm,0.3s,baz=134,slow=9.6,SNR=56							
MJAR				LR	LR	21 29 14.2	
comp=Z,3μm,18.4s,baz=94,slow=47							
47nm,0.6s							
MAJO	**Matsushiro**	**3.50**	**304**	Pn	**Pn**	**21 27 28.3**	**+0.3**
MAJO	**Matsushiro**	**3.50**	**304**	P	**Pn**	**21 27 28.3**	**+0.3**
JGF	**Kuroka**	**3.78**	**286**	Pn	**Pn**	**21 27 32.0**	**+0.2**
INU	**Inuyama**	**4.01**	**281**	Pn	**Pn**	**21 27 35.9**	**+1.0**
JSD	**Sado**	**4.44**	**321**	Pn	**Pn**	**21 27 40.3**	**-0.4**
JTM	**Tenmabayashi**	**6.15**	**355**	Pn	**Pn**	**21 28 03.0**	**-1.3**
JMN	**Monobe**	**6.65**	**264**		**Pn**	**21 28 12.6**	**+1.3**
JHS	**Saijyo**	**7.17**	**275**	Pn	**Pn**	**21 28 20.3**	**+1.9**
ERM	**Erimo**	**7.42**	**8**	Pn	**Pn**	**21 28 18.7**	**-3.0**
ERM	**Erimo**	**7.42**	**8**	*i* P	**Pn**	**21 28 20.1**	**-1.7**
JCJ	**Chichijima**	**7.54**	**178**	Pn	**Pn**	**21 28 23.6**	**+0.2**
44nm,0.4s,baz=272,slow=22,SNR=13							
JCJ				Sn	**Sn**	**21 29 41.2**	**-7.5**
37nm,0.3s,baz=270,slow=23,SNR=11							
JCJ	**Chichijima**	**7.54**	**178**		**Pn**	**21 28 23.4**	**-0.1**
KSRS	**Korea Array**	**11.60**	**288**	Pn	**Pn**	**21 29 20.3**	**+1.4**
0.4nm,0.3s,baz=101,slow=14,SNR=26							
KSRS				LR	LR	21 34 24.2	
comp=Z,508nm,18.6s,baz=95,slow=41							
11nm,0.7s							
TJN	**Taejon**	**11.91**	**282**	*i* P	**Pn**	**21 29 23.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**12.19**	**324**	Pn	**Pn**	**21 29 26.2**	**-0.8**
USA0B	**Ussuriysk Arra**	**12.19**	**324**	P	**Pn**	**21 29 26.2**	**-0.8**
USRK	**Ussuriysk Ar.**	**12.19**	**324**	Pn	**Pn**	**21 29 26.2**	**-0.8**
9.4nm,0.8s,baz=120,slow=12,SNR=9.9							
USRK				LR	LR	21 33 43.1	
comp=Z,284nm,21.8s,baz=135,slow=36							
YSS	**Yuzh-Sakhalins**	**12.31**	**3**		**Pn**	**21 29 26.8**	**-1.9**
YSS	**Yuzh-Sakhalins**	**12.31**	**3**	*e*P	**Pn**	**21 29 26.5**	**-2.1**
YSS				*e*S	**Sn**	**21 31 37.5**	**-7.9**
YSS				pmax	pmax		
comp=Z,43nm,1.0s							
YSS				MLR	MLR		
comp=Z,1μm,16.0s							
MDJ	**Mudanjiang**	**13.69**	**320**	P	**Pn**	**21 29 46.5**	**-1.1**
MDJ				sP	P	21 29 50.9	-5.3
MDJ				S	**Sn**	**21 32 20.1**	**+0.8**
MDJ				sS	S	21 32 23.8	-18
MDJ				ScP	**ScP**	**21 38 43.0**	**-1.7**
MDJ				PcS	**PcS**	**21 38 45.6**	**-0.8**
MDJ				ScS	**ScS**	**21 42 19.4**	**-2.1**
MDJ				pmax	pmax		
comp=Z,11nm,2.4s							
MDJ				pmax	pmax		
comp=Z,200nm,3.8s							
MDJ				LR	LR		
comp=Z,1μm,15.1s							
MDJ				LR	LR		
comp=Z,980nm,16.6s							
MDJ				LR	LR		
comp=Z,1μm,15.0s							
BNX	**BinXian**	**15.59**	**320**	⇓P	**Pn**	**21 30 09.0**	**-4.2**
BNX				pmax	pmax		
comp=Z,11nm,1.4s							
BNX				pmax	pmax		
comp=Z,190nm,6.3s							
KLR	**Kul'dur**	**16.36**	**336**	Pn	**Pn**	**21 30 17.6**	**-5.3**
comp=Z,0.1nm,0.3s,baz=56,slow=21,SNR=1.9							
KLR				LR	LR	21 37 31.0	
comp=Z,359nm,18.6s,baz=149,slow=40							
KLR	**Kul'dur**	**16.36**	**336**	*i* P	**Pn**	**21 30 24.1**	**+1.1**
KLR				pmax	pmax		
comp=Z,3.0nm,0.9s							
GRNR	**Gornyy**	**16.58**	**348**	⇓*i*P	**Pn**	**21 30 24.8**	**-1.0**
GRNR				pmax	pmax		
comp=Z,5.0nm,1.0s							
GRNR				MLR	MLR		
comp=E,580nm,17.0s							
GRNR				MLR	MLR		
comp=N,360nm,16.0s							
GRNR				MLR	MLR		
comp=Z,530nm,15.0s							
NJ2	**Nanjing**	**19.36**	**269**	*e*P	**P**	**21 30 58.1**	**-1.0**
NJ2				pmax	pmax		
comp=Z,13nm,0.9s							
NJ2				pmax	pmax		
comp=Z,280nm,4.7s							
NJ2				LR	LR		
comp=Z,1μm,13.7s							
NJ2				LR	LR		
comp=Z,330nm,14.2s							
NJ2				LR	LR		
comp=Z,770nm,12.8s							
BJI	**Beijing**	**21.06**	**292**	P	**P**	**21 31 16.6**	**-0.8**
BJI				sP	**sP**	**21 31 22.9**	**+1.2**
BJI				pmax	pmax		
comp=Z,7.0nm,0.9s							
BJI				LR	LR		
comp=Z,110nm,17.6s							
BJI				LR	LR		
comp=Z,410nm,16.5s							
BJI				LR	LR		
comp=Z,490nm,16.7s							
PETK	**Petropavlovsk-**	**21.62**	**27**	P	**P**	**21 31 24.0**	**+0.7**
comp=Z,2.2nm,0.8s,baz=198,slow=8.9,SNR=1.6							
comp=Z,2.2nm,0.8s							
ZEA	**Zeya**	**21.67**	**336**	*e*P	**P**	**21 31 24.1**	**+0.2**
ZEA				pmax	pmax		
comp=Z,100nm,4.2s							
ZEA				pmax	pmax		
comp=E,20nm,1.1s							
ZEA				pmax	pmax		
comp=N,30nm,0.9s							
ZEA				pmax	pmax		
comp=Z,50nm,1.0s							
ZEA				MLR	MLR		
comp=E,200nm,18.0s							
ZEA				MLR	MLR		
comp=N,200nm,16.0s							
ZEA				MLR	MLR		
comp=Z,300nm,14.0s							
TPUB	**Ta-pu**	**21.68**	**244**	P	**P**	**21 31 22.9**	**-1.4**
HIA	**Hailar**	**21.86**	**319**	P	**P**	**21 31 23.1**	**-3.0**
HIA	**Hailar**	**21.86**	**319**	*i* P	**P**	**21 31 26.0**	**-0.1**
HIA				pmax	pmax		
comp=Z,13nm,1.0s							
XLT	**XiLinHaoTe**	**21.89**	**303**	⇓*i*P	**P**	**21 31 22.9**	**-3.6**
XLT				pP	pP	21 31 25.9	-3.5
XLT				sP	sP	21 31 28.9	-1.9
XLT				PP	**PnPn**	**21 31 48.0**	**0.0**
XLT				S	S	21 35 12.7	-15
XLT				sS	Sn	21 35 25.2	-13
XLT				SS	**SnSn**	**21 35 57.4**	**+4.2**
XLT				pmax	pmax		
comp=Z,8.0nm,1.2s							
XLT				pmax	pmax		
comp=Z,130nm,4.0s							
XLT				LR	LR		
comp=Z,1μm,15.9s							
XLT				LR	LR		
comp=Z,1μm,15.8s							
HNS	**HongShan**	**22.08**	**285**	*e*P	**P**	**21 31 30.8**	**+2.4**
HNS				LR	LR		
comp=Z,1μm,14.1s							
HNS				LR	LR		
comp=Z,850nm,13.9s							
HNS				LR	LR		
comp=Z,1μm,13.9s							
WHN	**Wuhan**	**23.48**	**268**	⇑P	**P**	**21 31 39.0**	**-4.1**
WHN				S	**S**	**21 35 54.4**	**-1.7**
WHN				pmax	pmax		
comp=Z,36nm,0.9s							
WHN				LR	LR		
comp=Z,840nm,13.6s							
WHN				LR	LR		
comp=Z,2μm,10.6s							
WHN				LR	LR		
comp=Z,2μm,14.2s							
HHC	**Hu-ho-hao-te**	**24.64**	**294**	*e*P	**P**	**21 31 52.0**	**-2.1**
HHC				pmax	pmax		
comp=Z,27nm,0.8s							
HHC				pmax	pmax		
comp=Z,160nm,4.7s							
HHC				LR	LR		
comp=Z,1μm,17.8s							
HHC				LR	LR		
comp=Z,880nm,17.1s							
HHC				LR	LR		
comp=Z,2μm,18.4s							
H11N2	**WAKE ISLAND Hy**	**26.70**	**117**	T	T	22 00 19.7	
baz=309,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hy**	**26.71**	**117**	T	T	22 00 20.6	
baz=309,slow=75,SNR=17							
H11N3	**WAKE ISLAND Hy**	**26.72**	**117**	T	T	22 00 20.7	
baz=309,slow=75,SNR=16							
XAN	**Xi'an**	**27.11**	**278**	P	**P**	**21 32 14.6**	**-1.8**
XAN				S	**S**	**21 36 51.4**	**-2.7**
XAN				pmax	pmax		
comp=Z,15nm,0.8s							
XAN				pmax	pmax		
comp=Z,270nm,10.8s							
XAN				LR	LR		
comp=Z,760nm,18.6s							
XAN				LR	LR		
comp=Z,520nm,21.6s							
XAN				LR	LR		
comp=Z,690nm,17.6s							
H11S3	**WAKE ISLAND Hy**	**27.34**	**120**	T	T	22 01 11.1	
baz=312,slow=76,SNR=16							
H11S1	**WAKE ISLAND Hy**	**27.34**	**120**	T	T	22 01 13.5	
baz=312,slow=76,SNR=17							
H11S2	**WAKE ISLAND Hy**	**27.35**	**120**	T	T	22 01 12.4	
baz=312,slow=76,SNR=15							
ENH	**Enshi**	**27.57**	**270**	P	**P**	**21 32 17.5**	**-3.1**
ENH				IAmb	IAmb	21 32 33.2	
comp=Z,17nm,0.9s							
YAK	**Yakutsk**	**28.46**	**348**	P	**P**	**21 32 26.4**	**-1.6**
YAK				IAmb	IAmb	21 32 35.7	
comp=Z,17nm,0.9s							
YAK	**Yakutsk**	**28.46**	**348**	*e*P	**P**	**21 32 28.7**	**+0.6**
YAK				*e*S	**S**	**21 37 15.8**	**+1.2**
YAK				pmax	pmax		
comp=Z,14nm,1.1s							
ULN	**Ulaanbaatar**	**29.02**	**308**	P	**P**	**21 32 33.3**	**-0.2**
ULN				IAmb	IAmb	21 32 35.6	
comp=Z,15nm,1.0s							
ULN	**Ulaanbaatar**	**29.02**	**308**	*c*e*P	**P**	**21 32 34.6**	**+1.1**
ULN				pmax	pmax		
comp=Z,29nm,1.7s							
SEY	**Seymchan**	**29.06**	**10**	P	**P**	**21 32 35.1**	**+1.7**
comp=Z,1.2nm,0.6s,baz=203,slow=9.7,SNR=2.1							
comp=Z,1.2nm,0.6s							
SONM	**Songino Array**	**29.44**	**307**	P	**P**	**21 32 38.1**	**+0.9**
comp=Z,12nm,1.0s,baz=109,slow=9.3,SNR=49							
comp=Z,12nm,1.0s							
BOD	**Bodaibo**	**29.73**	**330**	*e*P	**P**	**21 32 38.9**	**-0.5**
BOD				pmax	pmax		
comp=Z,32nm,1.2s							
LZH	**Lanzhou**	**30.88**	**284**	*e*P	**P**	**21 32 50.1**	**+0.1**
LZH				sP	pwP	21 32 59.0	-1.3
LZH				pmax	pmax		
comp=Z,13nm,1.5s							
LZH				LR	LR		
comp=Z,620nm,15.1s							
LZH				LR	LR		
comp=Z,670nm,14.1s							
LZH				LR	LR		
comp=Z,1μm,15.5s							
GYA	**Guiyang**	**31.24**	**265**	⇑P	**P**	**21 32 51.7**	**-1.6**
GYA				LR	LR		
comp=Z,340nm,13.0s							
GYA				LR	LR		
comp=Z,420nm,11.5s							
GYA				LR	LR		
comp=Z,660nm,13.2s							
IRK	**Irkutsk**	**31.98**	**315**	*e*P	**P**	**21 32 58.9**	**-0.5**
IRK				pmax	pmax		
comp=Z,32nm,2.2s							
ZAK	**Zakamensk**	**32.05**	**311**	*e*P	**P**	**21 33 00.2**	**+0.1**
ZAK				pmax	pmax		
comp=Z,12nm,1.3s							
CD2	**Chengdu**	**32.10**	**274**	P	**P**	**21 32 58.6**	**-2.1**
CD2				pP	pP	21 33 03.3	-0.4
CD2				S	**S**	**21 38 13.4**	**+1.0**
CD2				pmax	pmax		
comp=Z,44nm,0.5s							
CD2				LR	LR		

comp=Z,3μm,7.8s
CD2 LR LR
comp=Z,1μm,6.4s
CD2 LR LR
comp=Z,3μm,7.7s
QIZ Qiongzhong 32.34 250 P **P 21 33 01.2 -1.6**
QIZ S **S 21 38 21.7 +5.5**
QIZ LR LR
comp=Z,270nm,17.5s
QIZ LR LR
comp=Z,310nm,14.3s
QIZ LR LR
comp=Z,270nm,15.9s
GTA Gaotai 33.65 291 ⇓P **P 21 33 14.3 0.0**
GTA pP sP 21 33 18.8 +0.3
GTA sP pwP 21 33 22.6 -2.0
GTA pmax pmax
comp=Z,12nm,1.0s
GTA pmax pmax
comp=Z,130nm,6.8s
GTA LR LR
comp=Z,290nm,17.5s
GTA LR LR
comp=Z,410nm,18.3s
GTA LR LR
comp=Z,510nm,17.5s
KMI Kunming 35.01 265 ⇑P **P 21 33 23.9 -2.4**
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI LR LR
comp=Z,480nm,15.0s
KMI LR LR
comp=Z,370nm,15.5s
KMI LR LR
comp=Z,710nm,17.6s
PZH PanZhiHua 35.27 268 P **P 21 33 30.7 +2.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.5s
PZH LR LR
comp=Z,1μm,18.0s
PZH LR LR
comp=Z,1μm,19.1s
PZH LR LR
comp=Z,910nm,19.6s
BILL Bilibino 36.22 15 *e*P **P 21 33 35.9 0.0**
BILL pmax pmax
comp=Z,5.0nm,0.4s
GOMU GeErMu 38.05 286 P **P 21 33 51.9 -0.4**
GOMU sP pP 21 33 55.2 -0.4
GOMU pmax pmax
comp=Z,14nm,1.2s
GOMU LR LR
comp=Z,450nm,16.9s
GOMU LR LR
comp=Z,180nm,17.6s
FAKI Fak Fak 38.45 196 P **P 21 33 54.9 -0.4**
FAKI IAmb IAmb 21 34 09.7
comp=Z,24nm,1.1s
TOLI2 Tolitoli 38.73 215 P **P 21 33 56.8 -0.8**
CHTO Chiang Mai 41.09 259 P **P 21 34 15.9 -1.5**
CHTO Chiang Mai 41.09 259 P **P 21 34 15.9 -1.5**
CM31 Chiang Mai Arr 41.28 258 P **P 21 34 18.1 -0.8**
CMAR Chiang Mai Arr 41.28 258 P **P 21 34 18.3 -0.7**
comp=Z,6.6nm,0.7s,baz=47,slow=7.7,SNR=49
comp=Z,6.6nm,0.7s
DGZ Jazzator, Alta 42.09 308 *i* P **P 21 34 25.1 -0.3**
DGZ pmax pmax
comp=Z,28nm,0.8s
WMQ Urumqi 42.25 299 ⇑*i*P **P 21 34 28.9 +2.2**
WMQ pmax pmax
comp=Z,36nm,1.5s
WMQ pmax pmax
comp=Z,160nm,3.6s
WMQ LR LR
comp=Z,960nm,20.9s
WMQ LR LR
comp=Z,880nm,17.9s
WMQ LR LR
comp=Z,1μm,22.3s
LSA Lhasa 42.82 278 P **P 21 34 31.8 -0.2**
LSA Lhasa 42.82 278 P **P 21 34 31.8 -0.2**
LSA pmax pmax
comp=Z,4.0nm,0.9s
ZAA0 Zalesovo Array 43.79 314 P **P 21 34 38.5 -0.4**
ZALV Zalesovo Beam 43.79 314 P **P 21 34 39.0 +0.1**
comp=Z,6.7nm,0.7s,baz=90,slow=6.7,SNR=32
ZALV PcP **PcP 21 36 25.3 0.0**
comp=Z,2.5nm,0.6s,baz=57,slow=2.1,SNR=3.2
comp=Z,6.7nm,0.7s
ZSN Zaisan 43.88 305 *e*P **P 21 34 39.3 -0.5**
ZSN Zaisan 43.88 305 *e*P **P 21 34 39.4 -0.5**
baz=304
NRIK Noril'sk 45.57 336 P **P 21 34 53.0 +0.1**
comp=Z,9.6nm,1.1s,baz=134,slow=5.8,SNR=7.4
comp=Z,9.6nm,1.1s
NRIK Noril'sk 45.57 336 P **P 21 34 52.4 -0.5**
NRIK IAmb IAmb 21 34 54.3
comp=Z,14nm,1.1s
NRIK Noril'sk 45.57 336 *ce*P **P 21 34 53.8 +0.9**
NRIK pmax pmax
comp=Z,11nm,1.1s
MK31 Makanchi Array 45.70 304 P **P 21 34 54.2 -0.1**
MK31 Makanchi Array 45.70 304 P **P 21 34 54.2 -0.1**
MK31 pmax pmax
comp=Z,9.0nm,0.7s
MKAR Makanchi Array 45.70 304 P **P 21 34 54.3 0.0**
comp=Z,7.8nm,0.6s,baz=86,slow=8.9,SNR=50
comp=Z,7.8nm,0.6s
MAKZ Makanchi 45.91 304 P **P 21 34 54.7 -1.3**
MAKZ IAmb IAmb 21 35 00.7
comp=Z,11nm,0.7s
MAKZ Makanchi 45.91 304 P **P 21 34 54.7 -1.3**
MAKZ pmax pmax
comp=Z,11nm,0.7s
MMRI Maumere 46.88 207 P **P 21 35 03.8 0.0**
SOEI Soe 47.20 204 P **P 21 35 06.4 0.0**
KURK Kurchatov 47.69 310 P **P 21 35 09.4 -0.4**
KURK Kurchatov 47.69 310 P **P 21 35 09.4 -0.4**
KURK pmax pmax
comp=Z,48nm,0.8s
KURBB Kurchatov Arra 47.75 310 P **P 21 35 10.0 -0.2**
comp=Z,33nm,0.8s,baz=85,slow=8.0,SNR=83
comp=Z,33nm,0.8s
KULM Kulim 47.95 242 P **P 21 35 12.1 -0.1**
J20K Nowinta River 48.16 32 P **P 21 35 15.2 +1.9**
J20K IAmb IAmb 21 35 21.9
comp=Z,12nm,1.4s
IPM Ipoh 48.24 241 P **P 21 35 13.8 -0.7**
IPM IAmb IAmb 21 35 38.7
comp=Z,29nm,1.4s
SHLS Shalkode 48.27 300 *e*P **P 21 35 10.8 -3.7**
SHLS Shalkode 48.27 300 *e*P **P 21 35 10.9 -3.7**
baz=299
M20K Styx River 48.45 35 P **P 21 35 15.1 -0.5**
UZB Uzynbulak 48.59 300 *e*P **P 21 35 15.7 -1.3**
UZB Uzynbulak 48.59 300 *e*P **P 21 35 15.7 -1.3**
baz=300
TDK Taldyqorghan 48.65 302 *e*P **P 21 35 17.0 -0.3**
TDK Taldyqorghan 48.65 302 *e*P **P 21 35 17.0 -0.3**
baz=302
KDAK Kodiak Island 48.66 41 P **P 21 35 18.3 +1.2**
comp=Z,5.3nm,0.6s,baz=281,slow=6.4,SNR=10.0
comp=Z,5.3nm,0.6s
KDAK Kodiak Island 48.66 41 P **P 21 35 17.5 +0.3**
KDAK Kodiak Island 48.66 41 P **P 21 35 17.5 +0.3**
KDAK pmax pmax
comp=Z,41nm,1.8s
KPKS Kokpek 48.76 300 *e*P **P 21 35 17.4 -0.9**
KPKS Kokpek 48.76 300 *e*P **P 21 35 17.5 -0.9**
baz=300
PPLA Purkeypile 48.94 34 P **P 21 35 20.6 +1.2**
PPLA IAmb IAmb 21 35 41.1
comp=Z,11nm,1.0s
SATY Saty 49.05 300 *e*P **P 21 35 19.5 -1.0**
SATY Saty 49.05 300 *e*P **P 21 35 19.6 -1.0**
baz=300
MLY Manley 49.70 31 P **P 21 35 26.2 +1.1**
TARG Taragay, Kyrgy 49.79 298 P **P 21 35 25.2 -1.3**
TARG IAmb IAmb 21 35 27.7
comp=Z,9.9nm,0.8s
TARG Taragay, Kyrgy 49.79 298 P **P 21 35 25.3 -1.3**
TARG pmax pmax
comp=Z,10.0nm,0.8s
MDOK Medeo 49.99 300 *e*P **P 21 35 26.5 -1.3**

MDOK Medeo 49.99 300 *e*P **P 21 35 26.5 -1.3**
baz=300
AAA Alma-Ata 50.08 300 *e*P **P 21 35 28.4 +0.1**
AAA Alma-Ata 50.08 300 *e*P **P 21 35 28.5 +0.1**
baz=300
TNSS Tian-Shan 50.10 300 *e*P **P 21 35 29.2 +0.3**
TNSS Tian-Shan 50.10 300 *e*P **P 21 35 29.2 +0.3**
baz=300
KUU Kurty 50.33 301 *e*P **P 21 35 29.1 -1.1**
KUU Kurty 50.33 301 *e*P **P 21 35 29.2 -1.1**
baz=301
PWL Port Wells 50.75 36 P **P 21 35 33.6 +0.6**
BOOM Boomskoye usch 50.95 300 P **P 21 35 35.3 +0.3**
BOOM IAmb IAmb 21 35 38.8
comp=Z,14nm,1.0s
BOOM Boomskoye usch 50.95 300 P **P 21 35 35.3 +0.3**
BOOM pmax pmax
comp=Z,14nm,1.0s
NRN Naryn 51.17 298 P **P 21 35 36.9 0.0**
NRN Naryn 51.17 298 P **P 21 35 36.9 0.0**
NRN pmax pmax
comp=Z,3.0nm,0.8s
SCM Sheep Creek Mo 51.20 35 P **P 21 35 37.0 +0.5**
SCM IAmb IAmb 21 35 52.6
comp=Z,14nm,1.2s
SCM Sheep Creek Mo 51.20 35 P **P 21 35 37.0 +0.5**
SCM pmax pmax
comp=Z,15nm,1.2s
HDA Harding Lake 51.31 32 P **P 21 35 37.5 +0.3**
IL31 51.33 31 P **P 21 35 38.1 +0.8**
ILAR Eielson Array 51.33 31 P **P 21 35 38.8 +1.4**
comp=Z,2.4nm,0.7s,baz=263,slow=5.7,SNR=21
comp=Z,2.4nm,0.7s
BRZS Berezniki 51.56 310 *e*P **P 21 35 37.2 -2.1**
BRZS Berezniki 51.56 310 *e*P **P 21 35 37.3 -2.1**
baz=309
SGDS Sogindy 51.64 301 *e*P **P 21 35 39.3 -0.8**
SGDS Sogindy 51.64 301 *e*P **P 21 35 39.4 -0.8**
baz=301
BTLS Baital 51.67 303 *e*P **P 21 35 38.9 -1.3**
BTLS Baital 51.67 303 *e*P **P 21 35 38.9 -1.3**
baz=303
KSH Kashi 51.71 296 P **P 21 35 45.1 +4.3**
KSH pmax pmax
comp=Z,8.0nm,0.8s
KSH LR LR
comp=Z,540nm,17.2s
KSH LR LR
comp=Z,550nm,16.1s
KSH LR LR
comp=Z,340nm,17.5s
AAK Ala-Archa 51.94 300 P **P 21 35 42.4 -0.1**
comp=Z,3.9nm,0.9s,baz=116,slow=6.1,SNR=5.3
comp=Z,3.9nm,0.9s
AAK Ala-Archa 51.94 300 P **P 21 35 42.1 -0.4**
AAK Ala-Archa 51.94 300 *ce*P **P 21 35 42.5 0.0**
AAK pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 52.44 314 P **P 21 35 45.8 0.0**
comp=Z,6.3nm,0.9s,baz=91,slow=7.4,SNR=40
comp=Z,6.3nm,0.9s
BRVK Borovoye 52.49 314 P **P 21 35 46.2 0.0**
BRVK IAmb IAmb 21 35 47.5
comp=Z,11nm,0.9s
BRVK Borovoye 52.49 314 P **P 21 35 46.2 0.0**
BRVK pmax pmax
comp=Z,11nm,0.9s
SCRK Sand Creek 52.62 32 P **P 21 35 48.1 +1.0**
GSI Gunungsitoli 52.91 241 P **P 21 35 49.5 -0.2**
K27K Chicken 53.45 32 P **P 21 35 54.3 +1.2**
DZA Taraz 54.12 301 *e*P **P 21 35 58.1 -0.2**
DZA Taraz 54.12 301 *e*P **P 21 35 58.1 -0.2**
baz=301
WB0 Warramunga Arr 54.58 189 P **P 21 36 02.4 +0.6**
WB0 IAmb IAmb 21 36 30.1
comp=Z,15nm,1.0s
KKAR Karatay Array 54.63 302 P **P 21 36 02.1 0.0**
KKAR Karatay Array 54.63 302 P **P 21 36 02.1 0.0**
KKAR pmax pmax
comp=Z,27nm,1.0s
WRAB Tennant Creek 54.75 189 *ce*P **P 21 36 03.4 +0.4**
WRAB pmax pmax
comp=Z,15nm,1.3s
WRA Warramunga Arr 54.76 189 P **P 21 36 03.6 +0.5**
comp=Z,7.8nm,0.9s,baz=7.9,slow=7.8,SNR=6.4
comp=Z,7.8nm,0.9s
DRK Karamyk 54.80 297 P **P 21 36 03.5 -0.2**
BTK Batken 55.34 298 P **P 21 36 07.0 -0.3**
BTK IAmb IAmb 21 36 08.6
comp=Z,19nm,1.8s
BTK Batken 55.34 298 P **P 21 36 07.0 -0.3**
BTK pmax pmax
comp=Z,19nm,1.8s
NIL Nilore 55.71 290 P **P 21 36 10.3 +0.3**
NIL Nilore 55.71 290 P **P 21 36 10.3 +0.3**
NIL pmax pmax
comp=Z,15nm,0.5s
HYT Haines Junctio 56.02 36 P **P 21 36 11.3 -0.6**
HYT IAmb IAmb 21 36 44.8
comp=Z,16nm,1.5s
GAR Garm 56.05 297 P **P 21 36 11.7 -0.8**
GAR IAmb IAmb 21 36 29.4
comp=Z,9.4nm,0.9s
INK Inuvik 56.35 26 P **P 21 36 14.3 +0.3**
comp=Z,2.7nm,0.7s,baz=286,slow=9.1,SNR=6.4
comp=Z,2.7nm,0.7s
INK Inuvik 56.35 26 P **P 21 36 15.3 +1.3**
INK IAmb IAmb 21 36 33.6
comp=Z,12nm,1.4s
INK Inuvik 56.35 26 P **P 21 36 15.3 +1.3**
INK pmax pmax
comp=Z,12nm,1.5s
CHGR Chuyangaron 57.02 297 P **P 21 36 19.2 -0.1**
CHGR Chuyangaron 57.02 297 P **P 21 36 19.3 -0.1**
CHGR pmax pmax
comp=Z,24nm,0.8s
SVE Sverdlovsk 57.16 320 *e*P **P 21 36 20.3 +0.4**
SVE pmax pmax
comp=Z,22nm,1.1s
ARU Arti 58.37 320 P **P 21 36 28.1 -0.3**
ARU IAmb IAmb 21 36 29.5
comp=Z,21nm,0.9s
ARU Arti 58.37 320 *c i*P **P 21 36 28.3 -0.2**
ARU 21 37 12.4
ARU S **S 21 44 32.5 +2.1**
ARU SS **SS 21 48 15.5 -6.5**
ARU pmax pmax
comp=Z,28nm,1.0s
ASAR Alice Springs 58.49 189 P **P 21 36 30.4 +0.9**
comp=Z,3.1nm,0.7s,baz=9.2,slow=9.2,SNR=4.8
comp=Z,3.1nm,0.7s
KBL Kabul 58.61 293 P **P 21 36 29.8 -0.9**
KBL IAmb IAmb 21 36 31.6
comp=Z,16nm,1.4s
KBL Kabul 58.61 293 P **P 21 36 29.8 -0.9**
KBL pmax pmax
comp=Z,16nm,1.5s
MBWA Marble Bar 59.35 204 P **P 21 36 36.2 +0.7**
MBWA IAmb IAmb 21 36 38.3
comp=Z,13nm,0.7s
C36M Paulatuk 59.45 24 P **P 21 36 36.8 +1.2**
PSA00 Pilbara Seismi 59.69 204 P **P 21 36 38.9 +0.9**
PSA00 IAmb IAmb 21 36 52.2
comp=Z,9.9nm,0.8s
PSA00 Pilbara Seismi 59.69 204 P **P 21 36 38.3 +0.4**
PSA00 IAmb IAmb 21 36 40.7
comp=Z,4.3nm,0.8s
ABKAR Akbulak array 59.74 311 P **P 21 36 37.7 -0.4**
ABKAR IAmb IAmb 21 36 38.4
comp=Z,7.4nm,0.7s
EIDS Eidsvold 60.34 170 P **P 21 36 43.6 +1.3**
EIDS IAmb IAmb 21 36 58.0
comp=Z,6.3nm,0.8s
PALK Pallekele 62.22 259 P **P 21 36 55.6 +0.2**
PALK IAmb IAmb 21 36 56.9
comp=Z,13nm,0.8s
PALK Pallekele 62.22 259 P **P 21 36 55.6 +0.2**
PALK pmax pmax
comp=Z,13nm,0.8s
KIRV Kirov 62.35 324 *ce*P **P 21 36 55.1 -0.5**
EUNU Eureka 62.48 8 P **P 21 36 56.7 +0.4**
SPITS Spitsbergen Ar 62.92 349 P **P 21 36 59.7 +0.5**
comp=Z,6.7nm,0.8s,baz=51,slow=12,SNR=1.4
comp=Z,6.7nm,0.8s
PRGR Permogore 62.95 328 *e*P **P 21 36 58.9 -0.6**

PRGR pmax pmax
comp=Z,14nm,1.0s
HRA Herat 63.80 295 P **P 21 37 06.0 +0.1**
RES Resolute Bay 64.82 14 P **P 21 37 11.8 +0.2**
RES Resolute Bay 64.82 14 P **P 21 37 11.8 +0.2**
RES pmax pmax
comp=Z,75nm,2.0s
GEYT Alibeck 65.30 300 P **P 21 37 15.8 +0.3**
comp=Z,6.9nm,0.9s,baz=348,slow=3.5,SNR=13
comp=Z,6.9nm,0.9s
GYA0B ALIBECK ARRAY 65.30 300 P **P 21 37 15.5 +0.1**
GYA0B IAmb IAmb 21 37 17.0
comp=Z,7.3nm,0.9s
YKA Yellowknife Ar 65.70 30 P **P 21 37 16.6 -0.9**
comp=Z,1.7nm,0.8s,baz=289,slow=6.0,SNR=3.5
comp=Z,1.7nm,0.8s
KLMR Klimovskoe 65.95 328 *e*P **P 21 37 18.1 -1.1**
KLMR pmax pmax
comp=Z,27nm,1.7s
KLMR Klimovskoe 65.95 328 *e*P **P 21 37 18.1 -1.1**
KLMR AMP 21 37 19.9
comp=Z,27nm,1.7s
STKA Stephens Creek 66.18 180 P **P 21 37 21.8 +0.9**
comp=Z,4.5nm,0.7s,baz=16,slow=12,SNR=2.1
comp=Z,4.5nm,0.7s
DAG Danmarks Havn 68.17 355 *i* P **P 21 37 33.0 0.0**
VRH Novokhopyorsk 69.57 319 *e*P **P 21 37 40.0 -2.2**
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 70.20 324 ⇓*i*P **P 21 37 46.5 +0.5**
OBN *i* 21 38 02.1
OBN *e* 21 40 21.2
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,338nm,17.0s
LPSR Galich'ya Gora 70.35 321 *e*P **P 21 37 46.4 -0.5**
LPSR pmax pmax
comp=Z,9.0nm,0.9s
VORR Voronezh 70.69 320 *e*P **P 21 37 49.6 +0.6**
VSR Storozhevoye 70.95 320 *e*P **P 21 37 49.0 -1.6**
VSR pmax pmax
comp=Z,10.0nm,1.1s
FIA1 FINESS Array S 71.07 333 P **P 21 37 51.4 +0.2**
FINES FINESS Array B 71.08 333 P **P 21 37 51.5 +0.3**
comp=Z,4.4nm,0.8s,baz=69,slow=11,SNR=7.3
comp=Z,4.4nm,0.8s
SEKA Sheki 71.26 307 P **P 21 37 53.0 +0.2**
ZKTA Zakatala 71.42 308 P **P 21 37 53.7 0.0**
LKRN Lenkeran, Azer 71.44 305 P **P 21 37 53.9 +0.1**
MNGR Mingechevir, A 71.55 307 P **P 21 37 54.5 +0.1**
GANJ Ganja 72.11 307 P **P 21 37 57.5 -0.4**
ZEI Tsey 72.58 310 *e*P **P 21 37 59.3 -1.5**
ZEI pmax pmax
comp=Z,6.0nm,1.4s
KBZ Khabaz 72.71 311 P **P 21 38 02.0 +0.7**
comp=Z,6.5nm,1.0s,baz=64,slow=3.7,SNR=8.3
comp=Z,6.5nm,1.0s
KBZ Khabaz 72.71 311 *ce*P **P 21 38 01.5 +0.2**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 72.73 312 P **P 21 38 02.0 +0.5**
KIV IAmb IAmb 21 38 04.1
comp=Z,15nm,1.2s
KIV Kislovodsk 72.73 312 *e*P **P 21 38 02.2 +0.6**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,90nm,18.0s
SHA1 Shidzhatmaz 72.86 312 *i* P **P 21 38 02.1 -0.4**
ONI Oni 72.96 310 P **P 21 38 03.2 +0.3**
ONI IAmb IAmb 21 38 05.2
comp=Z,9.1nm,1.1s
ONI Oni 72.96 310 P **P 21 38 03.3 +0.3**
ONI pmax pmax
comp=Z,9.0nm,1.1s
GNI Garni 73.41 307 P **P 21 38 06.3 +0.6**
GNI IAmb IAmb 21 38 28.7
comp=Z,10nm,0.9s
GNI Garni 73.41 307 P **P 21 38 06.3 +0.6**
GNI pmax pmax
comp=Z,10.0nm,1.0s
NAX Nakhchivan 73.42 306 P **P 21 38 05.7 0.0**
RAO Raoul Island 74.06 144 LR LR 22 05 38.2
comp=Z,363nm,21.7s,baz=113,slow=32
MNK Minsk 74.65 326 *i* P **P 21 38 13.3 +0.8**
MNK *i* 21 40 59.9
MNK *i* PPP PPP 21 42 45.5
MNK *i* S **S 21 47 50.0 +2.4**
MNK *i* SS **SS 21 52 38.1 +4.2**
MNK pmax pmax
comp=N,31nm,0.9s
MNK pmax pmax
comp=Z,13nm,0.8s
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK MLR MLR
comp=E,104nm,20.0s
MNK MLR MLR
comp=N,3μm,18.0s
MNK MLR MLR
comp=Z,129nm,15.0s
MNK Minsk 74.65 326 *i* P **P 21 38 13.3 +0.8**
comp=E,2.0nm,1.1s
MNK *i* P **P 21 38 13.3 +0.8**
comp=N,31nm,0.9s
MNK *i* P **P 21 38 13.3 +0.8**
comp=Z,13nm,0.8s,baz=231
MNK *i* PP **PP 21 40 60.0 +1.1**
MNK *i* PPP PPP 21 42 45.5
MNK *i* S **S 21 47 50.0 +2.4**
MNK *i* SS **SS 21 52 38.2 +4.2**
MNK *i* SSS SSS 21 56 00.2
MNK *i* LR LR 22 11 37.5
MNK *i* LRM MLR 22 13 50.7
comp=E,104nm,19.8s
MNK *i* LRM MLR 22 14 18.2
comp=N,3μm,17.9s
MNK *i* LRM MLR 22 14 33.5
comp=Z,129nm,15.3s
LRM Limekiln Ridge 75.61 44 P **P 21 38 20.2 +1.6**
GURO Guroymak-BITLI 76.03 307 P **P 21 38 22.0 +1.0**
GURO IAmb IAmb 21 38 23.3
comp=Z,9.3nm,1.3s
NVAR Mina Array Bea 76.15 53 P **P 21 38 23.9 +2.2**
comp=Z,2.0nm,0.7s,baz=295,slow=6.1,SNR=6.6
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 76.39 323 P **P 21 38 22.4 -0.1**
comp=Z,4.4nm,0.8s,baz=46,slow=5.7,SNR=22
comp=Z,4.4nm,0.8s
AKBB Malin Array Si 76.39 323 P **P 21 38 22.3 -0.2**
AKBB IAmb IAmb 21 38 26.0
comp=Z,6.4nm,0.8s
AKBB Malin Array Si 76.39 323 *ce*P **P 21 38 22.1 -0.4**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
NC204 NORSAR Array S 76.47 338 P **P 21 38 23.5 +0.6**
NB2 NORSAR Subarra 76.51 338 P **P 21 38 23.7 +0.6**
comp=Z,3.1nm,0.8s,baz=40,slow=5.6
NOA NORSAR Array B 76.51 338 P **P 21 38 23.4 +0.3**
comp=Z,4.4nm,0.8s,baz=39,slow=5.7,SNR=17
NOA LR LR 22 15 47.3
comp=Z,173nm,20.1s,baz=50,slow=39
comp=Z,4.4nm,0.8s
MARD Mardin 77.54 307 P **P 21 38 30.3 +0.8**
PDAR Pinedale Array 79.09 45 P **P 21 38 39.8 +1.6**
comp=Z,0.7nm,0.7s,baz=277,slow=1.6,SNR=5.9
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 80.68 312 P **P 21 38 47.4 +0.7**
comp=Z,2.1nm,0.8s,baz=102,slow=3.4,SNR=10
comp=Z,2.1nm,0.8s
SRU San Rafael Swe 80.72 49 P **P 21 38 49.0 +2.0**
SRU IAmb IAmb 21 38 50.8
comp=Z,6.3nm,0.8s
SRU San Rafael Swe 80.72 49 P **P 21 38 49.0 +2.0**
SRU pmax pmax
comp=Z,6.0nm,0.8s
UZH Uzhgorod 81.14 324 *e*P **P 21 38 49.0 +0.3**
UZH *e* 21 38 51.7
UZH *e* 21 38 59.0
MLR Muntele Rosu 81.42 320 LR LR 22 18 26.2
comp=Z,273nm,19.2s,baz=40,slow=38
RAYN Ar Rayn 81.88 293 P **P 21 38 52.9 -0.3**
RAYN IAmb IAmb 21 38 54.7
comp=Z,19nm,1.5s
RAYN Ar Rayn 81.88 293 P **P 21 38 52.9 -0.3**

RAYN pmax pmax
comp=Z,19nm,1.5s
MORC Moravsky Berou 82.53 327 *e*P **P 21 38 57.3 +1.2**
VRAC Vranov 83.30 327 LR LR 22 18 05.4
comp=Z,153nm,20.2s,baz=350,slow=37
CLL Collm 83.33 331 *i* P **P 21 39 00.2 +0.1**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 83.33 331 *i* P **P 21 39 00.2 +0.1**
comp=Z,7.0nm,0.9s
MMAI Mount Meron Ar 83.62 306 P **P 21 39 02.7 +0.6**
comp=Z,5.1nm,0.9s,baz=30,slow=6.8,SNR=10
MMAI LR LR 22 20 54.9
comp=Z,72nm,18.1s,baz=190,slow=39
comp=Z,5.1nm,0.9s
RONA Rosalia, Austr 84.62 326 *e*P **P 21 39 08.2 +1.3**
comp=Z,8.5nm,0.9s
CONA Conrad Observa 84.65 327 *e*P **P 21 39 08.0 +0.9**
comp=Z,10nm,1.7s
CKRC Cesky Krumlov 84.67 328 *e*P **P 21 39 07.2 +0.1**
KHC Kasperske Hory 84.75 329 P **P 21 39 08.0 +0.5**
KHC Kasperske Hory 84.75 329 P **P 21 39 08.0 +0.5**
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 84.75 329 *e*P **P 21 39 07.6 +0.1**
VTS Vitosha 84.80 319 P **P 21 39 08.6 +0.6**
VTS IAmb IAmb 21 39 10.1
comp=Z,4.9nm,0.9s
VTS Vitosha 84.80 319 P **P 21 39 08.6 +0.6**
VTS pmax pmax
comp=Z,5.0nm,0.9s
GERES GERESS Array B 84.91 329 P **P 21 39 08.3 -0.1**
comp=Z,1.6nm,0.8s,baz=28,slow=6.0,SNR=9.8
GERES LR LR 22 20 31.6
comp=Z,160nm,18.4s,baz=6.5,slow=38
comp=Z,1.6nm,0.8s
ARSA Arzberg 85.30 327 *e*P **P 21 39 09.8 -0.5**
comp=Z,2.9nm,0.9s
MOA Molln 85.42 328 *e*P **P 21 39 12.6 +1.8**
comp=Z,8.9nm,1.9s
BIOA Bad Ischl, Aus 85.81 328 *e*P **P 21 39 13.4 +0.6**
comp=Z,2.2nm,0.6s
SOKA Soboth 85.95 326 *e*P **P 21 39 12.7 -0.9**
comp=Z,9.5nm,1.2s
WTTA Wattenberg 87.01 329 *e*P P 21 39 12.4 -6.6
comp=Z,10nm,1.7s
SCHQ Schefferville 87.53 16 P **P 21 39 21.0 -0.1**
comp=Z,4.1nm,0.9s,baz=315,slow=7.1,SNR=1.8
comp=Z,4.1nm,0.9s
TXAR Lajitas Array 91.30 53 P **P 21 39 40.9 +1.5**
comp=Z,0.8nm,0.6s,baz=297,slow=3.1,SNR=13
TXAR LR LR 22 17 39.6
comp=Z,80nm,18.5s,baz=1.5,slow=34
comp=Z,0.8nm,0.6s
ESDC Sonseca Array 99.57 334 LR LR 22 28 51.4
comp=Z,125nm,19.3s,baz=5.0,slow=38
TORD Torodi Ar. Bea 119.24 314 PKP **PKPdf 21 45 22.1 -1.1**
comp=Z,0.5nm,0.8s,baz=16,slow=3.3,SNR=2.6
LPAZ La Paz 147.53 63 PKPbc **PKPab 21 46 20.3 -0.6**
comp=Z,1.8nm,0.6s,baz=22,slow=3.6,SNR=6.1

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*IDC **05** 22:01:54.3±1.8, 37°.97N×49°.42E, h0km, mb3.4/2, mbtmp3.4/5, ML1.8/2, Error ellipse: s-maj=38.8km s-min=15.9km az=17.0*
*TEH **05** 22:01:56.9, 38°.34N×49°.39E, h20km, ML3.6*
*AZER **05** 22:01:58.0±0.1, 38°.44N×49°.29E, h23km, Error ellipse: s-maj=3.1km s-min=2.4km az=356.0*
ISC 05 22:01:56.6±1.3, 38°.38N±0°.03×49°.38E±0°.03, h12km±9km, n82, σ1§19/114, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAS1	**Astara - Iran**	**0.42**	**271**	*e*Sg	**Sb**	**22 02 13.3**	**+0.8**
GAS1				*e*Pg	**Pb**	**22 02 06.5**	**+0.4**
GAS1				*e*		22 02 14.1	
comp=Z,36μm,0.3s							
ASTR	**Astara**	**0.50**	**291**	*e*Pg	**Pb**	**22 02 08.3**	**+1.0**
ASTR	**Astara**	**0.50**	**291**	P	**Pb**	**22 02 08.3**	**+1.0**
SNR=547							
ASTR				S	**Sb**	**22 02 15.9**	**+1.3**
LKRN	**Lenkeran, Azer**	**0.58**	**305**	*e*Pg	**Pb**	**22 02 09.6**	**+0.9**
LKRN	**Lenkeran, Azer**	**0.58**	**305**	P	**Pb**	**22 02 09.7**	**+0.9**
SNR=33							
LKRN				S	**Sb**	**22 02 17.9**	**+1.1**
CSN1	**Caspian**	**0.85**	**196**	*e*Pg	**Pg**	**22 02 12.8**	**-0.2**
LRK	**Lerik**	**0.86**	**288**	*e*Pg	**Pg**	**22 02 13.5**	**+0.3**
LRK	**Lerik**	**0.86**	**288**	P	**Pg**	**22 02 13.5**	**+0.3**
SNR=848							
LRK				S	**Sg**	**22 02 24.9**	**+0.5**
YRD	**Yardimli**	**1.04**	**301**	P	**Pg**	**22 02 16.2**	**-0.5**
SNR=353							
YRD				S	**Sg**	**22 02 29.5**	**-0.8**
GLBA	**Cliilabad**	**1.16**	**318**	*e*Pg	**Pb**	**22 02 18.3**	**-0.3**
GLBA	**Cliilabad**	**1.16**	**318**	P	**Pb**	**22 02 18.3**	**-0.3**
SNR=44							
GLBA				S	**Sb**	**22 02 33.2**	**-0.3**
GRMI	**Germi**	**1.24**	**291**	*e*		22 02 37.4	
comp=N,99nm,0.2s							
LHJ2	**Lahijan - Gila**	**1.33**	**156**	*e*Pg	**Pn**	**22 02 19.6**	**-1.4**
LHJ2				*e*		22 02 36.5	
comp=Z,19μm,0.2s							
ISRB	**Sarab**	**1.46**	**248**	*e*Pg	**Pn**	**22 02 22.6**	**-0.5**
ISRB				*e*		22 02 46.9	
comp=Z,6μm,0.4s							
ALIB	**Äli-Bayra**	**1.60**	**350**	P	**Pg**	**22 02 27.0**	**-0.4**
ALIB				S	**Sn**	**22 02 42.9**	**-2.5**
SAAT	**Saatly**	**1.66**	**334**	*e*Pn	**Pb**	**22 02 26.8**	**-0.3**
SAAT	**Saatly**	**1.66**	**334**	Pn	**Pb**	**22 02 26.9**	**-0.3**
SAAT				Sn	**Sb**	**22 02 48.7**	**+0.8**
IHRS	**Heris**	**1.84**	**269**	*e*Pn	**Pn**	**22 02 28.3**	**0.0**
IHRS				*e*		22 02 29.5	
comp=Z,5μm,0.2s							
QSDN	**Sirdan**	**1.88**	**185**	*e*Pn	**Pn**	**22 02 28.1**	**-0.8**
QSDN				*e*		22 03 02.3	
comp=Z,3μm,0.3s							
QRD	**Qoradiz**	**1.94**	**305**	Pn	**Pn**	**22 02 29.2**	**-0.2**
SNR=9.9							
QRD				Sn	**Sn**	**22 02 52.4**	**-1.4**
BLQ	**Beylaqan**	**1.95**	**314**	Pn	**Pn**	**22 02 29.8**	**+0.2**
SNR=15							
BLQ				Sn	**Sn**	**22 02 53.1**	**-0.9**
IHSH	**Hashtrud**	**1.99**	**238**	*e*Pn	**Pn**	**22 02 29.9**	**-0.6**
IHSH				*e*		22 03 02.8	
comp=Z,5μm,0.2s							
IBST	**Bostanabad**	**2.08**	**252**	*e*Pn	**Pn**	**22 02 31.2**	**-0.4**
IBST				*e*		22 02 41.2	
comp=Z,2μm,0.4s							
IGZV	**Ghazvin**	**2.10**	**161**	*e*Pn	**Pn**	**22 02 31.3**	**-0.6**
IGZV				*e*		22 02 59.6	
comp=Z,2μm,0.3s							
TVRZ	**Varzaqan**	**2.13**	**274**	*e*Pn	**Pn**	**22 02 32.9**	**+0.6**
TVRZ				*e*		22 02 34.8	
comp=Z,4μm,0.3s							
GBS	**Qobustan**	**2.18**	**351**	Pg	**Pb**	**22 02 36.0**	**-0.1**
GBS				Sn	**Sn**	**22 02 59.5**	**-0.3**
KDMR	**Kurdemir**	**2.20**	**335**	Sn	**Sn**	**22 03 00.6**	**+0.4**
NDR	**Nardaran**	**2.25**	**12**	Pg	**Pb**	**22 02 36.9**	**-0.3**
NDR				Sn	**Sn**	**22 03 01.8**	**+0.4**
ZRD	**Zardab**	**2.31**	**326**	Pn	**Pn**	**22 02 35.3**	**+0.8**
SNR=6.1							
ZRD				Sn	**Sn**	**22 03 03.1**	**+0.2**
AGDM	**Agdam**	**2.47**	**315**	Pn	**Pn**	**22 02 36.8**	**+0.1**
SNR=6.8							
AGDM				Sn	**Sn**	**22 03 06.3**	**-0.6**
PQL	**Pirkuli**	**2.48**	**346**	Pn	**Pn**	**22 02 37.7**	**-0.6**
PQL				Sn	**Sn**	**22 03 08.6**	**+1.2**
ATGJ	**Altiaghaj**	**2.50**	**352**	Pn	**Pn**	**22 02 37.6**	**+0.3**
ATGJ				Sn	**Sn**	**22 03 08.3**	**+0.5**
BRDA	**Brd**	**2.54**	**318**	Pn	**Pn**	**22 02 39.0**	**+1.3**
BRDA				Sn	**Sn**	**22 03 09.1**	**+0.5**
ITBZ	**Tabriz**	**2.55**	**268**	*e*Pn	**Pn**	**22 02 37.9**	**-0.1**
ITBZ				*e*		22 02 54.8	
comp=Z,1μm,0.3s							
IML	**Ismayilli**	**2.58**	**339**	Pn	**Pn**	**22 02 38.7**	**+0.3**
IML				Sn	**Sn**	**22 03 09.3**	**-0.4**
ORD	**Ordubad**	**2.71**	**283**	Pn	**Pn**	**22 02 41.0**	**+0.9**
SNR=26							
ORD				Sn	**Sn**	**22 03 14.1**	**+1.2**
SIZA	**Siyzn**	**2.72**	**352**	Pn	**Pn**	**22 02 41.3**	**+1.1**
SNR=6.5							
SIZA				Sn	**Sn**	**22 03 13.4**	**+0.2**
IAZR	**Azarshahr**	**2.78**	**256**	*e*Pn	**Pn**	**22 02 42.1**	**+0.9**
IAZR				*e*		22 03 00.0	
comp=Z,3μm,0.5s							
QBL	**Gabala**	**2.83**	**336**	Pn	**Pn**	**22 02 42.2**	**+0.5**
SNR=6.5							
QBL				Sn	**Sn**	**22 03 14.8**	**-1.0**
IMHD	**Mahdasht**	**2.88**	**159**	*e*Pn	**Pn**	**22 02 43.4**	**+0.9**
IMHD				*e*		22 03 21.1	
comp=E,2μm,0.2s							
IMRD	**Marand**	**2.90**	**278**	*e*Pn	**Pn**	**22 02 44.0**	**+1.1**
IMRD				*e*		22 02 53.6	
comp=Z,3μm,0.4s							
XNQ	**Khinaliq**	**2.95**	**341**	Pn	**Pn**	**22 02 43.8**	**+0.2**
XNQ				Sn	**Sn**	**22 03 20.4**	**+1.4**
ISHB	**Shabestar**	**2.96**	**269**	*e*Pn	**Pn**	**22 02 43.9**	**+0.2**
ISHB				*e*		22 02 54.4	
comp=Z,975nm,0.4s							
MNGR	**Mingechevir, A**	**2.98**	**324**	Sn	**Sn**	**22 03 20.5**	**+1.2**
IRAZ	**Razeghan**	**3.00**	**171**	*e*Pn	**Pn**	**22 02 44.0**	**-0.3**
QUBA	**Quba, Azerbaij**	**3.05**	**347**	Pn	**Pn**	**22 02 45.8**	**+1.1**
QUBA				Sn	**Sn**	**22 03 21.7**	**+0.5**
NAX	**Nakhchivan**	**3.14**	**286**	Pn	**Pn**	**22 02 47.1**	**+1.1**
SNR=8.4							
NAX				Sn	**Sn**	**22 03 25.1**	**+1.6**
SBZ	**Shahbuz**	**3.15**	**290**	Pn	**Pn**	**22 02 47.0**	**+0.7**
SNR=12							
SBZ				Sn	**Sn**	**22 03 25.2**	**+1.2**
IPRN	**Peran**	**3.18**	**131**	*e*Pn	**Pn**	**22 02 46.4**	**-0.2**
QSAR	**Qusar**	**3.25**	**345**	Pn	**Pn**	**22 02 48.5**	**+1.1**
SNR=5.0							
QSAR				Sn	**Sn**	**22 03 25.8**	**-0.4**
GANJ	**Ganja**	**3.27**	**315**	Pn	**Pn**	**22 02 47.9**	**0.0**
GANJ				Sn	**Sn**	**22 03 24.7**	**-2.1**
SEKA	**Sheki**	**3.29**	**330**	Pn	**Pn**	**22 02 48.4**	**+0.4**
SEKA				Sn	**Sn**	**22 03 26.1**	**-1.1**
IDMV	**Damavand**	**3.51**	**142**	*e*Pn	**Pn**	**22 02 52.5**	**+1.2**
HAGD	**Aghdareh**	**3.56**	**183**	*e*Pn	**Pn**	**22 02 52.1**	**+0.2**
GDB	**GEDABAY**	**3.65**	**311**	Pn	**Pn**	**22 02 53.9**	**+0.7**
SNR=7.7							
GDB				Sn	**Sn**	**22 03 35.9**	**-0.3**
HYR	**Heyderabad**	**3.77**	**292**	Pn	**Pn**	**22 02 56.1**	**+1.4**
HYR				Sg	**Sb**	**22 03 53.6**	**+4.7**
MAKU	**Maku**	**3.79**	**286**	*e*Pn	**Pn**	**22 02 56.3**	**+1.2**
IFIR	**Firoozkooh**	**3.84**	**134**	*e*Pn	**Pn**	**22 02 56.7**	**+0.8**
IVRN	**Varamin**	**3.87**	**150**	*e*Pn	**Pn**	**22 02 57.7**	**+1.6**
ZKTA	**Zakatala**	**3.88**	**328**	Pn	**Pn**	**22 02 57.2**	**+1.0**
ZKTA				Sn	**Sn**	**22 03 40.9**	**-0.8**
IGLO	**Ghaloghah**	**4.01**	**117**	*e*Pn	**Pn**	**22 02 58.8**	**+0.7**
GNI	**Garni**	**4.01**	**298**	Pn	**Pb**	**22 03 03.0**	**-4.4**
comp=Z,0.9nm,0.3s,baz=146,slow=11,SNR=6.0							
GNI				Sn	**Sb**	**22 03 55.0**	**-0.9**
comp=Z,0.6nm,0.3s,baz=27,slow=20,SNR=1.3							
comp=Z,5.4nm,0.5s							
ISHM	**Shahmirzad**	**4.05**	**128**	*e*Pn	**Pn**	**22 02 59.6**	**+0.9**
ISHM				*e*		22 03 50.1	
comp=Z,861nm,0.2s							
QZX	**Qazax, Azerbai**	**4.09**	**312**	Pn	**Pn**	**22 02 59.2**	**+0.2**
QZX				Sn	**Sn**	**22 03 46.6**	**-0.3**
HSAM	**Samen**	**4.21**	**189**	*e*Pn	**Pn**	**22 03 01.8**	**+0.9**
IDHR	**Dehrash**	**4.39**	**214**	*e*Pn	**Pn**	**22 03 04.7**	**+1.3**
ISFB	**Sefidab**	**4.63**	**149**	*e*Pn	**Pn**	**22 03 07.7**	**+1.1**
IGHG	**Ghaleghazi**	**4.64**	**210**	*e*Pn	**Pn**	**22 03 07.6**	**+0.8**
IANJ	**Anjilo**	**4.65**	**127**	*e*Pn	**Pn**	**22 03 08.5**	**+1.5**
IDOB	**Doab**	**4.69**	**192**	*e*Pn	**Pn**	**22 03 08.2**	**+0.8**
MRVT	**Maraveh tapeh**	**5.34**	**96**	*e*Pn	**Pn**	**22 03 16.2**	**-0.1**
MRVT				*e*		22 03 20.5	
comp=Z,99nm,0.3s							
ANAR	**Anarak**	**6.27**	**144**	*e*Pn	**Pn**	**22 03 30.8**	**+1.7**
SBZV	**Sabzevar**	**6.85**	**104**	*e*Pn	**Pn**	**22 03 38.3**	**+1.2**
GEYT	**Alibeck**	**6.90**	**91**	Pn	**Pn**	**22 03 37.5**	**-0.1**
comp=Z,5.5nm,0.4s,baz=278,slow=18,SNR=17							
GEYT				Sn	**Sn**	**22 04 51.1**	**-5.0**
comp=Z,1.8nm,0.3s,baz=248,slow=20,SNR=6.0							
ISFR	**Sfrayin**	**6.96**	**98**	*e*Pn	**Pn**	**22 03 40.1**	**+1.4**
KBZ	**Khabaz**	**7.25**	**320**	Pn	Pn	22 03 47.9	+5.5
comp=Z,0.1nm,0.3s,baz=141,slow=19,SNR=2.4							
comp=Z,0.5nm,0.6s							
IAKL	**Akhelmad**	**7.66**	**101**	*e*Pn	**Pn**	**22 03 49.0**	**+0.6**
IKRD	**Kardeh**	**8.20**	**98**	*e*Pn	**Pn**	**22 03 56.5**	**+0.7**
AFRZ	**Afriz**	**9.24**	**119**	*e*Pn	**Pn**	**22 04 11.3**	**+1.3**
TBJM	**Torbat-e-JAM**	**9.31**	**106**	*e*Pn	**Pn**	**22 04 12.4**	**+1.5**
MKAR	**Makanchi Array**	**25.50**	**60**	P	**P**	**22 07 25.9**	**+1.1**
comp=Z,1.3nm,0.8s,baz=252,slow=9.1,SNR=9.1							
comp=Z,1.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**49.07**	**252**	P	**P**	**22 10 42.1**	**-1.8**
comp=Z,0.2nm,0.8s,baz=60,slow=8.5,SNR=1.8							
comp=Z,0.2nm,0.8s							

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*IDC **05** 22:11:37.0±2.0, 21°.22S×169°.97E, h122km±16km, mb4.0/7, mbtmp4.3/10, MS3.7/1, Error ellipse: s-maj=22.3km s-min=16.5km az=174.0*
*NEIC **05** 22:11:36.1±1.3, 21°.23S±0°.09×170°.1E±0°.1, h111km±5km, mb4.6/27, Error ellipse: s-maj=13.9km s-min=13.1km az=96.0*
*NOU **05** 22:11:38.3, 21°.10S×169°.85E, h121km, mb4.7/32, Southeast of Loyalty Islands*
ISC 05 22:11:36.5±0.4, 21°.16S±0°.06×170°.01E±0°.06, h122km, n115, σ1§00/121, mb4.5/20, 1C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.87**	**260**		**Pn**	**22 12 07.7**	**-0.7**
MARNC				Sn	**Sn**	**22 12 32.1**	**-0.7**
MARNC	**Mare, Loyalty**	**1.87**	**260**	P	**Pn**	**22 12 07.9**	**-0.5**
LIFNC	**LIFOU**	**2.61**	**278**		**Pn**	**22 12 17.2**	**-0.6**
LIFNC				Sn	**Sn**	**22 12 48.1**	**-1.5**
LIFNC	**LIFOU**	**2.61**	**278**	P	**Pn**	**22 12 17.4**	**-0.4**
PINNC	**Pines Island,**	**2.78**	**238**		**Pn**	**22 12 19.8**	**-0.3**
PINNC	**Pines Island,**	**2.78**	**238**	P	**Pn**	**22 12 19.9**	**-0.1**
YATNC	**Mamie plateau,**	**3.04**	**252**	P	**Pn**	**22 12 22.9**	**-0.4**
OUENC	**Ouen Island, N**	**3.20**	**246**		**Pn**	**22 12 25.6**	**+0.1**
OUENC	**Ouen Island, N**	**3.20**	**246**	P	**Pn**	**22 12 25.8**	**+0.4**
DZM	**Mont Dzumac**	**3.44**	**254**	P	**Pn**	**22 12 29.2**	**+0.5**
44nm,0.3s,baz=122,slow=7.8,SNR=171							
DZM				S	**Sn**	**22 13 07.5**	**-1.5**
346nm,0.5s,baz=186,slow=21,SNR=4.9							
DZM	**Mont Dzumac**	**3.44**	**254**		**Pn**	**22 12 29.1**	**+0.3**
DZM	**Mont Dzumac**	**3.44**	**254**	P	**Pn**	**22 12 29.4**	**+0.7**
NOUC	**Port Laguerre**	**3.57**	**254**	P	**Pn**	**22 12 31.2**	**+0.8**
RTV	**Rentapao**	**3.67**	**336**	P	**Pn**	**22 12 32.3**	**+0.6**
DVP	**Devils Point**	**3.82**	**333**	P	**Pn**	**22 12 33.8**	**0.0**
KOUNC	**Koumac, New Ca**	**5.38**	**275**	P	**Pn**	**22 12 56.4**	**+1.7**
NFK	**Norfolk Island**	**8.07**	**193**	P	**Pn**	**22 13 31.7**	**+0.8**
MSVF	**Nonsavu**	**8.32**	**67**	P	**Pn**	**22 13 36.3**	**+2.0**
5.1nm,0.7s,baz=238,slow=13,SNR=4.6							
FUTU	**Fugatoga**	**13.20**	**61**	P	**Pn**	**22 14 42.6**	**+3.3**
OUZ	**Omahuta**	**14.36**	**168**	P	**P**	**22 14 58.5**	**+1.0**
EIDS	**Eidsvold**	**17.88**	**253**	P	**Pn**	**22 15 38.8**	**+1.2**
URZ	**Urewera**	**18.11**	**162**	P	**Pn**	**22 15 40.2**	**0.0**
6.1nm,0.5s,baz=344,slow=7.4,SNR=0.9							
URZ				LR	LR	22 20 56.4	
comp=Z,235nm,18.7s,baz=158,slow=31							
ARMA	**Armidale**	**18.92**	**237**	P	**Pn**	**22 15 50.8**	**+0.8**
ARMA				IAmb	IAmb	22 16 11.8	
comp=Z,20nm,1.3s							
TUWZ	**Tuamarina**	**20.48**	**172**	P	**P**	**22 16 04.5**	**-0.1**
KHZ	**Kahutara**	**21.40**	**173**	P	**P**	**22 16 16.7**	**+2.3**
CTA	**Charters Tower**	**22.25**	**268**	P	**P**	**22 16 24.9**	**+1.2**
comp=Z,1.9nm,0.3s,baz=80,slow=10,SNR=2.7							
comp=Z,1.9nm,0.3s							
CTAO	**Charters Tower**	**22.25**	**268**	P	**P**	**22 16 24.3**	**+0.6**
CTAO				IAmb	IAmb	22 16 31.5	
comp=Z,33nm,1.5s							
CNB	**Canberra Magne**	**22.95**	**228**	P	**P**	**22 16 32.3**	**+1.9**
LBZ	**Lake Benmore**	**23.16**	**180**	P	**P**	**22 16 30.9**	**-1.3**
LBZ				IAmb	IAmb	22 16 41.0	
comp=Z,42nm,1.4s							
CAN	**Canberra**	**23.21**	**228**	P	**P**	**22 16 34.1**	**+1.3**
CAN				IAmb	IAmb	22 16 42.6	
comp=Z,33nm,1.4s							
CMSA	**Cobar Meteorol**	**24.07**	**240**	P	**P**	**22 16 42.0**	**+1.4**
COEN	**Coen**	**26.54**	**281**	P	**P**	**22 17 03.6**	**+0.5**
STKA	**Stephens Creek**	**27.50**	**241**	P	**P**	**22 17 12.8**	**+1.2**
comp=Z,6.0nm,0.7s,baz=89,slow=12,SNR=13							
STKA				PcP	**PcP**	**22 20 26.9**	**+0.1**
comp=Z,1.3nm,0.5s,baz=65,slow=9.6,SNR=3.6							
comp=Z,6.0nm,0.7s							
STKA	**Stephens Creek**	**27.50**	**241**	P	**P**	**22 17 12.8**	**+1.2**
LCRK	**Leigh Creek**	**30.00**	**246**	P	**P**	**22 17 34.1**	**+0.4**
OOD	**Oodnadatta**	**31.85**	**251**	P	**P**	**22 17 51.7**	**+1.6**
BBOO	**Buckleboo**	**32.27**	**242**	P	**P**	**22 17 54.3**	**+0.7**
BBOO				IAmb	IAmb	22 17 59.0	
comp=Z,15nm,1.1s							
BBOO	**Buckleboo**	**32.27**	**242**	P	**P**	**22 17 54.3**	**+0.7**
WR0	**Warramunga Arr**	**33.19**	**266**	P	**P**	**22 18 01.6**	**-0.2**
WR0				IAmb	IAmb	22 18 09.2	
comp=Z,13nm,1.4s							
WRAB	**Tennant Creek**	**33.37**	**266**	P	**P**	**22 18 03.1**	**-0.3**
AS01	**Alice Springs**	**33.37**	**259**	P	**P**	**22 18 03.8**	**+0.4**
WRA	**Warramunga Arr**	**33.38**	**266**	P	**P**	**22 18 02.9**	**-0.6**
comp=Z,2.1nm,0.4s,baz=98,slow=8.1,SNR=61							
WRA				pP	**pP**	**22 18 30.7**	**+1.8**
comp=Z,1.2nm,0.6s,baz=97,slow=8.7,SNR=3.6							
WRA				PcP	**PcP**	**22 20 42.2**	**-0.3**
comp=Z,0.7nm,0.8s,baz=97,slow=2.8,SNR=4.8							
comp=Z,2.1nm,0.4s							
WRA	**Warramunga Arr**	**33.38**	**266**	P	**P**	**22 18 02.9**	**-0.6**
AS31	**Alice Springs**	**33.41**	**259**	P	**P**	**22 18 03.5**	**-0.3**
AS31				IAmb	IAmb	22 18 05.2	
comp=Z,2.0nm,0.6s							
ASAR	**Alice Springs**	**33.41**	**259**	P	**P**	**22 18 04.0**	**+0.2**
comp=Z,5.5nm,0.8s,baz=83,slow=9.0,SNR=36							
ASAR				pP	**pP**	**22 18 32.1**	**+2.9**
comp=Z,3.2nm,0.7s,baz=80,slow=9.1,SNR=7.7							
ASAR				PcP	**PcP**	**22 20 42.3**	**-0.3**
comp=Z,1.4nm,0.7s,baz=93,slow=2.9,SNR=9.1							
comp=Z,5.5nm,0.8s							
ASAR	**Alice Springs**	**33.41**	**259**	P	**P**	**22 18 03.7**	**-0.1**
MULG	**Mulgathing**	**33.52**	**247**	P	**P**	**22 18 05.3**	**+0.7**
MTN	**Manton Dam**	**38.00**	**276**	P	**P**	**22 18 43.1**	**+0.1**
MTN	**Manton Dam**	**38.00**	**276**	P	**P**	**22 18 43.4**	**+0.4**
WRKA	**Warakurna**	**38.45**	**256**	P	**P**	**22 18 47.3**	**+0.5**
KNRA	**Kununurra**	**39.43**	**271**	P	**P**	**22 18 54.3**	**-0.6**
FAKI	**Fak Fak**	**40.96**	**291**	P	**P**	**22 19 07.1**	**-0.5**
FAKI				IAmb	IAmb	22 19 27.0	
comp=Z,14nm,1.2s							
FITZ	**Fitzroy Crossi**	**41.80**	**266**	P	**P**	**22 19 15.1**	**+0.7**
FITZ				IAmb	IAmb	22 19 16.2	
comp=Z,8.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**41.80**	**266**	P	**P**	**22 19 15.2**	**+0.8**
PSA00	**Pilbara Seismi**	**46.55**	**260**	P	**P**	**22 19 52.2**	**0.0**
PSA00				IAmb	IAmb	22 20 11.4	
comp=Z,16nm,1.4s							
MBWA	**Marble Bar**	**46.72**	**260**	P	**P**	**22 19 53.7**	**+0.2**
MBWA				IAmb	IAmb	22 19 54.4	
comp=Z,5.2nm,0.7s							
MBWA	**Marble Bar**	**46.72**	**260**	P	**P**	**22 19 54.1**	**+0.6**
MEEK	**Meekatharra**	**47.05**	**253**	P	**P**	**22 19 56.0**	**-0.1**
KLBR	**Kellerberrin**	**47.57**	**246**	P	**P**	**22 19 59.9**	**-0.1**
NWAO	**Narrogin (SRO)**	**48.01**	**244**	P	**P**	**22 20 03.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**48.01**	**244**	P	**P**	**22 20 03.5**	**+0.1**
MORW	**Morawa**	**49.15**	**249**	P	**P**	**22 20 11.9**	**-0.2**
MORW				IAmb	IAmb	22 20 41.0	
comp=Z,15nm,1.3s							
TOLI2	**Tolitoli**	**52.95**	**288**	P	**P**	**22 20 41.0**	**+0.3**
VNDA	**Vanda**	**56.55**	**182**	P	**P**	**22 21 04.8**	**-1.0**
comp=Z,0.7nm,0.5s,baz=358,slow=6.5,SNR=7.5							
comp=Z,0.7nm,0.5s							
VNDA	**Vanda**	**56.55**	**182**	P	**P**	**22 21 05.0**	**-0.8**
SBA	**Scott Base**	**56.76**	**181**	P	**P**	**22 21 07.5**	**+0.3**
QSPA	**South Pole Qui**	**68.91**	**180**	P	**P**	**22 22 27.2**	**-0.9**
QSPA				IAmb	IAmb	22 22 28.4	
comp=Z,11nm,1.0s							
IPM	**Ipoh**	**72.19**	**282**	P	**P**	**22 22 48.5**	**-0.2**
IPM				IAmb	IAmb	22 23 09.0	
comp=Z,20nm,1.3s							
MAW	**Mawson**	**76.94**	**202**	P	**P**	**22 23 15.8**	**+0.7**
comp=Z,5.2nm,0.8s,baz=123,slow=7.8,SNR=12							
comp=Z,5.2nm,0.8s							
MAW	**Mawson**	**76.94**	**202**	P	**P**	**22 23 15.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**79.35**	**294**	P	**P**	**22 23 34.4**	**+1.8**
comp=Z,1.3nm,0.4s,baz=131,slow=3.5,SNR=8.8							
comp=Z,1.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**79.95**	**294**	P	**P**	**22 23 32.9**	**+0.3**
BELA	**Belgrano 2**	**80.13**	**175**	P	**P**	**22 23 30.9**	**-1.7**
PZH	**PanZhiHua**	**81.35**	**303**	P	**P**	**22 23 40.5**	**+0.5**
HHC	**Hu-ho-hao-te**	**82.14**	**319**	*e*P	**P**	**22 23 43.5**	**-0.3**
LZH	**Lanzhou**	**84.54**	**312**	⇑P	P	22 23 50.5	-5.8
LZH				sP	pwP	22 24 33.4	+4.1
TROLL	**Troll, Antarti**	**86.68**	**184**	P	**P**	**22 24 05.1**	**-1.2**
SNAA	**Sanae**	**87.28**	**182**	P	**P**	**22 24 07.6**	**-1.6**
SNAA	**Sanae**	**87.28**	**182**	P	**P**	**22 24 07.6**	**-1.6**
SNAA				IAmb	IAmb	22 24 08.5	
comp=Z,4.1nm,0.7s							
VNA3	**Neumayer Olymp**	**87.84**	**180**	P	**P**	**22 24 10.2**	**-1.6**
VNA2	**Neumayer--Watz**

FUL					A	A	22 27 55.5	
	33nm,0.3s							
PMOZ	**Porto Moniz, M**	**2.73**	**226**	*e*P		**Pn**	**22 27 26.1**	**+1.7**
PMOZ				*e*S		**Sn**	**22 27 54.6**	**-2.9**
PMOZ				A		A	22 28 02.4	
	50nm,0.4s							
PMOZ	**Porto Moniz, M**	**2.73**	**226**	P		**Pn**	**22 27 26.1**	**+1.7**
PMOZ				S		**Sn**	**22 27 58.2**	**+0.7**
PFVI	**Vila Bisbo**	**5.45**	**62**	*e*P		**Pn**	**22 28 01.1**	**-0.6**
PFVI				*e*S		Sn	22 28 54.3	-10
PFVI				A		A	22 28 57.0	
	7.9nm,0.2s							
PFVI	**Vila Bisbo**	**5.45**	**62**	P		**Pn**	**22 28 02.3**	**+0.6**
PFVI				S		**Sn**	**22 29 05.9**	**+1.4**
MORF	**Marmelete**	**5.65**	**61**	*e*P		**Pn**	**22 28 03.9**	**-0.6**
MORF				*e*S		Sn	22 28 59.6	-10
MORF				A		A	22 29 04.2	
	7.1nm,0.4s							
PTEO	**Sao Teotonio**	**5.70**	**59**	*e*P		**Pn**	**22 28 06.6**	**+1.4**
PTEO				*e*S		Sn	22 29 01.1	-10
PTEO				A		A	22 29 08.1	
	6.8nm,0.9s							
PMST	**Lisbon--Monsan**	**6.06**	**47**	*e*S		Sn	22 29 09.9	-10
PMST				A		A	22 29 11.4	
	12nm,0.8s							
PNCL	**Nicolau / Gran**	**6.12**	**55**	*e*P		**Pn**	**22 28 10.6**	**-0.3**
PNCL				*e*S		Sn	22 29 10.2	-11
PNCL				A		A	22 29 15.4	
	3.4nm,0.2s							
PMAFR	**Mafra**	**6.14**	**45**	*e*S		Sn	22 29 10.1	-11
PMAFR				A		A	22 29 11.1	
	12nm,0.2s							
MESJ	**Messejana**	**6.19**	**58**	*e*S		Sn	22 29 13.3	-10
MESJ				A		A	22 29 26.0	
	2.9nm,0.4s							
PCVE	**Castro Verde**	**6.23**	**61**	*e*S		Sn	22 29 13.9	-10
PCVE				A		A	22 29 21.9	
	3.3nm,0.6s							
SRHM	**Skhour des Reh**	**6.25**	**109**	P		**Pn**	**22 28 14.3**	**+1.5**
SRHM				S		**Sn**	**22 29 24.1**	**-0.2**
PACT	**Alcochete**	**6.29**	**49**	*e*S		Sn	22 29 15.2	-10
AVE	**Averroes**	**6.36**	**101**	P		**Pn**	**22 28 13.7**	**-0.6**
AVE				S		**Sn**	**22 29 26.5**	**-0.5**
PVAQ	**Vaqueiros**	**6.37**	**63**	*e*P		**Pn**	**22 28 14.5**	**+0.1**
PVAQ				*e*S		Sn	22 29 16.9	-10
PVAQ				A		A	22 29 21.5	
	5.5nm,0.2s							
PVAQ	**Vaqueiros**	**6.37**	**63**	P		**Pn**	**22 28 14.7**	**+0.4**
PVAQ				S		**Sn**	**22 29 30.3**	**+3.2**
PBEJ	**Beja**	**6.53**	**58**	*e*S		Sn	22 29 21.8	-9.3
PBEJ				A		A	22 29 25.1	
	2.4nm,0.2s							
EGRO	**El Granado**	**6.59**	**63**	⇑*i*Vmb_V			22 28 16.4	
	99nm,SNR=0.8							
EGRO				Sn		Sn	22 29 21.0	-12
EVO	**Evora**	**6.68**	**54**	*e*S		Sn	22 29 23.6	-11
EVO				A		A	22 29 24.4	
	3.5nm,0.1s							
PSBE	**So Bento**	**6.79**	**44**	*e*S		Sn	22 29 27.8	-10
PSBE				A		A	22 29 34.6	
	5.0nm,0.6s							
PMTG	**Montargil**	**6.85**	**49**	*e*S		Sn	22 29 26.6	-12
PMTG				A		A	22 29 31.3	
	1.8nm,0.4s							
TTIG	**Tnine Tigouga,**	**6.85**	**126**	P		**Pn**	**22 28 20.9**	**-0.2**
TTIG				S		**Sn**	**22 29 37.2**	**-2.1**
OUK	**Oukaimeden**	**6.87**	**119**	P		**Pn**	**22 28 24.0**	**+2.5**
OUK				S		**Sn**	**22 29 37.4**	**-2.4**
ZHG	**ZHG**	**6.95**	**98**	P		**Pn**	**22 28 24.2**	**+1.8**
ZHG				S		**Sn**	**22 29 41.1**	**-0.5**
PBAR	**Barrancos**	**7.18**	**59**	*e*S		Sn	22 29 35.8	-11
PBAR				A		A	22 29 42.1	
	2.4nm,0.5s							
EMIN	**Mina Concepcio**	**7.28**	**63**	⇑*i*Vmb_V			22 28 28.2	
	125nm,SNR=1.6							
EMIN				Sn		Sn	22 29 37.0	-12
PCAS	**Casmilo, Conde**	**7.33**	**42**	*e*P		**Pn**	**22 28 28.4**	**+0.9**
PCAS				*e*S		Sn	22 29 39.9	-11
EBAD	**Badajoz**	**7.47**	**55**	⇑*i*Vmb_V			22 28 28.2	
EBAD	39nm,SNR=0.6			Sn		Sn	22 29 42.4	-12
PMRV	**Marv??o**	**7.58**	**50**	*e*P		**Pn**	**22 28 30.1**	**-0.9**
PMRV				*e*S		Sn	22 29 44.2	-13
PMRV				A		A	22 29 50.5	
	1.5nm,0.7s							
ESPR	**Espera**	**7.62**	**71**	Pn		**Pn**	**22 28 30.7**	**-0.9**
ESPR				⇑*i*Vmb_V			22 28 31.1	
	76nm,SNR=0.9							
ESPR				Sn		Sn	22 29 47.2	-11
PVIS	**Viseu**	**8.12**	**41**	*e*S		Sn	22 29 57.6	-13
PVIS				A		A	22 30 06.9	
	1.9nm,0.3s							
ECAB	**El Cabril**	**8.31**	**64**	Pn		Pn	22 28 37.9	-3.2
ECAB				⇑*i*Vmb_V			22 28 40.0	
	80nm,SNR=1.5							
ECAB				Sn		Sn	22 30 02.1	-13
MD31	**MD31**	**8.62**	**100**	P		**Pn**	**22 28 47.1**	**+1.7**
MD31				S		**Sn**	**22 30 21.9**	**-0.8**
POLO	**Lamas de Olo**	**8.65**	**38**	*e*S		Sn	22 30 09.5	-14
MDT	**Midelt**	**8.76**	**100**	P		**Pn**	**22 28 50.3**	**+3.0**
MDT				S		**Sn**	**22 30 25.0**	**-1.2**
EPLA	**Plasencia**	**8.78**	**50**	⇑*i*Vmb_V			22 28 47.2	
	48nm,SNR=0.9							
EPLA				Sn		Sn	22 30 12.6	-14
PGAV	**Gavieira, Arco**	**8.87**	**34**	*e*S		Sn	22 30 17.1	-12
ELOB	**Lobios**	**8.89**	**35**	⇑*i*Vmb_V			22 28 48.2	
	40nm,SNR=0.4							
ELOB				Sn		Sn	22 30 13.1	-16
MVO	**Moncorvo**	**8.91**	**42**	*e*S		Sn	22 30 16.5	-13
MVO				A		A	22 30 19.9	
	1.5nm,0.5s							
EADA	**Adamuz**	**8.97**	**65**	Pn		**Pn**	**22 28 49.9**	**-0.2**
EADA				⇑*i*Vmb_V			22 28 50.5	
	52nm,SNR=0.9							
EADA				Sn		Sn	22 30 17.1	-14
AKLM	**AKL**	**9.08**	**88**	P		**Pn**	**22 28 52.9**	**+1.3**
AKLM				S		**Sn**	**22 30 32.4**	**-1.5**
ELGU	**Los Guajares,**	**9.38**	**74**	⇑*i*Vmb_V			22 28 55.5	
	66nm,SNR=1.1							
ELGU				Sn		Sn	22 30 28.2	-13
PAB	**San Pablo**	**9.67**	**57**	⇑*i*Vmb_V			22 28 58.4	
	29nm,SNR=0.6							
PAB				Sn		Sn	22 30 34.0	-14
EQES	**Quesada**	**10.00**	**69**	⇑*i*Vmb_V			22 29 03.5	
	67nm,SNR=1.0							
EQES				Sn		Sn	22 30 43.8	-13
JBK	**JBK**	**10.16**	**89**	P		**Pn**	**22 29 06.3**	**-0.2**
JBK				S		**Sn**	**22 30 58.3**	**-2.4**

*NEIC **05** 22:45:09.8±1.3, 37°.22S×0°.05×74°.21W±0°.06, h11km±6km, mb4.2/7, ML3.7(GUC), Error ellipse: s-maj=8.2km s-min=5.5km az=143.0*

*IDC **05** 22:45:11.0±2.0, 37°.20S×73°.77W, h0km, mb3.6/4, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=55.9km s-min=20.6km az=65.0*

*GUC **05** 22:45:11.4±0.4, 37°.38S×74°.03W, h42km±3km, ML3.7*

ISC 05 22:45:13.1±0.9,**37°.30S**±0°.05×**74°.12W**±0°.09,**h35**km,**n59,** σ1$**75**/62,**mb4.0**/7,**4C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.93**	**54**		**Pn**	**22 45 27.6**	**-2.0**
BI05					**Sn**	**22 45 41.3**	**-0.4**
BI05	**Punta Hualpn**	**0.93**	**54**	⇑*i*P	**Pn**	**22 45 27.6**	**-2.0**
BI05				*i* S	**Sn**	**22 45 40.2**	**-1.5**
BI05				IAML		22 45 49.0	
	comp=N,2μm,0.1s						
CCSP	**San Pedro de C**	**0.93**	**61**	IAML		22 45 46.4	
	comp=E,5μm,0.3s						
LR04	**Corral**	**2.63**	**168**		**Pn**	**22 45 52.5**	**-0.6**
LR04	**Corral**	**2.63**	**168**	*e*P	**Pn**	**22 45 51.6**	**-1.5**
LR04				*i* S	**Sn**	**22 46 20.1**	**-3.7**
ML02	**Panimavida**	**2.66**	**56**		**Pn**	**22 45 53.2**	**-0.4**
ML02	**Panimavida**	**2.66**	**56**	IAML		22 46 40.4	
	comp=E,844nm,0.8s						
LR03	**Panguipulli**	**2.71**	**150**		**Pn**	**22 45 54.9**	**+0.7**
GO05	**Huala**	**2.89**	**38**		**Pn**	**22 45 55.5**	**-1.2**
GO05	**Huala**	**2.89**	**38**	*e*P	**Pn**	**22 45 55.7**	**-1.0**
GO05				IAML		22 46 58.3	
	comp=E,188nm,0.7s						
GO06	**Curarrehue**	**3.09**	**138**		**Pn**	**22 46 00.1**	**+0.7**
GO06	**Curarrehue**	**3.09**	**138**	⇑*i*P	**Pn**	**22 46 00.1**	**+0.7**
GO06				IAML		22 46 57.4	
	comp=N,60nm,0.2s						
BO03	**Pichilemu**	**3.30**	**33**	*e*P	**Pn**	**22 46 00.6**	**-1.7**
BO02	**Sierra Bellavi**	**3.69**	**48**		**Pn**	**22 46 07.3**	**-0.3**
BO02	**Sierra Bellavi**	**3.69**	**48**	*e*P	**Pn**	**22 46 07.0**	**-0.7**
BO02				*i* S	**Sn**	**22 46 48.5**	**-1.4**
BO01	**Tunca**	**3.81**	**41**		**Pn**	**22 46 08.6**	**-0.7**
BO01	**Tunca**	**3.81**	**41**	*e*P	**Pn**	**22 46 08.2**	**-1.1**
LL04	**Puerto Octay**	**3.84**	**160**	Pn	**Pn**	**22 46 09.7**	**0.0**
LL04	**Puerto Octay**	**3.84**	**160**	*e*P	**Pn**	**22 46 07.8**	**-2.0**
LL04				*i* S	**Sn**	**22 46 49.5**	**-4.1**
LL03	**Petrohue**	**4.06**	**161**		**Pn**	**22 46 13.5**	**+0.8**
LL05	**Los Muermos**	**4.13**	**173**		**Pn**	**22 46 13.0**	**-0.7**
VA05	**Santo Domingo**	**4.17**	**30**	Pn	**Pn**	**22 46 12.2**	**-2.1**
MT09	**Talagante**	**4.34**	**37**		**Pn**	**22 46 15.4**	**-1.4**
BO04	**La Punta**	**4.37**	**42**		**Pn**	**22 46 15.6**	**-1.5**
BO04	**La Punta**	**4.37**	**42**	*e*P	**Pn**	**22 46 15.7**	**-1.3**
PLCA	**Paso Flores**	**4.41**	**142**	Pn	**Pn**	**22 46 19.1**	**+1.5**
	comp=N,1.0nm,0.3s,baz=319,slow=14,SNR=9.9						
PLCA				Lg	Lg	22 47 29.2	
	baz=230,slow=17						
	comp=N,2.3nm,0.3s						
PLCA	**Paso Flores**	**4.41**	**142**	Pn	**Pn**	**22 46 18.0**	**+0.4**
LMEL	**Las Melosas**	**4.70**	**44**		**Pn**	**22 46 20.7**	**-1.0**
LMEL	**Las Melosas**	**4.70**	**44**	*e*P	**Pn**	**22 46 21.0**	**-0.7**
LMEL				IAML		22 47 47.7	
	comp=N,64nm,0.6s						
MT02	**Curacav**	**4.71**	**32**		**Pn**	**22 46 19.7**	**-2.1**
MT02	**Curacav**	**4.71**	**32**	⇑*i*P	**Pn**	**22 46 19.6**	**-2.1**
MT05	**Renca**	**4.78**	**36**	Pn	**Pn**	**22 46 21.1**	**-1.6**
MT03	**Universidad Ad**	**4.81**	**39**		**Pn**	**22 46 21.6**	**-1.6**
ROC1	**El Roble**	**5.01**	**31**		**Pn**	**22 46 24.1**	**-1.9**
PEL	**Peldehue**	**5.01**	**35**		**Pn**	**22 46 24.9**	**-0.9**
ROCH	**El Roble**	**5.01**	**31**	⇑*i*P	**Pn**	**22 46 24.5**	**-1.6**
VA06	**Catapilco**	**5.27**	**27**	Pn	**Pn**	**22 46 25.6**	**-3.7**
VA04	**Juan Fernndez**	**5.30**	**312**		**Pn**	**22 46 27.6**	**-2.2**
VA03	**San Esteban**	**5.39**	**34**		**Pn**	**22 46 28.9**	**-2.2**
LL02	**Futaleuf**	**6.13**	**164**		**Pn**	**22 46 41.9**	**+0.6**
CO02	**Combarbal**	**6.61**	**24**		**Pn**	**22 46 45.6**	**-2.2**
CO06	**Fray Jorge**	**6.92**	**18**	Pn	**Pn**	**22 46 49.0**	**-3.1**
CO03	**El Pedregal**	**7.04**	**25**	Pn	**Pn**	**22 46 52.2**	**-1.6**
AY01	**Puyuhuapi**	**7.20**	**172**	Pn	**Pn**	**22 46 57.3**	**+1.5**
GO04	**Tololo Observa**	**7.63**	**22**	Pn	**Pn**	**22 46 59.3**	**-2.7**
CO01	**Juntas del Tor**	**8.04**	**26**	Pn	**Pn**	**22 47 06.2**	**-1.4**
AC05	**El Transito**	**9.04**	**22**	Pn	**Pn**	**22 47 19.0**	**-2.2**
TRQA	**Tornquist**	**9.66**	**98**	Pn	**Pn**	**22 47 30.0**	**+0.4**
PLTB	**Pedras Altas**	**17.77**	**78**	Pn	**Pn**	**22 49 16.0**	**-1.7**
PLTB				IAmb	IAmb	22 49 19.7	
	comp=Z,23nm,1.4s						
EFI	**East Falkland**	**18.32**	**147**	P	**P**	**22 49 24.4**	**+0.3**
PB16	**IPOC Station P**	**19.32**	**13**	P	**Pn**	**22 49 35.1**	**-2.0**
PB16				IAmb	IAmb	22 49 58.8	
	comp=Z,12nm,1.5s						
ITAB	**Concordia**	**21.09**	**68**	P	**P**	**22 49 54.1**	**-0.3**
ITAB				IAmb	IAmb	22 50 09.1	
	comp=Z,13nm,1.1s						
LPAZ	**La Paz**	**21.59**	**16**	P	**P**	**22 50 02.6**	**+2.1**
	comp=Z,2.2nm,0.8s,baz=164,slow=11,SNR=4.9						
	comp=Z,2.2nm,0.8s						
LPAZ	**La Paz**	**21.59**	**16**	P	**P**	**22 50 00.9**	**+0.3**
SIV	**San Ignacio**	**24.17**	**32**	P	**P**	**22 50 26.4**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=204,slow=11,SNR=4.4						
	comp=Z,0.6nm,0.5s						
SNAA	**Sanae**	**49.20**	**157**	P	**P**	**22 53 59.2**	**+1.8**
SNAA				IAmb	IAmb	22 54 00.8	
	comp=Z,4.5nm,1.2s						
TXAR	**Lajitas Array**	**71.84**	**333**	P	**P**	**22 56 36.0**	**+3.7**
	comp=Z,0.2nm,0.4s,baz=155,slow=8.8,SNR=4.4						
	comp=Z,0.2nm,0.4s						
TOA0	**Torodi Ar. Sit**	**86.91**	**71**	P	**P**	**22 57 54.6**	**0.0**
TOA0				IAmb	IAmb	22 58 19.0	
	comp=Z,4.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**86.91**	**71**	P	**P**	**22 57 55.6**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=214,slow=4.9,SNR=6.5						
	comp=Z,0.7nm,0.8s						

*IDC **05** 22:59:10.3±6.9, 7°.70S×128°.45E, h187km±77km, mb3.3.1/2, mbtmp3.6/5, Error ellipse: s-maj=74.3km s-min=22.5km az=42.0*

ISC 05 22:59:07.0±1.2,**7°.73S**±0°.09×**128°.7E**±0°.1,**h150**km,**n7,** σ2$**96**/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.55**	**243**	P	**Pn**	**23 00 29.2**	**+1.4**
	108nm,0.4s,baz=78,slow=1.5,SNR=18						
BATI				S	**Sn**	**23 01 31.5**	**+0.5**
	36nm,0.3s,baz=60,slow=23,SNR=7.5						
SIJI	**Sorong**	**7.28**	**21**	S	Sn	23 02 05.5	-6.9
	4.2nm,0.3s,baz=198,slow=23,SNR=0.6						
FITZ	**Fitzroy Crossi**	**10.73**	**196**	P	**Pn**	**23 01 38.1**	**+1.5**
	0.6nm,0.3s,baz=21,slow=14,SNR=10						
FITZ				S	**Sn**	**23 03 30.5**	**-4.9**
	5.2nm,0.6s,baz=135,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**13.31**	**156**	P	**Pn**	**23 02 12.3**	**+2.1**
	0.4nm,0.3s,baz=321,slow=14,SNR=18						
WRA				S	**Sn**	**23 04 35.3**	**-2.3**
	1.4nm,0.3s,baz=332,slow=23,SNR=10.0						
ASAR	**Alice Springs**	**16.61**	**163**	P	**P**	**23 02 55.1**	**+4.0**
	0.7nm,0.5s,baz=333,slow=9.6,SNR=11						
ASAR				S	**S**	**23 05 54.4**	**-1.6**
	0.6nm,0.4s,baz=347,slow=25,SNR=4.9						
SONM	**Songino Array**	**58.74**	**343**	P	**P**	**23 08 47.6**	**-1.6**
	0.4nm,0.5s,baz=164,slow=7.8,SNR=2.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**68.14**	**328**	P	**P**	**23 09 49.4**	**-1.6**
	0.4nm,0.5s,baz=121,slow=7.8,SNR=9.6						
	0.4nm,0.5s						

*IDC **05** 23:07:00.8±1.8, 6°.81S×129°.93E, h126km±17km, mb4.0/12, mbtmp4.5/14, MS2.9/2, Error ellipse: s-maj=19.3km s-min=11.6km az=61.0*

*DJA **05** 23:07:01.2±0.2, 7°.S±2°×13°.0E±°, h131km±3km, M4.9/42, mb4.8/42, mB5.4/13, MLv5.0/15, Mw(mB)4.8/13, MwMwp4.8/1, Mwp5.1/1*

*NEIC **05** 23:07:01.4±1.8, 6°.81S±0°.07×129°.85E±0°.07, h131km±7km, mb4.5/41, Error ellipse: s-maj=10.5km s-min=8.9km az=218.0*

ISC 05 23:07:01.1±0.3,**6°.87S**±0°.04×**129°.85E**±0°.05,**h131**km,**n163,** σ1$**47**/164,**mb4.5**/26,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.81**	**128**	Pn	**Pn**	**23 07 33.2**	**+0.3**
SAUI				Sn	**Sn**	**23 07 57.9**	**+0.7**
SAUI	**Saumlaki**	**1.81**	**128**	P	**Pn**	**23 07 33.1**	**+0.2**
SAUI				S	**Sn**	**23 07 57.8**	**+0.7**
SAUI	**Saumlaki**	**1.81**	**128**	P	**Pn**	**23 07 33.2**	**+0.3**
BNDI	**Bandanaira**	**2.33**	**1**	P	**Pn**	**23 07 40.2**	**+1.0**
BNDI				S	**Sn**	**23 08 10.4**	**+1.9**
BNDI	**Bandanaira**	**2.33**	**1**	P	**Pn**	**23 07 40.7**	**+1.5**
AAI	**Ambon**	**3.56**	**332**	P	**Pn**	**23 07 57.2**	**+2.1**
MSAI	**Masohi**	**3.62**	**345**	P	**Pn**	**23 07 58.1**	**+2.3**
KRAI	**Karang Ratu**	**3.81**	**338**	P	**Pn**	**23 08 01.6**	**+3.2**
NLAI	**Namlea**	**4.53**	**323**	P	**Pn**	**23 08 10.6**	**+2.7**
FAKI	**Fak Fak**	**4.60**	**31**	Pn	**Pn**	**23 08 06.7**	**-2.2**
FAKI	**Fak Fak**	**4.60**	**31**	P	**Pn**	**23 08 06.6**	**-2.2**
FAKI	**Fak Fak**	**4.60**	**31**	P	**Pn**	**23 08 06.7**	**-2.2**
MTN	**Manton Dam**	**6.07**	**168**	Pn	**Pn**	**23 08 27.2**	**-1.3**
MTN	**Manton Dam**	**6.07**	**168**	P	**Pn**	**23 08 27.5**	**-1.0**
SIJI	**Sorong**	**6.13**	**13**	P	**Pn**	**23 08 27.5**	**-1.8**
	26nm,0.3s,baz=225,slow=23,SNR=27						
SIJI				S	**Sn**	**23 09 31.9**	**-6.4**
	44nm,0.3s,baz=125,slow=23,SNR=13						
SIJI	**Sorong**	**6.13**	**13**	P	**Pn**	**23 08 27.3**	**-2.1**
	0.6nm4μm16nm,0.5s						
SWI	**Sorong**	**6.13**	**13**	P	**Pn**	**23 08 28.5**	**-0.9**
	0.8nm50nm,0.5s						
SANI	**Sanana**	**6.14**	**321**	P	**Pn**	**23 08 31.8**	**+2.3**
	0.2nm42nm,0.8s						
SANI	**Sanana**	**6.14**	**321**	P	**Pn**	**23 08 32.0**	**+2.5**
SOEI	**Soe**	**6.22**	**242**	Pn	**Pn**	**23 08 31.1**	**+0.4**
SOEI	**Soe**	**6.22**	**242**	P	**Pn**	**23 08 31.4**	**+0.7**
	3.7nm6μm746nm,0.8s						
SOEI	**Soe**	**6.22**	**242**	P	**Pn**	**23 08 31.8**	**+1.1**
KDU	**Kakadu**	**6.33**	**156**	P	**Pn**	**23 08 30.2**	**-1.9**
LBMI	**Labuha**	**6.62**	**339**	P	**Pn**	**23 08 37.7**	**+1.7**
	0.4nm1μm113nm,0.9s						
BATI	**Baumata**	**6.96**	**241**	P	**Pn**	**23 08 40.9**	**+0.3**
	810nm,0.4s,baz=135,slow=3.5,SNR=94						
BATI				S	**Sn**	**23 09 56.7**	**-1.6**
	522nm,0.5s,baz=270,slow=23,SNR=15						
BATI	**Baumata**	**6.96**	**241**	P	**Pn**	**23 08 40.6**	**+0.1**
	3.9nm12μm983nm,0.8s						
BBSI	**Bau Bau**	**7.37**	**280**	P	**Pn**	**23 08 49.7**	**+3.7**
	0.3nm899nm72nm,0.9s						
MMRI	**Maumere**	**7.74**	**256**	Pn	**Pn**	**23 08 51.4**	**+0.3**
MMRI	**Maumere**	**7.74**	**256**	P	**Pn**	**23 08 51.9**	**+0.8**
	0.5nm130nm,0.7s						
MMRI	**Maumere**	**7.74**	**256**	P	**Pn**	**23 08 52.5**	**+1.4**
SRPI	**Serui, Papua**	**8.08**	**52**	P	**Pn**	**23 08 54.0**	**-1.6**
	108nm,0.4s						
EDFI	**Ende, Flores**	**8.29**	**256**	P	**Pn**	**23 08 59.8**	**+1.2**
	480nm42nm,0.9s						
KNRA	**Kununurra**	**8.82**	**187**	Pn	**Pn**	**23 09 03.1**	**-2.4**
KNRA	**Kununurra**	**8.82**	**187**	P	**Pn**	**23 09 03.3**	**-2.2**
WAMI	**Wamena**	**9.31**	**72**	P	**Pn**	**23 09 14.9**	**+2.7**
	21μm1μm,0.7s						
BKSI	**Bulukumba**	**9.79**	**279**	P	**Pn**	**23 09 20.4**	**+1.7**
	27nm,0.8s						
BNSI	**Bone**	**10.00**	**284**	P	**Pn**	**23 09 25.3**	**+3.9**
	831nm13nm,0.7s						
SMPI	**Sarmi**	**10.08**	**62**	P	**Pn**	**23 09 21.8**	**-0.7**
	4μm45nm,0.5s						
APSI	**Ampana**	**10.10**	**306**	P	**Pn**	**23 09 27.1**	**+4.4**
	60nm,0.9s						
KAPI	**Kappang**	**10.21**	**280**	Pn	**Pn**	**23 09 24.8**	**+0.6**
KAPI	**Kappang**	**10.21**	**280**	P	**Pn**	**23 09 26.2**	**+1.9**
SPSI	**Sidrap Palu**	**10.44**	**286**	P	**Pn**	**23 09 29.2**	**+1.9**
	30nm,0.6s						
MRSI	**Marisa**	**10.75**	**312**	P	**Pn**	**23 09 34.0**	**+2.5**
	57nm,0.9s						
DBNI	**Kabupaten Domp**	**11.55**	**261**	P	**Pn**	**23 09 41.9**	**-0.2**
	76nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.89**	**200**	P	**Pn**	**23 09 42.9**	**-3.7**
	9.3nm,0.3s,baz=26,slow=9.8,SNR=64						
FITZ				S	Sn	23 11 45.4	-12
	51nm,0.3s,baz=136,slow=22,SNR=14						
FITZ	**Fitzroy Crossi**	**11.89**	**200**	Pn	Pn	23 09 42.4	-4.1
FITZ	**Fitzroy Crossi**	**11.89**	**200**	P	**Pn**	**23 09 43.4**	**-3.1**
PLAI	**Plampang**	**12.12**	**260**	P	**Pn**	**23 09 47.4**	**-2.1**
	2μm108nm,0.7s						
PLAI	**Plampang**	**12.12**	**260**	P	**Pn**	**23 09 48.3**	**-1.2**
MPSI	**Mapaga**	**12.24**	**305**	P	**Pn**	**23 09 54.3**	**+3.2**
TWSI	**Taliwang, Sumb**	**12.98**	**261**	P	**Pn**	**23 09 59.1**	**-1.7**
	697nm28nm,0.5s						
WRAB	**Tennant Creek**	**13.70**	**162**	Pn	Pn	23 10 06.1	-3.9
WRA	**Warramunga Arr**	**13.71**	**162**	P	Pn	23 10 05.3	-4.7
	16nm,0.4s,baz=351,slow=13,SNR=134						
WRA				S	Sn	23 12 27.4	-14
	43nm,0.6s,baz=338,slow=22,SNR=9.6						
WRA	**Warramunga Arr**	**13.71**	**162**	Pn	Pn	23 10 04.7	-5.4
KLNI	**Mataram**	**13.72**	**263**	P	**Pn**	**23 10 10.4**	**+0.1**
	28nm,0.7s						
DAV	**Davao City (W)**	**14.49**	**343**	LR	LR	23 15 42.4	
	comp=Z,67nm,21.5s,baz=114,slow=36						
IGBI	**Denpasar**	**14.69**	**261**	P	**Pn**	**23 10 22.6**	**0.0**
	45nm,0.6s						
COEN	**Coen**	**14.87**	**119**	Pn	**Pn**	**23 10 22.9**	**-2.0**
COEN	**Coen**	**14.87**	**119**	P	**Pn**	**23 10 24.7**	**-0.2**
BBKI	**Banjar Baru**	**15.32**	**282**	P	**P**	**23 10 33.2**	**+0.9**
	136nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.64**	**263**	Pn	**Pn**	**23 10 32.9**	**-1.5**
JAGI	**Jajag, Banyuwa**	**15.64**	**263**	P	**Pn**	**23 10 33.1**	**-1.3**
	37nm,0.8s						
GMJI	**Gumukmas**	**16.32**	**264**	P	**Pn**	**23 10 41.8**	**-1.0**
	20nm,0.9s						
QIS	**Mount Isa**	**16.57**	**146**	P	**Pn**	**23 10 43.9**	**-1.9**
AS31	**Alice Springs**	**17.15**	**167**	P	**P**	**23 10 51.1**	**-1.4**
ASAR	**Alice Springs**	**17.15**	**167**	P	**P**	**23 10 51.1**	**-1.3**
	12nm,0.4s,baz=345,slow=9.1,SNR=116						
ASAR				S	Sn	23 13 49.0	-15
	10nm,0.5s,baz=350,slow=24,SNR=10						
ASAR				ScP	**ScP**	**23 18 51.3**	**-1.3**
	0.9nm,0.5s,baz=0.6,slow=3.2,SNR=4.2						
ASAR	**Alice Springs**	**17.15**	**167**	P	**P**	**23 10 51.4**	**-1.0**
AS01	**Alice Springs**	**17.16**	**167**	P	**P**	**23 10 52.2**	**-0.3**
	34nm,0.5s						
MBWA	**Marble Bar**	**17.25**	**214**		**P**	**23 10 54.0**

CMAR			LR	LR	23 31 39.7	
	comp=Z,10nm,18.4s,baz=290,slow=37					
	comp=Z,1.7nm,0.6s					
CMAR	**Chiang Mai Arr**	**39.53 310**	P	**P**	**23 14 18.5**	**-0.9**
CHTO	**Chiang Mai**	**39.74 310**	P	**P**	**23 14 20.3**	**-0.9**
XAN	**Xi'an**	**45.26 335**	P	**P**	**23 15 04.7**	**-0.9**
XAN			pP	pP	23 15 33.8	-0.3
HHC	**Hu-ho-hao-te**	**50.37 342**	*e*P	**P**	**23 15 48.6**	**+3.6**
USRK	**Ussuriysk Ar.**	**50.87 2**	P	**P**	**23 15 48.1**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=168,slow=8.0,SNR=4.4					
	comp=Z,1.1nm,0.6s					
LBZ	**Lake Benmore**	**51.28 144**	P	**P**	**23 15 52.2**	**+0.5**
RPZ	**Rata Peaks**	**51.43 142**	P	**P**	**23 15 53.9**	**+1.1**
TUWZ	**Tuamarina**	**52.08 138**	P	**P**	**23 15 57.8**	**+0.1**
RAMN	**Ramite**	**53.70 311**	*e*P	**P**	**23 16 09.6**	**-0.4**
JIRN	**Jiri**	**54.39 311**	*e*P	**P**	**23 16 14.4**	**-0.8**
GUN	**Gumba**	**54.75 311**	*e*P	**P**	**23 16 17.2**	**-0.6**
	comp=Z,28nm,0.7s					
PKIN	**Phulchoki**	**54.94 311**	*e*P	**P**	**23 16 18.5**	**-0.5**
	comp=Z,5.4nm,0.4s					
DMN	**Daman**	**55.18 310**	*e*P	**P**	**23 16 20.7**	**0.0**
GKN	**Gorkha**	**55.73 311**	*e*P	**P**	**23 16 23.8**	**-0.8**
	comp=Z,11nm,0.4s					
KOLN	**Koldanda**	**56.40 310**	*e*P	**P**	**23 16 29.7**	**+0.3**
KOLN	**Koldanda**	**56.40 310**	*e*P	**P**	**23 16 29.7**	**+0.3**
PYUN	**Piuthan**	**57.03 310**	*e*P	**P**	**23 16 33.6**	**-0.3**
	comp=Z,11nm,0.6s					
SONM	**Songino Array**	**58.27 342**	P	**P**	**23 16 42.7**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=154,slow=7.1,SNR=2.4					
	comp=Z,0.5nm,0.4s					
WMQ	**Urumqi**	**63.20 327**	*e*P	**P**	**23 17 18.3**	**+2.9**
NIL	**Nilore**	**67.02 311**	P	**P**	**23 17 40.2**	**-0.1**
NIL			IAmb	IAmb	23 17 41.5	
	comp=Z,3.8nm,0.6s					
MK31	**Makanchi Array**	**68.03 327**	P	**P**	**23 17 47.0**	**+0.7**
MK31			IAmb	IAmb	23 17 47.5	
	comp=Z,5.3nm,0.6s					
MKAR	**Makanchi Array**	**68.03 327**	P	**P**	**23 17 47.0**	**+0.6**
	comp=Z,6.9nm,0.4s,baz=115,slow=8.2,SNR=170					
	comp=Z,6.9nm,0.4s					
MKAR	**Makanchi Array**	**68.03 327**	P	**P**	**23 17 46.7**	**+0.3**
MAKZ	**Makanchi**	**68.21 327**	P	**P**	**23 17 47.9**	**+0.4**
MAKZ			IAmb	IAmb	23 17 48.5	
	comp=Z,6.9nm,0.5s					
ZAA0	**Zalesovo Array**	**71.40 334**	P	**P**	**23 18 06.2**	**-0.6**
ZALV	**Zalesovo Beam**	**71.40 334**	P	**P**	**23 18 06.0**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=134,slow=5.8,SNR=6.2					
	comp=Z,1.3nm,0.5s					
ZALV	**Zalesovo Beam**	**71.40 334**	P	**P**	**23 18 06.2**	**-0.6**
CHGR	**Chuyangaron**	**72.14 314**	P	**P**	**23 18 11.1**	**-0.6**
CHGR			IAmb	IAmb	23 18 12.5	
	comp=Z,7.1nm,0.8s					
KURK	**Kurchatov**	**72.33 329**	P	**P**	**23 18 12.4**	**+0.1**
KURK			IAmb	IAmb	23 18 45.0	
	comp=Z,6.1nm,1.1s					
VNDA	**Vanda**	**72.59 173**	P	**P**	**23 18 13.7**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=319,slow=6.1,SNR=8.3					
	comp=Z,1.0nm,0.7s					
VNDA	**Vanda**	**72.59 173**	P	**P**	**23 18 13.4**	**-0.2**
KK31	**Karatay Array**	**73.14 319**	P	**P**	**23 18 17.4**	**0.0**
KKAR	**Karatay Array**	**73.14 319**	P	**P**	**23 18 17.2**	**-0.2**
SBA	**Scott Base**	**73.48 172**	P	**P**	**23 18 19.6**	**+0.8**
MAW	**Mawson**	**75.02 201**	P	**P**	**23 18 29.1**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=79,slow=7.1,SNR=6.8					
	comp=Z,1.9nm,0.6s					
MAW	**Mawson**	**75.02 201**	P	**P**	**23 18 29.1**	**+1.3**
UOSS	**Minazif**	**78.23 297**	P	**P**	**23 18 47.5**	**+0.7**
UOSS			IAmb	IAmb	23 19 18.7	
	comp=Z,13nm,1.1s					
GEYT	**Alibeck**	**80.02 310**	P	**P**	**23 18 56.8**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=160,slow=4.7,SNR=4.7					
	comp=Z,1.2nm,0.6s					
VOI	**Vohitsoka**	**81.05 249**	P	**P**	**23 19 02.3**	**+0.1**
ABKAR	**Akbulak array**	**82.31 322**	P	**P**	**23 19 07.7**	**-0.4**
ABKAR	**Akbulak array**	**82.31 322**	P	**P**	**23 19 07.5**	**-0.5**
ABKAR			IAmb	IAmb	23 19 09.9	
	comp=Z,4.3nm,1.4s					
QSPA	**South Pole Qui**	**83.11 180**	P	**P**	**23 19 12.1**	**0.0**
QSPA			IAmb	IAmb	23 19 12.6	
	comp=Z,3.4nm,0.8s					
RAYN	**Ar Rayn**	**87.56 294**	P	**P**	**23 19 35.0**	**0.0**
RAYN			IAmb	IAmb	23 19 35.8	
	comp=Z,3.6nm,0.7s					
SNAA	**Sanae**	**95.75 194**	PcP	**PcP**	**23 20 12.9**	**+0.7**
PDAR	**Pinedale Array**	**116.91 45**	PKP	**PKPdf**	**23 25 28.7**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=270,slow=1.5,SNR=3.6					
TXAR	**Lajitas Array**	**124.99 59**	PKP	**PKiKP**	**23 25 47.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=336,slow=2.0,SNR=3.0					
TORD	**Torodi Ar. Bea**	**128.64 281**	PKP	**PKPdf**	**23 25 53.9**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=73,slow=2.3,SNR=6.6					
LPAZ	**La Paz**	**150.91 142**	PKPbc	**PKiKP**	**23 26 41.9**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=145,slow=0.5,SNR=6.7					

*IDC **05** 23:26:26.9±5.4, 37.°68N×140.°81E, h135km±36km, mb3.1/3, mbtmp3.6/5, Error ellipse: s-maj=60.1km s-min=20.1km az=58.0*
*JMA **05** 23:26:26.1±0.1, 37.°9N±0.°3×140.°8E±0.°4, h118km, MV3.5/40, SOUTHERN MIYAGI PREF*
ISC 05 23:26:25.1±1.0, **37.°86N**±0.°04×**140.°82E**±0.°06, **h125**km±6km, **n19**, σ0°**82**/34, **mb3.5**/3, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMM	**Marumori**	**0.02**	**293**	*i* P	**Pn**	**23 26 42.4**	**+0.3**
JMM				S	**Sn**	**23 26 54.4**	**-0.4**
JMST	**Minamisoumatoc**	**0.14**	**158**	*i* P	**Pn**	**23 26 42.5**	**+0.3**
JMST				S	**Sn**	**23 26 54.9**	**-0.1**
JFK	**Kawauchi**	**0.49**	**175**	*i* P	**Pn**	**23 26 44.1**	**+0.6**
JFK				S	**Sn**	**23 26 57.2**	**-0.3**
JOU	**Okura**	**0.52**	**346**	*i* P	**Pn**	**23 26 44.1**	**+0.4**
JYS	**Shiratake**	**0.70**	**302**	*i* P	**Pn**	**23 26 45.0**	**+0.2**
JYS				*e*S	**Sn**	**23 26 59.5**	**-0.4**
JIO	**Ouri**	**0.73**	**35**	*i* P	**Pn**	**23 26 45.7**	**+0.6**
JIO				S	**Sn**	**23 26 59.8**	**-0.5**
JFY	**Yanaizu**	**0.99**	**243**	P	**Pn**	**23 26 47.8**	**+0.4**
JFY				S	**Sn**	**23 27 03.5**	**-0.9**
JYK	**Kaneyama**	**1.12**	**341**	*i* P	**Pn**	**23 26 48.8**	**+0.1**
JYK				S	**Sn**	**23 27 05.8**	**-0.8**
JMK	**Ichinoseki**	**1.14**	**16**	*i* P	**Pn**	**23 26 49.2**	**+0.4**
JMK				S	**Sn**	**23 27 06.5**	**-0.4**
JYA	**Atsumi**	**1.14**	**310**	P	**Pn**	**23 26 48.9**	**0.0**
JYA				S	**Sn**	**23 27 06.1**	**-0.9**
JNS	**Sasagawa**	**1.19**	**269**	P	**Pn**	**23 26 49.5**	**+0.1**
JNS				S	**Sn**	**23 27 07.2**	**-0.7**
JAW	**Awa shima**	**1.38**	**296**	P	**Pn**	**23 26 51.2**	**-0.1**
JAW				*e*S	**Sn**	**23 27 10.4**	**-0.9**
JOM	**Ohasama**	**1.66**	**13**	*i* P	**Pn**	**23 26 55.1**	**+0.5**
JOM				S	**Sn**	**23 27 16.9**	**-0.3**
JAG	**Ashikaga**	**1.80**	**218**	*i* P	**Pn**	**23 26 57.0**	**+0.7**
JAG				S	**Sn**	**23 27 20.9**	**+0.7**
MJAR	**Matsushiro Arr**	**2.46**	**239**	P	**Pn**	**23 27 05.5**	**+0.9**
	5.6nm,0.3s,baz=45,slow=11,SNR=19						
MJAR				S	**Sn**	**23 27 36.0**	**+1.1**
	3.6nm,0.5s,baz=86,slow=22,SNR=2.4						
JHJ	**Hachijo jima 2**	**4.80**	**190**	P	**Pn**	**23 27 35.6**	**+0.1**
	124nm,0.9s,baz=346,slow=22,SNR=7.8						
JHJ				S	**Sn**	**23 28 27.3**	**-2.9**
	24nm,0.3s,baz=237,slow=23,SNR=1.3						
MKAR	**Makanchi Array**	**43.28**	**301**	P	**P**	**23 34 15.1**	**+0.9**
	0.3nm,0.7s,baz=87,slow=9.5,SNR=2.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**57.81**	**187**	P	**P**	**23 36 04.0**	**+0.6**
	0.7nm,0.7s,baz=4.2,slow=7.4,SNR=6.4						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**61.54**	**187**	P	**P**	**23 36 27.4**	**-1.5**
	0.2nm,0.4s,baz=356,slow=5.6,SNR=2.3						
	0.2nm,0.4s						

*JMA **05** 23:26:39.2±0.1, 24.°1N±0.°6×121.°9E±0.°5, h44km±1km, MV2.5/8, TAIWAN REGION*
*TAP **05** 23:26:39.6, 24.°27N×121.°95E, h23km, ML3.4, C*
ISC 05 23:26:40.2±1.0, **24.°24N**±0.°02×**121.°96E**±0.°02, **h21**km±2km, **n81**, σ1°**21**/138, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.21**	**289**	*e*P	**Pb**	**23 26 45.4**	**-0.6**
	baz=288						
EWUT	**Wuta**	**0.26**	**321**	*i* P	**Pb**	**23 26 45.5**	**-0.9**
	baz=324						
EWUT				S	**Sb**	**23 26 50.4**	**-0.4**
	baz=324						
ETL	**Fush Village**	**0.32**	**255**	*i* P	**Pb**	**23 26 47.4**	**+0.2**
	baz=248						
ETL				S	**Sn**	**23 26 53.3**	**-2.4**
	baz=248						
NACB	**Ninganchiao**	**0.34**	**259**	P	**Pb**	**23 26 47.4**	**0.0**
	baz=252						
NACB				S	**Sb**	**23 26 53.3**	**+0.9**
	baz=252						
TWD	**Chiawan**	**0.37**	**244**	P	**Pb**	**23 26 47.9**	**0.0**
	baz=242						
TWD				S	**Sn**	**23 26 55.0**	**-1.9**
	baz=242						
TWC	**Suao**	**0.38**	**345**	*e*P	**Pn**	**23 26 48.5**	**-2.0**
	baz=351						
TWC				*e*S	**Sn**	**23 26 54.6**	**-2.6**
	baz=351						
HWA	**Hwalien**	**0.42**	**231**	*e*P	**Pn**	**23 26 49.7**	**-1.3**
	baz=237						
ETLH	**Xiulin Townshi**	**0.44**	**266**	*e*P	**Pb**	**23 26 49.1**	**-0.1**
	baz=261						
ETLH				*e*S	**Sb**	**23 26 56.2**	**+0.9**
	baz=261						
LATG	**Datong**	**0.49**	**307**	*i* P	**Pb**	**23 26 50.0**	**-0.2**
	baz=310						
LATG				*e*S	**Sn**	**23 26 58.1**	**-2.1**
	baz=310						
TEYL	**Yanliau Villag**	**0.50**	**222**	*e*P	**Pb**	**23 26 49.2**	**-1.0**
	baz=231						
ETM	**Tongmen**	**0.51**	**237**	P	**Pb**	**23 26 50.3**	**-0.1**
	baz=225						
ETM				S	**Sn**	**23 26 59.0**	**-1.4**
	baz=225						
TWE	**Neicheng**	**0.55**	**331**	*e*P	**Pn**	**23 26 51.3**	**-1.5**
	baz=333						
TWE				*e*S	**Sn**	**23 26 58.9**	**-2.4**
	baz=333						
ILA	**Ilan**	**0.56**	**340**	*e*P	**Pb**	**23 26 50.9**	**-0.5**
	baz=342						
ILA				*e*S	**Sn**	**23 27 00.3**	**-1.2**
	baz=342						
EGS		**0.60**	**358**	*i* P	**Pn**	**23 26 51.8**	**-1.7**
	baz=360						
FUSB	**Fushanzhiwuyua**	**0.62**	**327**	*i* P	**Pn**	**23 26 52.4**	**-1.4**
	baz=326						
FUSB				S	**Sn**	**23 27 01.0**	**-2.1**
	baz=326						
NTC	**Toucheng**	**0.62**	**349**	P	**Pn**	**23 26 52.8**	**-1.0**
	baz=350						
NTC				*e*S	**Sn**	**23 27 01.3**	**-1.8**
	baz=350						
WHF	**Hehuan Shan**	**0.64**	**262**	*i* P	**Pb**	**23 26 52.7**	**-0.4**
	baz=258						
WHF				S	**Sn**	**23 27 02.8**	**-1.5**
	baz=258						
ESL	**Shilin**	**0.64**	**229**	P	**Pb**	**23 26 52.5**	**-0.3**
	baz=224						
ESL				S	**Sn**	**23 27 02.9**	**-0.8**
	baz=224						
FUSS	**Fushou**	**0.65**	**271**	*i* P	**Pb**	**23 26 52.9**	**-0.2**
	baz=267						
FUSS				*e*S	**Sb**	**23 27 02.0**	**0.0**
	baz=267						
YHNB	**Yeheng**	**0.68**	**309**	*e*P	**Pn**	**23 26 53.3**	**-1.4**
	baz=307						
YHNB				S	**Sn**	**23 27 02.7**	**-2.1**
	baz=307						
NSK	**Sanguang**	**0.70**	**308**	*e*P	**Pb**	**23 26 52.4**	**-1.3**
	baz=307						
NSK				*e*S	**Sb**	**23 27 02.1**	**-0.9**
	baz=307						
TWT	**Tachien**	**0.72**	**271**	*i* P	**Pn**	**23 26 54.4**	**-0.9**
	baz=261						
TWT				S	**Sn**	**23 27 04.5**	**-1.2**
	baz=261						
TDCB	**Techi**	**0.73**	**271**	P	**Pn**	**23 26 54.3**	**-1.2**
	baz=262						
TDCB				S	**Sn**	**23 27 04.2**	**-1.9**
	baz=262						
TIPB	**Shuangxi**	**0.74**	**350**	*e*P	**Pn**	**23 26 55.0**	**-0.4**
	baz=352						
TIPB				*e*S	**Sn**	**23 27 05.3**	**-0.8**
	baz=352						
CHGB	**Renai**	**0.74**	**256**	*i* P	**Pb**	**23 26 54.3**	**-0.2**
	baz=253						
CHGB				*e*S	**Sn**	**23 27 05.0**	**-1.4**
	baz=253						
EGFH	**Guangfu**	**0.75**	**221**	*i* P	**Pn**	**23 26 54.7**	**-0.8**
	baz=217						
EGFH				S	**Sn**	**23 27 05.7**	**-0.6**
	baz=217						
TWB1	**Santiao Chiao**	**0.76**	**2**	*e*P	**Pn**	**23 26 55.1**	**-0.7**
	baz=356						
TWB1				*e*S	**Sn**	**23 27 07.5**	**+0.9**
	baz=356						
OWD	**Renai**	**0.77**	**248**	*i* P	**Pb**	**23 26 54.7**	**-0.2**
	baz=245						
OWD				S	**Sn**	**23 27 06.5**	**-0.5**
	baz=245						
WUSB	**Renai**	**0.81**	**252**	P	**Pb**	**23 26 55.4**	**-0.2**
	baz=249						
WUSB				*e*S	**Sn**	**23 27 06.6**	**-1.3**
	baz=249						
TWA	**Mucha**	**0.81**	**335**	*e*P	**Pn**	**23 26 56.8**	**+0.4**
	baz=328						
TWA				*e*S	**Sn**	**23 27 07.9**	**0.0**
	baz=328						
NHDH	**Xindian Distri**	**0.82**	**331**	P	**Pn**	**23 26 56.2**	**-0.3**
	baz=324						
NHDH				*e*S	**Sn**	**23 27 08.2**	**+0.2**
	baz=324						
NWF	**Wu-fen Shan**	**0.84**	**349**	*e*P	**Pn**	**23 26 56.6**	**-0.3**
	baz=343						
NWF				*e*S	**Sn**	**23 27 09.4**	**+0.7**
	baz=343						
WFSB	**Wu-fen Shan**	**0.84**	**349**	*e*P	**Pn**	**23 26 56.8**	**0.0**
	baz=343						
WFSB				*e*S	**Sn**	**23 27 08.6**	**0.0**
	baz=343						
SXI1	**Grass Mountain**	**0.85**	**355**	P	**Pn**	**23 26 57.2**	**+0.2**
	baz=359						
NFF	**Wufeng Townshi**	**0.86**	**297**	*e*P	**Pb**	**23 26 55.0**	**-1.5**
	baz=288						
NFF				*e*S	**Sn**	**23 27 07.2**	**-1.9**
	baz=288						
HGSD	**Ruisui**	**0.89**	**213**	*e*P	**Pn**	**23 26 57.6**	**+0.1**
	baz=199						
JYNG	**Yonagunijimaku**	**0.92**	**77**	P	**Pn**	**23 26 57.8**	**-0.1**
JYNG				*e*S	**Sn**	**23 27 11.2**	**+0.7**
WHP	**Taichung City**	**0.93**	**272**	P	**Pn**	**23 26 58.1**	**0.0**
	baz=270						
WHP				*e*S	**Sn**	**23 27 10.9**	**+0.1**
	baz=270						
EHY	**Hungye**	**0.94**	**219**	*e*P	**Pb**	**23 26 57.5**	**-0.3**
	baz=216						
LIOB	**Emei**	**0.95**	**295**	*e*P	**Pn**	**23 26 58.5**	**+0.1**
	baz=285						
LIOB				*e*S	**Sn**	**23 27 11.7**	**+0.4**
	baz=285						
NSTT	**Nanjuang**	**0.96**	**294**	*e*P	**Pn**	**23 26 58.4**	**0.0**
	baz=284						
NSTT				*e*S	**Sn**	**23 27 11.5**	**+0.1**
	baz=284						
DPDB	**Guoxing**	**0.97**	**258**	*e*P	**Pn**	**23 26 57.9**	**-0.7**
	baz=255						
YM01	**YM01**	**0.97**	**339**	P	**Pn**	**23 26 59.2**	**+0.6**
	baz=353						
YM01				*e*S	**Sn**	**23 27 12.7**	**+0.9**
	baz=353						
WCS	**Beigang Elemen**	**0.98**	**259**	*e*P	**Pb**	**23 26 57.2**	**-1.2**
	baz=250						
WCS				*e*S	**Sn**	**23 27 11.2**	**-0.6**
	baz=250						
YOJ	**Yonaguni jima**	**0.98**	**77**	*i* P	**Pn**	**23 26 58.5**	**-0.3**
	baz=72						
YOJ				*e*S	**Sn**	**23 27 13.1**	**+1.1**
	baz=72						
YOJ	**Yonaguni jima**	**0.98**	**77**	P	**Pn**	**23 26 58.3**	**-0.5**
YOJ				*e*S	**Sn**	**23 27 12.4**	**+0.4**
TWS1	**Kuangyinshan**	**0.99**	**330**	*e*P	**Pn**	**23 26 59.4**	**+0.5**
	baz=331						
TWS1				*e*S	**Sn**	**23 27 14.8**	**+2.6**
	baz=331						
NCU	**National Centr**	**1.01**	**316**	*e*S	**Sn**	**23 27 14.6**	**+1.9**
	baz=315						
SSLB	**Suanglung**	**1.02**	**244**	*e*P	**Pn**	**23 26 58.7**	**-0.7**
	baz=241						
SSLB				*e*S	**Sn**	**23 27 13.8**	**+0.6**
	baz=241						
NTST	**Danshui**	**1.03**	**333**	*e*S	**Sn**	**23 27 15.2**	**+1.9**
	baz=345						
SMLT	**Sun Moon Lake**	**1.03**	**250**	*e*P	**Pb**	**23 26 59.1**	**-0.3**
	baz=247						
YULB	**Yu-li**	**1.04**	**216**	*e*P	**Pn**	**23 26 58.5**	**-1.1**
	baz=228						
YULB				*e*S	**Sn**	**23 27 13.3**	**-0.2**
	baz=228						
SBCB	**Hsinchu**	**1.04**	**302**	*e*P	**Pb**	**23 27 00.4**	**+0.8**
	baz=300						
SBCB				*e*S	**Sn**	**23 27 16.0**	**+2.4**
	baz=300						
HSN	**Hsinchu**	**1.06**	**302**	*e*S	**Sn**	**23 27 15.8**	**+1.9**
	baz=303						
TYC	**Yuchr**	**1.06**	**252**	*e*P	**Pb**	**23 26 59.6**	**-0.2**
	baz=249						
TWF1	**Yuli**	**1.07**	**215**	*e*P	**Pn**	**23 26 59.1**	**-0.9**
	baz=227						
TWF1				*e*S	**Sb**	**23 27 13.7**	**+0.1**
	baz=227						
TWY	**Chenhua**	**1.08**	**342**	*e*P	**Pb**	**23 26 59.5**	**-0.7**
	baz=344						
TWY				*e*S	**Sn**	**23 27 17.1**	**+2.6**
	baz=344						
NMLH	**Miaoli**	**1.11**	**286**	*e*P	**Pb**	**23 27 02.0**	**+1.4**
	baz=283						
NMLH				*e*S	**Sn**	**23 27 17.4**	**+2.3**
	baz=283						
WHYT	**Xinyi Township**	**1.15**	**242**	*e*P	**Pb**	**23 27 01.2**	**-0.1**
	baz=233						
YUS	**Yu-Shan**	**1.19**	**231**	*e*P	**Pb**	**23 27 02.5**	**+0.2**
	baz=229						
WJS	**Zhushan**	**1.20**	**250**	*e*P	**Pb**	**23 27 02.2**	**0.0**
	baz=237						
WJS				*e*S	**Sb**	**23 27 20.1**	**+2.8**
	baz=237						
WDJ	**Dajia District**	**1.21**	**275**	*e*S	**Sb**	**23 27 20.0**	**+2.5**
	baz=273						
WNT	**Mingjian**	**1.22**	**253**	*e*P	**Pb**	**23 27 03.8**	**+1.2**
	baz=250						
WNT				*e*S	**Sb**	**23 27 20.7**	**+2.8**
	baz=250						
ALS	**Alishan**	**1.28**	**236**	*e*P	**Pb**	**23 27 03.8**	**0.0**
	baz=233						
CHN5	**Tsauling**	**1.34**	**242**	*e*P	**Pb**	**23 27 03.6**	**-1.0**
	baz=239						
ELDTW	**Lidau**	**1.36**	**220**	*e*P	**Pn**	**23 27 04.0**	**0.0**
	baz=205						
WDLH	**Douliu**	**1.41**	**247**	*e*P	**Pb**	**23 27 06.2**	**+0.4**
	baz=244						
WDLH				*e*S	**Sb**	**23 27 26.0**	**+2.6**
	baz=244						
WCKO	**Fanlu**	**1.48**	**238**	*e*S	**Sb**	**23 27 27.1**	**+1.8**
	baz=234						
WRL	**Guolierlin Hig**	**1.49**	**257**	*e*P	**Pb**	**23 27 05.9**	**-1.2**
	baz=254						
WRL				*e*S	**Sb**	**23 27 25.1**	**-0.4**
	baz=254						
STYH	**Taoyuan**	**1.52**	**226**	*e*P	**Pn**	**23 27 06.0**	**-0.2**
	baz=223						
STYH				*e*S	**Sb**	**23 27 26.1**	**-0.4**
	baz=223						
TPUB	**Ta-pu**	**1.54**	**233**	*e*P	**Pb**	**23 27 07.5**	**-0.4**
	baz=218						
TPUB				*e*S	**Sb**	**23 27 28.8**	**+1.8**
	baz=218						
WTP	**Ta-pu**	**1.58**	**232**	*e*P	**Pb**	**23 27 08.3**	**-0.5**
	baz=228						
WTP				*e*S	**Sb**	**23 27 30.3**	**+2.0**
	baz=228						
CHY	**Chiayi**	**1.59**	**243**	*e*P	**Pb**	**23 27 09.3**	**+0.5**
	baz=240						
IRIF	**Iriomote-Funau**	**1.62**	**86**	*e*P	**Pn**	**23 27 07.0**	**-0.4**
IRIF				*e*S	**Sb**	**23 27 28.2**	**-1.1**
TWG	**Pinlang**	**1.63**	**210**	*e*P	**Pn**	**23 27 06.8**	**-0.9**
	baz=208						
TWK	**Hsinying**	**1.66**	**235**	*e*P	**Pb**	**23 27 09.5**	**-0.6**
	baz=231						
TWK				*e*S	**Sb**	**23 27 32.4**	**+1.8**
	baz=231						
CHN1	**Nanshi**	**1.68**	**232**	*e*P	**Pb**	**23 27 10.3**	**-0.1**
	baz=228						
CHN1				*e*S	**Sb**	**23 27 33.2**	**+2.1**
	baz=228						
WSL	**Shuilin Townsh**	**1.74**	**246**	*e*P	**Pb**	**23 27 09.7**	**-1.7**
	baz=243						
WSL				*e*S	**Sb**	**23 27 33.4**	**+0.6**
	baz=243						
ICHU	**Yijhu**	**1.77**	**241**	*e*P	**Pb**	**23 27 10.8**	**-1.1**
	baz=222						
ICHU				*e*S	**Sb**	**23 27 34.6**	**+0.9**
	baz=222						
JKRS	**Kuro-shima**	**1.87**	**90**	P	**Pn**	**23 27 11.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.00**	**86**	*e*P	**Pn**	**23 27 12.4**	**-0.3**

*BJI **05** 23:44:41.1±0.0, 37.°40N×71.°73E, h217km, mb4.4/11, mB4.5/3*
*MOS **05** 23:44:46.3±0.8, 37.°43N×72.°27E, h224km, mb4.2/13, Error ellipse: s-maj=6.5km s-min=4.2km az=98.6*
*IDC **05** 23:44:47.0±2.2, 37.°32N×72.°40E, h226km±18km, mb3.7/17, mbtmp4.3/24, Error ellipse: s-maj=21.2km s-min=11.8km az=141.0*
*NEIC **05** 23:44:47.3±1.4, 37.°43N±0.°06×72.°28E±0.°09, h219km±5km, mb4.2/45, Error ellipse: s-maj=10.7km s-min=8.8km az=97.0*
ISC 05 23:44:45.2±0.4, **37.°41N**±0.°04×**72.°30E**±0.°04, **h200**km, **n245**, σ1°**57**/274, **mb4.2**/56, **16C-13D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**2.11**	**349**		**Pn**	**23 45 28.7**	**+3.6**
DRK				Sn	**Sn**	**23 45 59.0**	**+2.7**
GAR	**Garm**	**2.23**	**316**	Pn	**Pn**	**23 45 29.1**	**+2.9**
CHGR	**Chuyangaron**	**2.78**	**298**	Pn	**Pn**	**23 45 34.3**	**+2.0**
CHGR	**Chuyangaron**	**2.78**	**298**	PN	**Pn**	**23 45 34.3**	**+2.0**
BTK	**Batken**	**2.89**	**337**		**Pn**	**23 45 37.1**	**+3.6**
BTK	**Batken**	**2.89**	**337**	PN	**Pn**	**23 45 37.1**	**+3.6**
KSH	**Kashi**	**3.57**	**53**	P	**Pn**	**23 45 40.2**	**-1.5**
KSH				S	**Sn**	**23 46 19.0**	**-7.1**
KSH				smax	smax		
	comp=N,980nm,0.8s						
KSH				smax	smax		
	comp=E,640nm,0.6s						
CEP	**Cherat**	**3.59**	**185**	⇑P	**Pn**	**23 45 45.2**	**+3.1**
CEP				S	**Sn**	**23 46 29.0**	**+2.3**
CHCP	**Chirah Chowk**	**3.82**	**168**	⇑P	**Pn**	**23 45 48.0**	**+3.1**
CHCP				S	**Sn**	**23 46 34.0**	**+2.4**
NIL	**Nilore**	**3.83**	**168**		**Pn**	**23 45 48.0**	**+3.1**
NIL	**Nilore**	**3.83**	**168**

ULHL Ulahol 5.71 31 P **Pn 23 46 11.6 +2.8**
SNR=5.8
BOOM Boomskoye usch 5.79 28 Pn 23 46 12.4 +2.5
BOOM Boomskoye usch 5.79 28 PN **Pn 23 46 12.4 +2.5**
KK31 Karatay Array 5.85 347 Pn **Pn 23 46 12.4 +2.0**
KK31 Karatay Array 5.85 347 PN **Pn 23 46 12.3 +1.9**
KK31 Karatay Array 5.85 347 ⇑P **Pn 23 46 12.3 +1.9**
88nm,0.2s,baz=152,slow=10,SNR=1094
KK31 ⇓S **Sn 23 47 15.9 -2.0**
65nm,0.3s,baz=162,slow=16,SNR=14
KKAR Karatay Array 5.85 347 Pn **Pn 23 46 12.2 +1.9**
KKAR Karatay Array 5.85 347 Pn **Pn 23 46 12.3 +1.9**
KKAR Karatay Array 5.85 347 PN **Pn 23 46 12.3 +1.9**
CHMS Chumysh 5.89 18 P **Pn 23 46 13.4 +2.4**
SNR=27
CHMS Chumysh 5.89 18 PN **Pn 23 46 13.3 +2.3**
CHMS Chumysh 5.89 18 ⇑P **Pn 23 46 13.3 +2.3**
28nm,0.6s
CHMS ⇑S **Sn 23 47 13.3 -5.6**
82nm,0.7s
TKM2 Tokmak 2 6.06 24 P **Pn 23 46 15.9 +2.6**
SNR=114
TKM2 Tokmak 2 6.06 24 PN **Pn 23 46 15.0 +1.7**
TKM2 S **Sn 23 47 22.0 -1.0**
TARG Taragay, Kyrgy 6.06 43 Pn 23 46 13.5 0.0
TARG Taragay, Kyrgy 6.06 43 PN **Pn 23 46 13.5 0.0**
USP Ospenovka 6.09 15 P **Pn 23 46 15.0 +1.5**
SNR=16
SGDS Sogindy 6.29 16 *e*PN **Pn 23 46 17.6 +1.4**
SGDS Sogindy 6.29 16 *e*P **Pn 23 46 17.6 +1.4**
baz=18
TNSS Tian-Shan 6.65 31 *e*PN **Pn 23 46 23.2 +2.1**
TNSS Tian-Shan 6.65 31 *e*P **Pn 23 46 23.3 +2.1**
baz=35
AAA Alma-Ata 6.78 30 *e*PN **Pn 23 46 24.6 +2.1**
AAA Alma-Ata 6.78 30 *e*P **Pn 23 46 24.6 +2.1**
baz=34
MDOK Medeo 6.80 31 *e*PN **Pn 23 46 24.9 +2.1**
MDOK Medeo 6.80 31 *e*P **Pn 23 46 24.9 +2.1**
baz=35
MDOK *e*S Sn 23 47 29.2 -11
baz=35
KUU Kurty 7.17 24 *e*PN **Pn 23 46 28.1 +0.6**
KUU Kurty 7.17 24 *e*P **Pn 23 46 28.2 +0.6**
baz=27
KUU *e*S Sn 23 47 34.1 -15
baz=27
SMLA Simla 7.45 146 *e*P **Pn 23 46 31.9 +0.7**
SMLA *e*S **Sn 23 47 51.1 -4.4**
SMLA IAML 23 47 56.4
comp=E,280nm,0.9s
SMLA IAML 23 47 56.6
comp=N,295nm,0.6s
BTLS Baital 7.74 9 *e*PN **Pn 23 46 35.5 +0.6**
BTLS Baital 7.74 9 *e*P **Pn 23 46 35.6 +0.6**
baz=10.0
HRA Herat 8.70 253 Pn **Pn 23 46 48.5 +0.8**
GEYT Alibeck 11.26 277 P **Pn 23 47 21.0 +0.4**
comp=N,3.4nm,0.5s,baz=116,slow=10,SNR=10
GEYT S **Sn 23 49 22.6 -3.5**
comp=N,11nm,0.6s,baz=284,slow=24,SNR=3.3
GEYT Alibeck 11.26 277 Pn 23 47 20.9 +0.4
GYA0 ALIBECK ARRAY 11.26 277 P **Pn 23 47 20.7 +0.1**
GYA0B ALIBECK ARRAY 11.26 277 Pn 23 47 20.7 +0.2
MK31 Makanchi Array 11.95 35 Pn **Pn 23 47 30.6 +1.3**
MK31 Makanchi Array 11.95 35 *i* P **Pn 23 47 30.8 +1.5**
MK31 pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 11.95 35 P **Pn 23 47 31.1 +1.8**
comp=Z,0.8nm,0.7s,baz=219,slow=12,SNR=6.1
MKAR Makanchi Array 11.95 35 Pn **Pn 23 47 31.0 +1.7**
PYUN Piuthan 12.92 133 *e*P **Pn 23 47 40.9 -1.0**
JHNI Jhansi 13.04 154 *ex* **Pn 23 47 41.7 -1.5**
JHNI *i* x x 23 47 60.0
JHNI *e*S S 23 49 58.5 -10
DANN Dangsing 13.19 130 *e*P **Pn 23 47 44.8 -0.6**
DANN *e*S S 23 50 03.7 -9.0
WMQ Urumqi 13.33 56 *e*P **Pn 23 47 47.6 +0.9**
WMQ pmax pmax
comp=Z,12nm,0.6s
KOLN Koldanda 13.52 132 *e*P **Pn 23 47 49.0 -0.4**
KURBB Kurchatov Arra 13.94 17 P **Pn 23 47 54.1 -0.1**
comp=Z,2.6nm,0.8s,baz=208,slow=10,SNR=16
GKN Gorkha 13.98 129 *e*P **Pn 23 47 54.5 -0.6**
comp=Z,166nm,0.6s
GKN *e*S S 23 50 21.0 -10
KURK Kurchatov 14.05 17 **Pn 23 47 55.9 +0.4**
KURK Kurchatov 14.05 17 *ce*P **Pn 23 47 56.0 +0.5**
KURK pmax pmax
comp=Z,6.0nm,1.0s
KKN Kakani 14.54 128 *e*P **Pn 23 48 01.3 -0.6**
DMN Daman 14.55 128 *e*P **Pn 23 48 01.7 -0.5**
PKIN Phulchoki 14.76 128 *e*P **Pn 23 48 04.3 -0.4**
PKI Pulchoki 14.77 128 *e*P **Pn 23 48 04.3 -0.6**
BHPL Bhopal 14.79 161 *e*P **Pn 23 48 04.0 -0.9**
BHPL *e*S S 23 50 41.6 -7.8
GUN Gumba 14.83 126 *e*P **Pn 23 48 05.3 -0.4**
comp=Z,34nm,0.6s
AB31 Akbulak array 14.84 327 P **Pn 23 48 04.9 -0.4**
AB31 pmax pmax
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 14.84 327 P **Pn 23 48 04.9 -0.4**
ABKAR Akbulak array 14.84 327 P **Pn 23 48 04.8 -0.5**
JBP Jabalpur 15.66 153 *e*P **P 23 48 13.6 -1.7**
JBP *e*S S 23 50 59.5 -10
BVAR Borovoye Array 15.67 356 P **P 23 48 15.6 +0.4**
comp=Z,5.3nm,0.6s,baz=165,slow=12,SNR=41
BRVK Borovoye 15.71 356 P **P 23 48 15.8 +0.1**
BRVK IAmb IAmb 23 48 19.5
comp=Z,13nm,0.8s
BRVK Borovoye 15.71 356 *ce*P **P 23 48 16.5 +0.8**
BRVK pmax pmax
comp=Z,13nm,0.8s
RAMN Ramite 15.96 127 *e*P **P 23 48 18.8 -0.1**
comp=Z,86nm,0.7s
TAPN Taplejung 16.41 123 *e*P **P 23 48 24.5 +0.5**
comp=Z,34nm,0.6s
DGZ Jazzator, Alta 16.43 37 *i* P **Pn 23 48 25.9 +1.3**
DGZ pmax pmax
comp=Z,1.0nm,0.2s
ODAN Odare 16.53 125 *e*P **P 23 48 26.8 +1.6**
AKTO Aktyubinsk 16.56 326 P **Pn 23 48 26.5 +0.5**
comp=Z,6.8nm,0.7s,baz=127,slow=11,SNR=17
LSA Lhasa 17.47 111 P **Pn 23 48 38.3 +0.8**
LSA Lhasa 17.47 111 P **Pn 23 48 39.7 +2.2**
LSA pmax pmax
comp=Z,28nm,0.7s
LSA Lhasa 17.47 111 P **Pn 23 48 38.3 +0.8**
LSA pmax pmax
comp=Z,17nm,0.6s
BOK Bokaro 17.89 136 *e*P **P 23 48 41.5 +1.7**
WSAR Wadi Sarin 18.37 224 P **P 23 48 46.3 +1.2**
comp=Z,11nm,0.6s,baz=70,slow=6.3,SNR=14
UOSS Minazif 18.51 232 P **P 23 48 46.8 +0.2**
UOSS IAmb IAmb 23 49 15.0
comp=Z,9.6nm,1.1s
LKRN Lenkeran, Azer 18.56 281 P **P 23 48 48.0 +1.0**
ZAA0 Zalesovo Array 18.66 24 P **P 23 48 48.9 +1.0**
ZAA0 IAmb IAmb 23 48 52.8
comp=Z,9.2nm,0.8s
ZALV Zalesovo Beam 18.66 24 P **P 23 48 49.4 +1.4**
comp=Z,5.9nm,0.4s,baz=219,slow=10,SNR=35
ZALV Zalesovo Beam 18.66 24 P **P 23 48 49.0 +1.0**
MAK Makhachkala 19.71 294 *e*P **P 23 48 57.4 -1.8**
MAK *e*S **S 23 52 28.0 -2.3**
MAK pmax pmax
comp=Z,253nm,1.2s
SEKA Sheki 19.77 289 P **P 23 49 00.5 +0.5**
MNGR Mingechevir, A 19.84 288 P **P 23 49 01.7 +1.0**
ZKTA Zakatala 20.23 290 P **P 23 49 05.8 +0.9**
GANJ Ganja 20.41 287 P **P 23 49 07.8 +0.9**
SVE Sverdlovsk 20.93 342 *e*P **P 23 49 13.0 +0.9**
SVE pmax pmax
comp=Z,11nm,1.0s
NAX Nakhchivan 21.09 283 P **P 23 49 14.9 +0.8**
ARU Arti 21.14 339 P **P 23 49 15.4 +1.0**
comp=Z,2.6nm,0.4s,baz=155,slow=6.3,SNR=7.6
comp=Z,2.6nm,0.4s
ARU Arti 21.14 339 P **P 23 49 15.0 +0.6**
ARU IAmb IAmb 23 49 17.8
comp=Z,8.3nm,1.2s
ARU Arti 21.14 339 *d* P **P 23 49 14.9 +0.6**
ARU S **S 23 52 57.5 +0.4**
ARU pmax pmax
comp=Z,4.0nm,0.7s
GNI Garni 21.63 286 P **P 23 49 21.7 +1.9**
comp=Z,5.2nm,0.8s,baz=352,slow=2.8,SNR=6.0
comp=Z,5.2nm,0.8s
GNI Garni 21.63 286 P **P 23 49 20.8 +1.0**
GNI Garni 21.63 286 P **P 23 49 20.8 +1.0**
GNI pmax pmax
comp=Z,24nm,1.5s
ZEI Tsey 22.32 293 *e*P **P 23 49 29.2 +2.7**
ZEI pmax pmax
comp=Z,4.0nm,0.7s
ONI Oni 22.64 292 P **P 23 49 29.9 +0.7**
ONI IAmb IAmb 23 49 36.4
comp=Z,9.6nm,1.3s
ONI Oni 22.64 292 P **P 23 49 29.9 +0.7**
ONI pmax pmax
comp=Z,10.0nm,1.3s
BELG Belogornoye 22.86 319 P **P 23 49 31.4 +0.4**
comp=Z,18nm,0.9s,baz=118,slow=14,SNR=3.9
comp=Z,18nm,0.9s
BELG Belogornoye 22.86 319 *i* P **P 23 49 31.0 0.0**
BELG pmax pmax
comp=Z,4.0nm,1.0s
KBZ Khabaz 23.14 295 P **P 23 49 34.2 +0.6**
comp=Z,2.6nm,0.9s,baz=167,slow=4.8,SNR=6.2
comp=Z,2.6nm,0.9s
KBZ Khabaz 23.14 295 *ce*P **P 23 49 33.9 +0.4**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
SHA1 Shidzhatmaz 23.31 295 *i* P **P 23 49 34.9 -0.5**
KIV Kislovodsk 23.31 296 P **P 23 49 36.0 +0.7**
KIV IAmb IAmb 23 49 39.1
comp=Z,5.4nm,0.7s
KIV Kislovodsk 23.31 296 *e*P **P 23 49 35.0 -0.3**
KIV *e*S **S 23 53 31.3 -1.4**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,22nm,14.0s
LZH Lanzhou 25.25 83 ⇑P **P 23 49 51.8 -1.3**
LZH pP pP 23 50 33.5 -0.4
LZH sP sP 23 51 04.5 +6.2
LZH pmax pmax
comp=Z,12nm,1.5s
KIRV Kirov 25.90 332 P **P 23 49 58.0 -0.4**
comp=Z,7.7nm,0.7s,baz=92,slow=7.8,SNR=4.0
comp=Z,7.7nm,0.7s
KIRV Kirov 25.90 332 *ce*P **P 23 49 58.7 +0.3**
RAYN Ar Rayn 26.81 247 P **P 23 50 06.2 -0.8**
RAYN Ar Rayn 26.81 247 P **P 23 50 06.2 -0.8**
RAYN pmax pmax
comp=Z,2.0nm,0.9s
PZH PanZhiHua 27.14 105 P **P 23 50 12.1 +2.1**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,60nm,5.0s
VORR Voronezh 27.28 312 *e*P **P 23 50 06.7 -4.1**
OBN Obninsk 29.95 318 *e*P **P 23 50 34.3 0.0**
OBN pmax pmax
comp=Z,4.0nm,0.7s
BR131 Keskin Array S 30.16 286 P **P 23 50 37.4 +0.7**
BR131 IAmb IAmb 23 50 38.1
comp=Z,3.7nm,0.6s
BR131 Keskin Array S 30.16 286 P **P 23 50 37.4 +0.7**
BR131 pmax pmax
comp=Z,4.0nm,0.6s
BRTR Keskin Array B 30.16 286 P **P 23 50 37.5 +0.9**
comp=Z,1.9nm,0.6s,baz=101,slow=8.1,SNR=14
BRTR PcP **PcP 23 53 31.5 -1.1**
comp=Z,0.5nm,0.6s,baz=132,slow=2.1,SNR=3.1
comp=Z,1.9nm,0.6s
BRTR Keskin Array B 30.16 286 P **P 23 50 37.3 +0.7**
HHC Hu-ho-hao-te 30.48 71 *e*P **P 23 50 40.1 +0.7**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,89nm,5.0s
KLMR Klimovskoe 31.22 329 *e*P **P 23 50 44.1 -1.3**
KLMR *e* 23 51 58.7
KLMR pmax pmax
comp=Z,19nm,1.5s
KLMR Klimovskoe 31.22 329 *e*P **P 23 50 44.1 -1.3**
KLMR AMP 23 50 46.6
comp=Z,19nm,1.5s
KLMR *e*PP **PnPn 23 51 58.7 +2.2**
NRIK Noril'sk 33.05 10 *i* P **P 23 51 01.7 +0.4**
NRIK pmax pmax
comp=Z,7.0nm,0.9s
AKASG Malin Array Be 33.20 308 P **P 23 51 03.9 +1.0**
comp=Z,1.7nm,0.6s,baz=108,slow=9.1,SNR=12
comp=Z,1.7nm,0.6s
AKASG Malin Array Be 33.20 308 P **P 23 51 02.8 -0.1**
AKASG Malin Array Be 33.20 308 P **P 23 51 02.8 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.9s
ELL Elmali 33.62 282 P **P 23 51 07.2 +0.4**
ELL Elmali 33.62 282 P **P 23 51 07.2 +0.4**
ELL pmax pmax
comp=Z,19nm,0.7s
MNK Minsk 34.60 314 *i* P **P 23 51 13.4 -1.4**
MNK *i* *PP **pP 23 51 58.3 +1.5**
MNK *i* 23 52 36.5
MNK *i* 23 53 42.9
MNK *i* S **S 23 56 26.0 -2.9**
MNK *i* *SS **sS 23 57 46.8 +2.7**
MNK pmax pmax
comp=N,29nm,0.8s
MNK pmax pmax
comp=Z,10.0nm,0.6s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK MLR MLR
comp=E,101nm,21.0s
MNK MLR MLR
comp=Z,119nm,20.0s
MNK MLR MLR
comp=N,2μm,17.0s
MNK Minsk 34.60 314 *i* P **P 23 51 13.4 -1.4**
comp=E,4.0nm,0.9s
MNK *i* P **P 23 51 13.4 -1.4**
comp=N,29nm,0.8s
MNK *i* P **P 23 51 13.4 -1.4**
comp=Z,10.0nm,0.6s,baz=281
MNK *i* pP **pP 23 51 58.4 +1.5**
MNK *i* PP **PP 23 52 36.6 -0.9**
MNK *i* S **S 23 56 26.1 -2.9**
MNK *i* sS **sS 23 57 46.8 +2.7**
MNK *i* SS **SS 23 59 05.1 -0.9**
MNK *i* LRM MLR 00 07 02.7
comp=E,101nm,21.3s
MNK *i* LRM MLR 00 07 07.2
comp=Z,119nm,20.0s
MNK *i* LRM MLR 00 07 19.5
comp=N,2μm,17.3s
VRI Vrincioaia 34.69 299 ⇓P **P 23 51 16.3 +0.5**
PLOR Plostina 34.75 299 ⇑P **P 23 51 16.9 +0.6**
COVR Voineasa-Covas 35.06 299 ⇓P **P 23 51 19.7 +0.7**
BIZ Bicaz 35.09 301 ⇓P **P 23 51 19.9 +0.7**
MLR Muntele Rosu 35.26 298 ⇓P **P 23 51 21.3 +0.5**
MLR Muntele Rosu 35.26 298 P **P 23 51 21.8 +1.0**
MLR IAmb IAmb 23 51 23.8
comp=Z,8.3nm,0.7s
MLR Muntele Rosu 35.26 298 P **P 23 51 21.8 +1.0**
MLR pmax pmax
comp=Z,8.0nm,0.7s
NACGM Naroch 35.31 315 ⇓*e*P **P 23 51 21.1 +0.3**
baz=101
DOPR Dopca 35.62 299 ⇓P **P 23 51 24.4 +0.7**
BURAR Bucovina Array 35.68 302 ⇓P **P 23 51 25.2 +0.9**
BURAR Bucovina Array 35.68 302 P **P 23 51 24.6 +0.3**
BURAR Bucovina Array 35.68 302 P **P 23 51 24.6 +0.3**
BURAR pmax pmax
comp=Z,3.0nm,0.8s
BUR08 Bucovina Ar. S 35.69 302 P **P 23 51 24.6 +0.2**
VOIR 35.89 298 ⇓P **P 23 51 26.8 +0.7**
FIA1 FINESS Array S 37.32 325 P **P 23 51 37.9 0.0**
FINES FINESS Array B 37.32 325 P **P 23 51 38.4 +0.5**
comp=Z,3.0nm,0.5s,baz=114,slow=9.5,SNR=23
comp=Z,3.0nm,0.5s
FINES FINESS Array B 37.32 325 P **P 23 51 38.1 +0.3**
DRGR 37.42 301 ⇑P **P 23 51 39.4 +0.4**
DRGR 37.42 301 P **P 23 51 39.3 +0.4**
TRPA Tarpa 37.47 303 ⇓P **P 23 51 40.2 +1.0**
GZR Gura Zlata 37.49 298 ⇓P **P 23 51 40.2 +0.7**
VTS Vitosha 37.51 294 ⇑P **P 23 51 40.4 +0.5**
VTS Vitosha 37.51 294 P **P 23 51 40.8 +0.9**
VTS Vitosha 37.51 294 P **P 23 51 40.8 +0.9**
VTS pmax pmax
comp=Z,3.0nm,0.7s
KOLS Kolonicke sedl 37.62 304 *e*P **P 23 51 42.0 +1.5**
BLKB Belogradchik 37.77 295 ⇑P **P 23 51 42.4 +0.4**
BZS Buzias 38.28 299 ⇑P **P 23 51 46.5 +0.5**
DIVS Divibare 39.62 297 P **P 23 51 57.9 +0.5**
DIVS IAmb IAmb 23 51 59.2
comp=Z,7.6nm,1.1s
MORC Moravsky Sterou 40.67 306 *e*P **P** 23 52 11.7 +5.9
ARCES ARCESS Array B 40.71 337 P **P 23 52 06.5 +0.7**
comp=Z,2.7nm,0.5s,baz=110,slow=8.3,SNR=22
comp=Z,2.7nm,0.5s
VRAC Vranov 41.32 305 ⇓P **P 23 52 12.0 +0.8**
VRAC Vranov 41.32 305 P **P 23 52 11.9 +0.8**
VRAC Vranov 41.32 305 *e*P **P 23 52 12.4 +1.3**
DPC Dobruska-Polom 41.42 307 *e*P **P 23 52 12.7 +0.8**
DPC Dobruska-Polom 41.42 307 *e*P **P 23 52 12.7 +0.8**
KRUC Moravsky 41.48 305 *e*P **P 23 52 13.5 +1.2**
CONA Conrad Observa 41.95 303 *e*P **P 23 52 16.1 -0.2**
comp=Z,5.8nm,1.1s
CKRC Cesky Krumlov 42.87 305 *e*P **P 23 52 25.9 +2.3**
MOA Molln 43.02 303 *e*P **P 23 52 24.3 -0.6**
comp=Z,5.3nm,0.9s
GERES GERESS Array B 43.26 305 P **P 23 52 27.0 +0.2**
comp=Z,0.2nm,0.5s,baz=92,slow=7.2,SNR=2.2
comp=Z,0.2nm,0.5s
KHC Kasperske Hory 43.31 305 *e*P **P 23 52 27.6 +0.5**
KHC Kasperske Hory 43.31 305 *e*P **P 23 52 27.6 +0.5**
CUC Castrocucco 43.53 292 P **P 23 52 29.4 +0.4**
CUC IAmb IAmb 23 52 31.0
comp=Z,11nm,0.7s
NC405 NORSAR Array S 44.05 323 P **P 23 52 32.7 -0.1**
NB2 NORSAR Subarra 44.29 322 P **P 23 52 34.6 -0.1**
comp=Z,2.3nm,0.5s,baz=93,slow=7.9
NOA NORSAR Array B 44.29 322 P **P 23 52 34.6 -0.1**
comp=Z,3.1nm,0.6s,baz=94,slow=7.6,SNR=16
comp=Z,3.1nm,0.6s
ABTA Abfaltersbach 44.38 302 *e*P **P 23 52 34.9 -0.9**
comp=Z,3.5nm,1.1s
WTTA Wattenberg 44.88 303 *e*P **P 23 52 38.9 -0.9**
comp=Z,4.7nm,0.9s
WATA Walderalm 44.90 303 *e*P **P 23 52 38.3 -1.6**
comp=Z,2.8nm,0.8s
KONO Kongsberg 45.04 320 P **P 23 52 40.7 0.0**
KONO Kongsberg 45.04 320 P **P 23 52 40.7 0.0**
KONO pmax pmax
comp=Z,27nm,1.4s
CTI Castel Tesino 45.10 301 P **P 23 52 41.1 -0.3**
CTI Castel Tesino 45.10 301 P **P 23 52 41.1 -0.3**
CTI pmax pmax
comp=Z,6.0nm,0.9s
MOTA Moosalm 45.22 303 *e*P **P 23 52 41.4 -1.0**
comp=Z,4.3nm,0.8s
RETA Reutte 45.42 303 *e*P **P 23 52 43.7 -0.2**
FETA Feichten 45.53 303 *e*P **P 23 52 44.1 -0.8**
comp=Z,4.6nm,1.2s
FUORN Ofenpass-Fuorn 45.92 302 P **P 23 52 47.6 -0.5**
DAVA Damuels 46.05 303 *e*P **P 23 52 48.4 -0.6**
comp=Z,7.6nm,0.6s
BFO Black Forest 46.87 305 *ce*P **P 23 52 54.4 -0.7**
SENIN Lac Senin/Sane 47.98 302 P **P 23 53 03.5 -0.5**
SENIN IAmb IAmb 23 53 14.1
comp=Z,10nm,1.4s
KEST Kesra 49.74 288 P **P 23 53 18.0 +0.7**
comp=Z,2.1nm,0.6s,baz=110,slow=1.3,SNR=5.6
comp=Z,2.1nm,0.6s
KEST Kesra 49.74 288 P **P 23 53 17.7 +0.4**
KEST IAmb IAmb 23 53 18.2
comp=Z,11nm,1.5s
ESBB Sonseca Array 57.95 298 P **P 23 54 16.2 -0.5**
ESDC Sonseca Array 57.95 298 P **P 23 54 16.4 -0.3**
comp=Z,2.1nm,0.8s,baz=55,slow=7.1,SNR=23
comp=Z,2.1nm,0.8s
TAM Tamanrasset 58.48 276 P **P 23 54 20.4 -0.3**
TAM Tamanrasset 58.48 276 P **P 23 54 20.4 -0.3**
TAM pmax pmax
comp=Z,1.0nm,0.7s
EUNU Eureka 62.18 356 P **P 23 54 45.4 +0.6**
TOA0 Torodi Ar. Sit 66.78 269 P **P 23 55 13.6 -1.8**
TOA0 IAmb IAmb 23 55 14.4
comp=Z,4.1nm,0.6s
TORD Torodi Ar. Bea 66.78 269 P **P 23 55 13.2 -2.2**
comp=Z,3.1nm,0.4s,baz=48,slow=5.6,SNR=91
comp=Z,3.1nm,0.4s
TOLK Toolik Lake Re 69.78 15 P **P 23 55 33.3 +0.1**
TOLK IAmb IAmb 23 55 34.3
comp=Z,5.6nm,0.8s
KOWA Kowa 70.55 274 P **P 23 55 37.5 -1.3**
IMAR Indian Mountai 70.99 18 P **P 23 55 40.2 -0.3**
BMAR Burnt Mountain 71.81 14 P **P 23 55 46.3 +0.8**
MLY Manley 72.50 18 P **P 23 55 49.4 -0.2**
INK Inuvik 72.84 10 P **P 23 55 51.4 -0.1**
comp=Z,2.4nm,0.6s,baz=332,slow=9.0,SNR=8.0
comp=Z,2.4nm,0.6s
INK Inuvik 72.84 10 P **P 23 55 51.4 -0.1**
INK Inuvik 72.84 10 P **P 23 55 51.4 -0.1**
INK pmax pmax
comp=Z,14nm,1.5s
K20K Telida 73.01 20 P **P 23 55 52.9 +0.3**
K20K IAmb IAmb 23 55 53.5
comp=Z,8.9nm,1.2s
CAST Castle Rocks 73.49 19 P **P 23 55 55.7 +0.3**
CAST IAmb IAmb 23 55 56.4
comp=Z,7.3nm,1.1s
ILAR Eielson Array 73.62 16 P **P 23 55 55.1 -1.0**
comp=Z,1.0nm,0.9s,baz=312,slow=4.7,SNR=7.9
comp=Z,1.0nm,0.9s
PPLA Purkeypile 73.89 20 P **P 23 55 57.4 -0.5**
SKT Skwentna 74.81 20 P **P 23 56 02.4 -0.7**
SKT IAmb IAmb 23 56 03.2
comp=Z,4.5nm,1.0s
O18K Koktuh Hills 75.48 23 P **P 23 56 07.5 +0.6**
O18K IAmb IAmb 23 56 08.2
comp=Z,3.9nm,0.7s
DBIC Dimbokro 75.78 268 P **P 23 56 08.2 -1.2**
DBIC Dimbokro 75.78 268 P **P 23 56 08.2 -1.2**
DBIC pmax pmax
comp=Z,17nm,1.5s
SML Sawmill 75.80 19 P **P 23 56 08.1 -0.6**
SML IAmb IAmb 23 56 08.8
comp=Z,3.9nm,0.7s
SCM Sheep Creek Mo 76.03 18 P **P 23 56 09.7 -0.4**
SCM IAmb IAmb 23 56 19.1
comp=Z,8.4nm,1.3s
SCM Sheep Creek Mo 76.03 18 P **P 23 56 09.7 -0.4**
SCM pmax pmax
comp=Z,8.0nm,1.3s
BCAR Beaver Creek A 76.22 15 P **P 23 56 11.2 +0.1**
M27K Edge Creek, AK 76.83 16 P **P 23 56 14.8 +0.2**
M27K IAmb IAmb 23 56 16.1
comp=Z,4.4nm,1.2s
CTGM Chitina Glacie 78.19 16 P **P 23 56 22.0 -0.3**
CTGM IAmb IAmb 23 56 28.8
comp=Z,6.4nm,1.4s
HYT Haines Junctio 79.12 14 P **P 23 56 27.4 +0.1**
YKA Yellowknife Ar 80.29 3 P **P 23 56 33.1 -0.2**
comp=Z,2.0nm,0.6s,baz=351,slow=5.2,SNR=6.2
comp=Z,2.0nm,0.6s
PLCA Paso Flores 151.11 252 PKPbc **PKPbc 00 04 13.0 -1.4**
comp=Z,0.5nm,0.5s,baz=45,slow=7.1,SNR=3.8

MEX ***05*** *23:53:47.0±0.7, 14°.67N×92°.22W, h82km±8km, MD4.0*
GCG ***05*** *23:53:49.0±0.3, 15°.07N×92°.12W, h60km±38km, MD3.4*
ISC 05 23:53:48.8±1.6, 14°.74N±0°.10×92°.31W±0°.07, h62km±9km,
n13, σ1°.55/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.17**	**14**	*e*P	**Pn**	**23 53 57.7**	**-0.7**
THIG				*i* S	**Sn**	**23 54 06.6**	**+1.3**
PATR	**El Naranjo**	**0.38**	**11**	*e*P	**Pn**	**23 53 59.1**	**-1.0**
PATR				*e*S	**Sn**	**23 54 08.8**	**+0.5**
CHUJ	**Union Juarez**	**0.40**	**29**	*i* P	**Pn**	**23 53 59.4**	**-0.9**
CHUJ				*e*S	**Sn**	**23 54 09.2**	**+0.6**
PAVE	**Pavencul**	**0.47**	**16**	*e*P	**Pn**	**23 54 00.1**	**-0.8**
PAVE				*e*S	**Sn**	**23 54 10.8**	**+1.2**
STG3	**Santiaguito 3,**	**0.71**	**92**	*e*P	**Pn**	**23 54 03.1**	**-0.4**
STG3				*e*S	**Sn**	**23 54 14.3**	**0.0**
PCIG		**1.30**	**318**	*i* P	**Pn**	**23 54 09.9**	**-0.9**
PCIG				*i* S	**Sn**	**23 54 26.9**	**-0.5**
FUG	**Fuego 3**	**1.45**	**101**	*e*P	**Pn**	**23 54 12.8**	**-0.2**

FUG				*e*S	Sn	23 54 31.2	-0.1
CCIG	**Comitan**	**1.54**	**6**	*e*P	Pn	23 54 12.8	-1.5
CCIG				*i* S	Sn	23 54 37.5	+4.0
PCG	**Pacaya**	**1.68**	**102**	*e*S	Sn	23 54 37.3	+0.4
CARR	**Arriaga**	**2.15**	**314**	*i* P	Pn	23 54 22.4	0.0
CARR				*e*S	Sn	23 54 48.7	+0.7
TGIG		**2.17**	**339**	*i* S	Sn	23 54 44.6	-4.0
UXUV	**UXUV**	**3.11**	**326**	*e*P	Pn	23 54 36.2	+0.7
UXUV				*e*S	Sn	23 55 13.0	+1.5
CMIG	**Matias Romero**	**3.41**	**314**	*e*P	Pn	23 54 40.5	+1.0
CMIG				*i* S	Sn	23 55 17.9	-0.8

IDC 06 00:24:47.3±61.0, 16°.38S×174°.29W, h568km±147km, mb3.1/3, mbtmp4.1/4, Error ellipse: s-maj=920.1km s-min=143.3km az=77.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.45**	**258**	P	P	00 26 40.4	0.0
	20nm,0.6s,baz=128,slow=8.9,SNR=20						
STKA	**Stephens Creek**	**42.81**	**241**	P	P	00 31 55.9	-0.1
	1.9nm,0.9s,baz=80,slow=11,SNR=1.7						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**48.79**	**258**	P	P	00 32 41.1	-0.5
	0.6nm,0.7s,baz=95,slow=6.8,SNR=16						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**49.00**	**253**	P	P	00 32 43.2	+0.1
	3.8nm,0.5s,baz=89,slow=8.1,SNR=48						
	3.8nm,0.5s						

*GCMT **06** 00:25:24.0±0.4, 5°.50S±0°.04×11°.73W±0°.03, h28km±1km, MW4.9/79, Moment Tensor Solution. s11,c12; s79,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.39±.23; $M_{\theta\theta}$0.25±.14; $M_{\phi\phi}$2.14±.15; $M_{r\theta}$0.65±.19; $M_{\theta\phi}$-1.01±.11; $M_{r\phi}$1.47±.18; Best double couple: $M_0$2.95600×10^{16} NP1:ϕ_s178.00000°, δ61.00000°, λ-67.00000°. NP2: ϕ_s317.00000°, δ37.00000°, λ-125.00000°. Principal axes: T 2.8280, Plg13.0000°, Azm252.0000°; N 0.2580, Plg20.0000°, Azm347.0000°; P -3.0840, Plg66.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 06 00:25:16.5±11.0, 6°.06S×11°.20W, h0km, mb3.5/3, mbtmp3.6/3, MS3.8/8 Error ellipse: s-maj=456.3km s-min=119.6km az=142.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.71**	**241**	T	T	00 29 58.6	
	baz=59,slow=74						
H10N1	**ASCENSION HYDR**	**3.71**	**241**	T	T	00 29 58.8	
	baz=59,slow=74						
H10N3	**ASCENSION HYDR**	**3.73**	**241**	T	T	00 30 04.4	
	baz=59,slow=74						
H10S2	**ASCENSION HYDR**	**4.47**	**230**	T	T	00 30 51.8	
	baz=171,slow=74,SNR=18						
H10S3	**ASCENSION HYDR**	**4.48**	**230**	T	T	00 30 54.1	
	baz=49,slow=74						
DBIC	**Dimbokro**	**14.14**	**27**	LR	LR	00 32 45.8	
	comp=Z,333nm,21.9s,baz=200,slow=32						
BBTS	**Babate**	**21.25**	**346**	LR	LR	00 37 22.9	
	comp=Z,87nm,21.1s,baz=168,slow=34						
KOWA	**Kowa**	**21.63**	**19**	LR	LR	00 37 45.0	
	comp=Z,241nm,18.5s,baz=126,slow=35						
TORD	**Torodi Ar. Bea**	**22.98**	**34**	P	P	00 30 22.9	-0.1
	1.4nm,0.9s,baz=229,slow=9.4,SNR=6.6						
TORD				LR	LR	00 38 15.0	
	comp=Z,293nm,20.4s,baz=216,slow=34						
RCBR	**Riachuelo**	**24.57**	**269**	LR	LR	00 37 36.9	
	comp=Z,369nm,21.2s,baz=244,slow=30						
TSUM	**Tsumeb**	**30.91**	**118**	LR	LR	00 42 41.7	
	comp=Z,236nm,18.7s,baz=322,slow=34						
BDFB	**Brasilia**	**37.33**	**252**	LR	LR	00 45 01.0	
	comp=Z,156nm,18.7s,baz=131,slow=32						
LSZ	**Lusaka**	**39.72**	**107**	LR	LR	00 47 30.2	
	comp=Z,128nm,18.1s,baz=302,slow=34						
GERES	**GERESS Array B**	**58.86**	**19**	P	P	00 35 17.2	+0.1
	0.3nm,0.6s,baz=216,slow=6.6,SNR=4.1						
	0.3nm,0.6s						
AKASG	**Malin Array Be**	**66.39**	**27**	P	P	00 36 07.1	-0.1
	0.5nm,0.6s,baz=222,slow=6.2,SNR=1.8						
	0.5nm,0.6s						

IDC 06 00:26:36.0±6.8, 5°.56S×11°.54W, h0km, mb3.8/4, mbtmp3.8/4, MS3.8/8, Error ellipse: s-maj=226.2km s-min=108.5km az=142.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.69**	**232**	T	T	00 31 13.3	
	baz=56,slow=74,SNR=3.1						
H10N1	**ASCENSION HYDR**	**3.70**	**232**	T	T	00 31 15.4	
	baz=56,slow=74,SNR=3.9						
H10N3	**ASCENSION HYDR**	**3.71**	**232**	T	T	00 31 22.7	
	baz=56,slow=74,SNR=3.1						
H10S2	**ASCENSION HYDR**	**4.57**	**222**	T	T	00 32 15.0	
	baz=184						
H10S3	**ASCENSION HYDR**	**4.58**	**222**	T	T	00 32 16.8	
	baz=36						
TORD	**Torodi Ar. Bea**	**22.76**	**35**	P	P	00 31 40.1	-0.1
	3.3nm,0.8s,baz=218,slow=11,SNR=13						
	3.3nm,0.8s						
MATP	**Matopo**	**41.58**	**115**	LR	LR	00 50 20.0	
	comp=Z,247nm,20.9s,baz=240,slow=34						
GERES	**GERESS Array B**	**58.50**	**19**	P	P	00 36 34.6	+0.5
	0.6nm,0.7s,baz=205,slow=5.9,SNR=4.2						
	0.6nm,0.7s						
BRTR	**Keskin Array B**	**61.32**	**39**	P	P	00 36 54.3	+0.5
	0.5nm,0.7s,baz=223,slow=5.3,SNR=2.4						
	0.5nm,0.7s						
AKASG	**Malin Array Be**	**66.10**	**27**	P	P	00 37 24.2	-0.7
	1.1nm,0.7s,baz=227,slow=7.1,SNR=6.0						
	1.1nm,0.7s						
AAK	**Ala-Archa**	**90.81**	**47**	LR	LR	01 21 48.0	
	comp=Z,21nm,20.1s,baz=277,slow=36						
PALK	**Pallekele**	**92.91**	**83**	LR	LR	01 17 22.4	
	comp=Z,72nm,19.3s,baz=7.2,slow=33						
RPN	**Rapa Nui**	**94.39**	**242**	LR	LR	01 15 47.9	
	comp=Z,73nm,19.1s,baz=105,slow=31						
TXAR	**Lajitas Array**	**94.53**	**299**	LR	LR	01 17 02.8	
	comp=Z,30nm,21.3s,baz=32,slow=32						
MKAR	**Makanchi Array**	**96.64**	**44**	LR	LR	01 29 56.5	
	comp=Z,22nm,18.1s,baz=276,slow=39						
VNDA	**Vanda**	**96.96**	**179**	LR	LR	01 22 20.4	
	comp=Z,28nm,18.7s,baz=246,slow=34						
ANMO	**Albuquerque**	**97.17**	**304**	LR	LR	01 16 32.0	
	comp=Z,31nm,19.4s,baz=68,slow=31						

*NNC **06** 00:39:32.3±1.0, 46°.51N×82°.66E, h0km, mb3.5, mpv2.8, Error ellipse: s-maj=7.8km s-min=4.7km az=56.0*
*SOME **06** 00:39:33.4, 46°.62N×82°.37E, h10km*

ISC 06 00:39:25.6±3.9, 46°.9N±0°.1×83°.1E±0°.1, h4km±17km, n22, σ1°.14/36, 16C-8D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK06	**Makanchi Array**	**0.56**	**261**	⇓P	Pn	00 39 39.8	-0.6
MK06				⇑S	Sg	00 39 44.4	+0.7
MK07	**Makanchi Array**	**0.57**	**259**	⇓P	Pn	00 39 39.6	-0.9
MK07				⇓S	Sg	00 39 44.2	+0.4
MK02	**Makanchi Array**	**0.57**	**260**	⇑P	Pn	00 39 39.7	-0.8
MK02				⇑S	Sg	00 39 44.3	+0.5
MK01	**Makanchi Array**	**0.57**	**260**	⇑P	Pn	00 39 39.6	-1.0
MK01				⇑S	Sg	00 39 44.4	+0.4
MK03	**Makanchi Array**	**0.57**	**260**	⇑P	Pn	00 39 39.8	-0.8
MK03				⇑S	Sg	00 39 44.3	+0.3
MK04	**Makanchi Array**	**0.58**	**261**	⇑P	Pn	00 39 39.8	-0.8
MK04				⇓S	Sg	00 39 44.3	+0.2
MK05	**Makanchi Array**	**0.58**	**263**	⇓P	Pn	00 39 40.1	-0.5
MK05				⇑S	Sg	00 39 44.4	+0.3
MK31	**Makanchi Array**	**0.58**	**263**	⇑P	Pn	00 39 40.1	-0.5
	2.7nm,0.2s,baz=94,slow=17,SNR=1829						
MK31				⇑S	Sb	00 39 45.7	-1.1
	10nm,0.2s,baz=114,slow=24,SNR=46						
MK08	**Makanchi Array**	**0.58**	**259**	⇓P	Pn	00 39 39.8	-0.9
MK08				⇑S	Sg	00 39 44.5	+0.1
MK09	**Makanchi Array**	**0.59**	**261**	⇓P	Pn	00 39 39.9	-0.9
MK09				⇑S	Sg	00 39 45.0	+0.5
MAKZ	**Makanchi**	**0.79**	**266**	⇑P	Pn	00 39 43.2	-0.3
	0.7nm,0.2s						
MAKZ				⇑S	Sg	00 39 50.8	-0.2
	3.9nm,0.2s						
DJR	**Jarkent**	**3.45**	**224**	*e*P	Pb	00 40 26.8	-0.5
	0.9nm,0.1s						
DJR				*e*S	Sn	00 41 04.8	+3.3
	3.7nm,0.2s						
DJR	**Jarkent**	**3.45**	**224**	Pg	Pb	00 40 26.8	-0.5
	0.8nm,0.1s						
DJR				Lg	Lg	00 41 04.8	
	2.8nm,0.3s						
KTMS	**Ketmen**	**3.94**	**211**	*e*P	Pb	00 40 36.3	+0.6
	0.4nm,0.1s						
KTMS				*e*S	Sb	00 41 21.2	-2.6
	3.4nm,0.1s						
BLB	**Baldybastay**	**4.28**	**231**	*e*P	Pb	00 40 42.1	+0.6
	2.3nm,0.2s						
BLB				*e*S	Sb	00 41 31.6	-2.0
	3.8nm,0.3s						
BLB	**Baldybastay**	**4.28**	**231**	Pg	Pb	00 40 42.3	+0.8
	1.9nm,0.3s						
BLB				Lg	Lg	00 41 31.8	
	4.3nm,0.4s						
ARXS	**Arharly**	**4.57**	**236**	*e*P	Pb	00 40 47.0	+0.6
	1.3nm,0.2s						
ARXS				*e*S	Sb	00 41 39.8	-2.0
	5.5nm,0.3s						
ARXS	**Arharly**	**4.57**	**236**	Pg	Pb	00 40 47.0	+0.6
	0.3nm,0.1s						
ARXS				Lg	Lg	00 41 39.8	
	5.1nm,0.3s						
KURBB	**Kurchatov Arra**	**4.83**	**323**	⇑Lg	Lg	00 42 08.8	
	6.9nm,0.6s						
KURK	**Kurchatov**	**4.87**	**324**	⇓Lg	Lg	00 42 12.0	
	3.9nm,0.6s						
SATY	**Saty**	**5.07**	**223**	*e*P	Pb	00 40 56.2	+1.3
	1.7nm,0.2s						
SATY				*e*S	Sb	00 41 55.9	-0.4
	3.9nm,0.2s						
SATY	**Saty**	**5.07**	**223**	Pg	Pb	00 40 56.6	+1.6
	1.1nm,0.3s						
SATY				Lg	Lg	00 41 55.8	
	3.5nm,0.1s						

*IDC **06** 00:42:51.1±2.7, 24°.19S×179°.64W, h470km±28km, mb3.5/5, mbtmp4.4/7, Error ellipse: s-maj=38.1km s-min=23.2km az=146.0*
*NEIC **06** 00:42:55.9±1.2, 23°.4S±0°.2×179°.71W±0°.07, h550km±15km, mb4.3/23, Error ellipse: s-maj=30.8km s-min=8.4km az=188.0*

ISC 06 00:42:55.3±0.7, 23°.6S±0°.1×179°.79W±0°.10, h532km, n34, σ0°.72/33, mb4.3/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.13**	**340**	P	P	00 44 34.8	+0.4
	8.0nm,0.5s,baz=262,slow=22,SNR=12						
NIUE	**Niue**	**10.22**	**66**	P	P	00 45 14.5	-0.7
MARNC	**Mare, Loyalty**	**11.44**	**278**	P	P	00 45 27.9	-0.1
URZ	**Urewera**	**14.90**	**190**	P	P	00 45 53.8	-10
	19nm,0.9s,baz=16,slow=15,SNR=4.0						
QRZ	**Quartz Range**	**18.39**	**199**	P	P	00 46 38.2	+0.8
KHZ	**Kahutara**	**19.61**	**195**	P	P	00 46 49.9	+1.5
EIDS	**Eidsvold**	**26.55**	**260**	P	P	00 47 51.4	+0.7
EIDS				IAmb	IAmb	00 48 11.3	
	comp=Z,13nm,1.4s						
CTA	**Charters Tower**	**31.66**	**270**	P	P	00 48 36.0	+0.8
	comp=Z,12nm,0.4s,baz=95,slow=11,SNR=29						
	comp=Z,12nm,0.4s						
CTAO	**Charters Tower**	**31.66**	**270**	P	P	00 48 35.8	+0.6
TOO	**Toolangi**	**32.80**	**237**	P	P	00 48 45.2	+0.6
TOO				IAmb	IAmb	00 49 01.2	
	comp=Z,27nm,1.5s						
STKA	**Stephens Creek**	**35.03**	**248**	P	P	00 49 03.7	+0.3
	comp=Z,1.5nm,0.4s,baz=98,slow=13,SNR=5.0						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**35.03**	**248**	P	P	00 49 03.6	+0.2
BBOO	**Buckleboo**	**39.76**	**247**	P	P	00 49 41.6	-0.5
BBOO				IAmb	IAmb	00 49 55.8	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**42.28**	**260**	P	P	00 50 01.5	-0.9
AS31				IAmb	IAmb	00 50 03.4	
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**42.28**	**260**	P	P	00 50 02.4	0.0
	comp=Z,3.6nm,0.5s,baz=96,slow=7.4,SNR=28						
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**42.28**	**260**	P	P	00 50 01.9	-0.4
WR0	**Warramunga Arr**	**42.43**	**266**	P	P	00 50 02.7	-0.8
WR0				IAmb	IAmb	00 50 04.3	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**42.61**	**266**	P	P	00 50 04.2	-0.7
WB0				IAmb	IAmb	00 50 05.0	
	comp=Z,7.4nm,0.7s						
WRA	**Warramunga Arr**	**42.62**	**266**	P	P	00 50 04.7	-0.3
	comp=Z,4.8nm,0.5s,baz=102,slow=8.0,SNR=153						
	comp=Z,4.8nm,0.5s						
WRA	**Warramunga Arr**	**42.62**	**266**	P	P	00 50 04.2	-0.8
FORT	**Forrest**	**46.61**	**249**	P	P	00 50 34.9	-0.7
FORT				IAmb	IAmb	00 50 38.3	
	comp=Z,16nm,1.0s						
MTN	**Manton Dam**	**47.62**	**274**	P	P	00 50 42.9	-0.5
MTN				IAmb	IAmb	00 51 11.5	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**48.88**	**269**	P	P	00 50 52.7	-0.1
KNRA				IAmb	IAmb	00 50 59.6	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.04**	**265**	P	P	00 51 08.7	+0.1
FITZ				IAmb	IAmb	00 51 29.9	
	comp=Z,5.7nm,1.2s						
PSA00	**Pilbara Seismi**	**55.41**	**259**	P	P	00 51 38.9	-0.7
PSA00				IAmb	IAmb	00 51 55.4	
	comp=Z,11nm,1.4s						
MBWA	**Marble Bar**	**55.62**	**260**	P	P	00 51 40.0	-1.1
MBWA				IAmb	IAmb	00 51 52.1	
	comp=Z,9.4nm,1.2s						
MORW	**Morawa**	**57.17**	**250**	P	P	00 51 51.2	-0.5
MORW				IAmb	IAmb	00 52 16.7	
	comp=Z,16nm,1.4s						
MMRI	**Maumere**	**57.28**	**275**	P	P	00 51 51.8	-0.8
GIRL	**Giralia**	**60.18**	**257**	P	P	00 52 12.8	+0.8
QSPA	**South Pole Qui**	**66.53**	**180**	P	P	00 52 52.2	0.0
BELA	**Belgrano 2**	**76.75**	**173**	P	P	00 53 51.2	-0.2
SNAA	**Sanae**	**85.01**	**179**	P	P	00 54 33.2	-1.0
TXAR	**Lajitas Array**	**90.09**	**58**	P	P	00 55 00.0	+1.2
	comp=Z,0.2nm,0.6s,baz=207,slow=8.1,SNR=3.5						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**147.52**	**308**	PKPbc	**PKPab**	**01 01 44.6**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=70,slow=4.8,SNR=4.0						

IDC 06 00:43:53.3±3.1, 6°.50S×154°.91E, h0km, mb3.8/2, mbtmp3.8/3, ML3.8/1, MS3.3/6, Error ellipse: s-maj=58.1km s-min=36.1km az=73.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.60**	**307**	Pn	Pn	00 44 50.2	-0.2
	7.3nm,0.3s,baz=351,slow=22,SNR=1.5						
KRVT				Sn	Sn	00 45 36.5	+2.8
	12nm,0.3s,baz=299,slow=22,SNR=4.0						
KRVT				LR	LR	00 46 29.0	
	comp=Z,220nm,18.4s,baz=267,slow=43						
	21nm,0.3s						
HNR	**Honiara**	**5.78**	**121**	LR	LR	00 47 16.4	
	comp=Z,872nm,21.1s,baz=102,slow=35						
PMG	**Port Moresby**	**8.20**	**249**	LR	LR	00 48 44.6	
	comp=Z,128nm,18.4s,baz=63,slow=36						
WRA	**Warramunga Arr**	**24.03**	**234**	P	P	00 49 10.2	-0.1
	3.1nm,0.7s,baz=58,slow=9.7,SNR=18						
	3.1nm,0.7s						
ASAR	**Alice Springs**	**26.44**	**228**	P	P	00 49 32.3	+0.1
	0.6nm,0.6s,baz=57,slow=8.6,SNR=5.1						
	0.6nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.42**	**25**	T	T	01 17 43.4	
	baz=203						
H11S2	**WAKE ISLAND Hy**	**27.42**	**25**	T	T	01 18 11.0	
	baz=203						
H11S1	**WAKE ISLAND Hy**	**27.43**	**25**	T	T	01 17 50.4	
	baz=203						
STKA	**Stephens Creek**	**28.15**	**205**	LR	LR	01 00 19.1	
	comp=Z,71nm,19.0s,baz=315,slow=35						
KAPI	**Kappang**	**35.01**	**271**	LR	LR	01 07 23.9	
	comp=Z,18nm,18.1s,baz=58,slow=40						
BRDH	**Bariadhala**	**68.30**	**297**	LR	LR	01 25 01.8	
	comp=Z,62nm,19.9s,baz=301,slow=36						
TORD	**Torodi Ar. Bea**	**152.81**	**286**	PKPbc	PKPbc	01 03 53.2	-0.3
	0.2nm,0.5s,baz=50,slow=2.4,SNR=2.1						

*VAO **06** 00:47:42.9±0.4, 20°.14S×68°.63W, h10km, mb4.4*
*SJA **06** 00:47:43.2±1.7, 20°.27S×69°.27W, h98km±6km, ML4.3, MW4.2*
*GUC **06** 00:47:44.6±0.7, 20°.25S×69°.18W, h94km±2km, ML4.4*
*NEIC **06** 00:47:44.1±1.5, 20°.28S±0°.02×69°.22W±0°.05, h95km±4km, mb4.4/30, ML4.4(GUC), Error ellipse: s-maj=7.3km s-min=2.4km az=106.0*
*IDC **06** 00:47:45.0±0.7, 20°.29S×68°.99W, h103km±6km, mb3.8/8, mbtmp4.3/12, Error ellipse: s-maj=18.2km s-min=7.3km az=99.0*

ISC 06 00:47:43.4±0.5, 20°.26S±0°.03×69°.21W±0°.04, h91km±4km, n153, σ1°.53/179, mb4.4/12, 8C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.13**	**23**		**Pn**	**00 47 57.2**	**+0.4**
PB08				Sn	Sn	00 48 08.2	+1.6
PB08	**IPOC Station P**	**0.13**	**23**	⇓*i*P	Pn	00 47 58.1	+1.2
PB08				*i* S	Sn	00 48 08.5	+1.8
PB08				IAML		00 48 09.3	
	comp=E,38μm,0.4s						
PB08	**IPOC Station P**	**0.13**	**23**	*i* P	Pn	00 47 58.0	+1.2
PB08				*e*S	Sn	00 48 08.8	+2.1
PB08				IAML		00 48 09.1	
	comp=Z,14μm,0.7s						
GO01	**Chusmiza**	**0.59**	**1**		Pn	00 48 00.6	+1.1
GO01				Sn	Sn	00 48 13.7	+2.2
GO01	**Chusmiza**	**0.59**	**1**	⇓*i*P	Pn	00 48 00.7	+1.1
GO01				*i* S	Sn	00 48 13.2	+1.7
GO01				IAML		00 48 14.4	
	comp=N,43μm,0.1s						
GO01	**Chusmiza**	**0.59**	**1**	*i* P	Pn	00 48 00.0	+0.4
GO01				*e*S	Sn	00 48 13.9	+2.5
PB01	**IPOC Station P**	**0.82**	**199**		Pn	00 48 02.3	+0.9
PB01				Sn	Sn	00 48 16.2	+1.4
PB01	**IPOC Station P**	**0.82**	**199**	⇓*i*P	Pn	00 48 02.5	+1.1
PB01				*i* S	Sn	00 48 16.3	+1.6
PB01				IAML		00 48 17.2	
	comp=N,18μm,0.5s						
PB01	**IPOC Station P**	**0.82**	**199**	*i* P	Pn	00 48 02.0	+0.6
PB01				*e*S	Sn	00 48 16.6	+1.9
PB01				IAML		00 48 17.2	
	comp=Z,8μm,0.1s						
TA02	**Huaiquique**	**0.87**	**269**		Pn	00 48 02.5	+0.9
TA02				Sn	Sn	00 48 17.2	+1.8
TA02	**Huaiquique**	**0.87**	**269**	⇑*i*P	Pn	00 48 02.6	+0.9
TA02				*i* S	Sn	00 48 16.8	+1.5
TA02				IAML		00 48 17.6	
	comp=N,40μm,0.2s						
TA02	**Huaiquique**	**0.87**	**269**	*i* P	Pn	00 48 02.0	+0.3
TA02				*e*S	Sn	00 48 16.9	+1.5
TA02				IAML		00 48 18.9	
	comp=Z,17μm,0.3s						
TA01	**Diego Aracena**	**0.96**	**251**		Pn	00 48 03.4	+0.6
TA01				Sn	Sn	00 48 18.1	+0.9
TA01	**Diego Aracena**	**0.96**	**251**	⇑*i*P	Pn	00 48 03.4	+0.6
TA01				*i* S	Sn	00 48 18.2	+0.9
TA01				IAML		00 48 20.7	
	comp=E,6μm,0.6s						
TA01	**Diego Aracena**	**0.96**	**251**	*i* P	Pn	00 48 03.0	+0.3
TA01				*e*S	Sn	00 48 18.6	+1.4
TA01				IAML		00 48 19.9	
	comp=Z,5μm,0.6s						
PATCX	**Punta Patache**	**1.05**	**238**	Pn	Pn	00 48 04.5	+0.6
PATCX				Sn	Sn	00 48 20.4	+1.2
PATCX	**Punta Patache**	**1.05**	**238**	⇑*i*P	Pn	00 48 04.7	+0.9
PATCX				*i* S	Sn	00 48 20.2	+1.1
PATCX				IAML		00 48 21.1	
	comp=N,13μm,0.2s						
PATCX	**Punta Patache**	**1.05**	**238**	*i* P	Pn	00 48 04.0	+0.2
PATCX				*e*S	Sn	00 48 20.8	+1.7
PATCX				IAML		00 48 21.3	
	comp=Z,4μm,0.2s						
PB02	**IPOC Station P**	**1.24**	**211**		Pn	00 48 07.1	+1.0
PB02	**IPOC Station P**	**1.24**	**211**	⇑*i*P	Pn	00 48 07.2	+1.1
PB02				*i* S	Sn	00 48 24.5	+1.3
PB02				IAML		00 48 32.3	
	comp=E,14μm,0.4s						
PB02	**IPOC Station P**	**1.24**	**211**	*i* P	Pn	00 48 07.0	+0.9
PB02				*e*S	Sn	00 48 24.9	+1.8
PB02				IAML		00 48 29.0	
	comp=Z,9μm,0.2s						
PB09	**IPOC Station P**	**1.53**	**181**		Pn	00 48 11.2	+1.5
PB09				Sn	Sn	00 48 32.0	+2.3
PB09	**IPOC Station P**	**1.53**	**181**	⇓*i*P	Pn	00 48 11.3	+1.5
PB09				*i* S	Sn	00 48 31.8	+2.1
PB09				IAML		00 48 34.0	
	comp=N,4μm,0.5s						
PB09	**IPOC Station P**	**1.53**	**181**	*i* P	Pn	00 48 11.0	+1.2
PB09				IAML		00 48 33.6	
	comp=Z,2μm,1.0s						
PB07	**IPOC Station P**	**1.59**	**203**		Pn	00 48 11.5	+0.9
PB07				Sn	Sn	00 48 31.9	+0.8
PB07	**IPOC Station P**	**1.59**	**203**	⇑*i*P	Pn	00 48 11.8	+1.2
PB07				*i* S	Sn	00 48 32.9	+1.8
PB07				IAML		00 48 35.2	
	comp=E,5μm,0.4s						
PB07	**IPOC Station P**	**1.59**	**203**	*i* P	Pn	00 48 11.0	+0.4
PB07				IAML		00 48 35.1	
	comp=Z,4μm,0.9s						
PB16	**IPOC Station P**	**1.93**	**351**		Pn	00 48 17.5	+2.1
PB16	**IPOC Station P**	**1.93**	**351**	⇓*i*P	Pn	00 48 17.6	+2.1
PB16				*i* S	Sn	00 48 41.9	+2.3
PB16				IAML		00 48 50.8	
	comp=E,2μm,0.6s						
PB16	**IPOC Station P**	**1.93**	**351**	*i* P	Pn	00 48 18.0	+2.6
PB16				IAML		00 48 53.0	
	comp=Z,1μm,0.4s						
PB12	**IPOC Station P**	**1.95**	**327**		Pn	00 48 15.7	+0.6
PB12				Sn	Sn	00 48 40.8	+1.6
PB12	**IPOC Station P**	**1.95**	**327**	⇑*i*P	Pn	00 48 15.8	+0.6
PB12				*i* S	Sn	00 48 39.2	0.0
PB12				IAML		00 48 45.8	
	comp=E,6μm,0.2s						
PB12	**IPOC Station P**	**1.95**	**327**	*i* P	Pn	00 48 15.0	-0.1
PB12				IAML		00 48 47.3	
	comp=Z,4μm,0.4s						
AP01	**Chacalluta**	**2.16**	**330**		Pn	00 48 18.6	+0.8
AP01	**Chac

YJA IAML 00 49 35.6
comp=Z,15nm,1.2s
LPAZ La Paz 4.08 15 P **Pn 00 48 47.6 +3.5**
comp=Z,72nm,0.6s,baz=183,slow=7.9,SNR=225
LPAZ S **Sn 00 49 35.7 +4.6**
comp=Z,33nm,0.5s,baz=234,slow=25,SNR=2.2
LPAZ La Paz 4.08 15 Pn **Pn 00 48 47.5 +3.3**
LPAZ La Paz 4.08 15 *i* P **Pn 00 48 47.0 +2.8**
PB14 IPOC Station P 4.49 194 Pn **Pn 00 48 49.0 -0.4**
GO02 Mina Guanaco 4.89 184 Pn **Pn 00 48 54.5 -0.4**
GO02 Mina Guanaco 4.89 184 *i* P **Pn 00 48 55.0 +0.1**
AC02 Maricunga 6.55 179 Pn **Pn 00 49 17.5 -0.1**
SIV San Ignacio 8.82 63 P **Pn 00 49 46.7 -1.5**
comp=Z,12nm,0.5s,baz=252,slow=11,SNR=78
SIV S **Sn 00 51 22.4 -3.6**
comp=Z,7.8nm,0.9s,baz=148,slow=21,SNR=4.5
BBRB Robore, Bolivi 9.09 79 *e*P **Pn 00 49 47.5 -4.3**
CO01 Juntas del Tor 9.71 185 Pn **Pn 00 50 00.5 +0.1**
ETMB Extrema 10.78 16 *e*P **Pn 00 50 13.8 -1.1**
CO02 Combarbal 11.02 188 Pn **Pn 00 50 19.7 +1.6**
VILB Vilhena 11.28 51 *e*P **Pn 00 50 18.1 -3.6**
ANTJ Antonio Joao (12.44 100 *e*P **Pn 00 50 33.2 -4.1**
CPUP Villa Florida 12.47 121 P **Pn 00 50 36.5 -1.1**
comp=Z,7.3nm,0.7s,baz=306,slow=12,SNR=18
AQDB Aquidauana 12.67 93 Pn 00 50 41.9 +1.6
AQDB Aquidauana 12.67 93 *e*P **Pn 00 50 35.9 -4.4**
MT02 Curacav 13.06 187 Pn **Pn 00 50 45.6 +0.2**
SALV Santo Antonio 13.56 74 *e*P **Pn 00 50 47.8 -4.2**
MT01 Popeta 13.67 187 Pn **Pn 00 50 53.1 -0.4**
AZCA Azaras, Argent 14.35 125 *e*P **Pn 00 51 01.1 -1.2**
RPRD Ribas do Rio P 14.54 94 *e*P **Pn 00 51 02.7 -2.1**
BO02 Sierra Bellavi 14.54 185 Pn 00 51 03.7 -1.1
MCR1 Marechal Candi 14.64 109 *e*P **Pn 00 51 05.1 -0.9**
PDRB Porto dos Gac 14.75 56 *e*P **Pn 00 51 04.9 -2.6**
C2SB Chapadao do Su 15.51 87 *e*P **Pn 00 51 14.9 -2.2**
UNIS Unistalda (Bra 15.54 127 *e*P **Pn 00 51 18.0 +0.5**
CRSM Crissiumal (Br 15.62 120 *e*P **Pn 00 51 18.0 -0.4**
TRCB Terra Rica 15.63 102 Pn 00 51 18.9 +0.3
TRCB IAmb IAmb 00 51 23.3
comp=Z,25nm,0.7s
TRCB Terra Rica 15.63 102 *e*P **Pn 00 51 18.2 -0.4**
H03N1 Juan Fernandez 15.71 211 T T 01 07 58.3
baz=33,slow=72,SNR=73
H03N2 Juan Fernandez 15.72 211 T T 01 07 35.3
baz=33,slow=72,SNR=36
H03N3 Juan Fernandez 15.73 211 T T 01 07 33.0
baz=33,slow=72,SNR=41
CLDB Colider 15.93 56 *e*P **Pn 00 51 21.0 -1.3**
RODS Rosario do Sul 16.15 131 *e*P **P 00 51 26.4 -0.2**
PTGB Pitanga 16.45 109 *e*P **Pn 00 51 29.2 +0.3**
PCMB Pacaembu 16.82 98 *e*P **Pn 00 51 32.5 -0.9**
ALGR Alto Alegre (B 16.99 123 *e*P **Pn 00 51 35.5 0.0**
ITAB Concordia 17.10 117 Pn 00 51 36.6 -0.1
ITAB IAmb IAmb 00 51 39.6
comp=Z,46nm,1.4s
ITAB Concordia 17.10 117 *e*P **P 00 51 37.5 +0.5**
CPSB Cacapava Do Su 17.45 128 *e*P **Pn 00 51 42.0 +0.9**
PLTB Pedras Altas 18.08 132 P **P 00 51 47.6 -0.4**
PLTB IAmb IAmb 00 51 49.9
comp=Z,22nm,1.4s
PLTB Pedras Altas 18.08 132 *e*P **Pn 00 51 49.9 +1.2**
FRTB Fartura 18.50 103 *e*P **P 00 51 52.1 -0.4**
TRQA Tornquist 18.81 162 P **P 00 51 55.4 -0.4**
CNLB Canela 18.93 122 *e*P **Pn 00 51 59.5 +0.7**
MCRA Macar, Loja 18.95 325 P **P 00 51 58.5 +1.0**
SNDB Serra Nova Dou 19.07 67 *e*P **P 00 51 57.8 -1.0**
BOSC San Juan Bosco 19.27 331 P **P 00 52 01.5 +0.3**
BOSC IAmb IAmb 00 52 10.3
comp=Z,17nm,0.5s
TIJ01 Guaruva-PR 19.29 109 *e*P **Pn 00 52 02.5 -0.7**
GO06 Curarrehue 19.36 185 P **P 00 52 02.5 +0.5**
GO06 IAmb IAmb 00 52 03.8
comp=Z,15nm,0.8s
BB19B Bebedouro 19.37 96 *e*P **P 00 52 01.3 -0.8**
IPMB Ipameri, GO 19.97 87 *e*P **P 00 52 08.1 -0.6**
RCLB Rio Claro- Sao 20.30 100 *e*P **P 00 52 12.2 -0.1**
PLCA Paso Flores 20.44 183 P **P 00 52 13.9 +0.3**
comp=Z,10nm,0.8s,baz=8.4,slow=12,SNR=17
comp=Z,10nm,0.8s
PLCA Paso Flores 20.44 183 P **P 00 52 13.4 -0.2**
PLCA IAmb IAmb 00 52 15.3
comp=Z,14nm,0.9s
BDFB Brasilia 20.67 81 P **P 00 52 14.9 -1.4**
comp=Z,3.3nm,0.5s,baz=259,slow=9.4,SNR=8.2
comp=Z,3.3nm,0.5s
BDFB Brasilia 20.67 81 P **P 00 52 15.5 -0.8**
BDFB IAmb IAmb 00 52 18.6
comp=Z,13nm,1.3s
BDFB Brasilia 20.67 81 *e*P **P 00 52 15.9 -0.4**
PET01 Itanhaem-SP 20.68 105 *e*P **P 00 52 16.2 -0.1**
LL04 Puerto Octay 20.77 187 P **P 00 52 16.7 -0.2**
LL04 IAmb IAmb 00 52 37.0
comp=Z,18nm,1.4s
VAS01 Vassouras-RJ 24.09 99 *e*P **P 00 52 53.6 +3.0**
AY01 Puyuhuapi 24.26 186 P **P 00 52 51.5 -0.4**
AY01 IAmb IAmb 00 52 52.0
comp=Z,10.0nm,0.8s
GUA01 Guaratinga, BA 28.11 87 *e*P **P 00 53 30.8 +3.8**
TEIG Tepich 44.36 334 P **P 00 55 44.5 -0.3**
TEIG IAmb IAmb 00 55 56.2
comp=Z,7.3nm,1.1s
SWET Sewanee 57.41 344 P **P 00 57 21.5 -1.2**
V52A Sevierville 57.44 346 P **P 00 57 22.0 -0.7**
TXAR Lajitas Array 59.46 325 P **P 00 57 37.2 +0.1**
comp=Z,0.5nm,0.7s,baz=147,slow=6.7,SNR=7.3
comp=Z,0.5nm,0.7s
VNA3 Neumayer Olymp 61.34 161 P **P 00 57 50.0 +0.8**
ERPA Erie 62.86 351 P **P 00 57 59.3 -0.3**
WVNY West Valley, N 62.95 352 P **P 00 58 00.1 -0.1**
SNAA Sanae 63.54 161 P **P 00 58 04.5 +0.6**
SNAA Sanae 63.54 161 P **P 00 58 03.8 -0.1**
SNAA IAmb IAmb 00 58 05.2
comp=Z,2.9nm,0.9s
P38A Dawn 63.76 339 P **P 00 58 05.5 -0.2**
TROLL Troll, Antarti 65.25 161 P **P 00 58 16.1 +0.9**
SADO Sadowa 65.34 352 P **P 00 58 15.2 -0.6**
TRQ Mont Tremblant 66.34 356 P **P 00 58 21.9 -0.4**
TRQ IAmb IAmb 00 58 28.6
comp=Z,8.5nm,1.2s
DBIC Dimbokro 68.66 74 P **P 00 58 38.4 +0.8**
comp=Z,5.1nm,0.8s,baz=257,slow=7.3,SNR=4.9
DBIC pP **PcP 00 59 02.1 +0.2**
comp=Z,9.2nm,1.0s,baz=226,slow=3.5,SNR=4.4
comp=Z,5.1nm,0.8s
DBIC Dimbokro 68.66 74 P **P 00 58 38.3 +0.8**
DBIC IAmb IAmb 00 59 03.3
comp=Z,13nm,1.1s
TPNV Topopah Spring 72.15 322 P **P 00 58 59.5 +0.9**
TPNV IAmb IAmb 00 59 01.0
comp=Z,2.5nm,0.7s
NVAR Mina Array Bea 74.35 322 P **P 00 59 13.3 +1.7**
comp=Z,0.5nm,0.4s,baz=154,slow=6.5,SNR=1.4
comp=Z,0.5nm,0.4s
KVN Kaiserville 74.65 323 P **P 00 59 14.3 +1.0**
TOA0 Torodi Ar. Sit 77.21 71 P **P 00 59 26.5 -1.5**
TOA0 IAmb IAmb 00 59 54.1
comp=Z,7.5nm,1.1s
TORD Torodi Ar. Bea 77.21 71 P **P 00 59 26.4 -1.6**
comp=Z,3.0nm,0.5s,baz=253,slow=5.4,SNR=36
TORD pP **pP 00 59 53.0 0.0**
comp=Z,5.1nm,0.9s,baz=251,slow=5.6,SNR=9.5
TORD sP **sP 01 00 03.5 +0.2**
comp=Z,1.1nm,0.5s,baz=251,slow=5.8,SNR=2.6
comp=Z,3.0nm,0.5s
VNDA Vanda 78.02 190 P **P 00 59 30.3 -1.2**
comp=Z,0.6nm,0.8s,baz=114,slow=2.4,SNR=4.3
comp=Z,0.6nm,0.8s
VNDA Vanda 78.02 190 P **P 00 59 29.8 -1.7**
MAW Mawson 85.59 163 P **P 01 00 12.0 +0.7**
YKA Yellowknife Ar 89.93 341 P **P 01 00 32.2 +0.3**
comp=Z,3.6nm,0.8s,baz=142,slow=4.7,SNR=6.2
comp=Z,3.6nm,0.8s
H11S2 WAKE ISLAND Hyl 27.44 278 T T 03 26 26.6
baz=102,slow=74,SNR=103
H11S1 WAKE ISLAND Hyl 27.45 278 T T 03 26 25.1
baz=102,slow=74,SNR=78
H11S3 WAKE ISLAND Hyl 27.45 278 T T 03 26 26.1
baz=102,slow=74,SNR=59
H11N3 WAKE ISLAND Hyl 27.49 280 T T 03 26 33.5
baz=101,slow=74,SNR=67
H11N2 WAKE ISLAND Hyl 27.50 280 T T 03 26 30.7
baz=101,slow=74,SNR=70
H11N1 WAKE ISLAND Hyl 27.50 280 T T 03 26 31.6
baz=101,slow=74,SNR=58
ASAR Alice Springs 130.87 208 PKP **PKPdf 01 06 44.3 -0.8**
comp=Z,0.5nm,0.6s,baz=169,slow=0.9,SNR=4.4
WRA Warramunga Arr 133.87 211 PKP **PKPdf 01 06 50.7 0.0**
comp=Z,0.7nm,0.8s,baz=169,slow=1.8,SNR=3.6
ZALV Zalesovo Beam 140.95 24 PKP **PKPdf 01 07 02.7 0.0**
comp=Z,0.6nm,0.6s,baz=305,slow=5.2,SNR=3.7
MKAR Makanchi Array 144.78 35 PKP **PKPab 01 07 08.9 +0.1**
comp=Z,1.2nm,0.6s,baz=313,slow=3.1,SNR=14
USRK Ussuriysk Ar. 150.31 328 PKPbc **PKiKP 01 07 24.8 -0.2**
comp=Z,1.5nm,0.6s,baz=54,slow=2.3,SNR=4.9
SONM Songino Array 152.26 6 PKPbc **PKPbc 01 07 28.9 +0.1**
comp=Z,1.4nm,0.5s,baz=317,slow=1.9,SNR=6.2

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*IDC **06** 00:52:54.8±1.5, 19°.70N×69°.27W, h0km, mb3.6/3, mbtmp3.9/5, ML3.1/2, MS3.3/5, Error ellipse: s-maj=34.5km s-min=32.4km az=164.0*
*NEIC **06** 00:52:55.3±1.9, 19°.36N±0°.04×69°.30W±0°.02, h10km±1km, mb4.2/6, Error ellipse: s-maj=6.4km s-min=2.9km az=205.0*
*OSPL **06** 00:52:59.9±5.0, 19°.51N×69°.19W, h93km±35km, ML3.8*
ISC 06 00:52:54.6±0.6, 19°.40N±0°.04×69°.27W±0°.03, h10km, n57, σ1§96/58, mb3.8/4, MS3.4/5, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONA1	**Toro Cenizo, N**	**0.56 268**		*i* P	Pn	00 53 16.5	+7.8
LONA1				*e*S	**Sn**	**00 53 26.4**	**+8.4**
LONA1				IAML		00 53 28.2	
comp=Z,3μm,0.6s							
DR12	**Loma Pena Alta**	**0.61 190**			**Pg**	**00 53 05.5**	**-1.0**
SDD	**Santo Domingo**	**1.11 213**		Pg	**Pb**	**00 53 15.0**	**-1.0**
SDD				Sg	**Sb**	**00 53 29.9**	**-0.6**
PCDR	**Punta Cana, DR**	**1.21 136**			**Pg**	**00 53 17.6**	**-0.4**
PCDR				Sg	**Sn**	**00 53 35.8**	**+1.7**
PCDR	**Punta Cana, DR**	**1.21 136**		*i* P	**Pg**	**00 53 17.9**	**-0.1**
PCDR				*e*S	**Sn**	**00 53 36.9**	**+2.8**
PCDR				IAML		00 53 44.7	
comp=Z,1μm,0.9s							
SC01	**Santiago de Io**	**1.38 272**			**Pg**	**00 53 20.0**	**-1.0**
SC01				Sg	**Sg**	**00 53 40.5**	**+1.6**
BANI	**BANI**	**1.44 226**			**Pn**	**00 53 19.4**	**-1.4**
SDDR	**Presa de Saban**	**1.95 258**		Pn	**Pb**	**00 53 29.0**	**-1.3**
SDDR	**Presa de Saban**	**1.95 258**		*i* P	**Pb**	**00 53 29.5**	**-0.8**
SDDR				*e*S	**Sg**	**00 53 56.4**	**-1.0**
SDDR				IAML		00 53 59.4	
comp=Z,547nm,0.8s							
AGPR	**Aguadilla, PR**	**2.24 114**			**Pb**	**00 53 33.5**	**-1.7**
AGPR	**Aguadilla, PR**	**2.24 114**		*i* P	**Pb**	**00 53 33.9**	**-1.3**
AGPR				*e*S	**Sb**	**00 54 02.5**	**-0.4**
AGPR				IAML		00 54 14.1	
comp=Z,654nm,1.6s							
PRSN	**Puerto Rico Se**	**2.33 120**			**Pb**	**00 53 34.0**	**-2.7**
CRPR	**Cabo Rojo, PR**	**2.47 124**			**Pb**	**00 53 36.1**	**-2.9**
CRPR	**Cabo Rojo, PR**	**2.47 124**		*i* P	**Pb**	**00 53 37.2**	**-1.8**
CRPR				IAML		00 54 15.6	
comp=Z,316nm,0.9s							
MLPR	**Magueyes Islan**	**2.54 124**		Pn	**Pn**	**00 53 36.5**	**+0.6**
AOPR	**Arecibo Observ**	**2.60 113**			**Pb**	**00 53 38.8**	**-2.5**
LOPE2	**Hotel El Peder**	**2.71 240**		*i* P	**Pb**	**00 53 42.1**	**-1.1**
LOPE2				IAML		00 54 29.1	
comp=Z,317nm,1.3s							
GRTK	**Grand Turk**	**2.74 321**		Pn	**Pn**	**00 53 38.3**	**-0.3**
GRTK	**Grand Turk**	**2.74 321**		*i* P	**Pn**	**00 53 38.3**	**-0.3**
GRTK				*e*S	**Sn**	**00 54 11.5**	**-0.2**
GRTK				IAML		00 54 18.7	
comp=Z,164nm,1.4s							
EMPR	**Esperanza - Ma**	**2.75 109**		Pn	**Pn**	**00 53 39.2**	**+0.5**
OBIP	**Obispado Ponce**	**2.86 118**			**Pn**	**00 53 40.7**	**+0.4**
CELP	**Cerrillos**	**2.87 117**			**Pn**	**00 53 40.9**	**+0.6**
PAPH	**Port-au-Prince**	**3.00 254**		*i* P	**Pb**	**00 53 44.7**	**-3.4**
PAPH				IAML		00 54 30.9	
comp=Z,74nm,0.5s							
GCPR	**Guaynabo City**	**3.20 109**			**Pn**	**00 53 45.6**	**+0.6**
SJG	**San Juan**	**3.22 113**			**Pn**	**00 53 45.3**	**+0.1**
CBYP	**Canovanas**	**3.42 109**			**Pn**	**00 53 48.1**	**0.0**
HUMP	**Col San Antoni**	**3.47 111**			**Pn**	**00 53 49.4**	**+0.8**
MTP	**Monte Pirata**	**3.75 110**		Pn	**Pn**	**00 53 53.3**	**+0.8**
CUPR	**Culebra, Puert**	**3.93 105**			**Pn**	**00 53 55.2**	**+0.3**
STVI	**Saint Thomas**	**4.21 104**			**Pn**	**00 53 59.2**	**+0.3**
CDVI	**St. Croix**	**4.57 110**		Pn	**Pn**	**00 54 06.7**	**+2.9**
BAUV	**El Baul**	**10.46 173**		Pn	**Pn**	**00 55 26.8**	**+2.1**
SDV	**Santo Domingo**	**10.53 187**		Pn	Pn	00 55 31.1	+5.3
comp=Z,1.8nm,0.3s,baz=36,slow=15,SNR=3.6							
comp=Z,5.3nm,0.3s							
PAMC	**Pamplona, Colo**	**12.44 196**		*e*P	**Pn**	**00 55 49.6**	**-2.6**
UREC	**San Jos de Ur**	**13.07 209**		*e*P	**Pn**	**00 56 01.7**	**+1.1**
PTBC	**PUERTO BERRIO,**	**13.74 202**		*e*P	**Pn**	**00 56 10.0**	**+0.4**
RUSC	**La Rusia**	**13.93 196**		*e*P	**Pn**	**00 56 12.6**	**0.0**
SPBC	**San Pablo de B**	**14.44 200**		*e*P	**Pn**	**00 56 21.0**	**+1.7**
CBOC	**Ciudad Bolivar**	**14.97 207**		*e*P	**Pn**	**00 56 26.4**	**-0.1**
ROSC	**El Rosal**	**15.28 199**		Pn	**P**	**00 56 36.9**	**+1.1**
comp=Z,1.4nm,0.3s,baz=76,slow=16,SNR=2.0							
comp=Z,5.5nm,0.4s							
ROSC	**El Rosal**	**15.28 199**		Pn	**Pn**	**00 56 32.3**	**+1.4**
ROSC				IAmb	IAmb	00 56 44.5	
comp=Z,11nm,0.9s							
GUY2C	**Guyana, Caldas**	**15.29 204**		*e*P	**Pn**	**00 56 29.3**	**-1.8**
CHIC	**Chingaza**	**15.31 197**		*e*P	**Pn**	**00 56 30.8**	**-0.5**
PLMC	**San Jos del P**	**15.94 206**		*e*P	**Pn**	**00 56 33.3**	**-5.9**
T59A	**Double "B" Far**	**18.96 339**		P	**Pn**	**00 57 17.1**	**+0.6**
T59A				IAmb	IAmb	00 57 23.8	
comp=Z,15nm,1.2s							
S57A	**Dark Hollow, R**	**20.15 337**		P	Pn	00 57 29.1	-1.9
S57A				IAmb	IAmb	00 57 48.2	
comp=Z,20nm,1.4s							
OTAV	**Otavalo**	**21.06 206**		P	**P**	**00 57 38.3**	**-1.2**
OTAV				IAmb	IAmb	00 57 46.4	
comp=Z,9.3nm,1.1s							
MDP	**Montagnes des**	**21.55 129**		LR	LR	01 06 57.4	
comp=Z,36nm,19.8s,baz=182,slow=39							
TXAR	**Lajitas Array**	**32.76 294**		P	**P**	**00 59 27.6**	**-0.4**
comp=Z,0.6nm,0.7s,baz=103,slow=9.2,SNR=8.5							
comp=Z,0.6nm,0.7s							
TXAR	**Lajitas Array**	**32.76 294**		P	**P**	**00 59 27.3**	**-0.7**
TX31	**Lajitas Ar. Si**	**32.76 294**		P	**P**	**00 59 28.0**	**0.0**
LPIG	**La Paz**	**38.31 285**		LR	LR	01 17 59.4	
comp=Z,22nm,19.0s,baz=114,slow=39							
NVAR	**Mina Array Bea**	**46.34 305**		P	**P**	**01 01 22.8**	**+1.6**
comp=Z,0.2nm,0.3s,baz=131,slow=3.7,SNR=1.8							
NVAR				LR	LR	01 22 41.1	
comp=Z,55nm,18.8s,baz=90,slow=39							
comp=Z,0.2nm,0.3s							
NEW	**Newport**	**48.02 318**		LR	LR	01 22 00.8	
comp=Z,72nm,18.2s,baz=55,slow=36							
YBH	**Yreka Blue Hor**	**50.23 309**		LR	LR	01 23 57.8	
comp=Z,32nm,18.1s,baz=39,slow=37							
ESDC	**Sonseca Array**	**59.05 55**		P	**P**	**01 02 55.5**	**+0.4**
comp=Z,0.7nm,0.8s,baz=266,slow=6.3,SNR=5.4							
comp=Z,0.7nm,0.8s							
PZH	**PanZhiHua**	**133.55 11**		PKP	**PKiKP**	**01 12 11.8**	**-1.7**

IDC 06 01:23:27.5±3.6, 13°.19S×167°.46E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=167.5km s-min=33.8km az=141.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.41 254**		P	P	01 29 60.0	+0.5
0.2nm,0.8s,baz=84,slow=8.7,SNR=1.2							
0.2nm,0.8s							
ASAR	**Alice Springs**	**33.42 247**		P	P	01 30 08.0	-0.4
0.3nm,0.5s,baz=75,slow=9.1,SNR=5.5							
0.3nm,0.5s							
ILAR	**Eielson Array**	**85.01 18**		P	P	01 36 04.9	+0.4
0.3nm,0.5s,baz=236,slow=5.9,SNR=5.1							
0.3nm,0.5s							
MKAR	**Makanchi Array**	**96.22 316**		P	P	01 36 57.4	-0.3
0.3nm,0.5s,baz=100,slow=6.3,SNR=2.0							
0.3nm,0.5s							
ARCES	**ARCESS Array B**	**118.81 346**		PKP	PKPdf	01 42 16.6	-0.7
6.9nm,1.1s,baz=44,slow=2.9,SNR=1.7							

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*PRU **06** 01:25:25.4±0.0, 51°.41N×16°.18E, h0km*
*VIE **06** 01:25:26.8±1.0, 51°.33N×16°.43E, h0km, mb2.5/5, ml2.8/4, Error ellipse: s-maj=8.3km s-min=5.6km az=122.0 48 km NW of Wroclaw Suspected Mining induced.*
ISC 06 01:25:24.4±1.3, 51°.48N±0°.05×16°.24E±0°.03, h0km, n24, σ1§03/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64 177**		*e*Pg	**Pg**	**01 25 36.5**	**-0.1**
KSP				*e*Sg	**Sg**	**01 25 44.3**	**-0.5**
CHVC	**Chvalec**	**0.90 187**		*e*PG	**Pg**	**01 25 41.4**	**-0.2**
CHVC				*e*SG	**Sg**	**01 25 52.3**	**-0.9**
comp=Z,28nm,0.5s							
OSTC	**Ostas**	**0.92 181**		*e*PG	**Pg**	**01 25 42.2**	**+0.1**
OSTC				*e*SG	**Sg**	**01 25 53.4**	**-0.6**
comp=Z,32nm,0.7s							
UPC	**Upice**	**0.98 188**		*e*PG	**Pg**	**01 25 42.6**	**-0.6**
UPC				*e*SG	**Sg**	**01 25 54.4**	**-1.5**
comp=Z,87nm,0.5s							
DPC	**Dobruska-Polom**	**1.13 177**		*e*PG	**Pg**	**01 25 45.5**	**-0.6**
DPC				*e*SG	**Sg**	**01 25 59.5**	**-1.2**
comp=Z,32nm,0.6s							
PVCC	**Panska Ves**	**1.42 229**		*e*PG	**Pn**	**01 25 51.2**	**-0.3**
PVCC				*e*SG	**Sg**	**01 26 08.9**	**-1.1**
comp=Z,162nm,0.5s							
KRLC	**Kraliky**	**1.45 166**		*e*PG	**Pn**	**01 25 51.3**	**-0.6**
KRLC				*e*SG	**Sg**	**01 26 09.4**	**-1.4**
comp=Z,27nm,0.9s							
BRG	**Berggiesshubel**	**1.57 248**		Pg	**Pb**	**01 25 54.2**	**0.0**
BRG				Sg	**Sb**	**01 26 14.4**	**-0.2**
BRG				Amp		01 26 15.7	
comp=Z,45nm,0.3s							
PRU	**Pruhonice**	**1.84 217**		*e*PG	**Pb**	**01 25 58.2**	**-0.7**
PRU				*e*SG	**Sn**	**01 26 21.3**	**+0.1**
comp=Z,27nm,0.6s							
MORC	**Moravsky Berou**	**1.90 153**		*e*PN	**Pn**	**01 25 57.3**	**-0.8**
MORC				*e*SG	**Sb**	**01 26 24.1**	**0.0**
CLL	**Collm**	**2.03 266**		*e*Pg	**Pg**	**01 26 03.0**	**-0.4**
CLL				*e*Sg	**Sg**	**01 26 29.0**	**-0.7**
comp=Z,20nm,0.3s							
CLL				LmV		10 30 00.0	
comp=Z,100nm,18.6s							
OKC	**Ostrava-Krasne**	**2.04 143**		*e*PG	**Pb**	**01 26 02.6**	**+0.2**
OKC				*e*SG	**Sg**	**01 26 29.2**	**-0.8**
comp=Z,17nm,0.6s							
VRAC	**Vranov**	**2.18 174**		*e*PN	**Pn**	**01 26 01.9**	**-0.1**
VRAC				*e*SG	**Sb**	**01 26 32.7**	**+0.3**
TREC	**Trest**	**2.24 193**		*e*SG	**Sb**	**01 26 34.0**	**0.0**
comp=Z,15nm,0.6s							
MAUC	**Maruska**	**2.35 154**		*e*PG	**Pb**	**01 26 08.2**	**+0.6**
MAUC				*e*SG	**Sg**	**01 26 38.9**	**-0.9**
comp=Z,33nm,0.8s							
KRUC	**Moravsky**	**2.42 178**		*e*PN	**Pn**	**01 26 05.9**	**+0.7**
KRUC				*e*SG	**Sg**	**01 26 40.6**	**-1.5**
OJC	**Ojcow**	**2.58 118**		*e*Pg	**Pb**	**01 26 11.9**	**+0.3**
OJC				*e*Sg	**Sg**	**01 26 47.1**	**-0.4**
NKC	**Novy Kostel**	**2.71 244**		*e*PG	**Pb**	**01 26 13.9**	**+0.2**
NKC				*e*SG	**Sb**	**01 26 48.6**	**+1.2**
comp=Z,25nm,0.3s							
KHC	**Kasperske Hory**	**2.90 217**		*e*PN	**Pn**	**01 26 12.2**	**+0.3**
KHC				*e*PG	**Pb**	**01 26 17.5**	**+0.4**
KHC				*e*SN	**Sn**	**01 26 45.0**	**-2.5**
KHC				*e*SG	**Sb**	**01 26 54.5**	**+1.4**
comp=Z,13nm,0.8s							
CKRC	**Cesky Krumlov**	**2.94 206**		*e*PN	**Pn**	**01 26 12.6**	**+0.3**
CKRC				*e*PG	**Pb**	**01 26 18.2**	**+0.6**
CKRC				*e*SG	**Sb**	**01 26 56.0**	**+2.0**
CONA	**Conrad Observa**	**3.56 184**		*e*Pn	**Pn**	**01 26 22.5**	**+1.5**
comp=Z,0.3nm,0.1s							
CONA				*e*Sg	**Sg**	**01 27 18.2**	**-0.5**
comp=Z,7.2nm,0.3s							
RONA	**Rosalia, Austr**	**3.78 179**		Sg	**Sg**	**01 27 25.3**	**-0.5**
comp=Z,7.3nm,0.5s							
MOA	**Molln**	**3.85 200**		*i* Pn	**Pn**	**01 26 25.4**	**+0.5**
comp=Z,0.9nm,0.4s							
MOA				*e*Pg	**Pg**	**01 26 37.3**	**-0.9**
comp=Z,1.5nm,0.4s							
MOA				*i* Sn	**Sn**	**01 27 12.7**	**+1.8**
comp=Z,0.7nm,0.2s							
BIOA	**Bad Ischl, Aus**	**4.15 205**		Pg	**Pg**	**01 26 46.8**	**+2.9**
comp=Z,2.4nm,0.3s							
BIOA				Sg	**Sg**	**01 27 35.7**	**-1.9**

ASRS 06 01:41:53.4±0.2, 50°N±1°×91°.3E±1°.0, h5km, MLh3.3/17, 3C-1D, Error ellipse: s-maj=3.2km s-min=1.8km az=158.0, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLNR	**Muhor-Tarhata,**	**1.88 254**		Pg	Pg	01 42 31.1	+1.7
SLNR				Sg	Sg	01 42 56.9	+3.2
CUR	**Chagan-Uzun**	**1.88 264**		Pg	Pg	01 42 30.7	+1.3
CUR				Sg	Sg	01 42 53.9	+0.2
ULGR	**Ulagan, Altay**	**2.12 279**		Pg	Pg	01 42 36.1	+2.0
ULGR				Sg	Sg	01 43 02.6	+1.0
CHBI	**Chibit, Altay**	**2.40 271**		Pg	Pg	01 42 40.4	+1.0
CHBI				Sg	Sg	01 43 12.6	+2.0
KZLR	**Kyzyl**	**2.45 54**		Sg	Sg	01 43 14.7	+2.6
DJO	**Djoy, Khakassi**	**2.46 360**		Pg	Pg	01 42 44.1	+3.5
DJO				Sg	Sg	01 43 16.1	+3.7
DJOS	**Djoyskaya Sosn**	**2.48 2**		Sg	Sg	01 43 18.2	+5.3
ERNS	**Erzin**	**2.50 90**		Pg	Pg	01 42 40.3	-1.0
ERNS				Sg	Sg	01 43 13.2	-0.6
CERR	**Cheremushki**	**2.54 2**		Pg	Pg	01 42 45.8	+3.9
CERR				Sg	Sg	01 43 19.0	+4.2
DGZ	**Jazzator, Alta**	**2.54 257**		Pg	Pg	01 42 42.7	+0.6
DGZ				Sg	Sg	01 43 16.0	+1.0
ARDR	**Aradan**	**2.64 30**		Pg	Pg	01 42 44.3	+0.4
ARDR				Sg	Sg	01 43 21.1	+3.0
ARTR	**Artybash**	**2.91 302**		Pg	Pg	01 42 51.1	+2.0
ARTR				Sg	Sg	01 43 28.8	+2.1
TASR	**Tashtagol**	**3.22 320**		Pg	Pg	01 42 56.6	+1.6
TASR				Sg	Sg	01 43 37.2	+0.4
LUZB	**Luzhba, Kemero**	**3.64 337**		Pg	Pg	01 43 03.7	+0.5
LUZB				Sg	Sg	01 43 50.2	-0.1
KNGR	**Kungurtug, Tuv**	**4.01 84**		Pg	Pg	01 43 07.5	-2.7
KNGR				Sg	Sg	01 44 04.8	+2.6
UKR	**Ust'-Kan**	**4.17 281**		Pg	Pg	01 43 11.7	-1.5
UKR				Sg	Sg	01 44 07.1	-0.1
ELT	**Eltsovka**	**4.28 315**		Pg	Pg	01

comp=Z,8,8nm,1.2s
LSZ Lusaka 33.20 288 LR LR 02 12 08.8
comp=Z,86nm,18.1s,baz=129,slow=35
LSZ Lusaka 33.20 288 P P 01 59 10.0 -1.6
SUR Sutherland 34.47 254 LR LR 02 10 47.4
comp=Z,64nm,21.2s,baz=102,slow=32
MAW Mawson 38.44 179 P P 01 59 56.0 +0.2
comp=Z,3.6nm,0.9s,baz=343,slow=8.7,SNR=7.8
MAW LR LR 02 13 52.3
comp=Z,110nm,18.1s,baz=348,slow=33
comp=Z,3.6nm,0.9s
MAW Mawson 38.44 179 P P 01 59 54.7 -1.1
MBAR Mbarara 40.48 309 P P 02 00 13.0 -0.6
comp=Z,5.6nm,0.2s,baz=126,slow=18,SNR=4.9
MBAR LR LR 02 15 29.9
comp=Z,96nm,19.4s,baz=118,slow=34
comp=Z,5.6nm,0.2s
TSUM Tsumeb 40.58 274 P P 02 00 15.3 +0.9
comp=Z,2.2nm,0.6s,baz=119,slow=9.1,SNR=3.9
TSUM LR LR 02 15 32.2
comp=Z,95nm,19.0s,baz=149,slow=34
comp=Z,2.2nm,0.6s
PALK Pallekele 40.96 31 LR LR 02 13 21.5
comp=Z,91nm,19.5s,baz=298,slow=30
ATD Arta Tunnel 44.10 334 LR LR 02 16 28.1
comp=Z,123nm,19.4s,baz=167,slow=32
H01W2 Cape Leeuwin H 45.02 111 T T 02 48 31.6
baz=261,slow=75,SNR=34
H01W3 Cape Leeuwin H 45.02 111 T T 02 48 27.5
baz=261,slow=75,SNR=24
H01W1 Cape Leeuwin H 45.03 111 T T 02 48 27.9
baz=261,slow=75,SNR=33
SMRI Semarang 51.49 75 P P 02 01 41.0 +0.6
WSAR Wadi Sarin 52.19 357 LR LR 02 18 46.6
comp=Z,47nm,20.2s,baz=194,slow=30
PSA00 Pilbara Seismi 53.30 96 P P 02 01 54.6 +0.8
SNAA Sanae 54.35 200 P P 02 02 00.2 -0.6
SNAA Sanae 54.35 200 P P 02 02 00.7 -0.1
comp=Z,2.6nm,0.8s,baz=121,slow=7.4,SNR=13
comp=Z,2.6nm,0.8s
SNAA Sanae 54.35 200 P P 02 02 00.8 0.0
SNAA IAmb IAmb 02 02 03.9
comp=Z,3.5nm,0.9s
RAYN Ar Rayn 54.49 343 P P 02 02 01.3 -1.0
RAYN IAmb IAmb 02 02 04.2
comp=Z,6.0nm,1.2s
VNA3 Neumayer Olymp 56.41 201 P P 02 02 15.0 -0.5
FITZ Fitzroy Crossi 59.66 95 P P 02 02 39.0 -0.1
comp=Z,3.7nm,0.9s,baz=243,slow=6.7,SNR=3.0
comp=Z,3.7nm,0.9s
FITZ Fitzroy Crossi 59.66 95 P P 02 02 38.8 -0.3
FITZ IAmb IAmb 02 02 39.6
comp=Z,7.1nm,1.1s
CMAR Chiang Mai Arr 59.93 42 P P 02 02 41.0 +0.1
comp=Z,2.7nm,0.3s,baz=235,slow=6.2,SNR=4.5
CMAR LR LR 02 24 13.9
comp=Z,7.4nm,21.4s,baz=135,slow=32
comp=Z,2.7nm,0.3s
QSPA South Pole Qui 60.95 180 P P 02 02 47.1 -0.2
comp=Z,5.1nm,0.9s,baz=272,slow=1.8,SNR=11
QSPA LR LR 02 26 20.5
comp=Z,77nm,18.8s,baz=286,slow=33
comp=Z,5.1nm,0.9s
QSPA South Pole Qui 60.95 180 P P 02 02 47.2 -0.2
QSPA IAmb IAmb 02 02 50.6
comp=Z,6.1nm,0.9s
EIL Elat 63.58 335 LR LR 02 27 33.6
comp=Z,76nm,19.0s,baz=296,slow=33
VNDA Vanda 64.04 166 P P 02 03 06.5 -1.2
comp=Z,1.3nm,0.7s,baz=267,slow=6.3,SNR=10.0
VNDA LR LR 02 29 10.1
comp=Z,118nm,18.1s,baz=264,slow=34
comp=Z,1.3nm,0.7s
VNDA Vanda 64.04 166 P P 02 03 07.6 -0.1
VNDA IAmb IAmb 02 03 11.3
comp=Z,4.3nm,1.3s
ASAR Alice Springs 64.63 104 P P 02 03 12.2 -0.2
comp=Z,4.5nm,0.7s,baz=242,slow=6.3,SNR=36
comp=Z,4.5nm,0.7s
ASAR Alice Springs 64.63 104 P P 02 03 12.5 0.0
AS31 Alice Springs 64.63 104 P P 02 03 12.5 0.0
MMAI Mount Meron Ar 66.45 337 LR LR 02 29 10.3
comp=Z,46nm,19.0s,baz=188,slow=33
WRA Warramunga Arr 66.46 100 P P 02 03 24.3 0.0
comp=Z,3.9nm,0.9s,baz=247,slow=5.6,SNR=14
comp=Z,3.9nm,0.9s
WB2 Warramunga Arr 66.47 100 P P 02 03 22.6 -1.8
WB0 Warramunga Arr 66.57 100 P P 02 03 25.1 0.0
WR0 Warramunga Arr 66.62 101 P P 02 03 25.5 +0.2
WR0 IAmb IAmb 02 03 25.8
comp=Z,5.2nm,0.8s
STKA Stephens Creek 67.93 115 P P 02 03 33.2 -0.3
comp=Z,2.0nm,0.7s,baz=216,slow=8.7,SNR=3.1
comp=Z,2.0nm,0.7s
GNI Garni 70.62 347 LR LR 02 33 02.1
comp=Z,66nm,20.5s,baz=155,slow=34
TOA0 Torodi Ar. Sit 70.98 298 P P 02 03 52.9 +0.5
TOA0 IAmb IAmb 02 03 54.2
comp=Z,5.0nm,0.9s
TORD Torodi Ar. Bea 70.98 298 P P 02 03 53.1 +0.6
comp=Z,4.5nm,0.8s,baz=115,slow=5.1,SNR=22
comp=Z,4.5nm,0.8s
KKAR Karatay Array 72.49 7 P P 02 04 00.6 -0.4
DBIC Dimbokro 72.53 288 LR LR 02 33 34.9
comp=Z,28nm,19.7s,baz=140,slow=34
BRTR Keskin Array B 73.13 338 P P 02 04 04.2 -0.8
comp=Z,1.6nm,0.8s,baz=169,slow=7.6,SNR=11
BRTR LR LR 02 34 05.1
comp=Z,37nm,18.9s,baz=154,slow=34
comp=Z,1.6nm,0.8s
KBZ Khabaz 74.44 347 LR LR 02 35 01.0
comp=Z,65nm,22.0s,baz=138,slow=34
KOWA Kowa 76.24 295 LR LR 02 37 31.3
comp=Z,42nm,18.9s,baz=306,slow=35
KOWA Kowa 76.24 295 P P 02 04 23.6 +0.2
KOWA IAmb IAmb 02 04 28.4
comp=Z,5.4nm,0.8s
PMSA Palmer Station 77.07 201 LR LR 02 33 54.6
comp=Z,33nm,18.8s,baz=119,slow=32
MKAR Makanchi Array 78.07 15 P P 02 04 32.6 -0.4
comp=Z,1.4nm,0.9s,baz=189,slow=6.0,SNR=6.0
comp=Z,1.4nm,0.9s
MKAR Makanchi Array 78.07 15 P P 02 04 32.7 -0.3
ABKAR Akbulak array 78.11 359 P P 02 04 33.7 +0.6
ABKAR IAmb IAmb 02 04 34.6
comp=Z,7.7nm,1.3s
EIDS Eidsvold 78.18 112 P P 02 04 34.2 -0.1
CFR Carcaliu 79.83 337 ⇑P P 02 04 41.3 -1.3
BLKB Belogradchik 80.51 333 ⇓P P 02 04 45.7 -0.7
MLR Muntele Rosu 80.86 336 ⇓P P 02 04 49.2 +0.8
MLR Muntele Rosu 80.86 336 LR LR 02 38 35.2
comp=Z,29nm,19.8s,baz=228,slow=34
VRI Vrincioaia 80.91 337 ⇓P P 02 04 46.5 -2.0
PLOR Plostina 80.93 337 ⇑P P 02 04 48.1 -0.5
VASR Vaslui 81.22 338 ⇑P P 02 04 50.4 +0.3
BELG Belogornoye 82.08 352 LR LR 02 40 35.3
comp=Z,16nm,21.7s,baz=153,slow=35
BVAR Borovoye Array 82.30 6 LR LR 02 38 57.7
comp=Z,52nm,20.2s,baz=130,slow=34
BZS Buzias 82.59 333 ⇑P P 02 04 57.8 +0.4
BURAR Bucovina Array 82.95 337 ⇓P P 02 04 59.7 +0.5
RPZ Rata Peaks 83.33 137 LR LR 02 35 09.4
comp=Z,102nm,19.1s,baz=276,slow=31
MORH Mrgy, Hungar 84.27 332 ⇑P P 02 05 06.1 +0.1
AKASG Malin Array Be 84.36 340 P P 02 05 06.1 -0.1
comp=Z,2.7nm,0.9s,baz=155,slow=4.4,SNR=7.4
comp=Z,2.7nm,0.9s
ZALV Zalesovo Beam 85.36 14 P P 02 05 11.8 +0.6
comp=Z,0.9nm,0.4s,baz=219,slow=3.8,SNR=7.0
comp=Z,0.9nm,0.4s
MDT Midelt 87.53 310 LR LR 02 44 50.8
comp=Z,68nm,18.2s,baz=138,slow=36
MNK Minsk 88.10 341 *i* P P 02 05 24.1 -0.6
comp=E,2.0nm,0.9s
MNK *i* P P 02 05 24.1 -0.6
comp=N,19nm,0.8s
MNK *i* P P 02 05 24.1 -0.6
comp=Z,11nm,0.9s,baz=151
MNK *i* PP PP 02 08 40.6 -11
MNK *i* PPP PPP 02 10 46.1
MNK *i* SKS SKiKP 02 14 13.1 +12
MNK *i* S SKSac 02 15 52.1 -0.7
MNK *i* SP SP 02 17 15.4 +4.3
MNK *i* PS PS 02 18 17.9 +65
MNK *i* SS SS 02 23 09.1 +71
MNK *i* SSS SSS 02 26 24.5
MNK *i* LQ LQ 02 38 20.4
MNK *i* LR LR 02 41 52.5
MNK *i* LRM MLR 02 46 34.9
comp=N,3μm,18.0s
MNK *i* LRM MLR 02 47 08.6
comp=Z,85nm,18.1s
MNK *i* LRM MLR 02 47 14.9
comp=E,78nm,18.1s
WTTA Wattenberg 88.11 329 *eP* P 02 05 25.8 +0.6
comp=E,0.7nm,0.3s
WATA Walderalm 88.20 329 *i* P P 02 05 27.0 +1.5
comp=E,1.2nm,0.5s
SQTA Sankt Quirin 88.28 329 *eP* P 02 05 26.5 +0.7
comp=E,1.8nm,0.5s
FETA Feichten 88.35 328 *eP* P 02 05 27.3 +1.1
comp=E,2.4nm,0.7s
RETA Reutte 88.68 329 *eP* P 02 05 28.3 +0.6
comp=E,1.3nm,0.4s
DAVA Damuels 88.94 328 *eP* P 02 05 29.7 +0.7
comp=E,2.7nm,0.6s
ESDC Sonseca Array 91.28 316 P P 02 05 41.7 +1.7
comp=E,2.1nm,0.9s,baz=113,slow=3.3,SNR=14
ESDC LR LR 02 50 11.7
comp=E,31nm,18.1s,baz=28,slow=38
comp=E,2.1nm,0.9s
RCBR Riachuelo 93.12 262 LR LR 02 41 04.0
comp=E,28nm,18.3s,baz=134,slow=31
ILAR Eielson Array 140.35 18 PKP PKPdf 02 12 04.0 +1.1
comp=E,0.7nm,1.0s,baz=335,slow=4.1,SNR=3.7
YKA Yellowknife Ar 146.58 356 PKPbc PKPbc 02 12 15.2 -0.1
comp=E,2.7nm,0.9s,baz=353,slow=2.5,SNR=3.7

*JMA **06** 02:10:10.5±0.2, 37°.3N±0°.8×135°.0E±0°.8, h374km±2km, MV3.3/37, SEA OF JAPAN*
*IDC **06** 02:10:11.1±1.2, 37°.2Nx134°.94E, h373km±13km, mb3.0/7, mbtmp3.7/10, Error ellipse: s-maj=21.2km s-min=16.7km az=62.0*
ISC 06 02:10:10.9±0.8, 37°.24N±0°.10×135°.00E±0°.08, h372km, n20, σ0§54/21, mb3.2/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKG	Kaga	1.44	132	P		Pn		02 11 00.8	-0.1
JJH	Hakui	1.46	102	*eP*		Pn		02 11 01.0	0.0
JKY	Yasaka	1.61	177	*eP*		Pn		02 11 02.0	0.0
JOI	OKI	1.70	237	*eP*		Pn		02 11 02.4	0.0
JSZ	Suzu	1.90	83	P		Pn		02 11 03.7	+0.2
JWT	Wachi	1.98	170	*eP*		Pn		02 11 04.3	+0.2
JWT				*eS*		S		02 11 46.7	-0.4
JYTA	Yamagatataniai	2.16	139	*eP*		Pn		02 11 05.5	+0.2
JNG	Nsakai	2.62	108	P		Pn		02 11 08.8	-0.1
MAT	Matsushiro	2.66	104	P		Pn		02 11 09.0	-0.1
MJAR	Matsushiro Arr	2.67	104	P		Pn		02 11 09.5	+0.3
	26nm,0.7s,baz=285,slow=10,SNR=41								
JGT2	ShimaneMisato	2.96	224	*eP*		Pn		02 11 11.7	0.0
KSRS	Korea Array	5.64	274	P		Pn		02 11 39.1	+0.7
	8.2nm,0.8s,baz=95,slow=12,SNR=18								
USRK	Ussuriysk Ar.	7.32	343	P		Pn		02 11 57.6	+0.3
	1.3nm,0.6s,baz=149,slow=12,SNR=2.3								
SONM	Songino Array	23.46	306	P		P		02 14 48.2	-0.5
	0.7nm,0.7s,baz=104,slow=11,SNR=3.7								
	0.7nm,0.7s								
ILAR	Eielson Array	52.06	32	P		P		02 18 43.1	-0.4
	0.4nm,0.6s,baz=275,slow=6.3,SNR=6.2								
	0.4nm,0.6s								
WRA	Warramunga Arr	56.88	181	P		P		02 19 18.7	+0.4
	0.4nm,0.4s,baz=356,slow=7.6,SNR=9.9								
	0.4nm,0.4s								
FINES	FINESS Array B	66.17	330	P		P		02 20 18.3	-0.9
	2.9nm,0.9s,baz=90,slow=5.7,SNR=6.5								
	2.9nm,0.9s								
AKASG	Malin Array Be	70.91	320	P		P		02 20 47.7	-0.7
	0.5nm,0.4s,baz=46,slow=6.4,SNR=6.9								
	0.5nm,0.4s								
NOA	NORSAR Array B	71.92	335	P		P		02 20 54.2	-0.1
	0.6nm,0.7s,baz=55,slow=7.0,SNR=4.2								
	0.6nm,0.7s								
NVAR	Mina Array Bea	78.88	50	P		P		02 21 35.7	+1.5
	0.2nm,0.5s,baz=287,slow=6.1,SNR=2.0								
	0.2nm,0.5s								

*IDC **06** 02:23:45.3±5.0, 35°.53Nx140°.61E, h0km, mb3.8/2, mbtmp3.7/3, ML2.7/1, MS2.9/3, Error ellipse: s-maj=157.8km s-min=56.0km az=20.0*
*JMA **06** 02:23:50.0±0.1, 35°.9N±0°.3×140°.5E±0°.5, h38km±1km, MV3.3/34, SOUTHERN IBARAKI PREF .*
JMA Felt II J1 at SOUTHERN IBARAKI PREF .
*NIED **06** 02:23:50.0, 35°.87Nx140°.52E, h38km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.47; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.39; $M_{r\theta}$3.39; $M_{\theta\phi}$-1.78; $M_{\phi r}$3.07; Fault plane solution: $M_0$4.75000×10^{14} NP1: ϕ_s195.00000°, δ9.00000°, λ56.00000°. NP2:ϕ_s50.00000°, δ83.00000°, λ95.00000°.*
ISC 06 02:23:51.0±1.1, 35°.90N±0°.05×140°.62E±0°.06, h33km±3km, n17, σ1§69/14, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.10	310	⇓P		Pb		02 23 56.9	+0.2
JIHU				⇓*eS*		Sb		02 24 01.4	+0.7
CHOJ	Chosi	0.28	136	P		Pn		02 23 58.1	-0.5
CHOJ				*eS*		Sb		02 24 03.8	+0.2
JSMT	Sammumatsuo	0.29	208	P		Pb		02 23 57.8	-0.8
JSMT				*eS*		Sn		02 24 02.8	-0.8
JYT	Yasato	0.47	313	⇓P		Pb		02 23 59.9	-1.2
JYT				⇓*eS*		Sb		02 24 06.5	-1.7
JHO	Hitachi	0.71	357	⇓P		Pn		02 24 03.8	-0.8
JHO				⇓*eS*		Sn		02 24 13.7	-0.7
MJAR	Matsushiro Arr	2.05	289	Pn		Pn		02 24 22.0	-1.1
	2.4nm,0.3s,baz=114,slow=8.2,SNR=51								
MJAR				Sn		Sn		02 24 51.7	+4.2
	1.2nm,0.3s,baz=154,slow=11,SNR=8.4								
	14nm,0.3s								
KSRS	Korea Array	10.31	282	LR		LR		02 29 57.0	
	comp=Z,37nm,21.6s,baz=150,slow=36								
KLR	Kul'dur	14.82	337	LR		LR		02 32 23.2	
	comp=Z,44nm,19.0s,baz=274,slow=34								
YAK	Yakutsk	27.04	349	LR		LR		02 40 11.9	
	comp=Z,48nm,19.2s,baz=162,slow=36								
H11N2	WAKE ISLAND Hy	28.15	118	T		T		02 58 55.0	
	baz=310,slow=75,SNR=8.4								
H11N1	WAKE ISLAND Hy	28.16	118	T		T		02 58 58.8	
	baz=310,slow=75,SNR=9.1								
H11N3	WAKE ISLAND Hy	28.17	118	T		T		02 58 56.3	
	baz=310,slow=75,SNR=9.4								
H11S1	WAKE ISLAND Hy	28.82	120	T		T		02 59 31.6	
	baz=312,slow=75,SNR=11								
H11S3	WAKE ISLAND Hy	28.82	120	T		T		02 59 39.4	
	baz=312,slow=75,SNR=9.7								
H11S2	WAKE ISLAND Hy	28.83	120	T		T		02 59 51.3	
	baz=312,slow=75,SNR=7.6								
ZALV	Zalesovo Beam	42.21	313	P		P		02 31 41.9	+1.4
	0.6nm,0.4s,baz=92,slow=7.9,SNR=2.2								
	0.6nm,0.4s								
MKAR	Makanchi Array	44.19	303	P		P		02 31 57.3	+0.6
	0.9nm,0.8s,baz=90,slow=8.6,SNR=3.3								
	0.9nm,0.8s								

*MAN **06** 02:25:10.1, 9°.32Nx126°.23E, h27km, mb5.3, ML4.3, MS4.5*
*DJA **06** 02:25:11.0±0.7, 9°N±5°×12°6E±°, h61km±5km, M4.9/36, mB5.3/19, mb4.9/36, MLv5.6/4, Mw(mB)4.8/19*
*BJI **06** 02:25:12.1±0.0, 9°.50Nx126°.33E, h75km, mb4.7/22, mB4.8/17, Ms4.2/7, Ms7 3.9/6*
*NEIC **06** 02:25:12.4±1.8, 9°.34N±0°.03×126°.2E±0°.1, h65km±7km, mb4.6/48, Error ellipse: s-maj=15.7km s-min=1.8km az=103.0*
*IDC **06** 02:25:12.9±1.4, 9°.36Nx126°.25E, h78km±13km, mb4.2/18, mbtmp4.6/22, MS3.5/40, Error ellipse: s-maj=21.5km s-min=9.0km az=90.0*
ISC 06 02:25:10.9±0.8, 9°.40N±0°.03×126°.27E±0°.05, h58km±7km, n188, σ1§52/178, mb4.6/43, MS3.5/38, 16C-12D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.41	340	⇑*eP*		Pn		02 25 20.9	-0.8
BUTP	Butuan	0.77	236	⇓*eP*		Pn		02 25 23.7	-2.1
SCPH	Surigao	0.86	296	⇓*iP*		Pn		02 25 26.0	-1.0
SCPH				*i* S		Sn		02 25 35.2	-3.6
BIPH	Bislig	1.21	176	⇓*iP*		Pn		02 25 29.9	-1.7
BIPH				*i* S		Sn		02 25 44.7	-2.4
MSLP	Maasin	1.57	298	⇑*eP*		Pn		02 25 36.5	+0.1
CGP	Cagayan de Oro	1.81	239	⇑*iP*		Pn		02 25 38.7	-1.1
CGP				*i* S		Sn		02 25 59.4	-2.4
GHBP	Garcia Hernand	1.93	277	⇑*iP*		Pn		02 25 41.0	-0.4
TABP	Talibon, Bohol	2.03	290	⇓*iP*		Pn		02 25 42.5	-0.2
TABP				*i* S		Sn		02 26 06.9	0.0
OCLP	Ormoc	2.31	315	⇑*eP*		Pn		02 25 48.0	+1.4
TBP	Tagbilaran	2.39	277	⇑*iP*		Pn		02 25 47.9	+0.2
TBP				*i* S		Sn		02 26 15.7	-0.2
DAV	Davao City (W)	2.41	196	P		Pn		02 25 49.2	+1.2
	426nm,0.3s,baz=20,slow=5.1,SNR=13								
DAV				S		Sn		02 26 19.3	+2.9
	2μm,0.7s,baz=248,slow=22,SNR=9.7								
DAV				LR		LR		02 27 03.9	
	comp=Z,4μm,18.8s,baz=354,slow=47								
DAV	Davao City (W)	2.41	196			Pn		02 25 48.5	+0.5
DAV				Sn		Sn		02 26 16.0	-0.4
DAV	Davao City (W)	2.41	196	P		Pn		02 25 48.4	+0.5
DAV	Davao City (W)	2.41	196	P		Pn		02 25 50.3	+2.3
MATI	Mati	2.44	180	⇑*eP*		Pn		02 25 48.6	+0.3
LLP	Lapu-Lapu	2.44	292	⇑*iP*		Pn		02 25 49.6	+1.2
LLP				*i* S		Sn		02 26 18.9	+1.8
LSIP	Lazi, Siquijor	2.62	264	⇓*eP*		Pn		02 25 50.7	0.0
LSIP				*eS*		Sn		02 26 19.0	-2.3
KCP	Kidapawan	2.65	206	⇓*eP*		Pn		02 25 51.1	-0.1
KCP				*i* S		Sn		02 26 21.8	-0.4
CTBH	Cotabato--PC H	2.95	223	⇑*iP*		Pn		02 25 55.1	-0.2
DCPH	Dipolog City	2.99	255	⇓*iP*		Pn		02 25 56.3	+0.4
DCPH				*i* S		Sn		02 26 31.2	+0.6
SNPH	Sibulan	2.99	269	⇓*iP*		Pn		02 25 56.8	+0.9
SNPH				*eS*		Sn		02 26 29.2	-1.5
PAGZ	Pagadian	3.24	242	⇑*iP*		Pn		02 25 59.6	+0.3
PAGZ				*i* S		Sn		02 26 37.4	+0.7
PAGZ	Pagadian	3.24	242	⇑*eP*		Pn		02 25 59.9	+0.6
DDMP	Don Marcelino,	3.32	190	⇑*eP*		Pn		02 25 59.8	-0.6
DDMP				*eS*		Sn		02 26 28.5	-10
SKMP	Bagumbayan, Su	3.33	211	⇑*eP*		Pn		02 25 59.8	-0.8
CNP	Catarman	3.47	333	⇑*eP*		Pn		02 26 03.7	+1.3
CNP				*eS*		Sn		02 26 38.4	-4.0
GSPH	General Santos	3.54	202	*i* P		Pn		02 26 06.0	+2.4
GSPH				*i* S		Sn		02 26 46.5	+2.2
CNOP	Candoni, Negro	3.60	277	⇑*eP*		Pn		02 26 05.0	+0.7
CNOP				*eS*		Sn		02 26 47.5	+2.0
GUIM	Jordan	3.82	289	⇓*eP*		Pn		02 26 08.2	+0.9
PVCP	Virac	4.66	334	⇓*eP*		Pn		02 26 21.3	+2.6
SGSI	Sangihe	5.72	187	P		Pn		02 26 33.8	+0.5
	3.0nm7μm350nm,0.7s								
JCNP	Jose Panganiba	5.99	325	⇓*eP*		Pn		02 26 38.5	+1.6
JCNP				*eS*		Sn		02 27 45.2	+1.1
LQP	Lukban	6.58	316	⇓*eP*		Pn		02 26 48.3	+2.9
GAMI	Galela, Maluku	7.66	169	P		Pn		02 27 02.2	+2.3
	1.2nm174nm,0.5s								
TNTI	Ternate	8.64	173	Pn		Pn		02 27 13.2	-0.2
TNTI	Ternate	8.64	173	P		Pn		02 27 14.5	+1.2
	69nm,0.9s								
SMPP	San Manuel, Pa	8.64	321	⇑*eP*		Pn		02 27 14.3	+0.9
MYLDM	Lahad Datu	8.77	242			Pn		02 27 16.4	+1.3
MYLDM	Lahad Datu	8.77	242	P		Pn		02 27 18.7	+3.6
	41nm,1.2s								
KMSI	Cibinong	9.06	195	P		Pn		02 27 19.7	+0.7
	152nm,0.8s								
GTOI	Gorontalo	9.29	201	P		Pn		02 27 20.9	-1.3
	386nm55nm,0.8s								
MRSI	Marisa	9.85	206	P		Pn		02 27 31.0	+1.1
	658nm58nm,1.1s								
TOLI2	Tolitoli	9.88	214	Pn		Pn		02 27 30.9	+0.7
LBMI	Labuha	10.05	173	P		Pn		02 27 34.0	+1.4
	1μm77nm,1.0s								
LUWI	Luwuk	10.94	199	P		Pn		02 27 46.1	+1.3
	9μm221nm,0.5s								
APSI	Ampana	11.23	204	P		Pn		02 27 53.0	+4.3
	62nm,1.0s								
SIJI	Sorong	11.35	154	P		Pn		02 27 50.4	0.0
	57nm,0.7s,baz=272,slow=23,SNR=53								
SIJI	Sorong	11.35	154	P		Pn		02 27 49.6	-0.8
SANI	Sanana	11.38	181	P		Pn		02 27 47.6	-3.1
	561nm35nm,0.6s								
SANI	Sanana	11.38	181	P		Pn		02 27 48.6	-2.1
KRAI	Karang Ratu	12.81	170	P		Pn		02 28 09.5	-0.8
	20nm,0.8s								
MSAI	Masohi	12.94	168	P		Pn		02 28 15.3	+3.3
	2μm9.1nm,0.6s								
FAKI	Fak Fak	13.61	154	Pn		Pn		02 28 21.0	-0.2
FAKI	Fak Fak	13.61	154	P		Pn		02 28 21.4	+0.1
	850nm65nm,0.8s								
TTSI	Tana Toraja	13.93	208	P		Pn		02 28 27.7	+2.1
	41nm,0.8s								
SPSI	Sidrap Palu	14.77	206	P		Pn		02 28 38.1	+1.5
	25nm,0.8s								
BNSI	Bone	15.02	204	P		P		02 28 42.5	-1.5
	628nm35nm,1.5s								
SBUM	Sibu	15.58	245			P		02 28 51.0	+0.7
SBUM				IAmb		IAmb		02 29 08.3	
	comp=Z,55nm,1.3s								
SBUM	Sibu	15.58	245	P		P		02 28 51.3	+1.1
	comp=Z,434nmcomp=Z,33nm,1.1s								
KAPI	Kappang	15.72	205	P		Pn		02 28 49.5	+0.7
	comp=Z,13nm,0.8s,baz=352,slow=8.2,SNR=6.3								
KAPI				LR		LR		02 35 16.5	
	comp=Z,136nm,20.0s,baz=28,slow=38								
KAPI	Kappang	15.72	205	Pn		Pn		02 28 48.8	0.0
KAPI				IAmb		IAmb		02 29 04.7	
	comp=Z,39nm,1.1s								
KAPI	Kappang	15.72	205	P		Pn		02 28 50.1	+1.3
	comp=Z,387nmcomp=Z,32nm,1.6s								
BKSI	Bulukumba	15.85	203	P		Pn		02 28 51.5	+1.0
	comp=Z,469nmcomp=Z,11nm,0.7s								
SMPI	Sarmi	16.78	132	P		P		02 29 03.9	+0.3
GENI	Genyem	18.27	130	P		Pn		02 29 21.9	+1.4
	comp=Z,43nm,0.7s								
QIZ	Qiongzhong	18.56	303	P		Pn		02 29 24.2	+0.2
QIZ				S		Sn		02 32 50.1	-0.8
QIZ				LR		LR			
	comp=Z,250nm,17.5s								
QIZ				LR		LR			
	comp=Z,130nm,19.9s								
EDFI	Ende, Flores	18.60	194	P		Pn		02 29 24.5	0.0
	comp=Z,16nm,1.2s								
SOEI	Soe	19.13	186	P		Pn		02 29 31.4	+0.5
	comp=Z,1μmcomp=Z,96nm,1.0s								
BATI	Baumata	19.65	188	P		Pn		02 29 36.5	-0.5
	comp=Z,40nm,0.4s,baz=230,slow=4.2,SNR=8.6								
BATI				LR		LR		02 37 29.3	
	comp=Z,140nm,20.5s,baz=152,slow=38								
BATI	Baumata	19.65	188	P		Pn		02 29 36.7	-0.3
	comp=Z,79nm,0.8s								
PLAI	Plampang	19.98	205	P		Pn		02 29 42.2	+1.3
	comp=Z,20nm,0.9s								
MTN	Manton Dam	22.62	168	P		P		02 30 06.3	-0.8
MTN	Manton Dam	22.62	168	P		P		02 30 06.5	-0.6
KDU	Kakadu	22.79	164	P		P		02 30 06.9	-2.0
JCJ	Chichijima	23.16	38	LR		LR		02 37 41.7	
	comp=Z,79nm,21.8s,baz=206,slow=32								
NJ2	Nanjing	23.57	344	*eP*		P		02 30 12.0	-4.3
NJ2				pmax		pmax			
	comp=Z,16nm,0.5s								
KNRA	Kununurra	25.04	174	P		P		02 30 29.6	-0.2
KNRA	Kununurra	25.04	174	P		P		02 30 29.8	0.0
JHS	Saijyo	26.24	13	P		P		02 30 43.6	+3.0
JHS				IAmb		IAmb		02 31 03.2	
	comp=Z,40nm,1.4s								
FITZ	Fit

MJAR Matsushiro Arr 29.11 20 P P 02 31 05.7 -0.7
comp=Z,2.1nm,0.6s,baz=200,slow=9.5,SNR=5.7
MJAR LR LR 02 43 09.4
comp=Z,74nm,18.0s,baz=186,slow=37
comp=Z,2.1nm,0.6s
XAN Xi'an 29.25 330 P P 02 31 19.4 +12
XAN pP sP 02 31 37.0 +8.3
WB0 Warramunga Arr 30.07 165 P **P 02 31 12.8 -2.1**
WB0 IAmb IAmb 02 31 20.4
comp=Z,8.3nm,0.8s
WRAB Tennant Creek 30.21 165 P **P 02 31 14.8 -1.4**
WRA Warramunga Arr 30.22 165 P **P 02 31 14.3 -1.9**
comp=Z,2.4nm,0.6s,baz=342,slow=8.4,SNR=36
WRA LR LR 02 45 49.2
comp=Z,31nm,18.2s,baz=332,slow=41
comp=Z,2.4nm,0.6s
WRA Warramunga Arr 30.22 165 P **P 02 31 14.2 -2.1**
WB2 Warramunga Arr 30.22 165 P **P 02 31 14.5 -1.8**
WB2 IAmb IAmb 02 31 28.3
comp=Z,8.8nm,0.8s
WR0 Warramunga Arr 30.29 164 P **P 02 31 15.4 -1.4**
PSA00 Pilbara Seismi 31.42 192 P **P 02 31 26.0 -0.8**
PSA00 IAmb IAmb 02 31 26.8
comp=Z,13nm,1.1s
QIS Mount Isa 32.53 156 P **P 02 31 36.0 -0.6**
LZH Lanzhou 33.49 326 *eP* **P 02 31 42.3 -2.7**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH LR LR
comp=Z,200nm,10.0s
LZH LR LR
comp=Z,200nm,10.0s
LZH LR LR
comp=Z,190nm,10.7s
AS31 Alice Springs 33.70 167 P **P 02 31 45.9 -0.9**
AS31 IAmb IAmb 02 31 48.1
comp=Z,4.2nm,0.3s
ASAR Alice Springs 33.70 167 P **P 02 31 45.9 -0.9**
comp=Z,3.0nm,0.3s,baz=344,slow=7.2,SNR=58
ASAR ScP **ScP 02 38 03.3 -2.2**
comp=Z,1.7nm,1.0s,baz=329,slow=2.5,SNR=6.4
ASAR LR LR 02 46 33.6
comp=Z,57nm,19.2s,baz=342,slow=38
comp=Z,3.0nm,0.3s
ASAR Alice Springs 33.70 167 P **P 02 31 45.7 -1.1**
HHC Hu-ho-hao-te 33.93 340 *eP* **P 02 31 53.2 +4.5**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,150nm,6.2s
WRKA Warakurna 34.28 177 P **P 02 31 51.7 -0.1**
USRK Ussuriysk Ar. 35.02 7 P **P 02 31 59.6 +1.7**
comp=Z,25nm,0.8s,baz=192,slow=8.0,SNR=39
USRK LR LR 02 45 26.9
comp=Z,49nm,21.8s,baz=164,slow=35
comp=Z,25nm,0.8s
MDJ Mudanjiang 35.20 4 P **P 02 32 00.1 +0.6**
CTA Charters Tower 35.29 146 LR LR 02 46 39.1
comp=Z,70nm,21.5s,baz=260,slow=36
CTAO Charters Tower 35.29 146 P **P 02 32 00.8 +0.2**
BRDH Bariadhala 35.69 296 LR LR 02 46 51.3
comp=Z,54nm,21.8s,baz=78,slow=36
MORW Morawa 39.49 194 P **P 02 32 35.4 -0.6**
MORW IAmb IAmb 02 33 01.4
comp=Z,12nm,1.1s
KLR Kul'dur 39.97 6 P **P 02 32 40.7 +1.0**
comp=Z,4.6nm,0.6s,baz=185,slow=6.2,SNR=18
KLR LR LR 02 51 16.7
comp=Z,39nm,19.1s,baz=209,slow=39
comp=Z,4.6nm,0.6s
FORT Forrest 39.98 178 P **P 02 32 40.3 +0.3**
H11S3 WAKE ISLAND Hy 40.18 73 T T 03 15 42.7
baz=262,slow=75
H11S1 WAKE ISLAND Hy 40.19 72 T T 03 15 44.0
baz=262,slow=75,SNR=214
H11S2 WAKE ISLAND Hy 40.19 73 T T 03 15 43.4
baz=262,slow=75
H11N1 WAKE ISLAND Hy 40.54 71 T T 03 16 20.0
baz=264,slow=74
H11N2 WAKE ISLAND Hy 40.55 71 T T 03 16 05.3
baz=264,slow=74
H11N3 WAKE ISLAND Hy 40.55 71 T T 03 16 14.9
baz=264,slow=74
SONM Songino Array 41.83 340 ScP **ScP 02 38 36.7 +0.8**
comp=Z,0.7nm,0.8s,baz=145,slow=5.3,SNR=2.4
SONM LR LR 02 50 24.9
comp=Z,60nm,20.1s,baz=162,slow=36
NWAO Narrogin (SRO) 42.96 191 LR LR 02 53 12.9
comp=Z,48nm,18.3s,baz=256,slow=39
NWAO Narrogin (SRO) 42.96 191 P **P 02 33 04.4 0.0**
BBOO Buckleboo 43.00 168 P **P 02 33 04.9 +0.2**
STKA Stephens Creek 43.58 161 P **P 02 33 09.0 -0.4**
comp=Z,7.6nm,0.6s,baz=342,slow=8.4,SNR=17
STKA PP **PP 02 34 51.1 -0.7**
comp=Z,4.7nm,0.8s,baz=344,slow=9.6,SNR=3.0
STKA LR LR 02 53 38.4
comp=Z,36nm,21.9s,baz=25,slow=39
comp=Z,7.6nm,0.6s
STKA Stephens Creek 43.58 161 P **P 02 33 09.2 -0.2**
PALK Pallekele 45.11 271 LR LR 02 55 23.4
comp=Z,40nm,18.5s,baz=191,slow=40
WMQ Urumqi 47.91 323 *eP* **P 02 33 45.8 +2.3**
TOO Toolangi 50.07 160 P **P 02 34 01.2 +1.1**
DZM Mont Dzumac 50.30 129 LR LR 02 52 38.5
comp=Z,31nm,21.9s,baz=208,slow=33
PETK Petropavlovsk- 50.43 24 P **P 02 34 04.2 +1.6**
comp=Z,2.6nm,0.5s,baz=207,slow=4.9,SNR=7.2
PETK LR LR 02 57 32.3
comp=Z,33nm,18.3s,baz=185,slow=38
comp=Z,2.6nm,0.5s
PETK Petropavlovsk- 50.43 24 P **P 02 34 04.5 +2.0**
YAK Yakutsk 52.59 2 LR LR 02 57 07.4
comp=Z,34nm,20.0s,baz=261,slow=36
MK31 Makanchi Array 52.72 323 P **P 02 34 17.6 -2.2**
MK31 IAmb IAmb 02 34 20.1
comp=Z,3.8nm,0.8s
MKAR Makanchi Array 52.72 323 P **P 02 34 19.6 -0.2**
comp=Z,3.7nm,0.6s,baz=124,slow=6.9,SNR=25
MKAR LR LR 02 57 59.5
comp=Z,90nm,21.5s,baz=110,slow=37
comp=Z,3.7nm,0.6s
MKAR Makanchi Array 52.72 323 P **P 02 34 18.8 -1.0**
MAKZ Makanchi 52.91 323 P **P 02 34 20.8 -0.4**
MAKZ IAmb IAmb 02 34 21.4
comp=Z,3.7nm,0.7s
NIL Nilore 54.22 305 P **P 02 34 30.3 -0.8**
ZALV Zalesovo Beam 55.38 332 P **P 02 34 37.7 -1.3**
comp=Z,1.0nm,0.4s,baz=114,slow=7.3,SNR=4.3
ZALV LR LR 02 58 37.8
comp=Z,52nm,19.8s,baz=92,slow=36
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 55.38 332 P **P 02 34 37.4 -1.6**
AAK Ala-Archa 55.94 316 LR LR 03 02 03.1
comp=Z,72nm,18.2s,baz=88,slow=40
KURK Kurchatov 56.78 326 P **P 02 34 48.4 -0.6**
KURK IAmb IAmb 02 34 49.1
comp=Z,7.5nm,0.8s
KURBB Kurchatov Arra 56.78 326 LR LR 03 00 18.0
comp=Z,72nm,19.7s,baz=182,slow=37
GAR Garm 57.85 310 P **P 02 34 56.3 -0.7**
GAR IAmb IAmb 02 35 01.7
comp=Z,5.9nm,0.6s
KK31 Karatay Array 58.86 315 P **P 02 35 03.0 -0.9**
KKAR Karatay Array 58.86 315 P **P 02 35 02.3 -1.5**
BVAR Borovoye Array 62.38 326 LR LR 03 04 00.9
comp=Z,51nm,18.2s,baz=109,slow=37
BRVK Borovoye 62.45 326 P **P 02 35 27.0 -1.0**
BRVK IAmb IAmb 02 35 28.1
comp=Z,5.0nm,0.7s
NRIK Noril'sk 64.85 346 P **P 02 35 43.3 -0.3**
comp=Z,1.9nm,0.4s,baz=135,slow=7.9,SNR=2.7
comp=Z,1.9nm,0.4s
URZ Urewera 67.02 138 LR LR 03 03 39.9
comp=Z,23nm,21.6s,baz=19,slow=34
GEYT Alibeck 67.06 307 LR LR 03 08 27.4
comp=Z,66nm,21.9s,baz=114,slow=39
BKZ Black Stump Fm 67.13 140 P **P 02 35 59.2 +0.4**
KHZ Kahutara 67.25 144 P **P 02 35 59.0 -0.3**
ABKAR Akbulak array 67.53 320 P **P 02 36 00.2 -0.9**
AKTO Aktyubinsk 68.99 320 LR LR 03 08 17.8
comp=Z,101nm,18.1s,baz=92,slow=38
ARU Arti 69.95 327 LR LR 03 08 52.1
comp=Z,41nm,19.8s,baz=107,slow=37
KIRV Kirov 75.18 328 LR LR 03 12 04.3
comp=Z,47nm,18.0s,baz=86,slow=37
O18K Koktuh Hills 76.16 31 P **P 02 36 54.5 +1.8**
O18K IAmb IAmb 02 36 55.8
comp=Z,12nm,0.9s
KDAK Kodiak Island 77.39 33 P **P 02 37 00.5 +0.9**
KDAK IAmb IAmb 02 37 18.9
comp=Z,14nm,1.5s
IMAR Indian Mountai 77.39 24 P **P 02 37 00.9 +1.4**
GNI Garni 77.55 309 LR LR 03 15 00.4
comp=Z,25nm,19.6s,baz=71,slow=38
H21K Melozitna Rive 77.75 25 P **P 02 37 03.6 +2.0**
CAST Castle Rocks 77.91 27 P **P 02 37 03.7 +1.2**
I21K Tanana 78.06 25 P **P 02 37 05.4 +2.2**
BPAW Bear Paw Mtn. 78.44 26 P **P 02 37 05.8 +0.5**
BPAW IAmb IAmb 02 37 07.8
comp=Z,8.9nm,1.1s
MLY Manley 78.58 25 P **P 02 37 07.3 +1.2**
MLY IAmb IAmb 02 37 08.6
comp=Z,8.8nm,1.3s
KBZ Khabaz 78.79 313 LR LR 03 17 19.6
comp=Z,48nm,18.6s,baz=52,slow=40
I23K Minto, Yukon-K 79.17 25 P **P 02 37 10.9 +1.7**
TOLK Toolik Lake Re 79.18 22 P **P 02 37 11.0 +1.6**
TOLK IAmb IAmb 02 37 29.2
comp=Z,9.9nm,1.4s
MCK McKinley 79.33 27 P **P 02 37 11.3 +1.0**
MCK IAmb IAmb 02 37 11.5
comp=Z,5.7nm,0.8s
PWL Port Wells 79.62 30 P **P 02 37 12.8 +1.0**
PWL IAmb IAmb 02 37 18.6
comp=Z,7.8nm,1.0s
CCB Clear Creek Bu 79.83 26 P **P 02 37 13.2 +0.3**
HDA Harding Lake 80.20 26 P **P 02 37 14.8 -0.2**
ILAR Eielson Array 80.22 26 P **P 02 37 14.6 -0.5**
comp=Z,0.7nm,0.7s,baz=236,slow=5.0,SNR=7.7
ILAR LR LR 03 14 40.3
comp=Z,21nm,19.1s,baz=276,slow=37
comp=Z,0.7nm,0.7s
KLMR Klimovskoe 80.28 330 *eP* **P 02 37 12.7 -2.7**
KLMR AMP 02 37 14.8
comp=Z,5.0nm,0.7s
BMAR Burnt Mountain 81.07 23 P **P 02 37 21.7 +2.2**
RIDG Independent Ri 81.15 27 P **P 02 37 20.9 +0.8**
RIDG IAmb IAmb 02 37 23.8
comp=Z,8.2nm,1.1s
SCRK Sand Creek 81.52 26 P **P 02 37 22.6 +0.5**
ATD Arta Tunnel 81.78 280 LR LR 03 13 39.9
comp=Z,11nm,19.1s,baz=85,slow=36
K27K Chicken 82.35 26 P **P 02 37 28.6 +2.2**
K27K IAmb IAmb 02 37 29.8
comp=Z,7.6nm,1.2s
ARCES ARCESS Array B 85.00 340 P **P 02 37 39.5 -0.4**
comp=Z,3.5nm,0.7s,baz=79,slow=6.6,SNR=20
comp=Z,3.5nm,0.7s
BRTR Keskin Array B 86.08 309 LR LR 03 18 58.4
comp=Z,25nm,21.8s,baz=88,slow=38
EIL Elat 86.55 299 LR LR 03 22 56.3
comp=Z,35nm,18.3s,baz=86,slow=40
FINES FINESS Array B 86.65 332 P **P 02 37 46.4 -1.7**
comp=Z,4.6nm,1.0s,baz=120,slow=7.5,SNR=7.5
FINES LR LR 03 19 18.0
comp=Z,52nm,18.8s,baz=35,slow=37
comp=Z,4.6nm,1.0s
AKASG Malin Array Be 87.23 321 P **P 02 37 50.1 -1.0**
comp=Z,0.2nm,0.2s,baz=64,slow=4.2,SNR=2.2
comp=Z,0.2nm,0.2s
MAW Mawson 88.88 200 LR LR 03 14 04.8
comp=Z,16nm,20.1s,baz=74,slow=33
VNDA Vanda 89.07 173 P **P 02 37 59.0 -0.2**
comp=Z,2.2nm,0.6s,baz=313,slow=5.4,SNR=20
comp=Z,2.2nm,0.6s
MLR Muntele Rosu 90.52 316 LR LR 03 23 00.3
comp=Z,133nm,18.3s,baz=75,slow=38
MBAR Mbarara 95.55 270 LR LR 03 21 43.6
comp=Z,21nm,18.6s,baz=56,slow=36
QSPA South Pole Qui 99.27 180 LR LR 03 23 39.8
comp=Z,21nm,20.3s,baz=348,slow=35
TORD Torodi Ar. Bea 120.58 291 PKP **PKPdf 02 43 56.1 -1.0**
comp=Z,0.3nm,0.4s,baz=63,slow=1.9,SNR=9.5
PLCA Paso Flores 145.41 157 PKPbc **PKPab 02 44 43.3 +0.3**
comp=Z,3.9nm,0.8s,baz=182,slow=4.0,SNR=8.5

*IDC **06** 02:28:11.2±4.5, 9°.90N×127°.37E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=333.5km s-min=30.8km az=66.0*
*MAN **06** 02:28:20.8, 9°.32N×126°.26E, h31km, mb4.7, ML3.6, MS3.5*
ISC 06 02:28:20.1±1.1, 9°.32N±0°.05×126°.33E±0°.08, h43km, n19,
σ2°37/18, mb3.5/3, 3C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.50**	**337**	↓*eP*		**Pn**	**02 28 31.8**	**+0.7**
BUTP	**Butuan**	**0.78**	**243**	↑*eP*		**Pn**	**02 28 34.8**	**+0.1**
SCPH	**Surigao**	**0.95**	**299**	*eP*		**Pn**	**02 28 37.0**	**+0.1**
SCPH				*i*	S	**Sn**	02 28 49.6	+0.2
BIPH	**Bislig**	**1.13**	**178**	↓*iP*		**Pn**	**02 28 40.7**	**+1.2**
BIPH				*i*	S	**Sn**	02 28 54.5	+0.7
MSLP	**Maasin**	**1.66**	**299**	↓*eP*		**Pn**	**02 28 48.4**	**+1.7**
CGP	**Cagayan de Oro**	**1.83**	**242**	↑*eP*		**Pn**	**02 28 49.4**	**+0.3**
CGP				*eS*		**Sn**	02 29 10.2	-0.8
KCP	**Kidapawan**	**2.60**	**208**	↓*eP*		**Sn**	**02 29 33.1**	**+2.9**
DCPH	**Dipolog City**	**3.03**	**256**	↑*eP*		**Pn**	**02 29 08.3**	**+2.7**
DCPH				*eS*		**Sn**	**02 29 40.5**	**-0.2**
DDMP	**Don Marcelino,**	**3.25**	**191**	↓*eP*		**Pn**	02 29 12.2	+3.5
DDMP				*eS*		**Sn**	**02 29 39.7**	**-6.5**
CNP	**Catarman**	**3.57**	**333**	↓*eP*		**Pn**	**02 29 15.3**	**+2.4**
CNP				*eS*		Sn	02 29 43.5	-10
WRA	**Warramunga Arr**	**30.13**	**165**			**P**	**02 34 25.6**	**-0.4**
	0.6nm,0.6s,baz=350,slow=9.7,SNR=2.0							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**33.61**	**167**			**P**	**02 34 56.6**	**0.0**
	0.4nm,0.3s,baz=344,slow=7.3,SNR=4.4							
	0.4nm,0.3s							
H11S3	**WAKE ISLAND Hy 40.14**	**72**		T		T	03 18 51.9	
	baz=262,slow=75,SNR=28							
H11S1	**WAKE ISLAND Hy 40.16**	**72**		T		T	03 18 47.3	
	baz=262,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy 40.16**	**72**		T		T	03 18 53.0	
	baz=262,slow=75,SNR=42							
H11N1	**WAKE ISLAND Hy 40.51**	**71**		T		T	03 19 20.5	
	baz=264							
H11N2	**WAKE ISLAND Hy 40.52**	**71**		T		T	03 19 23.0	
	baz=264							
H11N3	**WAKE ISLAND Hy 40.52**	**71**		T		T	03 19 20.7	
	baz=264							
MKAR	**Makanchi Array**	**52.81**	**323**			**P**	**02 37 29.6**	**-1.7**
	0.4nm,0.7s,baz=110,slow=5.7,SNR=1.5							
	0.4nm,0.7s							

*MAN **06** 02:58:37.2, 9°.34N×126°.21E, h31km, mb4.8, ML3.7, MS3.6*
*NEIC **06** 02:58:38.7±0.8, 9°.37N±0°.08×126°.2E±0°.2, h64km±5km, mb4.4/12, Error ellipse: s-maj=30.6km s-min=11.3km az=89.0*
*IDC **06** 02:58:39.1±2.8, 9°.27N×126°.22E, h75km±26km, mb3.9/9, mbtmp4.2/11, MS3.1/5, Error ellipse: s-maj=45.1km s-min=13.9km az=81.0*
ISC 06 02:58:36.7±0.9, 9°.34N±0°.04×126°.31E±0°.06, h52km±9km,
n57, σ1°59/61, mb4.2/15, MS3.2/4, 8C-9D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.47**	**338**	↑*eP*		**Pn**	**02 58 47.6**	**-0.2**
BUTP	**Butuan**	**0.77**	**241**	↓*eP*		**Pn**	**02 58 50.4**	**-1.1**
SCPH	**Surigao**	**0.92**	**299**	↓*iP*		**Pn**	**02 58 52.5**	**-0.8**
SCPH				*i*	S	**Sn**	**02 59 05.9**	**+0.3**
BIPH	**Bislig**	**1.15**	**177**	↓*eP*		**Pn**	**02 58 55.9**	**-0.6**
BIPH				*eS*		**Sn**	**02 59 10.0**	**-1.2**
MSLP	**Maasin**	**1.63**	**299**	↑*eP*		**Pn**	**02 59 04.1**	**+1.1**
CGP	**Cagayan de Oro**	**1.82**	**241**	↓*eP*		**Pn**	**02 59 05.3**	**-0.3**
CGP				*eS*		**Sn**	**02 59 25.9**	**-1.5**
GHBP	**Garcia Hernand**	**1.98**	**279**	↓*iP*		**Pn**	**02 59 07.9**	**+0.1**
GHBP				*i*	S	**Sn**	**02 59 30.3**	**-1.1**
TABP	**Talibon, Bohol**	**2.08**	**291**	↑*iP*		**Pn**	**02 59 08.9**	**-0.3**
TABP				*i*	S	**Sn**	**02 59 32.7**	**-1.3**
DAV	**Davao City (W)**	**2.37**	**198**			**P**	**02 59 15.6**	**+2.4**
	127nm,0.3s,baz=63,slow=3.3,SNR=1.5							
DAV						LR	03 00 30.2	
	comp=Z,517nm,19.5s,baz=358,slow=49							
DAV	**Davao City (W)**	**2.37**	**198**	Pn		**Pn**	**02 59 15.0**	**+1.9**
DAV				Sn		**Sn**	**02 59 42.8**	**+1.8**
MATI	**Mati**	**2.38**	**181**	↓*eP*		**Pn**	**02 59 14.9**	**+1.6**
TBP	**Tagbilaran**	**2.44**	**278**	*eP*		**Pn**	**02 59 14.2**	**+0.2**
TBP				*i*	S	**Sn**	**02 59 41.9**	**-0.7**
LLP	**Lapu-Lapu**	**2.50**	**293**	↑*eP*		**Pn**	**02 59 16.5**	**+1.5**
LLP				*i*	S	**Sn**	**02 59 46.0**	**+1.7**
KCP	**Kidapawan**	**2.61**	**208**	↑*iP*		**Pn**	**02 59 17.4**	**+0.9**
KCP				*i*	S	**Sn**	**02 59 47.6**	**+0.6**
LSIP	**Lazi, Siquijor**	**2.65**	**266**	↑*eP*		**Pn**	**02 59 18.2**	**+1.2**
LSIP				*eS*		**Sn**	**02 59 46.9**	**-0.9**
CTBH	**Cotabato--PC H**	**2.93**	**224**	↓*iP*		**Pn**	**02 59 21.6**	**+0.8**
DCPH	**Dipolog City**	**3.01**	**256**	↓*iP*		**Pn**	**02 59 22.7**	**+0.8**
DCPH				*i*	S	**Sn**	**02 59 56.3**	**-0.5**
PAGZ	**Pagadian**	**3.25**	**243**	↓*eP*		**Pn**	**02 59 26.2**	**+1.1**
DDMP	**Don Marcelino,**	**3.27**	**190**	↑*eP*		**Pn**	**02 59 26.4**	**+1.0**
DDMP				*eS*		**Sn**	**02 59 55.7**	**-7.4**
GSPH	**General Santos**	**3.50**	**203**	*eP*		**Pn**	**02 59 33.5**	**+4.7**
CNP	**Catarman**	**3.54**	**333**	↑*eP*		**Pn**	**02 59 30.6**	**+1.5**
CNP				*eS*		**Sn**	**03 00 07.1**	**-2.7**
LUWI	**Luwuk**	**10.90**	**199**	Pn		**Pn**	**03 01 10.9**	**+0.8**
SIJI	**Sorong**	**11.28**	**154**	P		**Pn**	**03 01 15.8**	**+0.4**
	8.9nm,0.4s,baz=350,slow=23,SNR=4.2							
FAKI	**Fak Fak**	**13.54**	**154**	Pn		**Pn**	**03 01 47.7**	**+1.5**
MTN	**Manton Dam**	**22.55**	**168**	P		**P**	**03 03 32.9**	**+0.3**
KNRA	**Kununurra**	**24.98**	**174**	P		**P**	**03 03 55.8**	**+0.2**
KNRA				IAmb		IAmb	03 03 57.6	
	comp=Z,24nm,0.8s							
FITZ	**Fitzroy Crossi**	**27.27**	**181**	P		**P**	**03 04 16.5**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=8.8,slow=9.0,SNR=9.2							
	comp=Z,1.4nm,0.4s							
FITZ	**Fitzroy Crossi**	**27.27**	**181**	P		**P**	**03 04 17.0**	**+0.6**
PMG	**Port Moresby**	**27.89**	**131**	LR		LR	03 18 10.0	
	comp=Z,120nm,18.2s,baz=100,slow=42							
KSRS	**Korea Array**	**28.03**	**3**	LR		LR	03 16 44.3	
	comp=Z,10nm,19.2s,baz=185,slow=39							
WRA	**Warramunga Arr**	**30.16**	**165**	P		**P**	**03 04 40.5**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=345,slow=8.2,SNR=20							
	comp=Z,0.4nm,0.4s							
ASAR	**Alice Springs**	**33.63**	**167**	P		**P**	**03 05 12.3**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=345,slow=7.1,SNR=25							
	comp=Z,0.9nm,0.3s							
USA0B	**Ussuriysk Arra**	**35.08**	**7**	P		**P**	**03 05 24.9**	**+0.1**
USA0B				IAmb		IAmb	03 05 26.8	
	comp=Z,5.8nm,0.8s							
USRK	**Ussuriysk Ar.**	**35.08**	**7**	P		**P**	**03 05 26.1**	**+1.3**
	comp=Z,4.8nm,0.7s,baz=205,slow=7.9,SNR=11							
	comp=Z,4.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**35.08**	**7**	P		**P**	**03 05 25.9**	**+1.1**
MORW	**Morawa**	**39.45**	**194**	P		**P**	**03 06 01.3**	**-0.7**
FORT	**Forrest**	**39.92**	**178**	P		**P**	**03 06 06.5**	**+0.5**
KLR	**Kul'dur**	**40.02**	**6**	P		**P**	**03 06 07.3**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=181,slow=6.5,SNR=6.4							
KLR				LR		LR	03 24 02.6	
	comp=Z,19nm,18.0s,baz=338,slow=38							
	comp=Z,1.7nm,0.5s							
H11S3	**WAKE ISLAND Hy 40.16**	**72**		T		T	03 49 15.2	
	baz=262,slow=75,SNR=168							
H11S1	**WAKE ISLAND Hy 40.17**	**72**		T		T	03 49 09.1	
	baz=262,slow=75,SNR=159							
H11S2	**WAKE ISLAND Hy 40.17**	**72**		T		T	03 49 09.2	
	baz=262,slow=75,SNR=189							
H11N1	**WAKE ISLAND Hy 40.52**	**71**		T		T	03 49 43.7	
	baz=265,slow=74,SNR=52							
H11N2	**WAKE ISLAND Hy 40.53**	**71**		T		T	03 49 35.7	
	baz=265,slow=74,SNR=48							
H11N3	**WAKE ISLAND Hy 40.54**	**71**		T		T	03 49 42.6	
	baz=265,slow=74,SNR=50							
ULN	**Ulaanbaatar**	**41.70**	**341**	P		**P**	**03 06 20.3**	**-0.3**
ULN				IAmb		IAmb	03 06 23.2	
	comp=Z,2.3nm,0.5s							
NWAO	**Narrogin (SRO)**	**42.91**	**191**	P		**P**	**03 06 30.5**	**+0.1**
BBOO	**Buckleboo**	**42.93**	**168**	P		**P**	**03 06 30.9**	**+0.3**
BBOO				IAmb		IAmb	03 06 32.3	
	comp=Z,13nm,0.9s							
STKA	**Stephens Creek**	**43.52**	**161**	P		**P**	**03 06 35.6**	**+0.4**
	comp=Z,2.2nm,0.4s,baz=351,slow=7.2,SNR=8.6							
	comp=Z,2.2nm,0.4s							
STKA	**Stephens Creek**	**43.52**	**161**	P		**P**	**03 06 35.3**	**0.0**
TOO	**Toolangi**	**50.01**	**160**	P		**P**	**03 07 27.4**	**+1.4**
TOO				IAmb		IAmb	03 07 32.2	
	comp=Z,2.4nm,0.8s							
MKAR	**Makanchi Array**	**52.78**	**323**	P		**P**	**03 07 46.1**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=132,slow=7.0,SNR=6.6							
	comp=Z,0.5nm,0.5s							
MAKZ	**Makanchi**	**52.98**	**323**	P		**P**	**03 07 46.9**	**-1.2**
MAKZ				IAmb		IAmb	03 07 54.8	
	comp=Z,2.7nm,0.9s							
AAK	**Ala-Archa**	**56.01**	**316**	LR		LR	03 34 05.2	
	comp=Z,26nm,18.1s,baz=84,slow=38							
ABKAR	**Akbulak array**	**67.60**	**320**	P		**P**	**03 09 26.5**	**-1.5**
ARCES	**ARCESS Array B**	**85.07**	**340**	P		**P**	**03 11 06.4**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=95,slow=4.8,SNR=3.7							
	comp=Z,3.9nm,0.9s							
VNDA	**Vanda**	**89.01**	**173**	P		**P**	**03 11 25.7**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=311,slow=6.1,SNR=8.0							
	comp=Z,0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**120.64**	**291**	PKP		**PKPdf**	**03 17 22.2**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=101,slow=1.5,SNR=5.2							

*DJA **06** 03:01:44.5±0.5, 3°.5S×144°.12E±°, h12km±6km, M4.2/12, mb4.5/3, mB4.8/1, MLv4.0/12, Mw(mB)4.1/1*
*IDC **06** 03:01:44.2±1.0, 3°.03S×127°.56E, h0km, mb3.9/4, mbtmp4.0/6, ML4.1/2, MS3.1/10, Error ellipse: s-maj=33.0km s-min=11.0km az=75.0*
ISC 06 03:01:45.6±0.8, 3°.00S±0°.07×127°.49E±0°.06, h10km, n25,
σ1°22/16, mb3.9/4, MS3.3/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.46**	**238**	P		**Pg**	**03 01 54.6**	**+0.1**
KRAI	**Karang Ratu**	**0.96**	**109**	P		Pg	03 02 01.4	-2.7
AAI	**Ambon**	**0.98**	**134**	P		Pg	03 02 01.7	-2.8
MSAI	**Masohi**	**1.48**	**104**	P		**Pn**	**03 02 10.9**	**-1.4**
SANI	**Sanana**	**1.77**	**302**	P		Pn	03 02 15.1	-1.2
SANI				S		**Sn**	**03 02 37.5**	**-1.3**
LBMI	**Labuha**	**2.34**	**0**	P		Pn	03 02 23.7	-0.5
BNDI	**Bandanaira**	**2.85**	**122**	P		**Pn**	**03 02 29.1**	**-2.0**
SIJI	**Sorong**	**4.33**	**61**	Pn		**Pn**	**03 02 51.2**	**-0.2**
	9.3nm,0.3s,baz=218,slow=21,SNR=9.3							
SIJI				Sn		**Sn**	**03 03 41.9**	**-0.2**
	16nm,0.3s,baz=87,slow=22,SNR=25							
	44nm,0.5s							
SIJI	**Sorong**	**4.33**	**61**	P		**Pn**	**03 02 50.8**	**-0.7**
FAKI	**Fak Fak**	**4.75**	**89**	P		**Pn**	**03 02 56.5**	**-0.9**
APSI	**Ampana**	**6.19**	**289**	P		**Pn**	**03 03 17.5**	**+0.4**
	0.2nm726nm68nm,0.5s							
KAPI	**Kappang**	**7.97**	**255**	LR		LR	03 07 04.6	
	comp=Z,89nm,19.1s,baz=65,slow=40							
BATI	**Baumata**	**8.11**	**208**	LR		LR	03 07 06.1	
	comp=Z,238nm,20.1s,baz=120,slow=40							
FITZ	**Fitzroy Crossi**	**15.12**	**187**	LR		LR	03 10 41.4	
	comp=Z,42nm,21.1s,baz=22,slow=36							
WRA	**Warramunga Arr**	**18.12**	**159**	P		**Pn**	**03 05 57.9**	**+0.3**
	0.6nm,0.3s,baz=341,slow=11,SNR=12							
WRA				S		**Sn**	**03 09 22.2**	**+2.2**
	0.8nm,0.9s,baz=341,slow=21,SNR=2.5							
WRA				LR		LR	03 13 25.6	
	comp=Z,80nm,18.1s,baz=317,slow=39							
	5.3nm,0.7s							
ASAR	**Alice Springs**	**21.46**	**164**	P		**P**	**03 06 34.8**	**+0.4**
	1.3nm,0.3s,baz=347,slow=10.0,SNR=10							
ASAR				S		**S**	**03 10 30.8**	**-1.9**
	0.4nm,0.6s,baz=350,slow=23,SNR=4.4							
	1.3nm,0.3s							
STKA	**Stephens Creek**	**31.65**	**157**	LR		LR	03 21 08.1	
	comp=Z,52nm,20.8s,baz=18,slow=37

*NEIC **06** 03:54:45.6±0.8, 25°.0N±0°.1×142°.2E±0°.2, h243km±8km, mb4.5/10, Error ellipse: s-maj=21.6km s-min=15.2km az=90.0*
*JMA **06** 03:54:47.0±0.2, 25°.0N±0°.8×14°.1E±°, h176km, MV5.0/13, IOTO ISLANDS REGION*
ISC 06 03:54:42.8±0.6, 24°.76N±0°.06×141°.2E±0°.1, h181km, n36, σ1§59/38, mb4.0/16, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.08	26	P	Pn	03 55 23.8	+3.0
JHH2				S	Sn	03 55 51.6	+1.2
JHH2	Haha-jima-NKT2	2.08	26	A	A	03 55 23.8	
	comp=E,6.0nm,0.4s,comp=E,4.0nm,4.1s						
CBIJ	Chichi jima	2.50	22	P	Pn	03 55 28.2	+2.6
CBIJ				S	Sn	03 56 00.4	+1.4
CBIJ	Chichi jima	2.50	22	A	A	03 55 28.2	
	comp=N,4.0nm,0.8s						
JCJ	Chichijima	2.50	22	P	Pn	03 55 28.1	+2.5
	380nm,0.4s,baz=142,slow=4.9,SNR=72						
JCJ				S	Sn	03 55 59.9	+0.8
	948nm,0.4s,baz=136,slow=23,SNR=34						
JCJ	Chichijima	2.50	22	Pn	Pn	03 55 28.0	+2.5
JCJ				Sn	Sn	03 55 59.4	+0.4
JHJ	Hachijo jima 2	8.41	352	P	Pn	03 56 43.3	+1.8
	206nm,1.0s,baz=71,slow=21,SNR=2.7						
JHJ				S	Sn	03 58 11.2	-4.4
	121nm,0.9s,baz=102,slow=18,SNR=1.5						
BSO3	Boso 3	10.02	357	P	Pn	03 57 00.6	-1.7
JAG	Ashikaga	11.71	353	eP	Pn	03 57 22.0	-2.5
JHS	Saijyo	12.35	328	Pn	P	03 57 37.6	+0.1
JMM	Marumori	13.07	359	Pn	Pn	03 57 39.6	-2.1
KSRS	Korea Array	16.95	321	P	Pn	03 58 31.7	+2.2
	3.0nm,0.6s,baz=134,slow=11,SNR=8.2						
SSLB	Suanglung	18.44	271	P	Pn	03 58 48.6	+1.5
SSLB				IAmb	IAmb	03 59 02.6	
	comp=Z,31nm,1.2s						
USRK	Ussuriysk Ar.	20.78	341	P	P	03 59 10.1	+0.4
	comp=Z,2.1nm,0.6s,baz=139,slow=11,SNR=3.7						
	comp=Z,2.1nm,0.6s						
CMAR	Chiang Mai Arr	39.62	269	P	P	04 01 58.4	+1.3
	comp=Z,0.6nm,0.3s,baz=61,slow=8.0,SNR=4.7						
	comp=Z,0.6nm,0.3s						
WB0	Warramunga Arr	44.75	189	P	P	04 02 37.8	-0.5
WB0				IAmb	IAmb	04 02 38.9	
	comp=Z,10nm,0.6s						
CTA	Charters Tower	44.86	173	P	P	04 02 39.0	-0.3
	comp=Z,3.9nm,0.8s,baz=355,slow=11,SNR=1.8						
	comp=Z,3.9nm,0.8s						
WR0	Warramunga Arr	44.92	189	P	P	04 02 39.7	0.0
WR0				IAmb	IAmb	04 02 40.3	
	comp=Z,10nm,0.7s						
WRAB	Tennant Creek	44.92	189	P	P	04 02 39.9	+0.2
WRAB				IAmb	IAmb	04 02 40.4	
	comp=Z,19nm,0.6s						
WB2	Warramunga Arr	44.93	189	P	P	04 02 39.8	0.0
WB2				IAmb	IAmb	04 02 40.5	
	comp=Z,18nm,0.6s						
WRA	Warramunga Arr	44.93	189	P	P	04 02 39.7	-0.1
	comp=Z,15nm,0.6s,baz=9.5,slow=8.7,SNR=92						
WRA				PcP	PcP	04 04 17.5	-0.6
	comp=Z,1.0nm,0.7s,baz=1.7,slow=3.5,SNR=4.0						
WRA	Warramunga Arr	44.93	189	P	P	04 02 39.3	-0.5
FITZ	Fitzroy Crossi	45.20	201	P	P	04 02 42.2	+0.2
	comp=Z,2.1nm,0.8s,baz=31,slow=6.9,SNR=5.1						
	comp=Z,2.1nm,0.8s						
FITZ	Fitzroy Crossi	45.20	201	P	P	04 02 42.2	+0.2
ASAR	Alice Springs	48.65	189	P	P	04 03 08.2	-0.5
	comp=Z,0.6nm,0.5s,baz=12,slow=15,SNR=6.3						
ASAR				PcP	PcP	04 04 30.8	-0.4
	comp=Z,0.8nm,0.9s,baz=1.4,slow=3.7,SNR=4.2						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	51.27	311	P	P	04 03 28.2	+0.1
	comp=Z,0.4nm,0.4s,baz=84,slow=9.7,SNR=8.3						
	comp=Z,0.4nm,0.4s						
N18K	Kilae Creek	55.53	32	P	P	04 03 50.1	-8.9
P18K	Big Mountain,	55.63	34	P	P	04 03 50.6	-9.1
P18K				IAmb	IAmb	04 04 13.3	
	comp=Z,5.6nm,0.9s						
SVW2	Sparrevohn	55.76	32	P	P	04 03 49.5	-11
STKA	Stephens Creek	56.32	180	P	P	04 04 04.5	-0.4
	comp=Z,3.5nm,0.6s,baz=324,slow=7.3,SNR=5.3						
	comp=Z,3.5nm,0.6s						
ILAR	Eielson Array	60.20	28	P	P	04 04 30.2	-1.1
	comp=Z,0.5nm,0.9s,baz=241,slow=6.0,SNR=4.4						
	comp=Z,0.5nm,0.9s						
KBZ	Khabaz	78.91	313	P	P	04 06 25.9	-0.3
	comp=Z,2.2nm,0.7s,baz=130,slow=3.6,SNR=5.2						
	comp=Z,2.2nm,0.7s						
FINES	FINESS Array B	79.62	334	P	P	04 06 30.3	+0.6
	comp=Z,1.7nm,0.8s,baz=92,slow=4.2,SNR=1.7						
	comp=Z,1.7nm,0.8s						
NVAR	Mina Array Bea	82.70	51	P	P	04 06 46.5	-0.2
	comp=Z,0.2nm,0.5s,baz=289,slow=2.8,SNR=1.8						
	comp=Z,0.2nm,0.5s						
PLCA	Paso Flores	149.16	129	PKPbc	PKPbc	04 14 08.4	-1.5
	comp=Z,0.6nm,0.6s,baz=129,slow=5.1,SNR=3.3						
LPAZ	La Paz	151.36	79	PKPbc	PKPbc	04 14 14.3	-2.3
	comp=Z,0.7nm,0.6s,baz=256,slow=5.7,SNR=4.7						

*IDC **06** 03:56:57.7±2.8, 6°.46S×154°.85E, h0km, mb3.8/3, mbtmp3.9/4, ML3.8/1, MS2.9/3, Error ellipse: s-maj=53.1km s-min=35.0km az=75.0*
*NEIC **06** 03:56:58.5±1.8, 6°.4S±0°.1×154°.92E±0°.03, h10km±2km, mb4.1/6, Error ellipse: s-maj=21.8km s-min=5.8km az=1.0*
ISC 06 03:57:02.1±1.3, 6°.3S±0°.2×155°.0E±0°.2, h56km, n17, σ1§41/15, mb3.9/7, MS2.7/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.51	306	Pn	Pn	03 57 52.2	-2.0
RABL				Sn	Sn	03 58 33.7	-0.9
KRVT	Keravat (AS076	3.56	303	Pn	Pn	03 57 54.6	-0.2
	9.4nm,0.3s,baz=270,slow=4.0,SNR=5.4						
KRVT				Sn	Sn	03 58 38.0	+2.2
	15nm,0.3s,baz=197,slow=22,SNR=1.8						
	68nm,0.7s						
HNR	Honiara	5.81	123	Pn	Pn	03 58 25.3	-0.4
WR0	Warramunga Arr	24.11	234	P	P	04 02 13.1	+0.2
WR0				IAmb	IAmb	04 02 26.9	
	comp=Z,9.2nm,1.2s						
WB0	Warramunga Arr	24.13	234	P	P	04 02 13.0	0.0
WB0				IAmb	IAmb	04 02 14.8	
	comp=Z,9.8nm,1.4s						
WRAB	Tennant Creek	24.25	234	P	P	04 02 12.9	-1.2
WRAB				IAmb	IAmb	04 02 25.4	
	comp=Z,6.1nm,1.1s						
WB2	Warramunga Arr	24.26	234	P	P	04 02 14.3	+0.1
WB2				IAmb	IAmb	04 02 15.4	
	comp=Z,3.9nm,1.1s						
WRA	Warramunga Arr	24.27	234	P	P	04 02 14.8	+0.6
	comp=Z,2.4nm,0.6s,baz=58,slow=9.8,SNR=27						
WRA				LR	LR	04 09 42.7	
	comp=Z,22nm,21.5s,baz=36,slow=32						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	24.27	234	P	P	04 02 13.2	-1.1
ASAR	Alice Springs	26.69	227	P	P	04 02 36.4	+0.2
	comp=Z,0.4nm,0.4s,baz=60,slow=9.2,SNR=5.1						
	comp=Z,0.4nm,0.4s						
H11S3	WAKE ISLAND Hy 27.15	25		T	T	04 30 52.2	
	baz=207,slow=74,SNR=8.6						
H11S2	WAKE ISLAND Hy 27.16	25		T	T	04 30 53.4	
	baz=207,slow=74,SNR=6.4						
H11S1	WAKE ISLAND Hy 27.17	25		T	T	04 30 53.9	
	baz=207,slow=74,SNR=3.9						
STKA	Stephens Creek	28.41	205	LR	LR	04 13 49.6	
	comp=Z,30nm,18.9s,baz=31,slow=36						
FITZ	Fitzroy Crossi	30.98	245	P	P	04 03 14.4	0.0
	comp=Z,1.3nm,0.9s,baz=73,slow=11,SNR=1.0						
FITZ				LR	LR	04 14 30.4	
	comp=Z,16nm,19.8s,baz=80,slow=34						
	comp=Z,1.3nm,0.9s						
FITZ	Fitzroy Crossi	30.98	245	P	P	04 03 13.2	-1.2
TORD	Torodi Ar. Bea	152.85	287	PKPbc	PKiKP	04 16 57.3	+3.0
	comp=Z,0.2nm,0.4s,baz=60,slow=2.9,SNR=4.9						

*IDC **06** 04:03:37.0±4.1, 19°.29S×178°.00W, h583km±32km, mb2.8/4, mbtmp3.9/5, Error ellipse: s-maj=140.6km s-min=24.2km az=155.0*
ISC 06 04:03:39.0±1.9, 18°.6S±0°.8×178°.3W±0°.3, h600km, n6, σ0§52/7, mb3.4/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.62	283	P	P	04 05 01.7	-0.3
	30nm,0.5s,baz=135,slow=4.5,SNR=41						
CTA	Charters Tower	33.48	262	P	P	04 09 31.2	+0.8
	3.9nm,0.9s,baz=95,slow=12,SNR=1.9						
	3.9nm,0.9s						
WRA	Warramunga Arr	44.65	260	P	P	04 10 59.8	-0.2
	0.2nm,0.3s,baz=98,slow=7.6,SNR=13						
WRA				PcP	PcP	04 12 29.3	-0.1
	0.1nm,0.5s,baz=101,slow=3.1,SNR=0.9						
	0.2nm,0.3s						
ASAR	Alice Springs	44.75	255	P	P	04 11 00.1	-0.6
	0.7nm,0.6s,baz=88,slow=8.7,SNR=6.5						
	0.7nm,0.6s						
TXAR	Lajitas Array	86.24	58	P	P	04 15 18.7	+0.2
	0.6nm,0.8s,baz=222,slow=5.7,SNR=7.4						
	0.6nm,0.8s						
GERES	GERESS Array B	148.31	345	PKPbc	PKiKP	04 22 19.7	-0.2
	0.6nm,0.6s,baz=33,slow=5.1,SNR=4.4						

DJA 06 04:12:24.4±0.6, 2°.N±3°×12°.7E±°, h138km±7km, M3.7/7, mb3.7/2, MLv3.7/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.49	63	P	Pn	04 12 45.4	+1.1
GAMI				S	Sn	04 13 01.7	+2.3
TNTI	Ternate	0.83	179	P	Pn	04 12 49.2	+2.6
LBMI	Labuha	2.24	176	P	Pn	04 13 03.2	+1.5
SGSI	Sangihe	2.75	319	S	Sn	04 13 41.9	0.0
KMSI	Cibinong	3.52	253	S	Sn	04 14 00.4	+0.8
SANI	Sanana	3.88	201	P	Pn	04 13 22.5	-0.3
SANI				S	Sn	04 14 04.5	-3.7
GTOI	Gorontalo	4.45	257	P	Pn	04 13 32.2	+1.9
NLAI	Namlea	4.82	183	P	Pn	04 13 35.7	+0.4
APSI	Ampana	6.23	246	P	Pn	04 13 54.8	+0.7

*IDC **06** 04:50:44.0±1.4, 39°.98N×145°.63E, h0km, mb3.5/3, mbtmp3.5/4, ML2.7/1, MS2.5/1, Error ellipse: s-maj=77.8km s-min=27.1km az=128.0*
*JMA **06** 04:50:46.9±0.4, 40°.N±1°.×14°.5E±°, h46km, MV3.9/28, FAR E OFF NORTH HONSHU*
ISC 06 04:50:48.1±1.0, 40°.14N±0°.05×145°.39E±0°.07, h35km, n22, σ1§51/36, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	Erimo	2.52	319	eS	Sn	04 51 55.7	-0.3
JTHR	Tokachihiroo	2.67	324	eP	Pn	04 51 28.6	0.0
JTHR				eS	Sn	04 51 59.2	-0.3
JTH	Tanohata	2.71	267	eP	Pn	04 51 28.2	-1.0
JTH				eS	Sn	04 51 58.9	-1.9
MIYJ	Miyakonagasawa	2.80	260	P	Pn	04 51 30.1	-0.4
MIYJ				eS	Sn	04 52 00.8	-2.3
JAK	Akkeshi	2.90	350	P	Pn	04 51 30.9	-0.8
JAK				eS	Sn	04 52 02.7	-2.6
JCH	Churui	2.90	329	P	Pn	04 51 31.9	+0.1
JCH				S	Sn	04 52 04.2	-1.3
JNBK	Urakawa-nobuka	2.92	318	eP	Pn	04 51 32.9	+0.9
JNBK				S	Sn	04 52 07.0	+1.2
JANG	Nango	2.97	276	P	Pn	04 51 32.1	-0.7
JANG				eS	Sn	04 52 04.7	-2.5
JOM	Ohasama	3.23	259	P	Pn	04 51 36.2	0.0
JOM				eS	Sn	04 52 11.6	-1.8
NEM2	Nemuro 2	3.23	5	eP	Pn	04 51 35.2	-1.1
NEM2				eS	Sn	04 52 10.1	-3.4
JAR	Ashorobuto	3.38	340	P	Pn	04 51 37.6	-0.8
JAR				S	Sn	04 52 15.2	-1.9
JMK	Ichinoseki	3.44	251	P	Pn	04 51 38.8	-0.3
JMK				S	Sn	04 52 16.2	-2.4
JOT	Ohata	3.52	292	eP	Pn	04 51 40.5	+0.2
JOT				S	Sn	04 52 18.4	-2.3
JRA	Rausu	3.80	357	eS	Sn	04 52 25.3	-2.2
JTKR	Abashiri--Toko	3.98	344	P	Pn	04 51 46.6	0.0
JTKR				eS	Sn	04 52 30.6	-1.4
JEW	Eniwo	4.00	314	P	Pn	04 51 48.5	+1.6
JEW				eS	Sn	04 52 33.7	+1.1
JYK	Kaneyama	4.08	254	P	Pn	04 51 48.3	+0.4
JKK2	Kamakawa 2	4.22	333	eP	Pn	04 51 50.6	+0.7
MJAR	Matsushiro Arr	6.69	240	Pn	Pn	04 52 24.6	+0.7
	0.1nm,0.3s,baz=57,slow=11,SNR=6.4						
MJAR				LR	LR	04 55 30.4	
	comp=Z,41nm,20.4s,baz=56,slow=42						
	1.9nm,0.4s						
ILAR	Eielson Array	45.19	34	P	P	04 59 02.0	+0.8
	0.4nm,0.8s,baz=260,slow=8.1,SNR=4.5						
	0.4nm,0.8s						
WRA	Warramunga Arr	60.65	192	P	P	05 00 55.8	+0.2
	0.7nm,0.7s,baz=9.2,slow=7.0,SNR=6.1						
	0.7nm,0.7s						
TXAR	Lajitas Array	85.77	55	P	P	05 03 25.7	+1.6
	0.2nm,0.6s,baz=324,slow=2.6,SNR=3.8						
	0.2nm,0.6s						

*IDC **06** 05:22:47.7±11.0, 7°.26S×128°.59E, h110km±111km, mb3.5/2, mbtmp3.9/4, ML3.9/2, Error ellipse: s-maj=257.4km s-min=42.9km az=62.0*
*DJA **06** 05:22:50.8±0.4, 7°.5S±4°.×12°.9E±°, h148km±16km, M4.4/6, mB5.3/1, mb4.2/6, MLv4.5/4, Mw(mB)4.7/1*
*NEIC **06** 05:22:52.0±0.5, 7°.35S±0°.09×128°.47E±0°.07, h159km±11km, mb4.1/6, Error ellipse: s-maj=13.2km s-min=9.4km az=206.0*
ISC 06 05:22:51.1±0.8, 7°.40S±0°.07×128°.50E±0°.07, h151km, n35, σ1§43/38, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.84	102	Pn	Pn	05 23 38.1	+1.6
SOEI	Soe	4.79	240		Pn	05 24 02.7	+0.7
SOEI	Soe	4.79	240	P	Pn	05 24 03.0	+1.0
SOEI				S	Sn	05 24 57.5	+0.3
SOEI	Soe	4.79	240	P	Pn	05 24 03.5	+1.5
BATI	Baumata	5.53	239	P	Pn	05 24 12.5	+0.8
	0.6nm4μm97nm,0.5s						
FAKI	Fak Fak	5.81	40		Pn	05 24 15.7	+0.2
FAKI	Fak Fak	5.81	40	P	Pn	05 24 15.6	+0.2
	0.2nm31nm,0.5s						
FAKI				S	Sn	05 25 19.4	-1.9
	0.2nm31nm,0.5s						
MTN	Manton Dam	6.00	155		Pn	05 24 19.2	+1.3
MTN	Manton Dam	6.00	155	P	Pn	05 24 19.1	+1.2
KDU	Kakadu	6.55	144	P	Pn	05 24 26.3	+1.1
KNRA	Kununurra	8.23	178	Pn	Pn	05 24 47.5	-0.1
KNRA	Kununurra	8.23	178	P	Pn	05 24 47.4	-0.2
PLAI	Plampang	10.71	262	P	Pn	05 25 19.6	-1.0
	20nm,1.5s						
FITZ	Fitzroy Crossi	10.99	194	Pn	Pn	05 25 23.1	-1.2
FITZ	Fitzroy Crossi	10.99	194	P	Pn	05 25 23.0	-1.2
WB0	Warramunga Arr	13.56	156	Pn	Pn	05 25 55.7	-1.8
WRAB	Tennant Creek	13.69	156	P	Pn	05 25 57.9	-1.3
WRA	Warramunga Arr	13.70	156	P	Pn	05 25 57.9	-1.3
	0.4nm,0.3s,baz=334,slow=13,SNR=24						
WRA				S	Sn	05 28 21.9	-9.1
	3.5nm,0.4s,baz=333,slow=22,SNR=14						
	0.5nm,0.4s						
WRA	Warramunga Arr	13.70	156	Pn	Pn	05 25 58.0	-1.2
WB2	Warramunga Arr	13.70	156	Pn	Pn	05 25 58.1	-1.2
WR0	Warramunga Arr	13.79	155	Pn	Pn	05 25 59.0	-1.5
COEN	Coen	15.82	116		P	05 26 27.0	+0.5
COEN				IAmb	IAmb	05 26 47.0	
	comp=Z,8.9nm,1.1s						
PSA00	Pilbara Seismi	16.38	210		Pn	05 26 32.6	0.0
PSA00				IAmb	IAmb	05 27 00.8	
	comp=Z,5.7nm,1.1s						
QIS	Mount Isa	16.93	142	P	Pn	05 26 41.0	+1.7
AS31	Alice Springs	16.98	163	P	Pn	05 26 41.0	+1.1
AS31				IAmb	IAmb	05 26 41.9	
	comp=Z,3.0nm,0.3s						
ASAR	Alice Springs	16.99	163	P	Pn	05 26 41.0	+1.0
	comp=Z,0.9nm,0.3s,baz=339,slow=11,SNR=55						
ASAR				S	S	05 29 43.6	-5.2
	comp=Z,0.9nm,0.4s,baz=318,slow=16,SNR=6.8						
	comp=Z,3.6nm,0.5s						
AS01	Alice Springs	17.00	163	P	Pn	05 26 41.3	+1.2
OOD	Oodnadatta	21.40	162	P	P	05 27 28.6	+1.6
FORT	Forrest	23.26	181	P	P	05 27 46.4	+1.2
MULG	Mulgathing	23.35	168	P	P	05 27 47.3	+1.2
BBOO	Buckleboo	26.24	165	P	P	05 28 12.3	+0.1
BBOO				IAmb	IAmb	05 28 34.4	
	comp=Z,7.1nm,0.9s						
STKA	Stephens Creek	27.24	155	P	P	05 28 22.1	+1.0
	comp=Z,1.6nm,0.5s,baz=328,slow=10,SNR=2.9						
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	27.24	155	P	P	05 28 20.6	-0.6
MKAR	Makanchi Array	67.75	328	P	P	05 33 33.2	+0.7
	comp=Z,0.3nm,0.5s,baz=132,slow=8.4,SNR=3.8						
	comp=Z,0.3nm,0.5s						
QSPA	South Pole Qui	82.58	180	P	P	05 34 57.3	+0.1

*IDC **06** 05:33:13.3±1.5, 5°.97N×127°.17E, h103km±12km, mb3.8/13, mbtmp4.2/14, MS2.3/2, Error ellipse: s-maj=23.2km s-min=10.9km az=62.0*
*NEIC **06** 05:33:13.4±1.2, 6°.00N±0°.07×127°.1E±0°.1, h98km±8km, mb4.4/19, Error ellipse: s-maj=20.5km s-min=3.7km az=64.0*
*MAN **06** 05:33:14.0, 6°.11N×127°.10E, h97km, mb4.7, ML3.6, MS3.5*
ISC 06 05:33:11.2±0.5, 5°.91N±0°.05×127°.15E±0°.07, h83km, n52, σ1§54/61, mb4.3/23, 3C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.94	306	P	Pn	05 33 45.5	+3.2
	510nm,0.3s,baz=84,slow=2.9,SNR=11						
DAV				S	Sn	05 34 09.3	+3.2
	363nm,0.4s,baz=174,slow=17,SNR=5.0						
DAV	Davao City (W)	1.94	306	Pn	Pn	05 33 44.3	+1.9
GSPH	General Santos	2.19	275	↑iP	Pn	05 33 44.8	-1.1
GSPH				iS	Sn	05 34 10.2	-2.2
KCP	Kidapawan	2.32	298	↓iP	Pn	05 33 49.0	+1.6
KCP				iS	Sn	05 34 16.3	+1.0
BIPH	Bislig	2.39	341	↓iP	Pn	05 33 49.7	+1.4
BIPH				iS	Sn	05 34 15.4	-1.4
CTBH	Cotabato--PC H	3.16	294	↑iP	Pn	05 34 02.0	+3.2
CGP	Cagayan de Oro	3.51	316	eP	Pn	05 34 06.7	+3.2
CGP				eS	Sn	05 34 44.0	0.0
GHBP	Garcia Hernand	4.63	323	eP	Pn	05 34 21.5	+2.7
GHBP				eS	Sn	05 35 11.2	-0.2
TABP	Talibon, Bohol	5.00	326	eP	Pn	05 34 25.5	+1.7
TABP				eS	Sn	05 35 17.2	-3.2
TNTI	Ternate	5.11	178	Pn	Pn	05 34 28.7	+3.3
SIJI	Sorong	7.89	148	P	Pn	05 35 06.5	+3.1
	25nm,0.3s,baz=13,slow=9.0,SNR=6.5						
SIJI				S	Sn	05 36 29.9	-1.2
	8.0nm,0.3s,baz=248,slow=22,SNR=2.8						
TOLI2	Tolitoli	7.95	233	Pn	Pn	05 35 05.2	+1.2
MYLDM	Lahad Datu	8.64	266	Pn	Pn	05 35 14.5	+1.0
FAKI	Fak Fak	10.15	150	Pn	Pn	05 35 36.1	+2.0
SBUM	Sibu	15.28	258	Pn	Pn	05 36 43.1	+0.8
SBUM				IAmb	IAmb	05 36 47.7	
	comp=Z,22nm,0.6s						
SOEI	Soe	15.83	190	Pn	Pn	05 36 48.5	-0.9
MTN	Manton Dam	19.05	168	P	P	05 37 27.8	+0.8
MTN				IAmb	IAmb	05 37 51.7	
	comp=Z,32nm,1.4s						
KNRA	Kununurra	21.51	176	P	P	05 37 55.2	+1.7
KNRA				IAmb	IAmb	05 37 59.4	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	23.91	184	P	P	05 38 19.1	+1.6
	comp=Z,2.6nm,0.9s,baz=347,slow=13,SNR=6.9						
	comp=Z,2.6nm,0.9s						
FITZ	Fitzroy Crossi	23.91	184	P	P	05 38 18.3	+0.8
JCJ	Chichijima	25.47	33	P	P	05 38 31.1	-0.5
	comp=Z,93nm,0.4s,baz=286,slow=21,SNR=18						
WB0	Warramunga Arr	26.50	165	P	P	05 38 41.6	+0.6
WB0				IAmb	IAmb	05 38 47.2	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	26.65	165	P	P	05 38 42.9	+0.5
	comp=Z,1.2nm,0.5s,baz=344,slow=10,SNR=26						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	26.65	165	P	P	05 38 43.7	+1.4
WB2	Warramunga Arr	26.65	165	P	P	05 38 43.5	+1.1
WR0	Warramunga Arr	26.72	164	P	P	05 38 43.3	+0.3
ASAR	Alice Springs	30.13	168	P	P	05 39 13.1	-0.3
	comp=Z,0.2nm,0.4s,baz=350,slow=7.8,SNR=5.5						
ASAR				PcP	PcP	05 42 12.8	-0.3
	comp=Z,0.3nm,0.4s,baz=340,slow=2.3,SNR=1.4						
ASAR				ScP	ScP	05 45 45.4	-2.8
	comp=Z,0.3nm,0.5s,baz=348,slow=3.2,SNR=4.3						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	30.20	297	P	P	05 39 14.2	+0.2
	comp=Z,0.6nm,0.4s,baz=106,slow=6.7,SNR=2.1						
CMAR				LR	LR	05 52 30.5	
	comp=Z,6.0nm,18.2s,baz=35,slow=38						
	comp=Z,0.6nm,0.4s						
KSRS	Korea Array	31.40	1	LR	LR	05 54 33.6	
	comp=Z,4.6nm,19.1s,baz=140,slow=41						
SONM	Songino Array	45.38	340	P	P	05 41 22.3	+0.8
	comp=Z,0.4nm,0.3s,baz=157,slow=6.4,SNR=3.3						
	comp=Z,0.4nm,0.3s						
MK31	Makanchi Array	56.02	324	P	P	05 42 41.3	-0.1
MK31				IAmb	IAmb	05 42 42.0	
	comp=Z,3.5nm,0.7s						
MKAR	Makanchi Array	56.02	324	P	P	05 42 41.1	-0.3
	comp=Z,2.9nm,0.5s,baz=124,slow=8.3,SNR=36						
	comp=Z,2.9nm,0.5s						
MKAR	Makanchi Array	56.02	324	P	P	05 42 41.3	-0.1
MAKZ	Makanchi	56.21	324	P	P	05 42 42.6	-0.2
ZALV	Zalesovo Beam	58.85	332	P	P	05 43 00.6	-0.5
	comp=Z,1.0nm,0.4s,baz=152,slow=6.5,SNR=2.6						
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	60.15	327	P	P	05 43 08.9	-1.1
KURBB	Kurchatov Arra	60.15	327	P	P	05 43 09.7	-0.4
	comp=Z,6.4nm,0.7s,baz=126,slow=6.1,SNR=12						
	comp=Z,6.4nm,0.7s						
BTK	Batken	60.73	313	P	P	05 43 13.9	-0.5
BTK			

*IDC **06** 06:05:14.0±1.2,51°.70N×176°.61E,h0km,mb3.5/7, mbtmp3.6/8,ML4.2/1,MS3.1/7,Error ellipse: s-maj=34.4km s-min=17.3km az=8.0*
*NEIC **06** 06:05:16.3±1.4,51°.5N±0°.1×176°.53E±0°.07,h21km±13km, Error ellipse: s-maj=21.2km s-min=4.8km az=192.0*
*AEIC **06** 06:05:17±1.2,51°.55N±0°.06×176°.54E±0°.06,h26km±7km, ML3.6,mb4.0/51(NEIC),Error ellipse: s-maj=9.8km s-min=5.0km az=197.0*
ISC 06 06:05:17.8±0.8,51°.6N±0°.1×176°.57E±0°.04,h31km,n182, σ0=80/178,mb3.9/22,MS3.0/6,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.26**	**73**		**Sn**	**06 05 55.5**	**+0.3**
LSNW	**Little Sitkin**	**1.27**	**72**		**Pn**	**06 05 39.1**	**-0.3**
LSSE	**Little Sitkin**	**1.29**	**74**		**Pn**	**06 05 39.5**	**-0.2**
LSPA	**Little Sitkin**	**1.30**	**73**		**Pn**	**06 05 39.9**	**+0.1**
LSPA					**Sn**	**06 05 57.1**	**+1.0**
AMKA	**Amchitka**	**1.72**	**96**		**Pn**	**06 05 45.4**	**-0.3**
AMKA					**Sn**	**06 06 07.1**	**+0.6**
SHEM	**Shemya Is, Ala**	**1.90**	**308**	Pn	**Pn**	**06 05 47.6**	**-0.4**
	144nm,0.3s,baz=135,slow=2.0,SNR=54						
SHEM				Sn	**Sn**	**06 06 11.9**	**+1.0**
	108nm,0.3s,baz=294,slow=20,SNR=15						
SMY	**Shemya**	**1.90**	**308**		**Pn**	**06 05 47.9**	**-0.2**
SMY					**Sn**	**06 06 11.6**	**+0.7**
CEPE	**Semis' Perret**	**1.95**	**78**		**Pn**	**06 05 49.4**	**+0.6**
ADK	**Adak**	**4.20**	**83**		**Pn**	**06 06 20.8**	**+1.0**
UNV	**Unalaska Valle**	**10.51**	**71**	Pn	**Pn**	**06 07 46.0**	**-0.2**
AKUT	**Akutan**	**10.97**	**70**	Pn	**Pn**	**06 07 50.3**	**-2.2**
PET	**Petropavlovsk**	**11.06**	**284**	Pn	**Pn**	**06 07 52.9**	**-0.8**
PEA0B	**Petropavlovsk-**	**11.64**	**285**		**Pn**	**06 07 59.7**	**-2.0**
PETK	**Petropavlovsk-**	**11.64**	**285**	LR	LR	06 12 46.6	
	comp=Z,36nm,19.9s,baz=68,slow=39						
FALS	**False Pass**	**12.42**	**67**		**Sn**	**06 10 28.5**	**-1.0**
SDPT	**Sand Point**	**14.16**	**66**	Pn	**Pn**	**06 08 36.0**	**+0.1**
CNBA	**Chernabura Isl**	**14.62**	**68**	Pn	**Pn**	**06 08 37.9**	**-4.5**
R17K	**Ugashik Creek**	**16.72**	**58**	P	**P**	**06 09 10.3**	**-1.2**
	baz=260						
P17K	**Kvichak River**	**17.02**	**53**	P	**Pn**	**06 09 13.5**	**+0.3**
	baz=255						
Q17K	**Contact Creek**	**17.09**	**56**	P	**Pn**	**06 09 14.7**	**+0.4**
	baz=259						
Q18K	**Katmai Hardscr**	**17.62**	**55**	P	**P**	**06 09 21.1**	**-0.5**
	baz=259						
P18K	**Big Mountain,**	**17.67**	**53**	P	**P**	**06 09 21.7**	**-0.4**
	baz=256						
N18K	**Kilae Creek**	**17.71**	**48**		**P**	**06 09 24.3**	**+1.8**
SII	**Sitkinak Islan**	**17.79**	**62**	Pn	**Pn**	**06 09 20.8**	**-2.0**
SII				IAmb	IAmb	06 09 32.8	
	comp=Z,18nm,1.2s						
O18K	**Koktuh Hills**	**17.80**	**51**	P	**P**	**06 09 23.2**	**-0.2**
O18K				IAmb	IAmb	06 09 28.2	
	comp=Z,11nm,0.9s						
OHAK	**Old Harbor**	**18.33**	**60**	P	**P**	**06 09 27.4**	**-1.8**
OHAK				IAmb	IAmb	06 09 31.5	
	comp=Z,13nm,1.4s						
OHAK	**Old Harbor**	**18.33**	**60**	P	**P**	**06 09 27.8**	**-1.4**
	baz=265						
Q19K	**Cape Douglas,**	**18.37**	**55**	P	**Pn**	**06 09 29.8**	**-0.2**
	baz=259						
N19K	**Bonanza Creek**	**18.41**	**49**	P	**P**	**06 09 28.9**	**-1.4**
N19K				IAmb	IAmb	06 09 37.8	
	comp=Z,9.5nm,0.8s						
N19K	**Bonanza Creek**	**18.41**	**49**	P	**Pn**	**06 09 30.4**	**-0.1**
	baz=253						
L19K	**White Mountain**	**18.70**	**44**	P	**Pn**	**06 09 34.8**	**+0.9**
P19K	**Oil Pt**	**18.72**	**53**	P	**P**	**06 09 33.5**	**-0.1**
	baz=258						
KDAK	**Kodiak Island**	**18.76**	**59**	P	**P**	**06 09 32.4**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=1.4,slow=0.9,SNR=35						
	comp=Z,3.7nm,0.5s						
KDAK	**Kodiak Island**	**18.76**	**59**	P	**P**	**06 09 32.4**	**-1.6**
KDAK	**Kodiak Island**	**18.76**	**59**	P	**P**	**06 09 33.4**	**-0.6**
	baz=264						
M19K	**Big River Lodg**	**18.80**	**45**	P	**Pn**	**06 09 36.6**	**+1.5**
M19K				IAmb	IAmb	06 09 48.1	
	comp=Z,11nm,1.4s						
Q20K	**Shuyak Island**	**18.96**	**56**	P	**P**	**06 09 35.7**	**-0.5**
	baz=262						
M20K	**Styx River**	**19.36**	**46**	P	**Pn**	**06 09 43.5**	**+1.6**
M20K				IAmb	IAmb	06 09 48.1	
	comp=Z,15nm,1.4s						
M20K	**Styx River**	**19.36**	**46**	P	**P**	**06 09 40.3**	**-0.4**
	baz=252						
K20K	**Telida**	**19.48**	**42**	P	**Pn**	**06 09 44.4**	**+1.2**
K20K	**Telida**	**19.48**	**42**	P	**P**	**06 09 42.3**	**+0.4**
	baz=246						
N20K	**Mount Spurr**	**19.58**	**48**	P	**P**	**06 09 43.0**	**-0.1**
	baz=255						
CNPM	**China Poot**	**19.70**	**54**	P	**P**	**06 09 44.4**	**+0.2**
J20K	**Nowinta River**	**19.79**	**39**	P	**Pn**	**06 09 46.8**	**-0.2**
J20K	**Nowinta River**	**19.79**	**39**	P	**Pn**	**06 09 46.1**	**-0.8**
	baz=244						
BRLK	**Bradley Lake**	**19.91**	**53**	P	**P**	**06 09 46.3**	**-0.4**
BRSE	**Bradley Lake S**	**19.98**	**53**	P	**P**	**06 09 47.1**	**-0.2**
	baz=260						
PPLA	**Purkeypile**	**20.11**	**44**	P	Pn	06 09 51.8	+1.0
PPLA				IAmb	IAmb	06 10 01.7	
	comp=Z,11nm,1.2s						
SKT	**Skwentna**	**20.11**	**47**	P	Pn	06 09 50.9	+0.2
SKT				IAmb	IAmb	06 09 55.0	
	comp=Z,5.9nm,0.9s						
SKT	**Skwentna**	**20.11**	**47**	P	**P**	**06 09 49.1**	**+0.4**
	baz=253						
CAST	**Castle Rocks**	**20.33**	**42**	P	Pn	06 09 53.2	-0.2
CAST				IAmb	IAmb	06 10 05.6	
	comp=Z,3.8nm,0.6s						
CAST	**Castle Rocks**	**20.33**	**42**	P	**P**	**06 09 51.6**	**+0.5**
	baz=249						
SUA	**Susitna One**	**20.33**	**48**	P	**P**	**06 09 51.0**	**-0.2**
	baz=256						
O22K	**Cooper Landing**	**20.61**	**51**	P	**P**	**06 09 54.2**	**0.0**
	baz=260						
SEW	**Seward**	**20.68**	**52**	P	**P**	**06 09 54.6**	**-0.3**
SEW				IAmb	IAmb	06 09 58.9	
	comp=Z,10.0nm,1.0s						
SEW	**Seward**	**20.68**	**52**	P	**P**	**06 09 54.3**	**-0.5**
	baz=261						
M22K	**Willow**	**20.70**	**48**	P	**P**	**06 09 54.3**	**-0.7**
	baz=256						
RC01	**Rabbit Creek A**	**20.72**	**50**	P	**P**	**06 09 55.1**	**-0.3**
	baz=258						
IMAR	**Indian Mountai**	**20.78**	**35**	P	**P**	**06 09 56.9**	**+0.9**
KTH	**Kantishna Hill**	**20.87**	**42**	P	**P**	**06 09 57.6**	**+0.6**
KTH				IAmb	IAmb	06 10 03.1	
	comp=Z,8.4nm,1.2s						
H21K	**Melozitna Rive**	**20.97**	**36**	P	**P**	**06 09 58.1**	**+0.1**
	baz=243						
BPAW	**Bear Paw Mtn.**	**21.03**	**41**	P	**P**	**06 09 58.6**	**-0.1**
	baz=249						
TRF	**Thorofare Moun**	**21.10**	**43**	P	**P**	**06 09 59.6**	**-0.1**
	baz=251						
PMR	**Palmer**	**21.12**	**48**	P	**P**	**06 09 59.6**	**0.0**
PMR				IAmb	IAmb	06 10 34.1	
	comp=Z,6.7nm,1.4s						
PMR	**Palmer**	**21.12**	**48**	P	**P**	**06 09 59.4**	**-0.2**
	baz=257						
G21K	**Allakaket**	**21.14**	**34**	P	**P**	**06 10 00.5**	**+0.7**
	baz=240						
PWL	**Port Wells**	**21.35**	**51**	P	**P**	**06 10 01.9**	**-0.3**
PWL				IAmb	IAmb	06 10 09.2	
	comp=Z,4.4nm,0.7s						
PWL	**Port Wells**	**21.35**	**51**	P	**P**	**06 10 01.9**	**-0.3**
	baz=260						
KNK	**Knik Glacier**	**21.39**	**49**	P	**P**	**06 10 02.4**	**-0.2**
	baz=258						
MLY	**Manley**	**21.48**	**39**	P	**P**	**06 10 03.8**	**+0.2**
	baz=247						
F21K	**Alatna River**	**21.51**	**32**	P	**P**	**06 10 05.0**	**+1.2**
	baz=238						
SML	**Sawmill**	**21.54**	**48**	P	**P**	**06 10 03.7**	**-0.5**
SML	**Sawmill**	**21.54**	**48**	P	**P**	**06 10 03.9**	**-0.3**
	baz=258,SNR=6.8						
H22K	**Ishtalitna Cre**	**21.60**	**36**	P	**P**	**06 10 05.4**	**+0.6**
	baz=244						
WAT1	**Susitna Watana**	**21.68**	**45**	P	**P**	**06 10 04.8**	**-0.9**
	baz=255						
M23K	**Glacier View**	**21.81**	**48**	P	**P**	**06 10 06.9**	**-0.2**
	baz=258						
WAT6	**Susitna Watana**	**21.98**	**46**	P	**P**	**06 10 08.4**	**-0.7**
	baz=256						
NEA2	**Nenana**	**21.99**	**41**	P	**P**	**06 10 09.0**	**0.0**
	baz=250						
SCM	**Sheep Creek Mo**	**22.01**	**48**	P	**P**	**06 10 09.4**	**+0.2**
SCM	**Sheep Creek Mo**	**22.01**	**48**	P	**P**	**06 10 08.7**	**-0.5**
	baz=259,SNR=5.8						
I23K	**Minto, Yukon-K**	**22.07**	**39**	P	**P**	**06 10 09.8**	**0.0**
	baz=248						
F22K	**John River**	**22.09**	**32**	P	**P**	**06 10 10.1**	**0.0**
	baz=239						
DHY	**Denali Highway**	**22.26**	**45**	P	**P**	**06 10 12.1**	**0.0**
	baz=256						
WRH	**Wood River Hil**	**22.35**	**41**	P	**P**	**06 10 11.7**	**-1.1**
MDM	**Murphy Dome**	**22.45**	**40**	P	**P**	**06 10 14.3**	**+0.4**
G23K	**Bananza Creek**	**22.45**	**35**	P	**P**	**06 10 13.9**	**-0.1**
	baz=244						
CCB	**Clear Creek Bu**	**22.52**	**41**	P	**P**	**06 10 14.5**	**-0.1**
E22K	**Anaktuvuk Pass**	**22.53**	**31**	P	**P**	**06 10 14.4**	**-0.4**
	baz=238						
EYAK	**Cordova Ski Ar**	**22.57**	**52**	P	**P**	**06 10 14.4**	**-0.7**
EYAK				IAmb	IAmb	06 10 43.7	
	comp=Z,4.9nm,0.9s						
EYAK	**Cordova Ski Ar**	**22.57**	**52**	P	**P**	**06 10 14.1**	**-1.0**
	baz=264						
M24K	**Tolsona, Glenn**	**22.59**	**48**	P	**P**	**06 10 14.7**	**-0.8**
M24K	**Tolsona, Glenn**	**22.59**	**48**	P	**P**	**06 10 14.7**	**-0.8**
	baz=259						
KLU	**Klutina**	**22.61**	**49**	P	**P**	**06 10 15.7**	**0.0**
KLU				IAmb	IAmb	06 10 19.1	
	comp=Z,3.0nm,0.5s						
KLU	**Klutina**	**22.61**	**49**	P	**P**	**06 10 15.0**	**-0.7**
	baz=261						
HDA	**Harding Lake**	**22.80**	**42**	P	**P**	**06 10 17.1**	**-0.5**
	baz=253						
H24K	**Noodor Dome**	**22.90**	**38**	P	**P**	**06 10 19.1**	**+0.4**
H24K				IAmb	IAmb	06 10 21.4	
	comp=Z,3.3nm,0.8s						
H24K	**Noodor Dome**	**22.90**	**38**	P	**P**	**06 10 18.9**	**+0.2**
	baz=249,SNR=5.0						
IL31		**22.94**	**41**	P	**P**	**06 10 18.6**	**-0.3**
ILAR	**Eielson Array**	**22.94**	**41**	P	**P**	**06 10 18.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=243,slow=9.4,SNR=9.3						
	comp=Z,0.9nm,0.6s						
RAGM	**Ragged Mountai**	**23.08**	**52**	P	**P**	**06 10 20.8**	**+0.2**
PAX	**Paxson**	**23.08**	**46**	P	**P**	**06 10 20.3**	**-0.4**
PAX				IAmb	IAmb	06 10 21.6	
	comp=Z,5.7nm,1.1s						
PAX	**Paxson**	**23.08**	**46**	P	**P**	**06 10 20.2**	**-0.4**
	baz=258,SNR=5.3						
HARP	**HAARP**	**23.11**	**47**	P	**P**	**06 10 20.2**	**-0.7**
	baz=260						
K24K	**Donnelly Dome**	**23.14**	**44**	P	**P**	**06 10 20.2**	**-0.9**
	baz=256						
E23K	**Chandalar**	**23.21**	**32**	P	**P**	**06 10 22.1**	**+0.2**
	baz=242						
N25K	**Chitina, Valde**	**23.25**	**49**	P	**P**	**06 10 22.3**	**0.0**
N25K				IAmb	IAmb	06 10 25.4	
	comp=Z,4.3nm,1.0s						
N25K	**Chitina, Valde**	**23.25**	**49**	P	**P**	**06 10 21.7**	**-0.6**
	baz=262						
D23K	**Nanushuk River**	**23.32**	**30**	P	**P**	**06 10 22.6**	**-0.3**
	baz=238						
G24K	**Hadweenzic Riv**	**23.37**	**36**	P	**P**	**06 10 23.5**	**+0.1**
	baz=247						
SUCK	**Suckling Hills**	**23.50**	**53**	P	**P**	**06 10 24.6**	**-0.2**
TOLK	**Toolik Lake Re**	**23.51**	**31**	P	**P**	**06 10 24.6**	**-0.1**
	baz=241						
J25K	**Salcha River,**	**23.52**	**42**	P	**P**	**06 10 24.1**	**-0.8**
	baz=254						
RIDG	**Independent Ri**	**23.52**	**44**	P	**P**	**06 10 24.4**	**-0.6**
RIDG				IAmb	IAmb	06 10 40.5	
	comp=Z,5.7nm,1.3s						
RIDG	**Independent Ri**	**23.52**	**44**	P	**P**	**06 10 23.8**	**-1.1**
	baz=257						
F24K	**Squaw Lake**	**23.56**	**34**	P	**P**	**06 10 24.9**	**-0.3**
	baz=245						
E24K	**Your Creek**	**23.59**	**33**	P	**P**	**06 10 25.2**	**-0.4**
	baz=243						
GLB	**Gilahina Butte**	**23.61**	**50**	P	**P**	**06 10 25.9**	**+0.2**
GLB				IAmb	IAmb	06 10 29.0	
	comp=Z,8.4nm,1.2s						
PRP	**Porcupine Dome**	**23.71**	**40**	P	**P**	**06 10 26.2**	**-0.6**
	baz=252						
VRDI	**Verde Repeater**	**23.75**	**51**	P	**P**	**06 10 27.3**	**0.0**
VRDI				IAmb	IAmb	06 10 42.0	
	comp=Z,4.4nm,1.1s						
C23K	**Itkillik River**	**23.81**	**28**	P	**P**	**06 10 28.2**	**+0.6**
	baz=237						
DOT	**Dot Lake**	**23.84**	**44**	P	**P**	**06 10 27.6**	**-0.4**
MENT	**Mentasta**	**23.86**	**46**	P	**P**	**06 10 28.0**	**-0.1**
MENT				IAmb	IAmb	06 10 30.3	
	comp=Z,4.2nm,0.8s						
G25K	**Bearman Lake**	**23.90**	**36**	P	**P**	**06 10 27.8**	**-0.6**
	baz=249						
SCRK	**Sand Creek**	**23.95**	**44**	P	**P**	**06 10 28.4**	**-0.7**
SCRK	**Sand Creek**	**23.95**	**44**	P	**P**	**06 10 27.9**	**-1.1**
	baz=258						
MCARA	**McCarthy VSAT**	**23.98**	**50**	P	**P**	**06 10 28.3**	**-0.9**
	baz=264,SNR=5.0						
D24K	**Happy Valley**	**24.00**	**30**	P	**P**	**06 10 29.5**	**+0.2**
	baz=241						
L26K	**Log Cabin Wild**	**24.05**	**46**	P	**P**	**06 10 29.4**	**-0.4**
	baz=260,SNR=6.5						
M26K	**Nabesna, AK**	**24.11**	**48**	P	**P**	**06 10 29.2**	**-1.3**
	baz=262						
J26L	**Joseph Creek**	**24.24**	**43**	P	**P**	**06 10 31.2**	**-0.5**
J26L				IAmb	IAmb	06 10 33.0	
	comp=Z,3.5nm,0.6s						
J26L	**Joseph Creek**	**24.24**	**43**	P	**P**	**06 10 30.8**	**-1.0**
	baz=257,SNR=5.7						
C24K	**Franklin Bluff**	**24.32**	**29**	P	**P**	**06 10 31.6**	**-0.6**
	baz=240						
F25K	**Christian Rive**	**24.38**	**35**	P	**P**	**06 10 32.7**	**-0.2**
	baz=248						
I26K	**Coal Creek Min**	**24.61**	**41**	P	**P**	**06 10 34.3**	**-0.5**
	baz=256						
BARN	**Barnard Glacie**	**24.61**	**51**	P	**P**	**06 10 36.0**	**+0.8**
M27K	**Edge Creek, AK**	**24.62**	**48**	P	**P**	**06 10 34.4**	**-0.8**
	baz=263,SNR=6.4						
BMAR	**Burnt Mountain**	**24.70**	**35**	P	**P**	**06 10 36.0**	**+0.3**
L27K	**Beaver Creek,**	**24.73**	**46**	P	**P**	**06 10 36.4**	**+0.2**
L27K	**Beaver Creek,**	**24.73**	**46**	P	**P**	**06 10 35.2**	**-1.0**
	baz=262,SNR=9.0						
BCAR	**Beaver Creek A**	**24.75**	**46**	P	**P**	**06 10 36.4**	**+0.1**
CTG	**Chitna Glacier**	**24.76**	**51**	P	**P**	**06 10 35.1**	**-1.3**
	baz=267,SNR=7.0						
K27K	**Chicken**	**24.78**	**44**	P	**P**	**06 10 36.5**	**0.0**
K27K	**Chicken**	**24.78**	**44**	P	**P**	**06 10 34.9**	**-1.6**
	baz=260						
G26K	**Porcupine Rive**	**24.83**	**37**	P	**P**	**06 10 36.4**	**-0.5**
	baz=251						
D25K	**Kavik River**	**24.85**	**31**	P	**P**	**06 10 35.7**	**-1.4**
	baz=243						
LOGN	**Logan Glacier**	**24.91**	**52**	P	**P**	**06 10 38.0**	**+0.1**
F26K	**Sheenjek River**	**24.95**	**35**	P	**P**	**06 10 37.2**	**-0.8**
	baz=249						
YUK3	**Moose Creek**	**25.23**	**49**	P	**P**	**06 10 39.8**	**-1.1**
	baz=266,SNR=17						
O28M	**Mount Upton**	**25.31**	**52**	P	**P**	**06 10 40.6**	**-1.1**
	baz=268,SNR=13						
EGAK	**Eagle**	**25.32**	**42**	P	**P**	**06 10 41.2**	**0.0**
EGAK	**Eagle**	**25.32**	**42**	P	**P**	**06 10 40.5**	**-0.8**
	baz=259						
BCPM	**Bancas Point**	**25.58**	**54**	P	**P**	**06 10 43.3**	**-0.4**
DAWY	**Dawson**	**25.95**	**44**	P	**P**	**06 10 47.7**	**+0.5**
DAWY				IAmb	IAmb	06 10 49.3	
	comp=Z,4.3nm,0.8s						
DAWY	**Dawson**	**25.95**	**44**	P	**P**	**06 10 46.7**	**-0.5**
	baz=262						
YUK4	**Talbot Arm**	**26.08**	**51**	P	**P**	**06 10 48.5**	**0.0**
	baz=268						
O29M	**Mount Kennedy**	**26.11**	**53**	P	**P**	**06 10 48.1**	**-0.6**
	baz=271						
YUK6	**Outpost Mounta**	**26.21**	**51**	P	**P**	**06 10 49.0**	**-0.7**
	baz=270						
M29M	**Somme Creek**	**26.21**	**48**	P	**P**	**06 10 49.6**	**0.0**
	baz=266						
L29M	**L29M**	**26.41**	**47**	P	**P**	**06 10 51.3**	**0.0**
	baz=265						
P29M	**Windy Craggy**	**26.55**	**54**	P	**P**	**06 10 51.9**	**-0.7**
	baz=273						
I29M	**Ogilvie Camp,**	**26.61**	**42**	P	**P**	**06 10 52.7**	**-0.4**
I29M				IAmb	IAmb	06 10 57.0	
	comp=Z,2.8nm,0.8s						
I29M	**Ogilvie Camp,**	**26.61**	**42**	P	**P**	**06 10 52.8**	**-0.2**
	baz=261						
HYT	**Haines Junctio**	**26.63**	**52**	P	**P**	**06 10 53.9**	**+0.5**
HYT				IAmb	IAmb	06 10 58.9	
	comp=Z,4.1nm,0.7s						
HYT	**Haines Junctio**	**26.63**	**52**	P	**P**	**06 10 53.4**	**0.0**
	baz=271,SNR=5.9						
K29M	**Barlow Dome**	**26.75**	**45**	P	**P**	**06 10 54.5**	**+0.1**
	baz=264						
N30M	**Aishikik Lake**	**26.83**	**50**	P	**P**	**06 10 55.0**	**-0.1**
	baz=270						
EPYK	**Eagle Plains**	**27.42**	**40**	P	**P**	**06 10 59.7**	**-0.6**
	baz=260						
KLR	**Kul'dur**	**28.32**	**283**	LR	LR	06 24 46.3	
	comp=Z,26nm,18.0s,baz=314,slow=41						
MMPY	**Sheldon Lake,**	**29.55**	**48**	P	**P**	**06 11 18.8**	**-0.5**
	baz=272						
MJAR	**Matsushiro Arr**	**30.99**	**256**	LR	LR	06 22 20.5	
	comp=Z,22nm,20.3s,baz=10.0,slow=33						
SONM	**Songino Array**	**43.94**	**294**	P	**P**	**06 13 22.4**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=56,slow=7.7,SNR=2.4						
SONM				LR	LR	06 32 03.5	
	comp=Z,18nm,18.8s,baz=27,slow=37						
	comp=Z,0.3nm,0.4s						
NVAR	**Mina Array Bea**	**46.38**	**80**	P	**P**	**06 13 42.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=295,slow=8.3,SNR=4.9						
	comp=Z,0.4nm,0.6s						
ELK	**Elko**	**46.83**	**75**	LR	LR	06 32 30.5	
	comp=Z,20nm,19.3s,baz=24,slow=35						
R11A	**Troy Canyon, C**	**48.10**	**78**	P	**P**	**06 13 53.5**	**-1.2**
	baz=309						
TPNV	**Topopah Spring**	**48.58**	**80**	P	**P**	**06 13 57.1**	**-1.2**
	baz=310						
DUG	**Dugway, Tooele**	**48.62**	**74**	P	**P**	**06 13 58.2**	**-0.4**
	baz=308						
GSC	**Goldstone, Bar**	**49.30**	**82**	P	**P**	**06 14 03.7**	**-0.1**
	baz=311						
MKAR	**Makanchi Array**	**57.59**	**306**	P	**P**	**06 15 04.8**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=39,slow=4.7,SNR=2.7						
MKAR				LR	LR	06 41 10.3	
	comp=Z,25nm,18.1s,baz=78,slow=38						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**61.46**	**78**	P	**P**	**06 15 31.9**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=305,slow=5.3,SNR=14						
	comp=Z,0.3nm,0.5s						
AKASG	**Malin Array Be**	**74.38**	**339**	P	**P**	**06 16 52.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=23,slow=6.1,SNR=2.0						
	comp=Z,0.3nm,0.3s						
KBZ	**Khabaz**	**76.93**	**327**	LR	LR	06 54 46.9	
	comp=Z,19nm,18.3s,baz=301,slow=39						
ASAR	**Alice Springs**	**83.76**	**219**	P	**P**	**06 17 45.2**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=23,slow=5.6,SNR=4.2						
	comp=Z,0.3nm,0.6s						

*SEA **06** 06:06:19.6±0.9,47°.19N±0°.02×123°.45W±0°.03,h41km±5km, ML2.6/18,ML2.5/42(NEIC),Error ellipse: s-maj=3.0km s-min=2.6km az=67.0*
*PGC **06** 06:06:19.6,47°.19N×123°.45W,h41km,ML2.6,ML2.1/20, 96km Wsw of Seattle, Wa Washington*
*NEIC **06** 06:06:19.7±0.8,47°.19N±0°.02×123°.47W±0°.02,h40km±8km, Error ellipse: s-maj=3.5km s-min=1.0km az=210.0*
ISC 06 06:06:19.2±1.2,47°.20N±0°.02×123°.49W±0°.03,h45km±5km, n130,σ0=74/172,Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMW	**South Mountain**	**0.16**	**41**		**Pn**	**06 06 26.4**	**-0.4**
SMW	**South Mountain**	**0.16**	**41**	P	**Pn**	**06 06 26.4**	**-0.4**
SMW				S	**Sn**	**06 06 31.7**	**-0.5**
WISH	**Wishkah**	**0.21**	**246**	Pn	**Pn**	**06 06 27.3**	**+0.3**
WISH	**Wishkah**	**0.21**	**246**	P	**Pn**	**06 06 27.3**	**+0.3**
WISH				S	**Sn**	**06 06 33.8**	**+1.3**
B017	**Montesano**	**0.21**	**192**		**Pn**	**06 06 27.1**	**+0.1**
B017					**Sn**	**06 06 33.0**	**+0.6**
NLWA	**Neilton Lookou**	**0.32**	**307**		**Pn**	**06 06 28.2**	**+0.1**
NLWA					**Sn**	**06 06 34.8**	**+0.3**
NLWA				IAML		06 06 35.6	
	668nm,0.2s						
CPW	**Capitol Peak**	**0.33**	**133**		**Pn**	**06 06 27.8**	**-0.5**
CPW					**Sn**	**06 06 34.1**	**-0.5**
CPW	**Capitol Peak**	**0.33**	**133**	P	**Pn**	**06 06 27.8**	**-0.5**
CPW				S	**Sn**	**06 06 34.1**	**-0.5**
EGRN	**Evergreen Coll**	**0.37**	**110**		**Pn**	**06 06 28.2**	**-0.4**
EGRN					**Sn**	**06 06 35.4**	**+0.2**
OLQ	**Olympics--Lake**	**0.38**	**326**		**Pn**	**06 06 29.0**	**+0.3**
OLQ					**Sn**	**06 06 35.6**	**+0.2**
HDW	**Hoodsport**	**0.54**	**33**		**Pn**	**06 06 30.6**	**-0.1**
HDW					**Sn**	**06 06 39.3**	**+0.4**
HDW	**Hoodsport**	**0.54**	**33**	P	**Pn**	**06 06 30.7**	**-0.1**
HDW				S	**Sn**	**06 06 38.9**	**-0.1**
B019	**Raymond**	**0.56**	**191**		**Pn**	**06 06 31.1**	**+0.2**
GNW	**Green Mountain**	**0.58**	**51**		**Pn**	**06 06 30.8**	**-0.4**
GNW					**Sn**	**06 06 39.4**	**-0.3**
GNW	**Green Mountain**	**0.58**	**51**	P	**Pn**	**06 06 30.8**	**-0.4**
GNW				S	**Sn**	**06 06 39.4**	**-0.3**
GMW	**Gold Mountain**	**0.59**	**54**		**Pn**	**06 06 30.9**	**-0.4**
C04A	**Brinnon**	**0.63**	**34**		**Pn**	**06 06 31.7**	**0.0**
C04A					**Sn**	**06 06 41.1**	**+0.3**
OSD	**Olympics--Snow**	**0.64**	**347**		**Pn**	**06 06 32.8**	**+0.7**
OSD	**Olympics--Snow**	**0.64**	**347**	P	**Pn**	**06 06 32.7**	**+0.5**
OSD				S	**Sn**	**06 06 41.7**	**+0.3**
E03A	**Lebam**	**0.66**	**184**		**Pn**	**06 06 32.0**	**-0.1**
E03A					**Sn**	**06 06 41.5**	**+0.1**
E03A				IAML		06 06 42.4	
	comp=E,226nm,0.2s						
E03A				IAML		06 06 42.7	
	comp=N,261nm,0.4s						
E03A	**Lebam**	**0.66**	**184**	P	**Pn**	**06 06 32.0**	**-0.1**

BOLM	**Sugar Bowl**	**1.34**	**137**			**Pn**	**06 06 44.1 +2.5**
SEPW	**September Lobe**	**1.34**	**138**			**Pn**	**06 06 42.5 +0.8**
SWF2	**Southwest Flan**	**1.35**	**139**			**Pn**	**06 06 45.7 +4.0**
WPW	**White Pass**	**1.42**	**110**			**Pn**	**06 06 43.2 +0.5**
GLK	**Glacier Lake**	**1.44**	**116**			**Pn**	**06 06 41.5 -1.4**
B009	**North Saanich**	**1.45**	**1**	P		**Pn**	**06 06 43.2 +0.3**
B009				S		**Sn**	**06 06 59.9 -0.8**
B010	**North Saanich**	**1.45**	**1**	P		**Pn**	**06 06 43.3 +0.4**
B010				S		**Sn**	**06 06 59.9 -0.8**
B011	**North Saanich**	**1.45**	**1**			**Pn**	**06 06 43.5 +0.6**
B011	**North Saanich**	**1.45**	**1**	P		**Pn**	**06 06 43.2 +0.4**
B011				S		**Sn**	**06 06 59.9 -0.8**
PGC	**Sidney**	**1.45**	**1**	Pn		**Pn**	**06 06 43.4 +0.5**
PGC				IAML			06 07 01.2
	comp=N,46nm,0.5s						
PGC	**Sidney**	**1.45**	**1**	P		**Pn**	**06 06 43.1 +0.2**
PGC				S		**Sn**	**06 06 59.9 -0.8**
PA01	**PA01 North**	**1.45**	**1**	S		**Sn**	**06 07 00.0 -0.8**
PFB	**Port Renfrew**	**1.51**	**335**	P		**Pn**	**06 06 43.7 -0.1**
PFB				S		**Sn**	**06 07 01.1 -1.3**
CMW	**Cultus Mountai**	**1.54**	**37**	P		**Pn**	**06 06 44.8 +0.6**
MCW	**Mount Constitu**	**1.55**	**16**			**Pn**	**06 06 45.1 +0.8**
MCW	**Mount Constitu**	**1.55**	**16**	P		**Pn**	**06 06 44.9 +0.6**
MCW				S		**Sn**	**06 07 03.0 -0.2**
SNB	**Saturna Island**	**1.59**	**8**	P		**Pn**	**06 06 45.6 +0.7**
SNB				S		**Sn**	**06 07 04.0 -0.2**
B926	**Mesachie Lake**	**1.68**	**345**	S		**Sn**	**06 07 04.9 -1.4**
GOBB	**Galiano Island**	**1.75**	**360**	P		**Pn**	**06 06 47.9 +0.8**
GOBB				S		**Sn**	**06 07 06.7 -1.4**
RPW	**Rockport**	**1.83**	**46**			**Pn**	**06 06 48.9 +0.7**
RPW	**Rockport**	**1.83**	**46**	P		**Pn**	**06 06 48.8 +0.7**
RPW				S		**Sn**	**06 07 09.6 -0.5**
GPW	**Glacier Peak**	**1.84**	**59**			**Pn**	**06 06 49.3 +0.9**
GPW	**Glacier Peak**	**1.84**	**59**	P		**Pn**	**06 06 49.1 +0.7**
WRW	**Wenatchee Ridg**	**1.89**	**69**			**Pn**	**06 06 49.8 +0.8**
B06A	**Marblemount**	**1.89**	**45**			**Pn**	**06 06 49.5 +0.6**
B06A				IAML			06 07 14.0
	comp=E,39nm,0.3s						
B06A				IAML			06 07 25.9
	comp=N,38nm,0.3s						
B06A	**Marblemount**	**1.89**	**45**	P		**Pn**	**06 06 49.5 +0.6**
MBW	**Mount Baker**	**1.91**	**33**			**Pn**	**06 06 50.3 +0.9**
MBW	**Mount Baker**	**1.91**	**33**	P		**Pn**	**06 06 50.0 +0.6**
MBW				S		**Sn**	**06 07 11.7 -0.6**
LTY	**Liberty**	**1.92**	**87**			**Pn**	**06 06 50.5 +1.0**
LTY				IAML			06 07 14.4
	comp=E,30nm,0.5s						
LTY	**Liberty**	**1.92**	**87**	P		**Pn**	**06 06 50.3 +0.8**
LTY				S		**Sn**	**06 07 12.9 +0.5**
BFSB	**Bamfield**	**1.97**	**327**	P		**Pn**	**06 06 50.2 +0.1**
BFSB				S		**Sn**	**06 07 12.2 -1.3**
MGB	**Mount Grey**	**1.97**	**336**	P		**Pn**	**06 06 50.1 -0.1**
MGB				S		**Sn**	**06 07 12.1 -1.6**
TBM	**Table Mountain**	**1.97**	**90**			**Pn**	**06 06 51.5 +1.3**
EBG	**Ellensburg**	**2.02**	**97**			**Pn**	**06 06 51.9 +1.2**
A05A	**Maple Falls**	**2.03**	**27**	P		**Pn**	**06 06 51.5 +0.7**
A05A				S		**Sn**	**06 07 15.4 +0.4**
NLLB	**Nanaimo Lost L**	**2.06**	**351**	S		**Sn**	**06 07 14.9 -0.7**
SLFW	**Sugar Loaf**	**2.09**	**73**			**Pn**	**06 06 52.7 +0.9**
GHNB	**Nanoose**	**2.17**	**347**	S		**Sn**	**06 07 17.4 -0.9**
HNBB	**Haney**	**2.18**	**16**	P		**Pn**	**06 06 53.5 +0.6**
HNBB				S		**Sn**	**06 07 18.4 -0.2**
ETW	**Entiat**	**2.19**	**78**			**Pn**	**06 06 53.9 +0.8**
B927	**Port Alberni**	**2.20**	**337**	P		**Pn**	**06 06 53.5 +0.3**
B927				S		**Sn**	**06 07 17.9 -1.3**
B012	**Ucluelet**	**2.21**	**322**	S		**Sn**	**06 07 17.6 -1.7**
BIB	**Bowen Island**	**2.21**	**3**	P		**Pn**	**06 06 54.0 +0.7**
BIB				S		**Sn**	**06 07 19.0 -0.4**
OZB	**Mount Ozzard**	**2.21**	**323**	Pn		**Pn**	**06 06 53.4 -0.1**
OZB				IAML			06 07 25.1
	comp=N,46nm,2.9s						
OZB	**Mount Ozzard**	**2.21**	**323**	P		**Pn**	**06 06 53.3 -0.1**
OZB				S		**Sn**	**06 07 18.0 -1.5**
SHB	**Sechelt**	**2.41**	**354**	P		**Pn**	**06 06 57.2 +1.0**
SHB				S		**Sn**	**06 07 24.3 -0.3**
CBSW	**Chelan Butte S**	**2.42**	**74**			**Pn**	**06 06 56.6 +0.3**
WTV	**Waterville**	**2.45**	**77**			**Pn**	**06 06 57.0 +0.3**
WPB	**Watts Point**	**2.47**	**4**	P		**Pn**	**06 06 57.9 +1.0**
WPB				S		**Sn**	**06 07 25.1 -0.6**
TXB	**Texada**	**2.58**	**346**	P		**Pn**	**06 06 59.3 +0.9**
TXB				S		**Sn**	**06 07 27.7 -0.7**
EPH	**Ephrata**	**2.66**	**85**			**Pn**	**06 06 59.6 +0.1**
WSLR	**Whistler**	**2.95**	**7**	S		**Sn**	**06 07 38.7 +0.9**
B08A	**Colville Reser**	**3.03**	**66**	Pn		**Pn**	**06 07 04.5 -0.2**
B08A	**Colville Reser**	**3.03**	**66**	P		**Pn**	**06 07 04.4 -0.2**
D08A	**Wollman Farm,**	**3.12**	**91**	Pn		**Pn**	**06 07 05.7 -0.2**
D08A				IAML			06 07 39.2
	comp=E,12nm,4.9s						
D08A				IAML			06 07 56.4
	comp=N,10.0nm,4.2s						
LLLB	**Lillooet**	**3.57**	**17**	Pn		**Pn**	**06 07 13.2 +1.1**
LLLB				IAML			06 08 25.4
	comp=E,8.6nm,4.5s						
LLLB				IAML			06 08 25.5
	comp=N,9.3nm,4.2s						
LLLB	**Lillooet**	**3.57**	**17**	P		**Pn**	**06 07 12.8 +0.7**
LLLB				S		**Sn**	**06 07 52.3 -0.7**
C09A	**Chrisman Ranch**	**3.59**	**78**			**Pn**	**06 07 11.8 -0.4**
C09A				IAML			06 08 22.0
	comp=N,14nm,0.3s						
C09A				IAML			06 08 23.9
	comp=E,14nm,0.3s						
C09A	**Chrisman Ranch**	**3.59**	**78**	P		**Pn**	**06 07 11.8 -0.4**
WOSB	**Woss**	**3.60**	**327**	P		**Pn**	**06 07 14.0 +1.6**
E09A	**Wood Farm, Sta**	**3.73**	**99**	Pn		**Pn**	**06 07 14.5 +0.3**
E09A				IAML			06 07 50.1
	comp=E,10nm,4.6s						
E09A				IAML			06 07 53.1
	comp=N,11nm,4.8s						
DBO	**Dodson Butte**	**4.08**	**177**	Pn		**Pn**	**06 07 18.6 -0.6**
NEW	**Newport**	**4.43**	**74**	Pn		**Pn**	**06 07 23.5 -0.3**

*IDC **06** 06:09:29.9±2.4, 45°.91N×150°.59E, h0km, mb3.9/10, mbtmp3.9/10, MS3.0/1, Error ellipse: s-maj=69.8km s-min=23.1km az=176.0*
*SKHL **06** 06:09:43.2±0.1, 46°.30N×150°.80E, h94km±6km, mb4.8/2, msha5.7/2*
*MOS **06** 06:09:43.0±1.1, 46°.22N×150°.74E, h104km, mb4.0/3, Error ellipse: s-maj=23.8km s-min=12.8km az=58.8*
ISC 06 06:09:44.2±0.9, 46°.2N±0°.2×150°.7E±0°.1, h104km, n37, σ0s87/31, mb3.8/10, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.20**	**246**	*e*PN	**Pn**	**06 10 18.9**	**-0.6**
KUR				*e*S	**Sn**	**06 10 45.5**	**-0.9**
KUR	**Kuril'sk**	**2.20**	**246**	*e*P	**Pn**	**06 10 18.8**	**-0.7**
KUR				AMB	AMB	06 10 19.9	
	110nm,0.5s						
KUR				*e*S	**Sn**	**06 10 45.6**	**-0.9**
KUR				A	A	06 10 47.5	
	540nm,0.4s						
KUR				A	A	06 10 47.5	
	340nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.04**	**240**	*e*PN	**Pn**	**06 10 46.0**	**+2.1**
YUK	**Yuzh-Kuril'sk**	**4.04**	**240**	*e*P	**Pn**	**06 10 44.3**	**+0.4**
YUK				AMB	AMB	06 10 45.2	
	60nm,0.4s						
YUK				*e*S	**Sn**	**06 11 29.8**	**-0.4**
YUK				A	A	06 11 33.4	
	230nm,0.5s						
YUK				A	A	06 11 33.4	
	160nm,0.5s						
AKK	**Akkeshi**	**5.24**	**235**	*e*P	**Pn**	**06 11 00.8**	**+0.7**
ERM	**Erimo**	**6.83**	**235**	*i* PN	**Pn**	**06 11 21.9**	**+0.1**
MAJO	**Matsushiro**	**13.42**	**229**	*d i* PN	**Pn**	**06 12 51.1**	**+0.7**
TIXI	**Tiksi**	**27.60**	**345**	*i* P	**P**	**06 15 22.1**	**+0.9**
TIXI	**Tiksi**	**27.60**	**345**	*e*P	**P**	**06 15 22.1**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**29.52**	**148**	T	T	06 47 11.2	
	baz=337,slow=76,SNR=358						
H11N1	**WAKE ISLAND Hy**	**29.54**	**148**	T	T	06 47 13.1	
	baz=337,slow=76,SNR=376						
H11N3	**WAKE ISLAND Hy**	**29.54**	**148**	T	T	06 47 13.4	
	baz=337,slow=76,SNR=398						
H11S1	**WAKE ISLAND Hy**	**30.58**	**149**	T	T	06 48 29.1	
	baz=338,slow=76,SNR=329						
H11S3	**WAKE ISLAND Hy**	**30.58**	**149**	T	T	06 48 33.9	
	baz=338,slow=76,SNR=306						
H11S2	**WAKE ISLAND Hy**	**30.59**	**149**	T	T	06 48 30.5	
	baz=338,slow=76,SNR=269						
KDAK	**Kodiak Island**	**35.76**	**50**	P	**P**	**06 16 32.0**	**-0.8**
	2.0nm,0.9s,baz=258,slow=3.8,SNR=5.6						
	2.0nm,0.9s						
KDAK	**Kodiak Island**	**35.76**	**50**	P	**P**	**06 16 32.0**	**-0.8**
ILAR	**Eielson Array**	**38.04**	**38**	P	**P**	**06 16 51.6**	**-0.4**
	0.4nm,0.9s,baz=275,slow=8.2,SNR=2.4						
	0.4nm,0.9s						
INK	**Inuvik**	**43.04**	**32**	P	**P**	**06 17 33.7**	**+0.7**
	1.2nm,0.3s,baz=297,slow=9.3,SNR=26						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**45.74**	**297**	P	**P**	**06 17 54.0**	**-0.9**
	0.7nm,0.6s,baz=64,slow=7.9,SNR=6.7						
MKAR				PcP	**PcP**	**06 19 30.8**	**-0.1**
	0.3nm,0.6s,baz=56,slow=5.4,SNR=2.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**45.74**	**297**	*e*P	**P**	**06 17 55.9**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**45.74**	**297**	*e*P	**P**	**06 17 55.9**	**+1.1**
SIJI	**Sorong**	**49.87**	**206**	LR	LR	06 40 49.1	
	comp=Z,16nm,18.8s,baz=192,slow=38						
FINES	**FINESS Array B**	**63.86**	**334**	P	**P**	**06 20 04.0**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=39,slow=7.3,SNR=4.6						
	comp=Z,2.4nm,0.8s						
FINES	**FINESS Array B**	**63.86**	**334**	*e*P	**P**	**06 20 06.4**	**+1.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	**Pinedale Array**	**66.43**	**52**	P	**P**	**06 20 22.2**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=14,slow=1.8,SNR=3.8						
	comp=Z,0.3nm,0.7s						
NB2	**NORSAR Subarra**	**68.24**	**340**	P	**P**	**06 20 32.4**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.24**	**340**	P	**P**	**06 20 33.0**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=30,slow=6.6,SNR=6.0						
	comp=Z,0.8nm,0.4s						
NOA	**NORSAR Array B**	**68.24**	**340**	*e*P	**P**	**06 20 32.7**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**71.10**	**325**	P	**P**	**06 20 49.9**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=38,slow=6.4,SNR=4.8						
	comp=Z,0.7nm,0.4s						
GERES	**GERESS Array B**	**78.24**	**333**	P	**P**	**06 21 32.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=18,slow=5.6,SNR=4.1						
	comp=Z,0.3nm,0.3s						
GERES	**GERESS Array B**	**78.24**	**333**	*e*P	**P**	**06 21 32.8**	**+0.5**
TXAR	**Lajitas Array**	**79.22**	**59**	P	**P**	**06 21 37.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=290,slow=3.9,SNR=7.0						
	comp=Z,0.3nm,0.6s						
BFO	**Black Forest**	**80.33**	**336**	*i* P	**P**	**06 21 44.7**	**+1.1**
H03N2	**Juan Fernandez**	**140.41**	**89**	T	T	09 05 48.2	
	baz=307,slow=77,SNR=14						
H03N1	**Juan Fernandez**	**140.43**	**89**	T	T	09 05 49.5	
	baz=307,slow=77,SNR=20						
H03N3	**Juan Fernandez**	**140.43**	**89**	T	T	09 05 48.0	
	baz=307,slow=77,SNR=24						

*EAF **06** 06:18:20.7±0.6, 21°.50S×33°.15E, h20km±139km, MD3.1*
*BUL **06** 06:18:21.0±0.6, 21°.61S×33°.22E, h35km±19km, MD3.1*
PRE 06 06:18:06.9±1.4, 21°.72S×33°.95E, h10km, ML1.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.96**	**232**	*e*P	Pn	06 18 54.0	0.0
MOPA				*e*S	Sn	06 19 30.7	+1.0
MOPA				IAML		06 19 34.4	
	comp=Z,2.8nm,0.4s						
MOPA	**Mopani**	**2.96**	**232**	*i* P	Pb	06 19 00.9	+1.1
MOPA				*i* S	Sn	06 19 31.1	+1.5
MOPA	**Mopani**	**2.96**	**232**	*i* P	Pb	06 19 00.9	+1.1
MOPA				*i* S	Sn	06 19 31.1	+1.5
MUSN	**Musina, Limpop**	**3.84**	**261**	*e*P	Pn	06 19 07.9	+1.7
MUSN				*e*S	Sn	06 19 49.9	-1.6
MUSN				IAML		06 20 00.5	
	comp=Z,3.1nm,0.2s						
MUSN	**Musina, Limpop**	**3.84**	**261**	*i* P	Pn	06 19 08.9	+2.7
MUSN				*i* S	Sn	06 19 43.4	-8.1
MUSN	**Musina, Limpop**	**3.84**	**261**	*i* P	Pn	06 19 08.9	+2.7
MUSN				*i* S	Sn	06 19 43.4	-8.1
BLWY	**Bulawayo**	**5.24**	**287**	*e*S	Sn	06 20 28.4	+2.4
BLWY				IAML		06 20 41.0	
	comp=Z,11nm,0.3s						
BLWY	**Bulawayo**	**5.24**	**287**	*i* P	Pn	06 19 27.2	+1.8
BLWY				*e*S	Sn	06 20 15.2	-11
BLWY	**Bulawayo**	**5.24**	**287**	*i* P	Pn	06 19 27.2	+1.8
BLWY				*e*S	Sn	06 20 15.2	-11
MATP	**Matopo**	**5.25**	**283**	*i* P	Pn	06 19 27.5	+1.8
MATP				*i* S	Sn	06 20 15.8	-11
MATP	**Matopo**	**5.25**	**283**	*i* P	Pn	06 19 27.5	+1.8
MATP				*i* S	Sn	06 20 15.8	-11
LEPH	**Lephalale, Lim**	**6.07**	**248**	*e*S	Sn	06 20 44.3	-2.0
LEPH				IAML		06 21 11.3	
	comp=Z,2.2nm,0.5s						

IDC 06 06:31:03.7±3.8, 7°.45S×154°.83E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=131.6km s-min=39.0km az=119.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.43**	**236**	P	P	06 36 14.4	-0.4
	1.5nm,0.8s,baz=60,slow=9.3,SNR=9.8						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**25.75**	**229**	P	P	06 36 36.0	-0.2
	0.4nm,0.6s,baz=64,slow=8.9,SNR=7.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**83.64**	**319**	P	P	06 43 34.4	+0.1
	0.4nm,0.8s,baz=99,slow=8.9,SNR=3.3						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**152.98**	**284**	PKPbc	PKiKP	06 51 04.7	+0.3
	0.5nm,0.8s,baz=63,slow=3.9,SNR=2.9						

*NIC **06** 06:32:26.2±0.0, 35°.03N×31°.42E, h23km, Ml2.5/3*
*ISK **06** 06:32:29.6, 35°.32N×31°.70E, h14km, ML2.1/9*
ISC 06 06:32:26.0±2.2, 35°.08N±0°.06×31°.37E±0°.10, h27km±16km, n14, σ0s94/19, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.79**	**94**	P	**Pb**	**06 32 40.9**	**-0.4**
AKMS				S	**Sb**	**06 32 52.2**	**+0.6**
AKMS				AML	AML	06 32 55.4	
	0.7nm,0.3s						
AKMS				AML	AML	06 32 55.4	
	0.7nm,0.3s						
AKMS				AML	AML	06 32 57.8	
	0.6nm,0.6s						
AKMS				AML	AML	06 32 57.8	
	0.6nm,0.6s						
ALFC	**Alefka**	**1.01**	**85**	P	**Pb**	**06 32 44.1**	**-0.8**
ALFC				S	**Sn**	**06 32 58.4**	**+0.6**
ALFC				AML	AML	06 33 01.0	
	0.5nm,0.7s						
ALFC				AML	AML	06 33 01.0	
	0.5nm,0.7s						
ALFC				AML	AML	06 33 03.2	
	0.6nm,0.6s						
ALFC				AML	AML	06 33 03.2	
	0.6nm,0.6s						
NATA	**Nata**	**1.03**	**106**	P	**Pb**	**06 32 45.0**	**-0.3**
NATA				S	**Sb**	**06 32 58.3**	**-0.1**
NATA				AML	AML	06 33 01.3	
	0.9nm,0.3s						
NATA				AML	AML	06 33 01.3	
	0.9nm,0.3s						
NATA				AML	AML	06 33 15.1	
	1.0nm,0.6s						
NATA				AML	AML	06 33 15.1	
	1.0nm,0.6s						
LEF	**Lefka**	**1.25**	**88**	PG	**Pn**	**06 32 48.5**	**+0.8**
LEF				SG	**Sn**	**06 33 02.2**	**-1.4**
GAZI	**Gazipasa**	**1.39**	**33**	PG	**Pn**	**06 32 50.2**	**+0.5**
GAZI				SG	**Sn**	**06 33 05.1**	**-2.1**
OSC1	**CSNet OBS 1**	**1.58**	**183**	S	**Sn**	**06 33 12.0**	**+0.3**
CSS	**Mathiatis**	**1.61**	**94**	PN	**Pb**	**06 32 55.2**	**+0.1**
TEKE	**Tekeli-Mersin**	**1.77**	**53**	PN	**Pn**	**06 32 55.6**	**+0.6**
BERE	**Bereket-Mersin**	**1.97**	**49**	PN	**Pn**	**06 32 58.4**	**+0.6**
AKKU	**Akkuyu-Mersin**	**2.08**	**58**	PN	**Pn**	**06 32 59.8**	**+0.7**
HDMB	**Hadim**	**2.09**	**25**	PN	**Pn**	**06 33 00.5**	**+1.0**
OSC2	**CSNet OBS 4**	**2.13**	**159**	P	**Pn**	**06 32 59.6**	**-0.3**
IKL	**Isikli**	**2.21**	**58**	PN	**Pn**	**06 33 02.2**	**+1.2**
KEBE	**Keben-Mersin**	**2.34**	**54**	PN	**Pn**	**06 33 03.7**	**+0.8**

*IDC **06** 06:49:14.8±1.9, 22°.77S×174°.19W, h0km, mb3.5/4, mbtmp3.6/5, ML5.0/1, MS3.0/3, Error ellipse: s-maj=72.1km s-min=30.1km az=159.0*
ISC 06 06:49:20.6±1.6, 22°.7S±0°.3×174°.3W±0°.2, h35km, n8, σ0s54/6, mb3.5/4, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.69**	**303**	Pn	**Pn**	**06 51 23.9**	**0.0**
	0.6nm,0.3s,baz=129,slow=13,SNR=8.9						
MSVF				LR	LR	06 53 58.5	
	comp=Z,126nm,20.4s,baz=138,slow=32						
	8.9nm,0.8s						
RAR	**Rarotonga**	**13.57**	**87**	LR	LR	06 58 23.4	
	comp=Z,21nm,18.2s,baz=250,slow=41						
ASAR	**Alice Springs**	**47.41**	**258**	P	**P**	**06 57 52.2**	**+0.3**
	0.4nm,0.9s,baz=98,slow=7.5,SNR=3.2						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**47.73**	**263**	P	**P**	**06 57 54.3**	**-0.1**
	0.2nm,0.5s,baz=102,slow=6.2,SNR=8.5						
	0.2nm,0.5s						
LPIG	**La Paz**	**77.61**	**57**	LR	LR	07 31 50.3	
	comp=Z,20nm,18.9s,baz=168,slow=33						
NVAR	**Mina Array Bea**	**80.29**	**41**	P	**P**	**07 01 28.4**	**+0.1**
	0.4nm,0.7s,baz=225,slow=8.7,SNR=4.3						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**89.69**	**11**	P	**P**	**07 02 14.7**	**+0.2**
	0.4nm,0.9s,baz=223,slow=6.1,SNR=2.8						
	0.4nm,0.9s						
AKASG	**Malin Array Be**	**146.53**	**333**	PKPbc	**PKPbc**	**07 08 57.2**	**-0.8**
	0.3nm,0.3s,baz=42,slow=3.7,SNR=5.4						

*KRNET **06** 06:52:01.8±0.1, 39°.96N×76°.28E, mb3.5*
*NNC **06** 06:52:03.9±1.9, 39°.88N×76°.16E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=13.4km s-min=11.4km az=147.0*
*SOME **06** 06:52:05.0, 40°.07N×75°.98E, h0km*
ISC 06 06:52:05.5±2.4, 40°.03N±0°.09×76°.20E±0°.04, h9km±12km, n48, σ1s63/77, 14C-15D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.41**	**354**	⇓*e*P	**Pn**	**06 52 29.9**	**-1.8**
NRN				⇓*e*S	**Sn**	**06 52 50.5**	**-0.1**
	baz=51						
TARG	**Taragay, Kyrgy**	**2.09**	**35**	⇓*e*P	**Pn**	**06 52 40.8**	**-0.3**
	baz=33						
TARG				⇓*e*S	**Sb**	**06 53 09.2**	**-0.9**
	baz=33						
ULHL	**Ulahol**	**2.21**	**1**	⇓*e*P	**Pn**	**06 52 43.2**	**+0.5**
	baz=59						
ULHL				⇓*e*S	**Sb**	**06 53 13.3**	**-0.2**
	baz=59						
ARLS	**Aral**	**2.31**	**323**	⇓*e*P	**Pn**	**06 52 44.8**	**+0.8**
	baz=23						
ARLS				⇓*e*S	**Sb**	**06 53 16.1**	**-0.2**
	baz=23						
BOOM	**Boomskoye usch**	**2.47**	**356**	⇑*e*P	**Pn**	**06 52 46.6**	**+0.5**
	baz=54						
BOOM				⇑*e*S	**Sb**	**06 53 19.6**	**-1.1**
	baz=54						
UCH	**Uchtor**	**2.54**	**330**	⇓*e*P	**Pn**	**06 52 48.0**	**+0.7**
	baz=30						
UCH				⇓*e*S	**Sb**	**06 53 21.6**	**-1.4**
	baz=30						
KBK	**Karagaybulak**	**2.79**	**341**	⇑*e*P	**Pn**	**06 52 51.4**	**+0.9**
	baz=40						
KBK				⇑*e*S	**Sb**	**06 53 27.4**	**-2.5**
	baz=40						
AAK	**Ala-Archa**	**2.90**	**334**	⇑*e*P	**Pn**	**06 52 52.8**	**+0.7**
	baz=34						
AAK				⇑*e*S	**Sb**	**06 53 30.2**	**-3.1**
	baz=34						
TKM2	**Tokmak 2**	**2.92**	**351**	⇑*e*P	**Pn**	**06 52 53.2**	**+0.8**
	baz=50						
TKM2				⇑*e*S	**Sn**	**06 53 30.5**	**+2.7**
	baz=50						
TKM2	**Tokmak 2**	**2.92**	**351**	⇓Pn	**Pn**	**06 52 52.9**	**+0.5**
	4.4nm,0.8s						
TKM2				⇑Pg	**Pg**	**06 52 59.9**	**-1.6**
	7.5nm,0.6s						
TKM2				⇑Lg	Lg	06 53 41.6	
	15nm,0.5s						
KST	**Kastek**	**3.02**	**357**	*e*P	**Pg**	**06 53 03.3**	**+0.1**
	6.2nm,0.5s						
KST				*e*S	**Sg**	**06 53 45.1**	**+2.7**
	24nm,0.3s						
KST	**Kastek**	**3.02**	**357**	Pg	**Pg**	**06 53 03.4**	**+0.1**
KST				Lg	Lg	06 53 45.5	
IZV	**Izvestkoviy**	**3.02**	**6**	*e*P	**Pb**	**06 53 01.0**	**+1.5**
	7.9nm,0.3s						
IZV				*e*S	**Sg**	**06 53 41.1**	**-1.4**
	10nm,0.4s						
IZV	**Izvestkoviy**	**3.02**	**6**	Pg	**Pb**	**06 53 01.0**	**+1.5**
	7.9nm,0.3s						
IZV				Lg	Lg	06 53 41.1	
	14nm,0.7s						
TNSS	**Tian-Shan**	**3.06**	**10**	*e*P	**Pg**	**06 53 03.7**	**-0.4**
	14nm,0.3s						
TNSS				*e*S	**Sg**	**06 53 45.5**	**+1.8**
	12nm,0.3s						
TNSS	**Tian-Shan**	**3.06**	**10**	Pg	**Pg**	**06 53 03.5**	**-0.6**
	14nm,0.6s						
TNSS				Lg	Lg	06 53 46.0	
	12nm,0.6s						
MTBS	**Maitube**	**3.10**	**3**	*e*P	**Pg**	**06 53 04.8**	**-0.1**
	13nm,0.3s						
MTBS				*e*S	**Sg**	**06 53 47.6**	**+2.5**
	16nm,0.2s						
MTBS	**Maitube**	**3.10**	**3**	Pg	**Pg**	**06 53 04.8**	**-0.1**
	13nm,0.3s						
MTBS				Lg	Lg	06 53 47.6	
	16nm,0.

KURS	**Kuram**	**3.76**	**22**	Pg	**Pg**	**06 53 17.1**	**-0.4**
	5.5nm,0.9s						
KURS				Lg	Lg	06 54 08.5	
	14nm,0.6s						
UZB	**Uzynbulak**	**3.77**	**33**	*e*P	**Pg**	**06 53 15.6**	**-2.0**
	1.5nm,0.2s						
UZB				*e*S	**Sg**	**06 54 05.9**	**-0.6**
	9.1nm,0.5s						
UZB	**Uzynbulak**	**3.77**	**33**	Pg	**Pg**	**06 53 15.1**	**-2.5**
	2.6nm,0.4s						
UZB				Lg	Lg	06 54 05.9	
	8.8nm,0.7s						
KUU	**Kurty**	**3.86**	**2**	*e*P	**Pg**	**06 53 18.4**	**-1.1**
	4.3nm,0.3s						
KUU				*e*S	**Sg**	**06 54 10.6**	**+1.1**
	18nm,0.4s						
KUU	**Kurty**	**3.86**	**2**	Pg	**Pg**	**06 53 18.4**	**-1.1**
	8.2nm,0.5s						
KUU				Lg	Lg	06 54 10.6	
	18nm,0.7s						
CHKK	**Chushkaly**	**3.87**	**9**	*e*P	**Pg**	**06 53 18.6**	**-1.0**
	3.0nm,0.2s						
CHKK				*e*S	**Sg**	**06 54 11.1**	**+1.5**
	11nm,0.5s						
CHKK	**Chushkaly**	**3.87**	**9**	Pg	**Pg**	**06 53 18.6**	**-1.0**
	2.6nm,0.4s						
CHKK				Lg	Lg	06 54 11.1	
	9.2nm,0.5s						
KPKS	**Kokpek**	**3.91**	**28**	*e*P	**Pg**	**06 53 18.6**	**-1.7**
	3.4nm,0.2s						
KPKS				*e*S	**Sg**	**06 54 11.2**	**+0.3**
	19nm,0.6s						
KPKS	**Kokpek**	**3.91**	**28**	Pg	**Pg**	**06 53 18.6**	**-1.7**
	3.4nm,0.2s						
KPKS				Lg	Lg	06 54 11.2	
	19nm,0.6s						
SHLS	**Shalkode**	**3.97**	**37**	*e*P	**Pg**	**06 53 23.1**	**+1.6**
	1.5nm,0.0s						
SHLS				*e*S	**Sg**	**06 54 18.9**	**+5.9**
	6.8nm,0.4s						
PDGK	**Podgornoye**	**4.12**	**36**	⇑Pg	**Pb**	**06 53 16.5**	**-1.7**
	3.5nm,0.6s						
PDGK				⇓Lg	Lg	06 54 18.9	
	15nm,0.8s						
ARXS	**Arharly**	**4.35**	**16**	*e*P	**Pg**	**06 53 27.1**	**-1.8**
	4.8nm,0.4s						
ARXS				*e*S	**Sg**	**06 54 25.6**	**+0.4**
	6.5nm,0.6s						
ARXS	**Arharly**	**4.35**	**16**	Pg	**Pg**	**06 53 26.8**	**-2.0**
	4.8nm,0.4s						
ARXS				Lg	Lg	06 54 25.6	
	6.5nm,0.6s						
BLB	**Baldybastay**	**4.41**	**22**	*e*P	**Pg**	**06 53 27.8**	**-2.1**
	6.2nm,0.4s						
BLB				*e*S	**Sg**	**06 54 27.1**	**+0.2**
	9.2nm,0.2s						
BLB	**Baldybastay**	**4.41**	**22**	Pg	**Pg**	**06 53 27.8**	**-2.1**
	6.2nm,0.4s						
BLB				Lg	Lg	06 54 27.3	
	9.2nm,0.3s						
BTLS	**Baital**	**5.25**	**343**	*e*P	**Pg**	**06 53 42.9**	**-3.1**
	2.5nm,1.2s						
BTLS				*e*S	**Sg**	**06 54 53.0**	**-1.1**
	10.0nm,0.6s						
BTLS	**Baital**	**5.25**	**343**	Pg	**Pg**	**06 53 42.9**	**-3.1**
	2.5nm,1.2s						
BTLS				Lg	Lg	06 54 53.0	
	10.0nm,0.6s						
KK31	**Karatay Array**	**5.25**	**308**	⇑Pg	**Pb**	**06 53 39.2**	**+1.7**
	0.8nm,0.5s,baz=124,slow=16,SNR=6.7						
KK31				⇓Lg	Lg	06 54 52.9	
	1.3nm,0.5s,baz=123,slow=28,SNR=5.4						

SJA ***06*** *07:01:38.9±0.7, 28°.06S×64°.73W, h8km±4km, ML4.2, MW4.0*
IDC ***06*** *07:01:39.9±0.7, 28°.14S×64°.80W, h0km, mb4.0/8, mbtmp4.0/13, ML4.0/5, MS3.3/10, Error ellipse: s-maj=19.9km s-min=16.5km az=118.0*
VAO ***06*** *07:01:44.9±0.3, 28°.38S×64°.74W, h30km, mb4.5*
NEIC ***06*** *07:01:44.5±2.9, 28°.27S±0°.07×64°.71W±0°.08, h27km±5km, mb4.4/9, Md4.6(SJA), Error ellipse: s-maj=10.8km s-min=10.4km az=120.0*
ISC 06 07:01:45.5±0.4, 28°.16S±0°.04×64°.72W±0°.04, h35km, n136, σ1ŝ81/136, mb4.2/10, MS3.5/4, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**1.00**	**253**	*e*P	**Pn**	**07 01 59.1**	**-3.9**
CYA				*e*S	**Sn**	**07 02 13.2**	**-2.7**
CYA				IAML		07 02 16.5	
	comp=Z,4μm,0.5s						
ACLC	**CERRO LA CRUZ**	**2.33**	**237**	*e*P	**Pn**	**07 02 20.2**	**-1.3**
ACLC				*e*S	**Sn**	**07 02 52.5**	**+3.5**
ACLC				IAML		07 02 56.6	
	comp=Z,2μm,0.4s						
TINO	**Tinogasta**	**2.52**	**272**	*e*P	**Pn**	**07 02 22.6**	**-1.5**
TINO				*e*S	**Sn**	**07 02 53.5**	**-0.1**
APLL	**PUNTA DE LOS L**	**2.73**	**215**	*e*P	**Pn**	**07 02 26.0**	**-0.9**
VCA	**Vinchina**	**3.12**	**259**	*e*P	**Pn**	**07 02 31.8**	**-0.6**
VCA				*e*S	**Sn**	**07 03 11.8**	**+3.2**
VCA				IAML		07 03 26.4	
	comp=Z,1μm,0.5s						
TCA	**Tanti**	**3.17**	**178**	*e*P	**Pn**	**07 02 33.3**	**+0.4**
TCA				*e*S	**Sn**	**07 03 14.1**	**+4.5**
ACHE	**Chepes**	**3.44**	**209**	*e*P	**Pn**	**07 02 36.0**	**-0.7**
ACHE				*e*S	**Sn**	**07 03 20.3**	**+4.0**
AZAP	**Zapla**	**3.93**	**355**	*e*P	**Pn**	**07 02 42.2**	**-1.4**
AZAP				*e*S	**Sn**	**07 03 29.1**	**+0.5**
AZAP				IAML		07 03 52.4	
	comp=Z,3μm,0.7s						
AC02	**Maricunga**	**4.13**	**288**	Pn	**Pn**	**07 02 47.0**	**+0.4**
AC02	**Maricunga**	**4.13**	**288**	*e*P	**Pn**	**07 02 46.3**	**-0.3**
AC02				*e*S	Sn	07 03 49.6	+16
AC02				IAML		07 03 53.7	
	comp=Z,62nm,0.8s						
ASTB	**Santa Barbara**	**4.20**	**3**	*e*P	**Pn**	**07 02 45.3**	**-1.9**
ASTB				*e*S	**Sn**	**07 03 34.8**	**-0.4**
ASTB				IAML		07 04 02.7	
	comp=Z,102nm,0.3s						
ZON	**Zonda**	**4.82**	**225**	Pn	**Pn**	**07 02 54.3**	**-1.3**
AC05	**El Transito**	**4.94**	**261**		**Pn**	**07 02 57.6**	**+0.4**
CO01	**Juntas del Tor**	**5.04**	**248**	Pn	**Pn**	**07 03 00.1**	**+1.2**
AC06	**Mina Casimiro**	**5.06**	**278**		**Pn**	**07 02 57.6**	**-1.2**
GO02	**Mina Guanaco**	**5.28**	**303**	Pn	**Pn**	**07 03 03.7**	**+1.5**
LCO	**Las Campanas**	**5.33**	**259**	Pn	**Pn**	**07 03 02.2**	**-0.6**
AC01	**Pan de Azucar**	**5.61**	**290**	Pn	**Pn**	**07 03 05.3**	**-1.2**
AC04	**Llanos de Chal**	**5.61**	**268**	Pn	**Pn**	**07 03 04.8**	**-1.6**
GO04	**Tololo Observa**	**5.68**	**248**		**Pn**	**07 03 07.4**	**-0.2**
CO03	**El Pedregal**	**5.85**	**241**	Pn	**Pn**	**07 03 10.4**	**+0.7**
CO05	**La Serena**	**5.97**	**251**		**Pn**	**07 03 10.2**	**-1.2**
PB14	**IPOC Station P**	**6.20**	**303**		**Pn**	**07 03 15.0**	**+0.3**
CO02	**Combarbal**	**6.25**	**239**		**Pn**	**07 03 14.6**	**-0.7**
CO06	**Fray Jorge**	**6.53**	**246**		**Pn**	**07 03 16.2**	**-2.9**
LVC	**Limon Verde**	**6.70**	**325**	Pn	**Pn**	**07 03 23.5**	**+1.7**
	comp=Z,2.4nm,0.3s,baz=143,slow=8.6,SNR=22						
LVC				LR	LR	07 05 26.0	
	comp=Z,73nm,19.9s,baz=152,slow=34						
LVC	**Limon Verde**	**6.70**	**325**	Pn	**Pn**	**07 03 23.9**	**+2.2**
LVC	**Limon Verde**	**6.70**	**325**	*e*P	**Pn**	**07 03 23.6**	**+1.9**
VA03	**San Esteban**	**6.81**	**226**		**Pn**	**07 03 22.5**	**-0.5**
CPUP	**Villa Florida**	**6.82**	**76**	Pn	**Pn**	**07 03 22.1**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=253,slow=11,SNR=31						
CPUP				Lg	Lg	07 05 18.6	
	comp=Z,22nm,0.3s,baz=177,slow=18,SNR=6.2						
CPUP				LR	LR	07 06 20.4	
	comp=Z,292nm,18.6s,baz=263,slow=41						
	comp=Z,4.4nm,0.4s						
CPUP	**Villa Florida**	**6.82**	**76**		**Pn**	**07 03 21.7**	**-1.4**
PEL	**Peldehue**	**7.15**	**225**		**Pn**	**07 03 26.5**	**-1.1**
VA06	**Catapilco**	**7.18**	**231**	Pn	**Pn**	**07 03 25.2**	**-2.7**
ROC1	**El Roble**	**7.25**	**227**	Pn	**Pn**	**07 03 26.7**	**-2.4**
ITQB	**Itaqui**	**7.25**	**104**	Pn	**Pn**	**07 03 28.7**	**-0.3**
ITQB	**Itaqui**	**7.25**	**104**	*e*P	**Pn**	**07 03 29.0**	**0.0**
MT03	**Universidad Ad**	**7.28**	**222**	Pn	**Pn**	**07 03 28.8**	**-0.7**
MT05	**Renca**	**7.35**	**223**	Pn	**Pn**	**07 03 28.8**	**-1.6**
LMEL	**Las Melosas**	**7.37**	**218**	Pn	**Pn**	**07 03 31.0**	**+0.3**
MT02	**Curacav**	**7.51**	**226**	Pn	**Pn**	**07 03 29.7**	**-2.8**
BO04	**La Punta**	**7.70**	**220**	Pn	**Pn**	**07 03 34.0**	**-1.2**
AZCA	**Azaras, Argent**	**7.71**	**91**	*e*P	**Pn**	**07 03 35.3**	**0.0**
MT09	**Talagante**	**7.77**	**222**	Pn	**Pn**	**07 03 33.1**	**-3.0**
MT01	**Popeta**	**7.98**	**223**	Pn	**Pn**	**07 03 35.8**	**-3.2**
VA05	**Santo Domingo**	**8.07**	**226**	Pn	**Pn**	**07 03 37.8**	**-2.4**
BO01	**Tunca**	**8.26**	**220**	Pn	**Pn**	**07 03 38.9**	**-3.9**
UNIS	**Unistalda (Bra**	**8.53**	**98**	*e*P	**Pn**	**07 03 46.1**	**-0.4**
RODS	**Rosario do Sul**	**8.60**	**107**	*e*P	**Pn**	**07 03 47.5**	**+0.1**
MURT	**Porto Murtinho**	**9.14**	**46**	*e*P	**Pn**	**07 03 56.6**	**+1.8**
GO05	**Huala**	**9.19**	**220**	Pn	Pn	07 03 50.8	-4.8
ML02	**Panimavida**	**9.48**	**215**	Pn	**Pn**	**07 03 55.1**	**-4.3**
ANTJ	**Antonio Joao (**	**10.00**	**54**	*e*P	**Pn**	**07 04 08.7**	**+2.0**
CPSB	**Cacapava Do Su**	**10.10**	**106**	*e*P	**Pn**	**07 04 06.4**	**-1.6**
TRQA	**Tornquist**	**10.13**	**168**		**Pn**	**07 04 06.8**	**-1.7**
TRQA	**Tornquist**	**10.13**	**168**	*e*P	**Pn**	**07 04 06.1**	**-2.4**
MCR1	**Marechal Candi**	**10.27**	**71**	*e*P	**Pn**	**07 04 11.2**	**+0.9**
PLTB	**Pedras Altas**	**10.29**	**113**	Pn	**Pn**	**07 04 08.8**	**-1.8**
PLTB	**Pedras Altas**	**10.29**	**113**	*e*P	**Pn**	**07 04 09.1**	**-1.5**
ALGR	**Alto Alegre (B**	**10.31**	**96**	*e*P	**Pn**	**07 04 10.2**	**-0.8**
FRBT	**Francisco Belt**	**10.61**	**81**	*e*P	**Pn**	**07 04 15.8**	**+0.7**
ITAB	**Concordia**	**11.19**	**88**	Pn	**Pn**	**07 04 22.2**	**-0.8**
ITAB	**Concordia**	**11.19**	**88**	*e*P	**Pn**	**07 04 22.8**	**-0.2**
AQDB	**Aquidauana**	**11.23**	**49**	Pn	**Pn**	**07 04 21.8**	**-1.7**
AQDB	**Aquidauana**	**11.23**	**49**	*e*P	**Pn**	**07 04 23.8**	**+0.3**
PTGB	**Pitanga**	**11.84**	**76**	*e*P	**Pn**	**07 04 33.0**	**+1.0**
TRCB	**Terra Rica**	**12.15**	**67**	*e*P	**Pn**	**07 04 38.2**	**+2.1**
CNLB	**Canela**	**12.22**	**99**	*e*P	**Pn**	**07 04 34.8**	**-2.3**
LPAZ	**La Paz**	**12.23**	**344**	Pn	**Pn**	**07 04 37.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=135,slow=7.2,SNR=4.8						
LPAZ				LR	LR	07 10 31.1	
	comp=Z,78nm,19.5s,baz=142,slow=44						
	comp=Z,0.9nm,0.7s						
LPAZ	**La Paz**	**12.23**	**344**	*e*P	**Pn**	**07 04 39.0**	**+1.3**
SIV	**San Ignacio**	**12.57**	**16**	Pn	**Pn**	**07 04 42.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=193,slow=13,SNR=21						
SIV				Sn	**Sn**	**07 07 01.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=159,slow=19,SNR=1.4						
SIV				Lg	Lg	07 08 13.6	
	comp=Z,0.1nm,0.3s,baz=235,slow=7.0,SNR=4.0						
SIV				LR	LR	07 10 35.0	
	comp=Z,66nm,19.9s,baz=285,slow=43						
	comp=Z,1.6nm,0.3s						
RPRD	**Ribas do Rio P**	**12.62**	**55**	*e*P	**Pn**	**07 04 44.4**	**+1.9**
GO06	**Curarrehue**	**12.70**	**204**	Pn	**Pn**	**07 04 39.8**	**-3.8**
PLCA	**Paso Flores**	**13.43**	**199**	Pn	**Pn**	**07 04 51.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=24,slow=15,SNR=2.3						
PLCA				Lg	Lg	07 08 45.5	
	comp=Z,0.3nm,0.3s,baz=340,slow=18,SNR=2.9						
PLCA				LR	LR	07 10 56.3	
	comp=Z,132nm,19.4s,baz=27,slow=41						
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**13.43**	**199**	Pn	**Pn**	**07 04 50.5**	**-3.1**
PLCA	**Paso Flores**	**13.43**	**199**	*e*P	**Pn**	**07 04 49.5**	**-4.1**
PTLB	**Pontes e Lacer**	**13.66**	**23**	*e*P	P	07 04 59.3	-5.8
PCMB	**Pacaembu**	**13.84**	**65**	*e*P	**Pn**	**07 05 00.1**	**+0.9**
PP1B	**Ponte de Pedra**	**13.87**	**43**	*e*P	P	07 05 01.6	-5.8
C2SB	**Chapadao do Su**	**14.35**	**52**	*e*P	**P**	**07 05 08.1**	**-4.6**
FRTB	**Fartura**	**14.47**	**74**	*e*P	**P**	**07 05 09.5**	**-4.6**
VILB	**Vilhena**	**15.71**	**16**	*e*P	**P**	**07 05 27.7**	**-0.2**
BB19B	**Bebedouro**	**16.32**	**68**	*e*P	**P**	**07 05 32.8**	**-1.8**
RCLB	**Rio Claro- Sao**	**16.55**	**74**	*e*P	**P**	**07 05 37.1**	**-0.2**
VAO	**Valinhos**	**16.81**	**76**	*e*P	**P**	**07 05 39.0**	**-1.2**
PDRB	**Porto dos Gac**	**18.08**	**26**	*e*P	**P**	**07 05 55.8**	**+1.7**
IPMB	**Ipameri, GO**	**18.23**	**60**	*e*P	**Pn**	**07 05 57.8**	**+1.9**
ETMB	**Extrema**	**18.30**	**355**	*e*P	**Pn**	**07 05 57.6**	**+1.0**
CLDB	**Colider**	**19.13**	**28**	*e*P	**Pn**	**07 06 07.4**	**+0.7**
PMNB	**Patos De Minas**	**19.30**	**64**	*e*P	**Pn**	**07 06 09.0**	**+0.2**
MAN01	**Angra dos Reis**	**19.45**	**79**	*e*P	**Pn**	**07 06 09.0**	**-1.6**
BDFB	**Brasilia**	**19.85**	**55**	P	**Pn**	**07 06 14.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=248,slow=11,SNR=7.3						
BDFB				Lg	Lg	07 12 17.1	
	comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=1.4						
BDFB				LR	LR	07 15 18.6	
	comp=Z,112nm,21.0s,baz=195,slow=41						
	comp=Z,5.0nm,0.7s						
BDFB	**Brasilia**	**19.85**	**55**	P	**Pn**	**07 06 14.0**	**-1.4**
BDFB	**Brasilia**	**19.85**	**55**	*e*P	**Pn**	**07 06 16.0**	**+0.6**
SNDB	**Serra Nova Dou**	**20.42**	**41**	*e*P	Pn	07 06 21.0	-1.0
DUB01	**Friburgo-RJ**	**21.10**	**78**	*e*P	**P**	**07 06 28.1**	**+0.9**
DIAM	**Diamantina, MG**	**21.66**	**68**	*e*P	**P**	**07 06 34.3**	**+1.1**
CZSB	**Cruzeiro do Su**	**21.68**	**338**	*e*P	**P**	**07 06 35.7**	**+2.5**
MC01	**Montes Claros**	**22.29**	**64**	*e*P	**P**	**07 06 42.2**	**+2.3**
NPGB	**Novo Progresso**	**22.79**	**25**	*e*P	**P**	**07 06 45.7**	**+0.5**
JANB	**Januaria**	**22.97**	**60**	*e*P	**P**	**07 06 48.7**	**+1.5**
SJMB	**Sao Joao De Ma**	**23.52**	**72**	*e*P	**P**	**07 06 54.3**	**+1.8**
SDBA	**SAO DESIDERIO**	**24.25**	**54**	*e*P	**P**	**07 07 01.1**	**+1.7**
TBTG	**Tabatinga, AM**	**24.35**	**347**	*e*P	**P**	**07 07 02.8**	**+2.6**
NAN01	**Guarapari, ES**	**24.81**	**71**	*e*P	**P**	**07 07 05.9**	**+1.5**
SMTB	**Santa Maria do**	**25.08**	**43**	*e*P	**P**	**07 07 09.0**	**+2.1**
ITTB	**Itaituba**	**25.16**	**21**	*e*P	**P**	**07 07 08.0**	**+0.5**
GUA01	**Guaratinga, BA**	**25.70**	**69**	*e*P	**P**	**07 07 13.8**	**+1.3**
GDU01	**Guandu, BA**	**27.45**	**64**	*e*P	**P**	**07 07 29.6**	**+1.3**
MALB	**Monte Alegre**	**28.00**	**23**	*e*P	**P**	**07 07 35.8**	**+2.6**
MCPB	**Macapa, AP**	**30.19**	**26**	*e*P	P	07 07 55.9	+3.3
BOAV	**Boa Vista**	**30.64**	**8**	*e*P	**P**	**07 07 58.8**	**+2.2**
ROSC	**El Rosal**	**34.09**	**343**	LR	LR	07 22 18.2	
	comp=Z,40nm,19.9s,baz=234,slow=36						
RCBR	**Riachuelo**	**35.21**	**56**	LR	LR	07 24 11.7	
	comp=Z,150nm,18.9s,baz=354,slow=38						
RPN	**Rapa Nui**	**39.37**	**261**	LR	LR	07 21 40.7	
	comp=Z,76nm,21.3s,baz=82,slow=31						
BELA	**Belgrano 2**	**51.66**	**172**	P	**P**	**07 10 48.2**	**-0.1**
BELA				IAmb	IAmb	07 10 54.1	
	comp=Z,7.0nm,1.3s						
VNA3	**Neumayer Olymp**	**52.57**	**160**	P	**P**	**07 10 54.7**	**-0.4**
SNAA	**Sanae**	**54.76**	**160**	P	**P**	**07 11 10.4**	**-0.8**
SNAA	**Sanae**	**54.76**	**160**	P	**P**	**07 11 12.9**	**+1.6**
	comp=Z,1.1nm,0.9s,baz=267,slow=7.8,SNR=8.8						
	comp=Z,1.1nm,0.9s						
SNAA	**Sanae**	**54.76**	**160**	P	**P**	**07 11 11.4**	**+0.2**
SNAA				IAmb	IAmb	07 11 15.1	
	comp=Z,4.2nm,1.5s						
TROLL	**Troll, Antarti**	**56.47**	**160**	P	**P**	**07 11 23.1**	**-0.5**
QSPA	**South Pole Qui**	**62.06**	**180**	P	**P**	**07 12 02.4**	**0.0**
QSPA				IAmb	IAmb	07 12 03.5	
	comp=Z,5.6nm,1.1s						
DBIC	**Dimbokro**	**67.28**	**69**	P	**P**	**07 12 38.0**	**+1.0**
	comp=Z,3.6nm,0.6s,baz=231,slow=6.2,SNR=5.9						
	comp=Z,3.6nm,0.6s						
TXAR	**Lajitas Array**	**68.24**	**324**	P	**P**	**07 12 42.4**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=156,slow=6.9,SNR=4.3						
	comp=Z,0.4nm,0.8s						
VNDA	**Vanda**	**70.96**	**190**	P	**P**	**07 12 59.7**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=149,slow=7.5,SNR=6.0						
	comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**70.96**	**190**	P	**P**	**07 12 59.6**	**+0.8**
VNDA				IAmb	IAmb	07 13 00.4	
	comp=Z,1.8nm,1.1s						
ANMO	**Albuquerque**	**74.12**	**325**	LR	LR	07 46 01.8	
	comp=Z,31nm,19.8s,baz=50,slow=36						
TOA0	**Torodi Ar. Sit**	**76.23**	**67**	P	**P**	**07 13 29.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.23**	**67**	P	**P**	**07 13 29.9**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=274,slow=6.0,SNR=25						
	comp=Z,4.0nm,0.7s						
BOSA	**Boshof**	**77.06**	**116**	P	**P**	**07 13 35.1**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=242,slow=6.5,SNR=5.7						
	comp=Z,2.4nm,0.6s						
PDAR	**Pinedale Array**	**81.75**	**328**	P	**P**	**07 14 00.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=125,slow=7.8,SNR=6.1						
	comp=Z,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**83.05**	**320**	P	**P**	**07 14 07.5**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=139,slow=6.0,SNR=3.5						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**125.44**	**201**	PKP	**PKiKP**	**07 20 42.1**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=143,slow=1.8,SNR=21						
WRA	**Warramunga Arr**	**128.75**	**203**	PKP	**PKiKP**	**07 20 48.9**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=167,slow=1.8,SNR=20						
KSH	**Kashi**	**145.69**	**60**	PKPbc	**PKPab**	**07 21 19.9**	**-1.3**
MKAR	**Makanchi Array**	**148.20**	**45**	PKPbc	**PKiKP**	**07 21 26.9**	**-2.4**
	comp=Z,0.9nm,0.6s,baz=298,slow=2.2,SNR=8.7						
PZH	**PanZhiHua**	**167.85**	**95**	PKP	**PKPdf**	**07 21 48.1**	**-0.6**

SOF ***06*** *07:06:35.4, 39°.34N×26°.23E, h8km, MD3.7*
THE ***06*** *07:06:48.7, 40°.07N×25°.44E, h18km±1km, ML2.9/4, Error ellipse: s-maj=1.1km s-min=0.4km az=40.0*
ISK ***06*** *07:06:48.9, 40°.07N×25°.51E, h9km, ML2.9/21*
ATH ***06*** *07:06:49.9, 40°.09N×25°.47E, h8km±4km, ML2.7/6, Error ellipse: s-maj=4.8km s-min=1.0km az=95.0*
DDA ***06*** *07:06:49.8±0.0, 40°.04N×25°.56E, h17km±1km, ML2.8*
ISC 06 07:06:49.0±1.0, 40°.07N±0°.02×25°.51E±0°.02, h8km±9km, n63, σ0ŝ74/103, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.32**	**68**	PG	**Pg**	**07 06 55.9**	**+0.6**
GADA				SG	**Sg**	**07 07 00.7**	**+1.0**
GOKA	**anakkale-Gk**	**0.33**	**68**	P	**Pb**	**07 06 56.2**	**-0.9**
GOKA				S	**Sb**	**07 07 01.3**	**-1.2**
GOKA				*i* AML	AML	07 07 04.0	
	comp=E,2μm,0.4s						
SMTH	**Samothraki Isl**	**0.40**	**3**	P	**Pg**	**07 06 57.1**	**+0.3**
SMTH				S	**Sb**	**07 07 03.6**	**-1.0**
SMTH	**Samothraki Isl**	**0.40**	**3**	P	**Pb**	**07 06 57.7**	**-0.6**
SMTH				S	**Sb**	**07 07 03.4**	**-1.2**
SMTH				AML	AML	07 07 04.3	
	comp=N,965μm,0.2s						
SMTH				AML	AML	07 07 06.5	
	comp=E,878μm,0.2s						
BOZC	**Bozcaada**	**0.48**	**118**	PG	**Pb**	**07 06 58.8**	**-0.8**
BOZC				SG	**Sb**	**07 07 05.8**	**-0.9**
BOZC	**Bozcaada**	**0.48**	**118**	P	**Pb**	**07 06 58.7**	**-0.8**
BOZC				S	**Sg**	**07 07 05.2**	**+0.7**
ECEA	**Canakkale, Ece**	**0.51**	**93**	P	**Pb**	**07 06 59.7**	**-0.5**
ECEA				S	**Sb**	**07 07 06.6**	**-1.2**
EFSA	**Agios Efstrati**	**0.66**	**217**	P	**Pb**	**07 07 03.1**	**+0.3**
EFSA				S	**Sb**	**07 07 11.9**	**-0.2**
EZN	**Ezine**	**0.67**	**111**	PG	**Pg**	**07 07 02.2**	**+0.2**
EZN				SG	**Sb**	**07 07 12.2**	**-0.2**
EZN	**Ezine**	**0.67**	**111**	P	**Pg**	**07 07 02.0**	**0.0**
EZN				S	**Sb**	**07 07 12.4**	**0.0**
KOCA	**Canakkale, Ayv**	**0.75**	**139**	P	**Pb**	**07 07 03.7**	**-0.5**
KOCA				S	**Sb**	**07 07 13.6**	**-0.9**
GPNR	**Gulpinar-Canak**	**0.78**	**142**	PG	**Pb**	**07 07 04.4**	**-0.3**
CAVK	**Edirne/Enez-Ca**	**0.80**	**39**	P	**Pb**	**07 07 05.1**	**0.0**
CAVK				S	**Sb**	**07 07 16.9**	**+0.9**
THAS	**Thassos island**	**0.81**	**312**	P	**Pg**	**07 07 02.7**	**-1.8**
THAS				S	**Sg**	**07 07 14.0**	**-1.0**
	comp=E,985nm,0.3s						
THAS	**Thassos island**	**0.81**	**312**	P	**Pg**	**07 07 03.3**	**-1.2**
THAS				S	**Sg**	**07 07 14.4**	**-0.6**
THAS				AML	AML	07 07 15.7	
	comp=N,2136μm,0.4s						
THAS				AML	AML	07 07 15.8	
	comp=E,1808μm,0.3s						
GELI	**Tayfur-Gelibol**	**0.81**	**66**	PG	**Pb**	**07 07 04.9**	**-0.3**
GELI				SG	**Sb**	**07 07 16.6**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.86**	**112**	P	**Pg**	**07 07 05.4**	**-0.1**
BAYC				S	**Sb**	**07 07 18.5**	**+0.6**
BAYC				*i* AML	AML	07 07 19.0	
	comp=E,287nm,0.2s						
SIGR	**SIGRI**	**0.90**	**162**	PG	**Pb**	**07 07 06.7**	**0.0**
SIGR				SG	**Sb**	**07 07 19.6**	**+0.8**
SIGR	**SIGRI**	**0.90**	**162**	P	**Pg**	**07 07 05.3**	**-0.9**
SIGR				S	**Sb**	**07 07 18.6**	**-0.2**
	comp=E,1μm,0.4s						
SIGR	**SIGRI**	**0.90**	**162**	P	**Pg**	**07 07 06.2**	**0.0**
SIGR				S	**Sb**	**07 07 19.5**	**+0.6**
SIGR				AML	AML	07 07 21.0	
	comp=E,2086μm,0.5s						
SIGR				AML	AML	07 07 22.0	
	comp=N,2292μm,0.5s						
ALN	**Alexandroupoli**	**0.92**	**26**	PG	**Pb**	**07 07 07.1**	**-0.1**
ALN	**Alexandroupoli**	**0.92**	**26**	P	**Pg**	**07 07 06.0**	**-0.7**
ALN				S	**Sb**	**07 07 19.3**	**-0.3**
	comp=N,330nm,0.3s						
ALN	**Alexandroupoli**	**0.92**	**26**	P	**Pb**	**07 07 07.0**	**-0.2**
ALN				S	**Sb**	**07 07 19.5**	**-0.1**
ALN				AML	AML	07 07

H10N1 T T 07 23 04.6
baz=86,slow=79,SNR=1544
H10N3 ASCENSION HYDR 4.92 7 Pn **Pn 07 18 11.2 -0.3**
baz=174,slow=18
H10N3 T T 07 23 07.5
baz=86,slow=79,SNR=3929
H10N2 ASCENSION HYDR 4.94 7 Pn **Pn 07 18 11.5 -0.2**
baz=174,slow=18
H10N2 T T 07 23 08.6
baz=86,slow=79,SNR=1178
SHEL Horse Pasture 9.64 110 Pn **Pn 07 19 16.9 +0.3**
LIC Lamto 21.36 29⇓*i*PKP1 **P 07 21 48.7 +3.3**
45nm,0.7s
RCBR Riachuelo 21.61 287 P **P 07 21 47.6 -0.5**
6.6nm,0.7s,baz=263,slow=13,SNR=4.5
6.6nm,0.7s
RCBR Riachuelo 21.61 287 P **P 07 21 47.8 -0.3**
RCBR IAmb IAmb 07 22 24.0
comp=Z,34nm,1.4s
KIC Kosan Boka 21.62 29⇑*i*PKP1 **P 07 21 48.3 +0.2**
comp=Z,3.2nm,0.5s
TIC Toumodi 21.74 28⇓*i*PKP1 **P 07 21 49.1 -0.3**
comp=Z,2.1nm,0.2s
DBIC Dimbokro 21.84 28 P **P 07 21 50.0 -0.5**
comp=Z,8.3nm,1.0s,baz=208,slow=14,SNR=6.0
DBIC LR LR 07 28 25.5
comp=Z,78nm,19.8s,baz=210,slow=32
comp=Z,8.3nm,1.0s
DBIC Dimbokro 21.84 28 P **P 07 21 50.4 0.0**
DBIC IAmb IAmb 07 21 52.9
comp=Z,22nm,1.2s
BBTS Babate 27.28 357 LR LR 07 31 39.5
comp=Z,132nm,19.4s,baz=164,slow=32
SACV Santiago Islan 28.80 343 P **P 07 22 56.7 +0.6**
KOWA Kowa 29.23 22 P **P 07 22 59.9 0.0**
comp=Z,2.2nm,0.7s,baz=204,slow=8.7,SNR=6.4
KOWA LR LR 07 32 51.8
comp=Z,74nm,18.9s,baz=318,slow=33
comp=Z,2.2nm,0.7s
TOA0 Torodi Ar. Sit 30.67 34 P **P 07 23 12.2 -0.5**
TORD Torodi Ar. Bea 30.67 34 P **P 07 23 12.3 -0.4**
comp=Z,1.7nm,1.0s,baz=220,slow=7.9,SNR=5.6
comp=Z,1.7nm,1.0s
BDFB Brasilia 31.99 261 P **P 07 23 24.4 -0.1**
comp=Z,5.3nm,0.9s,baz=88,slow=9.7,SNR=5.6
comp=Z,5.3nm,0.9s
BDFB Brasilia 31.99 261 P **P 07 23 24.7 +0.2**
BDFB IAmb IAmb 07 23 25.0
comp=Z,5.1nm,0.8s
TSUM Tsumeb 32.06 106 LR LR 07 33 39.6
comp=Z,33nm,20.3s,baz=115,slow=31
SUR Sutherland 38.26 127 LR LR 07 35 43.2
comp=Z,67nm,21.4s,baz=307,slow=30
AQDB Aquidauana 39.54 253 P **P 07 24 29.4 +0.2**
AQDB IAmb IAmb 07 25 13.1
comp=Z,12nm,1.1s
BOSA Boshof 40.72 119 LR LR 07 37 39.4
comp=Z,49nm,21.7s,baz=272,slow=30
CPUP Villa Florida 41.80 245 LR LR 07 39 31.3
comp=Z,53nm,22.0s,baz=38,slow=32
SIV San Ignacio 44.55 260 P **P 07 25 10.6 +0.4**
comp=Z,2.1nm,0.8s,baz=99,slow=8.8,SNR=5.3
comp=Z,2.1nm,0.8s
MBAR Mbarara 47.03 79 LR LR 07 44 12.6
comp=Z,24nm,18.1s,baz=29,slow=35
TRQA Tornquist 48.59 230 P **P 07 25 42.9 +1.3**
TRQA IAmb IAmb 07 26 15.5
comp=Z,9.9nm,1.4s
TOSP Speyside 51.01 296 P **P 07 26 00.5 +0.2**
LPAZ La Paz 51.31 259 P **P 07 26 03.2 -0.1**
comp=Z,1.4nm,0.6s,baz=83,slow=6.7,SNR=6.0
comp=Z,1.4nm,0.6s
LPAZ La Paz 51.31 259 P **P 07 26 02.6 -0.7**
LVC Limon Verde 51.93 251 LR LR 07 47 03.8
comp=Z,29nm,18.4s,baz=73,slow=35
PB09 IPOC Station P 52.23 252 P **P 07 26 09.2 -0.3**
PB09 IAmb IAmb 07 26 16.0
comp=Z,28nm,1.4s
AC02 Maricunga 52.34 246 P **P 07 26 11.3 +0.6**
AC02 IAmb IAmb 07 26 28.9
comp=Z,12nm,1.2s
PB01 IPOC Station P 52.45 253 P **P 07 26 10.6 -0.5**
PB01 IAmb IAmb 07 26 13.1
comp=Z,14nm,1.3s
PB16 IPOC Station P 52.53 257 P **P 07 26 11.4 -0.9**
H05S1 Guadeloupe/Mar 52.71 299 T T 08 22 53.6
SNR=10.0
PB02 IPOC Station P 52.83 253 P **P 07 26 13.8 -0.1**
ESDC Sonseca Array 53.19 11 LR LR 07 47 43.1
comp=Z,31nm,18.5s,baz=313,slow=35
PB12 IPOC Station P 53.29 256 P **P 07 26 16.2 -1.2**
H05N1 Guadeloupe/Mar 53.81 301 T T 08 24 13.6
SNR=9.6
VNA3 Neumayer Olymp 58.55 178 P **P 07 26 51.8 -2.3**
SNAA Sanae 59.35 176 P **P 07 26 59.2 -0.6**
SNAA Sanae 59.35 176 P **P 07 26 59.8 0.0**
comp=Z,1.3nm,0.9s,baz=298,slow=5.0,SNR=5.1
SNAA LR LR 07 46 12.6
comp=Z,30nm,20.3s,baz=214,slow=30
comp=Z,1.3nm,0.9s
SNAA Sanae 59.35 176 P **P 07 26 59.8 0.0**
SNAA IAmb IAmb 07 27 00.8
comp=Z,3.7nm,1.2s
GO09 Cerro Castillo 59.82 218 P **P 07 27 03.3 +0.1**
ATAH Atahualpa 62.44 269 LR LR 07 52 40.0
comp=Z,32nm,21.6s,baz=99,slow=34
DAVOX Davos/Dischmat 63.37 19 LR LR 07 54 11.5
comp=Z,32nm,19.9s,baz=260,slow=35
BELA Belgrano 2 65.87 184 P **P 07 27 43.1 0.0**
BELA IAmb IAmb 07 27 44.0
comp=Z,7.2nm,1.3s
VRAC Vranov 67.84 22 LR LR 07 57 17.9
comp=Z,29nm,18.5s,baz=206,slow=36
MAW Mawson 73.72 157 P **P 07 28 31.5 0.0**
comp=Z,1.4nm,0.8s,baz=217,slow=5.9,SNR=4.1
MAW LR LR 07 53 13.7
comp=Z,25nm,18.6s,baz=232,slow=30
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 74.08 28 P **P 07 28 33.6 -0.2**
comp=Z,0.6nm,0.3s,baz=224,slow=5.8,SNR=9.1
comp=Z,0.6nm,0.3s

NEIC 06 07:19:00.1±1.2, 28°.11S±0°.10×64°.71W±0°.09, h10^{km}±2^{km}, mb4.3/2, Md4.0(SJA), Error ellipse: s-maj=16.9km s-min=13.3km az=2.0, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC02	**Maricunga**	**4.13**	**287**	Pn	Pn	07 20 03.4	-0.3
ZON	**Zonda**	**4.86**	**224**	Pn	Pn	07 20 13.2	-0.1
AC05	**El Transito**	**4.95**	**260**		Pn	07 20 15.4	+0.8
AC06	**Mina Casimiro**	**5.06**	**277**	Pn	Pn	07 20 16.2	+0.1
CO01	**Juntas del Tor**	**5.07**	**247**		Pn	07 20 17.6	+1.2
GO02	**Mina Guanaco**	**5.26**	**303**	Pn	Pn	07 20 18.5	-0.7
LCO	**Las Campanas**	**5.34**	**259**	Pn	Pn	07 20 19.6	-0.6
AC04	**Llanos de Chal**	**5.62**	**268**	Pn	Pn	07 20 23.0	-0.8
GO04	**Tololo Observa**	**5.71**	**247**	Pn	Pn	07 20 25.0	-0.2
CO03	**El Pedregal**	**5.88**	**241**	Pn	Pn	07 20 27.2	-0.1
CO02	**Combarbal**	**6.28**	**239**	Pn	Pn	07 20 32.2	-0.7
CO06	**Fray Jorge**	**6.56**	**245**	Pn	Pn	07 20 37.0	+0.3
CPUP	**Villa Florida**	**6.81**	**77**	Pn	Pn	07 20 39.9	-0.2
VA03	**San Esteban**	**6.85**	**226**	Pn	Pn	07 20 40.3	-0.4
ITQB	**Itaqui**	**7.26**	**104**	Pn	Pn	07 20 46.1	-0.1
MT03	**Universidad Ad**	**7.32**	**221**	Pn	Pn	07 20 46.9	-0.3
MT09	**Talagante**	**7.80**	**222**	Pn	Pn	07 20 51.4	-2.5
AY01	**Puyuhuapi**	**17.47**	**199**	P	Pn	07 23 02.9	-0.9
AY01				IAmb	IAmb	07 23 07.8	
	comp=Z,23nm,1.4s						
SNAA	**Sanae**	**54.80**	**160**	P	P	07 28 28.7	-1.1
SNAA				IAmb	IAmb	07 29 12.8	
	comp=Z,5.3nm,1.4s						

IDC 06 07:22:22.0±4.3, 19°.42N×108°.57W, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.2/2, MS3.0/2, Error ellipse: s-maj=77.1km s-min=41.1km az=28.0, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06N1	**SOCORRO T-PHAS**	**2.35**	**257**	T	T	07 25 21.1	
SNR=12							
H06S1	**SOCORRO T**	**2.36**	**254**	T	T	07 25 14.1	
SNR=14							
TXAR	**Lajitas Array**	**10.83**	**23**	Pn	Pn	07 24 59.3	+0.8
0.1nm,0.3s,baz=204,slow=11,SNR=9.4							
0.3nm,0.5s							
CMIG	**Matias Romero**	**13.21**	**98**	Pn	Pn	07 25 31.6	+0.6
baz=311,slow=14,SNR=4.4							
3.5nm,0.9s							
PFO	**Pinyon Flats O**	**15.79**	**335**	LR	LR	07 31 30.6	
comp=Z,56nm,19.2s,baz=175,slow=35							
NVAR	**Mina Array Bea**	**20.74**	**338**	P	Pn	07 27 05.8	-1.1
1.7nm,1.1s,baz=160,slow=12,SNR=8.4							
1.7nm,1.1s							
PDAR	**Pinedale Array**	**23.29**	**358**	P	P	07 27 31.8	+0.1
0.6nm,0.9s,baz=155,slow=8.8,SNR=3.7							
0.6nm,0.9s							
BBB	**Bella Bella**	**36.09**	**340**	LR	LR	07 45 10.3	
comp=Z,24nm,19.7s,baz=348,slow=38							
ILAR	**Eielson Array**	**51.98**	**340**	P	P	07 31 31.9	-0.8
0.4nm,0.6s,baz=154,slow=5.7,SNR=6.0							
0.4nm,0.6s							
H03N2	**Juan Fernandez**	**59.69**	**151**	T	T	08 37 02.6	
baz=329,slow=78,SNR=6.8							
H03N1	**Juan Fernandez**	**59.70**	**151**	T	T	08 37 01.0	
baz=329,slow=78,SNR=18							
H03N3	**Juan Fernandez**	**59.71**	**151**	T	T	08 37 00.8	
baz=329,slow=78,SNR=17							

*NNC **06** 07:30:40.5±0.4, 50°.02N×78°.78E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=6.5km s-min=2.2km az=77.0, Suspected Mining explosion.*
*IDC **06** 07:30:41.8±1.0, 50°.07N×78°.74E, h0^{km}, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=13.3km s-min=6.6km az=66.0*

ISC 06 07:30:41.6±0.9, 50°.02N±0°.05×78°.75E±0°.06, h0^{km}, n19, σ0^{s}63/31, 18C-14D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**345**	⇑P	**Pg**	**07 30 52.0**	**-0.7**
KUR07				⇓S	**Sg**	**07 31 00.7**	**+0.4**
KUR06	**Kurchatov Arra**	**0.60**	**346**	⇑P	**Pg**	**07 30 52.5**	**-0.6**
KUR06				⇑S	**Sg**	**07 31 01.3**	**+0.5**
KUR14	**Kurchatov Arra**	**0.60**	**351**	⇓P	**Pg**	**07 30 52.5**	**-0.7**
KUR14				⇑S	**Sg**	**07 31 01.1**	**+0.2**
KUR15	**Kurchatov Arra**	**0.61**	**349**	⇑P	**Pg**	**07 30 52.7**	**-0.6**
KUR15				⇑S	**Sg**	**07 31 01.2**	**0.0**
KURBB	**Kurchatov Arra**	**0.62**	**347**	Pg	**Pg**	**07 30 53.0**	**-0.5**
2.2nm,0.3s,baz=166,slow=19,SNR=87							
KURBB				Lg	Lg	07 31 01.1	
2.8nm,0.3s,baz=167,slow=31,SNR=28							
KURBB	**Kurchatov Arra**	**0.62**	**347**	⇓P	**Pg**	**07 30 53.0**	**-0.5**
14nm,0.3s							
KURBB				⇑S	**Sg**	**07 31 02.0**	**+0.6**
114nm,0.6s							
KUR16	**Kurchatov Arra**	**0.62**	**345**	⇑P	**Pg**	**07 30 53.2**	**-0.4**
KUR16				⇑S	**Sg**	**07 31 01.9**	**+0.2**
KUR05	**Kurchatov Arra**	**0.63**	**348**	⇑P	**Pg**	**07 30 53.1**	**-0.7**
KUR05				⇑S	**Sg**	**07 31 02.0**	**0.0**
KUR17	**Kurchatov Arra**	**0.64**	**344**	⇑P	**Pg**	**07 30 53.4**	**-0.4**
KUR17				⇑S	**Sg**	**07 31 01.9**	**-0.1**
KUR04	**Kurchatov Arra**	**0.65**	**349**	⇓P	**Pg**	**07 30 53.6**	**-0.5**
KUR04				⇓S	**Sg**	**07 31 02.9**	**+0.3**
KURK	**Kurchatov**	**0.70**	**353**	⇑P	**Pg**	**07 30 54.1**	**-0.9**
4.1nm,0.3s							
KURK				⇓S	**Sg**	**07 31 04.2**	**+0.2**
30nm,0.7s							
MAKZ	**Makanchi**	**3.87**	**145**	⇓Pg	**Pb**	**07 31 50.1**	**-0.7**
1.3nm,0.5s							
MAKZ				⇓Lg	Lg	07 32 40.8	
5.4nm,0.7s							
MK31	**Makanchi Array**	**4.00**	**143**	⇓Pn	**Pn**	**07 31 45.1**	**+0.9**
0.1nm,0.2s,baz=280,slow=6.7,SNR=24							
MK31				⇑Pg	**Pb**	**07 31 53.0**	**0.0**
0.9nm,0.4s,baz=332,slow=14,SNR=18							
MK31				⇓Lg	Lg	07 32 46.5	
6.8nm,0.6s,baz=333,slow=27,SNR=16							
MKAR	**Makanchi Array**	**4.00**	**143**	Pn	**Pn**	**07 31 45.2**	**+1.0**
0.4nm,0.3s,baz=321,slow=10,SNR=35							
MKAR				Pg	**Pb**	**07 31 52.1**	**-0.9**
0.7nm,0.3s,baz=321,slow=15,SNR=16							
MKAR				Lg	Lg	07 32 45.4	
0.9nm,0.3s,baz=329,slow=27,SNR=9.9							
0.5nm,0.4s							
OTUK	**Ortayu**	**4.57**	**250**	⇑Pn	**Pn**	**07 31 52.2**	**+0.2**
0.7nm,0.2s							
OTUK				⇓Pg	**Pb**	**07 32 02.9**	**+0.3**
2.2nm,0.8s							
OTUK				⇑Lg	Lg	07 33 05.7	
4.6nm,0.8s							
I46RU	**ZALESOVO INFRA**	**5.43**	**41**	I		08 02 10.0	
baz=224,slow=322,SNR=5.8							
ZALV	**Zalesovo Beam**	**5.43**	**41**	Pn	**Pn**	**07 32 05.1**	**+1.3**
0.8nm,0.3s,baz=233,slow=13,SNR=4.4							
ZALV				Lg	Lg	07 33 32.1	
0.8nm,0.3s,baz=227,slow=29,SNR=2.9							
1.8nm,0.4s							
BVA0	**Borovoye Array**	**6.02**	**303**	⇓Sn	**Sn**	**07 33 20.4**	**-1.1**
1.8nm,0.6s,baz=111,slow=24,SNR=6.8							
BVA0				⇓Lg	Lg	07 33 53.2	
4.4nm,0.8s							
BRVK	**Borovoye**	**6.09**	**303**	⇓Sn	**Sn**	**07 33 22.9**	**-0.3**
1.9nm,0.5s							
BRVK				⇑Lg	Lg	07 33 56.1	
2.2nm,0.6s							

*NOU **06** 07:33:00.9, 37°.35S×179°.65E, h0^{km}, MLv4.3/6, Off E. Coast of N. Island, N.Z.*
*WEL **06** 07:33:09.1±1.2, 37°.S±4°×17°.9E±°, h16^{km}±6^{km}, M3.5/17, ML3.7/22, MLv3.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=95.1*

ISC 06 07:33:03.1±2.6, 37°.38S±0°.07×179°.4E±0°.1, h15^{km}±11^{km}, n100, σ1^{s}76/107, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.89**	**257**	P	**Pb**	**07 33 20.8**	**+0.6**
MXZ				S	**Sg**	**07 33 28.3**	**-3.6**
MXZ	**Matakaoa Point**	**0.89**	**257**	P	**Pb**	**07 33 20.8**	**+0.6**
WMGZ	**Waiomatatini S**	**0.90**	**240**	P	**Pn**	**07 33 23.7**	**+2.5**
PUZ	**Puketiti**	**1.14**	**232**	P	**Pg**	**07 33 27.5**	**+2.4**
PUZ				S	**Sn**	**07 33 40.7**	**+0.7**
PKGZ	**Pakihiroa**	**1.17**	**244**	P	**Pg**	**07 33 27.0**	**+1.3**
PKGZ				S	**Sb**	**07 33 39.6**	**-0.3**
HAZ	**Te Kaha**	**1.34**	**253**	P	**Pb**	**07 33 28.0**	**+0.1**
HAZ				S	**Sb**	**07 33 43.1**	**-1.7**
TWGZ	**Tauwhareparae**	**1.38**	**234**	P	**Pg**	**07 33 30.8**	**+1.2**
TWGZ				S	**Sg**	**07 33 47.0**	**-0.6**
CNGZ	**Carnagh Statio**	**1.45**	**220**	P	**Pg**	**07 33 33.3**	**+2.3**
RUGZ	**Raukumara Rang**	**1.48**	**246**	P	**Pg**	**07 33 31.8**	**+0.1**
TKGZ	**Te Karaka**	**1.62**	**229**	P	**Pg**	**07 33 34.0**	**-0.3**
MWZ	**Matawai**	**1.76**	**236**	P	**Pb**	**07 33 35.5**	**+0.4**
MWZ				S	**Sn**	**07 33 54.7**	**-0.6**
RIGZ	**Rimuhau**	**1.85**	**224**	P	**Pb**	**07 33 37.6**	**+0.9**
RAGZ	**Rawiri**	**1.92**	**234**	P	**Pb**	**07 33 38.1**	**+0.1**
WHRZ	**Whale Island**	**1.98**	**255**	P	**Pb**	**07 33 39.2**	**+0.3**
URZ	**Urewera**	**2.01**	**243**	P	**Pb**	**07 33 39.1**	**-0.3**
URZ				S	**Sn**	**07 34 01.0**	**-0.4**
URZ	**Urewera**	**2.01**	**243**	P	**Pb**	**07 33 39.4**	**0.0**
MHGZ	**Mahia Peninsul**	**2.13**	**213**	P	**Pb**	**07 33 41.8**	**+0.4**
KNZ	**Kokohu**	**2.13**	**219**	P	**Pb**	**07 33 40.7**	**-0.7**
SNGZ	**Shannon Statio**	**2.15**	**228**	P	**Pb**	**07 33 41.0**	**-0.7**
EDRZ	**Edgecumbe**	**2.23**	**250**	P	**Pb**	**07 33 41.8**	**-1.4**
RTZ	**Ruatahuna**	**2.27**	**236**	P	**Pb**	**07 33 42.9**	**-1.0**
OPRZ	**Ohinepanea**	**2.30**	**257**	P	**Pn**	**07 33 42.1**	**+1.6**
MUGZ	**Murupara**	**2.35**	**241**	P	**Pn**	**07 33 43.4**	**+2.2**
RAHZ	**Arahi**	**2.38**	**229**	P	**Pb**	**07 33 44.7**	**-1.1**
WHHZ	**Waihua**	**2.40**	**224**	P	**Pn**	**07 33 44.6**	**+2.7**
RRRZ	**Republican Roa**	**2.47**	**246**	P	**Pn**	**07 33 45.5**	**+2.5**
MTHZ	**Maungataniwha**	**2.50**	**233**	P	**Pb**	**07 33 46.2**	**-1.5**
TGRZ	**Tauranga**	**2.52**	**261**	P	**Pn**	**07 33 44.8**	**+1.3**
KARZ	**Kaharoa**	**2.58**	**255**	P	**Pn**	**07 33 46.1**	**+1.8**
PRRZ	**Plateau Road**	**2.62**	**244**	P	**Pn**	**07 33 46.9**	**+1.9**
HRRZ	**Handcock Road**	**2.66**	**247**	P	**Pn**	**07 33 47.7**	**+2.2**
HSRZ	**Hossack Road**	**2.66**	**248**	P	**Pb**	**07 33 48.7**	**-1.8**
NMHZ	**Naumai**	**2.67**	**229**	P	**Pn**	**07 33 48.7**	**+3.0**
ARHZ	**Aropaoanui**	**2.67**	**224**	P	**Pn**	**07 33 48.1**	**+2.5**
ALRZ	**Allen Road**	**2.69**	**243**	P	**Pn**	**07 33 47.8**	**+2.0**
MRHZ	**Matea Rd**	**2.76**	**237**	P	**Pn**	**07 33 49.1**	**+2.2**
BKZ	**Black Stump Fm**	**2.90**	**231**	P	**Pn**	**07 33 51.2**	**+2.4**
BKZ				P	**Pn**	**07 33 51.2**	**+2.4**
BKZ	**Black Stump Fm**	**2.90**	**231**	P	**Pn**	**07 33 51.3**	**+2.5**
CKHZ	**Cape Kidnapper**	**2.92**	**218**	P	**Pn**	**07 33 51.1**	**+2.2**
MCHZ	**McNeill Hill**	**2.96**	**225**	P	**Pn**	**07 33 51.9**	**+2.4**
KUZ	**Kuaotunu**	**3.00**	**281**	P	**Pn**	**07 33 49.7**	**-0.5**
KWHZ	**Kaweka Forest**	**3.10**	**228**	P	**Pn**	**07 33 53.4**	**+1.8**
TOZ	**Tahuroa Road**	**3.11**	**262**	P	**Pn**	**07 33 53.0**	**+1.3**
KAHZ	**Kahuranaki**	**3.12**	**218**	P	**Pn**	**07 33 53.7**	**+1.9**
RATZ	**Rangitukua**	**3.22**	**241**	P	**Pn**	**07 33 55.7**	**+2.5**
KRHZ	**Kereru**	**3.28**	**225**	P	**Pn**	**07 33 55.8**	**+1.8**
PXZ	**Pawanui**	**3.31**	**216**	P	**Pn**	**07 33 55.8**	**+1.4**
GRZ	**Great Barrier**	**3.35**	**288**	P	**Pn**	**07 33 55.4**	**+0.4**
BHHZ	**Black Hill Sta**	**3.36**	**230**	P	**Pn**	**07 33 57.2**	**+2.1**
TMVZ	**Te Maari**	**3.38**	**238**	P	**Pn**	**07 33 57.4**	**+1.9**
MKAZ	**Moumakai**	**3.39**	**273**	P	**Pn**	**07 33 55.7**	**+0.2**
ETVZ	**East Tongariro**	**3.39**	**238**	P	**Pn**	**07 33 57.4**	**+1.8**
NTVZ	**North Tongarir**	**3.40**	**238**	P	**Pn**	**07 33 57.7**	**+2.0**
KRVZ	**Karewarewa**	**3.42**	**239**	P	**Pn**	**07 33 57.9**	**+1.9**
OTVZ	**Oturere**	**3.44**	**238**	P	**Pn**	**07 33 58.3**	**+2.1**
NNVZ	**North Ngauruho**	**3.45**	**238**	P	**Pn**	**07 33 58.8**	**+2.3**
WTVZ	**West Tongariro**	**3.46**	**239**	P	**Pn**	**07 33 58.8**	**+2.2**
SNVZ	**South Ngauruho**	**3.46**	**237**	P	**Pn**	**07 33 58.6**	**+1.9**
NGZ	**Ngauruhoe**	**3.48**	**238**	P	**Pn**	**07 33 58.8**	**+1.8**
TUVZ	**Tukino**	**3.50**	**236**	P	**Pn**	**07 33 59.2**	**+2.1**
MOVZ	**Moawhango**	**3.51**	**234**	P	**Pn**	**07 33 59.0**	**+1.8**
WPHZ	**Waipukurau**	**3.54**	**220**	P	**Pn**	**07 33 59.1**	**+1.5**
TWVZ	**Taurewa**	**3.55**	**240**	P	**Pn**	**07 34 00.3**	**+2.6**
FWVZ	**Far West T-bar**	**3.56**	**237**	P	**Pn**	**07 33 59.9**	**+1.9**
PNHZ	**Pukenui**	**3.56**	**224**	P	**Pn**	**07 33 58.8**	**+0.9**
WNVZ	**Wahianoa**	**3.56**	**236**	P	**Pn**	**07 33 59.7**	**+1.7**
ETAZ	**East Tamaki Re**	**3.59**	**275**	P	**Pn**	**07 33 58.8**	**+0.6**
PRHZ	**Porangahau**	**3.60**	**216**	P	**Pn**	**07 33 59.5**	**+1.1**
MBAZ	**Motutapu North**	**3.65**	**278**	P	**Pn**	**07 34 00.3**	**+1.3**
HIZ	**Hauiti**	**3.76**	**251**	P	**Pn**	**07 34 03.4**	**+2.8**
HIZ	**Hauiti**	**3.76**	**251**	P	**Pn**	**07 34 03.4**	**+2.8**
DVHZ	**Dannevirke**	**3.86**	**220**	P	**Pn**	**07 34 02.6**	**+0.7**
RVAZ	**Riverhead Bore**	**3.90**	**277**	P	**Pn**	**07 34 03.4**	**+0.9**
VRZ	**Vera Road**	**4.05**	**243**	P	**Pn**	**07 34 06.7**	**+2.2**
PRWZ	**Pori Road**	**4.15**	**219**	P	**Pn**	**07 34 07.2**	**+1.3**
WAZ	**Wanganui**	**4.19**	**234**	P	**Pn**	**07 34 08.8**	**+2.3**
WCZ	**Waipu Caves**	**4.30**	**288**	P	**Pn**	**07 34 09.1**	**+1.0**
CPWZ	**Castlepoint**	**4.32**	**214**	P	**Pn**	**07 34 09.0**	**+0.8**
MRZ	**Mangatainoka R**	**4.43**	**221**	P	**Pn**	**07 34 10.6**	**+0.8**
LREZ	**Lake Rotokare**	**4.44**	**241**	P	**Pn**	**07 34 12.9**	**+3.1**
DREZ	**Durham Road**	**4.47**	**245**	P	**Pg**	**07 34 30.7**	**+2.0**
TMWZ	**Te Maipa**	**4.61**	**215**	P	**Pn**	**07 34 12.5**	**+0.1**
PKE	**Pukeiti**	**4.63**	**245**	P	**Pn**	**07 34 17.3**	**+4.7**
HOWZ	**Holdsworth Sta**	**4.63**	**219**	P	**Pn**	**07 34 12.1**	**-0.5**
OGWZ	**Otaki Gorge**	**4.75**	**222**	P	**Pn**	**07 34 14.2**	**-0.1**
MTW	**Mount Morrison**	**4.84**	**217**	P	**Pn**	**07 34 14.9**	**-0.5**
TRWZ	**Traveller**	**4.94**	**214**	P	**Pn**	**07 34 16.0**	**-0.8**
PAWZ	**Paruwai Farm**	**5.04**	**216**	P	**Pn**	**07 34 18.1**	**-0.2**
OUZ	**Omahuta**	**5.15**	**293**	P	**Pn**	**07 34 20.8**	**+1.1**
OUZ	**Omahuta**	**5.15**	**293**	P	**Pn**	**07 34 21.5**	**+1.8**
MSWZ	**Moikau Station**	**5.16**	**217**	P	**Pn**	**07 34 19.0**	**-0.8**
PLWZ	**Palliser**	**5.27**	**216**	P	**Pn**	**07 34 20.4**	**-1.0**
TCW	**Tory Channel**	**5.52**	**224**	P	**Pn**	**07 34 23.5**	**-1.2**
TUWZ	**Tuamarina**	**5.85**	**225**	P	**Pn**	**07 34 28.5**	**-0.7**
KHZ	**Kahutara**	**6.75**	**220**	P	**Pn**	**07 34 42.2**	**+0.6**
CTZ	**Chatham Island**	**7.04**	**156**	P	Pn	07 34 54.2	+8.6
LTZ	**Lake Taylor**	**7.68**	**223**	P	**Pn**	**07 34 52.5**	**-2.0**
MQZ	**McQueen's Vall**	**8.14**	**217**	P	**Pn**	**07 34 58.3**	**-2.4**
TMZ	**Timaru**	**9.45**	**220**	P	**Pn**	**07 35 16.8**	**-1.9**
ODZ	**Otahua Downs**	**10.10**	**218**	P	**Pn**	**07 35 25.2**	**-2.4**

*NEIC **06** 07:36:24.7±0.9, 28°.8S±0°.1×62°.7W±0°.2, h606^{km}±8^{km}, mb4.2/7, Md4.1(SJA), Error ellipse: s-maj=21.7km s-min=15.5km az=118.0*
*SJA **06** 07:36:24.0±1.3, 28°.94S×63°.48W, h612^{km}±11^{km}, ML4.0, MW3.8*
*VAO **06** 07:36:24.0±0.2, 28°.77S×62°.79W, h606^{km}, mb4.0*
*IDC **06** 07:36:25.2±1.0, 28°.65S×62°.67W, h609^{km}±12^{km}, mb3.2/10, mbtmp4.2/15, Error ellipse: s-maj=14.8km s-min=13.4km az=96.0*

ISC 06 07:36:24.1±0.4, 28°.74S±0°.06×62°.83W±0°.06, h602^{km}, n136, σ1^{s}33/142, mb4.2/15, 2C-1D, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**2.63**	**276**	*i* P	**P**	**07 37 42.2**	**+0.7**
CYA				IAML		07 37 43.2	
comp=Z,44nm,0.7s							
CYA				*e*S	**S**	**07 38 39.9**	**-4.7**
AHML	**Horco Molle**	**2.96**	**311**	*i* P	**P**	**07 37 44.8**	**+1.4**
AHML				IAML		07 37 45.2	
comp=Z,49nm,0.5s							
AHML				*i* S	**S**	**07 38 45.7**	**-2.1**
TCA	**Tanti**	**3.01**	**210**	*i* P	**P**	**07 37 44.0**	**+0.5**
TCA				*i* S	**S**	**07 38 45.2**	**-3.1**
APLL	**PUNTA DE LOS L**	**3.62**	**242**	*i* P	**P**	**07 37 47.5**	**+0.4**
APLL				*e*S	**S**	**07 38 48.5**	**-6.5**
APLL				IAML		07 38 54.7	
comp=Z,51nm,3.1s							
ACLC	**CERRO LA CRUZ**	**3.67**	**258**	*i* P	**P**	**07 37 48.6**	**+0.9**
ACLC				*e*S	**S**	**07 38 49.3**	**-6.6**
ACLC				IAML		07 38 56.6	
comp=Z,94nm,0.4s							
ACHE	**Chepes**	**4.11**	**233**	*i* P	**P**	**07 37 51.2**	**+0.6**
TINO	**Tinogasta**	**4.23**	**278**	*i* P	**P**	**07 37 52.7**	**+1.2**
MRA	**San Martin**	**4.43**	**214**	*i* P	**P**	**07 37 53.4**

TA02	Huaiquique	10.74	320	P		P	07 38 51.1	+0.7
GO01	Chusmiza	10.74	326	P		P	07 38 51.5	+0.6
BBRB	Robore, Bolivi	10.78	16	eP		P	07 38 50.7	-0.1
TRCB	Terra Rica	10.93	59	eP		P	07 38 51.2	-1.0
BBSD	Serra de San D	11.68	11	eP		P	07 38 59.5	-0.4
PB16	IPOC Station P	12.03	328	P		P	07 39 04.8	+0.9
TER01	Tubaro-SC	12.04	92	eP		P	07 39 02.7	-0.5
PCMB	Pacaembu	12.65	58	eP		P	07 39 09.0	-0.5
TIJ01	Guaruva-PR	12.78	78	eP		P	07 39 08.8	-2.0
SIV	San Ignacio	12.79	8	P		P	07 39 10.8	-0.3
	comp=Z,4.0nm,0.7s,baz=185,slow=9.6,SNR=23							
GO06	Curarrehue	12.96	211	P		P	07 39 12.3	-0.1
FRTB	Fartura	13.08	69	eP		P	07 39 13.2	-0.5
PP1B	Ponte de Pedra	13.28	35	eP		P	07 39 15.5	-0.3
LPAZ	La Paz	13.33	337	P		P	07 39 17.6	+0.6
	comp=Z,3.4nm,0.4s,baz=110,slow=5.8,SNR=26							
LPAZ				S		S	07 41 37.0	-1.9
	comp=Z,1.6nm,0.6s,baz=359,slow=16,SNR=3.5							
LPAZ	La Paz	13.33	337	P		P	07 39 17.3	+0.2
LPAZ	La Paz	13.33	337	eP		P	07 39 16.5	-0.5
C2SB	Chapadao do Su	13.49	45	eP		P	07 39 18.0	0.0
PLCA	Paso Flores	13.53	206	P		P	07 39 17.6	-0.6
	comp=Z,11nm,0.7s,baz=26,slow=10,SNR=46							
PLCA	Paso Flores	13.53	206	P		P	07 39 17.4	-0.8
PLCA	Paso Flores	13.53	206	eP		P	07 39 17.6	-0.6
PTLB	Pontes e Lacer	13.66	15	eP		P	07 39 19.3	-0.5
SALV	Santo Antonio	14.38	29	eP		P	07 39 25.9	-0.7
LL04	Puerto Octay	14.45	210	P		P	07 39 25.6	-1.4
PET01	Itanhaem-SP	14.61	76	eP		P	07 39 28.8	+0.1
BB19B	Bebedouro	15.05	63	eP		P	07 39 32.1	-0.7
RCLB	Rio Claro- Sao	15.16	69	eP		P	07 39 33.5	-0.3
VAO	Valinhos	15.37	72	eP		P	07 39 35.6	-0.1
VILB	Vilhena	15.90	9	eP		P	07 39 40.3	-0.3
LL02	Futaleuf	16.14	204	P		P	07 39 43.3	+0.9
LL02				IAmb		IAmb	07 39 43.8	
	comp=Z,19nm,1.1s							
PARB	Paraibuna	16.37	75	eP		P	07 39 43.8	-1.0
IPMB	Ipameri, GO	17.15	55	eP		P	07 39 51.9	-0.2
AY01	Puyuhuapi	17.50	204	P		P	07 39 55.2	+0.5
MAN01	Angra dos Reis	17.96	75	eP		P	07 39 59.6	+0.2
PDRB	Porto dos Gac	17.97	20	eP		P	07 39 59.9	+0.4
PMNB	Patos De Minas	18.11	59	eP		P	07 40 00.8	-0.1
VAS01	Vassouras-RJ	18.63	74	eP		P	07 40 06.0	+0.5
BDFB	Brasilia	18.90	50	P		P	07 40 07.8	-0.3
	comp=Z,5.9nm,0.4s,baz=205,slow=6.8,SNR=13							
BDFB	Brasilia	18.90	50	P		P	07 40 07.7	-0.4
BDFB				IAmb		IAmb	07 40 08.6	
	comp=Z,14nm,1.1s							
BDFB	Brasilia	18.90	50	eP		P	07 40 07.8	-0.3
CLDB	Colider	18.96	22	eP		P	07 40 09.9	+1.4
ETMB	Extrema	19.10	350	eP		P	07 40 10.6	+0.8
SNDB	Serra Nova Dou	19.86	35	eP		P	07 40 16.4	-0.2
DIAM	Diamantina, MG	20.38	64	eP		P	07 40 21.7	+0.2
MC01	Montes Claros	21.11	59	eP		P	07 40 27.3	-0.6
JANB	Januaria	21.88	55	eP		P	07 40 34.4	-0.4
SJMB	Sao Joao De Ma	22.16	68	eP		P	07 40 36.5	-0.6
NPGB	Novo Progresso	22.71	20	eP		P	07 40 42.0	-0.1
CZSB	Cruzeiro do Su	22.89	334	eP		P	07 40 44.1	+0.4
SDBA	SAO DESIDERIO	23.31	49	eP		P	07 40 47.2	-0.3
NAN01	Guarapari, ES	23.46	67	eP		P	07 40 48.3	-0.5
GUA01	Guaratinga, BA	24.40	65	eP		P	07 40 56.1	-1.0
SMTB	Santa Maria do	24.43	39	eP		P	07 40 57.5	+0.1
ITTB	Itaituba	25.16	17	eP		P	07 41 03.1	-0.7
CMC01	Camacan, BA	25.32	63	eP		P	07 41 05.1	0.0
GDU01	Guandu, BA	26.25	60	eP		P	07 41 12.7	-0.7
NBAN	Anadia - AL	31.31	58	eP		P	07 41 56.8	-0.3
OTAV	Otavalo	32.47	330	eP		P	07 42 06.9	-0.5
RCBR	Riachuelo	34.19	53	P		P	07 42 20.8	-0.6
	comp=Z,6.2nm,0.6s,baz=108,slow=6.3,SNR=2.4							
	comp=Z,6.2nm,0.6s							
RCBR	Riachuelo	34.19	53	eP		P	07 42 21.0	-0.4
PMSA	Palmer Station	36.05	181	P		P	07 42 37.9	+1.9
	comp=Z,1.9nm,0.3s,baz=42,slow=8.7,SNR=5.1							
	comp=Z,1.9nm,0.3s							
SNAA	Sanae	53.64	160	P		P	07 44 50.6	+0.4
	comp=Z,0.6nm,0.8s,baz=280,slow=11,SNR=8.3							
	comp=Z,0.6nm,0.8s							
QSPA	South Pole Qui	61.48	180	P		P	07 45 43.7	+0.4
QSPA				IAmb		IAmb	07 45 45.1	
	comp=Z,6.9nm,1.0s							
LIC	Lamto	65.56	68⇑	iP		P	07 46 09.4	-0.5
	comp=Z,9.6nm,0.4s							
TIC	Toumodi	65.81	67⇑	iP		P	07 46 11.0	-0.5
	comp=Z,4.1nm,0.2s							
KIC	Kosan Boka	65.87	68⇓	eP		P	07 46 11.2	-0.7
	comp=Z,8.3nm,0.3s							
DBIC	Dimbokro	65.96	67	P		P	07 46 11.8	-0.6
	comp=Z,4.9nm,0.3s,baz=237,slow=3.8,SNR=20							
	comp=Z,4.9nm,0.3s							
TXAR	Lajitas Array	69.70	322	P		P	07 46 35.8	+0.9
	comp=Z,0.1nm,0.4s,baz=161,slow=7.4,SNR=4.7							
	comp=Z,0.1nm,0.4s							
VNDA	Vanda	70.66	189	P		P	07 46 41.4	+1.7
	comp=Z,1.2nm,0.9s,baz=142,slow=5.5,SNR=10							
	comp=Z,1.2nm,0.9s							
VNDA	Vanda	70.66	189	P		P	07 46 41.5	+1.8
TOA0	Torodi Ar. Sit	74.94	66	P		P	07 47 04.4	-0.8
TOA0				IAmb		IAmb	07 47 05.5	
	comp=Z,6.5nm,0.7s							
TORD	Torodi Ar. Bea	74.94	66	P		P	07 47 04.8	-0.3
	comp=Z,5.8nm,0.6s,baz=275,slow=6.7,SNR=47							
	comp=Z,5.8nm,0.6s							
BOSA	Boshof	75.30	115	P		P	07 47 06.8	-0.4
	comp=Z,1.9nm,0.4s,baz=289,slow=4.4,SNR=5.4							
	comp=Z,1.9nm,0.4s							
PDAR	Pinedale Array	83.13	327	P		P	07 47 49.2	+1.1
	comp=Z,0.3nm,0.4s,baz=122,slow=8.6,SNR=2.0							
	comp=Z,0.3nm,0.4s							
NVAR	Mina Array Bea	84.56	319	P		P	07 47 56.2	+1.0
	comp=Z,0.4nm,0.8s,baz=152,slow=4.1,SNR=2.5							
	comp=Z,0.4nm,0.8s							
ARCES	ARCESS Array B	116.03	23	PKKPbc		PKKPbc	08 04 32.1	-0.7
	comp=Z,4.3nm,1.0s,baz=47,slow=5.3,SNR=4.3							
ASAR	Alice Springs	125.46	199	PKP		PKPdf	07 54 18.0	-0.4
	comp=Z,0.9nm,0.5s,baz=136,slow=1.6,SNR=15							
WRA	Warramunga Arr	128.84	201	PKP		PKPdf	07 54 24.8	-0.1
	comp=Z,0.4nm,0.4s,baz=166,slow=1.8,SNR=13							
WRA				SKPbc		SKPbc	07 56 48.5	
	comp=Z,0.5nm,0.7s,baz=158,slow=3.6,SNR=6.3							
KURBB	Kurchatov Arra	143.68	42	PKP		PKPab	07 54 50.4	0.0
	comp=Z,2.3nm,0.6s,baz=293,slow=3.8,SNR=21							
KSH	Kashi	144.52	61	PKP		PKPbc	07 54 53.6	+0.2
ZALV	Zalesovo Beam	145.52	34	PKPbc		PKPbc	07 54 56.2	+0.5
	comp=Z,0.7nm,0.3s,baz=254,slow=4.1,SNR=2.6							
MKAR	Makanchi Array	147.41	47	PKPbc		PKPbc	07 55 00.5	-0.6
	comp=Z,0.6nm,0.5s,baz=272,slow=4.0,SNR=6.0							
PZH	PanZhiHua	166.14	96	PKP		PKPdf	07 55 20.0	-1.6

BUL 06 07:43:23.0±1.3, 21°.59S×33°.30E, h10km, MD3.3
EAF 06 07:43:24.0±3.6, 24°.87S×28°.88E, h10km, MD3.3
PRE 06 07:43:13.1±2.0, 21°.13S×33°.60E, h10km, ML2.5, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	Mopani	3.13	220	eP		Pn	07 44 03.2	+0.7
MOPA				eS		Sn	07 44 38.8	-1.2
MOPA				IAML			07 44 42.3	
	comp=Z,20nm,0.3s							
MOPA	Mopani	3.13	220	iP		Pb	07 44 06.1	-2.8
MOPA				iS		Sn	07 44 38.1	-1.9
MOPA	Mopani	3.13	220	iP		Pb	07 44 06.1	-2.8
MOPA				iS		Sn	07 44 38.1	-1.9
MUSN	Musina, Limpop	3.66	251	eP		Pn	07 44 11.7	+1.8
MUSN				eS		Sn	07 44 54.0	+0.8
MUSN				IAML			07 45 09.6	
	comp=Z,9.7nm,0.5s							
MUSN	Musina, Limpop	3.66	251	iP		Pn	07 44 13.6	+3.7
MUSN				iS		Sn	07 44 51.9	-1.3
MUSN	Musina, Limpop	3.66	251	iP		Pn	07 44 13.6	+3.7
MUSN				iS		Sn	07 44 51.9	-1.3
BLWY	Bulawayo	4.78	281	eS		Sn	07 45 21.7	+0.9
BLWY				IAML			07 45 46.7	
	comp=Z,32nm,0.5s							
BLWY	Bulawayo	4.78	281	iP		Pb	07 44 32.4	-4.7
BLWY				iS		Sn	07 45 23.6	+2.8
BLWY	Bulawayo	4.78	281	iP		Pb	07 44 32.4	-4.7
BLWY				iS		Sn	07 45 23.6	+2.8
MATP	Matopo	4.82	277	iP		Pb	07 44 33.6	-4.2
MATP				iS		Sn	07 45 22.1	+0.1
MATP	Matopo	4.82	277	iP		Pb	07 44 33.6	-4.2
MATP				iS		Sn	07 45 22.1	+0.1
LEPH	Lephalale, Lim	6.01	242	eS		Sn	07 45 49.8	-1.4
LEPH				IAML			07 46 21.9	
	comp=Z,6.6nm,0.5s							

JMA 06 07:44:25.2±0.1, 24°.N±2°.×123°.0E±0°.6, h48km, MV2.6/9, NW OFF ISHIGAKIJIMA IS
TAP 06 07:44:25.1, 24°.29N×122°.92E, h41km±1km, ML3.0, D
ISC 06 07:44:25.5±1.5, 24°.20N±0°.03×122°.98E±0°.02, h33km±3km, n54, σ1s22/103, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.25	352	iP		Pn	07 44 32.7	+0.2
JYNG				iS		Sb	07 44 38.1	+0.5
YOJ	Yonaguni jima	0.26	6	iP		Pn	07 44 32.9	+0.1
YOJ				S		Sb	07 44 38.2	+0.4
IRIF	Iriomote-Funau	0.69	79	P		Pn	07 44 38.5	-0.4
IRIF				S		Sn	07 44 48.5	-0.1
HATJ	Hateruma jima	0.77	101	P		Pn	07 44 40.3	+0.3
HATJ				eS		Sn	07 44 51.2	+0.9
JKRS	Kuro-shima	0.94	88	P		Pn	07 44 42.6	+0.3
JKRS				S		Sn	07 44 55.2	+0.7
JIJ	Ishigaki jima	1.07	81	P		Pn	07 44 43.6	-0.5
JIJ				S		Sn	07 44 56.8	-1.1
TWC	Suao	1.11	292	iP		Pn	07 44 43.0	-1.6
	baz=297							
TWC				eS		Sn	07 44 57.2	-1.6
	baz=297							
EWUT	Wuta	1.12	283	eP		Pn	07 44 43.0	-1.8
	baz=278							
ETL	Fush Village	1.24	268	eP		Pn	07 44 44.2	-2.3
	baz=249							
ETL				eS		Sn	07 45 03.2	+1.1
	baz=249							
NACB	Ninganchiao	1.27	269	eP		Pn	07 44 45.9	-0.9
	baz=250							
NACB				eS		Sn	07 45 03.4	+0.7
	baz=250							
TWD	Chiawan	1.27	265	eS		Sn	07 45 03.1	+0.3
	baz=246							
TIPB	Shuangxi	1.30	306	iP		Pn	07 44 46.0	-1.4
	baz=313							
TIPB				eS		Sn	07 45 00.4	-3.2
	baz=313							
SXI1	Grass Mountain	1.34	312	eP		Pn	07 44 46.7	-1.3
	baz=318							
LATG	Datong	1.37	284	eP		Pn	07 44 48.6	+0.3
	baz=281							
ETLH	Xiulin Townshi	1.37	271	eP		Pn	07 44 49.6	+1.2
	baz=266							
ETLH				eS		Sn	07 45 05.1	-0.3
	baz=266							
FUSB	Fushanzhiwuyua	1.39	294	eP		Pn	07 44 47.5	-1.1
	baz=298							
FUSB				eS		Sn	07 45 03.0	-2.8
	baz=298							
YHNB	Yeheng	1.54	288	eP		Pn	07 44 51.4	+0.8
	baz=293							
YHNB				eS		Sn	07 45 10.1	+0.6
	baz=293							
NSK	Sanguang	1.55	288	eP		Pn	07 44 50.4	-0.4
	baz=294							
NSK				eS		Sn	07 45 10.3	+0.3
	baz=294							
WHF	Hehuan Shan	1.57	268	eP		Pn	07 44 51.5	+0.1
	baz=251							
WHF				eS		Sn	07 45 10.3	-0.5
	baz=251							
FUSS	Fushou	1.59	272	eP		Pn	07 44 52.0	+0.5
	baz=268							
FUSS				eS		Sn	07 45 10.4	-0.6
	baz=268							
HGSD	Ruisui	1.59	244	eP		Pn	07 44 51.0	-0.3
	baz=239							
HGSD				eS		Sn	07 45 09.6	-1.1
	baz=239							
JTJ	Tarama	1.63	74	eS		Sn	07 45 11.1	-0.6
CHGB	Renai	1.66	265	eP		Pn	07 44 52.7	+0.3
	baz=249							
CHGB				eS		Sn	07 45 12.2	-0.5
	baz=249							
TDCB	Techi	1.67	272	eP		Pn	07 44 54.0	+1.6
	baz=268							
TDCB				eS		Sn	07 45 14.1	+1.3
	baz=268							
OWD	Renai	1.67	262	eP		Pn	07 44 52.5	0.0
	baz=258							
OWD				eS		Sn	07 45 12.1	-0.7
	baz=258							
EHY	Hungye	1.67	246	eP		Pn	07 44 52.1	-0.3
	baz=254							
EHY				eS		Sn	07 45 12.9	+0.2
	baz=254							
WUSB	Renai	1.72	263	eP		Pn	07 44 53.3	+0.2
	baz=259							
WUSB				eS		Sn	07 45 13.7	-0.3
	baz=259							
YULB	Yu-li	1.74	243	eP		Pn	07 44 52.9	-0.5
	baz=253							
YULB				eS		Sn	07 45 13.7	-0.8
	baz=253							
EYUL	Yuli	1.75	241	P		Pn	07 44 53.2	-0.3
	baz=237							
EYUL				eS		Sn	07 45 13.8	-0.8
	baz=237							
FULB	Fuli	1.84	238	P		Pn	07 44 54.3	-0.5
	baz=223							
FULB				eS		Sn	07 45 16.3	-0.7
	baz=223							
WHP	Taichung City	1.86	273	eP		Pn	07 44 56.5	+1.4
	baz=258							
WHP				eS		Sn	07 45 19.6	+2.0
	baz=258							
WCS	Beigang Elemen	1.90	266	eP		Pn	07 44 55.7	+0.2
	baz=254							
WCS				eS		Sn	07 45 19.5	+1.2
	baz=254							
SSLB	Suanglung	1.90	258	eP		Pn	07 44 56.0	+0.4
	baz=254							
SSLB				eS		Sn	07 45 18.5	+0.1
	baz=254							
SMLT	Sun Moon Lake	1.93	261	eP		Pn	07 44 57.2	+1.2
	baz=257							
SMLT				eS		Sn	07 45 20.7	+1.5
	baz=257							
EHD	Haiduan	1.94	238	eP		Pn	07 44 54.4	-1.7
	baz=224							
EHD				eS		Sn	07 45 16.8	-2.5
	baz=224							
TYC	Yuchr	1.96	262	eP		Pn	07 44 57.1	+0.7
	baz=248							
TYC				eS		Sn	07 45 20.1	+0.2
	baz=248							
EDH	Donghe	1.97	232	eP		Pn	07 44 54.3	-2.2
	baz=219							
EDH				S		Sn	07 45 17.8	-2.2
	baz=219							
WHYT	Xinyi Township	2.01	256	eP		Pn	07 44 58.7	+1.6
	baz=242							
WHYT				eS		Sn	07 45 23.2	+2.0
	baz=242							
LDUT	Ludao	2.06	223	eP		Pn	07 44 57.4	-0.4
	baz=219							
LDUT				eS		Sn	07 45 19.1	-3.2
	baz=219							
ELDTW	Lidau	2.06	241	eP		Pn	07 44 57.3	-0.6
	baz=237							
ELDTW				eS		Sn	07 45 22.0	-0.6
	baz=237							
ALS	Alishan	2.11	251	eP		Pn	07 45 00.1	+1.3
	baz=247							
ALS				eS		Sn	07 45 24.2	+0.3
	baz=247							
CHN5	Tsauling	2.19	255	eP		Pn	07 45 00.6	+0.9
	baz=251							
CHN5				eS		Sn	07 45 26.3	+0.6
	baz=251							
TWGBT	Beinan	2.22	232	eP		Pn	07 45 00.4	+0.4
	baz=240							
TWGBT				eS		Sn	07 45 25.5	-0.9
	baz=240							
STYH	Taoyuan	2.27	244	eP		Pn	07 45 01.5	+0.9
	baz=232							
STYH				eS		Sn	07 45 27.2	-0.2
	baz=232							
WDLH	Douliu	2.29	258	eP		Pn	07 45 03.0	+2.0
	baz=254							
WDLH				eS		Sn	07 45 29.9	+1.9
	baz=254							
WCKO	Fanlu	2.31	251	eP		Pn	07 45 02.1	+0.9
	baz=248							
WCKO				eS		Sn	07 45 29.4	+1.0
	baz=248							
TPUB	Ta-pu	2.33	248	eP		Pn	07 45 03.7	+2.1
	baz=244							
TPUB				eS		Sn	07 45 31.2	+2.1
	baz=244							
CHN4	Tsaushan	2.35	249	P		Pn	07 45 02.8	+1.1
	baz=246							
CHN4				eS		Sn	07 45 31.3	+1.9
	baz=246							
WTP	Ta-pu	2.37	247	eP		Pn	07 45 03.8	+1.7
	baz=243							
WTP				eS		Sn	07 45 30.7	+0.6
	baz=243							
CHN1	Nanshi	2.47	246	eP		Pn	07 45 05.6	+2.2
	baz=242							
CHN1				eS		Sn	07 45 33.7	+1.3
	baz=242							
TWK	Hsinying	2.47	248	eP		Pn	07 45 03.5	+0.1
	baz=244							
TWK				eS		Sn	07 45 32.1	-0.4
	baz=244							
MASBT	Mashibuluo	2.68	234	eP		Pn	07 45 07.3	+1.1
	baz=223							
MASBT				eS		Sn	07 45 36.9	-0.7
	baz=223							
SLIU	Shizi	2.82	226	eP		Pn	07 45 08.7	+0.5
	baz=213							
SLIU				eS		Sn	07 45 39.3	-1.8
	baz=213							
SMST	Manzhou Townsh	2.94	223	eP		Pn	07 45 10.3	+0.5
	baz=219							
SMST				eS		Sn	07 45 43.3	-0.6
	baz=219							

IDC 06 08:32:55.7±1.2, 2°.91S×119°.79E, h0km, mb3.6/4, mbtmp3.7/5, ML3.8/1, MS3.2/18, Error ellipse: s-maj=49.1km s-min=14.6km az=82.0
DJA 06 08:32:58.3±0.3, 3°.S±2°.×12°.0E±°, h10km, M4.5/13, mb5.1/1, MLv4.1/13
NEIC 06 08:32:58.9±2.0, 2°.98S±0°.06×119°.70E±0°.07, h10km±1km, mb4.4/11, Error ellipse: s-maj=12.2km s-min=9.2km az=248.0
ISC 06 08:32:58.0±1.1, 2°.93S±0°.05×119°.74E±0°.05, h9km±7km, n54, σ0s84/42, mb4.2/9, MS3.2/12, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.14	147	P		Pg	08 33 00.3	-0.9
TTSI				S		Sg	08 33 04.5	+1.2
PMSI	Majene	1.00	235	P		Pg	08 33 16.9	-0.5
SPSI	Sidrap Palu	1.03	179	P		Pg	08 33 17.2	-0.7
SPSI				S		Sn	08 33 34.0	+0.8
BNSI	Bone	1.51	166	P		Pn	08 33 25.9	+0.7
KAPI	Kappang	2.07	180	Pn		Pn	08 33 32.9	-0.1
	30nm,0.3s,baz=345,slow=10,SNR=60							
KAPI				LR		LR	08 34 02.0	
	comp=Z,76nm,20.0s,baz=346,slow=32							
KAPI				Lg		Lg	08 34 02.0	
	46nm,0.3s,baz=152,slow=19,SNR=15							
	74nm,0.3s							
KAPI	Kappang	2.07	180			Pn	08 33 33.4	+0.5
KAPI	Kappang	2.07	180	P		Pn	08 33 33.1	+0.1
KAPI				S		Sb	08 34 01.6	-0.1
KKSI	Kolaka, Sulawe	2.27	123	P		Pn	08 33 36.8	+1.1
BKSI	Bulukumba	2.41	171	P		Pn	08 33 38.1	+0.5
APSI	Ampana	2.77	44	P		Pn	08 33 42.2	-0.3
MPSI	Mapaga	3.25	3	P		Pn	08 33 48.5	-0.7
BSSI	Bau Bau, Buton	3.28	167	P		Pn	08 33 49.6	0.0
BKB	Balikpapan	3.29	300			Pn	08 33 50.4	+0.6
LUWI	Luwuk	3.56	58			Pn	08 33 53.7	+0.2
LUWI	Luwuk	3.56	58	P		Pn	08 33 52.5	-1.0
BBSI	Bau Bau	3.80	132	P		Pn	08 33 56.5	-0.2
MRSI	Marisa	4.03	33	P		Pn	08 34 00.0	0.0
TOLI2	Tolitoli	4.14	15			Pn	08 34 04.1	+2.6
GTOI	Gorontalo	4.82	43	P		Pn	08 34 11.6	+0.8
MTKI	Muara Teweh, K	5.23	292	P		Pn	08 34 16.0	-0.5
MYLDM	Lahad Datu	8.15	351	Pn		Pn	08 34 56.9	+0.3
BATI	Baumata	8.21	152	LR		LR	08 38 28.5	
	comp=Z,297nm,20.8s,baz=141,slow=41							
KKM	Kota Kinabalu	9.58	338	Pn		Pn	08 35 17.1	+0.7
DAV	Davao City (W)	11.52	30	LR		LR	08 40 26.6	
	comp=Z,114nm,21.0s,baz=174,slow=39							
SIJI	Sorong	11.70	80	LR		LR	08 40 30.2	
	comp=Z,66nm,21.5s,baz=312,slow=39							
LEM	Lembang	12.69	252	LR		LR	08 40 36.7	
	comp=Z,121nm,19.5s,baz=38,slow=36							
FITZ	Fitzroy Crossi	16.15	159	LR		LR	08 44 01.2	
	comp=Z,84nm,18.5s,baz=329,slow=41							
IPM	Ipoh	20.10	291	P		P	08 37 32.5	+0.3
IPM				IAmb		IAmb	08 37 38.8	
	comp=Z,29nm,1.4s							
KULM	Kulim	20.75	293	P		P	08 37 40.1	+0.8
KULM				IAmb		IAmb	08 37 45.0	
	comp=Z,26nm,1.3s							
RPSI	Rantau Prapat	21.55	285	P		P	08 37 48.8	+0.9
RPSI				IAmb		IAmb	08 37 53.7	
	comp=Z,27nm,1.4s							
PSI	Prapat	21.57	285	LR		LR	08 46 11.7	
	comp=Z,124nm,20.5s,baz=144,slow=37							
WRA	Warramunga Arr	22.11	141	P		P	08 37 52.4	-1.6
	comp=Z,1.2nm,0.7s,baz=314,slow=12,SNR=9.2							
WRA				LR		LR	08 46 46.0	
	comp=Z,52nm,18.2s,baz=318,slow=38							
	comp=Z,1.2nm,0.7s							
WRA	Warramunga Arr	22.11	141	P		P	08 37 54.8	+0.8
WB2	Warramunga Arr	22.12	141	P		P	08 37 53.2	-0.9
WB2				IAmb		IAmb	08 38 29.1	
	comp=Z,12nm,1.3s							
AS31	Alice Springs	24.75	148	P		P	08 38 21.3	+1.1
ASAR	Alice Springs	24.75	148	P		P	08 38 19.1	-1.0
	comp=Z,0.9nm,0.8s,baz=324,slow=7.7,SNR=7.5							
ASAR				LR		LR	08 47 39.8	
	comp=Z,54nm,19.2s,baz=332,slow=36							
	comp=Z,0.9nm,0.8s							
ASAR	Alice Springs	24.75	148	P		P	08 38 21.3	+1.1
COEN	Coen	25.60	117	P		P	08 38 27.7	-0.2
COEN				IAmb		IAmb	08 38 47.0	
	comp=Z,36nm,1.5s		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.56**	**198**		Pn	08 52 56.8	-0.6
SDPT	**Sand Point**	**0.56**	**198**	IAML		08 52 57.8	
	comp=N,85nm,0.4s						
CHGN	**Chignik**	**1.07**	**66**		Pn	08 53 01.1	-0.6
CHGN	**Chignik**	**1.07**	**66**	IAML		08 53 18.9	
	comp=E,844nm,0.6s						
CHGN				IAML		08 53 18.9	
	comp=N,660nm,0.4s						
PS4A	**Pavlof South-4**	**1.10**	**241**		Pn	08 53 01.3	-0.7
CNBA	**Chernabura Isl**	**1.11**	**162**		Pn	08 53 01.6	-0.7
PN7A	**Pavlof North-7**	**1.13**	**247**		Pn	08 53 01.9	-0.6
HAG	**Hague Volcano**	**1.14**	**241**		Pn	08 53 01.8	-0.7
DT1	**Dutton Round H**	**1.43**	**238**		Pn	08 53 05.0	-0.6
R16K	**Pilot Point**	**2.21**	**39**		Pn	08 53 14.7	-0.4
ISNN	**Isanotski Nort**	**2.31**	**244**		Pn	08 53 15.9	-0.5
ISLZ	**Isanotski Laza**	**2.33**	**242**		Pn	08 53 16.3	-0.3
SSLS	**Shishaldin Sou**	**2.48**	**243**		Pn	08 53 18.1	-0.5
CHIR	**Chirikof Islan**	**2.56**	**89**		Pn	08 53 18.6	-1.0
CHIR	**Chirikof Islan**	**2.56**	**89**	IAML		08 53 51.1	
	comp=E,83nm,0.6s						
CHIR				IAML		08 53 51.9	
	comp=N,104nm,0.8s						
R17K	**Ugashik Creek**	**2.73**	**48**		Pn	08 53 21.4	-0.3
CNTC	**Contact Creek**	**3.34**	**43**		Pn	08 53 29.1	-0.7
P16K	**Nushagak River**	**3.37**	**20**		Pn	08 53 28.7	-1.3
SII	**Sitkinak Islan**	**3.41**	**76**		Pn	08 53 29.7	-0.9
SII	**Sitkinak Islan**	**3.41**	**76**	IAML		08 54 12.7	
	comp=N,76nm,0.2s						
ANCK	**Angle Creek**	**3.45**	**46**		Pn	08 53 30.7	-0.5
KVTA	**Katmai Vly 10**	**3.65**	**45**		Pn	08 53 33.6	-0.2
AKUT	**Akutan**	**3.67**	**244**	Pn	Pn	08 53 32.6	-1.4
KAKN	**Katmai Knife C**	**3.69**	**47**		Pn	08 53 34.0	-0.5
O16K	**Kokwok River B**	**3.89**	**16**		Pn	08 53 35.0	-1.8
KAHC	**Katmai Hardscr**	**3.94**	**43**		Pn	08 53 37.1	-0.7
OHAK	**Old Harbor**	**4.04**	**68**		Pn	08 53 37.3	-1.7
OHAK	**Old Harbor**	**4.04**	**68**	IAML		08 54 24.8	
	comp=E,18nm,0.4s						
OHAK				IAML		08 54 26.1	
	comp=N,25nm,0.3s						
UNV	**Unalaska Valle**	**4.19**	**243**	Pn	Pn	08 53 40.0	-1.0
P18K	**Big Mountain,**	**4.41**	**35**	Pn	Pn	08 53 43.2	-0.7
KDAK	**Kodiak Island**	**4.58**	**62**		Pn	08 53 44.4	-1.8
KDAK	**Kodiak Island**	**4.58**	**62**	IAML		08 54 36.9	
	comp=N,14nm,0.2s						
KDAK				IAML		08 54 38.7	
	comp=N,16nm,0.5s						
Q19K	**Cape Douglas,**	**4.67**	**46**		Pn	08 53 47.0	-0.4
Q19K	**Cape Douglas,**	**4.67**	**46**	IAML		08 55 42.8	
	comp=N,32nm,1.2s						
O18K	**Koktuh Hills**	**4.78**	**32**		Pn	08 53 48.4	-0.6
O18K	**Koktuh Hills**	**4.78**	**32**	IAML		08 55 48.6	
	comp=E,17nm,4.0s						
O18K				IAML		08 55 57.0	
	comp=N,16nm,2.7s						
SYI	**Shuyak Island**	**5.03**	**54**		Pn	08 53 50.9	-1.3
P19K	**Oil Pt**	**5.30**	**42**	Pn	Pn	08 53 56.3	+0.4
N18K	**Kilae Creek**	**5.32**	**23**	Pn	Pn	08 53 54.7	-1.4
N18K				IAML		08 55 36.9	
	comp=N,14nm,2.9s						
N18K				IAML		08 56 57.9	
	comp=E,14nm,4.0s						
SVW2	**Sparrevohn**	**5.76**	**23**	Pn	Pn	08 54 00.9	-1.1
N19K	**Bonanza Creek**	**5.78**	**29**	Pn	Pn	08 54 01.5	-0.9
CNPM	**China Poot**	**6.02**	**49**		Pn	08 54 04.1	-1.5
RSO	**Redoubt South**	**6.04**	**37**	Pn	Pn	08 54 05.8	-0.1
BRLK	**Bradley Lake**	**6.30**	**48**	Pn	Pn	08 54 06.8	-2.6
SPU	**Mount Spurr**	**6.80**	**35**	Pn	Pn	08 54 15.6	-0.5
M20K	**Styx River**	**7.03**	**28**	Pn	Pn	08 54 19.2	-0.1
SUA	**Susitna One**	**7.44**	**37**		Pn	08 54 22.9	-2.0
SKT	**Skwentna**	**7.57**	**33**	Pn	Pn	08 54 26.0	-0.5
PWL	**Port Wells**	**7.97**	**46**		Pn	08 54 29.1	-2.8
PPLA	**Purkeypile**	**8.12**	**27**	Pn	Pn	08 54 34.9	+0.9
HIN	**Hinchinbrook I**	**8.52**	**52**		Pn	08 54 37.3	-2.1
CAST	**Castle Rocks**	**8.59**	**25**	Pn	Pn	08 54 40.4	+0.2
EYAK	**Cordova Ski Ar**	**8.93**	**52**		Pn	08 54 42.3	-2.5
SCM	**Sheep Creek Mo**	**8.93**	**43**	Pn	Pn	08 54 42.4	-2.4
DIV	**Divide**	**9.18**	**49**		Pn	08 54 45.8	-2.4
KLU	**Klutina**	**9.30**	**47**		Pn	08 54 47.3	-2.6
KAIM	**Kayak Island**	**9.31**	**58**	Pn	Pn	08 54 48.8	-1.1
RAGM	**Ragged Mountai**	**9.35**	**55**	Pn	Pn	08 54 48.4	-2.1
HMT	**Hamilton**	**9.52**	**56**		Pn	08 54 51.3	-1.5
M24K	**Tolsona, Glenn**	**9.53**	**43**	Pn	Pn	08 54 50.9	-2.1
BERG	**Berg Lake**	**9.80**	**56**		Pn	08 54 54.5	-2.1
N25K	**Chitina, Valde**	**9.90**	**48**		Pn	08 54 55.8	-2.2
GLB	**Gilahina Butte**	**10.17**	**50**	Pn	Pn	08 54 59.3	-2.2
VRDI	**Verde Repeater**	**10.23**	**52**		Pn	08 55 00.0	-2.5
H21K	**Melozitna Rive**	**10.44**	**17**	Pn	Pn	08 55 03.8	-1.3
MCARA	**McCarthy VSAT**	**10.48**	**51**	Pn	Pn	08 55 02.8	-3.0
M26K	**Nabesna, AK**	**10.95**	**46**		Pn	08 55 09.7	-2.4
PCA	**Pinnacle**	**11.36**	**60**		Pn	08 55 18.4	+0.8
BCAR	**Beaver Creek A**	**11.76**	**45**	Pn	Pn	08 55 19.5	-3.3

NNC 06 09:07:15.4±2.1,54°.28N×86°.17E,h0km,mb3.6,mpv2.6, 2C-7D,Error ellipse: s-maj=29.5km s-min=10.4km az=165.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.86**	**248**	⇑P	Pg	09 07 31.9	-0.1
	0.1nm,0.2s						
ZAA0				⇓S	Sg	09 07 44.2	+1.1
	1.9nm,0.3s						
KURK	**Kurchatov**	**5.83**	**235**	⇑Lg	Lg	09 10 20.5	
	2.8nm,0.6s						
KURBB	**Kurchatov Arra**	**5.94**	**235**	⇓Pn	Pn	09 08 47.1	+2.6
	2.7nm,0.7s						
KURBB				⇓Sn	Sn	09 09 54.0	+0.9
	2.1nm,0.6s						
KURBB				⇓Lg	Lg	09 10 25.9	
	5.7nm,0.7s						
MK31	**Makanchi Array**	**7.89**	**200**	⇓Pn	Pn	09 09 13.5	+2.0
	0.5nm,0.4s,baz=27,slow=13,SNR=8.2						
MK31				⇓Sn	Sn	09 10 40.9	-0.6
	0.4nm,0.6s						
MK31				⇓Lg	Lg	09 11 25.9	
	1.6nm,0.8s,baz=26,slow=26,SNR=3.5						

*JMA **06** 09:13:40.6±0.3,36°.7N±0°.5×14°.2E±°,h12km±3km, MV3.4/34,E OFF FUKUSHIMA PREF*
*IDC **06** 09:13:46.8±2.8,37°.06N×141°.80E,h0km,mb3.4/2, mbtmp3.3/3,ML2.6/1,MS3.5/1,Error ellipse: s-maj=55.7km s-min=37.9km az=30.0*

ISC 06 09:13:43.9±1.6,36°.72N±0°.05×142°.22E±0°.10,h19km,n25, σ1§04/23,Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.25**	**301**	*e*P	**Pn**	**09 14 05.0**	**-1.4**
JHO	**Hitachi**	**1.33**	**266**	*e*P	**Pn**	**09 14 06.1**	**-1.3**
JHYU	**Hitachinakayam**	**1.37**	**254**	*e*P	**Pn**	**09 14 06.6**	**-1.4**
JHYU				*e*S	**Sn**	**09 14 24.8**	**-0.7**
JFFD	**Fukushimafurud**	**1.38**	**286**	*e*P	**Pn**	**09 14 07.0**	**-1.1**
JMST	**Minamisoumatoc**	**1.46**	**314**	P	**Pn**	**09 14 07.7**	**-1.5**
JMST				*e*S	**Sn**	**09 14 26.9**	**-0.9**
JMM	**Marumori**	**1.61**	**316**	*e*P	**Pn**	**09 14 10.1**	**-1.3**
JIO	**Ouri**	**1.86**	**339**	*e*P	**Pn**	**09 14 13.6**	**-1.2**
JOU	**Okura**	**2.05**	**323**	*e*P	**Pn**	**09 14 17.1**	**-0.3**
JFY	**Yanaizu**	**2.12**	**290**	*e*P	**Pn**	**09 14 18.5**	**+0.1**
JAG	**Ashikaga**	**2.25**	**263**	*e*P	**Pn**	**09 14 19.6**	**-0.4**
BSO1	**Boso 1**	**2.30**	**206**	*e*P	**Pn**	**09 14 19.3**	**-1.0**
BSO1				*e*S	**Sn**	**09 14 47.2**	**-0.5**
JMK	**Ichinoseki**	**2.36**	**341**	*e*P	**Pn**	**09 14 20.9**	**-0.8**
JMK				*e*S	**Sn**	**09 14 49.5**	**-0.5**
JYK	**Kaneyama**	**2.64**	**327**	*e*P	**Pn**	**09 14 25.3**	**-0.2**
JRY	**Ryogami san**	**2.77**	**256**	*e*P	**Pn**	**09 14 26.6**	**-0.7**
JOM	**Ohasama**	**2.84**	**345**	*e*P	**Pn**	**09 14 27.4**	**-0.9**
JOM				*e*S	**Sn**	**09 15 01.8**	**-0.1**
MJAR	**Matsushiro Arr**	**3.23**	**268**	Pn	**Pn**	**09 14 34.4**	**+0.8**
	0.9nm,0.3s,baz=98,slow=10,SNR=46						
MJAR				Sn	**Sn**	**09 15 11.5**	**0.0**
	baz=89,slow=7.6,SNR=1.6						
	5.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.44**	**121**	T	T	09 48 07.3	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**27.44**	**121**	T	T	09 48 07.6	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**27.45**	**121**	T	T	09 48 05.9	
	baz=313						
H11S1	**WAKE ISLAND Hy**	**28.15**	**124**	T	T	09 48 58.4	
	baz=316						
H11S3	**WAKE ISLAND Hy**	**28.15**	**124**	T	T	09 49 01.9	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**28.17**	**124**	T	T	09 49 00.7	
	baz=316						
MKAR	**Makanchi Array**	**44.83**	**303**	P	**P**	**09 21 58.6**	**+1.9**
	0.3nm,0.5s,baz=95,slow=8.7,SNR=2.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**46.70**	**308**	LR	LR	09 41 07.6	
	comp=Z,58nm,19.2s,baz=60,slow=36						
WRA	**Warramunga Arr**	**56.85**	**189**	P	P	09 23 35.1	+7.8
	0.6nm,1.1s,baz=1.4,slow=7.6,SNR=1.3						
	0.6nm,1.1s						

NNC 06 09:18:45.9±7.1,36°.93N×70°.72E,h0km,mb3.6,mpv3.5, 6C,Error ellipse: s-maj=56.1km s-min=44.5km az=178.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.17**	**359**	⇑P	Pn	09 20 19.9	+1.7
	1.9nm,0.5s,baz=185,slow=14,SNR=16						
KK31				⇑S	Sn	09 21 31.5	+2.0
	0.5nm,0.2s,baz=192,slow=22,SNR=4.5						
TKM2	**Tokmak 2**	**7.06**	**31**	⇑P	Pn	09 20 30.4	-0.2
	1.3nm,0.5s						
TKM2				⇑S	Sn	09 21 51.7	0.0
	2.2nm,0.9s						
AB31	**Akbulak array**	**14.60**	**331**	⇑P	Pn	09 22 11.2	-2.3
	0.3nm,0.6s,baz=160,slow=12,SNR=9.3						
AB31				⇑S	Sn	09 24 54.8	-1.2
	0.9nm,0.8s,baz=159,slow=23,SNR=5.2						

*IDC **06** 09:47:43.7±0.4,29°.21S×61°.12E,h0km,mb4.4/26, mbtmp4.5/27,ML5.0/1,MS3.8/48,Error ellipse: s-maj=14.4km s-min=12.2km az=34.0*
*NEIC **06** 09:47:45.4±1.4,29°.1S±0°.1×61°.0E±0°.1,h10km±1km, mb4.9/32,Error ellipse: s-maj=21.8km s-min=15.1km az=59.0*
*GCMT **06** 09:47:47.4±0.4,29°.14S±0°.03×60°.63E±0°.06,h23km±1km, MW4.9/69,Moment Tensor Solution. s21,c22; s69,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.87±.27; $M_{\theta\theta}$2.60±.17; $M_{\phi\phi}$0.26±.15; $M_{r\theta}$0.90±.19; $M_{\theta\phi}$0.20±.10; $M_{r\phi}$0.48±.28; Best double couple: $M_0$2.92400×10^{16} NP1:ϕ_s258.00000°,δ55.00000°,λ-98.00000°. NP2: ϕ_s92.00000°,δ36.00000°,λ-79.00000°. Principal axes: T 2.7740, Plg10.0000°, Azm354.0000°; N 0.2900, Plg6.0000°, Azm263.0000°; P -3.0730, Plg78.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **06** 09:47:47.1±0.0,28°.65S×61°.28E,h7km,mb4.9/34, mB4.9/17,Ms4.8/4,Ms7 4.5/4*

ISC 06 09:47:45.5±0.4,29°.18S±0°.08×61°.03E±0°.08,h10km,n140, σ1§12/103,mb4.7/48,MS3.9/49,14C-4D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.31**	**328**	Pn	**Pn**	**09 49 56.5**	**-3.5**
VOI	**Vohitsoka**	**14.74**	**296**	Pn	**Pn**	**09 51 13.8**	**-0.6**
ABPO	**Ambohimpanom**	**16.15**	**306**	P	**Pn**	**09 51 32.3**	**-0.5**
OPO	**Ambohidratompo**	**16.47**	**307**	Pn	**Pn**	**09 51 36.0**	**-1.0**
	0.5nm,0.3s,baz=123,slow=12,SNR=18						
OPO				Sn	Sn	09 54 25.4	-15
	0.5nm,0.3s,baz=131,slow=13,SNR=5.3						
	7.6nm,0.3s						
H08S1	**Diego Carcia H**	**23.98**	**29**	T	T	10 17 42.7	
	baz=204,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**23.99**	**29**	T	T	10 17 43.7	
	baz=204,slow=76,SNR=9.8						
H08S3	**Diego Garcia H**	**24.00**	**29**	T	T	10 17 44.2	
	baz=204,slow=76,SNR=24						
MATP	**Matopo**	**30.71**	**279**	P	**P**	**09 54 00.3**	**-0.6**
	2.4nm,0.7s,baz=90,slow=4.4,SNR=3.9						
	2.4nm,0.7s						
BOSA	**Boshof**	**31.25**	**262**	P	**P**	**09 54 06.8**	**+1.2**
	3.0nm,0.8s,baz=105,slow=8.2,SNR=5.0						
	3.0nm,0.8s						
BOSA	**Boshof**	**31.25**	**262**	P	**P**	**09 54 06.2**	**+0.5**
BOSA				IAmb	IAmb	09 54 37.4	
	comp=Z,54nm,1.9s						
LBTB	**Lobatse**	**31.74**	**269**	P	**P**	**09 54 11.0**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=101,slow=6.4,SNR=3.0						
	comp=Z,3.0nm,0.8s						
LSZ	**Lusaka**	**33.27**	**287**	P	**P**	**09 54 23.6**	**+0.1**
	comp=Z,8.9nm,0.8s,baz=122,slow=8.7,SNR=12						
LSZ				LR	LR	10 06 06.6	
	comp=Z,92nm,20.0s,baz=64,slow=33						
	comp=Z,8.9nm,0.8s						
LSZ	**Lusaka**	**33.27**	**287**	P	**P**	**09 54 23.5**	**+0.1**
LSZ				IAmb	IAmb	09 54 26.4	
	comp=Z,28nm,1.3s						
SUR	**Sutherland**	**34.56**	**254**	LR	LR	10 06 32.0	
	comp=Z,112nm,18.0s,baz=44,slow=33						
MAW	**Mawson**	**38.47**	**179**	P	**P**	**09 55 07.0**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=6.4,slow=9.6,SNR=8.3						
MAW				PcP	**PcP**	**09 57 20.2**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=342,slow=4.0,SNR=5.0						
MAW				LR	LR	10 07 54.7	
	comp=Z,207nm,18.1s,baz=4.0,slow=32						
	comp=Z,3.4nm,0.8s						
MAW	**Mawson**	**38.47**	**179**	P	**P**	**09 55 07.1**	**-0.2**
MBAR	**Mbarara**	**40.53**	**309**	LR	LR	10 10 30.9	
	comp=Z,188nm,20.0s,baz=126,slow=34						
TSUM	**Tsumeb**	**40.66**	**274**	P	**P**	**09 55 27.9**	**+1.6**
	comp=Z,5.4nm,0.9s,baz=115,slow=9.9,SNR=8.1						
TSUM				LR	LR	10 11 05.5	
	comp=Z,135nm,18.9s,baz=142,slow=34						
	comp=Z,5.4nm,0.9s						
TSUM	**Tsumeb**	**40.66**	**274**	P	**P**	**09 55 27.5**	**+1.1**
PALK	**Pallekele**	**40.90**	**31**	LR	LR	10 08 27.5	
	comp=Z,140nm,20.0s,baz=314,slow=30						
ATD	**Arta Tunnel**	**44.12**	**334**	LR	LR	10 11 27.6	
	comp=Z,270nm,20.3s,baz=166,slow=32						
H01W2	**Cape Leeuwin H**	**44.94**	**111**	T	T	10 43 57.4	
	baz=262,slow=75,SNR=203						
H01W3	**Cape Leeuwin H**	**44.95**	**111**	T	T	10 44 01.8	
	baz=262,slow=75,SNR=118						
H01W1	**Cape Leeuwin H**	**44.96**	**111**	T	T	10 44 01.3	
	baz=262,slow=75,SNR=131						
NWAO	**Narrogin (SRO)**	**47.82**	**109**	LR	LR	10 11 27.8	
	comp=Z,58nm,20.5s,baz=82,slow=30						
WSAR	**Wadi Sarin**	**52.17**	**357**	LR	LR	10 13 50.9	
	comp=Z,57nm,18.9s,baz=200,slow=30						
TROLL	**Troll, Antarti**	**52.91**	**199**	P	**P**	**09 57 00.9**	**-0.6**
SNAA	**Sanae**	**54.41**	**200**	P	**P**	**09 57 11.7**	**-0.8**
SNAA	**Sanae**	**54.41**	**200**	P	**P**	**09 57 11.5**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=105,slow=7.7,SNR=20						
SNAA				LR	LR	10 15 22.0	
	comp=Z,140nm,20.9s,baz=14,slow=30						
	comp=Z,2.1nm,0.7s						
SNAA	**Sanae**	**54.41**	**200**	P	**P**	**09 57 11.8**	**-0.6**
RAYN	**Ar Rayn**	**54.49**	**342**	P	**P**	**09 57 13.5**	**0.0**
RAYN				IAmb	IAmb	09 57 16.7	
	comp=Z,9.4nm,1.1s						
VNA3	**Neumayer Olymp**	**56.46**	**201**	P	**P**	**09 57 26.4**	**-0.8**
BRDH	**Bariadhala**	**59.39**	**33**	LR	LR	10 22 26.3	
	comp=Z,101nm,18.3s,baz=255,slow=35						
FITZ	**Fitzroy Crossi**	**59.58**	**95**	LR	LR	10 20 24.6	
	comp=Z,47nm,18.1s,baz=255,slow=33						
CMAR	**Chiang Mai Arr**	**59.86**	**42**	P	**P**	**09 57 52.0**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=228,slow=7.2,SNR=20						
CMAR				LR	LR	10 21 56.3	
	comp=Z,46nm,18.0s,baz=225,slow=34						
	comp=Z,5.0nm,0.7s						
KAPI	**Kappang**	**60.37**	**78**	LR	LR	10 19 49.5	
	comp=Z,28nm,21.2s,baz=204,slow=32						
PYUN	**Piuthan**	**60.71**	**22**	*e*P	**P**	**09 57 57.1**	**-0.4**
	comp=Z,83nm,0.7s						
RAMN	**Ramite**	**60.96**	**26**	*e*P	**P**	**09 57 59.4**	**+0.2**
	comp=Z,28nm,0.7s						
QSPA	**South Pole Qui**	**60.97**	**180**	P	**P**	**09 57 57.8**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=262,slow=1.8,SNR=24						
QSPA				LR	LR	10 21 42.9	
	comp=Z,133nm,18.3s,baz=282,slow=34						
	comp=Z,4.5nm,0.8s						
QSPA	**South Pole Qui**	**60.97**	**180**	P	**P**	**09 57 57.3**	**-1.5**
QSPA				IAmb	IAmb	09 58 01.9	
	comp=Z,20nm,1.4s						
DANN	**Dangsing**	**61.20**	**23**	*e*P	**P**	**09 58 00.6**	**-0.3**
	comp=Z,84nm,0.8s						
JIRN	**Jiri**	**61.44**	**25**	*e*P	**P**	**09 58 01.8**	**-0.9**
	comp=Z,15nm,0.6s						
GUN	**Gumba**	**61.55**	**25**	*e*P	**P**	**09 58 02.6**	**-0.8**
	comp=Z,37nm,0.8s						
BBOO	**Buckleboo**	**63.14**	**114**	P	**P**	**09 58 13.1**	**-0.7**
EIL	**Elat**	**63.60**	**335**	LR	LR	10 22 33.2	
	comp=Z,141nm,19.7s,baz=90,slow=33						
VNDA	**Vanda**	**64.04**	**166**	P	**P**	**09 58 18.3**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=264,slow=7.3,SNR=26						
VNDA				LR	LR	10 24 22.2	
	comp=Z,210nm,18.3s,baz=252,slow=34						
	comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**64.04**	**166**	P	**P**	**09 58 18.6**	**-0.3**
VNDA				IAmb	IAmb	09 58 19.0	
	comp=Z,4.2nm,0.8s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**09 58 22.0**	**-1.2**
	comp=Z,3.8nm,0.7s,baz=242,slow=6.3,SNR=54						
ASAR				LR	LR	10 22 46.8	
	comp=Z,59nm,19.8s,baz=248,slow=33						
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**09 58 21.8**	**-1.4**
AS31	**Alice Springs**	**64.55**	**104**	P	**P**	**09 58 22.0**	**-1.2**
SBA	**Scott Base**	**64.92**	**167**	P	**P**	**09 58 25.5**	**+0.8**
SBA				IAmb	IAmb	09 58 25.9	
	comp=Z,6.5nm,0.9s						
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**09 58 34.0**	**-1.1**
	comp=Z,3.9nm,0.8s,baz=247,slow=5.7,SNR=35						
WRA				LR	LR	10 23 54.1	
	comp=Z,104nm,19.0s,baz=253,slow=33						
	comp=Z,3.9nm,0.8s						
WB2	**Warramunga Arr**	**66.39**	**100**	P	**P**	**09 58 34.0**	**-1.1**
WRAB	**Tennant Creek**	**66.39**	**100**	P	**P**	**09 58 34.4**	**-0.7**
WRAB				IAmb	IAmb	09 58 34.8	
	comp=Z,11nm,1.1s						
MMAI	**Mount Meron Ar**	**66.46**	**337**	LR	LR	10 24 29.3	
	comp=Z,90nm,19.9s,baz=66,slow=33						
WB0	**Warramunga Arr**	**66.49**	**100**	P	**P**	**09 58 34.6**	**-1.2**
WB0				IAmb	IAmb	09 59 44.9	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**66.54**	**101**	P	**P**	**09 58 35.0**	**-1.1**
GEYT	**Alibeck**	**66.82**	**357**	P	**P**	**09 58 37.6**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=186,slow=8.9,SNR=3.8						
GEYT				LR	LR	10 25 25.1	
	comp=Z,76nm,20.8s,baz=186,slow=34						
	comp=Z,1.9nm,0.8s						
KMI	**Kunming**	**67.24**	**41**	⇓P	**P**	**09 58 42.9**	**+2.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH	**PanZhiHua**	**67.75**	**39**	P	**P**	**09 58 44.7**	**+1.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,70nm,4.6s						
STKA	**Stephens Creek**	**67.86**	**115**	P	**P**	**09 58 43.3**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=316,slow=2.3,SNR=3.8						
STKA				LR	LR	10 23 21.2	
	comp=Z,68nm,20.3s,baz=211,slow=32						
	comp=Z,2.8nm,0.8s						
KSH	**Kashi**	**69.75**	**12**	P	**P**	**09 58 53.2**	**-2.6**
KSH				pmax	pmax		
	comp=Z,18nm,0.7s						
GYA	**Guiyang**	**70.54**	**43**	⇓P	**P**	**09 59 03.3**	**+2.4**
GYA				pmax	pmax		
	comp=Z,26nm,0.8s						
GNI	**Garni**	**70.62**	**347**	LR	LR	10 28 20.3	
	comp=Z,144nm,19.8s,baz=152,slow=34						
HOPE	**Hope Point**	**70.98**	**218**	P	**P**	**09 59 03.3**	**+0.2**
TOA0	**Torodi Ar. Sit**	**71.05**	**298**	P	**P**	**09 59 04.0**	**-0.1**
TOA0				IAmb	IAmb	09 59 07.2	
	comp=Z,10nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.05**	**298**	P	**P**	**09 59 04.2**	**0.0**
	comp=Z,6.1nm,0.8s,baz=109,slow=5.5,SNR=13						
	comp=Z,6.1nm,0.8s						
KARP	**Karpathos**	**71.86**	**331**	P	**P**	**09 59 08.8**	**+0.1**
CD2	**Chengdu**	**72.29**	**38**	*e*P	**P**	**09 59 11.6**	**+0.2**
KIC	**Kosan Boka**	**72.34**	**288**	⇑P	**P**	**09 59 14.7**	**+2.7**
	comp=Z,3.7nm,0.5s						
SIJI	**Sorong**	**72.36**	**81**	P	**P**	**09 59 12.4**	**+0.3**
	comp=Z,9.1nm,0.5s,baz=153,slow=3.9,SNR=4.6						
	comp=Z,9.1nm,0.5s						
KK31	**Karatay Array**	**72.46**	**7**	P	**P**	**09 59 12.0**	**0.0**
KK31				IAmb	IAmb	09 59 15.4	
	comp=Z,6.1nm,1.0s						
KKAR	**Karatay Array**	**72.46**	**7**	P	**P**	**09 59 12.0**	**0.0**
KKAR	**Karatay Array**	**72.46**	**7**	P	**P**	**09 59 11.8**	**-0.3**
LIC	**Lamto**	**72.51**	**288**	⇓*i*P	**P**	**09 59 16.0**	**+3.0**
	comp=Z,7.6nm,0.5s						
AAK	**Ala-Archa**	**72.53**	**10**	P	**P**	**09 59 13.0**	**+0.3**
DBIC	**Dimbokro**	**72.61**	**288**	P	**P**	**09 59 14.0**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=117,slow=5.0,SNR=4.6				

VOIR		81.16 335	⇑P		P	09 59 60.0	-1.2
HERR	Herculane	81.69 333	⇑P		P	10 00 03.0	-0.8
GZR	Gura Zlata	81.97 334	⇑P		P	10 00 05.5	+0.1
NJ2	Nanjing	82.00 47	*e*P		P	10 00 06.2	+0.4
NJ2			pmax	pmax			
	comp=Z,9.0nm,0.5s						
BELG	Belogornoye	82.07 352	LR	LR		10 39 48.8	
	comp=Z,41nm,18.1s,baz=203,slow=38						
PMG	Port Moresby	82.12 96	LR	LR		10 33 55.4	
	comp=Z,52nm,19.1s,baz=184,slow=34						
RPZ	Rata Peaks	83.28 137	LR	LR		10 28 55.2	
	comp=Z,154nm,18.6s,baz=230,slow=30						
HHC	Hu-ho-hao-te	83.94 36	*e*P		P	10 00 17.1	+1.3
HHC	Hu-ho-hao-te	83.94 36	*e*P		P	10 00 17.2	+1.4
HHC			pmax	pmax			
	comp=Z,20nm,0.8s						
HHC			pmax	pmax			
	comp=Z,240nm,5.5s						
AKASG	Malin Array Be	84.36 340	P		P	10 00 16.7	-0.9
	comp=Z,3.1nm,0.7s,baz=157,slow=4.0,SNR=10						
	comp=Z,3.1nm,0.7s						
ARU	Arti	85.30 359	LR	LR		10 37 12.6	
	comp=Z,38nm,18.8s,baz=316,slow=35						
ARU	Arti	85.30 359	P		P	10 00 20.2	-1.9
ARU			IAmb	IAmb		10 00 25.4	
	comp=Z,8.7nm,0.9s						
ZALV	Zalesovo Beam	85.31 14	P		P	10 00 21.6	-0.7
	comp=Z,3.4nm,0.7s,baz=213,slow=5.1,SNR=7.6						
ZALV			LR	LR		10 36 07.9	
	comp=Z,48nm,18.8s,baz=240,slow=34						
	comp=Z,3.4nm,0.7s						
ZALV	Zalesovo Beam	85.31 14	P		P	10 00 21.9	-0.4
OBN	Obninsk	86.55 346	LR	LR		10 38 52.7	
	comp=Z,17nm,20.6s,baz=360,slow=35						
SONM	Songino Array	86.82 29	P		P	10 00 30.5	+0.4
	comp=Z,0.4nm,0.4s,baz=194,slow=5.5,SNR=3.3						
SONM			LR	LR		10 37 06.2	
	comp=Z,62nm,20.6s,baz=216,slow=34						
	comp=Z,0.4nm,0.4s						
MDT	Midelt	87.58 310	LR	LR		10 39 23.6	
	comp=Z,118nm,19.4s,baz=98,slow=35						
KIRV	Kirov	87.97 354	LR	LR		10 41 09.3	
	comp=Z,49nm,18.0s,baz=167,slow=36						
MNK	Minsk	88.11 341	*i* P		P	10 00 34.4	-1.5
	comp=E,2.0nm,0.9s						
MNK			*i* P		P	10 00 34.4	-1.5
	comp=N,13nm,0.9s						
MNK			*i* P		P	10 00 34.4	-1.5
	comp=Z,17nm,0.9s,baz=151						
MNK			*i* S		S	10 11 02.3	-17
URZ	Urewera	90.20 135	LR	LR		10 34 08.3	
	comp=Z,119nm,18.7s,baz=316,slow=31						
KSRS	Korea Array	91.18 47	LR	LR		10 40 22.9	
	comp=Z,19nm,19.8s,baz=265,slow=35						
ESDC	Sonseca Array	91.33 316	P		P	10 00 52.2	+0.7
	comp=Z,1.9nm,0.8s,baz=117,slow=3.1,SNR=9.4						
	comp=Z,1.9nm,0.8s						
RCBR	Riachuelo	93.21 262	LR	LR		10 36 18.0	
	comp=Z,41nm,20.0s,baz=285,slow=31						
FINES	FINESS Array B	94.65 344	LR	LR		10 43 41.1	
	comp=Z,42nm,20.6s,baz=248,slow=36						
PLCA	Paso Flores	97.22 215	LR	LR		10 40 15.1	
	comp=Z,27nm,18.4s,baz=146,slow=32						
NOA	NORSAR Array B	98.58 338	LR	LR		10 45 43.2	
	comp=Z,29nm,19.9s,baz=275,slow=35						
CPUP	Villa Florida	99.13 233	LR	LR		10 36 34.5	
	comp=Z,13nm,21.8s,baz=48,slow=30						
YKA	Yellowknife Ar	146.56 356	PKPbc		PKPdf	10 07 25.8	+0.8
	comp=Z,3.5nm,0.7s,baz=348,slow=3.8,SNR=7.4						
PDAR	Pinedale Array	164.47 333	PKP		PKPdf	10 07 49.2	-0.5
	comp=Z,1.2nm,0.9s,baz=116,slow=3.4,SNR=7.8						
TXAR	Lajitas Array	166.64 274	PKP		PKPdf	10 07 52.5	+0.8
	comp=Z,0.5nm,0.8s,baz=125,slow=2.5,SNR=7.3						
NVAR	Mina Array Bea	170.76 357	PKP		PKPdf	10 07 54.7	+0.4
	comp=Z,0.5nm,0.7s,baz=241,slow=1.5,SNR=3.9						

*IDC **06** 09:50:50.3±0.9, 0°.21N×30°.05E, h0km, mb3.9/8, mbtmp4.0/8, ML2.7/1, MS3.5/6, Error ellipse: s-maj=22.2km s-min=9.7km az=52.0*
*EAF **06** 09:50:54.7±5.5, 0°.41N×30°.04E, h22km±36km, MD3.7*
ISC 06 09:50:53.6±0.8, 0°.17N±0°.05×30°.15E±0°.06, h27km±7km, n24, σ1§71/29, mb4.0/7, MS3.4/6, 1C, Uganda

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIL	Kilembe	0.15	283	*e*P	Pb	09 50 59.4	+0.2
KIL				*e*S	Sb	09 51 02.7	-0.3
MBAR	Mbarara	0.96	143	Pg	Pb	09 51 12.1	+0.4
	2μm,0.3s,baz=158,slow=23,SNR=4056						
MBAR				Lg	Lg	09 51 24.5	
	5μm,0.3s,baz=144,slow=22,SNR=26						
MBAR	Mbarara	0.96	143⇑	*e*P	Pb	09 51 12.2	+0.4
MBAR				*e*S	Sb	09 51 24.5	+0.3
MBAR	Mbarara	0.96	143	*e*P	Pb	09 51 12.3	+0.4
MBAR				*e*S	Sn	09 51 21.3	-3.1
MBAR	Mbarara	0.96	143	*e*P	Pb	09 51 12.2	+0.4
MBAR				*e*S	Sb	09 51 24.5	+0.3
ENT	Entebbe	2.32	93	*e*P	Pn	09 51 30.3	+0.1
ENT				*e*S	Sn	09 51 58.6	+0.6
LODK	Lodwar	6.13	58	*e*P	Pn	09 52 21.7	-0.9
LODK				*e*S	Sn	09 53 26.9	-4.9
KMBO	Kilima Mbogo	7.21	100	Pn	Pn	09 52 38.8	+1.2
	0.1nm,0.3s,baz=270,slow=24,SNR=13						
KMBO				Sn	Sn	09 54 02.5	+3.7
	0.1nm,0.3s,baz=233,slow=24,SNR=1.8						
KMBO				Lg	Lg	09 54 41.9	
	0.2nm,0.3s,baz=187,slow=24,SNR=8.2						
KMBO	Kilima Mbogo	7.21	100	*e*P	Pn	09 52 38.2	+0.6
KMBO				*e*S	Sn	09 53 55.8	-3.1
KARM1	KARONGA	10.72	160	*i* P	Pn	09 53 24.9	-0.6
KARM1				S	Sn	09 55 23.1	-1.7
KARM1	KARONGA	10.72	160	*i* P	Pn	09 53 24.9	-0.6
KARM1				S	Sn	09 55 23.1	-1.7
LSZ	Lusaka	15.47	187	Lg	Lg	09 58 52.6	
	0.1nm,0.3s,baz=97,slow=18,SNR=4.7						
MATP	Matopo	20.53	184	P	P	09 55 31.1	+0.9
	1.5nm,0.5s,baz=353,slow=12,SNR=3.8						
	1.5nm,0.5s						
LBTB	Lobatse	25.42	190	P	P	09 56 20.0	+0.8
	3.1nm,0.8s,baz=352,slow=8.9,SNR=2.5						
LBTB				LR	LR	10 06 32.4	
	comp=Z,142nm,19.1s,baz=74,slow=37						
	3.1nm,0.8s						
TORD	Torodi Ar. Bea	31.01	296	P	P	09 57 08.6	-0.7
	1.4nm,0.7s,baz=111,slow=8.1,SNR=7.5						
TORD				LR	LR	10 09 00.5	
	comp=Z,54nm,19.0s,baz=206,slow=35						
	1.4nm,0.7s						
BRTR	Keskin Array B	39.50	4	P	P	09 58 23.6	+1.4
	0.8nm,0.7s,baz=189,slow=10.0,SNR=3.9						
	0.8nm,0.7s						
KEST	Kesra	40.34	333	LR	LR	10 14 40.5	
	comp=Z,42nm,18.1s,baz=160,slow=36						
ESDC	Sonseca Array	50.15	326	P	P	09 59 46.6	-0.3
	1.0nm,0.8s,baz=140,slow=7.0,SNR=7.4						
	1.0nm,0.8s						
NOA	NORSAR Array B	62.43	350	P	P	10 01 14.5	+0.4
	0.9nm,0.8s,baz=164,slow=9.8,SNR=2.5						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	64.83	32	LR	LR	10 31 50.8	
	comp=Z,75nm,20.7s,baz=201,slow=38						
MKAR	Makanchi Array	64.92	37	P	P	10 01 32.1	+1.3
	2.8nm,0.7s,baz=241,slow=6.2,SNR=11						
	2.8nm,0.7s						
ZALV	Zalesovo Beam	69.87	31	P	P	10 02 02.6	+0.7
	1.6nm,0.6s,baz=263,slow=5.7,SNR=3.1						
	1.6nm,0.6s						
MAW	Mawson	71.35	167	LR	LR	10 29 21.1	
	comp=Z,20nm,21.5s,baz=51,slow=32						
SNAA	Sanae	74.77	190	LR	LR	10 32 35.9	
	comp=Z,35nm,19.3s,baz=11,slow=34						

*IDC **06** 10:00:45.9±2.3, 7°.08S×129°.67E, h120km±21km, mb3.6/2, mbtmp4.1/5, Error ellipse: s-maj=52.0km s-min=19.2km az=82.0*
ISC 06 10:00:46.2±1.0, 7°.19S±0°.09×129°.6E±0°.2, h139km, n6, σ3§22/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.49	15	P	Pn	10 02 16.4	-3.0
	7.3nm,0.2s,baz=21,slow=23,SNR=16						
SIJI				S	Sn	10 03 21.8	-11
	17nm,0.3s,baz=104,slow=23,SNR=14						
FITZ	Fitzroy Crossi	11.52	199	P	Pn	10 03 26.8	+0.2
	1.3nm,0.3s,baz=29,slow=12,SNR=18						
FITZ				S	Sn	10 05 29.2	-4.5
	7.4nm,0.4s,baz=116,slow=22,SNR=10						
WRA	Warramunga Arr	13.49	161	P	Pn	10 03 50.6	-1.5
	1.0nm,0.3s,baz=343,slow=13,SNR=52						
WRA				S	Sn	10 06 12.3	-9.0
	4.8nm,0.5s,baz=336,slow=23,SNR=10						
ASAR	Alice Springs	16.90	166	P	P	10 04 36.8	+2.5
	2.0nm,0.4s,baz=345,slow=9.8,SNR=46						
ASAR				ScP	ScP	10 12 37.1	+1.6
	0.3nm,0.5s,baz=4.9,slow=1.5,SNR=4.2						
STKA	Stephens Creek	26.99	157	P	P	10 06 17.8	+2.7
	1.7nm,0.7s,baz=349,slow=7.6,SNR=5.4						
	1.7nm,0.7s						
MKAR	Makanchi Array	68.17	327	P	P	10 11 33.5	+2.0
	0.6nm,0.5s,baz=116,slow=8.2,SNR=8.7						
	0.6nm,0.5s						

*BER **06** 10:03:45.2±1.9, 67°.91N×33°.50E, h0km, ML1.6, Suspected explosion*
HEL 06 10:03:46.6±0.2, 68°.19N×33°.19E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	Lovozero	0.62	117	PG	Pg	10 03 57.8	-0.7
LVZ				SG	Sg	10 04 03.2	-3.3
VRF	Varrio	1.42	254	PG	Pn	10 04 12.0	-1.6
VRF				MSG		10 04 29.4	
	comp=Z,6.5nm,0.2s						
VRF				SG	Sg	10 04 30.2	-1.9
OLKF	Oulanka, Finla	2.38	220	PB	Pn	10 04 27.4	+0.6
OLKF				SG	Sb	10 04 58.8	-1.4
KU6	Riekki	2.52	212	PB	Pn	10 04 30.1	+1.3
KU6				MSG		10 05 01.2	
	comp=Z,1.9nm,0.2s						
KU6				SG	Sb	10 05 04.6	+0.3
SGF	Sodankyl	2.64	257	PG	Pb	10 04 33.6	-1.0
SGF				SG	Sb	10 05 06.7	-0.8
KEV	Kevo	2.73	308	*e*P	Pn	10 04 32.9	+1.3
KEV				*e*S	Sn	10 05 06.3	+1.1
KEV	Kevo	2.73	308	PB	Pn	10 04 32.8	+1.2
KEV				SB	Sn	10 05 07.1	+1.9
KEV				MSG		10 05 07.2	
	comp=Z,3.9nm,0.2s						
MSF	Maaselka	2.80	217	PB	Pn	10 04 34.4	+1.8
MSF				SB	Sb	10 05 11.0	-1.4
ARA0	ARCESS Array S	3.10	299	*e*P	Pn	10 04 34.9	-1.8
ARA0				*e*S	Sn	10 05 15.6	+1.3
ARA0				IAML		10 05 28.7	
	comp=Z,3.7nm,0.5s						
ARA0	ARCESS Array S	3.10	299	PN	Pn	10 04 36.7	0.0
	baz=116						
ARA0				SN	Sn	10 05 14.7	+0.4
RNF	Rovaniemi	3.19	244	PN	Pn	10 04 37.8	-0.2
	baz=60						
RNF				SN	Sn	10 05 16.1	-0.5
HEF	Hetta	3.55	278	*e*P	Pn	10 04 42.0	-0.9
HEF				*e*S	Sn	10 05 24.1	-1.4
HEF	Hetta	3.55	278	PN	Pn	10 04 42.3	-0.6
HEF				SN	Sn	10 05 25.1	-0.3
KLF	Kolari	3.64	259	PN	Pn	10 04 44.4	+0.3
	baz=72						
KLF				SG	Sb	10 05 39.3	+2.9
KTK1	Kautokeino	3.74	287	*e*P	Pn	10 04 45.7	+0.2
KTK1				*e*		10 05 38.3	
KTK1				IAML		10 05 45.4	
	comp=Z,3.0nm,0.4s						
KTK1	Kautokeino	3.74	287	PN	Pn	10 04 45.9	+0.4
KTK1				SG	Sb	10 05 39.6	+0.3
PAJU	Pajala	4.03	258	PN	Pn	10 04 48.8	-0.6
PAJU				SG	Sb	10 05 50.8	+3.3
TOF	Tornio	4.05	243	PG	Pb	10 04 59.8	+1.1
LANU	Lannavaara	4.20	273	SG	Sb	10 05 54.4	+2.1
KIF	Kilpisjarvi	4.61	286	*e*S	Sn	10 05 48.8	-2.7
KIF	Kilpisjarvi	4.61	286	PB	Pb	10 05 04.8	-3.5
KIF				SN	Sn	10 05 49.7	-1.9

NOU 06 10:03:52.7, 12°.10S×167°.78E, h173km, mb4.1/8, Santa Cruz Islands, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	5.61	176	P	Pn	10 05 15.1	+0.6
KOUNC	Koumac, New Ca	9.05	201	P	Pn	10 05 59.9	+0.1
MARNC	Mare, Loyalty	9.33	179	P	Pn	10 06 03.1	-0.5
YATNC	Mamie plateau,	9.94	185	P	Pn	10 06 11.9	+0.3
DZM	Mont Dzumac	10.00	187	P	Pn	10 06 12.0	-0.4

UPP 06 10:04:02.0±0.1, 60°.16N×19°.79E, h0km, ML1.6, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	Aland	0.10	80	P	Pg	10 04 04.3	+0.3
AAL				S	Sg	10 04 05.7	+0.3
GRAU	Graesoe	0.65	286	P	Pg	10 04 14.3	-0.1
GRAU				S	Sg	10 04 23.3	+0.6
NRTU	Norrtaelje	0.76	231	P	Pg	10 04 16.3	-0.2
FORU	Forsmark	0.83	287	P	Pg	10 04 17.7	-0.2
FLYU	Flymyra	0.95	269	P	Pg	10 04 19.6	-0.6
OSTU	Oestervaala	1.33	274	P	Pg	10 04 26.3	-1.1
IGGU	Iggoen	1.42	301	P	Pn	10 04 27.9	-1.1
IGGU				S	Sg	10 04 47.4	-0.1
NYNU	Nynaeshamn	1.47	219	P	Pn	10 04 29.4	-0.3

IDC 06 10:04:43.9±4.0, 13°.09N×92°.65E, h0km, mb3.6/2, mbtmp3.5/3, MS3.8/2, Error ellipse: s-maj=93.6km s-min=46.9km az=104.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.07	48	Pn	Pn	10 06 42.5	+0.1
	1.1nm,0.4s,baz=239,slow=15,SNR=7.4						
H08S3	Diego Garcia H	28.73	225	T	T	10 41 49.1	
	baz=47						
H08S2	Diego Garcia H	28.73	225	T	T	10 41 52.7	
	baz=47						
H08S1	Diego Carcia H	28.74	225	T	T	10 41 47.6	
	baz=47						
WRA	Warramunga Arr	52.54	128	P	P	10 13 58.7	-0.8
	0.5nm,0.8s,baz=298,slow=6.5,SNR=2.0						
WRA				PcP	PcP	10 15 10.0	0.0
	0.3nm,0.5s,baz=317,slow=2.9,SNR=8.6						
	0.5nm,0.8s						
ASAR	Alice Springs	54.42	132	P	P	10 14 13.5	+0.2
	0.4nm,0.5s,baz=308,slow=6.6,SNR=7.2						
	0.4nm,0.5s						
NRIK	Noril'sk	56.30	358	LR	LR	10 44 01.9	
	comp=Z,66nm,18.7s,baz=197,slow=42						
SPITS	Spitsbergen Ar	74.46	348	LR	LR	10 57 36.2	
	comp=Z,56nm,18.0s,baz=109,slow=43						

IDC 06 10:14:36.5±1.1, 44°.08N×28°.58W, h0km, mb3.9/4, mbtmp3.8/5, ML3.6/1, MS3.5/28, Error ellipse: s-maj=85.0km s-min=22.0km az=27.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.82	95	P	P	10 18 56.8	-0.9
	baz=289,slow=11,SNR=5.2						
ESDC				LR	LR	10 24 35.7	
	comp=Z,112nm,19.0s,baz=324,slow=32						
	1.0nm,1.0s						
EKA	Eskdalemuir Ar	19.80	46	LR	LR	10 24 41.1	
	comp=Z,166nm,18.6s,baz=188,slow=31						
MDT	Midelt	21.80	113	LR	LR	10 26 17.6	
	comp=Z,51nm,21.1s,baz=0.0,slow=32						
SCHQ	Schefferville	26.77	307	LR	LR	10 29 06.7	
	comp=Z,108nm,19.7s,baz=57,slow=32						
DAVOX	Davos/Dischmat	26.94	71	LR	LR	10 29 42.7	
	comp=Z,109nm,19.1s,baz=262,slow=34						
NOA	NORSAR Array B	28.94	40	LR	LR	10 30 38.4	
	comp=Z,28nm,18.1s,baz=315,slow=33						
GERES	GERESS Array B	29.23	66	LR	LR	10 31 04.2	
	comp=Z,94nm,18.3s,baz=264,slow=34						
HFS	Hagfors	29.88	43	LR	LR	10 30 13.0	
	comp=Z,66nm,20.9s,baz=123,slow=31						
FRB	Frobisher Bay	29.94	325	LR	LR	10 29 09.1	
	comp=Z,93nm,21.0s,baz=43,slow=29						
VRAC	Vranov	31.05	64	LR	LR	10 32 14.3	
	comp=Z,102nm,19.4s,baz=220,slow=34						
SADO	Sadowa	35.65	289	LR	LR	10 35 30.2	
	comp=Z,124nm,18.8s,baz=28,slow=35						
AKASG	Malin Array Be	38.81	59	LR	LR	10 36 40.6	
	comp=Z,54nm,21.0s,baz=274,slow=34						
TORD	Torodi Ar. Bea	40.27	131	P	P	10 22 15.5	+0.2
	2.1nm,0.7s,baz=328,slow=8.2,SNR=14						
	2.1nm,0.7s						
SJG	San Juan	40.76	243	LR	LR	10 35 23.7	
	comp=Z,27nm,19.6s,baz=68,slow=31						
TKL	Tuckaleechee C	42.50	278	LR	LR	10 38 12.5	
	comp=Z,31nm,21.7s,baz=95,slow=33						
MDP	Montagnes des	44.22	216	LR	LR	10 36 42.0	
	comp=Z,26nm,19.4s,baz=52,slow=30						
BRTR	Keskin Array B	45.54	73	LR	LR	10 41 56.4	
	comp=Z,46nm,21.3s,baz=320,slow=36						
AKTO	Aktyubinsk	55.92	50	LR	LR	10 47 14.7	
	comp=Z,34nm,18.8s,baz=291,slow=35						
NEW	Newport	58.13	308	P	P	10 24 31.9	+0.2
	1.0nm,0.5s,baz=34,slow=7.3,SNR=4.0						
	1.0nm,0.5s						
ANMO	Albuquerque	58.70	290	LR	LR	10 49 20.0	
	comp=Z,90nm,19.6s,baz=54,slow=36						
TXAR	Lajitas Array	60.01	283	P	P	10 24 44.2	-0.9
	1.0nm,1.1s,baz=89,slow=4.9,SNR=5.9						
TXAR				LR	LR	10 50 33.6	
	comp=Z,47nm,19.6s,baz=42,slow=36						
	1.0nm,1.1s						
ELK	Elko	61.15	300	P	P	10 24 53.6	+0.8
	0.3nm,0.4s,baz=50,slow=16,SNR=1.8						
ELK				LR	LR	10 49 57.0	
	comp=Z,59nm,19.7s,baz=42,slow=35						
	0.3nm,0.4s						
CMIG	Matias Romero	61.35	266	LR	LR	10 48 58.8	
	comp=Z,28nm,20.7s,baz=62,slow=34						
PFO	Pinyon Flats O	66.16	294	LR	LR	10 54 42.1	
	comp=Z,73nm,18.2s,baz=36,slow=36						
LPIG	La Paz	67.90	283	LR	LR	10 54 26.4	
	comp=Z,37nm,19.6s,baz=44,slow=35						
ATAH	Atahualpa	67.92	235	LR	LR	10 53 53.7	
	comp=Z,26nm,19.4s,baz=104,slow=35						
MBAR	Mbarara	68.87	113	LR	LR	10 55 42.7	
	comp=Z,53nm,18.4s,baz=335,slow=36						
TSUM	Tsumeb	75.81	135	LR	LR	10 57 19.4	
	comp=Z,36nm,19.4s,baz=329,slow=34						
LBTB	Lobatse	84.77	132	LR	LR	11 03 03.4	
	comp=Z,26nm,20.1s,baz=304,slow=34						
BOSA	Boshof	87.50	135	LR	LR	11 06 01.5	
	comp=Z,20nm,18.0s,baz=10,slow=35						

*IDC **06** 10:15:41.9±3.1, 36°.61N×142°.53E, h0km, mb3.6/2, mbtmp3.6/3, ML2.8/1, Error ellipse: s-maj=66.1km s-min=35.3km az=39.0*
*JMA **06** 10:15:45.8±0.5, 36°.7N±0°.8×14°.2E±°, h41km, MV3.0/31, E OFF FUKUSHIMA PREF*
ISC 06 10:15:43.7±1.3, 36°.70N±0°.05×142°.31E±0°.09, h15km, n19, σ1§94/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.33	300	P	Pb	10 16 07.9	-0.5
JHO	Hitachi	1.40	267	P	Pb	10 16 08.7	-1.0
JHYU	Hitachinakayam	1.44	256	P	Pb	10 16 09.9	-0.2
JFFD	Fukushimafurud	1.46	286	*e*P	Pb	10 16 09.8	-0.7
JMST	Minamisoumatoc	1.53	312	P	Pb	10 16 10.6	-1.2
JMST				*e*S	Sn	10 16 29.4	-0.7
JMM	Marumori	1.68	314	*e*P	Pb	10 16 12.8	-1.6
JIO	Ouri	1.91	337	P	Pb	10 16 16.4	-1.9
JOU	Okura	2.12	322	P	Pb	10 16 20.6	-1.3
JFY	Yanaizu	2.20	289	*e*P	Pb	10 16 21.1	-2.2
BSO1	Boso 1	2.31	208	*e*P	Pb	10 16 22.0	-2.8
BSO1				*e*S	Sn	10 16 49.6	+0.9
JAG	Ashikaga	2.32	264	P	Pb	10 16 22.6	-2.7
JMK	Ichinoseki	2.41	339	*e*P	Pb	10 16 24.1	-2.7
JYK	Kaneyama	2.70	326	*e*P	Pn	10 16 28.1	+1.5
MJAR	Matsushiro Arr	3.30	268	Pn	Pn	10 16 37.2	+2.3
	0.9nm,0.3s,baz=98,slow=10,SNR=44						
MJAR				Sn	Sb	10 17 19.1	-3.0
	0.2nm,0.3s,baz=130,slow=15,SNR=4.9						
	6.5nm,0.3s						
H11N2	WAKE ISLAND Hy	27.36	121	T	T	10 50 09.4	
	baz=313,slow=75,SNR=5.8						
H11N1	WAKE ISLAND Hy	27.37	122	T	T	10 50 10.8	
	baz=313,slow=75,SNR=3.0						
H11N3	WAKE ISLAND Hy	27.38	121	T	T	10 50 11.2	
	baz=313,slow=75,SNR=3.2						
SONM	Songino Array	28.57	304	P	P	10 21 41.2	+2.1
	0.5nm,0.7s,baz=108,slow=8.0,SNR=1.8						
	0.5nm,0.7s						
WRA	Warramunga Arr	56.84	189	P	P	10 25 27.7	0.0
	1.0nm,1.2s,baz=4.9,slow=8.8,SNR=1.2						
	1.0nm,1.2s						

*MOS **06** 10:22:58.9±1.2, 30°.46N×142°.09E, h11km, mb5.0/37, Error ellipse: s-maj=9.1km s-min=4.4km az=115.4*
*BJI **06** 10:22:58.0±0.0, 30°.50N×142°.20E, h10km, mb4.7/56, mB4.8/32, Ms4.1/15, Ms7 3.8/15*
*JMA **06** 10:22:59.6±0.2, 30°.5N±0°.6×14°.2E±°, h50km, MV4.7/50, NEAR TORISHIMA IS*
*NIED **06** 10:22:59.6, 30°.53N×142°.41E, h50km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.07; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-1.08; $M_{r\theta}$-0.76; $M_{\theta\phi}$0.36; $M_{\phi r}$-0.41; Fault plane solution: $M_0$1.39000×10^{15} NP1: ϕ_s318.00000°, δ47.00000°, λ48.00000°. NP2: ϕ_s192.00000°, δ57.00000°, λ126.00000°.*
*IDC **06** 10:22:59.3±0.4, 30°.46N×142°.07E, h0km, mb4.6/31, mbtmp4.7/35, ML4.5/3, MS3.3/5 Error ellipse: s-maj=13.8km s-min=11.3km az=93.0*
*NEIC **06** 10:23:00.4±1.8, 30°.49N±0°.06×142°.3E±0°.1, h10km±1km, mb4.8/165, Error ellipse: s-maj=16.3km s-min=9.9km az=79.0*
ISC 06 10:22:59.2±0.7, 30°.50N±0°.04×142°.23E±0°.05, h5km±4km, n499, σ1§39/454, mb4.8/147, MS3.6/9, 21C-13D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.88	314	*e*P	Pn	10 23 46.2	+0.5
JHCJ	Hachijojimakas	3.30	322	*e*P	Pn	10 23 50.6	-0.8
JHJ2	Mitsune	3.32	322		Pn	10 23 51.1	-0.7
JHJ2	Mitsune	3.32	322	P	Pn	10 23 51.2	-0.5
JHJ2				*e*S	Sn

64nm,0.4s
MAJO Matsushiro 6.90 332 Pn **Pn 10 24 42.3 +1.3**
MAJO Matsushiro 6.90 332 *de*P **Pn 10 24 42.4 +1.4**
MAJO pmax pmax
comp=Z,87nm,0.7s
MAJO Matsushiro 6.90 332 P **Pn 10 24 42.9 +1.9**
MJB9 Matsu-Tunnel 6.90 332 Pn 10 24 43.2 +2.2
JMM Marumori 7.45 351 Pn **Pn 10 24 47.7 -0.8**
JMN Monobe 7.78 297 Pn **Pn 10 24 55.1 +2.0**
JSD Sado 8.21 338 Pn **Pn 10 24 58.0 -0.9**
JMK Ichinoseki 8.48 355 P **Pn 10 25 01.6 -1.0**
JHS Saijyo 8.89 303 Pn **Pn 10 25 10.0 +1.7**
JTM Tenmabayashi 10.31 355 Pn 10 25 26.8 -1.0
ERM Erimo 11.52 3⇑ *i*P **Pn 10 25 41.5 -2.8**
JAMN Amaminishikomi 11.60 262 S **Sn 10 27 58.2 +2.8**
JEW Eniwo 12.34 357 Pn **Pn 10 25 55.1 -0.3**
JOW Kunigami 12.78 257 LR LR 10 29 58.7
comp=Z,81nm,20.8s,baz=118,slow=33
TJN Taejon 13.72 299‖ *e*P **Pn 10 26 15.7 +1.3**
TJN Taejon 13.72 299 P P 10 26 19.2 -4.0
KSRS Korea Array 13.74 304 Pn **Pn 10 26 16.9 +2.4**
comp=Z,0.7nm,0.3s,baz=112,slow=12,SNR=21
KSRS Korea Array 13.74 304 P **Pn 10 26 17.0 +2.4**
KS19 Wonju Array Si 13.80 304 Pn 10 26 17.0 +1.5
INCN Inchon 14.68 302 Pn **Pn 10 26 28.8 +1.2**
INCN Inchon 14.68 302 P **Pn 10 26 28.8 +1.2**
INCN Inchon 14.68 302 P P 10 26 31.9 -2.0
KUR Kuril'sk 15.37 15‖ *e*P **Pn 10 26 36.0 -0.6**
USA0B Ussuriysk Arra 15.90 332 Pn **Pn 10 26 42.4 -1.2**
USA0B Ussuriysk Arra 15.90 332 P **Pn 10 26 42.4 -1.2**
USA0B pmax pmax
comp=Z,19nm,0.9s
USRK Ussuriysk Ar. 15.90 332 Pn **Pn 10 26 42.4 -1.2**
comp=Z,16nm,0.7s,baz=146,slow=11,SNR=27
YSS Yuzh-Sakhalins 16.44 1 Pn 10 26 49.2 -1.3
YSS Yuzh-Sakhalins 16.44 1‖ *e*P **Pn 10 26 49.8 -0.7**
YSS *e*S **Sn 10 29 46.6 -6.6**
YSS pmax pmax
comp=Z,34nm,0.8s
GUMO Guam 17.00 171 P **P 10 26 59.8 0.0**
GUMO Guam 17.00 171 P **P 10 26 59.8 0.0**
GUMO pmax pmax
comp=Z,265nm,0.9s
GUMO Guam 17.00 171 P **P 10 26 59.5 -0.3**
MDJ Mudanjiang 17.26 328 IAmb IAmb 10 27 05.2
comp=Z,76nm,0.9s
MDJ Mudanjiang 17.26 328 P **P 10 27 03.2 +0.7**
MDJ pmax pmax
comp=Z,96nm,0.9s
MDJ pmax pmax
comp=Z,110nm,4.1s
MDJ Mudanjiang 17.26 328 P **P 10 27 02.3 -0.2**
SNY Shenyang 18.79 312⇑ P **Pn 10 27 19.5 -0.2**
SNY S **Sn 10 30 45.5 -4.7**
SNY pmax pmax
comp=Z,21nm,0.7s
SNY pmax pmax
comp=Z,340nm,4.3s
SNY LR LR
comp=Z,190nm,4.8s
SNY LR LR
comp=Z,240nm,4.8s
SNY LR LR
comp=Z,230nm,4.9s
CN2 Changchun 18.80 320 P **P 10 27 18.5 -0.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
DL2 Dalian 18.87 302 P **Pn 10 27 22.1 +1.3**
DL2 *e*S **Sn 10 30 52.3 0.0**
DL2 pmax pmax
comp=Z,29nm,0.9s
DL2 LR LR
comp=Z,320nm,14.2s
YULB Yu-li 19.94 254 P **Pn 10 27 32.7 -1.0**
YULB IAmb IAmb 10 27 55.1
comp=Z,59nm,1.3s
NJ2 Nanjing 20.03 280 *e*P Pn 10 27 33.9 -0.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
SSLB Suanglung 20.06 256 P Pn 10 27 34.2 -1.0
SSLB IAmb IAmb 10 27 58.5
comp=Z,32nm,0.9s
SSLB Suanglung 20.06 256 P Pn 10 27 38.8 +3.6
KLR Kul'dur 20.33 340 P **P 10 27 36.1 +0.1**
comp=Z,14nm,0.6s,baz=145,slow=9.1,SNR=35
comp=Z,14nm,0.6s
KLR Kul'dur 20.33 340 *d i*P Pn 10 27 36.7 -1.4
KLR pmax pmax
comp=Z,24nm,1.3s
TYV Tymovskoe 20.35 1 *e*P Pn 10 27 38.8 +0.5
TYV *e*S Sn 10 31 31.0 +3.3
TYV pmax pmax
comp=Z,400nm,3.2s
TYV pmax pmax
comp=Z,42nm,1.4s
TYV smax smax
comp=N,300nm,3.3s
TYV smax smax
comp=E,200nm,3.3s
GRNR Gornyy 20.71 350⇑ *i*P Pn 10 27 43.0 +0.4
GRNR pmax pmax
comp=N,10.0nm,0.8s
GRNR pmax pmax
comp=Z,9.0nm,0.7s
BJT Baijiatuau 23.23 301 P **P 10 28 05.7 -1.6**
BJT Baijiatuau 23.23 301 P **P 10 28 05.7 -1.6**
BJT pmax pmax
comp=Z,27nm,0.6s
BJI Beijing 23.23 301 P **P 10 28 05.6 -1.6**
BJI pmax pmax
comp=Z,36nm,0.7s
HNS HongShan 23.79 294⇑ P **P 10 28 11.8 -1.0**
HNS S **S 10 32 26.0 -2.9**
HNS pmax pmax
comp=Z,12nm,0.7s
HNS LR LR
comp=Z,160nm,11.9s
HNS LR LR
comp=Z,100nm,14.3s
XLT XiLinHaoTe 24.63 310 *e*P **P 10 28 17.4 -3.2**
XLT pP sP 10 28 21.4 +2.0
XLT sP pP 10 28 24.4 +4.6
XLT pmax pmax
comp=Z,24nm,0.8s
XLT pmax pmax
comp=Z,96nm,4.2s
H11S3 WAKE ISLAND Hy 25.20 113 T T 10 54 51.9
baz=304,slow=74,SNR=11
H11S1 WAKE ISLAND Hy 25.21 113 T T 10 54 50.2
baz=304,slow=74,SNR=18
H11S2 WAKE ISLAND Hy 25.22 113 T T 10 54 53.6
baz=304,slow=74,SNR=11
PETK Petropavlovsk- 25.26 22 P **P 10 28 29.1 +3.0**
comp=Z,5.3nm,1.1s,baz=181,slow=10,SNR=1.8
comp=Z,5.3nm,1.1s
HIA Hailar 25.32 324 P **P 10 28 27.2 +0.5**
HIA Hailar 25.32 324 P **P 10 28 27.2 +0.5**
HIA pmax pmax
comp=Z,34nm,0.6s
LYN LuoYang 25.37 287 *e*P **P 10 28 28.7 +1.4**
LYN pmax pmax
comp=Z,20nm,0.4s
TIY Taiyuan 25.62 294 *e*P **P 10 28 30.0 +0.3**
TIY pmax pmax
comp=Z,24nm,0.6s
TIY LR LR
comp=Z,220nm,15.8s
TIY LR LR
comp=Z,120nm,15.8s
TIY LR LR
comp=Z,96nm,12.4s
ZEA Zeya 25.64 339 *e*P **P 10 28 30.7 +1.2**
ZEA pmax pmax
comp=E,30nm,0.8s
ZEA pmax pmax
comp=Z,90nm,0.8s
HHC Hu-ho-hao-te 26.84 301 *e*P **P 10 28 39.6 -1.1**
HHC pmax pmax
comp=Z,28nm,0.7s
HHC pmax pmax
comp=Z,160nm,4.8s
XAN Xi'an 28.31 286⇑ P **P 10 28 53.7 -0.2**
XAN pP sP 10 28 58.1 +5.5
XAN pmax pmax
comp=Z,14nm,0.9s

MA2 Magadan 29.65 9 P **P 10 29 06.0 +0.6**
comp=Z,11nm,0.8s,baz=165,slow=13,SNR=3.2
comp=Z,11nm,0.8s
MA2 Magadan 29.65 9⇑ *e*P **P 10 29 08.3 +2.9**
MA2 pmax pmax
comp=Z,9.0nm,0.6s
ULN Ulaanbaatar 31.96 313 P **P 10 29 26.8 +0.7**
ULN Ulaanbaatar 31.96 313 *ce*P **P 10 29 27.4 +1.2**
ULN pmax pmax
comp=Z,24nm,1.3s
ULN Ulaanbaatar 31.96 313 P **P 10 29 26.8 +0.7**
comp=Z,11nm,0.7s
SONM Songino Array 32.37 313 P **P 10 29 30.8 +1.1**
comp=Z,11nm,0.6s,baz=114,slow=8.6,SNR=18
comp=Z,11nm,0.6s
SONM Songino Array 32.37 313 P **P 10 29 30.6 +0.9**
SONM IAmb IAmb 10 29 35.5
comp=Z,7.2nm,0.7s
SONM Songino Array 32.37 313 P **P 10 29 30.6 +0.9**
SONM pmax pmax
comp=Z,7.0nm,0.7s
LZH Lanzhou 32.42 290 *e*P **P 10 29 28.8 -1.5**
LZH pP pwP 10 29 35.4 -4.3
LZH pmax pmax
comp=Z,21nm,1.4s
LZH LR LR
comp=Z,160nm,15.1s
LZH LR LR
comp=Z,170nm,16.7s
SMPI Sarmi 32.48 187 P **P 10 29 31.0 +0.3**
comp=Z,14nm,0.9s
YAK Yakutsk 32.59 349 *e*P **P 10 29 31.5 +0.2**
YAK *e**PP **pwP 10 29 36.9 -3.4**
YAK *e* 10 30 38.6
YAK *e* 10 32 16.6
YAK *e*S **S 10 34 48.9 +1.8**
YAK *e**SS sS 10 34 55.2 +9.3
YAK *e*SS **SnSn 10 36 43.7 +2.8**
YAK *e* 10 39 58.2
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,96nm,4.6s
YAK pmax pmax
comp=N,136nm,3.6s
YAK pmax pmax
comp=E,97nm,3.9s
YAK smax smax
comp=E,38nm,2.4s
YAK smax smax
comp=N,32nm,2.9s
CD2 Chengdu 32.97 281 *e*P **P 10 29 34.5 -0.6**
SEY Seymchan 33.10 8 P **P 10 29 37.0 +1.3**
comp=N,5.6nm,0.6s,baz=196,slow=9.4,SNR=15
comp=N,5.6nm,0.6s
SEY Seymchan 33.10 8 *ce*P **P 10 29 38.2 +2.4**
SEY pmax pmax
comp=Z,26nm,2.5s
BOD Bodaibo 33.53 333 *e*P **P 10 29 40.3 +0.7**
BOD pmax pmax
comp=Z,14nm,1.0s
FAKI Fak Fak 34.57 198 P **P 10 29 46.7 -2.3**
FAKI IAmb IAmb 10 29 50.4
comp=Z,7.9nm,0.5s
ZAK Zakamensk 35.15 316 *e*P **P 10 29 53.7 -0.1**
ZAK pmax pmax
comp=Z,9.0nm,1.5s
GTA Gaotai 35.61 296 *e*P **P 10 29 57.6 -0.4**
GTA pP sP 10 30 02.7 +6.0
GTA sP pwP 10 30 06.0 -1.3
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,73nm,4.7s
GTA LR LR
comp=Z,92nm,17.1s
GTA LR LR
comp=Z,150nm,17.1s
GTA LR LR
comp=Z,77nm,17.1s
PZH PanZhiHua 35.67 274 P **P 10 30 01.0 +2.4**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,130nm,5.0s
SANI Sanana 35.88 208 P **P 10 29 58.3 -2.0**
comp=Z,505nmcomp=Z,25nm,0.7s
SANI Sanana 35.88 208 P **P 10 29 59.7 -0.6**
GOMU GeErMu 39.70 291 P **P 10 30 32.3 -0.6**
GOMU pP sP 10 30 35.0 +3.3
GOMU pmax pmax
comp=Z,10.0nm,0.8s
GOMU pmax pmax
comp=Z,56nm,4.7s
BILL Bilibino 40.15 14 *e*P **P 10 30 36.8 +1.0**
BILL pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 40.95 263 P **P 10 30 42.8 -0.2**
comp=Z,0.6nm,0.4s,baz=63,slow=6.8,SNR=4.9
CMAR PcP **PcP 10 32 44.8 +1.3**
comp=Z,0.4nm,0.3s,baz=13,slow=1.2,SNR=1.5
CMAR LR LR 10 48 57.3
comp=Z,31nm,18.2s,baz=200,slow=38
comp=Z,0.6nm,0.4s
CMAR Chiang Mai Arr 40.95 263 *i* P **P 10 30 44.0 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
TIXI Tiksi 41.84 354 P **P 10 30 50.1 +0.5**
comp=Z,11nm,0.7s,baz=90,slow=17
comp=Z,11nm,0.7s
TIXI Tiksi 41.84 354 *ce*P **P 10 30 50.5 +0.8**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
BSSI Bau Bau, Buton 41.96 213 P **P 10 30 46.8 -4.5**
comp=Z,48nm,1.3s
EDFI Ende, Flores 43.72 210 P **P 10 31 04.0 -1.6**
comp=Z,11nm,0.7s
MTN Manton Dam 44.39 196 P **P 10 31 09.7 -1.1**
MTN Manton Dam 44.39 196 P **P 10 31 10.8 -0.1**
WMQ Urumqi 44.69 303 *e*P **P 10 31 15.1 +1.9**
WMQ pmax pmax
comp=Z,26nm,0.8s
DGZ Jazzator, Alta 45.00 311 *d i*P **P 10 31 16.5 +0.9**
DGZ pmax pmax
comp=Z,26nm,0.9s
TNA Tin City 46.31 26 P **P 10 31 24.4 -1.1**
baz=246
ZSN Zaisan 46.62 308 *e*P **P 10 31 27.7 -0.6**
ZSN Zaisan 46.62 308 *e*P **P 10 31 27.7 -0.6**
baz=308
ZAA0 Zalesovo Array 46.99 317 IAmb IAmb 10 31 33.0
comp=Z,5.7nm,0.9s
ZALV Zalesovo Beam 46.99 317 P **P 10 31 32.0 +1.0**
comp=Z,3.0nm,0.5s,baz=100,slow=8.3,SNR=14
ZALV PcP **PcP 10 33 04.0 +0.6**
comp=Z,5.4nm,0.5s,baz=104,slow=3.2,SNR=10
ZALV LR LR 10 52 50.2
comp=Z,66nm,18.2s,baz=24,slow=38
comp=Z,3.0nm,0.5s
ZALV Zalesovo Beam 46.99 317 P **P 10 31 30.0 -1.1**
KNRA Kununurra 47.70 198 P **P 10 31 36.2 -0.7**
MK31 Makanchi Array 48.39 307 P **P 10 31 42.8 +0.7**
MK31 IAmb IAmb 10 31 43.3
comp=Z,8.9nm,0.8s
MK31 Makanchi Array 48.39 307 P **P 10 31 42.8 +0.7**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 48.39 307 P **P 10 31 42.7 +0.5**
comp=Z,8.6nm,0.6s,baz=90,slow=9.7,SNR=87
comp=Z,8.6nm,0.6s
MKAR Makanchi Array 48.39 307 P **P 10 31 42.8 +0.7**
MAKZ Makanchi 48.61 307 P **P 10 31 44.2 +0.4**
MAKZ IAmb IAmb 10 31 45.0
comp=Z,7.9nm,0.7s
MAKZ Makanchi 48.61 307 P **P 10 31 44.2 +0.4**
N16K Nishlik Lake 48.79 34 P **P 10 31 43.8 -1.2**
baz=260
P16K Nushagak River 48.94 36 P **P 10 31 45.6 -0.4**
baz=262
O16K Kokwok River B 48.98 36 P **P 10 31 45.0 -1.4**
baz=261
NRIK Noril'sk 49.52 338 P **P 10 31 49.9 -0.5**
comp=Z,21nm,0.8s,baz=127,slow=8.4,SNR=14
comp=Z,21nm,0.8s
NRIK Noril'sk 49.52 338 *d i*P **P 10 31 51.2 +0.8**
P17K Kvichak River 49.76 36 P **P 10 31 51.5 -0.8**
baz=263
CHIR Chirikof Islan 49.88 41 P **P 10 31 52.2 -1.1**
baz=266
Q17K Contact Creek 49.94 38 P **P 10 31 52.4 -1.5**
baz=264
P18K Big Mountain, 50.40 36 IAmb IAmb 10 32 00.2
comp=Z,12nm,0.8s
P18K Big Mountain, 50.40 36 P **P 10 31 55.2 -2.0**
baz=264
Q18K Katmai Hardscr 50.43 37 P **P 10 31 56.9 -0.8**
baz=265
O18K Koktuh Hills 50.46 36 P **P 10 31 56.0 -1.7**
baz=263
PDGK Podgornoye 50.67 303 P **P 10 31 59.1 -0.6**
KURK Kurchatov 50.67 313 P **P 10 31 59.4 0.0**
KURK IAmb IAmb 10 32 02.4
comp=Z,20nm,1.2s
KURK Kurchatov 50.67 313 P **P 10 31 59.4 0.0**
KURK pmax pmax
comp=Z,19nm,1.2s
WRAB Tennant Creek 50.71 190 P **P 10 31 59.1 -0.8**
WRAB Tennant Creek 50.71 190 P **P 10 31 59.1 -0.8**
WRAB pmax pmax
comp=Z,34nm,0.8s
WRAB Tennant Creek 50.71 190 P **P 10 32 00.3 +0.4**
WRA Warramunga Arr 50.72 190 P **P 10 31 59.9 -0.1**
comp=Z,44nm,0.7s,baz=5.7,slow=7.6,SNR=250
WRA PcP **PcP 10 33 19.2 +2.0**
comp=Z,1.8nm,0.6s,baz=2.4,slow=4.2,SNR=1.8
WRA Warramunga Arr 50.72 190 *i* P **P 10 31 58.9 -1.1**
WRA pmax pmax
comp=Z,44nm,0.7s
SII Sitkinak Islan 50.72 40 P **P 10 31 58.7 -1.1**
baz=267
WB1 Warramunga Ar. 50.73 190 P **P 10 32 00.1 0.0**
FITZ Fitzroy Crossi 50.88 200 P **P 10 32 00.8 -0.5**
FITZ IAmb IAmb 10 32 02.5
comp=Z,11nm,0.9s
FITZ Fitzroy Crossi 50.88 200 P **P 10 32 01.6 +0.4**
N19K Bonanza Creek 50.93 34 P **P 10 32 00.9 -0.4**
baz=263
UZB Uzynbulak 51.03 303 *e*P **P 10 32 01.1 -1.3**
UZB Uzynbulak 51.03 303 *e*P **P 10 32 01.1 -1.3**
baz=302
M19K Big River Lodg 51.11 33 P **P 10 32 01.6 -1.0**
baz=262
KPKS Kokpek 51.23 303 *e*P **P 10 32 02.6 -1.3**
KPKS Kokpek 51.23 303 *e*P **P 10 32 02.6 -1.3**
baz=303
OHAK Old Harbor 51.25 39 P **P 10 32 02.5 -1.1**
baz=267
L20K Farewell, AK 51.42 32 P **P 10 32 02.5 -2.5**
baz=262
P19K Oil Pt 51.44 36 P **P 10 32 04.0 -1.0**
baz=265
K20K Telida 51.46 31 IAmb IAmb 10 32 08.6
comp=Z,7.2nm,0.8s
K20K Telida 51.46 31 P **P 10 32 04.9 -0.3**
baz=262
SATY Saty 51.49 303 *e*P **P 10 32 04.9 -1.0**
SATY Saty 51.49 303 *e*P **P 10 32 04.9 -1.0**
baz=302
J20K Nowinta River 51.55 30 IAmb IAmb 10 32 09.1
comp=Z,10.0nm,0.9s
J20K Nowinta River 51.55 30 P **P 10 32 05.0 -0.8**
baz=261,SNR=6.0
KDAK Kodiak Island 51.65 38 P **P 10 32 07.8 +1.1**
comp=Z,12nm,0.8s,baz=296,slow=5.2,SNR=20
comp=Z,12nm,0.8s
KDAK Kodiak Island 51.65 38 P **P 10 32 06.5 -0.1**
KDAK IAmb IAmb 10 32 09.2
comp=Z,15nm,0.9s
KDAK Kodiak Island 51.65 38 P **P 10 32 06.5 -0.1**
KDAK pmax pmax
comp=Z,15nm,0.9s
KDAK Kodiak Island 51.65 38 P **P 10 32 05.2 -1.5**
baz=267
Q20K Shuyak Island 51.80 37 P **P 10 32 06.7 -1.0**
baz=267,SNR=5.2
TARG Taragay, Kyrgy 52.14 301 IAmb IAmb 10 32 11.8
comp=Z,7.3nm,0.9s
G21K Allakaket 52.21 27 P **P 10 32 10.4 -0.3**
baz=260
PPLA Purkeypile 52.24 32 P **P 10 32 10.4 -0.8**
baz=264
H21K Melozitna Rive 52.34 28 IAmb IAmb 10 32 15.1
comp=Z,8.1nm,0.9s
H21K Melozitna Rive 52.34 28 P **P 10 32 11.1 -0.7**
baz=261,SNR=6.9
F21K Alatna River 52.35 26 P **P 10 32 12.3 +0.6**
baz=259
CAST Castle Rocks 52.35 31 IAmb IAmb 10 32 15.0
comp=Z,8.8nm,0.9s
CAST Castle Rocks 52.35 31 P **P 10 32 11.9 +0.1**
baz=263,SNR=5.5
CHKK Chushkaly 52.40 304 *e*P **P 10 32 11.3 -1.2**
CHKK Chushkaly 52.40 304 *e*P **P 10 32 11.4 -1.2**
baz=303
MDOK Medeo 52.46 303 P **P 10 32 13.0 -0.1**
MDOK Medeo 52.46 303 *e*P **P 10 32 12.7 -0.4**
baz=302
SKT Skwentna 52.46 33 P **P 10 32 12.7 0.0**
baz=265
TNSS Tian-Shan 52.55 303 *e*P **P 10 32 14.2 +0.1**
TNSS Tian-Shan 52.55 303 *e*P **P 10 32 14.3 +0.1**
baz=302
I21K Tanana 52.62 29 IAmb IAmb 10 32 17.8
comp=Z,7.8nm,0.8s
I21K Tanana 52.62 29 P **P 10 32 13.5 -0.2**
baz=262
BRSE Bradley Lake S 52.70 36 P **P 10 32 14.4 0.0**
baz=268
SUA Susitna One 52.79 34 P **P 10 32 15.1 -0.1**
baz=266
KUU Kurty 52.86 304 *e*P **P 10 32 15.1 -0.8**
KUU pmax pmax
comp=Z,10.0nm,0.7s
KUU Kurty 52.86 304 *e*P **P 10 32 15.1 -0.8**
comp=Z,9.9nm,0.7s,baz=304
F22K John River 52.89 26 P **P 10 32 14.2 -1.6**
baz=260
BPAW Bear Paw Mtn. 52.91 30 P **P 10 32 14.5 -1.4**
baz=264
H22K Ishtalitna Cre 52.96 28 P **P 10 32 15.6 -0.7**
baz=262,SNR=5.9
MLY Manley 53.12 29 IAmb IAmb 10 32 20.7
comp=Z,7.2nm,0.9s
MLY Manley 53.12 29 P **P 10 32 17.0 -0.6**
baz=264,SNR=6.6
E22K Anaktuvuk Pass 53.14 25 P **P 10 32 17.1 -0.5**
baz=260
TRF Thorofare Moun 53.16 31 P **P 10 32 17.3 -0.7**
baz=265
SEW Seward 53.36 35 P **P 10 32 18.4 -0.9**
baz=268
BOOM Boomskoye usch 53.37 302 IAmb IAmb 10 32 22.1
comp=Z,4.7nm,0.7s
NRN Naryn 53.52 301 IAmb IAmb 10 32 24.4
comp=Z,8.9nm,1.2s
PMR Palmer 53.57 34 P **P 10 32 20.2 -0.6**
baz=268
COLD Coldfoot 53.61 27 P **P 10 32 20.5 -0.6**
baz=262
G23K Bananza Creek 53.61 27 P **P 10 32 20.5 -0.6**
baz=263,SNR=8.0
D23K Nanushuk River 53.69 24 P **P 10 32 21.3 -0.3**
baz=261
H23K Yukon River 53.70 28 IAmb IAmb 10 32 25.7
comp=Z,11nm,1.2s
H23K Yukon River 53.70 28 P **P 10 32 21.6 -0.2**
baz=264,SNR=6.7
I23K Minto, Yukon-K 53.71 29 P **P 10 32 21.6 -0.2**
baz=265
MCK McKinley 53.78 31 P **P 10 32 22.4 0.0**
MCK IAmb IAmb 10 32 25.8
comp=Z,7.3nm,0.9s
MCK McKinley 53.78 31 P **P 10 32 22.4 0.0**
MCK pmax pmax
comp=Z,7.0nm,0.9s
MCK McKinley 53.78 31 P **P 10 32 22.1 -0.3**
baz=266
NEA2 Nenana 53.79 30 IAmb IAmb 10 32 25.1
comp=Z,12nm,0.8s

NEA2	Nenana	53.79	30	P	P	10 32 22.4	+0.1
	baz=265,SNR=14						
C23K	Itkillik River	53.86	23	P	P	10 32 21.6	-1.2
	baz=260						
KNK	Knik Glacier	53.89	34	P	P	10 32 22.0	-1.2
	baz=268						
WAT1	Susitna Watana	53.90	32	P	P	10 32 22.5	-0.8
	baz=267						
KSH	Kashi	53.92	299	P	P	10 32 28.1	+4.2
KSH				S	S	10 39 56.8	-3.2
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
PWL	Port Wells	53.94	35	P	P	10 32 23.9	+0.4
PWL				IAmb	IAmb	10 32 25.8	
	comp=Z,7.9nm,0.9s						
PWL	Port Wells	53.94	35	P	P	10 32 22.0	-1.5
	baz=269						
E23K	Chandalar	53.94	26	P	P	10 32 22.2	-1.3
	baz=262						
SML	Sawmill	53.96	33	IAmb	IAmb	10 32 26.4	
	comp=Z,11nm,0.9s						
SML	Sawmill	53.96	33	P	P	10 32 23.1	-0.6
	baz=268,SNR=6.6						
TOLK	Toolik Lake Re	54.04	25	P	P	10 32 22.8	-1.4
	baz=262						
SGDS	Sogindy	54.15	304	eP	P	10 32 23.3	-2.2
SGDS	Sogindy	54.15	304	eP	P	10 32 23.3	-2.2
	baz=303						
MDM	Murphy Dome	54.17	29	IAmb	IAmb	10 32 28.1	
	comp=Z,6.8nm,0.9s						
M23K	Glacier View	54.25	33	P	P	10 32 25.1	-0.7
	baz=269						
WAT6	Susitna Watana	54.27	32	P	P	10 32 25.5	-0.6
	baz=268						
BTLS	Baital	54.30	306	eP	P	10 32 26.0	-0.4
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BTLS	Baital	54.30	306	eP	P	10 32 26.0	-0.4
	comp=Z,7.4nm,0.7s,baz=305						
COLA	College	54.33	30	⇓eP	P	10 32 28.6	+2.3
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
E24K	Your Creek	54.36	26	P	P	10 32 26.1	-0.5
	baz=263						
D24K	Happy Valley	54.38	24	P	P	10 32 26.9	+0.3
	baz=262,SNR=5.7						
H24K	Noodor Dome	54.39	28	IAmb	IAmb	10 32 30.0	
	comp=Z,7.3nm,0.8s						
H24K	Noodor Dome	54.39	28	P	P	10 32 26.4	-0.4
	baz=266,SNR=6.9						
AAK	Ala-Archa	54.40	303	ceP	P	10 32 27.9	+0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AS01	Alice Springs	54.43	189	P	P	10 32 27.6	+0.1
	comp=Z,18nm,0.6s						
SCM	Sheep Creek Mo	54.44	33	IAmb	IAmb	10 32 29.7	
	comp=Z,14nm,0.9s						
SCM	Sheep Creek Mo	54.44	33	P	P	10 32 25.9	-1.4
	baz=269						
AS31	Alice Springs	54.44	189	IAmb	IAmb	10 32 30.0	
	comp=Z,5.5nm,0.6s						
ASAR	Alice Springs	54.44	189	P	P	10 32 27.3	-0.3
	comp=Z,9.9nm,0.6s,baz=1.0,slow=5.5,SNR=196						
ASAR				PcP	PcP	10 33 33.4	+2.1
	comp=Z,1.9nm,0.7s,baz=8.6,slow=5.5,SNR=2.2						
	comp=Z,9.9nm,0.6s						
DHY	Denali Highway	54.45	32	P	P	10 32 26.2	-1.2
	baz=268						
C24K	Franklin Bluff	54.50	24	P	P	10 32 27.2	-0.3
	baz=262						
POKR	Poker Plat Res	54.52	29	P	P	10 32 27.4	-0.3
	baz=266						
BRZS	Berezniki	54.52	312	eP	P	10 32 27.3	-0.7
BRZS	Berezniki	54.52	312	eP	P	10 32 27.4	-0.7
	baz=312						
F24K	Squaw Lake	54.53	26	P	P	10 32 26.7	-1.1
	baz=264						
G24K	Hadweenzic Riv	54.62	27	P	P	10 32 27.6	-0.8
	baz=265						
HDA	Harding Lake	54.69	30	P	P	10 32 28.3	-0.6
HDA				IAmb	IAmb	10 32 30.5	
	comp=Z,6.4nm,0.8s						
HDA	Harding Lake	54.69	30	P	P	10 32 28.8	-0.2
	baz=267,SNR=6.3						
IL31		54.74	30	P	P	10 32 28.8	-0.4
IL31				IAmb	IAmb	10 32 30.9	
	comp=Z,6.5nm,0.8s						
ILAR	Eielson Array	54.74	30	P	P	10 32 30.2	+0.9
	comp=Z,5.2nm,0.8s,baz=259,slow=6.1,SNR=46						
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	54.74	30	P	P	10 32 27.6	-1.6
OTUK	Ortayu	54.97	310	P	P	10 32 30.7	-0.6
M24K	Tolsona, Glenn	54.99	33	P	P	10 32 30.1	-1.1
	baz=270						
KLU	Klutina	55.11	34	P	P	10 32 30.8	-1.4
	baz=270						
G25K	Bearman Lake	55.17	27	P	P	10 32 31.7	-0.7
	baz=267						
K24K	Donnelly Dome	55.19	31	P	P	10 32 31.0	-1.6
	baz=269						
EYAK	Cordova Ski Ar	55.21	35	P	P	10 32 31.2	-1.5
	baz=271						
PAX	Paxson	55.32	32	P	P	10 32 31.9	-1.7
	baz=270						
PRP	Porcupine Dome	55.34	29	P	P	10 32 32.2	-1.6
	baz=268						
J25K	Salcha River,	55.38	30	P	P	10 32 32.6	-1.4
	baz=269						
F25K	Christian Rive	55.40	26	P	P	10 32 33.1	-1.0
	baz=266,SNR=5.1						
E25K	Arctic Village	55.46	26	P	P	10 32 33.4	-1.1
	baz=266						
HARP	HAARP	55.46	33	P	P	10 32 32.9	-1.7
	baz=270						
FYU	Fort Yukon	55.50	28	IAmb	IAmb	10 32 38.4	
	comp=Z,10nm,1.0s						
RIDG	Independent Ri	55.60	31	P	P	10 32 34.2	-1.4
	baz=270						
BRVK	Borovoye	55.66	316	P	P	10 32 36.4	+0.3
MBWA	Marble Bar	55.73	206	P	P	10 32 36.6	-0.3
MBWA	Marble Bar	55.73	206	P	P	10 32 36.7	-0.2
F26K	Sheenjek River	55.97	26	P	P	10 32 37.5	-0.7
	baz=268						
SCRK	Sand Creek	55.98	31	IAmb	IAmb	10 32 40.6	
	comp=Z,7.6nm,1.2s						
SCRK	Sand Creek	55.98	31	P	P	10 32 36.3	-2.1
	baz=270						
PSA00	Pilbara Seismi	56.06	205	P	P	10 32 39.0	-0.2
PSA00				IAmb	IAmb	10 32 39.7	
	comp=Z,8.4nm,0.6s						
G26K	Porcupine Rive	56.09	27	P	P	10 32 37.7	-1.3
	baz=269						
J26L	Joseph Creek	56.16	30	IAmb	IAmb	10 32 41.5	
	comp=Z,5.1nm,0.8s						
J26L	Joseph Creek	56.16	30	P	P	10 32 38.7	-1.0
	baz=270,SNR=7.2						
EIDS	Eidsvold	56.19	170	IAmb	IAmb	10 32 43.9	
	comp=Z,6.8nm,0.9s						
C27K	Jago River	56.22	24	P	P	10 32 38.6	-1.3
	baz=267						
L26K	Log Cabin Wild	56.28	32	P	P	10 32 40.0	-0.5
	baz=272,SNR=5.7						
I26K	Coal Creek Min	56.33	29	P	P	10 32 39.4	-1.3
	baz=270						
M26K	Nabesna, AK	56.47	33	P	P	10 32 40.3	-1.6
	baz=272						
MCARA	McCarthy VSAT	56.50	34	IAmb	IAmb	10 32 45.9	
	comp=Z,5.6nm,1.0s						
MCARA	McCarthy VSAT	56.50	34	P	P	10 32 40.2	-1.9
	baz=273						
TGL	Tana Glacier	56.63	35	IAmb	IAmb	10 32 45.6	
	comp=Z,12nm,1.2s						
QLP	Quilpie	56.79	178	P	P	10 32 45.2	+0.8
WRKA	Warakurna	56.81	195	P	P	10 32 44.8	+0.2
K27K	Chicken	56.82	31	IAmb	IAmb	10 32 47.8	
	comp=Z,5.6nm,1.0s						
K27K	Chicken	56.82	31	P	P	10 32 43.0	-1.3
	baz=272						
E27K	Coleen River	56.95	26	P	P	10 32 44.2	-0.9
	baz=270						
I27K	Kandik River	56.97	29	P	P	10 32 45.0	-0.4
	baz=272						
L27K	Beaver Creek,	56.98	32	P	P	10 32 44.3	-1.1
	baz=273,SNR=7.5						
H27K	Steamboat Moun	56.99	28	P	P	10 32 44.8	-0.7
	baz=271,SNR=8.2						
M27K	Edge Creek, AK	56.99	33	IAmb	IAmb	10 32 48.7	
	comp=Z,7.0nm,1.2s						
M27K	Edge Creek, AK	56.99	33	P	P	10 32 44.5	-1.1
	baz=273						
RMQ	Roma	57.01	173	P	P	10 32 45.7	-0.2
KK31	Karatay Array	57.17	304	P	P	10 32 47.5	+0.4
KK31				IAmb	IAmb	10 32 48.5	
	comp=Z,10nm,0.8s						
KK31	Karatay Array	57.17	304	P	P	10 32 47.5	+0.4
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	Karatay Array	57.17	304	IAmb	IAmb	10 32 48.5	
	comp=Z,10nm,0.8s						
EGAK	Eagle	57.19	30	P	P	10 32 47.0	+0.2
EGAK				IAmb	IAmb	10 32 51.3	
	comp=Z,4.9nm,0.8s						
EGAK	Eagle	57.19	30	P	P	10 32 45.8	-1.0
	baz=272						
BTK	Batken	57.66	301	IAmb	IAmb	10 32 53.6	
	comp=Z,5.2nm,0.7s						
IUG	Iuzhnay	57.73	303	eP	P	10 32 51.8	+0.6
IUG	Iuzhnay	57.73	303	eP	P	10 32 51.8	+0.6
	baz=302						
INKA	Innaminka	57.93	182	P	P	10 32 52.8	+0.4
DAWY	Dawson	58.00	31	P	P	10 32 53.8	+1.2
DAWY	Dawson	58.00	31	P	P	10 32 52.0	-0.7
	baz=274,SNR=5.5						
OOD	Oodnadatta	58.30	187	P	P	10 32 55.8	+0.8
I29M	Ogilvie Camp,	58.36	29	IAmb	IAmb	10 32 58.0	
	comp=Z,6.6nm,0.9s						
I29M	Ogilvie Camp,	58.36	29	P	P	10 32 54.6	-0.5
	baz=275,SNR=6.9						
M29M	Somme Creek	58.57	32	P	P	10 32 56.9	+0.1
	baz=276,SNR=6.1						
YUK4	Talbot Arm	58.61	34	P	P	10 32 57.0	-0.1
	baz=277						
L29M	L29M	58.65	32	P	P	10 32 57.4	+0.2
	baz=276,SNR=14						
O29M	Mount Kennedy	58.77	35	P	P	10 32 58.3	+0.1
	baz=278						
YUK6	Outpost Mounta	58.79	34	P	P	10 32 58.0	-0.5
	baz=277						
K29M	Barlow Dome	58.84	31	P	P	10 32 59.0	+0.4
	baz=276,SNR=11						
EPYK	Eagle Plains	58.92	28	P	P	10 32 59.3	+0.3
	baz=275,SNR=8.5						
G30M	tAoh Zraii Nji	59.06	27	P	P	10 33 00.4	+0.4
	baz=276,SNR=7.9						
HYT	Haines Junctio	59.23	34	P	P	10 33 01.2	-0.1
	baz=278						
CHGR	Chuyangaron	59.27	299	P	P	10 33 02.5	+0.5
P29M	Windy Craggy	59.28	36	P	P	10 33 00.9	-0.7
	baz=279						
N30M	Aishikik Lake	59.34	33	P	P	10 33 00.1	-1.9
	baz=278						
P30M	Million Dollar	59.60	35	P	P	10 33 03.6	-0.2
	baz=279						
INK	Inuvik	59.94	25	P	P	10 33 07.1	+1.2
	comp=Z,4.0nm,0.7s,baz=265,slow=6.7,SNR=13						
	comp=Z,4.0nm,0.7s						
INK	Inuvik	59.94	25	P	P	10 33 05.6	-0.3
	baz=277						
N31M	Braeburn, Yuko	59.95	33	IAmb	IAmb	10 33 12.8	
	comp=Z,5.3nm,0.8s						
N31M	Braeburn, Yuko	59.95	33	P	P	10 33 05.7	-0.5
	baz=279						
F31M	Tsiigehtchic	59.97	26	P	P	10 33 06.2	+0.1
	baz=277						
PLBC	Pleasant Camp	60.00	36	P	P	10 33 06.1	-0.5
	baz=280						
M31M	Drury Creek, Y	60.48	32	P	P	10 33 11.1	+1.3
M31M	Drury Creek, Y	60.48	32	P	P	10 33 09.0	-0.8
	baz=280						
WHY	Whitehorse	60.52	34	P	P	10 33 09.6	-0.6
	baz=280						
SVE	Sverdlovsk	60.58	321	eP	P	10 33 11.8	+1.3
SVE				pmax	pmax		
	comp=Z,16nm,1.0s						
LCRK	Leigh Creek	60.73	184	P	P	10 33 12.5	+0.8
FARO	Faro, Yukon	60.96	32	P	P	10 33 12.4	-0.7
	baz=281						
P33M	Teslin, Yukon	61.62	34	P	P	10 33 16.9	-0.7
	baz=282						
ARU	Arti	61.78	321	P	P	10 33 18.1	-0.6
ARU	Arti	61.78	321	c iP	P	10 33 19.4	+0.7
ARU				PPP	PPP	10 37 01.0	
ARU				S	S	10 41 45.9	+3.7
ARU				pmax	pmax		
	comp=Z,18nm,0.8s						
MMPY	Sheldon Lake,	61.83	32	P	P	10 33 18.4	-0.6
	baz=282						
STKA	Stephens Creek	62.04	181	P	P	10 33 20.9	+0.3
	comp=Z,9.9nm,0.7s,baz=345,slow=7.5,SNR=21						
	comp=Z,9.9nm,0.7s						
STKA	Stephens Creek	62.04	181	P	P	10 33 19.7	-0.8
STKA	Stephens Creek	62.04	181	P	P	10 33 19.7	-0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	62.04	181	P	P	10 33 21.3	+0.8
FORT	Forrest	62.41	194	P	P	10 33 22.4	-0.6
FORT	Forrest	62.41	194	P	P	10 33 24.0	+0.9
AB31	Akbulak array	62.78	313	i P	P	10 33 25.7	+0.2
ABKAR	Akbulak array	62.78	313	P	P	10 33 25.6	+0.2
ABKAR	Akbulak array	62.78	313	P	P	10 33 25.7	+0.2
BBOO	Buckleboo	63.23	186	P	P	10 33 29.1	+0.6
TGTN	Hyland Airport	63.46	32	P	P	10 33 29.0	-0.9
	baz=285						
WTLY	Watson Lake, Y	63.59	34	P	P	10 33 30.3	-0.4
	baz=286						
WRGLY	Wrigley	65.11	30	P	P	10 33 39.7	-0.9
	baz=288						
KIRV	Kirov	65.92	325	deP	P	10 33 47.5	+1.6
PRGR	Permogore	66.65	329	eP	P	10 33 50.5	0.0
PRGR				pmax	pmax		
	comp=Z,19nm,0.8s						
NWAO	Narrogin (SRO)	67.37	203	P	P	10 33 54.2	-1.1
NWAO	Narrogin (SRO)	67.37	203	P	P	10 33 54.2	-1.1
NWAO				pmax	pmax		
	comp=Z,69nm,1.3s						
NWAO	Narrogin (SRO)	67.37	203	P	P	10 33 56.2	+0.8
GEYT	Alibeck	67.72	302	P	P	10 33 58.2	+0.4
	comp=Z,4.1nm,0.7s,baz=64,slow=3.4,SNR=8.6						
	comp=Z,4.1nm,0.7s						
GEYT	Alibeck	67.72	302	IAmb	IAmb	10 34 25.4	
	comp=Z,7.3nm,1.1s						
RES	Resolute Bay	68.76	14	LR	LR	11 09 06.0	
	comp=Z,35nm,19.3s,baz=5.5,slow=40						
YKA	Yellowknife Ar	69.15	29	P	P	10 34 07.5	+1.2
	comp=Z,4.0nm,0.7s,baz=289,slow=6.5,SNR=7.9						
	comp=Z,4.0nm,0.7s						
KLMR	Klimovskoe	69.67	329	eP	P	10 34 09.3	-0.2
KLMR				pmax	pmax		
	comp=Z,15nm,0.9s						
KLMR	Klimovskoe	69.67	329	eP	P	10 34 09.3	-0.2
KLMR				AMP		10 34 10.9	
	comp=Z,15nm,0.9s						
ARCES	ARCESS Array B	70.35	341	P	P	10 34 14.6	+1.0
	comp=Z,4.9nm,0.7s,baz=70,slow=7.8,SNR=8.0						
	comp=Z,4.9nm,0.7s						
NEEM	North Greenlan	72.00	3	eP	P	10 34 23.4	-0.4
DAG	Danmarks Havn	72.33	355	i P	P	10 34 26.0	+0.6
OBN	Obninsk	73.77	325	i P	P	10 34 33.8	-0.4
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	73.87	51	P	P	10 34 37.8	+2.5
	comp=Z,3.0nm,0.8s,baz=31,slow=3.2,SNR=6.9						
	comp=Z,3.0nm,0.8s						
EDM	Edmonton	74.09	37	P	P	10 34 36.9	+0.6
EDM	Edmonton	74.09	37	P	P	10 34 36.9	+0.6
EDM				pmax	pmax		
	comp=Z,12nm,0.7s						
NEW	Newport	74.39	43	P	P	10 34 39.8	+1.7
	comp=Z,6.2nm,1.1s,baz=262,slow=5.6,SNR=6.4						
	comp=Z,6.2nm,1.1s						
NEW	Newport	74.39	43	P	P	10 34 37.7	-0.4
	baz=298						
K05A	Summer Lake	74.62	49	P	P	10 34 42.1	+2.3
FIA1	FINESS Array S	74.92	333	P	P	10 34 40.9	0.0
FINES	FINESS Array B	74.93	333	P	P	10 34 41.7	+0.9
	comp=Z,10nm,0.6s,baz=60,slow=3.3,SNR=11						
	comp=Z,10nm,0.6s						
FINES	FINESS Array B	74.93	333	P	P	10 34 40.8	0.0
ZEI	Tsey	75.53	311	eP	P	10 34 44.1	-0.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	Khabaz	75.73	312	P	P	10 34 47.0	+1.2
	comp=Z,8.4nm,0.9s,baz=63,slow=4.5,SNR=12						
	comp=Z,8.4nm,0.9s						
KBZ	Khabaz	75.73	312	ceP	P	10 34 47.3	+1.5
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	75.76	313	eP	P	10 34 48.9	+2.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
J08A	Circle Bar Ran	75.89	48	IAmb	IAmb	10 34 50.0	
	comp=Z,4.9nm,0.6s						
ONI	Oni	75.92	311	IAmb	IAmb	10 35 12.5	
	comp=Z,8.9nm,1.3s						
GNI	Garni	76.22	309	⇓eP	P	10 34 50.5	+1.5
GNI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BEKR	Beckworth	76.31	52	P	P	10 34 50.5	+1.0
BEKR				IAmb	IAmb	10 34 52.2	
	comp=Z,6.3nm,0.7s						
MSO	Missoula	76.97	43	P	P	10 34 51.8	-1.2
	baz=301						
CMB	Columbia Colle	77.16	53	IAmb	IAmb	10 34 56.7	
	comp=Z,4.2nm,0.8s						
PNTR	Pine Nut	77.20	52	P	P	10 34 54.5	0.0
PNTR				IAmb	IAmb	10 34 59.3	
	comp=Z,6.3nm,0.7s						
YERR	Yerington	77.49	52	IAmb	IAmb	10 34 58.8	
	comp=Z,5.8nm,0.6s						
WAKR	Walker	77.59	53	IAmb	IAmb	10 34 59.2	
	comp=Z,3.9nm,0.8s						
RYN	Ryan	78.16	52	IAmb	IAmb	10 35 02.5	
	comp=Z,4.7nm,0.7s						
KVN	Kaiserville	78.23	52	IAmb	IAmb	10 35 02.9	
	comp=Z,5.5nm,0.6s						
MNK	Minsk	78.31	327	i P	P	10 34 58.2	-1.9
MNK				i		10 35 07.3	
MNK				i		10 37 54.9	
MNK				i PPP	PPP	10 39 42.7	
MNK				i S	S	10 44 54.1	-1.7
MNK				i SS	SS	10 50 02.8	+5.7
MNK				pmax	pmax		
	comp=Z,16nm,0.8s						
MNK				pmax	pmax		
	comp=N,27nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,4μm,19.0s						
MNK				MLR	MLR		
	comp=Z,66nm,19.0s						
MNK				MLR	MLR		
	comp=E,37nm,18.0s						
MNK	Minsk	78.31	327	i P	P	10 34 58.3	-1.9
	comp=Z,16nm,0.8s,baz=53						
MNK				i P	sP	10 35 01.0	+2.1
	comp=E,2.0nm,0.9s						
MNK				i P	sP	10 35 01.0	+2.1
	comp=N,27nm,0.9s						
MNK				i PcP	PcP	10 35 07.4	-2.1
MNK				i PP	PP	10 37 54.9	-1.5
MNK				i PPP	PPP	10 39 42.8	
MNK				i S	S	10 44 54.2	-1.7
MNK				i SS	SS	10 50 02.8	+5.7
MNK				i SSS	SSS	10 54 45.1	
MNK				i LQ	LQ	11 01 06.7	
MNK				i LR	LR	11 03 22.0	
MNK				i LRM	MLR	11 09 35.9	
	comp=N,4μm,18.7s						
MNK				i LRM	MLR	11 09 38.8	
	comp=Z,66nm,18.7s						
MNK				i LRM	MLR	11 11 02.2	
	comp=E,37nm,18.4s						
LHV	Little Huntoon	78.36	53	IAmb	IAmb	10 35 04.0	
	comp=Z,5.3nm,0.7s						
HLID	Hailey	78.36	46	P	P	10 34 58.0	-2.9
	baz=301						
NVAR	Mina Array Bea	78.40	52	P	P	10 35 03.4	+2.1
	comp=Z,5.2nm,0.6s,baz=293,slow=5.7,SNR=64						
	comp=Z,5.2nm,0.6s						
EGMT	Eagleton	78.75	41	P	P	10 34 59.6	-3.2
	baz=303						
BOZ	Bozeman (W)	78.98	43	IAmb	IAmb	10 35 06.9	
	comp=Z,4.2nm,0.7s						
BOZ	Bozeman (W)	78.98	43	P	P	10 35 03.4	-0.8
	baz=302						
ELK	Elko	79.28	49	P	P	10 35 08.3	+2.1
	comp=Z,1.2nm,0.7s,baz=308,slow=7.2,SNR=6.3						
	comp=Z,1.2nm,0.7s						
ISA	Isabella, Lake	79.66	55	P	P	10 35 05.6	-2.4
	baz=300						
YHB	Horse Butte	79.70	44	IAmb	IAmb	10 35 11.9	
	comp=Z,8.5nm,0.8s						
YMR	Madison River	79.88	44	IAmb	IAmb	10 35 12.7	
	comp=Z,9.2nm,0.8s						
AKASG	Malin Array Be	79.91	324	P	P	10 35 09.3	+0.4
	comp=Z,3.0nm,0.5s,baz=48,slow=6.1,SNR=23						
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	79.91	324	deP	P	10 35 09.0	0.0
H17A	Grant Village	80.27	44	P	P	10 35 09.4	-2.0
	baz=303						
R11A	Troy Canyon, C	80.29	51	P	P	10 35 09.9	-1.6
	baz=301						
IMW	Indian Meadow	80.32	45	IAmb	IAmb	10 35 15.2	
	comp=Z,6.2nm,0.8s						
EDW2	Edwards Air Fo	80.39	55	P	P	10 35 09.3	-2.7
	baz=300						
NB2	NORSAR Subarra	80.48	338	P	P	10 35 12.3	+0.4
	comp=Z,5.1nm,0.6s,baz=41,slow=5.3						
NOA	NORSAR Array B	80.48	338	P	P	10 35 12.5	+0.6
	comp=Z,6.4nm,0.8s,baz=40,slow=5.3,SNR=21						
NOA				LR	LR	11 14 16.2	
	comp=Z,15nm,19.1s,baz=55,slow=38						
	comp=Z,6.4nm,0.8s						
TPAW	Teton Pass	80.53	45	IAmb	IAmb	10 35 16.2	
	comp=Z,6.5nm,0.7s						
TPNV	Topopah Spring	80.56	53	IAmb	IAmb	10 35 15.4	
	comp=Z,5.9nm,0.7s						
TPNV	Topopah Spring	80.56	53	P	P	10 35 11.7	-1.3
	baz=301						
RLMT	Red Lodge	80.64	43	IAmb	IAmb	10 35 16.5	
	comp=Z,7.1nm,0.6s						
RLMT	Red Lodge	80.64	43	P	P	10 35 11.0	-2.3
	baz=304						
DUG	Dugway, Tooele	81.14	48	P	P	10 35 15.6	-0.5
	baz=302						
HWUT	Hardware Ranch	81.18	47	IAmb	IAmb	10 35 19.4	
	comp=Z,6.5nm,0.9s						
LAO	LASA Array	81.49	40	IAmb	IAmb	10 35 21.0	
	comp=Z,12nm,1.4s						
LAO	LASA Array	81.49	40	P	P	10 35 16.5	-1.2
	baz=306						
CTU	Camp Tracy	81.56	48	IAmb	IAmb	10 35 22.6	
	comp=Z,4.4nm,0.8s						
HEC	Hector,Ludlow	81.59	55	P	P	10 35 17.6	-0.9
	baz=301						
MURC	Murrieta	81.61	56	P	P	10 35 17.1	-1.4
	baz=301						
BW06	Boulder Array	81.78	45	P	P	10 35 17.5	-2.0
	baz=304						
PDAR	Pinedale Array	81.78	45	P	P	10 35 21.0	+1.5
	comp=Z,2.9nm,0.7s,baz=277,slow=1.9,SNR=36						
	comp=Z,2.9nm,0.7s						
JLU	Jordanelle	81.80	48	IAmb	IAmb	10 35 22.5	
	comp=Z,4.2nm,0.8s						
GMRC	Granite Mounta	82.09	54	P	P	10 35 20.0	-1.1
	baz=302						
PFO	Pinyon Flats O	82.13	56	P	P	10 35 23.1	+1.7
	comp=Z,4.6nm,0.7s,baz=316,slow=4.8,SNR=10						
	comp=Z,4.6nm,0.7s						
PFO	Pinyon Flats O	82.13	56	P	P	10 35 21.2	-0.2
PFO				IAmb	IAmb	10 35 23.6	
	comp=Z,4.4nm,0.7s						
PFO	Pinyon Flats O	82.13	56	P	P

comp=Z,6.1nm,0.7s
SRU San Rafael Swe 83.22 48 IAmb IAmb 10 35 29.4
comp=Z,5.7nm,0.6s
K22A Casper 83.68 44 P **P 10 35 28.1 -1.2**
baz=306
BR131 Keskin Array S 83.73 313 *ce*P **P 10 35 30.4 +0.9**
BRTR Keskin Array B 83.73 313 P **P 10 35 30.1 +0.5**
comp=Z,6.7nm,0.8s,baz=99,slow=3.6,SNR=21
comp=Z,6.7nm,0.8s
BRTR Keskin Array B 83.73 313 *i* P **P 10 35 30.6 +1.0**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
TESR Tescani 83.81 321 ⇑P **P 10 35 29.5 -0.2**
RAYN Ar Rayn 83.82 294 P **P 10 35 31.2 +1.0**
RAYN Ar Rayn 83.82 294 P **P 10 35 31.2 +1.0**
RAYN pmax pmax
comp=Z,9.0nm,0.7s
TPGR Topolog 83.85 319 ⇑P **P 10 35 31.0 +1.1**
KWP Kalwaria Pacla 83.85 325 *e*P **P 10 35 31.2 +1.4**
BUR08 Bucovina Ar. S 83.87 323 P **P 10 35 29.6 -0.5**
BUR08 IAmb IAmb 10 35 31.7
comp=Z,5.9nm,0.8s
BURAR Bucovina Array 83.88 323 ⇑P **P 10 35 30.9 +0.8**
BURAR Bucovina Array 83.88 323 IAmb IAmb 10 35 32.0
comp=Z,4.8nm,0.7s
BURAR Bucovina Array 83.88 323 ⇑P **P 10 35 30.9 +0.8**
O20A White River Ci 84.09 47 IAmb IAmb 10 35 34.0
comp=Z,5.6nm,0.8s
O20A White River Ci 84.09 47 P **P 10 35 31.1 -0.4**
baz=305
VRI Vrincioaia 84.17 321 ⇑P **P 10 35 32.5 +1.0**
VRI Vrincioaia 84.17 321 ⇑P **P 10 35 32.5 +1.0**
RSSD Black Hills 84.26 41 P **P 10 35 31.7 -0.6**
baz=308
WUAZ Wupatki 84.65 52 IAmb IAmb 10 35 37.2
comp=Z,3.5nm,0.8s
WUAZ Wupatki 84.65 52 P **P 10 35 33.4 -1.0**
baz=304
MLR Muntele Rosu 84.83 321 ⇑P **P 10 35 35.9 +0.9**
MLR Muntele Rosu 84.83 321 ⇑P **P 10 35 35.9 +0.9**
CRVS Cervenica-Dubn 84.95 325 *e*P **P 10 35 36.5 +1.1**
N23A Red Feather La 85.07 45 P **P 10 35 36.0 -0.5**
baz=307
VOIR 85.35 321 ⇓P **P 10 35 38.7 +1.1**
VOIR 85.35 321 ⇓P **P 10 35 38.7 +1.1**
SMCO Snowmass 85.44 47 IAmb IAmb 10 35 44.5
comp=Z,7.8nm,1.1s
MVCO Mesa Verde 85.61 49 P **P 10 35 37.0 -2.2**
baz=305
214A Organ Pipe Nat 85.61 55 P **P 10 35 36.3 -2.7**
baz=303
S22A 4UR Ranch, Cre 86.38 48 P **P 10 35 40.9 -2.2**
baz=306
VYHS Vyhne 86.50 326 *e*P **P 10 35 44.1 +1.0**
VYHS pmax pmax
comp=Z,7.0nm,1.0s
TUC Tucson 86.84 54 P **P 10 35 43.2 -2.0**
baz=304
CLL Collm 87.11 331 *i* P **P 10 35 46.4 +0.4**
CLL Collm 87.11 331 *i* P **P 10 35 46.4 +0.4**
SDCO Great Sand Dun 87.22 47 P **P 10 35 44.7 -2.5**
baz=307
ANMO Albuquerque 88.27 50 P **P 10 35 49.5 -2.7**
baz=307
ECSD EROS Data Cent 88.62 38 P **P 10 35 50.6 -2.8**
baz=312
CLUD Cludinico 90.77 328 IAmb IAmb 10 36 04.5
comp=Z,7.0nm,1.0s
SCHQ Schefferville 91.41 16 P **P 10 36 07.5 +1.3**
comp=Z,5.3nm,1.2s,baz=284,slow=4.2,SNR=5.1
comp=Z,5.3nm,1.2s
FUORN Ofenpass-Fuorn 91.83 329 IAmb IAmb 10 36 09.8
comp=Z,4.2nm,0.7s
P38A Dawn 93.12 40 P **P 10 36 14.1 -0.3**
TX32 Lajitas Array 93.54 53 IAmb IAmb 10 36 19.7
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 93.54 53 P **P 10 36 18.9 +2.2**
comp=Z,2.9nm,0.7s,baz=304,slow=2.8,SNR=45
comp=Z,2.9nm,0.7s
TXAR Lajitas Array 93.54 53 P **P 10 36 18.5 +1.8**
CCM Cathedral Cave 95.49 40 P **P 10 36 24.3 -1.0**
baz=316
NATX Nacogdoches 97.88 46 P **P 10 36 34.2 -2.0**
baz=313
TORD Torodi Ar. Bea 122.34 313 PKP **PKiKP 10 41 56.2 -0.1**
comp=Z,0.4nm,0.5s,baz=358,slow=1.7,SNR=6.2
TROLL Troll, Antarti 133.20 196 PKPdf **PKiKP 10 42 17.0 +0.5**
SNAA Sanae 134.66 195 PKPdf **PKiKP 10 42 19.8 +0.5**
VNA2 Neumayer--Watz 136.19 194 PKPdf **PKiKP 10 42 23.3 +0.9**
baz=105,slow=1.0
VNA3 Neumayer Olymp 136.39 193 PKPdf **PKiKP 10 42 23.5 +0.7**

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*SOME **06** 10:23:38.9, 43.°65N×69.°70E*
NNC 06 10:23:39.0±1.4, 43.°58N×69.°63E, h0km, mb3.6, mpv2.9, 1C-1D, Error ellipse: s-maj=12.8km s-min=6.6km az=51.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.80**	**126**	⇑P	Pg	10 23 54.5	+0.1
	0.4nm,0.2s,baz=317,slow=15,SNR=13						
KK31				⇓S	Sg	10 24 06.0	+1.1
	17nm,0.5s,baz=317,slow=32,SNR=24						
BTLS	**Baital**	**3.49**	**64**	Pg	Pg	10 24 44.7	-1.3
	6.0nm,0.7s						
BTLS				Lg	Lg	10 25 31.7	
	4.0nm,0.6s						
DGS	**Degeres**	**4.49**	**92**	Pg	Pb	10 25 00.9	+2.1
	2.2nm,0.5s						
DGS				Lg	Lg	10 25 59.6	
	2.6nm,0.4s						
KST	**Kastek**	**4.66**	**94**	Pg	Pb	10 25 04.1	+2.4
	2.1nm,0.5s						
KST				Lg	Lg	10 26 05.3	
	5.9nm,1.1s						
TNSS	**Tian-Shan**	**5.37**	**93**	Pg	Pb	10 25 17.1	+3.2
	1.5nm,0.5s						
TNSS				Lg	Lg	10 26 27.8	
	1.8nm,0.7s						

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*SNET **06** 10:36:02.2±1.1, 14.°08N×91.°38W, h2km±12km, ML3.3*
*GCG **06** 10:36:06.1±1.0, 14.°35N×91.°49W, h40km±100km, MD3.7*
ISC 06 10:35:59.5±3.3, 13.°9N±0.°1×91.°9W±0.°2, h54km, n18, σ0.°58/20, 2C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.65**	**15**	⇓ *i* P	**Pn**	**10 36 12.8**	**0.0**
RTAL				*e*S	**Sn**	**10 36 22.5**	**-0.1**
RTAL				IAML		10 36 27.3	
	comp=Z,467nm,0.2s						
STG3	**Santiaguito 3,**	**0.87**	**20**	*e*P	**Pn**	**10 36 15.7**	**-0.1**
FUG	**Fuego 3**	**1.14**	**61**	*e*P	**Pn**	**10 36 19.0**	**-0.4**
PCG	**Pacaya**	**1.32**	**68**	*e*P	**Pn**	**10 36 22.0**	**+0.1**
NBG	**Las Nubes**	**1.63**	**65**	*e*P	**Pn**	**10 36 27.1**	**+0.9**
NBG				*e*S	**Sn**	**10 36 46.8**	**+0.6**
NUBE	**Las Nubes**	**2.03**	**89**	⇑ *e*P	**Pn**	**10 36 30.5**	**-1.0**
SLOZ	**Alcaldia de Sa**	**2.03**	**86**	*e*P	**Pn**	**10 36 30.8**	**-0.5**
RTR	**El Retiro**	**2.16**	**90**	*e*P	**Pn**	**10 36 33.4**	**+0.1**
CEVE	**Cerro Verde**	**2.19**	**91**	⇑ *e*P	**Pn**	**10 36 33.3**	**-0.3**
CEVE				IAML		10 37 03.0	
	comp=Z,1μm,0.3s						
SBLS	**San Blas**	**2.19**	**91**	*e*P	**Pn**	**10 36 33.2**	**-0.4**
MTO3	**Montecristo**	**2.49**	**78**	*i* P	**Pn**	**10 36 36.6**	**-1.1**
ESQI	**Esquipulas**	**2.54**	**75**	*e*P	**Pn**	**10 36 37.5**	**-0.9**
LFRS	**El Faro**	**2.75**	**95**	*e*P	**Pn**	**10 36 41.6**	**+0.5**
PAVA	**Las Pavas**	**2.86**	**93**	*e*P	**Pn**	**10 36 42.5**	**-0.2**
COEG	**Centro de Oper**	**2.92**	**95**	*e*P	**Pn**	**10 36 44.1**	**+0.6**
COEG				IAML		10 37 22.5	
	comp=Z,210nm,0.4s						
SCLA	**Alcaldia de Sa**	**3.06**	**93**	*e*P	**Pn**	**10 36 45.2**	**-0.3**
COEB	**Comit de Eme**	**3.27**	**96**	*e*P	**Pn**	**10 36 48.5**	**+0.1**
CNCH	**Conchagua**	**3.98**	**98**	*e*P	**Pn**	**10 36 58.1**	**+0.1**

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*NEIC **06** 10:53:18.6±0.5, 36.°805N±0.°009×97.°55W±0.°01, h5km±6km, Error ellipse: s-maj=1.7km s-min=0.7km az=217.0*
*TUL **06** 10:53:18.4±0.8, 36.°82N±0.°01×97.°55W±0.°01, h9km±6km, ML3.6, mb_Lg3.4/93(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=217.0*
*ANF **06** 10:53:19.4±0.8, 36.°83N×97.°51W, h5km, ML4.2/16, Error ellipse: s-maj=9.7km s-min=7.7km az=10.0*
ISC 06 10:53:18.7±1.1, 36.°81N±0.°02×97.°56W±0.°02, h5km±10km, n87, σ0.°67/55, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.22**	**18**	Pg	**Pg**	**10 53 23.0**	**0.0**
KAN13				Sg	**Sg**	**10 53 26.0**	**+0.1**
KAN17	**Caldwell West**	**0.29**	**326**		**Pg**	**10 53 24.4**	**+0.1**
KAN17				Sg	**Sg**	**10 53 28.5**	**+0.3**
KAN09	**Caldwell North**	**0.33**	**352**	Pg	**Pg**	**10 53 25.2**	**0.0**
KAN14	**Manchester OK**	**0.35**	**295**		**Pg**	**10 53 25.7**	**+0.1**
KAN01	**Argonia South**	**0.38**	**336**		**Pg**	**10 53 26.0**	**-0.1**
KAN05	**Bluff City Nor**	**0.39**	**321**		**Pg**	**10 53 26.4**	**+0.2**
OK049	**E0420 Rd and N**	**0.45**	**152**	Pg	**Pg**	**10 53 27.4**	**+0.1**
OK049				Sg	**Sg**	**10 53 33.5**	**+0.3**
KS21	**Milan North St**	**0.49**	**350**		**Pg**	**10 53 28.0**	**-0.1**
KAN06	**Argonia West S**	**0.50**	**332**		**Pg**	**10 53 28.3**	**-0.1**
OK032	**Salt Plains WL**	**0.52**	**270**	Pg	**Pg**	**10 53 28.7**	**0.0**
KAN10	**Anthony SW Sta**	**0.53**	**307**	Pg	**Pg**	**10 53 29.0**	**+0.1**
KAN08	**Anthony NE Sta**	**0.53**	**322**		**Pg**	**10 53 29.1**	**+0.1**
KAN16	**Harper SW Stat**	**0.58**	**316**		**Pg**	**10 53 29.8**	**-0.1**
OK050	**Pawnee Station**	**0.62**	**131**		**Pg**	**10 53 30.5**	**-0.2**
OK045	**Pawnee Station**	**0.62**	**125**		**Pg**	**10 53 30.5**	**-0.2**
OK048	**Pawnee Station**	**0.63**	**128**	Pg	**Pg**	**10 53 30.6**	**-0.2**
OK051	**E0350 and S346**	**0.66**	**117**	Pg	**Pg**	**10 53 31.0**	**-0.3**
OK046	**Pawnee Station**	**0.67**	**128**	Pg	**Pg**	**10 53 31.2**	**-0.2**
T35A	**Sooner Cattle**	**0.85**	**82**		**Pg**	**10 53 34.5**	**-0.5**
T35B	**Sooner Cattle**	**0.85**	**82**	S	**Sg**	**10 53 45.5**	**-0.5**
baz=263							
OK038	**West end E0370**	**1.00**	**251**		**Pg**	**10 53 37.5**	**-0.4**
OK029	**Liberty Lake**	**1.01**	**175**		**Pg**	**10 53 37.7**	**-0.4**
U32A	**Winter Ranch,**	**1.23**	**250**	P	**Pg**	**10 53 41.6**	**-0.8**
baz=69,SNR=126							
U32A				S	**Sg**	**10 53 58.7**	**+0.3**
baz=69							
OKCSW	**OKLAHOMA CITY**	**1.40**	**176**	Sn	**Sb**	**10 54 03.9**	**+0.4**
TUL1	**Leonard**	**1.69**	**121**	IAmb_Lg		10 54 14.8	
comp=Z,180nm,0.8s							
TUL1	**Leonard**	**1.69**	**121**	P	**Pn**	**10 53 48.8**	**0.0**
baz=303,SNR=118							
TUL1				S	**Sb**	**10 54 11.7**	**0.0**
baz=303							
R32A	**Long Quarter,**	**1.85**	**331**	P	**Pn**	**10 53 51.8**	**+0.6**
baz=150,SNR=101							
R32A				S	**Sb**	**10 54 16.6**	**0.0**
baz=150							
X34A	**Smith Ranch, M**	**2.21**	**186**		**Pn**	**10 53 56.9**	**+0.9**
X34A				IAmb_Lg		10 54 32.8	
comp=Z,186nm,0.9s							
WMOK	**Wichita Mounta**	**2.29**	**206**		**Pn**	**10 53 57.5**	**+0.3**
WMOK	**Wichita Mounta**	**2.29**	**206**	S	**Sb**	**10 54 29.6**	**+0.5**
baz=25							
KSU1	**Kansas State U**	**2.41**	**18**		**Pn**	**10 53 59.3**	**+0.5**
KSU1	**Kansas State U**	**2.41**	**18**	P	**Pn**	**10 53 59.2**	**+0.4**
baz=198,SNR=27							
KSU1				S	**Sb**	**10 54 32.3**	**-0.3**
baz=198							
U38A	**Gravette**	**2.58**	**97**	P	**Pn**	**10 54 01.7**	**+0.5**
baz=279,SNR=48							
CBKS	**Cedar Bluff**	**2.64**	**320**	S	**Sb**	**10 54 40.3**	**+1.0**
baz=139							
X37A	**Clayton**	**2.84**	**140**		**Pn**	**10 54 05.2**	**+0.5**
X37A	**Clayton**	**2.84**	**140**	P	**Pn**	**10 54 05.2**	**+0.5**
baz=322,SNR=37							
X37A				Sb	**Sb**	**10 54 46.9**	**+1.9**
baz=322							
HHAR	**Hobbs**	**2.96**	**99**		**Pn**	**10 54 06.8**	**+0.4**
S39A	**Bolivar**	**3.50**	**74**	IAmb_Lg		10 55 11.2	
comp=Z,78nm,0.7s							
AMTX	**Amarillo**	**3.86**	**241**	Pn	**Pn**	**10 54 19.9**	**+1.2**
AMTX				IAmb_Lg		10 55 22.7	
comp=Z,91nm,0.8s							
AMTX	**Amarillo**	**3.86**	**241**	S	**Sg**	**10 55 19.4**	**-3.2**
baz=59							
N33B	**J Bar K, Exete**	**3.93**	**1**	P	**Pn**	**10 54 19.7**	**+0.1**
baz=181,SNR=5.7							
MIAR	**Mount Ida**	**3.95**	**124**	Pn	**Pn**	**10 54 20.8**	**+0.8**
MIAR				IAmb_Lg		10 55 25.6	
comp=Z,88nm,0.8s							
Z38A	**Mt. Pleasant**	**4.12**	**148**	IAmb_Lg		10 55 33.9	
comp=Z,106nm,0.8s							
P38A	**Dawn**	**4.24**	**47**	IAmb_Lg		10 55 33.4	
comp=Z,102nm,0.7s							
P38A	**Dawn**	**4.24**	**47**	P	**Pn**	**10 54 24.3**	**+0.3**
baz=230,SNR=6.2							
N35A	**Tabor**	**4.32**	**20**	IAmb_Lg		10 55 45.9	
comp=Z,110nm,0.8s							
N35A	**Tabor**	**4.32**	**20**	P	**Pn**	**10 54 25.2**	**+0.2**
baz=201,SNR=11							
R40A	**Maddies Statio**	**4.46**	**69**	IAmb_Lg		10 55 47.0	
comp=Z,82nm,1.0s							
R40A	**Maddies Statio**	**4.46**	**69**	P	**Pn**	**10 54 27.1**	**+0.1**
baz=252,SNR=27							
FCAR	**Ozark Folk Cen**	**4.48**	**100**		**Pn**	**10 54 27.1**	**-0.2**
FCAR				IAmb_Lg		10 55 37.7	
comp=Z,71nm,1.1s							
WHAR	**Wooly Hollow**	**4.53**	**108**	IAmb_Lg		10 55 39.9	
comp=Z,50nm,0.8s							
KSCO	**Kaye Shedlock'**	**4.57**	**300**	IAmb_Lg		10 55 54.8	
comp=Z,65nm,0.8s							
KSCO	**Kaye Shedlock'**	**4.57**	**300**	S	**Sn**	**10 55 21.5**	**-0.7**
baz=117							
BGNE	**Belgrade**	**4.62**	**354**	IAmb_Lg		10 55 55.9	
comp=Z,102nm,0.9s							
BGNE	**Belgrade**	**4.62**	**354**	P	**Pn**	**10 54 28.9**	**-0.2**
baz=174,SNR=6.4							
UALR	**University of**	**4.70**	**114**	IAmb_Lg		10 55 57.2	
comp=Z,47nm,0.8s							
WLAR	**White Oak Lake**	**4.79**	**129**	IAmb_Lg		10 55 53.5	
comp=Z,47nm,0.8s							
237A	**Washetta, Mont**	**5.01**	**163**	IAmb_Lg		10 56 11.9	
comp=Z,46nm,0.9s							
P40A	**Paris**	**5.12**	**56**	IAmb_Lg		10 56 04.5	
comp=Z,73nm,0.7s							
CCM	**Cathedral Cave**	**5.18**	**74**	IAmb_Lg		10 56 07.8	
comp=Z,62nm,0.8s							
N38A	**Joes South For**	**5.22**	**39**		**Pn**	**10 54 37.0**	**-0.5**
L34A	**Svendsen Farm,**	**5.24**	**10**	IAmb_Lg		10 56 10.8	
comp=Z,84nm,0.7s							
OGNE	**Ogallala**	**5.41**	**321**	IAmb_Lg		10 56 16.2	
comp=Z,77nm,0.8s							
CCAR	**Cane Creek**	**5.54**	**120**	IAmb_Lg		10 56 23.8	
comp=Z,43nm,0.8s							
NATX	**Nacogdoches**	**5.58**	**154**	IAmb_Lg		10 56 28.0	
comp=Z,74nm,0.9s							
HBAR	**Harrisburg**	**5.72**	**101**	IAmb_Lg		10 56 35.2	
comp=Z,56nm,0.7s							
PBMO	**Poplar Bluff**	**5.72**	**88**	IAmb_Lg		10 56 30.8	
comp=Z,55nm,0.8s							
K31A	**O'Neill**	**5.88**	**351**	IAmb_Lg		10 56 28.0	
comp=Z,62nm,0.7s							
435B	**Jarrell**	**6.01**	**180**	IAmb_Lg		10 56 40.0	
comp=Z,49nm,0.8s							
GNAR	**Gosnell**	**6.14**	**96**	IAmb_Lg		10 56 35.7	
comp=Z,55nm,0.7s							
143A	**Socs Landing,**	**6.51**	**127**	IAmb_Lg		10 56 56.0	
comp=Z,37nm,0.9s							
S44A	**Carbondale**	**6.69**	**80**	IAmb_Lg		10 56 55.4	
comp=Z,60nm,0.9s							
HALT	**Halls**	**6.70**	**95**	IAmb_Lg		10 56 59.4	
comp=Z,52nm,0.8s							
W45A	**Hickory Valley**	**6.99**	**101**	IAmb_Lg		10 57 14.5	
comp=Z,38nm,1.1s							
Y45A	**Yeager Farm, C**	**7.18**	**112**	IAmb_Lg		10 57 15.4	
comp=Z,36nm,1.0s							
L40A	**Anamosa**	**7.18**	**41**	IAmb_Lg		10 57 08.9	
comp=Z,48nm,0.7s							
SUSD	**Miller**	**7.70**	**353**	IAmb_Lg		10 57 32.9	
comp=Z,46nm,0.9s							
N23A	**Red Feather La**	**7.71**	**305**	IAmb_Lg		10 57 27.0	
comp=Z,47nm,0.7s							
I37A	**Lemond, Waseca**	**7.87**	**22**	IAmb_Lg		10 57 39.9	
comp=Z,28nm,0.9s							
O44A	**Mansfield**	**7.88**	**62**	IAmb_Lg		10 57 28.3	
comp=Z,49nm,0.8s							
Y22D	**IRIS PASSCAL I**	**8.11**	**253**	IAmb_Lg		10 57 55.6	
comp=Z,51nm,0.8s							
JFWS	**Jewell Farm**	**8.29**	**40**	IAmb_Lg		10 57 55.1	
comp=Z,38nm,1.0s							
RSSD	**Black Hills**	**8.81**	**328**	IAmb_Lg		10 58 06.8	
comp=Z,22nm,0.8s							
I40A	**Norwalk**	**8.84**	**35**	IAmb_Lg		10 57 59.0	
comp=Z,21nm,0.8s							
RWWY	**Rawlins**	**8.93**	**306**	IAmb_Lg		10 58 08.6	
comp=Z,20nm,0.9s							
K22A	**Casper**	**9.04**	**313**	IAmb_Lg		10 58 09.4	
comp=Z,32nm,0.9s							
I42A	**Draeger Farm,**	**9.67**	**40**	IAmb_Lg		10 58 22.2	
comp=Z,27nm,1.0s							

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*IDC **06** 10:56:45.5±0.7, 17.°65S×173.°35W, h0km, mb4.1/11, mbtmp4.1/11, MS3.5/4, Error ellipse: s-maj=29.6km s-min=18.5km az=131.0*
*NEIC **06** 10:56:46.3±2.4, 17.°84S±0.°06×172.°56W±0.°07, h10km±1km, mb4.6/22, Error ellipse: s-maj=14.2km s-min=5.6km az=51.0*
ISC 06 10:56:45.8±0.5, 17.°76S±0.°06×172.°60W±0.°07, h10km, n56, σ2.°58/42, mb4.5/20, MS3.5/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.85**	**118**		**Pn**	**10 57 31.0**	**-0.4**
AFI	**Afiamalu**	**3.91**	**12**	Pn	**Pn**	**10 57 43.1**	**-3.0**
8.0nm,0.3s,baz=236,slow=7.8,SNR=11							
AFI				Sn	**Sn**	**10 58 26.5**	**-5.6**
14nm,0.3s,baz=43,slow=23,SNR=5.8							
AFI	**Afiamalu**	**3.91**	**12**		**Pn**	**10 57 47.5**	**+1.4**
MSVF	**Nonsavu**	**8.91**	**269**	LR	LR	11 01 37.8	
comp=Z,1μm,19.8s,baz=101,slow=36							
MSVF	**Nonsavu**	**8.91**	**269**		**Pn**	**10 58 56.4**	**+1.5**
RAR	**Rarotonga**	**12.57**	**108**	Pn	**Pn**	**10 59 45.1**	**+0.3**
2.4nm,0.3s,baz=265,slow=9.5,SNR=6.7							
RAR				Sn	**Sn**	**11 01 57.0**	**-8.0**
0.7nm,0.3s,baz=134,slow=21,SNR=1.5							
RAR				LR	LR	11 03 56.5	
comp=Z,97nm,20.7s,baz=266,slow=32							
RAR	**Rarotonga**	**12.57**	**108**	Pn	**Pn**	**10 59 44.4**	**-0.5**
DZM	**Mont Dzumac**	**20.16**	**254**	*e*LR	LR	11 05 45.8	
comp=Z,290nm,23.9s							
DZM	**Mont Dzumac**	**20.16**	**254**	P	Pn	11 01 24.0	+1.5
6.3nm,0.7s,baz=87,slow=22,SNR=3.1							
DZM				LR	LR	11 07 10.0	
comp=Z,193nm,19.9s,baz=42,slow=32							
DZM	**Mont Dzumac**	**20.16**	**254**	P	Pn	11 01 23.0	+0.5
DZM				IAmb	IAmb	11 01 51.4	
comp=Z,26nm,1.3s							
PAE	**Paea**	**21.93**	**93**	*e*T	T	11 23 56.2	
comp=Z,1.6nm,0.3s							
PPT2	**Papeete2**	**21.93**	**93**	*e*P	**P**	**11 01 44.6**	**+4.8**
comp=Z,45nm,29.8s							
PPT2				*e*LR	LR	11 07 05.0	
comp=Z,182nm,24.2s							
PPT	**Papeete**	**21.94**	**93**	LR	LR	11 08 04.1	
comp=Z,64nm,20.3s,baz=259,slow=30							
URZ	**Urewera**	**22.32**	**202**	S	S	11 05 30.2	-19
comp=Z,12nm,1.0s,baz=104,slow=11,SNR=1.8							
TBI	**Tubuai**	**22.35**	**108**	*e*LR	LR	11 07 04.7	
comp=Z,238nm,27.8s							
BKZ	**Black Stump Fm**	**23.35**	**202**	P	**P**	**11 01 53.0**	**-1.4**
BKZ				IAmb	IAmb	11 02 21.1	
comp=Z,35nm,1.4s							
BFZ	**Birch Farm**	**24.78**	**201**	P	**P**	**11 02 06.6**	**-1.3**
HNR	**Honiara**	**27.91**	**284**	LR	LR	11 12 00.6	
comp=Z,3μm,18.6s,baz=126,slow=34							
RPZ	**Rata Peaks**	**29.33**	**205**	P	**P**	**11 02 50.1**	**+1.4**
comp=Z,4.4nm,0.6s,baz=155,slow=22,SNR=1.4							
comp=Z,4.4nm,0.6s							
RPZ	**Rata Peaks**	**29.33**	**205**	P	**P**	**11 02 47.7**	**-1.0**
BBOO	**Buckleboo**	**48.33**	**242**	P	**P**	**11 05 25.7**	**-2.2**
WR0	**Warramunga Arr**	**49.90**	**259**	P	**P**	**11 05 37.0**	**-3.0**
WR0				IAmb	IAmb	11 05 48.6	
comp=Z,11nm,1.4s							
WB0	**Warramunga Arr**	**50.06**	**259**	P	**P**	**11 05 37.4**	**-3.8**
WB0				IAmb	IAmb	11 05 47.4	
comp=Z,4.8nm,0.9s							
WB2	**Warramunga Arr**	**50.08**	**259**	P	P	11 05 36.6	-4.8
WRAB	**Tennant Creek**	**50.09**	**259**	P	P	11 05 37.0	-4.5
WRAB				IAmb	IAmb	11 05 56.0	
comp=Z,7.4nm,1.1s							
WRA	**Warramunga Arr**	**50.09**	**259**	P	P	11 05 36.6	-4.9
comp=Z,0.8nm,0.6s,baz=98,slow=6.0,SNR=30							
WRA				PcP	**PcP**	**11 06 58.8**	**-2.3**
comp=Z,1.2nm,0.9s,baz=93,slow=4.7,SNR=2.4							
comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**50.09**	**259**	P	P	11 05 36.8	-4.7
AS31	**Alice Springs**	**50.15**	**254**	P	P	11 05 37.2	-4.7
ASAR	**Alice Springs**	**50.15**	**254**	P	P	11 05 37.2	-4.7
comp=Z,5.0nm,0.7s,baz=89,slow=8.5,SNR=47							
ASAR				PcP	**PcP**	**11 07 00.1**	**-1.2**
comp=Z,1.5nm,0.8s,baz=96,slow=4.3,SNR=4.7							
comp=Z,5.0nm,0.7s							
ASAR	**Alice Springs**	**50.15**	**254**	P	**P**	**11 05 38.6**	**-3.3**
FITZ	**Fitzroy Crossi**	**58.50**	**259**	P	**P**	**11 06 40.9**	**-1.8**
FITZ				IAmb	IAmb	11 06 54.1	
comp=Z,5.8nm,1.1s							
SBA	**Scott Base**	**60.97**	**185**	P	**P**	**11 06 58.9**	**+0.1**
VNDA	**Vanda**	**61.12**	**186**	P	**P**	**11 07 01.5**	**+1.7**
comp=Z,0.6nm,0.6s,baz=4.0,slow=7.8,SNR=5.4							
comp=Z,0.6nm,0.6s							
VNDA	**Vanda**	**61.12**	**186**	P	**P**	**11 06 59.8**	**-0.1**
YBH	**Yreka Blue Hor**	**75.02**	**36**	P	**P**	**11 08 29.1**	**+1.3**
YBH				IAmb	IAmb	11 08 33.0	
comp=Z,11nm,1.4s							
PETK	**Petropavlovsk-**	**75.10**	**342**	P	**P**	**11 08 27.2**	**-0.6**
comp=Z,2.2nm,0.8s,baz=148,slow=8.4,SNR=5.4							
comp=Z,2.2nm,0.8s							
NVAR	**Mina Array Bea**	**75.58**	**41**	P	**P**	**11 08 35.1**	**+3.9**
comp=Z,0.7nm,0.8s,baz=224,slow=8.9,SNR=6.3							
comp=Z,0.7nm,0.8s							
TXAR	**Lajitas Array**	**81.30**	**56**	P	**P**	**11 09 06.6**	**+3.8**
comp=Z,0.4nm,0.7s,baz=216,slow=6.2,SNR=4.6							
comp=Z,0.4nm,0.7s							
H03S2	**Juan Fernandez**	**83.27**	**123**	T	T	12 40 10.8	
baz=250							
H03S1	**Juan Fernandez**	**83.28**	**123**	T	T	12 40 15.7	
baz=250							
H03S3	**Juan Fernandez**	**83.28**	**123**	T	T	12 40 17.7	
baz=250							
PDAR	**Pinedale Array**	**83.51**	**41**	P	**P**	**11 09 17.4**	**+3.1**
comp=Z,0.9nm,0.6s,baz=217,slow=3.9,SNR=11							
comp=Z,0.9nm,0.6s							
WRH	**Wood River Hil**	**84.12**	**10**	P	**P**	**11 09 17.9**	**+1.3**
N31M	**Braeburn, Yuko**	**84.26**	**17**	P	**P**	**11 09 17.6**	**+0.2**
HDA	**Harding

Plg5.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 11:09:08.7±0.6,57.50S±0.09×147.9E±0.1,h10km,n70, σ0.84/33,mb4.3/9,MS4.0/32,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.92**	**69**	Pn	**Pn**	**11 10 51.2**	**+1.2**
WKZ	**Wanaka**	**18.26**	**55**		**Pn**	**11 13 19.8**	**-2.2**
CASY	**Casey**	**19.35**	**228**	P	**Pn**	**11 13 34.6**	**-0.4**
CASY				IAmb	IAmb	11 13 46.2	
comp=Z,8.8nm,0.9s							
TOO	**Toolangi**	**20.00**	**355**	P	**P**	**11 13 41.4**	**+0.1**
TOO				IAmb	IAmb	11 13 44.2	
comp=Z,32nm,1.3s							
RPZ	**Rata Peaks**	**20.04**	**56**	LR	LR	11 20 22.0	
comp=Z,463nm,18.8s,baz=218,slow=34							
VNDA	**Vanda**	**20.68**	**171**	P	**P**	**11 13 48.2**	**-0.1**
comp=Z,2.2nm,0.9s,baz=334,slow=13,SNR=10							
VNDA				LR	LR	11 20 23.6	
comp=Z,279nm,21.8s,baz=344,slow=33							
comp=Z,2.2nm,0.9s							
VNDA	**Vanda**	**20.68**	**171**	P	**P**	**11 13 48.4**	**+0.1**
SBA	**Scott Base**	**21.43**	**169**	P	**P**	**11 13 56.4**	**0.0**
BBOO	**Buckleboo**	**25.98**	**337**	P	**P**	**11 14 41.4**	**+0.1**
STKA	**Stephens Creek**	**25.98**	**348**	P	**P**	**11 14 40.6**	**-0.8**
comp=Z,11nm,1.2s,baz=166,slow=8.7,SNR=6.7							
comp=Z,11nm,1.2s							
STKA	**Stephens Creek**	**25.98**	**348**	P	**P**	**11 14 41.9**	**+0.6**
URZ	**Urewera**	**27.15**	**57**	LR	LR	11 25 15.1	
comp=Z,615nm,18.3s,baz=294,slow=36							
H01W1	**Cape Leeuwin H**	**31.94**	**300**	T	T	11 49 08.9	
baz=145,slow=76,SNR=229							
H01W2	**Cape Leeuwin H**	**31.95**	**300**	T	T	11 49 10.5	
baz=145,slow=76,SNR=211							
H01W3	**Cape Leeuwin H**	**31.96**	**300**	T	T	11 49 10.7	
baz=145,slow=76,SNR=191							
NWAO	**Narrogin (SRO)**	**32.21**	**307**	LR	LR	11 26 01.3	
comp=Z,160nm,18.6s,baz=229,slow=31							
QSPA	**South Pole Qui**	**32.60**	**180**	P	**P**	**11 15 40.4**	**+0.3**
comp=Z,1.5nm,1.0s,baz=349,slow=5.2,SNR=2.8							
QSPA				LR	LR	11 29 16.9	
comp=Z,575nm,18.9s,baz=12,slow=37							
comp=Z,1.5nm,1.0s							
QSPA	**South Pole Qui**	**32.60**	**180**	P	**P**	**11 15 39.1**	**-0.9**
QSPA				IAmb	IAmb	11 15 55.9	
comp=Z,7.4nm,1.4s							
ASAR	**Alice Springs**	**35.28**	**338**	P	**P**	**11 16 03.0**	**-0.5**
comp=Z,1.7nm,0.8s,baz=166,slow=10,SNR=18							
ASAR				LR	LR	11 28 00.3	
comp=Z,223nm,21.5s,baz=166,slow=32							
comp=Z,1.7nm,0.8s							
ASAR	**Alice Springs**	**35.28**	**338**	P	**P**	**11 16 05.9**	**+2.4**
MAW	**Mawson**	**37.28**	**219**	LR	LR	11 30 32.5	
comp=Z,577nm,21.3s,baz=97,slow=34							
CTA	**Charters Tower**	**37.38**	**358**	LR	LR	11 30 18.8	
comp=Z,744nm,18.0s,baz=188,slow=34							
DZM	**Mont Dzumac**	**37.90**	**29**	LR	LR	11 29 09.7	
comp=Z,545nm,19.2s,baz=208,slow=32							
WR0	**Warramunga Arr**	**38.76**	**340**	P	**P**	**11 16 32.8**	**-0.2**
WR0				IAmb	IAmb	11 16 48.4	
comp=Z,15nm,1.4s							
WB2	**Warramunga Arr**	**38.81**	**339**	P	**P**	**11 16 33.1**	**-0.4**
WRA	**Warramunga Arr**	**38.81**	**339**	P	**P**	**11 16 32.1**	**-1.4**
comp=Z,5.1nm,0.8s,baz=166,slow=7.5,SNR=37							
comp=Z,5.1nm,0.8s							
WRA	**Warramunga Arr**	**38.81**	**339**	P	**P**	**11 16 32.8**	**-0.7**
WRAB	**Tennant Creek**	**38.82**	**339**	P	**P**	**11 16 33.1**	**-0.5**
WRAB				IAmb	IAmb	11 16 34.8	
comp=Z,8.8nm,0.9s							
WB0	**Warramunga Arr**	**38.97**	**340**	P	**P**	**11 16 34.8**	**-0.1**
WB0				IAmb	IAmb	11 16 36.4	
comp=Z,8.3nm,1.0s							
FITZ	**Fitzroy Crossi**	**42.67**	**328**	LR	LR	11 32 12.9	
comp=Z,128nm,21.0s,baz=160,slow=32							
FITZ	**Fitzroy Crossi**	**42.67**	**328**	P	**P**	**11 17 05.7**	**+0.3**
FITZ				IAmb	IAmb	11 17 28.9	
comp=Z,8.0nm,1.1s							
KNRA	**Kununurra**	**44.15**	**333**	P	**P**	**11 17 17.0**	**-0.3**
MSVF	**Nonsavu**	**45.61**	**42**	LR	LR	11 32 28.1	
comp=Z,292nm,20.6s,baz=204,slow=31							
TROLL	**Troll, Antarti**	**48.54**	**194**	P	**P**	**11 17 51.2**	**-0.2**
SNAA	**Sanae**	**49.49**	**192**	P	**P**	**11 17 58.1**	**-0.4**
SNAA	**Sanae**	**49.49**	**192**	P	**P**	**11 17 58.3**	**-0.3**
comp=Z,0.9nm,0.8s,baz=138,slow=6.3,SNR=3.8							
SNAA				LR	LR	11 38 54.1	
comp=Z,440nm,18.9s,baz=158,slow=36							
comp=Z,0.9nm,0.8s							
SNAA	**Sanae**	**49.49**	**192**	P	**P**	**11 17 59.1**	**+0.6**
SNAA				IAmb	IAmb	11 18 07.7	
comp=Z,7.8nm,1.5s							
VNA3	**Neumayer Olymp**	**50.57**	**189**	P	**P**	**11 18 05.9**	**-0.9**
VNA1	**Neumayer--Stat**	**51.02**	**190**	P	**P**	**11 18 10.9**	**+0.9**
RAR	**Rarotonga**	**52.39**	**69**	LR	LR	11 36 40.7	
comp=Z,124nm,21.8s,baz=242,slow=32							
AFI	**Afiamalu**	**53.10**	**52**	LR	LR	11 38 55.7	
comp=Z,60nm,20.0s,baz=122,slow=34							
KAPI	**Kappang**	**56.80**	**326**	LR	LR	11 41 52.7	
comp=Z,144nm,20.0s,baz=166,slow=34							
PPT	**Papeete**	**60.68**	**76**	LR	LR	11 40 14.5	
comp=Z,91nm,20.9s,baz=201,slow=31							
DAV	**Davao City (W)**	**66.86**	**336**	LR	LR	11 49 30.5	
comp=Z,79nm,18.8s,baz=119,slow=36							
GUMO	**Guam**	**70.87**	**357**	LR	LR	11 51 48.6	
comp=Z,78nm,18.1s,baz=175,slow=36							
H08S2	**Diego Garcia H**	**75.73**	**278**	T	T	12 43 51.0	
baz=147,slow=76,SNR=70							
H08S1	**Diego Garcia H**	**75.74**	**278**	T	T	12 43 54.4	
baz=147,slow=76,SNR=63							
H08S3	**Diego Garcia H**	**75.75**	**278**	T	T	12 43 54.2	
baz=147,slow=76,SNR=59							
PLCA	**Paso Flores**	**76.96**	**151**	LR	LR	11 48 37.2	
comp=Z,97nm,19.6s,baz=192,slow=31							
SUR	**Sutherland**	**80.01**	**223**	LR	LR	11 50 35.7	
comp=Z,100nm,21.3s,baz=166,slow=31							
H03S2	**Juan Fernandez**	**80.86**	**142**	T	T	12 51 22.8	
baz=199							
H03S1	**Juan Fernandez**	**80.86**	**142**	T	T	12 51 23.4	
baz=199							
H03S3	**Juan Fernandez**	**80.88**	**142**	T	T	12 51 21.1	
baz=199							
BOSA	**Boshof**	**81.64**	**228**	LR	LR	11 52 05.7	
comp=Z,91nm,18.9s,baz=190,slow=31							
PALK	**Pallekele**	**84.14**	**293**	LR	LR	11 52 22.3	
comp=Z,54nm,20.4s,baz=243,slow=31							
JCJ	**Chichijima**	**84.40**	**355**	LR	LR	11 58 45.3	
comp=Z,28nm,19.6s,baz=146,slow=35							
LBTB	**Lobatse**	**84.69**	**230**	LR	LR	11 55 23.0	
comp=Z,103nm,18.1s,baz=154,slow=33							
JOW	**Kunigami**	**85.61**	**343**	LR	LR	11 59 08.6	
comp=Z,66nm,19.4s,baz=120,slow=35							
CMAR	**Chiang Mai Arr**	**85.88**	**314**	LR	LR	11 59 40.6	
comp=Z,83nm,19.1s,baz=160,slow=35							
JHJ	**Hachijo jima 2**	**90.53**	**353**	LR	LR	12 01 41.0	
comp=Z,63nm,19.6s,baz=105,slow=35							
LSZ	**Lusaka**	**92.14**	**237**	LR	LR	11 57 13.2	
comp=Z,199nm,20.5s,baz=142,slow=31							
BRDH	**Bariadhala**	**92.60**	**310**	LR	LR	12 04 07.1	
comp=Z,57nm,20.3s,baz=115,slow=36							
TSUM	**Tsumeb**	**93.12**	**226**	LR	LR	11 57 53.7	
comp=Z,116nm,21.1s,baz=149,slow=31							
MJAR	**Matsushiro Arr**	**94.04**	**352**	LR	LR	12 05 28.0	
comp=Z,34nm,18.6s,baz=149,slow=36							
KSRS	**Korea Array**	**96.08**	**344**	LR	LR	12 05 38.2	
comp=Z,33nm,20.3s,baz=140,slow=35							
TORD	**Torodi Ar. Bea**	**128.83**	**224**	PKP	**PKiKP**	**11 28 17.7**	**+0.8**
comp=Z,0.3nm,0.7s,baz=180,slow=1.4,SNR=1.9							
AKASG	**Malin Array Be**	**144.50**	**286**	PKP	**PKPab**	**11 28 42.4**	**0.0**
comp=Z,0.2nm,0.3s,baz=100,slow=2.1,SNR=1.5							
KEST	**Kesra**	**144.92**	**250**	PKPbc	**PKPdf**	**11 28 46.0**	**+0.6**
comp=Z,3.2nm,0.7s,baz=88,slow=2.7,SNR=4.1							
FINES	**FINESS Array B**	**151.02**	**303**	PKPbc	**PKiKP**	**11 29 00.7**	**-0.1**
comp=Z,4.1nm,0.9s,baz=134,slow=5.5,SNR=2.5							
GERES	**GERESS Array B**	**151.68**	**272**	PKPbc	**PKiKP**	**11 29 03.3**	**+0.6**
comp=Z,0.3nm,0.2s,baz=129,slow=4.4,SNR=1.3							

*SOME **06** 11:25:40.5,43.62N×74.43E,h15km*
*KRNET **06** 11:25:40.5±0.1,43.61N×74.48E,h19km,mb2.6*

ISC 06 11:25:40.8±1.1,43.60N±0.04×74.48E±0.03,h17km±8km, n25,σ0.64/49,9C-7D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGDS	**Sogindy**	**0.18**	**144**	*eP*	**Pg**	**11 25 45.4**	**0.0**
3.0nm,0.1s							
SGDS				*eS*	**Sg**	**11 25 48.9**	**+0.3**
30nm,0.1s							
USP	**Ospenovka**	**0.34**	**178**	⇑*eP*	**Pg**	**11 25 47.8**	**-0.1**
baz=78							
USP				⇑*eS*	**Sg**	**11 25 52.8**	**+0.1**
baz=78							
CHMS	**Chumysh**	**0.63**	**162**	⇑*eP*	**Pg**	**11 25 52.9**	**-0.4**
baz=62							
CHMS				⇑*eS*	**Sg**	**11 26 01.7**	**0.0**
baz=62							
KRBS	**Karabastau**	**0.87**	**83**	*eP*	**Pb**	**11 25 56.6**	**-1.0**
baz=84							
KRBS				*eS*	**Sb**	**11 26 08.0**	**-1.0**
baz=84							
KRBS	**Karabastau**	**0.87**	**83**	*eP*	**Pb**	**11 25 56.6**	**-1.0**
2.2nm,0.1s							
KRBS				*eS*	**Sb**	**11 26 08.0**	**-1.0**
7.2nm,0.1s							
AAK	**Ala-Archa**	**0.96**	**179**	⇓*eP*	**Pb**	**11 25 58.8**	**-0.4**
baz=80							
AAK				⇓*eS*	**Sb**	**11 26 11.4**	**-0.3**
baz=80							
KBK	**Karagaybulak**	**1.00**	**160**	⇓*eP*	**Pb**	**11 25 59.6**	**-0.3**
baz=60							
KBK				⇓*eS*	**Sb**	**11 26 13.0**	**+0.1**
baz=60							
EKS2	**Erkin-Say**	**1.07**	**209**	⇑*eP*	**Pb**	**11 26 00.6**	**-0.4**
baz=9.0							
EKS2				⇑*eS*	**Sb**	**11 26 14.5**	**-0.3**
baz=9.0							
KST	**Kastek**	**1.22**	**117**	*eP*	**Pg**	**11 26 04.6**	**+0.3**
2.5nm,0.1s							
KST				*eS*	**Sg**	**11 26 21.7**	**+1.5**
8.5nm,0.2s							
UCH	**Uchtor**	**1.37**	**179**	⇓*eP*	**Pb**	**11 26 05.9**	**-0.5**
baz=79							
UCH				⇓*iS*	**Sb**	**11 26 23.9**	**+0.1**
baz=79							
KUU	**Kurty**	**1.38**	**77**	*eP*	**Pn**	**11 26 05.5**	**+0.2**
baz=78							
KUU				*eS*	**Sb**	**11 26 23.4**	**-0.1**
baz=78							
KUU	**Kurty**	**1.38**	**77**	*eP*	**Pn**	**11 26 05.5**	**+0.2**
3.3nm,0.3s							
KUU				*eS*	**Sb**	**11 26 23.4**	**-0.1**
7.9nm,0.2s							
BTLS	**Baital**	**1.47**	**348**	*eP*	**Pn**	**11 26 06.4**	**-0.2**
1.0nm,0.1s							
BTLS				*eS*	**Sn**	**11 26 25.1**	**-0.5**
3.6nm,0.1s							
MTBS	**Maitube**	**1.50**	**108**	*eP*	**Pb**	**11 26 08.4**	**+0.2**
baz=8.0							
MTBS				*eS*	**Sg**	**11 26 28.3**	**-0.8**
baz=8.0							
MTBS	**Maitube**	**1.50**	**108**	*eP*	**Pb**	**11 26 08.4**	**+0.2**
2.2nm,0.1s							
MTBS				*eS*	**Sg**	**11 26 28.3**	**-0.8**
9.8nm,0.1s							
BOOM	**Boomskoye usch**	**1.54**	**136**	⇑*eP*	**Pb**	**11 26 08.8**	**-0.2**
baz=36							
BOOM				⇑*eS*	**Sb**	**11 26 29.2**	**+0.8**
baz=36							
KTBS	**Karatobe**	**1.60**	**85**	*eP*	**Pb**	**11 26 09.9**	**-0.1**
baz=86							
KTBS				*eS*	**Sb**	**11 26 30.7**	**+0.7**
baz=86							
KTBS	**Karatobe**	**1.60**	**85**	*eP*	**Pb**	**11 26 09.9**	**-0.1**
1.0nm,0.1s							
KTBS				*eS*	**Sb**	**11 26 30.6**	**+0.7**
9.4nm,0.2s							
IZV	**Izvestkoviy**	**1.65**	**109**	*eP*	**Pb**	**11 26 11.4**	**+0.4**
baz=10.0							
IZV				*eS*	**Sg**	**11 26 33.3**	**-0.9**
baz=10.0							
IZV	**Izvestkoviy**	**1.65**	**109**	*eP*	**Pb**	**11 26 11.4**	**+0.4**
4.1nm,0.3s							
IZV				*eS*	**Sg**	**11 26 33.3**	**-0.9**
11nm,0.2s							
CHKK	**Chushkaly**	**1.83**	**81**	*eP*	**Pb**	**11 26 13.9**	**0.0**
baz=82							
CHKK				*eS*	**Sb**	**11 26 37.5**	**+0.9**
baz=82							
CHKK	**Chushkaly**	**1.83**	**81**	*eP*	**Pb**	**11 26 13.9**	**0.0**
0.7nm,0.1s							
CHKK				*eS*	**Sb**	**11 26 37.5**	**+0.9**
12nm,0.3s							
TNSS	**Tian-Shan**	**1.89**	**107**	*eP*	**Pb**	**11 26 14.9**	**-0.1**
baz=7.0							
TNSS				*eS*	**Sb**	**11 26 39.7**	**+1.2**
baz=7.0							
TNSS	**Tian-Shan**	**1.89**	**107**	*eP*	**Pb**	**11 26 14.9**	**-0.1**
0.5nm,0.1s							
TNSS				*eS*	**Sb**	**11 26 39.7**	**+1.2**
2.9nm,0.2s							
KK31	**Karatay Array**	**2.94**	**262**	⇑Pg	**Pg**	**11 26 38.2**	**+1.1**
0.4nm,0.5s,baz=76,slow=14							
KK31				⇓Lg	Lg	11 27 11.6	
0.6nm,0.4s,baz=72,slow=29,SNR=8.4							

*NEIC **06** 11:38:17.5±1.6,8.11S±0.07×148.04E±0.08,h45km±6km, mb4.7/73,Error ellipse: s-maj=13.7km s-min=6.9km az=129.0*
*IDC **06** 11:38:18.4±1.1,8.14S×148.08E,h58km±10km,mb4.0/15, mbtmp4.3/19,MS3.7/17,Error ellipse: s-maj=16.3km s-min=7.9km az=121.0*
*DJA **06** 11:38:23.8±0.9,8.3S±6.×14.8E±.,h67km±6km,M4.6/10, mB4.6/2,mb4.5/10,MLv4.7/2,Mw(mB)3.8/2*

ISC 06 11:38:16.3±0.4,8.11S±0.05×148.07E±0.06,h35km,n153, σ1.20/141,mb4.7/47,MS3.7/13,3C-1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.57**	**215**	P	**Pn**	**11 38 42.7**	**+1.0**
8μm,0.7s,baz=36,slow=5.9,SNR=1312							
PMG				S	**Sn**	**11 39 03.6**	**+2.7**
3μm,0.4s,baz=178,slow=14,SNR=14							
PMG				LR	LR	11 39 40.1	
comp=Z,2μm,19.1s,baz=92,slow=52							
PMG	**Port Moresby**	**1.57**	**215**		**Pn**	**11 38 42.4**	**+0.6**
PMG				Sn	**Sn**	**11 39 04.6**	**+3.8**
PMG	**Port Moresby**	**1.57**	**215**	P	**Pn**	**11 38 43.1**	**+1.4**
PMG	**Port Moresby**	**1.57**	**215**	P	**Pn**	**11 38 43.4**	**+1.7**
KRVT	**Keravat (AS076**	**5.45**	**46**	P	**Pn**	**11 39 36.2**	**+1.1**
80nm,0.4s,baz=333,slow=1.7,SNR=25							
KRVT				S	**Sn**	**11 40 38.3**	**+1.7**
92nm,0.6s,baz=39,slow=22,SNR=1.4							
KRVT				LR	LR	11 41 33.7	
comp=Z,410nm,21.9s,baz=359,slow=36							
RABL	**Rabaul**	**5.63**	**47**	Pn	**Pn**	**11 39 37.5**	**-0.1**
RABL	**Rabaul**	**5.63**	**47**	P	**Pn**	**11 39 38.4**	**+0.8**
COEN	**Coen**	**7.54**	**219**	Pn	**Pn**	**11 40 04.3**	**+0.5**
COEN					**Sn**	**11 41 26.1**	**-2.0**
COEN	**Coen**	**7.54**	**219**	P	**Pn**	**11 40 04.4**	**+0.6**
MTSU	**Mount Surprise**	**10.61**	**200**	P	**Pn**	**11 40 46.6**	**+0.6**
TV1H	**Townsville Har**	**11.15**	**186**	P	**Pn**	**11 40 55.8**	**+2.5**
HNR	**Honiara**	**11.81**	**97**	LR	LR	11 44 58.1	
comp=Z,3μm,20.2s,baz=224,slow=34							
CTA	**Charters Tower**	**12.04**	**188**	P	**Pn**	**11 41 07.6**	**+2.2**
9.3nm,0.6s,baz=12,slow=15,SNR=17							
CTA				LR	LR	11 45 44.9	
comp=Z,380nm,18.0s,baz=352,slow=37							
CTA	**Charters Tower**	**12.04**	**188**	P	**Pn**	**11 41 07.6**	**+2.2**
CTAO	**Charters Tower**	**12.04**	**188**	Pn	**Pn**	**11 41 06.0**	**+0.5**
CTAO	**Charters Tower**	**12.04**	**188**	P	**Pn**	**11 41 08.0**	**+2.5**
QIS	**Mount Isa**	**14.84**	**213**	P	**Pn**	**11 41 44.6**	**+0.9**
RK1H	**Rockhampton Ha**	**15.37**	**172**	P	**Pn**	**11 41 52.4**	**+1.8**
KDU	**Kakadu**	**16.00**	**252**	P	**Pn**	**11 41 59.4**	**+0.6**
FAKI	**Fak Fak**	**16.57**	**287**	P	**Pn**	**11 42 07.0**	**+0.9**
FAKI	**Fak Fak**	**16.57**	**287**	P	**P**	**11 42 11.4**	**+3.1**
13nm,0.8s							
FAKI	**Fak Fak**	**16.57**	**287**	P	**Pn**	**11 42 05.1**	**-1.0**
SAUI	**Saumlaki**	**16.61**	**269**		**Pn**	**11 42 05.8**	**-0.8**
MTN	**Manton Dam**	**17.30**	**253**	P	**P**	**11 42 16.4**	**0.0**
EIDS	**Eidsvold**	**17.40**	**171**	P	**P**	**11 42 17.5**	**+0.1**
EIDS	**Eidsvold**	**17.40**	**171**	P	**P**	**11 42 18.3**	**+0.8**
WB0	**Warramunga Arr**	**17.60**	**227**	Pn	**Pn**	**11 42 17.9**	**-1.1**
WR0	**Warramunga Arr**	**17.62**	**227**	P	**Pn**	**11 42 19.0**	**-0.2**
WRAB	**Tennant Creek**	**17.74**	**227**		**Pn**	**11 42 19.8**	**-0.8**
WRAB	**Tennant Creek**	**17.74**	**227**	P	**Pn**	**11 42 20.6**	**-0.1**
WB2	**Warramunga Arr**	**17.75**	**227**	P	**Pn**	**11 42 20.5**	**-0.2**
WRA	**Warramunga Arr**	**17.75**	**227**	P	**Pn**	**11 42 20.3**	**-0.6**
11nm,0.9s,baz=52,slow=11,SNR=62							
WRA				S	Sn	11 45 27.1	-11
1.0nm,0.6s,baz=52,slow=20,SNR=1.5							
WRA				LR	LR	11 49 34.3	
comp=Z,193nm,18.8s,baz=18,slow=38							
WRA	**Warramunga Arr**	**17.75**	**227**		**Pn**	**11 42 19.7**	**-1.2**
PATS	**Pohnpei**	**18.02**	**35**		**P**	**11 42 24.6**	**+0.3**
PATS				IAmb	IAmb	11 42 55.5	
comp=Z,85nm,1.4s							
SIJI	**Sorong**	**18.22**	**292**	P	**P**	**11 42 25.6**	**-1.0**
comp=Z,1.6nm,0.3s,baz=135,slow=19,SNR=1.3							
QLP	**Quilpie**	**18.73**	**191**	P	**Pn**	**11 42 34.0**	**+1.3**
KNRA	**Kununurra**	**20.32**	**246**		**P**	**11 42 50.9**	**+1.3**
KNRA	**Kununurra**	**20.32**	**246**	P	**P**	**11 42 49.6**	**0.0**
AS01	**Alice Springs**	**20.55**	**220**	P	**P**	**11 42 52.1**	**0.0**
AS31	**Alice Springs**	**20.58**	**220**	P	**P**	**11 42 52.4**	**0.0**
ASAR	**Alice Springs**	**20.58**	**220**	P	**P**	**11 42 52.2**	**-0.1**
comp=Z,7.0nm,0.6s,baz=54,slow=9.9,SNR=71							
ASAR				S	**S**	**11 46 38.5**	**-2.4**
comp=Z,0.5nm,0.6s,baz=32,slow=29,SNR=1.1							
ASAR				LR	LR	11 52 20.4	
comp=Z,50nm,20.3s,baz=40,slow=41							
comp=Z,7.0nm,0.6s							
ASAR	**Alice Springs**	**20.58**	**220**	P	**P**	**11 42 53.1**	**+0.7**
INKA	**Innaminka**	**20.72**	**199**	P	**P**	**11 42 55.0**	**+1.3**
ARMA	**Armidale**	**22.44**	**172**	P	**P**	**11 43 13.7**	**+1.3**
OOD	**Oodnadatta**	**22.81**	**209**	P	**P**	**11 43 15.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**23.97**	**243**	P	**P**	**11 43 26.1**	**-1.6**
comp=Z,6.9nm,0.3s,baz=65,slow=8.9,SNR=41							
FITZ				LR	LR	11 52 16.7	
comp=Z,90nm,21.3s,baz=58,slow=35							
comp=Z,6.9nm,0.3s							
FITZ	**Fitzroy Crossi**	**23.97**	**243**	P	**P**	**11 43 25.9**	**-1.8**
FITZ				IAmb	IAmb	11 43 31.3	
comp=Z,13nm,0.7s							
FITZ	**Fitzroy Crossi**	**23.97**	**243**	P	**P**	**11 43 26.5**	**-1.1**
LCRK	**Leigh Creek**	**24.06**	**201**	P	**P**	**11 43 28.1**	**-0.3**
BATI	**Baumata**	**24.18**	**263**	LR	LR	11 54 58.4	
comp=Z,210nm,18.1s,baz=124,slow=41							
STKA	**Stephens Creek**	**24.41**	**193**	P	**P**	**11 43 30.7**	**-0.8**
comp=Z,2.2nm,0.5s,baz=2.4,slow=7.2,SNR=7.6							
STKA				LR	LR	11 54 04.8	
comp=Z,240nm,18.1s,baz=18,slow=39							
comp=Z,2.2nm,0.5s							
STKA	**Stephens Creek**	**24.41**	**193**	P	**P**	**11 43 31.4**	**-0.2**
STKA	**Stephens Creek**	**24.41**	**193**	P	**P**	**11 43 31.6**	**+0.1**
WRKA	**Warakurna**	**25.29**	**226**	P	**P**	**11 43 38.4**	**-1.3**
MULG	**Mulgathing**	**25.67**	**209**	P	**P**	**11 43 42.9**	**-0.1**
HTT	**Hallett**	**26.58**	**197**	P	**P**	**11 43 51.8**	**+0.5**
BBOO	**Buckleboo**	**26.98**	**203**	P	**P**	**11 43 53.2**	**-1.6**
BBOO				IAmb	IAmb	11 44 10.9	
comp=Z,24nm,1.4s							
CAN	**Canberra**	**27.10**	**178**	P	**P**	**11 43 56.0**	**+0.1**
CAN				IAmb	IAmb	11 43 58.1	
comp=Z,18nm,1.2s							
KAPI	**Kappang**	**28.30**	**274**	LR	LR	11 56 50.2	
comp=Z,75nm,18.1s,baz=95,slow=39							
FORT	**Forrest**	**29.30**	**217**	P	**P**	**11 44 15.2**	**-0.4**
FORT	**Forrest**	**29.30**	**217**	P	**P**	**11 44 15.5**	**-0.1**
MBWA	**Marble Bar**	**30.27**	**242**	P	**P**	**11 44 25.4**	**+1.1**
PSA00	**Pilbara Seismi**	**30.32**	**241**	P	**P**	**11 44 23.8**	**-0.9**
MSVF	**Nonsavu**	**30.70**	**111**	LR	LR	11 55 34.5	
comp=Z,98nm,18.2s,baz=263,slow=34							
MEEK	**Meekatharra**	**33.47**	**233**	P	**P**	**11 44 51.7**	**-0.7**
MORW	**Morawa**	**36.62**	**231**	P	**P**	**11 45 18.3**	**-1.2**
MORW				IAmb	IAmb	11 45 54.1	
comp=Z,20nm,1.2s							
MORW	**Morawa**	**36.62**	**231**	P	**P**	**11 45 18.9**	**-0.6**
NWAO	**Narrogin (SRO)**	**37.74**	**225**	LR	LR	12 01 47.0	
comp=Z,158nm,19.8s,baz=45,slow=37							
NWAO	**Narrogin (SRO)**	**37.74**	**225**	P	**P**	**11 45 28.3**	**-0.6**
URZ	**Urewera**	**39.84**	**143**	LR	LR	12 01 16.5	
comp=Z,117nm,19.6s,baz=20,slow=35							
BKZ	**Black Stump Fm**	**40.09**	**145**	P	**P**	**11 45 48.4**	**-0.1**
TUWZ	**Tuamarina**	**40.33**	**150**	P	**P**	**11 45 50.6**	**+0.1**
LTZ	**Lake Taylor**	**40.56**	**152**	P	**P**	**11 45 52.9**	**+0.5**
RPZ	**Rata Peaks**	**40.76**	**154**	P	**P**	**11 45 53.5**	**-0.5**
comp=Z,7.4nm,0.6s,baz=272,slow=3.4,SNR=7.5							
RPZ				LR	LR	12 00 39.5	
comp=Z,76nm,19.0s,baz=267,slow=33							
comp=Z,7.4nm,0.6s							
RPZ	**Rata Peaks**	**40.76**	**154**	P	**P**	**11 45 54.3**	**+0.3**
RPZ	**Rata Peaks**	**40.76**	**154**	P	**P**	**11 45 54.1**	**+0.1**
KHZ	**Kahutara**	**40.88**	**151**	P	**P**	**11 45 54.7**	**-0.2**
MLZ	**Mavora Lakes**	**40.97**	**158**	P	**P**	**11 45 54.7**	**-1.0**
MLZ				IAmb	IAmb	11 46 18.5	
comp=Z,36nm,1.3s							
TPUB	**Ta-pu**	**41.17**	**320**

QSPA IAmb IAmb 11 50 33.0
comp=Z,6.7nm,0.8s
P19K Oil Pt 81.92 26 P **P 11 50 31.5 -0.6**
N19K Bonanza Creek 82.01 25 P **P 11 50 31.8 -0.8**
N19K IAmb IAmb 11 50 56.0
comp=Z,6.5nm,1.1s
RSO Redoubt South 82.55 25 P **P 11 50 32.6 -3.0**
TTA Tatalina 82.57 22 P **P 11 50 34.8 -0.7**
L19K White Mountain 82.60 23 P **P 11 50 36.1 +0.5**
L19K IAmb IAmb 11 50 37.0
comp=Z,10nm,0.9s
HOM Homer 82.62 26 P **P 11 50 35.6 -0.1**
M19K Big River Lodg 82.64 24 P **P 11 50 36.4 +0.6**
M19K IAmb IAmb 11 50 47.7
comp=Z,9.7nm,1.2s
M20K Styx River 83.13 24 P **P 11 50 38.7 +0.2**
M20K IAmb IAmb 11 50 40.1
comp=Z,8.3nm,1.0s
K20K Telida 83.55 23 P **P 11 50 40.6 +0.2**
K20K IAmb IAmb 11 50 41.8
comp=Z,6.9nm,0.9s
SEW Seward 83.80 27 P **P 11 50 40.8 -0.9**
SEW IAmb IAmb 11 50 52.7
comp=Z,9.8nm,1.1s
J20K Nowinta River 83.96 22 P **P 11 50 42.9 +0.4**
J20K IAmb IAmb 11 50 43.1
comp=Z,11nm,1.4s
PPLA Purkeypile 84.03 23 P **P 11 50 42.7 -0.4**
PPLA IAmb IAmb 11 50 49.1
comp=Z,15nm,1.4s
RC01 Rabbit Creek A 84.15 26 P **P 11 50 43.0 -0.5**
RC01 IAmb IAmb 11 50 46.0
comp=Z,13nm,1.2s
CAST Castle Rocks 84.34 23 P **P 11 50 44.1 -0.4**
CAST IAmb IAmb 11 50 44.6
comp=Z,6.9nm,1.0s
PMR Palmer 84.64 25 P **P 11 50 45.7 -0.3**
PWL Port Wells 84.64 26 P **P 11 50 46.0 -0.1**
PWL IAmb IAmb 11 50 46.7
comp=Z,6.7nm,0.8s
KTH Kantishna Hill 84.86 23 P **P 11 50 45.7 -1.4**
KTH IAmb IAmb 11 50 57.7
comp=Z,5.9nm,0.9s
MLY Manley 85.66 22 P **P 11 50 50.5 -0.6**
MLY IAmb IAmb 11 50 51.5
comp=Z,3.8nm,0.9s
MCK McKinley 85.72 23 P **P 11 50 50.7 -0.8**
KLU Klutina 85.97 26 IAmb IAmb 11 50 54.4
comp=Z,7.2nm,1.0s
CHGR Chuyangaron 86.45 310 P P 11 51 02.1 +6.4
KKAR Karatay Array 86.51 314 P **P 11 50 54.6 -1.2**
IL31 86.99 23 IAmb IAmb 11 50 56.7
comp=Z,2.6nm,0.7s
ILAR Eielson Array 86.99 23 P **P 11 50 56.0 -1.6**
comp=Z,1.9nm,0.6s,baz=251,slow=4.7,SNR=32
comp=Z,1.9nm,0.6s
J25K Salcha River, 87.52 23 IAmb IAmb 11 51 00.1
comp=Z,3.7nm,0.6s
DOT Dot Lake 87.65 24 IAmb IAmb 11 51 01.9
comp=Z,8.9nm,1.2s
M27K Edge Creek, AK 88.08 26 P **P 11 51 03.6 +0.6**
M27K IAmb IAmb 11 51 04.6
comp=Z,6.1nm,0.8s
L27K Beaver Creek, 88.35 25 P **P 11 51 04.7 +0.4**
L27K IAmb IAmb 11 51 05.5
comp=Z,3.2nm,0.9s
YBH Yreka Blue Hor 94.75 49 LR LR 12 26 34.6
comp=Z,40nm,20.6s,baz=294,slow=31
ABKAR Akbulak array 94.86 319 P **P 11 51 32.8 -1.9**
ABKAR IAmb IAmb 11 51 33.5
comp=Z,1.9nm,0.8s
TROLL Troll, Antarti 96.92 190 P **P 11 51 42.1 -1.7**
NVAR Mina Array Bea 97.81 52 P Pdif 11 51 49.6 +0.9
comp=Z,0.6nm,0.8s,baz=243,slow=8.4,SNR=5.1
NVAR LR LR 12 28 33.9
comp=Z,46nm,20.0s,baz=278,slow=31
comp=Z,0.6nm,0.8s
SNAA Sanae 98.09 189 P **P 11 51 47.4 -1.7**
GERES GERESS Array B 124.23 325 PKP **PKPdf 11 57 10.6 -1.0**
comp=Z,0.7nm,0.6s,baz=54,slow=1.8,SNR=2.1
KEST Kesra 133.39 312 PKP **PKPdf 11 57 28.0 -1.4**
comp=Z,1.3nm,0.5s,baz=135,slow=1.4,SNR=2.6
TORD Torodi Ar. Bea 146.60 282 PKPbc **PKPbc 11 57 54.8 -0.4**
comp=Z,8.2nm,0.7s,baz=72,slow=2.8,SNR=51
BDFB Brasilia 151.53 146 PKPbc **PKPbc 11 58 06.7 -1.2**
comp=Z,7.6nm,0.6s,baz=190,slow=2.4,SNR=10
KIC Kosan Boka 152.97 268⇑ *e*PKIKP **PKPbc 11 58 10.5 -0.6**
comp=Z,7.8nm,0.5s
DBIC Dimbokro 153.12 269 PKPbc **PKPbc 11 58 10.8 -0.5**
comp=Z,9.7nm,0.6s,baz=117,slow=1.6,SNR=16
LIC Lamto 153.25 268⇑ *i*PKIKP **PKPbc 11 58 11.0 -0.7**
comp=Z,16nm,0.3s
TIC Toumodi 153.28 269⇑ *i*PKIKP **PKPbc 11 58 11.1 -0.7**
comp=Z,6.8nm,0.3s

*MIRAS **06** 11:41:49.4±0.0, 56.°90N×61.°46E, h0km, ML2.9/12*
ISC 06 11:41:48.7±1.5, **56.°90N**±0.°05×**61.°50E**±0.°08, **h10km, n8,**
σ0.°81/33, 4C-1D, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVE	**Sverdlovsk**	**0.48**	**262**	*i* P	**Pg**	**11 41 57.8**	**-0.3**
	24nm,0.4s,baz=261						
SVE				*i* P	**Pg**	**11 41 57.8**	**-0.3**
	46nm,0.2s,baz=261						
SVE				*i* P	**Pg**	**11 41 57.8**	**-0.3**
	41nm,0.2s,baz=261						
SVE				*i* S	**Sg**	**11 42 04.7**	**+0.2**
	182nm,0.3s,baz=261						
SVE				*i* S	**Sg**	**11 42 04.7**	**+0.2**
	82nm,0.3s,baz=261						
SVE				*i* S	**Sg**	**11 42 04.7**	**+0.2**
	68nm,0.5s,baz=261						
SVE				*i* AML	AML	11 42 06.1	
	239nm,1.0s						
ARU	**Arti**	**1.69**	**255**	*e*P	**Pb**	**11 42 19.8**	**-0.1**
	44nm,0.3s,baz=255						
ARU				*e*P	**Pb**	**11 42 19.8**	**-0.1**
	12nm,0.3s,baz=255						
ARU				*e*P	**Pb**	**11 42 19.8**	**-0.1**
	38nm,0.3s,baz=255						
ARU				*e*S	**Sg**	**11 42 42.9**	**-0.2**
	11nm,0.2s,baz=255						
ARU				*e*S	**Sg**	**11 42 42.9**	**-0.2**
	28nm,0.5s,baz=255						
ARU				*e*S	**Sg**	**11 42 42.9**	**-0.2**
	29nm,0.3s,baz=255						
ARU				*i* AML	AML	11 42 43.9	
	103nm,0.8s						
PR7R	**Sarany**	**2.22**	**320**	*e*P	**Pn**	**11 42 25.9**	**+0.4**
	30nm,0.4s,baz=320						
PR7R				*e*P	**Pn**	**11 42 25.9**	**+0.4**
	27nm,0.6s,baz=320						
PR7R				*e*P	**Pn**	**11 42 25.9**	**+0.4**
	31nm,0.5s,baz=320						
PR7R				*e*S	**Sb**	**11 42 55.3**	**-1.1**
	54nm,0.5s,baz=320						
PR7R				*e*S	**Sb**	**11 42 55.3**	**-1.1**
	65nm,0.7s,baz=320						
PR7R				*e*S	**Sb**	**11 42 55.3**	**-1.1**
	67nm,0.6s,baz=320						
PR7R				*i* AML	AML	11 42 56.5	
	145nm,1.1s						
PR3R	**Kungur**	**2.51**	**284**	*e*P	**Pn**	**11 42 31.0**	**+1.5**
	21nm,0.2s,baz=284						
PR3R				*e*P	**Pn**	**11 42 31.0**	**+1.5**
	33nm,0.8s,baz=284						
PR3R				*e*P	**Pn**	**11 42 31.0**	**+1.5**
	12nm,0.2s,baz=284						
PR3R				*e*S	**Sb**	**11 43 04.0**	**-0.7**
	20nm,0.2s,baz=284						
PR3R				*e*S	**Sb**	**11 43 04.0**	**-0.7**
	27nm,0.5s,baz=284						
PR3R				*e*S	**Sb**	**11 43 04.0**	**-0.7**
	81nm,0.5s,baz=284						
PR3R				*i* AML	AML	11 43 06.0	
	69nm,0.4s						
SVUR	**Severouralsk**	**3.41**	**347**	*e*S	**Sb**	**11 43 29.6**	**-0.9**
	16nm,0.8s,baz=347						
SVUR				*e*S	**Sb**	**11 43 29.6**	**-0.9**
	7.8nm,0.3s,baz=347						
SVUR				*e*S	**Sb**	**11 43 29.6**	**-0.9**
	baz=347						
PR1R	**Pomanovo**	**3.41**	**314**	*e*S	**Sn**	**11 43 23.2**	**+0.8**
	baz=314						
PR1R				*e*S	**Sn**	**11 43 23.2**	**+0.8**
	24nm,0.3s,baz=314						
PR1R				*e*S	**Sn**	**11 43 23.2**	**+0.8**
	baz=314						
AKTO	**Aktyubinsk**	**6.80**	**199**	⇑Sn	**Sn**	**11 44 45.1**	**-0.8**
	1.1nm,0.7s						
AKTO				⇑Lg	Lg	11 45 18.6	
	3.1nm,0.9s						
AB31	**Akbulak array**	**7.71**	**188**	⇓Pn	**Pn**	**11 43 41.8**	**+0.8**
	0.2nm,0.3s,baz=18,slow=12,SNR=11						
AB31				⇑Sn	**Sn**	**11 45 07.1**	**-1.3**
	1.0nm,0.7s,baz=16,slow=22,SNR=3.8						
AB31				⇑Lg	Lg	11 45 44.7	
	1.1nm,0.5s,baz=12,slow=26,SNR=3.1						

RHSSO 06 12:06:45.5±0.3, **43.°39N**×**19.°04E, h4km, ML1.5**/4,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.21**	**208**	*e*Pg	Pg	12 06 49.5	-0.2
UPM				*e*Sg	Sg	12 06 53.1	+0.6
RUDO	**Rudo**	**0.33**	**47**	*e*Pg	Pg	12 06 51.5	-0.3
RUDO				*e*Sg	Sg	12 06 56.4	+0.2
BBLS	**Lazići**	**0.54**	**29**	*e*Pg	Pg	12 06 55.4	-0.5
BBLS				*e*Sg	Sg	12 07 03.7	+0.8
BRY	**Bratogost**	**0.61**	**217**	*e*Pg	Pg	12 06 56.7	-0.6
BRY				*e*Sg	Sg	12 07 05.4	+0.1
DIVS	**Divibare**	**0.98**	**44**	*e*Pg	Pg	12 07 02.5	-1.9
DIVS				*e*Sg	Sg	12 07 17.1	-0.1
DRME	**Dracevica, Mon**	**1.21**	**175**	*e*Pg	Pg	12 07 07.3	-1.4
DRME				*e*Sg	Sg	12 07 24.2	-0.2

IDC 06 12:19:53.5±5.4, **16.°76S**×**175.°71W, h0km, mb4.1**/3,
mbtmp4.1/3, **Error ellipse: s-maj=175.6km**
s-min=107.0km az=156.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.44**	**241**	P	P	12 27 42.4	+0.3
	2.0nm,0.8s,baz=68,slow=11,SNR=3.6						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**47.38**	**258**	P	P	12 28 29.6	-0.2
	0.6nm,0.5s,baz=95,slow=7.1,SNR=13						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**47.59**	**253**	P	P	12 28 31.1	-0.4
	5.4nm,0.6s,baz=88,slow=8.4,SNR=117						
ASAR				PcP	PcP	12 30 01.2	-0.2
	0.2nm,0.5s,baz=92,slow=2.9,SNR=2.1						
	5.4nm,0.6s						

*IDC **06** 13:04:26.3±1.4, 19.°65N×121.°43E, h0km, mb3.6/4,*
mbtmp3.6/4, Error ellipse: s-maj=59.5km s-min=26.8km
az=76.0
*MAN **06** 13:04:28.3, 20.°15N×121.°76E, h2km, mb4.2, ML3.1, MS2.8*
ISC 06 13:04:28.9±1.1, **20.°0N**±0.°1×**122.°0E**±0.°2, **h10km, n11,**
σ3.°47/6, mb3.3/4, **1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACPP	**Pamplona Cagay**	**1.65**	**201**	⇓*i*P	**Pn**	**13 04 58.7**	**+0.7**
PACPP				*i* S	**Sb**	**13 05 22.4**	**+2.1**
WRA	**Warramunga Arr**	**41.51**	**162**	P	**P**	**13 12 12.8**	**-3.8**
	0.6nm,1.0s,baz=342,slow=9.1,SNR=4.9						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**41.90**	**319**	P	**P**	**13 12 17.7**	**-1.8**
	0.3nm,0.6s,baz=124,slow=8.0,SNR=1.9						
	0.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**42.15**	**84**	T	T	13 57 18.8	
	baz=281,slow=74,SNR=204						
H11N1	**WAKE ISLAND Hy**	**42.15**	**82**	T	T	13 57 18.0	
	baz=278,slow=75,SNR=39						
H11N2	**WAKE ISLAND Hy**	**42.15**	**82**	T	T	13 57 18.1	
	baz=278,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**42.16**	**84**	T	T	13 57 17.1	
	baz=281,slow=74,SNR=234						
H11N3	**WAKE ISLAND Hy**	**42.16**	**82**	T	T	13 57 19.5	
	baz=278,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**42.16**	**84**	T	T	13 57 20.2	
	baz=281,slow=74,SNR=164						
PETK	**Petropavlovsk-**	**42.98**	**31**	P	**P**	**13 12 31.6**	**+3.4**
	5.3nm,1.1s,baz=248,slow=7.6,SNR=2.3						
	5.3nm,1.1s						
ASAR	**Alice Springs**	**44.94**	**164**	P	**P**	**13 12 42.9**	**-1.4**
	0.3nm,0.8s,baz=342,slow=6.9,SNR=1.9						
	0.3nm,0.8s						

ASRS 06 13:06:53.7±0.3, **50.°N**±2.°×**9.°1E**±.°, **h5km, MLh3.2**/16, **1C-3D,**
Error ellipse: s-maj=4.0km s-min=2.2km az=162.7,
confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLNR	**Muhor-Tarhata,**	**1.45**	**271**	Pg	Pg	13 07 22.3	+0.9
SLNR				Sg	Sn	13 07 40.8	+0.6
CUR	**Chagan-Uzun**	**1.55**	**283**	Pg	Pg	13 07 23.8	+0.4
CUR				Sg	Sg	13 07 45.1	+1.6
ULGR	**Ulagan, Altay**	**1.95**	**297**	Pg	Pg	13 07 32.6	+1.5
ULGR				Sg	Sg	13 07 58.8	+2.4
DGZ	**Jazzator, Alta**	**2.12**	**269**	Pg	Pg	13 07 33.8	-0.5
DGZ				Sg	Sg	13 08 03.6	+1.8
CHBI	**Chibit, Altay**	**2.13**	**286**	Pg	Pg	13 07 34.8	+0.3
CHBI				Sg	Sg	13 08 04.9	+2.9
ERNS	**Erzin**	**2.92**	**79**	Pg	Pb	13 07 46.2	0.0
ARTR	**Artybash**	**2.97**	**314**	Pg	Pg	13 07 51.1	+0.6
ARTR				Sg	Sg	13 08 30.1	+1.2
DJO	**Djoy, Khakassi**	**3.03**	**6**	Pg	Pg	13 07 53.5	+1.8
DJO				Sg	Sg	13 08 33.0	+2.1
DJOS	**Djoyskaya Sosn**	**3.06**	**8**	Pg	Pg	13 07 57.6	+5.4
DJOS				Sg	Sg	13 08 36.2	+4.4
KZLR	**Kyzyl**	**3.07**	**50**	Sg	Sg	13 08 30.7	-1.6
CERR	**Cheremushki**	**3.12**	**8**	Pg	Pg	13 07 55.0	+1.7
CERR				Sg	Sg	13 08 36.6	+2.9
ARDR	**Aradan**	**3.29**	**30**	Pg	Pg	13 07 57.1	+0.3
ARDR				Sg	Sg	13 08 39.6	+0.2
TASR	**Tashtagol**	**3.47**	**330**	Pg	Pg	13 07 59.9	-0.3
TASR				Sg	Sg	13 08 47.7	+2.6
GALT	**Gorno-Altaysk,**	**3.72**	**308**	Sg	Sg	13 08 55.9	+2.9
UKR	**Ust'-Kan**	**3.97**	**289**	Pg	Pg	13 08 08.4	-1.3
UKR				Sg	Sg	13 09 02.2	+1.2
LUZB	**Luzhba, Kemero**	**4.05**	**345**	Pg	Pg	13 08 13.9	+2.7
LUZB				Sg	Sg	13 09 06.6	+3.0
MALIN	**Malinovka, Kuz**	**4.23**	**331**	Sg	Sg	13 09 14.3	+4.9
KNGR	**Kungurtug, Tuv**	**4.46**	**77**	Pg	Pg	13 08 18.8	-0.3
KNGR				Sg	Sg	13 09 20.2	+3.3
ELT	**Eltsovka**	**4.46**	**323**	Sg	Sg	13 09 19.0	+2.0
MK31	**Makanchi Array**	**6.35**	**245**	⇑Pn	Pg	13 08 51.3	-4.0
	0.7nm,0.5s,baz=68,slow=14,SNR=6.1						
MK31				⇓Lg	Lg	13 10 12.2	
	1.7nm,0.5s,baz=66,slow=30,SNR=2.6						
MAKZ	**Makanchi**	**6.53**	**246**	⇓Pn	Pg	13 08 56.0	-2.7
	5.0nm,1.4s						
MAKZ				⇓Lg	Lg	13 10 15.1	
	6.8nm,1.1s						

*IDC **06** 13:43:52.4±1.7, 17.°61S×178.°41W, h572km±15km, mb3.5/5,*
mbtmp4.5/8, Error ellipse: s-maj=76.9km s-min=19.4km
az=151.0
ISC 06 13:43:50.2±1.4, **18.°5S**±0.°5×**178.°0W**±0.°3, **h550km, n11,**
σ1.°76/13, mb4.3/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.85**	**280**	P	**P**	**13 45 13.1**	**+2.0**
	104nm,0.7s,baz=83,slow=3.8,SNR=140						
AFI	**Afiamalu**	**7.48**	**54**	P	**P**	**13 45 43.1**	**+0.1**
	22nm,0.5s,baz=194,slow=4.2,SNR=5.8						
DZM	**Mont Dzumac**	**15.05**	**254**	P	**P**	**13 47 02.1**	**+1.7**
	5.1nm,0.7s,baz=70,slow=12,SNR=2.1						
CTA	**Charters Tower**	**33.77**	**261**	P	**P**	**13 49 44.7**	**-2.2**
	8.7nm,1.1s,baz=115,slow=14,SNR=1.8						
	8.7nm,1.1s						
STKA	**Stephens Creek**	**38.73**	**242**	P	**P**	**13 50 29.1**	**+1.4**
	3.7nm,0.5s,baz=90,slow=9.7,SNR=11						
	3.7nm,0.5s						
WRA	**Warramunga Arr**	**44.94**	**260**	P	**P**	**13 51 14.3**	**-2.5**
	2.3nm,0.5s,baz=95,slow=6.8,SNR=52						
WRA				PcP	**PcP**	**13 52 45.2**	**-1.2**
	0.6nm,0.8s,baz=91,slow=3.6,SNR=2.4						
	2.3nm,0.5s						
ASAR	**Alice Springs**	**45.04**	**255**	P	**P**	**13 51 16.6**	**-1.0**
	25nm,0.7s,baz=90,slow=8.0,SNR=469						
ASAR				PcP	**PcP**	**13 52 45.9**	**-0.8**
	0.9nm,0.7s,baz=108,slow=3.8,SNR=4.2						
	25nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.35**	**261**	P	**P**	**13 52 17.4**	**-1.4**
	1.1nm,0.5s,baz=89,slow=5.6,SNR=8.2						
	1.1nm,0.5s						
BRTR	**Keskin Array B**	**145.47**	**315**	PKP	**PKPdf**	**14 02 24.6**	**-1.7**
	0.7nm,0.7s,baz=98,slow=3.2,SNR=3.6						
MMAI	**Mount Meron Ar**	**146.79**	**302**	PKPbc	**PKPdf**	**14 02 29.5**	**+0.9**
	0.7nm,0.3s,baz=90,slow=1.4,SNR=2.3						
GERES	**GERESS Array B**	**148.26**	**345**	PKPbc	**PKPdf**	**14 02 32.1**	**+1.5**
	0.9nm,0.7s,baz=0.0,slow=3.9,SNR=5.7						

IDC 06 14:01:04.5±3.3, **6.°88S**×**155.°03E, h0km, mb3.8**/2,
mbtmp3.8/3, **ML3.7**/1, **MS3.2**/2, **Error ellipse:**
s-maj=67.8km s-min=40.4km az=93.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.93**	**310**	Pn	Pn	14 02 07.1	+0.9
	5.7nm,0.3s,baz=267,slow=1.3,SNR=13						
KRVT				Sn	Sn	14 02 49.5	-3.6
	6.3nm,0.3s,baz=316,slow=21,SNR=1.7						
	13nm,0.3s						
CTA	**Charters Tower**	**15.64**	**212**	LR	LR	14 10 01.3	
	comp=Z,69nm,19.0s,baz=78,slow=34						
WRA	**Warramunga Arr**	**23.91**	**235**	P	P	14 06 20.1	-0.2
	2.2nm,0.7s,baz=58,slow=9.7,SNR=15						
WRA				LR	LR	14 14 59.7	
	comp=Z,67nm,18.9s,baz=22,slow=35						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**26.27**	**228**	P	P	14 06 41.9	0.0
	1.1nm,0.8s,baz=62,slow=8.4,SNR=15						
	1.1nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.72**	**24**	T	T	14 35 28.2	
	baz=203,slow=76,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**27.73**	**24**	T	T	14 35 32.7	
	baz=203,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**27.73**	**24**	T	T	14 35 27.6	
	baz=203,slow=76,SNR=4.3						
TORD	**Torodi Ar. Bea**	**153.03**	**285**	PKPbc	PKPbc	14 21 04.9	-0.3
	0.5nm,0.7s,baz=81,slow=1.4,SNR=2.8						

IDC 06 14:26:17.9±6.6, **16.°29S**×**178.°35W, h569km**±26km,
mb2.8/2, **mbtmp3.7**/3, **Error ellipse: s-maj=242.7km**
s-min=110.5km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.73**	**247**	P	P	14 27 39.3	+0.1
	19nm,0.8s,baz=56,slow=7.1,SNR=22						
WRA	**Warramunga Arr**	**45.00**	**258**	P	P	14 33 43.5	-0.1
	0.2nm,0.5s,baz=92,slow=6.8,SNR=9.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**45.30**	**253**	P	P	14 33 45.7	-0.2
	2.2nm,0.6s,baz=89,slow=8.0,SNR=81						
	2.2nm,0.6s						
AKASG	**Malin Array Be**	**139.15**	**333**	PKP	PKPdf	14 44 40.1	-0.3
	0.7nm,0.5s,baz=20,slow=1.5,SNR=2.6						

*IDC **06** 14:31:09.3±1.6, 4.°80S×152.°52E, h54km±12km, mb3.7/11,*
mbtmp3.9/11, MS2.9/5, Error ellipse: s-maj=24.1km
s-min=17.6km az=89.0
*NEIC **06** 14:31:09.7±0.7, 4.°8S±0.°1×152.°4E±0.°2, h68km±14km,*
mb4.1/12, Error ellipse: s-maj=24.5km s-min=14.7km
az=103.0
ISC 06 14:31:09.0±0.7, **4.°84S**±0.°06×**152.°5E**±0.°1, **h55km, n33,**
σ1.°55/32, mb4.0/16, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.72**	**317**	P	**Pn**	**14 31 24.5**	**+1.2**
	1μm,0.4s,baz=252,slow=1.7,SNR=394						
KRVT				S	**Sn**	**14 31 34.8**	**+1.1**
	3μm,0.4s,baz=278,slow=23,SNR=24						
RABL	**Rabaul**	**0.74**	**331**	Pn	**Pn**	**14 31 23.4**	**-0.1**
PMG	**Port Moresby**	**6.99**	**229**	P	**Pn**	**14 32 53.0**	**+4.1**
	6.5nm,0.4s,baz=66,slow=18,SNR=11						
PMG				S	**Sn**	**14 34 07.1**	**+0.1**
	12nm,0.8s,baz=17,slow=16,SNR=1.8						
PMG				LR	LR	14 35 25.3	
	comp=Z,82nm,18.1s,baz=112,slow=36						
PMG	**Port Moresby**	**6.99**	**229**	Pn	**Pn**	**14 32 48.1**	**-0.7**
PATS	**Pohnpei**	**12.96**	**27**	Pn	**Pn**	**14 34 10.8**	**+0.2**
CTA	**Charters Tower**	**16.34**	**201**	LR	LR	14 39 56.9	
	comp=Z,59nm,21.0s,baz=82,slow=32						
GUMO	**Guam**	**19.82**	**338**	LR	LR	14 42 43.5	
	comp=Z,12nm,21.1s,baz=180,slow=35						
SIJI	**Sorong**	**21.59**	**280**	P	**P**	**14 35 55.7**	**+1.2**
	2.7nm,0.5s,baz=96,slow=9.2,SNR=2.0						
	2.7nm,0.5s						
DZM	**Mont Dzumac**	**21.80**	**143**	P	**P**	**14 35 57.6**	**+0.9**
	7.5nm,1.0s,baz=325,slow=16,SNR=2.3						
	7.5nm,1.0s						
MTN	**Manton Dam**	**22.56**	**248**	P	**P**	**14 36 02.3**	**-2.6**
MTN				IAmb	IAmb	14 36 19.5	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**23.06**	**228**	P	**P**	**14 36 08.0**	**-2.0**
WB0				IAmb	IAmb	14 36 32.1	
	comp=Z,12nm,1.3s						
WR0	**Warramunga Arr**	**23.07**	**228**	P	**P**	**14 36 08.8**	**-1.3**
WR0				IAmb	IAmb	14 36 11.6	
	comp=Z,4.0nm,0.9s						
WRAB	**Tennant Creek**	**23.20**	**228**	P	**P**	**14 36 09.8**	**-1.6**
WRAB				IAmb	IAmb	14 36 12.8	
	comp=Z,4.1nm,0.7s						
WB2	**Warramunga Arr**	**23.20**	**228**	P	**P**	**14 36 10.6**	**-0.8**
WB2				IAmb	IAmb	14 36 37.8	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**23.21**	**228**	P	**P**	**14 36 11.7**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=52,slow=10.0,SNR=36						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**23.21**	**228**	P	**P**	**14 36 11.3**	**-0.2**
KNRA	**Kununurra**	**25.70**	**243**	P	**P**	**14 36 31.9**	**-2.5**
AS31	**Alice Springs**	**25.93**	**222**	P	**P**	**14 36 34.1**	**-2.3**
ASAR	**Alice Springs**	**25.93**	**222**	P	**P**	**14 36 37.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=55,slow=8.8,SNR=22						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**25.93**	**222**	P	**P**	**14 36 34.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**29.39**	**241**	P	**P**	**14 37 07.1**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=56,slow=6.3,SNR=30						
FITZ				LR	LR	14 50 32.6	
	comp=Z,39nm,19.4s,baz=132,slow=40						
	comp=Z,2.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**29.39**	**241**	P	**P**	**14 37 05.2**	**-2.2**
FITZ				IAmb	IAmb	14 37 17.7	
	comp=Z,7.4nm,1.4s						
MBWA	**Marble Bar**	**35.71**	**240**	P	**P**	**14 38 00.2**	**-2.3**
MORW	**Morawa**	**42.10**	**231**	P	**P**	**14 38 55.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**57.64**	**295**	P	**P**	**14 40 55.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=121,slow=6.9,SNR=4.5						
	comp=Z,0.4nm,0.3s						
MA2	**Magadan**	**64.23**	**359**	LR	LR	15 06 21.9	
	comp=Z,11nm,20.7s,baz=108,slow=33						
VNDA	**Vanda**	**72.80**	**178**	P	**P

0.4nm,0.9s,baz=106,slow=7.7,SNR=1.4
0.4nm,0.9s
WRA Warramunga Arr 42.06 278 P P 14 49 06.5 -0.4
0.8nm,1.1s,baz=118,slow=7.6,SNR=3.0
0.8nm,1.1s

*IDC **06** 14:47:56.2±0.5,26°.45N×92°.92E,h48km±5km,mb3.7/16, mbtmp4.0/17,MS3.2/7,Error ellipse: s-maj=15.3km s-min=9.2km az=79.0*
*NDI **06** 14:47:56.6±4.0,26°.39N×92°.99E,h32km±11km,ML4.0*
*BJI **06** 14:47:57.3±0.0,26°.66N×93°.15E,h41km,mb4.7/11, mB4.6/8,ML3.8/4*
*NEIC **06** 14:47:57.2±0.8,26°.44N±0°.10×92°.8E±0°.2,h57km±10km, mb4.3/15,Error ellipse: s-maj=25.1km s-min=9.7km az=62.0*

ISC 06 14:47:55.8±0.5,26°.47N±0°.04×92°.84E±0°.04,h48km±4km, n71,σ1§67/84,mb4.0/24,MS3.2/7,2C-1D,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**0.15**	**346**	*e*Pg	**Pn**	**14 48 04.8**	**+1.3**
TEZP				*i* Sg	**Sn**	**14 48 10.6**	**+1.5**
ITAN	**ITANAGAR**	**1.04**	**49**	*e*Pg	**Pn**	**14 48 15.3**	**+1.4**
ITAN				*i* Sg	**Sn**	**14 48 29.2**	**+1.8**
SHL	**Shillong**	**1.24**	**224**	*e*Pg	**Pn**	**14 48 18.9**	**+1.9**
SHL				*i* Sg	**Sn**	**14 48 33.6**	**+0.9**
SHL				IAML		14 48 36.0	
	comp=E,2μm,0.1s						
SHL				IAML		14 48 37.6	
	comp=E,2μm,0.1s						
KOHI	**KOHIMA**	**1.36**	**123**	*e*Pg	**Pn**	**14 48 19.6**	**+1.0**
KOHI				*e*S	**Sn**	**14 48 34.1**	**-1.3**
KOHI				IAML		14 48 37.1	
	comp=E,2μm,0.2s						
KOHI				IAML		14 48 50.3	
	comp=N,2μm,0.5s						
ZIRO	**ZIRO**	**1.39**	**40**	*e*Pg	**Pn**	**14 48 19.7**	**+0.8**
ZIRO				*i* Sg	**Sn**	**14 48 36.9**	**+0.7**
MOKO	**MOKOCHONG**	**1.51**	**95**	*e*Pg	**Pn**	**14 48 21.2**	**+0.7**
MOKO				*i* Sg	**Sn**	**14 48 38.1**	**-1.0**
MOKO				IAML		14 48 39.8	
	comp=E,10μm,0.5s						
MOKO				IAML		14 48 40.7	
	comp=N,5μm,0.3s						
MOKO				IAML		14 48 40.8	
	comp=Z,3μm,0.3s						
SILR	**SILCHAR**	**1.68**	**181**	*e*Pg	**Pn**	**14 48 25.3**	**+2.6**
SILR				*i* Sg	**Sn**	**14 48 46.6**	**+3.6**
LKP	**Lekhapani**	**2.82**	**72**	*i* P	**Pn**	**14 48 39.4**	**+1.0**
LKP				*i* x	**Sn**	**14 49 09.7**	**-1.4**
LKP				IAML		14 49 12.1	
	comp=N,2μm,0.4s						
AGT	**Agartala**	**2.95**	**210**	*e*P	**Pn**	**14 48 43.0**	**+2.8**
AGT				*e*S	**Sn**	**14 49 14.8**	**+0.5**
AGT				IAML		14 49 20.1	
	comp=N,2μm,0.5s						
AGT				IAML		14 49 20.5	
	comp=E,1μm,0.3s						
LSA	**Lhasa**	**3.55**	**336**	Pn	**Pn**	**14 48 50.8**	**+2.0**
LSA	**Lhasa**	**3.55**	**336**	P	**Pn**	**14 48 52.2**	**+3.4**
LSA				S	**Sn**	**14 49 30.4**	**+0.7**
BRDH	**Bariadhala**	**3.93**	**196**	P	**Pn**	**14 48 54.3**	**+0.7**
	comp=E,159nm,0.3s,baz=354,slow=23,SNR=5.6						
BRDH				S	**Sn**	**14 49 39.4**	**+1.0**
	comp=E,634nm,0.3s,baz=18,slow=19,SNR=38						
RAMN	**Ramite**	**5.60**	**276**	*e*P	**Pn**	**14 49 18.8**	**+2.0**
	comp=E,76nm,0.5s						
JIRN	**Jiri**	**6.05**	**283**	*e*P	**Pn**	**14 49 25.4**	**+2.4**
	comp=E,32nm,0.2s						
GUN	**Gumba**	**6.36**	**285**	*e*P	**Pn**	**14 49 29.3**	**+2.0**
	comp=E,29nm,0.2s						
PKI	**Pulchoki**	**6.72**	**281**	*e*P	**Pn**	**14 49 33.3**	**+1.1**
	comp=E,26nm,0.3s						
PKIN	**Phulchoki**	**6.73**	**281**	*e*P	**Pn**	**14 49 33.7**	**+1.4**
	comp=E,43nm,0.3s						
BOK	**Bokaro**	**6.84**	**249**	*e*P	**Pn**	**14 49 35.0**	**+1.4**
BOK				*e*S	**Sn**	**14 50 46.9**	**-3.2**
BOK				IAML		14 50 51.0	
	comp=N,135nm,0.5s						
BOK				IAML		14 50 51.4	
	comp=E,80nm,0.3s						
DMN	**Daman**	**6.99**	**281**	*e*P	**Pn**	**14 49 37.0**	**+1.2**
	comp=E,10nm,0.2s						
GKN	**Gorkha**	**7.46**	**284**	*e*P	**Pn**	**14 49 43.3**	**+1.1**
	comp=E,79nm,0.4s						
PZH	**PanZhiHua**	**7.98**	**88**	P	**Pn**	**14 49 49.0**	**-0.2**
PZH				pmax	pmax		
	comp=E,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=E,100nm,4.2s						
DANN	**Dangsing**	**8.29**	**285**	*e*P	**Pn**	**14 49 53.5**	**-0.1**
	comp=E,27nm,0.3s						
PYUN	**Piuthan**	**8.91**	**283**	*e*P	**Pn**	**14 50 01.3**	**-0.8**
	comp=E,22nm,0.2s						
CMAR	**Chiang Mai Arr**	**9.76**	**143**	P	**Pn**	**14 50 13.1**	**-0.6**
	comp=E,0.5nm,0.4s,baz=320,slow=14,SNR=4.5						
GOMU	**GeErMu**	**9.85**	**9**	P	**Pn**	**14 50 14.1**	**-0.9**
GOMU				pmax	pmax		
	comp=E,20nm,0.6s						
GOMU				pmax	pmax		
	comp=E,54nm,4.9s						
JBP	**Jabalpur**	**12.13**	**257**	*e*P	**P**	**14 50 53.1**	**-4.3**
JBP				⇓*e*S	**Sn**	**14 52 52.0**	**-7.8**
JHNI	**Jhansi**	**12.90**	**269**	*e*S	Sn	14 53 06.8	-12
LZH	**Lanzhou**	**13.42**	**42**	⇑P	**Pn**	**14 51 02.1**	**-1.6**
LZH				pmax	pmax		
	comp=E,23nm,1.5s						
GTA	**Gaotai**	**14.16**	**23**	⇑P	**P**	**14 51 20.7**	**+0.6**
GTA				pP	Pn	14 51 26.3	+13
ENH	**Enshi**	**15.13**	**72**	P	**P**	**14 51 30.8**	**0.0**
XAN	**Xi'an**	**15.80**	**58**	P	**Pn**	**14 51 32.2**	**-2.9**
XAN				pmax	pmax		
	comp=E,10.0nm,1.1s						
HYBB	**Hyderabad (bro**	**16.01**	**239**	*e*Pn	**Pn**	**14 51 38.0**	**+0.1**
HYBB				*e*Sn	**Sn**	**14 54 34.5**	**+0.1**
WMQ	**Urumqi**	**17.81**	**348**	*e*P	**Pn**	**14 51 59.4**	**-0.8**
WMQ				pmax	pmax		
	comp=E,25nm,0.7s						
NIL	**Nilore**	**18.39**	**298**	P	**P**	**14 52 06.2**	**-0.7**
NIL				IAmb	IAmb	14 52 10.2	
	comp=Z,8.3nm,0.5s						
MK31	**Makanchi Array**	**21.94**	**340**	P	**P**	**14 52 45.5**	**+0.2**
MK31				IAmb	IAmb	14 53 04.2	
	comp=Z,4.3nm,1.0s						
MKAR	**Makanchi Array**	**21.94**	**340**	P	**P**	**14 52 45.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=147,slow=12,SNR=14						
MKAR				pP	**pP**	**14 52 58.1**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=147,slow=12,SNR=7.6						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**21.94**	**340**	P	**P**	**14 52 45.4**	**+0.1**
AAK	**Ala-Archa**	**22.03**	**322**	P	**P**	**14 52 47.3**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=156,slow=10,SNR=6.3						
	comp=Z,1.0nm,0.4s						
PALK	**Pallekele**	**22.31**	**213**	LR	LR	15 05 20.4	
	comp=Z,50nm,18.4s,baz=171,slow=47						
GAR	**Garm**	**22.63**	**309**	P	**P**	**14 52 49.8**	**-3.0**
GAR				IAmb	IAmb	14 52 55.8	
	comp=Z,29nm,1.0s						
BTK	**Batken**	**22.79**	**312**	P	**P**	**14 52 53.9**	**-0.5**
BTK				IAmb	IAmb	14 53 02.0	
	comp=Z,9.4nm,0.9s						
CHGR	**Chuyangaron**	**23.30**	**307**	P	**P**	**14 52 58.9**	**-0.6**
CHGR				IAmb	IAmb	14 53 02.4	
	comp=Z,14nm,1.3s						
SONM	**Songino Array**	**23.84**	**23**	P	**P**	**14 53 04.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=208,slow=10,SNR=9.4						
SONM				LR	LR	15 03 30.5	
	comp=Z,40nm,20.7s,baz=232,slow=39						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**23.84**	**23**	P	**P**	**14 53 05.2**	**+0.6**
KKAR	**Karatay Array**	**24.62**	**318**	P	**P**	**14 53 11.5**	**-0.2**
KKAR				IAmb	IAmb	14 53 15.9	
	comp=Z,2.4nm,1.0s						
KURBB	**Kurchatov Arra**	**26.49**	**339**	P	**P**	**14 53 30.4**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=145,slow=3.4,SNR=2.2						
KURBB				pP	**pP**	**14 53 41.9**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=147,slow=10,SNR=2.4						
	comp=Z,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**28.09**	**350**	P	**P**	**14 53 43.7**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=162,slow=8.4,SNR=4.4						
	comp=Z,0.7nm,0.4s						
GEYT	**Alibeck**	**31.36**	**300**	P	**P**	**14 54 13.9**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=45,slow=1.0,SNR=2.2						
	comp=Z,1.0nm,0.6s						
KSRS	**Korea Array**	**31.55**	**61**	LR	LR	15 08 41.8	
	comp=Z,12nm,18.0s,baz=300,slow=40						
ABKAR	**Akbulak array**	**34.10**	**321**		**P**	**14 54 37.1**	**+1.4**
ABKAR				IAmb	IAmb	14 54 37.9	
	comp=Z,2.5nm,0.5s						
AKTO	**Aktyubinsk**	**35.77**	**321**	P	**P**	**14 54 51.1**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=125,slow=13,SNR=2.8						
	comp=Z,0.7nm,0.5s						
KLR	**Kul'dur**	**37.63**	**42**	LR	LR	15 12 08.3	
	comp=Z,49nm,18.1s,baz=292,slow=39						
MJAR	**Matsushiro Arr**	**39.65**	**64**	P	**P**	**14 55 23.0**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=273,slow=9.4,SNR=4.2						
	comp=Z,2.3nm,0.8s						
YAK	**Yakutsk**	**43.19**	**24**	LR	LR	15 15 04.4	
	comp=Z,39nm,19.4s,baz=270,slow=38						
AKASG	**Malin Array Be**	**53.46**	**315**	P	**P**	**14 57 10.9**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=80,slow=6.5,SNR=14						
	comp=Z,1.3nm,0.4s						
PETK	**Petropavlovsk-**	**54.32**	**42**	LR	LR	15 25 37.1	
	comp=Z,22nm,18.4s,baz=131,slow=42						
FINES	**FINESS Array B**	**56.03**	**328**	P	**P**	**14 57 30.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=95,slow=8.6,SNR=4.9						
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**56.03**	**328**	P	**P**	**14 57 29.5**	**+0.1**
WB0	**Warramunga Arr**	**61.14**	**134**	P	**P**	**14 58 05.5**	**0.0**
WB0				IAmb	IAmb	14 58 19.9	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**61.23**	**135**	P	**P**	**14 58 06.1**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=324,slow=7.3,SNR=17						
WRA				pP	**pP**	**14 58 19.1**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=323,slow=7.2,SNR=9.5						
WRA				sP	**sP**	**14 58 25.7**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=322,slow=7.4,SNR=4.2						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**61.23**	**135**	P	**P**	**14 58 06.0**	**-0.1**
WRAB	**Tennant Creek**	**61.23**	**135**	P	**P**	**14 58 05.3**	**-0.8**
WB2	**Warramunga Arr**	**61.24**	**135**	P	**P**	**14 58 06.5**	**+0.4**
WB2				IAmb	IAmb	14 58 28.4	
	comp=Z,5.9nm,1.2s						
NOA	**NORSAR Array B**	**63.21**	**327**	P	**P**	**14 58 18.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=97,slow=5.4,SNR=1.5						
NOA				pP	**pP**	**14 58 32.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=104,slow=3.8,SNR=3.1						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**63.62**	**314**	P	**P**	**14 58 22.9**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=81,slow=6.4,SNR=12						
	comp=Z,1.5nm,0.7s						
AS31	**Alice Springs**	**63.72**	**138**	P	**P**	**14 58 22.4**	**-0.3**
ASAR	**Alice Springs**	**63.72**	**138**	P	**P**	**14 58 23.0**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=321,slow=6.6,SNR=22						
ASAR				pP	**pP**	**14 58 36.2**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=317,slow=6.5,SNR=5.6						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**63.72**	**138**	P	**P**	**14 58 22.9**	**+0.1**
ESDC	**Sonseca Array**	**78.47**	**309**	LR	LR	15 41 13.7	
	comp=Z,27nm,18.0s,baz=328,slow=41						
BOSA	**Boshof**	**84.88**	**235**	P	**P**	**15 00 26.7**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=25,slow=5.1,SNR=6.1						
	comp=Z,4.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**85.25**	**282**	P	**P**	**15 00 28.9**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=66,slow=4.2,SNR=20						
	comp=Z,2.4nm,0.6s						

IDC 06 14:48:04.6±1.9,5°.58S×152°.74E,h0km,mb3.5/4, mbtmp3.5/4,MS3.1/1,Error ellipse: s-maj=41.7km s-min=20.7km az=95.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.46**	**331**	Pn	Pb	14 48 32.8	+0.2
	84nm,0.3s,baz=142,slow=19,SNR=96						
KRVT				Sn	Sg	14 48 51.5	0.0
	82nm,0.3s,baz=162,slow=20,SNR=20						
WRA	**Warramunga Arr**	**22.89**	**230**	P	P	14 53 09.6	-0.6
	0.6nm,1.0s,baz=55,slow=9.9,SNR=1.6						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**25.54**	**223**	P	P	14 53 35.3	0.0
	0.6nm,0.9s,baz=58,slow=9.0,SNR=15						
	0.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**29.24**	**243**	P	P	14 54 08.8	+0.3
	1.9nm,1.0s,baz=49,slow=11,SNR=2.0						
	1.9nm,1.0s						
KAPI	**Kappang**	**32.85**	**269**	LR	LR	15 09 10.0	
	comp=Z,32nm,21.4s,baz=88,slow=38						
ILAR	**Eielson Array**	**82.90**	**22**	P	P	15 00 31.0	0.0
	0.3nm,0.6s,baz=245,slow=5.5,SNR=4.2						
	0.3nm,0.6s						

*NOU **06** 15:08:57.9,12°.85S×168°.17E,h175km,MLv5.2/14,Santa Cruz Islands Region*
*IDC **06** 15:09:29.0±12.0,15°.40S×166°.15E,h0km,mb3.9/4, mbtmp4.0/5,ML4.3/1,Error ellipse: s-maj=221.5km s-min=35.1km az=60.0*
*NEIC **06** 15:09:28.5±2.2,15°.2S±0°.1×167°.8E±0°.2,h98km±12km, mb4.3/10,Error ellipse: s-maj=21.8km s-min=18.0km az=114.0*

ISC 06 15:09:30.1±1.5,15°.4S±0°.1×167°.6E±0°.1,h100km,n32, σ1§94/36,mb4.1/8,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.39**	**166**	P	**Pn**	**15 10 10.4**	**+2.6**
RTV	**Rentapao**	**2.52**	**162**	P	**Pn**	**15 10 10.8**	**+1.3**
LIFNC	**LIFOU**	**5.37**	**184**	Pn	**Pn**	**15 10 47.9**	**0.0**
LIFNC				Sn	**Sn**	**15 11 43.7**	**-4.7**
LIFNC	**LIFOU**	**5.37**	**184**	P	**Pn**	**15 10 48.4**	**+0.5**
KOUNC	**Koumac, New Ca**	**6.02**	**211**	Pn	**Pn**	**15 10 57.4**	**+0.6**
KOUNC	**Koumac, New Ca**	**6.02**	**211**	P	**Pn**	**15 10 57.8**	**+1.0**
MARNC	**Mare, Loyalty**	**6.07**	**176**		**Pn**	**15 10 57.3**	**-0.1**
MARNC					**Sn**	**15 12 01.1**	**-4.4**
MARNC	**Mare, Loyalty**	**6.07**	**176**	P	**Pn**	**15 10 57.7**	**+0.3**
YATNC	**Mamie plateau,**	**6.67**	**186**	P	**Pn**	**15 11 06.9**	**+1.4**
DZM	**Mont Dzumac**	**6.74**	**189**	Pn	**Pn**	**15 11 08.4**	**+1.9**
DZM				Sn	**Sn**	**15 12 23.7**	**+1.9**
	6.3nm,0.3s,baz=37,slow=20,SNR=86						
	2.3nm,0.3s,baz=330,slow=20,SNR=2.8						
	12nm,0.3s						
DZM	**Mont Dzumac**	**6.74**	**189**		**Pn**	**15 11 08.0**	**+1.5**
DZM	**Mont Dzumac**	**6.74**	**189**	P	**Pn**	**15 11 08.5**	**+1.9**
NOUC	**Port Laguerre**	**6.79**	**190**	P	**Pn**	**15 11 10.1**	**+3.0**
ONTNC	**Ouen Toro**	**6.96**	**189**		**Pn**	**15 11 11.9**	**+2.3**
ONTNC	**Ouen Toro**	**6.96**	**189**	P	**Pn**	**15 11 12.2**	**+2.6**
OUENC	**Ouen Island, N**	**7.03**	**186**		**Pn**	**15 11 13.1**	**+2.7**
OUENC				Sn	**Sn**	**15 12 29.8**	**+1.0**
OUENC	**Ouen Island, N**	**7.03**	**186**	P	**Pn**	**15 11 13.7**	**+3.3**
LHI	**Lord Howe Isla**	**17.85**	**204**		**P**	**15 13 32.0**	**+0.6**
EIDS	**Eidsvold**	**18.37**	**235**	P	**Pn**	**15 13 39.5**	**+1.1**
BKZ	**Black Stump Fm**	**24.94**	**163**	P	**P**	**15 14 44.8**	**+0.7**
BKZ				IAmb	IAmb	15 15 01.0	
	comp=Z,18nm,1.3s						
STKA	**Stephens Creek**	**28.82**	**231**	P	**P**	**15 15 19.2**	**+0.2**
	comp=Z,0.9nm,0.2s,baz=80,slow=11,SNR=3.0						
	comp=Z,0.9nm,0.2s						
WR0	**Warramunga Arr**	**31.79**	**257**	P	**P**	**15 15 44.1**	**-1.3**
WR0				IAmb	IAmb	15 15 46.1	
	comp=Z,8.2nm,1.4s						
WB0	**Warramunga Arr**	**31.92**	**257**	P	**P**	**15 15 45.2**	**-1.3**
WB0				IAmb	IAmb	15 15 56.9	
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**31.98**	**257**	P	**P**	**15 15 44.7**	**-2.4**
	comp=Z,0.7nm,1.0s,baz=85,slow=8.5,SNR=5.0						
	comp=Z,0.7nm,1.0s						
AS31	**Alice Springs**	**32.74**	**250**	P	**P**	**15 15 52.6**	**-1.1**
ASAR	**Alice Springs**	**32.74**	**250**	P	**P**	**15 15 52.6**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=76,slow=9.0,SNR=33						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**32.74**	**250**	P	**P**	**15 15 52.2**	**-1.5**
BBOO	**Buckleboo**	**33.43**	**233**	P	**P**	**15 15 59.4**	**-0.1**
FORT	**Forrest**	**39.24**	**240**	P	**P**	**15 16 49.0**	**0.0**
FITZ	**Fitzroy Crossi**	**40.21**	**260**	P	**P**	**15 16 56.2**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=77,slow=9.6,SNR=6.9						
	comp=Z,1.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.21**	**260**	P	**P**	**15 16 56.1**	**-1.0**
FITZ				IAmb	IAmb	15 17 16.6	
	comp=Z,5.7nm,1.2s						
QSPA	**South Pole Qui**	**74.64**	**180**	P	**P**	**15 20 58.1**	**-0.3**
QSPA				IAmb	IAmb	15 21 01.2	
	comp=Z,4.4nm,1.2s						

*IDC **06** 15:10:32.1±1.2,14°.89S×173°.62W,h0km,mb3.6/4, mbtmp3.7/5,ML4.1/1,MS2.4/1,Error ellipse: s-maj=49.6km s-min=23.6km az=149.0*
*NEIC **06** 15:10:36.7±1.7,15°.08S±0°.08×173°.39W±0°.10,h32km±6km, mb4.1/11,Error ellipse: s-maj=14.8km s-min=8.7km az=123.0*

ISC 06 15:10:35.3±0.7,14°.9S±0°.1×173°.38W±0°.10,h30km,n26, σ1§06/20,mb3.9/8,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.85**	**57**	Pn	**Pb**	**15 11 07.9**	**-0.7**
	72nm,0.3s,baz=202,slow=3.5,SNR=123						
AFI				Sn	**Sn**	**15 11 27.5**	**-0.1**
	228nm,0.3s,baz=294,slow=20,SNR=15						
AFI				LR	LR	15 11 50.3	
	comp=Z,93nm,21.3s,baz=283,slow=38						
	144nm,0.3s						
NIUE	**Niue**	**5.29**	**142**	Pn	**Pn**	**15 11 52.1**	**-0.2**
NIUE				Sn	Sn	15 12 43.1	-9.1
LIFNC	**LIFOU**	**19.33**	**250**	Pn	**Pn**	**15 15 00.2**	**+0.7**
HIZ	**Hauiti**	**25.69**	**202**	P	**P**	**15 16 02.4**	**-0.4**
LTZ	**Lake Taylor**	**30.38**	**201**	P	**P**	**15 16 43.6**	**-1.1**
WHZ	**Wether Hill Ro**	**34.63**	**203**	P	**P**	**15 17 20.0**	**-1.9**
H11S2	**WAKE ISLAND Hy**	**38.57**	**329**	T	T	15 58 42.5	
	baz=146,slow=75,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**38.58**	**329**	T	T	15 58 43.3	
	baz=146,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**38.59**	**329**	T	T	15 58 43.6	
	baz=146,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**39.51**	**330**	T	T	15 59 57.1	
	baz=147,slow=76,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**39.52**	**330**	T	T	15 59 53.1	
	baz=147,slow=76,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**39.53**	**330**	T	T	15 59 59.1	
	baz=147,slow=76,SNR=3.9						
BBOO	**Buckleboo**	**49.06**	**239**	P	**P**	**15 19 19.1**	**-0.9**
WB0	**Warramunga Arr**	**49.93**	**257**	P	**P**	**15 19 26.9**	**+0.1**
WB0				IAmb	IAmb	15 19 35.6	
	comp=Z,3.8nm,1.1s						
WB2	**Warramunga Arr**	**49.96**	**256**	P	**P**	**15 19 26.8**	**-0.2**
WB2				IAmb	IAmb	15 19 33.6	
	comp=Z,7.4nm,1.4s						
WRA	**Warramunga Arr**	**49.97**	**256**	P	**P**	**15 19 26.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=97,slow=6.1,SNR=21						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**49.97**	**256**	P	**P**	**15 19 26.9**	**-0.2**
WRA					**PcP**	**15 20 45.9**	**-1.1**
AS31	**Alice Springs**	**50.27**	**252**	P	**P**	**15 19 29.1**	**-0.3**
AS31				IAmb	IAmb	15 19 42.3	
	comp=Z,1.4nm,1.5s						
ASAR	**Alice Springs**	**50.27**	**252**	P	**P**	**15 19 29.1**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=89,slow=7.8,SNR=41						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**50.27**	**252**	P	**P**	**15 19 28.6**	**-0.8**
SBA	**Scott Base**	**63.72**	**185**	P	P	15 21 07.1	+3.5
VNDA	**Vanda**	**63.85**	**186**	P	**P**	**15 21 06.2**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=9.5,slow=6.1,SNR=3.6						
	comp=Z,0.5nm,0.8s						
VNDA	**Vanda**	**63.85**	**186**	P	**P**	**15 21 06.6**	**+2.1**
VNDA				IAmb	IAmb	15 21 11.5	
	comp=Z,1.1nm,1.1s						
KIWB	**Kanaga Island**	**66.58**	**357**	P	P	15 21 27.4	+4.9
QSPA	**South Pole Qui**	**75.11**	**180**	P	**P**	**15 22 15.2**	**+0.8**
QSPA				IAmb	IAmb	15 22 32.7	
	comp=Z,3.7nm,1.4s						
ILAR	**Eielson Array**	**81.98**	**11**	P	**P**	**15 22 53.3**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=219,slow=7.0,SNR=1.6						
	comp=Z,0.2nm,0.4s						

JMA 06 15:17:16.9±0.2,25°.N±2°.×123°.4E±0°.5,h97km±2km, MV1.7/8,NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.54**	**222**	P	Pn	15 17 32.8	+0.1
YOJ				*e*S	Sn	15 17 44.6	+0.2
IRIF	**Iriomote-Funau**	**0.61**	**150**	P	Pn	15 17 33.2	-0.1
JKRS	**Kuro-shima**	**0.83**	**138**	P	Pn	15 17 35.7	+0.3
JKRS				S	Sn	15 17 49.9	+0.8
JIJ	**Ishigaki jima**	**0.84**	**126**	P	Pn	15 17 35.4	0.0
JIJ				*e*S	Sn	15 17 49.2	-0.1
JISG	**Ishigakijimahi**	**0.87**	**108**	P	Pn	15 17 35.9	+0.2
JISG				S	Sn	15 17 50.4	+0.5
JTJ	**Tarama**	**1.20**	**100**	P	Pn	15 17 39.9	+0.5
JTJ				S	Sn	15 17 56.8	+0.4

TAP 06 15:17:49.8,23°.70N×121°.32E,h14km,ML1.9,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.10**	**104**	*e*P	Pb	15 17 53.3	-0.3
	baz=104						
EGFH				S	Sg	15 17 55.2	+0.2
	baz=104						
ESL	**Shilin**	**0.16**	**42**	*i* P	Pg	15 17 53.9	+0.2
	baz=43						
VWDT	**VWDT**	**0.17**	**290**	*i* P	Pg	15 17 54.0	+0.2
VWDT				*e*S	Sg	15 17 57.2	+0.6
	baz=290						
EHY	**Hungye**	**0.19**	**179**	*i* P	Pg	15 17 54.5	+0.4
	baz=178						
EHY				*e*S	Sg	15 17 57.0	-0.1

ELDTW	baz=352 Lidau	0.57	209	eP	Pg	15 18 01.2	+0.1
WCKO	baz=203 Fanlu	0.70	249	eP	Pb	15 18 03.8	0.0
NNS	baz=250 Nan Shan	0.74	4	eP	Pg	15 18 03.6	-0.6
NNS	baz=4.0			eS	Sg	15 18 13.8	-0.3
TPUB	baz=4.0 Ta-pu	0.74	238	eP	Pb	15 18 05.2	+0.7
WTP	baz=239 Ta-pu	0.79	235	eP	Pn	15 18 06.2	-0.3
LATG	baz=236 Datong	0.86	13	eP	Pg	15 18 06.4	0.0
TWK	baz=27 Hsinying	0.87	241	eP	Pn	15 18 08.2	+0.5
CHN1	baz=242 Nanshi	0.89	235	eP	Pn	15 18 08.2	+0.3
YHNB	baz=237 Yeheng	0.97	3	eP	Pb	15 18 08.4	0.0
NSK	baz=349 Sanguang	0.98	2	eP	Pb	15 18 08.2	-0.3
	baz=349						

NOU ***06*** *15:40:29.5, 37.°00S×179.°50W, h15km, MLv4.6/6, East of North Island, N.Z.*
WEL ***06*** *15:40:46.6±1.5, 37°S±5°×17°9E±°, h16km±7km, M3.5/11, ML3.8/17, MLv3.5/11, Error ellipse: s-maj=0.0km s-min=0.0km az=88.4*

ISC 06 15:40:44.5±2.9, 37.°34S±0.°07×179.°1E±0.°1, h27km±14km, n73, σ0.°84/50, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.69**	**251**	P	**Pb**	**15 40 57.4**	**-0.6**
MXZ				S	**Sb**	**15 41 04.9**	**-2.2**
WMGZ	**Waiomatatini S**	**0.74**	**230**	P	Pn	15 41 00.3	+1.1
WMGZ				S	**Sb**	**15 41 10.6**	**+2.1**
PKGZ	**Pakihiroa**	**1.00**	**236**	P	Pn	15 41 03.4	+0.6
PKGZ				S	**Sn**	**15 41 15.6**	**-0.4**
PUZ	**Puketiti**	**1.00**	**223**	P	**Pb**	**15 41 04.0**	**+0.8**
PUZ				S	**Sn**	**15 41 16.5**	**+0.4**
HAZ	**Te Kaha**	**1.15**	**248**	P	**Pn**	**15 41 04.6**	**-0.2**
HAZ				S	**Sn**	**15 41 18.5**	**-1.1**
TWGZ	**Tauwhareparae**	**1.23**	**227**	P	Pn	15 41 07.3	+1.2
TWGZ				S	**Sn**	**15 41 23.0**	**+1.1**
RUGZ	**Raukumara Rang**	**1.31**	**241**	P	Pn	15 41 08.2	+1.1
CNGZ	**Carnagh Statio**	**1.35**	**212**	P	**Pb**	**15 41 09.7**	**+0.5**
TKGZ	**Te Karaka**	**1.49**	**222**	P	Pn	15 41 10.3	+0.8
WIZ	**White Island**	**1.55**	**263**	P	Pn	15 41 11.1	+0.7
MWZ	**Matawai**	**1.61**	**231**	P	Pn	15 41 11.9	+0.7
RIGZ	**Rimuhau**	**1.74**	**218**	P	Pn	15 41 14.0	+1.1
RIGZ				S	**Sn**	**15 41 34.5**	**+0.3**
RAGZ	**Rawiri**	**1.78**	**229**	P	Pn	15 41 14.3	+0.8
WHRZ	**Whale Island**	**1.78**	**253**	P	Pn	15 41 14.9	+1.3
URZ	**Urewera**	**1.84**	**240**	P	Pn	15 41 15.4	+1.1
URZ	**Urewera**	**1.84**	**240**	P	Pn	15 41 15.6	+1.3
SNGZ	**Shannon Statio**	**2.01**	**224**	P	**Pn**	**15 41 17.3**	**+0.5**
KNZ	**Kokohu**	**2.03**	**214**	P	**Pn**	**15 41 17.2**	**+0.3**
EDRZ	**Edgecumbe**	**2.04**	**247**	P	Pn	15 41 18.2	+1.0
MHGZ	**Mahia Peninsul**	**2.05**	**208**	P	Pn	15 41 18.3	+1.1
OPRZ	**Ohinepanea**	**2.10**	**255**	P	**Pn**	**15 41 17.9**	**0.0**
RTZ	**Ruatahuna**	**2.12**	**232**	P	Pn	15 41 19.4	+1.1
MUGZ	**Murupara**	**2.18**	**238**	P	Pn	15 41 19.7	+0.6
RAHZ	**Arahi**	**2.25**	**225**	P	Pn	15 41 21.2	+1.2
WHHZ	**Waihua**	**2.29**	**220**	P	**Pn**	**15 41 21.1**	**+0.6**
RRRZ	**Republican Roa**	**2.29**	**243**	P	Pn	15 41 21.6	+0.9
TGRZ	**Tauranga**	**2.31**	**260**	P	**Pn**	**15 41 21.0**	**+0.2**
MTHZ	**Maungataniwha**	**2.35**	**229**	P	Pn	15 41 22.5	+1.1
HLRZ	**Highlands Stat**	**2.38**	**247**	P	**Pn**	**15 41 22.0**	**+0.3**
KARZ	**Kaharoa**	**2.38**	**253**	P	Pn	15 41 22.3	+0.5
HSRZ	**Hossack Road**	**2.48**	**246**	P	Pn	15 41 24.4	+1.2
ALRZ	**Allen Road**	**2.52**	**240**	P	Pn	15 41 24.4	+0.7
NMHZ	**Naumai**	**2.53**	**225**	P	Pn	15 41 24.9	+1.0
ARHZ	**Aropaoanui**	**2.55**	**220**	P	**Pn**	**15 41 24.6**	**+0.6**
KMRZ	**Kaimai**	**2.58**	**258**	P	**Pn**	**15 41 24.7**	**+0.2**
BKZ	**Black Stump Fm**	**2.76**	**228**	P	**Pn**	**15 41 27.5**	**+0.4**
BKZ	**Black Stump Fm**	**2.76**	**228**	P	**Pn**	**15 41 27.4**	**+0.4**
KUZ	**Kuaotunu**	**2.79**	**281**	P	**Pn**	**15 41 26.2**	**-1.2**
CKHZ	**Cape Kidnapper**	**2.82**	**214**	P	**Pn**	**15 41 27.5**	**-0.3**
MCHZ	**McNeill Hill**	**2.84**	**222**	P	**Pn**	**15 41 26.8**	**-1.3**
TOZ	**Tahuroa Road**	**2.91**	**261**	P	**Pn**	**15 41 29.1**	**+0.1**
KWHZ	**Kaweka Forest**	**2.97**	**225**	P	**Pn**	**15 41 29.9**	**-0.1**
KAHZ	**Kahuranaki**	**3.02**	**215**	P	**Pn**	**15 41 30.2**	**-0.3**
RITZ	**Rihia Road**	**3.05**	**237**	P	Pn	15 41 32.2	+1.2
GRZ	**Great Barrier**	**3.14**	**289**	P	**Pn**	**15 41 32.2**	**0.0**
KRHZ	**Kereru**	**3.15**	**222**	P	**Pn**	**15 41 33.0**	**+0.5**
MKAZ	**Moumakai**	**3.17**	**273**	P	**Pn**	**15 41 32.2**	**-0.5**
PXZ	**Pawanui**	**3.22**	**213**	P	**Pn**	**15 41 32.2**	**-1.1**
BHHZ	**Black Hill Sta**	**3.22**	**227**	P	**Pn**	**15 41 33.6**	**+0.2**
TMVZ	**Te Maari**	**3.23**	**236**	P	**Pn**	**15 41 33.8**	**+0.3**
NNVZ	**North Ngauruho**	**3.29**	**236**	P	Pn	15 41 35.4	+1.0
NGZ	**Ngauruhoe**	**3.32**	**236**	P	**Pn**	**15 41 35.1**	**+0.2**
MOVZ	**Moawhango**	**3.36**	**231**	P	**Pn**	**15 41 35.5**	**+0.2**
ETAZ	**East Tamaki Re**	**3.38**	**275**	P	**Pn**	**15 41 35.7**	**+0.2**
WNVZ	**Wahianoa**	**3.41**	**233**	P	**Pn**	**15 41 36.3**	**+0.2**
MBAZ	**Motutapu North**	**3.43**	**278**	P	**Pn**	**15 41 36.7**	**+0.5**
WPHZ	**Waipukurau**	**3.44**	**217**	P	**Pn**	**15 41 35.4**	**-0.8**
PNHZ	**Pukenui**	**3.44**	**221**	P	**Pn**	**15 41 35.3**	**-1.1**
PRHZ	**Porangahau**	**3.51**	**213**	P	**Pn**	**15 41 36.4**	**-0.9**
HIZ	**Hauiti**	**3.57**	**250**	P	Pn	15 41 39.6	+1.4
HIZ	**Hauiti**	**3.57**	**250**	P	Pn	15 41 39.6	+1.4
AWAZ	**Awhitu Peninsu**	**3.59**	**273**	P	**Pn**	**15 41 38.7**	**+0.3**
TSZ	**Takapari Road**	**3.67**	**221**	P	**Pn**	**15 41 37.9**	**-1.7**
RVAZ	**Riverhead Bore**	**3.68**	**278**	P	**Pn**	**15 41 39.9**	**+0.2**
BFZ	**Birch Farm**	**4.02**	**213**	P	**Pn**	**15 41 43.8**	**-0.5**
WAZ	**Wanganui**	**4.04**	**232**	P	Pn	15 41 45.6	+0.9
WCZ	**Waipu Caves**	**4.09**	**289**	P	**Pn**	**15 41 45.6**	**+0.3**
TIWZ	**Tintock**	**4.26**	**215**	P	**Pn**	**15 41 45.9**	**-1.6**
MRZ	**Mangatainoka R**	**4.32**	**219**	P	**Pn**	**15 41 46.8**	**-1.5**
KHEZ	**Kahui Hut**	**4.47**	**243**	P	Pn	15 41 53.6	+3.1
OUZ	**Omahuta**	**4.94**	**294**	P	**Pn**	**15 41 57.7**	**+0.8**
KHZ	**Kahutara**	**6.64**	**219**	P	**Pn**	**15 42 19.5**	**-0.8**
CTZ	**Chatham Island**	**7.16**	**154**	P	Pn	15 42 31.7	+4.3

MOS ***06*** *15:51:56.6±1.0, 22.°52N×121.°39E, h10km, mb6.1/108, MS5.6/70, Error ellipse: s-maj=5.4km s-min=3.4km az=109.6*
BJI ***06*** *15:51:57.6±0.0, 22.°63N×121.°35E, h10km, mb5.4/78, mB5.8/67, ML5.7/8, Ms6.0/95, Ms7 5.9/87*
NEIC ***06*** *15:51:58.5, 22.°60N×121.°44E, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.95; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-3.91; $M_{r\theta}$-1.90; $M_{\theta\phi}$-1.93; $M_{\phi r}$-0.84; Fault plane solution: $M_0$4.53000×10^{17} NP1:ϕ_s349.96000°, δ43.12000°, λ42.96000°. NP2:ϕ_s225.76000°, δ62.23000°, λ124.43000°. Principal axes: T 4.1102, Plg58.0000°, Azm184.0000°; N 0.7394, Plg30.0000°, Azm28.0000°; P -4.8496, Plg11.0000°, Azm292.0000°;*
ASIES ***06*** *15:51:59.6, 22.°61N×121.°40E, h21km, MW5.7*
NEIC ***06*** *15:51:59.2±2.2, 22.°63N±0.°04×121.°44E±0.°04, h14km±1km, mb5.9/481, Ms_20 5.4/325, Mwb5.7/58, Mwr5.7/22, Mww5.8, ML6.0(TAP), Error ellipse: s-maj=6.9km s-min=6.0km az=49.0*
NIED ***06*** *15:51:59.6, 22.°79N×121.°52E, h0km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}2.05; $M_{\theta\theta}$1.23; $M_{\phi\phi}$-3.29; $M_{r\theta}$-0.18; $M_{\theta\phi}$-1.91; $M_{\phi r}$-0.33; Fault plane solution: $M_0$3.05000×10^{17} NP1:ϕ_s2.00000°, δ44.00000°, λ64.00000°. NP2:ϕ_s216.00000°, δ51.00000°, λ113.00000°.*
NEIC ***06*** *15:51:59.2, 22.°63N×121.°43E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.21; $M_{\theta\theta}$0.38; $M_{\phi\phi}$-4.58; $M_{r\theta}$-1.54; $M_{\theta\phi}$-0.43; $M_{\phi r}$-0.63; Fault plane solution: $M_0$4.73000×10^{17} NP1:ϕ_s202.83000°, δ52.83000°, λ113.43000°. NP2:ϕ_s347.18000°, δ43.02000°, λ62.33000°. Principal axes: T 4.7679, Plg71.0000°, Azm171.0000°; N -0.0812, Plg18.0000°, Azm8.0000°; P -4.6867, Plg5.0000°, Azm276.0000°;*
JMA ***06*** *15:51:59.6±0.4, 23°N±1°×12°2E±°, h0km, MD5.8/15, MW5.8/15, TAIWAN REGION*
JMA Felt I J1 at TAIWAN REGION .
TAP ***06*** *15:52:00.5, 22.°63N×121.°34E, h24km, ML6.2, C*
GCMT ***06*** *15:52:01.2±0.1, 22.°62N±0.°01×121.°34E±0.°01, h26km, MW5.8/158, Moment Tensor Solution. s154, c296; s158, c469; Duration: 2s0 Moment tensor: Scale 10^{17} Nm; M_{rr}4.58±.05; $M_{\theta\theta}$0.79±.04; $M_{\phi\phi}$-5.37±.04; $M_{r\theta}$-3.31±.10; $M_{\theta\phi}$-2.88±.03; $M_{\phi r}$-0.90±.09; Best double couple: $M_0$6.72100×10^{17} NP1:ϕ_s228.00000°, δ62.00000°, λ124.00000°. NP2:ϕ_s354.00000°, δ43.00000°, λ44.00000°. Principal axes: T 6.5390, Plg58.0000°, Azm187.0000°; N 0.3600, Plg29.0000°, Azm31.0000°; P -6.9040, Plg11.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
IDC ***06*** *15:52:03.1±0.9, 22.°55N×121.°47E, h47km±7km, mb5.4/51, mbtmp5.7/53, ML5.3/3, MS5.4/81 Error ellipse: s-maj=9.6km s-min=6.3km az=71.0*
NEIC ***06*** *15:52:05, 22.°62N×121.°44E, h22km, Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10^{17}Nm; M_{rr}5.09; $M_{\theta\theta}$0.60; $M_{\phi\phi}$-5.69; $M_{r\theta}$-2.15; $M_{\theta\phi}$-3.04; $M_{\phi r}$1.03; Fault plane solution: $M_0$6.65000×10^{17} NP1: ϕ_s357.00000°, δ52.00000°, λ54.00000°. NP2: ϕ_s227.00000°, δ51.00000°, λ127.00000°. Principal axes: T 6.3437, Plg62.0000°, Azm203.0000°; N 0.5781, Plg28.0000°, Azm21.0000°; P -6.9218, Plg1.0000°, Azm112.0000°;*

ISC 06 15:52:00.0±0.3, 22.°59N±0.°01×121.°46E±0.°02, h24km±1km, h23km; pP-P, n2280, σ1.58/2403, mb5.9/507, MS5.5/307, 183C-162D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.09**	**7**	⇑iP	**Pb**	**15 52 05.4**	**+1.0**
LDUT	baz=68			i S	**Sb**	**15 52 09.0**	**+1.6**
TTN	**Taitung**	**0.33**	**300**	⇑eP	**Pb**	**15 52 06.9**	**-0.5**
EDH	baz=306 **Donghe**	**0.41**	**340**	⇑iP	**Pb**	**15 52 08.2**	**-0.5**
EDH	baz=359			S	**Sb**	**15 52 14.6**	**0.0**
TWG	**Pinlang**	**0.43**	**303**		**Pb**	**15 52 07.0**	**-2.0**
TWG	**Pinlang**	**0.43**	**303**	⇑iP	**Pb**	**15 52 07.8**	**-1.2**
TWG	baz=294			i S	**Sb**	**15 52 13.3**	**-1.8**
LONT	**Longtian**	**0.44**	**316**	⇑iP	**Pb**	**15 52 08.2**	**-1.0**
LONT	baz=325			S	**Sb**	**15 52 14.6**	**-0.8**
ECL	**Taimali**	**0.47**	**271**	⇓iP	**Pb**	**15 52 08.1**	**-1.5**
ECL	baz=275			i S	**Sb**	**15 52 13.6**	**-2.6**
ECS	**Chishang**	**0.55**	**337**	⇑iP	**Pb**	**15 52 10.9**	**-0.2**
ECS	baz=330			S	**Sb**	**15 52 18.4**	**-0.2**
LAY	**Lan-yu**	**0.55**	**171**	⇓iP	**Pb**	**15 52 11.7**	**+0.6**
LAY	baz=162			S	**Sn**	**15 52 20.7**	**-0.2**
TAW	**Tawu**	**0.57**	**246**	⇓iP	**Pb**	**15 52 10.3**	**-1.1**
TAW	baz=237			S	**Sb**	**15 52 16.8**	**-2.3**
LYUB	**Lan-yu**	**0.59**	**169**	⇓iP	**Pb**	**15 52 11.3**	**-0.5**
LYUB	baz=161			eS	**Sb**	**15 52 19.4**	**-0.3**
EAST	**Anshuo**	**0.60**	**250**	⇓iP	**Pb**	**15 52 10.7**	**-1.2**
EHD	baz=251 **Haiduan**	**0.61**	**337**	⇓iP	**Pb**	**15 52 10.0**	**-2.0**
EHD	baz=331			S	**Sb**	**15 52 18.2**	**-2.0**
FULB	**Fuli**	**0.63**	**346**	⇑iP	**Pb**	**15 52 11.6**	**-0.8**
FULB	baz=340			S	**Sb**	**15 52 21.1**	**+0.3**
SLIU	**Shizi**	**0.71**	**239**	⇑iP	**Pb**	**15 52 12.6**	**-1.2**
ELDTW	baz=231 **Lidau**	**0.72**	**326**	⇓iP	**Pb**	**15 52 12.4**	**-1.7**
ECBN	baz=323 **Changbin**	**0.73**	**359**	⇑eP	**Pb**	**15 52 12.2**	**-1.8**
ECBN	baz=15			eS	**Sb**	**15 52 22.3**	**-1.2**
TSMG	**Majia**	**0.76**	**279**	⇓iP	**Pb**	**15 52 12.8**	**-1.8**
TSMG	baz=274			eS	**Sb**	**15 52 21.0**	**-3.6**
MASBT	**Mashibuluo**	**0.76**	**272**	⇓iP	**Pb**	**15 52 13.0**	**-1.7**
MASBT	baz=269			S	**Sb**	**15 52 20.7**	**-3.9**
EYUL	**Yuli**	**0.77**	**350**	⇓iP	**Pb**	**15 52 13.9**	**-0.8**
TWF1	baz=345 **Yuli**	**0.78**	**349**	⇓iP	**Pb**	**15 52 13.6**	**-1.3**
TWF1	baz=344			S	**Sb**	**15 52 24.3**	**-0.8**
SSD	**Sandimen**	**0.78**	**282**	⇓iP	**Pb**	**15 52 12.9**	**-2.0**
SCZT	baz=280 **Fangliau**	**0.80**	**255**	⇓iP	**Pb**	**15 52 13.9**	**-1.5**
SCZT	baz=243			eS	**Sb**	**15 52 23.1**	**-2.7**
SMST	**Manzhou Townsh**	**0.81**	**226**	⇑iP	**Pb**	**15 52 14.4**	**-0.9**
YULB	baz=218 **Yu-li**	**0.81**	**350**	Pg	**Pb**	**15 52 13.9**	**-1.7**
YULB				Sn	**Sb**	**15 52 26.1**	**-0.1**
YULB	**Yu-li**	**0.81**	**350**	⇓iP	**Pb**	**15 52 14.1**	**-1.5**
YULB	baz=344			S	**Sb**	**15 52 23.9**	**-2.3**
SLGT	**Liugui**	**0.85**	**299**	eP	**Pb**	**15 52 14.5**	**-1.7**
STYH	baz=299 **Taoyuan**	**0.86**	**313**	⇓iP	**Pb**	**15 52 13.8**	**-2.4**
TSEB	baz=323 **Hengchuen, Pin**	**0.86**	**217**	⇑iP	**Pb**	**15 52 16.0**	**-0.3**
TSEB	baz=213			eS	**Sb**	**15 52 26.4**	**-0.9**
STYT	**Tauyuan**	**0.86**	**312**	⇓iP	**Pb**	**15 52 14.9**	**-1.5**
STYT	baz=314			eS	**Sb**	**15 52 24.1**	**-3.5**
TWKBT	baz=314 **Hengchun**	**0.88**	**223**	⇑iP	**Pb**	**15 52 16.0**	**-0.6**
TWKBT	baz=216			eS	**Sb**	**15 52 26.1**	**-1.8**
TWK1	**Hengchun**	**0.88**	**223**	⇑iP	**Pb**	**15 52 15.9**	**-0.8**
TWK1	baz=216			S	**Sb**	**15 52 26.8**	**-1.2**
HEN	**Hengchun**	**0.88**	**229**	⇑iP	**Pb**	**15 52 16.1**	**-0.6**
TSPT	baz=222 **Pingtung City**	**0.89**	**276**	⇓iP	**Pb**	**15 52 16.2**	**-0.7**
TSPT	baz=266			S	**Sb**	**15 52 28.0**	**-0.4**
HGSD	**Ruisui**	**0.90**	**358**	⇑iP	**Pb**	**15 52 15.7**	**-1.3**
HGSD	baz=18			S	**Sn**	**15 52 29.9**	**+0.3**
SGLT	**Jiouru**	**0.90**	**279**	eP	**Pb**	**15 52 16.1**	**-0.9**
SNW	baz=281 **Nanwan**	**0.91**	**227**	P	**Pb**	**15 52 16.8**	**-0.2**
EHY	baz=220 **Hungye**	**0.92**	**352**	⇓iP	**Pb**	**15 52 15.8**	**-1.6**
SCST	baz=347 **Cishan**	**0.94**	**289**	⇓iP	**Pb**	**15 52 16.9**	**-0.7**
SGST	baz=286 **Jiashian**	**0.95**	**302**	⇓iP	**Pb**	**15 52 16.1**	**-1.7**
TWM1	baz=311 **Shoushan**	**0.98**	**284**	⇓iP	**Pb**	**15 52 18.3**	**-0.1**
YUS	baz=283 **Yu-Shan**	**1.01**	**333**	⇓iP	**Pb**	**15 52 17.6**	**-1.6**
WTP	baz=331 **Ta-pu**	**1.02**	**310**	⇓iP	**Pb**	**15 52 18.3**	**-0.6**
WLCH	baz=320 **Liuqiu**	**1.03**	**257**	⇓eP	**Pb**	**15 52 21.3**	**+2.2**
TPUB	baz=237 **Ta-pu**	**1.04**	**313**	Pn	**Pn**	**15 52 17.9**	**-1.4**
TPUB				Sn	**Sb**	**15 52 30.4**	**-2.3**
TPUB	**Ta-pu**	**1.04**	**313**	P	**Pn**	**15 52 18.8**	**-0.4**
TPUB	**Ta-pu**	**1.04**	**313**	⇓iP	**Pn**	**15 52 18.7**	**-0.6**
TPUB	baz=315			eS	**Sb**	**15 52 30.2**	**-2.5**
CHN1	**Nanshi**	**1.04**	**305**	⇓iP	**Pn**	**15 52 19.1**	**-0.2**
CHN1	baz=312			S	**Sb**	**15 52 31.7**	**-1.0**
SNJT	**Kaohsiung City**	**1.05**	**279**	eP	**Pn**	**15 52 18.2**	**-1.1**
KAU	baz=277 **Kaohsiung**	**1.06**	**269**	⇓eP	**Pb**	**15 52 21.2**	**+1.4**
EGFH	baz=265 **Guangfu**	**1.08**	**358**	eP	**Pn**	**15 52 19.6**	**-0.1**
SNST	baz=350 **Tainan City**	**1.09**	**306**	⇓eP	**Pb**	**15 52 20.7**	**+0.6**
SNST	baz=316			S	**Sn**	**15 52 34.3**	**+0.1**
ALS	**Alishan**	**1.10**	**327**	⇓iP	**Pn**	**15 52 19.4**	**-0.8**
CHN4	baz=330 **Tsaushan**	**1.10**	**314**	⇓eP	**Pn**	**15 52 18.8**	**-1.3**
WSSB	baz=321 **Gushan**	**1.11**	**273**	⇓iP	**Pb**	**15 52 21.3**	**+0.7**
WSSB	baz=270			S	**Sn**	**15 52 36.0**	**+1.3**
SHHT	baz=270 **Tainan City**	**1.11**	**293**	⇓iP	**Pb**	**15 52 20.5**	**-0.1**
CHN3	baz=292 **Shinhua**	**1.12**	**296**	⇓iP	**Pb**	**15 52 21.2**	**+0.5**
CHN3	baz=294			eS	**Sn**	**15 52 35.9**	**+1.0**
TEGC	**Jichi Village**	**1.12**	**4**	eP	**Pn**	**15 52 19.4**	**-0.9**
TWK	baz=23 **Hsinying**	**1.12**	**307**	⇓iP	**Pb**	**15 52 20.1**	**-0.2**
TWK	baz=318			eS	**Sn**	**15 52 35.4**	**+0.3**
WCKO	**Fanlu**	**1.16**	**317**	⇓iP	**Pn**	**15 52 19.7**	**-1.1**
WCKO	baz=319			eS	**Sn**	**15 52 34.5**	**-1.4**
VWDT	**VWDT**	**1.20**	**346**	⇓iP	**Pn**	**15 52 20.7**	**-0.6**
SSHA	baz=359 **Shanhua**	**1.21**	**297**	⇓iP	**Pb**	**15 52 22.5**	**+0.2**
SSHA	baz=295			eS	**Sb**	**15 52 38.7**	**+1.2**
TAI1	baz=295 **Yung-k'ang**	**1.22**	**292**	⇓iP	**Pb**	**15 52 22.4**	**0.0**
TAI1	baz=290			eS	**Sb**	**15 52 37.9**	**+0.1**
ESL	**Shilin**	**1.22**	**359**	⇓iP	**Pn**	**15 52 20.0**	**-1.7**
TAI	baz=354 **Tainan**	**1.23**	**289**	⇓P	**Pb**	**15 52 22.4**	**-0.3**
TAI	baz=287			eS	**Sb**	**15 52 38.3**	**+0.2**
WHYT	**Xinyi Township**	**1.24**	**333**	⇓iP	**Pn**	**15 52 22.0**	**+0.1**
WHYT	baz=343			S	**Sb**	**15 52 38.1**	**-0.2**
SSLB	baz=343 **Suanglung**	**1.28**	**339**	Pn	**Pn**	**15 52 21.9**	**-0.6**
SSLB				Sn	**Sn**	**15 52 37.7**	**-1.3**
SSLB	**Suanglung**	**1.28**	**339**	P	**Pb**	**15 52 23.2**	**-0.3**
SSLB	**Suanglung**	**1.28**	**339**	⇓iP	**Pn**	**15 52 22.2**	**-0.3**
TEYL	baz=352 **Yanliau Villag**	**1.28**	**6**	eP	**Pn**	**15 52 22.3**	**-0.2**
TEYL	baz=22			eS	**Sb**	**15 52 39.2**	**-0.3**
SCLT	baz=22 **Jiali**	**1.30**	**297**	⇓iP	**Pn**	**15 52 23.1**	**+0.3**
SCLT	baz=295			eS	**Sb**	**15 52 40.7**	**+0.5**
CHN2	baz=295 **Minshiung**	**1.31**	**316**	⇓iP	**Pb**	**15 52 23.8**	**-0.1**
CHN2	baz=315			S	**Sb**	**15 52 41.2**	**+0.9**
CHY	**Chiayi**	**1.31**	**314**	⇓iP	**Pb**	**15 52 23.7**	**-0.4**
CHY	baz=313			i S	**Sb**	**15 52 40.9**	**+0.4**
ICHU	**Yijhu**	**1.33**	**306**	⇓iP	**Pn**	**15 52 23.6**	**+0.4**
ICHU	baz=304			S	**Sb**	**15 52 41.1**	**+0.2**
WGK	**Gukeng**	**1.37**	**323**	⇓iP	**Pb**	**15 52 24.8**	**-0.2**
WGK	baz=323			S	**Sb**	**15 52 42.0**	**-0.1**
ETM	baz=323 **Tongmen**	**1.37**	**1**	eP	**Pn**	**15 52 22.9**	**-0.8**
CHN8	baz=7.0 **Yiju**	**1.38**	**304**	⇓iP	**Pn**	**15 52 24.0**	**+0.2**
CHN8	baz=302			S	**Sb**	**15 52 42.5**	**+0.3**
TSCK	**Chigu Township**	**1.38**	**294**	⇓iP	**Pn**	**15 52 23.6**	**-0.3**
TSCK	baz=292			S	**Sn**	**15 52 41.5**	**0.0**
OWD	**Renai**	**1.39**	**349**	eP	**Pn**	**15 52 23.6**	**-0.5**
WDLH	baz=9.0 **Douliu**	**1.39**	**323**	⇓iP	**Pb**	**15 52 25.0**	**-0.2**
WDLH	baz=322			eS	**Sn**	**15 52 41.4**	**-0.1**
SMLT	baz=322 **Sun Moon Lake**	**1.39**	**338**	⇓iP	**Pn**	**15 52 24.4**	**+0.4**
SMLT	baz=340			eS	**Sn**	**15 52 41.0**	**-0.7**
HWA	baz=340 **Hwalien**	**1.39**	**6**	eP	**Pn**	**15 52 23.8**	**-0.1**
WJS	baz=23 **Zhushan**	**1.40**	**331**	⇓iP	**Pb**	**15 52 25.4**	**-0.1**
WJS	baz=332			eS	**Sb**	**15 52 42.9**	**-0.1**
TYC	baz=332 **Yuchr**	**1.42**	**337**	⇓iP	**Pb**	**15 52 25.8**	**-0.1**
TYC	baz=350			eS	**Sn**	**15 52 42.4**	**0.0**
WUSB	**Renai**	**1.43**	**347**	⇓iP	**Pn**	**15 52 24.4**	**-0.3**
WSL	baz=1.0 **Shuilin Townsh**	**1.47**	**310**	⇓iP	**Pn**	**15 52 24.4**	**-0.6**
WSL	baz=291			eS	**Sn**	**15 52 43.2**	**-0.3**
WNT	baz=291 **Mingjian**	**1.47**	**331**	⇓iP	**Pb**	**15 52 26.4**	**-0.3**
WNT	baz=331			S	**Sb**	**15 52 45.3**	**+0.4**
CHGB	baz=331 **Renai**	**1.49**	**350**	⇓iP	**Pn**	**15 52 25.3**	**-0.3**
TWD	baz=8.0 **Chiawan**	**1.49**	**5**	eP	**Pn**	**15 52 24.6**	**-0.7**
WPL	baz=357 **Puli Township**	**1.49**	**342**	⇓iP	**Pn**	**15 52 25.9**	**+0.5**
WNT1	**Nantou City**	**1.50**	**332**	⇓iP	**Pb**	**15 52 26.9**	**-0.2**
WNT1	baz=332			eS	**Sb**	**15 52 46.9**	**+1.1**
DPDB	baz=332 **Guoxing**	**1.52**	**341**	⇓iP	**Pb**	**15 52 26.7**	**-0.9**
WSF	baz=358 **Szhu**	**1.55**	**313**	⇓iP	**Pn**	**15 52 26.3**	**+0.2**
WSF	baz=311			S	**Sn**	**15 52 45.9**	**+0.4**
WCS	baz=311 **Beigang Elemen**	**1.55**	**341**	⇓eP	**Pn**	**15 52 26.1**	**0.0**
WHF	baz=342 **Hehuan Shan**	**1.56**	**354**	eP	**Pn**	**15 52 26.7**	**0.0**
ETL	baz=12 **Fush Village**	**1.57**	**5**	eP	**Pn**	**15 52 26.2**	**-0.4**
NACB	baz=357 **Ninganchiao**	**1.58**	**5**	Pn	**Pn**	**15 52 24.8**	**-1.8**
NACB				Sn	**Sb**	**15 52 45.5**	**-1.0**
NACB	**Ninganchiao**	**1.58**	**5**	⇓iP	**Pn**	**15 52 25.5**	**-1.2**
WYL	baz=356 **Yuanlin Townsh**	**1.59**	**330**	⇓iP	**Pb**	**15 52 27.8**	**-0.9**
WWF	baz=329 **Wufeng**	**1.61**	**334**	⇓iP	**Pn**	**15 52 27.7**	**+0.7**
WWF	baz=334			eS	**Sb**	**15 52 48.1**	**-0.9**
ETLH	baz=334 **Xiulin Townshi**	**1.61**	**1**	eP	**Pn**	**15 52 26.9**	**-0.2**
WRL	baz=6.0 **Guolierlin Hig**	**1.64**	**323**	⇓P	**Pn**	**15 52 27.1**	**-0.4**
WMLT	baz=322 **Mailiao**	**1.66**	**317**	⇓P	**Pn**	**15 52 28.1**	**+0.4**
WMLT	baz=315			eS	**Sn**	**15 52 48.3**	**0.0**
	baz=315						

WTCT Ta-ch'eng 1.67 320⇓iP Pn 15 52 28.3 +0.5
baz=318
WTCT S **Sn** **15 52 49.2 +0.7**
baz=318
TWT Tachien 1.68 351⇓iP Pn 15 52 28.2 +0.1
baz=8.0
TDCB Techi 1.68 351⇓iP Pn 15 52 28.5 +0.4
baz=7.0
WCHH Zhanghua 1.70 331⇓iP Pb 15 52 29.5 -1.1
baz=314
TCU Taichung 1.71 335 ⇓P Pb 15 52 30.2 -0.6
baz=334
TCU eS **Sb** **15 52 51.2 -0.7**
baz=334
WHP Taichung City 1.75 344 eP Pb 15 52 30.8 -0.7
baz=357
WHP eS **Sb** **15 52 52.9 -0.1**
baz=357
WDGT Dungji 1.79 292⇓iP Pn 15 52 28.9 -0.6
baz=289
WDGT S **Sn** **15 52 48.8 -2.6**
baz=289
NNS Nan Shan 1.85 358 eP Pn 15 52 29.1 -1.2
baz=16
EWUT Wuta 1.87 9 eP Pn 15 52 29.5 -1.1
baz=360
WDJ Dajia District 1.91 337 ⇓P Pb 15 52 32.6 -1.5
baz=335
WDJ eS **Sb** **15 52 56.0 -1.5**
baz=335
NSY Sanyi 1.93 341⇓iP Pb 15 52 33.1 -1.5
baz=339
NSY S **Sb** **15 52 57.9 -0.3**
baz=339
LATG Datong 1.94 2 ⇓P Pn 15 52 31.1 -0.5
baz=6.0
PHUB P'eng-hu 1.97 298⇓iP Pn 15 52 31.2 -0.6
baz=295
PHUB S **Sn** **15 52 52.7 -3.1**
baz=295
VCHM Qimei 1.97 289⇓iP Pn 15 52 31.4 -0.5
baz=286
VCHM iS **Sn** **15 52 54.0 -1.9**
baz=286
PNG Penghu 2.01 299⇓iP Pn 15 52 31.9 -0.5
baz=296
PNG iS **Sn** **15 52 55.4 -1.4**
baz=296
NMLH Miaoli 2.04 343 eP Pn 15 52 34.3 +1.4
baz=341
TWC Suao 2.04 10 P Pn 15 52 33.2 +0.2
baz=1.0
NFF Wufeng Townshi 2.06 351⇓eP Pn 15 52 34.0 +0.7
baz=5.0
YHNB Yeheng 2.08 358 Pn 15 52 33.1 -0.4
YHNB Yeheng 2.08 358 P Pb 15 52 35.8 -1.3
YHNB Yeheng 2.08 358 ⇓P Pn 15 52 33.9 +0.4
baz=14
NSTT Nanjuang 2.08 348⇓iP Pn 15 52 34.8 +1.3
baz=332
NSK Sanguang 2.08 357⇓eP Pn 15 52 32.9 -0.7
baz=14
LIOB Emei 2.09 349⇓iP Pn 15 52 35.0 +1.4
baz=350
TWE Neicheng 2.13 5 eP Pn 15 52 34.4 +0.2
baz=9.0
NJN Zhunan 2.16 346⇓eP Pn 15 52 35.6 +1.1
baz=330
FUSB Fushanzhiwuyua 2.17 3 eP Pn 15 52 35.9 +1.2
baz=7.0
NJD Zhudong 2.17 351 eP Pn 15 52 36.4 +1.7
baz=352
ILA Ilan 2.19 7 eP Pb 15 52 37.2 -1.7
baz=11
HSN1 Hsinchu 2.22 350 eP Pn 15 52 36.8 +1.4
baz=351
SBCB Hsinchu 2.24 349 ⇓P Pn 15 52 37.0 +1.4
baz=350
HSN Hsinchu 2.25 349 eP Pn 15 52 37.6 +1.8
baz=351
NTC Toucheng 2.28 9 eP Pn 15 52 37.9 +1.6
baz=359
EGS 2.29 11 eP Pn 15 52 37.9 +1.5
baz=2.0
JYNG Yonagunijimaku 2.30 36 iP Pn 15 52 37.8 +1.2
JYNG S **Sn** **15 53 04.8 +0.6**
JYNG Yonagunijimaku 2.30 36 A A 15 52 37.8
comp=E,159nm,3.5s,comp=E,162nm,1.9s
YOJ Yonaguni jima 2.35 37 Pn Pn 15 52 38.2 +1.0
YOJ Sn **Sn** **15 53 03.4 -1.9**
YOJ Yonaguni jima 2.35 37 P Pn 15 52 38.2 +1.0
YOJ 15 53 03.4
YOJ Yonaguni jima 2.35 37 P Pb 15 52 39.4 -2.3
YOJ Yonaguni jima 2.35 37⇓iP Pn 15 52 38.5 +1.3
baz=51
YOJ eS **Sn** **15 53 05.2 -0.1**
baz=51
YOJ Yonaguni jima 2.35 37 iP Pn 15 52 38.1 +1.0
YOJ S **Sn** **15 53 05.7 +0.5**
YOJ Yonaguni jima 2.35 37 A A 15 52 38.1
comp=E,130nm,2.9s,comp=E,127nm,2.1s
NHDH Xindian Distri 2.37 1 eP Pn 15 52 38.9 +1.5
baz=18
TATO Taipei 2.38 1 Pn 15 52 37.4 -0.2
TATO Taipei 2.38 1 P Pb 15 52 41.3 -0.9
TATO Taipei 2.38 1 eP Pn 15 52 39.0 +1.4
baz=17
NCU National Centr 2.38 354 eP Pn 15 52 39.6 +1.9
baz=337
TWA Mucha 2.38 3 P Pn 15 52 38.7 +1.0
baz=19
TIPB Shuangxi 2.40 8 eP Pn 15 52 39.5 +1.6
baz=358
TIPB eS **Sn** **15 53 06.8 +0.2**
baz=358
BACT New Taipei Cit 2.40 360 eP Pb 15 52 41.1 -1.4
baz=17
NTY Taoyuan 2.41 357 eP Pb 15 52 40.4 -2.3
baz=339
NHW Xinwu Township 2.44 351 eP Pn 15 52 39.2 +0.8
baz=352
TAP Taipei 2.44 1 eP Pb 15 52 41.2 -2.0
baz=17
TAP1 Taipei 2.44 1 eP Pb 15 52 41.9 -1.3
baz=17
NHY Taipei 2.44 2 eP Pb 15 52 41.5 -1.8
baz=4.0
TWB1 Santiao Chiao 2.46 11 eP Pn 15 52 40.0 +1.4
baz=3.0
NWF Wu-fen Shan 2.49 7 eP Pn 15 52 40.7 +1.5
baz=9.0
WFSB Wu-fen Shan 2.49 7 eP Pn 15 52 41.5 +2.3
baz=9.0
WFSB eS **Sn** **15 53 11.1 +2.3**
baz=9.0
TWS1 Kuangyinshan 2.50 359 eP Pn 15 52 41.5 +2.2
baz=16
SXI1 Grass Mountain 2.52 9 eP Pn 15 52 41.6 +1.9
baz=359
SXI1 eS **Sn** **15 53 11.2 +1.4**
baz=359
YM01 YM01 2.55 2 eP Pn 15 52 41.8 +1.8
baz=4.0
NTST Danshui 2.57 360 eP Pn 15 52 41.9 +1.8
baz=17
TNOU National Taiwa 2.57 6 eP Pn 15 52 41.4 +1.2
baz=9.0
ANP Anpu 2.59 1 eP Pn 15 52 42.2 +1.6
baz=18
YM08 YM08 2.59 3 eP Pn 15 52 41.0 +0.5
baz=4.0
HATJ Hateruma jima 2.61 55 iP Pn 15 52 41.9 +1.2
HATJ S **Sn** **15 53 11.9 +0.3**
HATJ Hateruma jima 2.61 55 A A 15 52 41.9
comp=E,154nm,2.4s,comp=E,141nm,3.2s
TWY Chenhua 2.68 3 eP Pb 15 52 44.8 -2.5
baz=4.0
IRIF Iriomote-Funau 2.72 50 iP Pn 15 52 43.5 +1.2
IRIF S **Sn** **15 53 16.1 +1.8**
IRIF Iriomote-Funau 2.72 50 A A 15 52 43.5
comp=E,87nm,1.6s,comp=E,141nm,1.7s
JKRS Kuro-shima 2.86 54 iP Pn 15 52 45.6 +1.4
JKRS eS **Sn** **15 53 17.8 -0.1**
JKRS Kuro-shima 2.86 54 A A 15 52 45.6
comp=E,145nm,2.6s,comp=E,150nm,4.2s
VWUC VWUC 3.02 323⇓iP Pn 15 52 45.9 -0.4
baz=318

JIJ Ishigaki jima 3.03 54 iP Pn 15 52 47.3 +0.7
JIJ S **Sn** **15 53 21.6 -0.5**
JIJ Ishigaki jima 3.03 54 A A 15 52 47.3
comp=E,43nm,3.3s,comp=E,57nm,4.5s
PTMZ Houxiangcun 3.25 319⇓iP Pn 15 52 49.5 -0.1
baz=313
PTMZ eS **Sn** **15 53 24.4 -3.1**
baz=313
JISG Ishigakijimahi 3.29 52 iP Pn 15 52 50.6 +0.6
CICP Calayan Island 3.31 180⇓iP Pn 15 52 50.0 -0.3
CICP iS **Sn** **15 53 28.1 -0.7**
KNM Kinmen 3.32 304⇓iP Pn 15 52 51.6 +1.1
baz=297
KNM eS **Sn** **15 53 28.6 -0.7**
baz=297
KNMB Chin-men Tao 3.38 304 Pn Pn 15 52 50.1 -1.2
KNMB Sn **Sn** **15 53 26.9 -3.8**
KNMB Chin-men Tao 3.38 304⇓iP Pn 15 52 50.9 -0.4
baz=300
QZH Quanzhou 3.52 312⇓iPn Pn 15 52 52.6 -0.7
QZH Sn **Sn** **15 53 31.2 -3.0**
QZH smax smax
comp=N,17μm,0.8s
QZH smax smax
comp=E,16μm,0.7s
QZH LR LR
comp=N,108μm,19.7s
QZH LR LR
comp=E,91μm,13.7s
QZH LR LR
comp=Z,127μm,16.8s
JTJ Tarama 3.61 55 iP Pn 15 52 55.6 +1.1
JTJ eS **Sn** **15 53 36.8 +0.4**
JTJ Tarama 3.61 55 A A 15 52 55.6
comp=E,107nm,3.2s,comp=E,92nm,3.3s
ZPLA Ao Xicun 3.66 292⇓iP Pn 15 52 54.9 -0.4
baz=288
ZPLA eS **Sn** **15 53 34.6 -3.1**
baz=288
MATB Ma-tsu 3.81 339⇓eP Pn 15 52 56.7 -0.5
baz=333
MSUT Lienchiang 3.83 339 eP Pn 15 52 57.5 0.0
baz=333
DSXP Dongshan 3.88 288⇓iP Pn 15 52 57.7 -0.4
baz=283
DSXP eS **Sn** **15 53 40.2 -2.7**
baz=283
AXDP Jialang 3.94 306⇓iP Pn 15 52 58.8 -0.2
baz=302
JIRB Irabujima 4.07 56 P Pn 15 53 01.9 +1.1
JIRB S **Sn** **15 53 47.4 -0.3**
JIRB Irabujima 4.07 56 A A 15 53 01.9
comp=E,48nm,5.0s,comp=E,58nm,4.8s
PACPP Pamplona Cagay 4.11 181⇑iP Pn 15 53 01.6 +0.2
MHZQ Yeshan 4.14 328⇓eP Pn 15 53 01.5 -0.3
baz=324
JMJ2 Miyako jima3 4.14 58 iP Pn 15 53 02.6 +0.8
JMJ2 S **Sn** **15 53 48.8 -0.9**
JMJ2 Miyako jima3 4.14 58 A A 15 53 02.6
comp=E,80nm,6.3s,comp=E,84nm,3.6s
JMJ Miyako jima 2 4.16 57⇓iP Pn 15 53 03.3 +1.3
baz=60
JMJ eS **Sn** **15 53 49.6 -0.2**
baz=60
JIKM Ikemajima 4.18 55 P Pn 15 53 03.4 +1.1
JIKM eS **Sn** **15 53 50.3 -0.2**
JIKM Ikemajima 4.18 55 A A 15 53 03.4
comp=E,63nm,5.8s,comp=E,59nm,5.2s
JOGS Gusukube 4.22 58 iP Pn 15 53 04.2 +1.4
JOGS S **Sn** **15 53 52.1 +0.7**
JOGS Gusukube 4.22 58 A A 15 53 04.2
comp=E,69nm,4.8s,comp=E,103nm,6.6s
LYJJ Jianjiangzhen 4.24 339⇓eP Pn 15 53 03.0 -0.2
baz=333
SGCP Gonzaga 4.36 173⇑eP Pn 15 53 05.9 +1.1
VDOS Pratas Island 4.78 248 eP Pn 15 53 11.3 +0.6
baz=245
SXFK Yanhouchang 5.14 318⇓iP Pn 15 53 15.4 -0.3
baz=316
SAMP Sagada Mountai 5.50 186⇑eP Pn 15 53 22.2 +1.6
PALP Palanan 5.57 170⇓eP Pn 15 53 24.7 +3.3
JKE Kume jima 2 6.12 51 A A 15 53 31.3
comp=E,8.0nm,9.8s,comp=E,12nm,11.1s
BOLP Bolinao 6.34 194⇑eP Pn 15 53 35.1 +3.0
SMPP San Manuel, Pa 6.45 187⇑eP Pn 15 53 34.3 +0.8
HKC Hong Kong Obse 6.74 269 ⇑P Pn 15 53 38.0 +0.4
JJT3 Tamagusuku3 6.77 57 A A 15 53 40.6
comp=E,19nm,6.7s,comp=E,28nm,5.3s
HKPS Hong Kong Po S 6.78 269 Pn 15 53 37.4 -0.6
HKPS Hong Kong Po S 6.78 269 Sn Sn 15 54 49.9 -4.6
HKPS Hong Kong Po S 6.78 269 P Pn 15 53 37.7 -0.4
baz=264
HKPS eS **Sn** **15 54 49.3 -5.2**
baz=264
BALP Baler 6.81 179⇓eP Pn 15 53 41.5 +3.0
PCPH Palayan 7.00 183⇑eP Pn 15 53 43.2 +2.2
PCPH eS **Sn** **15 55 08.3 +8.4**
MCO Taipa Grande 7.33 268 P Pn 15 53 46.0 +0.4
GZH Guangzhou 7.50 275 Pn Pn 15 53 44.5 -3.5
GZH Sn **Sn** **15 55 07.0 -5.3**
GZH smax smax
comp=N,8μm,1.3s
GZH smax smax
comp=E,7μm,1.2s
JOW Kunigami 7.50 54 P Pn 15 53 46.6 -1.4
286nm,0.5s,baz=244,slow=12,SNR=48
JOW S **Sn** **15 55 09.8 -2.5**
197nm,0.4s,baz=229,slow=19,SNR=2.0
JOW Kunigami 7.50 54 eP Pn 15 53 47.3 -0.7
baz=59
MACP Maragondon, Ca 8.31 185⇓eP Pn 15 54 03.9 +4.7
JCNP Jose Panganiba 8.34 172⇓eP Pn 15 54 01.2 +1.7
LQP Lukban 8.43 179⇓eP Pn 15 54 02.3 +1.3
SSE Sheshan 8.48 358 P Pn 15 54 02.9 +1.5
SSE S **Sn** **15 55 36.2 -0.1**
SSE pmax pmax
comp=Z,54nm,0.7s
GQP Guinayangan 8.69 174⇑eP Pn 15 54 07.3 +3.1
GQP eS **Sn** **15 55 42.4 +0.9**
LUBP Lubang 8.88 188⇑eP Pn 15 54 07.0 +0.1
LUBP Lubang 8.88 188⇓eP Pn 15 54 11.3 +4.4
BOAC Boac 9.09 178⇓eP Pn 15 54 14.4 +4.7
PVCP Virac 9.30 164⇑eP Pn 15 54 13.9 +1.2
JMZ Minamidaito 2 9.47 68 Pn Pn 15 54 15.3 +0.2
CNSH ChangSha 9.51 308 ⇓P Pn 15 54 14.6 -0.9
CNSH smax smax
comp=N,6μm,1.3s
CNSH smax smax
comp=E,10μm,1.3s
CNSH LR LR
comp=N,51μm,14.6s
CNSH LR LR
comp=E,68μm,17.1s
CNSH LR LR
comp=Z,81μm,14.9s
NJ2 Nanjing 9.71 347⇑iP Pn 15 54 17.3 -0.9
NJ2 S **Sn** **15 56 06.4 -0.1**
NJ2 pmax pmax
comp=Z,400nm,0.8s
NJ2 smax smax
comp=N,2μm,1.0s
NJ2 smax smax
comp=E,2μm,1.0s
NJ2 LR LR
comp=N,90μm,14.7s
NJ2 LR LR
comp=E,33μm,11.4s
NJ2 LR LR
comp=Z,98μm,13.9s
WHN Wuhan 10.16 323 ⇑P Pn 15 54 23.9 -0.5
WHN sP 15 54 31.6
WHN S **Sn** **15 56 09.8 -7.8**
WHN pmax pmax
comp=Z,550nm,0.8s
WHN LR LR
comp=N,67μm,5.5s
WHN LR LR
comp=E,59μm,4.5s
WHN LR LR
comp=Z,125μm,12.9s
CNP Catarman 10.48 163⇓eP Pn 15 54 32.8 +4.0
GULI GuiLin 10.50 287 ⇓P Pn 15 54 24.2 -4.9
GULI S **Sn** **15 56 22.9 -3.1**
BUSP Coron 10.59 187⇑eP Pn 15 54 33.2 +2.8
QIZ Qiongzhong 11.42 254 Pn Pn 15 54 40.4 -1.4

QIZ Qiongzhong 11.42 254⇓iP Pn 15 54 43.4 +1.6
QIZ sP 15 54 50.5
QIZ S **Sn** **15 56 53.5 +4.7**
QIZ pmax pmax
comp=Z,37nm,1.2s
QIZ LR LR
comp=N,58μm,14.2s
QIZ LR LR
comp=E,49μm,14.9s
QIZ LR LR
comp=Z,67μm,14.9s
QIZ Qiongzhong 11.42 254 P Pn 15 54 43.0 +1.2
OCLP Ormoc 11.86 165⇓eP Pn 15 54 55.3 +7.5
GUIM Jordan 11.94 175⇑eP Pn 15 54 52.8 +3.8
JSU Suzuyama 11.96 40 Pn Pn 15 54 47.6 -1.5
TABP Talibon, Bohol 12.73 167⇓iP Pn 15 54 59.8 +0.2
CNOP Candoni, Negro 12.74 175⇑iP Pn 15 55 02.1 +2.3
MSLP Maasin 12.80 165⇓eP Pn 15 55 04.0 +3.3
PPR Puerto Princes 13.00 192⇑iP Pn 15 55 05.0 +1.6
TBP Tagbilaran 13.03 169⇑iP Pn 15 55 05.3 +1.5
ENH Enshi 13.17 308 Pn Pn 15 55 05.4 -0.2
GHBP Garcia Hernand 13.17 168⇓eP P 15 55 12.0 -3.5
SNPH Sibulan 13.28 172 eP Pn 15 55 09.5 +2.2
GLSP General Luna, 13.49 160⇑eP Pn 15 55 12.1 +1.9
LSIP Lazi, Siquijor 13.54 171⇑eP Pn 15 55 12.9 +2.1
JTU Tsushima 13.78 29 Pn Pn 15 55 12.8 -1.1
GYA Guiyang 14.01 289 ⇑P Pn 15 55 17.9 +0.7
GYA pP P 15 55 21.5 -3.4
GYA S **Sn** **15 57 52.6 +0.6**
GYA pmax pmax
comp=Z,360nm,1.3s
GYA pmax pmax
comp=Z,2μm,3.5s
GYA LR LR
comp=N,45μm,16.6s
GYA LR LR
comp=E,52μm,12.0s
GYA LR LR
comp=Z,77μm,13.8s
DCPH Dipolog City 14.04 172⇓eP P 15 55 30.1 +4.9
TIA Tai'an 14.09 345 eP Pn 15 55 18.7 +0.5
TIA S **Sn** **15 57 50.7 -3.1**
TIA pmax pmax
comp=Z,250nm,1.2s
TIA LR LR
comp=N,49μm,13.7s
TIA LR LR
comp=E,24μm,14.7s
TIA LR LR
comp=Z,78μm,12.7s
BUTP Butuan 14.12 163⇓eP P 15 55 25.0 -1.1
LYN LuoYang 14.29 328 ⇓P Pn 15 55 20.7 -0.2
LYN pP P 15 55 24.0 -3.9
LYN S Sn 15 58 07.8 +9.1
LYN SS **S** **15 58 20.0 +1.3**
LYN pmax pmax
comp=Z,140nm,2.4s
LYN pmax pmax
comp=Z,2μm,4.3s
LYN LR LR
comp=N,60μm,11.4s
LYN LR LR
comp=E,25μm,13.5s
LYN LR LR
comp=Z,58μm,11.7s
CGP Cagayan de Oro 14.39 167⇓eP P 15 55 29.2 +0.1
TJN Taejon 14.67 19 Pn Pn 15 55 26.6 +0.6
TJN Taejon 14.67 19⇑eP Pn 15 55 29.0 +3.0
TJN Taejon 14.67 19 P P 15 55 29.7 -2.4
PAGZ Pagadian 14.77 173⇑iP Pn 15 55 27.5 -0.1
PAGZ Pagadian 14.77 173⇑eP P 15 55 33.6 +0.2
BIPH Bislig 15.08 161⇓eP P 15 55 34.8 -1.9
INCN Inchon 15.50 16 P P 15 55 39.5 -1.9
INCN IAmb IAmb 15 55 44.0
comp=Z,624nm,1.4s
INCN Inchon 15.50 16 P P 15 55 39.5 -1.9
INCN pmax pmax
comp=Z,624nm,1.5s
INCN Inchon 15.50 16 P P 15 55 39.7 -1.7
CTBH Cotabato--PC H 15.51 170⇓eP P 15 55 39.9 -1.7
ZCP Zamboanga City 15.58 178⇓eP P 15 55 45.6 +3.3
JMN Monobe 15.58 42 P Pn 15 55 35.2 -3.0
KSAR Wonju Array Be 15.81 19 Pn 15 55 42.7 +1.6
KSAR Wonju Array Be 15.81 19 P Pn 15 55 42.7 +1.6
KSRS Korea Array 15.83 19 P P 15 55 43.9 -1.1
comp=Z,4.7nm,0.3s,baz=195,slow=12,SNR=134
KSRS LR LR 16 02 45.7
comp=Z,11μm,18.7s,baz=205,slow=41
KSRS ScP **ScP** **16 04 10.8 -1.9**
comp=Z,18nm,1.0s,baz=196,slow=1.7,SNR=13
comp=Z,121nm,0.8s
HJU Haeju 15.84 12 P Pn 15 55 43.2 +1.8
HJU pP **P** **15 55 47.8 +2.8**
HJU S **Sn** **15 58 41.7 +5.4**
KS19 Wonju Array Si 15.86 19 P Pn 15 55 43.3 +1.5
XAN Xi'an 15.86 319 ⇑P Pn 15 55 40.9 -0.9
XAN pP P 15 55 45.5 +0.1
XAN sP pP 15 55 48.5 -3.1
XAN PP **sP** **15 55 53.2 -1.3**
XAN S **Sn** **15 58 37.0 0.0**
XAN sS S 15 58 45.6 -5.4
XAN SS **SnSn** **15 58 53.8 +3.7**
XAN pmax pmax
comp=Z,150nm,1.4s
XAN pmax pmax
comp=Z,4μm,4.6s
XAN LR LR
comp=Z,49μm,13.4s
XAN LR LR
comp=Z,39μm,12.4s
XAN LR LR
comp=Z,80μm,14.6s
HNS HongShan 15.87 340 ⇑P Pn 15 55 42.2 +0.3
HNS pP **pP** **15 55 48.5 -3.0**
HNS sP **sP** **15 55 52.3 -2.1**
HNS PP **PnPn** **15 55 55.2 +4.5**
HNS S **Sn** **15 58 41.8 +4.7**
HNS SS **S** **15 58 56.0 +5.0**
HNS ScS **ScS** **16 07 50.8 -0.6**
HNS pmax pmax
comp=Z,160nm,1.8s
HNS pmax pmax
comp=Z,3μm,4.8s
HNS LR LR
comp=Z,76μm,14.7s
HNS LR LR
comp=Z,53μm,13.5s
HNS LR LR
comp=Z,84μm,13.9s
DAV Davao City (W) 15.93 165 P Pn 15 55 44.5 +1.8
comp=Z,27nm,0.3s,baz=326,slow=6.7,SNR=1.0
DAV LR LR 16 01 45.7
comp=Z,27μm,21.6s,baz=345,slow=37
DAV Davao City (W) 15.93 165 Pn Pn 15 55 42.5 -0.3
DAV Davao City (W) 15.93 165 P Pn 15 55 34.2 -8.5
DAV Davao City (W) 15.93 165 P Pn 15 55 44.6 +1.8
comp=Z,17μmcomp=Z,11μmcomp=Z,371nm,1.0s
JHS Saijyo 16.02 37 Pn 15 55 43.5 -0.4
JHS **PcP** **16 00 38.2 -2.0**
SKMP Bagumbayan, Su 16.25 169⇓eP P 15 55 51.9 +2.1
DL2 Dalian 16.27 0 P P 15 55 49.3 -0.5
DL2 S **Sn** **15 58 50.7 +4.0**
DL2 pmax pmax
comp=Z,190nm,1.2s
DL2 pmax pmax
comp=Z,4μm,7.9s
DL2 LR LR
comp=Z,26μm,15.9s
DL2 LR LR
comp=Z,12μm,13.5s
DL2 LR LR
comp=Z,31μm,12.4s
UBPT Khong Chiam 16.77 247 P P 15 55 55.1 -0.4
UBPT Khong Chiam 16.77 247 P P 15 55 56.1 +0.5
comp=Z,22μmcomp=Z,6μmcomp=Z,233nm,1.8s
PYAG Pyongyang 16.82 12 P P 15 55 56.0 +0.1
DDMP Don Marcelino, 16.89 165⇑eP Pn 15 55 55.4 +0.3
TIY Taiyuan 16.96 335 ⇓P P 15 55 58.4 +0.8
TIY pP **sP** **15 56 05.8 -0.9**
TIY PP **PnPn** **15 56 13.5 +7.8**
TIY S **S** **15 59 09.2 -4.2**
TIY pmax pmax
comp=Z,83nm,0.8s
TIY pmax pmax

comp=Z,5μm,4.1s
TIY LR LR
comp=Z,88μm,14.2s
TIY LR LR
comp=Z,58μm,12.4s
TIY LR LR
comp=Z,87μm,14.2s
KKM Kota Kinabalu 17.21 198 P P 15 55 59.9 -0.6
KKM IAmb IAmb 15 56 08.0
comp=Z,1μm,1.3s
KKM Kota Kinabalu 17.21 198 P P 15 56 01.0 +0.5
comp=Z,21μmcomp=Z,11μmcomp=Z,721nm,1.4s
KMI Kunming 17.31 282 ⇓P Pn 15 56 00.5 +0.1
KMI pP pP 15 56 04.9 -3.0
KMI S **Sn 15 59 11.4 -1.1**
KMI sS S 15 59 20.4 -0.6
KMI pmax pmax
comp=Z,2μm,5.3s
KMI LR LR
comp=Z,14μm,11.8s
KMI LR LR
comp=Z,32μm,15.2s
KMI LR LR
comp=Z,39μm,17.3s
MYLDM Lahad Datu 17.54 190 P Pn 15 56 02.9 -0.2
MYLDM Lahad Datu 17.54 190 P P 15 56 06.2 +2.1
comp=Z,38μmcomp=Z,18μmcomp=Z,754nm,1.8s
SUJ Sinuiju 17.65 8 P P 15 56 05.7 +0.6
SUJ pP **pP 15 56 10.4 -1.0**
SUJ S **Sn 15 59 21.5 +1.3**
CD2 Chengdu 17.83 301 P Pn 15 56 06.1 -0.6
CD2 pP pP 15 56 11.3 -2.2
CD2 sP sP 15 56 14.2 -2.2
CD2 S **Sn 15 59 24.4 -0.5**
CD2 pmax pmax
comp=Z,2μm,1.8s
CD2 LR LR
comp=Z,47μm,4.5s
BJT Baijiatuau 17.95 347 P 15 56 08.6 +0.2
BJT Baijiatuau 17.95 347 P **P 15 56 08.6 +0.2**
BJT pmax pmax
comp=Z,299nm,1.1s
BJI Beijing 17.97 347 P Pn 15 56 07.8 -0.4
BJI sP **pP 15 56 14.5 -0.5**
BJI S **S 15 59 31.0 -2.8**
BJI pmax pmax
comp=Z,73nm,1.7s
BJI pmax pmax
comp=Z,790nm,3.5s
BJI LR LR
comp=Z,8μm,13.1s
BJI LR LR
comp=Z,16μm,17.3s
BJI LR LR
comp=Z,44μm,14.0s
HHU Hamhung 18.04 15 P P 15 56 11.1 +1.7
HHU pP **pP 15 56 13.4 -1.9**
HHU S **S 15 59 32.8 -2.3**
PZH PanZhiHua 18.35 286 P **Pn 15 56 13.6 +0.4**
PZH pP **pP 15 56 17.8 -1.5**
PZH sP **sP 15 56 21.9 -0.4**
PZH PP **PnPn 15 56 28.6 +3.8**
PZH S **Sn 15 59 38.6 +0.9**
PZH SS **SnSn 15 59 56.3 +4.8**
PZH pmax pmax
comp=Z,110nm,1.8s
PZH pmax pmax
comp=Z,2μm,4.6s
PZH LR LR
comp=Z,23μm,14.1s
PZH LR LR
comp=Z,29μm,15.3s
PZH LR LR
comp=Z,38μm,14.7s
SPMM Sapulut 18.42 196 P **Pn 15 56 17.0 +3.1**
INU Inuyama 18.60 43 Pn 15 56 16.4 +0.4
INU Inuyama 18.60 43 P **Pn 15 56 19.2 +3.2**
JGF Kuroka 18.97 43 P **Pn 15 56 20.8 +0.2**
SGSI Sangihe 19.20 168 P **P 15 56 21.0 -1.3**
comp=Z,2μmcomp=Z,210nm,0.7s
SNY Shenyang 19.27 5 ⇓P P 15 56 23.4 +0.5
SNY S **Sn 15 59 58.9 -0.4**
SNY pmax pmax
comp=Z,2μm,8.4s
SNY LR LR
comp=Z,15μm,17.5s
SNY LR LR
comp=Z,22μm,15.3s
SNY LR LR
comp=Z,35μm,14.9s
JHJ Hachijo jima 2 19.27 53 P **Pn 15 56 28.4 +4.2**
comp=Z,2μm,0.9s,baz=224,slow=7.4,SNR=27
JHJ LR LR 16 03 47.3
comp=Z,4μm,20.0s,baz=251,slow=36
JHJ2 Mitsune 19.30 53 P **Pn 15 56 24.7 +0.3**
JHJ2 Mitsune 19.30 53 P **Pn 15 56 28.5 +4.1**
JCJ Chichijima 19.33 72 P **Pn 15 56 25.9 +0.9**
comp=Z,10nm,0.3s,baz=270,slow=9.1,SNR=36
JCJ LR LR 16 04 03.3
comp=Z,4μm,18.6s,baz=240,slow=37
comp=Z,1μm,1.1s
JCJ Chichijima 19.33 72 P **P 15 56 24.1 +0.3**
JCJ Chichijima 19.33 72 P **Pn 15 56 26.9 +2.0**
HHC Hu-ho-hao-te 20.03 338 *e*P Pn 15 56 34.3 +1.1
HHC S Sn 16 00 19.2 +1.2
HHC pmax pmax
comp=Z,690nm,1.8s
HHC pmax pmax
comp=Z,8μm,5.5s
HHC LR LR
comp=Z,86μm,15.9s
HHC LR LR
comp=Z,28μm,13.7s
HHC LR LR
comp=Z,99μm,16.2s
MAJO Matsushiro 20.10 42 P Pn 15 56 33.2 -0.8
MAJO IAmb IAmb 15 56 41.0
comp=Z,352nm,0.9s
MAJO Matsushiro 20.10 42*c i*P Pn 15 56 34.4 +0.4
MAJO pmax pmax
comp=Z,166nm,1.0s
MAJO MLR MLR
comp=Z,6μm,18.0s
MAJO Matsushiro 20.10 42 P Pn 15 56 35.9 +1.9
MJAR Matsushiro Arr 20.10 42 P Pn 15 56 34.5 +0.5
comp=Z,143nm,0.8s,baz=229,slow=8.8,SNR=190
MJAR PcP **PcP 16 00 46.8 -0.1**
comp=Z,7.2nm,0.9s,baz=214,slow=2.7,SNR=4.0
MJAR ScP **ScP 16 04 19.0 -2.8**
comp=Z,26nm,1.2s,baz=226,slow=3.6,SNR=14
MJAR LR LR 16 05 19.6
comp=Z,7μm,19.3s,baz=222,slow=40
comp=Z,143nm,0.8s
MJB9 Matsu-Tunnel 20.10 42 P **P 15 56 32.7 +0.7**
MJB9 IAmb IAmb 15 56 42.0
comp=Z,356nm,0.9s
LZH Lanzhou 20.37 315 ⇓P Pn 15 56 38.4 +1.1
LZH sP sP 15 56 45.2 +0.8
LZH S **S 16 00 24.3 +1.8**
LZH PcP **PcP 16 00 48.3 +0.7**
LZH ScS **ScS 16 08 04.7 -1.0**
LZH pmax pmax
comp=Z,410nm,1.4s
LZH pmax pmax
comp=Z,10μm,4.8s
LZH LR LR
comp=Z,23μm,12.0s
LZH LR LR
comp=Z,31μm,12.6s
LZH LR LR
comp=Z,43μm,13.3s
BTO Baotou 20.40 334 *e*P Pn 15 56 38.8 +1.2
BTO LR LR
comp=Z,112μm,14.1s
BTO LR LR
comp=Z,75μm,16.1s
JSD Sado 21.10 39 P **P 15 56 43.7 +0.8**
JYT Yasato 21.19 46 P **P 15 56 42.0 -1.8**
JYT IAmb IAmb 15 56 59.8
comp=Z,538nm,1.5s
TOLI2 Tolitoli 21.36 182 P **P 15 56 46.2 +0.4**
TOLI2 IAMs_20 IAMs_20 16 04 51.0
comp=Z,12μm,20.0s
TOLI2 Tolitoli 21.36 182 P **P 15 56 47.1 +1.3**
CHTO Chiang Mai 21.39 264 P **P 15 56 46.5 +0.4**
CHTO IAmb IAmb 15 56 58.4
comp=Z,538nm,1.3s
CHTO PcP **PcP 16 00 50.6 +1.0**
CN2 Changchun 21.41 8 P **P 15 56 46.4 +0.2**
CN2 pP pP 15 56 53.3 +0.7
CN2 sP sP 15 56 57.0 +1.5
CN2 S **S 16 00 36.8 -5.9**
CN2 pmax pmax
comp=Z,70nm,0.9s
CN2 pmax pmax
comp=Z,600nm,7.0s
CN2 LR LR
comp=Z,26μm,15.0s
CN2 LR LR
comp=Z,15μm,15.0s
CN2 LR LR
comp=Z,30μm,15.0s
CM31 Chiang Mai Arr 21.48 263 P **P 15 56 48.4 +1.3**
CM31 IAmb IAmb 15 56 59.7
comp=Z,604nm,1.4s
CM31 Chiang Mai Arr 21.48 263 P **P 15 56 49.4 +2.3**
SNR=138
CM31 P **P 15 56 49.4 +2.3**
SNR=138
CMAR Chiang Mai Arr 21.48 263 P **P 15 56 49.2 +2.2**
comp=Z,139nm,1.0s,baz=69,slow=8.9,SNR=401
CMAR PcP **PcP 16 00 50.7 +0.9**
comp=Z,20nm,0.8s,baz=72,slow=2.9,SNR=16
CMAR ScP **ScP 16 04 23.0 -2.5**
comp=Z,4.5nm,0.8s,baz=90,slow=0.9,SNR=7.9
CMAR LR LR 16 06 16.1
comp=Z,33μm,19.1s,baz=80,slow=40
comp=Z,139nm,1.0s
CMAR Chiang Mai Arr 21.48 263 P **P 15 56 49.1 +2.0**
CMAR PcP **PcP 16 00 51.5 +1.7**
CMAR Chiang Mai Arr 21.48 263 *i* P **P 15 56 42.5 -4.6**
MSHR Mys Shultsa 21.52 20*de*P **P 15 56 48.9 +1.6**
MSHR pmax pmax
comp=Z,120nm,0.8s
MSHR MLR MLR
comp=Z,4μm,16.0s
GAMI Galela, Maluku 21.52 163 P **P 15 56 46.4 -1.1**
comp=Z,13μmcomp=Z,28μmcomp=Z,4μm,1.2s
XLT XiLinHaoTe 21.72 349 *e*P **P 15 56 48.7 -0.8**
XLT pP pP 15 56 52.6 -3.4
XLT sP sP 15 56 55.8 -3.1
XLT PP **PnPn 15 57 12.4 +1.6**
XLT S **S 16 00 49.3 +0.5**
XLT PcP **PcP 16 00 50.4 +0.5**
XLT pmax pmax
comp=Z,200nm,1.2s
XLT pmax pmax
comp=Z,2μm,5.1s
XLT LR LR
comp=Z,3μm,14.7s
XLT LR LR
comp=Z,20μm,20.6s
XLT LR LR
comp=Z,34μm,14.7s
GTOI Gorontalo 21.87 176 P **P 15 56 49.6 -1.7**
comp=Z,7μmcomp=Z,7μmcomp=Z,638nm,1.4s
SBUM Sibu 21.93 205 P **P 15 56 52.5 +0.5**
SBUM IAmb IAmb 15 57 05.1
comp=Z,462nm,1.2s
SBUM IAMs_20 IAMs_20 16 05 34.7
comp=Z,11μm,20.0s
SBUM Sibu 21.93 205 P **P 15 56 52.8 +0.8**
comp=Z,12μmcomp=Z,7μmcomp=Z,356nm,1.3s
SBUM Sibu 21.93 205 P **P 15 56 53.0 +1.0**
MRSI Marisa 21.98 179 P **P 15 56 53.1 +0.6**
comp=Z,15μmcomp=Z,16μmcomp=Z,1μm,1.5s
KMSI Cibinong 22.02 173 P **P 15 56 53.2 +0.4**
comp=Z,13μmcomp=Z,1μm,1.3s
MPSI Mapaga 22.17 184 P **P 15 56 55.4 +0.9**
comp=Z,14μmcomp=Z,7μmcomp=Z,501nm,1.6s
TNTI Ternate 22.43 164 P **P 15 56 56.4 -1.0**
TNTI IAmb IAmb 15 57 01.0
comp=Z,723nm,1.0s
TNTI Ternate 22.43 164 P **P 15 56 55.5 -1.8**
comp=Z,8μmcomp=Z,9μmcomp=Z,858nm,1.2s
TNTI Ternate 22.43 164 P **P 15 56 57.3 0.0**
JMM Marumori 22.54 43 P **P 15 56 56.3 -2.0**
JMM IAmb IAmb 15 56 59.6
comp=Z,350nm,0.9s
SRDT SRDT 22.69 253 P **P 15 57 00.4 +0.3**
comp=Z,7μmcomp=Z,246nm,1.6s
MDJ Mudanjiang 22.97 15 P **P 15 57 02.2 -0.6**
MDJ **PcP 16 00 52.3 0.0**
MDJ IAMs_20 IAMs_20 16 07 01.4
comp=Z,18μm,18.0s
MDJ Mudanjiang 22.97 15 P **P 15 57 03.2 +0.4**
MDJ pP pP 15 57 07.8 -0.9
MDJ sP pwP 15 57 10.1 -1.7
MDJ S **S 16 01 09.6 -2.1**
MDJ sS pS 16 01 15.3 -3.1
MDJ pmax pmax
comp=Z,68nm,0.9s
MDJ pmax pmax
comp=Z,2μm,6.9s
MDJ LR LR
comp=Z,8μm,18.4s
MDJ LR LR
comp=Z,11μm,17.2s
MDJ LR LR
comp=Z,11μm,22.4s
MDJ Mudanjiang 22.97 15 P **P 15 57 08.6 +5.8**
comp=Z,160nm,0.8s
USRK Ussuriysk Ar. 23.24 19 P **P 15 57 06.1 +0.6**
comp=Z,85nm,0.8s,baz=207,slow=8.6,SNR=82
USRK PcP **PcP 16 00 52.0 -0.8**
comp=Z,9.8nm,0.8s,baz=229,slow=3.3,SNR=5.6
USRK ScP **ScP 16 04 25.8 -3.7**
comp=Z,12nm,1.0s,baz=194,slow=0.8,SNR=8.5
USRK LR LR 16 06 42.9
comp=Z,7μm,20.7s,baz=187,slow=38
comp=Z,85nm,0.8s
USRK Ussuriysk Ar. 23.24 19 P **P 15 57 04.8 -0.7**
USRK PcP **PcP 16 00 51.7 -1.1**
SMKI Samarinda 23.27 191 P **P 15 57 08.0 +2.0**
comp=Z,21μmcomp=Z,40μmcomp=Z,2μm,1.6s
APSI Ampana 23.36 180 P **P 15 57 06.9 0.0**
comp=Z,14μmcomp=Z,38μmcomp=Z,4μm,1.4s
LUWI Luwuk 23.52 177 P **P 15 57 08.1 -0.4**
LUWI Luwuk 23.52 177 P **P 15 57 06.5 -2.0**
comp=Z,14μmcomp=Z,26μmcomp=Z,2μm,1.2s
LUWI Luwuk 23.52 177 P **P 15 57 08.1 -0.4**
BNX BinXian 23.60 10 ⇓P P 15 57 10.2 +1.2
BNX pP **pP 15 57 14.7 -1.0**
BNX sP **sP 15 57 17.1 -1.5**
BNX PP **PnPn 15 57 42.4 +6.0**
BNX S **S 16 01 23.6 +1.6**
BNX sS **pS 16 01 27.9 -0.7**
BNX pmax pmax
comp=Z,29nm,0.7s
BNX pmax pmax
comp=Z,1μm,6.9s
BNX LR LR
comp=Z,12μm,15.7s
BNX LR LR
comp=Z,9μm,15.1s
BNX LR LR
comp=Z,15μm,14.1s
LKP Lekhapani 23.68 287 *e*P **P 15 57 10.3 +0.3**
LBMI Labuha 23.82 165 P **P 15 57 09.8 -1.6**
comp=Z,22μmcomp=Z,2μm,1.1s
GUMO Guam 23.96 108 P **P 15 57 13.7 +1.0**
comp=Z,1μm,1.1s,baz=232,slow=0.6,SNR=30
GUMO LR LR 16 04 38.3
comp=Z,7μm,20.8s,baz=268,slow=32
comp=Z,1μm,1.1s
GUMO Guam 23.96 108 P **P 15 57 13.4 +0.8**
GUMO Guam 23.96 108 P **P 15 57 13.5 +0.8**
GUMO pmax pmax
comp=Z,2μm,1.3s
GUMO Guam 23.96 108 P **P 15 57 14.1 +1.4**
BKB Balikpapan 24.12 191 P **P 15 57 14.7 +0.6**
BKB Balikpapan 24.12 191 P **P 15 57 17.0 +2.8**
comp=Z,20μmcomp=Z,33μmcomp=Z,2μm,1.1s
MTKI Muara Teweh, K 24.25 196 P **P 15 57 15.8 +0.4**
comp=Z,11μmcomp=Z,17μmcomp=Z,2μm,1.3s
STKI Sintang 24.40 205 P **P 15 57 17.2 +0.4**
comp=Z,11μmcomp=Z,310nm,1.2s
DIBR DIBRUGARH 24.52 287 *e*P **P 15 57 21.1 +3.2**
JTM Tenmabayashi 24.55 38 P **P 15 57 18.1 +0.1**
JTM **PcP 16 00 53.5 -2.3**
MOKO MOKOCHONG 24.79 284 *e*P **P 15 57 20.4 0.0**
SANI Sanana 24.88 169 P **P 15 57 17.4 -3.7**
comp=Z,9μmcomp=Z,6μmcomp=Z,702nm,1.2s
GTA Gaotai 24.91 317 ⇑P P 15 57 22.2 +0.8
GTA pP sP 15 57 32.8 +2.0
GTA PcP **PcP 16 00 57.8 +1.0**
GTA S **S 16 01 43.5 0.0**
GTA sS sS 16 01 56.2 +1.6
GTA ScP **ScP 16 04 33.3 -1.1**
GTA ScS **ScS 16 08 21.4 -1.3**
GTA pmax pmax
comp=Z,130nm,1.7s
GTA pmax pmax
comp=Z,2μm,4.7s
GTA LR LR
comp=Z,12μm,15.3s
GTA LR LR
comp=Z,24μm,17.1s
GTA LR LR
comp=Z,28μm,16.7s
KOHI KOHIMA 25.13 283 *e*P **P 15 57 23.4 -0.1**
SRIT Nakonsritamara 25.18 240 P **P 15 57 24.1 +0.2**
SRIT IAmb IAmb 15 57 31.7
comp=Z,317nm,1.3s
SRIT PcP **PcP 16 00 57.9 +0.3**
SIJI Sorong 25.20 156 P **P 15 57 24.1 +0.1**
comp=Z,113nm,0.9s,baz=350,slow=6.9,SNR=36
SIJI PcP **PcP 16 00 57.3 -0.3**
comp=Z,9.4nm,0.8s,baz=349,slow=10,SNR=2.5
comp=Z,113nm,0.9s
SIJI Sorong 25.20 156 P **P 15 57 22.9 -1.1**
comp=Z,7μmcomp=Z,2μmcomp=Z,113nm,1.0s
SKLT Songkhla 25.25 236 P **P 15 57 25.5 +1.0**
comp=Z,3μmcomp=Z,157nm,1.4s
ZIRO ZIRO 25.46 287 *e*P **P 15 57 29.1 +2.5**
ZIRO *i* x x 15 57 38.4
TTSI Tana Toraja 25.53 184 P **P 15 57 26.9 0.0**
comp=Z,9μmcomp=Z,7μmcomp=Z,416nm,1.1s
ITAN ITANAGAR 25.55 286 *e*P **P 15 57 28.8 +1.7**
TEY Ternei 25.60 25⇓*e*P **P 15 57 29.4 +2.0**
TEY *e* 15 57 32.6
TEY *e* 15 57 33.7
TEY MLR MLR
comp=N,200nm,11.0s
TEY MLR MLR
comp=E,200nm,11.0s
TEY MLR MLR
comp=Z,200nm,14.0s
PMSI Majene 26.05 186 P **P 15 57 33.2 +1.5**
comp=Z,16μmcomp=Z,26μmcomp=Z,2μm,1.5s
JRMM Jerantut 26.14 227 P **P 15 57 34.0 +1.4**
JEW Eniwo 26.16 35 P **P 15 57 33.7 +1.2**
JEW IAmb IAmb 15 57 54.1
comp=Z,447nm,1.0s
NLAI Namlea 26.25 167 P **P 15 57 34.2 +0.6**
comp=Z,13μmcomp=Z,1μm,1.3s
TEZP TEZPUR 26.34 285 *e*P **P 15 57 34.8 +0.5**
TEZP *i* x x 15 57 44.7
SPSI Sidrap Palu 26.44 184 P **P 15 57 34.9 -0.3**
comp=Z,7μmcomp=Z,6μmcomp=Z,380nm,1.2s
KULM Kulim 26.46 233 P **P 15 57 35.8 +0.3**
KULM IAmb IAmb 15 57 38.4
comp=Z,329nm,1.8s
KULM IAMs_20 IAMs_20 16 07 07.7
comp=Z,10μm,21.0s
KULM Kulim 26.46 233 P **P 15 57 35.9 +0.4**
comp=Z,2μmcomp=Z,71nm,1.2s
KULM Kulim 26.46 233 P **P 15 57 37.0 +1.5**
ERM Erimo 26.55 38 P **P 15 57 36.7 +0.7**
ERM IAmb IAmb 15 57 48.7
comp=Z,324nm,0.8s
ERM Erimo 26.55 38*ce*P **P 15 57 38.4 +2.4**
ERM pmax pmax
comp=Z,310nm,1.0s
ERM MLR MLR
comp=Z,11μm,22.0s
ERM Erimo 26.55 38 P **P 15 57 38.8 +2.8**
KKSI Kolaka, Sulawe 26.59 180 P **P 15 57 36.7 0.0**
comp=Z,4μmcomp=Z,224nm,1.6s
HIA Hailar 26.66 357 P **P 15 57 36.0 -1.0**
HIA **PcP 16 01 00.0 -0.4**
BBKI Banjar Baru 26.68 195 P **P 15 57 38.5 +1.0**
comp=Z,8μmcomp=Z,10μmcomp=Z,608nm,1.1s
IPM Ipoh 26.74 231 P **P 15 57 37.9 -0.1**
IPM IAmb IAmb 15 57 40.1
comp=Z,275nm,1.4s
IPM IAMs_20 IAMs_20 16 08 32.2
comp=Z,8μm,18.0s
IPM Ipoh 26.74 231 P **P 15 57 38.2 +0.2**
comp=Z,3μmcomp=Z,116nm,1.1s
IPM Ipoh 26.74 231 P **P 15 57 39.0 +1.0**
IPM Ipoh 26.74 231 P **P 15 57 38.4 +0.4**
GOMU GeErMu 26.78 306 P **P 15 57 39.8 +1.1**
GOMU PcP **PcP 16 01 03.0 +1.6**
GOMU S **S 16 02 15.4 +1.7**
GOMU sS pS 16 02 19.0 -2.2
GOMU ScS **ScS 16 08 31.3 +0.1**
GOMU pmax pmax
comp=Z,100nm,1.4s
GOMU pmax pmax
comp=Z,2μm,7.7s
GOMU LR LR
comp=Z,21μm,14.8s
GOMU LR LR
comp=Z,28μm,15.5s
GOMU LR LR
comp=Z,28μm,16.4s
MSAI Masohi 26.79 163 P **P 15 57 38.8 +0.4**
comp=Z,348nmcomp=Z,39nm,0.9s
MYKOM Kota Tinggi 26.83 222 P **P 15 57 39.0 +0.2**
MYKOM Kota Tinggi 26.83 222 P **P 15 57 40.0 +1.2**
comp=Z,6μmcomp=Z,7μmcomp=Z,427nm,1.6s
MYKOM Kota Tinggi 26.83 222 P **P 15 57 40.0 +1.2**
BNSI Bone 26.85 183 P **P 15 57 38.7 -0.3**
comp=Z,5μmcomp=Z,5μmcomp=Z,266nm,1.6s
AAI Ambon 26.93 165 P **P 15 57 39.3 -0.4**
comp=Z,10μmcomp=Z,4μmcomp=Z,395nm,1.4s
TPRI Tanjung Pinang 27.11 220 P **P 15 57 42.4 +1.1**
comp=Z,6μmcomp=Z,5μmcomp=Z,255nm,0.9s
SHL Shillong 27.14 282 P **P 15 57 41.2 -0.6**
SHL IAmb IAmb 15 57 55.1
comp=Z,376nm,1.0s
SHL Shillong 27.14 282 P **P 15 57 41.2 -0.6**
SHL pmax pmax
comp=Z,376nm,1.0s
SHL Shillong 27.14 282 P **P 15 57 46.0 +4.2**
SNR=25
SHL Shillong 27.14 282 *e*P **P 15 57 45.8 +4.0**
BTDF Bukit Timah Da 27.21 222 P **P 15 57 43.2 +0.9**
comp=Z,5μmcomp=Z,5μmcomp=Z,354nm,1.4s
FAKI Fak Fak 27.45 156 P **P 15 57 42.5 -1.9**
FAKI IAmb IAmb 15 57 49.0
comp=Z,532nm,1.4s
FAKI **PcP 16 01 03.6 +0.8**
FAKI Fak Fak 27.45 156 P **P 15 57 42.8 -1.6**
comp=Z,6μmcomp=Z,3μmcomp=Z,263nm,1.0s
KAPI Kappang 27.48 184 P **P 15 57 44.9 +0.3**
comp=Z,116nm,0.9s,baz=7.2,slow=6.2,SNR=33
KAPI LR LR 16 08 53.0
comp=Z,9μm,21.8s,baz=7.0,slow=37
comp=Z,116nm,0.9s
KAPI Kappang 27.48 184 P **P 15 57 44.7 +0.1**
KAPI Kappang 27.48 184 IAMs_20 IAMs_20 16 08 31.5
comp=Z,10μm,21.0s
KAPI Kappang 27.48 184 P **P 15 57 44.7 +0.1**
KAPI pmax pmax
comp=Z,612nm,1.4s
KAPI MLR MLR
comp=Z,10μm,21.0s
KAPI Kappang 27.48 184 P **P 15 57 45.6 +1.0**
KAPI P **P 15 57 45.6 +1.0**
KAPI P **P 15 57 45.6 +1.0**
KAPI Kappang 27.48 184 P **P 15 57 44.9 +0.3**
comp=Z,7μmcomp=Z,7μmcomp=Z,322nm,1.4s
BRDH Bariadhala 27.50 276 P **P 15 57 46.6 +1.8**
comp=Z,133nm,0.4s,baz=76,slow=11,SNR=27
BRDH LR LR 16 10 37.3
comp=Z,10μm,18.7s,baz=118,slow=40
comp=Z,133nm,0.4s
ULN Ulaanbaatar 27.74 339 P **P 15 57 46.3 -0.6**
ULN PcP **PcP 16 01 03.5 +0.3**
ULN Ulaanbaatar 27.74 339*c i*P **P 15 57 46.7 -0.2**
ULN pmax pmax
comp=Z,73nm,1.0s
ULN MLR MLR
comp=Z,45μm,16.0s
ULN Ulaanbaatar 27.74 339 P **P 15 57 47.0 +0.2**

ULN P **P** **15 57 47.0 +0.2**
ULN Ulaanbaatar 27.74 339 P **P** **15 57 46.5 -0.4**
comp=Z,16μmcomp=Z,8μmcomp=Z,514nm,1.0s
AGT Agartala 27.77 279 *e*P **P** **15 57 48.9 +1.7**
BKSI Bulukumba 27.77 183 P **P** **15 57 46.5 -0.7**
comp=Z,6μmcomp=Z,2μmcomp=Z,124nm,1.0s
KLR Kul'dur 27.81 15 P **P** **15 57 49.1 +1.8**
comp=Z,52nm,1.0s,baz=227,slow=8.3,SNR=53
KLR PcP **PcP** **16 01 03.1 0.0**
comp=Z,24nm,0.8s,baz=205,slow=1.4,SNR=5.1
KLR ScP **ScP** **16 04 39.0 -3.6**
comp=Z,14nm,0.9s,baz=254,slow=3.1,SNR=8.0
KLR LR LR 16 09 54.3
comp=Z,13μm,18.9s,baz=198,slow=38
comp=Z,52nm,1.0s
KLR Kul'dur 27.81 15 *de*P **P** **15 57 49.5 +2.2**
KLR pmax pmax
comp=Z,89nm,1.2s
KLR MLR MLR
comp=Z,17μm,15.0s
BBSI Bau Bau 27.92 178 P **P** **15 57 49.7 +1.1**
comp=Z,168nm,1.1s
SONM Songino Array 27.93 338 P **P** **15 57 48.5 -0.1**
comp=Z,96nm,1.0s,baz=151,slow=9.6,SNR=101
SONM PcP **PcP** **16 01 02.9 -0.7**
comp=Z,19nm,1.0s,baz=155,slow=3.8,SNR=4.5
SONM ScP **ScP** **16 04 40.3 -2.8**
comp=Z,7.6nm,1.0s,baz=158,slow=4.2,SNR=5.3
SONM ScS **ScS** **16 08 31.9 -3.5**
comp=Z,1.5nm,0.9s,baz=146,slow=6.6,SNR=1.7
SONM LR LR 16 10 32.0
comp=Z,26μm,18.9s,baz=151,slow=40
comp=Z,96nm,1.0s
SONM Songino Array 27.93 338 P **P** **15 57 47.8 -0.8**
SONM PcP **PcP** **16 01 03.8 +0.2**
LSA Lhasa 28.06 291 P **P** **15 57 51.4 +1.1**
LSA IAmb IAmb 15 57 56.9
comp=Z,191nm,0.9s
LSA Lhasa 28.06 291 P **P** **15 57 52.8 +2.5**
LSA pP **sP** **15 58 01.1 +1.3**
LSA S **S** **16 02 38.7 +4.6**
LSA pmax pmax
comp=Z,170nm,1.2s
LSA LR LR
comp=Z,4μm,17.1s
LSA LR LR
comp=Z,20μm,17.1s
LSA LR LR
comp=Z,30μm,18.5s
LSA Lhasa 28.06 291 P **P** **15 57 51.4 +1.1**
LSA pmax pmax
comp=Z,191nm,0.9s
LSA MLR MLR
comp=Z,24μm,18.0s
LSA Lhasa 28.06 291 *i* P **P** **15 57 52.5 +2.2**
SNR=63
BNDI Bandanaira 28.18 162 P **P** **15 57 51.4 +0.5**
comp=Z,5μmcomp=Z,7μmcomp=Z,370nm,1.1s
DSRI Dabo 28.21 218 P **P** **15 57 51.9 +0.7**
comp=Z,5μmcomp=Z,3μmcomp=Z,119nm,1.1s
SRPI Serui, Papua 28.26 147 P **P** **15 57 50.9 -0.7**
comp=Z,3μmcomp=Z,2μmcomp=Z,102nm,1.1s
BSSI Bau Bau, Buton 28.57 182 P **P** **15 57 52.7 -1.6**
comp=Z,7μmcomp=Z,4μmcomp=Z,239nm,1.8s
PPBI Pangkal Pinang 28.79 213 P **P** **15 57 57.6 +1.3**
comp=Z,116nm,1.2s
DHUB DHUBRI 28.84 283 *e*P **P** **15 57 57.8 +1.1**
TSI Tuntungan 29.19 233 P **P** **15 58 01.5 +1.6**
comp=Z,210nm,1.2s
LHMI Lhok Sumawe 29.30 238 IAMs_20 IAMs_20 16 08 50.1
comp=Z,7μm,18.0s
YUK Yuzh-Kuril'sk 29.36 37⇑ *e*P **P** **15 58 03.7 +2.6**
PSI Prapat 29.40 231 P **P** **15 58 02.6 +0.6**
comp=Z,110nm,1.2s,baz=19,slow=5.3,SNR=40
PSI PcP **PcP** **16 01 07.6 -0.3**
comp=Z,19nm,0.9s,baz=263,slow=5.8,SNR=4.2
PSI LR LR 16 09 25.2
comp=Z,6μm,21.7s,baz=32,slow=35
comp=Z,110nm,1.2s
PSI Prapat 29.40 231 P **P** **15 58 00.9 -1.0**
comp=Z,3μmcomp=Z,2μmcomp=Z,93nm,1.4s,comp=Z,3μm,1.4s,
comp=Z,153nm,1.5s
PSI P **P** **15 58 01.0 -1.0**
comp=Z,3μmcomp=Z,2μmcomp=Z,93nm,1.4s,comp=Z,3μm,1.4s,
comp=Z,153nm,1.5s
PBA Port Blair 29.46 253 *i* x **PKiKP** **16 08 35.6 -5.7**
RPSI Rantau Prapat 29.48 231 P **P** **15 58 02.3 -0.1**
RPSI IAmb IAmb 15 58 04.6
comp=Z,198nm,1.3s
RPSI **PcP** **16 01 07.4 -0.5**
SMPI Sarmi 29.66 143 P **P** **15 58 04.0 -0.1**
comp=Z,6μmcomp=Z,3μmcomp=Z,132nm,1.7s
JMBI JAMBI 29.69 218 P **P** **15 58 06.5 +2.2**
comp=Z,5μmcomp=Z,439nm,1.2s
BKNI Bangkinang 29.74 225 P **P** **15 58 05.2 +0.5**
BKNI IAmb IAmb 15 58 10.5
comp=Z,420nm,1.3s
BKNI Bangkinang 29.74 225 P **P** **15 58 05.4 +0.6**
comp=Z,4μmcomp=Z,4μmcomp=Z,267nm,1.2s
YSS Yuzh-Sakhalins 29.76 30 P **P** **15 58 06.0 +1.4**
YSS IAMs_20 IAMs_20 16 09 59.3
comp=Z,6μm,20.0s
YSS Yuzh-Sakhalins 29.76 30 *ce*P **P** **15 58 06.8 +2.1**
YSS *e*S **S** **16 03 00.5 +0.9**
YSS pmax pmax
comp=Z,480nm,1.0s
YSS pmax pmax
comp=Z,1μm,4.0s
YSS Yuzh-Sakhalins 29.76 30 P **P** **15 58 07.0 +2.3**
KCSI Kotacane, Aceh 29.76 234 P **P** **15 58 05.3 +0.3**
comp=Z,2μmcomp=Z,69nm,1.7s
CIT Chita 30.01 350 *e*P **P** **15 58 07.3 +0.4**
CIT *e* 16 01 09.1
CIT *e* 16 04 40.3
CIT *e* 16 04 57.2
CIT pmax pmax
comp=Z,128nm,2.0s
GTK Tadong 30.11 286 *e*P **P** **15 58 10.4 +2.2**
PMBI Palembang 30.14 215 P **P** **15 58 09.5 +1.2**
MLSI Meulaboh, Aceh 30.32 237 P **P** **15 58 09.5 -0.5**
comp=Z,128nm,0.7s
KMMI Kalianget 30.35 195 P **P** **15 58 09.0 -1.1**
comp=Z,7μmcomp=Z,3μmcomp=Z,102nm,0.9s
MNSI Mandailing Nat 30.36 227 P **P** **15 58 10.5 +0.2**
comp=Z,4μmcomp=Z,236nm,1.2s
SDSI Sungai Dareh 30.46 223 P **P** **15 58 12.3 +1.2**
comp=Z,4μmcomp=Z,3μmcomp=Z,165nm,1.4s
GRNR Gornyy 30.46 19⇑ *i* P **P** **15 58 13.7 +2.9**
GRNR *e* 15 59 19.4
GRNR *e*S **S** **16 03 18.9 +8.4**
GRNR pmax pmax
comp=E,6.0nm,0.6s
GRNR pmax pmax
comp=N,8.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,0.7s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,3μm,14.0s
GRNR MLR MLR
comp=N,2μm,16.0s
GRNR MLR MLR
comp=Z,5μm,15.0s
TBJI Tambak Boyo 30.70 199 P **P** **15 58 14.0 +0.8**
comp=Z,5μmcomp=Z,8μmcomp=Z,393nm,1.1s
GENI Genyem 30.98 142 P **P** **15 58 15.6 -0.1**
comp=Z,6μmcomp=Z,2μmcomp=Z,114nm,1.8s
ABJI Asem Bagus 31.01 194 P **P** **15 58 16.4 +0.4**
comp=Z,5μmcomp=Z,5μmcomp=Z,194nm,1.4s
MMRI Maumere 31.04 179 P **P** **15 58 15.9 -0.3**
MMRI IAMs_20 IAMs_20 16 10 28.6
comp=Z,7μm,22.0s
MMRI Maumere 31.04 179 P **P** **15 58 16.6 +0.4**
comp=Z,6μmcomp=Z,20μmcomp=Z,1μm,1.5s
MMRI Maumere 31.04 179 P **P** **15 58 17.3 +1.1**
DBNI Kabupaten Domp 31.05 186 P **P** **15 58 16.4 +0.1**
comp=Z,5μmcomp=Z,168nm,0.9s
UGL Uglegorsk 31.07 27 *e*P **P** **15 58 18.6 +2.4**
UGL *e*S **S** **16 03 27.5 +7.5**
UGL pmax pmax
comp=Z,1μm,5.0s
UGL pmax pmax
comp=Z,270nm,1.2s
UGL smax smax
comp=E,3μm,7.0s
UGL smax smax
comp=N,2μm,4.5s
UGL MLR MLR
comp=E,5μm,11.0s
UGL MLR MLR
comp=N,9μm,17.0s
UGL MLR MLR
comp=Z,6μm,17.0s
SRBI Singaraja 31.09 192 P **P** **15 58 15.2 -1.4**
comp=Z,6μmcomp=Z,4μmcomp=Z,107nm,0.9s
BLJI Banyuglugur 31.11 195 P **P** **15 58 17.5 +0.7**
comp=Z,4μmcomp=Z,352nm,0.9s
EDFI Ende, Flores 31.14 180 P **P** **15 58 17.0 -0.2**
comp=Z,5μmcomp=Z,13μmcomp=Z,1μm,1.4s
ZAK Zakamensk 31.18 337 *e*P **P** **15 58 16.5 -0.8**
ZAK *e* 16 01 12.1
ZAK pmax pmax
comp=Z,38nm,1.0s
KUR Kuril'sk 31.23 37 *de*P **P** **15 58 20.1 +2.5**
KUR pmax pmax
comp=Z,497nm,1.1s
KUR MLR MLR
comp=Z,7μm,25.0s
KLNI Mataram 31.26 190 P **P** **15 58 18.4 +0.2**
comp=Z,3μmcomp=Z,129nm,1.1s
NGJI Ngawi 31.34 199 P **P** **15 58 18.9 +0.1**
comp=Z,11μmcomp=Z,5μmcomp=Z,241nm,0.8s
SMRI Semarang 31.37 201 P **P** **15 58 20.0 +0.9**
SMRI IAMs_20 IAMs_20 16 11 40.2
comp=Z,6μm,20.0s
SMRI Semarang 31.37 201 P **P** **15 58 20.5 +1.4**
comp=Z,8μmcomp=Z,253nm,1.8s
GSI Gunungsitoli 31.41 231 P **P** **15 58 18.6 -0.9**
GSI PcP **PcP** **16 01 13.5 +0.6**
GSI Gunungsitoli 31.41 231 P **P** **15 58 20.6 +1.1**
comp=Z,88nm,1.4s
GSI Gunungsitoli 31.41 231 P **P** **15 58 20.7 +1.2**
ZEA Zeya 31.41 7 *e*P **P** **15 58 20.4 +1.2**
ZEA *e* 15 59 31.4
ZEA *e*S **S** **16 03 22.8 -2.5**
ZEA pmax pmax
comp=N,100nm,6.7s
ZEA pmax pmax
comp=Z,200nm,7.8s
ZEA pmax pmax
comp=N,40nm,1.1s
ZEA pmax pmax
comp=Z,60nm,1.0s
ZEA smax smax
comp=E,500nm,12.8s
ZEA MLR MLR
comp=N,10μm,13.0s
ZEA MLR MLR
comp=Z,10μm,13.0s
PLAI Plampang 31.43 187 P **P** **15 58 19.9 +0.3**
comp=Z,5μmcomp=Z,5μmcomp=Z,291nm,1.0s
PLAI Plampang 31.43 187 P **P** **15 58 19.8 +0.2**
TWSI Taliwang, Sumb 31.45 189 P **P** **15 58 20.6 +0.8**
comp=Z,5μmcomp=Z,6μmcomp=Z,322nm,1.6s
RTBI Rangdo, Negare 31.51 192 P **P** **15 58 21.8 +1.4**
comp=Z,7μmcomp=Z,272nm,1.0s
DNP Denpasar 31.67 192 P **P** **15 58 22.6 +0.9**
comp=Z,12μmcomp=Z,22μmcomp=Z,1μm,1.1s
JAGI Jajag, Banyuwa 31.68 194 P **P** **15 58 20.8 -1.1**
JAGI Jajag, Banyuwa 31.68 194 P **P** **15 58 20.7 -1.2**
comp=Z,5μmcomp=Z,4μmcomp=Z,99nm,1.0s
JAGI Jajag, Banyuwa 31.68 194 P **P** **15 58 24.3 +2.4**
MASI Maura Aman, Be 31.72 219 P **P** **15 58 21.4 -0.9**
comp=Z,2μmcomp=Z,4μmcomp=Z,320nm,1.4s
KLI Kotabumi 31.75 213 P **P** **15 58 21.2 -1.3**
comp=Z,6μmcomp=Z,482nm,1.2s
IGBI Denpasar 31.82 192 P **P** **15 58 22.7 -0.3**
comp=Z,7μmcomp=Z,346nm,1.5s
PWJI Pagerwojo 31.86 198 P **P** **15 58 23.3 -0.1**
comp=Z,4μmcomp=Z,474nm,0.9s
RAMN Ramite 31.89 285 *e*P **P** **15 58 25.2 +1.2**
comp=Z,580nm,1.2s
KSI Kapahiang 31.93 218 P **P** **15 58 26.7 +2.5**
comp=Z,361nm,0.9s
BLSI Bandar Lampung 31.99 212 P **P** **15 58 25.4 +0.8**
comp=Z,131nm,1.2s
UGM Wanagama 32.15 201 P **P** **15 58 25.8 -0.2**
UGM PcP **PcP** **16 01 15.6 +0.7**
UGM Wanagama 32.15 201 P **P** **15 58 26.8 +0.8**
comp=Z,6μmcomp=Z,9μmcomp=Z,302nm,2.3s
UGM Wanagama 32.15 201 P **P** **15 58 28.5 +2.5**
CBJI Citeko 32.18 208 P **P** **15 58 29.5 +3.2**
comp=Z,7μmcomp=Z,243nm,1.0s
PCJI Pacitan 32.21 199 P **P** **15 58 26.0 -0.5**
comp=Z,4μmcomp=Z,145nm,2.0s
UBSI University, Be 32.21 218 P **P** **15 58 25.4 -1.1**
comp=Z,863nm,1.1s
SBJI Serang 32.23 210 P **P** **15 58 28.0 +1.3**
comp=Z,8μmcomp=Z,296nm,1.4s
SISI Saibi 32.26 225 P **P** **15 58 26.1 -0.9**
comp=Z,225nm,1.1s
JIRN Jiri 32.26 286 *e*P **P** **15 58 28.7 +1.3**
comp=Z,682nm,1.3s
SOEI Soe 32.26 175 P **P** **15 58 24.8 -2.3**
SOEI IAMs_20 IAMs_20 16 11 28.0
comp=Z,6μm,21.0s
SOEI Soe 32.26 175 P **P** **15 58 26.2 -0.9**
comp=Z,4μmcomp=Z,429nm,1.0s
LWLI Liwa 32.28 214 P **P** **15 58 28.9 +1.6**
comp=Z,5μmcomp=Z,8μmcomp=Z,702nm,0.9s
MNAI Manna 32.32 216 IAMs_20 IAMs_20 16 11 20.3
comp=Z,6μm,19.0s
MNAI Manna 32.32 216 P **P** **15 58 29.7 +2.2**
SCJI Gunung Srandil 32.40 203 P **P** **15 58 27.1 -1.1**
comp=Z,4μmcomp=Z,4μmcomp=Z,156nm,1.4s
IRK Irkutsk 32.43 340 *e*P **P** **15 58 27.1 -1.0**
IRK *e* 16 08 54.6
IRK pmax pmax
comp=Z,162nm,1.7s
KASI Kota Agung 32.49 213 P **P** **15 58 29.8 +0.8**
comp=Z,6μmcomp=Z,3μmcomp=Z,299nm,1.0s
GUN Gumba 32.54 287 *e*P **P** **15 58 31.1 +1.3**
comp=Z,968nm,1.6s
BATI Baumata 32.66 176 P **P** **15 58 28.9 -1.6**
comp=Z,379nm,1.0s,baz=303,slow=0.4,SNR=42
BATI PcP **PcP** **16 01 16.6 +0.3**
comp=Z,54nm,0.9s,baz=34,slow=3.6,SNR=3.2
comp=Z,379nm,1.0s
BATI Baumata 32.66 176 P **P** **15 58 30.6 +0.1**
comp=Z,4μmcomp=Z,4μmcomp=Z,461nm,1.1s
BOK Bokaro 32.67 279 *e*P **P** **15 58 32.1 +1.5**
BOK IAmb IAmb 15 58 36.7
comp=Z,111nm,1.2s
TYV Tymovskoe 32.70 25 *e*P **P** **15 58 33.3 +2.8**
TYV *e*S **S** **16 03 52.2 +6.7**
TYV pmax pmax
comp=Z,1μm,4.6s
TYV pmax pmax
comp=Z,66nm,1.1s
TYV smax smax
comp=N,500nm,5.4s
CNJI Cibinong 32.86 207 P **P** **15 58 28.9 -3.3**
comp=N,1μmcomp=N,66nm,1.0s
PKI Pulchoki 32.95 286 *e*P **P** **15 58 34.0 +0.6**
comp=N,228nm,1.2s
PKIN Phulchoki 32.96 286 *e*P **P** **15 58 33.9 +0.5**
comp=N,244nm,1.2s
MOY Mondy 33.06 336 *e*P **P** **15 58 34.0 +0.2**
MOY pmax pmax
comp=Z,168nm,2.1s
DMN Daman 33.22 286 *e*P **P** **15 58 36.5 +0.8**
comp=Z,763nm,1.5s
DANN Dangsing 34.42 288 *e*P **P** **15 58 46.9 +0.8**
comp=Z,346nm,1.1s
WMQ Urumqi 34.95 315 ‖P **P** **15 58 52.5 +2.2**
WMQ sP sP 15 59 01.2 +1.5
WMQ S **S** **16 04 23.3 +2.6**
WMQ ScP **ScP** **16 05 05.7 -0.9**
WMQ ScS **ScS** **16 09 07.3 -2.9**
WMQ pmax pmax
comp=Z,190nm,1.1s
WMQ pmax pmax
comp=Z,2μm,3.9s
WMQ LR LR
comp=Z,12μm,13.9s
WMQ LR LR
comp=Z,10μm,17.9s
WMQ LR LR
comp=Z,7μm,16.7s
MANU Manus Island 35.19 131 P **P** **15 58 53.1 +0.6**
MANU IAmb IAmb 15 58 55.2
comp=Z,134nm,1.1s
BOD Bodaibo 35.61 353 *e*P **P** **15 58 58.7 +3.1**
BOD pmax pmax
comp=Z,29nm,1.7s
XMIS Christmas Isla 36.33 207 P **P** **15 59 00.7 -1.5**
MTN Manton Dam 36.47 164 P **P** **15 59 01.0 -2.4**
MTN IAmb IAmb 15 59 02.5
comp=Z,427nm,1.6s
MTN PcP **PcP** **16 01 27.6 +0.5**
MTN Manton Dam 36.47 164 P **P** **15 59 01.5 -1.9**
KDU Kakadu 36.68 162 P **P** **15 59 03.4 -1.8**
DGZ Jazzator, Alta 38.02 324 *c i* P **P** **15 59 17.3 +0.8**
DGZ pmax pmax
comp=Z,67nm,1.1s
DGZ MLR MLR
comp=Z,24μm,16.0s
JBP Jabalpur 38.12 279 *e*P **P** **15 59 18.4 +0.9**
JBP IAmb IAmb 15 59 28.0
comp=Z,115nm,1.0s
JBP *e*S **S** **16 05 12.1 +2.7**
ZSN Zaisan 38.36 319 *e*P **P** **15 59 20.1 +0.9**
ZSN *e*S **S** **16 05 12.9 +0.4**
ZSN Zaisan 38.36 319 *e*P **P** **15 59 20.1 +0.9**
baz=320
ZSN *e*S **S** **16 05 13.0 +0.4**
baz=320
KNRA Kununurra 38.70 169 P **P** **15 59 20.4 -1.8**
KNRA Kununurra 38.70 169 P **P** **15 59 21.2 -1.0**
PATS Pohnpei 38.79 108 P **P** **15 59 22.7 -0.5**
PATS Pohnpei 38.79 108 P **P** **15 59 24.3 +1.2**
SKR Severo-Kuril's 38.90 35 *e*P **P** **15 59 24.3 +0.7**
SKR *e*S **S** **16 05 16.7 -3.7**
SKR pmax pmax
comp=Z,210nm,1.0s
SKR pmax pmax
comp=Z,200nm,2.2s
SKR MLR MLR
comp=Z,1μm,16.0s
DDI Dehra Dun 39.43 291 *e*P **P** **15 59 29.6 +1.1**
MK31 Makanchi Array 39.66 317 P **P** **15 59 30.6 +0.4**
MK31 IAmb IAmb 15 59 35.0
comp=Z,190nm,1.0s
MK31 PcP **PcP** **16 01 38.3 +1.6**
MK31 Makanchi Array 39.66 317 P **P** **15 59 30.6 +0.4**
MK31 16 01 38.3
MK31 pmax pmax
comp=Z,190nm,1.0s
MKAR Makanchi Array 39.66 317 P **P** **15 59 31.3 +1.1**
comp=Z,155nm,0.7s,baz=111,slow=9.6,SNR=31
MKAR PcP **PcP** **16 01 37.0 +0.2**
comp=Z,46nm,0.7s,baz=102,slow=4.8,SNR=4.1
MKAR ScP **ScP** **16 05 21.9 -2.2**
comp=Z,15nm,0.4s,baz=111,slow=4.1,SNR=2.4
comp=Z,155nm,0.7s
MKAR Makanchi Array 39.66 317 P **P** **15 59 30.6 +0.4**
YAK Yakutsk 39.82 6 P **P** **15 59 31.4 +0.2**
comp=Z,25nm,0.6s,baz=186,slow=0.0,SNR=28
YAK PcP **PcP** **16 01 36.3 -0.5**
comp=Z,54nm,0.8s,baz=185,slow=1.7,SNR=8.7
YAK ScP **ScP** **16 05 20.3 -4.1**
comp=Z,16nm,1.0s,baz=143,slow=5.1,SNR=6.3
YAK ScS **ScS** **16 09 29.7 -7.1**
comp=Z,0.6nm,0.3s,baz=182,slow=23,SNR=0.9
YAK LR LR 16 17 42.6
comp=Z,10μm,18.8s,baz=187,slow=39
comp=Z,25nm,0.6s
YAK Yakutsk 39.82 6 P **P** **15 59 31.2 0.0**
YAK Yakutsk 39.82 6 *e*P **P** **15 59 31.5 +0.3**
YAK *e**PP **pP** **15 59 37.0 -1.1**
YAK *e* 16 01 01.7
YAK *e* 16 01 35.6
YAK *e*S **S** **16 05 36.1 +2.1**
YAK *e* 16 09 31.1
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK pmax pmax
comp=Z,139nm,2.0s
YAK pmax pmax
comp=N,40nm,1.8s
YAK pmax pmax
comp=E,60nm,1.9s
YAK smax smax
comp=E,141nm,2.6s
YAK smax smax
comp=N,115nm,2.5s
YAK MLR MLR
comp=Z,12μm,17.0s
YAK MLR MLR
comp=N,8μm,16.0s
YAK MLR MLR
comp=E,2μm,16.0s
MAKZ Makanchi 39.87 317 P **P** **15 59 32.4 +0.6**
MAKZ IAmb IAmb 15 59 36.3
comp=Z,227nm,0.8s
MAKZ PcP **PcP** **16 01 38.8 +1.5**
MAKZ Makanchi 39.87 317 P **P** **15 59 32.4 +0.6**
MAKZ 16 01 38.8
MAKZ pmax pmax
comp=Z,227nm,0.9s
MAKZ MLR MLR
comp=Z,18μm,18.0s
KRVT Keravat (AS076 40.09 128 P **P** **15 59 34.2 +0.3**
comp=Z,369nm,1.1s,baz=275,slow=11,SNR=16
KRVT LR LR 16 15 10.4
comp=Z,4μm,18.1s,baz=83,slow=35
comp=Z,369nm,1.1s
RABL Rabaul 40.11 128 P **P** **15 59 34.7 +0.5**
RABL IAmb IAmb 15 59 37.2
comp=Z,321nm,0.8s
SMLA Simla 40.20 292 *e*P **P** **15 59 36.0 +1.2**
MDRS Chennai 40.24 264 *e*P **P** **15 59 37.8 +2.5**
MDRS *i* x x 16 15 25.5
SHLS Shalkode 40.28 311 *c i* P **P** **15 59 34.4 -1.0**
SHLS *e*S **S** **16 05 38.6 -3.1**
SHLS pmax pmax
comp=Z,104nm,1.4s
SHLS Shalkode 40.28 311⇑ *i* P **P** **15 59 34.5 -1.0**
comp=Z,104nm,1.4s,baz=311
SHLS *e*S **S** **16 05 38.6 -3.1**
baz=311
PDGK Podgornoye 40.31 311 P **P** **15 59 37.0 +1.3**
BHPL Bhopal 40.45 280 *e*P **P** **15 59 36.3 -0.7**
BHPL IAmb IAmb 15 59 39.0
comp=Z,66nm,1.2s
HYB Hyderabad 40.54 271 *e*P **P** **15 59 38.5 +0.6**
HYB *i* x x 16 16 33.8
HYBB Hyderabad (bro 40.54 271 *e*P **P** **15 59 38.8 +1.0**
HYBB *e*pP **pP** **15 59 42.4 -2.3**
HYBB *e*pP **sP** **15 59 42.5 -4.9**
HYBB IVmB_BB 15 59 48.3
comp=Z,746nm,1.6s
HYBB *e*PP **PnPn** **16 01 21.1 +5.7**
HYBB *e*PcP **PcP** **16 01 40.1 0.0**
HYBB *e*ScP **ScP** **16 05 29.6 +1.4**
HYBB *e*S **S** **16 05 46.8 +0.8**
HYBB *e*SS **SnSn** **16 09 03.5 +11**
HYBB *e*ScS **ScS** **16 09 39.7 -3.1**
HYBB IVMs_BB IVMs_BB 16 20 32.0
comp=Z,1μm,18.6s
PMG Port Moresby 40.56 139 P **P** **15 59 37.8 0.0**
comp=Z,142nm,0.9s,baz=338,slow=7.1,SNR=21
PMG LR LR 16 14 09.2
comp=Z,3μm,21.7s,baz=306,slow=33
comp=Z,142nm,0.9s
PMG Port Moresby 40.56 139 P **P** **15 59 38.4 +0.5**
PMG IAmb IAmb 15 59 40.1
comp=Z,222nm,1.0s
PMG Port Moresby 40.56 139 *c i* P **P** **15 59 38.7 +0.9**
PMG pmax pmax
comp=Z,196nm,1.0s
PMG MLR MLR
comp=Z,3μm,17.0s
PMG Port Moresby 40.56 139 P **P** **15 59 38.3 +0.5**
comp=Z,6μmcomp=Z,3μmcomp=Z,258nm,1.1s
PMG Port Moresby 40.56 139 P **P** **15 59 38.8 +0.9**
PMG Port Moresby 40.56 139 P **P** **15 59 38.7 +0.9**
UZB Uzynbulak 40.59 311 *i* P **P** **15 59 39.4 +1.4**
UZB *e*S **S** **16 05 47.3 +1.0**
UZB pmax pmax
comp=Z,80nm,1.7s
UZB Uzynbulak 40.59 311 *i* P **P** **15 59 39.5 +1.4**
comp=Z,80nm,1.7s,baz=311
UZB *e*S **S** **16 05 47.3 +1.0**

baz=311
FITZ Fitzroy Crossi 40.64 174 P P 15 59 37.2 -1.2
comp=Z,204nm,1.0s,baz=0.3,slow=8.2,SNR=170
FITZ LR LR 16 18 37.1
comp=Z,740nm,18.6s,baz=352,slow=39
comp=Z,204nm,1.0s
FITZ Fitzroy Crossi 40.64 174 P P 15 59 36.9 -1.5
FITZ IAmb IAmb 15 59 38.7
comp=Z,290nm,1.1s
FITZ Fitzroy Crossi 40.64 174 P P 15 59 37.5 -0.9
KPKS Kokpek 40.91 311*c iP* **P 15 59 41.7 +1.1**
KPKS *eS* **S 16 05 52.6 +1.6**
KPKS pmax pmax
comp=Z,108nm,1.8s
KPKS Kokpek 40.91 311⇑*i iP* **P 15 59 41.8 +1.1**
comp=Z,108nm,1.8s,baz=311
KPKS *eS* **S 16 05 52.7 +1.6**
baz=311
SATY Saty 40.99 310*c iP* **P 15 59 42.6 +1.3**
SATY *eS* **S 16 05 53.9 +1.6**
SATY pmax pmax
comp=Z,112nm,1.7s
SATY Saty 40.99 310⇑*i iP* **P 15 59 42.7 +1.3**
comp=Z,112nm,1.7s,baz=311
SATY *eS* **S 16 05 54.0 +1.6**
baz=311
PEA0B Petropavlovsk- 41.05 33 P **P 15 59 42.5 +0.9**
PEA0B Petropavlovsk- 41.05 33 P **P 15 59 42.5 +0.9**
PEA0B pmax pmax
comp=Z,168nm,1.3s
PETK Petropavlovsk- 41.05 33 P **P 15 59 42.4 +0.9**
comp=Z,31nm,0.9s,baz=217,slow=6.9,SNR=30
PETK LR LR 16 17 13.8
comp=Z,4μm,20.9s,baz=233,slow=37
comp=Z,31nm,0.9s
PETK Petropavlovsk- 41.05 33 P **P 15 59 42.7 +1.2**
PETK PcP **PcP 16 01 42.9 +1.8**
PETK Petropavlovsk- 41.05 33 P **P 15 59 42.7 +1.2**
PETK 16 01 42.9
TARG Taragay, Kyrgy 41.08 308 P **P 15 59 41.7 -0.7**
TARG Taragay, Kyrgy 41.08 308 P **P 15 59 41.7 -0.7**
TARG pmax pmax
comp=Z,175nm,1.2s
PET Petropavlovsk 41.49 33 P **P 15 59 44.9 -0.2**
PET Petropavlovsk 41.49 33 *eP* **P 15 59 44.7 -0.4**
PET *eS* **S 16 05 57.4 -1.7**
PET pmax pmax
comp=Z,900nm,9.1s
PET pmax pmax
comp=Z,596nm,1.2s
PET MLR MLR
comp=Z,4μm,19.0s
PET Petropavlovsk 41.49 33 P **P 15 59 46.4 +1.3**
TDK Taldyqorghan 41.56 313*c iP* **P 15 59 47.0 +1.2**
TDK *i* S **S 16 06 02.1 +1.7**
TDK pmax pmax
comp=Z,488nm,1.9s
TDK smax smax
comp=N,1μm,4.3s
TDK MLR MLR
comp=Z,4μm,14.0s
TDK Taldyqorghan 41.56 313⇑*i iP* **P 15 59 47.1 +1.2**
comp=Z,488nm,1.9s,baz=313
TDK *i* S **S 16 06 02.2 +1.7**
comp=Z,1μm,4.3s,baz=313
TDK *e*LR LR 16 18 26.5
comp=Z,4μm,14.4s,baz=313
ZAA0 Zalesovo Array 41.72 328 P **P 15 59 46.5 -0.5**
ZAA0 IAmb IAmb 15 59 53.0
comp=Z,275nm,1.0s
ZAA0 PcP **PcP 16 01 43.0 -0.2**
ZALV Zalesovo Beam 41.72 328 P **P 15 59 47.1 +0.2**
comp=Z,231nm,0.9s,baz=115,slow=7.8,SNR=430
ZALV PcP **PcP 16 01 42.4 -0.8**
comp=Z,26nm,0.7s,baz=102,slow=4.6,SNR=3.7
ZALV ScP **ScP 16 05 29.2 -2.8**
comp=Z,16nm,1.0s,baz=104,slow=5.2,SNR=6.8
ZALV LR LR 16 18 12.0
comp=Z,7μm,20.2s,baz=126,slow=38
comp=Z,231nm,0.9s
ZALV Zalesovo Beam 41.72 328 *i* P **P 15 59 47.0 0.0**
ZALV pmax pmax
comp=Z,231nm,0.9s
MDOK Medeo 41.98 310 *i* P **P 15 59 50.9 +1.4**
MDOK *i* S **S 16 06 09.7 +2.7**
MDOK MLR MLR
comp=Z,4μm,18.0s
MDOK Medeo 41.98 310 *i* P **P 15 59 50.9 +1.4**
baz=310
MDOK *i* S **S 16 06 09.7 +2.7**
baz=310
MDOK *e*LR LR 16 17 32.4
comp=Z,4μm,17.6s,baz=310
KSH Kashi 41.99 304 P **P 15 59 54.1 +4.5**
KSH sP sP 16 00 03.1 +4.0
KSH ScP **ScP 16 05 34.1 +0.5**
KSH S **S 16 06 12.8 +5.6**
KSH SS **SS 16 09 17.3 +2.8**
KSH pmax pmax
comp=Z,85nm,1.3s
KSH pmax pmax
comp=Z,2μm,4.8s
KSH LR LR
comp=Z,8μm,14.4s
KSH LR LR
comp=Z,16μm,16.5s
KSH LR LR
comp=Z,18μm,14.8s
TNSS Tian-Shan 42.02 310 *i* P **P 15 59 52.1 +2.0**
TNSS Tian-Shan 42.02 310 *i* P **P 15 59 52.1 +2.0**
baz=310
PALK Pallekele 42.05 255 LR LR 16 19 17.5
comp=Z,10μm,18.6s,baz=164,slow=39
PALK Pallekele 42.05 255 P **P 15 59 51.5 +1.2**
PALK Pallekele 42.05 255 P **P 15 59 51.5 +1.2**
PALK pmax pmax
comp=Z,138nm,1.3s
PALK MLR MLR
comp=Z,10μm,19.0s
PALK Pallekele 42.05 255 P **P 15 59 50.7 +0.5**
PALK P **P 15 59 50.7 +0.5**
PALK Pallekele 42.05 255 P **P 15 59 51.4 +1.2**
comp=Z,3μmcomp=Z,2μmcomp=Z,91nm,1.7s
KNDC Almaty 42.05 310 P **P 15 59 51.9 +1.9**
COEN Coen 42.09 148 P **P 15 59 50.6 +0.2**
COEN Coen 42.09 148 P **P 15 59 50.8 +0.4**
COCO West Island 42.15 217 P **P 15 59 51.2 +0.3**
COCO IAMs_20 IAMs_20 16 19 36.5
comp=Z,4μm,18.0s
COCO West Island 42.15 217 P **P 15 59 51.2 +0.3**
COCO pmax pmax
comp=Z,581nm,1.3s
COCO MLR MLR
comp=Z,4μm,18.0s
CHKK Chushkaly 42.20 311⇑*iP* **P 15 59 51.9 +0.8**
CHKK Chushkaly 42.20 311⇑*iP* **P 15 59 52.0 +0.8**
baz=311
WAKE Wake Island 42.22 86 P **P 15 59 52.3 +0.8**
ULHL Ulahol 42.34 309 P **P 15 59 54.6 +2.2**
SNR=9.0
H11N1 WAKE ISLAND Hy 42.35 85 T T 16 45 05.9
baz=282,slow=75,SNR=489
H11N2 WAKE ISLAND Hy 42.35 85 T T 16 45 06.8
baz=282,slow=75,SNR=599
MA2 Magadan 42.36 22 P **P 15 59 53.6 +1.5**
comp=Z,48nm,0.9s,baz=207,slow=8.7,SNR=18
MA2 PcP **PcP 16 01 44.5 -0.7**
comp=Z,26nm,0.8s,baz=173,slow=3.1,SNR=5.9
MA2 ScP **ScP 16 05 31.9 -2.6**
comp=Z,7.1nm,0.7s,baz=248,slow=5.4,SNR=3.6
MA2 LR LR 16 18 49.6
comp=Z,6μm,19.0s,baz=220,slow=38
comp=Z,48nm,0.9s
MA2 Magadan 42.36 22 P **P 15 59 52.5 +0.4**
MA2 PcP **PcP 16 01 45.0 -0.2**
MA2 IAMs_20 IAMs_20 16 18 38.5
comp=Z,7μm,19.0s
MA2 Magadan 42.36 22⇑*eP* **P 15 59 53.8 +1.7**
MA2 pmax pmax
comp=Z,65nm,0.9s
MA2 MLR MLR
comp=Z,7μm,19.0s
H11N3 WAKE ISLAND Hy 42.37 85 T T 16 45 11.9
baz=282,slow=75,SNR=717
SEM Semipalatinsk 42.41 321 *eP* **P 15 59 52.8 -0.1**
SEM Semipalatinsk 42.41 321 *eP* **P 15 59 52.8 -0.1**
baz=322
H11S3 WAKE ISLAND Hy 42.43 87 T T 16 45 13.5
baz=284,slow=75,SNR=709
H11S1 WAKE ISLAND Hy 42.44 87 T T 16 45 17.3
baz=284,slow=75,SNR=1975
H11S2 WAKE ISLAND Hy 42.45 87 T T 16 45 18.0
baz=284,slow=75,SNR=2464
BOOM Boomskoye usch 42.61 309 P **P 15 59 54.5 -0.1**
BOOM PcP **PcP 16 01 47.5 +0.9**
KUU Kurty 42.67 311 *eP* **P 15 59 54.7 -0.2**
KUU *eS* **S 16 06 18.4 +1.6**
KUU pmax pmax
comp=Z,317nm,1.9s
KUU smax smax
comp=N,448nm,3.9s
KUU Kurty 42.67 311 *eP* **P 15 59 54.8 -0.2**
comp=N,317nm,1.9s,baz=311
KUU *eS* **S 16 06 18.4 +1.6**
comp=N,448nm,3.9s,baz=311
TKM2 Tokmak 2 42.95 309 P **P 15 59 59.2 +1.7**
SNR=130
TKM2 Tokmak 2 42.95 309 P **P 15 59 59.2 +1.7**
KBK Karagaybulak 43.36 309 P **P 16 00 02.9 +2.1**
SNR=61
KURK Kurchatov 43.48 321 P **P 16 00 00.9 -0.4**
KURK IAmb IAmb 16 00 06.8
comp=Z,278nm,1.1s
KURK Kurchatov 43.48 321 IAMs_20 IAMs_20 16 20 14.9
comp=Z,4μm,20.0s
KURK Kurchatov 43.48 321*c iP* **P 16 00 02.0 +0.7**
KURK pmax pmax
comp=Z,206nm,1.0s
KURK MLR MLR
comp=Z,7μm,15.0s
KURK Kurchatov 43.48 321 P **P 16 00 02.6 +1.3**
KURBB Kurchatov Arra 43.49 321 P **P 16 00 02.2 +0.8**
comp=Z,237nm,0.9s,baz=116,slow=7.4,SNR=12
KURBB PcP **PcP 16 01 49.0 -0.1**
comp=Z,26nm,0.9s,baz=125,slow=2.8,SNR=4.6
KURBB ScP **ScP 16 05 37.0 -2.2**
comp=Z,7.7nm,0.8s,baz=115,slow=3.9,SNR=5.7
KURBB LR LR 16 20 29.8
comp=Z,4μm,18.9s,baz=99,slow=39
comp=Z,237nm,0.9s
MBWA Marble Bar 43.51 182 P **P 16 00 00.4 -1.4**
MBWA IAmb IAmb 16 00 02.4
comp=Z,588nm,1.6s
MBWA Marble Bar 43.51 182 P **P 16 00 01.1 -0.7**
MBWA P **P 16 00 01.1 -0.7**
MBWA Marble Bar 43.51 182 P **P 16 00 01.0 -0.8**
CHMS Chumysh 43.58 309 P **P 16 00 03.8 +1.5**
SNR=61
NIL Nilore 43.58 296 P **P 16 00 02.5 +0.1**
NIL IAmb IAmb 16 00 13.4
comp=Z,283nm,1.1s
NIL Nilore 43.58 296 P **P 16 00 02.6 +0.1**
NIL pmax pmax
comp=Z,283nm,1.1s
UCH Uchtor 43.59 308 P **P 16 00 05.3 +2.4**
SNR=209
AAK Ala-Archa 43.68 309 P **P 16 00 04.9 +1.6**
SNR=49
AAK Ala-Archa 43.68 309 LR LR 16 21 00.4
comp=Z,9μm,18.4s,baz=99,slow=40
AAK Ala-Archa 43.68 309 P **P 16 00 04.4 +1.1**
AAK PcP **PcP 16 01 51.3 +1.1**
AAK Ala-Archa 43.68 309*c iP* **P 16 00 04.9 +1.6**
AAK pmax pmax
comp=Z,49nm,0.9s
AAK MLR MLR
comp=Z,8μm,17.0s
AAK Ala-Archa 43.68 309 P **P 16 00 05.3 +2.0**
AAK P **P 16 00 05.3 +2.0**
AAK Ala-Archa 43.68 309 *i* P **P 16 00 04.6 +1.3**
SNR=63
SGDS Sogindy 43.76 310*c iP* **P 16 00 04.6 +0.8**
SGDS *i* S **S 16 06 34.9 +1.9**
SGDS Sogindy 43.76 310⇑*iP* **P 16 00 04.6 +0.8**
baz=310
SGDS *i* S **S 16 06 34.9 +1.9**
baz=310
USP Ospenovka 43.81 310 P **P 16 00 05.7 +1.4**
SNR=28
PSA00 Pilbara Seismi 43.92 182 P **P 16 00 03.9 -1.2**
PSA00 PcP **PcP 16 01 50.6 -0.3**
PSA00 Pilbara Seismi 43.92 182 P **P 16 00 03.2 -1.9**
PSA00 IAmb IAmb 16 00 05.9
comp=Z,366nm,1.3s
PSA00 Pilbara Seismi 43.92 182 P **P 16 00 04.7 -0.4**
WB0 Warramunga Arr 43.95 162 P **P 16 00 03.7 -1.7**
WB0 IAmb IAmb 16 00 05.6
comp=Z,274nm,1.1s
WRAB Tennant Creek 44.10 162 P **P 16 00 04.8 -1.8**
WRAB IAmb IAmb 16 00 07.0
comp=Z,321nm,1.1s
WRAB PcP **PcP 16 01 51.8 +0.1**
WRAB Tennant Creek 44.10 162 P **P 16 00 04.8 -1.8**
WRAB 16 01 51.8
WRAB pmax pmax
comp=Z,321nm,1.1s
WRAB Tennant Creek 44.10 162 P **P 16 00 05.6 -1.0**
WRA Warramunga Arr 44.10 162 P **P 16 00 05.2 -1.4**
comp=Z,158nm,0.9s,baz=344,slow=8.7,SNR=189
WRA PcP **PcP 16 01 51.9 +0.2**
comp=Z,30nm,0.9s,baz=352,slow=3.9,SNR=6.2
WRA ScP **ScP 16 05 38.5 -3.6**
comp=Z,3.7nm,0.8s,baz=343,slow=3.9,SNR=3.4
WRA S **S 16 06 31.8 -6.4**
comp=Z,6.3nm,1.0s,baz=344,slow=14,SNR=4.9
comp=Z,158nm,0.9s
WRA Warramunga Arr 44.10 162 P **P 16 00 04.7 -1.9**
WRA PcP **PcP 16 01 51.9 +0.2**
WRA Warramunga Arr 44.10 162 *i* P **P 16 00 04.0 -2.6**
WRA pmax pmax
comp=Z,160nm,0.9s
WB2 Warramunga Arr 44.10 162 P **P 16 00 05.2 -1.5**
WB2 PcP **PcP 16 01 51.6 -0.1**
WB1 Warramunga Ar. 44.12 162 P **P 16 00 06.1 -0.7**
AML Almayashu 44.16 308 P **P 16 00 09.6 +2.2**
SNR=141
WR0 Warramunga Arr 44.17 162 P **P 16 00 05.4 -1.8**
WR0 IAmb IAmb 16 00 07.5
comp=Z,260nm,1.0s
EKS2 Erkin-Say 44.21 309 P **P 16 00 08.7 +1.3**
SNR=61
BTLS Baital 44.54 312*c iP* **P 16 00 10.3 +0.4**
BTLS *i* S **S 16 06 43.8 -0.4**
BTLS pmax pmax
comp=Z,60nm,1.2s
BTLS Baital 44.54 312⇑*iP* **P 16 00 10.3 +0.4**
comp=Z,60nm,1.2s,baz=312
BTLS *i* S **S 16 06 43.8 -0.4**
baz=312
POO Poona 44.62 274 *eP* **P 16 00 11.0 +0.1**
PCHI Peechi 44.70 262⇑*eP* **P 16 00 13.0 +1.4**
PCHI *eS* **S 16 06 50.1 +2.9**
DRK Karamyk 45.18 304 P **P 16 00 16.4 +0.9**
DRK IAmb IAmb 16 00 31.4
comp=Z,187nm,1.2s
SEY Seymchan 45.39 19 P **P 16 00 16.9 +0.5**
comp=Z,10nm,0.8s,baz=230,slow=8.5,SNR=16
SEY PcP **PcP 16 01 55.4 0.0**
comp=Z,18nm,0.8s,baz=215,slow=2.6,SNR=4.7
SEY ScP **ScP 16 05 44.4 -2.4**
comp=Z,15nm,1.0s,baz=238,slow=5.1,SNR=5.8
SEY LR LR 16 21 17.0
comp=Z,3μm,18.2s,baz=220,slow=39
comp=Z,10nm,0.8s
SEY Seymchan 45.39 19*ceP* **P 16 00 18.8 +2.4**
SEY pmax pmax
comp=Z,26nm,1.3s
GOA Goa 45.43 270 *eP* **P 16 00 18.7 +1.4**
GOA *i* pP **sP 16 00 28.5 +1.5**
GIRL Giralia 45.50 189 P **P 16 00 18.4 +0.7**
GIRL Giralia 45.50 189 P **P 16 00 18.9 +1.2**
BTK Batken 46.00 304 P **P 16 00 22.0 +0.3**
BTK Batken 46.00 304 P **P 16 00 22.0 +0.3**
BTK pmax pmax
comp=Z,456nm,1.8s
DZA Taraz 46.02 308 *eP* **P 16 00 21.4 -0.3**
DZA *eS* **S 16 07 07.4 +1.8**
DZA Taraz 46.02 308 *eP* **P 16 00 21.5 -0.3**
baz=309
DZA *eS* **S 16 07 07.5 +1.8**
baz=309
MTSU Mount Surprise 46.23 149 P **P 16 00 25.0 +1.4**
GAR Garm 46.28 303 P **P 16 00 24.8 +0.9**
QIS Mount Isa 46.40 156 P **P 16 00 25.0 +0.2**
KK31 Karatay Array 46.65 309 P **P 16 00 27.1 +0.5**
KK31 IAmb IAmb 16 00 29.3
comp=Z,114nm,1.0s
KK31 PcP **PcP 16 01 60.0 -0.3**
KK31 Karatay Array 46.65 309 P **P 16 00 27.1 +0.5**
KK31 16 02 00.0
KK31 pmax pmax
comp=Z,114nm,1.0s
KKAR Karatay Array 46.65 309 P **P 16 00 27.0 +0.3**
KKAR PcP **PcP 16 01 60.0 -0.3**
KKAR Karatay Array 46.65 309 P **P 16 00 27.5 +0.8**
KKAR IAmb IAmb 16 00 29.3
comp=Z,114nm,1.0s
KKAR PcP **PcP 16 02 00.5 +0.3**
KKAR Karatay Array 46.65 309 P **P 16 00 27.0 +0.3**
KKAR 16 02 00.0
KKAR pmax pmax
comp=Z,114nm,1.0s
BRZS Berezniki 46.78 318*c iP* **P 16 00 28.5 +0.9**
BRZS *i* S **S 16 07 16.9 +0.6**
BRZS pmax pmax
comp=Z,73nm,1.1s
BRZS Berezniki 46.78 318⇑*i iP* **P 16 00 28.6 +0.9**
comp=Z,73nm,1.1s,baz=318
BRZS *i* S **S 16 07 17.0 +0.6**
baz=318
IUG Iuzhnay 46.85 307*c iP* **P 16 00 29.8 +1.4**
IUG *i* S **S 16 07 19.9 +2.1**
IUG Iuzhnay 46.85 307⇑*iP* **P 16 00 29.9 +1.4**
baz=307
IUG *i* S **S 16 07 20.0 +2.1**
baz=307
CHGR Chuyangaron 47.15 302 P **P 16 00 31.3 +0.6**
CHGR Chuyangaron 47.15 302 P **P 16 00 31.3 +0.6**
CHGR pmax pmax
comp=Z,283nm,1.2s
TAS Tashkent 47.30 306 P **P 16 00 33.0 +1.3**
TAS IAmb IAmb 16 00 34.9
comp=Z,163nm,0.9s
TAS Tashkent 47.30 306 P **P 16 00 33.1 +1.3**
TAS pmax pmax
comp=Z,163nm,0.9s
BHUJ Bhuj 47.51 281 *eP* **P 16 00 35.0 +1.4**
BHUJ *i* x x 16 00 44.0
AS31 Alice Springs 47.54 164 P **P 16 00 33.0 -0.7**
ASAR Alice Springs 47.54 164 P **P 16 00 33.1 -0.7**
comp=Z,103nm,1.0s,baz=342,slow=6.6,SNR=361
ASAR PcP **PcP 16 02 03.5 -0.1**
comp=Z,34nm,0.9s,baz=350,slow=3.6,SNR=7.0
ASAR ScP **ScP 16 05 53.3 -3.1**
comp=Z,5.8nm,0.9s,baz=352,slow=4.4,SNR=5.0
ASAR S **S 16 07 24.5 -3.2**
comp=Z,13nm,1.2s,baz=345,slow=14,SNR=8.5
ASAR LR LR 16 23 16.6
comp=Z,1μm,19.6s,baz=347,slow=39
comp=Z,103nm,1.0s
ASAR Alice Springs 47.54 164 P **P 16 00 33.5 -0.3**
ASAR PcP **PcP 16 02 03.0 -0.6**
AS01 Alice Springs 47.55 164 P **P 16 00 33.9 +0.1**
WRKA Warakurna 47.80 172 P **P 16 00 35.6 -0.2**
TV1H Townsville Har 48.40 147 P **P 16 00 41.7 +1.3**
MNCI Minicoy 48.55 261 P **P 16 00 41.9 +0.2**
MNCY Minicoy 48.58 261 *eP* **P 16 00 42.9 +0.9**
CTA Charters Tower 48.84 148 LR LR 16 19 25.1
comp=Z,4μm,21.8s,baz=328,slow=34
CTA Charters Tower 48.84 148 P **P 16 00 44.9 +1.1**
CTAO Charters Tower 48.84 148 P **P 16 00 44.1 +0.3**
CTAO Charters Tower 48.84 148 IAMs_20 IAMs_20 16 19 01.3
comp=Z,4μm,22.0s
CTAO Charters Tower 48.84 148 P **P 16 00 44.1 +0.3**
CTAO pmax pmax
comp=Z,361nm,1.1s
CTAO Charters Tower 48.84 148 P **P 16 00 44.8 +1.0**
MEEK Meekatharra 49.01 183 P **P 16 00 44.3 -0.7**
BVAR Borovoye Array 49.07 322 P **P 16 00 46.1 +0.9**
comp=Z,69nm,0.8s,baz=106,slow=9.6,SNR=319
BVAR PcP **PcP 16 02 08.9 +0.2**
comp=Z,73nm,0.7s,baz=99,slow=4.5,SNR=16
BVAR ScP **ScP 16 06 00.1 -2.3**
comp=Z,17nm,1.0s,baz=123,slow=5.3,SNR=11
BVAR S **S 16 07 48.0 -0.6**
comp=Z,0.9nm,0.8s,baz=308,slow=43,SNR=2.3
BVAR LR LR 16 24 01.2
comp=Z,5μm,18.0s,baz=103,slow=39
comp=Z,69nm,0.8s
BRVK Borovoye 49.14 322 P **P 16 00 46.0 +0.2**
BRVK PcP **PcP 16 02 08.5 -0.5**
BRVK Borovoye 49.14 322 IAMs_20 IAMs_20 16 22 52.6
comp=Z,5μm,19.0s
BRVK Borovoye 49.14 322 P **P 16 00 46.0 +0.2**
BRVK 16 02 08.5
BRVK pmax pmax
comp=Z,326nm,1.0s
BRVK MLR MLR
comp=Z,5μm,19.0s
BRVK Borovoye 49.14 322 P **P 16 00 47.0 +1.2**
BRVK P **P 16 00 47.0 +1.2**
TIXI Tiksi 49.27 3 LR LR 16 24 04.8
comp=Z,8μm,19.6s,baz=270,slow=39
TIXI Tiksi 49.27 3 P **P 16 00 44.7 -1.7**
TIXI PcP **PcP 16 02 06.9 -2.1**
TIXI Tiksi 49.27 3*c iP* **P 16 00 45.2 -1.2**
TIXI pmax pmax
comp=Z,34nm,1.0s
TIXI MLR MLR
comp=Z,8μm,16.0s
HNR Honiara 49.34 126 P **P 16 00 48.4 +0.6**
comp=Z,1μm,0.7s,baz=288,slow=13,SNR=3.5
HNR LR LR 16 20 42.6
comp=Z,33μm,18.9s,baz=310,slow=35
HNR Honiara 49.34 126 P **P 16 00 47.9 +0.2**
HNR Honiara 49.34 126 P **P 16 00 47.9 +0.2**
HNR pmax pmax
comp=Z,389nm,1.2s
SHEM Shemya Is, Ala 49.89 39 LR LR 16 21 56.0
comp=Z,1μm,20.7s,baz=278,slow=36
SMY Shemya 49.89 39 P **P 16 00 52.9 +1.4**
SMY Shemya 49.89 39 P **P 16 00 52.9 +1.4**
SMY pmax pmax
comp=Z,235nm,1.0s
NRIK Noril'sk 51.00 345 P **P 16 00 59.3 -0.3**
comp=Z,115nm,1.1s,baz=136,slow=7.6,SNR=42
NRIK PcP **PcP 16 02 15.5 0.0**
comp=Z,93nm,0.9s,baz=124,slow=5.4,SNR=6.9
NRIK ScP **ScP 16 06 07.7 -2.8**
comp=Z,6.7nm,0.9s,baz=124,slow=7.3,SNR=3.8
NRIK LR LR 16 24 26.4
comp=Z,9μm,18.9s,baz=148,slow=38
comp=Z,115nm,1.1s
NRIK Noril'sk 51.00 345*c iP* **P 16 00 59.1 -0.5**
NRIK pmax pmax
comp=Z,167nm,1.2s
NRIK MLR MLR
comp=Z,8μm,18.0s
MORW Morawa 51.62 186 P **P 16 01 04.1 -0.6**
MORW Morawa 51.62 186 P **P 16 01 04.4 -0.3**
OOD Oodnadatta 51.94 164 P **P 16 01 07.1 0.0**
KAAM Kaadhehdhoo 51.97 252 P **P 16 01 08.1 +0.4**
KAAM IAmb IAmb 16 01 20.4
comp=Z,302nm,1.3s
KAAM IAMs_20 IAMs_20 16 24 41.2
comp=Z,5μm,19.0s
KAAM Kaadhehdhoo 51.97 252 P **P 16 01 09.7 +2.0**
KAAM Kaadhehdhoo 51.97 252 P **P 16 01 09.7 +2.0**
comp=Z,208nm,1.5s
AMKA Amchitka 52.71 42 P **P 16 01 13.1 +0.4**
BLDU Ballidu 53.09 185 P **P 16 01 14.9 -0.7**
BILL Bilibino 53.10 19 P **P 16 01 15.2 -0.1**
BILL PcP **PcP 16 02 23.4 +0.1**
BILL IAMs_20 IAMs_20 16 26 31.9
comp=Z,5μm,18.0s
BILL Bilibino 53.10 19 *eP* **P 16 01 16.7 +1.4**
BILL *i* 16 01 25.3
BILL *i* 16 02 21.4
BILL *i* 16 03 15.5
BILL pmax pmax
comp=Z,39nm,1.0s
BILL MLR MLR
comp=Z,5μm,17.0s
INKA Innaminka 53.39 159 P **P 16 01 18.5 +0.7**
FORT Forrest 53.44 173 P **P 16 01 17.7 -0.5**
FORT Forrest 53.44 173 P **P 16 01 18.0 -0.1**
RK1H Rockhampton Ha 53.72 146 P **P 16 01 20.8 +0.4**

MULG	Mulgathing	53.94	167	P	P	16 01 21.8 -0.1
KLBR	Kellerberrin	53.99	184	P	P	16 01 21.8 -0.4
TARA	Tarawa	54.23	105	P	P	16 01 23.1 -1.2
TARA				IAmb	IAmb	16 01 43.2
	comp=Z,287nm,1.4s					
MUN	Mundaring	54.49	185	P	P	16 01 25.9 +0.1
AB31	Akbulak array	54.74	315	*i* P	P	16 01 28.6 +1.0
ABKAR	Akbulak array	54.74	315	P	P	16 01 28.0 +0.5
ABKAR				IAmb	IAmb	16 01 29.9
	comp=Z,156nm,1.1s					
ABKAR				PcP	PcP	16 02 29.3 -0.7
ABKAR	Akbulak array	54.74	315	P	P	16 01 28.0 +0.5
ABKAR				PcP	PcP	16 02 29.2 -0.8
KIWB	Kanaga Island	54.97	42	P	P	16 01 29.0 -0.2
MIDW	Midway	55.05	71	P	P	16 01 30.5 +0.4
LCRK	Leigh Creek	55.13	162	P	P	16 01 31.0 +0.5
ADK	Adak	55.26	42	P	P	16 01 30.9 -0.4
ADK				IAmb	IAmb	16 01 38.0
	comp=Z,228nm,1.2s					
ADK	Adak	55.26	42	P	P	16 01 30.9 -0.4
ADK				pmax	pmax	
	comp=Z,228nm,1.2s					
ADK	Adak	55.26	42	P	P	16 01 37.0 +5.8
	comp=Z,166nm,1.2s					
NWAO	Narrogin (SRO)	55.35	184	P	P	16 01 31.9 -0.2
	comp=Z,328nm,1.0s,baz=223,slow=7.4,SNR=74					
NWAO				LR	LR	16 26 29.3
	comp=Z,811nm,21.8s,baz=234,slow=37					
	comp=Z,328nm,1.0s					
NWAO	Narrogin (SRO)	55.35	184	P	P	16 01 31.9 -0.2
NWAO	Narrogin (SRO)	55.35	184	P	P	16 01 31.9 -0.1
NWAO				P	P	16 01 31.9 -0.1
NWAO	Narrogin (SRO)	55.35	184	P	P	16 01 32.2 +0.2
SVE	Sverdlovsk	55.48	324	*d* P	P	16 01 33.7 +0.9
SVE				*e*S	S	16 09 16.9 +0.6
SVE				pmax	pmax	
	comp=Z,463nm,1.1s					
SVE				pmax	pmax	
	comp=Z,941nm,12.7s					
SVE				MLR	MLR	
	comp=Z,9μm,16.0s					
SVE				MLR	MLR	
	comp=E,6μm,15.0s					
RMQ	Roma	55.48	150	P	P	16 01 33.9 +0.8
EIDS	Eidsvold	55.66	147	P	P	16 01 33.9 -0.6
EIDS				IAmb	IAmb	16 01 35.5
	comp=Z,90nm,1.0s					
EIDS	Eidsvold	55.66	147	P	P	16 01 34.9 +0.5
GSTR	Great Sitkin T	55.67	41	P	P	16 01 34.4 +0.2
GEYT	Alibeck	55.83	301	P	P	16 01 36.2 +0.5
	comp=Z,91nm,0.9s,baz=95,slow=3.1,SNR=174					
GEYT				ScP	ScP	16 06 30.8 -1.4
	comp=Z,9.3nm,0.9s,baz=79,slow=0.7,SNR=5.6					
GEYT				LR	LR	16 28 27.6
	comp=Z,7μm,18.9s,baz=92,slow=39					
	comp=Z,91nm,0.9s					
GEYT	Alibeck	55.83	301	P	P	16 01 36.8 +1.2
GEYT				IAmb	IAmb	16 01 42.2
	comp=Z,163nm,1.0s					
GYA0	ALIBECK ARRAY	55.83	301	P	P	16 01 36.2 +0.5
GYA0B	ALIBECK ARRAY	55.83	301	P	P	16 01 36.8 +1.2
GYA0B				IAmb	IAmb	16 01 42.1
	comp=Z,195nm,1.1s					
AKTO	Aktyubinsk	56.09	316	LR	LR	16 27 27.8
	comp=Z,9μm,18.3s,baz=103,slow=38					
DGAR	Diego Garcia	56.47	244	IAMs_20	IAMs_20	16 26 19.7
	comp=Z,3μm,19.0s					
ARU	Arti	56.53	324	P	P	16 01 40.7 +0.4
	comp=Z,142nm,0.6s,baz=106,slow=3.3,SNR=208					
ARU				S	S	16 09 28.4 -2.0
	comp=Z,5.6nm,0.9s,baz=306,slow=20,SNR=7.6					
ARU				LR	LR	16 28 12.3
	comp=Z,5μm,18.5s,baz=94,slow=38					
	comp=Z,142nm,0.6s					
ARU	Arti	56.53	324	P	P	16 01 40.5 +0.2
ARU	Arti	56.53	324	*c i* P	P	16 01 40.4 +0.1
ARU						16 02 37.9
ARU						16 03 45.8
ARU				PPP	PPP	16 05 00.8
ARU				S	S	16 09 31.6 +1.2
ARU						16 11 21.4
ARU				SS	SS	16 13 15.0 -2.6
ARU				pmax	pmax	
	comp=Z,219nm,0.8s					
ARU				MLR	MLR	
	comp=Z,5μm,16.0s					
BBOO	Buckleboo	56.82	165	P	P	16 01 41.8 -0.8
BBOO	Buckleboo	56.82	165	P	P	16 01 42.4 -0.2
RKGY	Rocky Gully	57.04	184	P	P	16 01 44.7 +0.6
WBK	Wadi Bani Khal	57.28	283	P	P	16 01 48.0 +1.8
	SNR=21					
WBK				P	P	16 01 48.0 +1.8
	SNR=21					
WSAR	Wadi Sarin	57.45	284	LR	LR	16 30 47.1
	comp=Z,3μm,18.2s,baz=98,slow=40					
WSAR	Wadi Sarin	57.45	284	P	P	16 01 49.2 +1.8
	SNR=20					
STKA	Stephens Creek	57.48	160	P	P	16 01 47.3 0.0
	comp=Z,81nm,0.9s,baz=332,slow=8.2,SNR=90					
STKA				LR	LR	16 27 46.5
	comp=Z,1μm,21.7s,baz=329,slow=37					
	comp=Z,81nm,0.9s					
STKA	Stephens Creek	57.48	160	P	P	16 01 46.9 -0.4
STKA	Stephens Creek	57.48	160	P	P	16 01 46.9 -0.4
STKA				pmax	pmax	
	comp=Z,30nm,1.0s					
STKA	Stephens Creek	57.48	160	P	P	16 01 47.3 0.0
JASK	Jask - Hormozg	57.59	287	P	P	16 01 51.1 +2.8
	SNR=11					
BIDO	Bidbid	57.84	284	P	P	16 01 53.0 +2.9
	SNR=26					
BIDO				P	P	16 01 53.0 +2.9
	SNR=26					
SMDO	Samad	58.01	284	P	P	16 01 53.0 +1.5
	SNR=17					
SMDO				P	P	16 01 53.0 +1.5
	SNR=17					
JMDO	Jabal Madar	58.12	283	P	P	16 01 54.0 +1.9
	SNR=13					
JMDO				P	P	16 01 54.0 +1.9
	SNR=13					
JMDO				P	P	16 01 54.0 +1.9
	SNR=13					
HTT	Hallett	58.14	163	P	P	16 01 52.1 +0.2
HOQ	Hoqain	58.56	285	P	P	16 01 57.0 +1.9
	SNR=21					
HOQ				P	P	16 01 57.0 +1.9
	SNR=21					
HOQ				P	P	16 01 57.0 +1.9
	SNR=21					
MHTO	MHTO	58.57	281	P	P	16 01 57.0 +1.8
	SNR=19					
MHTO				P	P	16 01 57.0 +1.8
	SNR=19					
CMSA	Cobar Meteorol	58.61	156	P	P	16 01 56.3 +1.1
BSY	Bisya	58.84	284	P	P	16 01 59.0 +1.8
	SNR=20					
BSY				P	P	16 01 59.0 +1.8
	SNR=20					
BSY				P	P	16 01 59.0 +1.8
	SNR=20					
BANOM	Banah	58.96	287	P	P	16 02 04.0 +6.1
	SNR=7.1					
BANOM				P	P	16 02 04.0 +6.1
	SNR=7.1					
BANOM				P	P	16 02 04.0 +6.1
	SNR=7.1					
BANOM	Banah	58.96	287	*i* P	P	16 01 58.5 +0.6
	SNR=14					
SHME	Shamm	59.07	288	P	P	16 02 01.0 +2.4
SHME				P	P	16 02 01.0 +2.4
SHME	Shamm	59.07	288	P	P	16 02 00.1 +1.4
MASF	Masafi	59.20	287	P	P	16 02 01.1 +1.6
MASF				P	P	16 02 01.1 +1.6
MSFE	Esma-Masafi	59.20	287	P	P	16 02 00.8 +1.2
DQM	DQM	59.22	280	P	P	16 02 01.0 +1.2
	SNR=7.7					
DQM				P	P	16 02 01.0 +1.2
	SNR=7.7					
UOSS	Minazif	59.24	286	P	P	16 01 59.8 -0.1
UOSS	Minazif	59.24	286	IAMs_20	IAMs_20	16 32 15.2
	comp=Z,2μm,20.0s					
UOSS	Minazif	59.24	286	P	P	16 02 01.5 +1.6
UOSS				P	P	16 02 01.5 +1.6
UOSS				P	P	16 02 01.5 +1.6
UOSS	Minazif	59.24	286	P	P	16 01 59.8 -0.1
ARQ	Araqi	59.32	285	P	P	16 02 03.0 +2.6
	SNR=21					
ARQ				P	P	16 02 03.0 +2.6
	SNR=21					
ARQ				P	P	16 02 03.0 +2.6
	SNR=21					
HATD	Hatta, Dubai	59.33	286	P	P	16 02 03.0 +2.4
	SNR=10.0					
HATD				P	P	16 02 03.0 +2.4
	SNR=10.0					
HATD				P	P	16 02 03.0 +2.4
	SNR=10.0					
HATD	Hatta, Dubai	59.33	286	*i* P	P	16 02 01.7 +1.2
	SNR=16					
ASHO	Ashiyiah	59.43	286	P	P	16 02 04.0 +2.7
	SNR=17					
ASHO				P	P	16 02 04.0 +2.7
	SNR=17					
ASHO	Ashiyiah	59.43	286	*i* P	P	16 02 02.2 +1.0
	SNR=15					
UMQ	Umm Al-Quwin	59.60	287	P	P	16 02 04.2 +1.8
UMQ				P	P	16 02 04.2 +1.8
NAZ	Nazwa, Dubai	59.72	287	P	P	16 02 05.0 +1.8
	SNR=14					
NAZ				P	P	16 02 05.0 +1.8
	SNR=14					
NAZ				P	P	16 02 05.0 +1.8
	SNR=14					
NAZ	Nazwa, Dubai	59.72	287	*i* P	P	16 02 03.8 +0.7
	SNR=8.5					
GAMB	Gambell	59.76	28	P	P	16 02 03.5 +0.8
	baz=260					
FAQ	Al Faqa, Dubai	59.83	286	P	P	16 02 06.0 +2.0
	SNR=9.2					
FAQ				P	P	16 02 06.0 +2.0
	SNR=9.2					
FAQ	Al Faqa, Dubai	59.83	286	*i* P	P	16 02 04.6 +0.7
	SNR=21					
ALNE	Al Ain	59.84	285	P	P	16 02 05.4 +1.4
	SNR=32					
ALNE	Al Ain	59.84	285	*i* P	P	16 02 04.7 +0.6
	SNR=18					
KOUNC	Koumac, New Ca	59.87	133	P	P	16 02 06.0 +1.9
ASUD	Al Ashush, Dub	60.09	286	P	P	16 02 07.2 +1.5
ASUD				P	P	16 02 07.2 +1.5
ASUD				P	P	16 02 07.2 +1.5
ASUD	Al Ashush, Dub	60.09	286	*i* P	P	16 02 06.9 +1.2
	SNR=13					
NIKH	Nikolski High	60.12	41	P	P	16 02 06.0 +0.6
	baz=268					
ARMA	Armidale	60.14	150	P	P	16 02 07.1 +1.2
ARMA	Armidale	60.14	150	P	P	16 02 07.5 +1.6
UMZA	Um Al Zommool	60.68	284	P	P	16 02 10.2 +0.4
UMZA				P	P	16 02 10.2 +0.4
UMZA				P	P	16 02 10.2 +0.4
SHAO	Shalim	61.48	279	P	P	16 02 15.4 +0.1
SHAO				P	P	16 02 15.4 +0.1
UNV	Unalaska Valle	61.54	40	P	P	16 02 15.6 +0.5
	baz=270					
TNA	Tin City	61.65	26	P	P	16 02 15.2 -0.4
	baz=262					
KIRV	Kirov	61.67	326	P	P	16 02 16.0 +0.2
	comp=Z,283nm,0.8s,baz=90,slow=2.6,SNR=109					
KIRV				LR	LR	16 31 19.3
	comp=Z,10μm,18.4s,baz=95,slow=38					
	comp=Z,283nm,0.8s					
KIRV	Kirov	61.67	326	*c i* P	P	16 02 15.9 +0.1
LIFNC	LIFOU	62.07	131	P	P	16 02 19.7 +0.7
LIFNC	LIFOU	62.07	131	P	P	16 02 20.6 +1.6
ARPS	Mount Arapiles	62.09	162	P	P	16 02 19.4 +0.5
MZR	Muzera	62.12	285	P	P	16 02 20.2 +0.7
	SNR=21					
MZR				P	P	16 02 20.2 +0.7
	SNR=21					
MZR	Muzera	62.12	285	*i* P	P	16 02 19.8 +0.3
	SNR=27					
DMTO	DMTO	62.19	279	P	P	16 02 20.6 +0.6
DMTO				P	P	16 02 20.6 +0.6
DMTO				P	P	16 02 20.6 +0.6
DZM	Mont Dzumac	62.38	132	*e*P	P	16 02 21.3 +0.1
	comp=Z,265nm,1.4s					
DZM				*e*S	S	16 10 48.2 +1.4
	comp=Z,3μm,28.9s					
DZM				*e*SS	SS	16 14 53.0 +1.9
	comp=Z,2μm,25.6s					
DZM				*e*LR	LR	16 20 53.8
	comp=Z,5μm,23.8s					
DZM	Mont Dzumac	62.38	132	P	P	16 02 22.6 +1.4
	comp=Z,70nm,0.9s,baz=328,slow=8.7,SNR=17					
DZM				LR	LR	16 25 58.3
	comp=Z,3μm,20.4s,baz=304,slow=33					
	comp=Z,70nm,0.9s					
DZM	Mont Dzumac	62.38	132	P	P	16 02 22.0 +0.8
DZM				IAmb	IAmb	16 02 23.5
	comp=Z,114nm,1.2s					
DZM	Mont Dzumac	62.38	132	P	P	16 02 22.7 +1.5
GHWR	Ruwais	62.42	286	P	P	16 02 21.7 +0.2
GHWR				P	P	16 02 21.7 +0.2
GHWR				P	P	16 02 21.7 +0.2
ONTNC	Ouen Toro	62.54	132	P	P	16 02 23.4 +1.2
ONTNC				IAmb	IAmb	16 02 41.4
	comp=Z,83nm,1.0s					
ANM	Nome	62.61	28	P	P	16 02 23.4 +1.3
ANM				IAmb	IAmb	16 04 20.4
	comp=Z,157nm,1.4s					
ANM				IAMs_20	IAMs_20	16 32 33.8
	comp=Z,2μm,18.0s					
ANM	Nome	62.61	28	P	P	16 02 23.4 +1.3
ANM				pmax	pmax	
	comp=Z,157nm,1.4s					
ANM				MLR	MLR	
	comp=Z,2μm,18.0s					
ANM	Nome	62.61	28	P	P	16 02 22.9 +0.8
	baz=265					
BELG	Belogornoye	62.65	318	LR	LR	16 31 50.9
	comp=Z,4μm,19.1s,baz=82,slow=38					
BELG	Belogornoye	62.65	318	*c i* P	P	16 02 22.4 -0.1
BELG				pmax	pmax	
	comp=Z,57nm,1.0s					
BELG				MLR	MLR	
	comp=Z,501nm,18.0s					
YATNC	Mamie plateau,	62.67	132	P	P	16 02 24.7 +1.6
DOK	Doka	62.68	280	P	P	16 02 24.1 +0.8
	SNR=7.3					
DOK				P	P	16 02 24.1 +0.8
	SNR=7.3					
OUENC	Ouen Island, N	62.88	132	P	P	16 02 26.1 +1.6
OUENC				IAmb	IAmb	16 02 27.0
	comp=Z,96nm,1.0s					
OUENC	Ouen Island, N	62.88	132	P	P	16 02 26.3 +1.9
RBK	Rabkut	62.92	279	P	P	16 02 27.0 +2.0
	SNR=17					
RBK				P	P	16 02 27.0 +2.0
	SNR=17					
WHFO	Wadi Hawf	63.20	279	P	P	16 02 28.0 +1.1
	SNR=10.0					
WHFO				P	P	16 02 28.0 +1.1
	SNR=10.0					
WHFO				P	P	16 02 28.0 +1.1
	SNR=10.0					
CAN	Canberra	63.23	155	P	P	16 02 27.4 +0.8
CAN				IAmb	IAmb	16 02 30.3
	comp=Z,162nm,1.1s					
CAN	Canberra	63.23	155	P	P	16 02 27.4 +0.8
CAN				pmax	pmax	
	comp=Z,162nm,1.1s					
CAN	Canberra	63.23	155	P	P	16 02 27.8 +1.2
CNB	Canberra Magne	63.37	155	P	P	16 02 28.3 +0.7
MAK	Makhachkala	63.46	308	*e*P	P	16 02 25.6 -2.5
MAK				*e*PPP	PPP	16 06 14.2
MAK				*e*S	S	16 10 56.6 -3.2
MAK				*e*SS	SS	16 15 03.0 -3.7
MAK				*e*SSS	SSS	16 18 00.2
MAK				pmax	pmax	
	comp=Z,199nm,1.2s					
MAK				MLR	MLR	
	comp=Z,3μm,14.0s					
SHMA	Al-Shehemyia	63.66	289	P	P	16 02 30.6 +0.9
PRGR	Permogore	63.67	329	⇑ *i* P	P	16 02 29.0 -0.1
PRGR				*e*		16 03 02.9
PRGR				*e*S	S	16 10 58.7 -3.1
PRGR				pmax	pmax	
	comp=Z,193nm,0.8s					
ABTO	Aybut	63.80	279	P	P	16 02 32.0 +1.2
	SNR=11					
ABTO				P	P	16 02 32.0 +1.2
	SNR=11					
ABTO				P	P	16 02 32.0 +1.2
	SNR=11					
RDOG	Red Dog Mine	63.89	24	P	P	16 02 31.0 +0.4
	baz=266					
TOO	Toolangi	63.97	159	P	P	16 02 32.2 +0.8
TOO	Toolangi	63.97	159	P	P	16 02 32.2 +0.8
TOO				pmax	pmax	
	comp=Z,411nm,1.2s					
TOO	Toolangi	63.97	159	P	P	16 02 32.6 +1.2
SMRA	Abu-Samra	64.05	287	P	P	16 02 33.5 +1.3
GROC	Groznyy	64.67	308	*e*P	P	16 02 35.3 -0.7
GROC				*e*		16 03 07.4
GROC				*e*		16 04 58.6
GROC				*e*S	S	16 11 16.4 +1.6
GROC				pmax	pmax	
	comp=Z,515nm,1.1s					
LHI	Lord Howe Isla	64.75	145	P	P	16 02 37.2 +0.6
MILA	Mila	64.82	156	P	P	16 02 38.3 +1.3
SDPT	Sand Point	65.00	38	P	P	16 02 38.3 +0.4
	baz=274					
CHNA	Chernabura Isl	65.55	39	P	P	16 02 41.9 +0.4
	baz=275					
CNBA	Chernabura Isl	65.55	39	P	P	16 02 41.3 -0.2
CNBA				IAmb	IAmb	16 02 42.1
	comp=Z,116nm,0.9s					
N16K	Nishlik Lake	65.61	32	P	P	16 02 42.9 +1.0
	baz=273,SNR=14					
GNI	Garni	65.92	305	LR	LR	16 36 26.3
	comp=Z,2μm,19.0s,baz=82,slow=40					
GNI	Garni	65.92	305	P	P	16 02 45.6 +1.2
GNI	Garni	65.92	305	IAMs_20	IAMs_20	16 36 14.1
	comp=Z,2μm,19.0s					
GNI	Garni	65.92	305	*c i* P	P	16 02 46.0 +1.6
GNI				pmax	pmax	
	comp=Z,260nm,1.2s					
GNI				MLR	MLR	
	comp=Z,2μm,22.0s					
GNI	Garni	65.92	305	P	P	16 02 46.5 +2.1
GNI				P	P	16 02 46.5 +2.1
GNI	Garni	65.92	305	P	P	16 02 46.1 +1.6
O16K	Kokwok River B	66.00	33	P	P	16 02 45.2 +0.8
	baz=274,SNR=8.6					
CHGN	Chignik	66.08	37	P	P	16 02 45.7 +0.7
	baz=275					
P16K	Nushagak River	66.09	34	P	P	16 02 45.7 +0.8
	baz=274					
ZEI	Tsey	66.11	308	*e*P	P	16 02 42.0 -3.6
ZEI				pmax	pmax	
	comp=Z,315nm,1.3s					
A21K	Barrow	66.21	20	P	P	16 02 46.6 +1.1
A21K	Barrow	66.21	20	P	P	16 02 45.8 +0.3
	baz=270,SNR=8.9					
GCSA	Galena City Sc	66.27	28	P	P	16 02 46.7 +0.7
	baz=273,SNR=9.5					
GOF	Gofitskoye	66.36	311	⇓ *i* P	P	16 02 47.9 +0.9
GOF				*e*S	S	16 11 37.5 +2.0
GOF				pmax	pmax	
	comp=Z,311nm,1.0s					
VRH	Novokhopyorsk	66.39	318	*e*P	P	16 02 46.7 -0.3
VRH				*e*		16 02 47.2
VRH				*e*S	S	16 11 30.7 -4.9
VRH				pmax	pmax	
	comp=Z,380nm,0.8s					
VRH				smax	smax	
	comp=E,480nm,9.1s					
VRH				MLR	MLR	
	comp=Z,4μm,18.0s					
R16K	Pilot Point	66.43	35	P	P	16 02 48.2 +1.0
	baz=275					
ONI	Oni	66.46	308	P	P	16 02 49.1 +1.3
ONI	Oni	66.46	308	P	P	16 02 49.1 +1.3
ONI				pmax	pmax	
	comp=Z,260nm,1.2s					
O17K	Koliganek Bris	66.49	33	P	P	16 02 47.7 +0.3
	baz=275,SNR=6.7					
KLMR	Klimovskoe	66.64	328	*c i* P	P	16 02 48.1 -0.4
KLMR				*e*		16 03 17.6
KLMR				*e*S	S	16 11 35.1 -3.2
KLMR				pmax	pmax	
	comp=Z,340nm,1.0s					
KLMR				MLR	MLR	
	comp=Z,11μm,15.0s					
KLMR	Klimovskoe	66.64	328	⇑ *i* P	P	16 02 48.2 -0.3
KLMR				*e*P	P	16 02 48.2 -0.3
KLMR				⇓ *i* P	P	16 02 48.2 -0.3
KLMR				AMP		16 02 49.5
	comp=Z,340nm,1.0s					
KLMR				*e*PcP	PcP	16 03 17.7 +0.2
KLMR				*e*S	S	16 11 35.2 -3.1
KLMR				*e*S	S	16 11 35.2 -3.1
KLMR				LQ	LQ	16 25 24.1
KLMR				LQ	LQ	16 25 24.1
KLMR				LR	LR	16 28 40.8
KLMR				AMP		16 34 24.8
	comp=Z,11μm,15.4s					
KBZ	Khabaz	66.68	309	P	P	16 02 50.0 +1.1
	comp=Z,154nm,0.9s,baz=89,slow=5.7,SNR=117					
KBZ				LR	LR	16 36 10.7
	comp=Z,2μm,18.7s,baz=68,slow=40					
	comp=Z,154nm,0.9s					
KBZ	Khabaz	66.68	309	*c i* P	P	16 02 49.8 +0.8
KBZ				pmax	pmax	
	comp=Z,148nm,1.0s					
KBZ				MLR	MLR	
	comp=Z,3μm,19.0s					
TTA	Tatalina	66.76	30	P	P	16 02 49.6 +0.3
TTA	Tatalina	66.76	30	P	P	16 02 49.6 +0.3
TTA				pmax	pmax	
	comp=Z,53nm,1.0s					
TTA	Tatalina	66.76	30	P	P	16 02 49.8 +0.5
	baz=274,SNR=16					
KIV	Kislovodsk	66.79	310	⇑ P	P	16 02 51.3 +1.5
KIV	Kislovodsk	66.79	310	P	P	16 02 50.2 +0.4
KIV				IAMs_20	IAMs_20	16 36 19.0
	comp=Z,3μm,18.0s					
KIV	Kislovodsk	66.79	310	*e*P	P	16 02 51.0 +1.1
KIV				*e*		16 05 18.0
KIV				*e*S	S	16 11 43.2 +2.3
KIV				*e*SS	SS	16 16 01.0 +2.3
KIV				pmax	pmax	
	comp=Z,298nm,1.0s					
KIV				pmax	pmax	
	comp=Z,306nm,4.6s					
KIV				MLR	MLR	
	comp=Z,2μm,17.0s					
KIV	Kislovodsk	66.79	310	P	P	16 02 51.3 +1.5
KIV				P	P	16 02 51.3 +1.5
KIV	Kislovodsk	66.79	310	*i* P	P	16 02 50.9 +1.0
	SNR=67					
Q16K	King Salmon	66.81	34	P	P	16 02 50.1 +0.6
	baz=276,SNR=7.8					
P17K	Kvichak River	66.87	34	P	P	16 02 50.7 +0.8
	baz=276					
NEY	Neytrino	66.88	309	*de*P	P	16 02 52.7 +2.1
NEY				pmax	pmax	
	comp=Z,17nm,0.8s					
NEY				MLR	MLR	
	comp=Z,2μm,16.0s					
N18K	Kilae Creek	67.01	32	IAmb	IAmb	16 02 53.4
	comp=Z,76nm,1.4s					
N18K	Kilae Creek	67.01	32	P	P	16 02 51.6 +0.8
	baz=275,SNR=8.6					
R17K	Ugashik Creek	67.06	35	P	P	16 02 50.2 -1.0
	baz=276					
Q17K	Contact Creek	67.25	35	P	P	16 02 51.5 -1.0
	baz=276,SNR=8.6					
L19K	White Mountain	67.36	30	IAmb	IAmb	16 02 59.8
	comp=Z,129nm,1.2s					
L19K	White Mountain	67.36	30	P	P	16 02 54.1 +1.0
	baz=276,SNR=34					
O18K	Koktuh Hills	67.43	33	P	P	16 02 54.5 +1.0
	baz=276					
P18K	Big Mountain,	67.47	33	IAmb	IAmb	16 02 55.6
	comp=Z,86nm,1.1s					
P18K	Big Mountain,	67.47	33	P	P	16 02 54.0 +0.2
	baz=276,SNR=11					
J20K	Nowinta River	67.49	28	P	P	16 02 54.4 +0.6
J20K				IAmb	IAmb	16 02 56.5
	comp=Z,79nm,1.0s					
J20K				IAMs_20	IAMs_20	16 35 08.8
	comp=Z,2μm,19.0s					
J20K	Nowinta River	67.49	28	P	P	16 02 54.9 +1.1
	baz=275,SNR=34					
F21K	Alatna River	67.50	25	P	P	16 02 54.1 +0.3
	baz=275,SNR=20					

G21K	Allakaket	67.55	26	P	P	16 02 54.2	0.0
	baz=275,SNR=48						
K20K	Telida	67.60	29	P	P	16 02 55.7	+1.1
K20K				IAmb	IAmb	16 02 57.4	
	comp=Z,66nm,1.0s						
K20K				IAMs_20	IAMs_20	16 35 54.8	
	comp=Z,2μm,20.0s						
K20K	Telida	67.60	29	P	P	16 02 55.8	+1.3
	baz=276,SNR=29						
M19K	Big River Lodg	67.61	31	IAmb	IAmb	16 02 57.4	
	comp=Z,67nm,1.0s						
M19K				IAMs_20	IAMs_20	16 36 49.8	
	comp=Z,2μm,19.0s						
M19K	Big River Lodg	67.61	31	P	P	16 02 55.2	+0.6
	baz=276						
Q18K	Katmai Hardscr	67.67	34	P	P	16 02 54.7	-0.4
	baz=277,SNR=10						
N19K	Bonanza Creek	67.68	32	IAmb	IAmb	16 02 58.7	
	comp=Z,45nm,0.8s						
N19K	Bonanza Creek	67.68	32	P	P	16 02 56.0	+0.8
	baz=276,SNR=16						
CHIR	Chirikof Islan	67.69	37	IAmb	IAmb	16 02 56.8	
	comp=Z,127nm,1.1s						
CHIR	Chirikof Islan	67.69	37	P	P	16 02 55.6	+0.4
	baz=278						
L20K	Farewell, AK	67.78	30	P	P	16 02 56.7	+1.0
	baz=276,SNR=14						
O19K	Port Alsworth	67.83	32	IAmb	IAmb	16 02 58.2	
	comp=Z,123nm,1.1s						
O19K	Port Alsworth	67.83	32	P	P	16 02 56.6	+0.6
	baz=277,SNR=11						
VORR	Voronezh	67.89	318	*e*P	P	16 02 56.9	+0.4
VORR				pmax	pmax		
	comp=Z,340nm,0.7s						
H21K	Melozitna Rive	67.91	26	P	P	16 02 57.9	+1.4
H21K				IAmb	IAmb	16 02 59.0	
	comp=Z,103nm,1.0s						
H21K				IAMs_20	IAMs_20	16 36 29.9	
	comp=Z,2μm,18.0s						
H21K	Melozitna Rive	67.91	26	P	P	16 02 57.7	+1.2
	baz=276,SNR=77						
LPSR	Galich'ya Gora	67.92	319	*e*P	P	16 02 57.0	+0.3
LPSR				*e*		16 02 57.0	
LPSR				*e*S	S	16 11 47.8	-6.2
LPSR				pmax	pmax		
	comp=Z,380nm,0.8s						
LPSR				smax	smax		
	comp=E,1μm,14.2s						
LPSR				MLR	MLR		
	comp=Z,1μm,11.0s						
F22K	John River	67.97	24	P	P	16 02 57.8	+1.0
	baz=276,SNR=61						
VSR	Storozhevoye	67.98	318	*e*P	P	16 02 56.5	-0.6
VSR				*e*		16 02 57.2	
VSR				*e*S	S	16 11 51.6	-3.2
VSR				pmax	pmax		
	comp=Z,270nm,0.9s						
VSR				smax	smax		
	comp=E,440nm,8.3s						
VSR				MLR	MLR		
	comp=Z,4μm,17.0s						
E22K	Anaktuvuk Pass	68.05	24	P	P	16 02 57.7	+0.3
	baz=276,SNR=115						
LVZ	Lovozero	68.10	336	P	P	16 02 57.6	0.0
LVZ				IAmb	IAmb	16 03 06.8	
	comp=Z,76nm,1.0s						
LVZ	Lovozero	68.10	336⇓	*e*P	P	16 02 58.0	+0.4
LVZ				pmax	pmax		
	comp=Z,56nm,1.1s						
LVZ				MLR	MLR		
	comp=Z,5μm,15.0s						
M20K	Styx River	68.20	31	IAmb	IAmb	16 03 01.1	
	comp=Z,66nm,1.1s						
M20K	Styx River	68.20	31	P	P	16 02 58.8	+0.3
	baz=277,SNR=22						
MOS	Moscow	68.22	323	*e*P	P	16 02 56.8	-1.7
MOS				*e*		16 03 22.5	
MOS				*e*S	S	16 11 53.6	-3.8
MOS				*e*		16 12 50.1	
MOS				pmax	pmax		
	comp=Z,328nm,0.8s						
MOS				pmax	pmax		
	comp=Z,400nm,1.0s						
MOS				smax	smax		
	comp=N,1μm,3.2s						
MOS				smax	smax		
	comp=E,600nm,3.2s						
MOS				MLR	MLR		
	comp=Z,5μm,18.0s						
GURO	Guroymak-BITLI	68.28	304	IAmb	IAmb	16 03 05.8	
	comp=Z,104nm,1.1s						
C23K	Itkillik River	68.30	22	P	P	16 02 59.2	+0.5
	baz=276,SNR=33						
I21K	Tanana	68.31	27	IAmb	IAmb	16 03 01.6	
	comp=Z,78nm,1.1s						
I21K	Tanana	68.31	27	P	P	16 02 59.9	+1.0
	baz=277,SNR=17						
CHUM	Lake Minchumin	68.32	28	P	P	16 02 59.2	+0.1
	baz=277,SNR=12						
MSVF	Nonsavu	68.32	121	LR	LR	16 27 27.0	
	comp=Z,3μm,21.9s,baz=299,slow=31						
MSVF	Nonsavu	68.32	121*c*	*i*P	P	16 03 01.5	+1.7
MSVF				pmax	pmax		
	comp=Z,172nm,1.0s						
MSVF	Nonsavu	68.32	121	P	P	16 03 02.3	+2.5
Q19K	Cape Douglas,	68.34	34	IAmb	IAmb	16 02 59.9	
	comp=Z,107nm,1.0s						
Q19K	Cape Douglas,	68.34	34	P	P	16 02 58.3	-0.9
	baz=278						
D23K	Nanushuk River	68.37	23	P	P	16 03 00.5	+1.2
	baz=277,SNR=111						
SII	Sitkinak Islan	68.39	36	P	P	16 02 59.7	+0.1
SII				IAmb	IAmb	16 03 01.0	
	comp=Z,90nm,0.9s						
SII	Sitkinak Islan	68.39	36	P	P	16 02 60.0	+0.4
	baz=278,SNR=6.0						
P19K	Oil Pt	68.45	33	IAmb	IAmb	16 03 01.1	
	comp=Z,76nm,0.9s						
P19K	Oil Pt	68.45	33	P	P	16 03 00.1	+0.2
	baz=278,SNR=8.3						
H22K	Ishtalitna Cre	68.47	26	P	P	16 03 01.3	+1.3
	baz=277,SNR=71						
CAST	Castle Rocks	68.48	29	IAmb	IAmb	16 03 02.4	
	comp=Z,95nm,1.0s						
CAST	Castle Rocks	68.48	29	P	P	16 03 00.9	+0.8
	baz=278,SNR=73						
PPLA	Purkeypile	68.51	29	IAmb	IAmb	16 03 31.2	
	comp=Z,80nm,1.1s						
PPLA	Purkeypile	68.51	29	P	P	16 03 01.0	+0.6
	baz=278,SNR=14						
APA	Apatity	68.61	336⇓	*i*P	P	16 02 59.2	-1.6
APA				*i*		16 03 30.0	
APA				*i*		16 05 37.0	
APA				*i* PPP	PPP	16 07 16.0	
APA				*i* S	S	16 11 58.0	-3.7
APA				pmax	pmax		
	comp=Z,110nm,0.9s						
APA				MLR	MLR		
	comp=Z,7μm,14.0s						
O20K	Slope Mountain	68.69	32	P	P	16 03 01.6	+0.1
	baz=278						
N20K	Mount Spurr	68.73	31	P	P	16 03 01.8	+0.1
	baz=278,SNR=27						
SPCR	Spurr Chakacha	68.73	31	P	P	16 03 02.4	+0.7
	baz=278,SNR=21						
COLD	Coldfoot	68.77	25	P	P	16 03 02.6	+0.9
	baz=278,SNR=26						
OHAK	Old Harbor	68.77	36	P	P	16 03 02.0	0.0
OHAK				IAmb	IAmb	16 03 13.8	
	comp=Z,100nm,1.0s						
OHAK	Old Harbor	68.77	36	P	P	16 03 01.9	0.0
	baz=279,SNR=20						
TOLK	Toolik Lake Re	68.81	23	IAmb	IAmb	16 03 04.2	
	comp=Z,67nm,1.0s						
TOLK				IAMs_20	IAMs_20	16 33 33.5	
	comp=Z,3μm,22.0s						
TOLK	Toolik Lake Re	68.81	23	P	P	16 03 02.9	+0.8
	baz=278,SNR=35						
MLY	Manley	68.85	27	IAmb	IAmb	16 03 06.8	
	comp=Z,86nm,1.0s						
MLY	Manley	68.85	27	P	P	16 03 03.0	+0.6
	baz=278,SNR=51						
BPAW	Bear Paw Mtn.	68.88	28	IAmb	IAmb	16 03 04.7	
	comp=Z,85nm,1.1s						
BPAW	Bear Paw Mtn.	68.88	28	P	P	16 03 03.2	+0.7
	baz=278,SNR=25						
E23K	Chandalar	68.88	24	P	P	16 03 03.2	+0.6
	baz=278,SNR=55						
G23K	Bananza Creek	68.91	25	P	P	16 03 03.7	+1.0
	baz=278,SNR=45						
OBN	Obninsk	68.91	322	⇑P	P	16 03 03.3	+0.5
OBN	Obninsk	68.91	322	LR	LR	16 36 33.7	
	comp=Z,1μm,19.0s,baz=70,slow=39						
OBN	Obninsk	68.91	322	P	P	16 03 02.4	-0.4
OBN	Obninsk	68.91	322*c*	*i*P	P	16 03 02.3	-0.5
OBN				*i*		16 03 06.4	
OBN				*i*		16 03 25.1	
OBN				*i* S	S	16 11 58.2	-7.4
OBN				pmax	pmax		
	comp=Z,169nm,1.0s						
OBN				MLR	MLR		
	comp=Z,4μm,18.0s						
SKT	Skwentna	68.94	30	IAmb	IAmb	16 03 05.7	
	comp=Z,54nm,1.0s						
SKT	Skwentna	68.94	30	P	P	16 03 03.1	+0.2
	baz=279,SNR=24						
C24K	Franklin Bluff	68.97	22	P	P	16 03 03.7	+0.7
	baz=278						
SOC	Sochi	68.97	310	*e*P	P	16 03 02.4	-1.1
SOC				*e*		16 05 36.0	
SOC				*e*S	S	16 12 06.9	+0.1
SOC				pmax	pmax		
	comp=Z,79nm,0.6s						
SOC				MLR	MLR		
	comp=Z,3μm,20.0s						
KTH	Kantishna Hill	68.98	29	IAmb	IAmb	16 03 06.7	
	comp=Z,48nm,0.9s						
KTH				IAMs_20	IAMs_20	16 36 06.2	
	comp=Z,2μm,20.0s						
D24K	Happy Valley	69.01	23	P	P	16 03 03.9	+0.7
	baz=278						
Q20K	Shuyak Island	69.03	34	P	P	16 03 03.0	-0.5
	baz=279,SNR=27						
RAYN	Ar Rayn	69.06	288	P	P	16 03 04.3	0.0
RAYN	Ar Rayn	69.06	288	P	P	16 03 04.4	0.0
RAYN				pmax	pmax		
	comp=Z,317nm,1.4s						
RAYN				MLR	MLR		
	comp=Z,4μm,20.0s						
RAYN	Ar Rayn	69.06	288	P	P	16 03 05.3	+0.9
RAYN	Ar Rayn	69.06	288	*i* P	P	16 03 04.6	+0.2
	SNR=164						
KDAK	Kodiak Island	69.06	35	P	P	16 03 03.7	0.0
	comp=Z,76nm,0.8s,baz=321,slow=2.9,SNR=87						
	comp=Z,76nm,0.8s						
KDAK	Kodiak Island	69.06	35	P	P	16 03 03.5	-0.2
KDAK				IAmb	IAmb	16 03 05.2	
	comp=Z,116nm,0.9s						
KDAK	Kodiak Island	69.06	35	P	P	16 03 03.5	-0.2
KDAK				pmax	pmax		
	comp=Z,116nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,1μm,18.0s						
KDAK	Kodiak Island	69.06	35	P	P	16 03 03.7	0.0
	baz=279						
KOPT	Kop Dagi	69.14	306	IAmb	IAmb	16 03 12.6	
	comp=Z,165nm,1.2s						
H23K	Yukon River	69.23	26	IAmb	IAmb	16 03 07.5	
	comp=Z,122nm,1.1s						
H23K	Yukon River	69.23	26	P	P	16 03 05.9	+1.2
	baz=279,SNR=97						
HOM	Homer	69.24	33	P	P	16 03 04.9	+0.1
	baz=279						
TRF	Thorofare Moun	69.28	29	P	P	16 03 05.2	0.0
TRF	Thorofare Moun	69.28	29	P	P	16 03 04.9	-0.3
	baz=279,SNR=21						
E24K	Your Creek	69.29	24	P	P	16 03 05.6	+0.6
	baz=279,SNR=86						
CAPN	Captain Cook N	69.31	32	IAMs_20	IAMs_20	16 31 15.9	
	comp=Z,2μm,19.0s						
SUA	Susitna One	69.39	31	P	P	16 03 05.6	-0.3
	baz=279,SNR=23						
TAU	Tasmania Unive	69.39	160	P	P	16 03 06.6	+0.8
TAU	Tasmania Unive	69.39	160	P	P	16 03 06.6	+0.8
TAU				pmax	pmax		
	comp=Z,492nm,1.3s						
TAU	Tasmania Unive	69.39	160	P	P	16 03 07.7	+1.9
I23K	Minto, Yukon-K	69.41	27	IAmb	IAmb	16 03 10.1	
	comp=Z,103nm,1.3s						
I23K	Minto, Yukon-K	69.41	27	P	P	16 03 05.9	+0.2
	baz=279,SNR=41						
CUT	Chulitna	69.46	30	P	P	16 03 06.0	-0.1
CUT				IAMs_20	IAMs_20	16 37 07.9	
	comp=Z,2μm,18.0s						
CUT	Chulitna	69.46	30	P	P	16 03 05.8	-0.3
	baz=280,SNR=18						
KTUT	Trabzon	69.47	307	⇑P	P	16 03 07.3	+0.7
MARD	Mardin	69.52	303	P	P	16 03 07.5	+0.4
BWN	Browne	69.52	28	IAmb	IAmb	16 03 38.2	
	comp=Z,124nm,1.2s						
BRLK	Bradley Lake	69.60	33	IAmb	IAmb	16 03 11.8	
	comp=Z,63nm,0.9s						
F24K	Squaw Lake	69.61	24	P	P	16 03 07.7	+0.7
	baz=280,SNR=78						
NEA2	Nenana	69.62	27	P	P	16 03 07.2	+0.1
NEA2				IAmb	IAmb	16 03 08.9	
	comp=Z,93nm,1.0s						
NEA2	Nenana	69.62	27	P	P	16 03 07.5	+0.3
	baz=280,SNR=58						
M22K	Willow	69.63	30	P	P	16 03 06.7	-0.5
	baz=280,SNR=26						
BRSE	Bradley Lake S	69.68	33	P	P	16 03 06.8	-0.8
	baz=280,SNR=18						
MCK	McKinley	69.83	28	IAmb	IAmb	16 03 13.2	
	comp=Z,104nm,1.0s						
MCK				IAMs_20	IAMs_20	16 34 01.6	
	comp=Z,2μm,21.0s						
MCK	McKinley	69.83	28	P	P	16 03 08.5	+0.1
	baz=280,SNR=44						
D25K	Kavik River	69.84	22	P	P	16 03 08.4	0.0
	baz=280,SNR=27						
MSEY	Mahe Island	69.88	256	P	P	16 03 10.1	+0.5
MSEY				IAmb	IAmb	16 03 21.2	
	comp=Z,135nm,1.2s						
MSEY	Mahe Island	69.88	256	P	P	16 03 10.1	+0.5
MSEY				pmax	pmax		
	comp=Z,135nm,1.3s						
MSEY				MLR	MLR		
	comp=Z,4μm,18.0s						
MSEY	Mahe Island	69.88	256	P	P	16 03 10.0	+0.5
MSEY				P	P	16 03 10.0	+0.5
MSEY	Mahe Island	69.88	256	*i* P	P	16 03 10.8	+1.2
	SNR=15						
H24K	Noodor Dome	69.90	26	IAmb	IAmb	16 03 11.4	
	comp=Z,80nm,1.1s						
H24K	Noodor Dome	69.90	26	P	P	16 03 09.4	+0.5
	baz=280,SNR=42						
G24K	Hadweenzic Riv	69.91	25	P	P	16 03 09.3	+0.5
	baz=280,SNR=57						
MDM	Murphy Dome	69.91	27	P	P	16 03 09.1	+0.2
MDM				IAmb	IAmb	16 03 11.5	
	comp=Z,148nm,1.1s						
RND	Reindeer	69.92	29	IAmb	IAmb	16 03 12.2	
	comp=Z,102nm,0.9s						
RC01	Rabbit Creek A	69.93	31	IAMs_20	IAMs_20	16 38 25.4	
	comp=Z,2μm,18.0s						
RC01	Rabbit Creek A	69.93	31	P	P	16 03 08.7	-0.4
	baz=280,SNR=7.1						
O22K	Cooper Landing	70.05	32	P	P	16 03 09.2	-0.6
	baz=281,SNR=8.5						
WRH	Wood River Hil	70.06	27	P	P	16 03 09.8	0.0
WRH				IAmb	IAmb	16 03 12.2	
	comp=Z,71nm,1.2s						
WRH				IAMs_20	IAMs_20	16 36 07.7	
	comp=Z,1μm,18.0s						
TCOL	CIGO, UAF Yank	70.08	27	P	P	16 03 09.7	-0.2
	baz=281						
COLA	College	70.09	27	P	P	16 03 09.8	-0.1
COLA	College	70.09	27*c*	*e*P	P	16 03 10.2	+0.3
COLA				pmax	pmax		
	comp=Z,35nm,0.9s						
COLA	College	70.09	27	P	P	16 03 09.8	-0.1
	baz=281						
PMR	Palmer	70.13	31	IAmb	IAmb	16 03 12.8	
	comp=Z,58nm,0.9s						
PMR	Palmer	70.13	31	P	P	16 03 10.0	-0.2
	baz=281,SNR=13						
CCB	Clear Creek Bu	70.15	27	P	P	16 03 09.4	-0.9
WAT1	Susitna Watana	70.16	29	P	P	16 03 10.0	-0.6
	baz=281						
POKR	Poker Plat Res	70.22	27	IAmb	IAmb	16 03 13.4	
	comp=Z,77nm,1.0s						
POKR	Poker Plat Res	70.22	27	P	P	16 03 10.7	0.0
	baz=281,SNR=16						
C26K	Camden Bay	70.23	21	P	P	16 03 11.4	+0.7
	baz=282,SNR=20						
SEW	Seward	70.25	32	P	P	16 03 10.2	-0.9
SEW				IAmb	IAmb	16 03 16.9	
	comp=Z,89nm,1.0s						
SEW	Seward	70.25	32	P	P	16 03 10.5	-0.5
	baz=281,SNR=26						
ANN	Anapa	70.33	311	*i* P	P	16 03 11.7	-0.1
E25K	Arctic Village	70.36	23	P	P	16 03 12.2	+0.6
	baz=282,SNR=33						
G25K	Bearman Lake	70.43	25	P	P	16 03 13.2	+1.2
	baz=282,SNR=37						
F25K	Christian Rive	70.44	24	P	P	16 03 13.0	+0.9
	baz=282,SNR=76						
SML	Sawmill	70.46	30	IAmb	IAmb	16 03 15.3	
	comp=Z,94nm,1.0s						
SML				IAMs_20	IAMs_20	16 38 00.4	
	comp=Z,2μm,18.0s						
SML	Sawmill	70.46	30	P	P	16 03 12.0	-0.4
	baz=281,SNR=36						
KNK	Knik Glacier	70.48	31	IAmb	IAmb	16 03 18.1	
	comp=Z,112nm,1.1s						
KNK	Knik Glacier	70.48	31	P	P	16 03 12.0	-0.4
	baz=281,SNR=43						
ILAR	Eielson Array	70.51	27	P	P	16 03 12.2	-0.3
	comp=Z,9.7nm,0.7s,baz=282,slow=4.5,SNR=30						
ILAR				PKP2bc		16 31 06.8	
	comp=Z,2.4nm,1.1s,baz=95,slow=1.2,SNR=10.0						
ILAR				LR	LR	16 38 14.2	
	comp=Z,856nm,18.2s,baz=285,slow=39						
	comp=Z,9.7nm,0.7s						
KEV	Kevo	70.55	338	P	P	16 03 12.3	-0.4
KEV				IAmb	IAmb	16 03 14.0	
	comp=Z,69nm,0.9s						
KEV	Kevo	70.55	338	P	P	16 03 12.3	-0.4
KEV				pmax	pmax		
	comp=Z,69nm,0.9s						
KEV				MLR	MLR		
	comp=Z,5μm,19.0s						
HDA	Harding Lake	70.56	27	IAMs_20	IAMs_20	16 38 06.9	
	comp=Z,1μm,18.0s						
HDA	Harding Lake	70.56	27	P	P	16 03 11.7	-1.2
	baz=282,SNR=42						
WAT6	Susitna Watana	70.58	29	P	P	16 03 12.7	-0.5
	baz=282,SNR=32						
DHY	Denali Highway	70.64	29	P	P	16 03 12.6	-1.0
DHY				IAMs_20	IAMs_20	16 34 08.1	
	comp=Z,2μm,21.0s						
DHY	Denali Highway	70.64	29	P	P	16 03 13.2	-0.4
	baz=282,SNR=16						
H25K	Birch Creek	70.64	25	P	P	16 03 14.6	+1.3
	baz=282,SNR=26						
PWL	Port Wells	70.65	31	IAmb	IAmb	16 03 16.6	
	comp=Z,104nm,0.8s						
PWL				IAMs_20	IAMs_20	16 36 20.4	
	comp=Z,2μm,21.0s						
PWL	Port Wells	70.65	31	P	P	16 03 13.2	-0.3
	baz=282,SNR=53						
C27K	Jago River	70.70	22	P	P	16 03 14.4	+0.7
	baz=283,SNR=56						
M23K	Glacier View	70.75	30	P	P	16 03 13.6	-0.4
	baz=282,SNR=48						
FYU	Fort Yukon	70.81	25	IAmb	IAmb	16 03 17.4	
	comp=Z,158nm,1.4s						
PRP	Porcupine Dome	70.92	26	P	P	16 03 14.0	-1.3
PRP	Porcupine Dome	70.92	26	P	P	16 03 15.9	+0.6
	baz=282,SNR=24						
SCM	Sheep Creek Mo	70.92	30	P	P	16 03 15.1	-0.1
SCM				IAMs_20	IAMs_20	16 38 12.5	
	comp=Z,1μm,18.0s						
SCM	Sheep Creek Mo	70.92	30	P	P	16 03 15.1	-0.1
SCM				pmax	pmax		
	comp=Z,171nm,1.0s						
SCM				MLR	MLR		
	comp=Z,1μm,18.0s						
SCM	Sheep Creek Mo	70.92	30	P	P	16 03 15.4	+0.2
	baz=282,SNR=53						
F26K	Sheenjek River	70.98	24	P	P	16 03 16.3	+0.9
	baz=283,SNR=78						
SPA0	Spitsbergen Ar	71.09	348	*e*P	P	16 03 16.1	+0.2
SPA0				IAmb	IAmb	16 03 18.0	
	comp=Z,122nm,0.9s						
SPITS	Spitsbergen Ar	71.09	348	P	P	16 03 15.2	-0.7
	comp=Z,65nm,0.8s,baz=84,slow=7.6,SNR=28						
SPITS				LR	LR	16 39 27.9	
	comp=Z,4μm,19.0s,baz=36,slow=40						
	comp=Z,65nm,0.8s						
ARA0	ARCESS Array S	71.11	338	*e*P	P	16 03 16.6	+0.5
ARA0				IAmb	IAmb	16 03 17.7	
	comp=Z,47nm,0.8s						
ARCES	ARCESS Array B	71.11	338	P	P	16 03 16.3	+0.2
	comp=Z,35nm,0.8s,baz=70,slow=7.7,SNR=45						
ARCES				LR	LR	16 39 04.5	
	comp=Z,5μm,18.3s,baz=72,slow=40						
	comp=Z,35nm,0.8s						
J25K	Salcha River,	71.18	27	P	P	16 03 15.3	-1.4
	baz=283,SNR=21						
K24K	Donnelly Dome	71.19	28	P	P	16 03 16.5	-0.2
	baz=283,SNR=39						
GLI	Glacier Island	71.24	31	IAmb	IAmb	16 03 22.7	
	comp=Z,98nm,1.0s						
GLI	Glacier Island	71.24	31	P	P	16 03 17.2	+0.2
	baz=283,SNR=16						
G26K	Porcupine Rive	71.28	24	P	P	16 03 18.4	+1.2
	baz=284,SNR=77						
PUL	Pulkovo	71.33	328*c*	*i*P	P	16 03 18.1	+0.5
PUL				pmax	pmax		
	comp=Z,440nm,0.8s						
PUL				MLR	MLR		
	comp=Z,13μm,17.0s						
M24K	Tolsona, Glenn	71.39	30	P	P	16 03 18.7	+0.7
	baz=283,SNR=42						
HAMF	Hammerfest	71.44	340	*e*P	P	16 03 18.1	+0.1
HAMF				IAmb	IAmb	16 03 26.9	
	comp=Z,218nm,1.4s						
PAX	Paxson	71.51	29	P	P	16 03 18.8	0.0
PAX	Paxson	71.51	29	P	P	16 03 18.8	0.0
PAX				pmax	pmax		
	comp=Z,50nm,1.1s						
PAX	Paxson	71.51	29	P	P	16 03 18.6	-0.2
	baz=283,SNR=33						
FID	Port Fidalgo	71.56	31	IAmb	IAmb	16 03 22.0	
	comp=Z,109nm,1.0s						
RIDG	Independent Ri	71.61	28	IAmb	IAmb	16 03 22.5	
	comp=Z,72nm,1.1s						
RIDG				IAMs_20	IAMs_20	16 40 00.6	
	comp=Z,1μm,18.0s						
RIDG	Independent Ri	71.61	28	P	P	16 03 18.6	-0.7
	baz=284,SNR=18						
HIN	Hinchinbrook I	71.63	32	IAmb	IAmb	16 03 22.6	
	comp=Z,69nm,0.9s						
KBS	Kingsbay	71.64	349	P	P	16 03 19.2	0.0
KBS				IAmb	IAmb	16 03 21.7	
	comp=Z,154nm,1.5s						
KBS	Kingsbay	71.64	349⇑	*e*P	P	16 03 20.4	+1.2
KBS				pmax	pmax		
	comp=Z,53nm,1.0s						
KBS				MLR	MLR		
	comp=Z,19μm,16.0s						
KBS	Kingsbay	71.64	349	*e*P	P	16 03 19.8	+0.6
KBS				IAmb	IAmb	16 03 20.9	
	comp=Z,57nm,1.0s						
KBS	Kingsbay	71.64	349	*e*P	P	16 03 19.6	+0.4
KLU	Klutina	71.65	30	P	P	16 03 19.9	+0.3
KLU	Klutina	71.65	30	P	P	16 03 19.8	+0.2
	baz=284,SNR=34						
HSPB	Hornsund (broa	71.67	347	*e*P	P	16 03 19.8	+0.4
BJO1	Bjornoya	71.69	344	*e*P	P	16 03 18.9	-0.6
BJO1				IAmb	IAmb	16 03 20.0	
	comp=Z,80nm,0.8s						
HARP	HAARP	71.79	29	P	P	16 03 20.8	+0.4
	baz=284,SNR=18						
E27K	Coleen River	71.79	23	P	P	16 03 20.6	+0.3
	baz=285,SNR=54						
DIV	Divide	71.81	31	IAmb	IAmb	16 03 24.4	
	comp=Z,103nm,1.1s						
SCRK	Sand Creek	71.92	28	P	P	16 03 20.7	-0.6
SCRK	Sand Creek	71.92	28	P	P	16 03 20.9	-0.3
	baz=284,SNR=16						
Q23K	Middleton Isla	71.93	32	P	P	16 03 21.2	0.0
	baz=284						
I26K	Coal Creek Min	71.94	26	IAmb	IAmb	16 03 22.5	
	comp=Z,73nm,1.1s						
I26K				IAMs_20	IAMs_20	16 40 07.0	
	com

MID	**Middleton Isla**	**71.94**	**32**	IAmb	IAmb	16 03 24.9	
	comp=Z,204nm,1.2s						
EYAK	**Cordova Ski Ar**	**71.96**	**31**	P	**P**	**16 03 21.1**	**-0.3**
EYAK				IAmb	IAmb	16 03 23.3	
	comp=Z,88nm,1.2s						
EYAK	**Cordova Ski Ar**	**71.96**	**31**	P	**P**	**16 03 21.9**	**+0.5**
	baz=284,SNR=19						
J26L	**Joseph Creek**	**71.97**	**27**	P	**P**	**16 03 20.9**	**-0.6**
J26L				IAMs_20	IAMs_20	16 39 15.1	
	comp=Z,1μm,18.0s						
J26L	**Joseph Creek**	**71.97**	**27**	P	**P**	**16 03 20.7**	**-0.8**
	baz=284,SNR=45						
DOT	**Dot Lake**	**71.97**	**28**	IAmb	IAmb	16 03 25.3	
	comp=Z,95nm,1.4s						
KTK1	**Kautokeino**	**72.02**	**338**	*e*P	**P**	**16 03 22.0**	**+0.3**
KTK1				IAmb	IAmb	16 03 23.1	
	comp=Z,62nm,0.9s						
G27K	**Doyon Strip**	**72.14**	**24**	P	**P**	**16 03 23.1**	**+0.8**
	baz=286,SNR=52						
N25K	**Chitina, Valde**	**72.24**	**30**	P	**P**	**16 03 23.4**	**+0.3**
	baz=285,SNR=37						
H27K	**Steamboat Moun**	**72.34**	**25**	P	**P**	**16 03 24.4**	**+0.7**
	baz=286,SNR=37						
BMRM	**Bremner River**	**72.40**	**31**	IAmb	IAmb	16 03 27.8	
	comp=Z,104nm,0.9s						
BMRM	**Bremner River**	**72.40**	**31**	P	**P**	**16 03 24.2**	**+0.1**
	baz=285,SNR=56						
L26K	**Log Cabin Wild**	**72.44**	**28**	P	**P**	**16 03 24.5**	**+0.3**
L26K				IAMs_20	IAMs_20	16 35 45.6	
	comp=Z,2μm,20.0s						
L26K	**Log Cabin Wild**	**72.44**	**28**	P	**P**	**16 03 24.8**	**+0.5**
	baz=285,SNR=27						
I27K	**Kandik River**	**72.48**	**26**	P	**P**	**16 03 25.2**	**+0.7**
	baz=286,SNR=40						
RAGM	**Ragged Mountai**	**72.51**	**31**	IAmb	IAmb	16 03 28.4	
	comp=Z,121nm,1.2s						
RAGM				IAMs_20	IAMs_20	16 40 14.7	
	comp=Z,2μm,18.0s						
SIM	**Simferopol'**	**72.58**	**312**	*e*P	**P**	**16 03 25.5**	**+0.1**
SIM				*e*		16 03 43.0	
SIM				*e*		16 06 06.1	
SIM				*e*S	**S**	**16 12 50.2**	**+1.4**
SIM				pmax	pmax		
	comp=Z,281nm,0.9s						
SIM				pmax	pmax		
	comp=Z,80nm,15.0s						
SIM				MLR	MLR		
	comp=Z,2μm,18.1s						
DIKM	**Dikmen**	**72.62**	**308**	⇑P	**P**	**16 03 27.3**	**+1.6**
GLB	**Gilahina Butte**	**72.65**	**30**	IAmb	IAmb	16 03 31.2	
	comp=Z,88nm,0.9s						
K27K	**Chicken**	**72.72**	**27**	IAmb	IAmb	16 03 30.2	
	comp=Z,80nm,1.1s						
K27K				IAMs_20	IAMs_20	16 39 47.8	
	comp=Z,2μm,18.0s						
K27K	**Chicken**	**72.72**	**27**	P	**P**	**16 03 26.5**	**+0.7**
	baz=286						
HMT	**Hamilton**	**72.72**	**31**	P	**P**	**16 03 25.8**	**-0.2**
HMT				IAmb	IAmb	16 03 29.3	
	comp=Z,79nm,0.9s						
HMT				IAMs_20	IAMs_20	16 38 06.3	
	comp=Z,2μm,20.0s						
KAIM	**Kayak Island**	**72.75**	**32**	IAmb	IAmb	16 03 29.7	
	comp=Z,117nm,0.8s						
KAIM	**Kayak Island**	**72.75**	**32**	P	**P**	**16 03 26.4**	**+0.3**
	baz=285,SNR=14						
M26K	**Nabesna, AK**	**72.76**	**29**	IAmb	IAmb	16 03 30.1	
	comp=Z,102nm,0.9s						
M26K				IAMs_20	IAMs_20	16 39 39.2	
	comp=Z,1μm,18.0s						
M26K	**Nabesna, AK**	**72.76**	**29**	P	**P**	**16 03 26.5**	**+0.3**
	baz=286,SNR=86						
JETT	**Jettan, Norway**	**72.82**	**339**	*e*P	**P**	**16 03 26.7**	**+0.3**
JETT				IAmb	IAmb	16 03 27.7	
	comp=Z,174nm,0.9s						
VRDI	**Verde Repeater**	**72.87**	**30**	IAMs_20	IAMs_20	16 39 16.0	
	comp=Z,1μm,19.0s						
EGAK	**Eagle**	**72.89**	**26**	P	**P**	**16 03 26.8**	**-0.1**
EGAK	**Eagle**	**72.89**	**26**	P	**P**	**16 03 26.4**	**-0.5**
	baz=286,SNR=36						
BNN	**Bunyan**	**72.92**	**305**	P	**P**	**16 03 27.4**	**-0.3**
FINES	**FINESS Array B**	**72.95**	**330**	P	**P**	**16 03 27.2**	**0.0**
	comp=Z,196nm,0.8s,baz=83,slow=6.5,SNR=304						
FINES				LR	LR	16 39 27.6	
	comp=Z,6μm,19.4s,baz=74,slow=39						
	comp=Z,196nm,0.8s						
BERG	**Berg Lake**	**72.98**	**31**	P	**P**	**16 03 27.6**	**+0.2**
BERG				IAmb	IAmb	16 03 30.8	
	comp=Z,124nm,0.9s						
BERG				IAMs_20	IAMs_20	16 38 06.0	
	comp=Z,2μm,20.0s						
MCARA	**McCarthy VSAT**	**73.03**	**30**	IAmb	IAmb	16 03 32.3	
	comp=Z,100nm,1.0s						
MCARA	**McCarthy VSAT**	**73.03**	**30**	P	**P**	**16 03 28.0**	**+0.3**
	baz=286,SNR=48						
SUCK	**Suckling Hills**	**73.03**	**31**	P	**P**	**16 03 27.8**	**0.0**
SUCK				IAmb	IAmb	16 03 31.4	
	comp=Z,76nm,1.0s						
SUCK				IAMs_20	IAMs_20	16 40 19.3	
	comp=Z,2μm,18.0s						
L27K	**Beaver Creek,**	**73.10**	**28**	IAmb	IAmb	16 03 32.2	
	comp=Z,63nm,0.9s						
L27K				IAMs_20	IAMs_20	16 39 11.0	
	comp=Z,2μm,19.0s						
L27K	**Beaver Creek,**	**73.10**	**28**	P	**P**	**16 03 28.4**	**+0.2**
	baz=286,SNR=60						
BGLC	**Bering Glacier**	**73.25**	**31**	P	**P**	**16 03 29.9**	**+0.9**
	baz=286						
M27K	**Edge Creek, AK**	**73.27**	**29**	IAMs_20	IAMs_20	16 36 22.7	
	comp=Z,2μm,21.0s						
M27K	**Edge Creek, AK**	**73.27**	**29**	P	**P**	**16 03 29.3**	**0.0**
	baz=287,SNR=32						
TRO	**Tromso**	**73.29**	**339**	*e*P	**P**	**16 03 29.1**	**0.0**
TRO				IAmb	IAmb	16 03 30.1	
	comp=Z,53nm,1.1s						
TGL	**Tana Glacier**	**73.29**	**31**	IAmb	IAmb	16 03 32.5	
	comp=Z,61nm,0.9s						
TGL				IAMs_20	IAMs_20	16 36 04.3	
	comp=Z,2μm,20.0s						
WAX	**Waxell Ridge**	**73.37**	**31**	P	**P**	**16 03 28.8**	**-1.1**
WAX				IAmb	IAmb	16 03 33.2	
	comp=Z,80nm,0.9s						
WAX				IAMs_20	IAMs_20	16 34 01.3	
	comp=Z,2μm,21.0s						
BZK	**Bozkurt**	**73.44**	**309**	⇑P	**P**	**16 03 30.1**	**-0.4**
SNH	**Sunshine Point**	**73.45**	**31**	P	**P**	**16 03 30.4**	**+0.1**
SNH				IAmb	IAmb	16 03 33.9	
	comp=Z,107nm,0.8s						
SNH				IAMs_20	IAMs_20	16 38 19.5	
	comp=Z,2μm,19.0s						
VSU	**Vasula**	**73.45**	**327***c*	*i*P	**P**	**16 03 30.4**	**+0.2**
VSU				pmax	pmax		
	comp=Z,954nm,0.9s						
VSU				MLR	MLR		
	comp=Z,20μm,18.0s						
VSU	**Vasula**	**73.45**	**327**	*e*P	**P**	**16 03 31.0**	**+0.8**
ISLE	**Juniper Island**	**73.57**	**31**	IAmb	IAmb	16 03 36.9	
	comp=Z,73nm,1.0s						
ISLE				IAMs_20	IAMs_20	16 36 22.5	
	comp=Z,2μm,19.0s						
BVCY	**Beaver Creek**	**73.71**	**29**	P	**P**	**16 03 32.3**	**+0.4**
	baz=288						
KIP	**Kipapa**	**73.72**	**73**	P	**P**	**16 03 32.3**	**-0.2**
KIP				IAmb	IAmb	16 03 35.5	
	comp=Z,218nm,1.4s						
KIP	**Kipapa**	**73.72**	**73***de*	P	**P**	**16 03 34.6**	**+2.1**
KIP				pmax	pmax		
	comp=Z,99nm,1.1s						
DAWY	**Dawson**	**73.84**	**27**	P	**P**	**16 03 32.0**	**-0.6**
DAWY	**Dawson**	**73.84**	**27**	P	**P**	**16 03 32.4**	**-0.1**
	baz=288,SNR=43						
I29M	**Ogilvie Camp,**	**73.87**	**25**	IAMs_20	IAMs_20	16 40 38.2	
	comp=Z,2μm,19.0s						
I29M	**Ogilvie Camp,**	**73.87**	**25**	P	**P**	**16 03 32.7**	**0.0**
	baz=289,SNR=27						
MESA	**MESA**	**73.88**	**31**	IAMs_20	IAMs_20	16 36 43.7	
	comp=Z,1μm,19.0s						
MESA	**MESA**	**73.88**	**31**	P	**P**	**16 03 33.2**	**+0.2**
	baz=287,SNR=17						
YAH	**Yahtse**	**73.92**	**31**	IAMs_20	IAMs_20	16 34 17.8	
	comp=Z,2μm,22.0s						
CTG	**Chitna Glacier**	**73.93**	**30**	P	**P**	**16 03 33.5**	**+0.3**
	baz=288,SNR=63						
CTGM	**Chitina Glacie**	**73.93**	**30**	P	**P**	**16 03 33.7**	**+0.4**
CTGM				IAmb	IAmb	16 03 37.0	
	comp=Z,102nm,0.9s						
ASF	**Jabal al Asfar**	**73.94**	**299**	LR	LR	16 39 59.8	
	comp=Z,3μm,20.6s,baz=75,slow=39						
MNK	**Minsk**	**73.94**	**323**	*i*P	**P**	**16 03 33.3**	**+0.1**
MNK				*i*		16 03 48.4	
MNK				*i*		16 06 18.0	
MNK				*i* PPP	PPP	16 08 03.0	
MNK				*i* S	**SKiKP**	**16 13 00.4**	**0.0**
MNK				*i* SS	**SS**	**16 17 50.6**	**+2.8**
MNK				pmax	pmax		
	comp=Z,181nm,1.0s						
MNK				pmax	pmax		
	comp=N,32nm,1.0s						
MNK				pmax	pmax		
	comp=E,17nm,1.0s						
MNK				MLR	MLR		
	comp=E,679nm,20.0s						
MNK				MLR	MLR		
	comp=Z,4μm,20.0s						
MNK				MLR	MLR		
	comp=N,4μm,20.0s						
MNK	**Minsk**	**73.94**	**323**	*i*P	**P**	**16 03 33.3**	**+0.1**
	comp=E,17nm,1.0s						
MNK				*i*P	**P**	**16 03 33.3**	**+0.1**
	comp=N,32nm,1.0s						
MNK				*i*P	**P**	**16 03 33.3**	**+0.1**
	comp=Z,181nm,1.0s,baz=74						
MNK				*i* PcP	**PcP**	**16 03 48.4**	**-0.1**
MNK				*i* PP	**PP**	**16 06 18.0**	**0.0**
MNK				*i* PPP	PPP	16 08 03.0	
MNK				*i* S	**SKiKP**	**16 13 00.5**	**0.0**
MNK				*i* SS	**SS**	**16 17 50.7**	**+2.8**
MNK				*i* SSS	SSS	16 20 50.9	
MNK				*i* LQ	LQ	16 29 39.9	
MNK				*i* LR	LR	16 33 00.5	
MNK				*i* LRM	MLR	16 40 05.8	
	comp=E,679nm,19.7s						
MNK				*i* LRM	MLR	16 40 20.0	
	comp=Z,4μm,19.7s						
MNK				*i* LRM	MLR	16 40 51.8	
	comp=N,4μm,20.0s						
NOR	**Nord**	**73.95**	**354**	*i*P	**P**	**16 03 32.7**	**-0.1**
NOR				IAmb	IAmb	16 03 33.5	
	comp=Z,104nm,1.1s						
YUK3	**Moose Creek**	**74.09**	**29**	P	**P**	**16 03 34.6**	**+0.4**
	baz=288,SNR=45						
MEF	**Metsahovi**	**74.09**	**329**	*e*P	**P**	**16 03 34.6**	**+0.7**
G30M	**tAoh Zraii Nji**	**74.12**	**24**	P	**P**	**16 03 33.9**	**-0.2**
	baz=290,SNR=60						
LOGN	**Logan Glacier**	**74.13**	**30**	P	**P**	**16 03 34.6**	**+0.2**
LOGN				IAmb	IAmb	16 03 40.7	
	comp=Z,103nm,1.0s						
EPYK	**Eagle Plains**	**74.15**	**24**	IAmb	IAmb	16 03 35.9	
	comp=Z,92nm,1.2s						
EPYK				IAMs_20	IAMs_20	16 39 51.5	
	comp=Z,2μm,20.0s						
EPYK	**Eagle Plains**	**74.15**	**24**	P	**P**	**16 03 34.2**	**-0.1**
	baz=290,SNR=30						
TABL	**Table Mountain**	**74.18**	**31**	IAmb	IAmb	16 03 38.3	
	comp=Z,93nm,1.0s						
J29M	**Klondike Camp**	**74.20**	**26**	P	**P**	**16 03 35.7**	**+1.0**
	baz=289						
AKASG	**Malin Array Be**	**74.23**	**319**	P	**P**	**16 03 34.4**	**-0.6**
	comp=Z,55nm,0.8s,baz=60,slow=6.3,SNR=194						
AKASG				LR	LR	16 38 22.2	
	comp=Z,3μm,20.9s,baz=69,slow=37						
	comp=Z,55nm,0.8s						
AKASG	**Malin Array Be**	**74.23**	**319**	IAmb	IAmb	16 03 35.8	
	comp=Z,104nm,0.8s						
AKBB	**Malin Array Si**	**74.23**	**319**	P	**P**	**16 03 34.0**	**-1.0**
AKBB				IAmb	IAmb	16 03 35.7	
	comp=Z,88nm,0.8s						
AKBB	**Malin Array Si**	**74.23**	**319**	P	**P**	**16 03 34.0**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,88nm,0.9s						
BR131	**Keskin Array S**	**74.32**	**307**	P	**P**	**16 03 35.0**	**-0.9**
BR131				IAmb	IAmb	16 03 41.8	
	comp=Z,173nm,1.2s						
BR131	**Keskin Array S**	**74.32**	**307**	P	**P**	**16 03 35.1**	**-0.9**
BR131				pmax	pmax		
	comp=Z,173nm,1.2s						
BR131	**Keskin Array S**	**74.32**	**307**	P	**P**	**16 03 36.0**	**+0.1**
	SNR=56						
BR131				P	**P**	**16 03 36.0**	**+0.1**
	SNR=56						
BRTR	**Keskin Array B**	**74.32**	**307**	P	**P**	**16 03 36.2**	**+0.3**
	comp=Z,48nm,0.9s,baz=82,slow=5.1,SNR=153						
	comp=Z,48nm,0.9s						
BHL	**Bhannes**	**74.44**	**301**	*e*P	**P**	**16 03 37.2**	**+0.5**
NACGM	**Naroch**	**74.44**	**323**	⇓*i*P	**P**	**16 03 36.6**	**+0.5**
QRWL	**Qaraoun**	**74.52**	**300**	*e*P	**P**	**16 03 37.9**	**+0.7**
O28M	**Mount Upton**	**74.52**	**30**	P	**P**	**16 03 37.4**	**+0.5**
	baz=288,SNR=51						
DQRL	**Deir Qamar**	**74.56**	**300**	*e*P	**P**	**16 03 38.0**	**+0.6**
ISAL	**Salakas**	**74.60**	**324**	*e*P	**P**	**16 03 38.1**	**+1.0**
INK	**Inuvik**	**74.60**	**22**	P	**P**	**16 03 36.4**	**-0.5**
	comp=Z,78nm,1.0s,baz=282,slow=4.9,SNR=51						
INK				LR	LR	16 39 36.5	
	comp=Z,2μm,20.2s,baz=280,slow=38						
	comp=Z,78nm,1.0s						
INK	**Inuvik**	**74.60**	**22**	IAmb	IAmb	16 03 38.5	
	comp=Z,124nm,1.1s						
INK	**Inuvik**	**74.60**	**22**	P	**P**	**16 03 36.2**	**-0.6**
	baz=292,SNR=52						
IIGN	**Ignalina**	**74.61**	**324**	*e*P	**P**	**16 03 38.4**	**+1.2**
L29M	**L29M**	**74.68**	**28**	P	**P**	**16 03 38.4**	**+0.9**
	baz=290,SNR=50						
K29M	**Barlow Dome**	**74.69**	**27**	P	**P**	**16 03 37.8**	**+0.2**
	baz=290,SNR=46						
PCA	**Pinnacle**	**74.71**	**31**	IAmb	IAmb	16 03 42.0	
	comp=Z,177nm,1.0s						
PINM	**Pinnacle**	**74.71**	**31**	P	**P**	**16 03 38.1**	**+0.4**
	baz=289,SNR=46						
M29M	**Somme Creek**	**74.76**	**28**	P	**P**	**16 03 39.0**	**+0.9**
	baz=290,SNR=63						
AFI	**Afiamalu**	**74.76**	**112**	LR	LR	16 34 26.1	
	comp=Z,907nm,18.5s,baz=301,slow=34						
AFI	**Afiamalu**	**74.76**	**112**	P	**P**	**16 03 38.7**	**0.0**
AFI				IAmb	IAmb	16 03 52.3	
	comp=Z,223nm,1.2s						
AFI	**Afiamalu**	**74.76**	**112**	P	**P**	**16 03 38.7**	**0.0**
AFI				pmax	pmax		
	comp=Z,223nm,1.3s						
MTSE	**Matsula**	**74.83**	**328**	*e*P	**P**	**16 03 38.9**	**+0.6**
F31M	**Tsiigehtchic**	**74.86**	**23**	P	**P**	**16 03 37.5**	**-0.8**
	baz=292,SNR=36						
MMAI	**Mount Meron Ar**	**74.90**	**300**	P	**P**	**16 03 40.2**	**+0.8**
	comp=Z,43nm,0.9s,baz=76,slow=6.1,SNR=7.5						
MMAI				LR	LR	16 43 06.7	
	comp=Z,3μm,18.1s,baz=286,slow=41						
	comp=Z,43nm,0.9s						
ANTO	**Ankara**	**74.91**	**307**	⇑P	**P**	**16 03 39.2**	**0.0**
ANTO	**Ankara**	**74.91**	**307**	P	**P**	**16 03 38.5**	**-0.7**
ANTO				IAmb	IAmb	16 03 44.6	
	comp=Z,118nm,0.9s						
ANTO	**Ankara**	**74.91**	**307**	P	**P**	**16 03 38.6**	**-0.7**
ANTO				pmax	pmax		
	comp=Z,118nm,0.9s						
ANTO	**Ankara**	**74.91**	**307**	P	**P**	**16 03 40.4**	**+1.1**
ANTO				P	**P**	**16 03 40.4**	**+1.1**
BR231	**Keskin MP Arra**	**74.93**	**307**	IAmb	IAmb	16 03 41.4	
	comp=Z,108nm,1.1s						
YUK4	**Talbot Arm**	**75.05**	**29**	P	**P**	**16 03 40.5**	**+0.6**
	baz=290,SNR=26						
BCPM	**Bancas Point**	**75.05**	**31**	P	**P**	**16 03 39.1**	**-0.4**
BCPM				IAmb	IAmb	16 03 42.9	
	comp=Z,80nm,1.1s						
RAF	**Rauma**	**75.06**	**330**	*e*P	**P**	**16 03 39.7**	**+0.1**
STEI	**Steigen**	**75.17**	**338**	*e*P	**P**	**16 03 39.9**	**-0.2**
STEI				IAmb	IAmb	16 03 41.2	
	comp=Z,170nm,0.7s						
ATD	**Arta Tunnel**	**75.24**	**277**	LR	LR	16 38 18.6	
	comp=Z,2μm,18.9s,baz=58,slow=37						
ATD	**Arta Tunnel**	**75.24**	**277**	P	**P**	**16 03 41.1**	**-0.5**
ATD				IAmb	IAmb	16 03 53.8	
	comp=Z,147nm,1.3s						
ATD	**Arta Tunnel**	**75.24**	**277**	P	**P**	**16 03 43.6**	**+2.0**
	SNR=14						
ATD	**Arta Tunnel**	**75.24**	**277**	*e*P	P	16 03 54.5	+13
ATD	**Arta Tunnel**	**75.24**	**277**	*e*P	**P**	**16 03 42.6**	**+1.0**
PNL	**Peninsula**	**75.26**	**31**	P	**P**	**16 03 40.8**	**-0.1**
	baz=289,SNR=14						
GHAJ	**Ghor Haditha**	**75.28**	**298**	IAmb	IAmb	16 03 47.4	
	comp=Z,155nm,1.0s						
YUK6	**Outpost Mounta**	**75.31**	**30**	P	**P**	**16 03 41.8**	**+0.4**
	baz=290,SNR=20						
FAUS	**Fauske**	**75.37**	**337**	*e*P	**P**	**16 03 40.8**	**-0.4**
FAUS				IAmb	IAmb	16 03 41.9	
	comp=Z,179nm,0.8s						
O29M	**Mount Kennedy**	**75.43**	**30**	P	**P**	**16 03 43.0**	**+1.1**
	baz=290,SNR=16						
MAYO	**Mayo, Yukon**	**75.46**	**27**	P	**P**	**16 03 42.2**	**+0.3**
MAYO				IAmb	IAmb	16 04 35.0	
	comp=Z,94nm,0.9s						
MAYO	**Mayo, Yukon**	**75.46**	**27**	P	**P**	**16 03 42.5**	**+0.6**
	baz=291,SNR=6.8						
KIS	**Kishinev**	**75.57**	**315**	⇑*i*P	**P**	**16 03 42.0**	**-0.8**
	comp=Z,280nm,5.9s						
KIS	**Kishinev**	**75.57**	**315**	*e*PcP	P	16 03 49.0	+6.2
KIS	**Kishinev**	**75.57**	**315**	*e*PP	PP	16 06 36.0	+4.0
KIS	**Kishinev**	**75.57**	**315***c*	*i*P	**P**	**16 03 42.0**	**-0.8**
KIS				*e*		16 03 49.0	
KIS				*e*		16 06 36.0	
KIS				*e*PPP	PPP	16 08 16.0	
KIS				*e*S	**S**	**16 13 19.0**	**-3.2**
KIS				*e*		16 14 09.0	
KIS				pmax	pmax		
	comp=Z,280nm,5.9s						
KIS				MLR	MLR		
	comp=Z,1μm,14.0s						
A36M	**Sachs Harbour**	**75.57**	**17**	IAMs_20	IAMs_20	16 42 07.8	
	comp=Z,2μm,20.0s						
A36M	**Sachs Harbour**	**75.57**	**17**	P	**P**	**16 03 41.6**	**-0.7**
	baz=299						
MILM	**Milestii Mici**	**75.59**	**315**	⇑P	**P**	**16 03 42.9**	**0.0**
MILM	**Milestii Mici**	**75.59**	**315***c*	*i*P	**P**	**16 03 42.0**	**-0.9**
MILM				*e*		16 03 49.0	
MILM				*e*		16 06 36.0	
MILM				*e*PPP	PPP	16 08 16.0	
MILM				*i* S	**S**	**16 13 19.0**	**-3.5**
MILM				*e*PS	**PnS**	**16 13 46.0**	**-14**
MILM				*e*		16 14 00.0	
MILM				pmax	pmax		
	comp=Z,600nm,3.1s						
VSVD	**Vaisvydziai**	**75.65**	**325**	*e*P	**P**	**16 03 43.7**	**+0.6**
LOF	**Lofoten**	**75.67**	**338**	*e*P	**P**	**16 03 42.4**	**-0.6**
LOF				IAmb	IAmb	16 03 48.2	
	comp=Z,67nm,0.8s						
N30M	**Aishikik Lake**	**75.71**	**29**	P	**P**	**16 03 44.5**	**+1.1**
	baz=291,SNR=39						
HYT	**Haines Junctio**	**75.75**	**30**	P	**P**	**16 03 44.1**	**+0.4**
HYT	**Haines Junctio**	**75.75**	**30**	P	**P**	**16 03 44.6**	**+0.9**
	baz=291,SNR=57						
PABE	**Paberze**	**75.79**	**324**	*e*P	**P**	**16 03 44.8**	**+0.9**
OUZ	**Omahuta**	**75.81**	**138**	P	**P**	**16 03 46.7**	**+2.5**
SLIT	**Slitere, Latvi**	**75.95**	**327**	*e*P	**P**	**16 03 44.8**	**0.0**
CSS	**Mathiatis**	**75.96**	**302**	IAmb	IAmb	16 03 50.5	
	comp=Z,137nm,0.9s						
CSS				IAMs_20	IAMs_20	16 42 11.9	
	comp=Z,2μm,22.0s						
P29M	**Windy Craggy**	**76.06**	**31**	IAmb	IAmb	16 03 49.5	
	comp=Z,79nm,0.8s						
P29M	**Windy Craggy**	**76.06**	**31**	P	**P**	**16 03 46.2**	**+0.8**
	baz=291,SNR=47						
TLCR		**76.12**	**313**	⇑P	**P**	**16 03 47.1**	**+1.2**
MOR8	**Moi Rana**	**76.17**	**336**	*e*P	**P**	**16 03 44.0**	**-1.9**
MOR8				IAmb	IAmb	16 03 45.4	
	comp=Z,110nm,0.9s						
AAL	**Aland**	**76.18**	**330**	*e*P	**P**	**16 03 46.0**	**0.0**
JURR	**Jurilovca**	**76.21**	**313**	⇓P	**P**	**16 03 47.4**	**+0.9**
P30M	**Million Dollar**	**76.25**	**30**	P	**P**	**16 03 47.5**	**+1.0**
	baz=291						
EIL	**Elat**	**76.29**	**297**	LR	LR	16 43 05.7	
	comp=Z,3μm,18.9s,baz=94,slow=40						
N31M	**Braeburn, Yuko**	**76.29**	**29**	P	**P**	**16 03 47.1**	**+0.4**
N31M				IAmb	IAmb	16 03 49.1	
	comp=Z,90nm,1.2s						
N31M				IAMs_20	IAMs_20	16 38 05.3	
	comp=Z,1μm,19.0s						
N31M	**Braeburn, Yuko**	**76.29**	**29**	P	**P**	**16 03 47.6**	**+1.0**
	baz=292,SNR=27						
VASR	**Vaslui**	**76.35**	**315**	⇑P	**P**	**16 03 48.5**	**+1.2**
VLDR	**Vladesti**	**76.41**	**314**	⇑P	**P**	**16 03 48.4**	**+0.8**
O30N	**Mendenhall**	**76.41**	**30**	P	**P**	**16 03 48.3**	**+0.9**
	baz=292,SNR=38						
POHA	**Pohakuloa**	**76.45**	**74**	P	**P**	**16 03 47.4**	**-1.2**
POHA				IAmb	IAmb	16 03 51.5	
	comp=Z,140nm,0.9s						
EUNU	**Eureka**	**76.47**	**5**	IAmb	IAmb	16 03 48.6	
	comp=Z,90nm,1.1s						
TPGR	**Topolog**	**76.49**	**313**	⇑P	**P**	**16 03 48.7**	**+0.5**
KONS	**Konsvik**	**76.51**	**337**	*e*P	**P**	**16 03 47.4**	**-0.4**
KONS				IAmb	IAmb	16 03 48.2	
	comp=Z,67nm,0.9s						
SCTR	**Scanteiesti**	**76.52**	**314**	⇑P	**P**	**16 03 49.2**	**+1.0**
VARL	**Varlezi**	**76.54**	**314**	⇑P	**P**	**16 03 50.0**	**+1.6**
BIR	**Birlad**	**76.57**	**315**	⇑P	**P**	**16 03 49.7**	**+1.2**
CFR	**Carcaliu**	**76.58**	**313**	⇑P	**P**	**16 03 48.6**	**0.0**
EFOR	**EFORIE**	**76.59**	**312**	⇓P	**P**	**16 03 49.3**	**+0.6**
BORA	**Eskisehir**	**76.62**	**308**	P	**P**	**16 03 48.1**	**-0.9**
BORA				IAmb	IAmb	16 03 50.5	
	comp=Z,92nm,1.0s						
M31M	**Drury Creek, Y**	**76.62**	**28**	IAMs_20	IAMs_20	16 41 35.1	
	comp=Z,2μm,20.0s						
M31M	**Drury Creek, Y**	**76.62**	**28**	P	**P**	**16 03 49.1**	**+0.5**
	baz=293,SNR=21						
TIRR	**Tirgusor**	**76.62**	**313**	⇑P	**P**	**16 03 49.4**	**+0.5**
TIRR	**Tirgusor**	**76.62**	**313**	⇑P	**P**	**16 03 49.4**	**+0.5**
TIRR	**Tirgusor**	**76.62**	**313**	IAmb	IAmb	16 03 54.0	
	comp=Z,184nm,1.1s						
STOK	**Stokkvaagen**	**76.62**	**337**	*e*P	**P**	**16 03 48.4**	**0.0**
PBUR	**Paburge**	**76.70**	**325**	*e*P	**P**	**16 03 50.0**	**+0.9**
PLBC	**Pleasant Camp**	**76.78**	**31**	P	**P**	**16 03 50.1**	**+0.7**
	baz=292,SNR=22						
GHRR		**76.78**	**314**	⇑P	**P**	**16 03 51.4**	**+1.6**
TLBR	**Topalu**	**76.84**	**313**	⇑P	**P**	**16 03 51.3**	**+1.3**
HARR	**Harsova**	**76.87**	**313**	⇑P	**P**	**16 03 51.7**	**+1.4**
WHY	**Whitehorse**	**77.00

PRD Provadia 77.72 312 P P 16 03 55.7 +0.7
MMPY Sheldon Lake, 77.78 27 P P 16 03 55.1 0.0
baz=296,SNR=21
NSS Namsos 77.82 335 *e*P **P 16 03 54.0 -1.2**
NSS IAmb IAmb 16 03 55.2
comp=Z,51nm,0.8s
OZUR 77.84 315 ⇑P **P 16 03 56.2 +0.5**
MLR Muntele Rosu 77.94 314 ⇑P **P 16 03 57.0 +0.6**
MLR Muntele Rosu 77.94 314 LR LR 16 43 38.5
comp=Z,3μm,19.8s,baz=56,slow=40
MLR Muntele Rosu 77.94 314 P **P 16 03 56.2 -0.2**
MLR Muntele Rosu 77.94 314 P **P 16 03 56.2 -0.2**
MLR pmax pmax
comp=Z,56nm,0.9s
MLR MLR MLR
comp=Z,4μm,21.0s
P32M Atlin 77.97 30 P **P 16 03 57.0 +0.8**
baz=294,SNR=15
DAG Danmarks Havn 77.98 351 *i* P **P 16 03 55.1 -0.7**
DAG IAmb IAmb 16 03 56.9
comp=Z,213nm,1.2s
SULR 78.01 313 ⇑P **P 16 03 57.9 +1.3**
SECR 78.01 314 ⇓P **P 16 03 57.7 +1.0**
R32K Eaglecrest 78.12 32 P **P 16 03 57.9 +0.9**
baz=294,SNR=13
P33M Teslin, Yukon 78.12 29 IAMs_20 IAMs_20 16 43 08.9
comp=Z,1μm,18.0s
P33M Teslin, Yukon 78.12 29 P **P 16 03 57.5 +0.4**
baz=295,SNR=17
DOPR Dopca 78.14 315 ⇑P **P 16 03 58.2 +0.8**
SIT Sitka 78.21 33 P **P 16 03 57.6 +0.2**
SIT IAmb IAmb 16 04 01.4
comp=Z,82nm,0.9s
SIT Sitka 78.21 33 P **P 16 03 57.6 +0.2**
SIT pmax pmax
comp=Z,82nm,0.9s
SIT Sitka 78.21 33 P **P 16 03 58.6 +1.1**
baz=293,SNR=19
RAZG Razgrad 78.21 312 ⇑P **P 16 03 58.7 +0.9**
VIKU Vikbolandet 78.38 329 *e*P **P 16 03 58.8 +0.4**
S32K Killisnoo 78.42 32 P **P 16 03 59.1 +0.5**
baz=294,SNR=8.0
ARCR ARCALIA 78.42 316 ⇑P **P 16 04 00.0 +1.1**
AKAS Kas 78.43 304 IAmb IAmb 16 04 06.5
comp=Z,172nm,1.1s
MANT Manisa 78.46 307 IAmb IAmb 16 04 04.4
comp=Z,138nm,1.2s
JMB Yambol 78.53 311 P **P 16 03 57.6 -2.0**
KWP Kalwaria Pacla 78.54 319 *e*P **P 16 04 00.2 +0.7**
VOIR 78.55 314 ⇑P **P 16 03 59.9 +0.2**
EDRB Edirne 78.63 311 P **P 16 04 00.7 +0.6**
SZH Strazhica 78.71 312 P P 16 04 09.4 +8.9
HIZ Hauiti 78.73 140 P **P 16 04 02.9 +2.4**
HIZ Hauiti 78.73 140 P **P 16 04 01.7 +1.2**
KHEZ Kahui Hut 78.75 141 P **P 16 04 03.1 +2.4**
ANKE Ethiopia-Afar 78.79 276 *e*P P 16 04 07.9 +6.0
ANKE Ethiopia-Afar 78.79 276 *e*P **P 16 04 04.0 +2.0**
ARR Arges 78.85 314 ⇑P **P 16 04 02.8 +1.4**
BEL Belsk 78.85 322 *e*P **P 16 04 01.9 +0.8**
Q32M Nakina River 78.91 30 P **P 16 04 02.5 +1.0**
baz=295,SNR=13
QRZ Quartz Range 78.93 143 P **P 16 04 02.4 +0.9**
QRZ Quartz Range 78.93 143 P **P 16 04 02.5 +0.9**
CJR Cluj-Napoca 79.04 316 ⇑P **P 16 04 02.7 +0.3**
CBBR Cluj-Babes-Bol 79.05 316 ⇑P **P 16 04 02.3 0.0**
KOLS Kolonicke sedl 79.06 318 *e*P **P 16 04 02.8 +0.4**
KOLS pmax pmax
comp=Z,41nm,0.8s
VRZ Vera Road 79.07 141 P **P 16 04 04.2 +1.8**
HFS Hagfors 79.08 331 LR LR 16 42 31.2
comp=Z,13μm,18.5s,baz=64,slow=38
LREZ Lake Rotokare 79.08 141 P **P 16 04 05.1 +2.6**
TBLU Trondheim 79.08 335 *e*P **P 16 04 00.6 -1.6**
TBLU IAmb IAmb 16 04 01.2
comp=Z,129nm,0.9s
YER Yerkesik 79.13 306 P **P 16 04 03.4 +0.4**
PVL Pavlikeni 79.14 312 P **P 16 04 04.1 +1.2**
UZH Uzhgorod 79.16 318 *e*P **P 16 04 02.0 -0.9**
UZH *e* 16 04 06.5
UZH *e* 16 04 11.7
UZH *e* 16 07 02.4
UZH *e*S **S 16 13 57.1 -4.1**
UZH *e* 16 14 12.3
UZH *e* 16 14 42.5
UZH MLR MLR
comp=Z,400nm,17.0s
TRPA Tarpa 79.19 318 ⇑P **P 16 04 03.5 +0.5**
TRPA Tarpa 79.19 318 P **P 16 04 03.6 +0.5**
JCZ Jackson Bay 79.23 147 P **P 16 04 04.7 +1.4**
MESR Meseseni 79.29 317 ⇓P **P 16 04 04.7 +1.0**
R33M Jennings River 79.32 30 P **P 16 04 04.7 +1.0**
baz=296,SNR=28
LOT Lotru 79.39 315 ⇑P **P 16 04 04.8 +0.4**
DIM Dimitrovgrad 79.41 311 P **P 16 04 05.0 +0.6**
ALN Alexandroupoli 79.46 310 IAmb IAmb 16 04 10.2
comp=Z,87nm,1.1s
ALN Alexandroupoli 79.46 310 P **P 16 04 04.8 +0.1**
DCZ Deep Cove 79.46 149 P **P 16 04 04.5 +0.2**
DCZ IAmb IAmb 16 04 06.2
comp=Z,215nm,1.0s
PKVZ Pokaka 79.52 140 P **P 16 04 07.0 +2.1**
TGTN Hyland Airport 79.53 27 P **P 16 04 05.1 +0.4**
baz=298,SNR=18
WTVZ West Tongariro 79.55 140 P **P 16 04 07.1 +1.9**
ARG Arkhangelos 79.56 305 P **P 16 04 05.4 +0.1**
CRVS Cervenica-Dubn 79.57 319 *e*P **P 16 04 05.7 +0.6**
CRVS pmax pmax
comp=Z,301nm,1.6s
DRGR 79.58 316 ⇑P **P 16 04 05.5 +0.1**
NNVZ North Ngauruho 79.58 140 P **P 16 04 07.2 +1.9**
NC303 NORSAR Array S 79.59 332 IAmb IAmb 16 04 05.8
comp=Z,136nm,0.8s
NGZ Ngauruhoe 79.60 140 P **P 16 04 07.3 +1.8**
WAZ Wanganui 79.61 141 P **P 16 04 07.3 +1.9**
BLCB Balcova 79.62 307 P **P 16 04 05.8 +0.2**
FWVZ Far West T-bar 79.62 140 P **P 16 04 07.3 +1.6**
OTVZ Oturere 79.63 140 P **P 16 04 07.2 +1.6**
SNVZ South Ngauruho 79.63 140 P **P 16 04 07.7 +2.0**
EZN Ezine 79.63 309 P **P 16 04 06.0 +0.4**
KDZ Kurdzhali 79.63 311 P **P 16 04 06.3 +0.6**
TRVZ Turoa 79.65 140 P **P 16 04 05.9 0.0**
WHVZ Whangaehu Hut 79.66 140 P **P 16 04 05.6 -0.3**
NNZ Nelson 79.67 143 P **P 16 04 06.0 +0.4**
DUWZ D'Urville Isla 79.69 142 P **P 16 04 06.2 +0.4**
WNVZ Wahianoa 79.69 140 P **P 16 04 08.0 +2.0**
U33K Whale Pass 79.70 33 P **P 16 04 06.5 +0.9**
baz=295
RDO Rodhopi 79.73 310 P **P 16 04 06.2 +0.1**
NB2 NORSAR Subarra 79.75 332 P **P 16 04 05.2 -0.7**
comp=Z,112nm,0.8s,baz=59,slow=5.6
NB2 NORSAR Subarra 79.75 332 P **P 16 04 05.2 -0.7**
baz=59,slow=5.6
NOA NORSAR Array B 79.75 332 P **P 16 04 05.2 -0.7**
comp=Z,99nm,0.8s,baz=60,slow=5.5,SNR=273
NOA PP **PP 16 07 08.2 +1.6**
comp=Z,13nm,1.1s,baz=64,slow=7.9,SNR=3.4
NOA LR LR 16 42 18.8
comp=Z,6μm,19.0s,baz=55,slow=38
comp=Z,99nm,0.8s
NC602 NORSAR Array S 79.75 332 IAmb IAmb 16 04 05.9
comp=Z,112nm,0.9s
NC602 NORSAR Array S 79.75 332 *e*P **P 16 04 05.1 -0.8**
NC602 IAmb IAmb 16 04 05.6
comp=Z,58nm,0.9s
THZ Tophouse 79.77 144 IAmb IAmb 16 04 06.9
comp=Z,130nm,0.9s
DEV Deva 79.79 315 ⇑P **P 16 04 07.1 +0.7**
DAT Datca 79.80 305 P **P 16 04 06.2 -0.6**
NC204 NORSAR Array S 79.83 333 IAmb IAmb 16 04 07.2
comp=Z,174nm,0.8s
MOVZ Moawhango 79.84 140 P **P 16 04 07.5 +0.8**
MLZ Mavora Lakes 79.84 149 IAmb IAmb 16 04 08.1
comp=Z,190nm,1.0s
PRK Paraskevi 79.88 308 P **P 16 04 08.0 +1.0**
BODT Bodrum 79.88 306 P **P 16 04 06.0 -1.1**
AAE Adis Abeba 79.88 276 *e*P **P 16 04 12.2 +4.4**
WKZ Wanaka 79.89 148 P **P 16 04 06.2 -0.6**
S34M Telegraph Cree 79.90 31 P **P 16 04 07.5 +0.7**
baz=296,SNR=14
URZ Urewera 79.92 139 IAmb IAmb 16 04 07.9
comp=Z,152nm,1.3s
URZ IAMs_20 IAMs_20 16 33 10.9
comp=Z,2μm,22.0s
URZ Urewera 79.92 139 P **P 16 04 07.7 +0.7**
URZ Urewera 79.92 139 P **P 16 04 07.8 +0.8**
NBO00 NORSAR Array S 79.94 332 IAmb IAmb 16 04 07.7
comp=Z,126nm,1.1s
WRAK Wrangell Islan 79.97 33 P **P 16 04 07.5 +0.5**
baz=296,SNR=11
PLD Plovdiv 79.97 311 P **P 16 04 08.0 +0.6**
WTLY Watson Lake, Y 79.97 29 P **P 16 04 07.0 -0.1**
WTLY IAmb IAmb 16 04 08.8
comp=Z,99nm,1.2s
WTLY Watson Lake, Y 79.97 29 P **P 16 04 07.4 +0.2**
baz=298,SNR=6.9
SMTH Samothraki Isl 79.97 310 P **P 16 04 06.2 -1.3**
CRAG Craig 79.98 34 P **P 16 04 07.9 +0.7**
baz=295,SNR=6.8
NAO01 NORSAR Array S 79.98 332 IAmb IAmb 16 04 07.6
comp=Z,127nm,0.9s
SMG Samos 80.01 307 P **P 16 04 07.6 -0.1**
FURI Furi 80.01 276 IAMs_20 IAMs_20 16 41 56.8
comp=Z,2μm,21.0s
FURI Furi 80.01 276 *e*P **P 16 04 12.0 +3.4**
FURI Furi 80.01 276 *e*P **P 16 04 10.4 +1.9**
SRE Strehaia 80.05 314 ⇑P **P 16 04 08.5 +0.7**
GZR Gura Zlata 80.06 315 ⇑P **P 16 04 08.7 +0.8**
OJC Ojcow 80.06 320 *e*P **P 16 04 06.8 -0.9**
OJC *e*S **S 16 14 06.4 -4.3**
OJC Ojcow 80.06 320 IAmb IAmb 16 04 07.9
comp=Z,151nm,0.7s
NIE Niedzica 80.07 319 *e*P **P 16 04 09.0 +1.1**
NIE *e*S **S 16 14 10.2 -0.8**
BHHZ Black Hill Sta 80.08 140 P **P 16 04 08.9 +0.9**
NEEM North Greenlan 80.09 358 ⇑*i*P **P 16 04 08.0 +0.2**
NEEM IAmb IAmb 16 04 09.1
comp=Z,435nm,1.0s
RZN Roznen 80.11 311 P **P 16 04 08.7 +0.2**
BKZ Black Stump Fm 80.12 140 IAmb IAmb 16 04 09.4
comp=Z,179nm,1.2s
BKZ IAMs_20 IAMs_20 16 34 14.2
comp=Z,2μm,22.0s
BKZ Black Stump Fm 80.12 140 P **P 16 04 08.4 +0.2**
BKZ Black Stump Fm 80.12 140 P **P 16 04 08.8 +0.6**
LTZ Lake Taylor 80.13 145 IAmb IAmb 16 04 10.8
comp=Z,137nm,1.1s
TUWZ Tuamarina 80.13 143 P **P 16 04 09.0 +0.9**
RPZ Rata Peaks 80.13 146 LR LR 16 38 30.0
comp=Z,1μm,19.6s,baz=314,slow=35
RPZ Rata Peaks 80.13 146 P **P 16 04 08.4 +0.3**
MTHZ Maungataniwha 80.13 139 P **P 16 04 08.5 +0.3**
NIS1 Nisyros Isl. 80.14 305 P **P 16 04 08.1 -0.4**
WHZ Wether Hill Ro 80.15 149 IAmb IAmb 16 04 09.4
comp=Z,214nm,1.0s
LBZ Lake Benmore 80.16 147 P **P 16 04 08.3 +0.1**
DOMB Dombas 80.16 334 *e*P **P 16 04 08.1 0.0**
DOMB IAmb IAmb 16 04 08.7
comp=Z,127nm,0.8s
TCW Tory Channel 80.17 142 P **P 16 04 09.3 +1.1**
MPEP Malo Peshtene 80.17 313 P **P 16 04 09.3 +0.8**
PGB Panagyurishte 80.18 312 P **P 16 04 09.6 +1.0**
DLBC Dease Lake 80.19 30 LR LR 16 40 54.7
comp=Z,976nm,20.3s,baz=316,slow=36
DLBC Dease Lake 80.19 30 P **P 16 04 08.6 +0.2**
DLBC IAmb IAmb 16 04 10.9
comp=Z,150nm,1.7s
DLBC Dease Lake 80.19 30 P **P 16 04 09.4 +1.1**
baz=297,SNR=22
RES Resolute Bay 80.19 9 P **P 16 04 07.8 -0.2**
comp=Z,122nm,1.2s,baz=331,slow=5.7,SNR=15
RES LR LR 16 43 02.0
comp=Z,2μm,20.4s,baz=326,slow=38
comp=Z,122nm,1.2s
RES Resolute Bay 80.19 9 IAmb IAmb 16 04 09.7
comp=Z,134nm,1.1s
SIGR SIGRI 80.19 308 P **P 16 04 08.5 -0.2**
MXZ Matakaoa Point 80.22 138 IAmb IAmb 16 04 09.9
comp=Z,231nm,1.1s
GKP Gorka Klasztor 80.27 324 *e*P **P 16 04 09.1 +0.3**
GKP Gorka Klasztor 80.27 324 *e*P **P 16 04 09.6 +0.8**
BSWZ Blackbirch Sta 80.28 143 P **P 16 04 08.8 -0.1**
KIW Kapiti Island 80.30 142 P **P 16 04 09.2 +0.2**
KECS Kecovo 80.33 319 *e*P **P 16 04 10.2 +1.0**
KECS pmax pmax
comp=Z,54nm,1.3s
CHOS Chios island 80.34 307 P **P 16 04 09.3 -0.3**
KRHZ Kereru 80.36 140 P **P 16 04 10.7 +1.3**
PUNG Punghina 80.37 314 ⇓P **P 16 04 11.0 +1.5**
OXZ Oxford 80.38 145 IAmb IAmb 16 04 10.3
comp=Z,132nm,1.2s
TSZ Takapari Road 80.38 141 P **P 16 04 09.5 0.0**
OGWZ Otaki Gorge 80.42 142 P **P 16 04 10.8 +1.2**
PNHZ Pukenui 80.43 140 P **P 16 04 10.6 +0.8**
JMIC Jan Mayen 80.43 345 LR LR 16 42 39.9
comp=Z,3μm,21.6s,baz=50,slow=38
SIRR Siria 80.45 316 ⇑P **P 16 04 10.6 +0.6**
SNZO South Karori 80.47 142 P **P 16 04 09.9 0.0**
HERR Herculane 80.48 315 ⇑P **P 16 04 10.7 +0.6**
ARHZ Aropaoanui 80.49 140 P **P 16 04 11.1 +1.0**
OSL Oslo 80.49 331 *e*P **P 16 04 09.7 -0.1**
OSL IAmb IAmb 16 04 10.6
comp=Z,108nm,0.7s
DJES Djerdap 80.50 314 ⇑P **P 16 04 11.3 +1.0**
THAS Thassos island 80.50 310 P **P 16 04 07.5 -2.8**
MOL Molde 80.50 335 *e*P **P 16 04 09.2 -0.6**
MOL IAmb IAmb 16 04 09.4
comp=Z,72nm,0.9s
KAVA Kavala 80.50 310 P **P 16 04 09.8 -0.5**
KARP Karpathos 80.53 304 P **P 16 04 10.9 +0.3**
CAW Cannon Point 80.55 142 P **P 16 04 10.8 +0.4**
KHZ Kahutara 80.56 144 P **P 16 04 10.2 -0.2**
WRGLY Wrigley 80.62 25 P **P 16 04 10.6 +0.1**
baz=302
DEL Delary 80.64 328 *e*P **P 16 04 10.7 0.0**
DVHZ Dannevirke 80.66 141 P **P 16 04 11.7 +0.7**
HOWZ Holdsworth Sta 80.67 142 P **P 16 04 11.2 +0.2**
WPHZ Waipukurau 80.67 140 P **P 16 04 11.4 +0.4**
PRWZ Pori Road 80.71 141 P **P 16 04 12.3 +1.1**
BSD Bornholm Skovb 80.71 326 *e*P **P 16 04 11.6 +0.5**
BSD Bornholm Skovb 80.71 326 *e*P **P 16 04 11.3 +0.1**
BSD IAmb IAmb 16 04 11.8
comp=Z,155nm,1.0s
BZS Buzias 80.73 316 ⇑P **P 16 04 11.6 +0.1**
T35M Bob Quinn 80.75 32 P **P 16 04 12.2 +0.8**
baz=297,SNR=11
KAHZ Kahuranaki 80.75 140 P **P 16 04 12.4 +0.9**
BLKB Belogradchik 80.79 313 ⇑P **P 16 04 13.1 +1.2**
VTS Vitosha 80.79 312 ⇑P **P 16 04 13.0 +0.9**
VTS Vitosha 80.79 312 IAmb IAmb 16 04 18.4
comp=Z,191nm,0.9s
VTS Vitosha 80.79 312 P **P 16 04 12.9 +0.9**
TIWZ Tintock 80.80 141 P **P 16 04 12.0 +0.3**
V35K Ketchikan 80.81 34 P **P 16 04 11.9 +0.2**
baz=296
MTW Mount Morrison 80.83 142 P **P 16 04 12.0 +0.2**
NVR Nevrokopi 80.83 311 P **P 16 04 11.8 -0.3**
MMB Musomiste 80.83 311 P **P 16 04 11.8 -0.4**
MSWZ Moikau Station 80.85 142 P **P 16 04 12.1 +0.1**
ODZ Otahua Downs 80.86 147 IAmb IAmb 16 04 13.4
comp=Z,85nm,1.1s
ODZ Otahua Downs 80.86 147 P **P 16 04 13.0 +1.1**
PXZ Pawanui 80.89 140 P **P 16 04 12.7 +0.5**
TULEG Thule 80.90 2 IAmb IAmb 16 04 12.5
comp=Z,206nm,1.2s
TULEG Thule 80.90 2 *i* P **P 16 04 12.0 +0.3**
TULEG IAmb IAmb 16 04 12.3
comp=Z,190nm,1.1s
PRHZ Porangahau 80.91 140 P **P 16 04 13.3 +1.0**
PSZ Piszkesteto 80.91 318 ⇑P **P 16 04 13.1 +0.6**
PSZ Piszkesteto 80.91 318 P **P 16 04 11.0 -1.5**
PSZ IAmb IAmb 16 04 21.8
comp=Z,162nm,1.7s
PSZ Piszkesteto 80.91 318 P **P 16 04 11.0 -1.5**
PSZ pmax pmax
comp=Z,162nm,1.7s
PSZ MLR MLR
comp=Z,4μm,18.0s
PSZ Piszkesteto 80.91 318 P **P 16 04 12.6 +0.1**
AKN Aaknes 80.93 334 *e*P **P 16 04 12.4 +0.2**
AKN IAmb IAmb 16 04 13.3
comp=Z,140nm,0.8s
BSZH Besenyszg 80.93 317 ⇓P **P 16 04 13.7 +1.3**
BSZH Besenyszg 80.93 317 P **P 16 04 13.2 +0.8**
KOKK Kokkinochori, 80.93 310 P **P 16 04 12.4 -0.2**
PAWZ Paruwai Farm 80.93 142 P **P 16 04 12.8 +0.3**
BFZ Birch Farm 80.95 141 P **P 16 04 12.7 +0.1**
BFZ Birch Farm 80.95 141 P **P 16 04 12.6 +0.1**
PLWZ Palliser 80.96 142 P **P 16 04 12.7 +0.1**
MDVR Moldovita 80.99 315 ⇑P **P 16 04 13.4 +0.5**
AMBH Ambrzfalva 81.01 316 ⇑P **P 16 04 13.2 +0.2**
AMBH Ambrzfalva 81.01 316 P **P 16 04 13.7 +0.8**
TMWZ Te Maipa 81.02 142 P **P 16 04 13.2 +0.3**
TRWZ Traveller 81.09 142 P **P 16 04 13.7 +0.4**
OUR Ouranopolis 81.12 310 P **P 16 04 13.0 -0.6**
KONO Kongsberg 81.13 332 P **P 16 04 12.5 -0.8**
KONO Kongsberg 81.13 332 *c i* P **P 16 04 12.8 -0.5**
KONO pmax pmax
comp=Z,31nm,1.1s
KONO MLR MLR
comp=Z,15μm,17.0s
KONO Kongsberg 81.13 332 *e*P **P 16 04 13.0 -0.2**
KONO IAmb IAmb 16 04 13.3
comp=Z,20nm,0.7s
SKAR Skarslia 81.17 333 *e*P **P 16 04 13.6 0.0**
SKAR IAmb IAmb 16 04 14.7
comp=Z,55nm,1.0s
KKB Krupnik 81.18 312 P **P 16 04 14.2 +0.2**
OKC Ostrava-Krasne 81.19 320 *e*P **P 16 04 14.3 +0.5**
OKC *e*S **S 16 14 22.7 +0.2**
OKC MLR MLR
comp=Z,3μm,15.6s
OKC Ostrava-Krasne 81.19 320 *e*P **P 16 04 14.3 +0.5**
OKC *e*S **S 16 14 22.7 +0.2**
OKC AMS AMS 16 43 10.0
comp=Z,3μm,15.6s
SYZ Scrubby Hill 81.19 149 P **P 16 04 15.1 +1.5**
APE Apeiranthos 81.21 306 ⇑P **P 16 04 13.7 -0.5**
APE Apeiranthos 81.21 306 P **P 16 04 12.6 -1.6**
APE Apeiranthos 81.21 306 *ce*P **P 16 04 13.1 -1.1**
APE pmax pmax
comp=Z,58nm,0.9s
VYHS Vyhne 81.33 319 *e*P **P 16 04 15.5 +0.9**
VYHS pmax pmax
comp=Z,95nm,0.9s
SOH Sokhos 81.39 311 P **P 16 04 14.6 -0.5**
ZKR Zakros 81.40 304 P **P 16 04 15.1 -0.2**
BOVS Bovan 81.44 314 ⇑P **P 16 04 15.3 +0.1**
THR8 Santorini-Mono 81.49 306 P **P 16 04 14.3 -1.4**
PAIG Paliouri 81.49 310 P **P 16 04 15.2 -0.4**
SANT Santorini 81.52 306 ⇓P **P 16 04 15.0 -0.9**
SANT Santorini 81.52 306 P **P 16 04 14.6 -1.3**
THR3 Thira Island, 81.55 306 P **P 16 04 15.0 -1.0**
MORC Moravsky Berou 81.57 320 ⇑P **P 16 04 16.4 +0.5**
MORC Moravsky Berou 81.57 320 *e*P **P 16 04 16.3 +0.4**
THR6 Thira Island, 81.57 306 P **P 16 04 14.9 -1.2**
MAUC Maruska 81.57 320 *e*P **P 16 04 16.1 +0.2**
MAUC *e*S **S 16 14 24.2 -2.4**
MAUC AMS AMS 16 43 20.0
comp=Z,6μm,15.0s
KNT Kendrikon 81.57 311 P **P 16 04 15.5 -0.6**
THR5 Thira Island, 81.58 306 P **P 16 04 15.2 -1.0**
BUD Budapest 81.63 318 P **P 16 04 16.8 +0.7**
HORT Hortiatis 81.65 310 P **P 16 04 15.6 -1.0**
KYMI Kymi, Euboea I 81.68 308 P **P 16 04 16.1 -0.5**
COP Copenhagen 81.71 327 *e*P **P 16 04 17.4 +0.9**
COP IAmb IAmb 16 04 18.1
comp=Z,223nm,0.8s
VAY Valandovo 81.74 311 *i* P **P 16 04 16.9 0.0**
HYA Hoyanger 81.79 334 *e*P **P 16 04 16.7 0.0**
HYA IAmb IAmb 16 04 17.6
comp=Z,87nm,0.9s
KSP Ksiaz 81.83 322 *e*P **P 16 04 17.9 +0.7**
KSP *e*S **S 16 14 27.2 -2.0**
STIP Stip 81.86 312 *i* P **P 16 04 16.4 -1.1**
JAVC Velka Javorina 81.88 320 *e*P **P 16 04 19.4 +1.8**
KRLC Kraliky 81.88 321 *e*P **P 16 04 17.9 +0.3**
KRLC *e*S **S 16 14 25.5 -4.3**
KRLC MLR MLR
comp=Z,4μm,17.2s
KRLC Kraliky 81.88 321 *e*P **P 16 04 17.9 +0.3**
KRLC *e*S **S 16 14 25.5 -4.3**
KRLC AMS AMS 16 45 30.0
comp=Z,4μm,17.2s
GRG Griva 82.00 311 P **P 16 04 17.6 -0.7**
OSTC Ostas 82.00 322 *e*P **P 16 04 18.6 +0.4**
OSTC *e*S **S 16 14 25.5 -5.5**
OSTC AMS AMS 16 45 30.0
comp=Z,6μm,16.5s
DION Dionisos Attik 82.01 308 P **P 16 04 17.2 -1.2**
FOO Floro 82.02 334 *e*P **P 16 04 17.9 0.0**
FOO IAmb IAmb 16 04 19.6
comp=Z,54nm,1.0s
DPC Dobruska-Polom 82.03 321 *e*P **P 16 04 19.0 +0.7**
DPC *e*S **S 16 14 23.2 -8.1**
DPC MLR MLR
comp=Z,5μm,16.0s
DPC Dobruska-Polom 82.03 321 *e*P **P 16 04 19.0 +0.7**
DPC *e*S **S 16 14 23.2 -8.1**
DPC AMS AMS 16 44 50.0
comp=Z,5μm,16.0s
XOR Xorichti 82.05 309 P **P 16 04 17.5 -1.2**
FRGS Fruska Gora 82.08 316 ⇑P **P 16 04 19.0 +0.3**
FRGS Fruska Gora 82.08 316 ⇑*i*P **P 16 04 18.7 +0.1**
CHVC Chvalec 82.08 322 *e*P **P 16 04 19.0 +0.4**
CHVC AMS AMS 16 45 30.0
comp=Z,6μm,16.7s
UPC Upice 82.14 322 *e*P **P 16 04 19.4 +0.5**
UPC *e*S **S 16 14 25.3 -7.1**
UPC MLR MLR
comp=Z,6μm,16.1s
UPC Upice 82.14 322 *e*P **P 16 04 19.4 +0.5**
UPC *e*S **S 16 14 25.3 -7.1**
UPC AMS AMS 16 45 30.0
comp=Z,6μm,16.1s
CSKK Cskako 82.15 318 P **P 16 04 19.3 +0.3**
ATHU Athens Univers 82.16 308 P **P 16 04 17.6 -1.6**
SMOL Smolenice 82.17 319 *e*P **P 16 04 20.1 +1.1**
SMOL pmax pmax
comp=Z,44nm,1.5s
MHLO Agia Marina, M 82.19 306 P **P 16 04 18.0 -1.4**
VLY Voula,Athens 82.20 308 P **P 16 04 17.8 -1.6**
FLDN Fort Liard 82.21 27 P **P 16 04 19.6 +0.7**
baz=302
KSTL Kastelli Herak 82.21 305 P **P 16 04 18.6 -0.9**
ATH Athens Observa 82.21 308 P **P 16 04 18.2 -1.2**
SKO Skopje 82.27 312 *i* P **P 16 04 20.2 +0.5**
LIT Litokhoron 82.27 310 P **P 16 04 18.9 -0.9**
ODD1 Odda 82.28 333 *e*P **P 16 04 19.5 0.0**
MODS Modra-Piesok 82.32 319 *e*P **P 16 04 20.8 +0.9**
MODS pmax pmax
comp=Z,173nm,1.5s
VRAC Vranov 82.33 320 LR LR 16 44 16.3
comp=Z,3μm,19.0s,baz=64,slow=38
VRAC Vranov 82.33 320 *e*P **P 16 04 20.5 +0.6**
IDI Anoyia 82.35 305 ⇑P **P 16 04 20.8 +0.5**
IDI Anoyia 82.35 305 P **P 16 04 19.2 -1.1**
IDI IAmb IAmb 16 04 29.2
comp=Z,84nm,1.0s
IDI Anoyia 82.35 305 P **P 16 04 19.5 -0.8**
DIVS Divibare 82.39 315 ⇑*i*P **P 16 04 20.2 -0.2**
MORH Mrgy, Hungar 82.39 317 ⇑P **P 16 04 20.8 +0.6**
MORH Mrgy, Hungar 82.39 317 P **P 16 04 20.3 +0.1**
HG4B Hotspring 82.41 36 IAmb IAmb 16 04 21.6
comp=Z,90nm,1.3s
VILL Villia 82.43 308 P **P 16 04 18.7 -2.0**
SUE Sulen 82.43 334 *e*P **P 16 04 19.5 -0.6**
SUE IAmb IAmb 16 04 21.1
comp=Z,86nm,0.8s
LKR Lokris 82.47 309 P **P 16 04 18.2 -2.6**
ZST Bratislava 82.50 319 *e*P **P 16 04 21.7 +0.9**
ZST pmax pmax
comp=Z,242nm,1.7s
RUE Ruedersdorf 82.50 324 *e*P **P 16 04 21.6 +1.0**
TEKS Tekeris 82.51 315 *e*P **P 16 04 20.1 -0.8**
SIVA Sivas 82.51 305 P **P 16 04 22.9 +1.8**
KRUC Moravsky 82.55 320 *e*P **P 16 04 21.7 +0.7**
BER Bergen 82.57 333 *e*P **P 16 04 21.1 +0.2**
BER IAmb IAmb 16 04 22.9
comp=Z,110nm,1.1s
ASK Askoy 82.57 333 *e*P **P 16 04 20.7 -0.2**
ASK IAmb IAmb 16 04 21.3
comp=Z,131nm,0.9s
GOET G??ttrup 82.61 329 *e*P **P 16 04 22.1 +1.0**
GOET IAmb IAmb 16 04 23.3
comp=Z,476nm,1.1s
BLS5 Blasjo 82.62 332 *e*P **P 16 04 21.2 0.0**
BLS5 IAmb IAmb 16 04 22.2
comp=Z,79nm,0.8s
MPLH Magyarpolny 82.67 318 P **P 16 04 21.6 -0.1**
EGYH Egyhazaskeszo 82.70 318 P **P 16 04 22.3 +0.5**
KZN Kozani 82.70 311 P **P 16 04 20.8 -1.3**

KOVH Kovagotottos 82.78 317 P **P** **16 04 22.4 +0.1**
THL Klokotos Trika 82.82 310 P **P** **16 04 20.7 -1.9**
SNART Snartemo 82.86 331 *e*P **P** **16 04 22.5 +0.1**
SNART IAmb IAmb 16 04 23.3
comp=Z,148nm,0.9s
BBLS Lazići 82.87 315⇑ *i*P **P** **16 04 21.8 -1.1**
MUD Monsted U'grnd 82.93 329⇑ *i*P **P** **16 04 23.0 +0.2**
MUD IAmb IAmb 16 04 24.8
comp=Z,122nm,0.9s
MAKR Makrakomi, Fth 82.95 309 P **P** **16 04 21.9 -1.4**
IVA Berane 82.95 313 *e*P **P** **16 04 23.8 +0.4**
PVCC Panska Ves 82.96 322 *e*P **P** **16 04 23.2 +0.1**
PVCC *e*S **S** **16 14 39.5 -1.2**
PVCC MLR MLR
comp=Z,6μm,15.5s
PVCC Panska Ves 82.96 322 *e*P **P** **16 04 23.2 +0.1**
PVCC *e*S **S** **16 14 39.5 -1.2**
PVCC AMS AMS 16 46 10.0
comp=Z,6μm,15.5s
IMMV Iera Moni Meta 82.97 305 P **P** **16 04 23.3 -0.2**
TREC Trest 82.98 321 *e*P **P** **16 04 23.7 +0.4**
TREC *e*S **S** **16 14 42.7 +1.7**
TREC MLR MLR
comp=Z,3μm,15.9s
TREC Trest 82.98 321 *e*P **P** **16 04 23.7 +0.4**
TREC *e*S **S** **16 14 42.7 +1.7**
TREC AMS AMS 16 46 10.0
comp=Z,3μm,15.9s
RUDO Rudo 83.00 314 *e*P **P** **16 04 22.8 -0.7**
OHR Ohrid 83.05 312 *i*P **P** **16 04 23.8 -0.1**
SOP Sopron 83.05 319 P **P** **16 04 23.8 +0.2**
PHP Peshkopia 83.07 312 P **P** **16 04 23.6 -0.3**
PLE Pljevlja 83.10 314 *e*P **P** **16 04 25.1 +0.9**
GOPC GO Pecny, Ondr 83.11 321 *e*P **P** **16 04 24.2 +0.3**
GOPC MLR MLR
comp=Z,4μm,16.1s
GOPC GO Pecny, Ondr 83.11 321 *e*P **P** **16 04 24.2 +0.3**
GOPC AMS AMS 16 43 50.0
comp=Z,4μm,16.1s
GVDS Gavdos 83.12 305 P **P** **16 04 24.1 -0.2**
GVD Gavdhos 83.13 305 P **P** **16 04 23.8 -0.5**
BRG Berggiesshubel 83.15 323⇑ *i*P **P** **16 04 24.5 +0.3**
BRG Amp 16 04 27.8
comp=Z,47nm,1.1s
BRG *i* x x 16 04 33.0
BRG Amp 16 04 34.7
comp=Z,120nm,1.4s
BRG PP **PP** **16 07 31.6 -3.3**
BRG Amp 16 07 34.2
comp=Z,19nm,1.3s
BRG Berggiesshubel 83.15 323 SKS **S** **16 14 44.0 +1.4**
BRG Berggiesshubel 83.15 323⇑ *i*P **P** **16 04 24.4 +0.3**
BRG *i* 16 04 33.0
BRG 16 07 31.6
BRG 16 14 44.0
BRG pmax pmax
comp=Z,47nm,1.1s
BRG pmax pmax
comp=Z,19nm,1.3s
BRG MLR MLR
comp=E,5μm,16.3s
BRG MLR MLR
comp=Z,9μm,15.2s
NEST Nestorio 83.16 311 P **P** **16 04 23.7 -0.8**
RONA Rosalia, Austr 83.20 319 *i*P **P** **16 04 25.0 +0.5**
comp=Z,47nm,1.3s,SNR=19
KOME Kolasin 83.22 314 *e*P **P** **16 04 25.2 +0.5**
PRU Pruhonice 83.22 322 *e*P **P** **16 04 24.7 +0.2**
PRU *e*S **S** **16 14 43.1 -0.2**
PRU MLR MLR
comp=Z,4μm,16.2s
PRU Pruhonice 83.22 322 *e*P **P** **16 04 24.7 +0.2**
PRU *e*S **S** **16 14 43.1 -0.2**
PRU AMS AMS 16 44 00.0
comp=Z,4μm,16.2s
EVR Evrytania 83.22 309 P **P** **16 04 23.8 -1.0**
SERG Sergoula 83.24 309 P **P** **16 04 23.2 -1.6**
KMY Karmoy 83.25 332 *e*P **P** **16 04 24.8 +0.4**
KBN Korca 83.26 311 P **P** **16 04 23.9 -1.1**
VLI Veliai 83.26 307 P **P** **16 04 23.1 -1.9**
KNDR Palaiochora Ch 83.28 305 P **P** **16 04 24.8 -0.2**
KLV Kalavryta, Ach 83.32 308 P **P** **16 04 23.9 -1.4**
ANKY Antikythira Is 83.32 306 P **P** **16 04 24.2 -1.1**
EFP Efpalio 83.34 309 P **P** **16 04 24.2 -1.1**
KTHA Kythira Island 83.35 306 P **P** **16 04 24.3 -1.1**
LAKA Lakka 83.37 309 P **P** **16 04 24.4 -1.1**
CONA Conrad Observa 83.37 319 *i*P **P** **16 04 26.2 +0.8**
comp=Z,155nm,1.4s,SNR=59
KTHR Kythira 83.39 306 P **P** **16 04 24.8 -0.8**
TRIP Tripoli 83.44 308 P P 16 04 20.8 -5.1
BEHE Becsehely 83.45 318 P **P** **16 04 26.3 +0.6**
ABPO Ambohimpanom 83.46 246 P **P** **16 04 27.3 +0.9**
ABPO IAmb IAmb 16 04 39.0
comp=Z,98nm,1.1s
ABPO IAMs_20 IAMs_20 16 48 37.9
comp=Z,2μm,18.0s
ABPO Ambohimpanom 83.46 246 P **P** **16 04 27.3 +0.9**
ABPO pmax pmax
comp=Z,98nm,1.1s
ABPO MLR MLR
comp=Z,2μm,18.0s
CLL Collm 83.47 323 IAmb IAmb 16 04 27.0
comp=Z,57nm,0.8s
CLL Collm 83.47 323⇑ *i*P **P** **16 04 25.7 0.0**
CLL *i* *PP **PcP** **16 04 31.3 +1.3**
CLL *e*S **S** **16 14 43.0 -2.9**
CLL pmax pmax
comp=Z,71nm,0.9s
CLL Collm 83.47 323⇑ *i*P **P** **16 04 25.7 0.0**
comp=Z,71nm,0.9s
CLL *i* pP **PcP** **16 04 31.3 +1.3**
CLL *e*sP **pP** **16 04 34.0 +0.9**
CLL *e*x x 16 07 12.0
CLL *e*PP **PP** **16 07 39.0 +1.5**
CLL *e*S **S** **16 14 43.0 -2.9**
CLL *e*PS **PnS** **16 15 41.0 +2.0**
CLL *e*x x 16 16 39.0
CLL *e*SS SS 16 20 24.0 +13
CLL *e*x x 16 24 36.0
CLL *e*SSSS 16 26 30.0
CLL *e*PKPPKPd**P'P'df** **16 30 50.0 -3.8**
CLL Lmax 16 46 00.0
UPM Unac-Piva 83.48 314 *e*P **P** **16 04 27.7 +1.5**
UPM Unac-Piva 83.48 314 *e*P **P** **16 04 26.0 -0.2**
PVO Paravola 83.54 309 P **P** **16 04 25.7 -0.6**
PDG Podgorica 83.56 313⇑P **P** **16 04 26.4 +0.1**
PDG Podgorica 83.56 313 IAMs_20 IAMs_20 16 48 03.5
comp=Z,2μm,19.0s
TTG Podgorica 83.56 313 *e*P **P** **16 04 26.5 +0.1**
LSK Leskovik 83.58 311 P **P** **16 04 26.3 -0.3**
TIR Tirane 83.60 312⇑P **P** **16 04 27.9 +1.3**
TIR Tirane 83.60 312 P **P** **16 04 26.6 0.0**
JAN Janina 83.60 310 P **P** **16 04 25.2 -1.5**
NKME Niksic 83.63 314 *e*P **P** **16 04 26.9 +0.1**
SCO Scoresbysund 83.67 348 *e*P **P** **16 04 27.4 +1.0**
SCO IAmb IAmb 16 04 28.5
comp=Z,246nm,1.2s
DRO Drossia 83.67 308 P **P** **16 04 26.6 -0.5**
DRME Dracevica, Mon 83.71 313 *e*P **P** **16 04 27.7 +0.5**
CEME Cevo 83.74 313 *e*P **P** **16 04 27.4 0.0**
ULC Ulcinj 83.77 313 *e*P **P** **16 04 27.8 +0.3**
KOGS Kog 83.78 318 *i*P **P** **16 04 27.5 +0.1**
RLS Riolos of Patr 83.81 309 P **P** **16 04 27.3 -0.4**
ITM Ithomi 83.83 308 P **P** **16 04 26.5 -1.4**
ITM Ithomi 83.83 308 P **P** **16 04 26.9 -1.0**
BRY Bratogost 83.85 314⇑ *i*P **P** **16 04 27.8 -0.2**
BRY Bratogost 83.85 314 *e*P **P** **16 04 27.9 -0.1**
BUM Brajici-Budva 83.86 313 *e*P **P** **16 04 28.0 0.0**
ARSA Arzberg 83.88 319 *i*P **P** **16 04 28.3 +0.4**
comp=Z,67nm,1.5s,SNR=20
CKRC Cesky Krumlov 83.89 321 *e*P **P** **16 04 28.4 +0.4**
CKRC *e*S **S** **16 14 46.4 -3.8**
BLY Banja Luka 83.94 316⇑ *i*P **P** **16 04 28.4 +0.1**
IGT Igoumenitsa 84.02 310 P **P** **16 04 27.8 -1.0**
HCY Herceg Novi 84.07 314⇑ *i*P **P** **16 04 28.0 -1.0**
HCY Herceg Novi 84.07 314 *e*P **P** **16 04 29.4 +0.4**
PYL PYLOS 84.07 307 P **P** **16 04 27.5 -1.6**
LKD2 Lefkada island 84.09 309 P **P** **16 04 28.1 -1.1**
NYDR Nydri-Lefkada 84.09 309 P **P** **16 04 28.1 -1.0**
SRN Sarande 84.11 311 P **P** **16 04 28.2 -1.0**
BBB Bella Bella 84.13 35 LR LR 16 45 41.1
comp=Z,282nm,18.1s,baz=314,slow=38
BBB Bella Bella 84.13 35 IAmb IAmb 16 04 30.5
comp=Z,150nm,1.9s
MGRS Mrkonjic Grad 84.15 316⇑ *i*P **P** **16 04 30.0 +0.6**
EVGI Lefkada island 84.16 309 P **P** **16 04 28.6 -0.9**
KHC Kasperske Hory 84.17 321 IAmb IAmb 16 04 39.3
comp=Z,96nm,1.3s
KHC Kasperske Hory 84.17 321 *e*P **P** **16 04 29.6 +0.2**
KHC *e* 16 04 35.5
KHC *e*S **S** **16 14 50.8 -2.3**
KHC MLR MLR
comp=Z,5μm,16.6s
KHC Kasperske Hory 84.17 321 *e*P **P** **16 04 29.6 +0.2**
KHC *e*pP **pP** **16 04 35.5 -1.3**
KHC *e*x x 16 05 00.0
KHC *e*S **S** **16 14 50.8 -2.3**
KHC AMS AMS 16 43 30.0
comp=Z,5μm,16.6s
GEC2 GERESS Array S 84.23 321 IAmb IAmb 16 04 32.5
comp=Z,74nm,1.1s
GERES GERESS Array B 84.23 321 P **P** **16 04 30.3 +0.5**
comp=Z,35nm,0.7s,baz=57,slow=4.9,SNR=183
GERES LR LR 16 46 15.2
comp=Z,3μm,19.0s,baz=62,slow=39
comp=Z,35nm,0.7s
GROS Grobnik 84.24 318 *i*P **P** **16 04 29.8 -0.1**
FSK Fiskardo 84.30 309 P **P** **16 04 28.9 -1.3**
NKC Novy Kostel 84.30 322 *e*P **P** **16 04 30.3 +0.3**
NKC *e*S **S** **16 14 52.7 -1.6**
NKC MLR MLR
comp=Z,7μm,14.7s
NKC Novy Kostel 84.30 322 *e*P **P** **16 04 30.3 +0.3**
NKC *e*S **S** **16 14 52.7 -1.6**
NKC AMS AMS 16 47 00.0
comp=Z,7μm,14.7s
KEK Kerkira 84.32 311 IAmb IAmb 16 04 31.0
comp=Z,120nm,1.0s
KEK Kerkira 84.32 311 P **P** **16 04 29.5 -0.8**
YKA Yellowknife Ar 84.34 23 P **P** **16 04 29.6 -0.3**
comp=Z,42nm,0.8s,baz=311,slow=4.8,SNR=105
YKA PKKPbc **PKKPbc** **16 22 39.8 -3.6**
comp=Z,1.0nm,0.6s,baz=131,slow=2.6,SNR=7.2
YKA LR LR 16 45 15.7
comp=Z,1μm,20.1s,baz=318,slow=38
comp=Z,42nm,0.8s
MOA Molln 84.36 320 *i*P **P** **16 04 31.2 +0.8**
comp=Z,96nm,0.9s,SNR=44
VLS Valsamata 84.39 309 P **P** **16 04 29.9 -0.8**
PERS Pernice 84.40 318 *i*P **P** **16 04 30.8 +0.1**
PSDA Pessada-Kefalo 84.42 309 P **P** **16 04 30.0 -0.8**
SOKA Soboth 84.43 318 *i*P **P** **16 04 31.2 +0.3**
comp=Z,46nm,0.8s,SNR=54
A050A Klekovaca 84.48 316⇑ *i*P **P** **16 04 31.1 0.0**
KEF4 Livadi, Kephal 84.48 309 P **P** **16 04 30.2 -0.9**
DMLN Damoulianata-K 84.52 309 P **P** **16 04 30.6 -0.8**
KEF3 Kipouria, Keph 84.56 309 P **P** **16 04 30.7 -0.8**
CRES Cresnjev 84.56 318⇑ *i*P **P** **16 04 31.6 +0.2**
OBKA Obir 84.81 318⇑ *i*P **P** **16 04 32.7 -0.1**
OBKA Obir 84.81 318 *i*P **P** **16 04 33.0 +0.3**
comp=Z,39nm,0.8s,SNR=16
BIOA Bad Ischl, Aus 84.81 320 *i*P **P** **16 04 33.1 +0.5**
comp=Z,69nm,1.6s,SNR=23
KIBK Kibwezi 84.81 265 IAMs_20 IAMs_20 16 39 35.7
comp=Z,2μm,21.0s
KIBK Kibwezi 84.81 265 P **P** **16 04 35.4 +2.0**
SNR=40
BOJS Bojanci 84.83 317⇑ *i*P **P** **16 04 33.2 +0.4**
UPNV Upernavik 84.86 359 *e*P **P** **16 04 32.8 +0.5**
UPNV IAmb IAmb 16 04 33.1
comp=Z,177nm,0.9s
PAF Port-aux-Franc 84.87 211 P **P** **16 04 33.2 +0.6**
PAF Port-aux-Franc 84.87 211 P **P** **16 04 33.2 +0.6**
PAF pmax pmax
comp=Z,461nm,1.3s
LJU Ljubljana 85.03 318 *i*P **P** **16 04 34.1 +0.3**
KMBO Kilima Mbogo 85.08 267 P **P** **16 04 33.8 -1.0**
comp=Z,1.1nm,1.0s,baz=52,slow=20,SNR=24
KMBO LR LR 16 43 21.9
comp=Z,46nm,19.0s,baz=92,slow=36
KMBO Kilima Mbogo 85.08 267 P **P** **16 04 34.1 -0.7**
KMBO IAmb IAmb 16 04 47.3
comp=Z,176nm,1.4s
KMBO Kilima Mbogo 85.08 267 IAMs_20 IAMs_20 16 43 11.4
comp=Z,2μm,20.0s
KMBO Kilima Mbogo 85.08 267 P **P** **16 04 34.1 -0.7**
KMBO pmax pmax
comp=Z,177nm,1.5s
KMBO MLR MLR
comp=Z,2μm,20.0s
KMBO Kilima Mbogo 85.08 267 P **P** **16 04 36.9 +2.1**
KMBO P **P** **16 04 36.9 +2.1**
KMBO Kilima Mbogo 85.08 267 *e*P **P** **16 04 34.9 0.0**
KMBO Kilima Mbogo 85.08 267 *e*P **P** **16 04 36.2 +1.4**
KMBO Kilima Mbogo 85.08 267 *i*P **P** **16 04 36.3 +1.4**
SNR=44
LODK Lodwar 85.10 272 IAmb IAmb 16 04 47.1
comp=Z,152nm,1.5s
LODK IAMs_20 IAMs_20 16 42 20.8
comp=Z,2μm,20.0s
LODK Lodwar 85.10 272 P **P** **16 04 36.5 +1.8**
SNR=69
LODK Lodwar 85.10 272 *e*P **P** **16 04 35.6 +0.8**
LODK Lodwar 85.10 272 *e*P P 16 04 25.4 -9.3
VOI Vohitsoka 85.11 244 IAmb IAmb 16 04 47.8
comp=Z,130nm,1.3s
VOI IAMs_20 IAMs_20 16 41 49.8
comp=Z,2μm,20.0s
VOI Vohitsoka 85.11 244 P **P** **16 04 35.5 +1.0**
SNR=5.9
VOI Vohitsoka 85.11 244 P **P** **16 04 35.6 +1.0**
CEY Cerknica 85.24 318⇑ *i*P **P** **16 04 35.0 +0.1**
GRA1 Grafenberg Arr 85.25 322 IAmb IAmb 16 04 45.0
comp=Z,123nm,1.3s
GRFO Grafenberg 85.25 322 P **P** **16 04 34.3 -0.5**
GRFO IAmb IAmb 16 04 45.0
comp=Z,133nm,1.4s
GRFO Grafenberg 85.25 322 P **P** **16 04 34.3 -0.5**
GRFO pmax pmax
comp=Z,133nm,1.4s
GRFO MLR MLR
comp=Z,7μm,19.0s
KBA Koelnbreinsper 85.27 319 *i*P **P** **16 04 35.1 -0.1**
comp=Z,21nm,0.7s,SNR=8.9
MYKA Terra Mystica 85.31 319 *i*P **P** **16 04 35.0 -0.2**
comp=Z,12nm,0.9s,SNR=14
SKDS Skadanscina 85.58 318⇑ *i*P **P** **16 04 36.2 -0.4**
CLUD Cludinico 85.85 319 P **P** **16 04 36.8 -1.1**
CLUD IAmb IAmb 16 04 38.2
comp=Z,42nm,0.8s
ABTA Abfaltersbach 85.93 319 *i*P **P** **16 04 37.6 -0.7**
comp=Z,39nm,0.9s,SNR=18
NUUG Nuugaatsiaq 86.05 358 *e*P **P** **16 04 38.8 +0.5**
NUUG IAmb IAmb 16 04 39.1
comp=Z,89nm,1.0s
MATE Matera 86.06 312⇑P **P** **16 04 39.2 +0.2**
WATA Walderalm 86.21 320 *i*P **P** **16 04 39.7 -0.1**
comp=Z,35nm,1.0s,SNR=11
WTTA Wattenberg 86.21 320 *i*P **P** **16 04 39.7 -0.2**
comp=Z,61nm,0.9s,SNR=26
MOTA Moosalm 86.48 320 *i*P **P** **16 04 40.8 -0.3**
comp=Z,34nm,1.0s,SNR=14
SQTA Sankt Quirin 86.48 320 *i*P **P** **16 04 40.9 -0.2**
comp=Z,48nm,1.0s,SNR=19
RETA Reutte 86.61 321 *i*P **P** **16 04 41.3 -0.4**
comp=Z,13nm,1.0s
TIP Timpagrande 86.67 311⇑P **P** **16 04 42.5 +0.4**
TIP Timpagrande 86.67 311 P **P** **16 04 41.7 -0.4**
TIP IAMs_20 IAMs_20 16 49 57.0
comp=Z,2μm,21.0s
FETA Feichten 86.86 320 *i*P **P** **16 04 43.0 -0.1**
comp=Z,38nm,1.1s,SNR=15
WAPA Wapiti River 86.93 30 IAmb IAmb 16 04 44.4
comp=Z,114nm,1.0s
CUC Castrocucco 86.96 312 IAmb IAmb 16 04 45.6
comp=Z,76nm,1.3s
OZB Mount Ozzard 87.21 37 P **P** **16 04 44.7 +0.2**
OZB IAmb IAmb 16 04 46.6
comp=Z,107nm,1.2s
DAVA Damuels 87.23 321 *i*P **P** **16 04 44.7 -0.2**
comp=Z,32nm,1.2s,SNR=9.6
SOEG Soedalen 87.30 350 *e*P **P** **16 04 44.6 +0.2**
FUORN Ofenpass-Fuorn 87.34 320 IAmb IAmb 16 04 55.1
comp=Z,74nm,1.4s
AQU L'Aquila 87.48 315 IAMs_20 IAMs_20 16 47 03.9
comp=Z,2μm,20.0s
DAVOX Davos/Dischmat 87.49 320 LR LR 16 48 22.2
comp=Z,4μm,21.0s,baz=46,slow=39
ICESG Greenland Ices 87.56 353 *i*P **P** **16 04 46.3 +0.1**
ICESG IAmb IAmb 16 04 47.0
comp=Z,278nm,1.0s
BTNL Ternell 87.58 325 *d*P **P** **16 04 46.5 +0.2**
comp=Z,24nm,1.4s
BFO Black Forest 87.58 322 P **P** **16 04 45.3 -1.0**
BFO Black Forest 87.58 322 P **P** **16 04 45.3 -1.0**
BFO pmax pmax
comp=Z,37nm,1.3s
BFO MLR MLR
comp=Z,8μm,20.0s
MEM Membach 87.64 325 *d*P **P** **16 04 46.6 +0.1**
comp=Z,20nm,1.3s
CEL Celeste 87.69 311 IAMs_20 IAMs_20 16 50 15.0
comp=Z,2μm,21.0s
BEBN Eben Emael 87.71 325 *d*P **P** **16 04 46.8 +0.1**
BHOU Houvegnez 87.78 325 *d*P **P** **16 04 47.3 +0.1**
comp=Z,22nm,1.4s
BSTI Sart Tilman 87.88 325 *d*P **P** **16 04 48.3 +0.6**
BSTI *d*x x 16 04 53.5
TUE Stuetta 87.96 320 IAmb IAmb 16 04 50.0
comp=Z,174nm,1.8s
WLF Walferdange 88.08 324 *d*P **P** **16 04 49.4 +0.8**
comp=Z,55nm,1.3s
BCLA Clavier 88.11 325 *d*P **P** **16 04 48.5 -0.3**
comp=Z,20nm,1.5s
RAR Rarotonga 88.25 114 LR LR 16 40 23.5
comp=Z,266nm,19.3s,baz=294,slow=33
BGES Gesves 88.25 325 *d*P **P** **16 04 48.9 -0.5**
comp=Z,14nm,1.5s
LLLB Lillooet 88.27 35 P **P** **16 04 49.5 0.0**
RCHB Rochefort 88.30 325 *d*P **P** **16 04 49.4 -0.2**
comp=Z,28nm,0.9s
ILULI Ilulissat 88.31 357 P **P** **16 04 48.5 -0.8**
ILULI Ilulissat 88.31 357 P **P** **16 04 48.5 -0.8**
ILULI pmax pmax
comp=Z,131nm,1.0s
ILULI Ilulissat 88.31 357 *e*P **P** **16 04 49.2 0.0**
ILULI IAmb IAmb 16 04 49.8
comp=Z,134nm,1.0s
BORG Borgarnes 88.32 345 LR LR 16 47 28.2
comp=Z,4μm,19.9s,baz=28,slow=38
BRLDA Berland Lookou 88.45 30 IAmb IAmb 16 04 52.2
comp=Z,91nm,1.0s
BMRD Maredsous 88.46 325 *d*P **P** **16 04 50.1 -0.3**
comp=Z,32nm,1.0s
VLC Villacollemand 88.51 318 IAmb IAmb 16 05 06.8
comp=Z,56nm,0.9s
PGC Sidney 88.51 37 IAmb IAmb 16 04 53.0
comp=Z,89nm,1.2s
DOU Dourbes 88.67 325 *d*P **P** **16 04 50.8 -0.6**
comp=Z,32nm,0.9s
KAC Achnashellach 88.69 334 *e*P **P** **16 04 50.5 -0.8**
B04A Port Angeles 88.81 37 IAmb IAmb 16 04 54.8
comp=Z,107nm,1.1s
EBL Broad Law 88.90 332 *e*P **P** **16 04 52.1 -0.3**
EBL IAmb IAmb 16 04 53.0
comp=Z,54nm,0.9s
NLWA Neilton Lookou 88.96 38 IAmb IAmb 16 04 55.7
comp=Z,108nm,1.1s
CASY Casey 88.98 184 P **P** **16 04 52.2 0.0**
EDMD Edmundbyers 89.03 331 *e*P **P** **16 04 52.3 -0.7**
EDMD IAmb IAmb 16 04 54.8
comp=Z,60nm,0.8s
VAE Valguarnera 89.09 310 LR LR 16 53 10.4
comp=Z,865nm,18.4s,baz=37,slow=41
SENIN Lac Senin/Sane 89.22 321 P **P** **16 04 53.3 -1.1**
EKA Eskdalemuir Ar 89.23 332 LR LR 16 49 13.5
comp=Z,11μm,18.9s,baz=47,slow=38
ESK Eskdalemuir 89.26 332 *e*P **P** **16 04 53.0 -1.0**
ESK IAmb IAmb 16 04 54.7
comp=Z,142nm,1.5s
B06A Marblemount 89.67 36 IAmb IAmb 16 04 58.8
comp=Z,133nm,1.1s
NEWG New Galloway 89.84 332 *e*P **P** **16 04 56.2 -0.5**
NEWG IAmb IAmb 16 05 01.4
comp=Z,94nm,1.4s
GAL1 Galloway 90.21 332 *e*P **P** **16 04 58.2 -0.3**
BNI Bardonecchia 90.30 320 P **P** **16 04 58.6 -0.7**
BNI IAmb IAmb 16 05 00.7
comp=Z,87nm,1.4s
BNI Bardonecchia 90.30 320 P **P** **16 04 58.6 -0.7**
BNI pmax pmax
comp=Z,87nm,1.4s
LON Longmire 90.49 38 IAmb IAmb 16 05 02.7
comp=Z,50nm,1.1s
SFJD Kangerlussuaq 90.49 357 P **P** **16 04 58.4 -1.1**
SFJD Kangerlussuaq 90.49 357 P **P** **16 04 58.4 -1.1**
SFJD pmax pmax
comp=Z,135nm,1.0s
SFJD Kangerlussuaq 90.49 357 *e*P **P** **16 04 59.2 -0.3**
SFJD IAmb IAmb 16 04 59.9
comp=Z,142nm,0.9s
DY2G Dye2 90.73 355 *e*P **P** **16 05 01.1 +0.1**
DY2G IAmb IAmb 16 05 02.7
comp=Z,231nm,0.8s
COR Corvallis 90.83 40 P **P** **16 05 03.6 +2.0**
COR Corvallis 90.83 40 P **P** **16 05 03.6 +2.0**
COR pmax pmax
comp=Z,148nm,1.2s
FOEL Foel Wylfa 90.84 330 *e*P **P** **16 05 00.1 -1.4**
FOEL IAmb IAmb 16 05 01.3
comp=Z,102nm,1.1s
LTY Liberty 90.84 37 IAmb IAmb 16 05 03.6
comp=Z,66nm,1.2s
MBAR Mbarara 90.89 270 LR LR 16 45 36.2
comp=Z,2μm,21.3s,baz=48,slow=35
MBAR Mbarara 90.89 270 P **P** **16 05 02.6 -0.1**
MBAR Mbarara 90.89 270 IAMs_20 IAMs_20 16 48 31.5
comp=Z,2μm,20.0s
MBAR Mbarara 90.89 270 P **P** **16 05 02.6 -0.1**
MBAR pmax pmax
comp=Z,46nm,1.5s
MBAR MLR MLR
comp=Z,2μm,20.0s
MBAR Mbarara 90.89 270 P **P** **16 05 03.6 +1.0**
MBAR P **P** **16 05 03.6 +1.0**
B08A Colville Reser 90.93 36 IAmb IAmb 16 05 04.8
comp=Z,97nm,1.1s
HLM1 Long Mynd 90.93 330 *e*P **P** **16 05 01.3 -0.7**
HLM1 IAmb IAmb 16 05 02.5
comp=Z,140nm,1.5s
WME Myndd Eilian 91.01 331 *e*P **P** **16 05 01.9 -0.3**
STRD Stroud 91.07 329 *e*P **P** **16 05 01.7 -0.9**
STRD IAmb IAmb 16 05 04.3
comp=Z,96nm,0.9s
YLL Llanberis 91.12 331 *e*P **P** **16 05 02.4 -0.4**
WLF1 Llynfaes 91.12 331 *e*P **P** **16 05 02.3 -0.5**
WLF1 IAmb IAmb 16 05 03.0
comp=Z,104nm,0.9s
YRC Rhoscolyn 91.23 331 *e*P **P** **16 05 03.5 +0.2**
BUCK Buck Mountain 91.23 40 P **P** **16 05 02.8 -0.8**
IDGL Inch Island, C 91.25 333 *e*P **P** **16 05 02.9 -0.4**
IDGL IAmb IAmb 16 05 05.1
comp=Z,94nm,1.0s
MCH1 Michaelchurch 91.33 329 *e*P **P** **16 05 03.2 -0.6**
MCH1 IAmb IAmb 16 05 04.2
comp=Z,93nm,1.2s
HOOD Mount Hood Mea 91.39 39 IAmb IAmb 16 05 06.7
comp=Z,110nm,1.2s
SSB Saint Sauveur 91.43 321 IAmb IAmb 16 05 06.0
comp=Z,146nm,1.9s
H04A Detroit Lake 91.44 40 IAmb IAmb 16 05 07.0
comp=Z,71nm,1.3s
C09A Chrisman Ranch 91.83 36 P **P** **16 05 06.1 -0.2**
C09A IAmb IAmb 16 05 08.4
comp=Z,93nm,1.4s
D08A Wollman Farm, 91.93 36 IAmb IAmb 16 05 10.2
comp=Z,30nm,0.8s
KSXB Camp Six Broad 91.98 43 P **P** **16 05 06.6 -0.5**
KSXB IAmb IAmb 16 05 09.4
comp=Z,59nm,1.3s
HAWA Hanford 91.98 37 IAmb IAmb 16 05 09.3
comp=Z,61nm,1.2s
F07A Phinny Hill Vi 92.05 38 IAmb IAmb 16 05 10.4
comp=Z,44nm,0.9s
NEW Newport 92.17 35 IAmb IAmb 16 05 10.4
comp=Z,46nm,1.0s
NEW Newport 92.17 35 IAMs_20 IAMs_20 16 53 22.7
comp=Z,1μm,19.0s
NEW Newport 92.17 35 P **P** **16 05 08.4 +0.6**
baz=308
E08A Dider Farm, El 92.19 37 P **P** **16 05 07.7 -0.2**
E08A IAmb IAmb 16 05 10.2
comp=Z,59nm,1.3s
PINE Pine Mountain 92.68 40 P **P** **16 05 09.5 -1.0**

PINE IAmb IAmb 16 05 13.7
comp=Z,93nm,1.1s
E09A Wood Farm, Sta 92.68 37 IAmb IAmb 16 05 12.4
comp=Z,65nm,1.3s
YBH Yreka Blue Hor 92.76 42 P **P 16 05 11.3 +0.6**
comp=Z,20nm,1.1s,baz=314,slow=2.9,SNR=15
YBH LR LR 16 42 18.9
comp=Z,231nm,20.2s,baz=313,slow=32
comp=Z,20nm,1.1s
YBH Yreka Blue Hor 92.76 42 IAmb IAmb 16 05 12.9
comp=Z,40nm,1.2s
WALA Waterton Lakes 93.32 33 IAmb IAmb 16 05 15.4
comp=Z,102nm,1.4s
K05A Summer Lake 93.32 41 IAmb IAmb 16 05 15.8
comp=Z,93nm,1.2s
I07A Izee 93.36 39 P **P 16 05 13.5 0.0**
NUUK Nuuk 93.36 357 *e*P **P 16 05 12.8 0.0**
NUUK IAmb IAmb 16 05 13.3
comp=Z,186nm,1.1s
KEST Kesra 93.50 311 P **P 16 05 14.8 +0.5**
comp=Z,36nm,0.8s,baz=11,slow=5.2,SNR=29
KEST LR LR 16 55 08.6
comp=Z,1μm,19.7s,baz=353,slow=40
comp=Z,36nm,0.8s
KEST Kesra 93.50 311 IAmb IAmb 16 05 16.2
comp=Z,71nm,1.0s
KEST Kesra 93.50 311 P **P 16 05 15.1 +0.8**
KEST P **P 16 05 15.1 +0.8**
F10A Beach Ranch, E 93.51 37 P **P 16 05 13.3 -0.8**
FRB Frobisher Bay 93.60 4 LR LR 16 48 57.3
comp=Z,1μm,21.9s,baz=346,slow=36
MOD Modoc Plateau 94.15 41 IAmb IAmb 16 05 19.2
comp=Z,45nm,1.2s
CMAH Djebel Manchou 94.36 313 P **P 16 05 20.1 +1.9**
FFC Flin Flon 94.49 24 P **P 16 05 18.1 -0.2**
FFC IAmb IAmb 16 05 19.8
comp=Z,33nm,1.1s
FFC Flin Flon 94.49 24 IAMs_20 IAMs_20 16 55 59.1
comp=Z,2μm,18.0s
FFC Flin Flon 94.49 24 P **P 16 05 18.1 -0.2**
FFC pmax pmax
comp=Z,33nm,1.1s
FFC MLR MLR
comp=Z,2μm,18.0s
MSO Missoula 94.74 35 IAMs_20 IAMs_20 16 52 23.9
comp=Z,1μm,20.0s
MSO Missoula 94.74 35 P **P 16 05 19.7 0.0**
baz=310
WVOR Wild Horse Val 94.84 40 IAmb IAmb 16 05 30.9
comp=Z,52nm,1.6s
CKFL Kef-Lekhel 94.96 313 P **P 16 05 21.4 +0.4**
CTEI Djebel Teioual 95.35 313 P **P 16 05 23.8 +1.0**
DFRA Djebel Bou Aff 95.45 313 P **P 16 05 23.9 +0.7**
PPT Papeete 95.66 107 LR LR 16 42 52.3
comp=Z,644nm,19.5s,baz=273,slow=32
PPT2 Papeete2 95.67 107 *e*P **P 16 05 24.1 -0.3**
comp=Z,249nm,23.8s
PPT2 Papeete2 95.67 107 *e*PP **PP 16 09 15.2 -1.0**
comp=Z,189nm,23.2s
PPT2 Papeete2 95.67 107 *e*SS SS 16 23 11.7 +1.2
comp=Z,927nm,25.8s
PPT2 Papeete2 95.67 107 *e*LR LR 16 36 19.5
comp=Z,2μm,22.8s
EMB Emerald Bay 95.96 44 IAmb IAmb 16 05 27.2
comp=Z,36nm,1.1s
PAHR Pah Rah Range 95.99 43 P **P 16 05 25.4 -0.3**
EGMT Eagleton 96.06 32 IAMs_20 IAMs_20 16 54 44.5
comp=Z,1μm,18.0s
EGMT Eagleton 96.06 32 P **P 16 05 25.4 -0.4**
baz=314
YERR Yerington 96.50 43 IAmb IAmb 16 05 39.0
comp=Z,41nm,1.6s
HLID Hailey 96.58 37 IAMs_20 IAMs_20 16 55 20.3
comp=Z,1μm,20.0s
HLID Hailey 96.58 37 P **P 16 05 29.0 +0.6**
baz=310
MCMT McKenzie Canyo 96.63 36 P **P 16 05 28.1 -0.5**
BOZ Bozeman (W) 96.76 34 IAMs_20 IAMs_20 16 54 56.3
comp=Z,1μm,19.0s
BOZ Bozeman (W) 96.76 34 P **P 16 05 29.0 0.0**
baz=312
QLMT Earthquake Lak 97.38 35 P **P 16 05 31.2 -0.7**
LHV Little Huntoon 97.40 43 IAmb IAmb 16 05 43.7
comp=Z,28nm,1.1s
NVAR Mina Array Bea 97.42 43 P Pdif 16 05 32.8 +0.5
comp=Z,6.3nm,1.1s,baz=277,slow=4.3,SNR=28
NVAR LR LR 16 44 58.5
comp=Z,268nm,21.2s,baz=326,slow=33
comp=Z,6.3nm,1.1s
MLAC Mammoth, Mammo 97.55 44 P Pdif 16 05 33.0 +0.1
baz=306
TBI Tubuai 97.87 112 *e*P **P 16 05 33.9 -0.2**
comp=Z,198nm,26.0s
TBI Tubuai 97.87 112 *e*PP **PP 16 09 31.9 -1.1**
comp=Z,191nm,28.2s
TBI Tubuai 97.87 112 *e*LR LR 16 37 20.2
comp=Z,809nm,28.5s
ELK Elko 97.89 40 LR LR 16 52 41.7
comp=Z,195nm,18.1s,baz=333,slow=37
LKWY Lake 98.10 35 IAMs_20 IAMs_20 16 49 42.7
comp=Z,1μm,21.0s
H17A Grant Village 98.12 35 P Pdif 16 05 36.0 +0.6
baz=313
SMMC Simmler 98.13 47 P **P 16 05 34.8 -0.5**
baz=305
RLMT Red Lodge 98.31 34 IAMs_20 IAMs_20 16 56 16.1
comp=Z,2μm,21.0s
RLMT Red Lodge 98.31 34 P Pdif 16 05 36.2 +0.1
baz=314
TPH Tonopah 98.31 43 IAmb IAmb 16 06 02.8
comp=Z,38nm,1.0s
DGMT Dagmar 98.33 29 IAMs_20 IAMs_20 16 54 26.3
comp=Z,1μm,21.0s
DGMT Dagmar 98.33 29 P **P 16 05 35.4 -0.5**
baz=318
LOHW Long Hollow 98.64 35 IAMs_20 IAMs_20 16 56 55.8
comp=Z,994nm,20.0s
REDW Red Top Meadow 98.67 36 IAMs_20 IAMs_20 16 57 23.0
comp=Z,919nm,19.0s
LSZ Lusaka 98.68 257 LR LR 16 51 22.6
comp=Z,3μm,18.0s,baz=73,slow=36
LAO LASA Array 98.70 31 IAMs_20 IAMs_20 16 56 39.4
comp=Z,1μm,20.0s
CWC Cottonwood Cre 98.74 45 P **P 16 05 37.7 -0.4**
baz=306
GMN Gold Mountain 98.76 44 P **P 16 05 36.7 -1.6**
GRAC Grapevine Rang 98.87 44 P **P 16 05 38.5 -0.1**
baz=307
AHID Auburn Hatcher 98.94 36 IAMs_20 IAMs_20 16 57 47.1
comp=Z,975nm,19.0s
ISA Isabella, Lake 98.94 46 P **P 16 05 38.6 -0.4**
baz=306
R11A Troy Canyon, C 99.17 42 P **Pdif 16 05 40.4 +0.3**
baz=308
CART Cartagena 99.33 317 IAMs_20 IAMs_20 16 56 50.5
comp=Z,1μm,19.0s
MPMC Manual Prospec 99.35 45 P **Pdif 16 05 40.9 -0.1**
baz=307
HWUT Hardware Ranch 99.45 37 IAMs_20 IAMs_20 16 57 51.8
comp=Z,1μm,18.0s
LRMC Laurel Mtn Rad 99.57 45 P **Pdif 16 05 42.0 +0.2**
baz=307
TPNV Topopah Spring 99.61 43 P **Pdif 16 05 41.5 -0.6**
TPNV IAMs_20 IAMs_20 16 42 06.5
comp=Z,1μm,21.0s
TPNV Topopah Spring 99.61 43 P **Pdif 16 05 41.5 -0.6**
TPNV pmax pmax
comp=Z,15nm,1.2s
TPNV MLR MLR
comp=Z,1μm,21.0s
TPNV Topopah Spring 99.61 43 P **Pdif 16 05 42.3 +0.3**
baz=308
DUG Dugway, Tooele 99.67 39 IAMs_20 IAMs_20 16 57 31.5
comp=Z,901nm,20.0s
MAW Mawson 99.68 199 P **Pdif 16 05 41.1 0.0**
MAW PKKPbc **PKKPbc 16 22 03.1 -1.9**
comp=Z,6.9nm,1.0s,baz=55,slow=6.9,SNR=12
MAW LR LR 16 50 21.5
comp=Z,4.3nm,0.9s,baz=10.0,slow=0.6,SNR=6.4
comp=Z,472nm,18.1s,baz=51,slow=35
comp=Z,6.9nm,1.0s
EDW2 Edwards Air Fo 99.72 46 P **Pdif 16 05 42.7 +0.3**
baz=306
BW06 Boulder Array 99.78 36 IAMs_20 IAMs_20 16 59 14.1
comp=Z,999nm,20.0s
BW06 Boulder Array 99.78 36 P **Pdif 16 05 42.8 0.0**
baz=313
PDAR Pinedale Array 99.78 36 P **Pdif 16 05 42.7 0.0**
comp=Z,0.9nm,0.8s,baz=302,slow=2.0,SNR=7.0
PDAR PKKPbc **PKKPbc 16 22 01.9 -1.9**
comp=Z,1.2nm,0.9s,baz=102,slow=5.0,SNR=5.7
comp=Z,0.9nm,0.8s
ESDC Sonseca Array 99.82 320 P **Pdif 16 05 42.7 -0.1**
comp=Z,1.5nm,0.9s,baz=35,slow=4.7,SNR=7.2
ESDC PP PP 16 09 37.3 -9.5
comp=Z,6.7nm,1.0s,baz=54,slow=8.2,SNR=7.7
ESDC PKKPbc **PKKPbc 16 22 02.7 -0.6**
comp=Z,1.3nm,1.0s,baz=287,slow=4.0,SNR=5.2
ESDC LR LR 16 56 20.2
comp=Z,3μm,18.7s,baz=41,slow=39
comp=Z,1.5nm,0.9s
PBRG Braganca 100.00 323 *e*P **Pdif 16 05 43.4 -0.1**
comp=Z,22nm,1.5s
MVO Moncorvo 100.59 323 *e*P **Pdif 16 05 46.5 +0.3**
MVO Moncorvo 100.59 323 *e*PP **PP 16 09 53.1 +0.5**
MVO *e*SKSac **SKSac 16 16 24.8 +0.7**
MVO *e*SS SS 16 24 31.1 +14
MVO Moncorvo 100.59 323 *e*LR LR 16 46 21.8
comp=Z,2μm,18.0s
PGAV Gavieira, Arco 100.73 324 *e*P **Pdif 16 05 46.8 0.0**
comp=Z,34nm,1.8s
PGAV Gavieira, Arco 100.73 324 *e*PP **PP 16 09 55.7 +2.1**
PGAV *e*SKSac **SKSac 16 16 28.8 +4.0**
PGAV *e*SS **SS 16 24 25.5 +6.5**
PGAV Gavieira, Arco 100.73 324 *e*LR LR 16 43 05.0
comp=Z,3μm,18.0s
TUQ Turquoise Moun 100.74 44 P **Pdif 16 05 47.0 -0.1**
baz=308
HEC Hector,Ludlow 100.84 45 P **Pdif 16 05 46.9 -0.6**
baz=307
POLO Lamas de Olo 100.87 324 *e*P **Pdif 16 05 47.8 +0.3**
comp=Z,13nm,1.5s
POLO Lamas de Olo 100.87 324 *e*PP **PP 16 09 56.3 +1.6**
POLO *e*SKSac **SKSac 16 16 26.9 +1.4**
POLO *e*SS **SS 16 24 29.1 +8.0**
TAOE Nuku Hiva Isla 101.05 95 *e*P **Pdif 16 05 49.7 +1.0**
comp=Z,116nm,24.0s
TAOE Nuku Hiva Isla 101.05 95 *e*SS SS 16 24 26.8 +0.6
comp=Z,704nm,26.0s
TAOE Nuku Hiva Isla 101.05 95 *e*LR LR 16 38 48.9
comp=Z,999nm,25.5s
GMRC Granite Mounta 101.31 45 P **Pdif 16 05 50.0 +0.4**
baz=308
MTE Manteigas 101.40 323 *e*PP **PP 16 09 59.7 +1.0**
MTE *e*SKSac **SKSac 16 16 34.4 +6.4**
MTE *e*SS **SS 16 24 39.1 +11**
MTE Manteigas 101.40 323 *e*LR LR 16 46 56.0
comp=Z,2μm,18.0s
PFO Pinyon Flats O 101.49 46 P **Pdif 16 05 50.5 +0.1**
comp=Z,5.7nm,0.9s,baz=279,slow=4.5,SNR=6.5
PFO Pinyon Flats O 101.49 46 P **Pdif 16 05 51.4 +1.0**
baz=307
TPFO Pinon Flats 101.50 46 P **Pdif 16 05 50.0 -0.5**
baz=307
RSSD Black Hills 101.63 32 IAMs_20 IAMs_20 16 57 08.9
comp=Z,1μm,20.0s
RWWY Rawlins 101.78 35 IAMs_20 IAMs_20 16 58 24.0
comp=Z,1μm,20.0s
AGMN Agassiz Nation 101.92 24 IAMs_20 IAMs_20 16 53 24.8
comp=Z,1μm,21.0s
PMRV Marv??o 101.97 322 *e*P **Pdif 16 05 53.1 +0.8**
PMRV Marv??o 101.97 322 *e*SKSac **SKSac 16 16 34.9 +4.2**
PMRV Marv??o 101.97 322 *e*LR LR 16 48 50.4
comp=Z,4μm,20.0s
IRM Iron Mountain 102.03 45 P **Pdif 16 05 53.5 +0.8**
baz=308
PCAS Casmilo, Conde 102.17 323 *e*SKSac **SKSac 16 16 34.1 +2.5**
PESTR Estremoz 102.47 322 *e*SKSac **SKSac 16 16 36.0 +3.0**
PESTR *e*SS **SS 16 24 51.9 +8.7**
PBAR Barrancos 102.61 321 *e*PP **PP 16 10 06.4 -1.4**
PBAR *e*SKSac **SKSac 16 16 37.9 +4.2**
PBAR *e*SS **SS 16 24 51.9 +6.7**
VNDA Vanda 102.69 172 P **Pdif 16 05 54.5 +0.1**
comp=Z,3.9nm,0.9s,baz=324,slow=6.3,SNR=15
VNDA PP **PP 16 10 06.9 -1.4**
comp=Z,12nm,1.0s,baz=309,slow=7.6,SNR=16
VNDA PKKPbc **PKKPbc 16 21 54.3 -2.1**
comp=Z,6.9nm,0.8s,baz=200,slow=1.4,SNR=27
PMTG Montargil 102.69 322 *e*PP **PP 16 10 09.4 +1.1**
PSBE So Bento 102.71 323 *e*SKSac **SKSac 16 16 36.4 +2.2**
PMAFR Mafra 103.37 323 *e*SKSac **SKSac 16 16 41.8 +4.6**
LIS Lisbon 103.46 322 *e*PP **PKiKP 16 10 14.6 -3.0**
LIS IAMs_20 IAMs_20 16 48 42.9
comp=E,6μm,18.8s
PNCL Nicolau / Gran 103.52 322 *e*PP **PP 16 10 15.7 +1.2**
PNCL *e*SKSac **SKSac 16 16 39.9 +2.0**
PNCL *e*SS SS 16 25 11.0 +13
MESJ Messejana 103.53 321 *e*PP **PKiKP 16 10 15.2 -2.6**
MESJ IAMs_20 IAMs_20 16 50 18.1
comp=N,5μm,24.3s
MESJ Messejana 103.53 321 *e*PP **PP 16 10 15.8 +1.2**
PVAQ Vaqueiros 103.53 321 *e*SKSac **SKSac 16 16 39.7 +1.7**
PVAQ *e*SS **SS 16 25 08.2 +10**
PVAQ Vaqueiros 103.53 321 *e*LR LR 16 49 01.3
comp=N,3μm,18.0s
PCVE Castro Verde 103.56 321 *e*PP **PKiKP 16 10 17.6 -0.3**
WUAZ Wupatki 103.57 42 P **Pdif 16 06 00.5 +0.8**
baz=311
SMCO Snowmass 103.67 37 IAMs_20 IAMs_20 16 57 46.3
comp=Z,1μm,21.0s
EYMN Ely 103.81 22 IAMs_20 IAMs_20 16 59 36.7
comp=Z,2μm,20.0s
MORF Marmelete 104.14 321 *e*PP **PKiKP 16 10 19.8 +0.8**
MORF IAMs_20 IAMs_20 16 50 36.3
comp=E,6μm,25.5s
MORF Marmelete 104.14 321 *e*SKSac **SKSac 16 16 43.3 +2.4**
MORF *e*SS SS 16 25 17.9 +12
MVCO Mesa Verde 104.17 39 IAMs_20 IAMs_20 16 59 29.0
comp=Z,964nm,20.0s
PFVI Vila Bisbo 104.36 321 *e*SKSac **SKSac 16 16 46.3 +4.5**
PFVI *e*SS **SS 16 25 15.1 +5.8**
OGNE Ogallala 104.99 33 IAMs_20 IAMs_20 17 01 53.1
comp=Z,2μm,19.0s
ECSD EROS Data Cent 105.33 28 IAMs_20 IAMs_20 17 00 22.3
comp=Z,2μm,20.0s
ECSD EROS Data Cent 105.33 28 P **PKiKP 16 10 20.7 -0.3**
baz=324
SDCO Great Sand Dun 105.50 37 IAMs_20 IAMs_20 17 02 07.8
comp=Z,1μm,20.0s
AVE Averroes 106.09 317 IAMs_20 IAMs_20 17 00 12.4
comp=Z,2μm,19.0s
ANMO Albuquerque 106.92 40 IAMs_20 IAMs_20 17 03 00.7
comp=Z,1μm,19.0s
ANMO Albuquerque 106.92 40 P **PKiKP 16 10 24.4 0.0**
baz=314
Y22D IRIS PASSCAL I 107.25 41 IAMs_20 IAMs_20 17 01 03.3
comp=Z,984nm,20.0s
CBKS Cedar Bluff 107.75 33 IAMs_20 IAMs_20 17 01 23.3
comp=Z,2μm,21.0s
CBKS Cedar Bluff 107.75 33 P **PKiKP 16 10 25.4 -0.2**
baz=320
121A Cookes Peak, D 107.78 42 P **PKiKP 16 10 26.1 0.0**
baz=313
SCIA State Center 108.25 27 IAMs_20 IAMs_20 17 01 07.0
comp=Z,1μm,20.0s
SCIA State Center 108.25 27 P **PKiKP 16 10 25.9 -0.6**
baz=326
JFWS Jewell Farm 108.58 24 IAMs_20 IAMs_20 17 01 27.2
comp=Z,1μm,20.0s
JFWS Jewell Farm 108.58 24 P **PKiKP 16 10 26.2 -0.8**
baz=329
GLMI Grayling 108.81 19 IAMs_20 IAMs_20 16 57 25.1
comp=Z,2μm,21.0s
KSU1 Kansas State U 109.04 31 P **PKiKP 16 10 26.9 -1.2**
baz=323
EPT El Paso 109.09 42 IAMs_20 IAMs_20 17 02 26.2
comp=Z,950nm,21.0s
AMTX Amarillo 109.69 37 IAMs_20 IAMs_20 17 06 39.8
comp=Z,868nm,19.0s
AMTX Amarillo 109.69 37 P **PKiKP 16 10 28.5 -1.0**
baz=318
MSTX Muleshoe 109.75 38 P **PKiKP 16 10 28.8 -0.9**
baz=317
L44A Lake County Fo 110.07 23 IAMs_20 IAMs_20 17 00 26.7
comp=Z,1μm,22.0s
OK032 Salt Plains WL 110.07 33 IAMs_20 IAMs_20 17 03 21.4
comp=Z,1μm,20.0s
OK049 E0420 Rd and N 110.84 33 IAMs_20 IAMs_20 17 07 27.9
comp=Z,1μm,20.0s
HDIL Hopedale 110.97 25 IAMs_20 IAMs_20 17 03 22.6
comp=Z,2μm,20.0s
OK045 Pawnee Station 110.99 32 IAMs_20 IAMs_20 17 06 40.7
comp=Z,1μm,18.0s
OK046 Pawnee Station 111.04 32 IAMs_20 IAMs_20 17 07 45.0
comp=Z,1μm,18.0s
TORD Torodi Ar. Bea 111.14 295 PKiKP **PKiKP 16 10 32.4 -0.2**
comp=Z,8.2nm,0.8s,baz=73,slow=2.2,SNR=18
TORD PP **PP 16 11 10.9 -0.4**
comp=Z,4.4nm,0.8s,baz=56,slow=6.3,SNR=3.6
TORD PKKPbc **PKKPbc 16 21 27.2 -1.0**
comp=Z,4.6nm,0.8s,baz=260,slow=3.1,SNR=15
TORD PKKPab **PKKPab 16 21 39.4 -0.3**
comp=Z,18nm,0.9s,baz=254,slow=4.5,SNR=29
OK033 Mehan 111.30 33 IAMs_20 IAMs_20 17 03 55.3
comp=Z,1μm,19.0s
WMOK Wichita Mounta 111.37 35 IAMs_20 IAMs_20 17 05 40.3
comp=Z,1μm,20.0s
WMOK Wichita Mounta 111.37 35 P **PKiKP 16 10 31.5 -1.0**
baz=320
OK034 N. Norfolk Rd. 111.44 33 IAMs_20 IAMs_20 17 07 12.0
comp=Z,1μm,20.0s
OK025 Westminster Rd 111.47 33 IAMs_20 IAMs_20 17 06 26.7
comp=Z,1μm,18.0s
SFIN Lafayette 111.94 23 P **PKiKP 16 10 32.1 -1.3**
baz=332
TUL1 Leonard 111.98 32 IAMs_20 IAMs_20 17 07 52.1
comp=Z,1μm,19.0s
TUL1 Leonard 111.98 32 P **PKiKP 16 10 32.6 -1.1**
baz=323
PMOZ Porto Moniz, M 112.22 323 *e*LR LR 16 53 31.7
comp=Z,2μm,20.0s
CCM Cathedral Cave 112.30 27 IAMs_20 IAMs_20 17 04 11.2
comp=Z,1μm,20.0s
CCM Cathedral Cave 112.30 27 P **PKiKP 16 10 33.3 -1.0**
baz=328
LBNH Lisbon 112.38 10 P **PKiKP 16 10 33.0 -1.2**
baz=347
QSPA South Pole Qui 112.38 180 PKKPbc PKKPbc 16 21 23.1 -3.1
comp=Z,4.4nm,0.9s,baz=182,slow=1.6,SNR=9.5
QSPA South Pole Qui 112.38 180 IAMs_20 IAMs_20 16 58 32.8
comp=Z,1μm,20.0s
ABTX Abilene, Hawle 112.51 37 P **PKiKP 16 10 33.6 -1.2**
baz=319
TXAR Lajitas Array 112.53 42 PKiKP **PKiKP 16 10 35.0 0.0**
comp=Z,12nm,1.0s,baz=254,slow=1.5,SNR=25
TXAR PKKPbc **PKKPbc 16 21 23.6 -0.6**
comp=Z,0.8nm,0.8s,baz=160,slow=2.9,SNR=2.0
TXAR PKKPab **PKKPab 16 21 32.5 -1.9**
comp=Z,1.0nm,0.8s,baz=120,slow=4.5,SNR=6.1
EMMW East Machias 112.54 7 IAMs_20 IAMs_20 17 05 59.9
comp=Z,1μm,18.0s
ERPA Erie 112.63 17 IAMs_20 IAMs_20 17 08 58.8
comp=Z,1μm,20.0s
O48B Farmland 112.74 22 P **PKiKP 16 10 33.8 -1.2**
baz=333
M53A WI Miller and 113.07 18 P **PKiKP 16 10 34.6 -1.0**
baz=338
FFD Franklin Falls 113.17 10 IAMs_20 IAMs_20 17 01 14.8
comp=Z,2μm,20.0s
ACSO Alum Creek Sta 113.48 20 IAMs_20 IAMs_20 17 01 06.7
comp=Z,2μm,22.0s
ACSO Alum Creek Sta 113.48 20 P **PKiKP 16 10 35.0 -1.4**
baz=336
P49A Miami Univ. Ec 113.54 22 P **PKiKP 16 10 35.6 -1.0**
baz=334
BINY Binghamton 113.55 14 P **PKiKP 16 10 35.8 -0.7**
baz=342
L61B Northampton 113.98 11 P **PKiKP 16 10 36.9 -0.5**
baz=346
O53A New Philadelph 114.01 19 IAMs_20 IAMs_20 17 09 51.4
comp=Z,1μm,20.0s
O53A New Philadelph 114.01 19 P **PKiKP 16 10 36.6 -0.9**
baz=337
JCT Junction City 114.02 39 IAMs_20 IAMs_20 17 08 22.5
comp=Z,1μm,19.0s
JCT Junction City 114.02 39 P **PKiKP 16 10 37.0 -0.8**
baz=318
HRV Adam Dziewonsk 114.13 11 IAMs_20 IAMs_20 17 02 59.9
comp=Z,2μm,20.0s
HRV Adam Dziewonsk 114.13 11 P **PKiKP 16 10 37.5 -0.1**
baz=347
WCI Wyandotte Cave 114.13 24 IAMs_20 IAMs_20 17 02 56.2
comp=Z,1μm,19.0s
WCI Wyandotte Cave 114.13 24 P **PKiKP 16 10 36.7 -1.0**
baz=332
MIAR Mount Ida 114.15 31 P **PKiKP 16 10 36.8 -1.0**
baz=325
WHTX Lake Whitney, 114.19 36 P **PKiKP 16 10 37.0 -0.9**
baz=321
P52A Corning 114.30 20 IAMs_20 IAMs_20 17 04 04.2
comp=Z,2μm,22.0s
P52A Corning 114.30 20 P **PKiKP 16 10 37.3 -0.7**
baz=336
SSPA Standing Stone 114.58 16 P **PKiKP 16 10 37.3 -1.2**
baz=340
MCWV Mont Chateau 114.96 18 P **PKiKP 16 10 38.0 -1.2**
baz=338
435B Jarrell 115.04 37 IAMs_20 IAMs_20 17 06 38.8
comp=Z,1μm,19.0s
PAL Palisades 115.14 13 IAMs_20 IAMs_20 17 03 15.9
comp=Z,2μm,21.0s
PAL Palisades 115.14 13 P **PKiKP 16 10 39.1 -0.5**
baz=344
WVT Waverly 115.36 26 **PKiKP 16 10 38.7 -1.4**
WVT Waverly 115.36 26 PKIKP **PKiKP 16 10 38.7 -1.4**
WVT MLR MLR
comp=Z,2μm,21.0s
WVT Waverly 115.36 26 P **PKiKP 16 10 39.1 -1.0**
baz=330
R53A Hurricane 115.54 20 **PKiKP 16 10 39.5 -1.0**
S51A Beattyville 115.62 22 **PKiKP 16 10 38.4 -2.2**
NATX Nacogdoches 115.84 34 **PKiKP 16 10 39.2 -2.0**
NATX IAMs_20 IAMs_20 17 07 39.7
comp=Z,1μm,18.0s
NATX Nacogdoches 115.84 34 P **PKiKP 16 10 40.3 -0.8**
baz=323
833A Chaparral WMA, 115.85 40 **PKiKP 16 10 39.4 -1.9**
833A Chaparral WMA, 115.85 40 P **PKiKP 16 10 40.6 -0.6**
baz=318
CLTN Cedars of Leba 115.99 25 **PKiKP 16 10 39.5 -1.8**
OXF Oxford 116.08 28 IAMs_20 IAMs_20 17 06 37.4
comp=Z,1μm,20.0s
OXF Oxford 116.08 28 P **PKiKP 16 10 40.0 -1.5**
baz=328
TZTN Tazewell 116.62 22 P **PKPdf 16 10 40.7 -1.8**
baz=334
HKT Hockley 116.64 36 PKPdf **PKPdf 16 10 41.6 -1.1**
HKT IAMs_20 IAMs_20 17 11 49.4
comp=Z,1μm,19.0s
HKT Hockley 116.64 36 PKIKP **PKPdf 16 10 41.6 -1.1**
HKT MLR MLR
comp=Z,1μm,19.0s
BLA Blacksburg 117.05 20 IAMs_20 IAMs_20 17 06 23.9
comp=Z,1μm,20.0s
BLA Blacksburg 117.05 20 P **PKPdf 16 10 42.2 -1.3**
baz=337
X48A Hartselle 117.14 26 PKPdf **PKPdf 16 10 41.5 -2.1**
VBMS Vicksburg 117.51 30 IAMs_20 IAMs_20 17 05 28.4
comp=Z,2μm,20.0s
NVL N'lazarevskaya 117.59 201 *e*PKIKP **PKPdf 16 10 42.9 -0.3**
NVL pmax pmax
comp=Z,9.0nm,0.8s
Y49A Blount Mountai 117.91 26 **PKPdf 16 10 43.3 -1.8**
LRAL Lakeview Retre 118.38 27 P **PKPdf 16 10 44.8 -1.3**
baz=330
KMSC Kings Mountain 118.65 21 P **PKPdf 16 10 45.5 -1.0**
baz=336
GOGA Godfrey 119.45 24 P **PKPdf 16 10 47.2 -0.9**
baz=334
152A Waverly Hall 119.63 25 **PKPdf 16 10 47.2 -1.2**
BRAL Brewton 119.97 28 P **PKPdf 16 10 48.2 -0.9**
baz=330
DBIC Dimbokro 119.97 292 PKP **PKPdf 16 10 48.9 -0.6**
comp=Z,24nm,0.9s,baz=78,slow=2.6,SNR=20
DBIC PKKPbc **PKKPbc 16 20 58.7 +1.1**
comp=Z,9.8nm,1.0s,baz=236,slow=4.7,SNR=6.7
DBIC Dimbokro 119.97 292 PKPdf **PKPdf 16 10 48.5 -1.1**
KIC Kosan Boka 120.03 292 ⇑*i*PKIKP **PKiKP 16 10 50.1 +0.4**
comp=Z,18nm,0.5s
TROLL Troll, Antarti 120.13 198 PKPdf **PKPdf 16 10 47.6 -0.7**
TIC Toumodi 120.13 293 ⇑*i*PKIKP **PKiKP 16 10 50.2 +0.3**
comp=Z,13nm,0.4s
LIC Lamto 120.35 292 ⇑*e*PKIKP **PKPdf 16 10 49.6 -0.7**
comp=Z,74nm,0.6s
352A Blakely 120.59 26 **PKPdf 16 10 48.8 -1.5**
NHSC New Hope 120.89 21 P **PKPdf 16 10 49.5 -1.3**
baz=337
TIGA Tifton 121.16 25 P **PKPdf 16 10 50.3 -1.1**
baz=333
SNAA Sanae 121.81 198 PKKPbc PKKPbc 16 20 48.6 -3.4
SNAA Sanae 121.81 198 PKPdf **PKPdf 16 10 50.5 -0.9**

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SNAA  Sanae          121.81 198  SKKPbc SKKPbc  16 24 34.1 -7.7
SNAA  Sanae          121.81 198  PKKPbc PKKPbc  16 20 48.8 -3.3
      comp=Z,2.5nm,0.9s,baz=320,slow=3.5,SNR=7.6
SNAA  Sanae          121.81 198  PKPdf  PKPdf   16 10 50.3 -1.1
SNAA                             IAMs_20 IAMs_20 16 59 12.4
      comp=Z,848nm,22.0s
SNAA  Sanae          121.81 198  PKIKP  PKPdf   16 10 50.3 -1.1
SNAA                             MLR    MLR
      comp=Z,800nm,22.0s
VNA2  Neumayer--Watz 123.45 198  PKPdf  PKPdf   16 10 53.7 -0.8
      baz=101,slow=2.0
BELA  Belgrano 2     123.50 186  PKPdf  PKPdf   16 10 52.9 -1.5
VNA1  Neumayer--Stat 123.84 198  PKKPbc PKKPbc  16 20 41.0 -3.0
VNA1  Neumayer--Stat 123.84 198  PKPdf  PKPdf   16 10 54.7 -0.5
VNA3  Neumayer Olymp 123.92 197  PKKPbc PKKPbc  16 20 40.4 -3.3
VNA3  Neumayer Olymp 123.92 197  PKPdf  PKPdf   16 10 54.3 -1.1
VNA3  Neumayer Olymp 123.92 197  SKKPbc SKKPbc  16 24 26.2 -8.6
DWPF  Disney Wildern 124.97  25  P      PKPdf   16 10 57.4 -1.4
      baz=334
CMIG  Matias Romero  126.90  45  PKP    PKPdf   16 11 02.2 -0.5
      comp=Z,32nm,1.0s,baz=323,slow=1.5,SNR=36
TEIG  Tepich         128.49  37  IAMs_20 IAMs_20 17 14 21.5
      comp=Z,960nm,21.0s
TEIG  Tepich         128.49  37  eP     PKPdf   16 11 05.0 -0.7
SNET  Serv Nac Est T 133.06  43  IAMs_20 IAMs_20 17 22 38.3
      comp=Z,1μm,19.0s
TGUH  Tegucigalpa,Un 133.97  40  IAMs_20 IAMs_20 17 21 34.1
      comp=Z,880nm,20.0s
MTDJ  Mount Denham   135.39  26  IAMs_20 IAMs_20 17 18 44.1
      comp=Z,1μm,20.0s
SDDR  Presa de Saban 136.85  18          PKPpre  16 11 11.7
SDDR                                     PKPdf   16 11 21.1 -0.5
SDDR  Presa de Saban 136.85  18  eP     PKPpre  16 11 12.3
ACON  Acoyapa        136.87  40  PKPpre PKPpre  16 11 10.1
ACON                             PKPdf   PKPdf   16 11 20.7 -0.9
ACON  Acoyapa        136.87  40  eP     PKPdf   16 11 20.4 -1.3
PMSA  Palmer Station 137.67 176  eP     PKiKP   16 11 22.6 -0.8
PRVC  Isla de Provid 137.84  34  eP     PKPdf   16 11 22.6 -0.8
ORTG  Ortega, Santa  137.95  42  PKPdf  PKPdf   16 11 22.7 -1.1
JTS   Las Juntas de  138.32  41  IAMs_20 IAMs_20 17 23 20.3
      comp=Z,697nm,21.0s
JTS   Las Juntas de  138.32  41  eP     PKPpre  16 11 11.2
GCPR  Guaynabo City  138.69  11          PKPdf   16 11 20.8 -4.1
CELP  Cerrillos      138.83  12          PKPpre  16 11 15.0
CELP                             PKPdf   PKPdf   16 11 23.1 -2.1
SJG   San Juan       138.87  11  IAMs_20 IAMs_20 17 16 25.3
      comp=Z,1μm,21.0s
MTP   Monte Pirata   138.99  10          PKPpre  16 11 18.3
HDC   Heredia        139.05  40  eP     PKPdf   16 11 26.5 +0.7
SMRT  St. Maarten    139.37   7  IAMs_20 IAMs_20 17 09 19.2
      comp=Z,1μm,22.0s
ANWB  Willy Bob      139.87   5  IAMs_20 IAMs_20 17 14 43.3
      comp=Z,1μm,22.0s
GDSD  La Dsirade Is  141.26   4  IAMs_20 IAMs_20 17 21 24.3
      comp=Z,942nm,20.0s
DSLB  Salisbury      142.10   5  eP     PKPdf   16 11 28.9 -2.2
BCIP  Isla Barro Col 142.17  36  PKPdf  PKPdf   16 11 27.4 -3.9
BCIP                             IAMs_20 IAMs_20 17 20 55.7
      comp=Z,734nm,21.0s
BCIP  Isla Barro Col 142.17  36  eP     PKPdf   16 11 27.0 -4.2
BCIP  Isla Barro Col 142.17  36  PKIKP  PKPdf   16 11 27.4 -3.9
BCIP                             MLR    MLR
      comp=Z,700nm,21.0s
PAYG  Puerto Ayora   142.22  59  eP     PKPdf   16 11 32.7 +1.3
FDF   Fort de France 142.82   4          PKPpre  16 11 25.3
FDF   Fort de France 142.82   4  PKHKP  PKPpre  16 11 25.3
CACAO El Cacao, Vera 143.09  39  eP     PKPbc   16 11 30.2 +0.5
MPOM  Morne Pois Mar 143.13   4  IAMs_20 IAMs_20 17 16 30.6
      comp=Z,946nm,22.0s
URIC  Uribia, Colomb 143.46  23  eP     PKPab   16 11 30.1 +0.4
SLBI  Saint Lucia, B 143.54   4  eP     PKPab   16 11 25.7 -4.3
CRJC  Cerrejon, Guaj 143.76  24  eP     PKPab   16 11 30.9 -0.1
SJCC  San Jacinto, C 143.83  29  eP     PKPab   16 11 31.2 -0.1
HATO  Hato, Curacao  143.97  17  IAMs_20 IAMs_20 17 19 26.7
      comp=Z,884nm,21.0s
LCBC  Los crdobas,   144.20  31  eP     PKPbc   16 11 32.8 -0.2
HOPE  Hope Point     144.25 202          PKPab   16 11 31.1 -0.4
HOPE  Hope Point     144.25 202  PKIKP  PKPab   16 11 31.1 -0.4
SVB   Belmont        144.26   5  eP     PKiKP   16 11 43.8 +5.2
BBGH  Gun Hill       144.48   2  eP     PKiKP   16 11 37.5 -1.5
PTAC  Punta Ardita,  144.94  35  eP     PKPab   16 11 34.1 -1.2
MAPC  Malpelo        145.26  43  eP     PKPbc   16 11 34.6 -1.8
GRGR  Grenville      145.36   5          PKPbc   16 11 35.0 -1.6
GRGR                             IAMs_20 IAMs_20 17 18 33.9
      comp=Z,1μm,20.0s
GRGR  Grenville      145.36   5  eP     PKPbc   16 11 34.4 -2.2
UREC  San Jos de Ur  145.56  31  eP     PKPdf   16 11 36.5 -0.8
ZARC  Zaragoza, Cauc 146.10  30  eP     PKPdf   16 11 38.5 +0.3
OCAC  Ocana          146.12  27  eP     PKPdf   16 11 38.7 +0.3
TOSP  Speyside       146.27   4  eP     PKPdf   16 11 38.0 -0.4
SDV   Santo Domingo  146.55  22  PKPbc  PKPdf   16 11 38.9 -0.2
      comp=Z,331nm,0.9s,baz=325,slow=2.8,SNR=139
SDV                              SKPbc  SKPbc   16 15 16.3 -1.8
      comp=Z,72nm,1.0s,baz=353,slow=3.2,SNR=10
SDV   Santo Domingo  146.55  22  PKPdf  PKPdf   16 11 38.6 -0.5
SDV   Santo Domingo  146.55  22  IAMs_20 IAMs_20 17 22 41.5
      comp=Z,1μm,22.0s
SDV   Santo Domingo  146.55  22  eP     PKPdf   16 11 39.3 +0.1
TRN   Trinidad (W)   146.85   5  eP     PKPdf   16 11 39.5 +0.1
PCRV  Puerto La Cruz 146.90  11  PKPbc  PKPdf   16 11 38.7 -0.8
      comp=Z,78nm,0.9s,baz=329,slow=2.3,SNR=20
HELC  Santa Helena   146.92  32  eP     PKPdf   16 11 39.5 -0.5
CBOC  Ciudad Bolivar 146.96  33  eP     PKPdf   16 11 40.6 +0.8
BRRC  Barranca, Sant 146.96  28  eP     PKPdf   16 11 40.4 +0.8
PTBC  PUERTO BERRIO147.13  30  eP     PKPdf   16 11 39.2 -0.7
PAMC  Pamplona, Colo 147.19  27  eP     PKPdf   16 11 40.4 -0.2
BAUV  El Baul        147.31  18  PKPdf  PKPdf   16 11 38.6 -1.6
BAUV                             PKPbc  PKPbc   16 11 41.7 -0.8
BAUV  El Baul        147.31  18  eP     PKPdf   16 11 40.3 +0.1
PLMC  San Jos del P  147.63  35  eP     PKPdf   16 11 39.5 -1.3
BARC  Barichara      147.65  28  eP     PKPdf   16 11 41.4 +0.3
NORC  Norcasia       147.78  32  eP     PKPdf   16 11 40.3 -0.7
MALC  Bahia Malaga   147.81  37  eP     PKPbc   16 11 43.0 -0.9
GUY2C Guyana, Caldas 147.83  33  eP     PKPdf   16 11 42.2 +0.5
SPBC  San Pablo de B 148.09  30  eP     PKPdf   16 11 41.6  0.0
GR1C  Gorgona, Isla  148.15  39  eP     PKPdf   16 11 41.6  0.0
MG04  Isla Riesco    148.18 165          PKPdf   16 11 39.5 -0.8
MG04                             PKPbc  PKPbc   16 11 44.5 +0.9
RUSC  La Rusia       148.32  28  eP     PKPdf   16 11 42.8 +0.3
YOTC  Yotoco, Valle  148.38  36  eP     PKPdf   16 11 40.8 -1.4
ROSC  El Rosal       148.68  31  PKPbc  PKPdf   16 11 43.9 +0.9
      comp=Z,126nm,1.0s,baz=150,slow=0.6,SNR=31
ROSC  El Rosal       148.68  31  PKPdf  PKPdf   16 11 43.0  0.0
ROSC                             PKPbc  PKPbc   16 11 47.1 +0.5
ROSC  El Rosal       148.68  31  eP     PKPdf   16 11 43.4 +0.5
ROSC  El Rosal       148.68  31  PKP2   PKPbc   16 11 47.2 +0.5
PTGL  Punta Galera   148.73  45  eP     PKPdf   16 11 44.0 +1.4
TUMC  Tumaco         148.75  42  eP     PKPbc   16 11 46.2 -0.2
MG05  Puerto Natales 149.01 163  PKPdf  PKPdf   16 11 40.7 -1.1
MG05                             PKPbc  PKPbc   16 11 45.5 -0.3
CHIC  Chingaza       149.14  31  eP     PKPdf   16 11 43.9 +0.2
BBAC  Balboa, Cauca  149.48  39  eP     PKPdf   16 11 44.5 +0.4
VILC  Villavicencio, 149.61  31  eP     PKPdf   16 11 44.9 +0.8
FLF1  Flavio Alfaro- 149.70  46  eP     PKiKP   16 11 49.7 -0.1
BETC  Betania        149.95  35  eP     PKPbc   16 11 49.0 -0.4
CMBC  Cumbal         150.00  41  eP     PKPdf   16 11 46.5 +1.4
CRUC  La Cruz        150.02  39  eP     PKPbc   16 11 49.6 -0.4
OTAV  Otavalo        150.16  43  eP     PKPdf   16 11 45.8 +0.4
TULM  Tulcn-Chalpat  150.20  42  eP     PKPdf   16 11 45.7 +0.2
IMBA  Imbabura, San  150.29  43          PKPdf   16 11 47.0 +1.4
PULU  Pululahua      150.29  44          PKPdf   16 11 46.2 +0.6
GARC  Garzon, Huila  150.34  36  eP     PKPdf   16 11 45.6 +0.2
BONI  La Bonita      150.56  41  eP     PKPdf   16 11 46.0 +0.2
FLOC  Florencia      150.75  37  eP     PKPdf   16 11 46.5 +0.7
EFI   East Falkland  150.96 181          PKPbc   16 11 48.2 -2.4
EFI   East Falkland  150.96 181  PKIKP  PKPbc   16 11 48.2 -2.4
PIAT  Ana Tenorio    151.22  44  eP     PKiKP   16 11 54.4 +0.9
GUVC  San Jose del G 151.49  31  eP     PKPbc   16 11 52.6 -0.4
COHC  Cochancay      151.64  48  eP     PKPbc   16 11 52.2 -1.1
MDP   Montagnes des  151.88 347  PKPbc  PKiKP   16 11 54.3  0.0
      baz=15,slow=2.5
PTLC  Puerto Leguiza 152.39  37  eP     PKPbc   16 11 54.4 -0.7
MCRA  Macar, Loja    152.48  52  eP     PKPdf   16 11 47.9 -0.5
RCBR  Riachuelo      152.52 304  eP     PKPdf   16 11 49.4 +1.0
BOAV  Boa Vista      155.09   5  eP     PKPdf   16 11 52.7 +0.6
NBAN  Anadia - AL    155.10 297  eP     PKPdf   16 11 52.7 +0.6
ATAH  Atahualpa      155.47  54  PKP    PKPdf   16 11 54.4 +1.3
      comp=Z,22nm,1.0s,baz=333,slow=11,SNR=29
ROSB  Rosrio         155.94 322  eP     PKPdf   16 11 53.6 +0.4
LL02  Futaleuf       156.67 155  PKPdf  PKPdf   16 11 51.5 -1.8
LL02                             PKPab  PKPab   16 12 22.0 -0.4
MCPB  Macapa, AP     157.02 343  eP     PKPdf   16 11 54.8 +0.1
TMAB  Tom-Au,PA,Br   157.49 332  eP     PKPdf   16 11 55.1 -0.1
TBTG  Tabatinga, AM  158.65  33  eP     PKPdf   16 11 56.8 +0.2
TBTG  Tabatinga, AM  158.65  33  eP     PKPdf   16 11 56.3 -0.4
MALB  Monte Alegre   158.97 348  eP     PKPdf   16 11 57.8 +0.7
PLCA  Paso Flores    159.26 153  PKP    PKPdf   16 11 56.4 -0.2
      comp=Z,9.9nm,1.2s,baz=230,slow=3.7,SNR=8.5
PLCA                             PKPab  PKPab   16 12 33.8  0.0
      comp=Z,14nm,0.9s,baz=219,slow=4.2,SNR=9.3
PLCA  Paso Flores    159.26 153  PKPdf  PKPdf   16 11 55.7 -0.9
PLCA                             PKPab  PKPab   16 12 34.2 +0.4
PLCA  Paso Flores    159.26 153  eP     PKPdf   16 11 57.5 +0.8
NNA   Nana           159.62  62  PKP    PKPdf   16 11 58.0 +0.3
      comp=Z,22nm,0.9s,baz=249,slow=3.3,SNR=6.1
NNA   Nana           159.62  62  IAMs_20 IAMs_20 17 37 57.4
      comp=Z,897nm,21.0s
GO06  Curarrehue     159.80 150  PKPdf  PKPdf   16 11 56.0 -1.4
GO06                             PKPab  PKPab   16 12 36.3  0.0
CZSB  Cruzeiro do Su 159.90  45  eP     PKPdf   16 11 58.6 +0.6
GDU01 Guandu, BA     159.95 293  eP     PKPdf   16 11 57.8 -0.3
MACA  Manacapuru-AM  160.58   6  eP     PKPdf   16 11 59.0 +0.1
CMC01 Camacan, BA    160.64 288  eP     PKPdf   16 11 59.2 +0.5
GUA01 Guaratinga, BA 161.37 285  eP     PKPdf   16 11 59.5  0.0
PRPB  Parauapebas    161.64 331  eP     PKPdf   16 11 59.5 -0.4
ITTB  Itaituba       161.69 351  eP     PKPdf   16 11 59.9 -0.2
NAN01 Guarapari, ES  162.09 282  eP     PKPdf   16 12 01.3 +1.1
RIB01 Linhares ES    162.74 278  eP     PKPdf   16 12 01.9 +1.0
SMTB  Santa Maria do 162.77 321  eP     PKPdf   16 12 01.6 +0.5
SJMB  Sao Joao De Ma 163.30 280  eP     PKPdf   16 12 01.3 -0.1
ALF01 Guarapari-ES   163.31 273  eP     PKPdf   16 12 01.6 +0.3
SDBA  SAO DESIDERIO  163.53 306  eP     PKPdf   16 12 01.3 -0.5
BO02  Sierra Bellavi 163.79 141          PKPdf   16 11 59.5 -2.1
BO02                             PKPab  PKPab   16 12 54.0 +0.1
BO01  Tunca          163.90 140          PKPdf   16 11 59.5 -2.1
BO01                             PKPab  PKPab   16 12 53.6 -0.6
NPGB  Novo Progresso 164.25 348  eP     PKPdf   16 12 02.2 -0.3
TRQA  Tornquist      164.30 170          PKPdf   16 12 00.4 -1.4
TRQA                             PKPab  PKPab   16 12 54.9 -0.9
TRQA  Tornquist      164.30 170  PKP2   PKPab   16 12 54.9 -0.9
TRQA                                     17 12 00.4
CAM01 Campos-RJ      164.34 270  eP     PKPdf   16 12 02.8 +0.5
MT09  Talagante      164.37 138          PKPdf   16 12 00.2 -2.0
MT09                             PKPab  PKPab   16 12 56.3 -0.2
JANB  Januaria       164.59 297  eP     PKPdf   16 12 03.4 +0.6
DUB01 Friburgo-RJ    165.03 269  eP     PKPdf   16 12 03.7 +0.7
MC01  Montes Claros  165.06 290  eP     PKPdf   16 12 03.7 +0.6
ETMB  Extrema        165.33  31  eP     PKPdf   16 12 02.8 -0.6
DIAM  Diamantina, MG 165.43 284  eP     PKPdf   16 12 04.0 +0.5
VAS01 Vassouras-RJ   166.03 268  eP     PKPdf   16 12 04.0 +0.2
SNDB  Serra Nova Dou 167.38 326  eP     PKPdf   16 12 05.2 +0.2
BDFB  Brasilia       167.89 303  PKP    PKPdf   16 12 05.2 -0.2
      comp=Z,24nm,0.9s,baz=58,slow=1.5,SNR=22
BDFB                             PKPab  PKPab   16 13 12.2 -0.3
      comp=Z,28nm,0.9s,baz=46,slow=6.4,SNR=9.7
BDFB  Brasilia       167.89 303  eP     PKPdf   16 12 05.5 +0.1
PMNB  Patos De Minas 167.97 287  eP     PKPdf   16 12 05.2 -0.2
CLDB  Colider        168.06 347  eP     PKPdf   16 12 05.8 +0.3
PDRB  Porto dos Gac  168.95 351  eP     PKPdf   16 12 06.1  0.0
LPAZ  La Paz         169.00  57  PKP    PKPdf   16 12 06.9 +0.1
      comp=Z,57nm,1.2s,baz=308,slow=0.7,SNR=79
LPAZ                             PKPab  PKPab   16 13 15.8 -2.2
      comp=Z,16nm,1.0s,baz=334,slow=1.9,SNR=4.3
LPAZ  La Paz         169.00  57  eP     PKPdf   16 12 07.1 +0.3
LPAZ  La Paz         169.00  57  eP     PKPdf   16 12 07.6 +0.8
IPMB  Ipameri, GO    169.28 293  eP     PKPdf   16 12 06.1 -0.1
VAO   Valinhos       169.31 266  eP     PKPdf   16 12 06.7 +0.6
PET01 Itanhaem-SP    169.52 258  eP     PKPdf   16 12 07.3 +1.2
RCLB  Rio Claro- Sao 169.82 269  eP     PKPdf   16 12 07.6 +1.2
PLTB  Pedras Altas   169.86 205  eP     PKPdf   16 12 07.3 +1.1
VILB  Vilhena        170.29  10  eP     PKPdf   16 12 07.6 +0.7
LVC   Limon Verde    170.42  92  eP     PKPdf   16 12 07.9 +0.7
BB19B Bebedouro      170.57 277  eP     PKPdf   16 12 07.6 +0.7
TIJ01 Guaruva-PR     170.86 251  eP     PKPdf   16 12 07.9 +0.9
CPSB  Cacapava Do Su 170.97 209  eP     PKPdf   16 12 07.6 +0.8
FRTB  Fartura        171.69 263  eP     PKPdf   16 12 07.5 +0.1
ITAB  Concordia      172.57 230  eP     PKPdf   16 12 07.7 +0.1
ITQB  Itaqui         172.74 193  eP     PKPdf   16 12 08.3 +0.7
SALV  Santo Antonio  172.83 337  eP     PKPdf   16 12 08.1 +0.1
PTLB  Pontes e Lacer 172.88   5  eP     PKPdf   16 12 07.6 -0.4
SIV   San Ignacio    173.02  20  PKP    PKPdf   16 12 08.3 +0.2
      comp=Z,32nm,1.2s,baz=97,slow=0.9,SNR=4.7
PCMB  Pacaembu       173.18 277  eP     PKPdf   16 12 08.3 +0.2
C2SB  Chapadao do Su 173.45 304  eP     PKPdf   16 12 08.4 +0.2
TRCB  Terra Rica     174.54 267  eP     PKPdf   16 12 08.9 +0.3
CPUP  Villa Florida  176.11 196  PKP    PKPdf   16 12 07.9 -0.9
      comp=Z,19nm,1.1s,baz=216,slow=3.7,SNR=15
AQDB  Aquidauana     176.62 308  eP     PKPdf   16 12 08.6 -0.5
```

*JMA **06** 16:08:57.1±0.6,35°N±2°×14°2E±°, h33km±1km, MV2.7/25, FAR SE OFF BOSO PEN*
*IDC **06** 16:09:02.0±2.5,33°73N×139°40E, h0km, mb3.6/2, mbtmp3.6/2, ML1.8/1, Error ellipse: s-maj=127.3km s-min=31.8km az=80.0*

ISC 06 16:08:58.6±1.7,34°54N±0°09×141°5E±0°1,h27km,n9, σ1§49/11,Off east coast of Honshu

```
Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
BSO1  Boso 1          0.47 284  P     Pb          16 09 07.4 -0.6
BSO3  Boso 3          0.88 287  P     Pn          16 09 14.1 -0.9
BSO4  Boso 4          1.08 295  P     Pn          16 09 17.2 -0.7
JKUC  kamogawauchiur  1.26 300  P     Pn          16 09 19.2 -1.2
JKUC                             S     Sb          16 09 35.9 -1.5
CHOJ  Chosi           1.28 335  P     Pn          16 09 20.0 -0.8
JMKN  Mikurajimanish  1.73 249  P     Pn          16 09 26.9 -0.1
MJAR  Matsushiro Arr  3.36 307  Pn    Pn          16 09 50.0 +0.6
      0.1nm,0.3s,baz=160,slow=14,SNR=3.3
MJAR                             Sn    Sn          16 10 31.8 +3.4
      0.1nm,0.3s,baz=278,slow=16,SNR=3.5
WRA   Warramunga Arr  54.61 188  P     P           16 18 24.8 -0.1
      0.8nm,0.7s,baz=3.9,slow=7.7,SNR=12
      0.8nm,0.7s
ASAR  Alice Springs   58.34 188  P     P           16 18 51.8 +0.4
      0.4nm,0.8s,baz=3.3,slow=6.8,SNR=9.4
      0.4nm,0.8s
```

*IDC **06** 16:46:33.6±1.0,8°19N×38°05W, h0km, mb4.0/8, mbtmp4.1/9, ML3.9/1, Error ellipse: s-maj=36.4km s-min=20.9km az=153.0*
*NEIC **06** 16:46:33.4±2.0,8°2N±0°1×37°9W±0°1, h10km±2km, mb4.2/7, Error ellipse: s-maj=23.5km s-min=18.5km az=290.0*

ISC 06 16:46:35.2±0.7,8°03N±0°08×37°9W±0°1,h16km,n19, σ1§65/17,mb4.2/10,Central Mid-Atlantic Ridge

```
Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
RCBR  Riachuelo       13.91 172  Pn    Pn          16 49 54.0 +2.1
      0.6nm,0.3s,baz=146,slow=4.6,SNR=2.6
      3.3nm,0.4s
RCBR  Riachuelo       13.91 172  Pn    Pn          16 49 52.8 +0.9
RCBR                             Sn    Sn          16 52 23.5 -2.7
SACV  Santiago Islan  15.64  63  Pn    Pn          16 50 12.0 -3.2
SACV                             IAmb  IAmb        16 50 41.6
      comp=Z,34nm,1.1s
H10N3 ASCENSION HYDR28.18 123    T     T           17 22 16.1
      baz=303,slow=75,SNR=109
H10N2 ASCENSION HYDR28.19 123    T     T           17 22 16.6
      baz=303,slow=75,SNR=104
H10N1 ASCENSION HYDR28.21 123    T     T           17 22 17.4
      baz=303,slow=75,SNR=100
KOWA  Kowa            33.86  76  P     P           16 53 19.0 +1.7
      comp=Z,2.8nm,0.6s,baz=270,slow=8.1,SNR=7.4
      comp=Z,2.8nm,0.6s
KOWA  Kowa            33.86  76  P     P           16 53 16.7 -0.7
KOWA                             IAmb  IAmb        16 53 20.0
      comp=Z,3.3nm,0.8s
LPAZ  La Paz          38.42 231  P     P           16 53 58.2 +1.1
      comp=Z,1.7nm,0.8s,baz=49,slow=9.3,SNR=7.0
      comp=Z,1.7nm,0.8s
LPAZ  La Paz          38.42 231  P     P           16 53 56.6 -0.5
TOA0  Torodi Ar. Sit  39.26  79  P     P           16 54 04.8 +1.3
TOA0                             IAmb  IAmb        16 54 06.3
      comp=Z,4.1nm,0.9s
TORD  Torodi Ar. Bea  39.26  79  P     P           16 54 04.8 +1.4
      comp=Z,4.1nm,0.8s,baz=266,slow=8.1,SNR=18
      comp=Z,4.1nm,0.8s
BATG  Bathurst New B  45.87 333  P     P           16 54 54.9 -1.8
KEST  Kesra           51.16  50  P     P           16 55 38.9 +1.1
      comp=Z,3.7nm,0.7s,baz=242,slow=11,SNR=5.3
      comp=Z,3.7nm,0.7s
TXAR  Lajitas Array   64.97 299  P     P           16 57 14.9 +0.1
      comp=Z,0.2nm,0.5s,baz=109,slow=6.8,SNR=3.6
      comp=Z,0.2nm,0.5s
AKASG Malin Array Be  69.42  39  P     P           16 57 42.1 -0.4
      comp=Z,1.5nm,0.7s,baz=266,slow=4.5,SNR=4.2
      comp=Z,1.5nm,0.7s
FINES FINESS Array B  70.72  27  P     P           16 57 50.8 +0.5
      comp=Z,1.3nm,0.6s,baz=240,slow=7.7,SNR=4.3
      comp=Z,1.3nm,0.6s
BRTR  Keskin Array B  70.75  51  P     P           16 57 52.6 +1.4
      comp=Z,0.5nm,0.6s,baz=282,slow=6.6,SNR=2.2
      comp=Z,0.5nm,0.6s
SNAA  Sanae           82.83 169  P     P           16 58 57.7 -0.8
SNAA                             IAmb  IAmb        16 58 58.7
      comp=Z,2.5nm,1.3s
```

*UUSS **06** 17:20:18.9±2.4,37°91N±0°03×111°81W±0°04, h9km±6km, ML3.0/20, ML3.0/135(NEIC), Error ellipse: s-maj=4.6km s-min=3.4km az=127.0*

NEIC 06 17:20:19.6±2.2,37°97N±0°03×111°87W±0°04,h3km±6km, Error ellipse: s-maj=5.1km s-min=3.5km az=141.0,Utah

```
Code  Station Name    Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
BTU   Barney Top      0.21 182          Pg          17 20 22.6 -1.2
MTPU  Mount Pierson   0.26 287          Pg          17 20 25.2 +0.5
MMU   Miners Mountai  0.51  63          Pg          17 20 28.3 -1.1
MSU   Marysvale       0.60 336          Pg          17 20 31.3 +0.2
MVU   Marysvale       0.60 333          Pg          17 20 31.5 +0.3
MVU                                     Sb          17 20 41.4 -0.6
MVU   Marysvale       0.60 333  IAML                17 20 53.7
      comp=E,1μm,0.7s
PKCU  Pink Cliffs     0.63 214          Pg          17 20 30.6 -1.1
PKCU  Pink Cliffs     0.63 214  IAML                17 20 44.3
      comp=E,691nm,0.7s
PKCU                            IAML                17 20 46.7
      comp=N,600nm,0.9s
TCRU  Three Creeks R  0.79 325          Pg          17 20 35.2 +0.4
TCRU                                    Sb          17 20 47.4  0.0
TCRU  Three Creeks R  0.79 325  IAML                17 20 59.3
      comp=E,377nm,0.8s
BHU   Blowhard Mount  0.87 245          Pg          17 20 36.1 -0.2
OWUT  Old Woman Plat  0.88  23          Pg          17 20 36.3 -0.4
HMU   Henry Mountain  0.89  91          Pg          17 20 34.8 -1.9
HMU                                     Sg          17 20 46.6 -1.7
DWU   Dry Willow Pea  0.90 279          Pg          17 20 37.5 +0.6
NMUT  North Mineral   0.95 306          Pg          17 20 38.0 +0.2
WCU   Willow Creek    1.01 350          Pg          17 20 39.3 +0.2
EKU   East Kanab      1.02 210          Pg          17 20 37.4 -1.8
SZCU  Shurtz Canyon   1.04 249          Pg          17 20 38.4 -1.0
Q16A  Castle Valley   1.10  30          Pg          17 20 39.5 -1.1
Q16A                            IAML                17 20 59.1
      comp=E,247nm,0.5s
Q16A                            IAML                17 21 01.8
      comp=N,358nm,0.7s
ZNPU  Zion National   1.17 239          Pg          17 20 40.6 -1.5
CCUT  Cedar City      1.26 251          Pg          17 20 42.6 -1.1
ARUT  Antelope Range  1.26 262          Pg          17 20 43.3 -0.5
TMUT  Trail Mountain  1.43  21          Pn          17 20 45.8 -1.0
TMUT  Trail Mountain  1.43  21  IAML                17 21 17.3
      comp=E,298nm,0.8s
TMUT                            IAML                17 21 20.1
      comp=N,295nm,0.7s
FLU   Fool Peak       1.43 350          Pn          17 20 46.1 -0.7
LCMT  Little Creek M  1.45 229          Pn          17 20 45.3 -1.6
SRU   San Rafael Swe  1.55  42          Pn          17 20 47.6 -0.9
SRU   San Rafael Swe  1.55  42  IAML                17 21 15.8
      comp=N,212nm,0.6s
SRU                             IAML                17 21 24.2
      comp=E,184nm,0.6s
PSUT  Pine Spring     1.67 291          Pn          17 20 50.0 +0.1
PSUT  Pine Spring     1.67 291  IAML                17 21 21.1
      comp=N,130nm,1.2s
PSUT                            IAML                17 21 29.8
      comp=E,122nm,1.1s
P17A  Butcher Ranch,  1.74  30          Pn          17 20 51.3 +0.3
P17A  Butcher Ranch,  1.74  30          Pn          17 20 49.1 -1.9
P17A  Butcher Ranch,  1.74  30  IAML                17 21 19.1
      comp=E,119nm,0.6s
P17A                            IAML                17 21 23.4
      comp=N,108nm,1.0s
NLU   North Lily Min  1.99 355          Pn          17 20 53.2 -1.2
NLU                                     Pg          17 20 56.6 -0.1
NLU                             IAML                17 21 33.9
      comp=E,65nm,0.8s
NLU                             IAML                17 21 35.3
      comp=N,72nm,0.8s
MPU   Maple Canyon    2.06   5          Pb          17 20 57.7 -0.1
P18A  Preston Nutter  2.09  37          Pb          17 20 57.5 -0.8
P18A                            IAML                17 21 33.3
      comp=N,123nm,0.8s
P18A                            IAML                17 21 37.0
      comp=E,155nm,0.8s
PV10  Paradox Valley  2.27  79          Pn          17 20 58.5 +0.3
PV23  Carpenter Ridg  2.30  77          Pg          Pn 17 20 59.6 +0.8
DUG   Dugway, Tooele  2.34 342          Pn          17 20 57.7 -1.5
DUG                             IAML                17 21 43.2
      comp=E,81nm,0.9s
DUG                             IAML                17 21 43.6
      comp=E,110nm,0.7s
PV13  Radium Mtn., P  2.41  84          Pn          17 21 00.7 +0.4
WUAZ  Wupatki         2.48 171          Pn          17 20 59.9 -1.1
PV07  Paradox Valley  2.58  78          Pn          17 21 02.8 +0.3
PRN   Pahroc Range    2.59 259          Pn          17 21 02.5 -0.1
PRN                             IAML                17 21 56.5
      comp=N,77nm,0.8s
JLU   Jordanelle      2.65   7          Pb          17 21 08.3 +0.3
JLU                             IAML                17 21 53.5
      comp=E,41nm,0.9s
JLU                             IAML                17 21 55.4
      comp=N,44nm,1.2s
PV15  Paradox Valley  2.69  81          Pn          17 21 04.3 +0.2
CTU   Camp Tracy      2.73   2          Pn          17 21 05.1 +0.6
CTU                             IAML                17 21 48.2
      comp=E,34nm,0.7s
MVCO  Mesa Verde      2.78 105          Pn          Pn 17 21 05.8 +0.5
R11A  Troy Canyon, C  2.96 279          Pn          17 21 08.9 +1.2
R11A                            IAML                17 21 59.9
      comp=N,34nm,1.1s
SHPR  Sheep Range     3.00 242          Pn          17 21 09.0 +0.6
BGU   Big Grassy Mou  3.09 343          Pn          17 21 08.8 -0.8
S11A  Rachel          3.09 265          Pb          17 21 14.5 -0.8
RDMU  Red Mountain    3.15  34          Pn          17 21 12.0 +1.5
RDMU                            IAML                17 22 08.7
      comp=N,54nm,1.4s
RDMU                            IAML                17 22 11.1
      comp=E,48nm,1.4s
TCUT  Toone Canyon    3.17   6          Pn          17 21 10.9 +0.2
TCUT                            IAML                17 21 33.5
      comp=E,50nm,0.7s
TCUT                            IAML                17 22 15.2
      comp=N,54nm,0.6s
V12A  Nelson          3.27 228          Pg          Pb 17 21 17.6 -0.9
V12A                            IAML                17 22 08.4
      comp=N,28nm,1.0s
V12A                            IAML                17 22 10.3
      comp=E,31nm,0.9s
W13A  Hualapai Mount  3.29 210          Pn          17 21 11.8 -0.5
W13A                            IAML                17 22 16.5
      comp=N,26nm,0.9s
W13A                            IAML                17 22 21.9
      comp=E,22nm,1.1s
W18A  Petrified Fore  3.32 148          Pn          Pn 17 21 12.2 -0.5
O20A  White River Ci  3.56  51          Pn          17 21 16.2 +0.3
TPNV  Topopah Spring  3.63 255          Pn          17 21 16.1 -0.9
TPNV                            IAML                17 22 38.0
      comp=E,28nm,1.0s
TPNV                            IAML                17 22 39.1
      comp=E,26nm,1.1s
HWUT  Hardware Ranch  3.64   4          Pn          Pn 17 21 17.4 +0.3
HWUT                            IAML                17 22 28.6
      comp=E,17nm,1.1s
HWUT                            IAML                17 22 32.0
      comp=E,19nm,0.8s
X18A  Snowflake       3.76 155          Pn          17 21 18.6 -0.1
ELK   Elko            3.81 318          Pg          Pb 17 21 28.0 +0.2
HVU   Hansel Valley   3.87 350          Pn          17 21 21.6 +1.3
HVU                             IAML                17 22 34.6
      comp=E,35nm,0.8s
HVU                             IAML                17 22 35.5
      comp=N,26nm,0.8s
WCT   Wildcat Mounta  3.97 254          Pn          Pn 17 21 21.5  0.0
WCT                             IAML                17 22 44.6
      comp=E,13nm,0.7s
WCT                             IAML                17 22 44.0
```

comp=N,16nm,0.7s
S22A 4UR Ranch, Cre 3.99 92 Pn 17 21 20.6 -1.4
S22A IAML 17 22 33.7
comp=N,28nm,0.8s
S22A IAML 17 22 45.1
comp=E,25nm,1.0s
SMCO Snowmass 4.02 71 Pn 17 21 22.4 -0.1
Y14A Wickenburg 4.12 193 Pb 17 21 31.8 -1.1
GWY Greenwater Val 4.23 247 Pb 17 21 32.2 -2.6
GWY IAML 17 22 57.1
comp=N,16nm,2.6s
GWY IAML 17 22 59.8
comp=E,17nm,1.0s
TPH Tonopah 4.23 273 Pb 17 21 36.6 +1.7
GMN Gold Mountain 4.33 263 Pb 17 21 38.8 +2.3
GMN IAML 17 22 53.6
comp=N,9.4nm,0.8s
MZP Montezuma Peak 4.38 268 Pg 17 21 40.5 -3.0
GRAC Grapevine Rang 4.48 259 Pg Pb 17 21 41.8 +2.8
GRAC IAML 17 23 06.6
comp=N,21nm,1.1s
GRAC IAML 17 23 21.3
comp=E,22nm,2.2s
LCH Last Change Ra 4.65 263 Pn 17 21 29.9 -1.0
LCH IAML 17 23 01.5
comp=N,9.5nm,1.4s
LCH IAML 17 23 01.6
comp=E,9.3nm,3.9s
BLYC Blythe 4.73 208 Pn Pn 17 21 30.3 -1.6
BLYC IAML 17 22 54.6
comp=N,18nm,0.8s
AHID Auburn Hatcher 4.83 7 Pg 17 21 50.2 -1.9
AHID IAML 17 23 07.5
comp=N,14nm,1.5s
AHID IAML 17 23 14.0
comp=N,15nm,1.1s
DSP Deep Springs 4.88 265 Pg 17 21 51.0 -2.1
DSP IAML 17 23 03.1
comp=E,7.4nm,4.4s
DSP IAML 17 23 12.9
comp=N,12nm,2.5s
NV11 Mina Array Sit 4.98 277 Pg 17 21 53.2 -1.8
NV11 IAML 17 23 10.7
comp=N,11nm,1.3s
NV11 IAML 17 24 22.9
comp=E,8.7nm,4.8s
KVN Kaiserville 5.01 284 Pg Pb 17 21 51.0 +3.0
KVN IAML 17 23 03.6
comp=N,12nm,1.1s
KVN IAML 17 23 25.4
comp=E,10nm,4.7s
SDCO Great Sand Dun 5.04 91 Pn 17 21 39.3 +2.8
NVAR Mina Array Bea 5.09 277 Pg 17 21 58.1 +0.9
BW06 Boulder Array 5.11 19 Pb 17 21 51.4 +1.6
BW06 IAML 17 23 19.5
comp=E,9.3nm,4.1s
BW06 IAML 17 23 44.9
comp=E,9.0nm,1.4s
PD31 Pinedale Array 5.11 19 Pn 17 21 37.7 +0.3
PDAR Pinedale Array 5.11 19 Pn Pn 17 21 37.2 -0.1
ISCO Idaho Springs 5.21 67 Pb 17 21 52.9 +1.3
ISCO IAML 17 23 07.4
comp=E,8.8nm,2.1s
ISCO IAML 17 23 33.0
comp=E,12nm,4.8s
LHV Little Huntoon 5.24 275 Pg 17 21 56.6 -3.4
ANMO Albuquerque 5.30 123 Pn 17 21 39.4 -0.5
ANMO IAML 17 23 11.8
comp=E,13nm,1.6s
N23A Red Feather La 5.44 56 Pb 17 21 49.8 -5.6
SBM South Baldy 5.50 135 Pb 17 21 57.0 +0.4
BNM Barren Site 5.70 130 Pg Pb 17 22 03.7 +3.8
FXWY Fox Creek 5.70 6 Pn Pn 17 21 44.0 -1.5
TUC Tucson 5.71 171 Pg Pg 17 22 04.8 -4.3
PHWY Pilot Hill 5.96 54 Pg Pb 17 22 05.5 +1.0
IMW Indian Meadow 5.97 6 Pg Pb 17 22 05.3 +0.8
T25A Trinidad 5.98 96 Pg Pb 17 22 08.0 +3.3
K22A Casper 6.21 39 Pn 17 21 52.4 0.0
121A Cookes Peak, D 6.37 147 Pn Pn 17 21 54.9 +0.3

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*IDC **06** 17:29:53.9±1.5, 20°.34S×177°.45W, h510km±14km, mb3.8/7, mbtmp4.7/11, Error ellipse: s-maj=25.7km s-min=15.7km az=146.0*
*NOU **06** 17:29:55.3, 20°.24S×177°.50W, h535km, mb4.2/12, Fiji Islands Region*
*NEIC **06** 17:29:57.2±1.3, 20°.4S±0°.2×177°.9W±0°.2, h509km±15km, mb4.5/32, Error ellipse: s-maj=31.0km s-min=20.2km az=56.0*
ISC 06 17:29:54.0±0.6, 20°.30S±0°.09×177°.51W±0°.08, h500km, n65, σ1§41/67, mb4.4/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**4.23**	**327**	P	**P**	**17 31 17.6**	**+3.1**
MSVF	**Nonsavu**	**4.92**	**301**	P	**P**	**17 31 22.8**	**+2.3**
4.8nm,0.4s,baz=98,slow=22,SNR=25							
MSVF				S	**S**	**17 32 33.3**	**+2.5**
5.0nm,0.9s,baz=338,slow=22,SNR=1.4							
MSVF	**Nonsavu**	**4.92**	**301**	P	**P**	**17 31 23.2**	**+2.8**
FUTU	**Fugatoga**	**5.99**	**354**	P	**P**	**17 31 32.7**	**+2.3**
NIUE	**Niue**	**7.25**	**82**	P	**P**	**17 31 45.5**	**+2.8**
NIUE	**Niue**	**7.25**	**82**	P	**P**	**17 31 45.8**	**+3.0**
AFI	**Afiamalu**	**8.39**	**42**	P	**P**	**17 31 56.3**	**+1.6**
37nm,1.0s,baz=163,slow=22,SNR=1.7							
AFI				S	**S**	**17 33 30.0**	**-3.6**
61nm,0.3s,baz=314,slow=22,SNR=13							
AFI	**Afiamalu**	**8.39**	**42**	P	**P**	**17 31 54.7**	**0.0**
MARNC	**Mare, Loyalty**	**13.57**	**262**	P	**P**	**17 32 48.4**	**-0.9**
MARNC	**Mare, Loyalty**	**13.57**	**262**	P	**P**	**17 32 49.2**	**0.0**
LIFNC	**LIFOU**	**14.30**	**265**	P	**P**	**17 32 56.1**	**-0.8**
YATNC	**Mamie plateau,**	**14.66**	**260**	P	**P**	**17 33 01.7**	**+1.0**
DZM	**Mont Dzumac**	**15.07**	**260**	P	**P**	**17 33 04.9**	**-0.3**
8.3nm,0.5s,baz=100,slow=18,SNR=2.8							
DZM	**Mont Dzumac**	**15.07**	**260**	P	**P**	**17 33 03.7**	**-1.5**
DZM	**Mont Dzumac**	**15.07**	**260**	P	**P**	**17 33 06.9**	**+1.7**
NOUC	**Port Laguerre**	**15.21**	**260**	P	**P**	**17 33 07.7**	**+1.3**
OUZ	**Omahuta**	**16.81**	**206**	P	**P**	**17 33 24.6**	**+1.7**
URZ	**Urewera**	**18.50**	**193**	P	**P**	**17 33 38.5**	**-0.3**
6.9nm,0.3s,baz=18,slow=1.7,SNR=14							
URZ	**Urewera**	**18.50**	**193**	P	**P**	**17 33 38.7**	**0.0**
URZ	**Urewera**	**18.50**	**193**	P	**P**	**17 33 37.7**	**-1.1**
BKZ	**Black Stump Fm**	**19.50**	**194**	P	**P**	**17 33 46.2**	**-1.8**
BKZ				IAmb	IAmb	17 34 29.1	
comp=Z,36nm,1.4s							
BKZ	**Black Stump Fm**	**19.50**	**194**	P	**P**	**17 33 47.4**	**-0.6**
BFZ	**Birch Farm**	**21.01**	**193**	P	**P**	**17 34 00.1**	**-1.5**
QRZ	**Quartz Range**	**22.16**	**200**	P	**P**	**17 34 12.4**	**+0.4**
THZ	**Tophouse**	**22.89**	**199**	P	**P**	**17 34 18.3**	**-0.3**
EIDS	**Eidsvold**	**29.34**	**254**	P	**P**	**17 35 15.2**	**-0.6**
ARMA	**Armidale**	**29.57**	**244**	P	**P**	**17 35 16.9**	**-1.0**
ARMA				IAmb	IAmb	17 35 19.1	
comp=Z,7.1nm,0.7s							
CTA	**Charters Tower**	**33.97**	**264**	P	**P**	**17 35 55.1**	**-0.4**
comp=Z,9.8nm,0.3s,baz=90,slow=12,SNR=36							
comp=Z,9.8nm,0.3s							
CTAO	**Charters Tower**	**33.97**	**264**	P	**P**	**17 35 55.0**	**-0.5**
PATS	**Pohnpei**	**35.95**	**316**	P	**P**	**17 36 12.0**	**-0.1**
COEN	**Coen**	**38.03**	**273**	P	**P**	**17 36 29.0**	**-0.3**
COEN				IAmb	IAmb	17 36 30.3	
comp=Z,43nm,1.4s							
STKA	**Stephens Creek**	**38.29**	**244**	P	**P**	**17 36 29.1**	**-2.1**
comp=Z,3.6nm,0.5s,baz=93,slow=11,SNR=7.5							
comp=Z,3.6nm,0.5s							
BBOO	**Buckleboo**	**43.05**	**243**	P	**P**	**17 37 08.5**	**-0.7**
BBOO				IAmb	IAmb	17 37 09.0	
comp=Z,12nm,0.6s							
WR0	**Warramunga Arr**	**44.90**	**262**	P	**P**	**17 37 22.3**	**-1.4**
WR0				IAmb	IAmb	17 37 24.0	
comp=Z,12nm,1.1s							
AS31	**Alice Springs**	**45.01**	**256**	P	**P**	**17 37 23.2**	**-1.5**
ASAR	**Alice Springs**	**45.01**	**256**	P	**P**	**17 37 24.1**	**-0.6**
comp=Z,18nm,0.8s,baz=89,slow=8.2,SNR=76							
ASAR				PcP	**PcP**	**17 38 54.5**	**-0.7**
comp=Z,1.1nm,0.7s,baz=105,slow=4.0,SNR=4.3							
comp=Z,1.8nm,0.8s							
ASAR	**Alice Springs**	**45.01**	**256**	P	**P**	**17 37 23.6**	**-1.0**
WB0	**Warramunga Arr**	**45.06**	**262**	P	**P**	**17 37 23.7**	**-1.3**
WB0				IAmb	IAmb	17 37 24.5	
comp=Z,12nm,0.5s							
WB2	**Warramunga Arr**	**45.07**	**262**	P	**P**	**17 37 23.8**	**-1.3**
WB2				IAmb	IAmb	17 37 24.6	
comp=Z,17nm,1.1s							
WRAB	**Tennant Creek**	**45.08**	**262**	P	**P**	**17 37 23.5**	**-1.6**
WRAB				IAmb	IAmb	17 37 24.6	
comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**45.09**	**262**	P	**P**	**17 37 23.9**	**-1.3**
comp=Z,4.9nm,0.4s,baz=97,slow=7.7,SNR=43							
comp=Z,4.9nm,0.4s							
WRA	**Warramunga Arr**	**45.09**	**262**	P	**P**	**17 37 23.8**	**-1.4**
MTN	**Manton Dam**	**49.62**	**270**	P	**P**	**17 37 58.3**	**-1.1**
MTN				IAmb	IAmb	17 37 58.8	
comp=Z,13nm,0.8s							
FORT	**Forrest**	**49.80**	**246**	P	**P**	**17 37 59.5**	**-1.0**
KNRA	**Kununurra**	**51.13**	**266**	P	**P**	**17 38 10.1**	**-0.4**
KNRA				IAmb	IAmb	17 38 10.5	
comp=Z,8.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**53.51**	**262**	P	**P**	**17 38 27.2**	**-0.3**
comp=Z,3.0nm,0.5s,baz=121,slow=6.2,SNR=6.4							
comp=Z,3.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**53.51**	**262**	P	**P**	**17 38 27.0**	**-0.5**
SIJI	**Sorong**	**53.63**	**285**	P	**P**	**17 38 27.6**	**-0.9**
comp=Z,14nm,0.7s,baz=104,slow=8.3,SNR=11							
comp=Z,14nm,0.7s							
SOEI	**Soe**	**56.96**	**271**	P	**P**	**17 38 52.1**	**+0.3**
SOEI				IAmb	IAmb	17 38 53.5	
comp=Z,30nm,0.9s							
SBA	**Scott Base**	**58.10**	**184**	P	**P**	**17 39 00.5**	**+2.0**
VNDA	**Vanda**	**58.15**	**185**	P	**P**	**17 38 59.7**	**+0.9**
PSA00	**Pilbara Seismi**	**58.16**	**257**	P	**P**	**17 38 58.6**	**-1.3**
PSA00	**Pilbara Seismi**	**58.16**	**257**	P	**P**	**17 38 58.8**	**-1.1**
PSA00				IAmb	IAmb	17 38 59.6	
comp=Z,9.3nm,0.8s							
MBWA	**Marble Bar**	**58.35**	**257**	P	**P**	**17 38 59.8**	**-1.3**
MBWA				IAmb	IAmb	17 39 00.4	
comp=Z,7.6nm,0.6s							
MORW	**Morawa**	**60.33**	**247**	P	**P**	**17 39 13.9**	**-0.4**
MORW				IAmb	IAmb	17 39 47.3	
comp=Z,25nm,1.5s							
GIRL	**Giralia**	**63.05**	**254**	P	**P**	**17 39 32.4**	**+0.3**
CASY	**Casey**	**64.34**	**205**	P	**P**	**17 39 40.2**	**+0.6**
CASY				IAmb	IAmb	17 40 17.3	
comp=Z,13nm,1.5s							
KKM	**Kota Kinabalu**	**70.15**	**285**	P	**P**	**17 40 17.1**	**+0.6**
KKM				IAmb	IAmb	17 40 25.6	
comp=Z,35nm,1.2s							
UGM	**Wanagama**	**70.43**	**269**	P	**P**	**17 40 17.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**90.48**	**289**	P	**P**	**17 42 03.0**	**+0.4**
comp=Z,1.7nm,0.8s,baz=110,slow=2.9,SNR=10.0							
comp=Z,1.7nm,0.8s							
CHTO	**Chiang Mai**	**90.61**	**290**	P	**P**	**17 42 04.0**	**+0.9**
MKAR	**Makanchi Array**	**111.39**	**313**	PKiKP	**PKiKP**	**17 47 29.5**	**-1.4**
comp=Z,0.2nm,0.6s,baz=114,slow=1.7,SNR=1.2							
AKASG	**Malin Array Be**	**143.06**	**332**	PKP	PKPab	17 48 27.0	-0.8
comp=Z,1.8nm,0.5s,baz=42,slow=4.1,SNR=10.0							
BRTR	**Keskin Array B**	**147.04**	**313**	PKPbc	**PKPbc**	**17 48 39.8**	**-0.9**
comp=Z,0.8nm,0.5s,baz=114,slow=3.3,SNR=5.6							
GERES	**GERESS Array B**	**150.13**	**345**	PKPbc	**PKPbc**	**17 48 47.2**	**-0.8**
comp=Z,0.5nm,0.8s,baz=46,slow=3.3,SNR=4.4							

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*IDC **06** 17:31:04.1±2.5, 4°.78S×153°.06E, h66km±18km, mb3.7/13, mbtmp4.0/14, MS3.7/1, Error ellipse: s-maj=26.7km s-min=14.1km az=100.0*
*NEIC **06** 17:31:05.8±1.9, 4°.66S±0°.09×152°.94E±0°.08, h67km±8km, mb4.5/22, Error ellipse: s-maj=13.7km s-min=11.2km az=212.0*
ISC 06 17:31:03.1±0.6, 4°.74S±0°.07×153°.07E±0°.09, h55km, n48, σ1§15/50, mb4.2/23, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.05**	**301**	Pn	**Pn**	**17 31 22.2**	**+0.5**
KRVT	**Keravat (AS076**	**1.12**	**292**	P	**Pn**	**17 31 23.8**	**+1.2**
466nm,0.3s,baz=253,slow=1.2,SNR=300							
KRVT				S	**Sn**	**17 31 39.1**	**+2.0**
1μm,0.3s,baz=117,slow=23,SNR=11							
MANU	**Manus Island**	**6.29**	**295**	Pn	**Pn**	**17 32 32.6**	**-0.7**
PMG	**Port Moresby**	**7.47**	**231**	P	**Pn**	**17 32 51.0**	**+1.5**
6.4nm,0.5s,baz=41,slow=13,SNR=1.6							
PMG				S	**Sn**	**17 34 10.5**	**-2.5**
13nm,0.7s,baz=18,slow=20,SNR=1.8							
PMG	**Port Moresby**	**7.47**	**231**	Pn	**Pn**	**17 32 50.2**	**+0.7**
PATS	**Pohnpei**	**12.63**	**25**	Pn	**Pn**	**17 34 00.1**	**-0.1**
FAKI	**Fak Fak**	**20.85**	**274**	P	**P**	**17 35 38.6**	**-2.0**
SIJI	**Sorong**	**22.11**	**279**	P	**P**	**17 35 53.8**	**-0.3**
8.8nm,0.6s,baz=109,slow=18,SNR=8.8							
8.8nm,0.6s							
MTN	**Manton Dam**	**23.11**	**248**	P	**P**	**17 36 04.8**	**+0.3**
MTN				IAmb	IAmb	17 36 43.8	
comp=Z,38nm,1.4s							
WB0	**Warramunga Arr**	**23.54**	**229**	P	**P**	**17 36 08.7**	**0.0**
WB0				IAmb	IAmb	17 36 09.9	
comp=Z,13nm,1.3s							
WR0	**Warramunga Arr**	**23.55**	**228**	P	**P**	**17 36 08.6**	**-0.1**
WB2	**Warramunga Arr**	**23.68**	**229**	P	**P**	**17 36 09.5**	**-0.4**
WB2				IAmb	IAmb	17 36 16.8	
comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**23.68**	**229**	P	**P**	**17 36 11.1**	**+1.1**
comp=Z,2.8nm,0.7s,baz=48,slow=9.4,SNR=16							
comp=Z,2.8nm,0.7s							
WRA	**Warramunga Arr**	**23.68**	**229**	P	**P**	**17 36 09.3**	**-0.7**
KNRA	**Kununurra**	**26.24**	**244**	P	**P**	**17 36 33.0**	**-0.2**
KNRA				IAmb	IAmb	17 36 37.3	
comp=Z,15nm,0.6s							
AS31	**Alice Springs**	**26.37**	**223**	P	**P**	**17 36 35.1**	**+0.7**
ASAR	**Alice Springs**	**26.38**	**223**	P	**P**	**17 36 33.2**	**-1.3**
comp=Z,0.6nm,0.6s,baz=56,slow=8.7,SNR=2.7							
ASAR				PcP	**PcP**	**17 39 58.5**	**-0.7**
comp=Z,0.4nm,0.7s,baz=35,slow=3.4,SNR=1.9							
comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**26.38**	**223**	P	**P**	**17 36 35.5**	**+1.1**
SOEI	**Soe**	**28.99**	**258**	P	**P**	**17 36 57.0**	**-1.0**
SOEI				IAmb	IAmb	17 37 20.3	
comp=Z,16nm,1.0s							
FITZ	**Fitzroy Crossi**	**29.92**	**241**	P	**P**	**17 37 05.2**	**-0.9**
comp=Z,4.4nm,0.6s,baz=63,slow=8.5,SNR=31							
comp=Z,4.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**29.92**	**241**	P	**P**	**17 37 05.0**	**-1.1**
FITZ				IAmb	IAmb	17 37 45.1	
comp=Z,12nm,1.4s							
LUWI	**Luwuk**	**30.47**	**276**	P	**P**	**17 37 09.5**	**-1.5**
LUWI				IAmb	IAmb	17 37 37.6	
comp=Z,25nm,1.1s							
FORT	**Forrest**	**35.00**	**219**	P	**P**	**17 37 51.1**	**+0.6**
FORT				IAmb	IAmb	17 38 00.2	
comp=Z,20nm,0.7s							
MBWA	**Marble Bar**	**36.23**	**240**	P	**P**	**17 38 01.0**	**-0.1**
MBWA				IAmb	IAmb	17 38 29.4	
comp=Z,6.8nm,1.2s							
GIRL	**Giralia**	**41.53**	**241**	P	**P**	**17 38 45.6**	**+0.2**
NWAO	**Narrogin (SRO)**	**43.62**	**226**	P	**P**	**17 39 03.1**	**+0.9**
LEM	**Lembang**	**45.25**	**265**	LR	LR	18 01 56.1	
comp=Z,80nm,18.2s,baz=282,slow=41							
KSRS	**Korea Array**	**48.06**	**333**	P	**P**	**17 39 37.3**	**+0.2**
comp=Z,1.1nm,0.6s,baz=143,slow=6.7,SNR=4.4							
comp=Z,1.1nm,0.6s							
MDJ	**Mudanjiang**	**53.46**	**339**	P	**P**	**17 40 17.1**	**-0.5**
KLR	**Kul'dur**	**56.86**	**343**	P	**P**	**17 40 42.6**	**+0.6**
comp=Z,0.9nm,0.6s,baz=195,slow=18,SNR=2.0							
comp=Z,0.9nm,0.6s							
PEA0B	**Petropavlovsk-**	**57.76**	**3**	P	**P**	**17 40 49.3**	**+1.0**
PETK	**Petropavlovsk-**	**57.76**	**3**	P	**P**	**17 40 48.5**	**+0.2**
comp=Z,3.5nm,0.9s,baz=177,slow=7.8,SNR=5.8							
comp=Z,3.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**58.09**	**295**	P	**P**	**17 40 52.8**	**+1.4**
comp=Z,1.3nm,0.7s,baz=122,slow=5.7,SNR=15							
comp=Z,1.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**58.09**	**295**	P	**P**	**17 40 51.3**	**-0.1**
SONM	**Songino Array**	**66.41**	**328**	P	**P**	**17 41 47.6**	**+0.9**
comp=Z,0.6nm,0.5s,baz=142,slow=5.4,SNR=6.2							
comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**66.41**	**328**	P	**P**	**17 41 48.3**	**+1.7**
SONM				IAmb	IAmb	17 41 49.0	
comp=Z,3.1nm,1.4s							
VNDA	**Vanda**	**72.88**	**178**	P	**P**	**17 42 26.4**	**+0.6**
comp=Z,0.6nm,0.7s,baz=349,slow=7.8,SNR=4.7							
comp=Z,0.6nm,0.7s							
VNDA	**Vanda**	**72.88**	**178**	P	**P**	**17 42 28.8**	**+3.0**
MKAR	**Makanchi Array**	**80.45**	**319**	P	**P**	**17 43 07.5**	**-1.7**
comp=Z,1.2nm,0.7s,baz=115,slow=4.1,SNR=5.5							
comp=Z,1.2nm,0.7s							
ZALV	**Zalesovo Beam**	**81.25**	**326**	P	**P**	**17 43 12.0**	**-1.2**
comp=Z,1.1nm,0.4s,baz=98,slow=8.9,SNR=5.4							
comp=Z,1.1nm,0.4s							
ILAR	**Eielson Array**	**82.00**	**22**	P	**P**	**17 43 15.5**	**-1.4**
comp=Z,0.4nm,0.6s,baz=245,slow=5.9,SNR=4.4							
comp=Z,0.4nm,0.6s							
KURK	**Kurchatov**	**83.88**	**322**	P	**P**	**17 43 26.7**	**-0.2**
KURK				IAmb	IAmb	17 43 28.1	
comp=Z,3.1nm,0.9s							
AAK	**Ala-Archa**	**84.82**	**313**	P	**P**	**17 43 32.7**	**+0.6**
AAK				IAmb	IAmb	17 43 34.1	
comp=Z,3.6nm,0.7s							
BRVK	**Borovoye**	**89.42**	**323**	P	**P**	**17 43 53.4**	**-0.5**
BRVK				IAmb	IAmb	17 43 54.3	
comp=Z,4.0nm,0.7s							
GERES	**GERESS Array B**	**124.14**	**329**	PKP	**PKPdf**	**17 49 53.4**	**-2.4**
comp=Z,0.4nm,0.5s,baz=41,slow=1.9,SNR=4.3							
LPAZ	**La Paz**	**134.21**	**118**	PKP	**PKPdf**	**17 50 17.4**	**+0.9**
comp=Z,0.5nm,0.4s,baz=297,slow=2.3,SNR=3.6							
TORD	**Torodi Ar. Bea**	**150.54**	**288**	PKPbc	**PKPbc**	**17 50 49.6**	**-0.2**
comp=Z,4.2nm,0.6s,baz=69,slow=2.5,SNR=27							
BDFB	**Brasilia**	**150.92**	**135**	PKPbc	**PKPbc**	**17 50 49.9**	**-1.0**
comp=Z,4.3nm,0.6s,baz=282,slow=9.3,SNR=4.6							

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*NEIC **06** 17:37:50.7±1.7, 31°.48N±0°.04×114°.35W±0°.03, h15km±7km, Error ellipse: s-maj=6.6km s-min=3.5km az=160.0*
*PAS **06** 17:37:51.1±1.9, 31°.50N±0°.06×114°.35W±0°.02, h6km±2km, Error ellipse: s-maj=9.9km s-min=3.0km az=182.0*
*ECX **06** 17:37:51.8±0.6, 31°.51N×114°.37W, h13km±10km, MD3.3, ML3.5*
*MEX **06** 17:37:52.5±0.5, 31°.46N×114°.33W, h5km, MD3.4*
ISC 06 17:37:49.2±1.2, 31°.47N±0°.03×114°.34W±0°.02, h6km±10km, n72, σ0§94/94, 7C-4D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.61**	**270⇑**	*eP*	**Pb**	**17 38 02.1**	**-0.1**
ECBX				*eS*	**Sb**	**17 38 10.5**	**-0.6**
SFX	**San Felipe**	**0.62**	**225**		**Pb**	**17 38 02.8**	**+0.4**
SFX					**Sb**	**17 38 11.3**	**+0.1**
SFX	**San Felipe**	**0.62**	**225**	IAML		17 38 11.5	
comp=N,3μm,0.4s							
SFX				IAML		17 38 11.6	
comp=E,3μm,0.5s							
SFX	**San Felipe**	**0.62**	**225**	*eP*	**Pb**	**17 38 02.8**	**+0.4**
SFX				*eS*	**Sb**	**17 38 11.4**	**+0.1**
SFX	**San Felipe**	**0.62**	**225⇓**	*eP*	**Pb**	**17 38 02.9**	**+0.6**
SFX				*eS*	**Sb**	**17 38 11.1**	**-0.1**
SFX				IAML		17 38 11.8	
comp=E,3μm,0.5s							
SFX				*⇑e*		17 38 11.8	
PPXB	**Puerto Peasco**	**0.62**	**103⇑**	*eP*	**Pb**	**17 38 03.5**	**+1.1**
PPXB				*eS*	**Sb**	**17 38 12.5**	**+1.2**
PIX	**Pinacate**	**0.76**	**83**		**Pb**	**17 38 05.4**	**+0.7**
PIX					**Sb**	**17 38 15.7**	**+0.4**
PIX	**Pinacate**	**0.76**	**83**	IAML		17 38 16.8	
comp=N,455nm,0.4s							
PIX				IAML		17 38 17.0	
comp=E,505nm,0.5s							
PIX	**Pinacate**	**0.76**	**83⇑**	*eP*	**Pb**	**17 38 05.4**	**+0.7**
PIX				*eS*	**Sb**	**17 38 15.8**	**+0.4**
SLRCX	**San Luis Rio C**	**1.03**	**342**		**Pb**	**17 38 09.5**	**0.0**
SLRCX					**Sn**	**17 38 24.9**	**0.0**
SLRCX	**San Luis Rio C**	**1.03**	**342**	*eP*	**Pb**	**17 38 09.4**	**-0.1**
RHX	**Rio Hardy**	**1.04**	**310⇑**	*iP*	**Pg**	**17 38 08.3**	**-0.9**
SPIG	**San Pedro Mart**	**1.05**	**246**	*eP*	**Pn**	**17 38 10.7**	**-0.2**
SPIG				*eS*	**Sb**	**17 38 24.5**	**+0.2**
SPIG	**San Pedro Mart**	**1.05**	**246**	*eP*	**Pb**	**17 38 10.5**	**+0.4**
SPIG				*eS*	**Sb**	**17 38 24.5**	**+0.2**
MBIG	**Mexicali**	**1.18**	**322**	*e*	**Pn**	**17 38 14.4**	**+2.1**
VTX	**Valle De La Tr**	**1.24**	**267**	*eP*	**Pn**	**17 38 13.3**	**+0.2**
CPBX	**Cerro Prieto**	**1.25**	**319**		**Pn**	**17 38 14.0**	**+0.8**
CPBX	**Cerro Prieto**	**1.25**	**319**	IAML		17 38 58.1	
comp=E,2μm,0.5s							
CPBX				*⇓e*		17 38 58.1	
CPBX				*⇓e*		17 38 59.6	
CPBX				IAML		17 38 59.6	
comp=N,2μm,0.4s							
EMSC	**East Mesa**	**1.38**	**337**		**Pn**	**17 38 14.9**	**+0.1**
EMSC					**Sb**	**17 38 33.4**	**+0.2**
EMSC	**East Mesa**	**1.38**	**337**	*eP*	**Pn**	**17 38 15.0**	**+0.1**
113A	**Mohawk Valley,**	**1.38**	**20**		**Pn**	**17 38 14.7**	**-0.3**
113A				IAML		17 38 34.4	
comp=E,252nm,0.6s							
214A	**Organ Pipe Nat**	**1.39**	**69**		**Pn**	**17 38 14.9**	**-0.2**
214A					**Sg**	**17 38 32.3**	**-1.6**
214A	**Organ Pipe Nat**	**1.39**	**69**	*eP*	**Pn**	**17 38 14.8**	**-0.4**
214A				*eS*	**Sg**	**17 38 32.2**	**-1.6**
214A	**Organ Pipe Nat**	**1.39**	**69⇑**	*eP*	**Pn**	**17 38 14.9**	**-0.2**
ESJX	**Sierra Juarez**	**1.47**	**292**		**Pn**	**17 38 16.4**	**0.0**
COA	**Coachella**	**1.54**	**335**		**Pn**	**17 38 16.9**	**-0.3**
COA					**Sn**	**17 38 37.4**	**0.0**
RUN	**Ruthven**	**1.59**	**340**		**Pn**	**17 38 17.5**	**-0.4**
RUN					**Sn**	**17 38 38.2**	**-0.5**
SQX	**San Quintin**	**1.59**	**236**	*eP*	**Pn**	**17 38 18.5**	**+0.6**
SQX				*⇓e*		17 38 41.6	
SQX				IAML		17 38 41.6	
comp=E,1μm,0.3s							
SQX				*⇑e*		17 38 42.1	
SQX				IAML		17 38 42.1	
comp=N,761nm,0.3s							
GLA	**Glamis**	**1.63**	**345**		**Pn**	**17 38 18.1**	**-0.3**
GLA					**Sn**	**17 38 38.3**	**-1.4**
SGL	**Mount Signal**	**1.66**	**315**		**Sg**	**17 38 44.8**	**+2.2**
YUH	**Yuha Desert**	**1.78**	**311**		**Pn**	**17 38 18.9**	**-1.6**
YUH					**Sg**	**17 38 47.6**	**+1.1**
RMX	**La Rumorosa**	**1.86**	**308**	Pn	**Pn**	**17 38 21.9**	**+0.2**
RMX				IAML		17 38 58.6	
comp=E,163nm,0.8s							
RMX				IAML		17 39 06.6	
comp=N,126nm,0.8s							
IKP	**In-Ko-Pah, Jac**	**1.91**	**308**		**Pn**	**17 38 21.1**	**-1.2**
IKP			

ELS				IAML		17 39 51.2	
	comp=E,38nm,0.5s						
W13A	**Hualapai Mount**	**3.64**	**6**		**Pn**	**17 38 47.8**	**+1.6**
W13A				IAML		17 40 00.9	
	comp=N,22nm,0.6s						
W13A				IAML		17 40 02.4	
	comp=E,32nm,1.0s						
HEC	**Hector,Ludlow**	**3.74**	**334**		**Pn**	**17 38 48.1**	**+0.5**
V12A	**Nelson**	**4.26**	**354**	Pn	**Pn**	**17 38 54.1**	**-0.6**
319A	**Douglas**	**4.32**	**90**	Pn	**Pn**	**17 38 55.4**	**-0.2**
GSC	**Goldstone, Bar**	**4.34**	**332**	Pn	**Pn**	**17 38 55.6**	**-0.2**
GSC				IAML		17 40 28.3	
	comp=N,12nm,2.5s						
GSC				IAML		17 40 34.5	
	comp=E,26nm,4.9s						
WUAZ	**Wupatki**	**4.73**	**31**		**Pn**	**17 39 01.0**	**-0.2**
X18A	**Snowflake**	**4.78**	**49**	Pn	**Pn**	**17 39 03.4**	**+1.4**
SHPR	**Sheep Range**	**5.07**	**352**	Pn	**Pn**	**17 39 05.4**	**-0.4**
121A	**Cookes Peak, D**	**5.67**	**78**		**Pn**	**17 39 13.9**	**-0.2**
TPNV	**Topopah Spring**	**5.69**	**344**		**Pn**	**17 39 15.1**	**+0.7**
PRN	**Pahroc Range**	**5.95**	**355**	Pn	**Pn**	**17 39 19.0**	**+1.0**
PKCU	**Pink Cliffs**	**6.19**	**15**		**Pn**	**17 39 20.5**	**-0.9**
SZCU	**Shurtz Canyon**	**6.19**	**9**	Pn	**Pn**	**17 39 21.3**	**-0.1**
SBM	**South Baldy**	**6.53**	**66**	Pn	**Pn**	**17 39 27.9**	**+1.8**
TX31	**Lajitas Ar. Si**	**9.46**	**100**	Pn	**Pn**	**17 40 06.8**	**+0.7**
TX32	**Lajitas Array**	**9.46**	**100**	Pn	**Pn**	**17 40 06.5**	**+0.4**

*LDG **06** 17:54:14.1±0.1, 42°.88N×13°.29E, h10km, Ml2.6/15, Error ellipse: s-maj=3.9km s-min=2.3km az=45.0*
*PRU **06** 17:54:19.8±0.0, 42°.99N×13°.59E, h10km*
ROM 06 17:54:14.6±0.0, 42°.899N±0°.002×13°.249E±0°.004, h9km, ML2.9/38, 37C-20D, Error ellipse: s-maj=0.2km s-min=0.2km az=102.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**288**	P	Pg	17 54 16.8	+0.1
MC2				S	Sg	17 54 18.0	-0.1
MMO1	**Montemonaco**	**0.06**	**90**	⇑P	Pg	17 54 16.7	+0.1
MMO1				S	Sg	17 54 17.9	-0.2
T1245	**Castelsantange**	**0.06**	**226**	⇑P	Pg	17 54 17.0	+0.3
T1245				S	Sg	17 54 18.6	+0.3
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
AM05	**Amandola Campo**	**0.11**	**44**	P	Pg	17 54 17.7	+0.5
AM05				S	Sg	17 54 19.6	+0.4
AM05				AML	AML		
	comp=E,9735μm,0.5s						
AM05				AML	AML		
	comp=N,11550μm,0.5s						
AM05				AML	AML		
	comp=E,40200μm,0.8s						
AM05				AML	AML		
	comp=N,3315μm,0.1s						
AM05				AML	AML		
	comp=E,9740μm,0.5s						
AM05				AML	AML		
	comp=N,11600μm,0.5s						
AM05				AML	AML		
	comp=N,3310μm,0.1s						
NRCA	**Norcia**	**0.12**	**237**	⇑P	Pg	17 54 18.0	+0.6
NRCA				S	Sg	17 54 20.3	+0.9
NRCA				AML	AML		
	comp=N,35900μm,0.7s						
NRCA				AML	AML		
	comp=E,38450μm,0.1s						
NRCA				AML	AML		
	comp=E,35250μm,0.1s						
NRCA				AML	AML		
	comp=N,35850μm,0.7s						
NRCA				AML	AML		
	comp=N,38250μm,0.7s						
NRCA				AML	AML		
	comp=E,35200μm,0.1s						
NRCA				AML	AML		
	comp=N,35900μm,0.6s						
T1241	**Roccafluvione,**	**0.14**	**108**	P	Pg	17 54 18.2	+0.5
T1241				S	Sg	17 54 20.8	+0.8
T1241				AML	AML		
	comp=N,31400μm,0.4s						
T1241				AML	AML		
	comp=E,36100μm,0.8s						
T1241				AML	AML		
	comp=N,29750μm,0.4s						
T1241				AML	AML		
	comp=E,37850μm,0.8s						
FEMA	**Monte Fema**	**0.16**	**293**	⇑P	Pg	17 54 18.7	+0.6
FEMA				S	Sg	17 54 21.6	+1.1
FEMA				AML	AML		
	comp=N,25000μm,0.4s						
FEMA				AML	AML		
	comp=E,24950μm,0.5s						
T1216	**Preci, Frazion**	**0.17**	**267**	⇑P	Pg	17 54 18.9	+0.6
T1216				S	Sg	17 54 22.1	+1.4
T1216				AML	AML		
	comp=E,26300μm,0.4s						
T1216				AML	AML		
	comp=N,18950μm,0.3s						
T1216				AML	AML		
	comp=E,26350μm,0.4s						
T1216				AML	AML		
	comp=N,19000μm,0.3s						
GUMA	**Gualdo di Mace**	**0.18**	**21**	P	Pg	17 54 19.1	+0.8
GUMA				S	Sg	17 54 22.5	+1.6
GUMA				AML	AML		
	comp=E,34350μm,0.3s						
GUMA				AML	AML		
	comp=E,26550μm,0.3s						
GUMA				AML	AML		
	comp=N,25300μm,0.5s						
GUMA				AML	AML		
	comp=N,24850μm,0.5s						
FDMO	**Fiordimonte**	**0.18**	**319**	⇑P	Pg	17 54 18.9	+0.4
FDMO				S	Sg	17 54 22.0	+0.9
FDMO				AML	AML		
	comp=E,12200μm,0.5s						
FDMO				AML	AML		
	comp=N,9905μm,0.4s						
CSP1	**Cessapalombo**	**0.20**	**351**	P	Pg	17 54 19.3	+0.5
CSP1				S	Sg	17 54 22.5	+1.0
CSP1				AML	AML		
	comp=E,9555μm,0.3s						
CSP1				AML	AML		
	comp=N,16850μm,0.5s						
CSP1				AML	AML		
	comp=N,16900μm,0.5s						
CSP1				AML	AML		
	comp=E,9565μm,0.3s						
T1202	**Accumoli, Fraz**	**0.20**	**185**	⇓P	Pg	17 54 19.5	+0.8
T1202				S	Sg	17 54 23.3	+1.8
T1202				AML	AML		
	comp=N,25250μm,0.2s						
T1202				AML	AML		
	comp=E,27650μm,0.8s						
T1204	**Amatrice, Fraz**	**0.23**	**167**	⇓P	Pg	17 54 20.0	+0.7
T1204				S	Sg	17 54 24.0	+1.6
T1204				AML	AML		
	comp=E,13550μm,0.8s						
T1204				AML	AML		
	comp=N,7805μm,1.4s						
T1204				AML	AML		
	comp=E,13500μm,0.8s						
T1243	**Rocca Santa Ma**	**0.25**	**144**	P	Pg	17 54 20.1	+0.4
T1243				S	Sg	17 54 24.4	+1.3
CESI	**CESI - Serrava**	**0.27**	**293**	P	Pg	17 54 20.8	+0.6
CESI				S	Sb	17 54 25.4	-1.2
CESI				AML	AML		
	comp=E,7910μm,0.5s						
CESI				AML	AML		
	comp=N,12300μm,0.5s						
MNTP	**Montappone**	**0.29**	**34**	P	Pb	17 54 21.6	-0.4
MNTP				S	Sb	17 54 27.2	+0.2
MNTP				AML	AML		
	comp=E,7410μm,0.5s						
MNTP				AML	AML		
	comp=N,6645μm,1.0s						
T1215	**Vallo di Nera,**	**0.30**	**251**	⇑P	Pg	17 54 21.2	+0.6
T1215				S	Sb	17 54 26.1	-1.1
T1215				AML	AML		
	comp=E,2455μm,1.4s						
T1215				AML	AML		
	comp=E,2475μm,1.4s						
T1215				AML	AML		
	comp=E,2450μm,1.4s						
T1215				AML	AML		
	comp=N,3035μm,0.5s						
T1215				AML	AML		
	comp=N,3005μm,0.6s						
T1217	**Poggiodomo (PG**	**0.30**	**231**	⇑P	Pg	17 54 21.2	+0.6
T1217				S	Sb	17 54 26.5	-0.8
T1217				AML	AML		
	comp=E,3910μm,1.1s						
T1217				AML	AML		
	comp=N,7010μm,0.4s						
T1217				AML	AML		
	comp=E,3840μm,0.5s						
T1217				AML	AML		
	comp=N,6945μm,0.4s						
T1217				AML	AML		
	comp=N,6950μm,0.4s						
T1217				AML	AML		
	comp=E,3915μm,1.1s						
T1217				AML	AML		
	comp=E,3845μm,0.5s						
T1217				AML	AML		
	comp=N,7015μm,0.4s						
OFFI	**Offida**	**0.32**	**83**	⇑P	Pb	17 54 22.4	-0.2
OFFI				AML	AML		
	comp=N,17350μm,0.6s						
OFFI				AML	AML		
	comp=E,9705μm,0.9s						
SEF1	**Sefro**	**0.33**	**318**	P	Pg	17 54 21.8	+0.6
SEF1				S	Sb	17 54 27.4	-0.8
SEF1				AML	AML		
	comp=E,9640μm,1.2s						
SEF1				AML	AML		
	comp=N,7820μm,1.2s						
SEF1				AML	AML		
	comp=E,9625μm,1.2s						
SEF1				AML	AML		
	comp=N,7820μm,1.2s						
LNSS	**Leonessa**	**0.33**	**207**	⇑P	Pg	17 54 21.8	+0.6
LNSS				S	Sb	17 54 27.5	-0.8
LNSS				AML	AML		
	comp=E,18750μm,0.3s						
LNSS				AML	AML		
	comp=N,15650μm,0.3s						
SSM1	**San Severino M**	**0.33**	**351**	P	Pg	17 54 21.9	+0.7
SSM1				S	Sb	17 54 27.5	-0.8
PIO1	**Pioraco**	**0.34**	**325**	P	Pb	17 54 22.2	-0.7
PIO1				S	Sb	17 54 27.5	-1.0
PIO1				AML	AML		
	comp=E,3720μm,0.4s						
PIO1				AML	AML		
	comp=N,6810μm,0.6s						
GAG1	**Gagliole**	**0.36**	**339**	P	Pb	17 54 22.7	-0.6
GAG1				S	Sb	17 54 28.6	-0.5
FIU1	**Fiuminata**	**0.37**	**321**	P	Pg	17 54 22.4	+0.5
FIU1				S	Sb	17 54 28.5	-0.8
TERO	**Teramo**	**0.38**	**136**	⇓P	Pg	17 54 22.3	+0.2
TERO				AML	AML		
	comp=E,6005μm,0.6s						
TERO				AML	AML		
	comp=N,8070μm,0.5s						
TERO				AML	AML		
	comp=E,6010μm,0.6s						
TERO				AML	AML		
	comp=N,8065μm,0.5s						
TERO				AML	AML		
	comp=N,8465μm,0.5s						
TERO				AML	AML		
	comp=E,6310μm,0.5s						
CAMP	**Campotosto**	**0.38**	**162**	⇓P	Pg	17 54 22.4	+0.3
CAMP				AML	AML		
	comp=E,3260μm,0.5s						
CAMP				AML	AML		
	comp=N,4115μm,0.3s						
RM33	**Pellescritta (**	**0.39**	**184**	⇑P	Pg	17 54 22.7	+0.4
RM33				AML	AML		
	comp=E,4300μm,1.3s						
RM33				AML	AML		
	comp=E,4205μm,1.3s						
RM33				AML	AML		
	comp=N,3465μm,0.3s						
RM33				AML	AML		
	comp=N,3610μm,0.3s						
RM33				AML	AML		
	comp=E,4250μm,1.3s						
RM33				AML	AML		
	comp=N,3461μm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**328**	⇑P	Pg	17 54 23.1	+0.3
SNTG				S	Sb	17 54 30.0	-0.8
SNTG				AML	AML		
	comp=N,2130μm,1.4s						
SNTG				AML	AML		
	comp=N,2295μm,1.4s						
SNTG				AML	AML		
	comp=E,2180μm,0.8s						
SNTG				AML	AML		
	comp=E,2135μm,0.8s						
EL6	**Elcito**	**0.44**	**346**	⇑P	Pg	17 54 23.6	+0.3
EL6				S	Sb	17 54 32.0	+0.5
EL6				AML	AML		
	comp=E,4965μm,0.6s						
EL6				AML	AML		
	comp=N,4780μm,1.6s						
EL6				AML	AML		
	comp=E,4960μm,0.6s						
EL6				AML	AML		
	comp=N,4775μm,1.6s						
T1247	**Pizzolo (AQ)**	**0.46**	**175**	⇓P	Pb	17 54 25.2	+0.3
T1247				S	Sb	17 54 34.0	+2.1
T1247				AML	AML		
	comp=E,5490μm,1.1s						
T1247				AML	AML		
	comp=E,5495μm,1.1s						
T1247				AML	AML		
	comp=N,7380μm,0.2s						
ARRO	**Arrone**	**0.48**	**228**	⇑P	Pg	17 54 24.3	+0.4
ARRO				S	Sb	17 54 33.0	+0.6
ARRO				AML	AML		
	comp=N,1500μm,1.2s						
ARRO				AML	AML		
	comp=E,1355μm,0.3s						
ARRO				AML	AML		
	comp=N,1495μm,1.2s						
CING	**Cingoli**	**0.48**	**355**	⇑P	Pg	17 54 24.3	+0.4
CING				AML	AML		
	comp=E,1560μm,1.1s						
CING				AML	AML		
	comp=N,1185μm,0.6s						
TRTR	**Tortoreto Alta**	**0.50**	**100**	⇓P	Pb	17 54 26.1	+0.5
TRTR				AML	AML		
	comp=E,18350μm,0.4s						
TRTR				AML	AML		
	comp=N,12400μm,0.3s						
GIGS	**Gran Sasso**	**0.51**	**152**	P	Pg	17 54 24.5	+0.1
GIGS				S	Sb	17 54 33.0	-0.3
GIGS				AML	AML		
	comp=N,1885μm,0.2s						
GIGS				AML	AML		
	comp=E,1130μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.53**	**303**	⇑P	Pg	17 54 25.3	+0.4
ATCC				AML	AML		
	comp=E,4450μm,0.8s						
ATCC				AML	AML		
	comp=N,4310μm,0.6s						
ATCC				AML	AML		
	comp=E,4445μm,0.8s						
ATCC				AML	AML		
	comp=N,4305μm,0.6s						
FOSV	**Fossato di Vic**	**0.53**	**318**	⇑P	Pg	17 54 25.2	+0.3
FOSV				S	Sb	17 54 34.0	0.0
FOSV				AML	AML		
	comp=N,3430μm,0.5s						
FOSV				AML	AML		
	comp=E,2065μm,0.7s						
FOSV				AML	AML		
	comp=N,3425μm,0.5s						
PP3	**Marolino**	**0.55**	**29**	⇓P	Pb	17 54 26.5	+0.1
PP3				AML	AML		
	comp=E,2600μm,1.5s						
PP3				AML	AML		
	comp=N,3390μm,0.9s						
PP3				AML	AML		
	comp=N,3385μm,0.9s						
PP3				AML	AML		
	comp=E,2600μm,1.5s						
PP3				AML	AML		
	comp=E,2570μm,1.5s						
PP3				AML	AML		
	comp=N,3405μm,0.9s						
AQU	**L'Aquila**	**0.56**	**168**	⇑P	Pg	17 54 25.7	+0.3
AQU				S	Sb	17 54 35.0	+0.3
AQU				AML	AML		
	comp=N,1550μm,1.6s						
AQU				AML	AML		
	comp=N,1645μm,1.6s						
AQU				AML	AML		
	comp=E,1935μm,0.9s						
AQU				AML	AML		
	comp=E,1975μm,0.8s						
CESX	**Cesi**	**0.57**	**240**	⇑P	Pg	17 54 25.8	+0.1
CESX				S	Sb	17 54 36.0	+0.9
CESX				AML	AML		
	comp=E,1850μm,0.5s						
CESX				AML	AML		
	comp=N,1485μm,1.1s						
SSFR	**Montelago di S**	**0.64**	**328**	⇑P	Pg	17 54 27.1	+0.1
SSFR				S	Sn	17 54 39.0	-1.2
SSFR				AML	AML		
	comp=E,2550μm,0.2s						
SSFR				AML	AML		
	comp=E,2555μm,0.2s						
SSFR				AML	AML		
	comp=N,2535μm,1.1s						
SSFR				AML	AML		
	comp=N,2490μm,1.1s						
FIAM	**Fiamignano**	**0.64**	**189**	⇑P	Pg	17 54 26.9	-0.1
FIAM				AML	AML		
	comp=E,1370μm,1.1s						
FIAM				AML	AML		
	comp=N,1455μm,0.6s						
ARVD	**Arcevia**	**0.64**	**340**	S	Sb	17 54 38.0	+0.9
MURB	**Monte Urbino**	**0.64**	**305**	⇑P	Pg	17 54 27.3	+0.3
MURB				AML	AML		
	comp=E,3315μm,0.3s						
MURB				AML	AML		
	comp=N,2820μm,0.3s						
MURB				AML	AML		
	comp=E,3490μm,0.3s						
MURB				AML	AML		
	comp=N,2800μm,0.3s						
MURB				AML	AML		
	comp=N,2795μm,0.3s						
MURB				AML	AML		
	comp=E,3310μm,0.3s						
VCEL	**Villa Celiera**	**0.67**	**139**	⇓P	Pg	17 54 27.8	+0.3
VCEL				AML	AML		
	comp=E,2525μm,1.6s						
VCEL				AML	AML		
	comp=N,2360μm,0.4s						
FAGN	**Fagnano**	**0.68**	**159**	⇓P	Pg	17 54 27.6	-0.2
FAGN				AML	AML		
	comp=E,3390μm,0.3s						
FAGN				AML	AML		
	comp=N,3905μm,0.4s						
ATFO	**Monte Foce - G**	**0.68**	**314**	⇑P	Pg	17 54 27.9	+0.1
ATFO				AML	AML		
	comp=E,1390μm,1.2s						
ATFO				AML	AML		
	comp=N,1535μm,1.4s						
ATFO				AML	AML		
	comp=E,1385μm,1.2s						
AOI	**Ancona**	**0.70**	**22**	⇓P	Pb	17 54 29.0	-0.1
AOI				AML	AML		
	comp=E,723μm,1.4s						
AOI				AML	AML		
	comp=N,691μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.72**	**295**	⇑P	Pg	17 54 28.6	0.0
ATTE				AML	AML		
	comp=N,851μm,0.7s						
ATTE				AML	AML		
	comp=E,756μm,1.1s						
FRON	**Frontone**	**0.73**	**328**	⇑P	Pg	17 54 28.6	-0.1
FRON				AML	AML		
	comp=N,1290μm,1.0s						
FRON				AML	AML		
	comp=E,1100μm,0.6s						
COR1	**Corinaldo**	**0.76**	**346**	⇓P	Pn	17 54 30.8	-0.7
COR1				AML	AML		
	comp=E,1212μm,0.7s						
COR1				AML	AML		
	comp=E,1215μm,0.7s						
COR1				AML	AML		
	comp=N,1890μm,0.5s						
T0110	**Collepietro**	**0.78**	**150**	⇓P	Pg	17 54 29.3	-0.3
T0110				AML	AML		
	comp=N,1975μm,0.4s						
T0110				AML	AML		
	comp=E,2360μm,0.5s						
ATVO	**AVT- Monte Val**	**0.78**	**308**	⇑P	Pg	17 54 29.6	-0.1
ATVO				AML	AML		
	comp=E,843μm,0.5s						
ATVO				AML	AML		
	comp=N,797μm,0.5s						
ATVO				AML	AML		
	comp=N,798μm,0.5s						
MPAG	**Monte Paganucc**	**0.81**	**334**	P	Pg	17 54 30.4	+0.1
MPAG				AML	AML		
	comp=N,872μm,0.7s						
MPAG				AML	AML		
	comp=E,1095μm,0.9s						
MPAG				AML	AML		
	comp=N,1452μm,1.3s						
MPAG				AML	AML		
	comp=E,935μm,0.5s						
MPAG				AML	AML		
	comp=N,872μm,0.7s						
PIEI	**Pieia**	**0.82**	**321**	⇑P	Pg	17 54 30.2	-0.3
PIEI				AML	AML		
	comp=N,496μm,0.4s						
PIEI				AML	AML		
	comp=N,497μm,0.4s						
PIEI				AML	AML		
	comp=E,582μm,0.5s						
ATPI	**Pietralunga -**	**0.83**	**312**	⇑P	Pg	17 54 30.5	-0.1
ATPI				AML	AML		
	comp=N,577μm,1.1s						
ATPI				AML	AML		
	comp=E,806μm,0.7s						
ATPI				AML	AML		
	comp=N,578μm,1.1s						
MGAB	**Montegabbione**	**0.83**	**271**	⇑P	Pg	17 54 30.8	+0.1
MGAB				AML	AML		
	comp=E,1012μm,0.4s						
MGAB				AML	AML		
	comp=N,1820μm,0.4s						
MGAB				AML	AML		
	comp=N,1845μm,0.4s						
MGAB				AML	AML		
	comp=E,961μm,0.4s						
ATMI	**Monte Miggiano**	**0.84**	**302**	⇓P	Pb	17 54 31.4	0.0
ATMI				AML	AML		
	comp=E,1685μm,0.6s						
ATMI				AML	AML		
	comp=N,1975μm,0.9s						
ATMI				AML	AML		
	comp=E,1690μm,0.6s						
SRES	**S.Oreste - Sor**	**0.86**	**220**	⇓P	Pg	17 54 31.3	+0.2
SRES				AML	AML		
	comp=N,502μm,0.6s						
SRES				AML	AML		
	comp=E,455μm,1.1s						
NARO	**Abbazia di Nar**	**0.86**	**326**	⇓P	Pg	17 54 31.1	-0.1
NARO				AML	AML		
	comp=E,613μm,0.3s						
NARO				AML	AML		
	comp=N,391μm,0.4s						
NARO				AML	AML		
	comp=N,390μm,0.4s						
NARO				AML	AML		
	comp=E,612μm,0.3s						
FSSB	**Fossombrone**	**0.86**	**337**	⇑P	Pg	17 54 31.4	+0.2
FSSB				AML	AML		
	comp=E,1950μm,0.5s						
FSSB				AML	AML		
	comp=N,2645μm,0.3s						
BADI	**Badiali**	**0.95**	**310**	⇑P	Pg	17 54 33.1	+0.2
BADI				S	Sn	17 54 49.0	+1.0
CERT	**Cerreto**	**0.97**	**192**	⇑P	Pg	17 54 32.7	-0.6
CERT				AML	AML		
	comp=E,1320μm,0.5s						
CERT				AML	AML		
	comp=N,954μm,0.4s						

SACS	**San Casciano d**	**0.99 268**	⇓P	Pb	17 54 34.0	+0.1
SACS			AML	AML		
	comp=N,410μm,0.6s					
SACS			AML	AML		
	comp=E,492μm,1.2s					
SACS			AML	AML		
	comp=N,421μm,0.6s					
SACS			AML	AML		
	comp=E,484μm,1.2s					
INTR	**Introdacqua**	**1.01 151**	⇑P	Pg	17 54 33.1	-0.9
INTR			AML	AML		
	comp=E,638μm,0.5s					
INTR			AML	AML		
	comp=N,1270μm,0.6s					
INTR			AML	AML		
	comp=E,640nm,0.5s					
INTR			AML	AML		
	comp=N,833nm,1.0s					
CAFI	**Castiglion Fio**	**1.03 295**	⇓P	Pg	17 54 34.4	-0.1
CAFI			AML	AML		
	comp=N,352μm,0.8s					
CAFI			AML	AML		
	comp=E,312μm,1.0s					
LPEL	**Lama dei Peligi**	**1.10 141**	P	Pg	17 54 35.1	-0.5
LPEL			AML	AML		
	comp=E,725μm,1.4s					
LPEL			AML	AML		
	comp=N,496μm,0.6s					
MCIV	**Monte Civitell**	**1.16 265**	⇑P	Pn	17 54 37.4	+0.3
MCIV			AML	AML		
	comp=E,230μm,0.9s					
MCIV			AML	AML		
	comp=N,206μm,0.7s					
SF04	**Casetta**	**1.17 267**	P	Pn	17 54 37.8	+0.6
SF04			AML	AML		
	comp=N,235μm,1.0s					
SF04			AML	AML		
	comp=E,230μm,1.2s					
CRE	**Caprese Michel**	**1.19 308**	⇑P	Pn	17 54 38.6	+1.1
TOLF	**Tolfa**	**1.25 228**	⇓P	Pg	17 54 38.5	0.0
TOLF			AML	AML		
	comp=E,358μm,0.5s					
TOLF			AML	AML		
	comp=N,380μm,1.2s					
ARCI	**Arcidosso**	**1.30 269**	⇑P	Pg	17 54 40.1	+0.4
TRIV	**Trivento**	**1.49 139**	⇑P	Pg	17 54 44.1	+0.9
MELA	**Melanico ??? S**	**1.83 130**	⇓P	Pb	17 54 48.1	-0.2
TREM	**Isole Tremiti**	**1.84 114**	S	Sg	17 55 14.0	+0.2
APRC	**Apricena**	**2.05 123**	P	Pb	17 54 50.8	-1.3
SGRT	**San Giovanni R**	**2.17 121**	S	Sb	17 55 21.0	-0.3
VENL	**Venezia Lido**	**2.59 346**	⇓P	Pb	17 55 00.8	-0.5
PGF	**Pioggiola**	**3.15 265**	*e*P	Pn	17 55 05.6	+1.1
PGF			*e*Sn	Sn	17 55 38.1	-4.2
	comp=N,3.5nm,0.4s					
OBKA	**Obir**	**3.73 14**	*e*Pn	Pn	17 55 15.8	+3.4
	comp=N,1.0nm,0.3s					
MYKA	**Terra Mystica**	**3.74 4**	*e*Pn	Pn	17 55 15.1	+2.5
	comp=N,0.9nm,0.2s					
MYKA			*e*Sn	Sb	17 56 02.2	-4.2
	comp=N,4.6nm,0.6s					
ABTA	**Abfaltersbach**	**3.88 353**	*e*Pn	Pn	17 55 16.6	+2.0
	comp=N,5.5nm,0.4s					
ABTA			*e*Sn	Sn	17 56 03.4	+3.1
	comp=N,15nm,0.7s					
SOKA	**Soboth**	**3.99 18**	*e*Pn	Pn	17 55 20.1	+4.1
	comp=N,0.5nm,0.2s					
KBA	**Koelnbreinsper**	**4.18 1**	*i* Pn	Pn	17 55 20.9	+2.1
	comp=N,1.0nm,0.1s					
SBF	**Sospel**	**4.35 285**	*e*P	Pn	17 55 22.7	+1.8
SBF			*e*Sn	Sn	17 56 08.5	-3.2
	comp=N,2.0nm,0.3s					
FETA	**Feichten**	**4.49 337**	*e*Pn	Pn	17 55 26.8	+3.7
	comp=N,2.7nm,0.5s					
FETA			*e*Sn	Sn	17 56 19.2	+3.7
	comp=N,5.5nm,0.8s					
WTTA	**Wattenberg**	**4.51 346**	*e*Pn	Pn	17 55 27.7	+4.4
	comp=N,1.0nm,0.2s					
SQTA	**Sankt Quirin**	**4.56 342**	*e*Pn	Pn	17 55 27.5	+3.7
	comp=N,3.6nm,0.3s					
SQTA			*e*Sn	Sn	17 56 20.4	+3.4
	comp=N,7.3nm,0.4s					
WATA	**Walderalm**	**4.59 346**	*e*Pn	Pn	17 55 27.8	+3.4
	comp=N,2.4nm,0.3s					
WATA			*e*Sn	Sn	17 56 21.3	+3.4
	comp=N,2.9nm,0.4s					
MOTA	**Moosalm**	**4.70 342**	*e*Pn	Pn	17 55 30.0	+4.1
	comp=N,4.1nm,0.5s					
MOTA			*e*Sn	Sn	17 56 25.1	+4.5
	comp=N,8.0nm,0.6s					
BIOA	**Bad Ischl, Aus**	**4.80 3**	*e*Pn	Pn	17 55 30.8	+3.6
	comp=N,2.3nm,0.2s					
LMR	**La Mourre**	**4.95 277**	*e*P	Pn	17 55 29.3	+0.1
LMR			*e*Sn	Sn	17 56 22.3	-4.3
	comp=N,1.5nm,0.3s					
DAVA	**Damuels**	**4.99 333**	*e*Pn	Pb	17 55 37.3	-5.0
	comp=N,4.7nm,0.5s					
DAVA			*e*Sn	Sn	17 56 32.3	+4.5
	comp=N,5.5nm,0.6s					
MOA	**Molln**	**5.00 8**	*e*Pn	Pn	17 55 33.9	+4.0
	comp=N,0.6nm,0.2s					
MBDF	**Montbardon**	**5.03 294**	*e*P	Pn	17 55 32.4	+2.0
MBDF			*e*Sn	Sn	17 56 23.9	-4.8
	comp=N,0.2nm,0.2s					
RONA	**Rosalia, Austr**	**5.26 23**	Pn	Pn	17 55 35.6	+2.2
	comp=N,0.3nm,0.2s					
LPG	**La Plagne**	**5.34 301**	*e*P	Pn	17 55 37.1	+2.3
LPG			*e*Sn	Sn	17 56 31.9	-4.8
	comp=N,1.1nm,0.3s					
LPL	**La Plagne**	**5.37 301**	*e*P	Pn	17 55 37.5	+2.4
LPL			*e*Sn	Sn	17 56 31.1	-6.0
	comp=N,1.1nm,0.4s					
ORIF	**Oris-en-Rattie**	**5.69 293**	*e*Pn	Pn	17 55 37.5	-1.9
ORIF			*e*Sn	Sn	17 56 40.4	-4.6
	comp=N,2.1nm,0.3s					
KHC	**Kasperske Hory**	**6.24 2**	*e*PN	Pn	17 55 49.1	+2.2
KHC			*e*SN	Sn	17 56 58.1	-0.2
CABF	**La Chapelle**	**6.30 309**	*e*P	Pn	17 55 50.1	+2.3
VIVF	**Saint-Julien-l**	**6.50 290**	*e*Pn	Pn	17 55 48.9	-1.6
HINF	**Hinteralfeld**	**6.67 320**	*e*P	Pn	17 55 55.3	+2.5
HINF			*e*Sn	Sn	17 57 02.9	-6.0
	comp=N,21nm,1.0s					
CDF	**Champ du Feu**	**6.92 325**	*e*P	Pn	17 55 58.3	+2.0
CDF			*e*Sn	Sn	17 57 09.4	-5.7
	comp=N,0.7nm,0.2s					
LASF	**Ste Croix**	**6.93 283**	*e*Pn	Pn	17 55 53.6	-2.8
LASF			*e*Sn	Sn	17 57 09.0	-6.4
	comp=N,0.5nm,0.3s					
HAU	**Haudompre**	**7.04 319**	*e*P	Pn	17 56 00.3	+2.4
HAU			*e*Sn	Sn	17 57 12.4	-5.7
	comp=N,22nm,1.0s					
SMF	**Signal de Mont**	**7.67 302**	*e*P	Pn	17 56 09.5	+3.0
PAGF	**Fort de Pagny**	**7.72 320**	*e*Pn	Pn	17 56 04.9	-2.3
SFTF	**Sexfontaines**	**7.83 315**	*e*P	Pn	17 56 06.2	-2.5
LOR	**Lormes**	**7.95 307**	*e*P	Pn	17 56 13.1	+2.8
LOR			*e*Sn	Sn	17 57 33.9	-6.5
	comp=N,0.3nm,0.2s					
MEZF	**Maizieres J'vi**	**8.02 317**	*e*Sn	Sn	17 57 34.3	-7.7
	comp=N,6.0nm,0.5s					
AVF	**Avril sur Loir**	**8.04 302**	*e*P	Pn	17 56 14.7	+3.2
MTLF	**Montolieu**	**8.08 277**	*e*Pn	Pn	17 56 09.5	-2.7
TCF	**Toulx Ste Croi**	**8.57 297**	*e*Pn	Pn	17 56 16.5	-2.4

ROM 06 17:54:59.6±0.0, 42°.903N±0°.002×13°.258E±0°.003, h9km, ML2.5/5, 2C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=48.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**281**	P	Pg	17 55 02.0	+0.2
MC2				S	Sg	17 55 03.1	-0.2
MMO1	**Montemonaco**	**0.05**	**94**	P	Pg	17 55 01.8	+0.2
MMO1				S	Sg	17 55 03.0	-0.2
T1245	**Castelsantange**	**0.07**	**228**	⇑P	Pg	17 55 02.2	+0.3
T1245				S	Sg	17 55 03.6	0.0
T1245				AML	AML		
	comp=E,17000μm,0.1s						
T1245				AML	AML		
	comp=N,12750μm,0.6s						
T1245				AML	AML		
	comp=E,15900μm,0.1s						
T1245				AML	AML		
	comp=E,17000μm,0.2s						
T1245				AML	AML		
	comp=N,12750μm,0.6s						
T1245				AML	AML		
	comp=N,12700μm,1.5s						
AM05	**Amandola Campo**	**0.10**	**43**	P	Pg	17 55 02.8	+0.6
AM05				S	Sg	17 55 04.7	+0.7
AM05				AML	AML		
	comp=E,1480μm,0.3s						
AM05				AML	AML		
	comp=N,3480μm,0.2s						
AM05				AML	AML		
	comp=N,726μm,0.1s						
AM05				AML	AML		
	comp=E,11720μm,0.4s						
NRCA	**Norcia**	**0.13**	**237**	⇑P	Pg	17 55 03.2	+0.6
NRCA				S	Sg	17 55 05.4	+0.8
NRCA				AML	AML		
	comp=E,4180μm,0.2s						
NRCA				AML	AML		
	comp=N,4015μm,0.5s						
NRCA				AML	AML		
	comp=E,4185μm,0.2s						
NRCA				AML	AML		
	comp=E,4615μm,0.2s						
NRCA				AML	AML		
	comp=N,4265μm,0.2s						
NRCA				AML	AML		
	comp=N,4020μm,0.5s						
T1241	**Roccafluvione,**	**0.14**	**110**	P	Pg	17 55 03.4	+0.7
T1241				S	Sg	17 55 05.9	+1.0
T1241				AML	AML		
	comp=E,3345μm,0.2s						
T1241				AML	AML		
	comp=N,3390μm,0.6s						
T1241				AML	AML		
	comp=E,3310μm,0.2s						
T1241				AML	AML		
	comp=N,3070μm,0.6s						
T1241				AML	AML		
	comp=E,3340μm,0.2s						
T1241				AML	AML		
	comp=N,3390μm,0.6s						
T1241				AML	AML		
	comp=N,3065μm,0.6s						
FEMA	**Monte Fema**	**0.16**	**291**	P	Pg	17 55 03.9	+0.6
FEMA				S	Sg	17 55 06.8	+1.1
T1216	**Preci, Frazion**	**0.18**	**266**	P	Pg	17 55 04.1	+0.7
T1216				S	Sg	17 55 07.3	+1.3
T1216				AML	AML		
	comp=E,3271μm,0.3s						
T1216				AML	AML		
	comp=N,2908μm,1.5s						
FDMO	**Fiordimonte**	**0.18**	**317**	P	Pg	17 55 04.0	+0.5
FDMO				S	Sg	17 55 07.1	+0.9
FDMO				AML	AML		
	comp=E,1330μm,0.5s						
FDMO				AML	AML		
	comp=N,1420μm,1.1s						
CSP1	**Cessapalombo**	**0.19**	**348**	P	Pg	17 55 04.3	+0.6
CSP1				S	Sg	17 55 07.6	+1.1
T1202	**Accumoli, Fraz**	**0.20**	**187**	P	Pg	17 55 04.8	+1.0
T1202				S	Sg	17 55 07.9	+1.2
T1204	**Amatrice, Fraz**	**0.23**	**169**	P	Pg	17 55 05.2	+0.8
T1204				S	Sg	17 55 09.1	+1.5
T1243	**Rocca Santa Ma**	**0.25**	**146**	P	Pg	17 55 05.4	+0.7
T1243				S	Sg	17 55 09.6	+1.5
CESI	**CESI - Serrava**	**0.28**	**292**	P	Pg	17 55 06.0	+0.7
CESI				S	Sb	17 55 10.6	-1.0
SMA1	**SAN MARTINO**	**0.28**	**168**	P	Pg	17 55 06.0	+0.7
SMA1				S	Sb	17 55 10.6	-1.1
T1215	**Vallo di Nera,**	**0.30**	**251**	P	Pg	17 55 06.4	+0.7
T1215				S	Sb	17 55 11.3	-1.0
T1217	**Poggiodomo (PG**	**0.31**	**232**	P	Pg	17 55 06.5	+0.7
T1217				S	Sb	17 55 11.6	-0.9
TERO	**Teramo**	**0.38**	**138**	⇓P	Pg	17 55 07.4	+0.3
SNTG	**Esanatoglia**	**0.42**	**327**	⇓P	Pg	17 55 08.4	+0.5
EL6	**Elcito**	**0.44**	**345**	S	Sb	17 55 17.0	+0.6
ASSB	**Assisi San Ben**	**0.46**	**288**	S	Sb	17 55 17.0	+0.1
FOSV	**Fossato di Vic**	**0.53**	**317**	S	Sb	17 55 19.0	0.0
ARVD	**Arcevia**	**0.64**	**339**	S	Sn	17 55 24.0	-1.1

IDC 06 18:03:08.7±21.0, 1°.26S×101°.46E, h215km±187km, mb2.6/3, mbtmp3.2/4, ML3.9/1, Error ellipse: s-maj=245.5km s-min=21.3km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.75**	**353**	P	P	18 07 22.5	0.0
	0.2nm,0.3s,baz=188,slow=10,SNR=8.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**37.13**	**122**	P	P	18 09 59.1	+0.1
	0.5nm,0.9s,baz=303,slow=9.1,SNR=2.0						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**38.53**	**128**	P	P	18 10 10.4	-0.3
	0.1nm,0.6s,baz=303,slow=8.0,SNR=4.4						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**50.73**	**343**	P	P	18 11 46.6	0.0
	0.2nm,0.6s,baz=163,slow=6.0,SNR=1.8						
	0.2nm,0.6s						

MAN 06 18:14:06.8, 18°.23N×121°.14E, h33km, mb4.1, ML2.8, MS2.5, 3C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACPP	**Pamplona Cagay**	**0.30**	**43**	⇑*i*P	Pn	18 14 15.4	+0.5
PACPP				*i* S	Sn	18 14 21.4	+1.4
SIPP	**Brgy, Tapao**	**0.71**	**244**	⇓*i*P	Pb	18 14 21.5	+0.6
SIPP				*i* S	Sb	18 14 31.1	+0.7
SGCP	**Gonzaga**	**0.86**	**89**	⇓*e*P	Pb	18 14 23.4	0.0
SGCP				*e*S	Sb	18 15 06.3	+32
SAMP	**Sagada Mountai**	**1.17**	**191**	⇑*e*P	Pn	18 14 26.6	-0.2
SAMP				*e*S	Sn	18 14 35.3	-6.4
PALP	**Palanan**	**1.69**	**133**	⇑*e*P	Pb	18 14 36.9	-0.5
PALP				*e*S	Sn	18 14 41.3	-13
SMPP	**San Manuel, Pa**	**2.12**	**192**	⇓*e*P	Pn	18 14 41.2	+1.3
BALP	**Baler**	**2.52**	**170**	⇑*e*P	Pb	18 14 50.2	-1.1
BALP				*e*S	Sn	18 15 17.5	+2.6

TIR 06 18:19:07.7, 40°.53N×20°.22E, h15km±1km, Md2.3, Ml1.8, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.44**	**77**	P	Pg	18 19 17.0	+0.3
	baz=77						
KBN				S	Sb	18 19 23.9	+0.1
	baz=77						
KBN				AMP			
	comp=N,0.6nm,0.6s,baz=77						
LSK	**Leskovik**	**0.48**	**142**	P	Pg	18 19 17.2	0.0
	baz=142						
LSK				S	Sb	18 19 25.1	+0.2
	baz=142						
LSK				AMP			
	comp=E,0.3nm,0.6s,baz=142						
SRN	**Sarande**	**0.67**	**194**	P	Pb	18 19 21.1	0.0
	baz=195						
SRN				S	Sb	18 19 31.2	+1.0
	baz=195						
SRN				AMP			
	comp=E,0.1nm,0.5s,baz=195						
IGT	**Igoumenitsa**	**1.00**	**175**	P	Pn	18 19 27.8	+0.5
	baz=175						
IGT				S	Sn	18 19 42.0	+0.9
	baz=175						
PHP	**Peshkopia**	**1.17**	**8**	P	Pg	18 19 30.4	+0.1
	baz=8.0						
PHP				S	Sg	18 19 47.1	+1.6
	baz=8.0						
PHP				AMP			
	comp=N,0.1nm,0.9s,baz=8.0						

ROM 06 18:20:23.2±0.1, 42°.965N±0°.004×13°.178E±0°.005, h17km, ML1.2/3, Error ellipse: s-maj=0.4km s-min=0.1km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**170**	P	Pg	18 20 26.7	+0.1
MC2				S	Sg	18 20 29.1	+0.2
FDMO	**Fiordimonte**	**0.10**	**317**	P	Pg	18 20 26.9	+0.1
FDMO				S	Sg	18 20 29.4	+0.3
FDMO				AML	AML		
	comp=E,108μm,0.4s						
FDMO				AML	AML		
	comp=N,85μm,0.2s						
T1245	**Castelsantange**	**0.11**	**176**	P	Pg	18 20 27.1	+0.1
T1245				S	Sg	18 20 29.9	+0.4
T1245				AML	AML		
	comp=E,198μm,0.5s						
T1245				AML	AML		
	comp=N,226μm,1.5s						
T1245				AML	AML		
	comp=N,226μm,1.5s						
CSP1	**Cessapalombo**	**0.13**	**9**	P	Pb	18 20 27.4	+0.1
CSP1				S	Sb	18 20 30.3	+0.2
MMO1	**Montemonaco**	**0.13**	**121**	P	Pb	18 20 27.3	0.0
MMO1				S	Sb	18 20 30.1	+0.1
T1216	**Preci, Frazion**	**0.14**	**237**	P	Pb	18 20 27.4	0.0
T1216				S	Sb	18 20 30.4	+0.1
T1216				AML	AML		
	comp=E,100μm,1.6s						
T1216				AML	AML		
	comp=N,72μm,1.6s						
NRCA	**Norcia**	**0.14**	**200**	P	Pg	18 20 27.4	+0.1
NRCA				S	Sb	18 20 30.3	0.0
NRCA				AML	AML		
	comp=N,236μm,0.4s						
NRCA				AML	AML		
	comp=E,230μm,0.2s						
T1241	**Roccafluvione,**	**0.22**	**120**	P	Pg	18 20 28.5	+0.1
T1241				S	Sb	18 20 32.4	-0.1
T1215	**Vallo di Nera,**	**0.28**	**234**	P	Pb	18 20 30.0	+0.1
T1215				S	Sb	18 20 34.2	-0.2
T1204	**Amatrice, Fraz**	**0.31**	**160**	P	Pg	18 20 29.9	0.0
T1204				S	Sb	18 20 35.2	0.0
T1243	**Rocca Santa Ma**	**0.33**	**143**	P	Pg	18 20 30.3	0.0
T1243				S	Sb	18 20 35.9	-0.1
SNTG	**Esanatoglia**	**0.34**	**329**	P	Pb	18 20 30.6	-0.2
SMA1	**SAN MARTINO**	**0.35**	**161**	P	Pg	18 20 29.8	-0.8
SMA1				S	Sb	18 20 36.5	0.0
TERO	**Teramo**	**0.46**	**137**	P	Pg	18 20 32.4	-0.2
TERO				S	Sb	18 20 39.8	+0.1

INET ***06*** *18:39:42.3±0.5, 12°.34N×88°.12W, h16km±15km, MW3.7*
SNET ***06*** *18:39:44.0±1.6, 12°.48N×88°.27W, h11km±11km, ML3.4*
ISC 06 18:39:39.6±1.9, 12°.33N±0°.09×88°.19W±0°.06, h12km±11km, n23, σ0°.71/35, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.00**	**20**	*i* P	**Pn**	**18 40 00.0**	**+0.4**
CNCH				*e*S	**Sn**	**18 40 14.4**	**+0.7**
CNCH				IAML		18 40 19.1	
	comp=Z,4μm,0.2s						
LCND	**La Caada**	**1.02**	**17**	*e*P	**Pn**	**18 40 00.0**	**+0.4**
LCND				IAML		18 40 16.9	
	comp=Z,1μm,0.2s						
VSM	**San Miguel**	**1.10**	**356**	*e*P	**Pn**	**18 40 02.0**	**+1.0**
PACA	**Pacayal**	**1.14**	**353**	*e*P	**Pg**	**18 40 02.4**	**+0.8**
PACA				*e*S	**Sn**	**18 40 16.7**	**-0.4**
CRIN	**San Cristobal**	**1.17**	**72**	*e*P	**Pn**	**18 40 02.3**	**+0.4**
CRIN				*e*S	**Sb**	**18 40 17.8**	**+0.8**
TECA	**Tecapa**	**1.20**	**345**	*e*P	**Pb**	**18 40 02.3**	**0.0**
COEB	**Comit de Eme**	**1.21**	**344**	*e*P	**Pg**	**18 40 03.5**	**+0.6**
COEB				*e*S	**Sn**	**18 40 18.4**	**-0.4**
COEB				IAML		18 40 24.2	
	comp=Z,1μm,0.3s						
PQSS	**Presa 15 de Se**	**1.34**	**344**	*e*P	**Pg**	**18 40 05.7**	**+0.4**
PQSS				*e*S	**Sg**	**18 40 22.1**	**-0.6**
COEG	**Centro de Oper**	**1.45**	**332**	*e*P	**Pb**	**18 40 07.0**	**+0.4**
COEG				*e*S	**Sb**	**18 40 24.6**	**-0.4**
COEG				IAML		18 40 29.1	
	comp=Z,827nm,0.2s						
SCLA	**Alcaldia de Sa**	**1.46**	**339**	*e*P	**Pg**	**18 40 07.4**	**-0.3**
SCLA				*e*S	**Sg**	**18 40 25.7**	**-1.1**
SCLA				IAML		18 40 26.4	
	comp=Z,351nm,0.2s						
CNGN	**Cerro Negro**	**1.47**	**83**	*e*P	**Pn**	**18 40 04.3**	**-1.6**
SJTE	**Alcalda de S**	**1.51**	**328**	*e*P	**Pb**	**18 40 07.9**	**+0.4**
SJTE				*e*S	**Sb**	**18 40 25.8**	**-0.9**
SJTE				IAML		18 40 28.4	
	comp=Z,563nm,0.2s						
LFRS	**El Faro**	**1.54**	**327**	*e*P	**Pb**	**18 40 08.4**	**+0.2**
LFRS				*e*S	**Sb**	**18 40 26.7**	**-1.0**
PAVA	**Las Pavas**	**1.56**	**332**	*e*P	**Pb**	**18 40 09.0**	**+0.6**
PAVA				*e*S	**Sb**	**18 40 27.8**	**-0.4**
PAVA				IAML		18 40 30.9	
	comp=Z,569nm,0.2s						
COPN	**Copaltepe**	**1.57**	**95**	*e*P	**Pn**	**18 40 07.3**	**0.0**
MOMN	**Momotombo**	**1.61**	**87**	*i* Pg	**Pn**	**18 40 07.9**	**0.0**
P5NO	**Presa 5 de nov**	**1.74**	**341**	*e*P	**Pb**	**18 40 10.8**	**-0.7**
P5NO				*e*S	**Sb**	**18 40 31.7**	**-1.6**
APYN	**Apoyeque**	**1.80**	**93**	*e*P	**Pn**	**18 40 10.6**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.94**	**27**	*e*P	**Pn**	**18 40 13.1**	**+0.7**
HUEN		**1.97**	**90**	*e*P	**Pn**	**18 40 12.8**	**0.0**
CEVE	**Cerro Verde**	**2.04**	**317**	*e*P	**Pb**	**18 40 17.4**	**+0.6**
CEVE				*e*S	**Sb**	**18 40 43.2**	**+0.9**
CEVE				IAML		18 40 52.2	
	comp=Z,556nm,0.3s						
SBLS	**San Blas**	**2.05**	**317**	*e*P	**Pb**	**18 40 17.0**	**+0.1**
MATN	**Matagalpa**	**2.29**	**75**	*e*P	**Pn**	**18 40 17.1**	**-0.2**

IDC ***06*** *18:56:30.4±1.8, 1°.94S×140°.77E, h0km, mb3.5/3, mbtmp3.8/5, ML3.8/2, MS3.2/2, Error ellipse: s-maj=49.8km s-min=29.3km az=100.0*
ISC 06 18:56:33.0±1.7, 2°.0S±0°.2×140°.8E±0°.3, h20km, n7, σ0°.96/6, mb3.6/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**18.78**	**164**	LR	LR	19 09 24.0	
	comp=Z,79nm,19.1s,baz=296,slow=41						
BATI	**Baumata**	**18.93**	**244**	P	**Pn**	**19 00 54.4**	**+0.8**
	2.7nm,0.3s,baz=58,slow=3.2,SNR=2.0						
	14nm,0.7s						
WRA	**Warramunga Arr**	**18.97**	**199**	P	**P**	**19 00 53.4**	**+0.1**
	0.1nm,0.3s,baz=26,slow=12,SNR=8.5						
WRA				LR	LR	19 09 20.1	
	comp=Z,62nm,20.0s,baz=48,slow=41						
	0.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.90**	**222**	P	**P**	**19 01 23.7**	**-1.4**
	1.6nm,0.7s,baz=54,slow=15,SNR=5.7						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**22.60**	**197**	P	**P**	**19 01 33.0**	**+0.4**
	0.7nm,0.7s,baz=24,slow=11,SNR=12						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**70.50**	**322**	P	**P**	**19 07 46.4**	**-0.1**
	1.2nm,1.0s,baz=110,slow=7.8,SNR=3.6						
	1.2nm,1.0s						
LPAZ	**La Paz**	**146.13**	**123**	PKPbc	**PKPab**	**19 16 14.3**	**+0.1**
	0.5nm,0.4s,baz=241,slow=10,SNR=2.2						

MOS ***06*** *19:09:44.4±0.9, 12°.12N×124°.97E, h33km, mb5.0/31, Error ellipse: s-maj=10.0km s-min=4.4km az=116.7*
BJI ***06*** *19:09:47.3±0.0, 12°.12N×125°.22E, h63km, mb4.7/58, mB4.9/28, Ms4.2/21, Ms7 3.9/20*
MAN ***06*** *19:09:50.0, 12°.20N×124°.88E, h37km, mb5.3, ML4.3, MS4.5*
MAN INTENSITY IV - CALBAYOG CITY AND MATUGUINAO SAMAR; INTENSITY III - CATBALOGAN CITY SAMAR; BORONGAN CITY AND CAN-AVID EASTERN SAMAR; INTENSITY II - TACLOBAN CITY; HERNANI EASTERN SAMAR.
NEIC ***06*** *19:09:50.6±1.6, 12°.15N±0°.07×125°.06E±0°.10, h65km±2km, mb5.0/175, Error ellipse: s-maj=13.6km s-min=9.5km az=89.0*
IDC ***06*** *19:09:50.0±1.7, 12°.11N×124°.99E, h66km±14km, mb4.4/29, mbtmp4.7/31, MS3.7/49, Error ellipse: s-maj=14.6km s-min=8.3km az=77.0*
DJA ***06*** *19:09:53.8±1.1, 12°N±5°×12°5E±°, h106km±10km, M4.5/25, mB5.1/10, mb4.7/25, Mw(mB)4.4/10*
ISC 06 19:09:48.3±0.3, 12°.21N±0°.03×125°.06E±0°.04, h52km±2km, h52km:pP-P, n734, σ1°.57/754, mb4.9/180, MS3.8/51, 46C-33D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.

MMPH *i* S **Sn** **19 10 30.9 +1.6**
PVCP Virac 1.64 327⇑*e*P Pn 19 10 16.7 +2.0
MSLP Maasin 2.08 186⇓*e*P Pn 19 10 23.2 +2.4
LLP Lapu-Lapu 2.17 210⇑*i*P Pn 19 10 22.7 +0.7
LLP *i* S **Sn** **19 10 47.9 +0.2**
TABP Talibon, Bohol 2.23 199⇓*i*P Pn 19 10 23.4 +0.6
TABP *i* S **Sn** **19 10 40.8 -8.3**
SCPH Surigao 2.45 170 *e*P Pn 19 10 28.0 +2.1
SCPH *i* S **Sn** **19 10 59.3 +4.7**
GLSP General Luna, 2.63 156⇓*e*P Pn 19 10 28.1 -0.2
GLSP *e*S Sn 19 11 07.2 +8.1
GHBP Garcia Hernand 2.67 196⇓*i*P Pn 19 10 30.9 +2.1
GHBP *i* S **Sn** **19 11 02.3 +2.4**
TBP Tagbilaran 2.77 205⇑*e*P Pn 19 10 31.5 +1.3
TBP *i* S Sn 19 11 16.3 +14
GUIM Jordan 2.89 237⇓*e*P Pn 19 10 33.1 +1.2
GUIM *e*S **Sn** **19 11 13.0 +7.5**
GQP Guinayangan 3.05 304⇑*e*P Pn 19 10 34.9 +0.7
GQP *e*S **Sn** **19 11 09.4 -0.1**
JCNP Jose Panganiba 3.09 312⇑*e*P Pn 19 10 35.9 +1.2
JCNP *e*S **Sn** **19 11 12.8 +2.4**
BUTP Butuan 3.27 170⇑*e*P Pn 19 10 40.8 +3.7
BUTP *e*S **Sn** **19 11 18.1 +3.3**
CNOP Candoni, Negro 3.36 225⇑*e*P Pn 19 10 39.4 +1.1
CNOP *e*S **Sn** **19 11 08.6 -8.3**
SNPH Sibulan 3.37 212⇑*i*P Pn 19 10 39.5 +1.0
SNPH *i* S **Sn** **19 11 20.1 +2.8**
LSIP Lazi, Siquijor 3.37 205⇑*e*P Pn 19 10 39.1 +0.6
LSIP *e*S **Sn** **19 11 22.8 +5.6**
BOAC Boac 3.37 292⇑*e*P Pn 19 10 39.7 +1.2
CGP Cagayan de Oro 3.75 186⇓*e*P Pn 19 10 46.0 +2.3
CGP *e*S **Sn** **19 11 30.4 +3.8**
LQP Lukban 3.92 299⇓*e*P Pn 19 10 47.7 +1.6
LQP *e*S **Sn** **19 11 35.6 +4.6**
BIPH Bislig 4.20 162⇑*i*P Pn 19 10 50.2 +0.3
BIPH *i* S **Sn** **19 11 39.2 +1.4**
TGY Tagaytay City 4.44 296⇓*e*P Pn 19 10 58.0 +4.9
PAGZ Pagadian 4.64 201⇑*e*P Pn 19 10 58.1 +2.1
MACP Maragondon, Ca 4.70 296⇑*e*P Pn 19 10 59.4 +2.7
MACP *e*S Sn 19 12 05.1 +15
BUSP Coron 4.76 268⇑*e*P Pn 19 10 58.9 +1.4
BALP Baler 4.87 316⇓*e*P Pn 19 10 58.9 -0.2
BALP Baler 4.87 316⇑*e*P Pn 19 11 02.3 +3.1
LUBP Lubang 4.93 288⇓*e*P Pn 19 11 01.6 +1.7
CTBH Cotabato--PC H 5.02 189⇑*i*P Pn 19 11 05.2 +4.0
PCPH Palayan 5.09 311⇑*e*P Pn 19 11 02.2 +0.1
PCPH *e*S **Sn** **19 11 59.1 -0.5**
DAV Davao City (W) 5.13 174 P Pn 19 11 12.0 +9.3
89nm,0.3s,baz=315,slow=18,SNR=5.4
DAV S **Sn** **19 12 02.6 +1.9**
91nm,0.4s,baz=5.0,slow=15,SNR=1.4
DAV LR LR 19 13 30.9
comp=Z,1µm,18.7s,baz=40,slow=44
DAV Davao City (W) 5.13 174 Pn **Pn** **19 11 05.1 +2.4**
MATI Mati 5.36 167⇓*e*P Pn 19 11 07.7 +1.8
PALP Palanan 5.46 332⇑*e*P Pn 19 11 08.6 +1.4
SMPP San Manuel, Pa 5.78 313⇓*e*P Pn 19 11 12.9 +1.4
DDMP Don Marcelino, 6.10 174⇑*e*P Pn 19 11 22.1 +6.2
SAMP Sagada Mountai 6.29 321⇑*e*P Pn 19 11 19.6 +1.0
SAMP *e*S **Sn** **19 12 33.4 +4.1**
BOLP Bolinao 6.49 310⇓*e*P Pn 19 11 25.6 +4.4
SGCP Gonzaga 6.66 334⇑*e*P Pn 19 11 24.7 +1.0
PPR Puerto Princes 6.67 249⇑*i*P Pn 19 11 28.7 +4.9
PACPP Pamplona Cagay 7.17 331⇓*i*P Pn 19 11 32.5 +1.9
PACPP *i* S **Sn** **19 12 48.5 -2.1**
MYLDM Lahad Datu 9.53 223 Pn **Pn** **19 12 04.2 +1.2**
MYLDM Lahad Datu 9.53 223 P Pn 19 12 08.7 +5.7
37nm,1.2s
TNTI Ternate 11.59 168 Pn **Pn** **19 12 34.9 +3.7**
GTOI Gorontalo 11.68 190 P **Pn** **19 12 34.5 +2.1**
189nm15nm,1.3s
TPUB Ta-pu 11.81 340 Pn Pn 19 12 39.5 +5.4
TOLI2 Tolitoli 11.82 201 Pn Pn 19 12 40.3 +6.1
SSLB Suanglung 12.16 342 Pn **Pn** **19 12 41.6 +2.7**
YOJ Yonaguni jima 12.34 351 Pn **Pn** **19 12 40.1 -1.2**
YOJ Yonaguni jima 12.34 351 P **Pn** **19 12 40.1 -1.2**
YHNB Yeheng 12.87 345 Pn **Pn** **19 12 50.5 +1.7**
LUWI Luwuk 13.36 190 Pn **Pn** **19 12 57.0 +1.7**
APSI Ampana 13.47 195 P **P** **19 13 02.5 -2.1**
771nm77nm,1.4s
SIJI Sorong 14.38 154 P **P** **19 13 14.4 -0.4**
7.7nm,0.8s,baz=3.2,slow=15,SNR=6.5
SIJI LR LR 19 20 07.1
comp=Z,123nm,19.0s,baz=18,slow=43
JOW Kunigami 14.86 11 P **P** **19 13 17.5 -2.4**
8.5nm,0.5s,baz=191,slow=20,SNR=2.7
JOW LR LR 19 18 08.4
comp=Z,346nm,20.9s,baz=130,slow=33
JOW Kunigami 14.86 11 Pn **Pn** **19 13 16.2 +1.0**
SBUM Sibu 16.00 234 Pn **P** **19 13 31.4 -1.3**
SBUM Sibu 16.00 234 P **Pn** **19 13 30.8 +0.8**
332nm22nm,1.2s
TTSI Tana Toraja 16.03 199 P **P** **19 13 36.9 +3.9**
1µm126nm,0.9s
QIZ Qiongzhong 16.14 297 P **P** **19 13 32.8 -1.5**
QIZ S **Sn** **19 16 34.7 +4.7**
QIZ LR LR
comp=N,230nm,13.5s
QIZ LR LR
comp=E,260nm,24.3s
QIZ LR LR
comp=Z,400nm,28.7s
MTKI Muara Teweh, K 16.51 218 P **P** **19 13 42.8 +4.4**
3µm62nm,1.0s
SPSI Sidrap Palu 16.91 198 P **P** **19 13 44.1 +1.3**
32nm,0.9s
BNSI Bone 17.22 197 P **P** **19 13 47.8 +1.5**
731nm49nm,1.6s
KAPI Kappang 17.91 197 LR LR 19 21 44.0
comp=Z,94nm,20.7s,baz=37,slow=40
STKI Sintang 18.09 229 P **Pn** **19 14 00.3 +4.2**
13nm,1.8s
GUMO Guam 19.36 84 P **Pn** **19 14 11.3 0.0**
87nm,0.9s,baz=164,slow=16,SNR=3.6
GUMO LR LR 19 20 00.5
comp=Z,212nm,20.9s,baz=277,slow=31
SMPI Sarmi 19.57 135 P **P** **19 14 11.9 -0.2**
46nm,1.0s
JSU Suzuyama 19.84 14 P **P** **19 14 14.6 -0.3**
JSU IAmb IAmb 19 14 18.8
comp=Z,90nm,1.2s
WHN Wuhan 20.77 333 ⇑P Pn 19 14 40.2 +12
GENI Genyem 21.02 133 P **P** **19 14 29.6 +1.8**
comp=Z,52nm,1.1s
SOEI Soe 21.84 182 P **P** **19 14 37.3 +0.7**
SOEI Soe 21.84 182 P **P** **19 14 37.4 +0.7**
JCJ Chichijima 21.85 45 P **P** **19 14 38.5 +1.9**
comp=Z,69nm,0.7s,baz=35,slow=4.3,SNR=4.7
JCJ LR LR 19 21 34.2
comp=Z,154nm,21.2s,baz=274,slow=32
comp=Z,69nm,0.7s
JCJ Chichijima 21.85 45 P **P** **19 14 37.4 +0.8**
PLAI Plampang 22.12 199 P **P** **19 14 41.0 +1.4**
BATI Baumata 22.32 184 P **P** **19 14 41.9 +0.2**
comp=Z,34nm,0.7s,baz=257,slow=3.4,SNR=6.3
BATI LR LR 19 24 06.7
comp=Z,188nm,20.3s,baz=79,slow=39
comp=Z,34nm,0.7s
TWSI Taliwang, Sumb 22.34 202 P **P** **19 14 43.3 +1.3**
comp=Z,28nm,0.8s
GYA Guiyang 22.37 312 ⇓P **P** **19 14 45.2 +2.9**
GYA pmax pmax
comp=Z,13nm,0.9s
JMN Monobe 22.88 19 P **P** **19 14 48.9 +1.3**
JMN IAmb IAmb 19 14 51.5
comp=Z,101nm,1.3s
ENH Enshi 23.05 324 P **P** **19 14 49.8 +0.4**
ENH IAmb IAmb 19 14 53.9
comp=Z,29nm,0.7s
JAGI Jajag, Banyuwa 23.23 208 P **P** **19 14 52.3 +1.1**
JAGI Jajag, Banyuwa 23.23 208 P **P** **19 14 52.0 +0.8**
comp=Z,2µmcomp=Z,162nm,1.0s
JAGI Jajag, Banyuwa 23.23 208 P **P** **19 14 53.7 +2.5**
TPRI Tanjung Pinang 23.25 243 P **P** **19 14 50.6 -0.8**
comp=Z,22nm,1.3s
MYKOM Kota Tinggi 23.44 245 P **P** **19 14 53.7 +0.5**
MYKOM IAmb IAmb 19 15 08.0
comp=Z,64nm,1.4s
MYKOM Kota Tinggi 23.44 245 P **P** **19 14 52.8 -0.4**
comp=Z,444nmcomp=Z,36nm,1.4s
BTDF Bukit Timah Da 23.70 245 P **P** **19 14 55.9 +0.2**
comp=Z,255nmcomp=Z,22nm,1.1s
DSRI Dabo 23.93 240 P **P** **19 14 58.8 +1.1**
comp=Z,703nmcomp=Z,21nm,0.9s

SMRI Semarang 24.03 218 P **P** **19 14 59.0 +0.4**
SMRI IAmb IAmb 19 15 13.5
comp=Z,97nm,1.2s
PWJI Pagerwojo 24.04 214 P **P** **19 15 00.1 +1.4**
comp=Z,35nm,1.0s
TJN Taejon 24.15 5⇓*e*P P 19 15 00.6 +1.1
UGM Wanagama 24.67 217 P **P** **19 15 06.3 +1.8**
KMI Kunming 24.69 304 ⇑P **P** **19 15 06.7 +1.8**
KMI pmax pmax
comp=Z,16nm,0.5s
JHJ Hachijo jima 2 24.79 31 LR LR 19 22 51.3
comp=Z,125nm,21.6s,baz=280,slow=31
LYN LuoYang 25.02 335 *e*P **P** **19 15 07.9 +0.5**
LYN pmax pmax
comp=Z,20nm,0.9s
LYN LR LR
comp=Z,210nm,17.1s
LYN LR LR
comp=Z,220nm,27.7s
KSAR Wonju Array Be 25.25 5 P **P** **19 15 10.4 +0.9**
KSAR Wonju Array Be 25.25 5 P **P** **19 15 10.4 +0.9**
KSRS Korea Array 25.27 5 P **P** **19 15 11.0 +1.4**
comp=Z,8.7nm,0.7s,baz=181,slow=10,SNR=24
KSRS PcP **PcP** **19 18 42.6 +0.8**
comp=Z,1.3nm,0.7s,baz=180,slow=2.4,SNR=4.1
KSRS LR LR 19 24 25.9
comp=Z,139nm,21.9s,baz=180,slow=34
comp=Z,8.7nm,0.7s
SRIT Nakonsritamara 25.29 264 P **P** **19 15 11.6 +1.5**
KS19 Wonju Array Si 25.31 5 P **P** **19 15 10.8 +0.7**
INU Inuyama 25.45 23 P **P** **19 15 11.8 +0.4**
INU IAmb IAmb 19 15 15.4
comp=Z,63nm,1.1s
MTN Manton Dam 25.61 166 P **P** **19 15 11.7 -1.3**
MTN Manton Dam 25.61 166 P **P** **19 15 12.2 -0.8**
LEM Lembang 25.66 223 LR LR 19 26 37.4
comp=Z,219nm,19.6s,baz=21,slow=39
JGF Kuroka 25.81 23 P **P** **19 15 15.6 +0.9**
JGF IAmb IAmb 19 15 18.6
comp=Z,69nm,1.4s
KDU Kakadu 25.81 163 P **P** **19 15 13.5 -1.2**
CBJI Citeko 25.89 225 P **P** **19 15 19.4 +3.8**
comp=Z,52nm,1.4s
CM31 Chiang Mai Arr 25.93 287 P **P** **19 15 16.4 +0.5**
CMAR Chiang Mai Arr 25.93 287 P **P** **19 15 16.3 +0.4**
comp=Z,9.5nm,0.8s,baz=97,slow=7.4,SNR=73
CMAR PcP **PcP** **19 18 44.0 +0.3**
comp=Z,1.5nm,0.8s,baz=72,slow=0.9,SNR=9.0
CMAR ScP **ScP** **19 22 17.4 -1.8**
comp=Z,0.6nm,0.6s,baz=104,slow=1.9,SNR=5.5
CMAR LR LR 19 26 53.2
comp=Z,69nm,18.2s,baz=110,slow=40
comp=Z,9.5nm,0.8s
CMAR Chiang Mai Arr 25.93 287 P **P** **19 15 15.9 0.0**
CMAR **PcP** **19 18 44.1 +0.3**
CHTO Chiang Mai 25.99 288 P **P** **19 15 16.4 -0.1**
CHTO **PcP** **19 18 43.9 0.0**
XAN Xi'an 26.24 329 ⇓P **P** **19 15 19.2 +0.6**
XAN pP pP 19 15 31.8 -0.1
XAN S **S** **19 19 42.9 -4.5**
XAN pmax pmax
comp=Z,46nm,0.9s
XAN pmax pmax
comp=Z,170nm,4.6s
HNS HongShan 26.74 341 ⇓P **P** **19 15 24.1 +1.1**
HNS pmax pmax
comp=Z,28nm,1.1s
MJAR Matsushiro Arr 26.96 24 P **P** **19 15 24.7 -0.4**
comp=Z,3.3nm,0.9s,baz=197,slow=11,SNR=7.1
MJAR PcP **PcP** **19 18 46.7 +0.8**
comp=Z,4.0nm,0.8s,baz=197,slow=2.8,SNR=6.8
MJAR LR LR 19 24 23.4
comp=Z,177nm,21.9s,baz=204,slow=32
comp=Z,3.3nm,0.9s
CD2 Chengdu 27.09 317 P **P** **19 15 27.3 +1.0**
PSI Prapat 27.52 252 LR LR 19 26 51.4
comp=Z,284nm,20.3s,baz=72,slow=37
KNRA Kununurra 27.95 172 P **P** **19 15 33.6 -0.4**
KNRA IAmb IAmb 19 16 05.6
comp=Z,59nm,1.9s
BJT Baijiatuau 28.79 346 P **P** **19 15 41.9 +0.6**
BJT Baijiatuau 28.79 346 P **P** **19 15 41.9 +0.6**
BJT pmax pmax
comp=Z,21nm,1.3s
BJI Beijing 28.81 346 P **P** **19 15 42.2 +0.8**
BJI pP **sP** **19 15 57.4 -3.6**
BJI sP pP 19 16 06.0 +11
BJI PcP **PcP** **19 18 51.4 +1.2**
BJI pmax pmax
comp=Z,11nm,1.1s
JMM Marumori 29.16 26 P **P** **19 15 44.4 -0.2**
FITZ Fitzroy Crossi 30.12 179 P **P** **19 15 52.1 -1.2**
comp=Z,7.5nm,0.8s,baz=7.1,slow=7.2,SNR=19
FITZ PcP **PcP** **19 18 52.8 -1.1**
comp=Z,1.7nm,0.9s,baz=169,slow=19,SNR=1.9
comp=Z,7.5nm,0.8s
FITZ Fitzroy Crossi 30.12 179 P **P** **19 15 52.1 -1.2**
FITZ Fitzroy Crossi 30.12 179 P **P** **19 15 52.1 -1.2**
LZH Lanzhou 30.52 325 *e*P P 19 16 03.3 +6.4
LZH sP sP 19 16 25.1 +8.6
LZH pmax pmax
comp=Z,23nm,1.5s
LZH LR LR
comp=Z,220nm,13.4s
LZH LR LR
comp=Z,170nm,12.7s
LZH LR LR
comp=Z,170nm,13.1s
MSHR Mys Shultsa 30.72 9⇓*e*P P 19 15 59.6 +1.3
MSHR pmax pmax
comp=Z,32nm,1.7s
HHC Hu-ho-hao-te 30.89 340 *e*P **P** **19 16 01.6 +1.5**
HHC pP sP 19 16 14.6 -5.0
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,260nm,5.5s
CN2 Changchun 31.48 1 *e*P **P** **19 16 04.6 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 32.43 9 P **P** **19 16 14.7 +1.3**
comp=Z,11nm,0.8s,baz=194,slow=8.2,SNR=12
USRK LR LR 19 28 10.2
comp=Z,48nm,20.6s,baz=179,slow=34
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 32.43 9 P **P** **19 16 14.3 +1.0**
USRK Ussuriysk Ar. 32.43 9 P **P** **19 16 14.3 +1.0**
XLT XiLinHaoTe 32.51 348⇓*i*P P 19 16 15.1 +0.9
XLT pP sP 19 16 28.1 -5.7
XLT sP pP 19 16 36.0 +8.4
XLT pmax pmax
comp=Z,14nm,1.0s
XLT pmax pmax
comp=Z,190nm,3.6s
MDJ Mudanjiang 32.52 6 P **P** **19 16 15.5 +1.3**
MDJ IAmb IAmb 19 16 18.4
comp=Z,24nm,1.2s
WB0 Warramunga Arr 33.08 164 P **P** **19 16 17.6 -1.7**
WB0 IAmb IAmb 19 16 18.3
comp=Z,13nm,0.8s
WRAB Tennant Creek 33.23 164 P **P** **19 16 19.3 -1.3**
WRAB IAmb IAmb 19 16 19.8
comp=Z,11nm,0.8s
WRAB Tennant Creek 33.23 164 P **P** **19 16 19.3 -1.3**
WRAB pmax pmax
comp=Z,11nm,0.8s
WRAB Tennant Creek 33.23 164 P **P** **19 16 19.1 -1.5**
WRA Warramunga Arr 33.23 164 P **P** **19 16 18.9 -1.7**
comp=Z,8.0nm,0.8s,baz=342,slow=9.5,SNR=32
WRA PcP **PcP** **19 19 01.6 -0.7**
comp=Z,3.8nm,0.7s,baz=342,slow=3.0,SNR=15
WRA S **S** **19 21 31.2 -6.0**
comp=Z,1.1nm,0.9s,baz=346,slow=14,SNR=5.0
WRA ScP **ScP** **19 22 38.5 -4.0**
comp=Z,0.6nm,0.7s,baz=346,slow=3.6,SNR=3.4
comp=Z,8.0nm,0.8s
WRA Warramunga Arr 33.23 164 P **P** **19 16 19.1 -1.6**
WRA Warramunga Arr 33.23 164 *i*P **P** **19 16 19.1 -1.6**
WRA pmax pmax
comp=Z,9.0nm,0.8s
WB2 Warramunga Arr 33.23 164 P **P** **19 16 18.8 -1.9**
WB2 IAmb IAmb 19 16 19.8
comp=Z,13nm,0.8s
WR0 Warramunga Arr 33.30 164 P **P** **19 16 19.9 -1.4**
WR0 IAmb IAmb 19 16 20.9
comp=Z,17nm,0.9s

BRDH Bariadhala 33.46 293 LR LR 19 31 41.7
comp=Z,161nm,18.7s,baz=142,slow=39
SHL Shillong 33.98 298 P **P** **19 16 27.7 +0.3**
SHL Shillong 33.98 298 P **P** **19 16 27.7 +0.3**
SHL pmax pmax
comp=Z,28nm,0.7s
GTA Gaotai 35.12 325 ⇑P **P** **19 16 38.7 +1.7**
GTA pP sP 19 16 51.4 -5.3
GTA sP pP 19 16 58.1 +7.6
GTA PcP **PcP** **19 19 08.8 +1.1**
GTA ScP **ScP** **19 22 49.1 0.0**
GTA pmax pmax
comp=Z,8.0nm,1.2s
QIS Mount Isa 35.57 156 P **P** **19 16 39.9 -0.9**
LSA Lhasa 35.95 304 P **P** **19 16 46.0 +1.3**
LSA **PcP** **19 19 11.2 +0.4**
LSA Lhasa 35.95 304 P **P** **19 16 46.0 +1.3**
LSA 19 19 11.2
LSA pmax pmax
comp=Z,8.0nm,0.8s
LSA Lhasa 35.95 304 P **P** **19 16 45.8 +1.2**
LSA pP **sP** **19 17 02.4 -2.0**
GOMU GeErMu 36.22 316 P **P** **19 16 49.1 +2.3**
GOMU S **S** **19 22 17.9 -5.9**
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU pmax pmax
comp=Z,59nm,4.1s
GOMU LR LR
comp=Z,110nm,20.5s
GOMU LR LR
comp=Z,140nm,20.9s
GOMU LR LR
comp=Z,220nm,20.4s
AS31 Alice Springs 36.69 166 P **P** **19 16 49.4 -1.0**
ASAR Alice Springs 36.69 166 P **P** **19 16 50.0 -0.4**
comp=Z,4.6nm,0.6s,baz=11,slow=9.5,SNR=46
ASAR PcP **PcP** **19 19 11.6 -0.8**
comp=Z,3.2nm,0.6s,baz=342,slow=2.9,SNR=12
ASAR S **S** **19 22 29.8 -0.6**
comp=Z,1.1nm,0.8s,baz=352,slow=17,SNR=6.1
ASAR ScP **ScP** **19 22 51.2 -3.7**
comp=Z,0.7nm,0.8s,baz=356,slow=4.2,SNR=3.9
ASAR LR LR 19 34 39.6
comp=Z,75nm,18.4s,baz=59,slow=41
comp=Z,4.6nm,0.6s
ASAR Alice Springs 36.69 166 P **P** **19 16 49.3 -1.2**
ASAR Alice Springs 36.69 166 P **P** **19 16 49.3 -1.2**
AS01 Alice Springs 36.70 166 P **P** **19 16 50.2 -0.3**
WRKA Warakurna 37.16 175 P **P** **19 16 54.0 -0.4**
KLR Kul'dur 37.32 7 LR LR 19 32 16.6
comp=Z,51nm,20.8s,baz=198,slow=36
KLR Kul'dur 37.32 7*c*eP P 19 16 56.8 +1.3
KLR pmax pmax
comp=Z,35nm,2.5s
TAPN Taplejung 38.06 299 *e*P **P** **19 17 02.8 +0.4**
comp=Z,24nm,0.5s
CTA Charters Tower 38.28 147 LR LR 19 34 58.3
comp=Z,69nm,18.2s,baz=320,slow=39
ULN Ulaanbaatar 38.61 341 P **P** **19 17 07.6 +1.1**
ULN IAmb IAmb 19 17 09.0
comp=Z,16nm,0.9s
ULN Ulaanbaatar 38.61 341 *d i*P **P** **19 17 07.9 +1.4**
ULN pmax pmax
comp=Z,18nm,1.0s
ULN Ulaanbaatar 38.61 341 P **P** **19 17 07.9 +1.4**
ULN Ulaanbaatar 38.61 341 P **P** **19 17 07.2 +0.7**
ULN pP **sP** **19 17 21.1 -5.2**
SONM Songino Array 38.80 340 P **P** **19 17 09.5 +1.4**
comp=Z,6.4nm,0.5s,baz=158,slow=9.6,SNR=35
SONM PcP **PcP** **19 19 18.9 +0.2**
comp=Z,2.4nm,0.8s,baz=164,slow=3.9,SNR=6.3
SONM LR LR 19 33 12.5
comp=Z,54nm,22.0s,baz=92,slow=36
comp=Z,6.4nm,0.5s
SONM Songino Array 38.80 340 P **P** **19 17 08.8 +0.8**
SONM Songino Array 38.80 340 P **P** **19 17 08.9 +0.8**
SONM pmax pmax
comp=Z,13nm,1.2s
RAMN Ramite 38.91 298 *e*P **P** **19 17 10.4 +0.9**
comp=Z,50nm,0.9s
MEEK Meekatharra 39.12 189 P **P** **19 17 10.4 -0.5**
JIRN Jiri 39.45 299 *e*P **P** **19 17 14.9 +0.8**
comp=Z,80nm,0.5s
GUN Gumba 39.78 299 *e*P **P** **19 17 17.6 +0.8**
comp=Z,154nm,0.9s
PKI Pulchoki 40.10 298 *e*P **P** **19 17 19.5 0.0**
comp=Z,40nm,0.7s
PKIN Phulchoki 40.11 298 *e*P **P** **19 17 19.6 +0.1**
comp=Z,43nm,0.7s
DMN Daman 40.37 298 *e*P **P** **19 17 22.1 +0.5**
comp=Z,90nm,0.9s
H11S3 WAKE ISLAND Hy 40.55 76 T T 20 00 33.0
baz=268,slow=75,SNR=54
H11S1 WAKE ISLAND Hy 40.57 76 T T 20 00 29.6
baz=268,slow=75,SNR=31
H11S2 WAKE ISLAND Hy 40.57 76 T T 20 00 22.5
baz=268,slow=75,SNR=51
HNR Honiara 40.79 120 LR LR 19 31 51.3
comp=Z,2µm,20.5s,baz=264,slow=32
H11N1 WAKE ISLAND Hy 40.82 74 T T 20 00 34.3
baz=266,slow=75,SNR=199
H11N2 WAKE ISLAND Hy 40.82 74 T T 20 00 45.7
baz=266,slow=75,SNR=131
H11N3 WAKE ISLAND Hy 40.84 74 T T 20 00 44.7
baz=266,slow=75,SNR=196
GKN Gorkha 40.87 299 *e*P **P** **19 17 25.7 +0.1**
comp=Z,55nm,0.8s
ZEA Zeya 41.46 2 *e*P **P** **19 17 31.3 +1.4**
DANN Dangsing 41.70 299 *e*P **P** **19 17 32.9 +0.3**
comp=Z,84nm,0.7s
MORW Morawa 41.95 192 P **P** **19 17 32.6 -1.6**
MORW Morawa 41.95 192 P **P** **19 17 33.2 -1.0**
ZAK Zakamensk 42.04 339 *e*P **P** **19 17 35.2 +0.4**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
PYUN Piuthan 42.30 298 *e*P **P** **19 17 38.1 +0.7**
comp=Z,145nm,0.9s
INKA Innaminka 42.53 159 P **P** **19 17 38.7 -0.2**
FORT Forrest 42.84 176 P **P** **19 17 40.8 -0.6**
FORT Forrest 42.84 176 P **P** **19 17 40.8 -0.6**
MULG Mulgathing 43.13 169 P **P** **19 17 43.4 -0.3**
MOY Mondy 43.91 339 *e*P **P** **19 17 50.9 +0.9**
MOY pmax pmax
comp=Z,20nm,1.4s
PALK Pallekele 43.96 268 LR LR 19 36 22.8
comp=Z,68nm,19.1s,baz=183,slow=36
KLBR Kellerberrin 44.11 189 P **P** **19 17 50.3 -1.3**
LCRK Leigh Creek 44.26 164 P **P** **19 17 52.6 -0.2**
WMQ Urumqi 44.97 322 *e*P **P** **19 18 01.0 +2.5**
EIDS Eidsvold 45.15 146 P **P** **19 17 59.5 -0.5**
HYBB Hyderabad (bro 45.18 282 *e*P **P** **19 18 01.1 +0.6**
HYBB *e*S **S** **19 24 35.4 -1.5**
BBOO Buckleboo 45.98 167 P **P** **19 18 05.7 -0.7**
BBOO Buckleboo 45.98 167 P **P** **19 18 06.0 -0.5**
BOD Bodaibo 46.29 352 *e*P **P** **19 18 09.4 +0.9**
BOD pmax pmax
comp=Z,15nm,1.6s
STKA Stephens Creek 46.61 161 P **P** **19 18 11.3 -0.1**
comp=Z,6.0nm,0.7s,baz=336,slow=8.2,SNR=16
comp=Z,6.0nm,0.7s
STKA Stephens Creek 46.61 161 P **P** **19 18 11.0 -0.4**
STKA Stephens Creek 46.61 161 P **P** **19 18 11.0 -0.4**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 46.61 161 P **P** **19 18 11.4 0.0**
HTT Hallett 47.27 164 P **P** **19 18 16.6 0.0**
CMSA Cobar Meteorol 47.79 156 P **P** **19 18 21.2 +0.6**
PEA0B Petropavlovsk- 48.39 26⇑*e*P P 19 18 27.1 +2.1
PETK Petropavlovsk- 48.39 26 P **P** **19 18 26.1 +1.1**
comp=Z,12nm,0.9s,baz=213,slow=3.8,SNR=17
PETK LR LR 19 36 23.9
comp=Z,93nm,21.8s,baz=232,slow=33
comp=Z,12nm,0.9s
PETK Petropavlovsk- 48.39 26 P **P** **19 18 25.9 +0.9**
PETK Petropavlovsk- 48.39 26 P **P** **19 18 25.9 +0.9**
DGZ Jazzator, Alta 48.50 328 *d i*P **P** **19 18 27.7 +1.6**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
ZSN Zaisan 48.61 324 *e*P **P** **19 18 27.0 +0.2**
ZSN Zaisan 48.61 324 *e*P **P** **19 18 27.0 +0.2**
baz=324
MK31 Makanchi Array 49.77 322 P **P** **19 18 37.2 +1.5**
MK31 IAmb IAmb 19 18 38.0
comp=Z,12nm,0.8s

MK31 Makanchi Array 49.77 322 P **P** **19 18 37.2 +1.5**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 49.77 322 P **P** **19 18 37.1 +1.3**
comp=Z,13nm,0.8s,baz=119,slow=8.6,SNR=62
MKAR PcP **PcP** **19 19 56.2 +0.2**
comp=Z,6.1nm,0.7s,baz=107,slow=3.8,SNR=8.6
MKAR ScP **ScP** **19 23 45.9 -1.5**
comp=Z,0.8nm,0.9s,baz=83,slow=3.6,SNR=3.8
MKAR LR LR 19 41 12.6
comp=Z,82nm,19.6s,baz=120,slow=38
comp=Z,13nm,0.8s
MKAR Makanchi Array 49.77 322 P **P** **19 18 36.6 +0.9**
YAK Yakutsk 49.85 3 LR LR 19 39 44.2
comp=Z,74nm,20.9s,baz=264,slow=36
YAK Yakutsk 49.85 3 P **P** **19 18 36.5 +0.6**
YAK Yakutsk 49.85 3*d i*P **P** **19 18 36.6 +0.6**
YAK *e*PP **PP** **19 20 32.8 +1.8**
YAK *e*S **S** **19 25 37.3 -4.5**
YAK *e*SS **SS** **19 29 10.0 -5.0**
YAK pmax pmax
comp=Z,66nm,0.9s
YAK Yakutsk 49.85 3 P **P** **19 18 35.5 -0.5**
YAK pP **sP** **19 18 56.9 +0.8**
SHLS Shalkode 49.92 317 *e*P **P** **19 18 35.6 -1.5**
SHLS Shalkode 49.92 317 *e*P **P** **19 18 35.6 -1.5**
baz=317
MAKZ Makanchi 49.97 322 P **P** **19 18 38.5 +1.3**
MAKZ lAmb lAmb 19 18 39.6
comp=Z,14nm,1.1s
MAKZ Makanchi 49.97 322 P **P** **19 18 38.5 +1.3**
MAKZ pmax pmax
comp=Z,14nm,1.1s
PDGK Podgornoye 49.98 317 P **P** **19 18 37.5 0.0**
UZB Uzynbulak 50.21 317 *e*P **P** **19 18 39.6 +0.3**
UZB Uzynbulak 50.21 317 *e*P **P** **19 18 39.7 +0.4**
baz=317
KPKS Kokpek 50.57 317 *e*P **P** **19 18 41.7 -0.2**
KPKS Kokpek 50.57 317 *e*P **P** **19 18 41.7 -0.2**
baz=317
SATY Saty 50.59 316 *e*P **P** **19 18 41.7 -0.4**
SATY Saty 50.59 316 *e*P **P** **19 18 41.8 -0.4**
baz=316
MA2 Magadan 51.01 17 LR LR 19 39 09.4
comp=Z,23nm,21.6s,baz=194,slow=34
KSH Kashi 51.06 311 P **P** **19 18 48.7 +3.0**
KSH pmax pmax
comp=Z,9.0nm,0.9s
TDK Taldyqorghan 51.38 319 *e*P **P** **19 18 48.4 +0.6**
TDK Taldyqorghan 51.38 319 *e*P **P** **19 18 48.5 +0.6**
baz=319
MDOK Medeo 51.55 316 *e*P **P** **19 18 48.4 -0.9**
MDOK Medeo 51.55 316 *e*P **P** **19 18 48.5 -0.9**
baz=316
TNSS Tian-Shan 51.57 316 *e*P **P** **19 18 50.0 +0.2**
TNSS Tian-Shan 51.57 316 *e*P **P** **19 18 50.0 +0.2**
baz=316
AAA Alma-Ata 51.66 316 *e*P **P** **19 18 49.2 -0.8**
AAA Alma-Ata 51.66 316 *e*P **P** **19 18 49.2 -0.8**
baz=316
NRN Naryn 51.67 314 P **P** **19 18 51.4 +1.0**
NRN Naryn 51.67 314 P **P** **19 18 51.4 +1.0**
NRN pmax pmax
comp=Z,6.0nm,0.7s
KUU Kurty 52.30 317 *e*P **P** **19 18 54.7 0.0**
KUU pmax pmax
comp=Z,18nm,0.8s
KUU Kurty 52.30 317 *e*P **P** **19 18 54.8 0.0**
comp=Z,18nm,0.8s,baz=317
ZAA0 Zalesovo Array 52.36 331 P **P** **19 18 55.2 +0.3**
ZAA0 lAmb lAmb 19 18 56.5
comp=Z,7.7nm,0.8s
ZALV Zalesovo Beam 52.36 331 P **P** **19 18 55.6 +0.6**
comp=Z,2.9nm,0.3s,baz=117,slow=6.9,SNR=26
ZALV PcP **PcP** **19 20 04.6 -0.8**
comp=Z,2.2nm,0.6s,baz=145,slow=3.6,SNR=4.5
ZALV LR LR 19 43 30.2
comp=Z,84nm,18.5s,baz=94,slow=38
comp=Z,2.9nm,0.3s
ZALV Zalesovo Beam 52.36 331 P **P** **19 18 55.1 +0.1**
CAN Canberra 52.43 155 P **P** **19 18 57.6 +1.8**
CAN lAmb lAmb 19 18 58.8
comp=Z,24nm,1.0s
CAN Canberra 52.43 155 P **P** **19 18 57.6 +1.8**
CAN pmax pmax
comp=Z,24nm,1.0s
CAN Canberra 52.43 155 P **P** **19 18 55.3 -0.5**
CAN pP **sP** **19 19 13.6 -2.4**
DZM Mont Dzumac 52.99 130 *e*LR LR 19 34 21.8
comp=Z,120nm,29.4s
TOO Toolangi 53.10 160 P **P** **19 19 02.0 +1.3**
TOO Toolangi 53.10 160 P **P** **19 19 02.0 +1.3**
TOO pmax pmax
comp=Z,62nm,1.5s
AAK Ala-Archa 53.12 315 LR LR 19 44 19.3
comp=Z,106nm,21.3s,baz=92,slow=39
AAK Ala-Archa 53.12 315 P **P** **19 19 02.2 +1.1**
AAK Ala-Archa 53.12 315 P **P** **19 19 02.2 +1.1**
AAK pmax pmax
comp=Z,11nm,1.6s
SGDS Sogindy 53.30 316 *e*P **P** **19 19 01.9 -0.3**
SGDS Sogindy 53.30 316 *e*P **P** **19 19 01.9 -0.3**
baz=316
KURK Kurchatov 53.81 325 P **P** **19 19 06.5 +0.8**
KURK Kurchatov 53.81 325 P **P** **19 19 06.5 +0.8**
KURK pmax pmax
comp=Z,53nm,0.8s
KURK Kurchatov 53.81 325 P **P** **19 19 05.9 +0.3**
KURBB Kurchatov Arra 53.81 325 P **P** **19 19 06.1 +0.4**
DRK Karamyk 54.15 310 P **P** **19 19 09.4 +0.7**
DRK lAmb lAmb 19 19 13.2
comp=Z,10nm,0.9s
BTLS Baital 54.25 317 *e*P **P** **19 19 08.3 -0.7**
BTLS Baital 54.25 317 *e*P **P** **19 19 08.3 -0.7**
baz=317
SEY Seymchan 54.25 15*ce*P **P** **19 19 11.3 +2.6**
SEY pmax pmax
comp=Z,9.0nm,0.8s
BTK Batken 55.03 311 P **P** **19 19 15.5 +0.6**
BTK Batken 55.03 311 P **P** **19 19 15.5 +0.6**
BTK pmax pmax
comp=Z,5.0nm,0.9s
GAR Garm 55.15 309 P **P** **19 19 16.4 +0.6**
CHGR Chuyangaron 55.95 309 P **P** **19 19 24.4 +2.9**
CHGR Chuyangaron 55.95 309 P **P** **19 19 24.4 +2.9**
KK31 Karatay Array 56.05 314 P **P** **19 19 22.8 +0.7**
KK31 lAmb lAmb 19 19 23.9
comp=Z,12nm,1.2s
KK31 Karatay Array 56.05 314 P **P** **19 19 22.8 +0.7**
KK31 pmax pmax
comp=Z,12nm,1.3s
KKAR Karatay Array 56.05 314 P **P** **19 19 21.9 -0.2**
KKAR Karatay Array 56.05 314 P **P** **19 19 22.1 0.0**
KKAR lAmb lAmb 19 19 23.9
comp=Z,12nm,1.2s
KKAR Karatay Array 56.05 314 P **P** **19 19 21.9 -0.2**
KKAR pmax pmax
comp=Z,12nm,1.3s
IUG Iuzhnay 56.14 313 *e*P **P** **19 19 23.0 +0.2**
IUG Iuzhnay 56.14 313 *e*P **P** **19 19 23.0 +0.2**
baz=313
SHEM Shemya Is, Ala 56.18 34 LR LR 19 38 09.1
comp=Z,67nm,21.4s,baz=274,slow=30
OTUK Ortayu 56.49 320 P **P** **19 19 24.1 -1.0**
BRZS Berezniki 56.92 322 *e*P **P** **19 19 28.2 +0.1**
BRZS pmax pmax
comp=Z,4.0nm,0.7s
BRZS Berezniki 56.92 322 *e*P **P** **19 19 28.2 +0.1**
comp=Z,4.4nm,0.7s,baz=322
TIXI Tiksi 59.45 1 LR LR 19 45 37.6
comp=Z,96nm,21.1s,baz=0.0,slow=36
TIXI Tiksi 59.45 1 P **P** **19 19 45.8 +0.4**
TIXI Tiksi 59.45 1⇓ *e*P **P** **19 19 46.8 +1.5**
TIXI pmax pmax
comp=Z,10.0nm,1.3s
BRVK Borovoye 59.48 325 P **P** **19 19 46.1 +0.2**
BRVK Borovoye 59.48 325 P **P** **19 19 46.1 +0.2**
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 59.48 325 P **P** **19 19 45.7 -0.2**
BRVK pP **pP** **19 19 59.8 -0.5**
MSVF Nonsavu 60.18 119 P **P** **19 19 52.8 +1.4**
MSVF Nonsavu 60.18 119*de*P **P** **19 19 52.8 +1.4**
MSVF pmax pmax
comp=Z,46nm,0.9s

MSVF Nonsavu 60.18 119 P **P** **19 19 52.4 +1.1**
MSVF pP **sP** **19 20 11.0 -0.7**
NRIK Noril'sk 61.85 346 P **P** **19 20 02.6 +0.9**
comp=Z,17nm,0.8s,baz=134,slow=5.8,SNR=21
NRIK PcP **PcP** **19 20 42.8 +0.5**
comp=Z,11nm,0.7s,baz=134,slow=2.3,SNR=6.2
comp=Z,17nm,0.8s
NRIK Noril'sk 61.85 346*d i*P **P** **19 20 02.4 +0.6**
NRIK pmax pmax
comp=Z,29nm,1.0s
GEYT Alibeck 64.44 306 P **P** **19 20 20.2 +0.7**
comp=Z,3.8nm,0.8s,baz=129,slow=2.1,SNR=11
comp=Z,3.8nm,0.8s
GEYT Alibeck 64.44 306 P **P** **19 20 19.5 -0.1**
GYA0B ALIBECK ARRAY 64.44 306 P **P** **19 20 19.2 -0.4**
AB31 Akbulak array 64.64 319 *i* P **P** **19 20 20.6 0.0**
ABKAR Akbulak array 64.64 319 P **P** **19 20 20.4 -0.2**
ABKAR Akbulak array 64.64 319 P **P** **19 20 20.9 +0.3**
ABKAR lAmb lAmb 19 20 22.1
comp=Z,18nm,0.9s
SVE Sverdlovsk 65.95 327⇑ *e*P **P** **19 20 29.7 +0.8**
SVE pmax pmax
comp=Z,41nm,0.9s
NIKH Nikolski High 65.98 37 P **P** **19 20 29.9 +0.8**
baz=258
AKTO Aktyubinsk 66.08 320 LR LR 19 51 20.7
comp=Z,81nm,20.6s,baz=102,slow=38
ARU Arti 66.96 326 P **P** **19 20 35.1 -0.3**
ARU Arti 66.96 326*d i*P **P** **19 20 35.4 0.0**
ARU *PP **sP** **19 20 52.7 -3.2**
ARU 19 21 01.5
ARU 19 23 02.5
ARU PPP PPP 19 24 39.1
ARU S **S** **19 29 26.6 +1.9**
ARU SS **SS** **19 33 40.7 -3.1**
ARU pmax pmax
comp=Z,24nm,0.6s
ARU Arti 66.96 326 P **P** **19 20 34.1 -1.3**
ARU pP **sP** **19 20 53.2 -2.8**
UNV Unalaska Valle 67.53 37 P **P** **19 20 40.1 +1.1**
baz=260
RPZ Rata Peaks 69.65 146 P **P** **19 20 52.4 +0.1**
BKZ Black Stump Fm 70.02 140 P **P** **19 20 55.3 +0.5**
BFZ Birch Farm 70.76 141 P **P** **19 20 59.0 -0.1**
CHNA Chernabura Isl 71.67 36 P **P** **19 21 05.3 +0.8**
baz=265
KIRV Kiv 72.18 328 LR LR 19 54 30.0
comp=Z,87nm,19.9s,baz=73,slow=37
KIRV Kirov 72.18 328*d i*P **P** **19 21 07.7 +0.2**
CHGN Chignik 72.45 35 P **P** **19 21 09.3 +0.2**
CHGN Chignik 72.45 35 P **P** **19 21 10.9 +1.8**
baz=266
N16K Nishlik Lake 72.64 30 P **P** **19 21 12.0 +1.7**
baz=264
BELG Belogornoye 72.76 321*d i*P **P** **19 21 11.0 0.0**
BELG pmax pmax
comp=Z,9.0nm,1.1s
O16K Kokwok River B 72.89 31 P **P** **19 21 13.3 +1.6**
baz=265
O17K Koliganek Bris 73.41 31 P **P** **19 21 16.5 +1.8**
baz=266
Q16K King Salmon 73.56 32 P **P** **19 21 16.8 +1.1**
baz=266
R17K Ugashik Creek 73.65 33 P **P** **19 21 17.4 +1.2**
baz=267
P17K Kvichak River 73.71 32 P **P** **19 21 18.1 +1.6**
baz=266
Q17K Contact Creek 73.94 33 P **P** **19 21 19.0 +0.9**
baz=267,SNR=6.3
CHIR Chirikof Islan 73.99 35 P **P** **19 21 19.8 +1.6**
baz=268
N18K Kilae Creek 74.08 30 P **P** **19 21 20.5 +1.8**
N18K lAmb lAmb 19 21 21.6
comp=Z,22nm,1.1s
N18K Kilae Creek 74.08 30 P **P** **19 21 20.7 +2.0**
baz=266
TTA Tatalina 74.17 28 P **P** **19 21 20.6 +1.3**
TTA lAmb lAmb 19 21 21.8
comp=Z,11nm,0.9s
TTA Tatalina 74.17 28 P **P** **19 21 20.6 +1.3**
TTA pmax pmax
comp=Z,11nm,0.9s
TTA Tatalina 74.17 28 P **P** **19 21 20.7 +1.5**
baz=266
SVW2 Sparrevohn 74.25 30 P **P** **19 21 20.8 +1.0**
SVW2 lAmb lAmb 19 21 22.1
comp=Z,43nm,1.6s
PRGR Permogore 74.32 331 *e*P **P** **19 21 19.2 -0.8**
PRGR pmax pmax
comp=Z,23nm,0.6s
P18K Big Mountain, 74.34 32 P **P** **19 21 21.1 +0.8**
baz=267
O18K Koktuh Hills 74.37 31 P **P** **19 21 22.6 +2.1**
baz=267
Q18K Katmai Hardscr 74.42 32 P **P** **19 21 21.8 +0.9**
baz=268
L19K White Mountain 74.66 29 P **P** **19 21 23.8 +1.7**
L19K lAmb lAmb 19 21 24.9
comp=Z,18nm,0.9s
L19K White Mountain 74.66 29 P **P** **19 21 24.0 +1.9**
baz=267,SNR=6.9
A21K Barrow 74.77 19 P **P** **19 21 24.3 +1.9**
baz=263
N19K Bonanza Creek 74.77 30 P **P** **19 21 24.7 +1.9**
N19K Bonanza Creek 74.77 30 P **P** **19 21 24.8 +1.9**
baz=268,SNR=9.8
SII Sitkinak Islan 74.81 34 P **P** **19 21 24.2 +1.1**
baz=269
M19K Big River Lodg 74.86 29 P **P** **19 21 25.0 +1.8**
baz=268
GNI Garni 74.87 308 LR LR 19 59 23.1
comp=Z,33nm,19.4s,baz=70,slow=40
GNI Garni 74.87 308⇓ *e*P **P** **19 21 25.5 +1.6**
GNI pmax pmax
comp=Z,5.0nm,1.3s
K20K Telida 75.08 27 P **P** **19 21 25.8 +1.3**
K20K lAmb lAmb 19 21 27.5
comp=Z,21nm,1.1s
K20K Telida 75.08 27 P **P** **19 21 26.4 +2.0**
baz=267,SNR=6.3
J20K Nowinta River 75.08 27 P **P** **19 21 25.6 +1.2**
J20K lAmb lAmb 19 21 27.0
comp=Z,16nm,0.6s
J20K Nowinta River 75.08 27 P **P** **19 21 26.3 +1.9**
baz=267,SNR=9.7
L20K Farewell, AK 75.12 28 P **P** **19 21 25.3 +0.6**
baz=268
Q19K Cape Douglas, 75.14 32 P **P** **19 21 24.2 -0.7**
Q19K Cape Douglas, 75.14 32 P **P** **19 21 25.7 +0.8**
baz=269
OHAK Old Harbor 75.31 34 P **P** **19 21 26.2 +0.3**
OHAK lAmb lAmb 19 21 27.9
comp=Z,16nm,0.8s
OHAK Old Harbor 75.31 34 P **P** **19 21 27.1 +1.3**
baz=270
IMAR Indian Mountai 75.34 25 P **P** **19 21 27.1 +1.2**
ZEI Tsey 75.35 311 *e*P **P** **19 21 26.1 -0.6**
ZEI pmax pmax
comp=Z,15nm,1.4s
P19K Oil Pt 75.36 31 P **P** **19 21 26.9 +0.7**
baz=269
M20K Styx River 75.46 29 P **P** **19 21 28.1 +1.3**
M20K lAmb lAmb 19 21 29.6
comp=Z,14nm,0.8s
M20K Styx River 75.46 29 P **P** **19 21 28.7 +1.9**
baz=269,SNR=6.5
G21K Allakaket 75.47 24 P **P** **19 21 28.6 +1.9**
baz=267,SNR=24
F21K Alatna River 75.51 23 P **P** **19 21 28.2 +1.3**
baz=267,SNR=7.0
RSO Redoubt South 75.61 30 P **P** **19 21 27.9 +0.1**
KDAK Kodiak Island 75.69 33 P **P** **19 21 29.0 +0.9**
comp=Z,13nm,0.6s,baz=282,slow=5.8,SNR=36
comp=Z,13nm,0.6s
KDAK Kodiak Island 75.69 33 P **P** **19 21 28.4 +0.4**
KDAK lAmb lAmb 19 21 30.1
comp=Z,15nm,0.7s
KDAK Kodiak Island 75.69 33 P **P** **19 21 28.4 +0.4**
KDAK pmax pmax
comp=Z,15nm,0.7s
KDAK Kodiak Island 75.69 33 P **P** **19 21 29.2 +1.1**
baz=270
ONI Oni 75.70 311 P **P** **19 21 27.6 -0.9**
ONI Oni 75.70 311 P **P** **19 21 27.6 -0.9**
ONI pmax pmax
comp=Z,8.0nm,1.1s

H21K Melozitna Rive 75.72 25 P **P** **19 21 29.3 +1.2**
H21K lAmb lAmb 19 21 31.0
comp=Z,22nm,0.8s
H21K Melozitna Rive 75.72 25 P **P** **19 21 30.0 +2.0**
baz=268,SNR=22
RAYN Ar Rayn 75.76 291 P **P** **19 21 28.5 -0.7**
RAYN Ar Rayn 75.76 291 P **P** **19 21 28.5 -0.7**
RAYN pmax pmax
comp=Z,8.0nm,0.9s
Q20K Shuyak Island 75.79 32 P **P** **19 21 29.5 +1.0**
baz=270,SNR=7.1
CHUM Lake Minchumin 75.88 27 P **P** **19 21 30.6 +1.6**
baz=269
N20K Mount Spurr 75.89 30 P **P** **19 21 30.1 +0.9**
baz=270
SPCR Spurr Chakacha 75.89 30 P **P** **19 21 30.1 +0.9**
baz=270
PPLA Purkeypile 75.92 28 P **P** **19 21 30.5 +1.1**
baz=269
CAST Castle Rocks 75.97 27 P **P** **19 21 30.5 +0.9**
CAST lAmb lAmb 19 21 32.0
comp=Z,30nm,1.1s
CAST Castle Rocks 75.97 27 P **P** **19 21 31.0 +1.5**
baz=269,SNR=25
F22K John River 76.03 23 P **P** **19 21 32.1 +2.3**
baz=268
KBZ Khabaz 76.03 312 P **P** **19 21 30.5 +0.2**
comp=Z,4.3nm,0.9s,baz=79,slow=4.8,SNR=8.2
KBZ LR LR 19 58 34.0
comp=Z,66nm,21.5s,baz=50,slow=38
comp=Z,4.3nm,0.9s
KBZ Khabaz 76.03 312*ce*P **P** **19 21 30.9 +0.7**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
I21K Tanana 76.05 26 P **P** **19 21 31.4 +1.4**
I21K Tanana 76.05 26 P **P** **19 21 31.9 +1.9**
baz=269,SNR=17
KIV Kislovodsk 76.17 313⇑P **P** **19 21 32.0 +0.8**
KIV Kislovodsk 76.17 313 P **P** **19 21 31.5 +0.3**
KIV lAmb lAmb 19 21 33.1
comp=Z,11nm,0.8s
KIV Kislovodsk 76.17 313 *e*P **P** **19 21 32.1 +0.9**
KIV pmax pmax
comp=Z,15nm,1.0s
E22K Anaktuvuk Pass 76.19 23 P **P** **19 21 32.7 +1.9**
baz=268
SKT Skwentna 76.22 29 P **P** **19 21 31.3 +0.3**
SKT lAmb lAmb 19 21 32.4
comp=Z,20nm,1.2s
SKT Skwentna 76.22 29 P **P** **19 21 31.0 0.0**
baz=270,SNR=7.1
G22K Bettles 76.28 24 P **P** **19 21 33.0 +1.8**
baz=269
GEVA Gevas 76.31 307 P **P** **19 21 32.0 -0.2**
H22K Ishtalitna Cre 76.31 25 P **P** **19 21 33.6 +2.1**
baz=269,SNR=18
CNPM China Poot 76.38 31 P **P** **19 21 32.4 +0.4**
CNPM lAmb lAmb 19 21 33.2
comp=Z,14nm,0.8s
VRH Novokhopyorsk 76.43 320 *e*P **P** **19 21 30.5 -1.8**
VRH pmax pmax
comp=Z,10.0nm,0.6s
BPAW Bear Paw Mtn. 76.46 27 P **P** **19 21 33.4 +1.1**
BPAW Bear Paw Mtn. 76.46 27 P **P** **19 21 33.8 +1.4**
baz=270,SNR=8.5
BRLK Bradley Lake 76.55 31 P **P** **19 21 32.3 -0.6**
BRLK lAmb lAmb 19 21 36.3
comp=Z,17nm,0.8s
MLY Manley 76.57 26 P **P** **19 21 34.2 +1.2**
MLY Manley 76.57 26 P **P** **19 21 34.7 +1.7**
baz=270,SNR=17
SUA Susitna One 76.59 29 P **P** **19 21 33.6 +0.3**
SUA lAmb lAmb 19 21 35.0
comp=Z,20nm,0.9s
SUA Susitna One 76.59 29 P **P** **19 21 33.4 +0.2**
baz=271
D23K Nanushuk River 76.62 22 P **P** **19 21 35.4 +2.2**
baz=269,SNR=23
BRSE Bradley Lake S 76.63 31 P **P** **19 21 33.7 +0.4**
baz=271,SNR=5.3
C23K Itkillik River 76.66 21 P **P** **19 21 35.1 +1.7**
baz=269,SNR=21
TRF Thorofare Moun 76.78 27 P **P** **19 21 35.2 +0.9**
TRF lAmb lAmb 19 21 36.1
comp=Z,13nm,0.8s
TRF Thorofare Moun 76.78 27 P **P** **19 21 34.9 +0.6**
baz=271,SNR=7.9
COLD Coldfoot 76.79 23 P **P** **19 21 35.8 +1.7**
COLD lAmb lAmb 19 21 37.2
comp=Z,26nm,1.0s
COLD Coldfoot 76.79 23 P **P** **19 21 35.8 +1.7**
baz=270,SNR=7.5
CUT Chulitna 76.80 28 P **P** **19 21 35.8 +1.6**
baz=271
G23K Bananza Creek 76.86 24 P **P** **19 21 36.7 +2.1**
baz=270,SNR=11
M22K Willow 76.89 29 P **P** **19 21 35.1 +0.4**
M22K Willow 76.89 29 P **P** **19 21 34.9 +0.2**
baz=271,SNR=5.4
E23K Chandalar 77.01 23 P **P** **19 21 37.7 +2.2**
baz=270,SNR=17
TOLK Toolik Lake Re 77.03 22 P **P** **19 21 37.5 +2.0**
TOLK lAmb lAmb 19 21 38.4
comp=Z,22nm,0.9s
TOLK Toolik Lake Re 77.03 22 P **P** **19 21 37.3 +1.8**
baz=270,SNR=12
H23K Yukon River 77.06 25 P **P** **19 21 38.0 +2.2**
H23K lAmb lAmb 19 21 38.9
comp=Z,24nm,0.9s
H23K Yukon River 77.06 25 P **P** **19 21 37.6 +1.9**
baz=271,SNR=20
GURO Guroymak-BITLI 77.09 307 P **P** **19 21 37.1 +0.6**
GURO lAmb lAmb 19 21 38.7
comp=Z,10nm,0.8s
RC01 Rabbit Creek A 77.09 30 P **P** **19 21 36.0 +0.1**
baz=272
O22K Cooper Landing 77.11 30 P **P** **19 21 36.7 +0.7**
baz=272
BWN Browne 77.13 27 P **P** **19 21 37.3 +1.2**
BWN lAmb lAmb 19 21 38.8
comp=Z,28nm,1.2s
I23K Minto, Yukon-K 77.15 26 P **P** **19 21 37.6 +1.4**
I23K lAmb lAmb 19 21 38.8
comp=Z,18nm,0.7s
I23K Minto, Yukon-K 77.15 26 P **P** **19 21 37.5 +1.3**
baz=271,SNR=16
KLMR Klimovskoe 77.26 330 *e*P **P** **19 21 35.6 -1.3**
KLMR pmax pmax
comp=Z,39nm,1.4s
KLMR Klimovskoe 77.26 330 *e*P **P** **19 21 35.7 -1.2**
KLMR AMP 19 21 38.1
comp=Z,39nm,1.4s
SEW Seward 77.26 31 P **P** **19 21 36.1 -0.8**
SEW lAmb lAmb 19 21 38.4
comp=Z,12nm,0.8s
SEW Seward 77.26 31 P **P** **19 21 37.5 +0.6**
baz=272
NEA2 Nenana 77.29 26 P **P** **19 21 38.0 +1.0**
NEA2 Nenana 77.29 26 P **P** **19 21 38.2 +1.2**
baz=272,SNR=31
D24K Happy Valley 77.29 21 P **P** **19 21 38.3 +1.4**
baz=271
C24K Franklin Bluff 77.33 21 P **P** **19 21 38.6 +1.5**
baz=271
PMR Palmer 77.36 29 P **P** **19 21 37.2 -0.2**
PMR lAmb lAmb 19 21 38.7
comp=Z,20nm,0.9s
PMR Palmer 77.36 29 P **P** **19 21 37.2 -0.2**
PMR pmax pmax
comp=Z,20nm,0.9s
PMR Palmer 77.36 29 P **P** **19 21 37.6 +0.2**
baz=272
MCK McKinley 77.38 27 P **P** **19 21 37.7 +0.2**
MCK McKinley 77.38 27 P **P** **19 21 37.7 +0.2**
MCK pmax pmax
comp=Z,43nm,0.7s
MCK McKinley 77.38 27 P **P** **19 21 38.0 +0.5**
baz=272,SNR=24
RND Reindeer 77.42 27 P **P** **19 21 38.0 +0.1**
RND lAmb lAmb 19 21 39.9
comp=Z,26nm,1.3s
RND Reindeer 77.42 27 P **P** **19 21 38.0 +0.1**
RND pmax pmax
comp=Z,26nm,1.3s
E24K Your Creek 77.44 23 P **P** **19 21 39.7 +1.9**
baz=271,SNR=15

WAT1	Susitna Watana	77.58	28	P	P	19 21 39.0	+0.3
	baz=272						
MDM	Murphy Dome	77.64	26	P	P	19 21 39.5	+0.5
MDM				IAmb	IAmb	19 21 42.2	
	comp=Z,10nm,0.9s						
F24K	Squaw Lake	77.68	23	P	P	19 21 41.4	+2.2
	baz=272,SNR=26						
KNK	Knik Glacier	77.69	29	P	P	19 21 40.0	+0.8
KNK	Knik Glacier	77.69	29	P	P	19 21 40.1	+0.8
	baz=273,SNR=12						
SML	Sawmill	77.73	29	P	P	19 21 40.0	+0.4
SML	Sawmill	77.73	29	P	P	19 21 40.2	+0.6
	baz=273,SNR=12						
H24K	Noodor Dome	77.75	25	P	P	19 21 41.4	+1.8
H24K				IAmb	IAmb	19 21 42.4	
	comp=Z,15nm,0.9s						
H24K	Noodor Dome	77.75	25	P	P	19 21 41.2	+1.6
	baz=272,SNR=15						
PWL	Port Wells	77.78	30	P	P	19 21 40.4	+0.6
PWL	Port Wells	77.78	30	P	P	19 21 40.4	+0.6
	baz=273,SNR=18						
TCOL	CIGO, UAF Yank	77.80	26	P	P	19 21 41.3	+1.6
	baz=273						
COLA	College	77.80	26⇑	eP	P	19 21 40.5	+0.7
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
COLA	College	77.80	26	P	P	19 21 41.1	+1.3
	baz=273						
CCB	Clear Creek Bu	77.83	26	P	P	19 21 40.1	+0.2
G24K	Hadweenzic Riv	77.88	24	P	P	19 21 41.9	+1.7
	baz=273,SNR=24						
VORR	Voronezh	77.97	321	eP	P	19 21 40.5	-0.5
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
POKR	Poker Plat Res	77.97	26	P	P	19 21 42.0	+1.2
POKR				IAmb	IAmb	19 21 44.0	
	comp=Z,18nm,0.8s						
POKR	Poker Plat Res	77.97	26	P	P	19 21 42.6	+1.8
	baz=273,SNR=6.4						
WAT6	Susitna Watana	77.97	28	P	P	19 21 41.9	+0.9
	baz=273,SNR=15						
M23K	Glacier View	78.02	29	P	P	19 21 42.1	+1.0
	baz=273,SNR=9.0						
VSR	Storozhevoye	78.03	320	eP	P	19 21 39.6	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	Galich'ya Gora	78.07	322	eP	P	19 21 40.3	-1.2
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
DHY	Denali Highway	78.11	28	P	P	19 21 42.5	+0.7
DHY				IAmb	IAmb	19 21 43.8	
	comp=Z,8.8nm,0.7s						
DHY	Denali Highway	78.11	28	P	P	19 21 42.7	+0.9
	baz=273,SNR=7.4						
D25K	Kavik River	78.16	21	P	P	19 21 43.3	+1.5
	baz=273,SNR=9.6						
SCM	Sheep Creek Mo	78.21	29	P	P	19 21 43.0	+0.8
SCM	Sheep Creek Mo	78.21	29	P	P	19 21 43.0	+0.8
SCM				pmax	pmax		
	comp=Z,38nm,0.9s						
SCM	Sheep Creek Mo	78.21	29	P	P	19 21 43.3	+1.1
	baz=274,SNR=15						
HDA	Harding Lake	78.22	26	P	P	19 21 41.7	-0.4
HDA				IAmb	IAmb	19 21 43.0	
	comp=Z,14nm,0.7s						
HDA	Harding Lake	78.22	26	P	P	19 21 42.1	0.0
	baz=274,SNR=18						
IL31		78.22	26	P	P	19 21 41.9	-0.2
IL31				IAmb	IAmb	19 21 44.0	
	comp=Z,9.3nm,0.8s						
ILAR	Eielson Array	78.22	26	P	P	19 21 42.0	-0.2
	comp=Z,7.1nm,0.8s,baz=245,slow=6.0,SNR=57						
	comp=Z,7.1nm,0.8s						
ILAR	Eielson Array	78.22	26	P	P	19 21 41.7	-0.5
ILAR	Eielson Array	78.22	26	P	P	19 21 41.7	-0.5
SOC	Sochi	78.34	312	eP	P	19 21 39.3	-3.9
SOC				e		19 24 48.7	
SOC				ePPP	PPP	19 26 37.5	
SOC				eS	S	19 31 27.9	-7.0
SOC				eSS	SS	19 36 33.9	-4.3
SOC				eSSS	SSS	19 39 58.9	
SOC				pmax	pmax		
	comp=Z,18nm,1.0s						
GLI	Glacier Island	78.39	30	P	P	19 21 43.5	+0.3
GLI	Glacier Island	78.39	30	P	P	19 21 44.1	+0.9
	baz=274						
G25K	Bearman Lake	78.42	24	P	P	19 21 45.3	+2.2
	baz=274,SNR=15						
E25K	Arctic Village	78.53	22	P	P	19 21 46.0	+2.1
	baz=274,SNR=16						
F25K	Christian Rive	78.54	23	P	P	19 21 46.2	+2.3
	baz=274,SNR=16						
H25K	Birch Creek	78.56	24	P	P	19 21 46.3	+2.3
	baz=274,SNR=26						
C26K	Camden Bay	78.63	21	P	P	19 21 46.8	+2.5
	baz=274						
FID	Port Fidalgo	78.70	30	P	P	19 21 45.8	+1.0
FID				IAmb	IAmb	19 21 46.7	
	comp=Z,16nm,0.9s						
HIN	Hinchinbrook I	78.72	30	P	P	19 21 46.1	+1.1
M24K	Tolsona, Glenn	78.73	29	P	P	19 21 46.4	+1.2
M24K	Tolsona, Glenn	78.73	29	P	P	19 21 46.7	+1.6
	baz=275,SNR=9.0						
PRP	Porcupine Dome	78.74	25	P	P	19 21 46.1	+0.9
PRP	Porcupine Dome	78.74	25	P	P	19 21 46.9	+1.7
	baz=275,SNR=5.6						
K24K	Donnelly Dome	78.77	27	P	P	19 21 45.6	+0.4
	baz=275,SNR=13						
FYU	Fort Yukon	78.78	24	P	P	19 21 47.0	+1.9
FYU				IAmb	IAmb	19 21 47.8	
	comp=Z,15nm,0.8s						
J25K	Salcha River,	78.88	26	P	P	19 21 45.6	-0.3
J25K	Salcha River,	78.88	26	P	P	19 21 45.6	-0.3
	baz=275,SNR=7.0						
KLU	Klutina	78.90	29	P	P	19 21 46.7	+0.6
KLU				IAmb	IAmb	19 21 47.8	
	comp=Z,8.6nm,0.7s						
KLU	Klutina	78.90	29	P	P	19 21 47.1	+1.0
	baz=275,SNR=9.5						
BMAR	Burnt Mountain	78.96	23	P	P	19 21 48.0	+1.8
PAX	Paxson	78.98	28	P	P	19 21 47.3	+0.8
PAX				IAmb	IAmb	19 21 48.6	
	comp=Z,12nm,0.8s						
PAX	Paxson	78.98	28	P	P	19 21 47.3	+0.8
PAX				pmax	pmax		
	comp=Z,12nm,0.8s						
PAX	Paxson	78.98	28	P	P	19 21 47.6	+1.1
	baz=275,SNR=13						
DIV	Divide	79.01	30	P	P	19 21 48.1	+1.5
EYAK	Cordova Ski Ar	79.07	30	P	P	19 21 48.1	+1.2
	baz=275						
C27K	Jago River	79.07	21	P	P	19 21 48.8	+2.0
	baz=275,SNR=13						
F26K	Sheenjek River	79.10	23	P	P	19 21 49.2	+2.3
	baz=275,SNR=11						
HARP	HAARP	79.18	28	P	P	19 21 49.0	+1.5
	baz=276,SNR=5.8						
RIDG	Independent Ri	79.19	27	P	P	19 21 47.8	+0.2
RIDG	Independent Ri	79.19	27	P	P	19 21 48.4	+0.8
	baz=276,SNR=5.0						
OBN	Obninsk	79.23	324	i P	P	19 21 47.0	-0.8
OBN				i		19 21 58.8	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
G26K	Porcupine Rive	79.31	24	P	P	19 21 50.1	+2.0
	baz=276,SNR=16						
APA	Apatity	79.44	337⇓	iP	P	19 21 55.1	+6.3
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
N25K	Chitina, Valde	79.52	29	P	P	19 21 51.0	+1.5
N25K				IAmb	IAmb	19 21 52.0	
	comp=Z,27nm,1.4s						
N25K	Chitina, Valde	79.52	29	P	P	19 21 50.8	+1.3
	baz=276,SNR=8.5						
SCRK	Sand Creek	79.55	27	P	P	19 21 50.6	+1.1
SCRK	Sand Creek	79.55	27	P	P	19 21 50.4	+0.8
	baz=276						
DOT	Dot Lake	79.55	27	P	P	19 21 50.2	+0.7
DOT				IAmb	IAmb	19 21 51.3	
	comp=Z,15nm,0.9s						
BMRM	Bremner River	79.59	30	P	P	19 21 50.2	+0.4
BMRM				IAmb	IAmb	19 21 52.6	
	comp=Z,20nm,1.1s						
BMRM	Bremner River	79.59	30	P	P	19 21 50.9	+1.1
	baz=276,SNR=6.6						
RAGM	Ragged Mountai	79.62	30	P	P	19 21 51.0	+1.1
RAGM				IAmb	IAmb	19 21 53.1	
	comp=Z,20nm,1.1s						
J26L	Joseph Creek	79.67	26	P	P	19 21 50.4	+0.1
J26L				IAmb	IAmb	19 21 52.1	
	comp=Z,15nm,1.4s						
J26L	Joseph Creek	79.67	26	P	P	19 21 50.8	+0.6
	baz=276,SNR=7.7						
I26K	Coal Creek Min	79.75	25	P	P	19 21 51.1	+0.6
	baz=277						
MENT	Mentasta	79.78	28	P	P	19 21 52.2	+1.4
MENT				IAmb	IAmb	19 21 53.1	
	comp=Z,9.7nm,0.7s						
GLB	Gilahina Butte	79.92	29	P	P	19 21 52.2	+0.7
GLB				IAmb	IAmb	19 21 53.8	
	comp=Z,16nm,1.0s						
L26K	Log Cabin Wild	79.94	28	P	P	19 21 52.5	+0.9
L26K	Log Cabin Wild	79.94	28	P	P	19 21 52.8	+1.2
	baz=277,SNR=5.7						
E27K	Coleen River	80.00	22	P	P	19 21 53.6	+1.7
	baz=278,SNR=15						
BERG	Berg Lake	80.10	30	P	P	19 21 53.4	+0.9
BERG				IAmb	IAmb	19 21 54.9	
	comp=Z,13nm,0.8s						
VRDI	Verde Repeater	80.11	29	P	P	19 21 53.7	+0.9
G27K	Doyon Strip	80.17	24	P	P	19 21 54.4	+1.6
	baz=278,SNR=11						
M26K	Nabesna, AK	80.18	28	P	P	19 21 53.7	+0.7
M26K				IAmb	IAmb	19 21 55.4	
	comp=Z,13nm,0.9s						
M26K	Nabesna, AK	80.18	28	P	P	19 21 54.3	+1.4
	baz=277,SNR=12						
H27K	Steamboat Moun	80.30	24	P	P	19 21 55.6	+2.1
	baz=278,SNR=9.5						
MCARA	McCarthy VSAT	80.30	29	P	P	19 21 55.1	+1.6
MCARA	McCarthy VSAT	80.30	29	P	P	19 21 55.2	+1.6
	baz=278						
I27K	Kandik River	80.35	25	P	P	19 21 55.8	+2.0
	baz=278,SNR=22						
K27K	Chicken	80.37	26	P	P	19 21 56.2	+2.3
	baz=278						
TGL	Tana Glacier	80.48	30	P	P	19 21 55.8	+1.2
TGL				IAmb	IAmb	19 21 56.9	
	comp=Z,14nm,0.9s						
L27K	Beaver Creek,	80.62	27	P	P	19 21 56.6	+1.3
L27K	Beaver Creek,	80.62	27	P	P	19 21 57.1	+1.8
	baz=278,SNR=8.8						
BCAR	Beaver Creek A	80.64	27	P	P	19 21 57.1	+1.7
EGAK	Eagle	80.66	26	P	P	19 21 56.0	+0.6
EGAK	Eagle	80.66	26	P	P	19 21 56.9	+1.4
	baz=279						
M27K	Edge Creek, AK	80.70	28	P	P	19 21 57.4	+1.5
M27K				IAmb	IAmb	19 21 58.4	
	comp=Z,11nm,0.9s						
M27K	Edge Creek, AK	80.70	28	P	P	19 21 57.4	+1.5
	baz=278						
RAR	Rarotonga	80.91	114	LR	LR	19 50 50.7	
	comp=Z,49nm,21.3s,baz=291,slow=30						
BARN	Barnard Glacie	81.00	29	P	P	19 21 59.4	+1.9
BARN				IAmb	IAmb	19 22 00.3	
	comp=Z,16nm,0.8s						
YAH	Yahtse	81.06	30	P	P	19 21 59.5	+1.5
YAH				IAmb	IAmb	19 22 00.3	
	comp=Z,14nm,1.2s						
BVCY	Beaver Creek	81.16	28	P	P	19 21 59.8	+1.6
	baz=279						
CTG	Chitna Glacier	81.17	30	P	P	19 22 00.2	+1.8
	baz=279,SNR=19						
CTGM	Chitina Glacie	81.17	30	P	P	19 21 59.9	+1.5
TABL	Table Mountain	81.35	30	P	P	19 22 01.4	+2.0
TABL				IAmb	IAmb	19 22 15.4	
	comp=Z,22nm,1.2s						
LOGN	Logan Glacier	81.35	30	P	P	19 22 01.3	+1.9
LOGN				IAmb	IAmb	19 22 02.2	
	comp=Z,17nm,1.0s						
YUK3	Moose Creek	81.45	29	P	P	19 22 01.5	+1.5
	baz=280,SNR=12						
DAWY	Dawson	81.53	26	P	P	19 22 01.4	+1.3
DAWY	Dawson	81.53	26	P	P	19 22 01.6	+1.5
	baz=280,SNR=7.6						
I29M	Ogilvie Camp,	81.75	25	P	P	19 22 02.6	+1.4
I29M	Ogilvie Camp,	81.75	25	P	P	19 22 03.0	+1.8
	baz=281,SNR=5.4						
O28M	Mount Upton	81.75	30	P	P	19 22 03.4	+1.7
	baz=280,SNR=7.8						
PINM	Pinnacle	81.84	30	P	P	19 22 03.3	+1.4
	baz=280						
BNN	Bunyan	81.85	308	P	P	19 22 01.9	-0.6
BNN				IAmb	IAmb	19 22 02.6	
	comp=Z,19nm,1.0s						
SPA0	Spitsbergen Ar	81.89	349	eP	P	19 22 02.5	+0.7
ARA0	ARCESS Array S	81.97	339	eP	P	19 22 02.9	+0.6
ARA0				IAmb	IAmb	19 22 03.8	
	comp=Z,43nm,1.0s						
ARCES	ARCESS Array B	81.97	339	P	P	19 22 03.1	+0.8
	comp=Z,30nm,0.8s,baz=80,slow=6.1,SNR=86						
ARCES				LR	LR	20 03 44.0	
	comp=Z,44nm,18.8s,baz=220,slow=39						
	comp=Z,30nm,0.8s						
EPYK	Eagle Plains	82.18	24	P	P	19 22 04.3	+0.8
EPYK				IAmb	IAmb	19 22 05.6	
	comp=Z,19nm,0.9s						
EPYK	Eagle Plains	82.18	24	P	P	19 22 04.7	+1.2
	baz=282,SNR=7.1						
G30M	tAoh Zraii Nji	82.24	23	P	P	19 22 05.1	+1.3
	baz=283						
M29M	Somme Creek	82.25	28	P	P	19 22 06.0	+2.0
	baz=281,SNR=14						
L29M	L29M	82.27	27	P	P	19 22 06.5	+2.4
	baz=282,SNR=21						
HAMF	Hammerfest	82.31	341	eP	P	19 22 04.6	+0.6
HAMF				IAmb	IAmb	19 22 05.1	
	comp=Z,19nm,0.6s						
PNL	Peninsula	82.35	31	P	P	19 22 06.1	+1.7
	baz=281						
YUK4	Talbot Arm	82.39	29	P	P	19 22 06.8	+1.9
	baz=281						
K29M	Barlow Dome	82.39	26	P	P	19 22 06.5	+1.8
	baz=282,SNR=6.1						
YUK6	Outpost Mounta	82.60	29	P	P	19 22 08.2	+2.2
	baz=282						
O29M	Mount Kennedy	82.63	30	P	P	19 22 07.9	+1.9
	baz=282						
KTK1	Kautokeino	82.88	339	eP	P	19 22 07.6	+0.5
KTK1				IAmb	IAmb	19 22 08.1	
	comp=Z,30nm,1.2s						
INK	Inuvik	82.92	22	P	P	19 22 08.0	+0.8
	comp=Z,9.8nm,0.7s,baz=297,slow=5.9,SNR=12						
	comp=Z,9.8nm,0.7s						
INK	Inuvik	82.92	22	P	P	19 22 07.9	+0.7
INK				IAmb	IAmb	19 22 09.2	
	comp=Z,9.8nm,0.8s						
INK	Inuvik	82.92	22	P	P	19 22 07.9	+0.7
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	Inuvik	82.92	22	P	P	19 22 08.3	+1.1
	baz=285,SNR=5.4						
HYT	Haines Junctio	83.04	29	P	P	19 22 10.0	+1.8
HYT	Haines Junctio	83.04	29	P	P	19 22 10.0	+1.8
	baz=282,SNR=7.9						
F31M	Tsiigehtchic	83.07	22	P	P	19 22 09.8	+1.8
	baz=285,SNR=5.4						
N30M	Aishikik Lake	83.09	29	P	P	19 22 10.4	+2.0
	baz=283,SNR=13						
MMAI	Mount Meron Ar	83.17	302	LR	LR	20 02 31.6	
	comp=Z,38nm,20.3s,baz=260,slow=38						
P29M	Windy Craggy	83.18	31	P	P	19 22 10.0	+1.2
P29M				IAmb	IAmb	19 22 12.8	
	comp=Z,17nm,0.8s						
P29M	Windy Craggy	83.18	31	P	P	19 22 11.1	+2.3
	baz=282,SNR=9.8						
GHAJ	Ghor Haditha	83.34	300	P	P	19 22 10.4	+0.3
GHAJ				IAmb	IAmb	19 22 12.1	
	comp=Z,15nm,0.7s						
BR131	Keskin Array S	83.39	309	P	P	19 22 09.6	-0.9
BR131	Keskin Array S	83.39	309	P	P	19 22 09.6	-0.9
BR131				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRTR	Keskin Array B	83.39	309	P	P	19 22 10.1	-0.3
	comp=Z,2.0nm,0.7s,baz=130,slow=3.3,SNR=11						
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	83.39	309	P	P	19 22 09.4	-1.0
BRTR	Keskin Array B	83.39	309	i P	P	19 22 09.3	-1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
P30M	Million Dollar	83.45	30	P	P	19 22 12.2	+1.9
	baz=283						
FINES	FINESS Array B	83.63	331	P	P	19 22 11.5	+0.5
	comp=Z,5.6nm,0.5s,baz=66,slow=4.9,SNR=57						
	comp=Z,5.6nm,0.5s						
JETT	Jettan, Norway	83.69	340	eP	P	19 22 11.7	+0.4
JETT				IAmb	IAmb	19 22 12.6	
	comp=Z,43nm,0.7s						
N31M	Braeburn, Yuko	83.70	28	P	P	19 22 12.7	+1.2
N31M				IAmb	IAmb	19 22 14.6	
	comp=Z,19nm,1.1s						
N31M	Braeburn, Yuko	83.70	28	P	P	19 22 13.4	+2.0
	baz=284,SNR=7.7						
O30N	Mendenhall	83.72	29	P	P	19 22 13.2	+1.6
	baz=284,SNR=7.8						
PLBC	Pleasant Camp	83.90	31	P	P	19 22 14.3	+1.8
	baz=284						
VSU	Vasula	84.01	328	ceP	P	19 22 13.4	+0.4
EIL	Elat	84.15	299	LR	LR	20 04 44.0	
	comp=Z,64nm,18.5s,baz=360,slow=39						
TRO	Tromso	84.16	340	eP	P	19 22 13.8	+0.2
TRO				IAmb	IAmb	19 22 14.2	
	comp=Z,16nm,1.0s						
M31M	Drury Creek, Y	84.16	28	P	P	19 22 15.5	+1.7
M31M				IAmb	IAmb	19 22 16.4	
	comp=Z,12nm,1.1s						
M31M	Drury Creek, Y	84.16	28	P	P	19 22 15.3	+1.5
	baz=285						
MNK	Minsk	84.29	324	i P	P	19 22 14.2	-0.3
MNK				i S	S	19 32 31.6	-4.5
MNK				pmax	pmax		
	comp=Z,28nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK	Minsk	84.29	324	i P	P	19 22 14.3	-0.3
	comp=E,2.0nm,0.9s						
MNK				i P	P	19 22 14.3	-0.3
	comp=N,12nm,0.9s						
MNK				i P	P	19 22 14.3	-0.3
	comp=Z,28nm,0.9s,baz=77						
MNK				i PcP	PcP	19 22 16.8	-1.4
MNK				i pP	sP	19 22 33.4	-2.0
MNK				i sP	pP	19 22 41.3	+12
MNK				i S	S	19 32 31.6	-4.5
MNK				i sS	sS	19 33 05.2	+3.7
MNK				i SSS	SSS	19 44 37.6	
AKASG	Malin Array Be	84.32	321	P	P	19 22 14.6	-0.2
	comp=Z,5.6nm,0.8s,baz=65,slow=4.9,SNR=17						
AKASG				LR	LR	20 02 08.0	
	comp=Z,62nm,18.7s,baz=2.0,slow=37						
	comp=Z,5.6nm,0.8s						
AKASG	Malin Array Be	84.32	321	P	P	19 22 14.0	-0.8
AKASG	Malin Array Be	84.32	321	i P	P	19 22 14.6	-0.2
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	84.32	321	P	P	19 22 14.1	-0.6
AKBB				IAmb	IAmb	19 22 15.2	
	comp=Z,9.4nm,0.8s						
AKBB	Malin Array Si	84.32	321	P	P	19 22 14.1	-0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WHY	Whitehorse	84.33	29	P	P	19 22 16.9	+2.1
WHY				IAmb	IAmb	19 22 17.8	
	comp=Z,18nm,1.1s						
WHY	Whitehorse	84.33	29	P	P	19 22 16.7	+1.9
	baz=285,SNR=9.1						
SKAG	Skagway	84.41	30	P	P	19 22 14.1	-1.0
SKAG				IAmb	IAmb	19 22 18.1	
	comp=Z,21nm,1.1s						
SKAG	Skagway	84.41	30	P	P	19 22 17.0	+2.0
	baz=284						
A36M	Sachs Harbour	84.42	17	P	P	19 22 15.7	+0.9
	baz=292						
CSS	Mathiatis	84.51	304	P	P	19 22 15.7	-0.4
FARO	Faro, Yukon	84.62	27	P	P	19 22 17.5	+1.4
FARO	Faro, Yukon	84.62	27	P	P	19 22 17.9	+1.8
	baz=286,SNR=17						
NACGM	Naroch	84.82	325	eP	P	19 22 17.8	+0.6
	baz=76						
N32M	Quiet Lake	85.04	28	P	P	19 22 19.6	+1.3
	baz=286						
MDUB	Mudurnu	85.09	310	P	P	19 22 17.7	-1.3
P32M	Atlin	85.17	30	P	P	19 22 20.7	+1.7
	baz=286						
S32K	Killisnoo	85.31	32	P	P	19 22 21.1	+1.6
	baz=285						
P33M	Teslin, Yukon	85.43	29	P	P	19 22 21.8	+1.5
	baz=286						
MMPY	Sheldon Lake,	85.44	27	P	P	19 22 22.0	+1.8
	baz=288						
TLCR		85.79	315	⇓P	P	19 22 22.2	0.0
C36M	Paulatuk	85.82	19	P	P	19 22 23.0	+1.1
	baz=294						
STEI	Steigen	86.03	339	eP	P	19 22 22.4	-0.5
STEI				IAmb	IAmb	19 22 23.6	
	comp=Z,14nm,0.9s						
Q32M	Nakina River	86.06	30	P	P	19 22 25.5	+1.9
	baz=287						
TPGR	Topolog	86.14	315	⇑P	P	19 22 24.4	+0.4
VLDR	Vladesti	86.14	316	⇑P	P	19 22 24.5	+0.6
FAUS	Fauske	86.22	339	eP	P	19 22 23.1	-0.8
TIRR	Tirgusor	86.24	315	⇑P	P	19 22 24.3	-0.2
TIRR	Tirgusor	86.24	315	P	P	19 22 24.2	-0.2
TIRR	Tirgusor	86.24	315	P	P	19 22 24.2	-0.2
TIRR				pmax	pmax		
	comp=Z,26nm,1.1s						
CFR	Carcaliu	86.26	315	⇑P	P	19 22 24.6	0.0
HARR	Harsova	86.52	315	⇑P	P	19 22 24.9	-0.9
R33M	Jennings River	86.57	30	P	P	19 22 27.8	+1.8
	baz=288						
WRAK	Wrangell Islan	86.77	33	P	P	19 22 28.2	+1.4
	baz=287						
ELL	Elmali	86.87	307	P	P	19 22 27.1	-0.8
ELL	Elmali	86.87	307	P	P	19 22 27.1	-0.8
ELL				pmax	pmax		
	comp=Z,33nm,0.5s						
TESR	Tescani	86.95	317	⇑P	P	19 22 27.4	-0.5
S34M	Telegraph Cree	86.95	31	P	P	19 22 29.6	+1.9
	baz=288						
VRI	Vrincioaia	87.06	316	⇑P	P	19 22 29.2	+0.6
VRI	Vrincioaia	87.06	316	P	P	19 22 29.1	+0.6
PLOR	Plostina	87.11	316	⇑P	P	19 22 29.2	+0.4
TGTN	Hyland Airport	87.13	27	P	P	19 22 30.4	+1.8
	baz=290						
DLBC	Dease Lake	87.34	31	P	P	19 22 31.4	+1.7
	baz=289						
BURAR	Bucovina Array	87.61	318	⇑P	P	19 22 31.7	+0.5
BURAR	Bucovina Array	87.61	318	P	P	19 22 31.6	+0.4
BURAR	Bucovina Array	87.61	318	P	P	19 22 31.6	+0.4
BURAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BUR08	Bucovina Ar. S	87.61	318	P	P	19 22 31.3	+0.1
MLR	Muntele Rosu	87.68	316	⇑P	P	19 22 31.7	0.0
MLR	Muntele Rosu	87.68	316	LR	LR	20 05 17.1	
	comp=Z,100nm,21.2s,baz=80,slow=38						
MLR	Muntele Rosu	87.68	316	P	P	19 22 31.2	-0.4
MLR				IAmb	IAmb	19 24 36.1	
	comp=Z,20nm,1.9s						
MLR	Muntele Rosu	87.68	316	P	P	19 22 31.3	-0.4
MLR				pmax	pmax		
	comp=Z,20nm,1.9s						
T35M	Bob Quinn	87.70	32	P	P	19 22 33.5	+2.1
	baz=289						
KMBO	Kilima Mbogo	88.09	268	P	P	19 22 34.5	+0.1
KMBO	Kilima Mbogo	88.09	268	P	P	19 22 34.5	+0.1
KMBO				pmax	pmax

comp=Z,73nm,19.5s,baz=60,slow=37
comp=Z,2.4nm,0.8s
TBI Tubuai 90.69 114 *e*LR LR 19 51 50.4
comp=Z,106nm,30.5s
MAW Mawson 91.11 200 P **P 19 22 45.3 -1.6**
comp=Z,0.8nm,0.5s,baz=309,slow=14,SNR=2.2
comp=Z,0.8nm,0.5s
IDI Anoyia 91.17 306 LR LR 20 09 27.4
comp=Z,22nm,21.1s,baz=78,slow=39
JMIC Jan Mayen 91.28 346 LR LR 20 09 14.0
comp=Z,53nm,18.2s,baz=241,slow=39
VNDA Vanda 92.00 173 P **P 19 22 50.1 -0.8**
comp=Z,2.5nm,0.7s,baz=324,slow=6.2,SNR=22
VNDA LR LR 20 05 57.2
comp=Z,53nm,19.4s,baz=354,slow=37
comp=Z,2.5nm,0.7s
VNDA Vanda 92.00 173 P **P 19 22 49.3 -1.6**
VNDA IAmb IAmb 19 24 55.0
comp=Z,9.6nm,1.3s
VNDA Vanda 92.00 173 P **P 19 22 49.3 -1.6**
VNDA pmax pmax
comp=Z,10.0nm,1.3s
YKA Yellowknife Ar 92.47 24 P **P 19 22 54.0 +0.5**
comp=Z,2.0nm,0.7s,baz=293,slow=4.1,SNR=6.3
YKA LR LR 20 09 25.0
comp=Z,28nm,18.4s,baz=316,slow=39
comp=Z,2.0nm,0.7s
VRAC Vranov 92.51 322 LR LR 20 07 39.1
comp=Z,78nm,19.3s,baz=13,slow=38
MBAR Mbarara 94.35 270 LR LR 20 04 32.1
comp=Z,26nm,19.4s,baz=62,slow=35
GERES GERESS Array B 94.44 322 P **P 19 23 02.8 -0.2**
comp=Z,0.6nm,0.6s,baz=64,slow=6.1,SNR=5.9
comp=Z,0.6nm,0.6s
YBH Yreka Blue Hor 97.90 44 LR LR 19 59 37.7
comp=Z,24nm,20.3s,baz=288,slow=30
LSZ Lusaka 99.67 256 LR LR 20 05 19.4
comp=Z,64nm,18.5s,baz=103,slow=33
NVAR Mina Array Bea 102.36 46 P **Pdif 19 23 39.9 +0.9**
comp=Z,0.3nm,0.5s,baz=316,slow=5.0,SNR=2.9
TXAR Lajitas Array 117.43 48 PKP **PKiKP 19 28 29.5 +0.5**
comp=Z,1.9nm,0.6s,baz=210,slow=0.9,SNR=21
WMOK Wichita Mounta 117.48 40 P **PKPdf 19 28 26.8 -2.1**
baz=310
TORD Torodi Ar. Bea 118.44 292 PKP **PKPdf 19 28 29.8 -1.3**
comp=Z,0.3nm,0.4s,baz=84,slow=1.7,SNR=5.5
TORD PKKPbc **PKKPab 19 38 52.2 +0.4**
comp=Z,2.2nm,0.8s,baz=265,slow=4.7,SNR=10
S39A Bolivar 118.69 34 PKPdf **PKPdf 19 28 30.7 -0.3**
CCM Cathedral Cave 119.53 32 P **PKPdf 19 28 32.1 -0.6**
baz=318
LONY Lake Ozonia 120.69 16 P **PKPdf 19 28 34.4 -0.4**
baz=338
O48B Farmland 120.75 27 P **PKPdf 19 28 34.5 -0.4**
baz=325
MIAR Mount Ida 120.78 37 P **PKPdf 19 28 35.1 -0.1**
baz=315
833A Chaparral WMA, 121.07 46 P **PKiKP 19 28 36.7 +0.7**
baz=307
M53A WI Miller and 121.57 23 P **PKPdf 19 28 36.3 -0.2**
baz=330
ACSO Alum Creek Sta 121.69 25 P **PKPdf 19 28 36.7 -0.1**
baz=327
WCI Wyandotte Cave 121.87 29 P **PKPdf 19 28 36.7 -0.5**
baz=323
O53A New Philadelph 122.39 24 P **PKPdf 19 28 37.8 -0.4**
baz=329
BINY Binghamton 122.50 18 P **PKPdf 19 28 38.1 -0.2**
baz=336
P52A Corning 122.55 25 P **PKPdf 19 28 38.2 -0.2**
baz=328
WVT Waverly 122.77 32 P **PKPdf 19 28 38.8 -0.2**
baz=321
L61B Northampton 123.22 16 P **PKPdf 19 28 39.7 0.0**
baz=339
SSPA Standing Stone 123.28 21 P **PKPdf 19 28 39.7 -0.1**
baz=333
LRAL Lakeview Retre 125.59 33 P **PKPdf 19 28 44.2 -0.2**
baz=320
KMSC Kings Mountain 126.67 27 P **PKPdf 19 28 46.3 -0.2**
baz=327
CMIG Matias Romero 130.95 54 PKP **PKPdf 19 28 55.2 +0.2**
comp=Z,3.5nm,0.6s,baz=292,slow=2.2,SNR=11
DWPF Disney Wildern 132.41 32 P **PKPdf 19 28 57.5 0.0**
baz=324
SDDR Presa de Saban 145.06 28 *e*P **PKPdf 19 29 20.6 -0.3**
BCIP Isla Barro Col 147.39 50 *e*P **PKPbc 19 29 26.6 -0.8**
SJG San Juan 147.90 20 PKPbc **PKPbc 19 29 29.1 +0.4**
comp=Z,8.1nm,0.3s,baz=296,slow=20,SNR=2.2
PLCA Paso Flores 148.45 157 PKPbc **PKPbc 19 29 29.8 +0.2**
comp=Z,9.1nm,1.1s,baz=222,slow=3.3,SNR=12
SJCC San Jacinto, C 150.22 43 *e*P **PKPbc 19 29 34.7 0.0**
URIC Uribia, Colomb 150.83 36 *e*P **PKPbc 19 29 35.9 -0.1**
CRJC Cerrejon, Guaj 150.84 38 *e*P **PKPbc 19 29 36.0 -0.2**
ZARC Zaragoza, Cauc 152.15 46 *e*P **PKPbc 19 29 39.0 -0.1**
CBOC Ciudad Bolivar 152.40 51 *e*P **PKiKP 19 29 40.2 0.0**
PLMC San Jos del P 152.81 53 *e*P **PKiKP 19 29 41.1 +0.2**
PTBC PUERTO BERRIO 153.10 47 *e*P **PKPbc 19 29 41.0 -0.3**
GUY2C Guyana, Caldas 153.31 51 *e*P **PKPbc 19 29 41.9 -0.4**
YOTC Yotoco, Valle 153.32 54 *e*P **PKPdf 19 29 35.6 +1.3**
NORC Norcasia 153.46 49 *e*P **PKPbc 19 29 41.5 -0.6**
PAMC Pamplona, Colo 153.75 43 *e*P **PKiKP 19 29 44.5 +1.1**
SDV Santo Domingo 153.87 37 PKPbc **PKiKP 19 29 43.3 +0.1**
comp=Z,14nm,0.7s,baz=70,slow=1.7,SNR=7.0
BARC Barichara 153.96 45 *e*P **PKPbc 19 29 42.6 -0.8**
SPBC San Pablo de B 153.98 48 *e*P **PKPbc 19 29 42.9 -0.4**
RUSC La Rusia 154.52 46 *e*P **PKPbc 19 29 44.2 -0.7**
PRAC Prado 154.63 53 *e*P **PKPbc 19 29 43.8 -0.8**
CHIC Chingaza 154.92 49 *e*P **PKPdf 19 29 37.1 +0.2**
ATAH Atahualpa 156.34 80 PKPab **PKPab 19 30 09.1 +1.9**
comp=Z,8.1nm,0.8s,baz=2.5,slow=1.7,SNR=4.8
CPUP Villa Florida 165.78 171 PKPab **PKPab 19 30 46.1 -1.1**
comp=Z,3.3nm,1.0s,baz=216,slow=5.5,SNR=4.0
LPAZ La Paz 166.59 109 PKP **PKPdf 19 29 50.1 +0.4**
comp=Z,0.9nm,0.3s,baz=46,slow=3.4,SNR=5.3
LPAZ PKPab **PKPab 19 30 54.1 +2.0**
comp=Z,5.3nm,0.9s,baz=287,slow=2.8,SNR=12
SIV San Ignacio 172.96 123 PKP **PKPdf 19 29 52.6 -0.1**
comp=Z,1.0nm,0.5s,baz=43,slow=2.5,SNR=5.3

DJA 06 19:22:45.9±1.0,9°S±3°×11°0E±°, h16km±9km, M3.6/11, mb4.0/3, MLv3.4/11, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.12**	**19**	P	Pb	19 23 06.7	-0.2
UGM				S	Sb	19 23 20.9	-0.4
YOGI	**Yogyakarta**	**1.16**	**7**	P	Pn	19 23 07.5	-0.1
YOGI				S	Sb	19 23 22.2	-0.3
PCJI	**Pacitan**	**1.27**	**52**	P	Pn	19 23 08.1	-0.9
SCJI	**Gunung Srandil**	**1.62**	**323**	P	Pn	19 23 13.8	0.0
SCJI				S	Sn	19 23 33.2	-1.2
PWJI	**Pagerwojo**	**1.88**	**60**	P	Pn	19 23 17.2	-0.3
PWJI				S	Sn	19 23 39.6	-1.3
SMRI	**Semarang**	**1.94**	**8**	P	Pb	19 23 20.0	-0.9
SMRI				S	Sb	19 23 45.5	+0.6
KRKI	**Karangkates**	**2.41**	**70**	P	Pn	19 23 25.5	+0.8
CNJI	**Cibinong**	**3.43**	**299**	P	Pn	19 23 39.4	+0.8
JAGI	**Jajag, Banyuwa**	**3.98**	**83**	P	Pn	19 23 46.4	+0.1
KLNI	**Mataram**	**5.89**	**85**	P	Pn	19 24 12.5	-0.1
	0.1nm16nm,1.1s						
TWSI	**Taliwang, Sumb**	**6.65**	**88**	P	Pn	19 24 23.3	+0.3
	0.1nm6.3nm,0.6s						
PLAI	**Plampang**	**7.53**	**89**	P	Pn	19 24 35.1	0.0

*SNET **06** 19:28:55.4±0.9, 13°.20N×89°.63W, h54km, ML4.2*
*GCG **06** 19:28:56.2±0.5, 13°.32N×89°.66W, h98km±18km, MD3.8*
*IDC **06** 19:28:58.9±9.7, 13°.69N×89°.35W, h81km±75km, mb3.0/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=100.0km s-min=62.1km az=56.0*
*INET **06** 19:29:00.3±0.9, 13°.31N×89°.20W, h15km±5km, MW3.7*

ISC 06 19:28:56.5±1.2, 13°26N±0°.08×89°56W±0°.05, h61km±9km, n44, σ1§09/54, 2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.53**	**36**	*e*P	**Pn**	**19 29 08.6**	**-0.4**
SNET				*e*S	**Sn**	**19 29 18.5**	**+0.4**
SNET	**Serv Nac Est T**	**0.53**	**36**	*e*P	**Pn**	**19 29 08.7**	**-0.4**
BOQS	**Boqueron**	**0.55**	**29**	*e*P	**Pn**	**19 29 08.9**	**-0.4**
UEES	**Universidad Ev**	**0.55**	**34**	*e*P	**Pn**	**19 29 09.0**	**-0.3**
CEVE	**Cerro Verde**	**0.57**	**353**	⇓*i*P	**Pn**	**19 29 09.1**	**-0.5**
SBLS	**San Blas**	**0.58**	**354**	*e*P	**Pn**	**19 29 09.2**	**-0.6**
IGN	**Direccin Gen**	**0.59**	**39**	*e*P	**Pn**	**19 29 09.4**	**-0.2**
LFRS	**El Faro**	**0.60**	**53**	*e*P	**Pn**	**19 29 09.4**	**-0.4**
SNJE	**San Jose**	**0.61**	**355**	*e*P	**Pn**	**19 29 09.5**	**-0.5**
SJTE	**Alcalda de S**	**0.64**	**56**	*e*P	**Pn**	**19 29 10.1**	**-0.2**
RTR	**El Retiro**	**0.64**	**352**	*e*P	**Pn**	**19 29 10.0**	**-0.4**
NUBE	**Las Nubes**	**0.68**	**341**	⇓*i*P	Pn	19 29 10.0	-0.8
LBRS	**Las Brisas**	**0.69**	**46**	*e*P	**Pn**	**19 29 11.0**	**+0.1**
PAVA	**Las Pavas**	**0.75**	**53**	*e*P	**Pn**	**19 29 11.9**	**+0.3**
PAVA				*e*S	**Sn**	**19 29 24.2**	**+1.5**
SLOZ	**Alcaldia de Sa**	**0.80**	**344**	*e*P	**Pn**	**19 29 11.6**	**-0.5**
SLOZ				*e*S	**Sn**	**19 29 23.5**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.92**	**61**	*e*P	**Pn**	**19 29 13.8**	**+0.1**
SCLA				*e*S	**Sn**	**19 29 27.6**	**+1.3**
COEB	**Comit de Eme**	**1.03**	**76**	*e*P	**Pn**	**19 29 14.9**	**-0.2**
PQSS	**Presa 15 de Se**	**1.03**	**69**	*e*P	**Pn**	**19 29 15.0**	**-0.1**
P5NO	**Presa 5 de nov**	**1.06**	**47**	*e*P	**Pn**	**19 29 14.9**	**-0.6**
PACA	**Pacayal**	**1.22**	**80**	*e*P	**Pn**	**19 29 18.7**	**+1.1**
PACA				*e*S	**Sn**	**19 29 34.9**	**+1.6**
ESQI	**Esquipulas**	**1.31**	**9**	*e*P	**Pn**	**19 29 18.8**	**-0.1**
ESQI				*e*S	**Sn**	**19 29 37.1**	**+1.6**
PCG	**Pacaya**	**1.52**	**318**	*e*P	**Pn**	**19 29 22.2**	**+0.4**
PCG				*e*S	**Sn**	**19 29 42.8**	**+2.0**
NBG	**Las Nubes**	**1.53**	**330**	*e*P	**Pn**	**19 29 22.8**	**+0.8**
NBG				*e*S	**Sn**	**19 29 44.5**	**+3.5**
LCND	**La Caada**	**1.62**	**88**	*e*P	**Pn**	**19 29 22.9**	**0.0**
CNCH	**Conchagua**	**1.68**	**89**	*e*P	**Pn**	**19 29 23.6**	**-0.2**
CNCH				*e*S	**Sn**	**19 29 46.9**	**+2.6**
FUG	**Fuego 3**	**1.72**	**314**	*e*P	**Pn**	**19 29 24.7**	**+0.3**
FUG				*e*S	**Sn**	**19 29 46.3**	**+0.8**
MRL	**Marmol**	**1.82**	**356**	*e*P	**Pn**	**19 29 26.5**	**+0.7**
MRL				*e*S	**Sn**	**19 29 50.1**	**+2.1**
TGUH	**Tegucigalpa,Un**	**2.36**	**70**	*e*P	**Pn**	**19 29 32.4**	**-0.6**
STG3	**Santiaguito 3,**	**2.43**	**307**	*e*P	**Pn**	**19 29 35.2**	**+1.1**
STG3				*e*S	**Sn**	**19 30 03.3**	**+0.5**
CRIN	**San Cristobal**	**2.50**	**102**	*e*P	**Pn**	**19 29 35.7**	**+0.8**
CRIN	**San Cristobal**	**2.50**	**102**	*e*P	**Pn**	**19 29 35.8**	**+0.8**
TELN	**Telica**	**2.73**	**103**	*e*P	**Pn**	**19 29 37.9**	**-0.3**
CNGN	**Cerro Negro**	**2.88**	**105**	*e*P	**Pn**	**19 29 40.8**	**+0.6**
CNGN	**Cerro Negro**	**2.88**	**105**	*e*P	**Pn**	**19 29 38.5**	**-1.7**
MOMN	**Momotombo**	**3.06**	**106**	*e*P	**Pn**	**19 29 42.0**	**-0.5**
ACON	**Acoyapa**	**4.46**	**106**	*e*P	Pn	19 30 07.3	+5.6
JTS	**Las Juntas de**	**5.38**	**123**	*e*P	Pn	19 30 21.7	+7.3
CMIG	**Matias Romero**	**6.40**	**307**	P	**Pn**	**19 30 29.5**	**+1.2**
	0.6nm,0.3s,baz=125,slow=11,SNR=7.5						
CMIG				S	**Sn**	**19 31 40.2**	**+0.1**
	3.9nm,0.4s,baz=4.6,slow=12,SNR=4.3						
	2.2nm,0.5s						
TEIG	**Tepich**	**7.04**	**10**	*e*P	**Pn**	**19 30 37.4**	**+0.5**
TXAR	**Lajitas Array**	**20.67**	**323**	P	**P**	**19 33 31.9**	**+0.3**
	0.5nm,0.4s,baz=144,slow=9.4,SNR=11						
	0.5nm,0.4s						
PDAR	**Pinedale Array**	**34.11**	**333**	P	**P**	**19 35 33.0**	**-2.7**
	0.2nm,0.5s,baz=127,slow=10,SNR=2.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**137.51**	**255**	PKP	**PKPdf**	**19 48 15.1**	**+0.7**
	0.2nm,0.7s,baz=90,slow=1.6,SNR=5.4						
ASAR	**Alice Springs**	**137.64**	**249**	PKP	**PKiKP**	**19 48 16.1**	**-0.4**
	0.3nm,1.0s,baz=98,slow=2.2,SNR=2.0						
CMAR	**Chiang Mai Arr**	**147.39**	**345**	PKPbc	**PKPdf**	**19 48 31.6**	**-0.3**
	0.3nm,0.6s,baz=352,slow=2.9,SNR=5.7						

*IDC **06** 19:54:23.2±0.6, 31°.79S×177°.19W, h0km, mb4.2/11, mbtmp4.2/12, ML4.3/1, MS3.3/13, Error ellipse: s-maj=22.3km s-min=21.2km az=69.0*
*NEIC **06** 19:54:24.1±1.1, 31°.69S±0°.03×177°.2W±0°.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=21.5km s-min=3.8km az=100.0*

ISC 06 19:54:24.0±0.6, 31°86S±0°.06×177°3W±0°.1, h10km, n53, σ1§48/47, mb4.3/17, MS3.3/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.65**	**348**	Pn	**Pn**	**19 55 06.1**	**-0.8**
	57nm,0.3s,baz=136,slow=19,SNR=1.6						
RAO				Sn	**Sn**	**19 55 37.4**	**-1.7**
	518nm,0.3s,baz=94,slow=21,SNR=9.4						
RAO				LR	LR	19 56 06.9	
	comp=Z,681nm,19.3s,baz=222,slow=40						
	206nm,0.2s						
RAO	**Raoul Island**	**2.65**	**348**	Pn	**Pn**	**19 55 04.8**	**-2.1**
RAO					**Sn**	**19 55 36.2**	**-2.9**
URZ	**Urewera**	**7.85**	**214**	Pn	**Pn**	**19 56 15.0**	**-3.3**
	0.3nm,0.3s,baz=128,slow=10,SNR=2.1						
URZ				Sn	**Sn**	**19 57 44.4**	**-2.8**
	5.2nm,0.3s,baz=287,slow=19,SNR=9.4						
URZ	**Urewera**	**7.85**	**214**	Pn	**Pn**	**19 56 19.8**	**+1.5**
OUZ	**Omahuta**	**8.30**	**244**	Pn	**Pn**	**19 56 20.0**	**+1.6**
BKZ	**Black Stump Fm**	**8.87**	**213**	Pn	**Pn**	**19 56 32.3**	**+0.1**
HIZ	**Hauiti**	**9.23**	**222**	Pn	**Pn**	**19 56 36.6**	**-0.6**
BFZ	**Birch Farm**	**10.22**	**209**	Pn	**Pn**	**19 56 48.4**	**-2.4**
THZ	**Tophouse**	**12.61**	**216**	Pn	**Pn**	**19 57 21.1**	**-2.4**
KHZ	**Kahutara**	**12.81**	**212**	Pn	**Pn**	**19 57 23.4**	**-2.8**
LTZ	**Lake Taylor**	**13.68**	**214**	Pn	**Pn**	**19 57 35.8**	**-2.4**
MSVF	**Nonsavu**	**14.68**	**342**	LR	LR	20 02 23.8	
	comp=Z,210nm,21.7s,baz=192,slow=33						
RPZ	**Rata Peaks**	**14.97**	**214**	Pn	**Pn**	**19 57 54.0**	**-1.7**
	0.7nm,0.3s,baz=66,slow=17,SNR=2.1						
RPZ				Sn	Sn	20 00 27.7	-14
	0.9nm,0.3s,baz=312,slow=23,SNR=6.7						
DZM	**Mont Dzumac**	**17.44**	**300**	LR	LR	20 03 57.2	
	comp=Z,226nm,18.6s,baz=132,slow=33						
RAR	**Rarotonga**	**18.91**	**60**	LR	LR	20 05 01.4	
	comp=Z,56nm,19.7s,baz=208,slow=34						
EIDS	**Eidsvold**	**28.43**	**275**	P	**P**	**20 00 19.4**	**+0.3**
EIDS				IAmb	IAmb	20 00 33.3	
	comp=Z,14nm,1.4s						
PPT	**Papeete**	**28.82**	**67**	LR	LR	20 11 51.2	
	comp=Z,32nm,18.1s,baz=334,slow=36						
CTA	**Charters Tower**	**34.64**	**281**	LR	LR	20 14 02.2	
	comp=Z,48nm,19.1s,baz=94,slow=34						
STKA	**Stephens Creek**	**34.76**	**259**	P	**P**	**20 01 16.8**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=114,slow=7.6,SNR=4.1						
	comp=Z,1.9nm,0.9s						
STKA	**Stephens Creek**	**34.76**	**259**	P	**P**	**20 01 13.8**	**-0.8**
BBOO	**Buckleboo**	**39.17**	**256**	P	**P**	**20 01 52.5**	**+0.3**
PMG	**Port Moresby**	**39.78**	**296**	LR	LR	20 15 01.4	
	comp=Z,30nm,21.4s,baz=98,slow=31						
AS31	**Alice Springs**	**43.64**	**268**	P	**P**	**20 02 29.2**	**+0.2**
ASAR	**Alice Springs**	**43.64**	**268**	P	**P**	**20 02 29.4**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=106,slow=7.3,SNR=21						
ASAR				PcP	**PcP**	**20 04 17.1**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=111,slow=4.1,SNR=2.5						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**43.64**	**268**	P	**P**	**20 02 28.8**	**-0.2**
WB2	**Warramunga Arr**	**44.75**	**273**	P	**P**	**20 02 37.4**	**-0.5**
WB2				IAmb	IAmb	20 03 00.3	
	comp=Z,6.2nm,0.8s						
WRAB	**Tennant Creek**	**44.76**	**273**	P	**P**	**20 02 37.8**	**-0.2**
WRAB				IAmb	IAmb	20 03 01.6	
	comp=Z,7.7nm,0.9s						
WRA	**Warramunga Arr**	**44.76**	**273**	P	**P**	**20 02 38.8**	**+0.8**
	comp=Z,3.9nm,0.9s,baz=112,slow=8.1,SNR=14						
WRA				LR	LR	20 20 41.0	
	comp=Z,68nm,18.2s,baz=126,slow=35						
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**44.76**	**273**		**P**	**20 02 38.1**	**+0.1**
WB0	**Warramunga Arr**	**44.79**	**274**	P	**P**	**20 02 38.4**	**+0.2**
WB0				IAmb	IAmb	20 02 39.7	
	comp=Z,8.4nm,1.1s						
VNDA	**Vanda**	**46.71**	**186**	LR	LR	20 19 15.9	
	comp=Z,42nm,18.5s,baz=24,slow=32						
KNRA	**Kununurra**	**51.42**	**275**	P	**P**	**20 03 28.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.96**	**271**	LR	LR	20 25 08.7	
	comp=Z,42nm,19.3s,baz=112,slow=35						
FITZ	**Fitzroy Crossi**	**52.96**	**271**	P	**P**	**20 03 42.7**	**+1.7**
FITZ				IAmb	IAmb	20 03 58.1	
	comp=Z,7.8nm,1.4s						
SIJI	**Sorong**	**57.43**	**292**	LR	LR	20 28 04.0	
	comp=Z,37nm,20.1s,baz=150,slow=35						
GUMO	**Guam**	**57.93**	**315**	LR	LR	20 28 46.6	
	comp=Z,13nm,18.1s,baz=100,slow=36						
QSPA	**South Pole Qui**	**58.25**	**180**	P	**P**	**20 04 19.7**	**+1.1**
	comp=Z,3.7nm,0.8s,baz=76,slow=1.5,SNR=12						
	comp=Z,3.7nm,0.8s						
QSPA	**South Pole Qui**	**58.25**	**180**	P	**P**	**20 04 19.6**	**+1.1**
MAW	**Mawson**	**71.15**	**201**	P	**P**	**20 05 45.3**	**+2.8**
	comp=Z,2.0nm,0.9s,baz=350,slow=2.0,SNR=3.6						
	comp=Z,2.0nm,0.9s						
SNAA	**Sanae**	**76.68**	**178**	P	**P**	**20 06 13.9**	**-1.0**
SNAA				IAmb	IAmb	20 06 56.7	
	comp=Z,5.6nm,1.5s						
MJAR	**Matsushiro Arr**	**79.78**	**325**	P	**P**	**20 06 32.9**	**+0.6**
	comp=Z,3.8nm,1.1s,baz=138,slow=9.2,SNR=3.3						
MJAR				LR	LR	20 42 07.0	
	comp=Z,13nm,18.9s,baz=118,slow=36						
	comp=Z,3.8nm,1.1s						
PLCA	**Paso Flores**	**81.08**	**133**	P	**P**	**20 06 39.5**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=231,slow=6.5,SNR=3.8						
	comp=Z,2.1nm,0.9s						
KSRS	**Korea Array**	**85.84**	**319**	P	**P**	**20 07 05.7**	**+1.9**
	comp=Z,2.5nm,0.9s,baz=139,slow=6.1,SNR=5.1						
	comp=Z,2.5nm,0.9s						
NVAR	**Mina Array Bea**	**88.91**	**42**	P	**P**	**20 07 19.3**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=223,slow=7.7,SNR=6.6						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**92.68**	**57**	P	**P**	**20 07 36.5**	**+0.1**
	comp=Z,0.4nm,1.0s,baz=230,slow=8.0,SNR=2.4						
	comp=Z,0.4nm,1.0s						
PDAR	**Pinedale Array**	**96.78**	**43**	P	**P**	**20 07 55.4**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=215,slow=4.2,SNR=2.7						
	comp=Z,0.2nm,0.5s						
KBZ	**Khabaz**	**146.41**	**302**	PKPbc	**PKiKP**	**20 14 07.1**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=223,slow=1.2,SNR=5.7						
FINES	**FINESS Array B**	**146.72**	**340**	PKPbc	**PKPbc**	**20 14 05.4**	**0.0**
	comp=Z,6.1nm,0.8s,baz=90,slow=1.9,SNR=11						
NB2	**NORSAR Subarra**	**150.28**	**352**	PKP	**PKPbc**	**20 14 14.6**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=20,slow=2.7						
NOA	**NORSAR Array B**	**150.28**	**352**	PKPbc	**PKPbc**	**20 14 14.8**	**0.0**
	comp=Z,2.4nm,0.8s,baz=15,slow=4.2,SNR=8.7						
AKASG	**Malin Array Be**	**152.81**	**322**	PKPbc	**PKPbc**	**20 14 21.0**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=48,slow=2.8,SNR=6.6						
BRTR	**Keskin Array B**	**153.80**	**296**	PKPab	**PKPab**	**20 14 37.0**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=116,slow=2.9,SNR=5.7						
TORD	**Torodi Ar. Bea**	**161.35**	**177**	PKPab	**PKPab**	**20 15 09.2**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=175,slow=3.6,SNR=3.7						

*HLW **06** 20:36:31.5, 30°.18N×31°.94E, h18km, Md2.1*
*GII **06** 20:36:31.5±0.0, 30°.25N×31°.94E, h20km, MD2.6/1, Mm2.5/4*

ISC 06 20:36:30.5±1.6, 30°21N±0°.06×31°92E±0°.05, h16km±10km, n26, σ0§57/37, 5D, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOT	**Kottamia**	**0.30**	**195**	⇓P	**Pb**	**20 36 37.6**	**0.0**
	baz=201						
KOT				S	**Sb**	**20 36 42.0**	**-0.2**
	baz=201						
HHAG	**Hagoal**	**0.30**	**149**	⇓P	**Pb**	**20 36 37.5**	**-0.2**
	baz=147						
HHAG				S	**Sg**	**20 36 41.5**	**+0.1**
	baz=147						
GLL	**Jalalah**	**0.66**	**196**	⇑P	**Pb**	**20 36 43.5**	**-0.2**
	baz=199						
HSAF	**As Saff**	**0.67**	**208**	⇓P	**Pb**	**20 36 43.8**	**-0.1**
	baz=211						
SUZ	**Suez**	**0.87**	**115**	⇓P	**Pg**	**20 36 47.4**	**-0.1**
	baz=113						
HMYD	**Mayadein**	**1.06**	**247**	⇑P	**Pn**	**20 36 51.1**	**+0.4**
	baz=250						
ZAF	**Zafarana**	**1.08**	**149**	⇓P	**Pb**	**20 36 50.6**	**-0.2**
	baz=148						
ZNM	**Zenema**	**1.18**	**135**	⇑P	**Pb**	**20 36 52.5**	**-0.1**
	baz=134						
NBNS	**Bani Suef**	**1.68**	**199**	P	**Pn**	**20 36 59.3**	**0.0**
	baz=201						
RYAN	**Fayoum**	**1.82**	**232**	P	**Pn**	**20 37 01.2**	**0.0**
	baz=234						
GRB	**Gharib**	**2.08**	**158**	P	**Pn**	**20 37 05.6**	**+0.8**
	baz=158						
KZIT	**Kziot**	**2.25**	**71**	Pn	**Pn**	**20 37 07.3**	**+0.2**
KZIT				Sn	**Sn**	**20 37 34.6**	**+0.1**
TR2	**Tor 2**	**2.41**	**139**	P	**Pn**	**20 37 08.9**	**-0.4**
	baz=138						
KRMI	**Paran Flat**	**2.43**	**92**	Pn	**Pn**	**20 37 09.6**	**-0.1**
KRMI				Sn	**Sn**	**20 37 39.1**	**0.0**
HKAT	**Jabal Katrina**	**2.47**	**132**	P	**Pn**	**20 37 09.8**	**-0.6**
	baz=132						
MBRI	**Mt Berech**	**2.63**	**98**	Pn	**Pn**	**20 37 12.4**	**-0.1**
TAMRE	**El Minia**	**2.67**	**199**	P	**Pn**	**20 37 13.0**	**+0.1**
	baz=201						
PRNI	**Paran**	**2.67**	**86**	Pn	**Pn**	**20 37 12.9**	**-0.1**
PRNI				Sn	**Sn**	**20 37 45.1**	**0.0**
EIL	**Elat**	**2.69**	**101**	Pn	**Pn**	**20 37 14.2**	**+1.1**
EIL				Sn	**Sn**	**20 37 47.3**	**+1.9**
TR1	**Tor 1**	**2.83**	**141**	P	**Pn**	**20 37 14.8**	**-0.3**
	baz=140						
AMAZ	**Amatzia**	**2.89**	**62**	Pn	**Pn**	**20 37 16.1**	**+0.1**
AMAZ				Sn	**Sn**	**20 37 49.8**	**-0.7**
YTIR	**Yattir**	**2.98**	**67**	Pn	**Pn**	**20 37 17.3**	**0.0**
YTIR				Sn	**Sn**	**20 37 52.0**	**-0.7**
DSI	**Dead Sea**	**3.27**	**65**	Pn	**Pn**	**20 37 22.5**	**+1.4**
DSI				Sn	**Sn**	**20 38 00.1**	**+0.4**
GHAJ	**Ghor Haditha**	**3.32**	**70**	Pn	**Pn**	**20 37 21.9**	**0.0**
HMDT	**Nahal Hemdat**	**3.70**	**56**	Pn	**Pn**	**20 37 27.6**	**+0.6**
HMDT				Sn	**Sn**

comp=N,0.2nm,0.4s,baz=246,slow=7.0,SNR=5.3
comp=N,0.2nm,0.4s
MKAR Makanchi Array 146.77 39 PKPbc **PKPbc 21 01 27.8 -0.2**
comp=N,0.2nm,0.5s,baz=307,slow=3.0,SNR=2.1

*IDC **06** 20:45:07.5±2.1,0°.31N×123°.83E,h0km,mb3.1/3, mbtmp3.2/3,Error ellipse: s-maj=307.2km s-min=28.5km az=62.0*
*DJA **06** 20:45:18.1±0.2,0°.5±2°×12°.3E±°,h65km±7km,M4.0/18, mb4.0/11,mB5.0/1,MLv4.0/18,Mw(mB)4.4/1*
ISC 06 20:45:18.0±1.0,0°.29S±0°.05×123°.08E±0°.05,h35km,n28, σ1°93/32,mb3.0/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.81**	**203**	P	**Pn**	**20 45 34.8**	**+1.9**
LUWI				S	**Sn**	**20 45 48.4**	**+4.7**
GTOI	**Gorontalo**	**0.92**	**355**	P	**Pn**	**20 45 36.3**	**+1.8**
GTOI				S	**Sn**	**20 45 50.4**	**+3.9**
KMSI	**Cibinong**	**1.24**	**46**	P	**Pn**	**20 45 39.9**	**+1.1**
KMSI				S	**Sn**	**20 45 56.8**	**+2.4**
MRSI	**Marisa**	**1.38**	**304**	P	**Pn**	**20 45 39.8**	**-0.9**
MRSI				S	**Sn**	**20 45 56.6**	**-1.0**
APSI	**Ampana**	**1.56**	**247**	P	**Pn**	**20 45 43.9**	**+0.7**
MPSI	**Mapaga**	**3.25**	**281**	P	**Pn**	**20 46 06.6**	**+0.2**
SANI	**Sanana**	**3.39**	**121**	P	**Pn**	**20 46 07.0**	**-1.4**
KKSI	**Kolaka, Sulawe**	**4.11**	**200**	P	**Pn**	**20 46 19.0**	**+0.6**
TTSI	**Tana Toraja**	**4.26**	**230**	P	**Pn**	**20 46 21.1**	**+0.7**
TTSI				S	**Sn**	**20 47 07.9**	**-1.0**
TNTI	**Ternate**	**4.41**	**76**	P	**Pn**	**20 46 24.3**	**+1.9**
LBMI	**Labuha**	**4.43**	**94**	P	**Pn**	**20 46 25.3**	**+2.6**
LBMI				S	**Sn**	**20 47 12.0**	**-1.1**
SGSI	**Sangihe**	**4.64**	**32**	P	Pn	20 46 14.0	-12
SPSI	**Sidrap Palu**	**4.93**	**222**	P	**Pn**	**20 46 30.0**	**+0.4**
NLAI	**Namlea**	**4.97**	**126**	P	**Pn**	**20 46 30.8**	**+0.7**
	0.2nm14nm,0.6s						
BNSI	**Bone**	**5.05**	**216**	P	**Pn**	**20 46 31.9**	**+0.6**
	0.1nm12nm,1.2s						
GAMI	**Galela, Maluku**	**5.16**	**66**	P	**Pn**	**20 46 34.0**	**+1.3**
	0.1nm20nm,0.9s						
BBSI	**Bau Bau**	**5.19**	**186**	P	**Pn**	**20 46 34.8**	**+1.6**
	0.2nm33nm,1.1s						
KAPI	**Kappang**	**5.75**	**215**	P	**Pn**	**20 46 41.2**	**+0.3**
	0.1nm12nm,0.5s						
BKSI	**Bulukumba**	**5.81**	**211**	P	**Pn**	**20 46 42.9**	**+1.2**
	0.1nm18nm,1.1s						
KRAI	**Karang Ratu**	**6.10**	**120**	P	**Pn**	**20 46 45.8**	**+0.1**
	0.2nm1μm7.8nm,1.0s						
BSSI	**Bau Bau, Buton**	**6.36**	**204**	P	**Pn**	**20 46 50.4**	**+1.1**
	0.5nm68nm,1.3s						
MYLDM	**Lahad Datu**	**7.11**	**320**	P	**Pn**	**20 46 59.6**	**+0.1**
	0.1nm8.7nm,0.9s						
SIJI	**Sorong**	**8.20**	**94**	P	**Pn**	**20 47 16.0**	**+1.4**
	5.4nm,1.7s						
MMRI	**Maumere**	**8.33**	**186**	P	**Pn**	**20 47 16.9**	**+0.5**
	17nm,0.8s						
EDFI	**Ende, Flores**	**8.52**	**189**	P	**Pn**	**20 47 19.3**	**+0.3**
WRA	**Warramunga Arr**	**22.43**	**151**	P	**P**	**20 50 09.8**	**-4.1**
	0.4nm,0.6s,baz=332,slow=9.9,SNR=5.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**25.50**	**156**	P	**P**	**20 50 39.9**	**-3.4**
	0.3nm,0.7s,baz=331,slow=8.7,SNR=4.4						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**58.90**	**328**	P	P	20 55 08.1	-5.5
	0.4nm,0.9s,baz=124,slow=7.8,SNR=1.8						
	0.4nm,0.9s						

*IDC **06** 20:57:07.0±0.5,3°.98S×103°.78W,h0km,mb4.7/33, mbtmp4.7/33,MS5.1/59,Error ellipse: s-maj=15.5km s-min=9.8km az=56.0*
*MOS **06** 20:57:06.3±0.9,3°.99S×103°.85W,h10km,mb5.4/57, MS5.1/32,Error ellipse: s-maj=10.2km s-min=5.3km az=100.8*
*NEIC **06** 20:57:08.7,4°.07S×103°.96W,h7km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.21; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.87; $M_{r\theta}$0.26; $M_{\theta\phi}$2.56; $M_{\phi r}$0.32; Fault plane solution: $M_0$2.71000×10^{17} NP1:ϕ_s7.94000°, δ84.67000°,λ172.01000°. NP2:ϕ_s98.69000°,δ82.04000°, λ5.38000°. Principal axes: T 2.6337, Plg9.0000°, Azm323.0000°; N 0.1502, Plg80.0000°, Azm154.0000°; P -2.7838, Plg2.0000°, Azm53.0000°;*
*NEIC **06** 20:57:08.6±1.7,4°.04S±0°.09×103°.92W±0°.09,h10km±1km, mb5.3/511,Ms_20 5.2/291,Mwb5.6/35 Error ellipse: s-maj=16.2km s-min=13.9km az=140.0*
*GCMT **06** 20:57:12.6±0.1,3°.89S±0°.01×103°.94W±0°.01,h17km, MW5.6/159,Moment Tensor Solution. s140,c244; s159,c316; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.51±.03; $M_{\theta\theta}$1.40±.03; $M_{\phi\phi}$-0.89±.04; $M_{r\theta}$0.12±.08; $M_{\theta\phi}$3.03±.03; $M_{\phi r}$0.17±.09; Best double couple: $M_0$3.24600×10^{17} NP1:ϕ_s10.00000°,δ89.00000°, λ177.00000°. NP2:ϕ_s100.00000°,δ87.00000°,λ1.00000°. Principal axes: T 3.5020, Plg3.0000°, Azm325.0000°; N -0.5130, Plg87.0000°, Azm177.0000°; P -2.9890, Plg2.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 20:57:09.3±0.3,4°.08S±0°.05×103°.94W±0°.06,h18km, n1173,σ1°06/1092,mb5.2/287,MS5.2/225,1D,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**14.06**	**76**		**Pn**	**21 00 27.2**	**-0.5**
RTAL	**Retalhuleu**	**22.11**	**33**	P	**P**	**21 02 03.8**	**-0.2**
RTAL				IAmb	IAmb	21 02 17.4	
	comp=Z,246nm,1.5s						
TLIG	**Tlapa**	**22.15**	**14**	P	**P**	**21 02 02.1**	**-2.3**
CMIG	**Matias Romero**	**22.86**	**23**	P	**P**	**21 02 11.4**	**-0.5**
	comp=Z,15nm,1.1s,baz=208,slow=6.9,SNR=14						
CMIG				LR	LR	21 09 04.2	
	comp=Z,6μm,19.5s,baz=210,slow=32						
	comp=Z,15nm,1.1s						
HUEH	**Huehuetenango**	**22.87**	**32**	P	**P**	**21 02 13.4**	**+1.2**
HUEH				IAmb	IAmb	21 02 19.2	
	comp=Z,76nm,0.6s						
SNET	**Serv Nac Est T**	**22.91**	**39**	P	**P**	**21 02 14.1**	**+1.6**
DUNO	**Dulce Nombre,**	**23.14**	**52**	P	**P**	**21 02 15.0**	**+0.2**
ORTG	**Ortega, Santa**	**23.34**	**52**	P	**P**	**21 02 16.8**	**0.0**
CCIG	**Comitan**	**23.36**	**30**	P	**P**	**21 02 17.3**	**+0.2**
MTO3	**Montecristo**	**23.37**	**38**	P	**P**	**21 02 16.6**	**-0.7**
MTO3				IAmb	IAmb	21 02 21.0	
	comp=Z,119nm,1.5s						
HZTE	**Horizontes, Gu**	**23.44**	**51**	P	**P**	**21 02 16.8**	**-1.1**
RPN	**Rapa Nui**	**23.49**	**192**	LR	LR	21 09 00.4	
	comp=Z,3μm,18.2s,baz=15,slow=30						
ESQI	**Esquipulas**	**23.50**	**38**	P	**P**	**21 02 18.4**	**-0.1**
JACO	**JACO, Garabito**	**23.57**	**55**	P	**P**	**21 02 19.6**	**+0.5**
JACO				IAmb	IAmb	21 02 42.5	
	comp=Z,60nm,1.1s						
CRIN	**San Cristobal**	**23.66**	**45**	P	**P**	**21 02 19.6**	**-0.4**
CRIN	**San Cristobal**	**23.66**	**45**	*eP*	**P**	**21 02 20.6**	**+0.6**
JTS	**Las Juntas de**	**23.70**	**53**	P	**P**	**21 02 20.0**	**-0.3**
JTS				IAmb	IAmb	21 02 42.9	
	comp=Z,155nm,1.5s						
JTS	**Las Juntas de**	**23.70**	**53**	IAMs_20	IAMs_20	21 08 52.6	
	comp=Z,8μm,21.0s						
JTS	**Las Juntas de**	**23.70**	**53**	*eP*	**P**	**21 02 20.8**	**+0.5**
JTS	**Las Juntas de**	**23.70**	**53**	P	**P**	**21 02 20.0**	**-0.3**
JTS				pmax	pmax		
	comp=Z,155nm,1.5s						
JTS				MLR	MLR		
	comp=Z,8μm,21.0s						
MAPC	**Malpelo**	**23.72**	**70**	*eP*	**P**	**21 02 18.4**	**-2.1**
CNGN	**Cerro Negro**	**23.77**	**46**	P	**P**	**21 02 20.7**	**-0.4**
CNGN				IAmb	IAmb	21 02 44.7	
	comp=Z,218nm,1.9s						
CNGN	**Cerro Negro**	**23.77**	**46**	*eP*	**P**	**21 02 19.1**	**-1.9**
MCRA	**Macar, Loja**	**23.93**	**92**	P	**P**	**21 02 20.9**	**-1.7**
MCRA				IAmb	IAmb	21 02 26.0	
	comp=Z,91nm,1.6s						
HDC	**Heredia**	**24.20**	**55**	P	**P**	**21 02 25.4**	**+0.1**
HDC				IAmb	IAmb	21 02 34.3	
	comp=Z,112nm,1.1s						
HDC	**Heredia**	**24.20**	**55**	*eP*	**P**	**21 02 26.9**	**+1.7**
PEZE	**Perez Zeledon,**	**24.22**	**56**	P	**P**	**21 02 23.9**	**-1.5**
RIMA	**Rio Macho**	**24.28**	**55**	P	**P**	**21 02 25.8**	**-0.2**
RIMA				IAmb	IAmb	21 02 34.9	
	comp=Z,160nm,1.8s						
COVE	**Coope Vega, Sa**	**24.38**	**53**	P	**P**	**21 02 26.1**	**-0.7**
COVE				IAmb	IAmb	21 02 35.7	
	comp=Z,119nm,1.2s						
SRBA	**San Rafael, Bu**	**24.41**	**57**	P	**P**	**21 02 26.2**	**-0.9**
TGUH	**Tegucigalpa,Un**	**24.46**	**42**	P	**P**	**21 02 27.6**	**+0.1**
TGUH				IAmb	IAmb	21 02 41.8	
	comp=Z,122nm,1.3s						
TGUH	**Tegucigalpa,Un**	**24.46**	**42**	*eP*	**P**	**21 02 28.0**	**+0.4**
BOAB	**BOACO BROADBAN**	**24.48**	**48**	P	**P**	**21 02 27.8**	**+0.1**
CVTR	**Volcan Turrial**	**24.50**	**55**	P	**P**	**21 02 28.0**	**-0.3**
ACON	**Acoyapa**	**24.54**	**49**	P	**P**	**21 02 27.6**	**-0.6**
MATN	**Matagalpa**	**24.61**	**46**	P	**P**	**21 02 28.4**	**-0.5**
COHC	**Cochancay**	**24.70**	**87**	P	**P**	**21 02 29.0**	**-0.6**
BRU2	**Volcan**	**24.75**	**59**	P	**P**	**21 02 30.8**	**+0.6**
BRU2	**Volcan**	**24.75**	**59**	*eP*	**P**	**21 02 32.3**	**+2.1**
BATAN	**Batan**	**24.86**	**55**	P	**P**	**21 02 30.4**	**-0.7**
PETF	**Flores**	**25.07**	**33**	P	**P**	**21 02 31.8**	**-1.1**
PETF				IAmb	IAmb	21 02 45.9	
	comp=Z,78nm,1.3s						
ESPN	**Las Esperanzas**	**25.35**	**50**	P	**P**	**21 02 35.3**	**-0.2**
ESPN				IAmb	IAmb	21 02 44.3	
	comp=Z,108nm,1.2s						
BOSC	**San Juan Bosco**	**25.41**	**89**	P	**P**	**21 02 37.5**	**+1.2**
BOSC				IAmb	IAmb	21 02 46.8	
	comp=Z,123nm,1.3s						
ATAH	**Atahualpa**	**25.60**	**98**	P	**P**	**21 02 38.7**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=299,slow=9.3,SNR=15						
ATAH				LR	LR	21 10 14.7	
	comp=Z,3μm,20.4s,baz=273,slow=31						
	comp=Z,5.0nm,0.7s						
SLOR	**San Lorenzo -**	**25.64**	**83**	P	**P**	**21 02 39.9**	**+1.2**
SLOR				IAmb	IAmb	21 03 12.2	
	comp=Z,164nm,1.8s						
OTAV	**Otavalo**	**25.83**	**81**	P	**P**	**21 02 40.4**	**0.0**
OTAV	**Otavalo**	**25.83**	**81**	P	**P**	**21 02 40.4**	**0.0**
OTAV				pmax	pmax		
	comp=Z,194nm,1.6s						
OTAV				MLR	MLR		
	comp=Z,4μm,18.0s						
IMBA	**Imbabura, San**	**26.09**	**81**	P	**P**	**21 02 44.2**	**+1.4**
TULM	**Tulcn-Chalpat**	**26.57**	**80**	P	**P**	**21 02 45.4**	**-1.7**
TULM				IAmb	IAmb	21 03 09.1	
	comp=Z,101nm,1.2s						
ZAIG	**Zacatecas**	**26.72**	**3**	P	**P**	**21 02 48.1**	**0.0**
GCUF	**Volcan Galeras**	**27.10**	**79**	*eP*	**P**	**21 02 53.1**	**+1.1**
BBAC	**Balboa, Cauca**	**27.36**	**78**	*eP*	**P**	**21 02 54.4**	**+0.4**
NNA	**Nana**	**27.94**	**108**	P	**P**	**21 02 57.2**	**-1.7**
	comp=Z,4.8nm,0.3s,baz=240,slow=2.5,SNR=1.6						
NNA				LR	LR	21 11 03.8	
	comp=Z,5μm,20.9s,baz=290,slow=30						
	comp=Z,4.8nm,0.3s						
NNA	**Nana**	**27.94**	**108**	IAMs_20	IAMs_20	21 11 59.7	
	comp=Z,5μm,19.0s						
SLBS	**Sierra La Lagu**	**28.21**	**348**	P	**P**	**21 03 00.5**	**-0.8**
SLBS				IAmb	IAmb	21 04 02.8	
	comp=Z,66nm,1.7s						
SLBS	**Sierra La Lagu**	**28.21**	**348**	IAMs_20	IAMs_20	21 11 11.0	
	comp=Z,7μm,20.0s						
TEIG	**Tepich**	**28.64**	**32**	P	**P**	**21 03 02.7**	**-2.4**
TEIG				IAMs_20	IAMs_20	21 12 37.5	
	comp=Z,6μm,19.0s						
LPIG	**La Paz**	**28.69**	**348**	LR	LR	21 11 35.4	
	comp=Z,5μm,21.5s,baz=166,slow=30						
FLOC	**Florencia**	**28.83**	**79**	*eP*	**P**	**21 03 07.7**	**+0.8**
PTLC	**Puerto Leguiza**	**29.43**	**82**	*eP*	**P**	**21 03 10.7**	**-1.5**
CBOC	**Ciudad Bolivar**	**29.59**	**71**	*eP*	**P**	**21 03 14.7**	**+0.9**
GUY2C	**Guyana, Caldas**	**30.00**	**72**	*eP*	**P**	**21 03 18.7**	**+0.9**
PRAC	**Prado**	**30.05**	**75**	*eP*	**P**	**21 03 18.4**	**+0.7**
HELC	**Santa Helena**	**30.15**	**70**	*eP*	**P**	**21 03 19.4**	**+0.4**
HPIG		**30.88**	**357**	P	**P**	**21 03 24.7**	**-0.3**
ROSC	**El Rosal**	**30.89**	**74**	P	**P**	**21 03 25.5**	**0.0**
	comp=Z,6.1nm,0.4s,baz=184,slow=5.6,SNR=5.5						
ROSC				LR	LR	21 12 30.4	
	comp=Z,3μm,21.0s,baz=243,slow=30						
	comp=Z,6.1nm,0.4s						
ROSC	**El Rosal**	**30.89**	**74**	P	**P**	**21 03 23.9**	**-1.7**
ROSC	**El Rosal**	**30.89**	**74**	P	**P**	**21 03 23.9**	**-1.7**
ROSC				pmax	pmax		
	comp=Z,137nm,1.9s						
PTBC	**PUERTO BERRIO,**	**31.27**	**70**	*eP*	**P**	**21 03 28.6**	**+0.1**
CHIC	**Chingaza**	**31.40**	**74**	*eP*	P	21 03 18.7	-11
SJCC	**San Jacinto, C**	**31.84**	**64**	*eP*	**P**	**21 03 33.7**	**+0.1**
BRRC	**Barranca, Sant**	**32.15**	**70**	*eP*	**P**	**21 03 36.5**	**+0.3**
RUSC	**La Rusia**	**32.37**	**72**	*eP*	**P**	**21 03 39.6**	**+0.9**
BARC	**Barichara**	**32.49**	**71**	*eP*	**P**	**21 03 40.6**	**+1.1**
833A	**Chaparral WMA,**	**32.51**	**7**	P	**P**	**21 03 38.6**	**-0.5**
833A				IAmb	IAmb	21 03 47.4	
	comp=Z,27nm,0.9s						
833A	**Chaparral WMA,**	**32.51**	**7**	P	**P**	**21 03 39.7**	**+0.6**
	baz=188						
833A				S	**S**	**21 08 56.1**	**+2.5**
	baz=188						
833A	**Chaparral WMA,**	**32.51**	**7**	P	**P**	**21 03 39.5**	**+0.3**
	baz=188						
PAMC	**Pamplona, Colo**	**33.18**	**70**	*eP*	**P**	**21 03 46.5**	**+0.7**
TX32	**Lajitas Array**	**33.22**	**0**	P	**P**	**21 03 45.5**	**0.0**
TXAR	**Lajitas Array**	**33.22**	**0**	P	**P**	**21 03 46.1**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=185,slow=12,SNR=17						
TXAR				LR	LR	21 15 42.7	
	comp=Z,2μm,19.0s,baz=179,slow=34						
	comp=Z,1.9nm,0.9s						
TXAR	**Lajitas Array**	**33.22**	**0**	P	**P**	**21 03 45.8**	**+0.4**
TX31	**Lajitas Ar. Si**	**33.22**	**0**	P	**P**	**21 03 45.5**	**0.0**
TX31				IAmb	IAmb	21 03 55.4	
	comp=Z,27nm,1.0s						
TX31	**Lajitas Ar. Si**	**33.22**	**0**	P	**P**	**21 03 45.7**	**+0.2**
	baz=180,SNR=12						
TX31				S	S	21 09 15.3	+11
	baz=180						
735A	**Kenedy**	**33.27**	**10**	P	**P**	**21 03 45.4**	**-0.4**
HSIG		**33.59**	**349**	P	**P**	**21 03 48.5**	**-0.1**
HSIG				IAmb	IAmb	21 03 50.4	
	comp=Z,81nm,1.9s						
TAMC	**Tame, Arauca**	**33.76**	**72**	*eP*	**P**	**21 03 51.1**	**+0.8**
TBTG	**Tabatinga, AM**	**33.94**	**91**	*eP*	**P**	**21 03 52.7**	**+0.8**
JCT	**Junction City**	**34.59**	**6**	P	**P**	**21 03 56.9**	**-0.4**
JCT				IAmb	IAmb	21 04 05.1	
	comp=Z,39nm,0.9s						
JCT	**Junction City**	**34.59**	**6**	P	**P**	**21 03 56.9**	**-0.4**
JCT				pmax	pmax		
	comp=Z,39nm,0.9s						
JCT				MLR	MLR		
	comp=Z,2μm,19.0s						
JCT	**Junction City**	**34.59**	**6**	P	**P**	**21 03 57.9**	**+0.6**
	baz=187,SNR=5.1						
JCT				S	**S**	**21 09 30.2**	**+4.3**
	baz=187						
JCT	**Junction City**	**34.59**	**6**	P	**P**	**21 03 57.6**	**+0.3**
	baz=187,SNR=5.1						
HKT	**Hockley**	**34.72**	**12**	P	**P**	**21 03 56.7**	**-1.6**
HKT	**Hockley**	**34.72**	**12**	P	**P**	**21 03 56.7**	**-1.6**
HKT				pmax	pmax		
	comp=Z,19nm,1.2s						
HKT				MLR	MLR		
	comp=Z,1μm,20.0s						
HKT	**Hockley**	**34.72**	**12**	S	**S**	**21 09 30.2**	**+2.6**
	baz=194						
435B	**Jarrell**	**35.19**	**10**	P	**P**	**21 04 02.9**	**+0.5**
	baz=191						
RKT	**Rikitea**	**35.46**	**235**	*eT*	T	21 41 24.3	
	comp=Z,6.7nm,0.3s						
SDV	**Santo Domingo**	**35.62**	**69**	LR	LR	21 16 12.0	
	comp=Z,3μm,20.6s,baz=244,slow=32						
SDV	**Santo Domingo**	**35.62**	**69**	P	**P**	**21 04 06.3**	**-0.3**
SDV				IAmb	IAmb	21 04 23.7	
	comp=Z,53nm,1.2s						
SDV	**Santo Domingo**	**35.62**	**69**	IAMs_20	IAMs_20	21 15 49.7	
	comp=Z,3μm,21.0s						
SDV	**Santo Domingo**	**35.62**	**69**	*eP*	**P**	**21 04 06.8**	**+0.2**
319A	**Douglas**	**35.62**	**352**	P	**P**	**21 04 04.4**	**-1.9**
TAOE	**Nuku Hiva Isla**	**36.27**	**261**	*eLR*	LR	21 13 53.5	
	comp=Z,4μm,24.4s						
CLN7	**Carlsbad 7**	**36.29**	**0**	P	**P**	**21 04 11.0**	**-1.0**
HTMS	**Hat Mesa**	**36.35**	**0**	P	**P**	**21 04 12.5**	**0.0**
WHTX	**Lake Whitney,**	**36.40**	**9**	P	**P**	**21 04 11.6**	**-1.2**
WHTX				IAmb	IAmb	21 04 25.1	
	comp=Z,34nm,0.8s						
WHTX	**Lake Whitney,**	**36.40**	**9**	S	**S**	**21 09 49.8**	**-3.6**
	baz=191						
WHTX	**Lake Whitney,**	**36.40**	**9**	P	**P**	**21 04 12.7**	**-0.1**
	baz=191						
PB16	**IPOC Station P**	**36.53**	**116**	P	**P**	**21 04 15.3**	**+0.5**
PB16				IAmb	IAmb	21 04 23.1	
	comp=Z,45nm,0.9s						
121A	**Cookes Peak, D**	**36.59**	**355**	P	**P**	**21 04 14.5**	**-0.1**
121A	**Cookes Peak, D**	**36.59**	**355**	P	**P**	**21 04 15.0**	**+0.4**
	baz=174,SNR=12						
121A	**Cookes Peak, D**	**36.59**	**355**	P	**P**	**21 04 15.1**	**+0.4**
	baz=174,SNR=12						
NATX	**Nacogdoches**	**36.72**	**13**	P	**P**	**21 04 16.9**	**+1.4**
	baz=196						
ABTX	**Abilene, Hawle**	**36.73**	**6**	P	**P**	**21 04 14.9**	**-0.7**
ABTX	**Abilene, Hawle**	**36.73**	**6**	P	**P**	**21 04 16.7**	**+1.1**
ABTX				S	**S**	**21 10 00.7**	**+2.1**
	baz=187						
ABTX	**Abilene, Hawle**	**36.73**	**6**	P	**P**	**21 04 14.9**	**-0.7**
	baz=187						
TUC	**Tucson**	**36.77**	**350**	P	**P**	**21 04 16.0**	**0.0**
TUC	**Tucson**	**36.77**	**350**	P	**P**	**21 04 16.0**	**0.0**
TUC				pmax	pmax		
	comp=Z,21nm,1.5s						
TUC				MLR	MLR		
	comp=Z,3μm,20.0s						
TUC	**Tucson**	**36.77**	**350**	P	**P**	**21 04 16.2**	**+0.2**
	baz=169						
214A	**Organ Pipe Nat**	**36.81**	**347**	P	**P**	**21 04 16.6**	**+0.2**
214A				IAmb	IAmb	21 04 18.1	
	comp=Z,68nm,1.7s						
214A	**Organ Pipe Nat**	**36.81**	**347**	P	**P**	**21 04 16.6**	**+0.2**
	baz=165,SNR=6.3						
LPAZ	**La Paz**	**37.20**	**112**	P	**P**	**21 04 20.9**	**+0.3**
	comp=Z,7.1nm,0.9s,baz=289,slow=8.3,SNR=19						
LPAZ				LR	LR	21 16 55.6	
	comp=Z,3μm,20.1s,baz=280,slow=32						
	comp=Z,7.1nm,0.9s						
LPAZ	**La Paz**	**37.20**	**112**	P	**P**	**21 04 20.9**	**+0.3**
LPAZ				IAmb	IAmb	21 04 24.9	
	comp=Z,78nm,1.8s						
LPAZ	**La Paz**	**37.20**	**112**	P	**P**	**21 04 20.9**	**+0.3**
LPAZ				pmax	pmax		
	comp=Z,78nm,1.8s						
H03N2	**Juan Fernandez**	**37.38**	**144**	T	T	21 44 07.6	
	baz=318,slow=78,SNR=80						
H03N1	**Juan Fernandez**	**37.40**	**144**	T	T	21 44 03.2	
	baz=318,slow=78,SNR=108						
H03N3	**Juan Fernandez**	**37.40**	**144**	T	T	21 44 09.5	
	baz=318,slow=78,SNR=57						
PB07	**IPOC Station P**	**37.40**	**121**	P	**P**	**21 04 21.1**	**-0.6**
PB01	**IPOC Station P**	**37.48**	**120**	P	**P**	**21 04 21.1**	**-1.2**
ESJX	**Sierra Juarez**	**37.66**	**343**	P	**P**	**21 04 23.9**	**+0.2**
Z35A	**Perchaven, San**	**37.74**	**9**	P	**P**	**21 04 24.4**	**+0.3**
Z35A				IAmb	IAmb	21 04 31.7	
	comp=Z,50nm,0.8s						
113A	**Mohawk Valley,**	**37.81**	**346**	P	**P**	**21 04 25.0**	**+0.3**
113A				IAmb	IAmb	21 04 26.8	
	comp=Z,54nm,1.5s						
MSTX	**Muleshoe**	**37.86**	**2**	P	**P**	**21 04 24.5**	**-0.8**
MSTX				IAmb	IAmb	21 04 33.4	
	comp=Z,32nm,0.9s						
MSTX	**Muleshoe**	**37.86**	**2**	P	**P**	**21 04 26.1**	**+0.8**
	baz=182,SNR=7.8						
MSTX				S	**S**	**21 10 22.7**	**+6.8**
	baz=182						
MSTX	**Muleshoe**	**37.86**	**2**	P	**P**	**21 04 25.1**	**-0.2**
	baz=182,SNR=7.8						
ETMB	**Extrema**	**37.86**	**101**	*eP*	**P**	**21 04 25.2**	**-0.3**
CRNM	**Carthage**	**37.92**	**356**	P	**P**	**21 04 25.9**	**0.0**
Y22A	**Socorro**	**37.92**	**356**	P	**P**	**21 04 26.7**	**+0.8**
	baz=175,SNR=10						
Y22A				S	**S**	**21 10 21.6**	**+4.6**
	baz=175						
SBM	**South Baldy**	**37.97**	**356**	P	**P**	**21 04 24.8**	**-1.8**
PB09	**IPOC Station P**	**37.98**	**121**	P	**P**	**21 04 25.9**	**-0.7**
Y22D	**IRIS PASSCAL I**	**38.05**	**356**	P	**P**	**21 04 26.4**	**-0.5**
	baz=175						
Y22F	**Passcal Instru**	**38.05**	**356**	P	**P**	**21 04 26.6**	**-0.4**
	baz=175						
BAUV	**El Baul**	**38.06**	**70**	P	**P**	**21 04 25.8**	**-1.4**
PB06	**IPOC Station P**	**38.06**	**122**	P	**P**	**21 04 26.8**	**-0.4**
BNM	**Barren Site**	**38.11**	**356**	P	**P**	**21 04 27.5**	**-0.1**
LENM	**Lemitar**	**38.15**	**356**	P	**P**	**21 04 27.4**	**-0.4**
PB14	**IPOC Station P**	**38.19**	**126**	P	**P**	**21 04 26.3**	**-2.2**
PB14				IAmb	IAmb	21 04 36.0	
	comp=Z,86nm,1.3s						
YUH	**Yuha Desert**	**38.25**	**344**	P	**P**	**21 04 28.1**	**-0.4**
VBMS	**Vicksburg**	**38.29**	**19**	P	**P**	**21 04 30.5**	**+1.7**
	baz=202						
IKP	**In-Ko-Pah, Jac**	**38.31**	**343**	P	**P**	**21 04 29.0**	**-0.1**
	baz=160,SNR=6.5						
GLA	**Glamis**	**38.34**	**345**	P	**P**	**21 04 29.2**	**-0.1**
GLA				IAmb	IAmb	21 04 31.4	
	comp=Z,65nm,1.4s						
GLA	**Glamis**	**38.34**	**345**	P	**P**	**21 04 29.2**	**-0.1**
GLA				pmax	pmax		
	comp=Z,65nm,1.5s						
GLA	**Glamis**	**38.34**	**345**	P	**P**	**21 04 29.4**	**+0.1**
	baz=162,SNR=5.0						
SWSC	**Sam W. Stewart**	**38.50**	**344**	P	**P**	**21 04 30.9**	**+0.3**
	baz=161						
BAR	**Barrett**	**38.50**	**343**	P	**P**	**21 04 30.2**	**-0.4**
BRAL	**Brewton**	**38.58**	**24**	P	**P**	**21 04 32.8**	**+1.5**
	baz=208						
LVC	**Limon Verde**	**38.58**	**122**	P	**

X37A			IAmb	IAmb	21 04 59.4	
	comp=Z,65nm,1.4s					
X37A	**Clayton**	**39.30 11**	P	**P**	**21 04 37.1**	**-0.2**
	baz=194					
TPFO	**Pinon Flats**	**39.30 343**	P	**P**	**21 04 37.6**	**+0.1**
	baz=160,SNR=9.2					
PFO	**Pinyon Flats O**	**39.31 343**	P	**P**	**21 04 37.7**	**+0.1**
	comp=Z,12nm,1.0s,baz=156,slow=6.9,SNR=13					
PFO			LR	LR	21 16 58.1	
	comp=Z,4μm,21.6s,baz=148,slow=30					
	comp=Z,12nm,1.0s					
PFO	**Pinyon Flats O**	**39.31 343**	P	**P**	**21 04 37.6**	**+0.1**
PFO	**Pinyon Flats O**	**39.31 343**	IAMs_20	IAMs_20	21 17 03.0	
	comp=Z,4μm,18.0s					
PFO	**Pinyon Flats O**	**39.31 343**	P	**P**	**21 04 37.6**	**+0.1**
PFO			pmax	pmax		
	comp=Z,48nm,1.5s					
PFO			MLR	MLR		
	comp=Z,4μm,18.0s					
PFO	**Pinyon Flats O**	**39.31 343**	P	**P**	**21 04 37.4**	**-0.2**
	baz=160,SNR=7.5					
AF01	**San Pedro de A**	**39.33 122**	P	**P**	**21 04 38.5**	**+0.4**
W18A	**Petrified Fore**	**39.37 353**	P	**P**	**21 04 38.6**	**+0.6**
W18A	**Petrified Fore**	**39.37 353**	P	**P**	**21 04 38.5**	**+0.5**
	baz=171,SNR=7.3					
PDMCI	**Parker Dam,Lak**	**39.37 347**	P	**P**	**21 04 38.0**	**+0.2**
	baz=164					
SCI2	**San Clemente I**	**39.37 340**	P	**P**	**21 04 38.0**	**+0.1**
	baz=157					
IRM	**Iron Mountain**	**39.47 345**	P	**P**	**21 04 39.2**	**+0.4**
	baz=162,SNR=24					
CCAR	**Cane Creek**	**39.50 16**	P	**P**	**21 04 36.8**	**-2.1**
CCAR			IAmb	IAmb	21 04 42.0	
	comp=Z,45nm,0.5s					
MURC	**Murrieta**	**39.51 342**	P	**P**	**21 04 39.3**	**+0.1**
	baz=159					
AC06	**Mina Casimiro**	**39.52 129**	P	**P**	**21 04 38.8**	**-0.5**
AC06			IAmb	IAmb	21 04 44.1	
	comp=Z,141nm,1.6s					
BELC	**Belle Mtn. Jos**	**39.55 344**	P	**P**	**21 04 39.7**	**+0.2**
	baz=161,SNR=11					
250A	**Grady**	**39.60 24**	P	**P**	**21 04 40.0**	**+0.2**
FNO	**Franklin**	**39.61 8**	P	**P**	**21 04 39.0**	**-0.8**
FNO			IAmb	IAmb	21 04 53.8	
	comp=Z,58nm,1.2s					
ELS	**Elsinore Mount**	**39.63 342**	P	**P**	**21 04 39.5**	**-0.6**
MIAR	**Mount Ida**	**39.64 13**	P	**P**	**21 04 39.8**	**-0.3**
MIAR			IAmb	IAmb	21 04 47.3	
	comp=Z,38nm,0.9s					
MIAR	**Mount Ida**	**39.64 13**	P	**P**	**21 04 39.8**	**-0.3**
MIAR			pmax	pmax		
	comp=Z,38nm,0.9s					
MIAR	**Mount Ida**	**39.64 13**	P	**P**	**21 04 40.2**	**+0.1**
	baz=196,SNR=18					
MIAR	**Mount Ida**	**39.64 13**	P	**P**	**21 04 41.0**	**+0.9**
	baz=196,SNR=18					
CIS	**Catalina Islan**	**39.71 341**	P	**P**	**21 04 40.6**	**-0.2**
	baz=157					
NEE2	**Needles Airpor**	**39.92 346**	P	**P**	**21 04 43.0**	**+0.5**
	baz=163					
SNCC	**San Nicolas Is**	**39.95 339**	P	**P**	**21 04 42.7**	**0.0**
	baz=155					
FMP	**Fort Macarthur**	**39.96 341**	P	**P**	**21 04 42.9**	**+0.2**
	baz=157					
WUAZ	**Wupatki**	**40.00 351**	P	**P**	**21 04 43.5**	**+0.2**
WUAZ	**Wupatki**	**40.00 351**	P	**P**	**21 04 44.0**	**+0.7**
	baz=168					
BBRC	**Big Bear Solar**	**40.05 343**	P	**P**	**21 04 44.4**	**+0.5**
	baz=160					
W13A	**Hualapai Mount**	**40.08 347**	P	**P**	**21 04 43.6**	**-0.4**
Y45A	**Yeager Farm, C**	**40.12 19**	P	**P**	**21 04 42.3**	**-1.7**
Y45A			IAmb	IAmb	21 04 50.8	
	comp=Z,164nm,1.7s					
OK029	**Liberty Lake**	**40.13 8**	P	**P**	**21 04 44.5**	**+0.3**
SC01	**Santiago de lo**	**40.16 53**	P	**P**	**21 04 43.8**	**-0.9**
GMRC	**Granite Mounta**	**40.20 345**	P	**P**	**21 04 45.4**	**+0.5**
	baz=162,SNR=20					
BIRV	**Birongo**	**40.20 69**	P	**P**	**21 04 43.4**	**-1.7**
AC02	**Maricunga**	**40.23 128**	P	**P**	**21 04 45.6**	**-0.2**
BFSC	**Mount Baldy Ra**	**40.25 342**	P	**P**	**21 04 45.6**	**+0.3**
	baz=159,SNR=8.2					
LRAL	**Lakeview Retre**	**40.25 22**	P	**P**	**21 04 46.2**	**+1.0**
	baz=207					
AC05	**El Transito**	**40.34 131**	P	**P**	**21 04 46.8**	**+0.6**
PASC	**Pasadena Art C**	**40.35 342**	P	**P**	**21 04 46.5**	**+0.5**
PASC	**Pasadena Art C**	**40.35 342**	IAMs_20	IAMs_20	21 17 24.5	
	comp=Z,3μm,22.0s					
HEC	**Hector,Ludlow**	**40.42 344**	P	**P**	**21 04 47.3**	**+0.7**
	baz=161,SNR=9.0					
OK033	**Mehan**	**40.45 9**	P	**P**	**21 04 46.0**	**-0.8**
OK033			IAmb	IAmb	21 05 01.2	
	comp=Z,73nm,1.5s					
OK034	**N. Norfolk Rd.**	**40.45 9**	P	**P**	**21 04 46.7**	**-0.1**
OK034			IAmb	IAmb	21 06 10.2	
	comp=Z,44nm,1.0s					
DECC	**Green Verdugo**	**40.47 342**	P	**P**	**21 04 47.9**	**+0.8**
	baz=158					
TUL1	**Leonard**	**40.51 10**	P	**P**	**21 04 46.3**	**-1.0**
TUL1	**Leonard**	**40.51 10**	P	**P**	**21 04 48.1**	**+0.8**
	baz=192					
RRX	**Edison Barstow**	**40.65 343**	P	**P**	**21 04 48.6**	**+0.1**
	baz=160					
GO04	**Tololo Observa**	**40.66 133**	P	**P**	**21 04 49.1**	**+0.1**
WHAR	**Wooly Hollow**	**40.66 15**	P	**P**	**21 04 47.7**	**-0.9**
SCZ2	**Santa Cruz Isl**	**40.66 340**	P	**P**	**21 04 48.4**	**-0.2**
	baz=156					
OK049	**E0420 Rd and N**	**40.75 8**	P	**P**	**21 04 49.2**	**-0.1**
OXF	**Oxford**	**40.75 19**	P	**P**	**21 04 49.6**	**+0.2**
	baz=202					
152A	**Waverly Hall**	**40.84 25**	P	**P**	**21 04 50.4**	**+0.3**
152A			IAmb	IAmb	21 04 53.8	
	comp=Z,126nm,1.9s					
152A	**Waverly Hall**	**40.84 25**	P	**P**	**21 04 50.6**	**+0.5**
	baz=210					
TUQ	**Turquoise Moun**	**40.88 345**	P	**P**	**21 04 51.5**	**+0.9**
	baz=162					
V12A	**Nelson**	**40.90 346**	P	**P**	**21 04 50.5**	**-0.1**
OSI	**Osito Audit: C**	**40.93 341**	P	**P**	**21 04 51.1**	**+0.2**
	baz=157					
EDW2	**Edwards Air Fo**	**40.95 342**	P	**P**	**21 04 51.2**	**+0.2**
	baz=158,SNR=12					
GRTK	**Grand Turk**	**40.98 50**	IAMs_20	IAMs_20	21 19 15.6	
	comp=Z,3μm,20.0s					
GSC	**Goldstone, Bar**	**40.99 344**	P	**P**	**21 04 51.6**	**+0.2**
GSC			IAmb	IAmb	21 05 00.0	
	comp=Z,35nm,0.9s					
GSC	**Goldstone, Bar**	**40.99 344**	P	**P**	**21 04 51.6**	**+0.2**
GSC			pmax	pmax		
	comp=Z,35nm,0.9s					
GSC	**Goldstone, Bar**	**40.99 344**	P	**P**	**21 04 51.9**	**+0.5**
	baz=160,SNR=9.6					
T25A	**Trinidad**	**41.01 359**	P	**P**	**21 04 51.2**	**-0.5**
T25A	**Trinidad**	**41.01 359**	P	**P**	**21 04 52.2**	**+0.5**
	baz=179					
CO01	**Juntas del Tor**	**41.07 133**	P	**P**	**21 04 53.4**	**+1.0**
CO01			IAmb	IAmb	21 05 02.9	
	comp=Z,150nm,1.9s					
SBC	**Santa Barbara**	**41.10 340**	P	**P**	**21 04 52.4**	**+0.3**
	baz=156					
CO03	**El Pedregal**	**41.10 134**	P	**P**	**21 04 52.8**	**+0.3**
CCAC	**Calif City Air**	**41.20 342**	P	**P**	**21 04 53.5**	**+0.4**
CCAC			IAmb	IAmb	21 05 01.3	
	comp=Z,32nm,0.8s					
HHAR	**Hobbs**	**41.23 12**	P	**P**	**21 04 52.1**	**-1.1**
FCAR	**Ozark Folk Cen**	**41.27 15**	P	**P**	**21 04 52.6**	**-1.0**
U38A	**Gravette**	**41.28 12**	P	**P**	**21 04 53.8**	**+0.1**
MVCO	**Mesa Verde**	**41.30 354**	P	**P**	**21 04 54.2**	**+0.2**
MVCO			IAmb	IAmb	21 05 02.2	
	comp=Z,40nm,0.9s					
MVCO	**Mesa Verde**	**41.30 354**	P	**P**	**21 04 54.3**	**+0.3**
	baz=173,SNR=8.4					
LRMC	**Laurel Mtn Rad**	**41.41 343**	P	**P**	**21 04 55.2**	**+0.3**
	baz=159					
SHOC	**Shoshone, Teco**	**41.41 345**	P	**P**	**21 04 55.2**	**+0.4**
	baz=161					
W45A	**Hickory Valley**	**41.42 18**	P	**P**	**21 04 54.6**	**-0.2**
ARVC	**Arvin**	**41.43 341**	P	**P**	**21 04 54.9**	**-0.1**
	baz=157					
BCW	**Bitter Crk WRg**	**41.45 341**	P	**P**	**21 04 55.4**	**+0.2**
154A	**Montrose**	**41.50 27**	P	**P**	**21 04 55.4**	**-0.1**
PKM	**Mcpherson Peak**	**41.54 340**	P	**P**	**21 04 55.8**	**-0.3**
	baz=156					
PLAL	**Pickwick Lake**	**41.62 20**	P	**P**	**21 04 56.1**	**-0.3**
PLAL			IAmb	IAmb	21 05 03.9	
	comp=Z,50nm,0.9s					
PCRV	**Puerto La Cruz**	**41.63 70**	P	**P**	**21 04 54.7**	**-2.2**
	comp=Z,27nm,1.1s,baz=337,slow=5.6,SNR=4.1					
PCRV			LR	LR	21 21 32.3	
	comp=Z,2μm,20.3s,slow=35					
	comp=Z,27nm,1.1s					
SDCO	**Great Sand Dun**	**41.63 358**	P	**P**	**21 04 57.2**	**+0.3**
SDCO	**Great Sand Dun**	**41.63 358**	P	**P**	**21 04 57.6**	**+0.7**
	baz=178,SNR=9.0					
SDCO			S	**S**	**21 11 18.1**	**+5.3**
	baz=178					
SDCO	**Great Sand Dun**	**41.63 358**	P	**P**	**21 04 56.9**	**0.0**
	baz=178,SNR=9.0					
VA06	**Catapilco**	**41.66 137**	P	**P**	**21 04 56.6**	**-0.2**
LCAR	**Lake Charles**	**41.69 16**	P	**P**	**21 04 56.8**	**-0.3**
S22A	**4UR Ranch, Cre**	**41.70 357**	P	**P**	**21 04 58.0**	**+0.6**
S22A	**4UR Ranch, Cre**	**41.70 357**	P	**P**	**21 04 57.6**	**+0.1**
	baz=176,SNR=22					
SHPR	**Sheep Range**	**41.71 346**	P	**P**	**21 04 58.0**	**+0.6**
GWY	**Greenwater Val**	**41.79 344**	P	**P**	**21 04 58.1**	**+0.1**
GWY			IAmb	IAmb	21 05 06.5	
	comp=Z,35nm,0.9s					
LCMT	**Little Creek M**	**41.79 349**	P	**P**	**21 04 58.3**	**+0.3**
ISA	**Isabella, Lake**	**41.81 342**	P	**P**	**21 04 58.2**	**+0.1**
ISA	**Isabella, Lake**	**41.81 342**	P	**P**	**21 04 58.3**	**+0.1**
ISA			pmax	pmax		
	comp=Z,23nm,1.0s					
ISA	**Isabella, Lake**	**41.81 342**	P	**P**	**21 04 58.7**	**+0.5**
	baz=158,SNR=9.7					
MPMC	**Manual Prospec**	**41.89 343**	P	**P**	**21 04 59.4**	**+0.5**
	baz=160,SNR=31					
SMMC	**Simmler**	**41.98 340**	P	**P**	**21 04 59.8**	**+0.3**
	baz=156					
GOGA	**Godfrey**	**42.02 26**	P	**P**	**21 05 00.6**	**+0.8**
	baz=211					
PKCU	**Pink Cliffs**	**42.04 350**	P	**P**	**21 05 00.1**	**-0.1**
PKCU			IAmb	IAmb	21 05 03.1	
	comp=Z,76nm,1.5s					
FURC	**Furnace Creek,**	**42.10 344**	P	**P**	**21 05 00.8**	**+0.5**
	baz=161					
FPAL	**Fort Paine**	**42.12 23**	P	**P**	**21 05 00.5**	**-0.1**
VES	**Vestal, Richgr**	**42.17 342**	P	**P**	**21 05 01.5**	**+0.6**
	baz=157					
MT02	**Curacav**	**42.18 137**	P	**P**	**21 05 02.1**	**+1.0**
PV13	**Radium Mtn., P**	**42.27 354**	P	**P**	**21 05 02.0**	**0.0**
VA03	**San Esteban**	**42.29 136**	P	**P**	**21 05 02.2**	**0.0**
SZCU	**Shurtz Canyon**	**42.32 349**	P	**P**	**21 05 02.6**	**+0.2**
CCUT	**Cedar City**	**42.33 349**	P	**P**	**21 05 03.1**	**+0.6**
WCT	**Wildcat Mounta**	**42.35 345**	P	**P**	**21 05 03.1**	**+0.6**
WCT			IAmb	IAmb	21 05 11.6	
	comp=Z,36nm,1.0s					
TPNV	**Topopah Spring**	**42.40 345**	P	**P**	**21 05 03.4**	**+0.4**
TPNV			IAmb	IAmb	21 05 05.8	
	comp=Z,63nm,1.6s					
TPNV	**Topopah Spring**	**42.40 345**	P	**P**	**21 05 03.4**	**+0.4**
TPNV			pmax	pmax		
	comp=Z,63nm,1.7s					
TPNV			MLR	MLR		
	comp=Z,5μm,20.0s					
TPNV	**Topopah Spring**	**42.40 345**	P	**P**	**21 05 04.1**	**+1.1**
	baz=162,SNR=10					
PV15	**Paradox Valley**	**42.41 355**	P	**P**	**21 05 02.4**	**-0.9**
PEL	**Peldehue**	**42.42 137**	P	**P**	**21 05 04.0**	**+0.9**
PEL	**Peldehue**	**42.42 137**	P	**P**	**21 05 04.0**	**+0.9**
PEL			pmax	pmax		
	comp=Z,165nm,1.7s					
CWC	**Cottonwood Cre**	**42.42 343**	P	**P**	**21 05 03.9**	**+0.7**
	baz=159					
X51A	**Calhoun**	**42.44 24**	P	**P**	**21 05 02.4**	**-0.8**
X51A			IAmb	IAmb	21 05 25.9	
	comp=Z,112nm,1.7s					
X51A	**Calhoun**	**42.44 24**	P	**P**	**21 05 03.4**	**+0.3**
	baz=209					
X51A			P	**P**	**21 05 03.4**	**+0.3**
	baz=209					
MGMO	**Mountain Grove**	**42.44 14**	P	**P**	**21 05 03.0**	**-0.2**
MT01	**Popeta**	**42.46 138**	P	**P**	**21 05 03.9**	**+0.5**
MT01			IAmb	IAmb	21 05 11.0	
	comp=Z,88nm,1.4s					
PV10	**Paradox Valley**	**42.50 354**	P	**P**	**21 05 02.4**	**-1.6**
PV07	**Paradox Valley**	**42.52 355**	P	**P**	**21 05 04.4**	**+0.3**
MT05	**Renca**	**42.53 137**	P	**P**	**21 05 03.9**	**-0.2**
PRN	**Pahroc Range**	**42.55 347**	P	**P**	**21 05 04.9**	**+0.7**
PV23	**Carpenter Ridg**	**42.58 354**	P	**P**	**21 05 04.6**	**+0.1**
MTPU	**Mount Pierson**	**42.60 350**	P	**P**	**21 05 05.4**	**+0.6**
VOG	**Valley Oaks Go**	**42.70 342**	P	**P**	**21 05 05.5**	**+0.2**
	baz=157					
S39A	**Bolivar**	**42.71 12**	P	**P**	**21 05 05.5**	**+0.2**
S39A	**Bolivar**	**42.71 12**	P	**P**	**21 05 05.8**	**+0.4**
	baz=196					
GO05	**Huala**	**42.72 140**	P	**P**	**21 05 05.5**	**-0.1**
GRAC	**Grapevine Rang**	**42.74 344**	P	**P**	**21 05 06.3**	**+0.7**
GRAC			IAmb	IAmb	21 05 14.2	
	comp=Z,57nm,0.9s					
GRAC	**Grapevine Rang**	**42.74 344**	P	**P**	**21 05 06.8**	**+1.1**
	baz=160,SNR=21					
V48A	**Smith Brothers**	**42.74 21**	P	**P**	**21 05 05.7**	**+0.1**
V48A			IAmb	IAmb	21 05 13.1	
	comp=Z,44nm,1.1s					
V48A	**Smith Brothers**	**42.74 21**	P	**P**	**21 05 05.8**	**+0.1**
	baz=206					
MT03	**Universidad Ad**	**42.74 137**	P	**P**	**21 05 05.7**	**-0.1**
WVT	**Waverly**	**42.75 19**	P	**P**	**21 05 05.3**	**-0.3**
WVT			IAmb	IAmb	21 05 12.9	
	comp=Z,42nm,1.0s					
WVT	**Waverly**	**42.75 19**	P	**P**	**21 05 05.3**	**-0.3**
WVT			pmax	pmax		
	comp=Z,42nm,1.0s					
WVT	**Waverly**	**42.75 19**	P	**P**	**21 05 05.2**	**-0.4**
	baz=204					
WVT	**Waverly**	**42.75 19**	P	**P**	**21 05 06.5**	**+0.9**
	baz=204					
Q24A	**Divide**	**42.84 359**	P	**P**	**21 05 06.1**	**-0.7**
Q24A	**Divide**	**42.84 359**	P	**P**	**21 05 06.9**	**+0.1**
	baz=178,SNR=7.1					
CBKS	**Cedar Bluff**	**42.85 5**	P	**P**	**21 05 07.6**	**+1.1**
	baz=186					
KSCO	**Kaye Shedlock'**	**42.89 2**	P	**P**	**21 05 06.9**	**-0.1**
KSCO	**Kaye Shedlock'**	**42.89 2**	P	**P**	**21 05 07.2**	**+0.3**
	baz=182					
BO01	**Tunca**	**42.89 139**	P	**P**	**21 05 06.8**	**-0.1**
CELP	**Cerrillos**	**42.91 58**	P	**P**	**21 05 06.5**	**-0.8**
CELP			IAmb	IAmb	21 05 18.7	
	comp=Z,84nm,1.6s					
ZON	**Zonda**	**42.93 134**	P	**P**	**21 05 07.8**	**+0.4**
ZON			IAmb	IAmb	21 05 10.8	
	comp=Z,72nm,1.2s					
ZON	**Zonda**	**42.93 134**	P	**P**	**21 05 07.8**	**+0.4**
ZON			pmax	pmax		
	comp=Z,72nm,1.2s					
S11A	**Rachel**	**42.94 346**	P	**P**	**21 05 08.5**	**+1.1**
S11A			IAmb	IAmb	21 05 12.2	
	comp=Z,45nm,1.1s					
BO04	**La Punta**	**42.97 138**	P	**P**	**21 05 07.3**	**-0.3**
BO04			IAmb	IAmb	21 05 10.6	
	comp=Z,132nm,1.8s					
GMN	**Gold Mountain**	**42.99 344**	P	**P**	**21 05 08.4**	**+0.5**
TIN	**Tinemaha, Big**	**43.03 343**	P	**P**	**21 05 08.9**	**+0.8**
	baz=159					
LCH	**Last Change Ra**	**43.04 344**	P	**P**	**21 05 08.0**	**-0.1**
MVU	**Marysvale**	**43.05 350**	P	**P**	**21 05 08.4**	**0.0**
MVU			IAmb	IAmb	21 05 16.7	
	comp=Z,60nm,1.2s					
MSU	**Marysvale**	**43.06 351**	P	**P**	**21 05 08.4**	**0.0**
MSU	**Marysvale**	**43.06 351**	P	**P**	**21 05 08.4**	**0.0**
SMCO	**Snowmass**	**43.13 357**	P	**P**	**21 05 09.0**	**-0.2**
SMCO			IAMs_20	IAMs_20	21 20 35.8	
	comp=Z,2μm,19.0s					
LMEL	**Las Melosas**	**43.16 137**	P	**P**	**21 05 09.5**	**+0.2**
MACA	**Manacapuru-AM**	**43.18 90**	*e*P	**P**	**21 05 09.5**	**0.0**
TCRU	**Three Creeks R**	**43.20 350**	P	**P**	**21 05 09.2**	**-0.4**
DSP	**Deep Springs**	**43.26 344**	P	**P**	**21 05 10.5**	**+0.8**
W52A	**Murphy**	**43.27 24**	P	**P**	**21 05 09.0**	**-0.9**
W52A			IAmb	IAmb	21 06 45.9	
	comp=Z,42nm,0.8s					
SJG	**San Juan**	**43.29 58**	P	**P**	**21 05 09.2**	**-1.2**
	comp=Z,4.0nm,0.3s,baz=280,slow=18,SNR=1.6					
SJG			LR	LR	21 20 15.5	
	comp=Z,1μm,19.1s,baz=231,slow=32					
	comp=Z,4.0nm,0.3s					
SJG	**San Juan**	**43.29 58**	P	**P**	**21 05 09.0**	**-1.3**
SJG			IAmb	IAmb	21 05 22.2	
	comp=Z,66nm,1.4s					
SJG	**San Juan**	**43.29 58**	P	**P**	**21 05 09.0**	**-1.3**
SJG			pmax	pmax		
	comp=Z,66nm,1.4s					
SJG			MLR	MLR		
	comp=Z,1μm,20.0s					
NHSC	**New Hope**	**43.30 30**	P	**P**	**21 05 10.9**	**+0.8**
	baz=216					
Q16A	**Castle Valley**	**43.30 352**	P	**P**	**21 05 10.4**	**+0.1**
BO02	**Sierra Bellavi**	**43.33 139**	P	**P**	**21 05 11.0**	**+0.4**
BO02			IAmb	IAmb	21 05 18.4	
	comp=Z,54nm,1.1s					
CPCT	**Cooper Cave**	**43.34 23**	P	**P**	**21 05 10.5**	**+0.1**
CPCT			IAmb	IAmb	21 05 19.5	
	comp=Z,66nm,1.5s					
PSUT	**Pine Spring**	**43.38 349**	P	**P**	**21 05 10.8**	**-0.2**
SRU	**San Rafael Swe**	**43.40 353**	P	**P**	**21 05 11.2**	**+0.1**
SRU	**San Rafael Swe**	**43.40 353**	P	**P**	**21 05 11.2**	**+0.1**
SRU			pmax	pmax		
	comp=Z,26nm,1.0s					
MZP	**Montezuma Peak**	**43.40 344**	P	**P**	**21 05 11.4**	**+0.2**
GCPR	**Guaynabo City**	**43.44 58**	P	**P**	**21 05 09.6**	**-1.9**
GCPR			IAmb	IAmb	21 05 10.8	
	comp=Z,76nm,1.4s					
BBGB	**Big Mountain B**	**43.49 340**	P	**P**	**21 05 10.7**	**-1.0**
BBGB			IAmb	IAmb	21 05 24.1	
	comp=Z,69nm,1.0s					
KSU1	**Kansas State U**	**43.49 8**	P	**P**	**21 05 12.2**	**+0.5**
	baz=191					
KSU1	**Kansas State U**	**43.49 8**	P	**P**	**21 05 12.2**	**+0.5**
	baz=191					
ML02	**Panimavida**	**43.52 141**	P	**P**	**21 05 11.4**	**-0.6**
R40A	**Maddies Statio**	**43.52 13**	P	**P**	**21 05 11.5**	**-0.4**
R40A	**Maddies Statio**	**43.52 13**	P	**P**	**21 05 12.2**	**+0.3**
	baz=197,SNR=11					
CCM	**Cathedral Cave**	**43.55 15**	P	**P**	**21 05 10.6**	**-1.5**
CCM	**Cathedral Cave**	**43.55 15**	P	**P**	**21 05 10.6**	**-1.5**
CCM			pmax	pmax		
	comp=Z,25nm,0.9s					
CCM			MLR	MLR		
	comp=Z,1μm,19.0s					
CCM	**Cathedral Cave**	**43.55 15**	P	**P**	**21 05 12.2**	**+0.2**
	baz=198					
CCM	**Cathedral Cave**	**43.55 15**	P	**P**	**21 05 12.3**	**+0.2**
	baz=198					
R11A	**Troy Canyon, C**	**43.57 347**	P	**P**	**21 05 13.0**	**+0.5**
R11A	**Troy Canyon, C**	**43.57 347**	P	**P**	**21 05 13.3**	**+0.8**
	baz=163,SNR=20					
BG3	**Lake Jocassee**	**43.60 25**	P	**P**	**21 05 11.8**	**-0.8**
BG3			IAmb	IAmb	21 05 16.5	
	comp=Z,70nm,1.5s					
TMUT	**Trail Mountain**	**43.68 352**	P	**P**	**21 05 13.4**	**-0.1**
TMUT			IAmb	IAmb	21 05 15.8	
	comp=Z,51nm,1.6s					
ISCO	**Idaho Springs**	**43.69 358**	P	**P**	**21 05 12.8**	**-0.8**
ISCO	**Idaho Springs**	**43.69 358**	P	**P**	**21 05 12.8**	**-0.8**
ISCO			pmax	pmax		
	comp=Z,17nm,1.0s					
ISCO			MLR	MLR		
	comp=Z,2μm,20.0s					
ISCO	**Idaho Springs**	**43.69 358**	P	**P**	**21 05 13.1**	**-0.5**
	baz=178					
ISCO	**Idaho Springs**	**43.69 358**	P	**P**	**21 05 14.0**	**+0.4**
	baz=178					
TPH	**Tonopah**	**43.71 345**	P	**P**	**21 05 13.9**	**+0.2**
TPH	**Tonopah**	**43.71 345**	P	**P**	**21 05 13.9**	**+0.2**
TPH			pmax	pmax		
	comp=Z,260nm,1.6s					
V51A	**Loudon**	**43.72 23**	P	**P**	**21 05 13.6**	**+0.1**
SIV	**San Ignacio**	**43.74 109**	P	**P**	**21 05 13.3**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=284,slow=8.3,SNR=17					
SIV			LR	LR	21 21 10.2	
	comp=Z,6μm,20.0s,baz=298,slow=33					
	comp=Z,4.3nm,0.8s					
S44A	**Carbondale**	**43.74 17**	P	**P**	**21 05 13.1**	**-0.5**
S44A			IAmb	IAmb	21 05 20.6	
	comp=Z,30nm,0.9s					
S44A	**Carbondale**	**43.74 17**	P	**P**	**21 05 13.6**	**0.0**
	baz=201					
MLAC	**Mammoth, Mammo**	**43.75 343**	P	**P**	**21 05 14.4**	**+0.4**
	baz=158					
T47A	**Sharon Grove**	**43.77 20**	P	**P**	**21 05 12.2**	**-1.7**
T47A	**Sharon Grove**	**43.77 20**	P	**P**	**21 05 14.3**	**+0.5**
	baz=205					
SIUC	**Southern Illin**	**43.78 17**	P	**P**	**21 05 12.6**	**-1.3**
OMMB	**Old Mammoth Mi**	**43.78 343**	P	**P**	**21 05 14.6**	**+0.3**
P17A	**Butcher Ranch,**	**43.79 352**	P	**P**	**21 05 14.4**	**+0.2**
P17A			IAmb	IAmb	21 05 22.7	
	comp=Z,31nm,1.0s					
U49A	**Red Boiling Sp**	**43.80 21**	P	**P**	**21 05 13.9**	**-0.3**
MDPB	**Devils Postpil**	**43.82 343**	P	**P**	**21 05 13.5**	**-1.1**
TKL	**Tuckaleechee C**	**43.82 24**	P	**P**	**21 05 13.4**	**-0.9**
	comp=Z,36nm,1.3s,baz=189,slow=10,SNR=3.5					
	comp=Z,36nm,1.3s					
TKL	**Tuckaleechee C**	**43.82 24**	P	**P**	**21 05 13.3**	**-1.0**
TKL			IAmb	IAmb	21 05 45.6	
	comp=Z,60nm,1.5s					
TKL	**Tuckaleechee C**	**43.82 24**	P	**P**	**21 05 13.3**	**-1.0**
TKL			pmax	pmax		
	comp=Z,60nm,1.5s					
BOAV	**Boa Vista**	**43.87 82**	*e*P	**P**	**21 05 14.5**	**-0.6**
P18A	**Preston Nutter**	**43.88 353**	P	**P**	**21 05 14.6**	**-0.5**
PAULI	**Pauline**	**43.94 27**	P	**P**	**21 05 14.7**	**-0.6**
PAULI			IAmb	IAmb	21 05 18.9	
	comp=Z,80nm,1.5s					
VILB	**Vilhena**	**44.09 104**	*e*P	**P**	**21 05 16.1**	**-0.8**
O20A	**White River Ci**	**44.17 355**	P	**P**	**21 05 17.4**	**+0.1**
O20A			IAmb	IAmb	21 05 26.5	
	comp=Z,44nm,0.9s					
O20A	**White River Ci**	**44.17 355**	P	**P**	**21 05 17.9**	**+0.5**
	baz=174,SNR=16					
V53A	**Saluda**	**44.23 25**	P	**P**	**21 05 16.5**	**-1.1**
V53A			IAmb	IAmb	21 05 24.9	
	comp=Z,29nm,0.9s					
LHV	**Little Huntoon**	**44.23 344**	P	**P**	**21 05 18.1**	**+0.6**
LHV			IAmb	IAmb	21 05 26.6	
	comp=Z,41nm,1.0s					
NV11	**Mina Array Sit**	**44.30 344**	P	**P**	**21 05 18.8**	**+0.5**
NVAR	**Mina Array Bea**	**44.34 344**	P	**P**	**21 05 19.4**	**+0.7**
	comp=Z,6.6nm,0.9s,baz=166,slow=7.9,SNR=18

	baz=177					
DUG	**Dugway, Tooele**	**44.80 350**	P	**P**	**21 05 22.5**	**+0.2**
DUG	**Dugway, Tooele**	**44.80 350**	P	**P**	**21 05 22.5**	**+0.2**
DUG			pmax	pmax		
	comp=Z,21nm,1.0s					
DUG			MLR	MLR		
	comp=Z,1µm,22.0s					
DUG	**Dugway, Tooele**	**44.80 350**	P	**P**	**21 05 22.8**	**+0.5**
	baz=167,SNR=18					
OGNE	**Ogallala**	**44.84 2**	P	**P**	**21 05 22.5**	**0.0**
OGNE	**Ogallala**	**44.84 2**	P	**P**	**21 05 23.8**	**+1.3**
	baz=183					
KVN	**Kaiserville**	**44.86 344**	P	**P**	**21 05 23.3**	**+0.4**
KVN	**Kaiserville**	**44.86 344**	P	**P**	**21 05 23.3**	**+0.4**
KVN			pmax	pmax		
	comp=Z,17nm,0.9s					
Q44A	**Meyer Farm, Va**	**44.94 17**	P	**P**	**21 05 23.0**	**-0.2**
Q44A	**Meyer Farm, Va**	**44.94 17**	P	**P**	**21 05 23.3**	**+0.1**
	baz=201					
JLU	**Jordanelle**	**44.99 352**	P	**P**	**21 05 24.0**	**0.0**
OLIL	**Olney**	**45.05 18**	P	**P**	**21 05 23.7**	**-0.4**
OLIL			IAmb	IAmb	21 05 30.8	
	comp=Z,27nm,0.7s					
V55A	**Taylorsville**	**45.07 26**	P	**P**	**21 05 23.8**	**-0.5**
V55A			IAmb	IAmb	21 05 52.0	
	comp=Z,80nm,1.5s					
YERR	**Yerington**	**45.12 343**	P	**P**	**21 05 25.1**	**+0.1**
YERR			IAmb	IAmb	21 05 33.9	
	comp=Z,44nm,1.0s					
CTU	**Camp Tracy**	**45.12 352**	P	**P**	**21 05 25.0**	**+0.1**
CTU			IAmb	IAmb	21 05 33.2	
	comp=Z,22nm,0.9s					
WCI	**Wyandotte Cave**	**45.16 20**	P	**P**	**21 05 23.6**	**-1.4**
WCI			IAmb	IAmb	21 05 28.0	
	comp=Z,41nm,1.4s					
WCI	**Wyandotte Cave**	**45.16 20**	P	**P**	**21 05 23.6**	**-1.4**
WCI			pmax	pmax		
	comp=Z,41nm,1.4s					
WCI	**Wyandotte Cave**	**45.16 20**	P	**P**	**21 05 25.4**	**+0.4**
	baz=205					
PHWY	**Pilot Hill**	**45.18 358**	P	**P**	**21 05 24.3**	**-1.2**
PNTR	**Pine Nut**	**45.32 343**	P	**P**	**21 05 27.8**	**+1.2**
N35A	**Tabor**	**45.36 9**	P	**P**	**21 05 26.2**	**-0.3**
N35A			IAmb	IAmb	21 05 39.5	
	comp=Z,54nm,1.2s					
EMB	**Emerald Bay**	**45.37 342**	P	**P**	**21 05 27.6**	**+0.7**
PTLB	**Pontes e Lacer**	**45.48 108**	*e*P	**P**	**21 05 27.3**	**-0.6**
LR03	**Panguipulli**	**45.49 145**	P	**P**	**21 05 29.0**	**+1.3**
TCUT	**Toone Canyon**	**45.49 352**	P	**P**	**21 05 27.4**	**-0.5**
TCUT			IAmb	IAmb	21 05 36.3	
	comp=Z,26nm,0.8s					
VCNR	**Virginia City**	**45.53 343**	P	**P**	**21 05 28.6**	**+0.4**
VCNR			IAmb	IAmb	21 05 37.1	
	comp=Z,41nm,0.9s					
BGU	**Big Grassy Mou**	**45.55 350**	P	**P**	**21 05 28.7**	**+0.4**
R49A	**Shelbyville**	**45.61 21**	P	**P**	**21 05 28.0**	**-0.6**
R49A			IAmb	IAmb	21 05 32.1	
	comp=Z,76nm,1.6s					
R49A	**Shelbyville**	**45.61 21**	P	**P**	**21 05 28.1**	**-0.4**
	baz=207					
R49A			P	**P**	**21 05 28.1**	**-0.4**
	baz=207					
AFDM	**Forest Hills D**	**45.61 341**	P	**P**	**21 05 29.1**	**+0.5**
AFDM			IAmb	IAmb	21 05 37.1	
	comp=Z,25nm,0.9s					
MPK	**Martis Peak**	**45.64 342**	P	**P**	**21 05 28.9**	**-0.2**
MPK			IAmb	IAmb	21 05 38.4	
	comp=Z,52nm,1.2s					
RWWY	**Rawlins**	**45.65 357**		**P**	**21 05 28.8**	**-0.3**
RWWY			IAmb	IAmb	21 05 44.6	
	comp=Z,34nm,1.3s					
RWWY			IAMs_20	IAMs_20	21 21 55.4	
	comp=Z,2µm,20.0s					
N38A	**Joes South For**	**45.72 11**		**P**	**21 05 29.2**	**-0.2**
N38A			IAmb	IAmb	21 05 51.5	
	comp=Z,19nm,0.8s					
N38A	**Joes South For**	**45.72 11**	P	**P**	**21 05 30.2**	**+0.8**
	baz=195					
ELK	**Elko**	**45.79 348**	LR	LR	21 21 56.4	
	comp=Z,2µm,18.4s,baz=166,slow=33					
ELK	**Elko**	**45.79 348**	IAMs_20	IAMs_20	21 21 44.6	
	comp=Z,2µm,19.0s					
PAHR	**Pah Rah Range**	**45.83 343**	P	**P**	**21 05 30.9**	**+0.4**
PAHR			IAmb	IAmb	21 05 38.9	
	comp=Z,40nm,0.9s					
SPUT	**South Promonto**	**45.83 351**	P	**P**	**21 05 30.6**	**+0.2**
SPUT			IAmb	IAmb	21 05 38.9	
	comp=Z,27nm,1.0s					
R50A	**Paris**	**45.90 22**	P	**P**	**21 05 30.0**	**-0.8**
R50A			IAmb	IAmb	21 05 37.0	
	comp=Z,26nm,1.1s					
R50A	**Paris**	**45.90 22**	P	**P**	**21 05 30.7**	**-0.1**
	baz=208					
R50A			P	**P**	**21 05 30.7**	**-0.1**
	baz=208					
BMN	**Battle Mountai**	**45.94 346**	P	**P**	**21 05 31.1**	**-0.2**
BMN			IAmb	IAmb	21 05 38.9	
	comp=Z,20nm,0.9s					
BMN	**Battle Mountai**	**45.94 346**	P	**P**	**21 05 31.1**	**-0.2**
BMN			pmax	pmax		
	comp=Z,20nm,0.9s					
GO06	**Curarrehue**	**45.96 145**	P	**P**	**21 05 32.0**	**+0.5**
HWUT	**Hardware Ranch**	**45.99 352**	P	**P**	**21 05 31.6**	**-0.2**
HWUT			IAmb	IAmb	21 05 40.0	
	comp=Z,30nm,0.9s					
HWUT			IAMs_20	IAMs_20	21 21 44.0	
	comp=Z,3µm,20.0s					
GDXM	**Geysers**	**46.09 339**	P	**P**	**21 05 33.2**	**+0.7**
GDXM			IAmb	IAmb	21 05 41.3	
	comp=Z,26nm,1.1s					
CNNC	**Cliffs of the**	**46.13 30**	IAMs_20	IAMs_20	21 22 49.8	
	comp=Z,3µm,20.0s					
CNNC	**Cliffs of the**	**46.13 30**	P	**P**	**21 05 33.0**	**+0.3**
	baz=217					
P46A	**Rosedale**	**46.13 18**	P	**P**	**21 05 32.4**	**-0.2**
P46A			IAmb	IAmb	21 05 39.3	
	comp=Z,37nm,0.9s					
P46A	**Rosedale**	**46.13 18**	P	**P**	**21 05 32.7**	**+0.1**
	baz=203					
BEKR	**Beckworth**	**46.26 342**	P	**P**	**21 05 34.4**	**+0.5**
BEKR			IAmb	IAmb	21 05 36.2	
	comp=Z,54nm,1.7s					
ORV	**Oroville**	**46.33 341**	P	**P**	**21 05 34.8**	**+0.5**
ORV	**Oroville**	**46.33 341**	P	**P**	**21 05 34.8**	**+0.5**
ORV			pmax	pmax		
	comp=Z,55nm,1.0s					
ORV			MLR	MLR		
	comp=Z,5µm,18.0s					
HVU	**Hansel Valley**	**46.34 351**	P	**P**	**21 05 34.7**	**+0.2**
HVU			IAmb	IAmb	21 05 42.7	
	comp=Z,28nm,1.1s					
HVU	**Hansel Valley**	**46.34 351**	P	**P**	**21 05 34.7**	**+0.2**
HVU			pmax	pmax		
	comp=Z,28nm,1.1s					
HDIL	**Hopedale**	**46.40 15**	P	**P**	**21 05 35.3**	**+0.5**
	baz=200					
BLA	**Blacksburg**	**46.55 26**	IAMs_20	IAMs_20	21 23 56.5	
	comp=Z,2µm,20.0s					
BLA	**Blacksburg**	**46.55 26**	P	**P**	**21 05 36.3**	**+0.2**
	baz=213					
K22A	**Casper**	**46.57 357**	P	**P**	**21 05 37.0**	**+0.8**
	baz=176					
PPT	**Papeete**	**46.64 250**	P	**P**	**21 05 39.3**	**+2.2**
	comp=Z,19nm,0.7s,baz=76,slow=20,SNR=2.2					
PPT			LR	LR	21 20 35.0	
	comp=Z,2µm,18.1s,baz=74,slow=30					
	comp=Z,19nm,0.7s					
PPT2	**Papeete2**	**46.65 250**	*e*P	**P**	**21 05 37.6**	**+0.4**
	comp=Z,127nm,27.0s					
PPT2			*e*S	**S**	**21 12 25.3**	**-0.7**
	comp=Z,744nm,24.5s					
PPT2			*e*LR	LR	21 18 41.6	
	comp=Z,6µm,27.0s					
SCIA	**State Center**	**46.80 11**	P	**P**	**21 05 38.1**	**+0.2**
	baz=195					
SFIN	**Lafayette**	**46.86 18**	P	**P**	**21 05 39.1**	**+0.7**
	baz=203					
P49A	**Miami Univ. Ec**	**46.88 20**	P	**P**	**21 05 37.8**	**-0.7**
	baz=207					
BW06	**Boulder Array**	**46.90 354**	P	**P**	**21 05 37.6**	**-1.3**
BW06			IAmb	IAmb	21 05 46.4	
	comp=Z,19nm,0.8s					
BW06	**Boulder Array**	**46.90 354**	P	**P**	**21 05 38.2**	**-0.8**
	baz=172,SNR=6.2					
PD31	**Pinedale Array**	**46.90 354**	P	**P**	**21 05 37.4**	**-1.6**
PD31			IAmb	IAmb	21 06 14.2	
	comp=Z,34nm,1.2s					
PDAR	**Pinedale Array**	**46.90 354**	P	**P**	**21 05 38.4**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=163,slow=7.0,SNR=18					
PDAR			PcP	**PcP**	**21 07 13.9**	**+2.3**
	comp=Z,3.0nm,1.0s,baz=161,slow=5.7,SNR=2.2					
PDAR			LR	LR	21 22 51.0	
	comp=Z,1µm,19.7s,baz=182,slow=33					
	comp=Z,2.8nm,0.6s					
PDAR	**Pinedale Array**	**46.90 354**	P	**P**	**21 05 37.4**	**-1.6**
AHID	**Auburn Hatcher**	**47.07 353**	P	**P**	**21 05 39.5**	**-0.7**
AHID			IAmb	IAmb	21 05 47.4	
	comp=Z,15nm,0.8s					
AHID			IAMs_20	IAMs_20	21 22 30.6	
	comp=Z,2µm,20.0s					
PLCA	**Paso Flores**	**47.25 145**	P	**P**	**21 05 41.9**	**+0.4**
	comp=Z,25nm,1.2s,baz=303,slow=9.8,SNR=13					
PLCA			LR	LR	21 20 43.4	
	comp=Z,4µm,19.7s,baz=324,slow=30					
	comp=Z,25nm,1.2s					
PLCA	**Paso Flores**	**47.25 145**	P	**P**	**21 05 41.4**	**-0.2**
PLCA	**Paso Flores**	**47.25 145**	P	**P**	**21 05 41.4**	**-0.2**
PLCA			pmax	pmax		
	comp=Z,131nm,1.7s					
PLCA	**Paso Flores**	**47.25 145**	*e*P	**P**	**21 05 42.6**	**+1.1**
Q52A	**Bidwell**	**47.28 23**	P	**P**	**21 05 40.7**	**-1.0**
PDRB	**Porto dos Gac**	**47.31 102**	*e*P	**P**	**21 05 41.4**	**-1.0**
L40A	**Anamosa**	**47.36 13**	P	**P**	**21 05 41.4**	**-0.9**
L40A			IAmb	IAmb	21 05 49.3	
	comp=Z,65nm,1.9s					
L40A	**Anamosa**	**47.36 13**	P	**P**	**21 05 42.3**	**+0.1**
	baz=197					
O48B	**Farmland**	**47.37 20**	P	**P**	**21 05 41.4**	**-1.0**
	baz=206					
K38A	**Parkersburg**	**47.60 11**	P	**P**	**21 05 43.1**	**-1.0**
K38A			IAmb	IAmb	21 05 55.1	
	comp=Z,28nm,1.2s					
REDW	**Red Top Meadow**	**47.63 353**	P	**P**	**21 05 44.3**	**-0.3**
REDW			IAmb	IAmb	21 06 02.7	
	comp=Z,17nm,1.0s					
KMRM	**Mail Ridge**	**47.67 339**	P	**P**	**21 05 44.5**	**-0.4**
SNOW	**Snow King Moun**	**47.72 353**	P	**P**	**21 05 44.8**	**-0.5**
SNOW			IAmb	IAmb	21 06 17.1	
	comp=Z,22nm,1.1s					
N47A	**Urbana**	**47.76 19**	P	**P**	**21 05 43.9**	**-1.5**
TPAW	**Teton Pass**	**47.77 353**	P	**P**	**21 05 45.5**	**-0.2**
TPAW			IAmb	IAmb	21 05 54.8	
	comp=Z,21nm,0.9s					
LOHW	**Long Hollow**	**47.85 353**	P	**P**	**21 05 45.1**	**-1.2**
LOHW			IAmb	IAmb	21 05 47.3	
	comp=Z,52nm,1.6s					
Q54A	**Coxs Mills**	**47.87 24**	P	**P**	**21 05 45.9**	**-0.4**
P52A	**Corning**	**47.91 23**	P	**P**	**21 05 45.7**	**-0.8**
P52A	**Corning**	**47.91 23**	P	**P**	**21 05 46.2**	**-0.4**
	baz=210					
TBI	**Tubuai**	**47.92 242**	*e*P	**P**	**21 05 47.5**	**+0.6**
	comp=Z,137nm,41.2s					
TBI			*e*S	**S**	**21 12 43.3**	**-0.6**
	comp=Z,1µm,26.8s					
TBI			*e*LR	LR	21 19 16.9	
	comp=Z,4µm,28.2s					
FXWY	**Fox Creek**	**47.92 353**	P	**P**	**21 05 45.5**	**-1.5**
FXWY			IAmb	IAmb	21 06 10.3	
	comp=Z,27nm,1.1s					
FXWY			IAMs_20	IAMs_20	21 22 59.1	
	comp=Z,2µm,20.0s					
RSSD	**Black Hills**	**47.98 360**	IAMs_20	IAMs_20	21 24 12.4	
	comp=Z,2µm,20.0s					
RSSD	**Black Hills**	**47.98 360**	P	**P**	**21 05 47.0**	**-0.3**
	baz=180					
KMPM	**Mount Pierce**	**47.99 339**	P	**P**	**21 05 46.9**	**-0.4**
MOOW	**Moose Ponds**	**48.00 353**	P	**P**	**21 05 46.9**	**-0.6**
MOOW			IAmb	IAmb	21 05 54.4	
	comp=Z,22nm,1.1s					
ECSD	**EROS Data Cent**	**48.05 7**	P	**P**	**21 05 47.0**	**-0.6**
ECSD			IAmb	IAmb	21 06 00.9	
	comp=Z,66nm,2.0s					
ECSD	**EROS Data Cent**	**48.05 7**	IAMs_20	IAMs_20	21 24 38.9	
	comp=Z,2µm,18.0s					
ECSD	**EROS Data Cent**	**48.05 7**	P	**P**	**21 05 47.4**	**-0.2**
	baz=190					
ITTB	**Itaituba**	**48.07 92**	*e*P	**P**	**21 05 47.9**	**-0.4**
MOD	**Modoc Plateau**	**48.13 344**	P	**P**	**21 05 48.6**	**+0.2**
CLDB	**Colidor**	**48.16 101**	*e*P	**P**	**21 05 47.6**	**-1.4**
IMW	**Indian Meadow**	**48.17 353**	P	**P**	**21 05 48.7**	**-0.1**
IMW			IAmb	IAmb	21 05 56.4	
	comp=Z,34nm,0.9s					
WVOR	**Wild Horse Val**	**48.18 345**	P	**P**	**21 05 49.0**	**+0.3**
WVOR			IAMs_20	IAMs_20	21 22 03.8	
	comp=Z,3µm,22.0s					
WVOR	**Wild Horse Val**	**48.18 345**	P	**P**	**21 05 49.0**	**+0.3**
WVOR			pmax	pmax		
	comp=Z,70nm,1.7s					
WVOR			MLR	MLR		
	comp=Z,3µm,22.0s					
LL02	**Futaleuf**	**48.22 149**	P	**P**	**21 05 49.7**	**+0.7**
LL02			IAmb	IAmb	21 05 52.7	
	comp=Z,45nm,1.1s					
KHMM	**Horse Mountain**	**48.26 340**	P	**P**	**21 05 49.7**	**+0.3**
KHMM			IAmb	IAmb	21 05 57.7	
	comp=Z,31nm,0.9s					
JCC	**Jacoby Creek,**	**48.32 340**	P	**P**	**21 05 50.0**	**+0.3**
JCC			IAMs_20	IAMs_20	21 21 12.4	
	comp=Z,3µm,20.0s					
HLID	**Hailey**	**48.35 350**	P	**P**	**21 05 50.0**	**-0.1**
HLID			IAmb	IAmb	21 05 58.4	
	comp=Z,16nm,0.9s					
HLID	**Hailey**	**48.35 350**	P	**P**	**21 05 50.5**	**+0.3**
	baz=166,SNR=15					
JFWS	**Jewell Farm**	**48.39 13**	P	**P**	**21 05 49.8**	**-0.4**
JFWS			IAmb	IAmb	21 05 56.5	
	comp=Z,17nm,0.9s					
JFWS	**Jewell Farm**	**48.39 13**	P	**P**	**21 05 49.8**	**-0.4**
JFWS			pmax	pmax		
	comp=Z,17nm,1.0s					
JFWS	**Jewell Farm**	**48.39 13**	P	**P**	**21 05 50.4**	**+0.2**
	baz=198					
O52A	**Adamsville**	**48.44 23**	P	**P**	**21 05 50.1**	**-0.5**
O52A			IAmb	IAmb	21 05 57.4	
	comp=Z,26nm,1.1s					
MFID	**Camas Ranch**	**48.48 348**	P	**P**	**21 05 50.9**	**-0.2**
MFID			IAMs_20	IAMs_20	21 23 23.7	
	comp=Z,2µm,18.0s					
H17A	**Grant Village**	**48.62 354**	P	**P**	**21 05 54.0**	**+1.7**
H17A			IAmb	IAmb	21 06 04.8	
	comp=Z,33nm,1.2s					
H17A	**Grant Village**	**48.62 354**	P	**P**	**21 05 52.2**	**-0.1**
	baz=171					
YBH	**Yreka Blue Hor**	**48.69 341**	P	**P**	**21 05 52.3**	**-0.4**
	comp=Z,12nm,0.9s,baz=131,slow=6.5,SNR=20					
YBH			LR	LR	21 21 59.8	
	comp=Z,2µm,21.5s,baz=170,slow=31					
	comp=Z,12nm,0.9s					
YBH	**Yreka Blue Hor**	**48.69 341**	P	**P**	**21 05 51.8**	**-0.9**
YBH			IAmb	IAmb	21 06 00.1	
	comp=Z,31nm,0.9s					
YBH			IAMs_20	IAMs_20	21 21 38.4	
	comp=Z,2µm,21.0s					
YBH	**Yreka Blue Hor**	**48.69 341**	P	**P**	**21 05 51.8**	**-0.9**
YBH			pmax	pmax		
	comp=Z,31nm,0.9s					
YBH			MLR	MLR		
	comp=Z,2µm,21.0s					
YFT	**Old Faithful**	**48.70 353**	P	**P**	**21 05 53.6**	**+0.7**
YFT			IAmb	IAmb	21 06 14.4	
	comp=Z,30nm,1.2s					
CBN	**Corbin Frederi**	**48.75 28**	IAMs_20	IAMs_20	21 25 04.1	
	comp=Z,3µm,20.0s					
LKWY	**Lake**	**48.77 354**		**P**	**21 05 52.8**	**-0.6**
LKWY			IAmb	IAmb	21 06 03.9	
	comp=Z,50nm,1.4s					
LKWY	**Lake**	**48.77 354**	P	**P**	**21 05 52.8**	**-0.6**
LKWY			pmax	pmax		
	comp=Z,50nm,1.4s					
LKWY			MLR	MLR		
	comp=Z,2µm,22.0s					
O53A	**New Philadelph**	**48.80 23**	P	**P**	**21 05 52.9**	**-0.5**
O53A			IAmb	IAmb	21 05 59.8	
	comp=Z,30nm,0.8s					
O53A	**New Philadelph**	**48.80 23**	P	**P**	**21 05 53.1**	**-0.3**
	baz=211					
SALV	**Santo Antonio**	**48.83 108**	*e*P	**P**	**21 05 53.5**	**-0.5**
MCWV	**Mont Chateau**	**48.85 25**	P	**P**	**21 05 53.1**	**-0.7**
MCWV			IAmb	IAmb	21 06 00.4	
	comp=Z,33nm,1.1s					
MCWV	**Mont Chateau**	**48.85 25**	P	**P**	**21 05 53.6**	**-0.2**
	baz=213					
KRMB	**Red Mountain**	**48.90 340**	P	**P**	**21 05 54.6**	**+0.3**
BCYI	**Bear Canyon**	**48.91 351**	P	**P**	**21 05 54.2**	**-0.3**
YMP	**Mirror Lake Pl**	**48.92 354**	P	**P**	**21 05 54.6**	**0.0**
YMP			IAmb	IAmb	21 06 24.2	
	comp=Z,53nm,1.3s					
YUF	**Upper Falls**	**48.93 354**	P	**P**	**21 05 54.4**	**-0.2**
YUF			IAmb	IAmb	21 06 06.5	
	comp=Z,39nm,1.2s					
YMR	**Madison River**	**48.93 353**	P	**P**	**21 05 54.5**	**-0.2**
YMR			IAmb	IAmb	21 06 05.5	
	comp=Z,28nm,1.0s					
YNR	**Norris Junctio**	**48.95 354**	P	**P**	**21 05 54.5**	**-0.3**
YNR			IAmb	IAmb	21 06 08.7	
	comp=Z,22nm,1.1s					
J08A	**Circle Bar Ran**	**49.01 346**	P	**P**	**21 05 54.8**	**-0.3**
J08A			IAmb	IAmb	21 06 08.6	
	comp=Z,22nm,1.0s					
YHH	**Holmes Hill**	**49.04 353**	P	**P**	**21 05 55.2**	**-0.4**
YHH			IAmb	IAmb	21 06 03.8	
	comp=Z,27nm,1.0s					
YHB	**Horse Butte**	**49.04 353**	P	**P**	**21 05 55.3**	**-0.2**
YHB			IAmb	IAmb	21 06 03.7	
	comp=Z,40nm,0.9s					
K05A	**Summer Lake**	**49.05 343**	P	**P**	**21 05 55.9**	**+0.3**
O54A	**Avella**	**49.07 24**	P	**P**	**21 05 54.8**	**-0.7**
O54A	**Avella**	**49.07 24**	P	**P**	**21 05 54.8**	**-0.7**
	baz=212					
O54A			P	**P**	**21 05 54.8**	**-0.7**
	baz=212					
QLMT	**Earthquake Lak**	**49.15 353**	P	**P**	**21 05 57.0**	**+0.7**
KSXB	**Camp Six Broad**	**49.16 340**	P	**P**	**21 05 57.1**	**+0.7**
RLMT	**Red Lodge**	**49.21 355**	P	**P**	**21 05 56.2**	**-0.6**
	baz=173					
MCMT	**McKenzie Canyo**	**49.34 352**	P	**P**	**21 05 57.6**	**-0.2**
N53A	**Lisbon**	**49.42 23**	P	**P**	**21 05 57.7**	**-0.5**
N53A			IAmb	IAmb	21 06 05.0	
	comp=Z,45nm,1.1s					
N53A	**Lisbon**	**49.42 23**	P	**P**	**21 05 58.0**	**-0.2**
	baz=211,SNR=8.7					
N53A			P	**P**	**21 05 58.0**	**-0.2**
	baz=211,SNR=8.7					
I42A	**Draeger Farm,**	**49.63 14**	P	**P**	**21 05 58.7**	**-1.0**
AQDB	**Aquidauana**	**49.65 113**	P	**P**	**21 05 59.2**	**-1.1**
AQDB			IAmb	IAmb	21 06 07.1	
	comp=Z,28nm,1.1s					
AQDB	**Aquidauana**	**49.65 113**	*e*P	**P**	**21 06 00.7**	**+0.4**
MALB	**Monte Alegre**	**49.65 89**	*e*P	**P**	**21 06 00.4**	**0.0**
CPUP	**Villa Florida**	**49.75 121**	P	**P**	**21 06 00.7**	**-0.3**
	comp=Z,13nm,1.0s,baz=300,slow=7.9,SNR=14					
CPUP			LR	LR	21 23 46.9	
	comp=Z,2µm,20.8s,baz=288,slow=32					
	comp=Z,13nm,1.0s					
CPUP	**Villa Florida**	**49.75 121**	P	**P**	**21 06 00.5**	**-0.5**
CPUP	**Villa Florida**	**49.75 121**	P	**P**	**21 06 00.5**	**-0.5**
CPUP			pmax	pmax		
	comp=Z,75nm,1.5s					
COYC	**Coyhaique**	**49.81 151**	P	**P**	**21 06 01.3**	**+0.2**
GCMT	**Greycliff**	**49.91 355**	P	**P**	**21 06 01.7**	**-0.3**
BOZ	**Bozeman (W)**	**49.93 353**	P	**P**	**21 06 01.5**	**-0.6**
BOZ	**Bozeman (W)**	**49.93 353**	P	**P**	**21 06 01.5**	**-0.6**
BOZ			pmax	pmax		
	comp=Z,34nm,1.8s					
BOZ			MLR	MLR		
	comp=Z,1µm,18.0s					
BOZ	**Bozeman (W)**	**49.93 353**	P	**P**	**21 06 01.1**	**-1.0**
	baz=170					
I07A	**Izee**	**49.94 345**	P	**P**	**21 06 02.5**	**+0.3**
M53A	**WI Miller and**	**50.03 23**	P	**P**	**21 06 02.0**	**-0.8**
M53A	**WI Miller and**	**50.03 23**	P	**P**	**21 06 02.1**	**-0.7**
	baz=211					
PINE	**Pine Mountain**	**50.05 344**	P	**P**	**21 06 03.6**	**+0.5**
PINE			IAmb	IAmb	21 06 11.2	
	comp=Z,44nm,1.1s					
SPMN	**Marine on St.**	**50.08 10**	P	**P**	**21 06 02.7**	**-0.4**
SPMN	**Marine on St.**	**50.08 10**	P	**P**	**21 06 02.7**	**-0.4**
	baz=194					
DBO	**Dodson Butte**	**50.12 342**	P	**P**	**21 06 04.0**	**+0.5**
DBO			IAmb	IAmb	21 06 11.5	
	comp=Z,36nm,0.9s					
PLID	**Pearl Lake**	**50.12 349**	P	**P**	**21 06 01.9**	**-1.8**
PLID			IAMs_20	IAMs_20	21 24 08.2	
	comp=Z,2µm,19.0s					
BMO	**Blue Mountains**	**50.16 348**	P	**P**	**21 06 02.8**	**-1.1**
BMO			IAMs_20	IAMs_20	21 24 06.2	
	comp=Z,3µm,19.0s					
BMO	**Blue Mountains**	**50.16 348**	P	**P**	**21 06 02.8**	**-1.1**
BMO			pmax	pmax		
	comp=Z,6.0nm,1.2s					
BMO			MLR	MLR		
	comp=Z,3µm,19.0s					
LRM	**Limekiln Ridge**	**50.26 352**	P	**P**	**21 06 03.9**	**-0.9**
SSPA	**Standing Stone**	**50.49 26**	IAMs_20	IAMs_20	21 26 08.2	
	comp=Z,2µm,20.0s					
SSPA	**Standing Stone**	**50.49 26**	P	**P**	**21 06 04.8**	**-1.5**
	baz=214					
E28A	**Huff**	**50.52 3**	P	**P**	**21 06 06.5**	**+0.1**
LAO	**LASA Array**	**50.59 358**	P	**P**	**21 06 06.3**	**-0.7**
	baz=177					
G08A	**Pilot Rock**	**50.95 346**	P	**P**	**21 06 09.8**	**0.0**
G08A			IAmb	IAmb	21 06 11.5	
	comp=Z,71nm,1.8s					
BUCK	**Buck Mountain**	**51.01 342**	P	**P**	**21 06 10.7**	**+0.4**
BUCK			IAmb	IAmb	21 06 18.0	
	comp=Z,45nm,0.8s					
TRQA	**Tornquist**	**51.03 137**	P	**P**	**21 06 10.2**	**-0.4**
TRQA	**Tornquist**	**51.03 137**	P	**P**	**21 06 10.2**	**-0.4**
TRQA			pmax	pmax		
	comp=Z,24nm,1.2s					
TRQA			MLR	MLR		
	comp=Z,3µm,18.0s					
HRY	**Holter Researc**	**51.05 353**	P	**P**	**21 06 10.3**	**-0.3**
F10A	**Beach Ranch, E**	**51.21 348**	P	**P**	**21 06 11.6**	**-0.2**
F10A			IAmb	IAmb	21 06 14.2	
	comp=Z,77nm,1.9s					
H04A	**Detroit Lake**	**51.22 343**	P	**P**	**21 06 11.5**	**-0.3**
H04A			IAmb	IAmb	21 06 18.8	
	comp=Z,38nm,0.9s					
ITQB	**Itaqui**	**51.44 125**	P	**P**	**21 06 13.2**	**-0.5**
ITQB	**Itaqui**	**51.44 125**	*e*P	**P**	**21 06 14.8**	**+1.1**
MSO	**Missoula**	**51.45 351**	P	**P**	**21 06 12.3**	**-1.2**
	baz=167					
COR	**Corvallis**	**51.46 342**	P	**P**	**21 06 14.0**	**+0.5**
COR	**Corvallis**	**51.46 342**	P	**P**	**21 06 14.0**	**+0.5**
COR			pmax	pmax		
	comp=Z,96nm,1.0s					
COR			MLR	MLR		
	comp=Z,4µm,21.0s					
HOOD	**Mount Hood Mea**	**51.66 344**	P	**P**	**21 06 15.2**	**0.0**
HOOD			IAmb	IAmb	21 06 23.1	
	comp=Z,48nm,0.9s					
COWI	**Conover**	**51.66 13**	P	**P**	**21 06 13.7**	**-1.4**
COWI	**Conover**	**51.66 13**	P	**P**	**21 06 14.1**	**-1.0**
	baz=199					
F07A	**Phinny Hill Vi**	**51.75 346**	P	**P**	**21 06 15.6**	**-0.1**
F07A			IA

LPA S **S** **21 13 49.0 +2.4**
LPA SS **SS** **21 17 21.1 -3.6**
LPA SSS SSS 21 20 30.1
BINY Binghamton 52.60 26 IAMs_20 IAMs_20 21 27 19.9
comp=Z,2μm,20.0s
BINY Binghamton 52.60 26 P **P** **21 06 21.7 -0.4**
baz=216
PAL Palisades 52.60 28 P **P** **21 06 22.0 -0.1**
baz=219
D08A Wollman Farm, 52.61 347 P **P** **21 06 21.7 -0.4**
D08A IAmb IAmb 21 06 23.1
comp=Z,47nm,1.6s
AGMN Agassiz Nation 52.63 7 P **P** **21 06 22.0 -0.2**
AGMN IAMs_20 IAMs_20 21 27 16.3
comp=Z,3μm,19.0s
AGMN Agassiz Nation 52.63 7 P **P** **21 06 21.8 -0.4**
baz=190
SNDB Serra Nova Dou 52.65 102 *eP* **P** **21 06 22.9 0.0**
TRCB Terra Rica 52.94 115 P **P** **21 06 24.5 -0.6**
TRCB Terra Rica 52.94 115 *eP* **P** **21 06 26.9 +1.9**
EYMN Ely 52.95 10 P **P** **21 06 24.3 -0.2**
baz=196
B35A Bob, Littlefor 52.98 9 P **P** **21 06 24.3 -0.4**
B35A IAmb IAmb 21 06 32.9
comp=Z,38nm,1.4s
LON Longmire 53.02 345 P **P** **21 06 24.6 -0.6**
LON Longmire 53.02 345 P **P** **21 06 24.6 -0.6**
LON pmax pmax
comp=Z,20nm,0.9s
C09A Chrisman Ranch 53.17 348 P **P** **21 06 25.7 -0.5**
C09A IAmb IAmb 21 06 27.4
comp=Z,47nm,1.5s
LTY Liberty 53.20 346 P **P** **21 06 25.6 -0.9**
YLE Yale 53.30 29 IAMs_20 IAMs_20 21 28 34.9
comp=Z,2μm,19.0s
E03A Lebam 53.32 343 P **P** **21 06 27.2 0.0**
NEW Newport 53.39 349 P **P** **21 06 27.2 -0.7**
comp=Z,12nm,0.9s,baz=150,slow=9.1,SNR=11
NEW LR LR 21 26 31.0
comp=Z,3μm,18.8s,baz=171,slow=33
comp=Z,12nm,0.9s
NEW Newport 53.39 349 P **P** **21 06 27.1 -0.7**
NEW IAmb IAmb 21 06 34.9
comp=Z,26nm,0.9s
NEW Newport 53.39 349 P **P** **21 06 27.1 -0.7**
NEW pmax pmax
comp=Z,26nm,1.0s
NEW MLR MLR
comp=Z,3μm,19.0s
NEW Newport 53.39 349 P **P** **21 06 27.0 -0.8**
baz=164,SNR=8.7
SADO Sadowa 53.46 22 P **P** **21 06 27.1 -1.2**
comp=Z,8.2nm,1.0s,baz=213,slow=3.4,SNR=4.0
SADO LR LR 21 29 29.7
comp=Z,1μm,18.1s,baz=194,slow=36
comp=Z,8.2nm,1.0s
SADO Sadowa 53.46 22 P **P** **21 06 29.3 +1.0**
D05A Enumclaw 53.47 345 P **P** **21 06 29.1 +0.7**
WALA Waterton Lakes 53.63 352 P **P** **21 06 29.3 -0.4**
WALA IAmb IAmb 21 06 51.8
comp=Z,35nm,1.2s
J58A Remsen 53.84 26 P **P** **21 06 29.8 -1.3**
J58A IAmb IAmb 21 06 33.8
comp=Z,31nm,1.4s
PTGB Pitanga 53.88 118 *eP* **P** **21 06 33.8 +1.8**
B08A Colville Reser 53.93 347 P **P** **21 06 30.6 -1.2**
PRPB Paraua pebas 53.93 95 *eP* **P** **21 06 33.8 +1.4**
PCMB Pacaembu 53.94 114 *eP* **P** **21 06 32.9 +0.5**
TRY Troy 54.06 27 IAMs_20 IAMs_20 21 27 47.6
comp=Z,2μm,20.0s
NLWA Neilton Lookou 54.17 343 P **P** **21 06 33.6 +0.1**
NLWA IAmb IAmb 21 06 41.1
comp=Z,32nm,0.9s
CPSB Cacapava Do Su 54.29 125 *eP* **P** **21 06 34.5 -0.2**
L61B Northampton 54.30 28 IAMs_20 IAMs_20 21 28 56.9
comp=Z,2μm,19.0s
L61B Northampton 54.30 28 P **P** **21 06 33.5 -1.0**
baz=220
QUA2 Belchertown 54.32 29 IAMs_20 IAMs_20 21 28 56.6
comp=Z,1μm,19.0s
BRYW Bryant College 54.44 29 IAMs_20 IAMs_20 21 27 54.8
comp=Z,3μm,20.0s
ITAB Concordia 54.46 121 P **P** **21 06 35.2 -0.8**
ITAB Concordia 54.46 121 *eP* **P** **21 06 38.1 +2.1**
ULM Lac du Bonnet 54.56 6 P **P** **21 06 34.1 -2.2**
comp=Z,16nm,1.0s,baz=150,slow=5.0,SNR=5.0
ULM LR LR 21 28 42.1
comp=Z,3μm,19.2s,baz=204,slow=35
comp=Z,16nm,1.0s
ULM Lac du Bonnet 54.56 6 P **P** **21 06 33.9 -2.4**
ULM IAmb IAmb 21 06 42.4
comp=Z,29nm,1.1s
ULM Lac du Bonnet 54.56 6 P **P** **21 06 33.9 -2.4**
ULM pmax pmax
comp=Z,29nm,1.1s
B06A Marblemount 54.58 346 P **P** **21 06 35.7 -0.7**
B06A IAmb IAmb 21 06 42.9
comp=Z,30nm,0.9s
PLTB Pedras Altas 54.60 126 P **P** **21 06 37.3 +0.3**
PLTB Pedras Altas 54.60 126 *eP* **P** **21 06 39.2 +2.2**
HRV Adam Dziewonsk 54.88 29 IAMs_20 IAMs_20 21 28 07.3
comp=Z,2μm,21.0s
HRV Adam Dziewonsk 54.88 29 P **P** **21 06 38.8 0.0**
baz=221
WES Weston 54.90 29 IAMs_20 IAMs_20 21 28 07.9
comp=Z,2μm,21.0s
LONY Lake Ozonia 55.15 25 IAMs_20 IAMs_20 21 28 50.4
comp=Z,2μm,20.0s
LONY Lake Ozonia 55.15 25 P **P** **21 06 40.9 +0.2**
baz=216
HNH Hanover 55.45 28 IAMs_20 IAMs_20 21 29 08.4
comp=Z,2μm,20.0s
VT1 Waterbury 55.72 27 IAMs_20 IAMs_20 21 28 40.4
comp=Z,2μm,21.0s
FRNY Flat Rock 55.75 26 P **P** **21 06 44.5 -0.4**
FRNY IAmb IAmb 21 06 47.6
comp=Z,60nm,1.8s
TMAB Tom-Au,PA,Br 55.78 90 *eP* **P** **21 06 47.2 +1.4**
FRTB Fartura 55.82 115 *eP* **P** **21 06 46.2 +0.2**
POHA Pohakuloa 55.95 297 IAMs_20 IAMs_20 21 26 16.2
comp=Z,2μm,18.0s
LBNH Lisbon 56.03 27 IAMs_20 IAMs_20 21 29 26.7
comp=Z,2μm,19.0s
LBNH Lisbon 56.03 27 P **P** **21 06 47.2 +0.2**
baz=220
CNLB Canela 56.11 123 *eP* **P** **21 06 50.2 +2.2**
BDFB Brasilia 56.13 106 P **P** **21 06 47.3 -1.1**
comp=Z,9.5nm,1.0s,baz=277,slow=10.0,SNR=4.6
BDFB LR LR 21 29 03.0
comp=Z,2μm,19.3s,baz=286,slow=34
comp=Z,9.5nm,1.0s
BDFB Brasilia 56.13 106 P **P** **21 06 47.9 -0.5**
BDFB IAmb IAmb 21 06 55.8
comp=Z,30nm,1.1s
BDFB Brasilia 56.13 106 P **P** **21 06 47.9 -0.5**
BDFB pmax pmax
comp=Z,30nm,1.1s
BDFB Brasilia 56.13 106 *eP* **P** **21 06 48.1 -0.3**
SMTB Santa Maria do 56.15 98 *eP* **P** **21 06 48.0 -0.5**
IPMB Ipameri, GO 56.20 109 *eP* **P** **21 06 48.1 -0.7**
BB19B Bebedouro 56.35 113 *eP* **P** **21 06 50.8 +1.0**
LLLB Lillooet 56.62 346 P **P** **21 06 51.0 -0.2**
LLLB IAmb IAmb 21 06 52.0
comp=Z,37nm,1.6s
TIJ01 Guaruva-PR 56.73 118 *eP* **P** **21 06 54.3 +1.7**
RAR Rarotonga 56.76 247 LR LR 21 25 16.2
comp=Z,678nm,18.2s,baz=74,slow=30
CBB Campbell River 56.99 344 P **P** **21 06 52.6 -1.1**
CBB IAmb IAmb 21 07 01.1
comp=Z,20nm,0.9s
WVL Waterville 57.34 29 IAMs_20 IAMs_20 21 29 31.2
comp=Z,2μm,21.0s
RCLB Rio Claro- Sao 57.49 114 *eP* **P** **21 06 59.2 +1.3**
EDM Edmonton 57.64 353 P **P** **21 06 57.4 -0.9**
EDM Edmonton 57.64 353 P **P** **21 06 57.4 -0.9**
EDM pmax pmax
comp=Z,93nm,0.9s
PMNB Patos De Minas 57.94 109 *eP* **P** **21 07 03.3 +2.1**
PKME Peaks-Kenny Pk 58.03 28 IAMs_20 IAMs_20 21 30 04.7
comp=Z,2μm,21.0s
PKME Peaks-Kenny Pk 58.03 28 P **P** **21 07 01.5 +0.4**
baz=222
PET01 Itanhaem-SP 58.06 116 *eP* **P** **21 07 03.6 +1.8**
VAO Valinhos 58.11 115 *eP* **P** **21 07 04.2 +2.0**
FFC Flin Flon 58.62 1 P **P** **21 07 04.0 -1.1**
FFC IAmb IAmb 21 07 14.1
comp=Z,27nm,1.2s
FFC Flin Flon 58.62 1 P **P** **21 07 04.0 -1.1**
FFC pmax pmax
comp=Z,27nm,1.2s
FFC MLR MLR
comp=Z,4μm,18.0s
SDBA SAO DESIDERIO 58.91 102 *eP* **P** **21 07 08.9 +1.0**
BRLDA Berland Lookou 59.04 351 P **P** **21 07 06.6 -1.6**
PARB Paraibuna 59.38 115 *eP* **P** **21 07 13.6 +2.5**
JANB Januaria 59.64 105 *eP* **P** **21 07 14.9 +1.9**
PQI Presque Isle 59.67 28 IAMs_20 IAMs_20 21 30 32.0
comp=Z,2μm,22.0s
BBB Bella Bella 59.69 343 P **P** **21 07 12.8 +0.3**
comp=Z,12nm,1.0s,baz=140,slow=10.0,SNR=4.9
BBB LR LR 21 30 12.6
comp=Z,988nm,18.1s,baz=160,slow=33
comp=Z,12nm,1.0s
BBB Bella Bella 59.69 343 P **P** **21 07 13.2 +0.7**
BBB IAmb IAmb 21 07 19.9
comp=Z,32nm,1.1s
ROSB Rosario 59.71 91 *eP* **P** **21 07 15.8 +2.4**
MC01 Montes Claros 60.12 107 *eP* **P** **21 07 18.6 +2.3**
WAPA Wapiti River 60.40 350 P **P** **21 07 16.6 -0.8**
DIAM Diamantina, MG 60.53 109 *eP* **P** **21 07 21.4 +2.2**
EFI East Falkland 60.81 149 P **P** **21 07 20.2 -0.1**
EFI East Falkland 60.81 149 P **P** **21 07 20.2 -0.1**
EFI pmax pmax
comp=Z,89nm,1.3s
EFI MLR MLR
comp=Z,4μm,19.0s
GRNB Grenville Isla 61.69 343 P **P** **21 07 26.1 0.0**
GRNB IAmb IAmb 21 07 34.0
comp=Z,28nm,0.9s
DIB Dawson Inlet, 61.92 341 P **P** **21 07 27.2 -0.4**
DIB IAmb IAmb 21 07 35.2
comp=Z,27nm,1.0s
RUBB Prince Rupert 62.19 343 P **P** **21 07 28.8 -0.7**
RUBB IAmb IAmb 21 07 37.2
comp=Z,22nm,1.0s
SJMB Sao Joao De Ma 62.92 109 *eP* **P** **21 07 34.8 -0.3**
HILA High Level 63.31 352 P **P** **21 07 36.0 -0.9**
V35K Ketchikan 63.46 343 P **P** **21 07 37.9 +0.1**
baz=149
ALF01 Guarapari-ES 63.53 111 *eP* **P** **21 07 40.1 +1.0**
RIB01 Linhares ES 63.71 109 *eP* **P** **21 07 42.3 +1.9**
NAN01 Guarapari, ES 63.85 108 *eP* **P** **21 07 43.5 +2.2**
CRAG Craig 64.03 342 P **P** **21 07 41.8 +0.1**
baz=147
GUA01 Guaratinga, BA 64.07 106 *eP* **P** **21 07 44.9 +2.2**
GDU01 Guandu, BA 64.15 103 *eP* **P** **21 07 43.4 0.0**
CMC01 Camacan, BA 64.28 105 *eP* **P** **21 07 46.0 +1.9**
T35M Bob Quinn 64.50 344 P **P** **21 07 44.8 0.0**
baz=151
U33K Whale Pass 64.58 342 P **P** **21 07 45.0 -0.2**
baz=147
WRAK Wrangell Islan 64.61 343 P **P** **21 07 45.3 -0.1**
WRAK IAmb IAmb 21 07 52.8
comp=Z,17nm,0.8s
WRAK Wrangell Islan 64.61 343 P **P** **21 07 45.1 -0.3**
baz=148
S34M Telegraph Cree 65.55 344 P **P** **21 07 51.5 0.0**
baz=150
DLBC Dease Lake 65.72 345 P **P** **21 07 53.6 +0.8**
comp=Z,17nm,1.0s,baz=186,slow=5.1,SNR=14
DLBC LR LR 21 33 34.4
comp=Z,2μm,20.1s,baz=140,slow=33
comp=Z,17nm,1.0s
DLBC Dease Lake 65.72 345 P **P** **21 07 53.0 +0.2**
DLBC Dease Lake 65.72 345 P **P** **21 07 52.9 +0.1**
baz=151,SNR=12
SIT Sitka 66.04 342 P **P** **21 07 55.3 +0.6**
SIT IAmb IAmb 21 07 58.4
comp=Z,24nm,1.2s
SIT Sitka 66.04 342 P **P** **21 07 55.3 +0.6**
SIT pmax pmax
comp=Z,24nm,1.2s
SIT Sitka 66.04 342 P **P** **21 07 54.6 -0.1**
baz=145
S32K Killisnoo 66.15 342 P **P** **21 07 55.4 -0.1**
baz=146
SCHQ Schefferville 66.26 22 LR LR 21 36 09.7
comp=Z,2μm,19.2s,baz=217,slow=35
Q32M Nakina River 66.76 344 P **P** **21 08 00.1 +0.5**
baz=149
JIS Juneau Island 66.77 343 P **P** **21 07 59.6 +0.2**
JIS IAmb IAmb 21 08 16.7
comp=Z,35nm,1.3s
JIS IAMs_20 IAMs_20 21 32 01.5
comp=Z,1μm,21.0s
R33M Jennings River 66.80 345 P **P** **21 07 59.8 +0.1**
baz=150,SNR=29
R32K Eaglecrest 66.81 343 P **P** **21 07 59.9 +0.2**
baz=146
YKA Yellowknife Ar 66.89 355 P **P** **21 07 59.1 -0.9**
comp=Z,3.8nm,0.9s,baz=164,slow=6.4,SNR=8.3
YKA LR LR 21 34 33.4
comp=Z,2μm,21.9s,baz=178,slow=34
comp=Z,3.8nm,0.9s
YKA Yellowknife Ar 66.89 355 P **P** **21 07 59.5 -0.5**
YKA Yellowknife Ar 66.89 355 P **P** **21 07 59.5 -0.5**
WTLY Watson Lake, Y 66.91 347 P **P** **21 08 00.5 +0.2**
baz=153
PMSA Palmer Station 66.93 163 P **P** **21 08 00.9 +0.5**
comp=Z,34nm,1.1s,baz=339,slow=5.0,SNR=4.3
PMSA LR LR 21 29 52.4
comp=Z,3μm,19.6s,baz=314,slow=29
comp=Z,34nm,1.1s
PMSA Palmer Station 66.93 163 P **P** **21 08 00.7 +0.4**
BESE Bessie Mountai 67.16 343 P **P** **21 08 02.1 +0.1**
R31K City Hall, Gus 67.28 343 P **P** **21 08 02.6 0.0**
baz=145
NBAN Anadia - AL 67.33 99 *eP* **P** **21 08 06.5 +2.7**
AFI Afiamalu 67.52 257 LR LR 21 29 36.5
comp=Z,884nm,21.8s,baz=90,slow=29
P32M Atlin 67.69 344 P **P** **21 08 05.1 -0.1**
baz=148
RCBR Riachuelo 67.78 95 LR LR 21 36 30.2
comp=Z,3μm,19.5s,baz=56,slow=35
P33M Teslin, Yukon 67.98 345 P **P** **21 08 06.8 -0.3**
P33M IAmb IAmb 21 08 14.6
comp=Z,14nm,0.9s
P33M Teslin, Yukon 67.98 345 P **P** **21 08 07.2 0.0**
baz=149
SKAG Skagway 68.03 343 P **P** **21 08 07.5 +0.1**
baz=146
TGTN Hyland Airport 68.06 348 P **P** **21 08 07.8 +0.2**
baz=154,SNR=11
PLBC Pleasant Camp 68.33 343 P **P** **21 08 09.2 0.0**
baz=145,SNR=9.3
WRGLY Wrigley 68.73 351 P **P** **21 08 11.4 -0.2**
baz=159
N32M Quiet Lake 68.85 345 P **P** **21 08 12.4 -0.2**
baz=149
P29M Windy Craggy 68.88 342 P **P** **21 08 12.2 -0.5**
P29M IAmb IAmb 21 08 25.3
comp=Z,18nm,1.2s
P29M Windy Craggy 68.88 342 P **P** **21 08 12.7 -0.1**
baz=144
WHY Whitehorse 68.91 344 P **P** **21 08 13.3 +0.4**
WHY IAmb IAmb 21 08 18.4
comp=Z,24nm,1.6s
WHY Whitehorse 68.91 344 P **P** **21 08 12.9 0.0**
baz=147
P30M Million Dollar 69.05 343 P **P** **21 08 14.2 +0.4**
baz=144
O30N Mendenhall 69.33 344 P **P** **21 08 15.8 +0.2**
baz=145,SNR=11
PNL Peninsula 69.42 342 P **P** **21 08 16.2 +0.1**
baz=142
O29M Mount Kennedy 69.67 342 P **P** **21 08 17.4 -0.3**
baz=143
MMPY Sheldon Lake, 69.69 347 P **P** **21 08 17.8 +0.1**
baz=151,SNR=19
BCPM Bancas Point 69.72 342 P **P** **21 08 17.5 -0.3**
BCPM IAMs_20 IAMs_20 21 32 45.5
comp=Z,1μm,18.0s
HYT Haines Junctio 69.78 343 P **P** **21 08 18.4 +0.1**
HYT IAmb IAmb 21 08 31.5
comp=Z,22nm,1.1s
HYT Haines Junctio 69.78 343 P **P** **21 08 18.6 +0.3**
baz=144,SNR=8.6
N31M Braeburn, Yuko 69.84 344 P **P** **21 08 18.8 +0.2**
N31M IAMs_20 IAMs_20 21 35 42.7
comp=Z,1μm,21.0s
N31M Braeburn, Yuko 69.84 344 P **P** **21 08 19.0 +0.4**
baz=146,SNR=18
FARO Faro, Yukon 69.84 346 P **P** **21 08 18.8 +0.2**
FARO Faro, Yukon 69.84 346 P **P** **21 08 18.7 0.0**
baz=149
PINM Pinnacle 70.02 342 P **P** **21 08 19.9 +0.1**
baz=141
PCA Pinnacle 70.03 342 P **P** **21 08 20.0 +0.1**
M31M Drury Creek, Y 70.08 345 P **P** **21 08 20.3 +0.2**
M31M IAMs_20 IAMs_20 21 35 17.0
comp=Z,1μm,20.0s
M31M Drury Creek, Y 70.08 345 P **P** **21 08 20.2 +0.1**
baz=148,SNR=10.0
YUK6 Outpost Mounta 70.12 343 P **P** **21 08 21.0 +0.3**
baz=143,SNR=12
N30M Aishikik Lake 70.17 344 P **P** **21 08 21.0 +0.3**
baz=145,SNR=11
YUK4 Talbot Arm 70.53 343 P **P** **21 08 23.5 +0.4**
baz=143,SNR=12
O28M Mount Upton 70.53 342 P **P** **21 08 23.6 +0.4**
baz=141,SNR=14
TABL Table Mountain 70.57 341 P **P** **21 08 22.8 -0.6**
TABL IAmb IAmb 21 08 30.9
comp=Z,29nm,1.0s
TABL IAMs_20 IAMs_20 21 33 10.1
comp=Z,1μm,18.0s
MESA MESA 70.63 341 P **P** **21 08 23.1 -0.6**
MESA IAmb IAmb 21 08 34.1
comp=Z,28nm,1.2s
MESA IAMs_20 IAMs_20 21 32 20.7
comp=Z,1μm,19.0s
MESA MESA 70.63 341 P **P** **21 08 23.7 0.0**
baz=139
YAH Yahtse 70.70 341 P **P** **21 08 24.1 0.0**
YAH IAMs_20 IAMs_20 21 33 09.6
comp=Z,1μm,19.0s
LOGN Logan Glacier 70.83 342 P **P** **21 08 25.0 +0.2**
LOGN IAmb IAmb 21 08 47.3
comp=Z,37nm,1.4s
LOGN IAMs_20 IAMs_20 21 33 29.8
comp=Z,1μm,19.0s
SNH Sunshine Point 70.92 341 P **P** **21 08 23.9 -1.3**
SNH IAmb IAmb 21 08 33.4
comp=Z,25nm,0.8s
SNH IAMs_20 IAMs_20 21 32 27.4
comp=Z,1μm,19.0s
CTGM Chitina Glacie 71.04 342 P **P** **21 08 25.9 -0.2**
CTGM IAmb IAmb 21 08 33.9
comp=Z,21nm,1.0s
CTGM IAMs_20 IAMs_20 21 33 37.4
comp=Z,1μm,19.0s
CTG Chitna Glacier 71.04 342 P **P** **21 08 26.1 0.0**
baz=140,SNR=10
ISLE Juniper Island 71.08 341 P **P** **21 08 26.9 +0.5**
ISLE IAmb IAmb 21 08 48.6
comp=Z,29nm,1.3s
ISLE IAMs_20 IAMs_20 21 33 20.5
comp=Z,1μm,20.0s
WAX Waxell Ridge 71.13 341 IAMs_20 IAMs_20 21 32 33.9
comp=Z,1μm,20.0s
SUCK Suckling Hills 71.16 340 P **P** **21 08 26.2 -0.4**
SUCK IAMs_20 IAMs_20 21 31 48.6
comp=Z,1μm,19.0s
BARN Barnard Glacie 71.21 342 P **P** **21 08 26.0 -1.2**
BARN IAmb IAmb 21 08 34.9
comp=Z,17nm,0.8s
BARN IAMs_20 IAMs_20 21 33 42.0
comp=Z,1μm,19.0s
KAIM Kayak Island 71.27 340 P **P** **21 08 27.6 +0.3**
baz=137
TGL Tana Glacier 71.35 341 P **P** **21 08 27.5 -0.4**
TGL IAmb IAmb 21 08 40.4
comp=Z,26nm,1.1s
TGL IAMs_20 IAMs_20 21 33 25.7
comp=Z,1μm,20.0s
M29M Somme Creek 71.36 344 P **P** **21 08 28.3 +0.3**
baz=143,SNR=7.8
BERG Berg Lake 71.37 340 P **P** **21 08 27.9 0.0**
BERG IAMs_20 IAMs_20 21 32 39.2
comp=Z,2μm,21.0s
YUK3 Moose Creek 71.40 343 P **P** **21 08 28.3 0.0**
baz=141,SNR=18
HMT Hamilton 71.52 340 P **P** **21 08 28.8 -0.1**
HMT IAMs_20 IAMs_20 21 32 30.1
comp=Z,1μm,20.0s
Q23K Middleton Isla 71.59 339 IAMs_20 IAMs_20 21 31 25.1
comp=Z,1μm,19.0s
Q23K Middleton Isla 71.59 339 P **P** **21 08 29.3 0.0**
baz=135
RAGM Ragged Mountai 71.69 340 P **P** **21 08 29.6 -0.3**
RAGM IAmb IAmb 21 08 42.7
comp=Z,34nm,1.1s
L29M L29M 71.80 344 P **P** **21 08 30.8 +0.2**
baz=144,SNR=24
MCARA McCarthy VSAT 71.89 341 P **P** **21 08 31.3 +0.2**
MCARA IAmb IAmb 21 08 41.6
comp=Z,38nm,1.0s
MCARA IAMs_20 IAMs_20 21 33 47.9
comp=Z,893nm,20.0s
MCARA McCarthy VSAT 71.89 341 P **P** **21 08 31.2 +0.2**
baz=139,SNR=11
VRDI Verde Repeater 71.91 341 P **P** **21 08 31.2 -0.3**
VRDI IAmb IAmb 21 08 44.0
comp=Z,50nm,1.4s
BVCY Beaver Creek 72.02 343 P **P** **21 08 31.7 -0.1**
baz=141
BMRM Bremner River 72.09 340 P **P** **21 08 32.6 +0.2**
BMRM Bremner River 72.09 340 P **P** **21 08 32.4 0.0**
baz=137,SNR=23
EYAK Cordova Ski Ar 72.18 340 P **P** **21 08 32.5 -0.2**
EYAK IAmb IAmb 21 08 40.2
comp=Z,32nm,0.9s
EYAK Cordova Ski Ar 72.18 340 P **P** **21 08 32.9 +0.2**
baz=136
GLB Gilahina Butte 72.18 341 P **P** **21 08 32.8 -0.1**
GLB IAmb IAmb 21 08 40.5
comp=Z,34nm,0.9s
GLB IAMs_20 IAMs_20 21 35 07.7
comp=Z,830nm,18.0s
K29M Barlow Dome 72.24 345 P **P** **21 08 33.2 -0.1**
baz=145,SNR=12
M27K Edge Creek, AK 72.28 342 P **P** **21 08 33.6 +0.1**
M27K IAmb IAmb 21 08 41.1
comp=Z,31nm,1.0s
M27K IAMs_20 IAMs_20 21 34 32.1
comp=Z,1μm,19.0s
M27K Edge Creek, AK 72.28 342 P **P** **21 08 33.1 -0.5**
baz=140,SNR=14
N25K Chitina, Valde 72.56 341 P **P** **21 08 34.9 -0.3**
N25K IAmb IAmb 21 08 42.9
comp=Z,16nm,0.9s
N25K IAMs_20 IAMs_20 21 34 36.7
comp=Z,966nm,18.0s
N25K Chitina, Valde 72.56 341 P **P** **21 08 35.2 +0.1**
baz=137,SNR=11
FID Port Fidalgo 72.58 340 P **P** **21 08 35.0 -0.1**
FID IAmb IAmb 21 08 42.2
comp=Z,25nm,1.0s
DIV Divide 72.60 340 P **P** **21 08 34.6 -0.8**
DIV IAmb IAmb 21 08 43.2
comp=Z,31nm,1.5s
FRB Frobisher Bay 72.64 16 LR LR 21 41 34.0
comp=Z,772nm,18.1s,baz=212,slow=37
M26K Nabesna, AK 72.65 342 P **P** **21 08 35.0 -0.6**
M26K IAmb IAmb 21 08 43.0
comp=Z,28nm,1.1s
M26K IAMs_20 IAMs_20 21 34 04.0
comp=Z,1μm,20.0s
M26K Nabesna, AK 72.65 342 P **P** **21 08 35.3 -0.3**
baz=139,SNR=11
BCAR Beaver Creek A 72.79 343 P **P** **21 08 35.9 -0.6**
L27K Beaver Creek, 72.80 343 P **P** **21 08 36.0 -0.5**
L27K IAmb IAmb 21 08 43.9
comp=Z,22nm,1.0s
L27K IAMs_20 IAMs_20 21 35 02.0
comp=Z,1μm,20.0s
L27K Beaver Creek, 72.80 343 P **P** **21 08 36.4 -0.1**
baz=140,SNR=13
SII Sitkinak Islan 72.88 334 P **P** **21 08 36.5 -0.5**
baz=127
GLI Glacier Island 72.88 340 IAMs_20 IAMs_20 21 33 17.2
comp=Z,1μm,20.0s
GLI Glacier Island 72.88 340 P **P** **21 08 35.9 -1.1**
baz=134
OHAK Old Harbor 72.89 334 P **P** **21 08 35.8 -1.2**
OHAK Old Harbor 72.89 334 P **P** **21 08 36.5 -0.6**
baz=128,SNR=7.7
DAWY Dawson 72.91 345 P **P** **21 08 36.5 -0.6**
DAWY IAmb IAmb 21 08 44.4

comp=Z,17nm,0.9s
DAWY Dawson 72.91 345 P P 21 08 36.6 -0.6
baz=143,SNR=13
J29M Klondike Camp 72.92 345 IAMs_20 IAMs_20 21 37 48.0
comp=Z,1µm,19.0s
KLU Klutina 72.92 340 P P 21 08 36.5 -0.8
KLU IAMs_20 IAMs_20 21 33 28.1
comp=Z,1µm,21.0s
KLU Klutina 72.92 340 P P 21 08 36.8 -0.5
baz=136
KDAK Kodiak Island 72.94 335 LR LR 21 32 44.6
comp=Z,3µm,21.0s,baz=160,slow=29
KDAK Kodiak Island 72.94 335 P P 21 08 36.7 -0.6
KDAK IAmb IAmb 21 08 51.4
comp=Z,35nm,1.3s
KDAK Kodiak Island 72.94 335 P P 21 08 36.7 -0.6
KDAK pmax pmax
comp=Z,35nm,1.3s
KDAK MLR MLR
comp=Z,3µm,20.0s
KDAK Kodiak Island 72.94 335 P P 21 08 36.7 -0.6
baz=128
CHIR Chirikof Islan 73.10 332 P P 21 08 37.7 -0.6
baz=125
SEW Seward 73.20 338 P P 21 08 38.2 -0.7
SEW IAmb IAmb 21 08 45.4
comp=Z,20nm,0.8s
SEW Seward 73.20 338 P P 21 08 38.1 -0.7
baz=132
L26K Log Cabin Wild 73.22 342 P P 21 08 38.4 -0.5
L26K IAmb IAmb 21 08 46.2
comp=Z,19nm,1.0s
L26K IAMs_20 IAMs_20 21 35 00.2
comp=Z,1µm,20.0s
L26K Log Cabin Wild 73.22 342 P P 21 08 38.5 -0.5
baz=139
MENT Mentasta 73.27 342 P P 21 08 38.9 -0.5
MENT IAmb IAmb 21 08 47.0
comp=Z,23nm,0.9s
PWL Port Wells 73.31 339 P P 21 08 38.1 -1.4
PWL IAmb IAmb 21 08 51.0
comp=Z,34nm,1.3s
PWL IAMs_20 IAMs_20 21 33 45.4
comp=Z,1µm,19.0s
PWL Port Wells 73.31 339 P P 21 08 38.4 -1.1
baz=133
HARP HAARP 73.32 341 P P 21 08 39.2 -0.4
baz=137
Q20K Shuyak Island 73.38 336 P P 21 08 39.4 -0.5
baz=129
M24K Tolsona, Glenn 73.44 341 P P 21 08 39.6 -0.8
M24K IAmb IAmb 21 08 47.8
comp=Z,27nm,0.9s
M24K Tolsona, Glenn 73.44 341 P P 21 08 39.7 -0.6
baz=136
BRSE Bradley Lake S 73.45 337 P P 21 08 39.7 -0.7
baz=131
CNPM China Poot 73.50 337 P P 21 08 40.2 -0.4
CNPM IAMs_20 IAMs_20 21 34 44.5
comp=Z,1µm,19.0s
BRLK Bradley Lake 73.52 337 P P 21 08 39.8 -1.0
BRLK IAmb IAmb 21 08 47.7
comp=Z,26nm,0.8s
BRLK IAMs_20 IAMs_20 21 34 44.0
comp=Z,1µm,19.0s
O22K Cooper Landing 73.55 338 P P 21 08 39.7 -1.2
O22K IAMs_20 IAMs_20 21 34 06.0
comp=Z,960nm,19.0s
O22K Cooper Landing 73.55 338 P P 21 08 40.0 -0.9
baz=132
K27K Chicken 73.62 344 P P 21 08 41.7 +0.4
K27K Chicken 73.62 344 P P 21 08 41.4 +0.1
baz=140
SCM Sheep Creek Mo 73.63 340 P P 21 08 40.9 -0.6
SCM IAmb IAmb 21 08 48.0
comp=Z,33nm,1.0s
SCM IAMs_20 IAMs_20 21 33 47.0
comp=Z,1µm,22.0s
SCM Sheep Creek Mo 73.63 340 P P 21 08 40.9 -0.6
SCM pmax pmax
comp=Z,33nm,1.0s
SCM MLR MLR
comp=Z,1µm,22.0s
SCM Sheep Creek Mo 73.63 340 P P 21 08 40.8 -0.6
baz=134,SNR=9.4
I29M Ogilvie Camp, 73.68 346 P P 21 08 40.9 -0.7
I29M IAmb IAmb 21 08 48.3
comp=Z,19nm,0.9s
I29M Ogilvie Camp, 73.68 346 P P 21 08 40.7 -0.9
baz=144,SNR=22
KNK Knik Glacier 73.73 339 P P 21 08 41.1 -0.8
KNK IAMs_20 IAMs_20 21 33 42.6
comp=Z,1µm,21.0s
KNK Knik Glacier 73.73 339 P P 21 08 41.2 -0.8
baz=133,SNR=10
M23K Glacier View 73.74 340 P P 21 08 41.3 -0.8
baz=134,SNR=38
HOM Homer 73.74 337 IAMs_20 IAMs_20 21 34 42.0
comp=Z,1µm,21.0s
HOM Homer 73.74 337 P P 21 08 41.5 -0.5
baz=130
PAX Paxson 73.84 342 P P 21 08 41.9 -0.8
PAX Paxson 73.84 342 P P 21 08 41.9 -0.8
PAX pmax pmax
comp=Z,16nm,1.2s
PAX Paxson 73.84 342 P P 21 08 41.9 -0.8
baz=136,SNR=9.9
DOT Dot Lake 73.91 343 P P 21 08 42.0 -1.0
DOT IAmb IAmb 21 08 50.4
comp=Z,22nm,0.8s
EGAK Eagle 73.94 344 P P 21 08 42.6 -0.5
EGAK IAmb IAmb 21 08 50.4
comp=Z,25nm,0.8s
EGAK IAMs_20 IAMs_20 21 36 15.2
comp=Z,1µm,22.0s
EGAK Eagle 73.94 344 P P 21 08 42.5 -0.7
baz=141,SNR=23
SML Sawmill 73.96 340 P P 21 08 42.5 -0.9
SML IAmb IAmb 21 08 57.2
comp=Z,42nm,1.2s
SML IAMs_20 IAMs_20 21 34 38.6
comp=Z,1µm,19.0s
SML Sawmill 73.96 340 P P 21 08 42.2 -1.2
baz=133,SNR=8.7
RC01 Rabbit Creek A 73.96 339 P P 21 08 42.1 -1.2
RC01 IAmb IAmb 21 08 50.2
comp=Z,28nm,0.8s
RC01 IAMs_20 IAMs_20 21 33 45.8
comp=Z,1µm,20.0s
RC01 Rabbit Creek A 73.96 339 P P 21 08 42.8 -0.6
baz=132
RAO Raoul Island 74.04 241 LR LR 21 33 02.8
comp=Z,506nm,21.8s,baz=206,slow=29
Q19K Cape Douglas, 74.08 336 P P 21 08 43.1 -1.0
baz=128
PMR Palmer 74.09 339 P P 21 08 43.2 -0.7
PMR IAmb IAmb 21 08 51.0
comp=Z,32nm,0.9s
PMR Palmer 74.09 339 P P 21 08 43.3 -0.7
PMR pmax pmax
comp=Z,32nm,0.9s
PMR Palmer 74.09 339 P P 21 08 43.4 -0.7
baz=133,SNR=5.7
SCRK Sand Creek 74.13 343 P P 21 08 43.5 -0.9
SCRK IAmb IAmb 21 08 52.4
comp=Z,65nm,2.0s
SCRK Sand Creek 74.13 343 P P 21 08 43.4 -0.9
baz=138
EPYK Eagle Plains 74.13 347 P P 21 08 43.7 -0.6
EPYK Eagle Plains 74.13 347 P P 21 08 43.7 -0.6
baz=146,SNR=13
GHO Glory Hole Cre 74.14 340 P P 21 08 43.8 -0.6
GHO IAmb IAmb 21 08 51.3
comp=Z,19nm,0.8s
RIDG Independent Ri 74.21 342 P P 21 08 44.2 -0.7
RIDG IAMs_20 IAMs_20 21 35 29.3
comp=Z,1µm,18.0s
RIDG Independent Ri 74.21 342 P P 21 08 44.1 -0.7
baz=137,SNR=17
WAT6 Susitna Watana 74.29 341 P P 21 08 44.6 -0.8
baz=134,SNR=9.8
P19K Oil Pt 74.36 336 P P 21 08 45.5 -0.3
P19K IAMs_20 IAMs_20 21 33 22.5
comp=Z,1µm,20.0s
P19K Oil Pt 74.36 336 P P 21 08 45.1 -0.7
baz=128,SNR=5.8
O20K Slope Mountain 74.39 337 P P 21 08 45.2 -0.8
baz=129
J26L Joseph Creek 74.40 343 P P 21 08 45.0 -0.9
J26L IAmb IAmb 21 08 53.6
comp=Z,21nm,0.9s
J26L IAMs_20 IAMs_20 21 36 03.3
comp=Z,1µm,20.0s
J26L Joseph Creek 74.40 343 P P 21 08 45.5 -0.4
baz=139,SNR=19
F31M Tsiigehtchic 74.41 349 P P 21 08 44.9 -0.8
baz=149
CHNA Chernabura Isl 74.45 330 P P 21 08 45.5 -0.8
baz=121
Q18K Katmai Hardscr 74.48 335 P P 21 08 45.7 -0.9
baz=126,SNR=5.4
R17K Ugashik Creek 74.49 334 P P 21 08 45.3 -1.1
baz=125
DHY Denali Highway 74.52 341 P P 21 08 45.9 -0.9
DHY IAmb IAmb 21 08 55.7
comp=Z,25nm,1.1s
DHY IAMs_20 IAMs_20 21 34 21.5
comp=Z,1µm,22.0s
DHY Denali Highway 74.52 341 P P 21 08 45.8 -0.9
baz=135,SNR=12
G30M tAoh Zraii Nji 74.53 347 P P 21 08 46.1 -0.5
baz=146
K24K Donnelly Dome 74.54 342 P P 21 08 46.1 -0.6
baz=136
M22K Willow 74.55 339 P P 21 08 46.5 -0.2
M22K IAMs_20 IAMs_20 21 34 35.2
comp=Z,1µm,19.0s
M22K Willow 74.55 339 P P 21 08 45.9 -0.8
baz=132
C36M Paulatuk 74.56 353 P P 21 08 46.8 +0.1
baz=159
SUA Susitna One 74.58 339 P P 21 08 46.1 -1.0
SUA IAmb IAmb 21 08 54.4
comp=Z,31nm,0.8s
SUA Susitna One 74.58 339 P P 21 08 46.3 -0.8
baz=131,SNR=7.0
Q17K Contact Creek 74.63 334 P P 21 08 46.5 -0.9
baz=126
CHGN Chignik 74.67 332 P P 21 08 46.0 -1.5
baz=123
RSO Redoubt South 74.68 337 P P 21 08 47.0 -0.8
I27K Kandik River 74.71 345 P P 21 08 47.6 -0.1
baz=141,SNR=26
WAT1 Susitna Watana 74.74 340 P P 21 08 46.9 -1.0
baz=133
I26K Coal Creek Min 74.90 344 P P 21 08 47.8 -0.9
I26K Coal Creek Min 74.90 344 P P 21 08 47.9 -0.8
baz=139
N20K Mount Spurr 74.94 338 P P 21 08 48.3 -0.9
baz=130
SPCR Spurr Chakacha 74.95 338 P P 21 08 48.0 -1.2
baz=130
R16K Pilot Point 74.97 333 P P 21 08 48.0 -1.2
baz=124
J25K Salcha River, 75.01 343 P P 21 08 48.8 -0.6
J25K IAmb IAmb 21 09 01.5
comp=Z,24nm,1.0s
J25K IAMs_20 IAMs_20 21 36 07.3
comp=Z,1µm,20.0s
J25K Salcha River, 75.01 343 P P 21 08 48.8 -0.6
baz=137,SNR=22
P18K Big Mountain, 75.02 336 P P 21 08 48.4 -1.2
baz=126
CUT Chulitna 75.03 340 P P 21 08 48.6 -0.9
CUT IAMs_20 IAMs_20 21 34 25.0
comp=Z,908nm,21.0s
CUT Chulitna 75.03 340 P P 21 08 49.0 -0.5
baz=132
INK Inuvik 75.11 349 P P 21 08 49.9 +0.1
comp=Z,15nm,1.1s,baz=125,slow=4.9,SNR=9.0
INK LR LR 21 40 08.8
comp=Z,2µm,18.3s,baz=141,slow=34
comp=Z,15nm,1.1s
INK Inuvik 75.11 349 P P 21 08 49.1 -0.7
INK IAmb IAmb 21 08 56.9
comp=Z,26nm,0.9s
INK Inuvik 75.11 349 P P 21 08 49.1 -0.7
INK pmax pmax
comp=Z,26nm,0.9s
INK Inuvik 75.11 349 P P 21 08 49.4 -0.4
baz=149
O19K Port Alsworth 75.13 337 P P 21 08 49.2 -0.9
O19K IAmb IAmb 21 09 01.2
comp=Z,42nm,1.4s
O19K Port Alsworth 75.13 337 P P 21 08 50.0 -0.1
baz=127
SDPT Sand Point 75.16 330 P P 21 08 49.5 -0.9
baz=121
H27K Steamboat Moun 75.18 345 P P 21 08 50.0 -0.3
baz=141,SNR=21
Q16K King Salmon 75.20 335 P P 21 08 50.7 +0.2
baz=125
SKT Skwentna 75.20 339 P P 21 08 49.4 -1.1
SKT IAmb IAmb 21 09 02.4
comp=Z,42nm,1.1s
SKT IAMs_20 IAMs_20 21 34 55.5
comp=Z,1µm,20.0s
SKT Skwentna 75.20 339 P P 21 08 49.9 -0.6
baz=130,SNR=10
RND Reindeer 75.23 341 P P 21 08 50.2 -0.6
RND Reindeer 75.23 341 P P 21 08 50.2 -0.6
RND pmax pmax
comp=Z,52nm,0.9s
O18K Koktuh Hills 75.28 336 P P 21 08 50.2 -0.8
O18K Koktuh Hills 75.28 336 P P 21 08 50.0 -1.1
baz=126
HDA Harding Lake 75.33 342 P P 21 08 50.3 -1.0
HDA IAmb IAmb 21 08 57.9
comp=Z,20nm,1.1s
HDA Harding Lake 75.33 342 P P 21 08 50.2 -1.0
baz=135
P17K Kvichak River 75.41 335 P P 21 08 50.8 -0.9
baz=125
MCK McKinley 75.48 341 P P 21 08 51.2 -1.0
MCK IAmb IAmb 21 08 59.3
comp=Z,28nm,0.9s
MCK IAMs_20 IAMs_20 21 35 01.0
comp=Z,1µm,20.0s
MCK McKinley 75.48 341 P P 21 08 51.2 -1.0
MCK pmax pmax
comp=Z,28nm,0.9s
MCK MLR MLR
comp=Z,1µm,20.0s
MCK McKinley 75.48 341 P P 21 08 51.4 -0.8
baz=133,SNR=8.9
N19K Bonanza Creek 75.57 337 P P 21 08 51.9 -0.9
N19K IAMs_20 IAMs_20 21 34 22.4
comp=Z,1µm,20.0s
N19K Bonanza Creek 75.57 337 P P 21 08 51.5 -1.3
baz=127,SNR=13
IL31 75.57 342 P P 21 08 51.7 -0.9
ILAR Eielson Array 75.57 342 P P 21 08 52.1 -0.5
comp=Z,12nm,0.9s,baz=156,slow=4.5,SNR=43
comp=Z,12nm,0.9s
ILAR Eielson Array 75.57 342 P P 21 08 51.1 -1.5
G27K Doyon Strip 75.66 346 P P 21 08 52.4 -0.8
baz=141,SNR=5.1
PRP Porcupine Dome 75.72 343 P P 21 08 52.6 -1.0
PRP Porcupine Dome 75.72 343 P P 21 08 52.6 -1.0
baz=137,SNR=24
M20K Styx River 75.72 338 P P 21 08 52.9 -0.8
M20K IAmb IAmb 21 09 00.3
comp=Z,31nm,0.8s
M20K IAMs_20 IAMs_20 21 36 19.3
comp=Z,884nm,19.0s
M20K Styx River 75.72 338 P P 21 08 52.6 -1.0
baz=129
WRH Wood River Hil 75.73 342 P P 21 08 52.9 -0.6
WRH IAMs_20 IAMs_20 21 36 42.5
comp=Z,967nm,20.0s
TRF Thorofare Moun 75.74 340 P P 21 08 52.1 -1.7
TRF IAmb IAmb 21 09 05.4
comp=Z,31nm,1.0s
TRF IAMs_20 IAMs_20 21 34 53.7
comp=Z,1µm,22.0s
TRF Thorofare Moun 75.74 340 P P 21 08 52.8 -1.0
baz=132,SNR=11
CCB Clear Creek Bu 75.77 342 P P 21 08 53.0 -0.6
CCB IAMs_20 IAMs_20 21 35 41.3
comp=Z,928nm,22.0s
COLA College 75.94 342 P P 21 08 54.6 0.0
COLA College 75.94 342 P P 21 08 54.6 0.0
COLA pmax pmax
comp=Z,55nm,0.3s
COLA MLR MLR
comp=Z,800nm,21.0s
COLA College 75.94 342 P P 21 08 54.2 -0.5
baz=134
TCOL CIGO, UAF Yank 75.94 342 P P 21 08 54.8 +0.1
TCOL IAMs_20 IAMs_20 21 35 47.0
comp=Z,901nm,22.0s
TCOL CIGO, UAF Yank 75.94 342 P P 21 08 54.1 -0.6
baz=134
BWN Browne 75.96 341 P P 21 08 53.5 -1.4
BWN IAMs_20 IAMs_20 21 35 17.1
comp=Z,1µm,21.0s
POKR Poker Plat Res 75.98 343 P P 21 08 54.5 -0.5
POKR IAmb IAmb 21 09 02.9
comp=Z,16nm,0.8s
POKR IAMs_20 IAMs_20 21 39 30.2
comp=Z,881nm,20.0s
POKR Poker Plat Res 75.98 343 P P 21 08 54.3 -0.7
baz=135
O17K Koliganek Bris 76.01 335 P P 21 08 54.4 -0.8
baz=125
KTH Kantishna Hill 76.02 340 P P 21 08 54.0 -1.3
KTH IAMs_20 IAMs_20 21 35 12.2
comp=Z,1µm,20.0s
PPLA Purkeypile 76.03 339 P P 21 08 54.9 -0.6
PPLA Purkeypile 76.03 339 P P 21 08 54.4 -1.0
baz=130,SNR=11
N18K Kilae Creek 76.05 336 P P 21 08 54.6 -0.8
N18K IAmb IAmb 21 09 02.1
comp=Z,32nm,0.9s
N18K Kilae Creek 76.05 336 P P 21 08 54.5 -0.9
baz=126,SNR=9.6
MDM Murphy Dome 76.11 342 P P 21 08 55.1 -0.7
MDM IAmb IAmb 21 09 02.8
comp=Z,27nm,0.9s
MDM IAMs_20 IAMs_20 21 35 50.6
comp=Z,1µm,22.0s
NEA2 Nenana 76.12 342 P P 21 08 54.8 -0.9
NEA2 IAmb IAmb 21 09 02.6
comp=Z,27nm,1.0s
NEA2 IAMs_20 IAMs_20 21 37 23.8
comp=Z,1µm,18.0s
NEA2 Nenana 76.12 342 P P 21 08 55.1 -0.6
baz=133
SVW2 Sparrevohn 76.17 337 P P 21 08 54.9 -1.3
SVW2 IAmb IAmb 21 09 02.4
comp=Z,21nm,0.9s
M19K Big River Lodg 76.20 338 P P 21 08 55.5 -0.8
M19K IAmb IAmb 21 09 08.0
comp=Z,33nm,1.1s
M19K IAMs_20 IAMs_20 21 36 42.0
comp=Z,849nm,20.0s
M19K Big River Lodg 76.20 338 P P 21 08 55.6 -0.7
baz=128
G26K Porcupine Rive 76.31 345 P P 21 08 55.5 -1.3
baz=139
CAST Castle Rocks 76.33 340 P P 21 08 55.8 -1.2
CAST IAMs_20 IAMs_20 21 35 55.3
comp=Z,1µm,19.0s
CAST Castle Rocks 76.33 340 P P 21 08 55.6 -1.4
baz=130,SNR=13
O16K Kokwok River B 76.33 335 P P 21 08 55.6 -1.4
baz=124
H25K Birch Creek 76.35 344 P P 21 08 56.3 -0.7
baz=137
L20K Farewell, AK 76.37 339 P P 21 08 56.0 -1.2
baz=128,SNR=15
BPAW Bear Paw Mtn. 76.40 341 P P 21 08 55.9 -1.5
BPAW IAmb IAmb 21 09 03.8
comp=Z,19nm,0.9s
BPAW IAMs_20 IAMs_20 21 35 26.3
comp=Z,1µm,20.0s
BPAW Bear Paw Mtn. 76.40 341 P P 21 08 56.1 -1.3
baz=131,SNR=8.3
FYU Fort Yukon 76.41 344 P P 21 08 56.6 -0.7
FYU IAMs_20 IAMs_20 21 37 30.3
comp=Z,1µm,19.0s
L19K White Mountain 76.55 338 P P 21 08 56.6 -1.6
L19K IAmb IAmb 21 09 04.8
comp=Z,31nm,0.9s
L19K IAMs_20 IAMs_20 21 36 54.1
comp=Z,899nm,18.0s
L19K White Mountain 76.55 338 P P 21 08 57.3 -0.9
baz=127,SNR=11
I23K Minto, Yukon-K 76.59 342 P P 21 08 58.0 -0.4
I23K IAmb IAmb 21 09 10.0
comp=Z,33nm,1.1s
I23K IAMs_20 IAMs_20 21 36 04.2
comp=Z,958nm,21.0s
I23K Minto, Yukon-K 76.59 342 P P 21 08 58.0 -0.4
baz=133,SNR=12
H24K Noodor Dome 76.63 343 P P 21 08 57.7 -0.9
H24K IAMs_20 IAMs_20 21 40 18.1
comp=Z,1µm,20.0s
H24K Noodor Dome 76.63 343 P P 21 08 58.1 -0.6
baz=135,SNR=46
CHUM Lake Minchumin 76.71 340 P P 21 08 57.8 -1.2
baz=130
E27K Coleen River 76.72 346 P P 21 08 58.5 -0.7
baz=141,SNR=9.2
G25K Bearman Lake 76.79 344 P P 21 08 59.1 -0.3
baz=137,SNR=10
BMAR Burnt Mountain 76.88 345 P P 21 08 59.1 -0.9
MLY Manley 76.94 341 P P 21 08 59.4 -1.1
MLY IAMs_20 IAMs_20 21 35 58.6
comp=Z,1µm,20.0s
MLY Manley 76.94 341 P P 21 08 59.8 -0.7
baz=132,SNR=11
F26K Sheenjek River 76.97 345 P P 21 09 00.2 -0.3
baz=139,SNR=11
K20K Telida 76.98 339 P P 21 08 59.2 -1.4
K20K Telida 76.98 339 P P 21 08 59.6 -1.0
baz=128,SNR=20
N16K Nishlik Lake 77.10 335 P P 21 09 00.3 -1.1
baz=123
H23K Yukon River 77.11 342 P P 21 09 00.5 -0.8
H23K IAMs_20 IAMs_20 21 40 06.0
comp=Z,1µm,20.0s
H23K Yukon River 77.11 342 P P 21 09 00.6 -0.8
baz=133
G24K Hadweenzic Riv 77.12 344 P P 21 09 01.4 0.0
baz=135,SNR=11
F25K Christian Rive 77.27 345 P P 21 09 02.4 +0.2
baz=137,SNR=16
MSVF Nonsavu 77.35 253 P P 21 09 06.3 +2.5
comp=Z,16nm,0.9s,baz=125,slow=10,SNR=8.4
MSVF LR LR 21 35 09.9
comp=Z,546nm,21.8s,baz=84,slow=29
comp=Z,16nm,0.9s
MSVF Nonsavu 77.35 253 P P 21 09 03.5 -0.3
MSVF IAmb IAmb 21 09 08.2
comp=Z,33nm,1.1s
MSVF Nonsavu 77.35 253 P P 21 09 03.5 -0.3
MSVF pmax pmax
comp=Z,33nm,1.1s
TTA Tatalina 77.42 338 P P 21 09 02.7 -0.5
TTA Tatalina 77.42 338 P P 21 09 02.7 -0.5
TTA pmax pmax
comp=Z,16nm,1.2s
TTA Tatalina 77.42 338 P P 21 09 03.0 -0.2
baz=126
I21K Tanana 77.44 341 P P 21 09 02.6 -0.6
I21K IAmb IAmb 21 09 11.1
comp=Z,30nm,0.9s
I21K IAMs_20 IAMs_20 21 36 11.6
comp=Z,1µm,20.0s
I21K Tanana 77.44 341 P P 21 09 02.5 -0.6
baz=130,SNR=9.0
J20K Nowinta River 77.52 340 P P 21 09 02.6 -0.9
J20K IAmb IAmb 21 09 10.2
comp=Z,28nm,0.8s
J20K IAMs_20 IAMs_20 21 36 41.8
comp=Z,924nm,19.0s
J20K Nowinta River 77.52 340 P P 21 09 02.7 -0.9
baz=128,SNR=11
UNV Unalaska Valle 77.56 327 P P 21 09 03.2 -0.8
baz=115
E25K Arctic Village 77.64 345 P P 21 09 04.2 -0.1
baz=137
H22K Ishtalitna Cre 77.72 342 P P 21 09 04.2 -0.6
baz=131,SNR=20
F24K Squaw Lake 77.82 344 P P 21 09 05.4 +0.1
baz=135
G23K Bananza Creek 77.86 343 P P 21 09 05.4 -0.2
baz=133
H21K Melozitna Rive 78.01 341 P P 21 09 05.7 -0.7
H21K IAmb IAmb 21 09 13.3

comp=Z,24nm,0.8s
H21K IAMs_20 IAMs_20 21 37 06.7
comp=Z,1μm,19.0s
H21K Melozitna Rive 78.01 341 P **P** **21 09 05.7 -0.7**
baz=130,SNR=11
COLD Coldfoot 78.26 343 P **P** **21 09 08.3 +0.6**
COLD Coldfoot 78.26 343 P **P** **21 09 08.2 +0.5**
baz=133
C27K Jago River 78.33 347 P **P** **21 09 08.3 +0.3**
baz=139
E24K Your Creek 78.37 344 P **P** **21 09 08.5 +0.1**
baz=134
G22K Bettles 78.44 343 P **P** **21 09 08.3 -0.3**
baz=131
IMAR Indian Mountai 78.52 341 P **P** **21 09 07.8 -1.4**
E23K Chandalar 78.67 344 P **P** **21 09 10.4 +0.4**
baz=133,SNR=7.3
G21K Allakaket 78.78 342 P **P** **21 09 10.3 -0.3**
baz=129,SNR=9.3
URZ Urewera 78.81 232 LR LR 21 38 35.1
comp=Z,973nm,18.2s,baz=186,slow=32
C26K Camden Bay 78.82 347 P **P** **21 09 11.4 +0.6**
baz=138
RES Resolute Bay 78.83 2 P **P** **21 09 10.6 -0.1**
comp=Z,7.4nm,0.9s,baz=128,slow=12,SNR=1.4
RES LR LR 21 42 36.5
comp=Z,1μm,20.9s,baz=188,slow=35
comp=Z,7.4nm,0.9s
F22K John River 79.02 343 P **P** **21 09 11.7 -0.2**
baz=131
TOLK Toolik Lake Re 79.06 345 P **P** **21 09 11.2 -0.9**
TOLK IAMs_20 IAMs_20 21 39 14.4
comp=Z,1μm,20.0s
TOLK Toolik Lake Re 79.06 345 P **P** **21 09 11.8 -0.3**
baz=133
D24K Happy Valley 79.22 345 P **P** **21 09 12.5 -0.4**
baz=134
F21K Alatna River 79.22 342 P **P** **21 09 13.4 +0.4**
baz=129,SNR=14
E22K Anaktuvuk Pass 79.33 344 P **P** **21 09 13.7 0.0**
baz=131
D23K Nanushuk River 79.58 344 P **P** **21 09 15.2 +0.3**
baz=132
C24K Franklin Bluff 79.59 346 P **P** **21 09 14.6 -0.3**
baz=134
C23K Itkillik River 80.15 345 P **P** **21 09 17.7 -0.2**
baz=133
SFJD Kangerlussuaq 80.26 19 LR LR 21 44 21.7
comp=Z,957nm,19.7s,baz=236,slow=35
BELA Belgrano 2 81.75 168 P **P** **21 09 26.8 +0.3**
ANM Nome 81.82 337 IAMs_20 IAMs_20 21 38 13.5
comp=Z,1μm,21.0s
ANM Nome 81.82 337 P **P** **21 09 27.4 +0.4**
baz=118
A21K Barrow 82.65 345 IAMs_20 IAMs_20 21 40 16.2
comp=Z,911nm,21.0s
RDOG Red Dog Mine 82.65 341 IAMs_20 IAMs_20 21 48 21.6
comp=Z,1μm,21.0s
RPZ Rata Peaks 83.59 227 LR LR 21 40 21.4
comp=Z,2μm,18.6s,baz=76,slow=31
EUNU Eureka 84.50 3 P **P** **21 09 41.3 +0.6**
SBA Scott Base 85.89 192 P **P** **21 09 47.0 -0.6**
SBA IAmb IAmb 21 10 05.7
comp=Z,41nm,1.7s
SBA Scott Base 85.89 192 P **P** **21 09 47.0 -0.6**
SBA pmax pmax
comp=Z,41nm,1.7s
QSPA South Pole Qui 85.98 180 LR LR 21 41 41.2
comp=Z,1μm,19.5s,baz=120,slow=31
QSPA South Pole Qui 85.98 180 P **P** **21 09 48.5 +0.1**
QSPA IAmb IAmb 21 10 07.0
comp=Z,33nm,1.1s
VNDA Vanda 86.96 193 P **P** **21 09 54.4 +1.5**
comp=Z,1.4nm,1.1s,baz=81,slow=5.4,SNR=3.8
VNDA LR LR 21 41 30.4
comp=Z,743nm,18.6s,baz=96,slow=31
comp=Z,1.4nm,1.1s
VNDA Vanda 86.96 193 P **P** **21 09 53.7 +0.8**
VNDA Vanda 86.96 193 P **P** **21 09 53.7 +0.8**
VNDA pmax pmax
comp=Z,13nm,1.4s
VNA3 Neumayer Olymp 87.55 161 P **P** **21 09 55.8 -0.1**
VNA1 Neumayer--Stat 88.07 161 P **P** **21 09 59.9 +1.6**
DZM Mont Dzumac 88.13 248 *e*SS SS 21 26 32.1 -0.4
comp=Z,246nm,27.1s
DZM Mont Dzumac 88.13 248 *e*LR LR 21 37 55.4
comp=Z,1μm,29.9s
DZM Mont Dzumac 88.13 248 LR LR 21 40 53.0
comp=Z,324nm,20.7s,baz=131,slow=30
VNA2 Neumayer--Watz 88.32 161 P **P** **21 09 59.5 -0.1**
baz=275,slow=4.0
SHEM Shemya Is, Ala 88.35 323 LR LR 21 41 07.2
comp=Z,2μm,21.0s,baz=117,slow=30
BBTS Babate 88.52 75 LR LR 21 43 29.2
comp=Z,356nm,20.2s,baz=249,slow=32
SNAA Sanae 89.64 162 P **P** **21 10 06.0 +0.1**
SNAA Sanae 89.64 162 P **P** **21 10 06.9 +1.1**
SNAA LR LR 21 42 02.5
comp=Z,824nm,21.9s,baz=258,slow=30
SNAA Sanae 89.64 162 P **P** **21 10 06.4 +0.6**
SNAA IAMs_20 IAMs_20 21 41 17.0
comp=Z,937nm,22.0s
SNAA Sanae 89.64 162 P **P** **21 10 06.4 +0.6**
SNAA pmax pmax
comp=Z,16nm,1.6s
SNAA MLR MLR
comp=Z,900nm,22.0s
KOUNC Koumac, New Ca 90.24 250 IAMs_20 IAMs_20 21 41 15.8
comp=Z,702nm,20.0s
BORG Borgarnes 90.50 25 LR LR 21 49 54.3
comp=Z,552nm,18.1s,baz=264,slow=35
H11N3 WAKE ISLAND Hy 90.56 290 T T 22 50 22.2
baz=96,slow=74,SNR=102
H11N2 WAKE ISLAND Hy 90.57 290 T T 22 50 25.7
baz=96,slow=74,SNR=90
H11N1 WAKE ISLAND Hy 90.57 290 T T 22 50 27.5
baz=96,slow=74,SNR=41
H11S2 WAKE ISLAND Hy 90.66 288 T T 22 50 25.1
baz=94,slow=75,SNR=191
H11S1 WAKE ISLAND Hy 90.67 288 T T 22 50 32.8
baz=94,slow=75,SNR=247
H11S3 WAKE ISLAND Hy 90.68 288 T T 22 50 32.7
baz=94,slow=75,SNR=197
BILL Bilibino 93.67 338 IAMs_20 IAMs_20 21 45 32.0
comp=Z,1μm,22.0s
NVL N'lazarevskaya 94.42 163 *e*P P 21 10 32.6 +4.8
NVL *e*S **SKSac** **21 21 05.2 +3.2**
NVL pmax pmax
comp=Z,3.0nm,0.5s
HNR Honiara 95.35 260 LR LR 21 43 16.9
comp=Z,4μm,20.8s,baz=92,slow=29
JMIC Jan Mayen 95.61 19 LR LR 21 52 06.0
comp=Z,741nm,21.5s,baz=244,slow=35
AVE Averroes 97.68 57 IAMs_20 IAMs_20 21 45 45.3
comp=Z,565nm,21.0s
PETK Petropavlovsk- 98.27 323 LR LR 21 46 51.4
comp=Z,1μm,20.7s,baz=89,slow=30
EKA Eskdalemuir Ar 99.47 35 LR LR 21 54 16.3
comp=Z,312nm,19.1s,baz=272,slow=34
DBIC Dimbokro 99.48 84 LR LR 21 54 55.2
comp=Z,398nm,18.1s,baz=270,slow=35
SEY Seymchan 99.83 333 LR LR 21 51 06.9
comp=Z,727nm,19.7s,baz=75,slow=32
SPITS Spitsbergen Ar 99.96 10 LR LR 21 56 56.0
comp=Z,1μm,18.1s,baz=272,slow=36
PAB San Pablo 99.98 51 IAMs_20 IAMs_20 21 48 02.8
comp=Z,612nm,21.0s
MDT Midelt 100.04 58 LR LR 21 50 26.1
comp=Z,379nm,19.9s,baz=290,slow=32
MA2 Magadan 101.22 330 IAMs_20 IAMs_20 21 49 41.8
comp=Z,913nm,21.0s
TIXI Tiksi 104.95 345 IAMs_20 IAMs_20 21 57 21.7
comp=Z,685nm,20.0s
GRFO Grafenberg 109.22 38 IAMs_20 IAMs_20 21 55 14.1
comp=Z,602nm,20.0s
GRA1 Grafenberg Arr 109.22 38 IAMs_20 IAMs_20 21 55 13.1
comp=Z,595nm,20.0s
CLL Collm 109.80 36 *e*PP **PP** **21 16 12.0 +0.9**
CLL *e*PS **PS** **21 25 42.0 +2.0**
CLL *e*PPS PPS 21 26 42.0
CLL *e*SS SS 21 31 36.0 +1.8
CLL *e*SSS SSS 21 35 42.0
CLL Lm MLR 22 00 00.0
comp=Z,300nm,20.8s
AQU L'Aquila 112.77 46 IAMs_20 IAMs_20 21 58 02.8
comp=Z,495nm,22.0s
PSZ Piszkesteto 115.21 38 IAMs_20 IAMs_20 22 03 38.5
comp=Z,440nm,21.0s
ASAR Alice Springs 117.29 241 PKP **PKPdf** **21 15 53.9 -0.7**
comp=Z,1.0nm,0.8s,baz=91,slow=3.7,SNR=5.8
ASAR PP **PP** **21 17 04.7 -0.6**
comp=Z,1.5nm,1.0s,baz=110,slow=6.8,SNR=5.3
ASAR PKKPab **PKKPab** **21 26 26.0 +3.7**
comp=Z,0.3nm,0.8s,baz=336,slow=5.5,SNR=4.6
WRA Warramunga Arr 118.00 245 PKP **PKPdf** **21 15 54.9 -1.1**
comp=Z,1.7nm,0.9s,baz=107,slow=2.0,SNR=8.0
WRA Warramunga Arr 118.00 245 PKP **PKPdf** **21 15 54.7 -1.3**
MDJ Mudanjiang 118.22 319 IAMs_20 IAMs_20 22 01 10.1
comp=Z,613nm,20.0s
OBN Obninsk 120.01 25 IAMs_20 IAMs_20 22 07 19.1
comp=Z,490nm,21.0s
FAKI Fak Fak 123.42 264 IAMs_20 IAMs_20 22 03 15.4
comp=Z,574nm,20.0s
XLT XiLinHaoTe 126.94 324 *e*PKP **PKPdf** **21 16 06.7 -5.9**
XLT PKS **PKSdf** **21 19 44.9 -4.3**
XLT SKS **SKSdf** **21 23 20.5 -3.3**
XLT AMB AMB
comp=Z,120nm,3.6s
XLT LR LR
comp=Z,620nm,21.1s
XLT LR LR
comp=Z,830nm,24.0s
BRTR Keskin Array B 127.80 41 PKP **PKPdf** **21 16 14.1 -0.4**
comp=Z,0.8nm,0.9s,baz=210,slow=4.3,SNR=4.5
ULN Ulaanbaatar 128.90 334 IAMs_20 IAMs_20 22 06 58.4
comp=Z,567nm,22.0s
SONM Songino Array 129.22 334 PKP **PKiKP** **21 16 17.6 0.0**
comp=Z,1.6nm,1.0s,baz=60,slow=3.6,SNR=5.4
ZALV Zalesovo Beam 129.77 353 PKP **PKiKP** **21 16 19.2 +0.9**
comp=Z,1.5nm,0.8s,baz=25,slow=3.8,SNR=6.1
BRVK Borovoye 130.94 5 IAMs_20 IAMs_20 22 18 12.1
comp=Z,548nm,21.0s
HHC Hu-ho-hao-te 131.45 324 *e*PKP **PKPdf** **21 16 17.3 -4.0**
HNS HongShan 131.54 318 *e*PKP **PKiKP** **21 16 22.8 +0.5**
HNS LR LR
comp=Z,380nm,20.7s
HNS LR LR
comp=Z,420nm,20.7s
HNS LR LR
comp=Z,500nm,17.9s
ABKAR Akbulak array 132.94 14 PKPdf **PKPdf** **21 16 24.2 +0.5**
ABKAR Akbulak array 132.94 14 PKPdf **PKiKP** **21 16 24.5 -0.4**
MAK Makhachkala 133.72 29 *e*P **Pdif** **21 13 20.3 -3.3**
MAK pmax pmax
comp=Z,181nm,1.7s
MKAR Makanchi Array 137.11 354 PKhKP PKPpre 21 16 23.7
comp=Z,1.3nm,1.0s,baz=284,slow=7.0,SNR=3.6
MAKZ Makanchi 137.13 354 IAMs_20 IAMs_20 22 15 09.7
comp=Z,438nm,20.0s
XAN Xi'an 137.32 318 P PKiKP 21 16 42.1 +7.8
GTA Gaotai 138.76 332 *e*PKP **PKiKP** **21 16 39.5 +2.3**
GTA AMB AMB
comp=Z,100nm,10.5s
GTA LR LR
comp=Z,400nm,19.3s
GTA LR LR
comp=Z,520nm,20.7s
GTA LR LR
comp=Z,920nm,20.4s
WMQ Urumqi 139.10 347 *e*PKP **PKPdf** **21 16 35.3 -0.1**
WMQ LR LR
comp=Z,670nm,19.7s
WMQ LR LR
comp=Z,460nm,18.5s
WMQ LR LR
comp=Z,690nm,20.9s
LODK Lodwar 139.39 90 IAMs_20 IAMs_20 22 17 48.4
comp=Z,526nm,21.0s
KKM Kota Kinabalu 139.96 275 IAMs_20 IAMs_20 22 09 11.7
comp=Z,401nm,22.0s
BOOM Boomskoye usch 141.75 0 **PKPdf** **21 16 40.8 +0.4**
BOOM Boomskoye usch 141.75 0 PKIKP **PKPdf** **21 16 40.8 +0.4**
TARG Taragay, Kyrgy 142.48 358 **PKPdf** **21 16 40.3 -1.7**
TARG Taragay, Kyrgy 142.48 358 PKIKP **PKPdf** **21 16 40.3 -1.7**
GEYT Alibeck 142.53 24 PKP **PKPdf** **21 16 40.8 -0.9**
comp=Z,1.3nm,0.8s,baz=270,slow=1.5,SNR=4.1
GEYT Alibeck 142.53 24 PKPdf **PKPdf** **21 16 38.0 -3.7**
CD2 Chengdu 142.67 319 *e*PKP **PKPdf** **21 16 40.6 -1.6**
NRN Naryn 142.81 0 **PKPdf** **21 16 39.3 -3.2**
NRN Naryn 142.81 0 PKIKP **PKPdf** **21 16 39.3 -3.2**
QIZ Qiongzhong 143.82 297 IAMs_20 IAMs_20 22 15 31.9
comp=Z,477nm,19.0s
QIZ Qiongzhong 143.82 297 PKP PKPab 21 16 41.6 +0.2
QIZ PP **PP** **21 19 55.4 -2.1**
QIZ LR LR
comp=Z,320nm,15.9s
QIZ LR LR
comp=Z,360nm,20.7s
QIZ LR LR
comp=Z,470nm,17.5s
SBUM Sibu 143.86 269 IAMs_20 IAMs_20 22 21 54.4
comp=Z,291nm,20.0s
BTK Batken 143.87 7 PKPdf PKPab 21 16 40.9 -0.2
BTK Batken 143.87 7 PKIKP PKPab 21 16 40.9 -0.2
KSH Kashi 144.72 0 PKPbc **PKPdf** **21 16 46.3 +0.6**
KSH SS SS 21 38 54.4 +6.8
KSH LR LR
comp=Z,490nm,19.2s
KSH LR LR
comp=Z,380nm,15.8s
KSH LR LR
comp=Z,690nm,19.6s
RAYN Ar Rayn 144.74 54 PKPdf **PKPab** **21 16 43.7 -1.1**
RAYN Ar Rayn 144.74 54 IAMs_20 IAMs_20 22 33 54.1
comp=Z,382nm,22.0s
RAYN Ar Rayn 144.74 54 PKIKP **PKPab** **21 16 43.7 -1.1**
RAYN MLR MLR
comp=Z,400nm,22.0s
GAR Garm 144.85 8 PKPdf **PKPab** **21 16 44.4 -0.4**
CHGR Chuyangaron 145.01 9 **PKPab** **21 16 45.1 -0.3**
CHGR Chuyangaron 145.01 9 PKIKP **PKPab** **21 16 45.1 -0.3**
PZH PanZhiHua 146.81 315 PKPbc **PKPdf** **21 16 48.2 -1.4**
PZH PP **PP** **21 20 18.0 +3.3**
PZH AMB AMB
comp=Z,130nm,3.9s
PZH LR LR
comp=Z,270nm,19.6s
PZH LR LR
comp=Z,280nm,21.5s
PZH LR LR
comp=Z,510nm,23.7s
KBL Kabul 149.00 11 **PKPbc** **21 16 56.7 -0.4**
KBL Kabul 149.00 11 PKP2 **PKPbc** **21 16 56.7 -0.4**
NIL Nilore 150.46 5 IAMs_20 IAMs_20 22 26 16.5
comp=Z,412nm,22.0s
LSA Lhasa 150.78 332 **PKPbc** **21 17 01.2 -0.7**
LSA Lhasa 150.78 332 P **PKiKP** **21 17 04.9 +2.3**
LSA Lhasa 150.78 332 PKIKP **PKPbc** **21 17 01.2 -0.7**
LSA MLR MLR
comp=Z,500nm,20.0s
MYKOM Kota Tinggi 152.15 266 IAMs_20 IAMs_20 22 36 14.1
comp=Z,314nm,18.0s
CMAR Chiang Mai Arr 153.45 304 PKP **PKPdf** **21 17 00.7 +0.6**
comp=Z,0.8nm,0.4s,baz=308,slow=1.3,SNR=11
CMAR Chiang Mai Arr 153.45 304 **PKPdf** **21 16 57.4 -2.6**
CMAR Chiang Mai Arr 153.45 304 PKIKP **PKPdf** **21 16 57.4 -2.6**
TAPN Taplejung 154.32 336 *e*P **PKPab** **21 17 26.7 +3.2**
comp=Z,26nm,0.9s
GUN Gumba 154.52 339 *e*P **PKPab** **21 17 28.6 +4.2**
comp=Z,50nm,0.9s
JIRN Jiri 154.63 339 *e*P **PKPab** **21 17 29.1 +4.2**
comp=Z,30nm,0.9s
DANN Dangsing 154.77 344 *e*P **PKPab** **21 17 29.0 +3.6**
comp=Z,68nm,1.0s
GKN Gorkha 154.84 342 *e*P **PKPab** **21 17 29.2 +3.7**
comp=Z,23nm,1.0s
PKIN Phulchoki 154.99 340 *e*P **PKPab** **21 17 30.4 +4.1**
comp=Z,31nm,1.2s
PKI Pulchoki 154.99 340 *e*P **PKPab** **21 17 30.8 +4.4**
comp=Z,42nm,1.2s
RAMN Ramite 155.12 337 *e*P **PKPab** **21 17 28.8 +1.9**
comp=Z,38nm,0.9s
PYUN Pinan 155.21 345 *e*P **PKPab** **21 17 27.9 +0.7**
comp=Z,49nm,1.0s

IDC 06 21:15:27.0±7.8, 4°.84S×102°.31W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=240.3km s-min=135.3km az=107.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**34.00**	**358**	P	P	21 22 13.1	+0.3
	0.2nm,0.6s,baz=185,slow=9.1,SNR=3.9						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**45.53**	**342**	P	P	21 23 48.4	-0.4
	0.5nm,0.8s,baz=170,slow=7.9,SNR=4.0						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**67.80**	**354**	P	P	21 26 26.0	-0.4
	0.9nm,0.9s,baz=153,slow=5.6,SNR=3.7						
	0.9nm,0.9s						
ILAR	**Eielson Array**	**76.79**	**342**	P	P	21 27 20.5	+0.3
	1.6nm,0.9s,baz=161,slow=5.4,SNR=7.6						
	1.6nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**92.34**	**289**	T	T	23 08 45.9	
	baz=96,slow=74,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**92.35**	**289**	T	T	23 08 52.5	
	baz=96,slow=74,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**92.36**	**289**	T	T	23 08 46.5	
	baz=96,slow=74,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**92.44**	**288**	T	T	23 08 52.8	
	baz=95,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**92.45**	**288**	T	T	23 08 49.9	
	baz=95,slow=75,SNR=32						
H11S3	**WAKE ISLAND Hy**	**92.46**	**288**	T	T	23 08 52.9	
	baz=95,slow=75,SNR=25						

*IDC **06** 21:17:42.5±1.0, 4°.05S×103°.73W, h0km, mb4.1/14, mbtmp4.1/14, MS4.4/19, Error ellipse: s-maj=28.1km s-min=14.8km az=67.0*

*NEIC **06** 21:17:44.2±1.2, 4°.19S±0°.06×103°.9W±0°.1, h10km±1km, mb4.6/80, Error ellipse: s-maj=22.0km s-min=6.9km az=291.0*

*GCMT **06** 21:17:46.2±0.5, 3°.85S±0°.02×104°.01W±0°.02, h19km±1km, MW5.0/103, Moment Tensor Solution. s18,c20; s103,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.14; $M_{\theta\theta}$1.23±.13; $M_{\phi\phi}$-1.06±.14; $M_{r\theta}$0.93±.28; $M_{\theta\phi}$3.05±.12; $M_{\phi r}$-1.12±.29; Best double couple: $M_0$3.55400×10^{16} NP1:ϕ_s278.00000°, δ76.00000°, λ-18.00000°. NP2:ϕ_s13.00000°, δ73.00000°, λ-166.00000°. Principal axes: T 3.3480, Plg2.0000°, Azm326.0000°; N 0.4100, Plg68.0000°, Azm61.0000°; P -3.7590, Plg22.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 21:17:45.1±0.8, 4°.15S±0°.09×103°.8W±0°.1, h18km, n120, σ0:85/97, mb4.5/52, MS4.4/22, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**13.92**	**76**	P	**P**	**21 21 08.5**	**-1.2**
RTAL	**Retalhuleu**	**22.09**	**33**	P	**P**	**21 22 39.0**	**-0.5**
TLIG	**Tlapa**	**22.18**	**13**	P	**P**	**21 22 39.8**	**-0.7**
CMIG	**Matias Romero**	**22.86**	**22**	P	**P**	**21 22 48.3**	**+0.7**
	3.4nm,0.9s,baz=211,slow=8.9,SNR=5.4						
CMIG				S	**S**	**21 26 57.6**	**+1.1**
	0.8nm,0.3s,baz=109,slow=19,SNR=2.1						
CMIG				LR	LR	21 29 36.8	
	comp=Z,942nm,19.3s,baz=198,slow=31						
	3.4nm,0.9s						
DUNO	**Dulce Nombre,**	**23.06**	**52**	P	**P**	**21 22 50.2**	**+0.4**
DUNO				IAmb	IAmb	21 23 30.2	
	comp=Z,40nm,1.4s						
MTO3	**Montecristo**	**23.32**	**38**	P	**P**	**21 22 53.6**	**+0.9**
CCIG	**Comitan**	**23.34**	**29**	P	**P**	**21 22 52.4**	**-0.3**
CCIG				IAmb	IAmb	21 23 13.9	
	comp=Z,18nm,1.1s						
HZTE	**Horizontes, Gu**	**23.36**	**51**	P	**P**	**21 22 54.4**	**+1.6**
ESQI	**Esquipulas**	**23.46**	**37**	P	**P**	**21 22 55.0**	**+1.2**
CNGN	**Cerro Negro**	**23.70**	**46**	P	**P**	**21 22 55.2**	**-1.0**
MCRA	**Macar, Loja**	**23.77**	**91**	P	**P**	**21 22 58.5**	**+1.6**
BOAB	**BOACO BROADBAN**	**24.41**	**47**	P	**P**	**21 23 02.4**	**-0.4**
ACON	**Acoyapa**	**24.47**	**49**	P	**P**	**21 23 02.3**	**-1.0**
COHC	**Cochancay**	**24.55**	**87**	P	**P**	**21 23 04.0**	**0.0**
BOSC	**San Juan Bosco**	**25.26**	**89**	P	**P**	**21 23 11.2**	**+0.5**
BOSC				IAmb	IAmb	21 23 35.8	
	comp=Z,20nm,1.1s						
SLOR	**San Lorenzo -**	**25.49**	**83**	P	**P**	**21 23 12.8**	**-0.3**
SLOR				IAmb	IAmb	21 23 33.8	
	comp=Z,15nm,1.1s						
OTAV	**Otavalo**	**25.68**	**81**	P	**P**	**21 23 16.1**	**+1.2**
IMBA	**Imbabura, San**	**25.94**	**81**	P	**P**	**21 23 17.8**	**+0.6**
TULM	**Tulcn-Chalpat**	**26.42**	**80**	P	**P**	**21 23 23.2**	**+1.6**
TULM				IAmb	IAmb	21 23 37.2	
	comp=Z,22nm,1.1s						
ZAIG	**Zacatecas**	**26.78**	**2**	P	**P**	**21 23 24.7**	**+0.3**
NNA	**Nana**	**27.77**	**108**	LR	LR	21 31 38.1	
	comp=Z,562nm,21.3s,baz=280,slow=30						
SLBS	**Sierra La Lagu**	**28.31**	**348**	P	**P**	**21 23 38.9**	**+1.0**
SLBS				IAmb	IAmb	21 23 42.5	
	comp=Z,23nm,1.4s						
LPIG	**La Paz**	**28.79**	**348**	LR	LR	21 32 07.2	
	comp=Z,536nm,20.3s,baz=190,slow=30						
ROSC	**El Rosal**	**30.76**	**73**	LR	LR	21 34 09.0	
	comp=Z,470nm,19.1s,baz=224,slow=32						
TXAR	**Lajitas Array**	**33.29**	**0**	P	**P**	**21 24 20.9**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=172,slow=7.0,SNR=3.0						
TXAR				LR	LR	21 35 47.8	
	comp=Z,320nm,20.7s,baz=174,slow=33						
	comp=Z,0.6nm,1.0s						
TXAR	**Lajitas Array**	**33.29**	**0**	P	**P**	**21 24 21.7**	**-0.1**
HSIG		**33.69**	**349**	P	**P**	**21 24 25.2**	**0.0**
HSIG				IAmb	IAmb	21 24 37.7	
	comp=Z,9.8nm,1.0s						
JCT	**Junction City**	**34.64**	**6**	P	**P**	**21 24 33.7**	**+0.2**
JCT				IAmb	IAmb	21 24 41.9	
	comp=Z,10nm,1.2s						
SDV	**Santo Domingo**	**35.50**	**69**	P	**P**	**21 24 40.4**	**-1.0**
	comp=Z,3.3nm,0.4s,baz=75,slow=18,SNR=1.4						
SDV				LR	LR	21 36 35.2	
	comp=Z,703nm,21.7s,baz=242,slow=32						
	comp=Z,3.3nm,0.4s						
SDV	**Santo Domingo**	**35.50**	**69**	P	**P**	**21 24 41.5**	**+0.2**
SDV				IAmb	IAmb	21 25 04.2	
	comp=Z,6.4nm,0.8s						
PB16	**IPOC Station P**	**36.36**	**116**	P	**P**	**21 24 48.6**	**-0.5**
PB16				IAmb	IAmb	21 25 04.7	
	comp=Z,15nm,1.2s						
ABTX	**Abilene, Hawle**	**36.78**	**6**	P	**P**	**21 24 51.8**	**-0.1**
ABTX				IAmb	IAmb	21 25 01.2	
	comp=Z,12nm,1.2s						
342A	**Flagon Creek P**	**36.98**	**16**	P	**P**	**21 24 53.8**	**+0.4**
LPAZ	**La Paz**	**37.03**	**112**	P	**P**	**21 24 54.1**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=252,slow=11,SNR=3.6						
LPAZ				LR	LR	21 38 04.8	
	comp=Z,415nm,18.4s,baz=331,slow=33						
	comp=Z,1.3nm,0.8s						
LPAZ	**La Paz**	**37.03**	**112**	P	**P**	**21 24 54.5**	**-0.4**
H03N2	**Juan Fernandez**	**37.23**	**144**	T	T	22 04 43.4	
	baz=318,slow=77,SNR=8.1						
H03N1	**Juan Fernandez**	**37.25**	**144**	T	T	22 04 49.6	
	baz=318,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**37.25**	**145**	T	T	22 04 49.4	
	baz=318,slow=77,SNR=9.1						
PB08	**IPOC Station P**	**37.28**	**118**	P	**P**	**21 24 56.3**	**-0.4**
PB01	**IPOC Station P**	**37.31**	**120**	P	**P**	**21 24 56.4**	**-0.2**
PB01				IAmb	IAmb	21 25 08.6	
	comp=Z,17nm,1.1s						
PB09	**IPOC Station P**	**37.81**	**121**	P	**P**	**21 25 00.8**	**-0.2**
LENM	**Lemitar**	**38.22**	**356**	P	**P**	**21 25 04.7**	**+0.4**
LVC	**Limon Verde**	**38.41**	**122**	P	**P**	**21 25 07.3**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=309,slow=4.6,SNR=4.7						
LVC				LR	LR	21 36 49.8	
	comp=Z,420nm,19.8s,baz=308,slow=30						
	comp=Z,4.7nm,0.8s						
Y14A	**Wickenburg**	**38.87**	**348**	P	**P**	**21 25 09.1**	**-0.4**
AMTX	**Amarillo**	**38.87**	**3**	P	**P**	**21 25 10.2**	**+0.6**
AMTX				IAmb	IAmb	21 25 21.7	
	comp=Z,13nm,1.4s						
X18A	**Snowflake**	**38.91**	**352**	P	**P**	**21 25 10.1**	**+0.1**
X34A	**Smith Ranch, M**	**38.95**	**8**	P	**P**	**21 25 10.3**	**+0.2**
X34A				IAmb	IAmb	21 25 21.7	
	comp=Z,11nm,1.0s						
WMOK	**Wichita Mounta**	**38.96**	**7**	P	**P**	**21 25 07.0**	**-3.3**
WMOK				IAmb	IAmb	21 25 08.1	
	comp=Z,4.8nm,0.3s						
ANMO	**Albuquerque**	**38.97**	**357**	P	**P**	**21 25 09.9**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=138,slow=9.4,SNR=3.1						
	comp=Z,1.8nm,1.0s						
MIAR	**Mount Ida**	**39.67**	**13**	P	**P**	**21 25 18.2**	**+2.1**
OK034	**N. Norfolk Rd.**	**40.49**	**9**	P	**P**	**21 25 22.8**	**-0.1**
V12A	**Nelson**	**41.00**	**346**	P	**P**	**21 25 27.0**	**-0.3**
GSC	**Goldstone, Bar**	**41.10**	**344**	P	**P**	**21 25 28.0**	**-0.1**
GSC				IAmb	IAmb	21 25 36.5	
	comp=Z,14nm,1.5s						
KAN09	**Caldwell North**	**41.47**	**7**	P	**P**	**21 25 32.3**	**+1.3**

SDCO	Great Sand Dun	41.71 358	P	P	21 25 33.0	-0.3
LCAR	Lake Charles	41.72 15	P	P	21 25 33.0	0.0
LCAR			IAmb	IAmb	21 25 36.7	
	comp=Z,9.3nm,1.1s					
S22A	4UR Ranch, Cre	41.77 356	P	P	21 25 34.1	+0.2
S22A			IAmb	IAmb	21 25 48.4	
	comp=Z,15nm,1.5s					
GWY	Greenwater Val	41.90 344	P	P	21 25 34.7	0.0
WCT	Wildcat Mounta	42.45 345	P	P	21 25 39.3	+0.1
WCT			IAmb	IAmb	21 25 58.4	
	comp=Z,6.4nm,0.6s					
GRAC	Grapevine Rang	42.85 344	P	P	21 25 42.3	0.0
GRAC			IAmb	IAmb	21 26 06.9	
	comp=Z,14nm,1.2s					
SIV	San Ignacio	43.57 109	P	P	21 25 47.4	-1.0
	comp=Z,1.0nm,0.7s,baz=252,slow=15,SNR=4.8					
SIV			LR	LR	21 41 43.9	
	comp=Z,672nm,19.7s,baz=338,slow=33					
	comp=Z,1.0nm,0.7s					
R11A	Troy Canyon, C	43.67 347	P	P	21 25 48.8	-0.4
P17A	Butcher Ranch,	43.87 352	P	P	21 25 51.3	+0.6
OMMB	Old Mammoth Mi	43.89 343	P	P	21 25 51.6	+0.5
MDPB	Devils Postpil	43.93 342	P	P	21 25 51.2	-0.1
P18A	Preston Nutter	43.96 353	P	P	21 25 51.3	-0.3
LHV	Little Huntoon	44.34 343	P	P	21 25 55.0	+0.9
LHV			IAmb	IAmb	21 26 13.2	
	comp=Z,8.6nm,1.3s					
NVAR	Mina Array Bea	44.45 344	P	P	21 25 54.5	-0.8
	comp=Z,0.7nm,0.8s,baz=162,slow=3.7,SNR=2.9					
	comp=Z,0.7nm,0.8s					
NVAR	Mina Array Bea	44.45 344	P	P	21 25 54.9	-0.5
MPU	Maple Canyon	44.53 351	P	P	21 25 56.7	+0.7
MPU			IAmb	IAmb	21 26 02.5	
	comp=Z,5.2nm,0.8s					
RYN	Ryan	44.69 344	P	P	21 25 56.4	-0.8
RYN			IAmb	IAmb	21 26 01.1	
	comp=Z,9.9nm,1.4s					
RDMU	Red Mountain	44.81 354	P	P	21 25 59.4	+1.1
RDMU			IAmb	IAmb	21 26 06.7	
	comp=Z,3.8nm,0.7s					
WAKR	Walker	44.84 343	P	P	21 25 57.9	-0.6
WAKR			IAmb	IAmb	21 26 02.7	
	comp=Z,8.0nm,1.2s					
JLU	Jordanelle	45.08 352	P	P	21 26 00.5	+0.1
PHWY	Pilot Hill	45.26 358	P	P	21 26 02.0	+0.1
PNTR	Pine Nut	45.43 343	P	P	21 26 03.0	-0.2
BGU	Big Grassy Mou	45.65 350	P	P	21 26 04.6	-0.2
BGU			IAmb	IAmb	21 26 08.6	
	comp=Z,6.9nm,1.4s					
HWUT	Hardware Ranch	46.09 352	P	P	21 26 09.4	+1.2
HWUT			IAmb	IAmb	21 26 11.8	
	comp=Z,6.0nm,1.1s					
HVU	Hansel Valley	46.44 351	P	P	21 26 11.6	+0.6
HVU			IAmb	IAmb	21 26 14.5	
	comp=Z,4.2nm,1.0s					
ORV	Oroville	46.45 341	P	P	21 26 11.1	+0.2
ORV			IAmb	IAmb	21 26 14.9	
	comp=Z,11nm,1.4s					
PPT	Papeete	46.77 250	LR	LR	21 41 07.3	
	comp=Z,264nm,18.4s,baz=14,slow=30					
PPT2	Papeete2	46.77 250	eLR	LR	21 39 13.2	
	comp=Z,790nm,27.0s					
PLCA	Paso Flores	47.10 145	P	P	21 26 17.4	+1.2
	comp=Z,3.1nm,1.1s,baz=326,slow=7.1,SNR=3.5					
PLCA			LR	LR	21 41 27.0	
	comp=Z,603nm,19.2s,baz=326,slow=30					
	comp=Z,3.1nm,1.1s					
FXWY	Fox Creek	48.01 353	P	P	21 26 22.7	-0.6
FXWY			IAmb	IAmb	21 26 23.4	
	comp=Z,6.4nm,1.4s					
TBI	Tubuai	48.02 242	eLR	LR	21 39 49.6	
	comp=Z,567nm,26.2s					
MOOW	Moose Ponds	48.09 353	P	P	21 26 24.2	+0.3
MOOW			IAmb	IAmb	21 26 27.3	
	comp=Z,3.8nm,1.1s					
WVOR	Wild Horse Val	48.28 345	P	P	21 26 26.0	+0.6
WVOR			IAmb	IAmb	21 26 28.9	
	comp=Z,8.9nm,1.4s					
HLID	Hailey	48.45 350	P	P	21 26 26.8	+0.1
HLID			IAmb	IAmb	21 26 30.3	
	comp=Z,5.1nm,1.4s					
AY01	Puyuhuapi	48.56 150	P	P	21 26 27.4	+0.1
MFID	Camas Ranch	48.58 348	P	P	21 26 27.4	-0.1
MFID			IAmb	IAmb	21 26 30.9	
	comp=Z,9.4nm,1.4s					
YBH	Yreka Blue Hor	48.81 341	P	P	21 26 28.6	-0.8
	comp=Z,0.7nm,0.3s,baz=168,slow=6.0,SNR=3.0					
	comp=Z,0.7nm,0.3s					
YHH	Holmes Hill	49.12 353	P	P	21 26 31.6	-0.4
YHH			IAmb	IAmb	21 26 49.5	
	comp=Z,4.6nm,1.1s					
MCMT	McKenzie Canyo	49.43 352	P	P	21 26 34.6	+0.4
CPUP	Villa Florida	49.58 121	P	P	21 26 35.1	-0.4
	comp=Z,2.6nm,0.9s,baz=276,slow=9.7,SNR=3.3					
	comp=Z,2.6nm,0.9s					
I42A	Draeger Farm,	49.66 14	P	P	21 26 34.4	-1.3
I07A	Izee	50.05 345	P	P	21 26 38.2	-0.6
I07A			IAmb	IAmb	21 26 49.9	
	comp=Z,8.2nm,1.2s					
MDP	Montagnes des	51.91 80	LR	LR	21 47 50.0	
	comp=Z,180nm,18.3s,baz=278,slow=35					
SADO	Sadowa	53.46 22	LR	LR	21 50 29.6	
	comp=Z,185nm,18.4s,baz=187,slow=37					
SCHQ	Schefferville	66.26 22	LR	LR	21 56 52.5	
	comp=Z,267nm,18.9s,baz=204,slow=36					
PMSA	Palmer Station	66.82 163	LR	LR	21 49 54.7	
	comp=Z,454nm,21.3s,baz=340,slow=29					
YKA	Yellowknife Ar	66.97 355	P	P	21 28 36.0	-0.3
	comp=Z,1.5nm,0.8s,baz=168,slow=6.3,SNR=5.0					
	comp=Z,1.5nm,0.8s					
FRB	Frobisher Bay	72.66 16	P	P	21 29 12.5	+1.2
	comp=Z,15nm,0.9s,baz=153,slow=6.9,SNR=3.2					
	comp=Z,15nm,0.9s					
KDAK	Kodiak Island	73.06 335	LR	LR	21 53 07.0	
	comp=Z,374nm,19.7s,baz=171,slow=29					
K27K	Chicken	73.73 343	P	P	21 29 16.8	-0.9
K27K			IAmb	IAmb	21 29 22.0	
	comp=Z,9.5nm,1.2s					
RND	Reindeer	75.35 341	P	P	21 29 26.4	-0.8
ILAR	Eielson Array	75.69 342	P	P	21 29 27.3	-1.8
	comp=Z,2.3nm,0.8s,baz=162,slow=6.2,SNR=4.3					
	comp=Z,2.3nm,0.8s					
PRP	Porcupine Dome	75.83 343	P	P	21 29 29.2	-0.8
PRP			IAmb	IAmb	21 29 33.6	
	comp=Z,8.1nm,1.2s					
H24K	Noodor Dome	76.74 343	P	P	21 29 33.7	-1.4
H24K			IAmb	IAmb	21 29 38.1	
	comp=Z,7.3nm,1.0s					
RES	Resolute Bay	78.89 2	LR	LR	22 01 57.9	
	comp=Z,170nm,18.1s,baz=157,slow=34					
RPZ	Rata Peaks	83.66 227	LR	LR	22 00 35.2	
	comp=Z,394nm,18.0s,baz=192,slow=31					
QSPA	South Pole Qui	85.91 180	P	P	21 30 23.6	-0.2
DZM	Mont Dzumac	88.25 248	eLR	LR	21 58 27.4	
	comp=Z,212nm,23.8s					
H11N3	WAKE ISLAND Hy	90.73 290	T	T	23 10 50.6	
	baz=96,slow=74,SNR=9.5					
H11N2	WAKE ISLAND Hy	90.74 290	T	T	23 10 51.7	
	baz=96,slow=74,SNR=7.4					
H11N1	WAKE ISLAND Hy	90.74 290	T	T	23 10 54.5	
	baz=96,slow=74,SNR=6.7					
H11S2	WAKE ISLAND Hy	90.83 288	T	T	23 10 58.7	
	baz=94,slow=75,SNR=22					
H11S1	WAKE ISLAND Hy	90.84 288	T	T	23 11 03.5	
	baz=94,slow=75,SNR=26					
H11S3	WAKE ISLAND Hy	90.85 288	T	T	23 11 02.3	
	baz=94,slow=75,SNR=20					
PETK	Petropavlovsk-	98.42 323	LR	LR	22 07 02.8	
	comp=Z,207nm,21.2s,baz=61,slow=30					
CMAR	Chiang Mai Arr	153.62 304	PKPbc	PKiKP	21 37 45.9	+2.0
	comp=Z,0.3nm,0.3s,baz=42,slow=4.2,SNR=4.2					

DDA ***06*** *21:28:18.3±0.0, 36°.04N×33°.45E, h7km±2km, ML2.0*
ISK ***06*** *21:28:18.2, 36°.03N×33°.49E, h12km, ML2.7/25*
NIC ***06*** *21:28:20.0±0.0, 35°.84N×33°.40E, h15km, ML2.2/7*
ISC 06 21:28:17.6±0.8, 35°.98N±0°.02×33°.44E±0°.02, h11km±6km, n45, σ0s62/73, 2C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YORU	Yoruktepe-Mers	0.17	350	PG	Pg	21 28 21.9	+0.4
YORU				SG	Sg	21 28 24.7	+0.5
AKK2	Akkuyu-Mersin	0.17	30	PG	Pg	21 28 21.5	0.0
AKK2				SG	Sg	21 28 24.1	-0.1
AKK1	Akkuyu-Mersin	0.18	27	PG	Pg	21 28 21.8	+0.2
AKK1				SG	Sg	21 28 24.2	-0.1
AKKU	Akkuyu-Mersin	0.20	27	PG	Pg	21 28 22.1	+0.2
AKKU				SG	Sg	21 28 24.8	0.0
OREN	Orenkoy-Mersin	0.22	3	PG	Pg	21 28 22.1	-0.3
OREN				SG	Sg	21 28 25.7	+0.1
TEPK	Tepekoy-MERSIN	0.25	19	PG	Pg	21 28 22.9	0.0
TEPK				SG	Sg	21 28 26.5	0.0
TISA	Tisan-Mersin	0.26	47	PG	Pg	21 28 22.9	-0.1
TISA				SG	Sg	21 28 26.6	-0.1
YESI	Yesilovacik-Me	0.27	38	PG	Pg	21 28 22.9	-0.2
YESI				SG	Sg	21 28 26.7	-0.1
TEKE	Tekeli-Mersin	0.31	301	PG	Pb	21 28 25.1	-0.1
TEKE				SG	Sb	21 28 30.1	-0.1
IKL	Isikli	0.32	38	PG	Pg	21 28 24.1	0.0
IKL				SG	Sg	21 28 28.3	-0.2
BERE	Bereket-Mersin	0.40	334	PG	Pb	21 28 26.4	-0.5
BERE				SG	Sb	21 28 32.2	-0.9
TEVE	Tevekalti-Mers	0.45	0	PG	Pg	21 28 26.8	+0.3
TEVE				SG	Sb	21 28 33.0	-1.4
KEBE	Keben-Mersin	0.51	25	PG	Pg	21 28 27.7	0.0
KEBE				SG	Sg	21 28 34.6	+0.1
SILI	Silifke-Mersin	0.55	45	PG	Pg	21 28 28.3	0.0
SILI				SG	Sg	21 28 35.7	+0.2
LFK	Lefkose	0.71	174	PG	Pb	21 28 33.3	+1.3
EREN	Erenkoy	0.75	127	PG	Pg	21 28 33.2	+1.1
KIZK	Mersin	0.75	49	PG	Pg	21 28 31.8	-0.4
KIZK				SG	Sb	21 28 42.3	-0.7
KIZK	Mersin	0.75	49	P	Pg	21 28 31.9	-0.4
KIZK				S	Sb	21 28 42.2	-0.8
KIZK				*i* AML	AML	21 28 44.0	
	comp=N,82nm,0.2s						
KIZK				*i* AML	AML	21 28 45.0	
	comp=E,62nm,0.3s						
ERMK	Ermenek	0.78	327	P	Pg	21 28 33.1	+0.3
ERMK				*i* AML	AML	21 28 46.0	
	comp=E,74nm,0.2s						
ERMK				*i* AML	AML	21 28 48.0	
	comp=N,86nm,0.3s						
ATHAL	Athalassa	0.84	183	S	Sg	21 28 44.2	-0.7
ATHAL				AML	AML	21 29 08.9	
	2.3nm,0.7s						
ATHAL				AML	AML	21 29 16.5	
	1.6nm,0.8s						
GAZI	Gazipasa	0.94	286	PG	Pn	21 28 37.3	+0.4
GAZI	Gazipasa	0.94	286	P	Pn	21 28 37.0	+0.1
GAZI				S	Sn	21 28 50.2	-0.1
GAZI				*i* AML	AML	21 28 51.0	
	comp=N,144nm,0.3s						
GAZI				*i* AML	AML	21 28 51.0	
	comp=E,92nm,0.3s						
MVOU	Mavrovouni	0.98	171	⇑*i*P	Pb	21 28 36.2	-0.4
MVOU				S	Sb	21 28 48.6	-0.8
MVOU				AML	AML	21 28 50.0	
	0.4nm,0.2s						
MVOU				AML	AML	21 28 50.0	
	0.4nm,0.2s						
MVOU				AML	AML	21 28 53.6	
	0.4nm,0.2s						
MVOU				AML	AML	21 28 53.6	
	0.4nm,0.2s						
CSS	Mathiatis	1.02	185	P	Pb	21 28 36.7	-0.6
CSS				S	Sb	21 28 50.0	-0.8
ALFC	Alefka	1.07	220	⇑*i*P	Pb	21 28 37.6	-0.6
ALFC				S	Sb	21 28 51.7	-0.6
ALFC				AML	AML	21 28 57.1	
	0.3nm,0.4s						
ALFC				AML	AML	21 28 57.1	
	0.3nm,0.4s						
ALFC				AML	AML	21 28 58.2	
	0.4nm,0.2s						
ALFC				AML	AML	21 28 58.2	
	0.4nm,0.2s						
PARAL	Paralimni	1.10	154	P	Pb	21 28 39.0	+0.3
PARAL				S	Sb	21 28 53.2	+0.2
PARAL				AML	AML	21 29 03.1	
	0.1nm,1.0s						
PARAL				AML	AML	21 29 03.1	
	0.1nm,1.0s						
PARAL				AML	AML	21 29 09.0	
	0.1nm,0.4s						
PARAL				AML	AML	21 29 09.0	
	0.1nm,0.4s						
KRMN	Karaman	1.20	353	PN	Pg	21 28 40.6	-0.1
ASGA	Asgata	1.21	188	P	Pn	21 28 39.2	-1.2
ASGA				AML	AML	21 29 10.4	
	0.1nm,0.4s						
ASGA				AML	AML	21 29 11.0	
	0.1nm,0.9s						
HDMB	Hadim	1.25	322	PN	Pg	21 28 41.6	0.0
KKBE	Karaman, Kazim	1.30	342	P	Pg	21 28 42.4	-0.2
KKBE				S	Sg	21 28 59.9	+0.4
KKBE				*i* AML	AML	21 29 03.0	
	comp=N,29nm,0.3s						
KKBE				*i* AML	AML	21 29 05.0	
	comp=E,29nm,0.5s						
SZAC	Souni	1.31	201	P	Pn	21 28 41.5	-0.3
SZAC				S	Sb	21 28 57.8	-1.2
SZAC				AML	AML	21 29 08.6	
	0.3nm,0.6s						
SZAC				AML	AML	21 29 08.6	
	0.3nm,0.6s						
SZAC				AML	AML	21 29 11.9	
	0.2nm,0.3s						
SZAC				AML	AML	21 29 11.9	
	0.2nm,0.3s						
AKMS	Akamas	1.32	223	P	Pn	21 28 41.8	-0.2
AKMS				S	Sb	21 28 59.4	0.0
AKMS				AML	AML	21 29 01.8	
	0.2nm,0.8s						
AKMS				AML	AML	21 29 01.8	
	0.2nm,0.8s						
AKMS				AML	AML	21 29 13.2	
	0.1nm,0.5s						
AKMS				AML	AML	21 29 13.2	
	0.1nm,0.5s						
NATA	Nata	1.40	211	P	Pn	21 28 43.6	+0.6
DED	Mersin	1.47	48	P	Pn	21 28 43.9	-0.1
DED				S	Sg	21 29 05.5	+0.7
DED				*i* AML	AML	21 29 09.0	
	comp=N,14nm,0.2s						
DED				*i* AML	AML	21 29 09.0	
	comp=E,18nm,0.2s						
KERG	Konya-Eregli	1.53	21	P	Pb	21 28 45.5	-0.6
KERG				S	Sg	21 29 06.8	-0.1
KERG				*i* AML	AML	21 29 10.0	
	comp=E,35nm,0.2s						
KERG				*i* AML	AML	21 29 10.0	
	comp=N,42nm,0.4s						
GULE	Gulek	1.68	39	P	Pb	21 28 48.6	-0.1
GULE				S	Sg	21 29 13.6	+1.8
GULE				*i* AML	AML	21 29 16.0	
	comp=N,38nm,0.3s						
GULE				*i* AML	AML	21 29 20.0	
	comp=E,49nm,0.4s						
KEPZ	Antalya-Kepez	1.74	302	P	Pb	21 28 50.4	+0.7
KEPZ				S	Sg	21 29 14.7	+1.0
KEPZ				*i* AML	AML	21 29 18.0	
	comp=N,15nm,0.3s						
KEPZ				*i* AML	AML	21 29 20.0	
	comp=E,19nm,0.5s						
SEYD	Seydisehir-KON	1.92	318	PN	Pb	21 28 51.7	-1.0
SEDI	Konya, Seydise	2.00	318	P	Pb	21 28 54.5	+0.5
SEDI				*i* AML	AML	21 29 29.0	
	comp=E,16nm,0.5s						
SEDI				*i* AML	AML	21 29 30.0	
	comp=N,15nm,0.4s						
CMRD	Camardi-Nigde	2.08	36	PN	Pn	21 28 52.9	+0.3
KONT	Konya--Tatoy	2.14	336	PN	Pn	21 28 54.6	+1.3
YAYL	Yayladag	2.16	88	PN	Pn	21 28 54.3	+0.6
SULT	Sultanhani-AKS	2.21	2	PN	Pn	21 28 55.1	+0.8
TAHT	Tahtakopru-Hat	2.25	79	PN	Pn	21 28 55.7	+0.9
OSC2	CSNet OBS 4	3.06	199	P	Pn	21 29 06.4	+0.5

IDC ***06*** *21:49:32.3±0.9, 64°.52N×20°.74E, h0km, mbtmp2.9/4, ML1.7/4, Error ellipse: s-maj=10.2km s-min=7.4km az=98.0*
NAO ***06*** *21:49:32.2±0.9, 64°.49N×20°.61E, ML2.3*
HEL ***06*** *21:49:34.9±0.1, 64°.54N×20°.55E, h24km, ML2.4, ML2.4(UPP), Confirmed Earthquake*
UPP ***06*** *21:49:34.4±0.1, 64°.53N×20°.54E, h27km, ML2.4, Confirmed Earthquake*
BER ***06*** *21:49:34.7±2.9, 64°.54N×20°.57E, h1km±5km, ML2.0,*

ML2.4(UPP), Confirmed Earthquake
ISC 06 21:49:34.6±0.8, 64°.52N±0°.02×20°.58E±0°.02, h28km±5km, n107, σ1s27/184, 15C-3D, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODEU	Stanfors	0.12	152	⇑P	Pb	21 49 39.6	-0.2
ODEU				S	Sb	21 49 43.1	-0.2
ODEU	Stanfors	0.12	152	⇑*i*P	Pb	21 49 39.6	-0.2
ODEU				*i* S	Sb	21 49 43.1	-0.2
BURU	Burvik	0.35	79	⇑P	Pb	21 49 42.2	-0.3
BURU				S	Sb	21 49 47.7	-0.3
BURU	Burvik	0.35	79	⇑P	Pb	21 49 42.2	-0.3
BURU				S	Sb	21 49 47.7	-0.3
BURU	Burvik	0.35	79	⇑*i*P	Pb	21 49 42.2	-0.3
BURU				*i* S	Sb	21 49 47.7	-0.3
SVAU	Svanoeiden	0.44	268	⇓P	Pb	21 49 43.1	-0.8
SVAU				S	Sb	21 49 49.3	-0.9
SVAU	Svanoeiden	0.44	268	⇓P	Pb	21 49 43.1	-0.8
SVAU				S	Sb	21 49 49.3	-0.9
SVAU	Svanoeiden	0.44	268	⇓*i*P	Pb	21 49 43.1	-0.8
SVAU				*i* S	Sb	21 49 49.3	-0.9
UMAU	Umeaa	0.64	176	⇑P	Pb	21 49 46.8	-0.3
UMAU				S	Sb	21 49 55.5	-0.2
UMAU	Umeaa	0.64	176	⇑P	Pb	21 49 46.8	-0.3
UMAU				S	Sb	21 49 55.5	-0.2
UMAU	Umeaa	0.64	176	*e*P	Pb	21 49 46.8	-0.3
UMAU				*e*S	Sb	21 49 55.4	-0.2
SJUU	Sjulsmark	1.09	23	⇑P	Pn	21 49 53.7	-0.2
SJUU				S	Sb	21 50 07.8	-0.7
SJUU	Sjulsmark	1.09	23	⇑P	Pn	21 49 53.7	-0.2
SJUU				S	Sb	21 50 07.8	-0.7
SJUU	Sjulsmark	1.09	23	⇑*e*P	Pn	21 49 53.7	-0.2
SJUU				*e*S	Sb	21 50 07.8	-0.7
OBF8	Ulkokalla	1.26	97	*e*P	Pn	21 49 57.2	+0.9
OBF8				*e*S	Sn	21 50 12.9	+0.7
OBF8				MSG		21 50 14.7	
	comp=Z,45nm,0.2s						
OBF8	Ulkokalla	1.26	97	*e*P	Pn	21 49 57.2	+0.9
OBF8				*e*S	Sn	21 50 12.9	+0.7
OBF8				MSG		21 50 14.7	
	comp=Z,45nm,0.2s						
HUSU	Husum	1.32	208	⇑P	Pn	21 49 58.1	+0.9
HUSU				S	Sn	21 50 15.1	+1.3
HUSU	Husum	1.32	208	⇑P	Pn	21 49 58.1	+0.9
HUSU				S	Sn	21 50 15.1	+1.3
HUSU	Husum	1.32	208	*e*P	Pn	21 49 58.1	+0.9
HUSU				*e*S	Sn	21 50 14.8	+1.0
OBF0	Syolatti, Pyha	1.58	89	*e*P	Pn	21 50 01.4	+0.7
OBF0				*e*S	Sb	21 50 22.6	0.0
OBF0				MSG		21 50 24.1	
	comp=Z,26nm,0.2s						
OBF0	Syolatti, Pyha	1.58	89	*e*P	Pn	21 50 01.4	+0.7
OBF0				*e*S	Sb	21 50 22.6	0.0
OBF0				MSG		21 50 24.1	
	comp=Z,26nm,0.2s						
HARU	Harads	1.66	6	⇑P	Pn	21 50 02.9	+1.1
HARU	Harads	1.66	6	⇑P	Pn	21 50 02.9	+1.1
HARU	Harads	1.66	6	⇑*e*P	Pn	21 50 02.9	+1.1
VAF	Ylistaro	1.75	147	*e*P	Pn	21 50 04.8	+1.9
VAF				*e*S	Sb	21 50 27.1	-0.3
VAF				MSG		21 50 28.4	
	comp=Z,41nm,0.2s						
VAF	Ylistaro	1.75	147	*e*P	Pn	21 50 04.8	+1.9
VAF				*e*S	Sb	21 50 27.1	-0.3
VAF				MSG		21 50 28.4	
	comp=Z,41nm,0.2s						
KALU	Kalix	1.79	40	P	Pn	21 50 04.6	+1.1
KALU	Kalix	1.79	40	P	Pn	21 50 04.6	+1.1
KALU	Kalix	1.79	40	*e*P	Pn	21 50 04.6	+1.1
KALU				*e*S	Sb	21 50 27.0	-1.5
OUF	Merijarvi	1.81	93	*e*P	Pn	21 50 04.2	+0.4
OUF				*e*S	Sb	21 50 28.1	-1.0
OUF	Merijarvi	1.81	93	*e*P	Pn	21 50 04.2	+0.4
OUF				*e*S	Sb	21 50 28.1	-1.0
OBF4	Vikkela, Lumij	1.97	79	*e*P	Pn	21 50 06.5	+0.5
OBF4				*e*S	Sn	21 50 31.0	+1.3
OBF4				MSG		21 50 35.8	
	comp=Z,21nm,0.2s						
OBF4	Vikkela, Lumij	1.97	79	*e*P	Pn	21 50 06.5	+0.5
OBF4				*e*S	Sn	21 50 31.0	+1.3
OBF4				MSG		21 50 35.8	
	comp=Z,21nm,0.2s						
ERTU	Ertsjaerv	2.15	17	*e*P	Pn	21 50 09.8	+1.2
ERTU	Ertsjaerv	2.15	17	*e*P	Pn	21 50 09.8	+1.2
ERTU				*e*SB	Sb	21 50 38.2	-0.9
HEMU	Hemsoen	2.17	213	*e*P	Pn	21 50 09.7	+0.9
HEMU				*e*S	Sb	21 50 38.0	-1.5
HEMU	Hemsoen	2.17	213	*e*P	Pn	21 50 09.7	+0.9
HEMU				*e*S	Sb	21 50 38.0	-1.5
TOF	Tornio	2.22	43	*e*P	Pn	21 50 10.5	+1.0
TOF				*e*S	Sn	21 50 37.5	+1.6
TOF				MSG		21 50 42.2	
	comp=Z,15nm,0.2s						
TOF	Tornio	2.22	43	*e*P	Pn	21 50 10.5	+1.0
TOF				*e*S	Sn	21 50 37.5	+1.6
TOF				MSG		21 50 42.2	
	comp=Z,15nm,0.2s						
OUL	Oulu	2.34	74	*e*P	Pn	21 50 11.4	+0.2
OUL	Oulu	2.34	74	*e*P	Pn	21 50 11.4	+0.2
PAJU	Pajala	2.73	21	*e*P	Pn	21 50 17.3	+0.8
PAJU	Pajala	2.73	21	*e*P	Pn	21 50 17.3	+0.8
PAJU				*e*SB	Sb	21 50 55.1	-0.5
KPF	Kankaanpaa	2.78	165	*e*P	Pn	21 50 18.5	+1.4
KPF				*e*S	Sn	21 50 51.4	+1.8
SALU	Saltoluokta	3.00	344	*e*P	Pn	21 50 21.7	+1.5
SALU				*e*S	Sn	21 50 57.6	+2.4
KEF	Keuruu	3.05	139	*e*P	Pn	21 50 22.4	+1.6
KEF				*e*S	Sn	21 50 58.1	+1.7
KEF	Keuruu	3.05	139	*e*P	Pn	21 50 22.4	+1.6
KEF				*e*S	Sn	21 50 58.1	+1.7
KLF	Kolari	3.06	25	*e*P	Pn	21 50 22.0	+1.0
KLF				*e*S	Sn	21 50 57.5	+0.8
KLF	Kolari	3.06	25	*e*P	Pn	21 50 22.0	+1.0
KLF				*e*S	Sn	21 50 57.5	+0.8
MOR8	Moi Rana	3.06	306	*e*P	Pn	21 50 22.7	+1.6
MOR8				IAML		21 51 12.8	
	comp=Z,7.4nm,0.2s						
RNF	Rovaniemi	3.08	45	*e*P	Pn	21 50 21.8	+0.5
RNF				*e*S	Sn	21 50 58.4	+1.1
RNF	Rovaniemi	3.08	45	*e*P	Pn	21 50 21.8	+0.5
RNF				*e*S	Sn	21 50 58.4	+1.1
NIF	Nilsia	3.38	106	*e*P	Pn	21 50 25.8	+0.3
NIF				*e*S	Sn	21 51 05.1	+0.5
KAF	Kangasniemi	3.53	130	*e*P	Pn	21 50 28.6	+1.1
KAF				*e*S	Sn	21 51 08.4	0.0
KAF	Kangasniemi	3.53	130	*e*P	Pn	21 50 28.6	+1.1
KAF	

FIA0				Sn	Sn	21 51 19.6	+0.4
	baz=327,slow=28						
FIA0	**FINESS Array S**	**3.97**	**138**	*e*P	**Pn**	**21 50 35.4**	**+1.8**
FIA0				*e*S	**Sn**	**21 51 21.0**	**+1.8**
FINES	**FINESS Array B**	**3.97**	**138**	Pn	**Pn**	**21 50 35.3**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=327,slow=13,SNR=1.5						
FINES				Pg	**Pb**	**21 50 39.6**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=326,slow=14,SNR=1.4						
FINES				Sn	**Sn**	**21 51 19.5**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=326,slow=23,SNR=9.1						
FINES				Lg	Lg	21 51 36.1	
	comp=Z,4.8nm,0.3s,baz=323,slow=25,SNR=28						
	comp=Z,2.4nm,1.1s						
STEI	**Steigen**	**4.05**	**330**	*e*P	**Pn**	**21 50 35.4**	**+0.7**
STEI				*e*S	**Sn**	**21 51 21.4**	**+0.4**
STEI				IAML		21 51 39.6	
	comp=Z,6.8nm,0.5s						
RMF	**Romuvaara**	**4.07**	**90**	*e*P	**Pn**	**21 50 34.6**	**-0.3**
RMF	**Romuvaara**	**4.07**	**90**	*e*P	**Pn**	**21 50 34.6**	**-0.3**
HEF	**Hetta**	**4.10**	**16**	*e*P	**Pn**	**21 50 35.7**	**+0.4**
HEF				*e*S	**Sn**	**21 51 21.7**	**-0.5**
HEF	**Hetta**	**4.10**	**16**	*e*P	**Pn**	**21 50 35.6**	**+0.3**
OLKF	**Oulanka, Finla**	**4.11**	**60**	*e*P	**Pn**	**21 50 35.2**	**-0.2**
OLKF				*e*S	**Sn**	**21 51 21.1**	**-1.3**
OLKF	**Oulanka, Finla**	**4.11**	**60**	*e*P	**Pn**	**21 50 35.2**	**-0.2**
OLKF				*e*S	**Sn**	**21 51 21.1**	**-1.3**
KU6	**Riekki**	**4.19**	**65**	*e*P	**Pn**	**21 50 36.6**	**0.0**
KU6				*e*S	**Sn**	**21 51 24.4**	**-0.1**
KU6	**Riekki**	**4.19**	**65**	*e*P	**Pn**	**21 50 36.6**	**0.0**
KU6				*e*S	**Sn**	**21 51 24.4**	**-0.1**
AAL	**Aland**	**4.36**	**184**	*e*P	**Pn**	**21 50 40.3**	**+1.4**
AAL	**Aland**	**4.36**	**184**	*e*P	**Pn**	**21 50 40.3**	**+1.4**
NUR	**Nurmijrvi**	**4.44**	**153**	*e*S	**Sn**	**21 51 32.9**	**+2.2**
NUR	**Nurmijrvi**	**4.44**	**153**	*e*S	**Sn**	**21 51 32.9**	**+2.2**
KIF	**Kilpisjarvi**	**4.51**	**1**	*e*P	**Pn**	**21 50 42.3**	**+1.4**
KIF				*e*PG	**Pb**	**21 50 55.5**	**+2.6**
KIF				*e*S	**Sn**	**21 51 32.8**	**+0.5**
LOF	**Lofoten**	**4.61**	**325**	*e*P	**Pn**	**21 50 43.4**	**+1.1**
LOF				*e*S	**Sn**	**21 51 32.6**	**-2.1**
LOF				IAML		21 52 03.5	
	comp=Z,4.3nm,0.8s						
KTK1	**Kautokeino**	**4.64**	**12**	*e*	**Pn**	**21 50 43.5**	**+0.8**
KTK1				*e*S	**Sn**	**21 51 35.0**	**-0.5**
MEF	**Metsahovi**	**4.67**	**156**	*e*S	**Sn**	**21 51 37.2**	**+1.0**
MEF	**Metsahovi**	**4.67**	**156**	*e*S	**Sn**	**21 51 37.2**	**+1.0**
PVF	**Pernaja**	**4.67**	**146**	*e*S	**Sn**	**21 51 38.4**	**+2.0**
PVF	**Pernaja**	**4.67**	**146**	*e*S	**Sn**	**21 51 38.4**	**+2.0**
JETT	**Jettan, Norway**	**5.06**	**359**	*e*P	**Pn**	**21 50 49.4**	**+0.8**
JETT				*e*S	**Sn**	**21 51 43.6**	**-2.4**
TRO	**Tromso**	**5.18**	**354**	*e*S	**Sn**	**21 51 47.5**	**-1.2**
ARA0	**ARCESS Array S**	**5.40**	**19**	Pn	**Pn**	**21 50 52.8**	**-0.3**
	baz=197,slow=14						
ARA0				Sn	**Sn**	**21 51 50.8**	**-3.4**
	baz=201,slow=28						
ARA0				Lg	Lg	21 52 16.1	
	baz=190,slow=28						
ARA0	**ARCESS Array S**	**5.40**	**19**	Pn	**Pn**	**21 50 52.8**	**-0.3**
	baz=197,slow=14						
ARA0				Sn	**Sn**	**21 51 50.8**	**-3.4**
	baz=201,slow=28						
ARA0				IAML		21 52 25.3	
	comp=Z,3.4nm,0.3s						
ARCES	**ARCESS Array B**	**5.40**	**19**	Pn	**Pn**	**21 50 52.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=202,slow=14,SNR=11						
ARCES				Sn	**Sn**	**21 51 51.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=202,slow=21,SNR=7.1						
ARCES				Lg	Lg	21 52 17.7	
	comp=Z,0.3nm,0.3s,baz=206,slow=25,SNR=6.0						
	comp=Z,2.3nm,0.9s						
HFS	**Hagfors**	**5.44**	**219**	Pn	**Pn**	**21 50 54.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=28,slow=12,SNR=1.7						
HFS				Sn	**Sn**	**21 51 55.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=42,slow=20,SNR=1.6						
HFS				Lg	Lg	21 52 22.2	
	comp=Z,1.3nm,0.3s,baz=31,slow=28,SNR=10						
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**5.44**	**219**	Pn	**Pn**	**21 50 53.0**	**-0.7**
	baz=22,slow=14						
HFS				Sn	**Sn**	**21 51 53.3**	**-2.1**
	baz=45,slow=22						
HFS				Lg	Lg	21 52 19.5	
	baz=45,slow=28						
HFS	**Hagfors**	**5.44**	**219**	Pn	**Pn**	**21 50 53.0**	**-0.7**
	baz=22,slow=14						
HFS				Sn	**Sn**	**21 51 53.3**	**-2.1**
	baz=45,slow=22						
NB2	**NORSAR Subarra**	**5.54**	**235**	Pn	**Pn**	**21 50 55.0**	**0.0**
NB2	**NORSAR Subarra**	**5.54**	**235**	Pn	**Pn**	**21 50 55.0**	**0.0**
NOA	**NORSAR Array B**	**5.54**	**235**	Pn	**Pn**	**21 50 55.4**	**+0.3**
	baz=64,slow=5.1,SNR=1.6						
NOA				Sn	**Sn**	**21 51 54.1**	**-3.6**
	baz=293,slow=21,SNR=1.4						
NOA				Lg	Lg	21 52 21.4	
	comp=Z,0.1nm,0.3s,baz=84,slow=17,SNR=8.6						
	comp=Z,0.7nm,0.7s						
NC204	**NORSAR Array S**	**5.54**	**239**	*e*P	**Pn**	**21 50 55.1**	**0.0**
NC602	**NORSAR Array S**	**5.64**	**232**	IAML		21 52 30.6	
	comp=Z,5.9nm,0.4s						
NRA0	**NORESS Array S**	**5.64**	**232**	Pn	**Pn**	**21 50 56.9**	**+0.5**
	baz=48,slow=11						
NRA0				Sn	**Sn**	**21 51 58.2**	**-2.0**
	baz=54,slow=22						
NRA0				Lg	Lg	21 52 25.9	
	baz=45,slow=22						
NRA0	**NORESS Array S**	**5.64**	**232**	Pn	**Pn**	**21 50 56.9**	**+0.5**
	baz=48,slow=11						
NRA0				Sn	**Sn**	**21 51 58.2**	**-2.0**
	baz=54,slow=22						
KEV	**Kevo**	**5.82**	**23**	*e*P	**Pn**	**21 51 00.4**	**+1.4**
KEV				*e*S	**Sn**	**21 52 01.9**	**-2.7**

IDC 06 21:50:46.1±3.4, 33°.43S×178°.91W, h0km, mb3.7/2, mbtmp3.7/3, ML3.7/1, MS3.5/1, Error ellipse: s-maj=74.9km s-min=37.7km az=112.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.80**	**213**	Pn	Pn	21 52 14.2	+0.8
	2.1nm,0.3s,baz=316,slow=3.2,SNR=7.6						
URZ				Sn	Sn	21 53 20.2	-0.5
	0.7nm,0.3s,baz=242,slow=16,SNR=1.6						
	9.7nm,0.6s						
DZM	**Mont Dzumac**	**17.19**	**307**	LR	LR	21 59 56.4	
	comp=Z,146nm,19.8s,baz=56,slow=32						
ASAR	**Alice Springs**	**42.27**	**271**	P	P	21 58 41.8	+0.2
	0.7nm,0.7s,baz=110,slow=7.3,SNR=7.5						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**43.54**	**276**	P	P	21 58 51.2	-0.6
	0.8nm,0.7s,baz=120,slow=7.5,SNR=7.5						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**147.68**	**338**	PKPbc	PKPbc	22 10 31.0	-0.8
	2.5nm,1.0s,baz=30,slow=6.9,SNR=1.3						

*DNK **06** 21:58:50.6±0.8, 51°.57N×16°.21E, h1km*
*IPEC **06** 21:58:50.1±0.3, 51°.47N×16°.26E, h1km, ML2.4/3, Error ellipse: s-maj=3.0km s-min=1.4km az=55.0*
*IDC **06** 21:58:51.3±0.8, 51°.44N×16°.14E, h0km, mbtmp3.4/8, ML2.9/8, Error ellipse: s-maj=16.4km s-min=6.8km az=104.0*
*PRU **06** 21:58:51.4±0.0, 51°.43N×16°.18E, h0km*
ISC 06 21:58:48.7±0.7, 51°.55N±0°.03×16°.31E±0°.02, h0km, n55, σ1°.50/101, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**181**	*i* Pg	**Pg**	**21 59 02.5**	**+0.3**
KSP				*e*Sg	**Sg**	**21 59 10.0**	**-1.4**
CHVC	**Chvalec**	**0.97**	**189**	*e*PG	**Pg**	**21 59 07.4**	**0.0**
CHVC				*e*SG	**Sg**	**21 59 18.9**	**-1.1**
	comp=Z,48nm,0.4s						
OSTC	**Ostas**	**0.99**	**183**	*e*PG	**Pg**	**21 59 07.9**	**+0.1**
OSTC				*e*SG	**Sg**	**21 59 20.0**	**-0.6**
	comp=Z,71nm,0.7s						
UPC	**Upice**	**1.06**	**190**	*e*PG	**Pg**	**21 59 08.7**	**-0.3**
UPC				*e*SG	**Sg**	**21 59 21.3**	**-1.4**
	comp=Z,184nm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**180**	*e*PG	**Pg**	**21 59 11.4**	**-0.3**
DPC				*e*SG	**Sg**	**21 59 25.6**	**-1.6**
	comp=Z,62nm,0.5s						
PVCC	**Panska Ves**	**1.50**	**228**	*e*PG	**Pn**	**21 59 16.8**	**-0.1**
PVCC				*e*SG	**Sg**	**21 59 35.5**	**-1.3**
	comp=Z,207nm,0.3s						
KRLC	**Kraliky**	**1.50**	**168**	*e*PG	**Pn**	**21 59 16.8**	**-0.2**
KRLC				*e*SG	**Sg**	**21 59 36.2**	**-0.8**
	comp=Z,28nm,0.3s						
BRG	**Berggiesshubel**	**1.63**	**246**	Pn	**Pn**	**21 59 18.1**	**-0.6**
BRG				Pg	**Pg**	**21 59 20.2**	**+0.2**
BRG				Sg	**Sn**	**21 59 40.5**	**0.0**
BRG				Amp		21 59 41.2	
	comp=Z,41nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.90**	**211**	*e*PG	**Pn**	**21 59 22.5**	**+0.1**
GOPC				*e*SG	**Sn**	**21 59 47.3**	**+0.3**
	comp=Z,29nm,0.4s						
PRU	**Pruhonice**	**1.92**	**216**	*e*PG	**Pn**	**21 59 22.7**	**0.0**
PRU				*e*SG	**Sn**	**21 59 47.7**	**+0.2**
	comp=Z,48nm,0.6s						
MORC	**Moravsky Berou**	**1.94**	**156**	*e*PN	**Pn**	**21 59 23.2**	**+0.2**
MORC				*e*SG	**Sb**	**21 59 49.2**	**-0.5**
MORC	**Moravsky Berou**	**1.94**	**156**	*e*Pn	**Pn**	**21 59 23.2**	**+0.2**
	baz=335						
MORC				*e*Sg	**Sb**	**21 59 49.2**	**-0.5**
	comp=Z,29nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.07**	**145**	*e*PG	**Pg**	**21 59 28.2**	**-0.3**
OKC				*e*SG	**Sg**	**21 59 55.0**	**-0.3**
	comp=Z,38nm,0.5s						
CLL	**Collm**	**2.08**	**265**	*e*Pn	**Pn**	**21 59 25.0**	**+0.1**
CLL				*e*Pg	**Pb**	**21 59 28.0**	**+0.6**
CLL				*i* x	x	21 59 31.0	
CLL				*e*x	x	21 59 43.0	
CLL				*e*Sg	**Sb**	**21 59 54.0**	**+0.2**
	comp=Z,20nm,0.6s						
VRAC	**Vranov**	**2.25**	**175**	Pn	**Pn**	**21 59 28.5**	**+1.3**
	comp=Z,2.9nm,0.3s,baz=349,slow=15,SNR=20						
VRAC				Lg	Lg	21 59 57.9	
	comp=Z,6.1nm,0.3s,baz=238,slow=20,SNR=10						
	comp=Z,8.2nm,0.4s						
VRAC	**Vranov**	**2.25**	**175**	*e*PN	**Pn**	**21 59 27.5**	**+0.2**
VRAC				*e*SG	**Sb**	**21 59 58.3**	**-0.3**
VRAC	**Vranov**	**2.25**	**175**	*e*Pn	**Pn**	**21 59 27.4**	**+0.2**
	baz=355						
VRAC				*e*Sg	**Sb**	**21 59 58.2**	**-0.3**
	comp=Z,18nm,0.4s,baz=355						
TREC	**Trest**	**2.31**	**193**	*e*PN	**Pn**	**21 59 28.1**	**0.0**
TREC				*e*PG	**Pb**	**21 59 31.4**	**0.0**
TREC				*e*SG	**Sb**	**21 59 59.9**	**-0.6**
	comp=Z,27nm,0.3s						
MAUC	**Maruska**	**2.39**	**155**	*e*PN	**Pn**	**21 59 30.6**	**+1.4**
MAUC				*e*PG	**Pb**	**21 59 33.7**	**+1.0**
MAUC				*e*SG	**Sg**	**22 00 05.0**	**-0.5**
	comp=Z,122nm,1.0s						
KRUC	**Moravsky**	**2.49**	**179**	*e*PN	**Pn**	**21 59 30.9**	**+0.4**
KRUC				*e*SG	**Sb**	**22 00 05.8**	**+0.3**
KRUC	**Moravsky**	**2.49**	**179**	*e*Pn	**Pn**	**21 59 30.8**	**+0.3**
	baz=358						
KRUC				*e*Sg	**Sb**	**22 00 05.7**	**+0.3**
	comp=Z,23nm,0.6s,baz=358						
OJC	**Ojcow**	**2.58**	**120**	*e*Pn	**Pn**	**21 59 30.3**	**-1.4**
OJC				*e*Pg	**Pg**	**21 59 37.8**	**-0.3**
OJC				*e*Sg	**Sg**	**22 00 12.2**	**+0.6**
NKC	**Novy Kostel**	**2.77**	**243**	*e*PN	**Pn**	**21 59 34.8**	**+0.3**
NKC				*e*SG	**Sg**	**22 00 16.1**	**-1.7**
	comp=Z,28nm,0.5s						
JAVC	**Velka Javorina**	**2.83**	**161**	*e*PN	**Pn**	**21 59 35.7**	**+0.5**
JAVC	**Velka Javorina**	**2.83**	**161**	*e*Pn	**Pn**	**21 59 35.6**	**+0.4**
	baz=342						
KHC	**Kasperske Hory**	**2.98**	**217**	*e*PN	**Pn**	**21 59 37.3**	**0.0**
KHC				*e*PG	**Pb**	**21 59 42.1**	**-0.7**
KHC				*e*SG	**Sb**	**22 00 21.2**	**+1.4**
	comp=Z,12nm,0.4s						
CKRC	**Cesky Krumlov**	**3.02**	**206**	*e*PN	**Pn**	**21 59 38.4**	**+0.6**
CKRC				*e*PG	**Pb**	**21 59 43.2**	**-0.1**
CKRC				*e*SG	**Sb**	**22 00 21.9**	**+1.2**
GERES	**GERESS Array B**	**3.18**	**213**	Pn	**Pn**	**21 59 40.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=27,slow=13,SNR=22						
GERES				Pg	**Pb**	**21 59 47.0**	**+0.8**
	comp=Z,7.3nm,0.3s,baz=30,slow=18,SNR=50						
GERES				Lg	Lg	22 00 26.3	
	comp=Z,6.6nm,0.3s,baz=33,slow=30,SNR=11						
	comp=Z,1.3nm,0.4s						
NIE	**Niedzica**	**3.32**	**128**	*e*P	**Pg**	**21 59 52.3**	**-0.1**
NIE				*e*S	**Sg**	**22 00 36.4**	**+0.9**
CONA	**Conrad Observa**	**3.63**	**185**	*e*Pn	**Pn**	**21 59 47.5**	**+1.1**
	comp=Z,1.3nm,0.4s						
CONA				*e*Sg	**Sg**	**22 00 43.2**	**-2.2**
	comp=Z,16nm,0.4s						
BSD	**Bornholm Skovb**	**3.67**	**347**	*e*P	**Pn**	**21 59 48.7**	**+2.0**
BSD				*e*S	**Sn**	**22 00 30.3**	**-0.3**
RONA	**Rosalia, Austr**	**3.85**	**180**	*e*Pn	**Pb**	**21 59 58.3**	**+0.7**
	comp=Z,0.4nm,0.2s						
RONA				*e*Sg	**Sg**	**22 00 52.4**	**0.0**
	comp=Z,6.4nm,0.4s						
MOA	**Molln**	**3.93**	**200**	*i* Pn	**Pn**	**21 59 50.9**	**+0.5**
	comp=Z,3.0nm,0.3s						
MOA				*e*Sg	**Sg**	**22 00 54.3**	**-0.7**
	comp=Z,12nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.23**	**205**	*i* Pn	**Pn**	**21 59 55.5**	**+1.0**
	comp=Z,2.5nm,0.4s						
BIOA				*e*Sg	**Sg**	**22 01 02.5**	**-2.2**
	comp=Z,15nm,0.5s						
ARSA	**Arzberg**	**4.33**	**187**	*i* Pn	**Pn**	**21 59 57.7**	**+1.9**
	comp=Z,1.6nm,0.3s						
ARSA				*e*Sg	**Sg**	**22 01 07.3**	**-0.6**
	comp=Z,9.2nm,0.7s						
BLEU	**Blekinge**	**4.78**	**357**	*e*S	**Sn**	**22 00 56.9**	**-1.0**
KBA	**Koelnbreinsper**	**4.87**	**205**	*i* Pn	**Pn**	**22 00 02.2**	**-1.2**
	comp=Z,1.9nm,0.5s						
KBA				*e*Sg	**Sg**	**22 01 24.2**	**-1.0**
	comp=Z,5.5nm,0.4s						
SOKA	**Soboth**	**4.95**	**190**	*e*Sg	**Sg**	**22 01 24.4**	**-3.1**
	comp=Z,1.7nm,0.4s						
DEL	**Delary**	**5.14**	**345**	*i* P	**Pn**	**22 00 08.0**	**+1.2**
OBKA	**Obir**	**5.17**	**194**	*e*Pn	**Pn**	**22 00 06.6**	**-0.9**
	comp=Z,0.5nm,0.3s						
OBKA				*e*Sg	**Sb**	**22 01 26.7**	**+3.9**
	comp=Z,5.1nm,0.5s						
WATA	**Walderalm**	**5.22**	**218**	*e*Pn	**Pn**	**22 00 09.4**	**+1.2**
	comp=Z,1.8nm,0.3s						
WATA				*e*Sg	**Sg**	**22 01 37.2**	**+0.7**
	comp=Z,7.7nm,0.7s						
MYKA	**Terra Mystica**	**5.22**	**201**	*e*Sg	**Sg**	**22 01 31.5**	**-5.0**
	comp=Z,3.1nm,0.5s						
WTTA	**Wattenberg**	**5.26**	**217**	*e*Pn	**Pn**	**22 00 10.4**	**+1.7**
	comp=Z,1.0nm,0.3s						
WTTA				*e*Sg	**Sg**	**22 01 35.9**	**-1.7**
	comp=Z,3.9nm,0.4s						
MOTA	**Moosalm**	**5.40**	**221**	*e*Sg	**Sg**	**22 01 44.0**	**+1.8**
	comp=Z,5.7nm,0.6s						
ABTA	**Abfaltersbach**	**5.41**	**209**	*e*Sg	**Sg**	**22 01 39.0**	**-3.5**
	comp=Z,1.9nm,0.4s						
RETA	**Reutte**	**5.43**	**224**	*e*Pn	**Pn**	**22 00 11.0**	**-0.1**
	comp=Z,1.2nm,0.3s						
RETA				*e*Sg	**Sg**	**22 01 36.7**	**-6.5**
	comp=Z,4.4nm,0.5s						
SQTA	**Sankt Quirin**	**5.46**	**220**	*e*Pn	**Pn**	**22 00 13.1**	**+1.6**
	comp=Z,1.9nm,0.2s						
SQTA				*e*Sg	**Sg**	**22 01 43.3**	**-0.7**
	comp=Z,3.2nm,0.4s						
FETA	**Feichten**	**5.82**	**221**	*e*Sg	**Sg**	**22 01 59.8**	**+4.4**
	comp=Z,3.5nm,0.8s						
DAVA	**Damuels**	**5.98**	**227**	*e*Pn	**Pn**	**22 00 18.3**	**-0.3**
	comp=Z,0.5nm,0.2s						
DAVOX	**Davos/Dischmat**	**6.36**	**224**	Pn	**Pn**	**22 00 25.9**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=12,slow=22,SNR=1.8						
DAVOX				Lg	Lg	22 02 08.3	
	comp=Z,0.3nm,0.3s,baz=171,slow=22,SNR=4.1						
	comp=Z,0.6nm,0.3s						
HFS	**Hagfors**	**8.73**	**351**	Pn	**Pn**	**22 00 57.3**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=16,SNR=5.6						
	comp=Z,12nm,1.3s						
NOA	**NORSAR Array B**	**9.92**	**345**	Pn	**Pn**	**22 01 12.8**	**+0.3**
	baz=160,slow=12,SNR=1.7						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**22 01 31.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=6.9						
FINES				Sn	**Sn**	**22 03 33.4**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=219,slow=20,SNR=4.6						
	comp=Z,1.6nm,0.7s						
EKA	**Eskdalemuir Ar**	**12.20**	**296**	Pn	**Pn**	**22 01 44.6**	**+1.0**
	baz=101,slow=14						
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**18.56**	**10**	Pn	**P**	**22 03 05.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=195,slow=14,SNR=8.1						
	comp=Z,2.1nm,0.9s						

*NEIC **06** 22:07:33.0±1.7, 58°.01S±0°.10×25°.34W±0°.10, h35km±1km, mb4.7/25, Error ellipse: s-maj=17.4km s-min=7.7km az=343.0*

*IDC **06** 22:07:40.0±4.3, 58°.02S×25°.42W, h109km±39km, mb4.1/10, mbtmp4.5/12, MS3.6/1, Error ellipse: s-maj=18.0km s-min=14.8km az=73.0*
ISC 06 22:07:33.7±0.5, 57°.97S±0°.08×25°.33W±0°.08, h49km, n58, σ0°.95/55, mb4.6/20, 3C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.25**	**296**	Pn	**Pn**	**22 09 17.4**	**+0.6**
VNA1	**Neumayer--Stat**	**14.63**	**157**	P	**Pn**	**22 10 57.9**	**+0.7**
VNA3	**Neumayer Olymp**	**14.83**	**160**	P	**Pn**	**22 10 59.8**	**-0.2**
VNA2	**Neumayer--Watz**	**15.02**	**157**	P	**Pn**	**22 11 02.5**	**+0.1**
	baz=323,slow=14						
SNAA	**Sanae**	**16.57**	**155**	P	**P**	**22 11 23.9**	**-0.2**
SNAA	**Sanae**	**16.57**	**155**	P	**P**	**22 11 24.0**	**-0.1**
	24nm,0.3s,baz=323,slow=15,SNR=702						
SNAA	**Sanae**	**16.57**	**155**	P	**P**	**22 11 23.8**	**-0.3**
TROLL	**Troll, Antarti**	**18.07**	**152**	P	**Pn**	**22 11 43.4**	**+2.6**
PMSA	**Palmer Station**	**19.48**	**233**	P	**P**	**22 11 56.6**	**+0.5**
	13nm,0.7s,baz=73,slow=5.1,SNR=4.2						
PMSA				LR	LR	22 17 57.1	
	comp=Z,158nm,19.3s,baz=37,slow=32						
PMSA	**Palmer Station**	**19.48**	**233**		**P**	**22 11 56.2**	**+0.1**
PMSA				IAmb	IAmb	22 12 05.5	
	comp=Z,60nm,1.4s						
EFI	**East Falkland**	**19.74**	**274**	P	**Pn**	**22 12 00.2**	**-0.6**
BELA	**Belgrano 2**	**20.24**	**186**	P	**P**	**22 12 03.6**	**-0.6**
BELA				IAmb	IAmb	22 12 08.6	
	comp=Z,24nm,0.6s						
MG02	**Cerro Sombrero**	**25.11**	**263**	P	**P**	**22 12 53.5**	**0.0**
GO09	**Cerro Castillo**	**27.54**	**264**	P	**P**	**22 13 17.0**	**+1.5**
GO09				IAmb	IAmb	22 13 32.8	
	comp=Z,57nm,1.4s						
TRQA	**Tornquist**	**31.02**	**294**	P	**P**	**22 13 47.4**	**+0.9**
QSPA	**South Pole Qui**	**32.27**	**180**	P	**P**	**22 13 57.5**	**+0.2**
	comp=Z,4.1nm,0.5s,baz=212,slow=1.3,SNR=40						
	comp=Z,4.1nm,0.5s						
QSPA	**South Pole Qui**	**32.27**	**180**	P	**P**	**22 13 57.6**	**+0.2**
QSPA				IAmb	IAmb	22 13 58.6	
	comp=Z,15nm,1.3s						
PLTB	**Pedras Altas**	**32.54**	**311**	P	**P**	**22 13 58.0**	**-1.8**
PLTB				IAmb	IAmb	22 14 29.4	
	comp=Z,9.7nm,1.2s						
PLCA	**Paso Flores**	**33.35**	**281**	P	**P**	**22 14 07.0**	**0.0**
	comp=Z,3.8nm,0.9s,baz=139,slow=7.4,SNR=8.0						
	comp=Z,3.8nm,0.9s						
PLCA	**Paso Flores**	**33.35**	**281**	P	**P**	**22 14 06.3**	**-0.6**
PLCA				IAmb	IAmb	22 14 25.3	
	comp=Z,8.8nm,0.9s						
LR04	**Corral**	**35.48**	**279**	P	**P**	**22 14 26.2**	**+1.0**
ITQB	**Itaqui**	**35.60**	**309**	P	**P**	**22 14 26.2**	**-0.1**
BO02	**Sierra Bellavi**	**37.97**	**288**	P	**P**	**22 14 47.5**	**+1.0**
BO02				IAmb	IAmb	22 14 47.9	
	comp=Z,11nm,0.6s						
MAW	**Mawson**	**38.00**	**142**	P	**P**	**22 14 47.0**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=242,slow=12,SNR=3.0						
	comp=Z,1.4nm,0.6s						
MAW	**Mawson**	**38.00**	**142**	P	**P**	**22 14 46.9**	**+0.7**
GO05	**Huala**	**38.38**	**286**	P	**P**	**22 14 51.6**	**+1.7**
GO05				IAmb	IAmb	22 15 27.4	
	comp=Z,25nm,1.1s						
CPUP	**Villa Florida**	**38.84**	**311**	P	**P**	**22 14 55.4**	**+1.6**
	comp=Z,4.5nm,0.6s,baz=292,slow=13,SNR=4.3						
	comp=Z,4.5nm,0.6s						
SUR	**Sutherland**	**40.24**	**71**	P	**P**	**22 15 06.7**	**+1.1**
TRCB	**Terra Rica**	**40.27**	**319**	P	**P**	**22 15 06.2**	**+0.4**
VNDA	**Vanda**	**44.69**	**182**	P	**P**	**22 15 41.5**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=188,slow=6.4,SNR=36						
	comp=Z,3.9nm,0.7s						
VNDA	**Vanda**	**44.69**	**182**	P	**P**	**22 15 41.3**	**+0.3**
BOSA	**Boshof**	**45.52**	**72**	P	**P**	**22 15 49.0**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=212,slow=7.0,SNR=11						
	comp=Z,5.4nm,0.8s						
BOSA	**Boshof**	**45.52**	**72**	P	**P**	**22 15 48.9**	**+0.6**
BOSA				IAmb	IAmb	22 16 31.0	
	comp=Z,10nm,1.4s						
BDFB	**Brasilia**	**45.54**	**329**	P	**P**	**22 15 48.9**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=142,slow=14,SNR=3.3						
	comp=Z,1.6nm,0.6s						
LBTB	**Lobatse**	**48.66**	**70**	P	**P**	**22 16 13.5**	**+0.8**
LBTB				IAmb	IAmb	22 16 45.5	
	comp=Z,4.6nm,1.1s						
H10N1	**ASCENSION HYDR**	**50.71**	**14**	T	T	23 11 31.7	
	baz=187,slow=74						
H10N3	**ASCENSION HY

ASTB IAML 22 13 22.3
comp=Z,5.5nm,1.0s
LVC Limon Verde 2.25 305 P Pn 22 12 45.6 +0.6
comp=Z,231nm,0.3s,baz=130,slow=5.7,SNR=564
LVC S **S 22 13 17.7 +1.0**
comp=Z,200nm,0.3s,baz=257,slow=20,SNR=26
LVC Limon Verde 2.25 305 Pn **Pn 22 12 45.3 +0.4**
LVC Sn **S 22 13 17.5 +0.9**
LVC Limon Verde 2.25 305⇑ *i* P **Pn 22 12 45.5 +0.6**
LVC *i* S **S 22 13 17.0 +0.4**
LVC Limon Verde 2.25 305 *i* P **Pn 22 12 45.5 +0.6**
LVC *i* S **S 22 13 17.9 +1.3**
LVC IAML 22 13 21.2
comp=Z,281nm,1.4s
LVC Limon Verde 2.25 305 *e*P **Pn 22 12 45.4 +0.5**
PB15 IPOC Station P 2.45 286 **Pn 22 12 47.4 +0.4**
PB15 Sn **S 22 13 20.6 +0.4**
PB15 IPOC Station P 2.45 286⇑ *i* P **Pn 22 12 47.6 +0.6**
PB15 *i* S **S 22 13 20.4 +0.2**
PB15 IPOC Station P 2.45 286 *i* P **Pn 22 12 47.6 +0.6**
PB15 *i* S **S 22 13 20.8 +0.6**
ALOL LOMAS DE OLMED 2.69 88 *i* P **Pn 22 12 48.8 -0.6**
ALOL *i* S **S 22 13 24.2 -0.4**
PB06 IPOC Station P 2.73 296 **Pn 22 12 50.3 +0.3**
PB06 Sn **S 22 13 25.2 -0.5**
PB06 IPOC Station P 2.73 296⇑ *i* P **Pn 22 12 50.5 +0.5**
PB06 *i* S **S 22 13 25.6 0.0**
PB06 IAML 22 13 26.7
comp=N,2μm,0.5s
PB06 IPOC Station P 2.73 296 *i* P **Pn 22 12 50.5 +0.5**
PB06 *i* S **S 22 13 25.9 +0.2**
PB06 IAML 22 13 27.5
comp=Z,842nm,0.2s
PB06 IAML 22 13 27.8
comp=Z,988nm,0.3s
GO02 Mina Guanaco 2.73 243 Pn **Pn 22 12 50.5 +0.2**
GO02 Sn **S 22 13 26.7 +0.6**
GO02 Mina Guanaco 2.73 243⇑ *i* P **Pn 22 12 50.6 +0.4**
GO02 *i* S **S 22 13 26.7 +0.6**
GO02 Mina Guanaco 2.73 243 *i* P **Pn 22 12 50.6 +0.4**
PB09 IPOC Station P 3.01 314 **Pn 22 12 53.6 +0.3**
PB09 Sn **S 22 13 32.6 +0.8**
PB09 IPOC Station P 3.01 314⇑ *i* P **Pn 22 12 54.0 +0.7**
PB09 *i* S **S 22 13 32.1 +0.4**
PB09 IAML 22 13 34.5
comp=N,547nm,0.3s
PB09 IPOC Station P 3.01 314 *i* P **Pn 22 12 54.1 +0.7**
PB09 IAML 22 13 34.7
comp=Z,490nm,0.5s
AHML Horco Molle 3.19 154 *i* P **Pn 22 12 54.6 -0.7**
AHML IAML 22 14 05.2
comp=Z,0.3nm,0.4s
PB14 IPOC Station P 3.26 257 Pn **Pn 22 12 56.1 -0.3**
PB14 Sn **S 22 13 36.6 -0.6**
PB14 IPOC Station P 3.26 257⇑ *i* P **Pn 22 12 56.2 -0.2**
PB14 *i* S **S 22 13 35.9 -1.4**
PB14 IPOC Station P 3.26 257 *i* P **Pn 22 12 56.2 -0.2**
PB14 IAML 22 13 38.1
comp=Z,570nm,0.5s
PB10 IPOC Station P 3.36 276 Pn **Pn 22 12 57.5 +0.1**
PB10 Sn **S 22 13 39.2 +0.3**
PB10 IPOC Station P 3.36 276⇑ *i* P **Pn 22 12 57.4 +0.1**
PB10 *i* S **S 22 13 38.3 -0.6**
PB10 IPOC Station P 3.36 276 *i* P **Pn 22 12 57.5 +0.1**
PB10 IAML 22 13 44.4
comp=Z,331nm,0.7s
PB04 IPOC Station P 3.37 297 Pn **Pn 22 12 57.3 -0.3**
PB04 Sn **S 22 13 39.4 0.0**
PB04 IPOC Station P 3.37 297⇑ *i* P **Pn 22 12 57.5 -0.1**
PB04 *i* S **S 22 13 38.0 -1.3**
PB04 IPOC Station P 3.37 297 *i* P **Pn 22 12 57.5 -0.1**
PB07 IPOC Station P 3.50 308 **Pn 22 12 59.0 -0.2**
PB07 Sn **S 22 13 40.9 -1.5**
PB07 IPOC Station P 3.50 308⇑ *i* P **Pn 22 12 59.0 -0.2**
PB07 *i* S **S 22 13 40.6 -1.7**
PB07 IPOC Station P 3.50 308 *i* P **Pn 22 12 59.1 -0.2**
PB07 IAML 22 13 45.2
comp=Z,598nm,0.3s
AC02 Maricunga 3.53 214 Pn **Pn 22 12 59.4 -0.4**
AC02 Sn **S 22 13 42.8 -0.6**
AC02 Maricunga 3.53 214⇑ *i* P **Pn 22 13 00.1 +0.3**
AC02 Maricunga 3.53 214 *i* P **Pn 22 13 00.1 +0.3**
PB01 IPOC Station P 3.72 320 **Pn 22 13 01.3 -0.6**
PB01 IPOC Station P 3.72 320⇑ *i* P **Pn 22 13 01.3 -0.6**
PB01 *i* S **S 22 13 45.7 -1.4**
PB01 IPOC Station P 3.72 320 *i* P **Pn 22 13 01.4 -0.4**
PB01 IAML 22 13 47.7
comp=Z,262nm,0.2s
PB02 IPOC Station P 3.78 313 **Pn 22 13 02.0 -0.6**
PB02 Sn **S 22 13 46.2 -2.1**
PB02 IPOC Station P 3.78 313⇑ *i* P **Pn 22 13 01.9 -0.6**
PB02 *i* S **S 22 13 46.1 -2.2**
PB02 IPOC Station P 3.78 313 *i* P **Pn 22 13 02.2 -0.4**
PB02 IAML 22 13 53.9
comp=Z,934nm,0.2s
AC01 Pan de Azucar 4.01 236 Pn **Pn 22 13 04.4 -0.9**
AC01 Sn **S 22 13 51.1 -2.3**
AC01 Pan de Azucar 4.01 236⇑ *i* P **Pn 22 13 04.0 -1.3**
AC01 *i* S **S 22 13 50.7 -2.6**
AC01 Pan de Azucar 4.01 236 *i* P **Pn 22 13 04.0 -1.3**
PB08 IPOC Station P 4.30 331 **Pn 22 13 09.6 +0.3**
PB08 Sn **S 22 14 00.9 +0.5**
PB08 IPOC Station P 4.30 331⇑ *i* P **Pn 22 13 09.4 +0.2**
PB08 *i* S **S 22 13 59.9 -0.5**
PB08 IPOC Station P 4.30 331 *i* P **Pn 22 13 09.4 +0.2**
PB08 IAML 22 14 06.7
comp=Z,119nm,0.2s
PATCX Punta Patache 4.30 315 Pn **Pn 22 13 07.9 -1.1**
PATCX Punta Patache 4.30 315⇑ *i* P **Pn 22 13 07.6 -1.4**
PATCX *i* S **S 22 13 57.5 -2.6**
PATCX Punta Patache 4.30 315 *i* P **Pn 22 13 07.7 -1.4**
PATCX IAML 22 14 00.7
comp=Z,273nm,0.3s
TA01 Diego Aracena 4.51 317 Pn **Pn 22 13 11.2 -0.3**
TA01 Diego Aracena 4.51 317 *i* P **Pn 22 13 10.2 -1.3**
CYA Choya 4.61 168 *i* P **Pn 22 13 12.6 -0.2**
CYA IAML 22 14 10.4
comp=Z,25nm,1.1s
AC06 Mina Casimiro 4.62 221 **Pn 22 13 11.6 -1.4**
AC06 Sn **S 22 14 05.3 -2.0**
TA02 Huaiquique 4.70 320 **Pn 22 13 13.0 -1.0**
TA02 **S 22 14 05.5 -3.5**
GO01 Chusmiza 4.73 333 **Pn 22 13 14.9 0.0**
GO01 Chusmiza 4.73 333 *i* P **Pn 22 13 15.0 +0.1**
VCA Vinchina 4.94 193 *i* P **Pn 22 13 16.7 -0.4**
VCA IAML 22 14 34.4
comp=Z,37nm,0.8s
AC04 Llanos de Chal 5.67 220 Pn **Pn 22 13 24.5 -1.9**
AC04 **S 22 14 26.8 -4.9**
AC05 El Transito 5.75 211 **Pn 22 13 26.4 -1.1**
PB16 IPOC Station P 6.06 336 Pn **Pn 22 13 31.6 -0.4**
LCO Las Campanas 6.10 213 Pn **Pn 22 13 31.0 -1.2**
PB12 IPOC Station P 6.17 328 Pn **Pn 22 13 31.9 -1.0**
CO01 Juntas del Tor 6.67 204 Pn **Pn 22 13 39.1 -0.4**
CO03 El Pedregal 7.67 205 Pn **Pn 22 13 49.9 -2.4**
LPAZ La Paz 7.68 351 P **Pn 22 13 53.3 +0.2**
comp=Z,4.1nm,0.3s,baz=170,slow=8.5,SNR=27
LPAZ S **S 22 15 19.1 -1.0**
comp=Z,7.3nm,0.8s,baz=246,slow=24,SNR=1.7
LPAZ La Paz 7.68 351 Pn **Pn 22 13 53.0 0.0**
LPAZ La Paz 7.68 351 *e*P **Pn 22 13 52.7 -0.4**
CO06 Fray Jorge 7.93 211 Pn **Pn 22 13 55.0 -0.6**
MURT Porto Murtinho 8.87 77 *e*P **Pn 22 14 05.7 -2.3**
BBSD Serra de San D 8.93 43 *e*P **Pn 22 14 06.8 -1.9**
CPUP Villa Florida 9.01 107 P **Pn 22 14 07.4 -2.3**
comp=Z,14nm,0.7s,baz=292,slow=12,SNR=27
CPUP Villa Florida 9.01 107 Pn **Pn 22 14 08.1 -1.6**
SIV San Ignacio 9.61 36 P **Pn 22 14 15.4 -2.3**
comp=Z,20nm,0.7s,baz=212,slow=12,SNR=74
SIV S S 22 15 52.2 -13
comp=Z,2.2nm,0.5s,baz=220,slow=16,SNR=3.0
ANTJ Antonio Joao (10.23 81 *e*P **Pn 22 14 23.1 -2.5**
AZCA Azaras, Argent 10.67 115 *e*P **Pn 22 14 30.4 -0.8**
ITQB Itaqui 10.83 124 *e*P **Pn 22 14 31.8 -1.4**
AQDB Aquidauana 10.94 74 Pn **Pn 22 14 33.0 -1.7**
AQDB Aquidauana 10.94 74 *e*P **Pn 22 14 32.9 -1.9**
PTLB Pontes e Lacer 11.16 42 *e*P **Pn 22 14 35.7 -1.9**
MCR1 Marechal Candi 11.77 95 *e*P **Pn 22 14 44.1 -1.2**
UNIS Unistalda (Bra 11.78 118 *e*P **Pn 22 14 44.3 -1.1**
RODS Rosario do Sul 12.24 124 *e*P **Pn 22 14 50.7 -0.5**
VILB Vilhena 12.63 31 *e*P **Pn 22 14 56.0 -0.3**
RPRD Ribas do Rio P 12.71 77 *e*P **Pn 22 14 54.6 -2.6**

FRBT Francisco Belt 12.73 102 *e*P **Pn 22 14 58.3 +0.8**
SALV Santo Antonio 13.22 55 *e*P **Pn 22 15 01.8 -1.9**
PTGB Pitanga 13.56 96 *e*P **Pn 22 15 07.2 -0.7**
CPSB Cacapava Do Su 13.62 121 *e*P **Pn 22 15 06.8 -1.7**
ITAB Concordia 13.74 107 Pn **Pn 22 15 08.1 -2.0**
ITAB Concordia 13.74 107 *e*P **Pn 22 15 09.0 -1.1**
ETMB Extrema 14.04 3 *e*P **Pn 22 15 14.0 +0.2**
C2SB Chapadao do Su 14.08 71 *e*P **Pn 22 15 14.2 -0.1**
PLTB Pedras Altas 14.12 127 Pn **Pn 22 15 13.0 -1.8**
TRQA Tornquist 14.71 164 **Pn 22 15 21.8 -0.2**
CNLB Canela 15.33 114 *e*P **Pn 22 15 27.8 -1.8**
PDRB Porto dos Gac 15.60 40 *e*P **P 22 15 31.3 -1.7**
FRTB Fartura 15.91 91 *e*P **Pn 22 15 36.1 -0.6**
GO06 Curarrehue 16.09 193 **P 22 15 38.1 -0.1**
GO06 IAmb IAmb 22 15 40.1
comp=Z,22nm,1.4s
TIJ01 Guaruva-PR 16.35 99 *e*P **P 22 15 41.0 -0.2**
TER01 Tubaro-SC 16.60 110 *e*P **P 22 15 43.4 -0.4**
CLDB Colider 16.74 41 *e*P **P 22 15 44.5 -1.0**
CZSB Cruzeiro do Su 17.03 340 *e*P **Pn 22 15 49.6 -0.5**
PLCA Paso Flores 17.04 189 P **Pn 22 15 49.6 -0.4**
comp=Z,2.7nm,0.7s,baz=13,slow=10.0,SNR=7.5
PLCA Paso Flores 17.04 189 IAmb IAmb 22 15 56.2
comp=Z,11nm,0.9s
PLCA Paso Flores 17.04 189 *e*P **P 22 15 48.5 -0.2**
BB19B Bebedouro 17.23 84 *e*P **P 22 15 50.5 -0.3**
RCLB Rio Claro- Sao 17.89 89 *e*P **P 22 15 57.0 -1.0**
PET01 Itanhaem-SP 17.93 95 *e*P **P 22 15 58.0 -0.5**
VAO Valinhos 18.32 91 *e*P **P 22 16 01.8 -1.0**
IPMB Ipameri, GO 18.43 75 *e*P **P 22 16 03.3 -0.7**
SNDB Serra Nova Dou 19.00 54 *e*P **P 22 16 08.6 -1.5**
PARB Paraibuna 19.52 93 *e*P **P 22 16 14.3 -1.3**
BDFB Brasilia 19.58 69 P **P 22 16 15.7 -0.8**
comp=Z,61nm,0.6s,baz=242,slow=11,SNR=92
BDFB Brasilia 19.58 69 P **P 22 16 15.9 -0.5**
BDFB Brasilia 19.58 69 *e*P **P 22 16 15.4 -1.0**
LL02 Futaleuf 19.65 191 P **Pn 22 16 19.1 -1.6**
PMNB Patos De Minas 19.82 78 *e*P **P 22 16 17.7 -1.2**
AY01 Puyuhuapi 20.98 192 P **P 22 16 30.5 -0.4**
AY01 IAmb IAmb 22 16 43.2
comp=Z,8.1nm,0.8s
MAN01 Angra dos Reis 21.09 92 *e*P **P 22 16 30.8 -1.6**
MACA Manacapuru-AM 21.50 17 *e*P **P 22 16 35.4 -1.2**
VAS01 Vassouras-RJ 21.65 90 *e*P **P 22 16 37.3 -0.8**
DIAM Diamantina, MG 22.38 80 *e*P **P 22 16 44.8 -0.5**
DUB01 Friburgo-RJ 22.66 90 *e*P **P 22 16 46.9 -0.9**
MC01 Montes Claros 22.69 76 *e*P **P 22 16 45.5 -2.5**
JANB Januaria 23.03 72 *e*P **P 22 16 49.6 -1.6**
MCRA Macar, Loja 23.15 325 P **P 22 16 53.1 +1.0**
MCRA IAmb IAmb 22 16 56.0
comp=Z,13nm,0.8s
BOSC San Juan Bosco 23.48 330 P **P 22 16 57.4 +2.1**
SMTB Santa Maria do 23.78 54 *e*P **P 22 16 56.9 -1.0**
SDBA SAO DESIDERIO 23.80 65 *e*P **P 22 16 56.8 -1.4**
ALF01 Guarapari-ES 24.44 87 *e*P **P 22 17 02.6 -1.2**
SJMB Sao Joao De Ma 24.51 83 *e*P **P 22 17 02.8 -1.7**
RIB01 Linhares ES 25.06 85 *e*P **P 22 17 08.0 -1.5**
MALB Monte Alegre 25.12 31 *e*P **P 22 17 08.8 -1.2**
GUA01 Guaratinga, BA 26.43 79 *e*P **P 22 17 20.2 -1.6**
BOAV Boa Vista 26.89 14 *e*P **P 22 17 25.7 -0.1**
CMC01 Camacan, BA 27.13 77 *e*P **P 22 17 26.5 -1.5**
GDU01 Guandu, BA 27.74 73 *e*P **P 22 17 31.2 -2.3**
MG02 Cerro Sombrero 28.87 183 P **P 22 17 43.5 +0.5**
NBAN Anadia - AL 32.48 69 *e*P **P 22 18 13.1 -2.1**
BAUV El Baul 32.68 358 P **P 22 18 14.1 -2.7**
BAUV IAmb IAmb 22 18 16.5
comp=Z,8.6nm,0.8s
RCBR Riachuelo 34.82 64 P **P 22 18 34.7 -0.7**
RCBR IAmb IAmb 22 18 47.7
comp=Z,21nm,1.3s
BCIP Isla Barro Col 35.23 337 P **P 22 18 40.5 +1.8**
BCIP IAmb IAmb 22 18 46.9
comp=Z,18nm,1.2s
ORTG Ortega, Santa 38.59 330 P **P 22 19 09.9 +2.7**
PMSA Palmer Station 40.89 178 P **P 22 19 26.6 +1.2**
MLPR Magueyes Islan 41.63 360 P **P 22 19 32.2 +0.2**
MLPR IAmb IAmb 22 19 42.3
comp=Z,18nm,0.8s
MTDJ Mount Denham 43.15 345 P **P 22 19 45.8 +1.4**
MTO3 Montecristo 43.95 328 P **P 22 19 52.4 +1.4**
MTO3 IAmb IAmb 22 19 53.2
comp=Z,7.3nm,0.8s
TEIG Tepich 48.57 333 P **P 22 20 26.9 +0.4**
SOR Soroa 48.99 340 P **P 22 20 30.4 +0.6**
SOR IAmb IAmb 22 20 31.2
comp=Z,17nm,0.9s
061Z Ochoppi 51.31 344 P **P 22 20 48.1 +1.0**
BELA Belgrano 2 56.11 172 P **P 22 21 22.3 +1.0**
BELA IAmb IAmb 22 21 22.7
comp=Z,4.6nm,0.8s
VNA3 Neumayer Olymp 57.20 161 P **P 22 21 29.7 +0.6**
VNA3 Neumayer Olymp 57.20 161 PcP **PcP 22 22 21.8 +0.6**
VNA1 Neumayer--Stat 57.40 160 P **P 22 21 31.1 +0.7**
VNA2 Neumayer--Watz 57.77 160 P **P 22 21 33.5 +0.5**
baz=279,slow=8.0
SNAA Sanae 59.40 161 P **P 22 21 44.7 +0.3**
SNAA Sanae 59.40 161 P **P 22 21 44.9 +0.5**
SNAA IAmb IAmb 22 21 45.9
comp=Z,4.6nm,0.8s
LRAL Lakeview Retre 59.79 340 P **P 22 21 47.1 -0.3**
Y49A Blount Mountai 60.38 341 P **P 22 21 50.9 -0.5**
Y49A IAmb IAmb 22 22 04.9
comp=Z,7.7nm,1.4s
X51A Calhoun 60.61 343 P **P 22 21 53.3 +0.4**
FPAL Fort Paine 60.79 342 P **P 22 21 54.2 0.0**
FPAL IAmb IAmb 22 22 21.5
comp=Z,19nm,1.4s
V55A Taylorsville 60.97 347 P **P 22 21 55.9 +0.6**
V55A IAmb IAmb 22 22 13.5
comp=Z,6.6nm,1.0s
TROLL Troll, Antarti 61.11 161 P **P 22 21 56.8 +0.8**
X48A Hartselle 61.12 341 P **P 22 21 56.6 +0.3**
W50A Signal Mountai 61.33 343 P **P 22 21 57.8 0.0**
W50A IAmb IAmb 22 22 07.0
comp=Z,5.1nm,0.9s
CPCT Cooper Cave 61.36 344 P **P 22 21 58.1 +0.2**
CPCT IAmb IAmb 22 22 13.7
comp=Z,5.8nm,1.1s
TKL Tuckaleechee C 61.37 344 P **P 22 21 57.9 -0.1**
TKL IAmb IAmb 22 22 20.9
comp=Z,17nm,1.4s
V52A Sevierville 61.50 345 P **P 22 21 58.5 -0.4**
SWET Sewanee 61.51 342 P **P 22 21 58.9 -0.1**
PLAL Pickwick Lake 61.92 340 P **P 22 22 01.1 -0.6**
PLAL IAmb IAmb 22 22 01.5
comp=Z,4.8nm,0.7s
U49A Red Boiling Sp 62.69 343 P **P 22 22 06.3 -0.5**
WVT Waverly 62.91 341 P **P 22 22 07.6 -0.6**
TXAR Lajitas Array 63.66 324 P **P 22 22 14.3 +0.9**
comp=Z,1.4nm,0.7s,baz=152,slow=8.2,SNR=18
comp=Z,1.4nm,0.7s
TX31 Lajitas Ar. Si 63.66 324 P **P 22 22 14.1 +0.6**
TX31 IAmb IAmb 22 22 14.7
comp=Z,9.2nm,0.9s
TX32 Lajitas Array 63.66 324 P **P 22 22 13.7 +0.3**
Q56A Snyder Ridge, 63.68 349 P **P 22 22 14.1 +0.9**
CCM Cathedral Cave 65.75 339 P **P 22 22 26.7 +0.1**
S39A Bolivar 66.13 337 P **P 22 22 29.6 +0.6**
QSPA South Pole Qui 66.28 180 P **P 22 22 31.3 +1.4**
QSPA IAmb IAmb 22 22 31.6
comp=Z,5.5nm,0.7s
R40A Maddies Statio 66.30 338 IAmb IAmb 22 22 32.9
comp=Z,5.4nm,0.6s
P40A Paris 67.35 339 P **P 22 22 36.2 -0.5**
P40A IAmb IAmb 22 22 37.3
comp=Z,8.5nm,0.8s
DBIC Dimbokro 67.70 72 P **P 22 22 38.8 -0.6**
comp=Z,2.8nm,0.6s,baz=287,slow=6.8,SNR=5.6
comp=Z,2.8nm,0.6s
P38A Dawn 67.93 338 P **P 22 22 40.4 0.0**
319A Douglas 68.32 322 P **P 22 22 44.0 +0.9**
319A IAmb IAmb 22 22 45.8
comp=Z,8.3nm,0.6s
121A Cookes Peak, D 68.36 324 P **P 22 22 43.4 0.0**
121A IAmb IAmb 22 22 46.3
comp=Z,6.4nm,0.9s
BNM Barren Site 68.99 325 P **P 22 22 48.0 +0.7**
SBM South Baldy 69.14 325 P **P 22 22 48.7 +0.2**
L40A Anamosa 69.39 341 P **P 22 22 49.0 -0.3**
ANMO Albuquerque 69.52 326 P **P 22 22 51.3 +0.7**
TUC Tucson 69.87 321 P **P 22 22 53.4 +0.8**
TUC IAmb IAmb 22 22 55.3
comp=Z,7.1nm,1.2s

SCIA State Center 69.87 339 P **P 22 22 52.1 -0.2**
SCIA IAmb IAmb 22 22 53.5
comp=Z,12nm,0.8s
T25A Trinidad 70.26 329 P **P 22 22 55.3 +0.3**
T25A IAmb IAmb 22 22 56.5
comp=Z,12nm,1.4s
BGNE Belgrade 71.16 336 P **P 22 23 00.7 +0.6**
SDCO Great Sand Dun 71.26 329 P **P 22 23 02.5 +1.3**
KOWA Kowa 72.33 65 P **P 22 23 07.4 -0.2**
KOWA IAmb IAmb 22 23 09.3
comp=Z,4.0nm,0.7s
WUAZ Wupatki 72.56 323 P **P 22 23 10.0 +1.2**
WUAZ IAmb IAmb 22 23 11.8
comp=Z,5.7nm,0.9s
ECSD EROS Data Cent 72.64 338 P **P 22 23 09.0 +0.2**
BLYC Blythe 73.08 320 P **P 22 23 12.7 +1.1**
BLYC IAmb IAmb 22 23 14.7
comp=Z,4.9nm,0.6s
SMCO Snowmass 73.10 328 P **P 22 23 13.1 +1.0**
SMCO IAmb IAmb 22 23 14.5
comp=Z,3.9nm,0.7s
V12A Nelson 74.67 321 P **P 22 23 21.8 +0.8**
VNDA Vanda 74.79 190 P **P 22 23 23.1 +2.1**
comp=Z,1.1nm,0.9s,baz=159,slow=3.0,SNR=6.9
comp=Z,1.1nm,0.9s
SRU San Rafael Swe 74.80 326 P **P 22 23 22.7 +0.9**
SRU IAmb IAmb 22 23 24.0
comp=Z,4.7nm,0.8s
MTPU Mount Pierson 74.87 324 P **P 22 23 23.2 +0.8**
P18A Preston Nutter 75.05 327 P **P 22 23 24.4 +1.1**
P18A IAmb IAmb 22 23 25.6
comp=Z,4.7nm,0.7s
CCUT Cedar City 75.14 323 P **P 22 23 25.3 +1.6**
CCUT IAmb IAmb 22 23 26.8
comp=Z,5.6nm,0.8s
P17A Butcher Ranch, 75.18 326 P **P 22 23 24.3 +0.4**
P17A IAmb IAmb 22 23 26.5
comp=Z,7.3nm,1.1s
MSU Marysvale 75.21 325 P **P 22 23 25.4 +1.3**
MVU Marysvale 75.22 325 P **P 22 23 25.1 +0.9**
RDMU Red Mountain 75.44 328 P **P 22 23 24.6 -0.8**
RDMU IAmb IAmb 22 23 25.9
comp=Z,9.5nm,0.7s
GSC Goldstone, Bar 75.51 320 P **P 22 23 26.4 +0.7**
GSC IAmb IAmb 22 23 28.7
comp=Z,14nm,1.5s
B35A Bob, Littlefor 75.86 342 P **P 22 23 27.9 +0.6**
B35A IAmb IAmb 22 23 28.5
comp=Z,9.1nm,0.8s
PRN Pahroc Range 75.97 322 P **P 22 23 30.3 +2.0**
GWY Greenwater Val 76.04 320 P **P 22 23 29.6 +0.8**
GWY IAmb IAmb 22 23 31.3
comp=Z,5.4nm,0.9s
PSUT Pine Spring 76.12 324 P **P 22 23 30.6 +1.3**
CCAC Calif City Air 76.13 319 P **P 22 23 30.2 +1.0**
CCAC IAmb IAmb 22 23 31.2
comp=Z,18nm,1.4s
NLU North Lily Min 76.23 326 P **P 22 23 30.8 +0.9**
TOA0 Torodi Ar. Sit 76.47 69 P **P 22 23 31.2 -0.3**
TOA0 IAmb IAmb 22 23 33.1
comp=Z,5.8nm,0.7s
TORD Torodi Ar. Bea 76.47 69 P **P 22 23 30.8 -0.7**
comp=Z,5.1nm,0.6s,baz=257,slow=4.9,SNR=39
comp=Z,5.1nm,0.6s
ISA Isabella, Lake 76.75 319 P **P 22 23 33.3 +0.6**
TCUT Toone Canyon 76.76 327 P **P 22 23 33.9 +1.0**
TCUT IAmb IAmb 22 24 16.3
comp=Z,10nm,1.5s
DUG Dugway, Tooele 76.78 326 P **P 22 23 33.6 +0.7**
DUG IAmb IAmb 22 23 35.7
comp=Z,10nm,1.5s
GRAC Grapevine Rang 77.00 321 P **P 22 23 35.1 +1.1**
BW06 Boulder Array 77.12 329 P **P 22 23 35.8 +1.0**
PD31 Pinedale Array 77.12 329 P **P 22 23 35.2 +0.4**
PDAR Pinedale Array 77.12 329 P **P 22 23 35.6 +0.8**
comp=Z,0.8nm,0.5s,baz=132,slow=7.8,SNR=15
comp=Z,0.8nm,0.5s
GMN Gold Mountain 77.15 321 P **P 22 23 35.2 +0.1**
GMN IAmb IAmb 22 23 56.6
comp=Z,3.2nm,0.3s
HWUT Hardware Ranch 77.20 327 P **P 22 23 36.1 +0.8**
LCH Last Change Ra 77.33 321 P **P 22 23 36.9 +1.0**
SPUT South Promonto 77.42 327 P **P 22 23 37.1 +0.7**
BGU Big Grassy Mou 77.43 326 P **P 22 23 36.6 +0.1**
TPH Tonopah 77.66 322 P **P 22 23 38.5 +0.6**
ULM Lac du Bonnet 78.18 341 P **P 22 23 40.3 +0.2**
comp=Z,6.4nm,0.6s,baz=145,slow=6.4,SNR=7.4
comp=Z,6.4nm,0.6s
OMMB Old Mammoth Mi 78.38 320 P **P 22 23 42.5 +0.6**
NVAR Mina Array Bea 78.53 321 P **P 22 23 44.3 +1.7**
comp=Z,0.6nm,0.5s,baz=162,slow=5.8,SNR=7.9
comp=Z,0.6nm,0.5s
NVAR Mina Array Bea 78.53 321 P **P 22 23 42.8 +0.2**
IMW Indian Meadow 78.63 329 P **P 22 23 43.9 +0.7**
IMW IAmb IAmb 22 23 45.7
comp=Z,7.9nm,1.3s
RLMT Red Lodge 78.81 331 P **P 22 23 45.5 +1.4**
RLMT IAmb IAmb 22 23 45.8
comp=Z,4.1nm,0.6s
KVN Kaiserville 78.83 322 P **P 22 23 45.6 +1.3**
KVN IAmb IAmb 22 23 46.5
comp=Z,4.6nm,0.9s
YHH Holmes Hill 79.27 330 P **P 22 23 48.3 +1.6**
YHH IAmb IAmb 22 23 49.6
comp=Z,5.7nm,0.8s
YHB Horse Butte 79.40 330 P **P 22 23 47.7 +0.4**
YHB IAmb IAmb 22 23 50.1
comp=Z,5.7nm,0.7s
DGMT Dagmar 79.42 336 P **P 22 23 46.6 -0.4**
GCMT Greycliff 79.51 331 P **P 22 23 48.8 +1.1**
PNTR Pine Nut 79.72 321 P **P 22 23 50.5 +1.4**
PNTR IAmb IAmb 22 23 52.0
comp=Z,6.3nm,0.8s
PAHR Pah Rah Range 80.01 322 P **P 22 23 51.3 +0.7**
PAHR IAmb IAmb 22 23 53.4
comp=Z,7.5nm,1.0s
HLID Hailey 80.06 327 P **P 22 23 51.5 +0.7**
HLID IAmb IAmb 22 23 53.7
comp=Z,5.9nm,0.8s
MCMT McKenzie Canyo 80.23 329 P **P 22 23 52.7 +1.0**
BEKR Beckworth 80.67 321 P **P 22 23 54.5 +0.4**
BOSA Boshof 80.70 117 P **P 22 23 54.8 +0.2**
comp=Z,0.9nm,0.3s,baz=250,slow=2.6,SNR=9.3
comp=Z,0.9nm,0.3s
LRM Limekiln Ridge 80.79 330 P **P 22 23 55.5 +0.9**
HRY Holter Researc 81.18 331 P **P 22 23 57.9 +1.3**
MAW Mawson 81.49 163 P **P 22 23 59.2 +1.4**
comp=Z,4.3nm,0.8s,baz=206,slow=6.8,SNR=11
comp=Z,4.3nm,0.8s
MAW Mawson 81.49 163 P **P 22 23 59.4 +1.6**
J08A Circle Bar Ran 82.00 325 P **P 22 24 02.4 +1.5**
J08A IAmb IAmb 22 24 03.0
comp=Z,5.0nm,0.7s
LBTB Lobatse 82.35 114 P **P 22 24 03.4 +0.1**
LBTB IAmb IAmb 22 24 21.9
comp=Z,7.3nm,1.1s
BMO Blue Mountains 82.44 326 P **P 22 24 04.4 +1.2**
F10A Beach Ranch, E 83.19 327 P **P 22 24 08.2 +1.2**
F10A IAmb IAmb 22 24 10.4
comp=Z,12nm,1.5s
PINE Pine Mountain 83.61 324 P **P 22 24 10.5 +1.1**
PINE IAmb IAmb 22 24 11.6
comp=Z,5.2nm,0.8s
ESDC Sonseca Array 86.28 44 P **P 22 24 23.1 +0.6**
comp=Z,0.7nm,0.8s,baz=258,slow=4.3,SNR=5.8
comp=Z,0.7nm,0.8s
YKA Yellowknife Ar 94.08 340 P **P 22 24 58.9 +0.6**
comp=Z,1.7nm,0.5s,baz=137,slow=4.7,SNR=14
comp=Z,1.7nm,0.5s
ASAR Alice Springs 128.56 205 PKP **PKPdf 22 30 47.4 +0.2**
comp=Z,2.1nm,0.7s,baz=148,slow=2.4,SNR=18
WRA Warramunga Arr 131.73 207 PKP **PKiKP 22 30 53.7 -0.5**
comp=Z,1.4nm,0.6s,baz=164,slow=1.7,SNR=13
WRA SKPbc **SKPab 22 34 00.7 -0.2**
comp=Z,1.0nm,0.7s,baz=153,slow=3.5,SNR=10
PETK Petropavlovsk- 135.60 323 PKP **PKPdf 22 30 59.3 0.0**
comp=Z,13nm,1.2s,baz=75,slow=1.6,SNR=3.5
ZALV Zalesovo Beam 143.28 28 PKP PKPbc 22 31 11.4 +0.5
comp=Z,4.7nm,0.7s,baz=299,slow=4.7,SNR=21
KSH Kashi 145.09 55 PKP **PKPab 22 31 17.2 0.0**
MKAR Makanchi Array 146.41 39 PKPbc **PKPbc 22 31 19.8 -0.8**
comp=Z,6.2nm,0.6s,baz=321,slow=2.2,SNR=53
USRK Ussuriysk Ar. 154.53 327 PKPbc **PKPbc 22 31 39.7 -0.4**
comp=Z,0.9nm,0.6s,baz=11,slow=1.1,SNR=2.4
USRK PKPab **PKPab 22 31 54.0 -1.5**

comp=Z,0.6nm,0.6s,baz=176,slow=35,SNR=1.5
SONM Songino Array 155.55 11 PKPab **PKPab 22 32 00.6 +0.8**
comp=Z,1.2nm,0.8s,baz=328,slow=5.1,SNR=6.2
PZH PanZhiHua 169.41 74 PKP **PKPdf 22 31 46.4 -0.9**

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*NEIC **06** 22:12:33.1±1.0,33°.55S±0°.09×177°.38W±0°.09,h10km±2km, mb4.2/4,Error ellipse: s-maj=15.8km s-min=12.4km az=167.0*
*IDC **06** 22:12:39.5±3.2,33°.43S×178°.70W,h0km,mb3.7/2, mbtmp3.8/3,ML3.8/1,Error ellipse: s-maj=73.6km s-min=36.7km az=115.0*
ISC 06 22:12:36.1±2.6,33°.5S±0°.2×178°.0W±0°.4,h10km,n13, σ1$28/14,**mb3.9/4,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.23**	**1**	Pn	**Pn**	**22 13 39.2**	**-1.4**
MXZ	**Matakaoa Point**	**5.05**	**215**	Pn	**Pn**	**22 13 51.9**	**+0.1**
URZ	**Urewera**	**6.19**	**218**	Pn	**Pn**	**22 14 08.9**	**+1.4**
2.4nm,0.3s,baz=334,slow=4.9,SNR=12							
URZ				Sn	**Sn**	**22 15 15.7**	**-2.5**
2.1nm,0.3s,baz=83,slow=21,SNR=5.6 12nm,0.6s							
URZ	**Urewera**	**6.19**	**218**	Pn	**Pn**	**22 14 09.1**	**+1.6**
BKZ	**Black Stump Fm**	**7.19**	**216**	Pn	**Pn**	**22 14 22.2**	**+0.9**
BFZ	**Birch Farm**	**8.51**	**211**	Pn	**Pn**	**22 14 39.2**	**-0.2**
ASAR	**Alice Springs**	**43.02**	**270**	P	**P**	**22 20 36.5**	**+0.4**
0.6nm,0.6s,baz=108,slow=7.6,SNR=6.8 0.6nm,0.6s							
WR0	**Warramunga Arr**	**44.11**	**275**	P	**P**	**22 20 46.4**	**+1.6**
WR0				IAmb	IAmb	22 20 58.3	
comp=Z,3.1nm,0.9s							
WB2	**Warramunga Arr**	**44.28**	**275**	P	**P**	**22 20 46.4**	**+0.2**
WRA	**Warramunga Arr**	**44.29**	**275**	P	**P**	**22 20 46.3**	**0.0**
comp=Z,0.8nm,0.6s,baz=118,slow=8.0,SNR=8.4 comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**44.29**	**275**	P	**P**	**22 20 46.4**	**+0.2**
WB0	**Warramunga Arr**	**44.32**	**276**	P	**P**	**22 20 46.9**	**+0.4**
WB0				IAmb	IAmb	22 21 05.7	
comp=Z,2.7nm,0.9s							
FINES	**FINESS Array B**	**148.02**	**338**	PKPbc	**PKPab**	**22 32 24.6**	**+0.9**
comp=Z,4.0nm,1.0s,baz=39,slow=3.3,SNR=4.0							

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*JMA **06** 22:20:00.4±0.2,36°.3N±0°.3×14°.2E±°,h56km±3km, MV3.7/35,FAR E OFF IBARAKI PREF*
*IDC **06** 22:20:09.1±2.5,35°.89N×141°.08E,h87km±21km,mb3.4/7, mbtmp3.7/10,Error ellipse: s-maj=33.2km s-min=17.9km az=78.0*
ISC 06 22:20:01.3±1.0,36°.29N±0°.05×141°.81E±0°.09,h35km,n27, σ1$05/23,**mb3.6/6,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**233**	P	**Pn**	**22 20 17.9**	**-0.5**
CHOJ				*e*S	**Sn**	**22 20 30.5**	**-0.4**
JHYU	**Hitachinakayam**	**0.99**	**273**	P	**Pn**	**22 20 17.9**	**-0.8**
JHYU				*e*S	**Sn**	**22 20 30.1**	**-1.3**
JHO	**Hitachi**	**1.05**	**288**	P	**Pn**	**22 20 18.1**	**-1.4**
JFK	**Kawauchi**	**1.31**	**325**	P	**Pn**	**22 20 21.9**	**-1.2**
BSO1	**Boso 1**	**1.77**	**203**	P	**Pn**	**22 20 28.4**	**-0.5**
BSO1				*e*S	**Sn**	**22 20 50.8**	**+0.8**
JMM	**Marumori**	**1.77**	**333**	P	**Pn**	**22 20 28.5**	**-0.9**
BSO3	**Boso 3**	**1.83**	**216**	P	**Pn**	**22 20 29.7**	**-0.3**
JAG	**Ashikaga**	**1.91**	**275**	P	**Pn**	**22 20 30.7**	**-0.6**
JKT	**Katashina**	**2.12**	**284**	P	**Pn**	**22 20 34.5**	**+0.2**
JIO	**Ouri**	**2.19**	**350**	P	**Pn**	**22 20 34.1**	**-1.1**
JRY	**Ryogami san**	**2.37**	**264**	P	**Pn**	**22 20 37.1**	**-0.6**
MJAR	**Matsushiro Arr**	**2.92**	**276**	P	**Pn**	**22 20 45.9**	**+0.7**
12nm,0.5s,baz=125,slow=8.9,SNR=40							
JHJ	**Hachijo jima 2**	**3.58**	**208**	P	**Pn**	**22 20 53.4**	**-0.9**
91nm,0.3s,baz=338,slow=23,SNR=10							
JHJ				S	**Sn**	**22 21 33.0**	**-2.4**
149nm,0.3s,baz=70,slow=23,SNR=11							
USRK	**Ussuriysk Ar.**	**10.89**	**320**	P	Pn	22 22 42.6	+8.0
1.4nm,0.7s,baz=125,slow=15,SNR=4.8							
PETK	**Petropavlovsk-**	**20.18**	**29**	P	Pn	22 24 43.7	+9.0
1.6nm,0.5s,baz=17,slow=12,SNR=4.5 1.6nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**27.50**	**120**	T	T	22 54 30.3	
baz=312,slow=74,SNR=14							
H11N1	**WAKE ISLAND Hy**	**27.50**	**120**	T	T	22 54 31.8	
baz=312,slow=74,SNR=13							
H11N3	**WAKE ISLAND Hy**	**27.52**	**120**	T	T	22 54 40.3	
baz=312,slow=74,SNR=12							
H11S1	**WAKE ISLAND Hy**	**28.19**	**122**	T	T	22 55 33.1	
baz=314							
H11S3	**WAKE ISLAND Hy**	**28.19**	**122**	T	T	22 55 51.0	
baz=314							
H11S2	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	22 55 27.8	
baz=314							
SONM	**Songino Array**	**28.47**	**305**	P	**P**	**22 25 53.7**	**+0.6**
1.9nm,0.8s,baz=97,slow=8.1,SNR=8.6 1.9nm,0.8s							
ZALV	**Zalesovo Beam**	**42.65**	**313**	P	**P**	**22 27 55.0**	**+0.8**
0.4nm,0.3s,baz=90,slow=7.2,SNR=2.3 0.4nm,0.3s							
MKAR	**Makanchi Array**	**44.79**	**303**	P	**P**	**22 28 12.5**	**+1.0**
1.1nm,0.7s,baz=87,slow=8.6,SNR=6.3 1.1nm,0.7s							
WRA	**Warramunga Arr**	**56.37**	**188**	P	**P**	**22 29 38.5**	**-0.5**
0.6nm,0.9s,baz=5.3,slow=7.3,SNR=1.5 0.6nm,0.9s							
ASAR	**Alice Springs**	**60.10**	**188**	P	**P**	**22 30 04.0**	**-1.1**
0.1nm,0.3s,baz=356,slow=7.1,SNR=1.7 0.1nm,0.3s							
NOA	**NORSAR Array B**	**74.99**	**338**	P	**P**	**22 31 40.1**	**+1.3**
0.4nm,0.5s,baz=34,slow=6.0,SNR=3.7 0.4nm,0.5s							

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*IDC **06** 22:39:37.0±14.0,21°.53S×176°.57W,h520km±101km, mb3.2/2,mbtmp4.0/3,Error ellipse: s-maj=267.9km s-min=35.2km az=141.0*
*NEIC **06** 22:39:43.2±2.8,21°.6S±0°.2×177°.11W±0°.09,h561km±13km, mb4.2/13,Error ellipse: s-maj=24.0km s-min=12.2km az=182.0*
ISC 06 22:39:42.1±0.8,21°.6S±0°.1×177°.2W±0°.1,h550km,n26, σ1$70/25,**mb4.1/8,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.89**	**309**	P	**P**	**22 41 18.4**	**-1.6**
6.6nm,0.6s,baz=251,slow=23,SNR=7.3							
MSVF	**Nonsavu**	**5.89**	**309**	P	**P**	**22 41 18.7**	**-1.3**
NIUE	**Niue**	**7.24**	**71**	P	**P**	**22 41 34.1**	**+1.6**
OUENC	**Ouen Island, N**	**14.85**	**264**	P	**P**	**22 42 50.5**	**+5.9**
DZM	**Mont Dzumac**	**15.22**	**265**	P	**P**	**22 42 57.6**	**+3.6**
DZM				IAmb	IAmb	22 43 41.0	
comp=Z,15nm,1.2s							
MQZ	**McQueen's Vall**	**23.64**	**199**	P	**P**	**22 44 10.6**	**-0.1**
CTAO	**Charters Tower**	**34.16**	**266**	P	**P**	**22 45 42.3**	**+0.1**
CTAO				IAmb	IAmb	22 46 25.7	
comp=Z,17nm,1.2s							
COEN	**Coen**	**38.42**	**275**	P	**P**	**22 46 15.3**	**-2.0**
BBOO	**Buckleboo**	**42.77**	**245**	P	**P**	**22 46 53.8**	**+2.1**
BBOO				IAmb	IAmb	22 47 05.3	
comp=Z,14nm,1.2s							
AS31	**Alice Springs**	**45.03**	**258**	P	**P**	**22 47 10.2**	**+0.8**
ASAR	**Alice Springs**	**45.03**	**258**	P	**P**	**22 47 11.2**	**+1.8**
comp=Z,1.7nm,0.6s,baz=88,slow=8.3,SNR=27 comp=Z,1.7nm,0.6s							
ASAR	**Alice Springs**	**45.03**	**258**	P	**P**	**22 47 10.6**	**+1.3**
WB0	**Warramunga Arr**	**45.20**	**263**	P	**P**	**22 47 10.6**	**-0.1**
WB0				IAmb	IAmb	22 47 11.1	
comp=Z,6.7nm,1.1s							
WB2	**Warramunga Arr**	**45.21**	**263**	P	**P**	**22 47 10.9**	**+0.1**
WB2				IAmb	IAmb	22 47 12.3	
comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**45.22**	**263**	P	**P**	**22 47 10.8**	**0.0**
comp=Z,0.9nm,0.4s,baz=96,slow=7.7,SNR=40 comp=Z,0.9nm,0.4s							
WRA	**Warramunga Arr**	**45.22**	**263**	P	**P**	**22 47 10.8**	**0.0**
MTN	**Manton Dam**	**49.95**	**271**	P	**P**	**22 47 44.1**	**-2.1**
FITZ	**Fitzroy Crossi**	**53.65**	**263**	P	**P**	**22 48 13.2**	**+0.4**
PSA00	**Pilbara Seismi**	**58.18**	**257**	P	**P**	**22 48 45.3**	**+1.1**
PSA00				IAmb	IAmb	22 48 46.1	
comp=Z,6.1nm,0.9s							
MORW	**Morawa**	**60.14**	**248**	P	**P**	**22 48 56.6**	**-0.6**
MORW				IAmb	IAmb	22 48 58.7	
comp=Z,11nm,1.2s							
QSPA	**South Pole Qui**	**68.51**	**180**	P	**P**	**22 49 48.8**	**-0.8**
QSPA				PcP	**PcP**	**22 50 06.0**	**-4.2**
GSTR	**Great Sitkin T**	**73.35**	**1**	P	**P**	**22 50 18.4**	**+0.4**
VNA3	**Neumayer Olymp**	**87.03**	**176**	P	P	22 51 41.1	+12
VNA2	**Neumayer--Watz**	**87.48**	**177**	P	P	22 51 43.8	+13
baz=168,slow=4.0							
BRTR	**Keskin Array B**	**148.12**	**312**	PKPbc	**PKPdf**	**22 58 24.3**	**+1.8**
comp=Z,0.2nm,0.5s,baz=93,slow=2.9,SNR=2.5							
GERES	**GERESS Array B**	**151.43**	**345**	PKPbc	**PKPbc**	**22 58 32.6**	**-1.5**
comp=Z,0.2nm,0.4s,baz=20,slow=3.2,SNR=5.1							

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*IDC **06** 22:50:51.0±1.0,4°.00S×131°.76E,h0km,mb3.9/5, mbtmp4.1/8,ML4.3/3,MS2.7/1,Error ellipse: s-maj=37.8km s-min=17.8km az=75.0*
*NEIC **06** 22:50:52.4±2.1,4°.13S±0°.05×131°.61E±0°.07,h11km±5km, mb4.4/19,Error ellipse: s-maj=11.1km s-min=6.5km az=107.0*
*DJA **06** 22:50:55.0±0.2,4°S±2°×13°2E±°,h77km±4km,M4.5/18, mb4.5/18,mB5.2/7,MLv4.5/11,Mw(mB)4.5/7,MwMwp5.0/1, Mwp5.3/1*
ISC 06 22:50:54.1±0.5,4°.01S±0°.04×131°.67E±0°.05,h29km,n57, σ2$42/64,**mb4.3/8,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.23**	**28**		**Pb**	**22 51 17.3**	**+0.5**
FAKI				Sn	**Sb**	**22 51 32.4**	**+0.2**
FAKI	**Fak Fak**	**1.23**	**28**	P	**Pb**	**22 51 17.3**	**+0.5**
FAKI				S	**Sb**	**22 51 32.9**	**+0.6**
BNDI	**Bandanaira**	**1.83**	**254**	P	**Pn**	**22 51 25.1**	**+1.5**
BNDI				S	**Sn**	**22 51 47.2**	**+1.4**
MSAI	**Masohi**	**2.81**	**284**	P	**Pn**	**22 51 38.9**	**+1.8**
MSAI				S	**Sn**	**22 52 08.7**	**-1.4**
SIJI	**Sorong**	**3.15**	**353**	Pn	**Pn**	**22 51 42.5**	**+0.8**
17nm,0.3s,baz=180,slow=6.1,SNR=11							
SIJI				Sn	**Sn**	**22 52 17.1**	**-1.3**
32nm,0.3s,baz=162,slow=8.4,SNR=12							
SIJI				LR	LR	22 53 32.3	
comp=Z,133nm,21.1s,baz=96,slow=51 27nm,0.3s							
SIJI	**Sorong**	**3.15**	**353**	P	**Pn**	**22 51 41.2**	**-0.6**
SIJI				S	**Sn**	**22 52 16.7**	**-1.7**
KRAI	**Karang Ratu**	**3.34**	**282**	P	**Pn**	**22 51 46.4**	**+2.1**
AAI	**Ambon**	**3.48**	**275**	P	**Pn**	**22 51 48.2**	**+1.9**
AAI				S	**Sn**	**22 52 25.4**	**-1.2**
SAUI	**Saumlaki**	**3.96**	**185**	Pn	**Pn**	**22 51 49.6**	**-3.4**
NLAI	**Namlea**	**4.62**	**279**	P	**Pn**	**22 52 03.7**	**+1.7**
NLAI				S	**Sn**	**22 52 55.7**	**+0.9**
SRPI	**Serui, Papua**	**5.04**	**65**	P	**Pn**	**22 52 08.6**	**+0.8**
LBMI	**Labuha**	**5.34**	**309**	P	**Pn**	**22 52 13.2**	**+1.2**
1.1nm4μm244nm,0.5s							
SANI	**Sanana**	**6.00**	**289**	P	**Pn**	**22 52 20.5**	**-0.4**
0.4nm720nm36nm,0.5s							
MTN	**Manton Dam**	**8.79**	**183**	Pn	**Pn**	**22 52 58.7**	**-0.6**
BATI	**Baumata**	**10.04**	**232**	Pn	**Pn**	**22 53 18.9**	**+2.4**
5.5nm,0.3s,baz=279,slow=3.6,SNR=4.9							
BATI				Sn	**Sn**	**22 55 13.4**	**+5.1**
5.3nm,0.3s,baz=118,slow=16,SNR=2.1 37nm,0.5s							
BATI	**Baumata**	**10.04**	**232**	P	**Pn**	**22 53 19.3**	**+2.8**
58nm,0.9s							
KAPI	**Kappang**	**11.92**	**265**	Pn	**Pn**	**22 53 46.9**	**+4.7**
1.2nm,0.3s,baz=83,slow=9.2,SNR=3.8							
KNRA	**Kununurra**	**11.94**	**194**	Pn	**Pn**	**22 53 40.1**	**-2.4**
COEN	**Coen**	**15.05**	**132**	Pn	**Pn**	**22 54 24.2**	**-0.7**
COEN				IAmb	IAmb	22 55 05.5	
comp=Z,16nm,1.1s							
FITZ	**Fitzroy Crossi**	**15.19**	**202**	Pn	**Pn**	**22 54 20.9**	**-5.8**
comp=Z,2.2nm,0.3s,baz=37,slow=11,SNR=18							
FITZ				Sn	Sn	22 57 00.5	-14
comp=Z,0.8nm,0.3s,baz=68,slow=20,SNR=2.6							
FITZ	**Fitzroy Crossi**	**15.19**	**202**	Pn	**Pn**	**22 54 21.8**	**-5.0**
FITZ				IAmb	IAmb	22 54 23.8	
comp=Z,11nm,0.7s							
WB0	**Warramunga Arr**	**15.88**	**171**	Pn	**Pn**	**22 54 32.5**	**-3.2**
WB0				IAmb	IAmb	22 54 48.2	
comp=Z,7.3nm,0.7s							
WRA	**Warramunga Arr**	**16.05**	**171**	Pn	**Pn**	**22 54 33.5**	**-4.3**
comp=Z,1.2nm,0.3s,baz=353,slow=14,SNR=38							
WRA				Sn	Sn	22 57 18.6	-16
comp=Z,0.8nm,0.3s,baz=350,slow=24,SNR=2.8							
WRA	**Warramunga Arr**	**16.05**	**171**	Pn	**Pn**	**22 54 33.0**	**-4.8**
WB2	**Warramunga Arr**	**16.05**	**171**		**Pn**	**22 54 34.2**	**-3.6**
KLNI	**Mataram**	**16.09**	**253**	P	**Pn**	**22 54 36.5**	**-1.8**
comp=Z,24nm,1.0s							
WR0	**Warramunga Arr**	**16.10**	**170**	Pn	**Pn**	**22 54 35.4**	**-3.1**
SRBI	**Singaraja**	**16.85**	**255**	P	**Pn**	**22 54 45.9**	**-2.2**
comp=Z,22nm,1.0s							
KMMI	**Kalianget**	**17.87**	**260**	P	**Pn**	**22 54 56.6**	**-4.2**
comp=Z,4μmcomp=Z,24nm,1.1s							
JAGI	**Jajag, Banyuwa**	**17.96**	**255**	Pn	**Pn**	**22 54 58.6**	**-3.3**
JAGI				IAmb	IAmb	22 55 39.9	
comp=Z,37nm,1.3s							
JAGI	**Jajag, Banyuwa**	**17.96**	**255**	P	**Pn**	**22 55 00.2**	**-1.7**
comp=Z,18nm,0.9s							
KKM	**Kota Kinabalu**	**18.38**	**303**	P	**P**	**22 55 03.0**	**-3.9**
comp=Z,25nm,1.4s							
ASAR	**Alice Springs**	**19.66**	**174**	P	**P**	**22 55 21.8**	**+0.9**
comp=Z,1.1nm,0.3s,baz=351,slow=9.6,SNR=75							
ASAR				S	S	22 58 45.6	-16
comp=Z,2.1nm,0.6s,baz=356,slow=26,SNR=8.4 comp=Z,5.8nm,0.6s							
ASAR	**Alice Springs**	**19.66**	**174**	Pn	**P**	**22 55 21.3**	**+0.5**
SBUM	**Sibu**	**20.47**	**288**	Pn	Pn	22 55 31.4	-0.6
SBUM				IAmb	IAmb	22 55 36.0	
comp=Z,11nm,1.1s							
MBWA	**Marble Bar**	**20.62**	**213**	P	**P**	**22 55 29.7**	**-1.5**
PSA00	**Pilbara Seismi**	**20.89**	**212**		**P**	**22 55 32.9**	**-1.3**
PSA00				IAmb	IAmb	22 55 33.4	
comp=Z,21nm,0.9s							
PSA00	**Pilbara Seismi**	**20.89**	**212**	P	**P**	**22 55 32.0**	**-2.2**
PSA00				IAmb	IAmb	22 55 33.4	
comp=Z,5.8nm,0.7s							
CTA	**Charters Tower**	**21.39**	**140**	P	**P**	**22 55 40.7**	**+1.1**
comp=Z,4.7nm,0.8s,baz=333,slow=13,SNR=1.8 comp=Z,4.7nm,0.8s							
CTAO	**Charters Tower**	**21.39**	**140**	P	**P**	**22 55 40.8**	**+1.3**
CTAO				IAmb	IAmb	22 55 49.9	
comp=Z,26nm,1.4s							
GIRL	**Giralia**	**25.06**	**221**	P	**P**	**22 56 14.9**	**-1.2**
FORT	**Forrest**	**26.84**	**187**	P	**P**	**22 56 31.9**	**-0.3**
BBOO	**Buckleboo**	**28.94**	**172**	P	**P**	**22 56 51.4**	**+0.5**
BBOO				IAmb	IAmb	22 57 08.7	
comp=Z,18nm,1.4s							
MORW	**Morawa**	**29.00**	**209**	P	**P**	**22 56 50.4**	**-1.1**
STKA	**Stephens Creek**	**29.25**	**163**	P	**P**	**22 56 54.7**	**+1.0**
comp=Z,1.1nm,0.5s,baz=333,slow=9.0,SNR=2.0 comp=Z,1.1nm,0.5s							
BJT	**Baijiatuau**	**46.07**	**343**	P	**P**	**22 59 16.8**	**+1.4**
BJT				IAmb	IAmb	22 59 17.4	
comp=Z,5.3nm,0.6s							
LZH	**Lanzhou**	**47.63**	**329**	*e*P	P	22 59 33.3	+5.4
LZH				pP	sP	22 59 38.8	-1.0
HHC	**Hu-ho-hao-te**	**48.29**	**340**	*e*P	**P**	**22 59 35.1**	**+2.2**
XLT	**XiLinHaoTe**	**49.72**	**345**	*e*P	**P**	**22 59 48.3**	**+4.6**
XLT				pP	sP	22 59 55.6	+0.1
XLT				sP	pP	22 59 58.3	+6.1
SONM	**Songino Array**	**56.19**	**340**	P	**P**	**23 00 32.9**	**+1.4**
comp=Z,0.5nm,0.5s,baz=159,slow=7.0,SNR=4.0 comp=Z,0.5nm,0.5s							
WMQ	**Urumqi**	**61.85**	**325**	*e*P	**P**	**23 01 12.2**	**+1.4**
MK31	**Makanchi Array**	**66.69**	**325**	P	**P**	**23 01 44.0**	**+1.6**
MK31				IAmb	IAmb	23 02 23.6	
comp=Z,7.6nm,1.4s							
MKAR	**Makanchi Array**	**66.69**	**325**	P	**P**	**23 01 44.0**	**+1.6**
comp=Z,1.5nm,0.5s,baz=119,slow=8.2,SNR=26 comp=Z,1.5nm,0.5s							
MKAR	**Makanchi Array**	**66.69**	**325**	P	**P**	**23 01 43.9**	**+1.6**
MAKZ	**Makanchi**	**66.87**	**325**	P	**P**	**23 01 44.6**	**+1.0**
KKAR	**Karatay Array**	**72.23**	**318**	P	**P**	**23 02 18.1**	**+1.4**
VNDA	**Vanda**	**75.20**	**174**	P	**P**	**23 02 34.6**	**+1.2**
comp=Z,0.5nm,0.8s,baz=311,slow=4.8,SNR=4.2 comp=Z,0.5nm,0.8s							

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*SKHL **06** 22:51:24.7±0.3,44°.40N×147°.30E,h118km±3km,mb4.4/3, msha5.0/3*
*JMA **06** 22:51:24.9±0.5,44°N±2°×14°7E±°,h134km±4km,MV3.7/29, NEAR ETOROFU ISLAND*
ISC 06 22:51:23.4±2.7,44°.4N±0°.1×147°.4E±0°.1,h126km±19km, n17,σ0$81/27,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.95**	**22**	*i* P	**Pn**	**22 51 45.7**	**+0.3**
KUR				AMB	AMB	22 51 46.2	
130nm,0.3s							
KUR				*e*S	**Sn**	**22 52 01.5**	**-0.6**
KUR				A	A	22 52 02.9	
140nm,0.4s							
KUR				A	A	22 52 02.9	
190nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.12**	**254**	*i* P	**Pn**	**22 51 47.6**	**+0.5**
YUK				AMB	AMB	22 51 49.1	
110nm,0.5s							
YUK				*e*S	**Sn**	**22 52 04.6**	**-0.4**
YUK				A	A	22 52 11.7	
150nm,0.4s							
YUK				A	A	22 52 11.7	
290nm,0.4s							
NEM2	**Nemuro 2**	**1.53**	**230**	P	**Pn**	**22 51 52.2**	**+0.7**
NEM2				*e*S	**Sn**	**22 52 13.0**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.54**	**231**	*i* P	**Pn**	**22 51 51.7**	**+0.1**
NMR				AMB	AMB	22 51 53.0	
60nm,0.2s							
NMR				*e*S	**Sn**	**22 52 11.6**	**-1.4**
NMR				A	A	22 52 14.9	
220nm,0.2s							
NMR				A	A	22 52 14.9	
340nm,0.2s							
JRA	**Rausu**	**1.66**	**256**	*e*P	**Pn**	**22 51 53.4**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.79**	**252**	*e*P	**Pn**	**22 51 55.5**	**+1.0**
JKHN	**Kushirohamanak**	**2.04**	**232**	*e*P	**Pn**	**22 51 58.4**	**+0.8**
JKHN				*e*S	**Sn**	**22 52 23.6**	**-0.1**
JNK	**Nakash**	**2.05**	**249**	*e*P	**Pn**	**22 51 58.5**	**+0.7**
AKK	**Akkeshi**	**2.26**	**235**	*i* P	**Pn**	**22 52 00.8**	**+0.4**
AKK				*e*S	**Sn**	**22 52 27.9**	**-0.8**
JAK	**Akkeshi**	**2.36**	**236**	*e*P	**Pn**	**22 52 02.1**	**+0.6**
JAK				*e*S	**Sn**	**22 52 30.4**	**-0.5**
JTKR	**Abashiri--Toko**	**2.51**	**262**	*e*P	**Pn**	**22 52 03.4**	**-0.1**
JAR	**Ashorobuto**	**2.80**	**249**	*e*P	**Pn**	**22 52 08.5**	**+1.2**
JAR				*e*S	**Sn**	**22 52 42.0**	**+1.0**
JOB	**Onbets**	**2.94**	**242**	*e*P	**Pn**	**22 52 10.1**	**+1.0**
JOB				*e*S	**Sn**	**22 52 44.0**	**-0.3**
JKK2	**Kamakawa 2**	**3.35**	**263**	*e*P	**Pn**	**22 52 14.9**	**+0.4**
JCH	**Churui**	**3.39**	**240**	*e*P	**Pn**	**22 52 15.2**	**+0.3**
JCH				*e*S	**Sn**	**22 52 52.7**	**-2.0**
ASAJ	**Asahikawa**	**3.43**	**268**	*e*P	**Pn**	**22 52 15.6**	**+0.2**
JNBK	**Urakawa-nobuka**	**3.95**	**240**	*e*P	**Pn**	**22 52 21.9**	**-0.4**

WEL 06 23:00:40.4±1.2,34°S±20°×17°8E±2°7,h243km±30km, M3.9/6,ML4.0/10,MLv3.9/6,Error ellipse: s-maj=0.0km s-min=0.0km az=124.4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.22**	**181**	S	S	23 02 19.0	+1.0
HAZ	**Te Kaha**	**3.45**	**188**	P	Pn	23 01 37.5	+0.1
HAZ				S	S	23 02 23.6	+1.1
WMGZ	**Waiomatatini S**	**3.48**	**180**	P	Pn	23 01 37.8	+0.1
WMGZ				S	S	23 02 23.7	+0.5
PKGZ	**Pakihiroa**	**3.56**	**184**	P	Pn	23 01 39.0	+0.3
PKGZ				S	S	23 02 25.1	+0.2
RUGZ	**Raukumara Rang**	**3.67**	**189**	P	Pn	23 01 40.2	+0.1
RUGZ				S	S	23 02 27.3	-0.1
PUZ	**Puketiti**	**3.73**	**182**	S	S	23 02 26.9	-1.6
URZ	**Urewera**	**4.05**	**194**	P	Pn	23 01 44.7	+0.3
URZ				S	S	23 02 37.4	+2.2
MUGZ	**Murupara**	**4.33**	**197**	P	Pn	23 01 48.7	+0.9
MUGZ				S	S	23 02 37.6	-3.8
BKZ	**Black Stump Fm**	**5.06**	**197**	P	Pn	23 01 56.6	-0.1
BKZ				S	S	23 02 58.9	+1.6
SNVZ	**South Ngauruho**	**5.32**	**204**	P	Pn	23 02 00.8	+0.8
BHHZ	**Black Hill Sta**	**5.47**	**199**	P	Pn	23 02 01.4	-0.4
BHHZ				S	S	23 03 08.2	+1.5
MOVZ	**Moawhango**	**5.49**	**202**	P	Pn	23 02 01.6	-0.4
MOVZ				S	S	23 03 07.5	+0.5
KAHZ	**Kahuranaki**	**5.58**	**192**	P	Pn	23 02 02.2	-0.9
KAHZ				S	S	23 03 12.1	+2.9
PNHZ	**Pukenui**	**5.84**	**197**	P	Pn	23 02 05.0	-1.3
PNHZ				S	S	23 03 12.8	-2.1

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*SOME **06** 23:15:00.8,37°.52N×71°.45E,h5km*
*NNC **06** 23:15:01.2±1.8,36°.46N×69°.57E,h0km,mb5.0,mpv4.9, Error ellipse: s-maj=18.1km s-min=9.0km az=159.0*
*MOS **06** 23:15:02.6±0.9,36°.11N×69°.94E,h102km,mb4.6/20,Error ellipse: s-maj=5.0km s-min=3.1km az=86.1*
*BJI **06** 23:15:03.0±0.0,36°.18N×69°.96E,h92km,mb4.5/21, mB4.7/15*
*IDC **06** 23:15:03.4±2.2,35°.94N×69°.99E,h108km±19km,mb4.1/25, mbtmp4.5/30,MS3.0/2,Error ellipse: s-maj=12.2km s-min=10.4km az=140.0*
*NEIC **06** 23:15:05.3±1.7,36°.11N±0°.03×69°.80E±0°.07,h113km±6km, mb4.4/97,Error ellipse: s-maj=8.1km s-min=3.3km az=100.0*
*NDI **06** 23:15:09.2±5.4,34°.77N×69°.44E,h158km±40km,mb4.4, mb4.4(NEIC)*
ISC 06 23:15:05.7±0.4,36°.09N±0°.04×69°.81E±0°.04,h124km,n394, σ2$40/439,**mb4.4/95,36C-48D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.67**	**202**	Pn	**Pn**	**23 15 33.4**	**-2.2**
KBL				Sn

KK31 Sn **Sn** **23 18 00.1 -4.3**
KK31 Karatay Array 7.03 4 PN **Pn** **23 16 42.6 -3.4**
KK31 Karatay Array 7.03 4 P **Pn** **23 16 42.6 -3.4**
48nm,0.7s,baz=194,slow=14,SNR=413
KK31 ⇓S **Sn** **23 17 59.1 -5.3**
35nm,0.5s,baz=187,slow=22,SNR=5.4
KKAR Karatay Array 7.03 4 Pn **Pn** **23 16 43.9 -2.1**
KKAR Karatay Array 7.03 4 **Pn** **23 16 44.0 -2.0**
KKAR Karatay Array 7.03 4 PN **Pn** **23 16 43.9 -2.1**
UCH Uchtor 7.13 29 P **Pn** **23 16 45.7 -2.2**
SNR=234
NRN Naryn 7.20 40 Pn **Pn** **23 16 45.2 -3.4**
NRN Naryn 7.20 40 PN **Pn** **23 16 45.2 -3.4**
BHK Bhakra 7.21 128 *eP* **Pn** **23 16 46.0 -2.5**
BHK *ex* x 23 18 01.0
EKS2 Erkin-Say 7.25 24 P **Pn** **23 16 47.2 -1.9**
SNR=50
AAK Ala-Archa 7.48 28 P **Pn** **23 16 50.5 -1.7**
SNR=152
AAK Ala-Archa 7.48 28 P **Pn** **23 16 50.5 -1.7**
91nm,0.5s,baz=206,slow=8.1,SNR=308
AAK S **Sn** **23 18 11.5 -4.0**
33nm,0.3s,baz=142,slow=19,SNR=10
AAK Ala-Archa 7.48 28*d i*PN **Pn** **23 16 50.2 -2.0**
AAK pmax pmax
comp=Z,61nm,0.6s
KBK Karagaybulak 7.67 30 P **Pn** **23 16 53.2 -1.6**
SNR=29
SMLA Simla 7.88 127 *eP* **Pn** **23 16 53.0 -4.5**
CHMS Chumysh 7.88 27 P **Pn** **23 16 55.4 -2.1**
SNR=104
CHMS Chumysh 7.88 27 PN **Pn** **23 16 55.2 -2.4**
CHMS Chumysh 7.88 27 ⇑P **Pn** **23 16 55.2 -2.4**
comp=Z,94nm,0.6s
CHMS ⇓S **Sn** **23 18 22.2 -2.9**
comp=Z,57nm,0.5s
ULHL Ulahol 7.92 37 P **Pn** **23 16 55.9 -2.4**
SNR=19
BOOM Boomskoye usch 7.96 35 Pn **Pn** **23 16 56.1 -2.7**
BOOM Boomskoye usch 7.96 35 PN **Pn** **23 16 56.1 -2.7**
USP Ospenovka 8.03 25 P **Pn** **23 16 57.0 -2.5**
SNR=71
TKM2 Tokmak 2 8.15 31 P **Pn** **23 16 59.2 -2.2**
SNR=95
TKM2 Tokmak 2 8.15 31 PN **Pn** **23 16 59.1 -2.3**
TKM2 Tokmak 2 8.15 31 ⇓P **Pn** **23 16 59.1 -2.3**
comp=Z,42nm,0.6s
TKM2 ⇑S **Sn** **23 18 29.5 -2.5**
comp=Z,57nm,0.8s
SGDS Sogindy 8.23 25*d i*PN **Pn** **23 16 59.5 -2.8**
SGDS Sogindy 8.23 25⇓*iP* **Pn** **23 16 59.5 -2.8**
baz=25
SGDS *eS* **Sn** **23 18 28.7 -5.0**
baz=25
KST Kastek 8.41 32 *eP* **Pn** **23 17 02.5 -2.3**
comp=Z,42nm,0.7s
KST *eS* **Sn** **23 18 29.4 -8.7**
comp=Z,44nm,0.3s
MTBS Maitube 8.69 34 *eP* **Pn** **23 17 06.3 -2.1**
comp=Z,18nm,0.5s
MTBS *eS* **Sn** **23 18 37.1 -7.6**
comp=Z,39nm,0.4s
KRBS Karabastau 8.83 29 *eP* **Pn** **23 17 13.4 +3.1**
comp=Z,7.8nm,0.8s
KRBS *eS* **Sn** **23 18 48.8 +0.6**
comp=Z,14nm,0.3s
TNSS Tian-Shan 8.86 36 *e*PN **Pn** **23 17 07.9 -3.1**
TNSS Tian-Shan 8.86 36 *eP* **Pn** **23 17 08.2 -2.8**
comp=Z,9.6nm,0.4s
TNSS *eS* Sn 23 18 38.9 -10
comp=Z,9.0nm,0.3s
TNSS Tian-Shan 8.86 36 *eP* **Pn** **23 17 08.0 -3.1**
baz=36
AAA Alma-Ata 8.97 35 *e*PN **Pn** **23 17 09.8 -2.5**
AAA Alma-Ata 8.97 35 *eP* **Pn** **23 17 09.8 -2.5**
baz=36
DDI Dehra Dun 8.98 127 *eP* **Pn** **23 17 09.4 -3.1**
MDOK Medeo 9.00 36 PN **Pn** **23 17 10.2 -2.5**
MDOK S **Sn** **23 18 58.4 +6.0**
MDOK Medeo 9.00 36 *eP* **Pn** **23 17 10.8 -2.0**
comp=Z,19nm,0.6s
MDOK *eS* **Sn** **23 18 43.6 -8.8**
comp=Z,8.3nm,0.3s
MDOK Medeo 9.00 36 *eP* **Pn** **23 17 10.4 -2.4**
baz=36
MDOK Medeo 9.00 36 ⇓P **Pn** **23 17 10.0 -2.7**
comp=Z,26nm,0.8s
MDOK S **Sn** **23 18 53.4 +1.0**
comp=Z,38nm,1.2s
KTBS Karatobe 9.26 33 *eP* **Pn** **23 17 19.7 +3.6**
comp=Z,3.0nm,0.3s
KTBS *eS* **Sn** **23 18 59.5 +1.0**
comp=Z,15nm,0.3s
KUU Kurty 9.26 31 *eP* **Pn** **23 17 12.2 -3.9**
KUU Kurty 9.26 31 *eP* **Pn** **23 17 19.3 +3.2**
comp=Z,5.6nm,0.1s
KUU *eS* **Sn** **23 18 58.3 -0.2**
comp=Z,13nm,0.4s
KUU Kurty 9.26 31 *eP* **Pn** **23 17 12.3 -3.9**
baz=31
BTLS Baital 9.50 18*d i*P **Pn** **23 17 15.7 -3.6**
BTLS pmax pmax
comp=Z,4.0nm,0.5s
BTLS Baital 9.50 18 *eP* Pn 23 17 25.7 +6.4
comp=Z,6.0nm,0.3s
BTLS *eS* **Sn** **23 19 09.1 +4.8**
comp=Z,7.8nm,0.4s
BTLS Baital 9.50 18⇓*iP* **Pn** **23 17 15.8 -3.6**
comp=Z,4.1nm,0.5s,baz=18
CHKK Chushkaly 9.51 33 *eP* **Pn** **23 17 17.7 -1.7**
CHKK Chushkaly 9.51 33 *eP* Pn 23 17 24.2 +4.8
comp=Z,4.7nm,0.3s
CHKK *eS* **Sn** **23 19 07.0 +2.5**
comp=Z,8.4nm,0.2s
CHKK Chushkaly 9.51 33 *eP* **Pn** **23 17 17.7 -1.7**
baz=33
GEYT Alibeck 9.54 285 P **Pn** **23 17 17.5 -2.4**
comp=Z,14nm,0.5s,baz=105,slow=11,SNR=42
GEYT S **Sn** **23 19 00.1 -5.2**
comp=Z,36nm,0.9s,baz=135,slow=18,SNR=14
GEYT Alibeck 9.54 285 Pn **Pn** **23 17 17.3 -2.6**
GYA0 ALIBECK ARRAY 9.54 285 P **Pn** **23 17 17.6 -2.3**
GYA0 S **Sn** **23 18 59.6 -5.6**
GYA0B ALIBECK ARRAY 9.54 285 Pn **Pn** **23 17 17.3 -2.6**
GYA0B ALIBECK ARRAY 9.54 285 ⇓P **Pn** **23 17 17.6 -2.3**
GYA0B ⇑S **Sn** **23 18 59.6 -5.6**
SATY Saty 9.61 41 *eP* **Pn** **23 17 17.4 -3.5**
SATY pmax pmax
comp=Z,5.0nm,0.6s
SATY Saty 9.61 41 *eP* **Pn** **23 17 22.5 +1.6**
comp=Z,11nm,0.4s
SATY *eS* **Sn** **23 19 03.7 -3.5**
comp=Z,11nm,0.7s
SATY Saty 9.61 41 *eP* **Pn** **23 17 17.5 -3.5**
comp=Z,4.9nm,0.6s,baz=41
NDI New Delhi 9.68 138 *eP* **Pn** **23 17 20.0 -1.8**
UZB Uzynbulak 10.00 42 *eP* **Pn** **23 17 22.7 -3.5**
UZB pmax pmax
comp=Z,2.0nm,0.3s
UZB Uzynbulak 10.00 42 *eP* **Pn** **23 17 29.1 +2.9**
comp=Z,5.8nm,0.5s
UZB *eS* **Sn** **23 19 15.1 -1.5**
comp=Z,7.8nm,0.3s
UZB Uzynbulak 10.00 42 *eP* **Pn** **23 17 22.7 -3.5**
comp=Z,2.1nm,0.3s,baz=43
KPKS Kokpek 10.04 40*de*P **Pn** **23 17 23.2 -3.5**
KPKS pmax pmax
comp=Z,4.0nm,0.5s
KPKS Kokpek 10.04 40⇓*eP* **Pn** **23 17 23.3 -3.5**
comp=Z,4.3nm,0.5s,baz=40
ARXS Arharly 10.17 35 *eP* Pn 23 17 35.9 +7.5
comp=Z,19nm,0.9s
ARXS *eS* **Sn** **23 19 26.1 +5.6**
comp=Z,11nm,0.3s
SHLS Shalkode 10.25 44 *eP* **Pn** **23 17 29.5 0.0**
SHLS pmax pmax
comp=Z,4.0nm,0.6s
SHLS Shalkode 10.25 44 *eP* **Pn** **23 17 29.6 0.0**
comp=Z,4.5nm,0.6s,baz=45
PDGK Podgornoye 10.38 43 P **Pn** **23 17 27.4 -3.9**
PDGK S **Sn** **23 19 24.3 -1.5**
PDGK Podgornoye 10.38 43 ⇓P **Pn** **23 17 27.4 -3.9**
comp=Z,14nm,0.6s
PDGK ⇓S **Sn** **23 19 24.3 -1.5**
comp=Z,39nm,1.1s
OTUK Ortayu 12.29 8 P **Pn** **23 17 53.4 -3.1**

OTUK S **Sn** **23 20 07.2 -4.5**
OTUK Ortayu 12.29 8 ⇑P **Pn** **23 17 53.4 -3.1**
comp=Z,24nm,0.9s
OTUK ⇑S **Sn** **23 20 07.2 -4.5**
comp=Z,20nm,1.0s
PYUN Piuthan 13.71 122 *eP* Pn 23 18 09.0 -6.2
comp=Z,28nm,0.3s
PYUN *eS* Sn 23 20 31.9 -15
BRZS Berezniki 14.04 8 *eP* **Pn** **23 18 16.2 -2.9**
BRZS Berezniki 14.04 8 *eP* **Pn** **23 18 16.3 -2.9**
baz=7.4
MAKZ Makanchi 14.05 37 **Pn** **23 18 16.9 -2.3**
MAKZ Makanchi 14.05 37 P **Pn** **23 18 16.9 -2.3**
MAKZ Makanchi 14.05 37 ⇑P **Pn** **23 18 18.4 -0.8**
comp=Z,27nm,0.7s
DANN Dangsing 14.09 119 *eP* Pn 23 18 15.3 -4.9
comp=Z,24nm,0.3s
MK31 Makanchi Array 14.19 37 Pn **Pn** **23 18 19.2 -1.8**
MK31 Makanchi Array 14.19 37 P **Pn** **23 18 19.2 -1.8**
MK31 Makanchi Array 14.19 37 ⇑P **Pn** **23 18 18.2 -2.8**
comp=Z,15nm,0.8s,baz=215,slow=9.6,SNR=18
MKAR Makanchi Array 14.19 37 P **Pn** **23 18 18.3 -2.7**
comp=Z,3.3nm,0.7s,baz=224,slow=14,SNR=22
BHPL Bhopal 14.40 151 *eP* Pn 23 18 17.5 -6.4
GKN Gorkha 14.92 119 *eP* **Pn** **23 18 25.8 -4.7**
comp=Z,16nm,0.3s
AB31 Akbulak array 15.01 334 P **Pn** **23 18 29.2 -2.1**
AB31 S **Sn** **23 21 10.5 -6.8**
AB31 Akbulak array 15.01 334 ⇓P **Pn** **23 18 29.2 -2.1**
comp=Z,6.1nm,0.3s,baz=146,slow=13,SNR=482
AB31 S **Sn** **23 21 10.5 -6.8**
comp=Z,8.0nm,0.6s,baz=157,slow=22,SNR=6.2
ABKAR Akbulak array 15.01 334 Pn **Pn** **23 18 28.7 -2.6**
ABKAR Akbulak array 15.01 334 Pn **Pn** **23 18 29.0 -2.3**
DMN Daman 15.49 119 *eP* **Pn** **23 18 33.2 -4.5**
comp=Z,14nm,0.2s
JBP Jabalpur 15.61 143 *eP* Pn 23 18 29.8 -9.1
JBP *eS* Sn 23 21 11.9 -20
PKIN Phulchoki 15.71 118 *eP* **Pn** **23 18 36.9 -3.6**
comp=Z,16nm,0.2s
WMQ Urumqi 15.72 55 *eP* **Pn** **23 18 40.5 +0.3**
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,160nm,4.1s
PKI Pulchoki 15.73 118 *eP* **Pn** **23 18 37.0 -3.7**
comp=Z,9.7nm,0.2s
KURBB Kurchatov Arra 15.83 21 P **Pn** **23 18 37.7 -3.8**
comp=Z,1.7nm,0.4s,baz=213,slow=12,SNR=14
KURBB S **S** **23 21 41.0 -0.5**
comp=Z,0.4nm,0.4s,baz=203,slow=16,SNR=2.2
KURBB LR LR 23 25 25.7
comp=Z,60nm,18.9s,baz=288,slow=39
GUN Gumba 15.87 116 *eP* **Pn** **23 18 39.7 -2.8**
comp=Z,28nm,0.4s
KURK Kurchatov 15.94 21 Pn **Pn** **23 18 39.2 -3.6**
KURK IAmb IAmb 23 18 46.2
comp=Z,18nm,0.9s
KURK Kurchatov 15.94 21⇑*eP* **Pn** **23 18 39.0 -3.8**
WSAR Wadi Sarin 16.06 220 P **Pn** **23 18 43.5 -1.1**
comp=Z,7.1nm,1.0s,baz=30,slow=20,SNR=3.7
JIRN Jiri 16.24 117 *eP* **Pn** **23 18 43.8 -3.3**
comp=Z,48nm,0.4s
AKTO Aktyubinsk 16.68 333 P **Pn** **23 18 51.3 -0.7**
comp=Z,11nm,0.4s,baz=135,slow=12,SNR=36
AKTO S Sn 23 21 45.4 -12
comp=Z,3.1nm,0.6s,baz=180,slow=20,SNR=2.1
AKTO Aktyubinsk 16.68 333 P **Pn** **23 18 51.1 -0.9**
AKTO S **Sn** **23 21 52.5 -5.1**
AKTO Aktyubinsk 16.68 333 ⇑P **Pn** **23 18 51.1 -0.9**
comp=Z,14nm,0.7s
AKTO ⇓S **Sn** **23 21 52.5 -5.1**
comp=Z,14nm,0.8s
LKRN Lenkeran, Azer 16.92 285 P **Pn** **23 18 56.1 +1.2**
BVA0 Borovoye Array 16.94 1 ⇑P **P** **23 18 54.6 -0.4**
comp=Z,14nm,0.9s,baz=160,slow=11,SNR=91
BVAR Borovoye Array 16.94 1 P **P** **23 18 53.8 -1.2**
comp=Z,10nm,0.6s,baz=168,slow=13,SNR=28
BVAR S **S** **23 22 04.8 -0.2**
comp=Z,0.7nm,0.5s,baz=180,slow=29,SNR=1.6
BVAR LR LR 23 26 30.3
comp=Z,35nm,18.2s,baz=216,slow=40
BRVK Borovoye 16.97 1 **P** **23 18 54.4 -0.9**
BRVK IAmb IAmb 23 18 57.4
comp=Z,15nm,0.6s
BRVK Borovoye 16.97 1 P **P** **23 18 54.4 -0.9**
BRVK pmax pmax
comp=Z,15nm,0.6s
BRVK Borovoye 16.97 1 ⇑P **P** **23 18 54.1 -1.3**
comp=Z,12nm,0.6s
POO Poona 17.85 167 *ex* x 23 22 32.0
MNGR Mingechevir, A 18.40 292 P **Pn** **23 19 12.5 -0.1**
MAK Makhachkala 18.50 299 *eP* **P** **23 19 10.3 -1.9**
MAK *eS* **S** **23 22 33.6 -3.2**
MAK pmax pmax
comp=Z,179nm,1.6s
DGZ Jazzator, Alta 18.69 38*ce*P **P** **23 19 15.2 +0.8**
DGZ pmax pmax
comp=Z,19nm,0.5s
ZKTA Zakatala 18.87 294 P **Pn** **23 19 17.4 -0.8**
GANJ Ganja 18.96 291 P **Pn** **23 19 18.6 -0.7**
NAX Nakhchivan 19.49 286 P **Pn** **23 19 25.1 -0.5**
GNI Garni 20.12 289 P Pn 23 19 32.6 -0.3
comp=Z,34nm,0.8s,baz=356,slow=6.2,SNR=43
comp=Z,34nm,0.8s
GNI Garni 20.12 289 P Pn 23 19 32.3 -0.6
ZAA0 Zalesovo Array 20.69 26 P **P** **23 19 36.2 +0.4**
ZAA0 IAmb IAmb 23 19 37.1
comp=Z,21nm,0.7s
ZALV Zalesovo Beam 20.69 26 P **P** **23 19 36.2 +0.5**
comp=Z,11nm,0.3s,baz=223,slow=11,SNR=93
ZALV S **S** **23 23 20.0 +0.1**
comp=Z,0.8nm,0.4s,baz=218,slow=16,SNR=1.5
comp=Z,11nm,0.3s
ZEI Tsey 21.05 296 *eP* **P** **23 19 39.7 -0.3**
ZEI pmax pmax
comp=Z,10.0nm,0.8s
ONI Oni 21.35 296 P **P** **23 19 45.1 +2.0**
ONI IAmb IAmb 23 19 51.2
comp=Z,22nm,0.8s
ONI Oni 21.35 296 P **P** **23 19 45.1 +2.0**
ONI pmax pmax
comp=Z,22nm,0.8s
KARS Kars 21.41 290 P **P** **23 19 44.8 +1.0**
KARS IAmb IAmb 23 19 52.5
comp=Z,25nm,0.9s
KARS Kars 21.41 290 P **P** **23 19 44.8 +1.0**
KARS pmax pmax
comp=Z,25nm,0.9s
SVE Sverdlovsk 21.65 346⇑*eP* **P** **23 19 47.7 +1.7**
SVE *eS* **S** **23 23 45.3 +7.4**
SVE pmax pmax
comp=Z,26nm,0.9s
ARU Arti 21.73 343 P **P** **23 19 48.2 +1.4**
comp=Z,21nm,0.8s,baz=153,slow=5.0,SNR=27
ARU S **S** **23 23 45.3 +6.0**
comp=Z,2.1nm,0.5s,baz=180,slow=20,SNR=2.6
comp=Z,21nm,0.8s
ARU Arti 21.73 343 P **P** **23 19 46.4 -0.4**
ARU IAmb IAmb 23 19 51.8
comp=Z,32nm,1.0s
ARU Arti 21.73 343*d i*P **P** **23 19 48.1 +1.3**
ARU 23 20 19.0
ARU S **S** **23 23 45.0 +5.7**
ARU *SS **sS** **23 24 19.3 -0.5**
ARU pmax pmax
comp=Z,33nm,0.9s
TEZP TEZPUR 21.74 109 *eP* **P** **23 19 46.3 -0.9**
TEZP IAmb IAmb 23 19 47.4
comp=Z,11nm,1.1s
KBZ Khabaz 21.95 299 P **P** **23 19 50.2 +1.0**
comp=Z,10nm,0.8s,baz=117,slow=11,SNR=27
comp=Z,10nm,0.8s
KBZ Khabaz 21.95 299*ce*P **P** **23 19 50.0 +0.8**
KBZ pmax pmax
comp=Z,10.0nm,0.8s
ZIRO ZIRO 22.10 106 *eP* **P** **23 19 50.8 -0.4**
ZIRO IAmb IAmb 23 19 54.6
comp=Z,16nm,0.5s
KVAR Kislovodsk Arr 22.14 299 S **S** **23 23 56.9 +10**
comp=Z,3.2nm,0.8s,baz=29,slow=21,SNR=3.0
GOF Gofitskoye 22.14 302⇑*eP* **P** **23 19 54.3 +3.0**
KIV Kislovodsk 22.14 299 P **P** **23 19 51.7 +0.3**
KIV IAmb IAmb 23 19 56.8
comp=Z,11nm,0.8s
KIV Kislovodsk 22.14 299 *eP* **P** **23 19 52.7 +1.3**

KIV *e*S **S** **23 23 50.7 +3.7**
KIV pmax pmax
comp=Z,17nm,1.1s
BELG Belogornoye 22.63 323 P **P** **23 19 56.4 +0.4**
comp=Z,54nm,0.9s,baz=141,slow=6.5,SNR=22
BELG S **S** **23 24 01.9 +7.5**
comp=Z,9.1nm,1.0s,baz=288,slow=20,SNR=1.9
comp=Z,54nm,0.9s
BELG Belogornoye 22.63 323*d i*P **P** **23 19 57.6 +1.6**
BELG pmax pmax
comp=Z,12nm,1.0s
MOKO MOKOCHONG 23.21 108 *eP* **P** **23 20 02.6 +0.6**
KOHI KOHIMA 23.21 110 *eP* **P** **23 20 02.1 +0.1**
KOHI IAmb IAmb 23 20 03.7
comp=Z,10nm,0.9s
MARD Mardin 23.28 282 P **P** **23 20 03.5 +1.0**
LKP Lekhapani 23.75 104 *eP* **P** **23 20 07.6 +0.9**
LKP IAmb IAmb 23 20 09.3
comp=Z,13nm,0.9s
GTA Gaotai 23.90 73 ⇓P **P** **23 20 09.3 +1.2**
GTA pmax pmax
comp=Z,12nm,0.9s
RAYN Ar Rayn 24.46 246 P **P** **23 20 13.3 +0.1**
RAYN Ar Rayn 24.46 246 P **P** **23 20 13.3 +0.1**
RAYN pmax pmax
comp=Z,2.0nm,0.7s
KIRV Kirov 26.20 336 P **P** **23 20 29.2 +0.7**
comp=Z,15nm,0.5s,baz=135,slow=10.0,SNR=8.0
comp=Z,15nm,0.5s
KIRV Kirov 26.20 336*de*P **P** **23 20 30.1 +1.6**
VORR Voronezh 26.75 315 *eP* **P** **23 20 34.5 +1.0**
VORR pmax pmax
comp=Z,10.0nm,0.4s
BZK Bozkurt 28.29 293 P **P** **23 20 47.7 +0.3**
BR131 Keskin Array S 28.65 288 P **P** **23 20 50.6 -0.2**
BR131 IAmb IAmb 23 20 53.3
comp=Z,5.1nm,0.8s
BR131 Keskin Array S 28.65 288 P **P** **23 20 50.6 -0.2**
BR131 pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 28.65 288 P **P** **23 20 52.0 +1.2**
comp=Z,2.6nm,0.7s,baz=98,slow=8.8,SNR=24
comp=Z,2.6nm,0.7s
BRTR Keskin Array B 28.65 288 P **P** **23 20 51.6 +0.8**
BRTR Keskin Array B 28.65 288 *i* P **P** **23 20 52.5 +1.7**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
PZH PanZhiHua 28.80 100 P **P** **23 20 55.0 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.9s
SONM Songino Array 29.36 55 P **P** **23 20 57.2 +0.3**
comp=Z,1.2nm,0.8s,baz=256,slow=5.8,SNR=6.0
comp=Z,1.2nm,0.8s
SONM Songino Array 29.36 55 P **P** **23 20 57.5 +0.5**
SONM Songino Array 29.36 55 P **P** **23 20 57.5 +0.5**
SONM pmax pmax
comp=Z,3.0nm,1.3s
OBN Obninsk 29.64 320⇑*iP* **P** **23 20 59.7 +0.6**
OBN pmax pmax
comp=Z,17nm,1.3s
OBN MLR MLR
comp=Z,72nm,16.0s
PRGR Permogore 29.76 337 *eP* **P** **23 21 01.1 +0.9**
PRGR pmax pmax
comp=Z,9.0nm,0.7s
ULN Ulaanbaatar 29.80 55 P **P** **23 21 01.1 +0.2**
ULN Ulaanbaatar 29.80 55⇓*eP* **P** **23 21 03.4 +2.5**
ULN pmax pmax
comp=Z,6.0nm,1.7s
KLMR Klimovskoe 31.38 332 *eP* **P** **23 21 13.3 -1.1**
KLMR *e* 23 22 19.2
KLMR pmax pmax
comp=Z,7.0nm,1.3s
KLMR Klimovskoe 31.38 332 *eP* **P** **23 21 13.4 -1.0**
KLMR AMP 23 21 15.6
comp=Z,7.0nm,1.3s
KLMR *e*PP **PnPn** **23 22 19.3 -2.9**
ELL Elmali 31.96 283 P **P** **23 21 20.4 +0.4**
ELL Elmali 31.96 283 P **P** **23 21 20.4 +0.4**
ELL pmax pmax
comp=Z,34nm,0.7s
TLCR 32.12 299 ⇑P **P** **23 21 22.3 +1.2**
TLCR 32.12 299 ⇑P **P** **23 21 22.3 +1.2**
TPGR Topolog 32.39 299 ⇑P **P** **23 21 25.2 +1.7**
AKASG Malin Array Be 32.46 310 P **P** **23 21 24.9 +0.8**
comp=Z,2.7nm,0.7s,baz=83,slow=7.0,SNR=18
comp=Z,2.7nm,0.7s
AKASG Malin Array Be 32.46 310 P **P** **23 21 24.3 +0.2**
CFR Carcaliu 32.60 299 ⇓P **P** **23 21 27.1 +1.8**
CFR Carcaliu 32.60 299 ⇓P **P** **23 21 27.1 +1.8**
HHC Hu-ho-hao-te 32.80 69 *eP* **P** **23 21 29.4 +2.1**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,110nm,6.2s
VRI Vrincioaia 33.60 300 ⇓P **P** **23 21 36.8 +2.7**
VRI Vrincioaia 33.60 300 ⇓P **P** **23 21 36.8 +2.7**
PLOR Plostina 33.66 300 ⇑P **P** **23 21 36.2 +1.6**
PLOR Plostina 33.66 300 ⇑P **P** **23 21 36.2 +1.6**
TESR Tescani 33.68 302 ⇑P **P** **23 21 36.1 +1.4**
ISR Istrita 33.73 299 ⇑P **P** **23 21 38.6 +3.4**
ISR Istrita 33.73 299 ⇑P **P** **23 21 38.6 +3.4**
RAZG Razgrad 33.78 296 ⇓P **P** **23 21 37.7 +2.1**
COVR Voineasa-Covas 33.97 300 ⇓P **P** **23 21 39.6 +2.4**
MLR Muntele Rosu 34.15 300 ⇑P **P** **23 21 40.2 +1.3**
MLR Muntele Rosu 34.15 300 P **P** **23 21 40.2 +1.3**
MLR IAmb IAmb 23 21 42.8
comp=Z,9.0nm,0.8s
MLR Muntele Rosu 34.15 300 P **P** **23 21 40.2 +1.3**
MLR pmax pmax
comp=Z,9.0nm,0.8s
DOPR Dopca 34.54 301 ⇑P **P** **23 21 44.0 +1.8**
BURAR Bucovina Array 34.71 303 ⇓P **P** **23 21 45.0 +1.3**
BURAR Bucovina Array 34.71 303 P **P** **23 21 43.7 +0.1**
BURAR Bucovina Array 34.71 303 ⇓P **P** **23 21 45.0 +1.3**
NRIK Noril'sk 34.71 11 P **P** **23 21 44.6 +1.3**
comp=Z,8.0nm,0.6s,baz=202,slow=5.0,SNR=14
comp=Z,8.0nm,0.6s
NRIK Noril'sk 34.71 11 P **P** **23 21 43.9 +0.7**
NRIK IAmb IAmb 23 21 46.0
comp=Z,11nm,0.9s
NRIK Noril'sk 34.71 11*ce*P **P** **23 21 44.8 +1.5**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
BUR08 Bucovina Ar. S 34.72 304 P **P** **23 21 43.9 0.0**
VOIR 34.78 300 ⇓P **P** **23 21 45.7 +1.4**
VOIR 34.78 300 ⇓P **P** **23 21 45.7 +1.4**
ARR Arges 35.07 300 ⇓P **P** **23 21 48.1 +1.3**
ARCR ARCALIA 35.27 302 ⇓P **P** **23 21 50.8 +2.4**
APE Apeiranthos 35.34 285 ⇑P **P** **23 21 50.3 +1.2**
APE Apeiranthos 35.34 285 ⇑P **P** **23 21 50.3 +1.2**
LOT Lotru 35.68 300 ⇑P **P** **23 21 52.5 +0.5**
BMR Baia Mare 35.87 303 ⇓P **P** **23 21 56.2 +2.7**
BMR Baia Mare 35.87 303 ⇓P **P** **23 21 56.2 +2.7**
XLT XiLinHaoTe 35.91 63 *eP* **P** **23 21 54.8 +0.8**
XLT pmax pmax
comp=Z,5.0nm,0.8s
XLT pmax pmax
comp=Z,130nm,4.3s
VTS Vitosha 36.23 295 ⇓P **P** **23 21 58.4 +1.5**
VTS Vitosha 36.23 295 ⇓P **P** **23 21 58.4 +1.5**
IDI Anoyia 36.25 282 P **P** **23 21 55.9 -1.1**
DEV Deva 36.28 300 ⇓P **P** **23 21 57.8 +0.8**
DEV Deva 36.28 300 ⇓P **P** **23 21 57.8 +0.8**
GZR Gura Zlata 36.38 300 ⇑P **P** **23 21 58.7 +0.8**
DRGR 36.40 302 ⇓P **P** **23 21 59.9 +1.8**
DRGR 36.40 302 ⇓P **P** **23 21 59.9 +1.8**
KWP Kalwaria Pacla 36.48 307 *eP* **P** **23 22 01.2 +2.5**
KWP Kalwaria Pacla 36.48 307 P **P** **23 22 00.3 +1.7**
KWP Kalwaria Pacla 36.48 307 P **P** **23 22 00.4 +1.7**
TRPA Tarpa 36.53 304 ⇑P **P** **23 22 01.0 +1.9**
BLKB Belogradchik 36.55 297 ⇓P **P** **23 22 01.3 +1.8**
HERR Herculane 36.66 299 ⇓P **P** **23 22 00.1 -0.2**
UZH Uzhgorod 36.71 305 *eP* **P** **23 22 02.0 +1.4**
UZH *e* 23 22 32.7
KOLS Kolonicke sedl 36.73 306 *eP* **P** **23 22 03.0 +2.2**
MDVR Moldovita 37.16 299 ⇑P **P** **23 22 06.3 +1.7**
BZS Buzias 37.19 300 ⇓P **P** **23 22 06.2 +1.5**
BZS Buzias 37.19 300 ⇓P **P** **23 22 06.2 +1.5**
BOVS Bovan 37.26 297 ⇑P **P** **23 22 06.7 +1.4**
CRVS Cervenica-Dubn 37.27 305 *eP* **P** **23 22 05.2 -0.2**
FIA1 FINESS Array S 37.30 327 P **P** **23 22 06.9 +1.5**

FINES	FINESS Array B	37.30	327	P	P	23 22 06.5	+1.1
	comp=Z,5.5nm,0.8s,baz=116,slow=8.7,SNR=10						
	comp=Z,5.5nm,0.8s						
FINES	FINESS Array B	37.30	327	P	P	23 22 06.7	+1.3
FINES	FINESS Array B	37.30	327	P	P	23 22 06.7	+1.3
LVZ	Lovozero	37.49	339	P	P	23 22 09.3	+2.3
LVZ	Lovozero	37.49	339	P	P	23 22 09.3	+2.3
LVZ				pmax	pmax		
	comp=Z,47nm,1.3s						
NIE	Niedzica	38.04	306	eP	P	23 22 14.2	+2.3
ITM	Ithomi	38.12	286	P	P	23 22 12.7	0.0
OJC	Ojcow	38.39	308	P	P	23 22 14.8	0.0
OJC				IAmb	IAmb	23 22 17.3	
	comp=Z,4.3nm,0.9s						
OJC	Ojcow	38.39	308	P	P	23 22 14.8	0.0
OJC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DIVS	Divibare	38.45	298	IAmb	IAmb	23 22 21.1	
	comp=Z,9.7nm,1.3s						
MORH	Mrgy, Hungar	39.23	301	⇓P	P	23 22 22.7	+1.0
MAUC	Maruska	39.66	306	eP	P	23 22 27.1	+1.7
MORC	Moravsky Berou	39.84	307	P	P	23 22 28.7	+1.8
MORC	Moravsky Berou	39.84	307	P	P	23 22 28.7	+1.8
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KRLC	Kraliky	40.33	307	eP	P	23 22 32.0	+1.1
KRLC	Kraliky	40.33	307	eP	P	23 22 32.0	+1.1
VRAC	Vranov	40.47	306	⇓P	P	23 22 33.8	+1.8
VRAC	Vranov	40.47	306	⇓P	P	23 22 33.8	+1.8
DPC	Dobruska-Polom	40.62	308	eP	P	23 22 35.2	+1.9
DPC	Dobruska-Polom	40.62	308	eP	P	23 22 35.2	+1.9
CHVC	Chvalec	40.79	308	eP	P	23 22 36.2	+1.5
KEV	Kevo	40.83	339	P	P	23 22 34.8	+0.1
KEV	Kevo	40.83	339	P	P	23 22 34.8	+0.1
KEV				pmax	pmax		
	comp=Z,52nm,1.5s						
CONA	Conrad Observa	41.01	304	eP	P	23 22 38.4	+1.8
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	41.16	338	P	P	23 22 38.2	+0.8
	comp=Z,5.0nm,0.7s,baz=113,slow=7.4,SNR=17						
	comp=Z,5.0nm,0.7s						
TIP	Timpagrande	41.64	291	P	P	23 22 41.3	-0.5
TIP				IAmb	IAmb	23 23 02.6	
	comp=Z,7.9nm,1.1s						
SOKA	Soboth	41.68	302	eP	P	23 22 43.8	+1.8
	comp=Z,4.4nm,0.8s						
MOA	Molln	42.09	304	eP	P	23 22 46.6	+1.3
	comp=Z,1.7nm,0.6s						
BRG	Berggiesshubel	42.13	309	i P	P	23 22 47.2	+1.7
BRG				Amp		23 22 48.0	
	comp=Z,5.7nm,0.8s						
BRG				i x	x	23 22 49.7	
BRG				Amp		23 22 50.4	
	comp=Z,4.2nm,0.7s						
BRG	Berggiesshubel	42.13	309	i P	P	23 22 47.2	+1.7
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CUC	Castrocucco	42.17	292	P	P	23 22 48.2	+2.1
GERES	GERESS Array B	42.39	306	P	P	23 22 49.0	+1.2
	comp=Z,0.7nm,0.7s,baz=80,slow=7.1,SNR=6.5						
GERES				PP	PP	23 24 31.5	+3.2
	comp=Z,1.0nm,1.0s,baz=68,slow=8.7,SNR=3.9						
	comp=Z,0.7nm,0.7s						
GERES	GERESS Array B	42.39	306	P	P	23 22 49.0	+1.2
CLL	Collm	42.71	309	eP	P	23 22 51.0	+0.8
CLL	Collm	42.71	309	eP	P	23 22 51.0	+0.8
PRED	Cave del Predi	42.71	302	P	P	23 22 54.4	+4.0
ZEA	Zeya	43.05	47	eP	P	23 22 54.3	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NC405	NORSAR Array S	43.90	324	P	P	23 23 00.3	+0.6
WTTA	Wattenberg	43.92	303	eP	P	23 23 00.8	+0.5
	comp=Z,0.6nm,0.2s						
RAFF	Raffo Rosso	43.95	289	P	P	23 23 00.3	-0.1
NC303	NORSAR Array S	44.08	324	P	P	23 23 02.3	+1.2
NB201	NORSAR Array S	44.10	323	P	P	23 23 02.0	+0.7
NB2	NORSAR Subarra	44.14	323	P	P	23 23 01.8	+0.2
	comp=Z,3.0nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.14	323	P	P	23 23 01.9	+0.2
	comp=Z,5.6nm,0.7s,baz=98,slow=7.9,SNR=23						
	comp=Z,5.6nm,0.7s						
MOTA	Moosalm	44.27	304	eP	P	23 23 02.0	-1.0
	comp=Z,1.6nm,0.5s						
NAO01	NORSAR Array S	44.27	323	P	P	23 23 03.4	+0.8
NBO00	NORSAR Array S	44.35	323	P	P	23 23 03.6	+0.4
NC204	NORSAR Array S	44.38	324	P	P	23 23 04.1	+0.5
RETA	Reutte	44.48	304	eP	P	23 23 05.4	+0.8
	comp=Z,0.7nm,0.3s						
CLTB	Caltabellotta	44.73	290	P	P	23 23 07.5	+0.8
KONO	Kongsberg	44.80	321	P	P	23 23 07.0	+0.2
KONO	Kongsberg	44.80	321	P	P	23 23 07.0	+0.2
KONO				pmax	pmax		
	comp=Z,37nm,1.4s						
YAK	Yakutsk	44.86	35	ceP	P	23 23 07.9	+0.7
YAK				pmax	pmax		
	comp=Z,17nm,0.6s						
FUORN	Ofenpass-Fuorn	44.94	303	P	P	23 23 10.1	+1.6
DAVA	Damuels	45.10	304	eP	P	23 23 09.2	-0.5
	comp=Z,5.3nm,0.5s						
TIXI	Tiksi	46.51	22	P	P	23 23 21.2	+1.1
TIXI				IAmb	IAmb	23 23 22.0	
	comp=Z,8.3nm,0.7s						
TIXI	Tiksi	46.51	22	P	P	23 23 21.2	+1.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SENIN	Lac Senin/Sane	47.00	303	P	P	23 23 25.2	+0.6
SENIN				IAmb	IAmb	23 23 28.5	
	comp=Z,3.9nm,0.8s						
LPL	La Plagne	47.56	302	eP	P	23 23 30.1	+1.2
LPL				pmax	pmax		
	comp=Z,11nm,1.1s						
KEST	Kesra	48.26	288	P	P	23 23 35.9	+1.7
	comp=Z,2.8nm,0.8s,baz=317,slow=2.6,SNR=6.0						
	comp=Z,2.8nm,0.8s						
KEST	Kesra	48.26	288	P	P	23 23 35.9	+1.7
SSB	Saint Sauveur	49.12	302	P	P	23 23 40.4	-0.2
SSB	Saint Sauveur	49.12	302	P	P	23 23 40.4	-0.2
SSB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CAF	Calviac	50.90	302	eP	P	23 23 55.5	+1.4
CAF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MBAR	Mbarara	51.49	234⇑	eP	P	23 24 00.8	+1.8
LFF	La Frestale	51.81	302	eP	P	23 24 04.5	+3.7
LFF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SEY	Seymchan	55.29	33	P	P	23 24 26.1	+0.2
	comp=Z,1.5nm,0.3s,baz=272,slow=9.4,SNR=3.6						
	comp=Z,1.5nm,0.3s						
ESDC	Sonseca Array	56.80	298	P	P	23 24 37.5	+0.4
	comp=Z,1.5nm,0.7s,baz=58,slow=7.8,SNR=15						
ESDC				PcP	PcP	23 25 30.8	-0.6
	comp=Z,0.7nm,0.8s,baz=49,slow=5.2,SNR=2.5						
	comp=Z,1.5nm,0.7s						
EUNU	Eureka	63.34	356	P	P	23 25 23.8	+2.7
EUNU				IAmb	IAmb	23 25 44.9	
	comp=Z,5.4nm,1.2s						
TOA0	Torodi Ar. Sit	64.75	268	P	P	23 25 30.5	-0.7
TOA0				IAmb	IAmb	23 25 31.6	
	comp=Z,2.7nm,0.8s						
TORD	Torodi Ar. Bea	64.75	268	P	P	23 25 30.1	-1.1
	comp=Z,2.5nm,0.6s,baz=47,slow=5.9,SNR=21						
	comp=Z,2.5nm,0.6s						
KOWA	Kowa	68.63	273	P	P	23 25 55.4	-0.5
KOWA				IAmb	IAmb	23 25 56.1	
	comp=Z,3.3nm,0.6s						
GIRL	Giralia	71.94	137	P	P	23 26 16.8	+1.1
IMAR	Indian Mountai	72.85	17	P	P	23 26 20.8	+0.3
AMKA	Amchitka	73.28	38	P	P	23 26 23.3	0.0
BMAR	Burnt Mountain	73.56	13	P	P	23 26 26.5	+1.8
LBTB	Lobatse	73.73	221	P	P	23 26 27.1	+0.7
LBTB				IAmb	IAmb	23 26 35.1	
	comp=Z,6.4nm,1.1s						
LBTB	Lobatse	73.73	221	P	P	23 26 27.1	+0.7
LBTB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
H23K	Yukon River	73.95	16	P	P	23 26 28.7	+1.6
J20K	Nowinta River	74.23	18	P	P	23 26 29.4	+0.8
PSA00	Pilbara Seismi	74.34	132	P	P	23 26 29.7	-0.1
C36M	Paulatuk	74.38	5	P	P	23 26 29.9	+0.5
INK	Inuvik	74.46	9	P	P	23 26 30.5	+0.6
	comp=Z,6.8nm,0.6s,baz=323,slow=5.3,SNR=8.6						
	comp=Z,6.8nm,0.6s						
INK	Inuvik	74.46	9	P	P	23 26 31.1	+1.2
INK				IAmb	IAmb	23 26 31.6	
	comp=Z,5.3nm,0.7s						
INK	Inuvik	74.46	9	P	P	23 26 31.1	+1.2
INK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
K20K	Telida	74.91	19	P	P	23 26 33.5	+0.9
K20K				IAmb	IAmb	23 26 55.0	
	comp=Z,16nm,1.5s						
BPAW	Bear Paw Mtn.	75.07	17	P	P	23 26 34.0	+0.4
NEA2	Nenana	75.11	16	P	P	23 26 33.9	+0.2
NEA2				IAmb	IAmb	23 26 34.7	
	comp=Z,6.2nm,0.7s						
CAST	Castle Rocks	75.37	18	P	P	23 26 35.9	+0.6
CAST				IAmb	IAmb	23 26 37.0	
	comp=Z,5.7nm,0.8s						
FITZ	Fitzroy Crossi	75.42	126	P	P	23 26 36.3	+0.2
ILAR	Eielson Array	75.43	15	P	P	23 26 35.5	-0.1
	comp=Z,1.2nm,0.7s,baz=322,slow=4.4,SNR=11						
	comp=Z,1.2nm,0.7s						
KTH	Kantishna Hill	75.55	18	P	P	23 26 37.5	+1.2
KTH				IAmb	IAmb	23 26 37.8	
	comp=Z,6.2nm,0.9s						
I26K	Coal Creek Min	75.72	14	P	P	23 26 38.3	+1.1
I26K				IAmb	IAmb	23 26 38.7	
	comp=Z,4.7nm,0.8s						
PPLA	Purkeypile	75.78	18	P	P	23 26 38.2	+0.5
PPLA				IAmb	IAmb	23 26 56.5	
	comp=Z,10nm,1.3s						
J25K	Salcha River,	75.89	15	P	P	23 26 38.7	+0.4
J25K				IAmb	IAmb	23 26 39.7	
	comp=Z,4.0nm,0.8s						
RND	Reindeer	76.17	17	P	P	23 26 39.4	-0.5
RND	Reindeer	76.17	17	P	P	23 26 39.4	-0.5
RND				pmax	pmax		
	comp=Z,3.0nm,0.7s						
J26L	Joseph Creek	76.36	14	P	P	23 26 41.5	+0.5
J26L				IAmb	IAmb	23 26 42.1	
	comp=Z,3.7nm,0.7s						
SCRK	Sand Creek	76.74	15	P	P	23 26 43.8	+0.6
SCRK				IAmb	IAmb	23 26 44.4	
	comp=Z,4.0nm,0.8s						
DHY	Denali Highway	76.80	16	P	P	23 26 44.1	+0.6
DHY				IAmb	IAmb	23 26 44.6	
	comp=Z,6.0nm,0.7s						
BOSA	Boshof	76.82	219	P	P	23 26 43.7	-0.2
	comp=Z,3.2nm,0.7s,baz=33,slow=2.9,SNR=5.1						
	comp=Z,3.2nm,0.7s						
BOSA	Boshof	76.82	219	P	P	23 26 44.1	+0.2
BOSA				IAmb	IAmb	23 26 55.7	
	comp=Z,14nm,1.4s						
BOSA	Boshof	76.82	219	P	P	23 26 44.1	+0.2
BOSA				pmax	pmax		
	comp=Z,14nm,1.4s						
PAX	Paxson	77.32	16	P	P	23 26 46.7	+0.4
PAX				IAmb	IAmb	23 26 47.1	
	comp=Z,3.8nm,0.7s						
PAX	Paxson	77.32	16	P	P	23 26 46.7	+0.4
PAX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAWY	Dawson	77.54	13	P	P	23 26 48.2	+0.7
DAWY				IAmb	IAmb	23 27 14.2	
	comp=Z,6.8nm,1.4s						
GHO	Glory Hole Cre	77.55	18	P	P	23 26 48.1	+0.4
GHO				IAmb	IAmb	23 26 48.5	
	comp=Z,4.3nm,0.8s						
SML	Sawmill	77.67	17	P	P	23 26 48.5	+0.3
SML				IAmb	IAmb	23 26 49.0	
	comp=Z,7.8nm,0.8s						
SCM	Sheep Creek Mo	77.89	17	P	P	23 26 50.5	+1.0
SCM				IAmb	IAmb	23 27 03.2	
	comp=Z,10nm,1.1s						
SCM	Sheep Creek Mo	77.89	17	P	P	23 26 50.5	+1.0
SCM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
L27K	Beaver Creek,	77.99	14	P	P	23 26 51.0	+1.0
BCAR	Beaver Creek A	78.00	14	P	P	23 26 51.4	+1.3
MORW	Morawa	78.05	140	P	P	23 26 50.3	-0.3
MORW				IAmb	IAmb	23 27 13.1	
	comp=Z,16nm,1.4s						
P19K	Oil Pt	78.19	21	P	P	23 26 52.6	+1.4
M27K	Edge Creek, AK	78.62	14	P	P	23 26 54.9	+1.3
M27K				IAmb	IAmb	23 26 55.4	
	comp=Z,5.8nm,0.8s						
N25K	Chitina, Valde	78.72	16	P	P	23 26 56.0	+2.0
N25K				IAmb	IAmb	23 27 04.4	
	comp=Z,6.8nm,1.3s						
DIV	Divide	78.87	17	P	P	23 26 55.9	+1.0
DIV				IAmb	IAmb	23 26 56.3	
	comp=Z,4.1nm,0.7s						
FID	Port Fidalgo	79.03	17	P	P	23 26 56.3	+0.6
FID				IAmb	IAmb	23 26 57.8	
	comp=Z,6.7nm,0.8s						
GLB	Gilahina Butte	79.04	16	P	P	23 26 56.5	+0.7
KDAK	Kodiak Island	79.94	22	P	P	23 27 00.5	-0.1
	comp=Z,3.8nm,0.9s,baz=345,slow=16,SNR=10.0						
	comp=Z,3.8nm,0.9s						
KDAK	Kodiak Island	79.94	22	P	P	23 27 01.4	+0.8
KDAK				IAmb	IAmb	23 27 05.7	
	comp=Z,9.6nm,1.1s						
KDAK	Kodiak Island	79.94	22	P	P	23 27 01.4	+0.8
KDAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CTGM	Chitina Glacie	79.99	15	P	P	23 27 01.8	+0.7
CTGM				IAmb	IAmb	23 27 12.8	
	comp=Z,9.6nm,1.4s						
BERG	Berg Lake	80.00	16	P	P	23 27 02.1	+1.2
BERG				IAmb	IAmb	23 27 14.4	
	comp=Z,5.5nm,1.0s						
HYT	Haines Junctio	80.87	13	P	P	23 27 07.1	+1.3
YKA	Yellowknife Ar	81.69	2	P	P	23 27 09.8	-0.1
	comp=Z,3.4nm,0.8s,baz=348,slow=5.3,SNR=13						
	comp=Z,3.4nm,0.8s						
YKA	Yellowknife Ar	81.69	2	P	P	23 27 10.3	+0.4
YKA	Yellowknife Ar	81.69	2	i P	P	23 27 10.3	+0.4
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
P33M	Teslin, Yukon	82.25	11	P	P	23 27 13.0	0.0
WRA	Warramunga Arr	82.59	121	P	P	23 27 13.5	-1.7
	comp=Z,0.7nm,0.7s,baz=326,slow=5.0,SNR=11						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	82.59	121	P	P	23 27 14.2	-1.0
WRA	Warramunga Arr	82.59	121	P	P	23 27 14.2	-1.0
WB2	Warramunga Arr	82.60	121	P	P	23 27 14.2	-1.1
WB2				IAmb	IAmb	23 27 39.8	
	comp=Z,9.7nm,1.4s						
AS31	Alice Springs	84.81	124	P	P	23 27 25.9	-0.6
ASAR	Alice Springs	84.81	124	P	P	23 27 25.1	-1.4
	comp=Z,0.9nm,0.6s,baz=311,slow=5.3,SNR=12						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	84.81	124	P	P	23 27 25.9	-0.6
ASAR	Alice Springs	84.81	124	P	P	23 27 25.9	-0.6

DDA 06 23:19:15.2±0.0, 37°.91N×29°.42E, h7km±4km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PASA	Karahalli, USA	0.44	7	P	Pg	23 19 23.8	0.0
PASA				S	Sg	23 19 30.6	+1.0
PASA				i AML	AML	23 19 32.0	
	comp=N,16nm,0.2s						
PASA				i AML	AML	23 19 37.0	
	comp=E,19nm,0.2s						
TAVA	DENIZLI_Tavas	0.60	223	P	Pg	23 19 27.0	+0.2
TAVA				S	Sb	23 19 36.1	-0.6
TAVA				i AML	AML	23 19 37.0	
	comp=E,10nm,0.3s						
TAVA				i AML	AML	23 19 38.0	
	comp=N,16nm,0.4s						
KZIL	AFYON_Kizioren	0.67	58	P	Pg	23 19 27.9	-0.1
KZIL				i AML	AML	23 19 43.0	
	comp=N,35nm,0.3s						
KZIL				i AML	AML	23 19 43.0	
	comp=E,27nm,0.4s						
GOLH	Golhisar	0.68	171	P	Pg	23 19 27.9	-0.3
GOLH				S	Sb	23 19 39.2	+0.1
GOLH				i AML	AML	23 19 43.0	
	comp=E,22nm,0.3s						
GOLH				i AML	AML	23 19 43.0	
	comp=N,11nm,0.6s						
USAK	Uak-Merkez	0.87	338	P	Pg	23 19 32.2	+0.4
USAK				S	Sb	23 19 44.0	-0.5
USAK				i AML	AML	23 19 44.0	
	comp=N,19nm,0.8s						
USAK				i AML	AML	23 19 48.0	
	comp=E,17nm,0.7s						
MANT	Manisa	0.90	311	P	Pb	23 19 33.3	+0.1
MANT				S	Sg	23 19 44.8	+0.7
MANT				i AML	AML	23 19 47.0	
	comp=E,17nm,0.2s						
MANT				i AML	AML	23 19 50.0	
	comp=N,20nm,0.7s						
GDZ	Gediz	1.18	2	P	Pg	23 19 37.1	-0.8
GDZ				S	Sb	23 19 53.7	+0.2
GDZ				i AML	AML	23 19 57.0	
	comp=E,5.6nm,0.5s						
GDZ				i AML	AML	23 19 58.0	
	comp=N,5.5nm,0.4s						
AYDN	Tasoluk	1.25	259	P	Pg	23 19 39.9	+0.7
AYDN				S	Sn	23 19 56.8	+0.6
AYDN				i AML	AML	23 20 01.0	
	comp=N,7.5nm,0.4s						
AYDN				i AML	AML	23 20 02.0	
	comp=E,8.5nm,0.7s						
DEMI	Demirci	1.26	334	P	Pg	23 19 39.6	+0.2
DEMI				S	Sn	23 19 56.3	-0.3
DEMI				i AML	AML	23 19 59.0	
	comp=E,7.8nm,0.7s						
DEMI				i AML	AML	23 20 04.0	
	comp=N,8.4nm,0.4s						

IDC 06 23:21:55.9±2.2, 6°.62N×124°.05E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=268.3km s-min=22.1km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.27	159	P	P	23 27 51.1	0.0
	0.4nm,0.3s,baz=339,slow=9.4,SNR=13						
	0.4nm,0.3s						
ASAR	Alice Springs	31.60	163	P	P	23 28 20.6	0.0
	0.3nm,0.3s,baz=336,slow=7.0,SNR=4.7						
	0.3nm,0.3s						
MKAR	Makanchi Array	53.68	325	P	P	23 31 20.0	+0.5
	0.2nm,0.3s,baz=118,slow=8.0,SNR=6.2						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	57.88	328	P	P	23 31 48.9	-0.7
	2.7nm,0.2s,baz=131,slow=5.2,SNR=4.7						
	2.7nm,0.2s						

*NEIC **06** 23:29:28.7±1.8, 16°.8S±0°.2×171°.86W±0°.06, h36km±13km, mb4.2/6, Error ellipse: s-maj=29.1km s-min=7.6km az=188.0*

*IDC **06** 23:29:50.1±10.0, 18°.37S×173°.49W, h117km±68km, mb3.7/2, mbtmp4.1/4, MS3.5/4, Error ellipse: s-maj=192.1km s-min=29.0km az=146.0*

ISC 06 23:29:50.2±1.3, 18°.2S±0°.2×173°.5W±0°.2, h100km, n21, σ2$42/14, mb4.1/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.50	105	Pn	Pn	23 30 14.6	-28
AFI	Afiamalu	4.59	21	P	Pn	23 30 58.8	+1.3
	27nm,0.3s,baz=217,slow=20						
MSVF	Nonsavu	8.05	272	P	Pn	23 31 45.9	+1.4
	6.7nm,0.9s,baz=106,slow=17,SNR=4.0						
MSVF				LR	LR	23 34 47.6	
	comp=Z,164nm,18.7s,baz=212,slow=37						
MSVF	Nonsavu	8.05	272	Pn	Pn	23 31 46.8	+2.4
RAR	Rarotonga	13.27	105	Pn	Pn	23 32 23.3	-31
DZM	Mont Dzumac	19.21	255	eLR	LR	23 38 54.1	
	comp=Z,89nm,24.5s						
DZM	Mont Dzumac	19.21	255	LR	LR	23 39 59.9	
	comp=Z,49nm,18.4s,baz=245,slow=32						
URZ	Urewera	21.59	200	P	P	23 34 34.1	+2.3
BKZ	Black Stump Fm	22.61	201	P	P	23 34 45.2	+2.6
BKZ				IAmb	IAmb	23 34 49.5	
	comp=Z,7.0nm,0.8s						
PPT2	Papeete2	22.78	92	eLR	LR	23 39 37.8	
	comp=Z,57nm,24.0s						
TBI	Tubuai	23.04	107	eLR	LR	23 39 49.0	
	comp=Z,43nm,38.8s						
HNR	Honiara	27.19	285	LR	LR	23 46 09.8	
	comp=Z,691nm,19.2s,baz=126,slow=36						
CTA	Charters Tower	38.00	260	LR	LR	23 52 33.4	
	comp=Z,40nm,18.4s,baz=77,slow=36						
WB0	Warramunga Arr	49.13	259	P	P	23 38 26.0	-2.1
WB0				IAmb	IAmb	23 38 33.0	
	comp=Z,2.4nm,1.1s						
WB2	Warramunga Arr	49.15	259	P	P	23 38 25.7	-2.5
WB2				IAmb	IAmb	23 38 37.4	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	49.16	259	P	P	23 38 25.7	-2.6
	comp=Z,0.7nm,0.7s,baz=96,slow=7.3,SNR=17						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	49.16	259	P	P	23 38 26.3	-2.0
AS31	Alice Springs	49.20	254	P	P	23 38 26.8	-1.8
AS31				IAmb	IAmb	23 38 28.1	
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	49.20	254	P	P	23 38 26.5	-2.1
	comp=Z,4.0nm,0.6s,baz=88,slow=8.5,SNR=44						
ASAR				PcP	PcP	23 39 47.4	-3.0
	comp=Z,0.5nm,0.8s,baz=79,slow=5.2,SNR=1.4						
	comp=Z,4.0nm,0.6s						
ASAR	Alice Springs	49.20	254	P	P	23 38 27.2	-1.4
BRTR	Keskin Array B	148.22	318	PKPbc	PKPbc	23 49 23.8	-1.3
	comp=Z,0.4nm,0.6s,baz=68,slow=4.3,SNR=3.7						

*FUNV **06** 23:32:42.7, 10°.88N×62°.23W, h97km, MW3.3*

*TRN **06** 23:32:43.0, 10°.87N×62°.20W, h93km, MD3.2*

ISC 06 23:32:40.4±1.7, 10°.88N±0°.07×62°.28W±0°.05, h113km±15km, n11, σ1$70/18, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.90	105	eP	Pn	23 33 01.3	+0.6
TRN				eS	Sn	23 33 14.0	-2.1
CRUV	Carupano	0.96	258	eP	Pn	23 33 02.2	+0.9
CRUV				eS	Sn	23 33 16.1	-1.1
GRFF	Grenada Fort F	1.28	25	eP	Pn	23 33 05.7	+0.9
GRFF				eS	Sn	23 33 22.9	-0.4
GRGR	Grenville	1.39	26	eP	Pn	23 33 07.1	+1.1
GRGR				eS	Sn	23 33 25.6	0.0
TPR	Prospect	1.51	78	eP	Pn	23 33 08.9	+1.4
COAV	Cumanacoa	1.68	245	eP	Pn	23 33 11.8	+2.1
TOSP	Speyside	1.77	76	eP	Pn	23 33 11.1	+0.6
TOSP				eS	Sn	23 33 32.2	-1.4
PRGV	PARIAGUAN	3.14	228	eP	Pn	23 33 30.0	+1.6
PRGV				eS	Sn	23 34 06.4	+1.0
BENV	Beln	5.31	261	eP	Pn	23 33 58.4	+0.9
BENV				eS	Sn	23 34 54.9	-2.6
CACV	CAICARA DEL OR	5.34	232	eP	Pn	23 33 53.8	-4.1
CACV				eS	Sn	23 34 46.2	-12
BAUV	El Baul	5.99	252	eP	Pn	23 34 07.3	+0.6
BAUV				eS	Sn	23 35 10.7	-3.3

**MAN 06 23:42:01.2, 7°.02N×126°.05E, h29km, mb4.4, ML3.2, MS3.0, 4C-3D,

JHJ	**Hachijo jima 2**	**2.81 323**	Pn	**Pn**	**23 51 16.9**	**+2.0**
	22nm,0.3s,baz=205,slow=12,SNR=2.0					
JHJ			Sn	**Sn**	**23 51 42.4**	**-5.7**
	40nm,0.3s,baz=47,slow=23,SNR=5.3					
	320nm,1.0s					
CBIJ	**Chichi jima**	**3.77 175**	*e*P	**Pn**	**23 51 28.3**	**+0.2**
JCJ	**Chichijima**	**3.77 175**	Pn	**Pn**	**23 51 28.3**	**+0.2**
	7.0nm,0.3s,baz=282,slow=20,SNR=5.9					
JCJ			Sn	**Sn**	**23 52 07.8**	**-4.0**
	7.4nm,0.3s,baz=289,slow=22,SNR=1.9					
	15nm,0.3s					
JHU	**Hanno**	**5.39 338**	*e*P	**Pn**	**23 51 51.1**	**+0.8**
JRY	**Ryogami san**	**5.67 336**	*e*P	**Pn**	**23 51 55.3**	**+1.1**
JRY			*e*S	**Sn**	**23 53 01.0**	**+2.4**
JHO	**Hitachi**	**5.82 350**	*e*P	**Pn**	**23 51 54.7**	**-1.5**
JAG	**Ashikaga**	**5.87 341**	*e*P	**Pn**	**23 51 56.7**	**-0.3**
MJAR	**Matsushiro Arr**	**6.39 333**	Pn	**Pn**	**23 52 05.0**	**+0.8**
	0.3nm,0.3s,baz=152,slow=10,SNR=12					
MJAR			LR	LR	23 54 08.6	
	comp=Z,22nm,18.4s,baz=192,slow=34					
	5.4nm,0.8s					
SONM	**Songino Array**	**31.84 312**	P	**P**	**23 56 54.9**	**+0.4**
	0.3nm,0.3s,baz=119,slow=8.4,SNR=2.3					
	0.3nm,0.3s					
BATI	**Baumata**	**44.39 206**	LR	LR	00 15 00.9	
	comp=Z,93nm,20.0s,baz=130,slow=33					
ZALV	**Zalesovo Beam**	**46.46 317**	P	**P**	**23 58 56.7**	**+0.5**
	0.6nm,0.5s,baz=101,slow=7.5,SNR=2.1					
	0.6nm,0.5s					
MKAR	**Makanchi Array**	**47.87 307**	P	**P**	**23 59 07.8**	**+0.4**
	1.7nm,1.0s,baz=81,slow=8.9,SNR=5.4					
	1.7nm,1.0s					
WRA	**Warramunga Arr**	**51.02 189**	P	**P**	**23 59 31.4**	**-0.3**
	1.1nm,0.4s,baz=4.7,slow=7.6					
	1.1nm,0.4s					
KDAK	**Kodiak Island**	**51.60 39**	P	**P**	**23 59 34.8**	**-0.8**
	2.3nm,0.8s,baz=328,slow=14,SNR=1.7					
	2.3nm,0.8s					
ILAR	**Eielson Array**	**54.60 30**	P	**P**	**23 59 57.3**	**-0.3**
	0.3nm,0.8s,baz=249,slow=6.6,SNR=2.2					
	0.3nm,0.8s					
ASAR	**Alice Springs**	**54.75 189**	P	**P**	**23 59 59.4**	**+0.2**
	0.6nm,0.5s,baz=1.3,slow=5.1,SNR=10					
	0.6nm,0.5s					
FINES	**FINESS Array B**	**74.42 333**	P	**P**	**00 02 07.5**	**+0.3**
	1.6nm,0.9s,baz=54,slow=3.6,SNR=4.5					
	1.6nm,0.9s					
NVAR	**Mina Array Bea**	**78.48 52**	P	**P**	**00 02 31.0**	**+0.1**
	0.2nm,0.5s,baz=282,slow=6.2,SNR=2.2					
	0.2nm,0.5s					
AKASG	**Malin Array Be**	**79.38 323**	P	**P**	**00 02 35.7**	**+0.4**
	0.8nm,0.5s,baz=52,slow=6.6,SNR=4.9					
	0.8nm,0.5s					
BRTR	**Keskin Array B**	**83.20 312**	P	**P**	**00 02 57.0**	**+1.0**
	0.6nm,0.8s,baz=52,slow=7.8,SNR=3.6					
	0.6nm,0.8s					
TXAR	**Lajitas Array**	**93.62 53**	P	**P**	**00 03 45.9**	**-0.3**
	0.3nm,0.9s,baz=305,slow=3.2,SNR=2.1					
	0.3nm,0.9s					

*NEIC **07** 00:04:12.0±1.0, 17°.5S±0°.2×178°.1W±0°.2, h563km±21km, mb4.2/13, Error ellipse: s-maj=36.6km s-min=28.3km az=220.0*

*IDC **07** 00:04:13.8±2.5, 17°.62S×178°.55W, h561km±21km, mb3.0/4, mbtmp4.0/6, Error ellipse: s-maj=120.4km s-min=28.9km az=155.0*

ISC 07 00:04:13.1±1.3, 17°.7S±0°.2×178°.4W±0°.2, h547km, n21, σ1§28/21, mb4.0/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.43 270**		P	**P**	**00 05 31.3**	**+0.5**
	27nm,0.7s,baz=120,slow=5.0,SNR=21						
MSVF	**Nonsavu**	**3.43 270**		P	**P**	**00 05 32.9**	**+2.1**
DZM	**Mont Dzumac**	**14.93 251**		P	**P**	**00 07 21.2**	**-0.9**
	2.8nm,0.6s,baz=72,slow=19,SNR=1.5						
DZM	**Mont Dzumac**	**14.93 251**		P	**P**	**00 07 23.8**	**+1.7**
DZM				IAmb	IAmb	00 08 01.4	
	comp=Z,15nm,1.1s						
BFZ	**Birch Farm**	**23.33 190**		P	**P**	**00 08 37.9**	**-1.1**
THZ	**Tophouse**	**25.08 196**		P	**P**	**00 08 56.7**	**+2.0**
STKA	**Stephens Creek**	**38.75 241**		P	**P**	**00 10 49.9**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=79,slow=9.3,SNR=4.9						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**38.75 241**		P	**P**	**00 10 51.6**	**+0.7**
MCQ	**Macquarie Isla**	**40.63 200**		P	**P**	**00 11 05.6**	**0.0**
BBOO	**Buckleboo**	**43.53 241**		P	**P**	**00 11 29.1**	**+0.2**
BBOO				IAmb	IAmb	00 11 29.5	
	comp=Z,6.1nm,0.8s						
WB2	**Warramunga Arr**	**44.70 259**		P	**P**	**00 11 36.3**	**-1.7**
WB2				IAmb	IAmb	00 11 54.7	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**44.71 259**		P	**P**	**00 11 35.9**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=98,slow=6.7,SNR=17						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**44.71 259**		P	**P**	**00 11 37.3**	**-0.8**
AS31	**Alice Springs**	**44.88 254**		P	**P**	**00 11 38.9**	**-0.6**
AS31				IAmb	IAmb	00 11 39.3	
	comp=Z,2.5nm,0.6s						
ASAR	**Alice Springs**	**44.88 254**		P	**P**	**00 11 38.3**	**-1.1**
	comp=Z,7.8nm,0.5s,baz=88,slow=8.1,SNR=63						
	comp=Z,7.8nm,0.5s						
ASAR	**Alice Springs**	**44.88 254**		P	**P**	**00 11 38.1**	**-1.4**
FORT	**Forrest**	**50.12 244**		P	**P**	**00 12 17.9**	**-0.7**
FORT				IAmb	IAmb	00 12 37.7	
	comp=Z,18nm,1.1s						
FAKI	**Fak Fak**	**50.60 281**		P	**P**	**00 12 22.7**	**+0.5**
FAKI				IAmb	IAmb	00 12 25.5	
	comp=Z,31nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.11 260**		P	**P**	**00 12 40.0**	**-0.3**
MBWA	**Marble Bar**	**58.16 256**		P	**P**	**00 13 14.3**	**-1.0**
MBWA				IAmb	IAmb	00 13 14.5	
	comp=Z,4.8nm,0.9s						
TXAR	**Lajitas Array**	**85.86 58**		P	**P**	**00 15 55.5**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=214,slow=6.4,SNR=2.1						
	comp=Z,0.1nm,0.4s						

*IDC **07** 00:04:23.4±2.4, 3°.34S×129°.64E, h0km, mb3.5/2, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=140.3km s-min=30.3km az=69.0*

*DJA **07** 00:04:24.5±2.0, 3°.5±4°×13°.0E±°, h28km±22km, M3.6/9, mb4.1/2, MLv3.4/9*

ISC 07 00:04:24.1±1.1, 3°.0S±0°.1×130°.01E±0°.08, h25km, n11, σ2§67/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.15 250**		P	**Pb**	**00 04 47.1**	**+1.8**
BNDI	**Bandanaira**	**1.57 184**		P	**Pb**	**00 04 52.7**	**+0.3**
KRAI	**Karang Ratu**	**1.65 257**		P	**Pb**	**00 04 54.3**	**+0.4**
AAI	**Ambon**	**1.96 248**		P	**Pb**	**00 04 59.9**	**+0.9**
FAKI	**Fak Fak**	**2.24 89**		P	**Pn**	**00 04 58.3**	**-1.3**
SLII	**Sorong**	**2.42 31**		P	Pn	00 04 58.9	-3.2
NLAI	**Namlea**	**2.92 264**		P	**Pb**	**00 05 11.3**	**-4.2**
LBMI	**Labuha**	**3.40 312**		P	**Pn**	**00 05 14.3**	**-1.3**
WRA	**Warramunga Arr**	**17.41 166**		P	**Pn**	**00 08 22.7**	**-2.7**
	0.1nm,0.3s,baz=345,slow=12,SNR=1.7						
WRA				S	Sn	00 11 24.7	-14
	0.2nm,0.8s,baz=355,slow=23,SNR=1.3						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**20.94 170**		P	**P**	**00 09 05.2**	**-0.1**
	1.9nm,0.5s,baz=350,slow=11,SNR=23						
	1.9nm,0.5s						
MKAR	**Makanchi Array**	**64.88 326**		P	**P**	**00 15 05.5**	**+4.2**
	0.2nm,0.5s,baz=132,slow=6.9,SNR=1.1						
	0.2nm,0.5s						

*BJI **07** 00:14:19.2±0.0, 41°.85N×142°.55E, h70km, mb4.7/47, mB4.8/28, Ms3.7/5, Ms7 3.6/6*

*MOS **07** 00:14:19.5±1.1, 42°.01N×142°.48E, h60km, mb4.8/55, Error ellipse: s-maj=6.3km s-min=4.6km az=114.7*

*JMA **07** 00:14:20.6±0.2, 42°.0N±0°.8×142°.6E±0°.8, h63km±1km, MD4.2/40, MW4.4/40, S OFF URAKAWA*

JMA Felt II J1 at S OFF URAKAWA .

*NIED **07** 00:14:20.6, 41°.98N×142°.56E, h63km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.85; Mθθ-0.84; Mφφ-3.00; Mrθ1.48; Mθφ-0.89; Mφr3.40; Fault plane solution: M0 5.15000×10¹⁵ NP1: φs198.00000°, δ22.00000°, λ86.00000°. NP2: φs22.00000°, δ68.00000°, λ92.00000°.*

*NEIC **07** 00:14:21.3±1.5, 42°.00N±0°.04×142°.52E±0°.06, h58km±5km, mb4.6/151, Mwr4.5/11 Error ellipse: s-maj=6.6km s-min=6.1km az=110.0*

*NEIC **07** 00:14:21.2, 42°.00N×142°.53E, h67km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr3.79; Mθθ-0.54; Mφφ-3.24; Mrθ1.59; Mθφ-1.71; Mφr4.78; Fault plane solution: M0 6.39000×10¹⁵ NP1: φs212.63000°, δ19.35000°, λ102.06000°. NP2: φs19.87000°, δ71.10000°, λ85.80000°. Principal axes: T 6.2676, Plg64.0000°, Azm283.0000°; N 0.2400, Plg4.0000°, Azm21.0000°; P -6.5076, Plg26.0000°, Azm113.0000°;*

*IDC **07** 00:14:21.1±0.5, 42°.02N×142°.54E, h66km±4km, mb4.1/31, mbtmp4.4/38, MS3.4/44 Error ellipse: s-maj=11.8km s-min=10.5km az=124.0*

ISC 07 00:14:20.7±0.4, 41°.99N±0°.03×142°.55E±0°.03, h60km±3km, h60km:pP-P, n483, σ1§16/465, mb4.6/164, 26C-43D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.33**	**28**	P	**Pn**	**00 14 31.2**	**+0.1**
JNBK				*e*S	**Sn**	**00 14 39.2**	**+0.6**
JNBK	**Urakawa-nobuka**	**0.33**	**28**	A	A	00 14 31.2	
	comp=E,157nm,0.3s,comp=E,194nm,0.4s						
JSHD	**Hidakashinhida**	**0.42**	**352**	⇓P	**Pn**	**00 14 32.4**	**+0.5**
JSHD				⇓*e*S	**Sn**	**00 14 40.8**	**+0.7**
JSHD	**Hidakashinhida**	**0.42**	**352**	A	A	00 14 32.4	
	comp=E,199nm,1.4s,comp=E,59nm,0.8s						
ERM	**Erimo**	**0.46**	**86**		**Pn**	**00 14 32.5**	**+0.2**
ERM				Sn	**Sn**	**00 14 41.3**	**+0.7**
ERM	**Erimo**	**0.46**	**86**	*i* PN	**Pn**	**00 14 32.3**	**+0.1**
ERM				SN	**Sn**	**00 14 41.3**	**+0.7**
JEM	**Erimo**	**0.46**	**86**	P	**Pn**	**00 14 32.5**	**+0.3**
JEM				*e*S	**Sn**	**00 14 41.1**	**+0.5**
JEM	**Erimo**	**0.46**	**86**	A	A	00 14 32.5	
	comp=E,16nm,1.1s,comp=E,14nm,4.1s						
JTHR	**Tokachihiroo**	**0.64**	**61**	*i* P	**Pn**	**00 14 34.4**	**+0.2**
JTHR	**Tokachihiroo**	**0.64**	**61**	A	A	00 14 34.4	
	comp=E,18nm,1.8s,comp=E,17nm,1.4s						
JIAM	**Iburiatsuma**	**0.79**	**324**	⇓P	**Pn**	**00 14 37.0**	**+1.0**
JIAM				⇓*e*S	**Sn**	**00 14 49.6**	**+2.4**
JIAM	**Iburiatsuma**	**0.79**	**324**	A	A	00 14 37.0	
	comp=E,35nm,1.4s,comp=E,41nm,1.4s						
JBT2	**Biratori 2**	**0.80**	**350**	*e*S	**Sn**	**00 14 48.3**	**+0.7**
JBT2	**Biratori 2**	**0.80**	**350**	A	A	00 14 48.3	
	comp=E,18nm,3.7s,comp=E,9.0nm,1.8s						
JCH	**Churui**	**0.87**	**44**	P	**Pn**	**00 14 37.3**	**+0.2**
JCH				*e*S	**Sn**	**00 14 49.8**	**+0.6**
JCH	**Churui**	**0.87**	**44**	A	A	00 14 37.3	
	comp=E,8.0nm,3.9s,comp=E,14nm,1.1s						
JKB	**Kayabe**	**1.13**	**265**	⇓*e*P	**Pn**	**00 14 40.5**	**0.0**
JKB				⇓*e*S	**Sn**	**00 14 55.1**	**-0.1**
JKB	**Kayabe**	**1.13**	**265**	A	A	00 14 40.5	
	comp=E,26nm,0.9s,comp=E,12nm,1.7s						
JAHD	**Aomorihigashid**	**1.16**	**232**	A	A	00 14 41.1	
	comp=E,22nm,2.2s,comp=E,25nm,1.3s						
JFR	**Furan**	**1.18**	**2**	⇓*e*P	**Pn**	**00 14 41.2**	**+0.1**
JFR				⇓*e*S	**Sn**	**00 14 56.9**	**+0.7**
JFR	**Furan**	**1.18**	**2**	A	A	00 14 41.2	
	comp=E,10.0nm,0.9s,comp=E,7.0nm,0.8s						
JEW	**Eniwo**	**1.18**	**317**		**Pn**	**00 14 41.4**	**+0.3**
JEW				Sn	**Sn**	**00 14 56.4**	**+0.2**
JEW	**Eniwo**	**1.18**	**317**	⇓*e*P	**Pn**	**00 14 41.4**	**+0.3**
JEW				⇓*e*S	**Sn**	**00 14 56.9**	**+0.6**
JEW	**Eniwo**	**1.18**	**317**	A	A	00 14 41.4	
	comp=E,14nm,1.1s,comp=E,22nm,2.1s						
JNB	**Noboribetsu**	**1.22**	**294**	⇓*e*P	**Pn**	**00 14 41.1**	**-0.5**
JNB				⇓*e*S	**Sn**	**00 14 57.0**	**-0.2**
JNB	**Noboribetsu**	**1.22**	**294**	A	A	00 14 41.1	
	comp=E,6.0nm,1.3s,comp=E,3.0nm,0.6s						
JOT	**Ohata**	**1.27**	**242**	⇓P	**Pn**	**00 14 42.4**	**+0.1**
JOT	**Ohata**	**1.27**	**242**	A	A	00 14 42.4	
	comp=E,6.0nm,5.3s,comp=E,12nm,2.8s						
JARK	**Aomorirokkasho**	**1.32**	**222**	A	A	00 14 43.3	
	comp=E,6.0nm,0.9s,comp=E,7.0nm,1.0s						
JOB	**Onbets**	**1.32**	**46**	*e*P	**Pn**	**00 14 44.2**	**+1.2**
JOB				*e*S	**Sn**	**00 15 01.5**	**+1.8**
JOB	**Onbets**	**1.32**	**46**	A	A	00 14 44.2	
	comp=E,14nm,2.4s,comp=E,15nm,1.0s						
JISS	**Ishikarishitsu**	**1.53**	**327**	*e*P	**Pn**	**00 14 46.4**	**+0.6**
JISS				*e*S	**Sn**	**00 15 05.8**	**+1.1**
JISS	**Ishikarishitsu**	**1.53**	**327**	A	A	00 14 46.4	
	comp=E,17nm,4.7s,comp=E,16nm,1.5s						
JAB	**Ashibetsu**	**1.53**	**351**	*e*P	**Pn**	**00 14 46.5**	**+0.6**
JAB	**Ashibetsu**	**1.53**	**351**	A	A	00 14 46.5	
	comp=E,11nm,0.9s,comp=E,12nm,0.9s						
JAR	**Ashorobuto**	**1.59**	**34**	*e*P	**Pn**	**00 14 46.9**	**+0.3**
JAR	**Ashorobuto**	**1.59**	**34**	A	A	00 14 46.9	
	comp=E,6.0nm,0.7s,comp=E,7.0nm,1.2s						
JYM2	**Yakumo 2**	**1.62**	**275**	*e*P	**Pn**	**00 14 47.0**	**0.0**
JTM	**Tenmabayashi**	**1.64**	**223**	Pn	**Pn**	**00 14 47.6**	**+0.4**
JTM				Sn	**Sn**	**00 15 07.5**	**+0.2**
JTM	**Tenmabayashi**	**1.64**	**223**	*e*P	**Pn**	**00 14 47.9**	**+0.7**
JTM				*e*S	**Sn**	**00 15 07.7**	**+0.4**
JSR	**Shiriuchi**	**1.66**	**255**	*e*P	**Pn**	**00 14 47.8**	**+0.3**
JSR				*e*S	**Sn**	**00 15 08.6**	**+0.9**
JSR	**Shiriuchi**	**1.66**	**255**	A	A	00 14 47.8	
	comp=E,6.0nm,0.8s,comp=E,9.0nm,0.7s						
JSI2	**Shiura 2**	**1.85**	**241**	A	A	00 14 50.8	
	comp=E,8.0nm,1.8s,comp=E,7.0nm,1.4s						
JHR	**Hokuryu**	**1.85**	**341**	A	A	00 14 51.0	
	comp=E,18nm,1.5s,comp=E,13nm,1.6s						
JKK2	**Kamakawa 2**	**1.89**	**4**	A	A	00 14 51.4	
	comp=E,4.0nm,2.7s,comp=E,5.0nm,2.4s						
JOMM	**Oshimamatsumae**	**1.95**	**257**	A	A	00 14 52.2	
	comp=E,2.0nm,0.8s,comp=E,2.0nm,2.8s						
JIW	**Iwasaki**	**2.37**	**235**	A	A	00 14 57.9	
	comp=E,3.0nm,5.7s,comp=E,3.0nm,4.7s						
NMR	**Nemuro--Hokkai**	**2.72**	**58**	⇓*i*PN	**Pn**	**00 15 01.5**	**-0.5**
NMR				*e*S	**Sn**	**00 15 32.3**	**-1.4**
RUSJ	**Misakicho**	**2.90**	**42**	*e*PN	Pn	00 15 11.1	+6.7
RUSJ				*e*S	**Sn**	**00 15 43.7**	**+5.7**
YUK	**Yuzh-Kuril'sk**	**3.18**	**49**	⇓*i*PN	**Pn**	**00 15 09.7**	**+1.5**
YUK				*i* S	**Sn**	**00 15 44.5**	**-0.4**
YUK				pmax	pmax		
	comp=Z,424nm,0.4s						
JMM	**Marumori**	**4.33**	**199**	Pn	**Pn**	**00 15 24.3**	**+0.3**
JMM				Sn	**Sn**	**00 16 16.1**	**+2.9**
YSS	**Yuzh-Sakhalins**	**4.97**	**2**	Pn	**Pn**	**00 15 33.9**	**+1.2**
YSS	**Yuzh-Sakhalins**	**4.97**	**2**	*e*PN	**Pn**	**00 15 35.4**	**+2.7**
YSS				*e*S	**Sn**	**00 16 31.2**	**+2.5**
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
KUR	**Kuril'sk**	**5.04**	**48**	PN	**Pn**	**00 15 36.1**	**+2.4**
KUR				*e*S	**Sn**	**00 16 32.7**	**+2.1**
KUR				pmax	pmax		
	comp=Z,159nm,0.9s						
KUR				smax	smax		
	comp=E,208nm,0.4s						
KUR				smax	smax		
	comp=N,172nm,0.5s						
JSD	**Sado**	**5.14**	**221**	Pn	**Pn**	**00 15 35.6**	**+0.6**
TEY	**Ternei**	**5.29**	**307**	⇑*e*PN	**Pn**	**00 15 37.5**	**+0.5**
TEY				*e*		00 16 42.9	
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
TEY				pmax	pmax		
	comp=E,40nm,0.6s						
TEY				pmax	pmax		
	comp=Z,40nm,0.6s						
JYT	**Yasato**	**6.04**	**198**	Pn	**Pn**	**00 15 46.6**	**-0.8**
MJB9	**Matsu-Tunnel**	**6.39**	**213**		**Pn**	**00 15 53.0**	**+0.7**
MAJO	**Matsushiro**	**6.39**	**213**	Pn	**Pn**	**00 15 52.9**	**+0.6**
MAJO	**Matsushiro**	**6.39**	**213**	⇑*e*PN	**Pn**	**00 15 54.3**	**+2.0**
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s						
MJAR	**Matsushiro Arr**	**6.39**	**213**	P	**Pn**	**00 15 52.6**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=16,slow=14,SNR=12						
MJAR				LR	LR	00 19 05.0	
	comp=Z,89nm,19.6s,baz=30,slow=44						
JGF	**Kuroka**	**7.55**	**214**	Pn	**Pn**	**00 16 08.6**	**+0.4**
INU	**Inuyama**	**7.91**	**215**		**Pn**	**00 16 14.7**	**+1.7**
USA0B	**Ussuriysk Arra**	**8.04**	**290**		**Pn**	**00 16 15.8**	**+1.1**
USA0B	**Ussuriysk Arra**	**8.04**	**290**	PN	**Pn**	**00 16 15.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**8.04**	**290**	P	**Pn**	**00 16 15.0**	**+0.3**
	comp=Z,31nm,0.9s,baz=93,slow=13,SNR=27						
USRK				LR	LR	00 19 25.6	
	comp=Z,136nm,21.5s,baz=100,slow=38						
USRK	**Ussuriysk Ar.**	**8.04**	**290**	Pn	**Pn**	**00 16 17.0**	**+2.3**
USRK	**Ussuriysk Ar.**	**8.04**	**290**	PN	**Pn**	**00 16 17.0**	**+2.3**
MSHR	**Mys Shultsa**	**8.46**	**278**	⇑*e*PN	**Pn**	**00 16 21.2**	**+0.6**
JHJ	**Hachijo jima 2**	**9.12**	**195**	P	**Pn**	**00 16 29.4**	**-0.2**
	comp=Z,169nm,0.6s,baz=55,slow=13,SNR=1.5						
JHJ				LR	LR	00 20 49.7	
	comp=Z,112nm,19.7s,baz=291,slow=42						
MDJ	**Mudanjiang**	**9.80**	**290**	P	**Pn**	**00 16 42.0**	**+3.2**
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,180nm,6.1s						
KLR	**Kul'dur**	**10.46**	**317**	P	**Pn**	**00 16 49.3**	**+1.4**
	comp=Z,7.8nm,0.9s,baz=116,slow=16,SNR=15						
KLR				LR	LR	00 20 56.5	
	comp=Z,221nm,20.9s,baz=170,slow=38						
KLR	**Kul'dur**	**10.46**	**317**	⇓*e*PN	**Pn**	**00 16 49.4**	**+1.6**
KSRS	**Korea Array**	**12.13**	**253**	P	**Pn**	**00 17 12.6**	**+1.9**
	comp=Z,12nm,0.8s,baz=65,slow=14,SNR=20						
KSRS				LR	LR	00 21 24.5	
	comp=Z,163nm,20.3s,baz=65,slow=35						
KS19	**Wonju Array Si**	**12.15**	**253**	Pn	**Pn**	**00 17 11.6**	**+0.6**
KSAR	**Wonju Array Be**	**12.16**	**253**	Pn	**Pn**	**00 17 10.7**	**-0.5**
KSAR	**Wonju Array Be**	**12.16**	**253**	PN	**Pn**	**00 17 10.7**	**-0.5**
CN2	**Changchun**	**12.67**	**284**	*e*P	**Pn**	**00 17 15.8**	**-2.2**
CN2				*e*S	**Sn**	**00 19 35.3**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,100nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
SKR	**Severo-Kuril's**	**12.77**	**42**	*e*PN	**P**	**00 17 29.2**	**+0.9**
SKR				pmax	pmax		
	comp=Z,900nm,3.8s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
PEA0B	**Petropavlovsk-**	**15.08**	**37**	P	**P**	**00 17 52.9**	**-1.1**
PEA0B				IAmb	IAmb	00 18 10.3	
	comp=Z,21nm,1.1s						
PEA0B	**Petropavlovsk-**	**15.08**	**37**	⇑*e*P	**Pn**	**00 17 47.2**	**-2.7**
PETK	**Petropavlovsk-**	**15.08**	**37**	P	**Pn**	**00 17 49.2**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=256,slow=17,SNR=1.4						
PETK				pP	**pP**	**00 18 02.4**	**-4.5**
	comp=Z,1.6nm,0.6s,baz=225,slow=9.5,SNR=1.6						
PETK	**Petropavlovsk-**	**15.08**	**37**	P	**P**	**00 17 53.2**	**-0.8**
ZEA	**Zeya**	**15.56**	**324**	*e*P	**Pn**	**00 17 57.1**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,100nm,13.0s						
HIA	**Hailar**	**17.49**	**302**	⇑*e*P	**Pn**	**00 18 19.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,13nm,1.2s						
MA2	**Magadan**	**18.34**	**13**	P	**P**	**00 18 28.9**	**-1.0**
	comp=Z,5.2nm,0.3s,baz=222,slow=6.9,SNR=4.2						
MA2				LR	LR	00 26 40.1	
	comp=Z,32nm,20.4s,baz=144,slow=40						
JOW	**Kunigami**	**19.12**	**222**	LR	LR	00 26 35.1	
	comp=Z,76nm,20.1s,baz=16,slow=38						
XLT	**XiLinHaoTe**	**19.44**	**285**	*e*P	**P**	**00 18 40.8**	**-1.5**
XLT				pP	pP	00 18 52.2	-2.8
XLT				sP	sP	00 19 03.2	+0.7
XLT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,55nm,3.6s						
BJI	**Beijing**	**19.97**	**273**	P	**P**	**00 18 45.4**	**-2.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BJT	**Baijiatuau**	**19.98**	**273**	P	**P**	**00 18 46.3**	**-1.7**
BJT	**Baijiatuau**	**19.98**	**273**	P	**P**	**00 18 46.3**	**-1.7**
BJT				pmax	pmax		
	comp=Z,13nm,1.0s						
TIA	**Tai'an**	**20.52**	**262**	⇓P	**P**	**00 18 52.2**	**-1.7**
TIA				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2	**Nanjing**	**21.30**	**250**	*e*P	**P**	**00 19 00.8**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YAK	**Yakutsk**	**21.50**	**343**	LR	LR	00 27 32.5	
	comp=Z,53nm,18.9s,baz=87,slow=37						
YAK	**Yakutsk**	**21.50**	**343**	P	**P**	**00 19 03.4**	**-0.7**
YAK				IAmb	IAmb	00 19 10.2	
	comp=Z,25nm,0.5s						
YAK	**Yakutsk**	**21.50**	**343**	*ce*P	**P**	**00 19 03.6**	**-0.5**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
SEY	**Seymchan**	**21.77**	**12**	P	**P**	**00 19 05.2**	**-1.8**
	comp=Z,5.1nm,0.6s,baz=188,slow=8.8,SNR=9.1						
	comp=Z,5.1nm,0.6s						
SEY	**Seymchan**	**21.77**	**12**	*ce*P	**P**	**00 19 06.1**	**-0.9**
SEY				pmax	pmax		
	comp=Z,24nm,2.5s						
HNS	**HongShan**	**21.86**	**267**	⇓P	**P**	**00

ZALV Zalesovo Beam 39.38 308 P **P 00 21 43.8 -0.3**
comp=Z,12nm,0.7s,baz=86,slow=7.9,SNR=51
ZALV PcP **PcP 00 23 50.9 -0.3**
comp=Z,2.1nm,0.8s,baz=48,slow=2.2,SNR=4.3
ZALV LR LR 00 37 14.5
comp=Z,48nm,19.4s,baz=262,slow=35
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 39.38 308 P **P 00 21 44.6 +0.5**
ZALV Zalesovo Beam 39.38 308 *i* P **P 00 21 44.2 0.0**
ZALV pmax pmax
comp=Z,12nm,0.7s
WMQ Urumqi 39.60 292 *eP* **P 00 21 47.4 +1.2**
WMQ pP pP 00 22 00.2 -0.9
WMQ sP sP 00 22 12.0 +4.0
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ LR LR
comp=Z,150nm,20.7s
TTA Tatalina 40.91 38 P **P 00 21 57.6 +0.8**
TTA pmax pmax
comp=Z,5.0nm,1.2s
N19K Bonanza Creek 41.67 41 P **P 00 22 06.5 +3.4**
J20K Nowinta River 41.77 36 P **P 00 22 04.0 +0.3**
K20K Telida 41.80 37 P **P 00 22 04.5 +0.6**
IMAR Indian Mountai 41.99 33 P **P 00 22 05.7 +0.2**
Q19K Cape Douglas, 42.23 44 P **P 00 22 07.8 +0.2**
H21K Melozitna Rive 42.37 34 P **P 00 22 09.2 +0.6**
P19K Oil Pt 42.37 43 P **P 00 22 11.1 +2.4**
MK31 Makanchi Array 42.40 298 P **P 00 22 09.2 0.0**
MK31 IAmb IAmb 00 22 10.0
comp=Z,9.2nm,0.8s
MK31 Makanchi Array 42.40 298 P **P 00 22 09.2 0.0**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 42.40 298 P **P 00 22 08.7 -0.5**
comp=Z,8.8nm,0.8s,baz=83,slow=9.0,SNR=32
MKAR PcP **PcP 00 24 01.4 +0.1**
comp=Z,0.9nm,0.7s,baz=70,slow=1.8,SNR=2.8
MKAR LR LR 00 39 08.8
comp=Z,41nm,18.7s,baz=220,slow=35
comp=Z,8.8nm,0.8s
MKAR Makanchi Array 42.40 298 P **P 00 22 09.5 +0.3**
MAKZ Makanchi 42.61 298 P **P 00 22 10.8 0.0**
MAKZ IAmb IAmb 00 22 12.2
comp=Z,20nm,1.1s
MAKZ Makanchi 42.61 298 P **P 00 22 10.8 0.0**
MAKZ pmax pmax
comp=Z,20nm,1.1s
PPLA Purkeypile 42.66 38 P **P 00 22 12.3 +1.1**
PPLA IAmb IAmb 00 22 30.9
comp=Z,11nm,1.2s
CAST Castle Rocks 42.69 37 P **P 00 22 12.4 +1.1**
LSA Lhasa 42.84 270 P **P 00 22 13.8 +0.4**
LSA IAmb IAmb 00 22 19.3
comp=Z,4.9nm,0.5s
LSA Lhasa 42.84 270 P **P 00 22 13.8 +0.4**
LSA pmax pmax
comp=Z,5.0nm,0.5s
BPAW Bear Paw Mtn. 43.16 36 P **P 00 22 16.6 +1.6**
HOM Homer 43.17 43 P **P 00 22 18.0 +2.9**
CNPM China Poot 43.39 43 P **P 00 22 18.9 +1.9**
CNPM IAmb IAmb 00 22 24.8
comp=Z,10nm,1.2s
SUA Susitna One 43.43 40 P P 00 22 22.4 +5.0
CHTO Chiang Mai 43.53 252 P **P 00 22 19.1 +0.6**
CHTO Chiang Mai 43.53 252 P **P 00 22 19.1 +0.6**
BRLK Bradley Lake 43.54 42 P **P 00 22 22.0 +3.8**
BRLK IAmb IAmb 00 22 35.3
comp=Z,10nm,1.2s
TOLK Toolik Lake Re 43.70 29 P **P 00 22 19.4 +0.1**
KURK Kurchatov 43.71 304 P **P 00 22 19.6 0.0**
KURK Kurchatov 43.71 304 P **P 00 22 19.6 0.0**
KURK pmax pmax
comp=Z,17nm,0.8s
CMAR Chiang Mai Arr 43.77 251 P **P 00 22 21.4 +1.0**
comp=Z,1.2nm,0.4s,baz=39,slow=7.5,SNR=10
CMAR PcP **PcP 00 24 06.4 +0.1**
comp=Z,0.4nm,0.3s,baz=32,slow=3.5,SNR=4.2
CMAR LR LR 00 42 12.4
comp=Z,34nm,18.3s,baz=70,slow=38
comp=Z,1.2nm,0.4s
RND Reindeer 44.14 37 P **P 00 22 23.8 +0.8**
RND Reindeer 44.14 37 P **P 00 22 23.8 +0.8**
RND pmax pmax
comp=Z,3.0nm,0.8s
GHO Glory Hole Cre 44.27 39 P **P 00 22 24.5 +0.4**
GHO IAmb IAmb 00 22 31.2
comp=Z,4.8nm,0.8s
MDM Murphy Dome 44.30 35 P **P 00 22 25.6 +1.4**
H24K Noodor Dome 44.40 33 P **P 00 22 25.8 +0.8**
COLA College 44.47 35*de*P **P 00 22 26.2 +0.8**
COLA pmax pmax
comp=Z,3.0nm,0.8s
SML Sawmill 44.55 39 P **P 00 22 26.7 +0.5**
SML IAmb IAmb 00 22 38.4
comp=Z,4.8nm,0.7s
PWL Port Wells 44.66 41 P **P 00 22 27.4 +0.3**
DHY Denali Highway 44.84 37 P **P 00 22 28.9 +0.3**
IL31 44.89 35 P **P 00 22 29.4 +0.6**
ILAR Eielson Array 44.89 35 P **P 00 22 28.3 -0.6**
comp=Z,2.2nm,0.9s,baz=269,slow=7.0,SNR=16
ILAR PcP **PcP 00 24 08.8 -0.6**
comp=Z,0.3nm,0.6s,baz=241,slow=3.9,SNR=1.3
ILAR LR LR 00 42 54.3
comp=Z,25nm,18.2s,baz=112,slow=38
comp=Z,2.2nm,0.9s
ILAR Eielson Array 44.89 35 P **P 00 22 29.0 +0.2**
SCM Sheep Creek Mo 45.01 39 P **P 00 22 31.1 +1.2**
SCM IAmb IAmb 00 22 36.3
comp=Z,4.8nm,0.9s
SCM Sheep Creek Mo 45.01 39 P **P 00 22 31.2 +1.2**
SCM pmax pmax
comp=Z,5.0nm,0.9s
GLI Glacier Island 45.26 40 P **P 00 22 34.4 +2.6**
GLI IAmb IAmb 00 22 49.7
comp=Z,11nm,1.0s
PRP Porcupine Dome 45.39 34 P **P 00 22 33.9 +0.9**
PRP IAmb IAmb 00 22 51.7
comp=Z,4.0nm,0.8s
M24K Tolsona, Glenn 45.52 39 P **P 00 22 34.3 +0.4**
M24K IAmb IAmb 00 22 48.1
comp=Z,11nm,1.1s
BMAR Burnt Mountain 45.61 31 P **P 00 22 36.1 +1.6**
KLU Klutina 45.73 39 P **P 00 22 36.4 +0.8**
KLU IAmb IAmb 00 22 54.4
comp=Z,6.7nm,1.1s
RIDG Independent Ri 45.89 36 P **P 00 22 37.2 +0.4**
RIDG IAmb IAmb 00 22 38.1
comp=Z,6.8nm,1.2s
SCRK Sand Creek 46.23 36 P **P 00 22 39.6 0.0**
SCRK IAmb IAmb 00 22 39.8
comp=Z,2.9nm,0.7s
N25K Chitina, Valde 46.33 39 P **P 00 22 41.9 +1.5**
J26L Joseph Creek 46.34 35 P **P 00 22 40.9 +0.5**
I26K Coal Creek Min 46.40 34 P **P 00 22 41.8 +1.1**
BMRM Bremner River 46.45 40 P **P 00 22 41.3 +0.1**
BMRM IAmb IAmb 00 22 48.5
comp=Z,6.9nm,1.2s
HMT Hamilton 46.73 41 P **P 00 22 44.9 +1.4**
HMT IAmb IAmb 00 23 00.8
comp=Z,5.6nm,1.0s
GLB Gilahina Butte 46.73 39 P **P 00 22 45.9 +2.4**
VRDI Verde Repeater 46.95 40 P **P 00 22 45.9 +0.6**
SUCK Suckling Hills 47.02 41 P **P 00 22 46.8 +1.1**
SUCK IAmb IAmb 00 23 03.8
comp=Z,8.2nm,1.1s
K27K Chicken 47.06 36 IAmb IAmb 00 23 03.0
comp=Z,3.2nm,0.8s
TARG Taragay, Kyrgy 47.15 293 IAmb IAmb 00 22 46.9
comp=Z,7.9nm,0.7s
L27K Beaver Creek, 47.34 37 P **P 00 22 49.7 +1.5**
L27K IAmb IAmb 00 22 50.7
comp=Z,3.7nm,0.9s
BCAR Beaver Creek A 47.36 37 P **P 00 22 49.7 +1.4**
M27K Edge Creek, AK 47.45 38 IAmb IAmb 00 22 53.1
comp=Z,5.7nm,1.1s
ISLE Juniper Island 47.61 40 P **P 00 22 51.5 +1.1**
ISLE IAmb IAmb 00 22 54.8
comp=Z,3.9nm,0.9s
JIRN Jiri 47.61 271 *eP* **P 00 22 51.7 +0.6**
comp=Z,6.6nm,0.3s
RAMN Ramite 47.69 270 *eP* **P 00 22 51.9 +0.3**
comp=Z,41nm,0.8s
GUN Gumba 47.71 272 *eP* **P 00 22 52.4 +0.6**
comp=Z,79nm,0.6s

BVA2 Borovoye Array 48.00 309 P **P 00 22 53.5 +0.2**
BVAR Borovoye Array 48.00 309 LR LR 00 42 50.4
comp=Z,54nm,18.1s,baz=51,slow=36
BRVK Borovoye 48.05 309 P **P 00 22 54.3 +0.6**
BRVK IAmb IAmb 00 22 54.5
comp=Z,5.9nm,0.7s
BRVK Borovoye 48.05 309 P **P 00 22 54.3 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BOOM Boomskoye usch 48.13 294 P **P 00 22 55.2 +0.5**
BOOM Boomskoye usch 48.13 294 P **P 00 22 55.2 +0.5**
BOOM pmax pmax
comp=Z,19nm,0.7s
TKM2 Tokmak 2 48.19 295 P **P 00 22 55.8 +0.6**
SNR=35
TKM2 Tokmak 2 48.19 295 P **P 00 22 54.9 -0.3**
PKI Pulchoki 48.24 272 *eP* **P 00 22 56.0 +0.1**
comp=Z,8.3nm,0.5s
PKIN Phulchoki 48.25 272 *eP* **P 00 22 55.9 0.0**
comp=Z,5.7nm,0.4s
OTUK Ortayu 48.36 303 P **P 00 22 54.6 -1.6**
DMN Daman 48.45 272 *eP* **P 00 22 57.9 +0.5**
comp=Z,13nm,0.5s
GKN Gorkha 48.58 273 *eP* **P 00 22 58.5 +0.1**
comp=Z,7.3nm,0.3s
KBK Karagaybulak 48.73 295 P **P 00 22 59.9 +0.6**
SNR=17
USP Ospenovka 48.79 296 P **P 00 22 59.8 +0.1**
SNR=12
EPYK Eagle Plains 48.83 32 P **P 00 23 00.9 +1.3**
EPYK IAmb IAmb 00 23 20.6
comp=Z,5.4nm,0.9s
AAK Ala-Archa 49.05 295 P **P 00 23 01.8 +0.1**
SNR=6.0
AAK Ala-Archa 49.05 295 LR LR 00 43 37.8
comp=Z,45nm,18.9s,baz=77,slow=36
AAK Ala-Archa 49.05 295 P **P 00 23 02.2 +0.5**
AAK IAmb IAmb 00 23 02.5
comp=Z,5.5nm,0.8s
AAK Ala-Archa 49.05 295 P **P 00 23 02.2 +0.5**
AAK pmax pmax
comp=Z,6.0nm,0.8s
DANN Dangsing 49.05 274 *eP* **P 00 23 02.8 +0.7**
comp=Z,42nm,0.5s
KSH Kashi 49.33 291 P P 00 23 08.4 +4.5
KSH pmax pmax
comp=Z,7.0nm,0.7s
EKS2 Erkin-Say 49.52 295 P **P 00 23 05.2 -0.2**
SNR=14
INK Inuvik 49.61 29 LR LR 00 44 51.8
comp=Z,20nm,18.2s,baz=312,slow=37
INK Inuvik 49.61 29 P **P 00 23 05.4 0.0**
INK IAmb IAmb 00 23 16.4
comp=Z,5.0nm,1.1s
INK Inuvik 49.61 29 P **P 00 23 05.4 0.0**
INK pmax pmax
comp=Z,5.0nm,1.2s
PYUN Piuthan 49.76 274 *eP* **P 00 23 07.8 +0.4**
comp=Z,6.5nm,0.4s
AML Almayashu 49.80 295 P **P 00 23 08.6 +0.8**
SNR=5.6
HYT Haines Junctio 49.85 39 P **P 00 23 09.2 +1.7**
HYT IAmb IAmb 00 23 28.2
comp=Z,11nm,1.0s
P29M Windy Craggy 50.08 41 P **P 00 23 11.5 +2.3**
P29M IAmb IAmb 00 23 28.9
comp=Z,7.0nm,1.0s
N31M Braeburn, Yuko 50.47 38 P **P 00 23 13.8 +1.7**
N31M IAmb IAmb 00 23 14.3
comp=Z,4.8nm,1.0s
WHY Whitehorse 51.13 39 P **P 00 23 18.8 +1.6**
KK31 Karatay Array 51.52 297 P **P 00 23 20.4 +0.1**
KK31 IAmb IAmb 00 23 20.8
comp=Z,7.5nm,0.7s
KK31 Karatay Array 51.52 297 P **P 00 23 20.4 +0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.7s
KKAR Karatay Array 51.52 297 P **P 00 23 20.0 -0.2**
KKAR Karatay Array 51.52 297 P **P 00 23 20.2 -0.1**
KKAR IAmb IAmb 00 23 20.8
comp=Z,7.5nm,0.7s
KKAR Karatay Array 51.52 297 P **P 00 23 20.2 -0.1**
KKAR pmax pmax
comp=Z,8.0nm,0.7s
SVE Sverdlovsk 52.09 316⇑ *eP* **P 00 23 25.1 +0.9**
SVE pmax pmax
comp=Z,20nm,1.0s
KULM Kulim 52.15 237 P **P 00 23 26.9 +1.8**
DRK Karamyk 52.24 292 P **P 00 23 25.6 -0.4**
DRK IAmb IAmb 00 23 26.8
comp=Z,11nm,1.1s
BTK Batken 52.65 294 P **P 00 23 30.1 +1.3**
BTK IAmb IAmb 00 23 41.6
comp=Z,4.0nm,0.7s
BTK Batken 52.65 294 P **P 00 23 30.1 +1.3**
BTK pmax pmax
comp=Z,4.0nm,0.7s
ARU Arti 53.30 316 LR LR 00 48 47.9
comp=Z,71nm,18.0s,baz=41,slow=39
ARU Arti 53.30 316 P **P 00 23 33.6 +0.5**
ARU Arti 53.30 316*d i*P **P 00 23 32.9 -0.3**
ARU *PP **pP** **00 23 48.2 -0.7**
ARU 00 24 37.4
ARU S **S** **00 31 01.1 +1.1**
ARU pmax pmax
comp=Z,14nm,1.1s
GAR Garm 53.48 293 P **P 00 23 34.9 -0.1**
CHGR Chuyangaron 54.44 293 P **P 00 23 42.0 +0.1**
CHGR Chuyangaron 54.44 293 P **P 00 23 42.0 +0.1**
CHGR pmax pmax
comp=Z,31nm,0.8s
EUNU Eureka 55.16 9 P **P 00 23 46.4 -0.1**
EUNU IAmb IAmb 00 23 48.0
comp=Z,5.3nm,0.8s
AB31 Akbulak array 55.50 308 *i* P **P 00 23 49.2 0.0**
ABKAR Akbulak array 55.50 308 P **P 00 23 49.5 +0.2**
ABKAR IAmb IAmb 00 23 49.7
comp=Z,4.5nm,0.7s
ABKAR Akbulak array 55.50 308 P **P 00 23 49.4 +0.1**
AKTO Aktyubinsk 56.09 310 LR LR 00 49 24.7
comp=Z,50nm,19.6s,baz=46,slow=38
KBL Kabul 56.57 288 P **P 00 23 56.7 -0.7**
KBL IAmb IAmb 00 23 57.7
comp=Z,7.3nm,0.8s
KBL Kabul 56.57 288 P **P 00 23 56.7 -0.7**
KBL pmax pmax
comp=Z,7.0nm,0.9s
KIRV Kirov 56.88 321 LR LR 00 51 33.4
comp=Z,76nm,18.7s,baz=28,slow=39
KIRV Kirov 56.88 321*d i*P **P 00 23 58.9 0.0**
PRGR Permogore 57.13 326 *eP* **P 00 23 59.4 -1.2**
PRGR *e**PP **pP** **00 24 15.2 -1.3**
PRGR pmax pmax
comp=Z,10.0nm,0.9s
BBB Bella Bella 57.96 47 LR LR 00 47 47.1
comp=Z,18nm,19.4s,baz=214,slow=35
KNRA Kununurra 58.77 196 P **P 00 24 13.5 +1.0**
YKA Yellowknife Ar 59.12 32 P **P 00 24 14.4 -0.1**
comp=Z,1.3nm,0.8s,baz=300,slow=6.4,SNR=4.5
comp=Z,1.3nm,0.8s
KEV Kevo 59.14 339 P **P 00 24 14.2 -0.3**
KEV Kevo 59.14 339 P **P 00 24 14.2 -0.3**
KEV pmax pmax
comp=Z,17nm,1.1s
ARCES ARCESS Array B 59.69 339 P **P 00 24 17.8 -0.6**
comp=Z,2.6nm,0.9s,baz=41,slow=8.0,SNR=8.7
ARCES LR LR 00 55 16.4
comp=Z,40nm,18.0s,baz=148,slow=41
comp=Z,2.6nm,0.9s
KLMR Klimovskoe 60.07 327 *eP* **P 00 24 19.0 -2.1**
KLMR pmax pmax
comp=Z,14nm,1.5s
KLMR Klimovskoe 60.07 327 *eP* **P 00 24 19.0 -2.1**
KLMR AMP 00 24 21.6
comp=Z,14nm,1.5s
BELG Belogornoye 60.82 316 LR LR 00 52 40.2
comp=Z,93nm,19.3s,baz=178,slow=38
HRA Herat 61.41 292 IAmb IAmb 00 24 32.0
comp=Z,6.8nm,0.8s
WB0 Warramunga Arr 61.90 189 P **P 00 24 33.8 -0.2**
WB0 IAmb IAmb 00 24 34.4
comp=Z,6.4nm,0.9s
WRAB Tennant Creek 62.07 189⇑ *eP* **P 00 24 35.4 +0.4**
WRAB pmax pmax
comp=Z,17nm,2.5s
WB2 Warramunga Arr 62.08 189 P **P 00 24 35.0 -0.1**

WB2 IAmb IAmb 00 24 40.2
comp=Z,7.2nm,1.1s
WRA Warramunga Arr 62.08 189 P **P 00 24 34.7 -0.4**
comp=Z,2.6nm,0.8s,baz=5.9,slow=7.0,SNR=18
WRA pP **pP** **00 24 52.0 +1.1**
comp=Z,2.3nm,0.8s,baz=5.2,slow=7.1,SNR=6.8
comp=Z,2.6nm,0.8s
WRA Warramunga Arr 62.08 189 P **P 00 24 35.0 -0.1**
WRA Warramunga Arr 62.08 189 P **P 00 24 35.0 -0.1**
GEYT Alibeck 62.28 297 P **P 00 24 35.4 -1.1**
comp=Z,4.3nm,0.8s,baz=349,slow=4.5,SNR=11
GEYT LR LR 00 52 15.7
comp=Z,55nm,18.6s,baz=134,slow=36
comp=Z,4.3nm,0.8s
GEYT Alibeck 62.28 297 P **P 00 24 36.3 -0.1**
GEYT IAmb IAmb 00 24 37.4
comp=Z,7.8nm,1.0s
GYA0B ALIBECK ARRAY 62.28 297 P **P 00 24 36.3 -0.1**
GYA0B IAmb IAmb 00 24 37.4
comp=Z,7.7nm,1.1s
E03A Lebam 63.43 50 P **P 00 24 45.6 +1.7**
PALK Pallekele 64.35 256 LR LR 00 54 45.3
comp=Z,34nm,18.2s,baz=185,slow=38
VRH Novokhopyorsk 64.53 317 *eP* **P 00 24 49.8 -1.2**
VRH pmax pmax
comp=Z,9.0nm,0.8s
OBN Obninsk 64.68 322 *eP* **P 00 24 50.3 -1.6**
OBN *e* 00 27 11.5
OBN *e*PPP PPP 00 28 46.1
OBN pmax pmax
comp=Z,6.0nm,0.9s
FIA1 FINESS Array S 64.86 332 P **P 00 24 52.9 -0.1**
FIA0 FINESS Array S 64.86 332 P **P 00 24 53.2 +0.2**
FIA0 FINESS Array S 64.86 332 P **P 00 24 53.2 +0.2**
FINES FINESS Array B 64.86 332 P **P 00 24 52.4 -0.6**
comp=Z,8.3nm,0.6s,baz=54,slow=7.8,SNR=52
FINES LR LR 00 56 01.6
comp=Z,103nm,18.1s,baz=28,slow=39
comp=Z,8.3nm,0.6s
FINES FINESS Array B 64.86 332 P **P 00 24 52.9 -0.1**
FINES FINESS Array B 64.86 332 P **P 00 24 52.9 -0.1**
LPSR Galich'ya Gora 65.09 319 *eP* **P 00 24 53.1 -1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VORR Voronezh 65.52 318 *eP* **P 00 24 56.0 -1.4**
VORR pmax pmax
comp=Z,30nm,0.4s
ASAR Alice Springs 65.81 189 P **P 00 24 57.7 -1.9**
comp=Z,1.4nm,0.9s,baz=7.2,slow=6.7,SNR=11
ASAR pP **pP** **00 25 18.5 +3.0**
comp=Z,1.7nm,1.0s,baz=8.2,slow=5.6,SNR=4.8
comp=Z,1.4nm,0.9s
VSR Storozhevoye 65.82 318 *eP* **P 00 24 58.0 -1.4**
VSR pmax pmax
comp=Z,10.0nm,0.9s
MSVF Nonsavu 67.87 143 LR LR 00 51 41.9
comp=Z,37nm,19.1s,baz=49,slow=33
KVAR Kislovodsk Arr 68.35 310 P **P 00 25 17.3 +1.5**
comp=Z,4.7nm,1.0s,baz=120,slow=16,SNR=3.8
comp=Z,4.7nm,1.0s
KIV Kislovodsk 68.36 310 ⇓P **P 00 25 17.3 +1.6**
KIV Kislovodsk 68.36 310 P **P 00 25 16.7 +1.0**
KIV Kislovodsk 68.36 310 *eP* **P 00 25 16.9 +1.2**
KIV pmax pmax
comp=Z,19nm,1.0s
ZEI Tsey 68.37 308 *eP* **P 00 25 15.0 -1.0**
ZEI pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 68.38 310 P **P 00 25 15.9 +0.2**
comp=Z,6.4nm,0.9s,baz=62,slow=4.5,SNR=16
KBZ LR LR 01 01 15.9
comp=Z,29nm,18.7s,baz=356,slow=41
comp=Z,6.4nm,0.9s
KBZ Khabaz 68.38 310*de*P **P 00 25 16.6 +0.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
PLID Pearl Lake 68.56 48 P **P 00 25 18.0 +0.8**
ONI Oni 68.75 309 IAmb IAmb 00 25 20.3
comp=Z,6.2nm,0.9s
MNK Minsk 68.90 325 *i* P **P 00 25 18.7 -0.1**
comp=E,3.0nm,1.6s
MNK *i* P **P 00 25 18.7 -0.1**
comp=N,56nm,1.3s
MNK *i* P **P 00 25 18.7 -0.1**
comp=Z,12nm,1.2s,baz=227
MNK *i* pP **pP** **00 25 35.0 -0.1**
MNK *i* PP **PP** **00 27 51.2 +0.2**
MNK *i* PPP PPP 00 29 31.6
MNK *i* S **S** **00 34 20.9 +2.7**
MNK *i* sS **sS** **00 34 47.0 +1.1**
MNK *i* SS **SS** **00 38 46.0 +2.5**
MNK *i* SSS SSS 00 41 45.5
MNK *i* LQ LQ 00 50 48.7
MNK *i* LR LR 00 56 03.4
MNK *i* LRM MLR 00 58 12.3
comp=E,9.0nm,13.4s
MNK *i* LRM MLR 00 58 12.3
comp=N,6μm,26.2s
MNK *i* LRM MLR 00 59 25.4
comp=Z,77nm,18.1s
FFC Flin Flon 69.09 34 P **P 00 25 21.2 +1.2**
FFC IAmb IAmb 00 25 21.4
comp=Z,9.3nm,0.9s
FFC Flin Flon 69.09 34 P **P 00 25 21.2 +1.2**
FFC pmax pmax
comp=Z,9.0nm,1.0s
GIRL Giralia 69.44 208 P **P 00 25 23.5 +1.1**
GNI Garni 69.48 306 LR LR 00 57 44.1
comp=Z,29nm,19.3s,baz=55,slow=38
GNI Garni 69.48 306 P **P 00 25 24.0 +1.1**
GNI IAmb IAmb 00 25 31.3
comp=Z,6.8nm,0.9s
GNI Garni 69.48 306⇑ *eP* **P 00 25 24.2 +1.3**
GNI pmax pmax
comp=Z,10.0nm,1.3s
AFI Afiamalu 69.72 132 LR LR 00 57 37.4
comp=Z,16nm,18.2s,baz=92,slow=37
NC405 NORSAR Array S 69.76 337 P **P 00 25 23.9 -0.1**
NC405 IAmb IAmb 00 25 42.3
comp=Z,14nm,1.1s
NC303 NORSAR Array S 69.77 337 P **P 00 25 24.1 +0.1**
NC303 IAmb IAmb 00 25 42.9
comp=Z,13nm,1.1s
HRY Holter Researc 69.79 45 P **P 00 25 26.3 +1.7**
NB201 NORSAR Array S 69.93 337 P **P 00 25 25.2 +0.1**
NB201 IAmb IAmb 00 25 42.7
comp=Z,12nm,1.1s
HFS Hagfors 69.94 335 P **P 00 25 23.4 -1.7**
comp=Z,5.4nm,0.5s,baz=64,slow=6.6,SNR=9.0
HFS LR LR 01 02 39.7
comp=Z,68nm,18.1s,baz=17,slow=42
comp=Z,5.4nm,0.5s
NB2 NORSAR Subarra 69.96 337 P **P 00 25 25.0 -0.3**
comp=Z,3.0nm,0.6s,baz=36,slow=6.2
NOA NORSAR Array B 69.96 337 P **P 00 25 24.1 -1.2**
comp=Z,5.0nm,0.7s,baz=36,slow=6.1,SNR=22
NOA LR LR 00 59 30.0
comp=Z,30nm,19.9s,baz=0.0,slow=39
comp=Z,5.0nm,0.7s
LRM Limekiln Ridge 70.03 46 P **P 00 25 26.7 +0.4**
NBO00 NORSAR Array S 70.10 337 P **P 00 25 26.3 +0.2**
NC602 NORSAR Array S 70.11 337 P **P 00 25 26.5 +0.3**
NC602 IAmb IAmb 00 25 45.5
comp=Z,14nm,1.1s
KARS Kars 70.19 307 P **P 00 25 28.1 +0.9**
KARS Kars 70.19 307 P **P 00 25 28.1 +0.9**
KARS pmax pmax
comp=Z,26nm,0.9s
NAO01 NORSAR Array S 70.22 337 P **P 00 25 26.7 -0.1**
CMB Columbia Colle 70.34 56 P **P 00 25 27.2 -0.8**
CMB Columbia Colle 70.34 56 P **P 00 25 27.2 -0.8**
CMB pmax pmax
comp=Z,2.0nm,0.9s
BOZ Bozeman (W) 70.62 46 P **P 00 25 31.1 +1.4**
BOZ Bozeman (W) 70.62 46 P **P 00 25 31.2 +1.4**
BOZ pmax pmax
comp=Z,2.0nm,0.7s
WAKR Walker 70.63 55 P **P 00 25 31.3 +1.3**
AKASG Malin Array Be 70.93 322 P **P 00 25 30.4 -0.9**
comp=Z,4.4nm,0.6s,baz=44,slow=6.1,SNR=27
AKASG pP **pP** **00 25 48.4 +0.9**
comp=Z,1.7nm,0.6s,baz=44,slow=6.2,SNR=4.0
comp=Z,4.4nm,0.6s
AKASG Malin Array Be 70.93 322 P **P 00 25 31.3 0.0**
AKASG Malin Array Be 70.93 322 *i* P **P 00 25 30.8 -0.5**
AKASG pmax pmax

comp=Z,6.0nm,0.7s
AKBB Malin Array Si 70.93 322 P **P 00 25 30.9 -0.4**
AKBB IAmb IAmb 00 25 31.7
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 70.93 322 P **P 00 25 30.9 -0.4**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
AK05 Malin Array Si 71.00 322 P **P 00 25 31.3 -0.4**
AK05 IAmb IAmb 00 25 32.1
comp=Z,11nm,1.1s
KVN Kaiserville 71.11 54 P **P 00 25 34.2 +1.3**
KVN Kaiserville 71.11 54 P **P 00 25 34.2 +1.3**
KVN pmax pmax
comp=Z,4.0nm,1.1s
UOSS Minazif 71.17 287 P **P 00 25 33.8 +0.6**
UOSS IAmb IAmb 00 25 34.0
comp=Z,5.8nm,0.8s
LHV Little Huntoon 71.36 55 P **P 00 25 36.5 +2.4**
LHV IAmb IAmb 00 25 54.5
comp=Z,4.2nm,1.0s
NVAR Mina Array Bea 71.37 55 P **P 00 25 35.7 +1.1**
comp=Z,1.4nm,0.7s,baz=301,slow=5.9,SNR=13
NVAR pP **PcP 00 25 52.6 -1.3**
comp=Z,1.0nm,0.7s,baz=300,slow=5.2,SNR=4.6
comp=Z,1.4nm,0.7s
NVAR Mina Array Bea 71.37 55 P **P 00 25 36.5 +2.0**
FRB Frobisher Bay 71.76 14 LR LR 01 00 05.8
comp=Z,40nm,18.2s,baz=53,slow=38
KOPT Kop Dagi 72.10 308 P **P 00 25 39.8 +0.9**
KOPT IAmb IAmb 00 25 42.9
comp=Z,6.5nm,0.8s
GURO Guroymak-BITLI 72.12 306 P **P 00 25 40.2 +1.4**
DUG Dugway, Tooele 73.49 51 P **P 00 25 48.5 +1.5**
DUG Dugway, Tooele 73.49 51 P **P 00 25 48.5 +1.5**
DUG pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 73.51 181 LR LR 00 57 29.4
comp=Z,18nm,21.2s,baz=28,slow=35
TPNV Topopah Spring 73.57 55 P **P 00 25 49.1 +1.6**
TPNV Topopah Spring 73.57 55 P **P 00 25 49.1 +1.6**
TPNV pmax pmax
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 73.61 47 P **P 00 25 48.2 +0.4**
comp=Z,1.1nm,0.7s,baz=274,slow=2.4,SNR=13
comp=Z,1.1nm,0.7s
MARD Mardin 73.67 306 P **P 00 25 49.2 +1.2**
KWP Kalwaria Pacla 74.62 324 *eP* **P 00 25 53.7 +0.5**
VLDR Vladesti 74.88 319 ⇑P **P 00 25 54.9 +0.1**
ULM Lac du Bonnet 74.91 35 P **P 00 25 54.2 -0.6**
comp=Z,1.4nm,0.4s,baz=298,slow=8.4,SNR=1.5
comp=Z,1.4nm,0.4s
BUR08 Bucovina Ar. S 74.96 322 P **P 00 25 55.9 +0.5**
BUR08 IAmb IAmb 00 25 56.5
comp=Z,5.4nm,0.7s
BURAR Bucovina Array 74.98 322 ⇓P **P 00 25 55.7 +0.3**
BURAR Bucovina Array 74.98 322 P **P 00 25 55.9 +0.5**
BURAR IAmb IAmb 00 25 56.9
comp=Z,7.7nm,0.7s
BIZ Bicaz 75.05 321 ⇑P **P 00 25 56.1 +0.3**
GHRR 75.06 319 ⇓P **P 00 25 57.7 +2.0**
RDMU Red Mountain 75.08 49 P **P 00 25 57.0 +0.6**
RDMU IAmb IAmb 00 25 58.5
comp=Z,5.8nm,0.9s
TESR Tescani 75.10 320 ⇑P **P 00 25 55.7 -0.3**
ILGA Ilgaz 75.28 312 P **P 00 25 58.0 +0.5**
CFR Carcaliu 75.33 318 ⇓P **P 00 25 55.2 -2.1**
CFR Carcaliu 75.33 318 ⇓P **P 00 25 55.2 -2.1**
KOLS Kolonicke sedl 75.33 324 *eP* **P 00 25 57.4 0.0**
KOLS pmax pmax
comp=Z,6.0nm,0.8s
P18A Preston Nutter 75.34 50 P **P 00 25 58.3 +0.4**
OJC Ojcow 75.42 326 *eP* **P 00 25 56.6 -1.2**
OJC Ojcow 75.42 326 P **P 00 25 56.1 -1.7**
OJC IAmb IAmb 00 25 57.6
comp=Z,13nm,1.0s
OJC Ojcow 75.42 326 P **P 00 25 56.1 -1.7**
OJC pmax pmax
comp=Z,13nm,1.0s
VRI Vrincioaia 75.53 319 ⇑P **P 00 25 59.6 +1.1**
VRI Vrincioaia 75.53 319 ⇑P **P 00 25 59.6 +1.1**
SRU San Rafael Swe 75.53 50 P **P 00 25 59.3 +0.4**
SRU IAmb IAmb 00 26 01.3
comp=Z,4.3nm,0.8s
SRU San Rafael Swe 75.53 50 P **P 00 25 59.3 +0.4**
SRU pmax pmax
comp=Z,4.0nm,0.8s
UZH Uzhgorod 75.55 324 *eP* **P 00 26 01.0 +2.4**
UZH *i* 00 26 14.0
BNN Bunyan 75.57 309 P **P 00 25 58.6 -0.5**
RSSD Black Hills 75.58 43 P **P 00 25 59.5 +0.4**
RSSD Black Hills 75.58 43 P **P 00 25 59.5 +0.4**
RSSD pmax pmax
comp=Z,1.0nm,0.8s
PFO Pinyon Flats O 75.61 58 LR LR 01 02 04.1
comp=Z,7.8nm,18.1s,baz=290,slow=38
CRVS Cervenica-Dubn 75.71 324 *eP* **P 00 26 00.4 +0.9**
HARR Harsova 75.78 318 ⇓P **P 00 26 00.5 +0.6**
HARR Harsova 75.78 318 ⇓P **P 00 26 00.5 +0.6**
OZUR 75.81 320 ⇓P **P 00 26 01.7 +1.5**
TRPA Tarpa 75.81 323 ⇓P **P 00 26 00.3 +0.2**
DOPR Dopca 76.10 320 ⇓P **P 00 26 03.3 +1.5**
MLR Muntele Rosu 76.18 320 P **P 00 26 02.8 +0.4**
comp=Z,1.3nm,0.8s,baz=34,slow=5.5
MLR LR LR 01 00 40.8
comp=Z,66nm,18.5s,baz=42,slow=36
comp=Z,1.3nm,0.8s
BR131 Keskin Array S 76.23 311 P **P 00 26 02.9 +0.1**
BR131 IAmb IAmb 00 26 04.0
comp=Z,4.2nm,0.8s
BR131 Keskin Array S 76.23 311 P **P 00 26 02.9 +0.1**
BR131 pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 76.23 311 P **P 00 26 03.4 +0.5**
comp=Z,2.4nm,0.7s,baz=78,slow=3.8,SNR=18
BRTR PP **PP 00 28 54.0 0.0**
comp=Z,0.6nm,0.8s,baz=68,slow=4.3,SNR=3.7
comp=Z,2.4nm,0.7s
KECS Kecovo 76.45 325 *eP* **P 00 26 05.0 +1.3**
ANTO Ankara 76.61 312 ⇑P **P 00 26 05.8 +1.0**
ANTO Ankara 76.61 312 P **P 00 26 05.2 +0.4**
ANTO Ankara 76.61 312 ⇑P **P 00 26 05.8 +1.0**
BR231 Keskin MP Arra 76.63 312 P **P 00 26 05.4 +0.4**
VOIR 76.65 320 ⇑P **P 00 26 06.2 +1.2**
VOIR 76.65 320 ⇑P **P 00 26 06.2 +1.2**
MORC Moravsky Berou 76.69 327 ⇑P **P 00 26 05.7 +0.5**
MORC Moravsky Berou 76.69 327 P **P 00 26 05.6 +0.5**
MORC IAmb IAmb 00 26 06.5
comp=Z,4.7nm,0.8s
MORC Moravsky Berou 76.69 327 P **P 00 26 05.6 +0.5**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 76.69 327 *eP* **P 00 26 05.3 +0.2**
DPC Dobruska-Polom 76.73 328 *eP* **P 00 26 05.8 +0.5**
DPC Dobruska-Polom 76.73 328 *eP* **P 00 26 05.8 +0.5**
DRGR 76.74 322 ⇓P **P 00 26 05.7 +0.2**
KRLC Kraliky 76.76 328 *eP* **P 00 26 06.0 +0.5**
KRLC Kraliky 76.76 328 *eP* **P 00 26 06.0 +0.5**
ARR Arges 76.90 320 ⇓P **P 00 26 07.0 +0.7**
VYHS Vyhne 77.15 325 *eP* **P 00 26 07.9 +0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.2s
PV15 Paradox Valley 77.22 50 P **P 00 26 08.3 -0.3**
PV15 IAmb IAmb 00 26 10.6
comp=Z,5.2nm,0.7s
CLL Collm 77.24 330 P **P 00 26 08.0 -0.1**
CLL IAmb IAmb 00 26 08.8
comp=Z,5.6nm,0.7s
CLL Collm 77.24 330 *i* P **P 00 26 07.8 -0.3**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 77.24 330 *i* P **P 00 26 07.8 -0.3**
comp=Z,7.0nm,0.9s
B35A Bob, Littlefor 77.26 35 P **P 00 26 08.7 +0.4**
B35A IAmb IAmb 00 26 09.0
comp=Z,7.5nm,0.8s
JAVC Velka Javorina 77.35 326 *eP* **P 00 26 10.2 +1.3**
VRAC Vranov 77.44 327 P **P 00 26 08.9 -0.4**
comp=Z,1.4nm,0.3s,baz=28,slow=6.4,SNR=3.8
VRAC LR LR 01 04 35.8
comp=Z,44nm,19.0s,baz=4.5,slow=39
comp=Z,1.4nm,0.3s
VRAC Vranov 77.44 327 *eP* **P 00 26 09.8 +0.5**
PRU Pruhonice 77.72 329 *eP* **P 00 26 11.5 +0.7**
PRU Pruhonice 77.72 329 *eP* **P 00 26 11.5 +0.7**

KRUC Moravsky 77.72 327 *eP* **P 00 26 11.3 +0.5**
SMOL Smolenice 77.72 326 *eP* **P 00 26 11.8 +0.9**
MODS Modra-Piesok 77.89 326 *eP* **P 00 26 12.9 +1.1**
MODS pmax pmax
comp=Z,8.0nm,1.0s
VLAD Vladila 78.02 319 ⇓P **P 00 26 12.5 -0.1**
BZS Buzias 78.12 322 ⇓P **P 00 26 10.3 -2.8**
BZS Buzias 78.12 322 ⇓P **P 00 26 10.3 -2.8**
HERR Herculane 78.31 321 ⇑P **P 00 26 14.0 -0.2**
CKRC Cesky Krumlov 78.74 328 *eP* **P 00 26 17.0 +0.5**
KHC Kasperske Hory 78.78 329 IAmb IAmb 00 26 18.1
comp=Z,4.7nm,0.8s
KHC Kasperske Hory 78.78 329 *eP* **P 00 26 17.3 +0.6**
KHC Kasperske Hory 78.78 329 *eP* **P 00 26 17.3 +0.6**
CONA Conrad Observa 78.83 327 *eP* **P 00 26 18.0 +1.0**
comp=Z,0.1nm,0.2s
RONA Rosalia, Austr 78.83 326 *eP* **P 00 26 18.2 +1.2**
comp=Z,0.9nm,0.3s
GERES GERESS Array B 78.96 328 P **P 00 26 17.4 -0.4**
comp=Z,2.2nm,1.0s,baz=37,slow=6.2,SNR=12
comp=Z,2.2nm,1.0s
MORH Mrgy, Hungar 79.00 324 ⇓P **P 00 26 17.5 -0.4**
BLKB Belogradchik 79.13 320 ⇑P **P 00 26 17.7 -1.1**
FRGS Fruska Gora 79.29 323 ⇑P **P 00 26 18.7 -0.9**
K31A O'Neill 79.31 41 P **P 00 26 19.9 +0.2**
ASF Jabal al Asfar 79.48 304 P **P 00 26 20.9 0.0**
comp=Z,1.5nm,0.6s,baz=42,slow=12,SNR=4.0
comp=Z,1.5nm,0.6s
ECSD EROS Data Cent 79.51 39 P **P 00 26 21.1 +0.3**
ECSD IAmb IAmb 00 26 21.6
comp=Z,3.4nm,0.8s
RDO Rodhopi 79.56 317 P **P 00 26 21.9 +0.8**
RDO IAmb IAmb 00 26 22.7
comp=Z,8.0nm,0.9s
BOVS Bovan 79.58 321 ⇑P **P 00 26 20.6 -0.6**
RAYN Ar Rayn 79.59 292 P **P 00 26 21.6 0.0**
RAYN Ar Rayn 79.59 292 P **P 00 26 21.6 0.0**
RAYN pmax pmax
comp=Z,2.0nm,0.8s
VTS Vitosha 79.61 319 ⇑P **P 00 26 22.4 +0.9**
VTS Vitosha 79.61 319 P **P 00 26 22.8 +1.2**
VTS IAmb IAmb 00 26 23.3
comp=Z,8.0nm,0.8s
VTS Vitosha 79.61 319 P **P 00 26 22.8 +1.2**
VTS pmax pmax
comp=Z,8.0nm,0.8s
CSS Mathiatis 79.71 308 P **P 00 26 22.9 +0.9**
CSS IAmb IAmb 00 26 26.3
comp=Z,6.8nm,0.9s
MMAI Mount Meron Ar 79.82 305 P **P 00 26 23.4 +0.7**
comp=Z,4.3nm,0.6s,baz=30,slow=6.8,SNR=13
MMAI pP **pP 00 26 41.3 +2.1**
comp=Z,2.5nm,0.7s,baz=42,slow=6.7,SNR=3.0
comp=Z,4.3nm,0.6s
KSCO Kaye Shedlock' 79.98 46 P **P 00 26 21.9 -1.7**
DIVS Divibare 80.03 322 P **P 00 26 24.1 +0.4**
DIVS IAmb IAmb 00 26 24.4
comp=Z,3.5nm,0.9s
SOKA Soboth 80.17 326 *i* P **P 00 26 24.9 +0.5**
comp=Z,3.2nm,0.6s,SNR=8.0
ELL Elmali 80.41 311 P **P 00 26 26.3 +0.4**
ELL Elmali 80.41 311 P **P 00 26 26.3 +0.4**
ELL pmax pmax
comp=Z,16nm,0.7s
OBKA Obir 80.50 327 *i* P **P 00 26 26.4 +0.3**
comp=Z,3.0nm,0.6s,SNR=4.8
KBA Koelnbreinsper 80.53 328 *eP* **P 00 26 25.4 -1.1**
comp=Z,2.2nm,0.6s
RCHB Rochefort 80.92 334 *dP* **P 00 26 28.1 -0.1**
BMRD Maredsous 80.95 334 *dP* **P 00 26 28.0 -0.4**
comp=Z,4.8nm,0.9s
WATA Walderalm 81.02 329 *eP* **P 00 26 28.9 -0.1**
comp=Z,6.0nm,0.7s
WTTA Wattenberg 81.05 329 *eP* **P 00 26 29.7 +0.4**
comp=Z,1.7nm,0.3s
ABTA Abfaltersbach 81.13 328 *eP* **P 00 26 30.4 +0.9**
comp=Z,1.2nm,0.4s
MOTA Moosalm 81.19 329 *i* P **P 00 26 30.3 +0.4**
comp=Z,6.8nm,0.9s,SNR=6.9
RETA Reutte 81.21 329 *i* P **P 00 26 30.5 +0.6**
comp=Z,1.7nm,0.5s,SNR=4.4
SQTA Sankt Quirin 81.25 329 *eP* **P 00 26 30.4 +0.2**
comp=Z,2.4nm,0.5s
FETA Feichten 81.61 329 *eP* **P 00 26 32.6 +0.4**
comp=Z,3.1nm,1.0s
PDG Podgorica 81.66 321 ⇓P **P 00 26 31.5 -0.7**
PDG Podgorica 81.66 321 P **P 00 26 32.6 +0.4**
DAVA Damuels 81.71 330 *i* P **P 00 26 33.0 +0.4**
comp=Z,5.8nm,0.9s,SNR=5.4
CTI Castel Tesino 82.05 328 P **P 00 26 33.9 -0.5**
CTI IAmb IAmb 00 26 34.2
comp=Z,4.7nm,0.6s
CTI Castel Tesino 82.05 328 P **P 00 26 33.9 -0.5**
CTI pmax pmax
comp=Z,5.0nm,0.6s
FUORN Ofenpass-Fuorn 82.12 329 P **P 00 26 35.6 +0.7**
FUORN IAmb IAmb 00 26 36.3
comp=Z,7.2nm,0.8s
DAVOX Davos/Dischmat 82.13 329 P **P 00 26 34.7 -0.2**
comp=Z,2.3nm,0.5s,baz=83,slow=0.1,SNR=4.4
DAVOX LR LR 01 05 58.2
comp=Z,52nm,19.2s,baz=38,slow=38
comp=Z,2.3nm,0.5s
SENIN Lac Senin/Sane 83.44 331 P **P 00 26 42.0 +0.2**
VLDQ Val d'Or 83.57 26 P **P 00 26 41.6 -0.5**
SSF Saint Saulge 84.17 333 *eP* **P 00 26 44.8 -0.4**
SSF pmax pmax
comp=Z,10.0nm,1.0s
IDI Anoyia 84.25 313 P **P 00 26 44.4 -1.5**
comp=Z,7.2nm,0.7s,baz=42,slow=13,SNR=8.0
comp=Z,7.2nm,0.7s
IDI Anoyia 84.25 313 P **P 00 26 46.0 +0.1**
MFF Saint Martin d 85.76 335 *eP* **P 00 26 53.5 +0.3**
MFF pmax pmax
comp=Z,9.0nm,0.9s
PPT Papeete 86.11 118 LR LR 00 58 45.7
comp=Z,24nm,20.5s,baz=350,slow=31
TXAR Lajitas Array 86.43 53 P **P 00 26 57.2 +0.3**
comp=Z,0.7nm,0.7s,baz=290,slow=4.2,SNR=12
TXAR pP **pP 00 27 12.8 -1.0**
comp=Z,0.7nm,0.8s,baz=295,slow=3.6,SNR=4.1
comp=Z,0.7nm,0.7s
LFF La Frestale 86.96 334 *eP* **P 00 26 58.9 -0.2**
LFF pmax pmax
comp=Z,6.0nm,0.8s
Q51A Peebles 89.21 34 P **P 00 27 10.7 +0.7**
TKL Tuckaleechee C 91.86 36 LR LR 01 12 53.2
comp=Z,22nm,18.3s,baz=344,slow=38
ESDC Sonseca Array 93.21 335 P **P 00 27 26.6 -2.0**
comp=Z,0.9nm,0.9s,baz=34,slow=3.7,SNR=6.1
ESDC LR LR 01 13 07.2
comp=Z,33nm,18.7s,baz=5.5,slow=38
comp=Z,0.9nm,0.9s
MDT Midelt 99.67 332 LR LR 01 19 03.6
comp=Z,30nm,18.1s,baz=342,slow=39
TORD Torodi Ar. Bea 114.36 318 PP **PP 00 33 44.7 -5.0**
comp=Z,1.3nm,0.9s,baz=357,slow=6.7,SNR=6.0
VNDA Vanda 119.83 175 PKP **PKiKP 00 33 02.8 +0.1**
comp=Z,0.4nm,0.8s,baz=302,slow=5.5,SNR=3.0
TROLL Troll, Antarti 144.19 200 PKPdf PKPbc 00 33 47.2 +0.3
SNAA Sanae 145.73 199 PKPdf **PKPab 00 33 51.5 -0.6**
H03N2 Juan Fernandez 146.37 89 T T 03 17 10.3
baz=300,slow=76,SNR=64
H03N3 Juan Fernandez 146.38 89 T T 03 17 14.7
baz=300,slow=76,SNR=50
H03N1 Juan Fernandez 146.38 89 T T 03 17 11.6
baz=300,slow=76,SNR=77
SIV San Ignacio 147.08 45 PKPbc **PKPbc 00 33 55.7 -1.5**
comp=Z,2.8nm,0.7s,baz=241,slow=1.0,SNR=18
SIV pPKPbc **pPKPbc 00 34 14.7 +0.2**
comp=Z,5.1nm,0.9s,baz=228,slow=2.8,SNR=7.7
VNA2 Neumayer--Watz 147.31 198 PKPdf **PKPbc 00 33 56.4 +0.2**
baz=119,slow=2.0
VNA1 Neumayer--Stat 147.71 198 PKPdf **PKPbc 00 33 57.4 +0.2**

*NEIC **07** 00:20:35.6±1.0, 22.°07N±0.°07×143.°2E±0.°3, h267km±13km, mb4.0/19, Error ellipse: s-maj=40.3km s-min=6.9km az=79.0*
*IDC **07** 00:20:36.2±2.2, 22.°05N×142.°90E, h270km±20km, mb3.5/21, mbtmp4.1/23, Error ellipse: s-maj=22.5km s-min=13.0km az=77.0*
ISC 07 00:20:33.9±0.6, 22.°06N±0.°07×143.°1E±0.°1, h250km, n49, σ1ϑ18/55, mb3.9/30, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.08**	**351**	P	**Pn**	**00 21 51.5**	**+0.9**
	40nm,0.4s,baz=259,slow=18,SNR=9.8						
JCJ				S	**S**	**00 22 49.6**	**-2.3**
	86nm,0.4s,baz=116,slow=23,SNR=10						
JCJ	**Chichijima**	**5.08**	**351**	Pn	**Pn**	**00 21 52.1**	**+1.5**
JCJ				Sn	**S**	**00 22 50.9**	**-1.0**
MJAR	**Matsushiro Arr**	**15.04**	**345**	P	**P**	**00 23 54.2**	**0.0**
	1.0nm,0.4s,baz=138,slow=6.2,SNR=1.6						
JHS	**Saijyo**	**15.57**	**328**	P	**Pn**	**00 24 02.5**	**+1.6**
JMM	**Marumori**	**15.88**	**353**	P	**Pn**	**00 24 06.7**	**+2.2**
KSRS	**Korea Array**	**20.17**	**323**	P	**P**	**00 24 51.2**	**+1.5**
	6.6nm,0.6s,baz=145,slow=8.8,SNR=21						
	6.6nm,0.6s						
KSAR	**Wonju Array Be**	**20.18**	**323**	P	**P**	**00 24 51.1**	**+1.2**
TWG	**Pinlang**	**20.36**	**276**	P	**P**	**00 24 53.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**23.91**	**340**	P	**P**	**00 25 25.3**	**+0.1**
	0.7nm,0.5s,baz=134,slow=17,SNR=2.5						
	0.7nm,0.5s						
PETK	**Petropavlovsk-**	**32.96**	**16**	P	**P**	**00 26 42.8**	**-2.3**
	33nm,1.4s,baz=296,slow=14,SNR=1.1						
SONM	**Songino Array**	**39.00**	**320**	P	**P**	**00 27 36.5**	**0.0**
	1.0nm,0.4s,baz=124,slow=6.1,SNR=12						
SONM				PcP	**PcP**	**00 29 40.5**	**-0.8**
	0.3nm,0.5s,baz=70,slow=1.7,SNR=1.8						
	1.0nm,0.4s						
SONM	**Songino Array**	**39.00**	**320**	P	**P**	**00 27 36.8**	**+0.4**
WB0	**Warramunga Arr**	**42.43**	**192**	P	**P**	**00 28 04.4**	**-0.1**
WB0				IAmb	IAmb	00 28 05.3	
	comp=Z,8.2nm,1.3s						
WB2	**Warramunga Arr**	**42.61**	**192**	P	**P**	**00 28 06.0**	**+0.1**
WB2				IAmb	IAmb	00 28 33.1	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**42.61**	**192**	P	**P**	**00 28 06.0**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=16,slow=7.9,SNR=14						
WRA				PcP	**PP**	**00 29 52.0**	**+1.4**
	comp=Z,0.4nm,0.9s,baz=359,slow=3.3,SNR=1.5						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**42.61**	**192**	P	**P**	**00 28 06.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.41**	**205**	P	**P**	**00 28 12.4**	**+0.1**
ASAR	**Alice Springs**	**46.32**	**192**	P	**P**	**00 28 35.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=17,slow=9.7,SNR=1.8						
	comp=Z,0.2nm,0.5s						
ZAA0	**Zalesovo Array**	**53.87**	**322**	P	**P**	**00 29 31.5**	**+0.2**
ZAA0				IAmb	IAmb	00 29 32.0	
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**53.87**	**322**	P	**P**	**00 29 30.7**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=109,slow=7.4,SNR=12						
ZALV				PcP	**pwP**	**00 30 32.1**	**+3.8**
	comp=Z,0.8nm,0.4s,baz=99,slow=4.1,SNR=4.2						
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**53.87**	**322**	P	**P**	**00 29 31.7**	**+0.3**
MK31	**Makanchi Array**	**54.39**	**312**	P	**P**	**00 29 35.4**	**+0.2**
MK31				IAmb	IAmb	00 29 39.9	
	comp=Z,5.3nm,1.3s						
MKAR	**Makanchi Array**	**54.39**	**312**	P	**P**	**00 29 35.0**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=94,slow=7.6,SNR=10.0						
MKAR				PcP	**PcP**	**00 30 35.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=92,slow=3.9,SNR=2.8						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**54.39**	**312**	P	**P**	**00 29 35.5**	**+0.2**
FORT	**Forrest**	**54.48**	**196**	P	**P**	**00 29 34.3**	**-1.7**
FORT				IAmb	IAmb	00 29 35.3	
	comp=Z,17nm,1.1s						
MORW	**Morawa**	**57.12**	**208**	P	**P**	**00 29 54.7**	**0.0**
BOOM	**Boomskoye usch**	**58.81**	**307**	P	**P**	**00 30 07.6**	**+1.0**
BOOM				IAmb	IAmb	00 30 08.0	
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**61.76**	**27**	P	**P**	**00 30 26.3**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=240,slow=5.7,SNR=2.9						
	comp=Z,0.3nm,0.7s						
KK31	**Karatay Array**	**62.76**	**308**	P	**P**	**00 30 32.0**	**-0.9**
KK31				IAmb	IAmb	00 30 33.9	
	comp=Z,2.6nm,1.0s						
KKAR	**Karatay Array**	**62.76**	**308**	P	**P**	**00 30 32.5**	**-0.4**
KKAR	**Karatay Array**	**62.76**	**308**	P	**P**	**00 30 32.9**	**0.0**
KKAR				IAmb	IAmb	00 30 33.9	
	comp=Z,2.6nm,1.0s						
KBL	**Kabul**	**65.08**	**299**	P	**P**	**00 30 47.8**	**-0.6**
KBL				IAmb	IAmb	00 30 48.9	
	comp=Z,3.8nm,0.9s						
ARU	**Arti**	**68.92**	**324**	P	**P**	**00 31 10.9**	**-0.9**
	comp=Z,2.4nm,0.4s,baz=68,slow=2.7,SNR=8.2						
	comp=Z,2.4nm,0.4s						
ARU	**Arti**	**68.92**	**324**	P	**P**	**00 31 11.6**	**-0.2**
ARU				IAmb	IAmb	00 31 12.5	
	comp=Z,4.9nm,0.9s						
ABKAR	**Akbulak array**	**69.23**	**316**	P	**P**	**00 31 13.6**	**-0.2**
GEYT	**Alibeck**	**72.97**	**305**	P	**P**	**00 31 35.2**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=32,slow=14,SNR=2.5						
	comp=Z,0.5nm,0.4s						
KIRV	**Kirov**	**73.32**	**327**	P	**P**	**00 31 38.1**	**0.0**
	comp=Z,4.6nm,0.5s,baz=169,slow=2.4,SNR=2.7						
	comp=Z,4.6nm,0.5s						
BELG	**Belogornoye**	**76.06**	**321**	P	**P**	**00 31 53.5**	**-0.3**
	comp=Z,6.5nm,0.8s,baz=162,slow=6.8,SNR=4.3						
	comp=Z,6.5nm,0.8s						
YKA	**Yellowknife Ar**	**76.18**	**28**	P	**P**	**00 31 55.8**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=292,slow=15,SNR=1.6						
	comp=Z,0.3nm,0.5s						
ARCES	**ARCESS Array B**	**78.55**	**341**	P	**P**	**00 32 07.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=68,slow=8.0,SNR=6.8						
	comp=Z,1.6nm,0.7s						
KBZ	**Khabaz**	**82.05**	**314**	P	**P**	**00 32 26.4**	**0.0**
	comp=Z,3.8nm,0.8s,baz=59,slow=5.2,SNR=11						
	comp=Z,3.8nm,0.8s						
FINES	**FINESS Array B**	**82.82**	**334**	P	**P**	**00 32 29.6**	**-0.4**
	comp=Z,3.3nm,0.4s,baz=66,slow=4.9,SNR=51						
	comp=Z,3.3nm,0.4s						
NVAR	**Mina Array Bea**	**82.99**	**51**	P	**P**	**00 32 33.8**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=291,slow=4.9,SNR=3.7						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**87.16**	**324**	P	**P**	**00 32 49.6**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=56,slow=4.3,SNR=2.0						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**88.36**	**337**	P	**P**	**00 32 55.9**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=116,slow=3.4,SNR=7.6						
	comp=Z,1.2nm,0.5s						
NOA	**NORSAR Array B**	**88.58**	**339**	P	**P**	**00 32 56.8**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=42,slow=2.3,SNR=1.7						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**90.03**	**313**	P	**P**	**00 33 04.3**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=76,slow=6.1,SNR=2.7						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**128.44**	**309**	PKP	**PKPdf**	**00 39 10.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=34,slow=1.7,SNR=6.3						
LPAZ	**La Paz**	**150.00**	**84**	PKPbc	**PKPbc**	**00 39 57.1**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=14,slow=3.7,SNR=7.5						

MAN 07 01:04:26.1, 7.°10N×125.°54E, h25km, mb4.5, ML3.4, MS3.2, 5C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.46**	**259**	⇓*iP*	Pn	01 04 36.9	-0.3
KCP				*i* S	Sn	01 04 45.1	+0.6
MATI	**Mati**	**0.73**	**102**	⇓*eP*	Pb	01 04 39.5	-0.6
MATI				*eS*	Sb	01 04 49.6	-0.1
DDMP	**Don Marcelino,**	**1.00**	**170**	⇓*eP*	Pn	01 04 44.0	-0.6
SKMP	**Bagumbayan, Su**	**1.15**	**240**	⇑*iP*	Pn	01 04 46.4	-0.2
GSPH	**General Santos**	**1.17**	**210**	⇑*iP*	Pn	01 04 47.2	+0.3
GSPH				*i* S	Sb	01 05 02.9	+0.5
CTBH	**Cotabato--PC H**	**1.29**	**275**	⇓*iP*	Pn	01 04 48.7	+0.2
CTBH				*i* S	Sb	01 05 05.7	-0.2
BIPH	**Bislig**	**1.35**	**37**	⇓*eP*	Pn	01 04 48.7	-0.6
BIPH				*eS*	Sb	01 05 09.0	+1.4
CGP	**Cagayan de Oro**	**1.59**	**328**	⇑*eP*	Pb	01 04 54.1	-0.6
CGP				*eS*	Sn	01 05 13.0	+0.7
PAGZ	**Pagadian**	**2.27**	**289**	⇓*eP*	Pn	01 05 02.1	+0.1
PAGZ				*eS*	Sn	01 05 02.1	-27
GLSP	**General Luna,**	**2.73**	**12**	⇑*iP*	Pn	01 05 09.0	+0.6
GHBP	**Garcia Hernand**	**2.79**	**334**	⇑*eP*	Pn	01 05 09.8	+0.6
GHBP				*eS*	Sn	01 05 41.2	-0.9
TABP	**Talibon, Bohol**	**3.21**	**338**	⇓*iP*	Pn	01 05 15.5	+0.6
TABP				*i* S	Sn	01 05 53.4	+1.1

*IDC **07** 01:23:41.9±7.9, 16.°02S×167.°66E, h141km±78km, mb3.5/3, mbtmp4.1/4, MS2.8/1, Error ellipse: s-maj=71.6km s-min=45.6km az=162.0*
*NOU **07** 01:23:45.9, 16.°50S×167.°55E, h0km, MLv4.5/16, Vanuatu Islands*
**ISC 07 01:23:41.5±1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.69**	**170**	P	**Pn**	**01 24 12.5**	**-0.6**
RTV	**Rentapao**	**1.81**	**164**	P	**Pn**	**01 24 14.0**	**-0.4**
LIFNC	**LIFOU**	**4.74**	**187**	P	**Pn**	**01 24 51.0**	**-0.5**
MARNC	**Mare, Loyalty**	**5.41**	**179**	P	**Pn**	**01 24 59.6**	**-0.7**
KOUNC	**Koumac, New Ca**	**5.64**	**217**	P	**Pn**	**01 25 02.7**	**-0.7**
YATNC	**Mamie plateau,**	**6.05**	**189**	P	**Pn**	**01 25 09.0**	**+0.1**
DZM	**Mont Dzumac**	**6.14**	**193**	P	**Pn**	**01 25 11.1**	**+0.8**
	51nm,0.3s,baz=156,slow=20,SNR=491						
DZM				S	**Sn**	**01 26 19.1**	**-0.6**
	31nm,0.3s,baz=135,slow=22,SNR=6.4						
DZM	**Mont Dzumac**	**6.14**	**193**	P	**Pn**	**01 25 11.0**	**+0.8**
NOUC	**Port Laguerre**	**6.21**	**194**	P	**Pn**	**01 25 12.4**	**+1.5**
ONTNC	**Ouen Toro**	**6.37**	**192**	P	**Pn**	**01 25 14.7**	**+1.5**
OUENC	**Ouen Island, N**	**6.41**	**189**	P	**Pn**	**01 25 15.6**	**+1.9**
WRA	**Warramunga Arr**	**32.11**	**258**	LR	LR	01 41 02.0	
	comp=Z,16nm,18.4s,baz=115,slow=33						
ASAR	**Alice Springs**	**32.79**	**251**	P	**P**	**01 30 00.1**	**-0.6**
	1.0nm,0.6s,baz=72,slow=9.2,SNR=5.3						
	1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.38**	**261**	P	**P**	**01 31 05.0**	**-0.1**
	2.0nm,0.9s,baz=69,slow=6.8,SNR=2.3						
	2.0nm,0.9s						
SONM	**Songino Array**	**83.91**	**323**	P	**P**	**01 35 54.6**	**-0.1**
	0.8nm,0.6s,baz=108,slow=4.7,SNR=3.2						
	0.8nm,0.6s						
ARCES	**ARCESS Array B**	**121.67**	**345**	PKP	**PKiKP**	**01 42 18.4**	**+1.3**
	4.9nm,1.1s,baz=46,slow=3.9,SNR=6.7						

*NEIC **07** 01:27:52.9±1.5, 30.°55S±0.°03×71.°1W±0.°1, h83km±6km, mb4.0/1, ML4.1(GUC), Error ellipse: s-maj=13.0km s-min=4.1km az=99.0*
*GUC **07** 01:27:52.5±0.9, 30.°58S×70.°91W, h77km±3km, ML4.1*
ISC 07 01:27:52.6±1.0, 30.°56S±0.°03×70.°97W±0.°06, h83km±6km, n59, σ0°84/74, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO03	**El Pedregal**	**0.37**	**139**	Pn	**Pn**	**01 28 06.0**	**+0.2**
CO03				Sn	**Sn**	**01 28 15.6**	**-0.1**
CO03	**El Pedregal**	**0.37**	**139**	⇓*i* P	**Pn**	**01 28 06.0**	**+0.2**
CO03				*e*S	**Sn**	**01 28 15.6**	**-0.1**
CO03				IAML		01 28 16.4	
	comp=E,40μm,0.1s						
GO04	**Tololo Observa**	**0.41**	**21**		**Pn**	**01 28 06.5**	**+0.1**
GO04				Sn	**Sn**	**01 28 16.8**	**+0.4**
GO04	**Tololo Observa**	**0.41**	**21**	*i* P	**Pn**	**01 28 06.4**	**+0.1**
GO04				*i* S	**Sn**	**01 28 16.8**	**+0.4**
CO06	**Fray Jorge**	**0.58**	**258**		**Pn**	**01 28 08.2**	**+0.8**
CO06	**Fray Jorge**	**0.58**	**258**	*e*P	**Pn**	**01 28 08.1**	**+0.7**
CO06				*e*S	**Sn**	**01 28 19.7**	**+1.3**
CO06				IAML		01 28 24.8	
	comp=N,8μm,0.2s						
CO02	**Combarbal**	**0.64**	**182**		**Pn**	**01 28 08.5**	**+0.4**
CO02				Sn	**Sn**	**01 28 20.0**	**+0.3**
CO02	**Combarbal**	**0.64**	**182**	⇑*i* P	**Pn**	**01 28 08.5**	**+0.4**
CO02				*e*S	**Sn**	**01 28 19.8**	**+0.1**
CO02				IAML		01 28 21.0	
	comp=N,26μm,0.2s						
CO05	**La Serena**	**0.68**	**340**		**Pn**	**01 28 09.0**	**+0.6**
CO05	**La Serena**	**0.68**	**340**	⇓*i* P	**Pn**	**01 28 08.9**	**+0.6**
CO05				*e*S	**Sn**	**01 28 21.2**	**+1.2**
CO05				IAML		01 28 21.7	
	comp=E,15μm,0.1s						
CO01	**Juntas del Tor**	**0.96**	**53**		**Pn**	**01 28 12.0**	**+0.4**
CO01	**Juntas del Tor**	**0.96**	**53**	*i* P	**Pn**	**01 28 12.0**	**+0.4**
CO01				*e*S	**Sn**	**01 28 25.9**	**+0.1**
LCO	**Las Campanas**	**1.56**	**9**		**Pn**	**01 28 19.8**	**+0.7**
LCO	**Las Campanas**	**1.56**	**9**	*e*P	**Pn**	**01 28 19.6**	**+0.5**
LCO				*e*S	**Sn**	**01 28 40.0**	**+0.9**
AC05	**El Transito**	**1.82**	**20**		**Pn**	**01 28 23.5**	**+1.1**
AC05	**El Transito**	**1.82**	**20**	*e*P	**Pn**	**01 28 23.5**	**+1.1**
AC05				*e*S	**Sn**	**01 28 45.9**	**+0.9**
AC05				IAML		01 28 46.8	
	comp=E,2μm,0.2s						
VA06	**Catapilco**	**2.02**	**188**		**Pn**	**01 28 25.4**	**+0.7**
VA06	**Catapilco**	**2.02**	**188**	*e*P	**Pn**	**01 28 25.5**	**+0.7**
VA06				*e*S	**Sn**	**01 28 50.6**	**+1.2**
VA06				IAML		01 28 58.1	
	comp=E,2μm,0.5s						
ZON	**Zonda**	**2.20**	**117**	Pn	**Pn**	**01 28 28.5**	**+1.1**
VA03	**San Esteban**	**2.23**	**171**		**Pn**	**01 28 28.9**	**+1.1**
VA03	**San Esteban**	**2.23**	**171**	*e*P	**Pn**	**01 28 28.6**	**+0.9**
VA03				*e*S	**Sn**	**01 28 56.2**	**+1.6**
VA03				IAML		01 29 01.6	
	comp=E,1μm,0.3s						
AC04	**Llanos de Chal**	**2.35**	**358**	Pn	**Pn**	**01 28 30.5**	**+1.2**
AC04	**Llanos de Chal**	**2.35**	**358**	*e*P	**Pn**	**01 28 30.4**	**+1.2**
AC04				*e*S	**Sn**	**01 28 58.6**	**+1.3**
AC04				IAML		01 29 09.7	
	comp=E,961nm,0.2s						
ROCH	**El Roble**	**2.41**	**181**	*e*P	**Pn**	**01 28 30.7**	**+0.4**
ROCH				IAML		01 29 10.3	
	comp=N,898nm,0.4s						
ROC1	**El Roble**	**2.41**	**181**		**Pn**	**01 28 30.8**	**+0.5**
VA01	**Torpederas**	**2.52**	**193**		**Pn**	**01 28 31.3**	**-0.3**
PEL	**Peldehue**	**2.59**	**175**		**Pn**	**01 28 33.5**	**+0.9**
PEL	**Peldehue**	**2.59**	**175**	*e*P	**Pn**	**01 28 33.4**	**+0.9**
PEL				*e*S	**Sn**	**01 29 03.6**	**+0.4**
PEL				IAML		01 29 13.5	
	comp=E,424nm,0.2s						
MT02	**Curacav**	**2.70**	**183**		**Pn**	**01 28 34.1**	**+0.2**
MT02	**Curacav**	**2.70**	**183**	*e*P	**Pn**	**01 28 34.1**	**+0.2**
MT02				IAML		01 29 16.0	
	comp=E,316nm,0.4s						
FCH	**Farellones**	**2.82**	**168**	*e*P	**Pn**	**01 28 37.5**	**+1.6**
FCH				IAML		01 29 25.4	
	comp=E,319nm,0.2s						
MT05	**Renca**	**2.83**	**176**		**Pn**	**01 28 36.8**	**+1.0**
MT05	**Renca**	**2.83**	**176**	*e*P	**Pn**	**01 28 36.7**	**+0.9**
MT05				IAML		01 29 21.4	
	comp=E,1μm,0.3s						
MT03	**Universidad Ad**	**2.95**	**172**		**Pn**	**01 28 39.1**	**+1.6**
MT03	**Universidad Ad**	**2.95**	**172**	*e*P	**Pn**	**01 28 38.9**	**+1.4**
MT03				IAML		01 29 24.5	
	comp=N,817nm,0.1s						
VA05	**Santo Domingo**	**3.14**	**190**		**Pn**	**01 28 39.4**	**-0.4**
VA05	**Santo Domingo**	**3.14**	**190**	*e*P	**Pn**	**01 28 39.5**	**-0.3**
VA05				IAML		01 29 36.7	
	comp=E,903nm,0.3s						
MT09	**Talagante**	**3.21**	**180**		**Pn**	**01 28 41.4**	**+0.5**
MT09	**Talagante**	**3.21**	**180**	*e*P	**Pn**	**01 28 41.5**	**+0.5**
MT09				IAML		01 29 33.4	
	comp=N,545nm,0.5s						
AC06	**Mina Casimiro**	**3.23**	**10**		**Pn**	**01 28 41.7**	**+0.4**
AC06	**Mina Casimiro**	**3.23**	**10**	*e*P	**Pn**	**01 28 41.7**	**+0.4**
AC06				IAML		01 29 26.6	
	comp=N,356nm,0.4s						
MT01	**Popeta**	**3.31**	**184**		**Pn**	**01 28 42.1**	**0.0**
MT01	**Popeta**	**3.31**	**184**	*e*P	**Pn**	**01 28 42.0**	**-0.1**
MT01				IAML		01 29 34.1	
	comp=E,382nm,0.6s						
LMEL	**Las Melosas**	**3.34**	**169**		**Pn**	**01 28 44.7**	**+1.8**
BO04	**La Punta**	**3.44**	**175**		**Pn**	**01 28 44.2**	**+0.3**
BO04	**La Punta**	**3.44**	**175**	*e*P	**Pn**	**01 28 44.2**	**+0.3**
BO04				IAML		01 29 38.3	
	comp=E,211nm,0.2s						
BO01	**Tunca**	**3.82**	**181**		**Pn**	**01 28 49.0**	**-0.1**
BO01	**Tunca**	**3.82**	**181**	*e*P	**Pn**	**01 28 49.1**	**-0.1**
BO03	**Pichilemu**	**4.01**	**192**	*i* P	**Pn**	**01 28 50.8**	**-0.9**
AC02	**Maricunga**	**4.05**	**24**	Pn	**Pn**	**01 28 53.5**	**+0.8**
AC02	**Maricunga**	**4.05**	**24**	*e*P	**Pn**	**01 28 53.6**	**+0.8**
BO02	**Sierra Bellavi**	**4.22**	**178**	Pn	**Pn**	**01 28 55.0**	**+0.3**
BO02	**Sierra Bellavi**	**4.22**	**178**	*e*P	**Pn**	**01 28 54.8**	**+0.1**
AC01	**Pan de Azucar**	**4.41**	**4**	*e*P	**Pn**	**01 28 55.8**	**-1.3**
GO02	**Mina Guanaco**	**5.51**	**13**	Pn	**Pn**	**01 29 11.4**	**-1.1**
PB15	**IPOC Station P**	**7.44**	**11**		**Pn**	**01 29 36.9**	**-1.8**
TRQA	**Tornquist**	**10.54**	**138**	Pn	**Pn**	**01 30 20.9**	**+0.2**
LPAZ	**La Paz**	**14.44**	**11**	Pn	**Pn**	**01 31 12.5**	**-1.1**
BDFB	**Brasilia**	**25.74**	**60**	P	**P**	**01 33 15.5**	**-0.1**
BDFB				IAmb	IAmb	01 33 29.3	
	comp=Z,6.1nm,1.2s						

*NEIC **07** 01:35:30.7±1.8, 31.°58N±0.°04×114.°41W±0.°03, h13km±7km, Error ellipse: s-maj=6.0km s-min=1.6km az=209.0*
*PAS **07** 01:35:30.4±1.3, 31.°58N±0.°05×114.°41W±0.°03, h6km±2km, Error ellipse: s-maj=8.1km s-min=3.5km az=193.0*
*ECX **07** 01:35:31.5±0.5, 31.°53N×114.°40W, h13km±5km, MD3.0, ML3.2*

ISC 07 01:35:30.2±1.0, 31.°56N±0.°03×114.°42W±0.°02, h10km±9km, n53, σ0°70/60, 6C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.55**	**261**	⇑*e*P	**Pg**	**01 35 41.6**	**+0.6**
ECBX				*e*S	**Sg**	**01 35 49.5**	**+1.3**
ECBX				⇑*e*		01 35 50.9	
ECBX				IAML		01 35 50.9	
	comp=N,1μm,0.3s						
SFX	**San Felipe**	**0.64**	**215**		**Pg**	**01 35 42.7**	**0.0**
SFX					**Sg**	**01 35 51.1**	**0.0**
SFX	**San Felipe**	**0.64**	**215**	IAML		01 35 51.8	
	comp=N,2μm,0.5s						
SFX	**San Felipe**	**0.64**	**215**	⇓*e*P	**Pg**	**01 35 42.7**	**0.0**
SFX				*i* S	**Sg**	**01 35 51.2**	**0.0**
SFX				IAML		01 35 51.9	
	comp=N,2μm,0.4s						
PPXB	**Puerto Peasco**	**0.71**	**109**	*e*P	**Pg**	**01 35 43.6**	**-0.3**
PPXB				*e*S	**Sg**	**01 35 53.0**	**-0.1**
PIX	**Pinacate**	**0.81**	**90**		**Pg**	**01 35 45.5**	**-0.4**
PIX					**Sg**	**01 35 57.0**	**+0.3**
PIX	**Pinacate**	**0.81**	**90**	IAML		01 35 58.3	
	comp=N,385nm,0.3s						
PIX	**Pinacate**	**0.81**	**90**	⇑*e*P	**Pg**	**01 35 45.5**	**-0.4**
PIX				*e*S	**Sg**	**01 35 57.0**	**+0.3**
PIX				IAML		01 35 58.4	
	comp=N,508nm,0.5s						
PIX				⇑*e*		01 35 58.4	
SLRCX	**San Luis Rio C**	**0.92**	**345**	*e*P	**Pb**	**01 35 48.8**	**+0.4**
GUVIX	**Guadalupe Vict**	**0.93**	**323**		**Pg**	**01 35 47.6**	**-0.5**
GUVIX					**Sg**	**01 35 59.7**	**-0.5**
RHX	**Rio Hardy**	**0.93**	**308**	*e*P	**Pg**	**01 35 47.7**	**-0.6**
SPIG	**San Pedro Mart**	**1.04**	**240**	*e*P	**Pb**	**01 35 49.9**	**-0.5**
SPIG				*e*S	**Sg**	**01 36 03.4**	**-0.4**
SPIG				IAML		01 36 05.0	
	comp=N,353nm,0.5s						
CPBX	**Cerro Prieto**	**1.14**	**319**		**Pg**	**01 35 52.8**	**+0.6**
CPBX				IAML		01 36 35.6	
	comp=N,777nm,0.7s						
CPBX	**Cerro Prieto**	**1.14**	**319**	⇓*e*		01 36 42.2	
CPBX				IAML		01 36 42.2	
	comp=N,2μm,0.5s						
CPBX				IAML		01 36 45.5	
	comp=E,1μm,0.5s						
CPBX				⇑*e*		01 36 45.5	
VTX	**Valle De La Tr**	**1.18**	**262**	*e*P	**Pn**	**01 35 52.2**	**-0.6**
VTX				*e*S	**Sb**	**01 36 08.6**	**+0.5**
EMSC	**East Mesa**	**1.27**	**338**		**Pn**	**01 35 53.6**	**-0.4**
113A	**Mohawk Valley,**	**1.32**	**24**		**Pn**	**01 35 54.5**	**-0.2**
113A				IAML		01 36 20.2	
	comp=E,155nm,0.6s						
ESJX	**Sierra Juarez**	**1.38**	**289**	Pn	**Pg**	**01 35 56.8**	**+0.1**
214A	**Organ Pipe Nat**	**1.42**	**74**		**Pn**	**01 35 55.1**	**-1.0**
214A					**Sn**	**01 36 12.8**	**-2.0**
214A	**Organ Pipe Nat**	**1.42**	**74**	IAML		01 36 13.8	
	comp=N,511nm,0.3s						
214A				IAML		01 36 14.0	
	comp=E,456nm,0.3s						
214A	**Organ Pipe Nat**	**1.42**	**74**	⇑*e*P	**Pn**	**01 35 55.1**	**-1.0**
COA	**Coachella**	**1.43**	**335**		**Pn**	**01 35 56.1**	**0.0**
RUN	**Ruthven**	**1.48**	**341**		**Pn**	**01 35 56.7**	**-0.3**
GLA	**Glamis**	**1.52**	**347**	Pn	**Pn**	**01 35 57.6**	**0.0**
GLA	**Glamis**	**1.52**	**347**		**Sb**	**01 36 17.4**	**-0.6**
GLA	**Glamis**	**1.52**	**347**	IAML		01 36 18.8	
	comp=N,473nm,0.5s						
GLA				IAML		01 36 31.1	
	comp=E,507nm,0.5s						
GLA	**Glamis**	**1.52**	**347**	*e*P	**Pn**	**01 35 57.6**	**0.0**
SQX	**San Quintin**	**1.59**	**232**	*e*P	**Pn**	**01 35 58.2**	**-0.3**
SQX				*e*S	**Sn**	**01 36 19.8**	**+0.8**
YUH	**Yuha Desert**	**1.68**	**311**		**Pn**	**01 35 59.4**	**-0.2**
YUH	**Yuha Desert**	**1.68**	**311**		**Pb**	**01 36 00.6**	**-0.6**
YUH				IAML		01 36 44.6	
	comp=N,62nm,0.7s						
YUH				IAML		01 36 44.8	
	comp=E,81nm,0.7s						
RMX	**La Rumorosa**	**1.75**	**307**		**Pn**	**01 35 59.5**	**-1.2**
RMX				IAML		01 36 45.1	
	comp=E,146nm,0.7s						
RMX				IAML		01 36 45.7	
	comp=N,96nm,0.7s						
CBX	**Cerro Bola**	**2.05**	**292**		**Pn**	**01 36 03.9**	**-1.0**
CBX				IAML		01 36 46.6	
	comp=N,85nm,0.5s						
CBX				IAML		01 36 50.2	
	comp=E,108nm,0.6s						
LAPR	**La Primavera**	**2.09**	**120**	*e*P	**Pn**	**01 36 06.2**	**+1.0**
LAPR				*e*S	**Sn**	**01 36 32.5**	**+1.3**
BLYC	**Blythe**	**2.18**	**358**		**Pn**	**01 36 07.2**	**+0.7**
BLYC				IAML		01 36 53.3	
	comp=E,98nm,0.7s						
BLYC				IAML		01 36 53.5	
	comp=N,88nm,0.6s						
BAR	**Barrett**	**2.21**	**301**		**Pn**	**01 36 06.2**	**-0.8**
BAR				IAML		01 37 01.2	
	comp=N,75nm,0.7s						
BAR				IAML		01 37 05.4	
	comp=E,53nm,0.8s						
109C	**Camp Elliot, M**	**2.63**	**301**		**Pn**	**01 36 13.1**	**+0.3**
109C				IAML		01 37 14.7	
	comp=E,41nm,0.4s						
109C				IAML		01 37 19.4	
	comp=N,62nm,0.6s						
Y14A	**Wickenburg**	**2.65**	**26**		**Pn**	**01 36 13.6**	**+0.6**
PFO	**Pinyon Flats O**	**2.67**	**320**	Pn	**Pn**	**01 36 12.9**	**-0.5**
TUC	**Tucson**	**3.17**	**76**		**Pn**	**01 36 20.2**	**-0.1**
TUC				IAML		01 37 11.9	
	comp=N,42nm,0.4s						
ELS	**Elsinore Mount**	**3.28**	**310**	Pn	**Pn**	**01 36 21.6**	**-0.2**
ELS				IAML		01 37 30.1	
	comp=E,36nm,0.6s						
W13A	**Hualapai Mount**	**3.55**	**7**		**Pn**	**01 36 26.8**	**+1.2**
W13A				IAML		01 37 45.1	
	comp=E,24nm,0.6s						
W13A				IAML		01 37 45.5	
	comp=N,19nm,1.6s						
V12A	**Nelson**	**4.17**	**355**	Pn	**Pn**	**01 36 35.6**	**+1.6**
319A	**Douglas**	**4.39**	**91**	Pn	**Pn**	**01 36 37.4**	**+0.4**
WUAZ	**Wupatki**	**4.69**	**32**		**Pn**	**01 36 41.7**	**+0.5**
X18A	**Snowflake**	**4.78**	**51**	Pn	**Pn**	**01 36 43.1**	**+0.8**
GWY	**Greenwater Val**	**4.98**	**338**	Pn	**Pn**	**01 36 45.4**	**+0.2**
W18A	**Petrified Fore**	**5.28**	**47**	Pn	**Pn**	**01 36 50.4**	**+1.0**
TPNV	**Topopah Spring**	**5.58**	**345**	Pn	**Pn**	**01 36 53.4**	**0.0**
KNB	**Kanab**	**5.60**	**13**		**Pn**	**01 36 53.6**	**-0.1**
121A	**Cookes Peak, D**	**5.71**	**79**	Pn	**Pn**	**01 36 55.5**	**+0.3**
PRN	**Pahroc Range**	**5.85**	**355**		**Pn**	**01 36 58.2**	**+1.0**
PKCU	**Pink Cliffs**	**6.12**	**16**		**Pn**	**01 37 01.5**	**+0.6**
BNM	**Barren Site**	**7.04**	**66**	Pn	**Pn**	**01 37 14.0**	**+0.5**

IDC 07 01:47:53.0±1.8, 4.°44S×145.°60E, h0km, mb3.8/3, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=87.9km s-min=26.7km az=124.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.91**	**215**	P	P	01 52 15.6	+0.1
	0.3nm,0.3s,baz=35,slow=11,SNR=22						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**22.20**	**209**	P	P	01 52 50.2	-1.0
	0.5nm,0.5s,baz=41,slow=7.4,SNR=5.1						
	0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.78**	**234**	P	P	01 53 08.3	+0.8
	4.0nm,0.3s,baz=50,slow=8.2,SNR=46						
	4.0nm,0.3s						
ILAR	**Eielson Array**	**84.61**	**23**	P	P	02 00 28.0	-0.1
	0.6nm,0.6s,baz=245,slow=5.1,SNR=6.4						
	0.6nm,0.6s						

AUST 07 01:53:45.0±4.7, 30.°57S×150.°34E, h0km, Error ellipse: s-maj=32.8km s-min=17.1km az=128.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUPHS	**Peel High Scho**	**0.71**	**138**	P	Pg	01 53 57.8	-0.8
	baz=0.7						
AUPHS				S	Sg	01 54 08.2	+0.4
	baz=0.7						
ARMA	**Armidale**	**1.12**	**83**	P	Pg	01 54 05.7	-0.8
	baz=1.1,SNR=170						
ARMA				S	Sb	01 54 23.2	+0.7
	baz=1.1						
MGCD	**Mangrove Creek**	**2.71**	**166**	P	Pn	01 54 30.4	+0.6
	baz=2.7,SNR=6.4						
MGCD				S	Sn	01 55 05.4	+2.1
	baz=2.7						
CMSA	**Cobar Meteorol**	**4.11**	**255**	P	Pn	01 54 42.6	-6.4
	baz=4.1						
CMSA				S	Sn	01 55 26.5	-11
	baz=4.1						

AUST 07 02:10:12.2±1.9, 32.°41S×150.°96E, h0km, Error ellipse: s-maj=78.6km s-min=7.6km az=82.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.81**	**171**	P	Pg	02 10 27.8	0.0
	baz=0.8						
MGCD				S	Sg	02 10 39.4	+1.2
	baz=0.8						
AUKHS	**Kincumber High**	**1.10**	**162**	P	Pg	02 10 33.4	-0.1
	baz=1.1						
AUKHS				S	Sb	02 10 48.8	-0.4
	baz=1.1						
AUPHS	**Peel High Scho**	**1.31**	**357**	P	Pg	02 10 37.2	-0.1
	baz=1.3						
AUPHS				S	Sb	02 10 55.4	+0.4
	baz=1.3						
RIV	**Riverview**	**1.43**	**173**	P	Pg	02 10 39.5	0.0
	baz=1.4						
ARMA	**Armidale**	**2.07**	**16**	P	Pn	02 10 49.1	+0.8
	baz=2.1						

*NEIC **07** 02:14:38.2±1.7, 30.°60N±0.°03×114.°13W±0.°05, h10km±1km, Error ellipse: s-maj=7.5km s-min=4.6km az=246.0*
*IDC **07** 02:14:39.4±3.2, 30.°45N×114.°26W, h0km, mb3.6/1, mbtmp3.1/4, ML3.8/2, MS2.9/7, Error ellipse: s-maj=53.1km s-min=13.3km az=29.0*
*MEX **07** 02:14:42.4±0.5, 30.°75N×114.°12W, h10km, MD4.0*
ISC 07 02:14:38.6±0.9, 30.°60N±0.°05×114.°16W±0.°04, h10km, n69, σ1°19/64, MS2.9/3, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.73**	**306**	Pg	**Pb**	**02 14 53.9**	**+0.3**
SFX				Sg	**Sb**	**02 15 04.9**	**+1.2**
SFX				IAML		02 15 06.1	
	comp=E,3μm,0.3s						
SFX				IAML		02 15 06.5	
	comp=N,3μm,0.3s						
SFX	**San Felipe**	**0.73**	**306**	*e*P	**Pn**	**02 14 54.2**	**-0.8**
SFX				*e*S	**Sb**	**02 15 03.6**	**0.0**
PIX	**Pinacate**	**1.13**	**32**	Pn	**Pn**	**02 15 00.9**	**+0.4**
PIX				IAML		02 15 27.1	
	comp=E,904nm,1.3s						
SPIG	**San Pedro Mart**	**1.21**	**292**	*e*P	**Pb**	**02 15 01.4**	**-0.4**
SPIG				*e*S	**Sb**	**02 15 17.0**	**-0.6**
LAPR	**La Primavera**	**1.59**	**93**	*e*P	**Pb**	**02 15 06.9**	**-1.3**
LAPR				*e*S	**Sn**	**02 15 26.6**	**-0.8**
BAHB	**Baha de los**	**1.73**	**162**	*e*P	**Pg**	**02 15 11.8**	**-0.1**
BAHB				*e*S	**Sb**	**02 15 32.5**	**+0.1**
214A	**Organ Pipe Nat**	**1.77**	**40**	Pn	**Pb**	**02 15 10.3**	**-1.0**
GUVIX	**Guadalupe Vict**	**1.87**	**335**	Pn	**Pn**	**02 15 09.9**	**-0.7**
MBIG	**Mexicali**	**2.00**	**334**	*e*P	**Pn**	**02 15 12.1**	**-0.4**
MBIG				*e*		02 15 38.0	
CPBX	**Cerro Prieto**	**2.06**	**332**	Pn	**Pn**	**02 15 12.9**	**-0.4**
ESJX	**Sierra Juarez**	**2.07**	**313**	Pn	**Pn**	**02 15 13.2**	**-0.5**
113A	**Mohawk Valley,**	**2.18**	**9**	Pn	**Pn**	**02 15 16.1**	**+1.1**
UABX	**UABC, Campus M**	**2.30**	**332**	Pn	**Pn**	**02 15 16.2**	**-0.4**
CCX	**Cicese**	**2.49**	**301**	Pn	**Pn**	**02 15 20.4**	**+1.2**
CCX				IAML		02 16 13.6	
	comp=E,224nm,0.5s						
CCX				IAML		02 16 18.6	
	comp=N,183nm,1.1s						
GLA	**Glamis**	**2.51**	**347**	Pn	**Pn**	**02 15 20.4**	**+0.9**
GLA				IAML		02 16 24.6	
	comp=N,186nm,1.1s						
GLA				IAML		02 16 34.0	
	comp=E,248nm,1.1s						
YUH	**Yuha Desert**	**2.53**	**324**	Pn	**Pn**	**02 15 18.6**	**-1.3**
RMX	**La Rumorosa**	**2.58**	**321**	Pn	**Pn**	**02 15 19.6**	**-1.0**
RMX				IAML		02 16 01.8	
	comp=N,197nm,0.4s						
RMX				IAML		02 16 04.5	
	comp=E,156nm,0.3s						
CBX	**Cerro Bola**	**2.74**	**309**	Pn	**Pn**	**02 15 23.4**	**+0.7**
CBX				IAML		02 16 22.8	
	comp=N,211nm,0.8s						
CBX				IAML		02 16 22.0	
	comp=E,207nm,1.0s						
CBX	**Cerro Bola**	**2.74**	**309**	*e*P	**Pn**	**02 15 23.2**	**+0.5**
CBX				*e*		02 15 55.1	
TJIG	**Tijuana**	**2.82**	**311**	*e*P	**Pn**	**02 15 24.5**	**+0.8**
TJIG				*e*		02 16 01.6	
TKX	**Tecate**	**2.86**	**314**	Pn	**Pn**	**02 15 23.6**	**-0.9**
TKX				IAML		02 16 12.9	
	comp=E,171nm,0.3s						
TKX				IAML		02 16 22.3	
	comp=N,139nm,1.0s						
BAR	**Barrett**	**2.98**	**315**	Pn	**Pn**	**02 15 26.8**	**+0.8**
BAR				IAML		02 16 18.4	
	comp=E,121nm,0.7s						
BAR				IAML		02 16 22.7	
	comp=N,134nm,0.5s						
TJX	**Tijuana**	**3.12**	**308**	Pn	**Pn**	**02 15 27.5**	**-0.3**
BLYC	**Blythe**	**3.15**	**354**	Pn	**Pn**	**02 15 28.7**	**+0.3**
HSIG		**3.21**	**119**	Pn	**Pn**	**02 15 28.8**	**-0.3**
HSIG				IAML		02 16 40.4	
	comp=N,99nm,1.1s						
HSIG				IAML		02 16 53.2	
	comp=E,110nm,1.0s						
HSIG		**3.21**	**119**	*e*

PKCU	Pink Cliffs	6.99	12		Pn		02 16 20.6	-0.9
SZCU	Shurtz Canyon	7.03	7	Pn	Pn		02 16 20.5	-1.3
LENM	Lemitar	7.04	58	Pn	Pn		02 16 21.1	-0.8
LPIG	La Paz	7.33	151	LR	LR		02 19 08.6	
	comp=E,96nm,19.9s,baz=294,slow=37							
MZP	Montezuma Peak	7.57	340	Pn	Pn		02 16 28.7	-0.6
MTPU	Mount Pierson	7.60	12		Pn		02 16 29.4	-0.4
ANMO	Albuquerque	7.80	54	LR	LR		02 19 44.8	
	comp=E,75nm,18.7s,baz=238,slow=38							
MSU	Marysvale	8.06	11	Pn	Pn		02 16 34.9	-1.1
NVAR	Mina Array Bea	8.52	337	Pn	Pn		02 16 45.7	+3.4
	comp=E,0.2nm,0.6s,baz=168,slow=13,SNR=2.8							
PV07	Paradox Valley	9.04	29	Pn	Pn		02 16 47.2	-2.2
TX31	Lajitas Ar. Si	9.19	95	Pn	Pn		02 16 50.3	-1.1
TXAR	Lajitas Array	9.19	95	Pn	Pn		02 16 54.8	+3.4
	comp=E,0.1nm,0.3s,baz=267,slow=15,SNR=5.1							
TXAR				Sn	Sn		02 18 38.4	+3.5
	comp=E,0.2nm,0.3s,baz=270,slow=21,SNR=1.6							
TXAR				Lg	Lg		02 19 34.5	
	comp=E,0.3nm,0.3s,baz=247,slow=18,SNR=6.4							
	comp=E,0.6nm,0.5s							
TXAR	Lajitas Array	9.19	95	Pn	Pn		02 16 51.1	-0.3
PDAR	Pinedale Array	12.69	16	Pn	Pn		02 17 47.2	+7.9
	comp=E,0.1nm,0.3s,baz=189,slow=10.0,SNR=1.6							
	comp=E,0.1nm,0.3s							
YBH	Yreka Blue Hor	13.07	331	LR	LR		02 23 16.2	
	comp=E,37nm,19.4s,baz=192,slow=39							
BBB	Bella Bella	23.89	338	LR	LR		02 29 29.3	
	comp=E,42nm,20.0s,baz=134,slow=37							
TKL	Tuckaleechee C	25.88	71	LR	LR		02 31 46.3	
	comp=E,38nm,18.4s,baz=302,slow=40							
ILAR	Eielson Array	39.78	339	P	P		02 22 16.0	+4.6
	comp=E,0.6nm,0.7s,baz=148,slow=8.6,SNR=6.5							
	comp=E,0.6nm,0.7s							
SJG	San Juan	45.16	95	LR	LR		02 44 41.4	
	comp=E,11nm,20.4s,baz=257,slow=40							

ECX ***07*** *02:18:19.3±0.6, 30°.56N×114°.22W, h12km±11km, MD3.3, ML3.5*
MEX ***07*** *02:18:20.5±1.0, 30°.75N×114°.12W, h10km, MD3.9*
ISC 07 02:18:17.8±1.8, 30°.57N±0°.04×114°.22W±0°.03, h14km±15km, n19, σ0°.55/27, 5C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFX	San Felipe	0.71	311	eP	Pb	02 18 31.7	-0.4
SFX				eS	Sb	02 18 41.4	-0.3
SFX	San Felipe	0.71	311	eP	Pb	02 18 32.2	+0.2
SFX				eS	Sb	02 18 42.0	+0.3
SFX				IAML		02 18 44.6	
	comp=N,3μm,0.5s						
SFX				⇓e		02 18 44.6	
SFX				IAML		02 18 44.7	
	comp=E,2μm,0.4s						
SFX				⇑e		02 18 44.7	
SLGB	San Luis Gonza	0.76	192	eP	Pb	02 18 32.4	-0.3
SLGB				⇑e		02 18 52.7	
SLGB				IAML		02 18 52.7	
	comp=N,1μm,0.8s						
PPXB	Puerto Peasco	0.92	34	eP	Pb	02 18 34.9	-0.6
ECBX	El Chinero	1.15	322	eP	Pn	02 18 39.7	+0.2
ECBX				eS	Sb	02 18 54.5	+0.3
ECBX				IAML		02 19 04.8	
	comp=E,750nm,0.5s						
SPIG	San Pedro Mart	1.17	294	eP	Pn	02 18 39.9	-0.2
SPIG				eS	Sb	02 18 54.9	-0.3
SPIG	San Pedro Mart	1.17	294	eP	Pn	02 18 39.9	-0.2
SPIG				eS	Sn	02 18 55.7	-0.3
SPIG				IAML		02 19 06.0	
	comp=N,688nm,0.4s						
PIX	Pinacate	1.18	33	eP	Pn	02 18 39.0	-1.0
PIX				eS	Sn	02 18 56.4	+0.5
PLIB	Puerto Liberta	1.48	116	eP	Pn	02 18 43.8	-0.2
PLIB				eS	Sb	02 19 04.1	+0.4
VTX	Valle De La Tr	1.57	302	eP	Pn	02 18 46.0	+0.6
VTX				IAML		02 19 09.8	
	comp=E,497nm,0.4s						
VTX				⇑e		02 19 09.8	
LAPR	La Primavera	1.64	92	eP	Pn	02 18 46.7	+0.4
LAPR				e		02 19 11.7	
LAPR	La Primavera	1.64	92	eP	Pn	02 18 47.4	+1.1
LAPR				eS	Sb	02 19 08.3	-0.2
LAPR				⇑e		02 19 22.0	
LAPR				IAML		02 19 22.0	
	comp=N,1μm,0.8s						
BAHB	Baha de los	1.72	160	eP	Pb	02 18 48.6	-0.6
BAHB				e		02 19 18.7	
214A	Organ Pipe Nat	1.83	41	eP	Pn	02 18 48.8	-0.2
MBIG	Mexicali	2.01	336	eP	Pg	02 18 56.3	-0.1
MBIG				e		02 19 37.2	
CPBX	Cerro Prieto	2.06	334	IAML		02 19 52.2	
	comp=E,792nm,0.7s						
CPBX				⇑e		02 19 52.2	
CBX	Cerro Bola	2.71	310	eP	Pb	02 19 07.1	+0.9
CBX				e		02 19 38.8	
TJIG	Tijuana	2.80	312	eP	Pn	02 19 02.8	+0.6
TJIG				eS	Sn	02 19 35.0	-0.8
HSIG		3.24	118	e	Pb	02 19 15.8	+0.6
HSIG				e		02 20 06.3	

IDC ***07*** *03:01:47.2±0.8, 52°.33N×162°.70E, h0km, mb3.8/11, mbtmp3.9/13, ML4.2/2, MS2.8/5, Error ellipse: s-maj=24.2km s-min=16.6km az=172.0*
KRSC ***07*** *03:01:47.1±2.0, 52°.63N×162°.70E, h41km±37km, ML4.1*
MOS ***07*** *03:01:49.7±0.9, 52°.59N×162°.69E, h40km, mb4.6/4, Error ellipse: s-maj=8.1km s-min=5.0km az=116.4*
NEIC ***07*** *03:01:50.4±1.5, 52°.3N±0°.3×162°.6E±0°.1, h32km±8km, mb4.4/7, Error ellipse: s-maj=45.9km s-min=10.5km az=183.0*
ISC 07 03:01:50.1±2.8, 52°.61N±0°.03×162°.64E±0°.03, h23km±21km, n108, σ1°.32/136, mb4.1/18, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.66	288	PN	Pn	03 02 35.1	-1.7
SPN				S	Sn	03 02 35.6	-2.8
SPN	Mys Shipunski	1.66	288	eP	Pn	03 02 16.1	-1.7
SPN				eS	Sn	03 02 35.6	-2.8
MKZ	Mys Kozlova	2.03	345	PN	Pn	03 02 21.3	-1.5
MKZ				S	Sn	03 02 44.5	-2.9
MKZ	Mys Kozlova	2.03	345	eP	Pn	03 02 21.3	-1.5
MKZ				eS	Sn	03 02 44.5	-2.9
NLC	Nalytchevo	2.08	287	eS	Sn	03 02 46.9	-1.7
SDLR	Sedlovina	2.37	288	PN	Pn	03 02 27.5	-0.2
SDLR	Sedlovina	2.37	288	eP	Pn	03 02 27.5	-0.2
UGLR	Uglovaya	2.39	286	PN	Pn	03 02 27.6	-0.3
UGLR				S	Sn	03 02 56.6	+0.1
UGLR	Uglovaya	2.39	286	eP	Pn	03 02 27.6	-0.3
UGLR				eS	Sn	03 02 56.6	+0.1
KII	Karymskiy	2.39	308	PN	Pn	03 02 27.0	-0.9
KII	Karymskiy	2.39	308	eP	Pn	03 02 27.0	-0.9
SMAR	Somma	2.42	287	PN	Pn	03 02 28.0	-0.4
SMAR	Somma	2.42	287	eP	Pn	03 02 28.0	-0.4
AVH	Avacha	2.45	287	PN	Pn	03 02 28.7	-0.1
AVH	Avacha	2.45	287	eP	Pn	03 02 28.7	-0.1
KRER	Koryakskii	2.46	288	PN	Pn	03 02 28.9	0.0
KRER				S	Sn	03 02 56.6	-1.7
KRER	Koryakskii	2.46	288	eP	Pn	03 02 28.9	0.0
KRER				eS	Sn	03 02 56.6	-1.7
PET	Petropavlovsk	2.46	281		Pn	03 02 28.2	-0.5
PET	Petropavlovsk	2.46	281	PN	Pn	03 02 28.2	-0.5
PET				S	Sn	03 02 56.3	-1.7
PET	Petropavlovsk	2.46	281	eP	Pn	03 02 28.2	-0.5
PET				eS	Sn	03 02 56.3	-1.7
KOK	Koryaka	2.52	287	PN	Pn	03 02 29.6	-0.1
KOK	Koryaka	2.52	287	eP	Pn	03 02 29.6	-0.1
KRX	Arik	2.53	289	PN	Pn	03 02 29.5	-0.4
KRX				S	Sn	03 02 59.3	-0.7
KRX	Arik	2.53	289	eP	Pn	03 02 29.5	-0.4
KRX				eS	Sn	03 02 59.3	-0.7
RUS	Russkaya	2.53	268	PN	Pn	03 02 29.3	-0.4
RUS				S	Sn	03 02 57.8	-2.0
RUS	Russkaya	2.53	268	eP	Pn	03 02 29.3	-0.4
RUS				eS	Sn	03 02 57.8	-2.0
MTVR	Mutnovka	2.73	269	PN	Pn	03 02 32.2	-0.4
MTVR				S	Sn	03 03 03.4	-1.5
MTVR	Mutnovka	2.73	269	eP	Pn	03 02 32.2	-0.4
MTVR				eS	Sn	03 03 03.4	-1.5
KRMR	Karymshinskiy	2.75	276	PN	Pn	03 02 32.7	-0.1
KRMR				S	Sn	03 03 04.3	-1.0
KRMR	Karymshinskiy	2.75	276	eP	Pn	03 02 32.7	-0.1
KRMR				eS	Sn	03 03 04.3	-1.0
GRL	Gorelyy	2.79	271	PN	Pn	03 02 33.6	+0.2
GRL				S	Sn	03 03 06.6	+0.2
GRL	Gorelyy	2.79	271	eP	Pn	03 02 33.6	+0.2
GRL				eS	Sn	03 03 06.6	+0.2
ASAK	Asacha	2.91	267	PN	Pn	03 02 35.3	+0.3
ASAK				S	Sn	03 03 07.4	-1.9
ASAK	Asacha	2.91	267	eP	Pn	03 02 35.3	+0.3
ASAK				eS	Sn	03 03 07.4	-1.9
KDTR	Khodutka, Kamc	2.92	256	PN	Pn	03 02 34.2	-0.9
KDTR	Khodutka, Kamc	2.92	256	eP	Pn	03 02 34.2	-0.9
KDTR				eS	Sn	03 03 05.9	-3.5
GNL	Ganaly	3.03	293	PN	Pn	03 02 37.2	+0.4
GNL				S	Sn	03 03 13.4	+1.0
GNL	Ganaly	3.03	293	eP	Pn	03 02 37.2	+0.4
GNL				eS	Sn	03 03 13.4	+1.0
PEA0B	Petropavlovsk-	3.04	281	Pn	Pn	03 02 36.8	0.0
PEA0B	Petropavlovsk-	3.04	281	PN	Pn	03 02 36.8	0.0
PETK	Petropavlovsk-	3.04	281	Pn	Pn	03 02 37.0	+0.2
	31nm,0.3s,baz=98,slow=17,SNR=349						
PETK				Sn	Sn	03 03 12.7	+0.3
	16nm,0.3s,baz=202,slow=27,SNR=12						
PETK				LR	LR	03 04 15.9	
	comp=Z,61nm,21.7s,baz=50,slow=47						
	80nm,0.4s						
PETK	Petropavlovsk-	3.04	281	Pn	Pn	03 02 37.1	+0.3
PETK	Petropavlovsk-	3.04	281	PN	Pn	03 02 37.1	+0.3
TUMR	Tumrok	3.06	332	PN	Pn	03 02 37.9	+0.8
TUMR				S	Sn	03 03 12.7	-0.4
TUMR	Tumrok	3.06	332	eP	Pn	03 02 37.9	+0.8
TUMR				eS	Sn	03 03 12.7	-0.4
BKI	Bering	3.26	36	PN	Pn	03 02 37.4	-2.4
BKI	Bering	3.26	36	eP	Pn	03 02 37.4	-2.4
BKI				eS	Sn	03 03 11.3	-6.6
APC	Apacha	3.35	278	PN	Pn	03 02 41.8	+0.8
APC				S	Sn	03 03 21.1	+1.2
APC	Apacha	3.35	278	eP	Pn	03 02 41.8	+0.8
APC				eS	Sn	03 03 21.1	+1.2
KMNR	Kamenistaya	3.46	337	PN	Pn	03 02 43.6	+1.0
KMNR				S	Sn	03 03 23.4	+0.6
KMNR	Kamenistaya	3.46	337	eP	Pn	03 02 43.6	+1.0
KMNR				eS	Sn	03 03 23.4	+0.6
BZMR	Bezymyannaya	3.56	340	PN	Pn	03 02 45.6	+1.5
BZMR	Bezymyannaya	3.56	340	eP	Pn	03 02 45.6	+1.5
KBTR	Krutoberegovo	3.61	2	PN	Pn	03 02 42.9	-1.7
KBTR	Krutoberegovo	3.61	2	eP	Pn	03 02 42.9	-1.7
KBTR				eS	Sn	03 03 23.9	-2.5
KIRR	Kirishev	3.61	339	PN	Pn	03 02 45.5	+0.7
KIRR	Kirishev	3.61	339	eP	Pn	03 02 45.5	+0.7
KPT	Kopyto	3.65	338	PN	Pn	03 02 46.3	+1.0
KPT	Kopyto	3.65	338	eP	Pn	03 02 46.3	+1.0
KOZ	Kozyrevsk	3.82	336	PN	Pn	03 02 48.3	+0.8
KOZ	Kozyrevsk	3.82	336	eP	Pn	03 02 48.3	+0.8
KLY	Klyuchi	3.89	343	PN	Pn	03 02 48.5	+0.1
KLY				S	Sn	03 03 31.8	-1.5
KLY	Klyuchi	3.89	343	eP	Pn	03 02 48.5	+0.1
KLY				S	Sn	03 03 31.8	-1.5
SMKR	Semkarok	4.04	351	PN	Pn	03 02 50.6	0.0
SMKR				S	Sn	03 03 37.8	+0.6
SMKR	Semkarok	4.04	351	eP	Pn	03 02 50.6	0.0
SMKR				eS	Sn	03 03 37.8	+0.6
ESO	Esso	4.05	327	PN	Pn	03 02 51.5	+0.9
ESO	Esso	4.05	327	eP	Pn	03 02 51.5	+0.9
BDR	Baidarnaya	4.05	349	PN	Pn	03 02 51.1	+0.3
BDR				S	Sn	03 03 38.0	+0.5
BDR	Baidarnaya	4.05	349	eP	Pn	03 02 51.1	+0.3
BDR				eS	Sn	03 03 38.0	+0.5
SRDR	Sredinnyy	4.09	337	PN	Pn	03 02 51.5	+0.3
SRDR	Sredinnyy	4.09	337	eP	Pn	03 02 51.5	+0.3
SRKR	Sorokina	4.14	349	PN	Pn	03 02 51.9	-0.1
SRKR				S	Sn	03 03 39.5	-0.2
SRKR	Sorokina	4.14	349	eP	Pn	03 02 51.9	-0.1
SRKR				eS	Sn	03 03 39.5	-0.2
SKR	Severo-Kuril's	4.50	247	ePN	Pn	03 02 55.6	-1.2
SKR				pmax	pmax		
	comp=Z,26nm,0.6s						
SMY	Shemya	6.97	84	Pn	Pn	03 03 28.4	-2.3
SMY	Shemya	6.97	84	PN	Pn	03 03 28.4	-2.3
SHEM	Shemya Is, Ala	6.97	84	Pn	Pn	03 03 30.3	-0.4
	comp=Z,17nm,0.3s,baz=43,slow=2.4,SNR=14						
SHEM				Sn	Sn	03 04 42.5	-6.7
	comp=Z,3.7nm,0.3s,baz=233,slow=20,SNR=1.3						
SHEM				LR	LR	03 05 24.0	
	comp=Z,35nm,20.4s,baz=342,slow=31						
	comp=Z,41nm,0.3s						
MA2	Magadan	9.62	321	LR	LR	03 07 59.6	
	comp=Z,43nm,18.5s,baz=73,slow=38						
KLR	Kul'dur	19.69	272	LR	LR	03 15 04.4	
	comp=Z,42nm,19.5s,baz=286,slow=40						
N19K	Bonanza Creek	24.52	53	P	P	03 07 07.4	-0.2
N19K				IAmb	IAmb	03 07 10.5	
	comp=Z,8.2nm,1.1s						
J20K	Nowinta River	24.89	45	P	P	03 07 11.9	+1.1
ILAR	Eielson Array	28.07	45	P	P	03 07 41.5	+2.1
	comp=Z,0.3nm,0.7s,baz=252,slow=7.9,SNR=4.5						
	comp=Z,0.3nm,0.7s						
BCAR	Beaver Creek A	30.39	48	P	P	03 08 01.0	+0.9
SONM	Songino Array	35.52	285	P	P	03 08 47.2	+2.1
	comp=Z,0.2nm,0.3s,baz=67,slow=11,SNR=2.0						
	comp=Z,0.2nm,0.3s						
KURK	Kurchatov	49.30	303	P	P	03 10 37.4	+0.6
KURK				IAmb	IAmb	03 10 52.3	
	comp=Z,2.3nm,0.6s						
KURK	Kurchatov	49.30	303	P	P	03 10 37.4	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	49.75	297	P	P	03 10 40.6	+0.2
MK31				IAmb	IAmb	03 10 59.7	
	comp=Z,9.4nm,1.4s						
MK31	Makanchi Array	49.75	297	P	P	03 10 40.6	+0.2
MK31				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MKAR	Makanchi Array	49.75	297	P	P	03 10 40.3	-0.1
	comp=Z,0.8nm,0.6s,baz=48,slow=5.9,SNR=5.7						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	49.75	297	P	P	03 10 40.9	+0.5
MKAR	Makanchi Array	49.75	297	P	P	03 10 40.9	+0.5
BRVK	Borovoye	51.92	310	P	P	03 10 58.5	+1.9
BRVK				IAmb	IAmb	03 11 09.1	
	comp=Z,5.0nm,1.4s						
BRVK	Borovoye	51.92	310	P	P	03 10 58.5	+1.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NVAR	Mina Array Bea	54.44	71	P	P	03 11 16.8	+1.1
	comp=Z,0.5nm,0.6s,baz=302,slow=6.9,SNR=5.4						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	56.40	62	P	P	03 11 30.9	+1.1
	comp=Z,0.9nm,0.6s,baz=300,slow=2.9,SNR=10.0						
	comp=Z,0.9nm,0.6s						
ABKAR	Akbulak array	59.28	312	P	P	03 11 48.9	-0.6
FINES	FINESS Array B	61.17	338	P	P	03 12 05.8	+3.5
	comp=Z,2.8nm,0.9s,baz=51,slow=11,SNR=5.2						
	comp=Z,2.8nm,0.9s						
BELG	Belogornoye	62.08	321	LR	LR	03 40 44.1	
	comp=Z,42nm,18.6s,baz=152,slow=38						
NIL	Nilore	63.73	292	P	P	03 12 19.5	-0.4
NIL	Nilore	63.73	292	P	P	03 12 19.5	-0.4
NIL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NOA	NORSAR Array B	64.43	345	P	P	03 12 26.8	+2.8
	comp=Z,0.4nm,0.6s,baz=21,slow=6.6,SNR=2.8						
	comp=Z,0.4nm,0.6s						
TX32	Lajitas Array	69.39	69	P	P	03 12 55.6	-0.5
TX32				IAmb	IAmb	03 13 00.1	
	comp=Z,4.9nm,1.4s						
TXAR	Lajitas Array	69.39	69	P	P	03 12 56.9	+0.7
	comp=Z,1.1nm,0.6s,baz=298,slow=4.3,SNR=17						
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	69.39	69	P	P	03 12 56.1	0.0
AKASG	Malin Array Be	69.81	331	P	P	03 13 01.1	+2.8
	comp=Z,0.9nm,0.6s,baz=31,slow=6.6,SNR=4.1						
	comp=Z,0.9nm,0.6s						
CLL	Collm	73.34	341	*i* pP	pP	03 13 30.8	+5.8
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	76.33	207	P	P	03 13 36.1	-0.9
	comp=Z,0.6nm,0.8s,baz=20,slow=6.1,SNR=7.2						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	79.98	207	P	P	03 13 57.7	+0.4
	comp=Z,0.9nm,0.6s,baz=22,slow=5.8,SNR=8.1						
	comp=Z,0.9nm,0.6s						

KRNET ***07*** *03:07:48.0±0.1, 40°.23N×71°.39E, h22km, mb2.6*
ISU ***07*** *03:07:47, 40°.25N×71°.37E, h7km*
ISC 07 03:07:47.8±0.9, 40°.25N±0°.03×71°.38E±0°.03, h11km±7km, n14, σ0°.73/26, 11C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMI	Chimion	0.12	78	P	Pg	03 07 51.0	+0.2
CHMI				S	Sg	03 07 53.2	+0.2
FRG	Fergana	0.34	67	P	Pg	03 07 53.9	-0.7
FRG				S	Sg	03 07 59.3	+0.1
BTK	Batken	0.47	247	⇓eP	Pb	03 07 57.3	-0.8
	baz=49						
BTK				⇓eS	Sb	03 08 04.4	-0.6
	baz=49						
BTK	Batken	0.47	247	P	Pg	03 07 57.0	0.0
BTK				S	Sb	03 08 04.2	-0.8
DRK	Karamyk	0.83	157	⇑eP	Pg	03 08 03.4	-0.5
	baz=57						
DRK				⇑eS	Sg	03 08 14.6	-0.2
	baz=57						
OHH	Osh	1.11	75	⇑eP	Pb	03 08 08.5	-0.6
	baz=74						
OHH				⇑eS	Sb	03 08 23.3	-0.4
	baz=74						
TRKS	Terek-Say	1.30	352	⇑eP	Pn	03 08 11.0	-1.1
	baz=53						
TRKS				⇑eS	Sb	03 08 27.5	-1.6
	baz=53						
GAR	Garm	1.49	214	⇓eP	Pb	03 08 15.1	-0.5
	baz=14						
GAR				⇓eS	Sb	03 08 34.4	-0.1
	baz=14						
ARK	Arkit	1.61	16	⇓eP	Pb	03 08 17.4	-0.3
	baz=15						
ARK				⇓eS	Sb	03 08 38.9	+0.7
	baz=15						
CHMG	Chimgan	1.67	322	P	Pb	03 08 18.6	0.0
CHMG				S	Sg	03 08 41.7	+0.3
CHRV	Charvak	1.76	323	P	Sg	03 08 44.5	0.0
CHGR	Chuyangaron	2.34	228	⇑eP	Pn	03 08 27.5	+1.2
	baz=28						
CHGR				⇑eS	Sn	03 08 55.9	+0.9
	baz=28						
ARLS	Aral	2.75	53	⇑eP	Pn	03 08 33.1	+1.0
	baz=53						
ARLS				⇑eS	Sn	03 09 06.0	+0.6
	baz=53						
KK31	Karatay Array	2.93	348	Pg	Pb	03 08 40.6	+0.6
	1.6nm,0.3s,baz=156,slow=18,SNR=24						
KK31				⇑Lg	Lg	03 09 18.9	
	6.3nm,0.6s,baz=162,slow=30,SNR=5.5						

IDC ***07*** *03:15:22.7±0.9, 11°.69N×87°.24W, h0km, mb3.7/9, mbtmp3.8/10, ML3.8/1, MS3.2/4, Error ellipse: s-maj=41.9km s-min=16.4km az=58.0*
INET ***07*** *03:15:25.8±0.9, 11°.54N×87°.55W, h15km±18km, MW4.2*
UCR ***07*** *03:15:27.5±2.1, 11°.67N×87°.49W, h38km±25km, ML3.4, mb4.2(NEIC)*
NEIC ***07*** *03:15:28.7±1.8, 11°.66N±0°.06×87°.36W±0°.08, h43km±12km, mb4.2/12, Error ellipse: s-maj=12.3km s-min=7.7km az=57.0*
SNET ***07*** *03:15:30.8±0.8, 11°.93N×87°.74W, h13km±14km, ML3.5*
ISC 07 03:15:26.7±1.5, 11°.64N±0°.04×87°.49W±0°.05, h31km±11km, n127, σ1°.10/133, mb4.0/12, MS3.0/4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.03	58	eP	Pb	03 15 45.9	-0.2
TEL3	Telica 3	1.12	34	eP	Pb	03 15 47.0	-0.5
CRIN	San Cristobal	1.14	22		Pb	03 15 47.4	-0.5
CRIN	San Cristobal	1.14	22	eP	Pb	03 15 47.8	-0.1
CNGN	Cerro Negro	1.15	42		Pn	03 15 46.6	-0.3
CNGN	Cerro Negro	1.15	42	eP	Pn	03 15 46.5	-0.3
CNGN				eS	Sn	03 16 03.8	+2.2
TELN	Telica	1.15	34	eP	Pb	03 15 48.2	0.0
MOMN	Momotombo	1.20	50	eP	Pb	03 15 48.0	-1.0
APYN	Apoyeque	1.26	62	eP	Pb	03 15 48.7	-1.2
MGAN	Managua	1.32	67	eP	Pn	03 15 49.2	+0.2
WILN	Americas 2	1.38	68	eP	Pn	03 15 50.2	+0.4
CNCH	Conchagua	1.66	348	eP	Pn	03 15 54.5	+0.6
CNCH				eS	Sn	03 16 14.0	-0.3
CNCH	Conchagua	1.66	348	eP	Pn	03 15 54.5	+0.6
CNCH				eS	Sn	03 16 14.0	-0.3
LCND	La Caada	1.71	347	eP	Pn	03 15 54.9	+0.5
LCND				eS	Sn	03 16 13.4	-1.8
LCND				IAML		03 16 26.2	
	comp=Z,501nm,0.6s						
LCND	La Caada	1.71	347	eP	Pn	03 15 54.9	+0.5
LCND				eS	Sn	03 16 13.4	-1.8
LCND				IAML		03 16 26.2	
	comp=Z,501nm,0.6s						
BOAB	BOACO BROADBAN	.96	66	Pn	Pn	03 15 58.0	+0.2
BOAB	BOACO BROADBAN	.96	66	eP	Pn	03 15 57.8	0.0
BOAB				eS	Sb	03 16 24.4	-1.3
PACA	Pacayal	1.99	336	eP	Pn	03 15 59.4	+0.9
PACA	Pacayal	1.99	336	eP	Pn	03 15 59.4	+0.9
MATN	Matagalpa	2.00	50		Pn	03 15 58.5	0.0
MATN	Matagalpa	2.00	50	eP	Pn	03 15 58.9	+0.4
HZTE	Horizontes, Gu	2.07	116		Pn	03 15 59.1	-0.4
RCON	San Juan de Ri	2.25	35	eP	Pb	03 16 05.4	-1.4
ACON	Acoyapa	2.29	82	Pn	Pn	03 16 03.0	+0.6
ACON	Acoyapa	2.29	82	eP	Pn	03 16 02.9	+0.5
ORTG	Ortega, Santa	2.36	122		Pn	03 16 02.6	-1.0
SCLA	Alcaldia de Sa	2.38	330	eP	Pn	03 16 04.5	+0.7
SCLA	Alcaldia de Sa	2.38	330	eP	Pn	03 16 04.5	+0.7
COEG	Centro de Oper	2.39	326

BRU2 Volcan 5.50 120 Pn **Pn 03 16 47.9 +1.1**
PETF Flores 5.73 337 **Pn 03 16 52.4 +2.7**
CMIG Matias Romero 8.98 308 Pn **Pn 03 17 35.4 +0.9**
comp=Z,1.1nm,0.3s,baz=150,slow=10,SNR=12
comp=Z,2.5nm,0.3s
TLIG Tlapa 12.23 300 Pn **Pn 03 18 22.5 +3.5**
OTAV Otavalo 14.45 141 *e*P **Pn 03 18 51.5 +1.7**
ROSC El Rosal 14.67 116 Pn **Pn 03 18 55.2 +2.5**
comp=Z,0.8nm,0.3s,baz=339,slow=22,SNR=1.6
ROSC El Rosal 14.67 116 Pn **Pn 03 18 50.8 -1.9**
SLOR San Lorenzo - 15.19 143 Pn **Pn 03 18 59.0 -0.7**
SDV Santo Domingo 16.81 98 Pn **Pn 03 19 20.5 +0.3**
comp=Z,0.6nm,0.3s,baz=248,slow=8.5,SNR=5.7
SDV Santo Domingo 16.81 98 Pn **Pn 03 19 19.1 -1.1**
SDV IAmb IAmb 03 19 24.4
comp=Z,18nm,1.3s
SDV Santo Domingo 16.81 98 *e*P **Pn 03 19 19.1 -1.1**
BOSC San Juan Bosco 17.20 148 Pn **Pn 03 19 24.6 -0.5**
HKT Hockley 19.80 338 P **P 03 19 55.1 +0.4**
HKT IAmb IAmb 03 20 04.9
comp=Z,14nm,1.4s
833A Chaparral WMA, 19.99 328 P **Pn 03 19 58.2 -0.5**
ATAH Atahualpa 20.73 154 LR LR 03 27 01.7
comp=Z,53nm,20.9s,baz=344,slow=34
JCT Junction City 21.95 330 P **P 03 20 19.3 +1.2**
JCT IAmb IAmb 03 20 32.9
comp=Z,5.3nm,0.8s
TXAR Lajitas Array 23.18 322 P **P 03 20 32.7 +1.7**
comp=Z,1.7nm,0.6s,baz=134,slow=9.8,SNR=32
comp=Z,1.7nm,0.6s
TX31 Lajitas Ar. Si 23.18 322 P **P 03 20 32.5 +1.5**
TX31 IAmb IAmb 03 20 43.7
comp=Z,12nm,0.9s
TX32 Lajitas Array 23.18 322 P **P 03 20 31.8 +0.7**
Z35A Perchaven, San 23.37 339 P **P 03 20 32.9 +0.1**
Z35A IAmb IAmb 03 20 51.7
comp=Z,12nm,0.9s
X37A Clayton 23.95 344 P **P 03 20 38.8 +0.5**
TKL Tuckaleechee C 24.15 7 P **P 03 20 40.6 +0.4**
comp=Z,3.4nm,0.7s,baz=181,slow=12,SNR=5.8
comp=Z,3.4nm,0.7s
CZSB Cruzeiro do Su 24.22 142 *e*P **P 03 20 41.7 +0.7**
LCAR Lake Charles 24.55 353 P **P 03 20 43.5 -0.2**
BOAV Boa Vista 28.27 107 *e*P **P 03 21 16.6 -1.0**
PTGA Pitinga 29.98 112 LR LR 03 34 07.6
comp=Z,36nm,19.0s,baz=250,slow=38
ETMB Extrema 30.03 134 *e*P **P 03 21 33.0 -0.2**
MACA Manacapuru-AM 30.44 117 *e*P **P 03 21 36.7 -0.2**
LPAZ La Paz 33.72 145 P **P 03 22 05.6 -0.7**
comp=Z,0.8nm,0.9s,baz=277,slow=8.1,SNR=2.1
comp=Z,0.8nm,0.9s
ITTB Itaituba 35.36 115 *e*P **P 03 22 19.9 0.0**
PDAR Pinedale Array 36.47 332 P **P 03 22 30.0 +0.7**
comp=Z,0.5nm,0.7s,baz=136,slow=9.4,SNR=4.2
comp=Z,0.5nm,0.7s
VILB Vilhena 36.47 131 *e*P **P 03 22 29.4 +0.1**
NPGB Novo Progresso 36.96 119 *e*P **P 03 22 32.1 -1.4**
ELK Elko 37.90 325 LR LR 03 41 10.4
comp=Z,16nm,19.1s,baz=196,slow=41
NVAR Mina Array Bea 38.29 320 P **P 03 22 47.5 +2.7**
comp=Z,0.2nm,0.6s,baz=122,slow=6.9,SNR=2.6
comp=Z,0.2nm,0.6s
PDRB Porto dos Gac 38.30 126 *e*P **P 03 22 43.9 -1.0**
LVC Limon Verde 38.60 152 *e*P **P 03 22 47.8 +0.1**
CLDB Colider 38.62 124 *e*P **P 03 22 46.1 -1.5**
PTLB Pontes e Lacer 38.89 133 *e*P **P 03 22 49.9 +0.1**
BBSD Serra de San D 39.06 137 *e*P **P 03 22 51.3 +0.1**
BBRB Robore, Bolivi 40.37 137 *e*P **P 03 23 01.7 -0.4**
SNDB Serra Nova Dou 42.92 122 *e*P **P 03 23 22.1 -1.0**
MURT Porto Murtinho 44.22 138 *e*P **P 03 23 32.6 -0.8**
SMTB Santa Maria do 44.60 115 *e*P **P 03 23 36.1 -0.5**
AQDB Aquidauana 44.68 135 *e*P **P 03 23 37.8 +0.7**
ROSB Rosrio 45.47 106 *e*P **P 03 23 40.9 -2.6**
ANTJ Antonio Joao (45.52 137 *e*P **P 03 23 44.0 +0.2**
SCHQ Schefferville 46.06 16 P **P 03 23 46.5 -1.1**
comp=Z,3.6nm,0.9s,baz=220,slow=8.2,SNR=1.5
comp=Z,3.6nm,0.9s
RPRD Ribas do Rio P 46.08 134 *e*P **P 03 23 46.7 -1.5**
BDFB Brasilia 47.56 124 P **P 03 23 59.4 -0.6**
comp=Z,3.6nm,0.7s,baz=299,slow=12,SNR=5.4
comp=Z,3.6nm,0.7s
BDFB Brasilia 47.56 124 *e*P **P 03 23 59.6 -0.4**
DIAM Diamantina, MG 52.48 124 *e*P **P 03 24 37.2 -0.2**
CPSB Cacapava Do Su 53.10 143 *e*P **P 03 24 40.4 -1.2**
PLTB Pedras Altas 54.00 144 *e*P **P 03 24 46.9 -1.3**
RCBR Riachuelo 54.17 106 LR LR 03 47 50.8
comp=Z,47nm,18.2s,baz=124,slow=36
PLCA Paso Flores 54.42 164 P **P 03 24 51.3 +0.2**
comp=Z,1.7nm,0.9s,baz=333,slow=11,SNR=3.0
comp=Z,1.7nm,0.9s
PLCA Paso Flores 54.42 164 *e*P **P 03 24 52.0 +0.9**
ILAR Eielson Array 66.74 336 P **P 03 26 14.6 -0.2**
comp=Z,0.1nm,0.8s,baz=150,slow=3.8,SNR=4.3
comp=Z,0.1nm,0.8s
ASAR Alice Springs 138.93 247 PKP **PKiKP 03 34 53.2 0.0**
comp=Z,0.6nm,0.7s,baz=123,slow=3.4,SNR=2.4
WRA Warramunga Arr 139.00 253 PKP **PKPdf 03 34 51.9 +0.7**
comp=Z,0.6nm,1.0s,baz=93,slow=3.3,SNR=2.2
PZH PanZhiHua 141.04 347 PKP **PKPdf 03 34 54.3 -0.7**
CMAR Chiang Mai Arr 149.43 348 PKPbc **PKPbc 03 35 14.3 +0.6**
comp=Z,1.6nm,0.4s,baz=337,slow=3.0,SNR=9.9

*NOU **07** 03:16:01.4, 17°.14S×168°.53E, h9km, ML4.6/14, Vanuatu Islands*
*IDC **07** 03:16:02.7±0.9, 17°.18S×168°.23E, h0km, mb4.1/8, mbtmp4.1/10, ML4.6/2, MS3.6/32, Error ellipse: s-maj=33.2km s-min=18.1km az=146.0*
*NEIC **07** 03:16:12.3±1.1, 17°.8S±0°.1×168°.3E±0°.2, h63km±7km, mb4.4/14, Error ellipse: s-maj=24.6km s-min=16.2km az=118.0*
ISC 07 03:16:07.9±0.6, **17°.43S**±0°.08×**168°.36E**±0°.08, **h35**km, **n85**, σ1§**50**/58, **mb4.2**/13, **MS3.6**/32, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.34**	**209**	P	**Pn**	**03 16 14.6**	**-1.8**
RTV	**Rentapao**	**0.37**	**170**	P	**Pn**	**03 16 14.7**	**-2.1**
LIFNC	**LIFOU**	**3.50**	**197**		**Pn**	**03 16 57.4**	**-2.5**
LIFNC	**LIFOU**	**3.50**	**197**	P	**Pn**	**03 16 58.5**	**-1.4**
MARNC	**Mare, Loyalty**	**4.05**	**184**		**Pn**	**03 17 05.7**	**-1.7**
MARNC	**Mare, Loyalty**	**4.05**	**184**	P	**Pn**	**03 17 06.5**	**-0.9**
YATNC	**Mamie plateau,**	**4.81**	**196**	P	**Pn**	**03 17 18.5**	**+0.6**
KOUNC	**Koumac, New Ca**	**4.95**	**230**	P	**Pn**	**03 17 20.3**	**+0.5**
DZM	**Mont Dzumac**	**4.96**	**201**	*e*Pn	**Pn**	**03 17 20.3**	**+0.2**
DZM	73nm,1.1s			*e*Sn	**Sn**	**03 18 19.8**	**+3.5**
	72nm,0.8s						
DZM				*e*LR	LR	03 18 33.6	
DZM	**Mont Dzumac**	**4.96**	**201**	Pn	**Pn**	**03 17 21.3**	**+1.3**
	6.8nm,0.3s,baz=55,slow=7.7,SNR=62						
DZM				Sn	**Sn**	**03 18 20.6**	**+4.3**
	4.2nm,0.3s,baz=310,slow=19,SNR=2.6						
DZM				LR	LR	03 18 49.9	
	comp=Z,257nm,21.7s,baz=34,slow=32						
	20nm,0.4s						
DZM	**Mont Dzumac**	**4.96**	**201**		**Pn**	**03 17 19.2**	**-0.9**
DZM	**Mont Dzumac**	**4.96**	**201**	P	**Pn**	**03 17 21.0**	**+0.9**
OUENC	**Ouen Island, N**	**5.17**	**196**		**Pn**	**03 17 22.7**	**-0.1**
OUENC	**Ouen Island, N**	**5.17**	**196**	P	**Pn**	**03 17 25.4**	**+2.6**
ONTNC	**Ouen Toro**	**5.18**	**200**		**Pn**	**03 17 22.4**	**-0.6**
ONTNC	**Ouen Toro**	**5.18**	**200**	P	**Pn**	**03 17 23.8**	**+0.9**
MSVF	**Nonsavu**	**9.25**	**93**	Pn	**Pn**	**03 18 20.0**	**+1.1**
	0.4nm,0.3s,baz=258,slow=12,SNR=5.4						
	11nm,0.9s						
HNR	**Honiara**	**11.40**	**313**	LR	LR	03 22 29.6	
	comp=Z,2μm,19.9s,baz=49,slow=35						
ARMA	**Armidale**	**20.00**	**227**	P	**P**	**03 20 35.4**	**-2.3**
CTA	**Charters Tower**	**21.10**	**259**	P	**P**	**03 20 48.4**	**-1.2**
	3.8nm,0.6s,baz=66,slow=12,SNR=2.1						
	3.8nm,0.6s						
CTAO	**Charters Tower**	**21.10**	**259**	P	**P**	**03 20 50.8**	**+1.2**
CTAO				IAmb	IAmb	03 21 03.5	
	comp=Z,18nm,1.1s						
PMG	**Port Moresby**	**22.09**	**288**	LR	LR	03 28 21.4	
	comp=Z,161nm,19.5s,baz=76,slow=34						
STKA	**Stephens Creek**	**28.16**	**234**	P	**P**	**03 21 58.1**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=76,slow=8.8,SNR=3.9						
STKA				LR	LR	03 31 55.2	
	comp=Z,70nm,18.2s,baz=41,slow=34						
	comp=Z,2.2nm,0.7s						
STKA	**Stephens Creek**	**28.16**	**234**	P	**P**	**03 21 55.9**	**-1.2**
RAR	**Rarotonga**	**30.28**	**102**	LR	LR	03 31 44.9	
	comp=Z,43nm,20.1s,baz=263,slow=31						

WB2 Warramunga Arr 32.28 260 P **P 03 22 33.4 -0.3**
WB2 IAmb IAmb 03 22 44.0
comp=Z,5.7nm,1.1s
WRA Warramunga Arr 32.30 260 P **P 03 22 32.3 -1.5**
comp=Z,2.5nm,1.1s,baz=83,slow=6.2,SNR=10.0
comp=Z,2.5nm,1.1s
WRA Warramunga Arr 32.30 260 P **P 03 22 34.0 +0.2**
AS31 Alice Springs 32.80 253 P **P 03 22 37.4 -0.8**
AS31 IAmb IAmb 03 22 44.2
comp=Z,2.9nm,0.9s
ASAR Alice Springs 32.80 253 P **P 03 22 37.5 -0.8**
comp=Z,4.4nm,0.6s,baz=80,slow=9.0,SNR=29
comp=Z,4.4nm,0.6s
BBOO Buckleboo 32.85 236 P **P 03 22 36.8 -1.7**
GUMO Guam 38.57 322 LR LR 03 37 15.9
comp=Z,84nm,20.6s,baz=108,slow=33
TBI Tubuai 39.87 106 *e*LR LR 03 34 56.9
comp=Z,124nm,27.8s
SIJI Sorong 40.01 290 LR LR 03 41 35.3
comp=Z,86nm,18.1s,baz=101,slow=38
PPT2 Papeete2 40.05 97 *e*LR LR 03 34 59.7
comp=Z,118nm,24.8s
PPT Papeete 40.06 97 LR LR 03 35 44.7
comp=Z,95nm,21.0s,baz=271,slow=29
FITZ Fitzroy Crossi 40.62 262 LR LR 03 39 30.8
comp=Z,44nm,18.2s,baz=92,slow=35
FITZ Fitzroy Crossi 40.62 262 P **P 03 23 44.2 -0.6**
DAV Davao City (W) 48.77 296 LR LR 03 43 06.2
comp=Z,45nm,20.4s,baz=156,slow=33
KAPI Kappang 49.10 279 LR LR 03 45 10.6
comp=Z,48nm,19.8s,baz=92,slow=36
LEM Lembang 60.10 272 LR LR 03 54 00.8
comp=Z,38nm,18.7s,baz=210,slow=38
VNDA Vanda 60.21 182 LR LR 03 48 26.2
comp=Z,35nm,21.6s,baz=5.5,slow=32
KSRS Korea Array 66.55 326 LR LR 03 52 49.3
comp=Z,12nm,21.4s,baz=100,slow=33
SHEM Shenya Is, Ala 70.04 4 LR LR 03 52 02.8
comp=Z,53nm,21.8s,baz=182,slow=31
PETK Petropavlovsk- 70.84 353 LR LR 03 51 20.7
comp=Z,66nm,20.3s,baz=140,slow=30
QSPA South Pole Qui 72.62 180 LR LR 03 55 20.9
comp=Z,39nm,20.7s,baz=32,slow=32
QSPA South Pole Qui 72.62 180 P **P 03 27 30.6 -1.1**
QSPA IAmb IAmb 03 27 37.7
comp=Z,8.9nm,1.2s
CMAR Chiang Mai Arr 77.00 294 LR LR 04 03 20.8
comp=Z,14nm,18.3s,baz=185,slow=37
MA2 Magadan 78.06 351 LR LR 03 56 52.6
comp=Z,36nm,19.8s,baz=208,slow=32
MAW Mawson 79.79 202 LR LR 03 58 40.3
comp=Z,38nm,20.7s,baz=122,slow=32
SONM Songino Array 85.28 323 P **P 03 28 41.2 0.0**
comp=Z,1.8nm,1.0s,baz=133,slow=5.3,SNR=7.5
comp=Z,1.8nm,1.0s
SONM Songino Array 85.28 323 P **P 03 28 42.3 +1.1**
SONM IAmb IAmb 03 28 43.7
comp=Z,4.3nm,1.2s
CMB Columbia Colle 86.58 49 P **P 03 28 49.0 +1.2**
CMB IAmb IAmb 03 28 51.1
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 86.59 44 LR LR 03 58 39.6
comp=Z,40nm,21.4s,baz=270,slow=30
PFO Pinyon Flats O 87.72 54 LR LR 03 59 49.9
comp=Z,56nm,20.2s,baz=264,slow=30
PAHR Pah Rah Range 87.99 47 P **P 03 28 56.6 +1.9**
NVAR Mina Array Bea 88.24 49 P **P 03 28 55.0 -1.0**
comp=Z,1.1nm,0.8s,baz=231,slow=8.2,SNR=8.5
NVAR LR LR 04 01 21.1
comp=Z,31nm,19.4s,baz=250,slow=31
comp=Z,1.1nm,0.8s
NVAR Mina Array Bea 88.24 49 P **P 03 28 57.4 +1.4**
BBB Bella Bella 88.42 33 LR LR 04 00 21.1
comp=Z,26nm,20.7s,baz=254,slow=30
ILAR Eielson Array 88.76 18 P **P 03 28 56.2 -1.3**
comp=Z,0.7nm,0.7s,baz=241,slow=5.1,SNR=11
ILAR LR LR 04 00 43.1
comp=Z,41nm,20.8s,baz=252,slow=30
comp=Z,0.7nm,0.7s
LPIG La Paz 89.39 65 LR LR 04 02 57.7
comp=Z,40nm,18.1s,baz=208,slow=32
J08A Circle Bar Ran 90.11 44 P **P 03 29 06.3 +1.8**
PRN Pahroc Range 90.21 51 P **P 03 29 07.2 +2.0**
PRN IAmb IAmb 03 29 09.3
comp=Z,3.3nm,1.0s
TROLL Troll, Antarti 90.27 184 P **P 03 29 03.7 -1.2**
DLBC Dease Lake 90.82 28 LR LR 04 05 27.0
comp=Z,30nm,18.1s,baz=274,slow=33
SNAA Sanae 90.93 183 P **P 03 29 04.9 -3.0**
ELK Elko 91.31 48 LR LR 04 03 59.7
comp=Z,35nm,18.4s,baz=263,slow=32
VNA3 Neumayer Olymp 91.55 181 P **P 03 29 09.4 -1.3**
VNA2 Neumayer--Watz 91.83 181 P **P 03 29 10.0 -2.0**
baz=168,slow=3.0
INK Inuvik 95.09 18 LR LR 04 07 42.7
comp=Z,22nm,21.1s,baz=228,slow=33
PDAR Pinedale Array 96.00 47 LR LR 04 05 46.6
comp=Z,16nm,19.7s,baz=258,slow=31
TXAR Lajitas Array 96.64 61 P **P 03 29 36.5 +1.6**
comp=Z,0.2nm,0.7s,baz=257,slow=3.6,SNR=2.7
TXAR LR LR 04 06 31.4
comp=Z,16nm,18.3s,baz=314,slow=31
comp=Z,0.2nm,0.7s
YKA Yellowknife Ar 99.45 27 LR LR 04 13 03.1
comp=Z,23nm,19.1s,baz=194,slow=34
ARCES ARCESS Array B 123.11 345 PKP **PKiKP 03 35 00.5 +0.1**
comp=Z,2.4nm,0.9s,baz=29,slow=2.8,SNR=3.7
ABTA Abfaltersbach 144.60 331 *e*P **PKPdf 03 35 40.6 -0.4**
comp=Z,3.3nm,0.6s
WTTA Wattenberg 144.61 332 *e*P **PKPdf 03 35 42.1 +1.0**
comp=Z,5.1nm,0.8s
MOTA Moosalm 144.78 333 *e*P **PKPdf 03 35 41.7 +0.4**
comp=Z,8.1nm,1.1s
RETA Reutte 144.82 333 *e*P **PKPdf 03 35 42.0 +0.7**
comp=Z,6.5nm,1.2s
SQTA Sankt Quirin 144.83 333 *e*P **PKPdf 03 35 42.0 +0.6**
comp=Z,8.0nm,0.9s
BFO Black Forest 145.13 337 **PKPdf 03 35 42.0 +0.2**
FETA Feichten 145.19 333 *e*P **PKPdf 03 35 43.0 +0.9**
comp=Z,8.6nm,0.8s
DAVA Damuels 145.35 334 *e*P **PKPdf 03 35 43.1 +0.7**
comp=Z,17nm,0.9s
ECH Echery 145.66 338 PKPbc **PKPab 03 35 44.2 +0.9**
FUORN Ofenpass-Fuorn 145.71 333 PKPbc **PKPab 03 35 44.8 +1.0**
DAVOX Davos/Dischmat 145.75 333 PKPbc **PKPdf 03 35 42.1 -1.0**
comp=Z,14nm,0.8s,baz=56,slow=3.6,SNR=7.2

IDC 07 03:21:03.2±18.0, **21°.18S**×**177°.99W**, **h316**km±130km, **mb2.8**/2, **mbtmp3.6**/3, **Error ellipse: s-maj=293.0km s-min=52.2km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.08**	**312**	P	Pn	03 22 22.3	-0.1
	9.9nm,0.8s,baz=131,slow=14,SNR=6.2						
ASAR	**Alice Springs**	**44.38**	**257**	P	P	03 28 42.3	-1.1
	0.5nm,0.8s,baz=93,slow=7.6,SNR=4.1						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**44.52**	**263**	P	P	03 28 45.2	+0.6
	0.4nm,0.3s,baz=96,slow=8.4,SNR=23						
	0.4nm,0.3s						
AKASG	**Malin Array Be**	**143.61**	**331**	PKP	PKPdf	03 39 59.8	-0.6
	0.3nm,0.3s,baz=42,slow=4.3,SNR=5.4						

*NNC **07** 03:25:10.6±2.2, 39°.90N×71°.83E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=16.8km s-min=9.6km az=8.0*
*KRNET **07** 03:25:15.6±0.1, 40°.28N×71°.38E, h12km, mb3.4*
*ISU **07** 03:25:15, 40°.27N×71°.36E, h14km*
ISC 07 03:25:15.7±0.8, **40°.30N**±0°.02×**71°.40E**±0°.02, **h15**km±5km, **n24**, σ1§**16**/41, **17C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMI	**Chimion**	**0.10**	**106**	P	**Pg**	**03 25 18.8**	**-0.2**
CHMI				S	**Sb**	**03 25 21.8**	**+0.6**
FRG	**Fergana**	**0.30**	**75**	P	**Pg**	**03 25 22.2**	**+0.1**
FRG				S	**Sb**	**03 25 27.6**	**-0.1**
BTK	**Batken**	**0.50**	**242**	⇓*i*P	**Pg**	**03 25 25.0**	**-0.7**
BTK	baz=43			⇓*i*S	**Sg**	**03 25 32.0**	**-0.5**
	baz=43						
BTK	**Batken**	**0.50**	**242**	P	**Pg**	**03 25 24.7**	**-1.0**
BTK				S	**Sg**	**03 25 31.9**	**-0.5**
ANR	**Andizhan**	**0.86**	**58**	P	**Sn**	**03 25 46.5**	**+0.8**
TSTA	**Tashata**	**0.87**	**71**	P	**Sn**	**03 25 44.8**	**-1.1**

DRK Karamyk 0.87 159⇑*i*P **Pg 03 25 32.2 -0.5**
baz=57
DRK ⇑*i*S **Sg 03 25 44.1 -0.1**
baz=57
OHH Osh 1.08 77⇑*i*P **Pg 03 25 36.6 0.0**
baz=77
OHH ⇑*i*S **Sn 03 25 51.8 +0.6**
baz=77
OHH Osh 1.08 77 P **Pb 03 25 36.3 +0.1**
OHH S **Sn 03 25 52.0 +0.8**
TRKS Terek-Say 1.25 351⇓*i*P **Pn 03 25 38.3 -0.5**
baz=53
TRKS ⇓*i*S **Sb 03 25 55.1 +0.1**
baz=53
GAR Garm 1.54 213⇑*i*P **Pb 03 25 44.1 +0.1**
baz=13
GAR ⇑*i*S **Sg 03 26 04.9 -0.5**
baz=13
ARK Arkit 1.56 16⇑*e*P **Pg 03 25 45.3 -0.4**
baz=16
ARK ⇑*e*S **Sg 03 26 07.1 +1.1**
baz=16
ARK Arkit 1.56 16 P **Pg 03 25 45.1 -0.6**
ARK S **Sg 03 26 06.7 +0.7**
CHMG Chimgan 1.64 320 P **Pg 03 25 46.5 -0.6**
CHRV Charvak 1.73 321 P **Pg 03 25 49.0 0.0**
CHRV S **Sg 03 26 12.7 +1.2**
TGS TashGRES 1.81 309 P **Pg 03 25 49.8 -0.7**
NZBK Nazarbek 1.96 299 P **Sg 03 26 21.6 +2.7**
CHGR Chuyangaron 2.38 227⇑*e*P **Pb 03 25 57.5 -0.9**
baz=28
CHGR ⇑*i*S **Sb 03 26 28.2 +0.6**
baz=28
ARLS Aral 2.71 54⇑*e*P **Pb 03 26 02.6 -1.3**
baz=54
ARLS ⇑*i*S **Sb 03 26 37.0 0.0**
baz=54
KK31 Karatay Array 2.88 347 Pn **Pb 03 26 04.2 -2.6**
1.5nm,0.3s,baz=144,slow=10,SNR=73
KK31 ⇑Pg **Pg 03 26 11.9 +1.0**
4.1nm,0.3s,baz=167,slow=15,SNR=26
KK31 Sn **Sg 03 26 46.3 -1.9**
KK31 ⇓Lg Lg 03 26 54.6
20nm,0.6s,baz=162,slow=28,SNR=6.3
UCH Uchtor 3.04 50⇑*e*P **Pb 03 26 07.4 -2.3**
baz=49
UCH ⇑*i*S **Sb 03 26 45.3 -1.5**
baz=49
CHMS Chumysh 3.69 42 ⇑Pg **Pb 03 26 20.3 -0.2**
3.7nm,0.6s
CHMS ⇑Lg Lg 03 27 10.8
9.5nm,0.7s
TKM2 Tokmak 2 4.10 49 ⇓Pg **Pb 03 26 25.6 -2.1**
2.4nm,0.4s
TKM2 ⇓Lg Lg 03 27 22.0
8.3nm,0.7s
AB31 Akbulak array 12.09 322 Pn **Pn 03 28 09.6 +2.3**
0.2nm,0.3s,baz=127,slow=14,SNR=18

*IDC **07** 03:26:10.6±2.7, 35°.42N×23°.43E, h43km±29km, mb3.8/9, mbtmp3.9/15, ML3.8/6, MS3.0/4, Error ellipse: s-maj=20.8km s-min=18.1km az=169.0*
*HLW **07** 03:26:11.1, 35°.28N×23°.88E, h12km±37km, Md3.9, Ml4.2*
*ISK **07** 03:26:12.6, 35°.44N×23°.41E, h29km, ML3.6/25*
*ATH **07** 03:26:12.6, 35°.36N×23°.31E, h27km±3km, ML3.8/8, Error ellipse: s-maj=4.1km s-min=0.8km az=64.0*
*THE **07** 03:26:13.2, 35°.41N×23°.33E, h28km, ML3.4/18, Error ellipse: s-maj=0.9km s-min=0.4km az=50.0*
ISC 07 03:26:10.4±0.9, **35°.32N**±0°.03×**23°.28E**±0°.04, **h36**km±1km, **n146**, σ2§**10**/177, **mb4.0**/9, **1C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.34**	**104**	PG	**Pn**	**03 26 20.1**	**+1.4**
KNDR				SG	**Sn**	**03 26 25.6**	**+0.5**
KNDR	**Palaiochora Ch**	**0.34**	**104**	P	**Pn**	**03 26 20.0**	**+1.4**
KNDR				S	**Sn**	**03 26 26.0**	**+0.9**
	11μm,0.5s						
KNDR	**Palaiochora Ch**	**0.34**	**104**	P	**Pn**	**03 26 19.9**	**+1.2**
KNDR				S	**Sn**	**03 26 23.9**	**-1.2**
KNDR				AML	AML	03 26 28.7	
	comp=E,61423μm,0.4s						
KNDR				AML	AML	03 26 30.6	
	comp=N,69854μm,0.6s						
RODP	**Rodopos**	**0.46**	**58**	P	**Pn**	**03 26 21.7**	**+1.4**
RODP				S	**Sn**	**03 26 28.2**	**+0.9**
	comp=N,4μm,0.4s						
ANKY	**Antikythira Is**	**0.55**	**2**	P	**Pn**	**03 26 22.8**	**+1.1**
ANKY				S	**Sn**	**03 26 29.9**	**+0.3**
	comp=N,10μm,0.5s						
ANKY	**Antikythira Is**	**0.55**	**2**	P	**Pn**	**03 26 22.7**	**+1.1**
ANKY				S	**Sn**	**03 26 30.1**	**+0.6**
ANKY				AML	AML	03 26 32.6	
	comp=N,25011μm,0.6s						
ANKY				AML	AML	03 26 33.4	
	comp=E,13253μm,0.4s						
IMMV	**Iera Moni Meta**	**0.59**	**76**	PG	**Pn**	**03 26 23.6**	**+1.3**
IMMV				SG	**Sn**	**03 26 31.0**	**+0.3**
IMMV	**Iera Moni Meta**	**0.59**	**76**	P	**Pn**	**03 26 23.7**	**+1.3**
IMMV				S	**Sn**	**03 26 32.0**	**+1.3**
	comp=E,17μm,0.4s						
IMMV	**Iera Moni Meta**	**0.59**	**76**	P	**Pn**	**03 26 23.6**	**+1.3**
IMMV				S	**Sn**	**03 26 31.3**	**+0.6**
IMMV				AML	AML	03 26 34.3	
	comp=N,35270μm,0.3s						
IMMV				AML	AML	03 26 35.5	
	comp=E,32291μm,0.4s						
CHAN	**Chania**	**0.65**	**72**	P	**Pn**	**03 26 24.7**	**+1.5**
CHAN				S	**Sn**	**03 26 33.8**	**+1.6**
CHAN				AML	AML	03 26 35.8	
	comp=N,27110μm,0.4s						
CHAN				AML	AML	03 26 36.0	
	comp=E,26960μm,0.5s						
GVDS	**Gavdos**	**0.82**	**125**	PG	**Pn**	**03 26 27.9**	**+2.6**
GVDS				SG	**Sn**	**03 26 39.6**	**+3.4**
GVDS	**Gavdos**	**0.82**	**125**	P	**Pn**	**03 26 27.6**	**+2.3**
GVDS				S	**Sn**	**03 26 40.0**	**+3.8**
	comp=E,4μm,0.3s						
GVD	**Gavdhos**	**0.82**	**126**	PG	**Pn**	**03 26 28.3**	**+3.0**
GVD				SG	**Sn**	**03 26 40.2**	**+4.0**
GVD	**Gavdhos**	**0.82**	**126**	P	**Pn**	**03 26 28.0**	**+2.7**
GVD				S	**Sn**	**03 26 39.7**	**+3.5**
	comp=E,6μm,0.4s						
GVD	**Gavdhos**	**0.82**	**126**	P	**Pn**	**03 26 28.1**	**+2.7**
GVD				S	**Sn**	**03 26 39.5**	**+3.3**
GVD				AML	AML	03 26 46.8	
	comp=E,11880μm,0.4s						
GVD				AML	AML	03 26 46.9	
	comp=N,11965μm,0.4s						
KTHA	**Kythira Island**	**0.95**	**349**	PG	**Pn**	**03 26 29.3**	**+2.1**
KTHA				SG	**Sn**	**03 26 41.5**	**+1.9**
KTHA	**Kythira Island**	**0.95**	**349**	P	**Pn**	**03 26 29.6**	**+2.4**
KTHA	**Kythira Island**	**0.95**	**349**	P	**Pn**	**03 26 29.7**	**+2.5**
KTHA				S	**Sn**	**03 26 41.8**	**+2.3**
KTHA				AML	AML	03 26 47.2	
	comp=E,8983μm,0.3s						
KTHA				AML	AML	03 26 48.9	
	comp=N,4328μm,0.8s						
KTHR	**Kythira**	**0.96**	**347**	P	**Pn**	**03 26 29.6**	**+2.2**
KTHR				S	**Sn**	**03 26 41.5**	**+1.6**
	comp=N,3μm,0.4s						
KTHR	**Kythira**	**0.96**	**347**	P	**Pn**	**03 26 29.7**	**+2.3**
KTHR				S	**Sn**	**03 26 41.9**	**+2.0**
KTHR				AML	AML	03 26 44.0	
	comp=E,19154μm,0.4s						
KTHR				AML	AML	03 26 45.5	
	comp=N,21178μm,0.4s						
PRNS	**Prines Rethymn**	**1.00**	**87**	P	**Pn**	**03 26 29.5**	**+1.7**
PRNS				S	**Sn**	**03 26 42.0**	**+1.4**
	comp=N,2μm,0.6s						
TMBK	**Timbaki Herakl**	**1.24**	**101**	P	**Pn**	**03 26 33.9**	**+2.8**
TMBK	**Timbaki Herakl**	**1.24**	**101**	P	**Pn**	**03 26 34.1**	**+3.0**
SIVA	**Sivas**	**1.29**	**103**	P	**Pn**	**03 26 35.9**	**+4.2**
IDI	**Anoyia**	**1.32**	**91**	P	**Pn**	**03 26 34.9**	**+2.6**
	comp=N,96nm,0.4s,baz=272,slow=13,SNR=136						
IDI				S	**Sn**	**03 26 52.3**	**+3.7**
	comp=N,374nm,0.4s,baz=25,slow=20,SNR=20						
IDI	**Anoyia**	**1.32**	**91**	PN	**Pn**	**03 26 34.9**	**+2.6**
IDI				SN	**Sn**	**03 26 50.4**	**+1.8**
IDI	**Anoyia**	**1.32**	**91**	P	**Pn**	**03 26 34.9**	**+2.6**
IDI				S	**Sn**	**03 26 51.6**	**+3.0**
	comp=N,1μm,0.6s						
IDI	**Anoyia**	**1.32**	**91**	P	**Pn**	**03 26 35.2**	**+

MNVA	**Monemvasia**	1.38	352	P	Pn	03 26 36.0 +3.0
VLI	**Veliai**	1.42	349	P	Pn	03 26 35.5 +1.8
VLI				S	Sn	03 26 52.6 +1.5
	comp=N,2μm,0.8s					
VLI	**Veliai**	1.42	349	P	Pn	03 26 36.8 +3.2
VLI				S	Sn	03 26 55.7 +4.5
VLI				AML	AML	03 26 59.0
	comp=N,786μm,1.4s					
VLI				AML	AML	03 27 03.1
	comp=E,1904μm,0.7s					
HRKL	**Herakleio**	1.49	90	PN	Pn	03 26 36.8 +2.3
HRKL	**Herakleio**	1.49	90	P	Pn	03 26 37.4 +2.9
HRKL				S	Sn	03 26 55.2 +2.5
	comp=E,3μm,0.6s					
HRKL	**Herakleio**	1.49	90	P	Pn	03 26 38.8 +4.2
MHLO	**Agia Marina, M**	1.64	33	P	Pn	03 26 37.6 +0.9
THR9	**Santorini-Faro**	1.98	58	P	Pn	03 26 42.6 +1.3
THR5	**Thira Island,**	2.00	56	P	Pn	03 26 42.8 +1.2
PYL	**PYLOS**	2.01	322	P	Pn	03 26 43.2 +1.5
PYL	**PYLOS**	2.01	322	P	Pn	03 26 47.3 +5.6
THR6	**Thira Island,**	2.01	58	P	Pn	03 26 43.2 +1.5
SAP3	**Santorini-Thir**	2.01	56	P	Pn	03 26 42.9 +1.1
THR3	**Thira Island,**	2.04	57	P	Pn	03 26 43.2 +1.1
SANT	**Santorini**	2.06	59	PN	Pn	03 26 43.6 +1.1
SANT	**Santorini**	2.06	59	P	Pn	03 26 43.5 +1.1
KRND	**KRANIDI**	2.06	357	P	Pn	03 26 44.1 +1.7
THT2	**Imerovigli**	2.06	57	PN	Pn	03 26 44.5 +2.0
THT2	**Imerovigli**	2.06	57	P	Pn	03 26 44.5 +2.0
CMBO	**Columbo, Santo**	2.07	56	P	Pn	03 26 44.0 +1.4
CMBO				S	Sn	03 27 09.2 +2.1
	comp=E,2μm,0.6s					
THR8	**Santorini-Mono**	2.09	58	P	Pn	03 26 44.0 +1.2
ITM	**Ithomi**	2.15	330	PN	Pn	03 26 47.1 +3.4
ITM	**Ithomi**	2.15	330	P	Pn	03 26 46.4 +2.7
ITM				S	Sn	03 27 11.0 +1.8
	comp=E,308nm,1.0s					
ITM	**Ithomi**	2.15	330	P	Pn	03 26 50.2 +6.4
ZKR	**Zakros**	2.41	94	PN	Pn	03 26 50.0 +2.7
ZKR	**Zakros**	2.41	94	P	Pn	03 26 50.3 +3.0
APE	**Apeiranthos**	2.52	46	PN	Pn	03 26 49.8 +1.0
APE	**Apeiranthos**	2.52	46	P	Pn	03 26 49.5 +0.7
APE				S	Sn	03 27 19.0 +0.7
	comp=E,232nm,0.5s					
VLY	**Voula,Athens**	2.56	9	P	Pn	03 26 50.8 +1.5
VLY				S	Sn	03 27 21.2 +2.0
	comp=E,318nm,0.7s					
ATH	**Athens Observa**	2.67	7	P	Pn	03 26 52.9 +2.1
ATHU	**Athens Univers**	2.67	9	P	Pn	03 26 52.5 +1.7
LOUT	**Loutraki**	2.67	355	P	Pn	03 26 53.3 +2.4
THAL	**Thalero**	2.76	350	P	Pn	03 26 54.7 +2.7
PTL	**Penteli**	2.76	10	P	Pn	03 26 53.6 +1.5
PTL				S	Sn	03 27 25.2 +0.9
	comp=E,192nm,0.7s					
VILL	**Villia**	2.84	0	P	Pn	03 26 54.6 +1.4
VILL				S	Sn	03 27 27.4 +1.3
	comp=E,340nm,0.7s					
KLV	**Kalavryta, Ach**	2.87	342	P	Pn	03 26 55.9 +2.3
DRO	**Drossia**	2.92	335	P	Pn	03 26 56.7 +2.5
LAKA	**Lakka**	3.10	341	P	Pn	03 26 59.2 +2.5
RLS	**Riolos of Patr**	3.10	332	P	Pn	03 26 59.4 +2.7
KARP	**Karpathos**	3.18	85	PN	Pn	03 26 59.8 +2.0
KARP	**Karpathos**	3.18	85	P	Pn	03 26 59.1 +1.3
SERG	**Sergoula**	3.24	343	P	Pn	03 27 00.8 +2.1
EFP	**Efpalio**	3.29	341	P	Pn	03 27 02.9 +3.6
KOSK	**Kos Island**	3.32	63	PN	Pn	03 27 02.2 +2.5
KYMI	**Kymi, Euboea I**	3.37	11	P	Pn	03 27 01.6 +1.2
KYMI				S	Sn	03 27 40.7 +1.5
	comp=E,70nm,0.8s					
NIS1	**Nisyros Isl.**	3.41	67	PN	Pn	03 27 03.6 +2.6
AXAR	**Agios Charalam**	3.48	352	P	Pn	03 27 04.1 +2.2
PSDA	**Pessada-Kefalo**	3.53	323	P	Pn	03 27 03.2 +0.6
PVO	**Paravola**	3.58	337	P	Pn	03 27 05.6 +2.3
VLS	**Valsamata**	3.58	324	P	Pn	03 27 04.0 +0.7
BODT	**Bodrum**	3.69	61	PN	Pn	03 27 05.5 +0.6
BODT	**Bodrum**	3.69	61	P	Pn	03 27 05.2 +0.3
KEF3	**Kipouria, Keph**	3.72	322	P	Pn	03 27 06.2 +1.0
SMG	**Samos**	3.73	49	P	Pn	03 27 06.0 +0.7
DMLN	**Damoulianata-K**	3.73	322	P	Pn	03 27 06.2 +0.8
DAT	**Datca**	3.75	67	PN	Pn	03 27 07.7 +1.9
DAT	**Datca**	3.75	67	P	Pn	03 27 07.4 +1.6
EVR	**Evrytania**	3.78	342	P	Pn	03 27 09.5 +3.4
CHOS	**Chios island**	3.78	35	PN	Pn	03 27 08.1 +1.9
CHOS	**Chios island**	3.78	35	P	Pn	03 27 07.8 +1.6
MAKR	**Makrakomi, Fth**	3.80	346	P	Pn	03 27 07.7 +1.3
FSK	**Fiskardo**	3.82	326	P	Pn	03 27 09.4 +2.8
EVGI	**Lefkada island**	3.91	328	P	Pn	03 27 10.2 +2.4
NYDR	**Nydri-Lefkada**	3.97	329	P	Pn	03 27 11.2 +2.6
GCAM	**G?zelcaml?**	3.97	52	PN	Pn	03 27 10.9 +2.2
NEO	**Neokhori**	3.98	359	P	Pn	03 27 10.1 +1.3
DRAG	**Dragano-Lefkad**	4.00	328	P	Pn	03 27 12.2 +3.2
URLA	**Izmir**	4.03	40	PN	Pn	03 27 10.3 +0.7
XOR	**Xorichti**	4.04	359	P	Pn	03 27 11.9 +2.2
ARG	**Arkhangelos**	4.04	76	PN	Pn	03 27 11.6 +2.0
ARG	**Arkhangelos**	4.04	76	P	Pn	03 27 11.3 +1.7
LKD2	**Lefkada island**	4.05	330	P	Pn	03 27 11.6 +1.8
TSLK	**Tsoukalades, L**	4.08	330	P	Pn	03 27 12.5 +2.3
SLUM	**Salum**	4.15	157	⇑P	Pn	03 27 12.5 +1.4
SLUM	baz=163			S	Sn	03 27 56.7 -1.6
	baz=163					
TURN	**Turunc**	4.28	69	PN	Pn	03 27 15.2 +2.3
THL	**Klokotos Trika**	4.36	347	P	Pn	03 27 16.8 +2.9
SIGR	**SIGRI**	4.39	27	PN	Pn	03 27 16.6 +2.1
SIGR	**SIGRI**	4.39	27	P	Pn	03 27 15.2 +0.7
YER	**Yerkesik**	4.43	64	PN	Pn	03 27 18.0 +2.9
YER	**Yerkesik**	4.43	64	P	Pn	03 27 17.6 +2.5
TYRN	**Tyrnavos**	4.46	350	P	Pn	03 27 17.1 +1.7
AYDB	**Zeytinkoy-Aydi**	4.54	53	PN	Pn	03 27 19.2 +2.6
DALY	**Dalyan (Mula)**	4.60	69	PN	Pn	03 27 20.5 +3.2
PAIG	**Paliouri**	4.61	4	P	Pn	03 27 18.5 +1.0
LIT	**Litokhoron**	4.81	353	P	Pn	03 27 21.4 +1.1
IGT	**Igoumenitsa**	4.81	332	P	Pn	03 27 22.8 +2.5
KEK	**Kerkira**	5.18	329	P	Pn	03 27 26.4 +1.0
KSL	**Kastellorizon**	5.19	79	P	Pn	03 27 26.4 +0.9
SRN	**Sarande**	5.24	331	P	Pn	03 27 27.2 +1.0
LSK	**Leskovik**	5.27	337	P	Pn	03 27 28.2 +1.6
HORT	**Hortiatis**	5.27	358	P	Pn	03 27 27.3 +0.7
NEST	**Nestorio**	5.38	342	P	Pn	03 27 28.7 +0.5
SOH	**Sokhos**	5.49	1	P	Pn	03 27 32.5 +2.9
KOKK	**Kokkinochori,**	5.52	6	P	Pn	03 27 31.5 +1.6
SRS	**Serrai**	5.79	2	P	Pn	03 27 35.8 +2.1
KNT	**Kendrikon**	5.84	357	P	Pn	03 27 35.6 +1.2
SWA2		6.33	163	⇓P	Pn	03 27 42.0 +0.9
SWA2	baz=167			S	Sn	03 28 48.4 -3.8
	baz=167					
RYAN	**Fayoum**	8.59	134	⇓P	Pn	03 28 11.7 -0.4
	baz=137					
GLL	**Jalalah**	9.13	126	⇑P	Pn	03 28 18.4 -1.2
	baz=128					
HFRF	**Wahat Farafira**	9.21	151	P	Pn	03 28 20.6 -0.1
	baz=153					
BRTR	**Keskin Array B**	9.33	59	P	Pn	03 28 25.1 +2.7
	comp=E,4.0nm,0.9s,baz=233,slow=12,SNR=23					
BRTR				LR	LR	03 32 53.9
	comp=E,50nm,20.2s,baz=288,slow=44					
MMAI	**Mount Meron Ar**	10.30	99	P	Pn	03 28 33.4 -2.3
	comp=E,0.9nm,0.3s,baz=284,slow=12,SNR=2.7					
	comp=E,0.8nm,0.4s					
EIL	**Elat**	11.35	117	P	Pn	03 28 48.8 -1.1
	comp=E,0.5nm,0.3s,baz=219,slow=1.6,SNR=10					
	comp=E,2.5nm,0.6s					
VRAC	**Vranov**	14.82	343	P	Pn	03 29 38.3 +1.1
	comp=E,0.4nm,0.3s,baz=76,slow=8.3,SNR=2.2					
	comp=E,3.5nm,0.7s					
GERES	**GERESS Array B**	15.25	335	P	Pn	03 29 44.0 +1.0
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=1.8					
	comp=E,0.2nm,0.5s					
AKASG	**Malin Array Be**	15.97	14	P	Pn	03 29 49.0 -3.0
	comp=E,0.5nm,0.3s,baz=207,slow=12,SNR=2.2					
	comp=E,0.1nm,0.3s					
KBZ	**Khabaz**	17.28	55	P	Pn	03 30 08.3 -0.4
	comp=E,0.1nm,0.3s,baz=266,slow=12,SNR=6.6					
KBZ				LR	LR	03 38 01.7
	comp=E,42nm,18.1s,baz=254,slow=42					
	comp=E,2.2nm,0.7s					
GNI	**Garni**	17.64	68	LR	LR	03 38 32.4
	comp=E,27nm,18.9s,baz=297,slow=42					
NACGM	**Naroch**	19.73	6	ℓP	P	03 30 34.5 -2.2
	baz=188					
ESDC	**Sonseca Array**	22.01	289	P	P	03 31 01.6 +0.1
	comp=E,0.7nm,0.9s,baz=86,slow=9.8,SNR=4.2					
	comp=E,0.7nm,0.9s					
HFS	**Hagfors**	25.60	349	P	P	03 31 35.0 -0.9
	comp=E,1.3nm,0.5s,baz=146,slow=11,SNR=9.6					
	comp=E,1.3nm,0.5s					
FINES	**FINESS Array B**	26.20	3	P	P	03 31 38.9 -2.5
	comp=E,4.7nm,1.1s,baz=186,slow=9.6,SNR=4.1					
	comp=E,4.7nm,1.1s					
EKA	**Eskdalemuir Ar**	27.04	326	P	P	03 31 49.6 +0.7
	comp=E,1.9nm,0.8s,baz=126,slow=7.9,SNR=1.9					
	comp=E,1.9nm,0.8s					
TORD	**Torodi Ar. Bea**	29.45	227	P	P	03 32 11.8 +1.0
	comp=E,2.2nm,0.5s,baz=35,slow=9.3,SNR=34					
	comp=E,2.2nm,0.5s					
ARCES	**ARCESS Array B**	34.29	1	P	P	03 32 50.4 -2.4
	comp=E,3.0nm,1.0s,baz=179,slow=9.0,SNR=7.7					
ARCES				LR	LR	03 48 25.3
	comp=E,81nm,18.1s,baz=234,slow=39					
	comp=E,3.0nm,1.0s					
MKAR	**Makanchi Array**	44.97	56	P	P	03 34 21.0 -0.9
	comp=E,0.7nm,0.4s,baz=268,slow=7.2,SNR=9.3					
	comp=E,0.7nm,0.4s					
ZALV	**Zalesovo Beam**	46.00	46	P	P	03 34 27.9 -2.1
	comp=E,1.7nm,0.4s,baz=264,slow=9.2,SNR=7.3					
	comp=E,1.7nm,0.4s					
USRK	**Ussuriysk Ar.**	77.81	44	P	P	03 38 02.2 -1.7
	comp=E,1.7nm,0.6s,baz=320,slow=3.0,SNR=5.8					
	comp=E,1.7nm,0.6s					

*IDC **07** 03:37:08.2±1.5, 0°.45N×125°.02E, h0km, mb3.6/3, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=118.8km s-min=23.1km az=66.0*
*DJA **07** 03:37:17.2±1.0, 0°.N±.3°×12°.5E±°, h29km±10km, M4.3/19, mb4.5/7, mB5.0/3, MLv4.2/19, Mw(mB)4.4/3*
ISC 07 03:37:16.3±0.9, 0°.35N±0°.08×125°.02E±0°.05, h50km, n23, σ1§64/26, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	1.06	282	P	Pn	03 37 35.6	+0.7
KMSI				S	Sn	03 37 49.2	+0.5
TNTI	**Ternate**	2.38	80	P	Pn	03 37 54.6	+1.7
SANI	**Sanana**	2.58	158	P	Pn	03 37 54.0	-1.6
LUWI	**Luwuk**	2.64	238	P	Pn	03 37 57.9	+1.4
LBMI	**Labuha**	2.67	112	P	Pn	03 38 00.0	+3.1
LBMI				S	Sn	03 38 30.5	+2.5
MRSI	**Marisa**	3.08	272	P	Pn	03 38 01.7	-0.8
GAMI	**Galela, Maluku**	3.13	62	P	Pn	03 38 05.6	+2.3
SGSI	**Sangihe**	3.35	9	P	Pn	03 38 07.8	+1.6
APSI	**Ampana**	3.60	250	P	Pn	03 38 11.5	+1.9
NLAI	**Namlea**	4.13	150	P	Pn	03 38 17.1	+0.2
KRAI	**Karang Ratu**	4.97	137	P	Pn	03 38 30.7	+2.3
AAI	**Ambon**	5.11	142	P	Pn	03 38 32.4	+1.9
	0.2nm36nm,0.6s						
MPSI	**Mapaga**	5.12	270	P	Pn	03 38 31.7	+1.1
	0.1nm821nm25nm,0.9s						
MSAI	**Masohi**	5.36	133	P	Pn	03 38 35.4	+1.5
	0.1nm5.9nm,0.6s						
TTSI	**Tana Toraja**	6.20	237	P	Pn	03 38 46.2	+0.9
	0.3nm40nm,0.8s						
SPSI	**Sidrap Palu**	6.78	231	P	Pn	03 38 53.8	+0.5
	0.1nm25nm,0.6s						
BNSI	**Bone**	6.81	226	P	Pn	03 38 54.5	+0.7
	0.1nm498nm16nm,0.5s						
BNDI	**Bandanaira**	6.87	135	P	Pn	03 38 55.7	+1.1
	1.0nm6μm166nm,0.8s						
PMSI	**Majene**	7.20	238	P	Pn	03 39 00.6	+1.4
FITZ	**Fitzroy Crossi**	18.34	178	P	P	03 41 27.1	+0.3
	0.1nm,0.3s,baz=347,slow=14,SNR=1.8						
	1.7nm,1.0s						
WRA	**Warramunga Arr**	22.14	156	P	P	03 42 06.4	-1.6
	1.4nm,0.6s,baz=333,slow=11,SNR=15						
	1.4nm,0.6s						
ASAR	**Alice Springs**	25.39	161	P	P	03 42 37.8	-1.5
	0.5nm,0.6s,baz=335,slow=6.8,SNR=11						
ASAR				PcP	PcP	03 46 10.2	-0.6
	0.4nm,0.4s,baz=344,slow=1.5,SNR=4.3						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	59.40	327	P	P	03 47 11.9	-1.8
	0.5nm,0.5s,baz=116,slow=7.9,SNR=8.9						
	0.5nm,0.5s						

IDC 07 04:30:50.3±2.3, 6°.98S×129°.05E, h0km, mb3.5/1, mbtmp3.2/3, ML3.0/1, MS3.3/1, Error ellipse: s-maj=124.3km s-min=34.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	6.22	239	LR	LR	04 34 56.0	
	comp=Z,263nm,21.2s,baz=142,slow=40						
WRA	**Warramunga Arr**	13.87	159	Pn	Pn	04 34 07.1	-1.2
	0.1nm,0.3s,baz=337,slow=12,SNR=10						
WRA				Sn	Sn	04 36 30.8	-12
	0.3nm,0.3s,baz=338,slow=23,SNR=10						
	0.3nm,0.9s						
ASAR	**Alice Springs**	17.23	165	P	P	04 34 53.7	-0.5
	0.3nm,0.7s,baz=346,slow=10,SNR=1.7						
MKAR	**Makanchi Array**	67.70	327	P	P	04 41 49.5	0.0
	0.2nm,0.3s,baz=137,slow=6.2,SNR=1.5						
	0.2nm,0.3s						

*IDC **07** 04:52:29.6±1.4, 27°.52N×86°.07E, h0km, mb3.9/8, mbtmp3.9/9, ML3.9/1, MS3.3/2, Error ellipse: s-maj=39.0km s-min=21.7km az=52.0*
*DMN **07** 04:52:30.9±0.1, 27°.67N×86°.16E, h10km, Ml4.7/7, Error ellipse: s-maj=3.9km s-min=1.5km az=20.0*
*NDI **07** 04:52:31.6±3.1, 27°.67N×86°.29E, h10km, ML3.7, mb4.0(NEIC)*
*NEIC **07** 04:52:38.2±2.1, 28°.35N±0°.06×85°.97E±0°.07, h10km±2km, mb4.0/10, Error ellipse: s-maj=13.8km s-min=4.8km az=314.0*
ISC 07 04:52:31.1±0.8, 27°.66N±0°.04×86°.15E±0°.02, h9km±5km, n61, σ1§73/74, mb3.9/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	0.04	90	ePg	Pg	04 52 32.9	-0.4
JIRN				eSg	Sg	04 52 34.4	-0.4
	116μm,0.2s						
GUN	**Gumba**	0.34	316	ePg	Pg	04 52 38.1	0.0
GUN				eSg	Sg	04 52 43.5	+0.8
	5μm,0.3s						
PKI	**Pulchoki**	0.66	262	ePg	Pg	04 52 43.9	-0.1
PKI				eSg	Sg	04 52 52.7	0.0
PKIN	**Phulchoki**	0.67	263	ePg	Pg	04 52 43.9	-0.3
PKIN				eSg	Sg	04 52 53.3	+0.3
	2μm,0.3s						
KKN	**Kakani**	0.78	280	ePg	Pg	04 52 46.1	-0.1
KKN				eSg	Sg	04 52 56.0	-0.4
	1μm,0.2s						
RAMN	**Ramite**	0.81	150	ePg	Pg	04 52 46.0	-0.9
RAMN				eSg	Sg	04 52 58.0	+0.5
	2μm,0.4s						
DMN	**Daman**	0.93	267	ePg	Pg	04 52 48.7	-0.3
DMN				eSg	Sg	04 53 01.3	+0.2
	1μm,0.3s						
ODAN	**Odare**	1.36	125	ePg	Pg	04 52 57.7	+0.4
ODAN				eSg	Sg	04 53 15.3	+0.3
	2μm,0.3s						
GKN	**Gorkha**	1.38	285	ePg	Pb	04 52 57.3	0.0
GKN				eSg	Sb	04 53 14.7	-0.4
	3μm,0.3s						
TAPN	**Taplejung**	1.42	102	ePg	Pb	04 52 58.1	+0.1
TAPN				eSg	Sb	04 53 15.4	-1.0
	1μm,0.5s						
VLK	**Valmikinagar**	2.06	261	eP	Pb	04 53 08.3	-0.3
GTK	**Tadong**	2.21	98	ePg	Pb	04 53 10.8	-0.5
GTK				i Sg	Sb	04 53 40.0	+1.2
GTK				IAML		04 53 42.3	
	comp=N,442nm,0.5s						
GTK				IAML		04 53 45.2	
	comp=E,379nm,0.4s						
DANN	**Dangsing**	2.22	289	ePg	Pb	04 53 12.3	+0.6
DANN				eSg	Sg	04 53 41.1	-1.5
	comp=E,1μm,0.4s						
KOLN	**Koldanda**	2.26	273	ePg	Pb	04 53 11.3	-1.0
KOLN				eSg	Sg	04 53 42.5	-1.4
	comp=E,1μm,0.5s						
PYUN	**Piuthan**	2.83	280	ePg	Pg	04 53 24.4	-1.0
PYUN				eSg	Sg	04 54 00.0	-2.1
	comp=E,875nm,0.5s						
DHUB	**DHUBRI**	3.81	115	ex	x	04 53 15.1	
DHUB				ex	Pg	04 53 40.1	-4.0
ALBI	**Allahabad**	4.54	240	ex	Pb	04 53 52.1	+1.1
LSA	**Lhasa**	4.84	64	Pn	Pn	04 53 50.4	+5.8
LGTI	**Lohaghat**	5.49	290	eP	Pn	04 53 57.1	+4.0
SHL	**Shillong**	5.54	111	Pn	Pb	04 54 06.5	-1.7
PTH	**Pithoragarh**	5.54	291	eP	Pn	04 53 57.2	+3.2
PTH				eS	Sn	04 54 57.5	-0.5
TEZP	**TEZPUR**	6.02	98	eP	Pn	04 54 01.5	+1.1
BLSP	**Bilaspur**	6.60	214	eP	Pn	04 54 09.7	+1.2
JBP	**Jabalpur**	7.15	233	eP	Pn	04 54 17.2	+1.4
JBP				eS	Sn	04 55 36.4	-0.8
BWNR	**Bhubaneshwar**	7.34	183	eP	Pn	04 54 20.7	+2.2
KOHI	**KOHIMA**	7.38	103	IAML		04 56 36.0	
	comp=E,60nm,0.8s						
KOHI				IAML		04 56 36.6	
	comp=N,67nm,1.3s						
DDI	**Dehra Dun**	7.57	292	eS	Sn	04 55 46.2	-1.5
SMLA	**Simla**	8.56	296	eP	Pn	04 54 33.9	-1.4
SMLA				i x	x	04 54 37.7	
SMLA				eS	Sn	04 56 07.6	-4.4
SMLA				IAML		04 56 10.2	
	comp=E,94nm,0.4s						
SMLA				IAML		04 56 10.9	
	comp=N,51nm,0.5s						
RAGD	**RAYAGADA**	8.73	197	eP	Pn	04 54 38.1	+0.4
BHPL	**Bhopal**	9.03	243	ex	Pn	04 54 39.4	-2.3
BHPL				eS	Sn	04 56 18.4	-5.2
KHET	**Khetri**	9.16	275	eP	Pn	04 54 43.7	+0.1
HYBB	**Hyderabad (bro**	12.37	216	eP	PnPn	04 55 40.5	+5.0
NIL	**Nilore**	12.60	301		Pn	04 55 32.2	+1.5
THW	**Thamme Wali**	13.46	296	P	Pn	04 55 42.2	-0.2
CEP	**Cherat**	13.69	300	P	Pn	04 55 45.5	-0.2
KSH	**Kashi**	14.54	327	P	Pn	04 55 54.8	-2.4
KSH				PP	PnPn	04 56 06.0	+0.8
CMAR	**Chiang Mai Arr**	14.91	125	Pn	P	04 56 06.5	-1.5
	comp=N,0.1nm,0.3s,baz=309,slow=11,SNR=9.4						
TARG	**Taragay, Kyrgy**	15.61	336	Pn	Pn	04 56 09.8	-1.9
KBL	**Kabul**	16.17	299	Pn	Pn	04 56 18.6	-0.2
KBL				IAmb	IAmb	04 56 41.9	
	comp=Z,4.7nm,0.7s						
AAK	**Ala-Archa**	17.70	331	LR	LR	05 03 50.0	
	comp=Z,41nm,18.3s,baz=134,slow=38						
BTK	**Batken**	17.72	318	Pn	Pn	04 56 35.3	-2.9
CHGR	**Chuyangaron**	17.93	312	Pn	Pn	04 56 39.7	-1.2
CHGR				IAmb	IAmb	04 56 51.1	
	comp=Z,15nm,0.8s						
MK31	**Makanchi Array**	19.34	352	P	P	04 56 56.9	+0.1
MKAR	**Makanchi Array**	19.34	352	P	Pn	04 56 58.4	+0.5
	comp=Z,0.3nm,0.3s,baz=168,slow=11,SNR=10						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	19.34	352	P	P	04 56 56.4	-0.4
KKAR	**Karatay Array**	19.95	325	P	P	04 57 01.4	-2.1
ENH	**Enshi**	20.58	77	P	Pn	04 57 16.4	+3.7
ENH				IAmb	IAmb	04 57 19.9	
	comp=Z,10nm,1.2s						
KURBB	**Kurchatov Arra**	23.65	348	P	P	04 57 45.7	+3.0
	comp=Z,3.9nm,0.2s,baz=169,slow=10,SNR=2.3						
	comp=Z,3.9nm,0.2s						
KURK	**Kurchatov**	23.73	348	P	P	04 57 42.1	-1.3
KURK				IAmb	IAmb	04 57 48.6	
	comp=Z,8.6nm,1.2s						
SONM	**Songino Array**	25.59	33	P	P	04 58 02.2	+1.5
	comp=Z,0.6nm,0.5s,baz=216,slow=8.8,SNR=3.8						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	25.59	33	P	P	04 58 02.6	+1.9
SONM				IAmb	IAmb	04 58 14.4	
	comp=Z,3.7nm,1.3s						
ZALV	**Zalesovo Beam**	26.28	358	P	P	04 58 08.0	+1.2
	comp=Z,0.7nm,0.4s,baz=188,slow=8.7,SNR=2.6						
	comp=Z,0.7nm,0.4s						
ABKAR	**Akbulak array**	29.51	324	P	P	04 58 37.0	+1.3
KSRS	**Korea Array**	36.29	64	P	P	04 59 34.8	-0.3
	comp=Z,1.3nm,0.5s,baz=260,slow=8.3,SNR=4.6						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	48.38	315	P	P	05 01 12.6	-0.7
	comp=Z,0.1nm,0.3s,baz=82,slow=7.1,SNR=5.4						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	51.86	328	P	P	05 01 39.7	+0.2
	comp=Z,1.7nm,0.8s,baz=93,slow=7.0,SNR=4.0						
	comp=Z,1.7nm,0.8s						
VRAC	**Vranov**	56.50	313	LR	LR	05 32 41.0	
	comp=Z,47nm,18.1s,baz=324,slow=43						
WRA	**Warramunga Arr**	66.44	130	P	P	05 03 21.3	+0.2
	comp=Z,0.8nm,0.9s,baz=322,slow=6.3,SNR=19						
	comp=Z,0.8nm,0.9s						
WB2	**Warramunga Arr**	66.45	130	P	P	05 03 31.6	+10
BMAR	**Burnt Mountain**	77.92	18	P	P	05 04 31.4	+2.2
ILAR	**Eielson Array**	79.13	20	P	P	05 04 36.1	+0.2
	comp=Z,0.5nm,0.6s,baz=306,slow=5.3,SNR=7.0						
	comp=Z,0.5nm,0.6s						

MEX 07 04:54:00.3±0.3, 17°.67N×105°.88W, h20km, MD2.3, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	2.18	54	eP	Pb	04 54 47.9	+8.8
CDAR				eS	Sn	04 54 58.0	-3.9
R15V		2.34	50	eP

FITZ	Fitzroy Crossi	18.21	181	P	Pn	05 11 39.5	+2.0
	0.2nm,0.3s,baz=3.5,slow=11,SNR=2.2 1.4nm,0.7s						
WRA	Warramunga Arr	21.61	158	P	P	05 12 13.8	-0.7
	1.3nm,0.5s,baz=336,slow=11,SNR=23 1.3nm,0.5s						
ASAR	Alice Springs	24.93	163	P	P	05 12 47.1	-0.2
	1.0nm,0.5s,baz=338,slow=7.4,SNR=12 1.0nm,0.5s						
STKA	Stephens Creek	35.14	157	P	P	05 14 18.6	+1.1
	1.1nm,0.5s,baz=329,slow=11,SNR=3.6 1.1nm,0.5s						
SONM	Songino Array	50.42	343	P	P	05 16 19.2	-2.1
	0.6nm,0.6s,baz=159,slow=8.9,SNR=3.9 0.6nm,0.6s						
MKAR	Makanchi Array	60.08	327	P	P	05 17 28.9	-1.9
	0.9nm,0.4s,baz=119,slow=7.6,SNR=9.2 0.9nm,0.4s						
ZALV	Zalesovo Beam	63.42	334	P	P	05 17 53.2	+0.1
	0.7nm,0.5s,baz=151,slow=4.0,SNR=2.5 0.7nm,0.5s						
AKTO	Aktyubinsk	76.00	322	P	P	05 19 08.3	-2.4
	1.0nm,0.6s,baz=90,slow=3.8,SNR=4.1 1.0nm,0.6s						

DJA 07 05:34:31.4±1.0, 4°N±10°×12°6E±°, h11km±4km, M3.9/6, mb4.1/2, mB4.8/1, MLv3.8/6, Mw(mB)4.1/1, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.70	230	P	Pg	05 34 45.1	+0.2
SGSI				S	Sb	05 34 55.2	0.0
GTOI	Gorontalo	4.63	221	P	Pn	05 35 41.3	0.0
LBMI	Labuha	4.96	163	P	Pn	05 35 45.9	0.0
MRSI	Marisa	5.49	229	P	Pn	05 35 53.2	0.0
	0.1nm17nm,0.5s						

SGS 07 05:43:26.3, 28°.50N×34°.69E, h12km, MI2.7
HLW 07 05:43:26.1, 28°.49N×34°.64E, h3km±4km, Md2.1
ISC 07 05:43:25.3±1.0, 28°.50N±0°.03×34°.73E±0°.03, h23km±6km, n46, σ1§45/48, 3D, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAYS	Tayyib Ism	0.14	66	S	Sb	05 43 33.1	0.0
TAYS	Tayyib Ism	0.14	66	P	Pb	05 43 29.1	-0.9
RSHS		0.20	164	P	Pb	05 43 30.8	0.0
RSHS				S	Sb	05 43 35.0	+0.5
HDHB	Dhahab	0.25	336	⇑P	Pb	05 43 31.2	-0.2
	baz=356						
BDAS	Al Bad`	0.33	101	P	Pn	05 43 33.4	-1.4
NUB	Nuweibaa	0.54	352	⇓P	Pb	05 43 35.5	-0.5
	baz=0.0						
NUB				S	Sb	05 43 42.4	-0.9
	baz=0.0						
AYUS	`Aynunah	0.56	123	P	Pn	05 43 37.5	-0.4
HAQS	Haql	0.58	17	S	Sn	05 43 45.9	-0.9
HAQS	Haql	0.58	17	P	Pn	05 43 37.5	-0.6
KRABS	KRABS	0.61	130	P	Pn	05 43 38.1	-0.4
HKAT	Jabal Katrina	0.65	273	⇑P	Pb	05 43 37.1	-1.0
	baz=274						
HKAT				S	Sb	05 43 45.5	-1.3
	baz=274						
JLOS		0.71	70	P	Pn	05 43 39.9	-0.1
HBST	Basata	0.72	0	⇑P	Pn	05 43 40.2	+0.2
	baz=6.0						
JMOS	Jabal al Moall	0.75	26	P	Pn	05 43 40.4	0.0
TR1	Tor 1	0.84	235	⇓P	Pb	05 43 41.1	-0.2
	baz=232						
HQLS		0.85	20	P	Pn	05 43 42.1	+0.2
TR2	Tor 2	0.90	263	P	Pb	05 43 41.5	-0.6
	baz=263						
MWLHS	Almuwaylih	1.02	137	P	Pb	05 43 44.3	+0.1
WTBKS	WTBKS	1.12	111	P	Pb	05 43 46.7	+0.7
HRDS	Abu Rudays	1.28	280	⇑P	Pb	05 43 49.0	+0.3
	baz=281						
NDEBA	Dheba	1.31	141	P	Pn	05 43 48.3	+0.1
SHQRE	Shigry	1.40	115	P	Pb	05 43 51.1	+0.2
DESA	DESA	1.61	128	P	Pb	05 43 53.4	-0.9
TBKS	Tabuk	1.62	99	P	Pb	05 43 54.4	-0.1
HHRG	Al Ghardaqah	1.64	219	P	Pn	05 43 53.6	+0.9
	baz=213						
GRB	Gharib	1.73	263	P	Pn	05 43 54.1	+0.2
	baz=263						
ZNM	Zenema	1.85	299	⇓P	Pb	05 43 58.5	+0.2
	baz=301						
URD06	Shuwaq	2.08	120	P	Pb	05 44 00.9	-1.4
URD10	Hayder	2.11	98	P	Pb	05 44 01.5	-1.4
SUZ	Suez	2.13	309	⇑P	Pn	05 44 01.0	+1.5
	baz=311						
URD12	Shuwaq	2.18	109	P	Pb	05 44 02.2	-1.9
WJHS		2.29	140	P	Pn	05 44 02.5	+0.8
URD11	Tayma	2.47	102	P	Pb	05 44 06.5	-2.5
BIDS	Bi`r al Bayda'	2.56	129	P	Pn	05 44 07.0	+1.7
URD13	Abu Rakah	2.61	111	P	Pb	05 44 08.5	-2.9
URD04	Abu Rakah	2.65	122	P	Pn	05 44 08.8	+2.1
URD15	Abu Rakah	2.71	117	P	Pb	05 44 10.3	-2.9
URD14	Abu Rakah	2.86	111	P	Pn	05 44 12.1	+2.5
EWJHS	Al Wajh	2.89	143	P	Pn	05 44 10.3	+0.4
QLABS	Al Qalibar	2.89	102	P	Pn	05 44 12.2	+2.1
URD01	URD01	3.02	120	P	Pn	05 44 14.2	+2.4
URD03	Al Ula	3.02	126	P	Pn	05 44 14.0	+2.2
URD02	Al Ula	3.35	123	P	Pn	05 44 17.9	+1.5
JOFS	JOFS	3.52	74	P	Pb	05 44 30.4	+3.6
NUMJS	Khuff	3.65	141	P	Pn	05 44 21.9	+1.7
HANO	Al Hamad	4.25	46	P	Pb	05 44 46.1	+6.7

TRN 07 06:50:21.0, 12°91N×61°.55W, h161km, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVB	Belmont	0.46	39	eP	Pn	06 50 44.0	+0.5
SVB				eS	Sn	06 51 00.7	-0.1
GRGR	Grenville	0.78	187	eP	Pn	06 50 45.5	+0.2
GRGR				eS	Sn	06 51 05.8	+1.9
GRFF	Grenada Fort F	0.88	192	eP	Pn	06 50 46.0	+0.1
GRFF				eS	Sn	06 51 05.9	+0.8
MCLT	Moule a Chique	0.99	37	eP	Pn	06 50 47.1	+0.3
MCLT	Moule a Chique	0.99	37	e	Pn	06 50 57.9	+11
MCLT				eS	Sn	06 51 06.8	+0.1
SLB	Belfond	1.04	28	eP	Pn	06 50 48.8	+1.6
SLB				eS	Sn	06 51 08.0	+0.5
SLCP	Castries, St.	1.22	26	eP	Pn	06 50 50.2	+1.5
SLCP				eS	Sn	06 51 11.0	+0.8
SLBI	Saint Lucia, B	1.24	27	eP	Pn	06 50 49.9	+1.0
SLBI				eS	Sn	06 51 11.3	+0.9
BIM	Bigot	1.66	16	eP	Pn	06 50 53.3	+0.1
BIM				eS	Sn	06 51 18.5	+0.5
MPOM	Morne Pois Mar	1.67	24	eP	Pn	06 50 53.6	+0.5
MPOM				eS	Sn	06 51 17.9	0.0
ZAM	Aeronautique	1.73	17	eP	Pn	06 50 55.8	+2.0
LPMF	Morne Lapointe	1.75	19	eP	Pn	06 50 55.1	+1.1
MVM	Montagne Vaucl	1.75	21	eP	Pn	06 50 55.2	+1.1
BCHC	Barbados, Cave	1.88	83	eS	Sn	06 51 23.0	+0.9
TOSP	Speyside	1.89	148	eP	Pn	06 50 55.6	+0.1
GBMF	Grand Be	1.91	11	eP	Pn	06 50 57.3	+1.4
PCM	Pelee Case Pet	1.92	10	eP	Pn	06 50 56.5	+0.6
BAMF	Morne Balai	1.93	12	eP	Pn	06 50 57.0	+0.8
BBGH	Gun Hill	1.95	83	eP	Pn	06 50 58.1	+1.8
BBGH				eS	Sn	06 51 22.9	-0.6
ILAM	Ilet Lapin Mar	1.97	19	eS	Sn	06 51 24.4	+0.6
BBSP	Saint Philip	2.05	84	eS	Sn	06 51 25.9	+0.5
TRN	Trinidad (W)	2.25	176	eP	Pn	06 51 01.6	+1.8
TRN				eS	Sn	06 51 29.8	0.0
DSLB	Salisbury	2.52	3	eP	Pn	06 51 02.9	0.0
MAGL	Barre de l'ile	3.03	5	eP	Pn	06 51 09.7	+0.5
CBE	Ff, Capester	3.14	359	eP	Pn	06 51 11.4	+0.8
CBE				eS	Sn	06 51 48.2	-1.0
ABD	La Joyeuse, An	3.54	1	eP	Pn	06 51 16.9	+1.3
ABD				eS	Sn	06 51 56.9	-1.4
ANBD	Bethesda, Anti	4.12	357	eP	Pn	06 51 24.3	+1.2

IDC 07 06:55:50.2±1.5, 52°.57N×169°.57W, h0km, mb3.8/7, mbtmp3.8/9, ML3.5/2, Error ellipse: s-maj=48.5km s-min=19.1km az=177.0
NEIC 07 06:55:55.6±1.8, 52°.32N±0°.09×169°.5W±0°.1, h42km±23km, mb3.6/15, ML3.8/6, ML3.3(AEIC), Error ellipse: s-maj=14.7km s-min=8.5km az=152.0
AEIC 07 06:55:55±1.8, 52°.4N±0°.1×169°.4W±0°.1, h36km±9km, Error ellipse: s-maj=16.6km s-min=7.8km az=157.0
ISC 07 06:55:54.2±0.9, 52°2N±0°.1×169°41W±0°.08, h30km, n57, σ1§34/50, mb4.0/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.81	24		Pn	06 56 08.9	-0.7
OKSP	Okmok Steeple	1.23	33		Pn	06 56 15.2	-0.1
OKCE	Okmok Cone E	1.42	32		Pn	06 56 17.5	-0.4
OKTU	Okmok Mt. Tuli	1.42	35		Pn	06 56 18.5	+0.5
OKER	Okmok East Rim	1.48	33		Pn	06 56 19.3	+0.6
MGOD	Makushin Gods	2.19	43		Pn	06 56 29.2	+0.7
MCIR	Makushin Cirqu	2.29	40		Pn	06 56 31.4	+1.4
MNAT	Makushin Natee	2.33	44		Pn	06 56 32.1	+1.6
UNV	Unalaska Valle	2.38	46		Pn	06 56 32.0	+0.8
ZRO	Akutan Zero	2.78	47		Pn	06 56 36.9	+0.3
KOFP	Korovin Flat P	2.88	273		Pn	06 56 39.9	+1.8
AKUT	Akutan	2.90	47	Pn	Pn	06 56 38.7	+0.5
AKUT				IAML		06 58 27.5	
	comp=N,217nm,3.4s						
GSTR	Great Sitkin T	4.10	271	Pn	Pn	06 56 55.6	+0.8
GSTD	Great Sitkin T	4.16	270		Pn	06 56 56.9	+1.3
ADK	Adak	4.51	268	IAML		06 58 12.2	
	comp=N,99nm,0.7s						
ADK				IAML		06 59 13.6	
	comp=N,94nm,3.6s						
ADK	Adak	4.51	268		Pn	06 57 00.8	+0.5
KIWB	Kanaga Island	4.80	269	Pn	Pn	06 57 04.0	-0.3
AMKA	Amchitka	7.06	268	Pn	Pn	06 57 36.0	+0.7
OHAK	Old Harbor	10.57	55	Pn	Pn	06 58 22.6	-0.8
KDAK	Kodiak Island	11.13	53	Pn	Pn	06 58 30.4	-0.7
	comp=N,0.2nm,0.3s,baz=204,slow=4.8,SNR=11 comp=N,5.3nm,1.0s						
KDAK	Kodiak Island	11.13	53	Pn	Pn	06 58 31.2	+0.2
N18K	Kilae Creek	11.27	36	Pn	Pn	06 58 34.9	+1.9
M19K	Big River Lodg	12.64	34	Pn	Pn	06 58 56.4	+4.7
L19K	White Mountain	12.68	32	Pn	Pn	06 58 55.6	+3.4
SEW	Seward	13.58	47	Pn	Pn	06 59 05.3	+0.8
O22K	Cooper Landing	13.64	45	Pn	Pn	06 59 06.3	+1.1
SUA	Susitna One	13.72	40	Pn	Pn	06 59 07.7	+1.2
KTH	Kantishna Hill	14.94	33	Pn	Pn	06 59 24.3	+1.4
SCM	Sheep Creek Mo	15.31	42	Pn	Pn	06 59 26.8	-1.1
KLU	Klutina	15.75	45	Pn	Pn	06 59 32.9	-0.8
KLU				IAmb	IAmb	07 00 14.4	
	comp=Z,11nm,1.4s						
M24K	Tolsona, Glenn	15.92	43	Pn	Pn	06 59 35.7	-0.1
BERG	Berg Lake	16.34	50	Pn	Pn	06 59 40.2	-1.0
N25K	Chitina, Valde	16.37	45	Pn	Pn	06 59 41.2	-0.4
I23K	Minto, Yukon-K	16.50	31	P	Pn	06 59 45.1	+2.0
I23K				IAmb	IAmb	06 59 58.5	
	comp=Z,5.4nm,1.2s						
GLB	Gilahina Butte	16.66	46	P	Pn	06 59 46.1	+0.9
VRDI	Verde Repeater	16.74	47	P	Pn	06 59 46.2	-0.2
VRDI				IAmb	IAmb	07 00 22.8	
	comp=Z,5.9nm,1.4s						
M26K	Nabesna, AK	17.39	44	P	P	06 59 56.1	+0.7
M26K				IAmb	IAmb	06 59 56.1	
	comp=Z,4.8nm,1.3s						
H24K	Noodor Dome	17.43	30	P	Pn	06 59 55.3	+0.5
H24K				IAmb	IAmb	07 00 03.0	
	comp=Z,4.0nm,1.1s						
J25K	Salcha River,	17.52	36	P	Pn	06 59 55.6	-0.3
J25K				IAmb	IAmb	07 00 05.6	
	comp=Z,6.7nm,1.5s						
J26L	Joseph Creek	18.12	37	P	Pn	07 00 02.7	-0.6
EGAK	Eagle	19.16	38	P	P	07 00 15.2	+0.4
EGAK				IAmb	IAmb	07 00 20.1	
	comp=Z,4.1nm,1.2s						
HYT	Haines Junctio	19.41	51	P	Pn	07 00 20.2	+1.3
HYT				IAmb	IAmb	07 00 23.0	
	comp=Z,4.2nm,0.7s						
DAWY	Dawson	19.55	41	P	P	07 00 19.3	+0.2
DAWY				IAmb	IAmb	07 01 03.4	
	comp=Z,3.0nm,1.2s						
PETK	Petropavlovsk-	19.88	286	P	P	07 00 22.6	-0.1
	comp=Z,1.1nm,0.3s,baz=89,slow=13,SNR=14 comp=Z,2.5nm,0.4s						
KLR	Kul'dur	36.48	289	P	P	07 02 53.6	-2.7
	comp=Z,1.0nm,0.5s,baz=31,slow=2.2,SNR=5.3 comp=Z,1.0nm,0.5s						
H11N2	WAKE ISLAND Hy	37.33	219	T	T	07 42 55.3	
	baz=24,slow=76,SNR=8.7						
H11N3	WAKE ISLAND Hy	37.34	219	T	T	07 42 58.5	
	baz=24,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	37.35	219	T	T	07 42 57.5	
	baz=24,slow=76,SNR=9.0						
H11S1	WAKE ISLAND Hy	38.52	218	T	T	07 44 20.5	
	baz=23,slow=76,SNR=51						
H11S2	WAKE ISLAND Hy	38.53	218	T	T	07 44 22.0	
	baz=23,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	38.54	218	T	T	07 44 21.1	
	baz=23,slow=76,SNR=34						
PDAR	Pinedale Array	40.45	79	P	P	07 03 31.6	+1.7
	comp=Z,0.3nm,0.5s,baz=285,slow=4.6,SNR=2.9 comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	52.77	89	P	P	07 05 07.6	+1.2
	comp=Z,0.1nm,0.6s,baz=308,slow=4.4,SNR=2.5 comp=Z,0.1nm,0.6s						
ARCES	ARCESS Array B	58.06	354	P	P	07 05 42.4	-1.4
	comp=Z,5.4nm,1.1s,baz=36,slow=4.5,SNR=3.7 comp=Z,5.4nm,1.1s						
MKAR	Makanchi Array	63.88	313	P	P	07 06 22.5	-1.2
	comp=Z,0.2nm,0.5s,baz=42,slow=6.6,SNR=2.0 comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	66.00	352	P	P	07 06 36.4	-0.8
	comp=Z,0.5nm,0.4s,baz=354,slow=7.7,SNR=6.7 comp=Z,0.5nm,0.4s						
CMAR	Chiang Mai Arr	76.63	283	P	P	07 07 41.0	-1.0
	comp=Z,1.0nm,0.4s,baz=29,slow=6.3,SNR=6.2 comp=Z,1.0nm,0.4s						

GEN 07 07:27:06.8, 46°.53N×9°.55E, h12km, MI0.0
VIE 07 07:27:07.9±0.5, 46°.54N×9°.61E, h11km, mb3.2/21, ml3.8/21, Error ellipse: s-maj=4.4km s-min=3.0km az=179.0 13 km S of Tiefencastel
ROM 07 07:27:07.3±0.2, 46°.549N±0°.006×9°.545E±0°.006, h10km±1km, ML3.5/61, Error ellipse: s-maj=0.7km s-min=0.3km az=351.0
ZUR 07 07:27:07.2, 46°.52N×9°.54E, h11km, MLh3.9/91, Error ellipse: s-maj=1.6km s-min=0.6km az=303.0
PRU 07 07:27:07.7±0.0, 46°.77N×9°.35E, h0km
BGR 07 07:27:08.8±0.3, 46°.55N×9°.54E, h5km, ML3.9/34, Error ellipse: s-maj=3.3km s-min=2.2km az=16.0
LDG 07 07:27:08.4±0.1, 46°.49N×9°.59E, h10km, Md3.6/1, ml3.8/64, Error ellipse: s-maj=1.7km s-min=1.6km az=16.0
STR 07 07:27:08.7±0.7, 47°.N±3°×1°.0E±°, h2km±5km, MLv4.0/38, Error ellipse: s-maj=0.0km s-min=0.0km az=123.7, preliminary
BUG 07 07:27:09.2±0.0, 46°.60N×9°.54E, h10km±23km, MD4.1/11, ML4.5/14
BNS 07 07:27:10.1±0.3, 46°.49N×9°.18E, h10km, ML3.4
ISC 07 07:27:07.2±0.7, 46°.523N±0°.010×9°.540E±0°.009, h15km±3km, n488, σ1§47/742, 134C-86D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VDL	Val di Lei	0.07	238	⇑Pg	Pg	07 27 10.4	0.0
VDL				Sg	Sg	07 27 12.1	-0.5
VDL	Val di Lei	0.07	238	⇑Pg	Pg	07 27 10.4	0.0
VDL				Sg	Sg	07 27 12.1	-0.5
VDL	Val di Lei	0.07	238	⇑Pg	Pg	07 27 10.4	0.0
VDL				Sg	Sg	07 27 12.1	-0.5
VDL	Val di Lei	0.07	238	P	Pg	07 27 10.4	0.0
VDL				S	Sg	07 27 12.1	-0.5
TUE	Stuetta	0.14	249	⇑Pg	Pg	07 27 11.1	-0.1
TUE				Sg	Sg	07 27 13.3	-0.5
TUE	Stuetta	0.14	249	⇑Pg	Pg	07 27 11.1	-0.1
TUE				Sg	Sg	07 27 13.3	-0.5
TUE	Stuetta	0.14	249	⇑Pg	Pg	07 27 11.1	-0.1
TUE				Sg	Sg	07 27 13.3	-0.5
TUE	Stuetta	0.14	249	P	Pg	07 27 11.1	-0.1
TUE				S	Sg	07 27 13.3	-0.5
TUE	Stuetta	0.14	249	⇑P	Pg	07 27 11.1	-0.1
TUE				S	Sg	07 27 13.3	-0.5
TUE				AML	AML		
	comp=E,31350μm,0.3s						
TUE				AML	AML		
	comp=N,24450μm,0.5s						
TUE				AML	AML		
	comp=E,39550μm,0.3s						
TUE				AML	AML		
	comp=N,30900μm,0.5s						
SVAM	Vaz, Muldain	0.17	357	⇑Pg	Pg	07 27 11.3	-0.2
SVAM				Sg	Sg	07 27 13.9	-0.5
SVAM	Vaz, Muldain	0.17	357	⇑Pg	Pg	07 27 11.3	-0.2
SVAM				Sg	Sg	07 27 13.9	-0.5
SVAM	Vaz, Muldain	0.17	357	⇑Pg	Pg	07 27 11.3	-0.2
SVAM				Sg	Sg	07 27 13.9	-0.5
SCEL	Celerina	0.22	94	⇓Pg	Pg	07 27 12.4	+0.2
SCEL				Sg	Sg	07 27 15.8	+0.1
SCEL	Celerina	0.22	94	⇓Pg	Pg	07 27 12.4	+0.2
SCEL				Sg	Sg	07 27 15.8	+0.1
SCEL	Celerina	0.22	94	⇓Pg	Pg	07 27 12.4	+0.2
SCEL				Sg	Sg	07 27 15.8	+0.1
SCUG	Chur Gewerbesc	0.33	358	⇑Pg	Pg	07 27 14.1	0.0
SCUG	Chur Gewerbesc	0.33	358	⇑Pg	Pg	07 27 14.1	0.0
SCUG	Chur Gewerbesc	0.33	358	⇑Pg	Pg	07 27 14.1	0.0
DAVOX	Davos/Dischmat	0.35	42	⇑Pg	Pg	07 27 14.5	+0.1
DAVOX				Sg	Sg	07 27 19.1	-0.2
DAVOX	Davos/Dischmat	0.35	42	⇑Pg	Pg	07 27 14.5	+0.1
DAVOX				Sg	Sg	07 27 19.1	-0.2
DAVOX	Davos/Dischmat	0.35	42	⇑Pg	Pg	07 27 14.5	+0.1
DAVOX				Sg	Sg	07 27 19.1	-0.2
DAVOX	Davos/Dischmat	0.35	42	P	Pg	07 27 14.5	+0.1
DAVOX				S	Sg	07 27 19.0	-0.4
DAVOX	Davos/Dischmat	0.35	42	⇑P	Pg	07 27 14.5	+0.1
DAVOX				S	Sg	07 27 19.8	+0.5
BERNI	Berninapass	0.35	108	⇓Pg	Pg	07 27 14.6	+0.1
BERNI				Sg	Sg	07 27 19.2	-0.2
BERNI	Berninapass	0.35	108	⇓Pg	Pg	07 27 14.6	+0.1
BERNI				Sg	Sg	07 27 19.2	-0.2
BERNI	Berninapass	0.35	108	⇓Pg	Pg	07 27 14.6	+0.1
BERNI				Sg	Sg	07 27 19.2	-0.2
BERNI	Berninapass	0.35	108	P	Pg	07 27 14.6	+0.1
BERNI				S	Sg	07 27 19.2	-0.2
BERNI	Berninapass	0.35	108	⇓P	Pg	07 27 14.6	+0.1
BERNI				S	Sg	07 27 19.2	-0.2
BERNI				AML	AML		
	comp=E,6710μm,0.3s						
BERNI				AML	AML		
	comp=N,10400μm,0.2s						
BERNI				AML	AML		
	comp=E,6710μm,1.7s						
SZER	Zernez	0.42	65	⇑Pg	Pg	07 27 15.6	-0.1
SZER	Zernez	0.42	65	⇑Pg	Pg	07 27 15.6	-0.1
PANIX	Pigniu (Panix)	0.42	316	⇑Pg	Pg	07 27 15.8	0.0
PANIX				Sg	Sg	07 27 21.0	-0.5
PANIX	Pigniu (Panix)	0.42	316	⇑Pg	Pg	07 27 15.8	0.0
PANIX				Sg	Sg	07 27 21.0	-0.5
PANIX	Pigniu (Panix)	0.42	316	⇑Pg	Pg	07 27 15.8	0.0
PANIX				Sg	Sg	07 27 21.0	-0.5
LLS	Linth-Limmern	0.49	312	⇑Pg	Pg	07 27 17.0	+0.1
LLS				Sg	Sg	07 27 23.2	-0.3
LLS	Linth-Limmern	0.49	312	⇑Pg	Pg	07 27 17.0	+0.1
LLS				Sg	Sg	07 27 23.2	-0.3
FUORN	Ofenpass-Fuorn	0.51	79	⇑Pg	Pg	07 27 17.3	0.0
FUORN				Sg	Sg	07 27 24.1	-0.1
FUORN	Ofenpass-Fuorn	0.51	79	⇑Pg	Pg	07 27 17.3	0.0
FUORN				Sg	Sg	07 27 24.1	-0.1
FUORN	Ofenpass-Fuorn	0.51	79	⇑P	Pg	07 27 17.3	0.0
FUORN				S	Sg	07 27 24.1	-0.1
PLONS	Plons/SG	0.54	348	⇑Pg	Pg	07 27 17.8	0.0
PLONS				Sg	Sg	07 27 24.8	-0.2
PLONS	Plons/SG	0.54	348	⇑Pg	Pg	07 27 17.8	0.0
PLONS				Sg	Sg	07 27 24.8	-0.2
PLONS	Plons/SG	0.54	348	ePg	Pg	07 27 17.8	0.0
PLONS				eSg	Sg	07 27 24.8	-0.2
PLONS	Plons/SG	0.54	348	⇑P	Pg	07 27 17.8	0.0
PLONS				S	Sg	07 27 24.8	-0.2
PLONS				AML	AML		
	comp=E,5385μm,0.5s						
PLONS				AML	AML		
	comp=N,3755μm,1.3s						
PLONS				AML	AML		
	comp=N,3755μm,1.3s						
PLONS				AML	AML		
	comp=E,5385μm,1.5s						
PLONS				AML	AML		
	comp=N,3755μm,0.7s						
SLTM2	Linthal, Matt	0.55	317	⇑Pg	Pg	07 27 18.1	+0.2
SLTM2				Sg	Sg	07 27 25.1	-0.2
SLTM2	Linthal, Matt	0.55	317	⇑Pg	Pg	07 27 18.1	+0.2
SLTM2				Sg	Sg	07 27 25.1	-0.2
NALPS	Val Nalps	0.55	278	⇑Pg	Pg	07 27 17.9	-0.2
NALPS	Val Nalps	0.55	278	⇑Pg	Pg	07 27 17.9	-0.2
STSP	Tschierv	0.56	79	⇑Pg	Pg	07 27 18.1	-0.1
STSP	Tschierv	0.56	79	⇑Pg	Pg	07 27 18.1	-0.1
BRMO	Bormio	0.58	94	⇓Pg	Pg	07 27 18.4	-0.2
BRMO	Bormio	0.58	94	⇓Pg	Pg	07 27 18.4	-0.2
BRMO	Bormio	0.58	94	P	Pg	07 27 18.4	-0.2
BRMO				S	Sg	07 27 25.8	-0.4
BRMO	Bormio	0.58	94	⇓P	Pg	07 27 18.4	-0.2
BRMO				S	Sg	07 27 25.9	-0.4
BRMO				AML	AML		
	comp=E,2315μm,0.5s						
BRMO				AML	AML		
	comp=N,3145μm,0.3s						
BRMO				AML	AML		
	comp=E,2315μm,1.5s						
BORM	Bormio	0.58	95	P	Pg	07 27 18.5	-0.1
SCUC	Scuol-Clozza	0.59	62	⇑Pg	Pg	07 27 18.6	-0.3
SCUC	Scuol-Clozza	0.59	62	⇑Pg	Pg	07 27 18.6	-0.3
STRW	Triesenberg, W	0.59	1	⇑Sg	Sg	07 27 18.8	-8.0
STRW	Triesenberg, W	0.59	1	⇑Pg	Sg	07 27 18.8	-8.0
FUSIO	Fusio	0.61	264	⇑Pg	Pg	07 27 19.0	-0.1
FUSIO				Sg	Sg	07 27 26.7	-0.6
FUSIO	Fusio	0.61	264	⇑Pg	Pg	07 27 19.0	-0.1
FUSIO				Sg	Sg	07 27 26.7

MUO	**Muotathal**	**0.76 306**	⇑Pg	**Pg**	**07 27 22.2**	**+0.1**
MUO			Sg	**Sg**	**07 27 32.3**	**+0.1**
DAVA	**Damuels**	**0.80 17**	⇑Pg	**Pg**	**07 27 22.6**	**-0.1**
DAVA	**Damuels**	**0.80 17**	⇑Pg	**Pg**	**07 27 22.6**	**-0.1**
DAVA	**Damuels**	**0.80 17**	*e*Pg	**Pg**	**07 27 22.6**	**-0.1**
	comp=E,284nm,0.3s,SNR=121					
DAVA			*i* Sg	**Sb**	**07 27 34.1**	**+0.6**
	comp=E,846nm,0.2s					
DAVA	**Damuels**	**0.80 17**	*e*Pg	**Pg**	**07 27 22.6**	**-0.1**
DAVA			*e*Sg	**Sg**	**07 27 33.2**	**-0.1**
CARE	**Lago del Cares**	**0.80 97**	P	**Pg**	**07 27 22.4**	**-0.5**
CARE			S	**Sg**	**07 27 33.2**	**-0.3**
MABI	**Malga Bissina**	**0.82 124**	P	**Pg**	**07 27 22.9**	**-0.2**
MABI			S	**Sg**	**07 27 33.3**	**-0.7**
MABI	**Malga Bissina**	**0.82 124**	⇑P	**Pg**	**07 27 22.9**	**-0.2**
MABI			S	**Sg**	**07 27 33.2**	**-0.7**
MABI			AML	AML		
	comp=N,2815µm,0.3s					
MABI			AML	AML		
	comp=E,1745µm,1.1s					
SGT04	**Schlatt-Haslen**	**0.84 351**	⇑Pg	**Pb**	**07 27 23.8**	**+0.3**
SGT04	**Schlatt-Haslen**	**0.84 351**	⇑Pg	**Pb**	**07 27 23.8**	**+0.3**
BNALP	**Bannalp**	**0.84 295**	Pg	**Pg**	**07 27 23.6**	**+0.1**
BNALP	**Bannalp**	**0.84 295**	⇓Pg	**Pg**	**07 27 23.6**	**+0.1**
BNALP	**Bannalp**	**0.84 295**	⇓Pg	**Pg**	**07 27 23.6**	**+0.1**
BNALP	**Bannalp**	**0.84 295**	⇑P	**Pg**	**07 27 23.7**	**+0.1**
BNALP			S	**Sg**	**07 27 34.4**	**-0.2**
BNALP			AML	AML		
	comp=N,2340µm,0.6s					
BNALP			AML	AML		
	comp=N,2340µm,0.6s					
BNALP			AML	AML		
	comp=E,1730µm,0.3s					
BNALP			AML	AML		
	comp=E,1730µm,1.7s					
GRIMS	**Grimsel Gerste**	**0.84 274**	⇑Pg	**Pg**	**07 27 23.4**	**-0.2**
GRIMS	**Grimsel Gerste**	**0.84 274**	⇑Pg	**Pg**	**07 27 23.4**	**-0.2**
GRIMS	**Grimsel Gerste**	**0.84 274**	⇑Pg	**Pg**	**07 27 23.4**	**-0.2**
VARE	**Varese**	**0.85 220**	⇑Pg	**Pg**	**07 27 23.6**	**0.0**
VARE	**Varese**	**0.85 220**	⇑Pg	**Pg**	**07 27 23.6**	**0.0**
VARE	**Varese**	**0.85 220**	P	**Pg**	**07 27 23.6**	**0.0**
VARE	**Varese**	**0.85 220**	⇑P	**Pg**	**07 27 23.8**	**+0.2**
VARE			AML	AML		
	comp=E,17700µm,0.3s					
VARE			AML	AML		
	comp=N,10105µm,0.2s					
MERA	**Merate**	**0.85 186**	P	**Pg**	**07 27 23.4**	**-0.4**
MERA			AML	AML		
	comp=E,29200µm,0.4s					
MERA			AML	AML		
	comp=N,16750µm,1.4s					
MERA			AML	AML		
	comp=N,16750µm,0.6s					
ZONE	**Zone**	**0.86 152**	P	**Pb**	**07 27 24.1**	**+0.3**
ZONE			S	**Sb**	**07 27 35.5**	**+0.4**
ZONE			AML	AML		
	comp=E,9935µm,0.3s					
ZONE			AML	AML		
	comp=N,10420µm,0.2s					
SGT00	**Sennhlsen**	**0.92 350**	⇑Pg	**Pg**	**07 27 25.5**	**+0.6**
SGT00			Sg	**Sb**	**07 27 38.1**	**+1.3**
SGT00	**Sennhlsen**	**0.92 350**	⇑Pg	**Pg**	**07 27 25.5**	**+0.6**
SGT00			Sg	**Sb**	**07 27 38.1**	**+1.3**
SGT05	**Eggersriet**	**0.92 356**	⇑Pg	**Pn**	**07 27 25.7**	**0.0**
SGT05	**Eggersriet**	**0.92 356**	⇑Pg	**Pn**	**07 27 25.7**	**0.0**
RONC	**Roncone**	**0.93 125**	P	**Pb**	**07 27 25.1**	**+0.1**
BAG8	**Bagolino**	**0.95 137**	P	**Pg**	**07 27 25.7**	**+0.1**
BAG8			S	**Sb**	**07 27 38.2**	**+0.4**
BAG8	**Bagolino**	**0.95 137**	P	**Pn**	**07 27 25.9**	**-0.2**
BAG8			S	**Sb**	**07 27 37.9**	**+0.1**
FETA	**Feichten**	**0.96 58**	⇑Pg	**Pb**	**07 27 24.7**	**-0.9**
FETA			Sg	**Sg**	**07 27 37.3**	**-1.0**
FETA	**Feichten**	**0.96 58**	⇑Pg	**Pb**	**07 27 24.7**	**-0.9**
FETA			Sg	**Sg**	**07 27 37.3**	**-1.0**
FETA	**Feichten**	**0.96 58**	⇑Pg	**Pb**	**07 27 24.7**	**-0.9**
FETA			Sg	**Sg**	**07 27 37.3**	**-1.0**
FETA	**Feichten**	**0.96 58**	*i* Pg	**Pb**	**07 27 24.7**	**-0.9**
	comp=N,214nm,0.2s,SNR=206					
FETA			*i* Sg	**Sg**	**07 27 37.3**	**-1.0**
	comp=N,845nm,0.5s					
HASLI	**Hasliberg/Brie**	**0.98 284**	⇑Pg	**Pb**	**07 27 26.2**	**+0.2**
HASLI	**Hasliberg/Brie**	**0.98 284**	⇑Pg	**Pb**	**07 27 26.2**	**+0.2**
FIESA	**Fiescheralp**	**0.99 265**	⇑Pg	**Pb**	**07 27 26.1**	**-0.1**
FIESA	**Fiescheralp**	**0.99 265**	⇑Pg	**Pb**	**07 27 26.1**	**-0.1**
WILA	**Wila**	**0.99 334**	⇑Pg	**Pn**	**07 27 27.1**	**+0.5**
WILA			Sg	**Sn**	**07 27 40.4**	**0.0**
WILA	**Wila**	**0.99 334**	⇑Pg	**Pn**	**07 27 27.1**	**+0.5**
WILA			Sg	**Sn**	**07 27 40.4**	**0.0**
WILA	**Wila**	**0.99 334**	*e*Pg	**Pn**	**07 27 27.1**	**+0.5**
WILA			*e*Sg	**Sn**	**07 27 40.5**	**0.0**
SARE	**Arbon, Evangel**	**0.99 356**	Sg	**Sn**	**07 27 40.7**	**+0.3**
SARE	**Arbon, Evangel**	**0.99 356**	Sg	**Sn**	**07 27 40.7**	**+0.3**
OBER	**Oberstdorf**	**1.02 30**	*e*Pg	**Pb**	**07 27 26.7**	**0.0**
OBER			*e*Sg	**Sn**	**07 27 41.6**	**+0.3**
ROMAN	**Romanshorn, Fo**	**1.05 352**	⇑Pg	**Pn**	**07 27 28.0**	**+0.6**
ROMAN	**Romanshorn, Fo**	**1.05 352**	⇑Pg	**Pn**	**07 27 28.0**	**+0.6**
MAGA	**Magasa**	**1.06 134**	P	**Pn**	**07 27 27.9**	**+0.2**
MAGA			S	**Sn**	**07 27 41.8**	**-0.4**
MAGA			AML	AML		
	comp=E,14000µm,0.5s					
MAGA			AML	AML		
	comp=N,12200µm,0.3s					
MILN	**Milano**	**1.06 192**	P	**Pn**	**07 27 27.9**	**+0.4**
MILN			AML	AML		
	comp=E,1800µm,0.5s					
MILN			AML	AML		
	comp=N,2585µm,0.8s					
MILN			AML	AML		
	comp=N,5290µm,0.8s					
MILN			AML	AML		
	comp=E,3795µm,1.4s					
MILN			AML	AML		
	comp=N,2585µm,1.2s					
MILN			AML	AML		
	comp=E,1795µm,0.5s					
MILN			AML	AML		
	comp=N,5290µm,1.2s					
MILN			AML	AML		
	comp=E,3795µm,0.6s					
ZUR	**Degenried**	**1.07 323**	⇑Pg	**Pg**	**07 27 28.5**	**+0.6**
ZUR	**Degenried**	**1.07 323**	⇑Pg	**Pg**	**07 27 28.5**	**+0.6**
ZUR	**Degenried**	**1.07 323**	⇑Pg	**Pg**	**07 27 28.5**	**+0.6**
ZUR	**Degenried**	**1.07 323**	S	**Sn**	**07 27 42.8**	**+0.4**
ZUR	**Degenried**	**1.07 323**	⇑Pn	**Pg**	**07 27 28.5**	**+0.6**
WEIN	**Weingarten**	**1.07 340**	⇑Pg	**Pg**	**07 27 28.6**	**+0.7**
WEIN			Sg	**Sn**	**07 27 43.1**	**+0.7**
WEIN	**Weingarten**	**1.07 340**	⇑Pg	**Pg**	**07 27 28.6**	**+0.7**
WEIN			Sg	**Sn**	**07 27 43.1**	**+0.7**
GAGG	**Gaggia**	**1.08 114**	P	**Pb**	**07 27 27.4**	**-0.2**
GAGG	**Gaggia**	**1.08 114**	⇓P	**Pb**	**07 27 27.4**	**-0.2**
GAGG			S	**Sg**	**07 27 41.7**	**-0.4**
GAGG			AML	AML		
	comp=E,1740µm,0.5s					
GAGG			AML	AML		
	comp=E,1865µm,0.3s					
GAGG			AML	AML		
	comp=E,1745µm,0.5s					
GAGG			AML	AML		
	comp=N,1770µm,0.3s					
GAGG			AML	AML		
	comp=N,1825µm,0.5s					
EWZT2	**Wettswil, ZR**	**1.09 319**	⇑Pg	**Pg**	**07 27 28.8**	**+0.7**
EWZT2	**Wettswil, ZR**	**1.09 319**	⇑Pg	**Pg**	**07 27 28.8**	**+0.7**
SIMPL	**Simplonpass**	**1.09 255**	⇑Pg	**Pb**	**07 27 27.7**	**-0.1**
SIMPL	**Simplonpass**	**1.09 255**	⇑Pg	**Pb**	**07 27 27.7**	**-0.1**
SIMPL	**Simplonpass**	**1.09 255**	⇑Pg	**Pb**	**07 27 27.7**	**-0.1**
SIMPL	**Simplonpass**	**1.09 255**	P	**Pb**	**07 27 27.8**	**-0.1**
LUSI	**Trento, Gardas**	**1.12 120**	P	**Pb**	**07 27 28.4**	**+0.1**
LUSI			AML	AML		
	comp=E,4035µm,1.0s					
LUSI			AML	AML		
	comp=N,5005µm,1.3s					
LUSI			AML	AML		
	comp=N,5005µm,0.7s					
HAMIK	**Hmikon, Dlik**	**1.13 310**	⇑Pg	**Pg**	**07 27 29.5**	**+0.5**
HAMIK	**Hmikon, Dlik**	**1.13 310**	⇑Pg	**Pg**	**07 27 29.5**	**+0.5**
SALO	**Salr**	**1.14 143**	P	**Pg**	**07 27 28.9**	**-0.1**
SALO	**Salr**	**1.14 143**	⇑P	**Pg**	**07 27 28.9**	**-0.1**
SALO			S	**Sn**	**07 27 45.5**	**+1.6**
SALO			AML	AML		
	comp=E,4175µm,0.5s					
SALO			AML	AML		
	comp=N,4965µm,1.0s					
SALO			AML	AML		
	comp=E,4230µm,0.4s					
SALO			AML	AML		
	comp=N,4995µm,0.9s					
STIEG	**Stiegenhof Hun**	**1.15 328**	⇑Pg	**Pg**	**07 27 29.9**	**+0.5**
STIEG	**Stiegenhof Hun**	**1.15 328**	⇑Pg	**Pg**	**07 27 29.9**	**+0.5**
VARA	**Varagna**	**1.17 126**	P	**Pn**	**07 27 29.4**	**+0.2**
MMK	**Mattmark**	**1.19 247**	⇑Pn	**Pn**	**07 27 28.8**	**-0.7**
MMK	**Mattmark**	**1.19 247**	⇑Pn	**Pn**	**07 27 28.8**	**-0.7**
MMK	**Mattmark**	**1.19 247**	P	**Pn**	**07 27 28.8**	**-0.7**
MMK	**Mattmark**	**1.19 247**	P	**Pn**	**07 27 28.9**	**-0.7**
MMK			S	**Sg**	**07 27 45.9**	**+0.2**
MMK			AML	AML		
	comp=E,1125µm,0.7s					
MMK			AML	AML		
	comp=N,1685µm,0.5s					
MMK			AML	AML		
	comp=E,1125µm,0.6s					
MMK			AML	AML		
	comp=E,1125µm,1.4s					
UBR	**Ueberruh**	**1.22 18**	⇑Pn	**Pg**	**07 27 31.2**	**+0.5**
UBR	**Ueberruh**	**1.22 18**	⇑Pn	**Pg**	**07 27 31.2**	**+0.5**
UBR	**Ueberruh**	**1.22 18**	*e*Pg	**Pg**	**07 27 31.3**	**+0.5**
UBR			Sg	**Sg**	**07 27 48.8**	**+2.1**
BALD	**Monte Baldo**	**1.22 133**	P	**Pg**	**07 27 30.6**	**-0.1**
BALD	**Monte Baldo**	**1.22 133**	P	**Pg**	**07 27 31.0**	**+0.2**
LAUCH	**Lauchernalp**	**1.23 266**	⇑Pn	**Pn**	**07 27 30.4**	**+0.4**
LAUCH	**Lauchernalp**	**1.23 266**	⇑Pn	**Pn**	**07 27 30.4**	**+0.4**
LAUCH	**Lauchernalp**	**1.23 266**	P	**Pn**	**07 27 30.4**	**+0.4**
STEIN	**Stein am Rhein**	**1.24 338**	⇑Pn	**Pg**	**07 27 31.6**	**+0.6**
STEIN	**Stein am Rhein**	**1.24 338**	⇑Pn	**Pg**	**07 27 31.6**	**+0.6**
FLACH	**Flaach**	**1.24 328**	⇑Pn	**Pg**	**07 27 31.6**	**+0.5**
FLACH	**Flaach**	**1.24 328**	⇑Pn	**Pg**	**07 27 31.6**	**+0.5**
TRES	**Parco Tresine**	**1.25 146**	P	**Pg**	**07 27 32.5**	**+1.4**
WALHA	**Wallhausen, DE**	**1.26 347**	⇑Pn	**Pg**	**07 27 32.0**	**+0.6**
WALHA	**Wallhausen, DE**	**1.26 347**	⇑Pn	**Pg**	**07 27 32.0**	**+0.6**
WALHA	**Wallhausen, DE**	**1.26 347**	*e*Pg	**Pg**	**07 27 32.1**	**+0.6**
WALHA			*e*Sg	**Sg**	**07 27 49.1**	**+1.2**
DAGMA	**Lutertal, Dagm**	**1.27 305**	⇑Pn	**Pg**	**07 27 32.0**	**+0.5**
DAGMA	**Lutertal, Dagm**	**1.27 305**	⇑Pn	**Pg**	**07 27 32.0**	**+0.5**
TRULL	**Truellikon**	**1.27 333**	⇑Pn	**Pg**	**07 27 32.2**	**+0.6**
TRULL	**Truellikon**	**1.27 333**	⇑Pn	**Pg**	**07 27 32.2**	**+0.6**
KOSI	**Kohlern**	**1.27 92**	P	**Pb**	**07 27 31.2**	**+0.3**
KOSI			AML	AML		
	comp=N,1092µm,0.6s					
KOSI			AML	AML		
	comp=N,1092µm,1.4s					
KOSI			AML	AML		
	comp=E,1014µm,0.5s					
RETA	**Reutte**	**1.28 40**	*i* Pg	**Pn**	**07 27 30.6**	**+0.1**
	comp=E,6.3nm,0.2s,SNR=83					
RETA			*e*Sg	**Sg**	**07 27 50.0**	**+1.5**
	comp=E,230nm,0.2s					
DOSS	**Dosso del Somm**	**1.31 119**	P	**Pg**	**07 27 32.3**	**-0.2**
DOSS	**Dosso del Somm**	**1.31 119**	P	**Pg**	**07 27 32.4**	**-0.1**
DOSS			AML	AML		
	comp=E,3495µm,0.5s					
DOSS			AML	AML		
	comp=N,2920µm,0.3s					
DOSS			AML	AML		
	comp=N,2925µm,0.3s					
DOSS			AML	AML		
	comp=N,3555µm,0.5s					
DOSS			AML	AML		
	comp=E,3055µm,0.3s					
DOSS			AML	AML		
	comp=N,2925µm,1.7s					
DOSS			AML	AML		
	comp=E,3500µm,0.5s					
DOSS			AML	AML		
	comp=E,3055µm,1.7s					
LKBD2	**Leukerbad 2**	**1.32 264**	Pn	**Pn**	**07 27 31.9**	**+0.7**
LKBD2	**Leukerbad 2**	**1.32 264**	Pn	**Pn**	**07 27 31.9**	**+0.7**
SATI	**Passo dei Sala**	**1.33 241**	P	**Pn**	**07 27 29.7**	**-1.8**
SATI	**Passo dei Sala**	**1.33 241**	P	**Pb**	**07 27 32.2**	**+0.2**
SATI			S	**Sb**	**07 27 49.4**	**+0.4**
WIMIS	**Wimmis**	**1.33 277**	⇓Pn	**Pg**	**07 27 32.8**	**0.0**
WIMIS	**Wimmis**	**1.33 277**	⇓Pn	**Pg**	**07 27 32.8**	**0.0**
ZUGS	**Zugspitze, Sch**	**1.33 47**	*e*Pn	**Pn**	**07 27 31.9**	**+0.4**
SQTA	**Sankt Quirin**	**1.34 58**	*e*Pg	**Pn**	**07 27 31.7**	**+0.2**
	comp=E,35nm,0.1s,SNR=80					
SQTA			*e*Sg	**Sg**	**07 27 49.9**	**-0.5**
	comp=E,295nm,0.3s					
EUCT	**Pavia**	**1.35 192**	AML	AML		
	comp=N,4550µm,1.4s					
EUCT			AML	AML		
	comp=N,4545µm,0.6s					
EUCT			AML	AML		
	comp=E,5630µm,1.4s					
EUCT			AML	AML		
	comp=N,4550µm,0.6s					
ROSI	**Rosskopf**	**1.35 72**	⇑Pn	**Pn**	**07 27 31.9**	**+0.3**
ROSI	**Rosskopf**	**1.35 72**	⇑Pn	**Pn**	**07 27 31.9**	**+0.3**
ROSI	**Rosskopf**	**1.35 72**	⇑P	**Pn**	**07 27 32.1**	**+0.4**
ROSI			S	**Sg**	**07 27 50.8**	**0.0**
ROSI			AML	AML		
	comp=E,5465µm,0.8s					
ROSI			AML	AML		
	comp=N,3260µm,0.5s					
ROSI			AML	AML		
	comp=E,5465µm,1.2s					
MOTA	**Moosalm**	**1.35 52**	*e*Pn	**Pn**	**07 27 32.1**	**+0.5**
	comp=E,65nm,0.3s,SNR=50					
MOTA			*e*Sg	**Sg**	**07 27 50.4**	**-0.4**
	comp=E,263nm,0.2s					
ROVR	**Rover Verones**	**1.38 129**	P	**Pg**	**07 27 33.5**	**-0.2**
ROVR			S	**Sg**	**07 27 52.5**	**+0.8**
ACHB	**Acheberg**	**1.38 321**	⇓Pn	**Pg**	**07 27 33.8**	**+0.1**
ACHB	**Acheberg**	**1.38 321**	⇓Pn	**Pg**	**07 27 33.8**	**+0.1**
VANNI	**Vissoie, Val d**	**1.38 258**	P	**Pb**	**07 27 33.3**	**+0.5**
EMMET	**Emmethof**	**1.39 312**	⇓Pn	**Pg**	**07 27 34.1**	**+0.2**
EMMET	**Emmethof**	**1.39 312**	⇓Pn	**Pg**	**07 27 34.1**	**+0.2**
SULZ	**Cheisacher**	**1.40 316**	⇓Pn	**Pg**	**07 27 34.2**	**+0.1**
SULZ	**Cheisacher**	**1.40 316**	⇓Pn	**Pg**	**07 27 34.2**	**+0.1**
SULZ	**Cheisacher**	**1.40 316**	*e*Pn	**Pg**	**07 27 34.1**	**+0.1**
SULZ			*e*Sg	**Sg**	**07 27 52.5**	**+0.1**
SULZ	**Cheisacher**	**1.40 316**	Pg	**Pg**	**07 27 35.7**	**+1.6**
SULZ	**Cheisacher**	**1.40 316**	Sn	**Sg**	**07 27 54.0**	**+1.6**
SULZ	**Cheisacher**	**1.40 316**	⇓Pn	**Pg**	**07 27 34.2**	**+0.1**
SLE	**Schleitheim**	**1.43 330**	⇓Pn	**Pb**	**07 27 34.2**	**+0.6**
SLE	**Schleitheim**	**1.43 330**	⇓Pn	**Pb**	**07 27 34.2**	**+0.6**
SLE	**Schleitheim**	**1.43 330**	*e*Pn	**Pb**	**07 27 34.3**	**+0.6**
SLE			*e*Sn	**Sb**	**07 27 52.4**	**0.8**
SLE	**Schleitheim**	**1.43 330**	Sg	**Sg**	**07 27 55.0**	**+1.6**
SLE	**Schleitheim**	**1.43 330**	Pn	**Pb**	**07 27 34.3**	**+0.6**
SLE			Pg	**Pg**	**07 27 35.7**	**+0.9**
EMING	**Emmingen-Lipti**	**1.45 341**	Pn	**Pb**	**07 27 34.4**	**+0.6**
EMING	**Emmingen-Lipti**	**1.45 341**	Pn	**Pb**	**07 27 34.4**	**+0.6**
EMING	**Emmingen-Lipti**	**1.45 341**	*e*Pn	**Pb**	**07 27 34.5**	**+0.6**
EMING			*e*Sn	**Sb**	**07 27 53.1**	**+0.9**
PART	**Garmisch-Parte**	**1.45 47**	*e*Pn	**Pb**	**07 27 34.4**	**+0.5**
MARN	**Marana (Italy)**	**1.46 127**	P	**Pg**	**07 27 35.5**	**+0.3**
ROTHE	**Rothenfluh**	**1.46 311**	⇓Pn	**Pb**	**07 27 35.1**	**+1.0**
ROTHE	**Rothenfluh**	**1.46 311**	⇓Pn	**Pb**	**07 27 35.1**	**+1.0**
METMA	**Mettma DE**	**1.48 324**	⇓Pn	**Pb**	**07 27 34.9**	**+0.5**
METMA	**Mettma DE**	**1.48 324**	⇓Pn	**Pb**	**07 27 34.9**	**+0.5**
METMA	**Mettma DE**	**1.48 324**	*e*Pn	**Pb**	**07 27 34.9**	**+0.5**
METMA			*e*Sn	**Sb**	**07 27 53.6**	**+0.6**
METMA			*e*Sg	**Sg**	**07 27 55.7**	**+0.9**
BALST	**Balsthal**	**1.50 303**	⇓Pn	**Pb**	**07 27 35.8**	**+1.0**
BALST	**Balsthal**	**1.50 303**	⇓Pn	**Pb**	**07 27 35.8**	**+1.0**
BALST	**Balsthal**	**1.50 303**	*e*Pn	**Pb**	**07 27 35.8**	**+1.0**
BALST	**Balsthal**	**1.50 303**	Pg	**Pg**	**07 27 37.3**	**+1.2**
BALST	**Balsthal**	**1.50 303**	⇓Pn	**Pb**	**07 27 35.8**	**+1.0**
BRES	**Bressanone**	**1.52 83**	P	**Pb**	**07 27 35.8**	**+0.5**
BRES			AML	AML		
	comp=E,1322µm,0.3s					
BRES			AML	AML		
	comp=E,1320µm,0.3s					
BRES			AML	AML		
	comp=N,1461µm,1.2s					
BRES			AML	AML		
	comp=E,1320µm,1.7s					
CTI	**Castel Tesino**	**1.54 107**	P	**Pg**	**07 27 36.3**	**-0.4**
CTI			AML	AML		
	comp=E,1135µm,0.3s					
CTI			AML	AML		
	comp=N,1200µm,0.7s					
DIX	**Grande Dixence**	**1.54 254**	⇑Pn	**Pb**	**07 27 35.7**	**+0.1**
DIX	**Grande Dixence**	**1.54 254**	⇑Pn	**Pb**	**07 27 35.7**	**+0.1**
DIX	**Grande Dixence**	**1.54 254**	⇑P	**Pb**	**07 27 35.8**	**+0.1**
DIX			S	**Sg**	**07 27 56.9**	**-0.1**
DIX			AML	AML		
	comp=E,1205µm,0.4s					
DIX			AML	AML		
	comp=N,1006µm,0.7s					
DIX	**Grande Dixence**	**1.54 254**	⇑Pn	**Pb**	**07 27 35.7**	**+0.1**
SENIN	**Lac Senin/Sane**	**1.56 265**	⇑Pn	**Pb**	**07 27 36.3**	**+0.5**
SENIN	**Lac Senin/Sane**	**1.56 265**	⇑Pn	**Pb**	**07 27 36.3**	**+0.5**
WOLEN	**Wohlen bei Ber**	**1.57 288**	⇓Pn	**Pg**	**07 27 37.2**	**-0.1**
WOLEN	**Wohlen bei Ber**	**1.57 288**	⇓Pn	**Pg**	**07 27 37.2**	**-0.1**
GUT	**Gutenstein**	**1.58 350**	⇑Pn	**Pb**	**07 27 35.9**	**-0.1**
GUT			PmP		07 27 38.1	
GUT	**Gutenstein**	**1.58 350**	⇑Pn	**Pb**	**07 27 35.9**	**-0.1**
GUT			PmP		07 27 38.1	
GUT	**Gutenstein**	**1.58 350**	Pg	**Pg**	**07 27 38.1**	**+0.7**
GUT	**Gutenstein**	**1.58 350**	Sn	**Sb**	**07 27 55.8**	**+0.1**
GUT			Sg	**Sg**	**07 27 58.8**	**+0.9**
GUT	**Gutenstein**	**1.58 350**	⇑Pn	**Pb**	**07 27 35.9**	**-0.1**
TRAV	**Traversella**	**1.61 232**	P	**Pn**	**07 27 35.6**	**+0.5**
WATA	**Walderalm**	**1.61 59**	*e*Pn	**Pb**	**07 27 36.8**	**+0.1**
	comp=N,9.4nm,0.2s,SNR=32					
WATA			*e*Sg	**Sg**	**07 28 00.4**	**+1.2**
	comp=N,343nm,0.3s					
WTTA	**Wattenberg**	**1.62 62**	*e*Pn	**Pb**	**07 27 36.7**	**-0.1**
	comp=N,105nm,0.3s,SNR=46					
WTTA			*e*Sg	**Sg**	**07 28 00.6**	**+1.2**
	comp=N,418nm,0.4s					
WTTA	**Wattenberg**	**1.62 62**	*e*Pn	**Pb**	**07 27 36.7**	**-0.1**
WTTA			*e*Sg	**Sg**	**07 28 00.5**	**+1.2**
WTTA	**Wattenberg**	**1.62 62**	P	**Pb**	**07 27 37.1**	**+0.3**
WTTA			S	**Sg**	**07 28 00.8**	**+1.5**
WTTA			AML	AML		
	comp=E,1480µm,0.9s					
WTTA			AML	AML		
	comp=N,1450µm,0.5s					
BERGE	**Lenzkirch (DE)**	**1.64 326**	⇓Pn	**Pb**	**07 27 37.0**	**-0.1**
BERGE			PmP		07 27 39.3	
BERGE	**Lenzkirch (DE)**	**1.64 326**	⇓Pn	**Pb**	**07 27 37.0**	**-0.1**
BERGE			PmP		07 27 39.3	
BERGE	**Lenzkirch (DE)**	**1.64 326**	*e*Pn	**Pb**	**07 27 37.0**	**-0.1**
BERGE			*e*Pg	**Pg**	**07 27 39.3**	**+0.6**
BERGE			*e*Sn	**Sn**	**07 27 57.2**	**+0.8**
BERGE			*e*Sg	**Sg**	**07 28 00.6**	**+0.6**
CIRO	**Champorcher**	**1.65 237**	P	**Pn**	**07 27 36.5**	**+0.6**
CIRO			AML	AML		
	comp=E,725µm,0.4s					
CIRO			AML	AML		
	comp=N,788µm,0.4s					
CIRO			AML	AML		
	comp=N,788µm,1.6s					
CIRO			AML	AML		
	comp=E,726µm,0.4s					
CGRP	**Cima Grappa**	**1.70 111**	P	**Pg**	**07 27 39.2**	**-0.6**
CGRP			AML	AML		
	comp=N,1600µm,1.1s					
CGRP			AML	AML		
	comp=E,1885µm,1.5s					
CGRP			AML	AML		
	comp=E,1900µm,1.5s					
CGRP			AML	AML		
	comp=E,1885µm,0.5s					
CGRP			AML	AML		
	comp=E,1900µm,0.5s					
CGRP			AML	AML		
	comp=N,1620µm,1.1s					
MATTE	**Schuetzenmatte**	**1.70 308**	Pn	**Pb**	**07 27 38.2**	**+0.1**
MATTE			PmP		07 27 40.6	
MATTE	**Schuetzenmatte**	**1.70 308**	Pn	**Pb**	**07 27 38.2**	**+0.1**
MATTE			PmP		07 27 40.6	
GRYON	**Gryon**	**1.70 262**	Pn	**Pb**	**07 27 39.3**	**+1.1**
GRYON	**Gryon**	**1.70 262**	Pn	**Pb**	**07 27 39.3**	**+1.1**
FELD	**Feldberg im Sc**	**1.71 323**	⇓Pn	**Pb**	**07 27 38.1**	**-0.3**
FELD			PmP		07 27 40.7	
FELD			Sn	**Sn**	**07 27 59.0**	**+0.7**
FELD			SmS		07 28 02.6	
FELD	**Feldberg im Sc**	**1.71 323**	⇓Pn	**Pb**	**07 27 38.1**	**-0.3**
FELD			PmP		07 27 40.7	
FELD			Sn	**Sn**	**07 27 59.0**	**+0.7**
FELD			SmS		07 28 02.6	
FELD	**Feldberg im Sc**	**1.71 323**	Pg	**Pg**	**07 27 40.7**	**+0.6**
FELD	**Feldberg im Sc**	**1.71 323**	Sn	**Sn**	**07 27 59.1**	**+0.8**
FELD	**Feldberg im Sc**	**1.71 323**	Sg	**Sg**	**07 28 02.7**	**+0.4**
FELD	**Feldberg im Sc**	**1.71 323**	⇓Pn	**Pb**	**07 27 38.1**	**-0.3**
AGOR	**Agordo**	**1.75 97**	P	**Pb**	**07 27 39.8**	**+0.8**
AGOR			S	**Sg**	**07 28 02.3**	**-1.2**
AGOR			AML	AML		
	comp=N,1360µm,0.4s					
AGOR			AML	AML		
	comp=E,716µm,0.4s					
AGOR			AML	AML		
	comp=N,1100µm,0.4s					
AGOR			AML	AML		
	comp=E,902µm,0.4s					
REMY	**Saint-Rhmy-en**	**1.79 248**	P	**Pb**	**07 27 40.1**	**+0.2**
REMY			S	**Sb**	**07 28 02.6**	**+0.4**
REMY			AML	AML		
	comp=N,1335µm,0.4s					
REMY			AML	AML		
	comp=E,1130µm,0.5s					
TORNY	**Torny/Romont**	**1.80 279**	⇓Pn	**Pb**	**07 27 40.6**	**+0.8**
TORNY	**Torny/Romont**	**1.80 279**	⇓Pn	**Pb**	**07 27 40.6**	**+0.8**
TORNY	**Torny/Romont**	**1.80 279**	Pg	**Pg**	**07 27 42.4**	**+0.8**
**TORN

OGSI	**Sixt**	**1.98 258**	Pn	**Pb**	**07 27 44.3**	**+1.3**
OGSI			Sn	**Sb**	**07 28 09.1**	**+1.6**
BFO	**Black Forest**	**1.99 336**	⇓Pn	**Pn**	**07 27 41.6**	**+1.4**
BFO	**Black Forest**	**1.99 336**	⇓Pn	**Pn**	**07 27 41.6**	**+1.4**
BFO	**Black Forest**	**1.99 336**	*e*Pn	**Pn**	**07 27 41.7**	**+1.4**
BFO			*e*Pg	**Pg**	**07 27 45.4**	**+0.2**
BFO			*e*Sn	**Sn**	**07 28 04.3**	**-0.6**
BFO			*e*Sg	**Sg**	**07 28 10.9**	**-0.2**
LSD	**Lago del Serru**	**1.99 238**	P	**Pb**	**07 27 42.3**	**-0.9**
VOGT	**Vogtsburg - To**	**2.01 321**	Pg	**Pg**	**07 27 46.4**	**+0.6**
VOGT	**Vogtsburg - To**	**2.01 321**	Sn	**Sn**	**07 28 05.8**	**+0.3**
VOGT	**Vogtsburg - To**	**2.01 321**	⇓Pn	**Pn**	**07 27 42.4**	**+1.7**
CIMO	**Cimolais**	**2.02 95**	⇑P	**Pb**	**07 27 44.3**	**+0.8**
CIMO			S	**Sg**	**07 28 12.2**	**+0.2**
CIMO			AML	AML		
	comp=E,401µm,0.8s					
CIMO			AML	AML		
	comp=N,532µm,0.8s					
CIMO			AML	AML		
	comp=E,402µm,0.8s					
CIMO			AML	AML		
	comp=N,526µm,0.7s					
FUR	**Furstenfeldbru**	**2.02 35**	*e*Pn	**Pb**	**07 27 42.9**	**-0.8**
FUR			*e*Pg	**Pg**	**07 27 45.7**	**-0.3**
FUR			*e*Sn	**Sn**	**07 28 06.2**	**+0.4**
FUR			*e*Sg	**Sg**	**07 28 12.7**	**+0.5**
ABTA	**Abfaltersbach**	**2.06 83**	*i* Pn	**Pb**	**07 27 45.0**	**+0.7**
	comp=N,30nm,0.3s,SNR=19					
ABTA			*e*Sg	**Sg**	**07 28 11.8**	**-1.6**
	comp=N,74nm,0.3s					
GRAM	**Graiana**	**2.06 169**	P	**Pb**	**07 27 44.6**	**+0.2**
GRAM			AML	AML		
	comp=E,966µm,1.1s					
GRAM			AML	AML		
	comp=E,966µm,0.9s					
GRAM			AML	AML		
	comp=N,898µm,0.5s					
RNCA	**Ronca, Sant'Ol**	**2.09 192**	P	**Pb**	**07 27 44.8**	**0.0**
RNCA			S	**Sb**	**07 28 11.6**	**+1.0**
RNCA			AML	AML		
	comp=N,235µm,0.3s					
RNCA			AML	AML		
	comp=E,252µm,0.4s					
PCP	**Piancastagn**	**2.10 200**	P	**Pb**	**07 27 44.0**	**-1.0**
PCP			AML	AML		
	comp=E,334µm,0.5s					
PCP			AML	AML		
	comp=N,327µm,0.4s					
PCP			AML	AML		
	comp=N,327µm,1.6s					
CHMF	**Charmoille**	**2.11 291**	⇓Pn	**Pb**	**07 27 44.1**	**-1.0**
CHMF			Sn	**Sb**	**07 28 10.7**	**-0.5**
MOF	**Molkenrain**	**2.11 310**	⇓Pn	**Pn**	**07 27 43.8**	**+1.8**
MOF			Pg	**Pg**	**07 27 49.4**	**+1.7**
BRANT	**Les Verrieres**	**2.15 282**	⇓Pn	**Pb**	**07 27 45.2**	**-0.7**
BRANT	**Les Verrieres**	**2.15 282**	S	**Sg**	**07 28 16.4**	**+0.1**
BRANT	**Les Verrieres**	**2.15 282**	⇓Pn	**Pb**	**07 27 45.2**	**-0.7**
OPP	**Oppenau**	**2.18 336**	⇓Pn	**Pn**	**07 27 44.2**	**+1.3**
RSL	**Roselend**	**2.19 249**	⇓Pn	**Pb**	**07 27 47.5**	**+0.9**
LPG	**La Plagne**	**2.20 243**	*e*P	**Pb**	**07 27 46.3**	**-0.5**
LPG			*e*Sg	**Sg**	**07 28 19.5**	**+1.7**
	comp=N,318nm,0.6s					
LPL	**La Plagne**	**2.20 244**	*e*P	**Pb**	**07 27 46.2**	**-0.6**
LPL			*e*Sg	**Sg**	**07 28 19.3**	**+1.4**
	comp=N,168nm,0.4s					
MSSA	**Maissana**	**2.21 180**	⇑P	**Pb**	**07 27 46.4**	**-0.4**
MSSA			S	**Sb**	**07 28 13.5**	**-0.4**
HINF	**Hinteralfeld**	**2.24 306**	*e*P	**Pn**	**07 27 45.4**	**+1.6**
HINF	**Hinteralfeld**	**2.24 306**	*e*Pg	**Pg**	**07 27 51.0**	**+0.8**
HINF			*e*Sn	**Sn**	**07 28 10.7**	**-0.6**
	comp=N,296nm,0.3s					
HINF			*e*Sg	**Sg**	**07 28 21.4**	**+2.1**
	comp=N,292nm,0.3s					
GIMEL	**St. Georges /**	**2.26 271**	⇓Pn	**Pb**	**07 27 46.9**	**-0.8**
GIMEL			Pg	**Pg**	**07 27 51.0**	**+0.5**
STU	**Stuttgart**	**2.26 354**	*e*Pn	**Pn**	**07 27 45.2**	**+1.2**
STU			*e*Pg	**Pg**	**07 27 50.9**	**+0.3**
STU			*e*Sn	**Sn**	**07 28 11.5**	**-0.2**
STU			*e*Sg	**Sg**	**07 28 19.7**	**-0.1**
RONF	**Ronchamp**	**2.31 302**	⇓Pn	**Pn**	**07 27 46.5**	**+1.9**
CLUD	**Cludinico**	**2.31 90**	AML	AML		
	comp=E,344µm,1.1s					
CLUD			AML	AML		
	comp=E,344µm,1.1s					
CLUD			AML	AML		
	comp=N,361µm,1.5s					
CLUD			AML	AML		
	comp=N,354µm,0.9s					
BHB	**Bricherasio**	**2.32 224**	P	**Pn**	**07 27 44.5**	**-0.3**
NORI	**Noerdlinger Ri**	**2.32 18**	*e*Pn	**Pn**	**07 27 45.5**	**+0.8**
NORI			*e*Pg	**Pg**	**07 27 51.5**	**-0.1**
OG02	**Monnetier-Morn**	**2.33 262**	PmP		07 27 51.8	
OG02	**Monnetier-Morn**	**2.33 262**	PmP		07 27 51.8	
ECH	**Echery**	**2.34 317**	⇓Pn	**Pn**	**07 27 46.8**	**+1.6**
ECH	**Echery**	**2.34 317**	⇓Pn	**Pn**	**07 27 46.8**	**+1.6**
ECH	**Echery**	**2.34 317**	*e*Pn	**Pn**	**07 27 46.8**	**+1.6**
ECH			*e*Sn	**Sn**	**07 28 13.3**	**-0.3**
ECH			*e*Sg	**Sg**	**07 28 21.6**	**-0.9**
ECH	**Echery**	**2.34 317**	⇓Pn	**Pn**	**07 27 46.8**	**+1.6**
QLNO	**Quiliano**	**2.35 201**	P	**Pb**	**07 27 47.8**	**-1.5**
BOUC	**Bouclans**	**2.37 289**	⇓Pn	**Pn**	**07 27 47.7**	**+2.2**
BOUC			Sn	**Sg**	**07 28 22.3**	**-0.9**
ZOU	**Zoufplan**	**2.37 88**	AML	AML		
	comp=E,450µm,0.7s					
ZOU			AML	AML		
	comp=E,459µm,1.1s					
ZOU			AML	AML		
	comp=N,369µm,1.6s					
ZOU			AML	AML		
	comp=N,366µm,1.6s					
ZOU			AML	AML		
	comp=N,366µm,0.4s					
ZOU			AML	AML		
	comp=N,369µm,0.4s					
CABF	**La Chapelle**	**2.38 273**	*e*Pn	**Pn**	**07 27 46.2**	**+0.4**
CABF	**La Chapelle**	**2.38 273**	*e*P	**Pb**	**07 27 48.4**	**-1.4**
CABF	**La Chapelle**	**2.38 273**	*e*Pg	**Pg**	**07 27 53.2**	**+0.3**
CABF			*e*Sn	**Sn**	**07 28 14.3**	**-0.5**
	comp=N,60nm,0.3s					
CABF			*e*Sg	**Sg**	**07 28 25.7**	**+1.9**
	comp=N,406nm,0.6s					
OGMO	**Fort Saint-Gob**	**2.39 238**	P	**Pb**	**07 27 50.4**	**+0.5**
EQUI	**Equi**	**2.40 169**	P	**Pb**	**07 27 49.5**	**-0.5**
EQUI			AML	AML		
	comp=E,300µm,0.6s					
EQUI			AML	AML		
	comp=N,364µm,0.5s					
ZCCA	**Zocca**	**2.40 155**	P	**Pb**	**07 27 49.7**	**-0.3**
MPRI	**Monte Prat**	**2.40 95**	AML	AML		
	comp=E,278µm,0.5s					
MPRI			AML	AML		
	comp=N,442µm,1.4s					
MPRI			AML	AML		
	comp=N,559µm,1.4s					
MPRI			AML	AML		
	comp=E,404µm,0.9s					
MPRI			AML	AML		
	comp=N,442µm,0.6s					
MPRI			AML	AML		
	comp=N,559µm,0.6s					
WLS	**Welschbruch**	**2.40 323**	Pn	**Pn**	**07 27 46.9**	**+0.9**
WLS			Sn	**Sn**	**07 28 15.2**	**0.0**
CDF	**Champ du Feu**	**2.44 322**	*e*P	**Pn**	**07 27 48.0**	**+1.5**
CDF	**Champ du Feu**	**2.44 322**	*e*Pg	**Pg**	**07 27 54.8**	**+0.9**
CDF			*e*Sn	**Sn**	**07 28 15.4**	**-0.6**
	comp=N,152nm,0.3s					
CDF			*e*Sg	**Sg**	**07 28 26.8**	**+1.4**
	comp=N,608nm,0.4s					
VLC	**Villacollemand**	**2.44 166**	P	**Pb**	**07 27 50.1**	**-0.6**
VLC			AML	AML		
	comp=N,286µm,0.8s					
VLC			AML	AML		
	comp=N,276µm,0.7s					
VLC			AML	AML		
	comp=E,270µm,1.3s					
VLC			AML	AML		
	comp=E,280µm,1.3s					
PLMA	**Palmaria, Port**	**2.48 175**	P	**Pb**	**07 27 50.2**	**-1.2**
PLMA			AML	AML		
	comp=N,328µm,0.8s					
PLMA			AML	AML		
	comp=E,342µm,0.5s					
PLMA			AML	AML		
	comp=N,328µm,1.2s					
BNI	**Bardonecchia**	**2.48 235**	P	**Pn**	**07 27 49.6**	**+2.4**
BNI			AML	AML		
	comp=E,314µm,0.6s					
BNI			AML	AML		
	comp=N,259µm,0.5s					
BNI			AML	AML		
	comp=N,208µm,0.5s					
BNI			AML	AML		
	comp=E,260µm,0.6s					
CANO	**Canova, Maglio**	**2.49 202**	P	**Pb**	**07 27 50.0**	**-1.6**
CANO			AML	AML		
	comp=E,1805µm,0.9s					
CANO			AML	AML		
	comp=N,1085µm,0.4s					
CANO			AML	AML		
	comp=E,1805µm,1.1s					
RIVEL	**MONT RIVEL**	**2.50 277**	⇓Pn	**Pn**	**07 27 50.0**	**+2.6**
RRL	**Rocca Remolon**	**2.50 231**	P	**Pn**	**07 27 48.6**	**+1.0**
RJOB	**Jochberg**	**2.53 60**	*e*Pn	**Pb**	**07 27 50.8**	**-1.5**
CARD	**Cardoso**	**2.58 165**	P	**Pb**	**07 27 52.4**	**-0.8**
CARD			AML	AML		
	comp=E,464µm,0.9s					
CARD			AML	AML		
	comp=N,417µm,0.5s					
CARD			AML	AML		
	comp=E,464µm,1.1s					
POPM	**Popiglio**	**2.62 160**	P	**Pb**	**07 27 52.5**	**-1.3**
POPM			AML	AML		
	comp=E,362µm,1.3s					
POPM			AML	AML		
	comp=N,396µm,0.6s					
POPM			AML	AML		
	comp=E,362µm,0.7s					
POPM			AML	AML		
	comp=N,396µm,1.4s					
RORO	**Rocca Rossa**	**2.62 204**	P	**Pn**	**07 27 51.2**	**+2.2**
RORO			AML	AML		
	comp=E,279µm,0.5s					
RORO			AML	AML		
	comp=N,482µm,0.6s					
HAU	**Haudompre**	**2.63 305**	*e*P	**Pn**	**07 27 51.0**	**+1.9**
HAU			*e*Sn	**Sn**	**07 28 20.9**	**+0.1**
	comp=N,96nm,0.3s					
HAU			*e*Sg	**Sg**	**07 28 33.0**	**+1.3**
	comp=N,285nm,0.3s					
PTCC	**Patocco-Chiusa**	**2.64 91**	P	**Pb**	**07 27 53.5**	**-0.6**
PTCC			AML	AML		
	comp=N,250µm,1.1s					
PTCC			AML	AML		
	comp=E,202µm,0.7s					
PTCC			AML	AML		
	comp=N,250µm,0.9s					
PTCC			AML	AML		
	comp=E,202µm,1.3s					
PZZ	**Stroppo**	**2.64 221**	P	**Pn**	**07 27 49.7**	**+0.4**
PZZ			S	**Sn**	**07 28 19.1**	**-2.0**
PZZ			AML	AML		
	comp=N,354µm,0.3s					
PZZ			AML	AML		
	comp=E,452µm,0.3s					
MBDF	**Montbardon**	**2.65 228**	*e*Pn	**Pn**	**07 27 50.1**	**+0.7**
MBDF	**Montbardon**	**2.65 228**	*e*Pg	**Pg**	**07 27 58.0**	**+0.1**
MBDF			*e*Sn	**Sn**	**07 28 19.3**	**-2.0**
	comp=E,127nm,0.4s					
KBA	**Koelnbreinsper**	**2.67 77**	*e*Pn	**Pb**	**07 27 54.6**	**-0.2**
	comp=E,27nm,0.4s,SNR=20					
KBA			*e*Sg	**Sg**	**07 28 32.6**	**-0.4**
	comp=E,98nm,0.5s					
MAIM	**Mastiano**	**2.69 165**	P	**Pb**	**07 27 53.7**	**-1.3**
GDM	**Grand'Maison**	**2.73 242**	Pn	**Pb**	**07 27 54.5**	**-1.3**
STV	**Sant Anna di V**	**2.76 215**	P	**Pn**	**07 27 51.6**	**+0.7**
STV			AML	AML		
	comp=E,147µm,0.4s					
STV			AML	AML		
	comp=E,147µm,1.6s					
STV			AML	AML		
	comp=N,178µm,0.6s					
MGRO	**Montegrosso**	**2.77 207**	P	**Pn**	**07 27 53.6**	**+2.5**
SEI	**Scarperia**	**2.78 152**	P	**Pn**	**07 27 52.3**	**+1.1**
SEI			AML	AML		
	comp=N,760µm,0.5s					
SEI			AML	AML		
	comp=E,434µm,0.5s					
SEI			AML	AML		
	comp=N,760µm,1.5s					
OG35	**Corcelles**	**2.79 262**	Pn	**Pn**	**07 27 54.0**	**+2.6**
OG35			Pg	**Pg**	**07 28 00.0**	**-0.6**
SURF	**Saint Ours**	**2.80 224**	P	**Pn**	**07 27 52.2**	**+0.6**
MYKA	**Terra Mystica**	**2.83 86**	Pn	**Pn**	**07 27 52.2**	**+0.3**
	comp=N,36nm,0.4s					
MYKA			*e*Sg	**Sg**	**07 28 36.9**	**-1.2**
	comp=N,16nm,0.3s					
IMI	**Imperia**	**2.86 205**	P	**Pn**	**07 27 54.4**	**+2.1**
IMI			AML	AML		
	comp=E,356µm,1.6s					
IMI			AML	AML		
	comp=N,384µm,0.5s					
SABO	**M.te Sabotino**	**2.87 99**	P	**Pb**	**07 27 57.8**	**-0.3**
SABO			AML	AML		
	comp=N,1910µm,1.4s					
SABO			AML	AML		
	comp=N,490µm,1.4s					
SABO			AML	AML		
	comp=E,1580µm,0.8s					
SABO			AML	AML		
	comp=E,390µm,0.7s					
SABO			AML	AML		
	comp=E,1580µm,1.2s					
SABO			AML	AML		
	comp=N,1910µm,0.6s					
SABO			AML	AML		
	comp=N,490µm,0.6s					
LMD	**Lutirano**	**2.88 147**	P	**Pn**	**07 27 55.4**	**+2.8**
LMD			AML	AML		
	comp=N,218µm,0.5s					
LMD			AML	AML		
	comp=E,191µm,1.6s					
LMD			AML	AML		
	comp=E,191µm,0.4s					
PII	**Pisa**	**2.89 166**	AML	AML		
	comp=N,595µm,1.3s					
PII			AML	AML		
	comp=E,510µm,0.9s					
PII			AML	AML		
	comp=N,595µm,0.7s					
PII			AML	AML		
	comp=E,510µm,1.1s					
SAOF	**Saorge**	**2.90 210**	P	**Pn**	**07 27 54.9**	**+2.2**
SAOF			AML	AML		
	comp=E,480µm,0.6s					
SAOF			AML	AML		
	comp=N,387µm,0.5s					
CADS	**Cadrg**	**2.92 94**	*e*Pn	**Pb**	**07 27 57.7**	**-1.2**
CADS			*i* Sn	**Sg**	**07 28 39.9**	**-1.0**
OGAG	**Argentiere**	**2.95 227**	Pn	**Pn**	**07 27 53.0**	**-0.6**
KTD	**Kalmit**	**2.97 341**	*e*Pn	**Pn**	**07 27 55.3**	**+1.6**
KTD			*e*Sn	**Sn**	**07 28 30.4**	**+1.4**
KTD			*e*Sg	**Sg**	**07 28 43.5**	**+1.1**
RUFI	**Rufina**	**3.02 152**	P	**Pn**	**07 27 57.5**	**+3.0**
ORIF	**Oris-en-Rattie**	**3.02 239**	*e*P	**Pb**	**07 27 58.2**	**-2.5**
ORIF	**Oris-en-Rattie**	**3.02 239**	*e*Pg	**Pg**	**07 28 05.4**	**+0.3**
ORIF			*e*Sn	**Sn**	**07 28 28.9**	**-1.7**
	comp=N,149nm,0.5s					
SBF	**Sospel**	**3.05 210**	*e*P	**Pn**	**07 27 57.0**	**+2.1**
SBF	**Sospel**	**3.05 210**	*e*Pg	**Pg**	**07 28 05.2**	**-0.3**
SBF			*e*Sn	**Sn**	**07 28 29.6**	**-1.5**
	comp=N,289nm,0.4s					
GROG	**Isola di Gorgo**	**3.11 175**	P	**Pn**	**07 27 57.6**	**+2.0**
OSSC	**Osservatorio P**	**3.23 157**	P	**Pn**	**07 27 58.9**	**+1.5**
OSSC			AML	AML		
	comp=N,140µm,1.2s					
OSSC			AML	AML		
	comp=E,190µm,1.6s					
OSSC			AML	AML		
	comp=N,140µm,0.8s					
OSSC			AML	AML		
	comp=E,190µm,0.4s					
PAGF	**Fort de Pagny**	**3.29 310**	*e*Pn	**Pn**	**07 27 58.4**	**+0.3**
	baz=131					
PAGF	**Fort de Pagny**	**3.29 310**	*e*P	**Pn**	**07 28 00.8**	**+2.7**
	baz=119					
PAGF	**Fort de Pagny**	**3.29 310**	*e*Pg	**Pg**	**07 28 10.3**	**+0.2**
PAGF			*e*Sn	**Sn**	**07 28 36.4**	**-0.5**
	comp=E,67nm,0.4s					
PAGF			*e*Sg	**Sg**	**07 28 53.4**	**+0.7**
	comp=E,72nm,0.3s					
MILB	**Miltenberg**	**3.31 357**	*e*Pn	**Pn**	**07 27 59.9**	**+1.4**
MILB			*e*Pg	**Pg**	**07 28 10.3**	**-0.3**
MILB			*e*Sg	**Sg**	**07 28 52.8**	**-0.7**
GRF	**Grafenberg Arr**	**3.37 19**	*e*Pn	**Pn**	**07 27 58.9**	**-0.3**
GRF			*e*Pg	**Pg**	**07 28 11.0**	**-0.6**
GRF			*e*Sn	**Sn**	**07 28 38.6**	**-0.3**
GRF			*e*Sg	**Sg**	**07 28 54.7**	**-0.5**
WET	**Wettzell**	**3.45 39**	*e*Pn	**Pn**	**07 28 01.7**	**+1.3**
WET			*e*Pg	**Pg**	**07 28 13.2**	**-0.1**
WET			*e*Sn	**Sn**	**07 28 41.7**	**+0.6**
OBKA	**Obir**	**3.46 88**	Sg	**Sg**	**07 28 59.3**	**+1.1**
	comp=E,63nm,0.7s					
OBKA	**Obir**	**3.46 88**	*e*Sg	**Sg**	**07 28 59.8**	**+1.6**
MOA	**Molln**	**3.48 66**	*i* Pn	**Pn**	**07 28 04.0**	**+3.2**
	comp=E,2.1nm,0.2s					
MOA			*e*Sn	**Sn**	**07 28 44.6**	**+2.7**
	comp=E,17nm,0.2s					
MOA	**Molln**	**3.48 66**	*e*Pn	**Pn**	**07 28 03.8**	**+3.0**
SFTF	**Sexfontaines**	**3.49 300**	*e*Pn	**Pn**	**07 28 00.9**	**0.0**
	baz=124					
SFTF	**Sexfontaines**	**3.49 300**	*e*P	**Pn**	**07 28 04.4**	**+3.5**
	baz=121					
SFTF	**Sexfontaines**	**3.49 300**	*e*Pg	**Pg**	**07 28 13.8**	**-0.2**
SFTF			*e*Sn	**Sn**	**07 28 41.2**	**-0.8**
	comp=E,31nm,0.2s					
SFTF			*e*Sg	**Sg**	**07 28 59.4**	**+0.2**
	comp=E,97nm,0.4s					
ABH	**Alteburg**	**3.62 339**	*e*Pn	**Pn**	**07 28 04.4**	**+1.8**
ABH			*e*Pg	**Pg**	**07 28 16.0**	**-0.4**
ABH			*e*Sn	**Sn**	**07 28 46.2**	**+1.2**
ABH			*e*Sg	**Sg**	**07 29 02.0**	**-1.2**
MEZF	**Maizieres J'vi**	**3.63 305**	*e*Pn	**Pn**	**07 28 03.0**	**+0.2**
MEZF	**Maizieres J'vi**	**3.63 305**	*e*P	**Pn**	**07 28 06.3**	**+3.5**
	baz=124					
MEZF	**Maizieres J'vi**	**3.63 305**	*e*Pg	**Pg**	**07 28 16.5**	**-0.1**
MEZF			*e*Sn	**Sn**	**07 28 44.2**	**-1.1**
	comp=E,40nm,0.4s					
MEZF			*e*Sg	**Sg**	**07 29 04.2**	**+0.6**
	comp=E,112nm,0.5s					
GEC2	**GERESS Array S**	**3.65 49**	*e*Pn	**Pn**	**07 28 04.9**	**+1.7**
GEC2			*e*Pg	**Pg**	**07 28 17.1**	**+0.1**
GEC2			*e*Sn	**Sn**	**07 28 46.9**	**+0.9**
SAVF	**Savonnieres en**	**3.65 307**	*e*Pn	**Pn**	**07 28 03.1**	**0.0**
SAVF	**Savonnieres en**	**3.65 307**	*e*P	**Pn**	**07 28 07.0**	**+3.9**
	baz=126					
SAVF	**Savonnieres en**	**3.65 307**	*e*Pg	**Pg**	**07 28 17.3**	**+0.3**
SAVF			*e*Sn	**Sn**	**07 28 44.6**	**-1.2**
	comp=E,46nm,0.4s					
SAVF			*e*Sg	**Sg**	**07 29 04.7**	**+0.4**
	comp=E,107nm,0.5s					
PIEI	**Pieia**	**3.66 144**	AML	AML		
	comp=N,79µm,1.2s					
PIEI			AML	AML		
	comp=E,101µm,0.3s					
PIEI			AML	AML		
	comp=N,79µm,0.8s					
PIEI			AML	AML		
	comp=E,101µm,1.7s					
RIVT	**Riveris**	**3.69 331**	*e*Pn	**Pn**	**07 28 06.1**	**+2.5**
RIVT			*e*Sn	**Sn**	**07 28 45.8**	**-1.0**
RIVT			*e*Sg	**Sg**	**07 29 04.0**	**-1.6**
ROTZ	**Rotzenmuhle**	**3.71 28**	*e*Pn	**Pn**	**07 28 03.5**	**-0.3**
ROTZ			*e*Pg	**Pg**	**07 28 16.7**	**-1.4**
ROTZ			*e*Sn	**Sn**	**07 28 46.7**	**-0.5**
ROTZ			*e*Sg	**Sg**	**07 29 03.9**	**-2.1**
KHC	**Kasperske Hory**	**3.77 45**	*e*PN	**Pn**	**07 28 06.8**	**+2.0**
KHC			*e*SN	**Sn**	**07 28 49.6**	**+0.7**
KHC			*e*SG	**Sb**	**07 29 02.9**	**+4.0**
	comp=E,124nm,0.4s					
TNS	**Taunus Mts**	**3.77 349**	*e*Pn	**Pn**	**07 28 06.0**	**+1.2**
TNS			*e*Sg	**Sg**	**07 29 06.8**	**-1.5**
SOKA	**Soboth**	**3.79 86**	*e*Pn	**Pn**	**07 28 07.5**	**+2.4**
	comp=E,1.7nm,0.2s					
VIVF	**Saint-Julien-l**	**3.80 246**	*e*P	**Pn**	**07 28 07.8**	**+2.7**
VIVF	**Saint-Julien-l**	**3.80 246**	*e*Pg	**Pg**	**07 28 19.1**	**-0.8**
VIVF			*e*Sn	**Sn**	**07 28 48.0**	**-1.5**
	comp=E,21nm,0.4s					
VIVF			*e*Sg	**Sg**	**07 29 08.9**	**-0.1**
	comp=E,30nm,0.4s					
LMR	**La Mourre**	**3.85 215**	*e*P	**Pn**	**07 28 08.6**	**+2.8**
LMR			*e*Sn	**Sn**	**07 28 48.1**	**-2.6**
	comp=E,50nm,0.4s					
CASP	**Castiglione de**	**3.85 165**	P	**Pn**	**07 28 08.1**	**+2.2**
MANZ	**Manzenberg**	**3.87 25**	*e*Pn	**Pn**	**07 28 05.8**	**-0.3**
MANZ			*e*Pg	**Pg**	**07 28 20.9**	**-0.3**
MANZ			*e*Sn	**Sn**	**07 28 51.0**	**-0.2**
MANZ			*e*Sg	**Sg**	**07 29 09.1**	**-2.2**
WLF	**Walferdange**	**3.88 325**	*d*P	**Pn**	**07 28 09.0**	**+2.9**
WLF			*d*S	**Sg**	**07 29 10.3**	**-1.3**
WLF	**Walferdange**	**3.88 325**	Pn	**Pn**	**07 28 09.1**	**+2.9**
WLF			*e*Sg	**Sg**	**07 29 09.7**	**-1.9**
SMF	**Signal de Mont**	**3.93 274**	*e*Pn	**Pn**	**07 28 06.7**	**-0.3**
SMF	**Signal de Mont**	**3.93 274**	*e*P	**Pn**	**07 28 10.2**	**+3.2**
SMF	**Signal de Mont**	**3.93 274**	*e*Pg	**Pg**	**07 28 22.0**	**-0.4**
SMF			*e*Sn	**Sn**	**07 28 51.5**	**-1.3**
	comp=E,30nm,0.2s					
SMF			*e*Sg	**Sg**	**07 29 13.9**	**+0.5**
	comp=E,32nm,0.2s					
CKRC	**Cesky Krumlov**	**3.96 53**	*e*PN	**Pn**	**07 28 09.3**	**+2.0**
CKRC			*e*SN	**Sn**	**07 28 54.1**	**+0.6**
CKRC			*e*SG	**Sg**	**07 29 11.0**	**-3.2**
	comp=E,101nm,0.6s					
LOR	**Lormes**	**3.97 283**	*e*P	**Pn**	**07 28 10.1**	**+2.7**
	baz=102					
LOR			*e*Sn	**Sn**	**07 28 52.0**	**-1.7**
	comp=E,40nm,0.3s					
LOR			*e*Sg	**Sg**	**07 29 14.3**	**-0.1**
	comp=E,54nm,0.3s					
BGG	**Burgeitz**	**3.97 339**	*e*Pn	**Pn**	**07 28 08.8**	**+1.4**
BGG			*e*Sn	**Sn**	**07 28 53.7**	**+0.1**
	comp=E,60nm,1.4s					
PGF	**Pioggiola**	**3.99 186**	*e*P	**Pn**	**07 28 09.6**	**+1.7**
PGF			*e*Sn	**Sn**	**07 28 50.8**	**-3.7**
	comp=E,4.1nm,0.2s					
HROE	**Hohe Rhon--Fla**	**4.04 6**	*e*Pn	**Pn**	**07 28 08.1**	**-0.3**
HROE			*e*Pg	**Pg**	**07 28 23.3**	**-1.1**
HROE			*e*Sn	**Sn**	**07 28 55.4**	**-0.1**
KOE	**Koeppel**	**4.09 344**	*e*Pn	**Pn**	**07 28 11.1**	**+2.0**
ARSA	**Arzberg**	**4.17 78**	*e*Pn	**Pn**	**07 28 14.3**	**+4.1**
	comp=E,2.4nm,0.2s					
SSF	**Saint Saulge**	**4.18 280**	*e*P	**Pn**	**07 28 13.4**	**+3.0**
SSF			*e*Sn	**Sn**	**07 28 57.2**	**-1.7**
	comp=E,29nm,0.4s					
SSF			*e*Sg	**Sg**	**07 29 21.0**	**-0.3**
	comp=E,45nm,0.4s					
NKC	**Novy Kostel**	**4.19 26**	*e*PN	**Pn**	**07 28 10.2**	**-0.3**
AVF	**Avril sur Loir**	**4.27 276**	*e*P	**Pn**	**07 28 13.9**	**+2.3**
AVF			*e*Sn	**Sn**	**07 28 58.9**	**-2.2**
	comp=E,17nm,0.3s					
AVF			*e*Sg	**Sg**	**07 29 24.1**	**-0.1**
	comp=E,23nm,0.3s					
UBBA	**Unterbreizbach**	**4.31 4**	*e*Pn	**Pn**	**07 28 12.5**	**+0.5**
UBBA			*e*Pg	**Pg**	**07 28 28.1**	**-1.5**
MOX	**Moxa**	**4.35 18**	*e*Pn	**Pn**	**07 28 11.9**	**-0.8**
MOX			*e*Pg	**Pg**	**07 28 28.1**	**-2.3**
MOX			*e*Sn	**Sn**	**07 29 02.4**	**-0.6**
MOX			*e*Sg	**Sg**	**07 29 25.9**	**-0.8**
STB	**Steinbach**	**4.45 337**	*e*Pn	**Pn**	**07 28 15.6**	**+1.5**
BHOU	**Houvegnez**	**4.50 330**	*d*P	**Pn**	**07 28 16.7**	**+2.0**
BHOU			*d*S	**Sn**	**07 29 05.3**	**-1.4**
CONA	**Conrad Observa**	**4.53 70**	*i* Pn	**Pn**	**07 28 17.8**	**+2.5**
	comp=E,2.0nm,0.2s					
CONA			*i* Sn	**Sn**	**07 29 09.6**	**+1.9**
	comp=E,8.5nm,0.3s					
C

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEM				dx	x	07 29 39.5	
RONA	**Rosalia, Austr**	**4.76**	**73**	*i* Pn	**Pn**	**07 28 21.3**	**+2.9**
	comp=E,19nm,0.4s,SNR=9.5						
GIVF	**Givet**	**4.77**	**320**	*e*Pn	**Pn**	**07 28 18.4**	**0.0**
GIVF	**Givet**	**4.77**	**320**	*e*P	**Pn**	**07 28 22.6**	**+4.2**
GIVF				*e*Sn	**Sn**	**07 29 10.5**	**-2.9**
	comp=E,36nm,0.4s						
GIVF				*e*Sg	**Sg**	**07 29 39.2**	**-0.9**
	comp=E,122nm,0.6s						
HYF	**Humbligny**	**4.79**	**281**	*e*P	**Pn**	**07 28 21.7**	**+3.0**
HYF				*e*Sn	**Sn**	**07 29 12.6**	**-1.3**
HYF				*e*Sg	**Sg**	**07 29 40.8**	**0.0**
BCLA	**Clavier**	**4.81**	**326**	*d*S	**Sn**	**07 29 13.5**	**-0.9**
BCLA				*dx*	x	07 29 40.6	
PRU	**Pruhonice**	**4.81**	**42**	*e*PN	**Pn**	**07 28 20.5**	**+1.4**
PRU				*e*SN	**Sn**	**07 29 14.6**	**+0.1**
BSTI	**Sart Tilman**	**4.84**	**328**	*d*S	**Sn**	**07 29 14.7**	**-0.5**
DOU	**Dourbes**	**4.87**	**319**	*d*P	**Pn**	**07 28 21.6**	**+1.8**
DOU				*d*S	**Sn**	**07 29 15.4**	**-0.3**
TREC	**Trest**	**4.87**	**53**	*e*PN	**Pn**	**07 28 21.9**	**+2.1**
TREC				*e*SN	**Sn**	**07 29 15.7**	**-0.2**
BGES	**Gesves**	**4.87**	**324**	*d*P	**Pn**	**07 28 22.7**	**+2.9**
BGES				*d*S	**Sn**	**07 29 14.9**	**-0.9**
HGN	**Heimansgroeve**	**4.87**	**332**	Pn	**Pn**	**07 28 22.3**	**+2.5**
GOPC	**GO Pecny, Ondr**	**4.88**	**44**	*e*PN	**Pn**	**07 28 21.6**	**+1.6**
POSS	**Possen**	**4.89**	**10**	*e*Pn	**Pn**	**07 28 20.0**	**-0.1**
POSS				*e*Pg	**Pg**	**07 28 40.1**	**-0.7**
POSS				*e*Sg	**Sg**	**07 29 42.4**	**-1.7**
NEUB	**Neuenburg**	**4.92**	**17**	*e*Pg	**Pg**	**07 28 39.6**	**-1.6**
BMRD	**Maredsous**	**4.94**	**322**	*d*P	**Pn**	**07 28 23.2**	**+2.5**
BMRD				*d*PP	**PnPn**	**07 28 29.3**	**+1.1**
BMRD				*d*S	**Sn**	**07 29 17.0**	**-0.6**
BAIF	**Baives**	**5.02**	**317**	*e*Pn	**Pn**	**07 28 21.7**	**-0.1**
BAIF	**Baives**	**5.02**	**317**	*e*P	**Pn**	**07 28 26.5**	**+4.7**
BAIF				*e*Sn	**Sn**	**07 29 17.5**	**-2.0**
	comp=E,26nm,0.5s						
BAIF				*e*Sg	**Sg**	**07 29 47.1**	**-1.0**
	comp=E,40nm,0.5s						
GTTG	**Gottingen**	**5.04**	**3**	*e*Pg	**Pg**	**07 28 43.0**	**-0.5**
GTTG				*e*Sg	**Sg**	**07 29 48.0**	**-0.6**
TCF	**Toulx Ste Croi**	**5.08**	**270**	*e*P	**Pn**	**07 28 25.1**	**+2.4**
TCF				*e*Sn	**Sn**	**07 29 18.2**	**-2.8**
	comp=E,18nm,0.2s						
TCF				*e*Sg	**Sg**	**07 29 49.1**	**-0.9**
	comp=E,26nm,0.5s						
CHRS	**Christianenhau**	**5.16**	**9**	*e*Pn	**Pn**	**07 28 24.9**	**+1.0**
CHRS				*e*Pg	**Pg**	**07 28 44.2**	**-1.7**
CHRS				*e*Sn	**Sn**	**07 29 21.8**	**-1.3**
CHRS				*e*Sg	**Sg**	**07 29 51.7**	**-1.0**
BRG	**Berggiesshubel**	**5.24**	**32**	Pn	Pn	07 28 13.4	-12
BRG				Pg	**Pg**	**07 28 43.8**	**-3.6**
BRG				Amp		07 28 45.9	
	comp=Z,50nm,0.6s						
BRG				*ex*	x	07 29 35.4	
BRG				*ex*	x	07 29 47.8	
BRG				*ex*	x	07 29 52.5	
BRG				Amp		07 29 59.9	
	comp=Z,71nm,1.1s						
BRG				Amp		07 30 39.0	
	comp=E,0.3nm,7.0s						
BRG				Amp		07 30 41.0	
	comp=Z,0.3nm,10.9s						
BRG				Amp		07 30 46.0	
	comp=N,0.1nm,10.4s						
KRUC	**Moravsky**	**5.27**	**59**	*e*PN	**Pn**	**07 28 26.5**	**+1.1**
KRUC				*e*SN	**Sn**	**07 29 24.2**	**-1.6**
CLL	**Collm**	**5.30**	**24**	*e*Pn	**Pn**	**07 28 27.0**	**+1.2**
CLL				*i* Pg	**Pg**	**07 28 47.8**	**-0.9**
CLL				*i* Sg	**Sg**	**07 30 00.4**	**+3.1**
	comp=Z,82nm,0.9s						
CLZ	**Clausthal**	**5.35**	**6**	*e*Pn	**Pn**	**07 28 26.7**	**+0.3**
CLZ				*e*Pg	**Pg**	**07 28 47.7**	**-1.8**
CLZ				*e*Sg	**Sg**	**07 29 57.8**	**-1.1**
CAF	**Calviac**	**5.47**	**256**	*e*P	**Pn**	**07 28 30.8**	**+2.6**
CAF				*e*Sn	**Sn**	**07 29 28.8**	**-2.0**
	comp=Z,22nm,0.5s						
CAF				*e*Sg	**Sg**	**07 30 02.0**	**-0.7**
	comp=Z,16nm,0.4s						
VRAC	**Vranov**	**5.50**	**57**	*e*SN	**Sn**	**07 29 30.4**	**-1.0**
ASSE	**Asse, Remlinge**	**5.66**	**7**	*e*Pg	**Pg**	**07 28 53.3**	**-2.2**
ASSE				*e*Sn	**Sn**	**07 29 33.1**	**-2.2**
ASSE				*e*Sg	**Sg**	**07 30 07.0**	**-1.7**
RJF	**Les Rejaudoux**	**5.73**	**261**	*e*Pn	**Pn**	**07 28 31.7**	**0.0**
RJF	**Les Rejaudoux**	**5.73**	**261**	*e*P	**Pn**	**07 28 34.9**	**+3.2**
RJF				*e*Sn	**Sn**	**07 29 34.1**	**-3.0**
	comp=Z,8.3nm,0.3s						
RJF				*e*Sg	**Sg**	**07 30 08.6**	**-2.4**
	comp=Z,17nm,0.5s						
DPC	**Dobruska-Polom**	**5.92**	**47**	*e*PN	**Pn**	**07 28 35.7**	**+1.4**
FLTG	**Flechtingen**	**5.92**	**10**	*e*Pg	**Pg**	**07 28 58.3**	**-2.1**
FLTG				*e*Sg	**Sg**	**07 30 17.1**	**+0.1**
CHVC	**Chvalec**	**5.94**	**44**	*e*PN	**Pn**	**07 28 35.6**	**+1.1**
JAVC	**Velka Javorina**	**5.97**	**64**	*e*PN	**Pn**	**07 28 34.6**	**-0.3**
OSTC	**Ostas**	**5.99**	**45**	*e*PN	**Pn**	**07 28 35.9**	**+0.6**
MTLF	**Montolieu**	**6.09**	**241**	*e*Pn	**Pn**	**07 28 36.1**	**-0.6**
MTLF	**Montolieu**	**6.09**	**241**	*e*P	**Pn**	**07 28 39.5**	**+2.8**
MTLF				*e*Sn	**Sn**	**07 29 42.9**	**-3.2**
	comp=Z,4.9nm,0.3s						
MTLF				*e*Sg	**Sg**	**07 30 20.8**	**-1.8**
	comp=Z,9.3nm,0.4s						
MORC	**Moravsky Berou**	**6.27**	**56**	*e*PN	**Pn**	**07 28 39.9**	**+0.9**
MORC				*e*SN	**Sn**	**07 29 49.4**	**-1.0**
LFF	**La Frestale**	**6.36**	**259**	*e*Sn	**Sn**	**07 29 49.7**	**-2.9**
	comp=Z,12nm,0.4s						
LFF				*e*Sg	**Sg**	**07 30 29.3**	**-1.9**
	comp=Z,22nm,0.5s						
MFF	**Saint Martin d**	**6.68**	**274**	*e*Pn	**Pn**	**07 28 45.3**	**+0.6**
MFF	**Saint Martin d**	**6.68**	**274**	*e*P	**Pn**	**07 28 49.3**	**+4.6**
MFF				*e*Sg	**Sg**	**07 30 38.2**	**-3.2**
	comp=Z,66nm,1.2s						
LDF	**La Druitiere**	**6.86**	**291**	*e*Pn	**Pn**	**07 28 48.5**	**+1.4**
LDF				*e*Sn	**Sn**	**07 30 01.4**	**-3.5**
	comp=Z,13nm,0.3s						
LDF				*e*Sg	**Sg**	**07 30 45.0**	**-2.1**
	comp=Z,22nm,0.5s						
FLN	**La Foliniere**	**7.13**	**292**	*e*Pn	**Pn**	**07 28 52.1**	**+1.2**
FLN				*e*Sn	**Sn**	**07 30 08.4**	**-3.2**
	comp=Z,19nm,0.4s						
FLN				*e*Sg	**Sg**	**07 30 53.4**	**-2.4**
	comp=Z,18nm,0.4s						
GRR	**Gorron**	**7.29**	**289**	*e*Pn	**Pn**	**07 28 54.8**	**+1.7**
GRR				*e*Sn	**Sn**	**07 30 12.4**	**-3.1**
	comp=Z,13nm,0.4s						
EPF	**Esparros**	**7.42**	**245**	*e*Pn	**Pn**	**07 28 54.4**	**-0.5**
EPF	**Esparros**	**7.42**	**245**	*e*P	Pn	07 28 59.7	+4.8
EPF	**Esparros**	**7.42**	**245**	*e*Pg	**Pg**	**07 29 26.1**	**-3.0**
ETSF	**Etsaut**	**8.05**	**247**	*e*P	Pn	07 29 09.0	+5.4
ETSF				*e*Sn	**Sn**	**07 30 30.0**	**-4.4**
	comp=Z,2.0nm,0.3s						
SJPF	**Ste Jean**	**8.38**	**250**	*e*Sn	**Sn**	**07 30 37.6**	**-4.7**
	comp=Z,0.9nm,0.3s						
SGMF	**Saint Gilles**	**8.39**	**286**	*e*Sn	**Sn**	**07 30 38.2**	**-4.3**
	comp=Z,9.3nm,0.3s						
QUIF	**Quistinic**	**8.76**	**284**	*e*Sn	**Sn**	**07 30 47.3**	**-4.3**
	comp=Z,23nm,0.3s						
ROSF	**Rostrenen**	**8.88**	**286**	*e*Sn	**Sn**	**07 30 49.8**	**-4.7**
	comp=Z,3.6nm,0.2s						

*JMA **07** 07:55:47.2±0.1, 24°.9N±0°.5×122°.0E±0°.3, h86km±1km, MV2.9/9, TAIWAN REGION*
*TAP **07** 07:55:47.2, 24°.78N×121°.88E, h87km, ML3.6, B*
ISC 07 07:55:46.7±1.3, **24°.81N**±0°.03×**121°.91E**±0°.03, **h92**km±5km, **n129**, o0°63/208, **22C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.04**	**29**	*e*P	**Pn**	**07 55 59.2**	**-0.4**
	baz=51						
EGS				*e*S	**Sn**	**07 56 08.6**	**-0.5**
	baz=51						
NTC	**Toucheng**	**0.09**	**304**	*e*P	**Pn**	**07 56 00.2**	**+0.6**
	baz=340						
NTC				*e*S	**Sn**	**07 56 09.2**	**+0.1**
	baz=340						
ILA	**Ilan**	**0.15**	**255**	*i* P	**Pn**	**07 56 00.4**	**+0.7**
	baz=264						
ILA				*i* S	**Sn**	**07 56 10.3**	**+0.9**
	baz=264						
TIPB	**Shuangxi**	**0.18**	**336**	⇑*i*P	**Pn**	**07 56 00.0**	**+0.1**
	baz=346						
TIPB				*e*S	**Sn**	**07 56 08.7**	**-1.0**
	baz=346						
TWC	**Suao**	**0.20**	**195**	⇑*i*P	**Pn**	**07 56 00.4**	**+0.5**
	baz=186						
TWC				S	**Sn**	**07 56 09.5**	**-0.2**
	baz=186						
TWB1	**Santiao Chiao**	**0.21**	**20**	*e*P	**Pn**	**07 56 00.1**	**+0.2**
	baz=30						
TWE	**Neicheng**	**0.23**	**249**	*e*P	**Pn**	**07 56 00.6**	**+0.6**
	baz=252						
TWE				S	**Sn**	**07 56 09.7**	**-0.2**
	baz=252						
NWF	**Wu-fen Shan**	**0.29**	**336**	P	**Pn**	**07 56 00.5**	**+0.1**
	baz=351						
NWF				*e*S	**Sn**	**07 56 09.9**	**-0.6**
	baz=351						
WFSB	**Wu-fen Shan**	**0.29**	**336**	⇑P	**Pn**	**07 56 00.5**	**+0.2**
	baz=350						
WFSB				S	**Sn**	**07 56 10.1**	**-0.3**
	baz=350						
SXI1	**Grass Mountain**	**0.29**	**354**	*e*P	**Pn**	**07 56 00.3**	**-0.1**
	baz=352						
SXI1				*e*S	**Sn**	**07 56 10.1**	**-0.4**
	baz=352						
FUSB	**Fushanzhiwuyua**	**0.29**	**261**	⇑*i*P	**Pn**	**07 56 00.8**	**+0.4**
	baz=279						
FUSB				S	**Sn**	**07 56 10.3**	**-0.2**
	baz=279						
TWA	**Mucha**	**0.34**	**301**	P	**Pn**	**07 56 00.8**	**+0.3**
	baz=312						
TWA				*i* S	**Sn**	**07 56 10.8**	**-0.1**
	baz=312						
TNOU	**National Taiwa**	**0.36**	**340**	*e*P	**Pn**	**07 56 00.6**	**-0.1**
	baz=352						
TNOU				*e*S	**Sn**	**07 56 10.4**	**-0.6**
	baz=352						
EWUT	**Wuta**	**0.38**	**198**	⇑P	**Pn**	**07 56 00.5**	**-0.3**
	baz=192						
EWUT				*e*S	**Sn**	**07 56 10.9**	**-0.3**
	baz=192						
NHDH	**Xindian Distri**	**0.38**	**294**	⇑*i*P	**Pn**	**07 56 01.2**	**+0.5**
	baz=307						
NHDH				*e*S	**Sn**	**07 56 11.6**	**+0.3**
	baz=307						
NHY	**Taipei**	**0.39**	**307**	*e*P	**Pn**	**07 56 02.0**	**+1.3**
	baz=319						
NDT	**Datong Townshi**	**0.41**	**241**	⇑*e*P	**Pn**	**07 56 00.6**	**-0.4**
	baz=253						
NDT				*e*S	**Sn**	**07 56 11.2**	**-0.5**
	baz=253						
TATO	**Taipei**	**0.42**	**294**	⇑*i*P	**Pn**	**07 56 01.3**	**+0.3**
	baz=306						
TATO				*i* S	**Sn**	**07 56 11.4**	**-0.2**
	baz=306						
TAP1	**Taipei**	**0.42**	**304**	*e*P	**Pn**	**07 56 01.2**	**+0.2**
	baz=315						
TAP1				S	**Sn**	**07 56 11.9**	**+0.3**
	baz=315						
TAP	**Taipei**	**0.43**	**303**	P	**Pn**	**07 56 01.4**	**+0.3**
	baz=315						
TAP				*e*S	**Sn**	**07 56 11.9**	**+0.1**
	baz=315						
LATG	**Datong**	**0.44**	**232**	⇑*i*P	**Pn**	**07 56 01.9**	**+0.6**
	baz=243						
LATG				S	**Sn**	**07 56 12.4**	**+0.3**
	baz=243						
YM01	**YM01**	**0.46**	**318**	⇑*i*P	**Pn**	**07 56 01.5**	**+0.2**
	baz=326						
YM01				*e*S	**Sn**	**07 56 12.1**	**-0.2**
	baz=326						
BACT	**New Taipei Cit**	**0.47**	**294**	*e*P	**Pn**	**07 56 01.8**	**+0.5**
	baz=302						
YM08	**YM08**	**0.48**	**323**	*e*P	**Pn**	**07 56 01.4**	**0.0**
	baz=333						
YHNB	**Yeheng**	**0.50**	**254**	⇑*i*P	**Pn**	**07 56 01.8**	**+0.1**
	baz=257						
YHNB				S	**Sn**	**07 56 12.2**	**-0.7**
	baz=257						
ANP	**Anpu**	**0.52**	**317**	*e*P	**Pn**	**07 56 01.9**	**+0.1**
	baz=322						
NSK	**Sanguang**	**0.52**	**256**	*e*P	**Pn**	**07 56 00.9**	**-0.9**
	baz=258						
NSK				*e*S	**Sn**	**07 56 11.4**	**-1.7**
	baz=258						
TWS1	**Kuangyinshan**	**0.53**	**304**	⇑*i*P	**Pn**	**07 56 02.4**	**+0.6**
	baz=314						
TWS1				*e*S	**Sn**	**07 56 13.8**	**+0.6**
	baz=314						
TWY	**Chenhua**	**0.55**	**329**	P	**Pn**	**07 56 02.2**	**+0.3**
	baz=338						
TWY				S	**Sn**	**07 56 13.4**	**+0.1**
	baz=338						
NTST	**Danshui**	**0.55**	**311**	*e*P	**Pn**	**07 56 02.6**	**+0.6**
	baz=318						
NTST				*e*S	**Sn**	**07 56 14.1**	**+0.8**
	baz=318						
NSM	**Shimen**	**0.56**	**329**	*e*P	**Pn**	**07 56 02.7**	**+0.6**
	baz=340						
NSM				*e*S	**Sn**	**07 56 14.3**	**+0.7**
	baz=340						
NTY	**Taoyuan**	**0.59**	**289**	*e*P	**Pn**	**07 56 02.8**	**+0.5**
	baz=302						
NTY				*e*S	**Sn**	**07 56 14.8**	**+0.8**
	baz=302						
NNS	**Nan Shan**	**0.61**	**233**	⇑*e*P	**Pn**	**07 56 02.1**	**-0.6**
	baz=238						
NNS				*e*S	**Sn**	**07 56 13.8**	**-0.7**
	baz=238						
NCU	**National Centr**	**0.68**	**284**	⇑P	**Pn**	**07 56 03.5**	**+0.4**
	baz=278						
NCU				*e*S	**Sn**	**07 56 15.8**	**+0.4**
	baz=278						
NACB	**Ninganchiao**	**0.69**	**204**	*e*P	**Pn**	**07 56 03.7**	**+0.4**
	baz=212						
NACB				*e*S	**Sn**	**07 56 15.0**	**-0.6**
	baz=212						
ETL	**Fush Village**	**0.69**	**202**	*e*P	**Pn**	**07 56 03.3**	**-0.1**
	baz=210						
ETLH	**Xiulin Townshi**	**0.71**	**213**	*e*P	**Pn**	**07 56 03.6**	**0.0**
	baz=212						
ETLH				*e*S	**Sn**	**07 56 15.8**	**-0.3**
	baz=212						
NFF	**Wufeng Townshi**	**0.74**	**257**	*e*P	**Pn**	**07 56 02.8**	**-1.0**
	baz=258						
NJD	**Zhudong**	**0.75**	**265**	*e*P	**Pn**	**07 56 04.2**	**+0.4**
	baz=267						
NJD				*e*S	**Sn**	**07 56 16.9**	**+0.3**
	baz=267						
TWD	**Chiawan**	**0.78**	**202**	⇓P	**Pn**	**07 56 03.7**	**-0.4**
	baz=208						
TWD				*e*S	**Sn**	**07 56 16.3**	**-0.8**
	baz=208						
NHW	**Xinwu Township**	**0.81**	**285**	P	**Pn**	**07 56 04.8**	**+0.4**
	baz=287						
NHW				*e*S	**Sn**	**07 56 17.9**	**+0.3**
	baz=287						
HSN1	**Hsinchu**	**0.81**	**268**	P	**Pn**	**07 56 04.7**	**+0.3**
	baz=270						
HSN1				S	**Sn**	**07 56 17.8**	**+0.1**
	baz=270						
FUSS	**Fushou**	**0.82**	**228**	⇑*i*P	**Pn**	**07 56 05.6**	**+0.7**
	baz=227						
FUSS				*e*S	**Sn**	**07 56 19.1**	**+0.7**
	baz=227						
LIOB	**Emei**	**0.83**	**259**	⇑*i*P	**Pn**	**07 56 05.0**	**+0.3**
	baz=260						
LIOB				*e*S	**Sn**	**07 56 17.8**	**-0.3**
	baz=260						
PCYT	**Pengchaiyu**	**0.83**	**10**	*e*P	**Pn**	**07 56 05.1**	**+0.4**
	baz=7.0						
SBCB	**Hsinchu**	**0.84**	**269**	P	**Pn**	**07 56 05.1**	**+0.4**
	baz=271						
SBCB				S	**Sn**	**07 56 18.2**	**-0.1**
	baz=271						
NSTT	**Nanjuang**	**0.84**	**258**	⇑*i*P	**Pn**	**07 56 05.0**	**+0.2**
	baz=259						
NSTT				*i* S	**Sn**	**07 56 17.9**	**-0.5**
	baz=259						
HSN	**Hsinchu**	**0.85**	**270**	*e*P	**Pn**	**07 56 04.8**	**0.0**
	baz=265						
HSN				*e*S	**Sn**	**07 56 17.9**	**-0.6**
	baz=265						
TWT	**Tachien**	**0.86**	**231**	P	**Pn**	**07 56 06.2**	**+0.9**
	baz=230						
TWT				S	**Sn**	**07 56 19.5**	**+0.4**
	baz=230						
HWA	**Hwalien**	**0.87**	**199**	*e*P	**Pn**	**07 56 05.4**	**+0.3**
	baz=206						
TDCB	**Techi**	**0.88**	**231**	⇑*i*P	**Pn**	**07 56 06.2**	**+0.9**
	baz=231						
TDCB				S	**Sn**	**07 56 19.4**	**+0.1**
	baz=231						
WHF	**Hehuan Shan**	**0.88**	**222**	⇑*i*P	**Pn**	**07 56 05.8**	**+0.2**
	baz=214						
WHF				S	**Sn**	**07 56 19.7**	**-0.1**
	baz=214						
ETM	**Tongmen**	**0.92**	**204**	*e*P	**Pn**	**07 56 04.9**	**-0.7**
	baz=203						
NJN	**Zhunan**	**0.95**	**263**	*e*P	**Pn**	**07 56 06.5**	**+0.5**
	baz=259						
NJN				S	**Sn**	**07 56 20.6**	**+0.3**
	baz=259						
TEYL	**Yanliau Villag**	**0.98**	**197**	*e*P	**Pn**	**07 56 05.7**	**-0.6**
	baz=204						
CHGB	**Renai**	**1.00**	**222**	⇑*i*P	**Pn**	**07 56 07.5**	**+0.8**
	baz=214						
CHGB				S	**Sn**	**07 56 21.7**	**0.0**
	baz=214						
JYNG	**Yonagunijimaku**	**1.01**	**110**	P	**Pn**	**07 56 06.8**	**+0.2**
JYNG				*e*S	**Sn**	**07 56 21.3**	**-0.2**
WHP	**Taichung City**	**1.02**	**239**	⇑*i*P	**Pn**	**07 56 07.6**	**+0.8**
	baz=239						
WHP				*e*S	**Sn**	**07 56 22.1**	**+0.1**
	baz=239						
NMLH	**Miaoli**	**1.05**	**255**	*e*P	**Pn**	**07 56 07.5**	**+0.4**
	baz=255						
NMLH				*e*S	**Sn**	**07 56 22.1**	**-0.3**
	baz=255						
YOJ	**Yonaguni jima**	**1.06**	**109**	⇓*i*P	**Pn**	**07 56 07.5**	**+0.3**
	baz=106						
YOJ				S	**Sn**	**07 56 22.4**	**-0.1**
	baz=106						
YOJ	**Yonaguni jima**	**1.06**	**109**	P	**Pn**	**07 56 07.5**	**+0.3**
YOJ				S	**Sn**	**07 56 22.2**	**-0.4**
ESL	**Shilin**	**1.08**	**204**	*e*P	**Pn**	**07 56 06.8**	**-0.7**
	baz=202						
OWD	**Renai**	**1.08**	**218**	*e*P	**Pn**	**07 56 07.9**	**+0.3**
	baz=211						
WUSB	**Renai**	**1.08**	**222**	⇑*i*P	**Pn**	**07 56 08.3**	**+0.7**
	baz=215						
WUSB				S	**Sn**	**07 56 23.2**	**-0.1**
	baz=215						
NSY	**Sanyi**	**1.11**	**250**	*e*P	**Pn**	**07 56 08.4**	**+0.5**
	baz=249						
NSY				*e*S	**Sn**	**07 56 23.9**	**+0.1**
	baz=249						
TEGC	**Jichi Village**	**1.14**	**197**	*e*P	**Pn**	**07 56 08.7**	**+0.5**
	baz=186						
WPL	**Puli Township**	**1.17**	**228**	*e*P	**Pn**	**07 56 09.3**	**+0.7**
	baz=234						
WCS	**Beigang Elemen**	**1.18**	**231**	*e*P	**Pn**	**07 56 08.5**	**-0.1**
	baz=238						
WCS				S	**Sn**	**07 56 24.4**	**-0.5**
	baz=238						
DPDB	**Guoxing**	**1.18**	**230**	*e*P	**Pn**	**07 56 09.6**	**+0.9**
	baz=237						
EGFH	**Guangfu**	**1.21**	**201**	*e*P	**Pn**	**07 56 09.1**	**0.0**
	baz=202						
WDJ	**Dajia District**	**1.24**	**249**	*e*P	**Pn**	**07 56 09.8**	**+0.5**
	baz=241						
WDJ				*e*S	**Sn**	**07 56 26.6**	**+0.3**
	baz=241						
VWDT	**VWDT**	**1.26**	**214**	*e*P	**Pn**	**07 56 10.4**	**+0.8**
	baz=208						
VWDT				*e*S	**Sn**	**07 56 27.2**	**+0.4**
	baz=208						
SMLT	**Sun Moon Lake**	**1.30**	**225**	*e*P	**Pn**	**07 56 10.8**	**+0.6**
	baz=231						
SMLT				*e*S	**Sn**	**07 56 28.9**	**+1.0**
	baz=231						
TCU	**Taichung**	**1.30**	**240**	*e*P	**Pn**	**07 56 10.5**	**+0.4**
	baz=239						
TCU				*e*S	**Sn**	**07 56 27.3**	**-0.3**
	baz=239						
TYC	**Yuchr**	**1.31**	**227**	*e*P	**Pn**	**07 56 10.8**	**+0.6**
	baz=233						
TYC				*e*S	**Sn**	**07 56 28.0**	**+0.1**
	baz=233						
SSLB	**Suanglung**	**1.34**	**221**	*e*P	**Pn**	**07 56 11.2**	**+0.6**
	baz=229						
SSLB				*e*S	**Sn**	**07 56 28.7**	**+0.1**
	baz=229						
WWF	**Wufeng**	**1.34**	**236**	*e*P	**Pn**	**07 56 10.3**	**-0.2**
	baz=242						
WWF				S	**Sn**	**07 56 28.3**	**-0.2**
	baz=242						
HGSD	**Ruisui**	**1.38**	**199**	*e*P	**Pn**	**07 56 10.9**	**-0.1**
	baz=205						
HGSD				*e*S	**Sn**	**07 56 29.6**	**+0.1**
	baz=205						
EHY	**Hungye**	**1.40**	**203**	*e*P	**Pn**	**07 56 11.4**	**+0.1**
	baz=194						
WCHH	**Zhanghua**	**1.43**	**240**	*e*P	**Pn**	**07 56 11.8**	**+0.2**
	baz=238						
WCHH				S	**Sn**	**07 56 30.7**	**+0.2**
	baz=238						
WNT	**Mingjian**	**1.45**	**231**	*e*P	**Pn**	**07 56 12.5**	**+0.6**
	baz=238						
WNT				*e*S	**Sn**	**07 56 31.4**	**+0.5**
	baz=238						
WJS	**Zhushan**	**1.46**	**228**	*e*P	**Pn**	**07 56 13.3**	**+1.3**
	baz=236						
WJS				*e*S	**Sn**	**07 56 31.6**	**+0.5**
	baz=236						
WHYT	**Xinyi Township**	**1.47**	**221**	*e*P	**Pn**	**07 56 13.0**	**+0.8**
	baz=228						
WHYT				*e*S	**Sn**	**07 56 32.8**	**+1.4**
	baz=228						
WYL	**Yuanlin Townsh**	**1.48**	**235**	*e*P	**Pn**	**07 56 12.2**	**0.0**
	baz=243						
WYL				*e*S	**Sn**	**07 56 32.0**	**+0.5**
	baz=243						
YULB	**Yu-li**	**1.51**	**202**	*e*P	**Pn**	**07 56 12.0**	**-0.7**
	baz=200						
EYUL	**Yuli**	**1.55**	**200**	*e*P	**Pn**	**07 56 13.6**	**+0.4**
	baz=202						
TWF1	**Yuli**	**1.55**	**201**	*e*P	**Pn**	**07 56 13.2**	**0.0**
	baz=202						
YUS	**Yu-Shan**	**1.57**	**214**	*e*P	**Pn**	**07 56 14.6**	**+0.6**
	baz=205						
ALS	**Alishan**	**1.64**	**218**	P	**Pn**	**07 56 15.4**	**+0.9**
	baz=224						
ALS				*e*S	**Sn**	**07 56 36.6**	**+0.9**
	baz=224						
WRL	**Guolierlin Hig**	**1.66**	**237**	*e*P	**Pn**	**07 56 14.2**	**-0.4**
	baz=236						
WDLH	**Douliu**	**1.67**	**229**	*e*P	**Pn**	**07 56 15.3**	**+0.6**
	baz=235						
FULB	**Fuli**	**1.70**	**199**	*e*P	**Pn**	**07 56 15.6**	**+0.5**
	baz=202						
IRIF	**Iriomote-Funau**	**1.72**	**105**	P	**Pn**	**07 56 15.4**	**+0.1**
IRIF				S	**Sn**	**07 56 37.0**	**-0.1**
EHD	**Haiduan**	**1.77**	**201**	*e*P	**Pn**	**07 56 16.3**

CHN1 *e*S **Sn** **07 56 45.1 +0.4**
baz=216
JIJ Ishigaki jima 2.08 102 P **Pn** **07 56 20.3 +0.3**
JIJ S **Sn** **07 56 44.9 -0.6**
SGST Jiashian 2.10 216 *e*P **Pn** **07 56 21.1 +0.7**
baz=222
TWG Pinlang 2.12 201 *e*P **Pn** **07 56 20.6 +0.1**
baz=191
TWGBT Beinan 2.12 201 *e*P **Pn** **07 56 20.7 +0.1**
baz=189
TWGBT *e*S **Sn** **07 56 44.9 -1.5**
baz=189
LDUT Ludao 2.16 191 *e*P **Pn** **07 56 19.8 -1.3**
baz=183
LDUT *e*S **Sn** **07 56 44.5 -2.8**
baz=183
MATB Ma-tsu 2.22 307 *e*P **Pn** **07 56 21.5 -0.3**
baz=306
VWUC VWUC 2.24 275 *e*P **Pn** **07 56 19.7 -2.4**
baz=274
SSD Sandimen 2.36 210 *e*P **Pn** **07 56 26.0 +2.3**
baz=217
MASBT Mashibuluo 2.48 208 *e*P **Pn** **07 56 26.8 +1.5**
baz=206
MASBT *e*S **Sn** **07 56 54.6 -0.3**
baz=206
PNG Penghu 2.48 241 *e*P **Pn** **07 56 24.8 -0.5**
baz=238
PTMZ Houxiangcun 2.54 276 *e*P **Pn** **07 56 25.7 -0.4**
baz=274
JTJ Tarama 2.55 93 S **Sn** **07 56 57.4 +0.9**
EAST Anshuo 2.60 202 *e*P **Pn** **07 56 27.1 +0.2**
baz=192
LYJJ Jianjiangzhen 2.60 312 *e*P **Pn** **07 56 26.7 -0.2**
baz=311
XPSS Dashiqiu 2.62 324 *e*P **Pn** **07 56 26.8 -0.3**
baz=324
SCZT Fanqliau 2.70 206 *e*P **Pn** **07 56 29.1 +0.9**
baz=214
VCHM Qimei 2.77 235 *e*P **Pn** **07 56 28.8 -0.3**
baz=232
MHZQ Yeshan 2.90 297 *e*P **Pn** **07 56 31.1 +0.2**
baz=294
KNMB Chin-men Tao 3.22 265 *e*P **Pn** **07 56 34.3 -0.9**
baz=262
AXDP Jialang 3.58 272 *e*P **Pn** **07 56 40.0 0.0**
baz=269
ZPLA Ao Xicun 3.89 258 *e*P **Pn** **07 56 43.7 -0.6**
baz=254
SXFK Yanhouchang 4.16 293 *e*P **Pn** **07 56 47.7 -0.3**
baz=290

*ISU **07** 07:57:03, 39°.53N×72°.43E, h6km*
KRNET 07 07:57:03.3±0.1, 39°.20N×71°.67E, h11km, mb2.3, 8C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.30**	**20**	⇑*i*P	Pg	07 57 09.1	-0.4
	baz=20						
DRK				⇑*e*S	Sg	07 57 13.8	+0.2
	baz=20						
CHMI	**Chimion**	**1.07**	**354**	P	Sg	07 57 38.9	+1.0
GAR	**Garm**	**1.07**	**260**	⇑*e*P	Pb	07 57 23.8	-0.2
	baz=60						
GAR				⇑*e*S	Sb	07 57 38.5	+0.4
	baz=60						
BTK	**Batken**	**1.08**	**323**	⇑*e*P	Pb	07 57 23.9	-0.2
	baz=23						
BTK				⇑*e*S	Sb	07 57 38.8	+0.5
	baz=23						
OHH	**Osh**	**1.57**	**33**	⇑*e*P	Pb	07 57 32.8	+0.3
	baz=33						
OHH				⇑*e*S	Sg	07 57 54.2	+0.2
	baz=33						
CHMG	**Chimgan**	**2.67**	**332**	P	Sg	07 58 30.9	+1.9

ROM 07 08:33:26.7±0.1, 42°.618N±0°.002×13°.230E±0°.004, h13km, ML1.5/5, 4C, Error ellipse: s-maj=0.3km s-min=0.1km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.08**	**81**	P	Pg	08 33 29.8	+0.3
SMA1				S	Sg	08 33 31.9	+0.3
SMA1				AML	AML		
	comp=E,496μm,0.3s						
SMA1				AML	AML		
	comp=N,400μm,0.2s						
SMA1				AML	AML		
	comp=E,496μm,0.3s						
SMA1				AML	AML		
	comp=N,400μm,0.2s						
T1202	**Accumoli, Fraz**	**0.09**	**358**	P	Pg	08 33 29.8	+0.2
T1202				S	Sg	08 33 32.1	+0.3
T1204	**Amatrice, Fraz**	**0.09**	**48**	P	Pg	08 33 29.8	+0.1
T1204				S	Sg	08 33 31.8	0.0
RM33	**Pellescritta (**	**0.11**	**186**	P	Pg	08 33 30.2	+0.3
RM33				S	Sg	08 33 32.5	+0.4
RM33				AML	AML		
	comp=E,832μm,0.5s						
RM33				AML	AML		
	comp=N,742μm,0.5s						
RM33				AML	AML		
	comp=N,220μm,0.8s						
RM33				AML	AML		
	comp=E,186μm,0.1s						
RM33				AML	AML		
	comp=E,834μm,0.5s						
LNSS	**Leonessa**	**0.14**	**264**	⇑P	Pg	08 33 30.6	+0.3
LNSS				S	Sg	08 33 33.3	+0.5
LNSS				AML	AML		
	comp=E,112μm,1.0s						
LNSS				AML	AML		
	comp=N,118μm,1.2s						
T1243	**Rocca Santa Ma**	**0.18**	**64**	P	Pg	08 33 31.1	+0.2
T1217	**Poggiodomo (PG**	**0.24**	**293**	P	Pg	08 33 32.0	+0.2
T1245	**Castelsantange**	**0.24**	**353**	⇑P	Pb	08 33 32.6	-0.5
T1245				AML	AML		
	comp=E,114μm,1.4s						
T1245				AML	AML		
	comp=N,148μm,0.3s						
TERO	**Teramo**	**0.28**	**89**	P	Pg	08 33 32.6	+0.2
MMO1	**Montemonaco**	**0.29**	**14**	⇑P	Pg	08 33 33.2	+0.5
GIGS	**Gran Sasso**	**0.30**	**124**	P	Pb	08 33 33.5	-0.5
T1216	**Preci, Frazion**	**0.31**	**330**	⇑P	Pg	08 33 33.5	+0.4
T1215	**Vallo di Nera,**	**0.32**	**305**	P	Pg	08 33 33.5	+0.1
CSP1	**Cessapalombo**	**0.47**	**358**	P	Pg	08 33 36.2	+0.2
CSP1				AML	AML		
	comp=E,126μm,1.6s						
CSP1				AML	AML		
	comp=N,84μm,1.6s						
VIVA	**Pratoni del Vi**	**0.93**	**202**	P	Pn	08 33 46.3	+0.8
COR1	**Corinaldo**	**1.03**	**351**	S	Sg	08 33 60.0	+0.1
BSSO	**Busso**	**1.48**	**136**	S	Sb	08 34 13.0	+0.3

*IPEC **07** 08:35:10.4±0.1, 47°.66N×16°.04E, h6km±1km, ML1.4/6, Error ellipse: s-maj=1.7km s-min=1.2km az=129.0*
VIE 07 08:35:10.5±0.2, 47°.66N×16°.01E, h4km±2km, mb1.3/4, ml1.6/4, Error ellipse: s-maj=1.4km s-min=1.0km az=155.0 3 km S of Sankt Valentin, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RONA	**Rosalia, Austr**	**0.20**	**78**	*i* Pg	Pg	08 35 14.7	+0.3
	3.4nm,0.1s						
RONA				*i* Sg	Sg	08 35 17.6	+0.7
	12nm,0.1s						
CONA	**Conrad Observa**	**0.29**	**339**	*i* Pg	Pg	08 35 16.0	-0.2
	1.2nm,0.1s						
CONA				*i* Sg	Sg	08 35 20.6	+0.6
	5.6nm,0.2s						
ARSA	**Arzberg**	**0.53**	**219**	*i* Pg	Pg	08 35 20.7	+0.1
	0.7nm,0.1s						
ARSA				*i* Sg	Sg	08 35 28.0	+0.5
	2.8nm,0.1s						
MOA	**Molln**	**1.20**	**280**	*i* Pg	Pn	08 35 34.6	+0.6
	0.8nm,0.2s						
MOA				*i* Sg	Sn	08 35 50.3	-0.4
	3.9nm,0.2s						
KRUC	**Moravsky**	**1.43**	**10**	*e*PG	Pn	08 35 36.7	-0.5
KRUC				*e*SG	Sb	08 35 54.8	-1.4
KRUC	**Moravsky**	**1.43**	**10**	*e*Pg	Pn	08 35 36.6	-0.6
	baz=190						
KRUC				*e*Sg	Sb	08 35 54.8	-1.4
	3.6nm,0.3s,baz=190						
VRAC	**Vranov**	**1.69**	**13**	*e*SG	Sn	08 36 03.1	+0.1
VRAC	**Vranov**	**1.69**	**13**	*e*Sg	Sn	08 36 03.1	+0.1
	3.5nm,0.3s,baz=193						

*JMA **07** 08:38:08.3±0.5, 31°.N±2°.×14°.2E±°, h0km, MV4.2/19, FAR E OFF IZU ISLANDS*
*IDC **07** 08:38:11.8±8.6, 30°.05N×140°.09E, h0km, mb3.6/4, mbtmp3.6/4, MS3.5/1, Error ellipse: s-maj=344.9km s-min=27.8km az=68.0*
ISC 07 08:38:08.3±1.9, 30°.9N±0°.1×142°.7E±0°.4, h35km, n11, σ0°.84/12, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.96**	**340**	*e*P	**Pn**	**08 39 06.9**	**+0.8**
BSO1				*e*S	**Sn**	**08 39 50.1**	**-1.0**
JOD2	**Odawara 2**	**5.25**	**326**	*e*P	**Pn**	**08 39 24.6**	**+0.3**
JHU	**Hanno**	**5.65**	**331**	*e*P	**Pn**	**08 39 30.8**	**+1.0**
JHO	**Hitachi**	**5.92**	**343**	*e*P	**Pn**	**08 39 34.0**	**+0.6**
JHO				*e*S	**Sn**	**08 40 39.0**	**-1.0**
JRY	**Ryogami san**	**5.96**	**329**	P	**Pn**	**08 39 35.0**	**+1.0**
JAG	**Ashikaga**	**6.09**	**335**	*e*P	**Pn**	**08 39 36.5**	**+0.8**
MKAR	**Makanchi Array**	**48.42**	**307**	P	**P**	**08 46 46.8**	**-0.2**
	0.4nm,0.6s,baz=90,slow=9.1,SNR=3.3						
	0.4nm,0.6s						
LEM	**Lembang**	**50.35**	**228**	LR	LR	09 09 18.6	
	comp=Z,50nm,18.0s,baz=170,slow=39						
KURBB	**Kurchatov Arra**	**50.71**	**312**	P	**P**	**08 47 04.7**	**+0.3**
	0.6nm,0.5s,baz=88,slow=7.5,SNR=6.1						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**51.22**	**190**	P	**P**	**08 47 07.8**	**-0.7**
	0.9nm,0.4s,baz=4.9,slow=7.5,SNR=3.0						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**54.94**	**190**	P	**P**	**08 47 35.9**	**0.0**
	0.2nm,0.5s,baz=355,slow=5.0,SNR=5.2						
	0.2nm,0.5s						

*NNC **07** 08:49:44.8±0.5, 51°.74N×75°.48E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=11.9km s-min=2.8km az=25.0, Suspected Mining explosion.*
*IDC **07** 08:49:48.1±1.0, 51°.65N×75°.50E, h0km, mbtmp2.8/4, ML2.4/4, Error ellipse: s-maj=25.8km s-min=8.4km az=26.0*
ISC 07 08:49:39.2±1.2, 53°.0N±0°.2×76°.21E±0°.05, h0km, n12, σ0°.70/9, 7C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.72**	**146**	⇑Pg	**Pn**	**08 50 25.1**	**+1.0**
	5.1nm,1.2s						
KURK				⇓Lg	Lg	08 50 56.8	
	18nm,0.9s						
KURBB	**Kurchatov Arra**	**2.77**	**148**	Pn	**Pn**	**08 50 24.8**	**+0.1**
	0.3nm,0.3s,baz=298,slow=18,SNR=19						
KURBB				Lg	Lg	08 50 56.7	
	0.5nm,0.3s,baz=296,slow=32,SNR=9.0						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**2.77**	**148**	⇓Pg	**Pn**	**08 50 25.1**	**+0.4**
	4.9nm,0.8s						
KURBB				⇓Lg	Lg	08 50 55.6	
	36nm,0.8s						
BVA0	**Borovoye Array**	**3.52**	**273**	⇑Pg	**Pg**	**08 50 46.7**	**+0.2**
	3.0nm,0.8s,baz=116,slow=17,SNR=11						
BVA0				⇑Lg	Lg	08 51 32.7	
	17nm,1.1s,baz=106,slow=22,SNR=13						
BVAR	**Borovoye Array**	**3.52**	**273**	Pn	**Pb**	**08 50 42.5**	**+0.2**
	0.5nm,0.3s,baz=107,slow=13,SNR=6.6						
BVAR				Sn	**Sb**	**08 51 24.7**	**-0.7**
	0.4nm,0.3s,baz=109,slow=21,SNR=3.9						
BVAR				Lg	Lg	08 51 34.1	
	1.0nm,0.3s,baz=105,slow=24,SNR=13						
	2.6nm,0.7s						
BRVK	**Borovoye**	**3.58**	**274**	⇑Pg	**Pg**	**08 50 47.9**	**+0.2**
	3.9nm,0.7s						
BRVK				⇓Lg	Lg	08 51 32.7	
	21nm,0.9s						
I46RU	**ZALESOVO INFRA**	**5.24**	**76**	I		09 24 30.0	
	baz=251,slow=319,SNR=1.9						
ZALV	**Zalesovo Beam**	**5.24**	**76**	Pn	**Pg**	**08 51 19.4**	**+0.1**
	0.4nm,0.3s,baz=261,slow=14,SNR=4.5						
ZALV				Lg	Lg	08 53 01.8	
	0.5nm,0.3s,baz=262,slow=29,SNR=2.2						
	1.1nm,0.4s						
OTUK	**Ortayu**	**5.35**	**209**	⇑Lg	Lg	08 51 53.1	
	8.8nm,0.9s						
MAKZ	**Makanchi**	**7.22**	**147**	⇑Lg	Lg	08 53 13.5	
	4.1nm,1.0s						
MK31	**Makanchi Array**	**7.33**	**145**	⇑Lg	Lg	08 53 15.8	
	1.4nm,0.5s,baz=326,slow=29,SNR=5.5						
MKAR	**Makanchi Array**	**7.33**	**145**	Pn	**Pn**	**08 51 26.4**	**-1.1**
	0.2nm,0.3s,baz=321,slow=14,SNR=2.1						
	0.3nm,0.4s						

*IDC **07** 09:24:56.2±2.5, 6°.46S×130°.52E, h0km, mb3.5/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=140.1km s-min=33.4km az=70.0*
ISC 07 09:24:58.6±0.9, 6°.39S±0°.08×130°.9E±0°.1, h10km, n12, σ1°.72/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.71**	**22**	P	**Pb**	**09 26 04.8**	**+0.5**
KDU	**Kakadu**	**6.45**	**166**	P	**Pn**	**09 26 36.9**	**+3.2**
KNRA	**Kununurra**	**9.46**	**192**	P	**Pn**	**09 27 16.0**	**+1.0**
FITZ	**Fitzroy Crossi**	**12.71**	**203**	P	**Pn**	**09 27 58.8**	**-0.8**
WRAB	**Tennant Creek**	**13.88**	**166**	P	**Pn**	**09 28 16.6**	**+1.0**
WRA	**Warramunga Arr**	**13.88**	**166**	Pn	**Pn**	**09 28 14.7**	**-1.0**
	0.2nm,0.3s,baz=348,slow=13,SNR=22						
WRA				Sn	Sn	09 30 36.9	-13
	1.0nm,0.3s,baz=331,slow=24,SNR=16						
	0.7nm,0.5s						
COEN	**Coen**	**14.24**	**123**	P	**P**	**09 28 26.6**	**-1.4**
	20nm,2.0s						
BKB	**Balikpapan**	**14.85**	**290**	P	**P**	**09 28 37.1**	**+2.4**
	99nm,0.5s						
QIS	**Mount Isa**	**16.43**	**150**	P	**P**	**09 28 51.2**	**-1.1**
ASAR	**Alice Springs**	**17.42**	**171**	P	**Pn**	**09 29 01.0**	**-1.0**
	0.2nm,0.3s,baz=353,slow=12,SNR=8.2						
ASAR				S	Sn	09 32 04.0	-12
	0.8nm,0.6s,baz=360,slow=27,SNR=5.3						
	0.4nm,0.4s						
AS01	**Alice Springs**	**17.43**	**171**	P	**P**	**09 29 03.0**	**-0.3**
	2.5nm,1.1s						
MKAR	**Makanchi Array**	**68.20**	**326**	P	**P**	**09 35 57.8**	**-1.6**
	0.2nm,0.4s,baz=123,slow=8.4,SNR=2.3						
	0.2nm,0.4s						

*ZAG **07** 09:25:43.7±2.5, 45°.30N±0°.05×18°.49E±0°.07, h11km±5km, Error ellipse: s-maj=8.5km s-min=5.5km az=46.0*
*LDG **07** 09:25:44.8±0.2, 45°.18N×18°.27E, h6km, Ml3.8/7, Error ellipse: s-maj=7.7km s-min=4.4km az=175.0*
*KRSZO **07** 09:25:44.9±0.6, 45°.19N×18°.31E, h0km±1km, ML4.5/44, Error ellipse: s-maj=2.5km s-min=2.2km az=22.0*
*MOS **07** 09:25:45.9±1.0, 45°.19N×18°.38E, h19km, mb4.3/4, Error ellipse: s-maj=6.8km s-min=3.6km az=105.6*
*BEO **07** 09:25:45.9±0.4, 45°.27N×18°.36E, h3km±2km, ML4.2/17*
*PDG **07** 09:25:46.2±0.5, 45°.18N×18°.36E, h15km, MD4.2/6, ML4.1/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*NEIC **07** 09:25:46.8±2.3, 45°.26N±0°.04×18°.40E±0°.07, h10km±1km, mb4.4/23, ML4.1(VIE), ML4.0(ZAG), Error ellipse: s-maj=8.6km s-min=6.6km az=237.0*
*RHSSO **07** 09:25:46.4±0.2, 45°.19N×18°.33E, h8km±1km, ML4.1/17*
*IDC **07** 09:25:46.1±0.6, 45°.21N×18°.32E, h0km, mb3.9/10, mbtmp3.9/23, ML3.8/13, MS3.2/25, Error ellipse: s-maj=9.9km s-min=7.8km az=33.0*
*MCSM **07** 09:25:46.4±0.4, 45°.N±2°.×1°.8E±°, h7km±3km, mb4.2*
*PRU **07** 09:25:47.8±0.0, 45°.20N×18°.38E, h10km, M4.4*
*BGR **07** 09:25:48.7±0.6, 45°.10N×18°.16E, h10km, ML4.1/9, Error ellipse: s-maj=13.3km s-min=8.9km az=28.0*
ISC 07 09:25:46.1±1.0, 45°.17N±0°.01×18°.33E±0°.01, h6km±7km, n495, σ1°.29/610, mb4.3/23, MS3.3/15, 42C-20D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOB	**Doboj**	**0.47**	**200**	*e*Pg	**Pg**	**09 25 54.7**	**-0.4**
DOB				*e*Sg	**Sg**	**09 26 02.5**	**+1.3**
A052A	**Srbac**	**0.58**	**263**	⇓*i*Pg	**Pg**	**09 25 57.4**	**+0.2**
A052A				*e*Sg	**Sg**	**09 26 05.0**	**+0.3**
BLJ	**Bijeljina**	**0.77**	**120**	⇓*i*Pg	**Pg**	**09 26 00.0**	**-0.9**
BLJ				*e*Sg	**Sg**	**09 26 10.5**	**-0.5**
BLY	**Banja Luka**	**0.91**	**243**	⇓*i*Pg	**Pg**	**09 26 03.0**	**-0.6**
BLY				*e*Sg	**Sg**	**09 26 15.7**	**+0.2**
BLY	**Banja Luka**	**0.91**	**243**	*e*Pg	**Pg**	**09 26 03.4**	**-0.2**
BLY				*e*Sg	**Sb**	**09 26 18.0**	**+1.3**
BLY	**Banja Luka**	**0.91**	**243**	Pg	**Pg**	**09 26 03.1**	**-0.6**
	comp=Z,15nm,SNR=384						
KOVH	**Kovagotottos**	**0.93**	**350**	Pb	**Pg**	**09 26 04.1**	**+0.1**
	comp=Z,13nm,SNR=436						
KOVH				Lg	Lg	09 26 16.5	
KOVH	**Kovagotottos**	**0.93**	**350**	P	**Pg**	**09 26 04.1**	**+0.1**
KOVH				S	**Sg**	**09 26 16.5**	**+0.5**
KOVH	**Kovagotottos**	**0.93**	**350**	Pg	**Pg**	**09 26 04.0**	**+0.1**
A051A	**Mrakovica**	**1.02**	**261**	*e*Pg	**Pg**	**09 26 04.9**	**-0.7**
A051A				*e*Sg	**Sg**	**09 26 18.6**	**-0.2**
FRGS	**Fruska Gora**	**1.05**	**90**	⇑P	**Pg**	**09 26 06.1**	**-0.1**
FRGS				⇑S	**Sb**	**09 26 21.0**	**+0.3**
FRGS	**Fruska Gora**	**1.05**	**90**	⇑*i*Pg	**Pg**	**09 26 06.0**	**-0.2**
FRGS				*e*Sg	**Sb**	**09 26 20.0**	**-0.7**
FRGS	**Fruska Gora**	**1.05**	**90**	*e*Pg	**Pb**	**09 26 06.3**	**-0.4**
FRGS				*e*Sg	**Sb**	**09 26 20.1**	**-0.7**
TEKS	**Tekeris**	**1.06**	**126**	⇑*i*Pg	**Pg**	**09 26 05.8**	**-0.6**
TEKS				*e*Sg	**Sg**	**09 26 20.0**	**-0.1**
TEKS	**Tekeris**	**1.06**	**126**	*e*Pg	**Pg**	**09 26 06.1**	**-0.3**
TEKS				*e*Sg	**Sb**	**09 26 21.3**	**+0.4**
MORH	**Mrgy, Hungar**	**1.07**	**12**	⇓P	**Pg**	**09 26 06.4**	**-0.1**
MORH				⇓S	**Sn**	**09 26 21.8**	**-0.8**
MORH	**Mrgy, Hungar**	**1.07**	**12**	⇓*i*Pg	**Pg**	**09 26 06.0**	**-0.5**
MORH				*e*Sg	**Sg**	**09 26 19.6**	**-0.8**
MORH	**Mrgy, Hungar**	**1.07**	**12**	x	x	09 26 06.1	
	comp=Z,14nm,SNR=630						
MORH				Sb	**Sb**	**09 26 20.9**	**-0.2**
MORH	**Mrgy, Hungar**	**1.07**	**12**	P	**Pg**	**09 26 06.1**	**-0.4**
MORH				S	**Sb**	**09 26 20.9**	**-0.2**
PRIJ	**Prijedor**	**1.16**	**261**	*e*Pg	**Pg**	**09 26 07.0**	**-1.3**
PRIJ				*e*Sg	**Sg**	**09 26 23.5**	**+0.2**
MGRS	**Mrkonjic Grad**	**1.16**	**230**	⇓*i*Pg	**Pg**	**09 26 07.3**	**-1.1**
MGRS				*e*Sg	**Sb**	**09 26 24.4**	**+0.5**
HAPS	**Han Pijesak,Bl**	**1.17**	**157**	*e*Pg	**Pg**	**09 26 08.6**	**0.0**
HAPS				*e*Sg	**Sb**	**09 26 24.5**	**+0.2**
MOSL	**Moslavina**	**1.19**	**292**	*e*Pg	**Pg**	**09 26 08.3**	**-0.6**
MOSL				Sg	**Sg**	**09 26 24.7**	**+0.3**
A264A	**Tarany**	**1.23**	**324**	Pn	**Pg**	**09 26 09.5**	**-0.1**
	comp=Z,12nm,SNR=30						
A264A				Lg	Lg	09 26 27.0	
A265A	**Kaposfured**	**1.31**	**344**	Pg	**Pg**	**09 26 12.1**	**+0.9**
	comp=Z,19nm,SNR=100						
SRKY	**Kupres RS**	**1.38**	**217**	*e*Pg	**Pn**	**09 26 11.7**	**-0.3**
SRKY				*e*Sg	**Sn**	**09 26 31.4**	**+0.8**
A050A	**Klekovaca**	**1.45**	**242**	*e*Pg	**Pn**	**09 26 12.6**	**-0.3**
A050A				*e*Sg	**Sg**	**09 26 33.3**	**+0.6**
A251A	**Rujevac**	**1.46**	**269**	*e*Pn	**Pn**	**09 26 12.3**	**-0.6**
A251A				Sg	**Sg**	**09 26 33.2**	**+0.3**
BBLS	**Lazići**	**1.52**	**149**	⇑*i*Pn	**Pn**	**09 26 13.7**	**-0.1**
BBLS				*e*Sn	**Sn**	**09 26 33.8**	**-0.1**
BBLS	**Lazići**	**1.52**	**149**	*e*Pg	**Pn**	**09 26 13.8**	**-0.1**
BBLS				*e*Sg	**Sg**	**09 26 35.9**	**+1.1**
BEO	**Beograd**	**1.57**	**103**	*e*Pg	**Pn**	**09 26 14.3**	**-0.1**
BEO				*e*Sg	**Sb**	**09 26 35.5**	**0.0**
DIVS	**Divibare**	**1.60**	**131**	Pn	**Pn**	**09 26 14.4**	**-0.6**
DIVS				Sn	**Sg**	**09 26 38.0**	**+0.4**
DIVS	**Divibare**	**1.60**	**131**	⇑*i*Pn	**Pn**	**09 26 14.4**	**-0.6**
DIVS				*e*Sn	**Sb**	**09 26 36.2**	**-0.5**
DIVS	**Divibare**	**1.60**	**131**	*e*Pg	**Pn**	**09 26 14.6**	**-0.4**
DIVS				*e*Sg	**Sg**	**09 26 38.7**	**+1.1**
A255A	**Hotnja, Vukome**	**1.64**	**283**	*e*Pn	**Pn**	**09 26 16.2**	**+0.7**
A255A				Sn	**Sg**	**09 26 38.5**	**-0.3**
BEHE	**Becsehely**	**1.69**	**321**	⇑*i*Pn	**Pn**	**09 26 15.9**	**-0.2**
BEHE				*e*Sn	**Sn**	**09 26 37.4**	**-0.7**
BEHE	**Becsehely**	**1.69**	**321**	Pg	**Pn**	**09 26 16.2**	**+0.1**
	comp=Z,12nm,SNR=107						
BEHE				Lg	Lg	09 26 38.2	
BEHE	**Becsehely**	**1.69**	**321**	P	**Pn**	**09 26 16.2**	**+0.1**
BEHE				S	**Sn**	**09 26 38.2**	**+0.1**
RUDO	**Rudo**	**1.73**	**154**	⇓*i*Pn	**Pn**	**09 26 15.8**	**-0.8**
RUDO				*e*Sn	**Sn**	**09 26 38.9**	**-0.1**
TIH	**Tihany**	**1.75**	**350**	Pn	**Pn**	**09 26 16.6**	**-0.5**
	comp=Z,21nm,SNR=95						
TIH	**Tihany**	**1.75**	**350**	P	**Pn**	**09 26 16.6**	**-0.5**
TRUS	**Trudelj**	**1.76**	**122**	*e*Pg	**Pn**	**09 26 16.7**	**-0.4**
TRUS				*e*Sg	**Sg**	**09 26 41.8**	**-0.9**
ZAG	**Zagreb**	**1.77**	**293**	*e*Pn	**Pn**	**09 26 17.2**	**0.0**
ZAG	**Zagreb**	**1.77**	**293**	Pg	**Pg**	**09 26 20.0**	**0.0**
	comp=Z,10nm,SNR=37						
A267A	**Kaloz**	**1.78**	**3**	Pn	**Pn**	**09 26 17.5**	**+0.2**
	comp=Z,8.4nm,SNR=95						
A267A				Lg	Lg	09 26 45.0	
PTJ	**Puntijarka**	**1.81**	**295**	*i* Pn	**Pn**	**09 26 17.0**	**-0.9**
PTJ				Sn	**Sn**	**09 26 41.6**	**+0.4**
PTJ	**Puntijarka**	**1.81**	**295**	Pn	**Pn**	**09 26 17.2**	**-0.7**
	comp=Z,5.4nm,SNR=124						
LOBO	**Lobor**	**1.86**	**303**	*i* Pn	**Pn**	**09 26 17.8**	**-0.7**
RICI	**Ricice**	**1.88**	**207**	*i* Pn	**Pn**	**09 26 19.6**	**+0.8**
RICI				Sn	**Sb**	**09 26 45.7**	**+1.0**
KOGS	**Kog**	**1.93**	**312**	*i* Pn	**Pn**	**09 26 18.9**	**-0.6**
KOGS				*i* Sn	**Sg**	**09 26 50.2**	**+2.1**
KOGS	**Kog**	**1.93**	**312**	Pg	**Pn**	**09 26 19.0**	**-0.4**
	comp=Z,16nm,SNR=80						
UDBI	**Udbina**	**1.93**	**251**	*e*Pn	**Pn**	**09 26 19.8**	**+0.3**
UDBI				Sn	**Sb**	**09 26 46.6**	**+0.6**
PLIT	**Plitvice**	**1.94**	**262**	*e*Pn	**Pn**	**09 26 19.4**	**-0.2**
PLIT				Sn	**Sb**	**09 26 46.1**	**-0.2**
A261A	**Ohid**	**1.96**	**336**	Pg	**Pb**	**09 26 22.0**	**-0.1**
	comp=Z,20nm,SNR=116						
PLE	**Pljevlja**	**1.99**	**157**	⇓*i*Pn	**Pn**	**09 26 20.5**	**+0.1**
PLE				*i* Sn	**Sb**	**09 26 46.9**	**-1.0**
BANR	**Banloc**	**2.00**	**83**	⇑P	**Pn**	**09 26 20.7**	**+0.4**
BANR	**Banloc**	**2.00**	**83**	Pb	**Pg**	**09 26 24.7**	**+0.3**
	comp=Z,10nm,SNR=43						
UPM	**Unac-Piva**	**2.01**	**168**	⇑*i*Pn	**Pn**	**09 26 21.0**	**+0.3**
UPM	**Unac-Piva**	**2.01**	**168**	*e*Pn	**Pn**	**09 26 20.8**	**+0.1**
UPM				*i* Sn	**Sb**	**09 26 47.5**	**-1.0**
AMBH	**Ambrzfalva**	**2.05**	**54**	⇓P	**Pn**	**09 26 21.5**	**+0.4**
AMBH				⇓S	**Sb**	**09 26 48.1**	**-1.4**
AMBH	**Ambrzfalva**	**2.05**	**54**	Pg	**Pg**	**09 26 25.1**	**-0.3**
	comp=Z,8.6nm,SNR=76						
OZLJ	**Ozalj**	**2.06**	**283**	*e*Pn	**Pn**	**09 26 21.1**	**-0.2**
OZL

comp=Z,5.5nm,SNR=65
EGYH Egyhazaskeszo 2.35 343 P **Pn 09 26 25.8 +0.6**
BUD Budapest 2.36 12 Pn **Pn 09 26 24.4 -0.9**
comp=Z,4.4nm,SNR=79
BUD Pb **Pg 09 26 31.9 +0.6**
BUD Budapest 2.36 12 P **Pn 09 26 24.4 -0.9**
BUD Budapest 2.36 12 PG **Pg 09 26 31.9 +0.6**
BZS Buzias 2.36 78 ⇑P **Pn 09 26 25.7 +0.4**
BZS Buzias 2.36 78 *e*Pn **Pn 09 26 24.9 -0.5**
BZS *e*Sn **Sn 09 26 54.5 -0.1**
BZS Buzias 2.36 78 Pn **Pn 09 26 24.5 -0.9**
comp=Z,4.3nm,SNR=212
HVAR Hvar 2.41 215 *i* Pn **Pn 09 26 27.5 +1.5**
HVAR Sn **Sb 09 26 58.0 -1.7**
A250A Rusevo Krmpots 2.42 269 *e*Pn **Pn 09 26 27.2 +1.0**
MDVR Moldovita 2.44 98 ⇑P **Pn 09 26 26.0 -0.5**
NKME Niksic 2.45 169 *e*Pn **Pn 09 26 26.8 +0.2**
NKME *i* Sn **Sn 09 26 58.1 +1.3**
ZIRJ Zirje 2.45 233 *e*Pn **Pn 09 26 27.9 +1.3**
ZIRJ Sn **Sb 09 26 59.5 -1.4**
A269A Baj 2.47 1 Pn **Pn 09 26 26.8 0.0**
comp=Z,5.8nm,SNR=79
KOME Kolasin 2.48 159 ⇓*i*Pn **Pn 09 26 27.1 +0.1**
KOME *i* Sn **Sn 09 26 58.7 +1.1**
VIRC Vir 2.49 250 *e*Pn **Pn 09 26 27.9 +0.8**
VIRC Sn **Sb 09 27 00.5 -1.6**
KUBS Kucevo 2.50 106 *e*Pn **Pn 09 26 25.7 -1.6**
KUBS *e*Sn **Sn 09 26 59.2 +1.0**
DBRK Dubrovnik 2.51 183 *e*Pn **Pn 09 26 27.9 +0.6**
DBRK Sn **Sn 09 26 59.9 +1.6**
BSZH Besenyszg 2.52 32 ⇑P **Pn 09 26 28.2 +0.7**
BSZH Besenyszg 2.52 32 Pg **Pg 09 26 34.9 +0.6**
NVLJ Novalja 2.53 257 *e*Pn **Pn 09 26 28.4 +0.8**
NVLJ Sn **Sn 09 27 01.1 +2.4**
RABC Rab 2.55 262 *e*Pn **Pn 09 26 28.9 +1.0**
RABC Sn **Sn 09 27 01.7 +2.4**
IVA Berane 2.56 153 ⇑*i*Pn **Pn 09 26 28.4 +0.2**
IVA *i* Sn **Sn 09 27 00.8 +1.1**
SIRR Siria 2.58 64 ⇑P **Pn 09 26 29.4 +1.0**
SIRR ⇑S **Sn 09 27 01.6 +1.5**
SIRR Siria 2.58 64 Pn **Pn 09 26 26.9 -1.5**
comp=Z,3.8nm,SNR=256
DUGI Dugi Otok 2.62 244 *i* Pn **Pn 09 26 30.0 +1.2**
DUGI Sn **Sb 09 27 03.7 -2.0**
LSTV Lastovo 2.62 204 *e*Pn **Pn 09 26 29.8 +0.9**
LSTV Sn **Sn 09 27 03.0 +2.1**
CEME Cevo 2.66 171 ⇑*i*Pn **Pn 09 26 29.8 +0.3**
CEME *i* Sn **Sn 09 27 03.2 +1.1**
A270A Szokolya 2.72 10 Pn **Pn 09 26 29.9 -0.3**
comp=Z,2.9nm,SNR=87
HCY Herceg Novi 2.73 177 ⇑*i*Pn **Pn 09 26 31.4 +1.0**
HCY *e*Sn **Sn 09 27 03.6 -0.1**
HCY Herceg Novi 2.73 177 *e*Pn **Pn 09 26 30.7 +0.3**
HCY *i* Sn **Sn 09 27 05.0 +1.3**
SOKA Soboth 2.75 304 *e*Pn **Pn 09 26 30.1 -0.7**
comp=Z,41nm,0.3s,SNR=35
SOP Sopron 2.79 335 Pn **Pn 09 26 31.1 -0.2**
comp=Z,1.2nm,SNR=36
SOP Sn **Sn 09 27 04.9 -0.4**
SOP Sopron 2.79 335 P **Pn 09 26 31.1 -0.2**
SOP S **Sn 09 27 04.9 -0.4**
SOP Sopron 2.79 335 Pn **Pn 09 26 31.1 -0.2**
CEY Cerknica 2.80 283 *e*Pn **Pn 09 26 31.7 +0.3**
CEY *e*Sn **Sn 09 27 05.6 +0.1**
SELS Selova 2.80 133 *e*Pn **Pn 09 26 31.4 0.0**
SELS *e*Sn **Sn 09 27 08.0 +2.4**
TTG Podgorica 2.82 166 ⇑*i*Pn **Pn 09 26 32.0 +0.3**
TTG *i* Sn **Sn 09 27 07.2 +1.2**
PVY Plav 2.83 155 *e*Pn **Pn 09 26 32.1 +0.1**
PVY *i* Sn **Sn 09 27 07.4 +0.9**
ARSA Arzberg 2.85 318 ⇑*i*Pn **Pn 09 26 31.9 -0.2**
ARSA *e*Sn **Sn 09 27 06.3 -0.4**
ARSA Arzberg 2.85 318 *e*Pn **Pn 09 26 32.2 +0.1**
comp=Z,250nm,0.4s,SNR=144
ARSA *e*Sn **Sn 09 27 06.2 -0.5**
comp=Z,102nm,0.4s
ARSA Arzberg 2.85 318 Pn **Pn 09 26 32.0 -0.1**
comp=Z,1.7nm,SNR=71
ARSA Arzberg 2.85 318 *e*Pn **Pn 09 26 32.1 +0.1**
ARSA *e*Sn **Sn 09 27 06.1 -0.5**
BOVS Bovan 2.87 121 ⇑P **Pn 09 26 31.7 -0.7**
BOVS Bovan 2.87 121 *e*Pn **Pn 09 26 31.7 -0.7**
BOVS *e*Sn **Sn 09 27 08.2 +1.0**
RONA Rosalia, Austr 2.89 332 **Pn 09 26 32.7 0.0**
RONA **Sn 09 27 07.4 -0.4**
RONA Rosalia, Austr 2.89 332 Pn **Pn 09 26 32.7 0.0**
comp=Z,132nm,0.2s,SNR=207
RONA *e*Sn **Sn 09 27 07.4 -0.4**
comp=Z,104nm,0.3s
BUM Brajici-Budva 2.90 172 ⇑*i*Pn **Pn 09 26 33.1 +0.3**
BUM *i* Sn **Sn 09 27 09.1 +1.1**
HERR Herculane 2.92 94 ⇑P **Pn 09 26 32.5 -0.5**
PSZ Piszkesteto 2.95 21 ⇑P **Pn 09 26 32.4 -1.2**
PSZ Piszkesteto 2.95 21 Pn **Pn 09 26 32.2 -1.4**
PSZ Piszkesteto 2.95 21 P **Pn 09 26 32.2 -1.4**
PSZ Piszkesteto 2.95 21 Pn **Pn 09 26 32.1 -1.5**
comp=Z,2.6nm,SNR=81
PSZ Pg **Pg 09 26 42.7 0.0**
PSZ Piszkesteto 2.95 21 P **Pn 09 26 32.1 -1.5**
SMRN Sveta Marina 2.96 269 *e*Pn **Pn 09 26 33.9 +0.4**
OBKA Obir 2.96 298 ⇓*i*Pn **Pn 09 26 33.4 -0.2**
OBKA *e*Sn **Sn 09 27 08.6 -0.9**
OBKA Obir 2.96 298 *e*Pn **Pn 09 26 33.6 0.0**
comp=Z,122nm,0.7s,SNR=17
OBKA Obir 2.96 298 Pb **Pn 09 26 33.5 -0.2**
comp=Z,1.1nm,SNR=44
OBKA Obir 2.96 298 *e*Pn **Pn 09 26 33.7 0.0**
OBKA *e*Sg **Sg 09 27 20.5 -0.6**
DRME Dracevica, Mon 3.05 168 *e*Pn **Pn 09 26 35.2 +0.4**
DRME *i* Sn **Sn 09 27 12.7 +1.1**
SKDS Skadanscina 3.06 279 *e*Pn **Pn 09 26 35.2 +0.2**
SKDS *e*Sn **Sn 09 27 11.2 -0.8**
ZAGS Zajecar 3.11 115 *e*Pn **Pn 09 26 35.0 -0.6**
ZAGS *e*Sn **Sn 09 27 14.5 +1.4**
ZST Bratislava 3.14 345 *e*P **Pn 09 26 35.9 -0.2**
ZST *e* 09 27 11.8
ZST Bratislava 3.14 345 Pn **Pn 09 26 35.7 -0.3**
comp=Z,6.9nm,SNR=12
GZR Gura Zlata 3.15 84 ⇓P **Pn 09 26 35.8 -0.5**
GZR Gura Zlata 3.15 84 Pn **Pn 09 26 35.6 -0.7**
comp=Z,2.7nm,SNR=173
CONA Conrad Observa 3.24 329 *i* Pn **Pn 09 26 37.6 +0.1**
comp=Z,115nm,0.4s,SNR=132
CONA *e*Sn **Sn 09 27 17.3 +0.9**
comp=Z,126nm,0.3s
CONA Conrad Observa 3.24 329 Pn **Pn 09 26 37.3 -0.2**
comp=Z,1.0nm,SNR=41
ULC Ulcinj 3.28 168 ⇑*i*Pn **Pn 09 26 38.3 +0.3**
ULC *i* Sn **Sn 09 27 18.2 +0.9**
MODS Modra-Piesok 3.28 348 *e*P **Pn 09 26 37.6 -0.4**
MODS *e* 09 27 17.5
MODS Modra-Piesok 3.28 348 Pn **Pn 09 26 37.7 -0.3**
comp=Z,545nm,SNR=24
DEV Deva 3.30 76 Pn **Pn 09 26 38.7 +0.5**
comp=Z,2.3nm,SNR=38
DEV Deva 3.30 76 Pn **Pn 09 26 39.6 +1.4**
LTVH Ltavrtes, Hu 3.32 47 Pg **Pg 09 26 49.7 0.0**
VYHS Vyhne 3.34 6 *e*P **Pn 09 26 38.6 -0.3**
VYHS Vyhne 3.34 6 Pn **Pn 09 26 38.3 -0.5**
comp=Z,0.2nm,SNR=46
VYHS Vyhne 3.34 6 Pn **Pn 09 26 38.6 -0.3**
SMOL Smolenice 3.40 350 *e*P **Pn 09 26 39.3 -0.3**
SMOL *e* 09 27 19.7
PUNG Punghina 3.40 104 ⇓P **Pn 09 26 39.5 -0.2**
PUNG ⇓S **Sn 09 27 20.5 +0.2**
BARS Barje 3.45 132 *e*Pn **Pn 09 26 40.6 +0.3**
BARS *e*Sn **Sn 09 27 22.3 +0.8**
DRGR 3.46 61 ⇑P **Pn 09 26 41.2 +0.7**
DRGR 3.46 61 P **Pn 09 26 41.2 +0.7**
DRGR 3.46 61 Pg **Pn 09 26 43.7 +3.2**
comp=Z,2.0nm,SNR=84
BLKB Belogradchik 3.48 115 ⇑P **Pn 09 26 40.9 +0.1**
SRE Strehaia 3.50 97 ⇑P **Pn 09 26 41.8 +0.7**
SRE ⇓S **Sn 09 27 23.4 +0.6**
PRED Cave del Predi 3.56 293 **Pn 09 26 41.9 0.0**
MYKA Terra Mystica 3.58 296 *i* Pn **Pn 09 26 42.5 +0.4**
comp=Z,34nm,0.6s,SNR=13
KECS Kecovo 3.63 23 *e*P **Pn 09 26 42.4 -0.4**
KECS Kecovo 3.63 23 Pg **Pg 09 26 55.8 +0.3**
ZAPS Zavoj 3.63 120 *e*Pn **Pn 09 26 43.0 +0.1**
ZAPS *e*Sn **Sn 09 27 26.9 +0.8**
JAVC Velka Javorina 3.71 353 *e*PN **Pn 09 26 43.5 -0.5**

BAIL Bailesti 3.77 106 ⇑P **Pn 09 26 45.2 +0.6**
MESR Meseseni 3.77 57 ⇑P **Pn 09 26 45.6 +0.9**
PHP Peshkopia 3.81 155 P **Pn 09 26 46.6 +1.2**
PHP S **Sn 09 27 31.6 +1.1**
LOT Lotru 3.85 84 ⇑P **Pn 09 26 45.5 -0.4**
LOT Lotru 3.85 84 Pb **Pn 09 26 47.1 +1.1**
comp=Z,2.0nm,SNR=31
MOA Molln 3.88 315 *i* Pn **Pn 09 26 47.0 +0.8**
comp=Z,71nm,0.3s,SNR=74
MOA *e*Sn **Sn 09 27 32.7 +0.7**
comp=Z,141nm,0.4s
MOA Molln 3.88 315 *e*Pn **Pn 09 26 46.9 +0.7**
MOA *e*Sn **Sn 09 27 33.1 +1.0**
SGRT San Giovanni R 3.90 210 Pn **Pn 09 26 47.9 +1.3**
SKO Skopje 3.92 144 *e*Pn **Pn 09 26 47.6 +0.8**
SKO Skopje 3.92 144 *i* Pn **Pn 09 26 47.5 +0.7**
KBA Koelnbreinsper 3.95 301 Pn **Pn 09 26 49.8 +2.4**
comp=Z,22nm,0.5s
KBA Koelnbreinsper 3.95 301 *e*Pn **Pn 09 26 49.9 +2.5**
TIR Tirane 3.98 163 P **Pn 09 26 49.8 +2.1**
CJR Cluj-Napoca 3.99 65 ⇑P **Pn 09 26 48.0 +0.2**
CJR Cluj-Napoca 3.99 65 Pn **Pn 09 26 47.8 0.0**
comp=Z,3.1nm,SNR=43
CLUD Cludinico 4.02 291 Pn **Pn 09 26 48.5 +0.3**
BOSS Bosilegrad 4.02 130 *e*Pn **Pn 09 26 48.2 0.0**
STAL STALIGIAL 4.08 287 **Pn 09 26 49.4 +0.3**
BIOA Bad Ischl, Aus 4.10 310 **Pn 09 26 50.1 +0.8**
BIOA **Sn 09 27 39.2 +1.5**
BIOA Bad Ischl, Aus 4.10 310 *i* Pn **Pn 09 26 50.1 +0.8**
comp=Z,64nm,0.3s,SNR=27
BIOA *e*Sn **Sn 09 27 39.2 +1.5**
comp=Z,122nm,0.4s
KRUC Moravsky 4.11 342 *e*PN **Pn 09 26 48.7 -0.7**
KRUC *e*SN **Sn 09 27 37.0 -0.7**
TRPA Tarpa 4.14 43 Pn **Pn 09 26 49.5 -0.3**
comp=Z,0.6nm,SNR=28
TRPA Pg **Pg 09 27 05.0 -0.4**
TRPA Tarpa 4.14 43 P **Pn 09 26 49.5 -0.3**
MAUC Maruska 4.21 356 *e*PN **Pn 09 26 51.3 +0.5**
MAUC *e*SN **Sn 09 27 38.1 -2.2**
CRVS Cervenica-Dubn 4.30 29 *e*P **Pn 09 26 52.2 +0.2**
CRVS Cervenica-Dubn 4.30 29 Pg **Pn 09 26 52.3 +0.2**
comp=Z,0.1nm,SNR=20
VRAC Vranov 4.30 345 ⇑P **Pn 09 26 52.5 +0.5**
VRAC ⇑S **Sn 09 27 42.5 -0.1**
VRAC Vranov 4.30 345 Pn **Pn 09 26 51.7 -0.3**
comp=Z,3.4nm,0.3s,baz=201,slow=11,SNR=20
VRAC Sn **Sn 09 27 40.9 -1.6**
comp=Z,6.6nm,0.3s,baz=178,slow=7.2,SNR=5.9
VRAC LR LR 09 28 36.8
comp=Z,77nm,19.2s,baz=178,slow=40
comp=Z,7.6nm,0.2s
VRAC Vranov 4.30 345 *e*PN **Pn 09 26 51.6 -0.5**
VRAC *e*SN **Sn 09 27 42.3 -0.2**
FDMO Fiordimonte 4.33 242 **Pn 09 26 53.3 +0.8**
ABTA Abfaltersbach 4.35 293 *i* Pn **Pn 09 26 53.3 +0.6**
comp=Z,53nm,0.6s,SNR=39
ABTA *e*Sg **Sg 09 28 08.0 +2.3**
comp=Z,57nm,0.7s
VTS Vitosha 4.37 124 ⇑P **Pn 09 26 53.0 -0.2**
VTS ⇑S **Sn 09 27 45.6 +1.1**
VTS Vitosha 4.37 124 Pn **Pn 09 26 53.0 -0.2**
VTS Vitosha 4.37 124 P **Pn 09 26 52.9 -0.2**
VTS S **Sn 09 27 45.5 +1.1**
UZH Uzhgorod 4.40 37 *e*P **Pn 09 26 56.3 +2.9**
UZH *e*S **Sn 09 27 47.3 +2.4**
UZH MLR MLR
comp=Z,60nm,10.0s
CAMP Campotosto 4.42 235 **Pn 09 26 55.6 +1.7**
NRCA Norcia 4.43 240 **Pn 09 26 54.7 +0.8**
OHR Ohrid 4.44 155 *e*Pn **Pn 09 26 55.8 +1.8**
OHR Ohrid 4.44 155 *i* Pn **Pn 09 26 56.4 +2.4**
NIE Niedzica 4.46 17 *e*Pn Pb 09 26 59.3 -5.4
NIE *e*Pg **Pg 09 27 10.2 -1.2**
NIE *e*Sg **Sg 09 28 17.1 +8.0**
NIE Niedzica 4.46 17 x x 09 26 55.8
comp=Z,0.1nm,SNR=8.6
NIE Niedzica 4.46 17 Pn **Pn 09 26 55.6 +1.4**
STIP Stip 4.47 140 *i* Pn **Pn 09 26 54.8 +0.4**
CKRC Cesky Krumlov 4.57 324 *e*PN **Pn 09 26 57.7 +2.0**
CKRC AMS AMS 09 28 40.0
comp=Z,800nm,10.8s
MURB Monte Urbino 4.58 247 Pn **Pn 09 26 57.0 +1.0**
RJOB Jochberg 4.60 306 *e*Pn **Pn 09 26 57.5 +1.3**
RJOB *e*Sn **Sn 09 27 49.5 -0.5**
ARCR ARCALIA 4.61 63 Pg **Pb 09 27 07.0 -0.3**
KOLS Kolonicke sedl 4.63 34 *e*P **Pn 09 26 58.1 +1.6**
KOLS Kolonicke sedl 4.63 34 Pn **Pn 09 27 01.1 +4.6**
comp=Z,130nm,SNR=77
MORC Moravsky Berou 4.64 354 ⇑P **Pn 09 26 56.8 +0.1**
MORC ⇓S **Sn 09 27 51.7 +0.9**
MORC Moravsky Berou 4.64 354 Pn **Pn 09 26 56.5 -0.1**
MORC Moravsky Berou 4.64 354 P **Pn 09 26 56.8 +0.1**
MORC S **Sn 09 27 51.7 +0.9**
MORC Moravsky Berou 4.64 354 *e*PN **Pn 09 26 56.6 -0.1**
MORC *e*SN **Sn 09 27 51.0 +0.2**
OKC Ostrava-Krasne 4.67 359 *e*P **Pn 09 26 57.3 +0.2**
OKC *e* 09 27 49.9
OKC Ostrava-Krasne 4.67 359 *e*PN **Pn 09 26 57.3 +0.2**
OKC *e*SN **Sn 09 27 49.9 -1.6**
OKC Ostrava-Krasne 4.67 359 Pg **Pn 09 26 57.7 +0.6**
comp=Z,0.2nm,SNR=9.3
OKC Ostrava-Krasne 4.67 359 Pn **Pn 09 26 57.2 +0.2**
MATE Matera 4.67 195 ⇓P **Pn 09 26 57.5 +0.4**
STHS Stebnicka Huta 4.69 24 *e*P **Pn 09 26 57.9 +0.6**
TEOL Teolo 4.70 275 Pn **Pn 09 26 59.4 +1.9**
VOIR 4.75 84 ⇑P **Pn 09 26 58.9 +0.6**
CTI Castel Tesino 4.76 283 **Pn 09 26 59.1 +0.6**
CTI Castel Tesino 4.76 283 P **Pn 09 26 59.1 +0.6**
VLO Vlora 4.78 169 Pn **Pn 09 26 59.9 +1.3**
VLO Vlora 4.78 169 P **Pn 09 26 59.9 +1.3**
GEC2 GERESS Array S 4.85 321 Pn **Pn 09 26 59.7 +0.1**
GEC2 GERESS Array S 4.85 321 *e*Pn **Pn 09 27 02.0 +2.4**
GEC2 *e*Sn **Sn 09 27 57.3 +1.2**
GERES GERESS Array B 4.85 321 Pn **Pn 09 27 00.2 +0.6**
comp=Z,8.3nm,0.3s,baz=148,slow=15,SNR=58
GERES Sn **Sn 09 27 54.9 -1.1**
comp=Z,8.8nm,0.3s,baz=133,slow=24,SNR=5.7
GERES LR LR 09 28 18.8
comp=Z,49nm,21.4s,baz=222,slow=32
comp=Z,13nm,0.3s
CESX Cesi 4.88 240 **Pn 09 27 01.7 +1.7**
KBN Korca 4.89 157 **Pn 09 27 00.9 +0.7**
KBN Korca 4.89 157 P **Pn 09 27 02.1 +1.9**
KBN S **Sn 09 28 00.7 +3.5**
KBN Korca 4.89 157 P **Pn 09 27 00.9 +0.7**
VAY Valandovo 4.94 140 *e*Pn **Pn 09 27 01.6 +0.8**
VAY Valandovo 4.94 140 *i* Pn **Pn 09 27 01.5 +0.6**
PAOL Paolisi 4.97 215 Pn **Pn 09 27 02.8 +1.5**
KRLC Kraliky 5.01 349 *e*P **Pn 09 27 02.7 +0.8**
KRLC Kraliky 5.01 349 *e*PN **Pn 09 27 02.7 +0.8**
KRLC Kraliky 5.01 349 Pn **Pn 09 27 02.4 +0.5**
WTTA Wattenberg 5.09 297 *i* Pn **Pn 09 27 04.3 +1.2**
comp=Z,21nm,0.6s,SNR=7.9
KHC Kasperske Hory 5.11 322 Pn **Pn 09 27 03.9 +0.6**
KHC Kasperske Hory 5.11 322 *e*P **Pn 09 27 04.4 +1.2**
KHC MLR MLR
comp=Z,800nm,10.4s
KHC Kasperske Hory 5.11 322 *e*PN **Pn 09 27 04.4 +1.2**
KHC AMS AMS 09 29 10.0
comp=Z,800nm,10.4s
OJC Ojcow 5.15 11 *e*Pn **Pn 09 27 02.2 -1.4**
OJC *e*Pg **Pb 09 27 13.4 -3.1**
OJC *e*Sg **Sb 09 28 21.0 +2.5**
OJC Ojcow 5.15 11 Pn **Pn 09 27 02.3 -1.3**
OJC Ojcow 5.15 11 P **Pn 09 27 02.3 -1.3**
OJC Ojcow 5.15 11 Pb **Pn 09 27 04.2 +0.6**
comp=Z,0.1nm,SNR=4.5
WATA Walderalm 5.16 297 **Pn 09 27 06.4 +2.5**
WATA Walderalm 5.16 297 P **Pn 09 27 06.4 +2.5**
WATA Walderalm 5.16 297 *i* Pn **Pn 09 27 06.4 +2.5**
comp=Z,45nm,0.8s,SNR=14
NEST Nestorio 5.16 156 P **Pn 09 27 05.1 +1.2**
GRG Griva 5.16 143 P **Pn 09 27 04.2 +0.3**
KNT Kendrikon 5.22 139 P **Pn 09 27 04.4 -0.3**
ZCCA Zocca 5.30 264 Pn **Pn 09 27 07.4 +1.7**
GOPC GO Pecny, Ondr 5.31 334 *e*P **Pn 09 27 05.8 -0.1**
GOPC MLR MLR
comp=Z,500nm,8.1s
GOPC GO Pecny, Ondr 5.31 334 *e*PN **Pn 09 27 05.8 -0.1**
GOPC AMS AMS 09 29 20.0
comp=Z,500nm,8.1s
OSSC Osservatorio P 5.34 255 Pn **Pn 09 27 06.7 +0.4**

SQTA Sankt Quirin 5.35 295 **Pn 09 27 08.6 +2.1**
SQTA **Sn 09 28 11.8 +3.3**
SQTA Sankt Quirin 5.35 295 P **Pn 09 27 08.6 +2.1**
SQTA 09 28 11.8
SQTA Sankt Quirin 5.35 295 *i* Pn **Pn 09 27 08.6 +2.1**
comp=Z,56nm,0.7s,SNR=21
SQTA *e*Sn **Sn 09 28 11.8 +3.3**
comp=Z,28nm,0.8s
DPC Dobruska-Polom 5.35 346 *e*P **Pn 09 27 07.3 +0.8**
DPC *e* 09 28 06.5
DPC Dobruska-Polom 5.35 346 *e*PN **Pn 09 27 07.3 +0.8**
DPC *e*SN **Sn 09 28 06.5 -2.0**
BURAR Bucovina Array 5.36 60 ⇑P **Pn 09 27 06.5 -0.2**
BURAR Bucovina Array 5.36 60 **Pn 09 27 06.4 -0.2**
BUR08 Bucovina Ar. S 5.36 60 Pn **Pn 09 27 06.5 -0.1**
LATE Laterza 5.36 244 Pn **Pn 09 27 07.0 +0.4**
KWP Kalwaria Pacla 5.36 32 Pn **Pn 09 27 06.0 -0.6**
KWP Kalwaria Pacla 5.36 32 P **Pn 09 27 06.0 -0.6**
MLR Muntele Rosu 5.38 84 Pn **Pn 09 27 08.5 +1.5**
comp=Z,1.1nm,0.3s,baz=304,slow=2.9,SNR=5.4
MLR Lg Lg 09 28 39.5
comp=Z,2.2nm,0.3s,baz=173,slow=20,SNR=4.5
MLR LR LR 09 29 50.1
comp=Z,265nm,18.6s,baz=276,slow=45
comp=Z,2.4nm,0.4s
MLR Muntele Rosu 5.38 84 Pn **Pn 09 27 07.7 +0.7**
WET Wettzell 5.44 319 *e*Pn **Pn 09 27 08.4 +0.7**
PRU Pruhonice 5.46 333 *e*P **Pn 09 27 09.0 +1.1**
PRU *e* 09 28 10.0
PRU MLR MLR
comp=Z,300nm,9.8s
PRU Pruhonice 5.46 333 *e*PN **Pn 09 27 09.0 +1.1**
PRU *e*SN **Sn 09 28 10.0 -0.9**
PRU AMS AMS 09 29 20.0
comp=Z,300nm,9.8s
MOTA Moosalm 5.46 296 **Pn 09 27 09.7 +1.6**
MOTA **Sn 09 28 17.0 +5.8**
MOTA Moosalm 5.46 296 P **Pn 09 27 09.7 +1.6**
MOTA 09 28 17.0
MOTA Moosalm 5.46 296 *i* Pn **Pn 09 27 09.7 +1.6**
comp=Z,27nm,0.6s,SNR=18
MOTA *e*Sn **Sn 09 28 17.0 +5.8**
comp=Z,29nm,0.6s
KZN Kozani 5.48 151 P **Pn 09 27 09.5 +1.1**
SALO Salr 5.51 277 Pn **Pn 09 27 08.3 -0.4**
KTI Kastanea 5.53 148 P **Pn 09 27 09.6 +0.5**
UPC Upice 5.56 345 *e*P **Pn 09 27 10.6 +1.3**
UPC Upice 5.56 345 *e*PN **Pn 09 27 10.6 +1.3**
NVR Nevrokopi 5.56 131 P **Pn 09 27 09.6 +0.2**
NVR Nevrokopi 5.56 131 Pn **Pn 09 27 09.5 +0.2**
KEK Kerkira 5.56 168 Pn **Pn 09 27 09.3 0.0**
KEK Kerkira 5.56 168 P **Pn 09 27 09.4 0.0**
OSTC Ostas 5.57 346 *e*PN **Pn 09 27 11.0 +1.5**
SRS Serrai 5.59 135 P **Pn 09 27 09.6 -0.2**
SRS Serrai 5.59 135 Pn **Pn 09 27 09.6 -0.2**
FETA Feichten 5.60 292 *i* Pn **Pn 09 27 11.6 +1.6**
comp=Z,46nm,0.7s,SNR=49
CHVC Chvalec 5.63 345 Pn **Pn 09 27 10.1 -0.2**
THE Thessaloniki 5.67 141 P **Pn 09 27 11.6 +0.7**
SOH Sokhos 5.70 138 P **Pn 09 27 11.2 -0.1**
SOH Sokhos 5.70 138 Pn **Pn 09 27 11.7 +0.4**
HORT Hortiatis 5.76 141 P **Pn 09 27 12.7 +0.5**
FUORN Ofenpass-Fuorn 5.81 287 Pn **Pn 09 27 13.7 +0.7**
IGT Igoumenitsa 5.83 165 P **Pn 09 27 12.9 -0.1**
CASP Castiglione de 5.88 249 Pn **Pn 09 27 15.0 +1.2**
LIT Litokhoron 5.93 147 Pn **Pn 09 27 15.4 +1.1**
LIT Litokhoron 5.93 147 P **Pn 09 27 15.1 +0.7**
LIT Litokhoron 5.93 147 P **Pn 09 27 15.5 +1.1**
VRI Vrincioaia 5.95 80 ⇑P **Pn 09 27 14.7 +0.1**
KOKK Kokkinochori, 6.02 134 P **Pn 09 27 15.5 -0.1**
DAVOX Davos/Dischmat 6.10 288 Pn **Pn 09 27 18.8 +1.9**
comp=Z,5.1nm,0.3s,baz=114,slow=12,SNR=56
DAVOX Lg Lg 09 29 01.7
comp=Z,0.8nm,0.3s,baz=117,slow=7.0,SNR=4.2
DAVOX LR LR 09 29 29.1
comp=Z,38nm,19.6s,baz=95,slow=37
comp=Z,60nm,0.6s
KAVA Kavala 6.16 130 P **Pn 09 27 17.6 +0.1**
ROTZ Rotzenmuhle 6.19 320 *e*Pn **Pn 09 27 18.4 +0.4**
UBR Ueberruh 6.21 297 *e*Pn **Pn 09 27 18.4 +0.1**
DAVA Damuels 6.23 293 *i* Pn **Pn 09 27 20.3 +1.7**
comp=Z,16nm,0.5s,SNR=5.5
DAVA Damuels 6.23 293 *e*Pn **Pn 09 27 19.3 +0.6**
THL Klokotos Trika 6.23 153 P **Pn 09 27 19.2 +0.6**
MSSA Maissana 6.33 265 Pn **Pn 09 27 21.1 +1.1**
MANZ Manzenberg 6.39 321 *e*Pn **Pn 09 27 21.7 +1.0**
BRG Berggiesshubel 6.42 334 *e*P **Pn 09 27 22.3 +1.2**
BRG Amp 09 27 25.5
comp=Z,5.8nm,0.3s
BRG *ex* Sn 09 28 20.4 -14
BRG *ex* x 09 28 48.3
BRG Amp 09 29 27.3
comp=Z,30nm,0.8s
BRG Amp 09 30 09.0
comp=N,0.4nm,10.3s
BRG Amp 09 30 12.0
comp=E,0.5nm,7.4s
BRG Amp 09 30 13.0
comp=Z,0.3nm,8.3s
BRG Berggiesshubel 6.42 334 *e*P **Pn 09 27 22.2 +1.2**
BRG pmax pmax
comp=Z,6.0nm,0.3s
BRG MLR MLR
comp=N,393nm,10.3s
BRG MLR MLR
comp=E,457nm,7.4s
BRG MLR MLR
comp=Z,345nm,8.3s
NKC Novy Kostel 6.43 324 *e*P **Pn 09 27 22.7 +1.4**
NKC MLR MLR
comp=Z,600nm,10.3s
NKC Novy Kostel 6.43 324 *e*PN **Pn 09 27 22.7 +1.4**
NKC AMS AMS 09 30 00.0
comp=Z,600nm,10.3s
PLONS Plons/SG 6.50 290 *e*Pn **Pn 09 27 23.3 +1.0**
KMPD K-Podol'skiy 6.53 56 Pn **Pn 09 27 24.1 +1.6**
comp=Z,12nm,1.1s
KMPD pP Pb 09 27 25.1 -15
comp=Z,12nm,1.1s
THAS Thassos island 6.55 132 P **Pn 09 27 19.7 -3.1**
PAIG Paliouri 6.56 141 P **Pn 09 27 23.5 +0.4**
TSLK Tsoukalades, L 6.58 164 P **Pn 09 27 23.0 -0.3**
GRA1 Grafenberg Arr 6.61 316 **Pn 09 27 24.7 +1.0**
GRF Grafenberg Arr 6.61 316 P **Pn 09 27 24.7 +1.0**
GRF Grafenberg Arr 6.61 316 *e*Pn **Pn 09 27 26.1 +2.4**
GRFO Grafenberg 6.61 316 **Pn 09 27 21.7 -2.0**
GRFO Grafenberg 6.61 316 P **Pn 09 27 21.7 -2.0**
LKD2 Lefkada island 6.61 164 P **Pn 09 27 23.4 -0.4**
RDO Rodhopi 6.63 125 **Pn 09 27 24.0 -0.1**
RDO Rodhopi 6.63 125 P **Pn 09 27 23.6 -0.4**
RDO Rodhopi 6.63 125 Pn **Pn 09 27 23.8 -0.2**
NYDR Nydri-Lefkada 6.69 164 P **Pn 09 27 24.1 -0.7**
DRAG Dragano-Lefkad 6.70 165 P **Pn 09 27 22.9 -2.0**
EVR Evrytania 6.77 156 P **Pn 09 27 27.5 +1.5**
EVGI Lefkada island 6.77 164 P **Pn 09 27 24.9 -1.1**
MAKR Makrakomi, Fth 6.77 154 P **Pn 09 27 27.0 +1.0**
XOR Xorichti 6.83 146 P **Pn 09 27 27.5 +0.7**
NEO Neokhori 6.90 147 P **Pn 09 27 28.5 +0.8**
FSK Fiskardo 6.91 165 P **Pn 09 27 26.9 -1.0**
EDRB Edirne 6.96 116 P **Pn 09 27 28.2 -0.4**
SMTH Samothraki Isl 7.08 129 P **Pn 09 27 29.6 -0.6**
SMTH Samothraki Isl 7.08 129 Pn **Pn 09 27 29.7 -0.5**
EMING Emmingen-Lipti 7.08 296 *e*Sn **Sn 09 28 47.4 -3.6**
ALN Alexandroupoli 7.09 124 Pn **Pn 09 27 30.2 -0.1**
ALN Alexandroupoli 7.09 124 P **Pn 09 27 29.9 -0.4**
ALN Alexandroupoli 7.09 124 P **Pn 09 27 30.2 -0.1**
MOX Moxa 7.09 323 P **Pn 09 27 31.7 +1.4**
MOX Moxa 7.09 323 *e*Pn **Pn 09 27 31.4 +1.1**
CLL Collm 7.09 332 **Pn 09 27 29.6 -0.7**
CLL Collm 7.09 332 *i* P **Pn 09 27 32.0 +1.7**
CLL pmax pmax
comp=Z,19nm,0.6s
CLL Collm 7.09 332 *i* Pn **Pn 09 27 32.0 +1.7**
comp=Z,19nm,0.6s
CLL *e*Sg **Sg 09 29 37.0 +3.4**
comp=Z,77nm,1.1s
KEF3 Kipouria, Keph 7.13 167 P **Pn 09 27 28.1 -2.7**
VLS Valsamata 7.19 166 Pn **Pn 09 27 30.1 -1.6**
TIRR Tirgusor 7.21 92 Pn **Pn 09 27 31.7 -0.3**
TIRR Tirgusor 7.21 92 P **Pn 09 27 31.7 -0.3**
PGF Pioggiola 7.23 252 *e*P **Pn 09 27 35.5 +3.1**
EFP Efpalio 7.25 157 P **Pn 09 27 33.4 +0.9**
SLE Schleitheim 7.27 294 *e*Pn **Pn 09 27 32.3 -0.5**

SLE eSn **Sn** **09 28 50.9 -4.7**
SERG Sergoula 7.31 156 P **Pn** **09 27 33.4 +0.1**
METMA Mettma DE 7.41 294 ePn **Pn** **09 27 34.0 -0.7**
METMA eSn **Sn** **09 28 56.1 -2.9**
LAKA Lakka 7.45 157 P **Pn** **09 27 35.4 +0.2**
SULZ Cheisacher 7.45 292 ePn **Pn** **09 27 35.0 -0.2**
BERGE Lenzkirch (DE) 7.50 295 ePn **Pn** **09 27 37.1 +1.1**
BERGE eSn **Sn** **09 28 56.5 -4.8**
BFO Black Forest 7.56 298 Pn **Pn** **09 27 37.6 +0.9**
BFO Black Forest 7.56 298 P **Pn** **09 27 37.6 +0.9**
BFO Black Forest 7.56 298 ePn **Pn** **09 27 38.4 +1.6**
BFO eSn **Sn** **09 28 56.9 -5.8**
DRO Drossia 7.65 159 P **Pn** **09 27 38.0 0.0**
KLV Kalavryta, Ach 7.68 157 P **Pn** **09 27 38.3 -0.1**
KLV Kalavryta, Ach 7.68 157 Pn **Pn** **09 27 38.4 0.0**
BALST Balsthal 7.68 290 ePn **Pn** **09 27 38.2 -0.3**
SENIN Lac Senin/Sane 7.80 283 Pn **Pn** **09 27 41.0 +0.8**
SBF Sospel 7.89 264 eP **Pn** **09 27 43.0 +1.6**
SBF eSn **Sn** **09 29 05.4 -5.6**
comp=Z,26nm,0.7s
VILL Villia 7.93 150 P **Pn** **09 27 42.1 +0.1**
LUBAR Lubar, Ukraine 7.95 50 Pn **Pn** **09 27 42.2 +0.1**
comp=Z,6.4nm,1.0s
EZN Ezine 7.96 129 P **Pn** **09 27 42.6 +0.3**
EZN Ezine 7.96 129 Pn **Pn** **09 27 42.4 +0.1**
LOUT Loutraki 7.98 153 P **Pn** **09 27 42.2 -0.3**
LPG La Plagne 8.16 276 eP **Pn** **09 27 45.8 +0.5**
SIGRI SIGRI 8.17 134 P **Pn** **09 27 45.4 +0.3**
LPL La Plagne 8.18 277 eSn Sn 09 29 07.6 -11
comp=Z,8.9nm,0.6s
MBDF Montbardon 8.21 271 eP **Pn** **09 27 46.0 +0.2**
MBDF eSn Sn 09 29 07.2 -12
comp=Z,18nm,0.7s
CDF Champ du Feu 8.24 297 eSn Sn 09 29 10.7 -9.0
comp=Z,7.7nm,0.4s
ECH Echery 8.26 296 Pn **Pn** **09 27 45.5 -0.8**
ECH Echery 8.26 296 P **Pn** **09 27 45.5 -0.8**
ECH Echery 8.26 296 ePn **Pn** **09 27 45.7 -0.6**
HINF Hinteralfeld 8.35 293 eP **Pn** **09 27 48.9 +1.3**
HINF eSn Sn 09 29 12.3 -10
comp=Z,11nm,0.4s
TNS Taunus Mts 8.36 311 ePn **Pn** **09 27 48.4 +0.7**
VLY Voula,Athens 8.38 149 P **Pn** **09 27 47.6 -0.5**
ITM Ithomi 8.43 160 Pn **Pn** **09 27 49.0 +0.2**
MI28 Mi28,Pidlybu 8.50 44 Pn **Pn** **09 27 50.2 +0.5**
comp=Z,7.1nm,0.9s
MI28 Sn **Sn** **09 29 22.2 -3.7**
comp=Z,7.1nm,0.9s
CABF La Chapelle 8.66 284 eP **Pn** **09 27 52.5 +0.6**
PYL PYLOS 8.66 161 P **Pn** **09 27 50.3 -1.6**
LMR La Mourre 8.68 262 ePn Pn 09 27 47.0 -5.1
LMR La Mourre 8.68 262 eP **Pn** **09 27 52.1 0.0**
HAU Haudompre 8.72 293 eP **Pn** **09 27 52.2 -0.5**
HAU eSn Sn 09 29 21.8 -10
comp=Z,11nm,0.4s
ORIF Oris-en-Rattie 8.82 273 eP **Pn** **09 27 55.5 +1.4**
ORIF eSn **Sn** **09 29 28.0 -5.8**
comp=Z,9.0nm,0.5s
CHOS Chios island 8.90 137 P **Pn** **09 27 56.1 +0.8**
AKASG Malin Array Be 9.17 49 Pn **Pn** **09 27 59.6 +0.9**
comp=Z,0.3nm,0.3s,baz=237,slow=12,SNR=4.7
AKASG Sn **Sn** **09 29 39.3 -2.9**
comp=Z,0.7nm,0.3s,baz=225,slow=26,SNR=4.4
AKASG Lg Lg 09 30 39.8
comp=Z,0.1nm,0.3s,baz=222,slow=28,SNR=5.0
AKASG LR LR 09 31 53.1
comp=Z,117nm,21.9s,baz=216,slow=40
WLF Walferdange 9.39 303 Pn **Pn** **09 28 01.8 -0.1**
WLF Walferdange 9.39 303 P **Pn** **09 28 01.8 -0.1**
KTHA Kythira Island 9.60 156 P **Pn** **09 28 03.6 -1.2**
VIVF Saint-Julien-l 9.68 273 eP **Pn** **09 28 04.7 -1.1**
SSB Saint Sauveur 9.73 276 Pn **Pn** **09 28 06.9 +0.4**
SSB Saint Sauveur 9.73 276 P **Pn** **09 28 06.9 +0.4**
APE Apeiranthos 9.75 144 P **Pn** **09 28 07.9 +1.1**
APE Apeiranthos 9.75 144 P **Pn** **09 28 08.0 +1.1**
ANKY Antikythira Is 10.04 156 P **Pn** **09 28 08.1 -2.6**
SMF Signal de Mont 10.20 283 eP **Pn** **09 28 13.9 +0.9**
LASF Ste Croix 10.38 269 ePn Pn 09 28 09.9 -5.5
LASF Ste Croix 10.38 269 eP **Pn** **09 28 16.2 +0.8**
SSF Saint Saulge 10.46 286 eP **Pn** **09 28 18.0 +1.5**
AVF Avril sur Loir 10.55 284 eP **Pn** **09 28 17.6 -0.1**
IDI Anoyia 11.07 151 Pn **Pn** **09 28 25.4 +0.5**
comp=Z,0.7nm,0.3s,baz=3.8,slow=12,SNR=2.2
comp=Z,3.7nm,0.6s
SIM Simferopol' 11.18 86 P Pn 09 28 18.4 -7.9
SIM pmax pmax
comp=Z,11μm,0.7s
TCF Toulx Ste Croi 11.32 281 eP **Pn** **09 28 29.1 +0.8**
ARG Arkhangelos 11.63 137 Pn **Pn** **09 28 33.4 +0.9**
ARG Arkhangelos 11.63 137 P **Pn** **09 28 33.4 +0.9**
KEST Kesra 11.64 219 Pn **Pn** **09 28 33.8 +1.0**
comp=Z,0.3nm,0.3s,baz=4.5,slow=13,SNR=1.4
KEST LR LR 09 33 20.4
comp=Z,101nm,20.1s,baz=202,slow=39
comp=Z,2.2nm,0.6s
KARP Karpathos 11.73 142 Pn **Pn** **09 28 35.9 +1.9**
ANTO Ankara 11.91 111 Pn **Pn** **09 28 35.2 -1.3**
ANTO Ankara 11.91 111 P **Pn** **09 28 35.2 -1.3**
BRTR Keskin Array B 12.55 110 Pn **Pn** **09 28 45.3 +0.1**
comp=Z,0.1nm,0.3s,baz=302,slow=10.0,SNR=6.4
comp=Z,1.6nm,0.8s
HFS Hagfors 15.24 351 LR LR 09 36 20.9
comp=Z,96nm,19.1s,baz=313,slow=42
NB201 NORSAR Array S 16.44 348 Pn **Pn** **09 29 35.1 -2.1**
NB201 IAmb IAmb 09 29 48.3
comp=Z,54nm,1.5s
NOA NORSAR Array B 16.44 348 Pn **Pn** **09 29 35.0 -2.2**
comp=Z,0.3nm,0.5s,baz=163,slow=12,SNR=2.9
NOA NORSAR Array B 16.44 348 P **Pn** **09 29 35.0 -2.2**
NBO00 NORSAR Array S 16.50 347 Pn **Pn** **09 29 36.2 -1.7**
FINES FINESS Array B 16.92 13 Pn **Pn** **09 29 40.6 -2.6**
comp=Z,0.2nm,0.3s,baz=195,slow=10,SNR=1.6
FINES LR LR 09 37 26.1
comp=Z,74nm,18.3s,baz=181,slow=42
comp=Z,3.7nm,1.0s
FINES FINESS Array B 16.92 13 Pn **Pn** **09 29 40.8 -2.4**
FINES FINESS Array B 16.92 13 P **Pn** **09 29 40.8 -2.4**
EKA Eskdalemuir Ar 17.02 314 Pn **P** **09 29 45.6 -0.8**
baz=112,slow=13
comp=Z,3.4nm,0.6s
ESDC Sonseca Array 17.33 259 P **P** **09 29 51.0 +1.1**
comp=Z,0.1nm,0.3s,baz=65,slow=12,SNR=6.7
ESDC LR LR 09 36 46.9
comp=Z,29nm,18.8s,baz=55,slow=38
comp=Z,0.9nm,0.6s
KBZ Khabaz 17.59 86 LR LR 09 37 51.5
comp=Z,54nm,19.6s,baz=252,slow=41
MMAI Mount Meron Ar 17.93 127 P **Pn** **09 29 56.1 +0.1**
comp=Z,1.6nm,0.3s,baz=332,slow=8.8,SNR=3.8
comp=Z,0.5nm,0.3s
ASF Jabal al Asfar 19.40 126 P **Pn** **09 30 15.1 +1.1**
comp=Z,0.2nm,0.3s,baz=141,slow=7.4,SNR=4.3
comp=Z,1.3nm,0.5s
GNI Garni 20.02 95 P **P** **09 30 18.0 -1.7**
GNI Garni 20.02 95 P **P** **09 30 18.0 -1.7**
GNI pmax pmax
comp=Z,27nm,0.8s
EIL Elat 20.28 134 P Pn 09 30 23.3 -1.0
comp=Z,10.0nm,0.8s,baz=320,slow=2.6,SNR=5.9
comp=Z,10.0nm,0.8s
LGD Lagodekhi 20.48 89 P P 09 30 16.6 -7.9
BELG Belogornoye 20.51 59 LR LR 09 38 33.6
comp=Z,82nm,21.0s,baz=182,slow=37
DDFL Dedoflistskaro 20.52 91 P P 09 30 12.8 -12
MDT Midelt 21.59 243 P **P** **09 30 39.6 +3.0**
comp=Z,1.3nm,0.8s,baz=64,slow=9.7,SNR=3.8
MDT LR LR 09 38 39.9
comp=Z,45nm,18.2s,baz=36,slow=36
comp=Z,1.3nm,0.8s
KIRV Kirov 23.16 43 LR LR 09 39 01.7
comp=Z,102nm,20.2s,baz=260,slow=34
ARCES ARCESS Array 6 24.70 6 LR LR 09 40 54.1
comp=Z,84nm,18.1s,baz=148,slow=37
AKTO Aktyubinsk 26.94 64 LR LR 09 42 30.1
comp=Z,55nm,19.3s,baz=267,slow=37
ARU Arti 27.41 51 LR LR 09 43 15.0
comp=Z,58nm,18.3s,baz=26,slow=38
ABKAR Abkulak array 28.30 67 P **P** **09 31 37.4 -2.8**
BRVK Borovoye 34.24 58 P **P** **09 32 31.2 -1.2**
BRVK IAmb IAmb 09 32 41.2
comp=Z,4.4nm,1.1s
BRVK Borovoye 34.24 58 P **P** **09 32 31.2 -1.2**
BRVK pmax pmax
comp=Z,4.0nm,1.1s
BVAR Borovoye Array 34.31 58 LR LR 09 47 20.6
comp=Z,83nm,19.1s,baz=288,slow=38
TOA0 Torodi Ar. Sit 34.92 209 P **P** **09 32 38.6 0.0**
TORD Torodi Ar. Bea 34.92 209 P **P** **09 32 38.7 +0.1**
comp=Z,1.9nm,0.7s,baz=19,slow=8.8,SNR=12
TORD LR LR 09 50 06.6
comp=Z,20nm,18.8s,baz=220,slow=42
comp=Z,1.9nm,0.7s
KOWA Kowa 35.95 219 LR LR 09 48 35.1
comp=Z,38nm,18.5s,baz=314,slow=38
KK31 Karatay Array 36.98 74 P **P** **09 32 54.1 -1.9**
KK31 Karatay Array 36.98 74 P **P** **09 32 54.1 -1.9**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 36.98 74 P **P** **09 32 56.2 +0.2**
KKAR Karatay Array 36.98 74 P **P** **09 32 56.2 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 39.86 73 LR LR 09 50 54.3
comp=Z,54nm,18.9s,baz=310,slow=38
ZALV Zalesovo Beam 42.53 53 LR LR 09 52 38.2
comp=Z,36nm,18.2s,baz=20,slow=38
DBIC Dimbokro 43.33 215 P **P** **09 33 50.6 +1.8**
comp=Z,3.7nm,0.7s,baz=39,slow=5.5,SNR=4.3
DBIC LR LR 09 53 37.7
comp=Z,27nm,19.4s,baz=50,slow=39
comp=Z,3.7nm,0.7s
MKAR Makanchi Array 43.37 64 P **P** **09 33 49.5 +0.4**
comp=Z,0.7nm,0.7s,baz=294,slow=6.0,SNR=5.8
MKAR LR LR 09 53 08.7
comp=Z,50nm,18.1s,baz=252,slow=38
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 43.37 64 P **P** **09 33 49.4 +0.3**
EUNU Eureka 48.33 347 P **P** **09 34 29.1 +1.3**
SONM Songino Array 57.43 53 P **P** **09 35 34.5 -0.9**
comp=Z,0.8nm,0.9s,baz=328,slow=8.6,SNR=2.5
comp=Z,0.8nm,0.9s
TSUM Tsumeb 64.07 181 LR LR 10 07 43.2
comp=Z,24nm,18.7s,baz=329,slow=39
INK Inuvik 64.89 349 P **P** **09 36 26.6 +1.0**
comp=Z,3.4nm,1.0s,baz=331,slow=4.7,SNR=3.0
comp=Z,3.4nm,1.0s
MA2 Magadan 68.56 24 LR LR 10 10 41.7
comp=Z,39nm,18.9s,baz=116,slow=39
H21K Melozitna Rive 69.29 356 P **P** **09 36 54.4 +0.8**
H21K IAmb IAmb 09 37 03.4
comp=Z,3.4nm,1.1s
DAWY Dawson 69.69 350 P **P** **09 36 54.8 -1.4**
DAWY IAmb IAmb 09 37 00.4
comp=Z,3.1nm,0.8s
J26L Joseph Creek 69.75 352 P **P** **09 36 56.0 -0.6**
ILAR Eielson Array 69.78 353 P **P** **09 36 57.8 +1.1**
comp=Z,0.5nm,0.7s,baz=14,slow=6.0,SNR=6.1
comp=Z,0.5nm,0.7s
K27K Chicken 70.05 351 P **P** **09 36 59.7 +1.4**
K27K IAmb IAmb 09 37 19.0
comp=Z,4.8nm,1.5s
FARO Faro, Yukon 70.56 346 P **P** **09 37 01.4 -0.1**
FARO IAmb IAmb 09 37 08.5
comp=Z,6.0nm,1.4s
BCAR Beaver Creek A 70.95 351 P **P** **09 37 02.1 -1.8**
L27K Beaver Creek, 70.96 351 P **P** **09 37 02.5 -1.4**
L27K IAmb IAmb 09 37 31.3
comp=Z,3.7nm,1.4s
CAST Castle Rocks 71.49 355 P **P** **09 37 06.7 -0.4**
CAST IAmb IAmb 09 37 13.3
comp=Z,3.5nm,1.3s
DHY Denali Highway 71.50 353 P **P** **09 37 07.1 -0.2**
N31M Braeburn, Yuko 71.65 347 P **P** **09 37 07.5 -0.6**
N31M IAmb IAmb 09 37 32.1
comp=Z,5.4nm,1.3s
PPLA Purkeypile 72.01 355 P **P** **09 37 09.3 -1.1**
HYT Haines Junctio 72.54 348 P **P** **09 37 14.3 +0.7**
HYT IAmb IAmb 09 37 18.3
comp=Z,2.6nm,0.8s
GLB Gilahina Butte 72.76 351 P **P** **09 37 13.2 -1.6**
GLB IAmb IAmb 09 37 34.6
comp=Z,3.3nm,1.0s
VRDI Verde Repeater 72.93 351 P **P** **09 37 15.1 -0.8**
VRDI IAmb IAmb 09 37 34.4
comp=Z,7.1nm,1.4s
WAX Waxell Ridge 73.62 350 P **P** **09 37 19.0 -0.9**
WAX IAmb IAmb 09 37 32.3
comp=Z,4.2nm,0.8s
PDAR Pinedale Array 80.89 324 P **P** **09 38 02.6 +1.4**
comp=Z,0.4nm,0.7s,baz=48,slow=6.6,SNR=3.7
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 89.01 312 P **P** **09 38 43.5 +1.4**
comp=Z,0.4nm,0.8s,baz=92,slow=3.3,SNR=4.5
comp=Z,0.4nm,0.8s

UPA 07 09:26:41.6±1.3, 9°.42N×80°.01W, h45km±5km, MW3.5, 5C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SABA3	**Sabanitas, Col**	**0.22**	**109**	↑*iP*	Pn	09 26 49.5	0.0
SABA3				*eS*	Sn	09 26 55.5	+0.4
BCIP	**Isla Barro Col**	**0.31**	**146**	↑*iP*	Pn	09 26 50.2	-0.1
BCIP				↑*eS*	Sn	09 26 56.6	+0.2
CHOR3	**La Chorrera**	**0.57**	**155**	*eP*	Pn	09 26 53.3	-0.3
CHOR3				*eS*	Sn	09 27 02.2	+0.2
UPA	**Univ. de Panam**	**0.64**	**133**	↑*iP*	Pn	09 26 53.9	-0.5
UPA				*eS*	Sn	09 27 03.0	-0.6
VTON	**El Valle, Cocl**	**0.81**	**187**	↓*eP*	Pn	09 26 56.5	-0.2
VTON				*eS*	Sn	09 27 08.0	+0.3
CHPO	**Chepo, Panama**	**0.92**	**106**	↑*eP*	Pn	09 26 58.1	0.0
CHPO				*eS*	Sn	09 27 10.2	0.0
CNTA3	**Canitas, Panam**	**1.12**	**100**	*eP*	Pn	09 27 00.8	-0.2
CNTA3				*eS*	Sn	09 27 15.3	0.0
CALO3	**Calobre, Verag**	**1.37**	**217**	*eP*	Pn	09 27 04.7	+0.4
CALO3				*eS*	Sn	09 27 21.3	+0.1
CHIT3	**Chitre**	**1.51**	**195**	↓*eP*	Pn	09 27 05.6	-0.6
CHIT3				*eS*	Sn	09 27 24.4	-0.3
STIA3	**Santiago, Vera**	**1.62**	**216**	*eP*	Pn	09 27 07.7	-0.1
STIA3				*eS*	Sn	09 27 27.6	+0.1
TOTI	**Torti**	**1.75**	**106**	*eP*	Pn	09 27 09.6	+0.1
TOTI				*eS*	Sn	09 27 30.8	+0.2
RSUS3	**Rio de Jesus,**	**1.83**	**219**	*eP*	Pn	09 27 10.8	+0.2
RSUS3				*eS*	Sn	09 27 32.5	0.0
PEDA3	**Pedasi**	**1.88**	**180**	*eP*	Pn	09 27 10.7	-0.6
PEDA3				*eS*	Sn	09 27 32.5	-1.4
ACHO3	**Achotines, Los**	**2.00**	**185**	*eP*	Pn	09 27 12.4	-0.5
MARI3	**Mariato, Verag**	**2.01**	**209**	*eP*	Pn	09 27 13.8	+0.7
MARI3				*eS*	Sn	09 27 35.5	-1.5
UPD2	**Meteti**	**2.15**	**114**	*eP*	Pn	09 27 14.7	-0.3
UPD2				*eS*	Sn	09 27 40.3	-0.3
REME3	**Remedios, Chir**	**2.16**	**237**	*eP*	Pn	09 27 16.1	+1.0
REME3				*eS*	Sn	09 27 40.6	0.0
CACAO	**El Cacao, Vera**	**2.23**	**202**	*eP*	Pn	09 27 15.8	-0.3
CACAO				*eS*	Sn	09 27 42.7	+0.3
CNI2	**El Empalme, Bo**	**2.43**	**270**	*eP*	Pn	09 27 19.0	+0.3
CNI2				*eS*	Sn	09 27 46.1	-1.1
LNBQ3	**Los Naranjos,**	**2.48**	**256**	*eP*	Pn	09 27 19.8	+0.2
LNBQ3				*eS*	Sn	09 27 47.3	-1.5
BCO2	**Palmira**	**2.58**	**254**	*eP*	Pn	09 27 21.9	+0.8
BCO2				*eS*	Sn	09 27 50.0	-1.3
DVD	**David**	**2.60**	**248**	*eP*	Pn	09 27 22.6	+1.4
DVD				*eS*	Sn	09 27 50.9	-0.7
BC3P	**Paso Ancho**	**2.64**	**257**	*eP*	Pn	09 27 23.4	+1.5
BC3P				*eS*	Sn	09 27 52.6	-0.2
BRU2	**Volcan**	**2.72**	**257**	*eP*	Pn	09 27 23.6	+0.6
BRU2				*eS*	Sn	09 27 54.3	-0.4
PRVC	**Isla de Provid**	**4.15**	**341**	*eP*	Pn	09 27 39.7	-2.8
PRVC				*eS*	Sn	09 28 26.9	-2.8
PRVC				*eS*		09 28 27.1	

ISK 07 09:40:25.0, 41°.15N×28°.92E, h0km±1km, ML1.2/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGKT	**Bogazkoy**	**0.11**	**287**	PG	Pg	09 40 27.9	+0.7
ISK	**Istanbul-Kandi**	**0.14**	**127**	PG	Pg	09 40 28.5	+0.9
ISK				SG	Sg	09 40 30.9	+1.6
KAVV	**Kandilli-Istan**	**0.14**	**127**	PG	Pg	09 40 28.4	+0.8
KAVV				SG	Sg	09 40 30.9	+1.5
KLYT	**Kilyos**	**0.14**	**42**	PG	Pg	09 40 28.4	+0.7
ARMT	**Armutlu**	**0.58**	**184**	PG	Pg	09 40 36.8	+0.7
ARMT				SG	Sg	09 40 45.2	+1.5
MRMT	**Marmara Adasi**	**1.14**	**242**	PN	Pb	09 40 47.4	-0.2

DDA 07 09:41:12.5±0.0, 39°.21N×29°.32E, h7km±1km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.17**	**135**	P	Pg	09 41 16.4	+0.3
GDZ				*i* AML	AML	09 41 19.0	
	comp=E,65nm,0.2s						
GDZ				S	Sg	09 41 19.4	+0.8
ANDZ	**Kutahya, Merke**	**0.54**	**56**	P	Pg	09 41 22.9	0.0
ANDZ				S	Sg	09 41 30.5	+0.6
USAK	**Uak-Merkez**	**0.55**	**206**	P	Pb	09 41 24.4	-0.1
USAK				S	Sb	09 41 32.0	-0.7
USAK				*i* AML	AML	09 41 32.0	
	comp=E,64nm,1.4s						
PASA	**Karahalli, USA**	**0.87**	**171**	P	Pn	09 41 31.0	-0.2
PASA				S	Sb	09 41 42.2	+0.3

*NEIC **07** 09:48:47.2±1.9, 4°.90S±0°.08×147°.72E±0°.08, h90km±8km, mb4.7/32, Error ellipse: s-maj=11.8km s-min=10.9km az=109.0*
*BJI **07** 09:48:50.1±0.0, 5°.73S×147°.35E, h121km, mb4.7/12, mB5.1/10*
*IDC **07** 09:48:57.6±1.8, 5°.55S×147°.45E, h144km±16km, mb4.1/13, mbtmp4.5/15, MS3.3/1, Error ellipse: s-maj=15.3km s-min=14.5km az=99.0*
*DJA **07** 09:48:58.0±0.5, 6°S±4°×14°7E±°, h136km±7km, M4.8/15, mB5.4/6, mb4.7/15, MLv4.9/2, Mw(mB)4.8/6*
ISC 07 09:48:57.5±0.5, 5°.56S±0°.06×147°.39E±0°.06, h150km, n132, σ1§69/128, mb4.5/28, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.83**	**183**	P	**Pn**	**09 49 54.5**	**-1.0**
	65nm,0.4s,baz=30,slow=5.4,SNR=42						
PMG				S	**Sn**	**09 50 35.7**	**-4.8**
	115nm,0.4s,baz=201,slow=11,SNR=7.6						
PMG	**Port Moresby**	**3.83**	**183**	P	**Pn**	**09 49 54.4**	**-1.0**
PMG	**Port Moresby**	**3.83**	**183**	P	**Pn**	**09 49 54.8**	**-0.7**
KRVT	**Keravat (AS076**	**4.79**	**75**	P	**Pn**	**09 50 09.1**	**+1.0**
	225nm,0.7s,baz=345,slow=0.2,SNR=33						
RABL	**Rabaul**	**4.95**	**74**	Pn	Pn	09 49 54.2	-16
RABL	**Rabaul**	**4.95**	**74**	P	**Pn**	**09 50 12.3**	**+2.0**
COEN	**Coen**	**9.32**	**206**	P	**Pn**	**09 51 09.8**	**+1.3**
	baz=9.2,SNR=31						
COEN	**Coen**	**9.32**	**206**	Pn	**Pn**	**09 51 08.7**	**+0.3**
COEN	**Coen**	**9.32**	**206**	P	**Pn**	**09 51 10.2**	**+1.7**
SMPI	**Sarmi**	**9.36**	**292**	P	**Pn**	**09 51 09.1**	**+0.1**
	3μm17nm,1.1s						
SRPI	**Serui, Papua**	**11.71**	**288**	P	**Pn**	**09 51 40.5**	**+0.4**
MTSU	**Mount Surprise**	**12.85**	**193**	P	**Pn**	**09 51 53.8**	**-1.0**
	baz=13,SNR=6.3						
CTAO	**Charters Tower**	**14.48**	**184**	Pn	**Pn**	**09 52 14.0**	**-1.5**
FAKI	**Fak Fak**	**15.32**	**279**	Pn	Pn	09 52 19.3	-6.7
SAUI	**Saumlaki**	**16.16**	**261**	P	**Pn**	**09 52 35.5**	**-0.7**
	384nm,1.2s						
KDU	**Kakadu**	**16.33**	**243**	P	**Pn**	**09 52 37.8**	**-0.5**
	baz=16,SNR=19						
KDU	**Kakadu**	**16.33**	**243**	P	**Pn**	**09 52 38.2**	**-0.2**
QIS	**Mount Isa**	**16.71**	**206**	P	**Pn**	**09 52 44.0**	**+1.1**
	baz=17,SNR=26						
QIS	**Mount Isa**	**16.71**	**206**	P	**Pn**	**09 52 44.5**	**+1.5**
SIJI	**Sorong**	**16.75**	**286**	P	**P**	**09 52 43.5**	**+0.3**
	30nm,1.0s						
BNDI	**Bandanaira**	**17.45**	**273**	P	**P**	**09 52 51.5**	**+0.7**
	269nm,0.7s						
MTN	**Manton Dam**	**17.59**	**245**	P	**P**	**09 52 53.7**	**+1.3**
	baz=18,SNR=18						
MTN	**Manton Dam**	**17.59**	**245**		**P**	**09 52 53.3**	**+0.9**
MTN				IAmb	IAmb	09 52 55.2	
	comp=Z,39nm,0.4s						
MTN	**Manton Dam**	**17.59**	**245**	P	**Pn**	**09 52 54.4**	**+0.8**
WB0	**Warramunga Arr**	**18.95**	**221**	P	**P**	**09 53 08.2**	**+0.9**
WB0				IAmb	IAmb	09 53 09.2	
	comp=Z,42nm,0.9s						
WR0	**Warramunga Arr**	**19.00**	**220**	P	**P**	**09 53 08.9**	**+1.2**
WRAB	**Tennant Creek**	**19.10**	**220**	P	**P**	**09 53 10.0**	**+1.1**
WRAB	**Tennant Creek**	**19.10**	**220**	P	**P**	**09 53 10.3**	**+1.4**
WB2	**Warramunga Arr**	**19.11**	**220**	P	**P**	**09 53 10.2**	**+1.2**
WRA	**Warramunga Arr**	**19.12**	**220**	P	**P**	**09 53 10.0**	**+1.0**
	comp=Z,81nm,0.6s,baz=46,slow=11,SNR=807						
WRA				S	**Sn**	**09 56 44.7**	**-2.5**
	comp=Z,6.8nm,0.8s,baz=41,slow=18,SNR=7.3						
WRA				LR	LR	10 01 32.0	
	comp=Z,82nm,19.9s,baz=52,slow=39						
WRA	**Warramunga Arr**	**19.12**	**220**	P	**P**	**09 53 10.2**	**+1.2**
EIDS	**Eidsvold**	**20.01**	**170**	P	**P**	**09 53 18.2**	**-0.4**
RMQ	**Roma**	**20.85**	**177**	P	**P**	**09 53 27.3**	**-0.3**
	baz=21,SNR=10						
RMQ	**Roma**	**20.85**	**177**	P	**P**	**09 53 29.6**	**+2.0**
KNRA	**Kununurra**	**20.86**	**240**	P	**P**	**09 53 28.1**	**+0.3**
	baz=21,SNR=116						
KNRA	**Kununurra**	**20.86**	**240**	P	**P**	**09 53 27.8**	**0.0**
KNRA	**Kununurra**	**20.86**	**240**	P	**P**	**09 53 28.5**	**+0.7**
QLP	**Quilpie**	**21.12**	**188**	P	**P**	**09 53 31.7**	**+1.3**
	baz=21,SNR=4.4						
QLP	**Quilpie**	**21.12**	**188**	P	**P**	**09 53 31.4**	**+1.0**
KOUNC	**Koumac, New Ca**	**22.17**	**134**	P	**P**	**09 53 35.9**	**-5.5**
AS01	**Alice Springs**	**22.17**	**214**	P	**P**	**09 53 42.1**	**+0.6**
AS31	**Alice Springs**	**22.19**	**214**	P	**P**	**09 53 42.6**	**+0.8**
ASAR	**Alice Springs**	**22.20**	**214**	P	**P**	**09 53 42.7**	**+0.9**
	comp=Z,22nm,0.5s,baz=50,slow=8.4,SNR=394						
ASAR				S	**S**	**09 57 37.9**	**+2.3**
	comp=Z,12nm,1.0s,baz=28,slow=22,SNR=19						
ASAR				ScP	**ScP**	**10 00 58.0**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=25,slow=3.8,SNR=4.5						
	comp=Z,22nm,0.5s						
INKA	**Innaminka**	**22.95**	**195**	P	**P**	**09 53 50.0**	**+1.3**
SOEI	**Soe**	**23.29**	**258**	P	**P**	**09 53 51.9**	**-0.3**
SOEI				IAmb	IAmb	09 54 14.8	
	comp=Z,47nm,0.9s						
BATI	**Baumata**	**23.94**	**257**	P	**P**	**09 54 00.5**	**+2.4**
	comp=Z,51nm,0.6s,baz=162,slow=2.7,SNR=4.8						
	comp=Z,51nm,0.6s						
LIFNC	**LIFOU**	**24.50**	**130**	P	**P**	**09 53 56.9**	**-6.0**
NOUC	**Port Laguerre**	**24.60**	**134**	P	**P**	**09 54 06.3**	**+2.4**
FITZ	**Fitzroy Crossi**	**24.62**	**238**	P	**P**	**09 54 05.3**	**+1.2**
	comp=Z,49nm,0.7s,baz=50,slow=5.8,SNR=100						
	comp=Z,49nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.62**	**238**	P	**P**	**09 54 05.3**	**+1.2**
	baz=25,SNR=59						
FITZ	**Fitzroy Crossi**	**24.62**	**238**	P	**P**	**09 54 04.3**	**+0.1**
FITZ				IAmb	IAmb	09 54 07.9	
	comp=Z,61nm,0.9s						
FITZ	**Fitzroy Crossi**	**24.62**	**238**	P	**P**	**09 54 05.3**	**+1.2**
DZM	**Mont Dzumac**	**24.68**	**134**	P	**P**	**09 54 04.8**	**+0.1**
	comp=Z,6.5nm,0.5s,baz=296,slow=9.4,SNR=14						
	comp=Z,6.5nm,0.5s						
DZM	**Mont Dzumac**	**24.68**	**134**	P	**P**	**09 54 00.6**	**-4.2**
DZM				IAmb	IAmb	09 54 05.9	
	comp=Z,13nm,0.9s						
DZM	**Mont Dzumac**	**24.68**	**134**	P	**P**	**09 54 07.7**	**+3.0**
OOD	**Oodnadatta**	**24.75**	**205**	P	**P**	**09 54 06.6**	**+1.4**
LUWI	**Luwuk**	**24.98**	**279**	P	**P**	**09 54 02.4**	**-5.0**
LUWI				IAmb	IAmb	09 54 14.2	
	comp=Z,17nm,0.5s						
ARMA	**Armidale**	**25.05**	**171**	P	**P**	**09 54 09.0**	**+1.0**
	baz=25,SNR=7.8						
ARMA	**Armidale**	**25.05**	**171**	P	**P**	**09 54 06.8**	**-1.2**
ARMA				IA

FORT	**Forrest**	**30.98 214**	P	**P**	**09 55 01.6 +0.9**
	baz=31,SNR=9.1				
FORT	**Forrest**	**30.98 214**	P	**P**	**09 55 00.8 +0.2**
FORT			IAmb	IAmb	09 55 02.3
	comp=Z,22nm,0.7s				
FORT	**Forrest**	**30.98 214**	P	**P**	**09 55 01.6 +0.9**
PSA00	**Pilbara Seismi**	**31.06 237**	P	**P**	**09 55 02.0 +0.5**
PSA00			IAmb	IAmb	09 55 03.1
	comp=Z,6.3nm,0.7s				
PSA00	**Pilbara Seismi**	**31.06 237**	P	**P**	**09 55 02.5 +1.0**
KKM	**Kota Kinabalu**	**33.19 290**	P	**P**	**09 55 16.4 -3.9**
MEEK	**Meekatharra**	**34.53 229**	P	**P**	**09 55 32.8 +1.1**
	baz=34,SNR=23				
MEEK	**Meekatharra**	**34.53 229**	P	**P**	**09 55 33.1 +1.4**
GIRL	**Giralia**	**36.23 239**	P	**P**	**09 55 48.8 +2.6**
	baz=36,SNR=4.6				
GIRL	**Giralia**	**36.23 239**	P	**P**	**09 55 48.7 +2.6**
UGM	**Wanagama**	**36.68 264**	P	**P**	**09 55 51.4 +1.2**
MORW	**Morawa**	**37.75 228**	P	**P**	**09 56 00.0 +1.0**
	baz=38,SNR=5.5				
MORW	**Morawa**	**37.75 228**	P	**P**	**09 56 00.0 +1.0**
MORW			IAmb	IAmb	09 56 00.9
	comp=Z,5.2nm,0.7s				
MORW	**Morawa**	**37.75 228**	P	**P**	**09 55 59.9 +0.9**
KLBR	**Kellerberrin**	**37.95 223**	P	**P**	**09 56 01.3 +0.6**
	baz=38,SNR=14				
KLBR	**Kellerberrin**	**37.95 223**	P	**P**	**09 56 01.1 +0.4**
BLDU	**Ballidu**	**38.11 225**	P	**P**	**09 56 02.7 +0.6**
	baz=38,SNR=7.3				
BLDU	**Ballidu**	**38.11 225**	P	**P**	**09 56 02.7 +0.6**
NWAO	**Narrogin (SRO)**	**39.11 222**	P	**P**	**09 56 08.4 -2.0**
NWAO			IAmb	IAmb	09 56 10.6
	comp=Z,36nm,1.5s				
LIRZ	**Lichensteins R**	**41.69 145**	P	**P**	**09 56 29.6 -1.8**
OTVZ	**Oturere**	**42.10 147**	P	**P**	**09 56 38.7 +3.8**
MRHZ	**Matea Rd**	**42.28 146**	P	P	09 56 23.6 -13
URZ	**Urewera**	**42.28 145**	P	**P**	**09 56 36.6 +0.4**
	comp=Z,6.6nm,0.6s,baz=355,slow=1.7,SNR=7.5				
	comp=Z,6.6nm,0.6s				
URZ	**Urewera**	**42.28 145**	P	**P**	**09 56 37.4 +1.2**
HAZ	**Te Kaha**	**42.34 143**	P	**P**	**09 56 38.4 +1.7**
RUGZ	**Raukumara Rang**	**42.41 144**	P	**P**	**09 56 39.6 +2.1**
RTZ	**Ruatahuna**	**42.45 145**	P	P	09 56 27.6 -10
BHHZ	**Black Hill Sta**	**42.55 147**	P	**P**	**09 56 40.1 +1.7**
BKZ	**Black Stump Fm**	**42.55 146**	P	**P**	**09 56 39.9 +1.4**
THZ	**Tophouse**	**42.62 152**	P	**P**	**09 56 38.0 -0.9**
RAGZ	**Rawiri**	**42.62 145**	P	P	09 56 28.2 -11
JCZ	**Jackson Bay**	**42.72 157**	P	**P**	**09 56 42.2 +2.4**
TWGZ	**Tauwhareparae**	**42.73 144**	P	**P**	**09 56 41.8 +1.9**
WMGZ	**Waiomatatini S**	**42.76 143**	P	**P**	**09 56 41.5 +1.4**
KRHZ	**Kereru**	**42.82 147**	P	**P**	**09 56 42.0 +1.4**
PUZ	**Puketiti**	**42.83 143**	P	**P**	**09 56 41.7 +1.0**
TKGZ	**Te Karaka**	**42.83 144**	P	P	09 56 35.7 -4.9
TSZ	**Takapari Road**	**42.89 147**	P	**P**	**09 56 43.0 +1.8**
PNHZ	**Pukenui**	**42.92 147**	P	**P**	**09 56 43.0 +1.6**
RIGZ	**Rimuhau**	**42.96 145**	P	P	09 56 28.3 -13
RPZ	**Rata Peaks**	**43.34 155**	P	**P**	**09 56 45.5 +0.8**
	comp=Z,7.4nm,0.7s,baz=332,slow=4.2,SNR=7.0				
	comp=Z,7.4nm,0.7s				
RPZ	**Rata Peaks**	**43.34 155**	P	**P**	**09 56 46.5 +1.8**
KHZ	**Kahutara**	**43.42 152**	P	**P**	**09 56 46.3 +1.0**
BFZ	**Birch Farm**	**43.49 148**	P	**P**	**09 56 44.7 -1.2**
BFZ	**Birch Farm**	**43.49 148**	P	**P**	**09 56 46.8 +0.9**
GYA	**Guiyang**	**50.69 311**	⇑P	**P**	**09 57 40.8 -1.3**
GYA			pmax	pmax	
	comp=Z,27nm,0.9s				
PZH	**PanZhiHua**	**54.49 308**	P	**P**	**09 58 07.7 -2.4**
PZH			pmax	pmax	
	comp=Z,10.0nm,0.9s				
PZH			pmax	pmax	
	comp=Z,150nm,5.2s				
HHC	**Hu-ho-hao-te**	**56.67 328**	*e*P	**P**	**09 58 24.5 -0.8**
HHC			pmax	pmax	
	comp=Z,20nm,0.7s				
HHC			pmax	pmax	
	comp=Z,98nm,6.1s				
SONM	**Songino Array**	**64.21 331**	P	**P**	**09 59 17.3 +0.9**
	comp=Z,0.5nm,0.5s,baz=136,slow=6.2,SNR=2.3				
	comp=Z,0.5nm,0.5s				
VNDA	**Vanda**	**72.33 177**	P	**P**	**10 00 07.5 +1.3**
	comp=Z,2.6nm,0.6s,baz=332,slow=6.9,SNR=44				
	comp=Z,2.6nm,0.6s				
VNDA	**Vanda**	**72.33 177**	P	**P**	**10 00 07.2 +1.0**
WMQ	**Urumqi**	**72.71 319**	*e*P	**P**	**10 00 07.6 -1.6**
MKAR	**Makanchi Array**	**77.41 320**	P	**P**	**10 00 37.2 +1.2**
	comp=Z,0.3nm,0.4s,baz=94,slow=7.5,SNR=4.3				
	comp=Z,0.3nm,0.4s				
ZALV	**Zalesovo Beam**	**78.85 328**	P	**P**	**10 00 44.0 +0.3**
	comp=Z,0.7nm,0.4s,baz=107,slow=5.0,SNR=2.1				
	comp=Z,0.7nm,0.4s				
MAW	**Mawson**	**82.80 203**	P	**P**	**10 01 05.1 +0.6**
	comp=Z,0.7nm,0.6s,baz=118,slow=9.9,SNR=2.5				
	comp=Z,0.7nm,0.6s				
QSPA	**South Pole Qui**	**84.40 180**	P	**P**	**10 01 13.1 +0.2**
QSPA			IAmb	IAmb	10 01 13.6
	comp=Z,3.2nm,0.7s				
ILAR	**Eielson Array**	**84.93 23**	P	**P**	**10 01 15.0 -0.3**
	comp=Z,3.1nm,0.7s,baz=252,slow=4.5,SNR=29				
	comp=Z,3.1nm,0.7s				
DOT	**Dot Lake**	**85.62 25**	P	P	10 01 13.2 -5.7
DOT			IAmb	IAmb	10 01 21.7
	comp=Z,4.1nm,1.0s				
PLCA	**Paso Flores**	**122.27 146**	PKP	**PKiKP**	**10 07 36.1 +0.8**
	comp=Z,0.6nm,0.4s,baz=232,slow=2.8,SNR=5.2				
TORD	**Torodi Ar. Bea**	**145.35 285**	PKPbc	**PKPab**	**10 08 20.0 +1.0**
	comp=Z,0.5nm,0.5s,baz=62,slow=3.7,SNR=10				

GUC 07 10:00:25.0±0.9, 33°.10S×71°.23W, h57km±3km, ML3.6, 5C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MT02	**Curacav**	**0.17**	**155**	⇑	*i*P	Pn	10 00 34.9	+0.9
MT02					*e*S	Sn	10 00 41.2	+0.7
MT02					IAML		10 00 41.5	
	comp=E,7μm,0.1s							
ROCH	**El Roble**	**0.22**	**54**	⇑	*i*P	Pn	10 00 35.7	+1.1
ROCH					*i*S	Sn	10 00 43.1	+1.7
ROCH					IAML		10 00 44.5	
	comp=N,14μm,0.2s							
VA01	**Torpederas**	**0.36**	**282**	⇓	*i*P	Pn	10 00 36.2	+0.9
VA01					*e*S	Sn	10 00 44.4	+1.6
PEL	**Peldehue**	**0.46**	**96**		*e*P	Pn	10 00 37.4	+1.1
PEL					*e*S	Sn	10 00 46.3	+1.8
PEL					IAML		10 00 47.5	
	comp=N,3μm,0.1s							
MT05	**Renca**	**0.50**	**126**	⇑	*i*P	Pn	10 00 37.7	+0.9
MT05					*e*S	Sn	10 00 47.2	+1.9
MT05					IAML		10 00 48.1	
	comp=E,4μm,0.2s							
VA06	**Catapilco**	**0.54**	**354**		*e*P	Pn	10 00 38.0	+0.8
VA06					*e*S	Sn	10 00 47.0	+1.0
VA06					IAML		10 00 48.5	
	comp=N,3μm,0.3s							
VA05	**Santo Domingo**	**0.64**	**210**		*i*P	Pn	10 00 38.9	+0.6
VA05					*i*S	Sn	10 00 49.3	+1.2
VA05					IAML		10 00 50.3	
	comp=E,6μm,0.3s							
VA03	**San Esteban**	**0.66**	**60**	⇑	*i*P	Pn	10 00 39.8	+1.1
VA03					*i*S	Sn	10 00 50.3	+1.7
VA03					IAML		10 00 52.1	
	comp=E,8μm,0.1s							
MT09	**Talagante**	**0.70**	**164**		*i*P	Pn	10 00 39.8	+0.5
MT09					*e*S	Sn	10 00 50.3	+0.6
MT09					IAML		10 00 52.0	
	comp=N,4μm,0.1s							
MT03	**Universidad Ad**	**0.71**	**123**	⇑	*i*P	Pn	10 00 40.2	+0.8
MT03					*i*S	Sn	10 00 51.6	+1.7
MT03					IAML		10 00 54.1	
	comp=E,5μm,0.1s							
MT01	**Popeta**	**0.76**	**182**	⇓	*i*P	Pn	10 00 40.5	+0.6
MT01					*i*S	Sn	10 00 51.1	+0.3
MT01					IAML		10 00 52.7	
	comp=E,4μm,0.2s							
FCH	**Farellones**	**0.81**	**106**		*e*P	Pn	10 00 41.7	+0.9
FCH					*i*S	Sn	10 00 54.0	+1.5
FCH					IAML		10 00 54.5	
	comp=E,3μm,0.2s							
BO04	**La Punta**	**1.02**	**150**		*e*P	Pn	10 00 43.8	+0.5
BO04					*e*S	Sn	10 00 57.8	+0.9
BO04					IAML		10 00 59.4	
	comp=E,2μm,0.4s							
LMEL	**Las Melosas**	**1.13**	**131**		*e*P	Pn	10 00 45.8	+0.9
LMEL					*e*S	Sn	10 01 01.1	+1.5
LMEL					IAML		10 01 03.2	
	comp=N,4μm,0.2s							
BO01	**Tunca**	**1.29**	**175**		*e*P	Pn	10 00 47.3	+0.5
BO01					*e*S	Sn	10 01 04.0	+0.9
BO03	**Pichilemu**	**1.52**	**204**		*e*P	Pn	10 00 49.2	-0.7
BO02	**Sierra Bellavi**	**1.73**	**168**		*e*P	Pn	10 00 53.8	+1.0
BO02					*e*S	Sn	10 01 14.7	+0.9
BO02					IAML		10 01 16.8	
	comp=N,1μm,0.4s							
CO02	**Combarbal**	**1.90**	**6**		*e*P	Pn	10 00 56.7	+1.5
CO02					IAML		10 01 30.0	
	comp=N,2μm,0.2s							
GO05	**Huala**	**1.99**	**197**		*e*P	Pn	10 00 55.9	-0.4
GO05					IAML		10 01 32.8	
	comp=E,237nm,0.4s							
CO03	**El Pedregal**	**2.30**	**12**		*e*P	Pn	10 01 02.8	+2.1
CO03					*e*S	Sn	10 01 30.7	+2.9
CO03					IAML		10 01 36.7	
	comp=E,730nm,0.2s							
CO06	**Fray Jorge**	**2.44**	**352**		*e*P	Pn	10 01 03.0	+0.5
CO06					IAML		10 01 45.6	
	comp=N,251nm,0.2s							
CO01	**Juntas del Tor**	**3.26**	**18**		*e*P	Pn	10 01 09.5	-4.4
AC05	**El Transito**	**4.33**	**11**		*e*P	Pn	10 01 29.9	+1.5

*DDA **07** 10:22:47.8±0.0, 39°.27N×23°.48E, h8km±4km, MW3.7*
*ATH **07** 10:22:52.1, 39°.51N×23°.54E, h17km±1km, ML2.8/12, Error ellipse: s-maj=1.7km s-min=0.8km az=274.0*
*THE **07** 10:22:52.2, 39°.52N×23°.54E, h11km, ML2.8/16, Error ellipse: s-maj=0.7km s-min=0.4km az=108.0*
*ISK **07** 10:22:52.3, 39°.11N×23°.57E, h9km, ML3.0/4*

ISC 07 10:22:52.1±0.9, 39°.50N±0°.02×23°.55E±0°.02, h14km±8km, n76, σ0°85/112, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.31**	**244**		P	**Pg**	**10 22 58.4**	**-0.1**
XOR					S	**Sg**	**10 23 03.0**	**+0.2**
	1μm,0.5s							
XOR	**Xorichti**	**0.31**	**244**		P	**Pg**	**10 22 58.3**	**-0.2**
XOR					S	**Sb**	**10 23 03.9**	**-0.5**
XOR					AML	AML	10 23 09.5	
	comp=N,3276μm,0.6s							
XOR					AML	AML	10 23 10.4	
	comp=E,2522μm,0.6s							
NEO	**Neokhori**	**0.32**	**232**		P	**Pg**	**10 22 58.7**	**0.0**
NEO					S	**Sg**	**10 23 03.5**	**+0.4**
	comp=E,2μm,0.6s							
NEO	**Neokhori**	**0.32**	**232**		P	**Pg**	**10 22 58.5**	**-0.2**
NEO					S	**Sg**	**10 23 03.5**	**+0.4**
NEO					AML	AML	10 23 05.2	
	comp=E,3185μm,0.2s							
NEO					AML	AML	10 23 16.1	
	comp=N,4990μm,0.7s							
ALNA	**Alonissos**	**0.43**	**145**		P	**Pg**	**10 23 00.7**	**0.0**
ALNA					S	**Sb**	**10 23 07.8**	**-0.1**
ALNA					AML	AML	10 23 10.8	
	comp=E,7209μm,0.4s							
ALNA					AML	AML	10 23 10.9	
	comp=N,6066μm,0.5s							
PAIG	**Paliouri**	**0.43**	**13**		P	**Pg**	**10 23 00.7**	**-0.1**
PAIG					S	**Sg**	**10 23 07.2**	**+0.5**
	comp=N,2μm,0.4s							
PAIG	**Paliouri**	**0.43**	**13**		P	**Pg**	**10 23 00.6**	**-0.2**
PAIG					S	**Sg**	**10 23 07.1**	**+0.5**
PAIG					AML	AML	10 23 07.8	
	comp=E,4291μm,0.3s							
PAIG					AML	AML	10 23 08.8	
	comp=N,2406μm,0.3s							
OUR	**Ouranopolis**	**0.90**	**22**		P	**Pg**	**10 23 09.0**	**-0.5**
OUR					S	**Sb**	**10 23 22.0**	**+0.8**
OUR	**Ouranopolis**	**0.90**	**22**		P	**Pg**	**10 23 08.9**	**-0.5**
OUR					AML	AML	10 23 22.6	
	comp=N,2521μm,0.6s							
OUR					AML	AML	10 23 24.6	
	comp=E,2414μm,0.5s							
LKR	**Lokris**	**0.95**	**207**		P	**Pb**	**10 23 09.3**	**-1.1**
LKR					AML	AML	10 23 25.8	
	comp=N,731μm,0.5s							
LKR					AML	AML	10 23 30.2	
	comp=E,419μm,0.3s							
KYMI	**Kymi, Euboea I**	**0.97**	**154**		P	**Pb**	**10 23 10.4**	**-0.3**
KYMI					S	**Sg**	**10 23 24.3**	**+0.8**
	comp=E,1μm,0.5s							
KYMI	**Kymi, Euboea I**	**0.97**	**154**		P	**Pb**	**10 23 10.3**	**-0.4**
KYMI					S	**Sb**	**10 23 23.4**	**+0.1**
KYMI					AML	AML	10 23 33.2	
	comp=E,2015μm,0.5s							
KYMI					AML	AML	10 23 33.7	
	comp=N,2051μm,0.5s							
AXAR	**Agios Charalam**	**1.01**	**224**		P	**Pn**	**10 23 11.9**	**0.0**
AXAR					S	**Sn**	**10 23 26.6**	**+0.7**
	comp=N,902nm,0.6s							
AXAR	**Agios Charalam**	**1.01**	**224**		P	**Pb**	**10 23 11.4**	**0.0**
LIT	**Litokhoron**	**1.01**	**307**		P	**Pb**	**10 23 10.6**	**-0.8**
LIT	**Litokhoron**	**1.01**	**307**		P	**Pb**	**10 23 10.4**	**-1.0**
LIT					S	**Sg**	**10 23 24.9**	**0.0**
LIT					*i* AML	AML	10 23 38.0	
	comp=N,107nm,0.4s							
TYRN	**Tyrnavos**	**1.04**	**282**		P	**Pb**	**10 23 11.5**	**-0.4**
TYRN					S	**Sg**	**10 23 25.7**	**0.0**
	comp=N,625nm,0.6s							
HORT	**Hortiatis**	**1.15**	**343**		P	**Pb**	**10 23 13.1**	**-0.7**
HORT					S	**Sb**	**10 23 28.8**	**+0.2**
	comp=N,390nm,0.6s							
HORT	**Hortiatis**	**1.15**	**343**		P	**Pb**	**10 23 13.0**	**-0.8**
HORT					S	**Sb**	**10 23 28.0**	**-0.6**
HORT					AML	AML	10 23 31.7	
	comp=N,635μm,0.9s							
HORT					AML	AML	10 23 37.4	
	comp=E,1071μm,0.9s							
THL	**Klokotos Trika**	**1.19**	**273**		P	**Pn**	**10 23 13.8**	**-0.5**
THL					S	**Sg**	**10 23 30.3**	**-0.2**
	comp=E,112nm,1.0s							
THL	**Klokotos Trika**	**1.19**	**273**		P	**Pn**	**10 23 13.4**	**-0.9**
THL					AML	AML	10 23 43.6	
	comp=E,183μm,0.7s							
THL					AML	AML	10 23 46.6	
	comp=N,268μm,1.4s							
MAKR	**Makrakomi, Fth**	**1.20**	**246**		P	**Pb**	**10 23 14.9**	**+0.2**
MAKR					S	**Sg**	**10 23 31.4**	**+0.4**
	comp=N,310nm,1.1s							
MAKR	**Makrakomi, Fth**	**1.20**	**246**		P	**Pb**	**10 23 14.9**	**+0.2**
THE	**Thessaloniki**	**1.21**	**339**		P	**Pn**	**10 23 14.2**	**-0.5**
THE					S	**Sg**	**10 23 31.3**	**0.0**
	comp=N,145nm,0.6s							
VIL2	**Platees**	**1.31**	**190**		P	**Pn**	**10 23 15.9**	**-0.1**
SOH	**Sokhos**	**1.32**	**354**		P	**Pn**	**10 23 15.7**	**-0.6**
SOH					S	**Sb**	**10 23 33.6**	**-0.1**
	comp=N,495nm,0.5s							
SOH	**Sokhos**	**1.32**	**354**		P	**Pn**	**10 23 16.0**	**-0.3**
SOH					AML	AML	10 23 37.6	
	comp=N,954μm,0.5s							
SOH					AML	AML	10 23 44.0	
	comp=E,1527μm,0.5s							
VILL	**Villia**	**1.35**	**188**		P	**Pn**	**10 23 16.2**	**-0.4**
VILL					S	**Sg**	**10 23 35.6**	**0.0**
	comp=E,312nm,0.6s							
KOKK	**Kokkinochori,**	**1.36**	**15**		P	**Pn**	**10 23 15.5**	**-1.2**
KOKK					S	**Sb**	**10 23 34.8**	**+0.2**
	comp=E,340nm,0.6s							
KOKK	**Kokkinochori,**	**1.36**	**15**		P	**Pn**	**10 23 15.6**	**-1.1**
DION	**Dionisos Attik**	**1.45**	**168**		P	**Pn**	**10 23 18.0**	**-0.1**
DION					S	**Sb**	**10 23 38.1**	**+0.7**
	comp=E,2μm,0.6s							
DION	**Dionisos Attik**	**1.45**	**168**		P	**Pn**	**10 23 17.9**	**-0.1**
DION					S	**Sb**	**10 23 38.0**	**+0.7**
DION					AML	AML	10 23 43.5	
	comp=N,2391μm,0.7s							
DION					AML	AML	10 23 44.1	
	comp=E,2022μm,0.6s							
EVR	**Evrytania**	**1.47**	**247**		P	**Pn**	**10 23 18.4**	**0.0**
PTL	**Penteli**	**1.47**	**170**		P	**Pn**	**10 23 18.2**	**-0.1**
PTL					S	**Sg**	**10 23 39.0**	**-0.6**
	comp=E,430nm,0.6s							
ATHU	**Athens Univers**	**1.54**	**173**		P	**Pn**	**10 23 19.1**	**-0.2**
LOUT	**Loutraki**	**1.58**	**197**		P	**Pn**	**10 23 19.4**	**-0.3**
KZN	**Kozani**	**1.59**	**301**		P	**Pn**	**10 23 19.8**	**-0.1**
SERG	**Sergoula**	**1.59**	**227**		P	**Pn**	**10 23 19.1**	**-0.8**
SRS	**Serrai**	**1.61**	**1**		P	**Pn**	**10 23 19.7**	**-0.5**
VLY	**Voula,Athens**	**1.66**	**173**		P	**Pn**	**10 23 20.6**	**-0.2**
VLY					S	**Sn**	**10 23 42.3**	**+0.4**
	comp=E,742nm,0.6s							
KAVA	**Kavala**	**1.67**	**26**		P	**Pn**	**10 23 20.2**	**-0.7**
KAVA	**Kavala**	**1.67**	**26**		P	**Pn**	**10 23 19.5**	**-1.4**
EFP	**Efpalio**	**1.67**	**231**		P	**Pn**	**10 23 21.1**	**+0.1**
KNT	**Kendrikon**	**1.73**	**343**		P	**Pn**	**10 23 21.6**	**-0.2**
SMTH	**Samothraki Isl**	**1.80**	**57**		P	**Pn**	**10 23 21.2**	**-1.6**
SMTH					AML	AML	10 23 52.0	
	comp=N,186μm,0.8s							
SMTH					AML	AML	10 23 53.3	
	comp=E,347μm,0.5s							
SIGR	**SIGRI**	**1.81**	**99**		PN	**Pn**	**10 23 24.0**	**+1.1**
SIGR					SN	**Sn**	**10 23 46.8**	**+1.1**
SIGR	**SIGRI**	**1.81**	**99**		P	**Pn**	**10 23 22.0**	**-0.9**
KLV	**Kalavryta, Ach**	**1.82**	**217**		P	**Pn**	**10 23 23.3**	**+0.2**
NVR	**Nevrokopi**	**1.86**	**7**		P	**Pn**	**10 23 23.6**	**0.0**
GADA	**Gvkgeada**	**1.94**	**68**		PN	**Pb**	**10 23 28.3**	**+1.1**
GOKA	**anakkale-Gk**	**1.94**	**69**		P	**Pb**	**10 23 26.2**	**-1.1**
GOKA					S	**Sg**	**10 23 54.7**	**+0.2**
GOKA					*i* AML	AML	10 23 59.0	
	comp=E,217nm,0.6s							
BOZC	**Bozcaada**	**1.96**	**79**		PN	**Pb**	**10 23 27.7**	**+0.1**
BOZC					SN	**Sg**	**10 23 53.8**	**-1.4**
BOZC	**Bozcaada**	**1.96**	**79**		P	**Pb**	**10 23 27.9**	**+0.2**
BOZC					S	**Sg**	**10 23 54.1**	**-1.1**
BOZC					*i* AML	AML	10 23 56.0	
	comp=E,64nm,0.6s							
VAY	**Valandovo**	**1.96**	**338**	*i*	Pn	**Pg**	**10 23 29.3**	**-0.5**
KOCA	**Canakkale, Ayv**	**2.00**	**89**		P	**Pn**	**10 23 25.2**	**-0.4**
KOCA					S	**Sg**	**10 23 56.5**	**0.0**
KOCA					*i* AML	AML	10 24 11.0	
	comp=E,68nm,0.6s							
MMB	**Musomiste**	**2.09**	**4**		P	**Pn**	**10 23 27.0**	**+0.2**
PRK	**Paraskevi**	**2.13**	**96**		P	**Pn**	**10 23 27.3**	**+0.1**
EZN	**Ezine**	**2.17**	**81**		PN	**Pb**	**10 23 30.6**	**-0.5**
EZN	**Ezine**	**2.17**	**81**		P	**Pb**	**10 23 30.8**	**-0.3**
EZN					S	**Sg**	**10 24 01.3**	**-0.5**
EZN					*i* AML	AML	10 24 09.0	
	comp=E,40nm,0.8s							
CHOS	**Chios island**	**2.25**	**119**		PN	**Pn**	**10 23 28.1**	**-0.9**
CHOS	**Chios island**	**2.25**	**119**		P	**Pn**	**10 23 28.8**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**2.33**	**83**		P	**Pn**	**10 23 29.6**	**-0.5**
BAYC					S	**Sg**	**10 24 08.0**	**+1.1**
BAYC					*i* AML	AML	10 24 14.0	
	comp=E,20nm,0.5s							
ALN	**Alexandroupoli**	**2.37**	**53**		P	**Pn**	**10 23 32.5**	**+2.0**
ALN					S	**Sg**	**10 24 08.6**	**+0.4**
ALN					*i* AML	AML	10 24 17.0	
	comp=E,28nm,0.6s							
KKB	**Krupnik**	**2.39**	**352**		P	**Pn**	**10 23 30.5**	**-0.4**
GELI	**Tayfur-Gelibol**	**2.42**	**67**		PN	**Pb**	**10 23 35.3**	**-0.1**
STIP	**Stip**	**2.42**	**335**	*i*	Pn	**Pb**	**10 23 35.3**	**-0.2**
KDZ	**Kurdzhali**	**2.57**	**33**		P	**Pn**	**10 23 32.5**	**-0.9**
URLA	**Izmir**	**2.64**	**115**		PN	**Pn**	**10 23 33.9**	**-0.4**
URLA	**Izmir**	**2.64**	**115**		P	**Pn**	**10 23 33.1**	**-1.2**
URLA					S	**Sg**	**10 24 16.6**	**-0.2**
URLA					*i* AML	AML	10 24 24.0	
	comp=E,29nm,0.9s							
BUHA	**Balikesir, Bur**	**2.73**	**89**		P	**Pn**	**10 23 35.1**	**-0.5**
BUHA					S	**Sg**	**10 24 20.1**	**+0.3**
BUHA					*i* AML	AML	10 24 35.0	
	comp=E,34nm,0.6s							
VLI	**Veliai**	**2.82**	**190**		P	**Pn**	**10 23 35.7**	**-1.1**
APE	**Apeiranthos**	**2.89**	**147**		PN	**Pn**	**10 23 34.9**	**-2.9**
APE	**Apeiranthos**	**2.89**	**147**		P	**Pn**	**10 23 37.6**	**-0.2**
VTS	**Vitosha**	**3.12**	**356**		P	**Pn**	**10 23 42.8**	**+1.7**
KIRK	**Kırklareli**	**3.53**	**49**		P	**Pn**	**10 23 49.0**	**+2.4**
KIRK					S	**Sg**	**10 24 43.7**	**-1.8**
KIRK					*i* AML	AML	10 24 45.0	
	comp=E,10nm,2.4s							
MPEP	**Malo Peshtene**	**3.85**	**2**		P	**Pn**	**10 23 55.1**	**+4.1**

HEL 07 10:29:29.1±0.4, 67°.88N×20°.41E, h0km, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.62**	**74**		PG	Pg	10 29 41.7	+0.8
LANU					SG	Sg	10 29 48.4	-0.5
KIF	**Kilpisjarvi**	**1.14**	**7**		*e*P	Pn	10 29 52.3	+0.1
KIF	**Kilpisjarvi**	**1.14**	**7**		PN	Pn	10 29 52.5	+0.3
KIF					MSG		10 30 04.6	
	comp=Z,2.7nm,0.2s							
KIF					SG	Sg	10 30 04.8	-0.7
HEF	**Hetta**	**1.32**	**65**		*e*P	Pg	10 29 53.2	-1.2
HEF	**Hetta**	**1.32**	**65**		MSG		10 30 09.0	
	comp=Z,0.8nm,0.2s							
HEF					SN	Sb	10 30 12.6	+0.3
PAJU	**Pajala**	**1.35**	**128**		PN	Pg	10 29 54.2	-0.8
PAJU					SG	Sg	10 30 11.5	-1.0
ERTU	**Ertsjaerv**	**1.50**	**152**		PN	Pn	10 29 57.1	-0.1
ERTU					SN	Sg	10 30 16.2	-1.2
KLF	**Kolari**	**1.51**	**114**		PN	Pb	10 29 58.0	0.0
KLF					SN	Sg	10 30 16.8	-0.7
KTK1	**Kautokeino**	**1.54**	**41**		SN	Sg	10 30 20.5	+2.0
TOF	**Tornio**	**2.38**	**138**		MSG		10 30 39.6	
	comp=Z,1.2nm,0.2s							
TOF					SG	Sb	10 30 41.6	-0.9
ARA0	**ARCESS Array S**	**2.49**	**46**		PB	Pn	10 30 12.2	+1.3
	baz=227							
ARA0					SG	Sb	10 30 47.2

KTK1				IAML		10 32 41.8
	comp=Z,10nm,0.4s					
KTK1	**Kautokeino**	**4.25 293**	PG	**Pb**		**10 31 45.3 +0.1**
KTK1			SG	**Sb**		**10 32 39.3 +2.4**
PAJU	**Pajala**	**4.32 266**	PN	**Pn**		**10 31 36.6 +0.1**
PAJU			SN	**Sn**		**10 32 27.6 +0.1**
LANU	**Lannavaara**	**4.61 280**	PN	**Pn**		**10 31 39.4 -1.1**
LANU			SG	**Sb**		**10 32 51.5 +4.1**
OBF4	**Vikkela, Lumij**	**4.67 236**	PN	**Pn**		**10 31 41.9 +0.7**
	baz=52					
HAMF	**Hammerfest**	**4.76 313**	*e*P	**Pn**		**10 31 43.0 +0.6**
KIF	**Kilpisjarvi**	**5.11 291**	*e*P	**Pn**		**10 31 46.7 -0.6**
KIF			*e*S	**Sn**		**10 32 44.2 -2.7**
JETT	**Jettan, Norway**	**5.36 297**	*e*P	**Pn**		**10 31 51.2 +0.5**
JETT			*e*S	**Sn**		**10 32 50.6 -2.5**
JETT			IAML			10 33 17.3
	comp=Z,11nm,0.4s					
STEI	**Steigen**	**7.16 281**	*e*P	**Pn**		**10 32 13.5 -1.8**

IDC 07 10:43:56.8±3.7, 29.°48S×60.°90E, h0km, mb3.6/3, mbtmp3.6/3, MS3.1/2, Error ellipse: s-maj=585.9km s-min=32.7km az=20.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**40.57 275**		LR	LR	11 07 04.8	
	comp=Z,20nm,18.7s,baz=220,slow=34						
MBAR	**Mbarara**	**40.63 310**		LR	LR	11 06 32.8	
	comp=Z,23nm,19.3s,baz=102,slow=33						
H01W2	**Cape Leeuwin H**	**44.94 111**		T	T	11 40 19.6	
	baz=261,slow=75,SNR=8.7						
H01W3	**Cape Leeuwin H**	**44.94 111**		T	T	11 40 20.7	
	baz=261,slow=75,SNR=7.9						
H01W1	**Cape Leeuwin H**	**44.95 111**		T	T	11 40 18.9	
	baz=261,slow=75,SNR=10.0						
ASAR	**Alice Springs**	**64.58 104**		P	P	10 54 36.2	0.0
	0.4nm,0.8s,baz=245,slow=6.2,SNR=5.2						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**66.43 100**		P	P	10 54 48.3	0.0
	0.5nm,0.9s,baz=246,slow=6.0,SNR=2.1						
	0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.09 298**		P	P	10 55 17.2	0.0
	1.1nm,0.9s,baz=124,slow=4.3,SNR=4.8						
	1.1nm,0.9s						

*TAP **07** 11:05:47.7, 24.°70N×122.°00E, h8km, ML3.1, C*
*JMA **07** 11:05:48.3±0.1, 24.°7N±0.°4×122.°0E±0.°4, h31km, MV2.7/10, TAIWAN REGION*
ISC 07 11:05:47.8±0.8, 24.°68N±0.°01×122.°02E±0.°02, h18km±2km, n90, g0°77/150, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.17 245**		*i* P	**Pb**	**11 05 51.5**	**-0.2**
	baz=236						
TWC				*i* S	**Sb**	**11 05 53.6**	**-0.6**
	baz=236						
EGS		**0.18 333**		*i* P	**Pb**	**11 05 51.8**	**-0.2**
	baz=339						
EGS				*i* S	**Sb**	**11 05 54.2**	**-0.4**
	baz=339						
NTC	**Toucheng**	**0.24 314**		*i* P	**Pb**	**11 05 52.9**	**-0.6**
	baz=314						
NTC				*e*S	**Sb**	**11 05 56.6**	**-0.6**
	baz=314						
ILA	**Ilan**	**0.26 288**		*e*P	**Pb**	**11 05 52.3**	**-1.6**
	baz=285						
EWUT	**Wuta**	**0.32 223**		*e*P	**Pg**	**11 05 53.1**	**-1.6**
	baz=210						
EWUT				*e*S	**Sg**	**11 05 57.5**	**-2.0**
	baz=210						
TWE	**Neicheng**	**0.32 277**		*i* P	**Pg**	**11 05 54.2**	**-0.6**
	baz=273						
TWB1	**Santiao Chiao**	**0.33 355**		*i* P	**Pg**	**11 05 54.3**	**-0.5**
	baz=350						
TWB1				S	**Sg**	**11 05 58.5**	**-1.1**
	baz=350						
TIPB	**Shuangxi**	**0.34 328**		P	**Pg**	**11 05 54.6**	**-0.4**
	baz=329						
TIPB				S	**Sg**	**11 05 59.1**	**-0.9**
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.40 281**		P	**Pg**	**11 05 55.8**	**-0.4**
	baz=279						
FUSB				*e*S	**Sb**	**11 06 02.1**	**-0.3**
	baz=279						
SXI1	**Grass Mountain**	**0.43 342**		*i* P	**Pg**	**11 05 56.6**	**-0.1**
	baz=353						
SXI1				*e*S	**Sg**	**11 06 02.7**	**+0.1**
	baz=353						
NWF	**Wu-fen Shan**	**0.44 331**		P	**Pb**	**11 05 57.0**	**-0.2**
	baz=321						
NWF				S	**Sg**	**11 06 02.8**	**-0.3**
	baz=321						
WFSB	**Wu-fen Shan**	**0.44 331**		*i* P	**Pb**	**11 05 56.9**	**-0.2**
	baz=324						
WFSB				S	**Sb**	**11 06 03.3**	**-0.1**
	baz=324						
NDT	**Datong Townshi**	**0.47 260**		*e*P	**Pg**	**11 05 56.1**	**-1.3**
	baz=268						
NDT				S	**Sg**	**11 06 03.4**	**-0.4**
	baz=268						
LATG	**Datong**	**0.47 252**		P	**Pg**	**11 05 57.1**	**-0.4**
	baz=250						
LATG				*e*S	**Sg**	**11 06 03.4**	**-0.5**
	baz=250						
TWA	**Mucha**	**0.49 307**		*e*P	**Pb**	**11 05 57.9**	**-0.1**
	baz=306						
TWA				S	**Sg**	**11 06 04.2**	**-0.3**
	baz=306						
TNOU	**National Taiwa**	**0.52 334**		*i* P	**Pg**	**11 05 58.3**	**+0.1**
	baz=326						
TNOU				S	**Sg**	**11 06 04.7**	**-0.5**
	baz=326						
NHDH	**Xindian Distri**	**0.53 302**		P	**Pg**	**11 05 58.5**	**0.0**
	baz=301						
NHDH				S	**Sg**	**11 06 05.4**	**-0.2**
	baz=301						
TAP	**Taipei**	**0.59 307**		*e*P	**Pb**	**11 05 59.3**	**-0.2**
	baz=307						
TAP				S	**Sg**	**11 06 07.6**	**+0.2**
	baz=307						
YHNB	**Yeheng**	**0.59 269**		P	**Pb**	**11 05 59.1**	**-0.5**
	baz=277						
NSK	**Sanguang**	**0.60 269**		*e*P	**Pb**	**11 05 58.6**	**-1.2**
	baz=268						
NSK				*e*S	**Sb**	**11 06 06.6**	**-1.3**
	baz=268						
NWRT	**Kuosheng**	**0.61 328**		*e*P	**Pg**	**11 05 59.9**	**-0.1**
	baz=327						
YM01	**YM01**	**0.62 318**		P	**Pg**	**11 06 00.5**	**+0.4**
	baz=318						
YM01				*e*S	**Sb**	**11 06 08.0**	**-0.4**
	baz=318						
ETL	**Fush Village**	**0.64 215**		*e*P	**Pb**	**11 06 00.0**	**-0.3**
	baz=206						
NNS	**Nan Shan**	**0.64 248**		*e*P	**Pb**	**11 05 59.3**	**-1.1**
	baz=246						
NNS				*e*S	**Sb**	**11 06 07.7**	**-1.3**
	baz=246						
NACB	**Ninganchiao**	**0.64 218**		P	**Pb**	**11 06 00.4**	**0.0**
	baz=207						
NACB				S	**Sb**	**11 06 08.4**	**-0.5**
	baz=207						
ANP	**Anpu**	**0.68 318**		P	**Pg**	**11 06 01.2**	**0.0**
	baz=318						
ANP				S	**Sg**	**11 06 10.3**	**0.0**
	baz=318						
ETLH	**Xiulin Townshi**	**0.68 226**		P	**Pg**	**11 06 01.4**	**+0.1**
	baz=225						
ETLH				*e*S	**Sg**	**11 06 10.8**	**+0.4**
	baz=225						
TWS1	**Kuangyinshan**	**0.69 307**		*e*P	**Pn**	**11 06 02.4**	**-0.2**
	baz=307						
TWS1				S	**Sg**	**11 06 10.9**	**+0.3**
	baz=307						
TWY	**Chenhua**	**0.70 327**		P	**Pg**	**11 06 02.0**	**+0.4**
	baz=316						
TWY				S	**Sg**	**11 06 10.7**	**-0.3**
	baz=316						
NTST	**Danshui**	**0.71 313**		*e*P	**Pn**	**11 06 03.0**	**+0.1**
	baz=312						
NTST				*e*S	**Sg**	**11 06 11.5**	**+0.3**
	baz=312						
TWD	**Chiawan**	**0.71 213**		P	**Pb**	**11 06 01.4**	**-0.3**
	baz=211						
TWD				*e*S	**Sb**	**11 06 10.4**	**-0.8**
	baz=211						
NCU	**National Centr**	**0.81 291**		*e*P	**Pn**	**11 06 05.3**	**+1.0**
	baz=290						
NCU				*e*S	**Sn**	**11 06 16.4**	**+0.5**
	baz=290						
NFF	**Wufeng Townshi**	**0.82 267**		*e*P	**Pb**	**11 06 03.0**	**-0.6**
	baz=266						
NFF				*e*S	**Sn**	**11 06 15.8**	**-0.4**
	baz=266						
FUSS	**Fushou**	**0.83 239**		*e*P	**Pb**	**11 06 03.8**	**0.0**
	baz=238						
FUSS				*e*S	**Sg**	**11 06 15.1**	**-0.1**
	baz=238						
JYNG	**Yonagunijimaku**	**0.87 105**		P	**Pb**	**11 06 04.8**	**+0.4**
JYNG				S	**Sb**	**11 06 16.3**	**+0.6**
WHF	**Hehuan Shan**	**0.87 232**		*e*P	**Pb**	**11 06 04.6**	**0.0**
	baz=231						
WHF				*e*S	**Sg**	**11 06 16.8**	**+0.3**
	baz=231						
TWT	**Tachien**	**0.88 241**		*e*P	**Pg**	**11 06 05.1**	**0.0**
	baz=232						
TWT				*e*S	**Sn**	**11 06 18.0**	**+0.1**
	baz=232						
TDCB	**Techi**	**0.90 242**		*e*P	**Pg**	**11 06 05.3**	**0.0**
	baz=232						
TDCB				*e*S	**Sg**	**11 06 17.0**	**-0.2**
	baz=232						
LIOB	**Emei**	**0.92 268**		*e*P	**Pn**	**11 06 07.3**	**+1.6**
	baz=265						
YOJ	**Yonaguni jima**	**0.93 104**		*i* P	**Pb**	**11 06 05.7**	**+0.4**
	baz=102						
YOJ				*i* S	**Sb**	**11 06 18.2**	**+0.8**
	baz=102						
YOJ	**Yonaguni jima**	**0.93 104**		P	**Pb**	**11 06 05.4**	**+0.1**
YOJ				*e*S	**Sb**	**11 06 17.8**	**+0.5**
NSTT	**Nanjuang**	**0.93 267**		*e*P	**Pg**	**11 06 06.2**	**+0.3**
	baz=264						
NHW	**Xinwu Township**	**0.94 290**		*e*P	**Pg**	**11 06 07.2**	**+1.0**
	baz=289						
NHW				*e*S	**Sn**	**11 06 21.1**	**+2.0**
	baz=289						
SBCB	**Hsinchu**	**0.95 277**		*e*P	**Pg**	**11 06 07.8**	**+1.5**
	baz=269						
SBCB				*e*S	**Sn**	**11 06 21.9**	**+2.6**
	baz=269						
HSN	**Hsinchu**	**0.96 277**		*e*P	**Pg**	**11 06 06.4**	**-0.2**
	baz=291						
CHGB	**Renai**	**0.99 231**		P	**Pn**	**11 06 06.9**	**-0.1**
	baz=239						
CHGB				S	**Sg**	**11 06 19.9**	**-0.3**
	baz=239						
ESL	**Shilin**	**1.02 212**		*e*P	**Pb**	**11 06 06.7**	**-0.2**
	baz=220						
ESL				*e*S	**Sg**	**11 06 21.0**	**0.0**
	baz=220						
OWD	**Renai**	**1.06 227**		P	**Pg**	**11 06 08.2**	**-0.2**
	baz=218						
OWD				*e*S	**Sb**	**11 06 21.2**	**0.0**
	baz=218						
WHP	**Taichung City**	**1.06 248**		P	**Pg**	**11 06 08.2**	**-0.1**
	baz=247						
WHP				*e*S	**Sn**	**11 06 21.8**	**-0.3**
	baz=247						
WUSB	**Renai**	**1.07 230**		*e*P	**Pn**	**11 06 08.1**	**0.0**
	baz=220						
WUSB				*e*S	**Sg**	**11 06 22.6**	**-0.2**
	baz=220						
NMLH	**Miaoli**	**1.13 263**		*e*P	**Pg**	**11 06 11.1**	**+1.4**
	baz=260						
NSY	**Sanyi**	**1.18 257**		*e*P	**Pg**	**11 06 11.9**	**+1.2**
	baz=254						
WCS	**Beigang Elemen**	**1.19 239**		*e*P	**Pg**	**11 06 10.8**	**-0.1**
	baz=225						
VWDT	**VWDT**	**1.23 221**		*e*P	**Pg**	**11 06 11.5**	**0.0**
	baz=221						
VWDT				*e*S	**Sg**	**11 06 26.9**	**-0.7**
	baz=221						
SMLT	**Sun Moon Lake**	**1.30 232**		*e*P	**Pg**	**11 06 12.9**	**0.0**
	baz=230						
HGSD	**Ruisui**	**1.31 205**		*e*P	**Pg**	**11 06 12.8**	**-0.2**
	baz=221						
TYC	**Yuchr**	**1.31 234**		*e*P	**Pg**	**11 06 12.8**	**-0.4**
	baz=234						
TYC				*e*S	**Sb**	**11 06 29.0**	**+0.6**
	baz=234						
SSLB	**Suanglung**	**1.32 228**		*e*P	**Pb**	**11 06 12.6**	**+0.5**
	baz=219						
SSLB				*e*S	**Sg**	**11 06 29.7**	**-0.9**
	baz=219						
YULB	**Yu-li**	**1.45 207**		*e*P	**Pb**	**11 06 14.6**	**+0.4**
	baz=217						
YULB				*e*S	**Sg**	**11 06 34.3**	**-0.3**
	baz=217						
WHYT	**Xinyi Township**	**1.45 228**		*e*P	**Pg**	**11 06 15.8**	**0.0**
	baz=226						
WJS	**Zhushan**	**1.46 234**		*e*P	**Pg**	**11 06 16.1**	**+0.2**
	baz=230						
WJS				*e*S	**Sg**	**11 06 36.5**	**+1.4**
	baz=230						
WNT	**Mingjian**	**1.46 237**		*e*P	**Pg**	**11 06 16.5**	**+0.5**
	baz=236						
WNT				*e*S	**Sg**	**11 06 37.7**	**+2.7**
	baz=236						
EYUL	**Yuli**	**1.48 206**		*e*P	**Pg**	**11 06 16.0**	**-0.3**
	baz=220						
YUS	**Yu-Shan**	**1.54 220**		*e*P	**Pb**	**11 06 16.6**	**+0.5**
	baz=206						
YUS				*e*S	**Sg**	**11 06 37.7**	**0.0**
	baz=206						
IRIF	**Iriomote-Funau**	**1.59 102**		P	**Pn**	**11 06 14.8**	**-0.3**
IRIF				S	**Sn**	**11 06 35.0**	**-0.3**
ALS	**Alishan**	**1.61 224**		*e*P	**Pg**	**11 06 18.3**	**-0.6**
	baz=209						
ALS				*e*S	**Sg**	**11 06 42.0**	**+2.0**
	baz=209						
CHN5	**Tsauling**	**1.64 229**		*e*P	**Pb**	**11 06 18.3**	**+0.8**
	baz=228						
CHN5				*e*S	**Sg**	**11 06 40.3**	**-0.4**
	baz=228						
EHD	**Haiduan**	**1.70 206**		*e*P	**Pn**	**11 06 16.9**	**+0.3**
	baz=206						
EHD				*e*S	**Sb**	**11 06 39.8**	**+0.3**
	baz=206						
HATJ	**Hateruma jima**	**1.74 111**		*e*S	**Sn**	**11 06 38.6**	**-0.3**
WCKO	**Fanlu**	**1.79 227**		*e*P	**Pb**	**11 06 20.5**	**+0.3**
	baz=224						
JKRS	**Kuro-shima**	**1.87 103**		P	**Pn**	**11 06 19.3**	**+0.5**
JKRS				S	**Sn**	**11 06 41.5**	**-0.4**
TPUB	**Ta-pu**	**1.88 223**		*e*P	**Pb**	**11 06 22.3**	**+0.8**
	baz=221						
WTP	**Ta-pu**	**1.93 222**		*e*P	**Pg**	**11 06 23.8**	**-1.0**
	baz=209						
JIJ	**Ishigaki jima**	**1.96 99**		*e*P	**Pn**	**11 06 20.2**	**+0.1**
JIJ				*e*S	**Sn**	**11 06 42.4**	**-1.8**
TWK	**Hsinying**	**1.99 225**		*e*P	**Pb**	**11 06 24.1**	**+0.7**
	baz=222						
WSL	**Shuilin Townsh**	**2.00 235**		*e*P	**Pb**	**11 06 22.3**	**-1.4**
	baz=245						
CHN1	**Nanshi**	**2.02 223**		*e*P	**Pb**	**11 06 24.3**	**+0.2**
	baz=220						
TWGBT	**Beinan**	**2.05 205**		*e*P	**Pn**	**11 06 22.8**	**+1.4**
	baz=194						
JISG	**Ishigakijimahi**	**2.09 92**		*e*P	**Pn**	**11 06 22.6**	**+0.8**
JISG				*e*S	**Sn**	**11 06 47.9**	**+0.6**
SSD	**Sandimen**	**2.31 214**		*e*P	**Pb**	**11 06 28.8**	**-0.2**
	baz=213						
TSMG	**Majia**	**2.34 213**		*e*P	**Pb**	**11 06 29.7**	**+0.3**
	baz=213						
TSCK	**Chigu Township**	**2.34 230**		*e*P	**Pb**	**11 06 28.9**	**-0.5**
	baz=227						
VWUC	**VWUC**	**2.36 278**		*e*P	**Pn**	**11 06 26.1**	**+0.5**
	baz=278						
VWUC				*e*S	**Sn**	**11 06 54.5**	**+0.5**
	baz=278						
MATB	**Ma-tsu**	**2.38 308**		*e*P	**Pn**	**11 06 26.0**	**+0.1**
	baz=306						
MATB				*e*S	**Sn**	**11 06 54.2**	**-0.4**
	baz=306						
MASBT	**Mashibuluo**	**2.42 212**		*e*P	**Pb**	**11 06 29.7**	**-1.2**
	baz=213						
EAST	**Anshuo**	**2.53 205**		*e*P	**Pb**	**11 06 31.2**	**-1.5**
	baz=197						
PTMZ	**Houxiangcun**	**2.66 278**		*e*P	**Pn**	**11 06 30.3**	**+0.6**
	baz=278						
PTMZ				*e*S	**Sn**	**11 07 01.8**	**+0.4**
	baz=278						
LYJJ	**Jianjiangzhen**	**2.76 313**		*e*P	**Pn**	**11 06 31.6**	**+0.4**
	baz=311						
LYJJ				*e*S	**Sn**	**11 07 03.4**	**-0.6**
	baz=311						
KNMB	**Chin-men Tao**	**3.31 267**		*e*P	**Pn**	**11 06 39.5**	**+0.7**
	baz=265						
AXDP	**Jialang**	**3.69 274**		*e*P	**Pn**	**11 06 45.0**	**+1.2**
	baz=273						

*TAP **07** 11:09:10.0, 24.°70N×122.°01E, h7km, ML3.5, C*
*JMA **07** 11:09:10.4±0.1, 24.°7N±0.°3×122.°0E±0.°3, h31km, MV3.1/10, TAIWAN REGION*
ISC 07 11:09:09.9±1.0, 24.°68N±0.°02×122.°06E±0.°02, h8km±8km, n95, g0°69/148, 5C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20 250**		*i* P	**Pg**	**11 09 13.8**	**-0.1**
	baz=237						
TWC				*i* S	**Sg**	**11 09 16.1**	**-0.6**
	baz=237						
EGS		**0.20 326**	⇑	*i* P	**Pg**	**11 09 14.1**	**+0.2**
	baz=338						
EGS				*i* S	**Sg**	**11 09 16.5**	**-0.2**
	baz=338						
NTC	**Toucheng**	**0.27 311**		*i* P	**Pg**	**11 09 15.4**	**+0.2**
	baz=313						
NTC				*i* S	**Sg**	**11 09 18.7**	**-0.2**
	baz=313						
ILA	**Ilan**	**0.29 288**	⇓	*i* P	**Pg**	**11 09 15.8**	**+0.1**
	baz=277						
ILA				*i* S	**Sg**	**11 09 19.7**	**+0.1**
	baz=277						
TWB1	**Santiao Chiao**	**0.34 350**	⇑	*i* P	**Pg**	**11 09 16.7**	**+0.2**
	baz=345						
TWB1				*i* S	**Sg**	**11 09 20.8**	**-0.2**
	baz=345						
EWUT	**Wuta**	**0.34 228**		P	**Pg**	**11 09 15.9**	**-0.6**
	baz=207						
TWE	**Neicheng**	**0.36 277**	⇓	*i* P	**Pg**	**11 09 16.6**	**-0.3**
	baz=265						
TWE				*i* S	**Sg**	**11 09 22.4**	**+0.9**
	baz=265						
TIPB	**Shuangxi**	**0.36 325**	⇑	*i* P	**Pg**	**11 09 17.0**	**+0.1**
	baz=328						
TIPB				*i* S	**Sg**	**11 09 21.3**	**-0.4**
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.43 281**	⇓	P	**Pg**	**11 09 18.1**	**-0.2**
	baz=279						
FUSB				S	**Sg**	**11 09 24.9**	**+0.9**
	baz=279						
SXI1	**Grass Mountain**	**0.45 339**	⇑	P	**Pg**	**11 09 18.9**	**+0.3**
	baz=353						
SXI1				S	**Sg**	**11 09 25.4**	**+0.9**
	baz=353						
NWF	**Wu-fen Shan**	**0.47 328**		*i* P	**Pg**	**11 09 19.2**	**+0.3**
	baz=321						
NWF				*i* S	**Sg**	**11 09 25.7**	**+0.7**
	baz=321						
NDT	**Datong Townshi**	**0.50 262**		P	**Pg**	**11 09 18.3**	**-1.2**
	baz=259						
NDT				S	**Sg**	**11 09 25.6**	**-0.5**
	baz=259						
LATG	**Datong**	**0.50 254**		P	**Pg**	**11 09 19.3**	**-0.3**
	baz=259						
LATG				S	**Sg**	**11 09 25.8**	**-0.3**
	baz=259						
TWA	**Mucha**	**0.52 305**		*i* P	**Pg**	**11 09 20.1**	**+0.1**
	baz=306						
TWA				*i* S	**Sg**	**11 09 27.0**	**+0.1**
	baz=306						
NHDH	**Xindian Distri**	**0.56 301**		*i* P	**Pg**	**11 09 21.2**	**+0.5**
	baz=301						
NHDH				*i* S	**Sg**	**11 09 28.0**	**0.0**
	baz=301						
TAP	**Taipei**	**0.62 306**		*i* S	**Sg**	**11 09 30.1**	**+0.2**
	baz=306						
YHNB	**Yeheng**	**0.62 270**		P	**Pg**	**11 09 21.3**	**-0.5**
	baz=268						
YHNB				S	**Sg**	**11 09 30.0**	**0.0**
	baz=268						
NSK	**Sanguang**	**0.63 270**		*i* P	**Pg**	**11 09 20.6**	**-1.6**
	baz=268						
NSK				*i* S	**Sg**	**11 09 28.6**	**-1.8**
	baz=268						
YM01	**YM01**	**0.64 317**	⇑	P	**Pg**	**11 09 22.7**	**+0.4**
	baz=318						
YM01				S	**Sg**	**11 09 30.4**	**-0.3**
	baz=318						
ETL	**Fush Village**	**0.65 217**		P	**Pg**	**11 09 22.5**	**+0.1**
	baz=214						
ETL				S	**Sg**	**11 09 31.2**	**+0.4**
	baz=214						
NACB	**Ninganchiao**	**0.65 220**		P	**Pg**	**11 09 22.8**	**+0.3**
	baz=207						
NACB				S	**Sg**	**11 09 30.7**	**-0.3**
	baz=207						
NNS	**Nan Shan**	**0.66 249**		*i* P	**Pg**	**11 09 21.1**	**-1.6**
	baz=246						
NNS				*i* S	**Sg**	**11 09 31.4**	**0.0**
	baz=246						
ETLH	**Xiulin Townshi**	**0.70 228**		P	**Pg**	**11 09 23.1**	**-0.2**
	baz=225						
ETLH				S	**Sg**	**11 09 33.1**	**+0.6**
	baz=225						
ANP	**Anpu**	**0.70 316**		*i* P	**Pb**	**11 09 24.0**	**-0.4**
	baz=318						
ANP				S	**Sg**	**11 09 32.5**	**-0.1**
	baz=318						
TWS1	**Kuangyinshan**	**0.72 306**		*i* P	**Pb**	**11 09 24.7**	**0.0**
	baz=296						
TWS1				*i* S	**Sg**	**11 09 33.3**	**+0.3**
	baz=296						
TWY	**Chenhua**	**0.73 325**		*i* P	**Pb**	**11 09 24.3**	**-0.5**
	baz=316						
TWY				*i* S	**Sg**	**11 09 33.1**	**-0.2**
	baz=316						
TWD	**Chiawan**	**0.73 215**		*i* P	**Pg**	**11 09 23.6**	**-0.2**
	baz=212						
TWD				*i* S	**Sg**	**11 09 32.9**	**-0.4**
	baz=212						
NTST	**Danshui**	**0.73 312**		*i* P	**Pb**	**11 09 25.0**	**0.0**
	baz=312						
NTST				*i* S	**Sb**	**11 09 34.4**	**-0.7**
	baz=312						
JYNG	**Yonagunijimaku**	**0.84 105**		P	**Pg**	**11 09 26.8**	**+0.7**
JYNG				S	**Sb**	**11 09 39.0**	**+0.8**
NCU	**National Centr**	**0.84 290**		*i* P	**Pn**	**11 09 27.8**	**-0.2**
	baz=300						
NCU				*i* S	**Sb**	**11 09 39.0**	**+0.7**
	baz=300						
FUSS	**Fushou**	**0.85 240**		P	**Pg**	**11 09 26.2**	**-0.2**
	baz=238						
FUSS				*i* S	**Sb**	**11 09 38.4**	**-0.4**
	baz=238						
NFF	**Wufeng Townshi**	**0.85 267**		P	**Pg**	**11 09 25.5**	**-0.8**
	baz=257						
WHF	**Hehuan Shan**	**0.89 234**		*i* P	**Pg**	**11 09 26.9**	**-0.2**
	baz=231						
WHF				*i* S	**Sg**	**11 09 39.2**	**+0.4**
	baz=231						
YOJ	**Yonaguni jima**	**0.90 104**		P	**Pb**	**11 09 28.2**	**+0.5**
	baz=102						
YOJ				S	**Sb**	**11 09 40.6**	**+0.9**
	baz=102						
YOJ	**Yonaguni jima**	**0.90 104**		P	**Pb**	**11 09 28.0**	**+0.3**
YOJ				S	**Sb**	**11 09 40.1**	**+0.3**
TWT	**Tachien**	**0.91 242**		*i* P	**Pb**	**11 09 27.8**	**-0.1**
	baz=232						
TWT				*i* S	**Sb**	**11 09 41.0**	**+0.8**
	baz=232						
TDCB	**Techi**	**0.92 243**		P	**Pg**	**11 09 27.6**	**0.0**
	baz=232						
TDCB				S	**Sg**	**11 09 39.9**	**+0.3**
	baz=232						
LIOB	**Emei**	**0.95 268**		P	**Pb**	**11 09 28.5**	**0.0**
	baz=254						
LIOB				*e*S	**Sb**	**11 09 41.2**	**-0.1**
	baz=254						
NSTT	**Nanjuang**	**0.96 268**		*i* P	**Pb**	**11 09 28.7**	**-0.1**
	baz=259						
NSTT				S	**Sg**	**11 09 41.1**	**+0.3**
	baz=259						
SBCB	**Hsinchu**	**0.98 277**		P	**Pn**	**11 09 30.5**	**+0.6**
	baz=296						
SBCB				S	**Sn**	**11 09 44.1**	**+0.1**
	baz=296						
HSN	**Hsinchu**	**0.99 277**		*i* P	**Pb**	**11 09 29.6**	**+0.2**
	baz=297						

HSN				S		Sb	11 09 43.3 +0.6
	baz=297						
CHGB	Renai	1.01 233		P		Pg	11 09 28.8 -0.5
	baz=231						
CHGB				S		Sg	11 09 42.1 -0.4
	baz=231						
ESL	Shilin	1.03 214	*i*	P		Pg	11 09 28.9 -0.7
	baz=221						
ESL				S		Sg	11 09 43.4 +0.4
	baz=221						
OWD	Renai	1.08 228		P		Pg	11 09 29.9 -0.6
	baz=217						
OWD			*i*	S		Sg	11 09 43.5 -1.1
	baz=217						
WHP	Taichung City	1.09 249	*i*	P		Pb	11 09 31.0 +0.1
	baz=238						
WUSB	Renai	1.09 232		P		Pg	11 09 30.6 -0.2
	baz=238						
WUSB				S		Sg	11 09 45.0 -0.1
	baz=238						
EGFH	Guangfu	1.16 210		P		Pg	11 09 31.9 -0.2
	baz=223						
EGFH				S		Sb	11 09 47.9 +0.6
	baz=223						
NMLH	Miaoli	1.16 263	*e*	P		Pn	11 09 33.5 +1.0
	baz=260						
NSY	Sanyi	1.21 258	*i*	P		Pn	11 09 34.1 +1.0
	baz=254						
WCS	Beigang Elemen	1.21 240	*e*	P		Pn	11 09 33.8 +0.7
	baz=248						
WCS			*e*	S		Sg	11 09 48.8 0.0
	baz=248						
VWDT	VWDT	1.24 222		P		Pn	11 09 33.4 -0.2
	baz=222						
VWDT				S		Sb	11 09 48.9 -0.8
	baz=222						
HGSD	Ruisui	1.31 206		P		Pn	11 09 34.8 +0.2
	baz=222						
SMLT	Sun Moon Lake	1.32 233	*i*	P		Pb	11 09 35.0 +0.1
	baz=224						
SMLT			*i*	S		Sb	11 09 52.2 +0.1
	baz=224						
WDJ	Dajia District	1.33 256	*e*	P		Pg	11 09 36.0 +0.6
	baz=252						
SSLB	Suanglung	1.34 229		P		Pn	11 09 34.8 -0.2
	baz=228						
SSLB				S		Sb	11 09 52.4 -0.2
	baz=228						
EHY	Hungye	1.34 210		P		Pb	11 09 35.6 +0.2
	baz=220						
TCU	Taichung	1.36 248		P		Pg	11 09 37.0 +1.0
	baz=237						
YULB	Yu-li	1.45 209		P		Pb	11 09 37.2 0.0
	baz=217						
WHYT	Xinyi Township	1.47 229	*e*	P		Pg	11 09 38.0 -0.1
	baz=226						
WJS	Zhushan	1.48 235	*e*	P		Pg	11 09 39.1 +0.8
	baz=231						
WJS			*e*	S		Sg	11 09 58.6 +1.1
	baz=231						
WNT	Mingjian	1.48 238		P		Pg	11 09 39.1 +0.8
	baz=237						
WNT				S		Sg	11 10 00.3 +2.7
	baz=237						
EYUL	Yuli	1.48 207	*e*	P		Pn	11 09 37.5 +0.6
	baz=220						
WCHH	Zhanghua	1.49 247	*e*	P		Pg	11 09 39.1 +0.7
	baz=229						
YUS	Yu-Shan	1.55 221		P		Pg	11 09 40.0 +0.3
	baz=211						
YUS				S		Sg	11 10 01.9 +2.0
	baz=211						
IRIF	Iriomote-Funau	1.56 102		P		Pn	11 09 37.2 -0.8
IRIF			*e*	S		Sn	11 09 57.5 -0.9
FULB	Fuli	1.63 205	*e*	P		Pb	11 09 40.3 +0.1
	baz=219						
ALS	Alishan	1.63 225		P		Pb	11 09 40.9 +0.6
	baz=209						
CHN5	Tsauling	1.66 230	*e*	P		Pb	11 09 40.9 +0.3
	baz=227						
WDLH	Douliu	1.70 235	*e*	P		Pb	11 09 41.4 0.0
	baz=232						
EHD	Haiduan	1.71 207	*e*	P		Pn	11 09 40.5 +0.5
	baz=208						
HATJ	Hateruma jima	1.71 111	*e*	S		Sn	11 10 01.1 -0.9
WRL	Guolierlin Hig	1.71 244	*e*	P		Pn	11 09 40.3 +0.2
	baz=240						
ELDTW	Lidau	1.76 213	*e*	P		Pn	11 09 40.9 +0.1
	baz=199						
WCKO	Fanlu	1.81 227	*e*	P		Pb	11 09 43.4 +0.1
	baz=224						
JKRS	Kuro-shima	1.83 103		P		Pn	11 09 41.6 -0.1
JKRS				S		Sn	11 10 03.8 -1.3
TPUB	Ta-pu	1.89 224	*e*	P		Pb	11 09 45.5 +0.8
	baz=221						
CHY	Chiayi	1.90 232	*e*	P		Pb	11 09 45.2 +0.4
	baz=215						
STYH	Taoyuan	1.90 218	*e*	P		Pn	11 09 43.4 +0.7
	baz=217						
JIJ	Ishigaki jima	1.93 99		P		Pn	11 09 42.2 -0.8
JIJ			*e*	S		Sn	11 10 04.8 -2.7
WTP	Ta-pu	1.94 223	*e*	P		Pb	11 09 46.3 +0.8
	baz=220						
TWK	Hsinying	2.01 226	*e*	P		Pb	11 09 46.5 -0.2
	baz=223						
WSL	Shuilin Townsh	2.03 236	*e*	P		Pn	11 09 44.8 +0.5
	baz=232						
CHN1	Nanshi	2.04 224	*e*	P		Pb	11 09 47.6 +0.4
	baz=221						
TWG	Pinlang	2.06 206	*e*	P		Pn	11 09 45.6 +0.9
	baz=207						
TWGBT	Beinan	2.06 206	*e*	P		Pn	11 09 46.3 +1.5
	baz=207						
LDUT	Ludao	2.06 195	*e*	P		Pn	11 09 44.5 -0.4
	baz=184						
SGST	Jiashian	2.08 221	*e*	P		Pb	11 09 47.1 -0.8
	baz=218						
ICHU	Yijhu	2.09 231	*e*	P		Pb	11 09 48.2 +0.2
	baz=240						
CHN8	Yiju	2.14 232	*e*	P		Pb	11 09 48.6 -0.4
	baz=240						
SCST	Cishan	2.29 219	*e*	P		Pb	11 09 51.5 +0.1
	baz=217						
SSD	Sandimen	2.32 214	*e*	P		Pb	11 09 52.3 +0.3
	baz=214						
TSMG	Majia	2.35 214	*e*	P		Pb	11 09 51.8 -0.7
	baz=213						
TSCK	Chigu Township	2.36 230	*e*	P		Pn	11 09 49.7 +0.8
	baz=226						
JTJ	Tarama	2.41 90		S		Sn	11 10 19.5 +0.2
MASBT	Mashibuluo	2.43 213	*e*	P		Pb	11 09 52.5 -1.5
	baz=213						

*IDC **07** 11:14:24.0±0.7, 27°.87N×141°.80E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=34.4km s-min=15.2km az=72.0*
*NEIC **07** 11:14:26.0±1.4, 27°.92N±0°.08×141°.8E±0°.2, h10km±1km, mb4.5/16, Error ellipse: s-maj=28.6km s-min=9.5km az=69.0*
*JMA **07** 11:14:30.0±0.1, 27°.8N±1°.0×14°.2E±°, h48km, MV4.3/23, NEAR CHICHIJIMA ISLAND*

ISC 07 11:14:29.3±0.6, 27°.90N±0°.06×142°.0E±0°.1, h42km, n49, σ1§87/57, mb4.2/16, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.82	167	P	Pn	11 14 43.7	-0.8
CBIJ				S	Sn	11 14 53.4	-2.0
JCJ	Chichijima	0.82	167	Pn	Pn	11 14 43.3	-1.1
	140nm,0.3s,baz=2.2,slow=19,SNR=236						
JCJ				Sn	Sn	11 14 53.0	-2.4
	baz=287,slow=19						
JCJ				LR	LR	11 15 05.3	
	comp=Z,64nm,20.1s,baz=146,slow=49						
JCJ	Chichijima	0.82	167		Pn	11 14 43.7	-0.8
JHH2	Haha-jima-NKT2	1.27	172	P	Pn	11 14 50.2	-0.4
JHH2				S	Sn	11 15 05.0	-1.5
JHJ2	Mitsune	5.52	341	Pn	Pn	11 15 46.4	-2.5
BSO1	Boso 1	6.79	353	*e*P	Pn	11 16 07.0	+1.2
JOD2	Odawara 2	7.74	342	*e*P	Pn	11 16 22.7	+3.3
JHU	Hanno	8.25	345	P	Pn	11 16 27.7	+1.3
JHU				*e*S	Sn	11 17 58.3	0.0
JYT	Yasato	8.44	350	Pn	Pn	11 16 27.5	-1.5
JYT	Yasato	8.44	350	*e*P	Pn	11 16 29.8	+0.8
JRY	Ryogami san	8.50	343	*e*P	Pn	11 16 31.9	+2.0
JRY				*e*S	Sn	11 18 07.9	+3.3
JAG	Ashikaga	8.77	347	P	Pn	11 16 33.5	+0.1
JAG				*e*S	Sn	11 18 07.6	-3.3
JHO	Hitachi	8.77	353	*e*P	Pn	11 16 32.6	-0.8
JHO				*e*S	Sn	11 18 06.0	-5.0
MAJO	Matsushiro	9.19	341	Pn	Pn	11 16 36.7	-2.5
JFK	Kawauchi	9.49	355	*e*S	Sn	11 18 21.3	-7.3
JMM	Marumori	9.99	355		Pn	11 16 49.2	-1.0
JTM	Tenmabayashi	12.88	357	Pn	Pn	11 17 28.8	-0.8
SONM	Songino Array	34.01	316	P	P	11 21 09.0	-0.2
	0.3nm,0.4s,baz=122,slow=8.8,SNR=1.9						
	0.3nm,0.4s						
WB0	Warramunga Arr	47.95	190	P	P	11 23 04.1	+0.3
WB0				IAmb	IAmb	11 23 04.7	
	comp=Z,4.4nm,0.5s						
WR0	Warramunga Arr	48.12	189	P	P	11 23 05.4	+0.3
WR0				IAmb	IAmb	11 23 20.2	
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	48.12	190	P	P	11 23 05.6	+0.5
WB2	Warramunga Arr	48.13	190	P	P	11 23 05.4	+0.2
WB2				IAmb	IAmb	11 23 20.7	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	48.13	190	P	P	11 23 05.0	-0.3
	comp=Z,2.6nm,0.4s,baz=8.1,slow=8.0,SNR=105						
	comp=Z,2.6nm,0.4s						
WRA	Warramunga Arr	48.13	190	P	P	11 23 04.2	-1.0
FITZ	Fitzroy Crossi	48.38	201	P	P	11 23 06.6	-0.5
FITZ				IAmb	IAmb	11 23 18.8	
	comp=Z,5.3nm,1.2s						
ZALV	Zalesovo Beam	48.76	319	PcP	PcP	11 24 35.0	+0.9
	comp=Z,1.0nm,0.4s,baz=96,slow=4.7,SNR=3.6						
MKAR	Makanchi Array	49.82	309	P	P	11 23 17.8	-0.2
	comp=Z,0.5nm,0.7s,baz=89,slow=10,SNR=4.0						
MKAR				PcP	PcP	11 24 39.1	+0.8
	comp=Z,0.3nm,0.3s,baz=64,slow=3.4,SNR=6.0						
	comp=Z,0.5nm,0.7s						
AS31	Alice Springs	51.85	189	P	P	11 23 32.8	-0.6
ASAR	Alice Springs	51.85	189	P	P	11 23 33.8	+0.4
	comp=Z,0.3nm,0.3s,baz=11,slow=6.4,SNR=20						
	comp=Z,0.3nm,0.3s						
J20K	Nowinta River	53.91	29	P	P	11 23 49.4	+1.2
J20K				IAmb	IAmb	11 24 14.6	
	comp=Z,5.8nm,1.3s						
IMAR	Indian Mountai	54.41	27	P	P	11 23 54.0	+2.2
MDM	Murphy Dome	56.54	29	P	P	11 24 09.4	+2.2
MDM				IAmb	IAmb	11 24 09.6	
	comp=Z,3.5nm,1.5s						
H24K	Noodor Dome	56.78	28	P	P	11 24 10.0	+1.2
GLI	Glacier Island	56.81	34	P	P	11 24 10.6	+1.5
M24K	Tolsona, Glenn	57.29	32	P	P	11 24 11.9	-0.6
M24K				IAmb	IAmb	11 24 27.3	
	comp=Z,13nm,1.4s						
BRVK	Borovoye	57.39	317	P	P	11 24 12.6	-0.7
BRVK				IAmb	IAmb	11 24 30.5	
	comp=Z,3.0nm,1.2s						
DIV	Divide	57.46	33	P	P	11 24 14.8	+1.1
BMAR	Burnt Mountain	58.22	26	P	P	11 24 19.7	+0.8
SCRK	Sand Creek	58.33	30	P	P	11 24 21.1	+1.3
KKAR	Karatay Array	58.47	305	P	P	11 24 20.5	-0.5
BCAR	Beaver Creek A	59.32	31	P	P	11 24 28.7	+2.1
INK	Inuvik	62.38	25	P	P	11 24 48.6	+1.3
	comp=Z,1.9nm,1.0s,baz=264,slow=6.0,SNR=2.2						
	comp=Z,1.9nm,1.0s						
ABKAR	Akbulak array	64.41	314	P	P	11 25 01.2	+0.2
FIA1	FINESS Array S	77.15	334	P	P	11 26 19.4	+1.2
FINES	FINESS Array B	77.15	334	P	P	11 26 19.3	+1.1
	comp=Z,0.7nm,0.3s,baz=70,slow=4.9,SNR=14						
	comp=Z,0.7nm,0.3s						
FINES	FINESS Array B	77.15	334	P	P	11 26 19.5	+1.3
NVAR	Mina Array Bea	80.17	52	P	P	11 26 37.4	+1.8
	comp=Z,0.3nm,0.6s,baz=305,slow=5.2,SNR=4.1						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	81.86	324	P	P	11 26 44.5	+0.4
	comp=Z,0.7nm,0.4s,baz=51,slow=5.1,SNR=4.1						
	comp=Z,0.7nm,0.4s						
TORD	Torodi Ar. Bea	123.92	311	PKP	PKiKP	11 33 24.7	+0.8
	comp=Z,0.5nm,0.8s,baz=48,slow=2.3,SNR=2.1						

*NEIC **07** 11:29:16.9±2.3, 3°.9S±0°.1×104°.6W±0°.1, h10km±1km, mb4.6/72, Error ellipse: s-maj=25.1km s-min=19.1km az=252.0*
*IDC **07** 11:29:17.2±1.3, 3°.85S×105°.43W, h0km, mb3.8/9, mbtmp3.9/9, MS4.0/46, Error ellipse: s-maj=55.5km s-min=26.2km az=75.0*
*GCMT **07** 11:29:19.9±0.3, 3°.89S±0°.02×104°.06W±0°.02, h18km±1km, MW4.9/94, Moment Tensor Solution. s22,c26; s94,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.10; $M_{\theta\theta}$0.48±.09; $M_{\phi\phi}$-0.38±.09; $M_{r\theta}$0.54±.22; $M_{\phi\phi}$2.27±.08; $M_{\theta r}$-0.50±.20; Best double couple: $M_0$2.42500×1016 NP1:ϕ_s274.00000°, δ80.00000°, λ-14.00000°. NP2: ϕ_s7.00000°, δ76.00000°, λ-169.00000°. Principal axes: T 2.3640, Plg2.0000°, Azm321.0000°; N 0.1230, Plg73.0000°, Azm59.0000°; P -2.4870, Plg17.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 11:29:16.8±0.8, 3°.9S±0°.1×104°.5W±0°.2, h10km, n142, σ1§32/90, mb4.6/42, MS4.0/49, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	22.88	24	P	P	11 34 27.3	+6.7
	1.3nm,0.4s,baz=179,slow=13,SNR=4.9						
CMIG				LR	LR	11 41 13.2	
	comp=Z,527nm,20.1s,baz=205,slow=31						
	1.3nm,0.4s						
CCIG	Comitan	23.45	31	P	P	11 34 27.6	+0.9
CCIG				IAmb	IAmb	11 34 29.5	
	comp=Z,23nm,1.1s						
MTO3	Montecristo	23.54	39	P	P	11 34 27.6	-0.1
MTO3				IAmb	IAmb	11 34 55.0	
	comp=Z,8.2nm,0.6s						
RPN	Rapa Nui	23.59	191	LR	LR	11 41 07.3	
	comp=Z,90nm,19.7s,baz=339,slow=30						
ORTG	Ortega, Santa	23.64	53	P	P	11 34 27.1	-1.4
ORTG				IAmb	IAmb	11 34 30.1	
	comp=Z,19nm,1.1s						
ESQI	Esquipulas	23.68	39	P	P	11 34 29.0	+0.1
JACO	JACO, Garabito	23.90	56	P	P	11 34 30.4	-0.5
JACO				IAmb	IAmb	11 34 46.2	
	comp=Z,27nm,1.1s						
MCRA	Macar, Loja	24.48	92	P	P	11 34 36.9	+0.4
TGUH	Tegucigalpa,Un	24.67	44	P	P	11 34 39.9	+1.7
BOAB	BOACO BROADBAN	24.75	49	P	P	11 34 38.7	0.0
ACON	Acoyapa	24.83	50	P	P	11 34 39.2	-0.2
MATN	Matagalpa	24.87	48	P	P	11 34 40.5	+0.5
PETF	Flores	25.20	35	P	P	11 34 43.2	+0.4
PETF				IAmb	IAmb	11 34 44.5	
	comp=Z,13nm,1.1s						
BOSC	San Juan Bosco	25.96	89	P	P	11 34 48.2	-1.8
BOSC				IAmb	IAmb	11 34 58.0	
	comp=Z,16nm,1.3s						
SLOR	San Lorenzo -	26.16	84	P	P	11 34 51.6	-0.5
SLOR				IAmb	IAmb	11 35 20.2	
	comp=Z,11nm,1.0s						
ATAH	Atahualpa	26.18	98	LR	LR	11 42 27.9	
	comp=Z,266nm,18.6s,baz=271,slow=29						
OTAV	Otavalo	26.34	82	P	P	11 34 54.5	+0.7
OTAV				IAmb	IAmb	11 35 09.0	
	comp=Z,24nm,1.3s						
ZAIG	Zacatecas	26.53	4	P	P	11 34 53.2	-1.9
LPIG	La Paz	28.36	349	LR	LR	11 43 40.4	
	comp=Z,330nm,19.9s,baz=176,slow=31						
NNA	Nana	28.53	108	LR	LR	11 43 16.5	
	comp=Z,431nm,21.4s,baz=285,slow=28						
ROSC	El Rosal	31.36	74	LR	LR	11 44 42.0	
	comp=Z,212nm,19.9s,baz=247,slow=29						
833A	Chaparral WMA,	32.37	8	P	P	11 35 47.1	+0.5
833A				IAmb	IAmb	11 35 54.8	
	comp=Z,6.2nm,0.9s						
TX31	Lajitas Ar. Si	33.01	1	P	P	11 35 51.2	-1.2
TX31				IAmb	IAmb	11 36 04.5	
	comp=Z,7.3nm,1.1s						
TX32	Lajitas Array	33.01	1	P	P	11 35 50.4	-1.9
TXAR	Lajitas Array	33.01	1	P	P	11 35 54.7	+2.4
	comp=Z,0.6nm,0.9s,baz=175,slow=16,SNR=4.6						
TXAR				PcP	PcP	11 38 37.4	+1.1
	comp=Z,0.3nm,0.8s,baz=160,slow=2.9,SNR=3.4						
TXAR				LR	LR	11 47 49.3	
	comp=Z,123nm,18.1s,baz=178,slow=34						
	comp=Z,0.6nm,0.9s						
TXAR	Lajitas Array	33.01	1	P	P	11 35 50.0	-2.4
TAOE	Nuku Hiva Isla	35.76	260	*e*LR	LR	11 45 40.3	
	comp=Z,264nm,24.6s						
SDV	Santo Domingo	36.06	69	LR	LR	11 48 42.9	
	comp=Z,179nm,19.8s,baz=254,slow=32						
PB16	IPOC Station P	37.12	116	P	P	11 36 26.3	-2.2
PB16				IAmb	IAmb	11 36 32.2	
	comp=Z,12nm,1.0s						
LPAZ	La Paz	37.79	112	LR	LR	11 49 07.4	
	comp=Z,194nm,20.4s,baz=283,slow=31						
H03N2	Juan Fernandez	37.88	144	T	T	12 16 21.3	
	baz=318,slow=77,SNR=23						
LENM	Lemitar	37.89	357	P	P	11 36 32.2	-2.2
H03N1	Juan Fernandez	37.89	144	T	T	12 16 22.0	
	baz=318,slow=77,SNR=44						
H03N3	Juan Fernandez	37.90	144	T	T	12 16 22.1	
	baz=318,slow=77,SNR=20						
ANMO	Albuquerque	38.64	357	LR	LR	11 50 32.6	
	comp=Z,66nm,18.9s,baz=182,slow=33						
PFO	Pinyon Flats O	38.95	344	P	P	11 36 43.3	+0.1
	comp=Z,3.0nm,1.0s,baz=170,slow=6.6,SNR=4.2						
PFO				LR	LR	11 49 03.1	
	comp=Z,303nm,19.3s,baz=150,slow=31						
	comp=Z,3.0nm,1.0s						
LVC	Limon Verde	39.16	122	LR	LR	11 48 28.1	
	comp=Z,261nm,19.8s,baz=291,slow=29						
W13A	Hualapai Mount	39.74	348	P	P	11 36 48.4	-1.5
AC06	Mina Casimiro	40.09	129	P	P	11 36 54.5	+1.7
T25A	Trinidad	40.79	0	P	P	11 36 58.2	-0.4
CCAC	Calif City Air	40.83	343	P	P	11 36 56.3	-2.5
SHPR	Sheep Range	41.37	347	P	P	11 37 01.8	-1.6
KNB	Kanab	41.40	350	P	P	11 37 01.0	-2.6
GWY	Greenwater Val	41.43	345	P	P	11 37 01.3	-2.6
ISA	Isabella, Lake	41.44	343	P	P	11 37 01.1	-2.7
LCMT	Little Creek M	41.47	349	P	P	11 37 03.6	-0.5
PLAL	Pickwick Lake	41.61	20	P	P	11 37 06.6	+1.6
PLAL				IAmb	IAmb	11 37 12.2	
	comp=Z,20nm,1.4s						
LCAR	Lake Charles	41.64	16	P	P	11 37 06.3	+1.0
LCAR				IAmb	IAmb	11 37 11.8	
	comp=Z,14nm,1.1s						
PCRV	Puerto La Cruz	42.08	70	LR	LR	11 53 43.2	
	comp=Z,162nm,18.8s,slow=34						
PRN	Pahroc Range	42.21	347	P	P	11 37 06.6	-3.6
GMN	Gold Mountain	42.64	345	P	P	11 37 11.0	-2.8
SRU	San Rafael Swe	43.12	353	P	P	11 37 17.3	-0.3
TPH	Tonopah	43.36	345	P	P	11 37 20.1	+0.5
P18A	Preston Nutter	43.60	354	P	P	11 37 21.6	0.0
SJG	San Juan	43.65	59	LR	LR	11 52 35.9	
	comp=Z,79nm,19.9s,baz=227,slow=32						
TKL	Tuckaleechee C	43.85	25	LR	LR	11 55 10.4	
	comp=Z,56nm,18.2s,baz=210,slow=35						
LHV	Little Huntoon	43.87	344	P	P	11 37 22.5	-0.8
O20A	White River Ci	43.91	356	P	P	11 37 22.4	-1.6
O20A				IAmb	IAmb	11 37 33.1	
	comp=Z,14nm,1.2s						
NVAR	Mina Array Bea	43.98	344	P	P	11 37 24.8	+0.3
	comp=Z,1.0nm,0.9s,baz=176,slow=9.0,SNR=6.6						
NVAR				LR	LR	11 51 52.6	
	comp=Z,231nm,21.8s,baz=169,slow=31						
	comp=Z,1.0nm,0.9s						
NVAR	Mina Array Bea	43.98	344	P	P	11 37 21.3	-3.3
SIV	San Ignacio	44.33	109	LR	LR	11 53 12.5	
	comp=Z,475nm,21.4s,baz=282,slow=32						
VCNR	Virginia City	45.16	343	P	P	11 37 31.7	-2.2
VCNR				IAmb	IAmb	11 37 44.6	
	comp=Z,8.1nm,1.0s						
ELK	Elko	45.47	349	LR	LR	11 53 53.0	
	comp=Z,157nm,19.0s,baz=163,slow=33						
HWUT	Hardware Ranch	45.71	353	P	P	11 37 38.9	+0.6
HWUT				IAmb	IAmb	11 37 47.2	
	comp=Z,7.9nm,1.1s						
HVU	Hansel Valley	46.04	351	P	P	11 37 40.2	-0.7
HVU				IAmb	IAmb	11 37 52.0	
	comp=Z,12nm,1.5s						
PPT	Papeete	46.20	249	LR	LR	11 51 55.1	
	comp=Z,103nm,18.6s,baz=82,slow=30						
PPT2	Papeete2	46.20	249	*e*S	S	11 44 13.5	-16
	comp=Z,40nm,24.2s						
PPT2				*e*LR	LR	11 50 29.0	
	comp=Z,348nm,27.2s						
K22A	Casper	46.33	358	P	P	11 37 44.5	+1.4
BW06	Boulder Array	46.63	355	P	P	11 37 45.2	-0.4
BW06				IAmb	IAmb	11 37 56.5	
	comp=Z,6.1nm,1.1s						
PD31	Pinedale Array	46.63	355	P	P	11 37 45.7	+0.1
PD31				IAmb	IAmb	11 37 56.5	
	comp=Z,6.6nm,1.2s						
PDAR	Pinedale Array	46.63	355	P	P	11 37 46.9	+1.3
	comp=Z,1.2nm,0.8s,baz=172,slow=6.1,SNR=10						
PDAR				LR	LR	11 54 12.7	
	comp=Z,92nm,18.1s,baz=180,slow=32						
	comp=Z,1.2nm,0.8s						
PDAR	Pinedale Array	46.63	355	P	P	11 37 45.8	+0.1
TPAW	Teton Pass	47.49	354	P	P	11 37 52.0	-0.4
TPAW				IAmb	IAmb	11 38 08.6	
	comp=Z,4.2nm,0.9s						
TBI	Tubuai	47.53	242	*e*S	S	11 44 32.0	-16
	comp=Z,73nm,26.2s						
TBI				*e*LR	LR	11 51 05.9	
	comp=Z,285nm,27.8s						
LOHW	Long Hollow	47.57	354	P	P	11 37 53.2	+0.3
FXWY	Fox Creek	47.65	354	P	P	11 37 54.2	+0.7
FXWY				IAmb	IAmb	11 38 05.2	
	comp=Z,11nm,1.5s						
PLCA	Paso Flores	47.74	145	P	P	11 38 00.4	+6.3
	comp=Z,0.6nm,0.8s,baz=350,slow=12,SNR=1.3						
PLCA				LR	LR	11 52 34.5	
	comp=Z,389nm,21.9s,baz=318,slow=29						
	comp=Z,0.6nm,0.8s						
RSSD	Black Hills	47.76	0	P	P	11 37 54.9	+0.5
RSSD				IAmb	IAmb	11 38 02.2	
	comp=Z,6.0nm,1.0s						
IMW	Indian Meadow	47.89	354	P	P	11 37 56.1	+0.7
IMW				IAmb	IAmb	11 38 06.9	
	comp=Z,8.1nm,1.2s						
HLID	Hailey	48.05	350	P	P	11 37 56.5	0.0
HLID				IAmb	IAmb	11 38 04.9	
	comp=Z,5.7nm,1.1s						
YBH	Yreka Blue Hor	48.31	342	P	P	11 37 58.8	+0.2
	comp=Z,1.4nm,0.8s,baz=77,slow=8.3,SNR=4.4						
YBH				LR	LR	11 54 04.8	
	comp=Z,164nm,21.7s,baz=169,slow=31						
	comp=Z,1.4nm,0.8s						
BCYI	Bear Canyon	48.62	351	P	P	11 38 01.4	+0.4
LL02	Futaleuf	48.70	148	P	P	11 38 01.5	+0.1
LL02				IAmb	IAmb	11 38 06.3	
	comp=Z,10nm,1.2s						
YHL	Hebgen Lake	48.86	354	P	P	11 38 01.4	-1.5
YHL				IAmb	IAmb	11 38 11.9	
	comp=Z,7.5nm,1.0s						
QLMT	Earthquake Lak	48.87	353	P	P	11 38 01.8	-1.1
RLMT	Red Lodge	48.95	356	P	P	11 38 02.8	-0.7
RLMT				IAmb	IAmb	11 38 11.7	
	comp=Z,9.0nm,1.1s						
I07

comp=Z,206nm,20.2s,baz=82,slow=34
BCAR Beaver Creek A 72.42 343 P P 11 40 44.7 +1.6
KDAK Kodiak Island 72.51 335 LR LR 12 04 50.1
comp=Z,229nm,20.2s,baz=175,slow=30
FRB Frobisher Bay 72.58 16 LR LR 12 13 52.0
comp=Z,70nm,18.1s,baz=202,slow=37
K27K Chicken 73.25 344 P P 11 40 48.4 +0.5
KNK Knik Glacier 73.33 340 P P 11 40 47.3 -1.2
J26L Joseph Creek 74.03 344 P P 11 40 52.5 -0.2
J26L IAmb IAmb 11 41 01.4
comp=Z,9.1nm,1.2s
INK Inuvik 74.79 349 LR LR 12 12 14.0
comp=Z,161nm,18.1s,baz=236,slow=34
INK Inuvik 74.79 349 P P 11 40 58.0 +1.2
INK IAmb IAmb 11 41 05.1
comp=Z,10nm,1.2s
RND Reindeer 74.85 341 P P 11 40 57.7 +0.4
HDA Harding Lake 74.96 342 P P 11 40 57.2 -0.7
HDA IAmb IAmb 11 41 05.3
comp=Z,10nm,1.5s
N19K Bonanza Creek 75.16 337 P P 11 40 57.1 -2.1
N19K IAmb IAmb 11 41 25.0
comp=Z,5.4nm,1.0s
IL31 75.20 343 P P 11 40 58.4 -0.8
IL31 IAmb IAmb 11 41 06.8
comp=Z,6.1nm,1.0s
ILAR Eielson Array 75.20 343 P P 11 40 59.4 +0.1
comp=Z,2.3nm,0.8s,baz=153,slow=4.9,SNR=20
ILAR LR LR 12 11 34.1
comp=Z,67nm,18.9s,baz=123,slow=34
comp=Z,2.3nm,0.8s
ILAR Eielson Array 75.20 343 P P 11 40 59.2 -0.1
PRP Porcupine Dome 75.35 344 P P 11 40 60.0 -0.3
KTH Kantishna Hill 75.63 340 P P 11 41 03.2 +1.4
CAST Castle Rocks 75.94 340 P P 11 41 04.8 +1.2
I23K Minto, Yukon-K 76.22 342 P P 11 41 05.8 +0.8
H24K Noodor Dome 76.26 343 P P 11 41 05.0 -0.4
BMAR Burnt Mountain 76.53 345 P P 11 41 06.2 -0.6
MLY Manley 76.56 342 P P 11 41 06.8 -0.3
MLY IAmb IAmb 11 41 15.1
comp=Z,6.3nm,1.0s
K20K Telida 76.58 339 P P 11 41 06.7 -0.5
RES Resolute Bay 78.64 3 LR LR 12 14 52.3
comp=Z,109nm,19.1s,baz=338,slow=35
SFJD Kangerlussuaq 80.23 19 LR LR 12 16 49.8
comp=Z,83nm,19.4s,baz=230,slow=35
QSPA South Pole Qui 86.19 180 P P 11 41 58.2 -0.1
QSPA IAmb IAmb 11 42 23.5
comp=Z,8.1nm,1.2s
SHEM Shemya Is, Ala 87.84 323 LR LR 12 12 50.0
comp=Z,161nm,20.7s,baz=107,slow=30
BBTS Babate 89.00 75 LR LR 12 19 12.8
comp=Z,42nm,19.8s,baz=283,slow=33
H11N3 WAKE ISLAND Hy 89.96 290 T T 13 20 30.4
baz=95,slow=75,SNR=11
H11N2 WAKE ISLAND Hy 89.98 290 T T 13 20 31.5
baz=95,slow=75,SNR=11
H11N1 WAKE ISLAND Hy 89.98 290 T T 13 20 29.6
baz=95,slow=75,SNR=5.9
H11S2 WAKE ISLAND Hy 90.07 288 T T 13 20 34.8
baz=94,slow=75,SNR=25
H11S1 WAKE ISLAND Hy 90.08 288 T T 13 20 33.8
baz=94,slow=75,SNR=23
H11S3 WAKE ISLAND Hy 90.09 288 T T 13 20 36.3
baz=94,slow=75,SNR=27
BORG Borgarnes 90.54 25 LR LR 12 21 09.8
comp=Z,33nm,18.2s,baz=235,slow=34
JMIC Jan Mayen 95.58 19 LR LR 12 26 29.5
comp=Z,71nm,18.0s,baz=256,slow=36
PETK Petropavlovsk- 97.76 323 LR LR 12 19 06.2
comp=Z,85nm,20.1s,baz=83,slow=31
MKAR Makanchi Array 136.83 353 PKhKP PKPpre 11 48 39.3
comp=Z,0.8nm,0.9s,baz=40,slow=2.5,SNR=4.1
CMAR Chiang Mai Arr 152.87 304 PKPbc PKiKP 11 49 16.4 +1.0
comp=Z,0.5nm,0.3s,baz=36,slow=2.8,SNR=5.6

*NNC **07** 11:31:36.3±2.5, 38°.65N×69°.17E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=23.6km s-min=14.6km az=132.0*
*IDC **07** 11:31:41.0±11.0, 38°.43N×69°.86E, h88km±97km, mb3.4/4, mbtmp3.8/7, ML3.7/3, Error ellipse: s-maj=78.2km s-min=50.7km az=156.0*
ISC 07 11:31:34.2±1.8, 38°.4N±0°.1×69°.3E±0°.1, h12km, n10, σ1§37/13, mb3.7/4, 2C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.81**	**11**	Pn	**Pn**	**11 32 46.6**	**+0.2**
	1.3nm,0.4s,baz=199,slow=16,SNR=32						
KK31				⇑Pg	**Pb**	**11 32 59.3**	**+0.9**
	5.9nm,0.5s,baz=194,slow=18,SNR=23						
KK31				⇓Sn	**Sn**	**11 33 41.9**	**-0.1**
	3.1nm,0.3s,baz=194,slow=34,SNR=4.5						
KK31				⇓Lg	Lg	11 34 00.1	
	27nm,0.7s,baz=192,slow=30,SNR=5.5						
AB31	**Akbulak array**	**12.77**	**331**	Pn	**Pn**	**11 34 34.2**	**-1.2**
	0.5nm,0.3s,baz=166,slow=12,SNR=29						
AB31				⇓Sn	**Sn**	**11 36 57.0**	**-0.4**
	3.4nm,0.9s,baz=155,slow=22,SNR=3.5						
AKTO	**Aktyubinsk**	**14.46**	**330**	P	**P**	**11 35 04.0**	**-1.3**
	1.1nm,0.3s,baz=138,slow=11,SNR=15						
	3.3nm,0.4s						
AKTO	**Aktyubinsk**	**14.46**	**330**	⇑Pn	**Pn**	**11 35 00.2**	**+1.7**
	3.9nm,0.7s						
BVAR	**Borovoye Array**	**14.66**	**3**	P	**Pn**	**11 35 02.7**	**+1.4**
	0.3nm,0.3s,baz=171,slow=9.9,SNR=2.6						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**18.86**	**29**	P	**P**	**11 35 51.2**	**-2.7**
	0.4nm,0.3s,baz=230,slow=11,SNR=4.4						
	0.9nm,0.5s						
FINES	**FINESS Array B**	**35.15**	**325**	P	**P**	**11 38 28.4**	**+1.1**
	2.4nm,1.0s,baz=98,slow=8.6,SNR=1.3						
	2.4nm,1.0s						
HFS	**Hagfors**	**40.73**	**321**	P	**P**	**11 39 15.1**	**+0.6**
	1.0nm,0.4s,baz=98,slow=10,SNR=6.3						
	1.0nm,0.4s						
NOA	**NORSAR Array B**	**42.05**	**322**	P	**P**	**11 39 24.8**	**-0.6**
	0.3nm,0.5s,baz=97,slow=8.0,SNR=1.8						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**64.41**	**267**	P	**P**	**11 42 11.3**	**+0.8**
	0.2nm,0.5s,baz=45,slow=6.8,SNR=2.6						
	0.2nm,0.5s						

*SKHL **07** 11:36:34.2±0.5, 42°.17N×135°.72E, h366km±4km, mb4.6/8, msha4.6/3*
*IDC **07** 11:36:35.2±0.9, 42°.13N×135°.42E, h378km±9km, mb3.5/21, mbtmp4.2/26, Error ellipse: s-maj=11.0km s-min=9.8km az=87.0*
*JMA **07** 11:36:36.5±0.3, 42°N±1°.5×13°6E±°, h386km, MV3.4/32, EASTERN SEA OF JAPAN*
ISC 07 11:36:33.7±0.5, 42°.06N±0°.05×135°.72E±0°.05, h368km, n60, σ1§32/68, mb3.7/20, 2C, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**2.80**	**88**	P	**Pn**	**11 37 34.0**	**+1.4**
TEY	**Ternei**	**3.04**	**12**	⇑iP	**Pn**	**11 37 35.9**	**+1.2**
TEY				AMB	AMB	11 37 36.1	
	14nm,0.3s						
TEY				eS	**S**	**11 38 23.7**	**-0.2**
TEY				A	A	11 38 24.5	
	66nm,0.8s						
GRTR	**Gornotajezhnoj**	**3.09**	**303**	⇑iP	**Pn**	**11 37 35.6**	**+0.5**
GRTR				AMB	AMB	11 37 36.1	
	111nm,0.6s						
JSH	**Shimam**	**3.26**	**78**	P	**Pn**	**11 37 38.2**	**+1.5**
JOG3	**Oga3**	**3.32**	**129**	eP	Pn	11 37 43.4	+6.0
USRK	**Ussuriysk Ar.**	**3.47**	**309**	P	**Pn**	**11 37 38.9**	**+0.4**
	97nm,0.4s,baz=119,slow=8.5,SNR=110						
USRK				S	**S**	**11 38 31.2**	**+0.3**
	9.9nm,0.9s,baz=134,slow=14,SNR=5.7						
JIW	**Iwasaki**	**3.55**	**113**	P	**Pn**	**11 37 41.1**	**+1.6**
JSK	**Shakotan**	**3.74**	**68**	P	**Pn**	**11 37 42.6**	**+1.5**
JKB	**Kayabe**	**3.97**	**91**	P	**Pn**	**11 37 44.5**	**+1.1**
JOT	**Ohata**	**4.05**	**98**	P	**Pn**	**11 37 45.3**	**+1.1**
JSD	**Sado**	**4.47**	**153**	P	**Pn**	**11 37 50.4**	**+1.8**
JRG	**Rokugo**	**4.59**	**124**	P	**Pn**	**11 37 50.8**	**+1.0**
JRG				eS	**S**	**11 38 49.3**	**-2.0**
JHR	**Hokuryu**	**4.72**	**67**	eP	**Pn**	**11 37 52.5**	**+1.4**
JMK	**Ichinoseki**	**5.22**	**125**	P	**Pn**	**11 37 56.9**	**+0.4**
JMK				eS	**S**	**11 39 01.0**	**-2.7**
JWK2	**Keihoku**	**5.54**	**52**	P	**Pn**	**11 38 01.6**	**+1.7**
JCH	**Churui**	**5.69**	**82**	P	**Pn**	**11 38 01.8**	**+0.1**
JCH				S	**S**	**11 39 09.6**	**-3.5**
JMM	**Marumori**	**5.72**	**135**	P	**Pn**	**11 38 02.2**	**+0.1**
JMM				eS	**S**	**11 39 10.9**	**-2.9**
JFK	**Kawauchi**	**6.14**	**138**	eP	**Pn**	**11 38 06.3**	**-0.5**
JFK				eS	**S**	**11 39 18.9**	**-3.6**
JTKR	**Abashiri--Toko**	**6.30**	**70**	eP	**Pn**	**11 38 09.2**	**+0.7**
JRY	**Ryogami san**	**6.52**	**157**	P	**P**	**11 38 13.9**	**+1.6**
JRY				eS	**S**	**11 39 29.4**	**-1.0**
AKK	**Akkeshi**	**6.81**	**79**	eP	**Pn**	**11 38 14.0**	**-0.2**
AKK				AMB	AMB	11 38 14.2	
	93nm,0.4s						
NMR	**Nemuro--Hokkai**	**7.49**	**77**	eP	**Pn**	**11 38 21.7**	**-0.4**
NMR				AMB	AMB	11 38 22.2	
	42nm,0.4s						
KSRS	**Korea Array**	**7.56**	**235**	P	**P**	**11 38 24.1**	**+0.1**
	3.3nm,0.7s,baz=43,slow=12,SNR=8.1						
KLR	**Kul'dur**	**7.69**	**340**	P	**P**	**11 38 23.7**	**-1.7**
	5.8nm,0.3s,baz=155,slow=12,SNR=27						
KLR	**Kul'dur**	**7.69**	**340**	eP	**P**	**11 38 23.8**	**-1.5**
KLR				AMB	AMB	11 38 24.8	
	6.0nm,0.3s						
JIE	**Ise**	**7.69**	**174**	eP	**P**	**11 38 27.1**	**+1.4**
JCJ	**Chichijima**	**15.84**	**158**	P	**P**	**11 39 57.5**	**+0.8**
	56nm,1.0s,baz=251,slow=20,SNR=1.6						
MA2	**Magadan**	**19.86**	**23**	P	**P**	**11 40 40.0**	**+1.3**
	10nm,1.0s,baz=207,slow=18,SNR=2.0						
MA2	**Magadan**	**19.86**	**23**	eP	**P**	**11 40 40.0**	**+1.3**
YAK	**Yakutsk**	**20.33**	**352**	P	**P**	**11 40 42.4**	**-0.6**
	18nm,0.4s,baz=20,slow=1.1,SNR=5.1						
	18nm,0.4s						
SONM	**Songino Array**	**21.46**	**296**	P	**P**	**11 40 52.3**	**-1.4**
	1.3nm,0.4s,baz=93,slow=8.9,SNR=10.0						
	1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**35.32**	**307**	P	**P**	**11 42 53.5**	**-1.7**
	2.8nm,0.3s,baz=90,slow=8.5,SNR=14						
	2.8nm,0.3s						
MKAR	**Makanchi Array**	**37.83**	**296**	P	**P**	**11 43 14.9**	**-1.4**
	1.8nm,0.7s,baz=84,slow=8.7,SNR=14						
MKAR				ScP	**ScP**	**11 48 34.6**	**-0.9**
	0.4nm,0.8s,baz=57,slow=5.3,SNR=3.0						
	1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.08**	**244**	P	**P**	**11 43 26.6**	**-0.4**
	0.6nm,0.4s,baz=36,slow=7.0,SNR=6.7						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**39.51**	**303**	P	**P**	**11 43 28.0**	**-2.0**
	5.2nm,0.2s,baz=81,slow=8.7,SNR=21						
	5.2nm,0.2s						
JIRN	**Jiri**	**42.53**	**267**	eP	**P**	**11 43 55.5**	**+0.4**
	24nm,0.4s						
RAMN	**Ramite**	**42.61**	**265**	eP	**P**	**11 43 55.6**	**0.0**
	29nm,0.5s						
GUN	**Gumba**	**42.62**	**267**	eP	**P**	**11 43 56.3**	**+0.5**
	130nm,0.4s						
PKI	**Pulchoki**	**43.16**	**267**	eP	**P**	**11 44 00.2**	**+0.2**
	22nm,0.5s						
PKIN	**Phulchoki**	**43.16**	**267**	eP	**P**	**11 43 59.9**	**-0.1**
	35nm,0.5s						
GKN	**Gorkha**	**43.50**	**268**	eP	**P**	**11 44 02.7**	**+0.2**
	43nm,0.5s						
DANN	**Dangsing**	**43.97**	**269**	eP	**P**	**11 44 07.1**	**+0.8**
	221nm,0.5s						
BVAR	**Borovoye Array**	**43.97**	**308**	P	**P**	**11 44 04.6**	**-1.1**
	1.3nm,0.5s,baz=78,slow=7.4,SNR=8.3						
	1.3nm,0.5s						
PYUN	**Piuthan**	**44.67**	**269**	eP	**P**	**11 44 12.2**	**+0.4**
	43nm,0.4s						
ILAR	**Eielson Array**	**47.73**	**34**	P	**P**	**11 44 35.4**	**+0.9**
	1.1nm,0.7s,baz=286,slow=7.7,SNR=16						
	1.1nm,0.7s						
ARU	**Arti**	**49.69**	**315**	P	**P**	**11 44 49.0**	**-0.3**
	6.6nm,0.4s,baz=68,slow=3.6,SNR=7.2						
	6.6nm,0.4s						
ARU	**Arti**	**49.69**	**315**	P	**P**	**11 44 49.0**	**-0.3**
AKTO	**Aktyubinsk**	**52.08**	**308**	P	**P**	**11 45 06.3**	**-0.7**
	0.7nm,0.3s,baz=93,slow=13,SNR=4.6						
	0.7nm,0.3s						
ARCES	**ARCESS Array B**	**57.70**	**337**	P	**P**	**11 45 45.9**	**-0.7**
	1.8nm,0.8s,baz=48,slow=7.2,SNR=5.3						
	1.8nm,0.8s						
YKA	**Yellowknife Ar**	**61.66**	**30**	P	**P**	**11 46 14.1**	**+0.7**
	0.7nm,0.8s,baz=311,slow=6.6,SNR=4.8						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**61.70**	**181**	P	**P**	**11 46 14.5**	**+0.4**
	0.4nm,0.4s,baz=0.0,slow=7.0,SNR=24						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**62.29**	**329**	P	**P**	**11 46 16.6**	**-0.8**
	2.2nm,0.6s,baz=71,slow=8.3,SNR=11						
	2.2nm,0.6s						
ASAR	**Alice Springs**	**65.41**	**182**	P	**P**	**11 46 39.3**	**+1.2**
	1.1nm,0.7s,baz=356,slow=6.7,SNR=26						
	1.1nm,0.7s						
AKASG	**Malin Array Be**	**67.63**	**319**	P	**P**	**11 46 50.8**	**-0.8**
	1.5nm,0.6s,baz=48,slow=6.5,SNR=6.5						
	1.5nm,0.6s						
STKA	**Stephens Creek**	**73.77**	**175**	P	**P**	**11 47 29.8**	**+1.4**
	0.7nm,0.4s,baz=344,slow=11,SNR=3.2						
	0.7nm,0.4s						
NVAR	**Mina Array Bea**	**75.40**	**51**	P	**P**	**11 47 39.9**	**+1.8**
	1.5nm,0.6s,baz=297,slow=5.2,SNR=18						
	1.5nm,0.6s						
PDAR	**Pinedale Array**	**77.16**	**43**	P	**P**	**11 47 48.8**	**+0.8**
	1.8nm,0.7s,baz=19,slow=1.0,SNR=21						
	1.8nm,0.7s						
ULM	**Lac du Bonnet**	**77.60**	**31**	P	**P**	**11 47 50.0**	**+0.1**
	3.3nm,0.6s,baz=254,slow=5.6,SNR=3.0						
	3.3nm,0.6s						
TXAR	**Lajitas Array**	**90.34**	**49**	P	**P**	**11 48 55.6**	**+1.5**
	0.8nm,0.7s,baz=296,slow=2.5,SNR=12						
	0.8nm,0.7s						
LPAZ	**La Paz**	**147.16**	**46**	PKPbc	**PKiKP**	**11 55 35.7**	**-1.4**
	0.7nm,0.6s,baz=39,slow=3.3,SNR=5.0						

IDC 07 11:45:04.9±3.3, 22°.58N×144°.05E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=144.8km s-min=25.4km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.32**	**193**	P	P	11 53 08.4	-0.4
	0.3nm,0.3s,baz=13,slow=8.1,SNR=12						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**47.02**	**193**	P	P	11 53 38.4	+0.1
	0.2nm,0.5s,baz=17,slow=7.0,SNR=4.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**54.70**	**312**	P	P	11 54 36.0	+0.1
	1.0nm,0.8s,baz=76,slow=8.7,SNR=6.3						
	1.0nm,0.8s						
NRIK	**Noril'sk**	**57.45**	**339**	P	P	11 54 55.1	-0.1
	2.6nm,0.5s,baz=115,slow=3.2,SNR=3.6						
	2.6nm,0.5s						

*JMA **07** 11:46:13.8±0.7, 45°N±3°×15°0E±°, h30km, MV4.3/13, SE OFF ETOROFU*
*NIED **07** 11:46:13.8, 44°.71N×150°.03E, h30km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.27; $M_{\theta\theta}$-1.63; $M_{\phi\phi}$1.36; $M_{r\theta}$-4.93; $M_{\theta\phi}$0.08; $M_{\phi r}$-3.89; Fault plane solution: $M_0$6.46000×10^{14} NP1: ϕ_s135.00000°, δ13.00000°, λ173.00000°. NP2: ϕ_s232.00000°, δ88.00000°, λ77.00000°.*
*SKHL **07** 11:46:15.6±0.2, 44°.40N×150°.00E, h55km±5km, mb4.3/3*
ISC 07 11:46:13.2±4.1, 44°.3N±0°.1×150°.1E±0°.2, h35km, n14, σ1§91/25, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.85**	**300**	eP	**Pn**	**11 46 42.0**	**-0.4**
KUR				AMB	AMB	11 46 44.3	
	40nm,0.2s						
KUR				eS	**Sn**	**11 47 01.8**	**-2.7**
KUR				A	A	11 47 14.4	
	470nm,0.5s						
KUR				A	A	11 47 14.4	
	140nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.08**	**266**	eP	**Pn**	**11 47 00.7**	**+1.3**
YUK				AMB	AMB	11 47 02.4	
	90nm,0.3s						
YUK				eS	**Sn**	**11 47 34.4**	**-0.6**
YUK				A	A	11 47 49.0	
	100nm,0.6s						
YUK				A	A	11 47 49.0	
	270nm,0.6s						
NEM2	**Nemuro 2**	**3.32**	**255**	eP	**Pn**	**11 47 03.5**	**+0.9**
NEM2				eS	**Sn**	**11 47 40.5**	**-0.2**
NMR	**Nemuro--Hokkai**	**3.33**	**255**	eP	**Pn**	**11 47 03.3**	**+0.6**
NMR				AMB	AMB	11 47 05.3	
	10.0nm,0.2s						
NMR				eS	**Sn**	**11 47 39.2**	**-1.8**
NMR				A	A	11 47 43.9	
	40nm,0.3s						
NMR				A	A	11 47 43.9	
	30nm,0.3s						
JRA	**Rausu**	**3.63**	**266**	eP	**Pn**	**11 47 09.2**	**+2.4**
JNK	**Nakash**	**3.98**	**261**	eP	**Pn**	**11 47 13.3**	**+1.7**
JNK				eS	**Sn**	**11 47 57.0**	**0.0**
AKK	**Akkeshi**	**4.05**	**253**	eP	**Pn**	**11 47 14.0**	**+1.3**
AKK				eS	**Sn**	**11 47 57.3**	**-1.6**
JAK	**Akkeshi**	**4.16**	**253**	eP	**Pn**	**11 47 15.2**	**+1.0**
JAK				eS	**Sn**	**11 48 00.9**	**-0.7**
JTKR	**Abashiri--Toko**	**4.49**	**268**	eP	**Pn**	**11 47 21.6**	**+2.9**
JAR	**Ashorobuto**	**4.72**	**260**	eP	**Pn**	**11 47 24.0**	**+2.1**
JAR				eS	**Sn**	**11 48 16.3**	**+1.0**
JOB	**Onbets**	**4.79**	**255**	eP	**Pn**	**11 47 24.5**	**+1.7**
JOB				eS	**Sn**	**11 48 17.1**	**+0.1**
JCH	**Churui**	**5.21**	**253**	eP	**Pn**	**11 47 30.4**	**+1.8**
JNBK	**Urakawa-nobuka**	**5.76**	**252**	eP	**Pn**	**11 47 37.5**	**+1.4**
JNBK				eS	**Sn**	**11 48 40.0**	**-1.0**
JANG	**Nango**	**7.50**	**241**	eP	**Pn**	**11 48 00.1**	**0.0**
JANG				eS	**Sn**	**11 49 18.6**	**-5.4**

*DSN **07** 12:01:55.9±2.4, 31°.00N×60°.97E, h10km, ML3.1/8, Error ellipse: s-maj=35.3km s-min=25.5km az=118.0*
*TEH **07** 12:02:08.3, 29°.86N×60°.66E, h9km, ML4.1*
*OMAN **07** 12:02:14.9±0.6, 29°.59N×60°.90E, h154km±18km, mb4.4/13, Error ellipse: s-maj=12.1km s-min=10.9km az=266.0*
ISC 07 12:02:08.8±1.2, 29°.81N±0°.06×60°.86E±0°.09, h10km, n65, σ1§34/68, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHSF	**Zahedan**	**0.21**	**199**	ePg	**Pg**	**12 02 14.7**	**+1.4**
ZHDN	**Zahedan**	**0.41**	**185**	ePg	**Pb**	**12 02 17.8**	**-0.5**
ZHDN				eSg	**Sb**	**12 02 24.7**	**-0.1**
ZHDN				e		12 02 25.6	
	comp=Z,29μm,0.2s						
NHDN	**Nehbandan**	**1.72**	**336**	ePn	**Pn**	**12 02 38.0**	**-1.0**
KBAM	**BAM**	**2.20**	**253**	ePn	**Pn**	**12 02 45.1**	**-0.4**
KBAM				e		12 02 51.1	
	comp=Z,27μm,0.5s						
BSRN	**Basiran**	**2.61**	**326**	ePn	**Pn**	**12 02 50.1**	**-1.1**
SRVN	**Saravan**	**2.76**	**150**	ePn	**Pb**	**12 02 57.3**	**-1.0**
CHMN	**Cheshme madani**	**2.88**	**272**	ePn	**Pn**	**12 02 54.0**	**-1.1**
CHMN				e		12 03 38.3	
	comp=Z,6μm,1.0s						
IDAH	**Dahanechah**	**3.04**	**344**	ePn	**Pn**	**12 02 57.9**	**+0.7**
IKOO	**Kooshah**	**3.05**	**329**	ePn	**Pn**	**12 02 56.2**	**-1.1**
IKOO				e		12 03 07.6	
	comp=Z,3μm,0.3s						
BAGH	**Bagheran - Bir**	**3.28**	**335**	ePn	**Pn**	**12 03 00.3**	**-0.3**
KHNJ	**Kahnooj**	**3.33**	**237**	ePn	**Pn**	**12 03 01.3**	**+0.3**
TVBK	**TV Kerman**	**3.56**	**274**	e		12 03 18.7	
	comp=Z,8μm,0.6s						
TVBK				ePn	**Pn**	**12 03 03.6**	**-0.8**
KRBR	**Kerman**	**3.56**	**274**	ePn	**Pn**	**12 03 04.3**	**-0.1**
ITEG	**Tejag**	**3.56**	**330**	ePn	**Pn**	**12 03 04.1**	**-0.2**
ITEG				e		12 04 08.0	
	comp=Z,2μm,0.7s						
NGRK	**Negar Kerman**	**3.59**	**268**	ePn	**Pn**	**12 03 04.7**	**-0.2**
NGRK				e		12 04 05.5	
	comp=Z,4μm,0.5s						
KHGB	**Koh Gabri**	**3.83**	**279**	ePn	**Pn**	**12 03 07.7**	**-0.4**
SHRT	**Shahrakht**	**3.85**	**353**	ePn	**Pn**	**12 03 08.4**	**+0.2**
AFRZ	**Afriz**	**3.93**	**337**	ePn	**Pn**	**12 03 09.4**	**+0.1**
CHBR	**Chabahar**	**4.21**	**185**	ePn	**Pn**	**12 03 15.0**	**+1.9**
NGCH	**Negor - Chabah**	**4.45**	**177**	ePn	**Pn**	**12 03 18.2**	**+1.9**
NGCH	**Negor - Chabah**	**4.45**	**177**	P	**Pn**	**12 03 18.4**	**+2.2**
	SNR=6.2						
IBND	**Bandar-abas**	**4.46**	**239**	ePn	**Pn**	**12 03 16.0**	**-0.6**
IBND				e		12 03 44.3	
	comp=Z,2μm,1.0s						
JASK	**Jask - Hormozg**	**4.74**	**215**	ePn	**Pn**	**12 03 21.5**	**+1.2**
JASK	**Jask - Hormozg**	**4.74**	**215**	P	**Pn**	**12 03 22.1**	**+1.8**
	SNR=7.5						
GENO	**Geno**	**4.77**	**241**	ePn	**Pn**	**12 03 22.0**	**+1.1**
TPRV	**Parvadeh(Tabas**	**4.79**	**313**	ePn	**Pn**	**12 03 20.8**	**-0.4**
TKDS	**Koohdasht(Taba**	**4.95**	**321**	ePn	**Pn**	**12 03 22.5**	**-0.8**
TABS	**Tabas**	**4.97**	**321**	ePn	**Pn**	**12 03 23.2**	**-0.5**
TBJM	**Torbat-e-JAM**	**5.46**	**355**	ePn	**Pn**	**12 03 31.2**	**+0.8**
TNSJ	**Nastanj**	**5.49**	**320**	ePn	**Pn**	**12 03 29.8**	**-1.0**
BANOM	**Banah**	**5.59**	**227**	P	**Pn**	**12 03 34.5**	**+2.4**
BANOM	**Banah**	**5.59**	**227**	P	**Pn**	**12 03 32.8**	**+0.7**
SHME	**Shamm**	**5.61**	**229**	P	**Pn**	**12 03 34.6**	**+2.4**
SHME	**Shamm**	**5.61**	**229**	P	**Pn**	**12 03 32.1**	**-0.1**
YZKH	**Yazd**	**5.95**	**297**	ePn	**Pn**	**12 03 39.0**	**+1.9**
MASF	**Masafi**	**6.08**	**224**	P	**Pn**	**12 03 41.6**	**+2.8**
MSFE	**Esma-Masafi**	**6.08**	**224**	P	**Pn**	**12 03 40.5**	**+1.6**
UOSS	**Minazif**	**6.37**	**222**	P	**Pn**	**12 03 45.5**	**+2.7**
UOSS	**Minazif**	**6.37**	**222**	P	**Pn**	**12 03 42.6**	**-0.2**
HATD	**Hatta, Dubai**	**6.50**	**221**	P	**Pn**	**12 03 46.6**	**+1.9**
HATD	**Hatta, Dubai**	**6.50**	**221**	P	**Pn**	**12 03 44.5**	**-0.1**
IMYA	**Miami**	**6.54**	**355**	ePn	**Pn**	**12 03 46.5**	**+1.2**
ASHO	**Ashiyiah**	**6.66**	**221**	P	**Pn**	**12 03 49.8**	**+3.0**
	SNR=7.1						
ASHO	**Ashiyiah**	**6.66**	**221**	P	**Pn**	**12 03 48.4**	**+1.6**
IPAY	**Payeh**	**6.80**	**347**	ePn	**Pn**	**12 03 50.7**	**+1.8**
SOHO	**SOHO**	**6.84**	**215**	P	**Pn**	**12 03 47.7**	**-1.5**
WSAR	**Wadi Sarin**	**6.84**	**197**	P	**Pn**	**12 03 49.2**	**-0.1**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**6.88**	**224**	P	**Pn**	**12 03 51.8**	**+1.9**
FAQ	**Al Faqa, Dubai**	**6.88**	**224**	P	**Pn**	**12 03 49.9**	**+0.1**
IAKL	**Akhelmad**	**7.00**	**346**	ePn	**Pn**	**12 03 53.0**	**+1.4**
SBZV	**Sabzevar**	**7.10**	**338**	ePn	**Pn**	**12 03 53.4**	**+0.4**
ASUD	**Al Ashush, Dub**	**7.13**	**225**	P	**Pn**	**12 03 55.2**	**+2.0**
ASUD	**Al Ashush, Dub**	**7.13**	**225**	P	**P

Triangular moment-rate function

ISC 07 12:18:29.6±0.3, 56°73S±0°08×141°39W±0°08, h10km, n165, σ0°98/113, mb4.9/31, MS4.2/54, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**27.43**	**201**	P		**P**		**12 24 16.8**	**+1.9**
VNDA	**Vanda**	**28.34**	**203**	P		**P**		**12 24 25.5**	**+2.5**
1.9nm,1.3s,baz=17,slow=7.5,SNR=5.1									
VNDA				LR			LR	12 32 46.8	
comp=Z,213nm,18.7s,baz=78,slow=30									
1.9nm,1.3s									
RPZ	**Rata Peaks**	**32.40**	**273**	LR			LR	12 34 41.9	
comp=Z,706nm,21.6s,baz=129,slow=30									
URZ	**Urewera**	**32.91**	**286**	LR			LR	12 35 29.7	
comp=Z,463nm,20.6s,baz=212,slow=31									
QSPA	**South Pole Qui**	**33.43**	**180**	P		**P**		**12 25 09.4**	**+1.2**
15nm,1.0s,baz=84,slow=4.2,SNR=28									
QSPA				LR			LR	12 36 03.6	
comp=Z,935nm,21.2s,baz=70,slow=31									
15nm,1.0s									
QSPA	**South Pole Qui**	**33.43**	**180**	P		**P**		**12 25 09.0**	**+0.8**
QSPA				IAmb		IAmb		12 25 10.9	
comp=Z,29nm,1.1s									
TBI	**Tubuai**	**33.86**	**347**	*e*S		**S**		**12 30 37.5**	**+1.3**
comp=Z,106nm,41.2s									
TBI				*e*LR			LR	12 34 10.2	
comp=Z,2μm,25.5s									
TBI	**Tubuai**	**33.86**	**347**	*e*T		T		13 00 47.5	
comp=Z,65nm,0.3s									
RKT	**Rikitea**	**33.90**	**11**	*e*T		T		13 00 49.7	
comp=Z,10nm,0.3s									
PMSA	**Palmer Station**	**36.33**	**135**	LR			LR	12 36 19.8	
comp=Z,495nm,20.2s,baz=247,slow=29									
RPN	**Rapa Nui**	**37.37**	**51**	LR			LR	12 37 18.8	
comp=Z,507nm,21.6s,baz=211,slow=30									
RAR	**Rarotonga**	**37.98**	**331**	LR			LR	12 36 44.7	
comp=Z,384nm,19.1s,baz=162,slow=29									
BELA	**Belgrano 2**	**38.56**	**161**	P		**P**		**12 25 52.1**	**+0.4**
BELA				IAmb		IAmb		12 25 53.2	
comp=Z,79nm,1.9s									
PAE	**Paea**	**39.49**	**348**	*e*T		T		13 07 48.0	
comp=Z,2.3nm,0.3s									
PPT2	**Papeete2**	**39.56**	**348**	*e*S		**S**		**12 32 04.8**	**+1.5**
comp=Z,165nm,28.0s									
PPT2				*e*LR			LR	12 36 48.8	
comp=Z,2μm,25.5s									
PPT2	**Papeete2**	**39.56**	**348**	*e*T		T		13 07 48.4	
comp=Z,4.5nm,0.3s									
PPT	**Papeete**	**39.58**	**348**	LR			LR	12 38 04.0	
comp=Z,473nm,19.7s,baz=164,slow=30									
MG01	**Puerto William**	**39.61**	**120**	P		**P**		**12 26 01.4**	**+0.7**
VAH	**Vaihoa**	**41.69**	**351**	*e*T		T		13 10 19.7	
comp=Z,26nm,0.3s									
AY01	**Puyuhuapi**	**43.51**	**104**	P		**P**		**12 26 33.5**	**+0.7**
LL02	**Futaleuf**	**44.77**	**103**	P		**P**		**12 26 43.5**	**+0.5**
PLCA	**Paso Flores**	**47.17**	**102**	P		**P**		**12 27 02.8**	**+0.8**
comp=Z,4.9nm,1.0s,baz=229,slow=7.7,SNR=8.3									
comp=Z,4.9nm,1.0s									
PLCA	**Paso Flores**	**47.17**	**102**	P		**P**		**12 27 02.8**	**+0.8**
GO06	**Curarrehue**	**47.48**	**100**	P		**P**		**12 27 05.1**	**+0.6**
GO06				IAmb		IAmb		12 27 07.7	
comp=Z,17nm,1.4s									
H03S2	**Juan Fernandez**	**47.58**	**89**	T		T		13 18 21.5	
baz=220,SNR=184									
H03S1	**Juan Fernandez**	**47.58**	**89**	T		T		13 18 24.0	
baz=220,SNR=183									
H03S3	**Juan Fernandez**	**47.59**	**89**	T		T		13 18 21.9	
baz=220,SNR=205									
TAOE	**Nuku Hiva Isla**	**47.77**	**2**	*e*S		**S**		**12 34 04.5**	**+1.3**
comp=Z,138nm,24.5s									
TAOE				*e*SS			**SS**	**12 37 33.7**	**+2.0**
comp=Z,138nm,26.1s									
TAOE				*e*LR			LR	12 40 36.6	
comp=Z,841nm,24.5s									
H03N3	**Juan Fernandez**	**47.87**	**88**	T		T		13 18 43.3	
baz=222,slow=72,SNR=409									
VNA3	**Neumayer Olymp**	**47.87**	**161**	P		**P**		**12 27 06.1**	**-0.8**
H03N2	**Juan Fernandez**	**47.87**	**88**	T		T		13 18 39.2	
baz=222,slow=72,SNR=357									
H03N1	**Juan Fernandez**	**47.88**	**88**	T		T		13 18 39.9	
baz=222,slow=72,SNR=560									
VNA2	**Neumayer--Watz**	**48.54**	**162**	P		**P**		**12 27 11.6**	**-0.5**
baz=211,slow=8.0									
VNA1	**Neumayer--Stat**	**48.62**	**161**	P		**P**		**12 27 12.2**	**-0.5**
AFI	**Afiamalu**	**48.62**	**319**	LR			LR	12 41 48.0	
comp=Z,233nm,21.2s,baz=172,slow=29									
SNAA	**Sanae**	**48.64**	**164**	P		**P**		**12 27 12.3**	**-0.7**
SNAA	**Sanae**	**48.64**	**164**	LR			LR	12 46 56.0	
comp=Z,260nm,18.0s,baz=190,slow=35									
SNAA	**Sanae**	**48.64**	**164**	P		**P**		**12 27 12.1**	**-0.9**
TROLL	**Troll, Antarti**	**49.11**	**166**	P		**P**		**12 27 16.7**	**0.0**
MSVF	**Nonsavu**	**49.33**	**305**	LR			LR	12 46 05.1	
comp=Z,135nm,18.5s,baz=161,slow=34									
MSVF	**Nonsavu**	**49.33**	**305**	P		**P**		**12 27 17.8**	**-1.2**
CAN	**Canberra**	**50.41**	**264**	P		**P**		**12 27 26.1**	**-0.8**
CAN				IAmb		IAmb		12 27 52.3	
comp=Z,32nm,1.4s									
TOO	**Toolangi**	**50.67**	**259**	P		**P**		**12 27 29.2**	**+0.3**
DZM	**Mont Dzumac**	**51.30**	**290**	LR			LR	12 46 00.7	
comp=Z,130nm,18.8s,baz=180,slow=32									
BO02	**Sierra Bellavi**	**51.35**	**96**	P		**P**		**12 27 33.5**	**-0.6**
BO02				IAmb		IAmb		12 27 35.4	
comp=Z,40nm,1.4s									
MT09	**Talagante**	**51.99**	**95**	P		**P**		**12 27 38.4**	**-0.5**
MT09				IAmb		IAmb		12 27 40.4	
comp=Z,24nm,1.1s									
LMEL	**Las Melosas**	**52.37**	**96**	P		**P**		**12 27 42.0**	**+0.3**
LMEL				IAmb		IAmb		12 27 43.4	
comp=Z,24nm,1.2s									
ARMA	**Armidale**	**52.66**	**270**	P		**P**		**12 27 45.0**	**+1.1**
ARMA				IAmb		IAmb		12 27 46.1	
comp=Z,16nm,1.1s									
TRQA	**Tornquist**	**53.69**	**106**	P		**P**		**12 27 51.5**	**+0.3**
TRQA				IAmb		IAmb		12 27 52.6	
comp=Z,29nm,1.1s									
CO02	**Combarbal**	**53.94**	**93**	P		**P**		**12 27 53.9**	**+0.6**
MAW	**Mawson**	**54.68**	**191**	P		**P**		**12 27 59.2**	**+1.1**
comp=Z,5.6nm,0.8s,baz=176,slow=7.4,SNR=17									
MAW				LR			LR	12 48 23.4	
comp=Z,327nm,21.4s,baz=158,slow=33									
comp=Z,5.6nm,0.8s									
MAW	**Mawson**	**54.68**	**191**	P		**P**		**12 27 59.1**	**+1.1**
AC05	**El Transito**	**56.16**	**92**	P		**P**		**12 28 09.3**	**-0.1**
AC05				IAmb		IAmb		12 28 10.5	
comp=Z,20nm,1.1s									
EIDS	**Eidsvold**	**56.90**	**274**	P		**P**		**12 28 15.1**	**+0.6**
EIDS				IAmb		IAmb		12 28 15.8	
comp=Z,16nm,1.0s									
STKA	**Stephens Creek**	**57.05**	**261**	P		**P**		**12 28 15.6**	**0.0**
comp=Z,11nm,0.9s,baz=126,slow=8.0,SNR=22									
STKA				LR			LR	12 48 09.6	
comp=Z,323nm,20.2s,baz=150,slow=31									
comp=Z,11nm,0.9s									
STKA	**Stephens Creek**	**57.05**	**261**	P		**P**		**12 28 16.0**	**+0.4**
AC02	**Maricunga**	**58.35**	**91**	P		**P**		**12 28 25.9**	**+0.6**
AC02				IAmb		IAmb		12 28 39.8	
comp=Z,19nm,1.4s									
BBOO	**Buckleboo**	**59.33**	**256**	P		**P**		**12 28 31.1**	**-0.3**
BBOO				IAmb		IAmb		12 29 03.6	
comp=Z,18nm,1.1s									
PB14	**IPOC Station P**	**59.39**	**89**	P		**P**		**12 28 31.9**	**-0.5**
LVC	**Limon Verde**	**61.81**	**89**	LR			LR	12 50 09.7	
comp=Z,43nm,20.5s,baz=233,slow=31									
LVC	**Limon Verde**	**61.81**	**89**	P		**P**		**12 28 48.1**	**-0.8**
LVC				IAmb		IAmb		12 28 52.5	
comp=Z,11nm,0.9s									
PLTB	**Pedras Altas**	**62.92**	**107**	P		**P**		**12 28 54.9**	**-1.0**
PLTB				IAmb		IAmb		12 28 55.6	
comp=Z,13nm,0.9s									
CTA	**Charters Tower**	**63.78**	**273**	LR			LR	12 52 57.8	
comp=Z,97nm,18.8s,baz=102,slow=32									
CTAO	**Charters Tower**	**63.78**	**273**	P		**P**		**12 29 02.2**	**+0.5**
FORT	**Forrest**	**65.15**	**252**	P		**P**		**12 29 10.7**	**+0.2**
CPUP	**Villa Florida**	**65.21**	**101**	P		**P**		**12 29 10.1**	**-0.8**
comp=Z,6.9nm,1.1s,baz=227,slow=6.6,SNR=6.9									
comp=Z,6.9nm,1.1s									
CPUP	**Villa Florida**	**65.21**	**101**	P		**P**		**12 29 10.2**	**-0.7**
HNR	**Honiara**	**65.25**	**292**	LR			LR	12 53 46.2	
comp=Z,992nm,19.3s,baz=134,slow=32									
NNA	**Nana**	**66.17**	**75**	LR			LR	12 51 18.9	
comp=Z,156nm,21.7s,baz=225,slow=30									
LPAZ	**La Paz**	**67.35**	**85**	P		**P**		**12 29 25.3**	**-0.2**
comp=Z,5.2nm,0.9s,baz=130,slow=2.1,SNR=10.0									
LPAZ				LR			LR	12 51 56.2	
comp=Z,69nm,20.6s,baz=218,slow=30									
comp=Z,5.2nm,0.9s									
LPAZ	**La Paz**	**67.35**	**85**	P		**P**		**12 29 25.7**	**+0.2**
LPAZ				IAmb		IAmb		12 29 31.1	
comp=Z,24nm,1.6s									
AS31	**Alice Springs**	**67.69**	**261**	P		**P**		**12 29 26.1**	**-0.8**
ASAR	**Alice Springs**	**67.69**	**261**	P		**P**		**12 29 25.9**	**-1.0**
comp=Z,6.1nm,0.7s,baz=140,slow=6.4,SNR=110									
ASAR				LR			LR	12 54 19.7	
comp=Z,150nm,21.9s,baz=156,slow=32									
comp=Z,6.1nm,0.7s									
ASAR	**Alice Springs**	**67.69**	**261**	P		**P**		**12 29 26.1**	**-0.8**
H01W1	**Cape Leeuwin H**	**68.78**	**239**	T		T		13 45 02.9	
baz=143,slow=76,SNR=384									
H01W2	**Cape Leeuwin H**	**68.78**	**239**	T		T		13 45 03.3	
baz=143,slow=76,SNR=435									
H01W3	**Cape Leeuwin H**	**68.78**	**239**	T		T		13 45 04.1	
baz=143,slow=76,SNR=337									
NWAO	**Narrogin (SRO)**	**68.90**	**242**	LR			LR	12 51 45.8	
comp=Z,251nm,21.1s,baz=246,slow=29									
ATAH	**Atahualpa**	**69.43**	**71**	LR			LR	12 53 09.2	
comp=Z,148nm,20.1s,baz=219,slow=30									
WB2	**Warramunga Arr**	**70.44**	**263**	P		**P**		**12 29 43.5**	**-0.5**
WB2				IAmb		IAmb		12 29 43.8	
comp=Z,6.6nm,0.8s									
WRA	**Warramunga Arr**	**70.45**	**263**	P		**P**		**12 29 43.2**	**-0.8**
comp=Z,5.0nm,0.7s,baz=149,slow=5.5,SNR=54									
WRA				LR			LR	12 56 45.4	
comp=Z,250nm,20.1s,baz=145,slow=33									
comp=Z,5.0nm,0.7s									
WRA	**Warramunga Arr**	**70.45**	**263**	P		**P**		**12 29 43.4**	**-0.7**
WRAB	**Tennant Creek**	**70.45**	**263**	P		**P**		**12 29 43.5**	**-0.6**
WRAB				IAmb		IAmb		12 29 43.9	
comp=Z,8.1nm,0.8s									
WB0	**Warramunga Arr**	**70.56**	**264**	P		**P**		**12 29 44.1**	**-0.6**
WB0				IAmb		IAmb		12 29 45.0	
comp=Z,9.0nm,0.8s									
MCRA	**Macar, Loja**	**70.97**	**68**	P		**P**		**12 29 46.8**	**-0.5**
MCRA				IAmb		IAmb		12 30 17.3	
comp=Z,11nm,1.4s									
SIV	**San Ignacio**	**71.48**	**91**	LR			LR	12 56 21.1	
comp=Z,38nm,19.4s,baz=283,slow=32									
PMG	**Port Moresby**	**72.03**	**280**	LR			LR	12 56 21.0	
comp=Z,114nm,20.1s,baz=152,slow=32									
BOSC	**San Juan Bosco**	**72.76**	**69**	P		**P**		**12 29 57.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**76.68**	**257**	P		**P**		**12 30 20.8**	**+0.2**
comp=Z,3.3nm,0.9s,baz=121,slow=5.9,SNR=3.2									
FITZ				LR			LR	12 59 36.8	
comp=Z,304nm,21.4s,baz=140,slow=32									
comp=Z,3.3nm,0.9s									
FITZ	**Fitzroy Crossi**	**76.68**	**257**	P		**P**		**12 30 21.3**	**+0.6**
FITZ				IAmb		IAmb		12 30 21.8	
comp=Z,24nm,1.7s									
PSA00	**Pilbara Seismi**	**76.89**	**251**	P		**P**		**12 30 21.6**	**-0.3**
KNRA	**Kununurra**	**76.97**	**261**	P		**P**		**12 30 22.8**	**+0.4**
KNRA				IAmb		IAmb		12 30 23.4	
comp=Z,15nm,0.9s									
BDFB	**Brasilia**	**78.91**	**101**	P		**P**		**12 30 32.3**	**-0.9**
comp=Z,2.3nm,0.4s,baz=225,slow=9.5,SNR=4.5									
BDFB				LR			LR	13 02 11.5	
comp=Z,100nm,18.3s,baz=75,slow=33									
comp=Z,2.3nm,0.4s									
ROSC	**El Rosal**	**81.72**	**68**	LR			LR	13 01 05.3	
comp=Z,101nm,19.9s,baz=224,slow=31									
CMIG	**Matias Romero**	**83.16**	**44**	LR			LR	12 59 51.5	
comp=Z,43nm,20.8s,baz=202,slow=30									
BATI	**Baumata**	**84.26**	**260**	LR			LR	13 06 00.1	
comp=Z,262nm,19.7s,baz=154,slow=34									
PTGA	**Pitinga**	**84.67**	**83**	LR			LR	13 02 31.1	
comp=Z,79nm,21.2s,baz=221,slow=31									
LPIG	**La Paz**	**84.69**	**28**	LR			LR	12 59 27.9	
comp=Z,57nm,20.1s,baz=206,slow=29									
SDV	**Santo Domingo**	**87.05**	**69**	LR			LR	13 04 02.6	
comp=Z,76nm,19.4s,baz=122,slow=31									
SIJI	**Sorong**	**87.82**	**272**	LR			LR	13 08 51.6	
comp=Z,88nm,19.9s,baz=92,slow=34									
SUR	**Sutherland**	**89.96**	**165**	LR			LR	13 09 37.7	
comp=Z,130nm,18.2s,baz=176,slow=34									
KAPI	**Kappang**	**90.70**	**260**	LR			LR	13 08 55.9	
comp=Z,256nm,20.9s,baz=138,slow=33									
PCRV	**Puerto La Cruz**	**91.27**	**73**	LR			LR	13 06 52.7	
comp=Z,253nm,21.3s,slow=32									
TXAR	**Lajitas Array**	**91.49**	**32**	P		**P**		**12 31 36.3**	**+0.4**
comp=Z,0.1nm,0.6s,baz=183,slow=12,SNR=2.1									
TXAR				LR			LR	13 03 42.0	
comp=Z,39nm,19.3s,baz=204,slow=30									
PFO	**Pinyon Flats O**	**92.44**	**21**	LR			LR	13 03 44.7	
comp=Z,145nm,19.5s,baz=198,slow=29									
MDP	**Montagnes des**	**93.53**	**86**	LR			LR	13 08 49.0	
comp=Z,45nm,18.4s,baz=253,slow=32									
RCBR	**Riachuelo**	**93.57**	**106**	LR			LR	13 10 39.9	
comp=Z,103nm,19.9s,baz=342,slow=33									
BOSA	**Boshof**	**94.24**	**168**	LR			LR	13 12 35.8	
comp=Z,248nm,18.2s,baz=192,slow=34									
LEM	**Lembang**	**95.60**	**249**	LR			LR	13 15 25.5	
comp=Z,49nm,18.0s,baz=176,slow=36									
ANMO	**Albuquerque**	**96.00**	**28**	LR			LR	13 05 26.9	
comp=Z,86nm,21.9s,baz=208,slow=29									
NVAR	**Mina Array Bea**	**96.79**	**18**	LR			LR	13 05 50.4	
comp=Z,145nm,20.4s,baz=190,slow=29									
SJG	**San Juan**	**97.14**	**68**	LR			LR	13 10 03.2	
comp=Z,41nm,19.3s,baz=190,slow=32									
DAV	**Davao City (W)**	**97.53**	**271**	LR			LR	13 14 06.1	
comp=Z,51nm,19.3s,baz=142,slow=34									
LBTB	**Lobatse**	**97.84**	**168**	LR			LR	13 12 49.3	
comp=Z,138nm,19.7s,baz=181,slow=33									
YBH	**Yreka Blue Hor**	**99.35**	**14**	LR			LR	13 06 39.9	
comp=Z,179nm,21.4s,baz=174,slow=29									
ELK	**Elko**	**99.59**	**20**	LR			LR	13 07 54.8	
comp=Z,116nm,19.9s,baz=204,slow=30									
H10S3	**ASCENSION HYDR**	**101.34**	**126**	T		T		14 26 02.8	
baz=207,slow=74,SNR=7.8									
H10S2	**ASCENSION HYDR**	**101.34**	**126**	T		T		14 26 22.9	
baz=13,slow=74,SNR=3.2									
H10N3	**ASCENSION HYDR**	**102.40**	**126**	T		T		14 27 42.7	
baz=206,slow=75,SNR=15									
H10N1	**ASCENSION HYDR**	**102.40**	**126**	T		T		14 27 37.2	
baz=206,slow=75,SNR=21									
H10N2	**ASCENSION HYDR**	**102.42**	**126**	T		T		14 27 41.3	
baz=206,slow=75,SNR=15									
ILAR	**Eielson Array**	**121.25**	**357**	PKP		**PKPdf**		**12 37 20.9**	**-0.2**
comp=Z,1.4nm,0.7s,baz=206,slow=1.8,SNR=6.2									
ILAR	**Eielson Array**	**121.25**	**357**			**PKiKP**		**12 37 21.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**121.44**	**255**	PKP		**PKiKP**		**12 37 23.4**	**+0.3**
comp=Z,0.6nm,0.7s,baz=203,slow=2.6,SNR=4.1									
PZH	**PanZhiHua**	**126.41**	**263**	PKP		**PKPdf**		**12 37 32.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**128.16**	**132**	PKP		**PKiKP**		**12 37 37.3**	**+0.8**
comp=Z,0.8nm,1.0s,baz=291,slow=4.5,SNR=3.4									
CD2	**Chengdu**	**128.73**	**269**	*e*PKP		**PKiKP**		**12 37 37.4**	**+0.1**
XLT	**XiLinHaoTe**	**131.53**	**290**	*e*PKP		**PKPdf**		**12 37 41.4**	**-0.1**
HHC	**Hu-ho-hao-te**	**131.78**	**283**	*e*PKP		**PKPdf**		**12 37 39.4**	**-2.7**
PBAR	**Barrancos**	**144.81**	**102**	*e*PKPbc		**PKPab**		**12 38 05.3**	**+0.4**
PMTG	**Montargil**	**144.81**	**100**	*e*PKPbc		**PKPab**		**12 38 05.2**	**+0.3**
PESTR	**Estremoz**	**145.01**	**101**	PKPbc		**PKPdf**		**12 38 06.7**	**+0.5**
COI	**Coimbra**	**145.51**	**98**	PKPdf		**PKPab**		**12 38 07.9**	**+0.5**
PMRV	**Marv??o**	**145.52**	**100**	*e*PKPbc		**PKPdf**		**12 38 07.6**	**+0.5**
PCBR	**Castelo Branco**	**145.76**	**100**	*e*PKPbc		**PKPbc**		**12 38 08.5**	**+0.5**
UOSS	**Minazif**	**145.78**	**209**	PKPdf		**PKPdf**		**12 38 06.7**	**-1.3**
MTE	**Manteigas**	**146.12**	**99**	*e*PKPab		**PKPab**		**12 38 10.6**	**+0.8**
RAYN	**Ar Rayn**	**146.45**	**191**	PKPdf		**PKPdf**		**12 38 09.9**	**+0.6**
POLO	**Lamas de Olo**	**146.66**	**97**	*e*PKPbc		**PKPbc**		**12 38 11.8**	**+1.0**
WMQ	**Urumqi**	**146.83**	**268**	*e*PKPbc		**PKPbc**		**12 38 10.7**	**-0.4**
WMQ				LR			LR		
comp=Z,120nm,22.5s									
MVO	**Moncorvo**	**146.94**	**98**	*e*PKPdf		**PKPdf**		**12 38 10.9**	**+1.4**
NIL	**Nilore**	**146.98**	**240**			**PKPbc**		**12 38 11.7**	**-0.2**
PAB	**San Pablo**	**147.25**	**103**	PKPbc		**PKPab**		**12 38 13.9**	**-0.4**
PBRG	**Braganca**	**147.53**	**98**	*e*PKPdf		**PKPbc**		**12 38 12.6**	**-0.5**
ESDC	**Sonseca Array**	**147.54**	**103**	PKPbc		**PKPbc**		**12 38 13.7**	**+0.4**
comp=Z,2.9nm,0.9s,baz=248,slow=2.6,SNR=20									
KSH	**Kashi**	**150.19**	**251**	PKPbc		**PKiKP**		**12 38 23.7**	**+2.8**
TARG	**Taragay, Kyrgy**	**150.82**	**256**	PKPdf		**PKPdf**		**12 38 14.3**	**-2.0**
NRN	**Naryn**	**151.57**	**254**	PKPbc		**PKiKP**		**12 38 24.1**	**+0.1**
MK31	**Makanchi Array**	**151.66**	**268**			**PKiKP**		**12 38 24.8**	**+1.2**
MKAR	**Makanchi Array**	**151.66**	**268**	PKPbc		**PKPbc**		**12 38 23.4**	**+0.3**
comp=Z,3.9nm,0.8s,baz=90,slow=0.4,SNR=26									
MKAR	**Makanchi Array**	**151.66**	**268**			**PKiKP**		**12 38 24.6**	**+1.0**
MKAR				PKPab		**PKPab**		**12 38 31.5**	**-0.5**
HRA	**Herat**	**152.46**	**226**	PKPbc		**PKPbc**		**12 38 25.1**	**-0.5**
GAR	**Garm**	**152.67**	**243**	PKPdf		**PKPdf**		**12 38 17.2**	**-1.5**
CHGR	**Chuyangaron**	**152.97**	**241**	PKPdf		**PKPdf**		**12 38 17.9**	**-1.2**
CHGR				PKPbc		**PKiKP**		**12 38 27.1**	**+0.5**
CHGR				PKPab		**PKPab**		**12 38 38.1**	**+0.3**
AAK	**Ala-Archa**	**153.21**	**254**	PKPab		**PKPab**		**12 38 38.4**	**-0.4**
comp=Z,3.4nm,0.7s,baz=137,slow=5.7,SNR=6.0									
AAK	**Ala-Archa**	**153.21**	**254**	PKPdf		**PKPdf**		**12 38 16.9**	**-2.6**
AAK				PKPab		**PKPab**		**12 38 38.4**	**-0.4**
ZAA0	**Zalesovo Array**	**153.96**	**284**	PKPab		**PKPab**		**12 38 40.0**	**-1.5**
ZALV	**Zalesovo Beam**	**153.96**	**284**	PKPab		**PKPab**		**12 38 39.1**	**-2.3**
comp=Z,2.6nm,0.6s,baz=111,slow=4.3,SNR=12									
ZALV	**Zalesovo Beam**	**153.96**	**284**	PKPab		**PKPab**		**12 38 39.4**	**-2.0**
KKAR	**Karatay Array**	**155.62**	**250**	PKPdf		**PKPdf**		**12 38 21.4**	**-1.3**
KKAR				PKPab		**PKPab**		**12 38 48.9**	**0.0**
BRTR	**Keskin Array B**	**162.67**	**167**	PKPab		**PKPab**		**12 39 19.0**	**-0.6**
comp=Z,0.9nm,0.8s,baz=151,slow=3.3,SNR=4.1									
CLL	**Collm**	**164.05**	**99**	*e*PKPab		**PKPab**		**12 39 25.0**	**-0.3**
comp=Z,10.0nm,1.3s									
CLL				L		L		14 01 00.0	
comp=Z,100nm,19.1s									
ABKAR	**Akbulak array**	**165.18**	**249**	PKPdf		**PKPdf**		**12 38 32.0**	**-0.9**
ABKAR				PKPab		**PKPab**		**12 39 29.9**	**-0.4**
AKTO	**Aktyubinsk**	**166.89**	**249**	PKPab		**PKPab**		**12 39 36.6**	**-1.3**
comp=Z,3.1nm,0.7s,baz=110,slow=6.3,SNR=12									
AKASG	**Malin Array Be**	**171.79**	**133**	PKPab		**PKPab**		**12 39 58.2**	**-1.3**
comp=Z,0.2nm,0.3s,baz=177,slow=1.7,SNR=4.8									

IDC 07 12:31:54.9±2.7, 6°04S×129°79E, h133km±39km, mb3.2/1, mbtmp3.7/5, Error ellipse: s-maj=67.8km s-min=16.9km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.34**	**16**	P			Pn	12 33 14.2	+1.6
6.9nm,0.2s,baz=186,slow=21,SNR=6.1									
SIJI				S			Sn	12 34 13.0	-0.3
21nm,0.3s,baz=271,slow=23,SNR=17									
FITZ	**Fitzroy Crossi**	**12.65**	**198**	P			Pn	12 34 49.6	-0.6
0.7nm,0.3s,baz=16,slow=9.3,SNR=17									
FITZ				S			Sn	12 37 02.8	-7.0
2.4nm,0.4s,baz=107,slow=21,SNR=8.1									
WRA	**Warramunga Arr**	**14.51**	**163**	P			Pn	12 35 13.1	-1.0
0.4nm,0.3s,baz=346,slow=14,SNR=32									
WRA				S			Sn	12 37 45.4	-9.4
1.4nm,0.6s,baz=343,slow=22,SNR=9.3									
ASAR	**Alice Springs**	**17.97**	**168**	P			Pn	12 35 55.8	-0.6
1.1nm,0.6s,baz=344,slow=10,SNR=25									
ASAR				S			S	12 39 08.9	-5.8
0.4nm,0.4s,baz=359,slow=24,SNR=6.0									
MKAR	**Makanchi Array**	**67.31**	**327**	P			P	12 42 35.4	-0.1
0.4nm,0.6s,baz=122,slow=7.3,SNR=2.4									
0.4nm,0.6s									

*NEIC **07** 13:20:09.4±1.7, 18°3N±0°2×68°53W±0°07, h156km±11km, Error ellipse: s-maj=23.6km s-min=8.8km az=191.0*
*RSPR **07** 13:20:09.5, 18°24N×68°55W, h154km±1km, MD3.5/16*
*OS

MTP	**Monte Pirata**	**2.84**	**93**	⇑	*e*P		**Pn**	**13 20 55.9**	**+0.9**
MTP	**Monte Pirata**	**2.84**	**93**		*e*S		**Sn**	**13 21 32.0**	**+1.9**
MTP	**Monte Pirata**	**2.84**	**93**				**Pn**	**13 20 55.9**	**+0.9**
MTP							**Sn**	**13 21 32.0**	**+1.9**
MTP	**Monte Pirata**	**2.84**	**93**		IAML			13 21 34.1	
	comp=N,168nm,0.4s								
MTP					IAML			13 21 34.9	
	comp=E,178nm,0.2s								
LOPE2	**Hotel El Peder**	**3.07**	**266**		*i* P		**Pn**	**13 20 59.2**	**+1.2**
LOPE2					*e*S		**Sn**	**13 21 35.3**	**+0.1**
LOPE2					IAML			13 21 41.0	
	comp=Z,76nm,0.4s								
CUPR	**Culebra, Puert**	**3.09**	**89**	⇑	*e*P		**Pn**	**13 20 57.5**	**-0.7**
CUPR	**Culebra, Puert**	**3.09**	**89**		*e*S		**Sn**	**13 21 33.7**	**-2.0**
CUPR	**Culebra, Puert**	**3.09**	**89**				**Pn**	**13 20 57.5**	**-0.7**
CUPR							**Sn**	**13 21 33.7**	**-2.0**
CUPR	**Culebra, Puert**	**3.09**	**89**		IAML			13 21 39.3	
	comp=N,89nm,0.6s								
STVI	**Saint Thomas**	**3.40**	**88**	⇑	*e*P		**Pn**	**13 21 00.7**	**-1.5**
STVI	**Saint Thomas**	**3.40**	**88**		*e*S		**Sn**	**13 21 42.5**	**-0.3**
STVI	**Saint Thomas**	**3.40**	**88**				**Pn**	**13 21 00.7**	**-1.5**
STVI							**Sn**	**13 21 42.5**	**-0.3**
STVI	**Saint Thomas**	**3.40**	**88**		IAML			13 21 49.0	
	comp=N,150nm,0.3s								
SJVI	**Gifft Hill Sch**	**3.57**	**89**	⇑	*e*P		**Pn**	**13 21 04.2**	**-0.3**
SJVI	**Gifft Hill Sch**	**3.57**	**89**		*e*S		**Sn**	**13 21 48.0**	**+1.1**
SJVI	**Gifft Hill Sch**	**3.57**	**89**				**Pn**	**13 21 04.2**	**-0.3**
SJVI							**Sn**	**13 21 48.0**	**+1.1**
PAPH	**Port-au-Prince**	**3.58**	**274**		*i* P		**Pn**	**13 21 05.3**	**+0.6**
PAPH					*e*S		**Sn**	**13 21 47.2**	**+0.1**
PAPH					IAML			13 21 52.7	
	comp=Z,20nm,0.3s								
CDVI	**St. Croix**	**3.62**	**98**		Pn		**Pn**	**13 21 04.6**	**-0.6**
GRTK	**Grand Turk**	**4.04**	**323**				**Pn**	**13 21 09.6**	**-0.9**
GRTK	**Grand Turk**	**4.04**	**323**		*i* P		**Pn**	**13 21 09.5**	**-1.1**
GRTK					*e*S		**Sn**	**13 21 55.7**	**-2.0**
GRTK					IAML			13 21 59.4	
	comp=Z,116nm,0.6s								
BAUV	**El Baul**	**9.30**	**177**				**Pn**	**13 22 20.3**	**-0.3**

*NEIC **07** 13:32:56.9±1.2, 24°.1S±0°.1×174°.8W±0°.1, h25km±6km, mb4.8/16, Error ellipse: s-maj=18.2km s-min=14.2km az=193.0*
*IDC **07** 13:32:57.7±0.8, 23°.98S×175°.45W, h0km, mb4.3/9, mbtmp4.3/10, ML5.4/1, MS3.8/19, Error ellipse: s-maj=34.9km s-min=20.4km az=150.0*
ISC 07 13:32:57.8±0.5, 24°.01S±0°.09×174°.75W±0°.07, h35km, n62, σ2§12/35, mb4.7/17, MS3.8/20, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.65**	**43**	Pn	**Pn**	**13 34 34.5**	**+1.4**
MSVF	**Nonsavu**	**9.18**	**312**	Pn	**Pn**	**13 35 06.9**	**-1.0**
	1.4nm,0.3s,baz=124,slow=14,SNR=12						
MSVF				LR	LR	13 38 02.2	
	comp=Z,544nm,21.2s,baz=125,slow=35						
	26nm,0.8s						
MSVF	**Nonsavu**	**9.18**	**312**	Pn	**Pn**	**13 35 08.3**	**+0.4**
AFI	**Afiamalu**	**10.43**	**16**	Pn	**Pn**	**13 35 22.1**	**-2.9**
	3.4nm,0.3s,baz=38,slow=15,SNR=9.8						
AFI				Sn	Sn	13 37 11.8	-9.0
	1.9nm,0.3s,baz=228,slow=19,SNR=1.7						
AFI	**Afiamalu**	**10.43**	**16**	Pn	**Pn**	**13 35 25.1**	**0.0**
RAR	**Rarotonga**	**14.11**	**82**	Pn	**P**	**13 36 19.6**	**-2.8**
	3.0nm,0.3s,baz=264,slow=8.9,SNR=9.5						
RAR				Sn	**Sn**	**13 38 50.8**	**+0.2**
	0.7nm,0.3s,baz=19,slow=21,SNR=1.4						
RAR				LR	LR	13 41 22.2	
	comp=Z,309nm,19.4s,baz=272,slow=34						
RAR	**Rarotonga**	**14.11**	**82**	Pn	**Pn**	**13 36 15.2**	**0.0**
BKZ	**Black Stump Fm**	**16.84**	**204**		**P**	**13 36 50.4**	**-2.3**
RPZ	**Rata Peaks**	**22.86**	**207**	LR	LR	13 47 04.4	
	comp=Z,499nm,18.5s,baz=22,slow=38						
TBI	**Tubuai**	**23.16**	**94**	*e*LR	LR	13 44 10.9	
	comp=Z,268nm,22.2s						
PAE	**Paea**	**24.34**	**80**	*e*T	T	14 04 11.8	
	1.6nm,0.3s						
PPT2	**Papeete2**	**24.36**	**80**	*e*LR	LR	13 44 35.3	
	comp=Z,282nm,21.8s						
PPT2	**Papeete2**	**24.36**	**80**	*e*T	T	14 04 16.9	
	2.3nm,0.4s						
PPT	**Papeete**	**24.37**	**80**	LR	LR	13 46 05.3	
	comp=Z,215nm,20.5s,baz=258,slow=32						
HNR	**Honiara**	**28.16**	**297**	LR	LR	13 49 06.4	
	comp=Z,1μm,18.7s,baz=152,slow=35						
CTA	**Charters Tower**	**36.28**	**268**	LR	LR	13 52 30.1	
	comp=Z,78nm,20.6s,baz=80,slow=33						
CTAO	**Charters Tower**	**36.28**	**268**	P	**P**	**13 39 56.9**	**-1.3**
CTAO				IAmb	IAmb	13 40 34.0	
	comp=Z,18nm,1.2s						
TAOE	**Nuku Hiva Isla**	**36.31**	**71**	*e*S	S	13 45 53.7	+16
	comp=Z,83nm,26.8s						
TAOE				*e*LR	LR	13 50 00.9	
	comp=Z,149nm,21.4s						
STKA	**Stephens Creek**	**39.15**	**248**	P	**P**	**13 40 22.8**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=272,slow=17,SNR=3.9						
STKA				LR	LR	13 55 02.4	
	comp=Z,130nm,18.8s,baz=33,slow=34						
	comp=Z,2.7nm,0.9s						
BBOO	**Buckleboo**	**43.82**	**247**	P	**P**	**13 40 60.0**	**-0.6**
BBOO				IAmb	IAmb	13 41 44.3	
	comp=Z,41nm,1.7s						
ASAR	**Alice Springs**	**46.75**	**259**	P	**P**	**13 41 24.1**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=92,slow=8.3,SNR=14						
ASAR				LR	LR	13 58 49.7	
	comp=Z,87nm,20.7s,baz=89,slow=34						
	comp=Z,2.8nm,0.8s						
WR0	**Warramunga Arr**	**47.00**	**265**	P	**P**	**13 41 25.6**	**-0.4**
WR0				IAmb	IAmb	13 41 27.6	
	comp=Z,7.0nm,0.9s						
WB2	**Warramunga Arr**	**47.17**	**265**	P	**P**	**13 41 25.9**	**-1.4**
WB2				IAmb	IAmb	13 41 28.7	
	comp=Z,9.8nm,1.0s						
WRAB	**Tennant Creek**	**47.18**	**265**	P	**P**	**13 41 25.8**	**-1.5**
WRAB				IAmb	IAmb	13 41 28.7	
	comp=Z,6.7nm,0.8s						
WB0	**Warramunga Arr**	**47.18**	**265**	P	**P**	**13 41 26.1**	**-1.2**
WB0				IAmb	IAmb	13 41 29.1	
	comp=Z,9.4nm,0.8s						
WRA	**Warramunga Arr**	**47.19**	**265**	P	**P**	**13 41 25.6**	**-1.8**
	comp=Z,6.1nm,0.8s,baz=97,slow=8.5,SNR=37						
WRA				LR	LR	14 01 13.4	
	comp=Z,135nm,18.4s,baz=129,slow=36						
	comp=Z,6.1nm,0.8s						
WRA	**Warramunga Arr**	**47.19**	**265**	P	**P**	**13 41 26.0**	**-1.4**
FORT	**Forrest**	**50.77**	**249**	P	**P**	**13 41 55.3**	**+0.6**
MTN	**Manton Dam**	**52.26**	**272**	P	**P**	**13 42 05.0**	**-1.0**
KNRA	**Kununurra**	**53.49**	**268**	P	**P**	**13 42 14.6**	**-0.4**
VNDA	**Vanda**	**54.73**	**186**	LR	LR	14 06 04.3	
	comp=Z,30nm,18.0s,baz=348,slow=36						
VNDA	**Vanda**	**54.73**	**186**	P	**P**	**13 42 23.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**55.60**	**264**	P	**P**	**13 42 30.2**	**-0.2**
FITZ				IAmb	IAmb	13 42 51.4	
	comp=Z,11nm,1.4s						
RPN	**Rapa Nui**	**58.49**	**108**	LR	LR	14 05 48.0	
	comp=Z,17nm,18.0s,baz=268,slow=33						
MORW	**Morawa**	**61.33**	**249**	P	**P**	**13 43 09.6**	**-0.7**
QSPA	**South Pole Qui**	**66.08**	**180**	LR	LR	14 11 52.0	
	comp=Z,76nm,18.1s,baz=34,slow=35						
QSPA	**South Pole Qui**	**66.08**	**180**	P	**P**	**13 43 41.3**	**+0.1**
QSPA				IAmb	IAmb	13 44 05.2	
	comp=Z,7.1nm,1.0s						
LPIG	**La Paz**	**78.68**	**57**	LR	LR	14 13 42.7	
	comp=Z,92nm,19.1s,baz=244,slow=31						
MAW	**Mawson**	**79.28**	**199**	P	P	13 45 04.3	+5.0
	comp=Z,4.2nm,0.9s,baz=108,slow=5.3,SNR=9.7						
	comp=Z,4.2nm,0.9s						
KSRS	**Korea Array**	**81.50**	**317**	LR	LR	14 18 14.8	
	comp=Z,16nm,19.8s,baz=305,slow=34						
NVAR	**Mina Array Bea**	**81.57**	**41**	P	P	13 45 20.1	+7.8
	comp=Z,1.8nm,0.9s,baz=221,slow=9.1,SNR=9.7						
	comp=Z,1.8nm,0.9s						
KDAK	**Kodiak Island**	**83.57**	**12**	LR	LR	14 15 53.6	
	comp=Z,104nm,21.4s,baz=227,slow=31						
TROLL	**Troll, Antarti**	**84.22**	**179**	P	P	13 45 32.6	+7.2
SNAA	**Sanae**	**84.41**	**177**	P	P	13 45 33.1	+6.7
SNAA	**Sanae**	**84.41**	**177**	P	**P**	**13 45 26.5**	**+0.1**
VNA3	**Neumayer Olymp**	**84.44**	**175**	P	P	13 45 33.0	+6.6
PLCA	**Paso Flores**	**84.69**	**132**	LR	LR	14 22 31.3	
	comp=Z,33nm,18.2s,baz=196,slow=35						
VNA2	**Neumayer--Watz**	**84.91**	**176**	P	P	13 45 35.3	+6.5
	baz=201,slow=3.0						
VNA1	**Neumayer--Stat**	**85.12**	**176**	P	P	13 45 36.9	+7.1
TXAR	**Lajitas Array**	**86.46**	**56**	P	P	13 45 46.2	+8.9
	comp=Z,0.8nm,0.9s,baz=212,slow=4.4,SNR=3.7						
	comp=Z,0.8nm,0.9s						
CMIG	**Matias Romero**	**87.95**	**70**	LR	LR	14 16 07.6	
	comp=Z,39nm,20.5s,baz=212,slow=29						
PDAR	**Pinedale Array**	**89.49**	**42**	P	P	13 45 58.2	+6.7
	comp=Z,0.8nm,0.8s,baz=193,slow=6.1,SNR=6.2						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**91.09**	**12**	P	P	13 46 03.0	+4.8
	comp=Z,0.8nm,1.0s,baz=219,slow=5.5,SNR=5.2						
	comp=Z,0.8nm,1.0s						
NNA	**Nana**	**92.27**	**104**	LR	LR	14 18 37.8	
	comp=Z,71nm,20.4s,baz=228,slow=30						
XAN	**Xi'an**	**92.63**	**306**	P	**P**	**13 46 09.7**	**+3.5**
ATAH	**Atahualpa**	**92.90**	**99**	LR	LR	14 18 47.3	
	comp=Z,71nm,21.6s,baz=259,slow=29						
CMAR	**Chiang Mai Arr**	**94.10**	**288**	P	P	13 46 17.6	+4.4
	comp=Z,4.5nm,1.0s,baz=126,slow=3.0,SNR=22						
	comp=Z,4.5nm,1.0s						
AKASG	**Malin Array Be**	**147.52**	**331**	PKPbc	**PKPab**	**13 52 41.2**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=45,slow=2.8,SNR=11						
BRTR	**Keskin Array B**	**151.40**	**310**	PKPbc	**PKiKP**	**13 52 51.1**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=113,slow=2.8,SNR=6.6						
CLL	**Collm**	**152.10**	**350**	*i* PKPbc	**PKPab**	**13 52 54.6**	**-4.2**
	comp=Z,6.0nm,0.9s						
CLL				*e*PKPab	**pPKPab**	**13 53 04.0**	**-3.4**
CLL				*ep*PKPab	**sPKPab**	**13 53 09.0**	**-1.5**
GERES	**GERESS Array B**	**154.33**	**347**	PKPab	**PKPab**	**13 53 13.9**	**+5.5**
	comp=Z,0.4nm,0.5s,baz=336,slow=2.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**168.69**	**162**	PKP	**PKPdf**	**13 53 06.6**	**+4.7**
	comp=Z,0.6nm,1.1s,baz=135,slow=0.4,SNR=3.5						

*SOME **07** 13:39:12.5, 42°.37N×72°.40E, h5km*
*KRNET **07** 13:39:13.9±0.1, 42°.20N×72°.38E, h30km, mb2.4*
*ISU **07** 13:39:14, 42°.26N×72°.29E, h5km*
*KNET **07** 13:39:14.8±0.5, 42°.39N×72°.54E, h0km±2km, ml1.9, Error ellipse: s-maj=2.9km s-min=2.6km az=42.0*
*NNC **07** 13:39:14.3±1.3, 42°.45N×72°.43E, h0km, mb2.8, mpv2.7, Error ellipse: s-maj=17.6km s-min=4.0km az=2.0*
ISC 07 13:39:12.6±1.1, 42°.34N±0°.04×72°.38E±0°.02, h10km±13km, n28, σ1§08/49, 19C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.62**	**210**	⇑ *e*P	**Pg**	**13 39 24.2**	**-0.5**
	baz=17						
ARK				⇑ *e*S	**Sg**	**13 39 31.7**	**-1.2**
	baz=17						
AML	**Almayashu**	**1.00**	**102**	⇑ P	**Pg**	**13 39 31.6**	**-0.2**
	4.4nm,0.2s,SNR=10						
AML				⇑ S	**Sb**	**13 39 45.5**	**-0.1**
	6.2nm,0.1s						
TRKS	**Terek-Say**	**1.23**	**229**	⇓ *e*P	**Pn**	**13 39 35.5**	**-0.6**
	baz=31						
TRKS				⇓ *e*S	**Sb**	**13 39 51.1**	**-1.0**
	baz=31						
ARLS	**Aral**	**1.52**	**108**	⇓ *e*P	**Pb**	**13 39 41.1**	**0.0**
	baz=3.0						
ARLS				⇓ *e*S	**Sb**	**13 40 00.6**	**+0.1**
	baz=3.0						
KK31	**Karatay Array**	**1.58**	**300**	⇑ P	**Pb**	**13 39 42.5**	**+0.5**
	1.5nm,0.2s,baz=120,slow=17,SNR=58						
KK31				⇑ S	**Sg**	**13 40 04.6**	**+1.2**
	6.1nm,0.2s,baz=123,slow=28,SNR=14						
UCH	**Uchtor**	**1.59**	**93**	⇑ P	**Pg**	**13 39 43.0**	**-0.1**
	1.1nm,0.1s,SNR=8.2						
UCH				⇑ S	**Sg**	**13 40 05.6**	**+2.0**
	5.3nm,0.2s						
UCH	**Uchtor**	**1.59**	**93**	⇑ *e*P	**Pb**	**13 39 42.7**	**+0.4**
	baz=88						
UCH				⇑ *e*S	**Sg**	**13 40 03.3**	**-0.4**
	baz=88						
AAK	**Ala-Archa**	**1.59**	**78**	⇓ P	**Pg**	**13 39 43.3**	**+0.2**
	3.5nm,0.2s,SNR=5.3						
AAK				⇑ S	**Sg**	**13 40 05.0**	**+1.2**
AAK	**Ala-Archa**	**1.59**	**78**	⇑ *e*P	**Pb**	**13 39 42.8**	**+0.5**
	baz=74						
AAK				⇑ *e*S	**Sg**	**13 40 04.1**	**+0.3**
	baz=74						
USP	**Ospenovka**	**1.81**	**58**	⇑ P	**Pb**	**13 39 47.0**	**+1.0**
	12nm,0.3s,SNR=6.6						
USP				⇓ S	**Sg**	**13 40 11.6**	**+0.6**
	21nm,0.2s						
USP	**Ospenovka**	**1.81**	**58**	⇓ *e*P	**Pb**	**13 39 46.6**	**+0.6**
	baz=55						
USP				⇓ *e*S	**Sg**	**13 40 10.3**	**-0.7**
	baz=55						
CHMS	**Chumysh**	**1.87**	**68**	⇓ *e*P	**Pb**	**13 39 46.9**	**0.0**
	baz=65						
CHMS				⇓ *e*S	**Sb**	**13 40 11.1**	**+0.7**
	baz=65						
CHMS	**Chumysh**	**1.87**	**68**	⇓ Pg	**Pb**	**13 39 47.8**	**+0.8**
	2.7nm,0.6s						
CHMS				⇑ Lg	Lg	13 40 12.2	
	8.2nm,0.6s						
KBK	**Karagaybulak**	**1.92**	**80**	⇓ P	**Pb**	**13 39 48.9**	**+1.0**
	2.9nm,0.1s						
KBK				⇑ S	**Sg**	**13 40 15.6**	**+1.1**
	11nm,0.2s						
KBK	**Karagaybulak**	**1.92**	**80**	⇑ *e*P	**Pb**	**13 39 47.4**	**-0.6**
	baz=76						
KBK				⇑ *e*S	**Sb**	**13 40 12.2**	**+0.1**
	baz=76						
CHMG	**Chimgan**	**1.94**	**247**	P	**Pg**	**13 39 50.3**	**+0.5**
CHMG				S	**Sg**	**13 40 15.3**	**+0.4**
SGDS	**Sogindy**	**1.99**	**55**	*e*P	**Pb**	**13 39 49.8**	**+0.7**
	5.3nm,0.4s						
SGDS				*e*S	**Sg**	**13 40 17.2**	**+0.5**
	13nm,0.3s						
SGDS	**Sogindy**	**1.99**	**55**	Pg	**Pb**	**13 39 49.8**	**+0.7**
	5.3nm,0.4s						
SGDS				Lg	Lg	13 40 17.2	
	13nm,0.3s						
CHMI	**Chimion**	**2.17**	**198**	P	**Pg**	**13 39 54.5**	**+0.4**
CHMI				S	**Sg**	**13 40 22.6**	**+0.4**
TKM2	**Tokmak 2**	**2.44**	**75**	⇑ P	**Pb**	**13 39 57.4**	**+0.6**
	3.1nm,0.3s,SNR=5.1						
TKM2				⇓ S	**Sg**	**13 40 30.0**	**-1.2**
	8.0nm,0.2s						
TKM2	**Tokmak 2**	**2.44**	**75**	⇓ Pg	**Pb**	**13 39 57.2**	**+0.4**
	1.5nm,0.4s						
TKM2				⇓ Lg	Lg	13 40 30.0	
	5.7nm,0.4s						
KST	**Kastek**	**2.73**	**74**	*e*P	**Pb**	**13 40 02.3**	**+0.6**
	1.4nm,0.5s						
KST				*e*S	**Sg**	**13 40 38.5**	**-2.0**
	9.1nm,0.5s						
KST	**Kastek**	**2.73**	**74**	Pg	**Pb**	**13 40 02.3**	**+0.6**
	1.4nm,0.5s						
KST				Lg	Lg	13 40 38.5	
	9.1nm,0.5s						
BTLS	**Baital**	**2.96**	**24**	Pg	**Pb**	**13 40 03.7**	**-1.8**
	0.5nm,0.3s						
BTLS				Lg	Lg	13 40 40.6	
	2.2nm,0.6s						
KUU	**Kurty**	**3.29**	**60**	*e*P	**Pb**	**13 40 12.4**	**+1.3**
	0.7nm,0.2s						
KUU				*e*S	**Sg**	**13 40 55.7**	**-2.5**
	9.0nm,0.5s						
KUU	**Kurty**	**3.29**	**60**	Pg	**Pb**	**13 40 12.4**	**+1.3**
	0.7nm,0.2s						
KUU				Lg	Lg	13 40 55.7	
	9.0nm,0.5s						
CHKK	**Chushkaly**	**3.70**	**64**	*e*P	**Pb**	**13 40 19.9**	**+1.8**
	0.5nm,0.2s						
CHKK				*e*S	**Sg**	**13 41 08.6**	**-2.8**
	2.7nm,0.2s						
CHKK	**Chushkaly**	**3.70**	**64**	Pg	**Pb**	**13 40 19.9**	**+1.8**
	0.5nm,0.2s						
CHKK				Lg	Lg	13 41 08.6	
	2.7nm,0.2s						

*ISU **07** 14:01:14, 39°.70N×73°.93E, h5km*
*KRNET **07** 14:01:14.9±0.1, 39°.48N×73°.73E, mb3.2*
*SOME **07** 14:01:18.4, 39°.62N×73°.90E, h5km*
*NNC **07** 14:01:20.4±0.9, 39°.67N×73°.80E, h1km±8km, mb3.5, mpv3.1, Error ellipse: s-maj=6.8km s-min=4.3km az=159.0*
ISC 07 14:01:16.1±1.9, 39°.31N±0°.07×73°.57E±0°.04, h9km±12km, n43, σ1§52/71, 18C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.35**	**334**	⇑ *e*P	**Pn**	**14 01 39.2**	**-2.0**
	baz=26						
OHH				⇑ *e*S	**Sb**	**14 01 56.9**	**-2.1**
	baz=26						
OHH	**Osh**	**1.35**	**334**	P	**Pn**	**14 01 38.8**	**-2.4**
OHH				S	**Sb**	**14 01 56.6**	**-2.4**
TSTA	**Tashata**	**1.52**	**327**	P	Pg	14 02 03.1	+18
FRG	**Fergana**	**1.73**	**308**	P	**Pg**	**14 01 48.9**	**-0.4**
FRG				S	**Sg**	**14 02 13.1**	**+1.3**
CHMI	**Chimion**	**1.84**	**302**	P	**Pg**	**14 01 51.3**	**-0.1**
CHMI				S	**Sg**	**14 02 17.6**	**+2.3**
BTK	**Batken**	**2.25**	**290**	⇑ *e*P	**Pb**	**14 01 56.4**	**-0.5**
	baz=85						
BTK				⇑ *e*S	**Sg**	**14 02 26.9**	**-1.4**
	baz=85						
GAR	**Garm**	**2.54**	**264**	⇑ *e*P	**Pb**	**14 02 01.7**	**-0.3**
	baz=61						
GAR				⇑ *e*S	**Sb**	**14 02 35.7**	**+2.2**
	baz=61						
AML	**Almayashu**	**2.82**	**2**	P	**Pn**	**14 02 02.9**	**+1.3**
	SNR=13						
NRN	**Naryn**	**2.82**	**41**	⇑ *e*P	**Pn**	**14 02 00.2**	**-1.4**
	baz=41						
NRN				⇑ *e*S	**Sn**	**14 02 33.2**	**-2.7**
	baz=41						
TRKS	**Terek-Say**	**2.89**	**321**	⇑ *e*P	**Pn**	**14 02 02.9**	**+0.5**
	baz=16						
TRKS				⇑ *e*S	**Sn**	**14 02 38.2**	**+0.9**
	baz=16						
UCH	**Uchtor**	**3.00**	**14**	P	**Pn**	**14 02 05.9**	**+1.7**
	SNR=21						
UCH	**Uchtor**	**3.00**	**14**	⇑ *e*P	**Pn**	**14 02 03.4**	**-0.8**
	baz=12						
UCH				⇑ *e*S	**Sn**	**14 02 38.9**	**-1.6**
	baz=12						
EKS2	**Erkin-Say**	**3.35**	**3**	P	**Pn**	**14 02 10.8**	**+2.1**
	SNR=6.6						
EKS2	**Erkin-Say**	**3.35**	**3**	⇑ *e*P	**Pn**	**14 02 08.5**	**-0.2**
	baz=1.0						
EKS2				⇑ *e*S	**Sn**	**14 02 47.3**	**-1.4**
	baz=1.0						
AAK	**Ala-Archa**	**3.39**	**12**	P	**Pn**	**14 02 12.5**	**+3.1**
	SNR=7.2						
ULHL	**Ulahol**	**3.56**	**34**	P	**Pb**	**14 02 18.5**	**-0.9**
	SNR=5.2						
CHMS	**Chumysh**	**3.79**	**13**	⇑ Pg	**Pb**	**14 02 22.5**	**-0.7**
	2.2nm,0.5s						
CHMS				⇑ Lg	Lg	14 03 09.3	
	12nm,0.8s						
IUG	**Iuzhnay**	**3.90**	**318**	*e*P	**Pg**	**14 02 29.4**	**-1.4**
	93nm,0.5s						
IUG				*e*S	**Sg**	**14 03 20.2**	**-1.2**
	18nm,0.6s						
IUG	**Iuzhnay**	**3.90**	**318**	Pg	**Pg**	**14 02 29.4**	**-1.4**
	93nm,0.5s						
IUG				Lg	Lg	14 03 20.2	
	18nm,0.6s						
TKM2	**Tokmak 2**	**3.92**	**22**	⇑ Pg	**Pb**	**14 02 24.0**	**-1.5**
	1.8nm,0.5s						
TKM2				⇓ Lg	Lg	14 03 12.2	
	4.1nm,0.5s						
KST	**Kastek**	**4.14**	**25**	*e*P	**Pb**	**14 02 29.4**	**+0.2**
	2.9nm,1.0s						
KST				*e*S	**Sb**	**14 03 20.7**	**+1.3**
	8.7nm,1.1s						
KST	**Kastek**	**4.14**	**25**	Pg	**Pb**	**14 02 29.4**	**+0.2**
	2.9nm,1.0s						
KST				Pg	**Pb**	**14 02 29.4**	**+0.2**
	2.9nm,1.0s						
KST				Lg	Lg	14 03 20.7	
	8.7nm,1.1s						
KST				Lg	Lg	14 03 20.7	
	8.7nm,1.1s						
SGDS	**Sogindy**	**4.21**	**11**	*e*P	**Pb**	**14 02 29.6**	**-0.8**
	3.8nm,0.6s						
SGDS				*e*S	**Sb**	**14 03 20.8**	**-0.6**
	2.8nm,1.0s						
SGDS	**Sogindy**	**4.21**	**11**	Pg	**Pb**	**14 02 29.6**	**-0.8**
	3.8nm,0.6s						
SGDS				Pg	**Pb**	**14 02 29.6**	**-0.8**
	3.8nm,0.6s						
SGDS				Lg	Lg	14 03 20.8	
	2.8nm,1.0s						
SGDS				Lg	Lg	14 03 20.8	
	2.8nm,1.0s						
MTBS	**Maitube**	**4.38**	**29**	*e*P	**Pb**	**14 02 33.3**	**0.0**
	4.8nm,1.2s						
MTBS				*e*S	**Sb**	**14 03 27.2**	**+0.9**
	5.6nm,0.5s						
MTBS	**Maitube**	**4.38**	**29**	Pg	**Pb**	**14 02 33.3**	**0.0**
	4.8nm,1.2s						
MTBS				Pg	**Pb**	**14 02 33.3**	**0.0**
	4.8nm,1.2s						
MTBS				Lg	Lg	14 03 27.2	
	5.6nm,0.5s						
MTBS				Lg	Lg	14 03 27.2	
	5.6nm,0.5s						
KK31	**Karatay Array**	**4.43**	**330**	⇓ Pn	**Pn**	**14 02 26.0**	**+2.5**
	0.3nm,0.2s,baz=129,slow=12,SNR=24						
KK31				⇑ Pg	**Pb**	**14 02 36.9**	**+2.8**
	1.0nm,0.3s,baz=144,slow=16,SNR=2.9						
KK31				⇓ Lg	Lg	14 03 34.2	
	1.7nm,0.4s,baz=164,slow=29,SNR=5.8						
TNSS	**Tian-Shan**	**4.51**	**33**	*e*P	**Pb**	**14 02 34.8**	**-0.9**
	2.3nm,0.3s						
TNSS				*e*S	**Sb**	**14 03 29.6**	**-0.7**
	2.4nm,1.1s						
TNSS	**Tian-Shan**	**4.51**	**33**	Pg	**Pb**	**14 02 34.7**	**-0.9**
	2.3nm,0.3s						
TNSS				Pg	**Pb**	**

3.3nm,1.4s
ARXS eS **Sb** 14 04 08.5 +0.3
4.8nm,1.1s
ARXS Arharly 5.84 32 Pg **Pb** 14 02 57.5 -0.6
3.3nm,1.4s
ARXS Lg Lg 14 04 08.5
4.8nm,1.1s
BLB Baldybastay 6.03 36 eP **Pb** 14 03 01.8 +0.4
3.9nm,1.2s
BLB eS **Sb** 14 04 15.8 +2.1
2.4nm,0.7s
BLB Baldybastay 6.03 36 Pg **Pb** 14 03 01.8 +0.4
3.9nm,1.2s
BLB Lg Lg 14 04 15.8
2.4nm,0.7s

IDC 07 14:09:55.4±2.2, 5°44S×130°39E, h340km±37km, mb2.7/1, mbtmp3.9/4, Error ellipse: s-maj=86.1km s-min=15.5km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.63**	**11**	P	Pn	14 11 11.4	+0.9
	6.7nm,0.3s,baz=183,slow=22,SNR=23						
SIJI				S	S	14 12 10.7	-0.5
	46nm,0.2s,baz=79,slow=23,SNR=37						
WRA	**Warramunga Arr**	**14.91**	**165**	P	P	14 13 08.8	-0.8
	0.8nm,0.3s,baz=343,slow=11,SNR=8.1						
WRA				S	S	14 15 52.0	+1.3
	0.9nm,0.6s,baz=342,slow=19,SNR=3.7						
ASAR	**Alice Springs**	**18.43**	**170**	P	P	14 13 48.9	+1.3
	5.1nm,0.5s,baz=349,slow=12,SNR=64						
ASAR				S	S	14 17 00.0	-0.2
	2.3nm,0.9s,baz=348,slow=21,SNR=9.7						
MKAR	**Makanchi Array**	**67.15**	**326**	P	P	14 20 13.5	0.0
	0.1nm,0.3s,baz=126,slow=7.5,SNR=2.0						
	0.1nm,0.3s						

*NOU **07** 14:52:20.0, 37°21S×179°79E, h0km, MLv4.4/9, Off E. Coast of N. Island, N.Z.*
*WEL **07** 14:52:29.7±1.6, 37°S±5°×17°9E±°, h23km±8km, M3.6/52, ML3.9/65, MLv3.6/52, Error ellipse: s-maj=0.0km s-min=0.0km az=71.8*
ISC 07 14:52:27.1±2.6, 37°28S±0°07×179°2E±0°1, h15km±12km, n101, σ0°86/105, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.78**	**248**	P	**Pg**	**14 52 42.8**	**+0.4**
MXZ				S	**Sg**	**14 52 50.6**	**-2.1**
MXZ	**Matakaoa Point**	**0.78**	**248**	P	**Pg**	**14 52 42.9**	**+0.5**
WMGZ	**Waiomatatini S**	**0.84**	**230**	P	**Pn**	**14 52 45.9**	**+1.5**
WMGZ				S	**Sb**	**14 52 57.0**	**+2.4**
PKGZ	**Pakihiroa**	**1.10**	**236**	P	**Pg**	**14 52 48.9**	**+0.6**
PKGZ				S	**Sb**	**14 53 01.4**	**-0.6**
PUZ	**Puketiti**	**1.10**	**224**	P	**Pg**	**14 52 49.4**	**+0.9**
PUZ				S	**Sb**	**14 53 03.1**	**+0.9**
HAZ	**Te Kaha**	**1.24**	**247**	P	**Pn**	**14 52 49.8**	**-0.2**
HAZ				S	**Sn**	**14 53 04.6**	**-1.8**
TWGZ	**Tauwhareparae**	**1.33**	**227**	P	**Pb**	**14 52 52.5**	**+0.6**
RUGZ	**Raukumara Rang**	**1.41**	**240**	P	**Pb**	**14 52 53.4**	**+0.2**
CNGZ	**Carnagh Station**	**1.45**	**213**	P	**Pg**	**14 52 55.1**	**+0.1**
TKGZ	**Te Karaka**	**1.59**	**223**	P	**Pn**	**14 52 55.6**	**+0.8**
WIZ	**White Island**	**1.64**	**261**	P	**Pn**	**14 52 56.0**	**+0.6**
MWZ	**Matawai**	**1.71**	**231**	P	**Pn**	**14 52 57.1**	**+0.6**
RIGZ	**Rimuhau**	**1.84**	**218**	P	**Pn**	**14 52 59.1**	**+0.9**
WHRZ	**Whale Island**	**1.88**	**251**	P	**Pn**	**14 52 59.1**	**+0.4**
RAGZ	**Rawiri**	**1.88**	**229**	P	**Pn**	**14 52 59.7**	**+0.9**
URZ	**Urewera**	**1.94**	**239**	P	**Pn**	**14 53 00.1**	**+0.6**
URZ	**Urewera**	**1.94**	**239**	P	**Pn**	**14 53 00.2**	**+0.6**
SNGZ	**Shannon Statio**	**2.12**	**224**	P	**Pn**	**14 53 02.5**	**+0.5**
KNZ	**Kokohu**	**2.13**	**215**	P	**Pn**	**14 53 02.6**	**+0.4**
EDRZ	**Edgecumbe**	**2.14**	**246**	P	**Pn**	**14 53 02.9**	**+0.5**
MHGZ	**Mahia Peninsul**	**2.14**	**209**	P	**Pn**	**14 53 03.4**	**+1.0**
MARZ	**Manawahe**	**2.14**	**250**	P	**Pn**	**14 53 02.8**	**+0.4**
OPRZ	**Ohinepanea**	**2.19**	**254**	P	**Pn**	**14 53 02.6**	**-0.5**
RTZ	**Ruatahuna**	**2.22**	**232**	P	**Pn**	**14 53 04.1**	**+0.6**
MUGZ	**Murupara**	**2.28**	**238**	P	**Pn**	**14 53 04.7**	**+0.4**
RAHZ	**Arahi**	**2.35**	**225**	P	**Pn**	**14 53 06.1**	**+0.8**
WHHZ	**Waihua**	**2.39**	**220**	P	**Pn**	**14 53 06.5**	**+0.8**
RRRZ	**Republican Roa**	**2.39**	**243**	P	**Pn**	**14 53 06.3**	**+0.5**
TGRZ	**Tauranga**	**2.40**	**258**	P	**Pn**	**14 53 06.8**	**-0.1**
OMRZ	**Omania**	**2.41**	**249**	P	**Pn**	**14 53 06.7**	**+0.7**
MTHZ	**Maungataniwha**	**2.45**	**229**	P	**Pn**	**14 53 07.4**	**+0.8**
HLRZ	**Highlands Stat**	**2.48**	**246**	P	**Pn**	**14 53 07.6**	**+0.6**
KARZ	**Kaharoa**	**2.48**	**252**	P	**Pn**	**14 53 07.0**	**0.0**
NGRZ	**Ngongotaha**	**2.55**	**250**	P	**Pn**	**14 53 06.6**	**-1.3**
PRRZ	**Plateau Road**	**2.55**	**241**	P	**Pn**	**14 53 08.1**	**+0.1**
HSRZ	**Hossack Road**	**2.58**	**245**	P	**Pn**	**14 53 08.6**	**+0.3**
HRRZ	**Handcock Road**	**2.58**	**244**	P	**Pn**	**14 53 08.6**	**+0.2**
ALRZ	**Allen Road**	**2.62**	**240**	P	**Pn**	**14 53 09.3**	**+0.4**
NMHZ	**Naumai**	**2.63**	**226**	P	**Pn**	**14 53 09.9**	**+0.7**
ARHZ	**Aropaoanui**	**2.65**	**221**	P	**Pn**	**14 53 09.8**	**+0.5**
MRHZ	**Matea Rd**	**2.71**	**234**	P	**Pn**	**14 53 10.9**	**+0.7**
WPRZ	**Whakapapatarin**	**2.72**	**242**	P	**Pn**	**14 53 10.7**	**+0.4**
KUZ	**Kuaotunu**	**2.85**	**280**	P	**Pn**	**14 53 10.8**	**-1.3**
KUZ				S	Sn	14 53 38.9	-7.3
KUZ	**Kuaotunu**	**2.85**	**280**	P	**Pn**	**14 53 11.0**	**-1.1**
BKZ	**Black Stump Fm**	**2.86**	**229**	P	**Pn**	**14 53 12.4**	**+0.1**
BKZ	**Black Stump Fm**	**2.86**	**228**	P	**Pn**	**14 53 12.7**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.92**	**215**	P	**Pn**	**14 53 12.9**	**-0.1**
MCHZ	**McNeill Hill**	**2.94**	**222**	P	**Pn**	**14 53 13.6**	**+0.3**
KUTZ	**Kaahu Road**	**2.95**	**245**	P	**Pn**	**14 53 14.1**	**+0.6**
TOZ	**Tahuroa Road**	**2.99**	**260**	P	**Pn**	**14 53 13.8**	**-0.3**
KWHZ	**Kaweka Forest**	**3.07**	**225**	P	**Pn**	**14 53 15.3**	**+0.1**
KAHZ	**Kahuranaki**	**3.12**	**215**	P	**Pn**	**14 53 15.4**	**-0.4**
RATZ	**Rangitukua**	**3.15**	**239**	P	**Pn**	**14 53 17.1**	**+0.8**
GRZ	**Great Barrier**	**3.19**	**288**	P	**Pn**	**14 53 16.5**	**-0.3**
MKAZ	**Moumakai**	**3.25**	**272**	P	**Pn**	**14 53 17.0**	**-0.6**
KRHZ	**Kereru**	**3.26**	**223**	P	**Pn**	**14 53 17.1**	**-0.6**
WIAZ	**Waiheke Island**	**3.31**	**277**	P	**Pn**	**14 53 17.8**	**-0.5**
PXZ	**Pawanui**	**3.31**	**213**	P	**Pn**	**14 53 17.5**	**-0.9**
BHHZ	**Black Hill Sta**	**3.33**	**227**	P	**Pn**	**14 53 18.6**	**-0.1**
TMVZ	**Te Maari**	**3.33**	**235**	P	**Pn**	**14 53 18.9**	**+0.2**
ETVZ	**East Tongariro**	**3.33**	**235**	P	**Pn**	**14 53 18.9**	**+0.1**
NTVZ	**North Tongarir**	**3.33**	**236**	P	**Pn**	**14 53 19.3**	**+0.4**
OTVZ	**Oturere**	**3.38**	**235**	P	**Pn**	**14 53 19.6**	**+0.1**
NNVZ	**North Ngauruho**	**3.39**	**236**	P	**Pn**	**14 53 20.1**	**+0.4**
WTVZ	**West Tongariro**	**3.40**	**236**	P	**Pn**	**14 53 20.2**	**+0.4**
SNVZ	**South Ngauruho**	**3.41**	**235**	P	**Pn**	**14 53 19.9**	**0.0**
NGZ	**Ngauruhoe**	**3.43**	**235**	P	**Pn**	**14 53 20.3**	**+0.1**
TUVZ	**Tukino**	**3.44**	**234**	P	**Pn**	**14 53 20.4**	**+0.1**
ETAZ	**East Tamaki Re**	**3.45**	**274**	P	**Pn**	**14 53 20.2**	**-0.1**
MOVZ	**Moawhango**	**3.46**	**231**	P	**Pn**	**14 53 20.1**	**-0.5**
TWVZ	**Taurewa**	**3.48**	**238**	P	**Pn**	**14 53 21.5**	**+0.7**
MBAZ	**Motutapu North**	**3.50**	**277**	P	**Pn**	**14 53 20.9**	**-0.1**
FWVZ	**Far West T-bar**	**3.50**	**234**	P	**Pn**	**14 53 21.3**	**+0.1**
WNVZ	**Wahianoa**	**3.51**	**233**	P	**Pn**	**14 53 21.0**	**-0.4**
WPHZ	**Waipukurau**	**3.54**	**217**	P	**Pn**	**14 53 20.8**	**-0.8**
PNHZ	**Pukenui**	**3.54**	**221**	P	**Pn**	**14 53 20.6**	**-1.1**
ABAZ	**Army Bay**	**3.58**	**280**	P	**Pn**	**14 53 22.5**	**+0.3**
PRHZ	**Porangahau**	**3.61**	**213**	P	**Pn**	**14 53 21.5**	**-1.0**
HBAZ	**Herne Bay Bore**	**3.62**	**275**	P	**Pn**	**14 53 23.4**	**+0.8**
MTVZ	**Mangateitei**	**3.62**	**233**	P	**Pn**	**14 53 23.0**	**+0.1**
PKVZ	**Pokaka**	**3.65**	**235**	P	**Pn**	**14 53 23.4**	**+0.2**
HIZ	**Hauiti**	**3.67**	**249**	P	**Pn**	**14 53 24.7**	**+1.3**
HIZ	**Hauiti**	**3.67**	**249**	P	**Pn**	**14 53 24.6**	**+1.3**
RVAZ	**Riverhead Bore**	**3.75**	**276**	P	**Pn**	**14 53 24.6**	**+0.2**
TSZ	**Takapari Road**	**3.77**	**222**	P	**Pn**	**14 53 23.3**	**-1.5**
ANWZ	**Angora Road**	**3.83**	**213**	P	**Pn**	**14 53 24.4**	**-1.2**
DVHZ	**Dannevirke**	**3.85**	**217**	P	**Pn**	**14 53 24.7**	**-1.2**
VRZ	**Vera Road**	**3.97**	**241**	P	**Pn**	**14 53 28.2**	**+0.7**
PRWZ	**Pori Road**	**4.14**	**217**	P	**Pn**	**14 53 29.1**	**-0.8**
WAZ	**Wanganui**	**4.14**	**232**	P	**Pn**	**14 53 29.7**	**-0.2**
WCZ	**Waipu Caves**	**4.14**	**287**	P	**Pn**	**14 53 30.3**	**+0.4**
LREZ	**Lake Rotokare**	**4.37**	**239**	P	**Pn**	**14 53 34.1**	**+1.1**
NEZ	**North Egmont**	**4.50**	**242**	P	**Pn**	**14 53 36.7**	**+1.8**
KHEZ	**Kahui Hut**	**4.57**	**242**	P	**Pn**	**14 53 37.7**	**+1.9**
KHEZ	**Kahui Hut**	**4.57**	**242**	P	**Pn**	**14 53 37.7**	**+1.9**
	380nm,2.0s						
OUZ	**Omahuta**	**4.99**	**293**	P	**Pn**	**14 53 42.5**	**+1.0**
OUZ	**Omahuta**	**4.99**	**293**	P	**Pn**	**14 53 42.4**	**+1.0**
TKNZ	**Takaka Hill**	**6.14**	**230**	P	**Pn**	**14 53 55.3**	**-2.1**
QRZ	**Quartz Range**	**6.30**	**234**	P	**Pn**	**14 53 58.1**	**-1.4**
KHZ	**Kahutara**	**6.74**	**219**	P	**Pn**	**14 54 04.4**	**-1.1**
CTZ	**Chatham Island**	**7.19**	**155**	P	Pn	14 54 16.8	+5.1

MAN 07 15:06:38.1, 17°34N×122°58E, h31km, mb4.1, ML2.9, MS2.5, 3C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.31**	**208**	eP	Pn	15 06 46.8	+0.3
PALP				eS	Sn	15 07 24.4	+32
CAUP	**Cauayan**	**0.82**	**242**	eP	Pb	15 06 54.1	+0.2
CAUP				eS	Sb	15 07 05.2	+0.5
SGCP	**Gonzaga**	**1.03**	**331**	eP	Pn	15 06 56.0	-0.6
SGCP				eS	Sb	15 07 44.0	+33
PACPP	**Pamplona Cagay**	**1.62**	**314**	eP	Pn	15 07 04.8	+0.3
PACPP				i S	Sn	15 07 24.9	+0.6
SAMP	**Sagada Mountai**	**1.62**	**261**	iP	Pn	15 07 05.6	+0.9
SAMP				eS	Sn	15 07 09.5	-15
BALP	**Baler**	**1.85**	**211**	iP	Pn	15 07 08.7	+0.8
SMPP	**San Manuel, Pa**	**2.17**	**237**	iP	Pn	15 07 13.4	+1.3
JCNP	**Jose Panganiba**	**3.03**	**178**	eP	Pn	15 07 24.2	+0.2
JCNP				eS	Sn	15 07 53.8	-5.5

*IDC **07** 15:08:19.7±0.8, 29°26S×61°19E, h0km, mb3.8/9, mbtmp3.8/10, ML4.4/1, MS3.3/9, Error ellipse: s-maj=27.6km s-min=23.6km az=46.0*
ISC 07 15:08:21.1±0.7, 29°25±0°2×61°2E±0°2, h10km, n25, σ0°77/12, mb3.9/9, MS3.3/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.60**	**307**	Pn	**Pn**	**15 12 13.9**	**-0.2**
	0.2nm,0.3s,baz=121,slow=14,SNR=7.0						
	3.5nm,0.4s						
H08S1	**Diego Carcia H**	**23.98**	**29**	T	T	15 38 36.4	
	baz=209,slow=76,SNR=3.7						
H08S2	**Diego Garcia H**	**23.98**	**29**	T	T	15 38 39.6	
	baz=209						
H08S3	**Diego Garcia H**	**24.00**	**29**	T	T	15 38 30.7	
	baz=209,slow=76,SNR=4.0						
BOSA	**Boshof**	**31.36**	**262**	LR	LR	15 26 24.0	
	comp=Z,26nm,18.0s,baz=190,slow=34						
LBTB	**Lobatse**	**31.85**	**269**	LR	LR	15 25 07.4	
	comp=Z,24nm,18.6s,baz=124,slow=32						
MAW	**Mawson**	**38.41**	**179**	LR	LR	15 27 51.9	
	comp=Z,39nm,18.4s,baz=332,slow=30						
MBAR	**Mbarara**	**40.65**	**309**	LR	LR	15 31 24.6	
	comp=Z,29nm,19.4s,baz=121,slow=34						
TSUM	**Tsumeb**	**40.78**	**274**	LR	LR	15 31 35.4	
	comp=Z,26nm,20.3s,baz=182,slow=34						
ATD	**Arta Tunnel**	**44.22**	**334**	LR	LR	15 32 02.0	
	comp=Z,53nm,20.1s,baz=161,slow=32						
H01W2	**Cape Leeuwin H**	**44.82**	**111**	T	T	16 04 42.7	
	baz=261,slow=75,SNR=9.1						
H01W3	**Cape Leeuwin H**	**44.82**	**111**	T	T	16 04 40.7	
	baz=261,slow=75,SNR=6.1						
H01W1	**Cape Leeuwin H**	**44.84**	**111**	T	T	16 04 40.8	
	baz=261,slow=75,SNR=8.9						
SNAA	**Sanae**	**54.39**	**200**	P	**P**	**15 17 47.0**	**-0.9**
	1.0nm,0.9s,baz=49,slow=9.3,SNR=3.5						
	1.0nm,0.9s						
BRDH	**Bariadhala**	**59.38**	**33**	LR	LR	15 41 53.8	
	comp=Z,33nm,19.8s,baz=89,slow=34						
CMAR	**Chiang Mai Arr**	**59.82**	**42**	P	**P**	**15 18 26.3**	**-0.6**
	0.4nm,0.6s,baz=220,slow=6.6,SNR=2.3						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**60.92**	**180**	P	**P**	**15 18 34.1**	**+0.2**
	0.6nm,0.7s,baz=264,slow=1.8,SNR=1.6						
QSPA				LR	LR	15 43 06.9	
	comp=Z,28nm,18.8s,baz=272,slow=34						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**15 18 57.9**	**-0.1**
	0.7nm,0.7s,baz=243,slow=6.0,SNR=11						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**66.25**	**100**	P	**P**	**15 19 10.5**	**+0.7**
	0.8nm,0.9s,baz=246,slow=5.9,SNR=3.4						
	0.8nm,0.9s						
STKA	**Stephens Creek**	**67.73**	**115**	P	**P**	**15 19 19.6**	**+0.6**
	0.9nm,0.8s,baz=258,slow=9.3,SNR=1.3						
	0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.17**	**298**	P	**P**	**15 19 41.7**	**+1.3**
	1.0nm,0.9s,baz=103,slow=5.5,SNR=4.9						
TORD				LR	LR	15 50 13.0	
	comp=Z,33nm,19.0s,baz=216,slow=35						
	1.0nm,0.9s						
MKAR	**Makanchi Array**	**78.05**	**15**	P	**P**	**15 20 19.9**	**+0.2**
	0.8nm,0.9s,baz=199,slow=3.1,SNR=2.7						
	0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**85.34**	**14**	P	**P**	**15 20 57.7**	**-0.3**
	0.3nm,0.3s,baz=199,slow=3.1,SNR=4.2						
	0.3nm,0.3s						
YKA	**Yellowknife Ar**	**146.62**	**356**	PKPbc	**PKPab**	**15 28 02.1**	**-1.2**
	1.3nm,0.8s,baz=343,slow=2.1,SNR=3.2						
PDAR	**Pinedale Array**	**164.57**	**333**	PKP	**PKPdf**	**15 28 25.4**	**+0.1**
	0.2nm,0.4s,baz=139,slow=3.2,SNR=4.0						

*GEN **07** 15:12:00.2, 44°05N×6°65E, h62km±4km, MI0.0*
*LDG **07** 15:12:06.8±0.1, 44°63N×7°17E, h5km, MI1.6/4, Error ellipse: s-maj=1.5km s-min=1.0km az=65.0*
STR 07 15:12:06.6±1.3, 45°N±6°×7°±°, h2km, MLv1.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=40.7, preliminary, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZZ	**Stroppo**	**0.12**	**207**	P	Pg	15 12 09.7	+0.6
PZZ				S	Sg	15 12 16.3	+5.6
BHB	**Bricherasio**	**0.23**	**12**	S	Sg	15 12 17.9	+3.8
SURF	**Saint Ours**	**0.30**	**244**	P	Pg	15 12 12.9	+0.4
SURF				S	Sb	15 12 22.0	+1.5
SURF	**Saint Ours**	**0.30**	**244**	Pg	Pg	15 12 12.9	+0.4
MBDF	**Montbardon**	**0.32**	**290**	ePg	Pg	15 12 13.1	+0.3
JAUF	**Jausiers**	**0.37**	**240**	Pg	Pg	15 12 14.0	+0.3
STV	**Saint Anna di V**	**0.38**	**166**	P	Pg	15 12 13.6	-0.4
STV				S	Sb	15 12 22.8	+0.3
CREF	**Crivoux**	**0.41**	**261**	Pg	Pg	15 12 14.8	+0.2
CREF				Sg	Sg	15 12 20.0	0.0
RRL	**Rocca Remolon**	**0.42**	**317**	P	Pg	15 12 14.7	0.0
RRL				S	Sb	15 12 23.7	-0.1
ENR	**Entracque**	**0.42**	**157**	P	Pg	15 12 14.0	-0.7
ENR				S	Sb	15 12 23.8	+0.1
ISO	**Isola**	**0.45**	**194**	P	Pg	15 12 15.6	+0.4
ISO	**Isola**	**0.45**	**194**	Pg	Pg	15 12 15.3	+0.1
ISO				Sg	Sg	15 12 21.4	+0.4
OGAG	**Argentiere**	**0.49**	**251**	P	Pg	15 12 16.2	+0.1
ENAUX	**Enaux**	**0.59**	**211**	Pg	Pg	15 12 18.2	+0.3
ENAUX				Sg	Sg	15 12 26.1	+0.6
TURF	**col de Turini**	**0.66**	**167**	P	Pg	15 12 19.0	-0.2
TURF				S	Sb	15 12 31.2	+0.6
TURF	**col de Turini**	**0.66**	**167**	Pg	Pg	15 12 19.1	-0.1
SBF	**Sospel**	**0.77**	**167**	ePg	Pg	15 12 21.9	+0.5
SBF				eSg	Sg	15 12 32.2	+0.8
	4.5nm,0.3s						
RORO	**Rocca Rossa**	**0.80**	**129**	P	Pg	15 12 19.7	-2.3
RORO				S	Sb	15 12 34.6	0.0
LSD	**Lago del Serru**	**0.84**	**357**	P	Pb	15 12 24.1	-0.1
LSD				S	Sb	15 12 37.1	+1.1
CANO	**Canova, Maglio**	**0.85**	**118**	P	Pg	15 12 21.0	-2.0
CANO				S	Sb	15 12 36.6	+0.5
LPG	**La Plagne**	**0.94**	**341**	ePg	Pg	15 12 23.5	-1.1
LPG				eSg	Sg	15 12 35.7	-1.0
	0.7nm,0.2s						
LPL	**La Plagne**	**0.96**	**340**	ePg	Pg	15 12 25.2	+0.2
LPL				eSg	Sg	15 12 36.4	-1.0
	2.2nm,0.3s						
PCP	**Piancastagn**	**0.97**	**94**	P	Pg	15 12 23.6	-1.6
PCP				S	Sb	15 12 40.5	+1.1
ORIF	**Oris-en-Rattie**	**0.98**	**288**	ePg	Pg	15 12 25.0	-0.5
ORIF				eSg	Sg	15 12 37.5	-0.7
	1.3nm,0.3s						
CIRO	**Champorcher**	**1.02**	**15**	P	Pb	15 12 27.6	+0.4
CIRO				S	Sg	15 12 39.1	-0.4

*IDC **07** 15:14:09.1±0.8, 14°14N×93°95W, h0km, mb4.0/12, mbtmp4.0/14, ML4.2/2, MS3.2/17, Error ellipse: s-maj=40.8km s-min=16.7km az=59.0*
*MEX **07** 15:14:12.5±0.8, 14°14N×94°00W, h16km±24km, MD4.8*
*NEIC **07** 15:14:12.1±1.8, 14°33N±0°06×93°88W±0°04, h10km±1km, mb4.6/73, Md4.8/13(MEX), Error ellipse: s-maj=11.6km s-min=2.9km az=209.0*
*GCG **07** 15:14:14.7±1.6, 14°42N×93°60W, h0km±999km, MD4.2*
ISC 07 15:14:09.8±3.1, 14°28N±0°06×93°97W±0°05, h4km±19km, n126, σ1°33/124, mb4.5/40, MS3.2/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.60**	**27**		**Pn**	**15 14 38.5**	**-0.4**
PCIG					**Sn**	**15 14 58.2**	**-1.8**
PCIG		**1.60**	**27**	i P	**Pn**	**15 14 38.5**	**-0.4**
PCIG				eS	**Sn**	**15 14 58.2**	**-1.8**
PATR	**El Naranjo**	**1.88**	**63**	eP	**Pn**	**15 14 41.9**	**-1.1**
PATR				eS	**Sn**	**15 15 04.5**	**-2.8**
PAVE	**Pavencul**	**1.96**	**62**	eP	**Pn**	**15 14 43.4**	**-0.8**
PAVE				eS	**Sn**	**15 15 08.1**	**-1.3**
CHUJ	**Union Juarez**	**1.98**	**65**	eP	**Pn**	**15 14 43.4**	**-1.0**
CHUJ				eS	**Sn**	**15 15 06.8**	**-3.0**
RTAL	**Retalhuleu**	**2.22**	**83**		**Pn**	**15 14 47.0**	**-0.5**
NILT	**Santiago Nilte**	**2.36**	**345**	eP	**Pn**	**15 14 48.6**	**-0.8**
NILT				eS	**Sn**	**15 15 15.2**	**-3.7**
STG3	**Santiaguito 3,**	**2.37**	**79**	eP	**Pn**	**15 14 49.5**	**-0.1**
HUIG	**Huatulco**	**2.54**	**306**		**Pn**	**15 14 50.0**	**-2.0**
HUIG	**Huatulco**	**2.54**	**306**	eP	**Pn**	**15 14 50.0**	**-2.0**
HUEH	**Huehuetenango**	**2.60**	**66**	Pn	**Pn**	**15 14 53.0**	**0.0**
TGIG		**2.62**	**18**		**Pn**	**15 14 54.2**	**+1.2**
TGIG		**2.62**	**18**	i P	**Pn**	**15 14 54.2**	**+1.2**
CCIG	**Comitan**	**2.67**	**41**	Pn	**Pb**	**15 14 55.7**	**-2.6**
CMIG	**Matias Romero**	**2.94**	**343**	Pn	**Pn**	**15 14 57.3**	**0.0**
	36nm,0.3s,baz=175,slow=14,SNR=341						
CMIG				Sn	**Sn**	**15 15 30.0**	**-3.0**
	134nm,0.3s,baz=69,slow=11,SNR=51						
CMIG				LR	LR	15 16 17.6	
	comp=Z,554nm,20.5s,baz=172,slow=42						
	71nm,0.3s						
UXUV	**UXUV**	**3.03**	**357**	eP	**Pn**	**15 15 00.2**	**+1.6**
FUG	**Fuego 3**	**3.04**	**86**	eP	**Pn**	**15 14 59.0**	**0.0**
FUG				eS	**Sn**	**15 15 35.2**	**-0.7**
PCG	**Pacaya**	**3.26**	**88**	eP	**Pn**	**15 15 02.4**	**+0.3**
PCG				eS	**Sn**	**15 15 40.1**	**-1.4**
NBG	**Las Nubes**	**3.53**	**84**	eP	**Pn**	**15 15 07.3**	**+1.6**
NBG				eS	**Sn**	**15 15 50.1**	**+2.0**
MRL	**Marmol**	**4.23**	**79**	eP	**Pn**	**15 15 16.4**	**+1.1**
MTO3	**Montecristo**	**4.47**	**88**	Pn	**Pn**	**15 15 18.4**	**-0.3**
ESQI	**Esquipulas**	**4.50**	**86**	Pn	**Pn**	**15 15 18.6**	**-0.3**
PETF	**Flores**	**4.75**	**56**	Pn	**Pn**	**15 15 22.3**	**0.0**
TLIG	**Tlapa**	**5.50**	**307**	Pn	**Pn**	**15 15 34.9**	**+2.2**
TEIG	**Tepich**	**8.04**	**42**	Pn	**Pn**	**15 16 06.2**	**-1.3**
HZTE	**Horizontes, Gu**	**8.91**	**112**	Pn	**Pn**	**15 16 20.7**	**+1.1**
ORTG	**Ortega, Santa**	**9.18**	**114**	Pn	**Pn**	**15 16 22.7**	**-0.5**
DUNO	**Dulce Nombre,**	**9.28**	**116**	Pn	**Pn**	**15 16 25.5**	**+1.0**
RIMA	**Rio Macho**	**10.85**	**113**	Pn	**Pn**	**15 16 47.4**	**+1.0**
SOR	**Soroa**	**13.40**	**49**	Pn	**Pn**	**15 17 20.6**	**-0.4**
833A	**Chaparral WMA,**	**14.86**	**341**		**Pn**	**15 17 42.0**	**+1.2**
HPIG		**16.67**	**321**	Pn	**Pn**	**15 18 05.2**	**+0.5**
JCT	**Junction City**	**17.00**	**343**	P	**Pn**	**15 18 09.2**	**+0.6**
TX31	**Lajitas Ar. Sí**	**17.47**	**331**	P	**P**	**15 18 16.7**	**+0.8**
TX32	**Lajitas Array**	**17.47**	**331**		**Pn**	**15 18 15.4**	**+0.9**
TXAR	**Lajitas Array**	**17.47**	**331**	P	**P**	**15 18 16.5**	**+0.7**
	0.2nm,0.3s,baz=142,slow=10,SNR=4.6						
	0.6nm,0.5s						
TXAR	**Lajitas Array**	**17.47**	**331**	Pn	**Pn**	**15 18 15.1**	**+0.6**
LPIG	**La Paz**	**18.25**	**305**	LR	LR	15 23 58.8	
	comp=Z,28nm,18.7s,baz=86,slow=32						
ABTX	**Abilene, Hawle**	**18.98**	**345**		**Pn**	**15 18 34.4**	**+1.3**
Z47A	**Carrollton**	**19.59**	**15**	P	**Pn**	**15 18 40.6**	**+0.3**
Z47A				IAmb	IAmb	15 18 41.0	
	comp=Z,33nm,0.6s						
X37A	**Clayton**	**20.27**	**357**		**P**	**15 18 46.1**	**-0.3**
WMOK	**Wichita Mounta**	**20.83**	**349**	P	**P**	**15 18 52.7**	**+0.1**
IMBA	**Imbabura, San**	**20.91**	**130**	P	**P**	**15 18 53.5**	**-0.5**
IMBA				IAmb	IAmb	15 19 01.0	
	comp=Z,53nm,1.1s			

ECSD IAmb IAmb 15 20 15.9
comp=Z,8.8nm,0.7s
SPMN Marine on St. 30.86 2 P P 15 20 27.1 -0.1
NNA Nana 31.13 146 LR LR 15 29 33.8
comp=Z,21nm,20.1s,baz=311,slow=30
NV11 Mina Array Sit 32.19 323 P P 15 20 42.0 +2.8
ELK Elko 32.24 329 P P 15 20 42.5 +2.7
NVAR Mina Array Bea 32.27 323 P P 15 20 42.0 +2.0
comp=Z,1.9nm,0.7s,baz=138,slow=8.8,SNR=15
NVAR PcP **PcP 15 23 28.6 +0.2**
comp=Z,0.7nm,0.7s,baz=120,slow=3.2,SNR=5.9
comp=Z,1.9nm,0.7s
NVAR Mina Array Bea 32.27 323 P P 15 20 41.5 +1.5
SADO Sadowa 32.91 20 LR LR 15 36 11.3
comp=Z,73nm,19.3s,baz=177,slow=40
MCMT McKenzie Canyo 34.42 336 P P 15 21 01.4 +2.7
J08A Circle Bar Ran 35.80 329 P P 15 21 12.4 +1.9
ULM Lac du Bonnet 35.91 358 P P 15 21 10.9 -0.2
comp=Z,1.7nm,0.3s,baz=169,slow=9.9,SNR=6.0
ULM LR LR 15 39 06.4
comp=Z,28nm,19.1s,baz=104,slow=42
comp=Z,1.7nm,0.3s
YBH Yreka Blue Hor 36.99 323 LR LR 15 38 15.2
comp=Z,45nm,18.6s,baz=141,slow=39
LPAZ La Paz 39.67 139 P P 15 21 43.5 -0.5
comp=Z,1.0nm,0.5s,baz=314,slow=9.4,SNR=4.5
comp=Z,1.0nm,0.5s
MDP Montagnes des 41.69 98 LR LR 15 39 32.5
comp=Z,25nm,18.7s,baz=16,slow=37
RPN Rapa Nui 43.77 200 LR LR 15 35 26.7
comp=Z,60nm,21.3s,baz=102,slow=29
SCHQ Schefferville 45.65 22 LR LR 15 43 17.9
comp=Z,64nm,18.2s,baz=199,slow=38
YKA Yellowknife Ar 50.34 348 P P 15 23 08.2 +0.5
comp=Z,0.8nm,0.4s,baz=135,slow=9.1,SNR=7.3
comp=Z,0.8nm,0.4s
FRB Frobisher Bay 52.49 14 LR LR 15 48 15.9
comp=Z,37nm,18.6s,baz=216,slow=39
LMEL Las Melosas 52.94 155 P P 15 23 27.8 +0.1
CPUP Villa Florida 53.84 138 P P 15 23 32.5 -1.7
comp=Z,0.7nm,0.3s,baz=318,slow=5.0,SNR=4.1
comp=Z,0.7nm,0.3s
ISLE Juniper Island 57.93 334 P P 15 24 04.1 +0.8
ISLE IAmb IAmb 15 24 46.0
comp=Z,6.3nm,0.7s
INK Inuvik 59.64 344 P P 15 24 15.0 +0.1
comp=Z,2.2nm,0.8s,baz=96,slow=4.2,SNR=3.7
comp=Z,2.2nm,0.8s
SFJD Kangerlussuaq 59.84 18 LR LR 15 52 37.7
comp=Z,29nm,19.8s,baz=217,slow=38
PRP Porcupine Dome 61.71 338 P P 15 24 29.7 +0.5
PRP IAmb IAmb 15 24 30.6
comp=Z,3.3nm,1.1s
IL31 61.84 337 P P 15 24 29.9 0.0
IL31 IAmb IAmb 15 25 09.7
comp=Z,2.8nm,1.1s
ILAR Eielson Array 61.84 337 P P 15 24 30.4 +0.5
comp=Z,1.6nm,1.0s,baz=143,slow=5.1,SNR=14
comp=Z,1.6nm,1.0s
ILAR Eielson Array 61.84 337 P P 15 24 30.2 +0.3
BMAR Burnt Mountain 62.38 340 P 15 24 34.6 +1.0
I23K Minto, Yukon-K 62.95 337 P P 15 24 37.1 -0.2
I23K IAmb IAmb 15 24 40.9
comp=Z,5.4nm,1.1s
CAST Castle Rocks 63.31 335 P P 15 24 39.4 -0.3
CAST IAmb IAmb 15 24 48.0
comp=Z,4.8nm,1.4s
ESDC Sonseca Array 81.04 51 P P 15 26 26.5 +0.1
comp=Z,0.5nm,0.7s,baz=271,slow=4.3,SNR=3.9
comp=Z,0.5nm,0.7s
NOA NORSAR Array B 84.81 28 P P 15 26 46.6 +1.1
comp=Z,2.1nm,1.2s,baz=293,slow=5.1,SNR=2.6
NOA LR LR 16 06 18.7
comp=Z,8.5nm,18.3s,baz=355,slow=37
comp=Z,2.1nm,1.2s
ARCES ARCESS Array B 86.47 18 P P 15 26 55.1 +1.6
comp=Z,2.3nm,0.9s,baz=287,slow=4.9,SNR=7.6
comp=Z,2.3nm,0.9s
FINES FINESS Array B 91.05 25 LR LR 16 07 55.4
comp=Z,11nm,19.1s,baz=219,slow=35
TORD Torodi Ar. Bea 92.17 76 P P 15 27 21.2 -0.3
comp=Z,0.4nm,0.7s,baz=302,slow=7.4,SNR=2.3
comp=Z,0.4nm,0.7s
STKA Stephens Creek 126.52 241 PKP **PKPdf 15 33 13.8 -1.1**
comp=Z,1.3nm,0.6s,baz=6.9,slow=3.3,SNR=3.8
WRA Warramunga Arr 133.61 256 PKP **PKPdf 15 33 27.1 -1.5**
comp=Z,1.2nm,0.9s,baz=82,slow=1.5,SNR=7.5
ASAR Alice Springs 133.95 251 PKP **PKPdf 15 33 28.0 -1.3**
comp=Z,0.7nm,0.8s,baz=41,slow=2.3,SNR=5.6
CMAR Chiang Mai Arr 145.07 338 PKPbc **PKPbc 15 33 48.4 -0.5**
comp=Z,3.1nm,0.8s,baz=345,slow=4.1,SNR=17

MAN 07 15:17:25.8, 13°.63N×122°.70E, h1km, mb4.0, ML2.8, MS2.4, 4C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.37**	**319**	⇑*iP*	Pg	15 17 33.1	+0.3
GQP				*i*S	Sg	15 17 38.8	+1.2
JCNP	**Jose Panganiba**	**0.66**	**0**	⇑*iP*	Pg	15 17 38.2	-0.2
JCNP				*i*S	Sg	15 17 45.2	-1.7
BOAC	**Boac**	**0.84**	**259**	⇓*eP*	Pg	15 17 42.3	+0.3
BOAC				*e*S	Sg	15 17 47.0	-6.0
LQP	**Lukban**	**1.22**	**293**	⇑*eP*	Pg	15 17 48.9	-0.3
LQP				*e*S	Sn	15 18 08.2	+0.8
PVCP	**Virac**	**1.42**	**91**	⇑*iP*	Pg	15 17 52.9	-0.1
PVCP				*e*S	Sn	15 18 27.3	+15
SJMP	**San Jose**	**1.93**	**233**	⇓*eP*	Pb	15 18 01.0	-0.6
BALP	**Baler**	**2.36**	**333**	⇓*eP*	Pn	15 18 05.6	-0.1
BALP				*e*S	Sg	15 18 55.4	+14

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*DJA **07** 15:28:05.8±0.8, 4°.N±3°×9°.6E±°, h19km±6km, M4.4/12, mb4.6/5, mB4.9/3, MLv4.4/12, Mw(mB)4.2/3*
*NEIC **07** 15:28:06.7±1.9, 3°.82N±0°.08×95°.8E±0°.1, h44km±11km, mb4.3/21, Error ellipse: s-maj=16.4km s-min=11.5km az=89.0*
*IDC **07** 15:28:08.1±4.3, 4°.00N×95°.90E, h60km±38km, mb3.8/12, mbtmp4.0/14, ML3.2/2, MS3.2/6, Error ellipse: s-maj=44.3km s-min=15.9km az=56.0*
ISC 07 15:28:05.3±0.6, 3°.83N±0°.04×95°.70E±0°.07, h35km, n71, σ1§49/72, mb4.2/19, MS3.7/3, 1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.83**	**58**	P	**Pn**	**15 28 20.5**	**0.0**
MLSI				S	**Sn**	**15 28 29.8**	**-1.8**
LHMI	**Lhok Sumawe**	**1.87**	**42**	Pn	**Pn**	**15 28 35.9**	**+1.1**
LHMI	**Lhok Sumawe**	**1.87**	**42**	P	**Pn**	**15 28 36.0**	**+1.2**
LHMI				S	**Sn**	**15 28 58.5**	**+1.3**
LHMI	**Lhok Sumawe**	**1.87**	**42**	P	**Pn**	**15 28 36.2**	**+1.4**
KCSI	**Kotacane, Aceh**	**2.09**	**98**	P	**Pn**	**15 28 39.3**	**+1.3**
KCSI				S	**Sn**	**15 29 02.2**	**-0.6**
LASI	**Langsa, Aceh**	**2.35**	**75**	P	**Pn**	**15 28 40.4**	**-1.1**
TSI	**Tuntungan**	**2.88**	**96**	P	**Pn**	**15 28 48.4**	**-0.4**
GSI	**Gunungsitoli**	**3.13**	**143**		**Pn**	**15 28 52.0**	**-0.3**
GSI	**Gunungsitoli**	**3.13**	**143**	P	**Pn**	**15 28 51.2**	**-1.1**
GSI				S	**Sn**	**15 29 28.9**	**+0.4**
GSI	**Gunungsitoli**	**3.13**	**143**	P	**Pn**	**15 28 52.1**	**-0.2**
PSI	**Prapat**	**3.38**	**107**	P	**Pn**	**15 28 57.6**	**+1.8**
2.8nm,0.3s,baz=320,slow=8.2,SNR=15							
PSI				S	**Sn**	**15 29 41.3**	**+6.6**
57nm,0.5s,baz=47,slow=10.0,SNR=7.4							
PSI				LR	LR	15 29 47.8	
comp=Z,56nm,19.3s,baz=297,slow=30							
6.8nm,0.3s							
PSI	**Prapat**	**3.38**	**107**	P	**Pn**	**15 28 57.7**	**+1.9**
PSI				S	**Sn**	**15 29 35.6**	**+0.9**
PSI	**Prapat**	**3.38**	**107**	P	**Pn**	**15 28 58.5**	**+2.7**
RPSI	**Rantau Prapat**	**3.41**	**109**	Pn	**Pn**	**15 28 57.9**	**+1.8**
TRSI	**Tarutung**	**3.72**	**119**	P	**Pn**	**15 29 00.8**	**+0.4**
PBSI	**Pulau Batu**	**4.64**	**146**	P	**Pn**	**15 29 13.5**	**+0.5**
MNSI	**Mandailing Nat**	**4.91**	**128**	P	**Pn**	**15 29 17.4**	**+0.7**
KULM	**Kulim**	**5.15**	**73**	Pn	**Pn**	**15 29 19.9**	**-0.1**
KULM	**Kulim**	**5.15**	**73**	P	**Pn**	**15 29 19.7**	**-0.3**
0.4nm1μm39nm,0.6s							
IPM	**Ipoh**	**5.35**	**83**	Pn	**Pn**	**15 29 22.5**	**-0.4**
IPM	**Ipoh**	**5.35**	**83**	P	**Pn**	**15 29 22.2**	**-0.6**
0.2nm894nm33nm,1.1s							
IPM	**Ipoh**	**5.35**	**83**	P	**Pn**	**15 29 22.7**	**-0.1**
SKLT	**Songkhla**	**5.92**	**56**	P	**Pn**	**15 29 30.3**	**-0.3**
0.2nm924nm37nm,0.9s							
SRIT	**Nakonsritamara**	**6.12**	**39**		**Pn**	**15 29 33.9**	**+0.5**
SISI	**Saibi 6.14 146**			P	**Pn**	**15 29 35.1**	**+1.5**
0.3nm36nm,0.7s							
BKNI	**Bangkinang 6.37 123**			P	**Pn**	**15 29 36.2**	**-0.6**
CM31	**Chiang Mai Arr 14.88 12**			P	**P**	**15 31 38.9**	**+0.3**
CMAR	**Chiang Mai Arr 14.88 12**			P	**Pn**	**15 31 33.4**	**+0.1**
baz=193,slow=16,SNR=2.7							
CMAR				LR	LR	15 37 42.9	
comp=Z,59nm,18.9s,baz=195,slow=39							
0.6nm,0.9s							
CMAR Chiang Mai Arr 14.88 12				Pn	**Pn**	**15 31 33.0**	**-0.4**
CHTO Chiang Mai 15.23 12				Pn	**Pn**	**15 31 37.9**	**0.0**
PALK Pallekele 15.31 284				LR	LR	15 36 21.1	
comp=Z,54nm,20.5s,baz=219,slow=32							
XMIS Christmas Isla 17.33 145				P	**Pn**	**15 32 02.0**	**-2.7**
XMIS				IAmb	IAmb	15 32 42.5	
comp=Z,68nm,1.1s							
KMI Kunming 22.23 17				⇓P	**P**	**15 33 02.4**	**+3.1**
MYLDM Lahad Datu 22.77 86				P	**P**	**15 33 04.0**	**-1.0**
MYLDM				IAmb	IAmb	15 33 07.8	
comp=Z,11nm,1.0s							
PZH PanZhiHua 23.28 14				P	**P**	**15 33 10.7**	**+0.5**
PZH				PKP	sP	15 33 33.9	+10
H08S2 Diego Garcia H 25.81 244				T	T	16 00 47.9	
baz=63,slow=76,SNR=61							
H08S3 Diego Garcia H 25.81 244				T	T	16 00 43.7	
baz=63,slow=76,SNR=72							
H08S1 Diego Carcia H 25.82 244				T	T	16 00 48.2	
baz=63,slow=76,SNR=27							
BATI Baumata 31.15 117				LR	LR	15 47 38.2	
comp=Z,146nm,18.5s,baz=188,slow=38							
NIL Nilore 36.31 327				P	**P**	**15 35 05.9**	**+0.1**
HHC Hu-ho-hao-te 39.53 19				*e*P	**P**	**15 35 36.3**	**+3.3**
WMQ Urumqi 40.45 351				*e*P	**P**	**15 35 43.2**	**+2.6**
BJT Baijiatuan 40.50 24				P	**P**	**15 35 40.5**	**-0.5**
BJT				IAmb	IAmb	15 35 41.6	
comp=Z,5.6nm,0.7s							
DRK Karamyk 41.58 332				P	**P**	**15 35 51.4**	**+1.2**
GAR Garm 41.92 330				P	**P**	**15 35 53.2**	**+0.4**
GAR				IAmb	IAmb	15 35 53.8	
comp=Z,15nm,1.2s							
CHGR Chuyangaron 42.25 329				P	**P**	**15 35 55.2**	**-0.2**
BTK Batken 42.50 331				P	**P**	**15 35 58.9**	**+1.4**
BTK				IAmb	IAmb	15 36 01.5	
comp=Z,3.3nm,0.8s							
MK31 Makanchi Array 44.35 347				P	**P**	**15 36 11.4**	**-0.8**
MKAR Makanchi Array 44.35 347				P	**P**	**15 36 10.5**	**-1.7**
comp=Z,1.3nm,0.3s,baz=164,slow=8.6,SNR=27							
comp=Z,1.3nm,0.3s							
KSRS Korea Array 44.61 37				P	**P**	**15 36 12.0**	**-2.4**
comp=Z,0.9nm,0.6s,baz=219,slow=9.7,SNR=2.8							
comp=Z,0.9nm,0.6s							
WRA Warramunga Arr 44.71 123				P	**P**	**15 36 14.9**	**-0.5**
comp=Z,1.5nm,0.9s,baz=303,slow=9.1,SNR=13							
comp=Z,1.5nm,0.9s							
SONM Songino Array 44.80 10				P	**P**	**15 36 14.2**	**-1.7**
comp=Z,3.5nm,0.7s,baz=189,slow=8.8,SNR=16							
SONM				PcP	**PcP**	**15 37 57.4**	**-0.1**
comp=Z,0.6nm,0.4s,baz=178,slow=3.6,SNR=3.1							
SONM				LR	LR	15 56 21.0	
comp=Z,35nm,21.0s,baz=261,slow=38							
comp=Z,3.5nm,0.7s							
SONM Songino Array 44.80 10				P	**P**	**15 36 14.3**	**-1.6**
SONM				IAmb	IAmb	15 36 15.4	
comp=Z,2.8nm,0.8s							
ULN Ulaanbaatar 44.95 11				P	**P**	**15 36 14.9**	**-2.2**
ULN				IAmb	IAmb	15 36 16.2	
comp=Z,2.4nm,0.6s							
KK31 Karatay Array 45.05 334				P	**P**	**15 36 18.9**	**+1.1**
KKAR Karatay Array 45.05 334				P	**P**	**15 36 18.5**	**+0.6**
KKAR Karatay Array 45.05 334				P	**P**	**15 36 18.2**	**+0.4**
ASAR Alice Springs 46.18 128				P	**P**	**15 36 26.4**	**-0.6**
comp=Z,0.4nm,0.6s,baz=300,slow=7.6,SNR=10.0							
comp=Z,0.4nm,0.6s							
KURBB Kurchatov Arra 48.82 346				P	**P**	**15 36 46.5**	**-0.6**
comp=Z,1.6nm,0.5s,baz=163,slow=6.9,SNR=25							
comp=Z,1.6nm,0.5s							
ZAA0 Zalesovo Array 50.75 352				P	**P**	**15 37 00.5**	**-1.3**
ZALV Zalesovo Beam 50.75 352				P	**P**	**15 37 00.7**	**-1.1**
comp=Z,5.3nm,0.5s,baz=179,slow=7.4,SNR=24							
comp=Z,5.3nm,0.5s							
ZALV Zalesovo Beam 50.75 352				P	**P**	**15 37 00.2**	**-1.6**
RAYN Ar Rayn 52.22 297				P	**P**	**15 37 15.5**	**+2.2**
RAYN				IAmb	IAmb	15 37 16.9	
comp=Z,1.5nm,0.7s							
BVAR Borovoye Array 53.29 341				P	**P**	**15 37 19.9**	**-0.8**
comp=Z,1.1nm,0.7s,baz=144,slow=10,SNR=9.3							
comp=Z,1.1nm,0.7s							
ABKAR Akbulak array 54.50 332				P	**P**	**15 37 29.8**	**+0.2**
ABKAR Akbulak array 54.50 332				P	**P**	**15 37 29.9**	**+0.3**
ABKAR				IAmb	IAmb	15 37 30.3	
comp=Z,2.7nm,0.8s							
AKTO Aktyubinsk 56.22 332				P	**P**	**15 37 41.7**	**-0.3**
comp=Z,1.3nm,0.5s,baz=132,slow=9.0,SNR=4.3							
comp=Z,1.3nm,0.5s							
BRTR Keskin Array B 66.25 312				P	**P**	**15 38 50.4**	**+0.1**
comp=Z,0.7nm,0.5s,baz=132,slow=8.6,SNR=5.1							
comp=Z,0.7nm,0.5s							
FINES FINESS Array B 76.99 332				P	**P**	**15 39 54.0**	**-0.3**
comp=Z,2.5nm,0.9s,baz=119,slow=5.4,SNR=4.0							
comp=Z,2.5nm,0.9s							
ARCES ARCESS Array B 79.57 340				P	**P**	**15 40 08.1**	**-0.4**
comp=Z,0.6nm,0.3s,baz=100,slow=6.4,SNR=9.8							
comp=Z,0.6nm,0.3s							
ESDC Sonseca Array 94.99 310				LR	LR	16 29 11.0	
comp=Z,46nm,18.9s,baz=144,slow=38							

DJA 07 15:29:01.9±1.6, 4°S±11°×14°0E±1°0, h62km±17km, M3.9/5, mb3.8/1, mB5.1/1, MLv4.0/5, Mw(mB)4.4/1, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**0.90**	**255**	P	Pn	15 29 18.3	-0.4
WAMI				S	Sn	15 29 30.0	-1.1
GENI	**Genyem**	**1.20**	**29**	P	Pn	15 29 22.4	-0.3
GENI				S	Sn	15 29 39.0	+0.8
SMPI	**Sarmi**	**1.86**	**332**	P	Pn	15 29 31.9	+0.3
SRPI	**Serui, Papua**	**3.78**	**298**	P	Pn	15 29 57.7	0.0
RKPI	**Ransiki, Papua**	**5.80**	**291**	P	Pn	15 30 25.1	-0.3

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*IDC **07** 15:36:30.8±0.5, 29°.23S×61°.21E, h0km, mb4.1/17, mbtmp4.1/18, ML3.9/1, MS3.5/28, Error ellipse: s-maj=19.3km s-min=16.3km az=47.0*
ISC 07 15:36:32.4±0.5, 29°.2S±0°.1×61°.2E±0°.1, h10km, n48, σ0§94/22, mb4.2/17, MS3.5/27, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo 16.61 307**			Pn	**Pn**	**15 40 23.9**	**-1.7**
baz=167,slow=11,SNR=2.5							
OPO				LR	LR	15 45 19.1	
comp=Z,55nm,19.7s,baz=9.5,slow=32							
3.5nm,0.7s							
H08S1 Diego Carcia H 23.95 29				T	T	16 06 32.2	
baz=204,slow=76,SNR=10							
H08S2 Diego Garcia H 23.96 29				T	T	16 06 32.8	
baz=204,slow=76,SNR=8.4							
H08S3 Diego Garcia H 23.97 29				T	T	16 06 30.7	
baz=204,slow=76,SNR=13							
BOSA Boshof 31.38 262				P	**P**	**15 42 52.7**	**-0.9**
4.3nm,0.9s,baz=128,slow=12,SNR=3.2							
BOSA				LR	LR	15 53 54.6	
comp=Z,48nm,18.7s,baz=174,slow=33							
4.3nm,0.9s							
LBTB Lobatse 31.88 269				LR	LR	15 54 21.8	
comp=Z,24nm,20.6s,baz=110,slow=34							
LSZ Lusaka 33.41 287				LR	LR	15 54 40.6	
comp=Z,39nm,20.2s,baz=117,slow=33							
SUR Sutherland 34.68 254				LR	LR	15 55 27.6	
comp=Z,48nm,18.9s,baz=158,slow=33							
MAW Mawson 38.42 179				P	**P**	**15 43 54.3**	**+0.7**
0.9nm,0.7s,baz=11,slow=12,SNR=3.1							
MAW				LR	LR	15 57 00.8	
comp=Z,74nm,19.0s,baz=352,slow=32							
0.9nm,0.7s							
MBAR Mbarara 40.66 309				LR	LR	15 59 16.2	
comp=Z,72nm,20.1s,baz=122,slow=34							
TSUM Tsumeb 40.80 274				P	**P**	**15 44 16.2**	**+1.9**
1.4nm,0.5s,baz=314,slow=4.9,SNR=3.1							
TSUM				LR	LR	16 00 45.7	
comp=Z,34nm,18.7s,baz=125,slow=36							
1.4nm,0.5s							
PALK Pallekele 40.87 30				LR	LR	15 57 03.0	
comp=Z,56nm,21.8s,baz=303,slow=30							
ATD Arta Tunnel 44.22 334				LR	LR	15 59 52.3	
comp=Z,101nm,21.1s,baz=164,slow=32							
H01W2 Cape Leeuwin H 44.80 111				T	T	16 32 27.1	
baz=261,slow=75,SNR=24							
H01W3 Cape Leeuwin H 44.80 111				T	T	16 32 32.2	
baz=261,slow=75,SNR=18							
H01W1 Cape Leeuwin H 44.82 111				T	T	16 32 37.4	
baz=261,slow=75,SNR=23							
WSAR Wadi Sarin 52.22 357				LR	LR	16 02 15.9	
comp=Z,38nm,19.4s,baz=140,slow=30							
SNAA Sanae 54.41 200				P	**P**	**15 45 58.6**	**-0.7**
0.6nm,0.7s,baz=80,slow=6.1,SNR=2.2							
0.6nm,0.7s							
CMAR Chiang Mai Arr 59.79 42				P	**P**	**15 46 37.8**	**-0.2**
0.4nm,0.3s,baz=231,slow=6.8,SNR=4.5							
CMAR				LR	LR	16 09 02.1	
comp=Z,24nm,18.9s,baz=205,slow=33							
0.4nm,0.3s							
QSPA South Pole Qui 60.93 180				P	**P**	**15 46 45.3**	**0.0**
1.9nm,1.0s,baz=263,slow=0.9,SNR=3.3							
QSPA				LR	LR	16 09 33.6	
comp=Z,69nm,21.7s,baz=274,slow=32							
1.9nm,1.0s							
EIL Elat 63.70 335				LR	LR	16 10 48.7	
comp=Z,53nm,19.4s,baz=266,slow=32							
VNDA Vanda 63.97 166				P	**P**	**15 47 05.2**	**-0.1**
0.7nm,0.7s,baz=274,slow=8.7,SNR=4.4							
VNDA				LR	LR	16 13 10.4	
comp=Z,96nm,18.0s,baz=249,slow=34							
0.7nm,0.7s							
ASAR Alice Springs 64.41 104				P	**P**	**15 47 09.1**	**0.0**
1.5nm,0.7s,baz=243,slow=5.5,SNR=17							
1.5nm,0.7s							
WRA Warramunga Arr 66.23 100				P	**P**	**15 47 20.9**	**0.0**
1.6nm,0.9s,baz=247,slow=5.6,SNR=11							
1.6nm,0.9s							
MMAI Mount Meron Ar 66.55 337				LR	LR	16 13 04.9	
comp=Z,38nm,20.2s,baz=300,slow=33							
STKA Stephens Creek 67.72 115				P	**P**	**15 47 29.3**	**-0.9**
3.1nm,1.0s,baz=254,slow=1.9,SNR=3.7							
3.1nm,1.0s							
GNI Garni 70.69 347				LR	LR	16 17 05.8	
comp=Z,54nm,20.3s,baz=167,slow=34							
TORD Torodi Ar. Bea 71.19 298				P	**P**	**15 47 51.0**	**-0.7**
1.9nm,0.9s,baz=104,slow=5.2,SNR=9.0							
1.9nm,0.9s							
DBIC Dimbokro 72.75 288				LR	LR	16 19 20.2	
comp=Z,19nm,18.7s,baz=150,slow=35							
BRTR Keskin Array B 73.23 338				P	**P**	**15 48 04.1**	**+0.4**
0.6nm,0.7s,baz=139,slow=9.6,SNR=4.3							
BRTR				LR	LR	16 17 19.3	
comp=Z,30nm,19.9s,baz=138,slow=33							
0.6nm,0.7s							
KBZ Khabaz 74.51 346				LR	LR	16 18 55.1	
comp=Z,57nm,22.0s,baz=118,slow=34							
KVAR Kislovodsk Arr 74.77 346				LR	LR	16 19 53.2	
comp=Z,26nm,21.1s,baz=39,slow=35							
MKAR Makanchi Array 78.03 15				P	**P**	**15 48 31.1**	**+0.2**
1.4nm,0.9s,baz=160,slow=3.9,SNR=6.2							
1.4nm,0.9s							
AKTO Aktyubinsk 79.36 358				LR	LR	16 20 15.6	
comp=Z,31nm,20.9s,baz=205,slow=33							
KURBB Kurchatov Arra 80.97 11				P	**P**	**15 48 46.7**	**0.0**
2.8nm,0.2s,baz=200,slow=7.9,SNR=5.6							
2.8nm,0.2s							
BVAR Borovoye Array 82.29 6				LR	LR	16 23 02.3	
comp=Z,40nm,19.9s,baz=258,slow=34							
AKASG Malin Array Be 84.45 340				P	**P**	**15 49 04.9**	**+0.1**
1.0nm,0.7s,baz=146,slow=4.4,SNR=4.6							
1.0nm,0.7s							
ZALV Zalesovo Beam 85.32 14				P	**P**	**15 49 09.3**	**+0.2**
0.7nm,0.5s,baz=204,slow=3.3,SNR=5.1							
0.7nm,0.5s							
VRAC Vranov 87.70 333				LR	LR	16 27 08.7	
comp=Z,17nm,20.5s,baz=116,slow=35							
MDT Midelt 87.72 310				LR	LR	16 28 18.6	
comp=Z,38nm,18.9s,baz=95,slow=35							
DAVOX Davos/Dischmat 88.70 328				LR	LR	16 29 12.4	
comp=Z,9.9nm,20.0s,baz=84,slow=36							
ESDC Sonseca Array 91.45 316				P	**P**	**15 49 40.2**	**+1.3**
1.1nm,1.1s,baz=117,slow=1.1,SNR=5.9							
1.1nm,1.1s							
PLCA Paso Flores 97.27 215				LR	LR	16 28 19.3	
comp=Z,26nm,18.4s,baz=180,slow=32							
NOA NORSAR Array B 98.67 338				LR	LR	16 34 17.7	
comp=Z,17nm,19.1s,baz=325,slow=35							
ULM Lac du Bonnet 152.77 327				PKPbc	**PKPbc**	**15 56 28.1**	**-1.1**
4.9nm,0.7s,baz=94,slow=4.7,SNR=4.2							
PDAR Pinedale Array 164.56 334				PKP	**PKPdf**	**15 56 35.9**	**-0.7**
0.8nm,0.9s,baz=114,slow=3.6,SNR=5.0							
TXAR Lajitas Array 166.78 274				PKP	**PKPdf**	**15 56 39.3**	**+0.6**
0.3nm,0.6s,baz=108,slow=2.9,SNR=2.3							
NVAR Mina Array Bea 170.81 357				PKP	**PKPdf**	**15 56 42.9**	**+1.7**
0.6nm,0.8s,baz=223,slow=1.8,SNR=5.4							

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*IDC **07** 15:39:20.7±1.7, 16°.15S×175°.09W, h308km±17km, mb3.4/7, mbtmp4.1/9, Error ellipse: s-maj=31.6km s-min=14.8km az=148.0*
ISC 07 15:39:19.9±0.8, 16°.1S±0°.2×175°.0W±0°.2, h300km, n10, σ1§25/11, mb3.6/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu 3.81 55**			P	**Pn**	**15 40 26.1**	**+1.8**
28nm,0.4s,baz=94,slow=5.8,SNR=6.9							
AFI				S	**S**	**15 41 13.2**	**-2.5**
72nm,0.3s,baz=84,slow=22,SNR=10							
MSVF Nonsavu 6.84 256				P	**Pn**	**15 41 00.0**	**+0.5**
8.9nm,0.9s,baz=104,slow=8.9,SNR=5.5							
WRA Warramunga Arr 48.18 258				P	**P**	**15 47 30.3**	**-0.8**
0.7nm,0.4s,baz=96,slow=6.7,SNR=72							
0.7nm,0.4s							
ASAR Alice Springs 48.42 253				P	**P**	**15 47 32.0**	**-0.9**
2.4nm,0.4s,baz=89,slow=7.8,SNR=162							
2.4nm,0.4s							
QSPA South Pole Qui 73.92 180				P	**P**	**15 50 22.2**	**-0.2**
1.7nm,0.7s,baz=345,slow=1.2,SNR=7.4					

MORW	**Morawa**	36.02	192	P	P	16 01 00.8	-0.2
FORT	**Forrest**	37.10	174	P	P	16 01 10.5	+0.7
BLDU	**Ballidu**	37.40	190	P	P	16 01 11.7	-0.6
KLBR	**Kellerberrin**	38.18	189	P	P	16 01 18.2	-0.5
STKA	**Stephens Creek**	41.53	157	P	P	16 01 47.0	+1.5
	0.8nm,0.3s,baz=335,slow=9.3,SNR=4.4						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	53.90	326	P	P	16 03 18.1	+0.3
	1.5nm,0.5s,baz=120,slow=7.7,SNR=23						
	1.5nm,0.5s						

MAN 07 15:57:04.6, 9°.89N×122°.91E, h3km, mb4.2, ML3.0, MS2.7, 2C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	0.27	257	⇓*i*P	Pb	15 57 11.4	-0.8
SNPH	**Sibulan**	0.63	149	⇓*i*P	Pg	15 57 16.5	-0.3
SNPH				*i* S	Sb	15 57 26.3	-1.3
GUIM	**Jordan**	0.80	337	⇑*i*P	Pg	15 57 20.2	+0.3
GUIM				*e*S	Sn	15 58 03.6	+28
DCPH	**Dipolog City**	1.37	161	⇑*e*P	Pn	15 57 30.0	-0.6
DCPH				*e*S	Sg	15 57 46.7	-2.0
TABP	**Talibon, Bohol**	1.42	82	⇓*i*P	Pn	15 57 29.7	-1.7
TABP				*i* S	Sb	15 57 48.9	-1.4
MSLP	**Maasin**	1.94	83	⇓*e*P	Pn	15 57 39.2	+0.7

*JMA **07** 15:58:54.5±0.2, 42°.1N±0°.6×143°.3E±0°.8, h43km±1km, MV2.7/37, HIDAKA MOUNTAINS REGION*
*SKHL **07** 15:58:55.5±0.5, 42°.10N×143°.40E, h37km±2km, mb4.1/3*
ISC 07 15:58:54.5±1.7, 42°.03N±0°.10×143°.38E±0°.05, h43km, n14, σ0§88/20, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	0.16	265	P	Pn	15 59 01.6	-0.2
JEM				*e*S	Sn	15 59 06.7	-0.2
JTHR	**Tokachihiroo**	0.27	348	*i* P	Pn	15 59 02.3	-0.4
JTHR				S	Sn	15 59 08.3	-0.1
JNBK	**Urakawa-nobuka**	0.53	299	P	Pn	15 59 05.0	-0.7
JCH	**Churui**	0.58	359	P	Pn	15 59 06.1	-0.4
JCH				*e*S	Sn	15 59 15.4	+0.4
JSHD	**Hidakashinhida**	0.78	300	P	Pn	15 59 08.8	-0.2
JOB	**Onbets**	0.94	21	P	Pn	15 59 11.9	+0.7
JBT2	**Biratori 2**	1.06	315	*e*P	Pn	15 59 12.9	0.0
JIAM	**Iburiatsuma**	1.23	299	*e*P	Pn	15 59 17.0	+1.8
JFR	**Furan**	1.27	333	*e*P	Pn	15 59 14.7	-1.1
JAR	**Ashorobuto**	1.30	13	*e*P	Pn	15 59 16.2	0.0
AKK	**Akkeshi**	1.47	47	*e*P	Pn	15 59 18.3	-0.1
NMR	**Nemuro--Hokkai**	2.19	52	*e*P	Pn	15 59 27.8	-0.6
NMR				AMB	AMB	15 59 33.7	
	10.0nm,0.3s						
NMR				*e*S	Sn	15 59 52.3	-1.9
NMR				A	A	15 59 59.4	
	50nm,0.4s						
NMR				A	A	15 59 59.4	
	40nm,0.4s						
YUK	**Yuzh-Kuril'sk**	2.71	41	*e*S	Sn	16 00 06.6	-0.4
YUK				*e*P	Pn	15 59 36.5	+1.0
YUK				AMB	AMB	15 59 37.9	
	40nm,0.3s						
YUK				A	A	16 00 13.2	
	50nm,0.4s						
YUK				A	A	16 00 13.2	
	70nm,0.4s						
KUR	**Kuril'sk**	4.57	44	*e*P	Pn	16 00 02.3	+1.3
KUR				AMB	AMB	16 00 06.2	
	20nm,0.5s						
KUR				*e*S	Sn	16 00 53.2	+0.4
KUR				A	A	16 01 03.4	
	30nm,0.5s						
KUR				A	A	16 01 03.4	
	20nm,0.5s						

*IDC **07** 16:01:00.8±1.5, 29°.18S×61°.26E, h0km, mb3.7/6, mbtmp3.7/7, ML4.0/1, MS3.4/13, Error ellipse: s-maj=58.3km s-min=27.2km az=27.0*
ISC 07 16:01:02.0±1.4, 29°.25S±0°.4×61°.1E±0°.2, h10km, n22, σ1§36/9, mb3.8/6, MS3.5/13, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	16.55	307	Pn	P	16 04 56.0	-1.1
	0.1nm,0.3s,baz=106,slow=15,SNR=2.4						
OPO				Sn	Sn	16 07 47.6	-11
	baz=64,slow=8.3,SNR=2.1						
	2.6nm,0.7s						
LSZ	**Lusaka**	33.36	287	LR	LR	16 19 21.7	
	comp=Z,13nm,19.7s,baz=132,slow=33						
MAW	**Mawson**	38.44	179	LR	LR	16 21 05.7	
	comp=Z,51nm,19.5s,baz=18,slow=31						
MBAR	**Mbarara**	40.61	309	LR	LR	16 23 47.4	
	comp=Z,42nm,20.3s,baz=128,slow=34						
TSUM	**Tsumeb**	40.75	274	LR	LR	16 23 58.0	
	comp=Z,31nm,19.0s,baz=150,slow=34						
ATD	**Arta Tunnel**	44.17	334	LR	LR	16 24 43.1	
	comp=Z,53nm,19.2s,baz=150,slow=32						
H01W2	**Cape Leeuwin H**	44.85	111	T	T	16 57 19.9	
	baz=261,slow=75,SNR=5.7						
H01W3	**Cape Leeuwin H**	44.86	111	T	T	16 57 21.5	
	baz=261,slow=75,SNR=4.5						
H01W1	**Cape Leeuwin H**	44.87	111	T	T	16 57 22.5	
	baz=261,slow=75,SNR=4.2						
SNAA	**Sanae**	54.42	200	LR	LR	16 32 19.4	
	comp=Z,23nm,18.0s,baz=15,slow=34						
CMAR	**Chiang Mai Arr**	59.81	42	P	P	16 11 09.2	+1.5
	0.3nm,0.7s,baz=243,slow=6.0,SNR=2.1						
	0.3nm,0.7s						
VNDA	**Vanda**	64.00	166	LR	LR	16 36 45.0	
	comp=Z,42nm,19.9s,baz=276,slow=34						
ASAR	**Alice Springs**	64.46	104	P	P	16 11 39.5	+0.4
	0.6nm,0.7s,baz=241,slow=6.0,SNR=8.1						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	66.28	100	P	P	16 11 49.5	-1.5
	1.1nm,1.0s,baz=253,slow=6.3,SNR=3.7						
WRA				LR	LR	16 35 55.5	
	comp=Z,52nm,20.1s,baz=159,slow=32						
	1.1nm,1.0s						
GNI	**Garni**	70.66	347	LR	LR	16 41 36.9	
	comp=Z,23nm,19.5s,baz=126,slow=34						
TORD	**Torodi Ar. Bea**	71.13	298	P	P	16 12 22.7	+1.5
	0.3nm,0.4s,baz=110,slow=7.3,SNR=2.7						
TORD				LR	LR	16 43 15.2	
	comp=Z,52nm,19.4s,baz=209,slow=36						
	0.3nm,0.4s						
KBZ	**Khabaz**	74.48	346	LR	LR	16 43 47.6	
	comp=Z,23nm,21.8s,baz=148,slow=34						
MKAR	**Makanchi Array**	78.02	15	P	P	16 13 00.1	-0.4
	0.7nm,0.8s,baz=186,slow=7.2,SNR=2.6						
	0.7nm,0.8s						
JOW	**Kunigami**	85.09	56	LR	LR	16 45 55.4	
	comp=Z,52nm,19.1s,baz=137,slow=32						
ZALV	**Zalesovo Beam**	85.31	14	P	P	16 13 37.6	-1.1
	0.6nm,0.7s,baz=298,slow=3.1,SNR=3.7						
ZALV				LR	LR	16 48 05.1	
	comp=Z,29nm,18.4s,baz=59,slow=33						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	146.59	356	PKPbc	PKPbc	16 20 42.0	-1.1
	1.2nm,0.8s,baz=350,slow=3.6,SNR=3.7						
PDAR	**Pinedale Array**	164.52	333	PKP	PKPdf	16 21 06.7	+0.4
	0.5nm,0.8s,baz=113,slow=3.4,SNR=4.2						

*IDC **07** 16:03:16.9±3.0, 6°.05S×146°.25E, h120km±35km, mb3.5/8, mbtmp3.9/10, MS3.2/1, Error ellipse: s-maj=33.1km s-min=19.3km az=119.0*
ISC 07 16:03:15.3±0.8, 5°.92S±0°.07×146°.2E±0°.1, h100km, n34, σ1§16/33, mb3.7/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.59	165	P	Pn	16 04 10.0	+1.0
	71nm,0.4s,baz=43,slow=5.8,SNR=87						
PMG				S	Sn	16 04 49.8	-0.8
	123nm,0.5s,baz=158,slow=24,SNR=21						
PMG	**Port Moresby**	3.59	165	P	Pn	16 04 09.9	+1.0
PMG	**Port Moresby**	3.59	165	P	Pn	16 04 10.0	+1.0
COEN	**Coen**	8.52	200	P	Pn	16 05 18.0	+2.0
MTSU	**Mount Surprise**	12.28	188	P	Pn	16 06 09.3	+2.6
TV1H	**Townsville Har**	13.28	178	P	P	16 06 23.3	-2.6
CTA	**Charters Tower**	14.08	180	P	P	16 06 33.7	-1.2
	6.1nm,0.4s,baz=359,slow=14,SNR=27						
KDU	**Kakadu**	15.12	243	P	Pn	16 06 43.4	-0.2

MTN	**Manton Dam**	16.37	244	P	Pn	16 06 59.4	+0.1
WRAB	**Tennant Creek**	18.07	219	P	P	16 07 18.2	-0.9
WRA	**Warramunga Arr**	18.09	219	P	P	16 07 17.9	-1.3
	1.1nm,0.6s,baz=39,slow=11,SNR=17						
KNRA	**Kununurra**	19.66	239	P	P	16 07 35.7	-0.7
RMQ	**Roma**	20.60	173	P	Pn	16 07 48.4	-1.2
AS01	**Alice Springs**	21.22	213	P	P	16 07 53.0	-0.2
ASAR	**Alice Springs**	21.25	213	P	P	16 07 53.1	-0.4
	0.9nm,0.5s,baz=52,slow=8.7,SNR=26						
	0.9nm,0.5s						
INKA	**Innaminka**	22.31	193	P	P	16 08 06.2	+1.5
FITZ	**Fitzroy Crossi**	23.43	237	P	P	16 08 14.1	-1.7
	2.1nm,0.5s,baz=42,slow=10.0,SNR=18						
	2.1nm,0.5s						
FITZ	**Fitzroy Crossi**	23.43	237	P	P	16 08 14.5	-1.3
OOD	**Oodnadatta**	23.94	203	P	P	16 08 19.6	-0.6
LCRK	**Leigh Creek**	25.53	196	P	P	16 08 34.5	-0.1
WRKA	**Warakurna**	25.61	220	P	P	16 08 34.2	-1.3
STKA	**Stephens Creek**	26.18	189	P	P	16 08 40.2	-0.3
	1.7nm,0.7s,baz=54,slow=15,SNR=4.5						
	1.7nm,0.7s						
STKA	**Stephens Creek**	26.18	189	P	P	16 08 41.6	+1.1
MULG	**Mulgathing**	26.79	204	P	P	16 08 45.5	-0.6
HTT	**Hallett**	28.20	193	P	P	16 08 58.6	0.0
MEEK	**Meekatharra**	33.40	229	P	P	16 09 44.5	0.0
KLBR	**Kellerberrin**	36.89	223	P	P	16 10 13.5	-0.9
JOW	**Kunigami**	36.90	333	LR	LR	16 21 54.2	
	comp=Z,37nm,21.5s,baz=98,slow=30						
USRK	**Ussuriysk Ar.**	51.51	347	P	P	16 12 11.2	+0.6
	1.8nm,0.6s,baz=183,slow=8.9,SNR=4.7						
	1.8nm,0.6s						
CMAR	**Chiang Mai Arr**	52.51	299	P	P	16 12 19.4	+0.8
	1.3nm,0.7s,baz=116,slow=6.0,SNR=9.4						
	1.3nm,0.7s						
PETK	**Petropavlovsk-**	59.61	8	P	P	16 13 08.9	+0.4
	2.5nm,0.8s,baz=157,slow=6.4,SNR=5.7						
	2.5nm,0.8s						
MKAR	**Makanchi Array**	76.93	321	P	P	16 14 56.6	-0.2
	0.2nm,0.4s,baz=94,slow=9.3,SNR=4.6						
	0.2nm,0.4s						
ILAR	**Eielson Array**	85.72	23	P	P	16 15 41.6	-1.2
	0.5nm,0.7s,baz=258,slow=5.7,SNR=4.2						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	144.30	284	PKP	PKPab	16 22 39.8	+1.0
	1.3nm,0.4s,baz=62,slow=3.4,SNR=8.8						

*MAN **07** 16:13:39.4, 4°.17N×127°.22E, h53km, mb4.8, ML3.7, MS3.6*
*IDC **07** 16:13:46.3±5.3, 4°.89N×126°.78E, h53km±52km, mb3.8/7, mbtmp4.0/8, ML3.9/1, Error ellipse: s-maj=68.9km s-min=21.6km az=71.0*
ISC 07 16:13:49.1±0.8, 4°.85N±0°.07×127°.01E±0°.10, h76km, n20, σ1§89/23, mb3.9/7, 4C-8D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	1.80	314	⇓*e*P	Pn	16 14 15.9	-2.4
DDMP				*e*S		16 16 10.8	
MATI	**Mati**	2.22	340	⇓*e*P	Pn	16 14 24.8	+0.9
MATI				*e*S		16 16 24.5	
GSPH	**General Santos**	2.39	301	⇑*i*P	Pn	16 14 22.6	-3.7
GSPH				*e*S	Sn	16 14 55.7	+0.9
SKMP	**Bagumbayan, Su**	2.96	304	⇓*e*P	Pn	16 14 33.1	-0.9
BIPH	**Bislig**	3.38	349	⇑*e*P	Pn	16 14 40.9	+1.3
BIPH				*e*S	Sn	16 15 27.7	+9.1
CTBH	**Cotabato--PC H**	3.62	311	⇑*e*P	Pn	16 14 43.4	+0.5
CGP	**Cagayan de Oro**	4.26	327	⇓*e*P	Pn	16 14 57.1	+5.5
CGP				*e*S	Sn	16 15 45.1	+4.9
BUTP	**Butuan**	4.32	341	⇓*e*P	Pn	16 14 54.9	+2.5
BUTP				*e*S	Sn	16 15 42.1	+0.4
PAGZ	**Pagadian**	4.68	310	⇓*e*P	Pn	16 14 57.4	+0.1
PAGZ				*e*S	Sn	16 15 10.8	-40
GLSP	**General Luna,**	4.98	350	⇓*e*P	Pn	16 15 01.2	-0.3
GLSP				*e*S	Sn	16 15 54.0	-3.8
LSIP	**Lazi, Siquijor**	5.42	322	⇓*i*P	Pn	16 15 09.1	+1.6
MSLP	**Maasin**	5.67	338	⇑*i*P	Pn	16 15 11.9	+1.1
SIJI	**Sorong**	7.09	143	P	Pn	16 15 30.7	+0.3
	2.2nm,0.3s,baz=226,slow=24,SNR=12						
SIJI				S	Sn	16 16 51.0	+1.4
	3.4nm,0.5s,baz=204,slow=19,SNR=1.8						
	4.7nm,0.3s						
FITZ	**Fitzroy Crossi**	22.84	183	P	P	16 18 45.1	-1.0
	2.2nm,0.9s,baz=0.1,slow=5.8,SNR=8.3						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	25.67	164	P	P	16 19 11.7	-0.4
	0.7nm,0.4s,baz=344,slow=9.9,SNR=20						
	0.7nm,0.4s						
ASAR	**Alice Springs**	29.13	167	P	P	16 19 43.3	+0.2
	0.4nm,0.5s,baz=350,slow=7.2,SNR=16						
	0.4nm,0.5s						
STKA	**Stephens Creek**	39.07	160	P	P	16 21 10.7	+1.8
	1.2nm,0.4s,baz=332,slow=8.9,SNR=5.2						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	56.81	325	P	P	16 23 24.4	-1.3
	0.5nm,0.5s,baz=118,slow=8.0,SNR=9.6						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	89.50	340	P	P	16 26 35.8	-1.8
	2.0nm,0.9s,baz=69,slow=6.6,SNR=3.6						
	2.0nm,0.9s						
FINES	**FINESS Array B**	90.99	332	P	P	16 26 44.1	-0.6
	8.2nm,1.1s,baz=70,slow=4.6,SNR=3.7						
	8.2nm,1.1s						

*ISN **07** 16:15:28.8±1.0, 35°.53N×46°.29E, h8km±11km, ML2.8*
*TEH **07** 16:15:28.3, 35°.54N×46°.20E, h6km, ML3.0*
*AZER **07** 16:15:35.4±5.7, 35°.36N×46°.09E, h5km, Error ellipse: s-maj=58.2km s-min=31.6km az=144.0*
ISC 07 16:15:28.9±0.8, 35°.58N±0°.02×46°.28E±0°.03, h10km, n36, σ1§46/43, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIN	**Lien**	0.87	140	*e*Pg	Pg	16 15 45.1	-0.5
ILIN				*e*		16 16 00.6	
	comp=Z,3μm,0.2s						
IDHR	**Dehrash**	0.89	174	*e*Pg	Pb	16 15 45.6	-0.9
IDHR				*e*Sg	Sn	16 15 59.0	-1.6
IDHR				*e*		16 16 01.2	
	comp=Z,5μm,0.3s						
SNGE	**Sanandaj**	1.00	119	*e*Pg	Pg	16 15 47.1	-1.0
MAHB	**Mahabad**	1.27	339	*e*Pg	Pg	16 15 53.4	+0.1
IGHG	**Ghaleghazi**	1.27	169	*e*Pg	Pg	16 15 53.7	+0.4
IGHG				*e*		16 16 20.6	
	comp=Z,3μm,0.6s						
KER	**Kermanshah**	1.39	149	*e*Pg	Pg	16 15 56.1	+0.6
KCHF	**Cheshme Sefid,**	1.45	154	*e*Pg	Pg	16 15 57.0	+0.3
KCHF				*e*Sg	Sg	16 16 17.9	+2.5
KCHF				*e*		16 16 23.5	
	comp=Z,3μm,0.4s						
IKRK	**Kirkuk**	1.59	264	*e*Pg	Pg	16 15 59.0	-0.5
	baz=85						
IKRK				*e*Sg	Sg	16 16 21.0	+0.9
IKRK				AML	AML	16 16 29.9	
	comp=E,109nm,0.5s						
IKRK				AML	AML	16 16 30.5	
	comp=N,153nm,0.6s						
IBZA	**Bozab**	1.71	130	*e*Pn	Pg	16 16 01.7	+0.1
IBZA				*e*		16 16 31.6	
	comp=Z,2μm,0.4s						
IKOM	**Komasi**	1.73	144	*e*Pn	Pg	16 16 01.7	-0.4
IKOM				*e*		16 16 33.0	
	comp=Z,2μm,0.5s						
IHSH	**Hashtrud**	1.89	24	*e*Pn	Pb	16 16 03.8	+0.1
IHSH				*e*		16 16 34.4	
	comp=Z,2μm,0.2s						
IAZR	**Azarshahr**	2.10	353	*e*		16 16 48.1	
	comp=Z,3μm,0.6s						
IAZR				*e*Pn	Pb	16 16 07.5	+0.2
IBST	**Bostanabad**	2.17	13	*e*		16 16 40.1	
	comp=Z,557nm,0.3s						
IBST				*e*Pn	Pb	16 16 08.9	+0.5
ZNJK	**Zanjan**	2.23	60	*e*Pn	Pb	16 16 09.2	-0.2
HSAM	**Samen**	2.35	125	*e*Pn	Pb	16 16 11.3	-0.1
HSAM				*e*		16 16 48.3	
	comp=Z,415nm,1.0s						
IDOB	**Doab**	2.38	138	*e*Pn	Pb	16 16 11.6	-0.3
IKFM	**Kafar-mosalman**	2.43	147	*e*Pn	Pb	16 16 12.2	-0.4
IKFM				*e*		16 17 01.1	
	comp=Z,577nm,0.6s						
IBDR	**Badra**	2.48	187	*e*Pn	Pb	16 16 11.0	-2.6
IBDR				*e*Sn	Sb	16 16 42.0	-2.2
ISRB	**Sarab**	2.50	26	*e*Pn	Pb	16 16 14.0	0.0
ISRB				*e*		16 16 50.5	
	comp=Z,715nm,0.3s						

QSDN	**Sirdan**	2.52	68	*e*Pn	Pb	16 16 13.8	-0.5
ITBZ	**Tabriz**	2.65	358	*e*	Sg	16 16 53.9	0.0
	comp=Z,310nm,0.4s						
QABG	**Abgarm-Qazvin**	2.69	86	*e*Pn	Pb	16 16 16.3	-1.0
ISHB	**Shabestar**	2.75	349	*e*Pn	Pb	16 16 17.2	-1.0
ISHB				*e*		16 17 02.8	
	comp=Z,511nm,0.4s						
IHRS	**Heris**	2.80	12	*e*Pn	Pb	16 16 17.8	-1.3
IHRS				*e*		16 16 26.5	
	comp=Z,290nm,0.3s						
IRAZ	**Razeghan**	2.98	92	*e*Pn	Pb	16 16 20.9	-1.3
IRAZ				*e*		16 17 15.1	
	comp=Z,367nm,0.7s						
IMRD	**Marand**	3.16	352	*e*	Sg	16 17 20.0	+10
	comp=Z,424nm,0.4s						
GIDE	**GILAN DEYLAMAN**	3.22	64	*e*Pn	Pb	16 16 22.3	+2.6
ASAO	**Ashtian**	3.24	108	*e*Pn	Pn	16 16 21.1	+1.1
ORD	**Ordubad**	3.35	356	P	Pg	16 16 31.3	-1.7
ORD				S	Sg	16 17 15.8	-0.5
GRMI	**Germi**	3.47	21	*e*Pn	Pn	16 16 26.6	+3.6
LRK	**Lerik**	3.47	28	P	Pg	16 16 34.2	-1.2
LRK				S	Sg	16 17 18.7	-1.6
KHMZ	**Khomeyn**	3.55	120	*e*Pn	Pn	16 16 25.4	+1.2
ASTR	**Astara**	3.59	33	P	Pg	16 16 36.3	-1.2
ASTR				S	Sg	16 17 23.5	-0.5
YRD	**Yardimli**	3.68	25	P	Pb	16 16 36.7	+2.7
YRD				S	Sg	16 17 25.5	-1.4
GHVR	**GHOM**	4.26	104	*e*Pn	Pn	16 16 34.6	+0.7
IPIR	**Pirpir**	4.79	126	*e*Pn	Pn	16 16 45.2	+3.8

*BJI **07** 16:17:26.4±0.0, 0°.92N×127°.53E, h150km, mb4.8/47, mB4.8/24*
*DJA **07** 16:17:31.6±0.3, 2°.N±2°.×12°.7E±°, h100km±6km, M5.0/19, mb5.3/15, mB5.5/12, MLv5.0/19, Mw(mB)5.0/12*
*NEIC **07** 16:17:31.2±1.4, 1°.50N±0°.08×127°.15E±0°.09, h130km±8km, mb4.7/51, Error ellipse: s-maj=13.8km s-min=11.1km az=79.0*
*IDC **07** 16:17:31.2±1.5, 1°.48N×127°.22E, h137km±14km, mb4.1/18, mbtmp4.4/20, MS3.0/4, Error ellipse: s-maj=19.3km s-min=10.0km az=80.0*
ISC 07 16:17:30.6±0.3, 1°.52N±0°.04×127°.18E±0°.05, h130km, n171, σ1§56/181, mb4.6/55, 10C-6D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	0.69	63	P	Pn	16 17 50.6	-0.3
GAMI				S	Sn	16 18 04.9	-1.4
TNTI	**Ternate**	0.77	166		Pn	16 17 51.7	+0.2
TNTI	**Ternate**	0.77	166	P	Pn	16 17 51.6	0.0
TNTI	**Ternate**	0.77	166	P	Pn	16 17 52.0	+0.4
LBMI	**Labuha**	2.17	171	P	Pn	16 18 06.8	+0.1
SGSI	**Sangihe**	2.71	323	P	Pn	16 18 13.2	-0.3
SGSI				S	Sn	16 18 44.0	-2.5
KMSI	**Cibinong**	3.33	254	P	Pn	16 18 22.0	+0.4
KMSI				S	Sn	16 19 00.4	-0.5
SANI	**Sanana**	3.74	199	P	Pn	16 18 25.7	-1.3
SANI	**Sanana**	3.74	199	P	Pn	16 18 26.2	-0.8
GTOI	**Gorontalo**	4.26	258	P	Pn	16 18 35.5	+1.7
SIJI	**Sorong**	4.73	120	P	Pn	16 18 41.1	+0.9
	13nm,0.4s,baz=327,slow=17,SNR=21						
SIJI				S	Sn	16 19 30.7	-3.5
	14nm,0.6s,baz=233,slow=8.0,SNR=3.9						
SIJI	**Sorong**	4.73	120	P	Pn	16 18 40.9	+0.7
NLAI	**Namlea**	4.73	181	P	Pn	16 18 39.8	-0.4
DDMP	**Don Marcelino,**	4.78	342	⇑*i*P	Pn	16 18 39.6	-1.2
DDMP				*e*S		16 20 50.3	
GSPH	**General Santos**	5.05	334	⇓*i*P	Pn	16 18 42.9	-1.7
GSPH				*i* S	Sn	16 19 38.2	-3.8
LUWI	**Luwuk**	5.09	240	Pn	Pn	16 18 44.1	-0.8
LUWI	**Luwuk**	5.09	240	P	Pn	16 18 44.0	-0.9
	5.9nm12μm458nm,0.5s						
LUWI	**Luwuk**	5.09	240	P	Pn	16 18 44.5	-0.4
MSAI	**Masohi**	5.14	160	P	Pn	16 18 47.3	+1.6
	0.1nm420nm17nm,0.6s						
AAI	**Ambon**	5.28	169	P	Pn	16 18 47.9	+0.5
	2.2nm11μm332nm,0.4s						
MRSI	**Marisa**	5.34	259	P	Pn	16 18 48.4	+0.1
	2.2nm6μm477nm,0.8s						
MATI	**Mati**	5.46	350	⇑*i*P	Pn	16 18 50.1	+0.1
MATI				*e*S		16 21 09.2	
SKMP	**Bagumbayan, Su**	5.62	332	⇑*i*P	Pn	16 18 51.7	-0.3
DAV	**Davao City (W)**	5.74	344	LR	LR	16 21 15.0	
	comp=Z,53nm,21.5s,baz=98,slow=39						
DAV	**Davao City (W)**	5.74	344	Pn	Pn	16 18 53.4	-0.3
DAV	**Davao City (W)**	5.74	344	P	Pn	16 18 54.3	+0.7
	1.6nm312nm,0.5s						
APSI	**Ampana**	6.03	246	P	Pn	16 18 57.2	-0.4
	3.9nm14μm648nm,0.5s						
CTBH	**Cotabato--PC H**	6.37	333	⇑*i*P	Pn	16 19 01.2	-0.9
TOLI2	**Tolitoli**	6.41	266	Pn	Pn	16 19 02.5	-0.2
TOLI2	**Tolitoli**	6.41	266	P	Pn	16 19 03.0	+0.4
BIPH	**Bislig**	6.67	353	⇑*e*P	Pn	16 19 04.4	-1.8
BIPH				*e*S	Sn	16 20 20.9	+0.1
FAKI	**Fak Fak**	6.72	131	Pn	Pn	16 19 08.3	+1.4
FAKI	**Fak Fak**	6.72	131	P	Pn	16 19 08.3	+1.4
	0.1nm23nm,0.7s						
FAKI	**Fak Fak**	6.72	131	P	Pn	16 19 08.7	+1.8
CGP	**Cagayan de Oro**	7.32	340	⇓*e*P	Pn	16 19 16.1	+1.2
CGP				*e*S	Sn	16 20 33.8	-2.8
MPSI	**Mapaga**	7.37	261	P	Pn	16 19 16.6	+0

WRAB Tennant Creek 22.45 162 P P 16 22 17.5 -1.6
WRAB IAmb IAmb 16 22 25.0
comp=Z,16nm,0.7s
WRAB Tennant Creek 22.45 162 P P 16 22 17.9 -1.2
WRA Warramunga Arr 22.46 162 P P 16 22 17.7 -1.4
comp=Z,1.3nm,0.3s,baz=340,slow=11,SNR=26
WRA S **S 16 26 15.2 -1.2**
comp=Z,0.8nm,0.6s,baz=336,slow=21,SNR=3.8
WRA ScP **ScP 16 29 33.5 -1.2**
comp=Z,0.5nm,0.7s,baz=336,slow=3.0,SNR=7.6
comp=Z,1.3nm,0.3s
WRA Warramunga Arr 22.46 162 P P 16 22 17.1 -2.1
WB2 Warramunga Arr 22.46 162 P P 16 22 17.9 -1.4
WB2 IAmb IAmb 16 22 25.1
comp=Z,17nm,0.7s
WR0 Warramunga Arr 22.54 162 P P 16 22 18.5 -1.4
TPUB Ta-pu 22.56 344 P P 16 22 18.4 -1.8
SSLB Suanglung 22.94 345 P P 16 22 23.5 -0.2
YOJ Yonaguni jima 23.16 350 P P 16 22 26.8 +1.1
YHNB Yeheng 23.68 347 P P 16 22 31.0 +0.4
MBWA Marble Bar 23.69 198 P P 16 22 31.4 +0.7
QIZ Qiongzhong 24.31 317 P P 16 22 37.1 +0.8
QIZ IAmb IAmb 16 22 37.9
comp=Z,12nm,0.7s
QIS Mount Isa 25.10 152 P P 16 22 44.2 +0.8
MTSU Mount Surprise 25.81 140 P P 16 22 50.4 +0.5
AS31 Alice Springs 25.88 166 P P 16 22 50.1 -0.4
ASAR Alice Springs 25.88 166 P P 16 22 49.7 -0.8
comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=13
ASAR S **S 16 27 20.1 +9.1**
comp=Z,3.1nm,0.9s,baz=349,slow=22,SNR=13
ASAR ScP **ScP 16 29 43.0 -1.1**
comp=Z,1.0nm,0.6s,baz=340,slow=3.0,SNR=12
comp=Z,0.3nm,0.3s
ASAR Alice Springs 25.88 166 P P 16 22 50.4 -0.1
AS01 Alice Springs 25.89 166 P P 16 22 49.9 -0.7
WRKA Warakurna 26.43 178 P P 16 22 55.2 -0.2
GIRL Giralia 27.13 207 P P 16 23 02.9 +1.2
MEEK Meekatharra 29.19 196 P P 16 23 21.4 +1.4
OOD Oodnadatta 30.28 165 P P 16 23 30.6 +1.1
NJ2 Nanjing 31.36 346 *eP* P 16 23 45.3 +6.3
NJ2 pmax pmax
comp=Z,11nm,0.6s
MORW Morawa 32.23 198 P P 16 23 46.7 -0.1
MORW IAmb IAmb 16 23 55.9
comp=Z,27nm,1.5s
MORW Morawa 32.23 198 P P 16 23 45.6 -1.1
MULG Mulgathing 32.30 169 P P 16 23 48.0 +0.7
CMAR Chiang Mai Arr 32.41 303 P P 16 23 49.4 +1.0
comp=Z,0.9nm,0.8s,baz=126,slow=7.0,SNR=9.5
CMAR ScP **ScP 16 30 04.9 -0.1**
comp=Z,0.8nm,0.9s,baz=176,slow=1.9,SNR=5.5
comp=Z,0.9nm,0.8s
CHTO Chiang Mai 32.57 304 P P 16 23 50.1 +0.2
JMN Monobe 32.65 10 P P 16 23 50.8 +0.5
ENH Enshi 33.16 331 P P 16 23 55.5 +0.7
ENH IAmb IAmb 16 23 56.6
comp=Z,18nm,1.0s
KMI Kunming 33.27 317 ⇑*P* **P 16 23 58.3 +2.2**
KMI pmax pmax
comp=Z,13nm,0.5s
BLDU Ballidu 33.48 196 P P 16 23 57.8 +0.2
LCRK Leigh Creek 33.49 163 P P 16 23 58.8 +1.2
PZH PanZhiHua 34.85 318 P P 16 24 12.8 +3.2
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,4.2s
INU Inuyama 34.88 14 P P 16 24 09.3 -0.3
INU IAmb IAmb 16 24 24.8
comp=Z,27nm,1.5s
MUN Mundaring 34.90 196 P P 16 24 10.1 +0.3
BBOO Buckleboo 35.16 167 P P 16 24 11.0 -1.1
BBOO IAmb IAmb 16 24 26.8
comp=Z,14nm,1.1s
BBOO Buckleboo 35.16 167 P P 16 24 12.7 +0.6
NWAO Narrogin (SRO) 35.53 194 P P 16 24 16.5 +1.3
LYN LuoYang 35.61 339 ⇓*P* **P 16 24 16.1 +0.2**
KSRS Korea Array 35.76 1 P P 16 24 17.6 +0.5
comp=Z,7.0nm,0.6s,baz=177,slow=9.6,SNR=28
comp=Z,7.0nm,0.6s
KS19 Wonju Array Si 35.81 1 P P 16 24 17.6 +0.1
STKA Stephens Creek 35.92 159 P P 16 24 18.6 0.0
comp=Z,1.2nm,0.3s,baz=330,slow=10,SNR=7.7
comp=Z,1.2nm,0.3s
STKA Stephens Creek 35.92 159 P P 16 24 18.1 -0.4
STKA Stephens Creek 35.92 159 P P 16 24 18.5 0.0
XAN Xi'an 36.58 334 ⇑*P* **P 16 24 24.6 +0.4**
XAN pmax pmax
comp=Z,37nm,0.7s
XAN pmax pmax
comp=Z,140nm,4.8s
HNS HongShan 37.51 344 ⇑*P* **P 16 24 32.8 +0.9**
HNS pmax pmax
comp=Z,7.0nm,0.6s
ARMA Armidale 39.40 146 P P 16 24 48.5 +0.5
BJT Baijiatuau 39.60 347 P P 16 24 50.0 +0.7
BJT IAmb IAmb 16 24 50.6
comp=Z,14nm,0.7s
BJI Beijing 39.62 347 P P 16 24 50.1 +0.6
BJI pmax pmax
comp=Z,19nm,0.7s
ARPS Mount Arapiles 40.46 162 P P 16 24 56.9 +0.4
comp=Z,15nm,1.0s
LZH Lanzhou 40.62 330 *eP* **P 16 24 59.8 +1.7**
LZH pP pwP 16 25 30.8 +1.3
LZH pmax pmax
comp=Z,47nm,1.4s
HHC Hu-ho-hao-te 41.62 342 *eP* **P 16 25 09.6 +3.5**
HHC pmax pmax
comp=Z,30nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.8s
CN2 Changchun 42.12 358 *eP* **P 16 25 13.6 +3.6**
CN2 *eS* **S 16 31 27.2 +7.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,12.0s
CN2 LR LR
comp=Z,200nm,12.0s
CN2 LR LR
comp=Z,300nm,10.0s
USA0B Ussuriysk Arra 42.71 5 P P 16 25 15.2 +0.5
USA0B IAmb IAmb 16 25 15.9
comp=Z,13nm,0.9s
USRK Ussuriysk Ar. 42.71 5 P P 16 25 14.9 +0.3
comp=Z,5.4nm,0.7s,baz=196,slow=5.8,SNR=14
comp=Z,5.4nm,0.7s
MDJ Mudanjiang 42.96 3 P P 16 25 17.4 +0.7
MDJ IAmb IAmb 16 25 18.2
comp=Z,18nm,1.1s
XLT XiLinHaoTe 43.33 348 *eP* **P 16 25 20.0 +0.1**
XLT pmax pmax
comp=Z,18nm,0.7s
XLT pmax pmax
comp=Z,71nm,4.6s
GTA Gaotai 45.21 330 ⇓*P* **P 16 25 36.0 +1.0**
GTA pP sP 16 26 14.0 -4.2
GTA pmax pmax
comp=Z,7.0nm,0.9s
KLR Kul'dur 47.69 4 P P 16 25 53.8 -0.2
comp=Z,3.5nm,0.5s,baz=206,slow=6.0,SNR=13
comp=Z,3.5nm,0.5s
ULN Ulaanbaatar 49.34 342 P 16 26 06.8 0.0
ULN IAmb IAmb 16 26 08.5
comp=Z,12nm,0.8s
SONM Songino Array 49.52 342 P P 16 26 08.8 +0.6
comp=Z,5.6nm,0.6s,baz=157,slow=8.8,SNR=21
comp=Z,5.6nm,0.6s
SONM Songino Array 49.52 342 P P 16 26 08.5 +0.3
SONM IAmb IAmb 16 26 09.7
comp=Z,5.0nm,0.8s
WMQ Urumqi 54.78 326 *eP* **P 16 26 49.5 +2.4**
PETK Petropavlovsk- 57.30 21 P P 16 27 05.2 +0.5
comp=Z,3.4nm,0.8s,baz=174,slow=3.8,SNR=9.1
comp=Z,3.4nm,0.8s
MK31 Makanchi Array 59.62 326 P P 16 27 21.4 +0.4
MK31 IAmb IAmb 16 27 22.4
comp=Z,7.7nm,0.7s
MKAR Makanchi Array 59.62 326 P P 16 27 21.6 +0.7
comp=Z,8.6nm,0.5s,baz=118,slow=7.7,SNR=92
comp=Z,8.6nm,0.5s
MKAR Makanchi Array 59.62 326 P P 16 27 21.2 +0.3

NIL Nilore 59.63 309 P P 16 27 20.1 -1.2
NIL IAmb IAmb 16 27 23.8
comp=Z,4.9nm,0.6s
MAKZ Makanchi 59.80 326 P P 16 27 22.5 +0.3
MAKZ IAmb IAmb 16 27 23.6
comp=Z,10nm,0.9s
YAK Yakutsk 60.39 1 P P 16 27 25.2 -0.7
comp=Z,7.8nm,0.7s,baz=241,slow=1.3,SNR=7.6
comp=Z,7.8nm,0.7s
YAK Yakutsk 60.39 1 P P 16 27 24.7 -1.2
MA2 Magadan 60.73 14 P P 16 27 28.4 +0.2
comp=Z,6.5nm,0.8s,baz=210,slow=14,SNR=1.7
comp=Z,6.5nm,0.8s
NRN Naryn 60.75 318 P P 16 27 29.5 +0.3
NRN IAmb IAmb 16 27 31.1
comp=Z,6.3nm,1.2s
ZAA0 Zalesovo Array 62.75 333 P P 16 27 41.2 -0.7
ZAA0 IAmb IAmb 16 27 42.0
comp=Z,8.6nm,1.4s
ZALV Zalesovo Beam 62.75 333 P P 16 27 41.0 -0.8
comp=Z,1.9nm,0.5s,baz=104,slow=6.3,SNR=9.2
comp=Z,1.9nm,0.5s
ZALV Zalesovo Beam 62.75 333 P P 16 27 41.3 -0.5
DRK Karamyk 62.85 314 P P 16 27 43.6 +0.3
DRK IAmb IAmb 16 27 45.0
comp=Z,6.3nm,0.8s
GAR Garm 63.74 313 P P 16 27 49.3 +0.4
BTK Batken 63.77 315 P P 16 27 49.2 +0.2
BTK IAmb IAmb 16 27 59.7
comp=Z,4.3nm,0.6s
KURK Kurchatov 63.83 328 P P 16 27 49.0 0.0
SEY Seymchan 64.07 13 P P 16 27 50.8 +0.4
comp=Z,3.2nm,0.6s,baz=244,slow=9.2,SNR=7.9
comp=Z,3.2nm,0.6s
CHGR Chuyangaron 64.47 313 P P 16 27 52.4 -1.3
KK31 Karatay Array 65.14 318 P P 16 27 57.9 0.0
KK31 IAmb IAmb 16 27 59.0
comp=Z,7.4nm,1.1s
KKAR Karatay Array 65.14 318 P P 16 27 57.7 -0.1
KKAR Karatay Array 65.14 318 P P 16 27 57.6 -0.2
KKAR IAmb IAmb 16 27 59.0
comp=Z,7.4nm,1.1s
BRVK Borovoye 69.47 327 P P 16 28 24.7 -0.2
BRVK IAmb IAmb 16 28 25.7
comp=Z,9.1nm,1.0s
GEYT Alibeck 72.62 309 P P 16 28 45.0 +0.7
comp=Z,2.8nm,0.6s,baz=163,slow=7.6,SNR=7.1
comp=Z,2.8nm,0.6s
GEYT Alibeck 72.62 309 P P 16 28 44.2 0.0
NRIK Noril'sk 72.66 346 P P 16 28 43.6 -0.1
comp=Z,5.8nm,0.6s,baz=134,slow=6.0,SNR=12
comp=Z,5.8nm,0.6s
ABKAR Abkulak array 74.13 321 P P 16 28 52.2 -0.5
ABKAR Abkulak array 74.13 321 P P 16 28 52.5 -0.3
ARU Arti 77.03 328 P P 16 29 08.3 -0.8
RAYN Ar Rayn 81.76 293 P P 16 29 35.0 -0.5
GEVA Gevas 84.44 308 P P 16 29 49.4 +0.2
GEVA IAmb IAmb 16 29 50.5
comp=Z,5.5nm,0.7s
ARCES ARCESS Array B 92.66 340 P P 16 30 25.6 -1.9
comp=Z,2.5nm,0.7s,baz=67,slow=4.1,SNR=5.8
comp=Z,2.5nm,0.7s
FINES FINESS Array B 93.97 332 P P 16 30 32.6 -1.0
comp=Z,2.8nm,0.9s,baz=102,slow=6.6,SNR=3.4
comp=Z,2.8nm,0.9s
MBAR Mbarara 96.45 270 LR LR 17 09 04.5
comp=Z,14nm,20.6s,baz=120,slow=32
TORD Torodi Ar. Bea 124.00 287 PKP **PKPdf 16 36 13.9 -0.7**
comp=Z,0.6nm,0.6s,baz=67,slow=2.6,SNR=4.8

IDC ***07*** *16:25:47.2±5.9, 36°.17N×140°.26E, h79km±42km, mb3.4/5, mbtmp3.7/7, ML2.9/2, MS2.8/1, Error ellipse: s-maj=87.8km s-min=19.2km az=67.0*
JMA ***07*** *16:25:48.1±0.1, 36°.1N±0°.3×140°.0E±0°.4, h68km, MV3.0/40, SW IBARAKI PREF*
ISC 07 16:25:47.4±0.9, 36°.11N±0°.04×140°.03E±0°.06, h73km±7km, n20, σ0°75/27, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.18**	**48**	P	**Pn**	**16 25 58.6**	**+0.3**
JYT				S	**Sn**	**16 26 06.2**	**-0.1**
JAG	**Ashikaga**	**0.56**	**304**	P	**Pn**	**16 26 01.2**	**0.0**
JAG				S	**Sn**	**16 26 10.7**	**-0.5**
JKT	**Katashina**	**0.91**	**317**	P	**Pn**	**16 26 05.0**	**-0.1**
JKT				S	**Sn**	**16 26 17.9**	**-0.4**
JRY	**Ryogami san**	**0.92**	**265**	P	**Pn**	**16 26 05.2**	**+0.1**
JRY				S	**Sn**	**16 26 18.1**	**-0.2**
JOD2	**Odawara 2**	**1.14**	**223**	P	**Pn**	**16 26 08.0**	**+0.1**
JOD2				S	**Sn**	**16 26 22.5**	**-0.6**
JFY	**Yanaizu**	**1.32**	**349**	P	**Pn**	**16 26 10.8**	**+0.6**
JFY				S	**Sn**	**16 26 28.1**	**+0.8**
JUON	**Uonuma**	**1.35**	**325**	P	**Pn**	**16 26 10.7**	**+0.1**
JYN	**Shimob**	**1.35**	**244**	P	**Pn**	**16 26 11.2**	**+0.5**
JYN				*eS*	**Sn**	**16 26 28.1**	**0.0**
BSO3	**Boso 3**	**1.36**	**163**	P	**Pn**	**16 26 10.9**	**+0.5**
JFNN	**Fujinakano**	**1.42**	**231**	P	**Pn**	**16 26 11.9**	**+0.4**
JFNN				*eS*	**Sn**	**16 26 29.6**	**0.0**
JFK	**Kawauchi**	**1.43**	**28**	P	**Pn**	**16 26 12.0**	**+0.4**
MAT	**Matsushiro**	**1.54**	**287**	P	**Pn**	**16 26 13.4**	**+0.5**
JHJ	**Hachijo jima 2**	**2.99**	**184**	P	**Pn**	**16 26 33.2**	**+0.7**
	23nm,0.3s,baz=81,slow=18,SNR=1.7						
	106nm,0.5s						
KSRS	**Korea Array**	**9.80**	**281**	P	**Pn**	**16 28 08.4**	**+2.9**
	baz=84,slow=15,SNR=2.4						
	1.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**10.15**	**325**	LR	LR	16 31 39.6	
	comp=Z,53nm,18.8s,baz=70,slow=34						
ZALV	**Zalesovo Beam**	**41.73**	**313**	P	**P**	**16 33 28.9**	**-0.1**
	0.5nm,0.4s,baz=101,slow=7.8,SNR=2.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.67**	**303**	P	**P**	**16 33 44.6**	**-0.3**
	1.4nm,0.7s,baz=87,slow=11,SNR=6.0						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**56.00**	**186**	P	**P**	**16 35 17.8**	**-0.7**
	0.7nm,0.5s,baz=1.8,slow=7.5,SNR=36						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**59.73**	**187**	P	**P**	**16 35 44.8**	**+0.2**
	0.2nm,0.6s,baz=358,slow=6.4,SNR=6.1						
	0.2nm,0.6s						
NOA	**NORSAR Array B**	**74.60**	**337**	P	**P**	**16 37 17.6**	**-0.7**
	0.6nm,0.7s,baz=38,slow=6.5,SNR=3.3						
	0.6nm,0.7s						

NEIC ***07*** *16:28:47.6±0.7, 31°.92N±0°.03×116°.23W±0°.02, h12km±3km, Error ellipse: s-maj=4.7km s-min=2.3km az=166.0*
ECX ***07*** *16:28:48.6±0.6, 31°.92N×116°.18W, h5km±3km, MD2.8, ML3.0*
ANF ***07*** *16:28:48.9±0.7, 32°.01N×116°.29W, h11km±3km, ML2.4/7, Error ellipse: s-maj=4.5km s-min=3.7km az=166.0*
PAS ***07*** *16:28:48.2±1.0, 31°.92N±0°.02×116°.20W±0°.03, h10km±7km, Error ellipse: s-maj=3.9km s-min=2.8km az=63.0*
MEX ***07*** *16:28:49.4±0.4, 31°.94N×116°.23W, h9km±6km, MD3.0*
ISC 07 16:28:47.2±0.9, 31°.92N±0°.02×116°.22W±0°.02, h10km±9km, n65, σ0°45/97, 10C-6D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESJX	**Sierra Juarez**	**0.24**	**69**	Pg	**Pg**	**16 28 52.8**	**+0.5**
SJX	**San Joaquin**	**0.27**	**125**	⇑*iP*	**Pg**	**16 28 52.8**	**+0.2**
SJX				*eS*	**Sg**	**16 28 55.8**	**-0.4**
SJX				⇑*e*		16 28 56.1	
SJX				IAML		16 28 56.1	
	comp=E,5μm,0.1s						
SJX				IAML		16 28 56.3	
	comp=N,6μm,0.1s						
SJX				⇓*e*		16 28 56.3	
CCX	**Cicese**	**0.39**	**263**	Pg	**Pb**	**16 28 56.3**	**+0.2**
CCX				IAML		16 29 02.4	
	comp=N,942nm,0.3s						
CCX	**Cicese**	**0.39**	**263**	⇑*iP*	**Pb**	**16 28 56.4**	**+0.2**
CCX				*eS*	**Sb**	**16 29 02.1**	**0.0**
CBX	**Cerro Bola**	**0.55**	**316**		**Pb**	**16 28 58.9**	**-0.1**
CBX				IAML		16 29 07.6	
	comp=N,956nm,0.4s						
CBX				IAML		16 29 07.7	
	comp=E,604nm,0.5s						
CBX	**Cerro Bola**	**0.55**	**316**	*eP*	**Pb**	**16 28 58.7**	**-0.3**
CBX				*i S*	**Sb**	**16 29 06.7**	**-0.3**
CBX	**Cerro Bola**	**0.55**	**316**	⇑*eP*	**Pb**	**16 28 58.9**	**-0.1**
CBX				IAML		16 29 07.7	
	comp=N,902nm,0.4s						
CBX				⇑*e*		16 29 07.7	
SVX	**San Vicente**	**0.59**	**183**	*eP*	**Pg**	**16 28 59.0**	**+0.3**
SVX				*eS*	**Sg**	**16 29 07.0**	**+0.6**
VTX	**Valle De La Tr**	**0.64**	**145**	⇓*eP*	**Pg**	**16 28 59.9**	**+0.3**
VTX				*eS*	**Sg**	**16 29 08.2**	**+0.2**
VTX				IAML		16 29 08.8	
	comp=N,846nm,0.1s						
VTX				⇑*e*		16 29 09.3	
VTX				IAML		16 29 09.3	
	comp=E,782nm,0.1s						
TJIG	**Tijuana**	**0.65**	**323**	*eP*	**Pg**	**16 29 00.3**	**+0.5**
TJIG				*eS*	**Sb**	**16 29 09.1**	**-0.7**
TJIG	**Tijuana**	**0.65**	**323**	*eP*	**Pg**	**16 29 00.3**	**+0.5**
TJIG				*eS*	**Sb**	**16 29 09.1**	**-0.7**
RMX	**La Rumorosa**	**0.69**	**10**	Pg	**Pg**	**16 29 00.3**	**-0.4**
RMX	**La Rumorosa**	**0.69**	**10**	⇓*eP*	**Pg**	**16 29 00.3**	**-0.4**
RMX				*eS*	**Sg**	**16 29 08.7**	**-1.1**
TKX	**Tecate**	**0.73**	**333**	Pg	**Pg**	**16 29 01.6**	**+0.2**
TKX	**Tecate**	**0.73**	**333**	⇑*eP*	**Pg**	**16 29 01.5**	**+0.2**
TKX				*eS*	**Sg**	**16 29 11.3**	**+0.4**
TKX				⇑*e*		16 29 11.5	
TKX				IAML		16 29 11.5	
	comp=N,1μm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.74**	**7**		**Pg**	**16 29 01.9**	**+0.4**
IKP					**Sg**	**16 29 11.3**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**0.74**	**7**	P	**Pg**	**16 29 01.9**	**+0.4**
	baz=186,SNR=70						
IKP				S	**Sg**	**16 29 11.2**	**0.0**
	baz=186						
IKP	**In-Ko-Pah, Jac**	**0.74**	**7**	⇓*iP*	**Pg**	**16 29 01.9**	**+0.4**
IKP				*eS*	**Sg**	**16 29 11.3**	**+0.2**
YUH	**Yuha Desert**	**0.77**	**19**		**Pg**	**16 29 02.3**	**+0.2**
YUH					**Sg**	**16 29 12.5**	**+0.3**
YUH	**Yuha Desert**	**0.77**	**19**	Pg	**Pg**	**16 29 02.0**	**-0.1**
YUH	**Yuha Desert**	**0.77**	**19**	IAML		16 29 12.8	
	comp=N,288nm,0.1s						
YUH				IAML		16 29 13.3	
	comp=E,250nm,0.1s						
RHX	**Rio Hardy**	**0.82**	**74**	*eS*	**Sg**	**16 29 13.5**	**-0.3**
SGL	**Mount Signal**	**0.84**	**29**		**Pg**	**16 29 03.8**	**+0.4**
SGL					**Sg**	**16 29 14.6**	**+0.2**
BAR	**Barrett**	**0.85**	**333**	Pg	**Pg**	**16 29 03.6**	**-0.1**
BAR	**Barrett**	**0.85**	**333**		**Sg**	**16 29 14.7**	**-0.2**
BAR	**Barrett**	**0.85**	**333**	⇓*iP*	**Pg**	**16 29 03.6**	**-0.1**
BAR				*eS*	**Sg**	**16 29 15.0**	**+0.2**
OLP	**Otay Lakes Par**	**0.92**	**319**		**Pg**	**16 29 05.1**	**+0.2**
OLP	**Otay Lakes Par**	**0.92**	**319**	*eP*	**Pg**	**16 29 05.1**	**+0.2**
OLP				*eS*	**Sb**	**16 29 17.3**	**-0.2**
WESC	**Westside Schoo**	**0.94**	**26**		**Pb**	**16 29 05.9**	**+0.4**
MONP2	**Monument Peak**	**0.99**	**350**		**Pg**	**16 29 06.2**	**-0.1**
MONP2	**Monument Peak**	**0.99**	**350**	P	**Pg**	**16 29 06.2**	**-0.1**
	baz=169,SNR=15						
MONP2				S	**Sg**	**16 29 19.0**	**-0.2**
	baz=169						
MONP2	**Monument Peak**	**0.99**	**350**	⇓*eP*	**Pg**	**16 29 06.2**	**-0.1**
MONP2				*eS*	**Sg**	**16 29 19.1**	**-0.1**
CRR	**Carrizo Plain**	**0.99**	**12**		**Pg**	**16 29 06.6**	**+0.3**
CRR					**Sb**	**16 29 20.1**	**+0.5**
MBIG	**Mexicali**	**0.99**	**60**	*eP*	**Pb**	**16 29 05.7**	**-0.7**
MBIG				*eS*	**Sg**	**16 29 18.0**	**-1.2**
COK2	**Cook Ranch 2**	**1.02**	**24**		**Pn**	**16 29 07.6**	**0.0**
SDRC	**San Diego Road**	**1.02**	**323**		**Pb**	**16 29 06.8**	**-0.3**
SDRC	**San Diego Road**	**1.02**	**323**	*eP*	**Pb**	**16 29 06.5**	**-0.5**
SPIG	**San Pedro Mart**	**1.08**	**143**	*eP*	**Pb**	**16 29 07.7**	**-0.4**
SPIG				*eS*	**Sg**	**16 29 21.3**	**-0.7**
SPIG	**San Pedro Mart**	**1.08**	**143**	*eP*	**Pb**	**16 29 07.7**	**-0.4**
SPIG				*eS*	**Sg**	**16 29 21.6**	**-0.4**
SPIG				*e*		16 29 23.3	
ECBX	**El Chinero**	**1.08**	**114**	*eP*	**Pb**	**16 29 07.6**	**-0.4**
ECBX				*eS*	**Sb**	**16 29 21.4**	**-0.9**
SWSC	**Sam W. Stewart**	**1.08**	**19**		**Pg**	**16 29 08.3**	**+0.2**
SWSC					**Sb**	**16 29 22.4**	**+0.1**
SWSC	**Sam W. Stewart**	**1.08**	**19**	P	**Pg**	**16 29 08.3**	**+0.2**
	baz=198,SNR=29						
SWSC				S	**Sg**	**16 29 22.7**	**+0.5**
	baz=198						
DREC	**Desert Rsrch C**	**1.10**	**36**		**Sn**	**16 29 25.1**	**+1.3**
EML	**El Monte Cty P**	**1.11**	**331**		**Pb**	**16 29 07.9**	**-0.6**
EML					**Sb**	**16 29 22.1**	**-0.9**
109C	**Camp Elliot, M**	**1.23**	**322**	Pn	**Pn**	**16 29 10.3**	**-0.1**
109C				IAML		16 29 26.7	
	comp=E,290nm,0.3s						
109C	**Camp Elliot, M**	**1.23**	**322**	P	**Pn**	**16 29 10.0**	**-0.4**
	baz=142						
109C				S	**Sb**	**16 29 25.9**	**-0.6**
	baz=142						
CPE	**Camp Elliot**	**1.23**	**322**		**Pn**	**16 29 10.0**	**-0.5**
CPE					**Sb**	**16 29 25.9**	**-0.5**
DPP	**Dos Picos Cty**	**1.24**	**331**		**Pn**	**16 29 10.1**	**-0.6**
DPP					**Sb**	**16 29 26.1**	**-0.8**
COA	**Coachella**	**1.32**	**44**		**Pn**	**16 29 11.6**	**-0.1**
COA					**Sb**	**16 29 29.2**	**+0.1**
MATG	**Mataguay Scout**	**1.33**	**344**		**Pn**	**16 29 12.0**	**0.0**
SQX	**San Quintin**	**1.37**	**168**	⇑*eP*	**Pn**	**16 29 12.1**	**-0.2**
SQX				IAML		16 29 31.1	
	comp=N,232nm,0.3s						
SFX	**San Felipe**	**1.46**	**127**		**Pn**	**16 29 13.8**	**+0.3**
SFX				IAML		16 29 35.6	
	comp=N,94nm,0.6s						
SFX				IAML		16 29 36.9	
	comp=E,97nm,0.6s						
SFX	**San Felipe**	**1.46**	**127**	*eP*	**Pb**	**16 29 14.8**	**+0.4**
SFX				*eS*	**Sb**	**16 29 33.7**	**+0.7**
SFX	**San Felipe**	**1.46**	**127**	*eP*	**Pn**	**16 29 13.3**	**-0.3**
SFX				IAML		16 29 37.1	
	comp=E,103nm,0.5s						
SFX				⇑*e*		16 29 37.1	
PLM	**Palomar**	**1.53**	**339**		**Pn**	**16 29 15.3**	**+0.5**
GLA	**Glamis**	**1.63**	**46**	Pn	**Pn**	**16 29 15.8**	**-0.2**
GLA				IAML		16 29 36.8	
	comp=N,54nm,0.4s						
GLA				IAML		16 29 47.2	
	comp=E,53nm,0.8s						
TPFO	**Pinon Flats**	**1.70**	**353**	P	**Pn**	**16 29 17.6**	**+0.6**
	baz=173						
PFO	**Pinyon Flats O**	**1.70**	**353**	Pn	**Pn**	**16 29 17.6**	**+0.5**
PFO	**Pinyon Flats O**	**1.70**	**353**	P	**Pn**	**16 29 17.8**	**+0.7**
	baz=173						
PFO				Sb	**Sb**	**16 29 40.3**	**0.0**
	baz=173						
BC3	**Big Chuckawall**	**1.85**	**20**	P	**Pn**	**16 29 19.5**	**+0.4**
	baz=200						
MURC	**Murrieta**	**1.87**	**334**	Sb	**Sb**	**16 29 45.2**	**+0.2**
	baz=153						
ELS	**Elsinore Mount**	**2.01**	**330**	Pn	**Pn**	**16 29 20.8**	**-0.5**
ELS				IAML		16 29 50.4	
	comp=E,96nm,0.6s						
ELS				IAML		16 29 53.7	
	comp=N,54nm,0.5s						
BELC	**Belle Mtn. Jos**	**2.09**	**5**	P	**Pn**	**16 29 23.0**	**+0.6**
	baz=185						
BELC				S	**Sn**	**16 29 48.6**	**+0.1**
	baz=185						
113A	**Mohawk Valley,**	**2.24**	**67**	Pn	**Pn**	**16 29 24.5**	**+0.1**
214A	**Organ Pipe Nat**	**2.89**	**88**	Pn	**Pn**	**16 29 32.9**	**-0.5**

RSNC 07 16:38:21.4±1.1, 6°.81N×73°.19W, h142km±5km, ML3.1, Mw3.7, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**179**	⇑*iP*	Pn	16 38 40.5	-0.6
BARC				*eS*	Sn	16 38 55.9	-0.1
BARC				*i*		16 38 58.5	
	comp=Z,354nm,0.4s						
PAMC	**Pamplona, Colo**	**0.71**	**43**	*eP*	Pn	16 38 43.4	-0.4
PAMC				*eS*	Sn	16 39 00.4	-0.3
PAMC				*i*		16 39 02.7	
	comp=Z,254nm,0.4s						
RUSC	**La Rusia**	**0.92**	**174**	*eP*	Pn	16 38 44.5	-0.8
RUSC				*eS*	Sn	16 39 03.6	+0.2
RUSC				*i*		16 39 04.3	
	comp=Z,196nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.29**	**258**	*eP*	Pn	16 38 46.9	-1.3
PTBC				*eS*	Sn	16 39 08.2	-0.4
PTBC				*i*		16 39 15.3	
	comp=Z,141nm,0.3s						
TAMC	**Tame, Arauca**	**1.43**	**105**	⇓*iP*	Pn	16 38 48.9	-0.8
TAMC				*eS*	Sn	16 39 10.9	-0.4
SPBC	**San Pablo de B**	**1.45**	**217**	*eP*	Pn	16 38 49.3	-0.6
SPBC				*eS*	Sn	16 39 11.8	+0.1

SPBC *i* 16 39 17.8
comp=Z,245nm,0.2s
ZARC Zaragoza, Cauc 1.79 292 *eP* Pn 16 38 53.0 -0.6
ZARC *eS* Sn 16 39 18.4 +0.1
ZARC *i* 16 39 27.5
comp=Z,116nm,0.2s
NORC Norcasia 2.08 234 *eP* Pn 16 38 56.3 -0.8
NORC *eS* Sn 16 39 24.3 -0.2
NORC *i* 16 39 29.4
comp=Z,102nm,0.3s
CHIC Chingaza 2.23 194 *eP* Pn 16 38 58.7 -0.6
CHIC *eS* Sn 16 39 28.6 +0.2
CHIC *i* 16 39 31.3
comp=Z,71nm,0.4s
ROSC El Rosal 2.26 210 *eP* Pn 16 39 00.6 +1.0
ROSC *eS* Sn 16 39 31.5 +2.6
ROSC *i* 16 39 38.8
comp=Z,106nm,0.3s
HELC Santa Helena 2.41 255 *eP* Pn 16 39 01.8 +0.4
HELC *eS* Sn 16 39 31.3 -0.8
HELC *i* 16 39 40.8
comp=Z,74nm,0.3s
UREC San Jos de Ur 2.51 292 *eP* Pn 16 39 01.2 -1.1
UREC *eS* Sn 16 39 32.8 -1.0
GUY2C Guyana, Caldas 2.68 234 *eP* Pn 16 39 04.8 -0.1
GUY2C *eS* Sn 16 39 38.2 -0.1
GUY2C *i* 16 39 46.7
comp=Z,72nm,0.2s
VILC Villavicencio, 2.73 191 *eP* Pn 16 39 04.2 -0.9
VILC *eS* Sn 16 39 38.5 -0.4
VILC *i* 16 39 47.5
comp=Z,74nm,0.4s
LL1C La Loma 1 Cana 2.74 352 *eP* Pn 16 39 05.8 +0.6
LL1C *eS* Sn 16 39 41.8 +2.9
PTGC Puerto Gaitan, 2.80 158 *eP* Pn 16 39 03.8 -2.1
PTGC *eS* Sn 16 39 37.1 -3.2
PTGC *i* 16 39 42.0
comp=Z,91nm,0.3s
CBOC Ciudad Bolivar 2.96 252 *eP* Pn 16 39 08.5 +0.4
CBOC *eS* Sn 16 39 43.3 -1.0
CBOC *i* 16 39 48.8
comp=Z,24nm,0.2s
DBBC Dabeiba 3.01 274 *eP* Pn 16 39 08.6 -0.1
DBBC *eS* Sn 16 39 43.5 -1.6
ANIL Santa Ana 3.19 224 *eP* Pn 16 39 11.8 +0.5
ANIL *eS* Sn 16 39 51.7 +2.0
ANIL *i* 16 39 57.4
comp=Z,151nm,0.3s
ARGC Ariguani, Magd 3.20 341 *eP* Pn 16 39 11.2 +0.1
ARGC *eS* Sn 16 39 50.1 +0.5
ARGC *i* 16 40 00.8
comp=Z,23nm,0.3s
PRAC Prado 3.51 209 *eP* Pn 16 39 14.4 -0.8
PRAC *eS* Sn 16 39 56.4 -0.4
PRAC *i* 16 40 00.7
comp=Z,44nm,0.2s
PLMC San Jos del P 3.62 239 *eP* Pn 16 39 16.3 -0.3
PLMC *eS* Sn 16 39 58.3 -0.9
PLMC *i* 16 40 04.6
comp=Z,26nm,0.4s
SJCC San Jacinto, C 3.65 327 *eP* Pn 16 39 14.2 -2.7
SJCC *eS* Sn 16 39 55.9 -4.0
SJCC *i* 16 40 02.9
comp=Z,13nm,0.3s
CRJC Cerrejon, Guaj 4.19 4 *eP* Pn 16 39 20.8 -3.3
CRJC *eS* Sn 16 40 08.5 -4.3
CRJC *i* 16 40 13.0
comp=Z,30nm,0.2s
GARC Garzon, Huila 5.14 207 *eP* Pn 16 39 34.6 -2.2
GARC *eS* Sn 16 40 31.6 -3.9
GARC *i* 16 40 36.9
comp=Z,20nm,0.3s

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*IDC **07** 16:50:26.5±1.6, 19°.03S×177°.60W, h619km±18km, mb3.0/4, mbtmp4.0/6, Error ellipse: s-maj=28.3km s-min=17.3km az=147.0*
ISC 07 16:50:25.7±1.0, **19°.1S**±0°.2×**177°.6W**±0°.2, **h600**km, **n8**, σ1§**68**/10, **mb3.6**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.35**	**287**	P	**P**	**16 51 55.4**	**+1.7**
	11nm,0.5s,baz=232,slow=13,SNR=21						
URZ	**Urewera**	**19.67**	**192**	P	**P**	**16 54 16.2**	**0.0**
	2.7nm,0.4s,baz=4.5,slow=2.9,SNR=7.0						
WRA	**Warramunga Arr**	**45.20**	**261**	P	**P**	**16 57 50.4**	**-0.4**
	1.8nm,0.5s,baz=97,slow=7.5,SNR=58						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**45.24**	**255**	P	**P**	**16 57 51.1**	**0.0**
	1.7nm,0.5s,baz=86,slow=8.2,SNR=73						
ASAR				PcP	**PcP**	**16 59 17.8**	**-0.3**
	0.5nm,0.8s,baz=100,slow=3.5,SNR=5.4						
ASAR				S	**S**	**17 03 47.2**	**-1.7**
	0.7nm,0.7s,baz=90,slow=16,SNR=6.3						
	1.7nm,0.5s						
NVAR	**Mina Array Bea**	**79.72**	**43**	P	**P**	**17 01 32.6**	**-0.1**
	0.3nm,0.5s,baz=226,slow=8.5,SNR=2.7						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**86.84**	**13**	P	**P**	**17 02 04.8**	**-2.2**
	0.3nm,0.4s,baz=219,slow=5.1,SNR=5.7						
	0.3nm,0.4s						
BRTR	**Keskin Array B**	**146.14**	**314**	PKPbc	**PKPdf**	**17 08 58.2**	**+0.3**
	0.6nm,0.7s,baz=3.4,slow=3.8,SNR=3.7						
GERES	**GERESS Array B**	**148.92**	**345**	PKPbc	**PKPdf**	**17 09 05.1**	**+3.0**
	0.6nm,0.8s,baz=346,slow=2.8,SNR=3.9						

IDC 07 16:51:59.2±379.0, **33°.47N×132°.44E, h0**km, **Error ellipse: s-maj=205.2km s-min=116.8km az=84.0, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I30JP	**ISUMI INFRASON**	**6.76**	**72**	I		17 33 00.0	
	0.2nm,2.0s,baz=256,slow=309,SNR=19						
I45RU	**USSURIYSK INFR**	**10.72**	**358**	I		18 00 20.0	
	baz=177,slow=306,SNR=5.8						
I39PW	**PALAU INFRASON**	**25.88**	**175**	I		19 29 30.0	
	baz=351,slow=279,SNR=39						

IDC 07 17:08:29.6±2.0, **0°.15N×125°.92E, h0**km, **mb3.5**/3, **mbtmp3.6**/3, **Error ellipse: s-maj=161.4km s-min=28.4km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.61**	**158**	P	P	17 13 20.8	-0.6
	2.0nm,0.7s,baz=336,slow=12,SNR=14						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**24.91**	**162**	P	P	17 13 55.1	+0.5
	0.4nm,0.6s,baz=344,slow=9.4,SNR=7.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**60.05**	**327**	P	P	17 18 38.4	-0.1
	0.6nm,0.8s,baz=122,slow=8.6,SNR=2.9						
	0.6nm,0.8s						

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*GCG **07** 17:26:33.2±0.3, 14°.07N×90°.21W, h126km±34km, MD3.7*
*SNET **07** 17:26:35.2±0.9, 13°.53N×90°.26W, h51km±11km, ML3.3*
ISC 07 17:26:35.0±1.8, **13°.5N**±0°.2×**90°.30W**±0°.09, **h58**km±29km, **n22**, σ0§**49**/32, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.62**	**54**	*eP*	**Pn**	**17 26 47.9**	**-0.5**
NUBE				*eS*	**Sn**	**17 26 57.6**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.70**	**46**	*eP*	**Pn**	**17 26 49.1**	**-0.1**
SLOZ				*eS*	**Sn**	**17 26 59.6**	**0.0**
SLOZ				IAML		17 27 03.3	
	comp=Z,394nm,0.3s						
CEVE	**Cerro Verde**	**0.72**	**66**	*eP*	**Pn**	**17 26 49.2**	**-0.4**
CEVE				*eS*	**Sn**	**17 27 01.2**	**+0.9**
CEVE				IAML		17 27 02.6	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**0.72**	**65**	*eP*	**Pn**	**17 26 49.2**	**-0.4**
SBLS				*eS*	**Sn**	**17 27 00.5**	**+0.1**
RTR	**El Retiro**	**0.73**	**60**	*eP*	**Pn**	**17 26 49.6**	**-0.1**
RTR				*eS*	**Sn**	**17 27 01.1**	**+0.7**
SNJE	**San Jose**	**0.75**	**64**	*eP*	**Pn**	**17 26 49.5**	**-0.5**
SNJE				*eS*	**Sn**	**17 27 01.0**	**+0.1**
PCG	**Pacaya**	**0.91**	**341**	*eP*	**Pn**	**17 26 52.9**	**+0.9**
BOQS	**Boqueron**	**1.01**	**78**	*eP*	**Pn**	**17 26 53.2**	**-0.1**
BOQS				*eS*	**Sn**	**17 27 07.2**	**+0.3**
SNET	**Serv Nac Est T**	**1.05**	**82**	*eP*	**Pn**	**17 26 53.6**	**-0.2**
SNET				IAML		17 27 12.2	
	comp=Z,922nm,0.2s						
FUG	**Fuego 3**	**1.05**	**330**	*eP*	**Pn**	**17 26 54.0**	**+0.2**
LFRS	**El Faro**	**1.21**	**86**	*eP*	**Pn**	**17 26 55.7**	**-0.2**
LFRS				*eS*	**Sn**	**17 27 11.7**	**+0.4**
MTO3	**Montecristo**	**1.25**	**46**	*eP*	**Pn**	**17 26 56.3**	**-0.3**
SJTE	**Alcalda de S**	**1.26**	**86**	*eP*	**Pn**	**17 26 56.7**	**+0.2**
SJTE				IAML		17 27 15.8	
	comp=Z,252nm,0.2s						
PAVA	**Las Pavas**	**1.33**	**82**	*eP*	**Pn**	**17 26 57.6**	**0.0**
COEG	**Centro de Oper**	**1.38**	**86**	*eP*	**Pn**	**17 26 57.4**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.54**	**84**	*eP*	**Pn**	**17 27 00.5**	**+0.2**
P5NO	**Presa 5 de nov**	**1.56**	**73**	*eP*	**Pn**	**17 26 59.6**	**-0.9**
STG3	**Santiaguito 3,**	**1.70**	**314**	*eP*	**Pn**	**17 27 01.6**	**-1.0**
STG3				*eS*	**Sn**	**17 27 23.7**	**+0.3**
COEB	**Comit de Eme**	**1.72**	**91**	*eP*	**Pn**	**17 27 02.5**	**-0.2**
PACA	**Pacayal**	**1.92**	**92**	*eP*	**Pn**	**17 27 06.0**	**+0.5**
PACA				IAML		17 27 40.9	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**2.35**	**95**	*eP*	**Pn**	**17 27 11.6**	**+0.3**
LCND				*eS*	**Sn**	**17 27 38.7**	**-0.4**
LCND				IAML		17 27 44.4	
	comp=Z,131nm,0.3s						
CNCH	**Conchagua**	**2.41**	**96**	*eP*	**Pn**	**17 27 12.3**	**+0.1**
CNCH				IAML		17 27 48.7	
	comp=Z,391nm,0.3s						

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*SOME **07** 17:40:16.2, 50°.42N×86°.13E, h5km*
*ASRS **07** 17:40:18.6±0.2, 50°.3N±0°.9×8°.8E±°, h10km, MLh4.4/18, Error ellipse: s-maj=2.7km s-min=1.7km az=66.5, confirmed*
*IDC **07** 17:40:19.7±0.8, 50°.27N×87°.75E, h0km, mb3.7/9, mbtmp3.9/17, ML3.6/8, MS2.5/2, Error ellipse: s-maj=11.3km s-min=10.6km az=26.0*
*MOS **07** 17:40:19.6±1.7, 50°.20N×87°.59E, h12km, mb4.5/6, Error ellipse: s-maj=8.0km s-min=5.7km az=86.6*
*BJI **07** 17:40:20.0±0.0, 50°.24N×87°.11E, h11km, mb3.7/6, mB4.3/3, ML4.1/4, Ms3.7/4, Ms7 3.5/1*
*NNC **07** 17:40:22.8±1.2, 50°.30N×87°.32E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=12.0km s-min=4.4km az=100.0*
ISC 07 17:40:19.4±1.1, **50°.22N**±0°.02×**87°.70E**±0°.02, **h2**km±7km, **n90**, σ1§**83**/138, **mb3.9**/13, **22C-13D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHBI	**Chibit, Altay**	**0.15**	**308**	PG	**Pg**	**17 40 23.2**	**+0.8**
CHBI	**Chibit, Altay**	**0.15**	**308**	Pg	**Pg**	**17 40 23.2**	**+0.8**
CHBI				Sg	**Sg**	**17 40 24.8**	**+0.3**
CUR	**Chagan-Uzun**	**0.44**	**105**	PG	**Pb**	**17 40 29.2**	**-0.7**
CUR						17 40 36.6	
CUR	**Chagan-Uzun**	**0.44**	**105**	⇑Pg	**Pb**	**17 40 29.1**	**-0.7**
CUR				Sg	**Sb**	**17 40 36.3**	**-0.7**
ULGR	**Ulagan, Altay**	**0.44**	**23**	PG	**Pb**	**17 40 29.6**	**-0.3**
ULGR						17 40 35.9	
ULGR	**Ulagan, Altay**	**0.44**	**23**	Pg	**Pb**	**17 40 29.7**	**-0.3**
ULGR				Sg	**Sb**	**17 40 36.0**	**-1.1**
DGZ	**Jazzator, Alta**	**0.55**	**198**	*d* PG	**Pg**	**17 40 29.6**	**-0.2**
DGZ	**Jazzator, Alta**	**0.55**	**198**	⇓Pg	**Pg**	**17 40 29.6**	**-0.2**
DGZ				Sg	**Sg**	**17 40 36.8**	**0.0**
SLNR	**Muhor-Tarhata,**	**0.67**	**131**	Pg	**Pb**	**17 40 33.1**	**-0.7**
SLNR				Sg	**Sb**	**17 40 43.1**	**-0.5**
ARTR	**Artybash**	**1.60**	**351**	PN	**Pb**	**17 40 48.7**	**-1.0**
ARTR						17 41 09.0	
ARTR	**Artybash**	**1.60**	**351**	Pg	**Pb**	**17 40 48.8**	**-1.0**
ARTR				Sg	**Sn**	**17 41 09.1**	**-0.9**
UKR	**Ust'-Kan**	**2.00**	**292**	PN	**Pb**	**17 40 56.0**	**-0.4**
UKR						17 41 22.0	
UKR	**Ust'-Kan**	**2.00**	**292**	Pg	**Pb**	**17 40 55.2**	**-1.3**
UKR				Sg	**Sb**	**17 41 22.1**	**+0.3**
GALT	**Gorno-Altaysk,**	**2.06**	**328**	PN	**Pb**	**17 40 56.3**	**-1.2**
GALT						17 41 24.6	
GALT	**Gorno-Altaysk,**	**2.06**	**328**	Pg	**Pg**	**17 40 58.3**	**-0.6**
GALT				Sg	**Sb**	**17 41 24.6**	**+1.1**
TASR	**Tashtagol**	**2.55**	**3**	PN	**Pb**	**17 41 06.0**	**+0.2**
TASR						17 41 39.9	
TASR	**Tashtagol**	**2.55**	**3**	Pg	**Pb**	**17 41 05.4**	**-0.4**
TASR				Sg	**Sg**	**17 41 40.0**	**-1.2**
ELT	**Eltsovka**	**3.18**	**344**	PN	**Pb**	**17 41 16.1**	**-0.4**
ELT						17 41 53.1	
ELT	**Eltsovka**	**3.18**	**344**	Pg	**Pb**	**17 41 13.2**	**-3.3**
ELT				Sg	**Sb**	**17 41 56.8**	**+1.1**
MALIN	**Malinovka, Kuz**	**3.22**	**356**	Pg	**Pb**	**17 41 18.1**	**+0.9**
MALIN				Sg	**Sb**	**17 41 59.0**	**+2.2**
TAIL	**Tailep, Kuzbas**	**3.25**	**355**	Pg	**Pb**	**17 41 18.3**	**+0.6**
TBTR	**Tabat**	**3.31**	**34**	PN	**Pn**	**17 41 13.5**	**+1.4**
TBTR				SG	**Sb**	**17 41 55.6**	**-3.8**
ZSN	**Zaisan**	**3.34**	**215**	*eP*	**Pb**	**17 41 16.0**	**-3.3**
	21nm,0.5s						
ZSN				*eS*	**Sb**	**17 41 58.2**	**-2.2**
	151nm,0.5s						
DJO	**Djoy, Khakassi**	**3.38**	**39**	PN	**Pg**	**17 41 23.6**	**-0.5**
DJO						17 42 07.3	
DJO	**Djoy, Khakassi**	**3.38**	**39**	Pg	**Pg**	**17 41 23.6**	**-0.5**
DJO				Sg	**Sg**	**17 42 07.4**	**-0.6**
DJOS	**Djoyskaya Sosn**	**3.47**	**40**	Pg	**Pg**	**17 41 27.3**	**+1.6**
DJOS				Sg	**Sg**	**17 42 10.1**	**-0.5**
CERR	**Cheremushki**	**3.52**	**40**	Pg	**Pg**	**17 41 27.5**	**+0.8**
CERR				Sg	**Sg**	**17 42 10.6**	**-1.7**
LUZB	**Luzhba, Kemero**	**3.53**	**12**	PN	**Pb**	**17 41 22.9**	**+0.4**
LUZB						17 42 09.7	
LUZB	**Luzhba, Kemero**	**3.53**	**12**	Pg	**Pb**	**17 41 22.9**	**+0.4**
LUZB				Sg	**Sg**	**17 42 09.7**	**-2.9**
VCHU	**Verkh-Chumysh,**	**3.82**	**349**	Pg	**Pb**	**17 41 29.6**	**+2.2**
VCHU				Sg	**Sb**	**17 42 08.9**	**-5.3**
HVS	**Khovu-Aksy**	**3.93**	**74**	PN	**Pg**	**17 41 31.3**	**-3.3**
HVS				SG	**Sg**	**17 42 25.5**	**0.0**
ERU	**Erunakovo, Kuz**	**3.93**	**357**	Pg	**Pb**	**17 41 31.9**	**+2.6**
ERU				Sg	**Sg**	**17 42 25.2**	**-0.4**
KOTO	**Kotino, Kuzbas**	**4.00**	**353**	Pg	**Pg**	**17 41 34.0**	**-2.0**
KOTO				Sg	**Sg**	**17 42 26.5**	**-1.4**
ZAA0	**Zalesovo Array**	**4.13**	**336**	⇑Pn	**Pn**	**17 41 24.8**	**+1.3**
	3.1nm,0.4s						
ZAA0				⇑Sn	**Sn**	**17 42 13.7**	**+1.3**
	5.2nm,0.4s						
ZAA0				⇓Lg	Lg	17 42 28.4	
	27nm,0.8s						
ZALV	**Zalesovo Beam**	**4.13**	**336**	Pn	**Pn**	**17 41 25.1**	**+1.6**
	17nm,0.3s,baz=158,slow=14,SNR=106						
ZALV				Sn	**Sn**	**17 42 13.5**	**+1.2**
	14nm,0.3s,baz=164,slow=26,SNR=11						
ZALV				LR	LR	17 42 22.7	
	comp=Z,13nm,18.6s,baz=62,slow=30						
ZALV				Lg	Lg	17 42 28.7	
	18nm,0.3s,baz=147,slow=28,SNR=7.4						
	46nm,0.3s						
BJR2	**Bachatsky-2, K**	**4.18**	**347**	Pg	**Pb**	**17 41 36.4**	**+2.8**
BJR2				Sg	**Sg**	**17 42 33.2**	**-0.4**
ABNR	**Abakan**	**4.21**	**32**	PN	**Pb**	**17 41 35.6**	**+1.6**
ABNR				SG	**Sg**	**17 42 32.9**	**-1.4**
POMOR	**Pomortsevo, Ku**	**4.26**	**351**	Pg	**Pg**	**17 41 38.5**	**-2.3**
POMOR				Sg	**Sg**	**17 42 37.9**	**+1.9**
ARDR	**Aradan**	**4.30**	**54**	Pg	**Pg**	**17 41 40.2**	**-1.5**
ARDR				Sg	**Sg**	**17 42 39.0**	**+1.7**
SALR	**Pechorkino, Sa**	**4.38**	**345**	Sg	**Sg**	**17 42 38.5**	**-1.4**
SHRR	**Shira**	**4.54**	**18**	PN	**Pb**	**17 41 41.2**	**+1.5**
SHRR				SG	**Sg**	**17 42 42.4**	**-2.7**
MK31	**Makanchi Array**	**4.96**	**228**	PN	**Pn**	**17 41 38.2**	**+3.3**
MK31				SN	**Sn**	**17 42 35.9**	**+3.0**
MK31	**Makanchi Array**	**4.96**	**228**	⇓Pn	**Pn**	**17 41 38.2**	**+3.3**
	11nm,0.5s,baz=51,slow=12,SNR=425						
MK31				⇓Sn	**Sn**	**17 42 35.9**	**+3.0**
	125nm,0.8s						
MK31				⇓Lg	Lg	17 42 55.8	
	132nm,0.8s,baz=46,slow=29,SNR=6.5						
MKAR	**Makanchi Array**	**4.96**	**228**	Pn	**Pn**	**17 41 38.2**	**+3.3**
	5.8nm,0.3s,baz=42,slow=12,SNR=345						
MKAR				Sn	**Sn**	**17 42 36.5**	**+3.6**
	12nm,0.3s,baz=54,slow=22,SNR=5.5						
MKAR				Lg	Lg	17 42 57.2	
	16nm,0.3s,baz=44,slow=30,SNR=9.9						
	9.7nm,0.3s						
MAKZ	**Makanchi**	**5.11**	**230**	PN	**Pn**	**17 41 40.1**	**+3.2**
MAKZ				SN	**Sn**	**17 42 38.7**	**+2.3**
MAKZ	**Makanchi**	**5.11**	**230**	⇑Pn	**Pn**	**17 41 40.1**	**+3.2**
	14nm,0.5s						
MAKZ				⇑Sn	**Sn**	**17 42 38.7**	**+2.3**
	62nm,0.7s						
MAKZ				⇑Lg	Lg	17 42 59.0	
	178nm,1.1s						
KURK	**Kurchatov**	**5.82**	**278**	PN	**Pn**	**17 41 48.2**	**+1.6**
KURK						17 42 57.7	
KURK	**Kurchatov**	**5.82**	**278**	⇑Pn	**Pn**	**17 41 47.5**	**+0.9**
	11nm,0.6s						
KURK				⇓Sn	**Sn**	**17 42 54.0**	**+0.2**
	32nm,0.8s						
KURK				⇑Lg	Lg	17 43 19.4	
	86nm,0.7s						
KURBB	**Kurchatov Arra**	**5.87**	**277**	Pn	**Pn**	**17 41 48.2**	**+0.9**
	1.5nm,0.3s,baz=91,slow=15,SNR=128						
KURBB				Sn	**Sn**	**17 42 57.7**	**+2.5**
	1.5nm,0.3s,baz=85,slow=30,SNR=6.9						
KURBB				Lg	Lg	17 43 22.1	
	1.7nm,0.3s,baz=351,slow=14,SNR=5.6						
	14nm,0.5s						
PDGK	**Podgornoye**	**8.89**	**222**	P	**Pn**	**17 42 29.6**	**+0.7**
PDGK				SN	**Sn**	**17 44 09.9**	**+0.2**
PDGK	**Podgornoye**	**8.89**	**222**	⇓Pn	**Pn**	**17 42 29.6**	**+0.7**
	6.2nm,0.7s						
PDGK				⇑Sn	**Sn**	**17 44 09.9**	**+0.2**
	30nm,0.8s						
PDGK				⇑Lg	Lg	17 45 03.6	
	78nm,1.4s						
MDOK	**Medeo**	**10.16**	**230**	P	**Pn**	**17 42 47.9**	**+1.7**
MDOK				SN	**Sn**	**17 44 42.6**	**+1.8**
MDOK	**Medeo**	**10.16**	**230**	⇓Pn	**Pn**	**17 42 47.9**	**+1.7**
	4.8nm,0.8s						
MDOK				⇓Sn	**Sn**	**17 44 42.6**	**+1.8**
	13nm,0.8s						
MDOK				⇓Lg	Lg	17 45 40.4	
	41nm,1.4s						
OTUK	**Ortayu**	**10.24**	**265**	P	**Pn**	**17 42 46.3**	**-1.0**
OTUK	**Ortayu**	**10.24**	**265**	⇑Pn	**Pn**	**17 42 46.3**	**-1.0**
	3.3nm,0.5s						
OTUK				⇑Lg	Lg	17 45 40.2	
	38nm,1.1s						
TKM2	**Tokmak 2**	**11.06**	**233**	P	**Pn**	**17 43 01.3**	**+2.6**
TKM2				SN	**Sn**	**17 45 03.2**	**+0.1**
TKM2	**Tokmak 2**	**11.06**	**233**	⇑Pn	**Pn**	**17 43 01.3**	**+2.6**
	2.1nm,0.6s						
TKM2				⇓Sn	**Sn**	**17 45 03.2**	**+0.1**
	6.8nm,0.8s						
TKM2				⇑Lg	Lg	17 46 11.3	
	24nm,1.6s						
BVA0	**Borovoye Array**	**11.12**	**291**	P	**Pn**	**17 42 58.2**	**-1.1**
BVA0				SN	**Sn**	**17 45 02.6**	**-1.4**
BVA0	**Borovoye Array**	**11.12**	**291**	Pn	**Pn**	**17 42 58.1**	**-1.1**
	3.4nm,0.6s,baz=106,slow=14,SNR=22						
BVA0				⇑Sn	**Sn**	**17 45 02.6**	**-1.4**
	10nm,1.1s,baz=107,slow=25,SNR=7.9						
BVAR	**Borovoye Array**	**11.12**	**291**	Pn	**Pn**	**17 42 58.5**	**-0.8**
	0.8nm,0.3s,baz=104,slow=14,SNR=23						
BVAR				Sn	**Sn**	**17 44 58.6**	**-5.5**
	0.7nm,0.3s,baz=101,slow=21,SNR=8.6						
	2.3nm,0.5s						
BRVK	**Borovoye**	**11.19**	**291**	P	**Pn**	**17 42 59.1**	**-1.0**
BRVK				SN	**Sn**	**17 45 02.3**	**-3.4**
BRVK	**Borovoye**	**11.19**	**291**	⇓Pn	**Pn**	**17 42 59.1**	**-1.0**
	4.2nm,0.8s						
BRVK				⇑Sn	**Sn**	**17 45 02.3**	**-3.4**
	6.7nm,0.8s						
AAK	**Ala-Archa**	**11.84**	**235**	Pn	**Pn**	**17 43 10.4**	**+1.1**
	0.4nm,0.3s,baz=100,slow=9.8,SNR=5.8						
	1.8nm,0.4s						
SONM	**Songino Array**	**12.50**	**94**	Lg	Lg	17 46 58.6	
	0.1nm,0.3s,baz=282,slow=39,SNR=6.8						
KK31	**Karatay Array**	**13.76**	**245**	P	**Pn**	**17 43 33.9**	**-1.5**
KK31				SN	**Sn**	**17 46 10.5**	**+1.8**
KK31	**Karatay Array**	**13.76**	**245**	⇑Pn	**Pn**	**17 43 33.9**	**-1.5**
	1.3nm,0.5s,baz=49,slow=14,SNR=25						
KK31				⇑Sn	**Sn**	**17 46 10.5**	**+1.8**
	1.1nm,0.6s						
KK31				⇑Lg	Lg	17 47 35.0	
	15nm,1.2s,baz=48,slow=26,SNR=4.9						
AB31	**Akbulak array**	**17.93**	**278**	P	**P**	**17 44 29.5**	**-0.8**
AB31	**Akbulak array**	**17.93**	**278**	⇑Pn	**P**	**17 44 29.5**	**-0.8**
	0.7nm,0.6s,baz=77,slow=11,SNR=16						
ARU	**Arti**	**18.39**	**301**	P	**Pn**	**17 44 36.4**	**+1.2**
	baz=97,slow=8.1,SNR=1.7						
ARU				S	**Sn**	**17 47 57.9**	**-2.9**
	1.7nm,0.3s,baz=102,slow=19,SNR=3.2						
	1.0nm,0.3s						
ARU	**Arti**	**18.39**	**301**	*c iP*	**Pn**	**17 44 37.0**	**+1.8**
ARU				pmax	pmax		
	comp=Z,7.0nm,2.6s						
AKTO	**Aktyubinsk**	**18.90**	**282**	P	**Pn**	**17 44 41.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=86,slow=10,SNR=8.3						
	comp=Z,2.2nm,0.5s						
AKTO	**Aktyubinsk**	**18.90**	**282**	⇑Pn	**Pn**	**17 44 40.7**	**-0.7**
	comp=Z,4.3nm,0.8s						
NRIK	**Noril'sk**	**19.18**	**360**	P	**Pn**	**17 44 44.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=153,slow=8.1,SNR=2.6						
	comp=Z,2.1nm,0.4s						
NRIK	**Noril'sk**	**19.18**	**360**	*eP*	**Pn**	**17 44 44.6**	**-0.2**
YAK	**Yakutsk**	**25.71**	**47**	*i* P	**P**	**17 45 51.6**	**+1.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRDH	**Bariadhala**	**27.66**	**172**	LR	LR	18 00 02.9	
	comp=Z,38nm,20.4s,baz=18,slow=43						
USRK	**Ussuriysk Ar.**	**30.33**	**84**	P	**P**	**17 46 32.7**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=300,slow=7.3,SNR=2.8						
	comp=Z,1.2nm,0.7s						
OBN	**Obninsk**	**30.81**	**299**	*eP*	**P**	**17 46 34.8**	**-1.3**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.94**	**160**	P	**P**	**17 46 56.8**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=339,slow=8.3,SNR=5.7						
	comp=Z,0.5nm,0.7s						
SOC	**Sochi**	**32.97**	**277**	*eP*	**P**	**17 46 52.9**	**-2.4**
SOC				*e*		17 48 02.9	
SOC				*eS*	**S**	**17 52 10.7**	**-3.3**
SOC				*eSS*	**SnSn**	**17 54 07.6**	**-3.1**
SOC				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,42nm,15.0s						
FINES	**FINESS Array B**	**35.03**	**313**	P	**P**	**17 47 14.5**	**+1.5**
	comp=Z,4.1nm,1.0s,baz=49,slow=9.4,SNR=3.9						
	comp=Z,4.1nm,1.0s						
FINES	**FINESS Array B**	**35.03**	**313**	*i*

baz=18
TWC *i* S Sb 17 40 48.1 -1.1
baz=18
LATG Datong 0.29 313 P Pb 17 40 44.4 +0.1
baz=312
LATG S Sb 17 40 49.0 -0.5
baz=312
TWD Chiawan 0.29 211 *i* P Pb 17 40 43.5 -0.8
baz=209
TWD *i* S Sb 17 40 47.9 -1.6
baz=209
NDS Dongshan 0.30 352 P Pg 17 40 43.2 +0.8
baz=352
NDT Datong Townshi 0.35 320 P Pb 17 40 44.7 -0.6
baz=319
NDT S Sb 17 40 50.6 -0.5
baz=319
NNS Nan Shan 0.37 287 *i* P Pb 17 40 44.7 -0.9
baz=286
NNS *i* S Sg 17 40 50.1 +1.5
baz=286
HWA Hwalien 0.38 202 *e*S Sb 17 40 51.7 -0.3
baz=200
TWE Neicheng 0.40 347 *i* P Pb 17 40 46.3 +0.3
baz=349
TWE *i* S Sb 17 40 52.3 -0.1
baz=349
FUSB Fushanzhiwuyua 0.45 339 P Pb 17 40 46.6 -0.5
baz=339
FUSB S Sb 17 40 53.4 -0.8
baz=339
YHNB Yeheng 0.48 314 P Pb 17 40 47.8 +0.2
baz=313
YHNB S Sb 17 40 55.5 +0.4
baz=313
WHF Hehuan Shan 0.49 248 *i* P Pb 17 40 48.4 +0.5
baz=246
WHF *i* S Sb 17 40 55.2 -0.4
baz=246
NSK Sanguang 0.50 313 P Pb 17 40 47.4 -0.5
baz=313
NSK *i* S Sb 17 40 55.1 -0.5
baz=313
NTC Toucheng 0.52 7 *e*P Pn 17 40 49.6 -1.0
baz=6.0
NTC *e*S Sb 17 40 57.7 +1.7
baz=6.0
TDCB Techi 0.56 262 *e*S Sb 17 40 55.9 -1.3
baz=261
CHGB Renai 0.60 243 *e*P Pb 17 40 49.8 +0.1
baz=243
CHGB *e*S Sb 17 40 59.7 +1.1
baz=243
TIPB Shuangxi 0.64 5 *e*P Pg 17 40 49.0 +0.2
baz=5.0
TIPB *e*S Sb 17 40 59.7 +0.2
baz=5.0
WUSB Renai 0.68 240 *e*P Pb 17 40 51.6 +0.6
baz=239
WUSB *e*S Sb 17 41 00.2 -0.5
baz=239
NWF Wu-fen Shan 0.73 1 *e*P Pg 17 40 50.8 +0.2
baz=1.0
NSTT Nanjuang 0.75 293 *e*S Sb 17 41 03.8 +1.1
baz=293
VWDT VWDT 0.81 225 *e*P Pb 17 40 53.5 +0.4
baz=224
VWDT *e*S Sb 17 41 05.0 +0.7
baz=224
WCS Beigang Elemen 0.82 251 *e*S Sb 17 41 04.3 -0.5
baz=250

JMA 07 17:40:41.5±0.3, 24°.3N±0°.5×12°4E±°, h19km±1km, MV1.5/5, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.15**	**70**	*i* P	Pg	17 40 45.8	-0.1
IRIF				S	Sg	17 40 48.8	-0.1
HATJ	**Hateruma jima**	**0.31**	**137**	P	Pg	17 40 48.0	-0.2
JKRS	**Kuro-shima**	**0.40**	**97**	*e*P	Pg	17 40 49.7	-0.2
JKRS				*e*S	Sg	17 40 55.3	-0.2
JIJ	**Ishigaki jima**	**0.52**	**81**	P	Pb	17 40 51.6	-0.5

*NOU **07** 17:55:12.3, 33°.57S×138°.56E, h0km, MLv3.9/14, Near Coast of South Australia*
*AUST **07** 17:55:12.6±1.1, 33°.54S×138°.54E, h11km±8km, Error ellipse: s-maj=9.3km s-min=5.7km az=31.0*
*IDC **07** 17:55:17.3±6.1, 32°.89S×138°.56E, h0km, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=68.0km s-min=21.6km az=10.0*
ISC 07 17:55:12.2±0.9, 33°.59S±0°.06×138°.55E±0°.04, h10km, n34, σ0°.97/36, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**0.35**	**64**	P	**Pg**	**17 55 19.4**	**+0.3**
HTT				S	**Sg**	**17 55 24.3**	**+0.5**
HTT	**Hallett**	**0.35**	**64**	P	**Pg**	**17 55 19.9**	**+0.8**
PTPS	**Port Pirie**	**0.62**	**311**	P	**Pg**	**17 55 25.1**	**+0.8**
WHYH	**Whyalla**	**0.99**	**304**	P	**Pg**	**17 55 31.0**	**-0.2**
GHSS	**Government Hou**	**1.33**	**178**	P	**Pn**	**17 55 38.7**	**+1.9**
BBOO	**Buckleboo**	**2.23**	**290**	P	**Pn**	**17 55 50.1**	**+0.9**
BBOO				S	**Sn**	**17 56 18.1**	**+1.3**
BBOO	**Buckleboo**	**2.23**	**290**	P	**Pn**	**17 55 50.4**	**+1.2**
STKA	**Stephens Creek**	**3.08**	**57**	Pn	**Pn**	**17 56 02.4**	**+1.5**
STKA				Lg	Lg	17 56 45.3	
STKA	**Stephens Creek**	**3.08**	**57**	P	**Pn**	**17 56 02.2**	**+1.2**
STKA	**Stephens Creek**	**3.08**	**57**	P	**Pn**	**17 56 02.9**	**+2.0**
LCRK	**Leigh Creek**	**3.14**	**355**	P	**Pn**	**17 56 02.3**	**+0.6**
LCRK	**Leigh Creek**	**3.14**	**355**	P	**Pn**	**17 56 03.3**	**+1.5**
ARPS	**Mount Arapiles**	**4.16**	**141**	P	**Pn**	**17 56 15.7**	**-0.1**
ARPS				S	**Sn**	**17 57 02.8**	**-1.8**
ARPS	**Mount Arapiles**	**4.16**	**141**	P	**Pn**	**17 56 16.4**	**+0.6**
MULG	**Mulgathing**	**5.04**	**310**	P	**Pn**	**17 56 28.1**	**+0.2**
MULG				S	**Sn**	**17 57 25.1**	**-1.2**
MULG	**Mulgathing**	**5.04**	**310**	P	**Pn**	**17 56 28.2**	**+0.3**
AUHPC	**Hawkesdale P12**	**5.45**	**147**	P	**Pn**	**17 56 35.0**	**+1.5**
AUMTC	**Mt Clear Colle**	**5.91**	**134**	P	**Pn**	**17 56 40.7**	**+0.9**
INKA	**Innaminka**	**6.13**	**19**	P	**Pn**	**17 56 43.3**	**+0.5**
INKA	**Innaminka**	**6.13**	**19**	P	**Pn**	**17 56 43.2**	**+0.5**
OOD	**Oodnadatta**	**6.28**	**336**	P	**Pn**	**17 56 44.9**	**+0.1**
OOD	**Oodnadatta**	**6.28**	**336**	P	**Pn**	**17 56 45.3**	**+0.4**
CMSA	**Cobar Meteorol**	**6.37**	**73**	P	**Pn**	**17 56 45.5**	**-0.6**
CMSA	**Cobar Meteorol**	**6.37**	**73**	P	**Pn**	**17 56 45.5**	**-0.6**
TOO	**Toolangi**	**6.91**	**127**	P	**Pn**	**17 56 54.1**	**+0.5**
TOO	**Toolangi**	**6.91**	**127**	P	**Pn**	**17 56 54.2**	**+0.6**
QLP	**Quilpie**	**8.54**	**37**	P	**Pn**	**17 57 15.3**	**-0.6**
FORT	**Forrest**	**9.32**	**285**	P	**Pn**	**17 57 26.0**	**-0.6**
FORT	**Forrest**	**9.32**	**285**	P	**Pn**	**17 57 27.1**	**+0.5**
ASAR	**Alice Springs**	**10.69**	**336**	Pn	**Pn**	**17 57 44.9**	**-0.6**
ASAR				Sn	Sn	17 59 37.7	-7.6
ASPA	**Alice Springs**	**10.69**	**336**	P	**Pn**	**17 57 45.4**	**-0.1**
WRKA	**Warakurna**	**12.35**	**311**	P	**Pn**	**17 58 07.5**	**-0.6**
WB2	**Warramunga Arr**	**14.10**	**344**	P	Pn	17 58 28.6	-3.5
WRA	**Warramunga Arr**	**14.10**	**344**	Pn	Pn	17 58 28.4	-3.7

baz=12
0.1nm,0.3s,baz=159,slow=12,SNR=11
WRA Sn Sn 18 00 57.9 -11
0.1nm,0.3s,baz=168,slow=24,SNR=2.0
0.5nm,0.6s

ATH 07 17:55:12.6, 38°.35N×22°.09E, h8km±2km, ML1.7/2, Error ellipse: s-maj=2.0km s-min=0.9km az=56.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.02**	**318**	P	Pg	17 55 13.9	-0.1
TRIZ				S	Sg	17 55 15.1	+0.2
SERG	**Sergoula**	**0.07**	**338**	P	Pg	17 55 14.3	-0.2
SERG				S	Sg	17 55 15.9	0.0
SERG				AML	AML	17 55 16.0	
	comp=E,3651μm,0.1s						
SERG				AML	AML	17 55 16.1	
	comp=N,4542μm,0.2s						
LAKA	**Lakka**	**0.14**	**218**	P	Pg	17 55 15.5	0.0
LAKA				S	Sg	17 55 17.7	0.0
EFP	**Efpalio**	**0.16**	**298**	P	Pg	17 55 15.6	-0.4
EFP				S	Sg	17 55 18.2	0.0
EFP				AML	AML	17 55 18.6	
	comp=E,454μm,0.2s						
EFP				AML	AML	17 55 18.7	
	comp=N,417μm,0.3s						
KLV	**Kalavryta, Ach**	**0.31**	**171**	P	Pg	17 55 18.3	-0.4
KLV				S	Sg	17 55 23.2	+0.4
DRO	**Drossia**	**0.50**	**217**	P	Pg	17 55 21.7	-0.5
DRO				S	Sg	17 55 29.4	+0.7
PVO	**Paravola**	**0.52**	**301**	P	Pg	17 55 22.7	+0.1
RLS	**Riolos of Patr**	**0.57**	**239**	P	Pg	17 55 23.6	0.0
EVR	**Evrytania**	**0.61**	**339**	P	Pg	17 55 23.7	-0.6
MAKR	**Makrakomi, Fth**	**0.66**	**3**	P	Pg	17 55 25.3	-0.1
MAKR				S	Sg	17 55 34.5	+0.5

THE 07 17:55:45.2, 38°.47N×20°.54E, h11km, ML1.7/4, Error ellipse: s-maj=1.4km s-min=0.3km az=109.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.02**	**116**	P	Pg	17 55 47.4	+0.3
FSK				S	Sg	17 55 48.3	-0.2
	985nm,0.1s						
EVGI	**Lefkada island**	**0.18**	**31**	P	Pg	17 55 49.0	-0.1
EVGI				S	Sg	17 55 52.1	+0.3
	372nm,0.0s						
DRAG	**Dragano-Lefkad**	**0.22**	**7**	P	Pg	17 55 49.8	0.0
DRAG				S	Sg	17 55 53.4	+0.5
KEF4	**Livadi, Kephal**	**0.23**	**204**	P	Pg	17 55 50.1	+0.2
KEF4				S	Sg	17 55 54.0	+0.9
	800nm,0.2s						
DMLN	**Damoulianata-K**	**0.26**	**210**	P	Pg	17 55 50.7	+0.1
DMLN				S	Sg	17 55 54.6	+0.4
NYDR	**Nydri-Lefkada**	**0.28**	**27**	P	Pg	17 55 50.6	-0.2
NYDR				S	Sg	17 55 55.0	+0.4
VLS	**Valsamata**	**0.29**	**172**	P	Pg	17 55 50.9	-0.2
VLS				S	Sg	17 55 55.8	+0.7
	130nm,0.2s						
KEF3	**Kipouria, Keph**	**0.30**	**210**	P	Pg	17 55 50.9	-0.4
KEF3				S	Sg	17 55 55.7	+0.3

*MOS **07** 18:11:37.9±1.1, 42°.51N×142°.76E, h105km, mb4.5/1, Error ellipse: s-maj=15.6km s-min=10.9km az=70.9*
*IDC **07** 18:11:39.6±4.1, 42°.58N×142°.68E, h99km±38km, mb3.4/11, mbtmp3.7/13, MS3.6/1, Error ellipse: s-maj=23.2km s-min=18.6km az=147.0*
*JMA **07** 18:11:40.2±0.2, 42°.6N±0°.5×142°.8E±0°.7, h93km±1km, MV3.2/40, HIDAKA MOUNTAINS REGION*
*SKHL **07** 18:11:40.0±0.3, 42°.60N×142°.90E, h108km±4km, mb4.7/3, msha5.5/3*
ISC 07 18:11:39.4±0.7, 42°.56N±0°.05×142°.77E±0°.03, h100km±6km, n47, σ1°.06/60, mb3.5/11, 1C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSHD	**Hidakashinhida**	**0.27**	**236**	P	**Pn**	**18 11 54.3**	**+0.6**
JNBK	**Urakawa-nobuka**	**0.28**	**182**	*e*P	**Pn**	**18 11 54.5**	**+0.6**
JNBK				*e*S	**Sn**	**18 12 05.3**	**+0.8**
JBT2	**Biratori 2**	**0.37**	**306**	P	**Pn**	**18 11 54.0**	**-0.2**
JBT2				*e*S	**Sn**	**18 12 04.9**	**-0.5**
JCH	**Churui**	**0.44**	**83**	P	**Pn**	**18 11 54.6**	**0.0**
JCH				*e*S	**Sn**	**18 12 05.7**	**-0.5**
JFR	**Furan**	**0.61**	**348**	P	**Pn**	**18 11 55.6**	**-0.4**
JEM	**Erimo**	**0.62**	**152**	P	**Pn**	**18 11 56.9**	**+0.9**
JEM				*e*S	**Sn**	**18 12 09.4**	**+1.0**
JIAM	**Iburiatsuma**	**0.63**	**276**	P	**Pn**	**18 11 56.9**	**+0.8**
JIAM				*e*S	**Sn**	**18 12 10.1**	**+1.5**
JOB	**Onbets**	**0.86**	**66**	P	**Pn**	**18 11 58.9**	**+0.7**
JOB				*e*S	**Sn**	**18 12 13.2**	**+0.8**
JEW	**Eniwo**	**1.01**	**286**	*e*P	**Pn**	**18 12 00.0**	**+0.2**
JEW				*e*S	**Sn**	**18 12 14.7**	**-0.6**
JAB	**Ashibetsu**	**1.02**	**337**	P	**Pn**	**18 11 59.9**	**0.0**
JAR	**Ashorobuto**	**1.04**	**45**	P	**Pn**	**18 12 00.3**	**+0.1**
JAR				*e*S	**Sn**	**18 12 15.5**	**-0.4**
JISS	**Ishikarishitsu**	**1.22**	**306**	*e*P	**Pn**	**18 12 02.2**	**0.0**
JISS				*e*S	**Sn**	**18 12 19.5**	**0.0**
JNB	**Noboribetsu**	**1.28**	**266**	*e*P	**Pn**	**18 12 02.2**	**-0.7**
JNB				*e*S	**Sn**	**18 12 19.3**	**-1.4**
JKK2	**Kamakawa 2**	**1.31**	**359**	P	**Pn**	**18 12 03.3**	**0.0**
JKK2				*e*S	**Sn**	**18 12 20.6**	**-0.8**
JHR	**Hokuryu**	**1.41**	**328**	*e*P	**Pn**	**18 12 04.7**	**+0.3**
JAK	**Akkeshi**	**1.49**	**72**	P	**Pn**	**18 12 05.4**	**+0.1**
JAK				*e*S	**Sn**	**18 12 24.5**	**-0.6**
AKK	**Akkeshi**	**1.59**	**73**	AMB	AMB	18 12 07.5	
	240nm,0.5s						
AKK				*e*S	**Sn**	**18 12 26.3**	**-1.2**
AKK				A	A	18 12 27.9	
	750nm,0.5s						
AKK				A	A	18 12 27.9	
	900nm,0.5s						
JTKR	**Abashiri--Toko**	**1.64**	**30**	*e*P	**Pn**	**18 12 07.7**	**+0.5**
JTKR				*e*S	**Sn**	**18 12 28.2**	**-0.2**
NMR	**Nemuro--Hokkai**	**2.32**	**69**	*e*PN	**Pn**	**18 12 15.6**	**-0.4**
NMR				*e*S	**Sn**	**18 12 42.3**	**-1.8**
NMR	**Nemuro--Hokkai**	**2.32**	**69**	*e*P	**Pn**	**18 12 15.6**	**-0.4**
NMR				AMB	AMB	18 12 18.6	
	40nm,0.2s						
NMR				*e*S	**Sn**	**18 12 42.4**	**-1.7**
NMR				A	A	18 12 45.6	
	140nm,0.3s						
NMR				A	A	18 12 45.6	
	190nm,0.3s						
RUSJ	**Misakicho**	**2.38**	**49**	*e*PN	**Pn**	**18 12 18.2**	**+1.4**
RUSJ				*e*S	**Sn**	**18 12 49.6**	**+4.1**
YUK	**Yuzh-Kuril'sk**	**2.70**	**56**	*c i*PN	**Pn**	**18 12 19.7**	**-1.3**
YUK				*i* S	**Sn**	**18 12 53.9**	**+0.9**
YUK				pmax	pmax		
	comp=Z,109nm,0.3s						
YUK				pmax	pmax		
	comp=N,41nm,0.4s						
YUK				pmax	pmax		
	comp=E,17nm,0.3s						
YUK				smax	smax		
	comp=N,922nm,0.5s						
YUK				smax	smax		
	comp=E,382nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.70**	**56**	*i* P	**Pn**	**18 12 20.6**	**-0.4**
YUK				AMB	AMB	18 12 22.9	
	comp=E,110nm,0.3s						
YUK				*i* S	**Sn**	**18 12 51.3**	**-1.7**
YUK				A	A	18 12 56.5	
	comp=E,840nm,0.6s						
YUK				A	A	18 12 56.5	
	comp=E,840nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.39**	**360**	*e*PN	**Pn**	**18 12 45.2**	**+1.5**
YSS				*e*S	**Sn**	**18 13 35.9**	**+2.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=N,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.39**	**360**	*e*P	**Pn**	**18 12 45.2**	**+1.5**
YSS				AMB	AMB	18 12 47.3	
	comp=N,30nm,0.8s						
YSS				*e*S	**Sn**	**18 13 33.1**	**-0.6**
YSS				A	A	18 13 37.5	
	comp=N,30nm,0.9s						
USRK	**Ussuriysk Ar.**	**8.02**	**285**	P	**Pn**	**18 13 33.6**	**+0.6**
	comp=N,0.9nm,0.6s,baz=85,slow=16,SNR=2.5						
PETK	**Petropavlovsk-**	**14.52**	**38**	P	**Pn**	**18 14 58.9**	**-0.9**

comp=N,2.2nm,0.5s,baz=222,slow=7.9,SNR=13
SEY Seymchan 21.17 12 P **P 18 16 15.3 -0.9**
comp=N,1.2nm,0.5s,baz=24,slow=22,SNR=2.5
comp=N,1.2nm,0.5s
SONM Songino Array 26.00 294 P **P 18 17 01.8 -1.1**
comp=N,0.9nm,0.6s,baz=91,slow=7.4,SNR=6.2
comp=N,0.9nm,0.6s
H11N2 WAKE ISLAND Hy 30.54 131 T T 18 49 25.4
baz=323,slow=75,SNR=12
H11N1 WAKE ISLAND Hy 30.55 131 T T 18 49 33.7
baz=323,slow=75,SNR=14
H11N3 WAKE ISLAND Hy 30.55 131 T T 18 49 35.1
baz=323,slow=75,SNR=8.7
H11S1 WAKE ISLAND Hy 31.41 132 T T 18 50 35.0
baz=325,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 31.42 132 T T 18 50 32.3
baz=325,slow=76,SNR=12
H11S2 WAKE ISLAND Hy 31.43 132 T T 18 50 36.1
baz=325,slow=76,SNR=9.4
ZALV Zalesovo Beam 39.16 308 P **P 18 18 57.5 +0.5**
comp=N,0.6nm,0.4s,baz=95,slow=8.3,SNR=2.7
comp=N,0.6nm,0.4s
MKAR Makanchi Array 42.28 297 P **P 18 19 21.9 -1.0**
comp=N,0.4nm,0.5s,baz=81,slow=10,SNR=5.7
comp=N,0.4nm,0.5s
KURK Kurchatov 43.53 304 P **P 18 19 33.7 +0.9**
KURK Kurchatov 43.53 304 *e*P **P 18 19 33.7 +0.9**
KURBB Kurchatov Arra 43.61 304 P **P 18 19 33.7 +0.3**
comp=N,1.7nm,0.5s,baz=76,slow=8.8,SNR=7.2
comp=N,1.7nm,0.5s
ILAR Eielson Array 44.33 35 P **P 18 19 39.9 +0.9**
comp=N,1.3nm,0.8s,baz=269,slow=6.7,SNR=10
comp=N,1.3nm,0.8s
BVAR Borovoye Array 47.76 309 P **P 18 20 06.1 0.0**
comp=N,0.2nm,0.3s,baz=108,slow=4.7,SNR=2.3
comp=N,0.2nm,0.3s
INK Inuvik 49.03 29 P **P 18 20 16.6 +1.1**
comp=N,1.3nm,0.6s,baz=283,slow=6.7,SNR=4.4
comp=N,1.3nm,0.6s
DLBC Dease Lake 53.69 41 LR LR 18 45 03.4
comp=N,52nm,18.2s,baz=280,slow=37
WRA Warramunga Arr 62.67 189 P **P 18 21 53.1 -0.3**
comp=N,0.3nm,0.7s,baz=6.4,slow=6.3,SNR=1.9
comp=N,0.3nm,0.7s
FINES FINESS Array B 64.43 332 P **P 18 22 04.0 -0.5**
comp=N,1.6nm,0.7s,baz=38,slow=9.6,SNR=4.0
comp=N,1.6nm,0.7s
ASAR Alice Springs 66.40 189 P **P 18 22 18.4 +0.8**
comp=N,0.2nm,0.7s,baz=8.1,slow=7.1,SNR=1.4
comp=N,0.2nm,0.7s

*KRNET **07** 19:06:56.9±0.1, 41°.92N×78°.86E, h16km, mb3.0*
*SOME **07** 19:06:58.4, 42°.02N×78°.78E, h5km*
*NNC **07** 19:07:00.6±0.8, 42°.12N×78°.87E, h0km, mb3.3, mpv3.2, Error ellipse: s-maj=5.6km s-min=2.9km az=159.0*
ISC 07 19:06:58.7±1.4, 42°.03N±0°.04×78°.78E±0°.03, h0km±10km, n55, σ1°.21/98, 15C-16D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.79**	**248**	⇓*e*P	**Pg**	**19 07 12.3**	**-1.5**
TARG				⇓*e*S	**Sg**	**19 07 24.0**	**0.0**
	baz=56						
SATY	**Saty**	**1.06**	**345**	*e*P	**Pn**	**19 07 19.9**	**-1.1**
SATY				*e*S	**Sn**	**19 07 34.8**	**-1.7**
	4.1nm,0.2s						
	31nm,0.3s						
SATY	**Saty**	**1.06**	**345**	P	**Pn**	**19 07 19.9**	**-1.1**
SATY				S	**Sn**	**19 07 34.8**	**-1.7**
	4.1nm,0.2s						
	31nm,0.3s						
ANVS	**Anan'yevo**	**1.11**	**313**	⇓*e*P	**Pb**	**19 07 20.5**	**-0.4**
ANVS				⇓*e*S	**Sn**	**19 07 37.4**	**-0.4**
	baz=15						
UZB	**Uzynbulak**	**1.13**	**9**	*e*P	**Pb**	**19 07 19.7**	**-1.4**
UZB				*e*S	**Sg**	**19 07 34.7**	**-0.2**
	3.2nm,0.8s						
	9.8nm,0.2s						
UZB	**Uzynbulak**	**1.13**	**9**	P	**Pb**	**19 07 19.7**	**-1.4**
UZB				S	**Sg**	**19 07 34.7**	**-0.2**
	3.2nm,0.8s						
	9.8nm,0.2s						
ZHN	**Zhinishke**	**1.16**	**347**	*e*P	**Pb**	**19 07 20.8**	**-0.9**
ZHN				*e*S	**Sg**	**19 07 36.9**	**+0.8**
	4.9nm,0.2s						
	60nm,0.2s						
ZHN	**Zhinishke**	**1.16**	**347**	P	**Pb**	**19 07 20.8**	**-0.9**
ZHN				S	**Sg**	**19 07 36.8**	**+0.8**
	4.9nm,0.2s						
	60nm,0.2s						
SHLS	**Shalkode**	**1.23**	**24**	*e*P	**Pg**	**19 07 23.7**	**+1.5**
SHLS				*e*S	**Sn**	**19 07 41.8**	**+1.2**
	4.6nm,0.3s						
	14nm,0.5s						
SHLS	**Shalkode**	**1.23**	**24**	P	**Pg**	**19 07 23.7**	**+1.5**
SHLS				S	**Sn**	**19 07 41.8**	**+1.2**
	4.6nm,0.3s						
	14nm,0.5s						
PDGK	**Podgornoye**	**1.40**	**22**	⇑P	**Pn**	**19 07 24.6**	**-1.0**
PDGK				⇑S	**Sb**	**19 07 41.9**	**-2.3**
	3.5nm,0.4s						
	16nm,0.6s						
KPKS	**Kokpek**	**1.43**	**357**	*e*P	**Pn**	**19 07 25.3**	**-0.7**
KPKS				*e*S	**Sb**	**19 07 44.3**	**-0.8**
	5.4nm,0.2s						
	15nm,0.5s						
KPKS	**Kokpek**	**1.43**	**357**	P	**Pn**	**19 07 25.3**	**-0.7**
KPKS				S	**Sb**	**19 07 44.3**	**-0.8**
	5.4nm,0.2s						
	15nm,0.5s						
KURS	**Kuram**	**1.52**	**343**	*e*P	**Pg**	**19 07 27.9**	**0.0**
KURS				*e*S	**Sg**	**19 07 49.1**	**+1.5**
	1.9nm,0.2s						
	13nm,0.4s						
KURS	**Kuram**	**1.52**	**343**	P	**Pg**	**19 07 27.9**	**0.0**
KURS				S	**Sg**	**19 07 49.1**	**+1.5**
	1.9nm,0.2s						
	13nm,0.4s						
TNSS	**Tian-Shan**	**1.69**	**307**	*e*P	**Pg**	**19 07 31.4**	**+0.5**
TNSS				*e*S	**Sg**	**19 07 55.0**	**+2.2**
	4.3nm,0.2s						
	25nm,0.2s						
TNSS	**Tian-Shan**	**1.69**	**307**	P	**Pg**	**19 07 31.4**	**+0.5**
TNSS				S	**Sg**	**19 07 55.0**	**+2.2**
	4.3nm,0.2s						
	25nm,0.2s						
MDOK	**Medeo**	**1.71**	**312**	*e*P	**Pg**	**19 07 31.6**	**+0.3**
MDOK				*e*S	**Sg**	**19 07 55.3**	**+1.9**
	8.1nm,0.4s						
	35nm,0.5s						
MDOK	**Medeo**	**1.71**	**312**	⇑Pn	**Pb**	**19 07 31.3**	**+0.3**
MDOK				Pg	**Pg**	**19 07 31.6**	**+0.3**
	5.7nm,0.4s						
	8.1nm,0.4s						
MDOK				Lg	Lg	19 07 55.3	
	35nm,0.5s						
MDOK				⇓Sn	**Sg**	**19 07 55.9**	**+2.4**
	22nm,0.5s						
KOTS	**Kotyrbulak**	**1.72**	**315**	*e*P	**Pg**	**19 07 31.9**	**+0.3**
KOTS				*e*S	**Sg**	**19 07 55.1**	**+1.2**
	14nm,0.3s						
	45nm,0.3s						
KOTS	**Kotyrbulak**	**1.72**	**315**	P	**Pg**	**19 07 31.9**	**+0.3**
KOTS				S	**Sg**	**19 07 54.8**	**+0.9**
	14nm,0.3s						
	25nm,0.7s						
KNDC	**Almaty**	**1.79**	**312**	⇑Pn	**Pg**	**19 07 33.3**	**+0.4**
KNDC				⇓Sn	**Sg**	**19 07 57.9**	**+1.8**
	13nm,0.3s						
	64nm,0.6s						
AAA	**Alma-Ata**	**1.81**	**311**	*e*P	**Pg**	**19 07 34.0**	**+0.6**
AAA				*e*S	**Sg**	**19 07 59.2**	**+2.4**
	28nm,0.2s						
	42nm,0.4s						
AAA	**Alma-Ata**	**1.81**	**311**	Pg	**Pg**	**19 07 34.0**	**+0.6**
AAA				Lg	Lg	19 07 59.2	
	28nm,0.2s						
	42nm,0.4s						
KTMS	**Ketmen**	**1.83**	**39**	*e*P	**Pg**	**19 07 33.5**	**-0.1**
KTMS				*e*S	**Sg**	**19 07 58.4**	**+1.1**
	4.1nm,0.2s						
	15nm,0.3s						
KTMS	**Ketmen**	**1.83**	**39**	P	**Pg**	**19 07 33.5**	**-0.1**
KTMS				S	**Sg**	**19 07 58.4**	**+1.1**
	4.1nm,0.2s						
	15nm,0.3s						

ULHL Ulahol 1.90 277⇓*e*P **Pb** **19 07 33.4 -0.9**
baz=80
ULHL ⇓*e*S **Sg** **19 08 00.1 +0.4**
baz=80
MTBS Maitube 2.05 303 *e*P **Pg** **19 07 37.8 -0.3**
11nm,0.3s
MTBS *e*S **Sg** **19 08 05.8 +1.2**
82nm,0.6s
MTBS Maitube 2.05 303 Pg **Pg** **19 07 37.8 -0.3**
11nm,0.3s
MTBS Lg Lg 19 08 05.8
82nm,0.6s
BLB Baldybastay 2.07 354 *e*P **Pb** **19 07 37.3 0.0**
50nm,0.4s
BLB *e*S **Sg** **19 08 05.2 -0.1**
70nm,0.3s
BLB Baldybastay 2.07 354 Pg **Pb** **19 07 37.3 0.0**
50nm,0.4s
BLB Lg Lg 19 08 05.2
70nm,0.3s
BOOM Boomskoye usch 2.16 283⇑*e*P **Pb** **19 07 37.1 -1.6**
baz=86
BOOM ⇑*e*S **Sb** **19 08 06.4 +0.4**
baz=86
NRN Naryn 2.17 255⇑*e*P **Pn** **19 07 36.9 +0.6**
baz=58
NRN ⇑*e*S **Sb** **19 08 06.1 -0.3**
baz=58
CHKK Chushkaly 2.25 325 *e*P **Pg** **19 07 41.1 -0.6**
41nm,0.3s
CHKK *e*S **Sg** **19 08 11.8 +1.0**
216nm,0.8s
CHKK Chushkaly 2.25 325 Pg **Pg** **19 07 41.1 -0.6**
41nm,0.3s
CHKK Lg Lg 19 08 11.8
216nm,0.8s
KST Kastek 2.31 297 *e*P **Pg** **19 07 42.4 -0.6**
11nm,0.5s
KST *e*S **Sg** **19 08 14.0 +1.0**
79nm,0.6s
KST Kastek 2.31 297 Pg **Pg** **19 07 42.4 -0.6**
11nm,0.5s
KST Lg Lg 19 08 14.0
79nm,0.6s
TKM2 Tokmak 2 2.52 292⇑*i*P **Pn** **19 07 42.4 +1.4**
baz=94
TKM2 ⇑*e*S **Sb** **19 08 15.5 -0.9**
baz=94
TKM2 Tokmak 2 2.52 292 ⇓Pn **Pb** **19 07 44.4 -0.4**
3.8nm,0.5s
TKM2 ⇓Lg Lg 19 08 20.7
25nm,0.6s
KUU Kurty 2.58 317 *e*P **Pb** **19 07 46.6 +0.7**
8.8nm,0.6s
KUU *e*S **Sg** **19 08 20.8 -0.7**
28nm,0.8s
KUU Kurty 2.58 317 Pg **Pb** **19 07 46.6 +0.7**
8.8nm,0.6s
KUU Lg Lg 19 08 20.8
28nm,0.8s
KRBS Karabastau 2.82 307 *e*P **Pb** **19 07 50.7 +0.7**
8.7nm,0.4s
KRBS *e*S **Sg** **19 08 28.2 -1.1**
14nm,0.4s
KRBS Karabastau 2.82 307 Pg **Pb** **19 07 50.7 +0.7**
8.7nm,0.4s
KRBS Lg Lg 19 08 28.2
14nm,0.4s
KBK Karagaybulak 2.91 284⇑*e*P **Pn** **19 07 47.6 +1.3**
baz=85
KBK ⇑*e*S **Sb** **19 08 24.5 -3.2**
baz=85
TDK Taldyqorghan 2.98 355 *e*P **Pb** **19 07 53.2 +0.6**
26nm,0.3s
TDK *e*S **Sg** **19 08 32.2 -2.1**
65nm,0.7s
TDK Taldyqorghan 2.98 355 Pg **Pb** **19 07 53.2 +0.6**
26nm,0.3s
TDK Lg Lg 19 08 32.3
65nm,0.7s
CHMS Chumysh 3.13 289 ⇓Pg **Pg** **19 07 58.1 -0.6**
1.9nm,0.6s
CHMS ⇓Lg Lg 19 08 39.1
11nm,0.6s
UCH Uchtor 3.18 275⇑*e*P **Pn** **19 07 51.3 +1.0**
baz=77
UCH ⇑*e*S **Sn** **19 08 31.2 +2.0**
baz=77
AAK Ala-Archa 3.23 282⇓*e*P **Pn** **19 07 52.0 +1.2**
baz=84
AAK ⇓*e*S **Sn** **19 08 32.3 +2.2**
baz=84
SGDS Sogindy 3.37 296 *e*P **Pb** **19 08 00.2 +1.0**
1.7nm,0.5s
SGDS *e*S **Sg** **19 08 44.5 -2.4**
7.7nm,0.5s
SGDS Sogindy 3.37 296 Pg **Pb** **19 08 00.2 +1.0**
1.7nm,0.5s
SGDS Lg Lg 19 08 44.5
7.7nm,0.5s
BTLS Baital 4.57 313 *e*P **Pg** **19 08 24.2 -2.0**
1.2nm,0.6s
BTLS *e*S **Sg** **19 09 25.6 +0.2**
3.1nm,0.9s
BTLS Baital 4.57 313 Pg **Pg** **19 08 24.2 -2.0**
1.2nm,0.6s
BTLS Lg Lg 19 09 25.6
3.1nm,0.9s
MK31 Makanchi Array 5.38 27 ⇓Pn **Pn** **19 08 22.0 +1.8**
0.2nm,0.2s,baz=208,slow=13,SNR=54
MK31 ⇓Sn **Sn** **19 09 23.9 +1.1**
3.6nm,0.8s,baz=209,slow=24,SNR=5.6
KK31 Karatay Array 6.20 283 ⇑Pg **Pg** **19 08 56.5 -0.9**
0.7nm,0.7s,baz=94,slow=14,SNR=7.7

NIED ***07*** *19:28:31.2, 41°.45N×142°.73E, h33km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.11; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-0.03; $M_{r\theta}$-1.64; $M_{\theta\phi}$0.25; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.99000×10^{14} NP1: ϕ_s113.00000°, δ18.00000°, λ109.00000°. NP2: ϕ_s273.00000°, δ73.00000°, λ84.00000°.*
JMA 07 19:28:31.2±0.2, 41°.5N±0°.7×14°.3E±°, h33km±3km, MV3.5/38, 6D, E OFF AOMORI PREF, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	0.65	29	⇓*e*P	Pn	19 28 43.8	-0.4
JEM				⇓*e*S	Sb	19 28 52.6	-0.5
JNBK	**Urakawa-nobuka**	0.83	1	⇓*e*P	Pn	19 28 46.4	-0.2
JNBK				⇓*e*S	Sn	19 28 56.8	-0.9
JTHR	**Tokachihiroo**	0.94	27	P	Pn	19 28 48.4	+0.2
JTHR				*e*S	Sn	19 29 00.6	+0.2
JSHD	**Hidakashinhida**	0.98	348	*e*P	Pb	19 28 49.3	-0.4
JSHD				*e*S	Sb	19 29 02.0	-0.3
JAHD	**Aomorihigashid**	1.07	260	⇓P	Pn	19 28 50.3	+0.4
JAHD				⇓*e*S	Sn	19 29 03.9	+0.3
JARK	**Aomorirokkasho**	1.12	247	*e*P	Pn	19 28 51.1	+0.4
JARK				*e*S	Sn	19 29 05.4	+0.5
JCH	**Churui**	1.25	22	*e*P	Pn	19 28 53.1	+0.6
JCH				*e*S	Sb	19 29 09.4	-0.7
JOT	**Ohata**	1.27	267	*e*P	Pn	19 28 53.2	+0.5
JOT				*e*S	Sn	19 29 09.4	+0.9
JIAM	**Iburiatsuma**	1.32	333	*e*P	Pb	19 28 54.7	-0.7
JIAM				*e*S	Sb	19 29 12.1	+0.2
JKB	**Kayabe**	1.34	289	*e*P	Pn	19 28 53.7	0.0
JKB				*e*S	Sn	19 29 09.5	-0.9
JBT2	**Biratori 2**	1.35	348	*e*P	Pn	19 28 54.7	+0.9
JANG	**Nango**	1.42	221	*e*P	Pn	19 28 55.4	+0.6
JANG				*e*S	Sn	19 29 13.0	+0.8
JTM	**Tenmabayashi**	1.42	243	*e*P	Pb	19 28 56.0	-1.2
JTM				*e*S	Sb	19 29 13.8	-1.1
JNB	**Noboribetsu**	1.62	309	*e*P	Pn	19 28 57.4	-0.1
JNB				*e*S	Sn	19 29 16.8	-0.4
JOB	**Onbets**	1.67	29	*e*P	Pb	19 28 60.0	-1.3
JOB				*e*S	Sb	19 29 20.6	-1.3
JEW	**Eniwo**	1.68	326	*e*P	Pn	19 28 59.4	+1.0
JEW				*e*S	Sn	19 29 20.3	+1.5
JSR	**Shiriuchi**	1.74	273	*e*S	Sn	19 29 21.9	+1.7
JYM2	**Yakumo 2**	1.89	291	*e*P	Pn	19 29 02.1	+0.9
JYM2				*e*S	Sn	19 29 25.1	+1.2

NEIC ***07*** *19:28:41±1.0, 23°.18N±0°.03×94°.19E±0°.05, h38km±7km, mb4.5/33, Error ellipse: s-maj=7.8km s-min=2.2km az=121.0*
IDC ***07*** *19:28:41.4±3.9, 23°.10N×94°.07E, h44km±39km, mb3.8/18, mbtmp4.0/19, ML3.8/1, MS3.2/2, Error ellipse: s-maj=41.8km s-min=12.9km az=57.0*
ISC 07 19:28:40.1±0.5, 23°.14N±0°.08×94°.14E±0°.07, h35km, n74, σ0§86/73, mb4.3/32, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	3.17	320		**Pn**	**19 29 29.2**	**+1.5**
CHTO	**Chiang Mai**	6.22	133		**Pn**	**19 30 09.3**	**-0.1**
CM31	**Chiang Mai Arr**	6.47	135		**Pn**	**19 30 13.8**	**+0.9**
CMAR	**Chiang Mai Arr**	6.47	135	P	**Pn**	**19 30 13.3**	**+0.4**
	0.5nm,0.3s,baz=313,slow=13,SNR=16						
	1.5nm,0.5s						
CMAR	**Chiang Mai Arr**	6.47	135		**Pn**	**19 30 13.4**	**+0.5**
LSA	**Lhasa**	7.06	338		**Pn**	**19 30 21.7**	**+0.3**
RAMN	**Ramite**	7.82	301	*e*P	**Pn**	**19 30 31.5**	**-0.1**
	63nm,0.6s						
RAMN				*e*S	**Sn**	**19 31 57.5**	**-1.5**
JIRN	**Jiri**	8.48	304	*e*P	**Pn**	**19 30 41.6**	**+0.8**
	23nm,0.2s						
GUN	**Gumba**	8.84	304	*e*P	**Pn**	**19 30 46.4**	**+0.6**
	44nm,0.4s						
PKI	**Pulchoki**	9.04	301	*e*P	**Pn**	**19 30 48.0**	**-0.5**
	14nm,0.3s						
PKIN	**Phulchoki**	9.06	301	*e*P	**Pn**	**19 30 47.7**	**-0.9**
	31nm,0.4s						
DMN	**Daman**	9.30	300	*e*P	**Pn**	**19 30 51.4**	**-0.6**
	15nm,0.3s						
GKN	**Gorkha**	9.85	301	*e*P	**Pn**	**19 30 58.6**	**-0.8**
	30nm,0.3s						
DANN	**Dangsing**	10.70	301	*e*P	**Pn**	**19 31 10.3**	**-0.8**
	9.3nm,0.2s						
PYUN	**Piuthan**	11.21	298	*e*P	**Pn**	**19 31 15.8**	**-2.2**
	11nm,0.2s						
HYBB	**Hyderabad (bro**	15.69	252	*e*P	**P**	**19 32 23.3**	**+0.9**
HYBB				*e*S	**S**	**19 35 27.8**	**+2.2**
XAN	**Xi'an**	16.90	47	P	Pn	19 32 21.4	-13
NIL	**Nilore**	21.11	304	P	**P**	**19 33 20.9**	**-0.8**
NIL				IAmb	IAmb	19 33 23.3	
	comp=Z,11nm,0.9s						
KSH	**Kashi**	22.45	321	P	**P**	**19 33 36.5**	**+0.2**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TARG	**Taragay, Kyrgy**	23.03	327	P	**P**	**19 33 40.1**	**-2.4**
TARG				IAmb	IAmb	19 33 51.3	
	comp=Z,20nm,1.5s						
KBL	**Kabul**	24.68	303	P	**P**	**19 33 57.4**	**-0.6**
DRK	**Karamyk**	24.99	316	P	**P**	**19 34 00.7**	**-0.2**
DRK				IAmb	IAmb	19 34 02.7	
	comp=Z,8.7nm,0.6s						
AAK	**Ala-Archa**	25.39	325	P	**P**	**19 34 06.0**	**+1.7**
	comp=Z,2.4nm,0.5s,baz=160,slow=8.0,SNR=7.0						
	comp=Z,2.4nm,0.5s						
AAK	**Ala-Archa**	25.39	325	P	**P**	**19 34 04.8**	**+0.5**
MK31	**Makanchi Array**	25.46	341	P	**P**	**19 34 04.8**	**0.0**
MKAR	**Makanchi Array**	25.46	341	P	**P**	**19 34 05.7**	**+0.9**
	comp=Z,4.8nm,0.7s,baz=151,slow=10,SNR=35						
	comp=Z,4.8nm,0.7s						
MKAR	**Makanchi Array**	25.46	341	P	**P**	**19 34 05.0**	**+0.2**
GAR	**Garm**	25.70	313	P	**P**	**19 34 07.4**	**+0.2**
GAR				IAmb	IAmb	19 34 08.4	
	comp=Z,16nm,0.6s						
CHGR	**Chuyangaron**	26.32	312	P	**P**	**19 34 12.1**	**-0.6**
CHGR				IAmb	IAmb	19 34 13.0	
	comp=Z,5.6nm,0.5s						
KURBB	**Kurchatov Arra**	30.01	340	P	**P**	**19 34 46.0**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=154,slow=8.2,SNR=5.6						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	31.56	349	P	**P**	**19 35 00.2**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=155,slow=8.0,SNR=2.9						
	comp=Z,0.6nm,0.3s						
BVAR	**Borovoye Array**	34.88	335	P	**P**	**19 35 28.2**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=142,slow=10,SNR=4.6						
	comp=Z,0.4nm,0.4s						
ABKAR	**Akbulak array**	37.44	323	P	**P**	**19 35 50.8**	**+0.9**
ABKAR				IAmb	IAmb	19 35 51.6	
	comp=Z,4.0nm,1.0s						
ABKAR	**Akbulak array**	37.44	323	P	**P**	**19 35 50.5**	**+0.6**
AKTO	**Aktyubinsk**	39.11	323	P	**P**	**19 36 05.5**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=119,slow=4.2,SNR=6.4						
	comp=Z,1.0nm,0.4s						
ARU	**Arti**	42.20	331	P	**P**	**19 36 29.7**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=153,slow=11,SNR=3.6						
	comp=Z,2.0nm,0.3s						
ARU	**Arti**	42.20	331	P	**P**	**19 36 29.6**	**+0.2**
RAYN	**Ar Rayn**	44.49	281	P	**P**	**19 36 48.7**	**+0.4**
GNI	**Garni**	44.76	304	LR	LR	20 00 15.2	
	comp=Z,21nm,18.2s,baz=79,slow=42						
FAKI	**Fak Fak**	45.28	120	P	**P**	**19 36 53.9**	**-0.8**
FITZ	**Fitzroy Crossi**	51.26	140	P	**P**	**19 37 40.2**	**-0.4**
KNRA	**Kununurra**	51.34	136	P	**P**	**19 37 40.9**	**-0.4**
TIXI	**Tiksi**	52.39	13	P	**P**	**19 37 48.0**	**-0.5**
TIXI				IAmb	IAmb	19 38 08.7	
	comp=Z,8.4nm,0.9s						
AKASG	**Malin Array Be**	56.65	316	P	**P**	**19 38 19.0**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=80,slow=6.7,SNR=6.8						
	comp=Z,1.2nm,0.5s						
WB0	**Warramunga Arr**	57.98	134	P	**P**	**19 38 29.4**	**0.0**
WB0				IAmb	IAmb	19 38 38.8	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	58.06	134	P	**P**	**19 38 30.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=323,slow=7.3,SNR=16						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	58.06	134	P	**P**	**19 38 28.3**	**-1.8**
WB2	**Warramunga Arr**	58.07	134	P	**P**	**19 38 30.1**	**0.0**
WB2				IAmb	IAmb	19 38 56.8	
	comp=Z,6.9nm,1.2s						
WR0	**Warramunga Arr**	58.21	134	P	**P**	**19 38 31.0**	**-0.1**
WR0				IAmb	IAmb	19 38 46.3	
	comp=Z,9.8nm,1.5s						
MLR	**Muntele Rosu**	58.79	310	P	**P**	**19 38 35.3**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=190,slow=2.6,SNR=7.1						
	comp=Z,4.0nm,0.8s						
MLR	**Muntele Rosu**	58.79	310	P	**P**	**19 38 35.3**	**+0.3**
MLR				IAmb	IAmb	19 38 37.3	
	comp=Z,4.8nm,0.9s						
BURAR	**Bucovina Array**	59.22	313	P	**P**	**19 38 37.5**	**-0.5**
FIA1	**FINESS Array S**	59.47	329	P	**P**	**19 38 38.0**	**-1.3**
FINES	**FINESS Array B**	59.47	329	P	**P**	**19 38 38.8**	**-0.5**
AS31	**Alice Springs**	60.48	138	P	**P**	**19 38 47.2**	**+0.5**
ASAR	**Alice Springs**	60.48	138	P	**P**	**19 38 47.9**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=317,slow=6.6,SNR=20						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	60.48	138	P	**P**	**19 38 46.5**	**-0.2**
ARCES	**ARCESS Array B**	61.07	328	P	**P**	**19 38 50.5**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=110,slow=7.2,SNR=6.8						
	comp=Z,0.4nm,0.3s						
HFS	**Hagfors**	65.50	327	P	**P**	**19 39 18.9**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=111,slow=8.1,SNR=7.2						
	comp=Z,3.9nm,0.9s						
KBS	**Kingsbay**	65.95	348	P	**P**	**19 39 22.3**	**+0.2**
NOA	**NORSAR Array B**	66.64	328	P	**P**	**19 39 25.9**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=90,slow=5.9,SNR=1.5						
NOA				LR	LR	20 11 51.1	
	comp=Z,19nm,19.4s,baz=0.0,slow=39						
	comp=Z,0.4nm,0.6s						
GEC2	**GERESS Array S**	66.77	315	P	**P**	**19 39 28.4**	**+0.3**
GEC2				IAmb	IAmb	19 39 28.7	
	comp=Z,2.7nm,0.6s						
GERES	**GERESS Array B**	66.77	315	P	**P**	**19 39 28.4**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=75,slow=6.3,SNR=20						
	comp=Z,1.3nm,0.4s						
CLL	**Collm**	66.85	318	*e*sP	sP	19 39 45.0	+1.7
FDMO	**Fiordimonte**	68.24	309	P	**P**	**19 39 37.5**	**+0.2**
BBOO	**Buckleboo**	68.53	143	P	**P**	**19 39 38.5**	**-0.6**
DAVOX	**Davos/Dischmat**	69.69	313	P	**P**	**19 39 45.5**	**-1.0**
	comp=Z,1.2nm,0.4s,baz=180,slow=20,SNR=2.2						
	comp=Z,1.2nm,0.4s						
EUNU	**Eureka**	77.01	0	P	**P**	**19 40 29.4**	**+0.5**
EUNU				IAmb	IAmb	19 40 35.4	
	comp=Z,4.5nm,1.2s						
BMAR	**Burnt Mountain**	79.86	20	P	**P**	**19 40 45.4**	**+0.5**
TULEG	**Thule**	80.00	356	P	**P**	**19 40 45.9**	**+0.6**
LBTB	**Lobatse**	81.89	239	P	**P**	**19 40 56.2**	**-0.2**
LBTB				IAmb	IAmb	19 41 28.7	
	comp=Z,17nm,1.5s						
RIDG	**Independent Ri**	82.01	23	P	**P**	**19 40 55.1**	**-1.2**
RIDG				IAmb	IAmb	19 41 03.7	
	comp=Z,7.6nm,1.0s						
BOSA	**Boshof**	83.95	236	P	**P**	**19 41 06.8**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=64,slow=3.7,SNR=5.7						
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	87.13	283	P	**P**	**19 41 23.9**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=61,slow=5.3,SNR=9.3						
	comp=Z,0.3nm,0.5s						

UPA ***07*** *19:37:15.4±1.4, 8°.80N×84°.10W, $h0^{km}$±33^{km}, MW4.0*
INET ***07*** *19:37:15.2±0.4, 8°.89N×83°.80W, $h10^{km}$±3^{km}, MW3.2*
UCR ***07*** *19:37:16.4±1.7, 8°.94N×84°.08W, $h5^{km}$, MW4.2*
ISC 07 19:37:14.7±1.4, 8°.88N±0°.04×84°.11W±0°.03, $h2^{km}$±11^{km}, n51, σ0§68/66, 3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	**Dominical**	0.44	33	*e*P	**Pn**	**19 37 27.3**	**-0.8**
EDPN	**Palmar Norte**	0.65	83	*e*P	**Pb**	**19 37 28.3**	**-0.5**
EDPN				*e*S	**Sb**	**19 37 39.2**	**+0.9**
PEZE	**Perez Zeledon,**	0.66	41	*e*P	**Pg**	**19 37 27.9**	**+0.7**
PEZE	**Perez Zeledon,**	0.66	41	*e*P	**Pg**	**19 37 27.7**	**+0.4**
CDM	**Cerro de Muert**	0.75	27	*e*P	**Pg**	**19 37 29.5**	**+0.4**
CDM				*e*Sn	**Sb**	**19 37 40.8**	**-0.8**
CDM	**Cerro de Muert**	0.75	27	*e*P	**Pg**	**19 37 29.5**	**+0.4**
CDM				*e*S	**Sb**	**19 37 40.7**	**-1.0**
SRBA	**San Rafael, Bu**	0.82	65	*e*P	**Pg**	**19 37 30.5**	**+0.1**
LCR2	**La Lucha 2**	0.86	7	*e*P	**Pg**	**19 37 31.4**	**+0.2**
LCR2				*e*S	**Sb**	**19 37 44.5**	**-0.1**
EDBA	**Buenos Aires**	0.87	71	*e*P	**Pg**	**19 37 31.9**	**+0.5**
RIMA	**Rio Macho**	0.91	16	*e*P	**Pg**	**19 37 32.1**	**-0.1**
RIMA	**Rio Macho**	0.91	16	*e*P	**Pg**	**19 37 32.1**	**-0.1**
RIMA				*e*S	**Sb**	**19 37 45.8**	**-0.3**
JACO	**JACO, Garabito**	0.95	325	*e*P	**Pg**	**19 37 32.9**	**0.0**
JACO	**JACO, Garabito**	0.95	325	*e*P	**Pg**	**19 37 32.9**	**0.0**
POTG	**Potrero Grande**	0.99	80	*e*P	**Pb**	**19 37 34.6**	**-0.1**
OCM	**Ochomogo**	1.02	8	*e*P	**Pb**	**19 37 35.5**	**+0.3**
SJS	**Escuela Geolog**	1.05	3	*e*P	**Pg**	**19 37 35.0**	**+0.2**
HDC	**Heredia**	1.11	360	*e*P	**Pg**	**19 37 36.1**	**0.0**
HDC3	**Heredia 3**	1.11	360	*e*P	**Pg**	**19 37 36.2**	**+0.2**
HDC3	**Heredia 3**	1.11	360	*e*P	**Pg**	**19 37 36.1**	**0.0**
HDC3				*e*S	**Sb**	**19 37 52.4**	**+0.5**
EDSV	**San Vito**	1.13	93	*e*P	**Pg**	**19 37 36.7**	**+0.4**
MRVA	**Moravia de Chi**	1.15	35	*e*P	**Pg**	**19 37 36.8**	**+0.1**
VTRT	**Volcan Turrial**	1.16	16	*e*P	**Pg**	**19 37 37.0**	**+0.1**
VTCV	**VTCV, Calle Va**	1.16	19	*e*P	**Pg**	**19 37 37.0**	**+0.1**
CVTR	**Volcan Turrial**	1.18	17	*e*P	**Pg**	**19 37 37.5**	**+0.2**
LAFE	**Finca La Fe, P**	1.21	319	*e*P	**Pg**	**19 37 36.9**	**-1.1**
LAFE	**Finca La Fe, P**	1.21	319	*e*P	**Pn**	**19 37 39.3**	**+0.6**
CRPO	**Crater poas**	1.31	355	*e*P	**Pg**	**19 37 39.3**	**-0.5**
BRU2	**Volcan**	1.41	93	*e*P	**Pn**	**19 37 41.0**	**-0.6**
BRU2	**Volcan**	1.41	93	*e*P	**Pn**	**19 37 41.1**	**-0.5**
BRU2				*e*S	**Sn**	**19 38 01.3**	**+0.5**
RIFO	**Rio Frio, Sara**	1.44	7	*e*P	**Pn**	**19 37 41.6**	**-0.2**
LIMO3	**Limones**	1.46	122	*e*P	**Pn**	**19 37 41.5**	**-0.6**
LIMO3				*e*S	**Sb**	**19 38 01.3**	**-0.3**
BC3P	**Paso Ancho**	1.48	92	⇓*i*P	**Pb**	**19 37 43.0**	**-0.1**
BC3P				*e*S	**Sn**	**19 38 03.9**	**+1.1**
BCO2	**Palmira**	1.57	96	*e*P	**Pn**	**19 37 43.5**	**-0.3**
BCO2				*e*S	**Sg**	**19 38 06.0**	**+0.7**
PTAR3	**Potrerillos Ar**	1.61	97	*e*P	**Pn**	**19 37 44.2**	**0.0**
PTAR3				*e*S	**Sn**	**19 38 05.1**	**-0.6**
LNBQ3	**Los Naranjos,**	1.65	93	⇓*e*P	**Pn**	**19 37 44.3**	**-0.6**
LNBQ3				*e*S	**Sg**	**19 38 07.6**	**-0.2**
DVD	**David**	1.70	105	*e*P	**Pb**	**19 37 46.2**	**-0.5**
DVD				*e*S	**Sn**	**19 38 07.8**	**0.0**
CNI2	**El Empalme, Bo**	1.71	71	*e*P	**Pn**	**19 37 45.5**	**0.0**
CNI2				⇓*i*S	**Sb**	**19 38 08.5**	**-0.3**
DUNO	**Dulce Nombre,**	1.81	311	*e*P	**Pb**	**19 37 48.5**	**-0.1**
GUAL3	**Gualaca, Chiri**	1.83	101	*e*P	**Pn**	**19 37 47.7**	**+0.5**
GUAL3				*e*S	**Sb**	**19 38 12.0**	**-0.2**
COVE	**Coope Vega, Sa**	1.85	351	*e*P	**Pn**	**19 37 47.0**	**-0.4**
ORTG	**Ortega, Santa**	1.98	318	*e*P	**Pn**	**19 37 50.6**	**+1.2**
PTEN	**Parque Tenorio**	2.02	335	*e*P	**Pb**	**19 37 51.9**	**-0.2**
CUI	**Cuipilapa**	2.05	330	*e*P	**Pn**	**19 37 49.9**	**-0.3**
COLC	**Colonia**	2.07	329	*e*P	**Pn**	**19 37 52.1**	**+1.5**
GUAB	**Guayabo de Bag**	2.12	329	*e*P	**Pn**	**19 37 52.5**	**+1.2**
VMAR	**Armenia, Volca**	2.16	333	*e*P	**Pb**	**19 37 53.7**	**-0.9**
GPS2	**Hotel Rincn d**	2.23	327	*e*P	**Pn**	**19 37 54.3**	**+1.6**
VRLE	**La Escondida,**	2.26	327	*e*P	**Pn**	**19 37 54.9**	**+1.7**
BUEV	**Buena Vista**	2.29	326	*e*P	**Pb**	**19 37 55.8**	**-1.1**
GB1A	**Borinquen Arri**	2.31	327	*e*P	**Pn**	**19 37 55.4**	**+1.5**
HZTE	**Horizontes, Gu**	2.33	321	*e*P	**Pb**	**19 37 56.3**	**-1.3**

NEIC ***07*** *19:43:00.9±2.6, 2°.95N±0°.06×126°.8E±0°.1, h96km±11km, mb4.1/7, Error ellipse: s-maj=19.2km s-min=7.4km az=75.0*
IDC ***07*** *19:43:00.8±6.8, 3°.32N×127°.15E, h106km±76km, mb3.2/4, mbtmp3.6/5, ML3.4/1, MS4.1/1, Error ellipse: s-maj=128.2km s-min=21.8km az=67.0*
ISC 07 19:43:00.2±0.8, 2°.99N±0°.09×126°.75E±0°.10, h100km, n21, σ1§27/21, mb4.0/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	2.29	164	Pn	**Pn**	**19 43 35.0**	**-1.6**
DAV	**Davao City (W)**	4.22	344	Pn	**Pn**	**19 44 03.4**	**+1.0**
SIJI	**Sorong**	5.92	130	P	**Pn**	**19 44 24.4**	**-1.1**
	1.0nm,0.3s,baz=330,slow=20,SNR=8.8						
SIJI				S	**Sn**	**19 45 32.9**	**+0.8**
	1.2nm,0.3s,baz=213,slow=23,SNR=1.5						
	2.6nm,0.3s						
TOLI2	**Tolitoli**	6.25	253	Pn	**Pn**	**19 44 30.6**	**+0.6**
FAKI	**Fak Fak**	8.04	137	Pn	**Pn**	**19 44 51.9**	**-2.4**
MYLDM	**Lahad Datu**	8.51	285	Pn	**Pn**	**19 44 59.8**	**-1.0**
WB0	**Warramunga Arr**	23.83	162	P	**P**	**19 48 04.8**	**+0.5**
WB0				IAmb	IAmb	19 48 36.0	
	comp=Z,4.9nm,1.1s						
WRAB	**Tennant Creek**	23.97	162	P	**P**	**19 48 06.6**	**+1.0**
WR

*NEIC **07** 19:49:00.3±1.0, 18°.0S±0°.1×175°.21W±0°.06, h201km±14km, mb4.5/22, Error ellipse: s-maj=20.9km s-min=5.6km az=196.0*
*NOU **07** 19:49:04.0, 17°.94S×174°.82W, h269km, mb4.5/10, Tonga Islands*
*IDC **07** 19:49:08.3±27.0, 18°.19S×175°.56W, h262km±231km, mb4.1/5, mbtmp4.7/5, Error ellipse: s-maj=123.7km s-min=82.2km az=102.0*

ISC 07 19:49:01.4±0.6, 17°.93S±0°.08×175°.06W±0°.06, h228km, n45, σ1§27/47, mb4.4/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.00**	**104**		**Pn**	**19 50 17.8**	**+1.3**
NIUE				Sn	**S**	**19 51 15.8**	**-0.2**
NIUE	**Niue**	**5.00**	**104**	P	**Pn**	**19 50 18.2**	**+1.7**
AFI	**Afiamalu**	**5.10**	**39**	Pn	**Pn**	**19 50 18.0**	**+0.2**
AFI				Sn	**S**	**19 51 16.2**	**-2.2**
MSVF	**Nonsavu**	**6.57**	**271**	Pn	**Pn**	**19 50 39.6**	**+3.2**
MSVF	**Nonsavu**	**6.57**	**271**	P	Pn	19 50 41.6	+5.2
RAR	**Rarotonga**	**14.77**	**105**		**Pn**	**19 52 20.4**	**+0.7**
MARNC	**Mare, Loyalty**	**16.31**	**255**		**P**	**19 52 35.9**	**-1.0**
DZM	**Mont Dzumac**	**17.86**	**254**	P	**P**	**19 52 51.2**	**-2.8**
DZM				IAmb	IAmb	19 53 00.8	
	comp=Z,14nm,1.1s						
DZM	**Mont Dzumac**	**17.86**	**254**	P	**Pn**	**19 52 57.6**	**+1.1**
OUZ	**Omahuta**	**19.95**	**208**	P	**Pn**	**19 53 18.4**	**-2.7**
URZ	**Urewera**	**21.38**	**197**	P	**P**	**19 53 29.4**	**-1.7**
URZ	**Urewera**	**21.38**	**197**	P	**P**	**19 53 29.6**	**-1.6**
BKZ	**Black Stump Fm**	**22.40**	**197**	P	**P**	**19 53 39.0**	**-1.8**
BKZ				IAmb	IAmb	19 53 42.1	
	comp=Z,36nm,1.4s						
QRZ	**Quartz Range**	**25.19**	**203**	P	**P**	**19 54 06.7**	**+0.6**
TUWZ	**Tuamarina**	**25.25**	**200**	P	**P**	**19 54 07.0**	**+0.5**
BSWZ	**Blackbirch Sta**	**25.52**	**199**	P	**P**	**19 54 10.5**	**+1.4**
THZ	**Tophouse**	**25.89**	**201**	P	**P**	**19 54 12.4**	**0.0**
JCZ	**Jackson Bay**	**29.40**	**204**	P	**P**	**19 54 42.0**	**-1.6**
WHZ	**Wether Hill Ro**	**31.25**	**203**	P	**P**	**19 54 59.2**	**-0.5**
EIDS	**Eidsvold**	**32.26**	**251**	P	**P**	**19 55 08.0**	**-0.9**
ARMA	**Armidale**	**32.71**	**241**	P	**P**	**19 55 12.1**	**-0.7**
ARMA				IAmb	IAmb	19 55 26.4	
	comp=Z,19nm,1.4s						
CTA	**Charters Tower**	**36.59**	**260**	P	**P**	**19 55 45.6**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=82,slow=11,SNR=7.3						
	comp=Z,1.6nm,0.3s						
CTAO	**Charters Tower**	**36.59**	**260**	P	**P**	**19 55 45.2**	**-0.8**
COEN	**Coen**	**40.29**	**269**	P	**P**	**19 56 17.6**	**+0.8**
COEN				IAmb	IAmb	19 56 36.3	
	comp=Z,30nm,1.4s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**19 56 25.5**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=99,slow=11,SNR=9.4						
	comp=Z,2.1nm,0.5s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**19 56 25.1**	**-0.7**
BBOO	**Buckleboo**	**46.19**	**242**	P	**P**	**19 57 03.0**	**-0.7**
BBOO				IAmb	IAmb	19 57 06.8	
	comp=Z,44nm,1.4s						
WR0	**Warramunga Arr**	**47.57**	**259**	P	**P**	**19 57 13.4**	**-1.1**
WB0	**Warramunga Arr**	**47.73**	**259**	P	**P**	**19 57 14.8**	**-1.0**
WB0				IAmb	IAmb	19 57 16.0	
	comp=Z,9.7nm,0.5s						
WB2	**Warramunga Arr**	**47.75**	**259**	P	**P**	**19 57 15.5**	**-0.5**
WB2				IAmb	IAmb	19 57 15.9	
	comp=Z,9.0nm,0.5s						
WRAB	**Tennant Creek**	**47.75**	**259**	P	**P**	**19 57 15.1**	**-0.8**
WRAB				IAmb	IAmb	19 57 15.8	
	comp=Z,8.1nm,0.5s						
WRA	**Warramunga Arr**	**47.76**	**259**	P	**P**	**19 57 15.4**	**-0.6**
	comp=Z,5.6nm,0.3s,baz=97,slow=7.2,SNR=263						
	comp=Z,5.6nm,0.3s						
WRA	**Warramunga Arr**	**47.76**	**259**	P	**P**	**19 57 14.6**	**-1.4**
AS31	**Alice Springs**	**47.85**	**254**	P	**P**	**19 57 15.9**	**-0.8**
AS31				IAmb	IAmb	19 57 17.2	
	comp=Z,9.9nm,0.8s						
ASAR	**Alice Springs**	**47.85**	**254**	P	**P**	**19 57 16.2**	**-0.5**
	comp=Z,38nm,0.6s,baz=90,slow=8.1,SNR=598						
ASAR				PcP	**PcP**	**19 58 42.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=96,slow=4.7,SNR=1.7						
	comp=Z,38nm,0.6s						
ASAR	**Alice Springs**	**47.85**	**254**	P	**P**	**19 57 16.1**	**-0.6**
MTN	**Manton Dam**	**51.98**	**268**	P	**P**	**19 57 47.3**	**-0.5**
MTN				IAmb	IAmb	19 58 01.3	
	comp=Z,28nm,1.3s						
KNRA	**Kununurra**	**53.66**	**263**	P	**P**	**19 57 59.5**	**-0.4**
KNRA				IAmb	IAmb	19 58 00.4	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**56.17**	**260**	P	**P**	**19 58 18.0**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=106,slow=8.1,SNR=32						
	comp=Z,2.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**56.17**	**260**	P	**P**	**19 58 17.5**	**-0.4**
SOEI	**Soe**	**59.26**	**269**	P	**P**	**19 58 41.3**	**+1.6**
TOLI2	**Tolitoli**	**65.86**	**280**	P	**P**	**19 59 25.0**	**+1.9**
TOLI2				IAmb	IAmb	20 00 07.6	
	comp=Z,9.3nm,1.2s						
CLL	**Collm**	**146.09**	**351**	*e*PKPbc	**PKiKP**	**20 08 17.0**	**-0.4**
BRTR	**Keskin Array B**	**147.02**	**317**	PKPbc	**PKPab**	**20 08 19.6**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=138,slow=4.9,SNR=4.9						
GERES	**GERESS Array B**	**148.36**	**349**	PKPbc	**PKPab**	**20 08 23.7**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=22,slow=3.2,SNR=4.9						

MAN 07 19:53:00.2, 9°.74N×123°.83E, h5km, mb4.0, ML2.7, MS2.3, 5C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.06**	**148**	‖*e*P	Pg	19 53 02.1	+0.4
TBP				*i* S	Sg	19 53 05.5	+2.7
LLP	**Lapu-Lapu**	**0.58**	**13**	*e*P	Pg	19 53 12.2	+0.6
LLP				*i* S	Sg	19 53 20.3	+1.2
TABP	**Talibon, Bohol**	**0.60**	**55**	⇑*i*P	Pg	19 53 11.8	-0.1
TABP				*i* S	Sg	19 53 20.9	+1.1
LSIP	**Lazi, Siquijor**	**0.64**	**198**	⇑*i*P	Pg	19 53 12.8	+0.2
LSIP				*i* S	Sb	19 53 23.5	+0.3
SNPH	**Sibulan**	**0.71**	**236**	⇑*i*P	Pb	19 53 14.6	-0.5
SNPH				*i* S	Sb	19 53 26.2	+1.0
MSLP	**Maasin**	**1.09**	**69**	⇑*i*P	Pg	19 53 20.8	-0.3
MSLP				*e*S	Sn	19 53 40.4	+2.8
CNOP	**Candoni, Negro**	**1.18**	**274**	‖*e*P	Pg	19 53 22.3	-0.6
DCPH	**Dipolog City**	**1.25**	**202**	‖*e*P	Pg	19 53 21.4	-2.7
GUIM	**Jordan**	**1.50**	**306**	‖*e*P	Pn	19 53 26.6	-1.3
GUIM				*e*S	Sn	19 53 37.9	-10

*CRAAG **07** 19:53:27.0, 36°.52N×3°.43E, Ml2.7*
*MDD **07** 19:53:28.8±1.0, 36°.61N×3°.40E, h0km, Mb3.8/10, M_mb3.1/10, Error ellipse: s-maj=9.7km s-min=4.9km az=137.0*

ISC 07 19:53:27.9±1.5, 36°.57N±0°.07×3°.48E±0°.09, h18km, n10, σ1§55/17, 8C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.42**	**184**	P	**Pg**	**19 53 36.1**	**-0.5**
EIBI	**Ibiza**	**2.98**	**326**	P	**Pn**	**19 54 15.5**	**+1.3**
EIBI				⇑*i*Vmb_V		19 54 16.6	
	189nm,SNR=1.2						
EIBI				S	**Sn**	**19 54 49.2**	**-0.3**
ETOS	**Mallorca**	**3.23**	**351**	P	**Pn**	**19 54 18.8**	**+1.0**
ETOS				⇑*i*Vmb_V		19 54 19.9	
	153nm,SNR=1.2						
ETOS				S	**Sn**	**19 54 54.0**	**-1.8**
EMUR	**La Murta**	**3.97**	**290**	P	**Pn**	**19 54 28.3**	**+0.3**
EMUR				⇑*i*Vmb_V		19 54 28.6	
	67nm,SNR=1.2						
EMUR				S	**Sn**	**19 55 14.1**	**0.0**
ECOL	**Islas Columbre**	**3.98**	**327**	P	**Pn**	**19 54 29.0**	**+1.0**
ECOL				S	**Sn**	**19 55 12.4**	**-1.8**
ETOB	**Tobarra**	**4.49**	**299**	P	**Pn**	**19 54 35.6**	**+0.4**
ETOB				⇑*i*Vmb_V		19 54 37.8	
	92nm,SNR=1.5						
ETOB				S	**Sn**	**19 55 26.5**	**-0.5**
ECHE	**Chera**	**4.62**	**312**	P	**Pn**	**19 54 38.0**	**+1.1**
ECHE				⇑*i*Vmb_V		19 54 39.8	
	102nm,SNR=1.0						
EMOS	**Mosqueruela**	**4.89**	**322**	P	**Pn**	**19 54 42.0**	**+1.2**
EMOS				⇑*i*Vmb_V		19 54 43.4	
	107nm,SNR=1.3						
EMOS				S	**Sn**	**19 55 34.2**	**-2.8**
EQES	**Quesada**	**5.37**	**285**	P	**Pn**	**19 54 46.2**	**-1.1**
EQES				⇑*i*Vmb_V		19 54 51.1	
	40nm,SNR=0.9						
EQES				S	**Sn**	**19 55 51.6**	**+2.9**
EJON	**La Jonquera**	**5.88**	**356**	P	**Pn**	**19 54 55.7**	**+1.5**
EJON				⇑*i*Vmb_V		19 54 57.5	
	108nm,SNR=1.7						

*IDC **07** 19:59:55.9±1.5, 13°.82S×49°.20W, h0km, mb3.7/2, mbtmp3.8/4, ML4.1/2, MS2.6/1, Error ellipse: s-maj=26.0km s-min=18.4km az=44.0*
*VAO **07** 19:59:55.4±0.2, 13°.69S×49°.05W, h0km, mb4.2*

ISC 07 19:59:56.5±0.8, 13°.72S±0°.06×49°.11W±0°.05, h10km, n25, σ1§47/29, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**2.19**	**151**	Pn	**Pn**	**20 00 34.3**	**+1.3**
	40nm,0.3s,baz=326,slow=16,SNR=277						
BDFB				Lg	Lg	20 01 03.8	
	115nm,0.3s,baz=195,slow=21,SNR=34						
	124nm,0.3s						
BDFB	**Brasilia**	**2.19**	**151**	*e*P	**Pn**	**20 00 36.5**	**+3.5**
BDFB				*e*S	**Sn**	**20 01 01.0**	**+0.8**
SNDB	**Serra Nova Dou**	**2.75**	**309**	*e*P	**Pn**	**20 00 42.3**	**+1.7**
SNDB				*e*S	**Sn**	**20 01 15.8**	**+1.9**
SDBA	**SAO DESIDERIO**	**4.30**	**73**	*e*P	**Pn**	**20 01 03.1**	**+1.0**
SDBA				*e*S	**Sn**	**20 01 51.8**	**-0.6**
IPMB	**Ipameri, GO**	**4.33**	**169**	*e*P	**Pn**	**20 01 03.0**	**+0.5**
JANB	**Januaria**	**4.84**	**107**	*e*S	**Sn**	**20 02 04.4**	**-1.2**
SMTB	**Santa Maria do**	**5.05**	**17**	*e*P	**Pn**	**20 01 12.2**	**-0.1**
SMTB				*e*S	**Sn**	**20 02 10.1**	**-0.8**
PMNB	**Patos De Minas**	**5.44**	**152**	*e*P	**Pn**	**20 01 18.4**	**+0.7**
MC01	**Montes Claros**	**5.81**	**121**	*e*P	**Pn**	**20 01 23.9**	**+1.1**
SALV	**Santo Antonio**	**6.73**	**250**	*e*P	**Pn**	**20 01 36.9**	**+1.5**
DIAM	**Diamantina, MG**	**6.93**	**132**	*e*P	**Pn**	**20 01 38.0**	**-0.3**
CLDB	**Colider**	**7.12**	**293**	*e*P	**Pn**	**20 01 41.8**	**+1.1**
BB19B	**Bebedouro**	**7.33**	**176**	*e*P	**Pn**	**20 01 43.8**	**+0.1**
PRPB	**Parauapebas**	**7.53**	**355**	*e*P	**Pn**	**20 01 47.1**	**+0.7**
PDRB	**Porto dos Gac**	**7.72**	**285**	*e*P	**Pn**	**20 01 50.0**	**+0.9**
PCMB	**Pacaembu**	**8.11**	**194**	*e*P	**Pn**	**20 01 55.2**	**+0.8**
NPGB	**Novo Progresso**	**9.04**	**317**	*e*P	**Pn**	**20 02 06.0**	**-1.1**
GUA01	**Guaratinga, BA**	**9.43**	**109**	*e*P	**Pn**	**20 02 11.6**	**-0.8**
PTLB	**Pontes e Lacer**	**9.86**	**259**	*e*P	**Pn**	**20 02 17.3**	**-1.0**
ITTB	**Itaituba**	**11.36**	**324**	*e*P	**Pn**	**20 02 38.2**	**-0.8**
SIV	**San Ignacio**	**11.78**	**257**	Pn	**Pn**	**20 02 44.5**	**-0.3**
	0.1nm,0.3s,baz=89,slow=16,SNR=5.8						
SIV				Sn	**Sn**	**20 04 53.4**	**-3.0**
	0.1nm,0.3s,baz=66,slow=12,SNR=3.9						
SIV				Lg	Lg	20 06 07.6	
	0.1nm,0.3s,baz=320,slow=21,SNR=3.9						
SIV				LR	LR	20 08 01.6	
	comp=Z,28nm,19.4s,baz=62,slow=42						
	1.4nm,0.4s						
CPUP	**Villa Florida**	**14.72**	**210**	Lg	Lg	20 07 42.2	
	0.1nm,0.3s,baz=255,slow=6.0,SNR=3.0						
PLCA	**Paso Flores**	**32.80**	**211**	P	**P**	**20 06 28.1**	**-1.9**
	1.2nm,0.8s,baz=50,slow=13,SNR=3.0						
	1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**56.97**	**64**	P	**P**	**20 09 44.0**	**+1.3**
	0.6nm,0.7s,baz=254,slow=7.8,SNR=5.3						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**146.38**	**186**	PKPbc	**PKPdf**	**20 19 39.8**	**+2.4**
	0.3nm,0.4s,baz=177,slow=2.8,SNR=7.0						

*DDA **07** 20:02:40.0±0.0, 37°.24N×27°.80E, h30km±10km, ML1.7*

ISK 07 20:02:28.1, 36°.83N×26°.98E, h133km±1km, ML2.1/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.35**	**48**	PG	Pn	20 02 47.2	+0.4
BODT				SG	Sn	20 03 01.1	+0.1
BDRM	**Kayabasi**	**0.44**	**57**	P	Pn	20 02 48.3	+1.1
TURN	**Turunc**	**1.01**	**92**	PG	Pn	20 02 52.1	+0.7
TURN				SG	Sn	20 03 09.3	+0.3
TURN	**Turunc**	**1.01**	**92**	P	Pn	20 02 52.1	+0.7
TURN				S	Sn	20 03 09.1	0.0
TURN				*i* AML	AML	20 03 10.0	
	comp=N,25nm,0.3s						
YER	**Yerkesik**	**1.09**	**73**	PN	Pn	20 02 52.5	+0.4
ARG	**Arkhangelos**	**1.10**	**123**	PN	Pn	20 02 53.0	+0.7
ARG				SN	Sn	20 03 10.8	+0.2
KARP	**Karpathos**	**1.28**	**173**	PN	Pn	20 02 54.6	+0.5
DALY	**Dalyan (Mula)**	**1.34**	**90**	PN	Pn	20 02 55.3	+0.7
TAVA	**DENIZLI_Tavas**	**1.67**	**67**	P	Pn	20 02 56.9	-1.5
FETY	**Fethiye**	**1.70**	**96**	PN	Pn	20 02 59.1	+0.4
CAME	**Cameli-Denizli**	**1.86**	**86**	PN	Pn	20 03 01.4	+0.7
CAEL	**Denizli, Camel**	**1.90**	**80**	P	Pn	20 03 01.5	+0.4
CAEL				S	Sn	20 03 17.5	-8.9
CAEL				*i* AML	AML	20 03 31.0	
	comp=N,24nm,1.4s						
GOLH	**Golhisar**	**2.10**	**78**	P	Pn	20 03 04.0	+0.5

*IDC **07** 20:24:45.4±0.7, 11°.69N×141°.44E, h0km, mb4.1/11, mbtmp4.1/12, ML4.2/1, MS3.0/6, Error ellipse: s-maj=25.5km s-min=17.6km az=97.0*
*NEIC **07** 20:24:50.8±1.7, 11°.66N±0°.04×141°.5E±0°.2, h35km±2km, mb4.6/63, Error ellipse: s-maj=31.2km s-min=4.9km az=100.0*

ISC 07 20:24:49.0±0.5, 11°.61N±0°.09×141°.47E±0°.10, h27km, n89, σ1§01/85, mb4.6/44, MS3.3/4, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.85**	**59**	Pn	**Pn**	**20 25 47.3**	**+0.7**
	16nm,0.3s,baz=10,slow=14,SNR=6.1						
GUMO				Sn	**Sn**	**20 26 31.9**	**+0.9**
	baz=17,slow=19						
GUMO				LR	LR	20 27 05.6	
	comp=Z,132nm,19.3s,baz=118,slow=36						
	74nm,0.5s						
SIJI	**Sorong**	**16.02**	**220**	LR	LR	20 33 55.9	
	comp=Z,20nm,20.5s,baz=86,slow=34						
MYLDM	**Lahad Datu**	**23.60**	**256**	P	**P**	**20 29 56.4**	**-1.6**
MYLDM				IAmb	IAmb	20 30 04.7	
	comp=Z,35nm,1.5s						
SOEI	**Soe**	**27.26**	**220**		**P**	**20 30 31.0**	**-0.4**
KSRS	**Korea Array**	**28.46**	**337**	LR	LR	20 41 56.5	
	comp=Z,17nm,18.8s,baz=150,slow=36						
CTA	**Charters Tower**	**31.85**	**171**	LR	LR	20 45 10.8	
	comp=Z,35nm,18.1s,baz=84,slow=38						
WB0	**Warramunga Arr**	**31.95**	**193**	P	**P**	**20 31 12.2**	**-0.6**
WB0				IAmb	IAmb	20 31 18.6	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**32.10**	**192**	P	**P**	**20 31 14.2**	**0.0**
WR0				IAmb	IAmb	20 31 18.9	
	comp=Z,12nm,1.5s						
WB2	**Warramunga Arr**	**32.13**	**193**	P	**P**	**20 31 14.6**	**+0.2**
WRA	**Warramunga Arr**	**32.13**	**193**	P	**P**	**20 31 14.6**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=14,slow=9.7,SNR=7.8						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**32.13**	**193**	P	**P**	**20 31 14.8**	**+0.3**
AS31	**Alice Springs**	**35.83**	**192**	P	**P**	**20 31 47.9**	**+1.3**
ASAR	**Alice Springs**	**35.83**	**192**	P	**P**	**20 31 47.5**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=21,slow=12,SNR=24						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**35.83**	**192**	P	**P**	**20 31 46.8**	**+0.3**
KLR	**Kul'dur**	**38.37**	**350**	P	**P**	**20 32 08.3**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=153,slow=5.4,SNR=12						
	comp=Z,4.2nm,0.5s						
MBWA	**Marble Bar**	**38.95**	**213**	P	**P**	**20 32 15.1**	**+2.1**
BBOO	**Buckleboo**	**44.47**	**187**	P	**P**	**20 32 58.6**	**+0.6**
SONM	**Songino Array**	**46.53**	**328**	P	**P**	**20 33 15.8**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=104,slow=6.1,SNR=2.5						
	comp=Z,0.5nm,0.5s						
YAK	**Yakutsk**	**51.06**	**353**	P	**P**	**20 33 47.9**	**-0.8**
MK31	**Makanchi Array**	**60.65**	**317**	P	**P**	**20 34 57.8**	**0.0**
MK31				IAmb	IAmb	20 35 18.1	
	comp=Z,5.4nm,1.4s						
MKAR	**Makanchi Array**	**60.65**	**317**	P	**P**	**20 34 58.6**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=115,slow=8.3,SNR=5.1						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**60.65**	**317**	P	**P**	**20 34 58.4**	**+0.6**
FALS	**False Pass**	**60.84**	**33**	P	**P**	**20 34 58.0**	**-0.9**
ZALV	**Zalesovo Beam**	**61.34**	**326**	P	**P**	**20 35 02.2**	**0.0**
	comp=Z,0.7nm,0.5s,baz=100,slow=7.6,SNR=2.6						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**63.99**	**321**	P	**P**	**20 35 20.0**	**0.0**
KURK				IAmb	IAmb	20 35 21.0	
	comp=Z,4.0nm,0.7s						
O18K	**Koktuh Hills**	**66.75**	**29**	P	**P**	**20 35 36.7**	**-1.1**
TTA	**Tatalina**	**67.38**	**26**	P	**P**	**20 35 42.0**	**+0.2**
TTA				IAmb	IAmb	20 36 19.0	
	comp=Z,8.2nm,1.4s						
N19K	**Bonanza Creek**	**67.39**	**29**	P	**P**	**20 35 42.5**	**+0.6**
KDAK	**Kodiak Island**	**67.49**	**32**	P	**P**	**20 35 43.7**	**+1.2**
M19K	**Big River Lodg**	**67.76**	**27**	P	**P**	**20 35 44.7**	**+0.6**
M19K				IAmb	IAmb	20 36 07.9	
	comp=Z,9.7nm,1.3s						
J20K	**Nowinta River**	**68.57**	**25**	P	**P**	**20 35 49.1**	**-0.1**
J20K				IAmb	IAmb	20 35 50.6	
	comp=Z,4.6nm,0.8s						
CNPM	**China Poot**	**68.60**	**30**	P	**P**	**20 35 48.8**	**-0.7**
BRLK	**Bradley Lake**	**68.83**	**30**	P	**P**	**20 35 49.7**	**-1.2**
PPLA	**Purkeypile**	**69.03**	**27**	P	**P**	**20 35 51.9**	**-0.4**
SKT	**Skwentna**	**69.08**	**28**	P	**P**	**20 35 53.3**	**+1.1**
SKT				IAmb	IAmb	20 36 09.9	
	comp=Z,9.4nm,1.4s						
CAST	**Castle Rocks**	**69.22**	**26**	P	**P**	**20 35 53.3**	**+0.1**
CAST				IAmb	IAmb	20 35 54.0	
	comp=Z,3.7nm,0.6s						
IMAR	**Indian Mountai**	**69.31**	**23**	P	**P**	**20 35 53.9**	**+0.2**
BRVK	**Borovoye**	**69.51**	**322**	P	**P**	**20 35 55.5**	**+0.4**
H21K	**Melozitna Rive**	**69.58**	**24**	P	**P**	**20 35 55.9**	**+0.5**
H21K				IAmb	IAmb	20 35 56.7	
	comp=Z,4.5nm,1.1s						
KTH	**Kantishna Hill**	**69.76**	**26**	P	**P**	**20 35 56.0**	**-0.7**
KTH				IAmb	IAmb	20 35 57.3	
	comp=Z,6.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**69.88**	**26**	P	**P**	**20 35 56.4**	**-0.9**
BPAW				IAmb	IAmb	20 35 58.5	
	comp=Z,3.1nm,0.8s						
TRF	**Thorofare Moun**	**70.01**	**26**	P	**P**	**20 35 56.9**	**-1.4**
TRF				IAmb	IAmb	20 36 21.6	
	comp=Z,5.7nm,1.3s						
GHO	**Glory Hole Cre**	**70.23**	**28**	P	**P**	**20 35 59.2**	**-0.3**
GHO				IAmb	IAmb	20 36 08.0	
	comp=Z,6.8nm,1.1s						
MLY	**Manley**	**70.23**	**25**	P	**P**	**20 35 59.0**	**-0.4**
MLY				IAmb	IAmb	20 36 00.3	
	comp=Z,5.2nm,1.0s						
PWL	**Port Wells**	**70.31**	**29**	P	**P**	**20 35 59.7**	**-0.3**
SML	**Sawmill**	**70.51**	**28**	P	**P**	**20 36 00.8**	**-0.5**
SML				IAmb	IAmb	20 36 01.6	
	comp=Z,6.3nm,0.9s						
RND	**Reindeer**	**70.63**	**27**	P	**P**	**20 36 00.6**	**-1.3**
RND				IAmb	IAmb	20 36 33.5	
	comp=Z,7.5nm,1.4s						
H23K	**Yukon River**	**70.92**	**24**	P	**P**	**20 36 04.2**	**+0.6**
H23K				IAmb	IAmb	20 36 04.7	
	comp=Z,4.3nm,1.0s						
SCM	**Sheep Creek Mo**	**70.98**	**28**	P	**P**	**20 36 03.9**	**-0.2**
SCM				IAmb	IAmb	20 36 04.9	
	comp=Z,6.9nm,0.9s						
FID	**Port Fidalgo**	**71.19**	**30**	P	**P**	**20 36 04.0**	**-1.4**
FID				IAmb	IAmb	20 36 08.3	
	comp=Z,7.0nm,0.9s						
MDM	**Murphy Dome**	**71.25**	**25**	P	**P**	**20 36 05.7**	**0.0**
MDM				IAmb	IAmb	20 36 07.0	
	comp=Z,4.2nm,0.9s						
H24K	**Noodor Dome**	**71.59**	**24**	P	**P**	**20 36 08.1**	**+0.4**
H24K				IAmb	IAmb	20 36 48.9	
	comp=Z,7.8nm,1.5s						
HDA	**Harding Lake**	**71.67**	**26**	P	**P**	**20 36 06.7**	**-1.4**
IL31		**71.77**	**25**	P	**P**	**20 36 07.6**	**-1.0**
IL31				IAmb	IAmb	20 36 07.9	
	comp=Z,3.2nm,0.6s						
ILAR	**Eielson Array**	**71.77**	**25**	P	**P**	**20 36 07.5**	**-1.2**
	comp=Z,2.5nm,0.7s,baz=252,slow=5.8,SNR=17						
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**71.77**	**25**	P	**P**	**20 36 07.7**	**-1.0**
PAX	**Paxson**	**72.04**	**27**	P	**P**	**20 36 09.7**	**-0.9**
PAX				IAmb	IAmb	20 36 11.1	
	comp=Z,4.3nm,0.7s						
HMT	**Hamilton**	**72.20**	**30**	P	**P**	**20 36 11.6**	**+0.2**
J25K	**Salcha River,**	**72.37**	**26**	P	**P**	**20 36 11.7**	**-0.7**
RIDG	**Independent Ri**	**72.45**	**27**	P	**P**	**20 36 12.2**	**-0.7**
GLB	**Gilahina Butte**	**72.58**	**29**	P	**P**	**20 36 13.8**	**+0.1**
VRDI	**Verde Repeater**	**72.72**	**29**	P	**P**	**20 36 14.7**	**0.0**
DOT	**Dot Lake**	**72.78**	**27**	P	**P**	**20 36 14.0**	**-0.8**
DOT				IAmb	IAmb	20 36 16.0	
	comp=Z,5.6nm,0.8s						
SCRK	**Sand Creek**	**72.86**	**26**	P	**P**	**20 36 15.6**	**+0.2**
L26K	**Log Cabin Wild**	**73.01**	**27**	P	**P**	**20 36 16.1**	**-0.1**
BMAR	**Burnt Mountain**	**73.20**	**23**	P	**P**	**20 36 18.3**	**+1.1**
MESA	**MESA**	**73.33**	**30**	P	**P**	**20 36 18.3**	**0.0**
L27K	**Beaver Creek,**	**73.70**	**28**	P	**P**	**20 36 20.5**	**+0.2**
CTGM	**Chitina Glacie**	**73.71**	**30**	P	**P**	**20 36 21.1**	**+0.6**
CTGM				IAmb	IAmb	20 36 28.1	
	comp=Z,12nm,1.4s						
LOGN	**Logan Glac

Probable volcanic
IDC 07 20:34:41.2±0.8, 5.°03N×75.°38W, h0km, mb3.8/8, mbtmp3.9/11, ML3.8/3, MS3.4/13, Error ellipse: s-maj=21.5km s-min=10.3km az=19.0
VAO 07 20:34:45.6±0.8, 4.°86N×75.°04W, h10km, mb4.2
ISC 07 20:34:41.4±0.5, 4.98N±0.02×75.35W±0.02, h10km, n57, σ1§71/73, mb3.8/8, MS3.4/8, 6C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUY2C	**Guyana, Caldas**	**0.25**	**357**	*e*P	**Pg**	**20 34 45.9**	**-0.8**
GUY2C				*e*S	**Sg**	**20 34 49.9**	**-0.3**
GUY2C				*i*		20 34 50.1	
	comp=Z,18μm,0.3s						
ANIL	**Santa Ana**	**0.48**	**186⇑**	*e*P	**Pg**	**20 34 49.1**	**-1.8**
ANIL				*e*S	**Sb**	**20 34 57.5**	**-2.0**
ANIL				*i*		20 35 03.8	
	comp=Z,3μm,0.4s						
NORC	**Norcasia**	**0.76**	**40⇑**	*e*P	**Pg**	**20 34 54.3**	**-1.7**
NORC				*e*S	**Sg**	**20 35 04.1**	**-1.9**
NORC				*i*		20 35 05.1	
	comp=Z,3μm,0.5s						
PLMC	**San Jos del P**	**0.93**	**266⇑**	*e*P	**Pg**	**20 34 58.2**	**-1.1**
PLMC				*e*S	**Sb**	**20 35 11.8**	**-0.3**
PLMC				*i*		20 35 14.4	
	comp=Z,2μm,0.3s						
ROSC	**El Rosal**	**1.04**	**97**	Pg	**Pn**	**20 35 01.0**	**-1.4**
	comp=Z,253nm,0.3s,baz=298,slow=5.8,SNR=284						
ROSC				Lg	Lg	20 35 17.9	
	comp=Z,216nm,0.3s,baz=240,slow=23,SNR=13						
ROSC				LR	LR	20 35 25.2	
	comp=Z,1μm,19.6s,baz=241,slow=41						
CBOC	**Ciudad Bolivar**	**1.10**	**323**	*i* P	**Pg**	**20 35 01.0**	**-1.6**
CBOC				*e*S	**Sb**	**20 35 16.5**	**-0.6**
CBOC				*i*		20 35 18.3	
	comp=Z,690nm,0.6s						
HELC	**Santa Helena**	**1.22**	**352**	*e*P	**Pb**	**20 35 02.9**	**-1.9**
HELC				*e*S	**Sg**	**20 35 19.9**	**-0.8**
HELC				*i*		20 35 26.7	
	comp=Z,615nm,0.3s						
PRAC	**Prado**	**1.34**	**160**	*e*P	**Pn**	**20 35 04.9**	**-1.3**
PRAC				*e*S	**Sg**	**20 35 23.2**	**-1.3**
PRAC				*i*		20 35 31.4	
	comp=Z,566nm,0.4s						
YOTC	**Yotoco, Valle**	**1.40**	**225⇑**	*e*P	**Pn**	**20 35 05.0**	**-2.1**
YOTC				*e*S	**Sb**	**20 35 24.0**	**-1.6**
YOTC				*i*		20 35 25.6	
	comp=Z,373nm,0.4s						
SPBC	**San Pablo de B**	**1.44**	**62**	*e*P	**Pn**	**20 35 06.7**	**-1.0**
SPBC				*e*S	**Sb**	**20 35 25.9**	**-1.0**
SPBC				*i*		20 35 31.4	
	comp=Z,430nm,0.3s						
CHIC	**Chingaza**	**1.65**	**102⇑**	*e*P	**Pb**	**20 35 11.4**	**-0.8**
CHIC				*e*S	**Sg**	**20 35 35.4**	**+0.7**
CHIC				*i*		20 35 41.8	
	comp=Z,356nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.79**	**30⇑**	*i*P	**Pb**	**20 35 12.6**	**-1.8**
PTBC				*e*S	**Sb**	**20 35 35.6**	**-1.3**
PTBC				*i*		20 35 37.8	
	comp=Z,1μm,0.5s						
VILC	**Villavicencio,**	**1.86**	**117**	*e*P	**Pb**	**20 35 15.0**	**-0.6**
VILC				*e*S	**Sn**	**20 35 36.2**	**-1.0**
MALC	**Bahia Malaga**	**2.20**	**244**	*e*P	**Pb**	**20 35 20.1**	**-1.2**
MALC				*e*S	**Sg**	**20 35 50.8**	**-1.3**
MALC				*i*		20 35 52.8	
	comp=Z,78nm,0.3s						
DBBC	**Dabeiba**	**2.20**	**337**	*e*P	**Pg**	**20 35 21.9**	**-1.7**
DBBC				*e*S	**Sg**	**20 35 51.6**	**-0.6**
BETC	**Betania**	**2.28**	**182**	*e*P	**Pb**	**20 35 21.6**	**-1.2**
BETC				*e*S	**Sb**	**20 35 50.8**	**-0.2**
SOLC	**Bahia Solano**	**2.39**	**301**	*e*P	**Pb**	**20 35 23.6**	**-1.0**
SOLC				*e*S	**Sb**	**20 35 53.6**	**-0.6**
RUSC	**La Rusia**	**2.44**	**68**	*e*P	**Pb**	**20 35 24.2**	**-1.4**
RUSC				*e*S	**Sg**	**20 35 57.6**	**-2.2**
RUSC				*i*		20 36 02.1	
	comp=Z,114nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.55**	**11**	*e*P	**Pb**	**20 35 26.0**	**-1.2**
ZARC				*e*S	**Sb**	**20 35 57.9**	**-0.7**
ZARC				*i*		20 36 03.9	
	comp=Z,427nm,0.5s						
BARC	**Barichara**	**2.69**	**53**	*e*P	**Pb**	**20 35 27.4**	**-2.4**
BARC				*e*S	**Sb**	**20 36 02.3**	**-0.8**
BARC				*i*		20 36 05.9	
	comp=Z,636nm,0.6s						
UREC	**San Jos de Ur**	**2.76**	**356**	*e*P	**Pb**	**20 35 29.5**	**-1.4**
UREC				*e*S	**Sg**	**20 36 07.9**	**-2.4**
GARC	**Garzon, Huila**	**2.77**	**183**	*e*P	**Pb**	**20 35 30.2**	**-1.1**
GARC				*e*S	**Sb**	**20 36 06.1**	**+0.6**
GARC				*i*		20 36 11.4	
	comp=Z,260nm,0.3s						
FLOC	**Florencia**	**3.38**	**185**	*e*P	**Pb**	**20 35 38.2**	**-3.4**
FLOC				*e*S	**Sg**	**20 36 26.2**	**-4.1**
GUVC	**San Jose del G**	**3.64**	**132**	*e*P	**Pn**	**20 35 40.7**	**+2.9**
GUVC				*e*S	**Sn**	**20 36 22.4**	**+1.5**
OCAC	**Ocana**	**3.82**	**32**	*e*P	**Pn**	**20 35 41.3**	**+0.8**
OCAC				*e*S	**Sb**	**20 36 29.8**	**-5.7**
OCAC				*i*		20 36 47.9	
	comp=Z,411nm,0.5s						
OTAV	**Otavalo**	**5.63**	**213**	*e*P	Pn	20 36 10.3	+4.6
SDV	**Santo Domingo**	**6.08**	**50**	Pn	**Pn**	**20 36 14.0**	**+2.3**
	comp=Z,7.1nm,0.3s,baz=253,slow=11,SNR=22						
SDV				Sn	**Sn**	**20 37 22.1**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=38,slow=19,SNR=1.6						
SDV				LR	LR	20 38 44.9	
	comp=Z,331nm,19.0s,baz=224,slow=40						
	comp=Z,57nm,0.7s						
SDV	**Santo Domingo**	**6.08**	**50**	*e*P	**Pn**	**20 36 13.7**	**+2.1**
SGCB	**SCo Gabriel d**	**9.73**	**121**	*e*P	**Pn**	**20 37 00.1**	**-1.5**
TBTG	**Tabatinga, AM**	**10.60**	**149**	*e*P	**Pn**	**20 37 14.7**	**+1.2**
PCRV	**Puerto La Cruz**	**11.81**	**63**	Pn	**Pn**	**20 37 30.4**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=226,slow=7.6,SNR=1.7						
	comp=Z,9.4nm,0.6s						
ATAH	**Atahualpa**	**12.41**	**194**	LR	LR	20 43 33.7	
	comp=Z,151nm,21.5s,baz=330,slow=43						
CZSB	**Cruzeiro do Su**	**12.90**	**168**	*e*P	**Pn**	**20 37 46.5**	**+1.6**
SJG	**San Juan**	**15.86**	**34**	LR	LR	20 45 13.6	
	comp=Z,71nm,20.0s,baz=236,slow=40						
PTGA	**Pitinga**	**16.38**	**110**	Pn	**P**	**20 38 34.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=288,slow=13,SNR=5.5						
PTGA				LR	LR	20 45 36.0	
	comp=Z,48nm,19.8s,baz=340,slow=40						
	comp=Z,1.1nm,0.3s						
MACA	**Manacapuru-AM**	**16.74**	**119**	*e*P	**P**	**20 38 36.4**	**-2.1**
NNA	**Nana**	**16.92**	**185**	LR	LR	20 46 17.7	
	comp=Z,216nm,19.1s,baz=337,slow=41						
ETMB	**Extrema**	**17.29**	**148**	*e*P	**P**	**20 38 44.7**	**+0.2**
ITTB	**Itaituba**	**21.68**	**115**	*e*P	**P**	**20 39 33.7**	**+1.1**
MALB	**Monte Alegre**	**22.13**	**107**	*e*P	**P**	**20 39 36.5**	**-0.9**
LPAZ	**La Paz**	**22.30**	**161**	P	**P**	**20 39 43.0**	**+3.2**
	comp=Z,0.4nm,0.3s,baz=326,slow=7.3,SNR=1.9						
LPAZ				LR	LR	20 48 51.8	
	comp=Z,119nm,18.0s,baz=300,slow=38						
	comp=Z,0.4nm,0.3s						
MDP	**Montagnes des**	**22.62**	**89**	LR	LR	20 48 54.2	
	comp=Z,133nm,20.2s,baz=231,slow=38						
NPGB	**Novo Progresso**	**23.26**	**121**	*e*P	**P**	**20 39 50.6**	**+1.3**
PDRB	**Porto dos Gac**	**24.80**	**132**	*e*P	**P**	**20 40 05.8**	**+1.9**
SIV	**San Ignacio**	**25.18**	**146**	P	**P**	**20 40 09.5**	**+2.2**
	comp=Z,1.4nm,0.6s,baz=324,slow=6.7,SNR=6.1						
SIV				LR	LR	20 50 05.0	
	comp=Z,113nm,18.4s,baz=13,slow=37						
	comp=Z,1.4nm,0.6s						
RCBR	**Riachuelo**	**40.83**	**105**	LR	LR	20 58 26.8	
	comp=Z,83nm,19.9s,baz=86,slow=35						
ULM	**Lac du Bonnet**	**48.31**	**342**	P	**P**	**20 43 23.4**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=185,slow=6.1,SNR=2.9						
	comp=Z,4.9nm,0.8s						
PDAR	**Pinedale Array**	**48.31**	**326**	P	**P**	**20 43 24.6**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=111,slow=8.1,SNR=5.9						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**51.24**	**317**	P	**P**	**20 43 46.6**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=123,slow=6.7,SNR=2.6						
	comp=Z,0.7nm,0.9s						
FRB	**Frobisher Bay**	**58.86**	**4**	LR	LR	21 13 01.3	
	comp=Z,27nm,18.4s,baz=312,slow=39						
YKA	**Yellowknife Ar**	**64.25**	**341**	P	**P**	**20 45 18.3**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=130,slow=7.1,SNR=4.1						
	comp=Z,1.1nm,0.6s						
DBIC	**Dimbokro**	**70.10**	**85**	LR	LR	21 16 48.8	
	comp=Z,18nm,18.3s,baz=106,slow=36						
ESDC	**Sonseca Array**	**72.53**	**50**	P	**P**	**20 46 09.4**	**+0.5**
	comp=Z,0.8nm,1.0s,baz=308,slow=6.3,SNR=3.0						
	comp=Z,0.8nm,1.0s						
ILAR	**Eielson Array**	**77.70**	**335**	P	**P**	**20 46 39.8**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=92,slow=5.8,SNR=5.1						
ILAR				LR	LR	21 23 42.3	
	comp=Z,34nm,19.2s,baz=235,slow=38						
	comp=Z,0.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**85.52**	**12**	LR	LR	21 27 23.9	
	comp=Z,17nm,18.2s,baz=316,slow=37						
ASAR	**Alice Springs**	**146.24**	**234**	PKPbc	**PKPbc**	**20 54 22.1**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=120,slow=3.4,SNR=7.2						
WRA	**Warramunga Arr**	**147.50**	**240**	PKPbc	**PKPab**	**20 54 27.6**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=109,slow=2.8,SNR=7.1						

CNRM 07 20:42:39.0, 36.°68N×8.°05W, h26km, ml2.3
MDD 07 20:42:39.2±0.5, 36.°77N×7.°98W, h12km, mb_Lg2.8/14, Error ellipse: s-maj=4.1km s-min=2.7km az=32.0
INMG 07 20:42:40.4±1.4, 36.°74N×8.°10W, h25km±3km, ML2.4, Error ellipse: s-maj=3.0km s-min=2.1km az=36.0
ISC 07 20:42:38.8±1.0, 36.76N±0.03×8.04W±0.02, h31km±10km, n71, σ1§33/120, 7C-2D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFARO	**Faro**	**0.28**	**19⇑**	*i*Pg	**Pn**	**20 42 47.4**	**+0.6**
PFARO				*e*Sg	**Sn**	**20 42 52.8**	**+0.9**
PFARO				A	A	20 42 56.4	
	1μm,0.3s						
PALBU	**Albufeira**	**0.37**	**333⇑**	*e*Pg	**Pn**	**20 42 48.5**	**+0.4**
PALBU				*e*Sg	**Sn**	**20 42 54.0**	**-0.2**
PALBU				A	A	20 42 54.9	
	1μm,0.1s						
PTAV	**Tavira**	**0.47**	**40**	*e*Pg	**Pn**	**20 42 50.6**	**+1.2**
PTAV				*e*Sg	**Sn**	**20 42 58.1**	**+1.4**
PTAV				A	A	20 42 59.1	
	283nm,0.8s						
PBDV	**Barranco-do-Ve**	**0.49**	**10**	*e*Pg	**Pb**	**20 42 48.4**	**-0.8**
PBDV				*e*Sg	**Sb**	**20 42 55.6**	**-0.6**
PBDV				A	A	20 42 56.5	
	112nm,0.5s						
PPOR	**Portimao**	**0.55**	**313**	*e*Sg	**Sb**	**20 42 57.8**	**+0.1**
PPOR				A	A	20 43 00.4	
	367nm,0.5s						
PLAGO	**Lagos**	**0.62**	**303**	*e*Pg	**Pn**	**20 42 51.6**	**+0.2**
PLAGO				*e*Sg	**Sn**	**20 43 00.3**	**0.0**
PVAQ	**Vaqueiros**	**0.69**	**22**	*e*P	**Pn**	**20 42 53.1**	**+0.7**
PVAQ				*e*S	**Sn**	**20 43 02.9**	**+0.9**
PVAQ				A	A	20 43 03.2	
	99nm,0.2s						
PVAQ	**Vaqueiros**	**0.69**	**22**	P	**Pn**	**20 42 52.8**	**+0.4**
PVAQ	**Vaqueiros**	**0.69**	**22**	P	**Sn**	**20 42 52.8**	**+0.4**
PVAQ				S	**Sn**	**20 43 03.2**	**+1.1**
MORF	**Marmelete**	**0.73**	**318**	*e*P	**Pb**	**20 42 53.2**	**+0.1**
MORF				*e*S	**Sb**	**20 43 02.5**	**-0.4**
MORF				IAML		20 43 03.6	
	comp=N,139nm,0.2s						
MORF	**Marmelete**	**0.73**	**318⇓**	*e*P	**Pb**	**20 42 53.3**	**+0.1**
MORF				*e*S	**Sn**	**20 43 03.4**	**+0.2**
MORF				A	A	20 43 05.4	
	comp=N,112nm,0.1s						
PFVI	**Vila Bisbo**	**0.73**	**300**	*e*Pg	**Pb**	**20 42 53.2**	**0.0**
PFVI				*e*Sg	**Sb**	**20 43 02.8**	**-0.1**
PFVI				A	A	20 43 06.7	
	comp=N,92nm,0.1s						
PFVI	**Vila Bisbo**	**0.73**	**300**	S	Sb	20 42 53.1	-10
PFVI	**Vila Bisbo**	**0.73**	**300**	P	**Pb**	**20 42 53.1**	**0.0**
PFVI				S	**Sn**	**20 43 05.2**	**+2.0**
PSVI	**Cabo S. Vicent**	**0.81**	**289**	*e*S	**Sn**	**20 43 04.5**	**-0.6**
PALJ	**Aljezur**	**0.82**	**312**	*e*P	**Pb**	**20 42 55.0**	**+0.3**
PALJ				*e*S	**Sb**	**20 43 05.7**	**+0.2**
PALJ				A	A	20 43 09.3	
	comp=N,390nm,0.4s						
PCVE	**Castro Verde**	**0.87**	**360⇑**	*i*P	**Pb**	**20 42 55.8**	**+0.4**
PCVE				*e*S	**Sb**	**20 43 07.0**	**+0.3**
PCVE				A	A	20 43 09.0	
	comp=N,55nm,0.2s						
EGRO	**El Granado**	**0.89**	**30**	⇑Pg	**Pb**	**20 42 56.2**	**+0.4**
EGRO				Sg	**Sn**	**20 43 07.2**	**+0.3**
EGRO				*i* Vmb_Lg		20 43 11.5	
PTEO	**Sao Teotonio**	**0.96**	**325⇓**	*e*P	**Pb**	**20 42 56.7**	**-0.2**
PTEO				*e*S	**Sb**	**20 43 09.8**	**+0.6**
PTEO				A	A	20 43 11.6	
	comp=N,60nm,0.4s						
MESJ	**Messejana**	**1.08**	**352**	*e*P	**Pb**	**20 42 58.7**	**-0.4**
MESJ				*e*S	**Sn**	**20 43 11.9**	**+0.1**
MESJ				IAML		20 43 12.8	
	comp=N,79nm,0.1s						
MESJ	**Messejana**	**1.08**	**352**	*e*P	**Pb**	**20 42 58.8**	**-0.3**
MESJ				*e*S	**Sn**	**20 43 11.9**	**+0.1**
MESJ				A	A	20 43 15.9	
	comp=N,56nm,0.1s						
PBEJ	**Beja**	**1.27**	**6**	*e*P	**Pb**	**20 43 01.6**	**-0.6**
PBEJ				*e*S	**Sb**	**20 43 17.9**	**-0.2**
PBEJ				A	A	20 43 20.5	
	comp=N,26nm,0.2s						
PNCL	**Nicolau / Gran**	**1.40**	**344⇑**	*e*Pn	**Pn**	**20 43 02.8**	**+0.6**
PNCL	**Nicolau / Gran**	**1.40**	**344**	*e*Pg	**Pb**	**20 43 05.4**	**+1.0**
PNCL				*e*Sg	**Sb**	**20 43 23.1**	**+1.2**
PNCL				A	A	20 43 24.8	
	comp=N,42nm,0.2s						
EMIN	**Mina Concepcio**	**1.48**	**47**	Pn	**Pn**	**20 43 03.9**	**+0.7**
EMIN				Sg	**Sb**	**20 43 24.2**	**+0.1**
EMIN				*i* Vmb_Lg		20 43 29.7	
PBAR	**Barrancos**	**1.62**	**29**	*e*Pn	**Pn**	**20 43 05.9**	**+0.7**
PBAR				A	A	20 43 35.0	
	comp=N,14nm,0.3s						
ESPR	**Espera**	**1.75**	**86**	Pn	**Pn**	**20 43 08.3**	**+1.3**
ESPR				Pg	**Pb**	**20 43 08.5**	**-1.9**
ESPR				*i* Vmb_Lg		20 43 30.5	
EVO	**Evora**	**1.77**	**1**	*e*Pn	**Pn**	**20 43 07.9**	**+0.7**
EVO	**Evora**	**1.77**	**1**	*e*Pg	**Pb**	**20 43 09.5**	**-1.1**
EVO				A	A	20 43 36.9	
	comp=N,30nm,0.1s						
PACT	**Alcochete**	**2.10**	**343**	*e*Pn	**Pb**	**20 43 14.2**	**-2.0**
PACT	**Alcochete**	**2.10**	**343**	*e*Pg	**Pb**	**20 43 15.3**	**-0.9**
PACT				*e*Sn	**Sn**	**20 43 36.8**	**0.0**
PACT				A	A	20 43 54.6	
	comp=N,38nm,0.4s						
PESTR	**Estremoz**	**2.13**	**9**	*e*Pn	**Pn**	**20 43 13.9**	**+1.6**
PESTR				*e*Sn	**Sn**	**20 43 38.1**	**+0.4**
PESTR				A	A	20 43 47.1	
	comp=N,7.8nm,0.2s						
PESTR	**Estremoz**	**2.13**	**9**	P	**Pn**	**20 43 14.2**	**+1.9**
EBAD	**Badajoz**	**2.15**	**22**	Pn	**Pn**	**20 43 13.0**	**+0.6**
EBAD				Pg	**Pb**	**20 43 18.2**	**+1.2**
EBAD				Sn	**Sn**	**20 43 38.8**	**+0.8**
EBAD				Sg	**Sb**	**20 43 45.3**	**+2.0**
EBAD				*i* Vmb_Lg		20 43 50.6	
PMTG	**Montargil**	**2.31**	**356**	*e*Pn	**Pn**	**20 43 15.2**	**+0.5**
PMTG				*e*Sn	**Sn**	**20 43 42.0**	**0.0**
PMTG				*e*Sg	**Sb**	**20 43 50.4**	**+2.5**
PMTG				A	A	20 43 54.0	
	comp=N,13nm,0.1s						
PMAFR	**Mafra**	**2.40**	**336**	*e*Pn	**Pn**	**20 43 16.9**	**+0.9**
PMAFR				*e*Sn	**Sn**	**20 43 43.3**	**-1.0**
PMAFR				A	A	20 44 03.6	
	comp=N,16nm,0.3s						
SMIR	**Smir Dam**	**2.40**	**116**	P	**Pn**	**20 43 18.0**	**+2.0**
SMIR	**Smir Dam**	**2.40**	**116**	P	**Pn**	**20 43 17.9**	**+2.0**
SMIR				S	**Sn**	**20 43 44.4**	**+0.1**
ECAB	**El Cabril**	**2.46**	**57**	Pn	**Pn**	**20 43 17.6**	**+0.8**
ECAB				Sn	**Sn**	**20 43 44.1**	**-1.7**
ECAB				Sg	**Sb**	**20 43 53.4**	**+1.1**
ECAB				*i* Vmb_Lg		20 43 59.4	
PMRV	**Marv??o**	**2.71**	**11**	*e*Pn	**Pn**	**20 43 20.8**	**+0.6**
PMRV				*e*Sn	**Sn**	**20 43 51.5**	**-0.4**
PMRV				A	A	20 44 10.8	
	comp=N,15nm,0.6s						
PSBE	**So Bento**	**2.81**	**348**	*e*Pn	**Pn**	**20 43 22.6**	**+1.0**
PSBE				*e*Sn	**Sn**	**20 43 53.9**	**-0.6**
PSBE				A	A	20 44 14.7	
	comp=N,12nm,0.7s						
EADA	**Adamuz**	**3.09**	**62**	Pn	**Pn**	**20 43 26.5**	**+1.1**
EADA				Sn	**Sn**	**20 43 59.9**	**-1.4**
EADA				*i* Vmb_Lg		20 44 02.8	
EADA				Sg	**Sb**	**20 44 14.7**	**+4.4**
PCBR	**Castelo Branco**	**3.10**	**8**	*e*Pn	**Pn**	**20 43 26.8**	**+1.2**
PCBR				*e*Sn	**Sn**	**20 44 01.1**	**-0.5**
PCAS	**Casmilo, Conde**	**3.31**	**354**	*e*Sn	**Sn**	**20 44 06.0**	**-0.6**
PCAS				A	A	20 44 26.2	
	comp=N,6.2nm,0.8s						
ZHG	**ZHG**	**3.50**	**161**	P	**Pn**	**20 43 30.9**	**-0.3**
ZHG				S	**Sn**	**20 44 11.5**	**-0.1**
ELGU	**Los Guajares,**	**3.54**	**87**	Pn	**Pn**	**20 43 32.0**	**+0.4**
ELGU				Sn	**Sn**	**20 44 11.9**	**-0.6**
ELGU				*i* Vmb_Lg		20 44 20.3	
EPLA	**Plasencia**	**3.64**	**24**	Pn	**Pn**	**20 43 34.0**	**+1.0**
EPLA				Sn	**Sn**	**20 44 14.2**	**-0.6**
EPLA				*i* Vmb_Lg		20 44 40.5	
MTE	**Manteigas**	**3.65**	**6**	*e*Sn	**Sn**	**20 44 13.8**	**-1.4**
MTE				A	A	20 44 46.1	
	comp=N,16nm,0.4s						
PALE	**Palemas**	**3.66**	**114**	P	**Pn**	**20 43 35.2**	**+1.9**
PVIS	**Viseu**	**3.95**	**2**	*e*Pg	**Pb**	**20 43 46.3**	**-1.4**
PVIS				*e*Sn	**Sn**	**20 44 21.1**	**-1.4**
PVIS				A	A	20 44 52.2	
	comp=N,4.0nm,0.4s						
PAB	**San Pablo**	**4.02**	**45**	Pn	**Pn**	**20 43 39.3**	**+1.0**
PAB				⇑Sn	**Sn**	**20 44 21.5**	**-2.8**
PAB				*i* Vmb_Lg		20 44 21.7	
PAB	**San Pablo**	**4.02**	**45**	P	**Pn**	**20 43 39.4**	**+1.0**
PAB	**San Pablo**	**4.02**	**45**	P	**Pn**	**20 43 39.4**	**+1.0**
LCRM	**LCR**	**4.02**	**139**	P	**Pn**	**20 43 40.0**	**+1.6**
EQES	**Quesada**	**4.09**	**74**	Pn	**Pn**	**20 43 39.8**	**+0.5**
EQES				Sn	**Sn**	**20 44 26.1**	**-0.1**
EQES				*i* Vmb_Lg		20 44 29.0	
ESDC	**Sonseca Array**	**4.33**	**47**	⇑Pn	**Pn**	**20 43 43.5**	**+1.0**
ESDC				*i* Vmb_Lg		20 44 27.1	
ESDC				Sn	**Sn**	**20 44 28.0**	**-3.9**
MVO	**Moncorvo**	**4.46**	**10**	*e*Pn	**Pn**	**20 43 45.4**	**+1.0**
MVO				*e*Sn	**Sn**	**20 44 32.9**	**-2.4**
MVO				A	A	20 45 10.2	
	comp=N,8.1nm,0.5s						
PVRL	**Vila Real**	**4.51**	**3**	*e*Sn	**Sn**	**20 44 34.1**	**-2.4**
POLO	**Lamas de Olo**	**4.61**	**2**	*e*Pn	**Pn**	**20 43 47.0**	**+0.6**
POLO				*e*Sn	**Sn**	**20 44 36.8**	**-2.1**
POLO				A	A	20 45 13.0	
	comp=N,1.3nm,0.6s						
MD31	**MD31**	**4.73**	**144**	P	**Pn**	**20 43 48.7**	**+0.7**
MDT	**Midelt**	**4.84**	**143**	P	**Pn**	**20 43 50.0**	**+0.3**
MDT	**Midelt**	**4.84**	**143**	P	**Pn**	**20 43 50.0**	**+0.3**
GUD	**Guadarrama**	**4.92**	**37**	Pn	**Pn**	**20 43 51.7**	**+1.0**
GUD				Sn	**Sn**	**20 44 46.1**	**-0.6**
GUD				*i* Vmb_Lg		20 45 24.7	
PCAB	**Cabril**	**4.94**	**0**	*e*Pn	**Pn**	**20 43 51.5**	**+0.6**
JBK	**JBK**	**5.07**	**117**	P	**Pn**	**20 43 52.9**	**0.0**
PBRG	**Braganca**	**5.13**	**11**	*e*Pn	**Pn**	**20 43 55.0**	**+1.4**
PBRG				*e*Sn	**Sn**	**20 44 49.5**	**-2.3**
PBRG				A	A	20 45 34.4	
	comp=N,2.7nm,0.6s						
PGAV	**Gavieira, Arco**	**5.20**	**358**	*e*Sn	**Sn**	**20 44 51.5**	**-1.9**
ETOB	**Tobarra**	**5.48**	**68**	Pn	**Pn**	**20 43 58.4**	**+0.1**
ETOB				Sn	**Sn**	**20 44 57.5**	**-2.8**
ETOB				*i* Vmb_Lg		20 45 00.4	
ETOR	**Torete**	**6.18**	**47**	Pn	**Pn**	**20 44 08.9**	**+0.9**
ETOR				Sn	**Sn**	**20 45 12.3**	**-5.3**
TTIG	**Tnine Tigouga,**	**6.21**	**183**	P	**Pn**	**20 44 06.0**	**-2.5**
ECHE	**Chera**	**6.24**	**61**	Pn	**Pn**	**20 44 09.7**	**+0.9**
ECHE				*i* Vmb_Lg		20 46 54.7	

IDC 07 21:01:35.5±6.8, 31.°64S×178.°78W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=292.4km s-min=57.8km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.39**	**269**	P	P	21 09 31.4	-0.4
	0.4nm,0.5s,baz=109,slow=8.0,SNR=6.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**43.50**	**274**	P	P	21 09 41.0	+0.1
	0.4nm,0.3s,baz=112,slow=8.1,SNR=29						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**146.07**	**339**	PKPbc	PKPdf	21 21 15.8	0.0
	1.7nm,0.9s,baz=72,slow=4.5,SNR=5.9						

MAN 07 21:17:40.4, 18.°73N×121.°98E, h1km, mb4.2, ML3.0, MS2.6, 4C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Gonzaga**	**0.49**	**173⇑**	*i*P	Pg	21 17 50.2	+0.4
SGCP				*e*S	Sb	21 18 04.0	+4.5
PACPP	**Pamplona Cagay**	**0.65**	**246⇑**	*i*P	Pg	21 17 53.2	+0.2
PACPP				*e*S	Sb	21 18 03.5	-0.8
CICP	**Calayan Island**	**0.71**	**318⇑**	*e*P	Pg	21 17 54.1	0.0
CICP				*e*S	Sg	21 18 02.8	-0.6
CAUP	**Cauayan**	**1.78**	**185⇑**	*i*P	Pn	21 18 12.4	+0.1
CAUP				*e*S	Sg	21 18 39.4	+1.7
SAMP	**Sagada Mountai**	**1.94**	**212⇓**	*e*P	Pn	21 18 14.5

THIG		**0.07**	**157**	*e*P	**Pn**	**22 11 34.6**	**-0.4**
THIG				*i* S	**Sn**	**22 11 45.8**	**+1.4**
PATR	**El Naranjo**	**0.15**	**23**	*e*P	**Pn**	**22 11 34.6**	**-0.9**
PATR				*e*P	**Pn**	**22 11 34.9**	**-0.7**
PATR				*e*S	**Sn**	**22 11 45.7**	**+0.4**
CHUJ	**Union Juarez**	**0.21**	**57**	*e*P	**Pn**	**22 11 34.9**	**-0.9**
CHUJ				*e*S	**Sn**	**22 11 45.9**	**+0.3**
PAVE	**Pavencul**	**0.24**	**28**	*e*S	**Sn**	**22 11 46.6**	**+0.8**
STG3	**Santiaguito 3,**	**0.75**	**111**	*e*P	**Pn**	**22 11 39.1**	**-0.5**
PCIG		**1.15**	**309**	*e*P	**Pn**	**22 11 43.2**	**-0.6**
PCIG				*e*S	**Sn**	**22 12 00.7**	**+0.9**
CCIG	**Comitan**	**1.31**	**7**	*e*P	**Pn**	**22 11 46.2**	**+0.3**
CCIG				*e*S	**Sn**	**22 12 03.2**	**-0.4**
FUG	**Fuego 3**	**1.50**	**110**	*e*P	**Pn**	**22 11 48.2**	**-0.2**
MRL	**Marmol**	**2.53**	**87**	*e*P	**Pn**	**22 12 01.4**	**-0.4**

*KRNET **07** 22:34:33.1±0.1, 41°.75N×78°.91E, mb2.5*
*SOME **07** 22:34:33.4, 41°.95N×78°.90E, h10km*
*NNC **07** 22:34:34.3±1.3, 41°.98N×78°.96E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=8.8km s-min=5.9km az=140.0*

ISC 07 22:34:31.0±2.2, 41°.88N±0°.06×78°.99E±0°.07, h2km±12km, n30, σ0§87/54, 10C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.90**	**261**	⇑*e*P	**Pg**	**22 34 48.9**	**+0.6**
TARG	baz=69			⇑*e*S	**Sg**	**22 35 00.5**	**+0.5**
SATY	**Saty**	**1.25**	**340**	*e*P	**Pg**	**22 34 56.5**	**+1.5**
SATY	4.7nm,0.8s			*e*S	**Sn**	**22 35 12.9**	**-0.3**
SATY	**Saty**	**1.25**	**340**	P	**Pg**	**22 34 57.3**	**+2.2**
SATY	4.7nm,0.8s			S	**Sn**	**22 35 13.9**	**+0.6**
UZB	**Uzynbulak**	**1.26**	**1**	*e*P	**Pb**	**22 34 55.9**	**+0.2**
UZB	1.1nm,0.4s			*e*S	**Sb**	**22 35 11.6**	**-0.9**
UZB	**Uzynbulak**	**1.26**	**1**	P	**Pb**	**22 34 55.8**	**+0.2**
UZB	1.1nm,0.4s			S	**Sb**	**22 35 11.6**	**-0.9**
KPKS	**Kokpek**	**1.60**	**352**	*e*P	**Pb**	**22 35 01.8**	**+0.5**
KPKS	1.1nm,0.3s			*e*S	**Sb**	**22 35 21.6**	**-0.4**
KPKS	**Kokpek**	**1.60**	**352**	P	**Pb**	**22 35 01.8**	**+0.5**
KPKS	1.1nm,0.3s			S	**Sb**	**22 35 21.6**	**-0.4**
TNSS	**Tian-Shan**	**1.90**	**308**	*e*P	**Pg**	**22 35 08.1**	**+0.6**
TNSS	1.6nm,0.3s			*e*S	**Sg**	**22 35 32.4**	**+0.2**
TNSS	**Tian-Shan**	**1.90**	**308**	P	**Pg**	**22 35 08.1**	**+0.6**
TNSS	1.6nm,0.3s			S	**Sg**	**22 35 32.4**	**+0.2**
MDOK	**Medeo**	**1.92**	**312**	*e*P	**Pg**	**22 35 07.8**	**0.0**
MDOK	2.5nm,0.9s			*e*S	**Sg**	**22 35 32.5**	**-0.3**
MDOK	**Medeo**	**1.92**	**312**	Pn	**Pb**	**22 35 07.1**	**+0.1**
MDOK	6.8nm,1.2s			Pg	**Pg**	**22 35 07.6**	**-0.3**
MDOK	2.5nm,0.9s			Lg	Lg	22 35 32.5	
MDOK	6.7nm,0.8s			⇑Sn	**Sg**	**22 35 32.5**	**-0.3**
KOTS	**Kotyrbulak**	**1.94**	**315**	*e*P	**Pg**	**22 35 08.5**	**+0.4**
KOTS	1.6nm,0.4s			*e*S	**Sg**	**22 35 33.7**	**+0.4**
KOTS	**Kotyrbulak**	**1.94**	**315**	P	**Pg**	**22 35 08.5**	**+0.4**
KOTS	1.6nm,0.4s			S	**Sg**	**22 35 33.7**	**+0.4**
ULHL	**Ulahol**	**2.08**	**281**	⇓*e*P	**Pb**	**22 35 10.5**	**+0.9**
ULHL	baz=85			⇓*e*S	**Sg**	**22 35 37.5**	**-0.4**
BLB	**Baldybastay**	**2.24**	**350**	*e*P	**Pg**	**22 35 13.7**	**-0.3**
BLB	2.5nm,0.3s			*e*S	**Sg**	**22 35 42.0**	**-1.1**
BLB	**Baldybastay**	**2.24**	**350**	Pg	**Pg**	**22 35 13.7**	**-0.3**
BLB	2.5nm,0.3s			Lg	Lg	22 35 42.0	
MTBS	**Maitube**	**2.27**	**304**	*e*P	**Pg**	**22 35 14.0**	**-0.5**
MTBS	1.6nm,0.2s			*e*S	**Sg**	**22 35 42.8**	**-1.1**
MTBS	**Maitube**	**2.27**	**304**	Pg	**Pg**	**22 35 14.0**	**-0.5**
MTBS	1.6nm,0.2s			Lg	Lg	22 35 42.8	
NRN	**Naryn**	**2.29**	**260**	⇑*e*P	**Pb**	**22 35 12.8**	**-0.4**
NRN	baz=62			⇑*e*S	**Sb**	**22 35 42.0**	**-0.1**
BOOM	**Boomskoye usch**	**2.35**	**286**	⇑*e*P	**Pb**	**22 35 14.2**	**0.0**
BOOM	baz=89			⇑*e*S	**Sb**	**22 35 44.3**	**+0.6**
CHKK	**Chushkaly**	**2.46**	**324**	*e*P	**Pg**	**22 35 17.8**	**-0.4**
CHKK	5.6nm,0.3s			*e*S	**Sg**	**22 35 49.2**	**-0.8**
CHKK	**Chushkaly**	**2.46**	**324**	Pg	**Pg**	**22 35 17.8**	**-0.4**
CHKK	5.6nm,0.3s			Lg	Lg	22 35 49.2	
KST	**Kastek**	**2.52**	**298**	*e*P	**Pg**	**22 35 18.7**	**-0.7**
KST	1.6nm,1.2s			*e*S	**Sg**	**22 35 51.1**	**-1.0**
KST	**Kastek**	**2.52**	**298**	Pg	**Pg**	**22 35 18.7**	**-0.7**
KST	1.6nm,1.2s			Lg	Lg	22 35 51.1	
TKM2	**Tokmak 2**	**2.72**	**294**	⇑*e*P	**Pb**	**22 35 19.8**	**-0.8**
TKM2	baz=96			⇑*e*S	**Sb**	**22 35 53.7**	**-0.8**
TKM2	**Tokmak 2**	**2.72**	**294**	⇓Pg	**Pg**	**22 35 22.5**	**-0.7**
TKM2	2.8nm,1.1s			⇑Lg	Lg	22 35 58.1	
KUU	**Kurty**	**2.80**	**317**	*e*P	**Pb**	**22 35 23.1**	**+1.3**
KUU	3.4nm,0.8s			*e*S	**Sg**	**22 35 58.1**	**-2.9**
KUU	**Kurty**	**2.80**	**317**	Pg	**Pb**	**22 35 23.1**	**+1.3**
KUU	1.1nm,1.1s			Lg	Lg	22 35 58.1	
KRBS	**Karabastau**	**3.04**	**308**	*e*P	**Pb**	**22 35 27.0**	**+1.1**
KRBS	1.1nm,0.8s			*e*S	**Sb**	**22 36 05.2**	**+1.7**
KRBS	**Karabastau**	**3.04**	**308**	Pg	**Pb**	**22 35 27.0**	**+1.1**
KRBS	1.1nm,0.8s			Lg	Lg	22 36 05.2	

*PRU **07** 22:39:22.8±0.0, 51°.43N×16°.17E, h0km*
*VIE **07** 22:39:24.1±1.0, 51°.35N×16°.34E, h0km, mb2.0/1, ml2.6/2, Error ellipse: s-maj=10.6km s-min=5.6km az=66.0 55 km WNW of Wroclaw Suspected Mining induced.*

ISC 07 22:39:22.4±1.2, 51°.40N±0°.05×16°.20E±0°.03, h0km, n21, σ0§63/44, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.56**	**174**	*e*Pg	**Pb**	**22 39 34.4**	**-0.6**
KSP				*e*Sg	**Sb**	**22 39 42.6**	**-0.9**
CHVC	**Chvalec**	**0.82**	**186**	*e*PG	**Pb**	**22 39 39.3**	**-0.1**
CHVC				*e*SG	**Sb**	**22 39 50.4**	**-0.6**
OSTC	**Ostas**	**0.84**	**179**	*e*PG	**Pb**	**22 39 40.1**	**+0.2**
OSTC				*e*SG	**Sb**	**22 39 51.4**	**-0.3**
UPC	comp=Z,16nm,0.4s **Upice**	**0.90**	**188**	*e*PG	**Pb**	**22 39 41.2**	**+0.4**
UPC				*e*SG	**Sb**	**22 39 53.1**	**-0.3**
DPC	comp=Z,36nm,0.3s **Dobruska-Polom**	**1.05**	**176**	*e*PG	**Pb**	**22 39 43.4**	**-0.1**
DPC				*e*SG	**Sb**	**22 39 57.6**	**-0.2**
PVCC	comp=Z,14nm,0.5s **Panska Ves**	**1.35**	**230**	*e*PG	**Pb**	**22 39 49.0**	**+0.5**
PVCC				*e*SG	**Sn**	**22 40 07.1**	**+0.1**
KRLC	comp=Z,74nm,0.7s **Kraliky**	**1.38**	**164**	*e*PG	**Pb**	**22 39 49.3**	**+0.3**
KRLC				*e*SG	**Sg**	**22 40 06.7**	**+0.2**
BRG	comp=Z,9.2nm,0.4s **Berggiesshubel**	**1.52**	**251**	Pg	**Pg**	**22 39 51.7**	**+0.4**
BRG				Sg	**Sb**	**22 40 11.4**	**+0.4**
BRG				Amp		22 40 12.5	
GOPC	comp=Z,16nm,0.4s **GO Pecny, Ondr**	**1.74**	**212**	*e*PG	**Pn**	**22 39 54.5**	**+0.7**
GOPC				*e*SG	**Sg**	**22 40 18.6**	**+0.5**
PRU	**Pruhonice**	**1.76**	**217**	*e*PG	**Pb**	**22 39 55.7**	**+0.2**
PRU				*e*SG	**Sg**	**22 40 18.8**	**-0.1**
MORC	comp=Z,14nm,0.3s **Moravsky Berou**	**1.84**	**152**	*e*PN	**Pn**	**22 39 54.9**	**-0.3**
MORC				*e*SG	**Sg**	**22 40 21.7**	**+0.4**
OKC	**Ostrava-Krasne**	**2.00**	**141**	*e*SG	**Sg**	**22 40 26.3**	**-0.1**
CLL	**Collm**	**2.00**	**269**	*e*Pn	**Pn**	**22 39 57.0**	**-0.5**
CLL				*i* Pg	**Pb**	**22 40 00.4**	**+0.7**
CLL				*e*Sg	**Sg**	**22 40 27.0**	**+0.3**
VRAC	comp=Z,7.0nm,0.5s **Vranov**	**2.11**	**173**	*e*PN	**Pn**	**22 39 59.7**	**+0.8**
VRAC				*e*SG	**Sg**	**22 40 30.2**	**+0.2**
KRUC	**Moravsky**	**2.34**	**177**	*e*PN	**Pn**	**22 40 02.7**	**+0.6**
KRUC				*e*SG	**Sg**	**22 40 38.7**	**+1.1**
OJC	**Ojcow**	**2.57**	**116**	*e*Pg	**Pb**	**22 40 09.6**	**+0.2**
OJC				*e*Sg	**Sg**	**22 40 44.6**	**-0.3**
NKC	**Novy Kostel**	**2.65**	**245**	*e*PN	**Pn**	**22 40 05.9**	**-0.4**
NKC				*e*PG	**Pg**	**22 40 12.3**	**-0.8**
NKC				*e*SG	**Sg**	**22 40 46.0**	**-1.4**
KHC	comp=Z,9.1nm,0.5s **Kasperske Hory**	**2.82**	**218**	*e*PN	**Pn**	**22 40 08.9**	**+0.1**
KHC				*e*PG	**Pb**	**22 40 14.4**	**+0.7**
KHC				*e*SG	**Sg**	**22 40 52.4**	**-0.6**
CKRC	comp=Z,3.7nm,0.3s **Cesky Krumlov**	**2.85**	**206**	*e*PN	**Pn**	**22 40 10.1**	**+1.0**
CKRC				*e*PG	**Pg**	**22 40 16.1**	**-0.9**
CKRC				*e*SG	**Sg**	**22 40 53.1**	**-0.9**
CONA	comp=Z,7.0nm,0.7s **Conrad Observa**	**3.48**	**184**	*i* Pn	**Pn**	**22 40 19.2**	**+1.4**
CONA	comp=Z,0.4nm,0.2s			Sg	**Sg**	**22 41 14.0**	**-0.1**
MOA	comp=Z,3.0nm,0.3s **Molln**	**3.77**	**200**	*e*Pn	**Pn**	**22 40 22.6**	**+0.9**
	comp=Z,0.8nm,0.2s						

*NEIC **07** 22:46:35.9±1.8, 1°.8N±0°.1×127°.7E±0°.1, h134km±8km, mb4.1/9, Error ellipse: s-maj=19.4km s-min=15.8km az=106.0*
*IDC **07** 22:46:46.6±8.4, 1°.64N×127°.62E, h250km±86km, mb3.2/4, mbtmp3.8/5, Error ellipse: s-maj=79.3km s-min=20.2km az=67.0*

ISC 07 22:46:36.7±0.8, 1°.77N±0°.08×127°.6E±0°.1, h150km, n19, σ1§48/21, mb4.1/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02**	**193**		**Pn**	**22 46 58.9**	**-2.8**
TNTI				Sn	**Sn**	**22 47 19.0**	**-1.7**
LUWI	**Luwuk**	**5.58**	**240**	Pn	**Pn**	**22 47 56.6**	**-1.3**
LUWI				Sn	**Sn**	**22 49 02.8**	**+1.5**
TOLI2	**Tolitoli**	**6.85**	**265**	Pn	**Pn**	**22 48 11.9**	**-3.0**
KAPI	**Kappang**	**10.34**	**229**	Pn	**Pn**	**22 49 01.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.84**	**186**	P	**P**	**22 50 57.4**	**+1.3**
	1.8nm,0.9s,baz=350,slow=6.1,SNR=2.5						
WB0	**Warramunga Arr**	**22.42**	**163**	P	**P**	**22 51 23.3**	**+0.1**
WB0				IAmb	IAmb	22 51 29.6	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**22.57**	**163**	P	**P**	**22 51 24.5**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=341,slow=11,SNR=21						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**22.57**	**163**	P	**P**	**22 51 23.8**	**-0.8**
WB2	**Warramunga Arr**	**22.57**	**163**	P	**P**	**22 51 24.9**	**+0.3**
WB2				IAmb	IAmb	22 52 06.4	
	comp=Z,12nm,1.4s						
ASAR	**Alice Springs**	**26.02**	**167**	P	**P**	**22 51 56.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=349,slow=7.7,SNR=7.9						
	comp=Z,0.6nm,0.4s						
BBOO	**Buckleboo**	**35.31**	**168**	P	**P**	**22 53 17.9**	**+0.4**
SONM	**Songino Array**	**49.42**	**341**	P	**P**	**22 55 11.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=154,slow=7.3,SNR=2.6						
	comp=Z,0.4nm,0.5s						
MK31	**Makanchi Array**	**59.65**	**326**	P	**P**	**22 56 26.0**	**+0.8**
MK31				IAmb	IAmb	22 56 49.4	
	comp=Z,3.6nm,1.4s						
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**22 56 25.9**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=115,slow=8.2,SNR=31						
	comp=Z,1.2nm,0.4s						
KURK	**Kurchatov**	**63.85**	**328**	P	**P**	**22 56 55.4**	**+2.2**
KURK				IAmb	IAmb	22 56 57.6	
	comp=Z,3.4nm,1.4s						
ABKAR	**Akbulak array**	**74.21**	**321**	P	**P**	**22 57 57.3**	**+0.2**
VOI	**Vohitsoka**	**82.13**	**248**	P	**P**	**22 58 42.0**	**+0.6**
SKT	**Skwentna**	**84.15**	**28**	P	**P**	**22 58 51.4**	**+0.6**
SKT				IAmb	IAmb	22 58 56.6	
	comp=Z,3.8nm,1.2s						
TORD	**Torodi Ar. Bea**	**124.34**	**287**	PKP	**PKPdf**	**23 05 16.5**	**-2.5**
	comp=Z,0.2nm,0.4s,baz=56,slow=2.7,SNR=1.7						

*KRNET **07** 22:53:54.5±0.1, 41°.98N×78°.94E, mb2.5*
*SOME **07** 22:53:57.1, 41°.98N×78°.82E, h10km*
*NNC **07** 22:53:58.9±1.0, 42°.06N×78°.89E, h0km, mb2.4, mpv2.4, Error ellipse: s-maj=7.6km s-min=3.5km az=158.0*

ISC 07 22:53:56.5±1.6, 41°.97N±0°.05×78°.87E±0.04, h6km±13km, n29, σ1§00/53, 10C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.83**	**253**	⇑*e*P	**Pg**	**22 54 11.3**	**-1.2**
TARG	baz=54			⇑*e*S	**Sg**	**22 54 23.6**	**+0.3**
UZB	**Uzynbulak**	**1.18**	**5**	*e*P	**Pb**	**22 54 18.7**	**-0.6**
UZB	0.8nm,0.8s			*e*S	**Sb**	**22 54 33.8**	**-1.1**
UZB	**Uzynbulak**	**1.18**	**5**	P	**Pb**	**22 54 18.7**	**-0.6**
UZB	0.8nm,0.8s			S	**Sb**	**22 54 33.8**	**-1.1**
PDGK	**Podgornoye**	**1.43**	**19**	⇑P	**Pn**	**22 54 23.6**	**+0.5**
PDGK	0.3nm,0.4s			⇓S	**Sg**	**22 54 43.0**	**+0.6**
KPKS	**Kokpek**	**1.50**	**355**	*e*P	**Pn**	**22 54 24.4**	**+0.3**
KPKS	0.8nm,0.6s			*e*S	**Sb**	**22 54 43.7**	**-0.4**
KPKS	**Kokpek**	**1.50**	**355**	P	**Pn**	**22 54 24.4**	**+0.3**
KPKS	0.8nm,0.6s			S	**Sb**	**22 54 43.7**	**-0.4**
TNSS	**Tian-Shan**	**1.77**	**307**	*e*P	**Pg**	**22 54 30.9**	**+0.4**
TNSS	1.5nm,1.0s			*e*S	**Sg**	**22 54 54.7**	**+1.2**
TNSS	**Tian-Shan**	**1.77**	**307**	P	**Pg**	**22 54 30.9**	**+0.4**
TNSS	1.5nm,1.0s			S	**Sg**	**22 54 54.7**	**+1.2**
MDOK	**Medeo**	**1.79**	**312**	*e*P	**Pg**	**22 54 31.0**	**+0.2**
MDOK	2.4nm,0.9s			*e*S	**Sg**	**22 54 54.9**	**+0.8**
MDOK	**Medeo**	**1.79**	**312**	Pn	**Pg**	**22 54 30.4**	**-0.5**
MDOK	5.0nm,1.0s			Pg	**Pg**	**22 54 31.0**	**+0.2**
MDOK	2.4nm,0.9s			⇑Sn	**Sg**	**22 54 54.1**	**0.0**
MDOK	3.2nm,0.5s			Lg	Lg	22 54 54.9	
	3.2nm,0.5s						
KOTS	**Kotyrbulak**	**1.81**	**315**	*e*P	**Pg**	**22 54 31.6**	**+0.5**
KOTS	1.5nm,0.5s			*e*S	**Sg**	**22 54 56.4**	**+1.9**
KOTS	**Kotyrbulak**	**1.81**	**315**	P	**Pg**	**22 54 31.6**	**+0.5**
KOTS	1.5nm,0.5s			S	**Sg**	**22 54 56.4**	**+1.9**
KTMS	**Ketmen**	**1.83**	**36**	*e*P	**Pb**	**22 54 31.4**	**+0.8**
KTMS	0.5nm,0.2s			*e*S	**Sg**	**22 54 55.5**	**+0.2**
KTMS	**Ketmen**	**1.83**	**36**	P	**Pb**	**22 54 31.4**	**+0.8**
KTMS	0.5nm,0.2s			S	**Sg**	**22 54 55.6**	**+0.2**
ULHL	**Ulahol**	**1.97**	**279**	⇑*e*P	**Pn**	**22 54 31.3**	**+0.6**
ULHL	baz=78			⇑*e*S	**Sg**	**22 54 58.3**	**-1.6**
MTBS	**Maitube**	**2.14**	**303**	*e*P	**Pg**	**22 54 37.8**	**+0.3**
MTBS	1.1nm,0.1s			*e*S	**Sg**	**22 55 06.7**	**+1.4**
MTBS	**Maitube**	**2.14**	**303**	Pg	**Pg**	**22 54 37.8**	**+0.3**
MTBS	1.1nm,0.1s			Lg	Lg	22 55 06.7	
BLB	**Baldybastay**	**2.14**	**352**	*e*P	**Pb**	**22 54 36.2**	**+0.5**
BLB	3.9nm,0.4s			*e*S	**Sg**	**22 55 04.2**	**-1.0**
BLB	**Baldybastay**	**2.14**	**352**	Pg	**Pb**	**22 54 36.3**	**+0.5**
BLB	3.9nm,0.4s			Lg	Lg	22 55 04.2	
NRN	**Naryn**	**2.21**	**257**	⇓*e*P	**Pn**	**22 54 35.1**	**+1.0**
NRN	baz=57			⇓*e*S	**Sb**	**22 55 04.7**	**-0.2**
BOOM	**Boomskoye usch**	**2.23**	**284**	⇑*e*P	**Pn**	**22 54 35.0**	**+0.8**
BOOM	baz=84			⇑*e*S	**Sb**	**22 55 04.4**	**-1.0**
CHKK	**Chushkaly**	**2.33**	**324**	*e*P	**Pg**	**22 54 40.1**	**-1.1**
CHKK	4.4nm,0.3s			*e*S	**Sg**	**22 55 10.8**	**-0.5**
CHKK	**Chushkaly**	**2.33**	**324**	Pg	**Pg**	**22 54 40.1**	**-1.1**
CHKK	4.4nm,0.3s			Lg	Lg	22 55 10.8	
KST	**Kastek**	**2.40**	**297**	*e*P	**Pg**	**22 54 41.7**	**-0.7**
KST	1.8nm,0.6s			*e*S	**Sg**	**22 55 13.6**	**0.0**
KST	**Kastek**	**2.40**	**297**	Pg	**Pg**	**22 54 41.7**	**-0.7**
KST	1.8nm,0.6s			Lg	Lg	22 55 13.6	
TKM2	**Tokmak 2**	**2.60**	**292**	⇑*e*P	**Pn**	**22 54 40.1**	**+0.8**
TKM2	baz=92			⇑*e*S	**Sb**	**22 55 13.2**	**-2.7**
TKM2	**Tokmak 2**	**2.60**	**292**	⇓Pg	**Pg**	**22 54 45.4**	**-0.9**
TKM2	0.7nm,0.4s			⇓Lg	Lg	22 55 19.1	
KRBS	**Karabastau**	**2.91**	**307**	*e*P	**Pb**	**22 54 49.9**	**+1.0**
KRBS	0.7nm,0.4s			*e*S	**Sg**	**22 55 27.4**	**-2.5**
KRBS	**Karabastau**	**2.91**	**307**	Pg	**Pb**	**22 54 49.9**	**+1.0**
KRBS	0.7nm,0.4s			Lg	Lg	22 55 27.5	

*IDC **07** 23:08:38.6±1.3, 13°.44N×121°.01E, h0km, mb3.3/4, mbtmp3.3/4, MS3.1/2, Error ellipse: s-maj=44.8km s-min=10.3km az=83.0*
*MAN **07** 23:08:40.1, 13°.54N×120°.71E, h22km, mb4.7, ML3.6, MS3.5*

ISC 07 23:08:40.8±1.2, 13°.56N±0°.03×120°.81E±0°.03, h13km±9km, n20, σ1§63/26, mb3.2/4, 11C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.55**	**13**	Pg	**Pb**	**23 08 51.8**	**-0.6**
TGY	baz=270,slow=6.0			Lg	Lg	23 09 00.7	
TGY	**Tagaytay City**	**0.55**	**13**	⇑*i*P	**Pb**	**23 08 52.1**	**-0.4**
TGY	baz=270,slow=20			*i* S	**Sb**	**23 09 00.8**	**+0.5**
LUBP	**Lubang**	**0.58**	**287**	⇑*e*P	**Pg**	**23 08 51.1**	**-1.0**
LUBP				*e*S	**Sb**	**23 09 00.6**	**-0.4**
MACP	**Maragondon, Ca**	**0.70**	**353**	⇓*e*P	**Pg**	**23 08 53.9**	**-0.6**
MACP				*e*S	Sn	23 09 30.5	+23
LQP	**Lukban**	**0.89**	**52**	⇑*e*P	**Pg**	**23 08 57.0**	**-1.1**
LQP				*i* S	**Sg**	**23 09 09.5**	**-0.3**
BOAC	**Boac**	**1.01**	**96**	⇑*i*P	**Pb**	**23 08 59.4**	**-0.7**
BOAC				*e*S	Sn	23 09 31.5	+17
SJMP	**San Jose**	**1.13**	**165**	⇑*i*P	**Pn**	**23 09 02.6**	**+0.2**
SJMP				*e*S	Sn	23 09 52.3	+34
GQP	**Guinayangan**	**1.62**	**78**	⇑*e*P	**Pn**	**23 09 09.2**	**0.0**
GQP				*e*S	**Sb**	**23 09 31.9**	**+0.8**
BUSP	**Coron**	**1.66**	**201**	⇑*i*P	**Pg**	**23 09 10.0**	**-2.7**
BUSP				*e*S	**Sg**	**23 09 39.6**	**+5.3**
OTRP	**Odiongan**	**1.68**	**135**	⇑*i*P	**Pn**	**23 09 09.4**	**-0.4**
OTRP				*e*S	Sn	23 09 19.2	-12
AUQP	**San Andres**	**1.83**	**97**	⇓*e*P	**Pg**	**23 09 15.9**	**+0.1**
AUQP				*e*S	Sg	23 09 51.5	+12
JCNP	**Jose Panganiba**	**1.97**	**68**	⇓*e*P	**Pn**	**23 09 13.6**	**-0.3**
JCNP				*e*S	**Sn**	**23 09 39.9**	**+1.4**
PCPH	**Palayan**	**2.01**	**8**	⇑*e*P	**Pn**	**23 09 13.9**	**-0.5**
PCPH				*e*S	**Sb**	**23 09 43.8**	**+1.6**
BALP	**Baler**	**2.29**	**19**	⇑*i*P	**Pn**	**23 09 18.7**	**+0.4**
BALP				*e*S	Sg	23 10 12.5	+18
SMPP	**San Manuel, Pa**	**2.58**	**357**	⇑*i*P	**Pn**	**23 09 22.4**	**0.0**
DAV	**Davao City (W)**	**7.97**	**144**	LR	LR	23 14 18.0	
	comp=Z,73nm,19.9s,baz=343,slow=44						
CMAR	**Chiang Mai Arr**	**21.57**	**286**	P	**P**	**23 13 32.9**	**+2.4**
	0.6nm,0.3s,baz=78,slow=8.5,SNR=4.3						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**35.85**	**158**	P	**P**	**23 15 38.0**	**-2.6**
	0.3nm,0.8s,baz=335,slow=9.8,SNR=1.7						
	0.3nm,0.8s						
SONM	**Songino Array**	**36.22**	**344**	P	**P**	**23 15 43.1**	**-0.5**
	0.3nm,0.7s,baz=154,slow=8.0,SNR=2.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**39.15**	**161**	P	**P**	**23 16 07.9**	**-0.6**
	0.2nm,0.4s,baz=338,slow=6.8,SNR=1.9						
ASAR				LR	LR	23 32 51.1	
	comp=Z,43nm,20.9s,baz=142,slow=37						
	0.2nm,0.4s						

*NEIC **07** 23:14:29.0±2.8, 11°.20S±0°.04×165°.9E±0°.2, h35km±2km, mb4.5/6, Error ellipse: s-maj=30.1km s-min=5.1km az=279.0*
*IDC **07** 23:14:30.8±6.0, 11°.46S×166°.24E, h59km±54km, mb3.6/8, mbtmp3.8/9, ML3.4/1, MS3.4/7, Error ellipse: s-maj=35.4km s-min=29.4km az=152.0*

ISC 07 23:14:28.6±0.7, 11°.3S±0°.1×166°.2E±0°.1, h37km, n29, σ1§40/22, mb4.0/12, MS3.2/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.43**	**286**	LR	LR	23 18 44.7	
	comp=Z,3μm,21.4s,baz=155,slow=39						
KOUNC	**Koumac, New Ca**	**9.41**	**191**	Pn	**Pn**	**23 16 42.1**	**+0.5**
DZM	**Mont Dzumac**	**10.74**	**179**	P	**Pn**	**23 17 00.0**	**+0.1**
	0.3nm,0.3s,baz=357,slow=19,SNR=1.9						
DZM				S	Sn	23 18 48.9	-10
	8.7nm,1.0s,baz=86,slow=19,SNR=2.6						
	4.0nm,0.8s						
DZM	**Mont Dzumac**	**10.74**	**179**	Pn	**Pn**	**23 17 01.8**	**+1.8**
OUENC	**Ouen Island, N**	**11.10**	**177**	Pn	**Pn**	**23 17 07.9**	**+3.1**
MSVF	**Nonsavu**	**13.14**	**121**	Pn	**P**	**23 17 41.8**	**-0.5**
PMG	**Port Moresby**	**18.83**	**274**	LR	LR	23 24 48.1	
	comp=Z,88nm,21.1s,baz=106,slow=33						
CTA	**Charters Tower**	**21.10**	**243**	LR	LR	23 25 18.6	
	comp=Z,64nm,21.8s,baz=78,slow=31						
H11S2	**WAKE ISLAND Hy**	**29.58**	**1**	T	T	23 51 34.7	
	baz=183						

H11S3	WAKE ISLAND Hy	29.58	1	T	T		23 51 25.0	
	baz=183							
H11S1	WAKE ISLAND Hy	29.58	1	T	T		23 51 40.3	
	baz=183							
STKA	Stephens Creek	30.59	224	LR	LR		23 32 26.3	
	comp=Z,54nm,18.0s,baz=24,slow=35							
THZ	Tophouse	30.94	170	P	P		23 20 43.4	+1.3
THZ				IAmb	IAmb		23 20 47.8	
	comp=Z,17nm,1.0s							
MSWZ	Moikau Station	31.06	167	P	P		23 20 40.6	-2.5
WB0	Warramunga Arr	31.75	251	P	P		23 20 48.4	-1.0
WRA	Warramunga Arr	31.84	250	P	P		23 20 49.4	-0.8
	comp=Z,0.7nm,0.8s,baz=83,slow=9.0,SNR=5.3							
WRA				PcP	PcP		23 23 40.2	-0.6
	comp=Z,0.5nm,0.7s,baz=73,slow=3.5,SNR=2.4							
WRA				LR	LR		23 31 00.0	
	comp=Z,51nm,20.8s,baz=97,slow=31							
	comp=Z,0.7nm,0.8s							
ASAR	Alice Springs	33.10	244	P	P		23 21 00.3	-1.0
	comp=Z,1.0nm,0.8s,baz=76,slow=9.4,SNR=7.6							
ASAR				PcP	PcP		23 23 42.8	-1.4
	comp=Z,0.6nm,0.6s,baz=79,slow=2.0,SNR=3.5							
	comp=Z,1.0nm,0.8s							
RAR	Rarotonga	34.05	111	LR	LR		23 33 18.6	
	comp=Z,28nm,18.1s,baz=264,slow=33							
VNDA	Vanda	66.28	181	P	P		23 25 11.4	-1.2
	comp=Z,0.6nm,1.0s,baz=2.9,slow=5.1,SNR=2.3							
	comp=Z,0.6nm,1.0s							
CMAR	Chiang Mai Arr	72.62	293	P	P		23 25 54.6	+1.8
	comp=Z,0.8nm,0.3s,baz=114,slow=4.0,SNR=4.6							
	comp=Z,0.8nm,0.3s							
QSPA	South Pole Qui	78.73	180	P	P		23 26 27.3	+0.2
QSPA				IAmb	IAmb		23 26 31.9	
	comp=Z,4.3nm,1.1s							
SONM	Songino Array	79.12	324	P	P		23 26 30.3	+0.8
	comp=Z,0.5nm,0.6s,baz=145,slow=4.1,SNR=4.1							
	comp=Z,0.5nm,0.6s							
RIDG	Independent Ri	83.53	20	P	P		23 26 50.6	-1.9
ILAR	Eielson Array	83.58	18	P	P		23 26 51.6	-1.0
	comp=Z,0.4nm,0.5s,baz=214,slow=6.2,SNR=4.3							
	comp=Z,0.4nm,0.5s							
J25K	Salcha River,	83.95	19	P	P		23 26 54.6	0.0
J25K				IAmb	IAmb		23 26 57.3	
	comp=Z,2.7nm,0.8s							
SCRK	Sand Creek	83.97	20	P	P		23 26 54.9	+0.1
SCRK				IAmb	IAmb		23 26 58.1	
	comp=Z,3.5nm,0.9s							
NVAR	Mina Array Bea	85.82	50	P	P		23 27 05.7	+1.0
	comp=Z,0.2nm,0.5s,baz=258,slow=4.5,SNR=2.3							
	comp=Z,0.2nm,0.5s							
PFO	Pinyon Flats O	85.84	55	LR	LR		23 58 24.3	
	comp=Z,19nm,18.4s,baz=252,slow=31							
MKAR	Makanchi Array	94.00	317	P	P		23 27 42.9	+0.1
	comp=Z,1.1nm,0.5s,baz=87,slow=6.6,SNR=12							
	comp=Z,1.1nm,0.5s							

MOS ***07*** *23:23:02.6±0.0, 42°.08N×46°.10E, h22km, MPVA3.7*
TIF ***07*** *23:23:02.4, 42°.12N×46°.05E, h20km±1km*
DRS ***07*** *23:23:04.6±0.0, 42°.04N×45°.99E, h18km*
ISC 07 23:23:02.0±1.1, 42°.06N±0°.02×46°.03E±0°.01, h4km±10km, n99, σ0990/175, 1C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.27	144	P	Pb	23 23 09.9	+0.4
LGD				S	Sb	23 23 14.9	+0.4
LGD	Lagodekhi	0.27	144	⇑PG	Pb	23 23 09.9	+0.4
LGD				S	Sb	23 23 14.9	+0.4
DDFL	Dedoflistskaro	0.61	174	P	Pn	23 23 18.8	+1.2
DDFL				S	Sn	23 23 32.6	+4.7
DDFL	Dedoflistskaro	0.61	174	PG	Pn	23 23 18.8	+1.2
XNZR	Khunzakh	0.70	46	ePg	Pb	23 23 17.1	+0.2
XNZR				eSg	Sb	23 23 26.8	-0.2
GNBR	Gunib	0.77	64	ePG	Pb	23 23 18.1	+0.1
GNBR				eS	Sb	23 23 28.7	-0.2
GNBR	Gunib	0.77	64	ePg	Pb	23 23 18.1	+0.1
GNBR				eSg	Sb	23 23 28.7	-0.2
DGRG	David-gareji	0.78	219	P	Pb	23 23 18.2	+0.1
DGRG				S	Sn	23 23 31.0	-1.0
DGRG	David-gareji	0.78	219	PG	Pb	23 23 18.2	+0.1
DGRG				S	Sn	23 23 31.0	-1.0
KMKR	Kumukh	0.80	84	ePG	Pb	23 23 18.6	0.0
KMKR				eS	Sb	23 23 30.0	+0.1
KMKR				pmax	pmax		
	comp=Z,117nm,0.2s						
KMKR				smax	smax		
	comp=N,492nm,0.2s						
KMKR	Kumukh	0.80	84	ePg	Pb	23 23 18.6	0.0
KMKR				eSg	Sb	23 23 29.7	-0.2
UNCR	Uncukul	0.87	40	ePG	Pb	23 23 19.5	-0.2
UNCR				eS	Sb	23 23 31.8	+0.1
UNCR				pmax	pmax		
	comp=Z,81nm,0.3s						
UNCR				smax	smax		
	comp=N,562nm,0.6s						
UNCR	Uncukul	0.87	40	ePg	Pb	23 23 19.5	-0.2
UNCR				eSg	Sb	23 23 31.3	-0.5
SHTL	Shatili	0.89	313	P	Pg	23 23 19.1	+0.2
SHTL				S	Sg	23 23 30.7	+0.3
ARKR	Arakani	0.90	52	ePG	Pg	23 23 20.0	+0.7
ARKR				eS	Sb	23 23 32.8	+0.1
ARKR				pmax	pmax		
	comp=Z,33nm,0.3s						
ARKR				smax	smax		
	comp=N,130nm,0.3s						
ARKR	Arakani	0.90	52	ePg	Pb	23 23 20.2	-0.1
ARKR				eSg	Sb	23 23 32.3	-0.3
DVE	Vedeno	0.91	5	dPG	Pb	23 23 20.2	-0.1
DVE	Vedeno	0.91	5	ePg	Pb	23 23 20.2	-0.1
DVE				eSg	Sb	23 23 33.6	+0.8
SEAG	Tbilisi Sea	0.96	253	P	Pb	23 23 21.7	+0.5
SEAG				S	Sn	23 23 35.8	-0.7
SEAG	Tbilisi Sea	0.96	253	PG	Pb	23 23 21.7	+0.5
SEAG				S	Sn	23 23 35.8	-0.7
BTNK	Botanikuri	0.99	248	P	Pg	23 23 14.6	-6.4
BTNK				S	Sg	23 23 29.1	-4.7
BTNK	Botanikuri	0.99	248	PG	Pg	23 23 14.6	-6.4
KRNR	Karanay	1.01	40	ePG	Pg	23 23 21.8	+0.5
KRNR				eS	Sb	23 23 35.9	+0.1
KRNR				pmax	pmax		
	comp=Z,27nm,0.4s						
KRNR				smax	smax		
	comp=N,146nm,0.3s						
KRNR	Karanay	1.01	40	ePg	Pg	23 23 21.8	+0.5
KRNR				eSg	Sb	23 23 35.4	-0.4
DLMR	Dylym	1.11	23	ePG	Pb	23 23 23.8	0.0
DLMR				eS	Sn	23 23 39.6	-0.5
DLMR				pmax	pmax		
	comp=Z,147nm,0.3s						
DLMR				pmax	pmax		
	comp=E,106nm,0.3s						
DLMR				smax	smax		
	comp=N,212nm,0.5s						
DLMR	Dylym	1.11	23	ePg	Pb	23 23 23.8	0.0
DLMR				eSg	Sn	23 23 39.0	-1.1
BUJR	Buynaksk	1.11	46	ePG	Pg	23 23 23.7	+0.4
BUJR				eS	Sn	23 23 39.1	-1.1
BUJR				pmax	pmax		
	comp=Z,45nm,0.6s						
BUJR				smax	smax		
	comp=E,210nm,0.8s						
BUJR	Buynaksk	1.11	46	ePg	Pg	23 23 23.7	+0.4
BUJR				eSg	Sb	23 23 38.6	0.0
DBC	Dubki	1.13	31	ePG	Pg	23 23 23.9	+0.2
DBC				eS	Sg	23 23 38.9	+0.5
DBC	Dubki	1.13	31	ePg	Pg	23 23 23.9	+0.2
DBC				eSg	Sg	23 23 38.9	+0.5
GROC	Groznyy	1.16	352	ePG	Pn	23 23 25.7	+0.7
GROC				eS	Sn	23 23 41.2	-0.2
GROC	Groznyy	1.16	352	ePg	Pn	23 23 25.7	+0.7
GROC				eSg	Sn	23 23 41.1	-0.2
PNSH	Pansheti	1.20	299	P	Pg	23 23 25.3	+0.4
PNSH	Pansheti	1.20	299	PG	Pg	23 23 25.3	+0.4
URKR	Urkarakh	1.20	84	ePG	Pg	23 23 25.0	0.0
URKR				eS	Sn	23 23 41.7	-0.8
URKR				pmax	pmax		
	comp=Z,21nm,0.2s						
URKR				smax	smax		
	comp=N,27nm,0.5s						
URKR	Urkarakh	1.20	84	ePg	Pg	23 23 25.0	0.0
URKR				eSg	Sb	23 23 41.2	-0.1
SGKR	Sergokala	1.28	71	ePG	Pn	23 23 26.4	-0.3
SGKR				eS	Sn	23 23 43.7	-0.6
SGKR	Sergokala	1.28	71	ePg	Pn	23 23 26.4	-0.3
SGKR				eSg	Sn	23 23 43.7	-0.6
KMGR	Komgaron	1.32	320	ePG	Pg	23 23 28.7	+1.4
KMGR				eS	Sn	23 23 46.2	+0.8
KMGR	Komgaron	1.32	320	ePg	Pg	23 23 28.7	+1.4
KMGR				eSg	Sn	23 23 46.2	+0.8
KZRT	Kazreti	1.39	242	P	Pn	23 23 27.6	-0.7
KZRT				S	Sb	23 23 46.6	-0.1
KZRT	Kazreti	1.39	242	PG	Pn	23 23 27.6	-0.7
KZRT				S	Sb	23 23 46.6	-0.1
AKT	Akhty	1.40	114	ePG	Pn	23 23 28.0	-0.4
AKT				eS	Sb	23 23 46.9	-0.1
AKT				pmax	pmax		
	comp=Z,29nm,0.2s						
AKT				smax	smax		
	comp=N,41nm,0.4s						
AKT	Akhty	1.40	114	ePg	Pn	23 23 27.9	-0.5
AKT				eSg	Sb	23 23 46.6	-0.4
MAK	Makhachkala	1.42	50	⇓iPG	Pn	23 23 28.1	-0.5
MAK				e		23 23 48.5	
MAK				pmax	pmax		
	comp=Z,184nm,0.3s						
MAK				smax	smax		
	comp=N,254nm,0.6s						
MAK				smax	smax		
	comp=N,319nm,0.5s						
MAK	Makhachkala	1.42	50	ePg	Pn	23 23 28.1	-0.5
MAK				eSg	Sg	23 23 48.1	+0.5
LACR	Lac	1.50	302	ePG	Pb	23 23 30.5	+0.1
LACR				eS	Sg	23 23 50.3	+0.2
LACR	Lac	1.50	302	ePg	Pb	23 23 30.5	+0.1
LACR				eSg	Sg	23 23 50.3	+0.2
DMNI	Dmanisi	1.56	243	P	Pn	23 23 30.1	-0.5
DMNI				S	Sn	23 23 51.2	-0.1
DMNI	Dmanisi	1.56	243	PG	Pn	23 23 30.1	-0.5
DMNI				S	Sn	23 23 51.2	-0.1
KSMR	Kasumkent	1.63	105	ePN	Pn	23 23 32.0	+0.4
KSMR				eS	Sn	23 23 53.1	0.0
KSMR				smax	smax		
	comp=E,2.0nm,0.8s						
KSMR	Kasumkent	1.63	105	ePg	Pn	23 23 32.0	+0.4
KSMR				eSg	Sn	23 23 53.1	0.0
BRNG	Burnasheti	1.70	256	P	Pn	23 23 32.9	+0.3
BRNG				S	Sb	23 23 55.6	-0.1
ARNR	Ardon	1.71	312	ePN	Pb	23 23 34.0	0.0
ARNR	Ardon	1.71	312	ePg	Pb	23 23 34.0	0.0
ARNR				eSg	Sn	23 23 55.2	+0.3
BTKR	Batakoyurt	1.71	321	ePN	Pg	23 23 34.9	+0.1
BTKR	Batakoyurt	1.71	321	ePg	Pg	23 23 34.9	+0.1
DRN	Derbent	1.71	90	ePN	Pb	23 23 33.5	-0.6
DRN				eS	Sg	23 23 56.9	-0.2
DRN				pmax	pmax		
	comp=Z,37nm,0.5s						
DRN				smax	smax		
	comp=N,150nm,0.8s						
DRN	Derbent	1.71	90	ePg	Pn	23 23 31.9	-0.8
DRN				eSg	Sn	23 23 55.0	0.0
ZEI	Tsey	1.74	296	ePN	Pb	23 23 34.0	-0.6
ZEI	Tsey	1.74	296	ePg	Pb	23 23 34.0	-0.6
ALIG	Mtskhetisjvari	1.77	272	P	Pn	23 23 34.1	+0.6
ALIG				S	Sb	23 23 57.5	-0.2
KORR	Kora	1.78	306	ePN	Pb	23 23 35.5	+0.3
KORR				eS	Sb	23 23 58.2	+0.3
KORR	Kora	1.78	306	ePg	Pb	23 23 35.5	+0.3
KORR				eSg	Sb	23 23 58.2	+0.3
BKRG	Bakuriani	1.89	262	P	Pn	23 23 36.0	+0.7
BKRG				S	Sb	23 24 01.9	+0.6
BKRG	Bakuriani	1.89	262	PN	Pn	23 23 36.0	+0.7
TRKR	Terskaya	1.92	331	ePN	Pn	23 23 34.6	-0.9
TRKR	Terskaya	1.92	331	ePg	Pn	23 23 34.6	-0.9
TRKR				eSg	Sn	23 23 58.9	-1.3
STDR	Stavd-Durt	1.96	313	ePN	Pb	23 23 38.5	+0.3
STDR	Stavd-Durt	1.96	313	ePg	Pb	23 23 38.5	+0.3
STDR				eSg	Sb	23 24 02.6	-0.3
ONI	Oni	1.98	287	P	Pb	23 23 38.6	-0.2
ONI	Oni	1.98	287	PN	Pb	23 23 38.5	-0.2
DIGR	Digorskoe uzhe	2.00	296	ePN	Pn	23 23 37.7	+0.9
DIGR	Digorskoe uzhe	2.00	296	ePg	Pn	23 23 37.7	+0.9
DIGR				eSg	Sn	23 24 01.8	-0.5
AKH	Akhalkalaki	2.00	252	P	Pb	23 23 38.6	-0.5
AKH				S	Sb	23 24 04.6	+0.1
AKH	Akhalkalaki	2.00	252	PN	Pb	23 23 38.6	-0.5
AKH	Akhalkalaki	2.00	252	ePg	Pn	23 23 37.6	+0.8
AKH				eSg	Sb	23 24 03.7	-0.8
LSNR	Lesken	2.03	308	ePN	Pb	23 23 39.8	+0.2
LSNR	Lesken	2.03	308	ePg	Pb	23 23 39.8	+0.2
LSNR				eSg	Sn	23 24 03.3	+0.3
GNI	Garni	2.14	207	ePN	Pn	23 23 39.4	+0.8
GNI				eS	Sb	23 24 07.1	-1.2
GNI	Garni	2.14	207	ePn	Pn	23 23 39.4	+0.8
GNI				eSn	Sb	23 24 07.1	-1.2
AZMN	Azmana	2.18	251	P	Pn	23 23 38.8	-0.5
AZMN				S	Sn	23 24 07.8	+0.9
TKB	Tkibuli	2.27	278	P	Pn	23 23 41.4	+1.0
TKB				S	Sb	23 24 11.9	-0.2
TKB	Tkibuli	2.27	278	PN	Pn	23 23 41.4	+1.0
TKB				S	Sb	23 24 11.9	-0.2
ABS	Abastumani	2.42	264	P	Pn	23 23 42.7	+0.2
ABS	Abastumani	2.42	264	PN	Pn	23 23 42.7	+0.2
KBTC	Kuba-Taba	2.61	313	ePN	Pn	23 23 45.4	+0.4
KBTC				eS	Sn	23 24 16.6	-0.6
KBTC	Kuba-Taba	2.61	313	ePn	Pn	23 23 45.4	+0.4
KBTC				eSn	Sn	23 24 16.6	-0.6
NEY	Neytrino	2.71	297	ePN	Pn	23 23 47.9	+1.3
NEY				eS	Sn	23 24 19.8	-0.2
NEY	Neytrino	2.71	297	ePn	Pn	23 23 47.9	+1.3
NEY				eSn	Sn	23 24 19.8	-0.2
KBZ	Khabaz	2.84	307	ePN	Pb	23 23 50.9	-2.4
KBZ				eS	Sn	23 24 24.2	+1.3
KBZ	Khabaz	2.84	307	ePn	Pb	23 23 50.9	-2.4
KBZ				eSn	Sn	23 24 24.2	+1.3
SHA1	Shidzhatmaz	2.99	305	ePN	Pn	23 23 53.1	+2.6
SHA1				eS	Sn	23 24 27.9	+0.9
SHA1	Shidzhatmaz	2.99	305	ePn	Pn	23 23 53.1	+2.6
SHA1				eSn	Sn	23 24 27.9	+0.9
BEYR	Belyy Ugol+	3.06	311	ePN	Pn	23 23 51.3	+0.1
BEYR				eS	Sn	23 24 27.0	-1.3
BEYR	Belyy Ugol+	3.06	311	ePn	Pn	23 23 51.4	+0.1
BEYR				eSn	Sn	23 24 27.0	-1.3
KIV0	Kislovodsk Arr	3.10	309	ePn	Pn	23 23 54.2	+2.4
KIV0				eSn	Sn	23 24 29.6	+0.3
KIV	Kislovodsk	3.10	309	ePN	Pn	23 23 53.5	+1.7
KIV				eS	Sn	23 24 29.1	-0.3
KIV	Kislovodsk	3.10	309	ePn	Pn	23 23 53.5	+1.7
KIV				eSn	Sn	23 24 29.1	-0.3

BJI ***07*** *23:32:41.4±0.0, 36°.36N×70°.29E, h224km, mb4.5/8, mB4.7/3*
NEIC ***07*** *23:32:42.7±1.8, 36°.52N±0°.06×70°.33E±0°.08, h212km±8km, mb4.4/6, Error ellipse: s-maj=9.9km s-min=8.5km az=125.0*
IDC ***07*** *23:32:42.2±4.6, 36°.18N×70°.29E, h196km±43km, mb3.1/4, mbtmp3.6/6, MS3.1/1, Error ellipse: s-maj=38.3km s-min=24.0km az=158.0*
NNC ***07*** *23:32:50.3±4.8, 37°.12N×70°.37E, h203km±72km, mb2.8, mpv3.7, Error ellipse: s-maj=46.7km s-min=29.2km az=9.0*
ISC 07 23:32:42.2±0.5, 36°.52N±0°.05×70°.42E±0°.05, h204km, n45, σ2§43/59, mb4.4/10, 2C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.27	210	Pn	Pn	23 33 25.0	+0.9
KBL				Sn	S	23 33 55.9	-0.3
CHGR	Chuyangaron	2.36	335	Pn	Pn	23 33 25.2	+0.3
CHGR				Sn	S	23 33 55.7	-2.1
GAR	Garm	2.48	358	Pn	Pn	23 33 26.9	+0.6
GAR				Sn	S	23 33 58.8	-1.4
DRK	Karamyk	3.15	20		Pn	23 33 35.2	+1.1
DRK				Sn	S	23 34 14.8	+0.5
BTK	Batken	3.55	5		Pn	23 33 39.8	+1.1
BTK				Sn	S	23 34 23.6	+1.0
NIL	Nilore	3.68	140	Pn	Pn	23 33 42.2	+1.9
TAS	Tashkent	4.88	350		Pn	23 33 56.4	+1.2
JMU	Jammu	5.29	134	eP	Pn	23 33 57.6	-2.8
JMU				eS	S	23 34 58.9	-2.9
KSH	Kashi	5.31	54	P	Pn	23 33 57.7	-3.0
KSH				S	S	23 34 53.8	-8.6
KSH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSH				smax	smax		
	comp=N,100nm,0.8s						
KSH				smax	smax		
	comp=E,67nm,0.8s						
THN	Thein Dam	5.97	131	eP	Pn	23 34 09.8	+0.6
THN				eS	S	23 35 16.4	-1.4
THN				eP	S	23 35 17.0	-0.8
NRN	Naryn	6.55	40	Pn	Pn	23 34 16.9	-0.1
KK31	Karatay Array	6.58	1	Pn	Pn	23 34 17.4	+0.4
KK31	Karatay Array	6.58	1	⇓P	Pn	23 34 17.4	+0.4
	3.2nm,0.3s,baz=176,slow=10,SNR=169						
KK31				⇑S	S	23 35 26.6	-5.4
	20nm,0.8s,baz=190,slow=25,SNR=6.2						
KKAR	Karatay Array	6.58	1	Pn	Pn	23 34 17.5	+0.5
KKAR	Karatay Array	6.58	1	Pn	Pn	23 34 17.3	+0.3
KKAR				Sn	S	23 35 28.3	-3.7
AAK	Ala-Archa	6.87	26		Pn	23 34 22.3	+1.4
BHK	Bhakra	7.12	134	ix	S	23 35 41.3	-3.5
CHMS	Chumysh	7.28	26	⇓P	Pn	23 34 29.1	+3.0
	2.1nm,0.4s						
CHMS				⇑S	S	23 35 46.1	-2.5
	19nm,0.8s						
BOOM	Boomskoye usch	7.33	34	Pn	Pn	23 34 27.0	+0.1
TKM2	Tokmak 2	7.54	30	⇓P	Pn	23 34 30.2	+0.7
	2.3nm,0.7s						
TKM2				⇓S	S	23 35 50.7	-4.2
	5.7nm,0.8s						
TARG	Taragay, Kyrgy	7.75	46	Pn	Pn	23 34 32.0	-0.4
SMLA	Simla	7.77	132	eP	Pn	23 34 32.3	-0.1
SMLA				eS	S	23 35 55.5	-4.7
SMLA				IAML		23 36 00.8	
	comp=E,28nm,0.5s						
SMLA				IAML		23 36 02.4	
	comp=N,23nm,0.8s						
GEYT	Alibeck	9.92	282	P	Pn	23 34 59.9	-0.4
	comp=N,1.2nm,0.4s,baz=95,slow=13,SNR=3.2						
GEYT				S	S	23 36 47.3	-4.1
	comp=N,0.5nm,0.3s,baz=62,slow=21,SNR=1.4						
MAKZ	Makanchi	13.41	36	P	P	23 35 47.4	+0.2
MKAR	Makanchi Array	13.55	37	P	P	23 35 52.2	+3.5
	comp=N,0.2nm,0.5s,baz=224,slow=12,SNR=5.0						
MKAR	Makanchi Array	13.55	37	Pn	Pn	23 35 47.0	+0.7
AB31	Akbulak array	14.85	332	P	P	23 36 03.0	+0.1
	comp=N,0.8nm,0.3s,baz=147,slow=12,SNR=32						
ABKAR	Akbulak array	14.85	332		Pn	23 36 02.4	+0.2
ABKAR	Akbulak array	14.85	332	P	P	23 36 03.3	+0.3
WMQ	Urumqi	15.07	56	eP	P	23 36 08.0	+2.4
WMQ				pmax	pmax		
	comp=N,30nm,0.9s						
AKTO	Aktyubinsk	16.54	331	⇓P	Pn	23 36 24.4	+1.8
	comp=N,4.5nm,0.7s						
BRVK	Borovoye	16.54	360		Pn	23 36 23.7	+1.1
ZALV	Zalesovo Beam	20.10	25	P	Pn	23 37 03.2	-1.5
	comp=N,0.9nm,0.4s,baz=224,slow=11,SNR=6.3						
	comp=N,0.9nm,0.4s						
KIRV	Kirov	26.02	335	LR	LR	23 51 13.3	
	comp=N,45nm,19.8s,baz=338,slow=42						
LZH	Lanzhou	26.86	81	⇓P	P	23 38 05.6	+1.4
LZH				sP	sP	23 39 10.8	-0.3
LZH				pmax	pmax		
	comp=N,15nm,1.4s						
PZH	PanZhiHua	28.40	102	P	P	23 38 19.8	+1.9
PZH				pmax	pmax		
	comp=N,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=N,120nm,4.9s						
ANTO	Ankara	29.62	288	P	P	23 38 28.1	-0.4
ANTO				IAmb	IAmb	23 38 38.8	
	comp=Z,5.2nm,0.7s						
HHC	Hu-ho-hao-te	32.19	70	eP	P	23 38 52.8	+1.7
HHC				S	S	23 43 53.4	+4.6
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
ARCES	ARCESS Array B	40.95	338	P	P	23 40 07.8	+3.3
	comp=Z,2.6nm,0.9s,baz=106,slow=9.5,SNR=4.2						
	comp=Z,2.6nm,0.9s						
NBO00	NORSAR Array S	44.30	323	P	P	23 40 32.4	+0.9
NBO00				IAmb	IAmb	23 40 36.8	
	comp=Z,53nm,1.4s						
ZCCA	Zocca	45.05	299	P	P	23 40 34.0	-3.7
ZCCA				IAmb	IAmb	23 41 18.5	
	comp=Z,31nm,1.5s						
TORD	Torodi Ar. Bea	65.25	268	P	P	23 43 02.2	-0.2
	comp=Z,0.3nm,0.7s,baz=50,slow=5.9,SNR=2.3						
	comp=Z,0.3nm,0.7s						
NRS	Narsarsuaq	69.64	332	P	P	23 43 27.1	-2.0
KTH	Kantishna Hill	74.99	18	P	P	23 44 00.3	-0.5
KTH				IAmb	IAmb	23 44 14.8	
	comp=Z,4.7nm,1.2s						
WRA	Warramunga Arr	82.39	122	P	P	23 44 42.2	+0.6
	comp=Z,0.5nm,0.9s,baz=316,slow=5.6,SNR=2.1						
	comp=Z,0.5nm,0.9s						

UPP ***07*** *23:36:18.8±0.1, 67°.85N×20°.21E, h2km±4km, ML1.9, Explosion*
IDC ***07*** *23:36:19.9±1.4, 67°.84N×20°.75E, h0km, mbtmp2.8/3, ML1.7/3, Error ellipse: s-maj=20.7km s-min=8.1km az=114.0*
HEL ***07*** *23:36:19.1±0.0, 67°.85N×20°.22E, h0km, ML2.0, ML1.9(UPP), Suspected explosion*
ISC 07 23:36:18.8±0.8, 67°.84N±0°.02×20°.27E±0°.03, h0km, n43, σ1§04/63, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	12	P	Pg	23 36 21.1	+0.1
KUA				S	Sg	23 36 22.7	+0.1
KUA	Kurravaara	0.12	12	iP	Pg	23 36 21.1	+0.1
KUA				iS	Sg	23 36 22.7	+0.1
RATU	Laukkuluspa	0.26	267	P	Pg	23 36 23.3	-0.4
RATU	Laukkuluspa	0.26	267	iP	Pg	23 36 23.3	-0.4
KOVU	Salmi	0.39	354	P	Pg	23 36 25.9	-0.3
KOVU	Salmi	0.39	354	iP	Pg	23 36 25.9	-0.3
NIKU	Nikkaluokta	0.47	274	P	Pg	23 36 27.2	-0.6
NIKU	Nikkaluokta	0.47	274	iP	Pg	23 36 27.2	-0.6
LANU	Lannavaara	0.68	71	P	Pg	23 36 32.0	+0.1
LANU	Lannavaara	0.68	71	eP	Pg	23 36 31.9	+0.1
LANU				eS	Sg	23 36 41.1	+0.4
DUNU	Dundret	0.73	171	P	Pg	23 36 32.5	-0.

ARA0 eS **Sn** **23 37 32.0 -1.4**
ARCES ARCESS Array B 2.56 46 Pn **Pn** **23 37 01.9 +0.4**
comp=Z,0.4nm,0.3s,baz=224,slow=16,SNR=18
ARCES Lg Lg 23 37 35.9
comp=Z,1.2nm,0.3s,baz=229,slow=27,SNR=15
comp=Z,1.0nm,0.3s
KEV Kevo 3.12 49 eS **Sn** **23 37 48.3 +1.3**
KEV MSG 23 37 51.5
comp=Z,2.8nm,0.2s
BURU Burvik 3.30 172 eP **Pn** **23 37 13.7 +2.1**
BURU eS **Sn** **23 37 54.1 +2.7**
VRF Varrio 3.55 87 ePG **Pb** **23 37 22.8 +0.4**
VRF eSB **Sb** **23 38 06.0 +0.1**
OUL Oulu 3.57 138 eSG **Sb** **23 38 08.0 +1.6**
OBF4 Vikkela, Lumij 3.61 145 eS **Sn** **23 37 56.4 -2.7**
OLKF Oulanka, Finla 3.88 109 ePG **Pb** **23 37 29.2 +1.2**
MSF Maaselka 3.96 115 ePG **Pb** **23 37 30.7 +1.3**
baz=302
MSF eSG **Sg** **23 38 24.2 -1.7**
KU6 Riekki 4.20 111 eP **Pn** **23 37 25.1 +1.1**
KU6 eSG **Sg** **23 38 30.7 -2.8**
FINES FINESS Array B 6.88 156 Pn **Pn** **23 38 01.7 +0.9**
baz=350,slow=13,SNR=1.4
FINES Sn **Sn** **23 39 18.7 -1.0**
comp=Z,0.1nm,0.3s,baz=343,slow=22,SNR=1.2
FINES Lg Lg 23 39 51.6
comp=Z,0.1nm,0.3s,baz=344,slow=29,SNR=2.0
comp=Z,1.5nm,0.8s
NOA NORSAR Array B 7.86 214 Pn **Pn** **23 38 14.2 0.0**
baz=14,slow=12,SNR=1.9
NOA Lg Lg 23 40 21.9
baz=26,slow=21,SNR=1.4
comp=Z,0.4nm,0.8s

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*IDC **07** 23:45:57.0±5.6, 42.°84S×171.°00E, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=351.1km s-min=48.0km az=38.0*
*WEL **07** 23:45:58.9±0.7, 43.°S±4.°×17.°1E±.°, h3km±3km, M3.6/6, ML3.9/6, MLv3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=142.5*
*NOU **07** 23:45:58.5, 43.°02S×170.°67E, h0km, MLv4.1/9, South Island, New Zealand*
ISC 07 23:45:59.2±0.9, 43.°04S±0.°03×170.°77E±0.°03, h6km±6km, n59, σ1°01/65, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	**0.04**	**217**	P	**Pg**	**23 46 00.4**	**0.0**
WVZ				S	**Sg**	**23 46 01.3**	**0.0**
GCSZ	**Gaunt Creek Bo**	**0.42**	**230**	P	**Pg**	**23 46 07.4**	**+0.1**
GCSZ				S	**Sg**	**23 46 12.9**	**+0.1**
INZ	**Inchbonnie**	**0.59**	**58**	P	**Pg**	**23 46 10.2**	**-0.3**
INZ				S	**Sg**	**23 46 18.0**	**-0.2**
RPZ	**Rata Peaks**	**0.70**	**163**	P	**Pg**	**23 46 12.6**	**-0.1**
RPZ				S	**Sg**	**23 46 21.5**	**-0.3**
RPZ	**Rata Peaks**	**0.70**	**163**	P	**Pg**	**23 46 12.8**	**+0.1**
MHCZ	**Mount Hutt**	**0.76**	**130**	P	**Pg**	**23 46 13.8**	**0.0**
MHCZ				S	**Sb**	**23 46 27.0**	**+1.4**
FOZ	**Fox Glacier**	**0.85**	**235**	P	**Pg**	**23 46 15.4**	**0.0**
FOZ				S	**Sg**	**23 46 26.9**	**+0.4**
ARCZ	**Arundel**	**0.95**	**162**	P	**Pg**	**23 46 17.1**	**-0.3**
OXZ	**Oxford**	**0.97**	**107**	P	**Pb**	**23 46 17.8**	**-0.6**
LTZ	**Lake Taylor**	**1.14**	**77**	P	**Pb**	**23 46 20.7**	**-0.5**
WACZ	**Wakanui South**	**1.19**	**139**	P	**Pg**	**23 46 21.6**	**-0.4**
RACZ	**Rakaia**	**1.21**	**125**	P	**Pb**	**23 46 22.4**	**-0.1**
TMZ	**Timaru**	**1.35**	**173**	P	**Pg**	**23 46 24.5**	**-0.6**
AMCZ	**Amberley**	**1.39**	**96**	P	**Pn**	**23 46 25.0**	**-0.1**
LBZ	**Lake Benmore**	**1.41**	**197**	P	**Pn**	**23 46 24.8**	**-0.5**
DSZ	**Dennistón Nort**	**1.51**	**31**	P	**Pn**	**23 46 25.9**	**-0.9**
MQZ	**McQueen's Vall**	**1.53**	**116**	P	**Pn**	**23 46 25.8**	**-1.2**
GVZ	**Greta Valley S**	**1.67**	**88**	P	**Pn**	**23 46 28.3**	**-0.6**
AKCZ	**Akaroa Harbour**	**1.77**	**119**	P	**Pn**	**23 46 29.0**	**-1.3**
JCZ	**Jackson Bay**	**1.77**	**234**	P	**Pn**	**23 46 29.1**	**-1.3**
JCZ	**Jackson Bay**	**1.77**	**234**	P	**Pn**	**23 46 29.3**	**-1.1**
ODZ	**Otahua Downs**	**2.00**	**182**	P	**Pn**	**23 46 33.4**	**-0.2**
ODZ	**Otahua Downs**	**2.00**	**182**	P	**Pn**	**23 46 33.9**	**+0.4**
THZ	**Tophouse**	**2.04**	**52**	P	**Pn**	**23 46 33.8**	**-0.3**
KHZ	**Kahutara**	**2.14**	**74**	P	**Pn**	**23 46 36.0**	**+0.6**
WKZ	**Wanaka**	**2.19**	**215**	P	**Pn**	**23 46 36.9**	**+0.9**
MRNZ	**Matariki Terra**	**2.21**	**43**	P	**Pn**	**23 46 36.1**	**-0.3**
EAZ	**Earnscleugh**	**2.42**	**205**	P	**Pn**	**23 46 40.2**	**+0.8**
QRZ	**Quartz Range**	**2.58**	**31**	P	**Pn**	**23 46 40.8**	**-0.6**
QRZ	**Quartz Range**	**2.58**	**31**	P	**Pn**	**23 46 40.9**	**-0.5**
TKNZ	**Takaka Hill**	**2.59**	**40**	P	**Pn**	**23 46 41.2**	**-0.4**
BSWZ	**Blackbirch Sta**	**2.66**	**61**	P	**Pn**	**23 46 44.1**	**+1.5**
NNZ	**Nelson**	**2.67**	**48**	P	**Pn**	**23 46 43.3**	**+0.6**
TUWZ	**Tuamarina**	**2.86**	**57**	P	**Pn**	**23 46 46.5**	**+1.2**
MLZ	**Mavora Lakes**	**3.00**	**218**	P	**Pn**	**23 46 48.1**	**+0.8**
TUZ	**Tuapeka**	**3.02**	**195**	P	**Pn**	**23 46 48.5**	**+1.0**
TCW	**Tory Channel**	**3.19**	**56**	P	**Pn**	**23 46 51.1**	**+1.3**
SNZO	**South Karori**	**3.40**	**61**	P	**Pn**	**23 46 54.0**	**+1.3**
WHZ	**Wether Hill Ro**	**3.49**	**214**	P	**Pn**	**23 46 57.6**	**+3.6**
SYZ	**Scrubby Hill**	**3.68**	**198**	P	**Pn**	**23 46 56.9**	**+0.4**
SYZ	**Scrubby Hill**	**3.68**	**198**	P	**Pn**	**23 46 56.9**	**+0.4**
CAW	**Cannon Point**	**3.74**	**60**	P	**Pn**	**23 46 56.7**	**-0.7**
KIW	**Kapiti Island**	**3.78**	**56**	P	**Pn**	**23 46 57.9**	**-0.2**
OGWZ	**Otaki Gorge**	**3.97**	**57**	P	**Pn**	**23 47 00.9**	**+0.3**
HOWZ	**Holdsworth Sta**	**4.14**	**60**	P	**Pn**	**23 47 03.9**	**+0.9**
NBEZ	**Newall Road No**	**4.44**	**33**	P	**Pn**	**23 47 07.6**	**+0.6**
KHEZ	**Kahui Hut**	**4.48**	**34**	P	**Pn**	**23 47 08.0**	**+0.4**
NEZ	**North Egmont**	**4.53**	**35**	P	**Pn**	**23 47 09.5**	**+1.1**
PKE	**Pukeiti**	**4.55**	**33**	P	**Pn**	**23 47 09.6**	**+1.0**
TSZ	**Takapari Road**	**4.91**	**54**	P	**Pn**	**23 47 17.0**	**+3.5**
VRZ	**Vera Road**	**4.94**	**39**	P	**Pn**	**23 47 14.7**	**+0.8**
TWVZ	**Taurewa**	**5.31**	**43**	P	**Pn**	**23 47 21.0**	**+1.9**
HIZ	**Hauiti**	**5.49**	**36**	P	**Pn**	**23 47 21.3**	**-0.2**
HIZ	**Hauiti**	**5.49**	**36**	P	**Pn**	**23 47 21.1**	**-0.3**
OUZ	**Omahuta**	**8.12**	**17**	P	**Pn**	**23 47 57.8**	**+0.3**
ASAR	**Alice Springs**	**35.98**	**291**	P	**P**	**23 52 59.9**	**-0.9**
0.2nm,0.6s,baz=130,slow=8.6,SNR=1.3							
0.2nm,0.6s							
WRA	**Warramunga Arr**	**38.23**	**295**	P	**P**	**23 53 19.4**	**-0.7**
0.3nm,0.8s,baz=133,slow=7.5,SNR=0.7							
0.3nm,0.8s							
BRTR	**Keskin Array B**	**147.92**	**279**	PKPbc	**PKPdf**	**00 05 43.6**	**+1.5**
0.4nm,0.4s,baz=87,slow=3.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**148.75**	**201**	PKPbc	**PKPbc**	**00 05 46.6**	**-1.1**
0.7nm,0.7s,baz=160,slow=1.3,SNR=7.5							

WEL 07 23:55:53.1±1.0, 37.°S±5.°×17.°9E±.°, h21km±5km, M3.3/15, ML3.6/19, MLv3.3/15, Error ellipse: s-maj=0.0km s-min=0.0km az=113.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.51**	**254**	P	Pb	23 56 03.6	+0.2
MXZ				S	Sb	23 56 10.6	+0.2
WMGZ	**Waiomatatini S**	**0.57**	**225**	P	Pn	23 56 05.5	-0.4
WMGZ				S	Sn	23 56 14.6	-0.1
PKGZ	**Pakihiroa**	**0.82**	**235**	P	Pn	23 56 09.3	-0.2
PKGZ				S	Sn	23 56 20.2	-0.8
PUZ	**Puketiti**	**0.84**	**219**	P	Pn	23 56 09.6	-0.1
PUZ				S	Sn	23 56 21.5	+0.1
HAZ	**Te Kaha**	**0.97**	**249**	P	Pn	23 56 11.7	+0.3
HAZ				S	Sn	23 56 25.0	+0.5
TWGZ	**Tauwhareparae**	**1.06**	**224**	P	Pn	23 56 13.3	+0.5
TWGZ				S	Sn	23 56 28.1	+1.1
RUGZ	**Raukumara Rang**	**1.13**	**241**	P	Pb	23 56 14.2	+0.3
RUGZ				S	Sn	23 56 30.2	+1.5
CNGZ	**Carnagh Statio**	**1.20**	**208**	P	Pb	23 56 15.2	+0.1
CNGZ				S	Sn	23 56 32.8	+2.4
MWZ	**Matawai**	**1.43**	**230**	P	Pn	23 56 18.0	+0.2
MWZ				S	Sn	23 56 35.5	-0.6
RAGZ	**Rawiri**	**1.60**	**228**	P	Pn	23 56 19.7	-0.6
RAGZ				S	Sn	23 56 40.9	+0.4
SNGZ	**Shannon Statio**	**1.85**	**222**	P	Pn	23 56 23.8	+0.2
SNGZ				S	Sn	23 56 45.6	-0.7
EDRZ	**Edgecumbe**	**1.86**	**248**	P	Pn	23 56 24.9	+1.1
KNZ	**Kokohu**	**1.88**	**211**	P	Pn	23 56 22.9	-1.0
KNZ				S	Sn	23 56 46.3	-0.7
MHGZ	**Mahia Peninsul**	**1.91**	**205**	P	Pn	23 56 24.0	-0.3
RTZ	**Ruatahuna**	**1.94**	**232**	P	Pn	23 56 25.8	+0.8
WHHZ	**Waihua**	**2.12**	**218**	P	Pn	23 56 27.3	-0.1
MTHZ	**Maungataniwha**	**2.18**	**228**	P	Pn	23 56 28.6	+0.5
ARHZ	**Aropaoanui**	**2.38**	**219**	P	Pn	23 56 30.6	-0.3
KUZ	**Kuaotunu**	**2.65**	**284**	P	Pn	23 56 33.8	-0.7
CKHZ	**Cape Kidnapper**	**2.66**	**212**	P	Pn	23 56 33.7	-1.1
KAHZ	**Kahuranaki**	**2.86**	**213**	P	Pn	23 56 36.4	-1.2
KRHZ	**Kereru**	**2.99**	**221**	P	Pn	23 56 38.5	-0.8
TMVZ	**Te Maari**	**3.05**	**235**	P	Pn	23 56 39.8	-0.3
MOVZ	**Moawhango**	**3.19**	**230**	P	Pn	23 56 41.7	-0.3
OUZ	**Omahuta**	**4.83**	**295**	P	Pn	23 57 05.4	+0.9

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*NEIC **07** 23:59:28.5±2.2, 30.°99S±0.°04×71.°41W±0.°08, h67km±4km, mb4.8/17, Mwr4.6/39, ML4.4(GUC), Error ellipse: s-maj=10.0km s-min=6.3km az=103.0*
*NEIC **07** 23:59:28.1, 30.°98S×71.°45W, h73km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.88; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$2.92; $M_{r\theta}$-3.95; $M_{\theta\phi}$-0.25; $M_{\phi r}$7.56; Fault plane solution: $M_0$8.91000×10^{15} NP1:ϕ_s27.00000°, δ11.61000°, λ-36.46000°. NP2:ϕ_s152.89000°, δ83.13000°, λ-99.38000°. Principal axes: T 9.1143, Plg37.0000°, Azm251.0000°; N -0.4340, Plg9.0000°, Azm154.0000°; P -8.6803, Plg51.0000°, Azm52.0000°;*
*IDC **07** 23:59:29.1±0.7, 30.°97S×71.°11W, h63km±4km, mb4.3/7, mbtmp4.6/11, MS3.5/16 Error ellipse: s-maj=25.0km s-min=16.1km az=106.0*
*GUC **07** 23:59:29.4±0.8, 31.°00S×71.°30W, h65km±3km, ML4.9*
ISC 07 23:59:28.2±0.4, 30.°97S±0.°04×71.°33W±0.°04, h63km±3km, h63km:pP-P, n137, σ1°54/138, mb4.8/18, 5C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.37**	**130**		**Pn**	**23 59 39.9**	**+0.6**
CO02				Sn	**Sn**	**23 59 48.2**	**+0.8**
CO02	**Combarbal**	**0.37**	**130**	⇑*iP*	**Pn**	**23 59 40.1**	**+0.8**
CO02				*i* S	**Sn**	**23 59 48.3**	**+0.9**
CO02				IAML		23 59 49.2	
comp=E,153μm,0.3s							
CO06	**Fray Jorge**	**0.39**	**318**		**Pn**	**23 59 40.8**	**+1.5**
CO06					**Sn**	**23 59 49.6**	**+2.3**
CO06	**Fray Jorge**	**0.39**	**318**	⇓*iP*	**Pn**	**23 59 40.9**	**+1.5**
CO06				*i* S	**Sn**	**23 59 49.7**	**+2.3**
CO06				IAML		23 59 52.0	
comp=N,33μm,0.4s							
CO03	**El Pedregal**	**0.57**	**77**		**Pn**	**23 59 41.8**	**+0.6**
CO03					**Sn**	**23 59 51.9**	**+1.2**
CO03	**El Pedregal**	**0.57**	**77**	⇑*iP*	**Pn**	**23 59 41.9**	**+0.7**
CO03				*i* S	**Sn**	**23 59 51.5**	**+0.8**
GO04	**Tololo Observa**	**0.92**	**30**		**Pn**	**23 59 46.8**	**+1.3**
GO04	**Tololo Observa**	**0.92**	**30**	⇑*iP*	**Pn**	**23 59 46.8**	**+1.3**
GO04				*i* S	**Sn**	**00 00 00.2**	**+2.0**
CO05	**La Serena**	**1.05**	**5**		**Pn**	**23 59 48.3**	**+1.4**
CO05	**La Serena**	**1.05**	**5**	⇑*iP*	**Pn**	**23 59 48.4**	**+1.4**
CO05				*i* S	**Sn**	**00 00 02.9**	**+2.1**
CO05				IAML		00 00 04.9	
comp=E,51μm,0.6s							
CO01	**Juntas del Tor**	**1.45**	**48**		**Pn**	**23 59 54.2**	**+1.6**
CO01	**Juntas del Tor**	**1.45**	**48**	⇓*iP*	**Pn**	**23 59 54.4**	**+1.9**
CO01				*i* S	**Sn**	**00 00 13.3**	**+2.5**
CO01				IAML		00 00 14.2	
comp=N,43μm,0.2s							
VA06	**Catapilco**	**1.59**	**179**		**Pn**	**23 59 54.7**	**+0.5**
VA03	**San Esteban**	**1.91**	**160**		**Pn**	**23 59 59.3**	**+0.7**
VA03	**San Esteban**	**1.91**	**160**	⇓*iP*	**Pn**	**23 59 59.8**	**+1.1**
VA03				*i* S	**Sn**	**00 00 22.8**	**+1.1**
VA03				IAML		00 00 33.5	
comp=E,11μm,0.3s							
ROCH	**El Roble**	**2.02**	**172**	*eP*	**Pn**	**00 00 00.7**	**+0.5**
ROC1	**El Roble**	**2.02**	**172**		**Pn**	**00 00 00.5**	**+0.3**
LCO	**Las Campanas**	**2.02**	**16**		**Pn**	**00 00 01.8**	**+1.5**
LCO	**Las Campanas**	**2.02**	**16**	Sn	**Sn**	**00 00 27.2**	**+2.6**
VA01	**Torpederas**	**2.07**	**187**		**Pn**	**00 00 00.5**	**-0.1**
VA01	**Torpederas**	**2.07**	**187**	*eP*	**Pn**	**00 00 00.5**	**-0.1**
PEL	**Peldehue**	**2.24**	**166**		**Pn**	**00 00 03.5**	**+0.5**
MT02	**Curacav**	**2.29**	**176**		**Pn**	**00 00 03.7**	**0.0**
MT02	**Curacav**	**2.29**	**176**	IAML		00 00 47.8	
comp=E,12μm,0.9s							
AC05	**El Transito**	**2.31**	**24**		**Pn**	**00 00 06.1**	**+2.1**
AC05	**El Transito**	**2.31**	**24**	⇓*iP*	**Pn**	**00 00 06.2**	**+2.1**
AC05				*i* S	**Sn**	**00 00 34.2**	**+2.7**
AC05				IAML		00 00 35.6	
comp=N,11μm,0.3s							
ZON	**Zonda**	**2.35**	**105**	Pn	**Pn**	**00 00 07.4**	**+2.9**
MT05	**Renca**	**2.47**	**168**	Pn	**Pn**	**00 00 06.2**	**0.0**
MT05	**Renca**	**2.47**	**168**	*eP*	**Pn**	**00 00 07.0**	**+0.8**
MT05				IAML		00 00 57.1	
comp=E,11μm,0.2s							
MT03	**Universidad Ad**	**2.62**	**165**		**Pn**	**00 00 09.0**	**+0.8**
MT03	**Universidad Ad**	**2.62**	**165**	*eP*	**Pn**	**00 00 09.2**	**+1.0**
VA05	**Santo Domingo**	**2.69**	**185**		**Pn**	**00 00 08.7**	**-0.4**
AC04	**Llanos de Chal**	**2.76**	**5**	Pn	**Pn**	**00 00 11.1**	**+1.0**
AC04	**Llanos de Chal**	**2.76**	**5**	*eP*	**Pn**	**00 00 11.2**	**+1.2**
MT09	**Talagante**	**2.82**	**174**		**Pn**	**00 00 11.6**	**+0.6**
MT01	**Popeta**	**2.89**	**179**		**Pn**	**00 00 11.8**	**0.0**
MT01	**Popeta**	**2.89**	**179**	*eP*	**Pn**	**00 00 11.9**	**+0.1**
MT01				IAML		00 01 04.8	
comp=E,2μm,0.4s							
LMEL	**Las Melosas**	**3.03**	**162**		**Pn**	**00 00 15.2**	**+1.4**
LMEL	**Las Melosas**	**3.03**	**162**	⇑*iP*	**Pn**	**00 00 15.5**	**+1.6**
BO04	**La Punta**	**3.08**	**169**		**Pn**	**00 00 14.9**	**+0.5**
BO04	**La Punta**	**3.08**	**169**	*eP*	**Pn**	**00 00 15.1**	**+0.7**
BO01	**Tunca**	**3.42**	**177**		**Pn**	**00 00 19.0**	**-0.1**
AC06	**Mina Casimiro**	**3.70**	**14**		**Pn**	**00 00 23.6**	**+0.7**
BO02	**Sierra Bellavi**	**3.84**	**173**	Pn	**Pn**	**00 00 25.0**	**+0.1**
GO05	**Huala**	**4.06**	**187**		**Pn**	**00 00 26.5**	**-1.4**
AC02	**Maricunga**	**4.55**	**26**		**Pn**	**00 00 36.0**	**+1.1**
BI05	**Punta Hualpn**	**5.97**	**194**		**Pn**	**00 00 52.1**	**-1.8**
BI05				Sn	**Sn**	**00 01 55.9**	**-5.0**
GO02	**Mina Guanaco**	**5.98**	**15**	Pn	**Pn**	**00 00 53.8**	**-0.6**
PB14	**IPOC Station P**	**6.37**	**8**	Pn	**Pn**	**00 00 58.2**	**-1.6**
H03N1	**Juan Fernandez**	**6.88**	**247**	P	**Pn**	**00 01 06.6**	**+0.4**
baz=116,slow=18,SNR=386							
H03N1				T	T	00 08 00.9	
baz=74,slow=72,SNR=786							
VA04	**Juan Fernndez**	**6.88**	**245**	Pn	**Pn**	**00 01 05.8**	**-0.7**
H03N3	**Juan Fernandez**	**6.89**	**247**	P	**Pn**	**00 01 06.4**	**0.0**
baz=116,slow=18,SNR=308							
H03N3				T	T	00 07 59.1	
baz=74,slow=72,SNR=517							
H03N2	**Juan Fernandez**	**6.90**	**247**	P	**Pn**	**00 01 06.6**	**+0.3**
baz=116,slow=18,SNR=209							
H03N2				T	T	00 08 01.6	
baz=74,slow=72,SNR=513							
H03S3	**Juan Fernandez**	**7.01**	**244**	P	**Pn**	**00 01 06.8**	**-1.2**
SNR=111							
H03S1	**Juan Fernandez**	**7.02**	**244**	P	**Pn**	**00 01 06.6**	**-1.4**
SNR=127							
H03S2	**Juan Fernandez**	**7.03**	**244**	P	**Pn**	**00 01 06.7**	**-1.4**
SNR=142							
PB10	**IPOC Station P**	**7.46**	**6**	Pn	**Pn**	**00 01 13.3**	**-1.1**
PB15	**IPOC Station P**	**7.90**	**13**	Pn	**Pn**	**00 01 18.8**	**-1.9**
PB06	**IPOC Station P**	**8.38**	**11**	Pn	**Pn**	**00 01 23.8**	**-3.3**
AF01	**San Pedro de A**	**8.46**	**20**	Pn	**Pn**	**00 01 27.8**	**-0.6**
LVC	**Limon Verde**	**8.60**	**15**	P	**Pn**	**00 01 27.4**	**-2.9**
comp=E,4.2nm,0.2s,baz=147,slow=7.1,SNR=28							
LVC				S	**Sn**	**00 03 01.2**	**-4.8**
comp=E,17nm,0.5s,baz=270,slow=20,SNR=1.3							
LVC				LR	LR	00 04 56.5	
comp=E,199nm,20.7s,baz=214,slow=38							
LVC	**Limon Verde**	**8.60**	**15**	Pn	**Pn**	**00 01 28.0**	**-2.3**
GO06	**Curarrehue**	**8.60**	**181**	Pn	**Pn**	**00 01 28.9**	**-1.1**
PB04	**IPOC Station P**	**8.66**	**7**	Pn	**Pn**	**00 01 27.8**	**-3.3**
LR04	**Corral**	**9.06**	**190**	Pn	**Pn**	**00 01 34.0**	**-2.2**
PB07	**IPOC Station P**	**9.29**	**8**	Pn	**Pn**	**00 01 37.0**	**-2.6**
PB09	**IPOC Station P**	**9.32**	**12**	Pn	**Pn**	**00 01 36.7**	**-3.3**
PB02	**IPOC Station P**	**9.69**	**8**	Pn	**Pn**	**00 01 41.5**	**-3.6**
PLCA	**Paso Flores**	**9.77**	**176**	P	**Pn**	**00 01 45.6**	**-0.3**
comp=E,1.8nm,0.5s,baz=349,slow=11,SNR=13							
PLCA				LR	LR	00 05 37.3	
comp=E,157nm,21.7s,baz=347,slow=38							
PLCA	**Paso Flores**	**9.77**	**176**	Pn	**Pn**	**00 01 45.4**	**-0.5**
LL04	**Puerto Octay**	**9.96**	**185**	Pn	**Pn**	**00 01 46.1**	**-2.4**
PB01	**IPOC Station P**	**10.02**	**10**	Pn	**Pn**	**00 01 45.4**	**-4.1**
TRQA	**Tornquist**	**10.46**	**135**	Pn	**Pn**	**00 01 54.8**	**-0.6**
GO01	**Chusmiza**	**11.41**	**10**		**Pn**	**00 02 09.6**	**+0.7**
PB16	**IPOC Station P**	**12.68**	**8**		**Pn**	**00 02 27.9**	**+1.6**
ITQB	**Itaqui**	**12.78**	**88**	Pn	**Pn**	**00 02 24.5**	**-2.5**
CPUP	**Villa Florida**	**13.13**	**73**	P	**Pn**	**00 02 28.9**	**-3.0**
comp=E,4.4nm,0.6s,baz=246,slow=13,SNR=8.8							
CPUP				LR	LR	00 08 28.3	
comp=E,73nm,19.5s,baz=221,slow=42							
CPUP	**Villa Florida**	**13.13**	**73**	Pn	**Pn**	**00 02 29.3**	**-2.6**
COYC	**Coyhaique**	**14.60**	**182**	P	**P**	**00 02 55.5**	**-0.5**
LPAZ	**La Paz**	**14.90**	**12**	P	**Pn**	**00 02 55.9**	**0.0**
comp=E,12nm,0.7s,baz=187,slow=8.1,SNR=50							
LPAZ	**La Paz**	**14.90**	**12**	P	**Pn**	**00 02 57.5**	**+1.6**
ITAB	**Concordia**	**17.19**	**82**		**Pn**	**00 03 23.3**	**-0.8**
AQDB	**Aquidauana**	**17.52**	**57**	P	**Pn**	**00 03 27.2**	**-1.0**
SIV	**San Ignacio**	**17.61**	**34**	P	**Pn**	**00 03 27.8**	**-1.6**
comp=E,23nm,0.6s,baz=211,slow=9.8,SNR=122							
TRCB	**Terra Rica**	**18.54**	**68**	P	**P**	**00 03 39.5**	**-0.4**
TRCB				IAmb	IAmb	00 03 56.8	
comp=Z,28nm,0.5s							
BDFB	**Brasilia**	**26.21**	**60**	P	**P**	**00 04 56.6**	**-0.8**
comp=Z,29nm,0.8s,baz=232,slow=8.2,SNR=39							
BDFB				LR	LR	00 16 28.1	
comp=Z,158nm,19.6s,baz=194,slow=39							
comp=Z,29nm,0.8s							
BDFB	**Brasilia**	**26.21**	**60**	P	**P**	**00 04 55.6**	**-1.8**
BDFB				IAmb	IAmb	00 04 57.7	
comp=Z,28nm,0.8s							
PTGA	**Pitinga**	**31.94**	**22**	LR	LR	00 19 27.8	
comp=Z,81nm,20.9s,baz=180,slow=38							
RPN	**Rapa Nui**	**33.34**	**267**	LR	LR	00 15 42.0	
comp=Z,138nm,18.5s,baz=88,slow=29							
PMSA	**Palmer Station**	**34.13**	**174**	LR	LR	00 20 32.5	
comp=Z,64nm,19.9s,baz=322,slow=37							
SDV	**Santo Domingo**	**39.63**	**1**	P	**P**	**00 06 53.2**	**-0.9**
SDV				IAmb	IAmb	00 06 55.2	
comp=Z,17nm,1.5s							
BAUV	**El Baul**	**39.81**	**5**	P	**P**	**00 06 54.4**	**-1.0**
MDP	**Montagnes des**	**40.07**	**30**	LR	LR	00 23 03.2	
comp=Z,82nm,18.4s,baz=322,slow=35							
RCBR	**Riachuelo**	**41.58**	**60**	LR	LR	00 25 46.2	
comp=Z,133nm,19.0s,baz=324,slow=38							
BELA	**Belgrano 2**	**49.76**	**170**	P	**P**	**00 08 14.8**	**+0.9**
VNA3	**Neumayer Olymp**	**51.95**	**159**	P	**P**	**00 08 31.1**	**+0.7**
VNA3	**Neumayer Olymp**	**51.95**	**159**	pP	pP	00 08 48.5	+1.5
VNA1	**Neumayer--Stat**	**52.24**	**158**	P	**P**	**00 08 34.3**	**+1.9**
VNA1	**Neumayer--Stat**	**52.24**	**158**	pP	pP	00 08 50.6	+1.6
VNA2	**Neumayer--Watz**	**52.59**	**158**	P	**P**	**00 08 35.7**	**+0.7**
baz=290,slow=6.4							
SNAA	**Sanae**	**54.17**	**159**	P	**P**	**00 08 47.3**	**+0.5**
SNAA	**Sanae**	**54.17**	**159**	pP	pP	00 09 04.8	+1.3
SNAA	**Sanae**	**54.17**	**159**	P	**P**	**00 08 46.6**	**-0.2**
comp=Z,1.3nm,0.8s,baz=268,slow=11,SNR=10							
SNAA				pP	**pP**	**00 09 03.6**	**+0.1**
comp=Z,7.3nm,0.8s,baz=269,slow=9.9,SNR=17							
comp=Z,1.3nm,0.8s							
SNAA	**Sanae**	**54.17**	**159**	P	**P**	**00 08 47.0**	**+0.2**
SNAA				IAmb	IAmb	00 09 13.3	
comp=Z,10nm,0.9s							
TROLL	**Troll, Antarti**	**55.89**	**159**	P	**P**	**00 09 00.0**	**+0.8**
QSPA	**South Pole Qui**	**59.26**	**180**	P	**P**	**00 09 23.8**	**+0.8**
QSPA					**pP**	**00 09 41.3**	**+1.4**
VNDA	**Vanda**	**67.19**	**191**	P	**P**	**00 10 16.7**	**+1.6**
comp=Z,1.0nm,0.9s,baz=119,slow=3.6,SNR=5.2							
comp=Z,1.0nm,0.9s							
TAOE	**Nuku Hiva Isla**	**67.35**	**273**	*e*LR	LR	00 30 48.6	
comp=Z,133nm,31.6s							
TXAR	**Lajitas Array**	**67.41**	**330**	pP	pP	00 10 36.0	+1.9
comp=Z,0.8nm,0.7s,baz=132,slow=5.2,SNR=4.4							
TBI	**Tubuai**	**68.64**	**255**	*e*LR	LR	00 31 24.0	
comp=Z,86nm,42.2s							
PPT2	**Papeete2**	**71.29**	**260**	*e*LR	LR	00 32 37.3	
comp=Z,37nm,22.8s							
R40A	**Maddies Statio**	**71.62**	**343**	P	**P**	**00 10 43.4**	**+0.6**
R40A				IAmb	IAmb	00 10 44.3	
comp=Z,8.7nm,0.8s							

KPKS	**Kokpek**	**1.66 354**	*e*P	**Pg**	**00 01 08.0**	**+0.4**
	2.0nm,0.1s					
KPKS			*e*S	**Sg**	**00 01 30.8**	**+1.7**
	4.8nm,0.3s					
TNSS	**Tian-Shan**	**1.92 310**	*e*P	**Pb**	**00 01 11.8**	**+0.6**
	0.7nm,0.3s					
TNSS			*e*S	**Sg**	**00 01 37.0**	**-0.3**
	3.0nm,0.2s					
KTMS	**Ketmen**	**1.93 32**	*e*P	**Pb**	**00 01 12.3**	**+1.0**
	0.4nm,0.2s					
KTMS			*e*S	**Sg**	**00 01 38.5**	**+0.6**
	2.1nm,0.2s					
KTMS	**Ketmen**	**1.93 32**	Pg	**Pb**	**00 01 12.3**	**+1.0**
KTMS			Lg	Lg	00 01 38.5	
MDOK	**Medeo**	**1.94 314**	*e*P	**Pb**	**00 01 12.2**	**+0.7**
	5.2nm,0.9s					
MDOK			*e*S	**Sg**	**00 01 37.8**	**-0.4**
	6.2nm,0.5s					
KOTS	**Kotyrbulak**	**1.96 317**	*e*P	**Pb**	**00 01 12.9**	**+1.1**
	1.7nm,0.3s					
KOTS			*e*S	**Sg**	**00 01 39.1**	**+0.4**
	10.0nm,0.3s					
KOTS	**Kotyrbulak**	**1.96 317**	Pg	**Pb**	**00 01 12.9**	**+1.1**
	1.7nm,0.3s					
KOTS			Lg	Lg	00 01 39.1	
	10.0nm,0.3s					
ULHL	**Ulahol**	**2.06 283**	⇓*e*P	**Pb**	**00 01 13.8**	**+0.3**
	baz=85					
ULHL			⇓*e*S	**Sg**	**00 01 42.1**	**+0.2**
	baz=85					
NRN	**Naryn**	**2.24 261**	⇓*i*P	**Pb**	**00 01 16.1**	**-0.5**
	baz=63					
NRN			⇓*e*S	**Sb**	**00 01 46.2**	**+1.6**
	baz=63					
MTBS	**Maitube**	**2.27 306**	*e*P	**Pb**	**00 01 18.7**	**+1.6**
	0.5nm,0.1s					
MTBS			*e*S	**Sg**	**00 01 49.0**	**+0.1**
	9.9nm,0.3s					
BLB	**Baldybastay**	**2.30 352**	*e*P	**Pb**	**00 01 17.7**	**0.0**
	1.5nm,0.3s					
BLB			*e*S	**Sb**	**00 01 47.3**	**+1.0**
	8.9nm,0.2s					
BLB	**Baldybastay**	**2.30 352**	Pg	**Pb**	**00 01 17.7**	**0.0**
	1.5nm,0.3s					
BLB			Lg	Lg	00 01 47.3	
	8.9nm,0.2s					
BOOM	**Boomskoye usch**	**2.33 288**	⇑*e*P	**Pb**	**00 01 17.7**	**-0.4**
	baz=90					
BOOM			⇑*e*S	**Sb**	**00 01 48.4**	**+1.3**
	baz=90					
CHKK	**Chushkaly**	**2.49 325**	*e*P	**Pb**	**00 01 21.6**	**+0.8**
	2.2nm,0.2s					
CHKK			*e*S	**Sg**	**00 01 54.5**	**-1.4**
	13nm,0.3s					
CHKK	**Chushkaly**	**2.49 325**	Pg	**Pb**	**00 01 21.6**	**+0.8**
	2.2nm,0.2s					
CHKK			Lg	Lg	00 01 54.5	
	13nm,0.3s					
KST	**Kastek**	**2.52 300**	*e*P	**Pb**	**00 01 22.2**	**+0.9**
	1.2nm,0.5s					
KST			*e*S	**Sg**	**00 01 55.6**	**-1.2**
	7.3nm,0.5s					
KST	**Kastek**	**2.52 300**	Pg	**Pb**	**00 01 22.2**	**+0.9**
	1.2nm,0.5s					
KST			Lg	Lg	00 01 55.6	
	7.3nm,0.5s					
DJR	**Jarkent**	**2.59 14**	*e*P	**Pb**	**00 01 22.6**	**+0.2**
	1.2nm,0.3s					
DJR			*e*S	**Sb**	**00 01 55.9**	**+1.5**
	5.3nm,0.4s					
DJR	**Jarkent**	**2.59 14**	Pg	**Pb**	**00 01 22.6**	**+0.2**
DJR			Lg	Lg	00 01 55.9	
TKM2	**Tokmak 2**	**2.71 295**	⇑*e*P	**Pb**	**00 01 23.2**	**-1.4**
	baz=96					
TKM2			⇑*e*S	**Sb**	**00 01 58.2**	**+0.1**
	baz=96					
TKM2	**Tokmak 2**	**2.71 295**	⇑Pg	**Pg**	**00 01 26.9**	**-0.9**
	0.8nm,0.5s					
TKM2			⇓Lg	Lg	00 02 01.1	
	1.6nm,0.5s					
KRBS	**Karabastau**	**3.05 309**	*e*P	**Pb**	**00 01 30.8**	**+0.4**
	0.7nm,0.4s					
KRBS			*e*S	**Sb**	**00 02 09.7**	**+2.0**
	2.4nm,0.5s					

*IDC **08** 00:16:43.0±1.6, 0°.50N×122°.50E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=173.5km s-min=27.6km az=63.0*
*DJA **08** 00:17:01.4±0.7, 0°N±4°×12°2E±°, h127km±6km, M3.2/6, MLv3.2/6*
ISC 08 00:16:59.5±1.0, 0°.27N±0°.08×122°.22E±0°.07, h150km, n9, σ0§67/13, mb3.4/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.35**	**306**	P	**Pn**	**00 17 20.1**	**-0.1**
MRSI				S	**Sn**	**00 17 35.0**	**-1.0**
GTOI	**Gorontalo**	**0.87**	**65**	P	**Pn**	**00 17 23.2**	**0.0**
GTOI				S	**Sn**	**00 17 40.7**	**-0.5**
APSI	**Ampana**	**1.31**	**206**	P	**Pn**	**00 17 27.6**	**+0.5**
LUWI	**Luwuk**	**1.41**	**157**	P	**Pn**	**00 17 28.6**	**+0.4**
LUWI				S	**Sn**	**00 17 49.7**	**-0.5**
KMSI	**Cibinong**	**1.78**	**80**	P	**Pn**	**00 17 32.6**	**+0.5**
KMSI				S	**Sn**	**00 17 58.2**	**+1.0**
MPSI	**Mapaga**	**2.33**	**272**	P	**Pn**	**00 17 39.4**	**+0.9**
WRA	**Warramunga Arr**	**23.33**	**150**	P	**P**	**00 21 53.8**	**-0.7**
	0.4nm,0.7s,baz=329,slow=11,SNR=5.7						
	0.4nm,0.7s						
SONM	**Songino Array**	**49.34**	**346**	P	**P**	**00 25 33.5**	**-0.1**
	0.5nm,0.6s,baz=158,slow=9.2,SNR=4.4						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**57.98**	**329**	P	**P**	**00 26 36.6**	**+0.2**
	0.3nm,0.3s,baz=126,slow=8.6,SNR=6.3						
	0.3nm,0.3s						

*IDC **08** 00:23:45.8±15.0, 6°.76N×82°.38W, h0km, mb3.4/3, mbtmp3.5/4, ML4.0/1, MS3.1/10, Error ellipse: s-maj=389.5km s-min=152.5km az=16.0*
*UPA **08** 00:23:48.6±1.8, 6°.90N×82°.63W, h10km±15km, MD3.8, MW4.0*
*INET **08** 00:23:50.7±0.4, 6°.95N×82°.73W, h17km±6km, MW3.2*
*UCR **08** 00:24:21.3±1.2, 8°.95N×83°.63W, h32km±4km, MW3.6*
ISC 08 00:23:48.1±1.3, 6°.90N±0°.08×82°.63W±0°.04, h10km, n49, σ1§01/54, mb3.4/3, MS3.1/6, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**1.68**	**352**	*e*P	**Pn**	**00 24 16.8**	**-0.7**
CDITO				*e*S	**Sb**	**00 24 39.0**	**-1.3**
BCO2	**Palmira**	**1.81**	**3**	*e*P	**Pn**	**00 24 19.4**	**0.0**
BCO2				*e*S	**Sb**	**00 24 44.1**	**-0.1**
CACAO	**El Cacao, Vera**	**1.81**	**76**	*e*P	**Pn**	**00 24 18.6**	**-0.7**
CACAO				*e*S	**Sn**	**00 24 40.4**	**-2.0**
BRU2	**Volcan**	**1.88**	**358**	*e*P	**Pn**	**00 24 20.2**	**-0.2**
BRU2				*e*S	**Sn**	**00 24 44.1**	**-0.3**
LNBQ3	**Los Naranjos,**	**1.89**	**6**	*e*P	**Pn**	**00 24 20.3**	**-0.2**
LNBQ3				*e*S	**Sn**	**00 24 43.8**	**-0.7**
STIA3	**Santiago, Vera**	**2.03**	**54**	*e*P	**Pn**	**00 24 22.8**	**+0.4**
STIA3				*e*S	**Sn**	**00 24 46.7**	**-1.0**
CHIT3	**Chitre**	**2.43**	**64**	*e*P	**Pn**	**00 24 27.9**	**0.0**
CHIT3				*e*S	**Sn**	**00 24 57.5**	**-0.1**
EDDO	**Dominical**	**2.64**	**332**	*e*P	**Pn**	**00 24 30.3**	**-0.4**
PNME	**Penonome**	**2.77**	**55**	*e*P	**Pn**	**00 24 34.1**	**+1.5**
PNME				*e*S	**Sb**	**00 25 09.6**	**-2.3**
CDM	**Cerro de Muert**	**2.86**	**337**	*e*P	**Pn**	**00 24 34.0**	**-0.2**
CDM	**Cerro de Muert**	**2.86**	**337**	*e*P	**Pn**	**00 24 34.1**	**-0.2**
CDM				*e*S	**Sn**	**00 25 08.7**	**-0.3**
MRVA	**Moravia de Chi**	**3.01**	**345**	*e*P	**Pn**	**00 24 36.8**	**+0.8**
RIMA	**Rio Macho**	**3.10**	**337**	*e*P	**Pn**	**00 24 37.1**	**-0.2**
LCR2	**La Lucha 2**	**3.13**	**334**	*e*P	**Pn**	**00 24 37.5**	**-0.2**
OCM	**Ochomogo**	**3.25**	**336**	*e*P	**Pn**	**00 24 39.6**	**+0.2**
BATAN	**Batan**	**3.26**	**347**	*e*P	**Pn**	**00 24 42.0**	**+2.7**
BATAN				*e*S	**Sb**	**00 25 24.5**	**-1.3**
JACO	**JACO, Garabito**	**3.40**	**324**	*e*P	**Pn**	**00 24 39.8**	**-1.5**
JACO				*e*S	**Sn**	**00 25 18.7**	**-3.0**
HDC	**Heredia**	**3.41**	**335**	*e*P	**Pn**	**00 24 42.0**	**+0.5**
HDC	**Heredia**	**3.41**	**335**	*e*P	**Pn**	**00 24 42.1**	**+0.6**
HDC				*e*S	**Sn**	**00 25 22.7**	**+0.6**
HDC3	**Heredia 3**	**3.41**	**335**	*e*P	**Pn**	**00 24 42.1**	**+0.5**
HDC3	**Heredia 3**	**3.41**	**335**	*e*P	**Pn**	**00 24 42.0**	**+0.5**
BCIP	**Isla Barro Col**	**3.56**	**51**	*e*P	**Pn**	**00 24 44.4**	**+0.9**
LAFE	**Finca La Fe, P**	**3.66**	**322**	*e*P	**Pn**	**00 24 43.7**	**-1.1**
FORC	**Fortuna**	**4.08**	**330**	*e*P	**Pn**	**00 24 51.3**	**+0.8**
JTS	**Las Juntas de**	**4.08**	**326**	*e*P	**Pn**	**00 24 50.4**	**-0.2**
JTS	**Las Juntas de**	**4.08**	**326**	*e*P	**Pn**	**00 24 50.4**	**-0.2**
JTS				*e*S	**Sn**	**00 25 38.3**	**-0.1**
DUNO	**Dulce Nombre,**	**4.24**	**318**	*e*P	**Pn**	**00 24 51.7**	**-1.1**
ORTG	**Ortega, Santa**	**4.43**	**321**	*e*P	**Pn**	**00 24 54.6**	**-0.9**
PTEN	**Parque Tenorio**	**4.45**	**329**	*e*P	**Pn**	**00 24 56.1**	**+0.4**
CUI	**Cuipilapa**	**4.49**	**326**	*e*P	**Pn**	**00 24 56.4**	**+0.1**
HORNC	**Hornillas**	**4.55**	**327**	*e*P	**Pn**	**00 24 57.2**	**+0.1**
GPS2	**Hotel Rincn d**	**4.68**	**325**	*e*P	**Pn**	**00 24 59.2**	**+0.4**
GPS3	**Bodega del ICE**	**4.69**	**325**	*e*P	**Pn**	**00 24 59.0**	**0.0**
GB1A	**Borinquen Arri**	**4.76**	**325**	*e*P	**Pn**	**00 25 00.4**	**+0.5**
HZTE	**Horizontes, Gu**	**4.79**	**322**	*e*P	**Pn**	**00 25 01.4**	**+1.0**
HZTE	**Horizontes, Gu**	**4.79**	**322**	*e*P	**Pn**	**00 25 01.1**	**+0.8**
ACON	**Acoyapa**	**5.62**	**334**	*e*P	**Pn**	**00 25 12.3**	**+0.5**
ROSC	**El Rosal**	**8.52**	**103**	LR	LR	00 28 31.1	
	comp=Z,72nm,19.1s,baz=248,slow=35						
SDV	**Santo Domingo**	**12.05**	**80**	LR	LR	00 31 28.3	
	comp=Z,72nm,20.4s,baz=260,slow=39						
ATAH	**Atahualpa**	**14.57**	**163**	LR	LR	00 31 45.0	
	comp=Z,36nm,20.4s,baz=322,slow=33						
CMIG	**Matias Romero**	**15.68**	**311**	Pn	**P**	**00 27 32.2**	**-1.1**
	0.5nm,0.3s,baz=136,slow=12,SNR=2.5						
CMIG				LR	LR	00 32 34.8	
	comp=Z,50nm,21.5s,baz=122,slow=33						
	1.1nm,0.3s						
PTGA	**Pitinga**	**23.85**	**108**	LR	LR	00 38 27.4	
	comp=Z,36nm,18.1s,baz=295,slow=37						
LPAZ	**La Paz**	**27.14**	**148**	LR	LR	00 40 49.7	
	comp=Z,63nm,18.8s,baz=290,slow=38						
TXAR	**Lajitas Array**	**29.85**	**321**	P	**P**	**00 29 57.0**	**+1.2**
	0.5nm,0.7s,baz=146,slow=6.6,SNR=3.8						
TXAR				LR	LR	00 43 35.2	
	comp=Z,19nm,18.3s,baz=152,slow=40						
	0.5nm,0.7s						
PFO	**Pinyon Flats O**	**41.06**	**315**	LR	LR	00 49 10.6	
	comp=Z,24nm,19.1s,baz=122,slow=37						
PDAR	**Pinedale Array**	**42.89**	**331**	P	**P**	**00 31 48.3**	**+1.2**
	0.2nm,0.6s,baz=131,slow=11,SNR=2.1						
	0.2nm,0.6s						
ELK	**Elko**	**44.52**	**324**	LR	LR	00 54 09.5	
	comp=Z,21nm,18.0s,baz=144,slow=41						
NVAR	**Mina Array Bea**	**44.98**	**320**	P	**P**	**00 32 05.5**	**+1.5**
	0.5nm,0.7s,baz=127,slow=7.3,SNR=6.0						
	0.5nm,0.7s						
FRB	**Frobisher Bay**	**57.64**	**7**	LR	LR	00 59 39.5	
	comp=Z,44nm,18.4s,baz=196,slow=37						

IDC 08 00:32:23.8±1.7, 6°.35S×129°.08E, h0km, mb3.9/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=60.3km s-min=28.2km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.87**	**22**	Pn	Pn	00 33 52.1	-0.1
	2.3nm,0.3s,baz=232,slow=23,SNR=13						
SIJI				Sn	Sn	00 34 47.2	-13
	6.7nm,0.3s,baz=210,slow=22,SNR=12						
	5.3nm,0.2s						
WRA	**Warramunga Arr**	**14.44**	**160**	Pn	Pn	00 35 48.6	-1.1
	0.2nm,0.3s,baz=338,slow=12,SNR=13						
WRA				Sn	Sn	00 38 15.8	-15
	0.5nm,0.3s,baz=347,slow=21,SNR=11						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.83**	**165**	P	P	00 36 34.0	-0.3
	0.2nm,0.3s,baz=353,slow=10,SNR=8.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**67.19**	**327**	P	P	00 43 19.9	+0.1
	0.5nm,0.4s,baz=116,slow=7.3,SNR=9.8						
	0.5nm,0.4s						

*SOF **08** 00:33:22.9, 40°.99N×22°.73E, h15km, MD4.0*
*BEO **08** 00:33:22.2±0.5, 40°.93N×22°.79E, h5km±1km, ML3.8/13*
*SKO **08** 00:33:22.6, 40°.97N×22°.74E, h15km*
*PDG **08** 00:33:22.8±0.6, 40°.98N×22°.70E, h13km, ML3.7/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*IDC **08** 00:33:22.1±1.0, 40°.90N×22°.71E, h0km, mb3.5/7, mbtmp3.6/11, ML3.8/5, MS2.7/5, Error ellipse: s-maj=14.7km s-min=13.8km az=6.0*
*ISK **08** 00:33:22.9, 40°.97N×22°.75E, h9km, ML3.8/15*
*ATH **08** 00:33:23.0, 40°.97N×22°.72E, h13km±1km, ML3.6/9, Error ellipse: s-maj=2.1km s-min=1.0km az=349.0*
*THE **08** 00:33:23.5, 40°.96N×22°.78E, h7km, ML3.6/16, Error ellipse: s-maj=0.8km s-min=0.4km az=51.0*
*NEIC **08** 00:33:24.1±1.8, 41°.03N±0°.04×22°.67E±0°.04, h10km±2km, mb4.0/8, ML3.6(THE), Error ellipse: s-maj=7.6km s-min=3.0km az=144.0*
*PRU **08** 00:33:32.9±0.0, 41°.65N×22°.49E, h0km, M4.1*
*DDA **08** 00:33:33.0±0.0, 41°.05N×23°.55E, h51km, MW3.9*
ISC 08 00:33:23.3±0.8, 40°.97N±0°.01×22°.74E±0°.01, h10km±6km, n311, σ1§37/380, mb3.8/7, MS2.5/3, 35C-42D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.22**	**32**	PG	**Pg**	**00 33 27.9**	**0.0**
KNT	**Kendrikon**	**0.22**	**32**	P	**Pg**	**00 33 28.1**	**+0.2**
KNT				S	**Sg**	**00 33 31.3**	**+0.2**
	36μm,0.3s						
KNT	**Kendrikon**	**0.22**	**32**	*i* Pg	**Pg**	**00 33 28.2**	**+0.2**
KNT				*i* Sg	**Sg**	**00 33 31.4**	**+0.2**
KNT	**Kendrikon**	**0.22**	**32**	P	**Pg**	**00 33 28.2**	**+0.2**
KNT				S	**Sg**	**00 33 30.6**	**-0.5**
GRG	**Griva**	**0.26**	**267**	PG	**Pg**	**00 33 28.7**	**+0.1**
GRG				SG	**Sg**	**00 33 32.9**	**+0.8**
GRG	**Griva**	**0.26**	**267**	P	**Pg**	**00 33 28.5**	**-0.1**
GRG	**Griva**	**0.26**	**267**	*i* Pg	**Pg**	**00 33 28.6**	**+0.1**
GRG	**Griva**	**0.26**	**267**	P	**Pg**	**00 33 28.6**	**-0.1**
VAY	**Valandovo**	**0.37**	**340**	*e*Pg	**Pb**	**00 33 31.0**	**-1.0**
VAY				*e*Sg	**Sg**	**00 33 36.1**	**+0.5**
VAY	**Valandovo**	**0.37**	**340**	*i* Pg	**Pb**	**00 33 30.9**	**-1.0**
VAY				*i* Sg	**Sb**	**00 33 36.4**	**-1.4**
VAY				*e*Lg	Lg	00 33 36.4	
	comp=E,59μm,0.3s						
VAY				*e*Lg	Lg	00 33 36.8	
	comp=N,25μm,0.3s						
THE	**Thessaloniki**	**0.38**	**154**	P	**Pg**	**00 33 30.7**	**-0.1**
THE				S	**Sg**	**00 33 35.8**	**0.0**
	comp=N,15μm,0.4s						
THE	**Thessaloniki**	**0.38**	**154**	*i* Pg	**Pg**	**00 33 30.7**	**-0.1**
THE				*i* Sg	**Sg**	**00 33 36.1**	**+0.3**
HORT	**Hortiatis**	**0.46**	**144**	PG	**Pg**	**00 33 32.4**	**+0.1**
HORT				SG	**Sg**	**00 33 39.2**	**+0.8**
HORT	**Hortiatis**	**0.46**	**144**	P	**Pg**	**00 33 32.1**	**-0.2**
HORT				S	**Sg**	**00 33 38.3**	**-0.1**
	comp=N,9μm,0.5s						
HORT	**Hortiatis**	**0.46**	**144**	P	**Pg**	**00 33 32.2**	**-0.2**
HORT				S	**Sg**	**00 33 38.6**	**+0.2**
HORT				AML	AML	00 33 41.3	
	comp=N,18994μm,0.4s						
HORT				AML	AML	00 33 41.4	
	comp=E,13707μm,0.4s						
SOH	**Sokhos**	**0.49**	**108**	P	**Pg**	**00 33 32.9**	**+0.2**
SOH				S	**Sg**	**00 33 39.8**	**+0.6**
	comp=E,13μm,0.3s						
SOH	**Sokhos**	**0.49**	**108**	*i* Pg	**Pg**	**00 33 33.0**	**+0.2**
SOH				*i* Sg	**Sb**	**00 33 40.2**	**-0.9**
SOH	**Sokhos**	**0.49**	**108**	P	**Pg**	**00 33 33.0**	**+0.2**
SOH				S	**Sg**	**00 33 39.7**	**+0.4**
SOH				AML	AML	00 33 44.0	
	comp=N,33700μm,0.3s						
SOH				AML	AML	00 33 45.8	
	comp=E,31897μm,0.4s						
SRS	**Serrai**	**0.66**	**77**	P	**Pg**	**00 33 35.9**	**-0.1**
SRS				S	**Sg**	**00 33 44.7**	**0.0**
	comp=E,4μm,0.5s						
SRS	**Serrai**	**0.66**	**77**	*i* Pg	**Pg**	**00 33 36.0**	**-0.1**
SRS				*i* Sg	**Sg**	**00 33 45.3**	**+0.6**
SRS	**Serrai**	**0.66**	**77**	P	**Pg**	**00 33 35.9**	**-0.1**
SRS				S	**Sg**	**00 33 45.3**	**+0.6**
SRS				AML	AML	00 33 50.5	
	comp=E,7829μm,0.6s						
SRS				AML	AML	00 33 54.7	
	comp=N,8517μm,0.6s						
STIP	**Stip**	**0.83**	**330**	*i* Pg	**Pg**	**00 33 38.4**	**-1.0**
STIP				*i* Sg	**Sg**	**00 33 49.2**	**-1.1**
STIP				*e*Lg	Lg	00 33 49.8	
	comp=N,3μm,0.3s						
STIP				*e*Lg	Lg	00 33 50.2	
	comp=Z,2μm,0.3s						
LIT	**Litokhoron**	**0.89**	**193**		**Pg**	**00 33 40.0**	**-0.5**
LIT					**Sn**	**00 33 54.4**	**-0.4**
LIT	**Litokhoron**	**0.89**	**193**	P	**Pg**	**00 33 39.9**	**-0.6**
LIT				S	**Sb**	**00 33 52.8**	**+0.1**
	comp=Z,3μm,0.4s						
LIT	**Litokhoron**	**0.89**	**193**	*i* Pg	**Pg**	**00 33 40.0**	**-0.5**
LIT				*i* Sg	**Sn**	**00 33 53.9**	**-0.9**
LIT	**Litokhoron**	**0.89**	**193**	P	**Pg**	**00 33 40.0**	**-0.5**
LIT				AML	AML	00 33 56.2	
	comp=N,7257μm,0.3s						
LIT				AML	AML	00 33 58.0	
	comp=E,6289μm,0.5s						
NVR	**Nevrokopi**	**0.93**	**66**	P	**Pg**	**00 33 40.7**	**-0.4**
NVR				S	**Sg**	**00 33 53.1**	**-0.1**
	comp=E,4μm,0.4s						
NVR	**Nevrokopi**	**0.93**	**66**	P	**Pg**	**00 33 40.9**	**-0.2**
NVR				S	**Sg**	**00 33 53.3**	**+0.1**
NVR				AML	AML	00 34 00.1	
	comp=N,5654μm,0.4s						
NVR				AML	AML	00 34 00.8	
	comp=E,8123μm,0.3s						
KKB	**Krupnik**	**0.93**	**16**	P	**Pg**	**00 33 40.5**	**-0.7**
KOKK	**Kokkinochori,**	**0.96**	**99**	P	**Pg**	**00 33 41.0**	**-0.8**
KOKK				S	**Sb**	**00 33 54.6**	**-0.2**
	comp=E,2μm,0.5s						
KOKK	**Kokkinochori,**	**0.96**	**99**	P	**Pg**	**00 33 41.3**	**-0.5**
KOKK				S	**Sg**	**00 33 54.5**	**+0.1**
KOKK				AML	AML	00 33 57.1	
	comp=N,11276μm,0.6s						
KOKK				AML	AML	00 34 02.2	
	comp=E,7494μm,0.4s						
MMB	**Musomiste**	**0.96**	**50**	P	**Pg**	**00 33 41.4**	**-0.5**
KZN	**Kozani**	**0.99**	**228**	P	**Pg**	**00 33 41.0**	**-1.4**
KZN				S	**Sn**	**00 33 57.3**	**-0.1**
	comp=E,2μm,0.4s						
KZN	**Kozani**	**0.99**	**228**	P	**Pg**	**00 33 41.2**	**-1.3**
KZN				S	**Sg**	**00 33 54.0**	**-1.3**
KZN				AML	AML	00 33 59.9	
	comp=N,5209μm,0.4s						
KZN				AML	AML	00 34 00.9	
	comp=E,9355μm,0.4s						
OUR	**Ouranopolis**	**1.14**	**124**	PN	**Pn**	**00 33 45.0**	**-0.2**
KVLA	**Kavala**	**1.25**	**91**	P	**Pn**	**00 33 46.3**	**-0.4**
KVLA				AML	AML	00 34 06.5	
	comp=E,5975μm,0.3s						
KVLA				AML	AML	00 34 08.8	
	comp=N,4639μm,0.4s						
PAIG	**Paliouri**	**1.27**	**145**	P	**Pn**	**00 33 45.9**	**-1.1**
PAIG				S	**Sn**	**00 34 04.3**	**+0.3**
	comp=N,3μm,0.5s						
PAIG	**Paliouri**	**1.27**	**145**	P	**Pn**	**00 33 46.3**	**-0.7**
PAIG				AML	AML	00 34 08.5	
	comp=E,4868μm,0.4s						
PAIG				AML	AML	00 34 11.1	
	comp=N,7873μm,0.6s						
TYRN	**Tyrnavos**	**1.32**	**197**	P	**Pn**	**00 33 47.3**	**-0.4**
TYRN				S	**Sg**	**00 34 05.8**	**+0.1**
	comp=N,10μm,0.6s						
KAVA	**Kavala**	**1.34**	**88**	P	**Pn**	**00 33 47.8**	**-0.2**
KAVA				S	**Sn**	**00 34 05.8**	**-0.1**
	comp=N,5μm,0.4s						
KAVA	**Kavala**	**1.34**	**88**	P	**Pn**	**00 33 48.0**	**0.0**
SKO	**Skopje**	**1.40**	**316**	*e*Pg	**Pn**	**00 33 48.6**	**-0.3**
SKO				*e*Sg	**Sg**	**00 34 07.5**	**-0.8**
SKO	**Skopje**	**1.40**	**316**	*i* Pg	**Pn**	**00 33 48.5**	**-0.3**
SKO				*i* Sg	**Sg**	**00 34 08.3**	**0.0**
SKO				*e*Lg	Lg	00 34 08.7	
	comp=N,67nm,0.4s						
SKO				*e*Lg	Lg	00 34 11.7	
	comp=E,67nm,0.3s						
NEST	**Nestorio**	**1.40**	**247**	P	**Pb**	**00 33 49.0**	**-0.6**
KPRO	**Kipourio**	**1.46**	**226**	P	**Pg**	**00 33 50.5**	**-0.9**
KPRO				S	**Sg**	**00 34 10.6**	**+0.3**
	comp=E,2μm,0.6s						
OHR	**Ohrid**	**1.48**	**276**	*e*Pg	**Pb**	**00 33 50.2**	**-0.6**
OHR				*e*Sg	**Sg**	**00 34 11.0**	**+0.2**
OHR	**Ohrid**	**1.48**	**276**	*i* Pn	**Pb**	**00 33 50.6**	**-0.2**
OHR				*i* Sn	**Sg**	**00 34 11.0**	**+0.2**
OHR				*e*Lg	Lg	00 34 13.8	
	comp=N,477nm,0.6s						
OHR				*e*Lg	Lg	00 34 15.6	
	comp=E,764nm,0.8s						
KBN	**Korca**	**1.52**	**257**		**Pb**	**00 33 51.0**	**-0.6**
KBN	**Korca**	**1.52**	**257**	P	**Pb**	**00 33 50.8**	**-0.8**
BOSS	**Bosilegrad**	**1.54**	**353**	*e*Pg	**Pn**	**00 33 50.9**	**+0.2**
BOSS				*e*Sg	**Sb**	**00 34 11.6**	**+0.3**
XOR	**Xorichti**	**1.64**	**168**	P	**Pn**	**00 33 51.5**	**-0.7**
XOR				S	**Sn**	**00 34 12.7**	**-0.6**
	comp=E,2μm,0.5s						
RZN	**Rozhen**	**1.65**	**64**	P	**Pb**	**00 33 53.3**	**-0.5**
VTS	**Vitosha**	**1.69**	**12**	⇑P	**Pg**	**00 33 54.9**	**-0.7**
VTS	**Vitosha**	**1.69**	**12**	Pn	**Pn**	**00 33 52.4**	**-0.5**
VTS	**Vitosha**	**1.69**	**12**	*i* Pn	**Pn**	**00 33 52.5**	**-0.4**
VTS	**Vitosha**	**1.69**	**12**	P	**Pn**	**00 33 52.7**	**-0.2**
NEO	**Neokhori**	**1.70**	**167**	P	**Pn**	**00 33 52.5**	**-0.5**
NEO				S	**Sn**	**00 34 14.6**	**-0.3**
	comp=E,2μm,0.5s						
NEO	**Neokhori**	**1.70**	**167**	P	**Pn**	**00 33 52.7**	**-0.4**
LSK	**Leskovik**	**1.83**	**244**	P	**Pb**	**00 33 55.4**	**-1.4**
PLD	**Plovdiv**	**1.86**	**52**	PN	**Pn**	**00 33 55.9**	**+0.8**
PLD	**Plovdiv**	**1.86**	**52**	*e*Pg	**Pb**	**00 33 56.6**	**-0.7**
PLD				*e*Sg	**Sg**	**00 34 21.7**	**-1.3**
PLD	**Plovdiv**	**1.86**	**52**	*i* Pn	**Pb**	**00 33 56.3**	**-1.0**
PLD	**Plovdiv**	**1.86**	**52**	P	**Pb**	**00

TTG				*i* Sn	Sn	00 34 47.8	+1.3
KOME	**Kolasin**	**3.05**	**309**	⇓*i*Pn	Pn	00 34 11.7	0.0
KOME				*i* Sn	Sn	00 34 49.3	+1.0
BAIL	**Bailesti**	**3.08**	**8**	⇑P	Pn	00 34 13.3	+1.4
BAIL				⇑S	Sg	00 35 07.6	+5.5
SJES	**Sjenica**	**3.08**	**319**	*e*Pn	Pn	00 34 12.6	+0.6
SJES				*e*Sn	Sn	00 34 49.8	+0.9
EDRB	**Edirne**	**3.13**	**72**	PN	Pn	00 34 12.9	+0.2
EDRB	**Edirne**	**3.13**	**72**	P	Pn	00 34 12.7	0.0
BAYC	**CANAKKALE_Bayr**	**3.16**	**112**	P	Pn	00 34 14.6	+1.7
BUM	**Brajici-Budva**	**3.18**	**296**	⇓*i*Pn	Pn	00 34 13.4	+0.1
BUM				*i* Sn	Sn	00 34 52.2	+1.0
IVAS	**Ivanjica**	**3.23**	**324**	*e*Pn	Pn	00 34 13.8	-0.3
VLAD	**Vladila**	**3.26**	**22**	⇓P	Pb	00 34 17.6	-3.6
CEME	**Cevo**	**3.27**	**300**	⇑*i*Pn	Pn	00 34 14.6	+0.1
CEME				*i* Sn	Sn	00 34 54.5	+1.1
GRUS	**Gruza**	**3.28**	**333**	*e*Pn	Pn	00 34 14.2	-0.4
GRUS				*e*Sn	Sn	00 34 55.0	+1.3
PUNG	**Punghina**	**3.31**	**2**	⇑P	Pn	00 34 16.0	+1.0
NKME	**Niksic**	**3.35**	**304**	⇓*i*Pn	Pn	00 34 15.8	+0.1
NKME				*i* Sn	Sn	00 34 56.5	+1.0
KIRK	**Kırklareli**	**3.38**	**75**	P	Pn	00 34 16.1	+0.1
RKY	**Sarkoy-Tekirda**	**3.38**	**93**	PN	Pn	00 34 17.2	+1.1
SART	**Tekirdag**	**3.38**	**93**	P	Pn	00 34 17.6	+1.5
SCTE	**Santa Cesarea**	**3.38**	**256**	Pn	Pn	00 34 16.7	+0.7
PLE	**Pljevlja**	**3.43**	**314**	⇓*i*Pn	Pn	00 34 16.9	0.0
PLE				*i* Sn	Sn	00 34 58.5	+0.9
SVIS	**Svilajnac**	**3.48**	**342**	*e*Pn	Pn	00 34 17.1	-0.3
SVIS				*e*Sn	Sn	00 34 58.7	+0.1
HCY	**Herceg Novi**	**3.51**	**296**	*e*Pn	Pn	00 34 19.0	+1.2
HCY	**Herceg Novi**	**3.51**	**296**	⇑*i*Pn	Pn	00 34 18.0	+0.2
HCY				*i* Sn	Sn	00 35 00.2	+0.9
KUBS	**Kucevo**	**3.53**	**347**	*e*Pn	Pn	00 34 16.8	-1.3
KUBS				*e*Sn	Sn	00 35 00.2	+0.4
UPM	**Unac-Piva**	**3.62**	**309**	*e*Pn	Pn	00 34 20.1	+0.5
UPM	**Unac-Piva**	**3.62**	**309**	⇓*i*Pn	Pn	00 34 19.6	0.0
UPM				*i* Sn	Sn	00 35 03.1	+0.7
BUHA	**Balikesir, Bur**	**3.63**	**112**	P	Pn	00 34 21.5	+2.1
ARMN	**Kirklareli, Me**	**3.63**	**74**	P	Pn	00 34 20.2	+0.7
RUDO	**Rudo**	**3.64**	**318**	*e*Pn	Pn	00 34 18.7	-0.9
COPA	**Copaceanca**	**3.65**	**29**	⇑P	Pn	00 34 23.2	+3.5
TRUS	**Trudelj**	**3.68**	**333**	*e*Pn	Pn	00 34 19.9	-0.3
BRY	**Bratogost**	**3.68**	**303**	*e*Pn	Pn	00 34 21.9	+1.6
BRY	**Bratogost**	**3.68**	**303**	⇓*i*Pn	Pn	00 34 20.4	+0.1
BRY				*i* Sn	Sn	00 35 04.5	+0.7
DJES	**Djerdap**	**3.69**	**358**	⇑P	Pn	00 34 19.9	-0.5
MRMT	**Marmara Adasi**	**3.70**	**94**	PN	Pn	00 34 21.9	+1.4
SRE	**Strehaia**	**3.70**	**5**	⇑P	Pn	00 34 21.7	+1.2
SRE				⇓S	Sg	00 35 21.5	-0.7
DIVS	**Divibare**	**3.73**	**328**	Pn	Pn	00 34 20.7	-0.2
DIVS	**Divibare**	**3.73**	**328**	⇓*i*Pn	Pn	00 34 20.3	-0.6
DIVS	**Divibare**	**3.73**	**328**	*e*Pn	Pn	00 34 20.6	-0.3
DIVS				*e*Sn	Sn	00 35 05.1	+0.2
BBLS	**Lazići**	**3.80**	**321**	⇓*i*Pn	Pn	00 34 21.4	-0.5
BBLS	**Lazići**	**3.80**	**321**	*e*Pn	Pn	00 34 21.7	-0.2
RAZG	**Razgrad**	**3.81**	**46**	⇑P	Pn	00 34 25.6	+3.6
ITM	**Ithomi**	**3.84**	**190**	Pn	Pn	00 34 24.8	+2.4
MDVR	**Moldovita**	**3.88**	**349**	⇑P	Pn	00 34 19.9	-3.1
MDVR				⇑S	Sb	00 35 21.2	+2.3
VIZE	**Kirklareli, Vi**	**3.89**	**79**	P	Pn	00 34 24.1	+1.1
HERR	**Herculane**	**3.91**	**357**	⇓P	Pn	00 34 22.6	-0.8
HERR				⇑S	Sg	00 35 25.1	-3.9
HUMR	**Humele**	**3.92**	**24**	⇓P	Pn	00 34 26.8	+3.4
HUMR				⇑S	Sg	00 35 29.8	+0.8
SGRR	**Singureni**	**4.03**	**35**	⇓P	Pn	00 34 28.0	+3.1
HAPS	**Han Pijesak,BI**	**4.19**	**319**	*e*Pn	Pn	00 34 27.6	+0.3
INCR	**INCERC-Sediu C**	**4.29**	**35**	⇓P	Pn	00 34 31.4	+2.9
TEKS	**Tekeris**	**4.29**	**328**	*e*Pn	Pn	00 34 26.0	-2.5
TEKS	**Tekeris**	**4.29**	**328**	*e*Pn	Pn	00 34 27.1	-1.4
GZR	**Gura Zlata**	**4.42**	**0**	⇑P	Pn	00 34 29.7	-0.6
SULR		**4.52**	**34**	⇑P	Pn	00 34 34.3	+2.7
SULR				⇓S	Sg	00 35 46.7	-1.5
LOT	**Lotru**	**4.54**	**9**	⇓P	Pn	00 34 33.5	+1.5
BANR	**Banloc**	**4.56**	**346**	⇑P	Pn	00 34 28.8	-3.5
BLJ	**Bijeljina**	**4.58**	**327**	*e*Pn	Pn	00 34 30.6	-2.0
RASA	**Rasa**	**4.59**	**44**	⇑P	Pn	00 34 34.6	+2.0
RASA				⇓S	Sg	00 35 49.0	-1.7
LEHL	**Lehliu**	**4.61**	**39**	⇓P	Pn	00 34 35.9	+3.0
FRGS	**Fruska Gora**	**4.70**	**334**	⇑P	Pn	00 34 27.6	-6.7
FRGS	**Fruska Gora**	**4.70**	**334**	⇓*i*Pn	Pn	00 34 33.0	-1.2
FRGS	**Fruska Gora**	**4.70**	**334**	*e*Pn	Pn	00 34 33.5	-0.7
BZS	**Buzias**	**4.71**	**350**	⇑P	Pn	00 34 32.7	-1.7
BZS	**Buzias**	**4.71**	**350**	*e*Pn	Pn	00 34 33.1	-1.3
SECR		**4.74**	**30**	⇓P	Pn	00 34 37.9	+3.2
VOIR		**4.77**	**20**	⇑P	Pn	00 34 36.4	+1.1
ICOR	**Ion Corvin**	**4.88**	**48**	⇓P	Pn	00 34 39.1	+2.5
DEMI	**Demirci**	**4.97**	**111**	P	Pn	00 34 40.9	+2.9
ISR	**Istrita**	**4.99**	**33**	⇓P	Pn	00 34 40.0	+1.7
SANT	**Santorini**	**5.06**	**154**	Pn	Pn	00 34 40.1	+0.9
MLR	**Muntele Rosu**	**5.09**	**26**	⇓P	Pn	00 34 42.0	+2.4
MLR	**Muntele Rosu**	**5.09**	**26**	Pn	Pn	00 34 42.5	+2.9
	comp=E,11nm,0.3s,baz=254,slow=12,SNR=41						
MLR				Lg	Lg	00 36 08.2	
	comp=E,4.2nm,0.3s,baz=98,slow=16,SNR=5.3						
MLR	**Muntele Rosu**	**5.09**	**26**	Pn	Pn	00 34 41.5	+1.9
SRKY	**Kupres RS**	**5.15**	**309**	*e*Pn	Pn	00 34 39.0	-1.5
TLBR	**Topalu**	**5.29**	**46**	⇑P	Pn	00 34 45.5	+3.3
SGRT	**San Giovanni R**	**5.32**	**281**	Pn	Pn	00 34 42.2	-0.6
HARR	**Harsova**	**5.33**	**44**	⇑P	Pn	00 34 46.1	+3.4
DOPR	**Dopca**	**5.35**	**20**	⇑P	Pn	00 34 45.4	+2.3
SIRR	**Siria**	**5.35**	**352**	⇓P	Pn	00 34 40.3	-2.9
MGRS	**Mrkonjic Grad**	**5.41**	**311**	*e*Pn	Pn	00 34 45.1	+1.2
TIRR	**Tirgusor**	**5.44**	**48**	Pn	Pn	00 34 45.9	+1.6
COVR	**Voineasa-Covas**	**5.49**	**26**	⇑P	Pn	00 34 47.2	+2.2
BLY	**Banja Luka**	**5.56**	**315**	⇓*i*Pn	Pn	00 34 46.6	+0.6
AMBH	**Ambrzfalva**	**5.57**	**345**	⇓P	Pn	00 34 41.7	-4.4
AMBH	**Ambrzfalva**	**5.57**	**345**	P	Pn	00 34 48.4	+2.3
OZUR		**5.58**	**22**	⇓P	Pn	00 34 49.4	+3.1
A052A	**Srbac**	**5.63**	**319**	*e*Pn	Pn	00 34 47.4	+0.4
PLOR	**Plostina**	**5.65**	**29**	⇓P	Pn	00 34 49.1	+1.9
VRI	**Vrincioaia**	**5.69**	**29**	⇓P	Pn	00 34 49.8	+2.0
TPGR	**Topolog**	**5.70**	**45**	⇓P	Pn	00 34 51.1	+3.3
ODBI	**Odobesti**	**5.73**	**32**	⇓P	Pn	00 34 51.8	+3.6
A050A	**Klekovaca**	**5.76**	**310**	*e*Pn	Pn	00 34 50.3	+1.4
CFR	**Carcaliu**	**5.77**	**41**	⇓P	Pn	00 34 52.2	+3.4
CJR	**Cluj-Napoca**	**5.77**	**6**	⇑P	Pn	00 34 50.4	+1.5
DRGR		**5.82**	**360**	⇓P	Pn	00 34 48.4	-1.2
DRGR		**5.82**	**360**	*e*Pn	Pn	00 34 48.4	-1.2
A051A	**Mrakovica**	**5.88**	**315**	*e*Pn	Pn	00 34 51.2	+0.7
IDI	**Anoyia**	**5.92**	**163**	Pn	Pn	00 34 52.4	+1.4
	comp=E,1.3nm,0.3s,baz=1.3,slow=11,SNR=11						
	comp=E,6.2nm,0.5s						
BORA	**Eskisehir**	**5.98**	**98**		Pn	00 34 53.1	+1.2
MORH	**Mrgy, Hungar**	**6.03**	**332**	⇑P	Pn	00 34 44.3	-8.0
MORH	**Mrgy, Hungar**	**6.03**	**332**	P	Pn	00 34 52.0	-0.3
MORH				S	Sn	00 36 02.5	+1.1
JOSR	**Joseni**	**6.07**	**18**	⇑P	Pn	00 34 54.0	+0.9
TLCR		**6.12**	**45**	⇑P	Pn	00 34 56.1	+2.4
KOVH	**Kovagotottos**	**6.13**	**328**	P	Pn	00 34 54.0	+0.2
PAOL	**Paolisi**	**6.19**	**273**	Pn	Pn	00 34 55.2	+0.6
TESR	**Tescani**	**6.22**	**26**	⇓P	Pn	00 34 59.0	+3.9
ARCR	**ARCALIA**	**6.22**	**10**	⇓P	Pn	00 34 57.3	+2.3
ARG	**Arkhangelos**	**6.35**	**137**	Pn	Pn	00 34 58.8	+1.9
KARP	**Karpathos**	**6.43**	**146**	Pn	Pn	00 34 58.2	+0.2
BIZ	**Bicaz**	**6.44**	**21**	⇓P	Pn	00 35 01.4	+3.3
LTVH	**Ltavrtes, Hu**	**6.44**	**355**	P	Pn	00 34 59.8	+1.7
INTR	**Introdacqua**	**6.72**	**282**		Pn	00 35 01.8	-0.2
LEOM	**Leova**	**6.79**	**34**	⇓P	Pn	00 35 05.2	+2.3
BURAR	**Bucovina Array**	**6.87**	**14**	⇓P	Pn	00 35 06.0	+1.9
BURAR	**Bucovina Array**	**6.87**	**14**	Pn	Pn	00 35 05.6	+1.5
TIH	**Tihany**	**6.88**	**331**	P	Pn	00 35 04.5	+0.4
BUR08	**Bucovina Ar. S**	**6.90**	**14**	Pn	Pn	00 35 05.2	+0.7
BEHE	**Becsehely**	**6.99**	**324**	P	Pn	00 35 06.9	+1.2
ELL	**Elmali**	**7.00**	**125**	Pn	Pn	00 35 07.6	+1.7
BUD	**Budapest**	**7.04**	**339**	P	Pn	00 35 06.2	0.0
CAMP	**Campotosto**	**7.15**	**286**	Pn	Pn	00 35 07.9	-0.1
CSKK	**Cskako**	**7.15**	**335**	P	Pn	00 35 08.3	+0.4
AKAS	**Kas**	**7.16**	**129**	Pn	Pn	00 35 10.0	+1.9
TRPA	**Tarpa**	**7.16**	**359**	⇑P	Pn	00 35 07.0	-0.9
TRPA	**Tarpa**	**7.16**	**359**	P	Pn	00 35 09.8	+1.9
PSZ	**Piszkesteto**	**7.24**	**345**	⇓P	Pn	00 35 04.2	-4.8
PSZ	**Piszkesteto**	**7.24**	**345**	Pn	Pn	00 35 08.5	-0.6
PSZ	**Piszkesteto**	**7.24**	**345**	P	Pn	00 35 09.8	+0.7
MPLH	**Magyarpolny**	**7.24**	**331**	P	Pn	00 35 09.9	+0.9
MPLH				S	Sn	00 36 32.1	+0.8
MILM	**Milestii Mici**	**7.38**	**34**	⇑P	Pn	00 35 14.9	+4.0
NRCA	**Norcia**	**7.42**	**288**		Pn	00 35 11.5	-0.1
FDMO	**Fiordimonte**	**7.48**	**289**	Pn	Pn	00 35 12.2	-0.2
RAFF	**Raffo Rosso**	**7.51**	**243**	Pn	Pn	00 35 11.8	-1.0
EGYH	**Egyhazaskeszo**	**7.52**	**331**	P	Pn	00 35 13.8	+0.9
EGYH				S	Sn	00 36 39.4	+1.2
GROS	**Grobnik**	**7.59**	**319**	*i* Pn	Pn	00 35 13.6	-0.3
CEY	**Cerknica**	**7.71**	**311**	*e*Pn	Pn	00 35 16.2	+0.7
CESX	**Cesi**	**7.77**	**286**	Pn	Pn	00 35 16.4	+0.1
PERS	**Pernice**	**7.90**	**318**	*i* Pn	Pn	00 35 18.3	+0.2
MURB	**Monte Urbino**	**7.93**	**290**		Pn	00 35 19.0	+0.4
SOKA	**Soboth**	**7.97**	**318**	*e*Pn	Pn	00 35 19.6	+0.4
	comp=E,3.6nm,0.3s,SNR=12						
SOKA				*i* Sn	Sn	00 36 50.3	+0.9
	comp=E,1.6nm,0.5s						
OBKA	**Obir**	**8.11**	**316**	*e*Pn	Pn	00 35 21.1	0.0
OBKA	**Obir**	**8.11**	**316**	*i* Pn	Pn	00 35 22.1	+1.1
	comp=E,4.8nm,0.3s,SNR=12						
ARSA	**Arzberg**	**8.14**	**323**	*e*Pn	Pn	00 35 22.4	+0.9
	comp=E,4.7nm,0.3s,SNR=4.0						
ARSA				*e*Sn	Sn	00 36 52.9	-0.6
	comp=E,6.0nm,0.5s						
BRTR	**Keskin Array B**	**8.41**	**95**	Pn	Pn	00 35 26.4	+1.1
	comp=E,0.1nm,0.3s,baz=276,slow=14,SNR=4.9						
	comp=E,0.4nm,0.4s						
BRTR	**Keskin Array B**	**8.41**	**95**	Pn	Pn	00 35 28.2	+2.9
CONA	**Conrad Observa**	**8.52**	**327**	*i* Pn	Pn	00 35 27.7	+1.1
	comp=E,0.7nm,0.2s,SNR=4.9						
CONA				*e*Sn	Sn	00 37 03.0	+0.2
	comp=E,3.7nm,0.7s						
MYKA	**Terra Mystica**	**8.67**	**314**	*i* Pn	Pn	00 35 30.2	+1.4
	comp=E,3.4nm,0.5s						
OSSC	**Osservatorio P**	**8.90**	**290**	Pn	Pn	00 35 32.2	+0.3
STAL	**STALIGIAL**	**8.99**	**309**		Pn	00 35 32.9	-0.2
CLUD	**Cludinico**	**9.00**	**311**		Pn	00 35 32.9	-0.3
CASP	**Castiglione de**	**9.05**	**285**	Pn	Pn	00 35 31.4	-2.4
KBA	**Koelnbreinsper**	**9.11**	**315**	*i* Pn	Pn	00 35 36.9	+2.0
	comp=E,1.4nm,0.3s						
MOA	**Molln**	**9.16**	**321**	*e*Pn	Pn	00 35 36.8	+1.3
	comp=E,1.6nm,0.3s						
MOA				*i* Sn	Sn	00 37 18.3	-0.3
	comp=E,2.3nm,0.3s						
TEOL	**Teolo**	**9.20**	**302**	Pn	Pn	00 35 35.3	-0.6
ZCCA	**Zocca**	**9.30**	**295**	Pn	Pn	00 35 37.0	-0.3
ABTA	**Abfaltersbach**	**9.37**	**311**	*i* Pn	Pn	00 35 38.8	+0.4
	comp=E,6.4nm,0.6s,SNR=12						
ABTA				*e*Sn	Sn	00 37 27.0	+3.2
	comp=E,3.7nm,0.9s						
VRAC	**Vranov**	**9.40**	**335**	LR	LR	00 38 59.6	
	comp=E,33nm,18.7s,baz=234,slow=36						
CTI	**Castel Tesino**	**9.52**	**306**	Pn	Pn	00 35 39.9	-0.5
PRMA	**PARMA**	**9.88**	**297**	Pn	Pn	00 35 45.1	-0.2
SALO	**Salr**	**10.04**	**302**	Pn	Pn	00 35 45.6	-1.9
GEC2	**GERESS Array S**	**10.15**	**324**	Pn	Pn	00 35 48.0	-1.0
GERES	**GERESS Array B**	**10.15**	**324**	Pn	Pn	00 35 51.1	+2.1
	comp=E,0.3nm,0.3s,baz=151,slow=13,SNR=11						
	comp=E,0.7nm,0.4s						
GERES	**GERESS Array B**	**10.15**	**324**	Pn	Pn	00 35 49.7	+0.7
WTTA	**Wattenberg**	**10.16**	**312**	*i* Pn	Pn	00 35 50.6	+1.4
	comp=E,2.7nm,0.3s						
WATA	**Walderalm**	**10.23**	**312**	*e*Pn	Pn	00 35 50.9	+0.7
	comp=E,10nm,0.7s						
MSSA	**Maissana**	**10.30**	**293**	Pn	Pn	00 35 50.2	-0.8
SQTA	**Sankt Quirin**	**10.38**	**311**	*i* Pn	Pn	00 35 53.1	+0.9
	comp=E,5.0nm,0.7s,SNR=7.7						
KHC	**Kasperske Hory**	**10.41**	**325**	Pn	Pn	00 35 52.0	-0.5
KHC	**Kasperske Hory**	**10.41**	**325**	*e*PN	Pn	00 35 52.7	+0.1
KHC				*ex*	x	00 36 02.0	
MOTA	**Moosalm**	**10.51**	**311**	*i* Pn	Pn	00 35 55.1	+1.1
	comp=E,11nm,0.8s,SNR=15						
FETA	**Feichten**	**10.55**	**309**	*e*Pn	Pn	00 35 55.8	+1.2
	comp=E,3.9nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**10.64**	**306**	Pn	Pn	00 35 56.2	+0.3
AKASG	**Malin Array Be**	**10.72**	**23**	LR	LR	00 40 02.9	
	comp=E,38nm,20.8s,baz=186,slow=37						
RETA	**Reutte**	**10.78**	**311**	*e*Pn	Pn	00 35 58.7	+1.1
	comp=E,1.0nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.95**	**306**	Pn	Pn	00 36 01.0	+1.0
	comp=E,0.7nm,0.3s,baz=30,slow=2.4,SNR=9.3						
	comp=E,4.0nm,0.5s						
DAVA	**Damuels**	**11.19**	**309**	*i* Pn	Pn	00 36 04.4	+1.1
	comp=E,1.1nm,0.3s						
SENIN	**Lac Senin/Sane**	**12.41**	**301**	Pn	Pn	00 36 19.8	-0.2
BFO	**Black Forest**	**12.61**	**310**	Pn	Pn	00 36 22.4	-0.3
ECH	**Echery**	**13.24**	**308**	Pn	Pn	00 36 29.2	-2.1
SSB	**Saint Sauveur**	**13.97**	**294**	Pn	Pn	00 36 37.9	-3.3
CLF	**Chambon-Foret**	**16.20**	**303**	P	P	00 37 13.9	0.0
ESDC	**Sonseca Array**	**20.38**	**275**	P	P	00 38 00.5	+0.4
	comp=E,0.9nm,0.7s,baz=72,slow=9.3,SNR=8.7						
	comp=E,0.9nm,0.7s						
BELG	**Belogornoye**	**20.43**	**48**	P	Pn	00 38 04.5	+2.0
	comp=E,5.4nm,0.8s,baz=215,slow=5.2,SNR=3.8						
FINES	**FINESS Array B**	**20.60**	**5**	P	Pn	00 38 03.5	-0.9
	comp=E,7.0nm,1.1s,baz=170,slow=13,SNR=3.8						
	comp=E,7.0nm,1.1s						
PAB	**San Pablo**	**20.70**	**275**	P	Pn	00 38 06.4	+0.5
PAB				IAmb	IAmb	00 38 07.8	
	comp=Z,2.7nm,0.9s						
NC602	**NORSAR Array S**	**20.96**	**345**	P	P	00 38 05.1	-1.0
NC602				IAmb	IAmb	00 38 05.8	
	comp=Z,6.2nm,0.8s						
NC405	**NORSAR Array S**	**21.27**	**345**	P	P	00 38 07.9	-1.5
NB201	**NORSAR Array S**	**21.29**	**345**	P	P	00 38 09.5	-0.2
NB201				IAmb	IAmb	00 38 25.4	
	comp=Z,18nm,1.1s						
NB2	**NORSAR Subarra**	**21.30**	**344**	P	P	00 38 08.6	-1.2
	comp=Z,2.1nm,0.8s,baz=161,slow=11						
NOA	**NORSAR Array B**	**21.30**	**344**	P	P	00 38 09.2	-0.6
	comp=Z,0.6nm,0.6s,baz=154,slow=10,SNR=5.4						
NOA				LR	LR	00 47 42.8	
	comp=Z,21nm,19.6s,baz=5.0,slow=40						
	comp=Z,0.6nm,0.6s						
NBO00	**NORSAR Array S**	**21.38**	**344**	P	P	00 38 08.8	-1.8
NC303	**NORSAR Array S**	**21.44**	**345**	P	P	00 38 10.3	-0.9
NC303				IAmb	IAmb	00 38 16.6	
	comp=Z,11nm,1.1s						
NC204	**NORSAR Array S**	**21.61**	**344**	P	P	00 38 12.3	-0.9
EKA	**Eskdalemuir Ar**	**22.30**	**319**	P	P	00 38 19.8	-0.7
	comp=Z,0.8nm,0.6s,baz=120,slow=12,SNR=3.9						
	comp=Z,0.8nm,0.6s						
AKTO	**Aktyubinsk**	**26.17**	**57**	LR	LR	00 52 07.7	
	comp=Z,14nm,18.2s,baz=317,slow=43						
TORD	**Torodi Ar. Bea**	**33.28**	**220**	P	P	00 40 00.7	-0.2
	comp=Z,0.8nm,0.6s,baz=34,slow=8.5,SNR=12						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**42.42**	**61**	P	P	00 41 18.0	+0.1
	comp=Z,0.6nm,0.6s,baz=289,slow=7.3,SNR=4.7						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**42.57**	**51**	P	P	00 41 19.4	+0.4
	comp=Z,0.8nm,0.4s,baz=289,slow=9.2,SNR=4.0						
	comp=Z,0.8nm,0.4s						
SFJD	**Kangerlussuaq**	**46.70**	**329**	LR	LR	01 03 42.5	
	comp=Z,15nm,18.7s,baz=106,slow=39						
WMQ	**Urumqi**	**46.94**	**64**	*e*P	P	00 41 57.7	+3.6
WMQ				pP	sP	00 42 00.2	+1.5
HHC	**Hu-ho-hao-te**	**64.06**	**58**	*e*P	P	00 43 56.2	-1.1
PZH	**PanZhiHua**	**65.20**	**76**	P	P	00 44 06.4	+1.4

*MEX **08** 00:43:38.7±0.4, 14°.67N×92°.07W, h84km±5km, MD3.9*
*GCG **08** 00:43:47.2±0.3, 14°.58N×91°.64W, h30km±3km, MD3.5*

ISC 08 00:43:39.9±1.8, 14°.7N±0°.1×92°.19W±0°.08, h69km±9km, n12, σ0°66/19, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THIG		**0.20**	**339**	*i* P	**Pn**	**00 43 49.8**	**-0.7**
THIG				*i* S	**Sn**	**00 43 59.2**	**+1.2**
CHUJ	**Union Juarez**	**0.38**	**13**	*e*P	**Pn**	**00 43 51.1**	**-0.8**
CHUJ				*e*S	**Sn**	**00 44 01.1**	**+0.5**
PATR	**El Naranjo**	**0.39**	**354**	*e*P	**Pn**	**00 43 51.1**	**-1.0**
PATR				*e*S	**Sn**	**00 44 01.4**	**+0.5**
PAVE	**Pavencul**	**0.47**	**2**	*e*P	**Pn**	**00 43 52.1**	**-0.5**
PAVE				*e*S	**Sn**	**00 44 02.7**	**+0.8**
STG3	**Santiaguito 3,**	**0.60**	**91**	*e*P	**Pn**	**00 43 53.6**	**-0.4**
FUG	**Fuego 3**	**1.34**	**102**	*e*P	**Pn**	**00 44 02.3**	**-0.6**
PCIG		**1.39**	**315**	*i* P	**Pn**	**00 44 03.2**	**-0.2**
PCIG				*e*S	**Sn**	**00 44 21.6**	**+0.6**
CCIG	**Comitan**	**1.55**	**2**	*e*P	**Pn**	**00 44 05.2**	**-0.6**
CCIG				*e*S	**Sn**	**00 44 25.2**	**+0.1**
PCG	**Pacaya**	**1.57**	**102**	*e*P	**Pn**	**00 44 06.1**	**0.0**
TGIG		**2.23**	**336**	*e*P	**Pn**	**00 44 15.3**	**+0.6**
TGIG				*e*S	**Sn**	**00 44 41.6**	**+0.2**
CMIG	**Matias Romero**	**3.50**	**313**	*e*P	**Pn**	**00 44 31.4**	**-0.5**
CMIG				*e*S	**Sn**	**00 45 12.1**	**-0.2**
NEUV	**Arroyo Zacate**	**4.57**	**311**	*e*	Pn	00 44 49.8	+3.2
NEUV				*e*		00 45 36.9	

AUST 08 00:44:11.0±1.8, 32°.50S×151°.18E, h13km±12km, Error ellipse: s-maj=37.3km s-min=7.4km az=88.0, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.71**	**185**	P		Pg	00 44 24.5	-0.3
	baz=0.7							
MGCD				S		Sb	00 44 34.7	-0.2
	baz=0.7							
AUKHS	**Kincumber High**	**0.97**	**170**	P		Pb	00 44 29.6	-0.1
	baz=1.0							
AUKHS				S		Sn	00 44 43.8	-0.2
	baz=1.0							
AUTKS	**The King's Sch**	**1.28**	**185**	P		Pn	00 44 34.7	+0.1
	baz=1.3							
AUTKS				S		Sn	00 44 51.9	+0.3
	baz=1.3							
RIV	**Riverview**	**1.33**	**181**	P		Pb	00 44 35.6	-0.1
	baz=1.3							
RIV				S		Sg	00 44 53.4	-0.3
	baz=1.3							
AUPHS	**Peel High Scho**	**1.42**	**350**	P		Pn	00 44 36.1	-0.4
	baz=1.4							
AUPHS				S		Sb	00 44 55.4	+0.2
	baz=1.4							
ARMA	**Armidale**	**2.11**	**11**	P		Pn	00 44 46.6	+0.5
	baz=2.1							

DJA 08 01:00:27.3±0.2, 8°S±3°×117°6E±°, h12km±2km, M3.7/11, mb4.1/1, MLv3.5/11, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KLNI	**Mataram**	**0.41**	**89**	P		Pb	01 00 36.6	+0.1
KLNI				S		Sb	01 00 42.5	-0.2
DNP	**Denpasar**	**0.53**	**242**	P		Pb	01 00 39.0	+0.5
DNP				S		Sb	01 00 46.8	+0.8
SRBI	**Singaraja**	**0.58**	**307**	P		Pb	01 00 39.6	+0.3
SRBI				S		Sb	01 00 47.9	+0.4
IGBI	**Denpasar**	**0.65**	**234**	P	

CO03	El Pedregal	3.07	206			Pn	01 09 31.8 +0.7
CO03	El Pedregal	3.07	206	⇑	iP	Pn	01 09 31.9 +0.7
CO03					eS	Sn	01 10 08.5 +0.8
CO03					IAML		01 10 12.8
	comp=E,962nm,0.5s						
CO06	Fray Jorge	3.39	220	Pn		Pn	01 09 34.7 -0.5
CO06	Fray Jorge	3.39	220	eP		Pn	01 09 34.7 -0.5
ZON	Zonda	3.48	174	Pn		Pn	01 09 37.0 +0.5
CO02	Combarbal	3.52	207			Pn	01 09 37.1 0.0
CO02	Combarbal	3.52	207	eP		Pn	01 09 37.0 0.0
CO02				eS		Sn	01 10 17.9 -0.4
PB14	IPOC Station P	3.62	341	Pn		Pn	01 09 39.9 +1.2
PB14	IPOC Station P	3.62	341	eP		Pn	01 09 39.6 +1.0
VA03	San Esteban	4.83	194			Pn	01 09 55.1 +0.5
VA03	San Esteban	4.83	194	eP		Pn	01 09 55.1 +0.5
VA06	Catapilco	4.85	202	Pn		Pn	01 09 53.4 -1.3
VA06	Catapilco	4.85	202	eP		Pn	01 09 53.5 -1.2
PB15	IPOC Station P	4.86	356	Pn		Pn	01 09 55.4 +0.4
PB15	IPOC Station P	4.86	356	eP		Pn	01 09 55.9 +0.9
ROCH	El Roble	5.15	198	eP		Pn	01 09 57.6 -1.3
AF01	San Pedro de A	5.17	10			Pn	01 09 59.5 +0.2
PEL	Peldehue	5.23	195			Pn	01 09 57.7 -2.1
LVC	Limon Verde	5.44	2	P		Pn	01 10 03.4 +0.3
	comp=E,13nm,0.3s,baz=182,slow=5.8,SNR=74						
LVC				S		Sn	01 11 03.6 -1.2
	comp=E,22nm,0.3s,baz=236,slow=22,SNR=7.6						
LVC				LR		LR	01 12 04.8
	comp=E,70nm,18.9s,baz=196,slow=37						
LVC	Limon Verde	5.44	2	Pn		Pn	01 10 03.1 0.0
MT02	Curacav	5.45	198			Pn	01 10 01.6 -1.2
MT05	Renca	5.48	194	Pn		Pn	01 10 03.0 -0.2
MT03	Universidad Ad	5.53	192	Pn		Pn	01 10 04.5 +0.6
PB09	IPOC Station P	6.25	359			Pn	01 10 13.3 -0.5
GO05	Huala	7.32	198			Pn	01 10 26.8 -1.1
PB08	IPOC Station P	7.90	360			Pn	01 10 34.3 -2.0
CPUP	Villa Florida	10.64	83			Pn	01 11 12.2 -0.7
CPUP	Villa Florida	10.64	83	eP		Pn	01 11 07.5 -5.5
ITQB	Itaqui	11.07	101			Pn	01 11 16.5 -2.1
TRQA	Tornquist	11.62	151	eP		Pn	01 11 14.4 -11
LPAZ	La Paz	11.77	5	P		Pn	01 11 27.9 -0.5
	comp=E,1.3nm,0.5s,baz=221,slow=4.7,SNR=8.0						
LPAZ	La Paz	11.77	5	Pn		Pn	01 11 25.8 -2.7
LPAZ	La Paz	11.77	5	eP		Pn	01 11 28.0 -0.5
MURT	Porto Murtinho	12.24	61	eP		Pn	01 11 30.5 -3.7
UNIS	Unistalda (Bra	12.39	98	eP		Pn	01 11 30.9 -5.2
PLCA	Paso Flores	12.68	185	P		P	01 11 43.1 -3.2
	comp=E,0.9nm,0.8s,baz=341,slow=12,SNR=3.6						
ANTJ	Antonio Joao (	13.34	66	eP		Pn	01 11 46.8 -1.7
BBSD	Serra de San D	13.38	38	eP		Pn	01 11 49.4 +0.4
SIV	San Ignacio	14.15	33	P		Pn	01 11 55.9 -2.9
	comp=E,0.6nm,0.3s,baz=193,slow=15,SNR=4.1						
AQDB	Aquidauana	14.38	61			Pn	01 12 01.9 +0.1
AQDB	Aquidauana	14.38	61	eP		Pn	01 12 01.3 -0.5
PTGB	Pitanga	15.65	82	eP		Pn	01 12 16.6 -1.2
CNLB	Canela	16.08	99	eP		Pn	01 12 21.0 -2.2
VILB	Vilhena	17.20	31	eP		Pn	01 12 38.2 +1.5
SALV	Santo Antonio	17.36	49	eP		Pn	01 12 40.0 +1.4
PCMB	Pacaembu	17.44	72	eP		Pn	01 12 39.9 +0.2
ETMB	Extrema	18.37	9	eP		Pn	01 12 52.6 +1.9
BB19B	Bebedouro	19.98	74	eP		Pn	01 13 07.2 -2.4
PDRB	Porto dos Gac	20.07	38	eP		Pn	01 13 09.5 -1.3
VAO	Valinhos	20.61	81	eP		P	01 13 14.0 +0.4
IPMB	Ipameri, GO	21.68	67	eP		P	01 13 26.4 +1.3
PARB	Paraibuna	21.68	83	eP		P	01 13 24.4 -0.8
BDFB	Brasilia	23.13	62	P		P	01 13 39.6 0.0
	comp=E,4.6nm,0.8s,baz=224,slow=10,SNR=6.8						
	comp=E,4.6nm,0.8s						
VAS01	Vassouras-RJ	23.93	82	eP		P	01 13 48.6 +1.8
ITTB	Itaituba	26.80	31	eP		P	01 14 16.9 +4.1
NAN01	Guarapari, ES	28.51	75	eP		P	01 14 31.3 +3.3
PTGA	Pitinga	28.57	19	P		P	01 14 34.9 +6.4
	comp=E,1.4nm,0.5s,baz=265,slow=22,SNR=5.5						
RPN	Rapa Nui	35.53	262	P		P	01 15 36.4 +7.1
	comp=E,79nm,0.4s,baz=102,slow=7.4,SNR=7.0						
SNAA	Sanae	56.18	160	P		P	01 18 13.3 +2.6
	comp=E,1.6nm,0.6s,baz=281,slow=9.3,SNR=15						
	comp=E,1.6nm,0.6s						
MAW	Mawson	78.12	163	P		P	01 20 32.9 +3.8
	comp=E,2.1nm,0.6s,baz=173,slow=5.2,SNR=6.9						
	comp=E,2.1nm,0.6s						
PDAR	Pinedale Array	79.71	331	P		P	01 20 44.6 +6.3
	comp=E,0.3nm,0.8s,baz=166,slow=1.9,SNR=2.6						
	comp=E,0.3nm,0.8s						
TORD	Torodi Ar. Bea	79.81	69	P		P	01 20 42.1 +2.9
	comp=E,1.2nm,0.5s,baz=272,slow=6.1,SNR=34						
	comp=E,1.2nm,0.5s						
BOSA	Boshof	80.58	117	P		P	01 20 45.4 +2.0
	comp=E,1.8nm,0.8s,baz=186,slow=4.6,SNR=3.7						
	comp=E,1.8nm,0.8s						
ASAR	Alice Springs	123.97	206	PKP		PKiKP	01 27 30.9 +2.1
	comp=E,0.4nm,0.4s,baz=126,slow=1.7,SNR=4.6						
WRA	Warramunga Arr	127.14	208	PKP		PKiKP	01 27 37.5 +2.4
	comp=E,1.0nm,0.6s,baz=157,slow=1.8,SNR=19						
ZALV	Zalesovo Beam	147.87	29	PKPbc		PKPab	01 28 16.9 -0.3
	comp=E,1.0nm,0.5s,baz=307,slow=3.2,SNR=5.8						
MKAR	Makanchi Array	150.84	42	PKPbc		PKPab	01 28 25.1 -4.5
	comp=E,1.6nm,0.7s,baz=312,slow=2.5,SNR=11						

*AEIC **08** 01:13:16±1.4, 53°.55N±0°.06×167°.13W±0°.08, h13km±7km, Error ellipse: s-maj=11.8km s-min=1.5km az=143.0*

NEIC 08 01:13:16.8±1.2, 53°.50N±0°.09×167°.10W±0°.08, h18km±7km, ML3.3(AEIC), Error ellipse: s-maj=14.5km s-min=0.7km az=150.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	Makushin Gods	0.33	24		Pg	01 13 23.7	-0.1
MNAT	Makushin Natee	0.46	32		Pg	01 13 25.8	-0.3
MCIR	Makushin Cirqu	0.47	15		Pb	01 13 26.7	+0.1
OKFG	Magazine Ridge	0.49	260		Pg	01 13 26.1	-0.6
UNV	Unalaska Valle	0.49	45		Pg	01 13 26.4	-0.3
MTBL	Makushin Table	0.53	28		Pg	01 13 27.5	0.0
OKER	Okmok East Rim	0.57	266		Pb	01 13 28.8	+0.5
OKTU	Okmok Mt. Tuli	0.58	259		Pb	01 13 28.7	+0.4
OKNC	Okmok New Cone	0.61	266		Pg	01 13 29.1	+0.1
OKSP	Okmok Steeple	0.76	251		Pb	01 13 31.2	-0.2
AKMO	Akutan Morgan	0.88	47		Pb	01 13 33.3	-0.1
AKRB	Akutan Reef Bi	0.88	44		Pb	01 13 33.4	-0.1
ZRO	Akutan Zero	0.89	48		Pb	01 13 33.7	0.0
LVA	Lava Point	0.92	43		Pb	01 13 34.0	-0.1
AKLV	Akutan Long Va	0.95	45		Pb	01 13 34.4	-0.3
AKUT	Akutan	1.01	50		Pb	01 13 35.6	-0.2
NIKH	Nikolski High	1.18	244		Pn	01 13 37.8	-0.6
WESP	Westdahl Peak	1.72	54		Pn	01 13 46.7	+0.8
WESN	West Dahl Nort	1.83	53		Pb	01 13 48.6	-1.1
SSLS	Shishaldin Sou	2.19	55		Pn	01 13 53.4	+1.1
BRPK	Brown Peak	2.29	59		Pn	01 13 54.8	+1.2
ISLZ	Isanotski Laza	2.34	57		Pn	01 13 55.5	+1.1
FALS	False Pass	2.56	56	Pn	Pn	01 13 56.9	-0.3
SDPT	Sand Point	4.29	62	Pn	Pn	01 14 19.1	-1.9

DJA 08 01:45:54.4±1.3, 10°.5S±5°.5×11°.9E±°, h25km±14km, M4.1/9, mb4.4/1, MLv3.9/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.27	321	P	Pn	01 46 17.0	+0.4
PLAI				S	Sn	01 46 32.9	0.0
DBNI	Kabupaten Domp	1.35	349	P	Pn	01 46 18.2	+0.6
DBNI				S	Sn	01 46 34.8	+0.1
TWSI	Taliwang, Sumb	2.00	303	P	Pn	01 46 27.2	+0.6
TWSI				S	Sn	01 46 51.5	+0.7
KLNI	Mataram	2.83	299	P	Pn	01 46 38.3	+0.3
KLNI				S	Sn	01 47 12.8	+1.5
IGBI	Denpasar	3.54	286	P	Pn	01 46 46.9	-0.8
IGBI				S	Sn	01 47 28.8	0.0
SRBI	Singaraja	3.75	297	P	Pn	01 46 50.4	-0.3
RTBI	Rangdo, Negare	3.84	290	P	Pn	01 46 51.9	-0.1
BSSI	Bau Bau, Buton	4.12	27	P	Pn	01 46 55.5	-0.4
JAGI	Jajag, Banyuwa	4.58	287	P	Pn	01 47 01.7	-0.4
BKSI	Bulukumba	4.73	19	P	Pn	01 47 03.8	-0.4
SOEI	Soe	5.61	90	P	Pn	01 47 16.6	+0.2

*BER **08** 01:48:13.7±3.9, 77°.85N×24°.58E, h19km±19km, ML2.4, ML2.9(NAO), Confirmed Earthquake*
*IEPN **08** 01:48:14.0, 77°.89N×23°.95E, h10km*
*KOLA **08** 01:48:15.6, 77°.69N×24°.74E, h0km, ML2.3*
*NAO **08** 01:48:15.1±2.3, 77°.71N×23°.59E, h20km±9km, ML2.9*

ISC 08 01:48:09.5±0.9, 77°.87N±0°.04×24°.69E±0°.04, h10km, n25, σ2§79/50, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPEN	Hopen	1.37	177	Pg	Pg	01 48 37.7	+2.0
HOPEN				Lg	Lg	01 48 56.6	
HOPEN	Hopen	1.37	177	eP	Pg	01 48 37.7	+2.0
HOPEN				eS	Sg	01 48 56.4	+3.0
HOPEN				IAML		01 48 58.8	
	comp=Z,149nm,0.2s						
HOPEN	Hopen	1.37	177	eP	Pg	01 48 37.6	+1.9
HOPEN				eS	Sg	01 48 55.3	+1.9
SPA0	Spitsbergen Ar	1.76	284	Pn	Pn	01 48 40.9	+0.9
	baz=111,slow=18						
SPA0				Sn	Sn	01 49 01.4	-1.1
	baz=108,slow=18						
SPA0				Lg	Lg	01 49 05.4	
	baz=104,slow=37						
SPA0	Spitsbergen Ar	1.76	284	Pn	Pn	01 48 40.9	+0.9
	baz=111,slow=18						
SPA0				Sn	Sn	01 49 01.4	-1.1
	baz=108,slow=18						
SPA0				eSg	Sb	01 49 04.8	+0.8
SPA0	Spitsbergen Ar	1.76	284	P	Pn	01 48 40.8	+0.8
SPA0				eS	Sn	01 49 01.2	-1.3
HSPB	Hornsund (broa	2.18	251	eP	Pn	01 48 46.9	+1.1
HSPB				eS	Sn	01 49 13.0	+0.2
HSPB				IAML		01 49 24.0	
	comp=Z,23nm,0.5s						
BRBA	Barentsburg A	2.20	280	Pn	Pn	01 48 47.2	+1.1
BRBA				Sn	Sn	01 49 13.4	+0.2
BRBA				Lg	Lg	01 49 18.8	
BRBA	Barentsburg A	2.20	280	eP	Pn	01 48 47.3	+1.2
BRBA				ePg	Pg	01 48 52.3	+0.7
BRBA				eSg	Sb	01 49 19.1	+2.5
BRBA				IAML		01 49 21.3	
	comp=Z,70nm,0.2s						
BRBB	Barentsburg B	2.21	281	ePg	Pg	01 48 52.1	+0.4
BRBB				eSg	Sg	01 49 19.9	-0.3
KBS	Kingsbay	2.78	299	eP	Pn	01 48 54.2	+0.1
KBS				eSg	Sb	01 49 35.6	+2.3
KBS				IAML		01 49 44.8	
	comp=Z,40nm,0.4s						
KBS	Kingsbay	2.78	299	eP	Pn	01 48 53.8	-0.2
KBS				eS	Sn	01 49 24.3	-3.3
ZFI	Zemlya Franca-	5.15	44	eP	Pn	01 49 28.0	+1.6
ZFI				eS	Sn	01 50 22.1	-3.6
	comp=Z,75nm,1.6s						
OMEGA	Omega	5.15	45	eP	Pn	01 49 28.0	+1.6
OMEGA				eS	Sn	01 50 23.4	-2.4
	comp=Z,87nm,1.7s						
HAMF	Hammerfest	7.27	183	Pn	Pn	01 49 55.5	-0.1
HAMF				Sn	Sn	01 51 12.6	-5.4
HAMF	Hammerfest	7.27	183	Pn	Pn	01 49 55.5	-0.1
HAMF				Sn	Sn	01 51 12.6	-5.4
ARA0	ARCESS Array S	8.38	178	Pn	Pn	01 50 12.2	+1.4
	baz=355,slow=11						
ARA0				Sn	Sn	01 51 40.6	-4.8
	baz=5.7,slow=18						
ARA0	ARCESS Array S	8.38	178	Pn	Pn	01 50 12.2	+1.4
	baz=355,slow=11						
ARA0				Sn	Sn	01 51 40.6	-4.8
	baz=5.7,slow=18						
ARCES	ARCESS Array B	8.38	178	P	Pn	01 50 12.9	+2.1
ARCES				S	Sn	01 51 42.4	-3.0
PRVG	Vayda Guba	8.42	162	P	Pn	01 50 14.4	+3.1
PRVG				S	Sn	01 51 43.0	-3.2
JETT	Jettan, Norway	8.44	190	Pn	Pn	01 50 12.0	+0.4
JETT				Sn	Sn	01 51 41.7	-5.1
JETT	Jettan, Norway	8.44	190	Pn	Pn	01 50 12.0	+0.4
JETT				Sn	Sn	01 51 41.7	-5.1
KIF	Kilpisjarvi	8.98	189	Pn	Pn	01 50 19.7	+0.7
KIF				Sn	Sn	01 51 53.9	-6.0
KIF	Kilpisjarvi	8.98	189	Pn	Pn	01 50 19.7	+0.7
KIF				Sn	Sn	01 51 53.9	-6.0
TERR	Teriberka	9.17	156	S	Sn	01 52 00.8	-3.9

*IDC **08** 01:53:53.4±3.8, 35°.99N×71°.18E, h72km±33km, mb3.5/7, mbtmp3.9/13, ML3.8/6, Error ellipse: s-maj=28.8km s-min=23.2km az=174.0*
*NNC **08** 01:54:02.6±3.0, 36°.72N×71°.18E, h129km±41km, mb3.8, mpv4.6, Error ellipse: s-maj=26.3km s-min=21.3km az=168.0*

ISC 08 01:53:56.2±0.9, 36°.24N±0°.08×71°.10E±0°.07, h100km, n26, σ1§83/30, mb3.6/6, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	5.39	134	eP	Pn	01 55 19.5	+5.3
THN				eS	Sn	01 56 12.5	-2.4
AML	Almayashu	6.21	18	P	Pn	01 55 26.5	+0.8
	SNR=68						
UCH	Uchtor	6.54	23	P	Pn	01 55 30.9	+0.7
	SNR=36						
EKS2	Erkin-Say	6.74	17	P	Pn	01 55 33.5	+1.0
	SNR=30						
KK31	Karatay Array	6.87	356	P	Pn	01 55 34.6	+0.4
	21nm,0.3s,baz=175,slow=11,SNR=264						
KK31				⇑S	Sn	01 56 46.7	-4.1
	13nm,0.4s,baz=184,slow=24,SNR=8.2						
AAK	Ala-Archa	6.90	21	P	Pn	01 55 35.8	+1.0
	SNR=22						
AAK	Ala-Archa	6.90	21	P	Pn	01 55 35.9	+1.0
	9.7nm,0.3s,baz=198,slow=6.9,SNR=62						
AAK				S	Sn	01 56 50.7	-1.2
	5.9nm,0.5s,baz=333,slow=23,SNR=5.9						
	23nm,0.3s						
KBK	Karagaybulak	7.06	24	P	Pn	01 55 38.2	+1.2
	SNR=7.2						
CHMS	Chumysh	7.31	22	P	Pn	01 55 40.9	+0.7
	SNR=9.5						
USP	Ospenovka	7.49	19	P	Pn	01 55 42.9	+0.2
	SNR=11						
TKM2	Tokmak 2	7.52	26	P	Pn	01 55 43.9	+0.6
	SNR=23						
TKM2	Tokmak 2	7.52	26	⇑P	Pn	01 55 43.5	+0.2
	16nm,0.6s						
TKM2				⇑S	Sn	01 57 03.2	-3.7
	3.7nm,0.7s						
GEYT	Alibeck	10.51	283	P	Pn	01 56 23.6	-0.2
	0.5nm,0.3s,baz=112,slow=7.3,SNR=6.0						
GEYT				S	Sn	01 58 15.0	-4.5
	1.9nm,0.5s,baz=116,slow=13,SNR=3.1						
	0.8nm,0.4s						
MKAR	Makanchi Array	13.45	35	P	Pn	01 57 01.9	-1.0
	0.1nm,0.3s,baz=222,slow=14,SNR=5.2						
	1.2nm,0.9s						
KURBB	Kurchatov Arra	15.34	18	P	P	01 57 29.6	+0.1
	0.2nm,0.3s,baz=208,slow=10,SNR=14						
	1.2nm,0.4s						
AB31	Akbulak array	15.35	331	P	Pn	01 57 26.1	-1.0
	1.5nm,0.3s,baz=139,slow=12,SNR=107						
BVAR	Borovoye Array	16.79	359	P	Pn	01 57 45.0	0.0
	0.5nm,0.3s,baz=167,slow=12,SNR=14						
	1.2nm,0.4s						
AKTO	Aktyubinsk	17.04	330	P	Pn	01 57 49.2	+1.1
	0.9nm,0.3s,baz=138,slow=15,SNR=15						
	2.3nm,0.3s						
AKTO	Aktyubinsk	17.04	330	⇓P	Pn	01 57 49.1	+1.0
	5.8nm,0.8s						
ZALV	Zalesovo Beam	20.11	24	P	P	01 58 22.2	+0.3
	2.1nm,0.4s,baz=219,slow=11,SNR=7.6						
	2.1nm,0.4s						
ARU	Arti	21.90	341	P	P	01 58 43.2	+2.3
	1.4nm,0.4s,baz=169,slow=6.2,SNR=3.9						
	1.4nm,0.4s						
FINES	FINESS Array B	37.74	326	P	P	02 01 04.1	+2.2
	3.1nm,0.9s,baz=123,slow=7.0,SNR=6.2						
	3.1nm,0.9s						
ARCES	ARCESS Array B	41.41	338	P	P	02 01 35.2	+3.0
	2.7nm,0.9s,baz=108,slow=7.8,SNR=11						
	2.7nm,0.9s						
NOA	NORSAR Array B	44.63	323	P	P	02 02 00.1	+1.7
	0.2nm,0.5s,baz=98,slow=7.7,SNR=1.3						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	65.79	269	P	P	02 04 30.9	-0.1
	0.5nm,0.6s,baz=46,slow=6.0,SNR=11						
	0.5nm,0.6s						
WRA	Warramunga Arr	81.79	122	P	P	02 06 04.1	-0.1
	0.3nm,0.8s,baz=326,slow=4.8,SNR=5.2						
	0.3nm,0.8s						

*IDC **08** 02:01:59.2±0.7, 17°.49S×66°.65E, h0km, mb3.9/10, mbtmp3.9/11, ML3.7/1, MS4.0/58, Error ellipse: s-maj=22.7km s-min=22.0km az=120.0*
*GCMT **08** 02:02:04.0±0.2, 17°.22S±0°.01×66°.34E±0°.01, h23km±1km, MW5.1/132, Moment Tensor Solution. s70,c86; s132,c210; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.88±.16; $M_{\theta\theta}$=-5.15±.13; $M_{\phi\phi}$=6.03±.15; $M_{r\theta}$=-0.77±.20; $M_{\theta\phi}$=2.39±.11; $M_{\phi r}$=0.38±.19; Best double couple: M_0=6.14500×10^{16} NP1:ϕ_s=56.00000°, δ87.00000°, λ-8.00000°. NP2:ϕ_s=147.00000°, δ82.00000°, λ-177.00000°. Principal axes: T 6.5570, Plg4.0000°, Azm102.0000°; N -0.8230, Plg81.0000°, Azm219.0000°; P -5.7330, Plg8.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 08 02:02:01.4±0.7, 17°.5S±0°.1×66°.6E±0°.1, h14km, n67, σ1§11/11, mb4.0/11, MS4.0/59, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	11.31	31	T	T	02 16 17.8	
	baz=210,slow=76,SNR=1608						
H08S2	Diego Garcia H	11.32	31	T	T	02 16 18.6	
	baz=210,slow=76,SNR=974						
H08S3	Diego Garcia H	11.33	31	T	T	02 16 19.3	
	baz=210,slow=76,SNR=2329						
OPO	Ambohidratompo	18.49	264	P	Pn	02 06 16.9	-0.7
	baz=81,slow=12,SNR=3.8						
	1.6nm,0.3s						
PALK	Pallekele	28.25	31	LR	LR	02 16 47.0	
	comp=Z,86nm,19.4s,baz=313,slow=31						
KMBO	Kilima Mbogo	33.10	296	LR	LR	02 19 05.9	
	comp=Z,15nm,20.7s,baz=86,slow=31						
LSZ	Lusaka	36.88	268	LR	LR	02 21 42.6	
	comp=Z,243nm,20.9s,baz=118,slow=32						
ATD	Arta Tunnel	37.15	319	LR	LR	02 21 40.3	
	comp=Z,288nm,21.6s,baz=152,slow=32						
PSI	Prapat	37.71	61	LR	LR	02 21 26.2	
	comp=Z,288nm,20.1s,baz=215,slow=31						
LBTB	Lobatse	38.83	252	P	P	02 09 25.8	-0.6
	4.4nm,0.8s,baz=100,slow=9.3,SNR=4.3						
LBTB				LR	LR	02 22 02.4	
	comp=Z,368nm,20.3s,baz=90,slow=31						
	4.4nm,0.8s						
MBAR	Mbarara	39.04	292	LR	LR	02 23 26.8	
	comp=Z,509nm,18.9s,baz=102,slow=33						
BOSA	Boshof	39.45	246	LR	LR	02 22 27.8	
	comp=Z,240nm,19.4s,baz=88,slow=31						
WSAR	Wadi Sarin	41.19	349	LR	LR	02 23 59.7	
	comp=Z,109nm,19.2s,baz=186,slow=32						
LEM	Lembang	41.38	80	LR	LR	02 23 29.6	
	comp=Z,333nm,20.4s,baz=150,slow=31						
H01W2	Cape Leeuwin H	45.61	122	T	T	02 59 12.0	
	baz=280,slow=75,SNR=426						
H01W3	Cape Leeuwin H	45.61	122	T	T	02 59 13.3	
	baz=280,slow=75,SNR=423						
H01W1	Cape Leeuwin H	45.63	122	T	T	02 59 14.5	
	baz=280,slow=75,SNR=401						
TSUM	Tsumeb	46.44	260	LR	LR	02 28 11.7	
	comp=Z,190nm,18.6s,baz=92,slow=34						
BRDH	Bariadhala	46.81	32	LR	LR	02 29 53.1	
	comp=Z,70nm,19.4s,baz=217,slow=36						
CMAR	Chiang Mai Arr	47.81	43	LR	LR	02 28 35.4	
	comp=Z,120nm,19.1s,baz=230,slow=33						
NWAO	Narrogin (SRO)	47.90	119	LR	LR	02 26 17.0	
	comp=Z,203nm,20.1s,baz=46,slow=30						
MAW	Mawson	50.18	182	LR	LR	02 26 53.8	
	comp=Z,198nm,21.7s,baz=2.5,slow=30						
KAPI	Kappang	53.41	83	LR	LR	02 30 50.9	
	comp=Z,152nm,21.9s,baz=252,slow=32						
GEYT	Alibeck	55.67	352	LR	LR	02 34 06.8	
	comp=Z,76nm,18.3s,baz=164,slow=35						
BATI	Baumata	55.72	91	LR	LR	02 30 39.5	
	comp=Z,131nm,19.2s,baz=132,slow=31						
EIL	Elat	55.92	327	LR	LR	02 32 02.9	
	comp=Z,230nm,20.0s,baz=132,slow=32						
FITZ	Fitzroy Crossi	56.01	100	LR	LR	02 32 21.3	
	comp=Z,252nm,20.8s,baz=265,slow=33						
AAK	Ala-Archa	60.24	7	LR	LR	02 34 52.9	
	comp=Z,125nm,20.6s,baz=196,slow=33						
ASAR	Alice Springs	62.83	108	P	P	02 12 26.5	-0.7
	0.9nm,0.7s,baz=270,slow=5.9,SNR=11						
ASAR				LR	LR	02 35 38.0	
	comp=Z,522nm,21.7s,baz=264,slow=32						
	0.9nm,0.7s						
DAV	Davao City (W)	63.15	72	LR	LR	02 37 41.0	
	comp=Z,135nm,21.0s,baz=168,slow=34						
WRA	Warramunga Arr	63.82	104	P	P	02 12 33.5	-0.3
	2.5nm,1.1s,baz=242,slow=6.6,SNR=11						
WRA				LR	LR	02 39 20.2	
	comp=Z,140nm,18.0s,baz=270,slow=35						
	2.5nm,1.1s						
KBZ	Khabaz	64.65	341	LR	LR	02 39 55.8	
	comp=Z,88nm,21.3s,baz=166,slow=35						
BRTR	Keskin Array B	64.67	332	P	P	02 12 39.2	+0.2
	0.6nm,0.9s,baz=131,slow=4.4,SNR=3.0						
	0.6nm,0.9s						
MKAR	Makanchi Array	65.50	12	P	P	02 12 44.9	+0.8
	1.3nm,1.0s,baz=202,slow=6.2,SNR=3.9						
MKAR				LR	LR	02 40 27.9	
	comp=Z,56nm,19.7s,baz=144,slow=35						
	1.3nm,1.0s						
SIJI	Sorong	65.62	83	LR	LR	02 41 37.0	
	comp=Z,30nm,18.8s,baz=132,slow=36						
SNAA	Sanae	67.11	199	P	P

KLR	Kul'dur	87.84	37	LR	LR	02 56 38.0
	comp=Z,38nm,18.4s,baz=260,slow=37					
NRIK	Noril'sk	87.85	7	LR	LR	02 54 12.4
	comp=Z,77nm,19.8s,baz=192,slow=36					
BBTS	Babate	87.96	286	LR	LR	02 53 27.3
	comp=Z,208nm,18.1s,baz=91,slow=35					
RPZ	Rata Peaks	88.14	135	LR	LR	02 45 10.1
	comp=Z,100nm,18.4s,baz=280,slow=29					
NOA	NORSAR Array B	89.80	336	LR	LR	02 54 16.0
	comp=Z,28nm,21.5s,baz=105,slow=35					
ARCES	ARCESS Array B	91.50	347	LR	LR	02 55 26.5
	comp=Z,52nm,19.8s,baz=92,slow=35					
DZM	Mont Dzumac	92.29	114	LR	LR	02 51 46.2
	comp=Z,120nm,21.2s,baz=278,slow=32					
YAK	Yakutsk	93.40	25	LR	LR	02 56 59.0
	comp=Z,40nm,18.5s,baz=268,slow=35					
SPITS	Spitsbergen Ar	99.55	351	LR	LR	03 02 10.4
	comp=Z,42nm,18.4s,baz=96,slow=36					

GEN ***08*** *02:31:58.9, 46°.41N×8°.55E, h6km±2km, Ml2.5*
LDG ***08*** *02:31:59.8±0.1, 46°.37N×8°.55E, h7km, Md2.6/3, Ml2.6/27, Error ellipse: s-maj=1.8km s-min=1.3km az=122.0*
ZUR ***08*** *02:31:59.6, 46°.40N×8°.55E, h7km±1km, MLh2.6/78, Error ellipse: s-maj=3.5km s-min=0.5km az=328.0*
PRU ***08*** *02:31:59.3±0.0, 46°.35N×8°.62E, h1km*
ROM ***08*** *02:31:59.4±0.1, 46°.40N±0°.01×8°.51E±0°.01, h10km, ML2.2/20, Error ellipse: s-maj=1.2km s-min=0.9km az=331.0*
STR ***08*** *02:32:00.6±0.7, 46°.N±3°×°±°, h10km±3km, MLv2.5/25, Error ellipse: s-maj=0.0km s-min=0.0km az=120.3, preliminary*

ISC 08 02:31:59.8±0.8, 46°.39N±0°.01×8°.53E±0°.01, h16km±6km, n170, σ1$40/251, 19C-20D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIMS	Grimsel Gerste	0.24	322	⇓Pg	Pg	02 32 04.7	-0.6
GRIMS				Sg	Sg	02 32 07.9	-1.2
NALPS	Val Nalps	0.25	36	⇑Pg	Pg	02 32 04.9	-0.7
NALPS				Sg	Sg	02 32 08.2	-1.3
FIESA	Fiescheralp	0.29	278	⇓Pg	Pg	02 32 05.9	-0.3
SIMPL	Simplonpass	0.39	247	⇓Pg	Pg	02 32 07.3	-0.5
SIMPL	Simplonpass	0.39	247	P	Pg	02 32 07.3	-0.5
SIMPL				S	Sg	02 32 12.5	-0.7
BIBA	Brigerbad	0.43	258	Pg	Pg	02 32 08.0	-0.5
HASLI	Hasliberg/Brie	0.45	324	⇓Pg	Pg	02 32 08.5	-0.4
HASLI				Sg	Sg	02 32 14.4	-0.7
SVIT	Visp-Terbiners	0.46	257	⇓Pg	Pg	02 32 08.5	-0.5
BNALP	Bannalp	0.48	351	⇑Pg	Pg	02 32 09.0	-0.5
BNALP				Sg	Sg	02 32 15.3	-0.9
BNALP	Bannalp	0.48	351	⇑P	Pg	02 32 09.0	-0.5
BNALP				S	Sg	02 32 15.2	-0.9
BNALP				AML	AML		
	comp=E,526μm,0.3s						
BNALP				AML	AML		
	comp=N,360μm,0.6s						
BNALP				AML	AML		
	comp=E,526μm,0.3s						
SALTS	Altdorf, Kanto	0.49	8	Pg	Pg	02 32 09.3	-0.4
MMK	Mattmark	0.52	229	⇑Pg	Pg	02 32 09.8	-0.5
MMK	Mattmark	0.52	229	P	Pg	02 32 09.8	-0.5
MMK				S	Sg	02 32 16.4	-0.9
MMK	Mattmark	0.52	229	⇑P	Pg	02 32 09.8	-0.5
MMK				S	Sg	02 32 16.4	-0.9
MMK				AML	AML		
	comp=E,261μm,0.1s						
MMK				AML	AML		
	comp=N,438μm,0.2s						
MMK				AML	AML		
	comp=N,438μm,0.2s						
SGRA	Graechen Ausbl	0.52	248	Pg	Pg	02 32 09.9	-0.4
LAUCH	Lauchernalp	0.53	273	⇓Pg	Pg	02 32 10.0	-0.3
LAUCH	Lauchernalp	0.53	273	P	Pg	02 32 10.0	-0.3
LAUCH				S	Sg	02 32 16.7	-0.8
SARK	Sarnen Kantons	0.54	338	Pg	Pg	02 32 10.0	-0.4
SINS	Interlaken, Sc	0.55	303	⇓Pg	Pg	02 32 10.5	-0.2
VARE	Varese	0.55	162	P	Pg	02 32 10.7	-0.1
VARE				S	Sg	02 32 17.9	-0.3
LLS	Linth-Limmern	0.56	36	⇑Pg	Pg	02 32 10.4	-0.6
TUE	Stuetta	0.57	82	⇓P	Pg	02 32 10.7	-0.5
TUE				S	Sg	02 32 17.5	-1.2
TUE				AML	AML		
	comp=N,258μm,0.5s						
TUE				AML	AML		
	comp=N,348μm,1.1s						
TUE				AML	AML		
	comp=E,257μm,0.8s						
TUE				AML	AML		
	comp=E,306μm,0.3s						
TUE				AML	AML		
	comp=N,257μm,0.5s						
TUE				AML	AML		
	comp=N,348μm,0.9s						
MUO	Muotathal	0.58	7	⇑Pg	Pg	02 32 11.0	-0.4
MUGIO	Muggio	0.59	143	⇓Pg	Pg	02 32 11.2	-0.3
MUGIO	Muggio	0.59	143	P	Pg	02 32 11.1	-0.3
MUGIO				S	Sg	02 32 19.0	-0.3
MUGIO	Muggio	0.59	143	⇓P	Pg	02 32 11.2	-0.3
MUGIO				S	Sg	02 32 18.9	-0.4
MUGIO				AML	AML		
	comp=E,924μm,0.3s						
MUGIO				AML	AML		
	comp=N,1360μm,0.4s						
PANIX	Pigniu (Panix)	0.59	42	Pg	Pg	02 32 10.8	-0.7
LKBD2	Leukerbad 2	0.61	269	⇓Pg	Pg	02 32 11.6	-0.4
SLTM2	Linthal, Matt	0.62	31	⇑Pg	Pg	02 32 11.5	-0.6
LKBD	Leukerbad	0.63	270	⇓Pg	Pg	02 32 11.8	-0.4
VDL	Val di Lei	0.64	82	⇓Pg	Pg	02 32 11.9	-0.6
VDL	Val di Lei	0.64	82	P	Pg	02 32 11.9	-0.6
VDL				S	Sg	02 32 19.7	-1.3
VANNI	Vissoie, Val d	0.67	255	⇑Pg	Pg	02 32 12.5	-0.6
VANNI	Vissoie, Val d	0.67	255	P	Pg	02 32 12.4	-0.6
VANNI				S	Sg	02 32 21.4	-0.6
SLUB	Luzern Bramber	0.68	347	Pg	Pb	02 32 13.5	+0.2
WIMIS	Wimmis	0.68	294	⇓Pg	Pg	02 32 13.0	-0.2
SATI	Passo dei Sala	0.69	222	⇑Pg	Pg	02 32 12.9	-0.6
SATI	Passo dei Sala	0.69	222	P	Pg	02 32 12.9	-0.6
SATI				S	Sg	02 32 22.2	-0.5
SATI	Passo dei Sala	0.69	222	⇑P	Pg	02 32 12.9	-0.6
SATI				AML	AML		
	comp=N,222μm,1.2s						
SATI				AML	AML		
	comp=E,251μm,0.8s						
SATI				AML	AML		
	comp=N,221μm,1.2s						
SATI				AML	AML		
	comp=N,221μm,0.8s						
DIX	Grande Dixence	0.84	249	Pg	Pg	02 32 15.3	-0.9
DIX	Grande Dixence	0.84	249	P	Pg	02 32 15.3	-0.9
DIX				S	Sg	02 32 26.2	-1.1
DIX	Grande Dixence	0.84	249	P	Pg	02 32 15.3	-0.9
DIX				AML	AML		
	comp=E,103μm,0.2s						
DIX				AML	AML		
	comp=N,199μm,0.2s						
DIX				AML	AML		
	comp=N,199μm,0.2s						
DIX	Grande Dixence	0.84	249	Pg	Pg	02 32 15.4	-0.9
DIX	Grande Dixence	0.84	249	Sg	Sg	02 32 26.8	-0.5
SENIN	Lac Senin/Sane	0.85	268	⇓Pg	Pg	02 32 15.8	-0.6
HAMIK	Hmikon, Dlik	0.87	348	⇑Pg	Pb	02 32 16.6	+0.1
PLONS	Plons/SG	0.88	41	Pg	Pg	02 32 16.1	-0.8
PLONS	Plons/SG	0.88	41	P	Pg	02 32 16.1	-0.8
PLONS				AML	AML		
	comp=E,93μm,0.3s						
PLONS				AML	AML		
	comp=N,124μm,0.2s						
DAGMA	Lutertal, Dagm	0.91	337	⇑Pg	Pb	02 32 17.6	+0.3
ZUR	Degenried	0.98	2	Sn	Sn	02 32 35.1	+2.7
ZUR	Degenried	0.98	2	Pg	Pb	02 32 18.7	+0.4
ZUR				Pn	Pn	02 32 20.9	+2.0
ZUR	Degenried	0.98	2	Sg	Sb	02 32 31.5	+0.4
DAVOX	Davos/Dischmat	1.01	67	⇑Pg	Pg	02 32 18.5	-0.9
DAVOX	Davos/Dischmat	1.01	67	P	Pg	02 32 18.4	-0.9
DAVOX				S	Sg	02 32 31.2	-1.3
DAVOX	Davos/Dischmat	1.01	67	P	Pg	02 32 18.3	-1.1
DAVOX				AML	AML		
	comp=E,63μm,0.5s						
DAVOX				AML	AML		
	comp=N,114μm,0.5s						
MDI	Monti di Nese	1.03	126	P	Pg	02 32 19.1	-0.6
MDI				AML	AML		
	comp=N,160μm,0.4s						
MDI				AML	AML		
	comp=E,193μm,0.8s						
MDI				AML	AML		
	comp=E,193μm,1.2s						
BERNI	Berninapass	1.03	88	P	Pg	02 32 18.7	-1.1
TRAV	Traversella	1.04	212	P	Pg	02 32 18.0	-1.9
TRAV				S	Sg	02 32 32.5	-1.0
TRAV	Traversella	1.04	212	⇑P	Pg	02 32 18.0	-1.9
TRAV				AML	AML		
	comp=E,208μm,1.0s						
TRAV				AML	AML		
	comp=N,226μm,0.2s						
CIRO	Champorcher	1.04	221	P	Pg	02 32 18.8	-1.2
CIRO				S	Sg	02 32 32.4	-1.2
CIRO	Champorcher	1.04	221	P	Pg	02 32 18.7	-1.2
CIRO				AML	AML		
	comp=N,121μm,0.3s						
CIRO				AML	AML		
	comp=E,96μm,1.0s						
AIGLE	Aigle	1.09	268	Pg	Pn	02 32 21.7	+1.2
BALST	Balsthal	1.10	329	Sn	Sn	02 32 38.0	+2.4
BALST	Balsthal	1.10	329	Pg	Pb	02 32 21.1	+0.6
REMY	Saint-Rhmy-en	1.11	240	P	Pg	02 32 20.0	-1.3
REMY				S	Sg	02 32 34.4	-1.3
REMY	Saint-Rhmy-en	1.11	240	P	Pg	02 32 19.9	-1.3
REMY				AML	AML		
	comp=N,166μm,1.4s						
REMY				AML	AML		
	comp=N,166μm,0.6s						
REMY				AML	AML		
	comp=E,142μm,0.7s						
SALAN	Lac Salanfe	1.11	258	P	Pg	02 32 20.6	-0.7
TORNY	Torny/Romont	1.15	290	Sg	Sn	02 32 38.4	+1.8
TORNY	Torny/Romont	1.15	290	Pg	Pn	02 32 22.3	+1.0
SULZ	Cheisacher	1.17	346	Sg	Sb	02 32 37.8	+1.1
SULZ	Cheisacher	1.17	346	⇑Pg	Pb	02 32 22.1	+0.5
MRGE	Morge	1.20	239	P	Pg	02 32 21.9	-1.1
MRGE	Morge	1.20	239	P	Pg	02 32 21.8	-1.1
MRGE				AML	AML		
	comp=E,97μm,0.4s						
MRGE				AML	AML		
	comp=N,79μm,0.3s						
MRGE				AML	AML		
	comp=N,79μm,1.7s						
ZONE	Zone	1.27	119	P	Pn	02 32 23.5	+0.6
ZONE				AML	AML		
	comp=E,123μm,0.3s						
ZONE				AML	AML		
	comp=N,124μm,0.5s						
BRMO	Bormio	1.28	86	P	Pn	02 32 23.1	+0.1
BRMO				AML	AML		
	comp=N,33μm,1.1s						
BRMO				AML	AML		
	comp=N,33μm,0.9s						
BRMO				AML	AML		
	comp=E,24μm,0.3s						
OGSI	Sixt	1.28	256	Pn	Pn	02 32 23.7	+0.7
OGSI				Sg	Sb	02 32 40.7	+1.0
DAVA	Damuels	1.29	45	*e*Pg	Pn	02 32 23.8	+0.6
	comp=E,3.5nm,0.1s,SNR=13						
DAVA				*e*Sn	Sn	02 32 41.0	+0.8
	comp=E,15nm,0.2s						
BOURR	Bourrignon	1.34	319	Pg	Pg	02 32 25.5	-0.2
LSD	Lago del Serru	1.35	227	P	Pn	02 32 24.6	+0.4
LSD				S	Sb	02 32 42.3	+0.4
LSD	Lago del Serru	1.35	227	P	Pn	02 32 24.5	+0.4
LSD				AML	AML		
	comp=N,81μm,0.5s						
LSD				AML	AML		
	comp=N,81μm,1.5s						
LSD				AML	AML		
	comp=E,70μm,0.4s						
SLE	Schleitheim	1.37	359	Sg	Sb	02 32 42.9	+0.5
SLE	Schleitheim	1.37	359	Pn	Pn	02 32 25.0	+0.7
SLE	Schleitheim	1.37	359	Pg	Pg	02 32 26.4	+0.2
MABI	Malga Bissina	1.42	103	P	Pn	02 32 25.7	+0.7
MABI	Malga Bissina	1.42	103	P	Pn	02 32 25.8	+0.7
MABI				AML	AML		
	comp=E,39μm,1.5s						
MABI				AML	AML		
	comp=N,45μm,1.4s						
MABI				AML	AML		
	comp=E,39μm,0.5s						
RSL	Roselend	1.50	243	P	Pb	02 32 27.8	+0.4
RSL	Roselend	1.50	243	⇓Pn	Pb	02 32 27.8	+0.4
BRANT	Les Verrieres	1.52	292	Pn	Pb	02 32 28.3	+0.7
BRANT	Les Verrieres	1.52	292	Pg	Pg	02 32 29.5	+0.5
FELD	Feldberg im Sc	1.53	347	⇑Pn	Pn	02 32 27.1	+0.6
FELD	Feldberg im Sc	1.53	347	Pg	Pg	02 32 28.8	-0.4
LPG	La Plagne	1.53	235	*e*Pg	Pb	02 32 28.3	+0.3
LPG				*e*Sg	Sn	02 32 48.3	+1.9
	comp=E,21nm,0.4s						
LPL	La Plagne	1.53	236	*e*Pg	Pn	02 32 28.1	+1.4
LPL				*e*Sg	Sb	02 32 48.7	+1.6
	comp=E,24nm,0.4s						
CHMF	Charmoille	1.55	304	⇓Pn	Pb	02 32 28.3	+0.2
CHMF				Pg	Pg	02 32 29.8	+0.1
CHMF				Sg	Sg	02 32 50.2	+0.4
GIMEL	St. Georges /	1.57	276	Sg	Sg	02 32 52.8	+2.2
GIMEL	St. Georges /	1.57	276	Pg	Pg	02 32 31.0	+0.9
GIMEL	St. Georges /	1.57	276	⇓Pn	Pb	02 32 29.3	+0.8
MAGA	Magasa	1.58	112	P	Pb	02 32 28.9	+0.2
MAGA				AML	AML		
	comp=N,140μm,0.6s						
MAGA				AML	AML		
	comp=E,186μm,0.4s						
SALO	Salr	1.59	118	P	Pb	02 32 29.6	+0.8
KIZ	Kirchzarten	1.62	345	Pg	Pg	02 32 30.5	-0.4
KIZ	Kirchzarten	1.62	345	Sn	Sn	02 32 47.8	-0.4
KIZ				Sg	Sg	02 32 51.4	-0.6
KIZ	Kirchzarten	1.62	345	⇑Pn	Pn	02 32 28.2	+0.6
FETA	Feichten	1.64	67	*e*Pg	Pb	02 32 30.0	+0.3
	comp=E,0.9nm,0.2s,SNR=5.7						
FETA				*e*Sn	Sg	02 32 51.4	-1.2
	comp=E,4.4nm,0.2s						
CABF	La Chapelle	1.70	278	*e*Pg	Pb	02 32 30.8	0.0
CABF				*e*Sg	Sb	02 32 53.4	+1.5
	comp=E,10nm,0.2s						
GAGG	Gaggia	1.71	100	P	Pb	02 32 31.3	+0.4
GAGG				AML	AML		
	comp=E,52μm,1.1s						
GAGG				AML	AML		
	comp=N,48μm,1.4s						
GAGG				AML	AML		
	comp=E,52μm,0.9s						
GUT	Gutenstein	1.73	13	Pg	Pg	02 32 32.8	-0.1
GUT	Gutenstein	1.73	13	Sn	Sn	02 32 51.8	+1.0
GUT	Gutenstein	1.73	13	⇑Pn	Pn	02 32 29.7	+0.5
LUSI	Trento, Gardas	1.73	104	P	Pb	02 32 31.2	0.0
LUSI				AML	AML		
	comp=E,75μm,0.4s						
LUSI				AML	AML		
	comp=N,83μm,0.2s						
LUSI				AML	AML		
	comp=E,75μm,1.6s						
MOF	Molkenrain	1.74	327	Pn	Pn	02 32 30.6	+1.1
MOF				Pg	Pg	02 32 33.1	-0.2
MOF				Sn	Sn	02 32 51.5	+0.1
MOF				Sg	Sg	02 32 55.5	-0.5
OGMO	Fort Saint-Gob	1.75	228	⇓Pn	Pb	02 32 31.9	+0.3
BOUC	Bouclans	1.78	299	⇓Pn	Pn	02 32 31.4	+1.5
BOUC				Pg	Pg	02 32 33.6	-0.4
BOUC				Sn	Sg	02 32 57.2	0.0
VOGT	Vogtsburg - To	1.79	341	Sn	Sn	02 32 52.2	-0.2
VOGT	Vogtsburg - To	1.79	341	Sg	Sg	02 32 57.0	-0.4
VOGT	Vogtsburg - To	1.79	341	Pg	Pg	02 32 34.0	-0.2
HINF	Hinteralfeld	1.83	322	*e*P	Pn	02 32 31.7	+1.1
HINF	Hinteralfeld	1.83	322	*e*Pg	Pb	02 32 33.7	+0.8
HINF				*e*Sn	Sn	02 32 52.7	-0.7
HINF				*e*Sg	Sb	02 32 57.3	+1.8
	comp=E,14nm,0.2s						
RIVEL	MONT RIVEL	1.84	282	Pn	Pn	02 32 32.7	+2.0
RIVEL				Pg	Pg	02 32 35.2	+0.1
RONF	Ronchamp	1.84	316	Pn	Pn	02 32 32.1	+1.4
RONF				Pg	Pg	02 32 35.0	-0.2
RONF				Sn	Sn	02 32 54.3	+0.6
BNI	Bardonecchia	1.87	225	P	Pb	02 32 33.7	+0.1
RETA	Reutte	1.88	54	*e*Pg	Pg	02 32 35.1	-0.7
	comp=E,2.8nm,0.2s						
RETA				*e*Sn	Sg	02 32 58.8	-1.5
	comp=E,14nm,0.4s						
MOTA	Moosalm	2.00	61	*i* Pn	Pb	02 32 36.2	+0.3
MOTA				*e*Sn	Sb	02 33 02.2	+1.5
	comp=E,0.7nm,0.1s						
SQTA	Sankt Quirin	2.02	65	*e*Pg	Pg	02 32 38.2	-0.3
	comp=E,2.8nm,0.2s						
SQTA				*e*Sn	Sg	02 33 03.9	-0.7
	comp=E,11nm,0.3s						
ECH	Echery	2.05	333	Pn	Pn	02 32 34.5	+0.9
MBDF	Montbardon	2.08	217	*e*P	Pn	02 32 35.9	+1.8
MBDF	Montbardon	2.08	217	*e*Pg	Pg	02 32 39.0	-0.6
MBDF				*e*Sg	Sg	02 33 05.8	-0.8
	comp=E,11nm,0.4s						
OG35	Corcelles	2.08	261	Pn	Pg	02 32 39.6	-0.2
OGSM	Saint Maurice	2.13	249	Pn	Pb	02 32 37.6	-0.3
WLS	Welschbruch	2.17	339	Pn	Pn	02 32 36.1	+0.8
CDF	Champ du Feu	2.19	338	*e*P	Pn	02 32 36.5	+0.9
CDF	Champ du Feu	2.19	338	*e*Pg	Pg	02 32 40.6	-1.3
CDF				*e*Sn	Sn	02 33 00.0	-2.5
CDF				*e*Sg	Sb	02 33 08.1	+2.0
	comp=E,23nm,0.4s						
HAU	Haudompre	2.20	318	*e*P	Pn	02 32 37.1	+1.5
HAU	Haudompre	2.20	318	*e*Pg	Pb	02 32 40.5	+1.4
HAU				*e*Sn	Sn	02 33 01.4	-1.0
HAU				*e*Sg	Sg	02 33 08.7	-1.7
	comp=E,20nm,0.4s						
CREF	Crivoux	2.28	217	Pn	Pn	02 32 39.6	+2.7
WATA	Walderalm	2.29	65	*e*Pg	Pg	02 32 42.6	-1.2
	comp=E,0.8nm,0.2s						
WATA				*e*Sn	Sb	02 33 10.7	+1.8
	comp=E,3.1nm,0.2s						
WTTA	Wattenberg	2.30	67	*e*Pn	Pb	02 32 40.9	-0.1
	comp=E,2.8nm,0.4s						
WTTA				*i* Pg	Pg	02 32 43.4	-0.6
	comp=E,2.8nm,0.4s						
WTTA				*e*Sn	Sb	02 33 09.6	+0.3
	comp=E,16nm,0.4s						
JAUF	Jausiers	2.33	213	Pn	Pn	02 32 38.5	+0.9
ORIF	Oris-en-Rattie	2.37	233	*e*Pg	Pb	02 32 42.5	+0.3
ORIF				*e*Sg	Sg	02 33 14.6	-1.5
	comp=E,15nm,0.5s						
ORIF	Oris-en-Rattie	2.37	233	P	Pn	02 32 40.6	+2.5
ORIF	Oris-en-Rattie	2.37	233	Pn	Pb	02 32 42.2	0.0
SBF	Sospel	2.65	197	*e*P	Pn	02 32 43.9	+2.1
SBF				*e*Sn	Sn	02 33 12.1	-1.5
SBF				*e*Sg	Sg	02 33 23.6	-1.2
	comp=E,7.7nm,0.3s						
ABTA	Abfaltersbach	2.77	81	*e*Sg	Sg	02 33 26.2	-2.5
	comp=E,0.7nm,0.2s						
PAGF	Fort de Pagny	2.88	320	*e*P	Pn	02 32 47.3	+2.3
PAGF				*e*Sn	Sn	02 33 17.7	-1.6
PAGF				*e*Sg	Sg	02 33 30.2	-2.1
	comp=E,5.3nm,0.3s						
SFTF	Sexfontaines	2.99	309	*e*P	Pn	02 32 48.5	+2.0
	baz=128						
SFTF	Sexfontaines	2.99	309	*e*Pg	Pg	02 32 55.1	-2.0
	baz=132						
SFTF				*e*Sn	Sn	02 33 20.6	-1.4
SFTF				*e*Sg	Sg	02 33 33.6	-2.2
	comp=E,6.5nm,0.3s						
VIVF	Saint-Julien-l	3.11	242	*e*P	Pn	02 32 50.4	+2.2
VIVF	Saint-Julien-l	3.11	242	*e*Pg	Pb	02 32 57.0	+2.2
VIVF				*e*Sn	Sn	02 33 23.1	-2.0
VIVF				*e*Sg	Sg	02 33 37.8	-2.0
	comp=E,4.9nm,0.3s						
MEZF	Maizieres J'vi	3.17	313	*e*P	Pn	02 32 51.0	+2.1
MEZF	Maizieres J'vi	3.17	313	*e*Pg	Pg	02 32 58.3	-2.2
MEZF				*e*Sn	Sn	02 33 24.5	-1.8
MEZF				*e*Sg	Sg	02 33 38.8	-2.7
	comp=E,11nm,0.5s						
SAVF	Savonnieres en	3.21	315	*e*P	Pn	02 32 51.9	+2.4
	baz=128						
SAVF	Savonnieres en	3.21	315	*e*Pg	Pg	02 32 59.0	-2.2
SAVF				*e*Sn	Sn	02 33 25.7	-1.6
SAVF				*e*Sg	Sg	02 33 40.6	-2.1
	comp=E,8.6nm,0.5s						
SMF	Signal de Mont	3.25	276	*e*P	Pn	02 32 51.7	+1.6
SMF	Signal de Mont	3.25	276	*e*Pg	Pg	02 33 00.4	-1.6
SMF				*e*Sn	Sn	02 33 26.1	-2.3
SMF				*e*Sg	Sg	02 33 41.8	-2.3
	comp=E,3.5nm,0.2s						
LOR	Lormes	3.33	287	*e*P	Pn	02 32 53.4	+2.3
	baz=108						
LOR	Lormes	3.33	287	*e*Pg	Pg	02 33 02.0	-1.5
	baz=107						
LOR				*e*Sg	Sg	02 33 44.4	-2.2
	comp=E,3.6nm,0.2s,baz=106						
LOR	Lormes	3.33	287	Pn	Pn	02 32 53.0	+1.9
LMR	La Mourre	3.38	206	*e*P	Pn	02 32 54.3	+2.5
LMR				*e*Sg	Sb	02 33 44.9	+4.8
	comp=E,1.2nm,0.3s						
SSF	Saint Saulge	3.52	283	*e*P	Pn	02 32 56.1	+2.3
SSF	Saint Saulge	3.52	283	*e*Pg	Pg	02 33 05.9	-1.3
SSF				*e*Sn	Sn	02 33 32.8	-2.3
SSF				*e*Sg	Sg	02 33 50.2	-2.6
	comp=E,2.1nm,0.2s						
AVF	Avril sur Loir	3.59	278	*e*P	Pn	02 32 56.5	+1.7
AVF	Avril sur Loir	3.59	278	*e*Pg	Pg	02 33 06.9	-1.7
AVF				*e*Sg	Sg	02 33 52.4	-2.8
	comp=E,1.6nm,0.3s						
BGF	Bois d'Agland	3.93	274	*e*P	Pn	02 33 01.1	+1.7
BGF				*e*Sn	Sn	02 33 42.2	-3.0
BGF				*e*Sg	Sg	02 34 03.1	-2.9
	comp=E,4.2nm,0.3s						
LASF	Ste Croix	4.03	237	*e*P	Pn	02 33 03.6	+2.7
LASF				*e*Sn	Sn	02 33 45.0	-2.8
	comp=E,0.5nm,0.2s						
HYF	Humbligny	4.14	284	*e*P	Pn	02 33 04.9	+2.6
KHC	Kasperske Hory	4.37	49	*e*PN	Pn	02 33 06.4	+0.9
KHC				*e*SN	Sn	02 33 54.7	-1.3
KHC				*ex*	x	02 34 17.0	
TCF	Toulx Ste Croi	4.38	271	*e*P	Pn	02 33 07.4	+1.8
TCF				*e*Sn	Sn	02 33 53.2	-3.1
	comp=E,0.7nm,0.2s						
TCF				*e*Sg	Sg	02 34 17.2	-3.2
	comp=E,1.7nm,0.4s						
CKRC	Cesky Krumlov	4.60	56	*e*SN	Sn	02 34 00.8	-0.9
CAF	Calviac	4.77	254	*e*P	Pn	02 33 13.7	+2.8
CAF				*e*Sn	Sn	02 34 02.3	-3.5
	comp=E,0.6nm,0.3s						
MFF	Saint Martin d	6.00	275	*e*P	Pn	02 33 29.6	+1.8
GRR	Gorron	6.68	291	*e*Pn	Pn	02 33 36.1	-1.1
GRR				*e*Sn	Sn	02 34 47.9	-5.0
	comp=E,0.4nm,0.2s						

MAN 08 02:36:17.7, 9°.88N×125°.52E, h27km, mb4.1, ML2.8, MS2.5, 3C-2D, Mindanao

| Code | Station Name | Δ° | AZ° |

JOD2	Odawara 2	1.15 223	*i* P		Pn	03 08 09.7	+0.3
JOD2			S		Sn	03 08 24.1	-0.6
JFY	Yanaizu	1.32 348	P		Pn	03 08 12.8	+1.2
JUON	Uonuma	1.35 325	P		Pn	03 08 12.3	+0.4
JYN	Shimob	1.36 244	*i* P		Pn	03 08 12.8	+0.7
JYN			S		Sn	03 08 29.8	+0.1
JFNN	Fujinakano	1.43 231	P		Pn	03 08 13.7	+0.7
JFNN			*e*S		Sn	03 08 31.6	+0.4
MAT	Matsushiro	1.54 287	P		Pn	03 08 15.2	+0.8
JHJ	Hachijo jima 2	2.99 184	P		Pn	03 08 34.0	+0.1
	8.9nm,0.3s,baz=57,slow=15,SNR=1.4						
JHJ			S		Sn	03 09 10.6	+1.9
	106nm,0.9s,baz=72,slow=20,SNR=1.5						
	40nm,0.3s						
MKAR	Makanchi Array	43.67 303	P		P	03 15 46.6	+0.6
	0.4nm,0.6s,baz=83,slow=11,SNR=2.6						
	0.4nm,0.6s						
WRA	Warramunga Arr	56.01 186	P		P	03 17 19.5	-0.2
	0.2nm,0.4s,baz=2.8,slow=7.2,SNR=7.4						
	0.2nm,0.4s						
ASAR	Alice Springs	59.74 187	P		P	03 17 43.3	-2.4
	0.3nm,0.8s,baz=359,slow=8.3,SNR=1.7						
	0.3nm,0.8s						

*PAS **08** 03:25:27.0±1.8, 34°.69N±0°.01×120°.28W±0°.02, h3km±7km, ML3.4/104, ML3.0/88(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=62.0*
*ANF **08** 03:25:26.4±0.4, 34°.68N×120°.28W, h16km±2km, ML3.4/40, Error ellipse: s-maj=4.5km s-min=1.7km az=87.0*
*NEIC **08** 03:25:27.0±1.3, 34°.69N±0°.02×120°.28W±0°.02, h15km±5km, Error ellipse: s-maj=2.9km s-min=1.8km az=52.0*
*NCEDC **08** 03:25:27.3, 34°.69N×120°.27W, h5km*

ISC 08 03:25:26.6±1.0, 34°.67N±0°.02×120°.29W±0°.02, h15km±8km, n101, σ0ŝ75/129, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GATR	Gnd/Air Tx Cnt	0.21	237		Pg	03 25 32.1	+0.7
GATR					Sb	03 25 37.6	+1.6
FIGC	Figueroa Mtn.	0.25	76		Pg	03 25 32.1	-0.1
FIGC					Sb	03 25 36.7	-0.5
SYP	Santa Ynez Pea	0.29	119		Sb	03 25 39.2	+0.9
PMLM	Mount Lospe	0.35	310		Pg	03 25 33.7	-0.1
PKM	Mcpherson Peak	0.45	60		Pg	03 25 35.4	-0.2
PKM					Sb	03 25 42.6	-0.3
PKM	Mcpherson Peak	0.45	60	P	Pg	03 25 35.4	-0.2
	baz=242,SNR=386						
PKM				S	Sg	03 25 41.1	-0.6
	baz=242						
SBC	Santa Barbara	0.52	115		Pg	03 25 37.5	+0.5
SBC					Sb	03 25 45.7	+0.8
SBC	Santa Barbara	0.52	115	P	Pg	03 25 37.4	+0.5
	baz=298,SNR=36						
BCH	Branch Mountai	0.54	18		Pg	03 25 37.1	-0.2
BSM	San Miguel Isl	0.63	185		Pg	03 25 39.4	+0.4
BSM					Sb	03 25 48.8	+0.8
SMMC	Simmler	0.69	20		Pg	03 25 39.7	-0.3
SMMC					Sb	03 25 49.6	-0.1
SMMC	Simmler	0.69	20	P	Pg	03 25 39.9	-0.2
	baz=200,SNR=214						
SMMC				S	Sb	03 25 49.9	+0.2
	baz=200						
DPD	Davis Peak	0.70	324		Pg	03 25 40.2	0.0
DPD					Sn	03 25 51.5	-1.0
DCD	Diablo Creek	0.71	320		Pg	03 25 40.5	0.0
CARC	Carrizo Plain	0.73	29		Pg	03 25 40.7	-0.2
CARC					Sb	03 25 52.0	+0.9
CRGC	Crocker Grade	0.73	39		Pg	03 25 40.9	-0.1
CRGC					Sn	03 25 53.1	-0.5
VPDC	Valencia Peak	0.74	320		Pg	03 25 41.0	-0.1
VPDC					Sg	03 25 50.7	-0.2
BCW	Bitter Crk WRg	0.77	69		Pg	03 25 41.3	-0.2
BCW	Bitter Crk WRg	0.77	69		Pg	03 25 41.5	0.0
BCW	Bitter Crk WRg	0.77	69		Sn	03 25 56.5	+2.1
RYS	Reyes Peak	0.77	92		Pg	03 25 41.9	+0.2
YEG	Yeguas Mountai	0.81	19		Pb	03 25 42.7	+0.1
SCZ2	Santa Cruz Isl	0.86	141		Pb	03 25 42.7	-0.6
SCZ2					Sb	03 25 54.2	-0.4
SCZ2	Santa Cruz Isl	0.86	141	P	Pb	03 25 42.5	-0.7
	baz=323,SNR=60						
SCZ2				S	Sb	03 25 55.0	+0.4
	baz=323						
TSCN	Private Proper	0.88	357		Pg	03 25 43.6	0.0
TSCN					Sn	03 25 56.0	-1.0
MPI	Mount Pinos, F	0.95	81		Pb	03 25 44.8	-0.2
MPI					Sn	03 25 58.8	-0.4
ARVC	Arvin	1.28	69	P	Pn	03 25 49.7	-0.3
	baz=250,SNR=44						
ARVC				S	Sn	03 26 07.5	+0.5
	baz=250						
OSI	Osito Audit: C	1.29	92	P	Pn	03 25 50.0	-0.1
	baz=274						
OSI				S	Sb	03 26 07.3	+0.3
	baz=274						
VES	Vestal, Richgr	1.53	40	P	Pn	03 25 53.5	+0.1
	baz=220,SNR=48						
VES				S	Sb	03 26 13.5	-0.4
	baz=220						
SNCC	San Nicolas Is	1.55	156		Pn	03 25 53.3	-0.4
SNCC	San Nicolas Is	1.55	156	P	Pn	03 25 53.1	-0.6
	baz=337,SNR=14						
SNCC				S	Sn	03 26 13.7	+0.1
	baz=337						
PMPB	Monarch Peak	1.60	345		Pn	03 25 53.7	-0.8
DECC	Green Verdugo	1.67	104	P	Pn	03 25 55.1	-0.2
	baz=286						
DECC				Sb	Sb	03 26 18.0	+0.2
	baz=286						
ISA	Isabella, Lake	1.79	56		Pn	03 25 56.8	-0.2
ISA	Isabella, Lake	1.79	56	P	Pn	03 25 56.5	-0.5
	baz=237,SNR=69						
ISA				S	Sn	03 26 20.0	+0.5
	baz=237						
PASC	Pasadena Art C	1.81	105		Pn	03 25 57.5	+0.2
PASC				IAML		03 26 27.5	
	comp=E,170nm,0.6s						
PASC				IAML		03 26 30.4	
	comp=N,108nm,0.8s						
EDW2	Edwards Air Fo	1.90	83	P	Pn	03 25 58.4	-0.2
	baz=265,SNR=48						
FMP	Fort Macarthur	1.91	119	Pb	Pb	03 26 00.4	-0.7
	baz=301						
FMP				S	Sn	03 26 21.6	-0.7
	baz=301						
CCAC	Calif City Air	1.93	75		Pn	03 25 59.0	0.0
CIS	Catalina Islan	2.00	129	P	Pn	03 25 59.0	-1.0
	baz=310,SNR=5.3						
CIS				S	Sn	03 26 24.2	-0.6
	baz=310						
BBGB	Big Mountain B	2.00	342		Pn	03 25 59.8	-0.2
BFSC	Mount Baldy Ra	2.21	100	P	Pn	03 26 02.7	-0.2
	baz=282,SNR=33						
BFSC				S	Sn	03 26 30.2	+0.1
	baz=282						
SCI2	San Clemente I	2.22	139	P	Pn	03 26 03.0	+0.1
	baz=320,SNR=11						
SCI2				S	Sn	03 26 30.3	+0.2
	baz=320						
SAO	San Andreas Ge	2.29	336		Pn	03 26 02.7	-1.2
CWC	Cottonwood Cre	2.52	45	Pb	Pb	03 26 10.8	-0.9
	baz=226						
ELS	Elsinore Mount	2.58	112		Pn	03 26 07.2	-0.7
ELS				IAML		03 26 39.7	
	comp=E,53nm,0.6s						
ELS				IAML		03 26 40.1	
	comp=N,89nm,0.6s						
MPMC	Manual Prospec	2.67	58	P	Pn	03 26 09.9	+0.6
	baz=240						
MURC	Murrieta	2.77	112	P	Pn	03 26 10.0	-0.6
	baz=294,SNR=11						
MURC				S	Sn	03 26 43.4	-0.5
	baz=294						
BBRC	Big Bear Solar	2.81	97	P	Pn	03 26 11.7	+0.4
	baz=280						
TIN	Tinemaha, Big	2.91	34	Pb	Pb	03 26 17.2	-1.1
	baz=216						
TIN				Sb	Sb	03 26 54.9	+1.2
	baz=216						
GSC	Goldstone, Bar	2.93	77		Pn	03 26 12.8	+0.1
GSC				IAML		03 27 07.8	
	comp=N,45nm,1.6s						
GSC				IAML		03 27 27.6	
	comp=E,64nm,1.0s						
GSC	Goldstone, Bar	2.93	77	P	Pn	03 26 12.6	-0.1
	baz=259						
GSC				S	Sn	03 26 47.4	-0.3
	baz=259						
MDPB	Devils Postpil	3.12	18		Pn	03 26 16.8	+1.3
MDPB				IAML		03 26 58.7	
	comp=E,56nm,0.6s						
OMMB	Old Mammoth Mi	3.12	19		Pn	03 26 16.0	+0.5
OMMB				IAML		03 27 14.9	
	comp=N,57nm,0.6s						
OMMB				IAML		03 27 20.7	
	comp=E,46nm,0.9s						
MLAC	Mammoth, Mammo	3.18	21	Pb	Pb	03 26 21.8	-1.2
	baz=202						
109C	Camp Elliot, M	3.19	123	Pn	Pn	03 26 15.8	-0.5
109C				IAML		03 26 53.2	
	comp=N,34nm,0.6s						
109C				IAML		03 27 03.8	
	comp=E,30nm,0.5s						
109C	Camp Elliot, M	3.19	123	P	Pn	03 26 15.4	-0.8
	baz=305						
109C				S	Sn	03 26 52.1	-1.9
	baz=305						
HEC	Hector,Ludlow	3.26	86	P	Pn	03 26 17.2	0.0
	baz=269						
HEC				S	Sn	03 26 56.1	+0.2
	baz=269						
FURC	Furnace Creek,	3.32	56	Pb	Pb	03 26 25.3	+0.2
	baz=238						
GWY	Greenwater Val	3.32	62		Pn	03 26 19.6	+1.5
GWY				IAML		03 27 16.6	
	comp=N,33nm,0.9s						
GWY				IAML		03 27 23.6	
	comp=E,32nm,1.0s						
GRAC	Grapevine Rang	3.32	45	IAML		03 27 20.3	
	comp=N,53nm,0.7s						
GRAC	Grapevine Rang	3.32	45	Pb	Pb	03 26 25.3	+0.1
	baz=226						
LCH	Last Change Ra	3.34	39		Pn	03 26 19.1	+0.6
LCH				IAML		03 27 12.2	
	comp=N,27nm,0.6s						
LCH				IAML		03 27 14.1	
	comp=E,26nm,0.7s						
PFO	Pinyon Flats O	3.34	107	Pn	Pn	03 26 18.6	+0.1
PFO	Pinyon Flats O	3.34	107	P	Pn	03 26 18.3	-0.2
	baz=290						
PFO				S	Sn	03 26 58.0	0.0
	baz=290						
TPFO	Pinon Flats	3.35	107	S	Sn	03 26 58.1	-0.1
	baz=290						
CMB	Columbia Colle	3.36	359		Pn	03 26 19.2	+0.6
SHOC	Shoshone, Teco	3.50	68	P	Pn	03 26 20.7	+0.2
	baz=251						
GMN	Gold Mountain	3.59	42	IAML		03 27 18.8	
	comp=N,24nm,0.6s						
BAR	Barrett	3.61	122		Pn	03 26 21.5	-0.5
BAR				IAML		03 27 05.5	
	comp=E,23nm,0.5s						
BAR				IAML		03 27 07.3	
	comp=N,23nm,0.5s						
BELC	Belle Mtn. Jos	3.61	99	P	Pn	03 26 22.8	+0.7
	baz=282,SNR=19						
BELC				S	Sn	03 27 05.2	+0.6
	baz=282						
WCT	Wildcat Mounta	3.66	53	IAML		03 27 33.7	
	comp=E,18nm,1.6s						
TUQ	Turquoise Moun	3.66	77	P	Pn	03 26 23.3	+0.5
	baz=259						
MONP2	Monument Peak	3.67	118	P	Pn	03 26 23.1	0.0
	baz=300,SNR=7.3						
MONP2				S	Sn	03 27 05.8	-0.5
	baz=300						
GMRC	Granite Mounta	3.81	87	P	Pn	03 26 25.3	+0.4
	baz=270,SNR=6.3						
GMRC				S	Sn	03 27 08.5	-1.1
	baz=270						
CBX	Cerro Bola	3.83	127		Pn	03 26 25.8	+0.6
CBX				IAML		03 27 14.7	
	comp=E,18nm,0.5s						
CBX				IAML		03 27 32.0	
	comp=N,17nm,0.7s						
WAKR	Walker	3.89	10	IAML		03 27 36.8	
	comp=N,27nm,0.9s						
WAKR				IAML		03 27 37.8	
	comp=E,29nm,1.2s						
TPNV	Topopah Spring	3.99	54	IAML		03 27 43.3	
	comp=E,19nm,1.5s						
TPNV				IAML		03 27 43.5	
	comp=E,21nm,2.3s						
TPNV	Topopah Spring	3.99	54	P	Pn	03 26 29.5	+2.1
	baz=236						
IKP	In-Ko-Pah, Jac	4.02	119	P	Pn	03 26 28.4	+0.6
	baz=302,SNR=6.3						
IKP				S	Sn	03 27 14.5	-0.2
	baz=302						
SWSC	Sam W. Stewart	4.11	113	P	Pn	03 26 29.4	+0.4
	baz=296						
NV11	Mina Array Sit	4.13	24	Pn	Pn	03 26 31.3	+1.9
NV11				IAML		03 27 56.7	
	comp=E,12nm,1.5s						
BC3	Big Chuckawall	4.13	103	P	Pn	03 26 29.9	+0.6
	baz=286						
BC3				S	Sn	03 27 17.0	-0.4
	baz=286						
YUH	Yuha Desert	4.16	118	IAML		03 27 00.2	
	comp=N,11nm,4.3s						
RYN	Ryan	4.20	19	Pn	Pn	03 26 31.9	+1.7
RYN				IAML		03 27 49.2	
	comp=E,11nm,1.0s						
TPH	Tonopah	4.20	35	Pn	Pn	03 26 33.1	+2.7
IRM	Iron Mountain	4.28	95	P	Pn	03 26 31.2	-0.1
	baz=279						
EMB	Emerald Bay	4.30	2	Pn	Pn	03 26 32.3	+0.6
EMB				IAML		03 27 54.8	
	comp=E,20nm,0.6s						
EMB				IAML		03 28 01.9	
	comp=N,24nm,1.0s						
AFDM	Forest Hills D	4.31	353		Pn	03 26 31.8	+0.2
AFDM				IAML		03 27 52.5	
	comp=E,10nm,1.3s						
PNTR	Pine Nut	4.45	7		Pn	03 26 35.1	+1.3
ESJX	Sierra Juarez	4.50	125		Pn	03 26 35.1	+0.7
SHPR	Sheep Range	4.56	65	Pn	Pn	03 26 36.5	+1.2
V12A	Nelson	4.57	75	IAML		03 28 24.4	
	comp=N,12nm,3.8s						
VCNR	Virginia City	4.65	6	IAML		03 27 59.1	
	comp=N,18nm,0.8s						
VCNR				IAML		03 28 09.6	
	comp=E,19nm,0.8s						
NEE2	Needles Airpor	4.67	87	P	Pn	03 26 37.0	+0.4
	baz=271,SNR=7.9						
KVN	Kaiserville	4.71	21		Pn	03 26 38.2	+0.8
KVN				IAML		03 27 57.2	
	comp=E,8.5nm,4.7s						
PAHR	Pah Rah Range	5.08	8	Pn	Pn	03 26 43.9	+1.5
PAHR				IAML		03 28 15.1	
	comp=E,11nm,3.1s						
PAHR				IAML		03 28 51.8	
	comp=N,8.5nm,4.2s						
PDMCI	Parker Dam,Lak	5.09	92	P	Pn	03 26 42.3	0.0
	baz=276						
BEKR	Beckworth	5.19	359	Pn	Pn	03 26 45.6	+1.7
BEKR				IAML		03 28 09.2	
	comp=E,9.9nm,0.9s						
BEKR				IAML		03 28 22.2	
	comp=N,6.9nm,1.2s						
W13A	Hualapai Mount	5.28	84	IAML		03 27 24.6	
	comp=E,5.8nm,4.9s						
W13A				IAML		03 28 25.4	
	comp=N,9.6nm,2.2s						
Y14A	Wickenburg	6.07	95		Pn	03 26 56.5	+0.6

MAN 08 03:27:45.4, 10°.20N×123°.26E, h4km, mb4.1, ML2.9, MS2.5, 3C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.71	80	*e*P	Pg	03 27 58.7	-0.2
LLP				*e*S	Sg	03 28 08.3	+0.2
SNPH	Sibulan	0.85	181	↑*i*P	Pb	03 28 02.8	0.0
SNPH				*i* S	Sb	03 28 15.2	+0.7
TABP	Talibon, Bohol	1.06	96	↑*e*P	Pg	03 28 05.0	-0.8
TABP				*i* S	Sn	03 28 22.0	-0.3
LSIP	Lazi, Siquijor	1.12	161	↑*i*P	Pg	03 28 06.8	-0.1
LSIP				*i* S	Sg	03 28 21.9	+0.4
GHBP	Garcia Hernand	1.19	118	↓*i*P	Pg	03 28 07.5	-0.7
GHBP				*i* S	Sg	03 28 23.9	+0.2

HEL 08 04:08:31.1±0.1, 67°.63N×33°.75E, h0km, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	Lovozero	0.43	52	PG	Pg	04 08 39.1	-0.3
LVZ				SG	Sg	04 08 44.4	-0.6
VRF	Varrio	1.58	276	PG	Pn	04 08 59.7	-0.7
VRF				MSG		04 09 18.5	
	comp=Z,2.8nm,0.2s						
VRF				SG	Sn	04 09 19.2	-2.4
OLKF	Oulanka, Finla	2.16	234	PG	Pb	04 09 09.9	-1.1
KU6	Riekki	2.22	225	PG	Pb	04 09 10.8	-1.3
KU6				MSG		04 09 36.9	
	comp=Z,1.0nm,0.2s						
MSF	Maaselka	2.54	229	PG	Pb	04 09 16.4	-1.2
	baz=47						
MSF				SG	Sb	04 09 50.8	+1.4
RMF	Romuvaara	3.77	206	PN	Pn	04 09 30.6	+0.2
KALU	Kalix	4.49	251	PB	Pb	04 09 45.7	-4.9
KALU	Kalix	4.49	251	SG	Pb	04 09 45.7	-4.9

HEL 08 04:08:33.8±0.3, 67°.76N×20°.20E, h0km, ML1.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	Lannavaara	0.74	66	PG	Pg	04 08 46.9	-0.9
LANU				SG	Sg	04 08 56.5	-1.0
KIF	Kilpisjarvi	1.27	10	*e*P	Pg	04 08 57.3	-0.8
KIF	Kilpisjarvi	1.27	10	PG	Pg	04 08 57.9	-0.2
KIF				SG	Sg	04 09 13.0	-1.6
KIF				MSG		04 09 13.5	
	comp=Z,3.4nm,0.2s						
PAJU	Pajala	1.35	122	PN	Pg	04 08 58.6	-1.0
	baz=305						
PAJU				SN	Sn	04 09 18.3	-0.1
ERTU	Ertsjaerv	1.44	146	PN	Pn	04 09 00.9	-0.2
ERTU				SN	Sn	04 09 21.6	+0.9
HEF	Hetta	1.45	62	*e*P	Pn	04 08 59.8	-1.5
HEF	Hetta	1.45	62	PG	Pn	04 08 59.9	-1.4
	baz=243						
HEF				MSG		04 09 17.6	
	comp=Z,1.7nm,0.2s						
HEF				SN	Sn	04 09 22.0	+1.0
KLF	Kolari	1.54	108	PN	Pn	04 09 02.2	-0.2
KLF				SN	Sg	04 09 23.6	+0.3
KTK1	Kautokeino	1.69	40	PN	Pn	04 09 04.4	-0.1
KTK1				SN	Sb	04 09 27.7	+0.2
TRO	Tromso	1.94	347	PG	Pn	04 09 08.4	+0.5
TRO				SG	Sn	04 09 32.5	-0.5
KALU	Kalix	2.28	145	PG	Pb	04 09 15.1	-0.7
TOF	Tornio	2.34	134	PG	Pb	04 09 15.6	-1.2
	baz=314						
TOF				MSG		04 09 43.2	
	comp=Z,1.8nm,0.2s						
TOF				SG	Sb	04 09 47.5	+1.3
SGF	Sodankyl	2.44	95	PB	Pb	04 09 18.6	+0.1
SGF				SN	Sb	04 09 49.4	+0.3
SGF	Sodankyl	2.44	95	PG	Pb	04 09 18.6	+0.1
SGF				SG	Sb	04 09 49.4	+0.3
RNF	Rovaniemi	2.54	114	SN	Sg	04 09 58.2	+2.8
RNF	Rovaniemi	2.54	114	PG	Pb	04 09 19.1	-1.1
	baz=300						
RNF				SG	Sb	04 09 52.7	+0.7
ARA0	ARCESS Array S	2.64	45	PB	Pn	04 09 18.6	+1.1
ARA0				SG	Sb	04 09 53.8	-0.9
KEV	Kevo	3.19	48	SN	Sn	04 10 01.4	-2.3
KEV	Kevo	3.19	48	SN	Sn	04 10 01.4	-2.3
KEV				MSG		04 10 07.3	
	comp=Z,1.3nm,0.2s						
OLKF	Oulanka, Finla	3.88	108	PB	Pn	04 09 38.2	+3.5
OLKF	Oulanka, Finla	3.88	108	SG	Pn	04 09 38.2	+3.5
KU6	Riekki	4.20	110	PN	Pn	04 09 40.4	+1.5
KU6	Riekki	4.20	110	SG	Pn	04 09 40.4	+1.5

*IDC **08** 04:29:43.9±0.5, 20°.40N×57°.38W, h0km, mb4.2/26, mbtmp4.3/28, ML4.0/2, MS3.7/12, Error ellipse: s-maj=13.3km s-min=11.0km az=114.0*
*NEIC **08** 04:29:45.6±1.4, 20°.35N±0°.08×57°.37W±0°.07, h10km±1km, mb4.9/198, Error ellipse: s-maj=13.9km s-min=10.3km az=145.0*
*GCMT **08** 04:29:50.7±0.3, 20°.37N±0°.02×57°.36W±0°.02, h39km±1km, MW4.9/71, Moment Tensor Solution. s19,c22; s71,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~0.44±.18; $M_{\theta\theta}$~1.46±.12; $M_{\phi\phi}$ 1.90±.12; $M_{r\theta}$0.38±.14; $M_{\theta\phi}$~1.70±.10; $M_{\phi r}$~0.44±.11; Best double couple: $M_0$2.44800×10^{16} NP1:ϕ_s112.00000°, δ87.00000°, λ169.00000°. NP2: ϕ_s203.00000°, δ79.00000°, λ3.00000°. Principal axes: T 2.7070, Plg10.0000°, Azm67.0000°; N -0.5140, Plg78.0000°, Azm279.0000°; P -2.1900, Plg6.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*TRN **08** 04:29:50.4, 20°.12N×57°.73W, h29km*

ISC 08 04:29:45.2±0.3, 20°.33N±0°.04×57°.48W±0°.05, h10km, n409, σ2ŝ18/322, mb4.8/147, MS3.6/9, 11C-6D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	4.86	238	Pn	Pn	04 30 59.3	+0.8
ANWB	Willy Bob	4.86	238	*e*P	Pn	04 30 59.2	+0.8
ANWB	Willy Bob	4.86	238	*e*S	Sn	04 31 49.3	-5.5
ANBD	Bethesda, Anti	5.21	232	*e*P	Pn	04 31 03.8	+0.5
ANBD	Bethesda, Anti	5.21	232	*e*S	Sn	04 31 57.6	-6.0
GDSD	La Dsirade Is	5.25	221		Pn	04 31 04.4	+0.5
ABD	La Joyeuse, An	5.41	225		Pn	04 31 07.1	+1.1
ABD	La Joyeuse, An	5.41	225	*e*P	Pn	04 31 06.9	+0.9
ABD	La Joyeuse, An	5.41	225	*e*S	Sn	04 32 03.4	-4.8
MAGL	Barre de l'ile	5.66	220		Pn	04 31 09.6	+0.1
MAGL	Barre de l'ile	5.66	220	*e*P	Pn	04 31 10.4	+0.9
MAGL	Barre de l'ile	5.66	220	*e*S	Sn	04 32 08.5	-6.2
MBFL	Flemmings, Mon	5.73	232	*e*P	Pn	04 31 11.9	+1.4
MBFL	Flemmings, Mon	5.73	232	*e*S	Sn	04 32 09.6	-6.8
GDHS	Morne Mazeau,	5.74	226		Pn	04 31 11.9	+1.3
SMRT	St. Maarten	5.76	248	Pn	Pn	04 31 12.0	+1.2
SMRT	St. Maarten	5.76	248	*e*P	Pn	04 31 11.7	+0.9
SMRT	St. Maarten	5.76	248	*e*S	Sn	04 32 12.3	-4.6
CBE	Ff, Capester	5.78	223		Pn	04 31 12.7	+1.6
CBE	Ff, Capester	5.78	223	*e*P	Pn	04 31 13.2	+2.1
CBE	Ff, Capester	5.78	223	*e*S	Sn	04 32 11.7	-5.8
TDBA	Terre de Bas,	5.96	222		Pn	04 31 15.3	+1.7
TDBA	Terre de Bas,	5.96	222	*e*P	Pn	04 31 15.3	+1.7
TDBA	Terre de Bas,	5.96	222	*e*S	Sn	04 32 16.5	-5.4
TBG	Guadaloupe-3	5.96	222	*e*P	Pn	04 31 15.2	+1.6
MDVC	Dominica, Viel	6.00	219	*e*P	Pn	04 31 15.3	+1.2
MDVC	Dominica, Viel	6.00	219	*e*S	Sn	04 32 18.2	-4.7
MDCT	Cottage Hill,	6.03	220	*e*P	Pn	04 31 16.6	+2.0
MDCT	Cottage Hill,	6.03	220	*e*S	Sn	04 32 18.1	-5.6
DLPL	La Plaine	6.13	216		Pn	04 31 16.7	+0.7
DLPL	La Plaine	6.13	216	*e*P	Pn	04 31 16.5	+0.6
DLPL	La Plaine	6.13	216	*e*S	Sn	04 32 20.5	-5.8
DSLB	Salisbury	6.15	218	*e*P	Pn	04 31 16.9	+0.7
DSLB	Salisbury	6.15	218	*e*S	Sn	04 32 21.6	-5.0
MDN	Morne-Daniel	6.23	217	*e*P	Pn	04 31 18.1	+0.8
MDN	Morne-Daniel	6.23	217	*e*S	Sn	04 32 23.1	-5.4
ILAM	Ilet Lapin Mar	6.41	211		Pn	04 31 20.6	+0.9
ILAM	Ilet Lapin Mar	6.41	211	*e*P	Pn	04 31 20.4	+0.6
ILAM

MPOM Morne Pois Mar 6.69 209 eS Sn 04 32 33.0 -6.8
TRMF Trois Ilets 6.70 211 eP Pn 04 31 24.6 +0.9
BIM Bigot 6.72 211 Pn 04 31 25.2 +1.1
BIM Bigot 6.72 211 eP Pn 04 31 25.3 +1.1
BIM Bigot 6.72 211 eS Sn 04 32 34.3 -6.5
SLCP Castries, St. 7.13 209 eP Pn 04 31 30.5 +0.9
SLCP Castries, St. 7.13 209 eS Sn 04 32 44.6 -6.1
SLB Belfond 7.31 208 eP Pn 04 31 34.0 +1.8
SLB Belfond 7.31 208 eS Sn 04 32 48.8 -6.5
STVI Saint Thomas 7.33 256 Pn 04 31 33.1 +0.7
CDVI St. Croix 7.36 251 Pn Pn 04 31 34.2 +1.5
CDVI St. Croix 7.36 251 eP Pn 04 31 34.3 +1.5
CDVI St. Croix 7.36 251 eS Sn 04 32 50.8 -5.5
MCLT Moule a Chique 7.37 207 Pn Pn 04 31 33.0 0.0
MCLT Moule a Chique 7.37 207 eP Pn 04 31 34.7 +1.7
MCLT Moule a Chique 7.37 207 eS Sn 04 32 50.2 -6.6
BBGH Gun Hill 7.42 196 Pn Pn 04 31 34.8 +1.1
BBGH Gun Hill 7.42 196 eP Pn 04 31 35.9 +2.2
BBGH Gun Hill 7.42 196 eS Sn 04 32 53.0 -4.9
BCHC Barbados, Cave 7.45 196 eP Pn 04 31 35.4 +1.4
BCHC Barbados, Cave 7.45 196 eS Sn 04 32 52.9 -5.7
CUPR Culebra, Puert 7.64 256 Pn Pn 04 31 37.0 +0.4
SVB Belmont 7.89 208 eP Pn 04 31 41.6 +1.4
SVB Belmont 7.89 208 eS Sn 04 33 03.4 -6.3
MTP Monte Pirata 7.95 255 Pn 04 31 41.9 +1.0
HUMP Col San Antoni 8.21 256 Pn 04 31 44.8 +0.4
SJG San Juan 8.49 256 Pn Pn 04 31 48.8 +0.5
102nm,0.3s,baz=77,slow=11,SNR=169
SJG Sn Sn 04 33 15.9 -8.2
49nm,0.3s,baz=327,slow=23,SNR=6.9
SJG LR LR 04 34 58.8
comp=Z,379nm,20.9s,baz=68,slow=37
SJG San Juan 8.49 256 Pn 04 31 48.1 -0.2
SJG San Juan 8.49 256 eP Pn 04 31 49.1 +0.8
SJG San Juan 8.49 256 eS Sn 04 33 16.5 -7.7
AOPR Arecibo Observ 8.98 259 eP Pn 04 31 57.1 +2.0
AOPR Arecibo Observ 8.98 259 eS Sn 04 33 28.7 -7.6
GRGR Grenville 9.09 207 Pn Pn 04 31 57.3 +0.8
GRGR Grenville 9.09 207 eP Pn 04 31 57.5 +0.9
GRGR Grenville 9.09 207 eS Sn 04 33 30.6 -8.3
GRFF Grenada Fort F 9.20 207 eP Pn 04 31 59.7 +1.7
GRFF Grenada Fort F 9.20 207 eS Sn 04 33 34.0 -7.6
MLPR Magueyes Islan 9.34 257 Pn Pn 04 32 01.0 +1.0
CRPR Cabo Rojo, PR 9.39 257 Pn Pn 04 32 01.5 +0.8
TOSP Speyside 9.45 199 Pn 04 32 02.8 +1.2
TOSP Speyside 9.45 199 eP Pn 04 32 01.9 +0.4
TOSP Speyside 9.45 199 eS Sn 04 33 40.3 -7.6
TRN Trinidad (W) 10.34 202 eP Pn 04 32 15.3 +1.5
PCDR Punta Cana, DR 10.45 262 Pn Pn 04 32 15.0 -0.2
SDD Santo Domingo 11.88 263 Pn Pn 04 32 35.2 +0.4
PCRV Puerto La Cruz 12.23 215 Pn Pn 04 32 41.5 +1.9
3.4nm,0.3s,baz=61,slow=3.4,SNR=28
PCRV Sn Sn 04 34 58.1 +2.0
2.5nm,0.3s,baz=273,slow=16,SNR=13
PCRV LR LR 04 37 05.4
comp=Z,264nm,21.5s,slow=36
20nm,0.5s
GRTK Grand Turk 12.82 278 Pn Pn 04 32 45.4 -2.2
SDDR Presa de Saban 13.08 266 i P Pn 04 32 52.8 +1.5
HATO Hato, Curacao 13.68 235 Pn 04 32 59.2 -0.1
BAUV El Baul 15.24 224 Pn Pn 04 33 20.9 +0.2
BAUV El Baul 15.24 224 eP Pn 04 33 19.8 -0.9
MDP Montagnes des 15.85 162 Pn Pn 04 33 24.6 -4.1
2.0nm,0.3s,baz=335,slow=18,SNR=32
MDP Sn Sn 04 36 09.8 -15
4.4nm,0.3s,baz=62,slow=19,SNR=9.8
MDP LR LR 04 39 18.4
comp=Z,235nm,18.9s,baz=343,slow=36
URIC Uribia, Colomb 16.37 241 eP P 04 33 38.8 +0.6
GTBY Guantanamo Bay 16.57 272 Pn Pn 04 33 37.4 -0.4
SDV Santo Domingo 17.06 230 P P 04 33 46.9 +0.9
1.5nm,0.3s,baz=50,slow=8.5,SNR=10
SDV LR LR 04 39 56.1
comp=Z,116nm,21.4s,baz=63,slow=36
70nm,0.9s
SDV Santo Domingo 17.06 230 Pn Pn 04 33 43.8 -0.5
SDV IAmb IAmb 04 33 51.3
comp=Z,90nm,0.9s
CRJC Cerrejon, Guaj 17.47 240 eP Pn 04 33 48.9 -0.4
BOAV Boa Vista 18.07 190 eP Pn 04 33 57.0 +0.3
ARGC Ariguani, Magd 19.23 240 eP Pn 04 34 12.6 +1.9
OCAC Ocana 19.48 234 eP Pn 04 34 14.1 +0.3
PAMC Pamplona, Colo 19.60 231 eP Pn 04 34 15.9 +0.2
SJCC San Jacinto, C 19.97 241 eP Pn 04 34 21.1 +1.4
BARC Barichara 20.46 230 eP Pn 04 34 26.3 +0.7
RUSC La Rusia 20.87 229 eP Pn 04 34 31.1 +0.5
PTGA Pitinga 21.07 187 P P 04 34 31.6 +1.8
comp=Z,15nm,0.7s,baz=14,slow=13,SNR=22
PTGA S S 04 38 12.7 -12
comp=Z,25nm,0.7s,baz=320,slow=16,SNR=7.6
comp=Z,15nm,0.7s
ZARC Zaragoza, Cauc 21.12 235 eP P 04 34 32.4 +2.0
MCPB Macapa, AP 21.24 165 eP P 04 34 31.4 -0.2
PTBC PUERTO BERRIO, 21.43 233 eP P 04 34 35.2 +1.5
PTGC Puerto Gaitan, 21.47 224 eP P 04 34 35.7 +1.6
UREC San Jos de Ur 21.49 237 eP P 04 34 36.1 +1.8
SPBC San Pablo de B 21.75 230 eP P 04 34 41.8 +4.6
CHIC Chingaza 22.22 228 eP P 04 34 44.9 +2.3
MALB Monte Alegre 22.27 172 eP P 04 34 43.0 +0.4
SGCB São Gabriel d 22.38 206 eP P 04 34 48.2 +4.4
NORC Norcasia 22.39 231 eP P 04 34 46.8 +2.8
HELC Santa Helena 22.46 234 eP P 04 34 45.8 +0.6
ROSC El Rosal 22.48 229 P P 04 34 47.3 +1.9
comp=Z,9.3nm,0.7s,baz=214,slow=7.7,SNR=7.1
ROSC LR LR 04 44 07.1
comp=Z,191nm,21.9s,baz=50,slow=38
comp=Z,9.3nm,0.7s
ROSC El Rosal 22.48 229 P P 04 34 46.3 +0.9
GUY2C Guyana, Caldas 22.98 232 eP P 04 34 52.0 +1.3
CBOC Ciudad Bolivar 23.04 234 eP P 04 34 53.1 +2.1
MACA Manacapuru-AM 23.56 188 eP P 04 34 56.8 +0.7
PRAC Prado 23.68 228 eP P 04 34 58.4 +1.1
PLMC San Jos del P 23.87 233 eP P 04 35 01.0 +1.8
T59A Double "B" Far 24.11 318 P P 04 35 01.6 +0.4
BCIP Isla Barro Col 24.27 246 P P 04 35 03.8 +1.0
BCIP Isla Barro Col 24.27 246 eP P 04 35 09.2 +6.4
L64A Middleborough 24.33 335 IAmb IAmb 04 35 23.1
comp=Z,16nm,0.7s
TMAB Tom-Au,PA,Br 24.36 157 eP P 04 35 05.0 +1.3
M63A Gales Ferry 24.38 333 IAmb IAmb 04 35 06.2
comp=Z,29nm,1.1s
YOTC Yotoco, Valle 24.53 231 eP P 04 35 05.3 -0.1
ITTB Itaituba 24.60 176 eP P 04 35 06.6 +0.7
YLE Yale 24.70 331 P P 04 35 07.1 +0.6
CPNY Central Park 24.77 329 IAmb IAmb 04 35 09.0
comp=Z,35nm,0.9s
HAL Halifax 24.77 350 IAmb IAmb 04 35 17.3
comp=Z,28nm,1.2s
BCX Boston College 24.80 335 P P 04 35 07.9 +0.5
BCX IAmb IAmb 04 35 15.7
comp=Z,32nm,1.4s
WES Weston 24.90 335 IAmb IAmb 04 35 11.2
comp=Z,32nm,1.3s
PAL Palisades 24.91 329 P P 04 35 07.9 -0.5
PAL IAmb IAmb 04 35 10.7
comp=Z,28nm,0.9s
WUPA West Chester U 24.96 325 IAmb IAmb 04 35 27.9
comp=Z,19nm,1.1s
HRV Adam Dziewonsk 25.09 335 P P 04 35 10.3 +0.3
HRV IAmb IAmb 04 35 13.3
comp=Z,23nm,1.2s
TRNY Table Rock, Ra 25.17 329 IAmb IAmb 04 35 19.8
comp=Z,34nm,0.9s
GARC Garzon, Huila 25.19 227 eP P 04 35 11.6 +0.1
QUA2 Belchertown 25.23 333 IAmb IAmb 04 35 14.1
comp=Z,50nm,1.3s
GBN Guysborough 25.23 353 P P 04 35 12.1 +0.9
GBN IAmb IAmb 04 35 20.0
comp=Z,26nm,0.9s
KSCT Kent School, K 25.27 331 IAmb IAmb 04 35 15.1
comp=Z,21nm,0.8s
MVL Millersville 25.41 325 IAmb IAmb 04 35 16.8
comp=Z,27nm,1.0s
K62A Royalston 25.50 334 IAmb IAmb 04 35 23.2
comp=Z,41nm,1.4s
EMMW East Machias 25.68 343 P P 04 35 15.6 +0.2
EMMW IAmb IAmb 04 35 19.4
comp=Z,21nm,1.0s
I63A Otisfield 26.05 338 IAmb IAmb 04 35 23.5
comp=Z,32nm,1.2s
TRY Troy 26.16 332 IAmb IAmb 04 35 21.9
comp=Z,17nm,0.9s
G65A Princeton 26.17 344 IAmb IAmb 04 35 24.6
comp=Z,26nm,1.2s
WVL Waterville 26.20 340 IAmb IAmb 04 35 25.4
comp=Z,19nm,1.2s
N58A Sunbury 26.20 326 IAmb IAmb 04 35 22.5
comp=Z,18nm,0.9s
KSPA Keystone Colle 26.23 328 IAmb IAmb 04 35 25.2
comp=Z,22nm,0.8s
HNH Hanover 26.39 335 IAmb IAmb 04 35 26.4
comp=Z,22nm,1.0s
ROSB Rosrio 26.54 149 eP P 04 35 26.6 +3.2
ACCN Adirondack Com 26.69 333 IAmb IAmb 04 35 26.7
comp=Z,17nm,0.9s
SSPA Standing Stone 26.70 324 P P 04 35 26.3 +1.7
SSPA IAmb IAmb 04 35 37.9
comp=Z,33nm,1.4s
LBNH Lisbon 26.71 336 IAmb IAmb 04 35 29.9
comp=Z,17nm,0.9s
H62A Milan 26.71 338 IAmb IAmb 04 35 31.1
comp=Z,28nm,1.2s
PKME Peaks-Kenny Pk 26.71 341 IAmb IAmb 04 35 30.4
comp=Z,22nm,1.3s
M57A Sunshine Farm, 26.77 326 IAmb IAmb 04 35 28.0
comp=Z,31nm,0.9s
BINY Binghamton 26.82 328 IAmb IAmb 04 35 28.3
comp=Z,39nm,1.1s
TBTG Tabatinga, AM 27.25 208 eP P 04 35 34.1 +4.3
NPGB Novo Progresso 27.28 175 eP P 04 35 30.5 +0.4
J58A Remsen 27.38 331 IAmb IAmb 04 35 33.6
comp=Z,25nm,1.2s
PRPB Parauapebas 27.39 163 eP P 04 35 32.1 +1.0
RIMA Rio Macho 27.52 251 P P 04 35 33.8 +1.3
L56A Greenwood 27.57 327 IAmb IAmb 04 35 34.6
comp=Z,36nm,1.2s
TKL Tuckaleechee C 27.68 309 P P 04 35 34.2 +0.7
comp=Z,6.5nm,0.8s,baz=138,slow=7.7,SNR=5.4
TKL LR LR 04 47 09.0
comp=Z,95nm,18.1s,baz=116,slow=38
comp=Z,6.5nm,0.8s
TULM Tulcn-Chalpat 27.83 228 IAmb IAmb 04 35 54.3
comp=Z,48nm,1.6s
LONY Lake Ozonia 28.08 333 P P 04 35 37.5 +0.5
MATN Matagalpa 28.20 259 P P 04 35 39.4 +0.9
D62A Allapoint, All 28.30 343 P 04 35 44.5 +5.6
OTAV Otavalo 28.64 228 P P 04 35 43.9 +1.2
OTAV Otavalo 28.64 228 eP P 04 35 49.3 +6.6
TGUH Tegucigalpa,Un 29.11 262 P P 04 35 47.9 +1.3
TGUH IAmb IAmb 04 36 00.1
comp=Z,27nm,1.1s
TRQ Mont Tremblant 29.38 335 IAmb IAmb 04 35 50.9
comp=Z,18nm,1.0s
SADO Sadowa 30.27 329 LR LR 04 46 19.5
comp=Z,142nm,19.4s,baz=176,slow=33
SMTB Santa Maria do 30.60 161 eP P 04 36 00.3 +0.8
CLDB Colider 31.05 177 eP P 04 36 04.2 +0.6
ETMB Extrema 31.17 197 eP P 04 36 05.8 +1.2
CZSB Cruzeiro do Su 31.65 210 eP P 04 36 12.4 +3.5
PDRB Porto dos Gac 31.75 179 eP P 04 36 10.3 +0.6
VLDQ Val d'Or 32.07 334 IAmb IAmb 04 36 16.6
comp=Z,23nm,1.2s
SNDB Serra Nova Dou 32.67 169 eP P 04 36 18.4 +0.6
MCRA Macar, Loja 33.02 224 P P 04 36 21.4 +0.5
VILB Vilhena 33.18 185 eP P 04 36 23.8 +1.5
RCBR Riachuelo 33.55 139 eP P 04 36 27.1 +1.6
SDBA SAO DESIDERIO 34.81 158 eP P 04 36 36.1 -0.3
R40A Maddies Statio 34.96 308 IAmb IAmb 04 36 39.6
comp=Z,15nm,0.7s
SCHQ Schefferville 35.17 351 P P 04 36 40.2 +1.0
comp=Z,6.4nm,1.0s,baz=164,slow=13,SNR=3.5
SCHQ LR LR 04 48 39.0
comp=Z,96nm,21.4s,baz=194,slow=32
comp=Z,6.4nm,1.0s
S39A Bolivar 35.54 307 IAmb IAmb 04 36 44.5
comp=Z,15nm,0.8s
PTLB Pontes e Lacer 35.59 183 eP P 04 36 43.8 +0.7
SALV Santo Antonio 36.05 177 eP P 04 36 47.4 +0.3
SIV San Ignacio 36.27 186 P P 04 36 49.7 +0.7
comp=Z,5.7nm,0.9s,baz=8.2,slow=8.4,SNR=25
comp=Z,5.7nm,0.9s
P38A Dawn 36.35 310 IAmb IAmb 04 36 51.7
comp=Z,25nm,1.1s
NBAN Anadia - AL 36.39 143 eP P 04 36 50.9 +0.9
COWI Conover 36.50 322 IAmb IAmb 04 36 53.2
comp=Z,19nm,0.8s
BDFB Brasilia 36.94 165 P P 04 36 55.8 +1.0
comp=Z,2.9nm,0.7s,baz=356,slow=10,SNR=5.3
comp=Z,2.9nm,0.7s
BDFB Brasilia 36.94 165 eP P 04 36 56.1 +1.3
K38A Parkersburg 37.03 315 IAmb IAmb 04 36 56.9
comp=Z,31nm,1.1s
JANB Januaria 37.47 159 eP P 04 36 59.2 0.0
LPAZ La Paz 37.87 197 P P 04 37 04.1 +0.9
comp=Z,1.4nm,0.8s,baz=341,slow=9.7,SNR=4.8
comp=Z,1.4nm,0.8s
GDU01 Guandu, BA 38.14 151 eP P 04 37 05.2 +0.4
SPMN Marine on St. 38.24 319 IAmb IAmb 04 37 07.7
comp=Z,26nm,0.8s
KSU1 Kansas State U 38.43 308 IAmb IAmb 04 37 10.3
comp=Z,33nm,1.4s
TLIG Tlapa 38.89 273 P P 04 37 11.8 +0.3
F36A Milaca 38.99 319 IAmb IAmb 04 37 13.4
comp=Z,66nm,2.0s
WMOK Wichita Mounta 39.06 300 P P 04 37 13.1 +0.6
C2SB Chapadao do Su 39.12 173 eP P 04 37 14.4 +1.3
MC01 Montes Claros 39.13 159 eP P 04 37 14.6 +1.3
IPMB Ipameri, GO 39.15 166 eP P 04 37 14.3 +1.0
L34A Svendsen Farm, 39.22 312 IAmb IAmb 04 37 15.6
comp=Z,22nm,0.9s
BBTS Babate 39.38 91 LR LR 04 49 02.5
comp=Z,92nm,21.2s,baz=260,slow=30
ECSD EROS Data Cent 40.04 315 P P 04 37 21.2 +0.6
PMNB Patos De Minas 40.12 164 eP P 04 37 22.6 +1.2
GUA01 Guaratinga, BA 40.58 153 eP P 04 37 26.0 +0.8
AQDB Aquidauana 40.59 177 P P 04 37 25.6 +0.3
AQDB Aquidauana 40.59 177 eP P 04 37 27.2 +1.9
DIAM Diamantina, MG 40.71 160 eP P 04 37 27.6 +1.2
K31A O'Neill 41.10 312 IAmb IAmb 04 37 31.9
comp=Z,33nm,1.0s
GO01 Chusmiza 41.38 197 P P 04 37 32.1 -0.2
AGMN Agassiz Nation 41.56 321 P P 04 37 33.1 +0.1
AGMN IAmb IAmb 04 37 35.4
comp=Z,21nm,1.2s
SJMB Sao Joao De Ma 41.95 157 eP P 04 37 37.7 +1.2
BB19B Bebedouro 42.06 167 eP P 04 37 38.5 +1.1
PCMB Pacaembu 42.12 171 eP P 04 37 39.3 +1.4
MSTX Muleshoe 42.21 298 IAmb IAmb 04 37 53.9
comp=Z,15nm,0.9s
ULM Lac du Bonnet 42.52 324 P P 04 37 39.4 -1.4
comp=Z,15nm,1.0s,baz=100,slow=8.5,SNR=6.3
ULM LR LR 04 54 29.8
comp=Z,166nm,18.7s,baz=100,slow=35
comp=Z,15nm,1.0s
ULM Lac du Bonnet 42.52 324 P P 04 37 41.5 +0.6
ULM IAmb IAmb 04 37 42.5
comp=Z,16nm,0.9s
TXAR Lajitas Array 42.64 292 P P 04 37 44.6 +2.3
comp=Z,0.9nm,0.8s,baz=92,slow=6.4,SNR=4.9
comp=Z,0.9nm,0.8s
TRCB Terra Rica 43.12 173 eP P 04 37 47.2 +1.2
FRB Frobisher Bay 44.03 353 LR LR 04 54 45.4
comp=Z,108nm,18.7s,baz=182,slow=34
FRTB Fartura 44.09 170 eP P 04 37 54.9 +1.1
LVC Limon Verde 44.12 195 P P 04 37 54.7 +0.3
comp=Z,4.0nm,0.8s,baz=341,slow=4.8,SNR=4.9
comp=Z,4.0nm,0.8s
LVC Limon Verde 44.12 195 P P 04 37 54.4 0.0
LVC Limon Verde 44.12 195 eP P 04 37 54.7 +0.3
VAS01 Vassouras-RJ 44.51 161 eP P 04 37 58.8 +1.7
DUB01 Friburgo-RJ 44.66 160 eP P 04 37 59.8 +1.4
ANMO Albuquerque 45.34 299 P P 04 38 02.9 -1.0
comp=Z,0.7nm,0.7s,baz=323,slow=20,SNR=2.5
comp=Z,0.7nm,0.7s
PET01 Itanhaem-SP 45.45 167 eP P 04 38 06.2 +1.6
MORF Marmelete 45.48 57 eP P 04 38 05.0 +0.1
comp=Z,46nm,1.6s
PHWY Pilot Hill 45.54 308 IAmb IAmb 04 38 09.1
comp=Z,31nm,1.9s
MESJ Messejana 45.90 57 eP P 04 38 08.3 +0.1
MESJ IAmb IAmb 04 38 09.6
comp=Z,11nm,0.9s
MESJ Messejana 45.90 57 eP P 04 38 08.8 +0.7
comp=Z,21nm,1.3s
PCVE Castro Verde 46.01 57 eP P 04 38 09.4 +0.4
comp=Z,25nm,1.2s
PCAS Casmilo, Conde 46.04 54 eP P 04 38 09.3 +0.1
PMTG Montargil 46.08 55 eP P 04 38 09.3 -0.2
comp=Z,29nm,1.7s
COI Coimbra 46.13 53 eP P 04 38 10.1 +0.2
comp=Z,43nm,1.4s
EVO Evora 46.16 56 eP P 04 38 10.1 -0.1
PBEJ Beja 46.20 56 eP P 04 38 10.9 +0.4
comp=Z,19nm,1.1s
PVAQ Vaqueiros 46.24 57 eP P 04 38 11.4 +0.6
comp=Z,29nm,1.4s
PVAQ Vaqueiros 46.24 57 P P 04 38 10.9 +0.2
PVAQ IAmb IAmb 04 38 12.1
comp=Z,8.2nm,1.0s
PGAV Gavieira, Arco 46.58 51 eP P 04 38 13.9 +0.4
K22A Casper 46.61 310 IAmb IAmb 04 38 33.2
comp=Z,22nm,1.6s
PVIS Viseu 46.61 53 eP P 04 38 13.9 +0.1
comp=Z,17nm,1.6s
POLO Lamas de Olo 46.81 52 eP P 04 38 15.4 +0.1
comp=Z,12nm,1.6s
MTE Manteigas 46.82 53 eP P 04 38 15.7 +0.3
comp=Z,29nm,1.1s
MTE Manteigas 46.82 53 P P 04 38 14.2 -1.2
PVRL Vila Real 46.85 52 eP P 04 38 15.7 +0.1
comp=Z,28nm,1.5s
PBAR Barrancos 46.87 56 eP P 04 38 16.2 +0.5
comp=Z,16nm,1.4s
PV15 Paradox Valley 47.33 304 IAmb IAmb 04 38 39.5
comp=Z,11nm,0.8s
MVO Moncorvo 47.34 52 eP P 04 38 19.7 +0.3
comp=Z,18nm,1.7s
ITAB Concordia 47.57 174 eP P 04 38 22.6 +1.4
PV13 Radium Mtn., P 47.58 303 IAmb IAmb 04 38 38.8
comp=Z,7.9nm,0.8s
PBRG Braganca 47.67 52 eP P 04 38 22.0 0.0
comp=Z,22nm,1.7s
X18A Snowflake 48.18 299 IAmb IAmb 04 38 39.1
comp=Z,8.4nm,1.2s
PDAR Pinedale Array 48.83 309 P P 04 38 32.0 +0.9
comp=Z,1.2nm,0.7s,baz=117,slow=9.4,SNR=11
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 48.83 309 P P 04 38 32.5 +1.4
PAB San Pablo 49.12 55 P P 04 38 32.8 -0.5
ESDC Sonseca Array 49.43 55 P P 04 38 35.0 -0.6
comp=Z,2.4nm,0.9s,baz=256,slow=8.4,SNR=20
comp=Z,2.4nm,0.9s
ITQB Itaqui 49.72 179 eP P 04 38 38.0 +0.3
JLU Jordanelle 49.90 306 IAmb IAmb 04 38 52.9
comp=Z,12nm,1.2s
HWUT Hardware Ranch 50.11 308 P P 04 38 41.6 +0.6
YHH Holmes Hill 50.12 312 IAmb IAmb 04 38 52.5
comp=Z,21nm,1.9s
YHL Hebgen Lake 50.37 312 IAmb IAmb 04 38 56.8
comp=Z,17nm,1.5s
H10N3 ASCENSION HYDR 50.69 119 T T 05 33 12.1
baz=304
H10N2 ASCENSION HYDR 50.70 119 T T 05 33 15.0
baz=304
H10N1 ASCENSION HYDR 50.71 119 T T 05 33 14.8
baz=304
KOWA Kowa 51.16 87 LR LR 04 56 30.3
comp=Z,118nm,21.3s,baz=308,slow=32
HLID Hailey 52.46 310 P P 04 38 59.4 +0.9
DBIC Dimbokro 52.71 97 P P 04 38 59.0 -1.6
comp=Z,3.1nm,0.7s,baz=290,slow=17,SNR=3.2
comp=Z,3.1nm,0.7s
EDM Edmonton 53.66 322 P P 04 39 07.6 +0.6
TPH Tonopah 54.18 303 IAmb IAmb 04 39 27.9
comp=Z,17nm,1.1s
F10A Beach Ranch, E 54.74 312 P P 04 39 15.4 +0.3
F10A IAmb IAmb 04 39 23.9
comp=Z,23nm,1.9s
NEW Newport 54.98 315 IAmb IAmb 04 39 18.8
comp=Z,9.5nm,1.1s
CLF Chambon-Foret 55.01 45 P P 04 39 16.4 -0.4
NVAR Mina Array Bea 55.03 303 P P 04 39 16.5 -1.0
comp=Z,0.2nm,0.5s,baz=76,slow=3.8,SNR=3.3
comp=Z,0.2nm,0.5s
D08A Wollman Farm, 56.03 314 IAmb IAmb 04 39 25.8
comp=Z,9.4nm,1.1s
TOA0 Torodi Ar. Sit 56.87 87 P P 04 39 28.4 -2.3
TORD Torodi Ar. Bea 56.87 87 P P 04 39 29.0 -1.7
comp=Z,3.6nm,0.9s,baz=293,slow=6.4,SNR=18
comp=Z,3.6nm,0.9s
YKA Yellowknife Ar 57.15 332 P P 04 39 31.9 -0.1
comp=Z,1.9nm,0.9s,baz=111,slow=7.2,SNR=3.8
comp=Z,1.9nm,0.9s
WAPA Wapiti River 57.49 323 IAmb IAmb 04 39 42.7
comp=Z,9.4nm,0.8s
ECH Echery 58.29 45 IAmb IAmb 04 39 41.0
comp=Z,16nm,1.1s
LLLB Lillooet 58.36 318 IAmb IAmb 04 39 42.1
comp=Z,13nm,1.0s
KEST Kesra 59.91 60 P P 04 39 51.9 +0.1
comp=Z,3.1nm,0.7s,baz=197,slow=5.3,SNR=5.0
comp=Z,3.1nm,0.7s
DAVA Damuels 60.07 46 eP P 04 39 53.1 +0.4
comp=Z,27nm,1.0s,SNR=8.9
FETA Feichten 60.64 47 eP P 04 39 56.9 +0.3
comp=Z,13nm,1.1s,SNR=5.5
RETA Reutte 60.67 46 eP P 04 39 56.9 +0.1
comp=Z,14nm,1.1s,SNR=5.8
MOTA Moosalm 60.90 46 eP P 04 39 58.4 0.0
comp=Z,13nm,1.0s,SNR=5.3
SQTA Sankt Quirin 60.97 47 i P P 04 39 58.9 0.0
comp=Z,12nm,0.8s,SNR=5.8
WATA Walderalm 61.22 46 i P P 04 40 00.4 -0.2
comp=Z,10nm,1.2s
WTTA Wattenberg 61.26 47 i P P 04 40 00.7 -0.2
comp=Z,13nm,1.2s
CTI Castel Tesino 61.27 48 P P 04 39 60.0 -0.9
CTI IAmb IAmb 04 40 01.3
comp=Z,8.5nm,1.0s
NKC Novy Kostel 61.86 43 eP P 04 40 05.6 +0.9
ABTA Abfaltersbach 61.86 47 i P P 04 40 04.5 -0.4
comp=Z,17nm,1.1s
PLCA Paso Flores 61.96 191 P P 04 40 05.9 +0.5
comp=Z,0.9nm,0.9s,baz=4.0,slow=10,SNR=4.6
comp=Z,0.9nm,0.9s
NB2 NORSAR Subarra 62.11 31 P P 04 40 06.4 +0.2
comp=Z,10nm,1.0s,baz=260,slow=6.9
NOA NORSAR Array B 62.11 31 P P 04 40 06.7 +0.4
comp=Z,4.5nm,0.9s,baz=262,slow=6.6,SNR=8.7
comp=Z,4.5nm,0.9s
CLUD Cludinico 62.12 47 P P 04 40 06.2 -0.3
CLL Collm 62.24 42 IAmb IAmb 04 40 08.2
comp=Z,11nm,1.0s
CLL Collm 62.24 42 i P P 04 40 07.0 -0.2
comp=Z,13nm,1.1s
KBA Koelnbreinsper 62.43 47 eP P 04 40 08.2 -0.6
comp=Z,7.3nm,0.7s
KHC Kasperske Hory 62.58 44 P P 04 40 08.8 -0.7
KHC IAmb IAmb 04 40 10.6
comp=Z,8.5nm,1.1s
KHC Kasperske Hory 62.58 44 eP P 04 40 09.6 0.0
BIOA Bad Ischl, Aus 62.62 46 eP P 04 40 09.2 -0.7
comp=Z,2.2nm,0.5s
GEC2 GERESS Array S 62.66 45 IAmb IAmb 04 40 10.9
comp=Z,10nm,1.0s
GERES GERESS Array B 62.66 45 P P 04 40 10.1 0.0
comp=Z,4.4nm,0.9s,baz=264,slow=6.3,SNR=30
comp=Z,4.4nm,0.9s
GERES GERESS Array B 62.66 45 P P 04 40 09.3 -0.9
BRG Berggiesshubel 62.83 42 eP P 04 40 11.1 0.0
BRG Amp 04 40 12.3
comp=Z,8.9nm,1.0s
MOA Molln 63.04 46 eP P 04 40 12.0 -0.7
comp=Z,4.1nm,0.8s
CKRC Cesky Krumlov 63.06 45 eP P 04 40 12.4 -0.4
PRU Pruhonice 63.20 43 eP P 04 40 14.3 +0.6
PVCC Panska Ves 63.22 43 eP P 04 40 14.1 +0.3
OBKA Obir 63.27 47 i P P 04 40 13.4 -0.8
comp=Z,21nm,1.8s
SOKA Soboth 63.60 47 i P P 04 40 15.2 -1.2
comp=Z,6.8nm,1.2s
DLBC Dease Lake 63.78 326 P P 04 40 17.9 +0.5
DLBC IAmb IAmb 04 40 34.8
comp=Z,10nm,0.9s
ARSA Arzberg 63.91 47 eP P 04 40 17.8 -0.7
comp=Z,12nm,1.5s
CONA Conrad Observa 64.11 46 eP P 04 40 19.3 -0.5
comp=Z,6.3nm,1.0s
UPC Upice 64.14 43 eP P 04 40 20.2 +0.3
CHVC Chvalec 64.17 43 eP P 04 40 20.0 -0.1
OSTC Ostas 64.27 43 eP P 04 40 21.1 +0.4
KSP Ksiaz 64.32 42 eP P 04 40 21.2 +0.2
DPC Dobruska-Polom 64.34 43 eP P 04 40 20.6 -0.6
RONA Rosalia, Austr 64.42 46 eP P 04 40 21.5 -0.3
comp=Z,15nm,1.1s,SNR=5.9
KRUC Moravsky 64.43 44 eP P 04 40 21.4 -0.3

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
VRAC	Vranov	64.55	44	⇑P	P	04 40 22.6	+0.1
VRAC	Vranov	64.55	44	eP	P	04 40 22.4	-0.2
KRLC	Kraliky	64.65	43	eP	P	04 40 23.5	+0.3
MORC	Moravsky Berou	65.15	44	⇓P	P	04 40 26.5	0.0
MORC	Moravsky Berou	65.15	44	IAmb	IAmb	04 40 27.6	
	comp=Z,8.7nm,1.0s						
MORC	Moravsky Berou	65.15	44	eP	P	04 40 26.5	0.0
P33M	Teslin, Yukon	65.30	328	IAmb	IAmb	04 40 43.6	
	comp=Z,7.8nm,0.9s						
MAUC	Maruska	65.35	44	eP	P	04 40 28.4	+0.6
MORH	Mrgy, Hungar	66.12	47	⇓P	P	04 40 33.0	+0.2
INK	Inuvik	66.12	337	P	P	04 40 32.4	+0.1
	comp=Z,8.2nm,1.0s,baz=86,slow=6.8,SNR=7.7						
	comp=Z,8.2nm,1.0s						
INK	Inuvik	66.12	337	P	P	04 40 31.7	-0.6
M31M	Drury Creek, Y	66.13	330	IAmb	IAmb	04 40 49.3	
	comp=Z,10nm,1.2s						
OJC	Ojcow	66.58	43	eP	P	04 40 34.4	-1.3
OJC	Ojcow	66.58	43	IAmb	IAmb	04 40 35.4	
	comp=Z,8.3nm,1.0s						
HYT	Haines Junctio	67.62	329	IAmb	IAmb	04 40 54.4	
	comp=Z,11nm,1.2s						
SIRR	Siria	68.19	47	⇑P	P	04 40 45.1	-0.9
BZS	Buzias	68.24	48	⇓P	P	04 40 46.6	+0.4
DAWY	Dawson	68.39	332	IAmb	IAmb	04 41 03.2	
	comp=Z,10.0nm,1.1s						
TRPA	Tarpa	68.56	45	⇑P	P	04 40 48.5	+0.3
DRGR		68.85	47	⇑P	P	04 40 49.9	-0.2
GZR	Gura Zlata	69.08	48	⇑P	P	04 40 51.4	-0.2
BLKB	Belogradchik	69.27	50	⇑P	P	04 40 52.0	-0.8
FINES	FINESS Array B	69.30	31	P	P	04 40 52.0	-0.5
	comp=Z,7.1nm,0.9s,baz=163,slow=14,SNR=6.7						
	comp=Z,7.1nm,0.9s						
LOGN	Logan Glacier	69.33	329	IAmb	IAmb	04 41 11.0	
	comp=Z,10nm,1.0s						
BCAR	Beaver Creek A	69.52	331	P	P	04 40 53.7	-0.3
M27K	Edge Creek, AK	69.62	330	IAmb	IAmb	04 41 12.7	
	comp=Z,6.7nm,1.1s						
ARCR	ARCALIA	69.92	46	⇓P	P	04 40 57.2	+0.5
M26K	Nabesna, AK	70.14	330	IAmb	IAmb	04 41 09.0	
	comp=Z,10nm,1.2s						
J26L	Joseph Creek	70.18	333	IAmb	IAmb	04 41 13.8	
	comp=Z,6.8nm,1.1s						
NACGM	Naroch	70.36	38	⇑eP	P	04 40 58.9	-0.3
	baz=278						
BUR08	Bucovina Ar. S	70.41	45	IAmb	IAmb	04 41 01.4	
	comp=Z,13nm,0.9s						
MENT	Mentasta	70.41	331	IAmb	IAmb	04 41 01.0	
	comp=Z,6.5nm,0.8s						
BURAR	Bucovina Array	70.42	45	⇓P	P	04 41 00.5	+0.7
BURAR	Bucovina Array	70.42	45	P	P	04 40 59.4	-0.4
VRDI	Verde Repeater	70.48	329	IAmb	IAmb	04 41 09.6	
	comp=Z,11nm,1.1s						
GLB	Gilahina Butte	70.63	329	IAmb	IAmb	04 41 15.9	
	comp=Z,6.4nm,0.8s						
VOIR		70.66	48	⇑P	P	04 40 56.4	-4.9
PRP	Porcupine Dome	70.90	334	IAmb	IAmb	04 41 13.2	
	comp=Z,11nm,1.5s						
MNK	Minsk	71.04	38	i P	P	04 41 00.3	-3.0
	comp=E,2.0nm,1.0s						
MNK				i P	P	04 41 00.3	-3.0
	comp=N,35nm,0.9s						
MNK				i P	P	04 41 00.3	-3.0
	comp=Z,8.0nm,0.8s,baz=99						
MNK				i PcP	PcP	04 41 20.6	-3.0
MNK				i PP	PP	04 43 37.2	-3.3
MNK				i PPP	PPP	04 45 20.0	
MNK				i S	S	04 50 16.5	-3.0
MNK				i SS	SS	04 54 50.1	-2.1
MNK				i SSS	SSS	04 58 09.0	
MNK				i LQ	LQ	05 07 15.6	
MNK				i LR	LR	05 12 23.7	
MNK				i LRM	MLR	05 14 01.0	
	comp=N,289nm,16.8s						
MNK				i LRM	MLR	05 14 08.7	
	comp=E,22nm,21.3s						
MNK				i LRM	MLR	05 14 17.7	
	comp=Z,150nm,20.0s						
BIZ	Bicaz	71.13	46	⇑P	P	04 41 05.1	+1.0
MLR	Muntele Rosu	71.27	48	⇓P	P	04 41 05.1	0.0
COVR	Voineasa-Covas	71.39	47	⇑P	P	04 41 07.2	+1.6
IL31		71.57	333	IAmb	IAmb	04 41 06.9	
	comp=Z,6.6nm,1.0s						
ILAR	Eielson Array	71.57	333	P	P	04 41 06.1	-0.3
	comp=Z,3.1nm,0.8s,baz=85,slow=5.4,SNR=25						
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	71.57	333	P	P	04 41 05.3	-1.0
KLU	Klutina	71.62	330	IAmb	IAmb	04 41 18.1	
	comp=Z,16nm,1.4s						
CCB	Clear Creek Bu	71.98	333	IAmb	IAmb	04 41 13.8	
	comp=Z,13nm,1.5s						
MDM	Murphy Dome	72.10	333	IAmb	IAmb	04 41 19.5	
	comp=Z,7.9nm,1.0s						
AKASG	Malin Array Be	72.49	42	P	P	04 41 11.7	-0.4
	comp=Z,3.3nm,0.9s,baz=284,slow=4.5,SNR=10						
	comp=Z,3.3nm,0.9s						
NEA2	Nenana	72.52	333	IAmb	IAmb	04 41 28.2	
	comp=Z,14nm,1.2s						
MLY	Manley	73.14	334	P	P	04 41 15.8	0.0
TRF	Thorofare Moun	73.27	332	IAmb	IAmb	04 41 32.4	
	comp=Z,8.6nm,0.9s						
KTH	Kantishna Hill	73.53	332	IAmb	IAmb	04 41 19.0	
	comp=Z,10nm,1.0s						
H21K	Melozitna Rive	73.85	335	IAmb	IAmb	04 41 20.9	
	comp=Z,5.7nm,0.8s						
IMAR	Indian Mountai	74.15	335	P	P	04 41 22.0	+0.3
OBN	Obninsk	75.84	36	P	P	04 41 30.9	-0.7
BR131	Keskin Array S	78.12	52	IAmb	IAmb	04 41 48.1	
	comp=Z,7.1nm,1.0s						
BRTR	Keskin Array B	78.12	52	P	P	04 41 45.0	0.0
	comp=Z,2.6nm,0.9s,baz=256,slow=3.7,SNR=8.9						
	comp=Z,2.6nm,0.9s						
BRTR	Keskin Array B	78.12	52	P	P	04 41 44.2	-0.8
PZH	PanZhiHua	129.27	24	PKP	PKPdf	04 48 54.9	+0.1

IDC ***08*** *04:37:39.7±0.5,36°.14S×100°.81W,h0km,mb5.0/21, mbtmp5.0/22,MS4.9/50,Error ellipse: s-maj=15.2km s-min=13.3km az=120.0*

MOS ***08*** *04:37:40.0±1.6,36°.08S×100°.80W,h10km,mb5.5/23, Error ellipse: s-maj=12.3km s-min=9.3km az=87.3*

NEIC ***08*** *04:37:41.4±1.4,36°.03S±0°.09×101°.0W±0°.1,h10km±1km, mb5.3/347,Ms_20 5.1/126,Mwc5.6(GCMT),Error ellipse: s-maj=17.8km s-min=15.2km az=259.0*

BJI ***08*** *04:37:41.0±0.0,36°.10S×101°.00W,h10km,mB5.3/7, Ms5.4/15,Ms7 5.1/16*

GCMT ***08*** *04:37:43.4±0.1,36°.16S±0°.01×100°.84W±0°.01,h19km, MW5.6/169,Moment Tensor Solution. s140,c275; s169,c347; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr=0.17±.03; Mθθ=0.48±.03; Mφφ0.64±.03; Mrθ0.37±.06; Mθφ=-2.88±.03; Mφr=-0.34±.06; Best double couple: M0=2.97300×10^17 NP1:φs=95.00000°,δ85.00000°, λ173.00000°. NP2:φs=186.00000°,δ83.00000°,λ5.00000°. Principal axes: T 3.0970, Plg9.0000°, Azm50.0000°; N -0.2490, Plg81.0000°, Azm240.0000°; P -2.8500, Plg1.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *04:37:43,36°.21S×100°.86W,h19km,Moment Tensor Solution. Duration: 3s0 Moment tensor: Scale 10^17Nm; Mrr=0.30; Mθθ=0.44; Mφφ0.73; Mrθ0.48; Mθφ=-3.02; Mφr=0.13; Fault plane solution: M0=3.13000×10^17 NP1: φs=186.00000°,δ81.00000°,λ0.00000°. NP2:φs=96.00000°, δ90.00000°,λ171.00000°. Principal axes: T 3.2704, Plg6.0000°, Azm50.0000°; N -0.3103, Plg81.0000°, Azm275.0000°; P -2.9601, Plg6.0000°, Azm141.0000°;*

ISC 08 04:37:40.9±0.2,36°.09S±0°.06×100°.86W±0°.05,h14km, n577,σ1§52/380,mb5.2/183,MS5.1/114,1C-3D,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
RPN	Rapa Nui	11.48	319	Pn	Pn	04 40 27.8	+3.3
	267nm,1.1s,baz=147,slow=13,SNR=6.2						
RPN				LR	LR	04 43 34.2	
	comp=Z,14μm,20.2s,baz=86,slow=31						
RPN	Rapa Nui	11.48	319	Pn	Pn	04 40 19.1	-5.4
VA02	Isla de Pascua	11.51	318	Pn	Pn	04 40 18.4	-6.5
H03S2	Juan Fernandez	18.12	89	T	T	05 00 44.4	
	baz=254,SNR=72						
H03S1	Juan Fernandez	18.13	89	T	T	05 00 45.2	
	baz=254,SNR=47						
H03S3	Juan Fernandez	18.13	89	T	T	05 00 42.4	
	baz=254,SNR=50						
H03N2	Juan Fernandez	18.21	88	T	T	05 00 50.7	
	baz=252,SNR=6.8						
H03N3	Juan Fernandez	18.21	88	T	T	05 00 46.3	
	baz=252						
H03N1	Juan Fernandez	18.23	88	T	T	05 00 48.9	
	baz=252						
VA04	Juan Fernndez	18.24	89	P	P	04 41 55.9	+2.1
VA04				IAmb	IAmb	04 41 58.1	
	comp=Z,176nm,1.1s						
LR04	Corral	21.92	108	P	P	04 42 36.0	+2.2
LR04				IAmb	IAmb	04 42 37.8	
	comp=Z,182nm,1.6s						
LL05	Los Muermos	21.97	112	P	P	04 42 36.3	+2.1
LL05				IAmb	IAmb	04 42 41.7	
	comp=Z,254nm,1.4s						
LL07	Hotel Espejo d	22.13	116	P	P	04 42 38.0	+1.9
LL07				IAmb	IAmb	04 42 45.3	
	comp=Z,163nm,1.1s						
LL04	Puerto Octay	22.73	111	P	P	04 42 45.0	+2.5
LR03	Panguipulli	22.75	108	P	P	04 42 45.1	+2.4
LR03				IAmb	IAmb	04 42 48.5	
	comp=Z,96nm,0.9s						
LL03	Petrohue	22.75	111	P	P	04 42 44.5	+1.8
LL03				IAmb	IAmb	04 43 00.4	
	comp=Z,89nm,0.9s						
AY01	Puyuhuapi	23.00	120	P	P	04 42 46.8	+1.6
LL02	Futaleuf	23.36	117	P	P	04 42 50.1	+1.1
LL02				IAmb	IAmb	04 42 56.6	
	comp=Z,192nm,1.8s						
GO06	Curarrehue	23.43	107	P	P	04 42 51.6	+1.9
GO06				IAmb	IAmb	04 43 06.7	
	comp=Z,80nm,1.4s						
GO05	Huala	23.53	96	P	P	04 42 51.0	+0.2
GO05				IAmb	IAmb	04 43 03.9	
	comp=Z,80nm,1.1s						
COYC	Coyhaique	23.64	123	P	P	04 42 53.0	+1.3
PLCA	Paso Flores	24.14	110	P	P	04 42 58.0	+1.5
	comp=Z,30nm,1.0s,baz=269,slow=11,SNR=25						
PLCA				LR	LR	04 48 52.3	
	comp=Z,1μm,19.3s,baz=274,slow=28						
	comp=Z,30nm,1.0s						
PLCA	Paso Flores	24.14	110	P	P	04 42 58.0	+1.5
PLCA	Paso Flores	24.14	110	P	P	04 42 58.0	+1.5
MT01	Popeta	24.33	93	P	P	04 42 59.2	+1.0
BO01	Tunca	24.34	95	P	P	04 42 59.5	+1.1
MT09	Talagante	24.56	93	IAmb	IAmb	04 43 05.7	
	comp=Z,41nm,0.8s						
ROC1	El Roble	24.74	92	IAmb	IAmb	04 43 14.9	
	comp=Z,42nm,0.9s						
CO06	Fray Jorge	24.95	86	P	P	04 43 06.4	+2.6
PEL	Peldehue	24.96	92	P	P	04 43 06.4	+2.3
PEL				IAmb	IAmb	04 43 09.4	
	comp=Z,126nm,1.4s						
PEL	Peldehue	24.96	92	P	P	04 43 06.4	+2.3
PEL				pmax	pmax		
	comp=Z,126nm,1.4s						
VA03	San Esteban	25.17	91	IAmb	IAmb	04 43 15.2	
	comp=Z,116nm,1.2s						
CO02	Combarbal	25.28	88	P	P	04 43 08.5	+1.5
CO02				IAmb	IAmb	04 43 19.1	
	comp=Z,70nm,1.1s						
GO09	Cerro Castillo	25.40	136	P	P	04 43 09.2	+1.4
MG05	Puerto Natales	25.48	137	P	P	04 43 10.3	+1.8
CO03	El Pedregal	25.65	87	P	P	04 43 12.6	+2.2
CO03				IAmb	IAmb	04 43 21.6	
	comp=Z,88nm,1.4s						
GO04	Tololo Observa	25.80	85	P	P	04 43 13.4	+1.5
CO01	Juntas del Tor	26.44	86	IAmb	IAmb	04 43 26.7	
	comp=Z,105nm,1.6s						
ZON	Zonda	27.05	90	IAmb	IAmb	04 43 31.4	
	comp=Z,148nm,1.6s						
AC01	Pan de Azucar	27.64	78	IAmb	IAmb	04 43 36.9	
	comp=Z,74nm,1.2s						
PB14	IPOC Station P	28.55	75	P	P	04 43 37.5	+0.8
PB14				IAmb	IAmb	04 43 41.4	
	comp=Z,86nm,1.8s						
USHA	Ushuaia	29.09	140	LR	LR	04 52 34.3	
	comp=Z,7μm,20.1s,baz=286,slow=31						
PB15	IPOC Station P	30.01	73	P	P	04 43 49.8	+0.2
PB15				IAmb	IAmb	04 43 53.1	
	comp=Z,43nm,1.0s						
PB06	IPOC Station P	30.20	72	P	P	04 43 52.3	+1.1
PB06				IAmb	IAmb	04 43 54.7	
	comp=Z,32nm,1.0s						
PB02	IPOC Station P	30.73	70	P	P	04 43 56.2	+0.3
LVC	Limon Verde	30.77	73	P	P	04 43 57.9	+1.4
	comp=Z,16nm,0.9s,baz=238,slow=8.9,SNR=9.7						
LVC				LR	LR	04 53 17.1	
	comp=Z,3μm,18.4s,baz=246,slow=30						
	comp=Z,16nm,0.9s						
LVC	Limon Verde	30.77	73	P	P	04 43 57.5	+1.1
LVC				IAmb	IAmb	04 44 02.1	
	comp=Z,69nm,1.4s						
LVC	Limon Verde	30.77	73	IAMs_20	IAMs_20	04 53 05.7	
	comp=Z,4μm,19.0s						
LVC	Limon Verde	30.77	73	P	P	04 43 57.6	+1.1
LVC				pmax	pmax		
	comp=Z,69nm,1.4s						
PATCX	Punta Patache	30.83	69	P	P	04 43 57.9	+1.2
TRQA	Tornquist	30.94	105	P	P	04 43 59.2	+1.8
TRQA				IAmb	IAmb	04 44 01.6	
	comp=Z,38nm,1.2s						
TRQA				IAMs_20	IAMs_20	04 54 23.8	
	comp=Z,3μm,19.0s						
TRQA	Tornquist	30.94	105	P	P	04 43 59.2	+1.8
TRQA				pmax	pmax		
	comp=Z,38nm,1.3s						
TA01	Diego Aracena	30.96	68	P	P	04 43 58.4	+0.7
PB09	IPOC Station P	30.96	71	P	P	04 43 59.0	+1.1
TA02	Huaiquique	31.17	68	P	P	04 44 01.1	+1.5
PB01	IPOC Station P	31.20	70	P	P	04 44 00.3	+0.3
PB12	IPOC Station P	32.04	65	P	P	04 44 08.5	+1.1
GO01	Chusmiza	32.24	68	IAmb	IAmb	04 44 20.6	
	comp=Z,29nm,1.1s						
NNA	Nana	32.34	48	P	P	04 44 09.3	-0.6
	comp=Z,71nm,1.2s,baz=226,slow=8.2,SNR=6.8						
NNA				LR	LR	04 54 14.9	
	comp=Z,4μm,19.0s,baz=226,slow=31						
	comp=Z,71nm,1.2s						
NNA	Nana	32.34	48	P	P	04 44 10.3	+0.4
NNA	Nana	32.34	48	IAMs_20	IAMs_20	04 54 11.2	
	comp=Z,4μm,18.0s						
NNA	Nana	32.34	48	P	P	04 44 10.3	+0.4
NNA				pmax	pmax		
	comp=Z,111nm,1.4s						
EFI	East Falkland	34.01	131	i P	P	04 44 22.7	-1.4
EFI				pmax	pmax		
	comp=Z,130nm,1.2s						
LPAZ	La Paz	35.13	64	P	P	04 44 36.6	+1.7
	comp=Z,44nm,1.1s,baz=219,slow=6.3,SNR=50						
LPAZ				LR	LR	04 56 07.1	
	comp=Z,741nm,19.8s,baz=212,slow=32						
	comp=Z,44nm,1.1s						
ATAH	Atahualpa	35.40	41	P	P	04 44 39.1	+2.2
	comp=Z,52nm,1.0s,baz=229,slow=6.8,SNR=30						
ATAH				LR	LR	04 55 29.4	
	comp=Z,4μm,20.8s,baz=219,slow=30						
	comp=Z,52nm,1.0s						
PMSA	Palmer Station	36.12	154	LR	LR	04 55 28.9	
	comp=Z,3μm,19.9s,baz=308,slow=30						
PAYG	Puerto Ayora	36.58	18	IAMs_20	IAMs_20	04 55 50.0	
	comp=Z,3μm,20.0s						
ITQB	Itaqui	37.45	93	IAmb	IAmb	04 45 05.4	
	comp=Z,56nm,1.0s						
ARNL	Arenillas	37.64	35	P	P	04 44 56.0	+0.3
ARNL				IAmb	IAmb	04 45 10.5	
	comp=Z,34nm,0.9s						
CPUP	Villa Florida	38.22	88	LR	LR	04 58 10.5	
	comp=Z,703nm,19.4s,baz=250,slow=32						
BOSC	San Juan Bosco	38.74	37	P	P	04 45 05.5	+0.4
COHC	Cochancay	38.97	36	P	P	04 45 07.4	+0.6
PLTB	Pedras Altas	39.15	98	P	P	04 45 08.9	+0.7
PLTB				IAmb	IAmb	04 45 19.2	
	comp=Z,38nm,0.8s						
SIV	San Ignacio	40.61	71	P	P	04 45 21.0	+0.5
	comp=Z,24nm,1.1s,baz=236,slow=10,SNR=18						
SIV				LR	LR	05 00 02.5	
	comp=Z,2μm,21.0s,baz=256,slow=33						
	comp=Z,24nm,1.1s						
OTAV	Otavalo	41.72	35	P	P	04 45 29.9	-0.2
OTAV				IAmb	IAmb	04 45 34.9	
	comp=Z,68nm,1.3s						
OTAV	Otavalo	41.72	35	P	P	04 45 29.9	-0.2
OTAV				pmax	pmax		
	comp=Z,68nm,1.3s						
ITAB	Concordia	42.04	92	P	P	04 45 32.9	+0.7
AQDB	Aquidauana	42.32	81	P	P	04 45 34.7	+0.2
TULM	Tulcn-Chalpat	42.45	35	IAmb	IAmb	04 45 41.1	
	comp=Z,44nm,1.2s						
TBI	Tubuai	43.66	273	eP	P	04 45 47.0	+1.7
	comp=Z,49nm,43.5s						
TBI				eS	S	04 52 14.0	-0.8
	comp=Z,275nm,26.2s						
TBI				eLR	LR	04 57 53.4	
	comp=Z,2μm,26.5s						
TAOE	Nuku Hiva Isla	44.83	297	eS	S	04 52 31.7	-0.4
	comp=Z,842nm,24.6s						
TAOE				eLR	LR	04 58 25.7	
	comp=Z,1μm,26.2s						
PPT2	Papeete2	46.69	280	eP	P	04 46 11.1	+1.5
	comp=Z,51nm,23.0s						
PPT2				eS	S	04 52 57.7	-1.2
	comp=Z,389nm,25.0s						
PPT2				eLR	LR	04 59 17.5	
	comp=Z,592nm,22.2s						
PPT	Papeete	46.70	280	P	P	04 46 11.5	+1.9
	comp=Z,45nm,0.9s,baz=189,slow=9.4,SNR=3.2						
	comp=Z,45nm,0.9s						
HOPE	Hope Point	47.12	134	P	P	04 46 13.7	+1.4
HOPE	Hope Point	47.12	134	IAMs_20	IAMs_20	05 01 13.3	
	comp=Z,3μm,22.0s						
HOPE	Hope Point	47.12	134	P	P	04 46 13.7	+1.4
HOPE				pmax	pmax		
	comp=Z,126nm,1.2s						
ROSC	El Rosal	47.71	37	P	P	04 46 19.9	+2.0
	comp=Z,47nm,1.0s,baz=186,slow=3.2,SNR=23						
ROSC				LR	LR	05 02 43.2	
	comp=Z,3μm,21.4s,baz=224,slow=32						
	comp=Z,47nm,1.0s						
SRBA	San Rafael, Bu	48.00	24	IAmb	IAmb	04 46 23.8	
	comp=Z,47nm,1.2s						
RIMA	Rio Macho	48.34	23	IAmb	IAmb	04 46 24.4	
	comp=Z,50nm,1.6s						
JTS	Las Juntas de	48.51	21	IAMs_20	IAMs_20	05 01 48.3	
	comp=Z,2μm,18.0s						
JTS	Las Juntas de	48.51	21	i P	P	04 46 23.6	+0.1
JTS				pmax	pmax		
	comp=Z,34nm,1.4s						
BCIP	Isla Barro Col	49.18	28	P	P	04 46 29.7	+1.1
BCIP				IAmb	IAmb	04 46 31.9	
	comp=Z,49nm,1.1s						
BCIP	Isla Barro Col	49.18	28	P	P	04 46 29.7	+1.1
BCIP				pmax	pmax		
	comp=Z,49nm,1.2s						
ACON	Acoyapa	50.04	20	IAmb	IAmb	04 46 45.2	
	comp=Z,43nm,1.1s						
BELA	Belgrano 2	50.05	165	P	P	04 46 34.9	+0.4
BELA				IAmb	IAmb	04 46 39.3	
	comp=Z,50nm,1.2s						
MATN	Matagalpa	50.76	19	IAmb	IAmb	04 46 45.4	
	comp=Z,35nm,1.0s						
BDFB	Brasilia	51.07	81	P	P	04 46 43.5	+0.3
	comp=Z,17nm,1.0s,baz=235,slow=9.4,SNR=13						
BDFB				LR	LR	05 06 23.9	
	comp=Z,1μm,19.1s,baz=244,slow=34						
	comp=Z,17nm,1.0s						
BDFB	Brasilia	51.07	81	P	P	04 46 43.5	+0.3
BDFB				IAmb	IAmb	04 46 52.4	
	comp=Z,52nm,1.2s						
TGUH	Tegucigalpa,Un	51.50	17	P	P	04 46 46.0	-0.4
TGUH				IAmb	IAmb	04 46 57.1	
	comp=Z,46nm,0.9s						
PTGA	Pitinga	51.71	57	P	P	04 46 47.1	-0.8
	comp=Z,16nm,0.7s,baz=222,slow=7.8,SNR=22						
PTGA				LR	LR	05 06 20.4	
	comp=Z,2μm,18.1s,baz=218,slow=33						
	comp=Z,16nm,0.7s						
CCIG	Comitan	52.73	11	IAmb	IAmb	04 47 11.8	
	comp=Z,111nm,2.0s						
SDV	Santo Domingo	53.02	39	LR	LR	05 08 07.4	
	comp=Z,794nm,18.7s,baz=214,slow=34						
SDV	Santo Domingo	53.02	39	P	P	04 46 56.7	-1.1
RAR	Rarotonga	53.04	269	LR	LR	05 03 51.1	
	comp=Z,176nm,18.6s,baz=128,slow=30						
CMIG	Matias Romero	53.19	7	LR	LR	05 03 47.7	
	comp=Z,1μm,20.1s,baz=181,slow=30						
PETF	Flores	53.73	13	IAmb	IAmb	04 47 23.1	
	comp=Z,42nm,1.3s						
QSPA	South Pole Qui	54.12	180	P	P	04 47 06.2	+0.9
	comp=Z,35nm,1.1s,baz=142,slow=2.4,SNR=31						
QSPA				LR	LR	05 07 02.1	
	comp=Z,1μm,18.7s,baz=117,slow=33						
	comp=Z,35nm,1.1s						
QSPA	South Pole Qui	54.12	180	P	P	04 47 06.4	+1.1
QSPA				IAmb	IAmb	04 47 09.8	
	comp=Z,42nm,1.1s						
QSPA	South Pole Qui	54.12	180	IAMs_20	IAMs_20	05 06 21.9	
	comp=Z,1μm,18.0s						
H06S1	SOCORRO T	55.35	348	T	T	05 47 06.8	
	SNR=11						
SBA	Scott Base	55.53	195	P	P	04 47 15.9	+0.9
SBA	Scott Base	55.53	195	P	P	04 47 15.9	+0.9
SBA				pmax	pmax		
	comp=Z,18nm,1.2s						
VNDA	Vanda	56.63	195	P	P	04 47 23.1	+0.2
	comp=Z,9.0nm,1.3s,baz=95,slow=6.6,SNR=6.7						
VNDA				LR	LR	05 07 17.2	
	comp=Z,1μm,18.1s,baz=98,slow=31						
	comp=Z,9.0nm,1.3s						
VNDA	Vanda	56.63	195	P	P	04 47 23.6	+0.7
VNDA	Vanda	56.63	195	P	P	04 47 23.6	+0.7
VNDA				pmax	pmax		
	comp=Z,13nm,1.4s						
VNA3	Neumayer Olymp	56.67	157	P	P	04 47 23.2	-0.1
VNA1	Neumayer–Stat	57.27	157	P	P	04 47 28.8	+1.2
PCRV	Puerto La Cruz	57.30	44	LR	LR	05 10 23.0	
	comp=Z,5μm,18.3s,slow=34						
MTDJ	Mount Denham	58.36	26	IAMs_20	IAMs_20	05 06 45.6	
	comp=Z,2μm,22.0s						
ZAIG	Zacatecas	58.56	358	P	P	04 47 38.3	+0.8
ZAIG				IAmb	IAmb	04 47 47.6	
	comp=Z,31nm,1.3s						
SNAA	Sanae	58.63	158	P	P	04 47 36.7	-0.5
SNAA	Sanae	58.63	158	P	P	04 47 37.1	0.0
	comp=Z,28nm,1.2s,baz=242,slow=8.8						
SNAA				LR	LR	05 10 21.9	
	comp=Z,2μm,18.1s,baz=252,slow=34						
	comp=Z,28nm,1.2s						
SNAA	Sanae	58.63	158	P	P	04 47 37.2	0.0
SNAA				IAmb	IAmb	04 47 41.2	
	comp=Z,50nm,1.3s						
SNAA				IAMs_20	IAMs_20	05 08 17.2	
	comp=Z,2μm,20.0s						
SN

CBE	Ff, Capester	63.79	43	IAMs_20	IAMs_20	05 15 05.4		
	comp=Z,1µm,19.0s							
GDHS	Morne Mazeau,	63.87	42	IAMs_20	IAMs_20	05 15 25.6		
	comp=Z,1µm,19.0s							
MQZ	McQueen's Vall	63.91	234	IAMs_20	IAMs_20	05 09 13.7		
	comp=Z,2µm,20.0s							
833A	Chaparral WMA,	64.08	1	P	P	04 48 13.5	-0.9	
	baz=181							
ABD	La Joyeuse, An	64.19	43	IAMs_20	IAMs_20	05 14 52.0		
	comp=Z,1µm,18.0s							
GDSD	La Dsirade Is	64.29	43	IAMs_20	IAMs_20	05 12 35.7		
	comp=Z,984nm,22.0s							
OXZ	Oxford	64.48	234	IAMs_20	IAMs_20	05 08 40.8		
	comp=Z,2µm,22.0s							
SMRT	St. Maarten	64.64	40	IAMs_20	IAMs_20	05 15 06.8		
	comp=Z,1µm,19.0s							
RPZ	Rata Peaks	64.94	233	LR	LR	05 09 26.9		
	comp=Z,2µm,21.0s,baz=78,slow=29							
TXAR	Lajitas Array	65.13	357	P	P	04 48 23.1	+1.8	
	comp=Z,4.8nm,1.1s,baz=182,slow=10.0,SNR=17							
TXAR				LR	LR	05 10 36.8		
	comp=Z,444nm,21.2s,baz=168,slow=30							
	comp=Z,4.8nm,1.1s							
TXAR	Lajitas Array	65.13	357	P	P	04 48 22.5	+1.1	
TX31	Lajitas Ar. Si	65.13	357	P	P	04 48 22.7	+1.4	
	baz=178							
TX32	Lajitas Array	65.13	357	IAmb	IAmb	04 48 31.4		
	comp=Z,47nm,1.9s							
QRZ	Quartz Range	65.27	237	IAMs_20	IAMs_20	05 10 51.9		
	comp=Z,2µm,20.0s							
HSIG		65.45	350	P	P	04 48 24.5	+1.1	
HSIG				IAmb	IAmb	04 48 32.4		
	comp=Z,17nm,1.3s							
JCT	Junction City	66.22	1	IAmb	IAmb	04 48 37.5		
	comp=Z,14nm,0.8s							
JCT	Junction City	66.22	1	P	P	04 48 28.8	+0.4	
	baz=181							
JCT	Junction City	66.22	1	P	P	04 48 28.4	+0.1	
	baz=181,SNR=5.8							
RCBR	Riachuelo	66.41	80	P	P	04 48 31.3	+1.2	
	comp=Z,12nm,1.0s,baz=2.2,slow=5.7,SNR=4.9							
RCBR				LR	LR	05 16 47.0		
	comp=Z,600nm,18.2s,baz=358,slow=35							
	comp=Z,12nm,1.0s							
RCBR	Riachuelo	66.41	80	P	P	04 48 31.2	+1.2	
RCBR	Riachuelo	66.41	80	P	P	04 48 31.2	+1.2	
RCBR				pmax	pmax			
	comp=Z,51nm,1.4s							
DWPF	Disney Wildern	66.43	19	P	P	04 48 29.6	0.0	
	baz=197							
435B	Jarrell	66.59	3	P	P	04 48 31.1	+0.5	
	baz=183							
AFI	Afiamalu	66.59	270	LR	LR	05 10 36.0		
	comp=Z,244nm,19.3s,baz=130,slow=30							
319A	Douglas	67.57	352	P	P	04 48 37.8	+0.8	
319A					pP	04 48 38.8	-1.6	
319A				IAmb	IAmb	04 48 48.2		
	comp=Z,24nm,1.0s							
342B	Flagon Creek P	67.59	8	P	P	04 48 38.6	+1.7	
	baz=188							
NATX	Nacogdoches	67.74	6	P	P	04 48 39.8	+1.9	
	baz=186							
NATX	Nacogdoches	67.74	6	P	P	04 48 39.7	+1.8	
	baz=186							
WHTX	Lake Whitney,	67.80	3	P	P	04 48 40.1	+1.9	
	baz=183							
WHTX	Lake Whitney,	67.80	3	P	P	04 48 38.8	+0.5	
	baz=183							
BRAL	Brewton	68.15	13	P	P	04 48 40.7	+0.2	
	baz=192							
ABTX	Abilene, Hawle	68.36	1	P	P	04 48 42.3	+0.5	
	baz=181							
ABTX	Abilene, Hawle	68.36	1	P	P	04 48 42.2	+0.3	
	baz=181							
121A	Cookes Peak, D	68.57	354	P	P	04 48 45.3	+2.0	
	baz=174							
121A	Cookes Peak, D	68.57	354	P	P	04 48 43.6	+0.3	
	baz=174							
214A	Organ Pipe Nat	68.61	349	P	P	04 48 44.2	+0.8	
	baz=170							
VBMS	Vicksburg	68.64	9	P	P	04 48 43.7	+0.2	
	baz=189							
TUC	Tucson	68.67	351	P	P	04 48 44.1	+0.3	
TUC				pmax	pmax			
	comp=Z,16nm,1.1s							
TUC	Tucson	68.67	351	P	P	04 48 43.7	-0.1	
	baz=172							
TIGA	Tifton	69.10	16	P	P	04 48 46.5	+0.1	
	baz=195							
Z35A	Perchaven, San	69.14	3	P	P	04 48 47.4	+0.8	
	baz=183							
MSTX	Muleshoe	69.72	358	IAmb	IAmb	04 48 59.1		
	comp=Z,17nm,0.9s							
MSTX	Muleshoe	69.72	358	P	P	04 48 50.9	+0.5	
	baz=178							
MSTX	Muleshoe	69.72	358	P	P	04 48 51.1	+0.8	
	baz=178,SNR=7.1							
RMX	La Rumorosa	69.80	346	IAmb	IAmb	04 49 06.2		
	comp=Z,22nm,1.0s							
YUH	Yuha Desert	69.82	346	IAmb	IAmb	04 49 02.8		
	comp=Z,26nm,1.2s							
IKP	In-Ko-Pah, Jac	69.86	346	P	P	04 48 52.4	+1.3	
	baz=167,SNR=6.9							
TKX	Tecate	69.87	346	P	P	04 48 52.3	+1.1	
TKX				IAmb	IAmb	04 48 54.7		
	comp=Z,63nm,1.8s							
Y22A	Socorro	69.90	355	P	P	04 48 53.0	+1.5	
	baz=175							
LRAL	Lakeview Retre	69.98	12	P	P	04 48 53.0	+1.2	
	baz=192							
GLA	Glamis	70.01	348	IAmb	IAmb	04 49 04.6		
	comp=Z,22nm,1.1s							
GLA	Glamis	70.01	348	P	P	04 48 53.6	+1.6	
	baz=168							
SWSC	Sam W. Stewart	70.08	347	P	P	04 48 52.9	+0.5	
	baz=167							
MONP2	Monument Peak	70.15	346	P	P	04 48 54.1	+1.0	
	baz=167,SNR=5.9							
109C	Camp Elliot, M	70.28	346	IAmb	IAmb	04 49 05.6		
	comp=Z,25nm,1.1s							
109C	Camp Elliot, M	70.28	346	P	P	04 48 53.4	-0.2	
	baz=166							
WMOK	Wichita Mounta	70.49	2	IAmb	IAmb	04 49 03.8		
	comp=Z,10nm,0.5s							
WMOK	Wichita Mounta	70.49	2	P	P	04 48 55.5	+0.6	
	baz=182,SNR=10							
MIAR	Mount Ida	70.60	6	P	P	04 48 56.0	+0.5	
	baz=186							
AMTX	Amarillo	70.61	359	IAmb	IAmb	04 49 05.0		
	comp=Z,23nm,0.9s							
AMTX	Amarillo	70.61	359	P	P	04 48 57.0	+1.2	
	baz=179							
AMTX	Amarillo	70.61	359	P	P	04 48 55.4	-0.4	
	baz=179							
BLYC	Blythe	70.64	348	IAmb	IAmb	04 49 08.7		
	comp=Z,30nm,1.1s							
SCI2	San Clemente I	70.67	344	P	P	04 48 56.3	+0.2	
	baz=165							
BC3	Big Chuckawall	70.71	347	P	P	04 48 56.4	0.0	
	baz=168,SNR=9.5							
TPFO	Pinon Flats	70.85	346	P	P	04 48 57.7	+0.4	
	baz=167,SNR=6.9							
PFO	Pinyon Flats O	70.86	346	LR	LR	05 12 34.0		
	comp=Z,358nm,20.4s,baz=164,slow=30							
PFO	Pinyon Flats O	70.86	346	P	P	04 48 57.3	0.0	
PFO	Pinyon Flats O	70.86	346	P	P	04 48 57.3	0.0	
PFO				pmax	pmax			
	comp=Z,12nm,1.1s							
PFO	Pinyon Flats O	70.86	346	P	P	04 48 57.3	0.0	
	baz=167,SNR=7.0							
ANMO	Albuquerque	70.86	355	LR	LR	05 14 26.4		
	comp=Z,633nm,19.6s,baz=170,slow=31							
ANMO	Albuquerque	70.86	355	P	P	04 48 58.1	+0.8	
ANMO	Albuquerque	70.86	355	IAMs_20	IAMs_20	05 14 16.0		
	comp=Z,878nm,21.0s							
ANMO	Albuquerque	70.86	355	P	P	04 48 58.2	+0.8	
ANMO				pmax	pmax			
	comp=Z,8.0nm,1.2s							
ANMO	Albuquerque	70.86	355	P	P	04 48 59.1	+1.7	
	baz=175							
ANMO	Albuquerque	70.86	355	P	P	04 48 57.5	+0.1	
	baz=175							
MURC	Murrieta	70.99	346	P	P	04 48 57.5	-0.5	
	baz=166							
CIS	Catalina Islan	71.05	345	P	P	04 48 59.4	+1.0	
	baz=165							
ELS	Elsinore Mount	71.08	345	IAmb	IAmb	04 49 10.5		
	comp=Z,27nm,1.5s							
PDMCI	Parker Dam,Lak	71.12	348	P	P	04 48 59.7	+1.0	
	baz=169							
IRM	Iron Mountain	71.15	348	P	P	04 48 59.0	0.0	
	baz=168,SNR=8.7							
BELC	Belle Mtn. Jos	71.15	347	P	P	04 48 58.9	-0.1	
	baz=167,SNR=7.5							
SNCC	San Nicolas Is	71.15	344	P	P	04 48 59.1	+0.2	
	baz=164							
W18A	Petrified Fore	71.32	352	P	P	04 48 59.8	-0.4	
	baz=173							
NHSC	New Hope	71.51	18	P	P	04 49 01.5	+0.5	
	baz=198							
BFSC	Mount Baldy Ra	71.70	345	P	P	04 49 02.9	+0.5	
	baz=166,SNR=6.9							
OK031	S. Brethren Rd	71.77	3	IAMs_20	IAMs_20	05 10 47.5		
	comp=Z,759nm,21.0s							
GMRC	Granite Mounta	71.85	347	P	P	04 49 03.8	+0.5	
	baz=168,SNR=7.8							
WUAZ	Wupatki	71.91	351	IAmb	IAmb	04 49 13.3		
	comp=Z,45nm,1.6s							
WUAZ	Wupatki	71.91	351	P	P	04 49 04.2	+0.5	
	baz=171,SNR=7.1							
HEC	Hector,Ludlow	72.02	347	P	P	04 49 05.2	+1.0	
	baz=167							
HHAR	Hobbs	72.29	6	IAmb	IAmb	04 49 15.3		
	comp=Z,24nm,1.3s							
EDW2	Edwards Air Fo	72.39	345	P	P	04 49 06.5	0.0	
	baz=166,SNR=6.0							
TUQ	Turquoise Moun	72.53	347	P	P	04 49 08.2	+0.8	
	baz=167,SNR=9.6							
GSC	Goldstone, Bar	72.56	346	IAmb	IAmb	04 49 19.8		
	comp=Z,22nm,1.1s							
GSC	Goldstone, Bar	72.56	346	P	P	04 49 08.2	+0.7	
	baz=167,SNR=13							
CCAC	Calif City Air	72.66	345	IAmb	IAmb	04 49 20.1		
	comp=Z,25nm,1.2s							
MSVF	Nosavu	72.71	260	LR	LR	05 12 44.7		
	comp=Z,603nm,21.9s,baz=153,slow=29							
PKM	Mcpherson Peak	72.79	344	P	P	04 49 09.2	+0.2	
	baz=164,SNR=12							
ARVC	Arvin	72.80	345	P	P	04 49 08.6	-0.2	
	baz=165							
WVT	Waverly	72.87	11	P	P	04 49 09.2	0.0	
	baz=191							
LRMC	Laurel Mtn Rad	72.91	346	P	P	04 49 09.8	+0.2	
	baz=166,SNR=8.4							
T25A	Trinidad	72.93	357	IAmb	IAmb	04 49 18.3		
	comp=Z,35nm,1.6s							
T25A	Trinidad	72.93	357	P	P	04 49 09.7	-0.1	
	baz=177							
SHOC	Shoshone, Teco	73.04	347	P	P	04 49 10.4	+0.1	
	baz=167,SNR=10							
TKL	Tuckaleechee C	73.13	14	P	P	04 49 11.7	+0.9	
	comp=Z,5.3nm,0.9s,baz=161,slow=5.3,SNR=4.5							
TKL				LR	LR	05 17 13.1		
	comp=Z,322nm,19.9s,baz=188,slow=32							
	comp=Z,5.3nm,0.9s							
KMSC	Kings Mountain	73.17	17	P	P	04 49 10.9	-0.1	
	baz=196							
SMMC	Simmler	73.24	344	P	P	04 49 11.4	-0.1	
	baz=164							
ISA	Isabella, Lake	73.25	345	IAmb	IAmb	04 49 14.6		
	comp=Z,28nm,1.6s							
ISA	Isabella, Lake	73.25	345	P	P	04 49 12.2	+0.7	
	baz=165,SNR=8.3							
MVCO	Mesa Verde	73.27	354	P	P	04 49 12.5	+0.6	
MVCO				IAmb	IAmb	04 49 24.6		
	comp=Z,53nm,1.4s							
MVCO	Mesa Verde	73.27	354	P	P	04 49 12.1	+0.2	
	baz=174,SNR=26							
MGMO	Mountain Grove	73.31	7	IAmb	IAmb	04 49 28.8		
	comp=Z,70nm,1.9s							
MPMC	Manual Prospec	73.43	346	P	P	04 49 12.7	-0.1	
	baz=166,SNR=15							
VES	Vestal, Richgr	73.55	345	P	P	04 49 13.8	+0.6	
	baz=165							
KNB	Kanab	73.58	350	IAmb	IAmb	04 49 24.7		
	comp=Z,32nm,1.3s							
SDCO	Great Sand Dun	73.59	356	P	P	04 49 15.2	+1.4	
	baz=176							
SDCO	Great Sand Dun	73.59	356	P	P	04 49 13.9	+0.1	
	baz=176,SNR=6.3							
S22A	4UR Ranch, Cre	73.67	355	P	P	04 49 14.5	+0.2	
	baz=175,SNR=13							
FURC	Furnace Creek,	73.70	347	P	P	04 49 14.6	+0.6	
	baz=167							
CWC	Cottonwood Cre	73.92	346	P	P	04 49 16.0	+0.4	
	baz=166							
PKCU	Pink Cliffs	73.93	351	IAmb	IAmb	04 49 29.2		
	comp=Z,44nm,1.2s							
WCT	Wildcat Mounta	73.98	347	IAmb	IAmb	04 49 28.4		
	comp=Z,21nm,1.1s							
TZTN	Tazewell	74.03	14	P	P	04 49 17.1	+1.0	
	baz=195							
TPNV	Topopah Spring	74.06	347	IAmb	IAmb	04 49 28.9		
	comp=Z,28nm,1.1s							
TPNV	Topopah Spring	74.06	347	P	P	04 49 17.6	+1.2	
	baz=167,SNR=27							
CNNC	Cliffs of the	74.12	19	P	P	04 49 18.2	+1.6	
	baz=199							
CCUT	Cedar City	74.18	350	IAmb	IAmb	04 49 29.7		
	comp=Z,47nm,1.2s							
SZCU	Shurtz Canyon	74.19	350	IAmb	IAmb	04 49 29.6		
	comp=Z,26nm,1.2s							
T50A	Nancy	74.25	13	IAmb	IAmb	04 49 27.2		
	comp=Z,75nm,1.8s							
PRN	Pahroc Range	74.30	348	P	P	04 49 18.8	+1.1	
PRN				IAmb	IAmb	04 49 34.1		
	comp=Z,38nm,1.2s							
CCM	Cathedral Cave	74.31	8	P	P	04 49 17.8	+0.2	
CCM				IAmb	IAmb	04 49 27.4		
	comp=Z,38nm,1.1s							
CCM	Cathedral Cave	74.31	8	P	P	04 49 17.8	+0.2	
CCM				pmax	pmax			
	comp=Z,38nm,1.2s							
CCM	Cathedral Cave	74.31	8	P	P	04 49 18.0	+0.4	
	baz=188							
CCM	Cathedral Cave	74.31	8	P	P	04 49 17.5	-0.1	
	baz=188							
GRAC	Grapevine Rang	74.31	346	P	P	04 49 17.3	-0.5	
	baz=166,SNR=9.2							
PV15	Paradox Valley	74.39	354	IAmb	IAmb	04 49 30.5		
	comp=Z,32nm,1.2s							
MTPU	Mount Pierson	74.50	351	IAmb	IAmb	04 49 29.7		
	comp=Z,44nm,1.8s							
CBKS	Cedar Bluff	74.54	1	P	P	04 49 19.5	+0.5	
	baz=181							
PV23	Carpenter Ridg	74.55	353	IAmb	IAmb	04 49 30.7		
	comp=Z,29nm,1.1s							
S11A	Rachel	74.65	348	IAmb	IAmb	04 49 32.4		
	comp=Z,21nm,1.0s							
KSCO	Kaye Shedlock'	74.75	359	P	P	04 49 21.1	+0.8	
	baz=179							
Q24A	Divide	74.79	357	P	P	04 49 20.9	+0.1	
	baz=176							
KSU1	Kansas State U	74.92	3	P	P	04 49 21.7	+0.6	
	baz=184							
TCRU	Three Creeks R	75.09	351	IAmb	IAmb	04 49 35.0		
	comp=Z,39nm,1.4s							
SMCO	Snowmass	75.11	355	IAmb	IAmb	04 49 37.5		
	comp=Z,25nm,1.3s							
CASY	Casey	75.13	193	P	P	04 49 23.2	+1.0	
CASY				IAmb	IAmb	04 49 26.6		
	comp=Z,46nm,1.8s							
CASY	Casey	75.13	193	IAMs_20	IAMs_20	05 17 44.3		
	comp=Z,1µm,19.0s							
WCI	Wyandotte Cave	75.17	12	P	P	04 49 23.1	+0.5	
	baz=192							
MLAC	Mammoth, Mammo	75.22	345	P	P	04 49 23.2	0.0	
	baz=165							
Q16A	Castle Valley	75.24	352	IAmb	IAmb	04 49 38.5		
	comp=Z,25nm,1.0s							
R11A	Troy Canyon, C	75.31	348	P	P	04 49 24.3	+0.7	
	baz=168,SNR=17							
SRU	San Rafael Swe	75.36	352	IAmb	IAmb	04 49 36.2		
	comp=Z,27nm,1.2s							
OLIL	Olney	75.38	10	IAmb	IAmb	04 49 34.0		
	comp=Z,56nm,1.4s							
TMUT	Trail Mountain	75.62	352	IAmb	IAmb	04 49 37.7		
	comp=Z,32nm,1.1s							
P40A	Paris	75.68	7	IAmb	IAmb	04 49 41.3		
	comp=Z,16nm,0.8s							
LHV	Little Huntoon	75.75	346	IAmb	IAmb	04 49 36.0		
	comp=Z,50nm,1.3s							
NV11	Mina Array Sit	75.86	346	IAmb	IAmb	04 49 39.7		
	comp=Z,25nm,1.1s							
NVAR	Mina Array Bea	75.88	346	P	P	04 49 28.7	+1.8	
	comp=Z,9.5nm,0.9s,baz=175,slow=7.4,SNR=66							
NVAR				LR	LR	05 16 06.9		
	comp=Z,382nm,18.9s,baz=172,slow=30							
	comp=Z,9.5nm,0.9s							
MAW	Mawson	75.89	174	P	P	04 49 27.9	+1.4	
	comp=Z,8.7nm,0.9s,baz=183,slow=7.2,SNR=10							
MAW				LR	LR	05 20 26.2		
	comp=Z,846nm,20.9s,baz=196,slow=34							
	comp=Z,8.7nm,0.9s							
MAW	Mawson	75.89	174	P	P	04 49 27.9	+1.4	
P43A	Skaggs, Pawnee	76.08	9	IAmb	IAmb	04 49 41.3		
	comp=Z,25nm,0.8s							
RYN	Ryan	76.12	346	IAmb	IAmb	04 49 37.9		
	comp=Z,36nm,1.5s							
O20A	White River Ci	76.15	354	IAmb	IAmb	04 49 50.1		
	comp=Z,74nm,2.0s							
O20A	White River Ci	76.15	354	P	P	04 49 29.0	+0.6	
	baz=174							
WAKR	Walker	76.18	345	IAmb	IAmb	04 49 33.7		
	comp=Z,31nm,1.7s							
NLU	North Lily Min	76.37	351	IAmb	IAmb	04 49 45.7		
	comp=Z,24nm,1.1s							
KVN	Kaiserville	76.44	346	IAmb	IAmb	04 49 42.9		
	comp=Z,34nm,1.4s							
Q51A	Peebles	76.47	14	IAmb	IAmb	04 49 40.5		
	comp=Z,30nm,1.1s							
YERR	Yerington	76.61	345	IAmb	IAmb	04 49 34.9		
	comp=Z,35nm,1.5s							
R58B	Mineral	76.69	18	IAmb	IAmb	04 49 41.1		
	comp=Z,41nm,1.1s							
DUG	Dugway, Tooele	76.70	351	P	P	04 49 32.1	+0.7	
DUG				IAmb	IAmb	04 49 44.4		
	comp=Z,56nm,1.8s							
DUG	Dugway, Tooele	76.70	351	P	P	04 49 32.2	+0.7	
DUG				pmax	pmax			
	comp=Z,56nm,1.8s							
DUG	Dugway, Tooele	76.70	351	P	P	04 49 32.3	+0.8	
	baz=170							
P49A	Miami Univ. Ec	76.71	13	P	P	04 49 32.4	+1.1	
	baz=193							
N23A	Red Feather La	76.75	356	IAmb	IAmb	04 49 39.9		
	comp=Z,40nm,1.8s							
N23A	Red Feather La	76.75	356	P	P	04 49 33.0	+1.1	
	baz=176							
HDIL	Hopedale	77.01	9	P	P	04 49 34.4	+1.4	
	baz=190							
CBN	Corbin Frederi	77.05	19	P	P	04 49 33.5	+0.2	
	baz=199							
MPK	Martis Peak	77.07	345	IAmb	IAmb	04 49 47.0		
	comp=Z,36nm,1.1s							
P52A	Corning	77.30	15	P	P	04 49 35.3	+0.6	
	baz=196							
PAHR	Pah Rah Range	77.33	345	P	P	04 49 36.1	+1.1	
O48B	Farmland	77.34	12	P	P	04 49 35.7	+0.8	
	baz=193							
TCUT	Toone Canyon	77.44	352	IAmb	IAmb	04 49 47.4		
	comp=Z,43nm,1.8s							
ELK	Elko	77.59	349	LR	LR	05 17 29.1		
	comp=Z,385nm,18.5s,baz=170,slow=31							
RWWY	Rawlins	77.62	355	IAmb	IAmb	04 49 49.8		
	comp=Z,22nm,1.2s							
ORV	Oroville	77.64	344	IAmb	IAmb	04 49 46.4		
	comp=Z,35nm,1.6s							
ACSO	Alum Creek Sta	77.71	14	P	P	04 49 37.6	+0.6	
	baz=195							
SPUT	South Promonto	77.75	351	IAmb	IAmb	04 49 49.6		
	comp=Z,35nm,1.4s							
SCIA	State Center	77.94	6	P	P	04 49 39.0	+0.8	
	baz=186							
HWUT	Hardware Ranch	77.94	352	IAmb	IAmb	04 49 50.6		
	comp=Z,40nm,2.0s							
O53A	New Philadelph	78.09	15	P	P	04 49 39.0	0.0	
O53A				IAmb	IAmb	04 49 49.5		
	comp=Z,39nm,1.0s							
O53A	New Philadelph	78.09	15	P	P	04 49 39.5	+0.5	
	baz=196							
K31A	O'Neill	78.36	2	IAmb	IAmb	04 49 55.9		
	comp=Z,43nm,1.1s							
K22A	Casper	78.53	356	IAmb	IAmb	04 49 51.7		
	comp=Z,23nm,1.1s							
K22A	Casper	78.53	356	P	P	04 49 42.3	+0.6	
	baz=175							
N53A	Lisbon	78.70	15	IAmb	IAmb	04 49 53.1		
	comp=Z,22nm,0.9s							
L44A	Lake County Fo	78.79	10	P	P	04 49 43.9	+1.1	
	baz=191							
KMRM	Mail Ridge	78.79	342	IAmb	IAmb	04 49 56.5		
	comp=Z,49nm,1.2s							
BW06	Boulder Array	78.88	353	IAmb	IAmb	04 49 55.7		
	comp=Z,32nm,1.2s							
BW06	Boulder Array	78.88	353	P	P	04 49 44.1	+0.4	
	baz=173							
PD31	Pinedale Array	78.88	353	IAmb	IAmb	04 49 55.7		
	comp=Z,29nm,1.2s							
PDAR	Pinedale Array	78.88	353	P	P	04 49 44.4	+0.7	
	comp=Z,10nm,1.0s,baz=162,slow=6.2,SNR=48							
PDAR				LR	LR	05 19 20.3		
	comp=Z,232nm,18.5s,baz=164,slow=32							
	comp=Z,10nm,1.0s							
SSPA	Standing Stone	79.22	18	P	P	04 49 46.2	+0.9	
SSPA				IAmb	IAmb	04 49 54.7		
	comp=Z,35nm,1.2s							
SSPA	Standing Stone	79.22	18	P	P	04 49 45.0	-0.2	
	baz=199							
JFWS	Jewell Farm	79.22	8	P	P	04 49 45.7	+0.5	
	baz=189							
M53A	WI Miller and	79.34	15	P	P	04 49 47.0	+1.0	
	baz=197							
DZM	Mont Dzumac	79.41	250	*e*P	P	04 49 48.5	+1.4	
	comp=Z,42nm,19.4s							
DZM				*e*S	S	04 59 45.9	-2.1	
	comp=Z,467nm,26.1s							
DZM				*e*SS	SS	05 04 54.6	-0.2	
	comp=Z,308nm,27.6s							
DZM				*e*LR	LR	05 14 28.2		
	comp=Z,3µm,26.9s							
DZM	Mont Dzumac	79.41	250	LR	LR	05 22 22.5		
	comp=Z,848nm,18.0s,baz=146,slow=34							
KHMM	Horse Mountain	79.42	343	IAmb	IAmb	04 49 59.9		
	comp=Z,36nm,1.2s							
ECSD	EROS Data Cent	79.54	3	P	P	04 49 47.8	+0.8	
	baz=184							
AAM	Ann Arbor	79.59	13	IAmb	IAmb	04 49 57.7		
	comp=Z,30nm,0.8s							
AAM	Ann Arbor	79.59	13	P	P	04 49 47.8	+0.6	
	baz=194							
MOD	Modoc Plateau	79.63	345	IAmb	IAmb	04 50 00.5		
	comp=Z,29nm,1.2s							
SNOW	Snow King Moun	79.69	353	P	P	04 49 49.0	+0.9	
SNOW				IAmb	IAmb	04 49 59.9		
	comp=Z,34nm,1.3s							
TPAW	Teton Pass	79.73	353	IAmb	IAmb	04 50 03.4		
	comp=Z,26nm,1.1s							
RSSD	Black Hills	79.89	358	P	P	04 49 50.3	+1.2	
RSSD	Black Hills	79.89	358	P	P	04 49 50.3	+1.2	
RSSD	

comp=Z,22nm,0.8s
SPMN Marine on St. 81.27 6 P **P 04 49 57.1 +0.9**
baz=187
G40A Rib Lake 81.55 8 P **P 04 49 58.3 +0.6**
PINE Pine Mountain 81.58 345 IAmb IAmb 04 50 10.6
comp=Z,32nm,0.9s
UCCT U. Connecticut 81.83 21 IAmb IAmb 04 50 07.5
comp=Z,19nm,0.9s
F36A Milaca 81.84 5 IAmb IAmb 04 50 14.2
comp=Z,32nm,1.1s
BOZ Bozeman (W) 81.89 352 P **P 04 50 00.8 +1.1**
baz=171
PLID Pearl Lake 81.95 349 IAmb IAmb 04 50 12.0
comp=Z,23nm,1.2s
QUA2 Belchertown 82.23 21 IAmb IAmb 04 50 10.8
comp=Z,26nm,1.0s
E28A Huff 82.29 0 P **P 04 50 02.5 +0.9**
L61B Northampton 82.30 21 P **P 04 50 02.4 +0.7**
baz=203
L64A Middleborough 82.37 22 IAmb IAmb 04 50 11.8
comp=Z,29nm,1.1s
J58A Remsen 82.44 19 IAmb IAmb 04 50 11.7
comp=Z,16nm,0.8s
LAO LASA Array 82.54 356 IAmb IAmb 04 50 18.4
comp=Z,23nm,0.9s
LAO LASA Array 82.54 356 P **P 04 50 03.0 0.0**
baz=176
K62A Royalston 82.62 21 IAmb IAmb 04 50 22.2
comp=Z,30nm,1.3s
WES Weston 82.63 22 IAmb IAmb 04 50 13.1
comp=Z,21nm,1.1s
HRV Adam Dziewonsk 82.67 21 P **P 04 50 04.0 +0.3**
HRV Adam Dziewonsk 82.67 21 P **P 04 50 04.0 +0.3**
HRV pmax pmax
comp=Z,14nm,1.1s
HRV Adam Dziewonsk 82.67 21 P **P 04 50 03.8 +0.1**
baz=204
H04A Detroit Lake 82.69 345 IAmb IAmb 04 50 15.1
comp=Z,35nm,1.4s
SADO Sadowa 82.86 15 LR LR 05 23 58.7
comp=Z,928nm,18.0s,baz=184,slow=34
F10A Beach Ranch, E 83.01 349 IAmb IAmb 04 50 17.6
comp=Z,16nm,1.0s
MSO Missoula 83.38 351 IAmb IAmb 04 50 10.8
comp=Z,44nm,2.0s
MSO Missoula 83.38 351 P **P 04 50 06.7 -0.7**
baz=170
F07A Phinny Hill Vi 83.40 347 IAmb IAmb 04 50 21.5
comp=Z,37nm,1.5s
FFD Franklin Falls 83.53 21 IAmb IAmb 04 50 18.0
comp=Z,23nm,0.9s
MDND Maddock 83.57 1 P **P 04 50 07.8 -0.4**
baz=181
LONY Lake Ozonia 83.79 19 P **P 04 50 09.0 -0.4**
LONY IAmb IAmb 04 50 18.9
comp=Z,25nm,0.9s
LONY Lake Ozonia 83.79 19 P **P 04 50 08.3 -1.1**
baz=201
HAWA Hanford 83.81 347 IAmb IAmb 04 50 21.9
comp=Z,18nm,1.0s
EYMN Ely 84.08 6 P **P 04 50 10.5 -0.3**
baz=188
EGMT Eagleton 84.11 354 IAmb IAmb 04 50 24.0
comp=Z,44nm,1.8s
EGMT Eagleton 84.11 354 P **P 04 50 09.7 -1.4**
baz=173
AGMN Agassiz Nation 84.13 3 IAmb IAmb 04 50 19.9
comp=Z,28nm,1.3s
AGMN Agassiz Nation 84.13 3 P **P 04 50 11.0 -0.1**
baz=184
LBNH Lisbon 84.16 20 P **P 04 50 11.2 -0.1**
baz=203
DGMT Dagmar 84.24 358 P **P 04 50 12.0 +0.4**
baz=177
JTMT Jette 84.32 351 IAmb IAmb 04 50 24.5
comp=Z,18nm,1.0s
TOO Toolangi 84.38 227 P **P 04 50 12.2 -0.7**
TOO Toolangi 84.38 227 P **P 04 50 12.2 -0.7**
TOO pmax pmax
comp=Z,47nm,1.3s
LON Longmire 84.59 346 IAmb IAmb 04 50 28.2
comp=Z,13nm,1.1s
LTY Liberty 84.85 347 IAmb IAmb 04 50 27.2
comp=Z,43nm,1.7s
ARMA Armidale 85.13 236 P **P 04 50 16.9 -0.1**
ARMA IAmb IAmb 04 50 17.7
comp=Z,31nm,1.2s
NEW Newport 85.22 349 LR LR 05 22 00.8
comp=Z,177nm,19.2s,baz=164,slow=31
NEW Newport 85.22 349 IAmb IAmb 04 50 29.3
comp=Z,19nm,1.1s
NEW Newport 85.22 349 P **P 04 50 16.6 0.0**
baz=167
TRQ Mont Tremblant 85.29 18 IAmb IAmb 04 50 26.0
comp=Z,22nm,1.1s
B08A Colville Reser 85.67 348 IAmb IAmb 04 50 31.1
comp=Z,41nm,1.9s
EMMW East Machias 85.93 23 IAMs_20 IAMs_20 05 26 24.5
comp=Z,856nm,18.0s
ULM Lac du Bonnet 86.08 3 P **P 04 50 21.3 +0.6**
comp=Z,5.2nm,0.8s,baz=189,slow=8.0,SNR=4.8
comp=Z,5.2nm,0.8s
F62A Pittston Farm, 86.24 21 IAmb IAmb 04 50 30.7
comp=Z,34nm,1.4s
F63A Nahmakanta, Br 86.31 22 IAmb IAmb 04 50 31.6
comp=Z,21nm,1.1s
E62A Clayton Lake 87.02 21 IAmb IAmb 04 50 35.0
comp=Z,19nm,1.1s
PQI Presque Isle 87.52 22 IAmb IAmb 04 50 36.5
comp=Z,36nm,1.5s
D62A Allapoint, All 87.58 21 IAmb IAmb 04 50 37.3
comp=Z,16nm,1.0s
GBN Guysborough 88.57 27 P **P 04 50 33.8 +0.9**
GBN IAmb IAmb 04 50 43.0
comp=Z,27nm,1.2s
STKA Stephens Creek 90.60 229 LR LR 05 22 41.0
comp=Z,710nm,21.9s,baz=154,slow=30
BBB Bella Bella 91.08 344 LR LR 05 24 12.2
comp=Z,177nm,20.8s,baz=142,slow=31
HNR Honiara 91.84 257 LR LR 05 23 33.5
comp=Z,6μm,21.5s,baz=140,slow=30
SUR Sutherland 92.71 134 LR LR 05 26 00.6
comp=Z,385nm,19.8s,baz=220,slow=31
BBTS Babate 94.02 75 LR LR 05 30 09.3
comp=Z,407nm,19.7s,baz=234,slow=34
SCHQ Schefferville 95.16 19 LR LR 05 29 53.0
comp=Z,978nm,20.5s,baz=213,slow=33
CTA Charters Tower 95.50 240 LR LR 05 26 38.4
comp=Z,660nm,21.7s,baz=96,slow=31
CTAO Charters Tower 95.50 240 IAMs_20 IAMs_20 05 28 18.3
comp=Z,806nm,20.0s
S34M Telegraph Cree 97.04 344 P Pdif 04 51 12.2 +0.5
baz=156
SIT Sitka 97.25 342 P **P 04 51 12.6 0.0**
baz=153
DLBC Dease Lake 97.28 345 LR LR 05 29 31.2
comp=Z,209nm,18.2s,baz=111,slow=32
JIS Juneau Island 98.11 343 IAMs_20 IAMs_20 05 26 08.4
comp=Z,585nm,20.0s
Q32M Nakina River 98.24 344 P Pdif 04 51 17.6 +0.2
baz=155
R33M Jennings River 98.36 345 P **P 04 51 17.5 -0.3**
baz=156
DBIC Dimbokro 98.73 88 LR LR 05 32 17.7
comp=Z,537nm,20.6s,baz=238,slow=33
YKA Yellowknife Ar 98.86 354 LR LR 05 31 49.4
comp=Z,382nm,18.5s,baz=160,slow=33
P33M Teslin, Yukon 99.49 344 P **Pdif 04 51 23.2 +0.4**
baz=154
TSUM Tsumeb 99.96 122 LR LR 05 29 22.6
comp=Z,201nm,21.3s,baz=230,slow=31
ASAR Alice Springs 101.21 230 P **Pdif 04 51 29.5 -2.0**
comp=Z,0.8nm,0.9s,baz=131,slow=5.1,SNR=3.7
ASAR PKKPbc **PKKPbc 05 07 42.2 +1.9**
comp=Z,0.9nm,1.0s,baz=29,slow=2.1,SNR=3.0
LOGN Logan Glacier 101.99 341 IAMs_20 IAMs_20 05 35 27.0
comp=Z,431nm,21.0s
CTGM Chitina Glacie 102.20 341 IAMs_20 IAMs_20 05 28 54.5
comp=Z,417nm,20.0s
H01W1 Cape Leeuwin H 102.20 209 T T 06 46 29.1
baz=151,slow=76,SNR=124
H01W2 Cape Leeuwin H 102.20 209 T T 06 46 29.4
baz=151,slow=76,SNR=142
H01W3 Cape Leeuwin H 102.20 209 T T 06 46 28.5
baz=151,slow=76,SNR=48
TGL Tana Glacier 102.42 340 IAMs_20 IAMs_20 05 32 51.3
comp=Z,419nm,18.0s
HMT Hamilton 102.47 340 IAMs_20 IAMs_20 05 26 55.6
comp=Z,429nm,20.0s
HIN Hinchinbrook I 103.17 339 IAMs_20 IAMs_20 05 27 49.1
comp=Z,486nm,22.0s
WRA Warramunga Arr 103.65 233 Pdiff **Pdif 04 51 40.6 -1.8**
comp=Z,1.5nm,1.1s,baz=138,slow=4.2,SNR=4.5
WRAB Tennant Creek 103.65 233 IAMs_20 IAMs_20 05 31 55.9
comp=Z,750nm,20.0s
PWL Port Wells 104.09 338 IAMs_20 IAMs_20 05 28 34.3
comp=Z,581nm,22.0s
AVE Averroes 111.18 64 IAMs_20 IAMs_20 05 37 30.0
comp=Z,629nm,18.0s
ESDC Sonseca Array 116.62 59 PKP **PKiKP 04 56 26.0 +1.5**
comp=Z,0.4nm,0.7s,baz=279,slow=1.1,SNR=2.0
ESDC PP **PP 04 57 32.8 +0.2**
comp=Z,3.5nm,1.3s,baz=251,slow=7.2,SNR=8.4
FAKI Fak Fak 117.12 244 IAMs_20 IAMs_20 05 40 49.5
comp=Z,419nm,20.0s
MMRI Maumere 119.82 231 IAMs_20 IAMs_20 05 41 16.5
comp=Z,504nm,20.0s
MBAR Mbarara 122.12 118 IAMs_20 IAMs_20 05 44 22.3
comp=Z,517nm,20.0s
KAPI Kappang 124.17 232 IAMs_20 IAMs_20 05 46 28.7
comp=Z,489nm,20.0s
SSB Saint Sauveur 124.56 56 IAMs_20 IAMs_20 05 42 55.4
comp=Z,605nm,21.0s
JAGI Jajag, Banyuwa 124.78 224 IAMs_20 IAMs_20 05 47 07.6
comp=Z,444nm,18.0s
KIBK Kibwezi 125.89 126 IAMs_20 IAMs_20 05 43 11.0
comp=Z,477nm,22.0s
KMBO Kilima Mbogo 126.26 124 IAMs_20 IAMs_20 05 43 42.5
comp=Z,416nm,22.0s
SENIN Lac Senin/Sane 126.72 55 IAMs_20 IAMs_20 05 47 05.6
comp=Z,515nm,20.0s
WLF Walferdange 126.86 51 IAMs_20 IAMs_20 05 48 53.7
comp=Z,563nm,21.0s
LODK Lodwar 128.21 118 IAMs_20 IAMs_20 05 43 40.9
comp=Z,390nm,22.0s
DAVA Damuels 128.67 55 *e*P **PKPdf 04 56 47.5 0.0**
comp=Z,6.1nm,1.3s
FUORN Ofenpass-Fuorn 128.76 56 IAMs_20 IAMs_20 05 48 24.7
comp=Z,390nm,20.0s
FETA Feichten 129.17 55 *e*P **PKiKP 04 56 49.1 0.0**
comp=Z,11nm,1.3s
FETA *e*P **PP 04 59 02.6 +5.1**
comp=Z,7.5nm,1.3s
RETA Reutte 129.30 55 *i* P **PP 04 58 59.3 +1.1**
comp=Z,9.6nm,1.7s
MOTA Moosalm 129.50 55 *e*P **PKPdf 04 56 49.3 +0.2**
comp=Z,15nm,1.5s
SQTA Sankt Quirin 129.54 55 *e*P **PKiKP 04 56 51.5 +1.7**
comp=Z,4.4nm,0.5s
WTTA Wattenberg 129.83 55 *e*P **PKPdf 04 56 49.0 -0.7**
comp=Z,21nm,1.8s
ABTA Abfaltersbach 130.30 56 *e*P **PP 04 59 06.2 +1.5**
comp=Z,13nm,1.4s
MYKA Terra Mystica 131.03 56 *e*P **PP 04 59 14.5 +5.0**
comp=Z,13nm,1.4s
CLL Collm 131.47 50 IAMs_20 IAMs_20 05 49 08.7
comp=Z,295nm,20.0s
CLL Collm 131.47 50 *e*PKPdf **PKiKP 04 56 54.0 +0.6**
CLL *e*PPS PPS 05 11 04.0
CLL *e*SS SS 05 16 48.0 +2.7
CLL *e*PSPS 05 17 24.0
CLL *e*SSS SSS 05 21 24.0
CLL *e*SSSS 05 25 06.0
CLL LmV 05 49 00.0
comp=Z,3μm,21.3s
GERES GERESS Array B 131.51 53 PKP **PKiKP 04 56 53.3 -0.4**
comp=Z,0.9nm,0.9s,baz=321,slow=0.9,SNR=5.8
MOA Molln 131.69 55 *e*P **PP 04 59 10.5 -3.1**
comp=Z,6.2nm,1.3s
ARSA Arzberg 132.42 56 *e*P **PP 04 59 15.1 -3.2**
comp=Z,11nm,1.4s
MYLDM Lahad Datu 132.56 239 IAMs_20 IAMs_20 05 52 24.3
comp=Z,466nm,19.0s
CONA Conrad Observa 132.76 55 *e*P **PP 04 59 19.4 -1.2**
comp=Z,13nm,1.5s
RONA Rosalia, Austr 133.01 55 *e*P **PP 04 59 20.8 -1.3**
comp=Z,7.7nm,1.2s
MODS Modra-Piesok 133.77 55 *e*PKIKP **PKiKP 04 56 59.5 +1.3**
MSEY Mahe Island 133.79 146 IAMs_20 IAMs_20 05 56 06.5
comp=Z,306nm,20.0s
FURI Furi 134.35 116 IAMs_20 IAMs_20 05 49 30.8
comp=Z,301nm,20.0s
SBUM Sibu 134.66 230 IAMs_20 IAMs_20 05 50 11.0
comp=Z,391nm,21.0s
VYHS Vyhne 134.82 55 *e*PKIKP **PKiKP 04 57 00.8 +0.5**
KSM Kuching 135.06 227 IAMs_20 IAMs_20 05 48 29.1
comp=Z,417nm,21.0s
PSZ Piszkesteto 135.44 55 IAMs_20 IAMs_20 05 54 39.5
comp=Z,375nm,19.0s
TIXI Tiksi 136.23 340 IAMs_20 IAMs_20 05 59 48.8
comp=Z,288nm,19.0s
TIXI Tiksi 136.23 340 *i* PKIKP **PKPdf 04 56 59.6 -1.2**
FINES FINESS Array B 138.44 35 PKP **PKiKP 04 57 07.7 +0.4**
comp=Z,3.4nm,0.9s,baz=336,slow=4.2,SNR=5.7
ATD Arta Tunnel 139.14 118 IAMs_20 IAMs_20 05 52 47.6
comp=Z,299nm,22.0s
MLR Muntele Rosu 139.31 60 IAMs_20 IAMs_20 05 52 59.1
comp=Z,384nm,22.0s
YAK Yakutsk 139.45 326 IAMs_20 IAMs_20 05 49 46.2
comp=Z,355nm,20.0s
YAK Yakutsk 139.45 326 *i* PKIKP **PKPdf 04 57 06.7 -0.2**
NACGM Naroch 139.86 45‖ *e*PKP **PKiKP 04 57 10.0 -0.4**
baz=276
MNK Minsk 140.54 46 *i* PKP **PKPdf 04 57 02.7 -6.5**
comp=E,2.0nm,0.8s
MNK *i* PKP **PKPdf 04 57 02.7 -6.5**
comp=N,18nm,0.8s
MNK *i* PKP **PKPdf 04 57 02.7 -6.5**
comp=Z,11nm,0.9s,baz=96
MNK *i* PP **PP 05 00 02.2 -6.7**
MNK *i* PPP PPP 05 03 06.7
MNK *i* SKS **SKSdf 05 04 11.7 -7.0**
MNK *i* SKKS **SKKSdf 05 13 36.5 -8.4**
MNK *i* SS **SS 05 18 27.4 -6.0**
MNK *i* SSS SSS 05 23 41.6
MNK *i* LR LR 05 54 59.8
MNK *i* LRM MLR 05 59 03.2
comp=N,213nm,15.3s
MNK *i* LRM MLR 05 59 15.4
comp=Z,118nm,17.2s
MNK *i* LRM MLR 05 59 20.5
comp=E,19nm,16.6s
KS19 Wonju Array Ei 141.30 287 **PKPdf 04 57 10.6 -0.6**
AKASG Malin Array Be 141.66 52 PKhKP PKPpre 04 57 07.2
comp=E,0.2nm,0.3s,baz=276,slow=3.8,SNR=2.7
AKASG PKP **PKiKP 04 57 13.4 -0.8**
comp=E,1.2nm,0.6s,baz=278,slow=3.0,SNR=4.9
AKBB Malin Array Si 141.66 52 *i* PKIKP **PKPdf 04 57 09.9 -1.4**
IPM Ipoh 142.64 218 IAMs_20 IAMs_20 06 00 57.7
comp=Z,440nm,20.0s
KULM Kulim 143.52 218 IAMs_20 IAMs_20 05 59 54.2
comp=Z,443nm,20.0s
ANTO Ankara 143.59 70 PKPdf **PKPdf 04 57 15.5 +0.3**
ANTO Ankara 143.59 70 PKIKP **PKPdf 04 57 15.5 +0.3**
GHAJ Ghor Haditha 143.66 85 IAMs_20 IAMs_20 06 02 11.3
comp=Z,338nm,20.0s
BRTR Keskin Array B 144.21 70 PKP PKPbc 04 57 15.2 +0.6
comp=Z,22nm,1.1s,baz=209,slow=4.1,SNR=29
BRTR Keskin Array B 144.21 70 PKPdf **PKPdf 04 57 15.8 -0.6**
BRTR Keskin Array B 144.21 70 PKIKP **PKPdf 04 57 15.8 -0.6**
KLMR Klimovskoe 144.77 33 *e*PKIKP **PKPab 04 57 14.3 -1.1**
KLMR pmax pmax
comp=Z,165nm,1.4s
KLMR Klimovskoe 144.77 33 *e*PKPdf **PKPab 04 57 14.3 -1.1**
KLMR AMP 04 57 21.0
comp=Z,165nm,1.4s
BZK Bozkurt 144.77 66 PKPdf **PKPdf 04 57 17.0 0.0**
SIM Simferopol' 145.03 61 *e*PKIKP **PKPab 04 57 17.0 +0.1**
SIM pmax pmax
comp=Z,85nm,1.4s
OBN Obninsk 145.36 43 **PKPab 04 57 17.8 +0.1**
OBN Obninsk 145.36 43*d* PKIKP **PKPbc 04 57 17.5 0.0**
OBN *e*SS SS 05 20 08.2 +39
OBN pmax pmax
comp=Z,46nm,1.0s
OBN pmax pmax
comp=Z,143nm,1.2s
OBN MLR MLR
comp=Z,242nm,19.0s
MOS Moscow 145.76 42 *e*PKIKP **PKPdf 04 57 17.9 -0.4**
MOS pmax pmax
comp=Z,200nm,2.0s
MOS pmax pmax
comp=Z,94nm,1.5s
NRIK Noril'sk 146.37 355 PKPbc **PKPbc 04 57 20.2 -0.1**
comp=Z,6.3nm,0.7s,baz=180,slow=2.1,SNR=5.5
NRIK Noril'sk 146.37 355 *i* PKIKP **PKPdf 04 57 18.1 -0.9**
PRGR Permogore 146.91 29 *e*PKP2 **PKPbc 04 57 21.4 -0.6**
PRGR pmax pmax
comp=Z,79nm,0.9s
NJ2 Nanjing 147.01 275 *e*PKPbc **PKPdf 04 57 21.3 +0.1**
LPSR Galich'ya Gora 147.35 47 *e*PKP2 **PKPbc 04 57 23.5 -0.1**
LPSR pmax pmax
comp=Z,40nm,0.8s
VORR Voronezh 147.74 48 *e*PKP2 **PKPbc 04 57 25.1 +0.4**
VORR pmax pmax
comp=Z,50nm,1.7s
HIA Hailar 147.77 307 PKPbc **PKPbc 04 57 25.0 +0.1**
HIA Hailar 147.77 307 IAMs_20 IAMs_20 05 57 28.3
comp=Z,254nm,21.0s
HIA Hailar 147.77 307 PKP2 **PKPbc 04 57 25.0 +0.1**
VSR Storozhevoye 147.82 49 *e*PKP2 **PKPbc 04 57 24.2 -0.7**
VSR pmax pmax
comp=Z,20nm,0.7s
QIZ Qiongzhong 148.09 246 PKPbc **PKPdf 04 57 23.6 +0.2**
QIZ PP **PP 05 00 57.0 +2.4**
QIZ LR LR
comp=Z,220nm,14.3s
QIZ LR LR
comp=Z,200nm,14.3s
QIZ LR LR
comp=Z,220nm,14.3s
BOD Bodaibo 148.33 324 *e*PKIKP **PKPbc 04 57 24.4 -1.6**
BOD pmax pmax
comp=Z,27nm,1.4s
RAYN Ar Rayn 148.40 104 **PKPbc 04 57 27.2 -0.2**
RAYN Ar Rayn 148.40 104 IAMs_20 IAMs_20 06 06 38.8
comp=Z,393nm,21.0s
RAYN Ar Rayn 148.40 104 PKP2 **PKPbc 04 57 27.2 -0.2**
RAYN MLR MLR
comp=Z,400nm,21.0s
SOC Sochi 149.05 64 *i* PKP2 **PKPbc 04 57 28.0 -0.3**
SOC *e* 05 00 56.3
SOC *e*PPP PPP 05 04 17.4
SOC *e*SSS SSS 05 25 52.8
SOC pmax pmax
comp=Z,68nm,1.3s
MARD Mardin 149.36 76 PKPbc **PKPbc 04 57 29.8 +0.3**
VRH Novokhopyorsk 149.38 49 *e*PKP2 **PKPbc 04 57 29.1 +0.2**
VRH pmax pmax
comp=Z,40nm,0.8s
TIA Tai'an 149.45 282 PKPbc **PKPbc 04 57 29.2 -0.4**
WHN Wuhan 150.17 270 PKPbc **PKPbc 04 57 31.7 +0.2**
BJT Baijiatuau 150.72 289 PKPbc **PKPbc 04 57 30.6 -1.9**
BJT Baijiatuau 150.72 289 PKIKP **PKPbc 04 57 30.6 -1.9**
XLT XiLinHaoTe 150.83 297 *e*PKPbc **PKPbc 04 57 32.4 -0.4**
XLT PKPab **sPKPab 04 57 47.5 +2.6**
XLT PP PP 05 01 19.5 +9.0
XLT AMB AMB
comp=Z,97nm,4.2s
XLT LR LR
comp=Z,260nm,17.3s
XLT LR LR
comp=Z,260nm,17.8s
KIV Kislovodsk 151.18 63 *e*PKIKP **PKPdf 04 57 30.0 +2.3**
KIV pmax pmax
comp=Z,20nm,1.0s
KBZ Khabaz 151.35 63 PKPbc **PKPbc 04 57 33.5 -0.3**
comp=Z,14nm,1.0s,baz=308,slow=2.4,SNR=19
GOF Gofitskoye 151.35 61‖ *e*PKIKP **PKiKP 04 57 34.4 +0.1**
HNS HongShan 151.57 283‖ PKPbc **PKPbc 04 57 34.5 -0.1**
HNS LR LR
comp=Z,240nm,21.5s
HNS LR LR
comp=Z,150nm,19.9s
HNS LR LR
comp=Z,310nm,22.6s
ZEI Tsey 152.12 65 *i* PKIKP **PKPdf 04 57 29.5 +0.2**
ZEI pmax pmax
comp=Z,21nm,0.8s
GROC Groznyy 153.49 64 *e*PKIKP **PKPdf 04 57 31.5 +0.5**
GROC pmax pmax
comp=Z,62nm,1.1s
HHC Hu-ho-hao-te 154.26 291 *e*PKPbc **PKPdf 04 57 30.0 -2.4**
HHC LR LR
comp=Z,260nm,17.8s
HHC LR LR
comp=Z,490nm,17.1s
HHC LR LR
comp=Z,500nm,16.5s
PCHI Peechi 154.43 174 *e*P **PKPdf 04 57 33.2 -0.1**
GYA Guiyang 154.66 255 PKPbc **PKPdf 04 57 32.5 -0.9**
MAK Makhachkala 154.76 65 *e*PKIKP **PKPdf 04 57 28.9 -3.9**
MAK *e* 05 01 27.9
MAK *e* 05 04 32.8
MAK *e*SS SS 05 21 10.6 -4.0
MAK *e*SSS SSS 05 27 04.6
MAK pmax pmax
comp=Z,172nm,1.2s
CMAR Chiang Mai Arr 155.22 230 PKP **PKPdf 04 57 36.1 +1.9**
comp=Z,0.8nm,0.3s,baz=215,slow=1.1,SNR=4.2
CMAR PKPbc pPKPbc 04 57 43.1 -3.5
comp=Z,1.1nm,0.3s,baz=224,slow=2.5,SNR=6.6
CMAR PKPab **PKPab 04 57 58.6 -0.4**
comp=Z,3.4nm,0.8s,baz=158,slow=3.6,SNR=9.9
CMAR Chiang Mai Arr 155.22 230 PKPdf **PKPdf 04 57 33.0 -1.2**
CMAR PKPab **PKPab 04 57 58.2 -0.9**
ARU Arti 155.35 28 PKPdf **PKPdf 04 57 33.2 0.0**
ARU **PKPab 04 57 59.0 +0.4**
BTO Baotou 155.43 290 *e*P **PKPab 04 57 58.3 -1.3**
ULN Ulaanbaatar 156.28 308 PKPab **PKPab 04 58 03.8 +0.7**
ULN Ulaanbaatar 156.28 308 IAMs_20 IAMs_20 06 09 32.2
comp=Z,290nm,19.0s
ULN Ulaanbaatar 156.28 308 PKP2 **PKPab 04 58 03.8 +0.7**
SONM Songino Array 156.71 309 PKP **PKPdf 04 57 35.5 0.0**
comp=Z,0.6nm,0.8s,baz=63,slow=0.6,SNR=2.1
SONM PKPbc **sPKPdf 04 57 45.7 +5.5**
comp=Z,1.8nm,0.8s,baz=104,slow=1.7,SNR=6.4
SONM PKPab **PKPab 04 58 05.9 +1.0**
comp=Z,6.1nm,1.1s,baz=118,slow=3.2,SNR=8.5
ZAK Zakamensk 157.47 317 *e*PKP2 **PKPab 04 58 07.6 -0.5**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
PZH PanZhiHua 158.49 250 PKP **PKPdf 04 57 38.0 -0.3**
LZH Lanzhou 160.04 277 *e*P **PKPab 04 58 19.4 -0.4**
LZH pP sPKPab 04 58 24.2 -0.2
ZALV Zalesovo Beam 161.71 349 PKP **PKPdf 04 57 42.3 +1.4**
comp=Z,1.5nm,0.7s,baz=20,slow=4.7,SNR=5.6
ZALV Zalesovo Beam 161.71 349 PKPdf **PKPdf 04 57 40.4 -0.5**
GEYT Alibeck 163.11 77 PKP **PKPdf 04 57 43.8 +0.9**
comp=Z,3.6nm,0.9s,baz=289,slow=4.5,SNR=5.2
GTA Gaotai 163.32 288 *e*PKP **PKPdf 04 57 45.9 +2.7**
MKAR Makanchi Array 169.05 349 PKP **PKPdf 04 57 46.8 -0.5**
comp=Z,1.1nm,1.1s,baz=25,slow=4.3,SNR=4.9
MKAR PKPab **pPKPab 04 59 00.6 -1.6**
comp=Z,0.8nm,0.8s,baz=5.7,slow=5.8,SNR=4.1
MKAR Makanchi Array 169.05 349 **PKPdf 04 57 46.4 -0.9**
WMQ Urumqi 169.87 322 *e*PKP **PKPdf 04 57 48.3 +0.4**
WMQ LR LR
comp=Z,310nm,22.7s
WMQ LR LR
comp=Z,290nm,19.9s
WMQ LR LR
comp=Z,480nm,23.9s
NIL Nilore 174.59 115 PKPdf **PKPdf 04 57 49.1 -1.2**
NIL PKPab **PKPab 04 59 23.0 -0.9**
NIL Nilore 174.59 115 PKIKP **PKPdf 04 57 49.1 -1.2**
NIL 04 59 23.0

*SJA **08** 04:43:45.7±0.7,29°.41S×71°.11W,h35km±2km,ML4.2, MW4.2*
*GUC **08** 04:43:46.5±0.8,29°.43S×71°.07W,h62km±4km,ML4.2*
*IDC **08** 04:43:47.9±0.9,29°.38S×70°.78W,h56km±5km,mb3.6/3, mbtmp3.9/5,Error ellipse: s-maj=39.4km s-min=19.6km az=79.0*
*NEIC **08** 04:43:47.1±1.9,29°.41S±0°.04×71°.24W±0°.10,h50km±23km, ML4.2(GUC),Error ellipse: s-maj=12.5km s-min=5.9km az=93.0*
ISC 08 04:43:47.5±0.6,29°.41S±0°.02×71°.06W±0°.04,h52km±5km, n87,σ1°81/118,mb4.2/3,2C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.51**	**39**	Pn	**Pn**	**04 43 59.5**	**+0.2**
LCO	**Las Campanas**	**0.51**	**39**	*e*P	**Pn**	**04 43 59.4**	**+0.1**
LCO				*i* S	**Sn**	**04 44 08.3**	**+0.7**

CO05	**La Serena**	**0.53 197**		**Pn**	**04 43 59.1**	**-0.1**
CO05	**La Serena**	**0.53 197**	⇑*i*P	**Pn**	**04 43 59.1**	**-0.1**
CO05			*i* S	**Sn**	**04 44 07.6**	**0.0**
CO05			IAML		04 44 09.5	
	comp=N,32μm,0.4s					
GO04	**Tololo Observa**	**0.79 163**		**Pn**	**04 44 02.7**	**0.0**
GO04	**Tololo Observa**	**0.79 163**	⇑*i*P	**Pn**	**04 44 02.6**	**-0.2**
GO04			*e*S	**Sn**	**04 44 14.1**	**+0.2**
GO04	**Tololo Observa**	**0.79 163**	*e*P	**Pn**	**04 44 02.0**	**-0.8**
GO04			*e*S	**Sn**	**04 44 14.6**	**+0.7**
AC05	**El Transito**	**0.90 51**		**Pn**	**04 44 04.6**	**+0.6**
AC05	**El Transito**	**0.90 51**	⇓*i*P	**Pn**	**04 44 04.6**	**+0.6**
AC05			*e*S	**Sn**	**04 44 17.4**	**+1.3**
AC05			IAML		04 44 17.8	
	comp=N,6μm,0.2s					
AC05	**El Transito**	**0.90 51**	*e*P	**Pn**	**04 44 04.0**	**0.0**
AC05			*e*S	**Sn**	**04 44 17.9**	**+1.8**
CO01	**Juntas del Tor**	**1.01 124**	Pn	**Pn**	**04 44 06.0**	**+0.3**
CO01	**Juntas del Tor**	**1.01 124**	⇓*i*P	**Pn**	**04 44 05.9**	**+0.3**
CO01			*e*S	**Sn**	**04 44 20.0**	**+0.9**
CO01			IAML		04 44 21.0	
	comp=E,6μm,0.5s					
CO01	**Juntas del Tor**	**1.01 124**	*e*P	**Pn**	**04 44 06.0**	**+0.3**
CO01			*e*S	**Sn**	**04 44 20.1**	**+1.0**
CO01			IAML		04 44 20.8	
	comp=Z,4μm,0.5s					
AC04	**Llanos de Chal**	**1.20 360**		**Pn**	**04 44 08.7**	**+0.7**
AC04	**Llanos de Chal**	**1.20 360**	*e*P	**Pn**	**04 44 08.3**	**+0.4**
AC04			*e*S	**Sn**	**04 44 24.7**	**+1.5**
AC04			IAML		04 44 32.0	
	comp=E,5μm,0.2s					
AC04	**Llanos de Chal**	**1.20 360**	*e*P	**Pn**	**04 44 08.0**	**0.0**
AC04			*e*S	**Sn**	**04 44 24.4**	**+1.2**
AC04			IAML		04 44 31.0	
	comp=Z,4μm,0.7s					
CO06	**Fray Jorge**	**1.35 201**	Pn	**Pn**	**04 44 09.4**	**-0.6**
CO06	**Fray Jorge**	**1.35 201**	*i* P	**Pn**	**04 44 09.4**	**-0.6**
CO06			*e*S	**Sn**	**04 44 26.2**	**-0.7**
CO06			IAML		04 44 32.4	
	comp=N,8μm,0.3s					
CO03	**El Pedregal**	**1.46 167**		**Pn**	**04 44 11.5**	**-0.2**
CO03	**El Pedregal**	**1.46 167**	*e*P	**Pn**	**04 44 11.3**	**-0.2**
CO03			*e*S	**Sn**	**04 44 30.0**	**+0.3**
CO03			IAML		04 44 35.9	
	comp=E,4μm,0.1s					
CO03	**El Pedregal**	**1.46 167**	*e*P	**Pn**	**04 44 11.4**	**-0.2**
CO03			*e*S	**Sn**	**04 44 31.1**	**+1.4**
CO03			IAML		04 44 34.6	
	comp=Z,2μm,0.5s					
AROD	**Rodeo**	**1.57 119**	*e*P	**Pn**	**04 44 13.1**	**-0.2**
AROD			*e*S	**Sn**	**04 44 30.6**	**-2.1**
CO02	**Combarbal**	**1.79 178**		**Pn**	**04 44 15.7**	**-0.4**
CO02	**Combarbal**	**1.79 178**	*i* P	**Pn**	**04 44 15.7**	**-0.4**
CO02			IAML		04 44 43.9	
	comp=N,10μm,0.2s					
CO02	**Combarbal**	**1.79 178**	*e*P	**Pn**	**04 44 15.7**	**-0.4**
CO02			*e*S	**Sn**	**04 44 40.0**	**+2.3**
CO02			IAML		04 44 42.5	
	comp=Z,3μm,0.3s					
ACDV	**Cuesta del Vie**	**1.85 115**	*e*P	**Pn**	**04 44 19.0**	**+2.0**
ACDV			*e*S	**Sn**	**04 44 35.2**	**-4.1**
ACCO	**Cerro Coronel**	**2.09 125**	*e*P	**Pn**	**04 44 22.0**	**+1.6**
ACCO			*e*S	**Sn**	**04 44 38.9**	**-6.6**
AC06	**Mina Casimiro**	**2.14 17**		**Pn**	**04 44 21.7**	**+0.9**
AC06	**Mina Casimiro**	**2.14 17**	*i* P	**Pn**	**04 44 21.7**	**+0.9**
AC06			IAML		04 45 08.2	
	comp=E,932nm,0.2s					
VCA	**Vinchina**	**2.59 76**	*e*P	**Pn**	**04 44 30.0**	**+2.9**
VCA			*e*S	**Sn**	**04 44 50.2**	**-7.2**
VCA			IAML		04 44 51.1	
	comp=Z,2μm,0.7s					
RTLS	**Leoncito**	**2.83 148**	*e*P	**Pn**	**04 44 33.0**	**+2.6**
RTLS			*e*S	Sn	04 44 52.1	-11
RTLS			IAML		04 45 30.1	
	comp=Z,594nm,0.8s					
RTLL	**Cerro Villicun**	**2.94 131**	*e*P	**Pn**	**04 44 33.0**	**+1.2**
RTLL			*e*P		04 44 33.4	
RTLL			*e*S	Sn	04 44 54.1	-12
ZON	**Zonda**	**2.96 137**	Pn	**Pn**	**04 44 33.5**	**+1.5**
ZON	**Zonda**	**2.96 137**	*e*P	**Pn**	**04 44 33.9**	**+1.9**
ZON			*e*S	Sn	04 44 57.1	-9.2
AC02	**Maricunga**	**3.08 34**	Pn	**Pn**	**04 44 35.5**	**+1.3**
AC02	**Maricunga**	**3.08 34**	*e*P	**Pn**	**04 44 35.5**	**+1.3**
AC02			IAML		04 45 37.1	
	comp=E,794nm,0.4s					
AC02	**Maricunga**	**3.08 34**	*e*P	**Pn**	**04 44 35.6**	**+1.5**
AC02			*e*S	Sn	04 44 56.4	-14
AC02			IAML		04 45 32.2	
	comp=Z,494nm,0.5s					
VA06	**Catapilco**	**3.15 184**	Pn	**Pn**	**04 44 35.0**	**+0.5**
VA06	**Catapilco**	**3.15 184**	*e*P	**Pn**	**04 44 34.4**	**-0.1**
AC01	**Pan de Azucar**	**3.28 7**	Pn	**Pn**	**04 44 35.6**	**-0.7**
AC01	**Pan de Azucar**	**3.28 7**	*e*P	**Pn**	**04 44 35.3**	**-1.0**
AC01			IAML		04 45 29.7	
	comp=E,355nm,0.4s					
AC01	**Pan de Azucar**	**3.28 7**	*e*P	**Pn**	**04 44 35.7**	**-0.7**
AC01			*e*S	**Sn**	**04 45 18.4**	**+4.3**
AC01			*e*S		04 45 21.4	
VA03	**San Esteban**	**3.37 173**		**Pn**	**04 44 38.4**	**+0.8**
VA03	**San Esteban**	**3.37 173**	*e*P	**Pn**	**04 44 38.5**	**+0.8**
VA03	**San Esteban**	**3.37 173**	*e*P	**Pn**	**04 44 39.0**	**+1.3**
VA03			*e*S	**Sn**	**04 45 20.9**	**+4.4**
VA03			IAML		04 45 32.7	
	comp=Z,659nm,0.8s					
ROCH	**El Roble**	**3.55 179**	*e*P	**Pn**	**04 44 41.7**	**+1.4**
ROC1	**El Roble**	**3.56 179**		**Pn**	**04 44 40.7**	**+0.3**
ROC1	**El Roble**	**3.56 179**	*e*P	**Pn**	**04 44 41.9**	**+1.5**
ROC1			*e*P		04 44 42.0	
ROC1			*e*S	**Sn**	**04 45 21.4**	**+0.1**
ACLC	**CERRO LA CRUZ**	**3.59 91**	*e*P	**Pn**	**04 44 42.0**	**+1.3**
ACLC			*e*S	**Sn**	**04 45 24.9**	**+2.9**
ACLC			IAML		04 45 33.1	
	comp=Z,458nm,0.4s					
VA01	**Torpederas**	**3.64 188**		**Pn**	**04 44 40.1**	**-1.1**
ASAL	**Salagasta**	**3.70 149**	*e*P	**Pn**	**04 44 44.0**	**+1.7**
PEL	**Peldehue**	**3.74 175**		**Pn**	**04 44 43.4**	**+0.8**
PEL	**Peldehue**	**3.74 175**	*e*P	**Pn**	**04 44 43.7**	**+1.0**
PEL			*e*S	**Sn**	**04 45 26.7**	**+1.2**
PEL	**Peldehue**	**3.74 175**	*e*P	**Pn**	**04 44 44.1**	**+1.4**
PEL			*e*S	Sn	04 45 40.9	+15
MT02	**Curacav**	**3.84 181**		**Pn**	**04 44 43.5**	**-0.6**
MT02	**Curacav**	**3.84 181**	*e*P	**Pn**	**04 44 44.0**	**0.0**
MT02	**Curacav**	**3.84 181**	*e*P	**Pn**	**04 44 44.0**	**0.0**
MT02			*e*P		04 44 44.1	
MT02			*e*P		04 44 44.3	
MT02			*e*S	Sn	04 45 40.4	+13
MT02			IAML		04 45 47.7	
	comp=Z,330nm,0.6s					
ARCO	**CERRO ARCO**	**3.88 152**	*e*P	**Pn**	**04 44 47.0**	**+2.3**
ARCO			*e*S	Sn	04 45 49.4	+20
ARCO			IAML		04 45 58.0	
	comp=Z,410nm,0.8s					
FCH	**Farellones**	**3.96 171**	*e*P	**Pn**	**04 44 48.3**	**+2.3**
MT05	**Renca**	**3.98 176**	Pn	**Pn**	**04 44 46.5**	**+0.5**
MT05	**Renca**	**3.98 176**	*e*P	**Pn**	**04 44 47.5**	**+1.5**
MT05	**Renca**	**3.98 176**	*e*P	**Pn**	**04 44 48.3**	**+2.3**
MT05			*e*S	**Sn**	**04 45 33.9**	**+2.5**
MT05			IAML		04 45 57.7	
	comp=Z,550nm,0.9s					
MT03	**Universidad Ad**	**4.10 174**	Pn	**Pn**	**04 44 48.4**	**+0.7**
MT03	**Universidad Ad**	**4.10 174**	*e*P	**Pn**	**04 44 48.7**	**+1.0**
MT03	**Universidad Ad**	**4.10 174**	*e*P	**Pn**	**04 44 49.3**	**+1.6**
MT03			*e*P		04 44 49.4	
MT03			*e*P		04 44 51.0	
MT03			*e*S	**Sn**	**04 45 42.4**	**+8.0**
MT03			*e*S		04 45 46.9	
MT03			IAML		04 46 04.9	
	comp=Z,422nm,0.4s					
VA05	**Santo Domingo**	**4.26 186**		**Pn**	**04 44 48.4**	**-1.3**
MT09	**Talagante**	**4.35 179**		**Pn**	**04 44 51.9**	**+0.6**
MT09	**Talagante**	**4.35 179**	*e*P	**Pn**	**04 44 51.4**	**+0.1**
GO02	**Mina Guanaco**	**4.43 18**		**Pn**	**04 44 52.0**	**-0.4**
GO02	**Mina Guanaco**	**4.43 18**	*e*P	**Pn**	**04 44 51.9**	**-0.6**
MT01	**Popeta**	**4.44 182**	*e*P	**Pn**	**04 44 52.4**	**+0.1**
MT01	**Popeta**	**4.44 182**	*e*P	**Pn**	**04 44 53.0**	**+0.7**
MT01			*e*S	**Sn**	**04 45 42.4**	**-0.4**
MT01			IAML		04 45 58.4	
	comp=Z,277nm,0.8s					
LMEL	**Las Melosas**	**4.48 171**	*e*P	**Pn**	**04 44 55.4**	**+2.4**
BO04	**La Punta**	**4.58 175**		**Pn**	**04 44 53.9**	**-0.3**
BO02	**Sierra Bellavi**	**5.37 178**	Pn	**Pn**	**04 45 04.7**	**-0.4**
PB15	**IPOC Station P**	**6.34 13**	Pn	**Pn**	**04 45 17.1**	**-1.5**
LVC	**Limon Verde**	**7.04 16**	P	**Pn**	**04 45 26.3**	**-2.0**
	comp=Z,2.3nm,0.3s,baz=207,slow=11,SNR=1.4					
VA04	**Juan Fernndez**	**7.86 236**	Pn	**Pn**	**04 45 36.3**	**-2.8**
PB01	**IPOC Station P**	**8.45 10**	Pn	**Pn**	**04 45 44.1**	**-3.3**
LPAZ	**La Paz**	**13.34 12**	P	**Pn**	**04 46 55.5**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=187,slow=9.4,SNR=1.1					
SNAA	**Sanae**	**55.54 159**	P	**P**	**04 53 16.4**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=266,slow=9.6,SNR=7.2					
SNAA			pP	**pP**	**04 53 31.6**	**0.0**
	comp=Z,1.6nm,0.5s,baz=281,slow=4.5,SNR=5.8					
SNAA			sP	**sP**	**04 53 38.2**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=291,slow=8.1,SNR=5.9					
	comp=Z,1.4nm,1.0s					
TXAR	**Lajitas Array**	**66.19 329**	P	**P**	**04 54 30.7**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=151,slow=7.7,SNR=2.7					
TXAR			pP	**pP**	**04 54 45.5**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=145,slow=5.5,SNR=2.4					
	comp=Z,0.9nm,0.9s					
TORD	**Torodi Ar. Bea**	**81.86 70**	P	**P**	**04 56 00.3**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=249,slow=5.1,SNR=16					
TORD			pP	**pP**	**04 56 16.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=257,slow=5.6,SNR=2.9					
TORD			sP	**sP**	**04 56 22.1**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=254,slow=4.8,SNR=5.8					
	comp=Z,0.8nm,0.5s					
WRA	**Warramunga Arr**	**125.16 210**	pPKP	pPKPdf	05 02 57.7	-1.0
	comp=Z,0.6nm,0.8s,baz=163,slow=1.9,SNR=2.5					
ZALV	**Zalesovo Beam**	**149.86 29**	PKPbc	**PKPbc**	**05 03 30.9**	**-0.5**
	comp=Z,4.2nm,0.5s,baz=302,slow=3.4,SNR=15					
ZALV			pPKPbc	**pPKPbc**	**05 03 47.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=322,slow=2.5,SNR=2.3					
KSH	**Kashi**	**151.15 61**	PKPbc	**PKPbc**	**05 03 35.0**	**-0.1**
MKAR	**Makanchi Array**	**152.97 43**	PKPbc	**PKPbc**	**05 03 37.8**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=291,slow=3.6,SNR=3.8					

*NNC **08** 05:02:06.0±0.9, 42°.29N×79°.89E, h0km, mpv2.8, Error ellipse: s-maj=5.9km s-min=4.0km az=138.0*
*SOME **08** 05:02:05.3, 42°.25N×79°.87E, h10km*
ISC 08 05:02:06.8±2.0, 42°.36N±0°.08×79°.89E±0°.06, h12km±11km, n14, σ0°79/25, 1C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.85**	**339**	*e*P	**Pg**	**05 02 22.7**	**-0.7**
	6.2nm,0.1s						
SHLS				*e*S	**Sg**	**05 02 35.4**	**+0.8**
	21nm,0.2s						
SHLS	**Shalkode**	**0.85**	**339**	P	**Pg**	**05 02 22.7**	**-0.7**
	6.2nm,0.1s						
SHLS				S	**Sg**	**05 02 35.4**	**+0.8**
	21nm,0.2s						
PDGK	**Podgornoye**	**1.01**	**343**	⇓P	**Pn**	**05 02 26.6**	**-0.3**
	0.3nm,0.1s						
PDGK				⇑S	**Sn**	**05 02 41.1**	**0.0**
	1.4nm,0.2s						
UZB	**Uzynbulak**	**1.01**	**321**	*e*P	**Pb**	**05 02 26.2**	**-0.1**
	1.9nm,0.1s						
UZB				*e*S	**Sn**	**05 02 41.1**	**-0.1**
	3.2nm,0.2s						
UZB	**Uzynbulak**	**1.01**	**321**	P	**Pb**	**05 02 26.2**	**-0.1**
	1.9nm,0.1s						
UZB				S	**Sn**	**05 02 41.1**	**-0.1**
	3.2nm,0.2s						
KTMS	**Ketmen**	**1.14**	**17**	*e*P	**Pb**	**05 02 27.4**	**-1.1**
	1.6nm,0.1s						
KTMS				*e*S	**Sb**	**05 02 43.1**	**-0.2**
	5.2nm,0.2s						
SATY	**Saty**	**1.29**	**303**	*e*P	**Pg**	**05 02 31.3**	**-0.4**
	0.8nm,0.1s						
SATY				*e*S	**Sg**	**05 02 49.9**	**+1.4**
	5.3nm,0.2s						
SATY	**Saty**	**1.29**	**303**	P	**Pg**	**05 02 31.3**	**-0.4**
	0.8nm,0.1s						
SATY				S	**Sg**	**05 02 49.9**	**+1.4**
	5.3nm,0.2s						
BLB	**Baldybastay**	**2.02**	**330**	*e*P	**Pb**	**05 02 43.9**	**+0.4**
	4.6nm,0.2s						
BLB				*e*S	**Sg**	**05 03 12.0**	**+0.3**
	11nm,0.4s						
BLB	**Baldybastay**	**2.02**	**330**	Pg	**Pb**	**05 02 43.9**	**+0.4**
	4.6nm,0.2s						
BLB				Lg	Lg	05 03 12.0	
	11nm,0.4s						
TNSS	**Tian-Shan**	**2.27**	**288**	*e*P	**Pb**	**05 02 47.7**	**-0.2**
	0.8nm,0.1s						
TNSS				*e*S	**Sg**	**05 03 18.2**	**-1.6**
	2.6nm,0.4s						
TNSS	**Tian-Shan**	**2.27**	**288**	Pg	**Pb**	**05 02 47.7**	**-0.2**
	0.8nm,0.1s						
TNSS				Lg	Lg	05 03 18.2	
	2.6nm,0.4s						
ARXS	**Arharly**	**2.38**	**322**	*e*P	**Pb**	**05 02 50.8**	**+1.1**
	3.1nm,0.5s						
ARXS				*e*S	**Sg**	**05 03 23.2**	**-0.2**
	6.6nm,0.4s						
WMQ	**Urumqi**	**5.90**	**73**	*e*P	**Pn**	**05 03 35.1**	**+1.0**

*NEIC **08** 05:03:14.9±1.1, 53°.34N±0°.09×165°.6W±0°.1, h40km±58km, Error ellipse: s-maj=14.2km s-min=7.0km az=152.0*
AEIC 08 05:03:14±1.1, 53°.35N±0°.04×165°.63W±0°.09, h39km±10km, ML3.3, Error ellipse: s-maj=8.7km s-min=5.2km az=120.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.72**	**314**		Pn	05 03 28.5	+0.8
ZRO	**Akutan Zero**	**0.77**	**345**		Pn	05 03 29.3	+0.9
AHB	**Akutan Harbor**	**0.78**	**352**		Pn	05 03 29.6	+1.1
AKMO	**Akutan Morgan**	**0.78**	**343**		Pn	05 03 29.4	+1.0
AKSA	**Akutan Strait**	**0.79**	**357**		Pn	05 03 29.1	+0.5
AKUT	**Akutan**	**0.79**	**354**		Pn	05 03 29.6	+1.0
MREP	**Makushin Rep't**	**0.81**	**305**		Pn	05 03 29.9	+0.9
AKRB	**Akutan Reef Bi**	**0.83**	**342**		Pn	05 03 30.2	+1.1
MNAT	**Makushin Natee**	**0.83**	**311**		Pn	05 03 30.2	+1.0
AKLV	**Akutan Long Va**	**0.84**	**347**		Pn	05 03 30.1	+0.7
MGOD	**Makushin Gods**	**0.87**	**302**		Pn	05 03 30.6	+0.8
MTBL	**Makushin Table**	**0.88**	**315**		Pn	05 03 31.2	+1.3
MCIR	**Makushin Cirqu**	**0.96**	**309**		Pn	05 03 32.3	+1.2
WESP	**Westdahl Peak**	**1.27**	**25**		Pn	05 03 37.3	+2.1
WECS	**Westdahl Cape**	**1.29**	**23**		Pn	05 03 37.3	+1.8
WESN	**West Dahl Nort**	**1.37**	**26**		Pn	05 03 38.8	+2.1
OKTU	**Okmok Mt. Tuli**	**1.45**	**272**		Pn	05 03 39.1	+1.4
OKSP	**Okmok Steeple**	**1.60**	**268**		Pn	05 03 40.9	+1.1
SSLS	**Shishaldin Sou**	**1.67**	**34**		Pn	05 03 41.8	+1.0
BRPK	**Brown Peak**	**1.71**	**40**		Pn	05 03 42.0	+0.7
ISLZ	**Isanotski Laza**	**1.78**	**39**		Pn	05 03 43.1	+0.8
ISNN	**Isanotski Nort**	**1.84**	**35**		Pn	05 03 45.3	+2.2
NIKH	**Nikolski High**	**1.98**	**260**		Pn	05 03 46.2	+1.3
FALS	**False Pass**	**2.00**	**40**		Pn	05 03 46.4	+1.3
SDPT	**Sand Point**	**3.62**	**54**		Pn	05 04 09.0	+1.5
P18K	**Big Mountain,**	**8.36**	**39**	Pn	Pn	05 05 13.5	+1.0
KDAK	**Kodiak Island**	**8.62**	**54**	Pn	Pn	05 05 15.8	-0.2
Q19K	**Cape Douglas,**	**8.71**	**45**	Pn	Pn	05 05 18.7	+1.4
SVW2	**Sparrevohn**	**9.48**	**31**	Pn	Pn	05 05 28.2	+0.4
N19K	**Bonanza Creek**	**9.62**	**35**	Pn	Pn	05 05 32.4	+2.6
CNPM	**China Poot**	**10.08**	**46**	Pn	Pn	05 05 37.3	+1.3
M19K	**Big River Lodg**	**10.46**	**31**	Pn	Pn	05 05 44.1	+2.9
L19K	**White Mountain**	**10.54**	**29**	Pn	Pn	05 05 45.4	+3.0
M20K	**Styx River**	**10.85**	**33**	Pn	Pn	05 05 51.3	+4.8
SUA	**Susitna One**	**11.40**	**39**	Pn	Pn	05 05 55.1	+0.9
K20K	**Telida**	**11.70**	**26**	Pn	Pn	05 06 00.1	+1.9
PWL	**Port Wells**	**12.01**	**44**	Pn	Pn	05 06 00.3	-2.1
HIN	**Hinchinbrook I**	**12.59**	**48**	Pn	Pn	05 06 08.7	-1.5
SCM	**Sheep Creek Mo**	**12.94**	**42**	Pn	Pn	05 06 14.8	-0.3
KLU	**Klutina**	**13.34**	**45**		Pn	05 06 19.4	-1.2
M24K	**Tolsona, Glenn**	**13.55**	**42**	Pn	Pn	05 06 20.8	-2.6
HMT	**Hamilton**	**13.58**	**51**	Pn	Pn	05 06 23.1	-0.8
N25K	**Chitina, Valde**	**13.96**	**45**	Pn	Pn	05 06 27.6	-1.4
GLB	**Gilahina Butte**	**14.22**	**47**	Pn	Pn	05 06 32.5	0.0

IDC 08 05:03:21.7±50.0, 16°.26S×175°.64W, h0km, mb4.1/3, mbtmp4.1/3, MS4.5/5, Error ellipse: s-maj=946.7km s-min=175.9km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.74**	**240**	P	P	05 11 13.4	+0.5
	1.0nm,0.4s,baz=20,slow=12,SNR=3.7						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**47.55**	**258**	P	P	05 11 59.2	-0.3
	0.7nm,0.6s,baz=95,slow=7.3,SNR=12						
WRA				LR	LR	05 32 35.7	
	comp=Z,302nm,18.8s,baz=152,slow=37						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**47.80**	**253**	P	P	05 12 00.9	-0.4
	5.6nm,0.6s,baz=89,slow=8.4,SNR=57						
ASAR				LR	LR	05 30 31.7	
	comp=Z,810nm,20.0s,baz=158,slow=34						
	5.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**55.93**	**259**	LR	LR	05 35 50.9	
	comp=Z,489nm,21.0s,baz=130,slow=35						
LEM	**Lembang**	**75.43**	**267**	LR	LR	05 49 35.8	
	comp=Z,230nm,19.5s,baz=142,slow=37						
YAK	**Yakutsk**	**89.06**	**337**	LR	LR	05 49 36.1	
	comp=Z,331nm,21.8s,baz=87,slow=31						

*ECX **08** 05:42:15.0±0.5, 30°.36N×115°.82W, h8km±5km, MD2.3, ML2.5*
*MEX **08** 05:42:15.6±0.3, 30°.43N×115°.84W, h4km±3km, MD3.6*
ISC 08 05:42:14.4±1.5, 30°.37N±0°.06×115°.78W±0°.05, h9km±9km, n16, σ2.9 19/31, 2C-4D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SQX	**San Quintin**	**0.22**	**337**	⇓*i*P	**Pg**	**05 42 19.3**	**+0.3**
SQX				*e*S	**Sg**	**05 42 22.7**	**+0.6**
SQX				*e*		05 42 23.0	
SQX				IAML		05 42 23.0	
	comp=N,1μm,0.1s						
SQX				⇓*e*		05 42 23.1	
SQX				IAML		05 42 23.1	
	comp=E,814nm,0.2s						
SPIG	**San Pedro Mart**	**0.72**	**22**	*i* P	**Pg**	**05 42 28.3**	**-0.2**
SPIG				*e*S	**Sg**	**05 42 38.2**	**+0.3**
SPIG	**San Pedro Mart**	**0.72**	**22**	*e*P	**Pg**	**05 42 28.2**	**-0.2**
SPIG				*e*S	**Sg**	**05 42 38.5**	**+0.5**
VTX	**Valle De La Tr**	**1.02**	**360**	⇓*e*P	**Pg**	**05 42 32.7**	**-1.3**
VTX				*e*S	**Sg**	**05 42 47.0**	**-0.3**
VTX				*e*		05 42 47.5	
VTX				IAML		05 42 47.5	
	comp=N,128nm,0.1s						
VTX				⇑*e*		05 42 47.6	
VTX				IAML		05 42 47.6	
	comp=E,97nm,0.1s						
SFX	**San Felipe**	**1.04**	**50**	*e*P	**Pg**	**05 42 33.1**	**-1.3**
SFX				*e*S	**Sg**	**05 42 46.7**	**-1.2**
SFX	**San Felipe**	**1.04**	**50**	*e*P	**Pg**	**05 42 34.0**	**-0.4**
SFX				*e*S	**Sg**	**05 42 48.6**	**+0.7**
SFX				*e*		05 42 50.5	
SFX				IAML		05 42 50.5	
	comp=E,77nm,0.3s						
SFX				IAML		05 42 50.5	
	comp=N,80nm,0.3s						
SFX				*e*		05 42 50.5	
ECBX	**El Chinero**	**1.26**	**29**	*e*P	**Pn**	**05 42 38.0**	**-0.3**
ECBX				*e*S	**Sg**	**05 42 54.8**	**-0.3**
ECBX				IAML		05 42 59.3	
	comp=N,85nm,0.6s						
ECBX				⇓*e*		05 42 59.3	
SLGB	**San Luis Gonza**	**1.30**	**114**	*e*P	**Pn**	**05 42 38.2**	**-0.6**
SLGB				*e*S	**Sb**	**05 42 55.8**	**-0.2**
SLGB				IAML		05 42 58.7	
	comp=E,108nm,0.3s						
SLGB				⇑*e*		05 42 58.7	
SJX	**San Joaquin**	**1.40**	**354**	*e*P	**Pg**	**05 42 43.3**	**+2.1**
SJX				*e*S	**Sn**	**05 43 05.9**	**+7.3**
RHX	**Rio Hardy**	**1.81**	**13**	*e*P	**Pn**	**05 42 45.4**	**-0.3**
CBX	**Cerro Bola**	**2.08**	**339**	*e*P	**Pn**	**05 42 46.5**	**-3.1**
CBX				*e*S	**Sn**	**05 43 11.4**	**-4.3**
CBX	**Cerro Bola**	**2.08**	**339**	*e*P	**Pn**	**05 42 49.9**	**+0.3**
CBX				*e*S	**Sn**	**05 43 17.1**	**+1.4**
TJIG	**Tijuana**	**2.19**	**340**	*e*P	**Pn**	**05 42 48.1**	**-3.0**
TJIG				*e*S	**Sn**	**05 43 13.9**	**-4.4**
RMX	**La Rumorosa**	**2.24**	**353**	*e*P	**Pn**	**05 42 51.4**	**-0.5**
BAHB	**Baha de los**	**2.40**	**126**	*e*P	**Pn**	**05 42 54.0**	**+0.2**
BAHB				*e*S	**Sn**	**05 43 23.8**	**+0.6**
BAHB				*e*S	**Sb**	**05 43 28.3**	**+0.9**
BAR	**Barrett**	**2.43**	**342**	*e*P	**Pn**	**05 42 54.9**	**+0.6**
BAR				*e*S	**Sn**	**05 43 26.3**	**+2.2**

HEL 08 05:49:21.4±0.3, 67°.20N×20°.74E, h0km, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	**0.87**	**138**	PG	Pg	05 49 36.7	-1.3
PAJU	**Pajala**	**0.94**	**100**	PB	Pg	05 49 38.6	-0.8
LANU	**Lannavaara**	**0.98**	**29**	PB	Pg	05 49 39.4	-0.7
KLF	**Kolari**	**1.25**	**87**	PG	Pg	05 49 44.2	-1.2
	baz=268						
KLF				SN	Sn	05 50 03.2	-0.6
HEF	**Hetta**	**1.64**	**41**	PG	Pn	05 49 51.0	-0.5
	baz=224						

*TEH **08** 05:58:59.4, 27.85N×57.65E, h18km, ML4.0*
*OMAN **08** 05:59:03.5±0.2, 27.56N×57.60E, h16km±3km, mb5.4/4, ml3.8/16, Error ellipse: s-maj=5.4km s-min=1.6km az=350.0*
ISC 08 05:58:58.6±0.8, 27.80N±0.04×57.66E±0.04, h10km, n91, σ1.9/86/110, mb3.7/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.16**	**15**	*e*Pg	**Pg**	**05 59 03.9**	**+1.8**
IBND	**Bandar-abas**	**1.05**	**251**	*e*Pg	**Pg**	**05 59 19.8**	**+0.9**
IBND				*e*Sg	**Sb**	**05 59 35.8**	**+3.0**
IBND				*e*		05 59 53.1	
	comp=Z,62μm,0.8s						
GENO	**Geno**	**1.38**	**254**	*e*Pg	**Pn**	**05 59 25.1**	**+1.0**
GENO				*e*		05 59 47.0	
	comp=Z,30μm,0.5s						
KBAM	**BAM**	**1.51**	**27**	*e*Pg	**Pn**	**05 59 25.0**	**-0.8**
KBAM				*e*		05 59 51.7	
	comp=Z,18μm,0.4s						
JASK	**Jask - Hormozg**	**1.93**	**174**	*e*Pn	**Pn**	**05 59 33.4**	**+1.9**
JASK				*e*		06 00 32.6	
	comp=Z,8μm,0.6s						
JASK	**Jask - Hormozg**	**1.93**	**174**	P	**Pn**	**05 59 34.1**	**+2.6**
	SNR=13						
NGRK	**Negar Kerman**	**2.02**	**336**	*e*Pn	**Pn**	**05 59 33.3**	**+0.2**
NGRK				*e*		06 00 00.7	
	comp=Z,16μm,0.2s						
CHMN	**Cheshme madani**	**2.06**	**357**	*e*Pn	**Pn**	**05 59 33.7**	**0.0**
CHMN				*e*		06 00 07.9	
	comp=Z,20μm,0.6s						
SHME	**Shamm**	**2.21**	**218**	*e*Pn	**Pn**	**05 59 36.6**	**+1.3**
SHME	**Shamm**	**2.21**	**218**	P	**Pn**	**05 59 36.8**	**+1.5**
	SNR=24						
SHME				S	**Sn**	**06 00 05.2**	**+2.6**
SHME	**Shamm**	**2.21**	**218**	P	**Pn**	**05 59 36.7**	**+1.5**
BANOM	**Banah**	**2.23**	**213**	*e*Pn	**Pn**	**05 59 37.3**	**+1.7**
BANOM	**Banah**	**2.23**	**213**	P	**Pn**	**05 59 37.1**	**+1.5**
	SNR=43						
BANOM				S	**Sn**	**06 00 03.9**	**+0.7**
BANOM	**Banah**	**2.23**	**213**	P	**Pn**	**05 59 36.8**	**+1.1**
BANOM				S	**Sn**	**06 00 06.0**	**+2.8**
KRBR	**Kerman**	**2.32**	**340**	*e*Pn	**Pn**	**05 59 37.5**	**+0.4**
TVBK	**TV Kerman**	**2.32**	**340**	*e*Pn	**Pn**	**05 59 37.9**	**+0.7**
KHGB	**Koh Gabri**	**2.77**	**338**	*e*Pn	**Pn**	**05 59 44.5**	**+1.2**
MSFE	**Esma-Masafi**	**2.77**	**209**	*e*Pn	**Pn**	**05 59 45.9**	**+2.7**
MSFE	**Esma-Masafi**	**2.77**	**209**	P	**Pn**	**05 59 45.2**	**+2.1**
UOSS	**Minazif**	**3.12**	**205**	*e*Pn	**Pn**	**05 59 49.7**	**+1.7**
UOSS	**Minazif**	**3.12**	**205**	P	**Pn**	**05 59 49.6**	**+1.6**
UOSS	**Minazif**	**3.12**	**205**	P	**Pn**	**05 59 49.1**	**+1.1**
ZHDN	**Zahedan**	**3.20**	**59**	*e*Pn	**Pn**	**05 59 50.7**	**+1.6**
HATD	**Hatta, Dubai**	**3.26**	**205**	*e*Pn	**Pn**	**05 59 50.8**	**+0.9**
HATD	**Hatta, Dubai**	**3.26**	**205**	P	**Pn**	**05 59 50.6**	**+0.8**
HATD	**Hatta, Dubai**	**3.26**	**205**	P	**Pn**	**05 59 53.8**	**+4.0**
ZHSF	**Zahedan**	**3.28**	**56**	*e*Pn	**Pn**	**05 59 52.6**	**+2.3**
NAZ	**Nazwa, Dubai**	**3.32**	**213**	P	**Pn**	**05 59 51.0**	**+0.4**
CHBR	**Chabahar**	**3.34**	**130**	*e*Pn	**Pn**	**05 59 53.3**	**+2.4**
ASHO	**Ashiyiah**	**3.42**	**205**	*e*Pn	**Pn**	**05 59 54.5**	**+2.5**
ASHO	**Ashiyiah**	**3.42**	**205**	P	**Pn**	**05 59 55.0**	**+3.0**
ASHO	**Ashiyiah**	**3.42**	**205**	P	**Pn**	**05 59 52.6**	**+0.6**
ASHO				S	**Sn**	**06 00 37.4**	**+4.8**
FAQ	**Al Faqa, Dubai**	**3.56**	**212**	*e*Pn	**Pn**	**05 59 55.4**	**+1.4**
FAQ	**Al Faqa, Dubai**	**3.56**	**212**	P	**Pn**	**05 59 55.5**	**+1.6**
SOHO	**SOHO**	**3.79**	**196**	*e*Pn	**Pn**	**05 59 56.0**	**-1.0**
SOHO	**SOHO**	**3.79**	**196**	P	**Pn**	**05 59 58.0**	**+1.0**
SOHO				S	**Sn**	**06 00 40.4**	**-1.2**
ASUD	**Al Ashush, Dub**	**3.79**	**214**	*e*Pn	**Pn**	**05 59 59.4**	**+2.3**
NGCH	**Negor - Chabah**	**3.95**	**127**	*e*Pn	**Pn**	**06 00 01.3**	**+2.0**
NGCH	**Negor - Chabah**	**3.95**	**127**	P	**Pn**	**06 00 02.1**	**+2.8**
ESRB	**Sir Abu**	**4.00**	**231**	*e*Pn	**Pn**	**06 00 00.5**	**+0.5**
AJN	**Ajban**	**4.02**	**217**	*e*Pn	**Pn**	**06 00 01.9**	**+1.7**
AJN	**Ajban**	**4.02**	**217**	P	**Pn**	**06 00 02.3**	**+2.1**
AJN				S	**Sn**	**06 00 47.1**	**-0.3**
ALNE	**Al Ain**	**4.10**	**205**	*e*Pn	**Pn**	**06 00 04.2**	**+2.8**
NHDN	**Nehbandan**	**4.14**	**30**	*e*Pn	**Pn**	**06 00 03.5**	**+1.4**
IBAF	**Bafgh**	**4.20**	**335**	*e*Pn	**Pn**	**06 00 04.6**	**+1.7**
IBAF				*e*		06 01 19.2	
	comp=Z,841nm,0.6s						
HOQ	**Hoqain**	**4.21**	**184**	*e*Pn	**Pn**	**06 00 02.9**	**0.0**
HOQ	**Hoqain**	**4.21**	**184**	P	**Pn**	**06 00 03.0**	**+0.2**
	SNR=7.9						
HOQ				S	**Sn**	**06 00 47.0**	**-5.1**
SRVN	**Saravan**	**4.22**	**94**	*e*Pn	**Pn**	**06 00 05.8**	**+2.6**
BIDO	**Bidbid**	**4.28**	**174**	*e*Pn	**Pn**	**06 00 04.2**	**+0.4**
BIDO	**Bidbid**	**4.28**	**174**	P	**Pn**	**06 00 04.9**	**+1.0**
BIDO				S	**Sn**	**06 00 53.2**	**-0.6**
BSRN	**Basiran**	**4.35**	**17**	*e*Pn	**Pn**	**06 00 06.1**	**+1.2**
IMEH	**Mehriz**	**4.46**	**324**	*e*Pn	**Pn**	**06 00 07.6**	**+1.1**
ARQ	**Araqi**	**4.56**	**193**	P	**Pn**	**06 00 06.4**	**-1.3**
	SNR=16						
ARQ				S	**Sn**	**06 01 01.8**	**+1.0**
WSAR	**Wadi Sarin**	**4.62**	**169**	P	**Pn**	**06 00 09.8**	**+1.2**
	SNR=13						
WSAR				S	**Sn**	**06 01 01.7**	**-0.7**
SMDO	**Samad**	**4.73**	**176**	P	**Pn**	**06 00 11.9**	**+1.8**
SMDO				S	**Sn**	**06 01 04.9**	**-0.2**
IKOO	**Kooshah**	**4.76**	**14**	*e*Pn	**Pn**	**06 00 11.4**	**+0.7**
BSY	**Bisya**	**5.05**	**185**	P	**Pn**	**06 00 17.5**	**+3.0**
	SNR=7.1						
BSY				S	**Sn**	**06 01 12.9**	**+0.1**
ITEG	**Tejag**	**5.17**	**10**	*e*Pn	**Pn**	**06 00 17.2**	**+0.9**
TPRV	**Parvadeh(Tabas**	**5.28**	**351**	*e*Pn	**Pn**	**06 00 18.9**	**+1.2**
IDAH	**Dahanechah**	**5.28**	**21**	*e*Pn	**Pn**	**06 00 19.5**	**+1.6**
YZKH	**Yazd**	**5.29**	**331**	*e*Pn	**Pn**	**06 00 18.9**	**+1.0**
WBK	**Wadi Bani Khal**	**5.30**	**167**	*e*Pn	**Pn**	**06 00 20.5**	**+2.6**
WBK	**Wadi Bani Khal**	**5.30**	**167**	P	**Pn**	**06 00 19.1**	**+1.2**
WBK				S	**Sn**	**06 01 18.2**	**-0.8**
ISAD	**Sadrabad**	**5.36**	**321**	*e*Pn	**Pn**	**06 00 20.1**	**+1.1**
JMDO	**Jabal Madar**	**5.42**	**176**	P	**Pn**	**06 00 20.9**	**+1.4**
JMDO				S	**Sn**	**06 01 22.4**	**+0.5**
AHBU	**AHRAM**	**5.71**	**282**	*e*Pn	**Pn**	**06 00 25.5**	**+2.0**
AFRZ	**Afriz**	**5.73**	**11**	*e*Pn	**Pn**	**06 00 25.3**	**+1.4**
TKDS	**Koohdasht(Taba**	**5.82**	**356**	*e*Pn	**Pn**	**06 00 26.7**	**+1.6**
TABS	**Tabas**	**5.85**	**356**	*e*Pn	**Pn**	**06 00 26.9**	**+1.3**
IRAM	**Ramesheh**	**6.08**	**312**	*e*Pn	**Pn**	**06 00 28.8**	**-0.1**
MZR	**Muzera**	**6.09**	**219**	P	**Pn**	**06 00 29.9**	**+1.2**
MZR				S	**Sn**	**06 01 34.8**	**-3.7**
TNSJ	**Nastanj**	**6.21**	**352**	*e*Pn	**Pn**	**06 00 31.6**	**+1.1**
SHRT	**Shahrakht**	**6.25**	**21**	*e*Pn	**Pn**	**06 00 32.3**	**+1.2**
ANAR	**Anarak**	**6.36**	**329**	*e*Pn	**Pn**	**06 00 33.7**	**+1.2**
NASN	**Na'in**	**6.52**	**321**	*e*Pn	**Pn**	**06 00 35.5**	**+0.6**
MHTO	**MHTO**	**6.79**	**178**	P	**Pn**	**06 00 40.5**	**+2.2**
	SNR=8.1						
MHTO				S	**Sn**	**06 01 54.4**	**-1.2**
KRSH	**Karshahi**	**7.77**	**324**	*e*Pn	**Pn**	**06 00 53.4**	**+1.4**
DQM	**DQM**	**7.83**	**181**	P	**Pn**	**06 00 54.3**	**+1.7**
DQM				S	**Sn**	**06 02 20.5**	**-1.0**
ISFB	**Sefidab**	**8.02**	**326**	*e*Pn	**Pn**	**06 00 56.2**	**+0.9**
SHRO	**Shahrood**	**8.29**	**351**	*e*Pn	**Pn**	**06 01 00.2**	**+1.2**
IVRN	**Varamin**	**8.79**	**326**	*e*Pn	**Pn**	**06 01 07.0**	**+1.2**
KHMZ	**Khomeyn**	**8.88**	**314**	*e*Pn	**Pn**	**06 01 08.1**	**+0.8**
ASAO	**Ashtian**	**9.38**	**318**	*e*Pn	**Pn**	**06 01 15.6**	**+1.5**
DOK	**Doka**	**9.69**	**200**	P	**Pn**	**06 01 18.3**	**+0.1**
	SNR=7.6						
DOK				S	**Sn**	**06 03 01.0**	**-6.2**
MRVT	**Maraveh tapeh**	**9.93**	**353**	*e*Pn	**Pn**	**06 01 22.1**	**+0.7**
DMTO	**DMTO**	**10.34**	**195**	P	**Pn**	**06 01 25.9**	**-1.1**
	SNR=5.2						
WHFO	**Wadi Hawf**	**10.46**	**201**	P	**Pn**	**06 01 29.4**	**+0.6**
ABTO	**Aybut**	**11.14**	**202**	P	**Pn**	**06 01 39.5**	**+1.3**
	SNR=10						
BRTR	**Keskin Array B**	**23.17**	**307**	P	**P**	**06 04 03.9**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=116,slow=11,SNR=7.3						
	comp=Z,1.7nm,0.8s						
ESDC	**Sonseca Array**	**51.69**	**300**	P	**P**	**06 08 03.0**	**-3.0**
	comp=Z,0.2nm,0.5s,baz=68,slow=6.5,SNR=4.4						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**54.00**	**266**	P	**P**	**06 08 20.6**	**-2.7**
	comp=Z,2.2nm,0.4s,baz=62,slow=7.3,SNR=47						
	comp=Z,2.2nm,0.4s						

IDC 08 06:05:12.3±2.6, 22.34S×148.14E, h0km, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=36.9km s-min=22.9km az=58.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.85**	**322**	Pn	Pn	06 05 59.9	+0.7
	1.7nm,0.3s,baz=137,slow=17,SNR=28						
CTA				Pg	Pb	06 06 05.5	+1.3
	5.2nm,0.3s,baz=152,slow=18,SNR=14						
CTA				Lg	Lg	06 06 42.2	
	4.8nm,0.3s,baz=42,slow=20,SNR=8.4						
	12nm,0.6s						
WRA	**Warramunga Arr**	**13.10**	**278**	Pn	Pn	06 08 18.1	-1.7
	baz=110,slow=12,SNR=2.5						
WRA				Lg	Lg	06 12 05.7	
	0.1nm,0.3s,baz=100,slow=25,SNR=4.7						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**13.18**	**262**	Pn	Pn	06 08 21.9	+1.0
	0.1nm,0.3s,baz=90,slow=14,SNR=4.2						
ASAR				Lg	Lg	06 12 13.1	
	0.1nm,0.3s,baz=88,slow=28,SNR=5.0						
	0.2nm,0.3s						
I22FR	**PORTLAGUERRE I**	**17.32**	**93**	I		07 45 50.0	
	baz=265,slow=309,SNR=0.8						
TORD	**Torodi Ar. Bea**	**146.83**	**260**	PKPbc	PKPdf	06 24 56.3	+0.7
	1.7nm,1.0s,baz=121,slow=3.3,SNR=5.6						

*PRE **08** 06:12:38.4±1.5, 13.99S×25.70E, h10km, ML3.0*
*BUL **08** 06:12:45.2±6.0, 14.76S×25.68E, h10km, MD4.7*
*EAF **08** 06:12:46.0±6.4, 14.78S×25.70E, h10km, MD4.1*
ISC 08 06:12:35.4±2.6, 14.25±0.2×25.60E±0.07, h10km, n22, σ3.9/09/29, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**2.71**	**113**	*i* P	**Pg**	**06 13 26.6**	**-0.8**
LSZ				*i* S	**Sb**	**06 13 54.5**	**-3.0**
LSZ	**Lusaka**	**2.71**	**113**	*i* P	**Pg**	**06 13 26.6**	**-0.8**
LSZ				*i* S	**Sb**	**06 13 54.5**	**-3.0**
BLWY	**Bulawayo**	**6.54**	**154**	*e*P	Pn	06 14 18.2	+6.3
BLWY				*e*S	**Sn**	**06 15 30.5**	**+3.9**
BLWY				IAML		06 16 20.0	
	comp=Z,52nm,0.6s						
BLWY	**Bulawayo**	**6.54**	**154**	*i* P	**Pn**	**06 14 13.6**	**+1.7**
BLWY	**Bulawayo**	**6.54**	**154**	*i* P	**Pn**	**06 14 13.6**	**+1.7**
MATP	**Matopo**	**6.75**	**156**	*i* P	**Pn**	**06 14 16.2**	**+1.5**
MATP				*i* S	Sn	06 15 23.1	-8.7
MATP	**Matopo**	**6.75**	**156**	*i* P	**Pn**	**06 14 16.2**	**+1.5**
MATP				*i* S	Sn	06 15 23.1	-8.7
MUSN	**Musina, Limpop**	**8.97**	**154**	*e*P	Pn	06 14 50.6	+5.4
MUSN				*e*S	**Sn**	**06 16 28.9**	**+2.5**
MUSN				IAML		06 16 48.5	
	comp=Z,7.8nm,0.4s						
MUSN	**Musina, Limpop**	**8.97**	**154**	*i* P	**Pn**	**06 14 46.6**	**+1.4**
MUSN	**Musina, Limpop**	**8.97**	**154**	*i* P	**Pn**	**06 14 46.6**	**+1.4**
TSUM	**Tsumeb**	**9.13**	**236**	*e*P	Pn	06 14 56.2	+8.8
TSUM				*e*S	**Sn**	**06 16 34.4**	**+4.0**
LEPH	**Lephalale, Lim**	**9.79**	**168**	*e*P	Pn	06 15 03.3	+6.8
LEPH				*e*S	**Sn**	**06 16 51.8**	**+5.2**
LEPH				IAML		06 18 09.9	
	comp=Z,9.1nm,0.5s						
LBTB	**Lobatse**	**10.72**	**180**	*e*P	Pn	06 15 16.6	+7.3
LBTB				*e*S	**Sn**	**06 17 12.2**	**+2.8**
LBTB				IAML		06 18 31.2	
	comp=Z,4.9nm,0.7s						
LBTB	**Lobatse**	**10.72**	**180**	*i* P	**Pn**	**06 15 10.5**	**+1.2**
LBTB				*i* S	**Sn**	**06 17 06.0**	**-3.5**
LBTB	**Lobatse**	**10.72**	**180**	*i* P	**Pn**	**06 15 10.5**	**+1.2**
LBTB				*i* S	**Sn**	**06 17 06.0**	**-3.5**
MOPA	**Mopani**	**10.74**	**150**	*e*P	Pn	06 15 16.4	+7.0
MOPA				*e*S	**Sn**	**06 17 12.4**	**+2.6**
MOPA				IAML		06 18 28.1	
	comp=Z,4.2nm,0.5s						
MOPA	**Mopani**	**10.74**	**150**	*i* P	**Pn**	**06 15 14.0**	**+4.6**
MOPA	**Mopani**	**10.74**	**150**	*i* P	**Pn**	**06 15 14.0**	**+4.6**
PRYS	**Parys**	**12.73**	**173**	*e*P	Pn	06 15 45.0	+8.3
PRYS				*e*S	**Sn**	**06 18 00.8**	**+2.0**
PRYS				IAML		06 19 37.3	
	comp=Z,2.3nm,0.6s						
BOSA	**Boshof**	**14.31**	**181**	*e*P	**P**	**06 16 02.7**	**-2.9**
BOSA				*e*S	**Sn**	**06 18 36.6**	**-0.6**
BOSA				IAML		06 20 42.4	
	comp=Z,2.3nm,0.6s						
BOSA	**Boshof**	**14.31**	**181**	*i* P	**Pn**	**06 15 59.5**	**+1.2**
BOSA				*i* S	**Sn**	**06 18 32.2**	**-5.1**
BOSA	**Boshof**	**14.31**	**181**	*i* P	**Pn**	**06 15 59.5**	**+1.2**
BOSA				*i* S	**Sn**	**06 18 32.2**	**-5.1**

*TIF **08** 06:15:08.4, 42.10N×46.03E, h25km±1km*
*MOS **08** 06:15:09.9±0.0, 42.07N×46.19E, h42km, MPVA3.9*
*DRS **08** 06:15:11.1±0.0, 42.02N×45.94E, h20km*
ISC 08 06:15:10.8±0.9, 42.08N±0.02×46.09E±0.02, h20km±3km, n35, σ1.9/43/71, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.27**	**154**	P	**Pg**	**06 15 16.2**	**-0.7**
LGD				S	**Sg**	**06 15 21.2**	**0.0**
DDFL	**Dedoflistskaro**	**0.63**	**178**	P	**Pb**	**06 15 24.8**	**+1.6**
DDFL				S	**Sn**	**06 15 38.5**	**+4.2**
XNZR	**Khunzakh**	**0.65**	**45**	*e*Pg	**Pg**	**06 15 23.4**	**-0.4**
XNZR				*e*Sg	**Sg**	**06 15 33.1**	**+0.5**
GNBR	**Gunib**	**0.72**	**64**	*i* Pg	**Pg**	**06 15 24.4**	**-0.7**
GNBR				*e*Sg	**Sg**	**06 15 35.0**	**+0.3**
KMKR	**Kumukh**	**0.76**	**86**	*e*Pg	**Pg**	**06 15 24.9**	**-0.8**
KMKR				*e*Sg	**Sg**	**06 15 35.7**	**-0.2**
DGRG	**David-gareji**	**0.82**	**221**	P	**Pb**	**06 15 24.5**	**-2.0**
DGRG				S	**Sb**	**06 15 38.0**	**+0.9**
UNCR	**Uncukul**	**0.82**	**39**	*i* Pg	**Pb**	**06 15 25.9**	**-0.6**
UNCR				*e*Sg	**Sb**	**06 15 37.4**	**+0.2**
ARKR	**Arakani**	**0.85**	**52**	*e*Pg	**Pb**	**06 15 26.5**	**-0.5**
ARKR				*e*Sg	**Sb**	**06 15 38.5**	**+0.5**
DVE	**Vedeno**	**0.88**	**2**	*e*Pg	**Pb**	**06 15 26.5**	**-0.9**
DVE				*e*Sg	**Sb**	**06 15 39.6**	**+0.8**
SHTL	**Shatili**	**0.90**	**310**	P	**Pb**	**06 15 25.6**	**-2.3**
SHTL				S	**Sb**	**06 15 36.9**	**-2.6**
KRNR	**Karanay**	**0.96**	**39**	*i* Pg	**Pb**	**06 15 28.1**	**-0.8**
KRNR				*e*Sg	**Sb**	**06 15 41.5**	**+0.3**
SEAG	**Tbilisi Seag**	**1.01**	**252**	P	**Pb**	**06 15 28.0**	**-1.6**
SEAG				S	**Sb**	**06 15 42.0**	**-0.4**
BTNK	**Botanikuri**	**1.04**	**248**	P	Pb	06 15 21.0	-9.1
BTNK				S	Sb	06 15 35.5	-7.9
BUJR	**Buynaksk**	**1.06**	**45**	*e*Pg	**Pb**	**06 15 29.6**	**-0.9**
BUJR				*e*Sg	**Sb**	**06 15 43.9**	**-0.1**
DLMR	**Dylym**	**1.07**	**22**	*e*Pg	**Pb**	**06 15 29.3**	**-1.3**
DLMR				*e*Sg	**Sb**	**06 15 43.9**	**-0.3**
DBC	**Dubki**	**1.09**	**30**	*e*Pg	**Pb**	**06 15 30.2**	**-0.8**
DBC				*e*Sg	**Sb**	**06 15 44.5**	**-0.4**
GROC	**Groznyy**	**1.14**	**349**	*e*Pg	**Pn**	**06 15 30.0**	**-1.7**
GROC				*e*Sg	**Sb**	**06 15 44.9**	**-1.4**
PNSH	**Pansheti**	**1.22**	**298**	P	**Pn**	**06 15 31.6**	**-1.4**
AKT	**Akhty**	**1.37**	**115**	*e*Pg	**Pn**	**06 15 33.4**	**-1.5**
AKT				*e*Sg	**Sn**	**06 15 50.7**	**-1.9**
KZRT	**Kazreti**	**1.44**	**242**	P	**Pn**	**06 15 33.9**	**-1.9**
KZRT				S	**Sn**	**06 15 51.7**	**-2.4**
LACR	**Lac**	**1.52**	**300**	*e*Pg	**Pn**	**06 15 37.4**	**+0.4**
LACR				*e*Sg	**Sn**	**06 15 57.5**	**+1.3**
DMNI	**Dmanisi**	**1.60**	**243**	P	**Pn**	**06 15 36.8**	**-1.3**
DMNI				S	**Sn**	**06 15 57.3**	**-1.0**
BRNG	**Burnasheti**	**1.75**	**256**	P	**Pn**	**06 15 39.0**	**-1.1**
BRNG				S	**Sn**	**06 16 02.1**	**+0.1**
ZEI	**Tsey**	**1.77**	**294**	*e*Pg	**Pn**	**06 15 41.0**	**+0.6**
ZEI				*e*Sg	**Sn**	**06 16 04.2**	**+1.7**
KORR	**Kora**	**1.80**	**305**	*e*Pg	**Pn**	**06 15 41.5**	**+0.7**
KORR				*e*Sg	**Sb**	**06 16 06.2**	**+1.0**
ALIG	**Mtskhetisjvari**	**1.81**	**272**	P	**Pn**	**06 15 40.4**	**-0.5**
ALIG				S	**Sn**	**06 16 03.3**	**-0.1**
BKRG	**Bakuriani**	**1.94**	**261**	P	**Pn**	**06 15 42.3**	**-0.5**
BKRG				S	**Sn**	**06 16 08.3**	**+1.7**
DIGR	**Digorskoe uzhe**	**2.02**	**295**	*e*Pg	**Pn**	**06 15 45.3**	**+1.3**
DIGR				*e*Sg	**Sn**	**06 16 11.1**	**+2.2**
AKH	**Akhalkalaki**	**2.05**	**252**	P	**Pn**	**06 15 44.8**	**+0.4**
AKH				S	**Sn**	**06 16 09.4**	**-0.1**
AKH	**Akhalkalaki**	**2.05**	**252**	*e*Pg	**Pn**	**06 15 43.6**	**-0.8**
AKH				*e*Sg	**Sn**	**06 16 09.4**	**-0.1**
GNI	**Garni**	**2.18**	**208**	*e*Pn	**Pn**	**06 15 45.7**	**-0.4**
GNI				*e*Sn	**Sn**	**06 16 14.0**	**+1.5**
AZMN	**Azmana**	**2.23**	**251**	P	**Pn**	**06 15 44.9**	**-2.0**
AZMN				S	**Sn**	**06 16 13.6**	**-0.2**
ABS	**Abastumani**	**2.46**	**264**	P	**Pn**	**06 15 48.8**	**-1.2**
ABS				S	**Sn**	**06 16 23.7**	**+4.1**
NEY	**Neytrino**	**2.74**	**296**	*e*Pn	**Pn**	**06 15 54.6**	**+0.8**
NEY				*e*Sn	**Sn**	**06 16 28.6**	**+2.1**
MNK	**Minsk**	**17.29**	**322**	*i* P	**Pn**	**06 19 10.0**	**-0.8**
	comp=E,4.0nm,1.1s						
MNK				*i* P	**Pn**	**06 19 10.0**	**-0.8**
	comp=N,29nm,0.8s						
MNK				*i* P	**Pn**	**06 19 10.0**	**-0.8**
	comp=Z,8.0nm,0.8s,baz=128						
MNK				*i* PP	**pP**	**06 19 20.1**	**+1.8**
MNK				*i* PPP	PPP	06 19 27.8	
MNK				*i* S	**Sn**	**06 22 23.9**	**+1.4**
MNK				*i* SS	**SnSn**	**06 22 38.7**	**+3.0**
MNK				*i* SSS	SSS	06 22 51.5	
MNK				*i* LQ	LQ	06 24 18.7	
MNK				*i* LR	LR	06 25 37.9	
MNK				*i* LRM	MLR	06 26 38.5	
	comp=E,53nm,21.2s						
MNK				*i* LRM	MLR	06 26 52.5	
	comp=N,350nm,18.7s						
MNK				*i* LRM	MLR	06 27 11.6	
	comp=Z,44nm,15.3s						

IDC 08 06:38:47.1±2.0, 3.52S×150.84E, h0km, mb2.8/2, mbtmp2.8/2, Error ellipse: s-maj=46.9km s-min=22.7km az=16.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.42**	**124**	Pn	Pn	06 39 13.9	-0.3
	15nm,0.3s,baz=235,slow=3.0,SNR=10						
KRVT				Sn	Sn	06 39 36.2	+2.7
	33nm,0.3s,baz=69,slow=22,SNR=12						
WRA	**Warramunga Arr**	**22.93**	**223**	P	P	06 43 55.0	+1.9
	0.1nm,0.5s,baz=53,slow=10,SNR=1.1						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**25.87**	**218**	P	P	06 44 19.4	-1.4
	0.1nm,0.3s,baz=53,slow=8.6,SNR=1.4						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**148.05**	**289**	PKPbc	PKPbc	06 58 35.0	-0.9
	0.9nm,0.5s,baz=72,slow=1.8,SNR=9.6						

*IDC **08** 07:05:43.3±51.0, 4.28S×101.67E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=1044.0km s-min=164.6km az=167.0*
*DJA **08** 07:06:13.7±0.7, 2°S±4°×10°E±°, h127km±12km, M3.7/11, MLv3.7/11*
ISC 08 07:06:13.2±1.1, 2.40S±0.06×101.81E±0.07, h150km, n16, σ0.8/81/16, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.85**	**150**	P	**Pn**	**07 06 35.7**	**-1.2**
UBSI	**University, Be**	**1.43**	**161**	P	**Pn**	**07 06 41.1**	**-0.9**
KSI	**Kapahiang**	**1.47**	**148**	P	**Pn**	**07 06 41.6**	**-0.9**
SDSI	**Sungai Dareh**	**1.51**	**345**	P	**Pn**	**07 06 41.5**	**-1.4**
PPSI	**Pulau Pagai**	**1.83**	**259**	P	**Pn**	**07 06 46.0**	**-0.4**
JMBI	**JAMBI**	**1.99**	**67**	P	**Pn**	**07 06 47.4**	**-0.8**
MNAI	**Manna**	**2.26**	**150**	P	**Pn**	**07 06 50.9**	**-0.5**
BKNI	**Bangkinang**	**2.82**	**344**	P	**Pn**	**07 06 57.9**	**-0.5**
SISI	**Saibi**	**2.92**	**291**	P	**Pn**	**07 06 59.5**	**-0.1**
DSRI	**Dabo**	**3.37**	**55**	P	**Pn**	**07 07 05.0**	**-0.3**
KASI	**Kota Agung**	**4.10**	**139**	P	**Pn**	**07 07 14.9**	**+0.1**
PBSI	**Pulau Batu**	**4.23**	**303**	P	**Pn**	**07 07 15.7**	**-0.8**
SONM	**Songino Array**	**50.19**	**4**	P	**P**	**07 14 54.9**	**+1.2**
	0.8nm,0.5s,baz=188,slow=8.6,SNR=4.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**51.92**	**343**	P	**P**	**07 15 06.7**	**+0.1**
	0.7nm,0.5s,baz=165,slow=7.7,SNR=7.1						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**56.46**	**342**	P	**P**	**07 15 39.2**	**-0.1**
	0.6nm,0.6s,baz=162,slow=6.9,SNR=5.7						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**57.91**	**348**	P	**P**	**07 15 49.3**

TOLI2 Tolitoli 12.46 179 Pn **Pn 07 35 43.6 +1.6**
TOLI2 Tolitoli 12.46 179 P **P 07 35 46.4 -2.4**
GTOI Gorontalo 13.14 170 P **Pn 07 35 51.5 +0.6**
372nm37nm,0.8s
MRSI Marisa 13.15 174 P **Pn 07 35 53.2 +2.2**
972nm103nm,1.0s
MPSI Mapaga 13.25 183 P **P 07 35 54.9 -2.6**
56nm,1.1s
KMSI Cibinong 13.41 166 P **Pn 07 35 56.3 +2.0**
283nm,0.8s
SBUM Sibu 13.91 218 P **P 07 36 03.0 -1.8**
3µm312nm,0.8s
APSI Ampana 14.50 176 P **P 07 36 10.7 -0.7**
1µm128nm,1.0s
LUWI Luwuk 14.75 172 **P 07 36 13.7 -0.5**
LUWI Luwuk 14.75 172 P **P 07 36 13.3 -0.9**
4µm228nm,1.1s
UBPT Khong Chiam 14.80 278 **P 07 36 15.8 +1.2**
UBPT Khong Chiam 14.80 278 P **P 07 36 15.9 +1.2**
940nm63nm,1.1s
JOW Kunigami 14.93 27 P **Pn 07 36 14.3 +0.7**
123nm,1.0s,baz=50,slow=13,SNR=4.0
JOW LR LR 07 42 23.0
comp=Z,83nm,19.5s,baz=202,slow=39
JOW Kunigami 14.93 27 P **P 07 36 16.7 +0.7**
BKB Balikpapan 15.28 194 P **P 07 36 19.7 -0.4**
BKB Balikpapan 15.28 194 P **Pn 07 36 18.6 +0.5**
3µm99nm,1.3s
LBMI Labuha 15.74 154 P **P 07 36 25.4 +0.3**
2µm84nm,0.8s
KSM Kuching 15.85 221 P **P 07 36 28.0 +1.6**
KSM Kuching 15.85 221 P **P 07 36 28.1 +1.7**
36nm,1.1s
SANI Sanana 16.47 161 P **Pn 07 36 30.2 -2.6**
1µm84nm,0.8s
TTSI Tana Toraja 16.61 183 P **P 07 36 36.8 +2.0**
64nm,0.8s
PMSI Majene 17.13 186 P **Pn 07 36 42.0 +1.1**
2µm198nm,1.0s
SPSI Sidrap Palu 17.53 183 P **Pn 07 36 46.4 +0.8**
84nm,0.8s
WHN Wuhan 17.79 342 ⇑P **Pn 07 36 51.7 +3.1**
BBKI Banjar Baru 17.96 199 P **Pn 07 36 51.5 +0.7**
165nm,0.6s
NLAI Namlea 17.96 159 P **P 07 36 49.9 +0.3**
3µm53nm,0.9s
GYA Guiyang 18.28 316 ⇓P **Pn 07 36 56.6 +1.9**
GYA pmax pmax
comp=Z,64nm,1.2s
KRAI Karang Ratu 18.53 155 P **P 07 36 56.6 +0.7**
3µm109nm,0.9s
KAPI Kappang 18.57 183 P **Pn 07 36 58.1 +0.1**
63nm,0.7s,baz=338,slow=7.5,SNR=31
KAPI Kappang 18.57 183 P **Pn 07 36 57.8 -0.2**
KAPI Kappang 18.57 183 P **Pn 07 36 57.8 -0.2**
KAPI Kappang 18.57 183 P **Pn 07 36 57.7 -0.2**
1µm82nm,0.7s
KAPI Kappang 18.57 183 P **Pn 07 36 59.8 +1.8**
BKSI Bulukumba 18.86 182 P **Pn 07 37 00.8 -0.6**
608nm72nm,0.8s
BBSI Bau Bau 19.11 174 P **P 07 37 03.2 +1.0**
85nm,0.9s
ENH Enshi 19.49 330 P **P 07 37 06.8 +0.5**
BSSI Bau Bau, Buton 19.67 180 P **P 07 37 08.7 +0.4**
154nm,0.9s
FAKI Fak Fak 20.09 144 P **P 07 37 12.6 -0.2**
846nm38nm,1.6s
FAKI Fak Fak 20.09 144 P **P 07 37 12.0 -0.8**
RKPI Ransiki, Papua 20.17 137 P **P 07 37 13.6 -0.1**
64nm,0.9s
BNDI Bandanaira 20.26 152 P **P 07 37 15.8 +1.2**
7µm238nm,1.1s
KMI Kunming 20.36 307 ⇑P Pn 07 37 19.3 +0.1
KMI S **S 07 40 57.4 -0.2**
KMI pmax pmax
comp=Z,310nm,3.8s
KMI LR LR
comp=N,180nm,14.6s
KMI LR LR
comp=E,150nm,12.8s
KMI LR LR
comp=Z,130nm,11.2s
TPI Tanjungpandan 20.79 219 P Pn 07 37 23.2 -0.8
48nm,1.1s
DSRI Dabo 21.24 230 P **P 07 37 27.0 +1.9**
59nm,0.8s
CM31 Chiang Mai Arr 21.40 286 P **P 07 37 28.9 +2.0**
CMAR Chiang Mai Arr 21.40 286 P **P 07 37 29.3 +2.4**
33nm,0.9s,baz=96,slow=7.6,SNR=113
CMAR ScP **ScP 07 44 49.9 -1.6**
1.0nm,0.3s,baz=64,slow=1.3,SNR=7.2
CMAR LR LR 07 45 42.6
comp=Z,42nm,18.5s,baz=105,slow=36
33nm,0.9s
CMAR Chiang Mai Arr 21.40 286 P **P 07 37 28.6 +1.7**
CMAR Chiang Mai Arr 21.40 286 *i* P **P 07 37 29.2 +2.4**
CMAR pmax pmax
comp=Z,37nm,0.8s
CHTO Chiang Mai 21.46 287 P **P 07 37 28.1 +0.6**
CHTO Chiang Mai 21.46 287 P **P 07 37 28.1 +0.6**
KMMI Kalianget 21.61 198 P **P 07 37 31.1 +2.0**
comp=Z,152nm,1.3s
PZH PanZhiHua 21.85 309 P **P 07 37 33.5 +1.8**
PZH pmax pmax
comp=Z,40nm,1.4s
PZH pmax pmax
comp=Z,250nm,4.9s
LYN LuoYang 22.09 342 ⇑*i* P **P 07 37 33.8 -0.1**
LYN S **S 07 41 26.8 -2.4**
LYN pmax pmax
comp=Z,50nm,1.7s
LYN pmax pmax
comp=Z,380nm,5.2s
DBNI Kabupaten Domp 22.13 186 P **P 07 37 35.3 +0.7**
comp=Z,40µmcomp=Z,2µmcomp=Z,133nm,0.7s
ABJI Asem Bagus 22.24 197 P **P 07 37 36.8 +1.1**
comp=Z,234nm,1.0s
SRBI Singaraja 22.26 194 P **P 07 37 37.7 +1.8**
comp=Z,2µmcomp=Z,272nm,1.3s
KLNI Mataram 22.39 192 P **P 07 37 37.9 +0.7**
comp=Z,53nm,1.1s
PLAI Plampang 22.52 187 P **P 07 37 40.1 +1.7**
comp=Z,5µmcomp=Z,553nm,1.1s
PLAI Plampang 22.52 187 P **P 07 37 40.3 +1.9**
TWSI Taliwang, Sumb 22.56 190 P **P 07 37 39.7 +0.9**
comp=Z,114nm,0.9s
TIA Tai'an 22.68 353 P **P 07 37 39.9 0.0**
TIA pmax pmax
comp=Z,12nm,0.8s
RTBI Rangdo, Negare 22.69 195 P **P 07 37 41.0 +0.9**
comp=Z,11µmcomp=Z,6µmcomp=Z,681nm,0.9s
NGJI Ngawi 22.79 204 P **P 07 37 43.5 +2.4**
comp=Z,140nm,0.8s
JAGI Jajag, Banyuwa 22.91 197 P **P 07 37 43.7 +1.5**
JAGI Jajag, Banyuwa 22.91 197 P **P 07 37 43.8 +1.5**
comp=Z,2µmcomp=Z,199nm,1.0s
JAGI Jajag, Banyuwa 22.91 197 P **P 07 37 44.3 +2.1**
XAN Xi'an 22.92 334 ⇑P **P 07 37 42.5 +0.3**
XAN pP sP 07 38 15.8 -5.9
XAN S **S 07 41 39.8 -2.9**
XAN sS sS 07 42 34.9 +9.3
XAN pmax pmax
comp=Z,76nm,0.8s
XAN pmax pmax
comp=Z,370nm,5.7s
IGBI Denpasar 22.99 194 P **P 07 37 44.0 +1.1**
comp=Z,3µmcomp=Z,188nm,1.0s
CD2 Chengdu 23.17 321 ⇑P **P 07 37 46.2 +1.6**
CD2 pmax pmax
comp=Z,130nm,1.0s
CD2 LR LR
comp=Z,200nm,10.3s
PWJI Pagerwojo 23.26 203 P **P 07 37 46.5 +1.0**
comp=Z,109nm,0.8s
JMN Monobe 23.32 29 P **P 07 37 47.2 +1.2**
BKNI Bangkinang 23.51 237 P **P 07 37 49.6 +1.8**
GUMO Guam 23.53 87 LR LR 07 47 49.8
comp=Z,54nm,18.7s,baz=230,slow=39
SOEI Soe 23.53 171 P **P 07 37 47.9 -0.2**
SOEI Soe 23.53 171 P **P 07 37 47.9 -0.2**
comp=Z,94nm,0.7s
SOEI Soe 23.53 171 P **P 07 37 48.9 +0.8**
PCJI Pacitan 23.66 204 P **P 07 37 50.1 +1.0**
comp=Z,126nm,1.2s
BATI Baumata 23.89 173 P **P 07 37 51.5 +0.2**
comp=Z,305nm,0.5s,baz=5.2,slow=1.6,SNR=21
BATI Baumata 23.89 173 P **P 07 37 51.0 -0.3**
comp=Z,4µmcomp=Z,404nm,0.6s
SDSI Sungai Dareh 23.94 234 P **P 07 37 52.9 +1.2**
comp=Z,38nm,0.8s
PSI Prapat 24.03 245 P **P 07 37 54.4 +1.8**
comp=Z,13nm,0.6s,baz=62,slow=9.0,SNR=10
PSI LR LR 07 47 37.2
comp=Z,81nm,19.2s,baz=47,slow=37
comp=Z,13nm,0.6s
PSI Prapat 24.03 245 P **P 07 37 53.0 +0.3**
comp=Z,12nm,0.8s
JHS Saijyo 24.05 26 P **P 07 37 53.4 +0.9**
RPSI Rantau Prapat 24.08 245 P **P 07 37 54.4 +1.4**
JCJ Chichijima 24.16 53 LR LR 07 47 16.8
comp=Z,42nm,18.8s,baz=116,slow=36
HNS HongShan 24.24 348 ⇑P **P 07 37 54.7 +0.6**
HNS PP **sP 07 38 37.9 +2.6**
HNS S **S 07 42 03.1 -0.6**
HNS pmax pmax
comp=Z,22nm,1.0s
HNS LR LR
comp=Z,220nm,10.8s
HNS LR LR
comp=Z,120nm,11.9s
KSRS Korea Array 24.57 14 P **P 07 37 57.3 +0.1**
comp=Z,5.0nm,1.0s,baz=196,slow=9.8,SNR=9.0
KSRS LR LR 07 48 54.9
comp=Z,65nm,18.2s,baz=195,slow=39
comp=Z,5.0nm,1.0s
MASI Maura Aman, Be 24.75 229 P **P 07 38 00.0 +0.9**
comp=Z,74nm,0.8s
CNJI Cibinong 24.78 214 P **P 07 38 00.6 +1.3**
comp=Z,44nm,1.0s
LWLI Liwa 24.81 223 P **P 07 38 01.7 +2.0**
comp=Z,172nm,0.8s
MNAI Manna 25.08 226 P **P 07 38 03.9 +1.8**
GSI Gunungsitoli 25.93 244 P **P 07 38 10.7 +1.0**
GSI IAmb IAmb 07 38 12.7
comp=Z,20nm,0.6s
GSI Gunungsitoli 25.93 244 P **P 07 38 10.6 +0.9**
comp=Z,6µmcomp=Z,36nm,0.6s
SISI Saibi 26.05 237 P **P 07 38 12.0 +1.2**
comp=Z,70nm,1.0s
INU Inuyama 26.16 31 P **P 07 38 13.2 +1.6**
JGF Kuroka 26.53 32 P **P 07 38 15.8 +0.9**
JGF IAmb IAmb 07 38 58.6
comp=Z,61nm,1.8s
LZH Lanzhou 26.96 329 *eP* **P 07 38 20.8 +1.8**
LZH pP pP 07 38 50.6 +4.9
LZH sP sP 07 39 11.1 +11
LZH pmax pmax
comp=Z,110nm,1.1s
LZH pmax pmax
comp=Z,330nm,4.2s
LZH LR LR
comp=Z,350nm,15.9s
LZH LR LR
comp=Z,260nm,12.7s
LZH LR LR
comp=Z,230nm,14.3s
HHC Hu-ho-hao-te 28.24 345 *eP* **P 07 38 34.0 +3.8**
HHC pmax pmax
comp=Z,43nm,1.0s
HHC pmax pmax
comp=Z,180nm,4.9s
MTN Manton Dam 28.30 158 P **P 07 38 29.1 -1.7**
BRDH Bariadhala 28.95 292 P **P 07 38 38.7 +2.1**
comp=Z,60nm,0.4s,baz=53,slow=9.9,SNR=7.3
SHL Shillong 29.51 298 P **P 07 38 42.4 +0.6**
SHL Shillong 29.51 298 P **P 07 38 42.4 +0.6**
SHL pmax pmax
comp=Z,56nm,0.8s
JMM Marumori 30.04 33 P **P 07 38 45.8 -0.3**
JMM IAmb IAmb 07 39 17.8
comp=Z,86nm,1.5s
KNRA Kununurra 30.23 164 P **P 07 38 47.1 -0.8**
KNRA IAmb IAmb 07 38 57.7
comp=Z,64nm,1.8s
XLT XiLinHaoTe 30.40 353 *eP* **P 07 38 49.3 0.0**
XLT pmax pmax
comp=Z,11nm,1.3s
XLT pmax pmax
comp=Z,130nm,5.2s
GTA Gaotai 31.56 328 ⇑P **P 07 39 00.9 +1.3**
GTA pP sP 07 39 37.3 -3.3
GTA sP PP 07 39 51.6 -22
GTA ScP **ScP 07 45 21.0 -0.2**
GTA pmax pmax
comp=Z,53nm,1.1s
GTA pmax pmax
comp=Z,99nm,5.1s
GTA LR LR
comp=Z,130nm,16.4s
GTA LR LR
comp=Z,130nm,15.6s
GTA LR LR
comp=Z,160nm,15.6s
LSA Lhasa 31.60 305 P **P 07 39 02.0 +1.5**
LSA IAmb IAmb 07 39 03.9
comp=Z,39nm,1.1s
LSA Lhasa 31.60 305 P **P 07 39 02.0 +1.5**
LSA pmax pmax
comp=Z,39nm,1.1s
FITZ Fitzroy Crossi 31.93 171 P **P 07 39 02.7 -0.1**
FITZ Fitzroy Crossi 31.93 171 P **P 07 39 02.8 -0.1**
USRK Ussuriysk Ar. 31.95 15 P **P 07 39 03.3 +0.5**
comp=Z,2.7nm,0.7s,baz=178,slow=5.7,SNR=4.7
USRK LR LR 07 51 14.5
comp=Z,60nm,21.5s,baz=173,slow=35
comp=Z,2.7nm,0.7s
GOMU GeErMu 32.27 319 P **P 07 39 07.6 +1.5**
GOMU pP sP 07 39 42.5 -4.2
GOMU S **S 07 44 14.3 +3.5**
GOMU pmax pmax
comp=Z,7.0nm,0.5s
GOMU LR LR
comp=Z,75nm,13.4s
GOMU LR LR
comp=Z,79nm,12.5s
GOMU LR LR
comp=Z,130nm,13.1s
RAMN Ramite 34.45 298 *eP* **P 07 39 26.6 +1.5**
comp=Z,209nm,1.2s
MBWA Marble Bar 34.61 182 P **P 07 39 25.2 -0.9**
MBWA Marble Bar 34.61 182 P **P 07 39 25.8 -0.3**
MBWA Marble Bar 34.61 182 P **P 07 39 25.3 -0.9**
JIRN Jiri 34.99 299 *eP* **P 07 39 31.4 +1.5**
comp=Z,22nm,0.5s
PSA00 Pilbara Seismi 35.02 181 P **P 07 39 28.9 -0.8**
PSA00 Pilbara Seismi 35.02 181 P **P 07 39 29.4 -0.2**
GUN Gumba 35.33 299 *eP* **P 07 39 34.2 +1.4**
comp=Z,100nm,0.7s
COEN Coen 35.35 140 P **P 07 39 31.3 -1.3**
COEN IAmb IAmb 07 40 12.0
comp=Z,32nm,1.4s
PKI Pulchoki 35.64 298 *eP* **P 07 39 36.3 +0.9**
PKIN Phulchoki 35.65 298 *eP* **P 07 39 36.2 +0.8**
comp=Z,22nm,0.6s
WB0 Warramunga Arr 35.86 158 P **P 07 39 35.1 -1.7**
WB0 IAmb IAmb 07 39 37.5
comp=Z,16nm,0.8s
DMN Daman 35.91 298 *eP* **P 07 39 38.6 +1.0**
comp=Z,169nm,1.3s
ULN Ulaanbaatar 35.94 344 *ceP* **P 07 39 38.4 +0.9**
ULN pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 35.94 344 P **P 07 39 37.4 0.0**
WRAB Tennant Creek 35.99 158 *i* P **P 07 39 37.0 -1.0**
WRAB pmax pmax
comp=Z,15nm,0.9s
WRAB Tennant Creek 35.99 158 P **P 07 39 36.5 -1.5**
WRAB Tennant Creek 35.99 158 P **P 07 39 35.9 -2.2**
WRAB pP **pP 07 40 03.5 -2.1**
WRAB pwP **sP 07 40 14.8 -5.0**
WRAB sP **sP 07 40 20.6 +0.8**
WRA Warramunga Arr 36.00 158 P **P 07 39 36.5 -1.6**
comp=Z,10nm,0.6s,baz=335,slow=9.5,SNR=126
WRA S **S 07 45 02.4 -5.4**
comp=Z,0.9nm,0.6s,baz=340,slow=15,SNR=5.0
comp=Z,10nm,0.6s
WRA Warramunga Arr 36.00 158 P **P 07 39 36.2 -1.9**
WRA Warramunga Arr 36.00 158 *i* P **P 07 39 36.5 -1.6**
WRA pmax pmax
comp=Z,13nm,0.6s
WB1 Warramunga Ar. 36.02 158 P **P 07 39 36.6 -1.6**
SONM Songino Array 36.09 344 P **P 07 39 39.6 +0.9**
comp=Z,9.1nm,0.7s,baz=161,slow=9.6,SNR=37
SONM LR LR 07 55 20.4
comp=Z,68nm,18.1s,baz=124,slow=37
comp=Z,9.1nm,0.7s
SONM Songino Array 36.09 344 P **P 07 39 38.8 +0.1**
SONM Songino Array 36.09 344 P **P 07 39 38.8 +0.1**
SONM pmax pmax
comp=Z,7.0nm,0.8s
GKN Gorkha 36.41 299 *eP* **P 07 39 42.3 +0.5**
comp=Z,69nm,1.0s
KLR Kul'dur 36.63 12 P **P 07 39 44.0 +0.9**
comp=Z,7.9nm,0.8s,baz=241,slow=7.0,SNR=19
KLR LR LR 07 56 09.9
comp=Z,58nm,19.5s,baz=216,slow=38
comp=Z,7.9nm,0.8s
KLR Kul'dur 36.63 12 *ceP* **P 07 39 43.7 +0.6**
KLR pmax pmax
comp=Z,37nm,2.5s
DANN Dangsing 37.25 299 *eP* **P 07 39 49.8 +0.8**
comp=Z,84nm,0.9s
PYUN Piuthan 37.84 298 *eP* **P 07 39 55.0 +1.1**
comp=Z,131nm,1.0s
YSS Yuzh-Sakhalins 38.01 25 *ceP* **P 07 39 55.9 +1.1**
YSS pmax pmax
comp=Z,25nm,1.7s
WRKA Warakurna 39.17 169 P **P 07 40 04.3 -0.5**
ZAK Zakamensk 39.27 342 *eP* **P 07 40 05.0 -0.4**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
AS31 Alice Springs 39.29 161 P **P 07 40 04.5 -1.3**
ASAR Alice Springs 39.29 161 P **P 07 40 04.6 -1.2**
comp=Z,5.7nm,0.5s,baz=336,slow=6.6,SNR=93
ASAR PcP **PcP 07 42 11.7 -0.5**
comp=Z,1.5nm,0.6s,baz=348,slow=3.1,SNR=4.3
comp=Z,5.7nm,0.5s
ASAR Alice Springs 39.29 161 P **P 07 40 04.7 -1.1**
AS01 Alice Springs 39.30 161 P **P 07 40 05.2 -0.7**
PALK Pallekele 39.76 265 LR LR 07 56 03.6
comp=Z,27nm,18.1s,baz=178,slow=35
MEEK Meekatharra 40.10 183 P **P 07 40 12.3 -0.1**
ZEA Zeya 40.33 6 *eP* **P 07 40 14.2 +0.3**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
HYBB Hyderabad (bro 40.68 281 *eP* **P 07 40 18.3 +0.9**
HYBB *eS* **S 07 46 20.1 +1.5**
TYV Tymovskoe 41.18 21 *eP* **P 07 40 17.1 -3.9**
TYV *eS* **S 07 46 18.5 -6.5**
TYV pmax pmax
comp=Z,400nm,3.8s
TYV pmax pmax
comp=Z,11nm,1.1s
TYV smax smax
comp=N,400nm,4.5s
TYV smax smax
comp=E,400nm,4.5s
WMQ Urumqi 41.22 323 *eP* **P 07 40 24.9 +3.4**
WMQ pP sP 07 40 59.0 -4.2
WMQ pmax pmax
comp=E,33nm,0.9s
WMQ LR LR
comp=E,240nm,20.5s
WMQ LR LR
comp=E,280nm,20.5s
WMQ LR LR
comp=E,170nm,21.7s
CTAO Charters Tower 41.93 143 P **P 07 40 27.0 -0.5**
CTAO Charters Tower 41.93 143 P **P 07 40 27.0 -0.5**
CTAO pmax pmax
comp=Z,22nm,1.2s
MORW Morawa 42.70 186 P **P 07 40 32.8 -0.8**
MORW IAmb IAmb 07 40 34.4
comp=Z,39nm,0.9s
PCHI Peechi 43.40 271 *eP* **P 07 40 41.4 +1.9**
OOD Oodnadatta 43.70 161 P **P 07 40 40.4 -1.2**
BLDU Ballidu 44.18 185 P **P 07 40 44.5 -0.9**
FORT Forrest 44.75 171 P **P 07 40 48.9 -1.0**
FORT Forrest 44.75 171 P **P 07 40 49.1 -0.8**
ZSN Zaisan 44.97 326 *eP* **P 07 40 51.3 -0.3**
ZSN *eS* **S 07 47 13.4 -7.2**
ZSN Zaisan 44.97 326 *eP* **P 07 40 51.4 -0.3**
baz=325
ZSN *eS* **S 07 47 13.4 -7.2**
baz=325
DGZ Jazzator, Alta 45.06 330 *i* P **P 07 40 53.4 +1.0**
DGZ pmax pmax
comp=Z,13nm,1.1s
KLBR Kellerberrin 45.07 183 P **P 07 40 52.2 -0.3**
HNR Honiara 45.24 118 LR LR 07 59 34.1
comp=Z,497nm,19.4s,baz=282,slow=36
MULG Mulgathing 45.55 164 P **P 07 40 55.3 -1.0**
SHLS Shalkode 45.96 318 *eP* **P 07 40 57.3 -2.3**
SHLS *eS* **S 07 47 27.3 -7.8**
SHLS pmax pmax
comp=Z,23nm,0.9s
SHLS Shalkode 45.96 318 *eP* **P 07 40 57.4 -2.3**
comp=Z,23nm,0.9s,baz=318
SHLS *eS* **S 07 47 27.4 -7.8**
baz=318
PDGK Podgornoye 46.02 318 P **P 07 41 01.3 +1.2**
MK31 Makanchi Array 46.04 324 P **P 07 41 01.3 +1.2**
MK31 IAmb IAmb 07 41 02.6
comp=Z,31nm,0.9s
MK31 Makanchi Array 46.04 324 *i* P **P 07 41 01.3 +1.2**
MK31 pmax pmax
comp=Z,35nm,0.8s
MKAR Makanchi Array 46.04 324 P **P 07 41 01.5 +1.4**
comp=Z,36nm,0.9s,baz=123,slow=8.8,SNR=139
comp=Z,36nm,0.9s
MKAR Makanchi Array 46.04 324 P **P 07 41 00.9 +0.8**
MAKZ Makanchi 46.23 324 P **P 07 41 02.2 +0.7**
MAKZ IAmb IAmb 07 41 04.1
comp=Z,55nm,1.4s
MAKZ Makanchi 46.23 324 P **P 07 41 02.2 +0.7**
MAKZ pmax pmax
comp=Z,55nm,1.4s
MAKZ Makanchi 46.23 324 P **P 07 41 00.6 -0.9**
UZB Uzynbulak 46.24 318 *eP* **P 07 41 02.1 +0.3**
UZB Uzynbulak 46.24 318 *eP* **P 07 41 02.1 +0.3**
baz=317
NWAO Narrogin (SRO) 46.43 184 P **P 07 41 01.9 -1.3**
NWAO IAmb IAmb 07 41 04.0
comp=Z,35nm,0.8s
NWAO Narrogin (SRO) 46.43 184 P **P 07 41 01.9 -1.3**
NWAO pmax pmax
comp=Z,35nm,0.8s
TARG Taragay, Kyrgy 46.45 315 P **P 07 41 03.5 -0.3**
TARG IAmb IAmb 07 41 05.2
comp=Z,20nm,1.0s
TARG Taragay, Kyrgy 46.45 315 P **P 07 41 03.5 -0.3**
TARG pmax pmax
comp=Z,20nm,1.0s
KPKS Kokpek 46.61 318 *eP* **P 07 41 05.3 +0.7**
KPKS pmax pmax
comp=Z,24nm,1.2s
KPKS Kokpek 46.61 318 *eP* **P 07 41 05.4 +0.7**
comp=Z,24nm,1.2s,baz=317
SATY Saty 46.61 317 *eP* **P 07 41 05.5 +0.8**
SATY pmax pmax
comp=Z,23nm,1.2s
SATY Saty 46.61 317 *eP* **P 07 41 05.5 +0.8**
comp=Z,23nm,1.2s,baz=317
KSH Kashi 46.90 312 P **P 07 41 10.2 +3.2**
KSH pmax pmax
comp=Z,20nm,1.1s
LCRK Leigh Creek 46.99 159 P **P 07 41 06.6 -1.0**
NIL Nilore 47.30 303 P **P 07 41 10.4 +0.3**
NIL IAmb IAmb 07 41 11.9
comp=Z,36nm,0.9s
NIL Nilore 47.30 303 P **P 07 41 10.4 +0.3**
NIL pmax pmax
comp=Z,36nm,0.9s
NIL Nilore 47.30 303 P **P 07 41 10.0 -0.1**
TDK Taldyqorghan 47.48 320 *eP* **P 07 41 11.6 +0.3**
TDK Taldyqorghan 47.48 320 *eP* **P 07 41 11.7 +0.4**
baz=319
ARXS Arharly 47.49 318 *eP* P 07 41 19.2 +7.7
MDOK Medeo 47.55 317 P **P 07 41 13.6 +1.6**
MDOK Medeo 47.55 317 *eP* **P 07 41 12.5 +0.4**
baz=316
TNSS Tian-Shan 47.57 317 *eP* **P 07 41 13.4 +0.9**
TNSS Tian-Shan 47.57 317 *eP* **P 07 41 13.4 +0.9**
baz=316
NRN Naryn 47.58 314 P **P 07 41 13.9 +1.4**
NRN IAmb IAmb 07 41 15.2
comp=Z,39nm,1.0s

NRN Naryn 47.58 314 P P 07 41 13.9 +1.4
NRN pmax pmax
comp=Z,39nm,1.0s
AAA Alma-Ata 47.66 317 *e*P **P 07 41 13.8 +1.0**
AAA Alma-Ata 47.66 317 *e*P **P 07 41 13.8 +1.0**
baz=316
ULHL Ulahol 47.73 315 P P 07 41 15.6 +2.1
SNR=22
BOOM Boomskoye usch 48.03 316 P P 07 41 16.8 +1.1
BOOM Boomskoye usch 48.03 316 P P 07 41 16.8 +1.1
BOOM pmax pmax
comp=Z,12nm,0.9s
KUU Kurty 48.33 317 *e*P **P 07 41 18.6 +0.8**
KUU Kurty 48.33 317 *e*P **P 07 41 18.6 +0.8**
baz=317
TKM2 Tokmak 2 48.43 316 P P 07 41 20.7 +1.8
SNR=15
TKM2 Tokmak 2 48.43 316 *i* P **P 07 41 20.2 +1.4**
TKM2 pmax pmax
comp=Z,20nm,0.9s
BBOO Buckleboo 48.49 163 P P 07 41 17.6 -1.6
BBOO IAmb IAmb 07 41 21.2
comp=Z,37nm,1.4s
BBOO Buckleboo 48.49 163 P P 07 41 17.5 -1.6
YAK Yakutsk 48.74 6 LR LR 08 05 13.6
comp=Z,19nm,20.4s,baz=264,slow=40
KBK Karagaybulak 48.77 315 P P 07 41 23.6 +2.2
SNR=12
UCH Uchtor 48.91 315 P P 07 41 24.7 +1.9
SNR=57
CHMS Chumysh 49.03 316 P P 07 41 25.0 +1.8
SNR=13
AAK Ala-Archa 49.07 315 P P 07 41 25.6 +1.9
SNR=10
AAK Ala-Archa 49.07 315 LR LR 08 04 04.6
comp=Z,75nm,19.1s,baz=121,slow=38
AAK Ala-Archa 49.07 315 P P 07 41 24.7 +1.0
AAK IAmb IAmb 07 41 26.8
comp=Z,25nm,1.2s
AAK Ala-Archa 49.07 315*ce*P **P 07 41 25.9 +2.2**
AAK pmax pmax
comp=Z,35nm,1.7s
AAK Ala-Archa 49.07 315 P P 07 41 24.7 +1.0
ZAA0 Zalesovo Array 49.08 333 P P 07 41 23.0 -0.3
ZAA0 IAmb IAmb 07 41 24.1
comp=Z,15nm,0.5s
ZALV Zalesovo Beam 49.08 333 P P 07 41 23.6 +0.2
comp=Z,14nm,0.4s,baz=118,slow=6.9,SNR=57
ZALV LR LR 08 03 09.3
comp=Z,35nm,18.9s,baz=155,slow=37
comp=Z,14nm,0.4s
ZALV Zalesovo Beam 49.08 333 P P 07 41 23.3 -0.1
PEA0B Petropavlovsk- 49.09 29 P P 07 41 26.3 +2.9
PEA0B Petropavlovsk- 49.09 29 P P 07 41 26.3 +2.9
PEA0B pmax pmax
comp=Z,87nm,1.6s
PETK Petropavlovsk- 49.09 29 P P 07 41 23.2 -0.2
comp=Z,4.0nm,1.0s,baz=207,slow=8.1,SNR=1.8
comp=Z,4.0nm,1.0s
SEM Semipalatinsk 49.16 327 *e*P **P 07 41 23.5 -0.8**
SEM Semipalatinsk 49.16 327 *e*P **P 07 41 23.6 -0.8**
baz=326
SGDS Sogindy 49.29 316 *e*P **P 07 41 25.0 -0.2**
SGDS Sogindy 49.29 316 *e*P **P 07 41 25.0 -0.2**
baz=316
USP Ospenovka 49.30 316 P P 07 41 26.9 +1.6
SNR=13
AML Almayashu 49.44 314 P P 07 41 28.9 +2.1
SNR=14
STKA Stephens Creek 49.52 156 P P 07 41 25.8 -1.2
comp=Z,3.2nm,0.6s,baz=332,slow=8.4,SNR=9.5
STKA LR LR 08 04 04.9
comp=Z,31nm,18.1s,baz=25,slow=38
comp=Z,3.2nm,0.6s
STKA Stephens Creek 49.52 156 P P 07 41 25.5 -1.5
STKA Stephens Creek 49.52 156 P P 07 41 25.5 -1.5
STKA pmax pmax
comp=Z,7.0nm,1.8s
EKS2 Erkin-Say 49.57 315 P P 07 41 29.5 +2.0
SNR=16
DRK Karamyk 49.94 310 P P 07 41 31.8 +1.2
DRK IAmb IAmb 07 41 33.2
comp=Z,38nm,1.0s
KURK Kurchatov 50.20 326 P P 07 41 32.6 +0.7
KURK Kurchatov 50.20 326*ce*P **P 07 41 33.0 +1.1**
KURK pmax pmax
comp=Z,182nm,1.3s
KURK Kurchatov 50.20 326 P P 07 41 31.2 -0.7
KURK pP **pP 07 42 01.2 +0.5**
KURK pwP **sP 07 42 11.1 -3.5**
BTLS Baital 50.29 318 *e*P **P 07 41 32.5 -0.2**
BTLS pmax pmax
comp=Z,15nm,1.1s
BTLS Baital 50.29 318 *e*P **P 07 41 32.5 -0.2**
comp=Z,15nm,1.1s,baz=318
BTK Batken 50.84 311 P P 07 41 37.9 +0.9
BTK IAmb IAmb 07 41 39.5
comp=Z,36nm,1.3s
BTK Batken 50.84 311 P P 07 41 37.9 +0.9
BTK pmax pmax
comp=Z,36nm,1.3s
MA2 Magadan 50.96 19 LR LR 08 03 07.0
comp=Z,20nm,19.6s,baz=338,slow=36
DZA Taraz 51.34 314 *e*P **P 07 41 41.2 +0.6**
DZA Taraz 51.34 314 *e*P **P 07 41 41.2 +0.6**
baz=314
CHGR Chuyangaron 51.70 309 P P 07 41 44.3 +0.8
CHGR Chuyangaron 51.70 309 P P 07 41 44.3 +0.8
CHGR pmax pmax
comp=Z,61nm,0.8s
KK31 Karatay Array 51.98 314 P P 07 41 46.1 +0.7
KK31 IAmb IAmb 07 41 47.5
comp=Z,31nm,1.1s
KK31 Karatay Array 51.98 314 P P 07 41 46.1 +0.7
KK31 pmax pmax
comp=Z,31nm,1.2s
KKAR Karatay Array 51.98 314 P P 07 41 46.2 +0.8
KKAR Karatay Array 51.98 314 P P 07 41 46.2 +0.8
IUG luzhnay 52.02 313 *e*P **P 07 41 46.2 +0.4**
IUG luzhnay 52.02 313 *e*P **P 07 41 46.2 +0.4**
baz=313
BRZS Berezniki 53.19 323 *e*P **P 07 41 53.6 -0.5**
BRZS Berezniki 53.19 323 *e*P **P 07 41 53.6 -0.5**
baz=323
SEY Seymchan 54.07 17*ce*P **P 07 42 02.7 +2.4**
SEY pmax pmax
comp=Z,8.0nm,1.7s
BVA0 Borovoye Array 55.79 326 *i* P **P 07 42 13.2 +0.3**
BRVK Borovoye 55.86 326 P P 07 42 14.1 +0.7
BRVK IAmb IAmb 07 42 15.5
comp=Z,34nm,1.1s
BRVK Borovoye 55.86 326*ce*P **P 07 42 14.5 +1.1**
BRVK pmax pmax
comp=Z,56nm,1.7s
BRVK Borovoye 55.86 326 P P 07 42 12.7 -0.6
BRVK pP **pP 07 42 40.8 -1.8**
HRA Herat 56.43 302 P P 07 42 18.4 +0.4
HRA IAmb IAmb 07 42 20.0
comp=Z,18nm,0.9s
DZM Mont Dzumac 57.24 128 *e*LR LR 07 59 22.0
comp=Z,141nm,28.8s
DZM Mont Dzumac 57.24 128 P P 07 42 23.6 -0.1
DZM IAmb IAmb 07 42 24.2
comp=Z,59nm,1.9s
TIXI Tiksi 58.18 3 P P 07 42 28.5 -0.9
TIXI IAmb IAmb 07 42 29.7
comp=Z,22nm,0.9s
TIXI Tiksi 58.18 3*ce*P **P 07 42 29.3 -0.1**
TIXI pmax pmax
comp=Z,16nm,0.8s
NRIK Noril'sk 59.45 347 P P 07 42 38.4 +0.2
comp=Z,8.0nm,0.5s,baz=134,slow=6.3,SNR=13
NRIK LR LR 08 10 42.0
comp=Z,53nm,18.4s,baz=159,slow=38
comp=Z,8.0nm,0.5s
NRIK Noril'sk 59.45 347*ce*P **P 07 42 38.1 -0.1**
NRIK pmax pmax
comp=Z,19nm,1.1s
GEYT Alibeck 60.13 306 P P 07 42 45.5 +2.0
comp=Z,22nm,0.9s,baz=150,slow=3.3,SNR=42
GEYT LR LR 08 12 26.0
comp=Z,28nm,18.6s,baz=330,slow=39
comp=Z,22nm,0.9s
GEYT Alibeck 60.13 306 P P 07 42 44.2 +0.7
GYA0 ALIBECK ARRAY 60.13 306 P P 07 42 44.6 +1.1
GYA0 pmax pmax
comp=Z,37nm,1.0s
GYA0B ALIBECK ARRAY 60.13 306 P P 07 42 44.6 +1.1
AB31 Akbulak array 60.74 319 *i* P **P 07 42 47.6 +0.2**
ABKAR Akbulak array 60.74 319 P P 07 42 47.4 0.0
BILL Bilibino 61.76 18*c i*P **P 07 42 54.4 +0.5**
BILL 07 45 20.0
BILL pmax pmax
comp=Z,14nm,1.1s
AKTO Aktyubinsk 62.22 320 LR LR 08 10 03.8
comp=Z,40nm,20.4s,baz=102,slow=36
AKTO Aktyubinsk 62.22 320 P P 07 42 57.5 +0.2
SVE Sverdlovsk 62.42 328⇑*e*P **P 07 42 59.4 +0.9**
SVE pmax pmax
comp=Z,27nm,1.1s
ARU Arti 63.40 327 LR LR 08 11 00.8
comp=Z,40nm,18.9s,baz=114,slow=36
ARU Arti 63.40 327 P P 07 43 04.4 -0.5
ARU IAmb IAmb 07 43 05.8
comp=Z,13nm,0.8s
ARU Arti 63.40 327*d i*P **P 07 43 05.2 +0.2**
ARU 07 45 27.2
ARU S **S 07 51 27.6 -0.1**
ARU SS **SS 07 55 30.6 -5.9**
ARU pmax pmax
comp=Z,15nm,0.8s
ARU Arti 63.40 327 P P 07 43 04.1 -0.9
KIRV Kirov 68.68 328 LR LR 08 14 29.3
comp=Z,46nm,19.0s,baz=66,slow=36
KIRV Kirov 68.68 328*ce*P **P 07 43 38.9 +0.2**
BELG Belogornoye 68.95 321 LR LR 08 14 53.0
comp=Z,22nm,19.5s,baz=142,slow=36
GNI Garni 70.61 308*de*P **P 07 43 53.2 +2.1**
GNI pmax pmax
comp=Z,23nm,1.3s
ZEI Tsey 71.17 311 *e*P **P 07 43 54.4 -0.1**
ZEI pmax pmax
comp=Z,13nm,1.2s
RAYN Ar Rayn 71.23 290 P P 07 43 55.2 +0.2
RAYN IAmb IAmb 07 43 57.1
comp=Z,28nm,1.0s
RAYN Ar Rayn 71.23 290 P P 07 43 55.2 +0.2
RAYN pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 71.23 290 P P 07 43 54.8 -0.3
ONI Oni 71.51 311 P P 07 43 57.7 +1.3
ONI Oni 71.51 311 P P 07 43 57.7 +1.3
ONI pmax pmax
comp=Z,11nm,1.0s
KBZ Khabaz 71.88 312 P P 07 43 59.0 +0.6
comp=Z,6.8nm,0.9s,baz=193,slow=5.4,SNR=9.1
comp=Z,6.8nm,0.9s
KBZ Khabaz 71.88 312*ce*P **P 07 43 58.6 +0.1**
KBZ pmax pmax
comp=Z,14nm,1.1s
GEVA Gevas 72.00 306 P P 07 44 00.2 +0.7
GEVA IAmb IAmb 07 44 01.9
comp=Z,14nm,0.7s
KIV Kislovodsk 72.03 312 *e*P **P 07 44 00.4 +0.9**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,15nm,18.0s
SHA1 Shidzhatmaz 72.06 312 *i* P **P 07 44 00.4 +0.6**
VRH Novokhopyorsk 72.56 320 *e*P **P 07 44 01.2 -1.1**
VRH pmax pmax
comp=Z,20nm,0.9s
GURO Guroymak-BITLI 72.79 306 P P 07 44 05.6 +1.4
GURO IAmb IAmb 07 44 07.0
comp=Z,26nm,1.1s
RPZ Rata Peaks 73.27 144 P P 07 44 05.5 -1.1
URZ Urewera 73.84 137 LR LR 08 13 44.6
comp=Z,26nm,21.7s,baz=101,slow=33
KLMR Klimovskoe 73.87 330 *e*P **P 07 44 08.4 -1.4**
KLMR pmax pmax
comp=Z,17nm,1.1s
KLMR Klimovskoe 73.87 330 *e*P **P 07 44 08.5 -1.4**
KLMR AMP 07 44 11.2
comp=Z,17nm,1.1s
MARD Mardin 73.87 305 P P 07 44 11.4 +0.9
MARD IAmb IAmb 07 44 12.2
comp=Z,15nm,0.6s
SOC Sochi 74.19 312 *e*P **P 07 44 10.4 -1.7**
SOC *e* 07 46 57.3
SOC *e*PPP PPP 07 48 44.3
SOC *e*S **S 07 53 31.7 -3.9**
SOC *e*SS **SS 07 58 18.7 -4.6**
SOC *e*SSS SSS 08 01 43.1
SOC pmax pmax
comp=Z,16nm,0.9s
LPSR Galich'ya Gora 74.27 321 *e*P **P 07 44 11.2 -1.1**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
OBN Obninsk 75.55 324⇓*e*P **P 07 44 19.5 -0.1**
OBN 07 44 32.0
OBN 07 47 14.0
OBN SSS SSS 08 02 00.0
OBN pmax pmax
comp=Z,6.0nm,0.4s
ATD Arta Tunnel 75.65 279 LR LR 08 14 31.0
comp=Z,17nm,20.8s,baz=56,slow=33
ANN Anapa 75.74 313 *e*P P 07 44 15.2 -5.7
ANN *e* 07 47 12.8
ANN pmax pmax
comp=Z,76nm,1.3s
APA Apatity 76.44 337⇓*i*P **P 07 44 24.3 -0.2**
APA pmax pmax
comp=Z,9.0nm,1.0s
MMAI Mount Meron Ar 78.77 301 LR LR 08 24 25.1
comp=Z,16nm,18.0s,baz=176,slow=39
ARA0 ARCESS Array S 79.11 339 *e*P **P 07 44 39.1 -0.2**
ARCES ARCESS Array B 79.11 339 P **P 07 44 39.2 -0.1**
comp=Z,4.9nm,0.7s,baz=74,slow=6.6,SNR=22
ARCES LR LR 08 21 40.2
comp=Z,8.4nm,19.3s,baz=84,slow=37
comp=Z,4.9nm,0.7s
BRTR Keskin Array B 79.14 308 P **P 07 44 40.9 +0.6**
comp=Z,2.4nm,0.8s,baz=131,slow=5.6,SNR=8.5
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 79.14 308*ce*P **P 07 44 40.7 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
SPA0 Spitsbergen Ar 79.63 348 *e*P **P 07 44 42.4 +0.4**
SPA0 IAmb IAmb 07 44 47.1
comp=Z,176nm,1.7s
SPITS Spitsbergen Ar 79.63 348 LR LR 08 23 20.3
comp=Z,29nm,19.4s,baz=32,slow=38
FINES FINESS Array B 80.30 331 P **P 07 44 45.2 -0.6**
comp=Z,1.5nm,0.6s,baz=57,slow=7.0,SNR=11
FINES LR LR 08 21 07.2
comp=Z,32nm,22.0s,baz=139,slow=36
comp=Z,1.5nm,0.6s
FINES FINESS Array B 80.30 331 *i* P **P 07 44 45.7 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 80.47 320 P P 07 44 45.7 -1.2
comp=Z,0.3nm,0.3s,baz=66,slow=4.6,SNR=8.8
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 80.47 320 *i* P **P 07 44 46.5 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
MNK Minsk 80.61 324 *i* P **P 07 44 49.3 +1.7**
comp=E,2.0nm,0.8s
MNK *i* P **P 07 44 49.3 +1.7**
comp=N,34nm,0.8s
MNK *i* P **P 07 44 49.3 +1.7**
comp=Z,11nm,0.7s,baz=260
MNK *i* pP **sP 07 45 28.8 -3.5**
MNK *i* PP **PP 07 47 55.3 +2.7**
MNK *i* PPP PPP 07 49 45.8
MNK *i* S **S 07 54 44.2 -0.3**
MNK *i* sS sS 07 55 53.3 +16
MNK *i* SS **SS 08 00 01.9 +2.6**
MNK *i* SSS SSS 08 03 29.6
MNK *i* LRM MLR 08 23 16.5
comp=N,476nm,17.2s
MNK *i* LRM MLR 08 23 18.4
comp=E,23nm,17.2s
MNK *i* LRM MLR 08 23 19.7
comp=Z,38nm,16.0s
CTGM Chitina Glacie 82.03 29 P **P 07 44 55.8 +0.6**
STEI Steigen 83.14 338 *e*P **P 07 44 59.8 -0.7**
STEI IAmb IAmb 07 45 01.4
comp=Z,16nm,1.0s
INK Inuvik 83.15 21 P P 07 45 00.3 -0.3
comp=Z,1.3nm,0.6s,baz=322,slow=3.9,SNR=4.4
comp=Z,1.3nm,0.6s
FAUS Fauske 83.30 338 *e*P **P 07 45 01.0 -0.4**
FAUS IAmb IAmb 07 45 01.8
comp=Z,5.3nm,0.8s
MLR Muntele Rosu 83.65 315 LR LR 08 25 03.7
comp=Z,49nm,22.0s,baz=80,slow=37
BURAR Bucovina Array 83.66 317 P **P 07 45 03.6 -0.3**
BURAR Bucovina Array 83.66 317 P **P 07 45 03.6 -0.3**
BURAR pmax pmax
comp=Z,4.0nm,0.8s
LOF Lofoten 83.67 339 *e*P **P 07 45 02.8 -0.5**
MOR8 Moi Rana 84.03 337 *e*P **P 07 45 04.2 -1.0**
FARO Faro, Yukon 85.31 27 P **P 07 45 12.8 +1.1**
UZH Uzhgorod 85.31 319⇓*i*P **P 07 45 10.5 -1.5**
NSS Namsos 85.59 336 *e*P **P 07 45 12.2 -0.9**
CRVS Cervenica-Dubn 85.77 319 *e*P **P 07 45 15.1 +0.8**
CRVS pmax pmax
comp=Z,20nm,1.2s
HFS Hagfors 86.50 331 LR LR 08 29 10.7
comp=Z,24nm,18.4s,baz=17,slow=39
NB201 NORSAR Array S 87.24 333 P **P 07 45 21.1 -0.1**
NB2 NORSAR Subarra 87.28 333 P **P 07 45 20.1 -1.3**
comp=Z,0.8nm,0.5s,baz=69,slow=4.6
NB2 NORSAR Subarra 87.28 333 P **P 07 45 20.1 -1.3**
baz=69,slow=4.6
NOA NORSAR Array B 87.28 333 P **P 07 45 20.6 -0.8**
comp=Z,1.9nm,0.8s,baz=81,slow=6.4,SNR=7.8
NOA LR LR 08 26 37.2
comp=Z,22nm,20.3s,baz=40,slow=37
comp=Z,1.9nm,0.8s
AKN Aaknes 88.62 335 *e*P **P 07 45 27.8 +0.1**
MBAR Mbarara 90.06 269 LR LR 08 23 54.1
comp=Z,15nm,20.5s,baz=114,slow=34
GERES GERESS Array B 90.64 321 P **P 07 45 38.0 +0.4**
comp=Z,0.6nm,0.6s,baz=338,slow=1.4,SNR=6.1
GERES LR LR 08 30 13.3
comp=Z,33nm,19.7s,baz=272,slow=38
comp=Z,0.6nm,0.6s
YKA Yellowknife Ar 92.83 22 P **P 07 45 47.4 +0.1**
comp=Z,1.1nm,0.7s,baz=305,slow=4.5,SNR=5.8
YKA LR LR 08 31 14.6
comp=Z,16nm,18.3s,baz=221,slow=38
comp=Z,1.1nm,0.7s
YKA Yellowknife Ar 92.83 22 *i* P **P 07 45 47.5 +0.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
PPT Papeete 93.82 107 LR LR 08 20 37.0
comp=Z,18nm,20.9s,baz=308,slow=31
PPT2 Papeete2 93.82 107 *e*LR LR 08 16 18.6
comp=Z,99nm,33.8s
VNDA Vanda 94.00 172 P **P 07 45 51.4 -0.8**
comp=Z,1.4nm,0.8s,baz=311,slow=5.9,SNR=10
comp=Z,1.4nm,0.8s
VNDA Vanda 94.00 172 P **P 07 45 51.3 -0.9**
VNDA Vanda 94.00 172 P **P 07 45 51.3 -0.9**
VNDA pmax pmax
comp=Z,2.0nm,0.9s
TBI Tubuai 95.20 113 *e*LR LR 08 16 57.4
comp=Z,95nm,40.2s
ESK Eskdalemuir 96.73 331*ce*P **P 07 46 09.1 +3.9**
TORD Torodi Ar. Bea 113.92 291 PP PP 07 52 00.2 -9.1
comp=Z,1.2nm,1.0s,baz=61,slow=6.8,SNR=3.5
TXAR Lajitas Array 119.53 45 PKP **PKiKP 07 51 24.9 +0.2**
comp=Z,0.1nm,0.3s,baz=225,slow=0.6,SNR=3.1

IDC 08 07:35:12.9±8.8, 26°.06S×63°.80W, h0km, mb3.7/1, mbtmp3.4/2, ML3.1/1, Error ellipse: s-maj=414.0km s-min=46.4km az=13.0, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**5.82**	**94**	Pn	Pn	07 36 41.2	+0.6
	0.1nm,0.3s,baz=268,slow=13,SNR=2.2						
CPUP				Sn	Sn	07 37 47.7	-0.4
	0.2nm,0.3s,baz=245,slow=14,SNR=3.1						
	1.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**74.65**	**67**	P	P	07 46 54.9	+0.2
	0.5nm,0.7s,baz=246,slow=5.2,SNR=2.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**146.14**	**43**	PKPbc	PKPdf	07 54 53.9	-0.2
	0.6nm,0.6s,baz=322,slow=2.6,SNR=4.2						

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*VAO **08** 07:48:43.4±0.3, 25°.45S×69°.52W, h131km, mb4.0*
*SJA **08** 07:48:44.2±1.3, 25°.42S×69°.28W, h80km, ML4.3, MW4.1*
*NEIC **08** 07:48:44.1±2.0, 25°.36S±0°.03×69°.48W±0°.10, h134km±8km, mb4.4/6, ML4.3(GUC), Error ellipse: s-maj=13.1km s-min=3.4km az=78.0*
*GUC **08** 07:48:46.1±0.4, 25°.38S×69°.28W, h116km±3km, ML4.4*
*IDC **08** 07:48:47.0±0.7, 25°.35S×68°.93W, h120km±5km, mb3.6/8, mbtmp4.0/9, MS3.2/2, Error ellipse: s-maj=24.8km s-min=16.2km az=67.0*

ISC 08 07:48:45.1±0.5, 25°.32S±0°.03×69°.23W±0°.04, h120km±5km, n127, σ2§00/166, mb3.9/9, 15C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.36**	**296**	Pn	**Pn**	**07 49 02.9**	**+0.2**
GO02				Sn	**Sn**	**07 49 15.9**	**0.0**
GO02	**Mina Guanaco**	**0.36**	**296**	⇓*i*P	**Pn**	**07 49 02.8**	**+0.2**
GO02				*i* S	**Sn**	**07 49 15.9**	**0.0**
GO02				IAML		07 49 16.7	
	comp=E,17μm,0.3s						
GO02	**Mina Guanaco**	**0.36**	**296**	*e*P	**Pn**	**07 49 03.0**	**+0.2**
PB14	**IPOC Station P**	**1.27**	**303**	Pn	**Pn**	**07 49 10.5**	**+0.2**
PB14				Sn	**Sn**	**07 49 30.4**	**+1.0**
PB14	**IPOC Station P**	**1.27**	**303**	⇓*i*P	**Pn**	**07 49 11.1**	**+0.9**
PB14				*i* S	**Sn**	**07 49 30.1**	**+0.8**
PB14	**IPOC Station P**	**1.27**	**303**	*e*P	**Pn**	**07 49 11.0**	**+0.7**
PB14				*e*S	**Sn**	**07 49 30.5**	**+1.2**
PB14				IAML		07 49 31.8	
	comp=Z,2μm,0.2s						
AC01	**Pan de Azucar**	**1.48**	**236**	Pn	**Pn**	**07 49 11.7**	**-0.6**
AC01				Sn	**Sn**	**07 49 32.1**	**-0.9**
AC01	**Pan de Azucar**	**1.48**	**236**	⇑*i*P	**Pn**	**07 49 12.1**	**-0.2**
AC01				*i* S	**Sn**	**07 49 32.1**	**-0.9**
AC01				IAML		07 49 33.3	
	comp=N,7μm,0.3s						
AC01	**Pan de Azucar**	**1.48**	**236**	*e*P	**Pn**	**07 49 11.9**	**-0.4**
AC01				*e*S	**Sn**	**07 49 32.7**	**-0.3**
AC01				IAML		07 49 33.8	
	comp=Z,2μm,0.3s						
AC02	**Maricunga**	**1.51**	**176**		**Pn**	**07 49 13.0**	**-0.2**
AC02				Sn	**Sn**	**07 49 33.5**	**-1.0**
AC02	**Maricunga**	**1.51**	**176**	⇑*i*P	**Pn**	**07 49 13.3**	**+0.1**
AC02				*i* S	**Sn**	**07 49 33.6**	**-0.9**
AC02				IAML		07 49 36.6	
	comp=N,5μm,0.8s						
AC02	**Maricunga**	**1.51**	**176**	*e*P	**Pn**	**07 49 13.2**	**+0.1**
AC02				*e*S	**Sn**	**07 49 33.6**	**-0.9**
AC02				IAML		07 49 36.9	
	comp=Z,2μm,0.4s						
PB15	**IPOC Station P**	**2.12**	**354**		**Pn**	**07 49 21.2**	**+1.0**
PB15	**IPOC Station P**	**2.12**	**354**	⇑*i*P	**Pn**	**07 49 21.5**	**+1.3**
PB15				*i* S	**Sn**	**07 49 48.3**	**+1.2**
PB15	**IPOC Station P**	**2.12**	**354**	*e*P	**Pn**	**07 49 21.0**	**+0.7**
PB15				*e*S	**Sn**	**07 49 49.0**	**+1.9**
PB15				IAML		07 49 55.0	
	comp=Z,5μm,0.3s						
AC06	**Mina Casimiro**	**2.26**	**206**		**Pn**	**07 49 20.5**	**-1.4**
AC06	**Mina Casimiro**	**2.26**	**206**	⇑*i*P	**Pn**	**07 49 20.8**	**-1.1**
AC06				*i* S	**Sn**	**07 49 48.0**	**-2.1**
AC06				IAML		07 49 50.1	
	comp=N,1μm,0.4s						
AF01	**San Pedro de A**	**2.55**	**22**		**Pn**	**07 49 26.8**	**+1.0**
AF01	**San Pedro de A**	**2.55**	**22**	⇑*i*P	**Pn**	**07 49 27.3**	**+1.5**
PB06	**IPOC Station P**	**2.62**	**353**		**Pn**	**07 49 26.3**	**-0.4**
PB06	**IPOC Station P**	**2.62**	**353**	*e*P	**Pn**	**07 49 27.6**	**+0.9**
PB06				*i* S	**Sn**	**07 49 55.2**	**-3.4**
PB06				IAML		07 50 01.1	
	comp=N,2μm,0.8s						
LVC	**Limon Verde**	**2.72**	**6**	P	**Pn**	**07 49 29.2**	**+1.1**
	comp=N,821nm,0.3s,baz=176,slow=9.1,SNR=1074						
LVC				S	**Sn**	**07 49 57.1**	**-4.0**
	comp=N,486nm,0.5s,baz=193,slow=14,SNR=14						
LVC	**Limon Verde**	**2.72**	**6**	Pn	**Pn**	**07 49 28.9**	**+0.8**
LVC	**Limon Verde**	**2.72**	**6**	*i* P	**Pn**	**07 49 29.1**	**+1.0**
LVC				*i* S	**Sn**	**07 49 57.3**	**-3.8**
LVC	**Limon Verde**	**2.72**	**6**	*e*P	**Pn**	**07 49 28.6**	**+0.5**
PB04	**IPOC Station P**	**3.09**	**344**		**Pn**	**07 49 32.7**	**-0.1**
PB04	**IPOC Station P**	**3.09**	**344**	⇑*i*P	**Pn**	**07 49 32.8**	**0.0**
PB04				*i* S	**Sn**	**07 50 02.2**	**-7.4**
PB04				IAML		07 50 10.9	

comp=N,1μm,0.2s
AC04 Llanos de Chal 3.31 209 Pn **Pn 07 49 33.1 -2.4**
AC04 Llanos de Chal 3.31 209 ⇑*i*P **Pn 07 49 33.3 -2.1**
AC04 IAML 07 50 28.1
comp=E,563nm,0.1s
AC04 Llanos de Chal 3.31 209 *e*P **Pn 07 49 33.5 -2.0**
AC04 *e*S **Sn 07 50 09.4 -5.0**
AC04 IAML 07 50 19.2
comp=Z,284nm,0.5s
SLA San Lorenzo 3.44 81 *e*Pg **Pn 07 49 38.8 +1.4**
SLA *e*S **Sn 07 50 14.4 -3.2**
PB09 IPOC Station P 3.51 360 Pn 07 49 39.0 +0.7
PB09 IPOC Station P 3.51 360 ⇑*i*P **Pn 07 49 39.3 +1.0**
PB09 *i* S **Sn 07 50 11.1 -8.3**
VCA Vinchina 3.52 165 *e*P **Pn 07 49 39.0 +0.6**
VCA *e*S **Sn 07 50 15.9 -3.8**
AC05 El Transito 3.62 195 Pn **Pn 07 49 38.2 -1.5**
AC05 El Transito 3.62 195 ⇑*i*P **Pn 07 49 38.6 -1.1**
AC05 *i* S Sn 07 50 10.2 -12
AC05 El Transito 3.62 195 *e*P **Pn 07 49 38.6 -1.1**
AC05 *e*S Sn 07 50 05.9 -16
AC05 IAML 07 50 11.3
comp=Z,533nm,0.8s
PB07 IPOC Station P 3.63 350 Pn 07 49 38.9 -1.0
PB07 IPOC Station P 3.63 350 ⇑*i*P **Pn 07 49 39.8 -0.1**
PB07 *i* S **Sn 07 50 21.0 -1.3**
PB07 IPOC Station P 3.63 350 *e*P **Pn 07 49 40.0 +0.1**
PB07 *e*S **Sn 07 50 15.9 -6.4**
PB07 *e*S 07 50 22.6
PB07 IAML 07 50 48.5
comp=Z,486nm,0.3s
LCO Las Campanas 3.90 199 Pn 07 49 41.1 -2.5
LCO Las Campanas 3.90 199 *e*P **Pn 07 49 41.6 -2.0**
LCO Las Campanas 3.90 199 *e*P **Pn 07 49 41.0 -2.5**
AZAP Zapla 3.94 75 *e*P **Pn 07 49 45.8 +1.7**
AZAP *e*S **Sn 07 50 27.4 -2.4**
PB02 IPOC Station P 4.03 351 Pn 07 49 44.6 -0.6
PB02 IPOC Station P 4.03 351 *e*P **Pn 07 49 44.9 -0.3**
PB02 *i* S **Sn 07 50 30.3 -1.5**
PB01 IPOC Station P 4.27 357 Pn 07 49 47.9 -0.5
PB01 IPOC Station P 4.27 357 ⇑*i*P **Pn 07 49 48.1 -0.3**
PB01 *i* S **Sn 07 50 36.8 -0.6**
PB01 IPOC Station P 4.27 357 *e*P **Pn 07 49 48.0 -0.3**
PB01 *e*S **Sn 07 50 37.1 -0.2**
PB01 IAML 07 50 40.9
comp=Z,441nm,0.3s
CYA Choya 4.36 136 *e*P **Pn 07 49 49.4 -0.2**
CYA *e*S **Sn 07 50 40.5 +0.9**
ASTB Santa Barbara 4.56 74 *e*P **Pn 07 49 53.3 +1.0**
PATCX Punta Patache 4.56 349 Pn 07 49 51.0 -1.3
PATCX Punta Patache 4.56 349 ⇑*i*P **Pn 07 49 51.0 -1.3**
PATCX *i* S **Sn 07 50 41.1 -3.3**
PATCX Punta Patache 4.56 349 *e*P **Pn 07 49 51.0 -1.3**
PATCX *e*S **Sn 07 50 37.9 -6.5**
PATCX IAML 07 50 50.6
comp=Z,252nm,0.5s
ACLC CERRO LA CRUZ 4.56 154 *e*P **Pn 07 49 51.0 -1.3**
ACLC *e*P 07 49 51.8
ACLC *e*S **Sn 07 50 41.8 -2.8**
ACLC IAML 07 50 42.1
comp=Z,238nm,0.4s
YJA Yavi 4.63 48 *e*P **Pn 07 49 55.0 +1.5**
CO01 Juntas del Tor 4.70 189 Pn 07 49 53.1 -1.1
CO01 Juntas del Tor 4.70 189 ⇑*i*P **Pn 07 49 53.4 -0.8**
CO01 Juntas del Tor 4.70 189 *e*P **Pn 07 49 53.6 -0.6**
CO01 *e*P 07 49 54.0
TA01 Diego Aracena 4.81 349 ⇑*i*P **Pn 07 49 53.9 -1.7**
TA01 *i* S **Sn 07 50 46.8 -3.6**
TA01 Diego Aracena 4.81 349 *e*P **Pn 07 49 54.0 -1.6**
TA01 IAML 07 51 27.0
comp=Z,192nm,0.7s
ACDV Cuesta del Vie 4.83 179 *e*P **Pn 07 49 56.0 +0.1**
ACDV *e*P 07 49 56.1
ACDV *e*S **Sn 07 50 52.2 +1.2**
AROD Rodeo 4.83 182 *e*P **Pn 07 49 56.0 -0.1**
AROD *e*S Sn 07 50 29.9 -21
CO05 La Serena 4.91 201 Pn 07 49 53.1 -3.7
CO05 La Serena 4.91 201 *e*P **Pn 07 49 53.5 -3.4**
ALOL LOMAS DE OLMED 5.01 74 *e*P **Pn 07 49 59.0 +0.8**
GO04 Tololo Observa 5.03 196 ⇑*i*P **Pn 07 49 55.9 -2.7**
GO04 Tololo Observa 5.03 196 *e*P **Pn 07 49 55.9 -2.7**
TA02 Huaiquique 5.10 350 Pn 07 49 57.3 -2.1
TA02 Huaiquique 5.10 350 *e*P **Pn 07 49 58.1 -1.3**
TA02 *e*S **Sn 07 50 57.3 +0.1**
TA02 IAML 07 51 42.5
comp=Z,226nm,0.3s
PB08 IPOC Station P 5.16 1 Pn 07 49 59.9 -0.7
PB08 IPOC Station P 5.16 1 *e*P **Pn 07 50 00.0 -0.6**
PB08 IAML 07 51 45.9
comp=Z,110nm,1.2s
ACCO Cerro Coronel 5.25 178 *e*P **Pn 07 50 01.0 -0.7**
ACCO *e*S **Sn 07 51 00.0 -1.3**
CO06 Fray Jorge 5.74 201 Pn 07 50 04.2 -3.8
ZON Zonda 6.22 176 Pn 07 50 12.7 -1.9
PB16 IPOC Station P 6.96 358 Pn 07 50 23.8 -1.3
VA03 San Esteban 7.50 189 Pn 07 50 28.9 -3.0
LMEL Las Melosas 8.54 185 Pn 07 50 43.3 -2.6
LPAZ La Paz 9.05 7 P **Pn 07 50 53.3 -0.1**
comp=Z,13nm,0.4s,baz=167,slow=8.0,SNR=107
LPAZ La Paz 9.05 7 *e*P **Pn 07 50 52.9 -0.4**
LPAZ La Paz 9.05 7 *e*P **Pn 07 50 53.0 -0.4**
CPUP Villa Florida 10.77 98 *e*P **Pn 07 51 17.4 +1.4**
ITQB Itaqui 12.00 114 *e*P **Pn 07 51 31.5 -0.8**
SIV San Ignacio 12.02 41 P **Pn 07 51 28.2 -4.4**
comp=Z,22nm,0.5s,baz=248,slow=11,SNR=71
SIV LR LR 07 56 42.6
comp=Z,66nm,21.2s,baz=140,slow=40
AQDB Aquidauana 13.37 72 *e*P **Pn 07 51 51.5 +1.3**
CRSM Crissiumal (Br 13.78 102 *e*P **Pn 07 51 57.4 +1.9**
MCR1 Marechal Candi 13.82 90 *e*P **Pn 07 51 58.2 +2.2**
TRQA Tornquist 14.11 156 Pn **Pn 07 51 58.0 -1.6**
GO06 Curarrehue 14.35 187 Pn **Pn 07 52 00.6 -2.1**
FRBT Francisco Belt 14.60 96 *e*P **Pn 07 52 07.1 +1.1**
PLTB Pedras Altas 15.15 119 *e*P **Pn 07 52 12.8 -0.1**
PLCA Paso Flores 15.41 184 P **Pn 07 52 14.9 -1.1**
comp=Z,8.6nm,0.8s,baz=2.3,slow=11,SNR=4.9
PLCA Paso Flores 15.41 184 Pn 07 52 14.9 -1.1
PLCA IAmb IAmb 07 52 19.7
comp=Z,12nm,0.8s
LL04 Puerto Octay 15.77 189 Pn 07 52 18.1 -2.3
LL04 IAmb IAmb 07 52 23.4
comp=Z,18nm,0.7s
C2SB Chapadao do Su 16.53 70 *e*P **Pn 07 52 29.9 -0.1**
PCMB Pacaembu 16.90 81 *e*P **P 07 52 35.0 +0.5**
CZSB Cruzeiro do Su 17.81 349 *e*P **P 07 52 42.4 -2.1**
PDRB Porto dos Gac 18.05 43 *e*P **P 07 52 46.5 -0.8**
CLDB Colider 19.20 44 *e*P **P 07 52 59.2 -0.5**
VAO Valinhos 20.45 88 *e*P **P 07 53 13.4 +0.2**
IPMB Ipameri, GO 20.84 74 *e*P **P 07 53 17.1 -0.5**
SNDB Serra Nova Dou 21.53 55 *e*P **P 07 53 23.9 -0.9**
BDFB Brasilia 22.06 68 P **P 07 53 28.5 -2.0**
comp=Z,1.8nm,0.5s,baz=239,slow=13,SNR=4.6
comp=Z,1.8nm,0.5s
BDFB Brasilia 22.06 68 *e*P **P 07 53 31.4 +0.9**
NPGB Novo Progresso 22.50 38 *e*P **P 07 53 34.1 -0.8**
MACA Manacapuru-AM 23.52 22 *e*P **P 07 53 45.2 +0.7**
ITTB Itaituba 24.54 34 *e*P **P 07 53 54.4 +0.7**
SGCB São Gabriel d 25.14 5 *e*P **P 07 53 59.2 0.0**
JANB Januaria 25.48 71 *e*P **P 07 54 02.4 0.0**
MALB Monte Alegre 27.44 34 *e*P **P 07 54 20.6 +0.8**
SNAA Sanae 58.79 160 P **P 07 58 31.4 +1.0**
SNAA Sanae 58.79 160 P **P 07 58 31.0 +0.6**
comp=Z,0.7nm,0.8s,baz=285,slow=12,SNR=7.6
SNAA pP **pP 07 58 59.1 -1.5**
comp=Z,0.7nm,0.6s,baz=278,slow=8.9,SNR=2.8
comp=Z,0.7nm,0.8s
SNAA Sanae 58.79 160 P **P 07 58 31.3 +0.9**
SNAA IAmb IAmb 07 59 02.5
comp=Z,8.8nm,1.5s
TROLL Troll, Antarti 60.51 160 P **P 07 58 43.5 +1.3**
TXAR Lajitas Array 63.61 327 P **P 07 59 06.5 +3.0**
comp=Z,0.5nm,0.7s,baz=151,slow=6.9,SNR=4.6
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 77.27 331 P **P 08 00 29.1 +2.8**
comp=Z,0.4nm,0.5s,baz=136,slow=7.2,SNR=5.7
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 78.32 323 P **P 08 00 35.9 +3.6**
comp=Z,0.5nm,0.6s,baz=153,slow=6.7,SNR=5.9
comp=Z,0.5nm,0.6s
ELK Elko 78.40 326 P **P 08 00 36.1 +3.4**
comp=Z,1.6nm,0.8s,baz=134,slow=1.9,SNR=9.7
comp=Z,1.6nm,0.8s
ULM Lac du Bonnet 78.86 343 P **P 08 00 35.8 +1.1**
comp=Z,4.2nm,0.5s,baz=162,slow=4.0,SNR=6.5
comp=Z,4.2nm,0.5s
TOA0 Torodi Ar. Sit 78.93 70 P **P 08 00 36.8 +1.0**
TOA0 IAmb IAmb 08 01 01.1
comp=Z,6.8nm,1.4s
TORD Torodi Ar. Bea 78.93 70 P **P 08 00 37.1 +1.3**
comp=Z,2.2nm,0.6s,baz=253,slow=4.9,SNR=12
TORD pP **pP 08 01 06.5 -0.9**
comp=Z,1.7nm,0.7s,baz=259,slow=5.5,SNR=5.4
comp=Z,2.2nm,0.6s
SCHQ Schefferville 79.85 1 LR LR 08 37 52.4
comp=Z,23nm,18.7s,baz=90,slow=37
ASAR Alice Springs 126.39 207 PKP **PKiKP 08 07 35.7 +0.7**
comp=Z,0.4nm,0.5s,baz=133,slow=2.1,SNR=6.4
WRA Warramunga Arr 129.50 209 PKP **PKiKP 08 07 41.8 +0.5**
comp=Z,0.2nm,0.7s,baz=156,slow=1.8,SNR=9.0
ZALV Zalesovo Beam 145.50 27 PKPbc **PKPab 08 08 10.8 +1.5**
comp=Z,2.7nm,0.4s,baz=303,slow=3.7,SNR=16
ZALV pPKPbc **pPKPdf 08 08 42.6 0.0**
comp=Z,4.8nm,0.7s,baz=300,slow=4.5,SNR=7.5
MKAR Makanchi Array 148.83 39 PKPbc **PKiKP 08 08 20.8 +0.9**
comp=Z,3.7nm,0.6s,baz=316,slow=2.7,SNR=30
MKAR pPKPbc **pPKPbc 08 08 51.9 -0.3**
comp=Z,2.5nm,0.9s,baz=309,slow=2.7,SNR=5.4
PZH PanZhiHua 171.79 80 PKP **PKPdf 08 08 37.3 -2.9**

NEIC ***08*** *08:06:41.3±1.7, 31°.96S±0°.08×176°.96W±0°.07, h10km±1km, mb4.3/11, Error ellipse: s-maj=13.6km s-min=9.5km az=18.0*
WEL ***08*** *08:06:47.1±0.5, 32°S±6°×17°9W±1°1, h33km, M4.7/11, mB4.9/6, ML5.3/12, MLv5.0/11, Mw(mB)4.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=116.1*
IDC ***08*** *08:06:49.8±2.2, 31°.51S×178°.49W, h0km, mb4.0/5, mbtmp4.1/6, ML4.5/1, MS3.2/4, Error ellipse: s-maj=57.9km s-min=23.9km az=138.0*
NOU ***08*** *08:06:58.6, 33°.49S×177°.34W, h93km, mb4.5/10, South of Kermadec Islands*
ISC 08 08:06:43.0±0.8, 32°.20S±0°.06×176°.93W±0°.10, h35km, n81, σ2.50/80, mb4.3/9, MS3.0/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.05**	**343**	P	**Pn**	**08 07 26.5**	**-2.3**
GLKZ				S	**Sn**	**08 07 59.2**	**-4.9**
RAO	**Raoul Island**	**3.06**	**344**	Pn	**Pn**	**08 07 27.4**	**-1.5**
	125nm,0.3s,baz=262,slow=23,SNR=1.6						
RAO				Sn	**Sn**	**08 08 01.1**	**-3.3**
	886nm,0.3s,baz=163,slow=20,SNR=11						
	353nm,0.3s						
RAO	**Raoul Island**	**3.06**	**344**	Pn	**Pn**	**08 07 27.0**	**-1.9**
RAO	**Raoul Island**	**3.06**	**344**	P	**Sn**	**08 08 01.2**	**-3.1**
RIZ	**Raoul Island**	**3.07**	**343**	P	**Pn**	**08 07 27.8**	**-1.2**
MXZ	**Matakaoa Point**	**6.63**	**215**	P	**Pn**	**08 08 14.7**	**-3.2**
MXZ				S	**Sn**	**08 09 31.2**	**-1.0**
MXZ	**Matakaoa Point**	**6.63**	**215**	P	**Pn**	**08 08 16.4**	**-1.5**
WMGZ	**Waiomatatini S**	**6.78**	**213**	P	**Pn**	**08 08 18.5**	**-1.5**
WMGZ				S	**Sn**	**08 09 35.9**	**0.0**
PKGZ	**Pakihiroa**	**7.00**	**214**	P	**Pn**	**08 08 21.5**	**-1.5**
PKGZ				S	**Sn**	**08 09 38.5**	**-2.8**
HAZ	**Te Kaha**	**7.04**	**217**	P	**Pn**	**08 08 22.4**	**-1.1**
HAZ				S	**Sn**	**08 09 42.8**	**+0.6**
PUZ	**Puketiti**	**7.06**	**213**	P	**Pn**	**08 08 20.7**	**-3.2**
PUZ				S	**Sn**	**08 09 40.7**	**-2.2**
RUGZ	**Raukumara Rang**	**7.25**	**216**	P	**Pn**	**08 08 25.4**	**-1.2**
RUGZ				S	**Sn**	**08 09 46.3**	**-1.5**
TWGZ	**Tauwhareparae**	**7.27**	**214**	P	**Pn**	**08 08 25.0**	**-1.8**
TWGZ				S	**Sn**	**08 09 46.3**	**-1.9**
CNGZ	**Carnagh Statio**	**7.42**	**211**	P	**Pn**	**08 08 26.3**	**-2.5**
TKGZ	**Te Karaka**	**7.55**	**213**	P	**Pn**	**08 08 28.9**	**-1.6**
TKGZ				S	**Sn**	**08 09 51.8**	**-2.9**
KUZ	**Kuaotunu**	**7.58**	**231**	P	**Pn**	**08 08 33.1**	**+2.2**
MWZ	**Matawai**	**7.61**	**215**	P	**Pn**	**08 08 29.3**	**-2.2**
MWZ				S	**Sn**	**08 09 51.8**	**-4.7**
URZ	**Urewera**	**7.76**	**217**	Pn	**Pn**	**08 08 31.6**	**-1.9**
	3.9nm,0.3s,baz=22,slow=16,SNR=20						
URZ				Sn	**Sn**	**08 09 57.5**	**-2.6**
	12nm,0.3s,baz=258,slow=2.5,SNR=9.8						
URZ	**Urewera**	**7.76**	**217**	Pn	**Pn**	**08 08 36.0**	**+2.5**
URZ	**Urewera**	**7.76**	**217**	P	**Pn**	**08 08 31.4**	**-2.0**
URZ				S	**Sn**	**08 09 54.0**	**-6.1**
URZ	**Urewera**	**7.76**	**217**	P	**Pn**	**08 08 32.4**	**-1.1**
SNGZ	**Shannon Statio**	**8.06**	**214**	P	**Pn**	**08 08 34.4**	**-3.1**
SNGZ				S	**Sn**	**08 10 05.2**	**-2.2**
KNZ	**Kokohu**	**8.10**	**211**	P	**Pn**	**08 08 34.9**	**-3.2**
MHGZ	**Mahia Peninsul**	**8.11**	**210**	P	**Pn**	**08 08 34.9**	**-3.3**
MHGZ				S	Sn	08 10 00.0	-8.6
OUZ	**Omahuta**	**8.45**	**247**	Pn	**Pn**	**08 08 45.6**	**+2.7**
OUZ	**Omahuta**	**8.45**	**247**	P	**Pn**	**08 08 47.0**	**+4.1**
HIZ	**Hauiti**	**9.20**	**225**	Pn	**Pn**	**08 08 55.0**	**+1.9**
HIZ	**Hauiti**	**9.20**	**225**	P	**Pn**	**08 08 53.5**	**+0.3**
PLWZ	**Palliser**	**11.24**	**212**	Pn	**Pn**	**08 09 23.6**	**+2.4**
TCW	**Tory Channel**	**11.42**	**216**	P	**Pn**	**08 09 20.7**	**-2.9**
TCW				S	Sn	08 11 19.0	-11
CTZ	**Chatham Island**	**11.52**	**179**	P	**Pn**	**08 09 22.6**	**-2.2**
TUWZ	**Tuamarina**	**11.75**	**216**	P	**Pn**	**08 09 25.6**	**-2.5**
TUWZ				S	Sn	08 11 28.1	-10
NNZ	**Nelson**	**11.88**	**218**	P	**Pn**	**08 09 28.1**	**-1.8**
NNZ				S	Sn	08 11 31.0	-10
BSWZ	**Blackbirch Sta**	**12.00**	**215**	Pn	**Pn**	**08 09 32.7**	**+1.2**
MRNZ	**Matariki Terra**	**12.34**	**219**	P	Pn	08 09 32.0	-4.2
MRNZ				S	Sn	08 11 43.0	-9.4
THZ	**Tophouse**	**12.53**	**218**	Pn	**Pn**	**08 09 38.8**	**+0.1**
THZ	**Tophouse**	**12.53**	**218**	P	**Pn**	**08 09 38.5**	**-0.2**
THZ				S	Sn	08 11 46.1	-11
KHZ	**Kahutara**	**12.70**	**214**	P	**Pn**	**08 09 37.3**	**-3.7**
KHZ				S	Sn	08 11 47.0	-14
KHZ	**Kahutara**	**12.70**	**214**	P	**Pn**	**08 09 38.2**	**-2.8**
DSZ	**Denniston Nort**	**13.10**	**220**	P	**Pn**	**08 09 45.4**	**-1.1**
DSZ				S	Sn	08 11 59.0	-12
GVZ	**Greta Valley S**	**13.36**	**214**	P	**Pn**	**08 09 47.4**	**-2.6**
GVZ				S	Sn	08 12 01.4	-16
LTZ	**Lake Taylor**	**13.59**	**216**	P	**Pn**	**08 09 49.6**	**-3.7**
LTZ				S	Sn	08 12 07.3	-16
INZ	**Inchbonnie**	**13.97**	**218**	P	**Pn**	**08 09 56.4**	**-2.0**
INZ				S	Sn	08 12 19.7	-12
MQZ	**McQueen's Vall**	**14.11**	**213**	P	Pn	08 09 55.7	-4.5
MQZ				S	Sn	08 12 19.5	-16
OXZ	**Oxford**	**14.11**	**215**	P	Pn	08 09 55.9	-4.3
OXZ				S	Sn	08 12 19.7	-16
RPZ	**Rata Peaks**	**14.88**	**216**	Pn	**Pn**	**08 10 07.6**	**-3.1**
	2.1nm,0.3s,baz=63,slow=12,SNR=14						
RPZ				Sn	Sn	08 12 41.9	-12
	1.1nm,0.3s,baz=31,slow=19,SNR=6.6						
RPZ	**Rata Peaks**	**14.88**	**216**	P	**Pn**	**08 10 07.4**	**-3.3**
RPZ				S	Sn	08 12 37.9	-16
RPZ	**Rata Peaks**	**14.88**	**216**	P	**Pn**	**08 10 07.6**	**-3.1**
GCSZ	**Gaunt Creek Bo**	**14.97**	**219**	P	**Pn**	**08 10 10.3**	**-1.6**
GCSZ				S	Sn	08 12 45.0	-11
ARCZ	**Arundel**	**14.99**	**215**	P	**Pn**	**08 10 08.8**	**-3.4**
ARCZ				S	Sn	08 12 42.2	-15
MSVF	**Nonsavu**	**15.11**	**341**	LR	LR	08 14 38.3	
	comp=Z,149nm,21.1s,baz=165,slow=33						
ODZ	**Otahua Downs**	**16.06**	**213**	P	**Pn**	**08 10 23.6**	**-2.4**
OUENC	**Ouen Island, N**	**17.39**	**300**	P	**P**	**08 10 43.5**	**-0.4**
OUENC				IAmb	IAmb	08 10 55.6	
	comp=Z,16nm,1.1s						
DZM	**Mont Dzumac**	**17.89**	**300**	*e*LR	LR	08 14 40.5	
	comp=Z,256nm,26.6s						
RAR	**Rarotonga**	**18.80**	**59**	P	**Pn**	**08 10 59.2**	**-1.0**
RAR				IAmb	IAmb	08 11 14.2	
	comp=Z,7.5nm,1.0s						
TBI	**Tubuai**	**25.80**	**77**	*e*LR	LR	08 18 47.9	
	comp=Z,95nm,40.2s						
PPT2	**Papeete2**	**28.65**	**66**	*e*LR	LR	08 19 59.3	
	comp=Z,34nm,22.8s						
CTA	**Charters Tower**	**35.02**	**281**	P	**P**	**08 13 33.3**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=120,slow=8.1,SNR=1.9						
CTA				LR	LR	08 25 49.4	
	comp=Z,38nm,19.4s,baz=81,slow=34						
	comp=Z,1.6nm,0.5s						
CTAO	**Charters Tower**	**35.02**	**281**	P	**P**	**08 13 32.8**	**+0.4**
BBOO	**Buckleboo**	**39.40**	**256**	P	**P**	**08 14 10.2**	**+0.7**
BBOO				IAmb	IAmb	08 14 11.5	
	comp=Z,8.6nm,0.9s						
AS31	**Alice Springs**	**43.95**	**268**	P	**P**	**08 14 47.8**	**+0.9**
ASAR	**Alice Springs**	**43.95**	**268**	P	**P**	**08 14 47.4**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=104,slow=7.6,SNR=20						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**43.95**	**268**	P	**P**	**08 14 48.0**	**+1.1**
WB2	**Warramunga Arr**	**45.09**	**273**	P	**P**	**08 14 55.8**	**-0.2**
WB2				IAmb	IAmb	08 15 19.0	
	comp=Z,7.7nm,1.1s						
WRA	**Warramunga Arr**	**45.10**	**273**	P	**P**	**08 14 56.9**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=115,slow=7.5,SNR=45						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.10**	**273**	P	**P**	**08 14 56.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**53.29**	**271**	P	**P**	**08 16 00.6**	**+1.9**
	comp=Z,3.9nm,1.1s,baz=131,slow=9.5,SNR=1.4						
	comp=Z,3.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.29**	**271**	P	**P**	**08 16 00.3**	**+1.7**
FITZ				IAmb	IAmb	08 16 07.9	
	comp=Z,4.6nm,1.2s						
QSPA	**South Pole Qui**	**57.91**	**180**	P	P	08 16 36.6	+5.2
RPN	**Rapa Nui**	**58.09**	**104**	LR	LR	08 41 44.0	
	comp=Z,9.4nm,18.0s,baz=252,slow=35						
BELA	**Belgrano 2**	**67.88**	**172**	P	**P**	**08 17 40.4**	**+3.1**
BELA				IAmb	IAmb	08 17 56.4	
	comp=Z,4.5nm,1.3s						
TROLL	**Troll, Antarti**	**76.08**	**180**	P	**P**	**08 18 30.7**	**+4.0**
SNAA	**Sanae**	**76.33**	**178**	P	**P**	**08 18 31.6**	**+3.5**
SNAA	**Sanae**	**76.33**	**178**	P	**P**	**08 18 31.1**	**+3.1**
SNAA				IAmb	IAmb	08 18 32.7	
	comp=Z,4.1nm,1.0s						
VNA3	**Neumayer Olymp**	**76.45**	**176**	P	**P**	**08 18 32.0**	**+3.4**
H03S2	**Juan Fernandez**	**78.71**	**123**	T	T	09 48 05.5	
	baz=236						
H03S1	**Juan Fernandez**	**78.72**	**123**	T	T	09 48 07.3	
	baz=236						
H03S3	**Juan Fernandez**	**78.73**	**123**	T	T	09 48 07.9	
	baz=236						
LPIG	**La Paz**	**84.72**	**57**	LR	LR	08 48 55.3	
	comp=Z,20nm,20.9s,baz=258,slow=30						
NVAR	**Mina Array Bea**	**88.94**	**42**	P	P	08 19 48.9	+15
	comp=Z,0.4nm,0.9s,baz=206,slow=6.0,SNR=2.8						
	comp=Z,0.4nm,0.9s						
FINES	**FINESS Array B**	**147.15**	**340**	PKPbc	PKiKP	08 26 29.8	+5.8
	comp=Z,2.7nm,0.8s,baz=29,slow=3.2,SNR=1.8						

RSNC 08 08:19:33.9±1.1, 3°.16N×78°.84W, h0km±12km, ML3.1, Mw3.7, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GR1C	**Gorgona, Isla**	**0.69**	**103**	⇑*e*P	Pg	08 19 46.4	-0.7
GR1C				*e*S	Sg	08 19 56.6	+0.7
TUMC	**Tumaco**	**1.33**	**175**	*e*P	Pg	08 19 56.8	-2.6
TUMC				*e*S	Sg	08 20 16.5	-0.2
TUMC				*i*		08 20 38.7	
	comp=Z,745nm,0.6s						
MALC	**Bahia Malaga**	**1.72**	**60**	*e*P	Pn	08 20 04.4	-0.8
MALC				*i*		08 20 31.4	
	comp=Z,70nm,0.5s						
BBAC	**Balboa, Cauca**	**1.95**	**125**	*e*S	Sn	08 20 32.3	-1.5
BBAC				*i*		08 20 33.8	
	comp=Z,167nm,0.4s						
GCUF	**Volcan Galeras**	**2.43**	**142**	*e*P	Pn	08 20 13.6	-1.7
GCUF				*e*S	Sn	08 20 46.0	0.0
GCUF				*i*		08 20 48.9	
	comp=Z,156nm,0.4s						
CRUC	**La Cruz**	**2.46**	**130**	*e*P	Pn	08 20 14.8	-0.8
YOTC	**Yotoco, Valle**	**2.62**	**72**	*e*P	Pn	08 20 16.3	-1.3
TULM	**Tulcn-Chalpat**	**2.64**	**157**	*e*P	Pn	08 20 15.5	-2.8
CUSE	**Cuicocha Este**	**2.87**	**171**	*e*P	Pn	08 20 19.5	-1.8
CUSE				*e*S	Sn	08 20 58.8	+2.1
CUSE				*i*		08 21 02.1	
	comp=Z,231nm,0.4s						
BONI	**La Bonita**	**2.99**	**154**	*e*P	Pn	08 20 23.0	+0.2
PLMC	**San Jos del P**	**3.08**	**56**	*e*P	Pn	08 20 23.7	-0.2
BETC	**Betania**	**3.42**	**98**	*e*P	Pn	08 20 30.6	+2.0
GARC	**Garzon, Huila**	**3.48**	**106**	*e*P	Pn	08 20 29.8	+0.2
GARC				*i*		08 21 19.9	
	comp=Z,26nm,0.7s						
FLOC	**Florencia**	**3.54**	**116**	*e*P	Pn	08 20 29.4	-0.9
FLOC				*i*		08 21 18.1	
	comp=Z,27nm,0.5s						
ANIL	**Santa Ana**	**3.67**	**69**	*e*P	Pn	08 20 32.7	+0.4
CBOC	**Ciudad Bolivar**	**3.89**	**46**	*e*P	Pn	08 20 35.7	+0.5
PTLC	**Puerto Leguiza**	**5.01**	**126**	*e*P	Pn	08 20 46.4	-4.0
PTLC				*i*		08 22 19.9	
	comp=Z,14nm,0.6s						
CHIC	**Chingaza**	**5.30**	**74**	*e*P	Pn	08 20 55.9	+1.1
CHIC				*i*		08 22 01.8	
	comp=Z,9.0nm,0.8s						
MCRA	**Macar, Loja**	**7.56**	**189**	*e*P	Pn	08 21 24.2	-1.3

IDC ***08*** *08:33:38.7±3.2, 53°.64N×90°.96E, h0km, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=27.2km s-min=23.5km az=55.0*
NNC ***08*** *08:33:42.9±4.2, 53°.50N×90°.59E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=30.6km s-min=23.7km az=61.0, Suspected Mining explosion.*
ISC 08 08:33:42.4±4.2, 53°.7N±0°.1×90°.5E±0°.2, h0km, n9, σ1.907/12, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.39**	**277**	I		08 59 40.0	
	baz=90,slow=338,SNR=7.5						
ZAA0	**Zalesovo Array**	**3.39**	**277**	⇓Pg	**Pg**	**08 34 46.7**	**-0.7**
	0.7nm,0.6s						
ZAA0				⇑Lg	Lg	08 35 35.5	
	4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**3.39**	**277**	Pn	**Pn**	**08 34 37.9**	**+1.4**
	0.3nm,0.3s,baz=95,slow=14,SNR=4.2						
ZALV				Lg	Lg	08 35 33.9	
	1.8nm,0.3s,baz=96,slow=27,SNR=6.5						
	1.4nm,0.3s						
KURK	**Kurchatov**	**7.88**	**253**	⇑Pn	**Pn**	**08 35 37.3**	**-0.9**
	3.1nm,0.9s						
KURK				⇑Sn	**Sn**	**08 37 07.8**	**-0.2**
	6.5nm,0.8s						
KURK				⇓Lg	Lg	08 37 53.3	
	7.9nm,1.1s						
KURBB	**Kurchatov Arra**	**7.98**	**252**	Pn	**Pn**	**08 35 39.0**	**-0.4**
	0.2nm,0.3s,baz=65,slow=15,SNR=13						
KURBB				Sn	**Sn**	**08 37 10.7**

comp=Z,52nm,19.8s,baz=56,slow=30
MBAR Mbarara 40.58 309 LR LR 09 08 32.8
comp=Z,30nm,18.1s,baz=50,slow=35
TSUM Tsumeb 40.72 274 LR LR 09 09 11.5
comp=Z,25nm,18.4s,baz=153,slow=35
ATD Arta Tunnel 44.16 334 LR LR 09 09 07.6
comp=Z,57nm,19.9s,baz=42,slow=33
H01W2 Cape Leeuwin H 44.88 111 T T 09 41 19.6
baz=259,slow=74
H01W3 Cape Leeuwin H 44.89 111 T T 09 41 28.2
baz=259
H01W1 Cape Leeuwin H 44.90 111 T T 09 41 20.6
baz=259,slow=74
SNAA Sanae 54.41 200 LR LR 09 12 44.7
comp=Z,32nm,20.3s,baz=32,slow=30
CMAR Chiang Mai Arr 59.83 42 P **P 08 55 14.9 +0.7**
1.1nm,0.3s,baz=239,slow=7.4,SNR=1.1
1.1nm,0.3s
QSPA South Pole Qui 60.96 180 P **P 08 55 21.7 +0.2**
0.5nm,0.6s,baz=252,slow=6.4,SNR=5.3
QSPA LR LR 09 18 10.2
comp=Z,30nm,21.6s,baz=259,slow=32
0.5nm,0.6s
EIL Elat 63.64 335 LR LR 09 19 54.1
comp=Z,16nm,20.6s,baz=240,slow=33
VNDA Vanda 64.01 166 P **P 08 55 41.5 -0.1**
0.8nm,1.0s,baz=256,slow=4.2,SNR=3.2
VNDA LR LR 09 21 09.0
comp=Z,42nm,18.0s,baz=276,slow=34
0.8nm,1.0s
ASAR Alice Springs 64.49 104 P **P 08 55 44.9 -0.8**
0.5nm,0.7s,baz=250,slow=6.1,SNR=7.7
0.5nm,0.7s
WRA Warramunga Arr 66.32 100 P **P 08 55 57.0 -0.6**
0.5nm,0.8s,baz=249,slow=5.4,SNR=4.6
0.5nm,0.8s
GNI Garni 70.65 347 LR LR 09 24 39.8
comp=Z,26nm,21.9s,baz=169,slow=34
TORD Torodi Ar. Bea 71.10 298 P **P 08 56 28.4 +1.0**
1.2nm,0.8s,baz=111,slow=5.2,SNR=6.3
1.2nm,0.8s
KBZ Khabaz 74.47 346 LR LR 09 27 31.0
comp=Z,27nm,21.1s,baz=157,slow=34
MKAR Makanchi Array 78.03 15 P **P 08 57 06.9 0.0**
0.7nm,0.8s,baz=204,slow=6.0,SNR=4.3
0.7nm,0.8s
AKTO Aktyubinsk 79.33 358 LR LR 09 30 08.2
comp=Z,12nm,19.2s,baz=273,slow=34
ZALV Zalesovo Beam 85.32 14 P **P 08 57 45.0 -0.1**
0.5nm,0.4s,baz=226,slow=3.9,SNR=4.2
0.5nm,0.4s
MDT Midelt 87.64 310 LR LR 09 36 34.2
comp=Z,21nm,19.9s,baz=128,slow=35
NOA NORSAR Array B 98.61 338 LR LR 09 43 43.3
comp=Z,4.8nm,18.2s,baz=355,slow=36
PDAR Pinedale Array 164.51 333 PKP **PKPdf 09 05 12.6 0.0**
0.3nm,0.9s,baz=116,slow=6.9,SNR=3.7

IDC 08 08:47:14.2±26.0, 20°.95S×172°.55W, h0km, mb4.1/4, mbtmp4.1/4, MS3.7/4, Error ellipse: s-maj=481.8km s-min=158.3km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.43**	**288**	LR	LR	08 52 28.5	
	comp=Z,78nm,20.2s,baz=182,slow=33						
HNR	**Honiara**	**28.85**	**289**	LR	LR	09 04 23.3	
	comp=Z,618nm,18.1s,baz=136,slow=36						
CTA	**Charters Tower**	**38.52**	**264**	P	P	08 54 39.2	+0.6
	2.1nm,0.3s,baz=91,slow=11,SNR=7.3						
CTA				LR	LR	09 08 35.9	
	comp=Z,45nm,20.1s,baz=77,slow=33						
	2.1nm,0.3s						
STKA	**Stephens Creek**	**42.21**	**245**	P	P	08 55 08.6	-0.6
	1.1nm,0.8s,baz=84,slow=9.2,SNR=1.6						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**49.37**	**256**	P	P	08 56 05.5	-0.4
	2.4nm,0.8s,baz=103,slow=8.0,SNR=16						
	2.4nm,0.8s						
WRA	**Warramunga Arr**	**49.58**	**261**	P	P	08 56 07.3	-0.2
	1.1nm,0.6s,baz=98,slow=8.3,SNR=31						
	1.1nm,0.6s						
BATI	**Baumata**	**62.03**	**269**	LR	LR	09 23 32.8	
	comp=Z,170nm,19.8s,baz=310,slow=35						

KRSC 08 08:57:10.4±1.6, 55°.32N×166°.32E, h37km±9km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.23**	**239**	*eP*	Pn	08 57 18.1	-0.9
BKI				*eS*	Sn	08 57 23.7	-3.4
KBTR	**Krutoberegovo**	**2.17**	**296**	*eP*	Pn	08 57 45.1	+1.2
MKZ	**Mys Kozlova**	**2.76**	**256**	*eP*	Pn	08 57 55.3	+3.4
MKZ				*eS*	Sn	08 58 27.8	+3.9
SMKR	**Semkarok**	**3.01**	**297**	*eP*	Pn	08 57 59.3	+3.9
SRKR	**Sorokina**	**3.19**	**297**	*eP*	Pn	08 58 01.5	+3.6
TUMR	**Tumrok**	**3.53**	**272**	*eP*	Pn	08 58 08.2	+5.5
SPN	**Mys Shipunski**	**4.32**	**241**	*eP*	Pn	08 58 15.8	+2.4
SDLR	**Sedlovina**	**4.81**	**248**	*eP*	Pn	08 58 25.2	+4.9
SMAR	**Somma**	**4.86**	**248**	*eP*	Pn	08 58 26.0	+4.9
KRER	**Koryakskii**	**4.87**	**249**	*eP*	Pn	08 58 26.1	+4.9
AVH	**Avacha**	**4.90**	**248**	*eP*	Pn	08 58 26.8	+5.4
KRX	**Arik**	**4.90**	**249**	*eP*	Pn	08 58 26.3	+4.8
GNL	**Ganaly**	**5.15**	**255**	*eP*	Pn	08 58 30.3	+5.4
KRMR	**Karymshinskiy**	**5.43**	**246**	*eP*	Pn	08 58 33.8	+5.2
KRMR				*eS*	Sn	08 59 35.0	+5.2

IDC 08 08:57:23.2±5.3, 17°.52S×179°.00W, h565km±16km, mb3.1/3, mbtmp3.9/4, Error ellipse: s-maj=196.4km s-min=28.5km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.82**	**265**	P	P	08 58 38.2	-0.3
	25nm,0.6s,baz=114,slow=10.0,SNR=22						
MSVF				S	S	08 59 40.5	+0.7
	8.6nm,1.0s,baz=287,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**44.15**	**259**	P	P	09 04 42.0	-0.6
	0.3nm,0.3s,baz=90,slow=7.7,SNR=26						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.36**	**254**	P	P	09 04 44.4	+0.2
	4.4nm,0.4s,baz=88,slow=8.0,SNR=103						
	4.4nm,0.4s						
ILAR	**Eielson Array**	**85.64**	**13**	P	P	09 09 01.4	-0.7
	0.4nm,0.7s,baz=213,slow=6.5,SNR=2.7						
	0.4nm,0.7s						
GERES	**GERESS Array B 147.09**	**344**		PKPbc	PKPbc	09 16 03.2	0.0
	0.4nm,0.5s,baz=33,slow=3.2,SNR=4.2						

*IDC **08** 09:10:30.0±0.8, 9°.54S×111°.74E, h0km, mb4.4/13, mbtmp4.4/15, ML4.1/2, MS3.3/6, Error ellipse: s-maj=33.1km s-min=13.7km az=48.0*
*DJA **08** 09:10:32.1±0.4, 10°.5±3°.×11°.2E±°, h10km, M4.4/15, mb4.7/5, mB5.1/1, MLv4.3/15, Mw(mB)4.5/1*
*NEIC **08** 09:10:33.3±1.6, 9°.90S±0°.08×111°.64E±0°.04, h37km±7km, mb4.6/28, Error ellipse: s-maj=11.1km s-min=5.4km az=173.0*

ISC 08 09:10:33.5±0.4, 9°.82S±0°.05×111°.62E±0°.05, h35km, n102, σ1$42/103, mb4.5/25, MS3.2/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.67**	**345**	P	**Pn**	**09 10 58.0**	**-2.4**
PCJI				S	**Sn**	**09 11 19.6**	**-1.0**
PWJI	**Pagerwojo**	**1.80**	**6**	P	**Pn**	**09 11 00.5**	**-1.6**
PWJI				S	**Sn**	**09 11 23.2**	**-0.4**
KRKI	**Karangkates**	**1.84**	**27**	P	**Pn**	**09 11 01.6**	**-1.1**
KRKI				S	**Sn**	**09 11 24.7**	**-0.1**
UGM	**Wanagama**	**2.18**	**330**		**Pn**	**09 11 07.7**	**+0.2**
UGM	**Wanagama**	**2.18**	**330**	P	**Pn**	**09 11 07.3**	**-0.1**
UGM	**Wanagama**	**2.18**	**330**	P	**Pn**	**09 11 08.5**	**+1.1**
YOGI	**Yogyakarta**	**2.38**	**327**	P	**Pn**	**09 11 09.6**	**-0.5**
YOGI				S	**Sn**	**09 11 38.0**	**-0.1**
NGJI	**Ngawi**	**2.44**	**356**	P	**Pn**	**09 11 09.8**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.84**	**62**		**Pn**	**09 11 15.8**	**-0.6**
JAGI	**Jajag, Banyuwa**	**2.84**	**62**	P	**Pn**	**09 11 16.4**	**0.0**
JAGI	**Jajag, Banyuwa**	**2.84**	**62**	P	**Pn**	**09 11 17.0**	**+0.6**
SMRI	**Semarang**	**2.99**	**337**		**Pn**	**09 11 18.4**	**-0.1**
SMRI	**Semarang**	**2.99**	**337**	P	**Pn**	**09 11 18.3**	**-0.2**
SMRI	**Semarang**	**2.99**	**337**	P	**Pn**	**09 11 20.7**	**+2.2**
TBJI	**Tambak Boyo**	**2.99**	**4**	P	**Pn**	**09 11 16.7**	**-1.8**
SCJI	**Gunung Srandil**	**3.22**	**311**	P	**Pn**	**09 11 22.1**	**+0.4**
ABJI	**Asem Bagus**	**3.27**	**52**	P	**Pn**	**09 11 22.6**	**+0.2**
RTBI	**Rangdo, Negare**	**3.55**	**68**	P	**Pn**	**09 11 27.0**	**+0.8**
KMMI	**Kalianget**	**3.60**	**40**	P	**Pn**	**09 11 26.2**	**-0.7**
IGBI	**Denpasar**	**3.62**	**74**	P	**Pn**	**09 11 28.2**	**+1.1**
SRBI	**Singaraja**	**3.95**	**64**	P	**Pn**	**09 11 31.6**	**0.0**
KLNI	**Mataram**	**4.63**	**73**	P	**Pn**	**09 11 42.2**	**+1.1**
LEM	**Lembang**	**4.95**	**307**	Pn	**Pn**	**09 11 46.0**	**+0.4**
	7.9nm,0.3s,baz=331,slow=21,SNR=2.2						
LEM				Sn	**Sn**	**09 12 43.5**	**+1.6**
	5.8nm,0.3s,baz=88,slow=22,SNR=2.2						
	19nm,0.4s						
CNJI	**Cibinong**	**5.09**	**299**	P	**Pn**	**09 11 48.1**	**+0.7**
	0.3nm28nm,0.8s						
TWSI	**Taliwang, Sumb**	**5.30**	**79**	P	**Pn**	**09 11 51.8**	**+1.5**
	0.3nm84nm,0.6s						
XMIS	**Christmas Isla**	**5.91**	**263**	Pn	**Pn**	**09 11 57.5**	**-1.2**
XMIS	**Christmas Isla**	**5.91**	**263**	P	**Pn**	**09 11 59.1**	**+0.4**
PLAI	**Plampang**	**6.16**	**81**	P	**Pn**	**09 12 03.2**	**+1.1**
	0.6nm1μm154nm,1.0s						
PLAI	**Plampang**	**6.16**	**81**	P	**Pn**	**09 12 03.7**	**+1.6**
DBNI	**Kabupaten Domp**	**6.74**	**79**	P	**Pn**	**09 12 11.1**	**+1.1**
GIRL	**Giralia**	**12.99**	**169**	Pn	**Pn**	**09 13 33.8**	**-2.0**
GIRL	**Giralia**	**12.99**	**169**	P	**Pn**	**09 13 35.1**	**-0.7**
MBWA	**Marble Bar**	**13.71**	**146**		**Pn**	**09 13 43.1**	**-2.5**
MBWA	**Marble Bar**	**13.71**	**146**	P	**Pn**	**09 13 43.5**	**-2.1**
PSA00	**Pilbara Seismi**	**14.11**	**147**	P	**Pn**	**09 13 46.5**	**-4.5**
PSA00	**Pilbara Seismi**	**14.11**	**147**	P	**Pn**	**09 13 49.5**	**-1.5**
TOLI2	**Tolitoli**	**14.18**	**41**	P	**Pn**	**09 13 53.8**	**+1.8**
FITZ	**Fitzroy Crossi**	**15.89**	**123**	Pn	**Pn**	**09 14 13.8**	**-0.9**
	0.5nm,0.3s,baz=313,slow=9.9,SNR=10						
FITZ				LR	LR	09 19 38.5	
	comp=Z,47nm,20.1s,baz=290,slow=34						
	1.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**15.89**	**123**	Pn	**Pn**	**09 14 13.0**	**-1.7**
KNRA	**Kununurra**	**17.70**	**111**	P	**P**	**09 14 38.5**	**+0.4**
MEEK	**Meekatharra**	**17.99**	**159**	P	**P**	**09 14 41.5**	**+0.3**
MTN	**Manton Dam**	**19.37**	**101**	P	**P**	**09 14 53.9**	**-2.5**
MTN				IAmb	IAmb	09 15 05.5	
	comp=Z,25nm,1.1s						
MTN	**Manton Dam**	**19.37**	**101**	P	**Pn**	**09 14 58.9**	**+1.2**
SIJI	**Sorong**	**21.47**	**67**	LR	LR	09 23 25.0	
	comp=Z,35nm,21.9s,baz=45,slow=36						
WB0	**Warramunga Arr**	**24.11**	**117**	P	**P**	**09 15 44.0**	**-2.2**
WB0				IAmb	IAmb	09 15 49.7	
	comp=Z,10nm,1.0s						
WRA	**Warramunga Arr**	**24.12**	**117**	P	**P**	**09 15 47.7**	**+1.3**
	comp=Z,4.2nm,0.8s,baz=293,slow=12,SNR=32						
WRA				PcP	**PcP**	**09 19 28.7**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=204,slow=1.8,SNR=2.9						
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**24.12**	**117**	P	**P**	**09 15 43.8**	**-2.6**
WRAB	**Tennant Creek**	**24.13**	**117**	P	**P**	**09 15 45.4**	**-1.0**
WB2	**Warramunga Arr**	**24.13**	**117**	P	**P**	**09 15 45.2**	**-1.3**
WB2				IAmb	IAmb	09 15 50.4	
	comp=Z,8.5nm,1.1s						
WR0	**Warramunga Arr**	**24.31**	**117**	P	**P**	**09 15 46.8**	**-1.2**
WR0				IAmb	IAmb	09 15 50.8	
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**25.34**	**126**	P	**P**	**09 15 59.0**	**+1.6**
	comp=Z,3.5nm,0.6s,baz=300,slow=8.9,SNR=27						
ASAR				PcP	**PcP**	**09 19 32.3**	**+2.5**
	comp=Z,0.8nm,0.7s,baz=315,slow=1.8,SNR=5.5						
	comp=Z,3.5nm,0.6s						
ASAR	**Alice Springs**	**25.34**	**126**	P	**P**	**09 15 56.2**	**-1.2**
AS31	**Alice Springs**	**25.34**	**126**	P	**P**	**09 15 55.7**	**-1.8**
CMAR	**Chiang Mai Arr**	**30.76**	**336**	P	**P**	**09 16 46.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=162,slow=6.6,SNR=1.4						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**35.38**	**133**	P	**P**	**09 17 29.2**	**+3.2**
	comp=Z,4.1nm,0.8s,baz=290,slow=8.9,SNR=6.6						
STKA				PcP	**PcP**	**09 19 58.9**	**+3.2**
	comp=Z,1.2nm,0.6s,baz=318,slow=9.2,SNR=3.0						
	comp=Z,4.1nm,0.8s						
STKA	**Stephens Creek**	**35.38**	**133**	P	**P**	**09 17 29.3**	**+3.2**
H08S2	**Diego Garcia H**	**38.72**	**270**	T	T	09 59 35.4	
	baz=92						
H08S3	**Diego Garcia H**	**38.73**	**270**	T	T	09 59 38.9	
	baz=92,slow=74						
H08S1	**Diego Carcia H**	**38.74**	**270**	T	T	09 59 40.1	
	baz=92,slow=74						
RAMN	**Ramite**	**43.88**	**327**	*eP*	**P**	**09 18 37.5**	**+0.4**
JIRN	**Jiri**	**44.66**	**327**	*eP*	**P**	**09 18 43.5**	**0.0**
PKI	**Pulchoki**	**45.02**	**326**	*eP*	**P**	**09 18 45.8**	**-0.5**
GUN	**Gumba**	**45.03**	**327**	*eP*	**P**	**09 18 45.8**	**-0.6**
	comp=Z,21nm,0.6s						
DMN	**Daman**	**45.21**	**326**	*eP*	**P**	**09 18 47.6**	**-0.2**
	comp=Z,20nm,0.9s						
DANN	**Dangsing**	**46.53**	**325**	*eP*	**P**	**09 18 58.1**	**-0.1**
	comp=Z,24nm,0.7s						
PYUN	**Piuthan**	**46.78**	**324**	*eP*	**P**	**09 18 59.8**	**-0.3**
	comp=Z,23nm,0.9s						
JHS	**Saijyo**	**49.00**	**23**	P	**P**	**09 19 16.7**	**-0.2**
KSRS	**Korea Array**	**49.45**	**17**	P	**P**	**09 19 20.6**	**+0.4**
	comp=Z,6.8nm,0.7s,baz=200,slow=7.8,SNR=17						
KSRS				LR	LR	09 41 20.3	
	comp=Z,13nm,20.0s,baz=155,slow=38						
	comp=Z,6.8nm,0.7s						
JGF	**Kuroka**	**51.30**	**27**	P	**P**	**09 19 33.3**	**-1.0**
JGF				IAmb	IAmb	09 19 35.2	
	comp=Z,13nm,1.0s						
DZM	**Mont Dzumac**	**53.85**	**110**	LR	LR	09 42 54.2	
	comp=Z,111nm,18.9s,baz=53,slow=36						
NIL	**Nilore**	**56.56**	**322**	P	**P**	**09 20 11.9**	**-0.9**
NIL				IAmb	IAmb	09 20 13.2	
	comp=Z,8.3nm,0.8s						
MDJ	**Mudanjiang**	**56.57**	**15**	P	**P**	**09 20 11.6**	**-1.0**
USA0B	**Ussuriysk Arra**	**56.85**	**17**	P	**P**	**09 20 13.2**	**-1.4**
USRK	**Ussuriysk Ar.**	**56.85**	**17**	P	**P**	**09 20 14.3**	**-0.3**
	comp=Z,9.4nm,0.8s,baz=204,slow=6.2,SNR=12						
	comp=Z,9.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**56.85**	**17**	P	**P**	**09 20 12.8**	**-1.8**
ULN	**Ulaanbaatar**	**57.57**	**356**	P	**P**	**09 20 19.7**	**-0.1**
ULN				IAmb	IAmb	09 20 20.8	
	comp=Z,6.1nm,0.9s						
SONM	**Songino Array**	**57.59**	**356**	P	**P**	**09 20 19.8**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=171,slow=7.9,SNR=17						
SONM				PcP	**PcP**	**09 21 14.2**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=189,slow=3.3,SNR=3.9						
	comp=Z,4.4nm,0.8s						
SONM	**Songino Array**	**57.59**	**356**	P	**P**	**09 20 19.7**	**-0.3**
SONM				IAmb	IAmb	09 20 20.5	
	comp=Z,4.3nm,0.9s						
TARG	**Taragay, Kyrgy**	**59.96**	**331**	P	**P**	**09 20 35.7**	**-1.2**
TARG				IAmb	IAmb	09 20 42.3	
	comp=Z,4.6nm,1.1s						
NRN	**Naryn**	**60.61**	**330**	P	**P**	**09 20 41.3**	**0.0**
NRN				IAmb	IAmb	09 20 42.3	
	comp=Z,4.1nm,0.9s						
RPZ	**Rata Peaks**	**61.31**	**135**	LR	LR	09 47 13.7	
	comp=Z,98nm,18.8s,baz=292,slow=36						
BOOM	**Boomskoye usch**	**61.44**	**331**	P	**P**	**09 20 47.0**	**+0.3**
BOOM				IAmb	IAmb	09 20 49.1	
	comp=Z,6.5nm,1.3s						
MK31	**Makanchi Array**	**62.15**	**338**	P	**P**	**09 20 51.0**	**-0.1**
MK31				IAmb	IAmb	09 20 51.8	
	comp=Z,3.2nm,0.7s						
MKAR	**Makanchi Array**	**62.15**	**338**	P	**P**	**09 20 50.8**	**-0.4**
	comp=Z,4.0nm,0.4s,baz=151,slow=7.6,SNR=47						
	comp=Z,4.0nm,0.4s						
MKAR	**Makanchi Array**	**62.15**	**338**	P	**P**	**09 20 50.9**	**-0.3**
YSS	**Yuzh-Sakhalins**	**62.97**	**23**	P	**P**	**09 20 56.7**	**0.0**
KKAR	**Karatay Array**	**64.63**	**328**	P	**P**	**09 21 07.6**	**-0.1**
ZAA0	**Zalesovo Array**	**67.46**	**343**	P	**P**	**09 21 25.5**	**-0.1**
ZALV	**Zalesovo Beam**	**67.46**	**343**	P	**P**	**09 21 24.6**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=149,slow=4.1,SNR=6.9						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**67.46**	**343**	P	**P**	**09 21 25.1**	**-0.5**
GEYT	**Alibeck**	**68.91**	**317**	P	**P**	**09 21 36.3**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=129,slow=4.0,SNR=3.9						
	comp=Z,2.8nm,0.9s						
VNDA	**Vanda**	**72.39**	**170**	P	**P**	**09 21 54.1**	**-1.5**
YAK	**Yakutsk**	**73.00**	**9**	P	**P**	**09 21 58.2**	**-1.1**
PETK	**Petropavlovsk-**	**73.92**	**27**	P	**P**	**09 22 05.0**	**0.0**
	comp=Z,18nm,1.3s,baz=228,slow=2.0,SNR=8.8						
	comp=Z,18nm,1.3s						
ABKAR	**Akbulak array**	**74.19**	**328**	P	**P**	**09 22 07.0**	**+0.4**
GNI	**Garni**	**79.17**	**314**	LR	LR	10 01 06.3	
	comp=Z,9.5nm,18.1s,baz=308,slow=38						
QSPA	**South Pole Qui**	**80.18**	**180**	P	**P**	**09 22 35.7**	**-4.5**
QSPA				IAmb	IAmb	09 22 44.3	
	comp=Z,9.8nm,1.5s						
KBZ	**Khabaz**	**81.80**	**317**	P	**P**	**09 22 50.8**	**+1.8**
	comp=Z,5.0nm,0.9s,baz=135,slow=2.7,SNR=6.0						
	comp=Z,5.0nm,0.9s						
BR131	**Keskin Array S**	**87.11**	**311**	P	**P**	**09 23 16.9**	**+0.7**
BRTR	**Keskin Array B**	**87.11**	**311**	P	**P**	**09 23 17.9**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=133,slow=7.3,SNR=7.4						
	comp=Z,2.0nm,0.8s						
SNAA	**Sanae**	**88.19**	**197**	P	**P**	**09 23 21.9**	**+1.3**
SNAA				IAmb	IAmb	09 23 25.1	
	comp=Z,5.0nm,1.3s						
TXAR	**Lajitas Array**	**141.72**	**55**	PKhKP	PKPpre	09 29 58.9	
	comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=2.4						

IDC 08 09:27:53.8±2.9, 19°.85S×177°.28W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=242.2km s-min=27.8km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.33**	**256**	P	P	09 36 13.9	0.0
	0.7nm,0.5s,baz=96,slow=7.5,SNR=17						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**45.36**	**261**	P	P	09 36 14.0	-0.3
	0.2nm,0.3s,baz=97,slow=7.5,SNR=8.7						
	0.2nm,0.3s						
NVAR	**Mina Array Bea**	**80.09**	**43**	P	P	09 40 06.3	+0.4
	0.3nm,0.8s,baz=243,slow=8.0,SNR=2.6						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**86.14**	**57**	P	P	09 40 36.9	-0.4
	0.2nm,0.5s,baz=236,slow=4.2,SNR=2.4						
	0.2nm,0.5s						

*SJA **08** 09:39:02.7±0.7, 58°.09S×47°.64W, h120km±47km, ML4.0, MW3.9*
*AWI **08** 09:39:12.6, 60°.80S×39°.22W*
*IDC **08** 09:39:20.9±2.6, 59°.31S×37°.56W, h0km, mb3.8/3, mbtmp3.8/3, MS3.1/4, Error ellipse: s-maj=88.1km s-min=44.7km az=11.0*

ISC 08 09:39:12.2±0.9, 60°.7S±0°.1×36°.5W±0°.2, h10km, n20, σ2$00/13, mb3.7/3, MS3.1/4, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.40**	**0**	*i P*	**Pn**	**09 40 47.2**	**+0.8**
HOPE				IAML		09 42 15.7	
	comp=Z,14nm,2.8s						
ESPZ	**Base Esperanza**	**9.98**	**245**	IAML		09 42 19.7	
	comp=Z,61nm,2.0s						
VNA3	**Neumayer Olymp**	**15.05**	**146**	P	**P**	**09 42 48.3**	**-1.8**
VNA3				S	**Sn**	**09 45 30.1**	**-1.1**
VNA1	**Neumayer--Stat**	**15.17**	**143**	P	**P**	**09 42 49.8**	**-1.5**
VNA1				S	**Sn**	**09 45 36.6**	**+2.7**
VNA2	**Neumayer--Watz**	**15.55**	**143**	P	**P**	**09 42 54.6**	**-1.0**
	baz=293,slow=15						
VNA2				S	**Sn**	**09 45 41.9**	**-1.4**
SNAA	**Sanae**	**17.20**	**144**	P	**P**	**09 43 17.4**	**+3.5**
SNAA				S	**Sn**	**09 46 23.1**	**-0.2**
TROLL	**Troll, Antarti**	**18.90**	**143**	P	Pn	09 43 41.7	+8.5
TROLL				S	**Sn**	**09 47 04.6**	**+0.2**
PLCA	**Paso Flores**	**28.85**	**298**	P	**P**	**09 45 12.1**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=119,slow=2.5,SNR=2.8						
	comp=Z,0.5nm,0.7s						
CPUP	**Villa Florida**	**37.15**	**328**	P	**P**	**09 46 20.3**	**-2.7**
	comp=Z,1.7nm,0.8s,baz=163,slow=8.0,SNR=4.2						
CPUP				LR	LR	10 03 19.5	
	comp=Z,20nm,18.1s,baz=217,slow=40						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**41.59**	**186**	LR	LR	10 02 12.7	
	comp=Z,10nm,21.0s,baz=128,slow=32						
SIV	**San Ignacio**	**48.01**	**327**	LR	LR	10 09 11.7	
	comp=Z,28nm,18.5s,baz=118,slow=38						
BOSA	**Boshof**	**51.73**	**81**	LR	LR	10 05 52.2	
	comp=Z,25nm,18.0s,baz=194,slow=31						
H10S2	**ASCENSION HYDR**	**54.12**	**27**	T	T	10 47 48.6	
	baz=192						
H10S3	**ASCENSION HYDR**	**54.12**	**27**	T	T	10 47 48.6	
	baz=28						
H10N1	**ASCENSION HYDR**	**55.23**	**27**	T	T	10 49 16.3	
	baz=193,slow=75,SNR=12						
H10N3	**ASCENSION HYDR**	**55.23**	**27**	T	T	10 49 16.3	
	baz=193,slow=75,SNR=14						
H10N2	**ASCENSION HYDR**	**55.25**	**27**	T	T	10 49 16.3	
	baz=193,slow=75,SNR=13						
TORD	**Torodi Ar. Bea**	**79.62**	**38**	P	P	09 51 26.2	+6.8
	comp=Z,0.5nm,0.6s,baz=197,slow=5.8,SNR=2.9						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**142.70**	**83**	PKP	PKiKP	09 58 55.6	+7.9
	comp=Z,0.4nm,0.6s,baz=225,slow=3.3,SNR=3.5						
ILAR	**Eielson Array**	**149.30**	**308**	PKPbc	**PKPab**	**09 59 05.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=134,slow=1.5,SNR=7.9						

*SOME **08** 09:42:20.4, 41°.28N×73°.05E, h5km*
*KRNET **08** 09:42:21.5±0.1, 41°.27N×73°.01E, h27km, mb2.6*
*NNC **08** 09:42:23.5±4.2, 41°.35N×72°.93E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=45.3km s-min=13.1km az=170.0*

ISC 08 09:42:21.3±1.2, 41°.28N±0°.03×73°.02E±0°.02, h7km±10km, n26, σ0$89/48, 28C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.77**	**193**	⇑*iP*	**Pg**	**09 42 36.0**	**-0.2**
	baz=93						
OHH				⇑*iS*	**Sg**	**09 42 46.5**	**+0.2**
	baz=93						
ARK	**Arkit**	**0.95**

SGDS	**Sogindy**	**2.48**	**28**	*eP*		**Pb**	**09 43 06.3**	**0.0**
	1.3nm,0.3s							
SGDS				*eS*		**Sb**	**09 43 38.7**	**+1.7**
	17nm,0.5s							
BOOM	**Boomskoye usch**	**2.50**	**60**	⇑*iP*		**Pn**	**09 43 02.8**	**+0.3**
	baz=60							
BOOM				⇑*iS*		**Sn**	**09 43 32.7**	**-0.6**
	baz=60							
TKM2	**Tokmak 2**	**2.53**	**49**	⇑*iP*		**Pn**	**09 43 03.0**	**+0.1**
	baz=49							
TKM2				⇑*iS*		**Sn**	**09 43 33.3**	**-0.8**
	baz=49							
TKM2	**Tokmak 2**	**2.53**	**49**	⇑Pn		**Pb**	**09 43 06.1**	**-1.0**
	1.8nm,0.4s							
TKM2				⇑Sn		**Sb**	**09 43 40.8**	**+2.3**
	3.5nm,0.5s							
KK31	**Karatay Array**	**2.61**	**315**	⇓Pn		**Pb**	**09 43 08.9**	**+0.5**
	0.3nm,0.2s,baz=132,slow=14,SNR=18							
KK31				Sn		**Sg**	**09 43 44.1**	**-0.9**
	1.3nm,0.3s,baz=134,slow=29,SNR=5.2							
KST	**Kastek**	**2.81**	**50**	*eP*		**Pb**	**09 43 13.2**	**+1.3**
	3.5nm,0.3s							
KST				*eS*		**Sg**	**09 43 51.0**	**-0.7**
	4.7nm,0.3s							
KST	**Kastek**	**2.81**	**50**	Pg		**Pb**	**09 43 13.2**	**+1.3**
	3.5nm,0.3s							
KST				Lg		Lg	09 43 50.9	
	4.7nm,0.3s							
KRBS	**Karabastau**	**3.12**	**38**	*eP*		**Pb**	**09 43 18.2**	**+1.1**
	1.3nm,0.4s							
KRBS				*eS*		**Sg**	**09 43 59.4**	**-2.0**
	2.1nm,0.3s							
KRBS	**Karabastau**	**3.12**	**38**	Pg		**Pb**	**09 43 18.2**	**+1.1**
	1.3nm,0.4s							
KRBS				Lg		Lg	09 43 59.4	
	2.1nm,0.3s							

GUC 08 09:46:26.9±0.7, 28°.47S×70°.49W, h108km±3km, ML3.7, 4C-4D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC05	**El Transito**	**0.41**	**153**	⇓*iP*	Pn	09 46 42.7	-0.5
AC05				*i* S	Sn	09 46 54.3	-1.2
AC05				IAML		09 46 55.3	
	comp=E,2μm,0.1s						
LCO	**Las Campanas**	**0.57**	**199**	*eP*	Pn	09 46 43.8	-0.6
LCO				*i* S	Sn	09 46 56.7	-0.9
AC04	**Llanos de Chal**	**0.58**	**297**	⇑*iP*	Pn	09 46 44.0	-0.2
AC04				*i* S	Sn	09 46 56.5	-0.6
AC04				IAML		09 46 57.4	
	comp=E,4μm,0.1s						
AC06	**Mina Casimiro**	**1.12**	**6**	*eP*	Pn	09 46 48.9	-0.4
AC06				*i* S	Sn	09 47 05.2	-0.9
AC06				IAML		09 47 06.2	
	comp=N,1μm,0.2s						
CO01	**Juntas del Tor**	**1.54**	**167**	*eP*	Pn	09 46 54.6	+0.3
CO01				*i* S	Sn	09 47 14.7	-0.4
CO05	**La Serena**	**1.58**	**204**	⇓*iP*	Pn	09 46 54.1	-0.5
CO05				*i* S	Sn	09 47 15.0	-0.7
CO05				IAML		09 47 17.5	
	comp=N,2μm,0.4s						
GO04	**Tololo Observa**	**1.71**	**189**	⇓*iP*	Pn	09 46 56.4	-0.1
GO04				*i* S	Sn	09 47 18.6	-0.4
GO04				IAML		09 47 21.3	
	comp=N,2μm,0.5s						
AC02	**Maricunga**	**2.03**	**37**	⇑*eP*	Pn	09 47 01.0	+0.3
AC02				*i* S	Sn	09 47 25.8	-0.6
AC02				IAML		09 47 27.8	
	comp=E,887nm,0.2s						
AC01	**Pan de Azucar**	**2.32**	**357**	⇑*iP*	Pn	09 47 03.4	-0.6
AC01				*i* S	Sn	09 47 29.4	-3.0
AC01				IAML		09 47 32.3	
	comp=E,293nm,0.1s						
CO03	**El Pedregal**	**2.36**	**184**	*eP*	Pn	09 47 04.7	+0.1
CO03				*i* S	Sn	09 47 32.9	-0.6
CO03				IAML		09 47 34.7	
	comp=E,783nm,0.2s						
CO06	**Fray Jorge**	**2.41**	**204**	*eP*	Pn	09 47 04.1	-1.0
CO02	**Combarbal**	**2.76**	**189**	⇓*iP*	Pn	09 47 09.3	-0.4
CO02				*i* S	Sn	09 47 41.6	-1.1
GO02	**Mina Guanaco**	**3.39**	**14**	*eP*	Pn	09 47 18.1	-0.4
PB14	**IPOC Station P**	**3.83**	**1**	⇑*eP*	Pn	09 47 22.5	-1.8
VA03	**San Esteban**	**4.28**	**181**	*eP*	Pn	09 47 30.1	0.0
VA03				*i* S	Sn	09 48 17.9	-1.1

RSNC 08 09:50:04.6±1.1, 6°.82N×73°.13W, h147km±5km, ML3.2, Mw3.5, 4C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**194**	⇑*iP*	Pn	09 50 24.6	-0.3
BARC				*eS*	Sn	09 50 39.9	-0.4
BARC				*i*		09 50 41.0	
	comp=Z,250nm,0.2s						
PAMC	**Pamplona, Colo**	**0.67**	**39**	⇑*iP*	Pn	09 50 27.3	+0.2
PAMC				*eS*	Sn	09 50 44.3	+0.1
PAMC				*i*		09 50 46.5	
	comp=Z,244nm,0.4s						
RUSC	**La Rusia**	**0.92**	**177**	⇑*iP*	Pn	09 50 28.6	-0.4
RUSC				*eS*	Sn	09 50 47.0	-0.6
RUSC				*i*		09 50 49.1	
	comp=Z,153nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*eP*	Pn	09 50 31.1	-1.3
PTBC				*eS*	Sn	09 50 52.4	-1.2
PTBC				*i*		09 50 55.0	
	comp=Z,177nm,0.4s						
OCAC	**Ocana**	**1.42**	**352**	*eP*	Pn	09 50 32.8	-0.5
OCAC				*eS*	Sn	09 50 54.4	-0.9
OCAC				*i*		09 51 00.7	
	comp=Z,211nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**219**	*eP*	Pn	09 50 33.7	-0.3
SPBC				*eS*	Sn	09 50 56.2	-0.2
SPBC				*i*		09 51 01.7	
	comp=Z,265nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*eP*	Pn	09 50 37.3	-0.4
ZARC				*eS*	Sn	09 51 02.8	-0.3
ZARC				*i*		09 51 08.5	
	comp=Z,265nm,0.5s						
NORC	**Norcasia**	**2.14**	**234**	*eP*	Pn	09 50 40.5	-0.7
NORC				*eS*	Sn	09 51 09.9	+0.5
NORC				*i*		09 51 10.8	
	comp=Z,133nm,0.2s						
CHIC	**Chingaza**	**2.26**	**196**	*eP*	Pn	09 50 43.0	-0.1
CHIC				*eS*	Sn	09 51 11.4	-1.2
CHIC				*i*		09 51 17.6	
	comp=Z,64nm,0.3s						
ROSC	**El Rosal**	**2.30**	**211**	*eP*	Pn	09 50 44.6	+1.1
ROSC				*eS*	Sn	09 51 15.2	+1.8
ROSC				*i*		09 51 18.7	
	comp=Z,141nm,0.4s						
HELC	**Santa Helena**	**2.47**	**255**	*eP*	Pn	09 50 45.5	-0.1
HELC				*eS*	Sn	09 51 16.7	-0.3
HELC				*i*		09 51 22.9	
	comp=Z,78nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*eP*	Pn	09 50 44.8	-1.6
UREC				*eS*	Sn	09 51 15.6	-2.9
UREC				*i*		09 51 29.7	
	comp=Z,95nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*eP*	Pn	09 50 49.0	0.0
GUY2C				*eS*	Sn	09 51 26.7	+3.6
GUY2C				*i*		09 51 30.5	
	comp=Z,77nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇑*iP*	Pn	09 50 47.9	-1.3
PTGC				*eS*	Sn	09 51 21.1	-2.5
PTGC				*i*		09 51 23.7	
	comp=Z,48nm,0.5s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*eP*	Pn	09 50 52.4	0.0
CBOC				*eS*	Sn	09 51 28.8	-0.4
CBOC				*i*		09 51 39.8	
	comp=Z,25nm,0.4s						
DBBC	**Dabeiba**	**3.07**	**274**	*eP*	Pn	09 50 52.6	-0.2
ANIL	**Santa Ana**	**3.24**	**224**	*eP*	Pn	09 50 55.8	+0.6
ANIL				*eS*	Sn	09 51 36.6	+2.2
ANIL				*i*		09 51 42.3	
	comp=Z,169nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**327**	⇓*eP*	Pn	09 50 59.1	-1.4
SJCC				*eS*	Sn	09 51 40.1	-3.8
SJCC				*i*		09 51 44.4	
	comp=Z,24nm,0.5s						
PLMC	**San Jos del P**	**3.67**	**239**	*eP*	Pn	09 51 00.4	-0.2
PLMC				*i*		09 51 48.5	
	comp=Z,19nm,0.3s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	*eP*	Pn	09 51 07.7	-0.8
GARC	**Garzon, Huila**	**5.17**	**207**	*eP*	Pn	09 51 19.3	-1.2
GARC				*eS*	Sn	09 52 18.0	-1.7
GARC				*i*		09 52 22.2	
	comp=Z,19nm,0.2s						

*NEIC **08** 10:02:42.9±1.6, 14°.25S±0°.1×167°.4E±0°.2, h204km±11km, mb4.4/22, Error ellipse: s-maj=27.9km s-min=15.5km az=93.0*
*IDC **08** 10:02:47.4±3.6, 14°.25S×167°.18E, h244km±36km, mb3.7/12, mbtmp4.2/13, Error ellipse: s-maj=29.0km s-min=19.9km az=153.0*
ISC 08 10:02:42.5±0.6, 14°.09S±0°.07×167°.3E±0°.1, h200km, n45, σ1§11/50, mb4.2/21, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**6.66**	**181**	Pn	**Pn**	**10 04 17.4**	**-0.9**
LIFNC				Sn	**Sn**	**10 05 32.3**	**-1.9**
KOUNC	**Koumac, New Ca**	**7.05**	**204**	Pn	**Pn**	**10 04 23.7**	**+0.3**
MARNC	**Mare, Loyalty**	**7.39**	**175**	Pn	**Pn**	**10 04 28.7**	**+0.9**
DZM	**Mont Dzumac**	**7.99**	**186**	P	**Pn**	**10 04 37.6**	**+2.0**
	2.7nm,0.5s,baz=111,slow=19,SNR=1.4						
DZM				S	**Sn**	**10 06 09.6**	**+3.8**
	6.6nm,0.3s,baz=118,slow=22,SNR=7.0						
DZM	**Mont Dzumac**	**7.99**	**186**	Pn	**Pn**	**10 04 35.6**	**-0.1**
EIDS	**Eidsvold**	**18.94**	**231**	P	**P**	**10 06 48.0**	**-0.5**
EIDS				IAmb	IAmb	10 06 50.9	
	comp=Z,6.1nm,0.7s						
CTA	**Charters Tower**	**20.99**	**251**	P	**P**	**10 07 12.1**	**+1.5**
	comp=Z,11nm,0.9s,baz=71,slow=11,SNR=5.9						
	comp=Z,11nm,0.9s						
CTAO	**Charters Tower**	**20.99**	**251**	P	**P**	**10 07 11.6**	**+1.0**
CTAO				IAmb	IAmb	10 07 12.9	
	comp=Z,12nm,0.9s						
ARMA	**Armidale**	**21.75**	**219**	P	**P**	**10 07 18.7**	**+0.2**
ARMA				IAmb	IAmb	10 07 36.2	
	comp=Z,18nm,1.3s						
COEN	**Coen**	**23.42**	**267**	P	**P**	**10 07 34.4**	**+0.6**
COEN				IAmb	IAmb	10 07 36.5	
	comp=Z,25nm,1.4s						
CAN	**Canberra**	**26.81**	**215**	P	**P**	**10 08 04.5**	**+0.1**
STKA	**Stephens Creek**	**29.45**	**229**	P	**P**	**10 08 26.5**	**-1.2**
	comp=Z,3.6nm,0.5s,baz=54,slow=8.5,SNR=10						
	comp=Z,3.6nm,0.5s						
STKA	**Stephens Creek**	**29.45**	**229**	P	**P**	**10 08 28.4**	**+0.7**
TOO	**Toolangi**	**30.39**	**216**	P	**P**	**10 08 36.4**	**+0.4**
TOO				IAmb	IAmb	10 08 51.9	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**31.84**	**255**	P	**P**	**10 08 47.9**	**-1.0**
WB0	**Warramunga Arr**	**31.96**	**255**	P	**P**	**10 08 49.0**	**-1.0**
WB0				IAmb	IAmb	10 08 49.6	
	comp=Z,6.2nm,0.6s						
WB2	**Warramunga Arr**	**32.02**	**255**	P	**P**	**10 08 49.6**	**-0.9**
WB2				IAmb	IAmb	10 08 50.4	
	comp=Z,6.3nm,1.1s						
WRAB	**Tennant Creek**	**32.02**	**255**	P	**P**	**10 08 49.5**	**-0.9**
WRAB				IAmb	IAmb	10 08 50.4	
	comp=Z,8.1nm,1.1s						
WRA	**Warramunga Arr**	**32.03**	**255**	P	**P**	**10 08 49.0**	**-1.6**
	comp=Z,3.4nm,0.6s,baz=86,slow=9.6,SNR=48						
WRA				PcP	**PcP**	**10 11 34.9**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=89,slow=3.2,SNR=1.9						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**32.03**	**255**	P	**P**	**10 08 48.7**	**-1.8**
AS31	**Alice Springs**	**32.95**	**248**	P	**P**	**10 08 57.6**	**-0.9**
ASAR	**Alice Springs**	**32.95**	**248**	P	**P**	**10 08 57.2**	**-1.3**
	comp=Z,2.7nm,0.5s,baz=76,slow=9.3,SNR=43						
ASAR				PcP	**PcP**	**10 11 37.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=73,slow=3.2,SNR=3.5						
	comp=Z,2.7nm,0.5s						
ASAR	**Alice Springs**	**32.95**	**248**	P	**P**	**10 08 57.9**	**-0.6**
BBOO	**Buckleboo**	**34.01**	**231**	P	**P**	**10 09 07.5**	**0.0**
KNRA	**Kununurra**	**37.26**	**263**	P	**P**	**10 09 35.1**	**-0.2**
KNRA				IAmb	IAmb	10 09 46.4	
	comp=Z,13nm,1.2s						
FORT	**Forrest**	**39.66**	**239**	P	**P**	**10 09 54.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.18**	**259**	P	**P**	**10 10 00.4**	**+0.8**
FITZ				IAmb	IAmb	10 10 25.1	
	comp=Z,12nm,1.5s						
NWAO	**Narrogin (SRO)**	**49.12**	**239**	P	**P**	**10 11 09.1**	**-0.9**
MORW	**Morawa**	**49.59**	**244**	P	**P**	**10 11 13.4**	**-0.3**
MORW				IAmb	IAmb	10 11 33.1	
	comp=Z,35nm,1.5s						
KSRS	**Korea Array**	**63.24**	**326**	P	**P**	**10 12 50.5**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=142,slow=6.2,SNR=3.0						
	comp=Z,1.5nm,0.9s						
CASY	**Casey**	**64.14**	**202**	P	**P**	**10 12 54.5**	**-0.7**
CASY				IAmb	IAmb	10 13 09.3	
	comp=Z,6.4nm,1.4s						
USRK	**Ussuriysk Ar.**	**66.33**	**333**	P	**P**	**10 13 09.2**	**-0.4**
BKNI	**Bangkinang**	**67.11**	**276**	P	**P**	**10 13 15.2**	**0.0**
PETK	**Petropavlovsk-**	**67.43**	**354**	P	**P**	**10 13 18.0**	**+1.7**
	comp=Z,5.7nm,1.0s,baz=208,slow=11,SNR=2.5						
	comp=Z,5.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**74.73**	**294**	P	**P**	**10 14 00.9**	**0.0**
	comp=Z,0.7nm,0.4s,baz=132,slow=3.5,SNR=6.3						
	comp=Z,0.7nm,0.4s						
QSPA	**South Pole Qui**	**75.94**	**180**	P	**P**	**10 14 06.4**	**-0.7**
SONM	**Songino Array**	**82.01**	**324**	P	**P**	**10 14 41.0**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=140,slow=4.4,SNR=5.1						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**85.90**	**18**	P	**P**	**10 14 59.0**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=233,slow=5.5,SNR=8.1						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**86.82**	**49**	P	**P**	**10 15 05.4**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=215,slow=5.5,SNR=3.1						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**96.77**	**316**	P	**P**	**10 15 51.1**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=100,slow=6.6,SNR=8.4						
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**96.90**	**324**	P	**P**	**10 15 50.4**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=4.0						
	comp=Z,0.7nm,0.6s						
ARCES	**ARCESS Array B**	**119.64**	**346**	PKP	**PKPdf**	**10 21 07.1**	**-0.9**
	comp=Z,5.3nm,1.0s,baz=42,slow=5.6,SNR=4.0						
GERES	**GERESS Array B**	**139.09**	**333**	PKP	**PKPdf**	**10 21 43.2**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=36,slow=3.7,SNR=1.5						
KEST	**Kesra**	**150.74**	**321**	PKPbc	**PKPbc**	**10 22 11.7**	**+0.1**
	comp=Z,6.6nm,0.9s,baz=0.0,slow=1.0,SNR=7.0						
ESDC	**Sonseca Array**	**153.38**	**345**	PKPbc	**PKiKP**	**10 22 18.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=4.6,slow=3.2,SNR=2.0						
ESDC				PKPab	**PKPab**	**10 22 30.2**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=27,slow=4.4,SNR=5.2						

LDG 08 10:26:05.9±0.1, 44°.63N×7°.26E, h3km, Md1.3/1, Ml1.4/6, Error ellipse: s-maj=2.1km s-min=1.1km az=67.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.36**	**286**	*e*Pg	Pg	10 26 13.3	+0.3
MBDF				*e*Sg	Sg	10 26 18.0	+0.3
	5.3nm,0.1s						
SBF	**Sospel**	**0.77**	**171**	*e*Pg	Pg	10 26 20.5	-0.2
SBF				*e*Sg	Sg	10 26 30.7	0.0
	0.5nm,0.1s						
LPG	**La Plagne**	**0.94**	**338**	*e*Pg	Pg	10 26 24.2	+0.2
LPG				*e*Sg	Sg	10 26 36.1	-0.2
	1.2nm,0.2s						
LPL	**La Plagne**	**0.97**	**337**	*e*Sg	Sg	10 26 36.9	-0.1
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.03**	**287**	*e*Pg	Pg	10 26 24.9	-0.7
ORIF				*e*Sg	Sg	10 26 38.6	-0.3
	0.8nm,0.2s						
LMR	**La Mourre**	**1.40**	**203**	*e*Pg	Pn	10 26 31.9	-0.4
VIVF	**Saint-Julien-l**	**1.86**	**278**	*e*P	Pn	10 26 39.1	+0.4
VIVF				*e*Sg	Sb	10 27 04.6	+0.4
	0.5nm,0.2s						

*CRAAG **08** 10:38:43.3, 36°.33N×3°.47E, Ml3.6*
*LDG **08** 10:38:45.5±0.4, 36°.32N×3°.63E, h10km, Ml3.5/6, Error ellipse: s-maj=9.1km s-min=4.8km az=168.0*
*MDD **08** 10:38:45.2±1.3, 36°.25N×3°.55E, h12km±26km, mb_Lg3.0/5, Error ellipse: s-maj=31.8km s-min=6.1km az=138.0*
ISC 08 10:38:42.8±0.8, 36°.41N±0°.04×3°.54E±0°.04, h10km, n38, σ1§85/43, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.26**	**197**	P	**Pg**	**10 38 48.3**	**+0.1**
ABMS	**Boumerdes**	**0.34**	**353**	P	**Pg**	**10 38 53.7**	**+4.0**
AKET	**Djebel Ketaf**	**0.46**	**142**	P	**Pb**	**10 38 53.8**	**+0.7**
ABA	**Alger-Bouzarea**	**0.56**	**314**	P	**Pg**	**10 38 55.7**	**+1.9**
SET	**Setif**	**1.52**	**97**	P	Pg	10 39 18.0	+6.0
CKHR	**Kef el Ahmar**	**1.65**	**103**	P	**Pg**	**10 39 16.2**	**+1.8**
DFRA	**Djebel Bou Aff**	**1.89**	**85**	P	**Pn**	**10 39 17.4**	**+2.1**
EANR	**'Ain N'Sour**	**2.02**	**258**	P	**Pn**	**10 39 17.9**	**+0.8**
CKFL	**Kef-Lekhel**	**2.57**	**89**	P	**Pb**	**10 39 29.1**	**0.0**
CMAH	**Djebel Manchou**	**3.14**	**85**	P	**Pn**	**10 39 34.1**	**+1.7**
EIBI	**Ibiza**	**3.14**	**327**	P	**Pn**	**10 39 35.1**	**+2.7**
EIBI				Sn	**Sn**	**10 40 09.5**	**-0.3**
EIBI				*i* Vmb_Lg		10 40 16.1	
ETOS	**Mallorca**	**3.40**	**351**	P	**Pn**	**10 39 38.8**	**+2.8**
ETOS				Sn	**Sn**	**10 40 16.8**	**+0.4**
ETOS				*i* Vmb_Lg		10 40 21.3	
EMUR	**La Murta**	**4.08**	**292**	Pn	**Pn**	**10 39 46.7**	**+1.4**
EMUR				Sn	**Sn**	**10 40 33.3**	**+0.2**
EMUR				*i* Vmb_Lg		10 40 40.3	
ECOL	**Islas Columbre**	**4.14**	**328**	Pn	**Pn**	**10 39 48.3**	**+2.1**
EZAR	**Zarzadilla de**	**4.43**	**291**	Pn	**Pn**	**10 39 51.4**	**+1.2**
ETOB	**Tobarra**	**4.62**	**300**	Pn	**Pn**	**10 39 55.2**	**+2.5**
ETOB				Sn	**Sn**	**10 40 48.1**	**+1.7**
ETOB				*i* Vmb_Lg		10 41 12.1	
EMOS	**Mosqueruela**	**5.05**	**323**	Pn	**Pn**	**10 40 02.0**	**+3.3**
EMOS				*i* Vmb_Lg		10 41 04.1	
MTLF	**Montolieu**	**7.00**	**352**	*e*Pn	**Pn**	**10 40 27.0**	**+1.7**
MTLF	**Montolieu**	**7.00**	**352**	*e*P	Pn	10 40 31.9	+6.6
MTLF				*e*Sn	**Sn**	**10 41 43.3**	**-1.7**
	1.0nm,0.4s						
EPF	**Esparros**	**7.06**	**341**	*e*Pn	**Pn**	**10 40 28.2**	**+2.0**
EPF	**Esparros**	**7.06**	**341**	*e*P	Pn	10 40 33.2	+7.0
EPF				*e*Sn	**Sn**	**10 41 44.8**	**-1.7**
	49nm,1.6s						
ETSF	**Etsaut**	**7.21**	**335**	*e*Pn	**Pn**	**10 40 30.0**	**+1.7**
ETSF	**Etsaut**	**7.21**	**335**	*e*P	Pn	10 40 34.4	+6.1
ETSF				*e*Sn	**Sn**	**10 41 48.4**	**-1.9**
	12nm,1.0s						
LMR	**La Mourre**	**7.28**	**17**	*e*Pn	**Pn**	**10 40 29.3**	**0.0**
PGF	**Pioggiola**	**7.44**	**33**	*e*Pn	**Pn**	**10 40 32.8**	**+1.2**
SJPF	**Ste Jean**	**7.63**	**333**	*e*Pn	**Pn**	**10 40 36.6**	**+2.5**
SJPF				*e*Sn	**Sn**	**10 41 58.4**	**-2.2**
LASF	**Ste Croix**	**7.66**	**2**	*e*Pn	**Pn**	**10 40 36.3**	**+1.8**
LASF	**Ste Croix**	**7.66**	**2**	*e*P	Pn	10 40 39.8	+5.3
LASF				*e*Sn	**Sn**	**10 41 59.6**	**-1.7**
	16nm,0.8s						
VIVF	**Saint-Julien-l**	**8.48**	**5**	*e*Pn	**Pn**	**10 40 48.2**	**+2.5**
VIVF				*e*Sn	**Sn**	**10 42 19.0**	**-2.5**
	29nm,1.4s						
MBDF	**Montbardon**	**8.66**	**15**	*e*Pn	**Pn**	**10 40 49.1**	**+0.7**
ORIF	**Oris-en-Rattie**	**8.68**	**11**	*e*Pn	**Pn**	**10 40 50.1**	**+1.5**
RJF	**Les Rejaudoux**	**9.02**	**351**	*e*Pn	**Pn**	**10 40 53.7**	**+0.7**
LPG	**La Plagne**	**9.40**	**14**	*e*Pn	**Pn**	**10 40 59.3**	**+0.8**
TCF	**Toulx Ste Croi**	**9.92**	**355**	*e*Pn	**Pn**	**10 41 06.6**	**+1.2**
BGF	**Bois d'Agland**	**10.15**	**357**	*e*Pn	**Pn**	**10 41 10.2**	**+1.6**
SMF	**Signal de Mont**	**10.23**	**1**	*e*Pn	**Pn**	**10 41 10.4**	**+0.7**
AVF	**Avril sur Loir**	**10.37**	**359**	*e*Pn	**Pn**	**10 41 12.1**	**+0.5**
SSF	**Saint Saulge**	**10.64**	**360**	*e*Pn	**Pn**	**10 41 16.9**	**+1.6**

*HVO **08** 10:53:16.6±0.6, 19°.34N±0°.02×154°.99W±0°.01, h6km±4km, ML2.5/9, ML2.6/42(NEIC), Error ellipse: s-maj=2.8km s-min=1.5km az=150.0*
NEIC 08 10:53:15.4±1.3, 19°.4N±0°.1×155°.03W±0°.07, h26km±5km, Error ellipse: s-maj=17.8km s-min=6.9km az=159.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCUZ	**Jacuzzi**	**0.07**	**294**		Pb	10 53 19.3	-0.9
JCUZ				IAML		10 53 21.8	
	comp=N,2μm,0.2s						
NPOC	**North of Pu'u**	**0.08**	**298**		Pb	10 53 19.5	-0.7
NPOC				Sg	Sb	10 53 21.4	-2.0
NPOC				IAML		10 53 21.9	
	comp=E,2μm,0.4s						
NPOC				IAML		10 53 21.9	
	comp=N,2μm,0.3s						
KNHH	**Kane Nui o Ham**	**0.13**	**281**		Pb	10 53 20.3	-0.3
PUH	**Pauahi**	**0.18**	**277**		Pb	10 53 20.9	-0.2
BYL	**Byron's Ledge**	**0.22**	**285**		Pb	10 53 21.7	+0.1
KKO	**Keanakako`i**	**0.23**	**281**		Pb	10 53 21.7	+0.1
KKO				IAML		10 53 24.1	
	comp=N,755nm,1.2s						
HATHI	**Halema'uma'u T**	**0.23**	**288**		Pb	10 53 21.8	+0.2
HATHI				IAML		10 53 26.4	
	comp=N,816nm,0.2s						
HATHI				IAML		10 53 26.6	
	comp=E,971nm,0.1s						
RIM	**Rim**	**0.23**	**280**	Pg	Pb	10 53 21.8	+0.1
RIM				IAML		10 53 27.1	
	comp=E,760nm,0.3s						
RIM				IAML		10 53 27.6	
	comp=N,787nm,0.3s						
SBLHI	**Steaming Bluff**	**0.24**	**288**	Pg	Pb	10 53 22.1	+0.4
SBLHI				Sg	Sb	10 53 26.2	+0.1
SBLHI				IAML		10 53 26.7	
	comp=N,753nm,0.4s						
UWB	**Uwekahuna B**	**0.24**	**287**		Pb	10 53 22.1	+0.3
OBL	**Observatory Le**	**0.25**	**285**		Pb	10 53 22.2	+0.4

OK032 Salt Plains WL 0.58 48 Pg **Pg 11 10 40.5 -0.3**
OK049 E0420 Rd and N 1.16 90 **Pg 11 10 51.4 -0.5**
OK029 Liberty Lake 1.22 120 **Pb 11 10 52.1 -0.8**
OK048 Pawnee Station 1.45 90 **Pn 11 10 56.2 -0.1**
OKCSW OKLAHOMA CITY 1.47 133 **Pn 11 10 56.8 +0.3**
OK045 Pawnee Station 1.47 88 **Pn 11 10 56.5 0.0**
OK046 Pawnee Station 1.48 90 **Pn 11 10 56.7 0.0**
OK051 E0350 and S346 1.54 86 Pn **Pn 11 10 57.8 +0.3**
OK044 Pawnee Station 1.57 91 **Pn 11 10 58.3 +0.4**
FNO Franklin 1.59 136 **Pn 11 10 58.5 +0.3**
OK031 S. Brethren Rd 1.61 106 **Pn 11 10 58.7 +0.2**
WMOK Wichita Mounta 1.68 181 Pn **Pn 11 10 59.2 -0.2**
WMOK Wichita Mounta 1.68 181 P **Pn 11 10 59.1 -0.3**
baz=0.3
WMOK S **Sb 11 11 22.4 +0.2**
baz=0.3
OK034 N. Norfolk Rd. 1.69 103 Pn **Pn 11 10 60.0 +0.4**
T35A Sooner Cattle 1.86 74 **Pn 11 11 02.5 +0.6**
T35B Sooner Cattle 1.86 74 P **Pn 11 11 02.4 +0.5**
baz=256,SNR=79
T35B S **Sb 11 11 27.9 +0.4**
baz=256
X34A Smith Ranch, M 1.96 157 **Pb 11 11 05.0 -0.7**
X34A IAmb_Lg 11 11 34.6
comp=Z,105nm,0.8s
R32A Long Quarter, 2.00 1 **Pn 11 11 04.4 +0.5**
R32A Long Quarter, 2.00 1 S **Sb 11 11 31.2 -0.3**
baz=181
TUL1 Leonard 2.44 101 **Pn 11 11 10.0 +0.1**
TUL1 IAmb_Lg 11 11 45.8
comp=Z,48nm,0.8s
TUL1 Leonard 2.44 101 P **Pn 11 11 10.0 +0.1**
baz=284,SNR=27
TUL1 S **Sn 11 11 41.1 +1.0**
baz=284
CBKS Cedar Bluff 2.52 342 **Pn 11 11 10.9 -0.1**
CBKS IAmb_Lg 11 11 50.7
comp=Z,61nm,0.7s
CBKS Cedar Bluff 2.52 342 S **Sb 11 11 45.6 -0.7**
baz=162
AMTX Amarillo 2.84 238 **Pn 11 11 14.7 -0.8**
AMTX Amarillo 2.84 238 P **Pn 11 11 16.9 +1.5**
baz=56,SNR=6.5
KSU1 Kansas State U 3.17 32 P **Pn 11 11 20.5 +0.6**
baz=214
X37A Clayton 3.30 123 IAmb_Lg 11 12 19.6
comp=Z,65nm,0.7s
X37A Clayton 3.30 123 P **Pn 11 11 22.2 +0.5**
baz=305,SNR=8.9
Z35A Perchaven, San 3.32 158 P **Pn 11 11 22.6 +0.7**
baz=339
U38A Gravette 3.52 88 IAmb_Lg 11 12 27.2
comp=Z,43nm,1.0s
U38A Gravette 3.52 88 P **Pn 11 11 25.4 +0.7**
baz=272,SNR=26
ABTX Abilene, Hawle 3.86 191 P **Pn 11 11 29.6 +0.2**
baz=10
HHAR Hobbs 3.88 91 IAmb_Lg 11 12 36.1
comp=Z,33nm,0.7s
KSCO Kaye Shedlock' 4.02 311 IAmb_Lg 11 12 43.1
comp=Z,39nm,0.7s
KSCO Kaye Shedlock' 4.02 311 P **Pn 11 11 32.4 +0.7**
baz=129
T25A Trinidad 4.61 281 IAmb_Lg 11 13 02.0
comp=Z,43nm,0.9s
MIAR Mount Ida 4.61 112 IAmb_Lg 11 13 08.4
comp=Z,35nm,1.1s
MIAR Mount Ida 4.61 112 P **Pn 11 11 40.4 +0.7**
baz=296,SNR=5.9
BGNE Belgrade 5.00 5 IAmb_Lg 11 13 20.7
comp=Z,35nm,0.8s
P38A Dawn 5.21 51 IAmb_Lg 11 13 18.0
comp=Z,26nm,0.7s
P38A Dawn 5.21 51 P **Pn 11 11 48.2 +0.2**
baz=234
FCAR Ozark Folk Cen 5.38 94 IAmb_Lg 11 13 24.1
comp=Z,22nm,0.9s
435B Jarrell 5.70 170 IAmb_Lg 11 13 42.3
comp=Z,24nm,0.8s
JCT Junction City 5.99 189 IAmb_Lg 11 13 53.4
comp=Z,24nm,0.9s
BRIGG Briggsdale 6.03 315 IAmb_Lg 11 13 51.2
comp=Z,27nm,0.9s
P40A Paris 6.13 58 IAmb_Lg 11 13 49.2
comp=Z,43nm,0.8s
LCAR Lake Charles 6.14 91 IAmb_Lg 11 13 42.4
comp=Z,16nm,0.8s
K31A O'Neill 6.20 360 IAmb_Lg 11 13 49.2
comp=Z,38nm,0.8s
CCM Cathedral Cave 6.20 72 IAmb_Lg 11 13 52.8
comp=Z,37nm,0.9s
JFWS Jewell Farm 9.21 43 IAmb_Lg 11 15 37.3
comp=Z,19nm,0.8s

*IDC **08** 11:15:06.2±0.8, 35°.48N×141°.54E, h0km, mb3.5/10, mbtmp3.7/13, ML2.7/2, MS2.8/3, Error ellipse: s-maj=24.5km s-min=16.1km az=101.0*
*JMA **08** 11:15:09.0±0.3, 35°.6N±0°.8×14°.1E±°, h24km±1km, MV3.4/31, E OFF BOSO PENINSULA*
ISC 08 11:15:09.7±0.7, 35°.52N±0°.05×141°.37E±0°.08, h25km, n34, σ1§43/24, mb3.5/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.46**	**294**	*i* P	**Pb**	**11 15 17.6**	**-1.6**
CHOJ				S	**Sb**	**11 15 23.8**	**-1.8**
JSMT	**Sammumatsuo**	**0.76**	**279**	P	**Pb**	**11 15 23.8**	**-0.6**
JIHU	**Itakohorinouch**	**0.82**	**303**	*i* P	**Pb**	**11 15 24.1**	**-1.2**
BSO1	**Boso 1**	**0.92**	**201**	P	**Pb**	**11 15 27.0**	**+0.3**
JCN	**Nagara**	**0.96**	**264**	P	**Pb**	**11 15 27.9**	**+0.2**
BSO3	**Boso 3**	**1.01**	**225**	P	**Pn**	**11 15 27.6**	**-0.3**
JYT	**Yasato**	**1.19**	**307**	*i* P	**Pn**	**11 15 28.8**	**-2.0**
JHO	**Hitachi**	**1.27**	**329**	P	**Pn**	**11 15 31.6**	**-0.2**
JHJ	**Hachijo jima 2**	**2.73**	**209**	Pn	**Pn**	**11 15 52.2**	**+0.2**
	5.9nm,0.3s,baz=80,slow=21,SNR=6.0						
JHJ				Sn	**Sn**	**11 16 26.1**	**+1.9**
	14nm,0.3s,baz=65,slow=21,SNR=1.6 133nm,1.0s						
JCJ	**Chichijima**	**8.43**	**175**	Pn	**Pn**	**11 17 07.7**	**-2.6**
	14nm,0.4s,baz=94,slow=23,SNR=5.3						
JCJ				Sn	**Sn**	**11 18 42.0**	**-2.6**
	2.1nm,0.3s,baz=254,slow=16,SNR=1.5						
KSRS	**Korea Array**	**11.00**	**284**	LR	LR	11 22 05.7	
	comp=Z,71nm,20.6s,baz=85,slow=38						
USRK	**Ussuriysk Ar.**	**11.27**	**323**	Pn	**Pn**	**11 17 51.3**	**+2.2**
	0.2nm,0.3s,baz=123,slow=17,SNR=2.1 1.2nm,0.6s						
PETK	**Petropavlovsk-**	**21.02**	**28**	P		11 19 52.3	
	1.4nm,0.7s,baz=206,slow=9.5,SNR=1.0 1.4nm,0.7s						
MA2	**Magadan**	**24.84**	**11**	LR	LR	11 30 38.7	
	comp=Z,23nm,18.4s,baz=32,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.43**	**118**	T	T	11 49 47.2	
	baz=311,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.44**	**118**	T	T	11 49 45.2	
	baz=311,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.45**	**118**	T	T	11 49 51.8	
	baz=311,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	11 50 35.6	
	baz=313,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	11 50 37.6	
	baz=313,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.11**	**120**	T	T	11 50 36.9	
	baz=313,slow=76						
SONM	**Songino Array**	**28.63**	**306**	P	**P**	**11 21 05.1**	**+0.9**
	0.6nm,0.5s,baz=105,slow=9.4,SNR=2.4 0.6nm,0.5s						
DAV	**Davao City (W)**	**31.81**	**211**	LR	LR	11 32 37.9	
	comp=Z,9.5nm,21.2s,baz=81,slow=33						
ZALV	**Zalesovo Beam**	**42.92**	**314**	P	**P**	**11 23 07.1**	**+1.0**
	0.8nm,0.5s,baz=104,slow=4.8,SNR=2.3 0.8nm,0.5s						
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**11 23 24.3**	**+2.0**
	0.5nm,0.5s,baz=80,slow=9.5,SNR=3.1 0.5nm,0.5s						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**11 24 07.2**	**-0.3**
	0.4nm,0.8s,baz=266,slow=6.5,SNR=4.6 0.4nm,0.8s						
WRA	**Warramunga Arr**	**55.56**	**188**	P	**P**	**11 24 43.0**	**-0.1**
	0.6nm,0.6s,baz=1.7,slow=8.1,SNR=19 0.6nm,0.6s						
ASAR	**Alice Springs**	**59.29**	**188**	P	**P**	**11 25 10.3**	**+1.0**
	0.3nm,0.9s,baz=21,slow=11,SNR=1.9 0.3nm,0.9s						
NOA	**NORSAR Array B**	**75.57**	**337**	P	**P**	**11 26 51.3**	**-0.6**
	0.4nm,0.7s,baz=99,slow=7.8,SNR=1.7 0.4nm,0.7s						
NVAR	**Mina Array Bea**	**75.92**	**53**	P	**P**	**11 26 54.8**	**+0.2**
	0.2nm,0.7s,baz=296,slow=4.6,SNR=2.6 0.2nm,0.7s						
PDAR	**Pinedale Array**	**78.75**	**45**	P	**P**	**11 27 09.5**	**-0.9**
	0.2nm,0.5s,baz=227,slow=1.7,SNR=4.1 0.2nm,0.5s						
H03N2	**Juan Fernandez**	**146.87**	**98**	T	T	14 19 08.9	
	baz=290,slow=76,SNR=22						
H03N3	**Juan Fernandez**	**146.88**	**98**	T	T	14 19 06.2	
	baz=290,slow=76,SNR=20						
H03N1	**Juan Fernandez**	**146.89**	**98**	T	T	14 19 06.3	
	baz=290,slow=76,SNR=22						
LPAZ	**La Paz**	**147.46**	**62**	PKPbc	**PKiKP**	**11 34 54.1**	**-0.8**
	0.7nm,0.7s,baz=25,slow=4.3,SNR=4.2						

*IDC **08** 11:48:21.8±4.8, 36°.74N×71°.17E, h102km±51km, mb3.3/3, mbtmp3.7/10, MS4.0/1, Error ellipse: s-maj=47.2km s-min=27.8km az=143.0*
*NNC **08** 11:48:27.9±2.7, 37°.30N×71°.36E, h211km±40km, mb3.0, mpv4.1, Error ellipse: s-maj=27.7km s-min=15.8km az=12.0*
ISC 08 11:48:21.0±0.7, 36°.81N±0°.06×71°.12E±0°.07, h100km, n32, σ1§75/37, mb3.3/3, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.68**	**20**	P	**Pn**	**11 49 44.4**	**+1.2**
	SNR=48						
THN	**Thein Dam**	**5.78**	**138**	*e*P	**Pn**	**11 49 46.8**	**+2.5**
THN				*e*S	**Sn**	**11 50 48.5**	**-0.7**
UCH	**Uchtor**	**6.01**	**25**	P	**Pn**	**11 49 49.1**	**+1.2**
	SNR=25						
EKS2	**Erkin-Say**	**6.19**	**18**	P	**Pn**	**11 49 51.7**	**+1.7**
	SNR=5.9						
KK31	**Karatay Array**	**6.31**	**356**	⇓P	**Pn**	**11 49 52.6**	**+1.2**
	12nm,0.4s,baz=175,slow=12,SNR=183						
KK31				S	**Sn**	**11 51 01.3**	**-0.7**
	7.3nm,0.4s,baz=186,slow=21,SNR=5.3						
AAK	**Ala-Archa**	**6.38**	**23**	P	**Pn**	**11 49 54.0**	**+1.5**
	SNR=18						
AAK	**Ala-Archa**	**6.38**	**23**	P	**Pn**	**11 49 53.9**	**+1.5**
	11nm,0.3s,baz=185,slow=6.5,SNR=35						
AAK				S	**Sn**	**11 51 01.5**	**-2.4**
	3.7nm,0.3s,baz=158,slow=23,SNR=1.9						
CHMS	**Chumysh**	**6.78**	**23**	P	**Pn**	**11 49 59.1**	**+1.2**
	SNR=9.2						
CHMS	**Chumysh**	**6.78**	**23**	⇑P	**Pn**	**11 49 58.7**	**+0.8**
	11nm,0.4s						
CHMS				⇑S	**Sn**	**11 51 10.6**	**-3.0**
	12nm,0.8s						
BHK	**Bhakra**	**6.94**	**139**	*e*S	**Sn**	**11 51 14.3**	**-3.2**
USP	**Ospenovka**	**6.95**	**21**	P	**Pn**	**11 50 01.1**	**+0.9**
	SNR=6.6						
TKM2	**Tokmak 2**	**7.01**	**28**	P	**Pn**	**11 50 01.9**	**+0.8**
	SNR=8.0						
TKM2	**Tokmak 2**	**7.01**	**28**	⇓P	**Pn**	**11 50 01.9**	**+0.8**
	3.8nm,0.5s						
TKM2				⇑S	**Sn**	**11 51 17.1**	**-2.3**
	9.2nm,0.7s						
GEYT	**Alibeck**	**10.41**	**280**	P	**Pn**	**11 50 49.0**	**+1.7**
	1.3nm,0.4s,baz=126,slow=14,SNR=2.3						
GEYT				S	**Sn**	**11 52 39.0**	**-3.0**
	1.7nm,0.3s,baz=92,slow=21,SNR=2.4						
MKAR	**Makanchi Array**	**12.98**	**36**	P	**Pn**	**11 51 22.3**	**+0.7**
	0.8nm,0.8s,baz=225,slow=14,SNR=2.7						
PYUN	**Piuthan**	**13.25**	**128**	*e*P	**Pn**	**11 51 24.5**	**-0.9**
	6.8nm,0.3s						
DANN	**Dangsing**	**13.58**	**125**	*e*P	**Pn**	**11 51 29.2**	**-0.5**
	6.9nm,0.3s						
KURBB	**Kurchatov Arra**	**14.80**	**19**	P	**Pn**	**11 51 48.1**	**+3.1**
	0.9nm,0.6s,baz=205,slow=11,SNR=6.7						
AB31	**Akbulak array**	**14.87**	**330**	⇑P	**Pn**	**11 51 45.3**	**-0.5**
	1.0nm,0.3s,baz=135,slow=12,SNR=64						
PKIN	**Phulchoki**	**15.17**	**123**	*e*P	**Pn**	**11 51 49.9**	**-0.3**
	3.6nm,0.3s						
PKI	**Pulchoki**	**15.19**	**123**	*e*P	**Pn**	**11 51 50.0**	**-0.4**
GUN	**Gumba**	**15.29**	**121**	*e*P	**Pn**	**11 51 51.9**	**+0.2**
	7.8nm,0.3s						
JIRN	**Jiri**	**15.66**	**121**	*e*P	**Pn**	**11 51 55.9**	**-0.5**
	11nm,0.4s						
BVAR	**Borovoye Array**	**16.23**	**358**	P	**Pn**	**11 52 03.1**	**+0.3**
	0.7nm,0.4s,baz=169,slow=11,SNR=6.0						
RAMN	**Ramite**	**16.39**	**122**	*e*P	**Pn**	**11 52 05.8**	**+0.4**
	9.2nm,0.5s						
AKTO	**Aktyubinsk**	**16.57**	**329**	P	**P**	**11 52 09.2**	**+1.3**
	2.2nm,0.6s,baz=141,slow=15,SNR=5.1						
AKTO	**Aktyubinsk**	**16.57**	**329**	⇑P	**Pn**	**11 52 02.3**	**-4.8**
	2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**19.59**	**25**	P	**P**	**11 52 41.7**	**+0.6**
	1.1nm,0.3s,baz=210,slow=10,SNR=6.1						
SONM	**Songino Array**	**28.08**	**56**	P	**P**	**11 54 04.7**	**+1.5**
	0.3nm,0.3s,baz=246,slow=11,SNR=2.1 0.3nm,0.3s						
MBAR	**Mbarara**	**52.77**	**234**	LR	LR	12 21 19.6	
	comp=Z,153nm,19.2s,baz=84,slow=38						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**12 00 30.4**	**-0.1**
	0.3nm,0.6s,baz=324,slow=5.0,SNR=8.0 0.3nm,0.6s						
ASAR	**Alice Springs**	**84.35**	**125**	P	**P**	**12 00 42.6**	**+0.4**
	0.5nm,0.6s,baz=309,slow=5.3,SNR=8.8 0.5nm,0.6s						

*LDG **08** 12:19:03.3±0.1, 42°.71N×13°.16E, h10km, Ml3.3/17, Error ellipse: s-maj=2.8km s-min=1.8km az=42.0*
*PDG **08** 12:19:03.8±0.5, 42°.74N×13°.17E, h9km, ML3.9/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*ROM **08** 12:19:03.2±0.0, 42°.744N±0°.002×13°.175E±0°.004, h8km, ML3.7/91, Mw3.5, Error ellipse: s-maj=0.3km s-min=0.1km az=69.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.33; $M_{\theta\theta}$0.46; $M_{\phi\phi}$1.87; $M_{r\theta}$-0.03; $M_{\theta\phi}$-1.13; $M_{\phi r}$-0.18; Fault plane solution: $M_0$2.42061×10^{14} NP1:ϕ_s148.00000°, δ43.00000°, λ-94.00000°. NP2:ϕ_s334.00000°, δ47.00000°, λ-86.00000°.*
*IDC **08** 12:19:04.0±1.1, 42°.81N×13°.15E, h0km, mb3.7/6, mbtmp3.6/13, ML3.5/7, MS3.0/11 Error ellipse: s-maj=17.9km s-min=13.0km az=83.0*
*PRU **08** 12:19:06.1±0.0, 42°.83N×13°.24E, h0km*
*GEN **08** 12:19:18.8, 43°.62N×12°.24E, h14km±21km, Ml0.0*
ISC 08 12:19:04.1±0.7, 42°.73N±0°.01×13°.14E±0°.01, h8km±4km, n245, σ1§79/330, mb3.8/4, MS3.0/4, 54C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**115**	⇓P	**Pg**	**12 19 05.5**	**-0.7**
T1202				S	**Sg**	**12 19 06.8**	**-0.8**
NRCA	**Norcia**	**0.10**	**348**	⇑P	**Pg**	**12 19 06.1**	**-0.5**
NRCA				S	**Sg**	**12 19 07.8**	**-0.6**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1201	**Domo (RI)**	**0.11**	**133**	⇑P	**Pg**	**12 19 06.5**	**-0.2**
T1201				S	**Sg**	**12 19 08.9**	**+0.5**
T1244	**Arquata del Tr**	**0.12**	**77**	⇑P	**Pg**	**12 19 06.1**	**-0.7**
T1244				S	**Sg**	**12 19 08.0**	**-0.7**
T1245	**Castelsantange**	**0.13**	**15**	⇑P	**Pg**	**12 19 06.3**	**-0.7**
T1245				S	**Sg**	**12 19 08.5**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1204	**Amatrice, Fraz**	**0.14**	**113**	⇑P	**Pg**	**12 19 06.7**	**-0.5**
T1204				S	**Sg**	**12 19 09.0**	**-0.4**
T1204				AML	AML		
T1204				AML	AML		
	comp=N,79800μm,0.6s						
T1204				AML	AML		
T1204				AML	AML		
	comp=N,79750μm,0.6s						
LNSS	**Leonessa**	**0.15**	**211**	⇑P	**Pg**	**12 19 07.6**	**+0.3**
LNSS				S	**Sg**	**12 19 11.0**	**+1.4**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=N,97250μm,0.7s						
T1217	**Poggiodomo (PG**	**0.16**	**263**	⇑P	**Pg**	**12 19 07.8**	**+0.3**
T1217				S	**Sg**	**12 19 11.0**	**+1.2**
T1217				AML	AML		
	comp=E,26000μm,0.6s						
T1217				AML	AML		
	comp=E,25050μm,0.6s						
T1217				AML	AML		
	comp=N,27150μm,0.9s						
T1217				AML	AML		
	comp=E,26050μm,0.6s						
T1217				AML	AML		
	comp=N,27200μm,0.9s						
T1217				AML	AML		
	comp=E,26000μm,0.6s						
T1217				AML	AML		
	comp=N,26500μm,0.2s						
SMA1	**SAN MARTINO**	**0.17**	**125**	⇑P	**Pg**	**12 19 07.2**	**-0.5**
SMA1				S	**Sg**	**12 19 10.3**	**+0.1**
SMA1				AML	AML		
	comp=N,91650μm,0.5s						
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,91600μm,0.5s						
MC2	**Monte Cornacci**	**0.18**	**11**	⇑P	**Pg**	**12 19 07.4**	**-0.6**
MC2				S	**Sg**	**12 19 10.9**	**+0.2**
T1216	**Preci, Frazion**	**0.18**	**330**	⇑P	**Pg**	**12 19 07.6**	**-0.3**
T1216				S	**Sg**	**12 19 10.6**	**+0.1**
T1216				AML	AML		
	comp=E,38600μm,0.2s						
T1216				AML	AML		
	comp=N,39700μm,0.5s						
T1216				AML	AML		
	comp=N,39750μm,0.5s						
T1216				AML	AML		
	comp=E,38550μm,0.2s						
MMO1	**Montemonaco**	**0.21**	**39**	⇑P	**Pg**	**12 19 07.6**	**-0.9**
MMO1				S	**Sg**	**12 19 10.8**	**-0.7**
T1215	**Vallo di Nera,**	**0.21**	**289**	⇑P	**Pg**	**12 19 08.7**	**+0.2**
T1215				S	**Sg**	**12 19 12.6**	**+1.2**
T1215				AML	AML		
	comp=N,19700μm,0.2s						
T1215				AML	AML		
	comp=E,29250μm,0.4s						
T1215				AML	AML		
	comp=N,20600μm,0.1s						
T1215				AML	AML		
	comp=E,29900μm,0.4s						
T1215				AML	AML		
	comp=N,20600μm,0.2s						
T1215				AML	AML		
	comp=E,29250μm,0.5s						
T1243	**Rocca Santa Ma**	**0.23**	**99**	⇑P	**Pg**	**12 19 07.8**	**-0.8**
T1243				S	**Sg**	**12 19 11.3**	**-0.5**
RM33	**Pellescritta (**	**0.23**	**167**	⇑P	**Pg**	**12 19 08.6**	**-0.1**
RM33				S	**Sg**	**12 19 12.7**	**+0.9**
RM33				AML	AML		
	comp=N,53250μm,0.3s						
RM33				AML	AML		
	comp=E,48600μm,0.3s						
RM33				AML	AML		
	comp=E,51300μm,0.3s						
RM33				AML	AML		
	comp=E,51250μm,0.3s						
RM33				AML	AML		
	comp=N,53300μm,0.3s						
RM33				AML	AML		
	comp=E,48650μm,0.3s						
RM33				AML	AML		
	comp=N,53350μm,0.3s						
FEMA	**Monte Fema**	**0.24**	**343**	P	**Pg**	**12 19 08.6**	**-0.4**
FEMA				S	**Sg**	**12 19 12.5**	**+0.2**
FEMA				AML	AML		
	comp=E,32850μm,0.9s						
FEMA				AML	AML		
	comp=N,26350μm,1.3s						
FEMA				AML	AML		
	comp=E,32900μm,0.9s						
T1241	**Roccafluvione,**	**0.25**	**59**	⇑P	**Pg**	**12 19 08.1**	**-0.9**
T1241				S	**Sg**	**12 19 11.8**	**-0.6**
T1241				AML	AML		
	comp=N,47550μm,0.4s						
T1241				AML	AML		
	comp=E,37150μm,0.5s						
T1241				AML	AML		
	comp=N,44950μm,0.4s						
T1241				AML	AML		
	comp=E,37800μm,0.5s						
T1241				AML	AML		
	comp=N,47600μm,0.4s						
T1241				AML	AML		
	comp=E,37100μm,0.5s						
CAMP	**Campotosto**	**0.28**	**135**	⇑P	**Pg**	**12 19 09.1**	**-0.5**
CAMP				S	**Sg**	**12 19 13.6**	**+0.3**
CAMP				AML	AML		
	comp=N,28800μm,0.5s						
CAMP				AML	AML		
	comp=E,16700μm,0.8s						
AM05	**Amandola Campo**	**0.29**	**32**	⇑P	**Pg**	**12 19 09.2**	**-0.7**
AM05				S	**Sg**	**12 19 13.9**	**+0.2**
T1246	**Crognaleto (TE**	**0.30**	**120**	⇑P	**Pg**	**12 19 09.3**	**-0.7**
T1246				S	**Sg**	**12 19 13.9**	**0.0**
FDMO	**Fiordimonte**	**0.31**	**352**	⇑P	**Pg**	**12 19 09.6**	**-0.6**
FDMO				S	**Sg**	**12 19 14.4**	**+0.1**
FDMO				AML	AML		
	comp=E,18000μm,0.2s						
FDMO				AML	AML		
	comp=N,20350μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.31**	**158**	⇑P	**Pb**	**12 19 11.3**	**-0.6**
T1247				S	**Sb**	**12 19 16.6**	**-0.5**
T1247				AML	AML		
	comp=E,38100μm,1.1s						
T1247				AML	AML		
	comp=N,33800μm,0.9s						
ARRO	**Arrone**	**0.32**	**242**	⇑P	**Pg**	**12 19 10.6**	**+0.3**
ARRO				AML	AML		
	comp=N,12550μm,0.2s						
ARRO				AML	AML		
	comp=E,11900μm,0.4s						
ARRO				AML	AML		
	comp=N,12600μm,0.2s						
CESI	**CESI - Serrava**	**0.33**	**327**	⇑P	**Pg**	**12 19 10.3**	**-0.3**
CESI				S	**Sg**	**12 19 15.6**	**+0.8**
CESI				AML	AML		
	comp=E,15350μm,1.4s						
CESI				AML	AML		
	comp=N,26650μm,0.5s						
TERO	**Teramo**	**0.36**	**108**	⇑P	**Pg**	**12 19 10.1**	**-1.0**
TERO				S	**Sg**	**12 19 15.3**	**-0.5**
TERO				AML	AML		
	comp=N,30450μm,0.6s						
TERO				AML	AML		
	comp=E,19700μm,0.5s						
TERO				AML	AML		
	comp=N,31600μm,0.6s						
TERO				AML	AML		
	comp=E,18850μm,0.5s						
TERO				AML	AML		
	comp=N,30500μm,0.6s						
GUMA	**Gualdo di Mace**	**0.36**	**23**	⇑P	**Pg**	**12 19 10.7**	**-0.5**
GUMA				S	**Sg**	**12 19 16.6**	**+0.7**
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,84550μm,0.5s						
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.36**	**7**	⇑P	**Pg**	**12 19 10.5**	**-0.7**
CSP1				S	**Sg**	**12 19 16.2**	**+0.1**
CSP1				AML	AML		
	comp=E,33750μm,0.6s						
CSP1				AML	AML		
	comp=E,33800μm,0.6s						
CSP1				AML	AML		
	comp=N,42450μm,0.5s						
GIGS	**Gran Sasso**	**0.42**	**132**	P	**Pg**	**12 19 11.2**	**-1.1**
GIGS				S	**Sg**	**12 19 17.7**	**-0.1**
GIGS				AML	AML		
	comp=E,4160μm,0.3s						
GIGS				AML	AML		
	comp=N,4305μm,0.6s						
AQU	**L'Aquila**	**0.42**	**153**	P	**Pg**	**12 19 11.8**	**-0.6**
AQU				S	**Sg**	**12 19 18.4**	**+0.5**
AQU				AML	AML		
	comp=E,15350μm,1.4s						
AQU				AML	AML		
	comp=N,13900μm,1.2s						
AQU				AML	AML		
	comp=E,15200μm,1.4s						

AQU AML AML
comp=N,13500µm,1.2s
AQU AML AML
comp=E,15300µm,1.4s
CESX Cesi 0.43 254 ⇑P Pg 12 19 12.5 0.0
CESX S **Sb 12 19 20.0 -0.6**
CESX AML AML
comp=E,10860µm,0.5s
CESX AML AML
comp=N,8195µm,1.2s
SEF1 Sefro 0.44 341 P **Pg 12 19 12.0 -0.6**
SEF1 S **Sg 12 19 19.0 +0.6**
SEF1 AML AML
comp=N,13200µm,0.2s
SEF1 AML AML
comp=E,15150µm,0.2s
OFFI Offida 0.45 63 ⇑P Pg 12 19 12.6 -0.2
OFFI S **Sb 12 19 20.6 -0.4**
OFFI AML AML
comp=E,24050µm,0.4s
OFFI AML AML
comp=N,24300µm,0.4s
MDAR Monte D'Aria 0.46 360 P **Pg 12 19 12.2 -0.8**
MDAR S **Sg 12 19 19.5 +0.4**
MDAR AML AML
comp=N,11000µm,0.4s
MDAR AML AML
comp=N,11035µm,0.5s
MDAR AML AML
comp=E,8940µm,0.7s
PIO1 Pioraco 0.46 345 P **Pg 12 19 12.3 -0.7**
FIAM Fiamignano 0.46 182 ⇑P Pg 12 19 12.8 -0.3
FIAM S **Sb 12 19 20.2 -1.3**
FIAM AML AML
comp=E,14100µm,0.9s
FIAM AML AML
comp=N,10895µm,0.5s
MNTP Montappone 0.47 30 P **Pg 12 19 12.8 -0.4**
MNTP S **Sb 12 19 21.2 -0.5**
MNTP AML AML
comp=E,23250µm,0.6s
MNTP AML AML
comp=N,18200µm,0.3s
MNTP AML AML
comp=E,23300µm,0.6s
FIU1 Fiuminata 0.48 341 P **Pg 12 19 12.8 -0.6**
FIU1 S **Sg 12 19 20.3 +0.5**
FIU1 AML AML
comp=E,4630µm,1.6s
FIU1 AML AML
comp=N,5865µm,0.6s
SSM1 San Severino M 0.50 3 P **Pg 12 19 12.9 -0.8**
SSM1 S **Sg 12 19 20.7 +0.4**
GAG1 Gagliole 0.51 354 P **Pg 12 19 13.3 -0.6**
GAG1 S **Sg 12 19 21.4 +0.7**
GAG1 AML AML
comp=E,21600µm,1.3s
GAG1 AML AML
comp=N,15400µm,1.6s
GAG1 AML AML
comp=N,15400µm,1.6s
GAG1 AML AML
comp=E,21600µm,1.3s
MTL1 Matelica 0.53 349 P **Pg 12 19 13.9 -0.5**
SNTG Esanatoglia 0.54 344 ⇑P Pg 12 19 13.8 -0.8
SNTG S **Sg 12 19 22.4 +0.6**
SNTG AML AML
comp=E,4400µm,0.8s
SNTG AML AML
comp=N,4405µm,0.8s
SNTG AML AML
comp=E,4390µm,0.8s
SNTG AML AML
comp=E,4395µm,0.8s
SNTG AML AML
comp=N,4140µm,0.8s
SNTG AML AML
comp=N,4410µm,0.8s
FAGN Fagnano 0.57 145 ⇓P Pg 12 19 14.3 -0.8
FAGN AML AML
comp=N,25900µm,0.5s
FAGN AML AML
comp=E,27300µm,0.6s
TRTR Tortoreto Alta 0.57 82 ⇑P Pg 12 19 15.2 +0.1
TRTR AML AML
comp=N,28400µm,0.4s
TRTR AML AML
comp=E,26550µm,1.2s
ATCC AVT- Casa Cast 0.58 321 ⇑P Pg 12 19 14.9 -0.5
ATCC S **Sb 12 19 24.3 -0.7**
ATCC AML AML
comp=E,5655µm,0.1s
ATCC AML AML
comp=N,5530µm,0.7s
ATCC AML AML
comp=E,5660µm,0.1s
TRE1 Treia 0.59 12 P **Pg 12 19 15.1 -0.4**
TRE1 AML AML
comp=E,17850µm,0.8s
TRE1 AML AML
comp=N,16300µm,1.0s
TRE1 AML AML
comp=E,17850µm,0.9s
TRE1 AML AML
comp=N,16300µm,1.0s
EL6 Elcito 0.60 357 ⇑P Pg 12 19 14.7 -1.0
EL6 S **Sg 12 19 24.6 +1.1**
EL6 AML AML
comp=E,8040µm,1.6s
EL6 AML AML
comp=N,9260µm,1.6s
EL6 AML AML
comp=E,8035µm,1.6s
EL6 AML AML
comp=N,9240µm,1.6s
VCEL Villa Celiera 0.61 123 ⇑P Pg 12 19 15.3 -0.6
VCEL S **Sb 12 19 24.9 -1.0**
VCEL AML AML
comp=N,20800µm,0.6s
VCEL AML AML
comp=E,17200µm,0.8s
FOSV Fossato di Vic 0.63 334 ⇑P Pg 12 19 15.5 -0.7
FOSV S **Sg 12 19 25.3 +0.8**
FOSV AML AML
comp=E,4570µm,0.3s
FOSV AML AML
comp=N,4045µm,0.2s
CING Cingoli 0.65 3 ⇑P Pg 12 19 15.5 -1.0
CING S **Sg 12 19 26.0 +1.0**
CING AML AML
comp=E,5515µm,1.3s
CING AML AML
comp=N,4840µm,0.9s
CADA Capodarco di F 0.65 44 P **Pg 12 19 16.8 +0.2**
SRES S.Oreste - Sor 0.68 224 ⇑P Pg 12 19 16.7 -0.5
SRES AML AML
comp=N,2740µm,0.4s
SRES AML AML
comp=E,2915µm,1.0s
T0110 Collepietro 0.69 137 ⇓P Pg 12 19 16.2 -1.1
T0110 S **Sg 12 19 26.9 +0.5**
T0110 AML AML
comp=E,16750µm,0.5s
T0110 AML AML
comp=N,16300µm,1.2s
CIMA Civitanova Mar 0.69 34 P **Pg 12 19 17.4 0.0**
MURB Monte Urbino 0.70 320 P **Pg 12 19 17.0 -0.6**
MURB S **Sb 12 19 28.5 +0.1**
MURB AML AML
comp=E,9260µm,0.3s
MURB AML AML
comp=N,10655µm,0.2s
MURB AML AML
comp=E,9275µm,0.3s
MURB AML AML
comp=N,10620µm,0.2s
MURB AML AML
comp=N,11450µm,0.2s
MURB AML AML
comp=E,10565µm,0.3s
MMUR Monte Murano 0.72 351 P **Pg 12 19 17.1 -0.9**
MMUR AML AML
comp=E,8900µm,0.5s
MMUR AML AML
comp=N,5400µm,1.2s
MMUR AML AML
comp=E,8905µm,0.5s
PP3 Marolino 0.73 28 ⇑P Pg 12 19 17.8 -0.4
PP3 AML AML
comp=E,31500µm,0.5s
PP3 AML AML
comp=E,30850µm,0.5s
PP3 AML AML
comp=N,29300µm,0.4s
PP3 AML AML
comp=E,31550µm,0.5s
PP3 AML AML
comp=N,30800µm,0.4s
PTQR Pietraquaria 0.73 165 P **Pg 12 19 17.0 -1.2**
PTQR AML AML
comp=E,2110µm,0.6s
PTQR AML AML
comp=N,2620µm,1.2s
SSFR Montelago di S 0.75 340 ⇓P Pg 12 19 17.6 -1.0
SSFR S **Sb 12 19 29.5 -0.4**
SSFR AML AML
comp=E,7735µm,0.2s
SSFR AML AML
comp=N,10300µm,0.2s
SSFR AML AML
comp=N,10200µm,0.2s
SSFR AML AML
comp=E,8230µm,0.2s
ATFO Monte Foce - G 0.76 327 P **Pg 12 19 18.0 -0.7**
ATFO S **Sb 12 19 30.2 +0.1**
ATFO AML AML
comp=N,2790µm,0.5s
ATFO AML AML
comp=E,2970µm,1.5s
MTCE Montecelio 0.77 203 ⇑P Pg 12 19 17.8 -1.0
MTCE S **Sb 12 19 30.7 +0.5**
MTCE AML AML
comp=E,4455µm,0.8s
MTCE AML AML
comp=N,4250µm,0.8s
ARVD Arcevia 0.78 349 P **Pg 12 19 18.0 -1.1**
ARVD S **Sb 12 19 30.4 -0.2**
ARVD AML AML
comp=E,2710µm,1.4s
ARVD AML AML
comp=N,2390µm,1.2s
MGAB Montegabbione 0.78 284 P **Pg 12 19 18.8 -0.3**
MGAB AML AML
comp=E,7305µm,1.2s
MGAB AML AML
comp=E,7745µm,1.5s
MGAB AML AML
comp=N,6865µm,0.5s
MGAB AML AML
comp=N,6715µm,0.3s
CERT Cerreto 0.79 189 P **Pg 12 19 18.2 -1.1**
CERT AML AML
comp=N,5135µm,1.1s
CERT AML AML
comp=E,5290µm,0.6s
ATLO AVT- Montelove 0.80 317 P **Pg 12 19 18.5 -0.9**
ATVA AVT- Monte Val 0.83 311 P **Pg 12 19 19.4 -0.7**
FRON Frontone 0.84 339 P **Pg 12 19 19.1 -1.2**
FRON AML AML
comp=N,3010µm,0.5s
FRON AML AML
comp=E,2255µm,0.7s
ATVO AVT- Monte Val 0.84 321 P **Pg 12 19 19.4 -0.9**
ATVO AML AML
comp=E,2550µm,1.3s
ATVO AML AML
comp=N,1830µm,0.7s
ATMI Monte Miggiano 0.88 313 P **Pg 12 19 20.8 -0.2**
ATMI AML AML
comp=N,4935µm,1.5s
ATMI AML AML
comp=E,5610µm,1.5s
AOI Ancona 0.88 22 ⇑P Pg 12 19 19.9 -1.2
AOI AML AML
comp=N,3030µm,0.4s
AOI AML AML
comp=E,3025µm,0.6s
RCAV Rocca di Cave 0.90 190 P **Pg 12 19 20.3 -1.0**
RCAV AML AML
comp=E,7755µm,1.1s
RCAV AML AML
comp=N,8110µm,0.7s
ATPI Pietralunga - 0.90 323 P **Pg 12 19 20.5 -0.9**
ATPI AML AML
comp=E,2125µm,0.9s
ATPI AML AML
comp=N,1335µm,0.6s
INTR Introdacqua 0.91 142 P **Pg 12 19 19.8 -1.9**
INTR AML AML
comp=E,5µm,0.8s
INTR AML AML
comp=N,6µm,0.9s
INTR AML AML
comp=E,4915µm,0.8s
INTR AML AML
comp=N,8490µm,0.9s
INTR AML AML
comp=E,5µm,0.8s
INTR AML AML
comp=N,6µm,0.9s
SACS San Casciano d 0.92 278 P **Pg 12 19 21.4 -0.3**
SACS AML AML
comp=E,2390µm,1.0s
SACS AML AML
comp=N,3265µm,1.3s
SACS AML AML
comp=N,3245µm,1.3s
SACS AML AML
comp=E,2375µm,1.0s
PIEI Pieia 0.92 331 P **Pg 12 19 20.4 -1.3**
PIEI AML AML
comp=N,1275µm,1.6s
PIEI AML AML
comp=E,1725µm,1.6s
VVLD Villa Vallelon 0.93 157 P **Pg 12 19 21.4 -0.5**
VVLD AML AML
comp=N,4840µm,0.6s
VVLD AML AML
comp=E,4780µm,1.0s
MPAG Monte Paganucc 0.94 343 P **Pg 12 19 20.9 -1.3**
MPAG AML AML
comp=N,1795µm,1.1s
MPAG AML AML
comp=E,2160µm,1.3s
LATE Laterza 0.99 264 P **Pg 12 19 22.7 -0.4**
FSSB Fossombrone 1.00 345 P **Pg 12 19 22.0 -1.2**
FSSB AML AML
comp=E,6015µm,0.3s
FSSB AML AML
comp=N,8030µm,0.5s
BADI Badiali 1.02 320 P **Pg 12 19 22.7 -0.9**
LPEL Lama dei Pelig 1.03 131 P **Pg 12 19 21.9 -1.9**
LPEL AML AML
comp=E,4610µm,0.7s
LPEL AML AML
comp=N,3000µm,0.4s
CAFI Castiglion Fio 1.05 305 P **Pg 12 19 23.5 -0.7**
CAFI AML AML
comp=N,1155µm,0.7s
CAFI AML AML
comp=E,1220µm,1.4s
PE3 Peglio 1.07 334 P **Pg 12 19 23.9 -0.8**
TOLF Tolfa 1.08 232 ⇑P Pg 12 19 23.9 -0.9
TOLF AML AML
comp=E,2340µm,0.7s
TOLF AML AML
comp=N,2055µm,1.0s
MCIV Monte Civitell 1.08 273 P **Pg 12 19 24.5 -0.3**
MCIV AML AML
comp=E,1280µm,0.9s
MCIV AML AML
comp=N,1067µm,1.2s
SF04 Casetta 1.10 276 P **Pg 12 19 24.6 -0.5**
POFI Posta Fibreno 1.10 157 P **Pg 12 19 24.1 -1.0**
POFI AML AML
comp=N,1890µm,0.8s
POFI AML AML
comp=E,2415µm,1.0s
GIUL Giuliano Di Ro 1.18 176 P **Pb 12 19 26.0 -0.6**
PESA Pesaro 1.23 350 P **Pn 12 19 27.2 -0.3**
PESA AML AML
comp=N,3805µm,0.5s
PESA AML AML
comp=E,3705µm,0.5s
CRE Caprese Michel 1.25 316 P **Pn 12 19 27.0 -0.9**
CRE AML AML
comp=N,814µm,0.3s
CRE AML AML
comp=E,976µm,0.5s
RNI2 Rionero Sannit 1.27 144 P **Pg 12 19 28.4 0.0**
RNI2 AML AML
comp=E,3800µm,0.7s
RNI2 AML AML
comp=N,2915µm,0.6s
RNI2 AML AML
comp=N,2885µm,0.6s
RNI2 AML AML
comp=E,3900µm,0.7s
CERA Filignano 1.31 150 P **Pn 12 19 27.6 -1.0**
CERA AML AML
comp=N,2555µm,0.7s
CERA AML AML
comp=E,4150µm,0.6s
CERA AML AML
comp=N,2465µm,0.7s
CERA AML AML
comp=E,4020µm,0.6s
FRES Fresagrandinar 1.36 123 P **Pg 12 19 30.1 -0.1**
FRES AML AML
comp=N,1126µm,1.3s
FRES AML AML
comp=E,1850µm,1.1s
TRIV Trivento 1.42 132 P **Pg 12 19 31.2 -0.1**
ASQU Asqua 1.45 318 P **Pn 12 19 30.8 +0.1**
ASQU AML AML
comp=N,576µm,0.6s
ASQU AML AML
comp=E,806µm,0.8s
SFI Santa Sofia 1.51 322 P **Pn 12 19 31.3 -0.1**
MAON Monte Argentar 1.52 259 P **Pn 12 19 31.2 -0.2**
MAON AML AML
comp=E,548µm,0.9s
MAON AML AML
comp=N,454µm,1.4s
FROS Frosini 1.54 289 P **Pn 12 19 31.9 +0.2**
VAGA Valle Agricola 1.54 148 P **Pb 12 19 32.8 -0.2**
VAGA AML AML
comp=E,922µm,0.8s
VAGA AML AML
comp=N,1090µm,0.7s
OSSC Osservatorio P 1.60 300 P **Pn 12 19 32.4 -0.2**
OSSC AML AML
comp=E,256µm,0.7s
OSSC AML AML
comp=N,442µm,0.8s
BSSO Busso 1.60 137 P **Pb 12 19 33.5 -0.4**
RUFI Rufina 1.63 313 P **Pn 12 19 33.0 0.0**
MODR Mondragone 1.68 161 P **Pb 12 19 34.2 -1.0**
CASP Castiglione de 1.68 273 P **Pn 12 19 33.4 -0.3**
CASP AML AML
comp=N,204µm,1.4s
CASP AML AML
comp=E,192µm,1.4s
TRIF Trifonti 1.69 284 P **Pn 12 19 34.0 +0.1**
TRIF AML AML
comp=E,280µm,0.6s
TRIF AML AML
comp=N,346µm,0.6s
CIGN Sant'Elia a Pi 1.69 129 P **Pb 12 19 35.4 0.0**
SACR S. Croce Del S 1.77 138 P **Pg 12 19 37.4 -0.6**
MELA Melanico ??? S 1.79 124 ⇑P Pb 12 19 36.1 -1.0
MELA AML AML
comp=E,3150µm,0.8s
MELA AML AML
comp=E,3270µm,0.8s
MELA AML AML
comp=N,2645µm,1.1s
MELA AML AML
comp=N,2610µm,1.1s
TREM Isole Tremiti 1.85 108 P **Pn 12 19 36.6 +0.5**
SEI Scarperia 1.86 316 P **Pn 12 19 36.8 +0.6**
SEI AML AML
comp=N,379µm,0.4s
SEI AML AML
comp=E,204µm,0.3s
MPPT Montemurlo 1.94 310 P **Pn 12 19 37.5 +0.2**
APRC Apricena 2.03 118 P **Pn 12 19 39.0 +0.4**
APRC AML AML
comp=E,1187µm,0.7s
APRC AML AML
comp=N,1505µm,0.9s
CELB S.Piero in Cam 2.16 271 P **Pn 12 19 40.0 -0.4**
SGRT San Giovanni R 2.16 116 P **Pn 12 19 40.7 +0.3**
SGRT AML AML
comp=E,864µm,0.4s
SGRT AML AML
comp=N,876µm,0.6s
POPM Popiglio 2.18 308 P **Pn 12 19 41.0 +0.4**
BRJN Brijuni 2.22 11 P **Pn 12 19 40.8 -0.2**
MAIM Mastiano 2.27 302 P **Pn 12 19 42.3 +0.5**
HVAR Hvar 2.47 78 P **Pn 12 19 44.4 -0.1**
SARO Sassorosso 2.47 307 P **Pn 12 19 44.5 -0.2**
CAPA Cerignola FG 2.54 127 P **Pn 12 19 46.7 +1.2**
CAPA AML AML
comp=E,1425µm,0.9s
CAPA AML AML
comp=N,1325µm,1.0s
PALZ Palazzo San Ge 2.76 129 P **Pn 12 19 49.5 +0.9**
PALZ AML AML
comp=E,1002µm,1.0s
PALZ AML AML
comp=N,831µm,1.0s
GRAM Graiana 2.84 309 P **Pn 12 19 51.5 +1.7**
A050A Klekovaca 3.02 53 *e*Pn **Pn 12 19 52.7 +0.5**
PGF Pioggiola 3.06 268 *e*P **Pn 12 19 53.5 +0.7**
PGF *e*Sn **Sn 12 20 25.3 -4.4**
comp=N,27nm,0.8s
PGF Pioggiola 3.06 268 P **Pn 12 19 54.0 +1.2**
CEY Cerknica 3.15 17 *e*Pn **Pn 12 19 53.6 -0.3**
AMUR Altamura 3.16 124 P **Pn 12 19 55.0 +0.9**
AMUR AML AML
comp=N,288µm,0.6s
AMUR AML AML
comp=E,298µm,1.1s
JAVS Javornik 3.23 11 *e*Pn **Pn 12 19 54.0 -1.0**
SABO M.te Sabotino 3.26 6 P **Pn 12 19 55.1 -0.4**
SABO AML AML
comp=N,1665µm,0.7s
SABO AML AML
comp=E,372µm,1.5s
SABO AML AML
comp=N,414µm,0.7s
SABO AML AML
comp=E,1660µm,1.5s
ROVR Rover Verones 3.27 334 P **Pn 12 19 56.4 +0.7**
CGRP Cima Grappa 3.29 343 P **Pn 12 19 56.8 +0.7**
CGRP AML AML
comp=N,258µm,1.4s
CGRP AML AML
comp=E,312µm,0.6s
MGRS Mrkonjic Grad 3.32 58 *e*Pn **Pn 12 19 57.9 +1.6**
VOJS Vojsko 3.34 9 *i*Pn **Pn 12 19 55.8 -0.8**
MATE Matera 3.38 127 ⇑P Pn 12 19 57.3 +0.3
MATE ⇑S **Sn 12 20 35.6 -1.7**
CRAC Craco 3.42 133 AML AML
comp=E,450µm,0.8s
CRAC AML AML
comp=N,480µm,1.1s
DOSS Dosso del Somm 3.45 337 P **Pn 12 19 59.0 +0.8**
DOSS Dosso del Somm 3.45 337 P **Pn 12 19 59.0 +0.8**
SALO Salr 3.45 328 P **Pn 12 19 59.8 +1.8**
SALO Salr 3.45 328 P **Pn 12 19 59.5 +1.5**
LTRZ Laterza 3.48 126 P **Pn 12 19 59.4 +0.9**
LTRZ AML AML
comp=N,685µm,1.6s
LTRZ AML AML
comp=E,169µm,0.9s
NOCI Noci 3.52 122 P **Pn 12 19 59.7 +0.8**
NOCI AML AML
comp=N,252µm,0.9s
NOCI AML AML
comp=E,219µm,0.6s
MAGA Magasa 3.54 330 P **Pn 12 19 59.9 +0.6**
MAGA AML AML
comp=N,255µm,0.5s
MAGA AML AML
comp=E,436µm,0.5s

STAL STALIGIAL 3.54 355 P **Pn 12 19 59.2 -0.1**
STAL AML AML
comp=E,244μm,0.5s
STAL AML AML
comp=N,228μm,1.1s
A051A Mrakovica 3.55 49 *e*Pn **Pn 12 19 58.7 -0.8**
BLY Banja Luka 3.56 54 *e*Pn **Pb 12 20 06.7 -0.4**
LUSI Trento, Gardas 3.59 335 P **Pn 12 20 01.1 +1.1**
CIMO Cimolais 3.61 352 P **Pn 12 20 00.3 0.0**
GAGG Gaggia 3.70 336 P **Pn 12 20 02.4 +0.8**
GAGG Gaggia 3.70 336 P **Pn 12 20 02.5 +0.8**
MABI Malga Bissina 3.82 331 P **Pn 12 20 04.2 +0.9**
MABI Malga Bissina 3.82 331 P **Pn 12 20 04.2 +0.9**
ACOM Acomizza, Ital 3.83 4 P **Pn 12 20 04.1 +0.7**
OBKA Obir 3.91 14 *e*Pn **Pn 12 20 05.3 +0.9**
MYKA Terra Mystica 3.91 5 *i* Pn **Pn 12 20 05.0 +0.6**
comp=N,3.4nm,0.2s,SNR=6.6
MYKA *i* Sn **Sn 12 20 50.6 0.0**
comp=N,9.1nm,0.4s
MDI Monti di Nese 3.92 322 P **Pn 12 20 05.1 +0.6**
KOSI Kohlern 3.94 342 P **Pn 12 20 06.2 +1.4**
HCY Herceg Novi 3.96 92 *e*Pn **Pn 12 20 05.4 +0.4**
HCY Herceg Novi 3.96 92 ⇑*i*Pn **Pn 12 20 05.8 +0.8**
HCY *i* Sn **Sn 12 20 52.9 +1.3**
BRY Bratogost 3.97 86 *e*Pn **Pn 12 20 05.6 +0.3**
BRY Bratogost 3.97 86 ⇑*i*Pn **Pn 12 20 05.9 +0.6**
BRY *i* Sn **Sn 12 20 53.1 +1.0**
APPI Appiano 3.99 341 P **Pn 12 20 06.9 +1.4**
ABTA Abfaltersbach 4.04 354 *i* Pn **Pn 12 20 07.0 +0.8**
comp=N,19nm,0.4s,SNR=26
ABTA *e*Sn **Sn 12 20 53.3 -0.5**
comp=N,19nm,0.5s
SOKA Soboth 4.17 18 *i* Pn **Pn 12 20 10.1 +2.1**
comp=N,1.3nm,0.2s,SNR=5.1
SOKA *e*Sn **Sn 12 20 56.7 -0.2**
comp=N,4.2nm,0.3s
UPM Unac-Piva 4.25 82 *e*Pn **Pn 12 20 10.4 +1.1**
UPM Unac-Piva 4.25 82 ⇑*i*Pn **Pn 12 20 09.9 +0.6**
UPM *i* Sn **Sn 12 21 00.0 +0.8**
CEME Cevo 4.26 91 *e*Pn **Pn 12 20 10.0 +0.7**
CEME *i* Sn **Sn 12 21 00.2 +1.0**
BUM Brajici-Budva 4.27 94 ⇑*i*Pn **Pn 12 20 10.1 +0.7**
BUM *i* Sn **Sn 12 21 00.4 +1.0**
NKME Niksic 4.28 88 *e*Pn **Pn 12 20 10.2 +0.7**
NKME *i* Sn **Sn 12 21 00.5 +0.9**
VSL Villasalto 4.30 223 P **Pn 12 20 11.0 +1.2**
SBF Sospel 4.32 287 *e*P **Pn 12 20 10.8 +0.8**
SBF *e*Sn **Sn 12 20 55.0 -5.5**
comp=N,25nm,0.5s
MUGIO Muggio 4.34 319 P **Pn 12 20 10.5 +0.2**
KBA Koelnbreinsper 4.35 2 *i* Pn **Pn 12 20 11.3 +0.7**
comp=N,9.8nm,0.5s,SNR=10
KBA *e*Sn **Sn 12 21 01.2 -0.3**
comp=N,22nm,0.5s
DRME Dracevica, Mon 4.50 95 *e*Pn **Pn 12 20 12.9 +0.4**
DRME Dracevica, Mon 4.50 95 ⇓*i*Pn **Pn 12 20 13.3 +0.8**
DRME *i* Sn **Sn 12 21 06.0 +1.0**
TTG Podgorica 4.52 92 ⇓*i*Pn **Pn 12 20 13.6 +0.9**
TTG *i* Sn **Sn 12 21 06.4 +0.9**
ULC Ulcinj 4.59 98 ⇑*i*Pn **Pn 12 20 14.4 +0.7**
ULC *i* Sn **Sn 12 21 08.0 +0.9**
PLE Pljevlja 4.62 80 *e*Pn **Pn 12 20 14.9 +0.7**
PLE *i* Sn **Sn 12 21 08.7 +0.7**
FETA Feichten 4.62 339 *i* Pn **Pn 12 20 16.4 +2.1**
comp=N,6.1nm,0.4s,SNR=6.4
FETA *i* Sn **Sn 12 21 10.8 +2.6**
comp=N,4.9nm,0.4s
RUDO Rudo 4.64 77 *e*Pn **Pn 12 20 14.4 0.0**
WTTA Wattenberg 4.66 347 *i* Pn **Pn 12 20 16.9 +2.2**
comp=N,2.7nm,0.2s
WTTA *e*Sn **Sn 12 21 09.5 +0.5**
comp=N,24nm,0.5s
DAVOX Davos/Dischmat 4.67 331 Pn **Pn 12 20 17.1 +2.2**
comp=N,3.2nm,0.3s,baz=143,slow=18,SNR=25
DAVOX Sn **Sn 12 21 05.4 -4.0**
comp=N,1.2nm,0.3s,baz=138,slow=23,SNR=1.5
comp=N,9.0nm,0.4s
KOME Kolasin 4.69 86 *e*Pn **Pn 12 20 15.9 +0.7**
KOME *i* Sn **Sn 12 21 10.5 +0.7**
SQTA Sankt Quirin 4.69 344 *i* Pn **Pn 12 20 17.3 +2.1**
comp=N,12nm,0.3s
SQTA *i* Sn **Sn 12 21 11.5 +1.6**
comp=N,17nm,0.4s
BBLS Lazići 4.71 74 *e*Pn **Pn 12 20 16.1 +0.7**
WATA Walderalm 4.74 347 *e*Pn **Pn 12 20 18.1 +2.2**
comp=N,5.5nm,0.2s,SNR=6.9
WATA *e*Sn **Sn 12 21 11.9 +1.0**
comp=N,27nm,0.5s
ARSA Arzberg 4.82 20 *i* Pn **Pn 12 20 18.5 +1.6**
comp=N,3.1nm,0.3s
ARSA *i* Sn **Sn 12 21 10.7 -2.3**
comp=N,9.1nm,0.5s
MOTA Moosalm 4.83 343 *i* Pn **Pn 12 20 19.6 +2.4**
comp=N,3.9nm,0.3s
MOTA *e*Sn **Sn 12 21 15.4 +2.0**
comp=N,10nm,0.4s
LMR La Mourre 4.90 279 *e*P **Pn 12 20 17.9 0.0**
LMR *e*Sn **Sn 12 21 09.2 -5.6**
comp=N,2.7nm,0.5s
IVA Berane 4.97 86 ⇑*i*Pn **Pn 12 20 19.7 +0.7**
IVA *i* Sn **Sn 12 21 17.2 +0.6**
BIOA Bad Ischl, Aus 4.97 4 *i* Pn **Pn 12 20 19.8 +0.8**
comp=N,7.2nm,0.4s,SNR=5.8
BIOA *i* Sn **Sn 12 21 17.9 +1.3**
comp=N,26nm,0.5s
PVY Plav 5.03 89 ⇓*i*Pn **Pn 12 20 20.5 +0.7**
PVY *i* Sn **Sn 12 21 18.6 +0.5**
MBDF Montbardon 5.03 296 *e*P **Pn 12 20 21.1 +1.2**
MBDF *e*Sn **Sn 12 21 12.0 -6.2**
comp=N,5.5nm,0.5s
DAVA Damuels 5.11 334 *i* Pn **Pn 12 20 23.4 +2.4**
comp=N,7.2nm,0.5s,SNR=5.9
DAVA *e*Sn **Sn 12 21 21.7 +1.6**
comp=N,13nm,0.5s
DIVS Divibare 5.17 72 *e*Pn **Pn 12 20 21.7 -0.1**
MOA Molln 5.18 8 *i* Pn **Pn 12 20 23.0 +1.2**
comp=N,2.3nm,0.2s,SNR=4.4
MOA *i* Sn **Sn 12 21 21.0 -0.7**
comp=N,5.2nm,0.4s
LPG La Plagne 5.37 303 *e*P **Pn 12 20 27.1 +2.4**
LPG *e*Sn **Sn 12 21 20.5 -6.3**
comp=N,15nm,0.7s
FRGS Fruska Gora 5.39 61 ⇑P **Pn 12 20 27.7 +3.0**
FRGS Fruska Gora 5.39 61 *e*Pn **Pn 12 20 23.6 -1.1**
LPL La Plagne 5.39 303 *e*P **Pn 12 20 26.9 +2.0**
LPL *e*Sn **Sn 12 21 20.6 -6.6**
comp=N,8.4nm,0.5s
RONA Rosalia, Austr 5.44 23 *i* Pn **Pn 12 20 25.6 +0.2**
comp=N,1.3nm,0.1s,SNR=6.5
CONA Conrad Observa 5.54 19 *e*Pn **Pn 12 20 27.1 +0.3**
comp=N,3.7nm,0.3s,SNR=10
CONA *i* Sn **Sn 12 21 30.3 -0.3**
comp=N,3.7nm,0.3s
ORIF Oris-en-Rattie 5.69 295 *e*P **Pn 12 20 31.1 +2.2**
ORIF *e*Sn **Sn 12 21 27.8 -6.6**
comp=N,8.3nm,0.7s
GERES GERESS Array B 6.13 3 Pn **Pn 12 20 34.9 0.0**
comp=N,0.7nm,0.3s,baz=169,slow=13,SNR=13
GERES Sn **Sn 12 21 43.7 -1.4**
comp=N,2.2nm,0.3s,baz=163,slow=24,SNR=9.1
comp=N,0.7nm,0.3s
CKRC Cesky Krumlov 6.14 7 *e*PN **Pn 12 20 35.3 +0.3**
CKRC *e*SN **Sn 12 21 41.9 -3.5**
BOVS Bovan 6.33 79 ⇓P **Pn 12 20 39.1 +1.6**
CABF La Chapelle 6.35 310 *e*P **Pn 12 20 39.7 +1.7**
CABF *e*Sn **Sn 12 21 43.5 -7.2**
comp=N,8.5nm,0.7s
KHC Kasperske Hory 6.41 3 *e*PN **Pn 12 20 38.1 -0.6**
KHC *e*SN **Sn 12 21 48.6 -3.4**
VIVF Saint-Julien-I 6.49 292 *e*P **Pn 12 20 41.8 +2.0**
MDVR Moldovita 6.54 69 ⇓P **Pn 12 20 42.5 +2.1**
KRUC Moravsky 6.72 19 *e*PN **Pn 12 20 42.1 -0.9**
KRUC *e*SN **Sn 12 21 59.3 -0.4**
BZS Buzias 6.74 62 ⇑P **Pn 12 20 46.8 +3.6**
HINF Hinteralfeld 6.75 321 *e*P **Pn 12 20 44.2 +0.8**
HINF *e*Sn **Sn 12 21 53.2 -7.2**
comp=N,11nm,0.4s
STIP Stip 6.79 96 *i* Pn **Pn 12 20 46.6 +2.6**
LASF Ste Croix 6.90 284 *e*P **Pn 12 20 47.3 +1.9**
VRAC Vranov 7.00 19 LR LR 12 24 05.6
comp=N,58nm,19.1s,baz=203,slow=44
CDF Champ du Feu 7.01 326 *e*P **Pn 12 20 47.7 +0.6**
CDF *e*Sn **Sn 12 21 59.9 -7.1**
comp=N,8.4nm,0.4s
HAU Haudompre 7.12 320 *e*P **Pn 12 20 50.3 +1.9**
HAU *e*Sn **Sn 12 22 02.3 -7.2**
comp=N,24nm,0.5s
PRU Pruhonice 7.32 7 *e*SN **Sn 12 22 11.6 -2.8**
GZR Gura Zlata 7.43 66 ⇑P **Pn 12 20 55.9 +3.2**
VTS Vitosha 7.44 87 ⇑P **Pn 12 20 53.2 +0.3**
KEST Kesra 7.58 204 Pn **Pn 12 20 56.2 +1.3**
comp=N,0.1nm,0.3s,baz=342,slow=9.6,SNR=1.7
comp=N,1.7nm,0.6s
MORC Moravsky Berou 7.68 22 ⇑P Pn 12 21 02.0 +5.9
SMF Signal de Mont 7.70 304 *e*P **Pn 12 20 57.4 +1.1**
SMF *e*Sn **Sn 12 22 15.5 -8.2**
comp=N,5.8nm,0.6s
SFTF Sexfontaines 7.90 317 *e*P **Pn 12 21 01.6 +2.5**
baz=134
LOR Lormes 7.99 308 *e*P **Pn 12 21 02.6 +2.2**
baz=124
LOR *e*Sn **Sn 12 22 22.9 -8.0**
comp=N,3.5nm,0.4s
SSF Saint Saulge 8.10 306 *e*P **Pn 12 21 04.0 +2.2**
SSF *e*Sn **Sn 12 22 25.2 -8.2**
comp=N,3.6nm,0.6s
SAVF Savonnieres en 8.13 319 *e*P **Pn 12 21 04.2 +1.9**
BGF Bois d'Agland 8.28 301 *e*P **Pn 12 21 07.3 +3.0**
CAF Calviac 8.31 289 *e*P **Pn 12 21 07.3 +2.6**
MLR Muntele Rosu 9.61 69 Pn **Pn 12 21 24.0 +1.3**
comp=N,0.2nm,0.3s,baz=192,slow=18,SNR=1.8
MLR LR LR 12 25 56.7
comp=N,138nm,21.7s,baz=260,slow=43
comp=N,1.1nm,0.5s
ESDC Sonseca Array 13.24 262 Pn **Pn 12 22 14.3 +2.0**
comp=N,0.1nm,0.3s,baz=70,slow=14,SNR=4.2
ESDC LR LR 12 27 12.7
comp=N,64nm,18.9s,baz=15,slow=37
comp=N,0.5nm,0.8s
AKASG Malin Array Be 13.59 49 LR LR 12 27 40.5
comp=N,40nm,19.8s,baz=256,slow=38
BRTR Keskin Array B 15.71 94 Pn **P 12 22 48.5 -1.3**
comp=N,0.1nm,0.3s,baz=293,slow=8.9,SNR=3.0
BRTR LR LR 12 30 02.2
comp=N,83nm,18.8s,baz=308,slow=42
comp=N,0.3nm,0.3s
EKA Eskdalemuir Ar 16.48 326 Pn **P 12 22 57.5 -0.5**
baz=136,slow=14
comp=N,0.3nm,0.6s
HFS Hagfors 17.43 1 LR LR 12 30 27.9
comp=N,36nm,20.7s,baz=35,slow=39
NOA NORSAR Array B 18.37 357 LR LR 12 31 36.6
comp=N,24nm,18.6s,baz=180,slow=41
MMAI Mount Meron Ar 20.02 112 P Pn 12 23 39.5 +0.5
comp=N,2.3nm,0.7s,baz=334,slow=9.3,SNR=4.5
comp=N,2.3nm,0.7s
FINES FINESS Array B 20.28 18 P **P 12 23 39.9 +0.1**
comp=N,6.0nm,1.0s,baz=189,slow=15,SNR=2.0
comp=N,6.0nm,1.0s
KBZ Khabaz 21.65 77 P **P 12 23 56.4 +1.6**
comp=N,1.3nm,0.4s,baz=262,slow=12,SNR=5.1
comp=N,1.3nm,0.4s
TORD Torodi Ar. Bea 31.10 202 P **P 12 25 23.8 +0.9**
comp=N,0.8nm,0.9s,baz=11,slow=8.5,SNR=5.5
comp=N,0.8nm,0.9s
AKTO Aktyubinsk 31.38 60 LR LR 12 39 50.6
comp=N,20nm,19.2s,baz=321,slow=40
ARU Arti 31.84 49 LR LR 12 38 24.0
comp=N,21nm,19.5s,baz=316,slow=36
AAK Ala-Archa 44.20 68 LR LR 12 49 18.8
comp=N,30nm,19.4s,baz=341,slow=41
ZALV Zalesovo Beam 46.98 50 LR LR 12 49 46.5
comp=N,26nm,18.0s,baz=272,slow=39
MKAR Makanchi Array 47.82 60 P **P 12 27 41.9 0.0**
comp=N,0.8nm,0.8s,baz=340,slow=6.7,SNR=3.5
comp=N,0.8nm,0.8s
SONM Songino Array 61.87 50 P **P 12 29 26.0 +2.2**
comp=N,0.6nm,0.6s,baz=295,slow=9.2,SNR=3.7
comp=N,0.6nm,0.6s

ROM 08 12:22:06.0±0.1, 42°.738N±0°.002×13°.202E±0°.002, h9km, ML1.7/5, 2C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=302.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**153**	P	Pg	12 22 08.2	+0.2
T1202				S	Sg	12 22 09.4	0.0
T1245	**Castelsantange**	**0.12**	**355**	P	Pg	12 22 09.6	+0.6
T1245				S	Sg	12 22 11.6	+0.5
T1245				AML	AML		
	comp=E,950μm,0.3s						
T1245				AML	AML		
	comp=E,1102μm,0.5s						
T1245				AML	AML		
	comp=N,1710μm,1.0s						
T1245				AML	AML		
	comp=N,1325μm,1.0s						
SMA1	**SAN MARTINO**	**0.15**	**137**	AML	AML		
	comp=E,618μm,0.3s						
SMA1				AML	AML		
	comp=N,720μm,1.1s						
LNSS	**Leonessa**	**0.18**	**221**	⇑P	Pg	12 22 10.5	+0.6
LNSS				S	Sg	12 22 13.7	+1.2
LNSS				AML	AML		
	comp=E,992μm,0.7s						
LNSS				AML	AML		
	comp=N,879μm,0.1s						
LNSS				AML	AML		
	comp=E,882μm,0.8s						
LNSS				AML	AML		
	comp=N,768μm,0.8s						
T1243	**Rocca Santa Ma**	**0.19**	**103**	⇑P	Pg	12 22 10.6	+0.6
T1243				S	Sg	12 22 13.9	+1.2
T1217	**Poggiodomo (PG**	**0.20**	**263**	P	Pg	12 22 10.7	+0.5
T1217				S	Sg	12 22 14.4	+1.3
T1217				AML	AML		
	comp=E,287μm,1.2s						
T1217				AML	AML		
	comp=N,310μm,1.4s						
T1241	**Roccafluvione,**	**0.21**	**55**	P	Pg	12 22 10.9	+0.6
T1241				S	Sg	12 22 14.7	+1.4
T1241				AML	AML		
	comp=E,246μm,1.0s						
T1241				AML	AML		
	comp=E,290μm,0.2s						
T1241				AML	AML		
	comp=N,229μm,0.7s						
T1241				AML	AML		
	comp=N,216μm,0.5s						
RM33	**Pellescritta (**	**0.23**	**178**	P	Pg	12 22 11.5	+0.7
RM33				S	Sg	12 22 15.4	+1.5
RM33				AML	AML		
	comp=E,403μm,1.6s						
RM33				AML	AML		
	comp=N,350μm,1.1s						
RM33				AML	AML		
	comp=E,250μm,0.3s						
RM33				AML	AML		
	comp=N,328μm,0.3s						
RM33				AML	AML		
	comp=E,239μm,0.2s						
CAMP	**Campotosto**	**0.25**	**143**	AML	AML		
	comp=E,150μm,0.6s						
CAMP				AML	AML		
	comp=N,163μm,1.3s						
T1215	**Vallo di Nera,**	**0.25**	**285**	AML	AML		
	comp=E,338μm,0.1s						
T1215				AML	AML		
	comp=N,298μm,0.1s						
FDMO	**Fiordimonte**	**0.31**	**344**	⇓P	Pg	12 22 12.8	+0.6
FDMO				S	Sb	12 22 17.9	-1.0
FDMO				AML	AML		
	comp=E,84μm,0.8s						
FDMO				AML	AML		
	comp=E,118μm,0.2s						
FDMO				AML	AML		
	comp=N,122μm,1.1s						
FDMO				AML	AML		
	comp=N,96μm,1.0s						
TERO	**Teramo**	**0.32**	**111**	AML	AML		
	comp=E,193μm,0.3s						
TERO				AML	AML		
	comp=N,310μm,0.1s						
GUMA	**Gualdo di Mace**	**0.34**	**17**	AML	AML		
	comp=E,1038μm,0.3s						
GUMA				AML	AML		
	comp=E,730μm,0.4s						
GUMA				AML	AML		
	comp=N,790μm,0.6s						
GUMA				AML	AML		
	comp=N,614μm,0.6s						
CESI	**CESI - Serrava**	**0.34**	**321**	AML	AML		
	comp=N,240μm,0.5s						
CESI				AML	AML		
	comp=E,174μm,0.3s						
ASSB	**Assisi San Ben**	**0.50**	**308**	AML	AML		
	comp=N,134μm,1.4s						
ASSB				AML	AML		
	comp=E,136μm,0.5s						
FAGN	**Fagnano**	**0.55**	**149**	AML	AML		
	comp=E,141μm,0.7s						
FAGN				AML	AML		
	comp=N,122μm,1.6s						

ROM 08 12:23:02.3±0.0, 42°.743N±0°.002×13°.186E±0°.004, h10km, ML2.1/2, Error ellipse: s-maj=0.3km s-min=0.1km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.05**	**143**	P	Pg	12 23 04.7	+0.2
T1202				S	Sg	12 23 05.9	-0.1
NRCA	**Norcia**	**0.10**	**330**	P	Pg	12 23 05.5	+0.4
NRCA				S	Sg	12 23 07.3	+0.2
T1245	**Castelsantange**	**0.11**	**1**	P	Pg	12 23 05.7	+0.4
T1245				S	Sg	12 23 08.0	+0.6
T1245				AML	AML		
	comp=E,1103μm,0.5s						
T1245				AML	AML		
	comp=E,1102μm,0.5s						
T1245				AML	AML		
	comp=N,1710μm,1.0s						
T1204	**Amatrice, Fraz**	**0.12**	**125**	P	Pg	12 23 05.9	+0.6
T1204				S	Sg	12 23 08.2	+0.8
SMA1	**SAN MARTINO**	**0.16**	**135**	P	Pg	12 23 06.8	+0.9
SMA1				S	Sg	12 23 09.0	+0.6
MC2	**Monte Cornacci**	**0.17**	**1**	P	Pg	12 23 06.8	+0.7
MC2				S	Sg	12 23 10.2	+1.3
LNSS	**Leonessa**	**0.18**	**218**	P	Pg	12 23 06.9	+0.7
LNSS				S	Sg	12 23 10.2	+1.4
LNSS				AML	AML		
	comp=E,993μm,0.7s						
LNSS				AML	AML		
	comp=N,882μm,0.1s						
LNSS				AML	AML		
	comp=E,991μm,0.7s						
LNSS				AML	AML		
	comp=N,880μm,0.1s						
LNSS				AML	AML		
	comp=E,992μm,0.7s						
LNSS				AML	AML		
	comp=N,879μm,0.1s						
LNSS				AML	AML		
	comp=N,878μm,0.1s						
LNSS				AML	AML		
	comp=E,990μm,0.7s						
MMO1	**Montemonaco**	**0.19**	**34**	P	Pg	12 23 06.9	+0.5
MMO1				S	Sg	12 23 10.2	+1.1
T1217	**Poggiodomo (PG**	**0.19**	**261**	P	Pg	12 23 07.1	+0.7
T1217				S	Sg	12 23 10.5	+1.3
T1216	**Preci, Frazion**	**0.19**	**320**	P	Pg	12 23 07.0	+0.5
T1216				S	Sg	12 23 10.1	+0.9
T1243	**Rocca Santa Ma**	**0.20**	**103**	P	Pg	12 23 07.1	+0.5
T1243				S	Sg	12 23 10.4	+0.9
T1241	**Roccafluvione,**	**0.21**	**58**	P	Pg	12 23 07.4	+0.6
T1241				S	Sg	12 23 11.1	+1.3
RM33	**Pellescritta (**	**0.23**	**175**	P	Pg	12 23 07.9	+0.7
RM33				S	Sg	12 23 11.9	+1.5
T1215	**Vallo di Nera,**	**0.24**	**284**	P	Pg	12 23 08.0	+0.7
T1215				S	Sg	12 23 11.8	+1.1
CAMP	**Campotosto**	**0.27**	**141**	P	Pg	12 23 08.4	+0.7
CAMP				S	Sb	12 23 12.7	-1.2
FDMO	**Fiordimonte**	**0.30**	**346**	P	Pg	12 23 09.1	+0.6
FDMO				S	Sg	12 23 13.6	+1.1
TERO	**Teramo**	**0.33**	**111**	S	Sg	12 23 10.0	-3.4
CESI	**CESI - Serrava**	**0.33**	**322**	P	Pg	12 23 09.7	+0.6
CESI				S	Sg	12 23 14.6	+1.1
GUMA	**Gualdo di Mace**	**0.34**	**19**	P	Pb	12 23 10.1	-0.4
CSP1	**Cessapalombo**	**0.35**	**2**	P	Pg	12 23 09.9	+0.6
CSP1				S	Sb	12 23 15.8	-0.6
GIGS	**Gran Sasso**	**0.41**	**136**	P	Pg	12 23 11.0	+0.6
GIGS				S	Sb	12 23 17.0	-1.0

MOS ***08*** *12:24:22.8±0.8, 43°.61N×143°.43E, h193km, mb4.0/1, Error ellipse: s-maj=18.1km s-min=14.0km az=116.2*
SKHL ***08*** *12:24:23.7±0.2, 43°.50N×143°.50E, h178km±7km, mb4.7/3, msha5.3/3*
JMA ***08*** *12:24:24.3±0.2, 43°.6N±0°.7×143°.4E±0°.9, h184km±1km, MV3.4/39, ABASHIRI REGION*
IDC ***08*** *12:24:24.9±5.6, 43°.79N×143°.41E, h188km±35km, mb3.5/12, mbtmp3.9/14, MS3.1/2, Error ellipse: s-maj=83.8km s-min=17.2km az=161.0*

ISC 08 12:24:23.3±0.7, 43°.55N±0°.05×143°.47E±0°.05, h189km±6km, n47, σ0°85/58, mb3.7/12, 1C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.33**	**138**	P	**Pn**	**12 24 49.2**	**+0.7**
JAR				*e*S	**Sn**	**12 25 07.8**	**-0.1**
JMP	**Maruseppu**	**0.47**	**350**	*i* P	**Pn**	**12 24 49.3**	**+0.4**
JMP				*e*S	**Sn**	**12 25 08.2**	**-0.8**
JTKR	**Abashiri--Toko**	**0.53**	**37**	*i* P	**Pn**	**12 24 49.8**	**+0.6**
JTKR				*e*S	**Sn**	**12 25 08.8**	**-0.5**
JKK2	**Kamakawa 2**	**0.62**	**302**	*i* P	**Pn**	**12 24 50.2**	**+0.6**
JKK2				*e*S	**Sn**	**12 25 09.7**	**-0.3**
JOB	**Onbets**	**0.69**	**157**	*i* P	**Pn**	**12 24 50.8**	**+0.8**
JOB				*e*S	**Sn**	**12 25 10.7**	**+0.2**
JFR	**Furan**	**0.74**	**239**	P	**Pn**	**12 24 51.0**	**+0.8**
JFR				*e*S	**Sn**	**12 25 10.9**	**-0.1**
JCH	**Churui**	**0.93**	**185**	*i* P	**Pn**	**12 24 51.5**	**+0.1**
JCH				*e*S	**Sn**	**12 25 11.8**	**-1.3**
JAK	**Akkeshi**	**1.05**	**121**	*i* P	**Pn**	**12 24 52.5**	**+0.3**
JAK				*e*S	**Sn**	**12 25 13.8**	**-0.8**
AKK	**Akkeshi**	**1.14**	**117**	*e*P	**Pn**	**12 24 53.1**	**+0.2**
AKK				AMB	AMB	12 24 54.3	
	210nm,0.3s						
AKK				*e*S	**Sn**	**12 25 15.0**	**-0.7**
AKK				A	A	12 25 16.4	
	750nm,0.5s						
AKK				A	A	12 25 16.4	
	1μm,0.5s						
JRA	**Rausu**	**1.26**	**71**	P	**Pn**	**12 24 54.9**	**+1.0**
JHR	**Hokuryu**	**1.28**	**279**	*e*P	**Pn**	**12 24 54.5**	**+0.5**
JNBK	**Urakawa-nobuka**	**1.37**	**203**	P	**Pn**	**12 24 55.2**	**+0.3**
JNBK				*e*S	**Sn**	**12 25 18.6**	**-0.6**
RUSJ	**Misakicho**	**1.41**	**66**	*e*PN	**Pn**	**12 24 56.3**	**+1.2**
RUSJ				*e*S	**Sn**	**12 25 18.7**	**-1.1**
JSS	**Shosan**	**1.45**	**307**	P	**Pn**	**12 24 56.1**	**+0.7**
JSE	**Soyaes**	**1.55**	**336**	P	**Pn**	**12 24 56.5**	**+0.1**
JEW	**Eniwo**	**1.64**	**245**	*e*P	**Pn**	**12 24 58.1**	**+0.8**
JEW				*e*S	**Sn**	**12 25 22.9**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.66**	**95**	⇑*i*PN	**Pn**	**12 24 57.5**	**+0.1**
NMR				*e*S	**Sn**	**12 25 22.4**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.66**	**95**	*i* P	**Pn**	**12 24 57.6**	**+0.1**
NMR				AMB	AMB	12 24 57.8	
	90nm,0.3s						
NMR				*e*S	**Sn**	**12 25 23.1**	**-0.8**
NMR				A	A	12 25 24.7	
	190nm,0.2s						
NMR				A	A	12 25 24.7	
	330nm,0.2s						
NEM2	**Nemuro 2**	**1.67**	**95**	*i* P	**Pn**	**12 24 57.5**	**0.0**
NEM2				*e*S	**Sn**	**12 25 22.3**	**-1.8**
YUK	**Yuzh-Kuril'sk**	**1.80**	**73**	*i* PN	**Pn**	**12 25 00.0**	**+1.2**
YUK				*e*S	**Sn**	**12 25 27.2**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**1.80**	**73**	*i* P	**Pn**	**12 25 00.1**	**+1.2**
YUK				AMB	AMB	12 25 00.7	
	300nm,0.5s						
YUK				*e*S	**Sn**	**12 25 27.2**	**+0.7**
YUK				A	A	12 25 32.9	
	290nm,0.5s						
YUK				A	A	12 25 32.9	
	290nm,0.5s						
JWK2	**Keihoku**	**2.10**	**328**	*e*P	**Pn**	**12 25 02.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**3.45**	**352**	*e*PN	**Pn**	**12 25 17.6**	**-0.1**
YSS				*e*S	**Sn**	**12 25 58.6**	**-1.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,1.1s						

YSS	Yuzh-Sakhalins	3.45	352	eP		Pn	12 25 18.5 +0.8
YSS				AMB		AMB	12 25 21.4
comp=N,10.0nm,0.5s							
USRK	Ussuriysk Ar.	8.32	278	P		Pn	12 26 19.8 -0.9
comp=N,1.9nm,0.6s,baz=85,slow=15,SNR=1.8							
SEY	Seymchan	20.11	12	P		P	12 28 41.1 -1.1
comp=N,1.7nm,0.8s,baz=194,slow=14,SNR=5.2							
SONM	Songino Array	26.08	293	P		P	12 29 40.9 +1.4
comp=N,3.4nm,0.6s,baz=86,slow=9.1,SNR=15							
comp=N,3.4nm,0.6s							
H11N2	WAKE ISLAND Hy	30.81	133	T		T	13 02 04.4
baz=328,slow=75,SNR=15							
H11N1	WAKE ISLAND Hy	30.82	133	T		T	13 02 07.1
baz=328,slow=75,SNR=11							
H11N3	WAKE ISLAND Hy	30.83	133	T		T	13 02 06.0
baz=328,slow=75,SNR=11							
H11S1	WAKE ISLAND Hy	31.72	135	T		T	13 03 18.7
baz=329,slow=76,SNR=23							
H11S3	WAKE ISLAND Hy	31.72	135	T		T	13 03 14.3
baz=329,slow=76,SNR=21							
H11S2	WAKE ISLAND Hy	31.73	135	T		T	13 03 20.0
baz=329,slow=76,SNR=20							
NRIK	Noril'sk	38.15	332	LR		LR	12 49 44.3
comp=N,27nm,19.5s,baz=210,slow=40							
ZALV	Zalesovo Beam	38.98	307	P		P	12 31 31.0 +0.1
comp=N,0.6nm,0.2s,baz=89,slow=9.1,SNR=4.4							
comp=N,0.6nm,0.2s							
MKAR	Makanchi Array	42.30	297	P		P	12 31 58.8 +0.6
comp=N,1.2nm,0.6s,baz=80,slow=9.7,SNR=9.4							
MKAR				LR		LR	12 51 13.2
comp=N,26nm,18.2s,baz=311,slow=38							
comp=N,1.2nm,0.6s							
ILAR	Eielson Array	43.23	36	P		P	12 32 05.9 +0.5
comp=N,0.5nm,0.9s,baz=266,slow=4.5,SNR=4.9							
comp=N,0.5nm,0.9s							
KURK	Kurchatov	43.41	303	P		P	12 32 08.4 +1.4
KURK	Kurchatov	43.41	303	eP		P	12 32 08.4 +1.4
KURBB	Kurchatov Arra	43.50	303	P		P	12 32 08.3 +0.7
comp=N,1.1nm,0.4s,baz=72,slow=9.0,SNR=15							
comp=N,1.1nm,0.4s							
BVAR	Borovoye Array	47.55	308	P		P	12 32 40.2 +0.7
comp=N,1.2nm,0.4s,baz=78,slow=9.9,SNR=10							
comp=N,1.2nm,0.4s							
INK	Inuvik	47.92	30	P		P	12 32 42.7 +0.7
comp=N,0.8nm,0.5s,baz=299,slow=9.2,SNR=5.4							
comp=N,0.8nm,0.5s							
GEYT	Alibeck	62.17	297	P		P	12 34 24.3 -0.3
comp=N,1.2nm,0.4s,baz=63,slow=11,SNR=1.6							
comp=N,1.2nm,0.4s							
FINES	FINESS Array B	63.81	332	P		P	12 34 34.8 -0.1
comp=N,8.8nm,1.1s,baz=67,slow=6.4,SNR=8.9							
comp=N,8.8nm,1.1s							
NOA	NORSAR Array B	68.79	337	P		P	12 35 05.2 -1.3
comp=N,0.3nm,0.5s,baz=23,slow=3.3,SNR=2.2							
comp=N,0.3nm,0.5s							
AKASG	Malin Array Be	70.13	322	P		P	12 35 13.8 -1.1
comp=N,0.5nm,0.4s,baz=42,slow=6.5,SNR=3.6							
comp=N,0.5nm,0.4s							
GERES	GERESS Array B	77.99	329	P		P	12 36 00.8 +0.3
comp=N,0.3nm,0.4s,baz=44,slow=5.8,SNR=2.4							
comp=N,0.3nm,0.4s							

*IDC **08** 12:25:43.9±1.4, 18°.99S×173°.16W, h0km, mb4.0/4, mbtmp4.1/6, ML3.2/2, MS3.2/4, Error ellipse: s-maj=40.4km s-min=26.3km az=136.0*

ISC 08 12:25:46.7±0.9, 19°.0S±0°.1×173°.0W±0°.1, h21km, n12, σ1≧53/7, mb4.0/4, MS3.5/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.19	14	Pn		Pn	12 27 02.4 -0.8
1.3nm,0.3s,baz=174,slow=18,SNR=2.1							
AFI				Sn		Sn	12 27 49.8 -13
1.9nm,0.3s,baz=274,slow=22,SNR=2.2							
21nm,0.7s							
MSVF	Nonsavu	8.56	277	LR		LR	12 30 53.1
comp=Z,326nm,18.1s,baz=34,slow=37							
RAR	Rarotonga	12.66	102	Pn		Pn	12 28 45.1 -0.4
0.9nm,0.3s,baz=263,slow=9.9,SNR=5.4							
RAR				LR		LR	12 33 35.1
comp=Z,20nm,18.3s,baz=276,slow=37							
7.9nm,0.7s							
URZ	Urewera	21.04	202	P		P	12 30 28.8 -0.3
8.6nm,1.1s,baz=343,slow=11,SNR=1.9							
8.6nm,1.1s							
PAE	Paea	22.30	90	eT		T	12 53 48.9
1.0nm,0.3s							
PPT2	Papeete2	22.32	90	eLR		LR	12 35 50.5
comp=Z,34nm,22.2s							
PPT2	Papeete2	22.32	90	eT		T	12 53 58.1
1.0nm,0.3s							
STKA	Stephens Creek	42.65	243	LR		LR	12 49 45.7
comp=Z,51nm,18.0s,baz=24,slow=34							
ASAR	Alice Springs	49.42	255	P		P	12 34 34.9 -0.6
3.6nm,0.7s,baz=94,slow=7.8,SNR=46							
ASAR				PcP		PcP	12 35 59.6 +1.9
0.6nm,0.8s,baz=107,slow=4.7,SNR=2.7							
3.6nm,0.7s							
WRA	Warramunga Arr	49.46	260	P		P	12 34 34.4 -1.4
0.9nm,0.6s,baz=95,slow=7.4,SNR=9.2							
0.9nm,0.6s							
FITZ	Fitzroy Crossi	57.88	260	LR		LR	12 58 31.0
comp=Z,33nm,18.2s,baz=94,slow=34							
ILAR	Eielson Array	85.88	11	P		P	12 38 26.0 +1.6
0.4nm,0.7s,baz=224,slow=3.6,SNR=3.4							
0.4nm,0.7s							

NOU 08 12:55:08.3, 17°.45S×167°.76E, h26km, MLv4.0/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	0.49	124	P		Pn	12 55 19.5 -0.1
RTV	Rentapao	0.72	118	P		Pn	12 55 23.0 +0.2
LIFNC	LIFOU	3.35	188	P		Pn	12 55 58.6 -0.3
MARNC	Mare, Loyalty	4.02	176	P		Pn	12 56 07.9 -0.3
KOUNC	Koumac, New Ca	4.51	226	P		Pn	12 56 15.2 +0.3
YATNC	Mamie plateau,	4.66	190	P		Pn	12 56 16.4 -0.6
DZM	Mont Dzumac	4.76	195	P		Pn	12 56 18.8 +0.3
NOUC	Port Laguerre	4.83	196	P		Pn	12 56 19.6 +0.3
ONTNC	Ouen Toro	4.99	194	P		Pn	12 56 21.5 0.0
OUENC	Ouen Island, N	5.02	190	P		Pn	12 56 22.8 +0.9

*DJA **08** 13:15:44.0±2.3, 5°.N±21°.×12°.8E±°, h10km, M4.3/9, mb4.4/7, mB4.9/2, MLv4.3/9, Mw(mB)4.2/2, MwMwp4.3/1, Mwp4.7/1*
*IDC **08** 13:15:46.1±0.9, 3°.93N×126°.85E, h0km, mb3.7/9, mbtmp3.7/10, ML3.4/1, MS2.7/2, Error ellipse: s-maj=78.7km s-min=14.7km az=67.0*
*MAN **08** 13:15:54.8, 5°.04N×128°.12E, h32km, mb4.7, ML3.5, MS3.4*

ISC 08 13:15:46.5±0.8, 4°.64N±0°.06×128°.18E±0°.10, h10km, n24, σ2≧40/26, mb3.8/9, 1C-2D, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	2.81	188	P		Pb	13 16 35.1 -1.7
SGSI	Sangihe	2.81	250	P		Pn	13 16 33.2 +1.6
KCP	Kidapawan	3.88	308⇓	eP		Pn	13 16 48.9 +2.6
KCP				i S		Sb	13 17 39.7 -2.4
TNTI	Ternate	3.92	192	P		Pn	13 16 51.2 +4.3
BIPH	Bislig	3.96	333⇓	eP		Pn	13 16 50.3 +2.8
BIPH				eS		Sn	13 17 33.8 -0.2
LBMI	Labuha	5.28	187	P		Pn	13 17 09.2 +3.6
0.1nm18nm,0.9s							
KMSI	Cibinong	5.82	226	P		Pn	13 17 16.1 +3.1
0.6nm134nm,0.6s							
GHBP	Garcia Hernand	6.27	323⇑	eP		Pg	13 17 45.5 -1.2
GHBP				i S		Sn	13 18 32.1 +1.2
SIJI	Sorong	6.28	151	Pn		Pn	13 17 22.1 +2.9
0.8nm,0.3s,baz=111,slow=23,SNR=12							
SIJI				Sn		Sn	13 18 28.4 -2.7
0.9nm,0.3s,baz=259,slow=23,SNR=1.4							
3.3nm,0.2s							
SIJI	Sorong	6.28	151	P		Pn	13 17 21.3 +2.0
0.1nm720nm9.1nm,0.7s							
GTOI	Gorontalo	6.52	233	P		Pn	13 17 25.1 +2.5
0.0nm6.5nm,0.5s							
MRSI	Marisa	7.48	237	P		Pn	13 17 38.8 +3.0
0.3nm878nm68nm,0.6s							
APSI	Ampana	8.54	230	P		Pn	13 17 53.7 +3.3
FITZ	Fitzroy Crossi	22.73	186	P		P	13 20 39.3 -10
1.2nm,0.7s,baz=138,slow=11,SNR=1.7							
FITZ				S		S	13 24 26.8 -31
1.2nm,0.9s,baz=58,slow=18,SNR=1.4							
1.2nm,0.7s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.16	166	P		P	13 21 11.9 -0.4
0.2nm,0.3s,baz=345,slow=9.9,SNR=19							
0.2nm,0.3s							
ASAR	Alice Springs	28.68	169	P		P	13 21 40.7 -3.2
0.2nm,0.3s,baz=355,slow=7.9,SNR=2.2							
ASAR				PcP		PcP	13 24 55.0 +0.3
0.4nm,0.4s,baz=351,slow=2.5,SNR=8.2							
0.2nm,0.3s							
KSRS	Korea Array	32.66	360	LR		LR	13 36 17.3
comp=Z,6.3nm,20.8s,baz=100,slow=37							
STKA	Stephens Creek	38.49	162	P		P	13 23 08.3 -0.7
0.4nm,0.3s,baz=332,slow=12,SNR=5.0							
0.4nm,0.3s							
SONM	Songino Array	46.93	340	P		P	13 24 19.2 +1.7
0.4nm,0.4s,baz=157,slow=11,SNR=2.2							
0.4nm,0.4s							
PALK	Pallekele	47.28	276	LR		LR	13 46 03.8
comp=Z,15nm,18.4s,baz=229,slow=40							
MKAR	Makanchi Array	57.66	324	P		P	13 25 38.0 +0.9
0.8nm,0.3s,baz=111,slow=8.1,SNR=13							
0.8nm,0.3s							
ZALV	Zalesovo Beam	60.45	332	P		P	13 25 56.2 -0.2
0.4nm,0.3s,baz=134,slow=10,SNR=2.1							
0.4nm,0.3s							
KURBB	Kurchatov Arra	61.77	327	P		P	13 26 06.1 +0.7
1.3nm,0.5s,baz=123,slow=6.2,SNR=13							
1.3nm,0.5s							
BVAR	Borovoye Array	67.36	326	P		P	13 26 42.1 +0.1
0.5nm,0.6s,baz=126,slow=7.3,SNR=3.2							
0.5nm,0.6s							

*BUL **08** 13:25:01.9±1.0, 22°.18S×32°.59E, h10km, MD3.5*
*EAF **08** 13:25:03.0±1.3, 22°.07S×32°.56E, h10km, MD3.4*

PRE 08 13:24:45.7±1.5, 21°.36S×33°.33E, h10km, ML2.2, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	Mopani	2.79	219	eP		Pn	13 25 30.1 -0.4
MOPA				eS		Sn	13 26 04.6 +0.3
MOPA				IAML			13 26 11.5
comp=Z,3.4nm,0.2s							
MOPA	Mopani	2.79	219	eP		Pb	13 25 33.4 -2.3
MOPA				i S		Sn	13 25 57.1 -7.2
MOPA	Mopani	2.79	219	eP		Pb	13 25 33.4 -2.3
MOPA				i S		Sn	13 25 57.1 -7.2
MUSN	Musina, Limpop	3.35	253	eP		Pn	13 25 39.9 +1.6
MUSN				eS		Sn	13 26 18.6 +0.5
MUSN				IAML			13 26 37.8
comp=Z,6.7nm,0.3s							
BLWY	Bulawayo	4.58	285	eS		Sn	13 26 50.1 +1.6
BLWY				IAML			13 27 18.3
comp=Z,22nm,0.3s							
BLWY	Bulawayo	4.58	285	i P		Pb	13 26 06.2 0.0
BLWY				eS		Sn	13 26 51.8 +3.3
BLWY	Bulawayo	4.58	285	i P		Pb	13 26 06.2 0.0
BLWY				eS		Sn	13 26 51.8 +3.3
MATP	Matopo	4.61	281	i P		Pb	13 26 05.9 -0.9
MATP				eS		Sn	13 26 52.4 +3.2
MATP	Matopo	4.61	281	i P		Pb	13 26 05.9 -0.9
MATP				eS		Sn	13 26 52.4 +3.2
LEPH	Lephalale, Lim	5.68	243	eP		Pn	13 26 11.6 +1.3
LEPH				eS		Sn	13 27 13.1 -2.6
LEPH				IAML			13 27 41.9
comp=Z,7.8nm,0.5s							
LBTB	Lobatse	7.99	241	eP		Pn	13 26 44.4 +2.4
LBTB				eS		Sn	13 28 09.2 -3.4
LBTB				IAML			13 29 14.2
comp=Z,1.8nm,0.6s							
LBTB	Lobatse	7.99	241	i P		Pn	13 26 44.4 +2.4
LBTB				i S		Sn	13 27 58.1 -14
LBTB	Lobatse	7.99	241	i P		Pn	13 26 44.4 +2.4
LBTB				i S		Sn	13 27 58.1 -14

*IDC **08** 13:51:51.4±1.9, 17°.85N×121°.05E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=73.2km s-min=24.1km az=52.0*
*MAN **08** 13:52:00.7, 17°.74N×120°.36E, h34km, mb4.2, ML3.1, MS2.8*

ISC 08 13:51:58.8±1.2, 17°.5N±0°.1×120°.5E±0°.1, h35km, n5, σ2≧17/5, mb3.6/3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACPP	Pamplona Cagay	1.28	40⇓	eP		Pn	13 52 21.0 +0.8
PACPP				i S		Sn	13 52 36.2 +0.1
CMAR	Chiang Mai Arr	20.52	276	P		P	13 56 36.3 +2.1
0.2nm,0.4s,baz=105,slow=8.5,SNR=4.3							
0.2nm,0.4s							
WRA	Warramunga Arr	39.59	159	P		P	13 59 25.7 -1.3
0.6nm,0.9s,baz=344,slow=8.7,SNR=16							
0.6nm,0.9s							
ASAR	Alice Springs	42.93	162	P		P	13 59 54.1 -0.3
0.7nm,0.3s,baz=338,slow=7.0,SNR=38							
0.7nm,0.3s							
KURBB	Kurchatov Arra	46.99	324	P		P	14 00 24.4 -2.0
0.4nm,0.6s,baz=118,slow=9.0,SNR=4.2							
0.4nm,0.6s							

*PRE **08** 14:07:11.1±2.2, 12°.44S×33°.49E, h10km, ML4.5*
*IDC **08** 14:07:19.4±0.8, 13°.63S×34°.63E, h0km, mb3.9/11, mbtmp4.1/18, ML4.4/5, MS3.2/9, Error ellipse: s-maj=21.6km s-min=14.0km az=136.0*
*NEIC **08** 14:07:20.9±1.6, 13°.54S±0°.08×34°.4E±0°.1, h10km±2km, mb4.4/8, Error ellipse: s-maj=22.0km s-min=13.1km az=108.0*

ISC 08 14:07:21.7±0.5, 13°.67S±0°.05×34°.49E±0°.06, h18km, n56, σ2≧05/63, mb4.1/14, MS3.2/4, Malawi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARM1	KARONGA	3.74	351	i P		Pn	14 08 19.3 +0.8
KARM1				S		Sn	14 09 00.6 -1.6
KARM1	KARONGA	3.74	351	i P		Pn	14 08 19.3 +0.8
KARM1				S		Sn	14 09 00.6 -1.6
LSZ	Lusaka	6.31	255	Pn		Pn	14 08 56.8 +2.8
55nm,0.3s,baz=80,slow=12,SNR=102							
LSZ				Sn		Sn	14 10 06.0 +0.2
20nm,0.3s,baz=353,slow=23,SNR=10.0							
LSZ				Lg		Lg	14 10 42.6
34nm,0.3s,baz=163,slow=20,SNR=12							
LSZ				LR		LR	14 11 38.1
comp=Z,226nm,18.9s,baz=106,slow=40							
LSZ	Lusaka	6.31	255	Pn		Pn	14 08 53.7 -0.3
BLWY	Bulawayo	8.55	220	eP		Pn	14 09 27.0 +2.2
BLWY				eS		Sn	14 10 59.8 -1.1
BLWY				IAML			14 12 17.6
comp=Z,323nm,0.6s							
BLWY	Bulawayo	8.55	220	eP		Pn	14 09 27.3 +2.5
BLWY				eS		Sn	14 10 53.0 -7.9
BLWY	Bulawayo	8.55	220	eP		Pn	14 09 27.3 +2.5
BLWY				eS		Sn	14 10 53.0 -7.9
MATP	Matopo	8.83	220	Pn		Pn	14 09 30.5 +1.9
comp=Z,8.8nm,0.3s,baz=47,slow=13,SNR=103							
MATP				Sn		Sn	14 11 04.1 -3.7
comp=Z,7.2nm,0.3s,baz=148,slow=9.8,SNR=8.7							
MATP				Lg		Lg	14 12 00.8
comp=Z,11nm,0.3s,baz=94,slow=17,SNR=7.8							
comp=Z,32nm,0.4s							
MATP	Matopo	8.83	220	eP		Pn	14 09 30.7 +2.1
MATP				eS		Sn	14 11 00.8 -7.0
MATP	Matopo	8.83	220	eP		Pn	14 09 30.7 +2.1
MATP				eS		Sn	14 11 00.8 -7.0
MUSN	Musina, Limpop	9.64	207	eP		Pn	14 09 41.4 +1.8
MOPA	Mopani	10.23	196	eP		Pn	14 09 50.5 +2.9
MOPA				eS		Sn	14 11 53.3 +11
MOPA	Mopani	10.23	196	eP		Pn	14 09 49.4 +1.8
MOPA				eS		Sn	14 11 34.4 -7.5
MOPA	Mopani	10.23	196	eP		Pn	14 09 49.4 +1.8
MOPA				eS		Sn	14 11 34.4 -7.5
KIBK	Kibwezi	11.79	18	Pn		Pn	14 10 07.6 -1.6
LEPH	Lephalale, Lim	11.95	211	eP		Pn	14 10 11.2 -0.2
LEPH				eS		Sn	14 12 22.3 -2.1
MMAL	MMAL	12.70	194	eP		Pn	14 10 28.2 +6.6
KMBO	Kilima Mbogo	12.76	13	Lg		Lg	14 14 01.6
baz=286,slow=24,SNR=6.1							
OPO	Ambohidratompo	13.14	113	Pn		Pn	14 10 27.7 +0.1
baz=239,slow=23,SNR=1.2							
OPO				Sn		Sn	14 12 45.1 -8.4
comp=Z,0.1nm,0.3s,baz=293,slow=20,SNR=1.7							
comp=Z,0.7nm,0.4s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	Mbarara	13.50	344	Pn		Pn	14 10 32.9 +0.2
comp=Z,2.8nm,0.3s,baz=224,slow=15,SNR=3.6							
MBAR				Sn		Sn	14 13 04.0 +1.5
comp=Z,0.6nm,0.3s,baz=44,slow=23,SNR=1.0							
MBAR				Lg		Lg	14 14 22.9
comp=Z,2.1nm,0.3s,baz=243,slow=22,SNR=6.3							
MBAR				LR		LR	14 15 56.9
comp=Z,74nm,18.6s,baz=160,slow=38							
comp=Z,5.0nm,0.3s							
MBAR	Mbarara	13.50	344	Pn		Pn	14 10 31.4 -1.3
LBTB	Lobatse	14.06	215	Pn		Pn	14 10 40.4 +0.3
comp=Z,1.9nm,0.3s,baz=36,slow=14,SNR=16							
LBTB				Sn		Sn	14 13 05.7 -10
comp=Z,2.3nm,0.3s,baz=345,slow=4.7,SNR=5.7							
LBTB				Lg		Lg	14 14 43.3
comp=Z,3.0nm,0.3s,baz=131,slow=20,SNR=2.8							
LBTB				LR		LR	14 15 11.0
comp=Z,21nm,19.5s,baz=43,slow=33							
comp=Z,5.0nm,0.4s							
LBTB	Lobatse	14.06	215			Pn	14 10 40.1 -0.1
LBTB	Lobatse	14.06	215	eP		Pn	14 10 39.3 -0.8
LBTB	Lobatse	14.06	215	eP		Pn	14 10 40.6 +0.4
LBTB	Lobatse	14.06	215	eP		Pn	14 10 40.6 +0.4
VOI	Vohitsoka	14.29	127	P		P	14 10 51.5 +1.0
TSUM	Tsumeb	17.12	249	P		Pn	14 11 21.4 +1.1
comp=Z,2.3nm,0.4s,baz=62,slow=4.0,SNR=3.2							
TSUM				Sn		Sn	14 14 26.1 -4.4
comp=Z,0.4nm,0.3s,baz=9.2,slow=8.3,SNR=1.8							
TSUM				LR		LR	14 18 17.5
comp=Z,124nm,18.9s,baz=146,slow=38							
TSUM	Tsumeb	17.12	249			Pn	14 11 21.1 +0.7
TSUM	Tsumeb	17.12	249	eP		Pn	14 11 06.8 -14
BOSA	Boshof	17.17	209	P		Pn	14 11 21.5 +0.6
comp=Z,0.9nm,0.3s,baz=26,slow=16,SNR=12							
BOSA				S		Sn	14 14 21.5 -10
comp=Z,3.1nm,0.5s,baz=278,slow=21,SNR=3.2							
BOSA				Lg		Lg	14 16 15.5
comp=Z,0.6nm,0.3s,baz=126,slow=18,SNR=2.6							
BOSA				LR		LR	14 17 28.3
comp=Z,58nm,19.6s,baz=13,slow=35							
comp=Z,4.1nm,0.4s							
BOSA	Boshof	17.17	209			Pn	14 11 21.4 +0.4
BOSA	Boshof	17.17	209	eP		Pn	14 11 22.0 +1.0
BOSA	Boshof	17.17	209	eP		Pn	14 11 22.0 +1.0
SUR	Sutherland	22.44	212	P		P	14 12 23.1 +3.2
comp=Z,4.0nm,0.9s,baz=25,slow=14,SNR=1.5							
SUR				S		S	14 16 28.6 +2.8
comp=Z,7.5nm,1.0s,baz=262,slow=10,SNR=2.0							
SUR				Lg		Lg	14 19 02.8
comp=Z,0.2nm,0.3s,baz=153,slow=21,SNR=1.9							
SUR				LR		LR	14 21 11.9
comp=Z,72nm,18.2s,baz=348,slow=37							
comp=Z,4.0nm,0.9s							
SUR	Sutherland	22.44	212	P		P	14 12 22.2 +2.3
SUR				IAmb		IAmb	14 12 22.7
comp=Z,29nm,1.5s							
TORD	Torodi Ar. Bea	42.02	308	P		P	14 15 11.8 -0.6
comp=Z,0.5nm,0.4s,baz=124,slow=8.6,SNR=7.5							
TORD				LR		LR	14 32 51.0
comp=Z,45nm,18.4s,baz=212,slow=36							
comp=Z,0.5nm,0.4s							
UOSS	Minazif	43.84	29	P		P	14 15 26.0 -1.0
UOSS				IAmb		IAmb	14 15 45.5
comp=Z,12nm,1.3s							
KOWA	Kowa	47.28	305	P		P	14 15 55.5 +1.1
comp=Z,1.1nm,0.6s,baz=95,slow=18,SNR=2.0							
comp=Z,1.1nm,0.6s							
BRTR	Keskin Array B	53.12	359	P		P	14 16 39.6 +1.2
comp=Z,0.6nm,0.5s,baz=170,slow=9.5,SNR=3.7							
comp=Z,0.6nm,0.5s							
ESDC	Sonseca Array	64.01	328	P		P	14 17 56.1 +1.8
comp=Z,1.3nm,0.8s,baz=148,slow=5.7,SNR=12							
comp=Z,1.3nm,0.8s							
AKASG	Malin Array Be	64.26	356	LR		LR	14 47 39.9
comp=Z,18nm,18.8s,baz=9.5,slow=38							
GERES	GERESS Array B	64.91	345	P		P	14 18 00.9 +0.9
comp=Z,0.6nm,0.7s,baz=152,slow=4.3,SNR=5.4							
comp=Z,0.6nm,0.7s							
KK31	Karatay Array	65.42	28	P		P	14 18 03.0 -0.4
KKAR	Karatay Array	65.42	28	P		P	14 18 03.4 0.0
ABKAR	Akbulak array	66.57	18	P		P	14 18 08.7 -1.9
CMAR	Chiang Mai Arr	71.09	65	P		P	14 18 38.0 -1.4
comp=Z,0.4nm,0.3s,baz=244,slow=7.9,SNR=5.4							
CMAR				LR		LR	14 46 25.4
comp=Z,11nm,18.9s,baz=205,slow=33							
comp=Z,0.4nm,0.3s							
ARU	Arti	72.67	14	P		P	14 18 46.8 -1.4
MK31	Makanchi Array	73.86	32	P		P	14 18 54.2 -1.2
MK31				IAmb		IAmb	14 18 55.6
comp=Z,3.8nm,1.1s							
MKAR	Makanchi Array	73.86	32	P		P	14 18 55.2 -0.2
comp=Z,1.0nm,0.6s,baz=212,slow=6.3,SNR=11							
comp=Z,1.0nm,0.6s							
MKAR	Makanchi Array	73.86	32	P		P	14 18 54.6 -0.8
KURK	Kurchatov	74.79	27	P		P	14 19 00.6 -0.1
KURK				IAmb		IAmb	14 19 01.7
comp=Z,3.1nm,0.9s							
ZALV	Zalesovo Beam	79.78	28	P		P	14 19 27.9 -0.7
comp=Z,0.9nm,0.4s,baz=252,slow=2.7,SNR=5.6							
comp=Z,0.9nm,0.4s							
ARCES	ARCESS Array B	83.23	357	P		P	14 19 46.7 +0.1
comp=Z,4.8nm,1.1s,baz=159,slow=5.3,SNR=4.2							
comp=Z,4.8nm,1.1s							
SONM	Songino Array	88.29	40	P		P	14 20 12.3 0.0
comp=Z,0.7nm,0.8s,baz=245,slow=5.1,SNR=3.1							
comp=Z,0.7nm,0.8s							
NVAR	Mina Array Bea	145.52	321	PKPbc		PKPab	14 27 01.2 +1.4
comp=Z,1.0nm,0.5s,baz=56,slow=5.1,SNR=14							

*IDC **08** 14:16:31.7±1.8, 7°.39S×128°.55E, h139km±16km, mb3.6/5, mbtmp4.0/9, Error ellipse: s-maj=28.9km s-min=13.4km az=124.0*
*DJA **08** 14:16

1.9nm,0.7s
SONM Songino Array 58.55 343 P **P** **14 26 13.3 +1.0**
1.1nm,0.8s,baz=169,slow=7.8,SNR=4.6
1.1nm,0.8s
MKAR Makanchi Array 67.96 328 P **P** **14 27 14.2 0.0**
0.7nm,0.4s,baz=120,slow=8.8,SNR=21
MKAR PcP **PcP** **14 27 39.9 +0.4**
0.4nm,0.6s,baz=126,slow=7.3,SNR=2.2
0.7nm,0.4s
ZALV Zalesovo Beam 71.49 334 P **P** **14 27 35.0 -0.5**
1.2nm,0.5s,baz=140,slow=4.9,SNR=5.7
1.2nm,0.5s

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*NEIC **08** 14:33:05.1±2.1, 19°.78N±0°.10×145°.5E±0°.2, h181km±10km, mb4.2/23, Error ellipse: s-maj=25.4km s-min=13.9km az=97.0*
*IDC **08** 14:33:07.7±1.6, 19°.53N×145°.34E, h195km±15km, mb3.5/13, mbtmp4.1/15, Error ellipse: s-maj=19.7km s-min=9.0km az=87.0*
ISC 08 14:33:06.1±0.8, **19°.66N**±0°.07×**145°.4E**±0°.2, **h200**km, **n46, σ1§64/24, mb3.9/23, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.06**	**185**	P	Pn	14 34 35.4	+1.2
	45nm,0.8s,baz=0.0,slow=5.1,SNR=10						
GUMO				S	**Sn**	**14 35 42.0**	**-2.0**
	27nm,0.5s,baz=277,slow=19,SNR=1.4						
JCJ	**Chichijima**	**7.96**	**339**	P	Pn	14 35 01.1	+2.3
	63nm,0.7s,baz=108,slow=20,SNR=14						
JCJ				S	**Sn**	**14 36 30.2**	**+1.6**
	33nm,0.5s,baz=73,slow=19,SNR=6.3						
JOW	**Kunigami**	**17.27**	**298**	P	**P**	**14 36 51.3**	**-2.6**
JOW				IAmb	IAmb	14 37 04.9	
	comp=Z,19nm,1.1s						
JGF	**Kuroka**	**17.39**	**338**	P	**Pn**	**14 36 54.5**	**-2.4**
JGF				IAmb	IAmb	14 37 03.6	
	comp=Z,10nm,1.1s						
MAJO	**Matsushiro**	**17.96**	**341**	P	**P**	**14 36 58.8**	**-2.6**
MAJO				IAmb	IAmb	14 37 08.6	
	comp=Z,3.3nm,0.7s						
JMM	**Marumori**	**18.57**	**348**	P	**Pn**	**14 37 07.8**	**-2.9**
H11S3	**WAKE ISLAND Hy**	**20.16**	**90**	T	T	14 58 30.8	
	baz=275						
H11S1	**WAKE ISLAND Hy**	**20.16**	**90**	T	T	14 58 31.4	
	baz=275						
H11S2	**WAKE ISLAND Hy**	**20.17**	**90**	T	T	14 58 32.1	
	baz=275						
H11N1	**WAKE ISLAND Hy**	**20.24**	**86**	T	T	14 58 50.5	
	baz=271						
H11N2	**WAKE ISLAND Hy**	**20.24**	**86**	T	T	14 58 56.6	
	baz=271						
H11N3	**WAKE ISLAND Hy**	**20.26**	**86**	T	T	14 58 54.8	
	baz=271						
KSRS	**Korea Array**	**23.38**	**323**	P	**P**	**14 38 00.2**	**+3.5**
	comp=Z,1.6nm,0.7s,baz=139,slow=9.9,SNR=6.8						
	comp=Z,1.6nm,0.7s						
KS19	**Wonju Array Si**	**23.44**	**323**	P	**P**	**14 37 56.1**	**-1.2**
TOLI2	**Tolitoli**	**30.34**	**236**	P	**P**	**14 39 00.1**	**+0.9**
TOLI2				IAmb	IAmb	14 39 17.9	
	comp=Z,5.1nm,1.0s						
KLR	**Kul'dur**	**31.47**	**343**	P	P	14 39 12.7	+4.0
	comp=Z,3.7nm,0.4s,baz=142,slow=12,SNR=12						
	comp=Z,3.7nm,0.4s						
COEN	**Coen**	**33.48**	**184**	P	**P**	**14 39 26.6**	**0.0**
COEN				IAmb	IAmb	14 39 45.5	
	comp=Z,10nm,1.1s						
MTN	**Manton Dam**	**35.23**	**205**	P	P	14 39 43.5	+1.9
MTN				IAmb	IAmb	14 39 48.2	
	comp=Z,7.2nm,0.9s						
SBUM	**Sibu**	**36.66**	**246**	P	**P**	**14 39 54.4**	**+0.6**
KNRA	**Kununurra**	**38.74**	**206**	P	P	14 40 12.4	+1.3
KNRA				IAmb	IAmb	14 40 25.8	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**40.65**	**196**	P	P	14 40 27.8	+1.0
WB0				IAmb	IAmb	14 40 40.6	
	comp=Z,5.3nm,1.1s						
WR0	**Warramunga Arr**	**40.79**	**196**	P	**P**	**14 40 28.1**	**+0.1**
WRAB	**Tennant Creek**	**40.81**	**196**	P	P	14 40 29.6	+1.4
WB2	**Warramunga Arr**	**40.82**	**196**	P	P	14 40 29.6	+1.3
WB2				IAmb	IAmb	14 40 35.7	
	comp=Z,4.5nm,1.1s						
WRA	**Warramunga Arr**	**40.83**	**196**	P	**P**	**14 40 28.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=16,slow=8.1,SNR=24						
WRA				PcP	**PcP**	**14 42 25.6**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=11,slow=3.4,SNR=1.8						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**40.83**	**196**	P	**P**	**14 40 28.3**	**0.0**
SONM	**Songino Array**	**42.22**	**321**	P	P	14 40 42.8	+3.3
	comp=Z,0.9nm,0.6s,baz=131,slow=8.8,SNR=5.6						
	comp=Z,0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**42.24**	**209**	P	P	14 40 41.0	+1.2
	baz=44,slow=8.0						
FITZ	**Fitzroy Crossi**	**42.24**	**209**	P	P	14 40 41.3	+1.5
FITZ				IAmb	IAmb	14 40 57.4	
	comp=Z,3.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.82**	**276**	P	P	14 40 54.3	+1.7
	comp=Z,0.4nm,0.3s,baz=61,slow=7.7,SNR=5.3						
	comp=Z,0.4nm,0.3s						
AS31	**Alice Springs**	**44.50**	**195**	P	P	14 40 58.7	+0.8
ASAR	**Alice Springs**	**44.50**	**195**	P	**P**	**14 40 58.6**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=15,slow=7.1,SNR=24						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**44.50**	**195**	P	**P**	**14 40 57.6**	**-0.3**
GSI	**Gunungsitoli**	**50.20**	**255**	P	P	14 41 43.9	+2.0
ZALV	**Zalesovo Beam**	**57.08**	**322**	P	P	14 42 34.3	+3.0
	comp=Z,1.5nm,0.5s,baz=106,slow=7.6,SNR=6.9						
ZALV				PcP	**PcP**	**14 43 24.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=98,slow=3.1,SNR=1.9						
	comp=Z,1.5nm,0.5s						
MK31	**Makanchi Array**	**57.59**	**313**	P	P	14 42 36.6	+1.5
MKAR	**Makanchi Array**	**57.59**	**313**	P	P	14 42 38.1	+3.1
	comp=Z,0.2nm,0.3s,baz=90,slow=7.8,SNR=12						
MKAR				PcP	**PcP**	**14 43 27.7**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=68,slow=5.4,SNR=2.1						
	comp=Z,0.2nm,0.3s						
N18K	**Kilae Creek**	**57.85**	**30**	P	**P**	**14 42 36.7**	**+0.1**
J20K	**Nowinta River**	**59.72**	**26**	P	**P**	**14 42 49.9**	**+0.6**
J20K				IAmb	IAmb	14 43 01.2	
	comp=Z,1.9nm,1.1s						
KURK	**Kurchatov**	**60.37**	**318**	P	**P**	**14 42 55.1**	**+1.1**
KURK				IAmb	IAmb	14 42 57.7	
	comp=Z,2.2nm,0.4s						
TOLK	**Toolik Lake Re**	**62.81**	**22**	P	**P**	**14 43 09.6**	**-0.5**
TOLK				IAmb	IAmb	14 43 28.4	
	comp=Z,5.1nm,1.1s						
ILAR	**Eielson Array**	**62.91**	**26**	P	P	14 43 13.0	+2.3
	comp=Z,0.5nm,0.4s,baz=254,slow=5.7,SNR=9.5						
	comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**77.27**	**28**	P	P	14 44 41.6	+3.6
	comp=Z,0.6nm,0.5s,baz=292,slow=5.7,SNR=5.8						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**81.49**	**342**	P	P	14 45 03.4	+2.8
	comp=Z,2.9nm,0.6s,baz=71,slow=8.7,SNR=10						
	comp=Z,2.9nm,0.6s						
NVAR	**Mina Array Bea**	**82.77**	**52**	P	P	14 45 12.2	+4.0
	comp=Z,0.7nm,0.6s,baz=265,slow=4.5,SNR=8.0						
	comp=Z,0.7nm,0.6s						
FINES	**FINESS Array B**	**85.89**	**335**	P	**P**	**14 45 24.4**	**+1.2**
	comp=Z,1.8nm,0.4s,baz=74,slow=4.7,SNR=34						
	comp=Z,1.8nm,0.4s						

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*SJA **08** 14:57:57.2±0.7, 24°.48S×68°.38W, h90km, ML4.0, MW3.9*
*NEIC **08** 14:57:59.8±1.4, 24°.45S±0°.05×68°.72W±0°.07, h125km±10km, mb4.1/3, ML3.9(GUC), Error ellipse: s-maj=11.4km s-min=2.4km az=124.0*
*GUC **08** 14:58:00.7±0.5, 24°.43S×68°.73W, h115km±4km, ML4.1*
*IDC **08** 14:58:00.8±4.3, 24°.39S×68°.28W, h102km±34km, mb3.5/3, mbtmp4.0/5, Error ellipse: s-maj=44.3km s-min=22.2km az=3.0*
*VAO **08** 14:58:04.4±0.8, 24°.09S×68°.26W, h125km, mb4.0*
ISC 08 14:57:59.1±0.6, **24°.47S**±0°.03×**68°.64W**±0°.05, **h116**km±6km, **n115, σ1§62/145, mb4.0/3, 4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.11**	**231**		**Pn**	**14 58 23.6**	**+1.3**
GO02				*e*S	**Sn**	**14 58 40.8**	**+2.1**
GO02	**Mina Guanaco**	**1.11**	**231**	⇑*i*P	**Pn**	**14 58 23.5**	**+1.3**
GO02				*i* S	**Sn**	**14 58 40.8**	**+1.1**
GO02				IAML		14 58 44.2	
	comp=E,2μm,0.4s						
GO02	**Mina Guanaco**	**1.11**	**231**	*e*P	**Pn**	**14 58 23.6**	**+1.3**
GO02				*e*S	**Sn**	**14 58 41.8**	**+2.1**
PB15	**IPOC Station P**	**1.47**	**329**	Pn	**Pn**	**14 58 27.0**	**+0.8**
PB15	**IPOC Station P**	**1.47**	**329**	⇓*i*P	**Pn**	**14 58 27.1**	**+0.8**
PB15				*i* S	**Sn**	**14 58 46.7**	**-0.1**
PB15				IAML		14 58 50.5	
	comp=N,7μm,0.3s						
PB15	**IPOC Station P**	**1.47**	**329**	*e*P	**Pn**	**14 58 27.0**	**+0.8**
PB15				*e*S	**Sn**	**14 58 48.7**	**+2.0**
PB15				IAML		14 58 50.8	
	comp=Z,3μm,0.2s						
AF01	**San Pedro de A**	**1.57**	**16**		**Pn**	**14 58 28.5**	**+1.1**
AF01				Sn	**Sn**	**14 58 49.6**	**+0.7**
AF01	**San Pedro de A**	**1.57**	**16**	⇑*i*P	**Pn**	**14 58 28.6**	**+1.1**
AF01				*i* S	**Sn**	**14 58 49.8**	**+0.8**
AF01				IAML		14 58 52.2	
	comp=N,6μm,0.3s						
PB14	**IPOC Station P**	**1.62**	**264**		**Pn**	**14 58 28.7**	**+0.7**
PB14				Sn	**Sn**	**14 58 49.9**	**0.0**
PB14	**IPOC Station P**	**1.62**	**264**	*i* P	**Pn**	**14 58 28.9**	**+0.9**
PB14				*i* S	**Sn**	**14 58 50.0**	**0.0**
PB14	**IPOC Station P**	**1.62**	**264**	*e*P	**Pn**	**14 58 27.3**	**-0.7**
PB14				*e*S	**Sn**	**14 58 53.8**	**+3.8**
PB14				IAML		14 58 57.8	
	comp=Z,923nm,0.6s						
LVC	**Limon Verde**	**1.87**	**352**	P	**Pn**	**14 58 32.3**	**+1.1**
	comp=Z,179nm,0.3s,baz=171,slow=9.4,SNR=254						
LVC				S	**Sn**	**14 58 55.9**	**+0.3**
	comp=Z,375nm,0.3s,baz=273,slow=18,SNR=14						
LVC	**Limon Verde**	**1.87**	**352**	⇑*i*P	**Pn**	**14 58 32.1**	**+0.9**
LVC				*i* S	**Sn**	**14 58 55.9**	**+0.3**
LVC	**Limon Verde**	**1.87**	**352**	*e*P	**Pn**	**14 58 32.5**	**+1.3**
LVC				*e*S	**Sn**	**14 58 58.0**	**+2.5**
LVC	**Limon Verde**	**1.87**	**352**	*e*P	**Pn**	**14 58 32.1**	**+0.9**
PB06	**IPOC Station P**	**1.96**	**334**	Pn	**Pn**	**14 58 32.8**	**+0.8**
PB06	**IPOC Station P**	**1.96**	**334**	*e*P	**Pn**	**14 58 33.0**	**+1.0**
PB06				*i* S	**Sn**	**14 58 57.2**	**0.0**
PB06				IAML		14 59 02.9	
	comp=E,1μm,0.5s						
PB06	**IPOC Station P**	**1.96**	**334**	*e*P	**Pn**	**14 58 33.0**	**+1.0**
PB06				*e*S	**Sn**	**14 58 58.8**	**+1.7**
PB06				IAML		14 59 04.4	
	comp=Z,640nm,0.3s						
PB10	**IPOC Station P**	**2.00**	**298**		**Pn**	**14 58 33.6**	**+1.3**
PB10	**IPOC Station P**	**2.00**	**298**	*e*P	**Pn**	**14 58 33.6**	**+1.3**
PB10				*i* S	**Sn**	**14 58 54.8**	**-3.0**
PB10				IAML		14 59 06.9	
	comp=E,1μm,0.4s						
PB10	**IPOC Station P**	**2.00**	**298**	*e*P	**Pn**	**14 58 33.8**	**+1.5**
PB10				*e*S	**Sn**	**14 59 00.0**	**+2.2**
PB10				IAML		14 59 06.1	
	comp=Z,746nm,0.3s						
AC02	**Maricunga**	**2.40**	**191**		**Pn**	**14 58 39.9**	**+2.0**
AC02	**Maricunga**	**2.40**	**191**	⇑*i*P	**Pn**	**14 58 40.2**	**+2.3**
AC02	**Maricunga**	**2.40**	**191**	*e*P	**Pn**	**14 58 35.0**	**-2.9**
AC02				*e*S	**Sn**	**14 59 07.0**	**-0.6**
AC01	**Pan de Azucar**	**2.44**	**226**	Pn	**Pn**	**14 58 38.4**	**+0.5**
AC01	**Pan de Azucar**	**2.44**	**226**	*e*P	**Pn**	**14 58 38.5**	**+0.5**
AC01				*i* S	**Sn**	**14 59 05.1**	**-2.7**
AC01				IAML		14 59 17.8	
	comp=N,506nm,0.6s						
AC01	**Pan de Azucar**	**2.44**	**226**	*e*P	**Pn**	**14 58 38.6**	**+0.6**
AC01				*e*P		14 58 39.0	
AC01				*e*S	**Sn**	**14 59 08.0**	**+0.2**
PB04	**IPOC Station P**	**2.54**	**327**		**Pn**	**14 58 40.0**	**+0.5**
PB04	**IPOC Station P**	**2.54**	**327**	*e*P	**Pn**	**14 58 40.2**	**+0.7**
PB04				*i* S	**Sn**	**14 59 05.9**	**-4.6**
PB04				IAML		14 59 18.4	
	comp=N,537nm,0.0s						
PB04	**IPOC Station P**	**2.54**	**327**	*i* P	**Pn**	**14 58 40.3**	**+0.7**
PB04				*e*S	**Sn**	**14 59 11.0**	**+0.5**
PB04				IAML		14 59 34.6	
	comp=Z,358nm,0.8s						
PB09	**IPOC Station P**	**2.72**	**348**		**Pn**	**14 58 43.4**	**+1.5**
PB09	**IPOC Station P**	**2.72**	**348**	*e*P	**Pn**	**14 58 43.4**	**+1.5**
PB09				*i* S	**Sn**	**14 59 11.4**	**-3.2**
PB09				IAML		14 59 21.7	
	comp=N,691nm,0.8s						
PB07	**IPOC Station P**	**2.97**	**337**		**Pn**	**14 58 45.5**	**+0.5**
PB07	**IPOC Station P**	**2.97**	**337**	*e*P	**Pn**	**14 58 45.7**	**+0.6**
PB07				*i* S	**Sn**	**14 59 16.3**	**-4.1**
PB07				IAML		14 59 30.9	
	comp=E,566nm,0.1s						
PB07	**IPOC Station P**	**2.97**	**337**	*e*P	**Pn**	**14 58 45.0**	**-0.1**
PB07				*e*S	**Sn**	**14 59 21.3**	**+0.9**
PB07				IAML		14 59 30.3	
	comp=Z,465nm,0.3s						
AC06	**Mina Casimiro**	**3.26**	**208**		**Pn**	**14 58 48.6**	**-0.2**
AC06	**Mina Casimiro**	**3.26**	**208**	*e*P	**Pn**	**14 58 48.9**	**+0.1**
AZAP	**Zapla**	**3.27**	**86**	*e*P	**Pn**	**14 58 51.3**	**+2.2**
PB02	**IPOC Station P**	**3.35**	**339**		**Pn**	**14 58 50.3**	**+0.2**
PB02	**IPOC Station P**	**3.35**	**339**	*e*P	**Pn**	**14 58 50.6**	**+0.6**
PB02				*i* S	**Sn**	**14 59 27.6**	**-1.6**
PB02	**IPOC Station P**	**3.35**	**339**	*e*P	**Pn**	**14 58 50.0**	**0.0**
PB02				*e*S	**Sn**	**14 59 30.0**	**+0.7**
PB02				IAML		14 59 43.4	
	comp=Z,763nm,0.5s						
PB01	**IPOC Station P**	**3.50**	**347**		**Pn**	**14 58 52.5**	**+0.4**
PB01	**IPOC Station P**	**3.50**	**347**	*e*P	**Pn**	**14 58 52.7**	**+0.6**
PB01				*i* S	**Sn**	**14 59 33.4**	**+0.5**
PB01				IAML		14 59 44.3	
	comp=E,430nm,0.5s						
PB01	**IPOC Station P**	**3.50**	**347**	*e*P	**Pn**	**14 58 52.0**	**-0.1**
PB01				*e*S	**Sn**	**14 59 33.5**	**+0.5**
PB01				IAML		14 59 42.2	
	comp=Z,247nm,0.2s						
YJA	**Yavi**	**3.67**	**52**	*e*P	**Pn**	**14 58 57.0**	**+2.4**
YJA				*e*P		14 58 58.0	
ASTB	**Santa Barbara**	**3.85**	**83**	*e*P	**Pn**	**14 58 58.6**	**+1.8**
PATCX	**Punta Patache**	**3.90**	**339**		**Pn**	**14 58 57.0**	**-0.3**
PATCX	**Punta Patache**	**3.90**	**339**	*e*P	**Pn**	**14 58 56.9**	**-0.3**
PATCX	**Punta Patache**	**3.90**	**339**	*e*P	**Pn**	**14 58 57.0**	**-0.3**
PATCX				*e*P		14 58 59.0	
PATCX				*e*S	**Sn**	**14 59 42.0**	**-0.3**
PATCX				IAML		15 00 02.6	
	comp=Z,252nm,0.7s						
TA01	**Diego Aracena**	**4.14**	**340**	Pn	**Pn**	**14 59 00.6**	**+0.1**
TA01	**Diego Aracena**	**4.14**	**340**	*e*P	**Pn**	**14 59 00.8**	**+0.2**
TA01				*e*S	**Sn**	**14 59 48.2**	**+0.1**
TA01				IAML		15 00 01.4	
	comp=Z,178nm,0.8s						
VCA	**Vinchina**	**4.26**	**175**	*e*P	Pn	14 59 07.0	+4.7
AC04	**Llanos de Chal**	**4.31**	**210**	Pn	**Pn**	**14 59 01.4**	**-1.4**
AC04	**Llanos de Chal**	**4.31**	**210**	*e*P	**Pn**	**14 59 00.0**	**-2.8**
AC04	**Llanos de Chal**	**4.31**	**210**	*e*P	Pn	14 58 39.6	-23
AC04				*e*S	Sn	15 00 09.8	+18
AC04				IAML		15 00 10.8	
	comp=Z,126nm,0.6s						
HMBC	**Humberstone**	**4.33**	**344**	*e*P	**Pn**	**14 59 03.0**	**-0.2**
PB08	**IPOC Station P**	**4.34**	**354**		**Pn**	**14 59 03.6**	**+0.1**
PB08	**IPOC Station P**	**4.34**	**354**	*e*P	**Pn**	**14 59 03.7**	**+0.1**
PB08	**IPOC Station P**	**4.34**	**354**	*e*P	**Pn**	**14 59 04.1**	**+0.6**
PB08				IAML		15 00 08.2	
	comp=Z,82nm,0.5s						
TA02	**Huaiquique**	**4.41**	**341**		**Pn**	**14 59 04.4**	**+0.3**
AC05	**El Transito**	**4.59**	**198**	Pn	**Pn**	**14 59 06.7**	**+0.1**
AC05	**El Transito**	**4.59**	**198**	*e*P	**Pn**	**14 59 06.6**	**+0.1**
AC05	**El Transito**	**4.59**	**198**	*e*P	**Pn**	**14 59 07.0**	**+0.4**
AC05				IAML		15 00 16.1	
	comp=Z,106nm,0.8s						
GO01	**Chusmiza**	**4.81**	**354**		**Pn**	**14 59 09.9**	**-0.1**
GO01	**Chusmiza**	**4.81**	**354**	*e*P	**Pn**	**14 59 10.0**	**+0.1**
LCO	**Las Campanas**	**4.88**	**202**		**Pn**	**14 59 10.2**	**-0.5**
CO01	**Juntas del Tor**	**5.63**	**193**		**Pn**	**14 59 21.2**	**+0.4**
CO05	**La Serena**	**5.90**	**203**		**Pn**	**14 59 22.0**	**-2.1**
GO04	**Tololo Observa**	**6.00**	**198**		**Pn**	**14 59 24.0**	**-1.6**
PB12	**IPOC Station P**	**6.04**	**345**	Pn	**Pn**	**14 59 23.6**	**-2.6**
PB16	**IPOC Station P**	**6.16**	**352**	Pn	**Pn**	**14 59 27.4**	**-0.9**
CO03	**El Pedregal**	**6.60**	**196**		**Pn**	**14 59 32.4**	**-1.2**
CO06	**Fray Jorge**	**6.73**	**203**		**Pn**	**14 59 31.6**	**-3.7**
CO02	**Combarbal**	**7.02**	**197**	Pn	**Pn**	**14 59 37.0**	**-2.5**
LPAZ	**La Paz**	**8.16**	**3**	P	**Pn**	**14 59 56.2**	**+0.8**
	comp=Z,3.6nm,0.4s,baz=184,slow=5.2,SNR=18						
LPAZ	**La Paz**	**8.16**	**3**	*e*P	**Pn**	**14 59 56.1**	**+0.8**
VA03	**San Esteban**	**8.43**	**191**	Pn	**Pn**	**14 59 56.2**	**-2.2**
ROC1	**El Roble**	**8.73**	**193**		**Pn**	**15 00 01.6**	**-1.0**
MT02	**Curacav**	**9.03**	**193**	Pn	**Pn**	**15 00 02.2**	**-4.2**
MT09	**Talagante**	**9.50**	**192**	Pn	**Pn**	**15 00 08.4**	**-4.5**
MT01	**Popeta**	**9.63**	**193**	Pn	**Pn**	**15 00 10.4**	**-4.3**
BBRB	**Robore, Bolivi**	**10.28**	**55**	*e*P	**Pn**	**15 00 20.6**	**-2.9**
CPUP	**Villa Florida**	**10.39**	**103**	*e*P	**Pn**	**15 00 27.5**	**+2.6**
BBSD	**Serra de San D**	**10.43**	**47**	*e*P	**Pn**	**15 00 23.5**	**-2.1**
MURT	**Porto Murtinho**	**10.53**	**77**	*e*P	**Pn**	**15 00 25.6**	**-1.2**
SIV	**San Ignacio**	**11.02**	**41**	P	**Pn**	**15 00 30.4**	**-3.2**
	comp=Z,9.4nm,0.5s,baz=231,slow=12,SNR=44						
SIV				S	Sn	15 02 27.0	-8.0
	comp=Z,0.6nm,0.4s,baz=252,slow=20,SNR=1.2						
PTLB	**Pontes e Lacer**	**12.66**	**47**	*e*P	**Pn**	**15 00 53.0**	**-2.1**
VILB	**Vilhena**	**13.96**	**36**	*e*P	**Pn**	**15 01 11.3**	**-0.8**
FRBT	**Francisco Belt**	**14.18**	**99**	*e*P	**P**	**15 01 16.1**	**-2.5**
PTGB	**Pitanga**	**15.08**	**94**	*e*P	**P**	**15 01 27.5**	**-1.2**
PDRB	**Porto dos Gac**	**17.06**	**44**	*e*P	**P**	**15 01 48.9**	**-1.8**
CLDB	**Colider**	**18.22**	**44**	*e*P	**P**	**15 02 02.9**	**-0.4**
BB19B	**Bebedouro**	**18.85**	**84**	*e*P	**Pn**	**15 02 11.3**	**-0.8**
PET01	**Itanhaem-SP**	**19.46**	**94**	*e*P	**Pn**	**15 02 18.1**	**-1.1**
RCLB	**Rio Claro- Sao**	**19.47**	**88**	*e*P	**P**	**15 02 17.6**	**+0.6**
VAO	**Valinhos**	**19.89**	**90**	*e*P	**P**	**15 02 22.2**	**+0.6**
IPMB	**Ipameri, GO**	**20.09**	**75**	*e*P	**P**	**15 02 23.6**	**-0.2**
SNDB	**Serra Nova Dou**	**20.61**	**56**	*e*P	**P**	**15 02 29.4**	**+0.2**
BDFB	**Brasilia**	**21.25**	**69**	P	**P**	**15 02 36.4**	**+0.1**
	comp=Z,4.0nm,0.6s,baz=224,slow=12,SNR=6.8						
	comp=Z,4.0nm,0.6s						
BDFB	**Brasilia**	**21.25**	**69**	P	**P**	**15 02 36.3**	**0.0**
BDFB				IAmb	IAmb	15 02 38.1	
	comp=Z,10.0nm,1.3s						
BDFB	**Brasilia**	**21.25**	**69**	*e*P	**P**	**15 02 35.7**	**-0.6**
PMNB	**Patos De Minas**	**21.47**	**78**	*e*P	**P**	**15 02 38.4**	**-0.2**
NPGB	**Novo Progresso**	**21.50**	**38**	*e*P	**P**	**15 02 36.9**	**-1.9**
ITTB	**Itaituba**	**23.54**	**34**	*e*P	**P**	**15 02 58.6**	**-0.4**
DIAM	**Diamantina, MG**	**24.02**	**80**	*e*P	**P**	**15 03 03.5**	**-0.1**
SGCB	**S£o Gabriel d**	**24.26**	**4**	*e*P	**P**	**15 03 06.5**	**+1.0**
MC01	**Montes Claros**	**24.35**	**76**	*e*P	**P**	**15 03 07.4**	**+1.0**
JANB	**Januaria**	**24.70**	**72**	*e*P	**P**	**15 03 10.7**	**+1.0**
EFI	**East Falkland**	**28.34**	**166**	P	**P**	**15 03 41.7**	**-0.2**
PDAR	**Pinedale Array**	**76.80**	**330**	P	**P**	**15 09 41.9**	**+3.7**
	comp=Z,0.1nm,0.5s,baz=134,slow=7.7,SNR=2.5						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.13**	**70**	P	**P**	**15 09 47.7**	**+1.8**
	comp=Z,1.2nm,0.5s,baz=252,slow=5.5,SNR=8.5						
TORD				pP	**pP**	**15 10 15.8**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=239,slow=5.5,SNR=2.4						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**127.39**	**206**	PKP	**PKiKP**	**15 16 53.6**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=130,slow=2.3,SNR=6.9						
WRA	**Warramunga Arr**	**130.51**	**209**	PKP	**PKiKP**	**15 16 59.9**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=151,slow=1.7,SNR=11						
ZALV	**Zalesovo Beam**	**144.50**	**27**	PKP	**PKiKP**	**15 17 23.4**	**-1.7**
	comp=Z,1.8nm,0.5s,baz=308,slow=3.5,SNR=9.2						
MKAR	**Makanchi Array**	**147.83**	**39**	PKPbc	**PKPab**	**15 17 33.5**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=301,slow=2.9,SNR=11						

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*DJA **08** 15:05:59.2±6.4, 3°.N±10°.×9°.2E±5°.4, h10km, M4.8/7, mb4.6/6, mB5.3/4, MLv4.8/7, Mw(mB)4.7/4*
*IDC **08** 15:06:07.5±1.7, 2°.44N×92°.33E, h0km, mb3.5/4, mbtmp3.6/7, ML3.9/2, Error ellipse: s-maj=47.9km s-min=23.3km az=46.0*
ISC 08 15:06:09.0±1.1, **2°.7N**±0°.1×**92°.44E**±0°.09, **h10**km, **n19, σ1§62/17, mb3.6/4, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**4.28**	**68**	P	**Pn**	**15 07 14.2**	**0.0**
	0.7nm3μm115nm,0.7s						
LHMI	**Lhok Sumawe**	**5.18**	**60**	P	**Pn**	**15 07 26.6**	**-0.1**
	0.6nm122nm,1.0s						
GSI	**Gunungsitoli**	**5.31**	**104**	P	**Pn**	**15 07 29.1**	**+0.7**
	0.4nm26nm,0.4s						
KCSI	**Kotacane, Aceh**	**5.40**	**81**	P	**Pn**	**15 07 31.6**	**+1.9**
PBSI	**Pulau Batu**	**6.43**	**115**	P	**Pn**	**15 07 44.8**	**+0.9**
	0.5nm114nm,1.6s						
PSI	**Prapat**	**6.48**	**89**	Pn	**Pn**	**15 07 45.7**	**+1.0**
	2.0nm,0.3s,baz=297,slow=9.0,SNR=7.8						
PSI				Sn	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZARC				*i*		15 12 08.4	
	comp=Z,89nm,0.1s						
NORC	**Norcasia**	**2.21**	**236**	*e*P	**Pn**	**15 11 39.5**	**+0.3**
NORC				*e*S	**Sn**	**15 12 07.0**	**-1.5**
NORC				*i*		15 12 15.2	
	comp=Z,72nm,0.2s						
CHIC	**Chingaza**	**2.29**	**198**	*e*P	**Pn**	**15 11 41.4**	**+0.9**
CHIC				*e*S	**Sn**	**15 12 10.7**	**-0.1**
CHIC				*i*		15 12 14.3	
	comp=Z,58nm,0.4s						
ROSC	**El Rosal**	**2.34**	**213**	P	**Pn**	**15 11 43.2**	**+2.1**
	comp=Z,39nm,0.3s,baz=14,slow=4.2,SNR=34						
ROSC				S	**Sn**	**15 12 09.5**	**-2.6**
	comp=Z,53nm,0.4s,baz=71,slow=13,SNR=12						
ROSC	**El Rosal**	**2.34**	**213**	*e*P	**Pn**	**15 11 43.4**	**+2.3**
ROSC				*e*S	**Sn**	**15 12 11.3**	**-0.7**
ROSC				*i*		15 12 15.4	
	comp=Z,126nm,0.3s						
HELC	**Santa Helena**	**2.55**	**256**	*e*P	**Pn**	**15 11 44.6**	**+1.1**
HELC				*e*S	**Sn**	**15 12 15.6**	**-0.8**
HELC				*i*		15 12 22.4	
	comp=Z,33nm,0.3s						
UREC	**San Jos de Ur**	**2.64**	**291**	*e*P	**Pn**	**15 11 48.0**	**+3.7**
UREC				*e*S	**Sn**	**15 12 15.1**	**-2.6**
LL1C	**La Loma 1 Cana**	**2.75**	**349**	*e*S	**Sn**	**15 12 24.4**	**+4.1**
PTGC	**Puerto Gaitan,**	**2.76**	**161**	*e*P	**Pn**	**15 11 46.5**	**+0.7**
PTGC				*e*S	**Sn**	**15 12 19.8**	**-0.7**
PTGC				*i*		15 12 24.9	
	comp=Z,77nm,0.5s						
VILC	**Villavicencio,**	**2.77**	**194**	*e*P	**Pn**	**15 11 47.1**	**+1.0**
VILC				*e*S	**Sn**	**15 12 21.1**	**+0.2**
VILC				*i*		15 12 24.0	
	comp=Z,104nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.81**	**236**	*e*P	**Pn**	**15 11 47.8**	**+1.0**
GUY2C				*e*S	**Sn**	**15 12 22.0**	**-0.1**
GUY2C				*i*		15 12 29.6	
	comp=Z,48nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.10**	**252**	*e*P	**Pn**	**15 11 52.2**	**+1.9**
CBOC				*e*S	**Sn**	**15 12 28.7**	**+0.3**
ARGC	**Ariguani, Magd**	**3.24**	**338**	*e*P	**Pn**	**15 11 55.6**	**+3.7**
ARGC				*e*S	**Sn**	**15 12 33.1**	**+1.8**
ANIL	**Santa Ana**	**3.30**	**226**	*e*P	**Pn**	**15 11 54.9**	**+2.0**
ANIL				*e*S	**Sn**	**15 12 34.1**	**+1.1**
ANIL				*i*		15 12 38.0	
	comp=Z,132nm,0.4s						
PRAC	**Prado**	**3.59**	**211**	*e*P	**Pn**	**15 11 57.2**	**+0.8**
PRAC				*e*S	**Sn**	**15 12 38.9**	**-0.5**
PRAC				*i*		15 12 44.3	
	comp=Z,49nm,0.3s						
SJCC	**San Jacinto, C**	**3.72**	**325**	*e*P	**Pn**	**15 11 57.6**	**-0.4**
SJCC				*e*S	**Sn**	**15 12 38.7**	**-3.5**
SJCC				*i*		15 12 43.1	
	comp=Z,21nm,0.6s						
PLMC	**San Jos del P**	**3.75**	**240**	*e*P	**Pn**	**15 11 59.1**	**+0.7**
PLMC				*e*S	**Sn**	**15 12 43.1**	**+0.2**
PLMC				*i*		15 12 44.9	
	comp=Z,15nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**2**	*e*P	**Pn**	**15 12 03.5**	**-0.4**
CRJC				*e*S	**Sn**	**15 12 51.2**	**-1.7**
CRJC				*i*		15 12 57.0	
	comp=Z,29nm,0.1s						
URIC	**Uribia, Colomb**	**4.96**	**12**	*e*P	**Pn**	**15 12 13.9**	**-0.2**
URIC				*e*S	**Sn**	**15 13 09.1**	**-2.0**
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKPbc**	**15 30 31.5**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=131,slow=4.3,SNR=1.9						
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc	**PKiKP**	**15 30 34.8**	**-0.8**
	comp=Z,0.7nm,1.1s,baz=106,slow=2.8,SNR=5.0						

*IDC **08** 15:25:10.2±1.2, 17°.45N×93°.69W, h168km±14km, mb3.6/18, mbtmp4.1/19, MS3.1/1, Error ellipse: s-maj=26.8km s-min=11.4km az=60.0*
*NEIC **08** 15:25:11.3±2.8, 17°.35N±0°.08×94°.05W±0°.05, h176km±6km, Error ellipse: s-maj=11.8km s-min=6.8km az=195.0*
*MEX **08** 15:25:12.7±0.6, 17°.31N×94°.08W, h183km±3km, MD4.4*
ISC 08 15:25:10.9±0.5, 17°.32N±0°.04×94°.05W±0°.03, h185km±5km, n182, σ1$69/256, mb4.2/28, 6D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UXUV	**UXUV**	**0.09**	**272**	*i* P	**Pn**	**15 25 35.4**	**+0.2**
UXUV				*e*S	**Sn**	**15 25 52.5**	**-1.5**
TUIG	**Tuzandepetl**	**0.80**	**334**	*e*P	**Pn**	**15 25 38.1**	**+0.4**
TUIG				*e*S	**Sn**	**15 25 57.6**	**-1.1**
CMIG	**Matias Romero**	**0.83**	**254**	P	**Pn**	**15 25 37.6**	**-0.4**
	2μm,0.3s,baz=91,slow=5.5,SNR=6002						
CMIG				LR	LR	15 25 53.4	
	comp=Z,187nm,18.3s,baz=182,slow=36						
CMIG				S	**Sn**	**15 25 57.3**	**-1.5**
	640nm,0.3s,baz=225,slow=20,SNR=31						
CMIG	**Matias Romero**	**0.83**	**254**		**Pn**	**15 25 37.9**	**-0.1**
CMIG					**Sn**	**15 25 57.6**	**-1.2**
CMIG	**Matias Romero**	**0.83**	**254**	*i* P	**Pn**	**15 25 37.9**	**-0.1**
CMIG				*e*S	**Sn**	**15 25 57.6**	**-1.2**
NILT	**Santiago Nilte**	**0.92**	**216**	*e*P	**Pn**	**15 25 38.4**	**-0.2**
NILT				*e*S	**Sn**	**15 25 59.7**	**-0.3**
TGIG		**1.04**	**121**		**Pn**	**15 25 39.5**	**+0.1**
TGIG					**Sn**	**15 26 00.5**	**-1.0**
TGIG		**1.04**	**121**	*i* P	**Pn**	**15 25 39.5**	**+0.1**
TGIG				*e*S	**Sn**	**15 26 00.5**	**-1.0**
TGBT	**Tuxtla Gutierr**	**1.06**	**120**		**Pn**	**15 25 39.8**	**+0.3**
TGBT					**Sn**	**15 26 00.6**	**-1.1**
TGBT	**Tuxtla Gutierr**	**1.06**	**120**	*e*P	**Pn**	**15 25 39.8**	**+0.3**
TGBT				*i* S	**Sn**	**15 26 00.6**	**-1.1**
NEUV	**Arroyo Zacate**	**1.72**	**284**	*e*P	**Pn**	**15 25 44.6**	**-0.8**
NEUV				*e*S	**Sn**	**15 26 09.9**	**-2.2**
PCIG		**1.79**	**153**		**Pn**	**15 25 46.6**	**+0.5**
PCIG					**Sn**	**15 26 12.7**	**-0.8**
PCIG		**1.79**	**153**	*e*P	**Pn**	**15 25 46.6**	**+0.5**
PCIG				*e*S	**Sn**	**15 26 12.7**	**-0.8**
CCIG	**Comitan**	**2.10**	**119**		**Pn**	**15 25 50.3**	**+0.7**
CCIG				Sn	**Sn**	**15 26 20.5**	**+0.8**
CCIG	**Comitan**	**2.10**	**119**	*e*P	**Pn**	**15 25 50.2**	**+0.7**
CCIG				*e*S	**Sn**	**15 26 20.9**	**+1.3**
HUIG	**Huatulco**	**2.50**	**232**		**Pn**	**15 25 51.7**	**-2.2**
HUIG					**Sn**	**15 26 26.2**	**-1.2**
HUIG	**Huatulco**	**2.50**	**232**	*e*P	**Pn**	**15 25 51.7**	**-2.2**
HUIG				*e*S	**Sn**	**15 26 26.2**	**-1.2**
OXLC	**Oaxaca**	**2.55**	**265**	*e*P	**Pn**	**15 25 55.0**	**+0.4**
OXLC				*e*S	**Sn**	**15 26 28.5**	**-0.1**
OXBJ	**Oaxaca**	**2.57**	**265**		**Pn**	**15 25 55.7**	**+0.8**
OXBJ					**Sn**	**15 26 29.0**	**0.0**
OXBJ	**Oaxaca**	**2.57**	**265**	*e*P	**Pn**	**15 25 55.7**	**+0.8**
OXBJ				*e*S	**Sn**	**15 26 29.0**	**0.0**
OXIG	**Oaxaca**	**2.58**	**265**		**Pn**	**15 25 55.3**	**+0.3**
OXIG					**Sn**	**15 26 29.2**	**-0.1**
VHO	**Vista Hermosa**	**2.58**	**265**	*e*P	**Pn**	**15 25 55.3**	**+0.3**
VHO				*e*S	**Sn**	**15 26 29.2**	**0.0**
PAVE	**Pavencul**	**2.77**	**139**	*e*P	**Pn**	**15 25 57.9**	**+0.6**
PAVE				*e*S	**Sn**	**15 26 34.0**	**+0.5**
PATR	**El Naranjo**	**2.80**	**141**	*e*P	**Pn**	**15 25 57.6**	**0.0**
PATR				*e*S	**Sn**	**15 26 34.0**	**0.0**
PANG	**Puerto Angel**	**2.84**	**235**		**Pn**	**15 25 55.5**	**-2.4**
PANG					**Sn**	**15 26 33.2**	**-1.4**
PANG	**Puerto Angel**	**2.84**	**235**	*e*P	**Pn**	**15 25 55.5**	**-2.4**
PANG				*e*S	**Sn**	**15 26 33.2**	**-1.4**
CHUJ	**Union Juarez**	**2.89**	**140**	*e*P	**Pn**	**15 25 59.4**	**+0.7**
CHUJ				*e*S	**Sn**	**15 26 34.7**	**-1.4**
THIG		**2.94**	**144**		**Sn**	**15 26 37.0**	**+0.2**
THIG		**2.94**	**144**	*e*S	**Sn**	**15 26 37.0**	**+0.2**
TOIG	**Toxpalan**	**2.98**	**286**		**Pn**	**15 26 00.1**	**+0.5**
TOIG					**Sn**	**15 26 35.6**	**-2.0**
TOIG	**Toxpalan**	**2.98**	**286**	*e*P	**Pn**	**15 26 00.1**	**+0.5**
TOIG				*e*S	**Sn**	**15 26 35.6**	**-2.0**
HUEH	**Huehuetenango**	**3.15**	**129**	Pn	**Pn**	**15 26 02.0**	**+0.2**
SCIG	**Sabancuy**	**3.18**	**58**	*e*P	**Pn**	**15 26 01.0**	**-1.0**
SCIG				*e*S	**Sn**	**15 26 39.5**	**-2.3**
PEIG	**Puerto Escondi**	**3.25**	**247**		**Pn**	**15 26 00.5**	**-2.2**
PEIG					**Sn**	**15 26 41.0**	**-2.4**
PEIG	**Puerto Escondi**	**3.25**	**247**	*e*P	**Pn**	**15 26 00.5**	**-2.2**
PEIG				*e*S	**Sn**	**15 26 41.0**	**-2.4**
OZST	**Orizaba**	**3.28**	**298**	*e*P	**Pn**	**15 26 03.0**	**-0.2**
OZST				*e*S	**Sn**	**15 26 41.1**	**-3.1**
LVIG	**Laguna Verde**	**3.28**	**317**	*e*P	**Pn**	**15 26 04.0**	**+0.9**
LVIG				*e*S	**Sn**	**15 26 41.5**	**-2.7**
JAUV	**Jalcomulco**	**3.32**	**308**	*e*P	**Pn**	**15 26 03.2**	**-0.4**
JAUV				*e*S	**Sn**	**15 26 40.9**	**-4.1**
TPIG	**Tehuac#an**	**3.34**	**290**		**Pn**	**15 26 04.9**	**+0.8**
TPIG					**Sn**	**15 26 43.6**	**-2.0**
TPIG	**Tehuac#an**	**3.34**	**290**	*e*P	**Pn**	**15 26 04.9**	**+0.8**
TPIG				*e*S	**Sn**	**15 26 43.6**	**-2.0**
YOIG	**Yosondua**	**3.37**	**263**		**Pn**	**15 26 04.0**	**-0.6**
YOIG					**Sn**	**15 26 43.0**	**-3.6**
YOIG	**Yosondua**	**3.37**	**263**	*e*P	**Pn**	**15 26 04.0**	**-0.6**
YOIG				*e*S	**Sn**	**15 26 43.0**	**-3.6**
TXIG	**Tlaxiaco**	**3.55**	**270**		**Pn**	**15 26 06.9**	**0.0**
TXIG					**Sn**	**15 26 44.5**	**-6.0**
TXIG	**Tlaxiaco**	**3.55**	**270**	*e*P	**Pn**	**15 26 06.9**	**0.0**
TXIG				*e*S	**Sn**	**15 26 44.5**	**-6.0**
RTAL	**Retalhuleu**	**3.58**	**140**	Pn	**Pn**	**15 26 09.4**	**+2.5**
RTAL				Sn	**Sn**	**15 26 45.9**	**-5.0**
HLIG	**Huajuapan de L**	**3.62**	**279**		**Pn**	**15 26 07.9**	**+0.3**
HLIG					**Sn**	**15 26 50.1**	**-1.7**
HLIG	**Huajuapan de L**	**3.62**	**279**	*e*P	**Pn**	**15 26 07.9**	**+0.3**
HLIG				*e*S	**Sn**	**15 26 50.1**	**-1.7**
FTIG	**Fresnillo de T**	**3.94**	**279**		**Pn**	**15 26 12.1**	**+0.6**
FTIG					**Sn**	**15 26 56.9**	**-2.0**
FTIG	**Fresnillo de T**	**3.94**	**279**	*e*P	**Pn**	**15 26 12.1**	**+0.6**
FTIG				*e*S	**Sn**	**15 26 56.9**	**-2.0**
PNIG	**Pinotepa**	**4.01**	**257**		**Pn**	**15 26 11.8**	**-0.5**
PNIG					**Sn**	**15 26 59.1**	**-1.3**
PNIG	**Pinotepa**	**4.01**	**257**	*e*	**Pn**	**15 26 10.6**	**-1.7**
PNIG				*e*P		15 26 11.8	
PNIG				*e*S	**Sn**	**15 26 59.1**	**-1.3**
TLIG	**Tlapa**	**4.32**	**274**	Pn	**Pn**	**15 26 16.4**	**+0.1**
TLIG	**Tlapa**	**4.32**	**274**	*e*P	**Pn**	**15 26 16.6**	**+0.2**
TLIG				*e*S	**Sn**	**15 27 06.3**	**-1.3**
HMTT	**Tlapaneco**	**4.33**	**277**		**Pn**	**15 26 17.1**	**+0.7**
HMTT					**Sn**	**15 27 06.6**	**-1.2**
HMTT	**Tlapaneco**	**4.33**	**277**	*i* P	**Pn**	**15 26 17.1**	**+0.7**
HMTT				*i* S	**Sn**	**15 27 06.6**	**-1.2**
MGIG	**Malinaltepec**	**4.38**	**270**		**Pn**	**15 26 17.1**	**0.0**
MGIG					**Sn**	**15 27 07.6**	**-1.5**
MGIG	**Malinaltepec**	**4.38**	**270**	*e*P	**Pn**	**15 26 17.1**	**0.0**
MGIG				*e*S	**Sn**	**15 27 07.6**	**-1.5**
CXUV	**Coxquihui**	**4.40**	**311**	*e*P	**Pn**	**15 26 17.9**	**+0.7**
CXUV				*e*S	**Sn**	**15 27 04.7**	**-4.6**
PPM	**Popocatepetl**	**4.69**	**293**	*e*P	**Pn**	**15 26 23.5**	**+2.1**
PPM				*e*S	**Sn**	**15 27 12.3**	**-4.4**
PPIG	**Popocatepetl**	**4.69**	**293**		**Pn**	**15 26 23.5**	**+2.1**
PPIG					**Sn**	**15 27 12.3**	**-4.4**
CRIG	**Cruz Grande**	**4.89**	**264**		**Pn**	**15 26 22.3**	**-1.3**
CRIG					**Sn**	**15 27 17.9**	**-2.8**
CRIG	**Cruz Grande**	**4.89**	**264**	*e*P	**Pn**	**15 26 22.3**	**-1.3**
CRIG				*e*S	**Sn**	**15 27 17.9**	**-2.8**
YAIG	**Yautepec**	**5.01**	**289**		**Pn**	**15 26 26.7**	**+1.4**
YAIG					**Sn**	**15 27 22.1**	**-1.7**
YAIG	**Yautepec**	**5.01**	**289**	*e*P	**Pn**	**15 26 26.7**	**+1.4**
YAIG				*e*S	**Sn**	**15 27 22.1**	**-1.7**
ESQI	**Esquipulas**	**5.29**	**121**	Pn	**Pn**	**15 26 29.1**	**+0.2**
PLIG	**Platanillo**	**5.30**	**282**		**Pn**	**15 26 30.3**	**+1.4**
PLIG					**Sn**	**15 27 28.0**	**-2.3**
PLIG	**Platanillo**	**5.30**	**282**	*e*P	**Pn**	**15 26 30.3**	**+1.4**
PLIG				*e*S	**Sn**	**15 27 28.0**	**-2.3**
MEIG	**Mezcala**	**5.35**	**277**		**Pn**	**15 26 30.5**	**+1.0**
MEIG					**Sn**	**15 27 29.4**	**-1.9**
MEIG	**Mezcala**	**5.35**	**277**	*e*P	**Pn**	**15 26 30.5**	**+1.0**
MEIG				*e*S	**Sn**	**15 27 29.4**	**-1.9**
DAIG	**Los Arroyos**	**5.36**	**268**		**Pn**	**15 26 29.1**	**-0.6**
DAIG					**Sn**	**15 27 30.3**	**-1.3**
DAIG	**Los Arroyos**	**5.36**	**268**	*e*P	**Pn**	**15 26 29.1**	**-0.6**
DAIG				*e*S	**Sn**	**15 27 30.3**	**-1.3**
DEIG	**Demacu**	**5.58**	**303**	*e*P	**Pn**	**15 26 34.8**	**+2.1**
DEIG				*e*S	Sn	15 27 26.3	-11
DHIG	**Demacu**	**5.58**	**303**		**Pn**	**15 26 34.8**	**+2.1**
DHIG					Sn	15 27 26.3	-11
CAIG	**El Cayaco**	**5.95**	**268**		**Pn**	**15 26 36.9**	**-0.4**
CAIG					**Sn**	**15 27 43.3**	**-2.1**
CAIG	**El Cayaco**	**5.95**	**268**	*e*P	**Pn**	**15 26 36.9**	**-0.4**
CAIG				*e*S	**Sn**	**15 27 43.3**	**-2.1**
ARIG	**Puente Sto Nin**	**6.08**	**280**		**Pn**	**15 26 40.7**	**+1.7**
ARIG					**Sn**	**15 27 48.1**	**-0.3**
ARIG	**Puente Sto Nin**	**6.08**	**280**	*e*P	**Pn**	**15 26 40.7**	**+1.7**
ARIG				*e*S	**Sn**	**15 27 48.1**	**-0.3**
TEIG	**Tepich**	**6.19**	**61**	Pn	**Pn**	**15 26 38.2**	**-2.2**
ZIIG	**Zihuatanejo**	**7.08**	**273**		**Pn**	**15 26 53.2**	**+1.1**
ZIIG					**Sn**	**15 28 14.1**	**+1.9**
ZIIG	**Zihuatanejo**	**7.08**	**273**	*e*P	**Pn**	**15 26 53.2**	**+1.1**
ZIIG				*e*S	**Sn**	**15 28 14.1**	**+1.9**
TGUH	**Tegucigalpa,Un**	**7.29**	**115**	Pn	**Pn**	**15 26 55.7**	**+0.7**
CRIN	**San Cristobal**	**8.17**	**123**	Pn	**Pn**	**15 27 07.5**	**+1.0**
MMIG	**Aquila**	**8.91**	**278**		**Pn**	**15 27 19.6**	**+3.5**
MMIG					**Sn**	**15 28 57.6**	**+1.9**
MMIG	**Aquila**	**8.91**	**278**	*e*P	**Pn**	**15 27 19.6**	**+3.5**
MMIG				*e*S	**Sn**	**15 28 57.6**	**+1.9**
ZAIG	**Zacatecas**	**9.67**	**306**		**Pn**	**15 27 28.5**	**+2.2**
ORTG	**Ortega, Santa**	**10.83**	**129**		**Pn**	**15 27 41.8**	**+0.5**
JTS	**Las Juntas de**	**11.26**	**127**		**Pn**	**15 27 47.0**	**+0.3**
SOR	**Soroa**	**11.72**	**61**	Pn	**Pn**	**15 27 51.5**	**-1.0**
JACO	**JACO, Garabito**	**11.88**	**129**		**Pn**	**15 27 56.5**	**+1.7**
833A	**Chaparral WMA,**	**12.01**	**337**	Pn	**Pn**	**15 27 58.2**	**+2.0**
RIMA	**Rio Macho**	**12.42**	**126**	P	**Pn**	**15 28 02.8**	**+1.0**
JCT	**Junction City**	**14.12**	**339**	Pn	**Pn**	**15 28 22.5**	**-0.3**
HPIG		**14.39**	**314**	P	**Pn**	**15 28 27.2**	**+0.8**
TXAR	**Lajitas Array**	**14.86**	**325**	P	**P**	**15 28 34.6**	**+1.4**
	7.7nm,0.8s,baz=149,slow=14,SNR=66						
TXAR	**Lajitas Array**	**14.86**	**325**		**P**	**15 28 33.9**	**+0.7**
TX31	**Lajitas Ar. Si**	**14.86**	**325**	P	**P**	**15 28 33.8**	**+0.6**
TX32	**Lajitas Array**	**14.86**	**325**	P	**P**	**15 28 33.6**	**+0.3**
MTDJ	**Mount Denham**	**15.76**	**84**	P	**Pn**	**15 28 42.1**	**-1.1**
WLAR	**White Oak Lake**	**16.32**	**3**	P	**Pn**	**15 28 55.0**	**+5.2**
Z47A	**Carrollton**	**16.71**	**18**	P	**P**	**15 28 53.8**	**+0.3**
Z47A				IAmb	IAmb	15 29 03.8	
	comp=Z,24nm,0.7s						
LRAL	**Lakeview Retre**	**16.89**	**21**	P	**P**	**15 28 56.6**	**+1.0**
LRAL				IAmb	IAmb	15 29 05.0	
	comp=Z,25nm,1.4s						
X37A	**Clayton**	**17.24**	**356**	P	**Pn**	**15 29 06.0**	**+5.3**
X37A				IAmb	IAmb	15 29 37.9	
	comp=Z,48nm,1.5s						
CLNB	**Carlsbad**	**17.34**	**331**	P	**Pn**	**15 29 02.1**	**+0.1**
HTMS	**Hat Mesa**	**17.40**	**332**	P	**P**	**15 29 02.3**	**+1.1**
CLN7	**Carlsbad 7**	**17.43**	**331**	P	**P**	**15 29 02.9**	**+1.3**
GDL2	**Guadalupe Moun**	**17.51**	**330**	P	**Pn**	**15 29 04.9**	**+0.8**
Y49A	**Blount Mountai**	**17.84**	**21**	P	**P**	**15 29 05.9**	**0.0**
WMOK	**Wichita Mounta**	**17.86**	**347**	P	**P**	**15 29 07.0**	**+0.8**
WHAR	**Wooly Hollow**	**17.97**	**5**	P	**P**	**15 29 07.3**	**0.0**
WHAR				IAmb	IAmb	15 29 22.6	
	comp=Z,14nm,0.9s						
CPRX	**Cap Rock**	**17.98**	**332**	P	**P**	**15 29 08.8**	**+1.3**
GTBY	**Guantanamo Bay**	**18.14**	**79**	P	**P**	**15 29 10.6**	**+1.4**
X48A	**Hartselle**	**18.18**	**19**	P	**P**	**15 29 09.1**	**-0.5**
X48A				IAmb	IAmb	15 29 24.1	
	comp=Z,20nm,1.4s						
MSTX	**Muleshoe**	**18.34**	**336**	P	**P**	**15 29 11.5**	**+0.1**
MSTX				IAmb	IAmb	15 29 16.5	
	comp=Z,21nm,1.1s						
PLAL	**Pickwick Lake**	**18.39**	**16**	P	**P**	**15 29 11.3**	**-0.5**
FCAR	**Ozark Folk Cen**	**18.58**	**5**	P	**P**	**15 29 14.2**	**+0.3**
FCAR				IAmb	IAmb	15 29 31.1	
	comp=Z,14nm,1.1s						
GOGA	**Godfrey**	**18.64**	**29**	P	**P**	**15 29 13.7**	**-0.9**
FPAL	**Fort Paine**	**18.74**	**22**	P	**P**	**15 29 15.1**	**-0.6**
Y52A	**Lilburn**	**18.76**	**27**	P	**P**	**15 29 14.2**	**-1.7**
Y52A				IAmb	IAmb	15 29 20.0	
	comp=Z,14nm,0.9s						
AMTX	**Amarillo**	**18.78**	**340**	P	**P**	**15 29 16.7**	**+0.5**
AMTX				IAmb	IAmb	15 29 21.8	
	comp=Z,13nm,0.5s						
LCAR	**Lake Charles**	**18.86**	**7**	P	**P**	**15 29 15.7**	**-1.2**
LCAR				IAmb	IAmb	15 29 31.1	
	comp=Z,16nm,0.7s						
SWET	**Sewanee**	**19.24**	**21**	P	**P**	**15 29 19.4**	**-1.8**
SWET				IAmb	IAmb	15 29 34.3	
	comp=Z,18nm,1.4s						
121A	**Cookes Peak, D**	**19.58**	**323**	P	**Pn**	**15 29 27.9**	**-0.7**
319A	**Douglas**	**19.68**	**318**	P	**P**	**15 29 27.7**	**+1.7**
319A				IAmb	IAmb	15 29 30.8	
	comp=Z,9.7nm,0.8s						
HODGE	**Hodges**	**19.88**	**30**	P	**P**	**15 29 25.4**	**-2.5**
CPCT	**Cooper Cave**	**19.95**	**23**	P	**P**	**15 29 27.5**	**-1.2**
CPCT				IAmb	IAmb	15 29 57.8	
	comp=Z,12nm,1.1s						
BNM	**Barren Site**	**20.20**	**328**	P	**P**	**15 29 32.0**	**+0.4**
S39A	**Bolivar**	**20.31**	**2**	P	**P**	**15 29 34.0**	**+1.5**
V51A	**Loudon**	**20.33**	**23**	P	**P**	**15 29 31.5**	**-1.3**
SBM	**South Baldy**	**20.34**	**327**	P	**P**	**15 29 33.4**	**0.0**
TKL	**Tuckaleechee C**	**20.43**	**25**	P	**P**	**15 29 32.5**	**-1.3**
	comp=Z,3.9nm,0.7s,baz=123,slow=13,SNR=2.0						
	comp=Z,3.9nm,0.7s						
TKL	**Tuckaleechee C**	**20.43**	**25**	P	**P**	**15 29 32.6**	**-1.2**
TKL				IAmb	IAmb	15 29 41.7	
	comp=Z,20nm,1.4s						
U49A	**Red Boiling Sp**	**20.48**	**19**	P	**P**	**15 29 33.0**	**-1.3**
T47A	**Sharon Grove**	**20.53**	**16**	P	**P**	**15 29 33.8**	**-1.1**
T47A				IAmb	IAmb	15 29 57.0	
	comp=Z,18nm,0.8s						
ANMO	**Albuquerque**	**20.76**	**330**	P	**P**	**15 29 40.4**	**+2.8**
	comp=Z,1.8nm,0.8s,baz=149,slow=12,SNR=5.9						
	comp=Z,1.8nm,0.8s						
ANMO	**Albuquerque**	**20.76**	**330**	P	**P**	**15 29 39.4**	**+1.8**
V53A	**Saluda**	**20.83**	**26**	P	**P**	**15 29 36.7**	**-1.5**
V53A				IAmb	IAmb	15 29 54.8	
	comp=Z,18nm,1.4s						
R40A	**Maddies Statio**	**20.96**	**4**	P	**P**	**15 29 38.2**	**-1.2**
T50A	**Nancy**	**21.25**	**21**	P	**P**	**15 29 40.2**	**-2.2**
T50A				IAmb	IAmb	15 29 41.2	
	comp=Z,9.6nm,1.1s						
TZTN	**Tazewell**	**21.29**	**24**	P	**P**	**15 29 41.5**	**-1.5**
TZTN				IAmb	IAmb	15 29 42.4	
	comp=Z,13nm,0.8s						
WCI	**Wyandotte Cave**	**21.92**	**17**	P	**P**	**15 29 47.1**	**-2.3**
WCI				IAmb	IAmb	15 30 02.3	
	comp=Z,8.7nm,0.9s						
S51A	**Beattyville**	**22.24**	**22**	P	**P**	**15 29 50.9**	**-1.6**
S51A				IAmb	IAmb	15 29 52.7	
	comp=Z,8.2nm,0.8s						
BLO	**Bloomington**	**22.75**	**15**	P	**P**	**15 29 55.7**	**-1.4**
P46A	**Rosedale**	**23.01**	**14**	P	**P**	**15 29 58.7**	**-0.7**
P48A	**Milroy**	**23.31**	**17**	P	**P**	**15 30 00.5**	**-1.7**
P48A				IAmb	IAmb	15 30 02.4	
	comp=Z,22nm,1.4s						
N38A	**Joes South For**	**23.41**	**2**	P	**P**	**15 30 02.0**	**-1.1**
R53A	**Hurricane**	**23.47**	**24**	P	**P**	**15 30 01.1**	**-2.6**
R53A				IAmb	IAmb	15 30 31.1	
	comp=Z,16nm,1.1s						
Q51A	**Peebles**	**23.56**	**21**	P	**P**	**15 30 02.8**	**-1.7**
Q51A				IAmb	IAmb	15 30 41.9	
	comp=Z,9.6nm,0.8s						
SDV	**Santo Domingo**	**24.27**	**107**	P	**P**	**15 30 11.3**	**-0.2**
	comp=Z,7.7nm,0.5s,baz=324,slow=4.8,SNR=5.6						
	comp=Z,7.7nm,0.5s						
Q49A	**Covington**	**24.30**	**18**	P	**P**	**15 30 08.5**	**-2.7**
PV13	**Radium Mtn., P**	**24.47**	**331**	P	**P**	**15 30 14.1**	**+1.0**
O52A	**Adamsville**	**25.07**	**23**	P	**P**	**15 30 15.8**	**-2.4**
O53A	**New Philadelph**	**25.41**	**23**	P	**P**	**15 30 19.6**	**-1.7**
PDAR	**Pinedale Array**	**28.60**	**336**	P	**P**	**15 30 52.6**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=135,slow=10,SNR=2.7						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**29.87**	**320**	P	**P**	**15 31 04.1**	**+2.8**
	comp=Z,0.7nm,0.8s,baz=138,slow=9.3,SNR=6.7						
NVAR				pP	**pP**	**15 31 36.9**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=134,slow=8.4,SNR=3.4						
	comp=Z,0.7nm,0.8s						
ULM	**Lac du Bonnet**	**32.89**	**358**	P	**P**	**15 31 25.5**	**-1.7**
	comp=Z,2.6nm,0.6s,baz=180,slow=8.1,SNR=1.9						
	comp=Z,2.6nm,0.6s					

5.7nm,0.1s
PSBE So Bento 5.21 130 *e*Pn **Pn 15 43 20.2 +1.6**
PSBE *e*Sn **Sn 15 44 18.8 0.0**
PMAFR Mafra 5.36 137 *e*Pn **Pn 15 43 22.2 +1.6**
PMAFR *e*Sn **Sn 15 44 23.2 +0.8**
PMAFR A A 15 44 27.6
17nm,0.7s
ECAL Calabor 5.46 98 P **Pn 15 43 23.0 +1.0**
ECAL S **Sn 15 44 25.0 +0.1**
MTE Manteigas 5.46 116 *e*Pn **Pn 15 43 23.6 +1.5**
MVO Moncorvo 5.48 107 *e*Pn **Pn 15 43 24.1 +1.8**
MVO *e*Sn **Sn 15 44 25.1 -0.3**
MVO A A 15 44 29.3
2.8nm,0.3s
PBRG Braganca 5.49 100 *e*Sn **Sn 15 44 26.3 +0.7**
PBRG A A 15 44 28.6
1.4nm,0.3s
PCBR Castelo Branco 5.80 120 *e*Sn **Sn 15 44 32.7 -0.6**
PMTG Montargil 5.84 130 *e*Pn **Pn 15 43 28.6 +1.4**
PMTG *e*Sn **Sn 15 44 33.2 -1.0**
PMTG A A 15 44 39.7
1.8nm,0.8s
PMRV Marv??o 6.10 123 *e*Pn **Pn 15 43 32.1 +1.3**
PMRV *e*Sn **Sn 15 44 39.9 -0.7**
PMRV A A 15 44 43.6
1.5nm,0.3s
EVO Evora 6.34 132 *e*Pn **Pn 15 43 35.7 +1.7**
PESTR Estremoz 6.34 128 *e*Pn **Pn 15 43 34.9 +0.8**
PESTR *e*Sn **Sn 15 44 44.8 -1.8**
PESTR A A 15 44 52.9
1.7nm,0.6s
PNCL Nicolau / Gran 6.38 138 *e*Pn **Pn 15 43 35.8 +1.1**
PNCL *e*Sn **Sn 15 44 45.5 -2.1**
PNCL A A 15 44 53.4
2.2nm,0.6s
EARI Arriondas 6.43 84 P **Pn 15 43 35.6 +0.3**
EARI ⇑*i*Vmb_V 15 43 44.1
154nm,SNR=1.6
EARI S **Sn 15 44 46.0 -2.7**
EPLA Plasencia 6.60 113 P **Pn 15 43 37.7 0.0**
EPLA ⇑*i*Vmb_V 15 43 39.1
123nm,SNR=1.4
EPLA S **Sn 15 44 50.5 -2.5**
PTEO Sao Teotonio 6.75 142 *e*Pn **Pn 15 43 40.6 +1.0**
MESJ Messejana 6.75 137 *e*Pn **Pn 15 43 41.3 +1.6**
MESJ *e*Sn **Sn 15 44 54.3 -2.3**
EBAD Badajoz 6.75 126 P **Pn 15 43 39.7 0.0**
EBAD ⇑*i*Vmb_V 15 43 42.0
108nm,SNR=1.7
EBAD S **Sn 15 44 53.6 -3.1**
MORF Marmelete 6.97 142 *e*Pn **Pn 15 43 44.0 +1.2**
MORF *e*Sn **Sn 15 45 00.1 -2.1**
MORF A A 15 45 03.6
6.3nm,0.1s
PCVE Castro Verde 7.00 138 *e*Pn **Pn 15 43 44.6 +1.4**
PCVE *e*Sn **Sn 15 45 00.8 -2.0**
PBAR Barrancos 7.13 130 *e*Sn **Sn 15 45 05.2 -0.8**
PBAR A A 15 45 06.7
1.5nm,0.7s
PVAQ Vaqueiros 7.34 137 ⇓*i*Pn **Pn 15 43 49.4 +1.6**
PVAQ *e*Sn **Sn 15 45 08.3 -2.8**
PVAQ A A 15 45 12.8
1.8nm,0.9s
EGRO El Granado 7.36 135 P **Pn 15 43 48.4 +0.3**
EGRO ⇑*i*Vmb_V 15 43 49.9
93nm,SNR=1.7
EGRO S **Sn 15 45 11.0 -0.6**
EMIN Mina Concepcio 7.62 131 P **Pn 15 43 52.4 +0.8**
EMIN ⇑*i*Vmb_V 15 43 53.8
74nm,SNR=1.7
EMIN S **Sn 15 45 14.7 -3.4**
GUD Guadarrama 7.70 104 P **Pn 15 43 53.6 +0.8**
ELAN Lanestosa 7.72 84 P **Pn 15 43 53.9 +0.8**
ELAN S **Sn 15 45 17.8 -2.8**
PAB San Pablo 8.02 112 P **Pn 15 43 57.7 +0.5**
PAB ⇑*i*Vmb_V 15 43 59.6
64nm,SNR=1.9
PAB S **Sn 15 45 26.8 -1.2**
ECAB El Cabril 8.15 124 P **Pn 15 43 59.9 +1.0**
ECAB ⇑*i*Vmb_V 15 44 04.0
78nm,SNR=1.8
ECAB S **Sn 15 45 28.4 -2.7**
ESDC Sonseca Array 8.22 110 P **Pn 15 44 01.1 +1.1**
ESDC ⇑*i*Vmb_V 15 44 02.4
76nm,SNR=2.0
EADA Adamuz 8.61 121 P **Pn 15 44 05.4 +0.1**
EADA ⇑*i*Vmb_V 15 44 15.2
57nm,SNR=1.4
EADA S **Sn 15 45 41.7 -0.8**

*IDC **08** 15:47:53.5±1.7, 1°.17S×120°.25E, h0km, mb3.3/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=80.8km s-min=27.5km az=65.0*
*DJA **08** 15:47:55.8±1.8, 1°S±3°×12°0E±°, h10km±17km, M3.6/8, MLv3.6/8*
ISC 08 15:47:55.3±1.2,**1°.43S**±0°.05×**119°.59E**±0°.09,**h10**km,**n12**, σ**1**§**28**/15,**mb3.3**/3,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.62**	**172**	P	**Pn**	**15 48 23.1**	**-0.8**
TTSI				S	**Sn**	**15 48 45.0**	**+0.2**
MPSI	**Mapaga**	**1.79**	**10**	P	**Pn**	**15 48 26.2**	**-0.1**
APSI	**Ampana**	**2.12**	**76**	P	**Pn**	**15 48 30.8**	**-0.1**
APSI				S	**Sn**	**15 48 58.3**	**+0.9**
PMSI	**Majene**	**2.16**	**198**	P	**Pn**	**15 48 32.1**	**+0.7**
SPSI	**Sidrap Palu**	**2.52**	**176**	P	**Pn**	**15 48 36.6**	**+0.3**
MRSI	**Marisa**	**3.02**	**51**	P	**Pn**	**15 48 44.2**	**+0.9**
LUWI	**Luwuk**	**3.21**	**83**	P	**Pn**	**15 48 46.7**	**+0.9**
KAPI	**Kappang**	**3.56**	**177**	Pn	**Pn**	**15 48 53.0**	**+2.3**
	2.6nm,0.3s,baz=106,slow=20,SNR=1.8						
KAPI				Sn	**Sn**	**15 49 32.8**	**-0.1**
	1.9nm,0.3s,baz=146,slow=18,SNR=1.9						
	5.4nm,0.3s						
GTOI	**Gorontalo**	**3.99**	**59**	P	**Pn**	**15 48 56.7**	**+0.1**
WRA	**Warramunga Arr**	**23.38**	**143**	P	**P**	**15 53 01.2**	**-3.2**
	1.0nm,1.0s,baz=322,slow=11,SNR=5.5						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**26.09**	**149**	P	**P**	**15 53 29.7**	**+0.2**
	0.5nm,1.0s,baz=345,slow=14,SNR=3.1						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**58.11**	**331**	P	**P**	**15 57 49.4**	**+0.3**
	0.4nm,0.6s,baz=132,slow=6.0,SNR=2.8						
	0.4nm,0.6s						

*STR **08** 15:54:25.8±1.0, 46°N±5°×°±°, h0km, MLv0.8/5, Error ellipse: s-maj=0.0km s-min=0.0km az=56.7, preliminary*
ZUR 08 15:54:24.9, 46°.26N×7°.40E, h7km±1km,**MLh0.8**/17,**4C-2D, Error ellipse: s-maj=2.5km s-min=0.9km az=181.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIOV	**Sion-Valere**	**0.04**	**230**	⇑Pg	Pg	15 54 26.6	+0.2
SIOV				Sg	Sg	15 54 27.5	+0.1
SENIN	**Lac Senin/Sane**	**0.13**	**325**	⇓Pg	Pg	15 54 27.9	+0.1
DIX	**Grande Dixence**	**0.18**	**179**	Pg	Pg	15 54 29.1	+0.5
DIX				Sg	Sg	15 54 31.6	+0.4
DIX	**Grande Dixence**	**0.18**	**179**	Pg	Pg	15 54 29.1	+0.5
LKBD	**Leukerbad**	**0.20**	**50**	⇓Pg	Pg	15 54 29.3	+0.4
LKBD2	**Leukerbad 2**	**0.20**	**55**	⇑Pg	Pg	15 54 29.3	+0.3
GRYON	**Gryon**	**0.20**	**268**	⇑Pg	Pg	15 54 29.2	+0.2
LAUCH	**Lauchernalp**	**0.30**	**58**	Pg	Pg	15 54 31.0	+0.2
SALAN	**Lac Salanfe**	**0.32**	**249**	⇑Pg	Pg	15 54 31.4	+0.2
AIGLE	**Aigle**	**0.32**	**285**	Pg	Pg	15 54 31.1	-0.1
OGSI	**Sixt**	**0.49**	**247**	Pg	Pg	15 54 34.5	+0.1
OGSI				Sg	Sg	15 54 40.6	-0.2
BRANT	**Les Verrieres**	**0.94**	**317**	Pg	Pn	15 54 45.3	+0.7
CHMF	**Charmoille**	**1.12**	**333**	Pg	Pb	15 54 46.6	+0.1

ROM 08 15:54:41.4±0.1,**42°.911N**±0°.003×**13°.254E**±0°.005, **h9**km,**ML1.8**/13,**7C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=87.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**272**	P	Pg	15 54 43.5	0.0
MC2				S	Sg	15 54 44.8	-0.3
MMO1	**Montemonaco**	**0.06**	**103**	P	Pg	15 54 43.4	-0.1
MMO1				S	Sg	15 54 44.6	-0.4
T1245	**Castelsantange**	**0.07**	**222**	⇑P	Pg	15 54 43.9	+0.2
T1245				S	Sg	15 54 45.5	+0.1
T1245				AML	AML		
	comp=E,2940μm,0.5s						
T1245				AML	AML		
	comp=N,2605μm,0.3s						
T1245				AML	AML		
	comp=E,3030μm,0.5s						
T1245				AML	AML		
	comp=N,2395μm,0.3s						
T1245				AML	AML		
	comp=E,2945μm,0.5s						
T1245				AML	AML		
	comp=N,2605μm,0.2s						
AM05	**Amandola Campo**	**0.10**	**48**	P	Pg	15 54 44.4	+0.5
AM05				S	Sg	15 54 46.2	+0.5
AM05				AML	AML		
	comp=E,418μm,0.3s						
AM05				AML	AML		
	comp=N,756μm,0.6s						
AM05				AML	AML		
	comp=E,2655μm,0.1s						
AM05				AML	AML		
	comp=N,210μm,0.1s						
AM05				AML	AML		
	comp=E,2650μm,0.1s						
AM05				AML	AML		
	comp=N,211μm,0.1s						
NRCA	**Norcia**	**0.13**	**233**	⇓P	Pg	15 54 44.9	+0.5
NRCA				S	Sg	15 54 47.4	+0.8
NRCA				AML	AML		
	comp=E,994μm,0.2s						
NRCA				AML	AML		
	comp=N,1038μm,0.7s						
NRCA				AML	AML		
	comp=N,1106μm,0.7s						
NRCA				AML	AML		
	comp=E,997μm,0.2s						
NRCA				AML	AML		
	comp=N,1040μm,0.7s						
NRCA				AML	AML		
	comp=E,1065μm,0.2s						
NRCA				AML	AML		
	comp=E,996μm,0.2s						
NRCA				AML	AML		
	comp=N,1042μm,0.7s						
T1241	**Roccafluvione,**	**0.14**	**113**	⇑P	Pg	15 54 45.1	+0.5
T1241				S	Sg	15 54 47.6	+0.8
T1241				AML	AML		
	comp=N,587μm,0.6s						
T1241				AML	AML		
	comp=E,572μm,0.2s						
T1241				AML	AML		
	comp=N,504μm,0.6s						
T1241				AML	AML		
	comp=E,572μm,0.2s						
T1241				AML	AML		
	comp=E,572μm,0.2s						
GUMA	**Gualdo di Mace**	**0.16**	**21**	⇑P	Pg	15 54 45.8	+0.9
GUMA				S	Sg	15 54 49.0	+1.6
GUMA				AML	AML		
	comp=E,1127μm,0.5s						
GUMA				AML	AML		
	comp=N,592μm,1.3s						
T1216	**Preci, Frazion**	**0.17**	**263**	⇑P	Pg	15 54 45.7	+0.6
T1216				S	Sg	15 54 48.9	+1.2
FDMO	**Fiordimonte**	**0.17**	**316**	⇑P	Pg	15 54 45.6	+0.4
FDMO				S	Sg	15 54 48.9	+1.2
FDMO				AML	AML		
	comp=N,341μm,0.6s						
FDMO				AML	AML		
	comp=E,284μm,0.4s						
CSP1	**Cessapalombo**	**0.18**	**349**	⇑P	Pg	15 54 45.9	+0.5
CSP1				S	Sg	15 54 49.1	+1.1
T1202	**Accumoli, Fraz**	**0.21**	**186**	P	Pg	15 54 46.5	+0.8
T1202				S	Sg	15 54 50.6	+1.9
T1204	**Amatrice, Fraz**	**0.24**	**169**	⇑P	Pg	15 54 47.0	+0.7
T1204				S	Sg	15 54 51.4	+1.7
T1204				AML	AML		
	comp=E,206μm,1.0s						
T1204				AML	AML		
	comp=N,137μm,1.5s						
T1204				AML	AML		
	comp=E,200μm,1.0s						
T1204				AML	AML		
	comp=N,144μm,1.5s						
T1243	**Rocca Santa Ma**	**0.26**	**146**	P	Pg	15 54 47.1	+0.5
T1243				S	Sb	15 54 51.6	-1.3
CESI	**CESI - Serrava**	**0.27**	**290**	P	Pg	15 54 47.5	+0.6
CESI				S	Sb	15 54 52.4	-0.9
T1215	**Vallo di Nera,**	**0.30**	**249**	P	Pg	15 54 48.0	+0.5
T1215				S	Sb	15 54 53.5	-0.6
T1217	**Poggiodomo (PG**	**0.31**	**230**	P	Pg	15 54 48.2	+0.5
T1217				S	Sb	15 54 53.5	-0.9
LNSS	**Leonessa**	**0.35**	**207**	⇓P	Pg	15 54 48.8	+0.5
LNSS				AML	AML		
	comp=E,346μm,0.7s						
LNSS				AML	AML		
	comp=N,256μm,0.4s						
LNSS				AML	AML		
	comp=E,345μm,0.7s						
LNSS				AML	AML		
	comp=N,257μm,0.4s						
TERO	**Teramo**	**0.39**	**138**	⇓P	Pg	15 54 49.4	+0.4
TERO				AML	AML		
	comp=E,114μm,1.0s						
TERO				AML	AML		
	comp=N,126μm,0.3s						
RM33	**Pellescritta (**	**0.40**	**184**	⇓P	Pg	15 54 50.0	+0.6
RM33				AML	AML		
	comp=E,71μm,1.4s						
RM33				AML	AML		
	comp=N,76μm,0.3s						
SNTG	**Esanatoglia**	**0.41**	**326**	P	Pg	15 54 49.9	+0.3
SNTG				AML	AML		
	comp=E,63μm,1.1s						
SNTG				AML	AML		
	comp=N,60μm,0.2s						
EL6	**Elcito**	**0.43**	**345**	⇓P	Pg	15 54 50.4	+0.5
CING	**Cingoli**	**0.47**	**355**	P	Pb	15 54 51.3	-0.6
CING				AML	AML		
	comp=E,65μm,0.1s						
CING				AML	AML		
	comp=N,51μm,0.9s						
CING				AML	AML		
	comp=N,51μm,0.9s						
CING				AML	AML		
	comp=E,65μm,0.1s						
GIGS	**Gran Sasso**	**0.52**	**153**	⇓P	Pg	15 54 51.8	+0.3
GIGS				AML	AML		
	comp=E,30μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,0.2s						
GIGS				AML	AML		
	comp=E,30μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,0.2s						
GIGS				AML	AML		
	comp=E,30μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,0.2s						

IDC 08 16:26:08.7±34.0,**30°.23S**×**61°.40E, h0**km,**mb3.6**/3, **mbtmp3.6**/3,**Error ellipse: s-maj=859.9km s-min=58.3km az=74.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**60.42**	**42**	P	P	16 36 20.1	-0.1
	0.5nm,0.4s,baz=234,slow=7.7,SNR=7.2						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**63.99**	**103**	P	P	16 36 44.5	+0.2
	0.4nm,0.7s,baz=245,slow=5.8,SNR=5.5						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**65.88**	**100**	P	P	16 36 56.4	-0.2
	0.3nm,0.8s,baz=240,slow=5.8,SNR=1.2						
	0.3nm,0.8s						

IDC 08 16:26:57.2±3.2,**49°.82N**×**29°.45W, h0**km,**mb3.4**/3, **mbtmp3.5**/3,**MS3.2**/16,**Error ellipse: s-maj=93.1km s-min=41.5km az=66.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**20.66**	**110**	P	P	16 31 38.8	+0.4
	0.2nm,0.3s,baz=305,slow=9.3,SNR=2.3						
ESDC				LR	LR	16 37 55.5	
	comp=Z,50nm,18.9s,baz=311,slow=32						
	0.2nm,0.3s						
JMIC	**Jan Mayen**	**23.36**	**17**	LR	LR	16 38 39.3	
	comp=Z,32nm,21.4s,baz=88,slow=30						
FRB	**Frobisher Bay**	**25.05**	**319**	LR	LR	16 40 07.5	
	comp=Z,41nm,18.4s,baz=194,slow=32						
NOA	**NORSAR Array B**	**25.22**	**48**	LR	LR	16 40 52.5	
	comp=Z,29nm,18.3s,baz=275,slow=33						
DAVOX	**Davos/Dischmat**	**26.13**	**81**	LR	LR	16 42 07.2	
	comp=Z,44nm,18.4s,baz=262,slow=35						
HFS	**Hagfors**	**26.35**	**50**	LR	LR	16 41 23.7	
	comp=Z,43nm,18.4s,baz=312,slow=33						
VRAC	**Vranov**	**29.51**	**73**	LR	LR	16 43 43.8	
	comp=Z,42nm,19.9s,baz=342,slow=34						
FINES	**FINESS Array B**	**32.40**	**48**	LR	LR	16 45 03.3	
	comp=Z,40nm,18.4s,baz=229,slow=34						
SADO	**Sadowa**	**33.57**	**281**	LR	LR	16 46 05.7	
	comp=Z,44nm,18.2s,baz=344,slow=34						
AKASG	**Malin Array Be**	**36.66**	**65**	LR	LR	16 48 21.3	
	comp=Z,22nm,18.4s,baz=128,slow=35						
OBN	**Obninsk**	**39.21**	**56**	LR	LR	16 49 56.8	
	comp=Z,14nm,20.4s,baz=330,slow=35						
TORD	**Torodi Ar. Bea**	**44.59**	**134**	P	P	16 35 10.7	-0.3
	0.6nm,0.7s,baz=334,slow=8.1,SNR=4.5						
	0.6nm,0.7s						
BELG	**Belogornoye**	**46.30**	**56**	LR	LR	16 54 06.6	
	comp=Z,23nm,19.6s,baz=151,slow=35						
ANMO	**Albuquerque**	**56.35**	**286**	LR	LR	16 58 36.0	
	comp=Z,27nm,18.0s,baz=282,slow=34						
TXAR	**Lajitas Array**	**58.32**	**279**	LR	LR	17 02 04.6	
	comp=Z,22nm,18.4s,baz=310,slow=36						
AAK	**Ala-Archa**	**66.48**	**51**	LR	LR	17 06 26.7	
	comp=Z,28nm,18.1s,baz=13,slow=36						
MKAR	**Makanchi Array**	**67.12**	**44**	P	P	16 37 52.2	-0.2
	0.9nm,0.8s,baz=308,slow=7.1,SNR=4.8						
MKAR				LR	LR	17 06 17.4	
	comp=Z,26nm,18.4s,baz=84,slow=35						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**150.82**	**33**	PKPbc	PKPbc	16 46 51.5	0.0
	0.2nm,0.7s,baz=340,slow=2.5,SNR=1.9						

*IDC **08** 16:37:59.2±1.1, 3°.88S×151°.64E, h0km, mb3.5/4, mbtmp3.5/4, MS2.9/2, Error ellipse: s-maj=27.5km s-min=14.8km az=45.0*
ISC 08 16:38:02.4±1.1,**3°.9S**±0°.2×**151°.6E**±0°.2,**h21**km,**n8**, σ0§**46**/7, **mb3.5**/4,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.62**	**134**	Pn	**Pb**	**16 38 14.7**	**0.0**
	4.9nm,0.3s,baz=294,slow=4.3,SNR=21						
KRVT				Sn	**Sn**	**16 38 25.5**	**+0.1**
	24nm,0.3s,baz=210,slow=20,SNR=9.9						
GUMO	**Guam**	**18.58**	**339**	LR	LR	16 48 10.3	
	comp=Z,18nm,21.9s,baz=138,slow=33						
WRA	**Warramunga Arr**	**23.19**	**225**	P	**P**	**16 43 07.6**	**-0.4**
	0.6nm,0.8s,baz=47,slow=9.5,SNR=5.9						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**26.05**	**219**	P	**P**	**16 43 34.6**	**0.0**
	0.6nm,0.9s,baz=54,slow=8.5,SNR=8.2						
	0.6nm,0.9s						
AFI	**Afiamalu**	**37.50**	**108**	LR	LR	16 58 30.7	
	comp=Z,45nm,21.0s,baz=168,slow=33						
SONM	**Songino Array**	**64.90**	**328**	P	**P**	**16 48 40.9**	**+0.5**
	0.4nm,0.6s,baz=146,slow=6.5,SNR=2.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**81.77**	**22**	P	**P**	**16 50 18.8**	**-0.6**
	0.6nm,0.8s,baz=243,slow=4.0,SNR=4.4						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.86**	**289**	PKPbc	**PKiKP**	**16 57 51.4**	**+0.4**
	0.3nm,0.4s,baz=75,slow=1.6,SNR=3.4						

OMAN 08 16:48:39.4±1.7,**15°.07N**×**52°.19E, h10**km,**mb5.2**/1,**ml2.9**/4, **Error ellipse: s-maj=24.4km s-min=13.6km az=148.0, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTO	**Aybut**	**2.50**	**25**	P	Pn	16 49 20.2	0.0
	SNR=45						
ABTO				S	Sn	16 49 51.0	+0.1
RBK	**Rabkut**	**3.10**	**38**	P	Pn	16 49 28.9	+0.6
	SNR=5.6						
RBK				S	Sn	16 50 06.2	+0.7
WHFO	**Wadi Hawf**	**3.21**	**28**	P	Pn	16 49 30.1	+0.1
	SNR=9.1						
WHFO				S	Sn	16 50 08.2	-0.2
DMTO	**DMTO**	**3.73**	**45**	P	Pn	16 49 37.1	0.0
	SNR=16						
DMTO				S	Sn	16 50 20.9	-0.1
DOK	**Doka**	**3.98**	**28**	P	Pn	16 49 40.9	+0.4
SHAO	**Shalim**	**4.41**	**48**	P	Pn	16 49 46.1	-0.4
SHAO				S	Sn	16 50 39.9	+2.0
UMZA	**Um Al Zommool**	**8.10**	**20**	P	Pn	16 50 36.3	-0.8

*NEIC **08** 17:05:00.5±1.9, 29°.2S±0°.1×60°.8E±0°.2, h10km±2km, mb4.2/3, Error ellipse: s-maj=31.5km s-min=16.9km az=52.0*
*IDC **08** 17:05:00.4±0.9, 29°.35S×60°.95E, h0km, mb3.7/8, mbtmp3.8/9, ML4.5/1, MS3.2/10, Error ellipse: s-maj=28.2km s-min=25.9km az=70.0*
ISC 08 17:05:01.3±0.8,**29°.3S**±0°.1×**60°.6E**±0°.1,**h10**km,**n31**, σ1§**85**/16,**mb3.9**/8,**MS3.3**/10,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.17**	**331**		**Pn**	**17 07 14.1**	**+0.3**
VOI	**Vohitsoka**	**14.41**	**297**		**P**	**17 08 30.2**	**-2.3**
ABPO	**Ambohimpanom**	**15.86**	**307**		**P**	**17 08 48.5**	**-0.3**
ABPO				IAmb	IAmb	17 08 53.9	
	comp=Z,13nm,1.4s						
OPO	**Ambohidratompo**	**16.19**	**308**	Pn	**P**	**17 08 53.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=128,slow=11,SNR=9.7						
OPO				Sn	**Sn**	**17 11 46.9**	**-2.1**
	baz=267,slow=22,SNR=1.2						
	comp=Z,2.5nm,0.3s						
H08S1	**Diego Carcia H**	**24.25**	**30**	T	T	17 35 03.7	
	baz=204						
H08S2	**Diego Garcia H**	**24.26**	**30**	T	T	17 35 03.6	
	baz=204						
H08S3	**Diego Garcia H**	**24.27**	**30**	T	T	17 35 19.3	
	baz=204						
BOSA	**Boshof**	**30.83**	**262**	LR	LR	17 21 30.8	
	comp=Z,24nm,19.5s,baz=192,slow=32						
LSZ	**Lusaka**	**32.90**	**288**	LR	LR	17 22 56.1	
	comp=Z,23nm,20.9s,baz=168,slow=32						
MAW	**Mawson**	**38.40**	**179**	LR	LR	17 24 24.2	
	comp=Z,47nm,20.1s,baz=120,slow=30						
TSUM	**Tsumeb**	**40.26**	**274**	LR	LR	17 29 25.2	
	comp=Z,23nm,19.3s,baz=162,slow=36						
MBAR	**Mbarara**	**40.26**	**310**	LR	LR	17 26 51.0	
	comp=Z,41nm,21.9s,baz=119,slow=32						
ATD	**Arta Tunnel**	**44.01**	**335**	LR	LR	17 28 44.2	
	comp=Z,36nm,21.0s,baz=57,slow=32						
H01W2	**Cape Leeuwin H**	**45.30**	**111**	T	T	18 00 58.2	
	baz=262						
H01W3	**Cape Leeuwin H**	**45.30**	**111**	T	T	18 01 13.2	
	baz=262						
H01W1	**Cape Leeuwin H**	**45.31**	**111**	T	T	18 01 17.2	
	baz=262						
SNAA	**Sanae**	**54.19**	**200**	P	**P**	**17 14 28.5**	**+1.8**
	comp=Z,1.0nm,1.0s,baz=135,slow=2.9,SNR=2.0						
	comp=Z,1.0nm,1.0s						
SNAA	**Sanae**	**54.19**	**200**	P	**P**	**17 14 26.9**	**+0.2**
SNAA				IAmb	IAmb	17 14 34.7	
	comp=Z,6.5nm,1.4s						
CMAR	**Chiang Mai Arr**	**60.19**	**43**	P	**P**	**17 15 11.1**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=226,slow=8.9,SNR=4.5						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**60.90**	**180**	P	**P**	**17 15 14.7**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=280,slow=4.8,SNR=2.4						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**60.90**	**180**	P	**P**	**17 15 14.1**	**0.0**
EIL	**Elat**	**63.49**	**335**	LR	LR	17 39 18.4	
	comp=Z,20nm,19.9s,baz=242,slow=32						
KNRA	**Kununurra**	**63.70**	**94**	P	P	17 15 40.7	+7.2
ASAR	**Alice Springs**	**64.93**	**104**	P	**P**	**17 15 39.2**	**-2.3**
	comp=Z,0.7nm,0.8s,baz=228,slow=6.4,SNR=7.9						
ASAR				LR	LR	17 40 24.3	
	comp=Z,40nm,18.4s,baz=109,slow=33						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**64.93**	**104**	P	**P**	**17 15 38.4**	**-3.1**

WRA	Warrumunga Arr	66.77	101	P	P	17 15 50.5	-2.8
	comp=Z,0.6nm,0.9s,baz=247,slow=6.5,SNR=2.4						
	comp=Z,0.6nm,0.9s						
GNI	Garni	70.60	347	LR	LR	17 45 05.4	
	comp=Z,22nm,21.7s,baz=160,slow=34						
TORD	Torodi Ar. Bea	70.72	298	P	P	17 16 19.8	+1.9
	comp=Z,0.7nm,0.9s,baz=112,slow=6.0,SNR=3.8						
	comp=Z,0.7nm,0.9s						
MKAR	Makanchi Array	78.21	15	P	P	17 17 02.0	+1.2
	comp=Z,0.7nm,0.7s,baz=205,slow=5.7,SNR=4.2						
	comp=Z,0.7nm,0.7s						
BVAR	Borovoye Array	82.38	6	LR	LR	17 51 22.8	
	comp=Z,19nm,21.6s,baz=342,slow=34						
ZALV	Zalesovo Beam	85.49	14	P	P	17 17 39.0	+0.1
	comp=Z,0.5nm,0.6s,baz=209,slow=4.5,SNR=4.1						
	comp=Z,0.5nm,0.6s						

*NEIC **08** 17:14:52.7±1.2, 33.°5S±0.°2×178.°3W±0.°2, h10km±2km, mb4.4/7, Error ellipse: s-maj=38.3km s-min=21.4km az=132.0*
*IDC **08** 17:14:53.0±3.0, 33.°39S×178.°54W, h0km, mb3.8/3, mbtmp3.8/4, ML3.9/1, MS3.3/2, Error ellipse: s-maj=65.6km s-min=45.4km az=121.0*
*WEL **08** 17:14:59.4±1.2, 33.°S±20.°×17.°9W±3.°4, h143km±55km, M4.2/9, mB4.7/6, ML4.4/7, MLv4.3/9, Mw(mB)3.9/6, Error ellipse: s-maj=0.0km s-min=0.0km az=117.5*
ISC 08 17:14:57.4±1.7, 33.°42S±0.°10×178.°5W±0.°2, h41km, n40, σ1§45/56, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.89	211	Pn	Pn	17 16 06.5	-1.8
MXZ	Matakaoa Point	4.89	211	P	Pn	17 16 09.2	+0.9
MXZ				S	Sn	17 17 02.3	-1.3
WMGZ	Waiomatatini S	5.06	209	P	Pn	17 16 12.6	+2.0
WMGZ				S	Sn	17 17 09.8	+1.9
PKGZ	Pakihiroa	5.26	211	P	Pn	17 16 13.2	-0.3
PKGZ				S	Sn	17 17 12.9	0.0
HAZ	Te Kaha	5.29	214	P	Pn	17 16 14.8	+1.0
HAZ				S	Sn	17 17 16.0	+2.6
PUZ	Puketiti	5.34	209	P	Pn	17 16 16.3	+1.7
PUZ				S	Sn	17 17 16.3	+1.5
RUGZ	Raukumara Rang	5.50	213	P	Pn	17 16 18.3	+1.4
RUGZ				S	Sn	17 17 19.8	+0.8
TWGZ	Tauwhareparae	5.54	210	P	Pn	17 16 18.7	+1.3
TWGZ				S	Sn	17 17 21.3	+1.4
CNGZ	Carnagh Statio	5.72	207	P	Pn	17 16 18.9	-0.8
CNGZ				S	Sn	17 17 26.6	+2.5
MWZ	Matawai	5.87	212	P	Pn	17 16 22.7	+0.8
MWZ				S	Sn	17 17 28.0	+0.1
URZ	Urewera	6.01	215	Pn	Pn	17 16 23.0	-0.7
	2.9nm,0.3s,baz=353,slow=3.5,SNR=18						
URZ				Sn	Sn	17 17 30.0	-1.1
	3.7nm,0.3s,baz=182,slow=18,SNR=7.6						
	5.9nm,0.3s						
URZ	Urewera	6.01	215	Pn	Pn	17 16 20.6	-3.0
URZ	Urewera	6.01	215	P	Pn	17 16 23.6	0.0
URZ				S	Sn	17 17 30.2	-0.9
RIGZ	Rimuhau	6.08	209	P	Pn	17 16 25.4	+0.6
RIGZ				S	Sn	17 17 33.3	+0.1
SNGZ	Shannon Statio	6.33	211	P	Pn	17 16 29.0	+0.9
SNGZ				S	Sn	17 17 39.8	+0.8
MUGZ	Murupara	6.34	216	P	Pn	17 16 29.8	+1.5
MHGZ	Mahia Peninsul	6.42	206	P	Pn	17 16 30.5	+1.1
MHGZ				S	Sn	17 17 42.2	+0.9
ARHZ	Aropaoanui	6.87	211	P	Pn	17 16 36.2	+0.7
ARHZ				S	Sn	17 17 51.0	-1.5
BKZ	Black Stump Fm	7.02	214	Pn	Pn	17 16 35.7	-1.9
BKZ	Black Stump Fm	7.02	214	P	Pn	17 16 37.6	0.0
MCHZ	McNeill Hill	7.15	211	P	Pn	17 16 38.7	-0.7
MCHZ				S	Sn	17 18 00.3	+0.9
BFZ	Birch Farm	8.38	209	Pn	Pn	17 16 53.1	-3.1
TUWZ	Tuamarina	10.00	215	Pn	Pn	17 17 16.3	-2.1
KHZ	Kahutara	10.96	213	Pn	Pn	17 17 27.7	-3.9
ODZ	Otahua Downs	14.32	213	Pn	Pn	17 18 14.8	-2.6
STKA	Stephens Creek	33.50	261	LR	LR	17 34 31.6	
	comp=Z,42nm,18.4s,baz=28,slow=35						
CTA	Charters Tower	33.99	284	P	P	17 21 39.2	+1.9
	1.9nm,0.8s,baz=130,slow=16,SNR=1.3						
	1.9nm,0.8s						
AS31	Alice Springs	42.62	270	P	P	17 22 50.3	+0.4
ASAR	Alice Springs	42.62	270	P	P	17 22 50.7	+0.8
	0.6nm,0.6s,baz=108,slow=7.2,SNR=14						
	0.6nm,0.6s						
ASAR	Alice Springs	42.62	270	P	P	17 22 48.0	-1.8
WR0	Warramunga Arr	43.70	276	P	P	17 22 58.9	+0.2
WR0				IAmb	IAmb	17 23 00.9	
	comp=Z,8.4nm,1.2s						
WB2	Warramunga Arr	43.87	276	P	P	17 23 00.8	+0.9
WRAB	Tennant Creek	43.87	276	P	P	17 22 59.6	-0.4
WRAB				IAmb	IAmb	17 23 40.4	
	comp=Z,9.0nm,1.4s						
WRAB					PP	17 24 42.4	-0.2
WRA	Warramunga Arr	43.88	276	P	P	17 23 00.7	+0.6
	comp=Z,1.0nm,0.7s,baz=116,slow=7.8,SNR=15						
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	43.88	276	P	P	17 23 00.0	0.0
WRA				PcP	PcP	17 24 45.1	-0.7
WB0	Warramunga Arr	43.91	276	P	P	17 23 00.5	+0.2
WB0				IAmb	IAmb	17 23 10.0	
	comp=Z,7.5nm,1.2s						
FITZ	Fitzroy Crossi	52.00	272	P	P	17 24 03.1	+0.2
FITZ				IAmb	IAmb	17 24 27.7	
	comp=Z,6.8nm,1.2s						
CASY	Casey	52.29	209	P	P	17 24 04.0	-0.3
CASY				IAmb	IAmb	17 24 22.1	
	comp=Z,2.7nm,0.8s						
NWAO	Narrogin (SRO)	52.99	252	LR	LR	17 43 34.8	
	comp=Z,27nm,21.1s,baz=340,slow=32						
FINES	FINESS Array B	147.80	338	PKPbc	PKiKP	17 34 38.3	-0.6
	comp=Z,4.3nm,0.9s,baz=35,slow=5.1,SNR=5.3						

*IDC **08** 17:17:15.0±2.7, 28.°92N×139.°09E, h394km±59km, mb2.9/2, mbtmp3.7/4, Error ellipse: s-maj=135.9km s-min=27.1km az=74.0*
*JMA **08** 17:17:16.1±0.4, 29.°N±2.°×13.°9E±.°, h395km, MV3.4/15, NEAR TORISHIMA IS*
ISC 08 17:17:15.2±1.1, 29.°00N±0.°09×139.°2E±0.°2, h400km, n10, σ0§70/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.27	125	eP	Pn	17 18 21.8	+1.1
CBIJ				eS	S	17 19 13.3	-0.5
JCJ	Chichijima	3.27	125	P	Pn	17 18 21.6	+0.8
	30nm,0.8s,baz=312,slow=23,SNR=1.4						
JCJ				S	S	17 19 12.9	-0.8
	82nm,0.4s,baz=294,slow=20,SNR=16						
BSO1	Boso 1	5.85	15	eS	S	17 19 58.4	-0.8
JHU	Hanno	6.84	1	eP	Pn	17 18 56.8	-0.1
JYT	Yasato	7.26	7	eP	P	17 19 02.2	0.0
JAG	Ashikaga	7.41	2	eP	P	17 19 03.9	0.0
JHO	Hitachi	7.68	8	eP	P	17 19 06.8	-0.1
USRK	Ussuriysk Ar.	16.22	341	P	P	17 20 41.2	+0.6
	1.3nm,0.6s,baz=158,slow=12,SNR=5.2						
WRA	Warramunga Arr	48.88	186	P	P	17 25 22.0	-0.6
	0.7nm,0.4s,baz=1.5,slow=7.6,SNR=32						
	0.7nm,0.4s						
ASAR	Alice Springs	52.60	186	P	P	17 25 49.5	-0.5
	0.2nm,0.4s,baz=3.9,slow=7.3,SNR=12						
	0.2nm,0.4s						

*TAP **08** 17:23:58.3, 25.°35N×122.°92E, h143km, ML3.1, D*
*JMA **08** 17:24:00.9±0.1, 25.°N±1.°×123.°1E±0.°4, h140km±1km, MV2.8/15, NW OFF ISHIGAKIJIMA IS*
ISC 08 17:24:00.1±1.8, 25.°1N±0.°1×123.°04E±0.°03, h143km±15km, n31, σ0§68/49, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.64	182	S	Sn	17 24 38.3	+0.7
	baz=171						
YOJ	Yonaguni jima	0.64	182	P	Pn	17 24 21.8	+0.4
YOJ				S	Sn	17 24 37.9	+0.3
JYNG	Yonagunijimaku	0.66	187	eP	Pn	17 24 22.0	+0.5
JYNG				eS	Sn	17 24 38.5	+0.7
IRIF	Iriomote-Funau	0.99	140	P	Pn	17 24 24.0	-0.1
IRIF				S	Sn	17 24 41.9	-0.5
JKRS	Kuro-shima	1.24	134	P	Pn	17 24 26.6	+0.3
JKRS				S	Sn	17 24 46.0	-0.4
JIJ	Ishigaki jima	1.25	126	P	Pn	17 24 26.3	-0.1
JIJ				S	Sn	17 24 45.5	-1.0
HATJ	Hateruma jima	1.26	146	P	Pn	17 24 26.8	+0.2
HATJ				S	Sn	17 24 46.5	-0.2
JISG	Ishigakijimahi	1.27	114	iP	Pn	17 24 26.7	+0.1
JISG				S	Sn	17 24 46.6	-0.3
NDT	Datong Townshi	1.47	250	eS	Sn	17 24 50.0	-0.7
	baz=243						
LATG	Datong	1.48	248	eS	Sn	17 24 52.1	+0.9
	baz=237						
JTJ	Tarama	1.58	107	P	Pn	17 24 30.4	+0.5
JTJ				S	Sn	17 24 52.5	-0.3
NSK	Sanguang	1.58	255	eS	Sn	17 24 52.5	-0.5
	baz=247						
NACB	Ninganchiao	1.61	235	eS	Sn	17 24 52.5	-0.8
	baz=218						
NNS	Nan Shan	1.65	247	iP	Pn	17 24 30.4	-0.4
	baz=243						
NNS				eS	Sn	17 24 53.2	-1.2
	baz=243						
TWD	Chiawan	1.66	232	eS	Sn	17 24 53.0	-1.4
	baz=217						
ETLH	Xiulin Townshi	1.67	238	eS	Sn	17 24 53.9	-1.0
	baz=221						
NFF	Wufeng Townshi	1.81	255	eS	Sn	17 24 56.1	-1.4
	baz=246						
FUSS	Fushou	1.84	243	eP	Pn	17 24 33.8	+0.6
	baz=227						
FUSS				eS	Sn	17 24 57.7	-0.8
	baz=227						
WHF	Hehuan Shan	1.87	240	eP	Pn	17 24 33.9	+0.1
	baz=225						
WHF				eS	Sn	17 24 58.6	-0.8
	baz=225						
LIOB	Emei	1.89	256	eP	Pn	17 24 34.1	+0.6
	baz=237						
LIOB				eS	Sn	17 24 58.8	-0.3
	baz=237						
NSTT	Nanjuang	1.91	256	eS	Sn	17 24 59.3	-0.1
	baz=237						
JIRB	Irabujima	1.96	98	eP	Pn	17 24 34.3	0.0
JIRB				eS	Sn	17 24 60.0	-0.4
JIKM	Ikemajima	2.01	95	eP	Pn	17 24 35.2	+0.4
JIKM				eS	Sn	17 25 01.0	-0.6
WUSB	Renai	2.07	238	eP	Pn	17 24 36.8	+1.0
	baz=230						
WUSB				eS	Sn	17 25 02.3	-0.8
	baz=230						
WHP	Taichung City	2.07	247	eS	Sn	17 25 03.4	+0.4
	baz=239						
JMJ2	Miyako jima3	2.11	99	P	Pn	17 24 36.7	+0.7
JMJ2				eS	Sn	17 25 03.4	-0.3
HGSD	Ruisui	2.18	223	eS	Sn	17 25 04.5	-0.7
	baz=211						
JOGS	Gusukube	2.18	99	P	Pn	17 24 37.5	+0.6
JOGS				eS	Sn	17 25 04.8	-0.3
WCS	Beigang Elemen	2.20	242	eP	Pn	17 24 37.3	+0.1
	baz=242						
WCS				eS	Sn	17 25 04.7	-0.9
	baz=242						
SSLB	Suanglung	2.31	236	eS	Sn	17 25 09.0	+0.9
	baz=223						
WHYT	Xinyi Township	2.44	235	eS	Sn	17 25 11.7	+0.9
	baz=238						

*SJA **08** 17:27:17.1±1.1, 29.°56S×72.°42W, h9km, ML4.1, MW4.0*
*IDC **08** 17:27:22.6±1.8, 29.°65S×71.°71W, h0km, mb4.2/2, mbtmp3.9/7, ML3.8/5, MS3.4/4, Error ellipse: s-maj=63.2km s-min=23.3km az=100.0*
*NEIC **08** 17:27:22.0±3.1, 29.°63S±0.°03×72.°15W±0.°06, h15km±5km, mb4.5/2, Mwr4.1/54, ML4.2(GUC), Error ellipse: s-maj=8.1km s-min=4.7km az=79.0*
*GUC **08** 17:27:23.7±0.6, 29.°66S×72.°08W, h35km±3km, ML3.8*
*NEIC **08** 17:27:23.6, 29.°59S×72.°18W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.51; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-1.84; $M_{r\theta}$0.29; $M_{\theta\phi}$-0.14; $M_{r\phi}$0.20; Fault plane solution: $M_0$1.74000×10^{15} NP1:ϕ_s15.92000°, δ49.97000°, λ106.59000°. NP2:ϕ_s171.07000°, δ42.79000°, λ71.22000°. Principal axes: T 1.5842, Plg77.0000°, Azm348.0000°; N 0.2794, Plg13.0000°, Azm185.0000°; P -1.8636, Plg4.0000°, Azm94.0000°;*
ISC 08 17:27:20.1±1.5, 29.°59S±0.°02×72.°16W±0.°04, h4km±9km, n106, σ1§68/141, mb4.4/3, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	La Serena	0.87	112		Pg	17 27 37.6	+0.9
CO05				Sn	Sg	17 27 47.5	-0.5
CO05	La Serena	0.87	112	eP	Pg	17 27 37.8	+1.1
CO05				iS	Sb	17 27 48.6	-1.0
CO05				IAML		17 27 50.3	
	comp=N,7μm,0.4s						
CO06	Fray Jorge	1.17	157	Pn	Pb	17 27 42.9	0.0
CO06	Fray Jorge	1.17	157	eP	Pb	17 27 43.1	+0.2
CO06				iS	Sb	17 27 57.4	-1.1
CO06				IAML		17 28 00.3	
GO04	Tololo Observa	1.32	116		Pn	17 27 45.2	-0.3
GO04	Tololo Observa	1.32	116	⇓iP	Pn	17 27 45.4	-0.1
GO04				iS	Sb	17 28 01.6	-1.3
GO04	Tololo Observa	1.32	116	eP	Pb	17 27 45.7	+0.2
GO04				eS	Sg	17 28 05.6	+3.1
LCO	Las Campanas	1.40	66		Pn	17 27 46.9	+0.3
LCO	Las Campanas	1.40	66	eP	Pn	17 27 47.0	+0.3
AC04	Llanos de Chal	1.68	35	Pn	Pn	17 27 50.7	+0.4
AC04	Llanos de Chal	1.68	35	eP	Pn	17 27 50.6	+0.4
AC04				IAML		17 28 26.9	
	comp=E,1μm,0.2s						
AC04	Llanos de Chal	1.68	35	eP	Pn	17 27 50.7	+0.4
AC04				eS	Sg	17 28 15.3	+1.2
AC04				IAML		17 28 24.9	
	comp=Z,864nm,0.5s						
CO03	El Pedregal	1.78	135		Pn	17 27 52.4	+0.7
CO03	El Pedregal	1.78	135	eP	Pn	17 27 52.5	+0.7
CO03				iS	Sb	17 28 14.6	-1.5
CO03				IAML		17 28 18.5	
	comp=E,2μm,0.3s						
CO03	El Pedregal	1.78	135	eP	Pn	17 27 52.6	+0.9
CO03				eS	Sn	17 28 09.8	-5.1
CO03				IAML		17 28 18.9	
	comp=Z,953nm,0.8s						
AC05	El Transito	1.81	66	Pn	Pn	17 27 53.3	+1.1
AC05	El Transito	1.81	66	eP	Pn	17 27 53.5	+1.3
AC05				iS	Sb	17 28 17.3	+0.3
AC05				IAML		17 28 24.6	
	comp=N,2μm,0.3s						
AC05	El Transito	1.81	66	eP	Pn	17 27 53.6	+1.3
AC05				eS	Sn	17 28 14.3	-1.5
AC05				IAML		17 28 22.1	
	comp=Z,1μm,0.5s						
CO01	Juntas del Tor	1.84	103		Pn	17 27 53.6	+0.9
CO01	Juntas del Tor	1.84	103	eP	Pb	17 27 53.9	-0.5
CO01				iS	Sb	17 28 16.9	-1.0
CO01				IAML		17 28 20.4	
	comp=N,1μm,0.3s						
CO01	Juntas del Tor	1.84	103	eP	Pb	17 27 54.0	-0.5
CO01				eP	Pn	17 27 54.1	+1.4
CO01				eS	Sg	17 28 18.9	-0.3
CO01				IAML		17 28 25.6	
	comp=Z,811nm,0.7s						
CO02	Combarbal	1.89	148		Pn	17 27 54.5	+1.1
CO02	Combarbal	1.89	148	⇑iP	Pn	17 27 54.5	+1.1
CO02				iS	Sn	17 28 17.4	-0.4
CO02	Combarbal	1.89	148	eP	Pn	17 27 48.8	-4.6
CO02				eP	Pb	17 27 54.0	-1.3
CO02				eS	Sg	17 28 23.6	+2.6
CO02				IAML		17 28 26.2	
	comp=Z,3μm,0.4s						
AROD	Rodeo	2.40	104	eP	Pb	17 28 03.0	-1.1
AROD				eS	Sg	17 28 37.1	-0.3
ACDV	Cuesta del Vie	2.70	103	eP	Pb	17 28 08.0	-1.2
ACDV				eS	Sg	17 28 50.5	+3.5
ACDV				IAML		17 28 51.8	
	comp=Z,458nm,0.4s						
AC06	Mina Casimiro	2.73	36		Pn	17 28 06.0	+1.2
AC06	Mina Casimiro	2.73	36	eP	Pn	17 28 06.2	+1.4
ACCO	Cerro Coronel	2.86	111	eP	Pb	17 28 11.0	-0.9
ACCO				eS	Sb	17 28 46.3	-1.2
VA06	Catapilco	3.05	166	Pn	Pn	17 28 09.6	+0.5
RTLS	Leoncito	3.31	132	eP	Pn	17 28 12.3	-0.6
RTLS				eP	Pb	17 28 17.0	-2.5
RTLS				eS	Sb	17 28 58.8	-1.4
RTLS				IAML		17 29 08.3	
	comp=Z,602nm,1.3s						
VA01	Torpederas	3.45	173	Pn	Pn	17 28 14.2	-0.4
VA03	San Esteban	3.45	157		Pn	17 28 17.0	+2.2
VA03	San Esteban	3.45	157	eP	Pn	17 28 17.0	+2.2
VA03				eS	Sb	17 29 02.3	-1.9
VA03				IAML		17 29 18.4	
	comp=Z,466nm,0.9s						
ROC1	El Roble	3.51	164		Pn	17 28 16.4	+0.7
ROC1	El Roble	3.51	164	eP	Pn	17 28 17.0	+1.3
ROC1				eS	Sn	17 28 56.8	-1.1
VCA	Vinchina	3.56	77	eP	Pn	17 28 16.8	+0.4
VCA				eS	Sb	17 29 03.3	-4.2
VCA				IAML		17 29 25.9	
	comp=Z,504nm,0.4s						
ZON	Zonda	3.58	124		Pn	17 28 17.4	+1.0
AC01	Pan de Azucar	3.70	22	Pn	Pn	17 28 17.5	-0.6
AC01	Pan de Azucar	3.70	22	eP	Pn	17 28 17.0	-1.1
AC01				eP	Pb	17 28 17.8	-8.3
AC01				eP	Pg	17 28 17.8	-13
AC01				eS	Sg	17 29 22.3	+3.3
AC01				IAML		17 29 32.9	
	comp=Z,215nm,0.5s						
MT02	Curacav	3.76	167		Pn	17 28 19.6	+0.6
MT02	Curacav	3.76	167	eP	Pn	17 28 19.5	+0.6
MT02				eS	Sg	17 29 17.8	-3.1
MT02				IAML		17 29 30.3	
	comp=Z,190nm,0.6s						
PEL	Peldehue	3.76	161		Pn	17 28 20.2	+1.3
PEL	Peldehue	3.76	161	eP	Pn	17 28 20.8	+1.8
PEL				eS	Sn	17 29 04.6	+0.9
AC02	Maricunga	3.83	45	Pn	Pn	17 28 21.6	+1.3
AC02	Maricunga	3.83	45	eP	Pn	17 28 22.0	+1.7
AC02				eS	Sb	17 29 12.3	-3.3
AC02				IAML		17 29 31.8	
	comp=Z,300nm,0.5s						
MT05	Renca	3.98	163	Pn	Pn	17 28 23.2	+1.2
MT05	Renca	3.98	163	eP	Pn	17 28 23.8	+1.8
MT05				eS	Sn	17 29 09.5	+0.4
MT05				eS	Sb	17 29 14.3	-5.1
MT05				IAML		17 29 32.4	
	comp=Z,319nm,1.8s						
VA05	Santo Domingo	4.08	174		Pn	17 28 24.6	+1.3
ASAL	Salagasta	4.13	137	eP	Pn	17 28 23.8	-0.3
ASAL				eP	Pb	17 28 24.8	-8.7
ASAL				eS	Sg	17 29 32.3	-0.6
MT03	Universidad Ad	4.14	161	Pn	Pn	17 28 25.5	+1.3
MT03	Universidad Ad	4.14	161	eP	Pn	17 28 26.9	+2.7
MT03				eS	Sn	17 29 15.0	+1.9
MT03				eS	Sb	17 29 24.8	+0.8
MT03				IAML		17 29 45.9	
	comp=Z,239nm,0.8s						
MT09	Talagante	4.29	167		Pn	17 28 27.7	+1.4
MT01	Popeta	4.33	170		Pn	17 28 27.2	+0.5
MT01	Popeta	4.33	170	eP	Pn	17 28 27.5	+0.8
MT01				eS	Sn	17 29 16.2	-1.5
MT01				IAML		17 29 41.6	
	comp=Z,124nm,0.8s						
AAGR	Agrelo	4.50	142	eP	Pn	17 28 30.3	+1.1
AAGR				eS	Sg	17 29 42.8	-1.9
LMEL	Las Melosas	4.56	159		Pn	17 28 32.0	+2.0
BO04	La Punta	4.58	164		Pn	17 28 31.5	+1.3
BO04	La Punta	4.58	164	eP	Pn	17 28 31.6	+1.3
BO04				iS	Sn	17 29 22.2	-1.7
BO01	Tunca	4.87	169		Pn	17 28 34.9	+0.7
BO01	Tunca	4.87	169	eP	Pn	17 28 34.7	+0.5
BO01	Tunca	4.87	169	eP	Pn	17 28 35.3	+1.1
BO01				eS	Sb	17 29 44.3	-0.7
BO01				IAML		17 29 57.7	
	comp=Z,81nm,1.1s						
BO03	Pichilemu	4.89	178	eP	Pn	17 28 34.4	-0.1
APLL	PUNTA DE LOS L	4.95	101	eP	Pn	17 28 38.3	+2.9
APLL				eS	Sb	17 29 48.8	+1.4
GO02	Mina Guanaco	4.97	28	Pn	Pn	17 28 35.9	+0.1
GO02	Mina Guanaco	4.97	28	eP	Pn	17 28 36.4	+0.6
GO02				eS	Sg	17 29 55.8	-4.0
PB14	IPOC Station P	5.19	18	Pn	Pn	17 28 37.5	-1.3
BO02	Sierra Bellavi	5.32	168		Pn	17 28 40.8	+0.5
GO05	Huala	5.41	178	Pn	Pn	17 28 41.1	-0.4
ML02	Panimavida	6.19	174	Pn	Pn	17 28 52.5	+0.3
PB10	IPOC Station P	6.22	14	Pn	Pn	17 28 52.6	-0.1
PB15	IPOC Station P	6.80	21	Pn	Pn	17 29 00.3	-0.6
H03N1	Juan Fernandez	6.92	235	T	T	17 36 55.5	
	baz=64,slow=71,SNR=777						
H03N2	Juan Fernandez	6.94	235	T	T	17 36 56.6	
	baz=64,slow=71,SNR=766						
H03N3	Juan Fernandez	6.94	235	T	T	17 36 55.0	
	baz=64,slow=71,SNR=696						
VA04	Juan Fernndez	6.97	233	Pn	Pn	17 29 02.1	-0.9
BI05	Punta Hualpn	7.19	187	Pn	Pn	17 29 05.7	-0.3
PB06	IPOC Station P	7.24	19	Pn	Pn	17 29 05.1	-1.8
PB04	IPOC Station P	7.45	15	Pn	Pn	17 29 09.5	-0.3
AF01	San Pedro de A	7.51	29	Pn	Pn	17 29 09.8	-0.9
LVC	Limon Verde	7.54	24	Pn	Pn	17 29 10.9	-0.3
	comp=Z,0.4nm,0.3s,baz=251,slow=22,SNR=1.5						
	comp=Z,1.5nm,0.2s						
LVC	Limon Verde	7.54	24	Pn	Pn	17 29 10.4	-0.8
PB07	IPOC Station P	8.10	15	Pn	Pn	17 29 16.8	-1.9
PB09	IPOC Station P	8.20	19	Pn	Pn	17 29 18.6	-1.4
PB02	IPOC Station P	8.49	14	Pn	Pn	17 29 21.7	-2.2
PB01	IPOC Station P	8.85	16	Pn	Pn	17 29 26.7	-2.1
PATCX	Punta Patache	8.92	12	Pn	Pn	17 29 29.3	-0.6
PLCA	Paso Flores	11.19	174	Pn	Pn	17 30 02.6	+1.6
	comp=Z,0.3nm,0.3s,baz=330,slow=12,SNR=7.9						
PLCA				LR	LR	17 35 04.7	
	comp=Z,104nm,20.0s,baz=10,slow=42						
	comp=Z,0.7nm,0.3s						
PLCA	Paso Flores	11.19	174	Pn	Pn	17 30 01.1	+0.1
TRQA	Tornquist	11.95	138	Pn	Pn	17 30 11.0	-0.2
CPUP	Villa Florida	13.50	80	Pn	Pn	17 30 30.2	-2.3
	comp=Z,0.2nm,0.3s,baz=317,slow=3.7,SNR=1.9						
CPUP				LR	LR	17 36 05.5	
	comp=Z,144nm,19.9s,baz=225,slow=40						
	comp=Z,1.1nm,0.6s						
ITQB	Itaqui	13.52	94	Pn	Pn	17 30 30.0	-2.7
LPAZ	La Paz	13.75	16	Pn	Pn	17 30 39.9	+3

TSEB eS Sn 17 57 15.0 +2.1
baz=267
SMST Manzhou Townsh 0.42 280 P Pn 17 57 05.5 +0.5
baz=280
SMST eS Sn 17 57 14.5 +0.7
baz=280
TWKBT Hengchun 0.44 269 P Pn 17 57 06.1 +0.9
baz=269
TWKBT eS Sn 17 57 15.2 +1.2
baz=269
TWK1 Hengchun 0.44 270 P Pn 17 57 06.0 +0.8
baz=269
TWK1 eS Sn 17 57 15.4 +1.2
baz=269
HEN Hengchun 0.51 277 P Pn 17 57 06.8 +1.0
baz=286
HEN eS Sn 17 57 16.9 +1.7
baz=286
SLIU Shizi 0.52 301 P Pn 17 57 06.4 +0.4
baz=308
SLIU eS Sn 17 57 16.5 +1.0
baz=308
TAWH Dawu Township 0.54 317 P Pn 17 57 05.4 -0.7
baz=317
TAWH eS Sn 17 57 14.8 -0.9
baz=317
EAST Anshuo 0.59 317 P Pn 17 57 07.2 +0.4
baz=318
EAST eS Sn 17 57 17.2 +0.4
baz=318
ECL Taimali 0.71 335 eP Pn 17 57 06.8 -1.3
baz=335
ECL eS Sn 17 57 18.7 -0.4
baz=335
LDUT Ludao 0.74 13 eP Pn 17 57 08.6 +0.2
baz=17
LDUT eS Sn 17 57 21.4 +1.7
baz=17
SCZT Fangliau 0.75 305 P Pn 17 57 09.3 +0.9
baz=305
SCZT eS Sn 17 57 21.3 +1.6
baz=305
TWGBT Beinan 0.89 348 eP Pn 17 57 09.8 -0.3
baz=347
TWGBT eS Sn 17 57 22.2 -0.5
baz=347
TWG Pinlang 0.89 347 eP Pn 17 57 09.9 -0.2
baz=347
TWG eS Sn 17 57 23.0 +0.2
baz=347
MASBT Mashibuluo 0.90 318 P Pn 17 57 11.1 +0.9
baz=318
MASBT eS Sn 17 57 22.9 0.0
baz=318
WLCH Liuqiu 0.93 296 eP Pn 17 57 12.4 +1.9
baz=296
WLCH eS Sn 17 57 27.8 +4.2
baz=296
TSMG Majia 0.96 322 eP Pn 17 57 11.6 +0.7
baz=322
TSMG eS Sn 17 57 25.0 +0.8
baz=322
LONT Longtian 0.96 352 eP Pn 17 57 11.2 +0.2
baz=344
LONT eS Sn 17 57 24.6 +0.2
baz=344
SSD Sandimen 1.00 323 eP Pn 17 57 12.2 +0.7
baz=329
SSD eS Sn 17 57 25.5 +0.4
baz=329
EDH Donghe 1.02 1 eS Sn 17 57 26.3 +0.7
baz=353
KAU Kaohsiung 1.09 305 eP Pn 17 57 14.3 +1.7
baz=294
KAU eS Sn 17 57 31.2 +3.9
baz=294
WSSB Gushan 1.17 306 eP Pn 17 57 14.9 +1.3
baz=306
WSSB eS Sn 17 57 31.6 +2.5
baz=306
TWM1 Shoushan 1.18 318 eP Pn 17 57 15.7 +1.9
baz=318
TWM1 eS Sn 17 57 33.5 +4.1
baz=318
SCST Cishan 1.19 322 eP Pn 17 57 14.3 +0.5
baz=322
SCST eS Sn 17 57 31.4 +2.1
baz=322
EHD Haiduan 1.20 357 eP Pn 17 57 12.7 -1.3
baz=351
EHD eS Sn 17 57 28.0 -1.7
baz=351
FULB Fuli 1.25 0 eP Pn 17 57 15.9 +1.2
baz=352
FULB eS Sn 17 57 32.6 +1.8
baz=352
ELDTW Lidau 1.26 349 eP Pn 17 57 14.8 -0.2
baz=351
SGST Jiashian 1.30 330 eP Pn 17 57 16.7 +1.3
baz=330
SGST eS Sn 17 57 32.2 +0.1
baz=330
STYH Taoyuan 1.30 339 eP Pn 17 57 15.3 -0.1
baz=339
STYH eS Sn 17 57 33.1 +1.0
baz=339
SHHT Tainan City 1.38 321 eP Pn 17 57 17.3 +1.0
baz=321
EYUL Yuli 1.39 1 eP Pn 17 57 17.2 +0.7
baz=352
EYUL eS Sn 17 57 34.2 0.0
baz=352
CHN1 Nanshi 1.42 331 eP Pn 17 57 17.9 +1.0
baz=330
CHN1 eS Sn 17 57 36.0 +1.2
baz=330
WTP Ta-pu 1.43 335 eP Pn 17 57 18.0 +0.9
baz=334
WTP eS Sn 17 57 36.3 +1.1
baz=334
SNST Tainan City 1.46 330 eP Pn 17 57 19.4 +1.9
baz=330
TPUB Ta-pu 1.48 336 eP Pn 17 57 18.4 +0.8
baz=335
TPUB eS Sn 17 57 36.6 +0.4
baz=335
TWK Hsinying 1.50 331 P Pn 17 57 18.9 +0.8
baz=331
TWK eS Sn 17 57 38.2 +1.2
baz=331
HGSD Ruisui 1.54 5 eP Pn 17 57 19.0 +0.5
baz=13
SCLT Jiali 1.58 321 eP Pn 17 57 22.0 +3.0
baz=331
SCLT eS Sn 17 57 39.8 +1.1
baz=331
WCKO Fanlu 1.61 337 eP Pn 17 57 19.3 -0.2
baz=337
WCKO eS Sn 17 57 39.7 +0.3
baz=337
ALS Alishan 1.62 344 eP Pn 17 57 21.3 +1.5
baz=333
TSCK Chigu Township 1.63 317 eP Pn 17 57 19.3 -0.4
baz=306
TSCK eS Sn 17 57 40.1 +0.3
baz=306
ICHU Yijhu 1.69 327 eP Pn 17 57 20.3 -0.1
baz=326
CHN8 Yiju 1.71 325 eP Pn 17 57 21.1 +0.4
baz=325
EGFH Guangfu 1.72 4 eP Pn 17 57 21.6 +0.7
baz=4.0
CHN5 Tsauling 1.73 341 eP Pn 17 57 23.9 +2.7
baz=341
CHY Chiayi 1.73 333 eP Pn 17 57 20.8 -0.3
baz=333
WHYT Xinyi Township 1.79 347 eP Pn 17 57 24.1 +2.3
baz=337
VWDT VWDT 1.80 356 eP Pn 17 57 22.9 +0.9
baz=343
VWDT eS Sn 17 57 45.4 +1.4
baz=343
WSL Shuilin Townsh 1.85 328 eP Pn 17 57 21.9 -0.7
baz=328
WSL eS Sn 17 57 43.8 -1.2
baz=328
SSLB Suanglung 1.86 351 eP Pn 17 57 24.8 +2.0
baz=339
WDLH Douliu 1.86 339 eP Pn 17 57 23.4 +0.6
baz=328
SMLT Sun Moon Lake 1.96 350 eP Pn 17 57 26.4 +2.2
baz=339
SMLT eS Sn 17 57 49.5 +1.6
baz=339
TYC Yuchr 1.99 349 eP Pn 17 57 26.8 +2.4
baz=348
TYC eS Sn 17 57 49.9 +1.5
baz=348
WDGT Dungji 1.99 311 eP Pn 17 57 24.0 -0.5
baz=311
WDGT eS Sn 17 57 46.8 -1.7
baz=311
OWD Renai 2.00 357 eP Pn 17 57 27.4 +2.6
baz=344
WUSB Renai 2.04 356 eP Pn 17 57 27.1 +1.8
baz=343
WCS Beigang Elemen 2.13 351 eP Pn 17 57 28.1 +1.8
baz=341
WHF Hehuan Shan 2.19 360 eP Pn 17 57 30.0 +2.4
baz=7.0
PHUB P'eng-hu 2.22 315 eP Pn 17 57 26.8 -0.8
baz=314
ETLH Xiulin Townshi 2.26 5 eP Pn 17 57 30.0 +1.8
baz=13
PNG Penghu 2.27 316 eP Pn 17 57 27.4 -0.9
baz=315
FUSS Fushou 2.29 359 eP Pn 17 57 30.9 +2.1
baz=348
LATG Datong 2.59 5 eP Pn 17 57 35.6 +2.9
baz=12
NDT Datong Townshi 2.65 5 eP Pn 17 57 33.3 -0.2
baz=11
NFF Wufeng Townshi 2.68 357 eP Pn 17 57 37.6 +3.7
baz=357
YHNB Yeheng 2.71 2 eP Pn 17 57 36.9 +2.5
baz=349
NSK Sanguang 2.72 1 eP Pn 17 57 36.6 +2.2
baz=348
FUSB Fushanzhiwuyua 2.81 6 eP Pn 17 57 37.2 +1.5
baz=11
YOJ Yonaguni jima 2.96 32 eP Pn 17 57 38.7 +1.0
baz=40
PACPP Pamplona Cagay 3.47 179⇑ eP Pn 17 57 43.6 -1.0
PACPP eS Sn 17 58 19.9 -4.6

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*BJI **08** 18:10:10.7±0.0,20°.10N×146°.71E,h6km,mb5.2/73, mB5.2/55,Ms5.0/77,Ms7 4.8/74*
*MOS **08** 18:10:12.4±0.9, 19°.95N×146°.74E,h17km,mb5.7/45, MS4.8/17,Error ellipse: s-maj=7.6km s-min=3.8km az=113.2*
*NEIC **08** 18:10:13.2±1.5,20°.02N±0°.03×146°.76E±0°.09,h10km±1km, mb5.6/441,Mww5.4,Error ellipse: s-maj=14.7km s-min=5.2km az=85.0*
*KLM **08** 18:10:13, 19°.83N×147°.05E,h10km,mb5.6*
*IDC **08** 18:10:14.6±1.6, 19°.94N×146°.80E,h20km±9km, mb5.1/56, mbtmp5.2/58,ML5.4/2,MS4.6/70,Error ellipse: s-maj=10.3km s-min=8.0km az=84.0*
*NEIC **08** 18:10:15,20°.22N×147°.09E,h18km,Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.73; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$1.17; $M_{r\theta}$-0.64; $M_{\theta\phi}$-1.26; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.74000×10^{17} NP1: ϕ_s11.00000°,δ60.00000°,λ-22.00000°. NP2:ϕ_s113.00000°, δ70.00000°,λ-148.00000°. Principal axes: T 1.8896, Plg7.0000°, Azm240.0000°; N -0.3442, Plg53.0000°, Azm141.0000°; P -1.5454, Plg36.0000°, Azm335.0000°;*
*GCMT **08** 18:10:18.2±0.1,20°.13N×146°.97E,h20km,MW5.3/146, Moment Tensor Solution. s104,c172; s146,c276; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.03±.01; $M_{\theta\theta}$-0.36±.01; $M_{\phi\phi}$0.38±.01; $M_{r\theta}$-0.71±.04; $M_{\theta\phi}$-0.97±.01; $M_{\phi r}$0.32±.03; Best double couple: $M_0$1.29000×10^{17} NP1:ϕ_s281.00000°,δ88.00000°, λ144.00000°. NP2:ϕ_s13.00000°,δ54.00000°,λ3.00000°. Principal axes: T 1.3860, Plg26.0000°, Azm231.0000°; N -0.1930, Plg54.0000°, Azm98.0000°; P -1.1930, Plg23.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 18:10:15.0±0.4,20°.00N±0°.03×146°.71E±0°.04,h24km±2km, h24km:pP-P,n1223,σ1°43/1191,mb5.6/396,MS4.7/120, 36C-32D,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.62**	**196**	Pn	Pn	**Pn**	**18 11 53.9**	**+3.0**
	254nm,0.3s,baz=60,slow=2.8,SNR=125							
GUMO				Sn	Sn	**Sn**	**18 13 01.1**	**-4.5**
	baz=16,slow=20							
GUMO	**Guam**	**6.62**	**196**	Pn	Pn	**Pn**	**18 11 53.2**	**+2.4**
GUMO	**Guam**	**6.62**	**196**	P	Pn	**Pn**	**18 11 53.3**	**+2.4**
GUMO	**Guam**	**6.62**	**196**	P	Pn	**Pn**	**18 11 54.5**	**+3.6**
JCJ	**Chichijima**	**8.19**	**330**	Pn	Pn	**Pn**	**18 12 12.2**	**-0.2**
	263nm,0.3s,baz=138,slow=7.3,SNR=131							
JCJ				Sn	Sn	**Sn**	**18 13 39.9**	**-4.4**
	140nm,0.3s,baz=132,slow=23,SNR=6.8							
	2μm,0.6s							
JCJ	**Chichijima**	**8.19**	**330**	Pn	Pn	**Pn**	**18 12 11.8**	**-0.6**
JCJ	**Chichijima**	**8.19**	**330**	P	Pn	**Pn**	**18 12 12.9**	**+0.5**
JHJ2	**Mitsune**	**14.43**	**336**	Pn	Pn	**Pn**	**18 13 35.7**	**-2.1**
JHJ	**Hachijo jima 2**	**14.45**	**336**	Pn	Pn	**Pn**	**18 13 35.5**	**-2.6**
	42nm,0.3s,baz=187,slow=14,SNR=20							
JHJ				Sn	Sn	**Sn**	**18 16 09.1**	**-8.5**
	9.4nm,0.3s,baz=242,slow=23,SNR=2.2							
JHJ				LR	LR		18 18 53.2	
	comp=Z,2μm,21.2s,baz=136,slow=36							
JYT	**Yasato**	**17.15**	**342**			**Pn**	**18 14 12.4**	**-0.6**
JYT				IAmb	IAmb	IAmb	18 14 17.7	
	comp=Z,816nm,1.2s							
INU	**Inuyama**	**17.51**	**333**			**Pn**	**18 14 16.9**	**-0.7**
INU				IAmb	IAmb	IAmb	18 14 21.7	
	comp=Z,435nm,1.0s							
INU	**Inuyama**	**17.51**	**333**	P		**Pn**	**18 14 17.9**	**+0.3**
JGF	**Kuroka**	**17.59**	**334**			**Pn**	**18 14 18.3**	**-0.3**
JGF				IAmb	IAmb	IAmb	18 14 22.9	
	comp=Z,758nm,1.5s							
JMN	**Monobe**	**17.80**	**323**	P		**P**	**18 14 21.9**	**0.0**
JMN				IAmb	IAmb	IAmb	18 14 25.7	
	comp=Z,785nm,1.3s							
MAJO	**Matsushiro**	**18.08**	**337**	P		**Pn**	**18 14 24.5**	**-0.1**
MAJO				IAmb	IAmb	IAmb	18 14 33.5	
	comp=Z,391nm,0.7s							
MAJO	**Matsushiro**	**18.08**	**337**	*d iP*		**Pn**	**18 14 24.6**	**-0.1**
MAJO				pmax	pmax	pmax		
	comp=Z,233nm,0.9s							
MAJO	**Matsushiro**	**18.08**	**337**	P		**P**	**18 14 25.8**	**+0.8**
JOW	**Kunigami**	**18.22**	**295**	P		**P**	**18 14 28.6**	**+2.0**
	comp=Z,10nm,0.3s,baz=125,slow=8.9,SNR=14							
	comp=Z,83nm,0.8s							
JOW	**Kunigami**	**18.22**	**295**			**P**	**18 14 26.7**	**+0.2**
JOW	**Kunigami**	**18.22**	**295**	P		**P**	**18 14 28.8**	**+2.3**
JMM	**Marumori**	**18.53**	**345**	P		**P**	**18 14 28.5**	**-1.3**
JSU	**Suzuyama**	**18.56**	**311**	P		**Pn**	**18 14 31.6**	**+1.0**
WAKE	**Wake Island**	**18.80**	**89**	P		**P**	**18 14 31.8**	**-1.1**
WAKE	**Wake Island**	**18.80**	**89**	P		**P**	**18 14 32.5**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**18.92**	**91**	P		**P**	**18 14 32.5**	**-1.7**
	baz=209,slow=19,SNR=4.5							
H11S3				S		Sn	18 17 43.2	-23
H11S3				T		T	18 33 56.6	
	baz=279,slow=75,SNR=3.7							
H11S1	**WAKE ISLAND Hy**	**18.93**	**91**	P		**P**	**18 14 32.2**	**-2.1**
	baz=209,slow=19,SNR=6.4							
H11S1				S		Sn	18 17 43.9	-22
H11S1				T		T	18 33 57.9	
	baz=279,slow=75,SNR=3.1							
H11S2	**WAKE ISLAND Hy**	**18.94**	**91**	P		**P**	**18 14 32.3**	**-2.0**
	baz=209,slow=19,SNR=7.6							
H11S2				S		Sn	18 17 45.2	-21
H11S2				T		T	18 33 53.5	
	baz=279,slow=75,SNR=4.6							
H11N1	**WAKE ISLAND Hy**	**18.99**	**87**	P		**P**	**18 14 33.5**	**-1.3**
	baz=258,slow=13,SNR=20							
H11N1				S		Sn	18 17 47.9	-20
H11N1				T		T	18 33 56.1	
	baz=274,slow=74,SNR=5.9							
H11N2	**WAKE ISLAND Hy**	**18.99**	**87**	P		**P**	**18 14 33.8**	**-1.1**
	baz=258,slow=13,SNR=18							
H11N2				S		Sn	18 17 47.5	-20
H11N2				T		T	18 33 50.6	
	baz=274,slow=74,SNR=5.5							
H11N3	**WAKE ISLAND Hy**	**19.00**	**87**	P		**P**	**18 14 33.7**	**-1.3**
	baz=258,slow=13,SNR=13							
H11N3				S		Sn	18 17 46.8	-21
H11N3				T		T	18 33 59.4	
	baz=274,slow=74,SNR=4.5							
JHS	**Saijyo**	**19.16**	**324**	P		**Pn**	**18 14 37.9**	**0.0**
JSD	**Sado**	**19.41**	**340**	P		**P**	**18 14 39.7**	**+0.2**
JSD				IAmb		IAmb	18 14 48.1	
	comp=Z,436nm,0.9s							
JTU	**Tsushima**	**21.07**	**317**	P		**P**	**18 14 57.5**	**-0.1**
JTM	**Tenmabayashi**	**21.27**	**348**	P		**P**	**18 14 59.6**	**0.0**
MANU	**Manus Island**	**21.92**	**178**	P		**P**	**18 15 06.2**	**-0.6**
MANU				IAmb		IAmb	18 15 09.2	
	comp=Z,129nm,0.7s							
MANU	**Manus Island**	**21.92**	**178**	P		**P**	**18 15 07.1**	**+0.3**
ERM	**Erimo**	**22.15**	**353**	P		**P**	**18 15 10.2**	**+1.2**
ERM				IAmb		IAmb	18 15 22.9	
	comp=Z,160nm,0.8s							
ERM	**Erimo**	**22.15**	**353**	P		**P**	**18 15 10.2**	**+1.2**
ERM				pmax		pmax		
	comp=Z,160nm,0.8s							
ERM	**Erimo**	**22.15**	**353**	P		**P**	**18 15 12.6**	**+3.6**
YOJ	**Yonaguni jima**	**22.37**	**286**	P		**P**	**18 15 11.7**	**+0.1**
YOJ	**Yonaguni jima**	**22.37**	**286**	P		**P**	**18 15 11.7**	**+0.1**
YOJ				pmax		pmax		
	comp=Z,117nm,0.8s							
YOJ	**Yonaguni jima**	**22.37**	**286**	P		**P**	**18 15 12.8**	**+1.2**
BIPH	**Bislig**	**22.93**	**242⇑**	*eP*		**P**	**18 15 17.6**	**0.0**
JEW	**Eniwo**	**23.20**	**350**	P		**P**	**18 15 20.5**	**+0.5**
SMPI	**Sarmi**	**23.22**	**201**	P		**P**	**18 15 20.2**	**-0.3**
	comp=Z,2μmcomp=Z,110nm,1.0s							
GENI	**Genyem**	**23.36**	**197**	P		**P**	**18 15 21.1**	**-0.8**
	comp=Z,3μmcomp=Z,165nm,1.4s							
MMPH	**Masbate**	**23.42**	**255⇓**	*iP*		**P**	**18 15 24.3**	**+1.8**
TJN	**Taejon**	**23.52**	**318**	P		**P**	**18 15 22.2**	**-1.2**
TJN	**Taejon**	**23.52**	**318**	P		**P**	**18 15 22.2**	**-1.2**
TJN				pmax		pmax		
	comp=Z,431nm,1.0s							
TJN	**Taejon**	**23.52**	**318**	P		**P**	**18 15 24.1**	**+0.7**
JCNP	**Jose Panganiba**	**23.62**	**260⇑**	*eP*		**P**	**18 15 25.8**	**+1.2**
NACB	**Ninganchiao**	**23.63**	**285**	P		**P**	**18 15 24.0**	**-0.5**
TABP	**Talibon, Bohol**	**23.72**	**249⇑**	*iP*		**P**	**18 15 26.1**	**+0.6**
TATO	**Taipei**	**23.81**	**287**	P		**P**	**18 15 24.6**	**-1.6**
TATO				IAmb		IAmb	18 15 50.5	
	comp=Z,160nm,1.1s							
YULB	**Yu-li**	**23.84**	**283**	P		**P**	**18 15 26.6**	**0.0**
YHNB	**Yeheng**	**23.87**	**286**	P		**P**	**18 15 26.5**	**-0.5**
YHNB				IAmb		IAmb	18 15 42.5	
	comp=Z,111nm,0.9s							
YHNB	**Yeheng**	**23.87**	**286**	P		**P**	**18 15 27.7**	**+0.7**
KSRS	**Korea Array**	**23.88**	**321**	P		**P**	**18 15 27.9**	**+1.3**
	comp=Z,66nm,0.8s,baz=144,slow=9.1,SNR=89							
KSRS				ScP		**ScP**	**18 22 48.5**	**+2.1**
	comp=Z,5.7nm,0.9s,baz=153,slow=4.1,SNR=6.0							
KSRS				LR		LR	18 25 10.0	
	comp=Z,2μm,18.8s,baz=140,slow=37							
	comp=Z,66nm,0.8s							
KSRS	**Korea Array**	**23.88**	**321**	P		**P**	**18 15 28.0**	**+1.3**
KSAR	**Wonju Array Be**	**23.89**	**321**	P		**P**	**18 15 26.8**	**-0.1**
KSAR	**Wonju Array Be**	**23.89**	**321**	P		**P**	**18 15 26.8**	**-0.1**
KS19	**Wonju Array Si**	**23.94**	**321**	P		**P**	**18 15 26.7**	**-0.7**
KS19				IAmb		IAmb	18 15 42.6	
	comp=Z,169nm,1.1s							
LLP	**Lapu-Lapu**	**23.94**	**250⇑**	*eP*		**P**	**18 15 27.9**	**+0.3**
LLP				*eS*		**S**	**18 19 39.5**	**-3.5**
GHBP	**Garcia Hernand**	**23.94**	**248⇑**	*iP*		**P**	**18 15 27.5**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**23.97**	**358**	*i P*		**P**	**18 15 28.9**	**+1.4**
TWG	**Pinlang**	**24.02**	**281**	P		**P**	**18 15 27.7**	**-0.5**
SRPI	**Serui, Papua**	**24.04**	**206**	P		**P**	**18 15 29.6**	**+1.1**
	comp=Z,86nm,1.0s							
SSLB	**Suanglung**	**24.18**	**284**	P		**P**	**18 15 30.0**	**+0.3**
SSLB				IAmb		IAmb	18 15 38.8	
	comp=Z,116nm,0.8s							
SSLB	**Suanglung**	**24.18**	**284**	P		**P**	**18 15 30.8**	**+1.0**
DAV	**Davao City (W)**	**24.19**	**241**	P		**P**	**18 15 30.9**	**+1.0**
	comp=Z,95nm,0.4s,baz=67,slow=4.2,SNR=6.9							
DAV				LR		LR	18 23 23.2	
	comp=Z,2μm,21.2s,baz=45,slow=32							
	comp=Z,95nm,0.4s							
DAV	**Davao City (W)**	**24.19**	**241**	P		**P**	**18 15 31.0**	**+1.1**
DAV				IAmb		IAmb	18 15 55.1	
	comp=Z,182nm,0.9s							
DAV	**Davao City (W)**	**24.19**	**241**	P		**P**	**18 15 30.9**	**+1.0**
DAV	**Davao City (W)**	**24.19**	**241**	P		**P**	**18 15 31.5**	**+1.6**
	comp=Z,3μmcomp=Z,3μmcomp=Z,159nm,0.7s							
DAV	**Davao City (W)**	**24.19**	**241**	P		**P**	**18 15 33.5**	**+3.6**
	comp=Z,164nm,0.7s							
CGP	**Cagayan de Oro**	**24.20**	**245⇓**	*eP*		**P**	**18 15 31.1**	**+1.2**
ASAJ	**Asahikawa**	**24.29**	**353**	P		**P**	**18 15 30.1**	**-0.4**
JKA	**Kamikawa-asahi**	**24.29**	**353**	P		**P**	**18 15 30.1**	**-0.4**
TBP	**Tagbilaran**	**24.32**	**248⇑**	*iP*		**P**	**18 15 30.4**	**-0.6**
TPUB	**Ta-pu**	**24.45**	**282**	P		**P**	**18 15 32.2**	**-0.1**
RABL	**Rabaul**	**24.63**	**167**	P		**P**	**18 15 31.7**	**-2.2**
RABL	**Rabaul**	**24.63**	**167**	P		**P**	**18 15 33.0**	**-0.9**
RKPI	**Ransiki, Papua**	**24.66**	**211**	P		**P**	**18 15 33.6**	**-0.6**
	comp=Z,2μmcomp=Z,75nm,0.9s							
INCN	**Inchon**	**24.68**	**319**	P		**P**	**18 15 33.8**	**-0.4**
INCN				IAmb		IAmb	18 15 36.1	
	comp=Z,131nm,0.8s							
INCN	**Inchon**	**24.68**	**319**	P		**P**	**18 15 33.8**	**-0.4**
INCN				pmax		pmax		
	comp=Z,131nm,0.8s							
INCN	**Inchon**	**24.68**	**319**	P		**P**	**18 15 35.7**	**+1.6**
KRVT	**Keravat (AS076**	**24.72**	**167**	P		**P**	**18 15 34.0**	**-0.6**
	comp=Z,55nm,0.8s,baz=357,slow=8.5,SNR=10							
KRVT				LR		LR	18 24 22.5	
	comp=Z,2μm,20.7s,baz=124,slow=34							
	comp=Z,55nm,0.8s							
LQP	**Lukban**	**24.75**	**260⇑**	*eP*		**P**	**18 15 36.0**	**+0.8**
LSIP	**Lazi, Siquijor**	**24.78**	**247⇑**	*eP*		**P**	**18 15 34.6**	**-0.6**
SNPH	**Sibulan**	**25.02**	**248**	*eP*		**P**	**18 15 38.2**	**+0.7**
KUR	**Kuril'sk**	**25.18**	**2**	*eP*		**P**	**18 15 39.8**	**+1.3**
KUR				pmax		pmax		
	comp=Z,957nm,1.0s							
KUR				pmax		pmax		
	comp=Z,2μm,3.6s							
KUR				MLR		MLR		
	comp=Z,598nm,19.0s							
CTBH	**Cotabato--PC H**	**25.21**	**243⇓**	*iP*		**P**	**18 15 40.5**	**+1.4**
DCPH	**Dipolog City**	**25.28**	**247⇓**	*eP*		**P**	**18 15 42.1**	**+2.3**
SSE	**Sheshan**	**25.48**	**301**	P		**P**	**18 15 42.4**	**+1.0**
SSE				S		**S**	**18 20 08.6**	**+1.2**
SSE				pmax		pmax		
	comp=Z,16nm,0.6s							
SSE				pmax		pmax		
	comp=Z,520nm,4.1s							
SSE				LR		LR		
	comp=Z,440nm,18.6s							
SSE				LR		LR		
	comp=Z,1μm,19.0s							
HJU	**Haeju**	**25.59**	**319**	P		**P**	**18 15 43.5**	**+1.2**
HJU				pP		**pP**	**18 15 49.3**	**+0.7**
HJU				S		**S**	**18 20 14.1**	**+5.2**
SIJI	**Sorong**	**25.68**	**218**	P		**P**	**18 15 43.5**	**+0.1**
	comp=Z,74nm,0.8s,baz=26,slow=9.6,SNR=51							
SIJI				LR		LR	18 23 58.3	
	comp=Z,3μm,20.3s,baz=34,slow=32							
	comp=Z,74nm,0.8s							
SIJI	**Sorong**	**25.68**	**218**	P		**P**	**18 15 43.5**	**+0.1**
	comp=Z,1μmcomp=Z,116nm,1.2s							
HHU	**Hamhung**	**25.79**	**325**	P		**P**	**18 15 45.2**	**+1.1**
GAMI	**Galela, Maluku**	**25.84**	**228**	P		**P**	**18 15 43.4**	**-1.5**
	comp=Z,2μmcomp=Z,82nm,0.8s							
MSHR	**Mys Shultsa**	**26.05**	**333**	*ceP*		**P**	**18 15 48.9**	**+2.4**
MSHR				pmax		pmax		
	comp=Z,178nm,1.7s							
LUBP	**Lubang**	**26.06**	**260⇓**	*eP*		**P**	**18 15 48.2**	**+1.4**
VLA	**Vladivostok**	**26.20**	**335**	*i P*		**P**	**18 15 50.5**	**+2.7**
VLA				pmax		pmax		
	comp=Z,152nm,1.1s							
FAKI	**Fak Fak**	**26.84**	**214**	P		**P**	**18 15 52.1**	**-1.8**
FAKI	**Fak Fak**	**26.84**	**214**	P		**P**	**18 15 53.4**	**-0.5**
	comp=Z,84nm,0.8s							
TNTI	**Ternate**	**26.90**	**227**	P		**P**	**18 15 53.5**	**-1.0**
TNTI	**Ternate**	**26.90**	**227**	P		**P**	**18 15 53.4**	**-1.0**
	comp=Z,674nmcomp=Z,36nm,1.2s							
TNTI	**Ternate**	**26.90**	**227**	P		**P**	**18 15 57.1**	**+2.7**
	comp=Z,36nm,1.2s							
USA0B	**Ussuriysk Arra**	**27.07**	**336**	P		**P**	**18 15 57.6**	**+2.0**
USA0B				IAmb		IAmb	18 16 18.7	
	comp=Z,303nm,1.6s							
USA0B	**Ussuriysk Arra**	**27.07**	**336**	P		**P**	**18 15 57.7**	**+2.0**
USA0B				pmax		pmax		
	comp=Z,303nm,1.7s							
USRK	**Ussuriysk Ar.**	**27.07**	**336**	P		**P**	**18 15 57.5**	**+1.8**

comp=Z,52nm,0.8s,baz=146,slow=9.1,SNR=74
USRK ScP **ScP** **18 22 54.0 -1.3**
comp=Z,2.6nm,0.9s,baz=143,slow=6.4,SNR=4.2
USRK LR LR 18 26 30.1
comp=Z,1μm,20.9s,baz=139,slow=36
comp=Z,52nm,0.8s
YSS Yuzh-Sakhalins 27.08 354 P **P** **18 15 54.3 -1.4**
YSS Yuzh-Sakhalins 27.08 354 *e*P **P** **18 15 56.5 +0.8**
YSS *e*S **S** **18 20 35.0 +2.8**
YSS pmax pmax
comp=Z,60nm,0.7s
YSS Yuzh-Sakhalins 27.08 354 P **P** **18 15 57.1 +1.4**
SUJ Sinuiju 27.63 321 P **P** **18 16 02.3 +1.6**
SUJ pP **pP** **18 16 07.4 +0.3**
SUJ S **S** **18 20 49.0 +7.8**
NJ2 Nanjing 27.67 301 *e*P **P** **18 16 02.4 +1.2**
NJ2 pmax pmax
comp=Z,52nm,0.9s
NJ2 LR LR
comp=Z,2μm,17.1s
NJ2 LR LR
comp=Z,2μm,19.9s
NJ2 LR LR
comp=Z,3μm,14.9s
LBMI Labuha 27.84 225 P **P** **18 16 01.9 -1.0**
comp=Z,18μmcomp=Z,109nm,1.0s
MDJ Mudanjiang 28.37 334 P **P** **18 16 08.3 +1.0**
MDJ Mudanjiang 28.37 334 P **P** **18 16 08.2 +0.9**
MDJ S **S** **18 20 56.4 +3.6**
MDJ pmax pmax
comp=Z,56nm,1.2s
MDJ pmax pmax
comp=Z,550nm,3.7s
MDJ LR LR
comp=Z,2μm,17.9s
MDJ LR LR
comp=Z,1μm,15.2s
MDJ LR LR
comp=Z,2μm,19.1s
MDJ Mudanjiang 28.37 334 P **P** **18 16 09.6 +2.3**
comp=Z,74nm,1.0s
DL2 Dalian 28.69 316 P **P** **18 16 14.0 +3.8**
DL2 pmax pmax
comp=Z,77nm,1.4s
DL2 LR LR
comp=Z,1μm,22.5s
DL2 LR LR
comp=Z,890nm,18.8s
DL2 LR LR
comp=Z,1μm,20.1s
MSAI Masohi 29.04 219 P **P** **18 16 13.9 +0.3**
comp=Z,812nmcomp=Z,14nm,0.9s
PMG Port Moresby 29.23 179 P **P** **18 16 14.9 -0.3**
comp=Z,170nm,0.7s,baz=46,slow=4.3,SNR=83
PMG LR LR 18 29 15.1
comp=Z,693nm,18.7s,baz=358,slow=39
comp=Z,170nm,0.7s
PMG Port Moresby 29.23 179 P **P** **18 16 14.3 -0.8**
PMG Port Moresby 29.23 179 P **P** **18 16 14.3 -0.8**
PMG pmax pmax
comp=Z,204nm,0.8s
PMG Port Moresby 29.23 179 P **P** **18 16 14.8 -0.3**
PMG Port Moresby 29.23 179 P **P** **18 16 15.1 -0.1**
PMG Port Moresby 29.23 179 P **P** **18 16 15.0 -0.1**
UGL Uglegorsk 29.25 354 *e*P **P** **18 16 17.5 +2.5**
UGL pmax pmax
comp=Z,960nm,4.0s
UGL pmax pmax
comp=Z,150nm,0.9s
SNY Shenyang 29.28 323 ⇓P **P** **18 16 15.2 -0.2**
SNY S **S** **18 21 05.6 -1.4**
SNY pmax pmax
comp=Z,47nm,0.9s
SNY pmax pmax
comp=Z,250nm,3.6s
SNY LR LR
comp=Z,2μm,17.5s
SNY LR LR
comp=Z,2μm,15.9s
SNY LR LR
comp=Z,2μm,20.6s
KMSI Cibinong 29.46 232 P **P** **18 16 17.1 -0.2**
comp=Z,128nm,0.9s
CN2 Changchun 29.64 328 *e*P **P** **18 16 20.4 +1.8**
CN2 PcP **PcP** **18 19 26.8 +4.0**
CN2 S **S** **18 21 09.5 -3.3**
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,2μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
AAI Ambon 29.75 220 P **P** **18 16 19.7 -0.1**
comp=Z,1μmcomp=Z,178nm,0.8s
SANI Sanana 29.89 225 P **P** **18 16 18.6 -2.5**
SANI Sanana 29.89 225 P **P** **18 16 19.0 -2.1**
comp=Z,461nmcomp=Z,39nm,0.8s
SANI Sanana 29.89 225 P **P** **18 16 19.8 -1.3**
NLAI Namlea 30.07 222 P **P** **18 16 22.1 -0.6**
NLAI Namlea 30.07 222 P **P** **18 16 22.6 -0.1**
comp=Z,40nm,1.2s
GTOI Gorontalo 30.14 233 P **P** **18 16 23.8 +0.5**
comp=Z,286nmcomp=Z,11nm,0.8s
BNX BinXian 30.20 333 ⇑P **P** **18 16 25.8 +2.3**
BNX pP **pP** **18 16 30.2 +0.3**
BNX sP **pwP** **18 16 33.1 +0.1**
BNX S **S** **18 21 29.8 +8.4**
BNX pmax pmax
comp=Z,36nm,1.0s
BNX pmax pmax
comp=Z,230nm,3.9s
BNX LR LR
comp=Z,1μm,18.8s
BNX LR LR
comp=Z,740nm,13.5s
BNX LR LR
comp=Z,1μm,18.6s
TIA Tai'an 30.53 308 ⇑P **P** **18 16 27.4 +0.8**
TIA PP **PnPn** **18 17 29.5 +3.6**
TIA S **S** **18 21 28.2 +1.3**
TIA pmax pmax
comp=Z,30nm,1.1s
TIA pmax pmax
comp=Z,250nm,4.1s
TIA LR LR
comp=Z,1μm,15.7s
TIA LR LR
comp=Z,920nm,17.1s
TIA LR LR
comp=Z,700nm,19.9s
TYV Tymovskoe 30.96 355 *e*P **P** **18 16 30.5 +0.3**
TYV *e*S **S** **18 21 37.1 +3.9**
TYV pmax pmax
comp=Z,40nm,0.8s
TYV pmax pmax
comp=Z,200nm,2.3s
TYV smax smax
comp=N,300nm,4.2s
WHN Wuhan 30.99 296 ⇑P P 18 16 39.8 +9.1
MRSI Marisa 31.05 234 P **P** **18 16 31.7 +0.3**
comp=N,1μmcomp=N,98nm,1.0s
MYLDM Lahad Datu 31.14 246 P **P** **18 16 33.0 +0.8**
MYLDM Lahad Datu 31.14 246 P **P** **18 16 34.7 +2.5**
comp=N,732nmcomp=N,50nm,1.1s
LUWI Luwuk 31.43 231 P **P** **18 16 33.4 -1.3**
LUWI Luwuk 31.43 231 P **P** **18 16 33.6 -1.1**
LUWI Luwuk 31.43 231 P **P** **18 16 33.9 -0.8**
comp=N,2μmcomp=N,164nm,0.6s
LUWI Luwuk 31.43 231 P **P** **18 16 34.4 -0.3**
KLR Kul'dur 31.53 341 P **P** **18 16 36.7 +1.5**
baz=152,slow=8.4
KLR PcP **PcP** **18 19 29.0 +1.4**
comp=N,9.3nm,0.8s,baz=174,slow=3.0,SNR=2.6
KLR LR LR 18 32 44.0
comp=N,337nm,19.2s,baz=154,slow=43
KLR Kul'dur 31.53 341 *de*P **P** **18 16 36.3 +1.1**
KLR pmax pmax
comp=Z,122nm,0.9s
TOLI2 Tolitoli 31.55 237 P **P** **18 16 35.4 -0.4**
TOLI2 IAmb IAmb 18 17 32.5
comp=Z,82nm,0.7s
TOLI2 Tolitoli 31.55 237 P **P** **18 16 36.8 +1.0**

GRNR Gornyy 31.76 348 ⇓*i*P **P** **18 16 39.0 +1.7**
GRNR *e*S **S** **18 21 52.2 +6.4**
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=E,20nm,0.9s
GRNR pmax pmax
comp=Z,50nm,0.8s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,270nm,13.0s
GRNR MLR MLR
comp=N,470nm,15.0s
GRNR MLR MLR
comp=Z,520nm,16.0s
HNR Honiara 32.02 155 LR LR 18 31 00.4
comp=Z,24μm,18.1s,baz=318,slow=39
HNR Honiara 32.02 155 P **P** **18 16 41.3 +1.5**
HNR Honiara 32.02 155 P **P** **18 16 41.3 +1.5**
HNR pmax pmax
comp=Z,121nm,0.9s
APSI Ampana 32.18 233 P **P** **18 16 40.3 -1.0**
comp=Z,0.9nmcomp=Z,2μmcomp=Z,256nm,0.9s
APSI Ampana 32.18 233 P **P** **18 16 41.2 -0.1**
comp=Z,2μmcomp=Z,256nm,0.9s
KKM Kota Kinabalu 32.71 249 P **P** **18 16 46.5 +0.5**
KKM IAmb IAmb 18 16 50.2
comp=Z,54nm,0.9s
KKM Kota Kinabalu 32.71 249 P **P** **18 16 47.7 +1.6**
comp=Z,64nm,0.8s
MPSI Mapaga 32.72 237 P **P** **18 16 46.4 +0.3**
comp=Z,425nmcomp=Z,38nm,0.9s
HNS HongShan 32.78 309 ⇓P **P** **18 16 47.1 +0.8**
HNS PcP **PcP** **18 19 37.3 +6.0**
HNS S **S** **18 22 00.9 -1.1**
HNS ScP **ScP** **18 23 15.5 +1.5**
HNS pmax pmax
comp=Z,51nm,1.4s
HNS LR LR
comp=Z,1μm,17.1s
HNS LR LR
comp=Z,1μm,18.3s
HNS LR LR
comp=Z,1μm,17.1s
BJT Baijiatuau 32.88 314 P **P** **18 16 47.1 0.0**
BJT Baijiatuau 32.88 314 P **P** **18 16 47.2 0.0**
BJT pmax pmax
comp=Z,29nm,1.2s
BJI Beijing 32.89 314 P **P** **18 16 47.2 0.0**
BJI S **S** **18 22 01.9 -1.7**
BJI LR LR
comp=Z,250nm,21.9s
BJI LR LR
comp=Z,650nm,18.9s
BJI LR LR
comp=Z,1μm,24.3s
SPMM Sapulut 33.13 247 P **P** **18 16 51.0 +1.3**
LYN LuoYang 33.52 303 ⇑P **P** **18 16 53.8 +0.9**
LYN S **S** **18 22 11.5 -2.2**
LYN SS **SnSn** **18 24 20.8 +3.9**
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN pmax pmax
comp=Z,210nm,5.7s
LYN LR LR
comp=Z,870nm,14.5s
LYN LR LR
comp=Z,1μm,18.1s
LYN LR LR
comp=Z,2μm,18.0s
MIDW Midway 33.69 69 P **P** **18 16 54.2 -0.2**
MIDW IAmb IAmb 18 17 09.6
comp=Z,111nm,1.3s
COEN Coen 33.93 186 P **P** **18 16 55.5 -1.0**
COEN Coen 33.93 186 P **P** **18 16 56.4 -0.1**
PEA0B Petropavlovsk- 34.12 12 P **P** **18 16 57.7 -0.1**
PEA0B IAmb IAmb 18 17 07.9
comp=Z,103nm,1.2s
PEA0B Petropavlovsk- 34.12 12 P **P** **18 16 57.7 -0.1**
PEA0B pmax pmax
comp=Z,103nm,1.2s
PETK Petropavlovsk- 34.12 12 P **P** **18 16 59.2 +1.4**
comp=Z,31nm,0.9s,baz=189,slow=8.3,SNR=18
PETK PcP **PcP** **18 19 35.4 +0.6**
comp=Z,7.1nm,0.8s,baz=194,slow=5.5,SNR=3.6
PETK LR LR 18 32 27.9
comp=Z,898nm,18.2s,baz=192,slow=39
comp=Z,31nm,0.9s
PETK Petropavlovsk- 34.12 12 P **P** **18 16 57.2 -0.6**
PET Petropavlovsk 34.23 13 P **P** **18 16 57.6 -1.2**
PET IAmb IAmb 18 17 01.1
comp=Z,77nm,1.0s
PET Petropavlovsk 34.23 13 *e*P **P** **18 16 59.9 +1.1**
PET *e* 18 19 34.2
PET *e*S **S** **18 22 23.8 -0.3**
PET *e*SS **SnSn** **18 24 33.2 -0.4**
PET pmax pmax
comp=Z,110nm,1.0s
PET pmax pmax
comp=Z,400nm,12.8s
PET Petropavlovsk 34.23 13 P **P** **18 17 00.3 +1.5**
QIZ Qiongzhong 34.72 275 P **P** **18 17 04.9 +1.5**
QIZ S **S** **18 22 33.4 +1.0**
QIZ sS **pS** **18 22 39.8 +0.3**
QIZ pmax pmax
comp=Z,22nm,1.0s
QIZ LR LR
comp=Z,440nm,15.9s
QIZ LR LR
comp=Z,820nm,18.3s
QIZ LR LR
comp=Z,1μm,17.5s
XLT XiLinHaoTe 34.92 320 ⇑*i*P **P** **18 17 06.3 +1.3**
XLT pP pP 18 17 10.7 -0.8
XLT sP sP 18 17 13.4 -0.6
XLT PP **PP** **18 18 22.2 -2.2**
XLT S **S** **18 22 28.3 -6.9**
XLT PcS **PcS** **18 23 20.9 -3.2**
XLT pmax pmax
comp=Z,45nm,1.0s
XLT pmax pmax
comp=Z,230nm,4.1s
XLT LR LR
comp=Z,130nm,17.5s
XLT LR LR
comp=Z,1μm,15.9s
XLT LR LR
comp=Z,1μm,17.3s
SMKI Samarinda 35.33 238 P **P** **18 17 10.8 +2.1**
comp=Z,22μmcomp=Z,147nm,0.6s
KDU Kakadu 35.38 204 P **P** **18 17 08.2 -0.8**
MTN Manton Dam 36.06 206 P **P** **18 17 13.3 -1.6**
MTN IAmb IAmb 18 17 35.7
comp=Z,176nm,1.6s
MTN Manton Dam 36.06 206 P **P** **18 17 15.3 +0.4**
BKB Balikpapan 36.07 238 P **P** **18 17 15.6 +0.6**
BKB Balikpapan 36.07 238 P **P** **18 17 15.3 +0.3**
XAN Xi'an 36.23 301 ⇑P **P** **18 17 17.1 +0.7**
XAN sP sP 18 17 24.2 -1.1
XAN PP **PP** **18 18 40.8 +1.9**
XAN S **S** **18 23 01.2 +5.7**
XAN sS sS 18 23 08.6 +2.7
XAN ScS **ScS** **18 27 35.0 +2.5**
XAN pmax pmax
comp=Z,24nm,0.7s
XAN pmax pmax
comp=Z,400nm,4.1s
XAN LR LR
comp=Z,2μm,15.5s
XAN LR LR
comp=Z,2μm,16.0s
XAN LR LR
comp=Z,2μm,17.7s
HIA Hailar 36.30 330 P **P** **18 17 17.5 +0.8**
HIA IAmb IAmb 18 17 19.1
comp=Z,124nm,0.9s
HIA Hailar 36.30 330 P **P** **18 17 17.5 +0.8**
HIA pmax pmax
comp=Z,124nm,0.9s
KAPI Kappang 36.34 230 LR LR 18 31 13.7
comp=Z,742nm,19.6s,baz=58,slow=35
HHC Hu-ho-hao-te 36.40 313 *e*P **P** **18 17 17.9 +0.1**
HHC ScS ScS 18 27 31.1 -2.2
HHC pmax pmax

comp=Z,45nm,1.0s
HHC pmax pmax
comp=Z,230nm,6.0s
HHC LR LR
comp=Z,1μm,15.9s
HHC LR LR
comp=Z,1μm,16.5s
HHC LR LR
comp=Z,2μm,17.1s
ZEA Zeya 36.84 341 *de*P **P** **18 17 22.3 +1.1**
ZEA *e* 18 17 29.5
ZEA *e* 18 26 10.7
ZEA pmax pmax
comp=N,70nm,0.9s
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=Z,120nm,0.8s
ZEA pmax pmax
comp=Z,100nm,1.5s
ZEA MLR MLR
comp=E,300nm,18.0s
ZEA MLR MLR
comp=Z,500nm,17.0s
SOEI Soe 36.91 219 P **P** **18 17 22.9 +0.5**
comp=Z,185nm,0.8s
GYA Guiyang 37.24 288 ⇓P **P** **18 17 26.8 +1.6**
GYA S **S** **18 23 12.4 +1.1**
GYA pmax pmax
comp=Z,31nm,1.2s
GYA pmax pmax
comp=Z,190nm,4.8s
GYA LR LR
comp=Z,770nm,9.4s
GYA LR LR
comp=Z,770nm,20.2s
GYA LR LR
comp=Z,1μm,21.6s
MMRI Maumere 37.29 223 P **P** **18 17 24.8 -0.6**
comp=Z,154nm,0.9s
MMRI Maumere 37.29 223 P **P** **18 17 25.3 -0.1**
comp=Z,152nm,0.9s
BTO Baotou 37.38 311 *e*P **P** **18 17 28.1 +2.0**
MTKI Muara Teweh, K 37.49 240 P **P** **18 17 28.6 +1.4**
comp=Z,120nm,1.0s
DLV T Lat 37.54 264 P **P** **18 17 30.0 +2.2**
BATI Baumata 37.63 219 LR LR 18 31 00.9
comp=Z,2μm,21.9s,baz=68,slow=33
SBUM Sibu 37.92 247 P **P** **18 17 31.0 +0.2**
SBUM IAmb IAmb 18 17 33.0
comp=Z,80nm,0.8s
SBUM Sibu 37.92 247 P **P** **18 17 32.4 +1.6**
comp=Z,1μmcomp=Z,144nm,1.5s
SBUM Sibu 37.92 247 P **P** **18 17 33.0 +2.2**
MTSU Mount Surprise 37.97 184 P **P** **18 17 31.7 +0.5**
SHEM Shemya Is, Ala 38.95 26 LR LR 18 32 50.4
comp=Z,964nm,19.5s,baz=250,slow=35
TV1H Townsville Har 39.02 180 P **P** **18 17 40.0 +0.1**
UBPT Khong Chiam 39.51 270 P **P** **18 17 44.5 +0.3**
KNRA Kununurra 39.60 208 P **P** **18 17 43.5 -1.4**
KNRA IAmb IAmb 18 17 45.4
comp=Z,93nm,0.6s
KNRA Kununurra 39.60 208 P **P** **18 17 44.8 0.0**
MA2 Magadan 39.63 3 P **P** **18 17 45.8 +1.2**
comp=Z,105nm,0.8s,baz=174,slow=8.0,SNR=44
MA2 PcP **PcP** **18 19 52.2 +0.9**
comp=Z,14nm,0.8s,baz=153,slow=6.5,SNR=2.2
MA2 LR LR 18 31 51.5
comp=Z,662nm,21.6s,baz=182,slow=33
comp=Z,105nm,0.8s
MA2 Magadan 39.63 3 P **P** **18 17 44.6 -0.1**
MA2 IAmb IAmb 18 17 47.1
comp=Z,144nm,0.9s
MA2 Magadan 39.63 3 *ce*P **P** **18 17 46.3 +1.7**
MA2 pmax pmax
comp=Z,140nm,0.7s
MA2 Magadan 39.63 3 P **P** **18 17 46.3 +1.7**
CTA Charters Tower 39.85 181 LR LR 18 33 15.4
comp=Z,919nm,22.0s,baz=0.5,slow=35
CTA Charters Tower 39.85 181 P **P** **18 17 47.3 +0.5**
CTAO Charters Tower 39.85 181 P **P** **18 17 46.3 -0.5**
CTAO Charters Tower 39.85 181 P **P** **18 17 46.3 -0.5**
CTAO pmax pmax
comp=Z,78nm,0.9s
CTAO Charters Tower 39.85 181 P **P** **18 17 47.3 +0.5**
CD2 Chengdu 40.06 294 P **P** **18 17 50.5 +1.9**
CD2 S **S** **18 23 56.3 +2.8**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,1μm,15.2s
CD2 LR LR
comp=Z,3μm,18.6s
CD2 LR LR
comp=Z,3μm,18.6s
KSM Kuching 40.06 247 P **P** **18 17 48.4 -0.3**
KSM Kuching 40.06 247 P **P** **18 17 49.2 +0.4**
comp=Z,52nm,0.9s
KSM Kuching 40.06 247 P **P** **18 17 49.2 +0.4**
PLAI Plampang 40.40 228 P **P** **18 17 50.7 -0.8**
comp=Z,1μmcomp=Z,123nm,0.8s
PLAI Plampang 40.40 228 P **P** **18 17 51.5 0.0**
AMKA Amchitka 40.40 31 P **P** **18 17 49.9 -1.2**
LZH Lanzhou 40.74 302 *e*P **P** **18 17 55.7 +1.4**
LZH sP pwP 18 18 04.1 -0.5
LZH S **S** **18 24 00.4 -3.3**
LZH pmax pmax
comp=Z,69nm,1.0s
LZH pmax pmax
comp=Z,230nm,4.8s
LZH LR LR
comp=Z,840nm,14.3s
LZH LR LR
comp=Z,1μm,14.4s
LZH LR LR
comp=Z,2μm,17.5s
KMI Kunming 40.79 286 ⇑P **P** **18 17 57.0 +2.0**
KMI sP sP 18 18 02.9 -1.0
KMI S **S** **18 24 06.0 +1.1**
KMI pmax pmax
comp=Z,45nm,1.1s
KMI pmax pmax
comp=Z,220nm,4.8s
KMI LR LR
comp=Z,1μm,21.5s
KMI LR LR
comp=Z,380nm,17.8s
KMI LR LR
comp=Z,410nm,18.9s
QIS Mount Isa 40.91 190 P **P** **18 17 55.2 -0.4**
CIT Chita 41.08 329 *e*P **P** **18 17 58.4 +1.6**
CIT *e* 18 18 06.6
CIT *e* 18 19 36.6
CIT pmax pmax
comp=Z,306nm,1.3s
PBKI Pangkalan Bun 41.13 241 P **P** **18 17 58.0 +0.4**
comp=Z,242nm,0.9s
KLNI Mataram 41.30 230 P **P** **18 17 59.2 +0.2**
comp=Z,3μmcomp=Z,340nm,0.9s
WB0 Warramunga Arr 41.33 198 P **P** **18 17 58.2 -0.8**
WB0 IAmb IAmb 18 18 12.3
comp=Z,104nm,1.0s
WR0 Warramunga Arr 41.47 197 P **P** **18 17 59.0 -1.2**
WRAB Tennant Creek 41.50 198 P **P** **18 17 59.1 -1.3**
WRAB IAmb IAmb 18 18 00.8
comp=Z,150nm,1.1s
WRAB Tennant Creek 41.50 198 P **P** **18 17 59.1 -1.3**
WRAB pmax pmax
comp=Z,150nm,1.2s
WRAB Tennant Creek 41.50 198 P **P** **18 18 00.1 -0.4**
WB2 Warramunga Arr 41.50 198 P **P** **18 17 59.4 -1.2**
WB2 IAmb IAmb 18 18 01.0
comp=Z,149nm,1.1s
WRA Warramunga Arr 41.51 198 P **P** **18 18 00.1 -0.5**
comp=Z,75nm,0.8s,baz=19,slow=8.9,SNR=98
WRA PcP **PcP** **18 19 58.8 +0.8**
comp=Z,19nm,0.7s,baz=12,slow=3.5,SNR=6.7
WRA ScP **ScP** **18 23 47.4 +0.7**
comp=Z,15nm,1.1s,baz=11,slow=3.6,SNR=11
WRA LR LR 18 35 22.2
comp=Z,2μm,21.4s,baz=12,slow=36
comp=Z,75nm,0.8s
WRA Warramunga Arr 41.51 198 *i*P **P** **18 17 59.0 -1.6**
WRA pmax pmax
comp=Z,74nm,0.8s
PZH PanZhiHua 41.66 288 ⇑P **P** **18 18 03.6 +1.6**

PZH sP **pwP** 18 18 11.7 -0.7
PZH S **S** 18 24 16.0 -1.5
PZH sS **sS** 18 24 27.5 -0.3
PZH ScS **ScS** 18 28 01.4 -3.0
PZH pmax pmax
comp=Z,90nm,0.8s
PZH pmax pmax
comp=Z,170nm,3.6s
PZH LR LR
comp=Z,1µm,17.1s
PZH LR LR
comp=Z,2µm,19.9s
PZH LR LR
comp=Z,3µm,20.4s
RTBI Rangdo, Negare 42.16 231 P **P** 18 18 06.2 +0.2
comp=Z,202nm,0.8s
IGBI Denpasar 42.26 230 P **P** 18 18 05.1 -1.7
comp=Z,113nm,0.6s
ULN Ulaanbaatar 42.36 320 P **P** 18 18 07.8 +0.4
ULN Ulaanbaatar 42.36 320 *ce*P **P** 18 18 08.8 +1.3
ULN pmax pmax
comp=Z,32nm,1.7s
KIWB Kanaga Island 42.46 33 P **P** 18 18 08.1 +0.1
SONM Songino Array 42.74 320 P **P** 18 18 11.7 +1.1
comp=Z,9.2nm,0.5s,baz=131,slow=8.5,SNR=38
SONM ScP **ScP** 18 23 53.7 +2.2
comp=Z,3.4nm,1.0s,baz=98,slow=6.1,SNR=3.6
SONM LR LR 18 37 12.9
comp=Z,1µm,19.3s,baz=110,slow=38
comp=Z,9.2nm,0.5s
SONM Songino Array 42.74 320 P **P** 18 18 09.9 -0.7
SONM Songino Array 42.74 320 P **P** 18 18 09.9 -0.7
SONM pmax pmax
comp=Z,27nm,0.7s
JAGI Jajag, Banyuwa 42.75 232 P **P** 18 18 09.4 -1.4
JAGI Jajag, Banyuwa 42.75 232 P **P** 18 18 10.0 -0.8
comp=Z,58nm,0.7s
JAGI Jajag, Banyuwa 42.75 232 P **P** 18 18 10.3 -0.5
SEY Seymchan 43.07 4 P **P** 18 18 14.3 +1.5
comp=Z,56nm,0.9s,baz=181,slow=7.7,SNR=82
comp=Z,56nm,0.9s
SEY Seymchan 43.07 4 *ce*P **P** 18 18 14.4 +1.6
SEY pmax pmax
comp=Z,103nm,1.3s
FITZ Fitzroy Crossi 43.14 210 LR LR 18 36 42.8
comp=Z,379nm,19.4s,baz=28,slow=37
FITZ Fitzroy Crossi 43.14 210 P **P** 18 18 13.4 -0.4
FITZ IAmb IAmb 18 18 14.8
comp=Z,78nm,0.8s
FITZ Fitzroy Crossi 43.14 210 P **P** 18 18 14.1 +0.2
YAK Yakutsk 43.63 348 P **P** 18 18 17.6 +0.3
comp=Z,68nm,0.7s,baz=346,slow=0.7,SNR=77
YAK LR LR 18 36 16.2
comp=Z,800nm,20.2s,baz=128,slow=36
comp=Z,68nm,0.7s
YAK Yakutsk 43.63 348 *d iP* **P** 18 18 17.5 +0.3
YAK *e**PP **pP** 18 18 24.0 +0.4
YAK *e* 18 19 57.6
YAK *e* 18 20 11.7
YAK *e*PPP PPP 18 20 35.2
YAK *e*S **S** 18 24 47.6 +2.3
YAK *e*SS **SS** 18 28 02.1 +1.5
YAK *e*SSS SSS 18 28 41.8
YAK pmax pmax
comp=Z,46nm,0.6s
YAK pmax pmax
comp=N,12nm,0.7s
YAK pmax pmax
comp=E,8.0nm,0.8s
YAK pmax pmax
comp=Z,40nm,1.5s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,16nm,1.5s
YAK smax smax
comp=N,18nm,1.6s
YAK smax smax
comp=E,38nm,1.8s
YAK MLR MLR
comp=E,232nm,15.0s
GD1S Gladstone Soft 43.80 174 P **P** 18 18 19.9 +0.9
comp=E,70nm,1.0s
KOUNC Koumac, New Ca 43.82 156 P **P** 18 18 19.7 +0.4
PWJI Pagerwojo 44.22 234 P **P** 18 18 22.2 -0.5
comp=E,108nm,1.0s
SMRI Semarang 44.68 237 P **P** 18 18 25.5 -0.8
SMRI Semarang 44.68 237 P **P** 18 18 27.2 +0.9
comp=E,66nm,1.1s
BOD Bodaibo 44.70 336 *eP* **P** 18 18 26.1 +0.1
BOD pmax pmax
comp=Z,72nm,1.0s
PCJI Pacitan 44.81 235 P **P** 18 18 27.8 +0.4
CHTO Chiang Mai 44.95 277 P **P** 18 18 28.0 -0.5
CHTO Chiang Mai 44.95 277 P **P** 18 18 28.0 -0.5
CM31 Chiang Mai Arr 45.01 276 P **P** 18 18 29.3 +0.3
CM31 Chiang Mai Arr 45.01 276 P **P** 18 18 30.7 +1.7
SNR=9.3
CMAR Chiang Mai Arr 45.01 276 P **P** 18 18 30.5 +1.5
comp=Z,20nm,0.8s,baz=68,slow=6.0,SNR=159
CMAR PcP **PcP** 18 20 11.0 +1.1
comp=Z,6.7nm,0.7s,baz=73,slow=2.9,SNR=3.3
CMAR ScP **ScP** 18 24 01.2 +0.1
comp=Z,5.2nm,1.2s,baz=140,slow=2.4,SNR=6.6
CMAR LR LR 18 39 00.2
comp=Z,390nm,18.0s,baz=90,slow=38
comp=Z,20nm,0.8s
CMAR Chiang Mai Arr 45.01 276 P **P** 18 18 29.8 +0.8
CMAR PcP **PcP** 18 20 11.2 +1.3
UGM Wanagama 45.14 236 P **P** 18 18 29.3 -0.7
AS01 Alice Springs 45.15 197 P **P** 18 18 29.6 -0.4
AS31 Alice Springs 45.16 197 P **P** 18 18 29.1 -1.0
ASAR Alice Springs 45.16 197 P **P** 18 18 29.4 -0.7
comp=Z,29nm,0.7s,baz=13,slow=6.5,SNR=123
ASAR PcP **PcP** 18 20 10.9 +0.7
comp=Z,8.9nm,0.8s,baz=30,slow=3.3,SNR=4.4
ASAR ScP **ScP** 18 24 01.8 +0.3
comp=Z,12nm,1.1s,baz=9.7,slow=3.1,SNR=9.9
ASAR S **S** 18 25 04.4 -4.1
comp=Z,6.0nm,0.9s,baz=22,slow=20,SNR=12
ASAR LR LR 18 38 07.5
comp=Z,1µm,19.7s,baz=20,slow=37
comp=Z,29nm,0.7s
ASAR Alice Springs 45.16 197 P **P** 18 18 28.8 -1.3
ASAR PcP **PcP** 18 20 10.3 0.0
ASAR Alice Springs 45.16 197 P **P** 18 18 28.8 -1.3
ASAR 18 20 10.3
LIFNC LIFOU 45.24 152 P **P** 18 18 30.5 -0.1
TPRI Tanjung Pinang 45.40 251 P **P** 18 18 33.6 +1.5
comp=Z,1µmcomp=Z,77nm,0.7s
MYKOM Kota Tinggi 45.61 252 P **P** 18 18 34.8 +1.0
MYKOM Kota Tinggi 45.61 252 P **P** 18 18 35.6 +1.8
comp=Z,2µmcomp=Z,187nm,1.1s
MYKOM Kota Tinggi 45.61 252 P **P** 18 18 36.0 +2.2
SRDT SRDT 45.70 271 P **P** 18 18 34.5 0.0
comp=Z,43nm,0.8s
ZAK Zakamensk 45.70 322 *eP* **P** 18 18 34.5 +0.4
ZAK pmax pmax
comp=Z,34nm,1.1s
JRMM Jerantut 45.96 256 P **P** 18 18 39.0 +2.4
IRK Irkutsk 45.98 325 *eP* **P** 18 18 37.0 +0.8
IRK pmax pmax
comp=Z,198nm,1.2s
DSRI Dabo 46.01 249 P **P** 18 18 38.1 +1.2
comp=Z,739nmcomp=Z,53nm,0.8s
NOUC Port Laguerre 46.02 154 P **P** 18 18 37.7 +0.9
DZM Mont Dzumac 46.05 154 *eP* **P** 18 18 36.7 -0.5
comp=Z,233nm,1.2s
DZM *e*S **S** 18 25 23.5 +2.1
comp=Z,319nm,30.4s
DZM *e*LR LR 18 31 32.9
comp=Z,2µm,22.9s
DZM Mont Dzumac 46.05 154 LR LR 18 37 03.0
comp=Z,2µm,19.2s,baz=336,slow=35
DZM Mont Dzumac 46.05 154 P **P** 18 18 36.7 -0.5
DZM Mont Dzumac 46.05 154 P **P** 18 18 38.2 +1.0
MARNC Mare, Loyalty 46.20 152 P **P** 18 18 39.2 +1.0
YATNC Mamie plateau, 46.22 154 P **P** 18 18 39.1 +0.7
RMQ Roma 46.26 177 P **P** 18 18 37.9 -0.7
ONTNC Ouen Toro 46.26 154 P **P** 18 18 38.4 -0.3
ONTNC IAmb IAmb 18 18 51.9
comp=Z,60nm,0.8s
ONTNC Ouen Toro 46.26 154 P **P** 18 18 39.0 +0.3
QLP Quilpie 46.37 183 P **P** 18 18 38.3 -1.2
SKLT Songkhla 46.42 261 P **P** 18 18 42.1 +1.9
comp=Z,801nmcomp=Z,65nm,0.9s
OUENC Ouen Island, N 46.52 154 P **P** 18 18 40.4 -0.3
OUENC IAmb IAmb 18 18 54.3
comp=Z,87nm,1.1s
OUENC Ouen Island, N 46.52 154 P **P** 18 18 41.9 +1.2
LEM Lembang 46.79 239 LR LR 18 38 52.1
comp=Z,397nm,20.0s,baz=36,slow=37
LEM Lembang 46.79 239 P **P** 18 18 43.5 +0.2
comp=Z,65nm,0.8s
SRIT Nakonsritamara 46.88 263 P **P** 18 18 44.5 +0.7
SRIT IAmb IAmb 18 18 47.0
comp=Z,42nm,0.9s
IPM Ipoh 47.05 257 P **P** 18 18 45.5 +0.4
IPM IAmb IAmb 18 18 47.7
comp=Z,70nm,1.0s
IPM Ipoh 47.05 257 P **P** 18 18 46.4 +1.3
comp=Z,753nmcomp=Z,70nm,1.0s
IPM Ipoh 47.05 257 P **P** 18 18 47.0 +1.9
IPM Ipoh 47.05 257 P **P** 18 18 46.7 +1.6
KULM Kulim 47.08 258 P **P** 18 18 45.5 +0.1
KULM Kulim 47.08 258 P **P** 18 18 46.8 +1.4
comp=Z,865nmcomp=Z,98nm,1.1s
KULM Kulim 47.08 258 P **P** 18 18 48.0 +2.6
CBJI Citeko 47.19 240 P **P** 18 18 46.2 +0.1
comp=Z,93nm,1.1s
NIKH Nikolski High 47.40 35 P **P** 18 18 46.2 -1.1
baz=243
MOY Mondy 47.55 323 *eP* **P** 18 18 50.2 +1.6
MOY pmax pmax
comp=Z,90nm,1.6s
INKA Innaminka 47.81 187 P **P** 18 18 49.9 -0.8
BLSI Bandar Lampung 47.93 243 P **P** 18 18 52.1 +0.2
comp=Z,2µmcomp=Z,192nm,1.0s
GOMU GeErMu 47.98 301 P **P** 18 18 55.7 +3.1
GOMU S **S** 18 25 49.9 +0.4
GOMU pmax pmax
comp=Z,90nm,0.6s
GOMU LR LR
comp=Z,350nm,19.1s
GOMU LR LR
comp=Z,260nm,19.8s
GOMU LR LR
comp=Z,340nm,20.0s
WRKA Warakurna 48.22 203 P **P** 18 18 54.1 +0.1
GC1S Gold Coast 1 S 48.33 172 P **P** 18 18 56.1 +1.4
MSVF Nonsavu 48.51 139 P **P** 18 18 56.9 +0.5
comp=Z,14nm,0.8s,baz=257,slow=9.4,SNR=7.2
MSVF LR LR 18 36 06.7
comp=Z,354nm,21.4s,baz=301,slow=32
comp=Z,14nm,0.8s
MSVF Nonsavu 48.51 139 P **P** 18 18 56.6 +0.3
MSVF Nonsavu 48.51 139 P **P** 18 18 56.7 +0.3
MSVF pmax pmax
comp=Z,38nm,1.0s
MSVF Nonsavu 48.51 139 P **P** 18 18 57.6 +1.3
KASI Kota Agung 48.64 243 P **P** 18 18 56.4 -1.0
comp=Z,82nm,1.3s
MBWA Marble Bar 48.68 214 P **P** 18 18 56.4 -1.2
MBWA Marble Bar 48.68 214 P **P** 18 18 57.5 -0.1
OOD Oodnadatta 48.70 193 P **P** 18 18 56.8 -0.8
LWLI Liwa 48.74 244 P **P** 18 18 57.4 -0.9
comp=Z,116nm,0.8s
SPIA Saint Paul Isl 48.74 30 P **P** 18 18 55.5 -2.0
baz=238
BKNI Bangkinang 48.77 252 P **P** 18 18 58.8 +0.3
BKNI IAmb IAmb 18 19 01.3
comp=Z,67nm,0.8s
BKNI Bangkinang 48.77 252 P **P** 18 19 00.0 +1.5
comp=Z,76nm,0.8s
BKNI Bangkinang 48.77 252 P **P** 18 19 00.9 +2.4
comp=Z,73nm,0.8s
PSA00 Pilbara Seismi 48.96 214 P **P** 18 18 59.0 -0.7
PSA00 IAmb IAmb 18 19 00.8
comp=Z,78nm,1.1s
PSA00 PcP **PcP** 18 20 22.2 -1.5
PSA00 Pilbara Seismi 48.96 214 P **P** 18 18 59.3 -0.5
PSA00 IAmb IAmb 18 19 00.8
comp=Z,176nm,1.2s
PSA00 Pilbara Seismi 48.96 214 P **P** 18 18 59.9 +0.2
SDSI Sungai Dareh 49.00 250 P **P** 18 19 00.3 +0.1
comp=Z,29nm,1.0s
UNV Unalaska Valle 49.04 35 P **P** 18 19 00.2 +0.3
baz=245
KSI Kapahiang 49.29 246 P **P** 18 19 01.8 -0.7
comp=Z,4µmcomp=Z,120nm,0.7s
MASI Maura Aman, Be 49.34 247 P **P** 18 19 03.9 +1.1
comp=Z,61nm,0.7s
BILL Bilibino 49.58 10 P **P** 18 19 03.9 0.0
BILL Bilibino 49.58 10 *c iP* **P** 18 19 04.7 +0.8
BILL *e**SP **pP** 18 19 09.0 -1.3
BILL *i* 18 19 11.8
BILL *e* 18 20 26.1
BILL S **S** 18 26 06.0 -4.3
BILL SSS SSS 18 31 13.0
BILL pmax pmax
comp=Z,83nm,0.9s
BILL MLR MLR
comp=Z,214nm,16.0s
PSI Prapat 49.64 256 P **P** 18 19 06.5 +1.3
comp=Z,29nm,0.8s
TSI Tuntungan 49.69 257 P **P** 18 19 06.4 +0.9
comp=Z,47nm,1.1s
MNSI Mandailing Nat 49.88 253 P **P** 18 19 08.1 +1.2
ARMA Armidale 50.35 174 P **P** 18 19 08.2 -2.1
ARMA Armidale 50.35 174 P **P** 18 19 10.3 0.0
LHMI Lhok Sumawe 50.52 260 P **P** 18 19 12.5 +0.7
SHL Shillong 50.56 287 P **P** 18 19 13.2 +1.0
SHL Shillong 50.56 287 P **P** 18 19 13.2 +1.0
SHL pmax pmax
comp=Z,87nm,0.7s
LCRK Leigh Creek 50.82 189 P **P** 18 19 13.1 -0.6
LSA Lhasa 50.92 292 P **P** 18 19 18.4 +3.2
LSA S **S** 18 26 25.0 -6.1
LSA pmax pmax
comp=Z,200nm,0.6s
LSA LR LR
comp=Z,330nm,21.4s
LSA LR LR
comp=Z,720nm,17.1s
LSA LR LR
comp=Z,1µm,21.4s
LSA Lhasa 50.92 292 P **P** 18 19 17.6 +2.4
LSA Lhasa 50.92 292 P **P** 18 19 17.8 +2.6
FALS False Pass 51.11 35 P **P** 18 19 15.0 -0.6
baz=247
CMSA Cobar Meteorol 51.26 181 P **P** 18 19 16.6 -0.3
MULG Mulgathing 51.46 194 P **P** 18 19 17.8 -0.7
GSI Gunungsitoli 51.48 255 P **P** 18 19 19.4 +0.4
GSI PcP **PcP** 18 20 34.6 +1.4
GSI Gunungsitoli 51.48 255 P **P** 18 19 19.8 +0.8
KIP Kipapa 51.49 78 P **P** 18 19 18.3 -0.7
KIP IAmb IAmb 18 19 32.1
comp=Z,108nm,1.1s
KIP Kipapa 51.49 78 P **P** 18 19 18.3 -0.7
KIP pmax pmax
comp=Z,108nm,1.1s
STKA Stephens Creek 51.82 186 P **P** 18 19 20.5 -0.6
comp=Z,39nm,0.8s,baz=359,slow=8.1,SNR=62
STKA LR LR 18 42 10.9
comp=Z,629nm,20.6s,baz=2.7,slow=37
comp=Z,39nm,0.8s
STKA Stephens Creek 51.82 186 P **P** 18 19 20.6 -0.6
STKA Stephens Creek 51.82 186 P **P** 18 19 20.6 -0.6
STKA pmax pmax
comp=Z,20nm,1.2s
STKA Stephens Creek 51.82 186 P **P** 18 19 20.9 -0.2
GAMB Gambell 51.89 22 P **P** 18 19 20.2 -1.2
baz=232
TIXI Tiksi 52.69 353 LR LR 18 41 57.5
comp=Z,502nm,20.9s,baz=88,slow=36
TIXI Tiksi 52.69 353 P **P** 18 19 26.1 -1.1
TIXI Tiksi 52.69 353 *ce*P **P** 18 19 27.5 +0.3
TIXI pmax pmax
comp=Z,20nm,1.0s
TIXI MLR MLR
comp=Z,436nm,16.0s
SDPT Sand Point 52.86 35 P **P** 18 19 27.4 -1.3
baz=250
AFI Afiamalu 52.95 126 LR LR 18 40 37.1
comp=Z,290nm,18.2s,baz=269,slow=34
CHNA Chernabura Isl 53.17 36 P **P** 18 19 29.4 -1.5
baz=251
WHYH Whyalla 53.45 190 P **P** 18 19 33.2 0.0
comp=Z,52nm,0.9s
BBOO Buckleboo 53.49 191 P **P** 18 19 32.9 -0.6
FORT Forrest 53.58 200 IAmb IAmb 18 19 35.4
comp=Z,67nm,0.8s
FORT Forrest 53.58 200 P **P** 18 19 34.4 +0.2
HTT Hallett 53.65 188 P **P** 18 19 34.6 -0.1
MEEK Meekatharra 53.78 212 P **P** 18 19 35.1 -0.7
WMQ Urumqi 54.19 310 ⇑P **P** 18 19 41.3 +2.5
WMQ sP pwP 18 19 48.9 -0.1
WMQ S **S** 18 27 11.8 -2.8
WMQ ScS **ScS** 18 29 28.0 +1.2
WMQ pmax pmax
comp=Z,42nm,1.3s
WMQ pmax pmax
comp=Z,420nm,3.9s
WMQ LR LR
comp=Z,680nm,20.5s
WMQ LR LR
comp=Z,640nm,21.3s
WMQ LR LR
comp=Z,590nm,23.3s
CHGN Chignik 54.27 34 P **P** 18 19 38.5 -0.5
baz=251
ANM Nome 54.63 23 P **P** 18 19 41.3 -0.1
baz=239
CAN Canberra 55.06 178 IAmb IAmb 18 20 01.7
comp=Z,63nm,1.1s
CAN Canberra 55.06 178 P **P** 18 19 45.8 +0.8
CAN pmax pmax
comp=Z,53nm,1.1s
CAN Canberra 55.06 178 P **P** 18 19 45.7 +0.8
CNB Canberra Magne 55.07 177 P **P** 18 19 45.9 +0.8
R16K Pilot Point 55.12 33 P **P** 18 19 45.1 0.0
baz=251
RAMN Ramite 55.14 289 *eP* **P** 18 19 47.4 +1.3
comp=Z,50nm,0.5s
DGZ Jazzator, Alta 55.21 317 *d iP* **P** 18 19 47.4 +1.2
DGZ pmax pmax
comp=Z,64nm,1.0s
P16K Nushagak River 55.40 31 P **P** 18 19 46.2 -0.9
baz=250
JIRN Jiri 55.42 290 *eP* **P** 18 19 50.0 +1.7
comp=Z,179nm,0.7s
O16K Kokwok River B 55.54 30 P **P** 18 19 47.3 -0.9
baz=249
N16K Nishlik Lake 55.55 29 P **P** 18 19 47.4 -0.8
baz=248
CHIR Chirikof Islan 55.63 35 P **P** 18 19 47.2 -1.6
baz=254
GUN Gumba 55.67 291 *eP* **P** 18 19 51.9 +1.9
comp=Z,191nm,0.8s
O17K Koliganek Bris 56.08 30 P **P** 18 19 52.1 +0.1
baz=250
PKI Pulchoki 56.12 290 *eP* **P** 18 19 54.3 +1.0
comp=Z,46nm,0.4s
PKIN Phulchoki 56.13 290 *eP* **P** 18 19 54.3 +1.0
comp=Z,53nm,0.4s
DMN Daman 56.38 290 *eP* **P** 18 19 56.4 +1.4
comp=Z,65nm,0.4s
ZSN Zaisan 56.57 314 *eP* **P** 18 19 56.3 +0.6
ZSN pmax pmax
comp=Z,22nm,1.5s
ZSN Zaisan 56.57 314 *eP* **P** 18 19 56.4 +0.6
comp=Z,22nm,1.5s,baz=314
SII Sitkinak Islan 56.60 35 P **P** 18 19 53.5 -2.3
baz=255
ARPS Mount Arapiles 56.65 185 P **P** 18 19 56.9 +0.6
Q18K Katmai Hardscr 56.74 32 P **P** 18 19 55.0 -1.9
baz=253
GKN Gorkha 56.75 291 *eP* **P** 18 19 58.8 +1.3
comp=Z,89nm,0.4s
MILA Mila 56.80 178 P **P** 18 19 58.2 +0.8
P18K Big Mountain, 56.86 31 P **P** 18 19 55.9 -1.7
baz=252
N18K Kilae Creek 56.95 30 P **P** 18 19 58.1 -0.2
N18K IAmb IAmb 18 20 07.1
comp=Z,67nm,1.1s
N18K Kilae Creek 56.95 30 P **P** 18 19 57.6 -0.6
baz=251
O18K Koktuh Hills 57.01 31 IAmb IAmb 18 20 07.2
comp=Z,95nm,1.1s
O18K Koktuh Hills 57.01 31 P **P** 18 19 57.4 -1.3
baz=252
MORW Morawa 57.06 212 P **P** 18 19 58.8 -0.6
OHAK Old Harbor 57.24 34 IAmb IAmb 18 20 14.3
comp=Z,123nm,1.4s
OHAK Old Harbor 57.24 34 P **P** 18 19 59.9 -0.4
baz=256
TOO Toolangi 57.28 181 P **P** 18 20 01.5 +0.8
BRAT Ballarat 57.30 183 P **P** 18 20 02.0 +1.2
DANN Dangsing 57.48 291 *eP* **P** 18 20 04.5 +1.6
comp=Z,435nm,0.6s
Q19K Cape Douglas, 57.51 32 P **P** 18 20 00.1 -2.1
baz=254
O19K Port Alsworth 57.54 30 P **P** 18 20 01.5 -0.9
baz=253
ZAA0 Zalesovo Array 57.58 322 IAmb IAmb 18 20 12.9
comp=Z,51nm,0.8s
ZALV Zalesovo Beam 57.58 322 P **P** 18 20 03.2 +0.5
comp=Z,34nm,0.7s,baz=106,slow=7.9,SNR=119
ZALV ScP **ScP** 18 24 56.9 +2.4
comp=Z,1.6nm,0.8s,baz=104,slow=4.6,SNR=2.7
ZALV LR LR 18 45 45.6
comp=Z,650nm,21.4s,baz=98,slow=37
comp=Z,34nm,0.7s
N19K Bonanza Creek 57.65 30 P **P** 18 20 03.0 -0.2
N19K IAmb IAmb 18 20 20.9
comp=Z,54nm,0.8s
N19K Bonanza Creek 57.65 30 P **P** 18 20 02.1 -1.2
baz=252,SNR=7.6
TTA Tatalina 57.66 27 IAmb IAmb 18 20 11.8
comp=Z,57nm,1.2s
TTA Tatalina 57.66 27 P **P** 18 20 02.9 -0.4
baz=249
KDAK Kodiak Island 57.75 34 P **P** 18 20 04.0 +0.1
comp=Z,14nm,0.8s,baz=242,slow=9.3,SNR=9.4
KDAK LR LR 18 41 11.5
comp=Z,539nm,21.3s,baz=257,slow=32
comp=Z,14nm,0.8s
KDAK Kodiak Island 57.75 34 P **P** 18 20 03.4 -0.4
KDAK IAmb IAmb 18 20 21.7
comp=Z,45nm,0.8s
KDAK Kodiak Island 57.75 34 P **P** 18 20 03.4 -0.4
KDAK pmax pmax
comp=Z,45nm,0.8s
KDAK Kodiak Island 57.75 34 P **P** 18 20 03.5 -0.4
baz=256
P19K Oil Pt 57.91 31 P **P** 18 20 03.7 -1.3
baz=254
L19K White Mountain 57.91 28 P **P** 18 20 04.0 -0.9
L19K White Mountain 57.91 28 P **P** 18 20 04.1 -0.9
baz=251,SNR=5.5
GEXS Deakin Univers 57.94 182 P **P** 18 20 06.8 +1.5
GCSA Galena City Sc 57.97 25 P **P** 18 20 04.1 -1.2
baz=247
BLDU Ballidu 58.01 211 P **P** 18 20 05.7 -0.3
M19K Big River Lodg 58.03 29 IAmb IAmb 18 20 19.9
comp=Z,51nm,1.2s
M19K Big River Lodg 58.03 29 P **P** 18 20 05.3 -0.5
baz=252
Q20K Shuyak Island 58.05 33 P **P** 18 20 04.9 -1.1
baz=256
PYUN Piuthan 58.19 291 *eP* **P** 18 20 09.0 +1.3
comp=Z,283nm,0.9s
MK31 Makanchi Array 58.26 313 IAmb IAmb 18 20 18.8
comp=Z,36nm,0.8s
MK31 Makanchi Array 58.26 313 *d iP* **P** 18 20 08.8 +1.1
MKAR Makanchi Array 58.26 313 P **P** 18 20 08.8 +1.1
comp=Z,25nm,0.7s,baz=92,slow=8.4,SNR=108
MKAR ScP **ScP** 18 24 59.9 +2.1
comp=Z,3.0nm,0.8s,baz=104,slow=6.1,SNR=4.8
MKAR S **S** 18 28 07.5 -0.9
comp=Z,0.7nm,0.9s,baz=90,slow=5.8,SNR=1.5
MKAR ScS **ScS** 18 29 57.9 +1.9
comp=Z,1.2nm,0.9s,baz=84,slow=5.9,SNR=3.6
MKAR LR LR 18 45 22.3
comp=Z,397nm,19.9s,baz=96,slow=36
MKAR PKP2bc 18 49 56.1
comp=Z,1.9nm,1.0s,baz=272,slow=7.2,SNR=4.9
comp=Z,25nm,0.7s
O20K Slope Mountain 58.32 31 P **P** 18 20 07.8 -0.1
baz=254
KLBR Kellerberrin 58.34 209 P **P** 18 20 07.9 -0.4
L20K Farewell, AK 58.44 28 P **P** 18 20 09.1 +0.4
baz=252
MAKZ Makanchi 58.48 313 P **P** 18 20 09.4 +0.2
MAKZ IAmb IAmb 18 20 20.4
comp=Z,55nm,0.8s
MAKZ Makanchi 58.48 313 P **P** 18 20 09.4 +0.2

MAKZ pmax pmax
comp=Z,55nm,0.8s
M20K Styx River 58.59 29 IAmb IAmb 18 20 23.9
comp=Z,69nm,1.2s
M20K Styx River 58.59 29 P **P 18 20 09.4 -0.4**
baz=253
K20K Telida 58.63 27 IAmb IAmb 18 20 19.1
comp=Z,81nm,1.1s
K20K Telida 58.63 27 P **P 18 20 09.0 -1.0**
baz=251
HOM Homer 58.69 32 P **P 18 20 09.5 -0.8**
baz=256
N20K Mount Spurr 58.82 30 P **P 18 20 09.7 -1.7**
baz=254,SNR=6.7
SPCR Spurr Chakacha 58.82 30 P **P 18 20 09.4 -2.1**
baz=254
CNPM China Poot 58.86 32 P **P 18 20 10.9 -0.8**
J20K Nowinta River 58.87 26 P **P 18 20 11.2 -0.4**
baz=250,SNR=14
BRLK Bradley Lake 59.09 32 IAmb IAmb 18 20 28.9
comp=Z,38nm,0.7s
BRSE Bradley Lake S 59.15 32 P **P 18 20 13.0 -0.7**
baz=256
CAPN Captain Cook N 59.20 30 P **P 18 20 13.1 -0.8**
baz=255
PPLA Purkeypile 59.31 28 P **P 18 20 14.0 -0.9**
baz=253
SKT Skwentna 59.34 29 P **P 18 20 14.0 -0.9**
baz=254,SNR=7.5
CAST Castle Rocks 59.51 27 IAmb IAmb 18 20 24.6
comp=Z,64nm,1.1s
CAST Castle Rocks 59.51 27 P **P 18 20 15.6 -0.5**
baz=253,SNR=21
CHUM Lake Minchumin 59.54 27 P **P 18 20 15.6 -0.7**
baz=252,SNR=9.0
SUA Susitna One 59.57 30 P **P 18 20 16.1 -0.6**
SUA Susitna One 59.57 30 P **P 18 20 15.9 -0.7**
baz=255
NWAO Narrogin (SRO) 59.70 209 LR LR 18 48 58.3
comp=Z,595nm,18.2s,baz=268,slow=39
NWAO Narrogin (SRO) 59.70 209 P **P 18 20 16.4 -1.3**
NWAO PcP **PcP 18 21 05.0 +0.5**
NWAO Narrogin (SRO) 59.70 209 P **P 18 20 16.4 -1.3**
NWAO 18 21 05.0
NWAO pmax pmax
comp=Z,70nm,0.7s
NWAO Narrogin (SRO) 59.70 209 P **P 18 20 17.6 -0.1**
O22K Cooper Landing 59.82 31 P **P 18 20 17.5 -0.7**
baz=257
SEW Seward 59.87 31 P **P 18 20 17.5 -1.0**
baz=257,SNR=8.5
SEM Semipalatinsk 59.89 317 *e*P **P 18 20 18.5 -0.7**
SEM pmax pmax
comp=Z,17nm,0.8s
SEM Semipalatinsk 59.89 317 *e*P **P 18 20 18.6 -0.7**
comp=Z,17nm,0.8s,baz=317
H21K Melozitna Rive 59.90 25 P **P 18 20 19.1 +0.3**
H21K Melozitna Rive 59.90 25 P **P 18 20 17.8 -0.9**
baz=251,SNR=18
G21K Allakaket 59.92 24 P **P 18 20 17.9 -0.9**
baz=250,SNR=21
M22K Willow 59.93 29 P **P 18 20 18.3 -0.6**
baz=256
RC01 Rabbit Creek A 59.95 30 P **P 18 20 18.2 -0.9**
RC01 IAmb IAmb 18 20 26.6
comp=Z,52nm,1.0s
RC01 Rabbit Creek A 59.95 30 P **P 18 20 18.3 -0.9**
baz=256
CUT Chulitna 60.03 29 P **P 18 20 19.1 -0.5**
baz=255
I21K Tanana 60.08 25 IAmb IAmb 18 20 28.9
comp=Z,70nm,1.1s
I21K Tanana 60.08 25 P **P 18 20 20.3 +0.4**
baz=252,SNR=8.2
PDGK Podgornoye 60.12 309 P **P 18 20 21.8 +1.0**
SHLS Shalkode 60.14 309 *e*P **P 18 20 19.4 -1.5**
SHLS pmax pmax
comp=Z,14nm,1.2s
SHLS Shalkode 60.14 309 *e*P **P 18 20 19.4 -1.5**
comp=Z,14nm,1.2s,baz=309
BPAW Bear Paw Mtn. 60.17 27 P **P 18 20 20.5 -0.1**
baz=254,SNR=42
F21K Alatna River 60.17 23 P **P 18 20 21.2 +0.6**
baz=249,SNR=10
TRF Thorofare Moun 60.29 27 IAmb IAmb 18 20 31.1
comp=Z,56nm,0.8s
TRF Thorofare Moun 60.29 27 P **P 18 20 20.0 -1.7**
baz=255,SNR=22
PMR Palmer 60.35 30 P **P 18 20 21.1 -0.8**
PMR IAmb IAmb 18 20 29.2
comp=Z,59nm,1.2s
PMR Palmer 60.35 30 P **P 18 20 21.1 -0.8**
PMR pmax pmax
comp=Z,59nm,1.2s
PMR Palmer 60.35 30 P **P 18 20 22.0 +0.1**
baz=257
UZB Uzynbulak 60.46 309 *e*P **P 18 20 23.7 +0.6**
UZB pmax pmax
comp=Z,11nm,1.9s
UZB Uzynbulak 60.46 309 *e*P **P 18 20 23.7 +0.6**
comp=Z,12nm,1.9s,baz=309
H22K Ishtalitna Cre 60.53 25 P **P 18 20 23.5 +0.4**
baz=252,SNR=16
MLY Manley 60.53 26 P **P 18 20 23.3 +0.2**
baz=253,SNR=34
PWL Port Wells 60.57 31 P **P 18 20 22.7 -0.7**
PWL Port Wells 60.57 31 P **P 18 20 23.1 -0.3**
baz=258,SNR=8.3
KNK Knik Glacier 60.63 30 IAmb IAmb 18 20 36.8
comp=Z,46nm,0.9s
KNK Knik Glacier 60.63 30 P **P 18 20 23.5 -0.3**
baz=258,SNR=11
KPKS Kokpek 60.70 309 *e*P **P 18 20 25.5 +0.8**
KPKS pmax pmax
comp=Z,5.0nm,0.4s
KPKS Kokpek 60.70 309 *e*P **P 18 20 25.6 +0.8**
comp=Z,4.6nm,0.4s,baz=309
NRIK Noril'sk 60.72 340 P **P 18 20 25.2 +1.0**
comp=Z,127nm,1.0s,baz=109,slow=8.3,SNR=71
NRIK S **S 18 28 39.8 +0.4**
comp=Z,2.7nm,0.5s,baz=105,slow=1.1,SNR=2.6
NRIK LR LR 18 47 27.8
comp=Z,1μm,21.0s,baz=116,slow=37
comp=Z,127nm,1.0s
F22K John River 60.75 23 P **P 18 20 24.8 +0.3**
baz=251
A21K Barrow 60.77 18 P **P 18 20 24.4 -0.1**
baz=244
SML Sawmill 60.77 30 P **P 18 20 24.8 0.0**
baz=257,SNR=22
G22K Bettles 60.80 23 P **P 18 20 24.2 -0.6**
baz=252
P23K Montague Islan 60.85 32 P **P 18 20 24.2 -1.1**
baz=259
WAT1 Susitna Watana 60.90 28 P **P 18 20 25.1 -0.6**
baz=257
TDK Taldyqorghan 60.90 311 *e*P **P 18 20 26.9 +0.9**
TDK Taldyqorghan 60.90 311 *e*P **P 18 20 26.9 +0.9**
baz=311
RND Reindeer 60.90 28 IAmb IAmb 18 20 33.0
comp=Z,99nm,1.6s
SATY Saty 60.91 309 *e*P **P 18 20 26.9 +0.7**
SATY pmax pmax
comp=Z,18nm,1.2s
SATY Saty 60.91 309 *e*P **P 18 20 27.0 +0.7**
comp=Z,18nm,1.2s,baz=309
MCK McKinley 60.95 27 P **P 18 20 25.5 -0.4**
MCK IAmb IAmb 18 20 38.7
comp=Z,61nm,1.0s
MCK McKinley 60.95 27 P **P 18 20 25.5 -0.4**
MCK pmax pmax
comp=Z,61nm,1.0s
MCK McKinley 60.95 27 P **P 18 20 24.4 -1.5**
baz=256,SNR=10
KURK Kurchatov 60.95 318 P **P 18 20 25.2 -0.9**
KURK Kurchatov 60.95 318 P **P 18 20 25.2 -0.9**
KURK pmax pmax
comp=Z,64nm,0.9s
KURK Kurchatov 60.95 318 P **P 18 20 26.6 +0.5**
KURK S **S 18 28 38.6 -4.4**
KURBB Kurchatov Arra 61.00 317 LR LR 18 48 22.2
comp=Z,969nm,18.1s,baz=66,slow=37
M23K Glacier View 61.05 30 P **P 18 20 26.4 -0.3**
baz=258,SNR=13
E22K Anaktuvuk Pass 61.09 22 P **P 18 20 26.6 -0.2**
baz=251,SNR=25
NEA2 Nenana 61.10 26 IAmb IAmb 18 20 41.1
comp=Z,40nm,0.9s
NEA2 Nenana 61.10 26 P **P 18 20 26.0 -1.0**
baz=255
I23K Minto, Yukon-K 61.13 26 P **P 18 20 27.1 +0.1**
baz=255,SNR=12
GLI Glacier Island 61.17 31 P **P 18 20 27.1 -0.3**
baz=259,SNR=5.9
WAT6 Susitna Watana 61.21 29 P **P 18 20 27.1 -0.8**
baz=258,SNR=20
H23K Yukon River 61.24 25 IAmb IAmb 18 20 36.7
comp=Z,69nm,1.2s
H23K Yukon River 61.24 25 P **P 18 20 27.6 -0.3**
baz=254,SNR=22
SCM Sheep Creek Mo 61.24 30 P **P 18 20 27.8 -0.2**
baz=258,SNR=18
Q23K Middleton Isla 61.28 32 P **P 18 20 27.5 -0.7**
baz=261
G23K Bananza Creek 61.30 24 P **P 18 20 27.3 -1.0**
baz=253,SNR=6.5
ARXS Arharly 61.32 310 *e*P **P 18 20 29.7 +0.8**
COLD Coldfoot 61.38 23 IAmb IAmb 18 20 37.8
comp=Z,53nm,1.1s
COLD Coldfoot 61.38 23 P **P 18 20 28.9 +0.1**
baz=253,SNR=15
TARG Taragay, Kyrgy 61.39 307 IAmb IAmb 18 20 52.5
comp=Z,33nm,0.8s
FID Port Fidalgo 61.44 31 P **P 18 20 28.5 -0.8**
DHY Denali Highway 61.48 28 P **P 18 20 29.6 -0.2**
DHY IAmb IAmb 18 20 37.7
comp=Z,50nm,1.1s
DHY Denali Highway 61.48 28 P **P 18 20 29.5 -0.2**
baz=258,SNR=12
WRH Wood River Hil 61.48 27 IAmb IAmb 18 20 58.2
comp=Z,37nm,0.9s
MDM Murphy Dome 61.54 26 IAmb IAmb 18 20 39.1
comp=Z,78nm,1.3s
CCB Clear Creek Bu 61.65 26 IAmb IAmb 18 20 37.9
comp=Z,75nm,1.5s
TCOL CIGO, UAF Yank 61.68 26 P **P 18 20 30.2 -0.6**
baz=256
COLA College 61.68 26 *i* P **P 18 20 32.3 +1.5**
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 61.68 26 P **P 18 20 30.3 -0.5**
baz=256
D23K Nanushuk River 61.75 21 P **P 18 20 31.1 -0.2**
baz=251,SNR=11
EYAK Cordova Ski Ar 61.76 31 IAmb IAmb 18 20 45.1
comp=Z,50nm,1.0s
EYAK Cordova Ski Ar 61.76 31 P **P 18 20 31.3 -0.1**
baz=260,SNR=8.2
M24K Tolsona, Glenn 61.83 29 IAmb IAmb 18 21 16.6
comp=Z,62nm,0.9s
M24K Tolsona, Glenn 61.83 29 P **P 18 20 32.2 +0.2**
baz=259
KLU Klutina 61.84 30 IAmb IAmb 18 20 40.5
comp=Z,46nm,1.0s
KLU Klutina 61.84 30 P **P 18 20 32.2 +0.2**
baz=260,SNR=10
E23K Chandalar 61.84 22 P **P 18 20 32.7 +0.7**
baz=253,SNR=22
H24K Noodor Dome 61.90 25 P **P 18 20 32.6 +0.2**
H24K IAmb IAmb 18 20 42.1
comp=Z,82nm,1.4s
H24K Noodor Dome 61.90 25 P **P 18 20 32.3 -0.1**
baz=256,SNR=23
MDOK Medeo 61.90 309 P **P 18 20 34.1 +1.2**
MDOK Medeo 61.90 309 *e*P **P 18 20 33.7 +0.8**
baz=309
POKR Poker Plat Res 61.91 26 IAmb IAmb 18 20 39.9
comp=Z,46nm,1.1s
POKR Poker Plat Res 61.91 26 P **P 18 20 31.8 -0.6**
baz=256
CHKK Chushkaly 61.93 310 *e*P **P 18 20 33.8 +0.9**
CHKK Chushkaly 61.93 310 *e*P **P 18 20 33.9 +0.9**
baz=310
HDA Harding Lake 61.95 27 P **P 18 20 31.6 -1.1**
HDA IAmb IAmb 18 20 49.6
comp=Z,29nm,0.8s
HDA Harding Lake 61.95 27 P **P 18 20 32.2 -0.5**
baz=257,SNR=18
AAA Alma-Ata 62.00 309 *e*P **P 18 20 35.0 +1.5**
AAA Alma-Ata 62.00 309 *e*P **P 18 20 35.0 +1.5**
baz=309
TOLK Toolik Lake Re 62.03 22 P **P 18 20 34.0 +0.7**
baz=253,SNR=15
C23K Itkillik River 62.05 20 P **P 18 20 33.9 +0.6**
baz=251,SNR=13
ILAR Eielson Array 62.06 26 P **P 18 20 32.5 -0.8**
comp=Z,22nm,0.8s,baz=257,slow=5.5,SNR=150
ILAR LR LR 18 47 24.4
comp=Z,748nm,19.3s,baz=250,slow=36
ILAR PKP2bc 18 49 48.4
comp=Z,0.8nm,0.9s,baz=69,slow=0.9,SNR=4.2
comp=Z,22nm,0.8s
E24K Your Creek 62.26 23 P **P 18 20 34.7 0.0**
baz=254,SNR=14
RAGM Ragged Mountai 62.26 32 IAmb IAmb 18 20 43.6
comp=Z,75nm,1.2s
G24K Hadweenzic Riv 62.27 24 P **P 18 20 35.3 +0.5**
baz=256,SNR=11
PAX Paxson 62.31 29 IAmb IAmb 18 20 48.5
comp=Z,77nm,1.3s
PAX Paxson 62.31 29 P **P 18 20 35.4 +0.2**
baz=260,SNR=13
KAIM Kayak Island 62.32 32 P **P 18 20 35.5 +0.3**
baz=262,SNR=6.6
F24K Squaw Lake 62.33 23 P **P 18 20 35.9 +0.7**
baz=255,SNR=18
K24K Donnelly Dome 62.33 28 P **P 18 20 35.5 +0.2**
baz=259,SNR=11
HARP HAARP 62.35 29 P **P 18 20 35.9 +0.5**
baz=260,SNR=13
BMRM Bremner River 62.38 31 P **P 18 20 35.4 -0.3**
BMRM Bremner River 62.38 31 P **P 18 20 35.9 +0.2**
baz=261,SNR=9.6
KUU Kurty 62.40 310 *e*P **P 18 20 36.5 +0.5**
KUU pmax pmax
comp=Z,67nm,1.3s
KUU Kurty 62.40 310 *e*P **P 18 20 36.5 +0.5**
comp=Z,67nm,1.3s,baz=310
D24K Happy Valley 62.44 21 P **P 18 20 36.4 +0.6**
baz=253
HMT Hamilton 62.46 32 IAmb IAmb 18 20 44.6
comp=Z,60nm,1.0s
N25K Chitina, Valde 62.48 30 P **P 18 20 36.1 -0.3**
N25K Chitina, Valde 62.48 30 P **P 18 20 36.8 +0.4**
baz=261,SNR=13
C24K Franklin Bluff 62.65 21 P **P 18 20 37.6 +0.4**
baz=253
J25K Salcha River, 62.66 27 P **P 18 20 36.4 -1.1**
baz=259,SNR=17
RIDG Independent Ri 62.73 28 P **P 18 20 37.8 -0.1**
baz=260
NRN Naryn 62.76 307 IAmb IAmb 18 21 06.6
comp=Z,29nm,0.8s
PRP Porcupine Dome 62.78 26 P **P 18 20 38.1 -0.3**
baz=258
G25K Bearman Lake 62.82 24 P **P 18 20 38.8 +0.4**
baz=257,SNR=7.2
H25K Birch Creek 62.82 25 P **P 18 20 39.1 +0.7**
baz=258,SNR=31
GLB Gilahina Butte 62.83 30 P **P 18 20 38.6 0.0**
KSH Kashi 62.90 305 P P 18 20 45.3 +5.7
KSH sP pwP 18 20 50.0 +0.1
KSH ScP **ScP 18 25 24.7 +6.1**
KSH S **S 18 29 14.9 +6.6**
KSH pmax pmax
comp=Z,31nm,0.8s
KSH LR LR
comp=Z,670nm,18.6s
KSH LR LR
comp=Z,450nm,17.9s
KSH LR LR
comp=Z,500nm,19.9s
BGLC Bering Glacier 62.91 32 P **P 18 20 38.6 -0.5**
baz=263
VRDI Verde Repeater 62.97 31 IAmb IAmb 18 20 53.2
comp=Z,72nm,1.2s
TKM2 Tokmak 2 62.98 309 P **P 18 20 42.0 +1.8**
SNR=18
TKM2 Tokmak 2 62.98 309 P **P 18 20 41.2 +1.0**
DOT Dot Lake 63.05 28 P **P 18 20 39.6 -0.5**
DOT IAmb IAmb 18 20 53.2
comp=Z,49nm,0.8s
MENT Mentasta 63.09 29 IAmb IAmb 18 21 05.0
comp=Z,28nm,0.9s
SCRK Sand Creek 63.14 28 P **P 18 20 40.5 -0.3**
baz=260,SNR=39
WAX Waxell Ridge 63.17 32 P **P 18 20 40.8 -0.1**
WAX IAmb IAmb 18 20 54.8
comp=Z,66nm,1.2s
F25K Christian Rive 63.18 23 P **P 18 20 41.3 +0.4**
baz=257,SNR=41
MCARA McCarthy VSAT 63.20 31 P **P 18 20 41.1 0.0**
baz=263,SNR=16
TGL Tana Glacier 63.21 31 IAmb IAmb 18 20 49.7
comp=Z,74nm,1.2s
L26K Log Cabin Wild 63.27 29 P **P 18 20 42.1 +0.5**
baz=261,SNR=6.4
E25K Arctic Village 63.33 23 P **P 18 20 42.9 +1.1**
baz=257,SNR=9.1
D25K Kavik River 63.33 21 P **P 18 20 42.6 +0.7**
baz=255,SNR=9.2
M26K Nabesna, AK 63.35 29 IAmb IAmb 18 20 50.4
comp=Z,38nm,1.2s
M26K Nabesna, AK 63.35 29 P **P 18 20 42.8 +0.7**
baz=262,SNR=18
J26L Joseph Creek 63.41 27 P **P 18 20 42.5 0.0**
baz=260,SNR=53
ISLE Juniper Island 63.44 31 IAmb IAmb 18 20 52.0
comp=Z,58nm,1.0s
KBK Karagaybulak 63.47 308 P **P 18 20 45.1 +1.7**
SNR=14
MESA MESA 63.58 32 P **P 18 20 43.8 -0.1**
MESA MESA 63.58 32 P **P 18 20 44.5 +0.7**
baz=264,SNR=7.1
SGDS Sogindy 63.66 309 *e*P **P 18 20 43.7 -0.8**
SGDS Sogindy 63.66 309 *e*P **P 18 20 43.7 -0.8**
baz=309
I26K Coal Creek Min 63.72 26 P **P 18 20 43.4 -1.0**
baz=260,SNR=5.8
G26K Porcupine Rive 63.75 24 P **P 18 20 45.6 +1.0**
baz=259,SNR=26
USP Ospenovka 63.76 309 P **P 18 20 46.5 +1.3**
SNR=11
F26K Sheenjek River 63.76 23 P **P 18 20 45.5 +0.8**
baz=258,SNR=23
AAK Ala-Archa 63.80 308 LR LR 18 48 12.6
comp=Z,599nm,21.4s,baz=90,slow=36
AAK PKP2bc 18 49 49.0
comp=Z,0.7nm,0.4s,baz=205,slow=19,SNR=2.5
AAK Ala-Archa 63.80 308 P **P 18 20 45.4 -0.2**
AAK Ala-Archa 63.80 308 P **P 18 20 45.4 -0.2**
AAK pmax pmax
comp=Z,14nm,0.9s
AAK Ala-Archa 63.80 308 P **P 18 20 47.6 +2.0**
AAK S **S 18 29 20.7 +1.2**
AAK Ala-Archa 63.80 308 P **P 18 20 47.7 +2.0**
UCH Uchtor 63.82 308 P **P 18 20 48.3 +2.2**
SNR=18
M27K Edge Creek, AK 63.86 30 IAmb IAmb 18 20 54.0
comp=Z,65nm,1.4s
M27K Edge Creek, AK 63.86 30 P **P 18 20 45.8 +0.2**
baz=263,SNR=17
CTG Chitna Glacier 63.96 31 P **P 18 20 46.7 +0.4**
baz=264,SNR=17
CTGM Chitina Glacie 63.96 31 IAmb IAmb 18 20 54.8
comp=Z,64nm,1.1s
L27K Beaver Creek, 63.97 29 IAmb IAmb 18 20 54.5
comp=Z,43nm,1.1s
L27K Beaver Creek, 63.97 29 P **P 18 20 46.5 +0.3**
baz=263,SNR=24
C26K Camden Bay 63.97 21 P **P 18 20 47.4 +1.4**
baz=257
K27K Chicken 63.98 28 IAmb IAmb 18 20 55.0
comp=Z,73nm,1.2s
K27K Chicken 63.98 28 P **P 18 20 46.8 +0.6**
baz=262
BCAR Beaver Creek A 63.99 29 P **P 18 20 45.8 -0.5**
BTLS Baital 63.99 311 *e*P **P 18 20 46.8 +0.2**
BTLS pmax pmax
comp=Z,14nm,1.1s
BTLS Baital 63.99 311 *e*P **P 18 20 46.8 +0.2**
comp=Z,14nm,1.1s,baz=311
LOGN Logan Glacier 64.11 31 IAmb IAmb 18 20 55.8
comp=Z,49nm,1.0s
HYBB Hyderabad (bro 64.20 280 *e*P **P 18 20 48.7 +0.2**
HYBB *e*sP **pP 18 20 53.2 -1.8**
HYBB *e*PcP **PcP 18 21 22.9 -0.4**
HYBB *e*PP **PP 18 23 10.8 +1.0**
HYBB *e*S **S 18 29 27.1 +2.2**
C27K Jago River 64.31 21 P **P 18 20 48.5 +0.3**
baz=258,SNR=5.6
BVCY Beaver Creek 64.33 29 P **P 18 20 48.3 -0.2**
baz=264,SNR=7.6
I27K Kandik River 64.40 26 P **P 18 20 48.8 -0.2**
baz=262,SNR=8.8
PCA Pinnacle 64.42 32 IAmb IAmb 18 21 02.8
comp=Z,60nm,1.1s
PINM Pinnacle 64.42 32 P **P 18 20 49.3 +0.1**
baz=266
AML Almayashu 64.43 308 P **P 18 20 52.1 +2.1**
SNR=14
YUK3 Moose Creek 64.46 30 P **P 18 20 49.2 -0.4**
baz=265,SNR=17
EGAK Eagle 64.48 27 IAmb IAmb 18 21 02.6
comp=Z,28nm,0.8s
EGAK Eagle 64.48 27 P **P 18 20 48.9 -0.5**
baz=263,SNR=13
O28M Mount Upton 64.50 31 P **P 18 20 49.7 -0.3**
baz=265,SNR=24
H27K Steamboat Moun 64.52 25 P **P 18 20 50.5 +0.7**
baz=262,SNR=19
G27K Doyon Strip 64.56 25 P **P 18 20 50.6 +0.7**
baz=261,SNR=7.3
URZ Urewera 64.61 154 P **P 18 20 49.3 -1.2**
comp=Z,9.1nm,0.7s,baz=90,slow=8.1,SNR=2.6
URZ LR LR 18 49 01.2
comp=Z,487nm,18.2s,baz=44,slow=36
comp=Z,9.1nm,0.7s
BCPM Bancas Point 64.72 32 IAmb IAmb 18 20 59.7
comp=Z,55nm,1.1s
BRZS Berezniki 64.74 317 *e*P **P 18 20 51.1 -0.3**
BRZS pmax pmax
comp=Z,21nm,1.6s
BRZS Berezniki 64.74 317 *e*P **P 18 20 51.1 -0.3**
comp=Z,21nm,1.6s,baz=317
E27K Coleen River 64.80 23 P **P 18 20 52.2 +0.7**
baz=261,SNR=9.8
PNL Peninsula 64.82 33 P **P 18 20 51.9 +0.1**
baz=267
OTUK Ortayu 65.02 315 P **P 18 20 53.7 +0.4**
BKZ Black Stump Fm 65.13 155 IAmb IAmb 18 21 02.0
comp=Z,62nm,1.1s
BKZ Black Stump Fm 65.13 155 P **P 18 20 54.0 0.0**
DAWY Dawson 65.16 28 IAmb IAmb 18 21 02.6
comp=Z,51nm,1.1s
DAWY Dawson 65.16 28 P **P 18 20 54.2 +0.2**
baz=265,SNR=19
O29M Mount Kennedy 65.27 32 P **P 18 20 55.8 +1.0**
baz=267,SNR=47
YUK4 Talbot Arm 65.29 31 P **P 18 20 56.6 +1.5**
baz=267,SNR=28
YUK6 Outpost Mounta 65.41 31 P **P 18 20 57.0 +1.2**
baz=267,SNR=13
M29M Somme Creek 65.45 30 P **P 18 20 57.0 +1.1**
baz=266,SNR=32
L29M L29M 65.65 29 P **P 18 20 58.2 +1.1**
baz=266,SNR=64
P29M Windy Craggy 65.66 33 P **P 18 20 58.4 +1.2**
baz=268,SNR=26
J29M Klondike Camp 65.70 27 P **P 18 20 57.8 +0.3**
baz=266
NIL Nilore 65.74 299 P **P 18 21 00.2 +2.1**
NIL Nilore 65.74 299 P **P 18 21 00.3 +2.1**
NIL pmax pmax
comp=Z,162nm,1.0s
I29M Ogilvie Camp, 65.74 26 IAmb IAmb 18 21 06.0
comp=Z,58nm,1.1s
I29M Ogilvie Camp, 65.74 26 P **P 18 20 58.0 +0.4**
baz=265,SNR=15
HYT Haines Junctio 65.82 31 P **P 18 20 59.4 +1.1**
baz=268,SNR=27
K29M Barlow Dome 65.97 28 P **P 18 20 58.9 -0.3**
baz=266,SNR=27
N30M Aishikik Lake 66.05 31 P **P 18 20 59.5 -0.2**
baz=268,SNR=23
P30M Million Dollar 66.07 32 P **P 18 21 00.9 +1.0**
baz=269,SNR=18
BVA0 Borovoye Array 66.09 320 *i* P **P 18 21 00.7 +0.6**
BVAR Borovoye Array 66.09 320 PKP2bc 18 49 38.2
comp=Z,0.5nm,0.6s,baz=172,slow=3.0,SNR=3.7
BVAR LR LR 18 52 33.8

comp=Z,825nm,18.4s,baz=81,slow=38
BRVK Borovoye 66.15 320 P **P 18 21 00.9 +0.4**
BRVK Borovoye 66.15 320 P **P 18 21 00.9 +0.4**
BRVK pmax pmax
comp=Z,53nm,0.8s
BRVK Borovoye 66.15 320 P **P 18 21 01.1 +0.7**
BRVK S **S 18 29 46.3 -1.4**
PLBC Pleasant Camp 66.36 33 P **P 18 21 01.9 +0.2**
baz=269,SNR=9.1
RAR Rarotonga 66.46 125 P **P 18 21 02.6 -0.2**
comp=Z,2.8nm,0.3s,baz=240,slow=5.4,SNR=3.6
comp=Z,2.8nm,0.3s
EPYK Eagle Plains 66.47 25 P **P 18 21 01.7 -0.6**
EPYK IAmb IAmb 18 21 10.8
comp=Z,68nm,1.1s
EPYK Eagle Plains 66.47 25 P **P 18 21 02.7 +0.4**
baz=266,SNR=14
O30N Mendenhall 66.51 31 P **P 18 21 03.4 +0.7**
baz=269,SNR=6.5
N31M Braeburn, Yuko 66.68 31 P **P 18 21 04.7 +1.0**
baz=269,SNR=20
MAYO Mayo, Yukon 66.68 28 P **P 18 21 03.7 +0.1**
baz=268
KK31 Karatay Array 66.68 309 IAmb IAmb 18 21 20.9
comp=Z,48nm,0.8s
KK31 Karatay Array 66.68 309 *i* P **P 18 21 04.8 +0.7**
R31K City Hall, Gus 66.68 34 P **P 18 21 04.4 +0.7**
baz=270
G30M tAoh Zraii Nji 66.71 25 P **P 18 21 03.7 -0.1**
baz=266,SNR=12
LTZ Lake Taylor 66.77 160 P **P 18 21 03.5 -0.9**
KHZ Kahutara 66.86 159 P **P 18 21 03.4 -1.5**
SKAG Skagway 66.89 33 IAmb IAmb 18 21 14.0
comp=Z,42nm,1.1s
SKAG Skagway 66.89 33 P **P 18 21 05.9 +0.9**
baz=270
SIT Sitka 66.92 36 P **P 18 21 05.3 +0.1**
baz=271
WHY Whitehorse 67.11 32 IAmb IAmb 18 21 15.6
comp=Z,75nm,1.4s
WHY Whitehorse 67.11 32 P **P 18 21 07.4 +0.8**
baz=270,SNR=8.5
IUG luzhnay 67.14 308 *e*P **P 18 21 08.4 +1.3**
IUG luzhnay 67.14 308 *e*P **P 18 21 08.5 +1.3**
baz=308
BESE Bessie Mountai 67.14 34 IAmb IAmb 18 21 15.6
comp=Z,75nm,1.3s
RPZ Rata Peaks 67.23 161 P **P 18 21 06.8 -0.5**
comp=Z,24nm,0.7s,baz=161,slow=2.1,SNR=8.8
RPZ LR LR 18 48 34.0
comp=Z,242nm,18.5s,baz=332,slow=34
comp=Z,24nm,0.7s
S32K Killisnoo 67.32 35 P **P 18 21 08.3 +0.6**
baz=272
R32K Eaglecrest 67.33 34 P **P 18 21 08.3 +0.4**
baz=271
M31M Drury Creek, Y 67.34 30 IAmb IAmb 18 21 21.7
comp=Z,52nm,1.1s
M31M Drury Creek, Y 67.34 30 P **P 18 21 08.2 +0.3**
baz=270,SNR=11
JIS Juneau Island 67.40 34 P **P 18 21 07.9 -0.4**
JIS IAmb IAmb 18 21 22.4
comp=Z,49nm,1.1s
LBZ Lake Benmore 67.58 162 IAmb IAmb 18 21 18.0
comp=Z,70nm,1.2s
F31M Tsiigehtchic 67.69 24 P **P 18 21 10.0 0.0**
baz=268,SNR=18
P32M Atlin 67.71 33 P **P 18 21 11.1 +0.8**
baz=272,SNR=6.3
INK Inuvik 67.80 23 P **P 18 21 10.7 0.0**
comp=Z,19nm,0.7s,baz=274,slow=5.6,SNR=28
INK LR LR 18 48 59.4
comp=Z,326nm,20.9s,baz=261,slow=34
comp=Z,19nm,0.7s
INK Inuvik 67.80 23 IAmb IAmb 18 21 18.7
comp=Z,59nm,0.9s
INK Inuvik 67.80 23 P **P 18 21 10.2 -0.4**
baz=268,SNR=13
FARO Faro, Yukon 67.83 30 IAmb IAmb 18 21 19.6
comp=Z,44nm,1.2s
FARO Faro, Yukon 67.83 30 P **P 18 21 11.4 +0.4**
baz=271,SNR=8.8
N32M Quiet Lake 67.98 31 P **P 18 21 12.3 +0.3**
baz=272,SNR=7.9
PCHI Peechi 68.13 274⇓ *e*P **P 18 21 14.4 +0.8**
PCHI *e*S **S 18 30 05.5 -7.2**
P33M Teslin, Yukon 68.14 32 IAmb IAmb 18 21 21.8
comp=Z,54nm,1.1s
P33M Teslin, Yukon 68.14 32 P **P 18 21 13.5 +0.4**
baz=272,SNR=8.3
U33K Whale Pass 68.18 36 P **P 18 21 13.7 +0.5**
baz=274
CRAG Craig 68.22 37 IAmb IAmb 18 21 22.3
comp=Z,42nm,1.1s
CRAG Craig 68.22 37 P **P 18 21 14.4 +0.9**
baz=274
T33K Petersburg 68.23 36 P **P 18 21 14.2 +0.6**
baz=273
POO Poona 68.26 283 *e*P **P 18 21 10.0 -4.5**
Q32M Nakina River 68.48 33 P **P 18 21 16.2 +0.9**
baz=273
WRAK Wrangell Islan 68.59 36 IAmb IAmb 18 21 24.6
comp=Z,38nm,1.1s
WRAK Wrangell Islan 68.59 36 P **P 18 21 16.6 +0.8**
baz=274
MMPY Sheldon Lake, 68.79 29 P **P 18 21 16.8 -0.3**
baz=272,SNR=8.3
KBL Kabul 69.04 300 P **P 18 21 18.7 -0.6**
KBL Kabul 69.04 300 P **P 18 21 18.7 -0.6**
KBL pmax pmax
comp=Z,173nm,1.2s
V35K Ketchikan 69.09 37 P **P 18 21 18.9 0.0**
baz=275
R33M Jennings River 69.12 33 P **P 18 21 20.2 +0.9**
baz=274,SNR=10.0
S34M Telegraph Cree 69.14 34 P **P 18 21 20.3 +1.0**
baz=274,SNR=12
DLBC Dease Lake 69.68 34 P **P 18 21 23.8 +1.1**
comp=Z,20nm,0.8s,baz=288,slow=8.1,SNR=21
DLBC LR LR 18 48 33.3
comp=Z,373nm,20.9s,baz=282,slow=33
comp=Z,20nm,0.8s
DLBC Dease Lake 69.68 34 P **P 18 21 22.9 +0.2**
DLBC IAmb IAmb 18 21 31.8
comp=Z,68nm,1.1s
DLBC Dease Lake 69.68 34 P **P 18 21 23.6 +0.9**
baz=275,SNR=15
T35M Bob Quinn 69.70 35 P **P 18 21 23.7 +1.0**
baz=276,SNR=20
RUBB Prince Rupert 69.98 38 IAmb IAmb 18 21 38.0
comp=Z,58nm,1.1s
WTLY Watson Lake, Y 70.15 32 P **P 18 21 25.4 -0.1**
WTLY Watson Lake, Y 70.15 32 P **P 18 21 26.6 +1.1**
baz=276
TGTN Hyland Airport 70.27 30 P **P 18 21 27.1 +0.9**
baz=276,SNR=11
A36M Sachs Harbour 70.54 19 IAmb IAmb 18 21 36.0
comp=Z,47nm,1.0s
A36M Sachs Harbour 70.54 19 P **P 18 21 28.1 +0.5**
baz=274
C36M Paulatuk 71.19 22 P **P 18 21 31.2 -0.3**
baz=276
SVE Sverdlovsk 71.37 325 *ce*P **P 18 21 33.9 +1.0**
SVE pmax pmax
comp=Z,58nm,1.1s
BBB Bella Bella 71.54 40 P **P 18 21 34.4 +0.4**
comp=Z,12nm,0.7s,baz=294,slow=6.1,SNR=9.3
BBB LR LR 18 47 15.5
comp=Z,451nm,20.1s,baz=288,slow=31
comp=Z,12nm,0.7s
WRGLY Wrigley 72.28 28 P **P 18 21 38.9 +0.7**
baz=279,SNR=8.3
ARU Arti 72.56 324 LR LR 18 56 53.0
comp=Z,622nm,18.8s,baz=82,slow=38
ARU Arti 72.56 324 P **P 18 21 40.0 -0.1**
ARU IAmb IAmb 18 21 55.7
comp=Z,64nm,1.0s
ARU Arti 72.56 324 *d i*P **P 18 21 40.6 +0.5**
ARU 18 21 58.2
ARU 18 24 18.9
ARU PPP PPP 18 26 02.7
ARU S **S 18 31 06.1 +2.9**
ARU 18 31 48.4
ARU pmax pmax
comp=Z,107nm,1.9s
ARU MLR MLR
comp=Z,622nm,18.0s

FLDN Fort Liard 72.77 31 P **P 18 21 41.2 0.0**
baz=280
PPT2 Papeete2 72.84 116 *e*P **P 18 21 43.8 +1.4**
comp=Z,40nm,25.2s
PPT2 *e*S **S 18 31 08.5 +1.0**
comp=Z,161nm,26.5s
PPT2 *e*SS **SS 18 35 49.2 +1.0**
comp=Z,54nm,22.2s
PPT2 *e*LR LR 18 43 57.0
comp=Z,502nm,27.5s
PPT2 *e*LR LR 18 43 57.0
comp=Z,597nm,23.2s
AB31 Akbulak array 73.04 317 *i* P **P 18 21 43.2 +0.2**
AKTO Aktyubinsk 74.03 318 LR LR 18 57 12.8
comp=Z,467nm,18.8s,baz=76,slow=38
AKTO Aktyubinsk 74.03 318 P **P 18 21 48.6 -0.2**
E03A Lebam 75.57 45 P **P 18 21 57.6 -0.2**
E03A IAmb IAmb 18 22 07.2
comp=Z,72nm,1.0s
TBI Tubuai 75.69 122 *e*S **S 18 31 39.5 +0.3**
comp=Z,120nm,30.2s
TBI *e*SS **SS 18 36 32.5 +1.1**
comp=Z,187nm,27.8s
TBI *e*LR LR 18 45 16.0
comp=Z,235nm,24.0s
TBI *e*LR LR 18 45 16.0
comp=Z,5μm,21.5s
KEBM Edson Butte 75.93 49 P **P 18 22 01.1 +1.1**
WAPA Wapiti River 76.08 36 IAmb IAmb 18 22 08.7
comp=Z,80nm,1.0s
YKA Yellowknife Ar 76.39 28 P **P 18 22 02.4 +0.2**
comp=Z,25nm,0.8s,baz=286,slow=5.7,SNR=58
comp=Z,25nm,0.8s
D05A Enumclaw 76.46 45 P **P 18 22 03.0 +0.1**
KHMM Horse Mountain 76.87 51 P **P 18 22 05.6 0.0**
KHMM IAmb IAmb 18 22 14.7
comp=Z,71nm,1.1s
KIRV Kirov 76.87 328 P **P 18 22 06.2 +1.3**
comp=Z,47nm,0.7s,baz=331,slow=0.8,SNR=23
KIRV LR LR 18 59 14.1
comp=Z,640nm,19.4s,baz=72,slow=38
comp=Z,47nm,0.7s
KIRV Kirov 76.87 328 *ce*P **P 18 22 05.9 +1.0**
GEYT Alibeck 76.91 306 P **P 18 22 07.8 +2.1**
comp=Z,16nm,0.9s,baz=52,slow=2.4,SNR=30
GEYT LR LR 18 59 20.4
comp=Z,384nm,19.1s,baz=93,slow=38
comp=Z,16nm,0.9s
GEYT Alibeck 76.91 306 IAmb IAmb 18 22 26.2
comp=Z,41nm,0.9s
GYA0 ALIBECK ARRAY 76.91 306 P **P 18 22 07.1 +1.4**
GYA0B ALIBECK ARRAY 76.91 306 IAmb IAmb 18 22 26.2
comp=Z,51nm,0.9s
H04A Detroit Lake 76.97 47 IAmb IAmb 18 22 14.2
comp=Z,58nm,1.0s
KMRM Mail Ridge 77.06 52 IAmb IAmb 18 22 15.5
comp=Z,52nm,1.0s
HOOD Mount Hood Mea 77.17 46 IAmb IAmb 18 22 19.4
comp=Z,64nm,0.9s
LTY Liberty 77.31 44 P **P 18 22 07.1 -0.7**
LTY IAmb IAmb 18 22 16.0
comp=Z,48nm,1.1s
YBH Yreka Blue Hor 77.39 50 P **P 18 22 09.6 +1.2**
comp=Z,8.3nm,0.7s,baz=295,slow=2.5,SNR=41
YBH LR LR 18 50 45.3
comp=Z,405nm,20.0s,baz=284,slow=31
comp=Z,8.3nm,0.7s
YBH Yreka Blue Hor 77.39 50 IAmb IAmb 18 22 17.1
comp=Z,42nm,1.0s
BRLDA Berland Lookou 77.41 37 IAmb IAmb 18 22 16.6
comp=Z,55nm,0.9s
TAOE Nuku Hiva Isla 77.44 104 *e*LR LR 18 46 03.7
comp=Z,268nm,22.8s
PRGR Permogore 77.73 331 *e*P **P 18 22 09.3 -0.4**
PRGR pmax pmax
comp=Z,98nm,0.8s
B08A Colville Reser 77.87 43 IAmb IAmb 18 22 19.2
comp=Z,54nm,0.8s
RES Resolute Bay 77.94 14 P **P 18 22 11.2 +0.6**
comp=Z,24nm,0.8s,baz=344,slow=5.6,SNR=12
RES LR LR 18 56 24.1
comp=Z,220nm,21.1s,baz=316,slow=36
comp=Z,24nm,0.8s
SPA0 Spitsbergen Ar 78.04 351 *e*P **P 18 22 12.3 +1.1**
SPA0 IAmb IAmb 18 22 14.1
comp=Z,59nm,1.0s
SPITS Spitsbergen Ar 78.04 351 LR LR 18 58 46.3
comp=Z,393nm,19.9s,baz=10.0,slow=37
GDXM Geysers 78.12 53 IAmb IAmb 18 22 21.3
comp=Z,52nm,1.1s
KBS Kingsbay 78.14 352 P **P 18 22 11.9 +0.2**
KBS Kingsbay 78.14 352 *ce*P **P 18 22 13.1 +1.4**
KBS pmax pmax
comp=Z,48nm,0.6s
KBS Kingsbay 78.14 352 *e*P **P 18 22 13.0 +1.4**
KBS IAmb IAmb 18 22 13.6
comp=Z,59nm,0.7s
NOR Nord 78.24 358 IAmb IAmb 18 22 15.3
comp=Z,16nm,0.8s
HAWA Hanford 78.30 45 IAmb IAmb 18 22 21.8
comp=Z,39nm,0.9s
D08A Wollman Farm, 78.51 44 IAmb IAmb 18 22 22.8
comp=Z,54nm,1.0s
C09A Chrisman Ranch 78.71 43 P **P 18 22 15.5 0.0**
C09A IAmb IAmb 18 22 23.8
comp=Z,41nm,0.8s
ORV Oroville 78.87 52 IAmb IAmb 18 22 24.5
comp=Z,50nm,1.0s
E09A Wood Farm, Sta 79.18 44 IAmb IAmb 18 22 26.6
comp=Z,62nm,0.9s
NEW Newport 79.31 43 P **P 18 22 19.2 +0.4**
comp=Z,11nm,0.9s,baz=288,slow=6.3,SNR=12
NEW LR LR 18 55 49.2
comp=Z,501nm,18.2s,baz=294,slow=34
comp=Z,11nm,0.9s
NEW Newport 79.31 43 P **P 18 22 18.4 -0.4**
NEW IAmb IAmb 18 22 27.2
comp=Z,44nm,0.9s
NEW Newport 79.31 43 P **P 18 22 18.4 -0.4**
NEW pmax pmax
comp=Z,44nm,1.0s
NEW Newport 79.31 43 P **P 18 22 19.5 +0.7**
baz=288,SNR=11
LVZ Lovozero 79.57 339 P **P 18 22 19.7 0.0**
LVZ IAmb IAmb 18 22 29.5
comp=Z,67nm,0.9s
LVZ Lovozero 79.57 339 *ce*P **P 18 22 21.4 +1.6**
LVZ pmax pmax
comp=Z,28nm,0.8s
LVZ MLR MLR
comp=Z,520nm,22.0s
BEKR Beckworth 79.62 51 IAmb IAmb 18 22 28.9
comp=Z,46nm,0.9s
BELG Belogornoye 79.76 322 P **P 18 22 22.2 +1.2**
comp=Z,134nm,0.9s,baz=105,slow=2.6,SNR=63
BELG LR LR 18 59 07.7
comp=Z,552nm,21.2s,baz=125,slow=37
comp=Z,134nm,0.9s
BELG Belogornoye 79.76 322 *d i*P **P 18 22 22.1 +1.1**
BELG pmax pmax
comp=Z,6.0nm,1.0s
BELG MLR MLR
comp=Z,91nm,20.0s
J08A Circle Bar Ran 79.92 48 IAmb IAmb 18 22 31.4
comp=Z,78nm,1.0s
EDM Edmonton 79.97 37 IAmb IAmb 18 22 30.6
comp=Z,62nm,0.9s
MPK Martis Peak 80.04 52 IAmb IAmb 18 22 31.7
comp=Z,73nm,1.0s
EMB Emerald Bay 80.08 52 P **P 18 22 22.4 -1.0**
WVOR Wild Horse Val 80.09 49 IAmb IAmb 18 22 31.6
comp=Z,47nm,0.9s
APA Apatity 80.14 339⇓ *i*P **P 18 22 22.4 -0.4**
APA *i* 18 22 31.3
APA *i* PPP PPP 18 27 23.0
APA *i* S **S 18 32 24.0 -1.9**
APA *i* PS PnS 18 32 40.0 -32
APA pmax pmax
comp=Z,61nm,0.9s
APA MLR MLR
comp=Z,700nm,18.0s
BMO Blue Mountains 80.25 46 IAmb IAmb 18 22 32.4
comp=Z,59nm,0.9s
PNTR Pine Nut 80.42 52 P **P 18 22 24.2 -1.0**
PNTR IAmb IAmb 18 22 33.8
comp=Z,48nm,0.8s
WBK Wadi Bani Khal 80.55 291 P **P 18 22 27.4 +1.4**
SNR=7.6
WBK S **S 18 32 30.5 -1.4**
WSAR Wadi Sarin 80.65 291 S **S 18 32 31.5 -1.4**
YERR Yerington 80.72 52 IAmb IAmb 18 22 35.2
comp=Z,49nm,0.9s
KLMR Klimovskoe 80.77 332 *e*P **P 18 22 25.4 -0.9**
KLMR *e* 18 25 28.6
KLMR pmax pmax
comp=Z,79nm,1.1s
KLMR MLR MLR
comp=Z,246nm,13.0s
KLMR Klimovskoe 80.77 332 *e*P **P 18 22 25.5 -0.9**
KLMR AMP 18 22 35.6
comp=Z,79nm,1.1s
KLMR *e*PP **PP 18 25 28.6 -1.4**
KLMR LR LR 18 51 26.3
KLMR AMP 19 05 08.4
comp=Z,246nm,13.0s
KEV Kevo 80.99 342 P **P 18 22 27.7 +0.3**
KEV Kevo 80.99 342 P **P 18 22 27.7 +0.3**
KEV pmax pmax
comp=Z,41nm,1.0s
BIDO Bidbid 81.01 292 P **P 18 22 29.9 +1.6**
SNR=12
BIDO S **S 18 32 36.2 -0.4**
WALA Waterton Lakes 81.06 41 IAmb IAmb 18 22 37.3
comp=Z,60nm,1.0s
MDPB Devils Postpil 81.26 53 P **P 18 22 28.7 -1.1**
JTMT Jette 81.28 42 IAmb IAmb 18 22 37.9
comp=Z,47nm,0.9s
SMMC Simmler 81.29 56 P **P 18 22 30.0 +0.3**
baz=288
TULEG Thule 81.30 8 *i* P **P 18 22 28.8 -0.1**
TULEG IAmb IAmb 18 22 30.6
comp=Z,106nm,0.8s
RYN Ryan 81.36 52 IAmb IAmb 18 22 38.6
comp=Z,43nm,0.9s
HAMF Hammerfest 81.39 344 *e*P **P 18 22 29.9 +0.4**
VOG Valley Oaks Go 81.44 55 P **P 18 22 30.4 0.0**
baz=288
MLAC Mammoth, Mammo 81.44 53 P **P 18 22 30.6 -0.1**
baz=289
LHV Little Huntoon 81.50 52 IAmb IAmb 18 22 39.6
comp=Z,51nm,1.0s
KVN Kaiserville 81.54 52 IAmb IAmb 18 22 39.5
comp=Z,48nm,0.9s
ARA0 ARCESS Array S 81.55 342 *e*P **P 18 22 30.9 +0.6**
ARA0 IAmb IAmb 18 22 39.6
comp=Z,48nm,0.9s
ARCES ARCESS Array B 81.55 342 P **P 18 22 31.0 +0.6**
comp=Z,24nm,0.7s,baz=64,slow=5.1,SNR=53
ARCES LR LR 19 03 00.3
comp=Z,655nm,20.9s,baz=66,slow=39
comp=Z,24nm,0.7s
ARCES ARCESS Array B 81.55 342 P **P 18 22 31.0 +0.6**
PKM Mcpherson Peak 81.56 56 P **P 18 22 30.9 -0.4**
baz=288,SNR=6.7
NVAR Mina Array Bea 81.59 52 P **P 18 22 32.2 +0.7**
comp=Z,10nm,0.7s,baz=265,slow=6.2,SNR=86
NVAR LR LR 18 55 48.3
comp=Z,380nm,18.2s,baz=274,slow=34
comp=Z,10nm,0.7s
NVAR Mina Array Bea 81.59 52 P **P 18 22 31.1 -0.3**
NV11 Mina Array Sit 81.70 52 IAmb IAmb 18 22 40.4
comp=Z,45nm,0.9s
HOQ Hoqain 81.70 292 P **P 18 22 33.4 +1.3**
SNR=19
HOQ S **S 18 32 43.3 -0.5**
MFID Camas Ranch 81.73 47 IAmb IAmb 18 22 40.4
comp=Z,56nm,1.0s
SBC Santa Barbara 81.78 56 P **P 18 22 32.6 +0.3**
baz=289
MSO Missoula 81.82 43 P **P 18 22 31.8 -0.6**
baz=290,SNR=6.3
VES Vestal, Richgr 81.83 55 P **P 18 22 31.9 -0.6**
baz=289,SNR=9.1
BANOM Banah 81.85 295 *i* P **P 18 22 34.0 +1.1**
SNR=7.8
BCW Bitter Crk WRg 81.86 56 IAmb IAmb 18 22 41.5
comp=Z,69nm,1.1s
MHTO MHTO 81.93 289 P **P 18 22 34.0 +0.8**
SNR=14
MHTO S **S 18 32 41.9 -4.3**
SHME Shamm 81.94 295 P **P 18 22 33.5 +0.3**
SCZ2 Santa Cruz Isl 81.98 57 P **P 18 22 32.0 -1.3**
baz=289
BSY Bisya 82.06 291 P **P 18 22 35.0 +1.1**
SNR=12
BSY S **S 18 32 45.7 -1.9**
TIN Tinemaha, Big 82.09 54 P **P 18 22 32.9 -1.1**
baz=289
MASF Masafi 82.14 294 P **P 18 22 36.0 +1.6**
SNR=8.5
MASF S **S 18 32 48.2 -0.2**
MSFE Esma-Masafi 82.14 294 *i* P **P 18 22 35.5 +1.1**
SNR=7.4
NEEM North Greenlan 82.19 4 *i* P **P 18 22 33.8 -0.2**
NEEM IAmb IAmb 18 22 36.0
comp=Z,97nm,0.8s
UOSS Minazif 82.24 294 P **P 18 22 35.5 +0.6**
UOSS IAmb IAmb 18 22 45.9
comp=Z,78nm,1.2s
UOSS Minazif 82.24 294 P **P 18 22 35.9 +1.1**
UOSS S **S 18 32 47.1 -2.1**
UOSS Minazif 82.24 294 *i* P **P 18 22 35.6 +0.7**
SNR=18
ARVC Arvin 82.25 56 P **P 18 22 34.3 -0.4**
baz=289
SNCC San Nicolas Is 82.31 58 P **P 18 22 34.8 -0.3**
baz=289,SNR=5.6
HATD Hatta, Dubai 82.33 294 P **P 18 22 36.8 +1.4**
SNR=14
HATD S **S 18 32 49.3 -1.0**
HATD Hatta, Dubai 82.33 294 *i* P **P 18 22 36.4 +1.1**
SNR=12
ISA Isabella, Lake 82.35 55 P **P 18 22 34.5 -0.8**
baz=289,SNR=8.6
CWC Cottonwood Cre 82.40 54 P **P 18 22 34.9 -0.8**
baz=289
ASHO Ashiyiah 82.44 293 P **P 18 22 37.1 +1.2**
SNR=18
ASHO S **S 18 32 50.3 -1.1**
ASHO Ashiyiah 82.44 293 *i* P **P 18 22 37.0 +1.0**
SNR=15
ARQ Araqi 82.47 292 P **P 18 22 37.6 +1.5**
SNR=16
ARQ S **S 18 32 49.7 -2.0**
OSI Osito Audit: C 82.50 56 P **P 18 22 35.6 -0.5**
baz=289
KTK1 Kautokeino 82.51 342 *e*P **P 18 22 35.0 -0.4**
KTK1 IAmb IAmb 18 22 37.9
comp=Z,29nm,1.1s
HLID Hailey 82.64 46 P **P 18 22 36.3 -0.6**
baz=290,SNR=9.8
NAZ Nazwa, Dubai 82.69 294 P **P 18 22 38.4 +1.2**
GMN Gold Mountain 82.74 53 P **P 18 22 37.5 0.0**
GMN IAmb IAmb 18 22 45.7
comp=Z,31nm,0.9s
GRAC Grapevine Rang 82.76 53 P **P 18 22 37.1 -0.3**
baz=290,SNR=5.7
FAQ Al Faqa, Dubai 82.83 294 P **P 18 22 38.7 +0.8**
CCAC Calif City Air 82.87 55 IAmb IAmb 18 22 46.4
comp=Z,44nm,1.1s
ALNE Al Ain 82.91 293 P **P 18 22 40.0 +1.6**
SNR=15
ALNE S **S 18 32 53.3 -2.9**
JETT Jettan, Norway 82.95 343 *e*P **P 18 22 38.3 +0.6**
JETT IAmb IAmb 18 22 38.9
comp=Z,46nm,0.6s
MPMC Manual Prospec 82.98 54 P **P 18 22 38.3 -0.4**
baz=290,SNR=14
EDW2 Edwards Air Fo 82.98 56 P **P 18 22 38.3 -0.3**
baz=289,SNR=11
LRMC Laurel Mtn Rad 83.02 55 P **P 18 22 38.7 -0.2**
baz=290,SNR=11
DAG Danmarks Havn 83.03 357 *i* P **P 18 22 37.1 -0.8**
DAG IAmb IAmb 18 22 39.1
comp=Z,31nm,0.9s
ELK Elko 83.05 49 P **P 18 22 39.8 +0.8**
comp=Z,11nm,0.8s,baz=292,slow=6.6,SNR=47
ELK LR LR 18 54 13.0
comp=Z,399nm,20.1s,baz=282,slow=32
comp=Z,11nm,0.8s
ELK Elko 83.05 49 IAmb IAmb 18 22 47.5
comp=Z,54nm,0.8s
MAK Makhachkala 83.08 313 *e*P P 18 22 33.9 -4.9
MAK *e* 18 25 46.9

MAK *e*S **S** **18 32 51.9 -5.3**
MAK *e*SSS SSS 18 41 46.1
MAK pmax pmax
comp=Z,233nm,1.2s
CIS Catalina Islan 83.14 57 P **P** **18 22 38.9 -0.6**
baz=289,SNR=6.1
SCI2 San Clemente I 83.17 58 P **P** **18 22 38.0 -1.6**
baz=289
TRO Tromso 83.29 344 *e*P **P** **18 22 39.7 +0.3**
TRO lAmb lAmb 18 22 48.0
comp=Z,22nm,0.8s
FURC Furnace Creek, 83.32 54 P **P** **18 22 40.0 -0.2**
baz=290,SNR=6.7
WCT Wildcat Mounta 83.39 53 lAmb lAmb 18 22 48.9
comp=Z,46nm,1.0s
BFSC Mount Baldy Ra 83.45 56 P **P** **18 22 40.5 -0.7**
baz=290
GWY Greenwater Val 83.56 54 P **P** **18 22 41.1 -0.6**
GWY lAmb lAmb 18 22 49.8
comp=Z,40nm,1.0s
VRH Novokhopyorsk 83.61 322 *e*P **P** **18 22 41.3 -0.1**
VRH pmax pmax
comp=Z,60nm,0.9s
TPNV Topopah Spring 83.62 53 lAmb lAmb 18 22 50.1
comp=Z,43nm,0.9s
TPNV Topopah Spring 83.62 53 P **P** **18 22 41.9 -0.1**
baz=290,SNR=47
R11A Troy Canyon, C 83.63 52 lAmb lAmb 18 22 50.5
comp=Z,42nm,1.1s
R11A Troy Canyon, C 83.63 52 P **P** **18 22 41.6 -0.4**
baz=290,SNR=54
GSC Goldstone, Bar 83.76 55 lAmb lAmb 18 22 50.8
comp=Z,32nm,1.1s
GSC Goldstone, Bar 83.76 55 P **P** **18 22 42.2 -0.4**
baz=290,SNR=9.4
BOZ Bozeman (W) 83.76 44 P **P** **18 22 41.9 -0.6**
baz=292,SNR=19
UMZA Um Al Zommool 83.85 292 P **P** **18 22 43.9 +0.7**
UMZA S **S** **18 33 02.7 -3.0**
MOS Moscow 83.88 327 *e*P **P** **18 22 41.2 -1.5**
MOS *e* 18 22 50.1
MOS *e*S **S** **18 33 00.5 -4.3**
MOS pmax pmax
comp=Z,101nm,0.9s
MOS pmax pmax
comp=Z,200nm,1.2s
MOS MLR MLR
comp=Z,800nm,19.0s
SHOC Shoshone, Teco 83.96 54 P **P** **18 22 42.9 -0.7**
baz=290,SNR=6.6
EGMT Eagleton 84.01 41 P **P** **18 22 43.4 -0.3**
baz=293,SNR=6.9
MURC Murrieta 84.03 57 P **P** **18 22 43.5 -0.5**
baz=290,SNR=6.8
GROC Groznyy 84.16 314 *e*P **P** **18 22 45.5 +1.1**
GROC *e* 18 26 00.8
GROC *e*S **S** **18 33 07.5 -0.6**
GROC pmax pmax
comp=Z,402nm,1.1s
HEC Hector,Ludlow 84.28 55 P **P** **18 22 45.1 -0.2**
baz=290,SNR=6.7
YHL Hebgen Lake 84.33 44 lAmb lAmb 18 22 54.7
comp=Z,53nm,0.9s
109C Camp Elliot, M 84.35 57 P **P** **18 22 45.0 -0.5**
baz=290
PRN Pahroc Range 84.36 52 lAmb lAmb 18 22 54.2
comp=Z,43nm,1.0s
YHB Horse Butte 84.36 44 lAmb lAmb 18 22 54.8
comp=Z,49nm,1.0s
TUQ Turquoise Moun 84.39 54 P **P** **18 22 45.7 -0.2**
baz=290,SNR=6.7
HVU Hansel Valley 84.41 48 lAmb lAmb 18 22 54.6
comp=Z,52nm,1.1s
YHH Holmes Hill 84.58 44 P **P** **18 22 46.9 -0.1**
YHH lAmb lAmb 18 22 56.0
comp=Z,48nm,1.2s
LPSR Galich'ya Gora 84.59 324 *e*P **P** **18 22 46.7 +0.3**
LPSR pmax pmax
comp=Z,100nm,1.6s
PFO Pinyon Flats O 84.61 56 P **P** **18 22 46.8 -0.3**
comp=Z,3.6nm,0.7s,baz=315,slow=5.2,SNR=5.2
PFO LR LR 19 00 02.6
comp=Z,272nm,18.1s,baz=270,slow=35
comp=Z,3.6nm,0.7s
PFO Pinyon Flats O 84.61 56 P **P** **18 22 45.6 -1.4**
PFO lAmb lAmb 18 22 54.9
comp=Z,36nm,1.0s
PFO Pinyon Flats O 84.61 56 P **P** **18 22 45.6 -1.4**
PFO pmax pmax
comp=Z,36nm,1.0s
PFO Pinyon Flats O 84.61 56 P **P** **18 22 47.0 0.0**
baz=290,SNR=10
TPFO Pinon Flats 84.61 56 P **P** **18 22 47.5 +0.4**
baz=290,SNR=11
OBN Obninsk 84.70 327 ⇑P **P** **18 22 47.6 +0.8**
OBN Obninsk 84.70 327 P **P** **18 22 47.0 +0.2**
comp=Z,9.4nm,0.8s,baz=301,slow=0.7,SNR=14
OBN LR LR 19 03 38.4
comp=Z,189nm,19.3s,baz=55,slow=38
comp=Z,9.4nm,0.8s
OBN Obninsk 84.70 327 P **P** **18 22 47.1 +0.2**
OBN Obninsk 84.70 327 *d i*P **P** **18 22 47.1 +0.2**
OBN *e* 18 22 49.6
OBN *i* *SP **sP** **18 22 54.5 -1.3**
OBN *e*S **S** **18 33 06.5 -6.5**
OBN *e*SS **SKKSac** **18 33 12.6 -2.7**
OBN SSS SSS 18 42 17.0
OBN pmax pmax
comp=Z,61nm,0.9s
OBN MLR MLR
comp=Z,744nm,18.0s
BAR Barrett 84.76 57 P **P** **18 22 46.6 -1.1**
BAR lAmb lAmb 18 22 55.4
comp=Z,36nm,1.3s
SPUT South Promonto 84.81 48 lAmb lAmb 18 22 56.5
comp=Z,47nm,1.1s
GMRC Granite Mounta 84.82 55 P **P** **18 22 47.6 -0.5**
baz=291,SNR=15
BELC Belle Mtn. Jos 84.83 56 P **P** **18 22 48.2 0.0**
baz=291,SNR=17
PSUT Pine Spring 84.83 51 lAmb lAmb 18 23 05.3
comp=Z,33nm,0.9s
VORR Voronezh 84.84 323 *e*P **P** **18 22 47.5 -0.1**
VORR S **S** **18 33 13.9 -0.6**
VORR pmax pmax
comp=Z,63nm,1.5s
IMW Indian Meadow 84.86 45 lAmb lAmb 18 22 57.2
comp=Z,32nm,0.9s
MONP2 Monument Peak 84.88 57 P **P** **18 22 47.9 -0.7**
baz=290,SNR=8.8
H17A Grant Village 84.91 45 P **P** **18 22 48.6 +0.1**
baz=293,SNR=8.4
DUG Dugway, Tooele 84.97 49 P **P** **18 22 47.9 -0.9**
DUG lAmb lAmb 18 22 57.1
comp=Z,42nm,1.1s
DUG Dugway, Tooele 84.97 49 P **P** **18 22 47.9 -0.9**
DUG pmax pmax
comp=Z,42nm,1.1s
DUG Dugway, Tooele 84.97 49 P **P** **18 22 47.7 -1.1**
baz=292,SNR=10
TPAW Teton Pass 85.01 46 lAmb lAmb 18 22 57.9
comp=Z,30nm,1.1s
VSR Storozhevoye 85.06 323 *e*P **P** **18 22 49.0 +0.2**
VSR pmax pmax
comp=Z,70nm,1.7s
V12A Nelson 85.10 54 lAmb lAmb 18 22 57.8
comp=Z,33nm,0.9s
AHID Auburn Hatcher 85.19 46 P **P** **18 22 48.0 -1.9**
AHID lAmb lAmb 18 22 58.3
comp=Z,43nm,1.1s
IKP In-Ko-Pah, Jac 85.22 57 P **P** **18 22 49.9 -0.2**
baz=291,SNR=6.2
MZR Muzera 85.22 293 P **P** **18 22 51.3 +1.2**
SNR=11
MZR S **SKSac** **18 33 08.9 -5.3**
MZR Muzera 85.22 293 *i* P **P** **18 22 51.6 +1.5**
SNR=29
GOF Gofitskoye 85.27 316⇑ *e*P **P** **18 22 51.3 +1.3**
GOF pmax pmax
comp=Z,21nm,0.9s
HWUT Hardware Ranch 85.32 47 lAmb lAmb 18 22 58.8
comp=Z,56nm,0.9s
SWSC Sam W. Stewart 85.36 57 P **P** **18 22 50.0 -0.6**
baz=291,SNR=6.4
BC3 Big Chuckawall 85.38 56 P **P** **18 22 51.1 +0.3**
baz=291,SNR=6.1
IRM Iron Mountain 85.44 55 P **P** **18 22 51.1 0.0**
baz=291,SNR=9.0
STEI Steigen 85.44 343 *e*P **P** **18 22 50.5 +0.2**
STEI lAmb lAmb 18 22 51.4
comp=Z,82nm,0.8s
RLMT Red Lodge 85.48 44 P **P** **18 22 50.2 -1.2**
baz=294,SNR=42
FFC Flin Flon 85.48 33 P **P** **18 22 50.7 -0.1**
FFC Flin Flon 85.48 33 P **P** **18 22 50.7 -0.1**
FFC pmax pmax
comp=Z,74nm,0.9s
DBG Daneborg 85.53 356 *i* P **P** **18 22 50.0 -0.7**
DBG lAmb lAmb 18 22 52.1
comp=Z,23nm,0.8s
CTU Camp Tracy 85.54 48 lAmb lAmb 18 22 59.8
comp=Z,35nm,1.0s
CCUT Cedar City 85.56 52 lAmb lAmb 18 23 00.6
comp=Z,41nm,1.2s
ESJX Sierra Juarez 85.57 58 P **P** **18 22 51.2 -0.7**
ZEI Tsey 85.60 314 *e*P **P** **18 22 53.1 +1.1**
ZEI pmax pmax
comp=Z,16nm,0.9s
TCUT Toone Canyon 85.61 48 lAmb lAmb 18 23 00.2
comp=Z,40nm,0.8s
NEE2 Needles Airpor 85.62 55 P **P** **18 22 51.7 -0.2**
baz=291
DMTO DMTO 85.68 287 P **P** **18 22 53.2 +0.7**
SZCU Shurtz Canyon 85.74 52 P **P** **18 22 52.8 0.0**
LOF Lofoten 85.74 344 *e*P **P** **18 22 52.0 +0.1**
LOF lAmb lAmb 18 23 00.3
comp=Z,69nm,1.5s
JLU Jordanelle 85.78 48 lAmb lAmb 18 23 01.2
comp=Z,54nm,0.9s
FAUS Fauske 85.82 343 *e*P **P** **18 22 52.5 +0.3**
FAUS lAmb lAmb 18 23 01.0
comp=Z,67nm,0.9s
LCMT Little Creek M 85.84 52 lAmb lAmb 18 23 01.8
comp=Z,46nm,1.3s
KBZ Khabaz 85.90 315 P **P** **18 22 53.8 +0.7**
comp=Z,12nm,0.9s,baz=67,slow=2.8,SNR=21
KBZ LR LR 19 05 05.7
comp=Z,298nm,18.8s,baz=62,slow=38
comp=Z,12nm,0.9s
KBZ Khabaz 85.90 315 *ce*P **P** **18 22 54.0 +0.9**
KBZ pmax pmax
comp=Z,17nm,0.9s
KIV Kislovodsk 85.95 315 ⇓P **P** **18 22 54.3 +0.8**
KIV Kislovodsk 85.95 315 P **P** **18 22 54.6 +1.1**
KIV lAmb lAmb 18 23 22.7
comp=Z,29nm,0.9s
KIV Kislovodsk 85.95 315 *e*P **P** **18 22 54.7 +1.2**
KIV *e* 18 26 14.8
KIV *e* 18 33 19.7
KIV *e*SS SS 18 39 06.5 +3.3
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,357nm,20.0s
KIV Kislovodsk 85.95 315 P **P** **18 22 55.5 +2.0**
GNI Garni 86.05 311 P **P** **18 22 55.2 +1.0**
comp=Z,3.3nm,0.5s,baz=17,slow=11,SNR=7.3
GNI LR LR 19 03 33.2
comp=Z,237nm,20.6s,baz=81,slow=37
comp=Z,3.3nm,0.5s
GNI Garni 86.05 311 P **P** **18 22 54.6 +0.4**
GNI lAmb lAmb 18 23 21.3
comp=Z,78nm,1.4s
GNI Garni 86.05 311 P **P** **18 22 54.6 +0.4**
GNI pmax pmax
comp=Z,78nm,1.4s
SHA1 Shidzhatmaz 86.06 315 *i* P **P** **18 22 54.8 +0.6**
GLA Glamis 86.08 56 P **P** **18 22 53.7 -0.6**
GLA Glamis 86.08 56 P **P** **18 22 53.7 -0.6**
GLA pmax pmax
comp=Z,28nm,1.0s
GLA Glamis 86.08 56 P **P** **18 22 54.4 +0.1**
baz=291,SNR=7.1
FINES FINESS Array B 86.10 336 P **P** **18 22 53.4 -0.3**
comp=Z,33nm,0.7s,baz=69,slow=4.7,SNR=132
FINES LR LR 19 04 43.0
comp=Z,412nm,20.7s,baz=42,slow=38
comp=Z,33nm,0.7s
PDMCI Parker Dam,Lak 86.16 55 P **P** **18 22 54.4 -0.2**
baz=292
UPNV Upernavik 86.19 7 *i* P **P** **18 22 54.1 +0.1**
UPNV lAmb lAmb 18 22 55.7
comp=Z,64nm,0.8s
NEY Neytrino 86.21 315 *i* P **P** **18 22 55.6 +0.7**
NEY pmax pmax
comp=Z,1.0nm,0.9s
BW06 Boulder Array 86.23 46 P **P** **18 22 54.4 -0.7**
baz=294,SNR=9.0
PD31 Pinedale Array 86.23 46 P **P** **18 22 53.9 -1.3**
PDAR Pinedale Array 86.23 46 P **P** **18 22 55.0 -0.2**
comp=Z,1.8nm,0.5s,baz=200,slow=0.6,SNR=27
PDAR LR LR 18 54 58.7
comp=Z,334nm,21.5s,baz=320,slow=31
comp=Z,1.8nm,0.5s
PKCU Pink Cliffs 86.37 52 lAmb lAmb 18 23 15.0
comp=Z,38nm,1.0s
VAF Ylistaro 86.40 338 P **P** **18 22 55.7 +0.5**
VAF pmax pmax
comp=Z,51nm,1.2s
Q16A Castle Valley 86.63 50 P **P** **18 22 56.2 -1.0**
Q16A lAmb lAmb 18 23 14.6
comp=Z,45nm,1.0s
P17A Butcher Ranch, 86.72 49 lAmb lAmb 18 23 05.9
comp=Z,35nm,1.1s
LAO LASA Array 86.75 41 P **P** **18 22 58.0 +0.6**
baz=296
LAO LASA Array 86.75 41 P **P** **18 22 55.7 -1.7**
baz=296,SNR=9.3
SMRA Abu-Samra 86.91 295 P **P** **18 22 59.6 +1.1**
MOR8 Moi Rana 86.92 342 *e*P **P** **18 22 56.4 -1.3**
MOR8 lAmb lAmb 18 23 05.1
comp=Z,42nm,0.9s
P18A Preston Nutter 87.01 49 lAmb lAmb 18 23 07.3
comp=Z,27nm,0.9s
SRU San Rafael Swe 87.02 49 lAmb lAmb 18 23 06.9
comp=Z,39nm,0.8s
KONS Konsvik 87.05 343 *e*P **P** **18 22 59.9 +1.6**
RDMU Red Mountain 87.11 48 P **P** **18 22 58.3 -1.2**
DGMT Dagmar 87.19 39 P **P** **18 22 58.6 -0.8**
baz=297
DGMT Dagmar 87.19 39 P **P** **18 22 58.5 -0.9**
baz=297
STOK Stokkvaagen 87.20 343 *e*P **P** **18 22 59.7 +0.7**
MEF Metsahovi 87.50 335 *e*P **P** **18 23 00.4 -0.2**
VSU Vasula 87.57 333 *e*P **P** **18 23 00.2 -0.7**
WUAZ Wupatki 87.81 53 P **P** **18 23 02.0 -0.9**
WUAZ Wupatki 87.81 53 P **P** **18 23 03.2 +0.4**
baz=293,SNR=11
RAF Rauma 88.01 336 *e*P **P** **18 23 02.8 -0.2**
SOC Sochi 88.06 316 *e*P **P** **18 23 03.0 -0.6**
SOC *e* 18 26 26.6
SOC *e*PPP PPP 18 28 23.4
SOC *e*S **SKSac** **18 33 31.0 +0.1**
SOC *e*SS **SS** **18 39 34.3 +0.5**
SOC *e*SSS SSS 18 43 07.9
214A Organ Pipe Nat 88.07 57 lAmb lAmb 18 23 12.4
comp=Z,28nm,0.9s
214A Organ Pipe Nat 88.07 57 P **P** **18 23 03.7 -0.3**
baz=292,SNR=9.3
O20A White River Ci 88.22 48 lAmb lAmb 18 23 12.7
comp=Z,33nm,0.8s
O20A White River Ci 88.22 48 P **P** **18 23 04.0 -0.7**
baz=295,SNR=6.7
RWWY Rawlins 88.27 46 P **P** **18 23 04.4 -0.6**
RWWY lAmb lAmb 18 23 22.1
comp=Z,49nm,1.2s
K22A Casper 88.31 45 lAmb lAmb 18 23 14.4
comp=Z,34nm,0.9s
K22A Casper 88.31 45 P **P** **18 23 05.6 +0.5**
baz=296
K22A Casper 88.31 45 P **P** **18 23 04.1 -1.0**
baz=296,SNR=6.2
GURO Guroymak-BITLI 88.61 311 P **P** **18 23 07.0 +0.5**
GURO lAmb lAmb 18 23 20.6
comp=Z,23nm,0.9s
PV13 Radium Mtn., P 88.63 50 lAmb lAmb 18 23 14.7
comp=Z,52nm,1.1s
PV07 Paradox Valley 88.64 49 lAmb lAmb 18 23 14.9
comp=Z,35nm,1.2s
MTSE Matsula 88.65 334 *e*P **P** **18 23 06.0 0.0**
NSS Namsos 88.83 342 *e*P **P** **18 23 06.4 -0.4**
NSS lAmb lAmb 18 23 14.8
comp=Z,14nm,0.7s
ANN Anapa 88.98 318 *e*P **P** **18 23 06.3 -1.6**
ANN *e**PP **PcP** **18 23 09.4 0.0**
ANN *e*S **SKSac** **18 33 35.1 -1.2**
ANN pmax pmax
comp=Z,60nm,1.1s
W18A Petrified Fore 89.19 53 P **P** **18 23 08.8 -0.6**
baz=294
MVCO Mesa Verde 89.25 51 lAmb lAmb 18 23 27.7
comp=Z,58nm,1.3s
MVCO Mesa Verde 89.25 51 P **P** **18 23 09.1 -0.6**
baz=295,SNR=5.2
RSSD Black Hills 89.28 43 P **P** **18 23 08.2 -1.5**
RSSD lAmb lAmb 18 23 22.8
comp=Z,33nm,1.2s
RSSD Black Hills 89.28 43 P **P** **18 23 08.2 -1.5**
RSSD pmax pmax
comp=Z,33nm,1.2s
RSSD Black Hills 89.28 43 P **P** **18 23 09.2 -0.5**
baz=297
RSSD Black Hills 89.28 43 P **P** **18 23 08.9 -0.8**
baz=297
MNK Minsk 89.33 329 *e*P **P** **18 23 10.0 +0.7**
MNK Minsk 89.33 329 *i* P **P** **18 23 09.4 +0.1**
comp=E,5.0nm,1.1s
MNK *i* P **P** **18 23 09.4 +0.1**
comp=N,31nm,0.8s
MNK *i* P **P** **18 23 09.4 +0.1**
comp=Z,69nm,0.8s,baz=236
MNK *i* PP **PP** **18 26 39.7 0.0**
MNK *i* PPP PPP 18 28 36.1
MNK *i* S **SKSac** **18 33 38.9 +0.9**
MNK *i* SS **SS** **18 39 54.6 +3.1**
MNK *i* SSS SSS 18 43 29.9
MNK *i* LQ LQ 18 55 00.2
MNK *i* LR LR 19 00 35.0
MNK *i* LRM MLR 19 05 42.0
comp=E,75nm,19.2s
MNK *i* LRM MLR 19 06 10.1
comp=Z,551nm,19.2s
MNK *i* LRM MLR 19 06 17.4
comp=N,1μm,19.8s
N23A Red Feather La 89.47 46 P **P** **18 23 09.6 -1.1**
baz=296,SNR=7.8
SMCO Snowmass 89.51 48 lAmb lAmb 18 23 19.7
comp=Z,33nm,0.9s
TUC Tucson 89.52 56 P **P** **18 23 09.7 -1.2**
TUC lAmb lAmb 18 23 19.7
comp=Z,46nm,1.5s
TUC Tucson 89.52 56 P **P** **18 23 09.7 -1.2**
TUC pmax pmax
comp=Z,46nm,1.5s
TUC Tucson 89.52 56 P **P** **18 23 10.8 0.0**
baz=293
ISAL Salakas 89.53 331 *e*P **P** **18 23 10.7 +0.4**
NACGM Naroch 89.62 330⇓ *e*P **P** **18 23 11.4 +0.7**
IIGN Ignalina 89.62 331 *e*P **P** **18 23 11.1 +0.3**
MARD Mardin 90.03 310 lAmb lAmb 18 23 26.8
comp=Z,56nm,1.0s
ILULI Ilulissat 90.11 6 lAmb lAmb 18 23 14.4
comp=Z,30nm,0.8s
ILULI Ilulissat 90.11 6 *i* P **P** **18 23 12.6 -0.1**
MDND Maddock 90.18 38 P **P** **18 23 12.8 -0.7**
baz=301
ISCO Idaho Springs 90.18 47 P **P** **18 23 13.6 -0.5**
baz=296
ISCO Idaho Springs 90.18 47 P **P** **18 23 12.3 -1.9**
baz=296,SNR=6.8
CASY Casey 90.22 194 P **P** **18 23 13.0 0.0**
S22A 4UR Ranch, Cre 90.23 49 P **P** **18 23 12.3 -2.1**
baz=296,SNR=7.3
VSVD Vaisvydziai 90.28 332 *e*P **P** **18 23 14.1 +0.3**
UPP Uppsala 90.32 337 *e*P **P** **18 23 12.9 -0.9**
PABE Paberze 90.56 331 P **P** **18 23 13.9 -1.2**
PABE lAmb lAmb 18 23 15.8
comp=Z,41nm,0.8s
PABE Paberze 90.56 331 *e*P **P** **18 23 15.1 0.0**
AKASG Malin Array Be 90.78 326 P **P** **18 23 15.2 -0.9**
comp=Z,1.9nm,0.6s,baz=46,slow=5.5,SNR=14
AKASG PP **PP** **18 26 49.2 -2.1**
comp=Z,0.8nm,0.6s,baz=48,slow=8.8,SNR=5.0
AKASG LR LR 19 08 21.5
comp=Z,525nm,18.2s,baz=55,slow=38
comp=Z,1.9nm,0.6s
AKASG Malin Array Be 90.78 326 *i* P **P** **18 23 15.6 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 90.78 326 lAmb lAmb 18 23 25.2
comp=Z,56nm,1.7s
Q24A Divide 90.88 48 P **P** **18 23 17.1 -0.3**
baz=297
SIM Simferopol' 90.98 319 *e*P **P** **18 23 17.7 +0.4**
SIM pmax pmax
comp=Z,44nm,1.2s
ULM Lac du Bonnet 90.99 35 P **P** **18 23 17.0 -0.2**
comp=Z,8.9nm,0.8s,baz=292,slow=5.1,SNR=8.5
ULM LR LR 19 01 59.8
comp=Z,259nm,19.4s,baz=298,slow=34
comp=Z,8.9nm,0.8s
ULM Lac du Bonnet 90.99 35 lAmb lAmb 18 23 25.1
comp=Z,32nm,0.9s
ULM Lac du Bonnet 90.99 35 P **P** **18 23 17.0 -0.2**
ICESG Greenland Ices 91.04 2 *i* P **P** **18 23 17.3 -0.2**
PBUR Paburge 91.13 333 *e*P **P** **18 23 17.9 +0.2**
SDCO Great Sand Dun 91.17 49 P **P** **18 23 18.9 +0.1**
baz=296
SDCO Great Sand Dun 91.17 49 P **P** **18 23 18.1 -0.6**
baz=296,SNR=6.4
NC303 NORSAR Array S 91.49 340 lAmb lAmb 18 23 27.9
comp=Z,58nm,1.5s
HFS Hagfors 91.53 339 P **P** **18 23 18.8 -0.7**
comp=Z,9.0nm,0.5s,baz=83,slow=4.6,SNR=54
HFS PP **PP** **18 26 54.1 -2.8**
comp=Z,7.4nm,0.8s,baz=72,slow=9.5,SNR=6.0
HFS LR LR 19 08 47.5
comp=Z,286nm,19.8s,baz=44,slow=38
comp=Z,9.0nm,0.5s
NB2 NORSAR Subarra 91.68 340 P **P** **18 23 19.4 -0.9**
comp=Z,24nm,1.1s,baz=41,slow=4.6
NB2 NORSAR Subarra 91.68 340 P **P** **18 23 19.4 -0.9**
baz=41,slow=4.6
NOA NORSAR Array B 91.68 340 P **P** **18 23 19.6 -0.7**
comp=Z,3.8nm,0.8s,baz=42,slow=4.7,SNR=18
NOA PP **PP** **18 26 56.0 -2.2**
comp=Z,5.8nm,0.9s,baz=39,slow=7.6,SNR=9.3
NOA LR LR 19 09 24.1
comp=Z,507nm,21.2s,baz=35,slow=39
comp=Z,3.8nm,0.8s
ANMO Albuquerque 91.71 52 P **P** **18 23 20.9 -0.3**
comp=Z,1.7nm,0.9s,baz=208,slow=5.0,SNR=6.4
comp=Z,1.7nm,0.9s
ANMO Albuquerque 91.71 52 P **P** **18 23 20.8 -0.3**
ANMO Albuquerque 91.71 52 P **P** **18 23 20.8 -0.3**
ANMO pmax pmax
comp=Z,15nm,1.1s
ANMO Albuquerque 91.71 52 P **P** **18 23 21.4 +0.3**
baz=296
ANMO Albuquerque 91.71 52 P **P** **18 23 20.7 -0.4**
baz=296
121A Cookes Peak, D 91.74 55 lAmb lAmb 18 23 30.6
comp=Z,27nm,1.0s
121A Cookes Peak, D 91.74 55 P **P** **18 23 22.2 +0.9**
baz=295
121A Cookes Peak, D 91.74 55 P **P** **18 23 20.9 -0.4**
baz=295,SNR=6.6
Y22D IRIS PASSCAL I 91.74 53 P **P** **18 23 19.8 -1.5**
baz=296
Y22F Passcal Instru 91.74 53 P **P** **18 23 20.6 -0.6**
baz=296
Y22A Socorro 91.77 53 P **P** **18 23 20.7 -0.7**
baz=296
RAYN Ar Rayn 91.88 296 P **P** **18 23 21.0 -1.0**
RAYN Ar Rayn 91.88 296 P **P** **18 23 21.0 -1.0**
RAYN pmax pmax
comp=Z,16nm,0.9s
RAYN Ar Rayn 91.88 296 *i* P **P** **18 23 22.0 +0.1**
SNR=14
AGMN Agassiz Nation 92.07 36 lAmb lAmb 18 23 35.8
comp=Z,28nm,1.0s
AGMN Agassiz Nation 92.07 36 P **P** **18 23 22.3 0.0**
baz=303
AGMN Agassiz Nation 92.07 36 P **P** **18 23 22.2 0.0**
baz=303
AKN Aaknes 92.08 342 *e*P **P** **18 23 22.7 +0.6**
OGNE Ogallala 92.08 45 P **P** **18 23 22.1 -0.5**
baz=299
FRB Frobisher Bay 92.12 15 LR LR 19 08 11.6
comp=Z,166nm,19.6s,baz=338,slow=38

T25A Trinidad 92.22 49 IAmb IAmb 18 23 32.2
comp=Z,23nm,1.0s
T25A Trinidad 92.22 49 P **P 18 23 24.4 +0.9**
baz=297,SNR=6.0
SFJD Kangerlussuaq 92.30 7 P **P 18 23 22.9 0.0**
comp=Z,31nm,0.8s,baz=360,slow=3.8,SNR=12
SFJD LR LR 19 04 01.0
comp=Z,282nm,21.9s,baz=342,slow=35
comp=Z,31nm,0.8s
SFJD Kangerlussuaq 92.30 7 P **P 18 23 22.9 0.0**
SFJD IAmb IAmb 18 23 24.2
comp=Z,30nm,0.8s
SFJD Kangerlussuaq 92.30 7 *i* P **P 18 23 22.2 -0.7**
SUSD Miller 92.31 41 P **P 18 23 23.7 +0.2**
baz=301
KSCO Kaye Shedlock' 92.60 47 P **P 18 23 24.8 -0.3**
baz=298
HYA Hoyanger 93.12 342 *e*P **P 18 23 27.1 +0.3**
LPIG La Paz 93.15 63 LR LR 19 01 05.8
comp=Z,552nm,18.3s,baz=249,slow=33
F33A 5 Mile Ranch, 93.17 39 P **P 18 23 26.7 -0.7**
F33A 5 Mile Ranch, 93.17 39 P **P 18 23 27.4 0.0**
baz=303
BR131 Keskin Array S 93.88 315 P **P 18 23 30.3 -0.7**
BR131 IAmb IAmb 18 23 55.3
comp=Z,18nm,0.9s
BR131 Keskin Array S 93.88 315 P **P 18 23 30.3 -0.7**
BR131 pmax pmax
comp=Z,18nm,0.9s
BRTR Keskin Array B 93.88 315 P **P 18 23 30.9 -0.2**
comp=Z,4.0nm,0.8s,baz=82,slow=3.5,SNR=11
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 93.88 315 *i* P **P 18 23 33.4 +2.4**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
ASK Askoy 93.96 342 *e*P **P 18 23 31.5 +0.8**
LVV L'vov 94.00 327 *e*P **P 18 23 31.8 +0.6**
LVV *e* 18 27 17.5
LVV MLR MLR
comp=N,300nm,20.0s
LVV MLR MLR
comp=E,400nm,20.0s
LVV MLR MLR
comp=Z,300nm,20.0s
ECSD EROS Data Cent 94.12 40 IAmb IAmb 18 23 45.0
comp=Z,25nm,1.2s
ECSD EROS Data Cent 94.12 40 P **P 18 23 30.8 -1.0**
baz=303
ECSD EROS Data Cent 94.12 40 P **P 18 23 31.2 -0.7**
baz=303
DEL Delary 94.13 336 *e*P **P 18 23 30.6 -1.0**
CBKS Cedar Bluff 94.66 46 P **P 18 23 34.5 0.0**
baz=300
EYMN Ely 94.67 35 P **P 18 23 33.3 -1.0**
baz=307
BURAR Bucovina Array 94.70 325 ⇓P **P 18 23 35.0 +0.5**
F36A Milaca 94.76 37 P **P 18 23 32.5 -2.2**
F36A IAmb IAmb 18 23 42.3
comp=Z,17nm,0.8s
F36A Milaca 94.76 37 P **P 18 23 34.2 -0.6**
baz=305
VRI Vrincioaia 94.88 323 ⇓P **P 18 23 36.0 +0.7**
VRI Vrincioaia 94.88 323 P **P 18 23 36.0 +0.7**
PLOR Plostina 94.94 323 ⇑P **P 18 23 37.3 +1.7**
ASF Jabal al Asfar 95.17 307 P **P 18 23 36.0 -1.0**
comp=Z,2.7nm,0.8s,baz=77,slow=5.5,SNR=4.2
comp=Z,2.7nm,0.8s
AMTX Amarillo 95.23 50 P **P 18 23 37.9 +0.6**
baz=299
SPMN Marine on St. 95.54 38 P **P 18 23 37.0 -1.3**
baz=306
MLR Muntele Rosu 95.55 323 LR LR 19 09 23.8
comp=Z,249nm,19.9s,baz=56,slow=37
UZH Uzhgorod 95.63 327 *e*P **P 18 23 40.6 +2.0**
UZH *i* 18 23 52.8
TRPA Tarpa 95.82 326 ⇑P **P 18 23 39.6 +0.2**
CRVS Cervenica-Dubn 95.89 327 *e*P **P 18 23 40.0 +0.2**
MMAI Mount Meron Ar 95.89 308 P **P 18 23 40.5 +0.2**
comp=Z,3.6nm,0.8s,baz=59,slow=6.9,SNR=5.6
MMAI LR LR 19 10 11.6
comp=Z,124nm,18.1s,baz=296,slow=38
comp=Z,3.6nm,0.8s
VOIR 96.09 323 ⇓P **P 18 23 41.3 +0.4**
TXAR Lajitas Array 96.32 56 P **P 18 23 42.8 +0.5**
comp=Z,0.4nm,0.5s,baz=316,slow=5.2,SNR=4.3
TXAR PKKPbc **PKKPdf 18 40 28.8 +0.3**
comp=Z,1.5nm,0.7s,baz=128,slow=5.9,SNR=15
comp=Z,0.4nm,0.5s
DRGR 96.56 325 ⇓P **P 18 23 43.3 +0.2**
DRGR 96.56 325 P **P 18 23 43.2 +0.2**
OKC Ostrava-Krasne 96.92 329 AMS AMS 19 10 40.0
comp=Z,600nm,20.3s
G40A Rib Lake 97.00 37 IAmb IAmb 18 23 52.8
comp=Z,18nm,0.9s
G40A Rib Lake 97.00 37 P **P 18 23 44.6 -0.3**
baz=308
KSP Ksiaz 97.10 331 *e*P **P 18 23 45.1 -0.1**
MORC Moravsky Berou 97.25 330 *e*P **P 18 23 45.9 -0.1**
MORC *e*PP **PP 18 27 42.8 +1.0**
OSTC Ostas 97.33 331 AMS AMS 19 13 50.0
comp=Z,400nm,17.5s
WMOK Wichita Mounta 97.38 49 P **P 18 23 45.6 -1.3**
WMOK IAmb IAmb 18 23 54.9
comp=Z,10nm,0.9s
WMOK Wichita Mounta 97.38 49 P **P 18 23 45.6 -1.3**
WMOK pmax pmax
comp=Z,10.0nm,0.9s
WMOK Wichita Mounta 97.38 49 P **P 18 23 46.5 -0.4**
baz=300
WMOK Wichita Mounta 97.38 49 P **P 18 23 46.9 0.0**
baz=300
CHVC Chvalec 97.39 331 *e*P **P 18 23 46.3 -0.3**
MAUC Maruska 97.39 329 AMS AMS 19 10 50.0
comp=Z,600nm,17.9s
KRLC Kraliky 97.40 330 *e*P **P 18 23 46.5 -0.2**
KRLC *e* 18 27 44.3
KRLC MLR MLR
comp=Z,400nm,15.5s
KRLC Kraliky 97.40 330 *e*P **P 18 23 46.5 -0.2**
KRLC *e*PP **PP 18 27 44.3 +1.3**
KRLC AMS AMS 19 17 20.0
comp=Z,400nm,15.5s
DPC Dobruska-Polom 97.43 331 *e*P Pdif 18 23 46.9 0.0
DPC *e* 18 27 44.1
DPC MLR MLR
comp=Z,400nm,17.4s
DPC Dobruska-Polom 97.43 331 *e*P Pdif 18 23 46.9 0.0
DPC *e*PP **PP 18 27 44.1 +0.9**
DPC AMS AMS 19 13 00.0
comp=Z,400nm,17.4s
UPC Upice 97.46 331 AMS AMS 19 13 50.0
comp=Z,400nm,18.9s
VYHS Vyhne 97.48 328 *e*P Pdif 18 23 47.1 0.0
VYHS *e* 18 27 42.1
VNDA Vanda 97.73 177 P Pdif 18 23 47.9 +0.5
comp=Z,2.6nm,0.8s,baz=314,slow=5.5,SNR=13
VNDA LR LR 19 07 22.5
comp=Z,107nm,18.3s,baz=341,slow=35
comp=Z,2.6nm,0.8s
EIL Elat 97.81 305 P Pdif 18 23 50.9 +1.9
comp=Z,2.2nm,0.7s,baz=24,slow=10.0,SNR=1.7
EIL LR LR 19 13 17.3
comp=Z,144nm,18.4s,baz=59,slow=39
comp=Z,2.2nm,0.7s
VRAC Vranov 98.02 330 LR LR 19 11 15.9
comp=Z,627nm,20.4s,baz=50,slow=37
VRAC Vranov 98.02 330 *e*P Pdif 18 23 49.7 +0.2
VRAC *e*PP **PP 18 27 48.8 +1.1**
BRG Berggiesshubel 98.13 332 *e*P **P 18 23 49.8 -0.2**
BRG Amp 18 23 55.8
comp=Z,3.8nm,0.9s
BRG PP **PP 18 27 50.1 +1.7**
BRG Amp 18 27 51.2
comp=Z,11nm,1.0s
BRG Berggiesshubel 98.13 332 SS SS 18 41 57.0 -0.2
BRG Amp 19 13 22.0
comp=E,0.3nm,22.8s
BRG Amp 19 13 24.0
comp=Z,0.5nm,19.9s
BRG Amp 19 13 27.0
comp=N,0.2nm,17.3s
BRG Berggiesshubel 98.13 332 *e*P **P 18 23 49.7 -0.2**
BRG 18 27 50.1
BRG SS SS 18 41 57.0 -0.2
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG pmax pmax
comp=Z,11nm,1.0s
BRG pmax pmax
comp=E,327nm,22.8s
BRG MLR MLR
comp=Z,477nm,19.9s
BRG MLR MLR
comp=N,198nm,17.3s
CLL Collm 98.23 333 *i* P **P 18 23 49.3 -1.0**
comp=Z,4.0nm,0.8s
CLL *e*x x 18 23 57.0
comp=Z,23nm,1.7s
CLL *i* PP **PP 18 27 50.1 +0.9**
comp=Z,10.0nm,1.0s
CLL *e*SKSac **SKSac 18 34 29.0 +2.2**
CLL *e*S **ScS 18 35 19.0 +2.3**
CLL *e*PS **PS 18 36 42.0 -1.0**
CLL *e*SS **SS 18 41 57.0 -1.5**
CLL *e*SSSS 18 49 12.0
CLL LmH 19 06 00.0
comp=N,500nm,21.3s
CLL LmH 19 06 00.0
comp=E,300nm,22.0s
CLL LmV 19 14 00.0
comp=Z,400nm,19.1s
KRUC Moravsky 98.28 330 *e*P **P 18 23 50.3 -0.3**
KRUC *e*PP **PP 18 27 51.3 +1.6**
MODS Modra-Piesok 98.33 329 *e*P Pdif 18 23 55.4 +4.5
MODS *e* 18 27 51.0
MDVR Moldovita 98.36 324 ⇑P **P 18 23 50.8 -0.3**
JFWS Jewell Farm 98.39 38 P **P 18 23 48.9 -2.4**
baz=307
GOPC GO Pecny, Ondr 98.44 331 AMS AMS 19 13 10.0
comp=Z,400nm,19.6s
PRU Pruhonice 98.50 331 AMS AMS 19 13 40.0
comp=Z,500nm,16.9s
TREC Trest 98.55 330 AMS AMS 19 11 40.0
comp=Z,500nm,18.9s
MORH Mrgy, Hungar 99.09 326 ⇓P **Pdif 18 23 54.3 0.0**
RONA Rosalia, Austr 99.27 329 *e*P **PP 18 27 56.0 -1.4**
comp=Z,12nm,1.6s
CONA Conrad Observa 99.32 329 *e*P **PP 18 27 56.4 -1.4**
comp=Z,16nm,1.3s
CKRC Cesky Krumlov 99.43 330 *e*P **Pdif 18 23 54.8 -1.0**
CKRC *e*PP **PP 18 27 59.4 +0.9**
CKRC AMS AMS 19 13 00.0
comp=Z,500nm,18.5s
KHC Kasperske Hory 99.55 331 *e*P **Pdif 18 23 55.4 -0.9**
KHC *e* 18 24 03.0
KHC *e* 18 28 00.1
KHC MLR MLR
comp=Z,500nm,17.3s
KHC Kasperske Hory 99.55 331 *e*P **Pdif 18 23 55.4 -0.9**
KHC *e*x x 18 24 03.0
KHC *e*PP **PP 18 28 00.1 +0.7**
KHC AMS AMS 19 15 20.0
comp=Z,500nm,17.3s
GERES GERESS Array B 99.70 331 P **Pdif 18 23 56.3 -0.8**
comp=Z,0.5nm,0.7s,baz=46,slow=3.9,SNR=6.4
GERES PP **PP 18 28 01.3 +0.7**
comp=Z,5.2nm,0.9s,baz=44,slow=5.9,SNR=14
comp=Z,0.5nm,0.7s
MOA Molln 100.14 330 *e*P **PP 18 28 03.8 -0.1**
comp=Z,11nm,1.4s
SCHQ Schefferville 100.14 19 P **Pdif 18 23 59.1 +0.3**
comp=Z,4.8nm,0.7s,baz=329,slow=4.6,SNR=4.6
SOKA Soboth 100.60 328 *e*P **PP 18 28 06.3 -1.1**
comp=Z,13nm,1.3s
EKA Eskdalemuir Ar 100.70 343 P **Pdif 18 24 00.6 -0.6**
comp=Z,0.8nm,0.7s,baz=4.0,slow=5.1,SNR=1.8
OBKA Obir 100.95 329 *e*P **PP 18 28 10.8 +0.6**
comp=Z,27nm,1.1s
KBA Koelnbreinsper 101.13 330 *e*P **PP 18 28 10.0 -1.6**
comp=Z,40nm,1.4s
MYKA Terra Mystica 101.31 329 *e*P **PP 18 28 11.2 -1.6**
comp=Z,26nm,1.3s
BTNL Ternell 101.60 336 *d*PP **PP 18 28 14.1 -0.7**
MEM Membach 101.63 336 *d*PP **PP 18 28 14.3 -0.7**
ABTA Abfaltersbach 101.77 330 *e*P **PP 18 28 13.1 -3.2**
comp=Z,11nm,1.3s
WATA Walderalm 101.77 331 *e*P **PP 18 28 16.6 +0.3**
comp=Z,26nm,1.3s
WTTA Wattenberg 101.80 331 *e*P **PP 18 28 16.0 -0.6**
comp=Z,24nm,1.4s
MOTA Moosalm 101.98 331 *e*P **PP 18 28 17.9 -0.1**
comp=Z,25nm,1.3s
SQTA Sankt Quirin 102.03 331 *e*P **PP 18 28 15.4 -2.8**
comp=Z,20nm,1.2s
RCHB Rochefort 102.29 336 *d*PP **PP 18 28 19.4 -0.5**
WLF Walferdange 102.32 335 *d*PP **PP 18 28 20.6 +0.4**
BMRD Maredsous 102.35 336 *d*PP **PP 18 28 19.4 -1.0**
FETA Feichten 102.40 331 *e*P **PP 18 28 21.3 +0.3**
comp=Z,24nm,1.4s
QSPA South Pole Qui 109.81 180 PKiKP **PKiKP 18 28 41.9 -1.7**
comp=Z,2.0nm,0.8s,baz=53,slow=2.2,SNR=3.6
ESDC Sonseca Array 114.62 335 PKP PKPdf 18 28 53.8 +0.1
comp=Z,0.4nm,0.6s,baz=5.3,slow=3.2,SNR=4.4
ESDC PP PP 18 29 38.3 -12
comp=Z,2.3nm,0.9s,baz=25,slow=6.4,SNR=5.2
ESDC PKKPab **PKKPab 18 39 39.1 -1.2**
comp=Z,1.2nm,0.8s,baz=216,slow=4.0,SNR=11
TROLL Troll, Antarti 124.07 193 PKPdf **PKiKP 18 29 11.3 +0.1**
SNAA Sanae 125.39 191 PKPdf **PKPdf 18 29 13.4 +0.1**
SNAA Sanae 125.39 191 PP **PP 18 31 00.6 -3.2**
SNAA Sanae 125.39 191 Pdiff **Pdif 18 25 53.5 +2.9**
SNAA Sanae 125.39 191 PKP **PKPdf 18 29 13.5 +0.1**
comp=Z,7.6nm,0.6s,baz=205,slow=2.6,SNR=46
SNAA PP **PP 18 31 00.3 -3.5**
comp=Z,10nm,1.1s,baz=161,slow=7.4,SNR=7.3
SNAA Sanae 125.39 191 PKPdf **PKPdf 18 29 11.0 -2.4**
LBTB Lobatse 125.72 253 PKP **PKiKP 18 29 16.2 +0.4**
comp=Z,27nm,0.9s,baz=139,slow=4.3,SNR=22
BOSA Boshof 126.40 249 PKP **PKPdf 18 29 16.1 -0.5**
comp=Z,4.3nm,0.8s,baz=308,slow=5.1,SNR=6.3
VNA2 Neumayer--Watz 126.82 190 PKPdf **PKiKP 18 29 16.6 +0.1**
baz=136,slow=1.1
VNA3 Neumayer Olymp 126.91 189 PKPdf **PKPdf 18 29 16.4 +0.3**
VNA1 Neumayer--Stat 127.20 190 PKPdf **PKiKP 18 29 17.6 +0.4**
TOA0 Torodi Ar. Sit 132.35 311 **PKPdf 18 29 26.3 -1.9**
TORD Torodi Ar. Bea 132.35 311 PKhKP PKPpre 18 29 17.2
comp=Z,0.7nm,0.9s,baz=18,slow=2.0,SNR=4.2
TORD PKP **PKPdf 18 29 27.6 -0.5**
comp=Z,3.6nm,0.7s,baz=33,slow=2.0,SNR=14
TORD PP **PP 18 31 52.4 +2.1**
comp=Z,2.9nm,0.8s,baz=31,slow=5.6,SNR=3.8
TORD SKPbc **SKPbc 18 32 51.8 -1.7**
comp=Z,3.5nm,0.7s,baz=46,slow=3.4,SNR=5.2
BAUV El Baul 135.31 53 PKPdf **PKPdf 18 29 31.4 -2.4**
DBIC Dimbokro 141.46 311 PKhKP PKPpre 18 29 38.9
comp=Z,5.6nm,0.7s,baz=76,slow=5.4,SNR=8.7
DBIC Dimbokro 141.46 311 **PKPdf 18 29 41.0 -4.0**
DBIC Dimbokro 141.46 311 PKIKP **PKPdf 18 29 41.0 -4.0**
KIC Kosan Boka 141.59 310⇑ *e*P **PKPdf 18 29 39.8 -5.5**
comp=Z,4.3nm,0.5s
TIC Toumodi 141.60 311⇑ *i*P **PKPdf 18 29 41.4 -3.9**
comp=Z,4.3nm,0.2s
LIC Lamto 141.89 310⇑ *i*P **PKPdf 18 29 41.6 -4.2**
comp=Z,19nm,0.5s
PLCA Paso Flores 142.17 131 PKP **PKPdf 18 29 43.7 -2.0**
comp=Z,6.1nm,0.9s,baz=284,slow=4.5,SNR=3.8
MT09 Talagante 143.90 120 PKPbc 18 29 47.1 +0.4
MT05 Renca 144.18 120 PKPdf PKPbc 18 29 48.1 +0.6
VA03 San Esteban 144.47 119 PKPbc 18 29 48.5 0.0
AC06 Mina Casimiro 145.37 109 **PKPab 18 29 52.2 +0.6**
LPAZ La Paz 146.72 89 PKPbc **PKPbc 18 29 56.0 -0.6**
comp=Z,23nm,0.8s,baz=295,slow=2.3,SNR=38
LPAZ La Paz 146.72 89 PKP2 **PKPbc 18 29 56.0 -0.6**
TRQA Tornquist 149.31 132 **PKPbc 18 30 02.0 -0.2**
TRQA Tornquist 149.31 132 PKP2 **PKPbc 18 30 02.0 -0.2**
MALB Monte Alegre 152.69 51 *e*P **PKPbc 18 30 07.3 -3.4**
VILB Vilhena 153.28 79 *e*P PKPdf 18 29 49.7 -15
BBSD Serra de San D 153.97 88 *e*P **PKPdf 18 30 05.3 -0.1**
PTLB Pontes e Lacer 154.98 84 *e*P **PKPdf 18 30 07.4 +0.6**
NPGB Novo Progresso 155.02 62 *e*P **PKPdf 18 30 08.1 +1.1**
PDRB Porto dos Gac 155.98 73 *e*P **PKPdf 18 30 08.8 +0.5**
CLDB Colider 156.51 71 *e*P **PKPdf 18 30 09.8 +0.9**
CPUP Villa Florida 157.04 110 PKP **PKPdf 18 30 09.2 -0.1**
comp=Z,2.1nm,0.6s,baz=14,slow=16,SNR=2.9
CPUP PKPab **PKPab 18 30 37.6 -2.0**
comp=Z,4.4nm,0.9s,baz=311,slow=6.6,SNR=3.8
ANTJ Antonio Joao (158.70 99 *e*P **PKPab 18 30 54.8 +7.7**
BDFB Brasilia 165.33 75 PKP **PKPdf 18 30 19.4 +0.9**
comp=Z,2.7nm,0.6s,baz=73,slow=5.1,SNR=4.6

IDC ***08*** *18:10:54.6±1.9, 1°.74S×141°.76E, h0km, mb4.1/2, mbtmp4.1/3, ML4.1/1, Error ellipse: s-maj=133.4km s-min=31.0km az=111.0*
NEIC ***08*** *18:11:00.4±1.8, 2°.2S±0°.2×141°.5E±0°.1, h10km±2km, mb4.1/10, Error ellipse: s-maj=28.3km s-min=20.6km az=23.0*
ISC 08 18:11:00.8±3.3, 2°.2S±0°.3×141°.4E±0°.2, h10km, n16, σ0s97/14, mb4.1/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**9.15**	**265**	Pn	**Pn**	**18 13 13.7**	**+0.7**
MTN	**Manton Dam**	**14.67**	**223**	Pn	**Pn**	**18 14 28.3**	**-0.3**
GUMO	**Guam**	**16.05**	**12**	Pn	Pn	18 14 34.8	-12
KNRA	**Kununurra**	**18.29**	**222**	P	**Pn**	**18 15 14.5**	**-0.4**
KNRA				IAmb	IAmb	18 15 25.3	
	comp=Z,28nm,1.3s						
SOEI	**Soe**	**18.59**	**245**	P	**P**	**18 15 19.1**	**+0.6**
WB0	**Warramunga Arr**	**18.77**	**201**	P	**P**	**18 15 19.7**	**-0.5**
WR0	**Warramunga Arr**	**18.89**	**200**	P	**P**	**18 15 21.8**	**+0.2**
WRAB	**Tennant Creek**	**18.93**	**201**	P	**P**	**18 15 20.9**	**-1.2**
WRAB				IAmb	IAmb	18 15 32.0	
	comp=Z,18nm,1.4s						
WB2	**Warramunga Arr**	**18.94**	**201**	P	**P**	**18 15 21.9**	**-0.3**
WB2				IAmb	IAmb	18 15 29.3	
	comp=Z,8.6nm,0.8s						
WRA	**Warramunga Arr**	**18.95**	**201**	P	**Pn**	**18 15 23.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=24,slow=12,SNR=33						
	comp=Z,2.1nm,0.5s						
TOLI2	**Tolitoli**	**20.85**	**279**	P	**P**	**18 15 42.3**	**-0.7**
TOLI2				IAmb	IAmb	18 15 46.3	
	comp=Z,6.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.10**	**223**	P	**P**	**18 15 54.4**	**-2.1**
FITZ				IAmb	IAmb	18 16 10.3	
	comp=Z,9.2nm,1.2s						
ASAR	**Alice Sprngs**	**22.55**	**198**	P	**P**	**18 16 02.5**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=29,slow=11,SNR=51						
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**22.55**	**198**	P	**P**	**18 16 02.3**	**+1.0**
TAU	**Tasmania Unive**	**40.90**	**173**	P	**P**	**18 18 43.1**	**-0.1**
ILAR	**Eielson Array**	**84.26**	**24**	P	P	18 23 25.0	-7.5
	comp=Z,1.5nm,0.8s,baz=261,slow=5.4,SNR=1.7						
	comp=Z,1.5nm,0.8s						

PRU ***08*** *18:11:09.0±0.0, 42°.61N×13°.54E, h0km, M4.2*
NEIC ***08*** *18:11:09.6, 42°.74N×13°.19E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-1.36; Mθθ0.33; Mφφ1.03; Mrθ-0.18; Mθφ-0.30; Mφr0.36; Fault plane solution: M0 1.33000×10^15 NP1:φs157.73000°, δ53.86000°, λ-91.95000°. NP2:φs341.04000°, δ36.19000°, λ-87.33000°. Principal axes: T 1.2025, Plg9.0000°, Azm249.0000°; N 0.2187, Plg2.0000°, Azm159.0000°; P -1.4213, Plg81.0000°, Azm59.0000°;*
ROM ***08*** *18:11:09.7±0.0, 42°.738N±0°.002×13°.185E±0°.002, h10km, ML3.9/132, Mw3.9 Error ellipse: s-maj=0.2km s-min=0.1km az=62.0, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-8.69; Mθθ1.18; Mφφ7.50; Mrθ-0.86; Mθφ-3.24; Mφr1.64; Fault plane solution: M0 8.97057×10^14 NP1:φs338.00000°, δ39.00000°, λ-88.00000°. NP2:φs156.00000°, δ51.00000°, λ-91.00000°.*
MOS ***08*** *18:11:09.8±0.8, 42°.85N×13°.11E, h10km, mb4.4/4 Error ellipse: s-maj=8.3km s-min=4.8km az=82.2*
IDC ***08*** *18:11:10.6±1.0, 42°.89N×12°.96E, h0km, mb4.0/9, mbtmp3.9/18, ML3.4/9, MS3.2/20, Error ellipse: s-maj=16.1km s-min=11.3km az=76.0*
LDG ***08*** *18:11:10.1±0.1, 42°.74N×13°.15E, h11km, Ml3.6/30, Error ellipse: s-maj=1.7km s-min=1.2km az=44.0*
PDG ***08*** *18:11:10.3±0.6, 42°.74N×13°.19E, h9km, ML4.0/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
STR ***08*** *18:11:10.7±1.8, 43°N±11°×1°3E±1°2, h10km, MLv4.0/31, Error ellipse: s-maj=0.0km s-min=0.0km az=131.2, preliminary*
NEIC ***08*** *18:11:10.5±1.7, 42°.72N±0°.03×13°.11E±0°.06, h7km±5km, mb4.2/7, Mwr4.0/31, ML3.9(ROM), Error ellipse: s-maj=6.0km s-min=4.5km az=101.0*
ISC 08 18:11:10.6±0.7, 42°.73N±0°.01×13°.15E±0°.01, h10km±4km, n486, σ2s11/569, mb4.0/13, MS3.2/8, 56C-20D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.06**	**115**	⇓P	**Pg**	**18 11 11.8**	**-1.0**
T1202				S	**Sg**	**18 11 13.2**	**-1.2**
T1201	**Domo (RI)**	**0.10**	**134**	⇑P	**Pg**	**18 11 12.8**	**-0.4**
T1201				S	**Sg**	**18 11 15.1**	**-0.1**
NRCA	**Norcia**	**0.11**	**345**		**Pg**	**18 11 12.0**	**-1.4**
NRCA				Sg	**Sg**	**18 11 14.5**	**-0.9**
NRCA	**Norcia**	**0.11**	**345**	⇑P	**Pg**	**18 11 12.6**	**-0.7**
NRCA				S	**Sg**	**18 11 14.8**	**-0.5**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1244	**Arquata del Tr**	**0.11**	**75**	⇑P	**Pg**	**18 11 12.5**	**-0.9**
T1244				S	**Sg**	**18 11 14.3**	**-1.1**
T1245	**Castelsantange**	**0.13**	**12**	⇑P	**Pg**	**18 11 12.8**	**-0.9**
T1245				S	**Sg**	**18 11 15.4**	**-0.6**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1204	**Amatrice, Fraz**	**0.13**	**113**	⇑P	**Pg**	**18 11 13.1**	**-0.7**
T1204				S	**Sg**	**18 11 15.1**	**-0.9**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
LNSS	**Leonessa**	**0.15**	**213**	⇑P	**Pg**	**18 11 14.1**	**+0.1**
LNSS				S	**Sg**	**18 11 17.5**	**+1.2**
LNSS				AML	AML		
LNSS				AML	AML		
T1217	**Poggiodomo (PG**	**0.16**	**264**	⇑P	**Pg**	**18 11 14.2**	**+0.1**
T1217				S	**Sg**	**18 11 17.8**	**+1.1**
T1217				AML	AML		
	comp=N,66050μm,0.9s						
T1217				AML	AML		
	comp=N,65750μm,0.3s						
T1217				AML	AML		
	comp=E,55450μm,0.9s						
T1217				AML	AML		
	comp=N,66100μm,0.9s						
T1217				AML	AML		
	comp=E,54600μm,0.9s						
T1217				AML	AML		
	comp=N,65700μm,0.3s						
T1217				AML	AML		
	comp=E,54650μm,0.9s						
T1217				AML	AML		
	comp=N,66050μm,0.9s						
T1217				AML	AML		
	comp=N,65700μm,0.3s						
SMA1	**SAN MARTINO**	**0.17**	**126**	⇑P	**Pg**	**18 11 13.7**	**-0.6**
SMA1				S	**Sg**	**18 11 16.6**	**-0.2**
SMA1				AML	AML		
SMA1				AML	AML		
MC2	**Monte Cornacci**	**0.19**	**9**	⇑P	**Pg**	**18 11 13.9**	**-0.7**
MC2				S	**Sg**	**18 11 17.8**	**+0.3**
T1216	**Preci, Frazion**	**0.19**	**329**	⇑P	**Pg**	**18 11 14.1**	**-0.5**
T1216				S	**Sg**	**18 11 17.9**	**+0.5**
T1216				AML	AML		
T1216				AML	AML		
	comp=E,87150μm,0.7s						
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=E,87150μm,0.7s						
MMO1	**Montemonaco**	**0.21**	**37**	⇑P	**Pg**	**18 11 14.1**	**-1.0**
MMO1				S	**Sg**	**18 11 17.3**	**-0.8**
T1215	**Vallo di Nera,**	**0.22**	**289**	⇑P	**Pg**	**18 11 15.1**	**0.0**
T1215				S	**Sg**	**18 11 19.5**	**+1.2**
T1215				AML	AML		

comp=E,70550µm,1.5s
T1215 AML AML
comp=N,47750µm,1.2s
T1215 AML AML
comp=E,69400µm,1.5s
T1215 AML AML
comp=N,49050µm,0.1s
T1215 AML AML
comp=N,49050µm,0.1s
T1215 AML AML
comp=E,69450µm,1.5s
T1215 AML AML
comp=N,47800µm,1.2s
T1243 Rocca Santa Ma 0.22 98 P Pg 18 11 14.2 -0.9
T1243 S Sg 18 11 17.6 -0.7
RM33 Pellescritta (0.22 168 ⇑P Pg 18 11 15.0 -0.2
RM33 S Sg 18 11 19.0 +0.6
RM33 AML AML
comp=N,52950µm,1.6s
RM33 AML AML
comp=N,53400µm,1.6s
RM33 AML AML
comp=E,61700µm,1.6s
RM33 AML AML
comp=E,60250µm,1.6s
RM33 AML AML
comp=N,52900µm,1.6s
RM33 AML AML
comp=E,61750µm,1.6s
RM33 AML AML
comp=N,53450µm,1.6s
RM33 AML AML
comp=E,60300µm,1.6s
T1241 Roccafluvione, 0.24 58 ⇑P Pg 18 11 14.6 -0.9
T1241 S Sg 18 11 18.4 -0.5
T1241 AML AML
T1241 AML AML
T1241 AML AML
T1241 AML AML
T1241 AML AML
FEMA Monte Fema 0.24 342 P Pg 18 11 15.1 -0.5
FEMA S Sg 18 11 19.5 +0.4
FEMA AML AML
comp=E,80800µm,0.5s
FEMA AML AML
comp=N,57250µm,1.4s
CAMP Campotosto 0.27 135 Pg 18 11 15.4 -0.6
CAMP Campotosto 0.27 135 ⇑P Pg 18 11 15.5 -0.6
CAMP S Sg 18 11 19.9 +0.1
CAMP AML AML
comp=E,25850µm,0.8s
CAMP AML AML
comp=N,27550µm,1.5s
AM05 Amandola Campo 0.29 31 ⇑P Pg 18 11 15.6 -0.8
AM05 S Sg 18 11 20.6 +0.3
AM05 AML AML
comp=E,29500µm,1.0s
AM05 AML AML
comp=N,20100µm,1.0s
AM05 AML AML
comp=E,92000µm,0.4s
AM05 AML AML
comp=N,3405µm,0.3s
AM05 AML AML
comp=E,29450µm,1.0s
AM05 AML AML
comp=N,3410µm,0.3s
T1246 Crognaleto (TE 0.29 120 ⇑P Pg 18 11 15.7 -0.8
T1246 S Sg 18 11 20.2 -0.2
T1247 Pizzolo (AQ) 0.31 159 P Pb 18 11 17.6 -0.6
T1247 S Sb 18 11 22.9 -0.4
T1247 AML AML
comp=E,40550µm,1.3s
T1247 AML AML
comp=N,33750µm,1.5s
FDMO Fiordimonte 0.31 351 Pg 18 11 15.9 -0.9
FDMO Sg Sg 18 11 20.9 -0.1
FDMO Fiordimonte 0.31 351 ⇑P Pg 18 11 16.1 -0.7
FDMO S Sg 18 11 21.8 +0.8
FDMO AML AML
comp=E,39250µm,0.7s
FDMO AML AML
comp=N,39150µm,0.9s
ARRO Arrone 0.32 242 ⇑P Pg 18 11 17.1 +0.1
CESI CESI - Serrava 0.33 327 ⇑P Pg 18 11 16.8 -0.4
CESI S Sg 18 11 22.6 +1.0
CESI AML AML
comp=N,93650µm,1.3s
CESI AML AML
comp=E,62950µm,0.6s
TERO Teramo 0.35 107 ⇑P Pg 18 11 16.5 -1.0
TERO S Sg 18 11 21.7 -0.5
TERO AML AML
comp=N,74150µm,0.4s
TERO AML AML
comp=E,48650µm,1.0s
TERO AML AML
comp=N,76350µm,0.4s
TERO AML AML
comp=N,74200µm,0.4s
TERO AML AML
comp=E,47050µm,1.0s
GUMA Gualdo di Mace 0.36 22 ⇑P Pg 18 11 17.2 -0.6
GUMA S Sg 18 11 23.2 +0.7
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
CSP1 Cessapalombo 0.36 6 ⇑P Pg 18 11 17.0 -0.8
CSP1 S Sg 18 11 23.2 +0.5
CSP1 AML AML
comp=E,60850µm,1.2s
CSP1 AML AML
CSP1 AML AML
comp=E,60950µm,1.2s
GIGS Gran Sasso 0.41 132 P Pg 18 11 17.8 -1.0
GIGS S Sg 18 11 24.1 -0.1
GIGS AML AML
comp=E,6555µm,1.0s
GIGS AML AML
comp=N,5995µm,0.9s
AQU L'Aquila 0.42 154 ⇓P Pg 18 11 18.2 -0.5
AQU AML AML
comp=E,21100µm,1.4s
AQU AML AML
comp=N,20650µm,1.1s
AQU AML AML
comp=N,20600µm,1.1s
AQU AML AML
comp=E,20400µm,1.6s
CESX Cesi 0.44 254 Pg 18 11 18.8 -0.2
CESX Sg Sg 18 11 23.2 -1.7
CESX Cesi 0.44 254 ⇑P Pg 18 11 18.9 -0.2
CESX AML AML
comp=E,23650µm,0.7s
CESX AML AML
comp=N,17600µm,0.3s
OFFI Offida 0.44 62 ⇑P Pg 18 11 19.1 -0.2
OFFI AML AML
comp=N,77550µm,0.5s
OFFI AML AML
comp=E,56600µm,0.5s
SEF1 Sefro 0.44 340 P Pg 18 11 18.7 -0.6
SEF1 S Sb 18 11 26.2 -1.1
SEF1 AML AML
comp=N,40650µm,0.2s
SEF1 AML AML
comp=E,44250µm,1.2s
SEF1 AML AML
comp=N,40600µm,0.2s
FIAM Fiamignano 0.46 183 ⇑P Pg 18 11 19.1 -0.5
FIAM S Sg 18 11 26.8 +1.1
FIAM AML AML
comp=N,12950µm,0.4s
FIAM AML AML
comp=E,13800µm,0.8s
MDAR Monte D'Aria 0.46 359 P Pg 18 11 18.8 -0.9
PIO1 Pioraco 0.47 345 P Pg 18 11 19.2 -0.4
PIO1 AML AML
comp=E,13400µm,0.6s
PIO1 AML AML
comp=N,26150µm,1.0s
PIO1 AML AML
comp=E,13350µm,0.6s
MNTP Montappone 0.47 30 P Pg 18 11 19.4 -0.4
MNTP AML AML
comp=E,71750µm,0.3s
MNTP AML AML
comp=N,57950µm,1.3s
MNTP AML AML
comp=E,71800µm,0.3s
ASSB Assisi San Ben 0.48 311 P Pg 18 11 19.5 -0.5
FIU1 Fiuminata 0.49 341 P Pg 18 11 19.6 -0.4
SSM1 San Severino M 0.50 2 P Pg 18 11 19.7 -0.6
GAG1 Gagliole 0.51 353 P Pg 18 11 20.2 -0.4
GAG1 AML AML
comp=N,44200µm,1.5s
GAG1 AML AML
comp=N,44250µm,1.5s
GAG1 AML AML
comp=E,40950µm,1.0s
MTL1 Matelica 0.54 349 P Pg 18 11 20.9 -0.1
SNTG Esanatoglia 0.55 344 ⇑P Pg 18 11 20.3 -0.9
SNTG AML AML
comp=N,9170µm,0.8s
SNTG AML AML
comp=E,9835µm,0.6s
SNTG AML AML
comp=E,10160µm,0.6s
SNTG AML AML
comp=N,9930µm,0.8s
SNTG AML AML
comp=N,9175µm,0.8s
FAGN Fagnano 0.56 145 P Pg 18 11 20.6 -0.9
FAGN AML AML
comp=E,32200µm,0.4s
FAGN AML AML
comp=N,32150µm,0.4s
TRTR Tortoreto Alta 0.57 82 ⇑P Pg 18 11 21.6 +0.1
TRTR AML AML
comp=E,42850µm,0.9s
TRTR AML AML
comp=N,46850µm,0.9s
ATCC AVT- Casa Cast 0.59 321 ⇑P Pg 18 11 21.4 -0.6
ATCC AML AML
comp=E,23100µm,0.3s
ATCC AML AML
comp=N,23000µm,0.6s
ATCC AML AML
comp=E,23150µm,0.3s
ATCC AML AML
comp=N,22950µm,0.6s
TRE1 Treia 0.59 11 P Pg 18 11 21.8 -0.3
EL6 Elcito 0.60 357 ⇑P Pg 18 11 21.2 -1.0
EL6 AML AML
comp=E,21700µm,1.0s
EL6 AML AML
comp=E,21750µm,1.0s
EL6 AML AML
comp=N,18200µm,1.0s
VCEL Villa Celiera 0.61 123 P Pg 18 11 21.6 -0.7
VCEL AML AML
comp=E,26700µm,0.4s
VCEL AML AML
comp=N,33850µm,1.5s
FOSV Fossato di Vic 0.63 333 ⇑P Pg 18 11 22.0 -0.9
FOSV AML AML
comp=E,11025µm,0.8s
FOSV AML AML
comp=E,11005µm,0.8s
FOSV AML AML
comp=N,13450µm,0.5s
CADA Capodarco di F 0.65 44 P Pb 18 11 23.4 -0.5
CADA AML AML
comp=N,76600µm,0.9s
CADA AML AML
comp=E,52300µm,1.1s
CING Cingoli 0.65 3 ⇑P Pg 18 11 22.0 -1.1
CING AML AML
comp=N,10235µm,0.5s
CING AML AML
comp=E,16250µm,0.6s
SRES S.Oreste - Sor 0.68 224 ⇑P Pg 18 11 23.1 -0.6
T0110 Collepietro 0.68 137 ⇓P Pg 18 11 22.6 -1.2
T0110 AML AML
comp=E,20250µm,0.5s
T0110 AML AML
comp=N,21450µm,0.4s
CIMA Civitanova Mar 0.69 33 P Pg 18 11 23.8 -0.1
MURB Monte Urbino 0.70 319 Pg 18 11 23.2 -1.0
MURB Monte Urbino 0.70 319 P Pg 18 11 23.6 -0.6
MURB AML AML
comp=N,35950µm,0.4s
MURB AML AML
comp=E,34950µm,0.3s
MURB AML AML
comp=N,36250µm,1.5s
MURB AML AML
comp=E,39800µm,0.3s
MMUR Monte Murano 0.72 351 P Pg 18 11 23.8 -0.7
MMUR AML AML
comp=E,21900µm,0.7s
MMUR AML AML
comp=E,21900µm,0.7s
MMUR AML AML
comp=N,16200µm,1.2s
PTQR Pietraquaria 0.73 165 P Pg 18 11 23.5 -1.2
PTQR AML AML
comp=E,2750µm,0.7s
PTQR AML AML
comp=N,2870µm,1.1s
PP3 Marolino 0.73 27 P Pg 18 11 24.5 -0.2
PP3 AML AML
comp=E,66000µm,0.6s
PP3 AML AML
comp=N,46100µm,0.5s
PP3 AML AML
comp=E,63700µm,0.6s
PP3 AML AML
comp=N,46050µm,0.5s
PP3 AML AML
comp=E,65950µm,0.6s
PP3 AML AML
comp=N,43950µm,0.5s
SSFR Montelago di S 0.76 339 P Pg 18 11 24.4 -0.8
SSFR AML AML
comp=E,19800µm,0.2s
SSFR AML AML
comp=N,22150µm,0.2s
SSFR AML AML
comp=N,21500µm,0.2s
SSFR AML AML
comp=E,19250µm,0.2s
ATFO Monte Foce - G 0.77 327 P Pg 18 11 24.6 -0.8
ATFO AML AML
comp=N,8355µm,1.1s
ATFO AML AML
comp=E,11750µm,0.6s
MTCE Montecelio 0.77 203 P Pg 18 11 24.2 -1.1
MTCE AML AML
comp=N,4015µm,1.6s
MTCE AML AML
comp=E,5440µm,1.5s
ATSC Scheggia e Pas 0.77 334 P Pg 18 11 24.4 -1.1
ARVD Arcevia 0.78 349 P Pg 18 11 24.8 -0.9
ARVD AML AML
comp=E,7985µm,1.0s
ARVD AML AML
comp=N,6595µm,0.6s
MGAB Montegabbione 0.79 284 ⇑P Pg 18 11 25.4 -0.3
MGAB AML AML
comp=E,25900µm,1.5s
MGAB AML AML
comp=N,22200µm,1.3s
MGAB AML AML
comp=E,25850µm,1.5s
MGAB AML AML
comp=N,22250µm,1.3s
MGAB AML AML
comp=N,23000µm,1.1s
MGAB AML AML
comp=E,27900µm,0.6s
CERT Cerreto 0.79 189 P Pg 18 11 24.9 -0.9
CERT AML AML
comp=N,6210µm,1.1s
CERT AML AML
comp=E,6065µm,0.4s
ATLO AVT- Montelove 0.80 317 P Pg 18 11 25.5 -0.6
TB01 Gubbio 0.84 321 P Pg 18 11 25.7 -1.0
ATVA AVT- Monte Val 0.84 311 P Pg 18 11 26.4 -0.3
TB02 Pietralunga 0.84 320 P Pg 18 11 25.7 -1.1
FRON Frontone 0.85 339 P Pg 18 11 25.9 -1.0
FRON AML AML
comp=E,6930µm,0.6s
FRON AML AML
comp=N,9785µm,0.5s
ATVO AVT- Monte Val 0.85 320 ⇑P Pg 18 11 26.1 -0.9
ATVO AML AML
comp=N,6820µm,1.6s
ATVO AML AML
comp=E,9150µm,1.0s
TB03 Pietralunga 0.86 321 P Pg 18 11 26.3 -1.0
ATBU Serra di Buran 0.87 330 P Pg 18 11 26.8 -0.5
AOI Ancona 0.89 22 P Pg 18 11 26.6 -1.0
AOI AML AML
comp=E,8090µm,1.2s
AOI AML AML
comp=E,8095µm,1.2s
AOI AML AML
comp=N,7755µm,0.5s
ATMI Monte Miggiano 0.89 313 P Pg 18 11 27.7 0.0
ATMI AML AML
comp=E,19550µm,0.7s
ATMI AML AML
comp=N,21650µm,0.5s
RCAV Rocca di Cave 0.89 190 P Pg 18 11 27.2 -0.6
RCAV AML AML
comp=E,7990µm,1.4s
RCAV AML AML
comp=N,10900µm,0.9s
ATPI Pietralunga - 0.91 323 P Pg 18 11 27.2 -0.8
ATPI AML AML
comp=N,6385µm,1.6s
ATPI AML AML
comp=E,5520µm,0.6s
ATPC Poggio Castell 0.91 326 P Pg 18 11 27.2 -0.8
INTR Introdacqua 0.91 142 Pn Pg 18 11 26.2 -1.9
INTR Introdacqua 0.91 142 P Pg 18 11 26.2 -1.9
INTR AML AML
comp=E,4µm,1.3s
INTR AML AML
comp=N,6µm,1.4s
INTR AML AML
comp=N,9545µm,1.5s
INTR AML AML
comp=E,4130µm,0.9s
INTR AML AML
comp=E,4µm,1.3s
PCRO Pietralacroce 0.92 17 P Pg 18 11 28.0 -0.3
PCRO AML AML
comp=E,43150µm,0.6s
PCRO AML AML
comp=N,30350µm,0.7s
SACS San Casciano d 0.92 278 P Pg 18 11 27.9 -0.5
SACS AML AML
comp=N,8665µm,1.1s
SACS AML AML
comp=N,8700µm,1.1s
SACS AML AML
comp=E,8680µm,0.6s
SACS AML AML
comp=E,8840µm,1.3s
PIEI Pieia 0.93 331 P Pg 18 11 27.6 -0.7
PIEI AML AML
comp=N,3845µm,1.1s
PIEI AML AML
comp=E,4375µm,0.5s
VVLD Villa Vallelon 0.93 158 P Pg 18 11 27.4 -1.0
VVLD AML AML
comp=E,4950µm,0.6s
VVLD AML AML
comp=N,4525µm,0.8s
GUAR Guarcino 0.94 173 P Pg 18 11 28.6 -0.1
GUAR AML AML
comp=E,5815µm,1.0s
GUAR AML AML
comp=N,6005µm,1.5s
MPAG Monte Paganucc 0.94 342 P Pg 18 11 27.8 -1.0
MPAG AML AML
comp=E,7420µm,0.6s
MPAG AML AML
comp=N,7215µm,1.0s
MPAG AML AML
comp=N,7130µm,0.9s
MPAG AML AML
comp=E,7330µm,0.6s
NARO Abbazia di Nar 0.98 335 P Pg 18 11 28.1 -1.3
NARO AML AML
comp=E,5615µm,1.3s
NARO AML AML
comp=N,4585µm,1.2s
RMP Rome, Mte Porz 0.98 200 P Pg 18 11 29.0 -0.3
RMP AML AML
comp=N,9900µm,1.2s
RMP AML AML
comp=E,5875µm,1.5s
SENI Senigallia 0.98 3 P Pb 18 11 29.6 0.0
SENI AML AML
comp=E,10735µm,0.9s
SENI AML AML
comp=N,7085µm,0.9s
APEC Apecchio 0.99 327 P Pg 18 11 29.2 -0.4
LATE Laterza 1.00 264 Pg 18 11 29.3 -0.5
LATE Laterza 1.00 264 P Pg 18 11 29.8 0.0
FSSB Fossombrone 1.00 344 ⇑P Pg 18 11 28.5 -1.3
FSSB AML AML
comp=E,12750µm,1.2s
FSSB AML AML
comp=N,17100µm,0.4s
ATMC Monte Cedrone 1.00 316 P Pg 18 11 29.0 -0.9
CAFR Castel Frentan 1.02 119 P Pg 18 11 28.2 -1.9
CAFR AML AML
comp=E,2960µm,0.5s
CAFR AML AML
comp=N,5340µm,0.4s
RDP Rocca di Papa 1.02 199 P Pg 18 11 29.9 -0.3
LPEL Lama dei Pelig 1.02 131 P Pg 18 11 27.8 -2.5
LPEL AML AML
comp=E,6795µm,1.4s
LPEL AML AML
comp=N,3985µm,1.6s
BADI Badiali 1.02 320 P Pg 18 11 29.5 -0.8
BADI AML AML
comp=E,232µm,1.6s
BADI AML AML
comp=N,6490µm,1.6s
BADI AML AML
comp=E,234µm,1.6s
BADI AML AML
comp=N,6485µm,1.6s
MA9 Marino 1.02 201 P Pg 18 11 30.4 +0.1
MA9 AML AML
comp=N,7020µm,1.2s
MA9 AML AML
comp=E,7390µm,0.4s
SAMA S.Maria delle 1.03 204 P Pg 18 11 30.1 -0.3
CAFI Castiglion Fio 1.06 305 P Pg 18 11 30.4 -0.5
CAFI AML AML
comp=E,3980µm,0.6s
CAFI AML AML
comp=N,4765µm,0.9s
CAFI AML AML
comp=N,4595µm,0.9s
CAFI AML AML
comp=E,3935µm,0.6s
PE3 Peglio 1.08 334 P Pg 18 11 30.4 -0.9
PE3 AML AML
comp=N,26µm,0.6s
PE3 AML AML
comp=E,29µm,0.6s
TOLF Tolfa 1.08 232 P Pg 18 11 30.9 -0.4
TOLF AML AML
comp=E,3180µm,0.6s
TOLF AML AML
comp=N,3285µm,1.1s
MCIV Monte Civitell 1.09 273 P Pg 18 11 31.2 -0.3
MCIV AML AML
comp=N,3170µm,1.2s
MCIV AML AML
comp=E,4270µm,1.6s
POFI Posta Fibreno 1.09 157 P Pg 18 11 30.6 -1.0
POFI AML AML
comp=E,3680µm,0.6s
POFI AML AML
comp=E,3965µm,0.6s
POFI AML AML
comp=N,2295µm,1.3s

POFI AML AML
comp=N,2330µm,1.3s
LAV9 Lanuvio 1.10 198 P **Pb 18 11 31.7 0.0**
SF04 Casetta 1.10 276 P **Pb 18 11 31.9 +0.1**
SF04 AML AML
comp=N,4825µm,0.9s
SF04 AML AML
comp=E,3845µm,0.5s
SSP9 Sansepolcro 1.13 319 P **Pn 18 11 32.6 +0.1**
SSP9 AML AML
comp=E,5770µm,1.6s
SSP9 AML AML
comp=N,4635µm,1.2s
LRP Arpino 1.13 163 P **Pb 18 11 32.0 -0.2**
LRP AML AML
comp=E,1560µm,0.9s
LRP AML AML
comp=N,2415µm,1.3s
GIUL Giuliano Di Ro 1.17 176 P **Pb 18 11 32.6 -0.3**
GIUL AML AML
comp=E,2585µm,1.0s
GIUL AML AML
comp=N,2840µm,0.6s
SF01 Poggio Pratacc 1.17 275 P **Pb 18 11 32.8 -0.2**
CPGN Carpegna, Ital 1.23 331 P **Pb 18 11 34.1 0.0**
CPGN AML AML
comp=E,8160µm,0.9s
CPGN AML AML
comp=N,8610µm,1.2s
PESA Pesaro 1.23 349 P **Pn 18 11 33.9 0.0**
PESA AML AML
comp=E,9585µm,1.2s
PESA AML AML
comp=N,8765µm,0.6s
ARCI Arcidosso 1.24 276 P **Pn 18 11 34.0 0.0**
ARCI AML AML
comp=E,1056µm,1.0s
ARCI AML AML
comp=N,1525µm,1.2s
CRE Caprese Michel 1.25 316 P **Pn 18 11 33.9 -0.3**
CRE AML AML
comp=N,2995µm,1.1s
CRE AML AML
comp=E,2995µm,0.7s
RNI2 Rionero Sannit 1.27 144 P **Pn 18 11 33.3 -1.1**
RNI2 AML AML
comp=N,3960µm,1.3s
RNI2 AML AML
comp=E,6795µm,1.4s
RNI2 AML AML
comp=E,6595µm,1.4s
RNI2 AML AML
comp=N,3905µm,1.3s
CERA Filignano 1.30 150 P **Pn 18 11 33.4 -1.5**
CERA AML AML
comp=N,2700µm,1.6s
CERA AML AML
comp=E,3795µm,1.4s
CERA AML AML
comp=E,3865µm,1.3s
CERA AML AML
comp=N,2660µm,1.6s
FRES Fresagrandinar 1.35 123 P **Pg 18 11 36.4 -0.1**
FRES AML AML
comp=N,2735µm,1.2s
FRES AML AML
comp=E,3445µm,0.8s
TRIV Trivento 1.42 132 P **Pb 18 11 37.1 0.0**
TRIV AML AML
comp=E,3705µm,1.2s
TRIV AML AML
comp=E,4205µm,1.2s
TRIV AML AML
comp=N,3700µm,1.2s
TRIV AML AML
comp=N,4015µm,1.2s
ASQU Asqua 1.46 317 P **Pn 18 11 37.4 +0.3**
ASQU AML AML
comp=E,1955µm,1.3s
ASQU AML AML
comp=N,1965µm,0.5s
SFI Santa Sofia 1.51 321 P **Pn 18 11 37.9 +0.2**
SFI AML AML
comp=N,1965µm,1.2s
SFI AML AML
comp=E,2085µm,0.7s
SFI AML AML
comp=E,2030µm,0.7s
SFI AML AML
comp=N,1980µm,1.2s
MAON Monte Argentar 1.52 259 P **Pn 18 11 38.1 +0.3**
MAON AML AML
comp=E,1114µm,1.5s
MAON AML AML
comp=N,1004µm,1.0s
VAGA Valle Agricola 1.54 148 P **Pb 18 11 38.8 -0.4**
VAGA AML AML
comp=N,1735µm,1.6s
VAGA AML AML
comp=E,1575µm,1.4s
VAGA AML AML
comp=E,1530µm,1.4s
VAGA AML AML
comp=N,1680µm,1.6s
CSNT Castellina Chi 1.55 299 P **Pn 18 11 38.7 +0.4**
CSNT AML AML
comp=N,1405µm,0.6s
CSNT AML AML
comp=E,864µm,1.1s
BSSO Busso 1.60 137 P **Pb 18 11 40.6 +0.4**
OSSC Osservatorio P 1.61 300 **Pn 18 11 38.0 -1.1**
OSSC Osservatorio P 1.61 300 P **Pn 18 11 38.2 -0.8**
OSSC AML AML
comp=N,1745µm,1.2s
OSSC AML AML
comp=E,1250µm,0.7s
OSSC AML AML
comp=N,1360µm,0.7s
OSSC AML AML
comp=E,1725µm,1.2s
RUFI Rufina 1.63 313 P **Pn 18 11 39.5 +0.1**
RUFI AML AML
comp=E,1855µm,0.8s
RUFI AML AML
comp=N,1862µm,1.5s
MODR Mondragone 1.67 161 P **Pn 18 11 40.3 +0.3**
MODR AML AML
comp=E,1030µm,1.3s
MODR AML AML
comp=N,1185µm,1.4s
CASP Castiglione de 1.69 273 **Pn 18 11 39.8 -0.3**
CASP Castiglione de 1.69 273 ⇑P **Pn 18 11 39.8 -0.3**
CASP AML AML
comp=E,514µm,0.9s
CASP AML AML
comp=N,571µm,1.1s
CIGN Sant'Elia a Pi 1.69 129 P **Pb 18 11 41.4 -0.3**
CIGN AML AML
comp=N,1495µm,1.3s
CIGN AML AML
comp=E,1315µm,1.5s
TRIF Trifonti 1.70 284 P **Pn 18 11 40.6 +0.3**
TRIF AML AML
comp=N,1260µm,1.2s
TRIF AML AML
comp=E,1076µm,0.8s
PTRJ Pietraroja 1.71 143 P **Pb 18 11 42.2 +0.1**
LMD Lutirano 1.71 323 P **Pn 18 11 41.0 +0.5**
LMD AML AML
comp=N,1720µm,1.2s
LMD AML AML
comp=E,1510µm,0.5s
SACR S. Croce Del S 1.76 138 P **Pb 18 11 43.1 +0.1**
GATE Gambatesa 1.79 132 P **Pb 18 11 44.0 +0.6**
MELA Melanico ??? S 1.79 124 P **Pb 18 11 42.7 -0.7**
MELA AML AML
comp=E,4570µm,1.0s
MELA AML AML
comp=N,5030µm,1.0s
MELA AML AML
comp=E,4400µm,1.0s
MELA AML AML
comp=N,4830µm,1.0s
TREM Isole Tremiti 1.85 108 P **Pb 18 11 43.4 -1.0**
TREM AML AML
comp=E,4860µm,0.8s
TREM AML AML
comp=N,4325µm,1.2s
SEI Scarperia 1.86 316 P **Pb 18 11 44.6 -0.1**
VITU Vitulano (BN) 1.90 144 P **Pb 18 11 45.1 -0.2**
IMOL Imola, Italy 1.93 328 P **Pb 18 11 45.8 +0.1**
VENT Ventotene 1.94 174 P **Pb 18 11 46.0 0.0**
PSB1 Pescosannita 1.95 140 P **Pb 18 11 46.1 0.0**
PAOL Paolisi 2.00 148 Pn **Pn 18 11 45.6 +1.1**
PAOL Paolisi 2.00 148 P **Pn 18 11 45.7 +1.3**
MOCO Biccari - m.te 2.02 132 P **Pb 18 11 46.5 -0.9**
APRC Apricena 2.02 118 P **Pn 18 11 45.7 +0.9**
APRC AML AML
comp=N,1645µm,1.1s
APRC AML AML
comp=E,1390µm,0.8s
MTCR Monte La Croce 2.04 310 P **Pn 18 11 45.1 +0.1**
MRB1 Monte Rocchett 2.10 139 P **Pb 18 11 48.5 -0.3**
SGRT San Giovanni R 2.16 116 **Pn 18 11 47.0 +0.3**
SGRT San Giovanni R 2.16 116 P **Pn 18 11 47.2 +0.6**
SGRT AML AML
comp=N,1440µm,1.5s
SGRT AML AML
comp=E,1250µm,1.3s
POPM Popiglio 2.19 308 P **Pn 18 11 47.4 +0.4**
POPM AML AML
comp=N,719µm,1.3s
POPM AML AML
comp=E,697µm,1.3s
BRJN Brijuni 2.22 11 P **Pn 18 11 47.4 -0.1**
ZCCA Zocca 2.27 316 **Pb 18 11 50.7 -0.9**
BDI Bagni Di Lucca 2.29 306 P **Pn 18 11 48.7 +0.2**
BDI AML AML
comp=N,600µm,1.5s
BDI AML AML
comp=E,279µm,1.4s
BDI AML AML
comp=N,281µm,0.9s
BDI AML AML
comp=E,834µm,1.4s
RSF3 Rocca San Feli 2.32 139 P **Pb 18 11 51.4 -1.2**
SNAL S. Angelo Dei 2.37 139 P **Pn 18 11 51.2 +1.6**
SNAL AML AML
comp=N,976µm,1.1s
SNAL AML AML
comp=E,1067µm,1.3s
SNAL AML AML
comp=E,1090µm,1.3s
SNAL AML AML
comp=N,956µm,1.1s
LIO3 Lioni 2.38 140 P **Pb 18 11 52.1 -1.4**
MCRV Calabrutti - M 2.46 142 P **Pn 18 11 52.3 +1.5**
HVAR Hvar 2.46 78 P **Pn 18 11 50.9 +0.1**
CAPA Cerignola FG 2.53 127 P **Pn 18 11 52.9 +1.2**
CAPA AML AML
comp=N,2465µm,1.1s
CAPA AML AML
comp=E,2125µm,1.1s
EQUI Equi 2.61 304 P **Pn 18 11 53.6 +0.7**
EQUI AML AML
comp=E,326µm,0.8s
EQUI AML AML
comp=N,332µm,0.5s
PLMA Palmaria, Port 2.75 300 P **Pn 18 11 55.7 +1.1**
PLMA AML AML
comp=N,306µm,0.5s
PLMA AML AML
comp=E,256µm,0.8s
PALZ Palazzo San Ge 2.75 129 P **Pn 18 11 56.1 +1.3**
PALZ AML AML
comp=N,1412µm,1.0s
PALZ AML AML
comp=E,1705µm,1.1s
CDRU Civita di Ruta 2.76 143 P **Pn 18 11 57.0 +2.1**
MORSI Morsiglia 2.79 276 P **Pn 18 11 56.4 +1.0**
MORSI S **Sn 18 12 31.7 +2.6**
TEOL Teolo 2.84 338 **Pn 18 11 56.7 +0.7**
GRAM Graiana 2.85 309 P **Pn 18 11 57.4 +1.2**
GRAM AML AML
comp=E,688µm,0.6s
GRAM AML AML
comp=N,790µm,0.7s
SKDS Skadanscina 2.88 12 *i* Pn **Pn 18 11 56.2 -0.5**
SKDS IAML 18 12 33.8
comp=Z,134nm,0.3s
PRMA PARMA 2.89 316 **Pn 18 11 57.9 +1.2**
SMPL Sampolo 2.93 259 P **Pn 18 11 58.1 +0.9**
SMPL AML AML
comp=N,70µm,1.5s
SMPL AML AML
comp=E,74µm,1.4s
SMPL Sampolo 2.93 259 P **Pn 18 11 58.0 +0.7**
A050A Klekovaca 3.02 53 *e*Pn **Pn 18 11 59.4 +0.9**
PGF Pioggiola 3.07 268 *e*P **Pn 18 11 59.8 +0.6**
PGF *e*Sn **Sn 18 12 31.5 -4.5**
comp=E,32nm,0.5s
PGF Pioggiola 3.07 268 P **Pn 18 12 00.5 +1.3**
PGF AML AML
comp=N,90µm,1.3s
PGF AML AML
comp=E,99µm,1.3s
PGF Pioggiola 3.07 268 P **Pn 18 12 00.5 +1.3**
PGF Pioggiola 3.07 268 S **Sn 18 12 38.7 +2.6**
MSSA Maissana 3.08 302 **Pn 18 11 59.5 +0.1**
CEY Cerknica 3.15 16 *e*Pn **Pn 18 12 00.5 +0.3**
AMUR Altamura 3.16 124 P **Pn 18 12 01.4 +1.1**
AMUR AML AML
comp=E,422µm,0.9s
AMUR AML AML
comp=N,410µm,1.4s
MIGL Miglionico 3.25 130 P **Pn 18 12 02.9 +1.2**
MIGL AML AML
comp=N,1530µm,1.6s
MIGL AML AML
comp=E,1775µm,1.1s
SABO M.te Sabotino 3.27 5 P **Pn 18 12 01.7 -0.1**
SABO AML AML
comp=N,1605µm,0.8s
SABO AML AML
comp=N,6045µm,0.8s
SABO AML AML
comp=E,5010µm,0.9s
SABO AML AML
comp=E,1020µm,0.9s
ROVR Rover Verones 3.28 334 P **Pn 18 12 03.2 +1.1**
ROVR AML AML
comp=N,242µm,1.0s
ROVR AML AML
comp=E,228µm,0.9s
CGRP Cima Grappa 3.30 343 P **Pn 18 12 03.6 +1.2**
CGRP AML AML
comp=E,952µm,0.6s
CGRP AML AML
comp=N,1017µm,0.6s
CGRP AML AML
comp=N,1029µm,0.6s
CGRP AML AML
comp=E,908µm,0.6s
MGRS Mrkonjic Grad 3.32 58 *e*Pn **Pn 18 12 04.3 +1.7**
VARN Col Varnada, M 3.35 347 P **Pn 18 12 03.9 +0.9**
VARN AML AML
comp=N,985µm,1.1s
VARN AML AML
comp=E,1260µm,1.0s
VARN AML AML
comp=E,1255µm,1.0s
VARN AML AML
comp=N,1012µm,1.1s
AJAC Base Areonaval 3.35 258 P **Pn 18 12 03.9 +0.9**
AJAC AML AML
comp=E,194µm,0.3s
AJAC AML AML
comp=N,232µm,0.8s
AJAC Base Areonaval 3.35 258 P **Pn 18 12 03.7 +0.7**
GORR Gorreto 3.37 305 P **Pn 18 12 05.5 +2.2**
MATE Matera 3.38 127 ⇓P **Pn 18 12 04.8 +1.4**
MATE ⇓S **Sn 18 12 46.1 +2.7**
DOSS Dosso del Somm 3.45 337 P **Pn 18 12 05.9 +1.3**
DOSS AML AML
comp=E,616µm,0.8s
DOSS AML AML
comp=N,515µm,0.9s
DOSS AML AML
comp=N,624µm,0.5s
DOSS AML AML
comp=E,522µm,0.9s
SALO Salr 3.45 328 Pn **Pn 18 12 05.4 +1.0**
SALO Salr 3.45 328 P **Pn 18 12 05.5 +1.0**
SALO AML AML
comp=N,931µm,1.3s
SALO AML AML
comp=E,748µm,0.9s
LTRZ Laterza 3.47 126 P **Pn 18 12 05.4 +0.7**
CTI Castel Tesino 3.49 343 **Pn 18 12 05.8 +0.8**
CTI Castel Tesino 3.49 343 P **Pn 18 12 05.8 +0.8**
CTI Castel Tesino 3.49 343 P **Pn 18 12 06.1 +1.1**
CTI AML AML
comp=N,582µm,0.7s
CTI AML AML
comp=E,598µm,1.0s
NOCI Noci 3.51 122 P **Pn 18 12 06.1 +0.9**
NOCI AML AML
comp=E,292µm,0.7s
NOCI AML AML
comp=N,398µm,1.2s
MAGA Magasa 3.54 330 P **Pn 18 12 06.9 +1.2**
MAGA AML AML
comp=N,10015µm,0.5s
MAGA AML AML
comp=E,1660µm,0.7s
STAL STALIGIAL 3.54 355 **Pn 18 12 06.0 +0.3**
STAL STALIGIAL 3.54 355 P **Pn 18 12 06.3 +0.6**
STAL AML AML
comp=E,652µm,0.7s
STAL AML AML
comp=N,667µm,1.4s
STAL AML AML
comp=N,620µm,1.6s
STAL AML AML
comp=E,790µm,0.7s
A051A Mrakovica 3.55 49 *e*Pn **Pn 18 12 07.4 +1.6**
BLY Banja Luka 3.55 54 *e*Pn **Pn 18 12 07.0 +1.2**
LUSI Trento, Gardas 3.60 335 P **Pn 18 12 07.8 +1.3**
LUSI AML AML
comp=N,716µm,1.1s
LUSI AML AML
comp=E,548µm,1.2s
CIMO Cimolais 3.62 352 P **Pn 18 12 07.0 +0.3**
CIMO AML AML
comp=E,240µm,1.1s
CIMO AML AML
comp=N,219µm,0.8s
CIMO AML AML
comp=E,246µm,1.3s
CIMO AML AML
comp=N,228µm,0.8s
PTCC Patocco-Chiusa 3.68 2 P **Pn 18 12 07.3 -0.3**
PTCC AML AML
comp=E,426µm,0.7s
PTCC AML AML
comp=N,499µm,1.0s
GAGG Gaggia 3.70 336 P **Pn 18 12 09.3 +1.3**
GAGG AML AML
comp=N,1077µm,1.1s
GAGG AML AML
comp=E,1105µm,1.1s
GAGG AML AML
comp=N,672µm,1.0s
GAGG AML AML
comp=E,634µm,0.9s
PRED Cave del Predi 3.73 4 **Pn 18 12 08.6 +0.4**
CLUD Cludinico 3.73 357 Pn **Pn 18 12 08.6 +0.3**
CLUD Cludinico 3.73 357 P **Pn 18 12 09.0 +0.7**
CLUD AML AML
comp=N,700µm,1.0s
CLUD AML AML
comp=E,782µm,1.0s
CLUD AML AML
comp=N,678µm,1.0s
CLUD AML AML
comp=E,843µm,1.0s
ZONE Zone 3.74 325 P **Pn 18 12 09.3 +1.0**
TAR1 Taranto 3.80 124 AML AML
comp=N,301µm,1.4s
TAR1 AML AML
comp=E,273µm,0.8s
MABI Malga Bissina 3.83 331 P **Pn 18 12 11.1 +1.4**
MABI AML AML
comp=E,180µm,0.9s
MABI AML AML
comp=N,154µm,0.4s
ACOM Acomizza, Ital 3.83 4 P **Pn 18 12 10.7 +0.9**
ACOM AML AML
comp=N,628µm,0.6s
ACOM AML AML
comp=E,707µm,0.6s
ACOM AML AML
comp=E,716µm,0.6s
ACOM AML AML
comp=N,692µm,0.6s
ZOU Zoufplan 3.83 358 P **Pn 18 12 10.1 +0.3**
ZOU AML AML
comp=N,1010µm,1.2s
ZOU AML AML
comp=E,696µm,1.0s
ZOU AML AML
comp=E,639µm,1.0s
ZOU AML AML
comp=N,980µm,1.2s
QLNO Quiliano 3.84 296 P **Pn 18 12 10.7 +1.0**
OBKA Obir 3.91 14 *e*Pn **Pn 18 12 11.0 +0.2**
OBKA Obir 3.91 14 *i* Pn **Pn 18 12 11.3 +0.5**
comp=N,9.0nm,0.2s
MYKA Terra Mystica 3.92 5 *i* Pn **Pn 18 12 11.5 +0.7**
comp=N,4.5nm,0.2s,SNR=15
MYKA *e*Sn **Sn 18 12 58.7 +1.8**
comp=N,42nm,0.4s
MDI Monti di Nese 3.92 322 P **Pn 18 12 11.7 +0.8**
MDI AML AML
comp=E,198µm,1.3s
MDI AML AML
comp=N,216µm,0.7s
KOSI Kohlern 3.94 342 P **Pn 18 12 13.0 +1.7**
A052A Srbac 3.94 52 *e*Pn **Pn 18 12 12.6 +1.5**
HCY Herceg Novi 3.96 92 *e*Pn **Pn 18 12 11.2 -0.1**
HCY Herceg Novi 3.96 92 ⇑*i*Pn **Pn 18 12 12.1 +0.8**
HCY *i* Sn **Sn 18 12 58.3 +0.6**
BRY Bratogost 3.97 86 *e*Pn **Pn 18 12 12.0 +0.4**
BRY Bratogost 3.97 86 ⇓*i*Pn **Pn 18 12 12.4 +0.8**
BRY *i* Sn **Sn 18 12 58.6 +0.3**
APPI Appiano 3.99 341 P **Pn 18 12 13.4 +1.4**
ABTA Abfaltersbach 4.04 354 *i* Pn **Pn 18 12 13.8 +1.2**
comp=N,34nm,0.4s,SNR=46
ABTA *e*Sn **Sn 18 12 59.3 -0.8**
comp=N,70nm,0.6s
SOKA Soboth 4.17 18 *e*Pn **Pn 18 12 15.0 +0.7**
comp=N,3.1nm,0.2s,SNR=9.5
SOKA *e*Sn **Sn 18 13 00.9 -2.2**
comp=N,25nm,0.6s
UPM Unac-Piva 4.25 82 *e*Pn **Pn 18 12 16.6 +1.1**
UPM Unac-Piva 4.25 82 *e*Pn **Pn 18 12 16.3 +0.8**
UPM *i* Sn **Sn 18 13 05.5 +0.2**
CEME Cevo 4.26 90 *e*Pn **Pn 18 12 16.4 +0.9**
CEME *i* Sn **Sn 18 13 05.7 +0.4**
BUM Brajici-Budva 4.27 94 *e*Pn **Pn 18 12 16.5 +0.9**
BUM *i* Sn **Sn 18 13 05.9 +0.4**
SAOF Saorge 4.27 289 P **Pn 18 12 17.1 +1.4**
SAOF AML AML
comp=N,138µm,0.9s
SAOF AML AML
comp=E,72µm,1.1s
SAOF Saorge 4.27 289 P **Pn 18 12 16.9 +1.3**
NKME Niksic 4.27 88 *e*Pn **Pn 18 12 16.6 +0.9**
NKME *i* Sn **Sn 18 13 06.0 +0.3**
RISI Rein 4.29 350 ⇑P **Pn 18 12 17.7 +1.7**
RISI AML AML
comp=E,660µm,0.6s
RISI AML AML
comp=N,972µm,1.4s
VSL Villasalto 4.31 223 P **Pn 18 12 17.6 +1.4**
SBF Sospel 4.32 287 *e*P **Pn 18 12 17.3 +0.9**
SBF *e*Sn **Sn 18 13 01.3 -5.6**
comp=N,61nm,0.5s
MUGIO Muggio 4.35 319 P **Pn 18 12 17.1 +0.4**
KBA Koelnbreinsper 4.35 2 *i* Pn **Pn 18 12 18.0 +1.1**
comp=N,6.3nm,0.2s,SNR=16
KBA *e*Sn **Sn 18 13 08.0 +0.2**
comp=N,34nm,0.4s
ESCA l'Escarene 4.36 287 P **Pn 18 12 20.4 +3.5**
ROSI Rosskopf 4.38 344 P **Pn 18 12 19.2 +1.9**
TURF col de Turini 4.38 288 P **Pn 18 12 18.6 +1.3**

FUORN Ofenpass-Fuorn 4.40 333 Pn Pn 18 12 19.7 +2.0
CGL Cagliari Serpe 4.45 222 ⇑P Pn 18 12 20.4 +2.2
DRME Dracevica, Mon 4.50 95 ePn Pn 18 12 19.7 +1.0
DRME Dracevica, Mon 4.50 95⇑ i/Pn Pn 18 12 19.7 +1.0
DRME i Sn Sn 18 13 11.5 +0.4
SPIF crte de Spivo 4.51 289 P Pn 18 12 21.2 +2.2
TTG Podgorica 4.52 92 ePn Pn 18 12 20.0 +1.0
TTG i Sn Sn 18 13 12.0 +0.4
MVIF Mont Vial 4.53 287 P Pn 18 12 20.6 +1.2
BEHE Becsehely 4.55 33 P Pn 18 12 21.4 +1.9
ULC Ulcinj 4.58 98⇓ i/Pn Pn 18 12 20.9 +1.0
ULC i Sn Sn 18 13 13.6 +0.4
PLE Pljevlja 4.61 80 ePn Pn 18 12 21.3 +0.9
PLE i Sn Sn 18 13 14.3 +0.2
FETA Feichten 4.62 339 i Pn Pn 18 12 23.0 +2.4
comp=N,4.7nm,0.3s,SNR=14
FETA eSn Sn 18 13 17.0 +2.5
comp=N,19nm,0.4s
RUDO Rudo 4.63 77 ePn Pn 18 12 20.9 +0.3
WTTA Wattenberg 4.66 347 i Pn Pn 18 12 23.6 +2.4
comp=N,7.2nm,0.2s,SNR=18
WTTA eSn Sn 18 13 18.1 +2.8
comp=N,45nm,0.3s
CALF Calern 4.67 285 P Pn 18 12 22.5 +1.3
DAVOX Davos/Dischmat 4.67 331 Pn Pn 18 12 21.2 -0.1
comp=N,3.5nm,0.3s,baz=163,slow=18,SNR=45
DAVOX Sn Sn 18 13 11.8 -3.9
comp=N,2.3nm,0.3s,baz=137,slow=10,SNR=3.2
DAVOX LR LR 18 13 59.5
comp=N,59nm,19.6s,baz=87,slow=38
comp=N,6.6nm,0.3s
ISO Isola 4.67 290 P Pn 18 12 23.5 +2.3
KOME Kolasin 4.69 86⇑ i/Pn Pn 18 12 22.3 +0.9
KOME i Sn Sn 18 13 16.1 +0.2
SQTA Sankt Quirin 4.70 344 i Pn Pn 18 12 24.0 +2.4
comp=N,9.0nm,0.2s,SNR=24
SQTA i Sn Sn 18 13 18.1 +1.9
comp=N,43nm,0.3s
BBLS Lazići 4.70 74 ePn Pn 18 12 22.5 +0.8
WATA Walderalm 4.74 347 i Pn Pn 18 12 24.9 +2.7
comp=N,12nm,0.2s,SNR=12
WATA eSn Sn 18 13 18.7 +1.4
comp=N,43nm,0.3s
SCTE Santa Cesarea 4.80 122 Pn Pn 18 12 24.2 +1.3
ARSA Arzberg 4.82 20 i Pn Pn 18 12 23.9 +0.6
comp=N,5.7nm,0.4s,SNR=7.9
ARSA eSn Sn 18 13 17.6 -1.6
comp=N,12nm,0.4s
ARSA Arzberg 4.82 20 P Pn 18 12 23.7 +0.4
MOTA Moosalm 4.84 343 i Pn Pn 18 12 26.4 +2.8
comp=N,11nm,0.4s,SNR=19
MOTA eSn Sn 18 13 21.8 +2.1
comp=N,57nm,0.6s
ENAUX Enaux 4.84 289 P Pn 18 12 26.3 +2.6
KOVH Kovagotottos 4.88 45 P Pn 18 12 23.0 -1.0
KOVH S Sn 18 13 17.3 -3.3
LMR La Mourre 4.91 279 eP Pn 18 12 25.0 +0.6
LMR eSn Sn 18 13 15.3 -5.9
comp=N,12nm,0.5s
SURF Saint Ours 4.92 293 P Pn 18 12 26.4 +1.6
JAUF Jausiers 4.95 292 P Pn 18 12 27.5 +2.3
IVA Berane 4.96 86⇑ i/Pn Pn 18 12 26.2 +1.0
IVA i Sn Sn 18 13 22.9 +0.2
TEKS Tekeris 4.97 66 ePn Pn 18 12 22.3 -3.0
BIOA Bad Ischl, Aus 4.97 4 ePn Pn 18 12 26.0 +0.7
comp=N,14nm,0.4s,SNR=17
BIOA i Sn Sn 18 13 24.8 +1.9
comp=N,96nm,0.7s
PVY Plav 5.02 89 ePn Pn 18 12 27.0 +0.9
PVY i Sn Sn 18 13 24.3 +0.1
TRIGF Trigance 5.03 284 P Pn 18 12 27.8 +1.7
MBDF Montbardon 5.04 296 eP Pn 18 12 27.6 +1.3
MBDF eSn Sn 18 13 18.5 -6.1
comp=N,29nm,0.6s
RETA Reutte 5.05 341 i Pn Pn 18 12 29.3 +2.9
comp=N,7.0nm,0.3s,SNR=10.0
RETA i Sn Sn 18 13 27.4 +2.6
comp=N,10nm,0.3s
CREF Crivoux 5.08 293 P Pn 18 12 29.4 +2.6
FLAF Flassans-sur-I 5.10 280 P Pn 18 12 28.4 +1.4
OGAG Argentiere 5.10 292 P Pn 18 12 31.8 +4.6
DAVA Damuels 5.11 334 ePn Pn 18 12 30.1 +2.8
comp=N,8.4nm,0.3s,SNR=14
DAVA eSn Sn 18 13 28.8 +2.2
comp=N,64nm,0.5s
DIVS Divibare 5.17 72 Pn Pn 18 12 28.7 +0.6
DIVS Divibare 5.17 72 ePn Pn 18 12 28.3 +0.3
MOA Molln 5.18 8 i Pn Pn 18 12 29.2 +1.0
comp=N,5.5nm,0.2s,SNR=11
MOA i Sn Sn 18 13 28.0 0.0
comp=N,38nm,0.6s
MORH Mrgy, Hungar 5.25 47 ⇓P Pn 18 12 30.5 +1.4
MORH Mrgy, Hungar 5.25 47 P Pn 18 12 32.1 +3.0
VLO Vlora 5.26 113 Pn 18 12 31.3 +2.0
VLO Vlora 5.26 113 P Pn 18 12 31.3 +2.0
DIX Grande Dixence 5.31 311 P Pn 18 12 31.3 +1.2
LPG La Plagne 5.38 303 eP Pn 18 12 32.7 +1.6
LPG eSn Sn 18 13 26.6 -6.5
comp=N,70nm,0.8s
FRGS Fruska Gora 5.39 61 ⇑P Pn 18 12 32.3 +1.3
FRGS Fruska Gora 5.39 61 ePn Pn 18 12 30.8 -0.2
LPL La Plagne 5.40 303 eP Pn 18 12 32.6 +1.3
LPL eSn Sn 18 13 27.0 -6.6
comp=N,32nm,0.7s
MPLH Magyarpolny 5.42 34 P Pn 18 12 31.9 +0.5
ARTF Artiques 5.44 282 P Pn 18 12 33.0 +1.3
RONA Rosalia, Austr 5.44 23 i Pn Pn 18 12 32.0 +0.2
comp=N,12nm,0.6s,SNR=17
RONA eSn Sn 18 13 33.4 -1.1
comp=N,5.1nm,0.3s
SOP Sopron 5.51 25 P Pn 18 12 32.6 0.0
CONA Conrad Observa 5.54 19 i Pn Pn 18 12 33.4 +0.2
comp=N,3.6nm,0.2s,SNR=11
CONA Sg Sn 18 13 35.5 -1.4
comp=N,27nm,0.7s
SENIN Lac Senin/Sane 5.54 313 Pn Pn 18 12 35.1 +1.8
EGYH Egyhazaskeszo 5.54 31 P Pn 18 12 34.6 +1.5
RSL Roselend 5.54 304 P Pn 18 12 35.7 +2.4
OGSI Sixt 5.67 308 P Pn 18 12 36.6 +1.7
ORIF Oris-en-Rattie 5.70 295 eP Pn 18 12 36.9 +1.6
ORIF eSn Sn 18 13 34.2 -6.6
comp=N,37nm,0.7s
ORIF Oris-en-Rattie 5.70 295 P Pn 18 12 38.5 +3.2
AIGLE Aigle 5.71 311 P Pn 18 12 37.4 +1.8
RUSF Rustrel 5.72 285 P Pn 18 12 37.9 +2.3
KEK Kerkira 5.85 119 Pn Pn 18 12 37.7 +0.4
BALST Balsthal 6.01 322 P Pn 18 12 40.4 +0.8
SLE Schleitheim 6.01 328 P Pn 18 12 40.4 +0.8
OGSM Saint Maurice 6.08 301 P Pn 18 12 43.5 +2.9
KBN Korca 6.09 108 Pn Pn 18 12 43.3 +2.6
KBN Korca 6.09 108 P Pn 18 12 43.3 +2.6
GEC2 GERESS Array S 6.13 3 Pn Pn 18 12 40.9 -0.3
GERES GERESS Array B 6.13 3 Pn Pn 18 12 40.8 -0.4
comp=N,1.0nm,0.3s,baz=186,slow=10,SNR=44
GERES Sn Sn 18 13 48.9 -2.6
comp=N,5.3nm,0.3s,baz=166,slow=23,SNR=12
GERES LR LR 18 15 46.2
comp=N,142nm,18.1s,baz=182,slow=46
comp=N,5.3nm,0.8s
ZST Bratislava 6.13 26 eP Pn 18 12 41.2 0.0
ZST e 18 13 52.3
CKRC Cesky Krumlov 6.15 7 ePN Pn 18 12 40.9 -0.5
CKRC eSN Sn 18 13 48.5 -3.2
GIMEL St. Georges / 6.21 310 P Pn 18 12 44.8 +2.4
FELD Feldberg im Sc 6.30 327 P Pn 18 12 44.3 +0.7
BOVS Bovan 6.32 79 ⇓P Pn 18 12 45.2 +1.4
BRANT Les Verrieres 6.34 314 P Pn 18 12 45.8 +1.6
MODS Modra-Piesok 6.34 26 eP Pn 18 12 45.3 +1.2
MODS e 18 13 55.9
CABF La Chapelle 6.36 310 eP Pn 18 12 46.1 +1.7
CABF eSn Sn 18 13 49.8 -7.3
comp=N,11nm,0.6s
OG35 Corcelles 6.36 304 P Pn 18 12 45.2 +0.8
KIZ Kirchzarten 6.40 327 P Pn 18 12 45.5 +0.7
KHC Kasperske Hory 6.41 3 Pn Pn 18 12 44.9 -0.2
KHC Kasperske Hory 6.41 3 eP Pn 18 12 45.6 +0.5
KHC e 18 13 55.8
KHC Kasperske Hory 6.41 3 ePN Pn 18 12 45.6 +0.5
KHC eSN Sn 18 13 55.8 -2.5
CHMF Charmoille 6.45 317 P Pn 18 12 45.9 +0.3
VIVF Saint-Julien-l 6.49 292 eP Pn 18 12 48.1 +1.9
VIVF eSn Sn 18 13 53.1 -7.3
comp=N,6.3nm,0.7s

SMOL Smolenice 6.52 26 eP Pn 18 12 47.7 +1.2
MDVR Moldovita 6.53 69 ⇑P Pn 18 12 46.9 +0.2
BFO Black Forest 6.54 331 Pn Pn 18 12 45.8 -1.1
BFO Black Forest 6.54 331 P Pn 18 12 45.8 -1.1
VOGT Vogtsburg - To 6.60 326 P Pn 18 12 48.1 +0.5
MOF Molkenrain 6.65 322 P Pn 18 12 49.7 +1.3
SSB Saint Sauveur 6.71 295 Pn Pn 18 12 49.6 +0.4
SSB Saint Sauveur 6.71 295 P Pn 18 12 49.6 +0.4
KRUC Moravsky 6.73 19 ePN Pn 18 12 49.0 -0.3
KRUC eSN Sn 18 14 01.3 -4.7
BZS Buzias 6.74 62 ⇑P Pn 18 12 51.3 +1.8
HINF Hinteralfeld 6.75 321 eP Pn 18 12 49.7 -0.1
HINF eSn Sn 18 13 59.0 -7.7
comp=N,49nm,0.6s
STIP Stip 6.79 96 i Pn Pn 18 12 53.0 +2.8
JAVC Velka Javorina 6.90 26 ePN Pn 18 12 51.3 -0.4
JAVC eSN Sn 18 14 03.4 -6.9
LASF Ste Croix 6.90 284 eP Pn 18 12 53.7 +1.9
LASF eSn Sn 18 14 02.9 -7.5
comp=N,1.7nm,0.5s
ECH Echery 6.92 325 Pn Pn 18 12 51.9 -0.1
ECH Echery 6.92 325 P Pn 18 12 51.9 -0.1
ECH Echery 6.92 325 P Pn 18 12 52.1 +0.1
WLS Welschbruch 6.99 326 P Pn 18 12 53.8 +0.8
VRAC Vranov 7.00 19 Pn Pn 18 12 53.1 0.0
comp=N,0.6nm,0.3s,baz=218,slow=12,SNR=4.7
VRAC Sn Sn 18 14 03.0 -10
baz=212,slow=10.0
VRAC LR LR 18 15 40.0
comp=N,95nm,18.7s,baz=208,slow=39
comp=N,2.2nm,0.5s
VRAC Vranov 7.00 19 ePN Pn 18 12 51.7 -1.5
VRAC eSN Sn 18 14 02.5 -10
VYHS Vyhne 7.01 33 eP Pn 18 12 54.4 +1.2
BLKB Belogradchik 7.02 79 ⇑P Pn 18 12 54.7 +1.2
CDF Champ du Feu 7.02 326 eP Pn 18 12 53.7 +0.2
CDF eSn Sn 18 14 05.4 -8.0
comp=N,38nm,0.6s
PSZ Piszkesteto 7.04 40 Pn 18 12 53.9 +0.3
PSZ Piszkesteto 7.04 40 P Pn 18 12 53.9 +0.3
PSZ Piszkesteto 7.04 40 P Pn 18 12 57.0 +3.4
SIRR Siria 7.04 57 ⇓P Pn 18 12 55.4 +1.7
HERR Herculane 7.04 69 ⇑P Pn 18 12 54.5 +0.8
DJES Djerdap 7.06 71 ⇑P Pn 18 12 55.0 +1.1
GRFO Grafenberg 7.09 350 Pn Pn 18 12 54.6 +0.3
GRFO Grafenberg 7.09 350 P Pn 18 12 54.6 +0.3
GRA1 Grafenberg Arr 7.09 350 Pn 18 12 53.0 -1.4
GRF Grafenberg Arr 7.09 350 P Pn 18 12 53.0 -1.4
HAU Haudompre 7.12 320 eP Pn 18 12 55.3 +0.4
HAU eSn Sn 18 14 08.0 -7.9
comp=N,59nm,0.6s
VAY Valandovo 7.15 98 i Pn Pn 18 12 56.4 +1.2
MAUC Maruska 7.39 24 ePN Pn 18 13 00.2 +1.7
KKB Krupnik 7.41 93 P Pn 18 13 00.2 +1.4
GZR Gura Zlata 7.43 66 ⇑P Pn 18 13 00.2 +1.1
VTS Vitosha 7.43 87 ⇓P Pn 18 13 00.4 +1.2
VTS Vitosha 7.43 87 Pn Pn 18 13 00.0 +0.8
VTS Vitosha 7.43 87 P Pn 18 13 00.0 +0.8
VTS Vitosha 7.43 87 P Pn 18 13 00.4 +1.2
LIT Litokhoron 7.49 107 Pn Pn 18 12 58.4 -1.5
LIT Litokhoron 7.49 107 P Pn 18 12 58.4 -1.5
KEST Kesra 7.58 204 Pn Pn 18 13 05.6 +4.3
comp=N,0.3nm,0.3s,baz=350,slow=19,SNR=7.2
KEST LR LR 18 16 11.2
comp=N,325nm,18.2s,baz=338,slow=39
comp=N,11nm,1.1s
KEST Kesra 7.58 204 Pn Pn 18 13 01.0 -0.2
DEV Deva 7.67 62 ⇓P Pn 18 13 03.2 +0.9
MORC Moravsky Berou 7.68 22 ⇓P Pn 18 13 03.7 +1.3
MORC Moravsky Berou 7.68 22 Pn Pn 18 13 02.9 +0.4
MORC Moravsky Berou 7.68 22 P Pn 18 13 02.9 +0.4
MORC Moravsky Berou 7.68 22 ePN Pn 18 13 03.1 +0.7
MORC eSN Sn 18 14 24.2 -5.2
SMF Signal de Mont 7.70 304 eP Pn 18 13 03.7 +0.9
SMF eSn Sn 18 14 21.9 -8.1
comp=N,20nm,0.6s
KRLC Kraliky 7.76 18 eP Pn 18 13 03.7 +0.1
KRLC Kraliky 7.76 18 ePN Pn 18 13 03.7 +0.1
PAGF Fort de Pagny 7.81 321 eP Pn 18 13 05.6 +1.4
PAGF eSn Sn 18 14 24.2 -8.4
comp=N,5.7nm,0.3s
SFTF Sexfontaines 7.90 317 eP Pn 18 13 07.4 +1.9
baz=130
SFTF eSn Sn 18 14 26.5 -8.5
comp=N,23nm,0.7s
DRGR 7.92 56 ⇑P Pn 18 13 07.8 +2.0
DPC Dobruska-Polom 7.93 15 eP Pn 18 13 06.6 +0.7
DPC Dobruska-Polom 7.93 15 ePN Pn 18 13 06.6 +0.7
MMB Musomiste 7.94 95 P Pn 18 13 07.0 +0.9
LOR Lormes 8.00 308 eP Pn 18 13 07.7 +0.9
baz=122
LOR eSn Sn 18 14 28.8 -8.5
comp=N,13nm,0.5s
MTLF Montolieu 8.04 278 eP Pn 18 13 09.6 +2.3
MTLF eSn Sn 18 14 30.0 -8.2
comp=N,2.9nm,0.6s
AVF Avril sur Loir 8.07 304 eP Pn 18 13 08.7 +1.0
AVF eSn Sn 18 14 30.5 -8.5
comp=N,28nm,1.0s
MEZF Maizieres J'vi 8.09 318 eP Pn 18 13 10.2 +2.1
MEZF eSn Sn 18 14 31.0 -8.6
comp=N,7.7nm,0.4s
SSF Saint Saulge 8.10 306 eP Pn 18 13 09.8 +1.6
SSF eSn Sn 18 14 31.4 -8.4
comp=N,18nm,0.8s
LOT Lotru 8.11 67 ⇑P Pn 18 13 11.2 +2.7
SAVF Savonnieres en 8.14 319 eP Pn 18 13 10.7 +2.0
SAVF eSn Sn 18 14 31.9 -8.8
comp=N,22nm,0.8s
BRG Berggiesshubel 8.17 4 eP Pn 18 13 16.9 +7.8
BRG Amp 18 13 17.9
comp=Z,1.9nm,0.4s
BRG ex x 18 14 36.4
BRG ex x 18 15 39.1
BRG Amp 18 15 48.7
comp=Z,22nm,1.1s
BRG Amp 18 16 40.0
comp=E,0.3nm,11.6s
BRG Amp 18 16 47.0
comp=Z,0.2nm,12.4s
BRG Amp 18 16 51.0
comp=N,0.1nm,15.3s
BRG Berggiesshubel 8.17 4 eP Pn 18 13 16.8 +7.7
BRG e 18 14 36.4
BRG pmax pmax
comp=Z,2.0nm,0.4s
BRG MLR MLR
comp=E,284nm,11.6s
BRG MLR MLR
comp=Z,174nm,12.4s
BRG MLR MLR
comp=N,129nm,15.3s
BGF Bois d'Agland 8.28 301 eP Pn 18 13 12.0 +1.3
BGF eSn Sn 18 14 35.6 -8.7
comp=N,11nm,0.6s
CAF Calviac 8.31 289 eP Pn 18 13 13.2 +2.1
WLF Walferdange 8.46 327 Pn Pn 18 13 12.7 -0.5
WLF Walferdange 8.46 327 P Pn 18 13 12.7 -0.5
WLF Walferdange 8.46 327 dPP Pn 18 13 15.1 +2.0
TRPA Tarpa 8.53 47 ⇑P Pn 18 13 14.7 +0.6
TRPA Tarpa 8.53 47 P Pn 18 13 20.8 +6.8
CLL Collm 8.58 359 Pn Pn 18 13 14.6 -0.2
CLL Collm 8.58 359 eP Pn 18 13 17.0 +2.2
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL MLR MLR
comp=Z,400nm,19.1s
CLL Collm 8.58 359 ePn Pn 18 13 17.0 +2.2
comp=Z,6.0nm,0.9s
CLL eSn Sn 18 14 42.0 -10
CLL eSg Sg 18 15 52.0 +6.2
comp=Z,162nm,2.1s
TCF Toulx Ste Croi 8.59 298 eP Pn 18 13 17.2 +2.3
TCF eSn Sn 18 14 42.9 -9.0
comp=Z,6.1nm,0.8s
RZN Rozhen 8.65 93 P Pn 18 13 17.9 +2.0
UZH Uzhgorod 8.70 44 eP Pn 18 13 16.5 +0.1
RJF Les Rejaudoux 8.77 291 eP Pn 18 13 19.6 +2.2
RJF eSn Sn 18 14 47.6 -8.7
comp=Z,0.4nm,0.3s
VOIR 8.98 68 ⇓P Pn 18 13 22.6 +2.2
BTNL Ternell 9.22 331 dPP Pn 18 13 28.1 +4.6
RCHB Rochefort 9.22 326 dx Pn 18 13 27.2 +3.7

LFF La Frestale 9.24 288 eP Pn 18 13 26.3 +2.5
RDO Rodhopi 9.37 96 Pn Pn 18 13 26.6 +1.0
BCLA Clavier 9.40 328 dPP Pn 18 13 29.8 +3.9
BGES Gesves 9.46 327 dPP Pn 18 13 30.4 +3.6
BMRD Maredsous 9.52 326 dx x 18 14 13.5
MLR Muntele Rosu 9.61 69 ⇑P Pn 18 13 30.0 +1.0
MLR Muntele Rosu 9.61 69 Pn Pn 18 13 33.2 +4.2
comp=Z,0.2nm,0.3s,baz=288,slow=23,SNR=6.5
MLR LR LR 18 18 02.7
comp=Z,425nm,20.6s,baz=266,slow=43
comp=Z,6.3nm,0.9s
MLR Muntele Rosu 9.61 69 Pn Pn 18 13 29.7 +0.7
MLR Muntele Rosu 9.61 69 P Pn 18 13 29.7 +0.7
ALN Alexandroupoli 9.80 96 Pn Pn 18 13 30.9 -0.6
ALN Alexandroupoli 9.80 96 P Pn 18 13 30.9 -0.6
BURAR Bucovina Array 9.82 56 Pn Pn 18 13 33.4 +1.6
COVR Voineasa-Covas 9.87 67 ⇑P Pn 18 13 34.2 +1.7
ETSF Etsaut 10.08 276 ePn Pn 18 13 32.2 -3.2
ETSF eSn Sn 18 15 18.9 -10
comp=Z,0.7nm,0.4s
MFF Saint Martin d 10.23 297 eP Pn 18 13 39.9 +2.5
FLN La Foliniere 11.27 307 eP Pn 18 13 54.1 +2.5
FLN eSn Sn 18 15 47.1 -10
comp=Z,0.7nm,0.2s
GRR Gorron 11.33 305 eP Pn 18 13 54.8 +2.4
IDI Anoyia 11.76 125 Sn Sn 18 16 02.9 -6.9
comp=Z,0.4nm,0.3s,baz=292,slow=10.0,SNR=1.4
IDI LR LR 18 19 36.4
comp=Z,35nm,18.9s,baz=278,slow=42
ESDC Sonseca Array 13.24 262 Pn Pn 18 14 19.0 +0.3
comp=Z,0.1nm,0.3s,baz=70,slow=13,SNR=4.8
ESDC LR LR 18 19 30.3
comp=Z,117nm,18.6s,baz=56,slow=38
comp=Z,0.6nm,0.8s
AKASG Malin Array Be 13.59 49 LR LR 18 20 39.1
comp=Z,98nm,18.1s,baz=238,slow=42
ELL Elmali 14.20 109 P 18 14 38.6 -0.7
ELL Elmali 14.20 109 P P 18 14 38.6 -0.7
BRTR Keskin Array B 15.70 94 Pn P 18 14 56.5 +0.5
comp=Z,0.1nm,0.3s,baz=298,slow=8.0,SNR=5.1
BRTR LR LR 18 21 59.9
comp=Z,204nm,19.6s,baz=277,slow=41
comp=Z,1.2nm,0.9s
EKA Eskdalemuir Ar 16.48 326 Pn Pn 18 15 00.5 -1.2
baz=129,slow=15
comp=Z,1.1nm,0.8s
MDT Midelt 17.15 241 LR LR 18 20 53.8
comp=Z,45nm,20.9s,baz=348,slow=34
HFS Hagfors 17.43 1 LR LR 18 22 36.2
comp=Z,74nm,19.1s,baz=178,slow=40
NB2 NORSAR Subarra 18.38 357 P P 18 15 25.9 +0.6
comp=Z,5.4nm,1.1s,baz=175,slow=11
NOA NORSAR Array B 18.38 357 P P 18 15 25.5 +0.2
baz=175,slow=12,SNR=4.4
NOA LR LR 18 23 16.6
comp=Z,48nm,18.8s,baz=175,slow=40
comp=Z,1.7nm,0.8s
NC405 NORSAR Array S 18.43 358 P P 18 15 24.4 -1.5
NC405 IAmb IAmb 18 15 36.2
comp=Z,22nm,1.2s
OBN Obninsk 19.64 43 LR LR 18 24 13.8
comp=Z,26nm,21.3s,baz=110,slow=40
OBN Obninsk 19.64 43⇑ eP Pn 18 15 40.0 -0.5
OBN S Sn 18 19 21.0 +0.1
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,89nm,18.0s
VORR Voronezh 19.75 54 eP Pn 18 15 43.4 +1.6
VORR pmax pmax
comp=Z,50nm,0.4s
MMAI Mount Meron Ar 20.01 112 P Pn 18 15 46.1 +0.8
comp=Z,7.4nm,0.9s,baz=311,slow=14,SNR=6.9
MMAI LR LR 18 25 09.6
comp=Z,56nm,19.2s,baz=166,slow=42
comp=Z,7.4nm,0.9s
FINES FINESS Array B 20.28 18 P P 18 15 46.2 0.0
comp=Z,6.0nm,0.9s,baz=199,slow=8.7,SNR=4.4
FINES LR LR 18 24 19.9
comp=Z,55nm,20.9s,baz=224,slow=39
comp=Z,6.0nm,0.9s
FINES FINESS Array B 20.28 18 P P 18 15 45.4 -0.7
KIV Kislovodsk 21.47 77 P P 18 15 59.4 +0.2
KIV IAmb IAmb 18 16 03.6
comp=Z,15nm,1.3s
KIV Kislovodsk 21.47 77 eP P 18 16 00.9 +1.7
KIV pmax pmax
comp=Z,10.0nm,1.1s
KVAR Kislovodsk Arr 21.48 77 LR LR 18 26 17.9
comp=Z,78nm,18.9s,baz=247,slow=42
ASF Jabal al Asfar 21.53 111 P P 18 16 03.5 +3.6
comp=Z,3.2nm,0.8s,baz=264,slow=9.3,SNR=5.5
comp=Z,3.2nm,0.8s
KBZ Khabaz 21.65 77 P P 18 16 03.5 +2.5
comp=Z,4.8nm,0.9s,baz=317,slow=7.8,SNR=8.0
KBZ LR LR 18 26 06.7
comp=Z,59nm,20.1s,baz=257,slow=41
comp=Z,4.8nm,0.9s
ONI Oni 22.23 80 P P 18 16 07.8 +0.4
ONI Oni 22.23 80 P P 18 16 07.8 +0.4
ONI pmax pmax
comp=Z,4.0nm,0.9s
BELG Belogornoye 24.97 55 P P 18 16 35.3 +1.3
comp=Z,10.0nm,0.9s,baz=343,slow=19,SNR=5.8
BELG LR LR 18 27 27.1
comp=Z,94nm,20.8s,baz=100,slow=39
comp=Z,10.0nm,0.9s
KIRV Kirov 27.49 42 LR LR 18 28 27.1
comp=Z,80nm,19.1s,baz=253,slow=38
TORD Torodi Ar. Bea 31.10 202 P P 18 17 30.5 +1.4
comp=Z,1.4nm,0.8s,baz=24,slow=8.3,SNR=7.7
comp=Z,1.4nm,0.8s
KOWA Kowa 31.78 213 LR LR 18 30 48.8
comp=Z,69nm,18.2s,baz=307,slow=37
ARU Arti 31.84 49 P P 18 17 34.0 -1.4
ARU IAmb IAmb 18 17 40.9
comp=Z,5.4nm,0.9s
ARU Arti 31.84 49 P P 18 17 36.1 +0.8
GEYT Alibeck 34.30 83 P P 18 17 58.7 +1.6
comp=Z,1.6nm,0.7s,baz=282,slow=10,SNR=4.2
comp=Z,1.6nm,0.7s
KK31 Karatay Array 41.29 69 P P 18 18 55.6 -0.5
KK31 IAmb IAmb 18 18 60.0
comp=Z,3.0nm,0.9s
KK31 Karatay Array 41.29 69 P P 18 18 55.6 -0.5
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 41.29 69 P P 18 18 55.9 -0.2
KKAR Karatay Array 41.29 69 P P 18 18 55.9 -0.2
GAR Garm 42.69 75 P P 18 19 08.7 +1.0
GAR IAmb IAmb 18 19 13.0
comp=Z,4.7nm,0.8s
ZALV Zalesovo Beam 46.98 50 P P 18 19 43.2 +1.8
comp=Z,0.3nm,0.3s,baz=301,slow=17,SNR=3.9
comp=Z,0.3nm,0.3s
NIL Nilore 47.21 80 P P 18 19 44.0 +0.4
NIL Nilore 47.21 80 P P 18 19 44.0 +0.4
NIL pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 47.82 60 P P 18 19 50.5 +2.3
comp=Z,2.4nm,0.8s,baz=284,slow=6.1,SNR=12
comp=Z,2.4nm,0.8s
MKAR Makanchi Array 47.82 60 P P 18 19 48.3 +0.2
MKAR Makanchi Array 47.82 60 P P 18 19 48.3 +0.2
WMQ Urumqi 52.51 62 eP P 18 20 26.2 +2.4
YKA Yellowknife Ar 67.09 337 LR LR 18 53 30.8
comp=Z,881nm,20.6s,baz=287,slow=38

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*IDC **08** 18:15:48.8±0.7, 52°.43S×13°.00E, h0km, mb4.3/12, mbtmp4.3/12, MS3.9/14, Error ellipse: s-maj=25.7km s-min=18.0km az=67.0*

*NEIC **08** 18:15:52.9±2.9, 52°.9S±0°.1×12°.5E±0°.2, h10km±1km, mb4.7/19, Error ellipse: s-maj=25.1km s-min=21.8km az=113.0*

ISC 08 18:15:51.1±0.6, **52°.70S**±0°.08×**12°.6E**±0°.1, **h10**km, **n57**, σ2S**10**/36, **mb4.6**/17, **MS3.8**/14, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	19.88	189	P	Pn	18 20 25.0	+1.1
TROLL	Troll, Antarti	19.88	189	S	S	18 24 00.5	-5.3
SNAA	Sanae	20.23	194	P	Pn	18 20 29.1	+1.1
SNAA	Sanae	20.23	194	P	Pn	18 20 29.0	+1.1
	19nm,0.8s,baz=24,slow=8.8,SNR=90						
SNAA				S	S	18 24 10.9	-1.7

0.3nm,0.4s,baz=70,slow=12,SNR=1.6
SNAA LR LR 18 26 33.2
comp=Z,271nm,20.8s,baz=11,slow=31
19nm,0.8s
SNAA Sanae 20.23 194 P Pn 18 20 28.4 +0.5
SNAA IAmb IAmb 18 20 32.7
comp=Z,28nm,0.9s
VNA1 Neumayer--Stat 20.33 200 P **P** **18 20 26.5 -0.6**
VNA2 Neumayer--Watz 20.38 199 P Pn 18 20 30.1 +0.5
baz=31,slow=11
VNA2 Neumayer--Watz 20.38 199 S **S** **18 24 10.8 -4.7**
VNA3 Neumayer Olymp 21.09 200 P **P** **18 20 37.9 +2.6**
SUR Sutherland 21.16 20 P **P** **18 20 36.5 0.0**
comp=Z,14nm,0.7s,baz=182,slow=11,SNR=35
SUR S S 18 24 13.8 -18
comp=Z,9.9nm,1.1s,baz=120,slow=9.1,SNR=1.9
SUR LR LR 18 26 36.2
comp=Z,283nm,21.4s,baz=170,slow=31
SUR Sutherland 21.16 20 P **P** **18 20 37.6 +1.0**
SOE Somerset East 22.07 30 P **P** **18 20 50.2 +4.0**
SOE IAmb IAmb 18 20 53.9
comp=Z,29nm,1.1s
BOSA Boshof 25.83 26 LR LR 18 29 24.3
comp=Z,275nm,21.8s,baz=196,slow=32
BOSA Boshof 25.83 26 P P 18 21 29.2 +6.6
MAW Mawson 28.13 141 LR LR 18 30 32.7
comp=Z,184nm,21.9s,baz=276,slow=31
HOPE Hope Point 28.77 247 P **P** **18 21 45.3 -3.3**
HOPE IAmb IAmb 18 22 22.0
comp=Z,17nm,1.1s
LBTB Lobatse 29.35 25 LR LR 18 31 40.0
comp=Z,202nm,20.2s,baz=205,slow=33
BELA Belgrano 2 30.35 198 P **P** **18 22 03.7 +1.3**
TSUM Tsumeb 33.66 9 LR LR 18 33 59.3
comp=Z,301nm,19.9s,baz=160,slow=33
QSPA South Pole Qui 37.54 180 P **P** **18 23 06.4 +1.3**
comp=Z,5.1nm,0.9s,baz=340,slow=0.6,SNR=22
QSPA LR LR 18 37 28.9
comp=Z,211nm,21.6s,baz=258,slow=34
comp=Z,5.1nm,0.9s
QSPA South Pole Qui 37.54 180 P **P** **18 23 06.0 +0.8**
QSPA IAmb IAmb 18 23 21.3
comp=Z,14nm,1.1s
PMSA Palmer Station 38.99 221 LR LR 18 37 29.3
comp=Z,157nm,18.1s,baz=127,slow=33
SMAI San Martin Ant 39.06 216 P **P** **18 23 20.8 +3.3**
SMAI IAmb IAmb 18 24 00.1
comp=Z,36nm,1.4s
LSZ Lusaka 39.33 24 LR LR 18 37 29.9
comp=Z,200nm,21.4s,baz=169,slow=33
VNDA Vanda 48.65 171 P **P** **18 24 36.4 +1.8**
comp=Z,1.0nm,0.4s,baz=214,slow=5.3,SNR=6.2
comp=Z,1.0nm,0.4s
VNDA Vanda 48.65 171 P **P** **18 24 36.3 +1.8**
H10S2 ASCENSION HYDR 48.89 323 T T 19 17 21.2
baz=156,slow=74,SNR=6.4
H10S3 ASCENSION HYDR 48.90 323 T T 19 17 23.6
baz=64,slow=74,SNR=11
TRQA Tornquist 52.04 255 P **P** **18 25 01.8 +1.0**
TRQA IAmb IAmb 18 25 27.0
comp=Z,14nm,1.4s
MBAR Mbarara 54.09 23 LR LR 18 47 15.1
comp=Z,236nm,18.9s,baz=178,slow=35
PLCA Paso Flores 55.17 247 P **P** **18 25 24.0 +0.3**
comp=Z,2.3nm,0.8s,baz=108,slow=4.5,SNR=3.7
comp=Z,2.3nm,0.8s
PLCA Paso Flores 55.17 247 P **P** **18 25 24.6 +0.8**
PLCA IAmb IAmb 18 25 26.3
comp=Z,11nm,1.2s
CPUP Villa Florida 57.47 268 P **P** **18 25 41.4 +1.2**
comp=Z,3.0nm,0.8s,baz=139,slow=8.0,SNR=5.3
comp=Z,3.0nm,0.8s
BO02 Sierra Bellavi 59.42 252 P **P** **18 25 54.2 +0.4**
BO02 IAmb IAmb 18 25 54.4
comp=Z,14nm,1.4s
BDFB Brasilia 59.96 284 P **P** **18 25 58.0 +0.2**
comp=Z,1.9nm,0.4s,baz=132,slow=10,SNR=4.9
comp=Z,1.9nm,0.4s
DBIC Dimbokro 60.97 340 LR LR 18 47 25.6
comp=Z,62nm,19.1s,baz=194,slow=31
TORD Torodi Ar. Bea 66.24 348 P **P** **18 26 36.2 -3.0**
comp=Z,1.5nm,0.8s,baz=172,slow=5.3,SNR=7.9
TORD LR LR 18 49 12.2
comp=Z,45nm,21.3s,baz=226,slow=30
comp=Z,1.5nm,0.8s
KOWA Kowa 68.43 343 LR LR 18 51 10.6
comp=Z,91nm,19.7s,baz=141,slow=31
H01W2 Cape Leeuwin H 69.41 121 T T 19 43 16.6
baz=220,slow=75,SNR=24
H01W3 Cape Leeuwin H 69.42 121 T T 19 43 18.8
baz=220,slow=75,SNR=20
H01W1 Cape Leeuwin H 69.43 121 T T 19 43 21.5
baz=220,slow=75,SNR=21
LPAZ La Paz 71.60 267 P **P** **18 27 14.8 +1.3**
comp=Z,12nm,0.9s,baz=115,slow=5.8,SNR=42
comp=Z,12nm,0.9s
LPAZ La Paz 71.60 267 P **P** **18 27 15.3 +1.8**
BBOO Buckleboo 81.66 135 P **P** **18 28 07.9 -1.5**
STKA Stephens Creek 84.78 138 P **P** **18 28 24.5 -1.0**
comp=Z,2.5nm,0.7s,baz=175,slow=1.6,SNR=4.0
comp=Z,2.5nm,0.7s
STKA Stephens Creek 84.78 138 P **P** **18 28 24.8 -0.7**
ASAR Alice Springs 88.48 128 P **P** **18 28 42.4 -1.4**
comp=Z,2.5nm,0.7s,baz=204,slow=4.5,SNR=14
comp=Z,2.5nm,0.7s
WRA Warramunga Arr 91.86 127 P **P** **18 28 59.1 -0.5**
comp=Z,0.5nm,0.7s,baz=216,slow=5.2,SNR=3.0
comp=Z,0.5nm,0.7s
ESDC Sonseca Array 93.11 347 P **P** **18 29 04.8 +0.2**
comp=Z,1.0nm,0.7s,baz=176,slow=4.1,SNR=9.6
comp=Z,1.0nm,0.7s
DAVOX Davos/Dischmat 99.12 358 LR LR 19 14 19.8
comp=Z,221nm,18.6s,baz=51,slow=36
ZALV Zalesovo Beam 122.03 42 PKP **PKPdf** **18 34 41.9 -2.7**
comp=Z,0.4nm,0.5s,baz=183,slow=3.0,SNR=3.7
TXAR Lajitas Array 128.44 269 PKP **PKPdf** **18 34 56.3 -1.5**
comp=Z,0.7nm,1.1s,baz=142,slow=2.1,SNR=2.7
PDAR Pinedale Array 140.82 279 PKhKP PKPpre 18 35 13.5
comp=Z,1.2nm,1.0s,baz=104,slow=5.0,SNR=5.2
NVAR Mina Array Bea 143.51 267 PKhKP PKPpre 18 35 22.0
comp=Z,0.5nm,0.6s,baz=88,slow=4.6,SNR=4.8
YKA Yellowknife Ar 150.87 311 PKPbc **PKPbc** **18 35 41.5 -1.0**
comp=Z,4.3nm,0.6s,baz=102,slow=2.1,SNR=27
INK Inuvik 157.58 327 PKPab **PKPab** **18 36 17.1 -1.1**
comp=Z,3.2nm,0.6s,baz=32,slow=9.4,SNR=4.3
ILAR Eielson Array 163.98 327 PKPab **PKPab** **18 36 46.1 -0.1**
comp=Z,1.3nm,0.8s,baz=31,slow=3.6,SNR=8.2

WEL 08 18:16:47.5±1.0, 37°S±4°×17°9E±°, h19km±5km, M3.2/13, ML3.6/23, MLv3.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=96.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.61**	**236**	P	Pb	18 16 58.8	-0.8
MXZ				S	Sb	18 17 07.2	-0.5
WMGZ	**Waiomatatini S**	**0.73**	**215**	P	Pn	18 17 02.7	-0.1
WMGZ				S	Sn	18 17 14.9	+1.4
PKGZ	**Pakihiroa**	**0.96**	**226**	P	Pn	18 17 05.9	-0.1
PKGZ				S	Sn	18 17 20.9	+1.7
PUZ	**Puketiti**	**1.01**	**213**	P	Pb	18 17 06.5	0.0
PUZ				S	Sg	18 17 21.2	+0.6
HAZ	**Te Kaha**	**1.07**	**240**	P	Pb	18 17 05.8	-1.6
TWGZ	**Tauwhareparae**	**1.23**	**219**	P	Pb	18 17 10.0	-0.1
RUGZ	**Raukumara Rang**	**1.25**	**233**	P	Pn	18 17 10.2	+0.1
RUGZ				S	Sg	18 17 30.1	+1.9
CNGZ	**Carnagh Statio**	**1.39**	**205**	P	Pn	18 17 12.2	+0.3
TKGZ	**Te Karaka**	**1.50**	**215**	P	Pn	18 17 12.1	-1.2
TKGZ				S	Sn	18 17 32.7	+0.4
SNGZ	**Shannon Statio**	**2.01**	**219**	P	Pn	18 17 20.8	+0.4
SNGZ				S	Sn	18 17 45.3	+0.2
KNZ	**Kokohu**	**2.06**	**209**	P	Pn	18 17 20.2	-0.8
KNZ				S	Sn	18 17 45.6	-0.6
MHGZ	**Mahia Peninsul**	**2.10**	**203**	P	Pn	18 17 21.2	-0.4
MUGZ	**Murupara**	**2.13**	**233**	P	Pn	18 17 23.1	+1.0
MUGZ				S	Sn	18 17 47.5	-0.5
MTHZ	**Maungataniwha**	**2.33**	**225**	P	Pn	18 17 25.2	+0.4
MTHZ				S	Sn	18 17 53.8	+0.9
NMHZ	**Naumai**	**2.52**	**221**	P	Pn	18 17 28.0	+0.5
NMHZ				S	Sn	18 17 59.2	+1.5
BKZ	**Black Stump Fm**	**2.74**	**224**	P	Pn	18 17 30.3	-0.2
TOZ	**Tahuroa Road**	**2.79**	**258**	P	Pn	18 17 30.9	-0.2
MCHZ	**McNeill Hill**	**2.84**	**218**	P	Pn	18 17 30.8	-1.0
MCHZ				S	Sn	18 18 06.1	+0.7
KWHZ	**Kaweka Forest**	**2.96**	**221**	P	Pn	18 17 33.5	0.0
KWHZ				S	Sn	18 18 08.9	+0.3
GRZ	**Great Barrier**	**2.97**	**288**	P	Pn	18 17 34.2	+0.6
MKAZ	**Moumakai**	**3.03**	**271**	P	Pn	18 17 33.3	-1.0
KAHZ	**Kahuranaki**	**3.04**	**212**	P	Pn	18 17 33.5	-1.1
TMVZ	**Te Maari**	**3.18**	**233**	P	Pn	18 17 37.3	+0.8
ETAZ	**East Tamaki Re**	**3.23**	**274**	P	Pn	18 17 38.2	+1.1
MBAZ	**Motutapu North**	**3.27**	**277**	P	Pn	18 17 38.5	+0.8
HIZ	**Hauiti**	**3.49**	**247**	P	Pn	18 17 41.7	+1.0
RVAZ	**Riverhead Bore**	**3.53**	**276**	P	Pn	18 17 41.6	+0.4
WCZ	**Waipu Caves**	**3.92**	**288**	P	Pn	18 17 46.3	-0.4
OUZ	**Omahuta**	**4.77**	**293**	P	Pn	18 17 58.1	-0.2

VAO 08 18:25:42.8±0.2, 25°41S×49°11W, h0km, mbR2.7, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET01	**Itanhaem-SP**	**2.00**	**57**	*e*P	Pn	18 26 16.5	-1.4
PET01				*e*S	Sn	18 26 42.2	-1.5
PET01	**Itanhaem-SP**	**2.00**	**57**	*e*P	Pn	18 26 17.7	-0.2
PET01				*e*S	Sn	18 26 42.9	-0.9
FRTB	**Fartura**	**2.10**	**349**	*e*P	Pn	18 26 16.8	-2.5
FRTB				*e*S	Sn	18 26 42.1	-4.1
FRTB	**Fartura**	**2.10**	**349**	*e*P	Pn	18 26 17.6	-1.7
FRTB				*e*S	Sn	18 26 44.9	-1.3
PTGB	**Pitanga**	**2.77**	**284**	*e*P	Pn	18 26 27.0	-1.5
PTGB				*e*S	Sn	18 27 01.2	-1.5
PTGB	**Pitanga**	**2.77**	**284**	*e*P	Pn	18 26 28.1	-0.5
PTGB				*e*S	Sn	18 27 03.3	+0.5
VAO	**Valinhos**	**3.10**	**40**	*e*P	Pn	18 26 31.0	-2.0
VAO				*e*S	Sn	18 27 07.9	-2.9
VAO	**Valinhos**	**3.10**	**40**	*e*P	Pn	18 26 33.5	+0.5
VAO				*e*S	Sn	18 27 12.4	+1.6
TER01	**Tubaro-SC**	**3.11**	**180**	*e*P	Pb	18 26 36.2	-2.7
TER01				*e*S	Sb	18 27 17.0	-0.4
TER01	**Tubaro-SC**	**3.11**	**180**	*e*P	Pn	18 26 32.9	-0.2
TER01				*e*S	Sn	18 27 10.5	-0.5
ITAB	**Concordia**	**3.26**	**236**	*e*P	Pn	18 26 36.9	+1.6
ITAB	**Concordia**	**3.26**	**236**	*e*P	Pn	18 26 35.4	+0.1
ITAB				*e*S	Sn	18 27 15.6	+0.8
RCLB	**Rio Claro- Sao**	**3.31**	**26**	*e*P	Pn	18 26 33.6	-2.3
RCLB				*e*S	Sn	18 27 12.6	-3.4
PARB	**Paraibuna**	**3.79**	**58**	*e*P	Pn	18 26 41.0	-1.5
PARB				*e*S	Sn	18 27 26.3	-1.6
PARB	**Paraibuna**	**3.79**	**58**	*e*P	Pn	18 26 43.0	+0.4
PARB				*e*S	Sn	18 27 29.4	+1.5
CNLB	**Canela**	**4.18**	**201**	*e*P	Pn	18 26 50.9	+2.9
CNLB				*e*S	Sb	18 27 43.1	-5.4
CNLB	**Canela**	**4.18**	**201**	*e*P	Pn	18 26 47.7	-0.3
CNLB				*e*S	Sn	18 27 38.0	+0.4
PCMB	**Pacaembu**	**4.27**	**332**	*e*P	Pn	18 26 46.9	-2.3
PCMB				*e*S	Sn	18 27 36.3	-3.5
BB19B	**Bebedouro**	**4.36**	**7**	*e*P	Pn	18 26 47.8	-2.6
BB19B				*e*S	Sn	18 27 38.0	-3.9

BJI ***08*** *18:28:26.5±0.0, 26°60N×127°45E, h58km, mb4.3/46, mB4.8/14, Ms4.4/9, Ms7 4.1/9*
IDC ***08*** *18:28:28.0±0.7, 26°79N×127°65E, h64km±6km, mb4.1/28, mbtmp4.4/29, MS3.6/4, Error ellipse: s-maj=14.3km s-min=9.9km az=75.0*
JMA ***08*** *18:28:28.2±0.2, 26°7N±0°7×127°5E±0°5, h63km±2km, MD4.3/11, MV4.5/11, NEAR OKINAWAJIMA ISLAND*
JMA Felt III J1 at NEAR OKINAWAJIMA ISLAND .
MOS ***08*** *18:28:28.1±1.0, 26°63N×127°58E, h85km, mb4.5/15, Error ellipse: s-maj=8.9km s-min=5.5km az=104.6*
NEIC ***08*** *18:28:28.1±1.9, 26°65N±0°07×127°52E±0°06, h60km±6km, mb4.7/123, Error ellipse: s-maj=11.1km s-min=6.7km az=153.0*

ISC 08 18:28:28.0±0.5, 26°68N±0°04×127°57E±0°03, h65km±3km, n328, σ1°21/343, mb4.6/111, 6C-5D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.31**	**253**	*i* P	**Pn**	**18 28 38.6**	**0.0**
JAGN				S	**Sn**	**18 28 46.2**	**-0.1**
JAGN	**Aguni-jima**	**0.31**	**253**	A	A	18 28 38.6	
comp=E,47nm,1.9s,comp=E,111nm,1.1s							
JNTH	**Nagotoyohara**	**0.43**	**111**	*i* P	**Pn**	**18 28 40.1**	**+0.4**
JNTH				S	**Sn**	**18 28 48.8**	**+0.6**
JNTH	**Nagotoyohara**	**0.43**	**111**	A	A	18 28 40.1	
comp=E,29nm,0.3s,comp=E,39nm,1.0s							
JIH	**Iheya**	**0.50**	**45**	*i* P	**Pn**	**18 28 40.5**	**+0.2**
JIH				S	**Sn**	**18 28 49.5**	**+0.1**
JIH	**Iheya**	**0.50**	**45**	A	A	18 28 40.5	
comp=E,43nm,2.1s,comp=E,86nm,1.0s							
JJT3	**Tamagusuku3**	**0.56**	**160**	*i* P	**Pn**	**18 28 42.5**	**+1.5**
JJT3				S	**Sn**	**18 28 52.6**	**+2.1**
JJT3	**Tamagusuku3**	**0.56**	**160**	A	A	18 28 42.5	
comp=E,118nm,1.1s,comp=E,150nm,1.9s							
JOW	**Kunigami**	**0.65**	**76**	P	**Pn**	**18 28 42.5**	**+0.6**
3μm,0.3s,baz=149,slow=26							
JOW				S	**Sn**	**18 28 52.5**	**+0.3**
18μm,0.2s,baz=217,slow=20,SNR=43							
JOW	**Kunigami**	**0.65**	**76**	Pn	**Pn**	**18 28 42.2**	**+0.3**
JOW				Sn	**Sn**	**18 28 52.5**	**+0.3**
JOW	**Kunigami**	**0.65**	**76**	P	**Pn**	**18 28 42.7**	**+0.8**
JOW	**Kunigami**	**0.65**	**76**	*i* P	**Pn**	**18 28 42.3**	**+0.3**
JOW				S	**Sn**	**18 28 52.4**	**+0.3**
JOW	**Kunigami**	**0.65**	**76**	A	A	18 28 42.3	
comp=E,48nm,0.8s,comp=E,56nm,0.5s							
JKE	**Kume jima 2**	**0.79**	**244**	*i* P	**Pn**	**18 28 43.7**	**+0.2**
JKE				S	**Sn**	**18 28 55.7**	**+0.7**
JKE	**Kume jima 2**	**0.79**	**244**	A	A	18 28 43.7	
comp=E,19nm,0.9s,comp=E,40nm,2.0s							
JYRO	**Yoronjima**	**0.86**	**66**	*i* P	**Pn**	**18 28 44.7**	**+0.3**
JYRO				S	**Sn**	**18 28 56.4**	**-0.2**
JYRO	**Yoronjima**	**0.86**	**66**	A	A	18 28 44.7	
comp=E,20nm,2.1s,comp=E,18nm,4.0s							
JOKE	**Okinoerabujima**	**1.12**	**52**	*i* P	**Pn**	**18 28 47.8**	**0.0**
JOKE				*e*S	**Sn**	**18 29 02.0**	**-0.6**
JOKE	**Okinoerabujima**	**1.12**	**52**	A	A	18 28 47.8	
comp=E,6.0nm,5.7s,comp=E,16nm,3.2s							
JTK	**Tokunoshima**	**1.65**	**48**	*i* P	**Pn**	**18 28 54.8**	**0.0**
JTK				S	**Sn**	**18 29 14.3**	**-0.8**
JTK	**Tokunoshima**	**1.65**	**48**	A	A	18 28 54.8	
comp=E,5.0nm,0.7s,comp=E,8.0nm,0.7s							
JZK	**Kikaishima**	**2.69**	**52**	A	A	18 29 09.9	
comp=E,14nm,2.4s,comp=E,11nm,3.6s							
JMJ	**Miyako jima 2**	**2.77**	**228**	P	**Pn**	**18 29 11.4**	**+1.5**
YOJ	**Yonaguni jima**	**4.67**	**243**	Pn	**Pn**	**18 29 35.6**	**-0.4**
YOJ				Sn	**Sn**	**18 30 26.8**	**-2.1**
YOJ	**Yonaguni jima**	**4.67**	**243**	P	**Pn**	**18 29 35.6**	**-0.4**
YOJ						18 30 26.8	
YOJ	**Yonaguni jima**	**4.67**	**243**	P	**Pn**	**18 29 36.5**	**+0.5**
JSU	**Suzuyama**	**5.43**	**27**	Pn	**Pn**	**18 29 47.5**	**+1.1**
TATO	**Taipei**	**5.74**	**254**	Pn	**Pn**	**18 29 51.7**	**+1.1**
YHNB	**Yeheng**	**5.94**	**252**		**Pn**	**18 29 55.0**	**+1.6**
YHNB	**Yeheng**	**5.94**	**252**	P	**Pn**	**18 29 55.7**	**+2.3**
NACB	**Ninganchiao**	**5.95**	**247**		**Pn**	**18 29 52.4**	**-1.1**
YULB	**Yu-li**	**6.56**	**241**		**Pn**	**18 29 58.8**	**-3.1**
SSLB	**Suanglung**	**6.65**	**246**	Pn	**Pn**	**18 30 01.4**	**-1.7**
SSLB	**Suanglung**	**6.65**	**246**	P	**Pn**	**18 30 02.3**	**-0.8**
TWG	**Pinlang**	**7.04**	**238**	Pn	**Pn**	**18 30 05.5**	**-3.0**
TPUB	**Ta-pu**	**7.14**	**243**		**Pn**	**18 30 09.0**	**-0.8**
TPUB	**Ta-pu**	**7.14**	**243**	P	**Pn**	**18 30 09.4**	**-0.4**
JTU	**Tsushima**	**7.98**	**11**	Pn	**Pn**	**18 30 22.1**	**+0.9**
KNMB	**Chin-men Tao**	**8.58**	**257**	Pn	**Pn**	**18 30 27.9**	**-1.5**
JMN	**Monobe**	**8.89**	**36**	Pn	**Pn**	**18 30 32.1**	**-1.7**
NJ2	**Nanjing**	**9.30**	**307**	*e*P	**Pn**	**18 30 38.3**	**-1.0**
NJ2				pmax	pmax		
comp=Z,6.0nm,0.5s							
JHS	**Saijyo**	**9.56**	**29**	Pn	**Pn**	**18 30 41.1**	**-1.8**
TJN	**Taejon**	**9.67**	**359**	Pn	**Pn**	**18 30 47.9**	**+3.6**
TJN	**Taejon**	**9.67**	**359**	P	**Pn**	**18 30 47.9**	**+3.6**
KSAR	**Wonju Array Be**	**10.74**	**1**	Pn	**Pn**	**18 31 02.3**	**+3.4**
KSAR	**Wonju Array Be**	**10.74**	**1**	P	**Pn**	**18 31 02.3**	**+3.4**
KSRS	**Korea Array**	**10.75**	**2**	P	**Pn**	**18 31 01.4**	**+2.4**
12nm,0.8s,baz=177,slow=14,SNR=22							
KSRS				LR	LR	18 35 06.7	
comp=Z,208nm,20.0s,baz=150,slow=38							
KS19	**Wonju Array Si**	**10.80**	**1**	Pn	**Pn**	**18 31 01.8**	**+2.1**
INCN	**Inchon**	**10.80**	**356**	Pn	**Pn**	**18 31 03.9**	**+4.1**
INCN	**Inchon**	**10.80**	**356**	P	**Pn**	**18 31 03.9**	**+4.1**
INU	**Inuyama**	**11.84**	**41**	Pn	**Pn**	**18 31 13.4**	**-0.6**
INU	**Inuyama**	**11.84**	**41**	P	**Pn**	**18 31 15.8**	**+1.8**
JGF	**Kuroka**	**12.21**	**41**	Pn	**Pn**	**18 31 19.4**	**-0.2**
JCJ	**Chichijima**	**13.05**	**85**	LR	LR	18 35 14.5	
comp=Z,214nm,19.3s,baz=250,slow=31							
MAJO	**Matsushiro**	**13.36**	**40**	Pn	**Pn**	**18 31 34.7**	**0.0**
MAJO	**Matsushiro**	**13.36**	**40**	P	**Pn**	**18 31 34.7**	**0.0**
MAJO	**Matsushiro**	**13.36**	**40**	P	**Pn**	**18 31 38.3**	**+3.6**
LYN	**LuoYang**	**15.18**	**305**	*e*P	**P**	**18 32 02.9**	**+0.7**
LYN				pmax	pmax		
comp=Z,20nm,1.3s							
LYN				LR	LR		
comp=N,520nm,14.9s							
LYN				LR	LR		
comp=E,560nm,12.7s							
LYN				LR	LR		
comp=Z,630nm,13.5s							
HNS	**HongShan**	**15.26**	**318**	⇑P	**P**	**18 32 02.0**	**-1.0**
HNS				pmax	pmax		
comp=Z,9.0nm,0.5s							
JMM	**Marumori**	**15.78**	**42**	Pn	**Pn**	**18 32 06.0**	**-0.1**
JMM				IAmb	IAmb	18 32 32.2	
comp=Z,84nm,1.4s							
BJT	**Baijiatuau**	**16.34**	**327**	P	**P**	**18 32 15.8**	**+0.7**
BJT	**Baijiatuau**	**16.34**	**327**	P	**P**	**18 32 15.8**	**+0.7**
BJT				pmax	pmax		
comp=Z,9.0nm,0.8s							
CN2	**Changchun**	**17.17**	**355**	P	**P**	**18 32 25.6**	**+1.4**
CN2				pmax	pmax		
comp=Z,20nm,0.8s							
XAN	**Xi'an**	**17.67**	**299**	P	**P**	**18 32 32.2**	**+2.3**
XAN				pmax	pmax		
comp=Z,7.0nm,0.8s							
XAN				LR	LR		
comp=Z,460nm,11.5s							
XAN				LR	LR		
comp=Z,640nm,13.1s							
XAN				LR	LR		
comp=Z,740nm,16.5s							
USRK	**Ussuriysk Ar.**	**17.84**	**10**	P	**P**	**18 32 30.5**	**-1.1**
comp=Z,2.4nm,0.7s,baz=185,slow=8.7,SNR=1.5							
USRK	**Ussuriysk Ar.**	**17.84**	**10**	P	**P**	**18 32 30.7**	**-1.0**
USRK	**Ussuriysk Ar.**	**17.84**	**10**	P	**P**	**18 32 30.7**	**-1.0**
HHC	**Hu-ho-hao-te**	**19.37**	**321**	*e*P	**Pn**	**18 32 51.1**	**+0.9**
HHC				pmax	pmax		
comp=Z,32nm,0.9s							
HHC				pmax	pmax		
comp=Z,740nm,5.2s							
XLT	**XiLinHaoTe**	**19.54**	**335**	*e*P	**Pn**	**18 32 51.9**	**-0.3**
XLT				pmax	pmax		
comp=Z,10.0nm,0.6s							
ERM	**Erimo**	**19.94**	**36**	*i* P	**P**	**18 32 51.6**	**-3.0**
ERM				pmax	pmax		
comp=Z,259nm,2.6s							
LZH	**Lanzhou**	**22.28**	**301**	*e*P	**P**	**18 33 20.8**	**+0.8**
LZH				pP	pP	18 33 29.7	-3.9
LZH				pmax	pmax		
comp=Z,12nm,1.1s							
KLR	**Kul'dur**	**22.75**	**7**	P	**P**	**18 33 24.4**	**-0.3**
comp=Z,0.7nm,0.4s,baz=102,slow=9.2,SNR=2.3							
KLR				PcP	**PcP**	**18 37 13.9**	**-0.3**
comp=Z,1.1nm,0.5s,baz=262,slow=15,SNR=3.5							
comp=Z,0.7nm,0.4s							
KLR	**Kul'dur**	**22.75**	**7**	*i* P	**P**	**18 33 24.3**	**-0.4**
KLR				pmax	pmax		
comp=Z,2.0nm,0.9s							
MYLDM	**Lahad Datu**	**23.07**	**204**	P	**P**	**18 33 27.7**	**-0.5**
MYLDM				IAmb	IAmb	18 34 11.0	
comp=Z,28nm,1.3s							
PZH	**PanZhiHua**	**23.09**	**275**	P	**P**	**18 33 28.5**	**0.0**
PZH				pmax	pmax		
comp=Z,20nm,0.9s							
PZH				pmax	pmax		
comp=Z,160nm,4.9s							
YSS	**Yuzh-Sakhalins**	**23.53**	**27**	P	**P**	**18 33 33.5**	**+1.3**
YSS				IAmb	IAmb	18 34 04.6	
comp=Z,52nm,1.4s							
TOLI2	**Tolitoli**	**26.24**	**196**	P	**P**	**18 33 55.2**	**-2.0**
TOLI2				IAmb	IAmb	18 34 22.4	
comp=Z,29nm,1.3s							
TOLI2	**Tolitoli**	**26.24**	**196**	P	**P**	**18 33 58.0**	**+0.8**
GTA	**Gaotai**	**26.39**	**306**	⇓P	**P**	**18 33 57.2**	**-1.3**
GTA				pP	pP	18 34 13.7	0.0
GTA				sP	sP	18 34 22.4	+1.1
GTA				pmax	pmax		
comp=Z,17nm,0.7s							
ULN	**Ulaanbaatar**	**26.57**	**328**	P	**P**	**18 34 01.1**	**+1.1**
ULN	**Ulaanbaatar**	**26.57**	**328**	P	**P**	**18 34 01.1**	**+1.1**
ULN				pmax	pmax		
comp=Z,5.0nm,0.6s							
SONM	**Songino Array**	**26.86**	**327**	P	**P**	**18 34 03.4**	**+0.8**
comp=Z,5.5nm,0.4s,baz=142,slow=11,SNR=34							
comp=Z,5.5nm,0.4s							
SONM	**Songino Array**	**26.86**	**327**	P	**P**	**18 34 03.2**	**+0.6**
SONM	**Songino Array**	**26.86**	**327**	P	**P**	**18 34 03.2**	**+0.6**
SONM				pmax	pmax		
comp=Z,6.0nm,1.0s							
CHTO	**Chiang Mai**	**27.49**	**259**	P	**P**	**18 34 08.2**	**-0.2**
CHTO	**Chiang Mai**	**27.49**	**259**	P	**P**	**18 34 08.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**27.63**	**259**	P	**P**	**18 34 10.2**	**+0.6**
comp=Z,2.2nm,0.9s,baz=57,slow=7.5,SNR=17							
CMAR				PcP	**PcP**	**18 37 26.6**	**+0.9**
comp=Z,1.8nm,0.8s,baz=38,slow=1.7,SNR=13							
comp=Z,2.2nm,0.9s							
CMAR	**Chiang Mai Arr**	**27.63**	**259**	P	**P**	**18 34 08.9**	**-0.7**
CMAR					**PcP**	**18 37 25.4**	**-0.4**
FAKI	**Fak Fak**	**29.77**	**171**	P	**P**	**18 34 26.9**	**-1.7**
FAKI				IAmb	IAmb	18 34 53.2	
comp=Z,33nm,1.2s							
KULM	**Kulim**	**33.35**	**235**	P	**P**	**18 34 59.0**	**-1.1**
IPM	**Ipoh**	**33.63**	**234**	P	**P**	**18 35 01.8**	**-0.8**
IPM				IAmb	IAmb	18 35 04.2	
comp=Z,12nm,1.0s							
PETK	**Petropavlovsk-**	**34.63**	**32**	P	**P**	**18 35 08.5**	**-2.4**
comp=Z,4.8nm,0.8s,baz=188,slow=8.7,SNR=4.5							
comp=Z,4.8nm,0.8s							
PETK	**Petropavlovsk-**	**34.63**	**32**	P	**P**	**18 35 11.1**	**+0.2**
PETK	**Petropavlovsk-**	**34.63**	**32**	P	**P**	**18 35 11.1**	**+0.2**
PET	**Petropavlovsk**

MKAR Makanchi Array 40.80 312 P **P 18 36 02.4 -0.6**
MKAR Makanchi Array 40.80 312 *ce*P **P 18 36 02.7 -0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MAKZ Makanchi 41.01 312 P **P 18 36 04.0 -0.8**
MAKZ Makanchi 41.01 312 P **P 18 36 04.0 -0.8**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 41.53 323 P **P 18 36 08.0 -0.9**
ZALV Zalesovo Beam 41.53 323 P **P 18 36 08.3 -0.6**
comp=Z,5.0nm,0.6s,baz=112,slow=8.3,SNR=23
ZALV PcP **PcP 18 38 05.2 +0.1**
comp=Z,0.4nm,0.4s,baz=134,slow=6.2,SNR=1.9
ZALV ScP **ScP 18 41 47.2 -2.5**
comp=Z,0.5nm,0.6s,baz=107,slow=1.5,SNR=3.6
comp=Z,5.0nm,0.6s
KNRA Kununurra 42.12 178 P **P 18 36 14.0 +0.1**
KNRA IAmb IAmb 18 36 29.6
comp=Z,38nm,1.4s
KNRA Kununurra 42.12 178 P **P 18 36 14.8 +0.9**
COEN Coen 43.15 158 P **P 18 36 20.9 -1.4**
COEN IAmb IAmb 18 36 59.5
comp=Z,25nm,1.1s
SMY Shemya 43.21 40 P **P 18 36 21.6 -0.8**
SMY Shemya 43.21 40 P **P 18 36 21.7 -0.8**
KURK Kurchatov 44.09 316 P **P 18 36 29.0 -0.6**
KURK IAmb IAmb 18 36 29.9
comp=Z,7.2nm,0.6s
KURK Kurchatov 44.09 316 P **P 18 36 29.0 -0.6**
KURK pmax pmax
comp=Z,7.0nm,0.6s
KURBB Kurchatov Arra 44.12 316 P **P 18 36 29.8 -0.1**
comp=Z,6.4nm,0.5s,baz=104,slow=8.8,SNR=10
comp=Z,6.4nm,0.5s
KSH Kashi 44.52 300 P **P 18 36 36.6 +3.2**
KSH pmax pmax
comp=Z,3.0nm,0.9s
FITZ Fitzroy Crossi 44.55 183 P **P 18 36 33.9 +0.4**
comp=Z,8.1nm,0.7s,baz=11,slow=7.8,SNR=21
FITZ PcP **PcP 18 38 16.1 +0.4**
comp=Z,1.4nm,0.6s,baz=7.3,slow=5.4,SNR=1.9
comp=Z,8.1nm,0.7s
FITZ Fitzroy Crossi 44.55 183 P **P 18 36 33.9 +0.4**
FITZ IAmb IAmb 18 36 34.8
comp=Z,8.0nm,0.8s
FITZ Fitzroy Crossi 44.55 183 P **P 18 36 34.4 +0.9**
NRN Naryn 44.56 303 P **P 18 36 34.5 +0.6**
NRN Naryn 44.56 303 P **P 18 36 34.5 +0.6**
NRN pmax pmax
comp=Z,4.0nm,0.8s
BOOM Boomskoye usch 44.66 304 P **P 18 36 35.4 +0.9**
BOOM PcP **PcP 18 38 16.9 +0.7**
BOOM Boomskoye usch 44.66 304 P **P 18 36 35.4 +0.9**
BOOM 18 38 16.9
BOOM pmax pmax
comp=Z,6.0nm,1.2s
TIXI Tiksi 45.02 1 P **P 18 36 38.0 +1.3**
TIXI IAmb IAmb 18 36 44.0
comp=Z,9.2nm,1.0s
TIXI Tiksi 45.02 1 P **P 18 36 38.0 +1.3**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
AAK Ala-Archa 45.73 305 PcP **PcP 18 38 19.8 -0.1**
comp=Z,1.4nm,0.6s,baz=65,slow=7.2,SNR=2.7
AAK Ala-Archa 45.73 305 P **P 18 36 42.8 -0.2**
AAK Ala-Archa 45.73 305 P **P 18 36 42.8 -0.2**
AAK pmax pmax
comp=Z,4.0nm,1.3s
ARLS Aral 45.83 303 P **P 18 36 44.9 +1.1**
ARLS pmax pmax
comp=Z,10.0nm,0.8s
AMKA Amchitka 45.95 43 P **P 18 36 44.2 -0.1**
WB0 Warramunga Arr 46.64 171 P **P 18 36 50.1 0.0**
WRAB Tennant Creek 46.80 171 P **P 18 36 50.6 -0.7**
WRAB IAmb IAmb 18 36 54.1
comp=Z,12nm,1.3s
WRAB Tennant Creek 46.80 171 P **P 18 36 50.6 -0.7**
WRAB pmax pmax
comp=Z,12nm,1.3s
WRAB Tennant Creek 46.80 171 P **P 18 36 51.9 +0.6**
WRA Warramunga Arr 46.81 171 P **P 18 36 51.7 +0.3**
comp=Z,3.6nm,0.7s,baz=353,slow=8.4,SNR=32
WRA PcP **PcP 18 38 23.7 +0.1**
comp=Z,0.7nm,0.8s,baz=352,slow=4.3,SNR=1.9
WRA LR LR 18 58 12.7
comp=Z,73nm,19.6s,baz=1.5,slow=38
comp=Z,3.6nm,0.7s
WRA Warramunga Arr 46.81 171 P **P 18 36 51.4 0.0**
WRA Warramunga Arr 46.81 171 P **P 18 36 51.4 0.0**
WB2 Warramunga Arr 46.81 171 P **P 18 36 51.7 +0.3**
WB2 IAmb IAmb 18 36 53.4
comp=Z,5.1nm,0.8s
WR0 Warramunga Arr 46.85 171 P **P 18 36 52.1 +0.4**
WR0 IAmb IAmb 18 36 53.3
comp=Z,17nm,1.4s
NIL Nilore 47.03 292 P **P 18 36 52.6 -0.5**
NIL IAmb IAmb 18 36 54.1
comp=Z,7.2nm,0.6s
NIL Nilore 47.03 292 P **P 18 36 52.7 -0.5**
NIL pmax pmax
comp=Z,7.0nm,0.6s
MTSU Mount Surprise 47.42 158 P **P 18 36 58.4 +2.2**
BILL Bilibino 47.44 19 P **P 18 36 57.0 +1.3**
BILL IAmb IAmb 18 37 09.1
comp=Z,17nm,1.2s
BILL Bilibino 47.44 19‖ *e*P **P 18 36 56.7 +1.0**
BILL *SP **sP 18 37 16.0 -3.4**
BILL S S 18 43 33.0 -12
BILL SSS SSS 18 48 27.0
BILL pmax pmax
comp=Z,19nm,1.6s
BILL MLR MLR
comp=Z,196nm,16.0s
MBWA Marble Bar 48.16 190 P **P 18 37 02.2 +0.4**
BTK Batken 48.49 301 P **P 18 37 03.3 -1.1**
BTK Batken 48.49 301 P **P 18 37 03.3 -1.1**
BTK pmax pmax
comp=Z,4.0nm,1.2s
PSA00 Pilbara Seismi 48.55 190 P **P 18 37 03.4 -1.4**
PSA00 IAmb IAmb 18 37 25.9
comp=Z,9.4nm,1.4s
NRIK Noril'sk 48.65 342 *i* P **P 18 37 04.6 -0.4**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
KK31 Karatay Array 48.67 305 P **P 18 37 05.8 +0.2**
KK31 Karatay Array 48.67 305 P **P 18 37 05.9 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 48.67 305 P **P 18 37 05.4 -0.3**
KKAR PcP **PcP 18 38 29.4 -0.7**
KKAR Karatay Array 48.67 305 P **P 18 37 05.4 -0.3**
KKAR 18 38 29.4
GAR Garm 48.93 300 P **P 18 37 07.8 -0.1**
GAR IAmb IAmb 18 37 10.8
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 49.55 318 PcP **PcP 18 38 31.7 -1.4**
comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=3.0
BRVK Borovoye 49.62 318 *ce*P **P 18 37 13.0 +0.3**
BRVK pmax pmax
comp=Z,11nm,1.0s
CHGR Chuyangaron 49.85 299 P **P 18 37 13.8 -1.1**
CHGR IAmb IAmb 18 37 15.4
comp=Z,8.8nm,0.7s
CHGR Chuyangaron 49.85 299 P **P 18 37 13.8 -1.1**
CHGR pmax pmax
comp=Z,9.0nm,0.7s
TARA Tarawa 50.27 112 P **P 18 37 19.2 +1.0**
AS31 Alice Springs 50.42 172 P **P 18 37 18.6 -0.5**
AS31 PcP **PcP 18 38 36.4 -0.2**
ASAR Alice Springs 50.42 172 P **P 18 37 20.0 +0.9**
comp=Z,4.8nm,0.8s,baz=359,slow=10,SNR=61
ASAR PcP **PcP 18 38 36.8 +0.1**
comp=Z,1.4nm,0.7s,baz=2.6,slow=3.6,SNR=5.0
comp=Z,4.8nm,0.8s
ASAR Alice Springs 50.42 172 P **P 18 37 19.1 0.0**
ASAR PcP **PcP 18 38 36.2 -0.5**
AS01 Alice Springs 50.43 172 P **P 18 37 20.3 +1.2**
WRKA Warakurna 51.42 179 P **P 18 37 28.0 +1.4**
OOD Oodnadatta 54.72 171 P **P 18 37 51.8 +1.1**
ABKAR Akbulak array 55.91 313 P **P 18 37 59.0 -0.2**
ANM Nome 56.40 29 P **P 18 38 02.4 0.0**
ANM Nome 56.40 29 P **P 18 38 02.4 0.0**
MORW Morawa 56.52 192 P **P 18 38 04.2 +0.6**
ARU Arti 56.68 322 P **P 18 38 03.6 -0.9**
ARU IAmb IAmb 18 38 04.2
comp=Z,3.1nm,0.6s
ARU Arti 56.68 322 *d i*P **P 18 38 04.2 -0.3**
ARU 18 40 06.9
ARU S **S 18 45 53.8 +1.9**
ARU SS **SS 18 49 42.0 +1.9**
ARU pmax pmax
comp=Z,2.0nm,0.6s
MULG Mulgathing 56.98 173 P **P 18 38 07.8 +1.0**
FORT Forrest 57.13 180 P **P 18 38 08.4 +0.4**
FORT Forrest 57.13 180 P **P 18 38 09.1 +1.2**
LCRK Leigh Creek 57.71 169 P **P 18 38 13.5 +1.5**
GEYT Alibeck 58.56 300 P **P 18 38 18.2 +0.2**
comp=Z,2.7nm,0.8s,baz=45,slow=2.5,SNR=6.9
comp=Z,2.7nm,0.8s
GEYT Alibeck 58.56 300 P **P 18 38 18.5 +0.4**
BBOO Buckleboo 59.71 172 P **P 18 38 26.3 +0.5**
BBOO Buckleboo 59.71 172 P **P 18 38 27.0 +1.1**
STKA Stephens Creek 59.74 166 P **P 18 38 26.8 +0.7**
comp=Z,4.5nm,0.7s,baz=326,slow=7.6,SNR=9.3
comp=Z,4.5nm,0.7s
STKA Stephens Creek 59.74 166 P **P 18 38 27.0 +0.9**
STKA Stephens Creek 59.74 166 P **P 18 38 27.0 +0.9**
STKA pmax pmax
comp=Z,1.0nm,1.1s
NWAO Narrogin (SRO) 60.09 190 P **P 18 38 29.1 +0.7**
NWAO Narrogin (SRO) 60.09 190 P **P 18 38 29.2 +0.7**
N18K Kilae Creek 60.58 33 P **P 18 38 34.1 +2.6**
SVW2 Sparrevohn 60.71 33 P **P 18 38 33.1 +0.7**
L19K White Mountain 61.01 32 P **P 18 38 35.9 +1.4**
L19K IAmb IAmb 18 39 13.4
comp=Z,6.1nm,1.1s
M19K Big River Lodg 61.24 32 P **P 18 38 37.2 +1.2**
M19K IAmb IAmb 18 38 40.3
comp=Z,9.0nm,1.3s
J20K Nowinta River 61.25 29 P **P 18 38 37.3 +1.2**
J20K IAmb IAmb 18 39 04.8
comp=Z,9.9nm,1.4s
N19K Bonanza Creek 61.26 33 P **P 18 38 38.1 +1.8**
N19K IAmb IAmb 18 39 06.6
comp=Z,15nm,1.3s
ARMA Armidale 61.26 156 P **P 18 38 36.9 +0.2**
K20K Telida 61.31 30 P **P 18 38 37.8 +1.3**
K20K IAmb IAmb 18 38 41.1
comp=Z,10nm,0.9s
IMAR Indian Mountai 61.36 27 P **P 18 38 37.8 +1.0**
DZM Mont Dzumac 61.36 138 P **P 18 38 38.3 +0.8**
ONTNC Ouen Toro 61.55 139 P **P 18 38 38.7 +0.1**
H21K Melozitna Rive 61.76 28 P **P 18 38 40.9 +1.5**
H21K IAmb IAmb 18 38 43.3
comp=Z,13nm,1.3s
M20K Styx River 61.84 32 P **P 18 38 42.0 +1.8**
M20K IAmb IAmb 18 38 44.6
comp=Z,6.0nm,0.8s
OUENC Ouen Island, N 61.86 138 P **P 18 38 41.3 +0.6**
P19K Oil Pt 61.98 34 P **P 18 38 42.9 +1.8**
I21K Tanana 62.13 28 P **P 18 38 44.0 +2.1**
I21K IAmb IAmb 18 38 45.5
comp=Z,8.5nm,0.8s
RSO Redoubt South 62.14 33 P **P 18 38 44.8 +2.4**
PPLA Purkeypile 62.20 31 P **P 18 38 43.1 +0.5**
CAST Castle Rocks 62.20 30 P **P 18 38 42.6 +0.1**
CAST IAmb IAmb 18 38 45.8
comp=Z,9.1nm,1.2s
KDAK Kodiak Island 62.51 36 P **P 18 38 44.5 -0.1**
comp=Z,6.2nm,0.6s,baz=275,slow=4.6,SNR=4.8
comp=Z,6.2nm,0.6s
KDAK Kodiak Island 62.51 36 P **P 18 38 44.3 -0.3**
KDAK Kodiak Island 62.51 36 P **P 18 38 44.3 -0.3**
KDAK pmax pmax
comp=Z,23nm,1.1s
SKT Skwentna 62.58 32 P **P 18 38 45.0 0.0**
SKT IAmb IAmb 18 38 53.2
comp=Z,9.5nm,1.5s
BPAW Bear Paw Mtn. 62.63 29 P **P 18 38 45.4 0.0**
BPAW IAmb IAmb 18 39 06.2
comp=Z,5.5nm,1.2s
KTH Kantishna Hill 62.71 30 P **P 18 38 45.8 -0.2**
KTH IAmb IAmb 18 38 50.8
comp=Z,7.6nm,1.2s
SUA Susitna One 63.01 32 P **P 18 38 48.3 +0.3**
H23K Yukon River 63.09 27 P **P 18 38 49.4 +1.0**
I23K Minto, Yukon-K 63.23 28 P **P 18 38 50.8 +1.6**
I23K IAmb IAmb 18 38 55.5
comp=Z,3.5nm,0.7s
MCK McKinley 63.58 30 P **P 18 38 51.9 +0.3**
MCK IAmb IAmb 18 38 55.6
comp=Z,11nm,1.0s
MCK McKinley 63.58 30 P **P 18 38 51.9 +0.3**
MCK pmax pmax
comp=Z,11nm,1.0s
RND Reindeer 63.65 30 P **P 18 38 52.5 +0.3**
RND Reindeer 63.65 30 P **P 18 38 52.5 +0.3**
RND pmax pmax
comp=Z,15nm,0.9s
MDM Murphy Dome 63.73 28 P **P 18 38 53.3 +0.7**
H24K Noodor Dome 63.77 27 P **P 18 38 54.2 +1.3**
H24K IAmb IAmb 18 38 57.0
comp=Z,6.3nm,0.9s
SML Sawmill 64.11 32 P **P 18 38 55.5 +0.3**
SML IAmb IAmb 18 38 58.0
comp=Z,5.6nm,0.8s
PWL Port Wells 64.25 33 IAmb IAmb 18 38 58.6
comp=Z,7.5nm,0.8s
ILAR Eielson Array 64.33 28 P **P 18 38 54.9 -1.6**
comp=Z,0.9nm,0.7s,baz=264,slow=5.2,SNR=11
comp=Z,0.9nm,0.7s
ILAR Eielson Array 64.33 28 P **P 18 38 56.0 -0.5**
ILAR Eielson Array 64.33 28 P **P 18 38 56.0 -0.5**
HDA Harding Lake 64.35 29 IAmb IAmb 18 38 59.3
comp=Z,7.7nm,0.7s
DHY Denali Highway 64.36 30 P **P 18 38 57.2 +0.3**
SCM Sheep Creek Mo 64.57 32 P **P 18 38 58.0 -0.2**
SCM IAmb IAmb 18 39 02.5
comp=Z,17nm,1.3s
SCM Sheep Creek Mo 64.57 32 P **P 18 38 58.0 -0.2**
SCM pmax pmax
comp=Z,17nm,1.3s
BMAR Burnt Mountain 64.86 25 P **P 18 39 01.4 +1.4**
PAX Paxson 65.23 30 P **P 18 39 02.9 +0.4**
PAX Paxson 65.23 30 P **P 18 39 02.9 +0.4**
PAX pmax pmax
comp=Z,5.0nm,0.9s
DIV Divide 65.43 32 IAmb IAmb 18 39 07.2
comp=Z,8.5nm,0.8s
J26L Joseph Creek 65.78 28 P **P 18 39 06.0 -0.1**
J26L IAmb IAmb 18 39 08.5
comp=Z,7.0nm,0.8s
I26K Coal Creek Min 65.80 27 P **P 18 39 05.7 -0.3**
BMRM Bremner River 66.02 32 P **P 18 39 07.3 -0.3**
BMRM IAmb IAmb 18 39 15.5
comp=Z,10.0nm,0.8s
MENT Mentasta 66.03 30 P **P 18 39 08.7 +1.1**
MENT IAmb IAmb 18 39 11.5
comp=Z,5.9nm,0.7s
L26K Log Cabin Wild 66.17 30 P **P 18 39 09.0 +0.4**
GLB Gilahina Butte 66.30 32 P **P 18 39 09.8 +0.4**
GLB IAmb IAmb 18 39 30.0
comp=Z,5.5nm,1.0s
M26K Nabesna, AK 66.47 31 P **P 18 39 11.4 +1.0**
M26K IAmb IAmb 18 39 14.0
comp=Z,9.3nm,0.8s
VRDI Verde Repeater 66.51 32 IAmb IAmb 18 39 14.1
comp=Z,5.0nm,0.9s
EGAK Eagle 66.73 28 P **P 18 39 13.0 +1.0**
M27K Edge Creek, AK 66.98 30 IAmb IAmb 18 39 17.3
comp=Z,5.1nm,0.8s
CTGM Chitina Glacie 67.58 32 IAmb IAmb 18 39 21.5
comp=Z,5.3nm,0.8s
I29M Ogilvie Camp, 67.76 27 P **P 18 39 20.0 +1.4**
I29M IAmb IAmb 18 39 22.7
comp=Z,6.2nm,0.9s
ZEI Tsey 67.98 308 *e*P **P 18 39 19.7 -0.9**
ZEI pmax pmax
comp=Z,4.0nm,1.0s
SPA0 Spitsbergen Ar 68.27 348 *e*P **P 18 39 21.7 +0.2**
KBZ Khabaz 68.42 309 P **P 18 39 22.8 -0.2**
comp=Z,7.9nm,0.8s,baz=124,slow=5.6,SNR=15
comp=Z,7.9nm,0.8s
KBZ Khabaz 68.42 309 *ce*P **P 18 39 23.4 +0.4**
KBZ pmax pmax
comp=Z,8.0nm,0.8s
KIV Kislovodsk 68.50 309 P **P 18 39 23.2 -0.4**
KIV IAmb IAmb 18 39 26.1
comp=Z,12nm,1.0s
KIV Kislovodsk 68.50 309 *e*P **P 18 39 22.5 -1.2**
KIV pmax pmax
comp=Z,12nm,1.1s
SHA1 Shidzhatmaz 68.58 309 *i* P **P 18 39 23.8 -0.5**
KBS Kingsbay 68.70 349 *e*P **P 18 39 24.4 +0.3**
INK Inuvik 68.71 23 P **P 18 39 24.6 +0.2**
comp=Z,5.1nm,0.6s,baz=294,slow=6.2
comp=Z,5.1nm,0.6s
INK Inuvik 68.71 23 P **P 18 39 24.5 +0.2**
INK IAmb IAmb 18 39 27.1
comp=Z,11nm,1.1s
INK Inuvik 68.71 23 P **P 18 39 24.5 +0.2**
INK pmax pmax
comp=Z,11nm,1.2s
OBN Obninsk 69.11 322‖ *e*P **P 18 39 26.0 -1.1**
OBN S **S 18 48 21.0 -6.4**
OBN SS **SS 18 53 00.0 +6.1**
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,243nm,17.0s
ARCES ARCESS Array B 69.38 338 P **P 18 39 27.5 -1.0**
comp=Z,5.6nm,1.0s,baz=55,slow=6.4,SNR=4.6
comp=Z,5.6nm,1.0s
A36M Sachs Harbour 69.99 18 P **P 18 39 33.1 +0.9**
A36M IAmb IAmb 18 39 36.9
comp=Z,13nm,0.8s
FARO Faro, Yukon 70.83 29 IAmb IAmb 18 39 41.4
comp=Z,9.2nm,0.9s
JETT Jettan, Norway 71.02 339 *e*P **P 18 39 38.8 +0.2**
MARD Mardin 71.97 303 P **P 18 39 44.8 -0.3**
MARD IAmb IAmb 18 39 49.5
comp=Z,8.2nm,0.6s
FINES FINESS Array B 72.18 330 P **P 18 39 45.0 -0.7**
comp=Z,2.4nm,0.5s,baz=65,slow=5.3,SNR=40
comp=Z,2.4nm,0.5s
FINES FINESS Array B 72.18 330 P **P 18 39 45.0 -0.7**
RAYN Ar Rayn 73.11 288 P **P 18 39 51.5 -0.4**
RAYN IAmb IAmb 18 39 53.0
comp=Z,8.1nm,1.1s
RAYN Ar Rayn 73.11 288 P **P 18 39 51.5 -0.4**
RAYN pmax pmax
comp=Z,8.0nm,1.1s
STEI Steigen 73.44 339 *e*P **P 18 39 52.1 -0.9**
FAUS Fauske 73.70 338 *e*P **P 18 39 54.4 -0.2**
MNK Minsk 74.04 323 *i* P **P 18 39 56.6 -0.1**
comp=E,2.0nm,1.1s
MNK *i* P **P 18 39 56.6 -0.1**
comp=N,28nm,0.8s
MNK *i* P **P 18 39 56.6 -0.1**
comp=Z,6.0nm,0.8s,baz=67
MNK *i* pP **pP 18 40 13.2 -0.8**
MNK *i* PP **PP 18 42 42.3 0.0**
MNK *i* PPP PPP 18 44 27.5
MNK *i* S **S 18 49 25.2 +0.9**
MNK *i* sS **sS 18 49 53.7 +0.5**
MNK *i* SS **SS 18 54 11.9 +2.5**
MNK *i* SSS SSS 18 57 33.7
MNK *i* LR LR 19 12 14.7
MNK *i* LRM MLR 19 14 45.5
comp=E,26nm,15.3s
MNK *i* LRM MLR 19 14 59.8
comp=N,281nm,19.2s
MNK *i* LRM MLR 19 14 59.8
comp=Z,262nm,16.6s
DAG Danmarks Havn 74.73 352 *i* P **P 18 39 59.6 -0.8**
AKASG Malin Array Be 74.81 319 P **P 18 40 00.2 -1.0**
comp=Z,1.8nm,0.4s,baz=58,slow=6.9,SNR=7.8
comp=Z,1.8nm,0.4s
BR131 Keskin Array S 76.29 308 P **P 18 40 09.4 -0.8**
BR131 IAmb IAmb 18 40 12.9
comp=Z,11nm,0.8s
BR131 Keskin Array S 76.29 308 P **P 18 40 09.4 -0.8**
BR131 pmax pmax
comp=Z,11nm,0.8s
BRTR Keskin Array B 76.29 308 P **P 18 40 10.1 -0.2**
comp=Z,4.6nm,0.7s,baz=104,slow=4.7,SNR=25
comp=Z,4.6nm,0.7s
BRTR Keskin Array B 76.29 308 P **P 18 40 09.3 -0.9**
RAO Raoul Island 76.30 133 LR LR 19 11 45.9
comp=Z,83nm,19.9s,baz=345,slow=34
NSS Namsos 76.38 336 *e*P **P 18 40 10.0 0.0**
YKA Yellowknife Ar 78.37 25 P **P 18 40 20.6 -0.6**
comp=Z,1.5nm,0.6s,baz=299,slow=5.5,SNR=7.4
comp=Z,1.5nm,0.6s
YKA Yellowknife Ar 78.37 25 *ce*P **P 18 40 21.7 +0.6**
YKA pmax pmax
comp=Z,2.0nm,0.6s
NC405 NORSAR Array S 78.41 334 P **P 18 40 20.9 -0.5**
BUR08 Bucovina Ar. S 78.50 318 P **P 18 40 21.6 -0.8**
NB2 NORSAR Subarra 78.65 334 P **P 18 40 21.7 -1.1**
comp=Z,1.6nm,0.6s,baz=54,slow=5.9
NB2 NORSAR Subarra 78.65 334 P **P 18 40 21.7 -1.1**
baz=54,slow=5.9
NOA NORSAR Array B 78.65 334 P **P 18 40 21.8 -1.1**
comp=Z,2.3nm,0.7s,baz=53,slow=5.6,SNR=14
comp=Z,2.3nm,0.7s
NC204 NORSAR Array S 78.69 334 P **P 18 40 22.0 -1.0**
NC204 IAmb IAmb 18 40 24.9
comp=Z,14nm,0.8s
NC602 NORSAR Array S 78.70 333 *e*P **P 18 40 22.5 -0.5**
DOMB Dombas 78.89 335 *e*P **P 18 40 23.7 -0.4**
AKN Aaknes 79.58 336 *e*P **P 18 40 27.8 0.0**
VYHS Vyhne 81.82 320 *e*P **P 18 40 40.4 +0.3**
KSP Ksiaz 81.98 323 *e*P **P 18 40 41.3 +0.4**
VRAC Vranov 82.65 322 P **P 18 40 45.3 +0.9**
VRAC pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 83.45 325 P **P 18 40 48.0 -0.4**
CLL IAmb IAmb 18 40 51.0
comp=Z,4.5nm,0.7s
CLL Collm 83.45 325 *i* P **P 18 40 48.5 +0.1**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 83.45 325 *i* P **P 18 40 48.5 +0.1**
comp=Z,5.0nm,0.8s
CONA Conrad Observa 83.81 321 *e*P **P 18 40 51.0 +0.5**
comp=Z,3.1nm,0.8s
GERES GERESS Array B 84.49 323 P **P 18 40 54.0 +0.1**
comp=Z,2.2nm,0.7s,baz=54,slow=6.8,SNR=14
comp=Z,2.2nm,0.7s
GERES GERESS Array B 84.49 323 P **P 18 40 53.3 -0.6**
CLUD Cludinico 86.31 321 P **P 18 41 02.1 -0.9**
CLUD IAmb IAmb 18 41 05.3
comp=Z,7.1nm,0.8s
ABTA Abfaltersbach 86.35 321 *e*P **P 18 41 00.6 -2.6**
comp=Z,7.4nm,1.4s
MOTA Moosalm 86.78 322 *e*P **P 18 41 05.8 +0.4**
comp=Z,5.6nm,1.1s
RETA Reutte 86.88 323 *e*P **P 18 41 06.8 +1.0**
comp=Z,3.5nm,1.0s
MOD Modoc Plateau 87.39 44 P **P 18 41 09.0 +0.5**
DAVA Damuels 87.48 323 *i* P **P 18 41 08.9 +0.1**
comp=Z,4.7nm,0.7s
WLF Walferdange 87.92 326 *d*P **P 18 41 10.9 +0.3**
BEKR Beckworth 88.49 46 P **P 18 41 14.4 +0.6**
NVAR Mina Array Bea 90.62 46 P **P 18 41 24.1 +0.2**
comp=Z,0.4nm,0.6s,baz=297,slow=5.1,SNR=3.9
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 93.18 38 P **P 18 41 35.1 -0.5**
comp=Z,0.3nm,0.7s,baz=280,slow=0.9,SNR=3.7
comp=Z,0.3nm,0.7s
ESDC Sonseca Array 100.02 324 P **Pdif 18 42 05.7 -0.7**
comp=Z,0.5nm,0.8s,baz=23,slow=5.6,SNR=3.6
comp=Z,0.5nm,0.8s
TORD Torodi Ar. Bea 114.20 300 PKP PKPdf 18 46 59.9 -1.0
comp=Z,0.5nm,0.8s,baz=232,slow=4.9,SNR=3.7
TROLL Troll, Antarti 125.74 198 PKPdf **PKiKP 18 47 22.5 +0.6**
TROLL Troll, Antarti 125.74 198 pPKPdf pPKPdf 18 47 40.5 +0.4
SNAA Sanae 127.38 198 PKPdf **PKiKP 18 47 24.9 -0.3**
VNA2 Neumayer--Watz 129.02 197 PKPdf **PKPdf 18 47 27.9 +0.3**
baz=107,slow=1.3
VNA2 Neumayer--Watz 129.02 197 pPKPdf pPKPdf 18 47 47.2 +1.0
VNA1 Neumayer--Stat 129.42 197 pPKPdf **PKPdf 18 47 28.5 +0.2**
VNA1 Neumayer--Stat 129.42 197 pPKPdf pPKPdf 18 47 47.1 +0.2
VNA3 Neumayer Olymp 129.43 197 PKPdf **PKiKP 18 47 29.3 +0.2**

NEIC ***08*** *18:36:26.9±2.8, 42°.79N±0°.07×144°.0E±0°.1, h104km±8km, mb4.5/45, Error ellipse: s-maj=13.4km s-min=9.4km az=111.0*
IDC ***08*** *18:36:26.2±2.4, 42°.93N×143°.97E, h101km±21km, mb3.9/24, mbtmp4.2/28, Error ellipse: s-maj=13.0km s-min=11.8km az=108.0*
BJI ***08*** *18:36:27.0±0.0, 42°.80N×143°.90E, h110km, mb4.6/15,*

mB4.9/5
MOS ***08*** *18:36:27.2±1.0,42°.91N×143°.97E,h128km,mb4.4/17,*
Error ellipse: s-maj=9.3km s-min=6.3km az=91.3
JMA ***08*** *18:36:28.4±0.1,42°.9N±0°.5×143°.9E±0°.6,h115km±1km,*
MD3.9/40,MV4.4/40,KUSHIRO REGION
JMA Felt II J1 at KUSHIRO REGION .
SKHL ***08*** *18:36:28.2±0.4,42°.90N×144°.00E,h121km±4km,mb4.6/3,*
msha5.3/3
ISC 08 18:36:26.9±0.5,42°.80N±0°.04×143°.97E±0°.03,h112km±4km,
n200,σ1§47/214,mb4.4/66,2C-25D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.14**	**315**	*i* P	**Pn**	**18 36 44.7**	**+2.3**
JOB				*e*S	**Sn**	**18 36 56.6**	**+2.6**
JOB	**Onbets**	**0.14**	**315**	A	A	18 36 44.7	
comp=E,46nm,0.4s,comp=E,57nm,0.3s							
JCH	**Churui**	**0.49**	**248**	*i* P	**Pn**	**18 36 45.6**	**+1.8**
JCH				*e*S	**Sn**	**18 36 57.9**	**+1.3**
JCH	**Churui**	**0.49**	**248**	A	A	18 36 45.6	
comp=E,5.0nm,0.7s,comp=E,4.0nm,0.5s							
JAR	**Ashorobuto**	**0.52**	**343**	⇓*i* P	**Pn**	**18 36 45.5**	**+1.4**
JAR				⇓*e*S	**Sn**	**18 36 58.4**	**+1.4**
JAR	**Ashorobuto**	**0.52**	**343**	A	A	18 36 45.5	
comp=E,14nm,0.3s,comp=E,18nm,0.3s							
JAK	**Akkeshi**	**0.57**	**70**	⇓*i* P	**Pn**	**18 36 46.2**	**+1.8**
JAK				⇓*e*S	**Sn**	**18 36 59.4**	**+1.9**
JAK	**Akkeshi**	**0.57**	**70**	A	A	18 36 46.2	
comp=E,38nm,0.3s,comp=E,25nm,0.5s							
AKK	**Akkeshi**	**0.67**	**71**	*e*P	**Pn**	**18 36 47.1**	**+1.9**
AKK				*e*S	**Sn**	**18 37 00.6**	**+1.6**
JTHR	**Tokachihiroo**	**0.71**	**225**	A	A	18 36 47.7	
comp=E,8.0nm,0.6s,comp=E,6.0nm,0.5s							
JKHN	**Kushirohamanak**	**0.92**	**72**	⇓*e*P	**Pn**	**18 36 49.2**	**+1.9**
JKHN				⇓*e*S	**Sn**	**18 37 04.4**	**+1.6**
JNK	**Nakash**	**0.95**	**35**	⇓*i* P	**Pn**	**18 36 49.0**	**+1.2**
JNK				⇓*e*S	**Sn**	**18 37 04.3**	**+0.8**
JNK	**Nakash**	**0.95**	**35**	A	A	18 36 49.0	
comp=E,6.0nm,0.2s,comp=E,7.0nm,0.2s							
JEM	**Erimo**	**0.99**	**218**	*e*P	**Pn**	**18 36 50.1**	**+2.0**
ERM	**Erimo**	**0.99**	**218**	*c i*PN	**Pn**	**18 36 51.2**	**+3.1**
JNBK	**Urakawa-nobuka**	**1.04**	**240**	*i* P	**Pn**	**18 36 50.5**	**+1.8**
JNBK				*e*S	**Sn**	**18 37 06.7**	**+1.6**
JNBK	**Urakawa-nobuka**	**1.04**	**240**	A	A	18 36 50.5	
comp=E,7.0nm,0.7s,comp=E,5.0nm,0.7s							
JFR	**Furan**	**1.07**	**290**	⇓*e*P	**Pn**	**18 36 49.9**	**+0.9**
JFR				⇓*e*S	**Sn**	**18 37 06.7**	**+0.9**
JFR	**Furan**	**1.07**	**290**	A	A	18 36 49.9	
comp=E,6.0nm,0.4s,comp=E,5.0nm,1.0s							
JTKR	**Abashiri--Toko**	**1.17**	**358**	⇓P	**Pn**	**18 36 51.3**	**+1.3**
JTKR				⇓*e*S	**Sn**	**18 37 08.1**	**+0.7**
JBT2	**Biratori 2**	**1.19**	**269**	P	**Pn**	**18 36 51.5**	**+1.4**
JBT2				*e*S	**Sn**	**18 37 09.0**	**+1.2**
JNSB	**Nemuroshibetsu**	**1.23**	**37**	A	A	18 36 52.2	
comp=E,10.0nm,1.2s,comp=E,7.0nm,1.3s							
JMP	**Maruseppu**	**1.28**	**340**	⇓*e*P	**Pn**	**18 36 52.3**	**+1.0**
JMP				⇓*e*S	**Sn**	**18 37 09.7**	**-0.2**
JKK2	**Kamakawa 2**	**1.39**	**321**	⇓P	**Pn**	**18 36 53.7**	**+1.2**
JKK2				⇓*e*S	**Sn**	**18 37 12.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**1.41**	**66**	⇓*e*PN	**Pn**	**18 36 53.7**	**+1.1**
NMR				*e*S	**Sn**	**18 37 12.0**	**-0.2**
NMR	**Nemuro--Hokkai**	**1.41**	**66**	*e*P	**Pn**	**18 36 53.8**	**+1.1**
NMR				AMB	AMB	18 36 54.1	
110nm,0.2s							
NMR				*e*S	**Sn**	**18 37 12.4**	**+0.2**
NMR				A	A	18 37 13.6	
240nm,0.2s							
NMR				A	A	18 37 13.6	
160nm,0.2s							
JRA	**Rausu**	**1.41**	**36**	⇓*e*P	**Pn**	**18 36 54.2**	**+1.5**
JRA				⇓*e*S	**Sn**	**18 37 14.0**	**+1.7**
JRA	**Rausu**	**1.41**	**36**	A	A	18 36 54.2	
comp=E,6.0nm,0.3s,comp=E,13nm,0.4s							
NEM2	**Nemuro 2**	**1.41**	**66**	⇓P	**Pn**	**18 36 53.7**	**+1.0**
NEM2				⇓*e*S	**Sn**	**18 37 12.2**	**-0.1**
JAB	**Ashibetsu**	**1.46**	**299**	⇓P	**Pn**	**18 36 55.0**	**+1.7**
RUSJ	**Misakicho**	**1.60**	**35**	⇓*i* PN	**Pn**	**18 36 56.5**	**+1.6**
RUSJ				*e*S	**Sn**	**18 37 17.6**	**+1.3**
YUK	**Yuzh-Kuril'sk**	**1.85**	**48**	*i* PN	**Pn**	**18 36 59.4**	**+1.4**
YUK	**Yuzh-Kuril'sk**	**1.85**	**48**	*i* P	**Pn**	**18 36 59.7**	**+1.7**
YUK				AMB	AMB	18 37 00.6	
140nm,0.3s							
YUK				*e*S	**Sn**	**18 37 23.0**	**+1.3**
YUK				A	A	18 37 24.2	
580nm,0.4s							
YUK				A	A	18 37 24.2	
390nm,0.4s							
JEW	**Eniwo**	**1.86**	**272**		**Pn**	**18 37 00.1**	**+2.0**
JEW	**Eniwo**	**1.86**	**272**	*e*P	**Pn**	**18 36 60.0**	**+1.8**
JEW				*e*S	**Sn**	**18 37 23.4**	**+1.5**
JHR	**Hokuryu**	**1.89**	**301**	P	**Pn**	**18 37 00.5**	**+1.9**
JHR				*e*S	**Sn**	**18 37 24.6**	**+1.8**
JTM	**Tenmabayashi**	**2.96**	**228**	Pn	**Pn**	**18 37 13.6**	**+1.1**
KUR	**Kuril'sk**	**3.71**	**48**	*e*PN	**Pn**	**18 37 24.5**	**+2.1**
KUR				S	**Sn**	**18 38 07.1**	**+1.8**
KUR				pmax	pmax		
comp=Z,41nm,0.8s							
KUR				smax	smax		
comp=N,176nm,0.3s							
KUR				smax	smax		
comp=E,107nm,0.2s							
KUR	**Kuril'sk**	**3.71**	**48**	*e*P	**Pn**	**18 37 24.4**	**+2.1**
KUR				AMB	AMB	18 37 26.8	
comp=E,30nm,0.5s							
KUR				*e*S	**Sn**	**18 38 06.8**	**+1.5**
KUR				A	A	18 38 10.6	
comp=E,70nm,0.3s							
KUR				A	A	18 38 10.6	
comp=E,90nm,0.3s							
JOM	**Ohasama**	**3.89**	**212**	A	A	18 37 27.9	
comp=E,1.0nm,0.3s,comp=E,1.0nm,0.6s							
YSS	**Yuzh-Sakhalins**	**4.24**	**349**	Pn	**Pn**	**18 37 30.1**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.24**	**349**	*e*PN	**Pn**	**18 37 30.2**	**+0.8**
YSS				*e*S	**Sn**	**18 38 18.5**	**+0.6**
YSS				pmax	pmax		
comp=Z,20nm,0.4s							
YSS				smax	smax		
comp=N,50nm,0.9s							
YSS	**Yuzh-Sakhalins**	**4.24**	**349**	*e*P	**Pn**	**18 37 30.2**	**+0.8**
YSS				AMB	AMB	18 37 30.4	
comp=N,10.0nm,0.3s							
YSS				*e*S	**Sn**	**18 38 18.5**	**+0.6**
YSS				A	A	18 38 29.1	
comp=N,30nm,0.6s							
YSS				A	A	18 38 29.1	
comp=N,20nm,0.6s							
JMM	**Marumori**	**5.50**	**207**	Pn	**Pn**	**18 37 46.7**	**+0.3**
JSD	**Sado**	**6.45**	**224**	Pn	**Pn**	**18 37 59.6**	**+0.2**
JYT	**Yasato**	**7.19**	**205**	Pn	**Pn**	**18 38 09.2**	**-0.1**
MAJO	**Matsushiro**	**7.67**	**217**	Pn	**Pn**	**18 38 16.9**	**+1.0**
MAJO	**Matsushiro**	**7.67**	**217**	*i* PN	**Pn**	**18 38 17.8**	**+1.9**
MAJO				pmax	pmax		
comp=Z,6.0nm,0.5s							
USA0B	**Ussuriysk Arra**	**8.82**	**283**	Pn	**Pn**	**18 38 33.0**	**+1.6**
USA0B	**Ussuriysk Arra**	**8.82**	**283**	PN	**Pn**	**18 38 33.1**	**+1.6**
USRK	**Ussuriysk Ar.**	**8.82**	**283**	P	**Pn**	**18 38 31.5**	**+0.1**
comp=Z,1.5nm,0.6s,baz=98,slow=16,SNR=2.0							
JGF	**Kuroka**	**8.83**	**218**	Pn	**Pn**	**18 38 32.4**	**+0.8**
INU	**Inuyama**	**9.20**	**218**	Pn	**Pn**	**18 38 37.0**	**+0.4**
JHJ2	**Mitsune**	**10.21**	**200**	Pn	**Pn**	**18 38 51.0**	**+0.7**
JHJ	**Hachijo jima 2**	**10.21**	**200**	P	**Pn**	**18 38 49.8**	**-0.6**
comp=Z,174nm,0.9s,baz=64,slow=20,SNR=2.2							
JHJ				S	**Sn**	**18 40 35.5**	**-7.4**
comp=Z,45nm,0.4s,baz=74,slow=23,SNR=1.7							
KLR	**Kul'dur**	**10.65**	**311**	P	**Pn**	**18 38 54.6**	**-1.6**
comp=Z,1.2nm,0.5s,baz=128,slow=18,SNR=1.5							
KLR	**Kul'dur**	**10.65**	**311**	*i* PN	**Pn**	**18 38 57.2**	**+1.1**
KLR				pmax	pmax		
comp=Z,1.0nm,0.7s							
KLR	**Kul'dur**	**10.65**	**311**	*e*P	**Pn**	**18 38 57.2**	**+1.1**
PEA0B	**Petropavlovsk-**	**13.79**	**37**	Pn	**Pn**	**18 39 36.5**	**-1.0**
PEA0B	**Petropavlovsk-**	**13.79**	**37**	P	**Pn**	**18 39 36.5**	**-1.0**
PETK	**Petropavlovsk-**	**13.79**	**37**	P	**Pn**	**18 39 34.5**	**-3.0**
comp=Z,3.8nm,0.9s,baz=167,slow=7.2,SNR=9.2							
ZEA	**Zeya**	**15.57**	**320**	*e*P	**Pn**	**18 40 00.9**	**+1.0**
ZEA				pmax	pmax		
comp=Z,20nm,0.4s							
ZEA	**Zeya**	**15.57**	**320**	*e*P	**Pn**	**18 40 00.7**	**+0.8**
ZEA				AMB	AMB	18 40 04.5	
comp=Z,50nm,0.2s							
JCJ	**Chichijima**	**15.74**	**186**	S	**Sn**	**18 42 48.2**	**-8.4**
comp=Z,40nm,0.7s,baz=273,slow=22,SNR=2.2							
MA2	**Magadan**	**17.31**	**12**	P	**P**	**18 40 19.1**	**-1.9**
comp=Z,7.3nm,0.8s,baz=90,slow=21,SNR=1.9							
MA2	**Magadan**	**17.31**	**12**	P	**P**	**18 40 20.0**	**-1.0**
MA2				IAmb	IAmb	18 40 44.8	
comp=Z,27nm,1.2s							
MA2	**Magadan**	**17.31**	**12**	P	**P**	**18 40 20.0**	**-1.0**
MA2				pmax	pmax		
comp=Z,27nm,1.2s							
SEY	**Seymchan**	**20.76**	**11**	P	**P**	**18 40 56.8**	**-1.6**
comp=Z,5.1nm,0.4s,baz=193,slow=9.5,SNR=23							
comp=Z,5.1nm,0.4s							
YAK	**Yakutsk**	**21.05**	**341**	P	**P**	**18 40 57.2**	**-4.3**
comp=Z,13nm,0.2s,baz=135,slow=2.9,SNR=44							
YAK	**Yakutsk**	**21.05**	**341**	*e*P	**P**	**18 40 57.9**	**-3.6**
YAK				pmax	pmax		
comp=Z,14nm,0.6s							
YAK				pmax	pmax		
comp=N,3.0nm,0.8s							
YAK				pmax	pmax		
comp=E,2.0nm,0.8s							
NJ2	**Nanjing**	**22.57**	**250**	*e*P	**P**	**18 41 15.9**	**-1.9**
NJ2				pmax	pmax		
comp=E,9.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**24.15**	**276**	*e*P	**P**	**18 41 34.3**	**+1.7**
HHC				pmax	pmax		
comp=E,28nm,0.8s							
HHC				pmax	pmax		
comp=E,210nm,5.7s							
ULN	**Ulaanbaatar**	**26.27**	**294**	P	**P**	**18 41 51.3**	**-0.5**
ULN	**Ulaanbaatar**	**26.27**	**294**	P	**P**	**18 41 51.3**	**-0.5**
ULN				pmax	pmax		
comp=E,6.0nm,1.0s							
ULN	**Ulaanbaatar**	**26.27**	**294**	*e*P	**P**	**18 41 52.4**	**+0.7**
SONM	**Songino Array**	**26.71**	**294**	P	**P**	**18 41 56.3**	**+0.6**
comp=Z,7.6nm,0.7s,baz=86,slow=8.6,SNR=36							
comp=Z,7.6nm,0.7s							
SONM	**Songino Array**	**26.71**	**294**	P	**P**	**18 41 56.6**	**+0.9**
SONM	**Songino Array**	**26.71**	**294**	P	**P**	**18 41 56.6**	**+0.9**
SONM				pmax	pmax		
comp=Z,9.0nm,1.1s							
TIXI	**Tiksi**	**29.86**	**350**	*i* P	**P**	**18 42 23.8**	**+0.6**
TIXI	**Tiksi**	**29.86**	**350**	*e*P	**P**	**18 42 23.8**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**30.03**	**133**	T	T	19 13 54.6	
baz=326,slow=75,SNR=196							
H11N1	**WAKE ISLAND Hy**	**30.04**	**133**	T	T	19 13 59.9	
baz=326,slow=75,SNR=144							
H11N3	**WAKE ISLAND Hy**	**30.05**	**133**	T	T	19 14 00.3	
baz=326,slow=75,SNR=154							
H11S1	**WAKE ISLAND Hy**	**30.93**	**135**	T	T	19 15 03.8	
baz=328,slow=76,SNR=298							
H11S3	**WAKE ISLAND Hy**	**30.94**	**135**	T	T	19 15 06.3	
baz=328,slow=76,SNR=350							
H11S2	**WAKE ISLAND Hy**	**30.95**	**135**	T	T	19 15 04.9	
baz=328,slow=76,SNR=206							
PZH	**PanZhiHua**	**37.92**	**258**	P	**P**	**18 43 36.1**	**+2.6**
PZH				pmax	pmax		
comp=Z,10.0nm,0.9s							
DGZ	**Jazzator, Alta**	**38.89**	**300**	*i* P	**P**	**18 43 41.9**	**+0.5**
DGZ				pmax	pmax		
comp=Z,3.0nm,0.6s							
NRIK	**Noril'sk**	**38.98**	**332**	*i* P	**P**	**18 43 41.4**	**-0.3**
NRIK				pmax	pmax		
comp=Z,3.0nm,1.0s							
ZAA0	**Zalesovo Array**	**39.72**	**307**	P	**P**	**18 43 47.7**	**-0.3**
ZAA0				IAmb	IAmb	18 43 50.1	
comp=Z,3.5nm,0.8s							
ZALV	**Zalesovo Beam**	**39.72**	**307**	P	**P**	**18 43 48.4**	**+0.4**
comp=Z,3.5nm,0.6s,baz=84,slow=8.6,SNR=16							
ZALV				PcP	**PcP**	**18 45 52.0**	**-0.2**
comp=Z,0.3nm,0.3s,baz=104,slow=6.1,SNR=1.7							
comp=Z,3.5nm,0.6s							
ZALV	**Zalesovo Beam**	**39.72**	**307**	P	**P**	**18 43 47.7**	**-0.4**
WMQ	**Urumqi**	**40.28**	**291**	*e*P	**P**	**18 43 55.3**	**+2.4**
J20K	**Nowinta River**	**40.49**	**37**	P	**P**	**18 43 55.8**	**+1.5**
J20K				IAmb	IAmb	18 44 02.9	
comp=Z,10nm,1.4s							
IMAR	**Indian Mountai**	**40.73**	**34**	P	**P**	**18 43 57.0**	**+0.8**
H21K	**Melozitna Rive**	**41.10**	**34**	P	**P**	**18 43 60.0**	**+0.7**
PPLA	**Purkeypile**	**41.37**	**38**	P	**P**	**18 44 03.2**	**+1.6**
PPLA				IAmb	IAmb	18 44 17.3	
comp=Z,17nm,1.4s							
CAST	**Castle Rocks**	**41.40**	**38**	P	**P**	**18 44 03.6**	**+1.8**
CAST				IAmb	IAmb	18 44 04.2	
comp=Z,12nm,1.4s							
SPU	**Mount Spurr**	**41.52**	**41**	P	**P**	**18 44 02.7**	**-0.1**
KDAK	**Kodiak Island**	**41.59**	**46**	P	**P**	**18 44 04.2**	**+0.9**
KDAK	**Kodiak Island**	**41.59**	**46**	P	**P**	**18 44 04.2**	**+0.9**
KDAK				pmax	pmax		
comp=Z,25nm,1.4s							
BPAW	**Bear Paw Mtn.**	**41.87**	**37**	P	**P**	**18 44 07.8**	**+2.2**
KTH	**Kantishna Hill**	**41.92**	**37**	P	**P**	**18 44 07.9**	**+1.8**
KTH				IAmb	IAmb	18 44 15.4	
comp=Z,15nm,1.4s							
CNPM	**China Poot**	**42.08**	**43**	P	**P**	**18 44 09.0**	**+1.6**
SUA	**Susitna One**	**42.13**	**41**	P	**P**	**18 44 08.7**	**+0.9**
TRF	**Thorofare Moun**	**42.21**	**38**	P	**P**	**18 44 09.9**	**+1.4**
TRF				IAmb	IAmb	18 44 50.7	
comp=Z,12nm,1.4s							
BRLK	**Bradley Lake**	**42.23**	**43**	P	**P**	**18 44 09.8**	**+1.3**
BRLK				IAmb	IAmb	18 44 32.9	
comp=Z,14nm,1.2s							
H23K	**Yukon River**	**42.45**	**34**	P	**P**	**18 44 11.1**	**+0.8**
H23K				IAmb	IAmb	18 44 15.6	
comp=Z,8.4nm,1.3s							
TOLK	**Toolik Lake Re**	**42.47**	**30**	P	**P**	**18 44 10.9**	**+0.5**
TOLK				IAmb	IAmb	18 44 49.9	
comp=Z,13nm,1.4s							
RND	**Reindeer**	**42.86**	**38**	P	**P**	**18 44 14.1**	**+0.5**
RND	**Reindeer**	**42.86**	**38**	P	**P**	**18 44 14.1**	**+0.5**
RND				pmax	pmax		
comp=Z,6.0nm,1.4s							
MK31	**Makanchi Array**	**42.97**	**297**	P	**P**	**18 44 14.6**	**-0.1**
MK31	**Makanchi Array**	**42.97**	**297**	P	**P**	**18 44 14.6**	**-0.1**
MK31				pmax	pmax		
comp=Z,3.0nm,0.7s							
MKAR	**Makanchi Array**	**42.97**	**297**	P	**P**	**18 44 15.0**	**+0.3**
comp=Z,2.6nm,0.6s,baz=82,slow=10,SNR=18							
MKAR				PcP	**PcP**	**18 46 03.3**	**+0.1**
comp=Z,0.3nm,0.6s,baz=103,slow=4.2,SNR=1.9							
comp=Z,2.6nm,0.6s							
MKAR	**Makanchi Array**	**42.97**	**297**	P	**P**	**18 44 14.1**	**-0.6**
MDM	**Murphy Dome**	**43.03**	**35**	P	**P**	**18 44 14.6**	**-0.3**
MDM				IAmb	IAmb	18 44 54.8	
comp=Z,8.7nm,1.5s							
SML	**Sawmill**	**43.24**	**40**	P	**P**	**18 44 17.4**	**+0.7**
SML				IAmb	IAmb	18 44 47.3	
comp=Z,6.1nm,1.0s							
DHY	**Denali Highway**	**43.55**	**38**	P	**P**	**18 44 20.0**	**+0.7**
DHY				IAmb	IAmb	18 44 20.9	
comp=Z,8.0nm,1.4s							
ILAR	**Eielson Array**	**43.61**	**35**	P	**P**	**18 44 19.9**	**+0.3**
comp=Z,1.7nm,0.6s,baz=259,slow=5.8,SNR=16							
comp=Z,1.7nm,0.6s							
ILAR	**Eielson Array**	**43.61**	**35**	P	**P**	**18 44 20.0**	**+0.4**
PRP	**Porcupine Dome**	**44.13**	**34**	P	**P**	**18 44 24.2**	**+0.4**
PRP				IAmb	IAmb	18 44 25.4	
comp=Z,3.4nm,0.6s							
KURK	**Kurchatov**	**44.13**	**304**	P	**P**	**18 44 23.6**	**-0.3**
KURK				IAmb	IAmb	18 44 26.6	
comp=Z,6.5nm,0.8s							
KURK	**Kurchatov**	**44.13**	**304**	P	**P**	**18 44 23.6**	**-0.3**
KURK				pmax	pmax		
comp=Z,6.0nm,0.9s							
KURK	**Kurchatov**	**44.13**	**304**	*e*P	**P**	**18 44 23.6**	**-0.3**
KURBB	**Kurchatov Arra**	**44.22**	**304**	P	**P**	**18 44 24.7**	**+0.1**
comp=Z,5.0nm,0.5s,baz=70,slow=8.8,SNR=18							
comp=Z,5.0nm,0.5s							
M24K	**Tolsona, Glenn**	**44.22**	**39**	P	**P**	**18 44 24.6**	**+0.1**
M24K				IAmb	IAmb	18 44 34.5	
comp=Z,24nm,1.4s							
BMAR	**Burnt Mountain**	**44.36**	**32**	P	**P**	**18 44 26.8**	**+1.2**
SIJI	**Sorong**	**44.95**	**198**	P	**P**	**18 44 33.4**	**+2.5**
comp=Z,7.3nm,0.6s,baz=34,slow=9.0,SNR=6.0							
comp=Z,7.3nm,0.6s							
DOT	**Dot Lake**	**44.97**	**37**	P	**P**	**18 44 30.9**	**+0.4**
DOT				IAmb	IAmb	18 45 14.9	
comp=Z,9.0nm,1.0s							
L27K	**Beaver Creek,**	**46.05**	**37**	P	**P**	**18 44 40.9**	**+1.9**
BCAR	**Beaver Creek A**	**46.07**	**37**	P	**P**	**18 44 40.5**	**+1.3**
M27K	**Edge Creek, AK**	**46.16**	**38**	P	**P**	**18 44 41.5**	**+1.5**
FAKI	**Fak Fak**	**46.73**	**196**	P	**P**	**18 44 47.0**	**+2.3**
BVAR	**Borovoye Array**	**48.30**	**309**	P	**P**	**18 44 57.0**	**+0.4**
comp=Z,2.9nm,0.3s,baz=80,slow=9.8,SNR=42							
comp=Z,2.9nm,0.3s							
BVAR	**Borovoye Array**	**48.30**	**309**	P	**P**	**18 44 57.0**	**+0.4**
BRVK	**Borovoye**	**48.35**	**309**	*ce*P	**P**	**18 44 58.0**	**+1.1**
BRVK				pmax	pmax		
comp=Z,6.0nm,1.0s							
BRVK	**Borovoye**	**48.35**	**309**	*e*P	**P**	**18 44 58.0**	**+1.1**
INK	**Inuvik**	**48.38**	**30**	P	**P**	**18 44 56.5**	**-0.4**
comp=Z,1.6nm,0.4s,baz=333,slow=3.2,SNR=4.7							
comp=Z,1.6nm,0.4s							
HYT	**Haines Junctio**	**48.55**	**40**	P	**P**	**18 44 58.4**	**-0.2**
HYT				IAmb	IAmb	18 45 01.7	
comp=Z,5.2nm,0.8s							
ARU	**Arti**	**53.44**	**316**	P	**P**	**18 45 34.3**	**-0.7**
comp=Z,3.0nm,0.3s,baz=66,slow=2.6,SNR=9.3							
comp=Z,3.0nm,0.3s							
ARU	**Arti**	**53.44**	**316**	P	**P**	**18 45 33.8**	**-1.1**
ARU				IAmb	IAmb	18 45 35.7	
comp=Z,5.8nm,0.7s							
ARU	**Arti**	**53.44**	**316**	*d i*P	**P**	**18 45 35.5**	**+0.6**
ARU						18 47 36.0	
ARU				S	**S**	**18 52 58.6**	**+0.1**
ARU				SS	**SS**	**18 56 41.3**	**+1.9**
ARU				pmax	pmax		
comp=Z,6.0nm,0.7s							
ARU	**Arti**	**53.44**	**316**	*e*P	**P**	**18 45 35.6**	**+0.6**
SPA0	**Spitsbergen Ar**	**55.26**	**349**	*e*P	**P**	**18 45 47.6**	**-0.3**
SPA0				IAmb	IAmb	18 45 49.3	
comp=Z,90nm,1.4s							
ABKAR	**Akbulak array**	**55.83**	**308**	P	**P**	**18 45 52.3**	**0.0**
AKTO	**Aktyubinsk**	**56.38**	**310**	P	**P**	**18 45 56.0**	**-0.2**
comp=Z,1.2nm,0.5s,baz=54,slow=9.3,SNR=5.3							
comp=Z,1.2nm,0.5s							
AKTO	**Aktyubinsk**	**56.38**	**310**	P	**P**	**18 45 56.0**	**-0.2**
RES	**Resolute Bay**	**56.53**	**16**	P	**P**	**18 45 56.6**	**-0.3**
RES	**Resolute Bay**	**56.53**	**16**	P	**P**	**18 45 56.6**	**-0.3**
RES				pmax	pmax		
comp=Z,13nm,1.1s							
MTN	**Manton Dam**	**56.61**	**195**	P	**P**	**18 45 57.5**	**-0.6**
YKA	**Yellowknife Ar**	**57.86**	**33**	P	**P**	**18 46 05.2**	**-1.2**
comp=Z,0.4nm,0.5s,baz=326,slow=8.2,SNR=2.5							
comp=Z,0.4nm,0.5s							
KEV	**Kevo**	**58.77**	**339**	P	**P**	**18 46 12.3**	**-0.3**
KEV	**Kevo**	**58.77**	**339**	P	**P**	**18 46 12.3**	**-0.3**
KEV				pmax	pmax		
comp=Z,35nm,1.4s							
ARCES	**ARCESS Array B**	**59.31**	**339**	P	**P**	**18 46 16.0**	**-0.4**
comp=Z,7.0nm,1.0s,baz=62,slow=8.5,SNR=9.5							
comp=Z,7.0nm,1.0s							
KNRA	**Kununurra**	**59.85**	**197**	P	**P**	**18 46 21.3**	**+0.7**
KTK1	**Kautokeino**	**60.26**	**339**	*e*P	**P**	**18 46 23.3**	**+0.4**
JETT	**Jettan, Norway**	**60.60**	**340**	*e*P	**P**	**18 46 25.8**	**+0.6**
JETT				IAmb	IAmb	18 46 33.1	
comp=Z,15nm,1.2s							
TRO	**Tromso**	**60.91**	**341**	*e*P	**P**	**18 46 27.1**	**-0.1**
TRO				IAmb	IAmb	18 46 29.3	
comp=Z,20nm,1.3s							
BELG	**Belogornoye**	**60.98**	**316**	P	**P**	**18 46 27.0**	**-0.9**
comp=Z,7.2nm,0.6s,baz=2.0,slow=3.3,SNR=7.0							
comp=Z,7.2nm,0.6s							
GEYT	**Alibeck**	**62.84**	**298**	P	**P**	**18 46 39.7**	**-1.1**
comp=Z,1.9nm,0.7s,baz=28,slow=6.7,SNR=4.4							
comp=Z,1.9nm,0.7s							
WB0	**Warramunga Arr**	**62.88**	**190**	P	**P**	**18 46 42.0**	**+1.0**
WB0				IAmb	IAmb	18 46 58.0	
comp=Z,12nm,1.4s							
WR0	**Warramunga Arr**	**63.05**	**190**	P	**P**	**18 46 43.2**	**+1.1**
WR0				IAmb	IAmb	18 47 11.2	
comp=Z,8.8nm,1.4s							
WRA	**Warramunga Arr**	**63.06**	**190**	P	**P**	**18 46 42.9**	**+0.7**
comp=Z,0.4nm,0.5s,baz=7.9,slow=6.8,SNR=14							
comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**63.06**	**190**	P	**P**	**18 46 42.0**	**-0.2**
WRA	**Warramunga Arr**	**63.06**	**190**	*i* P	**P**	**18 46 43.7**	**+1.5**
WRA				pmax	pmax		
comp=Z,1.0nm,0.6s							
LOF	**Lofoten**	**63.33**	**341**	*e*P	**P**	**18 46 43.0**	**-0.4**
FAUS	**Fauske**	**63.49**	**340**	*e*P	**P**	**18 46 44.7**	**+0.3**
FAUS				IAmb	IAmb	18 46 46.4	
comp=Z,6.6nm,0.7s							
FIA1	**FINESS Array S**	**64.64**	**332**	P	**P**	**18 46 51.5**	**-0.6**
MOR8	**Moi Rana**	**64.64**	**340**	*e*P	**P**	**18 46 50.4**	**-1.6**
MOR8				IAmb	IAmb	18 46 52.8	
comp=Z,5.

T1245				AML	AML	
	comp=E,226μm,0.5s					
T1245				AML	AML	
	comp=N,408μm,0.1s					
SMA1	**SAN MARTINO**	**0.15 138**		P	Pg	18 38 47.1 +0.5
SMA1				S	Sg	18 38 50.2 +1.2
MC2	**Monte Cornacci**	**0.17 358**	⇑P		Pg	18 38 47.7 +0.6
MC2				S	Sg	18 38 51.6 +1.9
LNSS	**Leonessa**	**0.18 220**	⇓P		Pg	18 38 47.8 +0.6
LNSS				S	Sg	18 38 50.9 +1.1
LNSS				AML	AML	
	comp=E,177μm,1.3s					
LNSS				AML	AML	
	comp=N,164μm,0.2s					
LNSS				AML	AML	
	comp=N,165μm,0.2s					
MMO1	**Montemonaco**	**0.18 31**	⇓P		Pg	18 38 47.7 +0.5
MMO1				S	Sg	18 38 51.0 +1.1
T1243	**Rocca Santa Ma**	**0.19 104**	⇑P		Pg	18 38 47.8 +0.5
T1243				S	Sg	18 38 51.0 +1.0
T1216	**Preci, Frazion**	**0.20 318**		P	Pg	18 38 47.9 +0.4
T1216				S	Sg	18 38 51.3 +1.0
T1217	**Poggiodomo (PG**	**0.20 261**		P	Pg	18 38 48.0 +0.5
T1217				S	Sg	18 38 52.0 +1.7
T1241	**Roccafluvione,**	**0.21 56**		P	Pg	18 38 48.1 +0.5
T1241				S	Sg	18 38 51.9 +1.4
T1241				AML	AML	
	comp=E,89μm,0.1s					
T1241				AML	AML	
	comp=N,45μm,0.2s					
T1241				AML	AML	
	comp=N,56μm,0.5s					
T1241				AML	AML	
	comp=E,90μm,0.1s					
RM33	**Pellescritta (**	**0.23 177**		P	Pg	18 38 48.9 +0.8
T1215	**Vallo di Nera,**	**0.25 284**	⇑P		Pg	18 38 48.8 +0.4
FDMO	**Fiordimonte**	**0.30 345**		P	Pg	18 38 50.0 +0.6
FDMO				S	Sb	18 38 55.1 -0.9
FDMO				AML	AML	
	comp=N,27μm,1.6s					
FDMO				AML	AML	
	comp=E,25μm,1.6s					
TERO	**Teramo**	**0.32 112**	⇑P		Pg	18 38 50.0 +0.3
TERO				AML	AML	
	comp=N,60μm,0.9s					
TERO				AML	AML	
	comp=N,60μm,0.9s					
TERO				AML	AML	
	comp=E,41μm,1.1s					
CSP1	**Cessapalombo**	**0.35 1**	⇓P		Pg	18 38 50.9 +0.6
ASSB	**Assisi San Ben**	**0.50 307**		P	Pg	18 38 53.1 +0.2
EL6	**Elcito**	**0.59 353**		S	Sb	18 39 05.0 +0.7
VVLD	**Villa Vallelon**	**0.93 160**		S	Sg	18 39 11.0 -2.1

*NOU **08** 18:42:06.7, 37.°24S×179.°66E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **08** 18:42:14.4±1.1, 37°S±6.°×17.°9E±.°, h19km±7km, M3.3/26, ML3.5/34, MLv3.3/26, Error ellipse: s-maj=0.0km s-min=0.0km az=127.0*
ISC 08 18:42:11.3±2.6, 37.°31S±0.°07×179.°3E±0.°1, h12km±11km, n53, σ1§08/61, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.80**	**252**	P	**Pb**	**18 42 27.4**	**+0.2**
MXZ				S	**Sg**	**18 42 35.3**	**-2.1**
MXZ	**Matakaoa Point**	**0.80**	**252**	P	**Pb**	**18 42 27.4**	**+0.2**
WMGZ	**Waiomatatini S**	**0.84**	**233**	P	**Pn**	**18 42 30.4**	**+1.4**
WMGZ				S	**Sb**	**18 42 40.7**	**+1.5**
PUZ	**Puketiti**	**1.10**	**226**	P	**Pg**	**18 42 34.1**	**+1.6**
PUZ				S	**Sb**	**18 42 47.6**	**+0.9**
PKGZ	**Pakihiroa**	**1.11**	**238**	P	**Pg**	**18 42 33.6**	**+1.0**
PKGZ				S	**Sb**	**18 42 46.4**	**-0.4**
HAZ	**Te Kaha**	**1.26**	**249**	P	**Pb**	**18 42 34.7**	**-0.3**
HAZ				S	**Sn**	**18 42 50.1**	**-1.5**
TWGZ	**Tauwhareparae**	**1.34**	**229**	P	**Pg**	**18 42 37.6**	**+0.6**
TWGZ				S	**Sg**	**18 42 53.9**	**+0.3**
RUGZ	**Raukumara Rang**	**1.42**	**242**	P	**Pg**	**18 42 38.5**	**-0.1**
RUGZ				S	**Sn**	**18 42 54.8**	**-0.9**
CNGZ	**Carnagh Statio**	**1.44**	**215**	P	**Pg**	**18 42 40.0**	**+1.0**
TKGZ	**Te Karaka**	**1.59**	**225**	P	**Pb**	**18 42 40.7**	**+0.1**
TKGZ				S	**Sn**	**18 42 59.5**	**-0.2**
MWZ	**Matawai**	**1.71**	**233**	P	**Pb**	**18 42 42.2**	**-0.6**
RIGZ	**Rimuhau**	**1.83**	**220**	P	**Pb**	**18 42 44.1**	**-0.6**
URZ	**Urewera**	**1.95**	**240**	P	**Pb**	**18 42 45.8**	**-1.0**
URZ				S	**Sn**	**18 43 07.7**	**-1.0**
URZ	**Urewera**	**1.95**	**240**	P	**Pb**	**18 42 46.0**	**-0.8**
SNGZ	**Shannon Statio**	**2.11**	**225**	P	**Pn**	**18 42 47.6**	**+1.1**
KNZ	**Kokohu**	**2.12**	**216**	P	**Pn**	**18 42 47.5**	**+1.0**
MHGZ	**Mahia Peninsul**	**2.13**	**210**	P	**Pb**	**18 42 48.4**	**-1.3**
RTZ	**Ruatahuna**	**2.23**	**234**	P	**Pb**	**18 42 49.8**	**-1.8**
MUGZ	**Murupara**	**2.29**	**239**	P	**Pn**	**18 42 50.2**	**+1.3**
WHHZ	**Waihua**	**2.38**	**222**	P	**Pn**	**18 42 51.5**	**+1.4**
MTHZ	**Maungataniwha**	**2.46**	**231**	P	**Pn**	**18 42 52.8**	**+1.6**
NMHZ	**Naumai**	**2.63**	**227**	P	**Pn**	**18 42 55.6**	**+1.9**
ARHZ	**Aropaoanui**	**2.64**	**222**	P	**Pn**	**18 42 55.1**	**+1.4**
MRHZ	**Matea Rd**	**2.71**	**235**	P	**Pn**	**18 42 56.1**	**+1.3**
BKZ	**Black Stump Fm**	**2.86**	**229**	P	**Pn**	**18 42 57.4**	**+0.6**
BKZ	**Black Stump Fm**	**2.86**	**229**	P	**Pn**	**18 42 57.8**	**+1.0**
KUZ	**Kuaotunu**	**2.89**	**280**	P	**Pn**	**18 42 56.4**	**-0.8**
KUZ	**Kuaotunu**	**2.89**	**280**	P	**Pn**	**18 42 56.5**	**-0.7**
MCHZ	**McNeill Hill**	**2.93**	**223**	P	**Pn**	**18 42 58.6**	**+0.8**
TOZ	**Tahuroa Road**	**3.02**	**261**	P	**Pn**	**18 42 59.9**	**+1.0**
KWHZ	**Kaweka Forest**	**3.07**	**226**	P	**Pn**	**18 43 00.2**	**+0.5**
KAHZ	**Kahuranaki**	**3.11**	**216**	P	**Pn**	**18 43 00.8**	**+0.6**
GRZ	**Great Barrier**	**3.24**	**288**	P	**Pn**	**18 43 02.2**	**+0.3**
KRHZ	**Kereru**	**3.25**	**223**	P	**Pn**	**18 43 02.6**	**+0.4**
MKAZ	**Moumakai**	**3.29**	**272**	P	**Pn**	**18 43 02.4**	**-0.2**
BHHZ	**Black Hill Sta**	**3.33**	**228**	P	**Pn**	**18 43 03.8**	**+0.6**
TMVZ	**Te Maari**	**3.33**	**236**	P	**Pn**	**18 43 04.1**	**+0.7**
NGZ	**Ngauruhoe**	**3.43**	**236**	P	**Pn**	**18 43 05.8**	**+1.0**
MOVZ	**Moawhango**	**3.46**	**232**	P	**Pn**	**18 43 05.7**	**+0.6**
WPHZ	**Waipukurau**	**3.53**	**218**	P	**Pn**	**18 43 05.8**	**-0.1**
PNHZ	**Pukenui**	**3.54**	**222**	P	**Pn**	**18 43 05.5**	**-0.6**
PRHZ	**Porangahau**	**3.59**	**214**	P	**Pn**	**18 43 06.4**	**-0.5**
HIZ	**Hauiti**	**3.69**	**250**	P	**Pn**	**18 43 10.2**	**+2.1**
HIZ	**Hauiti**	**3.69**	**250**	P	**Pn**	**18 43 10.1**	**+2.0**
TSZ	**Takapari Road**	**3.77**	**222**	P	**Pn**	**18 43 08.5**	**-0.7**
DVHZ	**Dannevirke**	**3.84**	**218**	P	**Pn**	**18 43 09.4**	**-0.9**
BFZ	**Birch Farm**	**4.11**	**214**	P	**Pn**	**18 43 13.0**	**-0.9**
WAZ	**Wanganui**	**4.15**	**233**	P	**Pn**	**18 43 15.9**	**+1.5**
TIWZ	**Tintock**	**4.35**	**216**	P	**Pn**	**18 43 16.6**	**-0.6**
MRZ	**Mangatainoka R**	**4.41**	**220**	P	**Pn**	**18 43 17.1**	**-1.0**
OUZ	**Omahuta**	**5.04**	**293**	P	**Pn**	**18 43 28.0**	**+1.4**
OUZ	**Omahuta**	**5.04**	**293**	P	**Pn**	**18 43 27.7**	**+1.1**
CTZ	**Chatham Island**	**7.14**	**155**	P	Pn	18 44 00.8	+5.3

*IDC **08** 18:50:30.9±0.9, 34.°49N×141.°73E, h0km, mb3.6/8, mbtmp3.7/11, ML3.9/2, Error ellipse: s-maj=26.9km s-min=17.8km az=92.0*
*JMA **08** 18:50:32.3±0.4, 34.°N±1.°×14.°2E±.°, h39km±3km, MV3.9/36, FAR E OFF CENTRAL HONSHU*
ISC 08 18:50:32.3±3.6, 34.°41N±0.°05×141.°94E±0.°07, h17km±22km, n33, σ1§24/35, mb3.7/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.83**	**287**	P	**Pb**	**18 50 48.3**	**+0.3**
BSO3	**Boso 3**	**1.24**	**289**	P	**Pn**	**18 50 54.8**	**+0.1**
BSO4	**Boso 4**	**1.44**	**294**	*e*P	**Pn**	**18 50 58.1**	**+0.5**
KTR	**Katsuura**	**1.52**	**299**	*e*P	**Pn**	**18 50 58.9**	**+0.1**
CHOJ	**Chosi**	**1.56**	**326**	*e*P	**Pn**	**18 50 59.1**	**-0.3**
JKUC	**kamogawauchiur**	**1.61**	**298**	*e*P	**Pn**	**18 51 00.0**	**-0.1**
JKUC				*e*S	**Sn**	**18 51 19.2**	**-1.3**
JMYK	**Miyake Tsubota**	**2.01**	**261**	P	**Pn**	**18 51 05.7**	**+0.1**
JMYK				S	**Sn**	**18 51 29.6**	**-0.7**
JMKN	**Mikurajimanish**	**2.02**	**256**	P	**Pn**	**18 51 05.6**	**0.0**
JMKN				*e*S	**Sn**	**18 51 29.3**	**-1.1**
JHJ	**Hachijo jima 2**	**2.21**	**235**	Pn	**Pn**	**18 51 09.1**	**+0.8**
	44nm,0.3s,baz=73,slow=22,SNR=16						
JHJ				Sn	**Sn**	**18 51 33.5**	**-1.7**
	65nm,0.3s,baz=82,slow=23,SNR=8.7						
	80nm,0.3s						
JOD2	**Odawara 2**	**2.49**	**291**	*e*P	**Pn**	**18 51 11.6**	**-0.6**
JIZS	**Izushimoda**	**2.54**	**278**	*e*P	**Pn**	**18 51 12.6**	**-0.2**
JFNN	**Fujinakano**	**2.79**	**287**	*e*P	**Pn**	**18 51 16.9**	**+0.7**
JFNN				*e*S	**Sn**	**18 51 49.8**	**+0.3**
JAG	**Ashikaga**	**2.85**	**315**	*e*P	**Pn**	**18 51 17.2**	**0.0**
JAG				*e*S	**Sn**	**18 51 49.8**	**-1.4**
JRY	**Ryogami san**	**2.96**	**304**	*e*P	**Pn**	**18 51 18.8**	**+0.3**
JYN	**Shimob**	**2.99**	**292**	P	**Pn**	**18 51 19.0**	**-0.1**
JFK	**Kawauchi**	**3.07**	**344**	P	**Pn**	**18 51 19.0**	**-1.2**
JCJ	**Chichijima**	**7.30**	**178**	Pn	**Pn**	**18 52 18.9**	**+0.6**
	4.5nm,0.3s,baz=99,slow=23,SNR=5.1						
JCJ				Sn	**Sn**	**18 53 36.3**	**-4.4**
	2.0nm,0.3s,baz=139,slow=22,SNR=2.0						
	105nm,1.1s						
USRK	**Ussuriysk Ar.**	**12.43**	**325**	Pn	**Pn**	**18 53 26.8**	**-1.7**
	2.1nm,0.8s,baz=116,slow=13,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**26.51**	**117**	T	T	19 24 10.2	
	baz=309,slow=76,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**26.52**	**117**	T	T	19 24 08.6	
	baz=309,slow=76,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**26.53**	**117**	T	T	19 24 09.8	
	baz=309,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**27.14**	**119**	T	T	19 25 00.6	
	baz=309						
H11S3	**WAKE ISLAND Hy**	**27.14**	**119**	T	T	19 24 59.0	
	baz=309						
H11S2	**WAKE ISLAND Hy**	**27.16**	**119**	T	T	19 24 57.7	
	baz=309						
CMAR	**Chiang Mai Arr**	**41.32**	**259**	P	**P**	**18 58 16.1**	**-1.3**
	0.2nm,0.5s,baz=54,slow=7.9,SNR=2.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.02**	**314**	P	**P**	**18 58 38.3**	**-0.5**
	0.8nm,0.6s,baz=91,slow=6.1,SNR=4.4						
ZALV				PcP	**PcP**	**19 00 24.6**	**+0.4**
	0.6nm,0.3s,baz=116,slow=4.7,SNR=4.4						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**45.91**	**304**	P	**P**	**18 58 53.5**	**-0.6**
	0.3nm,0.6s,baz=92,slow=8.0,SNR=1.6						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**54.54**	**189**	P	**P**	**19 00 01.2**	**+1.6**
	1.5nm,0.7s,baz=5.0,slow=7.6,SNR=16						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**58.26**	**189**	P	**P**	**19 00 27.6**	**+1.5**
	0.7nm,0.9s,baz=14,slow=11,SNR=11						
	0.7nm,0.9s						
NVAR	**Mina Array Bea**	**76.22**	**53**	P	**P**	**19 02 21.9**	**+1.6**
	0.4nm,0.7s,baz=268,slow=4.5,SNR=3.7						
	0.4nm,0.7s						
AKASG	**Malin Array Be**	**76.63**	**323**	P	**P**	**19 02 22.6**	**+0.6**
	0.2nm,0.3s,baz=64,slow=2.1,SNR=1.4						
	0.2nm,0.3s						
NB2	**NORSAR Subarra**	**76.77**	**338**	P	**P**	**19 02 23.9**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**76.77**	**338**	P	**P**	**19 02 23.8**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=39,slow=5.7,SNR=3.3						
	comp=Z,0.7nm,0.7s						

*IDC **08** 19:05:20.8±2.0, 38.°20N×21.°05E, h0km, mb3.6/3, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=117.4km s-min=27.8km az=142.0*
*ATH **08** 19:05:23.6, 37.°91N×21.°34E, h10km±2km, ML3.0/17, Error ellipse: s-maj=2.1km s-min=0.8km az=346.0*
*THE **08** 19:05:23.1, 37.°87N×21.°35E, h12km±1km, ML3.1/13, Error ellipse: s-maj=1.1km s-min=0.4km az=80.0*
ISC 08 19:05:23.4±0.9, 37.°90N±0.°02×21.°34E±0.°02, h15km±6km, n64, σ0§61/84, mb3.7/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**32**	P	**Pg**	**19 05 27.5**	**-0.3**
RLS				S	**Sg**	**19 05 31.1**	**+0.4**
	10μm,0.1s						
RLS	**Riolos of Patr**	**0.19**	**32**	P	**Pg**	**19 05 27.5**	**-0.3**
RLS				S	**Sg**	**19 05 30.8**	**+0.1**
RLS				AML	AML	19 05 31.2	
	comp=E,16559μm,0.1s						
RLS				AML	AML	19 05 31.4	
	comp=N,23790μm,0.2s						
DRO	**Drossia**	**0.30**	**79**	P	**Pg**	**19 05 29.2**	**-0.4**
DRO				S	**Sg**	**19 05 34.1**	**+0.3**
	comp=N,16μm,0.3s						
DRO	**Drossia**	**0.30**	**79**	P	**Pg**	**19 05 29.1**	**-0.4**
DRO				S	**Sg**	**19 05 33.8**	**0.0**
DRO				AML	AML	19 05 34.8	
	comp=N,40279μm,0.3s						
DRO				AML	AML	19 05 35.2	
	comp=E,23749μm,0.3s						
LTHK	**Lithakia**	**0.44**	**245**	P	**Pb**	**19 05 32.4**	**-0.5**
LTHK	**Lithakia**	**0.44**	**245**	P	**Pb**	**19 05 32.6**	**-0.3**
LTHK				S	**Sg**	**19 05 38.4**	**+0.2**
LTHK				AML	AML	19 05 46.9	
	comp=E,9771μm,0.6s						
LTHK				AML	AML	19 05 47.1	
	comp=N,10500μm,0.5s						
UPR	**University Cam**	**0.52**	**42**	P	**Pb**	**19 05 34.3**	**+0.1**
LAKA	**Lakka**	**0.61**	**56**	P	**Pg**	**19 05 34.6**	**-0.7**
LAKA				S	**Sb**	**19 05 44.0**	**-0.2**
	comp=N,7μm,0.4s						
LAKA	**Lakka**	**0.61**	**56**	P	**Pg**	**19 05 34.7**	**-0.7**
LAKA				S	**Sb**	**19 05 43.9**	**-0.2**
LAKA				AML	AML	19 05 45.6	
	comp=E,5372μm,0.6s						
LAKA				AML	AML	19 05 46.8	
	comp=N,2631μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.64**	**290**	P	**Pg**	**19 05 35.4**	**-0.4**
PSDA				S	**Sb**	**19 05 45.3**	**+0.4**
	comp=N,2μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.64**	**290**	P	**Pg**	**19 05 35.4**	**-0.4**
PSDA				S	**Sg**	**19 05 44.1**	**-0.1**
VLS	**Valsamata**	**0.66**	**295**	P	**Pg**	**19 05 35.6**	**-0.6**
VLS	**Valsamata**	**0.66**	**295**	P	**Pg**	**19 05 35.6**	**-0.6**
VLS				AML	AML	19 05 49.3	
	comp=N,2002μm,0.1s						
VLS				AML	AML	19 05 50.5	
	comp=E,1889μm,0.2s						
KLV	**Kalavryta, Ach**	**0.66**	**77**	P	**Pg**	**19 05 35.2**	**-1.0**
KLV				S	**Sg**	**19 05 44.9**	**0.0**
	comp=E,1μm,0.3s						
KLV	**Kalavryta, Ach**	**0.66**	**77**	P	**Pg**	**19 05 35.3**	**-1.0**
KLV				S	**Sg**	**19 05 45.0**	**+0.1**
KLV				AML	AML	19 05 49.4	
	comp=N,2536μm,0.4s						
KLV				AML	AML	19 05 50.9	
	comp=E,2507μm,0.3s						
EFP	**Efpalio**	**0.69**	**40**	P	**Pg**	**19 05 36.3**	**-0.5**
EFP				S	**Sb**	**19 05 47.1**	**+0.6**
	comp=E,2μm,0.6s						
EFP	**Efpalio**	**0.69**	**40**	P	**Pg**	**19 05 36.5**	**-0.3**
EFP				AML	AML	19 05 49.7	
	comp=E,3642μm,0.4s						
EFP				AML	AML	19 05 49.8	
	comp=N,2292μm,0.5s						
ALIK	**Aliki, Aigiali**	**0.71**	**59**	P	**Pg**	**19 05 36.6**	**-0.5**
ALIK				S	**Sb**	**19 05 47.4**	**+0.4**
PVO	**Paravola**	**0.73**	**11**	P	**Pb**	**19 05 37.8**	**0.0**
PVO				S	**Sn**	**19 05 49.6**	**-0.6**
	comp=N,1μm,0.3s						
PVO	**Paravola**	**0.73**	**11**	P	**Pb**	**19 05 37.9**	**+0.1**
SERG	**Sergoula**	**0.76**	**47**	P	**Pg**	**19 05 37.4**	**-0.8**
SERG				S	**Sb**	**19 05 49.5**	**+0.9**
	comp=N,2μm,0.2s						
SERG	**Sergoula**	**0.76**	**47**	P	**Pg**	**19 05 37.6**	**-0.6**
SERG				AML	AML	19 05 52.6	
	comp=E,3981μm,0.3s						
SERG				AML	AML	19 05 53.1	
	comp=N,3591μm,0.3s						
KEF4	**Livadi, Kephal**	**0.81**	**297**	P	**Pg**	**19 05 38.4**	**-0.6**
KEF4				S	**Sb**	**19 05 51.1**	**+1.3**
	comp=N,7μm,0.2s						
KEF4	**Livadi, Kephal**	**0.81**	**297**	P	**Pg**	**19 05 38.5**	**-0.5**
FSK	**Fiskardo**	**0.83**	**313**	P	**Pb**	**19 05 39.9**	**+0.4**
FSK				S	**Sn**	**19 05 52.2**	**-0.4**
	comp=N,970nm,0.2s						
FSK	**Fiskardo**	**0.83**	**313**	P	**Pb**	**19 05 39.9**	**+0.4**
FSK				AML	AML	19 05 55.1	
	comp=E,2579μm,0.2s						
FSK				AML	AML	19 05 58.1	
	comp=N,1287μm,0.4s						
DMLN	**Damoulianata-K**	**0.83**	**294**	P	**Pg**	**19 05 39.3**	**-0.3**
KEF3	**Kipouria, Keph**	**0.84**	**292**	P	**Pg**	**19 05 38.8**	**-0.9**
KEF3				S	**Sb**	**19 05 51.7**	**+0.9**
	comp=N,2μm,0.2s						
KEF3	**Kipouria, Keph**	**0.84**	**292**	P	**Pg**	**19 05 38.8**	**-0.9**
ITM	**Ithomi**	**0.86**	**147**	P	**Pg**	**19 05 39.3**	**-0.6**
ITM	**Ithomi**	**0.86**	**147**	P	**Pg**	**19 05 39.7**	**-0.3**
ITM				AML	AML	19 05 57.0	
	comp=E,769μm,0.4s						
ITM				AML	AML	19 06 01.5	
	comp=N,1380μm,0.6s						
EVGI	**Lefkada island**	**0.90**	**323**	P	**Pg**	**19 05 40.2**	**-0.6**
EVGI				S	**Sn**	**19 05 54.6**	**+0.3**
	comp=N,1μm,0.1s						
EVGI	**Lefkada island**	**0.90**	**323**	P	**Pg**	**19 05 40.4**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.96**	**328**	P	**Pg**	**19 05 41.1**	**-0.8**
DRAG	**Dragano-Lefkad**	**0.99**	**323**	P	**Pg**	**19 05 41.8**	**-0.7**
DRAG				S	**Sn**	**19 05 57.2**	**+0.7**
LKD2	**Lefkada island**	**1.04**	**329**	P	**Pg**	**19 05 42.6**	**-0.8**
LKD2				S	**Sn**	**19 05 59.1**	**+1.3**
	comp=N,732nm,0.3s						
LKD2	**Lefkada island**	**1.04**	**329**	P	**Pg**	**19 05 42.9**	**-0.5**
LKD2				AML	AML	19 06 05.1	
	comp=E,1352μm,0.2s						
LKD2				AML	AML	19 06 07.9	
	comp=N,1569μm,0.6s						
PYL	**PYLOS**	**1.05**	**162**	P	**Pg**	**19 05 42.5**	**-1.2**
PYL	**PYLOS**	**1.05**	**162**	P	**Pg**	**19 05 42.5**	**-1.2**
THAL	**Thalero**	**1.05**	**82**	P	**Pg**	**19 05 42.2**	**-1.5**
TSLK	**Tsoukalades, L**	**1.07**	**330**	P	**Pg**	**19 05 43.5**	**-0.5**
TSLK	**Tsoukalades, L**	**1.07**	**330**	P	**Pb**	**19 05 43.7**	**+0.1**
EVR	**Evrytania**	**1.08**	**20**	P	**Pg**	**19 05 43.4**	**-0.8**
EVR	**Evrytania**	**1.08**	**20**	P	**Pb**	**19 05 43.9**	**+0.1**
EVR				AML	AML	19 06 09.6	
	comp=E,802μm,0.8s						
EVR				AML	AML	19 06 12.6	
	comp=N,615μm,0.6s						
MAKR	**Makrakomi, Fth**	**1.27**	**29**	P	**Pb**	**19 05 47.2**	**+0.1**
MAKR				AML	AML	19 06 11.3	
	comp=N,1662μm,0.4s						
MAKR				AML	AML	19 06 12.4	
	comp=E,1798μm,0.5s						
LOUT	**Loutraki**	**1.29**	**86**	P	**Pg**	**19 05 47.9**	**-0.4**
AXAR	**Agios Charalam**	**1.35**	**50**	P	**Pn**	**19 05 47.7**	**0.0**
AXAR	**Agios Charalam**	**1.35**	**50**	P	**Pn**	**19 05 47.7**	**0.0**
AXAR				AML	AML	19 06 15.6	
	comp=E,2639μm,0.4s						
AXAR				AML	AML	19 06 18.9	
	comp=N,2664μm,0.5s						
EPID	**Epidavros**	**1.44**	**101**	P	**Pb**	**19 05 50.0**	**+0.1**
LKR	**Lokris**	**1.51**	**60**	P	**Pn**	**19 05 50.6**	**+0.7**
LKR				AML	AML	19 06 17.8	
	comp=E,510μm,0.8s						
LKR				AML	AML	19 06 19.0	
	comp=N,466μm,0.5s						
KRND	**KRANIDI**	**1.53**	**109**	P	**Pb**	**19 05 51.8**	**+0.5**
KRND				AML	AML	19 06 19.8	
	comp=N,391μm,0.4s						
KRND				AML	AML	19 06 22.7	
	comp=E,576μm,0.4s						
VIL2	**Platees**	**1.55**	**78**	P	**Pb**	**19 05 52.2**	**+0.4**
VLI	**Veliai**	**1.73**	**132**	P	**Pb**	**19 05 55.6**	**+0.6**
IGT	**Igoumenitsa**	**1.81**	**335**	P	**Pb**	**19 05 55.6**	**-0.7**
ATH	**Athens Observa**	**1.88**	**87**	P	**Pb**	**19 05 57.7**	**+0.3**
ATH				AML	AML	19 06 28.2	
	comp=N,483μm,0.5s						
ATH				AML	AML	19 06 28.4	
	comp=E,548μm,0.6s						
ATHU	**Athens Univers**	**1.93**	**87**	P	**Pb**	**19 05 58.0**	**-0.3**
VLY	**Voula,Athens**	**1.94**	**91**	P	**Pb**	**19 05 58.7**	**+0.2**
DION	**Dionisos Attik**	**2.06**	**84**	P	**Pb**	**19 05 60.0**	**-0.4**
KTHA	**Kythira Island**	**2.14**	**139**	P	**Pb**	**19 06 02.6**	**+0.7**
KEK	**Kerkira**	**2.18**	**327**	P	**Pb**	**19 06 01.0**	**-1.5**
BRTR	**Keskin Array B**	**9.77**	**75**	Pn	Pn	19 07 48.8	+5.3
	comp=E,0.1nm,0.3s,baz=276,slow=13,SNR=1.5						
	comp=E,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.23**	**221**	P	**P**	**19 11 33.9**	**+0.3**
	comp=E,0.4nm,0.9s,baz=39,slow=8.5,SNR=2.0						
	comp=E,0.4nm,0.9s						
MKAR	**Makanchi Array**	**44.90**	**58**	P	**P**	**19 13 37.0**	**-0.3**
	comp=E,0.4nm,0.3s,baz=274,slow=7.3,SNR=7.5						
	comp=E,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**45.40**	**48**	P	**P**	**19 13 40.7**	**-0.5**
	comp=E,0.3nm,0.3s,baz=280,slow=8.6,SNR=1.8						
	comp=E,0.3nm,0.3s						

*IDC **08** 19:08:32.3±2.9, 44.°23N×105.°23W, h0km, mbtmp2.7/3, ML3.6/3, Error ellipse: s-maj=34.4km s-min=17.8km az=4.0*
*NEIC **08** 19:08:39.5±0.9, 43.°64N±0.°05×105.°17W±0.°06, h0km±2km, ML3.3/56, Error ellipse: s-maj=9.6km s-min=5.7km az=319.0*
ISC 08 19:08:39.3±1.0, 43.°60N±0.°05×105.°24W±0.°05, h0km, n43, σ1§10/43, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**59**	Pg	**Pg**	**19 08 57.8**	**-0.9**
K22A	**Casper**	**1.34**	**225**		**Pg**	**19 09 03.4**	**-1.5**
PHWY	**Pilot Hill**	**2.30**	**184**		**Pn**	**19 09 19.1**	**+0.3**
PHWY				IAML		19 09 57.1	
	162nm,0.4s						
RWWY	**Rawlins**	**2.40**	**218**		**Pn**	**19 09 20.4**	**+0.3**
RWWY				IAML		19 10 02.0	
	245nm,0.5s						
RWWY				IAML		19 10 02.3	
	197nm,0.9s						
N23A	**Red Feather La**	**2.75**	**191**		**Pn**	**19 09 25.6**	**+0.6**
N23A				IAML		19 10 07.8	
	comp=N,114nm,0.9s						
N23A				IAML

TCUT	Toone Canyon	5.20 244		Pn	19 09 59.8 +1.2
EGMT	Eagleton	5.43 326	Pn	Pn	19 10 01.9 +0.4
LRM	Limekiln Ridge	5.60 296	Pn	Pn	19 10 04.5 +0.5
PV15	Paradox Valley	5.80 206		Pn	19 10 07.9 +1.2
SPUT	South Promonto	5.80 249	Pn	Pn	19 10 06.9 +0.2
S22A	4UR Ranch, Cre	5.97 192		Pn	19 10 09.7 +0.6
SRU	San Rafael Swe	5.99 223		Pn	19 10 09.5 +0.1
ECSD	EROS Data Cent	6.26 86		Pn	19 10 11.8 -1.0
DUG	Dugway, Tooele	6.59 242	Pn	Pn	19 10 18.5 +0.9
HLID	Hailey	6.66 273	Pn	Pn	19 10 19.4 +0.9
MVCO	Mesa Verde	6.85 202	Pn	Pn	19 10 22.0 +0.8
NVAR	Mina Array Bea	11.13 247	Pn	Pn	19 11 17.9 -2.0
	comp=E,0.1nm,0.3s,baz=64,slow=12,SNR=1.6 comp=E,0.1nm,0.3s				
TXAR	Lajitas Array	14.29 174	Pn	Pn	19 12 05.3 +2.3
	baz=359,slow=12,SNR=1.5				
TXAR			Pg	Pg	19 13 04.2
	baz=360,slow=12,SNR=1.4				
TXAR			Lg	Lg	19 16 10.2
	baz=357,slow=33,SNR=1.8 comp=E,0.1nm,0.3s				

NOU ***08*** *19:09:46.3, 37°.01S×179°.69E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*

WEL ***08*** *19:09:53.8±0.9, 37°S±4°×17°9E±°, h20km, M3.3/18, ML3.6/24, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=98.4*

ISC 08 19:09:51.0±2.6, 36°.99S±0°.08×179°.3E±0°.1, h13km±10km, n48, σ1°.20/64, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.95	232	P	Pg	19 10 09.0	-0.3
MXZ				S	Sg	19 10 21.3	-0.4
MXZ	Matakaoa Point	0.95	232	P	Pg	19 10 09.0	-0.3
WMGZ	Waiomatatini S	1.07	219	P	Pn	19 10 12.7	+1.2
WMGZ				S	Sn	19 10 26.9	+0.6
PKGZ	Pakihiroa	1.30	226	P	Pn	19 10 15.5	+0.7
PKGZ				S	Sb	19 10 32.3	+0.5
PUZ	Puketiti	1.34	216	P	Pg	19 10 16.5	-0.2
PUZ				S	Sb	19 10 34.0	+1.0
HAZ	Te Kaha	1.40	236	P	Pn	19 10 14.7	-1.4
HAZ				S	Sn	19 10 36.2	+1.8
TWGZ	Tauwhareparae	1.56	220	P	Pb	19 10 19.9	+0.2
TWGZ				S	Sb	19 10 40.5	+1.2
RUGZ	Raukumara Rang	1.59	232	P	Pb	19 10 20.5	+0.3
CNGZ	Carnagh Statio	1.71	209	P	Pb	19 10 22.0	-0.2
TKGZ	Te Karaka	1.83	217	P	Pb	19 10 23.9	-0.3
TKGZ				S	Sn	19 10 44.8	-0.3
RIGZ	Rimuhau	2.08	214	P	Pn	19 10 26.1	+0.5
RIGZ				S	Sn	19 10 50.5	-0.9
URZ	Urewera	2.12	233	P	Pn	19 10 27.2	+1.1
URZ				S	Sn	19 10 52.1	-0.2
URZ	Urewera	2.12	233	P	Pn	19 10 27.5	+1.4
OPRZ	Ohinepanea	2.31	247	P	Pn	19 10 29.2	+0.5
MHGZ	Mahia Peninsul	2.41	206	P	Pn	19 10 30.4	+0.4
RTZ	Ruatahuna	2.43	227	P	Pn	19 10 31.8	+1.5
WHHZ	Waihua	2.63	217	P	Pn	19 10 32.4	-0.6
WHHZ				S	Sn	19 11 04.0	-0.7
MTHZ	Maungataniwha	2.67	225	P	Pn	19 10 34.8	+1.2
MTHZ				S	Sn	19 11 06.0	+0.2
KUZ	Kuaotunu	2.84	274	P	Pn	19 10 35.5	-0.5
KUZ				S	Sn	19 11 04.9	-5.2
KUZ	Kuaotunu	2.84	274	P	Pn	19 10 36.9	+0.9
ARHZ	Aropaoanui	2.89	217	P	Pn	19 10 37.0	+0.4
ARHZ				S	Sn	19 11 09.8	-1.4
BKZ	Black Stump Fm	3.08	224	P	Pn	19 10 39.9	+0.6
BKZ				S	Sn	19 11 14.7	-1.3
BKZ	Black Stump Fm	3.08	224	P	Pn	19 10 39.9	+0.6
TOZ	Tahuroa Road	3.08	255	P	Pn	19 10 39.3	+0.1
GRZ	Great Barrier	3.14	282	P	Pn	19 10 41.0	+0.9
MCHZ	McNeill Hill	3.17	219	P	Pn	19 10 41.2	+0.7
MCHZ				S	Sn	19 11 16.9	-1.4
MKAZ	Moumakai	3.28	267	P	Pn	19 10 41.8	-0.2
KWHZ	Kaweka Forest	3.30	222	P	Pn	19 10 42.9	+0.6
KWHZ				S	Sn	19 11 19.5	-2.0
KAHZ	Kahuranaki	3.37	213	P	Pn	19 10 42.6	-0.7
ETAZ	East Tamaki Re	3.46	269	P	Pn	19 10 45.7	+1.2
KRHZ	Kereru	3.49	220	P	Pn	19 10 45.0	+0.1
MBAZ	Motutapu North	3.50	272	P	Pn	19 10 46.5	+1.5
TMVZ	Te Maari	3.52	232	P	Pn	19 10 46.6	+1.2
BHHZ	Black Hill Sta	3.54	224	P	Pn	19 10 46.0	+0.3
MOVZ	Moawhango	3.67	228	P	Pn	19 10 47.9	+0.5
AWAZ	Awhitu Peninsu	3.69	267	P	Pn	19 10 48.3	+0.7
RVAZ	Riverhead Bore	3.75	272	P	Pn	19 10 49.3	+0.9
PNHZ	Pukenui	3.78	218	P	Pn	19 10 48.9	-0.1
WPHZ	Waipukurau	3.78	215	P	Pn	19 10 48.3	-0.7
TSZ	Takapari Road	4.01	219	P	Pn	19 10 52.8	+0.7
WCZ	Waipu Caves	4.09	283	P	Pn	19 10 54.9	+1.8
WAZ	Wanganui	4.35	229	P	Pn	19 10 57.8	+1.2
BFZ	Birch Farm	4.37	212	P	Pn	19 10 55.4	-1.6
TIWZ	Tintock	4.61	214	P	Pn	19 10 59.4	-0.9
OUZ	Omahuta	4.91	289	P	Pn	19 11 06.3	+1.9
OUZ	Omahuta	4.91	289	P	Pn	19 11 06.3	+1.9
QRZ	Quartz Range	6.50	232	P	Pn	19 11 27.2	+1.0
	73nm,2.2s						
CTZ	Chatham Island	7.44	156	P	Pn	19 11 40.4	+1.3

WEL ***08*** *19:41:00, 37°.08S×178°.89E, h10km, ML5.8, Mw5.8, Moment Tensor Solution. s9 Moment tensor: Scale 10^17 Nm; Mrr0.93; Mθθ-0.97; Mφφ0.03; Mrθ2.11; Mθφ-0.50; Mφr6.12; Fault plane solution: M0 6.54000×10^17 NP1: φs265.00000°, δ7.00000°, λ154.00000°. NP2: φs20.00000°, δ87.00000°, λ84.00000°. Principal axes: T -62744.0300, Plg48.0000°, Azm284.0000°; N -5347.1200, Plg6.0000°, Azm20.0000°; P 68091.1500, Plg42.0000°, Azm116.0000°;*

BJI ***08*** *19:41:14.3±0.0, 37°.13S×178°.99E, h5km, mb5.5/38, mB5.9/33, Ms5.5/45, Ms7 5.4/45*

WEL ***08*** *19:41:16.8±1.7, 37°S±5°×17°9E±1°, h7km±7km, M5.7/24, ML5.9/25, MLv5.7/24, Error ellipse: s-maj=0.0km s-min=0.0km az=75.9*

MOS ***08*** *19:41:17.6±1.0, 37°.16S×178°.53E, h21km, mb5.9/35, MS5.4/43, Error ellipse: s-maj=10.5km s-min=8.2km az=111.1*

NEIC ***08*** *19:41:21.3, 37°.11S×178°.65E, h32km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-0.25; Mθθ-0.85; Mφφ 1.10; Mrθ 1.18; Mθφ 0.92; Mφr 1.89; Fault plane solution: M0 2.61000×10^17 NP1: φs332.56000°, δ20.97000°, λ-158.13000°. NP2: φs222.02000°, δ82.34000°, λ-70.42000°. Principal axes: T 2.9748, Plg34.0000°, Azm295.0000°; N -1.0674, Plg19.0000°, Azm39.0000°; P -1.9074, Plg49.0000°, Azm153.0000°;*

NEIC ***08*** *19:41:21.3±1.5, 37°.12S±0°.06×178°.64E±0°.10, h35km±1km, mb5.7/163, Ms_20 5.5/327, Mwb5.5/34, Mww5.8 Error ellipse: s-maj=14.0km s-min=9.4km az=119.0*

GCMT ***08*** *19:41:22.3±0.1, 37°.23S±0°.01×178°.80E±0°.01, h26km, MW5.8/137, Moment Tensor Solution. s136, c246; s137, c266; Duration: 1s9 Moment tensor: Scale 10^17 Nm; Mrr-0.21±.03; Mθθ-0.59±.02; Mφφ 0.79±.02; Mrθ 2.88±.07; Mθφ-0.24±.02; Mφr 4.61±.09; Best double couple: M0 5.48700×10^17 NP1: φs212.00000°, δ89.00000°, λ-82.00000°. NP2: φs310.00000°, δ8.00000°, λ-172.00000°. Principal axes: T 5.4810, Plg43.0000°, Azm294.0000°; N 0.0110, Plg8.0000°, Azm32.0000°; P -5.4940, Plg46.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NOU ***08*** *19:41:23.1, 37°.53S×178°.56E, h49km, ML5.7/112, Off E. Coast of N. Island, N.Z.*

IDC ***08*** *19:41:24.4±0.9, 37°.15S×178°.49E, h67km±6km, mb5.0/24, mbtmp5.2/26, MS5.4/54, Error ellipse: s-maj=9.9km s-min=7.4km az=126.0*

NEIC ***08*** *19:41:29, 37°.18S×179°.04E, h36km, Moment Tensor Solution. Duration: 24s0 Moment tensor: Scale 10^17 Nm; Mrr0.24; Mθθ-0.94; Mφφ 0.70; Mrθ 2.34; Mθφ-0.54; Mφr 5.58; Fault plane solution: M0 6.14000×10^17 NP1: φs290.00000°, δ9.00000°, λ177.00000°. NP2: φs23.00000°, δ89.00000°, λ81.00000°. Principal axes: T 6.2791, Plg45.0000°, Azm284.0000°; N -0.2978, Plg9.0000°, Azm24.0000°; P -5.9813, Plg44.0000°, Azm122.0000°;*

ISC 08 19:41:20.2±0.3, 37°.26S±0°.03×178°.66E±0°.03, h33km±1km, h33km:pP-P, n1457, σ1°.66/1359, mb5.8/202, MS5.5/238, 46C-29D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.41	223	P	Pn	19 41 29.9	0.0
MXZ				S	Sn	19 41 37.8	+1.4
MXZ	Matakaoa Point	0.41	223	P	Pn	19 41 29.9	0.0
MXZ				S	Sn	19 41 38.1	+1.7
MXZ	Matakaoa Point	0.41	223	P	Pn	19 41 30.6	+0.7
WMGZ	Waiomatatini S	0.59	199	P	Pn	19 41 34.0	+1.7
PKGZ	Pakihiroa	0.78	216	P	Pb	19 41 36.2	+0.8
PKGZ				S	Sb	19 41 50.8	+5.1
HAZ	Te Kaha	0.85	234	P	Pb	19 41 36.7	+0.1
PUZ	Puketiti	0.87	201	P	Pb	19 41 37.7	+0.8
PUZ				S	Sb	19 41 52.4	+4.1
RUGZ	Raukumara Rang	1.05	228	P	Pb	19 41 41.1	+1.1
TWGZ	Tauwhareparae	1.06	210	P	Pb	19 41 40.9	+0.8
TWGZ				S	Sb	19 41 59.4	+5.7
WIZ	White Island	1.20	257	P	Pn	19 41 41.4	+0.7
WSRZ	White Island S	1.21	257	P	Pb	19 41 41.9	-0.6
CNGZ	Carnagh Statio	1.27	196	P	Pb	19 41 43.3	-0.3
TKGZ	Te Karaka	1.34	208	P	Pb	19 41 44.3	-0.5
MWZ	Matawai	1.40	220	P	Pb	19 41 45.6	-0.1
WHRZ	Whale Island	1.47	246	P	Pb	19 41 47.2	+0.4
RAGZ	Rawiri	1.58	218	P	Pb	19 41 48.2	-0.6
URZ	Urewera	1.58	230	P	Pb	19 41 48.9	0.0
	17μm,0.5s,baz=117,slow=1.9,SNR=5650						
URZ				S	Sb	19 42 09.3	+0.8
	23μm,0.4s,baz=52,slow=16,SNR=41						
URZ				LR	LR	19 42 40.5	
	comp=Z,187μm,18.8s,baz=182,slow=49						
URZ	Urewera	1.58	230		Pb	19 41 48.2	-0.6
URZ				Sn	Sb	19 42 10.0	+1.6
URZ	Urewera	1.58	230	P	Pb	19 41 48.5	-0.3
URZ	Urewera	1.58	230	P	Pb	19 41 49.1	+0.3
RIGZ	Rimuhau	1.61	206	P	Pn	19 41 47.4	+1.1
MARZ	Manawahe	1.73	245	P	Pb	19 41 50.7	-0.7
EDRZ	Edgecumbe	1.74	240	P	Pb	19 41 50.9	-0.7
OPRZ	Ohinepanea	1.77	250	P	Pb	19 41 50.6	-1.4
SNGZ	Shannon Statio	1.84	214	P	Pn	19 41 51.1	+1.5
RTZ	Ruatahuna	1.90	224	P	Pb	19 41 52.9	-1.3
KNZ	Kokohu	1.92	204	P	Pn	19 41 50.9	+0.3
MUGZ	Murupara	1.93	230	P	Pb	19 41 53.2	-1.5
MYRZ	Mayor Island	1.93	269	P	Pn	19 41 52.4	+1.7
MKRZ	Makatiti	1.95	243	P	Pb	19 41 54.7	-0.4
LIRZ	Lichensteins R	1.95	247	P	Pb	19 41 54.4	-0.7
TGRZ	Tauranga	1.96	256	P	Pb	19 41 53.8	-1.5
MHGZ	Mahia Peninsul	1.98	197	P	Pn	19 41 52.2	+0.8
OMRZ	Omania	2.00	244	P	Pb	19 41 54.9	-1.1
RRRZ	Republican Roa	2.01	237	P	Pb	19 41 54.8	-1.3
KARZ	Kaharoa	2.06	248	P	Pb	19 41 55.1	-1.9
RAHZ	Arahi	2.07	216	P	Pn	19 41 54.5	+1.9
HLRZ	Highlands Stat	2.08	241	P	Pb	19 41 55.9	-1.4
WHHZ	Waihua	2.13	211	P	Pn	19 41 54.8	+1.3
NGRZ	Ngongotaha	2.13	246	P	Pb	19 41 56.8	-1.4
MTHZ	Maungataniwha	2.14	222	P	Pn	19 41 55.9	+2.2
UTU	Utuhina	2.16	244	P	Pb	19 41 57.4	-1.3
PRRZ	Plateau Road	2.18	235	P	Pn	19 41 56.5	+2.4
HSRZ	Hossack Road	2.18	241	P	Pb	19 41 57.8	-1.2
HRRZ	Handcock Road	2.19	238	P	Pb	19 41 57.5	-1.7
KMRZ	Kaimai	2.24	254	P	Pb	19 41 57.7	-2.3
ALRZ	Allen Road	2.25	234	P	Pn	19 41 57.4	+2.3
GRRZ	Galatos Road	2.29	241	P	Pb	19 41 59.0	-1.9
WPRZ	Whakapapatarin	2.34	237	P	Pb	19 41 59.6	-2.1
NMHZ	Naumai	2.34	218	P	Pn	19 41 58.6	+2.0
MRHZ	Matea Rd	2.37	228	P	Pn	19 41 59.3	+2.5
ARHZ	Aropaoanui	2.39	213	P	Pn	19 41 58.2	+1.2
KUZ	Kuaotunu	2.41	281	P	Pn	19 41 57.9	+0.6
KUZ	Kuaotunu	2.41	281	P	Pn	19 41 58.5	+1.2
BKZ	Black Stump Fm	2.56	221		Pn	19 42 00.9	+1.5
BKZ	Black Stump Fm	2.56	221	P	Pn	19 42 01.1	+1.7
BKZ	Black Stump Fm	2.56	221	P	Pn	19 42 02.1	+2.7
TOZ	Tahuroa Road	2.56	258	P	Pn	19 42 00.9	+1.6
WHTZ	Whakaora	2.56	236	P	Pb	19 42 03.8	-1.6
KUTZ	Kaahu Road	2.56	241	P	Pn	19 42 02.3	+2.9
HATZ	Hinemaiaia	2.60	230	P	Pn	19 42 02.5	+2.6
MCHZ	McNeill Hill	2.67	215	P	Pn	19 42 01.9	+1.0
TLZ	Tolley Road	2.69	246	P	Pn	19 42 04.1	+2.8
CKHZ	Cape Kidnapper	2.70	207	P	Pn	19 42 01.2	0.0
WATZ	Wairara	2.73	237	P	Pb	19 42 05.3	-3.0
GRZ	Great Barrier	2.76	290	P	Pn	19 42 03.5	+1.3
KWHZ	Kaweka Forest	2.79	218	P	Pn	19 42 03.5	+0.9
RATZ	Rangitukua	2.79	234	P	Pn	19 42 05.8	+3.2
MKAZ	Moumakai	2.80	272	P	Pn	19 42 03.8	+1.2
WIAZ	Waiheke Island	2.86	278	P	Pn	19 42 05.4	+1.9
KAHZ	Kahuranaki	2.89	208	P	Pn	19 42 03.9	-0.1
KATZ	Kakaramea	2.90	233	P	Pn	19 42 07.3	+3.1
TMVZ	Te Maari	2.98	231	P	Pn	19 42 07.3	+2.0
KRHZ	Kereru	2.98	216	P	Pn	19 42 05.4	+0.1
NTVZ	North Tongarir	2.98	231	P	Pn	19 42 07.6	+2.3
ETVZ	East Tongariro	2.98	230	P	Pn	19 42 07.4	+2.0
ETAZ	East Tamaki Re	3.00	275	P	Pn	19 42 07.4	+1.9
KRVZ	Karewarewa	3.00	232	P	Pn	19 42 07.8	+2.2
BHHZ	Black Hill Sta	3.02	222	P	Pn	19 42 06.9	+1.1
OTVZ	Oturere	3.03	230	P	Pn	19 42 08.0	+2.0
NNVZ	North Ngauruho	3.04	231	P	Pn	19 42 08.6	+2.5
WTVZ	West Tongariro	3.05	232	P	Pn	19 42 09.0	+2.8
MBAZ	Motutapu North	3.05	278	P	Pn	19 42 08.0	+1.8
SNVZ	South Ngauruho	3.06	230	P	Pn	19 42 08.4	+2.0
NGZ	Ngauruhoe	3.08	231	P	Pn	19 42 08.6	+2.0
TUVZ	Tukino	3.10	229	P	Pn	19 42 09.2	+2.2
TWVZ	Taurewa	3.12	234	P	Pn	19 42 09.7	+2.6
MOVZ	Moawhango	3.13	226	P	Pn	19 42 08.7	+1.3
ABAZ	Army Bay	3.14	281	P	Pn	19 42 09.4	+2.0
WHVZ	Whangaehu Hut	3.15	229	P	Pn	19 42 09.4	+1.7
FWVZ	Far West T-bar	3.15	230	P	Pn	19 42 09.5	+1.8
EPAZ	Eden Park BICE	3.16	276	P	Pn	19 42 10.3	+2.7
DRZ	Dome Shelter	3.16	230	P	Pn	19 42 10.9	+2.9
HBAZ	Herne Bay Bore	3.17	276	P	Pn	19 42 10.4	+2.6
WNVZ	Wahianoa	3.17	228	P	Pn	19 42 09.5	+1.5
TRVZ	Turoa	3.18	229	P	Pn	19 42 10.1	+1.9
AWAZ	Awhitu Peninsu	3.21	272	P	Pn	19 42 10.5	+2.1
HIZ	Hauiti	3.26	246		Pn	19 42 12.2	+3.1
HIZ	Hauiti	3.26	246	P	Pn	19 42 12.6	+3.6
MTVZ	Mangateitei	3.28	229	P	Pn	19 42 11.4	+2.0
WTAZ	Waiatarua	3.28	275	P	Pn	19 42 11.7	+2.4
WPHZ	Waipukurau	3.29	211	P	Pn	19 42 09.1	-0.4
PKVZ	Pokaka	3.30	231	P	Pn	19 42 12.2	+2.6
RVAZ	Riverhead Bore	3.30	277	P	Pn	19 42 11.7	+2.1
VRZ	Vera Road	3.59	238	P	Pn	19 42 16.7	+3.1
WCZ	Waipu Caves	3.71	290	P	Pn	19 42 17.3	+2.0
WAZ	Wanganui	3.81	228	P	Pn	19 42 18.4	+1.8
MHEZ	Mangahewa	3.87	241	P	Pn	19 42 22.5	+5.1
BFZ	Birch Farm	3.90	208	P	Pn	19 42 16.4	-1.4
PRWZ	Pori Road	3.90	212	P	Pn	19 42 17.5	-0.4
OHWZ	Ohakea	3.94	221	P	Pn	19 42 19.2	+1.0
LREZ	Lake Rotokare	4.00	235	P	Pn	19 42 22.6	+3.4
DREZ	Durham Road	4.00	240	P	Pn	19 42 24.1	+4.8
PREZ	Palmer Road	4.11	238	P	Pn	19 42 24.8	+4.1
NEZ	North Egmont	4.11	239	P	Pn	19 42 24.8	+4.0
PKE	Pukeiti	4.16	241	P	Pn	19 42 26.0	+4.6
KHEZ	Kahui Hut	4.18	240	P	Pn	19 42 26.1	+4.4
NBEZ	Newall Road No	4.27	241	P	Pn	19 42 27.4	+4.5
NMEZ	Namu Road	4.33	239	P	Pn	19 42 27.7	+4.0
OUZ	Omahuta	4.57	295	P	Pn	19 42 29.1	+2.0
OUZ	Omahuta	4.57	295	P	Pn	19 42 29.4	+2.3
SNZO	South Karori	5.08	216	P	Pn	19 42 31.6	-2.3
TKNZ	Takaka Hill	5.81	228	P	Pn	19 42 45.2	+1.1
KHZ	Kahutara	6.48	216	P	Pn	19 42 51.3	-2.0
CTZ	Chatham Island	7.40	152	P	Pn	19 43 03.8	-2.0
CTZ	Chatham Island	7.40	152	P	Pn	19 43 05.0	-0.9
I36NZ	CHATHAM INFRAS	7.60	152	I	I	20 19 20.0	
	baz=331,slow=332,SNR=1.4						
RAO	Raoul Island	8.48	21	S	Sn	19 44 51.1	-4.4
	544nm,0.4s,baz=253,slow=19,SNR=3.3						
RPZ	Rata Peaks	8.66	220	P	Pn	19 43 20.4	-2.8
	136nm,0.3s,baz=49,slow=2.3,SNR=108						
RPZ				S	Sn	19 44 51.5	-8.3
	312nm,0.3s,baz=336,slow=23,SNR=21						
RPZ				LR	LR	19 47 32.7	
	comp=Z,60μm,21.0s,baz=46,slow=42						
RPZ	Rata Peaks	8.66	220	P	Pn	19 43 21.1	-2.1
ODZ	Otahua Downs	9.84	215	P	Pn	19 43 36.5	-2.9
JCZ	Jackson Bay	10.12	225	P	Pn	19 43 41.3	-2.0
SYZ	Scrubby Hill	11.66	214	P	Pn	19 44 01.6	-2.6
LHI	Lord Howe Isla	17.15	284		Pn	19 45 14.8	-2.5
OUENC	Ouen Island, N	17.97	322		P	19 45 28.4	+0.5
OUENC	Ouen Island, N	17.97	322	P	P	19 45 33.4	+5.6
MARNC	Mare, Loyalty	18.23	327		P	19 45 28.8	-1.9
MARNC	Mare, Loyalty	18.23	327	P	Pn	19 45 34.0	+3.3
YATNC	Mamie plateau,	18.25	323	P	Pn	19 45 35.3	+4.3
ONTNC	Ouen Toro	18.26	321		P	19 45 30.4	-0.6
ONTNC	Ouen Toro	18.26	321	P	Pn	19 45 35.9	+4.9
	367nm,1.4s						
DZM	Mont Dzumac	18.46	322	*e*Pn	Pn	19 45 34.8	+1.2
	619nm,1.6s						
DZM				*e*LR	LR	19 49 48.2	
	comp=Z,49μm,24.1s						
DZM	Mont Dzumac	18.46	322	P	Pn	19 45 33.8	+0.1
	9.7nm,0.7s,baz=125,slow=15,SNR=13						
DZM				LR	LR	19 51 28.0	
	comp=Z,27μm,21.2s,baz=136,slow=33						
DZM	Mont Dzumac	18.46	322	P	Pn	19 45 33.6	0.0
DZM	Mont Dzumac	18.46	322	P	Pn	19 45 38.5	+4.9
NOUC	Port Laguerre	18.51	321	P	Pn	19 45 38.0	+3.9
LIFNC	LIFOU	19.20	326		P	19 45 41.3	0.0
LIFNC				IAmb	IAmb	19 45 50.5	
	comp=Z,706nm,1.7s						
LIFNC	LIFOU	19.20	326	P	Pn	19 45 46.2	+3.8
MSVF	Nonsavu	19.46	358	P	Pn	19 45 45.2	-0.5
	comp=Z,31nm,0.8s,baz=142,slow=12,SNR=16						
MSVF				LR	LR	19 51 36.9	
	comp=Z,15μm,21.4s,baz=193,slow=32						
MSVF	Nonsavu	19.46	358	P	P	19 45 42.9	-1.4
MSVF	Nonsavu	19.46	358	*e*P	Pn	19 45 45.0	-0.7
MSVF				pmax	pmax		
	comp=Z,33nm,0.8s						
MSVF	Nonsavu	19.46	358	P	Pn	19 45 45.7	0.0
NIUE	Niue	20.69	32	P	P	19 45 55.6	-2.0
NIUE				IAmb	IAmb	19 46 05.4	
	comp=Z,938nm,1.9s						
NIUE	Niue	20.69	32	P	Pn	19 46 04.3	+4.2
KOUNC	Koumac, New Ca	20.83	319	P	Pn	19 46 01.7	+0.1
DVP	Devils Point	21.54	332	P	P	19 46 10.9	+4.3
SYDH	Sydney Hard Ro	22.96	270	P	P	19 46 25.2	+3.4
ARMA	Armidale	23.42	279	P	P	19 46 27.7	+1.1
	baz=23,SNR=8.0						
ARMA	Armidale	23.42	279	P	P	19 46 28.1	+1.5
ARMA				IAmb	IAmb	19 46 36.1	
	comp=Z,322nm,1.9s						
ARMA	Armidale	23.42	279	P	P	19 46 30.6	+4.1
MILA	Mila	23.48	261	P	P	19 46 26.9	-0.1
	baz=23,SNR=16						
MILA	Mila	23.48	261	P	P	19 46 29.1	+2.1
CNB	Canberra Magne	23.66	266	P	P	19 46 28.4	-0.3
	baz=24,SNR=32						
CNB	Canberra Magne	23.66	266	P	P	19 46 31.5	+2.8
CAN	Canberra	23.94	266	P	P	19 46 33.2	+1.8
CAN				IAmb	IAmb	19 46 59.9	
	comp=Z,247nm,1.3s						
CAN				IAMs_20	IAMs_20	19 54 35.2	
	comp=Z,15μm,20.0s						
CAN	Canberra	23.94	266	P	P	19 46 33.2	+1.8
CAN				pmax	pmax		
	comp=Z,247nm,1.3s						
CAN				MLR	MLR		
	comp=Z,14μm,20.0s						
CAN	Canberra	23.94	266	P	P	19 46 33.6	+2.2
TAU	Tasmania Unive	24.55	247	P	P	19 46 37.3	+0.5
TAU				IAmb	IAmb	19 46 39.9	
	comp=Z,366nm,1.6s						
TAU	Tasmania Unive	24.55	247	IAMs_20	IAMs_20	19 54 59.0	
	comp=Z,14μm,20.0s						
TAU	Tasmania Unive	24.55	247	P	P	19 46 37.3	+0.5
TAU				pmax	pmax		
	comp=Z,367nm,1.7s						
TAU				MLR	MLR		
	comp=Z,14μm,20.0s						
TAU	Tasmania Unive	24.55	247	P	P	19 46 37.9	+1.1
RAR	Rarotonga	24.61	55	P	P	19 46 38.3	+0.7
	comp=Z,10nm,0.7s,baz=204,slow=3.9,SNR=7.9						
RAR				LR	LR	19 54 04.0	
	comp=Z,5μm,21.1s,baz=221,slow=31 comp=Z,10nm,0.7s						
RAR	Rarotonga	24.61	55	P	P	19 46 38.1	+0.6
RAR	Rarotonga	24.61	55	P	P	19 46 38.1	+0.6
RAR				pmax	pmax		
	comp=Z,19nm,1.0s						
RAR				MLR	MLR		
	comp=Z,5μm,21.0s						
RAR	Rarotonga	24.61	55	P	P	19 46 41.2	+3.7
MOO	Moorlands	24.62	248	P	P	19 46 37.1	-0.5
	baz=24,SNR=9.1						
MOO	Moorlands	24.62	248	P	P	19 46 38.3	+0.8
COROU	Coronation Par	24.65	250	P	P	19 46 40.8	+3.1
	comp=Z,59nm,1.0s						
AFI	Afiamalu	24.77	23	P	P	19 46 38.4	-0.7
	comp=Z,57nm,

CTAO pP **pP** **19 48 01.4 +0.5**
TV1H Townsville Har 33.09 294 P **P** **19 47 54.9 +1.8**
INKA Innaminka 33.17 275 P **P** **19 47 55.3 +1.6**
WHYH Whyalla 33.67 265 P **P** **19 47 59.4 +1.3**
PAE Paea 34.05 64 *e*P **P** **19 48 02.4 +1.0**
LCRK Leigh Creek 34.07 269 P **P** **19 48 02.6 +1.0**
PPT2 Papeete2 34.10 64 *e*P **P** **19 48 01.9 -0.1**
PPT2 Papeete2 34.10 64 *e*P **P** **19 48 02.4 +0.4**
comp=Z,592nm,30.0s
PPT2 *e*LR LR 19 57 00.0
comp=Z,14μm,25.0s
PPT2 *e*LR LR 19 57 00.2
comp=Z,11μm,26.0s
PPTF Pamatai, Papee 34.10 64 P **P** **19 47 60.0 -2.0**
PPTF IAmb IAmb 19 48 37.0
comp=Z,257nm,1.5s
PPT Papeete 34.11 64 LR LR 19 58 30.0
comp=Z,5μm,21.4s,baz=236,slow=30
BBOO Buckleboo 34.95 264 P **P** **19 48 08.9 -0.2**
baz=35,SNR=33
BBOO Buckleboo 34.95 264 P **P** **19 48 08.8 -0.4**
BBOO IAmb IAmb 19 48 11.0
comp=Z,97nm,1.2s
BBOO Buckleboo 34.95 264 P **P** **19 48 09.5 +0.3**
MTSU Mount Surprise 35.62 293 P **P** **19 48 16.2 +1.2**
baz=36,SNR=84
MTSU Mount Surprise 35.62 293 P **P** **19 48 16.5 +1.5**
DRV Dumont d'Urvil 36.76 205 P **P** **19 48 25.5 +1.3**
DRV pP **sP** **19 48 36.9 -0.2**
OOD Oodnadatta 37.17 272 P **P** **19 48 28.9 +0.7**
MULG Mulgathing 37.45 267 P **P** **19 48 30.7 +0.1**
QIS Mount Isa 37.72 285 P **P** **19 48 33.7 +0.7**
baz=38,SNR=53
QIS Mount Isa 37.72 285 P **P** **19 48 34.4 +1.5**
TARA Tarawa 38.79 351 P **P** **19 48 41.1 -0.7**
TARA IAmb IAmb 19 48 55.8
comp=Z,80nm,0.9s
COEN Coen 39.18 297 P **P** **19 48 45.9 +0.7**
baz=39,SNR=332
COEN Coen 39.18 297 P **P** **19 48 45.6 +0.4**
COEN Coen 39.18 297 P **P** **19 48 46.4 +1.2**
PMG Port Moresby 39.73 306 LR LR 20 04 12.2
comp=Z,6μm,18.4s,baz=164,slow=35
PMG Port Moresby 39.73 306 P **P** **19 48 49.9 +0.2**
PMG IAmb IAmb 19 48 58.1
comp=Z,106nm,0.9s
PMG Port Moresby 39.73 306 IAMs_20 IAMs_20 20 03 15.1
comp=Z,6μm,19.0s
PMG Port Moresby 39.73 306 P **P** **19 48 49.9 +0.2**
PMG pmax pmax
comp=Z,106nm,0.9s
PMG MLR MLR
comp=Z,6μm,19.0s
PMG Port Moresby 39.73 306 P **P** **19 48 51.6 +1.9**
PMG Port Moresby 39.73 306 P **P** **19 48 51.1 +1.4**
PMG Port Moresby 39.73 306 P **P** **19 48 50.0 +0.3**
AS01 Alice Springs 40.49 277 P **P** **19 48 56.3 +0.2**
AS31 Alice Springs 40.53 277 P **P** **19 48 56.0 -0.4**
ASAR Alice Springs 40.53 277 P **P** **19 48 56.1 -0.3**
comp=Z,104nm,0.8s,baz=118,slow=7.8,SNR=481
ASAR PcP **PcP** **19 50 56.8 -1.7**
comp=Z,8.9nm,0.8s,baz=110,slow=3.4,SNR=1.6
ASAR ScP **ScP** **19 54 39.0 -6.3**
comp=Z,2.4nm,0.7s,baz=111,slow=5.1,SNR=3.4
ASAR S **S** **19 54 60.0 -3.5**
comp=Z,6.9nm,0.9s,baz=125,slow=14,SNR=7.4
ASAR LR LR 20 05 52.6
comp=Z,5μm,18.5s,baz=128,slow=36
comp=Z,104nm,0.8s
KRVT Keravat (AS076 40.87 317 S **S** **19 55 05.3 -3.3**
comp=Z,8.7nm,0.6s,baz=281,slow=18,SNR=1.2
KRVT LR LR 20 04 45.2
comp=Z,2μm,19.8s,baz=283,slow=34
RABL Rabaul 40.89 317 P **P** **19 48 59.0 -0.5**
RABL Rabaul 40.89 317 P **P** **19 48 59.7 +0.2**
VNDA Vanda 41.01 186 P **P** **19 49 01.6 +1.9**
comp=Z,1.8nm,0.8s,baz=9.1,slow=8.1,SNR=13
VNDA ScP **ScP** **19 54 42.1 -4.2**
comp=Z,0.7nm,0.7s,baz=354,slow=4.9,SNR=1.4
VNDA LR LR 20 03 09.4
comp=Z,4μm,20.2s,baz=24,slow=32
VNDA Vanda 41.01 186 P **P** **19 49 01.8 +2.1**
VNDA Vanda 41.01 186 P **P** **19 49 01.8 +2.1**
VNDA pmax pmax
comp=Z,14nm,1.0s
SBA Scott Base 41.01 184 P **P** **19 49 02.3 +2.6**
SBA IAmb IAmb 19 49 25.5
comp=Z,182nm,2.0s
SBA Scott Base 41.01 184 P **P** **19 49 02.3 +2.6**
SBA pmax pmax
comp=Z,182nm,2.0s
SBA MLR MLR
comp=Z,5μm,20.0s
SBA Scott Base 41.01 184 P **P** **19 49 02.0 +2.3**
SBA pP **sP** **19 49 11.3 -1.3**
WR0 Warramunga Arr 41.98 282 P **P** **19 49 08.0 -0.4**
WR0 IAmb IAmb 19 49 10.7
comp=Z,243nm,1.1s
FORT Forrest 42.03 263 P **P** **19 49 08.8 +0.2**
baz=42,SNR=28
FORT Forrest 42.03 263 P **P** **19 49 08.2 -0.4**
FORT IAmb IAmb 19 49 11.2
comp=Z,253nm,0.8s
FORT Forrest 42.03 263 P **P** **19 49 08.8 +0.2**
WB1 Warramunga Ar. 42.13 282 P **P** **19 49 09.5 -0.1**
WB2 Warramunga Arr 42.14 282 P **P** **19 49 09.0 -0.6**
WB2 IAmb IAmb 19 49 11.3
comp=Z,189nm,0.8s
WRAB Tennant Creek 42.15 282 P **P** **19 49 09.1 -0.6**
WRAB IAmb IAmb 19 49 11.3
comp=Z,172nm,0.8s
WRAB Tennant Creek 42.15 282 P **P** **19 49 09.1 -0.6**
WRAB pmax pmax
comp=Z,173nm,0.8s
WRAB MLR MLR
comp=Z,10μm,21.0s
WRAB Tennant Creek 42.15 282 P **P** **19 49 09.7 0.0**
WRAB Tennant Creek 42.15 282 P **P** **19 49 08.1 -1.6**
WRA Warramunga Arr 42.15 282 P **P** **19 49 09.5 -0.3**
comp=Z,97nm,0.6s,baz=123,slow=7.0,SNR=954
WRA PcP **PcP** **19 51 01.6 -2.2**
comp=Z,14nm,0.6s,baz=118,slow=3.2,SNR=4.9
WRA ScP **ScP** **19 54 46.4 -5.4**
comp=Z,4.9nm,0.9s,baz=127,slow=3.9,SNR=5.9
WRA S **S** **19 55 19.2 -8.4**
comp=Z,9.0nm,1.1s,baz=127,slow=13,SNR=6.3
WRA LR LR 20 06 06.1
comp=Z,11μm,21.6s,baz=120,slow=35
comp=Z,97nm,0.6s
WRA Warramunga Arr 42.15 282 P **P** **19 49 09.5 -0.3**
WRA Warramunga Arr 42.15 282 P **P** **19 49 09.5 -0.3**
WRA pmax pmax
comp=Z,48nm,1.3s
WB0 Warramunga Arr 42.20 282 P **P** **19 49 09.7 -0.5**
WB0 IAmb IAmb 19 49 11.8
comp=Z,199nm,0.8s
WRKA Warakurna 44.32 271 P **P** **19 49 25.8 -1.5**
baz=44,SNR=118
WRKA Warakurna 44.32 271 P **P** **19 49 26.0 -1.3**
PTCN Pitcairn Islan 45.01 90 IAMs_20 IAMs_20 20 03 10.2
comp=Z,7μm,21.0s
MANU Manus Island 45.36 313 P **P** **19 49 35.4 -0.1**
MANU IAmb IAmb 19 49 37.6
comp=Z,72nm,0.8s
MANU Manus Island 45.36 313 P **P** **19 49 36.4 +0.9**
CCD Concordia, Ant 45.60 197 P **P** **19 49 37.8 +0.5**
CCD pP **sP** **19 49 50.3 +0.1**
TAOE Nuku Hiva Isla 46.72 63 *e*P **P** **19 49 46.7 +0.3**
comp=Z,309nm,27.9s
TAOE *e*S **S** **19 56 34.7 +0.5**
comp=Z,471nm,24.7s
TAOE *e*LR LR 20 02 51.2
comp=Z,9μm,25.3s
KWAJ Kwajalein Atol 46.98 345 P **P** **19 49 47.4 -0.8**
KWAJ Kwajalein Atol 46.98 345 IAMs_20 IAMs_20 20 04 32.6
comp=Z,4μm,20.0s
KWAJ Kwajalein Atol 46.98 345 P **P** **19 49 47.4 -0.8**
KWAJ pmax pmax
comp=Z,166nm,0.8s
KWAJ MLR MLR
comp=Z,4μm,20.0s
CASY Casey 47.81 210 P **P** **19 49 54.9 +0.8**
CASY IAmb IAmb 19 50 11.4
comp=Z,100nm,0.9s
CASY Casey 47.81 210 IAMs_20 IAMs_20 20 08 32.1
comp=Z,4μm,20.0s
CASY Casey 47.81 210 P **P** **19 49 53.9 -0.2**
CASY pP **pP** **19 50 02.7 -0.7**
KDU Kakadu 47.89 288 P **P** **19 49 54.7 -0.7**
baz=48,SNR=24
KDU Kakadu 47.89 288 P **P** **19 49 54.8 -0.6**
MTN Manton Dam 48.81 287 P **P** **19 50 02.0 -0.5**
baz=49,SNR=68
MTN Manton Dam 48.81 287 P **P** **19 50 02.0 -0.5**
MTN Manton Dam 48.81 287 P **P** **19 50 01.9 -0.5**
KNRA Kununurra 48.93 282 P **P** **19 50 03.2 -0.2**
baz=49,SNR=150
KNRA Kununurra 48.93 282 P **P** **19 50 03.3 -0.1**
KNRA Kununurra 48.93 282 P **P** **19 50 03.2 -0.2**
GENI Genyem 49.39 305 P **P** **19 50 07.0 +0.1**
comp=Z,3μmcomp=Z,3μmcomp=Z,208nm,1.1s
GENI Genyem 49.39 305 P **P** **19 50 08.8 +1.9**
NWAO Narrogin (SRO) 49.68 256 LR LR 20 09 28.8
comp=Z,4μm,20.9s,baz=306,slow=34
NWAO Narrogin (SRO) 49.68 256 P **P** **19 50 08.7 -0.3**
baz=50,SNR=8.5
NWAO P **P** **19 50 08.7 -0.3**
baz=50,SNR=8.5
NWAO Narrogin (SRO) 49.68 256 P **P** **19 50 08.3 -0.6**
NWAO IAmb IAmb 19 50 31.4
comp=Z,220nm,1.8s
NWAO Narrogin (SRO) 49.68 256 IAMs_20 IAMs_20 20 12 29.8
comp=Z,5μm,18.0s
NWAO Narrogin (SRO) 49.68 256 P **P** **19 50 08.3 -0.6**
NWAO pmax pmax
comp=Z,220nm,1.8s
NWAO MLR MLR
comp=Z,5μm,18.0s
KLBR Kellerberrin 49.81 257 P **P** **19 50 09.1 -0.8**
baz=50,SNR=21
KLBR Kellerberrin 49.81 257 P **P** **19 50 09.6 -0.4**
FITZ Fitzroy Crossi 50.01 277 S **S** **19 57 17.6 -2.9**
comp=Z,5.7nm,0.9s,baz=208,slow=23,SNR=8.5
FITZ LR LR 20 12 31.9
comp=Z,2μm,18.8s,baz=120,slow=38
FITZ Fitzroy Crossi 50.01 277 P **P** **19 50 11.7 0.0**
baz=50,SNR=137
FITZ Fitzroy Crossi 50.01 277 P **P** **19 50 11.7 0.0**
FITZ Fitzroy Crossi 50.01 277 P **P** **19 50 12.1 +0.5**
SMPI Sarmi 50.80 304 P **P** **19 50 16.4 -1.2**
comp=Z,87nm,1.5s
MUN Mundaring 50.85 256 P **P** **19 50 17.7 -0.2**
baz=51,SNR=16
MUN Mundaring 50.85 256 P **P** **19 50 19.0 +1.1**
BLDU Ballidu 51.03 258 P **P** **19 50 18.5 -0.7**
baz=51,SNR=15
BLDU Ballidu 51.03 258 P **P** **19 50 18.8 -0.4**
MEEK Meekatharra 51.29 264 P **P** **19 50 19.9 -1.3**
baz=51,SNR=52
MEEK Meekatharra 51.29 264 P **P** **19 50 20.1 -1.2**
SAUI Saumlaki 51.80 292 P **P** **19 50 24.5 -0.6**
MORW Morawa 52.22 260 P **P** **19 50 27.4 -0.8**
baz=52,SNR=30
MORW Morawa 52.22 260 P **P** **19 50 27.5 -0.7**
MORW IAmb IAmb 19 50 35.7
comp=Z,46nm,0.8s
MORW Morawa 52.22 260 P **P** **19 50 27.5 -0.7**
SRPI Serui, Papua 52.54 302 P **P** **19 50 30.5 -0.1**
comp=Z,2μmcomp=Z,183nm,1.0s
PSA00 Pilbara Seismi 52.78 270 P **P** **19 50 31.2 -1.2**
PSA00 Pilbara Seismi 52.78 270 P **P** **19 50 31.1 -1.2**
PSA00 IAmb IAmb 19 50 38.6
comp=Z,74nm,0.8s
PSA00 Pilbara Seismi 52.78 270 P **P** **19 50 31.4 -0.9**
QSPA South Pole Qui 52.86 180 P **P** **19 50 35.1 +2.6**
comp=Z,51nm,1.0s,baz=25,slow=1.7,SNR=143
QSPA ScP **ScP** **19 55 33.2 -3.0**
comp=Z,3.2nm,0.9s,baz=337,slow=7.7,SNR=1.7
QSPA PKiKP **PKiKP** **19 58 19.6 +0.4**
comp=Z,4.5nm,1.0s,baz=90,slow=20,SNR=11
QSPA LR LR 20 09 33.3
comp=Z,6μm,21.2s,baz=40,slow=32
comp=Z,51nm,1.0s
QSPA South Pole Qui 52.86 180 P **P** **19 50 34.7 +2.1**
QSPA IAmb IAmb 19 50 54.1
comp=Z,118nm,0.9s
QSPA South Pole Qui 52.86 180 P **P** **19 50 32.5 0.0**
MBWA Marble Bar 53.08 270 P **P** **19 50 33.3 -1.3**
MBWA IAmb IAmb 19 50 41.3
comp=Z,101nm,0.8s
MBWA Marble Bar 53.08 270 P **P** **19 50 33.7 -0.9**
MBWA Marble Bar 53.08 270 P **P** **19 50 32.1 -2.5**
MBWA pP **pP** **19 50 39.9 -3.9**
RKPI Ransiki, Papua 54.21 300 P **P** **19 50 42.2 -0.7**
comp=Z,2μmcomp=Z,2μmcomp=Z,152nm,0.9s
FAKI Fak Fak 54.56 297 P **P** **19 50 43.9 -1.5**
FAKI IAMs_20 IAMs_20 20 14 03.6
comp=Z,4μm,21.0s
FAKI Fak Fak 54.56 297 P **P** **19 50 44.1 -1.3**
comp=Z,2μmcomp=Z,2μmcomp=Z,199nm,0.8s
FAKI Fak Fak 54.56 297 P **P** **19 50 44.2 -1.2**
SOEI Soe 55.99 285 P **P** **19 50 56.4 +0.6**
SOEI Soe 55.99 285 P **P** **19 50 57.4 +1.5**
comp=Z,4μmcomp=Z,374nm,1.2s
SOEI Soe 55.99 285 P **P** **19 50 57.0 +1.1**
BATI Baumata 56.18 284 LR LR 20 16 54.0
comp=Z,12μm,18.4s,baz=132,slow=38
BATI Baumata 56.18 284 P **P** **19 50 58.4 +1.3**
comp=Z,2μmcomp=Z,3μmcomp=Z,236nm,1.1s
MSAI Masohi 56.65 294 P **P** **19 50 59.2 -1.2**
comp=Z,411nmcomp=Z,39nm,0.7s
SIJI Sorong 56.69 298 LR LR 20 15 48.9
comp=Z,4μm,20.7s,baz=121,slow=36
SIJI Sorong 56.69 298 P **P** **19 51 00.0 -0.8**
comp=Z,2μmcomp=Z,3μmcomp=Z,272nm,0.8s
SIJI pP **pP** **19 51 07.0 -3.1**
comp=Z,2μmcomp=Z,3μmcomp=Z,272nm,0.8s
GIRL Giralia 56.70 266 P **P** **19 51 01.2 +0.5**
baz=56,SNR=8.1
GIRL Giralia 56.70 266 P **P** **19 51 00.6 -0.2**
AAI Ambon 56.95 293 P **P** **19 51 00.6 -2.0**
comp=Z,2μmcomp=Z,1μmcomp=Z,65nm,0.9s
NLAI Namlea 58.06 293 P **P** **19 51 09.7 -0.7**
comp=Z,5μmcomp=Z,66nm,0.8s
MMRI Maumere 58.25 284 P **P** **19 51 11.3 -0.5**
MMRI Maumere 58.25 284 P **P** **19 51 11.8 +0.1**
comp=Z,3μmcomp=Z,7μmcomp=Z,553nm,1.2s
MMRI Maumere 58.25 284 P **P** **19 51 12.1 +0.4**
LBMI Labuha 59.53 295 P **P** **19 51 20.7 0.0**
comp=Z,4μmcomp=Z,21nm,0.9s
SANI Sanana 59.67 293 P **P** **19 51 20.9 -0.7**
comp=Z,2μmcomp=Z,2μmcomp=Z,185nm,0.9s
SANI Sanana 59.67 293 P **P** **19 51 21.1 -0.5**
GUMO Guam 59.74 321 LR LR 20 14 13.0
comp=Z,948nm,21.3s,baz=152,slow=33
BBSI Bau Bau 59.98 287 P **P** **19 51 24.2 +0.5**
comp=Z,2μmcomp=Z,67nm,1.5s
RPN Rapa Nui 60.46 103 LR LR 20 11 38.3
comp=Z,3μm,20.1s,baz=228,slow=30
TNTI Ternate 60.61 296 P **P** **19 51 27.4 -0.6**
TNTI Ternate 60.61 296 P **P** **19 51 27.3 -0.7**
comp=Z,1μmcomp=Z,1μmcomp=Z,82nm,2.2s
TNTI Ternate 60.61 296 P **P** **19 51 28.8 +0.8**
comp=Z,81nm,2.3s
GAMI Galela, Maluku 61.05 298 P **P** **19 51 30.2 -0.8**
comp=Z,1μmcomp=Z,114nm,1.0s
BSSI Bau Bau, Buton 61.15 285 P **P** **19 51 31.4 -0.3**
comp=Z,154nm,2.2s
DBNI Kabupaten Domp 61.38 282 P **P** **19 51 33.1 -0.2**
comp=Z,2μmcomp=Z,163nm,0.8s
KHLU Kahalu`u 61.43 27 P **P** **19 51 33.4 -0.1**
PUH Pauahi 61.48 28 P **P** **19 51 33.9 0.0**
KKSI Kolaka, Sulawe 61.52 288 P **P** **19 51 34.2 0.0**
comp=Z,1μmcomp=Z,84nm,0.9s
MLH Mauna Loa 61.53 28 P **P** **19 51 34.2 -0.1**
PLAI Plampang 61.60 281 P **P** **19 51 34.3 -0.5**
comp=Z,3μmcomp=Z,3μmcomp=Z,200nm,1.3s
PLAI Plampang 61.60 281 P **P** **19 51 34.8 0.0**
POHA Pohakuloa 61.71 28 P **P** **19 51 34.7 -0.8**
POHA pP **pP** **19 51 43.0 -2.0**
POHA sP **sP** **19 51 50.4 +1.7**
HPAH Hawaii Prepara 61.90 27 P **P** **19 51 36.3 -0.3**
BKSI Bulukumba 61.95 286 P **P** **19 51 36.8 -0.3**
comp=Z,2μmcomp=Z,1μmcomp=Z,82nm,1.3s
KEKH Kekaha 62.35 23 P **P** **19 51 39.2 -0.3**
TWSI Taliwang, Sumb 62.36 280 P **P** **19 51 39.6 -0.2**
comp=Z,4μmcomp=Z,377nm,1.1s
KAPI Kappang 62.43 286 P **P** **19 51 40.0 -0.3**
comp=Z,17nm,0.7s,baz=164,slow=6.6,SNR=5.8
KAPI S **S** **20 00 00.8 -4.6**
comp=Z,3.6nm,0.4s,baz=211,slow=19,SNR=1.3
KAPI LR LR 20 19 54.1
comp=Z,4μm,19.5s,baz=126,slow=37
comp=Z,17nm,0.7s
KAPI Kappang 62.43 286 P **P** **19 51 40.0 -0.3**
KAPI Kappang 62.43 286 P **P** **19 51 40.0 -0.3**
KAPI pmax pmax
comp=Z,214nm,1.5s
KAPI MLR MLR
comp=Z,4μm,19.0s
KAPI Kappang 62.43 286 P **P** **19 51 40.6 +0.3**
comp=Z,2μmcomp=Z,82nm,1.5s
KAPI Kappang 62.43 286 P **P** **19 51 42.0 +1.7**
comp=Z,91nm,1.5s
KAPI Kappang 62.43 286 pP pP 19 51 46.6 -3.1
LUWI Luwuk 62.73 291 P **P** **19 51 42.2 0.0**
LUWI IAMs_20 IAMs_20 20 18 11.4
comp=Z,3μm,21.0s
LUWI Luwuk 62.73 291 P **P** **19 51 42.3 0.0**
comp=Z,3μmcomp=Z,184nm,1.1s
LUWI Luwuk 62.73 291 P **P** **19 51 44.2 +1.9**
KMSI Cibinong 62.92 294 P **P** **19 51 42.7 -0.9**
comp=Z,2μmcomp=Z,195nm,1.0s
SPSI Sidrap Palu 63.09 287 P **P** **19 51 43.8 -0.9**
comp=Z,1μmcomp=Z,110nm,0.8s
KLNI Mataram 63.17 280 P **P** **19 51 44.5 -0.7**
comp=Z,2μmcomp=Z,248nm,0.8s
BELA Belgrano 2 63.37 173 P **P** **19 51 46.4 +0.7**
BELA IAmb IAmb 19 51 48.9
comp=Z,76nm,0.8s
TTSI Tana Toraja 63.64 287 P **P** **19 51 47.7 -0.6**
comp=Z,1μmcomp=Z,78nm,1.0s
APSI Ampana 63.65 291 P **P** **19 51 48.8 +0.4**
comp=Z,3μmcomp=Z,218nm,1.2s
IGBI Denpasar 63.67 279 P **P** **19 51 48.5 -0.1**
comp=Z,2μmcomp=Z,259nm,1.2s
DNP Denpasar 63.71 279 P **P** **19 51 49.4 +0.6**
comp=Z,21μmcomp=Z,583nm,0.9s
SGSI Sangihe 63.95 297 P **P** **19 51 50.1 -0.3**
comp=Z,904nmcomp=Z,70nm,1.2s
PMSI Majene 64.03 286 P **P** **19 51 51.3 +0.3**
comp=Z,3μmcomp=Z,129nm,0.8s
RTBI Rangdo, Negare 64.05 279 P **P** **19 51 51.5 +0.4**
comp=Z,4μmcomp=Z,292nm,0.9s
SRBI Singaraja 64.06 280 P **P** **19 51 51.8 +0.7**
comp=Z,4μmcomp=Z,321nm,1.1s
SMAI San Martin Ant 64.13 158 P **P** **19 51 52.4 +1.6**
SMAI IAmb IAmb 19 51 55.1
comp=Z,95nm,1.1s
MRSI Marisa 64.35 292 P **P** **19 51 51.5 -1.5**
comp=Z,2μmcomp=Z,761nmcomp=Z,36nm,1.3s
JAGI Jajag, Banyuwa 64.67 279 P **P** **19 51 54.1 -0.9**
JAGI Jajag, Banyuwa 64.67 279 P **P** **19 51 54.2 -0.9**
comp=Z,2μmcomp=Z,207nm,1.2s
JAGI Jajag, Banyuwa 64.67 279 P **P** **19 51 55.3 +0.2**
MAW Mawson 64.92 202 P **P** **19 51 57.1 +1.1**
comp=Z,18nm,0.8s,baz=110,slow=14,SNR=12
MAW S **S** **20 00 33.8 -1.1**
comp=Z,0.7nm,0.3s,baz=59,slow=21,SNR=1.3
MAW LR LR 20 19 22.7
comp=Z,4μm,21.0s,baz=110,slow=35
comp=Z,18nm,0.8s
MAW Mawson 64.92 202 P **P** **19 51 56.5 +0.6**
baz=65,SNR=11
MAW Mawson 64.92 202 P **P** **19 51 57.5 +1.6**
ABJI Asem Bagus 65.01 280 P **P** **19 51 57.6 +0.3**
TOLI2 Tolitoli 65.64 292 P **P** **19 51 59.9 -1.5**
TOLI2 IAmb IAmb 19 52 16.1
comp=Z,71nm,1.3s
TOLI2 Tolitoli 65.64 292 P **P** **19 52 00.8 -0.6**
KMMI Kalianget 65.67 280 P **P** **19 52 01.4 -0.2**
comp=Z,3μmcomp=Z,362nm,1.0s
MPSI Mapaga 65.78 290 P **P** **19 52 01.4 -0.9**
comp=Z,860nmcomp=Z,87nm,0.9s
GSPH General Santos 66.04 299⇑ *e*P **P** **19 52 03.6 -0.5**
KRKI Karangkates 66.19 278 P **P** **19 52 06.7 +1.7**
comp=Z,2μmcomp=Z,58nm,0.7s
DAV Davao City (W) 66.30 300 P **P** **19 52 05.3 -0.3**
comp=Z,368nm,0.7s,baz=87,slow=2.2,SNR=39
DAV LR LR 20 20 52.3
comp=Z,1μm,21.9s,baz=135,slow=36
DAV Davao City (W) 66.30 300 P **P** **19 52 05.2 -0.5**
DAV Davao City (W) 66.30 300 P **P** **19 52 06.0 +0.4**
comp=Z,3μmcomp=Z,8μmcomp=Z,724nm,0.8s
DAV Davao City (W) 66.30 300 P **P** **19 52 07.8 +2.2**
BIPH Bislig 66.56 301⇓ *e*P **P** **19 52 05.0 -2.3**
PWJI Pagerwojo 66.79 278 P **P** **19 52 08.5 -0.3**
comp=Z,4μmcomp=Z,398nm,0.9s
BKB Balikpapan 67.01 287 P **P** **19 52 11.3 +1.1**
BKB IAmb IAmb 19 52 20.3
comp=Z,120nm,0.8s
BKB IAMs_20 IAMs_20 20 22 59.6
comp=Z,3μm,19.0s
BKB Balikpapan 67.01 287 P **P** **19 52 10.9 +0.7**
comp=Z,3μmcomp=Z,199nm,1.1s
BKB Balikpapan 67.01 287 P **P** **19 52 12.4 +2.2**
PMSA Palmer Station 67.17 156 P **P** **19 52 11.8 +1.4**
comp=Z,64nm,0.9s,baz=274,slow=4.2,SNR=5.1
PMSA LR LR 20 16 11.4
comp=Z,4μm,18.4s,baz=232,slow=31
comp=Z,64nm,0.9s
PMSA Palmer Station 67.17 156 P **P** **19 52 12.1 +1.6**
PMSA IAmb IAmb 19 52 13.5
comp=Z,78nm,0.9s
PMSA Palmer Station 67.17 156 *e*P **P** **19 52 12.8 +2.3**
PCJI Pacitan 67.18 277 P **P** **19 52 11.9 +0.6**
comp=Z,6μmcomp=Z,854nm,1.0s
BBKI Banjar Baru 67.20 284 P **P** **19 52 11.7 +0.3**
comp=Z,6μmcomp=Z,496nm,1.0s
SMKI Samarinda 67.30 288 P **P** **19 52 12.6 +0.6**
CTBH Cotabato--PC H 67.33 299⇑ *e*P **P** **19 52 11.9 -0.3**
UGM Wanagama 67.87 277 P **P** **19 52 15.4 -0.2**
UGM Wanagama 67.87 277 P **P** **19 52 15.8 +0.1**
comp=Z,5μmcomp=Z,380nm,0.9s
UGM Wanagama 67.87 277 P **P** **19 52 16.3 +0.6**
CGP Cagayan de Oro 67.90 300⇓ *e*P **P** **19 52 16.3 +0.5**
YOGI Yogyakarta 68.11 277 P **P** **19 52 17.7 +0.6**
comp=Z,243nm,1.0s
SMRI Semarang 68.45 278 P **P** **19 52 19.2 -0.1**
SMRI IAMs_20 IAMs_20 20 21 39.6
comp=Z,3μm,20.0s
SMRI Semarang 68.45 278 P **P** **19 52 20.0 +0.7**
comp=Z,3μmcomp=Z,351nm,0.7s
SMRI Semarang 68.45 278 P **P** **19 52 19.8 +0.5**
MTKI Muara Teweh, K 68.75 286 P **P** **19 52 21.1 0.0**
comp=Z,3μmcomp=Z,133nm,0.9s
BJII Banjamegara 68.86 277 P **P** **19 52 22.8 +0.9**
comp=Z,326nmcomp=Z,10nm,0.8s
GHBP Garcia Hernand 68.99 301⇑ *i*P **P** **19 52 21.9 -0.7**
SCJI Gunung Srandil 69.08 276 P **P** **19 52 23.3 +0.1**
comp=Z,2μmcomp=Z,153nm,1.1s
LSIP Lazi, Siquijor 69.11 300⇑ *e*P **P** **19 52 21.9 -1.4**
TABP Talibon, Bohol 69.32 301⇑ *e*P **P** **19 52 21.1 -3.5**
TBP Tagbilaran 69.35 301 *e*P **P** **19 52 25.6 +0.8**
SNPH Sibulan 69.54 300 *e*P **P** **19 52 24.2 -1.8**
LLP Lapu-Lapu 69.73 301⇑ *e*P **P** **19 52 26.8 -0.3**
MYLDM Lahad Datu 70.04 293 P **P** **19 52 29.4 +0.3**
MYLDM IAmb IAmb 19 52 51.6
comp=Z,101nm,1.0s
MYLDM Lahad Datu 70.04 293 P **P** **19 52 29.5 +0.4**
comp=Z,3μmcomp=Z,2μmcomp=Z,110nm,1.2s
PBKI Pangkalan Bun 70.14 282 P **P** **19 52 30.1 +0.4**
comp=Z,332nm,1.1s
XMIS Christmas Isla 70.23 272 P **P** **19 52 30.1 -0.2**
CNOP Candoni, Negro 70.29 300⇑ *e*P **P** **19 52 27.7 -2.9**
JCJI Jatiwangi 70.50 277 P **P** **19 52 30.5 -1.5**
comp=Z,326nm,0.8s
LEM Lembang 70.82 276 LR LR 20 25 45.4
comp=Z,4μm,19.3s,baz=124,slow=38
LEM Lembang 70.82 276 P **P** **19 52 34.6 +0.5**
comp=Z,3μmcomp=Z,311nm,0.8s
CNJI Cibinong 70.92 275 P **P** **19 52 33.9 -0.6**
comp=Z,3μmcomp=Z,362nm,0.9s
TROLL Troll, Antarti 71.00 181 P **P** **19 52 35.2 +0.9**
SNAA Sanae 71.36 180 P **P** **19 52 37.1 +0.7**
SNAA Sanae 71.36 180 S **SKiKP** **20 02 08.4 -5.2**
SNAA Sanae 71.36 180 P **P** **19 52 37.1 +0.7**
comp=Z,66nm,1.4s,baz=192,slow=6.4
SNAA S **S** **20 01 49.0 -2.8**
comp=Z,0.9nm,1.1s,baz=129,slow=8.9,SNR=1.4
SNAA LR LR 20 20 55.4
comp=Z,3μm,21.0s,baz=191,slow=33
comp=Z,66nm,1.4s
SNAA Sanae 71.36 180 P **P** **19 52 36.8 +0.4**
SNAA IAmb IAmb 19 52 58.0
comp=Z,42nm,0.9s
SNAA IAMs_20 IAMs_20 20 20 44.1

comp=Z,3μm,21.0s
SKJI Sukabumi 71.55 275 P P 19 52 37.7 -0.7
VNA3 Neumayer Olymp 71.63 177 P P 19 52 38.6 +0.6
VNA3 Neumayer Olymp 71.63 177 S SKiKP 20 02 09.3 -4.6
USHA Ushuaia 71.82 146 LR LR 20 18 41.5
comp=Z,4μm,18.6s,baz=217,slow=31
NVL N'lazarevskaya 71.86 185 *eP* **P 19 52 38.9 -0.4**
NVL *eS* **S 20 01 54.7 -2.6**
NVL pmax pmax
comp=Z,49nm,1.1s
NVL MLR MLR
comp=Z,3μm,17.0s
MG05 Puerto Natales 71.86 142 P **P 19 52 40.3 +0.7**
MG05 IAmb IAmb 19 52 42.4
comp=Z,72nm,0.7s
STKI Sintang 72.02 284 P **P 19 52 41.2 +0.1**
comp=Z,2μmcomp=Z,137nm,1.0s
VNA2 Neumayer--Watz 72.03 178 P **P 19 52 41.3 +0.9**
VNA2 Neumayer--Watz 72.03 178 S **SKiKP 20 02 10.4 -4.1**
MG01 Puerto William 72.11 146 P **P 19 52 42.0 +0.9**
MG01 IAmb IAmb 19 52 44.8
comp=Z,141nm,1.4s
GO09 Cerro Castillo 72.19 141 P **P 19 52 42.7 +1.1**
VNA1 Neumayer--Stat 72.28 178 P **P 19 52 42.9 +1.1**
KKM Kota Kinabalu 72.30 292 P **P 19 52 42.4 -0.5**
KKM IAmb IAmb 19 52 43.9
comp=Z,100nm,0.9s
KKM Kota Kinabalu 72.30 292 P **P 19 52 42.0 -0.9**
comp=Z,2μmcomp=Z,126nm,1.6s
KKM Kota Kinabalu 72.30 292 P **P 19 52 42.1 -0.9**
SBJI Serang 72.42 276 P **P 19 52 43.6 +0.1**
comp=Z,264nm,1.0s
JCJ Chichijima 72.61 326 P **P 19 52 42.1 -2.2**
comp=Z,86nm,0.8s,baz=268,slow=9.4,SNR=4.5
JCJ LR LR 20 20 04.4
comp=Z,627nm,21.9s,baz=176,slow=32
comp=Z,86nm,0.8s
JCJ Chichijima 72.61 326 P **P 19 52 43.8 -0.5**
MG02 Cerro Sombrero 72.76 144 P **P 19 52 46.1 +1.2**
SBUM Sibu 72.96 287 P **P 19 52 46.5 -0.2**
SBUM IAmb IAmb 19 52 48.9
comp=Z,84nm,1.4s
SBUM IAMs_20 IAMs_20 20 25 07.0
comp=Z,3μm,22.0s
SBUM Sibu 72.96 287 P **P 19 52 46.3 -0.4**
comp=Z,801nmcomp=Z,40nm,1.2s
JCNP Jose Panganiba 73.44 303⇑ *eP* **P 19 52 48.4 -1.0**
BLSI Bandar Lampung 73.57 276 P **P 19 52 49.0 -1.4**
comp=Z,2μmcomp=Z,260nm,0.9s
KSM Kuching 73.81 285 P **P 19 52 50.8 -1.0**
KSM IAmb IAmb 19 53 00.9
comp=Z,70nm,0.9s
KSM Kuching 73.81 285 P **P 19 52 51.4 -0.3**
comp=Z,927nmcomp=Z,104nm,0.9s
KSM Kuching 73.81 285 P **P 19 52 51.5 -0.3**
KASI Kota Agung 74.08 275 P **P 19 52 52.3 -1.0**
comp=Z,183nm,0.9s
LQP Lukban 74.09 302⇑ *eP* **P 19 52 52.5 -1.0**
KLI Kotabumi 74.19 276 P **P 19 52 53.0 -1.0**
comp=Z,3μmcomp=Z,384nm,0.9s
TGY Tagaytay City 74.49 302 P **P 19 52 55.7 +0.1**
baz=90,slow=1.8
TGY LR LR 20 27 52.1
comp=Z,553nm,19.3s,baz=98,slow=38
LUBP Lubang 74.70 301⇑ *eP* **P 19 52 53.5 -3.3**
LUBP Lubang 74.70 301⇑ *eP* **P 19 52 53.5 -3.3**
LWLI Liwa 74.73 275 P **P 19 52 56.9 -0.4**
comp=Z,11μmcomp=Z,421nm,0.6s
PPBI Pangkal Pinang 74.81 279 P **P 19 52 58.0 +0.4**
comp=Z,2μmcomp=Z,168nm,1.0s
PMBI Palembang 75.42 278 P **P 19 53 01.3 +0.2**
PMBI IAMs_20 IAMs_20 20 26 40.3
comp=Z,3μm,21.0s
COYC Coyhaique 75.86 137 P **P 19 53 04.2 +1.1**
COYC IAmb IAmb 19 53 06.5
comp=Z,55nm,0.7s
MNAI Manna 76.00 275 P **P 19 53 04.0 -0.4**
MNAI IAMs_20 IAMs_20 20 30 55.7
comp=Z,3μm,20.0s
ORCD Orcadas 76.10 160 P **P 19 53 04.5 +0.3**
ORCD IAmb IAmb 19 53 06.3
comp=Z,115nm,1.1s
AY01 Puyuhuapi 76.27 136 P **P 19 53 05.8 +0.3**
KSI Kapahiang 76.71 276 P **P 19 53 08.3 -0.2**
comp=Z,609nm,0.8s
UBSI University, Be 76.90 275 P **P 19 53 10.4 +0.9**
comp=Z,452nm,1.1s
DSRI Dabo 77.07 279 P **P 19 53 09.6 -0.9**
comp=Z,672nmcomp=Z,66nm,0.9s
MASI Maura Aman, Be 77.30 276 P **P 19 53 11.4 -0.4**
comp=Z,2μmcomp=Z,382nm,0.9s
LL02 Futaleuf 77.50 135 P **P 19 53 13.5 +1.0**
LL02 IAmb IAmb 19 53 15.5
comp=Z,51nm,0.8s
TPRI Tanjung Pinang 77.97 280 P **P 19 53 15.0 -0.5**
comp=Z,2μmcomp=Z,986nmcomp=Z,58nm,1.0s
EFI East Falkland 78.51 148 P **P 19 53 18.3 +0.4**
EFI East Falkland 78.51 148 P **P 19 53 18.3 +0.4**
EFI pmax pmax
comp=Z,208nm,1.1s
LL04 Puerto Octay 78.63 133 P **P 19 53 19.3 +0.5**
JHJ Hachijo jima 2 78.85 328 LR LR 20 27 47.2
comp=Z,640nm,18.8s,baz=111,slow=35
H03S2 Juan Fernandez 78.97 124 T T 21 19 55.5
baz=230,SNR=91
H03S1 Juan Fernandez 78.98 124 T T 21 19 56.8
baz=230,SNR=87
H03S3 Juan Fernandez 78.98 124 T T 21 19 58.9
baz=230,SNR=76
MYKOM Kota Tinggi 79.03 281 P **P 19 53 20.0 -1.4**
MYKOM Kota Tinggi 79.03 281 P **P 19 53 20.4 -1.0**
comp=Z,747nmcomp=Z,31nm,1.0s
H03N3 Juan Fernandez 79.20 124 T T 21 20 05.8
baz=234,slow=72,SNR=389
H03N2 Juan Fernandez 79.20 124 T T 21 20 04.6
baz=234,slow=72,SNR=334
H03N1 Juan Fernandez 79.22 124 T T 21 20 04.8
baz=234,slow=72,SNR=313
SDSI Sungai Dareh 79.28 277 P **P 19 53 21.0 -1.7**
comp=Z,572nmcomp=Z,51nm,0.9s
PPSI Pulau Pagai 79.30 275 P **P 19 53 22.7 -0.1**
comp=Z,3μmcomp=Z,392nm,0.8s
JOW Kunigami 79.40 316 LR LR 20 26 06.5
comp=Z,804nm,19.2s,baz=135,slow=34
JOW Kunigami 79.40 316 P **P 19 53 22.6 -0.4**
PLCA Paso Flores 79.82 134 P **P 19 53 27.0 +1.5**
comp=Z,34nm,0.8s,baz=233,slow=5.4,SNR=55
PLCA LR LR 20 20 34.6
comp=Z,1μm,21.8s,baz=220,slow=29
comp=Z,34nm,0.8s
PLCA Paso Flores 79.82 134 P **P 19 53 26.6 +1.2**
PLCA IAmb IAmb 19 53 28.7
comp=Z,57nm,0.9s
PLCA Paso Flores 79.82 134 P **P 19 53 26.6 +1.2**
PLCA pmax pmax
comp=Z,57nm,0.9s
PLCA Paso Flores 79.82 134 *eP* **P 19 53 26.9 +1.5**
GO06 Curarrehue 80.03 132 P **P 19 53 27.3 +0.7**
BKNI Bangkinang 80.35 278 P **P 19 53 27.0 -1.5**
BKNI IAmb IAmb 19 53 35.9
comp=Z,133nm,0.8s
BKNI Bangkinang 80.35 278 P **P 19 53 27.5 -1.0**
comp=Z,1μmcomp=Z,198nm,0.9s
TWG Pinlang 80.67 308 P **P 19 53 28.9 -1.0**
TWG IAmb IAmb 19 53 47.8
comp=Z,89nm,1.1s
YOJ Yonaguni jima 80.68 310 P **P 19 53 28.9 -1.0**
YOJ IAmb IAmb 19 53 45.7
comp=Z,168nm,1.3s
YOJ Yonaguni jima 80.68 310 P **P 19 53 28.9 -1.0**
YOJ pmax pmax
comp=Z,168nm,1.3s
YOJ Yonaguni jima 80.68 310 P **P 19 53 33.2 +3.3**
SISI Saibi 80.89 275 P **P 19 53 31.6 +0.2**
comp=Z,59nm,0.9s
YULB Yu-li 80.95 308 P **P 19 53 30.2 -1.2**
YULB IAMs_20 IAMs_20 20 23 37.4
comp=Z,2μm,20.0s
TPUB Ta-pu 81.30 308 P **P 19 53 32.2 -1.1**
TPUB Ta-pu 81.30 308 P **P 19 53 32.6 -0.7**
SSLB Suanglung 81.45 308 P **P 19 53 32.7 -1.4**
SSLB IAmb IAmb 19 53 41.1
comp=Z,92nm,0.8s
SSLB IAMs_20 IAMs_20 20 23 20.7
comp=Z,3μm,21.0s
SSLB Suanglung 81.45 308 P **P 19 53 33.0 -1.1**

MNSI Mandailing Nat 81.79 277 P **P 19 53 34.9 -1.3**
comp=Z,778nmcomp=Z,66nm,0.9s
JSU Suzuyama 81.91 320 P **P 19 53 35.3 -1.1**
JSU IAmb IAmb 19 54 05.6
comp=Z,244nm,1.9s
INU Inuyama 81.94 327 P **P 19 53 35.5 -0.9**
INU Inuyama 81.94 327 P **P 19 53 40.4 +4.0**
TATO Taipei 81.99 310 P **P 19 53 35.8 -1.1**
JGF Kuroka 82.01 327 P **P 19 53 36.0 -0.9**
JGF IAmb IAmb 19 53 54.4
comp=Z,156nm,1.9s
PBSI Pulau Batu 82.31 276 P **P 19 53 38.6 -0.3**
comp=Z,202nm,0.9s
MAJO Matsushiro 82.44 328 P **P 19 53 38.9 -0.1**
MAJO Matsushiro 82.44 328 P **P 19 53 38.9 -0.1**
MAJO pmax pmax
comp=Z,16nm,0.9s
MAJO MLR MLR
comp=Z,1μm,20.0s
MAJO Matsushiro 82.44 328 P **P 19 53 40.1 +1.1**
ML02 Panimavida 82.55 130 P **P 19 53 40.2 +0.3**
ML02 IAmb IAmb 19 53 42.4
comp=Z,161nm,1.5s
GO05 Huala 82.72 129 P **P 19 53 40.7 -0.1**
GO05 IAmb IAmb 19 53 44.1
comp=Z,100nm,1.4s
IPM Ipoh 82.90 281 P **P 19 53 40.4 -1.6**
IPM Ipoh 82.90 281 P **P 19 53 40.8 -1.2**
comp=Z,642nmcomp=Z,37nm,1.2s
IPM Ipoh 82.90 281 P **P 19 53 41.2 -0.8**
TRSI Tarutung 83.03 278 P **P 19 53 41.0 -1.8**
comp=Z,3μmcomp=Z,123nm,0.5s
JHS Saijyo 83.42 324 P **P 19 53 43.5 -0.7**
PSI Prapat 83.53 278 P **P 19 53 43.1 -2.2**
comp=Z,15nm,0.8s,baz=99,slow=2.4,SNR=9.0
PSI LR LR 20 34 07.9
comp=Z,4μm,19.2s,baz=140,slow=38
comp=Z,15nm,0.8s
PSI Prapat 83.53 278 P **P 19 53 43.6 -1.8**
comp=Z,329nmcomp=Z,26nm,1.0s
BO02 Sierra Bellavi 83.58 129 P **P 19 53 45.8 +0.4**
BO02 IAmb IAmb 19 53 48.7
comp=Z,122nm,1.3s
GSI Gunungsitoli 83.69 276 P **P 19 53 45.7 -0.4**
GSI Gunungsitoli 83.69 276 P **P 19 53 46.6 +0.6**
comp=Z,285nm,0.9s
GSI Gunungsitoli 83.69 276 P **P 19 53 47.1 +1.1**
KULM Kulim 83.69 281 P **P 19 53 44.7 -1.4**
KULM IAmb IAmb 19 53 53.2
comp=Z,42nm,1.1s
KULM IAMs_20 IAMs_20 20 33 35.5
comp=Z,2μm,20.0s
KULM Kulim 83.69 281 P **P 19 53 45.6 -0.5**
comp=Z,578nmcomp=Z,39nm,1.1s
QZH Quanzhou 83.77 308⇑ *iP* **P 19 53 46.5 +0.4**
QZH S **S 20 04 11.2 +4.3**
MT01 Popeta 83.89 128 P **P 19 53 47.6 +0.7**
MT01 IAmb IAmb 19 53 50.1
comp=Z,146nm,1.4s
HOPE Hope Point 83.92 160 P **P 19 53 47.3 +0.7**
HOPE Hope Point 83.92 160 IAMs_20 IAMs_20 20 24 13.0
comp=Z,3μm,21.0s
HOPE Hope Point 83.92 160 P **P 19 53 47.3 +0.7**
HOPE pmax pmax
comp=Z,231nm,1.4s
HOPE MLR MLR
comp=Z,3μm,21.0s
MT09 Talagante 84.12 128 P **P 19 53 48.5 +0.3**
MT09 IAmb IAmb 19 53 51.2
comp=Z,44nm,0.9s
BO04 La Punta 84.21 129 P **P 19 53 49.0 +0.4**
BO04 IAmb IAmb 19 53 50.9
comp=Z,85nm,1.7s
TSI Tuntungan 84.24 279 P **P 19 53 48.5 -0.3**
comp=Z,80nm,0.9s
MT05 Renca 84.53 128 P **P 19 53 50.7 +0.5**
LMEL Las Melosas 84.56 129 P **P 19 53 51.0 +0.5**
LMEL IAmb IAmb 19 53 53.4
comp=Z,58nm,1.4s
ROC1 El Roble 84.63 128 P **P 19 53 51.5 +0.5**
ROC1 IAmb IAmb 19 53 55.0
comp=Z,33nm,0.6s
PEL Peldehue 84.72 128 P **P 19 53 51.3 +0.1**
PEL IAmb IAmb 19 53 54.6
comp=Z,52nm,0.9s
PEL Peldehue 84.72 128 P **P 19 53 51.3 +0.1**
PEL pmax pmax
comp=Z,51nm,0.9s
PEL MLR MLR
comp=Z,3μm,21.0s
KCSI Kotacane, Aceh 84.88 278 P **P 19 53 50.5 -1.6**
comp=Z,31nm,0.8s
SKLT Songkhla 84.88 283 P **P 19 53 52.3 +0.3**
comp=Z,24nm,0.9s
VA03 San Esteban 85.06 128 P **P 19 53 53.0 +0.1**
VA03 IAmb IAmb 19 53 55.6
comp=Z,48nm,1.1s
ERM Erimo 85.30 334 IAMs_20 IAMs_20 20 27 10.1
comp=Z,2μm,20.0s
QIZ Qiongzhong 85.56 298 P **P 19 53 55.0 -0.4**
QIZ IAmb IAmb 19 54 03.0
comp=Z,36nm,1.0s
QIZ Qiongzhong 85.56 298 P **P 19 53 53.3 -2.0**
QIZ pP **PcP 19 53 57.2 -1.0**
QIZ sP **pP 19 54 01.7 -3.3**
QIZ PP **PP 19 57 13.7 -0.9**
QIZ SKS **SKSac 20 04 15.0 -3.4**
QIZ S **SKKSac 20 04 29.3 +4.1**
QIZ SS **SS 20 10 04.8 +3.0**
QIZ pmax pmax
comp=Z,370nm,3.6s
QIZ LR LR
comp=Z,490nm,23.9s
QIZ LR LR
comp=Z,770nm,24.7s
QIZ LR LR
comp=Z,2μm,26.3s
QIZ Qiongzhong 85.56 298 P **P 19 53 55.8 +0.5**
CO02 Combarbal 85.80 126 P **P 19 53 57.1 +0.4**
CO02 IAmb IAmb 19 53 59.5
comp=Z,74nm,1.0s
UBPT Khong Chiam 86.28 292 P **P 19 53 58.8 -0.2**
UBPT IAmb IAmb 19 54 07.4
comp=Z,30nm,0.9s
UBPT Khong Chiam 86.28 292 P **P 19 53 58.9 -0.1**
comp=Z,41nm,0.8s
MLSI Meulaboh, Aceh 86.41 278 P **P 19 53 59.3 -0.4**
comp=Z,83nm,1.0s
TRQA Tornquist 86.49 136 P **P 19 54 00.2 +0.4**
TRQA IAmb IAmb 19 54 03.0
comp=Z,107nm,1.6s
TRQA Tornquist 86.49 136 P **P 19 54 00.2 +0.4**
TRQA pmax pmax
comp=Z,107nm,1.6s
TRQA MLR MLR
comp=Z,3μm,19.0s
TRQA Tornquist 86.49 136 *eP* **P 19 54 01.9 +2.1**
SRIT Nakonsritamara 86.55 283 P **P 19 54 00.2 -0.1**
SRIT IAmb IAmb 19 54 09.0
comp=Z,30nm,0.6s
ZON Zonda 87.05 128 P **P 19 54 03.4 +0.6**
ZON IAmb IAmb 19 54 05.6
comp=Z,76nm,1.4s
ZON Zonda 87.05 128 P **P 19 54 03.4 +0.6**
ZON pmax pmax
comp=Z,76nm,1.4s
CO01 Juntas del Tor 87.20 126 P **P 19 54 04.5 +0.7**
CO01 IAmb IAmb 19 54 07.6
comp=Z,29nm,1.0s
TJN Taejon 87.33 321 P **P 19 54 03.4 -0.2**
TJN Taejon 87.33 321 P **P 19 54 03.4 -0.2**
TJN pmax pmax
comp=Z,378nm,1.2s
TJN Taejon 87.33 321 P **P 19 54 04.7 +1.1**
AC05 El Transito 87.84 125 P **P 19 54 07.7 +1.0**
AC05 IAmb IAmb 19 54 12.5
comp=Z,41nm,0.8s
KSRS Korea Array 87.89 322 P **P 19 54 06.5 +0.3**
comp=Z,26nm,0.7s,baz=141,slow=4.7,SNR=53
KSRS PP **PP 19 57 33.3 +0.2**
comp=Z,3.2nm,1.1s,baz=141,slow=8.7,SNR=3.0
KSRS LR LR 20 32 33.8
comp=Z,457nm,18.2s,baz=135,slow=35
comp=Z,26nm,0.7s
KSAR Wonju Array Be 87.90 322 P **P 19 54 06.0 -0.3**

KSAR Wonju Array Be 87.90 322 P **P 19 54 06.0 -0.3**
KS19 Wonju Array Si 87.96 322 P **P 19 54 07.1 +0.5**
KS19 IAmb IAmb 19 54 10.1
comp=Z,54nm,0.9s
INCN Inchon 88.56 321 P **P 19 54 11.5 +2.1**
NJ2 Nanjing 88.72 313 *eP* **P 19 54 10.8 +0.5**
NJ2 sP **PcP 19 54 15.8 +4.0**
NJ2 pmax pmax
comp=Z,33nm,0.7s
NJ2 LR LR
comp=Z,1μm,17.1s
NJ2 LR LR
comp=Z,1μm,17.0s
NJ2 LR LR
comp=Z,2μm,22.9s
AC06 Mina Casimiro 88.77 124 P **P 19 54 11.5 +0.5**
AC06 IAmb IAmb 19 54 14.1
comp=Z,48nm,1.4s
SHEM Shemya Is, Ala 89.71 357 LR LR 20 27 47.1
comp=Z,1μm,21.6s,baz=136,slow=31
YSS Yuzh-Sakhalins 89.80 336 P **P 19 54 15.5 +0.5**
YSS IAMs_20 IAMs_20 20 28 15.2
comp=Z,3μm,21.0s
YSS Yuzh-Sakhalins 89.80 336 *eP* **P 19 54 15.7 +0.7**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,600nm,17.0s
AC02 Maricunga 89.93 124 P **P 19 54 18.1 +1.1**
AC02 IAmb IAmb 19 54 21.4
comp=Z,128nm,1.8s
SLBS Sierra La Lagu 90.43 60 P **P 19 54 20.0 +1.4**
SLBS IAmb IAmb 19 54 40.9
comp=Z,40nm,1.5s
SLBS Sierra La Lagu 90.43 60 IAMs_20 IAMs_20 20 26 54.5
comp=Z,2μm,20.0s
PAYG Puerto Ayora 90.44 91 IAMs_20 IAMs_20 20 25 10.0
comp=Z,2μm,21.0s
LPIG La Paz 90.45 60 LR LR 20 25 25.7
comp=Z,1μm,21.5s,baz=227,slow=29
SRDT SRDT 90.46 288 P **P 19 54 18.7 -0.1**
NIKH Nikolski High 90.52 8 P **P 19 54 20.9 +2.7**
baz=190
GO02 Mina Guanaco 90.74 123 P **P 19 54 21.7 +1.2**
GO02 IAmb IAmb 19 54 24.3
comp=Z,63nm,1.1s
SNCC San Nicolas Is 90.76 48 P **P 19 54 21.1 +1.2**
baz=225
SCI2 San Clemente I 91.15 48 P **P 19 54 22.5 +0.9**
baz=225
SCZ2 Santa Cruz Isl 91.22 47 P **P 19 54 23.3 +1.3**
baz=225
USRK Ussuriysk Ar. 91.44 328 P **P 19 54 23.2 +0.5**
comp=Z,14nm,0.8s,baz=137,slow=3.2,SNR=19
USRK LR LR 20 34 38.6
comp=Z,591nm,19.2s,baz=146,slow=35
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 91.44 328 P **P 19 54 22.8 +0.1**
USA0B Ussuriysk Arra 91.44 328 P **P 19 54 22.3 -0.4**
USA0B Ussuriysk Arra 91.44 328 P **P 19 54 22.3 -0.4**
USA0B pmax pmax
comp=Z,170nm,2.0s
CIS Catalina Islan 91.52 48 P **P 19 54 24.6 +1.2**
baz=225
PET Petropavlovsk 91.58 348 *eP* **P 19 54 24.1 +1.0**
PET *eS* **S 20 05 20.0 -0.3**
PET MLR MLR
comp=Z,1μm,18.0s
PET MLR MLR
comp=Z,1μm,19.0s
PKM Mcpherson Peak 91.75 46 P **P 19 54 25.9 +1.3**
baz=225
PETK Petropavlovsk- 91.82 348 P **P 19 54 24.5 +0.2**
comp=Z,12nm,0.8s,baz=185,slow=10,SNR=19
PETK PKiKP **PKiKP 19 59 13.7 -1.2**
comp=Z,5.2nm,0.9s,baz=193,slow=5.2,SNR=4.1
PETK LR LR 20 30 52.1
comp=Z,1μm,20.0s,baz=158,slow=32
comp=Z,12nm,0.8s
SMMC Simmler 91.95 46 P **P 19 54 26.2 +0.8**
baz=224
BCW Bitter Crk WRg 92.02 46 P **P 19 54 26.7 +0.9**
BCW IAmb IAmb 19 54 41.3
comp=Z,30nm,1.1s
ESJX Sierra Juarez 92.05 51 P **P 19 54 27.0 +0.9**
ESJX IAmb IAmb 19 54 30.7
comp=Z,23nm,1.3s
DECC Green Verdugo 92.17 48 P **P 19 54 27.5 +1.1**
baz=225
SAO San Andreas Ge 92.17 44 P **P 19 54 27.4 +1.1**
SAO IAMs_20 IAMs_20 20 35 54.7
comp=Z,2μm,18.0s
SAO San Andreas Ge 92.17 44 P **P 19 54 27.4 +1.1**
SAO pmax pmax
comp=Z,15nm,1.0s
SAO MLR MLR
comp=Z,2μm,18.0s
OSI Osito Audit: C 92.19 47 P **P 19 54 27.5 +1.0**
baz=225
PASC Pasadena Art C 92.20 48 IAMs_20 IAMs_20 20 27 33.6
comp=Z,1μm,21.0s
MONP2 Monument Peak 92.37 50 P **P 19 54 28.7 +1.1**
baz=226,SNR=18
MURC Murrieta 92.39 49 P **P 19 54 28.6 +1.2**
baz=226,SNR=7.0
IKP In-Ko-Pah, Jac 92.39 50 P **P 19 54 28.8 +1.3**
baz=226,SNR=11
MCCM Marconi Confer 92.39 42 IAMs_20 IAMs_20 20 27 24.5
comp=Z,2μm,21.0s
ARVC Arvin 92.49 47 P **P 19 54 29.0 +1.2**
baz=225
BFSC Mount Baldy Ra 92.56 48 P **P 19 54 29.1 +0.8**
baz=226,SNR=11
GYA Guiyang 92.64 301 ⇓P **P 19 54 29.9 +1.0**
GYA SKS **SKSac 20 05 03.9 +3.7**
GYA S **ScS 20 05 32.7 -0.7**
GYA pmax pmax
comp=Z,30nm,0.7s
GYA pmax pmax
comp=Z,280nm,4.6s
GYA LR LR
comp=Z,860nm,24.1s
GYA LR LR
comp=Z,660nm,15.9s
GYA LR LR
comp=Z,910nm,22.0s
TIA Tai'an 92.70 315 P **P 19 54 29.8 +1.0**
TIA S **S 20 05 35.5 +4.3**
TIA SS **SS 20 11 47.4 +2.2**
TIA pmax pmax
comp=Z,9.0nm,0.7s
TIA pmax pmax
comp=Z,150nm,2.6s
TIA LR LR
comp=Z,690nm,22.1s
TIA LR LR
comp=Z,520nm,18.5s
TIA LR LR
comp=Z,1μm,22.8s
SWSC Sam W. Stewart 92.78 50 P **P 19 54 30.8 +1.6**
baz=227,SNR=5.4
EDW2 Edwards Air Fo 92.81 47 P **P 19 54 30.9 +1.5**
baz=226,SNR=7.4
PB07 IPOC Station P 92.83 120 P **P 19 54 30.6 +0.4**
PB07 IAmb IAmb 19 54 34.3
comp=Z,42nm,1.3s
PFO Pinyon Flats O 92.84 49 P **P 19 54 31.2 +1.6**
comp=Z,5.7nm,0.8s,baz=235,slow=6.7,SNR=6.1
PFO LR LR 20 27 48.6
comp=Z,1μm,21.1s,baz=226,slow=30
comp=Z,5.7nm,0.8s
PFO Pinyon Flats O 92.84 49 P **P 19 54 29.5 -0.1**
PFO Pinyon Flats O 92.84 49 IAMs_20 IAMs_20 20 26 10.7
comp=Z,1μm,20.0s
PFO Pinyon Flats O 92.84 49 P **P 19 54 29.5 -0.1**
PFO pmax pmax
comp=Z,17nm,1.1s
PFO MLR MLR
comp=Z,1μm,20.0s
PFO Pinyon Flats O 92.84 49 P **P 19 54 30.7 +1.0**
baz=226,SNR=6.6
TPFO Pinon Flats 92.84 49 P **P 19 54 30.6 +1.0**
baz=226,SNR=8.7
VES Vestal, Richgr 92.85 46 P **P 19 54 30.5 +1.1**
baz=225
HOPS Hopland Field 92.91 42 IAMs_20 IAMs_20 20 27 52.1
comp=Z,2μm,21.0s

LVC	Limon Verde	92.92	121		LR	LR	20 27 14.3	
	comp=Z,4µm,20.9s,baz=186,slow=30							
LVC	Limon Verde	92.92	121		P	P	19 54 32.2	+1.6
LVC					IAmb	IAmb	19 54 35.5	
	comp=Z,69nm,1.6s							
LVC	Limon Verde	92.92	121		P	P	19 54 32.3	+1.6
LVC					pmax	pmax		
	comp=Z,69nm,1.6s							
LVC					MLR	MLR		
	comp=Z,3µm,20.0s							
LVC	Limon Verde	92.92	121	eP	P	P	19 54 33.5	+2.8
FALS	False Pass	93.03	10		P	P	19 54 32.1	+2.3
	baz=194							
ISA	Isabella, Lake	93.07	47		P	P	19 54 31.7	+1.1
	baz=225,SNR=7.5							
CMAR	Chiang Mai Arr	93.13	291		P	P	19 54 31.0	-0.1
	comp=Z,14nm,0.6s,baz=148,slow=3.7,SNR=44							
CMAR					PP	PP	19 58 14.3	-0.6
	comp=Z,2.3nm,0.6s,baz=143,slow=6.6,SNR=6.5							
CMAR					PKKPbc	PKKPbc	20 11 38.4	-0.5
	comp=Z,0.7nm,0.8s,baz=306,slow=4.6,SNR=4.4							
CMAR					LR	LR	20 38 09.0	
	comp=Z,989nm,21.8s,baz=130,slow=37							
	comp=Z,14nm,0.6s							
CMAR	Chiang Mai Arr	93.13	291		P	P	19 54 30.3	-0.9
CMAR	Chiang Mai Arr	93.13	291	i	P	P	19 54 30.7	-0.4
CMAR					pmax	pmax		
	comp=Z,15nm,0.6s							
ENH	Enshi	93.27	306		P	P	19 54 31.1	-0.4
ENH					IAmb	IAmb	19 54 39.9	
	comp=Z,16nm,0.8s							
ENH					IAMs_20	IAMs_20	20 31 40.8	
	comp=Z,2µm,22.0s							
CHTO	Chiang Mai	93.34	291		P	P	19 54 31.2	-0.9
CHTO					IAmb	IAmb	19 54 39.5	
	comp=Z,35nm,1.0s							
CHTO	Chiang Mai	93.34	291		P	P	19 54 31.2	-0.9
CHTO					pmax	pmax		
	comp=Z,35nm,1.0s							
CHTO					MLR	MLR		
	comp=Z,100nm,22.0s							
BELC	Belle Mtn. Jos	93.39	49		P	P	19 54 34.0	+1.8
	baz=227,SNR=15							
SNY	Shenyang	93.40	322	⇑	P	P	19 54 27.2	-4.6
LRMC	Laurel Mtn Rad	93.41	47		P	P	19 54 33.4	+1.2
	baz=226							
GLA	Glamis	93.45	51		P	P	19 54 33.0	+0.7
GLA					IAmb	IAmb	19 54 50.7	
	comp=Z,19nm,0.7s							
GLA	Glamis	93.45	51		P	P	19 54 33.0	+0.7
GLA					pmax	pmax		
	comp=Z,19nm,0.7s							
GLA	Glamis	93.45	51		P	P	19 54 34.5	+2.1
	baz=227,SNR=6.4							
BC3	Big Chuckawall	93.48	50		P	P	19 54 34.4	+1.8
	baz=227,SNR=16							
CHNA	Chernabura Isl	93.61	12		P	P	19 54 35.0	+2.6
	baz=197							
CMB	Columbia Colle	93.67	44		P	P	19 54 33.2	-0.1
CMB	Columbia Colle	93.67	44		P	P	19 54 33.2	-0.1
HEC	Hector,Ludlow	93.75	48		P	P	19 54 35.0	+1.2
	baz=226,SNR=8.6							
JCC	Jacoby Creek,	93.76	40		IAMs_20	IAMs_20	20 28 45.4	
	comp=Z,2µm,20.0s							
GSC	Goldstone, Bar	93.80	48		P	P	19 54 35.2	+1.2
	baz=226,SNR=7.0							
CWC	Cottonwood Cre	93.84	46		P	P	19 54 35.8	+1.5
	baz=226							
MPMC	Manual Prospec	93.92	47		P	P	19 54 35.8	+1.1
	baz=226,SNR=7.9							
214A	Organ Pipe Nat	93.97	52		P	P	19 54 35.6	+0.8
214A	Organ Pipe Nat	93.97	52		P	P	19 54 36.4	+1.6
	baz=228							
AFDM	Forest Hills D	94.00	43		P	P	19 54 35.1	+0.4
CN2	Changchun	94.01	324		P	P	19 54 35.4	+0.8
CN2					pP	pP	19 54 40.2	-4.3
CN2					S	S	20 05 43.6	+1.3
CN2					pmax	pmax		
	comp=Z,20nm,0.8s							
CN2					LR	LR		
	comp=Z,900nm,24.0s							
CN2					LR	LR		
	comp=Z,900nm,24.0s							
CN2					LR	LR		
	comp=Z,1µm,22.0s							
IRM	Iron Mountain	94.01	50		P	P	19 54 36.5	+1.6
	baz=227,SNR=17							
NNA	Nana	94.07	108		LR	LR	20 28 42.9	
	comp=Z,3µm,19.7s,baz=231,slow=30							
GMRC	Granite Mounta	94.12	49		P	P	19 54 37.4	+1.8
	baz=227							
OMMB	Old Mammoth Mi	94.14	45		P	P	19 54 35.8	0.0
ORV	Oroville	94.16	42		IAMs_20	IAMs_20	20 28 31.1	
	comp=Z,1µm,21.0s							
LYN	LuoYang	94.27	311	⇓	P	P	19 54 36.4	+0.4
LYN					sP	pwP	19 54 47.8	-0.3
LYN					PP	PP	19 58 26.5	+2.8
LYN					SKS	SKSac	20 05 09.0	+0.5
LYN					S	ScS	20 05 49.2	+2.8
LYN					SS	SS	20 12 07.9	+0.2
LYN					pmax	pmax		
	comp=Z,10.0nm,0.8s							
LYN					pmax	pmax		
	comp=Z,230nm,5.2s							
LYN					LR	LR		
	comp=Z,1µm,19.2s							
LYN					LR	LR		
	comp=Z,720nm,21.4s							
LYN					LR	LR		
	comp=Z,2µm,23.5s							
TUQ	Turquoise Moun	94.41	48		P	P	19 54 38.1	+1.3
	baz=227							
KMI	Kunming	94.51	298	⇑	P	P	19 54 37.7	+0.1
KMI					pP	pP	19 54 42.9	-4.5
KMI					sP	pwP	19 54 44.7	-5.5
KMI					SKS	SKSac	20 05 08.1	-2.6
KMI					S	ScS	20 05 50.4	+1.1
KMI					SS	SS	20 12 11.7	-0.1
KMI					pmax	pmax		
	comp=Z,14nm,1.2s							
KMI					LR	LR		
	comp=Z,320nm,18.9s							
KMI					LR	LR		
	comp=Z,800nm,23.1s							
KMI					LR	LR		
	comp=Z,2µm,27.7s							
WAKR	Walker	94.53	44		P	P	19 54 36.9	-0.5
GRAC	Grapevine Rang	94.64	46		P	P	19 54 39.5	+1.8
	baz=226							
GO01	Chusmiza	94.69	119		P	P	19 54 38.9	-0.1
GO01					IAmb	IAmb	19 54 42.1	
	comp=Z,58nm,1.8s							
HNS	HongShan	94.91	314	eP	P	P	19 54 42.7	+3.8
HNS					PP	PP	19 58 33.0	+4.4
HNS					SKS	SKSac	20 05 12.1	+0.3
HNS					S	ScS	20 05 59.2	+7.7
HNS					LR	LR		
	comp=Z,310nm,18.7s							
HNS					LR	LR		
	comp=Z,1µm,23.1s							
HNS					LR	LR		
	comp=Z,1µm,24.0s							
YBH	Yreka Blue Hor	95.10	40		P	P	19 54 40.4	+0.6
	comp=Z,1.6nm,0.9s,baz=177,slow=6.0,SNR=4.0							
YBH					LR	LR	20 29 52.8	
	comp=Z,2µm,20.9s,baz=228,slow=31							
	comp=Z,1.6nm,0.9s							
YBH	Yreka Blue Hor	95.10	40		IAMs_20	IAMs_20	20 30 02.0	
	comp=Z,2µm,21.0s							
NVAR	Mina Array Bea	95.11	45		P	P	19 54 40.3	+0.2
	comp=Z,2.3nm,0.9s,baz=220,slow=7.3,SNR=17							
NVAR					PKKPbc	PKKPbc	20 11 34.9	+0.1
	comp=Z,0.4nm,0.7s,baz=129,slow=4.0,SNR=4.5							
NVAR					LR	LR	20 28 36.2	
	comp=Z,1µm,22.0s,baz=230,slow=30							
	comp=Z,2.3nm,0.9s							
Y14A	Wickenburg	95.17	51		P	P	19 54 41.1	+0.8
NV11	Mina Array Sit	95.19	45		P	P	19 54 40.3	-0.1
CHGN	Chignik	95.22	13		P	P	19 54 41.7	+1.9
	baz=198							
TPNV	Topopah Spring	95.26	47		P	P	19 54 41.3	+0.6
TPNV					IAMs_20	IAMs_20	20 29 33.6	
	comp=Z,2µm,21.0s							
TPNV	Topopah Spring	95.26	47		P	P	19 54 41.3	+0.6
TPNV					pmax	pmax		
	comp=Z,26nm,1.7s							
TPNV					MLR	MLR		
	comp=Z,2µm,21.0s							
TPNV	Topopah Spring	95.26	47		P	P	19 54 41.4	+0.6
	baz=227							
CHIR	Chirikof Islan	95.28	14		P	P	19 54 42.3	+2.2
	baz=200							
PB16	IPOC Station P	95.36	118		P	P	19 54 43.2	+1.0
PB16					IAmb	IAmb	19 54 46.3	
	comp=Z,52nm,1.5s							
TPH	Tonopah	95.47	46		P	P	19 54 42.0	+0.3
TPH					IAmb	IAmb	19 55 11.1	
	comp=Z,76nm,1.3s							
TPH	Tonopah	95.47	46		P	P	19 54 42.0	+0.3
TPH					pmax	pmax		
	comp=Z,76nm,1.3s							
UNM	Universidad Na	95.49	70		IAMs_20	IAMs_20	20 29 22.0	
	comp=Z,2µm,20.0s							
TUC	Tucson	95.50	53		P	P	19 54 42.4	+0.6
TUC	Tucson	95.50	53		P	P	19 54 42.4	+0.6
TUC					pmax	pmax		
	comp=Z,4.0nm,0.9s							
TUC					MLR	MLR		
	comp=Z,800nm,21.0s							
TUC	Tucson	95.50	53		P	P	19 54 43.6	+1.8
	baz=229							
HUMO	Hull Mountain	95.62	39		IAMs_20	IAMs_20	20 29 55.6	
	comp=Z,1µm,20.0s							
KLR	Kul'dur	95.62	331		P	P	19 54 43.0	+1.2
	comp=Z,1.7nm,0.7s,baz=207,slow=4.5,SNR=2.3							
KLR					LR	LR	20 33 58.6	
	comp=Z,539nm,20.5s,baz=156,slow=33							
	comp=Z,1.7nm,0.7s							
KLR	Kul'dur	95.62	331	i	P	P	19 54 42.6	+0.8
KLR					pmax	pmax		
	comp=Z,2.0nm,0.6s							
ITQB	Itaqui	95.65	134	eP	P	P	19 54 43.2	+0.5
PLTB	Pedras Altas	95.75	137	eP	P	P	19 54 46.0	+2.8
ATAH	Atahualpa	95.91	104		LR	LR	20 28 06.0	
	comp=Z,4µm,21.6s,baz=249,slow=29							
BJI	Beijing	95.93	317		P	P	19 54 44.3	+0.8
BJI					S	S	20 06 01.7	+2.5
BJI					SS	SS	20 12 32.4	+1.3
BJI					pmax	pmax		
	comp=Z,6.0nm,1.0s							
BJI					LR	LR		
	comp=Z,160nm,27.5s							
BJI					LR	LR		
	comp=Z,420nm,25.9s							
BJI					LR	LR		
	comp=Z,1µm,28.0s							
RODS	Rosario do Sul	95.95	135	eP	P	P	19 54 45.3	+1.3
PZH	PanZhiHua	96.07	299		P	P	19 54 45.8	+1.2
PZH					PP	PP	19 58 36.1	-1.9
PZH					S	S	20 06 01.5	+0.1
PZH					sS	pS	20 06 10.4	-3.6
PZH					SS	SS	20 12 42.5	+8.7
PZH					pmax	pmax		
	comp=Z,10.0nm,1.1s							
PZH					pmax	pmax		
	comp=Z,120nm,4.3s							
PZH					LR	LR		
	comp=Z,770nm,22.7s							
PZH					LR	LR		
	comp=Z,690nm,21.6s							
PZH					LR	LR		
	comp=Z,1µm,22.2s							
XAN	Xi'an	96.11	308		P	P	19 54 45.9	+1.4
XAN					pP	pP	19 54 50.6	-3.7
XAN					PP	PP	19 58 36.1	-2.0
XAN					SKS	SKSac	20 05 17.6	-0.9
XAN					pmax	pmax		
	comp=Z,7.0nm,0.6s							
XAN					pmax	pmax		
	comp=Z,280nm,4.0s							
XAN					LR	LR		
	comp=Z,580nm,17.5s							
XAN					LR	LR		
	comp=Z,890nm,19.8s							
XAN					LR	LR		
	comp=Z,1µm,19.9s							
MOD	Modoc Plateau	96.47	41		IAMs_20	IAMs_20	20 30 19.4	
	comp=Z,2µm,21.0s							
CPSB	Cacapava Do Su	96.88	137	eP	P	P	19 54 49.5	+1.2
UNIS	Unistalda (Bra	96.99	135	eP	P	P	19 54 49.1	+0.3
LCMT	Little Creek M	97.07	48		P	Pdif	19 54 49.7	+0.7
AZCA	Azaras, Argent	97.22	133	eP	Pdif	Pdif	19 54 53.6	+3.7
WUAZ	Wupatki	97.22	51		P	P	19 54 49.6	-0.1
WUAZ					IAMs_20	IAMs_20	20 31 40.8	
	comp=Z,1µm,20.0s							
WUAZ	Wupatki	97.22	51		P	Pdif	19 54 51.3	+1.6
	baz=229							
CMIG	Matias Romero	97.41	74		LR	LR	20 28 26.7	
	comp=Z,1µm,21.5s,baz=217,slow=29							
PINE	Pine Mountain	97.49	39		P	Pdif	19 54 51.4	+0.6
LPAZ	La Paz	97.70	117		P	Pdif	19 54 54.5	+1.5
	comp=Z,3.5nm,0.7s,baz=211,slow=4.6,SNR=18							
LPAZ					PP	PP	19 58 52.2	+1.7
	comp=Z,0.7nm,0.7s,baz=212,slow=10,SNR=4.2							
LPAZ					LR	LR	20 30 55.5	
	comp=Z,1µm,20.8s,baz=200,slow=30							
	comp=Z,3.5nm,0.7s							
LPAZ	La Paz	97.70	117		P	Pdif	19 54 53.6	+0.6
LPAZ	La Paz	97.70	117		P	Pdif	19 54 53.6	+0.6
LPAZ					pmax	pmax		
	comp=Z,8.0nm,0.9s							
LPAZ	La Paz	97.70	117	eP	Pdif	Pdif	19 54 54.9	+1.9
KDAK	Kodiak Island	97.72	15		LR	LR	20 32 20.1	
	comp=Z,1µm,21.3s,baz=229,slow=31							
KDAK	Kodiak Island	97.72	15		IAMs_20	IAMs_20	20 34 48.3	
	comp=Z,2µm,20.0s							
WVOR	Wild Horse Val	97.72	42		IAMs_20	IAMs_20	20 30 57.5	
	comp=Z,2µm,22.0s							
CPUP	Villa Florida	97.73	131		P	Pdif	19 54 52.9	+0.7
	comp=Z,2.6nm,0.7s,baz=222,slow=3.4,SNR=5.1							
CPUP					LR	LR	20 32 06.4	
	comp=Z,5µm,20.0s,baz=230,slow=31							
	comp=Z,2.6nm,0.7s							
CPUP	Villa Florida	97.73	131	eP	Pdif	Pdif	19 54 55.1	+2.9
EPT	El Paso	97.94	56		IAMs_20	IAMs_20	20 33 08.2	
	comp=Z,1µm,20.0s							
TXAR	Lajitas Array	98.34	60		P	P	19 54 54.7	-0.1
	comp=Z,0.5nm,0.8s,baz=206,slow=8.3,SNR=4.8							
TXAR					PKKPbc	PKKPbc	20 11 25.8	+0.5
	comp=Z,0.5nm,0.8s,baz=62,slow=3.8,SNR=4.2							
TXAR					LR	LR	20 31 45.3	
	comp=Z,1µm,19.4s,baz=226,slow=31							
	comp=Z,0.5nm,0.8s							
ALGR	Alto Alegre (B	98.35	136	eP	Pdif	Pdif	19 54 57.6	+2.6
O16K	Kokwok River B	98.41	12		P	Pdif	19 54 56.7	+2.6
	baz=199							
ELK	Elko	98.42	45		LR	LR	20 30 17.4	
	comp=Z,1µm,21.5s,baz=232,slow=30							
ELK	Elko	98.42	45		IAMs_20	IAMs_20	20 40 15.1	
	comp=Z,1µm,18.0s							
Q19K	Cape Douglas,	98.57	14		IAMs_20	IAMs_20	20 36 59.5	
	comp=Z,1µm,19.0s							
NLWA	Neilton Lookou	98.68	35		IAMs_20	IAMs_20	20 33 04.3	
	comp=Z,2µm,20.0s							
XLT	XiLinHaoTe	98.68	320	eP	Pdif	Pdif	19 54 56.8	+0.8
XLT					pP	pP	19 55 02.1	-3.8
XLT					sP	pwP	19 55 05.7	-2.4
XLT					PP	PP	19 59 01.0	+3.3
XLT					SKS	SKSac	20 05 29.6	-1.7
XLT					S	S	20 06 21.8	-1.1
XLT					sS	pS	20 06 35.7	+0.3
XLT					pmax	pmax		
	comp=Z,6.0nm,1.3s							
XLT					pmax	pmax		
	comp=Z,90nm,3.8s							
XLT					LR	LR		
	comp=Z,760nm,22.6s							
XLT					LR	LR		
	comp=Z,770nm,23.6s							
CRSM	Crissiumal (Br	98.78	134	eP	Pdif	Pdif	19 54 58.7	+1.8
HHC	Hu-ho-hao-te	99.05	315	eP	Pdif	Pdif	19 54 59.5	+1.8
HHC					S	S	20 06 35.2	+9.1
HHC					SS	SS	20 13 22.2	+6.9
HHC					pmax	pmax		
	comp=Z,35nm,0.9s							
HHC					pmax	pmax		
	comp=Z,170nm,5.4s							
HHC					LR	LR		
	comp=Z,930nm,19.7s							
HHC					LR	LR		
	comp=Z,1µm,19.7s							
HHC					LR	LR		
	comp=Z,2µm,20.3s							
Y22D	IRIS PASSCAL I	99.11	54		P	Pdif	19 54 59.6	+1.4
	baz=231							
Y22F	Passcal Instru	99.11	54		P	Pdif	19 54 59.7	+1.5
	baz=231							
CNLB	Canela	99.13	138	eP	Pdif	19 55 00.8	+2.3
MA2	Magadan	99.21	346		LR	LR	20 33 32.8	
	comp=Z,2µm,21.3s,baz=164,slow=32							
MA2	Magadan	99.21	346		IAMs_20	IAMs_20	20 32 49.5	
	comp=Z,2µm,21.0s							
MA2	Magadan	99.21	346	i	P	Pdif	19 54 58.2	+0.4
MA2					pmax	pmax		
	comp=Z,15nm,1.2s							
CNPM	China Poot	99.61	15		IAMs_20	IAMs_20	20 33 08.1	
	comp=Z,1µm,20.0s							
SNET	Serv Nac Est T	99.80	80		IAMs_20	IAMs_20	20 31 11.9	
	comp=Z,2µm,19.0s							
BRLK	Bradley Lake	99.90	15		IAMs_20	IAMs_20	20 33 59.4	
	comp=Z,1µm,20.0s							
ANMO	Albuquerque	99.95	54		LR	LR	20 33 06.5	
	comp=Z,783nm,20.9s,baz=226,slow=31							
ANMO	Albuquerque	99.95	54	i	P	Pdif	19 55 01.9	-0.1
HAWA	Hanford	100.03	38		IAMs_20	IAMs_20	20 33 37.4	
	comp=Z,2µm,20.0s							
MVCO	Mesa Verde	100.08	51		IAMs_20	IAMs_20	20 33 21.5	
	comp=Z,1µm,20.0s							
N19K	Bonanza Creek	100.17	13		IAMs_20	IAMs_20	20 41 03.0	
	comp=Z,1µm,20.0s							
OTAV	Otavalo	100.40	98		IAMs_20	IAMs_20	20 30 30.3	
	comp=Z,2µm,20.0s							
LZH	Lanzhou	100.62	307	eP	Pdif	19 55 04.3	-0.6
LZH					sP	pPdif	19 55 12.2	-2.4
LZH					PP	PP	19 59 11.0	-1.7
LZH					SS	SS	20 13 38.3	+0.8
LZH					pmax	pmax		
	comp=Z,10.0nm,1.0s							
LZH					LR	LR		
	comp=Z,890nm,14.9s							
LZH					LR	LR		
	comp=Z,300nm,14.6s							
LZH					LR	LR		
	comp=Z,1µm,17.0s							
ZEA	Zeya	100.91	332	eP	Pdif	19 55 05.5	0.0
ZEA				e			20 08 08.1	
ZEA					pmax	pmax		
	comp=Z,10.0nm,1.6s							
PLID	Pearl Lake	100.94	41		IAMs_20	IAMs_20	20 33 33.4	
	comp=Z,2µm,20.0s							
HWUT	Hardware Ranch	101.07	46		IAMs_20	IAMs_20	20 41 34.3	
	comp=Z,1µm,19.0s							
KVTX	Kingsville	101.33	64		IAMs_20	IAMs_20	20 32 16.5	
	comp=Z,2µm,20.0s							
M20K	Styx River	101.41	13		IAMs_20	IAMs_20	20 41 12.7	
	comp=Z,1µm,20.0s							
SUA	Susitna One	101.48	14		IAMs_20	IAMs_20	20 34 54.6	
	comp=Z,2µm,21.0s							
TGUH	Tegucigalpa,Un	101.56	81		IAMs_20	IAMs_20	20 30 36.5	
	comp=Z,1µm,22.0s							
SKT	Skwentna	101.80	14		IAMs_20	IAMs_20	20 39 12.0	
	comp=Z,1µm,20.0s							
RAGM	Ragged Mountai	101.85	18		IAMs_20	IAMs_20	20 44 40.6	
	comp=Z,1µm,18.0s							
M22K	Willow	101.87	15		IAMs_20	IAMs_20	20 35 06.9	
	comp=Z,1µm,21.0s							
HMT	Hamilton	101.91	18		IAMs_20	IAMs_20	20 44 23.1	
	comp=Z,1µm,19.0s							
AHID	Auburn Hatcher	102.08	45		IAMs_20	IAMs_20	20 32 23.9	
	comp=Z,1µm,22.0s							
BERG	Berg Lake	102.10	18		IAMs_20	IAMs_20	20 41 16.1	
	comp=Z,1µm,20.0s							
SNH	Sunshine Point	102.13	19		IAMs_20	IAMs_20	20 43 54.9	
	comp=Z,1µm,18.0s							
ANM	Nome	102.27	7		IAMs_20	IAMs_20	20 35 48.8	
	comp=Z,1µm,20.0s							
MESA	MESA	102.36	19		IAMs_20	IAMs_20	20 37 52.9	
	comp=Z,1µm,20.0s							
CUT	Chulitna	102.43	14		IAMs_20	IAMs_20	20 35 34.8	
	comp=Z,2µm,21.0s							
YAH	Yahtse	102.57	19		IAMs_20	IAMs_20	20 40 00.3	
	comp=Z,1µm,20.0s							
REDW	Red Top Meadow	102.60	45		IAMs_20	IAMs_20	20 33 13.3	
	comp=Z,1µm,22.0s							
TPAW	Teton Pass	102.62	45		IAMs_20	IAMs_20	20 32 52.3	
	comp=Z,1µm,22.0s							
TGL	Tana Glacier	102.63	18		IAMs_20	IAMs_20	20 41 35.1	
	comp=Z,984nm,19.0s							
FXWY	Fox Creek	102.68	44		IAMs_20	IAMs_20	20 32 31.8	
	comp=Z,1µm,22.0s							
TABL	Table Mountain	102.79	19		IAMs_20	IAMs_20	20 37 59.4	
	comp=Z,1µm,19.0s							
IMW	Indian Meadow	102.89	44		IAMs_20	IAMs_20	20 33 32.9	
	comp=Z,1µm,22.0s							
LOHW	Long Hollow	102.90	45		IAMs_20	IAMs_20	20 33 00.6	
	comp=Z,1µm,22.0s							
MOOW	Moose Ponds	102.90	45		IAMs_20	IAMs_20	20 33 00.8	
	comp=Z,1µm,22.0s							
JIS	Juneau Island	102.95	23		IAMs_20	IAMs_20	20 33 52.6	
	comp=Z,2µm,20.0s							
BW06	Boulder Array	102.96	46		IAMs_20	IAMs_20	20 43 14.2	
	comp=Z,977nm,18.0s							
PDAR	Pinedale Array	102.96	46		P	Pdif	19 55 14.4	-0.8
	comp=Z,0.5nm,0.7s,baz=188,slow=4.4,SNR=1.6							
PDAR					PKKPbc	PKKPbc	20 11 09.9	-2.7
	comp=Z,1.0nm,0.8s,baz=117,slow=6.2,SNR=7.5							
CAST	Castle Rocks	103.02	13		IAMs_20	IAMs_20	20 41 54.2	
	comp=Z,1µm,20.0s							
AMTX	Amarillo	103.03	56		IAMs_20	IAMs_20	20 35 52.0	
	comp=Z,1µm,20.0s							
P29M	Windy Craggy	103.04	21		IAMs_20	IAMs_20	20 36 25.2	
	comp=Z,1µm,21.0s							
KTH	Kantishna Hill	103.36	13		IAMs_20	IAMs_20	20 42 46.1	
	comp=Z,1µm,20.0s							
J20K	Nowinta River	103.37	12		IAMs_20	IAMs_20	20 40 34.4	
	comp=Z,2µm,21.0s							
ISCO	Idaho Springs	103.46	50		IAMs_20	IAMs_20	20 33 58.0	
	comp=Z,1µm,21.0s							
LKWY	Lake	103.61	44		IAMs_20	IAMs_20	20 44 41.5	
	comp=Z,2µm,18.0s							
RWWY	Rawlins	103.65	48		IAMs_20	IAMs_20	20 35 01.9	
	comp=Z,2µm,21.0s							
BPAW	Bear Paw Mtn.	103.84	13		IAMs_20	IAMs_20	20 40 57.0	
	comp=Z,1µm,20.0s							
MCK	McKinley	103.90	14		IAMs_20	IAMs_20	20 36 09.5	
	comp=Z,2µm,21.0s							
BWN	Browne	104.19	14		IAMs_20	IAMs_20	20 40 57.1	
	comp=Z,2µm,20.0s							
HKT	Hockley	104.19	63		IAMs_20	IAMs_20	20 34 41.4	
	comp=Z,2µm,21.0s							
RLMT	Red Lodge	104.59	44		IAMs_20	IAMs_20	20 34 28.4	
	comp=Z,1µm,21.0s							
NEA2	Nenana	104.65	14		IAMs_20	IAMs_20	20 41 31.3	
	comp=Z,1µm,20.0s							
I21K	Tanana	104.66	12		IAMs_20	IAMs_20	20 41 25.5	
	comp=Z,1µm,20.0s							
WRH	Wood River Hil	104.73	14		IAMs_20	IAMs_20	20 36 56.4	
	comp=Z,1µm,21.0s							
N30M	Aishikik Lake	104.73

MDM Murphy Dome 105.14 14 IAMs_20 IAMs_20 20 37 19.3
comp=Z,1µm,20.0s
SCRK Sand Creek 105.15 16 P **PKiKP 19 59 38.8 +0.4**
baz=210
M29M Somme Creek 105.18 19 P **PKiKP 19 59 39.2 +0.8**
baz=214
ILAR Eielson Array 105.23 15 Pdiff **Pdif 19 55 25.8 +1.4**
comp=Z,0.2nm,0.8s,baz=232,slow=4.4,SNR=1.4
ILAR PKiKP **PKiKP 19 59 37.5 -0.8**
comp=Z,1.7nm,0.7s,baz=299,slow=3.4,SNR=12
ILAR PKKPbc **PKKPbc 20 11 05.5 -0.7**
comp=Z,0.5nm,0.9s,baz=5.7,slow=0.9,SNR=2.0
BILL Bilibino 105.40 355 IAMs_20 IAMs_20 20 39 27.0
comp=Z,1µm,20.0s
J25K Salcha River, 105.40 15 P **PKiKP 19 59 40.2 +1.5**
baz=209
H22K Ishtalitna Cre 105.41 12 P **PKiKP 19 59 39.7 +1.0**
baz=204
POKR Poker Plat Res 105.43 14 P **PKiKP 19 59 39.8 +1.1**
baz=208
K27K Chicken 105.62 17 P **PKiKP 19 59 40.7 +1.6**
baz=212
G21K Allakaket 105.64 11 P **PKiKP 19 59 39.9 +0.8**
baz=203
H23K Yukon River 105.67 13 IAMs_20 IAMs_20 20 40 11.4
comp=Z,1µm,20.0s
H23K Yukon River 105.67 13 P **PKiKP 19 59 40.1 +1.0**
baz=206
J26L Joseph Creek 105.69 16 P **PKiKP 19 59 40.4 +1.1**
baz=210
VOI Vohitsoka 105.72 226 IAMs_20 IAMs_20 20 37 26.3
comp=Z,2µm,21.0s
L29M L29M 105.81 19 P **PKiKP 19 59 40.5 +1.0**
baz=215
RDOG Red Dog Mine 105.91 7 IAMs_20 IAMs_20 20 44 43.0
comp=Z,2µm,22.0s
RDOG Red Dog Mine 105.91 7 P **PKiKP 19 59 40.6 +1.1**
baz=195
H24K Noodor Dome 105.99 14 IAMs_20 IAMs_20 20 42 20.8
comp=Z,1µm,20.0s
M31M Drury Creek, Y 106.09 21 IAMs_20 IAMs_20 20 40 13.8
comp=Z,1µm,20.0s
EGMT Eagleton 106.12 42 IAMs_20 IAMs_20 20 36 26.7
comp=Z,1µm,20.0s
EGMT Eagleton 106.12 42 P **PKiKP 19 59 41.1 +0.5**
baz=232
PRP Porcupine Dome 106.17 15 P **PKiKP 19 59 41.5 +1.3**
baz=209
DAWY Dawson 106.29 18 P **PKiKP 19 59 41.5 +1.1**
baz=214
G22K Bettles 106.33 12 P **PKiKP 19 59 41.8 +1.5**
baz=204
OK025 Westminster Rd 106.34 58 IAMs_20 IAMs_20 20 34 58.6
comp=Z,1µm,20.0s
OGNE Ogallala 106.35 51 IAMs_20 IAMs_20 20 37 29.3
comp=Z,2µm,21.0s
SONM Songino Array 106.36 318 Pdiff **Pdif 19 55 29.1 -1.0**
comp=Z,0.4nm,0.7s,baz=142,slow=4.6,SNR=1.7
SONM PKiKP **PKiKP 19 59 41.8 +0.6**
comp=Z,1.2nm,0.9s,baz=155,slow=1.4,SNR=3.0
SONM PKKPbc **PKKPbc 20 11 02.0 -0.3**
comp=Z,1.7nm,0.7s,baz=286,slow=2.8,SNR=12
OK029 Liberty Lake 106.38 57 IAMs_20 IAMs_20 20 34 38.7
comp=Z,2µm,22.0s
G23K Bananza Creek 106.39 12 P **PKiKP 19 59 41.5 +1.0**
baz=206
OK032 Salt Plains WL 106.44 56 IAMs_20 IAMs_20 20 42 21.2
comp=Z,1µm,20.0s
EGAK Eagle 106.47 17 P **PKiKP 19 59 41.5 +0.9**
baz=212
YAK Yakutsk 106.55 338 Pdiff **Pdif 19 55 30.2 -0.1**
comp=Z,6.2nm,0.5s,baz=247,slow=3.8,SNR=9.3
YAK Yakutsk 106.55 338 IAMs_20 IAMs_20 20 37 58.9
comp=Z,1µm,22.0s
K29M Barlow Dome 106.58 19 P **PKiKP 19 59 41.8 +0.8**
baz=215
F22K John River 106.76 11 P **PKiKP 19 59 42.3 +1.1**
baz=204
H25K Birch Creek 106.77 14 P **PKiKP 19 59 42.1 +1.1**
baz=209
G24K Hadweenzic Riv 106.83 13 P **PKiKP 19 59 42.2 +0.9**
baz=208
OK033 Mehan 106.86 57 IAMs_20 IAMs_20 20 35 18.6
comp=Z,2µm,19.0s
RSSD Black Hills 106.98 47 IAMs_20 IAMs_20 20 39 11.7
comp=Z,1µm,19.0s
OK050 Pawnee Station 107.03 57 IAMs_20 IAMs_20 20 38 33.9
comp=Z,2µm,20.0s
I27K Kandik River 107.07 16 P **PKiKP 19 59 42.8 +1.0**
baz=212
OK046 Pawnee Station 107.08 57 IAMs_20 IAMs_20 20 38 33.3
comp=Z,2µm,20.0s
OK044 Pawnee Station 107.14 57 IAMs_20 IAMs_20 20 36 28.9
comp=Z,2µm,20.0s
G25K Bearman Lake 107.15 14 P **PKiKP 19 59 42.9 +1.1**
baz=209
OK051 E0350 and S346 107.19 57 IAMs_20 IAMs_20 20 36 34.1
comp=Z,2µm,21.0s
LAO LASA Array 107.23 44 IAMs_20 IAMs_20 20 35 18.2
comp=Z,1µm,22.0s
LAO LASA Array 107.23 44 P **PKiKP 19 59 43.0 +0.3**
baz=234
E22K Anaktuvuk Pass 107.39 11 P **PKiKP 19 59 42.0 -0.3**
baz=204
F24K Squaw Lake 107.49 13 P **PKiKP 19 59 43.1 +0.6**
baz=208
H27K Steamboat Moun 107.62 16 P **PKiKP 19 59 43.6 +0.8**
baz=212
I29M Ogilvie Camp, 107.63 17 P **PKiKP 19 59 43.7 +0.9**
baz=215
E23K Chandalar 107.68 12 P **PKiKP 19 59 43.7 +0.8**
baz=206
G26K Porcupine Rive 107.77 15 P **PKiKP 19 59 45.4 +2.4**
baz=211
E24K Your Creek 107.88 12 P **PKiKP 19 59 44.3 +1.1**
baz=207
F25K Christian Rive 107.96 14 P **PKiKP 19 59 44.3 +0.8**
baz=209
G27K Doyon Strip 108.08 15 P **PKiKP 19 59 44.9 +1.3**
baz=212
TOLK Toolik Lake Re 108.21 12 P **PKiKP 19 59 45.1 +1.2**
baz=206
HYBB Hyderabad (bro 108.24 278 *e*PKiKP **PKiKP 19 59 45.3 -0.1**
HYBB *e*PP **PP 20 00 09.2 -0.3**
HYBB *e*SKSac **SKSac 20 06 15.6 -1.2**
HYBB *e*SP **SP 20 09 29.1 -0.7**
HYBB *e*PS **PS 20 09 34.2 +0.5**
HYBB *e*SKKSdf **SKKSdf 20 18 18.5 -0.1**
HYBB IVMs_BB IVMs_BB 20 45 01.8
comp=Z,313nm,20.1s
D23K Nanushuk River 108.33 11 P **PKiKP 19 59 45.2 +1.2**
baz=205
MIAR Mount Ida 108.34 60 IAMs_20 IAMs_20 20 39 55.8
comp=Z,1µm,20.0s
MIAR Mount Ida 108.34 60 P **PKiKP 19 59 45.5 +0.4**
baz=237
F26K Sheenjek River 108.34 14 P **PKiKP 19 59 45.5 +1.4**
baz=211
E25K Arctic Village 108.44 13 P **PKiKP 19 59 44.9 +0.7**
baz=210
KSU1 Kansas State U 108.76 55 IAMs_20 IAMs_20 20 38 17.7
comp=Z,2µm,21.0s
KSU1 Kansas State U 108.76 55 P **PKiKP 19 59 46.1 +0.3**
baz=237
D24K Happy Valley 108.79 12 P **PKiKP 19 59 46.3 +1.4**
baz=207
EPYK Eagle Plains 108.83 17 P **PKiKP 19 59 45.9 +0.8**
baz=216
E27K Coleen River 109.26 15 P **PKiKP 19 59 47.1 +1.3**
baz=213
C24K Franklin Bluff 109.32 11 P **PKiKP 19 59 46.3 +0.6**
baz=207
G30M tAoh Zraii Nji 109.44 17 P **PKiKP 19 59 46.3 +0.1**
baz=217
A21K Barrow 109.71 8 IAMs_20 IAMs_20 20 41 24.4
comp=Z,2µm,21.0s
BOSA Boshof 109.88 205 PKKPbc PKKPbc 20 10 49.8 -0.8
comp=Z,3.1nm,1.0s,baz=342,slow=6.4,SNR=2.2
C27K Jago River 110.08 13 P **PKiKP 19 59 48.0 +0.7**
baz=211
F31M Tsiigehtchic 110.40 18 P **PKiKP 19 59 48.1 +0.3**
baz=219
INK Inuvik 111.13 17 PKiKP **PKiKP 19 59 50.1 +0.9**
comp=Z,1.9nm,0.5s,baz=153,slow=7.6,SNR=3.3
INK Inuvik 111.13 17 P **PKiKP 19 59 49.6 +0.4**
baz=219
ECSD EROS Data Cent 111.23 51 P **PKiKP 19 59 49.9 -0.3**
baz=238

MTDJ Mount Denham 111.61 83 IAMs_20 IAMs_20 20 40 47.0
comp=Z,1µm,18.0s
CCM Cathedral Cave 111.78 58 IAMs_20 IAMs_20 20 38 24.9
comp=Z,2µm,21.0s
CCM Cathedral Cave 111.78 58 P **PKiKP 19 59 51.6 +0.1**
baz=239
MSEY Mahe Island 112.73 245 IAMs_20 IAMs_20 20 39 50.9
comp=Z,2µm,20.0s
YKA Yellowknife Ar 112.81 28 PKiKP **PKiKP 19 59 52.0 -0.6**
comp=Z,2.9nm,0.8s,baz=235,slow=1.8,SNR=8.1
YKA PP **PP 20 00 43.7 +2.2**
comp=Z,2.0nm,0.8s,baz=239,slow=7.2,SNR=5.3
YKA PKKPbc **PKKPab 20 10 44.9 -0.9**
comp=Z,1.8nm,0.9s,baz=57,slow=3.9,SNR=4.9
WVT Waverly 113.17 62 P **PKiKP 19 59 53.1 -1.0**
baz=240
FFC Flin Flon 113.93 39 IAMs_20 IAMs_20 20 42 06.0
comp=Z,1µm,21.0s
AGMN Agassiz Nation 114.00 47 IAMs_20 IAMs_20 20 43 08.6
comp=Z,1µm,21.0s
TIXI Tiksi 114.12 345 PKiKP PKPdf 19 59 53.1 -1.8
baz=90,slow=20
TIXI Tiksi 114.12 345 IAMs_20 IAMs_20 20 43 44.4
comp=Z,940nm,21.0s
JFWS Jewell Farm 114.85 54 P PKPdf 19 59 56.6 -0.6
baz=242
ULM Lac du Bonnet 114.94 45 PKP PKPdf 19 59 56.2 -0.9
comp=Z,3.7nm,0.9s,baz=282,slow=9.3,SNR=2.2
HATO Hato, Curacao 115.05 94 IAMs_20 IAMs_20 20 44 39.4
comp=Z,957nm,19.0s
WMQ Urumqi 115.19 307 *e*PKP **PKiKP 19 59 58.9 +1.0**
WMQ AMB AMB
comp=Z,150nm,4.9s
WMQ LR LR
comp=Z,450nm,21.1s
WMQ LR LR
comp=Z,410nm,21.1s
WMQ LR LR
comp=Z,800nm,22.7s
WCI Wyandotte Cave 115.26 60 P **PKPdf 19 59 56.7 -1.4**
baz=242,SNR=6.4
WCI Wyandotte Cave 115.26 60 P **PKPdf 19 59 57.2 -0.8**
baz=242
A36M Sachs Harbour 115.75 17 **PKPdf 19 59 57.4 -0.5**
A36M Sachs Harbour 115.75 17 P **PKPdf 19 59 57.7 -0.3**
baz=227
MATP Matopo 116.10 211 PKP **PKiKP 19 59 59.5 -1.0**
comp=Z,3.2nm,0.7s,baz=64,slow=18,SNR=8.7
TZTN Tazewell 116.39 63 P **PKPdf 19 59 59.3 -1.1**
baz=242
EYMN Ely 116.41 49 IAMs_20 IAMs_20 20 43 04.5
comp=Z,1µm,20.0s
EYMN Ely 116.41 49 P **PKPdf 19 59 58.9 -1.1**
baz=243
P49A Miami Univ. Ec 116.96 60 P **PKPdf 20 00 00.1 -1.2**
baz=243
O48B Farmland 116.99 59 P **PKPdf 20 00 00.5 -0.8**
baz=243
ACSO Alum Creek Sta 118.47 59 P **PKPdf 20 00 03.2 -0.9**
baz=244
ZSN Zaisan 118.59 310 *e*PKIKP **PKPdf 20 00 03.0 -1.2**
ZSN Zaisan 118.59 310 *e*PKP **PKPdf 20 00 03.0 -1.2**
baz=310
P52A Corning 118.79 60 P **PKPdf 20 00 04.2 -0.6**
baz=244
BLA Blacksburg 118.93 64 P **PKPdf 20 00 04.2 -1.0**
baz=244
O53A New Philadelph 119.69 60 P **PKPdf 20 00 05.9 -0.6**
baz=245
MK31 Makanchi Array 119.92 308 PKPdf **PKPdf 20 00 05.8 -1.0**
MK31 Makanchi Array 119.92 308 PKIKP **PKPdf 20 00 05.8 -1.0**
MKAR Makanchi Array 119.92 308 PKP **PKPdf 20 00 04.6 -2.3**
comp=Z,6.6nm,0.9s,baz=44,slow=1.4,SNR=21
MKAR PP PP 20 01 21.0 -11
comp=Z,3.3nm,0.7s,baz=116,slow=6.9,SNR=4.2
MKAR PKKPbc **PKKPbc 20 10 17.1 +0.9**
comp=Z,2.4nm,0.9s,baz=298,slow=3.7,SNR=10
MCPB Macapa, AP 120.09 117 *e*P **PKiKP 20 00 09.6 +1.4**
MAKZ Makanchi 120.13 308 **PKPdf 20 00 06.1 -1.1**
MAKZ Makanchi 120.13 308 PKIKP **PKPdf 20 00 06.1 -1.1**
MAKZ MLR MLR
comp=Z,700nm,19.0s
SHLS Shalkode 120.28 303 *e*PKIKP **PKPdf 20 00 06.4 -1.4**
SHLS Shalkode 120.28 303 *e*PKP **PKPdf 20 00 06.4 -1.4**
baz=303
MCWV Mont Chateau 120.39 61 P **PKPdf 20 00 07.3 -0.7**
baz=244
M53A WI Miller and 120.56 59 P **PKPdf 20 00 08.0 -0.2**
baz=246
UZB Uzynbulak 120.57 303 *i* PKIKP **PKPdf 20 00 07.8 -0.5**
UZB Uzynbulak 120.57 303 *e*PKP **PKPdf 20 00 07.8 -0.5**
baz=303
SJG San Juan 120.61 90 IAMs_20 IAMs_20 20 46 49.6
comp=Z,1µm,19.0s
NIL Nilore 120.62 291 IAMs_20 IAMs_20 20 52 11.9
comp=Z,1µm,22.0s
LSZ Lusaka 120.81 214 PKP **PKPdf 20 00 08.2 -1.4**
comp=Z,1.9nm,0.3s,baz=65,slow=1.1,SNR=7.0
LSZ Lusaka 120.81 214 **PKPdf 20 00 08.8 -0.8**
LSZ Lusaka 120.81 214 PKIKP **PKPdf 20 00 08.8 -0.8**
LSZ MLR MLR
comp=Z,2µm,20.0s
TARG Taragay, Kyrgy 120.81 301 **PKPdf 20 00 07.8 -1.4**
TARG Taragay, Kyrgy 120.81 301 PKIKP **PKPdf 20 00 07.8 -1.4**
HUMP Col San Antoni 120.87 90 **PKPdf 20 00 08.3 -1.1**
KPKS Kokpek 120.92 303 *e*PKIKP **PKPdf 20 00 07.6 -1.3**
KPKS Kokpek 120.92 303 *e*PKP **PKPdf 20 00 07.6 -1.3**
baz=303
SATY Saty 120.95 303 *e*PKIKP **PKPdf 20 00 07.3 -1.7**
SATY Saty 120.95 303 *e*PKP **PKPdf 20 00 07.3 -1.7**
baz=303
TSUM Tsumeb 121.07 201 PKP **PKPdf 20 00 08.4 -1.7**
comp=Z,2.9nm,0.8s,baz=125,slow=17,SNR=1.9
KSH Kashi 121.17 298 PKP **PKiKP 20 00 11.6 +1.9**
KSH AMB AMB
comp=Z,190nm,8.2s
KSH LR LR
comp=Z,820nm,21.0s
KSH LR LR
comp=Z,720nm,18.6s
KSH LR LR
comp=Z,2µm,22.0s
ZALV Zalesovo Beam 121.19 316 PKP **PKPdf 20 00 06.3 -2.7**
comp=Z,3.8nm,0.7s,baz=127,slow=2.1,SNR=15
ERPA Erie 121.31 59 P **PKPdf 20 00 08.9 -0.7**
baz=246
TMAB Tom-Au,PA,Br 121.42 121 *e*P **PKiKP 20 00 12.6 +1.7**
CBN Corbin Frederi 121.53 64 P **PKPdf 20 00 09.8 -0.4**
baz=245
TDK Taldyqorghan 121.71 305 *e*PKIKP **PKPdf 20 00 08.6 -1.7**
TDK Taldyqorghan 121.71 305 *e*PKP **PKPdf 20 00 08.7 -1.7**
baz=305
MDOK Medeo 121.90 302 *e*PKIKP **PKPdf 20 00 09.7 -1.2**
MDOK Medeo 121.90 302 *e*PKP **PKPdf 20 00 09.8 -1.2**
baz=302
TNSS Tian-Shan 121.92 302 *i* PKIKP **PKPdf 20 00 09.8 -1.5**
TNSS Tian-Shan 121.92 302 *e*PKP **PKPdf 20 00 09.9 -1.5**
baz=302
NRN Naryn 121.93 300 PKPdf **PKPdf 20 00 09.9 -1.3**
NRN Naryn 121.93 300 PKIKP **PKPdf 20 00 09.9 -1.3**
SSPA Standing Stone 122.17 61 IAMs_20 IAMs_20 20 43 48.9
comp=Z,2µm,22.0s
SSPA Standing Stone 122.17 61 P **PKPdf 20 00 10.9 -0.4**
baz=246
BOOM Boomskoye usch 122.39 301 **PKPdf 20 00 11.4 -0.5**
BOOM Boomskoye usch 122.39 301 PKIKP **PKPdf 20 00 11.4 -0.5**
SEM Semipalatinsk 122.55 311 *e*PKIKP **PKPdf 20 00 10.8 -1.2**
SEM Semipalatinsk 122.55 311 *e*PKP **PKPdf 20 00 10.8 -1.2**
baz=311
KUU Kurty 122.66 303 *e*PKIKP **PKPdf 20 00 10.2 -1.9**
KUU Kurty 122.66 303 *e*PKP **PKPdf 20 00 10.3 -1.9**
baz=303
FDF Fort de France 122.72 96 IAMs_20 IAMs_20 20 51 44.8
comp=Z,948nm,20.0s
SVN Savane Anatole 122.77 96 IAMs_20 IAMs_20 20 51 37.9
comp=Z,973nm,20.0s
MPOM Morne Pois Mar 122.79 97 IAMs_20 IAMs_20 20 47 36.5
comp=Z,830nm,20.0s
TDBA Terre de Bas, 122.97 95 IAMs_20 IAMs_20 20 50 04.2
comp=Z,1µm,19.0s
NBAN Anadia - AL 122.98 138 *e*P **PKiKP 20 00 14.9 +1.0**
SMRT St. Maarten 123.03 92 IAMs_20 IAMs_20 20 49 51.9
comp=Z,772nm,20.0s
GDHS Morne Mazeau, 123.10 94 IAMs_20 IAMs_20 20 53 31.7
comp=Z,1µm,18.0s
MAGL Barre de l'ile 123.30 95 IAMs_20 IAMs_20 20 48 11.1
comp=Z,1µm,20.0s

ABD La Joyeuse, An 123.43 94 IAMs_20 IAMs_20 20 47 08.5
comp=Z,1µm,20.0s
AAK Ala-Archa 123.43 301 PKP **PKPdf 20 00 12.8 -1.1**
comp=Z,3.0nm,0.5s,baz=169,slow=4.5,SNR=12
AAK Ala-Archa 123.43 301 PKPdf **PKPdf 20 00 14.0 +0.1**
AAK Ala-Archa 123.43 301 IAMs_20 IAMs_20 20 56 50.8
comp=Z,1µm,22.0s
AAK Ala-Archa 123.43 301 PKIKP **PKPdf 20 00 14.0 +0.1**
AAK MLR MLR
comp=Z,1µm,22.0s
AAK Ala-Archa 123.43 301 P **PKPdf 20 00 12.4 -1.5**
KURK Kurchatov 123.63 311 *c i*PKIKP **PKPdf 20 00 12.8 -0.9**
KURK pmax pmax
comp=Z,22nm,0.8s
SGDS Sogindy 123.64 302 *e*PKIKP **PKPdf 20 00 12.6 -1.5**
SGDS Sogindy 123.64 302 *e*PKP **PKPdf 20 00 12.6 -1.5**
baz=302
KURBB Kurchatov Arra 123.65 311 PKP **PKPdf 20 00 11.6 -2.2**
comp=Z,13nm,0.7s,baz=116,slow=2.0,SNR=52
GDSD La Dsirade Is 123.68 95 IAMs_20 IAMs_20 20 48 13.0
comp=Z,1µm,20.0s
ROSB Rosrio 123.68 125 *e*P **PKiKP 20 00 16.4 +1.0**
ANWB Willy Bob 123.85 93 IAMs_20 IAMs_20 20 48 22.6
comp=Z,945nm,20.0s
KSPA Keystone Colle 124.00 61 **PKPdf 20 00 14.9 +0.1**
KSPA Keystone Colle 124.00 61 P **PKiKP 20 00 15.2 +0.1**
baz=248
BINY Binghamton 124.09 60 P **PKPdf 20 00 14.9 -0.1**
baz=248
DRK Karamyk 124.12 297 **PKPdf 20 00 15.0 -0.5**
BTLS Baital 124.60 304 *e*PKIKP **PKPdf 20 00 14.3 -1.5**
BTLS Baital 124.60 304 *e*PKP **PKPdf 20 00 14.3 -1.5**
baz=304
RES Resolute Bay 124.61 19 PKP **PKPdf 20 00 14.4 -0.6**
comp=Z,13nm,0.9s,baz=284,slow=2.2,SNR=4.8
NRIK Noril'sk 124.69 334 PKP **PKPdf 20 00 14.5 -0.7**
comp=Z,11nm,0.8s,baz=154,slow=3.5,SNR=5.8
NRIK Noril'sk 124.69 334 *c i*PKIKP **PKPdf 20 00 15.2 0.0**
WCNY West Carthage 124.95 58 P **PKPdf 20 00 15.4 -1.1**
baz=250,SNR=7.3
J58A Remsen 124.99 59 **PKPdf 20 00 16.7 0.0**
GAR Garm 125.00 295 PKPdf **PKPdf 20 00 16.2 -0.7**
BTK Batken 125.03 297 PKPdf **PKPdf 20 00 15.3 -1.6**
BTK Batken 125.03 297 PKIKP **PKPdf 20 00 15.3 -1.6**
PAL Palisades 125.10 62 IAMs_20 IAMs_20 20 54 57.5
comp=Z,1µm,18.0s
PAL Palisades 125.10 62 P **PKPdf 20 00 16.9 0.0**
baz=249
HCNY Howe Caverns 125.36 60 P **PKPdf 20 00 16.6 -0.8**
baz=250
J59A Piesco 125.56 59 P **PKPdf 20 00 17.2 -0.6**
baz=250
J59A P **PKPdf 20 00 17.2 -0.6**
baz=250
TRY Troy 125.88 60 **PKPdf 20 00 18.2 -0.1**
YLE Yale 125.89 62 IAMs_20 IAMs_20 20 50 11.9
comp=Z,1µm,20.0s
LONY Lake Ozonia 125.89 58 **PKPdf 20 00 17.7 -0.6**
LONY Lake Ozonia 125.89 58 P **PKPdf 20 00 18.4 +0.1**
baz=251
NCB Newcomb 125.92 58 P **PKPdf 20 00 18.0 -0.5**
baz=250,SNR=11
BMNY Brushton-Moira 126.02 57 P **PKPdf 20 00 17.7 -0.8**
baz=251,SNR=9.7
ACCN Adirondack Com 126.10 59 PKPdf **PKPdf 20 00 18.4 -0.4**
KIBK Kibwezi 126.28 232 **PKPdf 20 00 19.2 -1.0**
KK31 Karatay Array 126.33 300 PKPdf **PKPdf 20 00 17.7 -1.5**
KK31 Karatay Array 126.33 300 PKIKP **PKPdf 20 00 17.7 -1.5**
KKAR Karatay Array 126.33 300 PKPdf **PKPdf 20 00 17.8 -1.5**
KKAR Karatay Array 126.33 300 PKIKP **PKPdf 20 00 17.8 -1.5**
IUG Iuzhnay 126.34 299 *e*PKIKP **PKPdf 20 00 18.5 -0.9**
IUG Iuzhnay 126.34 299 *e*PKP **PKPdf 20 00 18.6 -0.9**
baz=299
L61B Northampton 126.47 61 P **PKPdf 20 00 19.2 -0.3**
baz=250,SNR=7.2
L61B Northampton 126.47 61 P **PKPdf 20 00 19.5 0.0**
baz=250
FRNY Flat Rock 126.63 58 P **PKPdf 20 00 19.3 -0.5**
baz=251,SNR=5.2
QUA2 Belchertown 126.64 61 **PKPdf 20 00 19.7 -0.1**
QUA2 Belchertown 126.64 61 P **PKiKP 20 00 20.2 0.0**
baz=250,SNR=6.9
MCVT Middlebury Col 126.75 59 P **PKiKP 20 00 20.4 -0.1**
baz=251
MNTQ Montreal, Queb 126.82 57 **PKPdf 20 00 19.2 -0.8**
J61A Chester 126.86 60 **PKPdf 20 00 20.0 -0.1**
J61A Chester 126.86 60 P **PKPdf 20 00 20.1 -0.1**
baz=251,SNR=8.6
J61A P **PKPdf 20 00 20.1 -0.1**
baz=251,SNR=8.6
BRZS Berezniki 127.03 309 *e*PKIKP **PKPdf 20 00 18.1 -2.2**
BRZS Berezniki 127.03 309 *e*PKP **PKPdf 20 00 18.1 -2.2**
baz=309
VT1 Waterbury 127.04 58 IAMs_20 IAMs_20 20 48 08.5
comp=Z,1µm,20.0s
BRYW Bryant College 127.08 62 IAMs_20 IAMs_20 20 49 18.1
comp=Z,1µm,21.0s
WSAR Wadi Sarin 127.14 273 PKP **PKPdf 20 00 20.9 -0.5**
comp=Z,4.6nm,0.7s,baz=228,slow=7.8,SNR=6.4
HRV Adam Dziewonsk 127.27 61 P **PKPdf 20 00 21.1 +0.1**
baz=251
LBNH Lisbon 127.57 59 **PKPdf 20 00 21.8 +0.3**
LBNH Lisbon 127.57 59 PKIKP **PKPdf 20 00 21.8 +0.3**
LBNH MLR MLR
comp=Z,2µm,22.0s
LBNH Lisbon 127.57 59 P **PKPdf 20 00 21.2 -0.4**
baz=252,SNR=6.4
LBNH Lisbon 127.57 59 P **PKPdf 20 00 21.7 +0.1**
baz=252
KMBO Kilima Mbogo 127.71 232 PKP **PKPdf 20 00 22.5 -0.6**
comp=Z,0.4nm,1.0s,baz=336,slow=24,SNR=13
KMBO Kilima Mbogo 127.71 232 PKPdf **PKPdf 20 00 23.2 +0.1**
KMBO Kilima Mbogo 127.71 232 PKIKP **PKPdf 20 00 23.2 +0.1**
KMBO MLR MLR
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 127.71 232 *i* P **PKPdf 20 00 21.7 -1.4**
SNR=18
H62A Milan 128.20 59 PKPdf **PKiKP 20 00 23.2 -0.2**
H62A Milan 128.20 59 P **PKiKP 20 00 23.4 +0.1**
baz=252,SNR=8.0
H62A P **PKiKP 20 00 23.4 +0.1**
baz=252,SNR=8.0
I63A Otisfield 128.44 59 P **PKiKP 20 00 23.7 -0.1**
baz=252
I63A P **PKiKP 20 00 23.7 -0.1**
baz=252
BVAR Borovoye Array 129.16 312 PKP **PKPdf 20 00 23.6 -0.6**
comp=Z,6.3nm,0.7s,baz=90,slow=3.0,SNR=22
BRVK Borovoye 129.23 312 PKPdf **PKPdf 20 00 24.0 -0.4**
BRVK Borovoye 129.23 312 IAMs_20 IAMs_20 20 58 15.1
comp=Z,780nm,22.0s
BRVK Borovoye 129.23 312 PKIKP **PKPdf 20 00 24.0 -0.4**
BRVK MLR MLR
comp=Z,800nm,22.0s
PKME Peaks-Kenny Pk 129.67 58 **PKiKP 20 00 26.4 +0.2**
PKME Peaks-Kenny Pk 129.67 58 P **PKPdf 20 00 25.7 +0.2**
baz=254,SNR=5.6
PKME Peaks-Kenny Pk 129.67 58 P **PKiKP 20 00 26.0 -0.2**
baz=254
ASHO Ashiyiah 129.90 273 *i* P **PKPdf 20 00 25.3 -1.3**
SNR=5.8
HATD Hatta, Dubai 129.91 273 *i* P **PKPdf 20 00 25.5 -1.1**
SNR=6.7
UOSS Minazif 129.91 273 PKPdf **PKPdf 20 00 26.0 -0.6**
UOSS Minazif 129.91 273 IAMs_20 IAMs_20 20 52 09.4
comp=Z,772nm,20.0s
UOSS Minazif 129.91 273 P **PKPdf 20 00 25.2 -1.4**
PQI Presque Isle 130.90 57 **PKPdf 20 00 27.9 +0.2**
PQI IAMs_20 IAMs_20 20 51 51.5
comp=Z,1µm,20.0s
MZR Muzera 131.13 269 *i* P **PKPdf 20 00 27.5 -1.4**
SNR=22
MBAR Mbarara 132.04 226 PKP **PKPdf 20 00 30.6 -0.6**
comp=Z,3.3nm,0.2s,baz=106,slow=3.1,SNR=7.4
MBAR SKPbc **SKPbc 20 03 51.5 -3.5**
comp=Z,2.0nm,0.2s,baz=220,slow=6.3,SNR=1.4
BATG Bathurst New B 132.34 56 **PKPdf 20 00 30.5 0.0**
FRB Frobisher Bay 132.64 34 SKPbc **SKPbc 20 03 52.2 -2.9**
comp=Z,30nm,1.1s,baz=268,slow=5.0,SNR=3.1
ATD Arta Tunnel 132.88 249 PKP **PKPdf 20 00 31.9 -0.7**
comp=Z,4.4nm,0.6s,baz=225,slow=20,SNR=1.8
SCHQ Schefferville 133.09 46 PKP **PKPdf 20 00 32.1 +0.4**
comp=Z,1.6nm,0.5s,baz=222,slow=15,SNR=1.7
SCHQ SKPbc **SKPbc 20 03 54.5 -2.5**
comp=Z,16nm,1.0s,baz=254,slow=4.5,SNR=6.5
GEYT Alibeck 133.60 290 PKhKP PKPpre 20 00 18.9

comp=Z,1.2nm,0.5s,baz=228,slow=1.8,SNR=4.9
GEYT PKP **PKPdf 20 00 32.7 -0.6**
comp=Z,9.8nm,0.8s,baz=241,slow=1.5,SNR=16
GEYT SKPbc **SKPbc 20 03 53.9 -5.5**
comp=Z,4.7nm,0.9s,baz=176,slow=2.3,SNR=3.7
GEYT Alibeck 133.60 290 PKiKP 20 00 34.2 -0.3
GYA0B ALIBECK ARRAY 133.60 290 PKPdf **PKiKP 20 00 34.1 -0.3**
NEEM North Greenlan 134.52 14 *e*P PKPpre 20 00 26.8
NEEM North Greenlan 134.52 14 *e*P 20 04 00.5
NOR Nord 135.19 3 *i*P PKPpre 20 00 30.4
SVE Sverdlovsk 135.21 316 *e*PKIKP **PKiKP 20 00 37.4 +0.3**
ARU Arti 136.35 316 IAMs_20 IAMs_20 21 06 30.9
comp=Z,892nm,20.0s
ARU Arti 136.35 316 *i*PKIKP **PKPdf 20 00 34.6 -3.1**
ARU MLR MLR
comp=Z,859nm,20.0s
RAYN Ar Rayn 137.75 265 PKPdf **PKPdf 20 00 39.8 -1.6**
RAYN Ar Rayn 137.75 265 PKIKP **PKPdf 20 00 39.8 -1.6**
RAYN MLR MLR
comp=Z,2μm,21.0s
RAYN Ar Rayn 137.75 265 *i*P **PKPdf 20 00 40.2 -1.2**
SNR=5.2
SPITS Spitsbergen Ar 138.30 355 PKP **PKPdf 20 00 38.6 -2.2**
comp=Z,22nm,0.7s,baz=98,slow=5.3,SNR=5.7
SPITS PP **PP 20 03 30.5 -0.3**
comp=Z,6.8nm,0.9s,baz=339,slow=9.0,SNR=6.5
SPITS SKPbc **SKPbc 20 04 09.3 -3.3**
comp=Z,23nm,0.8s,baz=96,slow=5.1,SNR=6.1
ILULI Ilulissat 138.34 24 *i*P **PKPdf 20 00 38.1 -2.9**
DAG Danmarks Havn 139.65 6 *i*P PKPpre 20 00 34.0
DAG Danmarks Havn 139.65 6 *i*P 20 04 13.0
KIRV Kirov 141.07 320*c* *i*PKIKP **PKiKP 20 00 48.3 -0.6**
DY2G Dye2 141.16 27 *i*P PKPpre 20 00 40.9
DBG Daneborg 141.77 8 *i*P PKPpre 20 00 40.7
ICESG Greenland Ices 141.95 21 *i*P PKPpre 20 00 41.5
PRGR Permogore 142.16 325 *e*PKHKP PKPpre 20 00 42.2
PRGR pmax pmax
comp=Z,15nm,0.7s
MAK Makhachkala 142.64 294 *e*P **Pdif 19 58 01.2 -10**
MAK *i* 20 00 48.1
MAK *e* 20 03 54.3
MAK *e* 20 07 58.8
MAK pmax pmax
comp=Z,232nm,1.1s
NRS Narsarsuaq 143.63 35 *i*P PKPab 20 00 46.6 -0.8
GROC Groznyy 143.91 295 *e*PKIKP PKPab 20 00 49.2 +0.1
GROC *e* 20 08 00.7
GROC pmax pmax
comp=Z,287nm,1.2s
APA Apatity 143.93 338⇓*i*PKIKP PKPbc 20 00 48.9 -0.1
APA pmax pmax
comp=Z,17nm,0.8s
KEV Kevo 144.06 344 IAMs_20 IAMs_20 21 05 14.6
comp=Z,1μm,22.0s
ISOG Isortoq, Green 144.21 26 *i*P **PKPab 20 00 47.4 -2.1**
GNI Garni 144.23 289 P **PKPab 20 00 50.1 -0.5**
GNI Garni 144.23 289 PKPdf **PKPab 20 00 50.8 +0.1**
GNI Garni 144.23 289 IAMs_20 IAMs_20 21 07 21.5
comp=Z,636nm,21.0s
GNI Garni 144.23 289 PKIKP **PKPab 20 00 50.8 +0.1**
GNI MLR MLR
comp=Z,600nm,21.0s
GNI Garni 144.23 289 P **PKPab 20 00 50.7 +0.1**
ARA0 ARCESS Array S 144.56 344 *e*PKPdf **PKPab 20 00 50.6 -0.1**
ARCES ARCESS Array B 144.56 344 PKP **PKPab 20 00 50.1 -0.6**
comp=Z,27nm,0.7s,baz=21,slow=2.3,SNR=50
ARCES SKPbc **SKPbc 20 04 24.9 -3.9**
comp=Z,14nm,0.8s,baz=90,slow=2.4,SNR=6.3
ANGG Ammassalik, Gr 144.63 25 P **PKPab 20 00 50.5 -0.6**
ANGG Ammassalik, Gr 144.63 25 *i*P **PKPab 20 00 49.8 -1.3**
CLDR Caldiran 144.66 287 P **PKPab 20 00 51.5 -0.9**
SOEG Soedalen 144.81 19 *i*P **PKPab 20 00 50.9 -0.7**
VANB Van 144.96 286 P **PKPdf 20 00 54.0 0.0**
SCO Scoresbysund 144.96 12 **PKPdf 20 00 52.6 -0.2**
SCO Scoresbysund 144.96 12 PKIKP **PKPdf 20 00 52.6 -0.2**
SCO Scoresbysund 144.96 12 *e*P **PKPdf 20 00 52.7 -0.1**
GEVA Gevas 145.15 286 **PKPbc 20 00 52.8 -1.2**
KLMR Klimovskoe 145.19 326 *e*PKHKP PKPpre 20 00 49.5
KLMR pmax pmax
comp=Z,173nm,1.3s
KLMR Klimovskoe 145.19 326 *e*PKPdf **PKPbc 20 00 49.5 -3.7**
KLMR AMP 20 00 54.4
comp=Z,173nm,1.3s
KLMR *e*SKP 20 04 28.5
AKDM Akdamar-Van 145.21 286 P **PKPab 20 00 54.3 0.0**
ZEI Tsey 145.24 294 *i*PKP2 **PKPbc 20 00 51.1 -3.1**
ZEI pmax pmax
comp=Z,87nm,0.6s
AKH Akhalkalaki 145.37 291 P **PKPbc 20 00 53.9 -0.7**
AGRB Hanur-Agry 145.45 288 P **PKPdf 20 00 54.2 -0.7**
KTK1 Kautokeino 145.47 345 *e*PKPbc **PKPdf 20 00 52.9 -0.9**
ONI Oni 145.55 293 P **PKPdf 20 00 53.4 -1.4**
ONI Oni 145.55 293 PKPdf **PKPdf 20 00 53.9 -0.9**
ONI Oni 145.55 293 PKIKP **PKPdf 20 00 53.9 -0.9**
KARS Kars 145.56 290 P **PKPdf 20 00 54.9 -0.1**
KARS Kars 145.56 290 PKPdf **PKPdf 20 00 54.8 -0.1**
KARS Kars 145.56 290 PKIKP **PKPdf 20 00 54.8 -0.2**
JETT Jettan, Norway 145.57 347 *e*PKPbc **PKPdf 20 00 52.6 -1.3**
EKNA AfricaArray - 145.71 199⇑*e*P **PKPab 20 00 58.1 +1.5**
MLAZ Malazgirt-MUS 145.71 287 P **PKPdf 20 00 55.5 +0.2**
TRO Tromso 145.77 348 *e*PKPdf **PKPdf 20 00 53.5 -0.7**
GURO Guroymak-BITLI 145.99 286 P **PKPdf 20 00 55.9 +0.1**
GURO Guroymak-BITLI 145.99 286 PKPdf **PKPdf 20 00 55.4 -0.3**
GOF Gofitskoye 146.04 297⇑*e*PKP2 **PKPdf 20 00 55.7 +0.3**
GOF pmax pmax
comp=Z,128nm,1.2s
KBZ Khabaz 146.06 295 PKPbc **PKPdf 20 00 54.7 -0.8**
comp=Z,42nm,0.8s,baz=108,slow=2.7,SNR=35
KBZ Khabaz 146.06 295*c* *i*PKP2 **PKPdf 20 00 55.1 -0.4**
SENK Senkaya-Erzuru 146.10 289 P **PKPdf 20 00 55.7 -0.3**
KIV Kislovodsk 146.23 295 ⇑P **PKPbc 20 00 57.1 0.0**
KIV Kislovodsk 146.23 295 P **PKPab 20 00 57.5 -0.4**
KIV Kislovodsk 146.23 295 PKPdf **PKPdf 20 00 56.4 +0.5**
KIV IAMs_20 IAMs_20 21 12 20.7
comp=Z,646nm,20.0s
KIV Kislovodsk 146.23 295 *e*PKHKP PKPpre 20 00 53.2
KIV *i* 20 00 57.1
KIV *e* 20 04 16.9
KIV *e*SS SS 20 23 13.7 -1.0
KIV pmax pmax
comp=Z,52nm,1.0s
KIV MLR MLR
comp=Z,588nm,25.0s
KIV Kislovodsk 146.23 295 *i*P **PKPdf 20 00 55.0 -1.0**
SNR=14
KOPR Koprukoy-ERZUR 146.39 288 P **PKPbc 20 00 57.5 -0.3**
VRTB Varto-Mus 146.54 287 P **PKPab 20 00 59.4 +0.1**
SVAN Silvan-Diyarba 146.55 285 P **PKPbc 20 00 58.3 +0.2**
VRH Novokhopyorsk 146.65 309 *e*PKIKP **PKPdf 20 00 56.0 -0.2**
VRH pmax pmax
comp=Z,190nm,0.6s
MAZI Mazidag 146.98 283 P **PKPdf 20 00 56.9 -0.6**
BNGB Bingl 147.11 286 P **PKPdf 20 00 58.0 +0.4**
DYBB Diyarbakir 147.32 284 P **PKPbc 20 01 00.3 -0.1**
CHOM Cayeli-Rize 147.37 290 P **PKPbc 20 01 00.8 +0.5**
KOPT Kop Dagi 147.42 288 **PKPbc 20 01 00.2 -0.7**
STEI Steigen 147.90 348 *e*PKPbc **PKPbc 20 01 00.1 -0.7**
LOF Lofoten 147.98 358 *e*PKPbc **PKPbc 20 00 59.6 -1.4**
MOS Moscow 148.00 318 *e*PKP2 **PKPdf 20 00 59.8 +1.5**
MOS pmax pmax
comp=Z,100nm,0.9s
MOS pmax pmax
comp=Z,86nm,0.8s
PTK Pertek 148.08 286 P **PKPbc 20 01 01.6 -1.0**
KTUT Trabzon 148.10 290 P **PKPbc 20 01 02.8 +0.5**
LPSR Galich'ya Gora 148.11 312 *e*PKP2 **PKPdf 20 01 00.2 +1.6**
LPSR pmax pmax
comp=Z,80nm,0.9s
VORR Voronezh 148.13 310 *e*PKP2 **PKPbc 20 01 00.5 -1.5**
VORR pmax pmax
comp=Z,70nm,0.6s
VSR Storozhevoye 148.24 309 *e*PKIKP **PKPdf 20 01 00.4 +1.5**
VSR pmax pmax
comp=Z,60nm,0.7s
URFA Urfa 148.24 283 P **PKPdf 20 00 58.0 -1.5**
ASF Jabal al Asfar 148.31 272 PKPbc **PKPbc 20 01 02.6 -0.6**
comp=Z,11nm,0.7s,baz=189,slow=1.9,SNR=23
SOC Sochi 148.36 295 *i*PKIKP **PKPdf 20 01 00.8 +1.4**
SOC *e*SSS SSS 20 29 05.8
SOC pmax pmax
comp=Z,44nm,0.7s
SOC MLR MLR
comp=Z,900nm,21.0s

FAUS Fauske 148.39 348 *e*PKPbc **PKPbc 20 01 01.4 -0.8**
OBN Obninsk 148.77 317 PKPdf **PKPdf 20 00 58.6 -1.0**
OBN IAMs_20 IAMs_20 21 17 35.2
comp=Z,864nm,21.0s
OBN Obninsk 148.77 317*d* *i*PKP2 **PKiKP 20 01 04.4 -0.5**
OBN *e*PPP PPP 20 08 02.3
OBN *e*SS SS 20 23 43.2 +1.2
OBN pmax pmax
comp=Z,44nm,0.7s
ARPR Arapgir-MALATY 148.92 286 P **PKPbc 20 01 04.6 -0.1**
LIC Lamto 148.92 173⇑*e*PKP1 **PKPbc 20 01 05.5 +0.3**
comp=Z,206nm,1.0s
EIL Elat 148.94 267 P **PKPdf 20 01 01.3 +0.5**
GHAJ Ghor Haditha 149.07 270 **PKPdf 20 00 59.6 -1.3**
KIC Kosan Boka 149.09 173⇓*i*PKP1 **PKPbc 20 01 05.8 +0.2**
comp=Z,66nm,0.7s
TIC Toumodi 149.34 173⇓*i*PKP1 **PKPbc 20 01 06.5 +0.2**
comp=Z,60nm,0.6s
UJAP Al Uja 149.38 271 P **PKPbc 20 01 05.6 -0.2**
DBIC Dimbokro 149.38 173 PKP **PKPdf 20 01 02.0 +0.1**
comp=Z,21nm,0.8s,baz=243,slow=4.8,SNR=6.0
DBIC PKPbc **PKPbc 20 01 06.7 +0.3**
comp=Z,32nm,0.9s,baz=151,slow=2.2,SNR=13
DBIC Dimbokro 149.38 173 PKPdf **PKPdf 20 01 01.6 -0.4**
DARE Darende-Malaty 149.49 285 P **PKPbc 20 01 06.1 +0.1**
KONS Konsvik 149.55 349 *e*PKPbc **PKPbc 20 01 04.0 -1.1**
MMLI Mount Malkishu 149.58 272 P **PKPbc 20 01 05.5 -0.8**
MOR8 Moi Rana 149.63 347 *e*PKPbc **PKPbc 20 01 04.0 -1.3**
STOK Stokkvaagen 149.72 349 *e*PKPbc **PKPbc 20 01 05.4 -0.1**
PUL Pulkovo 149.72 328*c* *i*PKP2 **PKPbc 20 01 04.6 -1.1**
PUL pmax pmax
comp=Z,173nm,0.7s
KMRS Kahramanmaras 149.75 282 P **PKPbc 20 01 04.9 -1.7**
BHL Bhannes 149.85 275 *e*P **PKPbc 20 01 05.8 -1.3**
DQRL Deir Qamar 149.86 274 *e*P **PKPbc 20 01 05.6 -1.5**
RSDY Resadiye-TOKAT 149.88 288 P **PKPbc 20 01 06.4 -0.4**
YAYL Yayladag 150.05 279 P **PKPbc 20 01 07.4 -0.1**
SVSK Karacayir 150.07 287 P **PKiKP 20 01 07.9 -0.2**
TAHT Tahtakopru-Hat 150.07 280 P **PKPbc 20 01 07.1 -0.3**
SARI SarD1z-Kayseri 150.29 284 P **PKPbc 20 01 07.5 -0.6**
FIA1 FINESS Array S 150.34 333 **PKPbc 20 01 05.9 -1.3**
FINES FINESS Array B 150.34 333 PKPbc **PKPbc 20 01 05.7 -1.5**
comp=Z,60nm,0.8s,baz=69,slow=2.8,SNR=65
FINES FINESS Array B 150.34 333 **PKPbc 20 01 06.1 -1.1**
FINES FINESS Array B 150.34 333 PKIKP **PKPbc 20 01 06.1 -1.1**
TOKT Tokat 150.46 288 P **PKPbc 20 01 07.9 -0.4**
CEYT Ceyhan 150.55 281 P **PKiKP 20 01 10.5 +1.3**
KOZT Kozan 150.58 282 P **PKPbc 20 01 08.6 0.0**
BNN Bunyan 150.80 285 P **PKPbc 20 01 08.3 -0.9**
BNN Bunyan 150.80 285 PKPdf **PKPdf 20 01 03.0 -0.6**
BNN PKPbc **PKPbc 20 01 08.1 -1.2**
KVT Kavak 150.91 289 P **PKiKP 20 01 09.7 -0.2**
CMRD Camardi-Nigde 151.27 282 P **PKPbc 20 01 09.7 -0.6**
YOZ Yozgat 151.32 286 P **PKPbc 20 01 09.9 -0.5**
EREN Erenkoy 151.46 277 P **PKiKP 20 01 11.9 +0.8**
MERS Mersin 151.48 280 P **PKPbc 20 01 09.7 -1.1**
DIKM Dikmen 151.54 290 ⇓P **PKPdf 20 01 04.1 -0.3**
DIKM Dikmen 151.54 290 P **PKiKP 20 01 11.9 +0.8**
NSS Namsos 151.56 348 *e*pPKPdf **PKPbc 20 01 08.8 -1.1**
KIZK Mersin 151.70 279 P **PKPbc 20 01 11.1 -0.1**
MEF Metsahovi 151.78 333 *e*P **PKPbc 20 01 10.3 -0.3**
SILI Silifke-Mersin 151.85 279 P **PKiKP 20 01 12.5 +0.6**
CORM Corum 151.90 287 P **PKPbc 20 01 11.7 0.0**
LFK Lefkose 151.91 277 P **PKiKP 20 01 13.6 +1.5**
CSS Mathiatis 151.99 276 P **PKPbc 20 01 11.5 -0.4**
CSS Mathiatis 151.99 276 **PKPbc 20 01 11.1 -0.8**
VSU Vasula 151.99 328 *e*P **PKiKP 20 01 11.5 +0.1**
IKL Isikli 152.01 279 P **PKiKP 20 01 12.2 0.0**
KEBE Keben-Mersin 152.03 279 P **PKPbc 20 01 11.7 -0.3**
AKKU Akkuyu-Mersin 152.10 278 P **PKPbc 20 01 11.9 -0.2**
RAF Rauma 152.12 336 *e*P **PKPbc 20 01 10.1 -1.2**
TEVE Tevekalti-Mers 152.24 279 P **PKPbc 20 01 12.5 0.0**
SIM Simferopol' 152.37 297 *i*PKIKP **PKPbc 20 01 11.7 -0.7**
SIM pmax pmax
comp=Z,40nm,0.8s
LEF Lefka 152.38 276 P **PKPbc 20 01 12.5 -0.3**
BERE Bereket-Mersin 152.40 279 P **PKPbc 20 01 12.8 -0.2**
TEKE Tekeli-Mersin 152.44 278 P **PKPbc 20 01 12.2 -0.7**
SERE Sereflikochisa 152.58 284 P **PKPbc 20 01 12.2 -1.1**
BR131 Keskin Array S 152.61 286 **PKPbc 20 01 12.3 -1.1**
BR131 Keskin Array S 152.61 286 PKIKP **PKPbc 20 01 12.3 -1.1**
BRTR Keskin Array B 152.61 286 PKPbc **PKPbc 20 01 11.2 -2.2**
comp=Z,28nm,0.7s,baz=99,slow=1.5,SNR=9.5
BRTR Keskin Array B 152.61 286 P **PKPbc 20 01 12.5 -0.9**
BRTR Keskin Array B 152.61 286 PKPdf **PKPdf 20 01 05.5 -0.9**
BRTR PKPbc **PKPbc 20 01 13.2 -0.2**
BRTR Keskin Array B 152.61 286 PKIKP **PKPbc 20 01 13.2 -0.2**
ILGA Ilgaz 152.67 289 **PKPbc 20 01 13.6 0.0**
CANT Cankiri 152.71 288 P **PKiKP 20 01 14.8 +1.2**
MTSE Matsula 153.02 331 *e*P **PKPbc 20 01 13.1 -0.3**
TBLU Trondheim 153.03 348 *e*PKPdf **PKPdf 20 01 06.5 +0.6**
GAZI Gazipasa 153.09 278 P **PKPbc 20 01 13.3 -1.1**
ANTO Ankara 153.28 286 ⇑P **PKiKP 20 01 15.3 +0.4**
ANTO Ankara 153.28 286 **PKPbc 20 01 14.1 -0.6**
ANTO Ankara 153.28 286 IAMs_20 IAMs_20 21 07 38.2
comp=Z,1μm,22.0s
ANTO Ankara 153.28 286 PKIKP **PKPbc 20 01 14.1 -0.6**
ANTO MLR MLR
comp=Z,1μm,22.0s
MNK Minsk 153.61 320 *i*PKP **PKPdf 20 01 06.9 -0.1**
comp=E,1.0nm,0.7s
MNK *i*PKP **PKPdf 20 01 06.9 -0.1**
comp=N,32nm,0.9s
MNK *i*PKP **PKPdf 20 01 06.9 -0.1**
comp=Z,9.0nm,0.9s,baz=240
MNK *i*PKiKP **PKiKP 20 01 15.5 +0.6**
MNK *i*PP **PP 20 05 01.8 -0.3**
MNK *i*SKS **SKSdf 20 08 14.1 +2.9**
MNK *i*PPP PPP 20 08 29.6
MNK *i*SKKS **SKKSdf 20 16 55.8 +2.2**
MNK *i*SS **SS 20 24 38.7 +3.2**
MNK *i*SSS SSS 20 30 28.9
MNK *i*LR LR 21 12 42.7
MNK *i*LRM MLR 21 16 14.8
comp=N,1μm,19.8s
MNK *i*LRM MLR 21 16 14.8
comp=Z,747nm,20.4s
MNK *i*LRM MLR 21 16 18.6
comp=E,62nm,19.8s
ISAL Salakas 153.93 323 *e*P **PKPbc 20 01 15.2 -0.2**
NACGM Naroch 153.97 322⇑*e*PKP **PKPbc 20 01 15.0 -0.6**
baz=58
IIGN Ignalina 154.00 323 *e*P **PKPbc 20 01 15.4 -0.2**
MOL Molde 154.08 351 *e*PKPbc **PKPbc 20 01 15.2 -0.4**
DOMB Dombas 154.36 349 *e*PKPbc **PKiKP 20 01 16.4 +0.1**
AKASG Malin Array Be 154.44 311 PKP **PKPdf 20 01 17.2 -1.1**
comp=E,1.2nm,0.7s,baz=56,slow=1.8,SNR=11
AKASG PKPbc **PKPbc 20 01 14.7 -2.0**
comp=E,17nm,0.7s,baz=60,slow=2.5,SNR=27
AKASG Malin Array Be 154.44 311 **PKPdf 20 01 07.2 -1.1**
AKASG PKPbc **PKPbc 20 01 15.8 -0.9**
AKBB Malin Array Si 154.44 311 **PKPbc 20 01 15.5 -1.2**
AKBB Malin Array Si 154.44 311 PKIKP **PKPbc 20 01 15.5 -1.2**
AKN Aaknes 154.53 351 *e*PKPbc **PKPbc 20 01 16.3 -0.3**
MDUB Mudurnu 154.54 287 P **PKiKP 20 01 17.6 +0.1**
MDUB Mudurnu 154.54 287 **PKPbc 20 01 16.2 -1.2**
VSVD Vaisvydziai 154.71 326 *e*P **PKPbc 20 01 16.8 -0.3**
SHUT Suhut-Afyon 154.87 283 P **PKPdf 20 01 09.2 -0.3**
NB201 NORSAR Array S 154.89 345 **PKPbc 20 01 16.8 -0.6**
NB2 NORSAR Subarra 154.91 346 PKPdf **PKPdf 20 01 08.2 -0.6**
comp=Z,50nm,1.7s,baz=31,slow=1.9
NB2 NORSAR Subarra 154.91 346 PKPdf **PKPdf 20 01 08.2 -0.6**
baz=31,slow=1.9
NOA NORSAR Array B 154.91 346 PKP **PKPdf 20 01 08.0 -0.8**
comp=Z,3.9nm,1.0s,baz=20,slow=1.5,SNR=7.6
NOA PKPbc **PKPbc 20 01 17.0 -0.5**
comp=Z,10nm,1.0s,baz=32,slow=2.1,SNR=14
PABE Paberze 154.98 325 **PKPbc 20 01 16.7 -1.0**
PABE Paberze 154.98 325 *e*P **PKiKP 20 01 18.8 +1.1**
BORA Eskisehir 155.07 286 PKPdf 20 01 18.4 +8.6
ELL Elmali 155.09 278 PKPdf 20 01 18.8 +8.9
ELL Elmali 155.09 278 PKIKP PKPdf 20 01 18.8 +8.9
NC602 NORSAR Array S 155.12 345 *e*PKPbc PKPdf 20 01 18.5 +10
AKAS Kas 155.23 277 **PKPdf 20 01 17.4 +7.3**
FOO Floro 155.31 353 *e*PKPbc PKPdf 20 01 17.9 +8.7
SKAR Skarslia 155.77 348 *e*pPKPdf **PKPdf 20 01 14.9 +4.9**
TOA0 Torodi Ar. Sit 155.83 187 PKPdf **PKPdf 20 01 10.5 -0.9**
TOA0 PKPab **PKPab 20 01 38.6 +0.7**
TORD Torodi Ar. Bea 155.83 187 PKP **PKPdf 20 01 11.2 -0.1**
comp=Z,4.7nm,0.8s,baz=40,slow=0.1,SNR=20
TORD PKPab **PKPab 20 01 39.0 +1.0**
comp=Z,30nm,0.7s,baz=170,slow=3.3,SNR=18

ASK Askoy 156.39 352 *e*pPKPdf **PKPdf 20 01 14.9 +4.2**
CFR Carcaliu 156.56 299 ⇓P PKPdf 20 01 25.5 +14
CFR Carcaliu 156.56 299 ⇓PKIKP PKPdf 20 01 25.5 +14
ICOR Ion Corvin 156.94 296 ⇓P PKPdf 20 01 26.0 +14
KARP Karpathos 157.03 274 PKPab **PKPab 20 01 42.7 -0.2**
KOWA Kowa 157.20 173 PKP **PKPdf 20 01 12.7 -0.4**
comp=Z,2.8nm,0.7s,baz=144,slow=6.6,SNR=6.0
KOWA Kowa 157.20 173 PKPdf **PKPdf 20 01 12.3 -0.8**
VRI Vrincioaia 157.40 301 ⇑P PKPdf 20 01 23.9 +11
VRI Vrincioaia 157.40 301 ⇑PKIKP PKPdf 20 01 23.9 +11
PLOR Plostina 157.45 301 ⇑P **PKPdf 20 01 14.6 +2.0**
PLOR Plostina 157.45 301 ⇑PKIKP **PKPdf 20 01 14.6 +2.0**
BIZ Bicaz 157.56 304 ⇑P **PKPdf 20 01 14.5 +1.9**
LVV L'vov 157.86 313 *e*PKIKP PKPdf 20 01 21.9 +9.0
LVV MLR MLR
comp=Z,800nm,24.0s
BURAR Bucovina Array 157.94 306 ⇓P **PKPdf 20 01 20.3 +7.1**
BURAR Bucovina Array 157.94 306 PKPdf **PKPdf 20 01 12.0 -1.2**
BURAR PKPab **PKPab 20 01 45.9 -0.7**
BURAR Bucovina Array 157.94 306 ⇓PKIKP **PKPdf 20 01 20.3 +7.1**
MLR Muntele Rosu 158.01 301 ⇑P **PKPdf 20 01 17.5 +4.1**
MLR Muntele Rosu 158.01 301 ⇑PKIKP **PKPdf 20 01 17.5 +4.1**
SANT Santorini 158.55 276 IAMs_20 IAMs_20 21 21 07.6
comp=Z,768nm,21.0s
VOIR 158.64 301 ⇑P **PKPdf 20 01 13.3 -0.8**
VOIR 158.64 301 ⇑PKIKP **PKPdf 20 01 13.3 -0.8**
UZH Uzhgorod 159.39 311⇓*i*PKP2 **PKPab 20 01 52.2 -0.4**
LOT Lotru 159.51 301 ⇓P **PKPdf 20 01 15.7 +0.5**
CRVS Cervenica-Dubn 159.77 312 *e*PKIKP **PKPdf 20 01 15.4 +0.2**
DRGR 159.82 306 ⇑P **PKPdf 20 01 16.2 +0.8**
DRGR 159.82 306 ⇑PKIKP **PKPdf 20 01 16.2 +0.8**
OJC Ojcow 160.06 317 PKPab **PKPab 20 01 54.6 -0.9**
OJC Ojcow 160.06 317 PKP2 **PKPab 20 01 54.6 -0.9**
GZR Gura Zlata 160.20 302 ⇑P **PKPdf 20 01 17.3 +1.4**
GZR Gura Zlata 160.20 302 ⇑PKIKP **PKPdf 20 01 17.3 +1.4**
VTS Vitosha 160.44 294 ⇑P **PKPdf 20 01 15.4 -1.0**
VTS Vitosha 160.44 294 PKPab **PKPab 20 01 57.1 -0.6**
VTS Vitosha 160.44 294 ⇑PKIKP **PKPdf 20 01 15.4 -1.0**
KECS Kecovo 160.54 312 *e*PKP2 **PKPab 20 02 00.2 +2.6**
HERR Herculane 160.58 301 ⇓P **PKPdf 20 01 18.9 +2.7**
BLKB Belogradchik 160.68 297 ⇓P **PKPdf 20 01 16.8 +0.3**
BZS Buzias 160.92 303 ⇓P PKPdf 20 01 07.1 -10
BZS Buzias 160.92 303 ⇓PKIKP PKPdf 20 01 07.1 -9.5
VAY Valandovo 161.07 290 *i*P **PKPab 20 01 57.8 -2.4**
MDVR Moldovita 161.09 301 ⇑P **PKPdf 20 01 18.4 +1.5**
PSZ Piszkesteto 161.14 311 ⇑P **PKPdf 20 01 10.8 -6.1**
PSZ Piszkesteto 161.14 311 **PKPdf 20 01 15.6 -1.2**
PSZ Piszkesteto 161.14 311 PKIKP **PKPdf 20 01 15.6 -1.2**
OKC Ostrava-Krasne 161.16 318 AMS AMS 21 18 00.0
comp=Z,700nm,18.4s
STIP Stip 161.32 291 *i*P **PKPab 20 01 59.8 -1.6**
VYHS Vyhne 161.50 314 *e*PKIKP **PKPdf 20 01 16.9 -0.2**
MORC Moravsky Berou 161.52 319 ⇑P **PKPdf 20 01 17.2 0.0**
MORC Moravsky Berou 161.52 319 PKPdf **PKPdf 20 01 15.8 -1.3**
MORC PKPab **PKPab 20 02 02.1 +0.2**
MORC Moravsky Berou 161.52 319 PKIKP **PKPdf 20 01 15.8 -1.3**
MORC Moravsky Berou 161.52 319 *e*PKP **PKPdf 20 01 16.7 -0.4**
MORC *e* 20 02 02.3
MAUC Maruska 161.60 317 *e*PKPDF **PKPdf 20 01 16.6 -0.6**
MAUC AMS AMS 21 24 30.0
comp=Z,2μm,21.2s
OSTC Ostas 161.72 322 *e*PKPDF **PKPdf 20 01 16.7 -0.6**
OSTC *e*PKPAB **PKPab 20 02 04.1 +1.4**
OSTC AMS AMS 21 12 40.0
comp=Z,1μm,25.1s
KRLC Kraliky 161.73 320 *e*PKIKP **PKPdf 20 01 17.0 -0.4**
KRLC MLR MLR
comp=Z,900nm,21.0s
KRLC Kraliky 161.73 320 *e*PKPDF **PKPdf 20 01 17.0 -0.4**
KRLC *e*PKPAB **PKPab 20 02 04.1 +1.2**
KRLC AMS AMS 21 11 20.0
comp=Z,900nm,21.0s
CHVC Chvalec 161.77 322 *e*PKPAB **PKPab 20 02 03.9 +0.9**
DPC Dobruska-Polom 161.79 322 *e*PKIKP **PKPdf 20 01 17.0 -0.4**
DPC MLR MLR
comp=Z,1μm,24.0s
DPC Dobruska-Polom 161.79 322 *e*PKPDF **PKPdf 20 01 17.0 -0.4**
DPC *e*PKPAB **PKPab 20 02 04.7 +1.6**
DPC AMS AMS 21 13 00.0
comp=Z,1μm,24.0s
UPC Upice 161.85 322 *e*PKP2 **PKPab 20 02 04.6 +1.3**
UPC MLR MLR
comp=Z,1μm,20.2s
UPC Upice 161.85 322 *e*PKPAB **PKPab 20 02 04.6 +1.3**
UPC AMS AMS 21 17 20.0
comp=Z,1μm,20.2s
JAVC Velka Javorina 161.96 316 *e*PKP **PKPdf 20 01 17.6 -0.1**
JAVC *e* 20 02 05.1
SMOL Smolenice 162.29 315 *e*PKP2 **PKPab 20 02 06.4 +1.1**
VRAC Vranov 162.29 319 ⇑P **PKPdf 20 01 17.8 -0.1**
VRAC Vranov 162.29 319 ⇑PKIKP **PKPdf 20 01 17.8 -0.1**
VRAC Vranov 162.29 319 *e*PKP **PKPdf 20 01 17.1 -0.8**
VRAC *e* 20 02 05.9
MODS Modra-Piesok 162.45 315 *e*PKIKP **PKPdf 20 01 18.0 -0.1**
PVCC Panska Ves 162.52 324 *e*PKP2 **PKPab 20 02 07.1 +0.9**
PVCC Panska Ves 162.52 324 *e*PKPAB **PKPab 20 02 07.1 +0.9**
KRUC Moravsky 162.54 318 *e*PKP **PKPdf 20 01 17.3 -0.8**
KRUC *e* 20 02 05.1
BRG Berggiesshubel 162.56 326⇓*e*PKPf 20 01 17.7
BRG Amp 20 01 19.9
comp=Z,17nm,1.6s
BRG *ex* x 20 01 28.2
BRG Amp 20 01 30.3
comp=Z,6.0nm,1.1s
BRG *i*PKPab **PKPab 20 02 07.1 +0.8**
BRG Amp 20 02 11.5
comp=Z,12nm,0.8s
BRG Berggiesshubel 162.56 326 *e*PKIKP **PKPdf 20 01 17.6 -0.5**
BRG *e* 20 01 28.2
BRG pmax pmax
comp=Z,17nm,1.6s
MORH Mrgy, Hungar 162.65 307 ⇑P **PKPdf 20 01 15.4 -2.9**
CLL Collm 162.65 329 PKPdf **PKPdf 20 01 16.9 -1.2**
CLL PKPab **PKPab 20 02 06.6 -0.1**
CLL Collm 162.65 329 *i*PKIKP **PKPdf 20 01 16.9 -1.2**
CLL pmax pmax
comp=Z,13nm,1.6s
CLL MLR MLR
comp=Z,900nm,21.7s
CLL Collm 162.65 329 *i*PKPdf **PKPdf 20 01 16.9 -1.2**
comp=Z,13nm,1.6s
CLL *i*PKPab **PKPab 20 02 07.5 +0.8**
comp=Z,13nm,0.7s
CLL *i*(pPKPab) 20 02 13.3
CLL *e*PP **PP 20 05 52.0 +0.8**
CLL *e*PP PP 20 06 02.0 +11
comp=Z,200nm,13.8s
CLL *e*SKSdf **SKSdf 20 08 24.0 +3.9**
CLL *ex* x 20 13 24.0
CLL *e*PSKS 20 16 12.0
CLL *e*PSKSrev 20 19 16.0
CLL *e*SS **SS 20 26 11.0 -0.3**
CLL *e*PSSrev 20 33 23.0
CLL *e*SSSrev 20 39 54.0
CLL L L 21 18 00.0
comp=Z,900nm,21.7s
GOPC GO Pecny, Ondr 162.83 323 *e*PKP2 **PKPab 20 02 08.4 +0.8**
GOPC GO Pecny, Ondr 162.83 323 *e*PKPAB **PKPab 20 02 08.4 +0.8**
PRU Pruhonice 162.90 323 *e*PKP2 **PKPab 20 02 08.6 +0.7**
PRU MLR MLR
comp=Z,1μm,24.6s
PRU Pruhonice 162.90 323 *e*PKPAB **PKPab 20 02 08.6 +0.7**
PRU *ex* x 20 16 13.1
PRU AMS AMS 21 11 20.0
comp=Z,1μm,24.6s
RONA Rosalia, Austr 163.36 314 *e*P **PKPdf 20 01 18.4 -0.6**
comp=Z,14nm,1.9s
RONA *e*P **PKPab 20 02 12.4 +2.4**
comp=Z,11nm,1.1s
CONA Conrad Observa 163.48 316 *i*P **PKPdf 20 01 18.7 -0.5**
comp=Z,9.8nm,1.9s
CONA *e*P **PKPab 20 02 10.8 +0.2**
comp=Z,18nm,0.8s,SNR=11
NKC Novy Kostel 163.69 327 *e*PKP2 **PKPab 20 02 12.1 +0.8**
NKC MLR MLR
comp=Z,1μm,21.3s
NKC Novy Kostel 163.69 327 *e*PKPAB **PKPab 20 02 12.1 +0.8**
NKC AMS AMS 21 25 00.0
comp=Z,1μm,21.3s
CKRC Cesky Krumlov 163.78 320 *e*PKPDF **PKPdf 20 01 18.3 -1.1**
CKRC *e*PKPAB **PKPab 20 02 12.5 +0.7**
CKRC AMS AMS 21 16 50.0
comp=Z,2μm,21.2s

KHC	**Kasperske Hory**	**163.94 322**	PKPab	**PKPab**	**20 02 12.3**	**-0.2**
KHC	**Kasperske Hory**	**163.94 322**	*e*PKIKP	**PKPdf**	**20 01 18.4**	**-1.1**
KHC			MLR	MLR		
	comp=Z,1μm,21.2s					
KHC	**Kasperske Hory**	**163.94 322**	*e*PKPDF	**PKPdf**	**20 01 18.4**	**-1.1**
KHC			*e*PKPAB	**PKPab**	**20 02 13.6**	**+1.1**
KHC			*ex*	x	20 16 10.9	
KHC			AMS	AMS	21 17 40.0	
	comp=Z,1μm,21.2s					
ARSA	**Arzberg**	**164.05 314**	*e*P	**PKPdf**	**20 01 18.8**	**-0.9**
	comp=Z,7.7nm,1.8s					
ARSA			*e*P	**PKPab**	**20 02 13.5**	**+0.4**
	comp=Z,14nm,0.9s,SNR=5.7					
GEC2	**GERESS Array S**	**164.07 321**		**PKPdf**	**20 01 18.7**	**-1.0**
GEC2			PKPab	**PKPab**	**20 02 13.0**	**-0.2**
GERES	**GERESS Array B**	**164.07 321**	PKP	**PKPdf**	**20 01 19.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=88,slow=3.2,SNR=8.8					
GERES			PKPab	**PKPab**	**20 02 13.7**	**+0.5**
	comp=Z,6.0nm,0.7s,baz=46,slow=5.8,SNR=12					
GERES	**GERESS Array B**	**164.07 321**		**PKPdf**	**20 01 18.9**	**-0.9**
GERES				**PKPab**	**20 02 13.5**	**+0.3**
MOA	**Molln**	**164.40 318**	*e*P	**PKPdf**	**20 01 18.7**	**-1.3**
	comp=Z,5.9nm,1.2s					
MOA			*e*P	**PKPab**	**20 02 14.3**	**-0.4**
	comp=Z,9.2nm,0.8s					
GRA1	**Grafenberg Arr**	**164.62 328**		**PKPab**	**20 02 15.0**	**-0.4**
GRF	**Grafenberg Arr**	**164.62 328**	PKP2	**PKPab**	**20 02 15.0**	**-0.4**
SOKA	**Soboth**	**164.64 313**	*e*P	**PKPdf**	**20 01 19.8**	**-0.5**
	comp=Z,7.1nm,1.1s					
SOKA			*e*P	**PKPab**	**20 02 16.0**	**+0.2**
	comp=Z,16nm,1.2s					
BIOA	**Bad Ischl, Aus**	**164.84 318**	*e*P	**PKPdf**	**20 01 19.1**	**-1.3**
	comp=Z,7.8nm,1.2s					
OBKA	**Obir**	**165.01 313**	*e*P	**PKPab**	**20 02 17.4**	**0.0**
	comp=Z,11nm,0.8s,SNR=5.1					
KBA	**Koelnbreinsper**	**165.37 317**	*e*P	**PKPdf**	**20 01 20.2**	**-0.8**
	comp=Z,5.3nm,0.8s					
MEM	**Membach**	**165.66 341**	*d*PKP	**PKPab**	**20 02 19.6**	**-0.3**
BSTI	**Sart Tilman**	**165.79 342**	*d*PKP	**PKPab**	**20 02 20.7**	**+0.2**
BHOU	**Houvegnez**	**165.89 340**	*d*PKP	**PKPab**	**20 02 21.1**	**+0.1**
BCLA	**Clavier**	**166.01 342**	*d*PKP	**PKPab**	**20 02 19.7**	**-1.8**
ABTA	**Abfaltersbach**	**166.02 317**	*e*P	**PKPdf**	**20 01 22.5**	**+1.0**
	comp=Z,14nm,1.6s					
ABTA			*e*P	**PKPab**	**20 02 21.5**	**-0.4**
	comp=Z,11nm,1.6s					
WATA	**Walderalm**	**166.14 321**	*e*P	**PKPdf**	**20 01 20.8**	**-0.8**
	comp=Z,9.6nm,1.3s					
WTTA	**Wattenberg**	**166.15 320**	*e*P	**PKPdf**	**20 01 19.6**	**-2.0**
	comp=Z,14nm,1.5s					
WTTA			*e*P	**PKPab**	**20 02 26.5**	**+4.0**
	comp=Z,5.9nm,0.8s					
BMRD	**Maredsous**	**166.25 343**	*d*PKP	**PKPab**	**20 02 23.4**	**+0.9**
RCHB	**Rochefort**	**166.27 342**	*d*PKP	**PKPab**	**20 02 22.2**	**-0.4**
PMOZ	**Porto Moniz, M**	**166.28 104**	*e*PP	**PP**	**20 06 19.1**	**+7.6**
PMOZ	**Porto Moniz, M**	**166.28 104**	*e*LR	LR	21 04 35.6	
	comp=Z,738nm,18.0s					
MOTA	**Moosalm**	**166.37 322**	*e*P	**PKPdf**	**20 01 20.9**	**-0.9**
	comp=Z,11nm,1.3s					
MOTA			*e*P	**PKPab**	**20 02 23.8**	**+0.4**
	comp=Z,7.2nm,0.8s					
SQTA	**Sankt Quirin**	**166.40 321**	*e*P	**PKPdf**	**20 01 21.0**	**-0.8**
	comp=Z,6.4nm,1.1s					
RETA	**Reutte**	**166.44 323**	*e*P	**PKPdf**	**20 01 20.7**	**-1.0**
	comp=Z,7.2nm,1.5s					
RETA			*e*P	**PKPab**	**20 02 23.9**	**+0.3**
	comp=Z,11nm,1.2s					
DOU	**Dourbes**	**166.48 343**	*d*PKPdf	**PKPdf**	**20 01 23.2**	**+1.7**
DOU			*d*PKP	**PKPab**	**20 02 22.7**	**-0.9**
FETA	**Feichten**	**166.78 321**	*e*P	**PKPdf**	**20 01 21.8**	**-0.3**
	comp=Z,15nm,1.2s					
FETA			*e*P	**PKPab**	**20 02 25.5**	**+0.2**
	comp=Z,8.6nm,1.2s					
BFO	**Black Forest**	**166.87 330**	PKPab	**PKPab**	**20 02 25.3**	**-0.1**
BFO	**Black Forest**	**166.87 330**	PKP2	**PKPab**	**20 02 25.3**	**-0.1**
DAVA	**Damuels**	**167.00 324**	*e*P	**PKPdf**	**20 01 20.4**	**-1.9**
	comp=Z,7.3nm,1.3s					
DAVA			*e*P	**PKPab**	**20 02 27.0**	**+0.8**
	comp=Z,20nm,0.9s,SNR=6.3					
PMPS	**Porto Santo**	**167.04 104**	*e*PKPdf	**PKPdf**	**20 01 23.0**	**+0.5**
ECH	**Echery**	**167.41 333**	PKPab	**PKPab**	**20 02 27.0**	**-0.8**
ECH	**Echery**	**167.41 333**	PKP2	**PKPab**	**20 02 27.0**	**-0.8**
FDMO	**Fiordimonte**	**167.55 302**		**PKPab**	**20 02 28.2**	**-0.5**
MURB	**Monte Urbino**	**167.84 304**		**PKPab**	**20 02 29.3**	**-0.7**
SENIN	**Lac Senin/Sane**	**168.86 327**	PKPab	**PKPab**	**20 02 34.1**	**-0.4**
KEST	**Kesra**	**171.26 263**	PKP	**PKPdf**	**20 01 25.9**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=239,slow=3.6,SNR=3.1					
KEST			PKPab	**PKPab**	**20 02 44.4**	**-1.1**
	comp=Z,11nm,0.9s,baz=136,slow=2.3,SNR=8.7					
KEST	**Kesra**	**171.26 263**	PKPab	**PKPab**	**20 02 45.0**	**-0.5**
PGAV	**Gavieira, Arco**	**172.88 47**	*e*SS	SS	20 28 04.2	+9.0
PGAV	**Gavieira, Arco**	**172.88 47**	*e*LR	LR	21 06 19.8	
	comp=Z,2μm,20.0s					
PCAB	**Cabril**	**173.18 47**	*e*PKPab	**PKPab**	**20 02 53.3**	**-0.4**
PMAFR	**Mafra**	**173.51 72**	*e*PP	**PP**	**20 06 48.8**	**+1.1**
PMAFR	**Mafra**	**173.51 72**	*e*SS	SS	20 28 11.1	+8.8
POLO	**Lamas de Olo**	**173.53 49**	*e*PKPab	**PKPab**	**20 02 56.6**	**+1.3**
POLO	**Lamas de Olo**	**173.53 49**	*e*PP	**PP**	**20 06 54.5**	**+7.2**
POLO	**Lamas de Olo**	**173.53 49**	*e*SS	SS	20 28 07.8	+6.3
LIS	**Lisbon**	**173.66 74**	*e*PP	PP	20 06 48.7	+0.2
LIS			IAMs_20	IAMs_20	21 15 43.4	
	comp=Z,4μm,37.9s					
PSBE	**So Bento**	**173.73 67**	*e*PP	**PP**	**20 06 51.7**	**+3.0**
PSBE	**So Bento**	**173.73 67**	*e*SS	SS	20 28 14.0	+10
COI	**Coimbra**	**173.74 60**	*e*PP	**PP**	**20 06 53.0**	**+4.5**
COI	**Coimbra**	**173.74 60**	*e*SS	SS	20 28 12.3	+8.4
PCAS	**Casmilo, Conde**	**173.74 61**	*e*PP	**PP**	**20 06 50.4**	**+1.8**
PCAS	**Casmilo, Conde**	**173.74 61**	*e*SS	SS	20 28 15.0	+11
PBRG	**Braganca**	**173.84 41**	*e*PKPab	**PKPab**	**20 02 54.7**	**-1.8**
PBRG	**Braganca**	**173.84 41**	*e*SS	SS	20 28 12.6	+8.6
PVIS	**Viseu**	**173.84 54**	*e*PKPdf	**PKPdf**	**20 01 29.1**	**+3.0**
PVIS	**Viseu**	**173.84 54**	*e*PKPab	**PKPab**	**20 02 56.4**	**-0.3**
PFVI	**Vila Bisbo**	**174.02 89**	*e*PP	**PP**	**20 06 53.7**	**+3.4**
PFVI	**Vila Bisbo**	**174.02 89**	*e*SS	SS	20 28 17.9	+10
MVO	**Moncorvo**	**174.11 47**	*e*PKPdf	**PKPdf**	**20 01 29.1**	**+2.9**
MVO	**Moncorvo**	**174.11 47**	*e*PKPab	**PKPab**	**20 02 57.8**	**0.0**
MVO	**Moncorvo**	**174.11 47**	*e*SS	SS	20 28 16.6	+10
MVO	**Moncorvo**	**174.11 47**	*e*LR	LR	21 06 41.9	
	comp=Z,1μm,20.0s					
MORF	**Marmelete**	**174.17 87**	*e*PKPdf	**PKPdf**	**20 01 27.7**	**+1.3**
MORF			*e*PP	**PP**	**20 06 51.5**	**+0.3**
MORF			IAMs_20	IAMs_20	21 08 53.6	
	comp=Z,2μm,27.8s					
MORF	**Marmelete**	**174.17 87**	*e*PP	**PP**	**20 06 54.4**	**+3.3**
MORF	**Marmelete**	**174.17 87**	*e*SS	SS	20 28 18.7	+10
MORF	**Marmelete**	**174.17 87**	*e*PKIKP	**PKPdf**	**20 01 27.7**	**+1.3**
MORF			*e*		20 06 51.5	
MTE	**Manteigas**	**174.23 55**	*e*PKPdf	**PKPdf**	**20 01 27.4**	**+1.1**
MTE	**Manteigas**	**174.23 55**	*e*PKPab	**PKPab**	**20 02 58.2**	**-0.2**
MTE	**Manteigas**	**174.23 55**	*e*SS	SS	20 28 16.4	+7.8
MTE	**Manteigas**	**174.23 55**	*e*LR	LR	21 05 15.1	
	comp=Z,2μm,20.0s					
PNCL	**Nicolau / Gran**	**174.24 79**	*e*PKPdf	**PKPdf**	**20 01 27.7**	**+1.4**
PNCL	**Nicolau / Gran**	**174.24 79**	*e*PP	**PP**	**20 06 52.6**	**+1.3**
PNCL	**Nicolau / Gran**	**174.24 79**	*e*SS	SS	20 28 13.5	+4.1
MESJ	**Messejana**	**174.50 82**	*e*PKPdf	**PKPdf**	**20 01 27.8**	**+1.4**
MESJ			*e*PP	**PP**	**20 06 52.7**	**0.0**
MESJ			IAMs_20	IAMs_20	21 10 07.6	
	comp=Z,1μm,20.7s					
MESJ	**Messejana**	**174.50 82**	*e*PKPdf	**PKPdf**	**20 01 29.2**	**+2.8**
MESJ	**Messejana**	**174.50 82**	*e*PKIKP	**PKPdf**	**20 01 27.8**	**+1.4**
MESJ			*e*		20 06 52.7	
PCBR	**Castelo Branco**	**174.54 60**	*e*PKPdf	**PKPdf**	**20 01 27.8**	**+1.5**
PCBR	**Castelo Branco**	**174.54 60**	*e*PKPab	**PKPab**	**20 02 59.5**	**-0.3**
EVO	**Evora**	**174.57 74**	*e*PKPdf	**PKPdf**	**20 01 28.7**	**+2.3**
PCVE	**Castro Verde**	**174.66 84**	*e*PKPdf	**PKPdf**	**20 01 28.0**	**+1.6**
PCVE	**Castro Verde**	**174.66 84**	*e*PKPab	**PKPab**	**20 03 00.5**	**+0.1**
PCVE	**Castro Verde**	**174.66 84**	*e*PP	**PP**	**20 06 54.6**	**+1.2**
PCVE	**Castro Verde**	**174.66 84**	*e*SS	SS	20 28 09.8	-3.8
PBEJ	**Beja**	**174.76 80**	*e*PKPdf	**PKPdf**	**20 01 28.8**	**+2.4**
PMRV	**Marv??o**	**174.77 64**	*e*PKPdf	**PKPdf**	**20 01 23.8**	**-2.6**
PMRV	**Marv??o**	**174.77 64**	*e*PKPab	**PKPab**	**20 03 00.6**	**-0.3**
PMRV	**Marv??o**	**174.77 64**	*e*PP	**PP**	**20 06 57.4**	**+3.7**
PMRV	**Marv??o**	**174.77 64**	*e*SS	SS	20 28 29.2	+15
PMRV	**Marv??o**	**174.77 64**	*e*LR	LR	21 06 08.6	
	comp=Z,2μm,20.0s					
PESTR	**Estremoz**	**174.81 70**	*e*PKPdf	**PKPdf**	**20 01 27.4**	**+0.9**
PESTR	**Estremoz**	**174.81 70**	*e*PP	**PP**	**20 06 56.9**	**+2.9**
PESTR	**Estremoz**	**174.81 70**	*e*SS	SS	20 28 18.2	+3.4
PVAQ	**Vaqueiros**	**174.92 86**	*e*PP	**PP**	**20 06 57.6**	**+2.9**
PVAQ	**Vaqueiros**	**174.92 86**	*e*SS	SS	20 28 40.6	+25
PVAQ	**Vaqueiros**	**174.92 86**	*e*LR	LR	21 03 34.0	
	comp=Z,1μm,20.0s					
PBAR	**Barrancos**	**175.39 77**	*e*PKPdf	**PKPdf**	**20 01 29.0**	**+2.4**
PBAR	**Barrancos**	**175.39 77**	*e*PP	**PP**	**20 06 57.0**	**+0.1**
PBAR	**Barrancos**	**175.39 77**	*e*SS	SS	20 28 32.4	+12
PAB	**San Pablo**	**176.72 45**		**PKPdf**	**20 01 26.6**	**-0.4**
PAB	**San Pablo**	**176.72 45**	PKIKP	**PKPdf**	**20 01 26.6**	**-0.4**
ESDC	**Sonseca Array**	**176.83 40**	PKP	**PKPdf**	**20 01 27.8**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=8.1,slow=2.5,SNR=14					
ESDC			PKPab	**PKPab**	**20 03 09.7**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=317,slow=4.6,SNR=6.5					
ESDC			PP	**PP**	**20 07 06.9**	**+4.1**
	comp=Z,2.0nm,1.2s,baz=9.4,slow=2.6,SNR=4.3					

*JMA **08** 19:43:19.6±0.1, 24°.8N±0°.4×122°.0E±0°.3, h91km±1km, MV2.0/10, TAIWAN REGION*
*TAP **08** 19:43:19.1, 24°.80N×121°.97E, h98km, ML2.8, C*
ISC 08 19:43:20.7±1.5, 24°.82N±0°.05×122°.01E±0°.03, h87km±8km, n56, σ0s73/103, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.16**	**282**	*e*P	**Pn**	**19 43 32.8**	**-0.4**
	baz=302						
NTC				*e*S	**Sn**	**19 43 42.4**	**-0.2**
	baz=302						
TWB1	**Santiao Chiao**	**0.19**	**355**	*e*P	**Pn**	**19 43 32.9**	**-0.4**
	baz=7.0						
TWB1				*e*S	**Sn**	**19 43 41.9**	**-0.8**
	baz=7.0						
TIPB	**Shuangxi**	**0.22**	**313**	P	**Pn**	**19 43 33.0**	**-0.5**
	baz=322						
TIPB				*e*S	**Sn**	**19 43 42.6**	**-0.4**
	baz=322						
ILA	**Ilan**	**0.24**	**257**	*e*P	**Pn**	**19 43 33.3**	**-0.2**
	baz=260						
ILA				*e*S	**Sn**	**19 43 43.6**	**+0.6**
	baz=260						
TWC	**Suao**	**0.25**	**214**	*i* P	**Pn**	**19 43 33.5**	**-0.1**
	baz=209						
TWC				S	**Sn**	**19 43 43.4**	**+0.3**
	baz=209						
SXI1	**Grass Mountain**	**0.30**	**337**	*e*P	**Pn**	**19 43 33.0**	**-1.0**
	baz=336						
SXI1				*e*S	**Sn**	**19 43 44.7**	**+0.9**
	baz=336						
TWE	**Neicheng**	**0.32**	**252**	*e*P	**Pn**	**19 43 34.0**	**+0.1**
	baz=253						
TWE				*e*S	**Sn**	**19 43 45.0**	**+1.3**
	baz=253						
FUSB	**Fushanzhiwuyua**	**0.39**	**261**	P	**Pn**	**19 43 34.0**	**-0.4**
	baz=267						
FUSB				*e*S	**Sn**	**19 43 45.9**	**+1.3**
	baz=267						
TWA	**Mucha**	**0.41**	**293**	*e*S	**Sn**	**19 43 46.4**	**+1.5**
	baz=301						
EWUT	**Wuta**	**0.43**	**209**	P	**Pn**	**19 43 34.2**	**-0.4**
	baz=200						
EWUT				S	**Sn**	**19 43 45.5**	**+0.5**
	baz=200						
NHDH	**Xindian Distri**	**0.46**	**288**	*e*P	**Pn**	**19 43 34.1**	**-0.7**
	baz=295						
NHDH				*e*S	**Sn**	**19 43 46.5**	**+1.1**
	baz=295						
NDT	**Datong Townshi**	**0.50**	**244**	P	**Pn**	**19 43 34.5**	**-0.7**
	baz=254						
NDT				*e*S	**Sn**	**19 43 46.2**	**+0.2**
	baz=254						
TAP	**Taipei**	**0.50**	**296**	*e*P	**Pn**	**19 43 34.9**	**-0.3**
	baz=305						
YM01	**YM01**	**0.51**	**310**	*e*P	**Pn**	**19 43 34.4**	**-1.0**
	baz=313						
YM01				*e*S	**Sn**	**19 43 47.1**	**+0.9**
	baz=313						
LATG	**Datong**	**0.52**	**237**	P	**Pn**	**19 43 35.9**	**+0.5**
	baz=246						
LATG				*e*S	**Sn**	**19 43 48.0**	**+1.6**
	baz=246						
YHNB	**Yeheng**	**0.59**	**256**	*e*P	**Pn**	**19 43 35.8**	**-0.3**
	baz=257						
YHNB				*e*S	**Sn**	**19 43 47.5**	**+0.1**
	baz=257						
TWS1	**Kuangyinshan**	**0.60**	**298**	*e*P	**Pn**	**19 43 35.7**	**-0.3**
	baz=303						
TWS1				*e*S	**Sn**	**19 43 49.0**	**+1.5**
	baz=303						
NSK	**Sanguang**	**0.61**	**256⇑**	*i*P	**Pn**	**19 43 34.8**	**-1.4**
	baz=257						
NSK				S	**Sn**	**19 43 46.6**	**-1.0**
	baz=257						
NTST	**Danshui**	**0.61**	**304**	*e*P	**Pn**	**19 43 35.6**	**-0.5**
	baz=307						
NTST				*e*S	**Sn**	**19 43 48.7**	**+1.1**
	baz=307						
NNS	**Nan Shan**	**0.69**	**237**	P	**Pn**	**19 43 36.2**	**-0.8**
	baz=241						
NNS				S	**Sn**	**19 43 49.2**	**0.0**
	baz=241						
ETL	**Fush Village**	**0.74**	**208**	*e*S	**Sn**	**19 43 50.1**	**+0.1**
	baz=216						
NACB	**Ninganchiao**	**0.74**	**210**	*e*S	**Sn**	**19 43 49.8**	**-0.1**
	baz=209						
NCU	**National Centr**	**0.76**	**282**	*e*P	**Pn**	**19 43 37.1**	**-0.5**
	baz=283						
NCU				*e*S	**Sn**	**19 43 50.6**	**+0.5**
	baz=283						
ETLH	**Xiulin Townshi**	**0.77**	**218**	*e*P	**Pn**	**19 43 37.4**	**-0.4**
	baz=224						
ETLH				*e*S	**Sn**	**19 43 50.5**	**-0.1**
	baz=224						
TWD	**Chiawan**	**0.82**	**207**	*e*P	**Pn**	**19 43 37.6**	**-0.6**
	baz=214						
TWD				*e*S	**Sn**	**19 43 51.0**	**-0.3**
	baz=214						
NFF	**Wufeng Townshi**	**0.83**	**257**	P	**Pn**	**19 43 36.8**	**-1.6**
	baz=258						
NFF				*e*S	**Sn**	**19 43 50.3**	**-1.2**
	baz=258						
FUSS	**Fushou**	**0.90**	**231**	*e*P	**Pn**	**19 43 39.6**	**+0.3**
	baz=225						
FUSS				*e*S	**Sn**	**19 43 54.6**	**+1.4**
	baz=225						
LIOB	**Emei**	**0.92**	**259**	*e*P	**Pn**	**19 43 38.8**	**-0.5**
	baz=253						
LIOB				*e*S	**Sn**	**19 43 53.3**	**+0.1**
	baz=253						
SBCB	**Hsinchu**	**0.93**	**269**	*e*P	**Pn**	**19 43 38.5**	**-0.9**
	baz=262						
SBCB				*e*S	**Sn**	**19 43 53.6**	**+0.3**
	baz=262						
JYNG	**Yonagunijimaku**	**0.93**	**113**	P	**Pn**	**19 43 39.1**	**-0.3**
JYNG				S	**Sn**	**19 43 53.5**	**+0.1**
NSTT	**Nanjuang**	**0.93**	**259**	*e*P	**Pn**	**19 43 38.9**	**-0.5**
	baz=259						
NSTT				*e*S	**Sn**	**19 43 53.2**	**-0.3**
	baz=259						
WHF	**Hehuan Shan**	**0.95**	**225**	*e*P	**Pn**	**19 43 40.6**	**+0.4**
	baz=219						
WHF				*e*S	**Sn**	**19 43 55.0**	**+0.4**
	baz=219						
TDCB	**Techi**	**0.96**	**234**	*e*P	**Pn**	**19 43 39.3**	**-0.5**
	baz=228						
TDCB				*e*S	**Sn**	**19 43 54.0**	**-0.2**
	baz=228						
YOJ	**Yonaguni jima**	**0.98**	**111**	*e*P	**Pn**	**19 43 39.6**	**-0.4**
	baz=113						
YOJ				*e*S	**Sn**	**19 43 55.3**	**+0.8**
	baz=113						
CHGB	**Renai**	**1.07**	**225**	*e*P	**Pn**	**19 43 41.6**	**+0.3**
	baz=220						
CHGB				*e*S	**Sn**	**19 43 57.4**	**+0.7**
	baz=220						
WHP	**Taichung City**	**1.11**	**241**	*e*P	**Pn**	**19 43 41.6**	**+0.1**
	baz=241						
WHP				*e*S	**Sn**	**19 43 57.1**	**-0.1**
	baz=241						
ESL	**Shilin**	**1.13**	**208**	*e*S	**Sn**	**19 43 56.4**	**-1.1**
	baz=207						
NMLH	**Miaoli**	**1.14**	**256**	*e*P	**Pn**	**19 43 41.4**	**-0.5**
	baz=256						
WUSB	**Renai**	**1.16**	**225**	*e*P	**Pn**	**19 43 42.5**	**+0.3**
	baz=221						
WUSB				*e*S	**Sn**	**19 43 58.9**	**+0.6**
	baz=221						
NSY	**Sanyi**	**1.20**	**251**	*e*P	**Pn**	**19 43 42.2**	**-0.4**
	baz=250						
WCS	**Beigang Elemen**	**1.25**	**233**	*e*P	**Pn**	**19 43 42.2**	**-1.0**
	baz=239						
WCS				*e*S	**Sn**	**19 43 59.5**	**-0.7**
	baz=239						
EGFH	**Guangfu**	**1.26**	**205**	*e*P	**Pn**	**19 43 43.4**	**0.0**
	baz=210						
EGFH				*e*S	**Sn**	**19 43 59.6**	**-0.8**
	baz=210						
VWDT	**VWDT**	**1.32**	**217**	*e*P	**Pn**	**19 43 44.2**	**+0.1**
	baz=213						
VWDT				*e*S	**Sn**	**19 44 01.9**	**+0.2**
	baz=213						
SMLT	**Sun Moon Lake**	**1.37**	**227**	*e*P	**Pn**	**19 43 44.8**	**-0.1**
	baz=234						
SMLT				*e*S	**Sn**	**19 44 03.7**	**+0.7**
	baz=234						
TYC	**Yuchr**	**1.39**	**229**	*e*P	**Pn**	**19 43 44.8**	**-0.1**
	baz=235						
TYC				*e*S	**Sn**	**19 44 03.5**	**+0.3**
	baz=235						
SSLB	**Suanglung**	**1.41**	**223**	*e*P	**Pn**	**19 43 45.1**	**-0.1**
	baz=220						
SSLB				*e*S	**Sn**	**19 44 04.5**	**+0.8**
	baz=220						
HGSD	**Ruisui**	**1.42**	**202**	*e*S	**Sn**	**19 44 04.1**	**+0.1**
	baz=202						
WHYT	**Xinyi Township**	**1.54**	**223**	*e*P	**Pn**	**19 43 47.1**	**+0.3**
	baz=231						
WHYT				*e*S	**Sn**	**19 44 08.0**	**+1.4**
	baz=231						
YULB	**Yu-li**	**1.56**	**205**	*e*S	**Sn**	**19 44 05.4**	**-1.7**
	baz=198						
IRIF	**Iriomote-Funau**	**1.64**	**107**	P	**Pn**	**19 43 48.0**	**-0.1**
IRIF				S	**Sn**	**19 44 08.9**	**0.0**
ALS	**Alishan**	**1.70**	**220**	*e*P	**Pn**	**19 43 49.7**	**+0.4**
	baz=229						
ALS				*e*S	**Sn**	**19 44 13.2**	**+2.3**
	baz=229						
WCKO	**Fanlu**	**1.88**	**223**	*e*P	**Pn**	**19 43 51.0**	**-0.3**
	baz=223						
WCKO				*e*S	**Sn**	**19 44 14.3**	**-0.2**
	baz=223						
JKRS	**Kuro-shima**	**1.92**	**107**	P	**Pn**	**19 43 51.5**	**-0.2**
JKRS				S	**Sn**	**19 44 15.4**	**+0.2**
JIJ	**Ishigaki jima**	**2.00**	**103**	P	**Pn**	**19 43 52.2**	**-0.6**
JIJ				S	**Sn**	**19 44 16.6**	**-0.7**
JISG	**Ishigakijimahi**	**2.11**	**96**	P	**Pn**	**19 43 54.2**	**0.0**
JISG				S	**Sn**	**19 44 20.3**	**+0.4**
JTJ	**Tarama**	**2.46**	**94**	P	**Pn**	**19 43 59.1**	**+0.2**
JTJ				S	**Sn**	**19 44 28.7**	**+0.5**

WEL 08 19:47:27.4±1.3, 37°S±5°×17°9E±1°0, h22km±6km, M3.5/9, ML3.8/11, MLv3.5/9, Error ellipse: s-maj=0.0km s-min=0.0km az=91.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.52**	**222**	P	Pb	19 47 37.2	-0.6
MXZ				S	Sb	19 47 44.9	+0.1
WMGZ	**Waiomatatini S**	**0.69**	**202**	P	Pn	19 47 41.6	-0.2
WMGZ				S	Sn	19 47 53.4	+1.5
PKGZ	**Pakihiroa**	**0.88**	**216**	P	Pb	19 47 43.9	-0.2
PKGZ				S	Sn	19 47 57.6	+0.8
HAZ	**Te Kaha**	**0.95**	**233**	P	Pb	19 47 44.1	-1.1
HAZ				S	Sn	19 48 00.8	+2.4
PUZ	**Puketiti**	**0.97**	**203**	P	Pn	19 47 46.4	+0.6
PUZ				S	Sn	19 47 58.9	+0.1
RUGZ	**Raukumara Rang**	**1.15**	**227**	P	Pn	19 47 48.4	+0.1
CNGZ	**Carnagh Statio**	**1.37**	**198**	P	Pn	19 47 50.8	-0.4
URZ	**Urewera**	**1.68**	**230**	P	Pn	19 47 55.8	+0.4
URZ				S	Sb	19 48 17.5	-0.8
MTHZ	**Maungataniwha**	**2.25**	**221**	P	Pn	19 48 01.7	-1.6
MTHZ				S	Sn	19 48 31.3	+0.9
KUZ	**Kuaotunu**	**2.46**	**279**	P	Pn	19 48 05.3	-0.8
KUZ				S	Sn	19 48 33.1	-2.4
GRZ	**Great Barrier**	**2.79**	**288**	P	Pn	19 48 11.4	+0.7
MKAZ	**Moumakai**	**2.86**	**270**	P	Pn	19 48 11.2	-0.4
MBAZ	**Motutapu North**	**3.10**	**276**	P	Pn	19 48 16.4	+1.4
TSZ	**Takapari Road**	**3.61**	**216**	S	Sn	19 49 01.3	-2.6
WCZ	**Waipu Caves**	**3.75**	**288**	P	Pn	19 48 23.6	-0.3
OUZ	**Omahuta**	**4.60**	**294**	P	Pn	19 48 35.3	-0.2

*NOU **08** 19:48:15.5, 36°.15S×177°.76W, h0km, MLv5.3/6, East of North Island, N.Z.*
*IDC **08** 19:48:50.8±3.4, 36°.81S×178°.92E, h0km, mb4.5/3, mbtmp4.5/4, ML4.1/1, Error ellipse: s-maj=71.9km s-min=42.2km az=120.0*
*NEIC **08** 19:48:53.1±0.9, 37°.00S±0°.06×178°.89E±0°.05, h10km±1km, mb4.7/10, Error ellipse: s-maj=11.1km s-min=5.6km az=153.0*
*WEL **08** 19:48:54.3±1.4, 37°S±5°×17°9E±°, h12km±7km, M4.0/18, ML4.2/20, MLv4.0/18, Error ellipse: s-maj=0.0km s-min=0.0km az=97.1*
ISC 08 19:48:52.2±2.1, 37°.21S±0°.05×179°.18E±0°.08, h14km±10km, n119, σ1s16/123, mb4.6/8, Off east coast of North Island

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

KAHZ	Kahuranaki	3.15 214	P	Pn	19 49 40.7	-0.7
MKAZ	Moumakai	3.21 271	P	Pn	19 49 41.7	-0.5
WIAZ	Waiheke Island	3.26 276	P	Pn	19 49 42.8	-0.2
KRHZ	Kereru	3.28 221	P	Pn	19 49 42.5	-0.7
TMVZ	Te Maari	3.33 234	P	Pn	19 49 44.3	+0.3
ETVZ	East Tongariro	3.34 234	P	Pn	19 49 44.3	+0.2
BHHZ	Black Hill Sta	3.34 226	P	Pn	19 49 44.1	+0.1
PXZ	Pawanui	3.35 212	P	Pn	19 49 42.7	-1.4
OTVZ	Oturere	3.38 234	P	Pn	19 49 45.0	+0.3
NNVZ	North Ngauruho	3.40 235	P	Pn	19 49 45.5	+0.5
WTVZ	West Tongariro	3.41 235	P	Pn	19 49 45.7	+0.7
ETAZ	East Tamaki Re	3.41 273	P	Pn	19 49 44.9	0.0
SNVZ	South Ngauruho	3.41 234	P	Pn	19 49 45.3	+0.2
NGZ	Ngauruhoe	3.43 234	P	Pn	19 49 45.6	+0.2
MBAZ	Motutapu North	3.46 276	P	Pn	19 49 45.9	+0.3
MOVZ	Moawhango	3.47 230	P	Pn	19 49 45.6	-0.3
TWVZ	Taurewa	3.48 237	P	Pn	19 49 45.9	-0.2
WHVZ	Whangaehu Hut	3.50 233	P	Pn	19 49 46.5	+0.1
FWVZ	Far West T-bar	3.51 233	P	Pn	19 49 46.6	+0.1
WNVZ	Wahianoa	3.52 232	P	Pn	19 49 46.4	-0.3
ABAZ	Army Bay	3.54 279	P	Pn	19 49 47.0	+0.4
EPAZ	Eden Park BICE	3.56 274	P	Pn	19 49 48.1	+1.1
WPHZ	Waipukurau	3.56 216	P	Pn	19 49 45.9	-1.2
PNHZ	Pukenui	3.57 220	P	Pn	19 49 45.7	-1.5
HBAZ	Herne Bay Bore	3.58 274	P	Pn	19 49 48.9	+1.7
AWAZ	Awhitu Peninsu	3.63 271	P	Pn	19 49 48.3	+0.4
MTVZ	Mangateitei	3.63 232	P	Pn	19 49 48.3	+0.2
PRHZ	Porangahau	3.64 212	P	Pn	19 49 46.3	-1.8
HIZ	Hauiti	3.66 248	P	Pn	19 49 50.0	+1.7
HIZ	Hauiti	3.66 248	P	Pn	19 49 49.8	+1.4
PKVZ	Pokaka	3.66 234	P	Pn	19 49 48.9	+0.4
WTAZ	Waiatarua	3.69 273	P	Pn	19 49 49.3	+0.4
RVAZ	Riverhead Bore	3.71 275	P	Pn	19 49 49.3	+0.3
TSZ	Takapari Road	3.80 221	P	Pn	19 49 48.9	-1.4
DVHZ	Dannevirke	3.88 216	P	Pn	19 49 49.6	-1.8
VRZ	Vera Road	3.97 240	P	Pn	19 49 53.6	+1.0
WCZ	Waipu Caves	4.09 287	P	Pn	19 49 54.8	+0.5
POWZ	Post Office Ro	4.14 219	P	Pn	19 49 53.5	-1.5
BFZ	Birch Farm	4.15 213	P	Pn	19 49 52.7	-2.4
WAZ	Wanganui	4.16 231	P	Pn	19 49 56.0	+0.7
PRWZ	Pori Road	4.17 216	P	Pn	19 49 54.0	-1.4
TIWZ	Tintock	4.39 215	P	Pn	19 49 56.5	-1.9
NEZ	North Egmont	4.50 241	P	Pn	19 50 02.3	+2.3
KHEZ	Kahui Hut	4.56 241	P	Pn	19 50 03.2	+2.4
KHEZ	Kahui Hut	4.56 241	P	Pn	19 50 03.3	+2.4
OUZ	Omahuta	4.93 292	P	Pn	19 50 06.8	+0.9
RPZ	Rata Peaks	8.97 221	Pn	Pn	19 50 57.4	-3.9
	0.8nm,0.3s,baz=185,slow=22,SNR=1.2					
RPZ			Sn	Sn	19 52 29.0	-13
	3.7nm,0.3s,baz=319,slow=20,SNR=12					
CAN	Canberra	24.36 265	P	P	19 54 09.8	-0.1
BBOO	Buckleboo	35.36 264	P	P	19 55 45.9	-1.4
BBOO			IAmb	IAmb	19 55 50.8	
	comp=Z,19nm,1.1s					
COEN	Coen	39.52 296	P	P	19 56 21.7	-1.0
COEN			IAmb	IAmb	19 56 31.5	
	comp=Z,15nm,1.2s					
AS31	Alice Springs	40.93 276	P	P	19 56 33.0	-1.4
ASAR	Alice Springs	40.93 276	P	P	19 56 33.4	-1.0
	comp=Z,6.1nm,0.7s,baz=118,slow=7.4,SNR=15					
	comp=Z,6.1nm,0.7s					
ASAR	Alice Springs	40.93 276	P	P	19 56 33.0	-1.4
WR0	Warramunga Arr	42.38 281	P	P	19 56 44.4	-1.8
WR0			IAmb	IAmb	19 56 59.5	
	comp=Z,24nm,1.4s					
FORT	Forrest	42.45 263	P	P	19 56 45.4	-1.2
WRA	Warramunga Arr	42.55 281	P	P	19 56 46.1	-1.5
	comp=Z,5.1nm,0.7s,baz=122,slow=7.9,SNR=32					
	comp=Z,5.1nm,0.7s					
FITZ	Fitzroy Crossi	50.42 277	P	P	19 57 47.9	-1.5
	comp=Z,4.4nm,0.6s,baz=115,slow=5.4,SNR=13					
	comp=Z,4.4nm,0.6s					
FITZ	Fitzroy Crossi	50.42 277	P	P	19 57 48.3	-1.1
FITZ			IAmb	IAmb	19 58 02.0	
	comp=Z,21nm,1.3s					
MORW	Morawa	52.64 259	P	P	19 58 03.4	-2.5
MORW			IAmb	IAmb	19 58 13.3	
	comp=Z,10nm,1.0s					
QSPA	South Pole Qui	52.91 180	P	P	19 58 11.0	+3.4
QSPA			IAmb	IAmb	19 58 27.1	
	comp=Z,10nm,1.4s					
PSA00	Pilbara Seismi	53.19 270	P	P	19 58 09.1	-1.0
SNAA	Sanae	71.41 179	P	P	20 00 22.4	+11
VNA3	Neumayer Olymp	71.66 177	P	P	20 00 24.6	+12
VNA2	Neumayer--Watz	72.06 178	P	P	20 00 26.9	+12
	baz=172,slow=5.3					
VNA1	Neumayer--Stat	72.31 177	P	P	20 00 28.5	+12
FINES	FINESS Array B	150.49 334	PKPbc	PKPdf	20 08 41.7	+4.6
	comp=Z,1.2nm,0.7s,baz=48,slow=2.5,SNR=1.1					

*NOU **08** 20:26:58.3, 37°.14S×179°.62E, h0km, MLv4.5/10, Off E. Coast of N. Island, N.Z.*
*IDC **08** 20:27:02.5±1.8, 36°.94S×179°.04E, h0km, mb3.8/2, mbtmp4.0/3, ML4.4/1, Error ellipse: s-maj=43.4km s-min=38.3km az=150.0*
*NEIC **08** 20:27:06.7±2.5, 37°.2S±0°.1×179°.0E±0°.1, h19km±10km, mb4.0/5, Error ellipse: s-maj=19.3km s-min=9.6km az=150.0*
*WEL **08** 20:27:07.2±1.6, 37°S±7°×17°9E±1°0, h9km±8km, M4.2/13, ML4.5/13, MLv4.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=93.0*

ISC 08 20:27:03.8±2.3, 37.14S±0.06×179.03E±0.08, h5km±12km, n112, σ1§11/112, mb3.8/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.71 234			Pb	20 27 19.3	+0.6
MXZ					Sg	20 27 26.9	+0.2
MXZ	Matakaoa Point	0.71 234		P	Pb	20 27 19.3	+0.6
MXZ				S	Sg	20 27 27.0	+0.2
MXZ	Matakaoa Point	0.71 234		P	Pb	20 27 19.5	+0.8
WMGZ	Waiomatatini S	0.84 216		P	Pn	20 27 23.4	+1.2
PKGZ	Pakihiroa	1.06 225		P	Pn	20 27 25.7	+0.3
PKGZ				S	Sb	20 27 39.8	+0.9
PUZ	Puketiti	1.11 213		P	Pn	20 27 27.2	+1.1
HAZ	Te Kaha	1.17 238		P	Pg	20 27 26.2	0.0
HAZ				S	Sg	20 27 40.4	-0.9
TWGZ	Tauwhareparae	1.33 219		P	Pg	20 27 30.3	+1.1
TWGZ				S	Sb	20 27 47.5	+1.0
RUGZ	Raukumara Rang	1.35 232		P	Pg	20 27 30.5	+0.8
CNGZ	Carnagh Statio	1.49 206		P	Pg	20 27 32.9	+0.6
WIZ	White Island	1.52 255		P	Pn	20 27 31.1	-0.5
WSRZ	White Island S	1.53 255		P	Pb	20 27 31.9	-0.6
TKGZ	Te Karaka	1.60 216		P	Pb	20 27 33.6	-0.1
MWZ	Matawai	1.69 225		P	Pb	20 27 35.1	-0.2
WHRZ	Whale Island	1.79 246		P	Pb	20 27 36.8	-0.2
RIGZ	Rimuhau	1.86 212		P	Pn	20 27 37.1	+0.8
RAGZ	Rawiri	1.86 223		P	Pb	20 27 38.0	-0.3
URZ	Urewera	1.89 233		Pn	Pn	20 27 37.5	+0.8
	132nm,0.3s,baz=57,slow=1.0,SNR=391						
URZ				Sn	Sn	20 27 59.8	-1.0
	193nm,0.3s,baz=273,slow=17,SNR=13						
	311nm,0.3s						
URZ	Urewera	1.89 233			Pb	20 27 37.7	-1.0
URZ	Urewera	1.89 233		P	Pb	20 27 37.8	-1.0
URZ	Urewera	1.89 233		P	Pb	20 27 38.0	-0.7
MARZ	Manawahe	2.05 245		P	Pb	20 27 40.5	-1.0
EDRZ	Edgecumbe	2.06 241		P	Pn	20 27 40.2	+1.1
OPRZ	Ohinepanea	2.09 250		P	Pn	20 27 40.1	+0.6
SNGZ	Shannon Statio	2.11 219		P	Pn	20 27 40.8	+1.0
KNZ	Kokohu	2.16 209		P	Pn	20 27 40.6	+0.2
RTZ	Ruatahuna	2.19 227		P	Pb	20 27 42.6	-1.3
MHGZ	Mahia Peninsul	2.19 204		P	Pn	20 27 41.6	+0.7
MYRZ	Mayor Island	2.23 266		P	Pb	20 27 42.9	-1.7
OMRZ	Omania	2.32 245		P	Pb	20 27 44.8	-1.3
RRRZ	Republican Roa	2.33 238		P	Pn	20 27 43.9	+1.2
RAHZ	Arahi	2.34 220		P	Pn	20 27 43.7	+0.8
KARZ	Kaharoa	2.38 248		P	Pn	20 27 44.5	+1.0
WHHZ	Waihua	2.40 216		P	Pn	20 27 44.2	+0.5
HLRZ	Highlands Stat	2.40 242		P	Pb	20 27 45.5	-1.9
MTHZ	Maungataniwha	2.43 225		P	Pn	20 27 45.3	+1.1
PRRZ	Plateau Road	2.49 236		P	Pn	20 27 45.8	+0.8
HSRZ	Hossack Road	2.50 241		P	Pg	20 27 50.7	-1.0
ALRZ	Allen Road	2.56 236		P	Pn	20 27 46.7	+0.8
NMHZ	Naumai	2.63 221		P	Pn	20 27 47.7	+0.9
ARHZ	Aropaoanui	2.66 217		P	Pn	20 27 47.6	+0.4
MRHZ	Matea Rd	2.67 230		P	Pn	20 27 48.7	+1.2
KUZ	Kuaotunu	2.68 277		P	Pn	20 27 47.3	-0.3
KUZ	Kuaotunu	2.68 277		P	Pn	20 27 47.8	+0.2
BKZ	Black Stump Fm	2.84 224			Pn	20 27 50.2	+0.3
BKZ	Black Stump Fm	2.84 224	P		Pn	20 27 50.5	+0.6
BKZ	Black Stump Fm	2.84 224	P		Pn	20 27 50.8	+0.9
TOZ	Tahuroa Road	2.87 257	P		Pn	20 27 50.1	0.0
MCHZ	McNeill Hill	2.94 218	P		Pn	20 27 51.4	+0.2
CKHZ	Cape Kidnapper	2.94 211	P		Pn	20 27 50.6	-0.6
GRZ	Great Barrier	3.01 286	P		Pn	20 27 53.0	+0.9
KWHZ	Kaweka Forest	3.07 221	P		Pn	20 27 53.3	+0.3
MKAZ	Moumakai	3.10 270	P		Pn	20 27 53.2	0.0
KAHZ	Kahuranaki	3.14 212	P		Pn	20 27 53.3	-0.7
KRHZ	Kereru	3.26 219	P		Pn	20 27 55.0	-0.5
TMVZ	Te Maari	3.28 232	P		Pn	20 27 56.7	+0.8
ETAZ	East Tamaki Re	3.29 272	P		Pn	20 27 56.5	+0.6
ETVZ	East Tongariro	3.29 232	P		Pn	20 27 56.8	+0.8
BHHZ	Black Hill Sta	3.31 224	P		Pn	20 27 56.6	+0.3
MBAZ	Motutapu North	3.33 275	P		Pn	20 27 57.5	+1.0
OTVZ	Oturere	3.33 232	P		Pn	20 27 58.3	+1.6
NNVZ	North Ngauruho	3.35 233	P		Pn	20 27 58.2	+1.3
WTVZ	West Tongariro	3.35 233	P		Pn	20 27 59.0	+2.0
SNVZ	South Ngauruho	3.36 232	P		Pn	20 27 57.6	+0.5
NGZ	Ngauruhoe	3.38 232	P		Pn	20 27 57.8	+0.5
ABAZ	Army Bay	3.41 278	P		Pn	20 27 59.0	+1.4
TWVZ	Taurewa	3.43 235	P		Pn	20 27 58.9	+1.0
MOVZ	Moawhango	3.43 228	P		Pn	20 27 57.8	-0.1
EPAZ	Eden Park BICE	3.44 273	P		Pn	20 27 59.6	+1.5
FWVZ	Far West T-bar	3.46 231	P		Pn	20 27 59.8	+1.3
WNVZ	Wahianoa	3.48 230	P		Pn	20 27 58.7	+0.1
AWAZ	Awhitu Peninsu	3.51 270	P		Pn	20 27 59.7	+0.8
PNHZ	Pukenui	3.55 218	P		Pn	20 27 58.7	-0.8
WPHZ	Waipukurau	3.56 214	P		Pn	20 27 58.8	-0.7
WTAZ	Waiatarua	3.57 272	P		Pn	20 28 00.9	+1.1
HIZ	Hauiti	3.58 246	Pn		Pn	20 28 01.4	+1.5
HIZ	Hauiti	3.58 246	P		Pn	20 28 01.8	+1.9
HIZ	Hauiti	3.58 246	P		Pn	20 28 02.3	+2.4
RVAZ	Riverhead Bore	3.59 275	P		Pn	20 28 00.9	+0.9
MTVZ	Mangateitei	3.59 230	P		Pn	20 28 01.0	+0.9
PKVZ	Pokaka	3.61 232	P		Pn	20 28 02.1	+1.7
TSZ	Takapari Road	3.78 219	P		Pn	20 28 02.0	-0.7
VRZ	Vera Road	3.91 238	P		Pn	20 28 05.9	+1.5
WCZ	Waipu Caves	3.96 286	P		Pn	20 28 06.3	+1.2
WAZ	Wanganui	4.11 229	P		Pn	20 28 08.1	+0.8
BFZ	Birch Farm	4.15 211			Pn	20 28 05.6	-2.2
BFZ	Birch Farm	4.15 211	P		Pn	20 28 06.4	-1.4
LREZ	Lake Rotokare	4.32 236	P		Pn	20 28 11.6	+1.6
OUZ	Omahuta	4.80 292	P		Pn	20 28 18.4	+1.8
OUZ	Omahuta	4.80 292	P		Pn	20 28 18.4	+1.8
SNZO	South Karori	5.35 218	P		Pn	20 28 23.2	-1.0
QRZ	Quartz Range	6.26 232	P		Pn	20 28 35.2	-1.5
KHZ	Kahutara	6.75 217	P		Pn	20 28 42.4	-1.1
CTZ	Chatham Island	7.37 155	P		Pn	20 28 53.8	+1.9
RPZ	Rata Peaks	8.95 220	Pn		Pn	20 29 09.8	-3.8
	0.5nm,0.3s,baz=333,slow=20,SNR=2.1						
RPZ			Sn		Sn	20 30 41.0	-14
	5.6nm,0.3s,baz=22,slow=6.5,SNR=16						
COEN	Coen	39.39 296	P		P	20 34 35.2	+0.6
AS31	Alice Springs	40.81 276	P		P	20 34 45.8	-0.5
AS31			IAmb		IAmb	20 35 12.7	
	comp=Z,1.7nm,1.2s						
ASAR	Alice Springs	40.81 276	P		P	20 34 45.5	-0.9
	comp=Z,0.8nm,0.6s,baz=119,slow=6.8,SNR=11						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	40.81 276	P		P	20 34 46.0	-0.4
WR0	Warramunga Arr	42.25 281	P		P	20 34 57.5	-0.6
WR0			IAmb		IAmb	20 35 02.6	
	comp=Z,8.3nm,1.2s						
WRA	Warramunga Arr	42.42 281	P		P	20 34 58.8	-0.7
	comp=Z,0.7nm,0.3s,baz=121,slow=7.6,SNR=83						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	42.42 281	P		P	20 34 58.2	-1.3
QSPA	South Pole Qui	52.98 180	P		P	20 36 23.4	+2.3
QSPA			IAmb		IAmb	20 36 25.1	
	comp=Z,3.8nm,1.4s						
H03S2	Juan Fernandez	78.79 124	T		T	22 05 31.5	
	baz=230						
H03S1	Juan Fernandez	78.80 124	T		T	22 05 40.7	
	baz=230						
H03S3	Juan Fernandez	78.80 124	T		T	22 05 42.5	
	baz=230						
H03N3	Juan Fernandez	79.02 124	T		T	22 05 45.8	
	baz=235						
H03N2	Juan Fernandez	79.02 124	T		T	22 05 39.7	
	baz=235						
H03N1	Juan Fernandez	79.03 124	T		T	22 05 46.4	
	baz=235						
ARCES	ARCESS Array B	144.53 344	PKP		PKPdf	20 46 39.6	-0.6
	comp=Z,2.6nm,0.8s,baz=29,slow=2.1,SNR=1.9						
FINES	FINESS Array B	150.37 334	PKPbc		PKPbc	20 46 54.0	-1.2
	comp=Z,2.9nm,0.9s,baz=39,slow=4.4,SNR=6.0						
TORD	Torodi Ar. Bea	155.99 186	PKPab		PKPab	20 47 26.9	+0.3
	comp=Z,0.3nm,0.8s,baz=158,slow=3.2,SNR=2.2						

*NOU **08** 20:38:48.8, 37°.06S×179°.29E, h0km, MLv3.9/7, Off E. Coast of N. Island, N.Z.*
*WEL **08** 20:38:55.5±1.6, 37°S±6°×17°9E±1°2, h11km±6km, M3.4/8, ML3.6/9, MLv3.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=85.9*

ISC 08 20:38:53.0±2.7, 37.16S±0.07×179.0E±0.1, h11km±11km, n43, σ0§75/49, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.67 233		P	Pg	20 39 06.5	+0.5
MXZ				S	Sg	20 39 14.1	-0.8
MXZ	Matakaoa Point	0.67 233		P	Pg	20 39 06.6	+0.5
WMGZ	Waiomatatini S	0.80 214		P	Pn	20 39 10.7	+0.5
WMGZ				S	Sn	20 39 21.5	-0.6
PKGZ	Pakihiroa	1.02 224		P	Pb	20 39 12.9	+0.1
PKGZ				S	Sb	20 39 26.2	-0.1
PUZ	Puketiti	1.08 212		P	Pg	20 39 14.5	+0.7
PUZ				S	Sb	20 39 28.4	+0.6
HAZ	Te Kaha	1.13 238		P	Pb	20 39 13.6	-0.9
TWGZ	Tauwhareparae	1.29 218		P	Pg	20 39 18.1	+0.3
TWGZ				S	Sn	20 39 34.8	+0.5
RUGZ	Raukumara Rang	1.31 232		P	Pb	20 39 17.8	0.0
CNGZ	Carnagh Statio	1.46 205		P	Pb	20 39 20.3	+0.1
CNGZ				S	Sb	20 39 39.1	+0.3
MWZ	Matawai	1.65 224		P	Pn	20 39 22.6	+0.7
URZ	Urewera	1.85 233		P	Pn	20 39 25.2	+0.6
URZ	Urewera	1.85 233		P	Pn	20 39 25.2	+0.6
SNGZ	Shannon Statio	2.08 218		P	Pn	20 39 28.0	+0.2
KNZ	Kokohu	2.13 209		P	Pn	20 39 27.7	-0.7
RTZ	Ruatahuna	2.15 227		P	Pn	20 39 29.8	+1.0
MHGZ	Mahia Peninsul	2.17 203		P	Pn	20 39 28.8	-0.1
MUGZ	Murupara	2.19 232		P	Pn	20 39 29.9	+0.5
RRRZ	Republican Roa	2.29 238		P	Pb	20 39 33.0	-1.3
RAHZ	Arahi	2.31 220		P	Pn	20 39 31.0	+0.1
MTHZ	Maungataniwha	2.39 224		P	Pn	20 39 32.6	+0.5
NMHZ	Naumai	2.59 221		P	Pn	20 39 35.3	+0.4
ARHZ	Aropaoanui	2.62 216		P	Pn	20 39 35.0	-0.3
KUZ	Kuaotunu	2.65 278		P	Pn	20 39 34.4	-1.2
KUZ	Kuaotunu	2.65 278		P	Pn	20 39 34.6	-1.0
BKZ	Black Stump Fm	2.81 224		P	Pn	20 39 37.8	0.0
BKZ	Black Stump Fm	2.81 224		P	Pn	20 39 37.9	0.0
TOZ	Tahuroa Road	2.83 257		P	Pn	20 39 37.4	-0.7
MCHZ	McNeill Hill	2.91 218		P	Pn	20 39 38.6	-0.6
GRZ	Great Barrier	2.98 287		P	Pn	20 39 40.4	+0.3
MKAZ	Moumakai	3.06 270		P	Pn	20 39 40.5	-0.7
KAHZ	Kahuranaki	3.11 212		P	Pn	20 39 40.7	-1.3
KRHZ	Kereru	3.22 219		P	Pn	20 39 42.9	-0.6
KRVZ	Karewarewa	3.27 233		P	Pn	20 39 43.9	-0.4
BHHZ	Black Hill Sta	3.27 224		P	Pn	20 39 44.1	-0.2
MBAZ	Motutapu North	3.30 276		P	Pn	20 39 44.9	+0.4
MOVZ	Moawhango	3.39 228		P	Pn	20 39 45.6	-0.3
PNHZ	Pukenui	3.51 218		P	Pn	20 39 46.1	-1.5
HIZ	Hauiti	3.54 246		P	Pn	20 39 49.7	+1.8
HIZ	Hauiti	3.54 246		P	Pn	20 39 49.7	+1.8
WCZ	Waipu Caves	3.93 287		P	Pn	20 39 53.6	+0.4
OUZ	Omahuta	4.77 292		P	Pn	20 40 05.7	+0.9
OUZ	Omahuta	4.77 292		P	Pn	20 40 05.0	+0.3
QRZ	Quartz Range	6.22 232		P	Pn	20 40 24.8	+0.1

*SCB **08** 20:48:12.7±1.3, 21°.04S×67°.19W, h172km±7km, ML2.2/2, Error ellipse: s-maj=11.1km s-min=8.7km az=0.0*

GUC 08 20:48:27.7±0.6, 21.16S×68.52W, h136km±4km, ML2.9, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.91 277		eP	Pn	20 48 49.4	-1.0
PB01				i S	Sn	20 49 06.6	-1.1
PB01				IAML		20 49 08.3	
	comp=E,282nm,0.2s						
PB09	IPOC Station P	0.92 227		eP	Pn	20 48 50.4	-0.2
PB09				i S	Sn	20 49 08.1	0.0
PB09				IAML		20 49 10.6	
	comp=E,131nm,0.3s						
PB08	IPOC Station P	1.17 330		eP	Pn	20 48 52.9	-0.3
PB08				i S	Sn	20 49 12.4	-0.1
PB08				IAML		20 49 15.4	
	comp=E,170nm,0.3s						
PB02	IPOC Station P	1.29 263		eP	Pn	20 48 53.5	-0.6
PB02				i S	Sn	20 49 13.0	-1.1
PB02				IAML		20 49 14.1	
	comp=N,436nm,0.3s						
PB02	IPOC Station P	1.29 263		P	Pn	20 48 53.1	-1.0
PB07	IPOC Station P	1.39 246		eP	Pn	20 48 54.5	-0.7
PB07				i S	Sn	20 49 15.0	-1.2
PB07				IAML		20 49 15.2	
	comp=N,346nm,0.2s						
HMBC	Humberstone	1.55 304		eP	Pn	20 48 55.8	-1.1
HMBC				i S	Sn	20 49 17.9	-1.2
PATCX	Punta Patache	1.56 282		eP	Pn	20 48 56.2	-0.7
PATCX				i S	Sn	20 49 18.2	-1.1
GO01	Chusmiza	1.61 337		eP	Pn	20 48 57.5	-0.5
GO01				i S	Sn	20 49 20.6	-0.4
TA01	Diego Aracena	1.66 291		eP	Pn	20 48 56.7	-1.3
TA01				i S	Sn	20 49 19.7	-1.4
TA01				IAML		20 49 22.3	
	comp=N,97nm,0.3s						
TA01	Diego Aracena	1.66 291		P	Pn	20 48 56.7	-1.3
TA02	Huaiquique	1.75 300		P	Pn	20 48 57.9	-1.1
PB06	IPOC Station P	1.82 212		P	Pn	20 48 57.0	-3.0
PB04	IPOC Station P	1.91 232		eP	Pn	20 49 00.6	-0.5
PB04	IPOC Station P	1.91 232		P	Pn	20 49 00.3	-0.8
PB15	IPOC Station P	2.22 203		P	Pn	20 49 00.0	-4.9

*JMA **08** 20:51:55.9±0.4, 47°N±3°×14°7E±°, h509km, MV4.2/27, SOUTHERN SEA OF OKHOTSK*
*MOS **08** 20:51:56.2±1.0, 47°.95N×146°.36E, h455km, mb4.0/23, Error ellipse: s-maj=9.8km s-min=7.0km az=81.4*
*SKHL **08** 20:51:56.0±0.3, 47°.80N×146°.80E, h489km±10km, mb5.2/8, msha5.1/5*
*NEIC **08** 20:51:57.8±1.3, 48°.0N±0°.1×146°.4E±0°.2, h459km±8km, mb4.1/75, Error ellipse: s-maj=17.7km s-min=13.0km az=136.0*
*IDC **08** 20:51:58.3±1.5, 47°.96N×146°.30E, h466km±17km, mb3.3/20, mbtmp4.2/27, Error ellipse: s-maj=12.4km s-min=9.2km az=141.0*

ISC 08 20:51:58.5±0.4, 47.79N±0.05×146.40E±0.05, h483km, n406, σ1§36/412, mb4.1/70, 9C-5D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	2.61 253			P	20 53 04.3	-1.2
YSS	Yuzh-Sakhalins	2.61 253		α iPN	P	20 53 04.3	-1.2
YSS				eS	S	20 53 56.5	-3.5
YSS				pmax	pmax		
	comp=Z,710nm,0.7s						
YSS				smax	smax		
	comp=E,40nm,0.9s						
YSS	Yuzh-Sakhalins	2.61 253		i P	P	20 53 04.0	-1.5
YSS				AMB	AMB	20 53 05.0	
	comp=E,470nm,0.5s						
YSS				eS	S	20 53 56.7	-3.3
YSS				A	A	20 54 05.2	
	comp=E,30nm,0.7s						
YSS				A	A	20 54 05.2	
	comp=E,50nm,0.7s						
KUR	Kuril'sk	2.75 158		i PN	P	20 53 03.9	-2.6
KUR	Kuril'sk	2.75 158		eP	P	20 53 03.4	-3.1
KUR				AMB	AMB	20 53 04.3	
	comp=E,70nm,0.3s						
KUR				i S	S	20 53 55.7	-5.9
KUR				A	A	20 54 14.0	
	comp=E,90nm,0.4s						
KUR				A	A	20 54 14.0	
	comp=E,70nm,0.4s						
UGL	Uglegorsk	3.16 296		⇑ iPN	P	20 53 07.6	-1.5
UGL				i S	S	20 54 03.2	-3.5
UGL				pmax	pmax		
	comp=Z,427nm,0.7s						
UGL				smax	smax		
	comp=E,360nm,0.9s						
UGL				smax	smax		
	comp=N,110nm,1.0s						
UGL	Uglegorsk	3.16 296		i P	P	20 53 07.6	-1.5
UGL				AMB	AMB	20 53 08.7	
	comp=N,250nm,0.6s						
UGL				i S	S	20 54 03.5	-3.2
UGL				A	A	20 54 07.9	
	comp=N,100nm,0.6s						
UGL				A	A	20 54 07.9	
	comp=N,90nm,0.6s						
RUSJ	Misakicho	3.77 193		⇓ ePN	P	20 53 11.5	-2.5
RUSJ				eS	S	20 54 12.5	-2.8
YUK	Yuzh-Kuril'sk	3.77 186		i PN	P	20 53 10.9	-3.1
YUK	Yuzh-Kuril'sk	3.77 186		i P	P

USA0B **Ussuriysk Arra** 10.65 256 P **P** 20 54 21.1 -1.4
USA0B **Ussuriysk Arra** 10.65 256 PN **P** 20 54 21.1 -1.4
USRK **Ussuriysk Ar.** 10.65 256 P **P** 20 54 21.6 -0.9
comp=Z,4.1nm,0.6s,baz=62,slow=11,SNR=6.9
USRK **Ussuriysk Ar.** 10.65 256 P **P** 20 54 21.3 -1.2
JMM **Marumori** 10.73 205 **P** 20 54 23.9 +0.3
MDJ **Mudanjiang** 12.07 261 P **P** 20 54 36.9 -0.8
MA2 **Magadan** 12.09 11 P **P** 20 54 36.8 -0.9
comp=Z,11nm,0.8s,baz=192,slow=8.7,SNR=4.9
MA2 **Magadan** 12.09 11 P **P** 20 54 36.1 -1.5
MA2 **Magadan** 12.09 11 *i* PN **P** 20 54 36.0 -1.7
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 **Magadan** 12.09 11 *eP* **P** 20 54 36.0 -1.7
MAJO **Matsushiro** 12.76 211 P **P** 20 54 46.2 +0.9
MAJO **Matsushiro** 12.76 211 PN **P** 20 54 46.2 +0.9
JGF **Kuroka** 13.91 212 P **P** 20 54 58.1 +0.6
INU **Inuyama** 14.26 213 P **P** 20 55 02.0 +0.9
CN2 **Changchun** 15.14 262 P **P** 20 55 08.4 -1.9
SEY **Seymchan** 15.54 10 P **P** 20 55 13.5 -0.7
comp=Z,9.9nm,0.7s,baz=178,slow=9.2,SNR=17
SEY **Seymchan** 15.54 10 *ceP* **P** 20 55 14.0 -0.2
SEY pmax pmax
comp=Z,37nm,2.5s
SEY **Seymchan** 15.54 10 *eP* **P** 20 55 14.0 -0.2
KS19 **Wonju Array Si** 17.03 240 P **P** 20 55 31.0 +0.7
KSRS **Korea Array** 17.03 239 P **P** 20 55 31.0 +0.8
comp=Z,6.0nm,0.6s,baz=45,slow=9.6,SNR=19
KSAR **Wonju Array Be** 17.06 239 P **P** 20 55 30.8 +0.2
KSAR **Wonju Array Be** 17.06 239 P **P** 20 55 30.8 +0.2
YAK **Yakutsk** 17.12 333 P **P** 20 55 28.3 -2.4
comp=Z,6.8nm,0.3s,baz=111,slow=2.8,SNR=14
YAK **Yakutsk** 17.12 333 *i* P **P** 20 55 28.2 -2.5
YAK pmax pmax
comp=Z,4.0nm,0.7s
YAK **Yakutsk** 17.12 333 *eP* **P** 20 55 28.2 -2.5
JTU **Tsushima** 18.37 230 P **P** 20 55 44.4 +1.3
XLT **XiLinHaoTe** 21.40 271 ||*iP* **P** 20 56 10.6 -0.1
BILL **Bilibino** 22.67 19 ||*eP* **P** 20 56 20.7 -1.0
BILL pmax pmax
comp=Z,10.0nm,1.0s
BILL **Bilibino** 22.67 19 *eP* **P** 20 56 21.1 -0.6
HHC **Hu-ho-hao-te** 25.71 267 *eP* **P** 20 56 50.4 +1.2
ULN **Ulaanbaatar** 26.22 285 *ceP* **P** 20 56 53.9 +0.2
ULN pmax pmax
comp=Z,11nm,1.7s
ULN **Ulaanbaatar** 26.22 285 *eP* **P** 20 56 53.9 +0.2
SONM **Songino Array** 26.66 285 P **P** 20 56 57.7 +0.1
comp=Z,0.5nm,0.7s,baz=58,slow=11,SNR=4.3
comp=Z,0.5nm,0.7s
SONM **Songino Array** 26.66 285 P **P** 20 56 58.4 +0.8
SONM **Songino Array** 26.66 285 P **P** 20 56 58.4 +0.8
SONM pmax pmax
comp=Z,3.0nm,1.0s
LZH **Lanzhou** 33.34 265 *eP* **P** 20 57 57.2 +1.6
LZH pP PP 20 59 29.3 -3.8
N16K **Nishlik Lake** 33.50 47 P **P** 20 57 55.7 -0.7
baz=273
GTA **Gaotai** 34.31 273 *eP* **P** 20 58 05.1 +1.4
N18K **Kilae Creek** 34.91 47 P **P** 20 58 07.5 -0.7
baz=275
L19K **White Mountain** 35.29 44 P **P** 20 58 11.2 -0.2
L19K IAmb IAmb 20 58 27.4
comp=Z,10nm,1.4s
J20K **Nowinta River** 35.52 40 P **P** 20 58 12.9 -0.4
J20K **Nowinta River** 35.52 40 P **P** 20 58 13.9 +0.7
baz=272,SNR=6.5
N19K **Bonanza Creek** 35.58 46 P **P** 20 58 14.1 +0.1
baz=276
K20K **Telida** 35.58 42 P **P** 20 58 13.6 -0.2
baz=273
Q18K **Katmai Hardscr** 35.59 50 P **P** 20 58 13.8 -0.3
baz=279
IMAR **Indian Mountai** 35.67 37 P **P** 20 58 13.8 -0.8
L20K **Farewell, AK** 35.72 43 P **P** 20 58 14.5 -0.6
baz=274
G21K **Allakaket** 35.78 36 P **P** 20 58 15.0 -0.4
baz=269,SNR=6.4
F21K **Alatna River** 35.81 35 P **P** 20 58 15.0 -0.7
baz=268
H21K **Melozitna Rive** 36.06 38 P **P** 20 58 17.5 -0.4
H21K **Melozitna Rive** 36.06 38 P **P** 20 58 17.2 -0.6
baz=271
M20K **Styx River** 36.12 44 P **P** 20 58 18.6 +0.2
baz=276
Q19K **Cape Douglas,** 36.25 49 P **P** 20 58 19.2 -0.3
baz=279
F22K **John River** 36.32 35 P **P** 20 58 19.6 -0.3
baz=269
CHUM **Lake Minchumin** 36.34 41 P **P** 20 58 20.0 -0.1
baz=274
PPLA **Purkeypile** 36.47 43 P **P** 20 58 21.9 +0.5
baz=275
CAST **Castle Rocks** 36.47 42 P **P** 20 58 21.6 +0.3
CAST IAmb IAmb 20 58 22.3
comp=Z,7.7nm,0.6s
CAST **Castle Rocks** 36.47 42 P **P** 20 58 21.6 +0.3
baz=275,SNR=5.5
E22K **Anaktuvuk Pass** 36.48 34 P **P** 20 58 20.9 -0.4
baz=268
G22K **Bettles** 36.58 36 P **P** 20 58 21.1 -0.9
baz=270,SNR=5.9
N20K **Mount Spurr** 36.64 45 P **P** 20 58 23.0 +0.3
baz=278
H22K **Ishtalitna Cre** 36.65 38 P **P** 20 58 22.3 -0.3
baz=272
OHAK **Old Harbor** 36.75 52 P **P** 20 58 23.3 -0.2
baz=282
SKT **Skwentna** 36.87 44 P **P** 20 58 24.9 +0.3
baz=277
BPAW **Bear Paw Mtn.** 36.91 40 P **P** 20 58 24.8 -0.1
baz=275
D23K **Nanushuk River** 36.92 32 P **P** 20 58 24.6 -0.2
baz=268
Q20K **Shuyak Island** 36.95 50 P **P** 20 58 24.2 -1.0
baz=281
MLY **Manley** 36.95 39 P **P** 20 58 25.4 +0.2
baz=274
KDAK **Kodiak Island** 37.01 51 P **P** 20 58 25.0 -0.7
KDAK **Kodiak Island** 37.01 51 P **P** 20 58 25.0 -0.7
KDAK pmax pmax
comp=Z,43nm,1.5s
G23K **Bananza Creek** 37.17 36 P **P** 20 58 26.6 -0.4
baz=272
TRF **Thorofare Moun** 37.27 42 P **P** 20 58 27.4 -0.7
baz=276
SUA **Susitna One** 37.30 45 P **P** 20 58 27.7 -0.6
SUA IAmb IAmb 20 58 30.4
comp=Z,5.3nm,0.8s
SUA **Susitna One** 37.30 45 P **P** 20 58 27.4 -0.8
baz=278
E23K **Chandalar** 37.30 34 P **P** 20 58 27.4 -0.7
baz=270
TOLK **Toolik Lake Re** 37.32 33 P **P** 20 58 27.3 -0.9
baz=270
H23K **Yukon River** 37.40 38 P **P** 20 58 28.9 0.0
H23K IAmb IAmb 20 58 30.7
comp=Z,4.1nm,0.7s
H23K **Yukon River** 37.40 38 P **P** 20 58 28.8 -0.1
baz=274
BRSE **Bradley Lake S** 37.58 48 P **P** 20 58 30.1 -0.3
baz=280
D24K **Happy Valley** 37.59 32 P **P** 20 58 29.7 -0.7
baz=270
C24K **Franklin Bluff** 37.65 31 P **P** 20 58 30.1 -0.7
baz=269
NEA2 **Nenana** 37.70 40 P **P** 20 58 30.9 -0.4
baz=276
E24K **Your Creek** 37.73 34 P **P** 20 58 31.0 -0.5
baz=272
RC01 **Rabbit Creek A** 37.84 45 P **P** 20 58 32.1 -0.4
baz=280
MCK **McKinley** 37.84 41 P **P** 20 58 32.1 -0.4
baz=277
F24K **Squaw Lake** 37.98 35 P **P** 20 58 32.8 -0.7
baz=273,SNR=5.5
MDM **Murphy Dome** 38.02 39 P **P** 20 58 33.7 -0.3
DGZ **Jazzator, Alta** 38.06 296 *i* P **P** 20 58 34.8 +0.1
DGZ pmax pmax
comp=Z,2.0nm,0.7s
H24K **Noodor Dome** 38.09 37 P **P** 20 58 34.3 -0.3
baz=275
GHO **Glory Hole Cre** 38.12 44 P **P** 20 58 34.5 -0.4
GHO IAmb IAmb 20 58 35.3
comp=Z,10nm,0.8s
WAT1 **Susitna Watana** 38.13 42 P **P** 20 58 34.0 -1.0
baz=278
SEW **Seward** 38.15 47 P **P** 20 58 34.7 -0.3
baz=281
G24K **Hadweenzic Riv** 38.18 36 P **P** 20 58 34.9 -0.3
baz=274
TCOL **CIGO, UAF Yank** 38.19 39 P **P** 20 58 34.9 -0.4
baz=276
COLA **College** 38.19 39 *i* P **P** 20 58 34.6 -0.7
COLA pmax pmax
comp=Z,9.0nm,0.7s
COLA **College** 38.19 39 P **P** 20 58 35.0 -0.3
baz=276
CCB **Clear Creek Bu** 38.23 39 P **P** 20 58 35.1 -0.5
ZAA0 **Zalesovo Array** 38.25 303 P **P** 20 58 35.4 -0.5
ZALV **Zalesovo Beam** 38.25 303 P **P** 20 58 35.3 -0.7
comp=Z,0.4nm,0.4s,baz=63,slow=6.8,SNR=2.9
ZALV PcP **PcP** 21 00 39.0 +1.2
comp=Z,0.3nm,0.3s,baz=172,slow=1.0,SNR=2.0
comp=Z,0.4nm,0.4s
POKR **Poker Plat Res** 38.34 39 P **P** 20 58 36.5 -0.1
baz=276
SML **Sawmill** 38.39 44 P **P** 20 58 37.1 +0.1
baz=280
KNK **Knik Glacier** 38.40 45 P **P** 20 58 37.0 -0.1
KNK IAmb IAmb 20 58 37.7
comp=Z,8.5nm,0.9s
KNK **Knik Glacier** 38.40 45 P **P** 20 58 37.0 -0.1
baz=280
D25K **Kavik River** 38.47 32 P **P** 20 58 36.7 -0.9
baz=272
WAT6 **Susitna Watana** 38.54 43 P **P** 20 58 37.7 -0.7
baz=279
PWL **Port Wells** 38.55 46 P **P** 20 58 38.2 -0.2
baz=281
IL31 **38.61 39** P **P** 20 58 38.1 -0.6
IL31 IAmb IAmb 20 58 39.3
comp=Z,7.2nm,0.8s
ILAR **Eielson Array** 38.61 39 P **P** 20 58 38.2 -0.5
comp=Z,4.6nm,0.7s,baz=274,slow=8.0,SNR=51
comp=Z,4.6nm,0.7s
ILAR **Eielson Array** 38.61 39 P **P** 20 58 38.0 -0.8
DHY **Denali Highway** 38.63 42 P **P** 20 58 38.6 -0.5
DHY IAmb IAmb 20 58 39.2
comp=Z,7.3nm,0.7s
DHY **Denali Highway** 38.63 42 P **P** 20 58 38.3 -0.8
baz=279
HDA **Harding Lake** 38.63 40 P **P** 20 58 37.8 -1.1
baz=278
M23K **Glacier View** 38.68 44 P **P** 20 58 38.9 -0.5
baz=280
G25K **Bearman Lake** 38.72 36 P **P** 20 58 39.3 -0.3
baz=275
E25K **Arctic Village** 38.82 34 P **P** 20 58 39.9 -0.5
baz=274
F25K **Christian Rive** 38.83 35 P **P** 20 58 40.5 -0.1
baz=275
SCM **Sheep Creek Mo** 38.85 44 P **P** 20 58 40.5 -0.3
baz=280
H25K **Birch Creek** 38.88 37 P **P** 20 58 41.1 +0.2
baz=276
PRP **Porcupine Dome** 39.09 38 P **P** 20 58 42.9 0.0
PRP IAmb IAmb 20 58 43.5
comp=Z,6.9nm,0.7s
PRP **Porcupine Dome** 39.09 38 P **P** 20 58 42.8 0.0
baz=277,SNR=8.8
GLI **Glacier Island** 39.15 45 P **P** 20 58 42.6 -0.5
baz=282
P23K **Montague Islan** 39.18 47 P **P** 20 58 43.5 +0.1
baz=283
K24K **Donnelly Dome** 39.23 41 P **P** 20 58 42.8 -1.0
baz=279
BMAR **Burnt Mountain** 39.25 35 P **P** 20 58 43.8 -0.2
J25K **Salcha River,** 39.28 39 P **P** 20 58 43.4 -0.8
baz=279
M24K **Tolsona, Glenn** 39.34 43 P **P** 20 58 44.1 -0.6
baz=281
GOMU **GeErMu** 39.36 272 P **P** 20 58 46.2 +0.5
C27K **Jago River** 39.39 31 P **P** 20 58 44.4 -0.6
baz=274
F26K **Sheenjek River** 39.39 34 P **P** 20 58 45.0 -0.1
baz=276
KLU **Klutina** 39.58 44 P **P** 20 58 46.8 +0.1
KLU IAmb IAmb 20 58 47.5
comp=Z,7.6nm,0.9s
KLU **Klutina** 39.58 44 P **P** 20 58 46.6 -0.1
baz=282
G26K **Porcupine Rive** 39.61 35 P **P** 20 58 47.1 +0.3
baz=277,SNR=6.2
HARP **HAARP** 39.75 43 P **P** 20 58 48.2 +0.2
baz=282
EYAK **Cordova Ski Ar** 39.86 46 P **P** 20 58 49.2 +0.3
baz=283
SCRK **Sand Creek** 39.98 40 P **P** 20 58 48.8 -1.2
SCRK **Sand Creek** 39.98 40 P **P** 20 58 49.1 -0.8
baz=280,SNR=7.1
J26L **Joseph Creek** 40.07 39 P **P** 20 58 49.7 -1.0
baz=280
N25K **Chitina, Valde** 40.17 44 P **P** 20 58 51.1 -0.4
baz=283
WMQ **Urumqi** 40.26 287 *eP* **P** 20 58 54.4 +1.9
E27K **Coleen River** 40.29 33 P **P** 20 58 51.6 -0.7
baz=278
BMRM **Bremner River** 40.31 45 P **P** 20 58 52.1 -0.5
baz=284
L26K **Log Cabin Wild** 40.44 41 P **P** 20 58 53.8 +0.2
baz=282
G27K **Doyon Strip** 40.47 35 P **P** 20 58 53.6 -0.2
baz=279
H27K **Steamboat Moun** 40.61 36 P **P** 20 58 54.8 -0.2
baz=280
I27K **Kandik River** 40.68 37 P **P** 20 58 55.4 -0.2
baz=280
M26K **Nabesna, AK** 40.74 42 P **P** 20 58 56.0 0.0
baz=283,SNR=6.7
PZH **PanZhiHua** 40.75 255 P **P** 20 58 55.3 -1.3
K27K **Chicken** 40.79 40 P **P** 20 58 56.3 0.0
K27K IAmb IAmb 20 58 57.1
comp=Z,6.9nm,0.7s
K27K **Chicken** 40.79 40 P **P** 20 58 56.1 -0.3
baz=282
MCARA **McCarthy VSAT** 40.96 44 P **P** 20 58 58.0 +0.2
MCARA IAmb IAmb 20 58 59.3
comp=Z,9.2nm,0.9s
MCARA **McCarthy VSAT** 40.96 44 P **P** 20 58 58.0 +0.2
baz=284
EGAK **Eagle** 41.03 38 P **P** 20 58 57.5 -0.7
EGAK IAmb IAmb 20 58 58.2
comp=Z,8.2nm,0.7s
EGAK **Eagle** 41.03 38 P **P** 20 58 57.7 -0.5
baz=282,SNR=7.2
L27K **Beaver Creek,** 41.11 41 P **P** 20 58 59.5 +0.6
baz=283,SNR=8.7
BCAR **Beaver Creek A** 41.13 41 P **P** 20 58 59.5 +0.4
M27K **Edge Creek, AK** 41.25 42 P **P** 20 59 00.2 0.0
baz=284
BARN **Barnard Glacie** 41.68 44 P **P** 20 59 04.2 +0.5
BARN IAmb IAmb 20 59 05.0
comp=Z,4.2nm,0.8s
CTG **Chitna Glacier** 41.86 44 P **P** 20 59 05.2 +0.2
baz=286
DAWY **Dawson** 41.94 39 P **P** 20 59 04.9 -0.6
baz=284
YUK3 **Moose Creek** 42.05 43 P **P** 20 59 06.0 -0.6
baz=286
I29M **Ogilvie Camp,** 42.09 37 P **P** 20 59 06.3 -0.4
baz=284
MK31 **Makanchi Array** 42.37 293 P **P** 20 59 09.0 -0.1
MK31 **Makanchi Array** 42.37 293 P **P** 20 59 09.0 -0.1
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MKAR **Makanchi Array** 42.37 293 P **P** 20 59 09.1 0.0
comp=Z,2.3nm,0.7s,baz=65,slow=8.1,SNR=18
comp=Z,2.3nm,0.7s
MKAR **Makanchi Array** 42.37 293 *eP* **P** 20 59 09.0 -0.1
O28M **Mount Upton** 42.45 44 P **P** 20 59 09.7 -0.2
baz=287
EPYK **Eagle Plains** 42.48 36 P **P** 20 59 09.7 -0.1
baz=284
G30M **tAoh Zraii Nji** 42.54 35 P **P** 20 59 09.8 -0.4
baz=283
L29M **L29M** 42.73 40 P **P** 20 59 12.6 +0.8
baz=286,SNR=6.2
M29M **Somme Creek** 42.77 41 P **P** 20 59 12.5 +0.4
baz=286
K29M **Barlow Dome** 42.79 39 P **P** 20 59 12.2 -0.1
baz=286
KURK **Kurchatov** 42.93 300 *ceP* **P** 20 59 13.5 0.0
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK **Kurchatov** 42.93 300 *eP* **P** 20 59 13.5 0.0
YUK4 **Talbot Arm** 43.00 43 P **P** 20 59 14.3 +0.2
baz=288
PNL **Peninsula** 43.16 46 P **P** 20 59 16.0 +0.8
baz=289
INK **Inuvik** 43.22 32 P **P** 20 59 14.9 -0.5
INK IAmb IAmb 20 59 15.3
comp=Z,4.1nm,0.6s
INK **Inuvik** 43.22 32 P **P** 20 59 14.9 -0.5
INK pmax pmax
comp=Z,4.0nm,0.6s
INK **Inuvik** 43.22 32 P **P** 20 59 15.1 -0.3
baz=284
O29M **Mount Kennedy** 43.35 44 P **P** 20 59 16.9 +0.1
baz=289
HYT **Haines Junctio** 43.69 44 P **P** 20 59 20.8 +1.4
HYT **Haines Junctio** 43.69 44 P **P** 20 59 20.8 +1.4
baz=289,SNR=8.5
P29M **Windy Craggy** 43.97 45 P **P** 20 59 23.1 +1.6
baz=290,SNR=6.8
P30M **Million Dollar** 44.18 44 P **P** 20 59 24.0 +0.8
baz=290
N31M **Braeburn, Yuko** 44.27 42 P **P** 20 59 24.5 +0.7
baz=289
O30N **Mendenhall** 44.36 43 P **P** 20 59 25.2 +0.6
baz=290
M31M **Drury Creek, Y** 44.65 41 P **P** 20 59 26.6 -0.1
baz=290
PLBC **Pleasant Camp** 44.69 45 P **P** 20 59 27.4 +0.4
baz=291
A36M **Sachs Harbour** 44.95 26 P **P** 20 59 28.3 -0.5
baz=288
WHY **Whitehorse** 44.96 43 P **P** 20 59 29.4 +0.2
baz=291
SKAG **Skagway** 45.18 45 P **P** 20 59 30.5 -0.3
baz=292
MMPY **Sheldon Lake,** 45.87 40 P **P** 20 59 36.1 0.0
baz=292
R32K **Eaglecrest** 46.02 46 P **P** 20 59 37.3 +0.1
baz=293
P33M **Teslin, Yukon** 46.08 43 P **P** 20 59 38.1 +0.3
baz=293
BRVK **Borovoye** 46.65 306 P **P** 20 59 42.1 0.0
BRVK **Borovoye** 46.65 306 *i* P **P** 20 59 42.2 +0.1
BRVK pmax pmax
comp=Z,6.0nm,2.4s
BRVK **Borovoye** 46.65 306 *eP* **P** 20 59 42.2 +0.1
Q32M **Nakina River** 46.83 45 P **P** 20 59 43.8 +0.1
baz=294
R33M **Jennings River** 47.26 44 P **P** 20 59 47.3 +0.5
baz=295
S34M **Telegraph Cree** 47.81 46 P **P** 20 59 51.2 +0.4
baz=296
CHTO **Chiang Mai** 48.04 250 P **P** 20 59 53.8 +0.7
CHTO **Chiang Mai** 48.04 250 P **P** 20 59 53.8 +0.7
DLBC **Dease Lake** 48.11 45 P **P** 20 59 53.3 +0.2
baz=296
CMAR **Chiang Mai Arr** 48.30 249 P **P** 20 59 56.1 +1.1
comp=Z,0.6nm,0.6s,baz=32,slow=7.5,SNR=6.0
comp=Z,0.6nm,0.6s
CMAR **Chiang Mai Arr** 48.30 249 *ceP* **P** 20 59 56.9 +1.8
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BOOM **Boomskoye usch** 48.41 291 P **P** 20 59 55.8 +0.1
BOOM IAmb IAmb 21 00 00.4
comp=Z,8.2nm,1.2s
BOOM **Boomskoye usch** 48.41 291 P **P** 20 59 55.8 +0.1
BOOM pmax pmax
comp=Z,8.0nm,1.3s
T35M **Bob Quinn** 48.65 46 P **P** 20 59 57.8 +0.6
baz=297
V35K **Ketchikan** 48.73 49 P **P** 20 59 58.4 +0.7
baz=298
EUNU **Eureka** 48.98 11 P **P** 20 59 58.9 -0.5
EUNU IAmb IAmb 20 59 59.5
comp=Z,5.4nm,0.7s
DIB **Dawson Inlet,** 49.27 52 P **P** 21 00 03.0 +1.3
DIB IAmb IAmb 21 00 06.2
comp=Z,15nm,1.3s
KSH **Kashi** 50.00 288 P P 21 00 12.8 +5.2
JIRN **Jiri** 50.34 269 *eP* **P** 21 00 11.6 +1.1
comp=Z,4.9nm,0.3s
RAMN **Ramite** 50.53 268 *eP* **P** 21 00 12.6 +0.9
comp=Z,18nm,0.6s
PKI **Pulchoki** 50.93 269 *eP* **P** 21 00 15.2 +0.5
comp=Z,2.0nm,0.3s
PKIN **Phulchoki** 50.93 269 *eP* **P** 21 00 15.2 +0.5
ARU **Arti** 51.09 314 P **P** 21 00 14.8 -0.3
ARU IAmb IAmb 21 00 15.1
comp=Z,3.6nm,0.5s
ARU **Arti** 51.09 314 *c i* P **P** 21 00 14.9 -0.1
ARU 21 02 15.0
ARU S **S** 21 06 55.6 0.0
ARU SS **SS** 21 10 34.3 -3.8
ARU pmax pmax
comp=Z,3.0nm,0.7s
ARU **Arti** 51.09 314 *eP* **P** 21 00 15.1 +0.1
DMN **Daman** 51.11 270 *eP* **P** 21 00 17.7 +1.7
GKN **Gorkha** 51.17 270 *eP* **P** 21 00 17.1 +0.8
comp=Z,4.7nm,0.3s
RES **Resolute Bay** 51.26 17 P **P** 21 00 15.7 -0.3
RES **Resolute Bay** 51.26 17 P **P** 21 00 15.7 -0.3
RES pmax pmax
comp=Z,17nm,0.6s
KK31 **Karatay Array** 51.45 295 P **P** 21 00 18.1 +0.2
KK31 **Karatay Array** 51.45 295 P **P** 21 00 18.1 +0.2
KK31 pmax pmax
comp=Z,3.0nm,1.0s
KKAR **Karatay Array** 51.45 295 P **P** 21 00 18.3 +0.4
KKAR **Karatay Array** 51.45 295 P **P** 21 00 18.3 +0.4
DANN **Dangsing** 51.54 271 *eP* **P** 21 00 20.7 +1.6
comp=Z,8.0nm,0.2s
PYUN **Piuthan** 52.22 272 *eP* **P** 21 00 25.8 +1.9
YKA **Yellowknife Ar** 52.77 35 P **P** 21 00 26.8 -0.3
comp=Z,2.4nm,0.6s,baz=302,slow=7.2,SNR=9.1
comp=Z,2.4nm,0.6s
GAR **Garm** 53.90 291 P **P** 21 00 36.5 +0.8
GAR IAmb IAmb 21 00 37.2
comp=Z,12nm,0.9s
LVZ **Lovozero** 53.92 334 *i* P **P** 21 00 35.3 0.0
LVZ pmax pmax
comp=Z,28nm,1.2s
ABKAR **Akbulak array** 54.18 306 P **P** 21 00 37.4 0.0
CHGR **Chuyangaron** 54.83 291 P **P** 21 00 42.6 +0.3
CHGR **Chuyangaron** 54.83 291 P **P** 21 00 42.6 +0.3
CHGR pmax pmax
comp=Z,19nm,1.1s
NIL **Nilore** 55.22 284 P **P** 21 00 45.5 +0.5
NIL IAmb IAmb 21 00 47.3
comp=Z,8.3nm,0.9s
NIL **Nilore** 55.22 284 P **P** 21 00 45.5 +0.5
NIL pmax pmax
comp=Z,8.0nm,1.0s
ARCES **ARCESS Array B** 55.29 338 P **P** 21 00 44.0 -0.8
comp=Z,3.7nm,0.8s,baz=42,slow=8.9,SNR=6.8
comp=Z,3.7nm,0.8s
PGC **Sidney** 56.53 53 P **P** 21 00 54.7 +1.0
KULM **Kulim** 57.57 238 P **P** 21 01 03.2 +1.8
KULM IAmb IAmb 21 01 05.5
comp=Z,14nm,1.3s
BELG **Belogornoye** 58.63 315 *i* P **P** 21 01 08.5 +0.5
BELG pmax pmax
comp=Z,1.0nm,1.2s
LTY **Liberty** 58.86 53 P **P** 21 01 10.6 +0.8
HOOD **Mount Hood Mea** 59.53 55 P **P** 21 01 15.9 +1.4
KBO **Bosley Butte** 60.02 59 P **P** 21 01 19.6 +1.9
NEW **Newport** 60.10 50 P **P** 21 01 18.3 +0.2
baz=310
FIA1 **FINESS Array S** 61.05 332 P **P** 21 01 23.4 -0.6
FINES **FINESS Array B** 61.05 332 P **P** 21 01 23.5 -0.5
comp=Z,3.7nm,0.5s,baz=42,slow=8.0,SNR=39
comp=Z,3.7nm,0.5s
YBH **Yreka Blue Hor** 61.20 59 P **P** 21 01 27.2 +1.7
YBH **Yreka Blue Hor** 61.20 59 P **P** 21 01 27.2 +1.7
YBH pmax pmax
comp=Z,4.0nm,0.9s
OBN **Obninsk** 61.77 322 ||*eP* **P** 21 01 31.2 +2.3
OBN 21 02 05.0
OBN S **S** 21 09 06.0 -7.5
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN **Obninsk** 61.77 322 *eP* **P** 21 01 30.0 +1.1
JTMT **Jette** 61.89 49 P **P** 21 01 31.2 +1.3
JTMT IAmb IAmb 21 01 32.4

comp=Z,3.0nm,0.5s
GEYT Alibeck 62.09 297 P P 21 01 31.9 +0.5
comp=Z,1.8nm,0.6s,baz=344,slow=4.9,SNR=5.9
comp=Z,1.8nm,0.6s
GEYT Alibeck 62.09 297 P P 21 01 32.3 +0.9
GEYT IAmb IAmb 21 01 33.1
comp=Z,2.6nm,0.6s
GYA0 ALIBECK ARRAY 62.09 297 P P 21 01 32.3 +0.9
GYA0 pmax pmax
comp=Z,3.0nm,0.6s
GYA0B ALIBECK ARRAY 62.09 297 P P 21 01 32.3 +0.9
MOD Modoc Plateau 62.46 57 P P 21 01 35.2 +1.3
MOD IAmb IAmb 21 01 36.1
comp=Z,3.1nm,0.7s
GSI Gunungsitoli 62.58 238 P P 21 01 36.6 +1.9
MSO Missoula 62.67 50 P P 21 01 35.5 +0.4
baz=312
PLID Pearl Lake 62.74 52 P P 21 01 36.6 +0.9
FFC Flin Flon 62.79 37 P P 21 01 35.7 +0.2
FFC IAmb IAmb 21 01 58.6
comp=Z,9.1nm,1.2s
FFC Flin Flon 62.79 37 P P 21 01 35.7 +0.2
FFC pmax pmax
comp=Z,9.0nm,1.3s
HRY Holter Researc 63.82 49 P P 21 01 43.8 +1.3
EGMT Eagleton 63.96 47 P P 21 01 43.7 +0.4
baz=314
PAHR Pah Rah Range 64.43 59 P P 21 01 47.6 +1.1
PAHR IAmb IAmb 21 01 48.6
comp=Z,5.0nm,0.8s
HLID Hailey 64.61 53 P P 21 01 48.5 +0.9
baz=313
BOZ Bozeman (W) 64.69 49 P P 21 01 49.4 +1.3
BOZ IAmb IAmb 21 01 50.0
comp=Z,4.7nm,0.7s
BOZ Bozeman (W) 64.69 49 P P 21 01 49.4 +1.3
BOZ pmax pmax
comp=Z,5.0nm,0.7s
BOZ Bozeman (W) 64.69 49 P P 21 01 48.7 +0.6
baz=313,SNR=6.9
KNRA Kununurra 65.12 199 P P 21 01 53.1 +2.3
YHH Holmes Hill 65.64 50 P P 21 01 55.2 +0.9
NB2 NORSAR Subarra 65.65 338 P P 21 01 53.5 -0.2
comp=Z,1.0nm,0.5s,baz=30,slow=6.5
NOA NORSAR Array B 65.65 338 P P 21 01 53.5 -0.2
comp=Z,1.3nm,0.5s,baz=33,slow=6.6,SNR=20
comp=Z,1.3nm,0.5s
NVAR Mina Array Bea 65.91 59 P P 21 01 57.6 +1.6
comp=Z,3.4nm,0.7s,baz=296,slow=6.1,SNR=32
comp=Z,3.4nm,0.7s
NVAR Mina Array Bea 65.91 59 P P 21 01 57.2 +1.2
RLMT Red Lodge 66.22 49 P P 21 01 58.7 +0.9
baz=315
DGMT Dagmar 66.30 43 P P 21 01 58.7 +0.8
baz=316
KIV Kislovodsk 66.71 310 *eP* **P 21 02 00.8 +0.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 66.71 310 *eP* **P 21 02 00.8 +0.1**
KBZ Khabaz 66.76 310 P **P 21 02 01.9 +1.1**
comp=Z,1.3nm,0.8s,baz=27,slow=9.1,SNR=2.1
comp=Z,1.3nm,0.8s
KBZ Khabaz 66.76 310 P P 21 02 02.0 +1.1
KBZ Khabaz 66.76 310 *eP* **P 21 02 02.0 +1.1**
CWC Cottonwood Cre 67.40 60 P P 21 02 05.9 +0.8
baz=314
PKM Mcpherson Peak 67.43 63 P P 21 02 06.1 +0.7
baz=314
GRAC Grapevine Rang 67.43 60 P P 21 02 06.5 +1.3
baz=314
R11A Troy Canyon, C 67.52 57 P P 21 02 07.0 +1.1
R11A Troy Canyon, C 67.52 57 P P 21 02 06.8 +0.9
baz=314
ISA Isabella, Lake 67.70 61 P P 21 02 07.6 +0.7
baz=314
BW06 Boulder Array 67.72 51 P P 21 02 08.1 +1.0
baz=315,SNR=6.0
PD31 Pinedale Array 67.72 51 P P 21 02 08.0 +0.9
PD31 IAmb IAmb 21 02 08.7
comp=Z,4.2nm,0.8s
PDAR Pinedale Array 67.72 51 P P 21 02 08.0 +0.9
comp=Z,3.7nm,0.6s,baz=306,slow=2.1,SNR=27
comp=Z,3.7nm,0.6s
PDAR Pinedale Array 67.72 51 P P 21 02 07.8 +0.6
DUG Dugway, Tooele 67.79 54 P P 21 02 08.8 +1.3
baz=315
MPMC Manual Prospec 68.00 60 P P 21 02 10.2 +1.3
baz=314,SNR=5.6
AKASG Malin Array Be 68.03 322 P P 21 02 08.3 -0.3
comp=Z,0.5nm,0.3s,baz=38,slow=6.3,SNR=5.4
comp=Z,0.5nm,0.3s
AKBB Malin Array Si 68.03 322 *ceP* **P 21 02 08.8 +0.3**
AKBB pmax pmax
comp=Z,4.0nm,1.1s
FURC Furnace Creek, 68.09 60 P P 21 02 10.4 +1.3
baz=314
TPNV Topopah Spring 68.11 59 P P 21 02 10.6 +1.1
TPNV Topopah Spring 68.11 59 P P 21 02 10.6 +1.1
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 68.11 59 P P 21 02 10.7 +1.2
baz=314,SNR=8.5
FITZ Fitzroy Crossi 68.18 201 P P 21 02 10.8 +1.0
comp=Z,1.5nm,0.8s,baz=18,slow=13,SNR=1.7
comp=Z,1.5nm,0.8s
FITZ Fitzroy Crossi 68.18 201 P P 21 02 11.8 +2.0
FITZ IAmb IAmb 21 02 38.4
comp=Z,6.3nm,1.2s
WRA Warramunga Arr 68.28 192 P P 21 02 11.8 +1.4
comp=Z,1.0nm,0.6s,baz=5.8,slow=6.5,SNR=8.6
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 68.28 192 P P 21 02 11.9 +1.4
WRA Warramunga Arr 68.28 192 P P 21 02 11.9 +1.4
LRMC Laurel Mtn Rad 68.29 61 P P 21 02 10.9 +0.3
baz=314
CCAC Calif City Air 68.32 61 P P 21 02 11.6 +0.9
EDW2 Edwards Air Fo 68.52 62 P P 21 02 12.9 +1.0
baz=314
SNCC San Nicolas Is 68.73 64 P P 21 02 14.4 +1.2
baz=314
SHOC Shoshone, Teco 68.82 60 P P 21 02 14.9 +1.2
baz=314
GSC Goldstone, Bar 68.93 61 P P 21 02 15.2 +0.8
baz=314
BFSC Mount Baldy Ra 69.16 62 P P 21 02 16.9 +1.0
baz=314
RDMU Red Mountain 69.28 52 P P 21 02 17.9 +1.3
TUQ Turquoise Moun 69.35 60 P P 21 02 18.3 +1.3
baz=315,SNR=5.9
RSSD Black Hills 69.53 46 P P 21 02 18.8 +0.7
baz=318
GMRC Granite Mounta 69.96 60 P P 21 02 21.7 +1.0
baz=315
AGMN Agassiz Nation 70.12 39 P P 21 02 21.3 +0.1
baz=321
O20A White River Ci 70.30 52 P P 21 02 23.4 +0.8
baz=317
BELC Belle Mtn. Jos 70.31 61 P P 21 02 23.6 +0.8
baz=315
PFO Pinyon Flats O 70.31 62 P P 21 02 23.8 +1.0
baz=315
TPFO Pinon Flats 70.32 62 P P 21 02 23.8 +0.9
baz=315
IRM Iron Mountain 70.70 60 P P 21 02 26.6 +1.6
baz=315,SNR=5.5
MONP2 Monument Peak 70.84 62 P P 21 02 26.3 +0.3
baz=315
BC3 Big Chuckawall 70.88 61 P P 21 02 27.0 +0.9
baz=315
PV23 Carpenter Ridg 71.10 53 P P 21 02 28.9 +1.3
PV23 IAmb IAmb 21 02 29.6
comp=Z,5.9nm,0.8s
PDMCI Parker Dam,Lak 71.19 60 P P 21 02 28.3 +0.5
baz=316
IKP In-Ko-Pah, Jac 71.20 62 P P 21 02 29.1 +1.1
baz=315
WUAZ Wupatki 71.91 57 P P 21 02 33.3 +1.1
baz=316
ASAR Alice Springs 72.01 192 P P 21 02 35.3 +2.7
comp=Z,1.4nm,0.7s,baz=0.2,slow=5.2,SNR=10
comp=Z,1.4nm,0.7s
BUR08 Bucovina Ar. S 72.07 323 P P 21 02 33.2 +0.3
BUR08 IAmb IAmb 21 02 54.4
comp=Z,7.3nm,1.4s
BURAR Bucovina Array 72.09 323 P P 21 02 33.2 +0.3
BURAR Bucovina Array 72.09 323 P P 21 02 33.2 +0.3
BURAR pmax pmax
comp=Z,1.0nm,1.0s
EYMN Ely 72.20 37 P P 21 02 33.6 +0.1
baz=323
MVCO Mesa Verde 72.28 54 P P 21 02 35.4 +1.0
baz=317
S22A 4UR Ranch, Cre 72.79 53 P P 21 02 38.3 +0.8
baz=318
ECSD EROS Data Cent 73.33 42 P P 21 02 40.3 +0.2
ECSD IAmb IAmb 21 02 41.0
comp=Z,5.8nm,0.8s
ECSD EROS Data Cent 73.33 42 P P 21 02 40.2 +0.2
baz=321
MLR Muntele Rosu 73.47 321 P P 21 02 42.3 +1.3
MLR IAmb IAmb 21 02 50.1
comp=Z,8.2nm,1.5s
MLR Muntele Rosu 73.47 321 P P 21 02 42.3 +1.3
MLR pmax pmax
comp=Z,8.0nm,1.5s
CLL Collm 73.50 332 *eP* **P 21 02 41.0 +0.1**
SDCO Great Sand Dun 73.50 52 P P 21 02 42.1 +0.6
baz=318
214A Organ Pipe Nat 73.64 60 P P 21 02 43.4 +1.3
baz=317
T25A Trinidad 74.53 52 P P 21 02 47.6 +0.4
baz=319
ANMO Albuquerque 75.06 54 P P 21 02 50.8 +0.5
baz=318
GERES GERESS Array B 75.39 330 P P 21 02 52.0 +0.3
comp=Z,0.3nm,0.5s,baz=32,slow=5.8,SNR=4.1
comp=Z,0.3nm,0.5s
GERES GERESS Array B 75.39 330 P P 21 02 52.0 +0.3
121A Cookes Peak, D 76.12 57 P P 21 02 57.5 +1.3
baz=318
VLDQ Val d'Or 77.16 28 P P 21 03 00.5 -0.8
WMOK Wichita Mounta 79.30 50 P P 21 03 13.7 +0.5
baz=322
STKA Stephens Creek 79.42 184 P P 21 03 15.2 +1.7
comp=Z,0.5nm,0.3s,baz=319,slow=8.8,SNR=1.6
comp=Z,0.5nm,0.3s
TUL1 Leonard 79.88 47 P P 21 03 17.4 +1.2
baz=323
CCM Cathedral Cave 80.31 43 P P 21 03 18.0 -0.4
baz=325
TX32 Lajitas Array 80.84 56 P P 21 03 23.1 +1.6
TXAR Lajitas Array 80.84 56 P P 21 03 22.9 +1.5
comp=Z,2.2nm,0.5s,baz=289,slow=3.6,SNR=51
comp=Z,2.2nm,0.5s
TXAR Lajitas Array 80.84 56 P P 21 03 23.0 +1.5
O48B Farmland 81.12 37 P P 21 03 23.7 +1.1
baz=328
MIAR Mount Ida 82.05 46 P P 21 03 27.9 +0.4
baz=324
O53A New Philadelph 82.69 35 P P 21 03 30.9 +0.3
baz=330
WVT Waverly 83.44 41 P P 21 03 35.1 +0.7
baz=327
BDFB Brasilia 145.80 25 PKPbc **PKPab 21 10 44.5 -0.3**
comp=Z,3.2nm,0.8s,baz=37,slow=8.5,SNR=4.5
PLCA Paso Flores 152.81 89 PKPbc **PKiKP 21 11 01.1 +1.2**
comp=Z,1.4nm,1.0s,baz=225,slow=1.4,SNR=1.3

IDC ***08*** *20:57:33.4±7.5, 4°.42S×143°.79E, h75km±80km, mb3.3/4, mbtmp3.7/6, ML2.9/2, MS3.2/1, Error ellipse: s-maj=49.7km s-min=27.5km az=147.0*

ISC 08 20:57:36.5±1.1, 4°.6S±0°.1×143°.8E±0°.1, h110km, n7, σ1ˢ73/7, mb3.5/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.83**	**146**	P	**Pn**	**20 59 00.9**	**+0.3**
	2.4nm,0.3s,baz=308,slow=12,SNR=2.4						
PMG				S	**Sn**	**21 00 05.6**	**-0.6**
	9.7nm,0.6s,baz=337,slow=23,SNR=1.8						
	12nm,0.5s						
KRVT	**Keravat (AS076**	**8.18**	**88**	LR	LR	21 02 50.6	
	comp=Z,137nm,18.5s,baz=147,slow=39						
WRA	**Warramunga Arr**	**17.86**	**210**	P	**Pn**	**21 01 36.3**	**-1.8**
	0.1nm,0.3s,baz=32,slow=12,SNR=5.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**21.26**	**206**	P	**P**	**21 02 16.9**	**+2.8**
	2.6nm,0.8s,baz=29,slow=11,SNR=21						
	2.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**22.30**	**231**	P	**P**	**21 02 24.4**	**-0.7**
	1.1nm,0.7s,baz=45,slow=8.5,SNR=1.6						
	1.1nm,0.7s						
SONM	**Songino Array**	**61.65**	**332**	P	**P**	**21 07 42.7**	**-0.2**
	0.3nm,0.7s,baz=134,slow=8.3,SNR=2.1						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**85.44**	**24**	P	**P**	**21 10 01.6**	**0.0**
	0.5nm,0.7s,baz=261,slow=4.4,SNR=5.1						
	0.5nm,0.7s						

SNET ***08*** *20:57:57.1±1.0, 14°.14N×91°.25W, h20km±5km, ML3.1*
GCG ***08*** *20:58:00.5±0.7, 14°.33N×91°.07W, h90km±5km, MD3.6*

ISC 08 20:57:59.7±2.6, 14°.1N±0°.2×91°.2W±0°.1, h92km±20km, n13, σ1ˢ15/19, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.44**	**42**	*eP*	**Pn**	**20 58 13.9**	**-0.5**
PCG	**Pacaya**	**0.59**	**62**	*eP*	**Pn**	**20 58 15.0**	**-0.6**
PCG				*eS*	**Sn**	**20 58 27.8**	**+0.3**
STG3	**Santiaguito 3,**	**0.72**	**325**	*eP*	**Pn**	**20 58 16.7**	**-0.1**
STG3				*eS*	**Sn**	**20 58 29.8**	**+0.3**
NBG	**Las Nubes**	**0.91**	**59**	*eP*	**Pn**	**20 58 18.5**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.32**	**94**	*eS*	**Sn**	**20 58 40.7**	**-0.6**
SLOZ				IAML		20 58 44.9	
	comp=Z,201nm,0.4s						
LOAL	**Lomas de Alarc**	**1.33**	**95**	*eS*	**Sn**	**20 58 41.5**	**+0.1**
NUBE	**Las Nubes**	**1.34**	**99**	*eP*	**Pn**	**20 58 22.5**	**-1.3**
NUBE				*eS*	**Sn**	**20 58 41.5**	**-0.4**
NUBE				IAML		20 58 46.6	
	comp=Z,141nm,0.3s						
RTR	**El Retiro**	**1.47**	**98**	*eP*	**Pn**	**20 58 24.6**	**-0.8**
RTR				*eS*	**Sn**	**20 58 46.4**	**+1.6**
CEVE	**Cerro Verde**	**1.50**	**101**	*eP*	**Pn**	**20 58 24.7**	**-1.1**
CEVE				*eS*	**Sn**	**20 58 47.5**	**+1.9**
CEVE				IAML		20 58 50.6	
	comp=Z,1μm,0.2s						
MRL	**Marmol**	**1.71**	**56**	*eP*	**Pn**	**20 58 27.7**	**-0.8**
LFRS	**El Faro**	**2.08**	**103**	*eS*	**Sn**	**20 59 00.5**	**+1.7**
SJTE	**Alcalda de S**	**2.14**	**103**	*eP*	**Pn**	**20 58 33.0**	**-0.9**
SJTE				*eS*	**Sn**	**20 59 01.4**	**+1.4**
SJTE				IAML		20 59 04.2	
	comp=Z,71nm,0.3s						
COEG	**Centro de Oper**	**2.25**	**102**	*eS*	**Sn**	**20 59 04.3**	**+1.6**

NOU ***08*** *21:06:28.3, 37°.11S×179°.62E, h0km, MLv4.5/11, Off E. Coast of N. Island, N.Z.*
NEIC ***08*** *21:06:33.6±1.3, 37°.25S±0°.09×179°.09E±0°.06, h10km±1km, mb4.2/9, Error ellipse: s-maj=16.2km s-min=3.6km az=333.0*
WEL ***08*** *21:06:36.5±1.5, 37°S±6°×17°9E±1°0, h8km±6km, M4.1/10, ML4.5/8, MLv4.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=99.0*
IDC ***08*** *21:06:38.0±6.6, 37°.17S×178°.95E, h42km±54km, mb4.0/2, mbtmp4.2/2, MS3.6/1, Error ellipse: s-maj=46.5km s-min=41.5km az=150.0*

ISC 08 21:06:34.0±2.0, 37°.18S±0°.05×179°.09E±0°.07, h13km±10km, n128, σ1ˢ14/132, mb4.1/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.73**	**238**		**Pg**	**21 06 48.6**	**+0.4**
MXZ					**Sg**	**21 06 56.1**	**-1.7**
MXZ	**Matakaoa Point**	**0.73**	**238**	P	**Pg**	**21 06 48.6**	**+0.4**
MXZ				S	**Sg**	**21 06 56.4**	**-1.4**
MXZ	**Matakaoa Point**	**0.73**	**238**	P	**Pb**	**21 06 48.9**	**+0.3**
WMGZ	**Waiomatatini S**	**0.84**	**219**	P	**Pn**	**21 06 52.7**	**+1.2**
WMGZ				S	**Sn**	**21 07 03.3**	**-0.3**
PKGZ	**Pakihiroa**	**1.07**	**228**	P	**Pg**	**21 06 55.1**	**+0.4**
PKGZ				S	**Sb**	**21 07 08.8**	**+0.3**
PUZ	**Puketiti**	**1.11**	**216**	P	**Pg**	**21 06 56.4**	**+1.0**
PUZ				S	**Sb**	**21 07 10.1**	**+0.6**
HAZ	**Te Kaha**	**1.19**	**240**	P	**Pn**	**21 06 55.6**	**-0.7**
TWGZ	**Tauwhareparae**	**1.33**	**221**	P	**Pb**	**21 06 59.6**	**+0.8**
TWGZ				S	**Sb**	**21 07 16.7**	**+0.9**
RUGZ	**Raukumara Rang**	**1.37**	**234**	P	**Pb**	**21 06 59.8**	**+0.3**
RUGZ				S	**Sn**	**21 07 17.1**	**0.0**
CNGZ	**Carnagh Statio**	**1.48**	**208**	P	**Pb**	**21 07 02.1**	**+0.7**
CNGZ				S	**Sb**	**21 07 21.5**	**+1.4**
WIZ	**White Island**	**1.55**	**256**	P	**Pn**	**21 07 00.4**	**-0.9**
TKGZ	**Te Karaka**	**1.60**	**217**	P	**Pn**	**21 07 02.6**	**+0.7**
MWZ	**Matawai**	**1.69**	**226**	P	**Pn**	**21 07 04.2**	**+0.9**
WHRZ	**Whale Island**	**1.81**	**247**	P	**Pb**	**21 07 06.0**	**-1.0**
RIGZ	**Rimuhau**	**1.85**	**214**	P	**Pn**	**21 07 06.0**	**+0.5**
RAGZ	**Rawiri**	**1.87**	**225**	P	**Pn**	**21 07 06.9**	**+1.2**
URZ	**Urewera**	**1.90**	**235**	P	**Pn**	**21 07 06.9**	**+0.7**
	370nm,0.3s,baz=8.9,slow=3.2,SNR=332						
URZ				S	**Sn**	**21 07 28.8**	**-1.2**
	491nm,0.3s,baz=257,slow=18,SNR=32						
URZ				LR	LR	21 08 08.8	
	comp=Z,491nm,19.4s,baz=78,slow=50						
URZ	**Urewera**	**1.90**	**235**		**Pn**	**21 07 06.6**	**+0.5**
URZ	**Urewera**	**1.90**	**235**	P	**Pn**	**21 07 07.0**	**+0.9**
URZ	**Urewera**	**1.90**	**235**	P	**Pn**	**21 07 07.3**	**+1.1**
EDRZ	**Edgecumbe**	**2.08**	**243**	P	**Pn**	**21 07 09.4**	**+0.8**
SNGZ	**Shannon Statio**	**2.12**	**220**	P	**Pn**	**21 07 09.8**	**+0.7**
OPRZ	**Ohinepanea**	**2.12**	**251**	P	**Pn**	**21 07 09.3**	**+0.2**
KNZ	**Kokohu**	**2.15**	**211**	P	**Pn**	**21 07 09.3**	**-0.3**
MHGZ	**Mahia Peninsul**	**2.18**	**205**	P	**Pn**	**21 07 11.0**	**+1.0**
RTZ	**Ruatahuna**	**2.20**	**229**	P	**Pn**	**21 07 11.2**	**+0.9**
MUGZ	**Murupara**	**2.25**	**234**	P	**Pn**	**21 07 11.6**	**+0.7**
MYRZ	**Mayor Island**	**2.27**	**266**	P	**Pn**	**21 07 12.2**	**+0.9**
TGRZ	**Tauranga**	**2.31**	**255**	P	**Pn**	**21 07 12.7**	**+0.9**
OMRZ	**Omania**	**2.35**	**246**	P	**Pn**	**21 07 13.7**	**+1.5**
RRRZ	**Republican Roa**	**2.35**	**240**	P	**Pn**	**21 07 13.5**	**+1.2**
RAHZ	**Arahi**	**2.35**	**222**	P	**Pn**	**21 07 12.9**	**+0.6**
WHHZ	**Waihua**	**2.40**	**217**	P	**Pn**	**21 07 13.3**	**+0.3**
KARZ	**Kaharoa**	**2.41**	**249**	P	**Pn**	**21 07 13.7**	**+0.6**
HLRZ	**Highlands Stat**	**2.42**	**243**	P	**Pn**	**21 07 14.7**	**+1.4**
MTHZ	**Maungataniwha**	**2.44**	**226**	P	**Pn**	**21 07 14.5**	**+1.0**
PRRZ	**Plateau Road**	**2.51**	**237**	P	**Pn**	**21 07 15.1**	**+0.7**
HSRZ	**Hossack Road**	**2.52**	**242**	P	**Pn**	**21 07 16.2**	**+1.5**
ALRZ	**Allen Road**	**2.58**	**237**	P	**Pn**	**21 07 16.1**	**+0.6**
NMHZ	**Naumai**	**2.63**	**222**	P	**Pn**	**21 07 17.1**	**+0.9**
ARHZ	**Aropaoanui**	**2.66**	**218**	P	**Pn**	**21 07 16.9**	**+0.4**
KUZ	**Kuaotunu**	**2.73**	**278**	P	**Pn**	**21 07 16.5**	**-1.0**
KUZ	**Kuaotunu**	**2.73**	**278**	P	**Pn**	**21 07 18.0**	**+0.5**
BKZ	**Black Stump Fm**	**2.85**	**225**		**Pn**	**21 07 19.4**	**+0.1**
BKZ	**Black Stump Fm**	**2.85**	**225**	P	**Pn**	**21 07 19.7**	**+0.5**
BKZ	**Black Stump Fm**	**2.85**	**225**	P	**Pn**	**21 07 19.9**	**+0.7**
KUTZ	**Kaahu Road**	**2.90**	**242**	P	**Pn**	**21 07 21.0**	**+1.1**
TOZ	**Tahuroa Road**	**2.91**	**258**	P	**Pn**	**21 07 19.4**	**-0.5**
CKHZ	**Cape Kidnapper**	**2.94**	**212**	P	**Pn**	**21 07 19.9**	**-0.5**
MCHZ	**McNeill Hill**	**2.94**	**219**	P	**Pn**	**21 07 20.5**	**0.0**
GRZ	**Great Barrier**	**3.06**	**286**	P	**Pn**	**21 07 22.8**	**+0.7**
KWHZ	**Kaweka Forest**	**3.07**	**222**	P	**Pn**	**21 07 22.1**	**-0.2**
RATZ	**Rangitukua**	**3.11**	**236**	P	**Pn**	**21 07 24.0**	**+1.1**
MKAZ	**Moumakai**	**3.14**	**270**	P	**Pn**	**21 07 22.5**	**-0.6**
KAHZ	**Kahuranaki**	**3.14**	**213**	P	**Pn**	**21 07 22.6**	**-0.5**
KRHZ	**Kereru**	**3.26**	**220**	P	**Pn**	**21 07 23.9**	**-0.9**
TMVZ	**Te Maari**	**3.30**	**233**	P	**Pn**	**21 07 25.6**	**+0.2**
ETVZ	**East Tongariro**	**3.30**	**233**	P	**Pn**	**21 07 25.8**	**+0.3**
BHHZ	**Black Hill Sta**	**3.31**	**225**	P	**Pn**	**21 07 25.6**	**-0.1**
KRVZ	**Karewarewa**	**3.32**	**234**	P	**Pn**	**21 07 26.3**	**+0.5**
ETAZ	**East Tamaki Re**	**3.33**	**273**	P	**Pn**	**21 07 25.6**	**-0.2**
PXZ	**Pawanui**	**3.34**	**211**	P	**Pn**	**21 07 24.3**	**-1.6**
NNVZ	**North Ngauruho**	**3.36**	**233**	P	**Pn**	**21 07 26.9**	**+0.5**
WTVZ	**West Tongariro**	**3.37**	**234**	P	**Pn**	**21 07 27.1**	**+0.7**
SNVZ	**South Ngauruho**	**3.38**	**232**	P	**Pn**	**21 07 26.9**	**+0.3**
MBAZ	**Motutapu North**	**3.38**	**276**	P	**Pn**	**21 07 26.8**	**+0.4**
NGZ	**Ngauruhoe**	**3.40**	**233**	P	**Pn**	**21 07 27.1**	**+0.2**
MOVZ	**Moawhango**	**3.44**	**229**	P	**Pn**	**21 07 27.2**	**+0.2**
TWVZ	**Taurewa**	**3.44**	**236**	P	**Pn**	**21 07 28.1**	**+0.7**
ABAZ	**Army Bay**	**3.46**	**278**	P	**Pn**	**21 07 27.9**	**+0.4**
FWVZ	**Far West T-bar**	**3.47**	**232**	P	**Pn**	**21 07 28.4**	**+0.5**
WNVZ	**Wahianoa**	**3.49**	**231**	P	**Pn**	**21 07 27.9**	**-0.2**
EPAZ	**Eden Park BICE**	**3.49**	**274**	P	**Pn**	**21 07 29.5**	**+1.6**
PNHZ	**Pukenui**	**3.55**	**219**	P	**Pn**	**21 07 27.7**	**-1.1**
WPHZ	**Waipukurau**	**3.55**	**215**	P	**Pn**	**21 07 27.8**	**-1.1**
AWAZ	**Awhitu Peninsu**	**3.55**	**270**	P	**Pn**	**21 07 29.0**	**+0.2**
MTVZ	**Mangateitei**	**3.60**	**231**	P	**Pn**	**21 07 29.5**	**-0.1**
HIZ	**Hauiti**	**3.60**	**247**	Pn	**Pn**	**21 07 29.5**	**-0.1**
HIZ	**Hauiti**	**3.60**	**247**	P	**Pn**	**21 07 31.0**	**+1.4**
HIZ	**Hauiti**	**3.60**	**247**	P	**Pn**	**21 07 31.3**	**+1.7**
WTAZ	**Waiatarua**	**3.62**	**272**	P	**Pn**	**21 07 30.0**	**+0.3**
PKVZ	**Pokaka**	**3.62**	**233**	P	**Pn**	**21 07 30.8**	**+1.0**
RVAZ	**Riverhead Bore**	**3.63**	**275**	P	**Pn**	**21 07 30.2**	**+0.3**
PRHZ	**Porangahau**	**3.63**	**211**	P	**Pn**	**21 07 28.2**	**-1.8**
TSZ	**Takapari Road**	**3.78**	**219**	P	**Pn**	**21 07 30.2**	**-1.7**
DVHZ	**Dannevirke**	**3.87**	**215**	P	**Pn**	**21 07 31.6**	**-1.6**
VRZ	**Vera Road**	**3.93**	**239**	P	**Pn**	**21 07 35.1**	**+1.1**
WCZ	**Waipu Caves**	**4.01**	**286**	P	**Pn**	**21 07 35.7**	**+0.6**
WAZ	**Wanganui**	**4.12**	**230**	P	**Pn**	**21 07 37.2**	**+0.5**
POWZ	**Post Office Ro**	**4.13**	**218**	P	**Pn**	**21 07 36.2**	**-0.6**
BFZ	**Birch Farm**	**4.14**	**211**		**Pn**	**21 07 34.4**	**-2.6**
BFZ	**Birch Farm**	**4.14**	**211**	P	**Pn**	**21 07 34.6**	**-2.3**
DREZ	**Durham Road**	**4.34**	**241**	P	**Pn**	**21 07 42.2**	**+2.5**
TIWZ	**Tintock**	**4.38**	**214**	P	**Pn**	**21 07 38.2**	**-2.0**
PREZ	**Palmer Road**	**4.44**	**239**	P	**Pn**	**21 07 43.3**	**+2.2**
NEZ	**North Egmont**	**4.45**	**240**	P	**Pn**	**21 07 43.3**	**+2.0**
PKE	**Pukeiti**	**4.49**	**242**	P	**Pn**	**21 07 45.0**	**+3.2**
KHEZ	**Kahui Hut**	**4.52**	**241**	P	**Pn**	**21 07 44.6**	**+2.4**
KHEZ	**Kahui Hut**	**4.52**	**241**	P	**Pn**	**21 07 45.1**	**+2.9**
NBEZ	**Newall Road No**	**4.61**	**241**	P	**Pn**	**21 07 46.2**	**+2.9**
OUZ	**Omahuta**	**4.85**	**292**		**Pn**	**21 07 47.4**	**+0.7**
OUZ	**Omahuta**	**4.85**	**292**	P	**Pn**	**21 07 47.7**	**+1.1**
OUZ	**Omahuta**	**4.85**	**292**	P	**Pn**	**21 07 47.8**	**+1.1**
SNZO	**South Karori**	**5.35**	**218**	P	**Pn**	**21 07 54.4**	**+0.9**
QRZ	**Quartz Range**	**6.27**	**232**	P	**Pn**	**21 08 04.2**	**-2.0**
QRZ	**Quartz Range**	**6.27**	**232**	P	**Pn**	**21 08 06.9**	**+0.7**
KHZ	**Kahutara**	**6.75**	**217**	P	**Pn**	**21 08 13.6**	**+0.8**
CTZ	**Chatham Island**	**7.33**	**155**	P	**Pn**	**21 08 23.2**	**+2.6**
RPZ	**Rata Peaks**	**8.95**	**221**	P	Pn	21 08 36.9	-6.0
	5.2nm,0.7s,baz=80,slow=5.4,SNR=1.6						
RPZ				S	Sn	21 10 09.1	-15
	10nm,0.3s,baz=142,slow=22,SNR=12						
STKA	**Stephens Creek**	**31.20**	**268**	LR	LR	21 26 26.9	
	comp=Z,107nm,18.1s,baz=192,slow=38						
STKA	**Stephens Creek**	**31.20**	**268**	P	**P**	**21 12 52.3**	**-0.6**
STKA				IAmb	IAmb	21 13 12.6	
	comp=Z,1.7nm,1.5s						
COEN	**Coen**	**39.44**	**296**	P	**P**	**21 14 03.9**	**-0.1**
AS31	**Alice Springs**	**40.85**	**276**	P	**P**	**21 14 14.9**	**-0.9**
ASAR	**Alice Springs**	**40.85**	**276**	P	**P**	**21 14 14.8**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=122,slow=8.3,SNR=15						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**40.85**	**276**	P	**P**	**21 14 13.9**	**-1.8**
WR0	**Warramunga Arr**	**42.30**	**281**	P	**P**	**21 14 26.6**	**-0.9**
WR0				IAmb	IAmb	21 14 52.3	
	comp=Z,5.6nm,1.3s						
WRA	**Warramunga Arr**	**42.47**	**281**	P	**P**	**21 14 28.0**	**-0.8**
	comp=Z,3.5nm,0.5s,baz=123,slow=7.2,SNR=5.1						
	comp=Z,3.5nm,0.5s						
WRA	**Warramunga Arr**	**42.47**	**281**	P	**P**	**21 14 28.1**	**-0.8**
WB0	**Warramunga Arr**	**42.52**	**281**	P	**P**	**21 14 28.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**50.34**	**277**	P	**P**	**21 15 30.1**	**-0.6**
FITZ				IAmb	IAmb	21 15 35.9	
	comp=Z,11nm,1.3s						

MXZ			S	Sg	21 09 13.6	-1.7
WMGZ	**Waiomatatini S**	**0.84 222**	P	Pn	21 09 10.1	+1.6
WMGZ			S	Sn	21 09 21.1	+0.4
PKGZ	**Pakihiroa**	**1.08 230**	P	Pn	21 09 12.7	+0.8
PKGZ			S	Sn	21 09 26.2	-0.5
PUZ	**Puketiti**	**1.11 218**	P	Pn	21 09 13.9	+1.6
PUZ			S	Sn	21 09 27.8	+0.3
HAZ	**Te Kaha**	**1.20 242**	P	Pb	21 09 13.2	-0.4
TWGZ	**Tauwhareparae**	**1.33 222**	P	Pg	21 09 17.3	+0.6
TWGZ			S	Sg	21 09 33.8	-0.3
RUGZ	**Raukumara Rang**	**1.38 236**	P	Pg	21 09 17.8	+0.3
CNGZ	**Carnagh Statio**	**1.48 209**	P	Pg	21 09 19.8	+0.4
MWZ	**Matawai**	**1.70 227**	P	Pb	21 09 21.9	-0.2
RAGZ	**Rawiri**	**1.87 226**	P	Pb	21 09 24.5	-0.6
URZ	**Urewera**	**1.92 236**	P	Pn	21 09 24.7	+1.4
	108nm,0.3s,baz=0.5,slow=2.7,SNR=8.7					
URZ			S	Sn	21 09 46.8	-0.5
	106nm,0.6s,baz=72,slow=20,SNR=4.2					
URZ	**Urewera**	**1.92 236**	P	Pb	21 09 24.9	-0.8
SNGZ	**Shannon Statio**	**2.12 221**	P	Pn	21 09 27.6	+1.4
OPRZ	**Ohinepanea**	**2.14 252**	P	Pn	21 09 27.1	+0.7
MHGZ	**Mahia Peninsul**	**2.18 206**	P	Pn	21 09 28.4	+1.5
RTZ	**Ruatahuna**	**2.21 229**	P	Pn	21 09 28.8	+1.3
MUGZ	**Murupara**	**2.26 235**	P	Pn	21 09 29.4	+1.4
MTHZ	**Maungataniwha**	**2.44 227**	P	Pn	21 09 32.2	+1.6
ARHZ	**Aropaoanui**	**2.66 218**	P	Pn	21 09 34.6	+1.0
BKZ	**Black Stump Fm**	**2.86 226**	P	Pn	21 09 37.2	+0.9
CKHZ	**Cape Kidnapper**	**2.94 212**	P	Pn	21 09 37.6	+0.2
TLZ	**Tolley Road**	**3.06 247**	P	Pb	21 09 45.5	+0.2
KAHZ	**Kahuranaki**	**3.14 213**	P	Pn	21 09 40.3	+0.1
MKAZ	**Moumakai**	**3.16 270**	P	Pn	21 09 40.2	-0.2
HIZ	**Hauiti**	**3.62 247**	P	Pn	21 09 49.3	+2.5
OUZ	**Omahuta**	**4.88 292**	P	Pn	21 10 05.8	+1.7
TUWZ	**Tuamarina**	**5.83 222**	P	Pn	21 10 18.4	+1.3
ASAR	**Alice Springs**	**40.88 276**	P	P	21 16 33.1	+0.1
	0.3nm,0.7s,baz=125,slow=8.0,SNR=1.9					
	0.3nm,0.7s					
WRA	**Warramunga Arr**	**42.49 281**	P	P	21 16 46.0	-0.1
	0.3nm,0.3s,baz=120,slow=8.3,SNR=1.2					
	0.3nm,0.3s					
TORD	**Torodi Ar. Bea**	**155.94 186**	PKPab	PKPab	21 29 09.9	-2.3
	1.1nm,1.1s,baz=193,slow=5.9,SNR=3.1					

*IDC **08** 21:14:41.6±1.9, 19°.14S×177°.38W, h560km±20km, mb2.9/5, mbtmp3.9/7, Error ellipse: s-maj=53.9km s-min=17.7km az=154.0*

ISC 08 21:14:42.5±0.9, 19°.0S±0°.3×177°.4W±0°.2, h570km, n10, σ1°49/11, mb3.6/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**286**	P	P	21 16 09.0	-0.7
	25nm,0.6s,baz=162,slow=21,SNR=20						
AFI	**Afiamalu**	**7.41**	**48**	P	P	21 16 33.7	-1.6
	18nm,0.7s,baz=234,slow=8.7,SNR=1.5						
STKA	**Stephens Creek**	**38.95**	**243**	P	P	21 21 21.6	+1.1
	1.8nm,0.7s,baz=18,slow=9.6,SNR=3.0						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**45.38**	**260**	P	P	21 22 09.9	-1.1
	0.8nm,0.4s,baz=96,slow=7.1,SNR=9.4						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**45.42**	**255**	P	P	21 22 10.9	-0.4
	1.7nm,0.4s,baz=93,slow=7.5,SNR=34						
ASAR				PcP	PcP	21 23 38.8	+0.4
	0.2nm,0.4s,baz=107,slow=4.3,SNR=1.8						
	1.7nm,0.4s						
NVAR	**Mina Array Bea**	**79.57**	**43**	P	P	21 25 51.6	+0.4
	0.1nm,0.5s,baz=224,slow=2.5,SNR=1.7						
	0.1nm,0.5s						
TXAR	**Lajitas Array**	**85.79**	**57**	P	P	21 26 24.6	+2.0
	0.2nm,0.7s,baz=255,slow=1.8,SNR=2.5						
	0.2nm,0.7s						
AKASG	**Malin Array Be**	**141.98**	**332**	PKP	PKPdf	21 33 11.2	+1.3
	0.2nm,0.3s,baz=46,slow=0.9,SNR=1.7						
BRTR	**Keskin Array B**	**146.24**	**314**	PKPbc	PKPdf	21 33 18.0	+0.2
	0.5nm,0.7s,baz=72,slow=3.5,SNR=2.0						
TORD	**Torodi Ar. Bea**	**174.10**	**171**	PKPab	PKPab	21 35 20.8	-2.4
	0.4nm,0.7s,baz=173,slow=2.3,SNR=3.0						

*ISK **08** 21:22:33.8, 40°.61N×28°.95E, h6km, ML3.5/31*
*DDA **08** 21:22:33.9±0.0, 40°.60N×28°.95E, h14km±2km, MW3.3*
*CFUSG **08** 21:22:33.8, 40°.60N×29°.00E, h5km, mb3.0/1,*
Northwestern Turkey Magtype MSH 3.0 from 2 stations

ISC 08 21:22:34.3±0.8, 40°.60N±0°.02×28°.94E±0°.02, h10km±6km, n55, σ0°69/72, 6C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.07**	**239**	PG	Pg	21 22 36.2	-0.4
ARMT				SG	Sg	21 22 37.8	-0.5
MDNY	**Mudanya-Bursa**	**0.24**	**191**	PG	Pg	21 22 39.6	+0.5
MDNY				SG	Sg	21 22 43.5	+1.1
GEMT	**Gemlik**	**0.25**	**132**	PG	Pg	21 22 39.4	0.0
GEMT				SG	Sg	21 22 43.6	+0.8
YLV	**Yalova**	**0.33**	**96**	PG	Pg	21 22 40.7	-0.2
YLV				SG	Sg	21 22 45.8	+0.5
IGD	**Bursa**	**0.39**	**150**	P	Pb	21 22 42.3	-0.9
IGD				*i* AML	AML	21 22 47.0	
	comp=N,1μm,0.4s						
IGD				S	Sg	21 22 47.5	+0.3
AVCI	**Avcilar-stanb**	**0.43**	**337**	PG	Pg	21 22 42.7	0.0
AVCI				SG	Sg	21 22 49.1	+0.8
KAVV	**Kandilli-Istan**	**0.47**	**11**	PG	Pg	21 22 43.4	0.0
KAVV				SG	Sg	21 22 49.9	+0.3
ISK	**Istanbul-Kandi**	**0.47**	**11**	PG	Pg	21 22 43.4	-0.1
ISK				SG	Sg	21 22 49.7	0.0
ULDT	**Uludag**	**0.48**	**162**	P	Pb	21 22 44.0	-0.9
ULDT				S	Sb	21 22 50.9	-1.2
ULDT				*i* AML	AML	21 22 51.0	
	comp=E,1μm,0.6s						
ORLT	**Orhaneli**	**0.56**	**184**	PG	Pg	21 22 45.3	+0.2
BGKT	**Bogazkoy**	**0.59**	**347**	PG	Pg	21 22 45.7	-0.1
HRT	**Hereke**	**0.59**	**68**	PG	Pg	21 22 45.4	-0.4
ADVT	**Abdulvahap**	**0.63**	**105**	PG	Pg	21 22 46.4	0.0
KLYT	**Kilyos**	**0.65**	**6**	PG	Pg	21 22 46.8	-0.1
CTKS	**Kestanelik-??a**	**0.71**	**332**	PG	Pg	21 22 47.8	-0.3
SILT	**Sile**	**0.76**	**44**	PG	Pg	21 22 48.9	-0.1
CAVI	**Cavuskoy**	**0.79**	**120**	PG	Pg	21 22 49.4	-0.2
BILE	**Bilecik/Merkez**	**0.84**	**122**	P	Pb	21 22 50.3	-0.6
BILE				S	Sb	21 23 02.3	0.0
BILE				*i* AML	AML	21 23 06.0	
	comp=N,558nm,0.6s						
BILE				*i* AML	AML	21 23 06.0	
	comp=E,453nm,0.3s						
SLVT	**Silivri**	**0.84**	**319**	PG	Pg	21 22 50.3	-0.1
EDC	**Edincik**	**0.86**	**253**	PG	Pg	21 22 50.6	-0.3
CTYL	**Yalikoy Yolu**	**1.00**	**331**	PG	Pg	21 22 53.1	-0.4
MRMT	**Marmara Adasi**	**1.03**	**270**	PG	Pg	21 22 53.7	-0.3
DST	**Dursunbey**	**1.03**	**194**	PG	Pb	21 22 53.9	-0.3
CRLT	**Corlu**	**1.06**	**300**	PG	Pb	21 22 54.6	0.0
SAUV	**Serdivan-Sakar**	**1.06**	**82**	PG	Pg	21 22 53.8	-0.8
AUBOZ	**BOZOYUK**	**1.08**	**129**	PN	Pg	21 22 54.3	-0.8
GPA	**Golpazari**	**1.09**	**106**	PN	Pb	21 22 54.9	-0.3
GONE	**Gonen-Balikesi**	**1.11**	**240**	PN	Pb	21 22 55.5	0.0
KAYN	**Sakarya, Kayna**	**1.12**	**71**	P	Pg	21 22 54.9	-0.9
KAYN				S	Sb	21 23 10.3	0.0
KAYN				*i* AML	AML	21 23 12.0	
	comp=E,686nm,0.4s						
KAYN				*i* AML	AML	21 23 13.0	
	comp=N,713nm,0.6s						
KNL	**Balıkesir**	**1.13**	**253**	P	Pg	21 22 55.3	-0.7
KNL				S	Sn	21 23 12.2	+0.5
KNL				*i* AML	AML	21 23 15.0	
	comp=E,772nm,0.9s						
KNL				*i* AML	AML	21 23 16.0	
	comp=N,844nm,0.6s						
GULT	**Gulveren**	**1.21**	**98**	PN	Pb	21 22 57.1	-0.2
TVSB	**Tavsanli**	**1.22**	**161**	PN	Pg	21 22 56.6	-1.1
ANDZ	**Kutahya, Merke**	**1.32**	**146**	P	Pb	21 22 59.0	-0.1
ANDZ				S	Sn	21 23 16.5	+0.1
RKY	**Sarkoy-Tekirda**	**1.35**	**274**	PN	Pb	21 22 59.6	0.0
BORA	**Eskisehir**	**1.36**	**122**	PN	Pg	21 22 59.8	-0.6
PHSR	**Pinarhisar**	**1.48**	**314**	PN	Pn	21 23 01.4	+0.4
SMAA	**Simav-Kutahya**	**1.50**	**179**	PN	Pn	21 23 01.7	+0.4
STEP	**BALIKESIR_Sava**	**1.54**	**218**	P	Pn	21 23 01.5	-0.3
STEP				S	Sn	21 23 22.4	+0.4
STEP				*i* AML	AML	21 23 30.0	
	comp=N,698nm,0.6s						
STEP				*i* AML	AML	21 23 30.0	
	comp=E,439nm,0.6s						
GDZ	**Gediz**	**1.57**	**165**	P	Pn	21 23 01.5	-0.7
GDZ				S	Sb	21 23 23.7	+0.3
GDZ				*i* AML	AML	21 23 27.0	
	comp=N,224nm,0.7s						
GEDZ	**Gediz**	**1.60**	**167**	PN	Pb	21 23 03.4	-0.5
MDUB	**Mudurnu**	**1.72**	**94**	PN	Pn	21 23 05.1	+0.8
UKOP	**Uzunkopru-Edir**	**1.83**	**287**	PN	Pn	21 23 06.1	+0.4
YIGI	**Dzce**	**1.94**	**78**	P	Pb	21 23 08.7	-0.9
YIGI				*i* AML	AML	21 23 39.0	
	comp=E,161nm,0.6s						
YIGI				*i* AML	AML	21 23 40.0	
	comp=N,183nm,0.8s						
KIBS	**BOLU**	**2.23**	**94**	P	Pb	21 23 15.0	+0.4
KIBS				S	Sg	21 23 47.2	+1.4
KIBS				*i* AML	AML	21 23 56.0	
	comp=E,181nm,0.8s						
ANTO	**Ankara**	**3.04**	**103**	⇑P	Pg	21 23 35.0	+2.5
VTS	**Vitosha**	**4.73**	**297**	⇑P	Pn	21 23 46.4	+0.7
SEV	**Sevastopol'**	**5.26**	**40**	*e*S	Sn	21 24 53.6	+0.1
SEV				Sm		21 24 56.7	
	comp=N,4.0nm,0.6s						
SEV				Sm		21 24 56.7	
	comp=E,4.0nm,0.5s						
MLR	**Muntele Rosu**	**5.36**	**337**	⇑P	Pg	21 24 16.6	-0.2
YAL	**Yalta**	**5.47**	**43**	*e*S	Sn	21 24 56.7	-1.8
YAL				Sm		21 24 58.8	
	comp=N,21nm,0.4s						
YAL				Sm		21 24 58.8	
	comp=E,19nm,0.4s						
BLKB	**Belogradchik**	**5.55**	**305**	⇓P	Pn	21 23 57.6	+0.7
ALU	**Alushta**	**5.73**	**43**	*e*P	Pn	21 23 58.6	-0.7
ALU				*e*S	Sn	21 25 04.7	-0.3
ALU				Sm		21 25 07.1	
	comp=N,5.0nm,0.3s						
BOVS	**Bovan**	**6.18**	**302**	⇑P	Pn	21 24 06.6	+1.1
SUDU	**Sudak**	**6.18**	**44**	*e*P	Pn	21 24 06.0	+0.5
SUDU				Pm		21 24 06.3	
	comp=Z,6.0nm,0.5s						
SUDU				*e*S	Sn	21 25 15.9	-0.3
SUDU				Sm		21 25 21.5	
	comp=N,13nm,0.4s						
SUDU				Sm		21 25 21.5	
	comp=E,7.0nm,0.3s						
GZR	**Gura Zlata**	**6.58**	**319**	⇑P	Pn	21 24 09.7	-1.4
MDVR	**Moldovita**	**6.77**	**310**	⇑P	Pn	21 24 07.1	-6.5

*IDC **08** 21:32:59.8±0.7, 27°.68N×139°.87E, h477km±9km, mb2.8/8, mbtmp3.7/10, Error ellipse: s-maj=21.3km s-min=13.4km az=87.0*

ISC 08 21:33:00.1±0.7, 27°.7N±0°.1×139°.9E±0°.1, h479km, n17, σ0°76/19, mb3.2/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.16**	**105**	P	P	21 34 05.2	+1.1
	135nm,0.3s,baz=360,slow=15,SNR=115						
JCJ				S	S	21 34 55.3	-0.8
	379nm,0.3s,baz=294,slow=21,SNR=21						
USRK	**Ussuriysk Ar.**	**17.65**	**341**	P	P	21 36 38.6	+0.7
	2.5nm,0.7s,baz=138,slow=8.6,SNR=5.0						
CMAR	**Chiang Mai Arr**	**38.59**	**265**	P	P	21 39 40.1	-1.1
	0.4nm,0.7s,baz=78,slow=5.0,SNR=2.7						
	0.4nm,0.7s						
JIRN	**Jiri**	**47.19**	**283**	*e*P	P	21 40 49.4	+0.3
	13nm,0.5s						
GUN	**Gumba**	**47.41**	**284**	*e*P	P	21 40 51.2	+0.5
	7.3nm,0.3s						
WRA	**Warramunga Arr**	**47.65**	**187**	P	P	21 40 51.9	-0.2
	0.7nm,0.4s,baz=2.9,slow=7.6,SNR=25						
WRA				PcP	PcP	21 42 13.1	+0.6
	0.2nm,0.5s,baz=360,slow=4.0,SNR=1.8						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**47.69**	**319**	P	P	21 40 51.3	-0.6
	0.4nm,0.4s,baz=109,slow=7.2,SNR=2.4						
	0.4nm,0.4s						
PKI	**Pulchoki**	**47.89**	**283**	*e*P	P	21 40 55.0	+0.7
	2.1nm,0.5s						
PKIN	**Phulchoki**	**47.90**	**283**	*e*P	P	21 40 54.8	+0.5
	3.4nm,0.4s						
DMN	**Daman**	**48.14**	**283**	*e*P	P	21 40 56.7	+0.6
	10nm,0.7s						
MKAR	**Makanchi Array**	**48.50**	**309**	P	P	21 40 58.5	+0.2
	0.4nm,0.4s,baz=89,slow=10,SNR=9.6						
	0.4nm,0.4s						
DANN	**Dangsing**	**49.13**	**285**	*e*P	P	21 41 04.9	+1.4
	6.5nm,0.4s						
PYUN	**Piuthan**	**49.85**	**285**	*e*P	P	21 41 09.6	+0.8
	10nm,0.4s						
ASAR	**Alice Springs**	**51.37**	**187**	P	P	21 41 19.2	-0.4
	0.5nm,0.5s,baz=4.6,slow=6.1,SNR=17						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**58.20**	**29**	P	P	21 42 06.1	-0.9
	0.7nm,0.8s,baz=268,slow=5.1,SNR=4.7						
	0.7nm,0.8s						
YKA	**Yellowknife Ar**	**72.60**	**28**	P	P	21 43 37.5	-0.2
	0.4nm,0.4s,baz=296,slow=6.1,SNR=3.1						
	0.4nm,0.4s						
NVAR	**Mina Array Bea**	**81.77**	**51**	P	P	21 44 28.7	+0.2
	0.2nm,0.5s,baz=325,slow=4.4,SNR=2.2						
	0.2nm,0.5s						

*ROM **08** 21:37:19.0±0.1, 43°.791N±0°.007×8°.361E±0°.007, h21km±1km, ML3.1/45, Error ellipse: s-maj=0.7km s-min=0.6km az=221.0*
*LDG **08** 21:37:19.5±0.1, 43°.77N×8°.39E, h8km, Md3.4/2, Ml3.4/49, Error ellipse: s-maj=2.4km s-min=1.6km az=18.0*
*STR **08** 21:37:19.1±0.4, 44°.N±°×°±°, h10km±3km, MLv3.6/44, Error ellipse: s-maj=0.0km s-min=0.0km az=42.0, preliminary*
*GEN **08** 21:37:19.9, 43°.84N×8°.33E, h8km±2km, Ml3.4*
*PRU **08** 21:37:25.8±0.0, 44°.12N×8°.63E, h0km*

ISC 08 21:37:18.0±0.7, 43°.76N±0°.02×8°.37E±0°.02, h12km, n190, σ1°96/284, 3C-6D, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMI	**Imperia**	**0.38**	**294**	P	Pg	21 37 26.8	+1.2
IMI				S	Sg	21 37 32.0	+1.3
IMI	**Imperia**	**0.38**	**294**	⇓P	Pg	21 37 26.8	+1.2
IMI				S	Sg	21 37 32.0	+1.3
IMI				AML	AML		
	comp=N,14900μm,0.8s						
IMI				AML	AML		
	comp=E,6970μm,0.3s						
RORO	**Rocca Rossa**	**0.42**	**328**	P	Pg	21 37 27.2	+0.8
RORO				S	Sg	21 37 32.2	+0.2
RORO	**Rocca Rossa**	**0.42**	**328**	⇑P	Pg	21 37 27.2	+0.8
RORO				S	Sg	21 37 32.1	+0.2
RORO				AML	AML		
	comp=E,28000μm,0.1s						
RORO				AML	AML		
	comp=N,14800μm,0.1s						
CANO	**Canova, Maglio**	**0.46**	**348**	P	Pg	21 37 28.1	+1.0
CANO				S	Sg	21 37 33.2	0.0
CANO	**Canova, Maglio**	**0.46**	**348**	⇑P	Pg	21 37 28.1	+1.0
CANO				S	Sg	21 37 33.3	0.0
CANO				AML	AML		
	comp=E,14650μm,0.8s						
CANO				AML	AML		
	comp=E,14650μm,1.2s						
CANO				AML	AML		
	comp=N,9735μm,0.2s						
MGRO	**Montegrosso**	**0.50**	**305**	P	Pg	21 37 28.8	+0.9
MGRO				S	Sg	21 37 35.6	+1.1
MGRO	**Montegrosso**	**0.50**	**305**	⇓P	Pg	21 37 28.8	+0.9
MGRO				S	Sg	21 37 35.8	+1.3
MGRO				AML	AML		
	comp=E,11550μm,0.1s						
MGRO				AML	AML		
	comp=N,9060μm,0.7s						
QLNO	**Quiliano**	**0.57**	**358**	P	Pg	21 37 30.1	+1.0
QLNO				S	Sg	21 37 37.1	+0.5
QLNO	**Quiliano**	**0.57**	**358**	P	Pg	21 37 30.1	+1.0
QLNO				S	Sg	21 37 36.7	+0.1
BURY	**Giardini Botan**	**0.59**	**273**	P	Pg	21 37 30.9	+1.3
BURY				S	Sg	21 37 38.8	+1.4
BURY	**Giardini Botan**	**0.59**	**273**	⇑P	Pg	21 37 30.9	+1.3
BURY				S	Sg	21 37 39.1	+1.7
BURY				AML	AML		
	comp=E,10825μm,0.3s						
BURY				AML	AML		
	comp=N,8255μm,0.4s						
SAOF	**Saorge**	**0.63**	**291**	P	Pg	21 37 31.1	+0.8
SAOF				S	Sg	21 37 39.7	+1.0
SAOF	**Saorge**	**0.63**	**291**	P	Pg	21 37 31.2	+0.8
SAOF				S	Sg	21 37 39.8	+1.0
SAOF	**Saorge**	**0.63**	**291**	Pg	Pg	21 37 31.3	+0.9
SAOF				Sg	Sg	21 37 39.7	+1.0
SBF	**Sospel**	**0.69**	**279**	*e*Pg	Pg	21 37 33.0	+1.6
SBF				*e*Sg	Sg	21 37 42.2	+1.8
	comp=N,19μm,0.3s						
ESCA	**l'Escarene**	**0.73**	**276**	P	Pg	21 37 33.7	+1.6
ESCA				S	Sg	21 37 43.6	+1.9
ESCA	**l'Escarene**	**0.73**	**276**	Pg	Pg	21 37 33.4	+1.2
TURF	**col de Turini**	**0.74**	**287**	P	Pg	21 37 33.6	+1.1
TURF				S	Sg	21 37 43.4	+1.3
TURF	**col de Turini**	**0.74**	**287**	Pg	Pg	21 37 33.7	+1.2
TURF				Sg	Sg	21 37 43.5	+1.3
PCP	**Piancastagn**	**0.79**	**9**	P	Pg	21 37 34.0	+0.6
PCP				S	Sg	21 37 43.9	+0.1
PCP	**Piancastagn**	**0.79**	**9**	P	Pg	21 37 34.1	+0.7
PCP				S	Sg	21 37 43.9	+0.1
PCP				AML	AML		
	comp=E,3525μm,1.3s						
PCP				AML	AML		
	comp=N,4150μm,0.2s						
RNCA	**Ronca, Sant'Ol**	**0.82**	**30**	P	Pg	21 37 34.9	+0.8
RNCA				S	Sg	21 37 45.7	+0.8
RNCA	**Ronca, Sant'Ol**	**0.82**	**30**	P	Pg	21 37 34.8	+0.8
RNCA				AML	AML		
	comp=E,790μm,0.3s						
RNCA				AML	AML		
	comp=N,1041μm,0.6s						
ENR	**Entracque**	**0.83**	**305**	P	Pg	21 37 34.5	+0.4
ENR				S	Sg	21 37 45.1	+0.1
ENR	**Entracque**	**0.83**	**305**	⇓P	Pg	21 37 34.5	+0.4
ENR				S	Sg	21 37 45.2	+0.2
ENR				AML	AML		
	comp=E,4090μm,0.9s						
ENR				AML	AML		
	comp=N,5895μm,0.2s						
ENR				AML	AML		
	comp=E,4090μm,1.1s						
SPIF	**crte de Spivo**	**0.87**	**290**	Pg	Pg	21 37 35.7	+0.8
SPIF				Sg	Sb	21 37 48.0	+1.0
MVIF	**Mont Vial**	**0.89**	**279**	P	Pb	21 37 37.2	+1.7
MVIF				S	Sb	21 37 48.9	+1.4
MVIF	**Mont Vial**	**0.89**	**279**	Pg	Pg	21 37 35.9	+0.6
MVIF				Pn	Pb	21 37 37.1	+1.5
MVIF				Sg	Sg	21 37 48.5	+1.5
STV	**Sant Anna di V**	**0.90**	**303**	P	Pg	21 37 35.8	+0.4
STV				S	Sg	21 37 47.0	-0.2
STV	**Sant Anna di V**	**0.90**	**303**	⇓P	Pg	21 37 35.8	+0.4
STV				S	Sg	21 37 47.0	-0.2
STV				AML	AML		
	comp=E,3245μm,1.1s						
STV				AML	AML		
	comp=N,2920μm,0.6s						
EILF	**Villa Eilenroc**	**0.93**	**257**	Pg	Pg	21 37 35.6	-0.2
EILF				Pn	Pb	21 37 37.6	+1.6
EILF				Sg	Sg	21 37 46.7	-1.2
MSSA	**Maissana**	**1.00**	**56**	P	Pg	21 37 37.6	+0.3
MSSA	**Maissana**	**1.00**	**56**	P	Pg	21 37 37.6	+0.3
MSSA				AML	AML		
	comp=E,640μm,0.6s						
MSSA				AML	AML		
	comp=N,716μm,0.6s						
ISO	**Isola**	**1.04**	**294**	P	Pb	21 37 38.9	+0.8
ISO				S	Sg	21 37 52.8	+1.0
ISO	**Isola**	**1.04**	**294**	Pg	Pb	21 37 38.6	+0.5
CALF	**Calern**	**1.05**	**270**	Pg	Pb	21 37 38.2	0.0
CALF				Pn	Pg	21 37 39.5	+1.2
GORR	**Gorreto**	**1.08**	**38**	P	Pb	21 37 38.4	-0.2
GORR				AML	AML		
	comp=N,1175μm,0.8s						
GORR				AML	AML		
	comp=E,1145μm,0.4s						
MORSI	**Morsiglia**	**1.08**	**138**	Pg	Pb	21 37 38.8	+0.2
MORSI				Sg	Sb	21 37 52.5	-0.2
ROTM	**Rocchetta Tana**	**1.09**	**359**	P	Pb	21 37 40.0	+1.1
ROTM				S	Sn	21 37 55.1	+1.0
ROTM	**Rocchetta Tana**	**1.09**	**359**	P	Pb	21 37 39.4	+0.6
ROTM				AML	AML		
	comp=E,6460μm,1.6s						
ROTM				AML	AML		
	comp=E,6460μm,0.4s						
ROTM				AML	AML		
	comp=N,7800μm,0.3s						
PLMA	**Palmaria, Port**	**1.11**	**74**	P	Pg	21 37 41.3	+1.9
PLMA	**Palmaria, Port**	**1.11**	**74**	P	Pb	21 37 39.4	+0.3
PLMA				AML	AML		
	comp=N,627μm,0.5s						
PLMA				AML	AML		
	comp=E,380μm,0.7s						
GROG	**Isola di Gorgo**	**1.15**	**106**	P	Pb	21 37 40.4	+0.5
GROG	**Isola di Gorgo**	**1.15**	**106**	⇓P	Pb	21 37 40.4	+0.5
GROG				AML	AML		
	comp=N,386μm,1.6s						
GROG				AML	AML		
	comp=E,515μm,0.8s						
SARZ	**Sarezzano**	**1.17**	**19**	P	Pg	21 37 41.9	+1.3
SARZ	**Sarezzano**	**1.17**	**19**	P	Pb	21 37 41.2	+1.0
SARZ				AML	AML		
	comp=E,1181μm,0.6s						
SARZ				AML	AML		
	comp=N,1720μm,1.0s						
SARZ				AML	AML		
	comp=N,1715μm,1.0s						
SARZ				AML	AML		
	comp=E,1168μm,1.0s						
SARZ				AML	AML		
	comp=N,1645μm,1.0s						
SARZ				AML	AML		
	comp=N,1715μm,1.0s						
SARZ				AML	AML		
	comp=E,1182μm,0.6s						
PZZ	**Stroppo**	**1.17**	**310**	P	Pb	21 37 41.2	+0.8
PZZ				S	Sb	21 37 55.2	-0.4
PZZ	**Stroppo**	**1.17**	**310**	P	Pb	21 37 40.1	-0.3
PZZ				AML	AML		
	comp=N,6855μm,0.4s						
PZZ				AML	AML		
	comp=E,4770μm,0.3s						
ENAUX	**Enaux**	**1.21**	**287**	Pn	Pb	21 37 41.3	+0.4
ENAUX				Pg	Pn	21 37 42.2	+1.3
BOB	**Bobbio (Coli)**	**1.27**	**37**	P	Pn	21 37 42.0	+0.3
PGF	**Pioggi

VLC				AML	AML	
	comp=E,329μm,0.6s					
VLC				AML	AML	
	comp=N,236μm,0.6s					
VLC				AML	AML	
	comp=E,342μm,0.6s					
VLC				AML	AML	
	comp=N,238μm,0.6s					
VLC				AML	AML	
	comp=N,238μm,1.4s					
VLC				AML	AML	
	comp=N,236μm,1.4s					
VLC				AML	AML	
	comp=E,342μm,1.4s					
VLC				AML	AML	
	comp=E,329μm,1.4s					
OGDI	**Digne**	**1.54 284**	Pn	**Pb**	**21 37 48.2 +1.7**	
MAIM	**Mastiano**	**1.54 83**	P	**Pn**	**21 37 45.8 +0.5**	
MAIM				AML	AML	
	comp=E,288μm,0.6s					
MAIM				AML	AML	
	comp=N,195μm,0.7s					
EUCT	**Pavia**	**1.54 20**		AML	AML	
	comp=E,1446μm,0.5s					
EUCT				AML	AML	
	comp=N,1860μm,0.9s					
EUCT				AML	AML	
	comp=N,1860μm,1.1s					
CARD	**Cardoso**	**1.55 79**	P	**Pn**	**21 37 45.8 +0.3**	
CARD				AML	AML	
	comp=N,394μm,0.7s					
CARD				AML	AML	
	comp=E,307μm,0.9s					
CARD				AML	AML	
	comp=N,394μm,1.3s					
PII	**Pisa**	**1.56 91**	AML	AML		
	comp=E,278μm,0.4s					
PII				AML	AML	
	comp=N,226μm,0.6s					
PII				AML	AML	
	comp=N,226μm,1.4s					
CORF	**Corte**	**1.57 158**	P	**Pn**	**21 37 46.4 +0.7**	
CORF				AML	AML	
	comp=E,1185μm,0.9s					
CORF				AML	AML	
	comp=N,924μm,1.2s					
CORF				AML	AML	
	comp=E,1185μm,1.1s					
CORF	**Corte**	**1.57 158**	Pn	**Pn**	**21 37 46.4 +0.7**	
FLAF	**Flassans-sur-I**	**1.58 257**	Pn	**Pn**	**21 37 46.0 0.0**	
RRL	**Rocca Remolon**	**1.62 316**	P	**Pn**	**21 37 47.1 +0.4**	
RRL				AML	AML	
	comp=E,528μm,0.6s					
RRL				AML	AML	
	comp=N,542μm,0.4s					
RRL				AML	AML	
	comp=E,528μm,1.4s					
BDI	**Bagni Di Lucca**	**1.64 79**	P	**Pn**	**21 37 47.2 +0.5**	
BDI				AML	AML	
	comp=E,108μm,0.9s					
BDI				AML	AML	
	comp=N,104μm,0.6s					
CELB	**S.Piero in Cam**	**1.68 126**	P	**Pn**	**21 37 47.9 +0.5**	
CELB				AML	AML	
	comp=N,268μm,0.5s					
CELB				AML	AML	
	comp=E,334μm,1.1s					
CELB				AML	AML	
	comp=E,334μm,0.9s					
BLAF	**les Blancs**	**1.69 277**	Pn	**Pn**	**21 37 49.2 +1.7**	
GSCL	**Gusciola**	**1.70 69**	AML	AML		
	comp=N,289μm,1.1s					
GSCL				AML	AML	
	comp=E,258μm,1.1s					
GSCL				AML	AML	
	comp=E,258μm,0.9s					
GSCL				AML	AML	
	comp=N,289μm,0.9s					
BNI	**Bardonecchia**	**1.77 317**	P	**Pn**	**21 37 49.2 +0.5**	
BNI				AML	AML	
	comp=E,229μm,0.4s					
BNI				AML	AML	
	comp=N,222μm,0.9s					
BNI				AML	AML	
	comp=N,196μm,0.8s					
BNI				AML	AML	
	comp=E,276μm,0.4s					
SMPL	**Sampolo**	**1.79 158**	P	**Pn**	**21 37 50.2 +1.4**	
SMPL				AML	AML	
	comp=N,497μm,0.7s					
SMPL				AML	AML	
	comp=E,471μm,0.2s					
SMPL	**Sampolo**	**1.79 158**	Pn	**Pn**	**21 37 50.1 +1.3**	
TRAV	**Traversella**	**1.81 346**	P	**Pn**	**21 37 48.7 -0.4**	
TRAV				AML	AML	
	comp=E,466μm,0.3s					
TRAV				AML	AML	
	comp=N,280μm,0.5s					
AJAC	**Base Areonaval**	**1.85 171**	P	**Pn**	**21 37 49.8 +0.3**	
AJAC				AML	AML	
	comp=E,1445μm,0.3s					
AJAC				AML	AML	
	comp=N,1380μm,0.6s					
AJAC	**Base Areonaval**	**1.85 171**	Pn	**Pn**	**21 37 49.8 +0.3**	
ARTF	**Artigues**	**1.87 266**	Pn	**Pn**	**21 37 50.3 +0.4**	
ASEAF	**Site Antares,**	**1.88 240**	Pn	**Pn**	**21 37 50.1 +0.5**	
MLYF	**Mely**	**1.90 278**	Pn	**Pn**	**21 37 51.9 +1.6**	
LSD	**Lago del Serru**	**1.92 333**	P	**Pn**	**21 37 50.5 -0.2**	
LSD				AML	AML	
	comp=E,414μm,0.8s					
LSD				AML	AML	
	comp=N,352μm,0.4s					
LSD				AML	AML	
	comp=E,414μm,1.2s					
CIRO	**Champorcher**	**1.93 343**	P	**Pn**	**21 37 50.2 -0.7**	
CIRO				AML	AML	
	comp=E,206μm,0.9s					
CIRO				AML	AML	
	comp=N,206μm,0.5s					
TRIF	**Trifonti**	**1.95 108**	P	**Pn**	**21 37 51.4 +0.4**	
TRIF				AML	AML	
	comp=E,111μm,0.7s					
TRIF				AML	AML	
	comp=N,88μm,1.1s					
TRIF				AML	AML	
	comp=E,111μm,1.3s					
BSTF	**la Bastide-des**	**1.98 274**	Pn	**Pn**	**21 37 51.8 +0.5**	
BSTF			Pg	**Pb**	**21 37 56.3 +2.3**	
CASP	**Castiglione de**	**2.06 117**	P	**Pn**	**21 37 53.2 +0.7**	
CASP				AML	AML	
	comp=E,198μm,0.4s					
CASP				AML	AML	
	comp=N,210μm,0.4s					
LPG	**La Plagne**	**2.09 327**	*e*P	**Pn**	**21 37 55.4 +2.3**	
LPG			*e*Sg	**Sg**	**21 38 25.5 +0.3**	
	comp=N,134nm,0.5s					
RUSF	**Rustrel**	**2.10 276**	Pn	**Pn**	**21 37 53.7 +0.7**	
LPL	**La Plagne**	**2.11 327**	*e*Pn	**Pn**	**21 37 55.4 +2.0**	
LPL			*e*Sn	**Sn**	**21 38 18.7 -1.0**	
LPL			*e*Sg	**Sg**	**21 38 26.2 +0.2**	
	comp=N,86nm,0.3s					
ORIF	**Oris-en-Rattie**	**2.13 304**	*e*P	**Pn**	**21 37 56.4 +2.8**	
ORIF	**Oris-en-Rattie**	**2.13 304**	*e*Pg	**Pb**	**21 37 58.7 +2.1**	
ORIF			*e*Sg	**Sg**	**21 38 26.8 +0.2**	
	comp=N,334nm,0.6s					
ORIF	**Oris-en-Rattie**	**2.13 304**	AML	AML		
	comp=N,358μm,0.8s					
ORIF				AML	AML	
	comp=E,360μm,0.8s					
ORIF	**Oris-en-Rattie**	**2.13 304**	Pn	**Pn**	**21 37 56.0 +2.5**	
ORIF	**Oris-en-Rattie**	**2.13 304**	Pg	**Pb**	**21 37 58.8 +2.1**	
GDM	**Grand'Maison**	**2.17 313**	Pn	**Pn**	**21 37 56.9 +2.8**	
MRGE	**Morge**	**2.22 336**	P	**Pn**	**21 37 55.9 +1.1**	
MRGE				AML	AML	
	comp=E,380μm,0.6s					
MRGE				AML	AML	
	comp=N,336μm,1.0s					
ARBF	**Arbois**	**2.22 264**	Pg	**Pb**	**21 38 01.0 +2.8**	
ARBF			Sg	**Sg**	**21 38 30.7 +1.2**	
REMY	**Saint-Rhmy-en**	**2.25 338**	P	**Pn**	**21 37 56.0 +0.6**	
REMY				AML	AML	
	comp=N,318μm,0.6s					
REMY				AML	AML	
	comp=E,236μm,0.5s					
REMY				AML	AML	
	comp=E,236μm,1.5s					
RSL	**Roselend**	**2.30 328**	Pn	**Pb**	**21 37 59.4 -0.1**	
MMK	**Mattmark**	**2.31 353**	P	**Pn**	**21 37 56.3 +0.2**	
MMK				AML	AML	
	comp=E,134μm,0.5s					
MMK				AML	AML	
	comp=N,139μm,1.0s					
MMK				AML	AML	
	comp=N,139μm,1.0s					
MMK				AML	AML	
	comp=E,134μm,1.5s					
SAUF	**chteau de Sau**	**2.37 275**	Pn	**Pn**	**21 37 58.7 +2.0**	
SAUF			Pg	**Pg**	**21 38 05.0 +1.5**	
GRN	**Grenoble**	**2.40 309**	Pn	**Pn**	**21 37 60.0 +2.8**	
GRN			Pg	**Pg**	**21 38 05.6 +1.6**	
MAON	**Monte Argentar**	**2.42 122**	P	**Pn**	**21 37 58.3 +0.9**	
ASQU	**Asqua**	**2.48 88**	P	**Pn**	**21 37 59.5 +1.3**	
OGSI	**Sixt**	**2.58 334**	Pn	**Pn**	**21 38 02.3 +2.6**	
CRE	**Caprese Michel**	**2.60 92**	P	**Pn**	**21 38 01.8 +1.8**	
CRE				AML	AML	
	comp=N,63μm,1.1s					
CRE				AML	AML	
	comp=E,60μm,1.3s					
CRE				AML	AML	
	comp=N,63μm,0.9s					
OGSM	**Saint Maurice**	**2.66 315**	Pn	**Pn**	**21 38 02.9 +2.2**	
OGSM			Pg	**Pb**	**21 38 08.0 +2.4**	
ROVR	**Rover Verones**	**2.70 45**	P	**Pn**	**21 38 02.3 +1.0**	
ROVR				AML	AML	
	comp=N,106μm,0.3s					
ROVR				AML	AML	
	comp=E,54μm,0.7s					
ROVR				AML	AML	
	comp=E,54μm,1.3s					
LATE	**Laterza**	**2.76 113**	P	**Pn**	**21 38 03.4 +1.3**	
VIVF	**Saint-Julien-l**	**2.87 294**	*e*Pn	**Pn**	**21 38 04.2 +0.5**	
VIVF	**Saint-Julien-l**	**2.87 294**	*e*Pg	**Pg**	**21 38 13.2 +0.1**	
VIVF			*e*Sn	**Sn**	**21 38 37.1 -1.1**	
VIVF			*e*Sg	**Sg**	**21 38 50.2 -0.1**	
	comp=E,96nm,0.3s					
OG35	**Corcelles**	**3.03 320**	Pn	**Pn**	**21 38 07.4 +1.6**	
TOLF	**Tolfa**	**3.16 121**	P	**Pn**	**21 38 08.8 +1.3**	
CABF	**La Chapelle**	**3.28 331**	*e*P	**Pn**	**21 38 11.0 +1.7**	
CABF			*e*Sn	**Sn**	**21 38 46.3 -2.0**	
	comp=E,14nm,0.3s					
LASF	**Ste Croix**	**3.28 277**	*e*Pn	**Pn**	**21 38 10.0 +0.8**	
LASF	**Ste Croix**	**3.28 277**	*e*Pg	**Pg**	**21 38 20.8 0.0**	
LASF			*e*Sn	**Sn**	**21 38 46.4 -1.8**	
	comp=E,75nm,0.5s					
BALST	**Balsthal**	**3.61 353**	Pn	**Pn**	**21 38 15.6 +1.8**	
MTCE	**Montecelio**	**3.65 117**	AML	AML		
	comp=N,57μm,0.8s					
MTCE				AML	AML	
	comp=E,72μm,1.6s					
MTCE				AML	AML	
	comp=N,57μm,1.2s					
MTCE				AML	AML	
	comp=E,72μm,0.4s					
FETA	**Feichten**	**3.66 26**	*i* Pn	**Pn**	**21 38 18.5 +3.9**	
	comp=E,0.6nm,0.2s,SNR=7.1					
FETA			*e*Sn	**Sn**	**21 39 00.5 +2.7**	
	comp=E,3.7nm,0.4s					
DAVA	**Damuels**	**3.68 16**	*i* Pn	**Pn**	**21 38 17.9 +2.9**	
	comp=E,2.4nm,0.2s,SNR=6.4					
DAVA			*e*Sn	**Sn**	**21 39 00.6 +2.3**	
	comp=E,16nm,0.3s					
CLAF	**Gruissan**	**3.90 263**	*e*Pn	**Pn**	**21 38 17.9 +0.2**	
CLAF	**Gruissan**	**3.90 263**	Pn	**Pn**	**21 38 17.9 +0.2**	
SQTA	**Sankt Quirin**	**4.00 29**	*e*Pn	**Pn**	**21 38 22.9 +3.8**	
	comp=E,4.3nm,0.2s,SNR=16					
SQTA			*e*Sn	**Sn**	**21 39 07.8 +1.8**	
	comp=E,10nm,0.4s					
MOTA	**Moosalm**	**4.07 27**	*i* Pn	**Pn**	**21 38 24.0 +3.8**	
	comp=E,3.5nm,0.2s,SNR=14					
MOTA			*i* Sn	**Sn**	**21 39 09.3 +1.5**	
	comp=E,6.8nm,0.4s					
RETA	**Reutte**	**4.09 23**	*i* Pn	**Pn**	**21 38 23.0 +2.6**	
	comp=E,1.5nm,0.2s,SNR=7.4					
RETA			*i* Sn	**Sn**	**21 39 08.5 +0.3**	
	comp=E,8.2nm,0.4s					
CLUD	**Cludinico**	**4.18 48**	AML	AML		
	comp=N,103μm,0.4s					
CLUD				AML	AML	
	comp=N,103μm,1.6s					
CLUD				AML	AML	
	comp=E,31μm,0.9s					
CLUD				AML	AML	
	comp=N,27μm,1.1s					
CLUD				AML	AML	
	comp=E,66μm,1.5s					
CLUD				AML	AML	
	comp=N,27μm,0.9s					
ABTA	**Abfaltersbach**	**4.18 43**	*i* Pn	**Pn**	**21 38 24.6 +2.9**	
	comp=N,5.9nm,0.4s					
ABTA			*i* Sn	**Sn**	**21 39 08.9 -1.6**	
	comp=N,3.4nm,0.3s					
WTTA	**Wattenberg**	**4.19 32**	*i* Pn	**Pn**	**21 38 25.3 +3.4**	
	comp=N,4.8nm,0.2s,SNR=19					
WTTA			*e*Sn	**Sn**	**21 39 10.3 -0.6**	
	comp=N,8.0nm,0.4s					
HINF	**Hinteralfeld**	**4.20 346**	*e*Pn	**Pn**	**21 38 22.5 +0.6**	
HINF			*e*Sn	**Sn**	**21 39 08.7 -2.1**	
	comp=N,9.9nm,0.3s					
SJAF	**Saint Jean de**	**4.22 254**	Pn	**Pn**	**21 38 21.9 -0.3**	
WATA	**Walderalm**	**4.23 31**	*i* Pn	**Pn**	**21 38 25.8 +3.4**	
	comp=N,3.1nm,0.2s,SNR=6.7					
WATA			*i* Sn	**Sn**	**21 39 12.1 +0.4**	
	comp=N,9.4nm,0.6s					
SMF	**Signal de Mont**	**4.31 314**	*e*Pn	**Pn**	**21 38 24.3 +0.9**	
SMF			*e*Sn	**Sn**	**21 39 11.6 -2.0**	
	comp=N,13nm,0.3s					
VSL	**Villasalto**	**4.33 170**	AML	AML		
	comp=N,38μm,0.7s					
VSL				AML	AML	
	comp=E,60μm,0.5s					
VSL				AML	AML	
	comp=E,60μm,1.5s					
FILF	**Fillols**	**4.42 256**	Pn	**Pn**	**21 38 26.4 +1.5**	
HAU	**Haudompre**	**4.48 342**	*e*Pn	**Pn**	**21 38 25.9 +0.2**	
HAU			*e*Sn	**Sn**	**21 39 15.1 -2.6**	
	comp=E,40nm,0.4s					
MTLF	**Montolieu**	**4.49 267**	*e*Pn	**Pn**	**21 38 26.2 +0.3**	
MTLF			*e*Sn	**Sn**	**21 39 15.9 -2.2**	
	comp=E,26nm,0.4s					
MTLF			*e*Sg	**Sg**	**21 39 40.9 -1.4**	
	comp=E,21nm,0.4s					
MTLF	**Montolieu**	**4.49 267**	Pn	**Pn**	**21 38 26.5 +0.6**	
AVF	**Avril sur Loir**	**4.66 312**	*e*Pn	**Pn**	**21 38 29.2 +1.0**	
AVF			*e*Sn	**Sn**	**21 39 19.6 -2.6**	
	comp=E,6.2nm,0.2s					
AVF			*e*Sg	**Sg**	**21 39 45.4 -2.3**	
	comp=E,8.7nm,0.4s					
CAF	**Calviac**	**4.67 287**	*e*Pn	**Pn**	**21 38 29.1 +0.7**	
CAF			*e*Sn	**Sn**	**21 39 20.1 -2.5**	
	comp=E,9.4nm,0.3s					
CAF			*e*Sg	**Sg**	**21 39 46.2 -1.8**	
	comp=E,13nm,0.3s					
MYKA	**Terra Mystica**	**4.70 51**	*i* Pn	**Pn**	**21 38 31.3 +2.5**	
	comp=E,2.3nm,0.3s					
MYKA			*i* Sn	**Sn**	**21 39 22.6 -0.7**	
	comp=E,1.6nm,0.2s					
CDF	**Champ du Feu**	**4.72 351**	*e*Pn	**Pn**	**21 38 29.2 +0.1**	
CDF			*e*Sn	**Sn**	**21 39 20.0 -3.7**	
	comp=E,7.0nm,0.3s					
LOR	**Lormes**	**4.73 319**	*e*Pn	**Pn**	**21 38 30.0 +0.8**	
	baz=141					
LOR			*e*Sn	**Sn**	**21 39 21.4 -2.6**	
	comp=E,20nm,0.5s,baz=135					
LOR	**Lormes**	**4.73 319**	Pn	**Pn**	**21 38 30.4 +1.2**	
SSF	**Saint Saulge**	**4.76 316**	*e*Pn	**Pn**	**21 38 30.2 +0.6**	
SSF			*e*Sn	**Sn**	**21 39 21.8 -2.8**	
	comp=E,5.6nm,0.3s					
SSF			*e*Sg	**Sg**	**21 39 48.5 -2.3**	
	comp=E,7.5nm,0.5s					
BGF	**Bois d'Agland**	**4.81 308**	*e*Pn	**Pn**	**21 38 31.2 +1.0**	
BGF			*e*Sn	**Sn**	**21 39 23.3 -2.5**	
	comp=E,13nm,0.3s					
BGF			*e*Sg	**Sg**	**21 39 50.3 -2.0**	
	comp=E,28nm,0.4s					
KBA	**Koelnbreinsper**	**4.82 45**	*i* Pn	**Pn**	**21 38 33.4 +2.8**	
	comp=E,2.2nm,0.4s					
SFTF	**Sexfontaines**	**5.02 334**	*e*Pn	**Pn**	**21 38 33.9 +0.8**	
	baz=150					
SFTF			*e*Sn	**Sn**	**21 39 27.5 -3.5**	
	comp=E,12nm,0.3s,baz=150					
TCF	**Toulx Ste Croi**	**5.05 302**	*e*Pn	**Pn**	**21 38 34.6 +1.0**	
TCF			*e*Sn	**Sn**	**21 39 28.9 -2.9**	
	comp=E,6.7nm,0.4s					
PAGF	**Fort de Pagny**	**5.14 340**	*e*Pn	**Pn**	**21 38 35.3 +0.5**	
	baz=158					
PAGF			*e*Sn	**Sn**	**21 39 30.3 -3.7**	
	comp=E,26nm,0.7s,baz=160					
RJF	**Les Rejaudoux**	**5.14 290**	*e*Pn	**Pn**	**21 38 35.7 +0.9**	
RJF	**Les Rejaudoux**	**5.14 290**	*e*Pg	**Pg**	**21 38 54.7 -1.7**	
RJF			*e*Sn	**Sn**	**21 39 31.0 -3.0**	
RJF			*e*Sg	**Sg**	**21 40 00.8 -2.2**	
	comp=E,7.2nm,0.3s					
OBKA	**Obir**	**5.16 56**	*e*Pn	**Pn**	**21 38 38.5 +3.3**	
	comp=E,1.3nm,0.3s					
OBKA			*e*Sn	**Sn**	**21 39 32.0 -2.8**	
	comp=E,3.4nm,0.5s					
MONQ	**Montcuq**	**5.21 279**	Pn	**Pn**	**21 38 37.0 +1.3**	
MEZF	**Maizieres J'vi**	**5.28 335**	*e*P	**Pn**	**21 38 39.6 +3.0**	
	baz=150					
MEZF			*e*Sn	**Sn**	**21 39 33.6 -3.7**	
	comp=E,10nm,0.3s,baz=154					
SAVF	**Savonnieres en**	**5.36 336**	*e*P	**Pn**	**21 38 40.1 +2.4**	
	baz=155					
SAVF			*e*Sn	**Sn**	**21 39 35.5 -3.8**	
	comp=E,15nm,0.7s,baz=154					
BIOA	**Bad Ischl, Aus**	**5.39 41**	*i* Pn	**Pn**	**21 38 42.2 +4.0**	
	comp=E,1.7nm,0.3s					
BIOA			*i* Sn	**Sn**	**21 39 41.1 +0.9**	
	comp=E,3.8nm,0.4s					
SOKA	**Soboth**	**5.54 56**	*i* Pn	**Pn**	**21 38 42.8 +2.5**	
	comp=E,0.3nm,0.2s					
SOKA			*i* Sn	**Sn**	**21 39 43.0 -0.9**	
	comp=E,2.0nm,0.5s					
LFF	**La Frestale**	**5.60 285**	*e*P	**Pn**	**21 38 44.2 +3.1**	
LFF	**La Frestale**	**5.60 285**	*e*Pg	**Pg**	**21 39 03.8 -1.4**	
LFF			*e*Sg	**Sg**	**21 40 15.2 -2.5**	
	comp=E,20nm,0.4s					
MOA	**Molln**	**5.80 43**	*i* Pn	**Pn**	**21 38 47.0 +3.0**	
	comp=E,0.5nm,0.2s					
EPF	**Esparros**	**5.90 266**	*e*P	**Pn**	**21 38 49.9 +4.6**	
EPF	**Esparros**	**5.90 266**	*e*Pg	Pg	21 39 07.8 -3.1	
EPF			*e*Sg	**Sg**	**21 40 24.8 -2.5**	
	comp=E,8.3nm,0.4s					
ARSA	**Arzberg**	**6.12 53**	*e*Pn	**Pn**	**21 38 50.1 +1.9**	
	comp=E,4.9nm,0.3s,SNR=13					
KHC	**Kasperske Hory**	**6.46 32**	*e*PN	**Pn**	**21 38 56.7 +3.7**	
KHC			*e*SN	**Sn**	**21 40 02.7 -4.0**	
KHC			*ex*	x	21 40 31.0	
CKRC	**Cesky Krumlov**	**6.52 37**	*e*SN	**Sn**	**21 40 05.2 -2.9**	
ETSF	**Etsaut**	**6.57 266**	*e*P	**Pn**	**21 38 59.3 +4.8**	
ETSF			*e*Sn	**Sn**	**21 40 05.7 -3.7**	
	comp=E,5.8nm,0.3s					
MFF	**Saint Martin d**	**6.66 298**	*e*P	**Pn**	**21 38 58.4 +2.8**	
MFF			*e*Sn	**Sn**	**21 40 07.7 -3.7**	
MFF			*e*Sg	**Sg**	**21 40 48.0 -3.6**	
	comp=E,4.8nm,0.5s					
CONA	**Conrad Observa**	**6.69 49**	*i* Pn	**Pn**	**21 38 57.7 +1.6**	
	comp=E,1.5nm,0.3s,SNR=5.4					
BAIF	**Baives**	**6.92 337**	*e*Pn	**Pn**	**21 38 59.6 +0.4**	
BAIF			*e*Sn	**Sn**	**21 40 12.7 -5.0**	
	comp=E,1.7nm,0.3s					
SJPF	**Ste Jean**	**7.02 268**	*e*P	**Pn**	**21 39 03.9 +3.3**	
SJPF			*e*Sn	**Sn**	**21 40 16.9 -3.4**	
	comp=E,1.4nm,0.3s					
MEM	**Membach**	**7.04 348**	*dx*	x	21 39 04.1	
NKC	**Novy Kostel**	**7.05 22**	*e*PN	**Pn**	**21 39 03.3 +2.3**	
PRU	**Pruhonice**	**7.53 32**	*e*PN	**Pn**	**21 39 10.2 +2.7**	
GOPC	**GO Pecny, Ondr**	**7.56 33**	*e*PN	**Pn**	**21 39 09.7 +1.6**	
LDF	**La Druitiere**	**7.62 312**	*e*Pn	**Pn**	**21 39 09.7 +0.8**	
LDF			*e*Sn	**Sn**	**21 40 30.2 -4.9**	
	comp=E,2.8nm,0.4s					
LDF			*e*Sg	**Sg**	**21 41 17.8 -4.7**	
	comp=E,5.6nm,0.7s					
GRR	**Gorron**	**7.91 309**	*e*Pn	**Pn**	**21 39 12.5 -0.3**	
GRR			*e*Sn	**Sn**	**21 40 37.1 -5.1**	
	comp=E,2.4nm,0.4s					
FLN	**La Foliniere**	**7.92 312**	*e*Pn	**Pn**	**21 39 13.4 +0.5**	
	baz=133					
FLN			*e*Sn	**Sn**	**21 40 37.0 -5.3**	
	comp=E,1.6nm,0.3s					
SGMF	**Saint Gilles**	**8.83 304**	*e*P	**Pn**	**21 39 29.7 +4.2**	
SGMF			*e*Sn	**Sn**	**21 40 59.1 -5.8**	
	comp=E,0.8nm,0.4s					
QUIF	**Quistinic**	**9.06 301**	*e*P	**Pn**	**21 39 33.3 +4.7**	
QUIF			*e*Sn	**Sn**	**21 41 04.9 -5.6**	
	comp=E,7.2nm,0.9s					
ROSF	**Rostrenen**	**9.30 304**	*e*P	Pn	21 39 36.8 +4.9	
ROSF			*e*Sn	**Sn**	**21 41 10.2 -6.1**	
	comp=E,0.8nm,0.4s					

NEIC ***08*** *21:41:08.3±1.5,30°.03S±0°.09×176°.8W±0°.1,h10km±1km, mb4.5/14, Error ellipse: s-maj=20.9km s-min=13.8km az=251.0*

IDC ***08*** *21:41:09.6±0.9,29°.95S×176°.41W,h45km±7km,mb3.9/8, mbtmp4.2/10,ML3.9/2,MS3.6/6, Error ellipse: s-maj=17.4km s-min=9.0km az=30.0*

ISC 08 21:41:08.2±0.6,29°.90S±0°.08×176°.54W±0°.08,h24km,n42, σ1.88/47,mb4.4/12,MS3.7/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.36 298**		P	**Pn**	**21 41 32.3**	**+0.6**
	847nm,0.4s,baz=90,slow=20,SNR=13						
RAO				S	**Sb**	**21 41 52.5**	**+2.5**
	3μm,0.4s,baz=93,slow=23,SNR=11						
URZ	**Urewera**	**9.86 211**		P	**Pn**	**21 43 27.1**	**-1.3**
	1.1nm,0.3s,baz=340,slow=4.0,SNR=7.9						
URZ				S	**Sn**	**21 45 18.5**	**+0.2**
	8.3nm,0.3s,baz=65,slow=19,SNR=9.3						
	3.1nm,0.4s						
URZ	**Urewera**	**9.86 211**		Pn	**Pn**	**21 43 26.9**	**-1.5**
MSVF	**Nonsavu**	**13.08 337**		LR	LR	21 48 37.6	
	comp=Z,430nm,18.2s,baz=171,slow=34						
RPZ	**Rata Peaks**	**16.97 212**		P	**Pn**	**21 44 59.3**	**-4.5**
	11nm,0.6s,baz=153,slow=2.3,SNR=2.4						
RPZ				S	Sn	21 47 56.5	-15
	5.6nm,0.6s,baz=268,slow=23,SNR=1.9						
DZM	**Mont Dzumac**	**17.16 293**		P	**P**	**21 45 09.4**	**+1.4**
	0.4nm,0.3s,baz=140,slow=17,SNR=4.1						
DZM				LR	LR	21 50 10.2	
	comp=Z,200nm,20.7s,baz=84,slow=31						
	6.6nm,0.8s						
DZM	**Mont Dzumac**	**17.16 293**		P	**Pn**	**21 45 07.3**	**+0.8**
DZM				IAmb	IAmb	21 45 14.7	
	comp=Z,24nm,1.2s						
RAR	**Rarotonga**	**17.41 64**		LR	LR	21 52 16.2	
	comp=Z,99nm,18.1s,baz=277,slow=38						
KOUNC	**Koumac, New Ca**	**19.66 294**		P	**P**	**21 45 35.7**	**+0.2**
KOUNC				IAmb	IAmb	21 45 41.0	
	comp=Z,47nm,1.0s						
PPT	**Papeete**	**27.49 70**		LR	LR	21 54 24.9	
	comp=Z,46nm,20.3s,baz=197,slow=29						
CTA	**Charters Tower**	**34.98 277**		P	**P**	**21 47 58.8**	**+0.1**
	comp=Z,7.3nm,0.7s,baz=95,slow=8.9,SNR=9.4						
CTA				LR	LR	22 01 16.1	
	comp=Z,165nm,19.1s,baz=82,slow=34						
	comp=Z,7.3nm,0.7s						
CTAO	**Charters Tower**	**34.98 277**		P	**P**	**21 47 58.6**	**-0.2**
CTAO				IAmb	IAmb	21 48 01.0	
	comp=Z,8.1nm,0.8s						
STKA	**Stephens Creek**	**35.83 256**		P	**P**	**21 48 06.1**	**+0.1**
	comp=Z,9.2nm,0.9s,baz=94,slow=11,SNR=10						
	comp=Z,9.2nm,0.9s						
STKA	**Stephens Creek**	**35.83 256**		P	**P**	**21 48 06.0**	**+0.1**
STKA				IAmb	IAmb	21 48 08.9	
	comp=Z,4.8nm,1.2s						
BBOO	**Buckleboo**	**40.32 253**		P	**P**	**21 48 43.4**	**-0.5**
BBOO				IAmb	IAmb	21 48 57.8	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**44.40 266**		P	**P**	**21 49 16.8**	**-0.4**
ASAR	**Alice Springs**	**44.40 266**		P	**P**	**21 49 15.6**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=102,slow=6.3,SNR=25						
ASAR				pP	**pwP**	**21 49 29.9**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=109,slow=7.9,SNR=6.2						
ASAR				PcP	**PP**	**21 51 00.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=111,slow=4.9,SNR=2.9						
	comp=Z,1.1nm,0.5s						
ASAR

WRA LR LR 22 07 23.4
comp=Z,83nm,19.1s,baz=356,slow=35
comp=Z,6.6nm,0.8s
WRA Warramunga Arr 45.35 271 P P 21 49 23.0 -1.7
VNDA Vanda 48.72 186 P P 21 49 49.0 -1.3
comp=Z,0.5nm,0.7s,baz=326,slow=7.3,SNR=8.6
comp=Z,0.5nm,0.7s
VNDA Vanda 48.72 186 P P 21 49 51.6 +1.3
MTN Manton Dam 51.16 278 P P 21 50 08.4 -1.2
KNRA Kununurra 51.94 273 P P 21 50 14.2 -1.2
CASY Casey 56.17 208 P P 21 50 47.3 +1.7
CASY IAmb IAmb 21 51 01.5
comp=Z,4.0nm,0.9s
QSPA South Pole Qui 60.21 180 P P 21 51 16.5 +2.4
TROLL Troll, Antarti 78.37 180 P P 21 53 07.7 +1.4
SNAA Sanae 78.61 178 P P 21 53 08.6 +1.0
SNAA Sanae 78.61 178 P P 21 53 09.1 +1.6
SNAA IAmb IAmb 21 53 10.1
comp=Z,5.3nm,1.3s
VNA3 Neumayer Olymp 78.71 176 P P 21 53 08.8 +0.8
VNA2 Neumayer-Watz 79.16 176 P P 21 53 11.7 +1.1
NVAR Mina Array Bea 87.02 42 P P 21 53 49.5 -2.3
comp=Z,1.3nm,0.8s,baz=219,slow=8.2,SNR=7.9
NVAR pP **sP 21 54 03.0 +3.6**
comp=Z,0.9nm,0.7s,baz=219,slow=6.7,SNR=4.6
comp=Z,1.3nm,0.8s
TXAR Lajitas Array 91.06 57 P P 21 54 09.6 -1.3
comp=Z,0.2nm,0.7s,baz=246,slow=3.8,SNR=2.5
comp=Z,0.2nm,0.7s
CMAR Chiang Mai Arr 94.44 289 P P 21 54 24.8 -1.8
comp=Z,0.3nm,0.3s,baz=176,slow=2.7,SNR=1.3
comp=Z,0.3nm,0.3s
MKAR Makanchi Array 118.42 310 PKP **PKPdf 21 59 51.8 -1.7**
comp=Z,0.7nm,0.9s,baz=132,slow=2.1,SNR=3.4
FINES FINESS Array B 145.10 341 PKPbc **PKPbc 22 00 40.3 -2.0**
comp=Z,3.3nm,0.6s,baz=52,slow=4.5,SNR=16
KBZ Khabaz 145.88 305 PKPbc **PKPdf 22 00 43.9 -0.8**
comp=Z,2.1nm,0.8s,baz=67,slow=1.4,SNR=3.7
NB2 NORSAR Subarra148.43 353 PKP **PKPdf 22 00 50.1 +1.6**
comp=Z,1.5nm,0.7s,baz=12,slow=4.6
NOA NORSAR Array B148.43 353 PKPbc **PKPdf 22 00 49.8 +1.3**
comp=Z,1.7nm,0.8s,baz=14,slow=4.4,SNR=5.7
AKASG Malin Array Be 151.65 324 PKPbc **PKPbc 22 00 58.7 -1.4**
comp=Z,2.6nm,0.5s,baz=46,slow=3.0,SNR=13
TORD Torodi Ar. Bea 163.25 174 PKPab **PKPab 22 01 59.1 -0.4**
comp=Z,1.8nm,0.8s,baz=189,slow=3.6,SNR=7.9
TORD pPKPab **sPKPab 22 02 13.5 +6.8**
comp=Z,1.6nm,0.8s,baz=217,slow=4.8,SNR=5.6

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*IDC **08** 21:43:20.1±1.7, 19°.46S×71°.62W, h0km, mb3.6/2, mbtmp3.6/4, ML2.1/1, MS3.7/1, Error ellipse: s-maj=55.3km s-min=27.4km az=54.0*
*GUC **08** 21:43:24.1±0.6, 19°.37S×71°.33W, h26km±4km, ML3.3*
ISC 08 21:43:19.5±2.1, 19°.44S±0°.04×71°.41W±0°.07, h2km±12km, n26, σ1°59/39, 12C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**1.31**	**51** ⇓	*i*P	**Pn**	**21 43 44.0**	**-0.9**
PB12				*e*S	**Sb**	**21 44 00.1**	**-2.0**
TA02	**Huaiquique**	**1.46**	**125** ⇑	*i*P	**Pg**	**21 43 48.2**	**+0.7**
TA02				*i*S	**Sg**	**21 44 07.1**	**+0.6**
TA02				IAML		21 44 08.1	
	comp=N,488nm,0.5s						
TA01	**Diego Aracena**	**1.61**	**134** ⇑	*i*P	**Pg**	**21 43 50.5**	**+0.1**
TA01				*e*S	**Sb**	**21 44 10.2**	**-0.5**
TA01				IAML		21 44 11.8	
	comp=N,683nm,0.5s						
HMBC	**Humberstone**	**1.66**	**121** ⇑	*i*P	**Pb**	**21 43 51.1**	**+0.3**
PATCX	**Punta Patache**	**1.81**	**140** ⇑	*i*P	**Pb**	**21 43 53.2**	**-0.2**
PATCX				*i*S	**Sb**	**21 44 16.0**	**-0.7**
GO01	**Chusmiza**	**2.10**	**97** ⇑	*i*P	**Pb**	**21 43 57.6**	**-1.0**
GO01				*e*S	**Sb**	**21 44 24.0**	**-1.4**
GO01				IAML		21 44 31.3	
	comp=N,328nm,0.3s						
PB16	**IPOC Station P**	**2.10**	**59**	*e*P	**Pn**	**21 43 56.7**	**+0.4**
PB16				*i*S	**Sn**	**21 44 22.7**	**-0.6**
PB08	**IPOC Station P**	**2.23**	**109**	*e*P	**Pb**	**21 43 59.4**	**-1.5**
PB08				*i*S	**Sb**	**21 44 27.2**	**-2.0**
PB08				IAML		21 44 43.5	
	comp=E,139nm,0.5s						
PB02	**IPOC Station P**	**2.35**	**143** ⇑	*i*P	**Pb**	**21 44 00.8**	**-1.8**
PB02				*e*S	**Sn**	**21 44 28.5**	**-0.3**
PB01	**IPOC Station P**	**2.41**	**132** ⇑	*i*P	**Pb**	**21 44 02.1**	**-1.6**
PB01				*i*S	**Sn**	**21 44 30.3**	**+0.1**
PB01				IAML		21 44 32.6	
	comp=N,335nm,0.5s						
PB07	**IPOC Station P**	**2.69**	**148** ⇑	*i*P	**Pn**	**21 44 05.4**	**+1.4**
PB07				*i*S	**Sn**	**21 44 35.9**	**-1.4**
PB07				IAML		21 44 41.0	
	comp=E,148nm,0.4s						
PB09	**IPOC Station P**	**3.10**	**140** ⇑	*i*P	**Pb**	**21 44 12.3**	**-3.2**
PB09				*i*S	**Sn**	**21 44 48.4**	**+0.9**
PB09				IAML		21 44 52.0	
	comp=E,125nm,0.6s						
PB04	**IPOC Station P**	**3.11**	**158** ⇑	*i*P	**Pn**	**21 44 10.7**	**+0.9**
PB04				*i*S	**Sn**	**21 44 46.1**	**-1.6**
PB06	**IPOC Station P**	**3.68**	**153** ⇑	*i*P	**Pn**	**21 44 18.6**	**+1.1**
PB06				*e*S	**Sn**	**21 45 02.5**	**+0.9**
LVC	**Limon Verde**	**3.93**	**144**	Pn	**Pn**	**21 44 24.0**	**+2.8**
	comp=E,21nm,0.3s,baz=28,slow=8.5,SNR=80						
LVC				Sn	**Sn**	**21 45 10.6**	**+2.5**
	comp=E,11nm,0.3s,baz=78,slow=20,SNR=14						
LVC	**Limon Verde**	**3.93**	**144** ⇑	*i*P	**Pn**	**21 44 24.0**	**+2.8**
LVC				*i*S	**Sn**	**21 45 09.3**	**+1.2**
PB10	**IPOC Station P**	**4.13**	**169**	*e*P	**Pn**	**21 44 24.1**	**+0.4**
PB10				*i*S	**Sn**	**21 45 09.4**	**-3.3**
PB15	**IPOC Station P**	**4.17**	**155**	*e*P	**Pn**	**21 44 25.3**	**+1.0**
PB15				*i*S	**Sn**	**21 45 13.1**	**-0.6**
LPAZ	**La Paz**	**4.42**	**45**	Pn	**Pn**	**21 44 31.4**	**+3.2**
	comp=E,0.1nm,0.3s,baz=231,slow=13,SNR=2.1						
	comp=E,0.6nm,0.3s						
H03N1	**Juan Fernandez**	**15.47**	**204**	T	T	22 03 13.3	
	baz=28,slow=72,SNR=8.0						
H03N2	**Juan Fernandez**	**15.48**	**204**	T	T	22 03 06.4	
	baz=28,slow=72,SNR=8.2						
H03N3	**Juan Fernandez**	**15.49**	**204**	T	T	22 03 12.5	
	baz=28,slow=72,SNR=6.0						
BDFB	**Brasilia**	**22.62**	**84**	LR	LR	21 58 42.4	
	comp=E,227nm,21.4s,baz=356,slow=40						
TXAR	**Lajitas Array**	**57.61**	**327**	P	**P**	**21 53 11.7**	**+0.4**
	comp=E,0.1nm,0.3s,baz=150,slow=7.3,SNR=1.6						
	comp=E,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**88.48**	**341**	P	**P**	**21 56 13.6**	**+0.5**
	comp=E,1.2nm,0.9s,baz=130,slow=4.8,SNR=4.4						
	comp=E,1.2nm,0.9s						
MKAR	**Makanchi Array**	**145.25**	**32**	PKPbc	**PKPdf**	**22 02 59.2**	**+0.3**
	comp=E,0.5nm,0.7s,baz=322,slow=4.4,SNR=3.0						

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*NOU **08** 22:03:14.3, 37°.14S×179°.60E, h0km, MLv4.3/7, Off E. Coast of N. Island, N.Z.*
*NEIC **08** 22:03:18.1±1.1, 37°.2S±0°.1×179°.19E±0°.09, h10km±2km, mb4.3/6, Error ellipse: s-maj=19.6km s-min=8.0km az=151.0*
*WEL **08** 22:03:24.8±1.1, 37°S±5°×17°9E±°, h14km±4km, M4.0/13, ML4.3/13, MLv4.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=99.8*
*IDC **08** 22:03:28.4±2.3, 37°.22S×178°.75E, h69km±15km, mb3.8/3, mbtmp4.1/3, MS3.5/2, Error ellipse: s-maj=41.7km s-min=14.1km az=127.0*
ISC 08 22:03:19.7±2.0, 37°.18S±0°.06×179°.12E±0°.08, h16km±10km, n121, σ1°56/128, mb4.2/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.75**	**240**		**Pb**	**22 03 35.0**	**+0.6**
MXZ					**Sg**	**22 03 43.1**	**-1.2**
MXZ	**Matakaoa Point**	**0.75**	**240**	P	**Pb**	**22 03 35.1**	**+0.7**
MXZ				S	**Sg**	**22 03 42.6**	**-1.8**
MXZ	**Matakaoa Point**	**0.75**	**240**	P	**Pb**	**22 03 35.1**	**+0.7**
WMGZ	**Waiomatatini S**	**0.85**	**221**	P	**Pn**	**22 03 39.2**	**+2.3**
PKGZ	**Pakihiroa**	**1.09**	**230**	P	**Pn**	**22 03 41.5**	**+1.2**
PKGZ				S	**Sg**	**22 03 55.3**	**+0.2**
PUZ	**Puketiti**	**1.12**	**218**	P	**Pn**	**22 03 42.9**	**+2.2**
PUZ				S	**Sg**	**22 03 57.0**	**+0.9**
HAZ	**Te Kaha**	**1.21**	**241**	P	**Pn**	**22 03 42.1**	**+0.1**
TWGZ	**Tauwhareparae**	**1.34**	**222**	P	**Pg**	**22 03 46.3**	**+0.7**
RUGZ	**Raukumara Rang**	**1.39**	**235**	P	**Pg**	**22 03 46.3**	**-0.2**
RUGZ				S	**Sn**	**22 04 01.8**	**-0.8**
CNGZ	**Carnagh Statio**	**1.49**	**209**	P	**Pg**	**22 03 48.9**	**+0.5**
WIZ	**White Island**	**1.58**	**257**	P	**Pn**	**22 03 47.1**	**+0.1**
TKGZ	**Te Karaka**	**1.61**	**218**	P	**Pg**	**22 03 50.4**	**-0.3**
TKGZ				S	**Sn**	**22 04 09.2**	**+1.3**
MWZ	**Matawai**	**1.71**	**227**	P	**Pb**	**22 03 51.1**	**+0.4**
MWZ				S	**Sn**	**22 04 10.8**	**+0.5**
WHRZ	**Whale Island**	**1.83**	**248**	P	**Pb**	**22 03 54.0**	**+1.1**
RIGZ	**Rimuhau**	**1.86**	**215**	P	**Pb**	**22 03 53.5**	**+0.1**
RIGZ				S	**Sn**	**22 04 14.9**	**+0.8**
RAGZ	**Rawiri**	**1.88**	**225**	P	**Pb**	**22 03 53.7**	**0.0**
URZ	**Urewera**	**1.92**	**235**	P	**Pn**	**22 03 53.6**	**+1.9**
	111nm,0.3s,baz=358,slow=4.8,SNR=65						
URZ				S	**Sn**	**22 04 16.2**	**+0.6**
	426nm,0.4s,baz=262,slow=19,SNR=34						
URZ				LR	LR	22 04 54.8	
	comp=Z,679nm,20.1s,baz=91,slow=52						
URZ	**Urewera**	**1.92**	**235**		**Pn**	**22 03 53.5**	**+1.8**
URZ				Sn	**Sn**	**22 04 16.4**	**+0.8**
URZ	**Urewera**	**1.92**	**235**	P	**Pb**	**22 03 53.7**	**-0.6**
URZ				S	**Sn**	**22 04 15.6**	**0.0**
URZ	**Urewera**	**1.92**	**235**	P	**Pb**	**22 03 54.0**	**-0.4**
EDRZ	**Edgecumbe**	**2.10**	**243**	P	**Pn**	**22 03 56.1**	**+1.7**
SNGZ	**Shannon Statio**	**2.13**	**221**	P	**Pn**	**22 03 56.6**	**+2.0**
OPRZ	**Ohinepanea**	**2.15**	**251**	P	**Pn**	**22 03 56.0**	**+1.1**
OPRZ				S	**Sn**	**22 04 19.4**	**-1.7**
KNZ	**Kokohu**	**2.16**	**212**	P	**Pn**	**22 03 56.4**	**+1.4**
MHGZ	**Mahia Peninsul**	**2.19**	**206**	P	**Pn**	**22 03 57.3**	**+1.9**
RTZ	**Ruatahuna**	**2.22**	**229**	P	**Pb**	**22 03 58.6**	**-0.8**
MUGZ	**Murupara**	**2.27**	**235**	P	**Pn**	**22 03 58.2**	**+1.8**
MYRZ	**Mayor Island**	**2.30**	**267**	P	**Pn**	**22 03 58.8**	**+1.8**
TGRZ	**Tauranga**	**2.34**	**256**	P	**Pn**	**22 03 59.1**	**+1.6**
RAHZ	**Arahi**	**2.36**	**222**	P	**Pn**	**22 03 59.7**	**+1.9**
RRRZ	**Republican Roa**	**2.37**	**240**	P	**Pn**	**22 04 00.2**	**+2.3**
OMRZ	**Omania**	**2.37**	**246**	P	**Pb**	**22 04 01.1**	**-0.9**
WHHZ	**Waihua**	**2.41**	**218**	P	**Pn**	**22 04 00.2**	**+1.8**
KARZ	**Kaharoa**	**2.43**	**249**	P	**Pn**	**22 04 01.3**	**+2.5**
MTHZ	**Maungataniwha**	**2.45**	**227**	P	**Pn**	**22 04 01.2**	**+2.1**
HSRZ	**Hossack Road**	**2.54**	**243**	P	**Pb**	**22 04 06.2**	**+1.2**
HRRZ	**Handcock Road**	**2.55**	**241**	P	**Pb**	**22 04 05.0**	**-0.1**
ALRZ	**Allen Road**	**2.59**	**237**	P	**Pn**	**22 04 02.8**	**+1.8**
KMRZ	**Kaimai**	**2.62**	**254**	P	**Pn**	**22 04 03.3**	**+2.0**
NMHZ	**Naumai**	**2.64**	**223**	P	**Pn**	**22 04 03.9**	**+2.2**
ARHZ	**Aropaoanui**	**2.67**	**218**	P	**Pn**	**22 04 03.7**	**+1.7**
MRHZ	**Matea Rd**	**2.70**	**232**	P	**Pn**	**22 04 04.9**	**+2.4**
KUZ	**Kuaotunu**	**2.76**	**278**	P	**Pn**	**22 04 02.9**	**-0.4**
KUZ	**Kuaotunu**	**2.76**	**278**	P	**Pn**	**22 04 03.2**	**-0.1**
BKZ	**Black Stump Fm**	**2.87**	**226**		**Pn**	**22 04 05.9**	**+1.2**
BKZ	**Black Stump Fm**	**2.87**	**226**	P	**Pn**	**22 04 06.3**	**+1.6**
BKZ	**Black Stump Fm**	**2.87**	**226**	P	**Pn**	**22 04 07.0**	**+2.2**
KUTZ	**Kaahu Road**	**2.92**	**243**	P	**Pn**	**22 04 08.3**	**+2.8**
CKHZ	**Cape Kidnapper**	**2.95**	**212**	P	**Pn**	**22 04 06.5**	**+0.7**
MCHZ	**McNeill Hill**	**2.96**	**219**	P	**Pn**	**22 04 07.4**	**+1.4**
KWHZ	**Kaweka Forest**	**3.08**	**223**	P	**Pn**	**22 04 09.0**	**+1.2**
GRZ	**Great Barrier**	**3.09**	**286**	P	**Pn**	**22 04 08.6**	**+0.8**
RITZ	**Rihia Road**	**3.14**	**234**	P	**Pn**	**22 04 10.8**	**+2.3**
KAHZ	**Kahuranaki**	**3.15**	**213**	P	**Pn**	**22 04 09.2**	**+0.6**
MKAZ	**Moumakai**	**3.17**	**270**	P	**Pn**	**22 04 09.0**	**+0.1**
WIAZ	**Waiheke Island**	**3.22**	**276**	P	**Pn**	**22 04 11.2**	**+1.6**
KRHZ	**Kereru**	**3.27**	**221**	P	**Pn**	**22 04 10.8**	**+0.5**
TMVZ	**Te Maari**	**3.31**	**233**	P	**Pn**	**22 04 12.4**	**+1.4**
ETVZ	**East Tongariro**	**3.32**	**233**	P	**Pn**	**22 04 12.7**	**+1.6**
NTVZ	**North Tongarir**	**3.32**	**234**	P	**Pn**	**22 04 12.9**	**+1.8**
BHHZ	**Black Hill Sta**	**3.33**	**225**	P	**Pn**	**22 04 12.5**	**+1.4**
KRVZ	**Karewarewa**	**3.34**	**234**	P	**Pn**	**22 04 13.3**	**+1.9**
PXZ	**Pawanui**	**3.35**	**211**	P	**Pn**	**22 04 11.5**	**+0.2**
ETAZ	**East Tamaki Re**	**3.36**	**273**	P	**Pn**	**22 04 12.4**	**+0.8**
OTVZ	**Oturere**	**3.37**	**233**	P	**Pn**	**22 04 13.8**	**+2.1**
NNVZ	**North Ngauruho**	**3.38**	**234**	P	**Pn**	**22 04 14.3**	**+2.4**
WTVZ	**West Tongariro**	**3.39**	**234**	P	**Pn**	**22 04 15.5**	**+3.5**
SNVZ	**South Ngauruho**	**3.40**	**233**	P	**Pn**	**22 04 13.7**	**+1.5**
MBAZ	**Motutapu North**	**3.41**	**276**	P	**Pn**	**22 04 13.1**	**+1.0**
NGZ	**Ngauruhoe**	**3.41**	**233**	P	**Pn**	**22 04 14.0**	**+1.6**
TUVZ	**Tukino**	**3.43**	**232**	P	**Pn**	**22 04 14.5**	**+1.9**
MOVZ	**Moawhango**	**3.46**	**229**	P	**Pn**	**22 04 13.8**	**+0.9**
TWVZ	**Taurewa**	**3.46**	**236**	P	**Pn**	**22 04 15.4**	**+2.3**
WHVZ	**Whangaehu Hut**	**3.48**	**232**	P	**Pn**	**22 04 15.4**	**+2.0**
ABAZ	**Army Bay**	**3.49**	**278**	P	**Pn**	**22 04 14.7**	**+1.4**
FWVZ	**Far West T-bar**	**3.49**	**233**	P	**Pn**	**22 04 15.2**	**+1.7**
WNVZ	**Wahianoa**	**3.50**	**231**	P	**Pn**	**22 04 14.9**	**+1.3**
HBAZ	**Herne Bay Bore**	**3.53**	**274**	P	**Pn**	**22 04 16.0**	**+2.1**
PNHZ	**Pukenui**	**3.56**	**219**	P	**Pn**	**22 04 14.7**	**+0.4**
WPHZ	**Waipukurau**	**3.56**	**213**	P	**Pn**	**22 04 14.7**	**+0.4**
AWAZ	**Awhitu Peninsu**	**3.58**	**271**	P	**Pn**	**22 04 15.4**	**+0.9**
HIZ	**Hauiti**	**3.63**	**247**	P	**Pn**	**22 04 18.4**	**+3.1**
WTAZ	**Waiatarua**	**3.65**	**273**	P	**Pn**	**22 04 16.8**	**+1.3**
RVAZ	**Riverhead Bore**	**3.66**	**275**	P	**Pn**	**22 04 16.7**	**+1.0**
ANWZ	**Angora Road**	**3.87**	**212**	P	**Pn**	**22 04 19.3**	**+0.8**
VRZ	**Vera Road**	**3.95**	**239**	P	**Pn**	**22 04 22.1**	**+2.5**
WCZ	**Waipu Caves**	**4.04**	**286**	P	**Pn**	**22 04 22.1**	**+1.2**
POWZ	**Post Office Ro**	**4.14**	**218**	P	**Pn**	**22 04 22.9**	**+0.6**
WAZ	**Wanganui**	**4.14**	**230**	P	**Pn**	**22 04 24.1**	**+1.8**
TIWZ	**Tintock**	**4.38**	**214**	P	**Pn**	**22 04 25.4**	**-0.2**
NEZ	**North Egmont**	**4.47**	**241**	P	**Pn**	**22 04 30.2**	**+3.3**
KHEZ	**Kahui Hut**	**4.54**	**241**	P	**Pn**	**22 04 31.9**	**+4.1**
OUZ	**Omahuta**	**4.88**	**292**		**Pn**	**22 04 33.9**	**+1.5**
OUZ	**Omahuta**	**4.88**	**292**	P	**Pn**	**22 04 34.0**	**+1.6**
OUZ	**Omahuta**	**4.88**	**292**	P	**Pn**	**22 04 34.3**	**+1.9**
TUWZ	**Tuamarina**	**5.84**	**222**	Pn	**Pn**	**22 04 44.1**	**-1.4**
BSWZ	**Blackbirch Sta**	**6.08**	**220**	P	**Pn**	**22 04 49.0**	**+0.1**
TKNZ	**Takaka Hill**	**6.14**	**229**	P	**Pn**	**22 04 49.6**	**-0.2**
QRZ	**Quartz Range**	**6.29**	**233**	Pn	**Pn**	**22 04 50.3**	**-1.5**
QRZ	**Quartz Range**	**6.29**	**233**	P	**Pn**	**22 04 52.0**	**+0.2**
KHZ	**Kahutara**	**6.76**	**218**	P	**Pn**	**22 04 57.0**	**-1.3**
CTZ	**Chatham Island**	**7.30**	**155**	P	**Pn**	**22 05 09.0**	**+3.3**
RAO	**Raoul Island**	**8.29**	**18**	P	Pb	22 05 29.2	-14
	277nm,0.5s,baz=233,slow=20,SNR=2.1						
RAO				S	Sn	22 07 01.2	+8.7
	150nm,0.4s,baz=270,slow=20,SNR=1.5						
RPZ	**Rata Peaks**	**8.96**	**221**	P	**Pn**	**22 05 25.4**	**-3.1**
	8.4nm,0.9s,baz=10.0,slow=17,SNR=1.7						
RPZ				S	Sn	22 06 56.9	-12
	7.1nm,0.3s,baz=14,slow=17,SNR=19						
RPZ				LR	LR	22 09 46.7	
	comp=Z,287nm,20.3s,baz=56,slow=43						
DZM	**Mont Dzumac**	**18.63**	**320**	LR	LR	22 13 10.8	
	comp=Z,164nm,18.3s,baz=177,slow=32						
COEN	**Coen**	**39.47**	**296**	P	**P**	**22 10 48.8**	**-0.6**
COEN				IAmb	IAmb	22 11 08.9	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**40.89**	**276**	P	**P**	**22 11 00.1**	**-1.1**
AS31				IAmb	IAmb	22 11 02.8	
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**40.89**	**276**	P	**P**	**22 11 01.4**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=117,slow=8.0,SNR=16						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**40.89**	**276**	P	**P**	**22 10 59.8**	**-1.4**
WR0	**Warramunga Arr**	**42.33**	**281**	P	**P**	**22 11 11.6**	**-1.4**
WR0				IAmb	IAmb	22 11 18.6	
	comp=Z,6.4nm,1.2s						
WRA	**Warramunga Arr**	**42.50**	**281**	P	**P**	**22 11 14.6**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=120,slow=8.0,SNR=48						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**42.50**	**281**	P	**P**	**22 11 13.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**50.37**	**277**	P	**P**	**22 12 15.3**	**-0.9**
TOLI2	**Tolitoli**	**65.95**	**291**	P	**P**	**22 14 04.8**	**-0.5**
TOLI2				IAmb	IAmb	22 14 15.5	
	comp=Z,3.9nm,1.0s						
H03N3	**Juan Fernandez**	**78.93**	**124**	T	T	23 42 05.9	
	baz=234,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**78.94**	**124**	T	T	23 42 04.5	
	baz=234,slow=72,SNR=10						
H03N1	**Juan Fernandez**	**78.95**	**124**	T	T	23 42 08.1	
	baz=234,slow=72,SNR=14						
CMAR	**Chiang Mai Arr**	**93.45**	**290**	P	**P**	**22 16 34.2**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=138,slow=9.5,SNR=1.5						
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**144.59**	**344**	PKP	**PKPdf**	**22 22 54.0**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=20,slow=3.9,SNR=5.2						
FINES	**FINESS Array B**	**150.44**	**334**	PKPbc	**PKiKP**	**22 23 11.0**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=68,slow=3.7,SNR=5.7						
TORD	**Torodi Ar. Bea**	**155.95**	**186**	PKPab	**PKPab**	**22 23 42.1**	**+1.7**
	comp=Z,0.6nm,1.0s,baz=155,slow=3.9,SNR=2.7						

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*NEIC **08** 22:17:25.6±1.1, 62°.30N±0°.02×154°.62W±0°.06, h15km±6km, Error ellipse: s-maj=4.3km s-min=3.4km az=97.0*
*AEIC **08** 22:17:25.7±1.2, 62°.28N±0°.02×154°.56W±0°.06, h14km±5km, ML3.3/115, ML3.5/126(NEIC), Error ellipse: s-maj=4.1km s-min=2.6km az=72.0*
ISC 08 22:17:25.6±0.9, 62°.29N±0°.02×154°.58W±0°.03, h15km±6km, n206, σ0°64/203, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
L19K	**White Mountain**	**0.17**	**230**		**Pg**	**22 17 29.8**	**0.0**
L19K					**Sg**	**22 17 32.9**	**+0.3**
L19K	**White Mountain**	**0.17**	**230**	IAML		22 17 33.2	
	comp=N,12μm,0.3s						
L19K				IAML		22 17 33.3	
	comp=E,25μm,0.5s						
L19K	**White Mountain**	**0.17**	**230**	P	**Pg**	**22 17 29.8**	**0.0**
	baz=54						
L19K				S	**Sg**	**22 17 32.9**	**+0.3**
	baz=54						
L20K	**Farewell, AK**	**0.38**	**59**		**Pg**	**22 17 33.3**	**0.0**
L20K	**Farewell, AK**	**0.38**	**59**	P	**Pg**	**22 17 33.3**	**0.0**
	baz=238						
M19K	**Big River Lodg**	**0.40**	**167**		**Pg**	**22 17 33.0**	**-0.6**
M19K					**Sg**	**22 17 38.7**	**-0.3**
M19K	**Big River Lodg**	**0.40**	**167**	IAML		22 17 39.0	
	comp=E,26μm,0.4s						
M19K				IAML		22 17 39.2	
	comp=N,20μm,0.4s						
M19K	**Big River Lodg**	**0.40**	**167**	P	**Pg**	**22 17 33.0**	**-0.6**
	baz=348						
M19K				S	**Sg**	**22 17 38.7**	**-0.3**
	baz=348						
M20K	**Styx River**	**0.79**	**120**		**Pg**	**22 17 40.1**	**-0.9**
M20K	**Styx River**	**0.79**	**120**	P	**Pg**	**22 17 40.1**	**-0.9**
	baz=301						
TT01	**Tatalina**	**0.91**	**313**		**Pg**	**22 17 43.2**	**0.0**
TT01					**Sn**	**22 17 56.2**	**-0.4**
TTA	**Tatalina**	**0.92**	**315**		**Pg**	**22 17 43.5**	**+0.1**
TTA	**Tatalina**	**0.92**	**315**	P	**Pg**	**22 17 43.5**	**+0.1**
	baz=134						
K20K	**Telida**	**1.10**	**12**		**Pb**	**22 17 45.8**	**-0.4**
K20K					**Sn**	**22 18 01.7**	**+0.5**
K20K	**Telida**	**1.10**	**12**	P	**Pb**	**22 17 45.8**	**-0.4**
	baz=192						
K20K				S	**Sn**	**22 18 01.7**	**+0.5**
	baz=192						
PPLA	**Purkeypile**	**1.26**	**60**		**Pn**	**22 17 48.5**	**-0.2**
PPLA					**Sn**	**22 18 05.8**	**+0.3**
PPLA	**Purkeypile**	**1.26**	**60**	P	**Pn**	**22 17 48.5**	**-0.2**
	baz=242						
PPLA				S	**Sn**	**22 18 05.8**	**+0.3**
	baz=242						
SVW2	**Sparrevohn**	**1.29**	**202**		**Pn**	**22 17 48.4**	**-0.6**
SVW2					**Sn**	**22 18 06.2**	**+0.2**
SKT	**Skwentna**	**1.46**	**101**		**Pn**	**22 17 51.9**	**+0.5**
SKT	**Skwentna**	**1.46**	**101**	IAML		22 18 13.2	
	comp=E,793nm,0.6s						
SKT				IAML		22 18 13.9	
	comp=N,757nm,0.5s						
SKT	**Skwentna**	**1.46**	**101**	P	**Pn**	**22 17 51.9**	**+0.5**
	baz=283						
SPBG	**Spurr Blockage**	**1.47**	**134**		**Pn**	**22 17 50.9**	**-0.7**
SPBG					**Sn**	**22 18 11.0**	**+0.3**
N19K	**Bonanza Creek**	**1.48**	**178**		**Pn**	**22 17 51.4**	**-0.3**
N19K					**Sb**	**22 18 11.4**	**-0.1**
N19K	**Bonanza Creek**	**1.48**	**178**	IAML		22 18 13.0	
	comp=E,1μm,0.4s						
N19K	**Bonanza Creek**	**1.48**	**178**	P	**Pn**	**22 17 51.4**	**-0.3**
	baz=359						
N19K				S	**Sb**	**22 18 11.4**	**-0.1**
	baz=359						
STLK	**Strandline Lak**	**1.52**	**120**		**Pn**	**22 17 52.6**	**+0.3**
CKL	**Chakachamna La**	**1.53**	**135**		**Pn**	**22 17 52.6**	**+0.1**
SPCP	**Crater Peak Br**	**1.54**	**131**		**Pn**	**22 17 53.2**	**+0.5**
SPCP					**Sn**	**22 18 12.9**	**+0.5**
SPCR	**Spurr Chakacha**	**1.57**	**133**		**Pn**	**22 17 53.5**	**+0.6**
SPCR	**

comp=N,196nm,0.9s
P18K Big Mountain, 2.93 187 P Pn 22 18 11.7 +0.1
baz=6.1
MCK McKinley 2.95 58 Pn 22 18 12.2 +0.3
MCK McKinley 2.95 58 IAML 22 19 01.1
comp=N,186nm,1.4s
MCK IAML 22 19 01.3
comp=E,114nm,0.9s
MCK McKinley 2.95 58 P Pn 22 18 12.2 +0.3
baz=243
SML Sawmill 2.98 97 Pn 22 18 12.5 +0.2
SML Sawmill 2.98 97 IAML 22 19 02.7
comp=E,248nm,0.8s
SML IAML 22 19 03.4
comp=N,219nm,0.9s
SML Sawmill 2.98 97 P Pn 22 18 12.5 +0.2
baz=282
HOM Homer 3.00 150 Pn 22 18 12.4 -0.1
KNK Knik Glacier 3.03 104 Pn 22 18 14.0 +1.0
KNK Knik Glacier 3.03 104 P Pn 22 18 14.0 +1.0
baz=289
BRLK Bradley Lake 3.11 143 Pn 22 18 14.4 +0.4
BRLK Bradley Lake 3.11 143 IAML 22 19 00.2
comp=N,140nm,0.5s
I21K Tanana 3.12 21 Pn 22 18 13.9 -0.3
I21K Tanana 3.12 21 IAML 22 19 09.4
comp=N,195nm,0.8s
I21K Tanana 3.12 21 P Pn 22 18 13.9 -0.3
baz=203
BRSE Bradley Lake S 3.17 142 Pn 22 18 15.5 +0.7
BRSE Bradley Lake S 3.17 142 P Pn 22 18 15.5 +0.7
baz=326
WAT6 Susitna Watana 3.19 82 Pn 22 18 16.4 +1.1
WAT6 Susitna Watana 3.19 82 P Pn 22 18 16.4 +1.1
baz=268
O16K Kokwok River B 3.20 214 Pn 22 18 14.7 -0.6
CNPM China Poot 3.22 148 Pn 22 18 16.0 +0.4
CNPM China Poot 3.22 148 IAML 22 19 04.0
comp=E,110nm,0.7s
P17K Kvichak River 3.24 197 Pn 22 18 15.7 0.0
MLY Manley 3.24 30 Pn 22 18 15.0 -0.8
MLY Manley 3.24 30 IAML 22 19 16.4
comp=N,105nm,0.8s
MLY Manley 3.24 30 P Pn 22 18 15.0 -0.8
baz=213
M23K Glacier View 3.27 96 Pn 22 18 16.5 +0.3
SEW Seward 3.31 129 Pn 22 18 17.1 +0.4
SEW Seward 3.31 129 P Pn 22 18 17.1 +0.4
baz=314
PWL Port Wells 3.31 113 Pn 22 18 17.2 +0.4
PWL Port Wells 3.31 113 IAML 22 19 16.7
comp=E,88nm,1.1s
NEA2 Nenana 3.38 45 Pn 22 18 16.6 -1.1
NEA2 Nenana 3.38 45 P Pn 22 18 18.0 +0.2
baz=229
Q19K Cape Douglas, 3.41 172 Pn 22 18 17.6 -0.5
Q19K Cape Douglas, 3.41 172 P Pn 22 18 18.4 +0.4
baz=353
DHY Denali Highway 3.41 73 Pn 22 18 17.7 -0.6
DHY IAML 22 19 15.6
comp=E,110nm,1.1s
DHY IAML 22 19 17.1
comp=N,95nm,1.2s
DHY Denali Highway 3.41 73 P Pn 22 18 18.2 -0.1
baz=260
SCM Sheep Creek Mo 3.44 94 Pn 22 18 19.2 +0.6
SCM Sheep Creek Mo 3.44 94 IAML 22 19 19.5
comp=E,163nm,0.9s
SCM IAML 22 19 22.4
comp=N,131nm,1.3s
H21K Melozitna Rive 3.47 12 Pn 22 18 19.2 +0.2
H21K Melozitna Rive 3.47 12 IAML 22 19 19.4
comp=E,89nm,0.9s
H21K Melozitna Rive 3.47 12 P Pn 22 18 19.2 +0.2
baz=194
WRH Wood River Hil 3.65 50 Pn 22 18 20.3 -1.1
WRH IAML 22 19 27.1
comp=E,71nm,1.3s
KAHC Katmai Hardscr 3.66 184 Pn 22 18 22.2 +0.5
I23K Minto, Yukon-K 3.69 37 Pn 22 18 20.9 -1.0
I23K IAML 22 19 27.6
comp=N,114nm,0.9s
I23K IAML 22 19 38.5
comp=E,67nm,1.1s
I23K Minto, Yukon-K 3.69 37 P Pn 22 18 22.3 +0.3
baz=221
IM03 3.73 5 Pn 22 18 22.9 +0.5
IMAR Indian Mountai 3.73 5 Pn **Pn 22 18 22.3 -0.2**
Q16K King Salmon 3.77 197 Pn 22 18 23.2 +0.2
GLI Glacier Island 3.85 108 Pn 22 18 23.6 -0.6
GLI IAML 22 19 28.3
comp=E,68nm,0.7s
GLI IAML 22 19 42.0
comp=N,56nm,0.9s
SYI Shuyak Island 3.85 163 Pn 22 18 24.6 +0.4
CCB Clear Creek Bu 3.85 49 Pn 22 18 23.0 -1.2
CCB IAML 22 19 24.6
comp=N,55nm,1.4s
CCB IAML 22 19 25.4
comp=E,76nm,0.8s
H22K Ishtalitna Cre 3.88 20 Pn 22 18 24.2 -0.4
MDM Murphy Dome 3.90 44 Pn 22 18 23.6 -1.3
MDM IAML 22 19 35.5
comp=N,72nm,0.7s
M24K Tolsona, Glenn 3.94 89 Pn 22 18 24.2 -1.3
M24K Tolsona, Glenn 3.94 89 P Pn 22 18 26.3 +0.8
baz=276
JPK Jack Peak 4.00 105 Pn 22 18 26.5 +0.2
KAKN Katmai Knife C 4.01 184 Pn 22 18 26.7 +0.2
HDA Harding Lake 4.04 55 Pn 22 18 27.4 +0.7
HDA IAML 22 19 40.4
comp=E,51nm,1.0s
HDA IAML 22 19 46.3
comp=N,90nm,0.8s
ANCK Angle Creek 4.13 187 Pn 22 18 28.6 +0.5
P23K Montague Islan 4.17 120 Pn 22 18 28.6 +0.1
KLU Klutina 4.17 97 Pn 22 18 28.7 0.0
KLU IAML 22 19 49.5
comp=N,47nm,0.9s
KLU Klutina 4.17 97 P Pn 22 18 29.0 +0.3
baz=285
FID Port Fidalgo 4.17 108 Pn 22 18 28.3 -0.4
H23K Yukon River 4.18 30 Pn 22 18 27.9 -0.8
H23K IAML 22 19 39.9
comp=E,50nm,1.0s
H23K IAML 22 19 46.1
comp=N,45nm,0.9s
H23K Yukon River 4.18 30 P Pn 22 18 27.8 -0.9
baz=214
IL31 4.25 51 Pn 22 18 29.1 -0.4
POKR Poker Plat Res 4.26 45 Pn 22 18 29.3 -0.5
POKR Poker Plat Res 4.26 45 IAML 22 19 47.6
comp=N,43nm,1.0s
POKR IAML 22 19 54.6
comp=E,40nm,0.9s
POKR Poker Plat Res 4.26 45 P Pn 22 18 29.3 -0.5
baz=231
PAX Paxson 4.26 77 Pn 22 18 31.2 +1.3
PAX Paxson 4.26 77 P Pn 22 18 30.0 +0.1
baz=265
G21K Allakaket 4.27 6 Pn 22 18 30.1 +0.2
HIN Hinchinbrook I 4.33 112 Pn 22 18 30.3 -0.4
HIN IAML 22 19 55.7
comp=E,41nm,1.0s
HIN IAML 22 20 00.9
comp=N,54nm,1.0s
DIV Divide 4.35 102 Pn 22 18 31.4 +0.3
EYAK Cordova Ski Ar 4.59 108 Pn 22 18 34.8 +0.5
H24K Noodor Dome 4.62 37 Pn 22 18 33.6 -1.2
H24K IAML 22 20 03.8
comp=E,32nm,1.1s
H24K Noodor Dome 4.62 37 P Pn 22 18 34.0 -0.8
baz=222
KDAK Kodiak Island 4.63 167 Pn 22 18 36.0 +1.1
KDAK Kodiak Island 4.63 167 IAML 22 19 51.5
comp=E,34nm,3.2s
KDAK IAML 22 20 16.5
comp=E,39nm,3.5s
J25K Salcha River, 4.74 57 Pn 22 18 35.9 -0.6
J25K IAML 22 19 58.7
comp=N,37nm,1.5s
J25K IAML 22 20 09.1
comp=E,33nm,0.8s
J25K Salcha River, 4.74 57 P Pn 22 18 38.0 +1.5
baz=245
N25K Chitina, Valde 4.76 94 Pn 22 18 35.8 -0.9
N25K Chitina, Valde 4.76 94 P Pn 22 18 36.9 +0.1
baz=283
G23K Bananza Creek 4.85 22 Pn 22 18 38.0 0.0
BMRM Bremner River 4.94 101 Pn 22 18 39.0 -0.2
BMRM Bremner River 4.94 101 P Pn 22 18 39.4 +0.2
baz=290
F21K Alatna River 4.97 5 Pn 22 18 40.1 +0.5
DOT Dot Lake 4.99 70 Pn **Pn 22 18 40.9 +1.1**
GOAT Goat Mountain 5.03 106 Pn 22 18 40.5 +0.1
MENT Mentasta 5.06 78 Pn **Pn 22 18 42.0 +1.3**
SCRK Sand Creek 5.09 66 Pn 22 18 42.2 +0.9
SCRK Sand Creek 5.09 66 IAML 22 20 09.9
comp=E,36nm,1.1s
SCRK IAML 22 20 18.0
comp=N,30nm,1.7s
SCRK Sand Creek 5.09 66 P Pn 22 18 42.2 +0.9
baz=255
OHAK Old Harbor 5.13 172 Pn 22 18 42.2 +0.5
OHAK Old Harbor 5.13 172 IAML 22 20 17.8
comp=N,45nm,3.1s
OHAK IAML 22 20 34.6
comp=E,36nm,2.9s
OHAK Old Harbor 5.13 172 P Pn 22 18 42.2 +0.5
baz=353
PRP Porcupine Dome 5.14 47 Pn **Pn 22 18 41.6 -0.4**
PRP IAML 22 20 13.1
comp=E,29nm,0.6s
PRP IAML 22 20 24.1
comp=N,29nm,1.4s
GLB Gilahina Butte 5.17 95 Pn **Pn 22 18 42.1 -0.2**
GLB IAML 22 20 07.9
comp=N,27nm,1.0s
HMT Hamilton 5.34 107 Pn **Pn 22 18 43.6 -1.1**
HMT IAML 22 20 30.1
comp=N,33nm,0.8s
G24K Hadweenzic Riv 5.38 32 Pn 22 18 45.0 -0.2
VRDI Verde Repeater 5.39 96 Pn **Pn 22 18 44.8 -0.7**
VRDI IAML 22 20 17.5
comp=N,21nm,3.4s
M26K Nabesna, AK 5.40 84 Pn **Pn 22 18 45.8 +0.4**
M26K IAML 22 20 12.5
comp=E,24nm,1.4s
J26L Joseph Creek 5.42 61 Pn 22 18 47.1 +1.3
J26L Joseph Creek 5.42 61 P Pn 22 18 47.1 +1.3
baz=251
BERG Berg Lake 5.57 105 Pn **Pn 22 18 48.0 +0.2**
I26K Coal Creek Min 5.89 54 Pn 22 18 53.5 +1.3
FYU Fort Yukon 5.89 39 Pn 22 18 52.1 -0.1
M27K Edge Creek, AK 5.92 84 Pn **Pn 22 18 54.0 +1.3**
L27K Beaver Creek, 5.92 77 Pn 22 18 52.9 +0.2
BC03 5.94 77 Pn 22 18 54.8 +1.9
BCAR Beaver Creek A 5.94 77 Pn **Pn 22 18 53.2 +0.3**
F24K Squaw Lake 5.97 26 Pn 22 18 52.8 -0.4
BARN Barnard Glacie 6.27 96 Pn 22 18 57.8 +0.2
CTGM Chitina Glacie 6.45 96 Pn 22 19 00.9 +0.9
EGAK Eagle 6.50 62 Pn 22 19 02.4 +2.0
LOGN Logan Glacier 6.65 97 Pn 22 19 03.7 +0.9
YUK3 Moose Creek 6.66 88 Pn 22 19 03.5 +0.5
YUK3 Moose Creek 6.66 88 P **Pn 22 19 03.5 +0.5**
baz=281
BMAR Burnt Mountain 6.68 35 Pn **Pn 22 19 01.8 -1.3**
TOLK Toolik Lake Re 6.71 16 Pn 22 19 03.7 +0.3
D23K Nanushuk River 6.89 12 Pn 22 19 07.5 +1.6
DAWY Dawson 7.10 69 Pn **Pn 22 19 08.5 -0.3**
M29M Somme Creek 7.50 82 Pn 22 19 15.2 +0.9

*NOU **08** 22:23:51.7, 36.°08S×177.°94W, h0km, MLv4.7/5, East of North Island, N.Z.*
*NEIC **08** 22:24:29.8±1.3, 37.°19S±0.°09×178.°9E±0.°1, h19km±9km, mb4.2/6, Error ellipse: s-maj=17.2km s-min=5.7km az=137.0*
*WEL **08** 22:24:30.5±1.4, 37.°S±7.°×17.°9E±1.°1, h9km±6km, M3.6/15, ML3.9/13, MLv3.6/15, Error ellipse: s-maj=0.0km s-min=0.0km az=90.6*
*IDC **08** 22:24:32.4±6.0, 37.°71S×179.°20E, h75km±66km, mb3.8/3, mbtmp4.1/3, MS4.1/1, Error ellipse: s-maj=209.2km s-min=46.3km az=170.0*

ISC 08 22:24:28.8±2.2, 37.°19S±0.°07×178.°99E±0.°09, h15km±10km, n89, σ1§16/95, mb4.2/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.66**	**235**	**P**	**Pg**	**22 24 41.9**	**+0.2**
MXZ				Sg	**Sg**	**22 24 49.5**	**-1.0**
MXZ	**Matakaoa Point**	**0.66**	**235**	P	**Pg**	**22 24 42.0**	**+0.2**
MXZ				S	**Sg**	**22 24 49.7**	**-0.8**
WMGZ	**Waiomatatini S**	**0.78**	**216**	P	**Pn**	**22 24 46.1**	**+0.8**
WMGZ				S	**Sn**	**22 24 57.5**	**+0.8**
PKGZ	**Pakihiroa**	**1.01**	**226**	P	**Pb**	**22 24 48.2**	**+0.2**
PUZ	**Puketiti**	**1.06**	**213**	P	**Pg**	**22 24 49.7**	**+0.5**
PUZ				S	**Sn**	**22 25 04.1**	**+0.5**
HAZ	**Te Kaha**	**1.11**	**239**	P	**Pb**	**22 24 48.8**	**-1.0**
TWGZ	**Tauwhareparae**	**1.27**	**219**	P	**Pb**	**22 24 53.1**	**+0.6**
TWGZ				S	**Sg**	**22 25 10.9**	**+1.1**
RUGZ	**Raukumara Rang**	**1.30**	**233**	P	**Pn**	**22 24 53.0**	**+0.4**
CNGZ	**Carnagh Statio**	**1.43**	**205**	P	**Pb**	**22 24 55.5**	**+0.3**
WIZ	**White Island**	**1.47**	**256**	P	**Pn**	**22 24 55.3**	**+0.4**
WSRZ	**White Island S**	**1.48**	**257**	P	**Pn**	**22 24 51.8**	**-3.1**
TKGZ	**Te Karaka**	**1.54**	**216**	P	**Pb**	**22 24 58.2**	**+1.1**
MWZ	**Matawai**	**1.63**	**225**	P	**Pn**	**22 24 57.7**	**+0.7**
RIGZ	**Rimuhau**	**1.80**	**212**	P	**Pb**	**22 25 01.3**	**-0.2**
RAGZ	**Rawiri**	**1.80**	**223**	P	**Pn**	**22 25 00.4**	**+0.9**
URZ	**Urewera**	**1.83**	**234**	P	**Pn**	**22 25 00.3**	**+0.5**
	50nm,0.3s,baz=10,slow=1.3,SNR=44						
URZ				S	**Sn**	**22 25 22.3**	**-0.5**
	171nm,0.5s,baz=207,slow=22,SNR=9.2						
URZ				LR	LR	22 26 01.2	
	comp=Z,330nm,19.5s,baz=113,slow=51						
URZ	**Urewera**	**1.83**	**234**		**Pn**	**22 25 00.6**	**+0.9**
URZ	**Urewera**	**1.83**	**234**	P	**Pn**	**22 25 00.5**	**+0.8**
URZ				S	**Sn**	**22 25 22.2**	**-0.5**
URZ	**Urewera**	**1.83**	**234**	P	**Pn**	**22 25 00.8**	**+1.0**
EDRZ	**Edgecumbe**	**2.01**	**242**	P	**Pb**	**22 25 04.5**	**-0.6**
OPRZ	**Ohinepanea**	**2.04**	**251**	P	**Pn**	**22 25 03.2**	**+0.5**
SNGZ	**Shannon Statio**	**2.06**	**219**	P	**Pn**	**22 25 03.2**	**+0.4**
KNZ	**Kokohu**	**2.10**	**209**	P	**Pn**	**22 25 03.2**	**-0.3**
RTZ	**Ruatahuna**	**2.13**	**228**	P	**Pn**	**22 25 05.0**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.14**	**203**	P	**Pn**	**22 25 04.2**	**+0.2**
RRRZ	**Republican Roa**	**2.27**	**239**	P	**Pb**	**22 25 08.8**	**-0.8**
RAHZ	**Arahi**	**2.29**	**220**	P	**Pn**	**22 25 06.4**	**+0.3**
KARZ	**Kaharoa**	**2.33**	**248**	P	**Pn**	**22 25 07.8**	**+1.1**
WHHZ	**Waihua**	**2.34**	**216**	P	**Pn**	**22 25 06.8**	**+0.1**
MTHZ	**Maungataniwha**	**2.37**	**225**	P	**Pn**	**22 25 08.2**	**+0.9**
KMRZ	**Kaimai**	**2.51**	**254**	P	**Pn**	**22 25 10.3**	**+1.2**
NMHZ	**Naumai**	**2.57**	**221**	P	**Pn**	**22 25 10.6**	**+0.7**
ARHZ	**Aropaoanui**	**2.60**	**217**	P	**Pn**	**22 25 10.3**	**0.0**
MRHZ	**Matea Rd**	**2.61**	**230**	P	**Pn**	**22 25 10.6**	**+0.1**
KUZ	**Kuaotunu**	**2.66**	**279**	P	**Pn**	**22 25 09.8**	**-1.3**
KUZ	**Kuaotunu**	**2.66**	**279**	P	**Pn**	**22 25 10.0**	**-1.1**
BKZ	**Black Stump Fm**	**2.79**	**224**		**Pn**	**22 25 13.1**	**+0.1**
BKZ	**Black Stump Fm**	**2.79**	**224**	P	**Pn**	**22 25 13.2**	**+0.3**
BKZ	**Black Stump Fm**	**2.79**	**224**	P	**Pn**	**22 25 13.4**	**+0.4**
TOZ	**Tahuroa Road**	**2.83**	**258**	P	**Pn**	**22 25 12.7**	**-0.7**
MCHZ	**McNeill Hill**	**2.88**	**218**	P	**Pn**	**22 25 14.0**	**-0.2**
CKHZ	**Cape Kidnapper**	**2.89**	**211**	P	**Pn**	**22 25 13.2**	**-1.0**
GRZ	**Great Barrier**	**2.99**	**287**	P	**Pn**	**22 25 16.3**	**+0.6**
KWHZ	**Kaweka Forest**	**3.01**	**221**	P	**Pn**	**22 25 15.6**	**-0.4**
RITZ	**Rihia Road**	**3.05**	**233**	P	**Pn**	**22 25 17.1**	**+0.5**
MKAZ	**Moumakai**	**3.06**	**270**	P	**Pn**	**22 25 15.8**	**-0.8**
KAHZ	**Kahuranaki**	**3.08**	**212**	P	**Pn**	**22 25 16.0**	**-1.0**
KRHZ	**Kereru**	**3.20**	**219**	P	**Pn**	**22 25 17.6**	**-1.0**
TMVZ	**Te Maari**	**3.23**	**232**	P	**Pn**	**22 25 19.4**	**+0.3**
ETVZ	**East Tongariro**	**3.23**	**232**	P	**Pn**	**22 25 19.6**	**+0.4**
BHHZ	**Black Hill Sta**	**3.25**	**224**	P	**Pn**	**22 25 19.7**	**+0.4**
ETAZ	**East Tamaki Re**	**3.26**	**273**	P	**Pn**	**22 25 21.1**	**+1.7**
PXZ	**Pawanui**	**3.29**	**210**	P	**Pn**	**22 25 18.1**	**-1.8**
NNVZ	**North Ngauruho**	**3.29**	**233**	P	**Pn**	**22 25 20.9**	**+0.9**
NGZ	**Ngauruhoe**	**3.33**	**232**	P	**Pn**	**22 25 20.4**	**0.0**
TWVZ	**Taurewa**	**3.37**	**235**	P	**Pn**	**22 25 22.2**	**+1.1**
MOVZ	**Moawhango**	**3.37**	**228**	P	**Pn**	**22 25 21.5**	**+0.4**
WNVZ	**Wahianoa**	**3.42**	**230**	P	**Pn**	**22 25 22.4**	**+0.7**
AWAZ	**Awhitu Peninsu**	**3.48**	**271**	P	**Pn**	**22 25 22.4**	**+0.1**
PNHZ	**Pukenui**	**3.49**	**218**	P	**Pn**	**22 25 21.3**	**-1.3**
WPHZ	**Waipukurau**	**3.50**	**214**	P	**Pn**	**22 25 21.6**	**-1.1**
HIZ	**Hauiti**	**3.53**	**247**	P	**Pn**	**22 25 25.1**	**+2.0**
HIZ	**Hauiti**	**3.53**	**247**	P	**Pn**	**22 25 25.2**	**+2.1**
RVAZ	**Riverhead Bore**	**3.56**	**275**	P	**Pn**	**22 25 24.1**	**+0.6**
PRHZ	**Porangahau**	**3.58**	**210**	P	**Pn**	**22 25 21.9**	**-1.9**
TSZ	**Takapari Road**	**3.72**	**219**	P	**Pn**	**22 25 25.7**	**-0.1**
VRZ	**Vera Road**	**3.85**	**239**	P	**Pn**	**22 25 28.4**	**+0.8**
WCZ	**Waipu Caves**	**3.94**	**287**	P	**Pn**	**22 25 29.1**	**+0.3**
WAZ	**Wanganui**	**4.05**	**230**	P	**Pn**	**22 25 30.7**	**+0.4**
BFZ	**Birch Farm**	**4.09**	**211**	P	**Pn**	**22 25 28.2**	**-2.6**
NEZ	**North Egmont**	**4.38**	**240**	P	**Pn**	**22 25 37.6**	**+2.7**
KHEZ	**Kahui Hut**	**4.45**	**240**	P	**Pn**	**22 25 39.0**	**+3.2**
OUZ	**Omahuta**	**4.78**	**293**		**Pn**	**22 25 40.9**	**+0.6**
OUZ	**Omahuta**	**4.78**	**293**	P	**Pn**	**22 25 41.1**	**+0.7**
CAW	**Cannon Point**	**4.96**	**217**	P	**Pn**	**22 25 40.8**	**-1.9**
CTZ	**Chatham Island**	**7.35**	**154**	P	**Pn**	**22 26 16.4**	**+0.9**
AS31	**Alice Springs**	**40.78**	**276**	P	**P**	**22 32 08.0**	**-1.6**
AS31				IAmb	IAmb	22 32 10.2	
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**40.78**	**276**	P	**P**	**22 32 08.2**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=117,slow=8.1,SNR=25						
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**40.78**	**276**	P	**P**	**22 32 07.7**	**-2.0**
WRA	**Warramunga Arr**	**42.39**	**281**	P	**P**	**22 32 21.5**	**-1.4**
	comp=Z,2.7nm,0.5s,baz=123,slow=7.0,SNR=58						
	comp=Z,2.7nm,0.5s						
WRA	**Warramunga Arr**	**42.39**	**281**	P	**P**	**22 32 21.2**	**-1.7**
WB0	**Warramunga Arr**	**42.45**	**282**	P	**P**	**22 32 21.8**	**-1.5**
WB0				IAmb	IAmb	22 32 22.4	
	comp=Z,5.2nm,0.5s						
KNRA	**Kununurra**	**49.17**	**282**	P	**P**	**22 33 15.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**50.26**	**277**	P	**P**	**22 33 23.2**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=120,slow=8.1,SNR=5.5						
	comp=Z,1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.26**	**277**	P	**P**	**22 33 23.3**	**-1.4**
FITZ				IAmb	IAmb	22 33 32.6	
	comp=Z,8.9nm,1.4s						
BELA	**Belgrano 2**	**63.41**	**172**	P	**P**	**22 34 58.0**	**+0.8**
BELA				IAmb	IAmb	22 34 59.1	
	comp=Z,1.0nm,0.7s						
PSI	**Prapat**	**83.78**	**278**	LR	LR	23 17 01.9	
	comp=Z,106nm,19.9s,baz=116,slow=38						
LZH	**Lanzhou**	**100.78**	**307**	*e*P	**Pdif**	**22 38 19.3**	**+2.3**
LZH				pP	pwP	22 38 28.3	+6.8
FINES	**FINESS Array B**	**150.40**	**334**	PKPbc	**PKPdf**	**22 44 15.5**	**+2.1**
	comp=Z,3.0nm,0.9s,baz=56,slow=3.5,SNR=1.5						

IDC 08 22:25:25.8±2.7, 10.°23S×113.°41E, h0km, mb3.4/4, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=139.5km s-min=22.9km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.21**	**125**	Pn	Pn	22 28 46.9	-1.5
	baz=317,slow=9.8,SNR=1.6						
FITZ				Sn	Sn	22 31 15.8	-11
	0.1nm,0.3s,baz=278,slow=5.7,SNR=1.8						
	2.4nm,1.1s						
WRA	**Warramunga Arr**	**22.38**	**118**	P	P	22 30 27.5	+1.6
	0.5nm,0.8s,baz=293,slow=10,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**23.69**	**127**	P	P	22 30 38.2	-1.3
	0.2nm,0.6s,baz=298,slow=9.4,SNR=2.0						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**63.20**	**337**	P	P	22 35 55.8	-0.1
	0.4nm,0.5s,baz=145,slow=7.3,SNR=7.1						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**68.37**	**342**	P	P	22 36 29.2	+0.2
	0.9nm,0.4s,baz=141,slow=5.8,SNR=5.1						
	0.9nm,0.4s						

*IDC **08** 22:25:26.0±0.5, 15.°13S×174.°63W, h0km, mb4.3/17, mbtmp4.2/19, ML4.7/1, MS4.6/56, Error ellipse: s-maj=24.8km s-min=14.1km az=141.0*
*NEIC **08** 22:25:27.3±2.0, 15.°02S±0.°09×174.°34W±0.°08, h10km±1km, mb5.0/41, Error ellipse: s-maj=17.0km s-min=11.2km az=150.0*
*NOU **08** 22:25:30.9, 14.°86S×174.°07W, h21km, mb4.9/23, Samoa Islands Region*
*GCMT **08** 22:25:32.3±0.1, 14.°80S±0.°01×174.°42W±0.°01, h13km, MW5.3/149, Moment Tensor Solution. s105,c166; s149,c265; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.16±.01; $M_{\theta\theta}$=0.00±.01; $M_{\phi\phi}$=0.16±.01; $M_{r\theta}$=0.07±.03; $M_{\theta\phi}$=1.06±.01; $M_{r\phi}$=0.11±.03; Best double couple: M_0=1.06900×10^{17} NP1:ϕ_s=358.00000°, δ87.00000°, λ175.00000°. NP2:ϕ_s=88.00000°, δ85.00000°, λ3.00000°. Principal axes: T 1.1540, Plg5.0000°, Azm313.0000°; N -0.1690, Plg84.0000°, Azm148.0000°; P -0.9850, Plg2.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 22:25:27.2±0.3, 14.°94S±0.°06×174.°37W±0.°05, h10km, n208, σ2§11/148, mb4.9/40, MS4.8/75, 11C-7D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.72**	**68**	Pn	**Pn**	**22 26 08.8**	**-2.2**
	151nm,0.3s,baz=182,slow=2.1,SNR=102						
AFI				Sn	**Sn**	**22 26 38.7**	**-5.3**
	97nm,0.3s,baz=275,slow=17,SNR=8.2						
AFI				LR	LR	22 27 23.7	
	comp=Z,9μm,21.3s,baz=264,slow=39						
AFI	**Afiamalu**	**2.72**	**68**	Pn	**Pn**	**22 26 08.9**	**-2.1**
AFI	**Afiamalu**	**2.72**	**68**	P	**Pn**	**22 26 09.8**	**-1.2**
FUTU	**Fugatoga**	**3.68**	**279**	P	Pn	22 26 29.5	+5.3
NIUE	**Niue**	**5.92**	**135**	Pn	**Pn**	**22 26 54.2**	**-0.7**
NIUE	**Niue**	**5.92**	**135**	P	**Pn**	**22 26 54.8**	**-0.1**
MSVF	**Nonsavu**	**7.79**	**248**	Pn	**Pn**	**22 27 17.7**	**-3.0**
	0.4nm,0.3s,baz=148,slow=18,SNR=2.1						
MSVF				Sn	**Sn**	**22 28 41.4**	**-7.6**
	0.3nm,0.3s,baz=70,slow=22,SNR=0.5						
MSVF				LR	LR	22 29 51.8	
	comp=Z,9μm,18.6s,baz=59,slow=36						
	3.7nm,0.8s						
MSVF	**Nonsavu**	**7.79**	**248**	Pn	**Pn**	**22 27 20.7**	**0.0**
MSVF	**Nonsavu**	**7.79**	**248**	P	Pn	22 27 27.8	+7.1
RAO	**Raoul Island**	**14.61**	**192**	LR	LR	22 32 57.9	
	comp=Z,2μm,20.6s,baz=12,slow=31						
RAR	**Rarotonga**	**15.21**	**116**	Pn	**Pn**	**22 29 00.4**	**-1.8**
	0.6nm,0.3s,baz=278,slow=7.6,SNR=18						
RAR				LR	LR	22 33 37.2	
	comp=Z,2μm,21.6s,baz=292,slow=32						
RAR	**Rarotonga**	**15.21**	**116**	Pn	**Pn**	**22 29 00.6**	**-1.7**
RAR				IAmb	IAmb	22 29 03.6	
	comp=Z,60nm,0.9s						
RAR	**Rarotonga**	**15.21**	**116**	P	**Pn**	**22 29 02.1**	**-0.1**
	comp=Z,90nm,0.9s						
MARNC	**Mare, Loyalty**	**17.93**	**246**	P	**Pn**	**22 29 35.8**	**-1.0**
MARNC	**Mare, Loyalty**	**17.93**	**246**	P	**P**	**22 29 43.2**	**+5.8**
LIFNC	**LIFOU**	**18.43**	**249**		**P**	**22 29 41.2**	**-1.7**
LIFNC				IAmb	IAmb	22 29 48.7	
	comp=Z,134nm,1.0s						
LIFNC	**LIFOU**	**18.43**	**249**	P	**Pn**	**22 29 47.2**	**+4.2**
OUENC	**Ouen Island, N**	**19.27**	**245**	P	**P**	**22 29 49.5**	**-2.6**
OUENC	**Ouen Island, N**	**19.27**	**245**	P	**Pn**	**22 29 57.2**	**+4.0**
DZM	**Mont Dzumac**	**19.51**	**246**	*e*Pn	**P**	**22 29 54.4**	**-0.5**
	comp=Z,114nm,1.1s						
DZM				*e*LR	LR	22 34 30.6	
	comp=Z,6μm,27.0s						
DZM	**Mont Dzumac**	**19.51**	**246**	P	**P**	**22 29 50.4**	**-4.5**
	comp=Z,6.0nm,1.1s,baz=31,slow=16,SNR=2.1						
DZM				LR	LR	22 36 08.8	
	comp=Z,2μm,19.6s,baz=66,slow=34						
DZM	**Mont Dzumac**	**19.51**	**246**	P	**P**	**22 29 53.8**	**-1.1**
DZM	**Mont Dzumac**	**19.51**	**246**	P	**Pn**	**22 30 00.7**	**+4.6**
ONTNC	**Ouen Toro**	**19.58**	**245**	P	**P**	**22 29 54.8**	**-0.7**
ONTNC				IAmb	IAmb	22 30 04.2	
	comp=Z,48nm,0.9s						
ONTNC	**Ouen Toro**	**19.58**	**245**	P	**Pn**	**22 30 00.1**	**+3.3**
NOUC	**Port Laguerre**	**19.65**	**246**	P	**Pn**	**22 30 03.7**	**+6.1**
TARA	**Tarawa**	**20.50**	**321**	P	**P**	**22 30 03.8**	**-1.7**
KOUNC	**Koumac, New Ca**	**21.07**	**252**	P	**P**	**22 30 10.0**	**-1.7**
KUZ	**Kuaotunu**	**23.44**	**200**	P	**P**	**22 30 38.7**	**+2.0**

comp=Z,11nm,0.8s
URZ Urewera 24.42 196 P **P 22 30 43.3 -2.7**
URZ IAmb IAmb 22 31 00.3
comp=Z,79nm,1.2s
TBI Tubuai 24.95 113 *e*LR LR 22 36 58.0
comp=Z,3μm,29.0s
TBI Tubuai 24.95 113 *e*T T 22 56 51.6
comp=Z,17nm,0.2s
HNR Honiara 25.68 279 LR LR 22 39 26.4
comp=Z,17μm,20.3s,baz=122,slow=33
BFZ Birch Farm 26.92 196 P **P 22 31 06.5 -2.0**
BFZ IAmb IAmb 22 31 14.3
comp=Z,46nm,1.1s
BFZ Birch Farm 26.92 196 P **P 22 31 12.7 +4.1**
RPZ Rata Peaks 31.26 201 LR LR 22 43 27.8
comp=Z,2μm,19.3s,baz=24,slow=35
TAOE Nuku Hiva Isla 34.00 84 *e*P **P 22 32 11.7 +0.1**
comp=Z,165nm,25.2s
TAOE *e*LR LR 22 41 09.9
comp=Z,920nm,22.5s
TAOE Nuku Hiva Isla 34.00 84 *e*T T 23 08 08.5
comp=Z,40nm,0.2s
KRVT Keravat (AS076 34.72 284 LR LR 22 44 53.0
comp=Z,657nm,21.2s,baz=266,slow=34
CTA Charters Tower 37.83 256 LR LR 22 45 43.7
comp=Z,698nm,20.5s,baz=84,slow=32
RKT Rikitea 38.03 108 *e*T T 23 13 08.8
comp=Z,18nm,0.3s
H11S2 WAKE ISLAND Hy 38.09 330 T T 23 13 04.9
baz=150,slow=76,SNR=66
H11S3 WAKE ISLAND Hy 38.11 330 T T 23 13 04.4
baz=150,slow=76,SNR=51
H11S1 WAKE ISLAND Hy 38.11 330 T T 23 13 04.8
baz=150,slow=76,SNR=53
CNB Canberra Magne 38.29 231 P **P 22 32 51.7 +3.6**
H11N3 WAKE ISLAND Hy 39.05 331 T T 23 14 15.3
baz=151,slow=76,SNR=92
H11N1 WAKE ISLAND Hy 39.06 331 T T 23 14 14.9
baz=151,slow=76,SNR=238
H11N2 WAKE ISLAND Hy 39.07 331 T T 23 14 19.0
baz=151,slow=76,SNR=154
CMSA Cobar Meteorol 39.98 239 P **P 22 33 06.9 +4.7**
QLP Quilpie 40.23 246 P P 22 33 09.3 +4.9
TOO Toolangi 42.03 230 P **P 22 33 17.3 -1.8**
TOO IAmb IAmb 22 33 23.9
comp=Z,26nm,1.1s
TOO Toolangi 42.03 230 P **P 22 33 23.3 +4.2**
STKA Stephens Creek 43.46 239 P **P 22 33 28.6 -2.1**
comp=Z,4.8nm,1.0s,baz=99,slow=5.0,SNR=4.3
STKA LR LR 22 52 06.2
comp=Z,600nm,18.1s,baz=64,slow=37
comp=Z,4.8nm,1.0s
STKA Stephens Creek 43.46 239 P **P 22 33 28.2 -2.5**
STKA Stephens Creek 43.46 239 P **P 22 33 34.4 +3.7**
WB0 Warramunga Arr 48.99 257 P **P 22 34 12.7 -1.8**
WB0 IAmb IAmb 22 34 51.2
comp=Z,31nm,1.8s
WRA Warramunga Arr 49.03 256 P **P 22 34 12.4 -2.4**
comp=Z,1.2nm,1.0s,baz=90,slow=8.4,SNR=4.7
WRA LR LR 22 52 41.2
comp=Z,1μm,21.3s,baz=84,slow=34
comp=Z,1.2nm,1.0s
WRA Warramunga Arr 49.03 256 P **P 22 34 14.3 -0.5**
GUMO Guam 49.30 303 LR LR 22 53 00.4
comp=Z,636nm,18.8s,baz=104,slow=34
AS31 Alice Springs 49.36 252 P **P 22 34 15.8 -1.4**
ASAR Alice Springs 49.36 252 P **P 22 34 14.2 -3.0**
comp=Z,3.8nm,0.6s,baz=84,slow=7.7,SNR=22
ASAR LR LR 22 53 15.4
comp=Z,1μm,21.9s,baz=92,slow=34
comp=Z,3.8nm,0.6s
ASAR Alice Springs 49.36 252 P **P 22 34 16.4 -0.8**
SIJI Sorong 55.46 279 P **P 22 35 01.1 -1.5**
comp=Z,13nm,0.8s,baz=130,slow=11,SNR=4.0
comp=Z,13nm,0.8s
FITZ Fitzroy Crossi 57.38 258 LR LR 22 58 40.8
comp=Z,464nm,18.7s,baz=96,slow=35
FITZ Fitzroy Crossi 57.38 258 P **P 22 35 15.2 -1.1**
FITZ IAmb IAmb 22 36 01.8
comp=Z,21nm,1.6s
JCJ Chichijima 59.36 315 LR LR 22 56 56.0
comp=Z,1μm,20.0s,baz=121,slow=32
RPN Rapa Nui 61.33 113 LR LR 22 56 49.2
comp=Z,220nm,21.7s,baz=274,slow=31
PSA00 Pilbara Seismi 62.44 253 P **P 22 35 50.9 -0.1**
DAV Davao City (W) 63.41 286 LR LR 23 02 02.4
comp=Z,725nm,18.3s,baz=95,slow=35
SBA Scott Base 63.63 184 P **P 22 35 58.9 +0.9**
VNDA Vanda 63.74 186 LR LR 22 58 59.6
comp=Z,216nm,20.4s,baz=27,slow=32
VNDA Vanda 63.74 186 P **P 22 35 58.5 -0.2**
VNDA IAmb IAmb 22 36 07.2
comp=Z,7.5nm,1.1s
NWAO Narrogin (SRO) 64.03 240 LR LR 23 00 55.4
comp=Z,593nm,21.6s,baz=314,slow=33
JHJ Hachijo jima 2 64.80 318 LR LR 22 58 54.3
comp=Z,312nm,21.7s,baz=74,slow=31
TOLI2 Tolitoli 66.05 278 P **P 22 36 13.9 -0.9**
TOLI2 IAmb IAmb 22 36 59.2
comp=Z,12nm,1.3s
SHEM Shemya Is, Ala 68.12 352 LR LR 23 01 11.9
comp=Z,549nm,19.3s,baz=136,slow=31
JOW Kunigami 69.45 307 LR LR 23 01 01.8
comp=Z,1μm,21.7s,baz=120,slow=31
PETK Petropavlovsk- 71.91 343 LR LR 23 03 04.5
comp=Z,149nm,20.3s,baz=151,slow=31
CMB Columbia Colle 73.05 42 P **P 22 36 56.4 -1.2**
PFO Pinyon Flats O 73.30 48 LR LR 23 04 18.2
comp=Z,796nm,18.0s,baz=254,slow=32
LPIG La Paz 73.60 59 LR LR 23 00 51.4
comp=Z,588nm,21.5s,baz=230,slow=29
YBH Yreka Blue Hor 73.81 38 P **P 22 37 05.3 +3.3**
comp=Z,3.0nm,0.9s,baz=239,slow=5.9,SNR=8.9
YBH LR LR 23 01 37.7
comp=Z,588nm,21.9s,baz=243,slow=29
comp=Z,3.0nm,0.9s
WAKR Walker 73.93 42 P **P 22 37 01.7 -1.3**
WAKR IAmb IAmb 22 37 09.3
comp=Z,21nm,1.8s
NVAR Mina Array Bea 74.62 43 P **P 22 37 09.4 +2.3**
comp=Z,1.7nm,0.8s,baz=227,slow=9.7,SNR=14
NVAR LR LR 23 02 26.2
comp=Z,615nm,21.6s,baz=244,slow=30
comp=Z,1.7nm,0.8s
KDAK Kodiak Island 74.66 12 LR LR 23 02 40.6
comp=Z,303nm,21.2s,baz=224,slow=30
BLYC Blythe 74.76 48 P **P 22 37 07.0 -0.7**
BLYC IAmb IAmb 22 37 27.4
comp=Z,29nm,1.9s
QSPA South Pole Qui 75.10 180 P **P 22 37 09.8 +0.5**
comp=Z,8.0nm,0.9s,baz=34,slow=2.1,SNR=16
QSPA LR LR 23 05 15.0
comp=Z,536nm,20.8s,baz=41,slow=32
comp=Z,8.0nm,0.9s
QSPA South Pole Qui 75.10 180 P **P 22 37 09.7 +0.5**
QSPA IAmb IAmb 22 37 16.6
comp=Z,20nm,1.1s
TPH Tonopah 75.14 43 P **P 22 37 08.9 -1.1**
KSRS Korea Array 75.17 316 P **P 22 37 10.7 +0.7**
comp=Z,2.9nm,1.0s,baz=40,slow=16,SNR=4.6
KSRS LR LR 23 04 55.0
comp=Z,372nm,21.6s,baz=125,slow=32
comp=Z,2.9nm,1.0s
K05A Summer Lake 75.48 38 P **P 22 37 12.3 +0.4**
LEM Lembang 76.72 266 LR LR 23 13 35.0
comp=Z,127nm,18.8s,baz=110,slow=38
ELK Elko 77.87 42 P **P 22 37 27.6 +2.1**
comp=Z,0.9nm,0.8s,baz=234,slow=7.2,SNR=4.4
ELK LR LR 23 03 54.9
comp=Z,343nm,21.8s,baz=232,slow=30
comp=Z,0.9nm,0.8s
ELK Elko 77.87 42 P **P 22 37 25.6 +0.1**
ELK IAmb IAmb 22 38 17.1
comp=Z,21nm,1.9s
BBB Bella Bella 77.90 27 LR LR 23 04 11.3
comp=Z,441nm,20.6s,baz=203,slow=30
SUA Susitna One 78.43 11 P **P 22 37 28.8 +0.8**
SUA IAmb IAmb 22 37 42.5
comp=Z,18nm,1.1s
DIV Divide 79.17 14 P **P 22 37 32.6 +0.5**
DIV IAmb IAmb 22 37 46.9
comp=Z,9.9nm,0.9s
MA2 Magadan 79.45 343 LR LR 23 09 19.3
comp=Z,248nm,19.9s,baz=148,slow=33
TGL Tana Glacier 79.55 15 P **P 22 37 34.9 +0.8**
TGL IAmb IAmb 22 37 43.6
comp=Z,45nm,1.7s
KLR Kul'dur 79.62 327 LR LR 23 08 05.7
comp=Z,260nm,21.6s,baz=131,slow=32
N25K Chitina, Valde 79.86 14 P **P 22 37 34.6 -1.2**
N25K IAmb IAmb 22 37 46.9
comp=Z,20nm,1.3s
CN2 Changchun 80.13 320 *e*P P 22 37 43.1 +5.6
CN2 S **S 22 47 47.3 +5.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,500nm,20.0s
CN2 LR LR
comp=Z,500nm,20.0s
CN2 LR LR
comp=Z,500nm,26.0s
RND Reindeer 80.57 11 P **P 22 37 40.0 +0.4**
NEW Newport 80.86 35 LR LR 23 06 32.8
comp=Z,533nm,20.7s,baz=228,slow=30
TXAR Lajitas Array 81.14 57 P **P 22 37 45.8 +2.3**
comp=Z,1.6nm,0.9s,baz=224,slow=3.5,SNR=10
TXAR LR LR 23 05 53.0
comp=Z,566nm,21.7s,baz=235,slow=30
comp=Z,1.6nm,0.9s
ANMO Albuquerque 81.23 50 LR LR 23 07 27.5
comp=Z,729nm,19.2s,baz=229,slow=31
ANMO Albuquerque 81.23 50 P **P 22 37 44.2 +0.3**
DLBC Dease Lake 81.62 22 LR LR 23 06 16.0
comp=Z,606nm,20.9s,baz=269,slow=30
BCAR Beaver Creek A 81.79 14 P **P 22 37 47.2 +1.2**
QIZ Qiongzhong 81.86 292 P **P 22 37 45.8 -1.5**
QIZ S **S 22 47 59.8 -1.6**
QIZ LR LR
comp=Z,270nm,19.1s
QIZ LR LR
comp=Z,420nm,12.7s
QIZ LR LR
comp=Z,530nm,27.1s
MDM Murphy Dome 82.10 11 P **P 22 37 48.1 +0.5**
MDM IAmb IAmb 22 38 02.5
comp=Z,22nm,1.5s
IMAR Indian Mountai 82.16 8 P **P 22 37 48.5 +0.7**
ILAR Eielson Array 82.18 12 P **P 22 37 48.9 +0.9**
comp=Z,5.9nm,1.3s,baz=219,slow=5.9,SNR=6.7
ILAR LR LR 23 08 35.1
comp=Z,141nm,19.9s,baz=210,slow=31
comp=Z,5.9nm,1.3s
ILAR Eielson Array 82.18 12 P **P 22 37 48.4 +0.4**
J25K Salcha River, 82.34 12 P **P 22 37 49.4 +0.5**
J25K IAmb IAmb 22 38 03.1
comp=Z,12nm,1.2s
K27K Chicken 82.55 14 P **P 22 37 50.2 +0.3**
PDAR Pinedale Array 82.56 42 P **P 22 37 52.1 +1.4**
comp=Z,0.7nm,0.9s,baz=224,slow=4.1,SNR=5.9
PDAR LR LR 23 07 50.0
comp=Z,357nm,21.3s,baz=244,slow=31
comp=Z,0.7nm,0.9s
PDAR Pinedale Array 82.56 42 P **P 22 37 51.2 +0.5**
I26K Coal Creek Min 83.41 13 P **P 22 37 55.8 +1.5**
MSTX Muleshoe 83.62 53 P **P 22 37 57.9 +1.5**
BRLDA Berland Lookou 84.07 30 P **P 22 37 59.5 +1.3**
HNS HongShan 84.45 311 ⇓P **P 22 38 01.6 +1.3**
HNS S **S 22 48 32.0 +5.1**
HNS LR LR
comp=Z,330nm,16.3s
HNS LR LR
comp=Z,510nm,20.7s
HNS LR LR
comp=Z,600nm,23.1s
BJI Beijing 84.47 314 P **P 22 38 01.0 +0.7**
BJI pmax pmax
comp=Z,7.0nm,1.2s
BJI LR LR
comp=Z,55nm,17.7s
BJI LR LR
comp=Z,250nm,19.2s
BJI LR LR
comp=Z,440nm,22.6s
BELA Belgrano 2 84.58 172 P **P 22 37 59.4 -0.9**
CMIG Matias Romero 84.62 71 LR LR 23 09 04.0
comp=Z,272nm,18.2s,baz=251,slow=31
PMSA Palmer Station 84.97 156 LR LR 23 07 19.2
comp=Z,292nm,20.6s,baz=296,slow=30
BMAR Burnt Mountain 84.98 11 P **P 22 38 03.4 +1.1**
ABTX Abilene, Hawle 85.56 55 P **P 22 38 07.5 +1.4**
ABTX IAmb IAmb 22 38 27.1
comp=Z,15nm,1.1s
XLT XiLinHaoTe 86.15 317 ⇑*i*P **P 22 38 09.8 +1.0**
XLT pP sP 22 38 14.4 +2.3
XLT sP pwP 22 38 17.6 +2.9
XLT SKS **SKSac 22 48 31.6 -3.5**
XLT pmax pmax
comp=Z,5.0nm,1.3s
XLT pmax pmax
comp=Z,200nm,4.8s
XLT LR LR
comp=Z,330nm,22.4s
XLT LR LR
comp=Z,480nm,23.3s
H03N2 Juan Fernandez 86.34 123 T T 00 13 47.9
baz=258,slow=73,SNR=4.8
H03N3 Juan Fernandez 86.34 123 T T 00 13 55.6
baz=258,slow=73,SNR=3.9
H03N1 Juan Fernandez 86.35 123 T T 00 13 54.1
baz=258,slow=73,SNR=5.2
GYA Guiyang 87.00 298 ⇓P **P 22 38 12.1 -1.3**
GYA pmax pmax
comp=Z,7.0nm,0.6s
XAN Xi'an 87.60 306 P **P 22 38 16.8 +0.7**
XAN pmax pmax
comp=Z,9.0nm,1.3s
XAN pmax pmax
comp=Z,280nm,4.1s
XAN LR LR
comp=Z,440nm,17.2s
XAN LR LR
comp=Z,600nm,18.0s
XAN LR LR
comp=Z,570nm,21.3s
MAW Mawson 87.92 199 P **P 22 38 16.6 -0.3**
comp=Z,2.4nm,0.7s,baz=174,slow=19,SNR=2.5
MAW LR LR 23 15 45.7
comp=Z,729nm,18.2s,baz=117,slow=34
comp=Z,2.4nm,0.7s
HHC Hu-ho-hao-te 88.03 313 *e*P **P 22 38 16.5 -1.5**
HHC S **S 22 48 58.4 -3.6**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,310nm,4.7s
HHC LR LR
comp=Z,360nm,16.5s
HHC LR LR
comp=Z,430nm,17.1s
HHC LR LR
comp=Z,710nm,18.4s
INK Inuvik 88.05 14 LR LR 23 11 13.4
comp=Z,166nm,20.7s,baz=184,slow=31
YAK Yakutsk 88.32 337 LR LR 23 13 16.9
comp=Z,128nm,20.0s,baz=90,slow=32
YKA Yellowknife Ar 90.05 24 P **P 22 38 27.4 +0.5**
comp=Z,0.5nm,0.7s,baz=243,slow=4.6,SNR=2.0
YKA LR LR 23 11 30.9
comp=Z,369nm,20.8s,baz=226,slow=31
comp=Z,0.5nm,0.7s
PLCA Paso Flores 90.51 132 LR LR 23 10 11.1
comp=Z,417nm,21.6s,baz=238,slow=30
PZH PanZhiHua 91.23 297 P **P 22 38 33.0 -0.4**
PZH S **S 22 49 29.5 -2.9**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,160nm,4.5s
PZH LR LR
comp=Z,660nm,22.0s
PZH LR LR
comp=Z,670nm,21.0s
PZH LR LR
comp=Z,910nm,20.8s
CMAR Chiang Mai Arr 91.58 289 P **P 22 38 35.7 +0.7**
comp=Z,0.9nm,0.3s,baz=111,slow=2.7,SNR=7.5
CMAR LR LR 23 14 11.8
comp=Z,324nm,21.8s,baz=95,slow=32
comp=Z,0.9nm,0.3s
TROLL Troll, Antarti 93.23 179 P **P 22 38 42.9 +1.1**
SNAA Sanae 93.41 177 LR LR 23 14 57.4
comp=Z,204nm,21.9s,baz=191,slow=32
SONM Songino Array 93.88 318 P **P 22 38 46.9 +1.8**
comp=Z,0.3nm,0.7s,baz=85,slow=1.6,SNR=2.3
SONM LR LR 23 15 45.1
comp=Z,238nm,21.3s,baz=118,slow=32
comp=Z,0.3nm,0.7s
ULM Lac du Bonnet 94.17 39 LR LR 23 16 52.1
comp=Z,522nm,18.8s,baz=255,slow=33
GTA Gaotai 96.16 309 *e*P **P 22 38 56.2 +0.4**
GTA pP pwP 22 39 04.0 +2.3
GTA sP sP 22 39 07.9 +8.8
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,120nm,5.8s
GTA LR LR
comp=Z,210nm,20.0s
GTA LR LR
comp=Z,480nm,23.6s
GTA LR LR
comp=Z,690nm,22.2s
LVC Limon Verde 98.06 116 LR LR 23 13 03.1
comp=Z,244nm,20.6s,baz=250,slow=29
TKL Tuckaleechee C 99.03 56 LR LR 23 17 47.3
comp=Z,460nm,18.3s,baz=260,slow=32
BRDH Bariadhala 99.22 291 LR LR 23 20 15.2
comp=Z,352nm,21.0s,baz=121,slow=33
VASR Vaslui 143.37 334 ⇑P PKPab 22 44 55.4 -2.6
CHVC Chvalec 143.46 349 *e*PKP **PKPdf 22 45 03.1 +1.0**
OSTC Ostas 143.46 349 *e*PKP **PKiKP 22 45 05.9 +0.5**
OSTC P AMS AMS 23 47 50.0
comp=Z,300nm,18.3s
UPC Upice 143.54 349 AMS AMS 23 47 30.0
comp=Z,300nm,20.9s
DPC Dobruska-Polom 143.63 348 *e*PKP **PKiKP 22 45 05.8 0.0**
DPC AMS AMS 23 48 20.0
comp=Z,200nm,19.4s
OKC Ostrava-Krasne 143.73 346 AMS AMS 23 45 30.0
comp=Z,200nm,18.1s
PVCC Panska Ves 143.77 350 AMS AMS 23 47 10.0
comp=Z,300nm,20.6s
KRLC Kraliky 143.80 348 AMS AMS 23 45 50.0
comp=Z,300nm,20.4s
MORC Moravsky Berou 143.92 347 *e*PKP PKPbc 22 45 01.4 +0.7
TRPA Tarpa 144.07 341 ⇓P **PKPab 22 45 01.7 +1.0**
MAUC Maruska 144.25 346 *e*PKP PKPbc 22 45 02.9 +1.2
MAUC AMS AMS 23 45 50.0
comp=Z,500nm,22.8s
PRU Pruhonice 144.30 350 *e*PKP **PKPdf 22 45 03.8 +0.2**
PRU AMS AMS 23 48 00.0
comp=Z,400nm,19.8s
VRAC Vranov 144.57 348 *e*PKP PKPbc 22 45 04.0 +1.3
COVR Voineasa-Covas 144.66 335 ⇓P PKiKP 22 45 23.6 +16
JAVC Velka Javorina 144.76 346 *e*PKP **PKPdf 22 45 05.8 +1.3**
TREC Trest 144.80 349 AMS AMS 23 52 20.0
comp=Z,300nm,19.9s
KRUC Moravsky 144.84 348 *e*PKP PKPbc 22 45 04.7 +1.1
DOPR Dopca 144.89 336 ⇑P PKPbc 22 45 05.0 +1.2
MLR Muntele Rosu 145.06 335 ⇑P **PKPdf 22 45 06.9 +1.7**
PSZ Piszkesteto 145.06 343 ⇑P **PKPdf 22 45 06.7 +1.7**
ISR Istrita 145.11 334 ⇑P **PKPbc 22 45 02.0 -2.6**
DRGR 145.19 339 ⇑P **PKPbc 22 45 04.5 -0.3**
BRTR Keskin Array B 145.21 321 PKPbc **PKPbc 22 45 05.8 +0.5**
comp=Z,5.9nm,0.8s,baz=146,slow=2.4,SNR=17
KHC Kasperske Hory 145.29 351 *e*PKP **PKPdf 22 45 06.2 +0.8**
KHC *ep*PKP **PKiKP 22 45 12.0 +2.7**
KHC AMS AMS 23 48 50.0
comp=Z,300nm,17.6s
VOIR 145.47 336 ⇑P **PKPdf 22 45 06.4 +0.6**
CKRC Cesky Krumlov 145.47 350 *e*PKP **PKPab 22 45 06.7 +0.9**
CKRC AMS AMS 23 49 30.0
comp=Z,300nm,20.4s
GERES GERESS Array B 145.54 351 PKPbc **PKPbc 22 45 07.0 +1.0**
comp=Z,2.0nm,0.9s,baz=29,slow=3.0,SNR=18
SIRR Siria 146.00 340 ⇓P **PKPdf 22 45 07.6 +1.0**
CONA Conrad Observa 146.03 348 *e*P **PKPbc 22 45 08.3 +0.8**
comp=Z,13nm,1.2s,SNR=8.8
RONA Rosalia, Austr 146.16 347 *e*P **PKPbc 22 45 09.0 +1.2**
comp=Z,15nm,1.1s,SNR=7.7
MOA Molln 146.41 349 *e*P **PKPbc 22 45 09.6 +1.0**
comp=Z,2.2nm,0.8s
BZS Buzias 146.58 339 ⇓P **PKPbc 22 45 09.2 +0.1**
BIOA Bad Ischl, Aus 146.68 350 *e*P **PKPab 22 45 10.8 +0.4**
comp=Z,4.7nm,1.0s
ARSA Arzberg 146.75 348 *e*P **PKPbc 22 45 10.6 +1.1**
comp=Z,3.6nm,1.0s
HERR Herculane 146.94 338 ⇑P **PKPbc 22 45 10.7 +0.6**
RETA Reutte 147.27 354 *e*P **PKPbc 22 45 12.4 +1.3**
comp=Z,12nm,1.2s
MDVR Moldovita 147.28 339 ⇓P **PKPbc 22 45 12.5 +1.3**
KBA Koelnbreinsper 147.32 350 *e*P **PKPbc 22 45 11.6 +0.3**
comp=Z,1.5nm,0.7s
WATA Walderalm 147.32 352 *e*P **PKPbc 22 45 12.0 +0.6**
comp=Z,10.0nm,1.3s
MOTA Moosalm 147.37 353 *e*P **PKPbc 22 45 12.2 +0.7**
comp=Z,5.4nm,1.2s
WTTA Wattenberg 147.39 352 *e*P **PKPbc 22 45 12.5 +1.0**
comp=Z,11nm,1.2s
SOKA Soboth 147.40 348 *e*P **PKPbc 22 45 12.1 +0.6**
comp=Z,13nm,1.5s
SQTA Sankt Quirin 147.48 353 *e*P **PKPbc 22 45 12.8 +1.1**
comp=Z,8.4nm,1.2s
DAVA Damuels 147.56 355 *e*P **PKPbc 22 45 13.7 +1.7**
comp=Z,14nm,1.2s,SNR=5.2
OBKA Obir 147.65 348 *i*P **PKPbc 22 45 12.0 -0.2**
comp=Z,4.4nm,1.1s
MYKA Terra Mystica 147.70 350 *e*P **PKPbc 22 45 12.6 +0.2**
comp=Z,7.6nm,1.4s
FETA Feichten 147.73 353 *e*P **PKPbc 22 45 14.3 +1.8**
comp=Z,10nm,1.4s
ABTA Abfaltersbach 147.77 351 *e*P **PKPbc 22 45 12.5 0.0**
comp=Z,9.8nm,1.1s
BLKB Belogradchik 147.91 336 ⇑P **PKPdf 22 45 11.9 +2.0**
BOVS Bovan 148.27 338 ⇑P **PKPdf 22 45 12.7 +2.2**
ESDC Sonseca Array 153.96 17 PKPbc **PKPbc 22 45 27.6 +0.2**
comp=Z,1.3nm,1.1s,baz=2.9,slow=3.0,SNR=4.9
ESDC PKPab **PKPab 22 45 40.0 -0.5**
comp=Z,1.7nm,1.1s,baz=323,slow=3.1,SNR=5.3
TORD Torodi Ar. Bea 175.79 115 PKPab **PKPab 22 47 16.0 -1.0**
comp=Z,0.4nm,0.8s,baz=262,slow=4.1,SNR=2.6

AAE 08 22:29:27.6±3.3, 11°.77N×43°.25E, h0km±42km, Ethiopia

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**0.46**	**239**	*e*P	Pg	22 29 35.0	-1.5
ATD				*e*S	Sg	22 29 41.6	-0.9
ATD	**Arta Tunnel**	**0.46**	**239**	*e*P	Pg	22 29 35.0	-1.5
ATD				*e*S	Sg	22 29 40.9	-1.5
ANKE	**Ethiopia-Afar**	**4.08**	**238**	*e*P	Pn	22 30 31.5	-0.1
ANKE	**Ethiopia-Afar**	**4.08**	**238**	*e*P	Pn	22 30 26.0	-5.6
AAE	**Adis Abeba**	**5.18**	**239**	*e*P	Pn	22 30 42.4	-4.4
FURI	**Furi**	**5.33**	**238**	*e*P	Pn	22 30 44.4	-4.4
FURI				*e*S	Sn	22 31 30.6	-20

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*TAP **08** 22:30:47.0, 23°.97N×122°.63E, h15km±1km, ML2.6, D*
*JMA **08** 22:30:48.4±0.1, 24°.5N±0°.8×122°.6E±0°.2, h60km, MV1.8/11,*
NW OFF ISHIGAKIJIMA IS

ISC 08 22:30:47.5±1.3, 23°.94N±0°.04×122°.62E±0°.02, h21km±5km, n53, σ0°.85/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.58**	**30**	P	**Pb**	**22 30 58.7**	**-0.5**
JYNG				S	**Sb**	**22 31 06.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.62**	**34**	P	**Pb**	**22 30 59.3**	**-0.6**
YOJ	baz=33			S	**Sb**	**22 31 08.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.62**	**34**	P	**Pb**	**22 30 59.4**	**-0.6**
YOJ				*e*S	**Sb**	**22 31 07.4**	**-0.8**
EWUT	**Wuta**	**0.92**	**303**	*e*P	**Pb**	**22 31 04.3**	**-0.4**
EWUT	baz=301			*e*S	**Sn**	**22 31 17.4**	**-0.4**
ETL	**Fush Village**	**0.94**	**283**	*e*P	**Pn**	**22 31 06.3**	**+0.8**
TEYL	**Yanliau Villag**	**0.94**	**266**	*e*P	**Pn**	**22 31 05.4**	**-0.1**
TWD	**Chiawan**	**0.95**	**278**	*e*P	**Pb**	**22 31 04.8**	**-0.5**
NACB	**Ninganchiao**	**0.97**	**284**	*e*P	**Pn**	**22 31 06.0**	**+0.1**
TWC	**Suao**	**0.97**	**313**	P	**Pb**	**22 31 05.6**	**0.0**
TWC	baz=312			S	**Sn**	**22 31 18.7**	**-0.3**

	baz=312						
TEGC	**Jichi Village**	**1.02 257**	*e*P		**Pn**	**22 31 07.2**	**+0.6**
	baz=255						
ETM	**Tongmen**	**1.03 271**	*e*P		**Pb**	**22 31 05.9**	**-0.9**
	baz=269						
ETLH	**Xiulin Townshi**	**1.08 284**	*e*P		**Pb**	**22 31 06.7**	**-0.8**
	baz=282						
IRIF	**Iriomote-Funau**	**1.08 69**	P		**Pn**	**22 31 07.4**	**-0.1**
IRIF			*e*S		**Sn**	**22 31 21.6**	**-0.2**
HATJ	**Hateruma jima**	**1.09 84**	*e*P		**Pb**	**22 31 09.3**	**+1.7**
HATJ			S		**Sn**	**22 31 24.2**	**+2.3**
EGFH	**Guangfu**	**1.13 256**	*e*P		**Pb**	**22 31 08.9**	**+0.5**
	baz=254						
LATG	**Datong**	**1.16 301**	P		**Pb**	**22 31 09.8**	**+0.8**
	baz=299						
LATG			*e*S		**Sn**	**22 31 26.2**	**+2.2**
	baz=299						
TWE	**Neicheng**	**1.17 312**	*e*P		**Pb**	**22 31 08.8**	**-0.2**
	baz=310						
TWE			*e*S		**Sn**	**22 31 25.1**	**+1.3**
	baz=310						
HGSD	**Ruisui**	**1.19 248**	P		**Pb**	**22 31 09.6**	**+0.2**
	baz=246						
HGSD			*e*S		**Sn**	**22 31 25.5**	**+1.1**
	baz=246						
NDT	**Datong Townshi**	**1.21 303**	*e*P		Pn	22 31 09.4	+0.2
	baz=301						
NDT			*e*S		**Sn**	**22 31 24.9**	**0.0**
	baz=301						
NNS	**Nan Shan**	**1.25 294**	*e*P		Pn	22 31 09.5	-0.3
	baz=292						
FUSB	**Fushanzhiwuyua**	**1.25 311**	P		**Pb**	**22 31 10.8**	**+0.4**
	baz=309						
FUSB			*e*S		**Sn**	**22 31 28.7**	**+2.7**
	baz=309						
TIPB	**Shuangxi**	**1.26 325**	P		**Pb**	**22 31 10.6**	**0.0**
	baz=323						
TIPB			*i* S		**Sn**	**22 31 26.6**	**+0.4**
	baz=323						
WHF	**Hehuan Shan**	**1.26 279**	P		Pn	22 31 10.1	-0.1
	baz=278						
WHF			*e*S		**Sb**	**22 31 26.4**	**-0.4**
	baz=278						
EHY	**Hungye**	**1.27 250**	*e*P		Pn	22 31 10.3	+0.3
	baz=248						
FUSS	**Fushou**	**1.30 284**	P		**Pb**	**22 31 11.0**	**-0.4**
	baz=282						
JKRS	**Kuro-shima**	**1.30 77**	P		**Pb**	**22 31 11.4**	**+0.1**
JKRS			S		**Sb**	**22 31 28.0**	**+0.5**
OWD	**Renai**	**1.32 271**	*e*P		Pn	22 31 11.3	+0.4
	baz=269						
CHGB	**Renai**	**1.33 275**	P		Pn	22 31 11.2	+0.2
	baz=273						
CHGB			*e*S		**Sn**	**22 31 28.1**	**-0.1**
	baz=273						
SXI1	**Grass Mountain**	**1.33 329**	*e*P		Pn	22 31 10.8	-0.2
	baz=328						
SXI1			*e*S		**Sb**	**22 31 29.6**	**+1.1**
	baz=328						
YULB	**Yu-li**	**1.33 246**	P		**Pn**	**22 31 10.9**	**0.0**
	baz=244						
YULB			*e*S		**Sn**	**22 31 27.6**	**-0.5**
	baz=244						
EYUL	**Yuli**	**1.34 244**	*e*P		**Pb**	**22 31 11.7**	**-0.2**
	baz=242						
YHNB	**Yeheng**	**1.35 303**	P		**Pb**	**22 31 11.7**	**-0.5**
	baz=301						
YHNB			*e*S		**Sb**	**22 31 29.4**	**+0.3**
	baz=301						
TWF1	**Yuli**	**1.35 244**	P		**Pn**	**22 31 11.0**	**-0.1**
	baz=243						
NWF	**Wu-fen Shan**	**1.36 326**	*e*P		**Pb**	**22 31 12.3**	**-0.1**
	baz=324						
WFSB	**Wu-fen Shan**	**1.36 326**	*e*P		**Pb**	**22 31 11.9**	**-0.4**
	baz=324						
NSK	**Sanguang**	**1.37 303**	*e*P		**Pn**	**22 31 10.9**	**-0.5**
	baz=301						
VWDT	**VWDT**	**1.37 262**	P		Pn	22 31 11.9	+0.5
	baz=261						
VWDT			*e*S		**Sn**	**22 31 28.3**	**-0.6**
	baz=261						
TDCB	**Techi**	**1.37 283**	*e*P		Pn	22 31 12.1	+0.5
	baz=281						
WUSB	**Renai**	**1.38 272**	P		Pn	22 31 12.1	+0.4
	baz=271						
WUSB			*e*S		**Sb**	**22 31 29.7**	**-0.2**
	baz=271						
TWA	**Mucha**	**1.40 318**	P		**Pb**	**22 31 13.2**	**+0.2**
	baz=316						
JIJ	**Ishigaki jima**	**1.45 73**	P		Pn	22 31 12.4	-0.1
JIJ			*e*S		**Sn**	**22 31 30.6**	**-0.3**
EHD	**Haiduan**	**1.52 239**	*e*P		**Pn**	**22 31 13.6**	**0.0**
	baz=238						
EHD			*e*S		**Sn**	**22 31 31.6**	**-1.1**
	baz=238						
NFF	**Wufeng Townshi**	**1.54 297**	P		Pn	22 31 14.4	+0.6
	baz=295						
NFF			*e*S		**Sn**	**22 31 32.7**	**-0.4**
	baz=295						
SSLB	**Suanglung**	**1.54 265**	*e*P		**Pb**	**22 31 14.8**	**-0.6**
	baz=263						
WHP	**Taichung City**	**1.57 283**	*e*P		**Pb**	**22 31 16.7**	**+0.7**
	baz=281						
WCS	**Beigang Elemen**	**1.57 274**	P		Pn	22 31 14.2	0.0
	baz=273						
SMLT	**Sun Moon Lake**	**1.58 268**	*e*P		**Pb**	**22 31 16.0**	**-0.1**
	baz=266						
TYC	**Yuchr**	**1.62 269**	*e*P		**Pb**	**22 31 16.3**	**-0.4**
	baz=267						
LIOB	**Emei**	**1.63 296**	*e*P		Pn	22 31 15.8	+0.8
	baz=294						
WHYT	**Xinyi Township**	**1.64 262**	*e*P		**Pb**	**22 31 16.3**	**-0.8**
	baz=260						
JISG	**Ishigakijimahi**	**1.67 67**	P		Pn	22 31 15.1	-0.4
JISG			S		**Sn**	**22 31 34.5**	**-1.7**
ALS	**Alishan**	**1.72 256**	*e*P		Pn	22 31 17.5	+1.0
	baz=254						
JTJ	**Tarama**	**2.02 69**	P		Pn	22 31 20.2	-0.2
JTJ			S		**Sn**	**22 31 43.3**	**-1.6**

NEIC ***08*** *22:40:13.8±1.9, 62°.34N±0°.02×151°.24W±0°.05, h17km±7km, Error ellipse: s-maj=3.7km s-min=2.7km az=115.0*
AEIC ***08*** *22:40:13±1.8, 62°.35N±0°.02×151°.24W±0°.05, h13km±4km, ML3.4, ML3.7/171(NEIC), Error ellipse: s-maj=3.6km s-min=2.8km az=110.0*

ISC 08 22:40:13.2±1.0, 62°.35N±0°.02×151°.25W±0°.02, h14km±8km, n239, σ0s85/248, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.39 200**			**Pg**	**22 40 21.1**	**0.0**
SKT				Sg	**Sg**	**22 40 26.7**	**+0.2**
SKT	**Skwentna**	**0.39 200**		P	**Pg**	**22 40 21.1**	**0.0**
	baz=20						
SKT				S	**Sg**	**22 40 26.7**	**+0.2**
	baz=20						
CUT	**Chulitna**	**0.46 83**			**Pg**	**22 40 22.6**	**+0.3**
CUT				Sg	**Sb**	**22 40 29.3**	**-0.3**
CUT	**Chulitna**	**0.46 83**		P	**Pg**	**22 40 22.3**	**0.0**
	baz=262						
CUT				S	**Sb**	**22 40 29.4**	**-0.3**
	baz=262						
PPLA	**Purkeypile**	**0.70 322**			**Pg**	**22 40 27.0**	**+0.1**
PPLA	**Purkeypile**	**0.70 322**		P	**Pg**	**22 40 27.0**	**+0.1**
	baz=142						
M22K	**Willow**	**0.80 138**			**Pg**	**22 40 28.0**	**-0.6**
M22K				Sg	**Sb**	**22 40 39.4**	**0.0**
M22K				IAML		22 40 40.4	
	comp=N,4μm,0.5s						
M22K				IAML		22 40 44.7	
	comp=E,4μm,0.7s						
M22K	**Willow**	**0.80 138**		P	**Pg**	**22 40 28.1**	**-0.6**
	baz=318						
M22K				S	**Sb**	**22 40 39.6**	**+0.2**
	baz=318						
STLK	**Strandline Lak**	**0.90 198**			**Pb**	**22 40 29.6**	**-0.9**
SUA	**Susitna One**	**0.92 165**			**Pb**	**22 40 30.0**	**-0.9**
SUA	**Susitna One**	**0.92 165**		P	**Pb**	**22 40 30.0**	**-0.9**
	baz=345						
M20K	**Styx River**	**1.00 243**			**Pb**	**22 40 31.9**	**-0.5**
M20K	**Styx River**	**1.00 243**		IAML		22 40 45.7	
	comp=N,2μm,0.5s						
M20K				IAML		22 40 45.8	
	comp=E,2μm,0.5s						
M20K	**Styx River**	**1.00 243**		P	**Pb**	**22 40 31.9**	**-0.5**
	baz=62						
SPCG	**Spurr Capps Gl**	**1.12 199**			**Pb**	**22 40 33.5**	**-0.9**
SPCG					**Sb**	**22 40 48.7**	**-0.2**
CAST	**Castle Rocks**	**1.14 341**			**Pb**	**22 40 34.5**	**-0.2**
CAST				IAML		22 40 50.4	
	comp=E,1μm,0.3s						
CAST	**Castle Rocks**	**1.14 341**			**Sb**	**22 40 49.5**	**+0.2**
CAST	**Castle Rocks**	**1.14 341**		P	**Pb**	**22 40 34.5**	**-0.2**
	baz=160						
CAST				S	**Sb**	**22 40 49.5**	**+0.2**
	baz=160						
CRP	**Crater Peak**	**1.17 202**			**Sn**	**22 40 50.7**	**-0.2**
SPCP	**Crater Peak Br**	**1.17 202**			**Pb**	**22 40 34.5**	**-0.7**
SPCP					**Sn**	**22 40 50.9**	**-0.1**
TRF	**Thorofare Moun**	**1.19 21**			**Pn**	**22 40 35.3**	**-0.2**
TRF				IAML		22 40 52.3	
	comp=E,1μm,0.3s						
TRF				IAML		22 40 52.7	
	comp=N,2μm,0.3s						
TRF	**Thorofare Moun**	**1.19 21**			**Sn**	**22 40 51.7**	**+0.1**
TRF	**Thorofare Moun**	**1.19 21**		P	**Pn**	**22 40 35.3**	**-0.2**
	baz=202						
TRF				S	**Sn**	**22 40 51.7**	**+0.1**
	baz=202						
SPNN	**North Nagishla**	**1.20 216**			**Sb**	**22 40 51.5**	**+0.3**
SPCN	**Chakachatna No**	**1.21 202**			**Pn**	**22 40 35.4**	**-0.3**
KTH	**Kantishna Hill**	**1.22 7**			**Pn**	**22 40 35.9**	**0.0**
L20K	**Farewell, AK**	**1.23 277**			**Pn**	**22 40 35.4**	**-0.5**
L20K	**Farewell, AK**	**1.23 277**		P	**Pn**	**22 40 35.4**	**-0.5**
	baz=96						
SPU	**Mount Spurr**	**1.23 198**			**Pn**	**22 40 35.3**	**-0.7**
SPCR	**Spurr Chakacha**	**1.24 202**			**Pn**	**22 40 35.4**	**-0.7**
SPCR	**Spurr Chakacha**	**1.24 202**		P	**Pn**	**22 40 35.4**	**-0.7**
	baz=21						
PMR	**Palmer**	**1.26 126**			**Pn**	**22 40 34.8**	**-1.4**
PMR				IAML		22 40 52.9	
	comp=N,844nm,0.4s						
PMR				IAML		22 40 55.2	
	comp=E,905nm,0.5s						
PMR	**Palmer**	**1.26 126**		P	**Pn**	**22 40 34.9**	**-1.4**
	baz=308						
CKL	**Chakachamna La**	**1.27 205**			**Pn**	**22 40 36.1**	**-0.4**
FIS	**Fire Island**	**1.30 157**			**Pb**	**22 40 37.7**	**+0.3**
WAT1	**Susitna Watana**	**1.34 68**			**Pn**	**22 40 36.9**	**-0.6**
WAT1	**Susitna Watana**	**1.34 68**		P	**Pn**	**22 40 36.9**	**-0.6**
	baz=250						
RC01	**Rabbit Creek A**	**1.45 150**			**Pn**	**22 40 38.1**	**-0.9**
RC01				IAML		22 41 03.2	
	comp=N,905nm,0.3s						
RC01	**Rabbit Creek A**	**1.45 150**		P	**Pn**	**22 40 38.2**	**-0.8**
	baz=331						
SML	**Sawmill**	**1.48 110**			**Pn**	**22 40 38.4**	**-0.9**
SML				IAML		22 41 04.2	
	comp=E,1μm,0.7s						
SML				IAML		22 41 06.7	
	comp=N,1μm,0.7s						
SML	**Sawmill**	**1.48 110**		P	**Pn**	**22 40 38.9**	**-0.4**
	baz=292						
RND	**Reindeer**	**1.53 45**			**Pn**	**22 40 39.8**	**-0.3**
M19K	**Big River Lodg**	**1.54 255**			**Pn**	**22 40 40.0**	**-0.3**
M19K	**Big River Lodg**	**1.54 255**		P	**Pn**	**22 40 40.0**	**-0.3**
	baz=72						
CAPN	**Captain Cook N**	**1.59 178**			**Pb**	**22 40 42.7**	**+0.5**
CAPN				IAML		22 41 20.5	
	comp=E,1μm,0.6s						
CAPN				IAML		22 41 23.1	
	comp=N,1μm,0.7s						
CAPN	**Captain Cook N**	**1.59 178**		P	**Pb**	**22 40 42.2**	**0.0**
	baz=358						
CHUM	**Lake Minchumin**	**1.61 343**			**Pn**	**22 40 41.2**	**0.0**
CHUM	**Lake Minchumin**	**1.61 343**		P	**Pn**	**22 40 41.2**	**0.0**
	baz=162						
KNK	**Knik Glacier**	**1.62 124**			**Pn**	**22 40 41.0**	**-0.3**
KNK				IAML		22 41 06.9	
	comp=N,1μm,0.6s						
KNK				IAML		22 41 07.7	
	comp=E,1μm,0.4s						
KNK	**Knik Glacier**	**1.62 124**		P	**Pn**	**22 40 41.7**	**+0.4**
	baz=306						
K20K	**Telida**	**1.64 309**			**Pn**	**22 40 41.3**	**-0.3**
K20K				IAML		22 41 06.0	
	comp=E,1μm,0.5s						
K20K	**Telida**	**1.64 309**		P	**Pn**	**22 40 41.4**	**-0.3**
	baz=127						
WAT6	**Susitna Watana**	**1.65 80**			**Pn**	**22 40 40.7**	**-1.1**
WAT6	**Susitna Watana**	**1.65 80**		P	**Pn**	**22 40 40.7**	**-1.1**
	baz=263						
L19K	**White Mountain**	**1.69 266**			**Pn**	**22 40 42.1**	**-0.2**
L19K				IAML		22 41 08.7	
	comp=E,659nm,0.8s						
L19K	**White Mountain**	**1.69 266**		P	**Pn**	**22 40 42.0**	**-0.2**
	baz=83						
MCK	**McKinley**	**1.74 36**			**Pn**	**22 40 43.2**	**+0.2**
MCK				IAML		22 41 08.9	
	comp=E,750nm,0.5s						
MCK				IAML		22 41 10.0	
	comp=N,1μm,0.5s						
MCK	**McKinley**	**1.74 36**		P	**Pn**	**22 40 43.8**	**+0.8**
	baz=218						
M23K	**Glacier View**	**1.75 107**			**Pn**	**22 40 43.1**	**0.0**
BPAW	**Bear Paw Mtn.**	**1.76 4**			**Pn**	**22 40 42.8**	**-0.5**
BPAW				IAML		22 41 08.4	
	comp=E,448nm,0.6s						
BPAW	**Bear Paw Mtn.**	**1.76 4**		P	**Pn**	**22 40 42.8**	**-0.5**
	baz=184						
DFR	**Drift River**	**1.89 202**			**Pn**	**22 40 45.5**	**+0.4**
SLKM	**Skilak Lake**	**1.91 165**			**Pn**	**22 40 44.4**	**-0.9**
RDJH	**Redoubt Jeurge**	**1.92 204**			**Pn**	**22 40 46.1**	**+0.6**
SCM	**Sheep Creek Mo**	**1.92 104**		Pn	**Pn**	**22 40 45.4**	**0.0**
SCM				IAML		22 41 15.2	
	comp=E,767nm,0.7s						
DHY	**Denali Highway**	**1.93 66**			**Pn**	**22 40 45.1**	**-0.5**
DHY				IAML		22 41 14.4	
	comp=E,631nm,0.5s						
DHY				IAML		22 41 15.1	
	comp=N,580nm,0.3s						
DHY	**Denali Highway**	**1.93 66**		P	**Pn**	**22 40 45.5**	**-0.1**
	baz=249						
NCT	**North Crescent**	**1.97 205**			**Pn**	**22 40 46.6**	**+0.5**
BWN	**Browne**	**2.00 23**			**Pb**	**22 40 48.9**	**-0.4**
BWN				IAML		22 41 25.4	
	comp=N,756nm,0.8s						
BWN				IAML		22 41 26.4	
	comp=E,762nm,0.9s						
O22K	**Cooper Landing**	**2.01 158**			**Pn**	**22 40 47.4**	**+0.7**
O22K	**Cooper Landing**	**2.01 158**		P	**Pn**	**22 40 47.3**	**+0.7**
	baz=339						
RDWB	**Redoubt West**	**2.02 203**			**Pn**	**22 40 47.8**	**+0.9**
RSO	**Redoubt South**	**2.03 202**			**Pn**	**22 40 47.2**	**+0.1**
PWL	**Port Wells**	**2.04 136**			**Pn**	**22 40 48.1**	**+1.0**
PWL				IAML		22 41 15.7	
	comp=E,895nm,0.6s						
RED	**Redoubt Volcan**	**2.07 201**			**Pn**	**22 40 47.4**	**-0.1**
N19K	**Bonanza Creek**	**2.18 227**			**Pn**	**22 40 49.0**	**-0.1**
N19K				IAML		22 41 24.2	
	comp=N,312nm,0.8s						
N19K				IAML		22 41 26.2	
	comp=E,351nm,0.3s						
N19K	**Bonanza Creek**	**2.18 227**		P	**Pn**	**22 40 49.1**	**0.0**
	baz=44						
J20K	**Nowinta River**	**2.25 326**		Pn	**Pn**	**22 40 50.0**	**0.0**
J20K	**Nowinta River**	**2.25 326**		P	**Pn**	**22 40 49.9**	**0.0**
	baz=144						
TT01	**Tatalina**	**2.27 286**			**Pn**	**22 40 49.8**	**-0.5**
TTA	**Tatalina**	**2.28 287**			**Pn**	**22 40 49.8**	**-0.6**
TTA				IAML		22 41 31.8	
	comp=E,365nm,0.8s						
TTA	**Tatalina**	**2.28 287**		P	**Pn**	**22 40 49.7**	**-0.6**
	baz=103						
O20K	**Slope Mountain**	**2.37 197**			**Pn**	**22 40 52.2**	**+0.6**
O20K	**Slope Mountain**	**2.37 197**		P	**Pn**	**22 40 52.2**	**+0.6**
	baz=16						
M24K	**Tolsona, Glenn**	**2.39 94**			**Pn**	**22 40 53.2**	**+1.4**
M24K				IAML		22 41 36.6	
	comp=N,611nm,0.5s						
M24K	**Tolsona, Glenn**	**2.39 94**		P	**Pn**	**22 40 53.2**	**+1.4**
	baz=278						
SEW	**Seward**	**2.41 158**			**Pn**	**22 40 53.5**	**+1.4**
SEW	**Seward**	**2.41 158**		P	**Pn**	**22 40 53.4**	**+1.3**
	baz=340						
SVW2	**Sparrevohn**	**2.42 241**			**Pn**	**22 40 52.0**	**-0.2**
SVW2				IAML		22 41 33.1	
	comp=E,354nm,0.4s						
SVW2				IAML		22 41 37.3	
	comp=N,353nm,0.5s						
NEA2	**Nenana**	**2.46 23**			**Pn**	**22 40 52.1**	**-0.7**
NEA2	**Nenana**	**2.46 23**		P	**Pn**	**22 40 52.1**	**-0.7**
	baz=204						
GLI	**Glacier Island**	**2.47 125**			**Pn**	**22 40 53.7**	**+0.8**
GLI				IAML		22 41 26.5	
	comp=N,452nm,0.4s						
GLI				IAML		22 41 32.5	
	comp=E,478nm,0.5s						
GLI	**Glacier Island**	**2.47 125**		P	**Pn**	**22 40 53.8**	**+0.8**
	baz=308						
IVE	**Iliamna Volcan**	**2.49 201**			**Pn**	**22 40 54.0**	**+0.7**
WRH	**Wood River Hil**	**2.56 32**			**Pn**	**22 40 54.0**	**-0.2**
JPK	**Jack Peak**	**2.57 118**			**Pn**	**22 40 55.2**	**+0.8**
BRLK	**Bradley Lake**	**2.60 176**			**Pn**	**22 40 56.0**	**+1.2**
O19K	**Port Alsworth**	**2.62 216**			**Pn**	**22 40 55.1**	**+0.2**
O19K				IAML		22 41 43.6	
	comp=N,483nm,0.4s						
BRSE	**Bradley Lake S**	**2.63 174**			**Pn**	**22 40 56.5**	**+1.3**
BRSE	**Bradley Lake S**	**2.63 174**		P	**Pn**	**22 40 56.5**	**+1.3**
	baz=355						
KLU	**Klutina**	**2.66 106**		Pn	**Pn**	**22 40 56.5**	**+0.8**
KLU				IAML		22 41 35.3	
	comp=E,192nm,0.4s						
KLU				IAML		22 41 35.6	
	comp=N,297nm,0.4s						
KLU	**Klutina**	**2.66 106**		P	**Pn**	**22 40 56.8**	**+1.1**
	baz=291						
MLY	**Manley**	**2.70 5**			**Pn**	**22 40 55.9**	**-0.3**
MLY	**Manley**	**2.70 5**		P	**Pn**	**22 40 56.2**	**0.0**
	baz=185						
PS11	**TAPS Pump St11**	**2.72 93**			**Pb**	**22 40 59.0**	**-2.5**
PAX	**Paxson**	**2.74 74**			**Pn**	**22 40 56.8**	**+0.1**
PAX	**Paxson**	**2.74 74**		P	**Pn**	**22 40 57.2**	**+0.4**
	baz=259						
CCB	**Clear Creek Bu**	**2.78 32**			**Pn**	**22 40 56.6**	**-0.5**
CCB				IAML		22 41 39.5	
	comp=E,217nm,0.8s						
CCB				IAML		22 41 39.8	
	comp=N,167nm,0.4s						
N18K	**Kilae Creek**	**2.78 235**			**Pn**	**22 40 57.0**	**-0.3**
N18K				IAML		22 41 41.1	
	comp=N,338nm,0.7s						
N18K				IAML		22 41 41.4	
	comp=E,275nm,0.9s						
N18K	**Kilae Creek**	**2.78 235**		P	**Pn**	**22 40 57.0**	**-0.3**
	baz=51						
FID	**Port Fidalgo**	**2.79 123**			**Pn**	**22 40 57.5**	**+0.2**
FID				IAML		22 41 34.1	
	comp=N,354nm,0.4s						
CNPM	**China Poot**	**2.83 180**			**Pn**	**22 40 58.5**	**+0.5**
HDA	**Harding Lake**	**2.83 41**			**Pn**	**22 40 57.7**	**-0.2**
HDA				IAML		22 41 43.5	
	comp=E,368nm,0.4s						
HDA	**Harding Lake**	**2.83 41**		P	**Pn**	**22 40 58.2**	**+0.3**
	baz=225						
HARP	**HAARP**	**2.84 86**			**Pn**	**22 40 59.2**	**+1.2**
HARP	**HAARP**	**2.84 86**		P	**Pn**	**22 40 59.2**	**+1.2**
	baz=271						
I21K	**Tanana**	**2.86 354**			**Pn**	**22 40 58.0**	**-0.3**
I21K	**Tanana**	**2.86 354**		P	**Pn**	**22 40 58.5**	**+0.3**
	baz=173						
DIV	**Divide**	**2.88 113**			**Pn**	**22 40 59.2**	**+0.6**
K24K	**Donnelly Dome**	**2.88 57**			**Pn**	**22 40 59.2**	**+0.5**
I23K	**Minto, Yukon-K**	**2.93 16**			**Pn**	**22 40 59.1**	**-0.1**
I23K	**Minto, Yukon-K**	**2.93 16**		P	**Pn**	**22 40 59.2**	**0.0**
	baz=198						
MDM	**Murphy Dome**	**2.95 26**			**Pn**	**22 40 59.6**	**+0.1**
MDM				IAML		22 41 45.4	
	comp=E,155nm,0.7s						
TCOL	**CIGO, UAF Yank**	**2.95 29**			**Pn**	**22 40 59.3**	**-0.2**
COLA	**College**	**2.95 29**			**Pn**	**22 40 59.1**	**-0.5**
P23K	**Montague Islan**	**3.00 140**			**Pn**	**22 41 00.1**	**-0.2**
HIN	**Hinchinbrook I**	**3.01 129**		Pn	**Pn**	**22 41 01.1**	**+0.7**
HIN				IAML		22 41 51.2	
	comp=E,260nm,0.6s						
HIN				IAML		22 41 52.1	
	comp=N,276nm,1.0s						
IL31		**3.12 37**			**Pn**	**22 41 01.7**	**-0.1**
ILAR	**Eielson Array**	**3.12 37**		Pn	**Pn**	**22 41 01.4**	**-0.4**
O18K	**Koktuh Hills**	**3.16 219**			**Pn**	**22 41 02.7**	**+0.3**
O18K				IAML		22 41 55.4	
	comp=E,125nm,0.3s						
EYAK	**Cordova Ski Ar**	**3.20 122**			**Pn**	**22 41 03.9**	**+1.0**
EYAK	**Cordova Ski Ar**	**3.20 122**		P	**Pn**	**22 41 03.7**	**+0.7**
	baz=307						
N25K	**Chitina, Valde**	**3.23 100**			**Pn**	**22 41 04.1**	**+0.7**
N25K	**Chitina, Valde**	**3.23 100**		P	**Pn**	**22 41 04.6**	**+1.2**
	baz=286						
RIDG	**Independent Ri**	**3.23 62**			**Pn**	**22 41 04.1**	**+0.6**
RIDG				IAML		22 41 60.0	
	comp=E,299nm,0.7s						
POKR	**Poker Plat Res**	**3.26 30**			**Pn**	**22 41 03.9**	**+0.1**
POKR				IAML		22 41 57.0	
	comp=N,157nm,0.5s						
POKR				IAML		22 41 57.1	
	comp=E,147nm,0.5s						
H21K	**Melozitna Rive**	**3.39 349**		Pn	**Pn**	**22 41 05.4**	**-0.2**
H21K				IAML		22 42 00.0	
	comp=E,105nm,0.5s						
H21K	**Melozitna Rive**	**3.39 349**		P	**Pn**	**22 41 05.5**	**-0.2**
	baz=168						
BMRM	**Bremner River**	**3.46 111**			**Pn**	**22 41 07.1**	**+0.5**
BMRM	**Bremner River**	**3.46 111**		P	**Pn**	**22 41 07.7**	**+1.1**
	baz=296						
J25K	**Salcha River,**	**3.48 47**			**Pn**	**22 41 06.5**	**-0.3**
J25K				IAML		22 42 03.4	
	comp=E,163nm,0.9s						
J25K				IAML		22 42 03.5	
	comp=N,161nm,0.6s						
J25K	**Salcha River,**	**3.48 47**		P	**Pn**	**22 41 06.6**	**-0.3**
	baz=232						
MENT	**Mentasta**	**3.53 77**			**Pn**	**22 41 08.6**	**+1.1**
DOT	**Dot Lake**	**3.53 65**			**Pn**	**22 41 07.9**	**+0.4**
H22K	**Ishtalitna Cre**	**3.56 359**			**Pn**	**22 41 08.1**	**+0.2**
H23K	**Yukon River**	**3.57 11**			**Pn**	**22 41 08.0**	**0.0**
H23K	**Yukon River**	**3.57 11**		P	**Pn**	**22 41 08.1**	**0.0**
	baz=193						
GOAT	**Goat Mountain**	**3.60 117**			**Pn**	**22 41 09.4**	**+0.9**
Q19K	**Cape Douglas,**	**3.63 200**		Pn	**Pn**	**22 41 09.3**	**+0.5**
Q19K				IAML		22 42 24.2	
	comp=N,158nm,0.7s						
Q19K				IAML		22 42 31.4	
	comp=E,214nm,1.4s						
GLB	**Gilahina Butte**	**3.64 101**			**Pn**	**22 41 10.0**	**+1.0**
GLB				IAML		22 42 05.5	
	comp=E,95nm,0.7s						
GLB				IAML		22 42 07.3	
	comp=N,94nm,0.6s						
SCRK	**Sand Creek**	**3.68 60**		Pn	**Pn**	**22 41 09.6**	**-0.1**
SCRK				IAML		22 42 10.3	
	comp=N,218nm,0.8s						
SCRK				IAML		22 42 10.4	
	comp=E,141nm,0.6s						
SCRK	**Sand Creek**	**3.68 60**		P	**Pn**	**22 41 10.5**	**+0.9**

PRP	Porcupine Dome	4.06	36	P	Pn	22 41 15.5	+0.6
	baz=221						
J26L	Joseph Creek	4.07	55		Pn	22 41 15.0	-0.1
J26L				IAML		22 42 29.5	
	comp=E,105nm,0.6s						
J26L				IAML		22 42 30.3	
	comp=N,91nm,0.5s						
J26L	Joseph Creek	4.07	55	P	Pn	22 41 15.1	+0.1
	baz=241						
NICHA	Nichawak Mount	4.10	118		Pn	22 41 17.0	+1.6
KAIM	Kayak Island	4.11	123	Pn	Pn	22 41 15.9	+0.5
KAIM				IAML		22 42 31.9	
	comp=E,58nm,1.4s						
BERG	Berg Lake	4.13	115		Pn	22 41 16.9	+1.2
SUCK	Suckling Hills	4.27	119		Pn	22 41 17.6	-0.1
SUCK				IAML		22 42 33.0	
	comp=N,69nm,0.6s						
SUCK				IAML		22 42 41.0	
	comp=E,60nm,0.8s						
KHIT	Khitrov Hills	4.29	113		Pn	22 41 19.5	+1.4
G21K	Allakaket	4.30	348		Pn	22 41 18.2	+0.2
PTPK	Patty Peak	4.33	102		Pn	22 41 20.5	+1.8
TGL	Tana Glacier	4.33	108		Pn	22 41 19.3	+0.7
TGL				IAML		22 42 29.8	
	comp=E,92nm,0.6s						
TGL				IAML		22 42 30.3	
	comp=N,100nm,1.1s						
M27K	Edge Creek, AK	4.37	86		Pn	22 41 21.1	+2.1
M27K				IAML		22 42 35.7	
	comp=N,64nm,0.7s						
M27K	Edge Creek, AK	4.37	86	P	Pn	22 41 21.2	+2.1
	baz=274						
L27K	Beaver Creek,	4.40	76		Pn	22 41 20.4	+0.9
L27K	Beaver Creek,	4.40	76	P	Pn	22 41 20.8	+1.3
	baz=265						
G23K	Bananza Creek	4.41	6		Pn	22 41 20.0	+0.4
BC03		4.42	76		Pn	22 41 21.1	+1.5
BCAR	Beaver Creek A	4.42	76	Pn	Pn	22 41 20.5	+0.8
BALM	Baldy	4.44	103		Pn	22 41 20.9	+0.8
WAX	Waxell Ridge	4.46	112		Pn	22 41 21.4	+1.1
KIAG	Kiagna River	4.47	105		Pn	22 41 21.5	+0.9
K27K	Chicken	4.48	64		Pn	22 41 21.4	+0.8
K27K				IAML		22 42 38.9	
	comp=N,62nm,0.8s						
H25K	Birch Creek	4.59	29		Pn	22 41 22.7	+0.7
SNH	Sunshine Point	4.61	114		Pn	22 41 23.2	+0.9
SNH				IAML		22 42 45.7	
	comp=E,64nm,2.0s						
BARK	Barkley Ridge	4.64	111		Pn	22 41 24.4	+1.6
I26K	Coal Creek Min	4.65	47		Pn	22 41 22.9	0.0
BARN	Barnard Glacie	4.74	102		Pn	22 41 25.2	+0.9
BARN				IAML		22 42 40.5	
	comp=N,51nm,0.9s						
BARN				IAML		22 42 40.8	
	comp=E,55nm,1.0s						
BAGL	Bagley Icefiel	4.78	109		Pn	22 41 26.1	+1.6
COLD	Coldfoot	4.92	5	Pn	Pn	22 41 26.8	+0.3
CTG	Chitna Glacier	4.92	102	P	Pn	22 41 28.5	+1.8
	baz=291						
CTGM	Chitina Glacie	4.93	102		Pn	22 41 27.8	+1.0
CTGM				IAML		22 42 46.0	
	comp=N,34nm,0.9s						
YUK2	White River	4.93	92		Pn	22 41 28.4	+1.7
FYU	Fort Yukon	4.97	29		Pn	22 41 28.7	+1.5
FYU				IAML		22 43 12.8	
	comp=E,66nm,4.1s						
F21K	Alatna River	4.99	350		Pn	22 41 28.2	+0.7
MESA	MESA	4.99	112	Pn	Pn	22 41 26.5	-1.2
MESA				IAML		22 42 54.8	
	comp=E,59nm,0.8s						
MESA	MESA	4.99	112	P	Pn	22 41 29.5	+1.8
	baz=300						
YAH	Yahtse	4.99	109		Pn	22 41 27.9	+0.2
YAH				IAML		22 42 48.1	
	comp=E,40nm,0.7s						
YAH				IAML		22 42 57.1	
	comp=N,67nm,0.9s						
YUK3	Moose Creek	5.11	92		Pn	22 41 31.0	+1.6
YUK3	Moose Creek	5.11	92	P	Pn	22 41 31.0	+1.6
	baz=281						
EGAK	Eagle	5.12	57		Pn	22 41 29.8	+0.4
LOGN	Logan Glacier	5.13	103		Pn	22 41 30.4	+0.8
LOGN				IAML		22 42 53.3	
	comp=N,32nm,0.9s						
LOGN				IAML		22 42 58.8	
	comp=E,45nm,1.3s						
TABL	Table Mountain	5.22	107		Pn	22 41 32.2	+1.3
TABL				IAML		22 42 57.0	
	comp=E,29nm,1.1s						
TABL				IAML		22 43 14.1	
	comp=N,30nm,1.8s						
I27K	Kandik River	5.35	48		Pn	22 41 32.8	+0.2
F24K	Squaw Lake	5.38	14		Pn	22 41 33.2	+0.2
O28M	Mount Upton	5.52	102		Pn	22 41 36.4	+1.4
DAWY	Dawson	5.63	67		Pn	22 41 37.3	+0.9
DAWY	Dawson	5.63	67	P	Pn	22 41 37.3	+0.9
	baz=257						
H27K	Steamboat Moun	5.75	43		Pn	22 41 37.9	-0.1
PCA	Pinnacle	5.77	108		Pn	22 41 39.1	+0.8
PINM	Pinnacle	5.77	108	P	Pn	22 41 39.1	+0.8
	baz=298						
BM03	Burnt Mountain	5.82	26		Pn	22 41 39.0	0.0
BMAR	Burnt Mountain	5.83	26	Pn	Pn	22 41 39.3	+0.2
M29M	Somme Creek	5.95	83		Pn	22 41 42.5	+1.8
YUK4	Talbot Arm	6.05	94	P	Pn	22 41 44.3	+2.0
	baz=284						
L29M	L29M	6.08	77		Pn	22 41 43.9	+1.4
G27K	Doyon Strip	6.09	38		Pn	22 41 42.5	-0.1
YUK6	Outpost Mounta	6.30	97		Pn	22 41 46.8	+1.0
YUK6	Outpost Mounta	6.30	97	P	Pn	22 41 46.8	+1.0
	baz=288						
TOLK	Toolik Lake Re	6.36	6	Pn	Pn	22 41 47.7	+1.4
TOLK	Toolik Lake Re	6.36	6	P	Pn	22 41 47.5	+1.2
	baz=187						
K29M	Barlow Dome	6.41	70		Pn	22 41 48.0	+0.9
I29M	Ogilvie Camp,	6.47	56		Pn	22 41 47.4	-0.4
HYT	Haines Junctio	6.74	97		Pn	22 41 53.2	+1.6
HYT	Haines Junctio	6.74	97	P	Pn	22 41 52.8	+1.2
	baz=289						
N30M	Aishikik Lake	6.75	91		Pn	22 41 52.6	+0.9
P29M	Windy Craggy	7.11	106		Pn	22 41 57.5	+0.8
EPYK	Eagle Plains	7.47	51		Pn	22 42 01.0	-0.6
WHY	Whitehorse	8.01	95	Pn	Pn	22 42 10.2	+1.2
SKAG	Skagway	8.28	103	Pn	Pn	22 42 13.3	+0.7
BESE	Bessie Mountai	8.93	108	Pn	Pn	22 42 22.4	+0.8
P33M	Teslin, Yukon	9.12	95	Pn	Pn	22 42 24.8	+0.5
INK	Inuvik	9.49	43	Pn	Pn	22 42 29.2	0.0

NEIC ***08*** *22:43:48.6±1.0, 34°.007N±0°.007×117°.250W±0°.010, h18km±1km, Error ellipse: s-maj=1.3km s-min=1.0km az=101.0*

IDC ***08*** *22:43:48.7±1.9, 34°.00N×117°.17W, h10km±12km, mbtmp3.3/6, ML3.6/6, Error ellipse: s-maj=24.6km s-min=7.0km az=53.0*

ANF ***08*** *22:43:48.3±0.2, 33°.99N×117°.26W, h17km±1km, ML4.1/42, Error ellipse: s-maj=1.1km s-min=1.0km az=48.0*

NEIC ***08*** *22:43:49.2, 34°.01N×117°.25W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.75; $M_{\theta\theta}$-4.72; $M_{\phi\phi}$2.97; $M_{r\theta}$-1.41; $M_{\theta\phi}$-0.92; $M_{\phi r}$2.47; Fault plane solution: $M_0$5.10000×10^{14} NP1:ϕ_s45.00000°, δ55.00000°, λ22.00000°. NP2:ϕ_s302.00000°, δ72.00000°, λ143.00000°. Principal axes: T 5.1667, Plg38.0000°, Azm258.0000°; N -0.1289, Plg50.0000°, Azm99.0000°; P -5.0378, Plg11.0000°, Azm357.0000°;*

PAS ***08*** *22:43:49.1±1.2, 34°.008N±0°.008×117°.252W±0°.009, h14km±1km, Mwr3.7/6, ML3.7/88(NEIC) Error ellipse: s-maj=1.2km s-min=1.0km az=185.0*

ISC 08 22:43:48.7±0.7, 34°.00N±0°.01×117°.25W±0°.01, h18km±4km, n182, σ0°90/262, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RVR	Riverside	0.10	266		Pb	22 43 52.1	+0.8
RVR					Sb	22 43 54.2	+1.3
CLTC	Calectric	0.11	330		Pg	22 43 52.4	-0.1
CLTC					Sg	22 43 55.0	0.0
CFSC	Central Fire S	0.11	347		Pb	22 43 52.2	+0.7
CFSC					Sg	22 43 54.9	-0.1
CFT	Crafton Hills	0.12	73		Pg	22 43 55.1	+2.5
HLNC	Highland	0.12	13		Pb	22 43 52.4	+0.4
HLNC					Sb	22 43 54.7	+0.8
PEC	Perris	0.13	145		Pg	22 43 52.6	-0.2
PEC					Sg	22 43 55.2	-0.3
SVD	Seven Oaks Dam	0.17	50		Pg	22 43 53.0	-0.3
SVD					Sg	22 43 55.7	-0.5
FON	Fontana	0.18	303		Pg	22 43 53.2	-0.3
FON					Sg	22 43 56.1	-0.5
SME	Santa Rosa Min	0.20	206		Pg	22 43 53.6	0.0
BBSC	Beaumont Base	0.24	109		Pb	22 43 54.5	+0.1
BBSC					Sb	22 43 58.3	0.0
MLSC	Mira Loma	0.26	271		Pg	22 43 54.3	-0.2
MLSC					Sg	22 43 58.1	-0.4
CRNC	Corona	0.28	244		Pn	22 43 59.0	+1.0
SS2	San Sevaine	0.29	315		Pg	22 43 55.0	-0.1
CSP	Cedar Springs	0.31	344		Pg	22 43 55.2	-0.3
BTL	Butler Peak	0.33	39		Pg	22 43 55.8	-0.2
CHNC	Chino	0.35	270		Pg	22 43 56.1	-0.1
CHNC					Sg	22 44 01.4	+0.2
HMTC	Hemet	0.36	144		Pg	22 43 56.0	-0.2
HMTC					Sg	22 44 01.2	-0.1
BBRC	Big Bear Solar	0.38	46		Pg	22 43 56.5	-0.2
BBRC					Sg	22 44 01.9	-0.4
BBRC	Big Bear Solar	0.38	46	P	Pg	22 43 56.5	-0.2
	baz=227,SNR=283						
BBRC				S	Sg	22 44 01.8	-0.4
	baz=227						
ELS	Elsinore Mount	0.38	203		Pg	22 43 56.5	-0.1
ELS				Sg	Sg	22 44 02.0	0.0
ELS				IAML		22 44 02.4	
	comp=E,6μm,0.7s						
MURC	Murrieta	0.40	173		Pg	22 43 57.0	-0.1
MURC					Sg	22 44 02.8	+0.2
MURC	Murrieta	0.40	173	P	Pg	22 43 57.0	-0.1
	baz=353,SNR=1000						
MURC				S	Sg	22 44 02.8	+0.2
	baz=353						
DGR	Domenigoni Val	0.40	150		Pg	22 43 56.8	-0.3
DGR					Sg	22 44 02.3	-0.4
BFSC	Mount Baldy Ra	0.41	305		Pg	22 43 56.7	-0.6
BFSC					Sg	22 44 02.3	-0.8
BFSC	Mount Baldy Ra	0.41	305	P	Pg	22 43 56.7	-0.6
	baz=124,SNR=857						
BFSC				S	Sg	22 44 02.3	-0.8
	baz=124						
POB	Polly Butte	0.42	139		Pg	22 43 57.0	-0.2
POB					Sg	22 44 02.9	-0.2
SSK	Sunset Peak	0.42	300		Pg	22 43 57.1	-0.3
BACC	Bachelor Mtn.	0.42	155		Pg	22 43 57.1	-0.3
BACC					Sg	22 44 02.9	-0.4
PSRC	Puddingstone R	0.47	281		Pg	22 43 57.9	-0.3
PSRC					Sg	22 44 04.7	0.0
SIL	Silver Peak	0.49	45		Pg	22 43 58.4	-0.4
SIL					Sg	22 44 05.0	-0.6
PEM	Pine Mountain	0.54	288		Pg	22 43 59.1	-0.4
VTV	Victorville	0.56	354		Pg	22 43 59.5	-0.5
VTV					Sg	22 44 06.8	-0.8
DEVC	Devers	0.56	96		Pb	22 44 00.0	0.0
DEVC					Sb	22 44 07.8	+0.1
ADO	Adelanto Recei	0.57	345		Pg	22 43 59.8	-0.3
ADO					Sg	22 44 07.7	-0.1
FULC	Fullerton	0.57	257		Pb	22 44 00.8	+0.7
FULC					Sn	22 44 09.6	-1.3
GVDA	Garner Valley	0.58	124		Pg	22 43 59.9	-0.5
GVDA					Sg	22 44 07.8	-0.5
XTL	Crystal Lake,	0.59	300		Pg	22 43 59.7	-0.8
SANC	Santa Ana	0.60	241		Pb	22 44 01.1	+0.5
SANC					Sb	22 44 10.2	+1.4
CRY	Cary Ranch	0.61	135		Pg	22 44 00.5	-0.4
CRY					Sg	22 44 08.6	-0.5
RHC	Rose Hills Cem	0.63	270		Pg	22 44 01.0	-0.2
BREC	Barre Substati	0.64	253		Pb	22 44 02.0	+0.7
BREC					Sn	22 44 11.6	-0.9
HOLC	Holcomb Ridge	0.67	313		Pg	22 44 01.3	-0.7
HOLC					Sg	22 44 10.0	-1.0
DNR	Dunn Ranch,Anz	0.67	130		Pg	22 44 01.8	-0.2
DNR					Sb	22 44 11.3	+0.2
SNDA	J Saunders Pla	0.69	130		Pg	22 44 02.1	-0.3
SNDA					Sb	22 44 11.8	+0.1
BZNA	Buzz No.'s Pla	0.70	136		Pg	22 44 02.2	-0.4
BZNA					Sg	22 44 11.4	-0.5
EW2	E Wide Canyon	0.70	95		Pb	22 44 02.3	-0.2
EW2					Sg	22 44 11.6	-0.4
MWC	Mount Wilson	0.70	289		Pg	22 44 01.9	-0.8
MWC					Sg	22 44 11.5	-0.5
DLAC	Del Amo	0.72	258		Pn	22 44 03.5	-0.4
DLAC					Sn	22 44 14.5	0.0
BLAC	Blackrock camp	0.72	84		Pb	22 44 02.5	-0.3
BLAC					Sg	22 44 11.9	-0.6
CHFC	Chilao Flat St	0.72	298		Pb	22 44 01.9	-0.9
CHFC					Sg	22 44 11.7	-0.9
GVRC	Garvey Reservo	0.72	274		Pb	22 44 02.5	-0.3
PLM	Palomar	0.72	153		Pb	22 44 02.3	-0.6
PLM					Sg	22 44 12.0	-0.6
JNH	Juniper Hills	0.73	308		Pb	22 44 02.2	-0.8
JNH					Sb	22 44 11.6	-1.2
CACC	Caltech Cellar	0.73	281		Pb	22 44 02.3	-0.7
CACC					Sb	22 44 12.6	-0.1
FRD	Ford Ranch, An	0.74	133		Pb	22 44 02.8	-0.3
FRD					Sb	22 44 12.6	-0.3
FRD	Ford Ranch, An	0.74	133		Pb	22 44 02.8	-0.3
FRD					Sb	22 44 12.7	-0.3
PFO	Pinyon Flats O	0.77	120	Pg	Pb	22 44 02.9	-0.7
	comp=E,103nm,0.3s,baz=297,slow=17,SNR=2733						
PFO				Lg	Lg	22 44 13.2	
	comp=E,1μm,0.3s,baz=307,slow=8.5,SNR=67						
PFO	Pinyon Flats O	0.77	120		Pb	22 44 03.1	-0.5
PFO				Sg	Sb	22 44 13.3	-0.4
PFO				IAML		22 44 13.9	
	comp=E,3μm,0.5s						
PFO				IAML		22 44 13.9	
	comp=E,5μm,0.5s						
PFO	Pinyon Flats O	0.77	120		Pb	22 44 03.1	-0.5
PFO					Sb	22 44 12.9	-0.8
PFO	Pinyon Flats O	0.77	120	P	Pb	22 44 03.0	-0.5
	baz=301,SNR=621						
PFO				S	Sb	22 44 13.0	-0.7
	baz=301						
XPFO	Pion Flat	0.77	120		Pb	22 44 03.1	-0.6
XPFO					Sb	22 44 13.1	-0.7
TPFO	Pinon Flats	0.77	120	P	Pb	22 44 03.1	-0.6
	baz=301,SNR=442						
PASC	Pasadena Art C	0.79	283		Pb	22 44 03.1	-0.9
PASC	Pasadena Art C	0.79	283		Sb	22 44 13.8	-0.6
GTM	Goat Mountain	0.80	68		Pb	22 44 03.5	-0.6
GTM					Sb	22 44 13.8	-0.8
LRRC	Littlerock Res	0.83	309		Pb	22 44 04.1	-0.5
LRRC					Sb	22 44 14.8	-0.6
SBB	Saddle Back Bu	0.83	326		Pb	22 44 04.1	-0.6
SBB					Sb	22 44 14.6	-1.1
WTT2	Watts, South G	0.83	267		Pn	22 44 05.4	-0.1
WTT2					Sn	22 44 17.8	+0.4
GORC	Green Oak Ranc	0.84	179		Pb	22 44 04.0	-0.9
GORC					Sb	22 44 15.2	-0.6
USC	University of	0.86	272		Pb	22 44 05.1	+0.1
GR2C	Griffith Obs.	0.88	278		Pb	22 44 04.7	-0.7
RRX	Edison Barstow	0.90	14		Pb	22 44 05.7	-0.2
RRX					Sg	22 44 17.8	-0.3
RRX	Edison Barstow	0.90	14	P	Pb	22 44 05.6	-0.2
	baz=194,SNR=367						
RRX				S	Sg	22 44 17.9	-0.2
	baz=194						
HYS	Haystack Butte	0.90	343		Pb	22 44 05.5	-0.4
HYS					Sb	22 44 17.0	-0.6
CJV	Casa Juvan	0.91	306		Pb	22 44 05.3	-0.8
FMP	Fort Macarthur	0.91	252		Pb	22 44 05.8	-0.2
FMP	Fort Macarthur	0.91	252	P	Pb	22 44 05.6	-0.4
	baz=71,SNR=40						
FMP				S	Sb	22 44 17.6	-0.2
	baz=71						
DECC	Green Verdugo	0.93	286	P	Pb	22 44 05.8	-0.6
	baz=105,SNR=131						
DECC				S	Sb	22 44 18.3	-0.1
	baz=105						
BELC	Belle Mtn. Jos	1.04	90	P	Pb	22 44 08.3	0.0
	baz=271,SNR=1000						
BELC				S	Sb	22 44 21.9	+0.2
	baz=271						
EDW2	Edwards Air Fo	1.07	325	P	Pb	22 44 08.4	-0.4
	baz=145,SNR=444						
EDW2				S	Sb	22 44 22.2	-0.3
	baz=145						
109C	Camp Elliot, M	1.11	174		Pn	22 44 08.4	-1.0
109C	Camp Elliot, M	1.11	174	P	Pn	22 44 08.4	-1.0
	baz=354,SNR=175						
109C				S	Sb	22 44 23.1	-0.5
	baz=354						
HEC	Hector,Ludlow	1.12	42	P	Pn	22 44 09.6	-0.1
	baz=223,SNR=850						
HEC				S	Sn	22 44 24.4	-0.3
	baz=223						
CIS	Catalina Islan	1.14	239	P	Pn	22 44 08.8	-0.9
	baz=58,SNR=95						
CIS				S	Sb	22 44 24.6	+0.2
	baz=58						
MONP2	Monument Peak	1.30	148	P	Pn	22 44 12.4	+0.2
	baz=328,SNR=566						
MONP2				S	Sb	22 44 29.4	+0.1
	baz=328						
CCAC	Calif City Air	1.31	331		Pn	22 44 12.3	+0.1
GSC	Goldstone, Bar	1.35	16	Pn	Pn	22 44 13.0	+0.3
GSC	Goldstone, Bar	1.35	16	P	Pn	22 44 13.1	+0.3
	baz=196,SNR=1000						
OSI	Osito Audit: C	1.36	297	P	Pn	22 44 12.8	-0.1
	baz=116,SNR=8.4						
OSI				S	Sb	22 44 30.7	-0.1
	baz=116						
BAR	Barrett	1.40	160		Pn	22 44 13.2	-0.3
BAR				IAML		22 44 32.7	
	comp=N,2μm,0.4s						
BAR				IAML		22 44 33.0	
	comp=E,2μm,0.4s						
SCI2	San Clemente I	1.48	227	P	Pn	22 44 14.0	-0.5
	baz=46,SNR=42						
SCI2				S	Sn	22 44 33.3	-0.2
	baz=46						
TJX	Tijuana	1.50	174		Pb	22 44 15.5	-0.5
LRMC	Laurel Mtn Rad	1.52	347	P	Pn	22 44 15.2	+0.1
	baz=166,SNR=801						
LRMC				S	Sn	22 44 34.3	-0.2
	baz=166						
TKX	Tecate	1.53	159		Pn	22 44 15.4	+0.3
TKX				IAML		22 44 36.5	
	comp=E,1μm,0.5s						
TKX				IAML		22 44 37.3	
	comp=N,1μm,0.2s						
GMRC	Granite Mounta	1.53	59	P	Pn	22 44 15.1	-0.2
	baz=240,SNR=546						
GMRC				Sb	Sg	22 44 36.9	-1.3
	baz=240						
BC3	Big Chuckawall	1.54	102	P	Pn	22 44 15.1	-0.2
	baz=284,SNR=816						
BC3				Sb	Sb	22 44 37.0	+1.1
	baz=284						
SWSC	Sam W. Stewart	1.61	130	P	Pn	22 44 15.4	-0.8
	baz=312,SNR=110						
SWSC				Sb	Sb	22 44 38.9	+1.1
	baz=312						
IKP	In-Ko-Pah, Jac	1.65	144	P	Pn	22 44 16.8	-0.1
	baz=325,SNR=218						
IKP				Sb	Sb	22 44 40.2	+1.0
	baz=325						
RMX	La Rumorosa	1.71	144		Pn	22 44 18.6	+0.9
RMX				IAML		22 44 44.0	
	comp=E,741nm,0.5s						
RMX				IAML		22 44 47.6	
	comp=N,443nm,0.8s						
ARVC	Arvin	1.72	311	P	Pn	22 44 17.7	0.0
	baz=130,SNR=39						
ARVC				S	Sn	22 44 39.8	+0.5
	baz=130						
YUH	Yuha Desert	1.75	140		Pn	22 44 17.9	-0.2
YUH				IAML		22 44 44.8	
	comp=E,465nm,0.3s						
YUH				IAML		22 44 44.9	
	comp=N,709nm,0.8s						
CBX	Cerro Bola	1.75	163		Pn	22 44 19.1	+0.8
CBX				IAML		22 44 45.1	
	comp=N,828nm,0.7s						
CBX				IAML		22 44 46.0	
	comp=E,1μm,0.5s						
IRM	Iron Mountain	1.76	84	P	Pn	22 44 17.9	-0.4
	baz=266,SNR=750						
IRM				Sb	Sg	22 44 43.8	-1.6
	baz=266						
TUQ	Turquoise Moun	1.80	37	P	Pn	22 44 19.0	0.0
	baz=218,SNR=255						
TUQ				Sb	Sg	22 44 45.1	-1.8
	baz=218						
ISA	Isabella, Lake	1.94	329	Pn	Pn	22 44 20.9	+0.1
ISA				IAML		22 44 50.4	
	comp=N,412nm,0.5s						
ISA				IAML		22 44 50.8	
	comp=E,651nm,0.6s						
ISA	Isabella, Lake	1.94	329	P	Pn	22 44 21.1	+0.2
	baz=148,SNR=171						
ISA				Sb	Sb	22 44 48.6	+1.1
	baz=148						
SCZ2	Santa Cruz Isl	1.98	271	P	Pn	22 44 20.7	-0.7
	baz=89,SNR=14						
BCW	Bitter Crk WRg	2.02	298		Pn	22 44 22.3	+0.3
SNCC	San Nicolas Is	2.04	249		Pn	22 44 21.5	-0.7
SNCC				IAML		22 44 52.5	
	comp=N,472nm,0.5s						
SNCC				IAML		22 44 54.8	
	comp=E,511nm,0.6s						
SNCC	San Nicolas Is	2.04	249	P	Pn	22 44 21.3	-0.8
	baz=68,SNR=18						
SNCC				S	Sn	22 44 47.4	+0.3
	baz=68						
SHOC	Shoshone, Teco	2.06	23	P	Pn	22 44 22.8	+0.3
	baz=203,SNR=292						
SHOC				Sb	Sg	22 44 53.0	-2.0
	baz=203						
MPMC	Manual Prospec	2.06	355	P	Pn	22 44 23.0	+0.3
	baz=174,SNR=494						
MPMC				Sb	Sg	22 44 54.0	-1.1
	baz=174						
SBC	Santa Barbara	2.09	283	P	Pn	22 44 22.7	0.0
	baz=101,SNR=11						
CCX	Cicese	2.18	167		Pn	22 44 24.9	+0.8
CCX				IAML		22 44 58.9	
	comp=N,549nm,0.5s						
CCX				IAML		22 45 00.3	
	comp=E,550nm,0.6s						
GWY	Greenwater Val	2.23	12	Pn	Pn	22 44 25.4	+0.4
GLA	Glamis	2.24	114		Pn	22 44 24.8	-0.1
GLA				IAML		22 45 08.2	
	comp=N,725nm,0.7s						
GLA	Glamis	2.24	114	P	Pn	22 44 24.9	-0.1
	baz=296,SNR=59						
ESJX	Sierra Juarez	2.27	151	Pn	Pn	22 44 26.0	+0.5
ESJX				IAML		22 45 01.6	
	comp=E,303nm,0.5s						
BLYC	Blythe	2.28	95	Pn	Pn	22 44 25.2	-0.3
PKM	Mcpherson Peak	2.29	293	P	Pn	22 44 25.9	0.0
	baz=112,SNR=83						
NEE2	Needles Airpor	2.31	70	P	Pn	22 44 25.8	-0.1
	baz=252						
FURC	Furnace Creek,	2.48	7	P	Pn	22 44 28.6	+0.4
	baz=188,SNR=32						
CWC	Cottonwood Cre	2.53	345	P	Pn	22 44 29.7	+0.7
	baz=164						
PDMCI	Parker Dam,Lak	2.60	82	P	Pn	22 44 30.0	+0.2
	baz=264,SNR=36						
SMMC	Simmler	2.61	301	P	Pn	22 44 30.3	+0.2
	baz=119,SNR=7.2						
V12A	Nelson	2.62	48	Pn	Pn	22 44 30.6	+0.4
V12A				IAML		22 45 12.

PAGB IAML 22 45 38.1
comp=E,197nm,0.9s
SHPR Sheep Range 3.03 34 Pn 22 44 36.9 +0.9
SHPR IAML 22 45 25.5
comp=E,144nm,0.9s
TPNV Topopah Spring 3.05 15 Pn 22 44 37.3 +1.0
TPNV Topopah Spring 3.05 15 P **Pn 22 44 37.5 +1.2**
baz=196,SNR=80
113A Mohawk Valley, 3.16 112 Pn 22 44 37.5 -0.1
LCH Last Change Ra 3.24 354 Pn 22 44 40.2 +1.3
GMN Gold Mountain 3.29 360 Pn 22 44 41.4 +1.7
Y14A Wickenburg 3.53 90 Pn 22 44 43.1 +0.4
Y14A IAML 22 45 41.0
comp=N,298nm,0.3s
Y14A IAML 22 45 45.6
comp=E,220nm,0.4s
MZP Montezuma Peak 3.69 358 Pn 22 44 46.8 +1.6
PRN Pahroc Range 3.84 27 Pn **Pn 22 44 48.6 +1.5**
OMMB Old Mammoth Mi 3.88 339 Pn 22 44 50.1 +2.4
MDPB Devils Postpil 3.92 338 Pn 22 44 51.0 +2.8
PIX Pinacate 4.01 126 Pn 22 44 50.0 +0.7
BBGB Big Mountain B 4.03 311 Pn 22 44 49.8 +0.3
TPH Tonopah 4.07 0 Pn 22 44 51.7 +1.5
214A Organ Pipe Nat 4.25 117 Pn **Pn 22 44 52.9 +0.3**
214A IAML 22 46 15.2
comp=E,64nm,0.5s
214A Organ Pipe Nat 4.25 117 P **Pn 22 44 53.0 +0.4**
baz=300
LHV Little Huntoon 4.36 347 Pn 22 44 56.4 +2.3
SAO San Andreas Ge 4.40 310 Pn **Pn 22 44 54.6 0.0**
LCMT Little Creek M 4.44 46 Pn 22 44 56.6 +1.3
NV11 Mina Array Sit 4.48 351 Pn 22 44 57.6 +1.7
NVAR Mina Array Bea 4.50 349 Pn **Pn 22 44 58.1 +1.9**
comp=E,1.3nm,0.3s,baz=171,slow=15,SNR=25
NVAR Pg **Pb 22 45 07.0 -0.3**
comp=E,7.2nm,0.3s,baz=166,slow=19,SNR=32
NVAR Lg Lg 22 46 13.1
comp=E,2.3nm,0.3s,baz=163,slow=35,SNR=1.5
comp=E,1.3nm,0.3s
NVAR Mina Array Bea 4.50 349 Pn 22 44 57.9 +1.6
R11A Troy Canyon, C 4.54 17 Pn 22 44 58.5 +1.7
R11A IAML 22 46 12.6
comp=E,52nm,1.3s
R11A Troy Canyon, C 4.54 17 P **Pn 22 44 57.6 +0.8**
baz=198
KNB Kanab 4.70 49 Pn 22 45 00.1 +1.2
RYN Ryan 4.73 348 Pn **Pn 22 45 01.3 +2.0**
CCUT Cedar City 4.75 41 Pn **Pn 22 45 01.5 +1.9**
CMB Columbia Colle 4.76 329 Pn **Pn 22 45 01.1 +1.5**
CMB IAML 22 46 22.4
comp=E,42nm,1.4s
CMB IAML 22 46 23.5
comp=N,37nm,0.7s
Q09A Carvers 4.83 1 Pn **Pn 22 45 01.9 +1.3**
WAKR Walker 4.83 339 Pn **Pn 22 45 03.2 +2.5**
SZCU Shurtz Canyon 4.93 42 Pn 22 45 03.8 +1.7
WUAZ Wupatki 5.07 71 Pn **Pn 22 45 06.5 +2.5**
WUAZ IAML 22 46 30.9
comp=N,94nm,0.6s
WUAZ IAML 22 46 32.6
comp=N,82nm,0.7s
KVN Kaiserville 5.09 353 Pn 22 45 06.3 +2.0
PKCU Pink Cliffs 5.29 48 Pn **Pn 22 45 09.6 +2.5**
PSUT Pine Spring 5.29 30 Pn 22 45 08.9 +1.8
TUC Tucson 5.68 105 Pn **Pn 22 45 12.0 -0.3**
TUC Tucson 5.68 105 P **Pn 22 45 12.0 -0.3**
baz=289
MTPU Mount Pierson 5.76 44 Pn **Pn 22 45 14.8 +1.3**
AFDM Forest Hills D 5.78 330 Pn **Pn 22 45 16.0 +2.5**
X16A Snowflake 6.07 83 Pn **Pn 22 45 19.4 +1.7**
BMN Battle Mountai 6.42 0 Pn **Pn 22 45 23.9 +1.4**
ELK Elko 6.92 13 Pn **Pn 22 45 31.4 +1.9**
comp=N,1.4nm,0.3s,baz=195,slow=12,SNR=25
ELK Lg Lg 22 47 25.2
comp=N,0.9nm,0.3s,baz=271,slow=23,SNR=3.5
comp=N,3.0nm,0.4s
ELK Elko 6.92 13 Pn **Pn 22 45 31.9 +2.4**
DUG Dugway, Tooele 7.13 29 Pn **Pn 22 45 33.2 +1.0**
121A Cookes Peak, D 8.06 98 Pn **Pn 22 45 46.3 +1.2**
121A Cookes Peak, D 8.06 98 P **Pn 22 45 45.2 +0.1**
baz=283,SNR=6.4
YBH Yreka Blue Hor 8.84 332 Sn **Sn 22 47 35.3 +0.4**
baz=254,slow=7.7
ANMO Albuquerque 8.96 81 Pn **Pn 22 45 55.4 -2.1**
comp=N,0.1nm,0.3s,baz=264,slow=9.2,SNR=1.5
ANMO Pg 22 46 31.8
comp=N,0.2nm,0.3s,baz=266,slow=13,SNR=5.1
ANMO Lg Lg 22 48 29.7
comp=N,0.2nm,0.3s,baz=170,slow=21,SNR=2.7
comp=N,0.2nm,0.3s
PDAR Pinedale Array 10.63 32 Pn **Pn 22 46 22.3 +2.0**
comp=N,0.2nm,0.3s,baz=209,slow=13,SNR=2.5
comp=N,0.2nm,0.3s
TXAR Lajitas Array 12.47 108 Pn **Pn 22 46 46.5 +1.1**
comp=N,0.1nm,0.3s,baz=288,slow=13,SNR=6.0
TXAR Lg Lg 22 50 20.8
baz=324,slow=21,SNR=3.3
comp=N,0.1nm,0.3s
NEW Newport 14.25 0 Pn **Pn 22 47 11.7 +2.1**
comp=N,0.1nm,0.3s,baz=177,slow=18,SNR=2.3
comp=N,1.4nm,0.8s

*IDC **08** 22:53:14.9±14.0, 36.°29N×71.°01E, h148km±150km, mb3.3/3, mbtmp3.8/6, ML3.3/3, MS4.0/1, Error ellipse: s-maj=87.6km s-min=71.1km az=110.0*
*NNC **08** 22:53:27.6±2.9, 37.°07N×70.°98E, h216km±36km, mb2.7, mpv3.6, Error ellipse: s-maj=29.2km s-min=16.9km az=11.0*
ISC 08 22:53:22.6±1.0, 36.°73N±0.°09×70.°9E±0.°1, h200km, n20, σ1§17/21, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.80**	**21**	P	**Pn**	**22 54 48.7**	**+1.2**
	SNR=56						
EKS2	**Erkin-Say**	**6.32**	**19**	P	**Pn**	**22 54 55.8**	**+1.8**
	SNR=11						
KK31	**Karatay Array**	**6.37**	**357**	⇑P	**Pn**	**22 54 55.7**	**+1.2**
	1.6nm,0.3s,baz=182,slow=12,SNR=84						
KK31				⇑S	**Sn**	**22 56 05.9**	**-1.6**
	6.1nm,0.5s,baz=187,slow=24,SNR=14						
AAK	**Ala-Archa**	**6.51**	**24**	P	**Pn**	**22 54 58.0**	**+1.5**
	SNR=8.0						
ULHL	**Ulahol**	**6.87**	**35**	P	**Pn**	**22 55 01.9**	**+0.7**
	SNR=5.9						
TKM2	**Tokmak 2**	**7.15**	**29**	P	**Pn**	**22 55 06.2**	**+1.4**
	SNR=6.5						
TKM2	**Tokmak 2**	**7.15**	**29**	⇓P	**Pn**	**22 55 05.8**	**+1.0**
	2.6nm,0.5s						
TKM2				⇓S	**Sn**	**22 56 24.7**	**-1.4**
	10nm,0.8s						
MKAR	**Makanchi Array**	**13.14**	**37**	P	**Pn**	**22 56 21.1**	**-0.5**
	0.3nm,0.3s,baz=212,slow=11,SNR=13						
	0.6nm,0.3s						
GKN	**Gorkha**	**14.48**	**123**	*e*P	**P**	**22 56 40.4**	**+0.5**
	5.4nm,0.3s						
AB31	**Akbulak array**	**14.85**	**331**	P	**P**	**22 56 43.2**	**-0.4**
	1.3nm,0.5s,baz=138,slow=12,SNR=31						
KURBB	**Kurchatov Arra**	**14.92**	**19**	P	**Pn**	**22 56 42.9**	**-0.6**
	0.1nm,0.3s,baz=206,slow=11,SNR=2.5						
	1.3nm,0.3s						
PKIN	**Phulchoki**	**15.27**	**123**	*e*P	**P**	**22 56 49.1**	**+0.4**
	5.7nm,0.4s						
PKI	**Pulchoki**	**15.28**	**123**	*e*P	**P**	**22 56 49.7**	**+0.8**
	3.7nm,0.4s						
JIRN	**Jiri**	**15.76**	**121**	*e*P	**Pn**	**22 56 53.9**	**-0.5**
	5.8nm,0.3s						
BVAR	**Borovoye Array**	**16.30**	**359**	P	**P**	**22 56 58.7**	**-0.8**
	0.1nm,0.3s,baz=179,slow=13,SNR=4.3						
	0.6nm,0.6s						
AKTO	**Aktyubinsk**	**16.55**	**330**	⇓P	**Pn**	**22 57 04.1**	**+0.8**
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**19.73**	**25**	P	**P**	**22 57 36.6**	**-0.2**
	1.6nm,0.4s,baz=214,slow=12,SNR=8.8						
	1.6nm,0.4s						
FINES	**FINESS Array B**	**37.26**	**326**	P	**P**	**23 00 15.8**	**+1.2**
	5.5nm,1.1s,baz=108,slow=13,SNR=2.0						
	5.5nm,1.1s						
SPITS	**Spitsbergen Ar**	**47.25**	**347**	LR	LR	23 27 32.2	
	comp=Z,159nm,20.4s,baz=350,slow=43						
TORD	**Torodi Ar. Bea**	**65.66**	**268**	P	**P**	**23 03 43.9**	**-1.8**
	0.2nm,0.8s,baz=42,slow=6.4,SNR=1.5						
	0.2nm,0.8s						

*THE **08** 23:02:46.6, 40.°64N×29.°24E, h28km±8km, ML3.4/5, Error ellipse: s-maj=10.1km s-min=1.5km az=70.0*
*ISK **08** 23:02:46.6, 40.°61N×28.°95E, h6km, ML3.7/30*
*DDA **08** 23:02:47.0±0.0, 40.°60N×28.°95E, h10km±2km, MW3.6*
*CFUSG **08** 23:02:53.1, 40.°60N×29.°90E, h5km, mb3.0/6, Northwestern Turkey Magtype MSH 3.4 from 6 stations*
ISC 08 23:02:47.1±0.8, 40.°59N±0.°02×28.°94E±0.°02, h12km±6km, n85, σ1§44/116, 12C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.07**	**250**	PG	**Pg**	**23 02 48.8**	**-0.8**
MDNY	**Mudanya-Bursa**	**0.22**	**192**	PG	**Pb**	**23 02 52.1**	**-0.9**
MDNY				SG	**Sg**	**23 02 56.2**	**+1.1**
GEMT	**Gemlik**	**0.24**	**129**	PG	**Pg**	**23 02 52.3**	**+0.1**
YLV	**Yalova**	**0.33**	**94**	PG	**Pg**	**23 02 53.6**	**-0.2**
YLV				SG	**Sg**	**23 02 58.7**	**+0.5**
IGD	**Bursa**	**0.38**	**149**	P	**Pb**	**23 02 55.2**	**-0.4**
IGD				S	**Sb**	**23 03 00.6**	**-0.9**
IGD				*i* AML	AML	23 03 02.0	
	comp=N,1μm,0.6s						
IGD				*i* AML	AML	23 03 02.0	
	comp=E,1μm,0.5s						
KAVV	**Kandilli-Istan**	**0.48**	**10**	PG	**Pg**	**23 02 56.0**	**-0.6**
KAVV				SG	**Sg**	**23 03 02.9**	**-0.1**
ISK	**Istanbul-Kandi**	**0.48**	**10**	PG	**Pg**	**23 02 56.0**	**-0.6**
ISK				SG	**Sg**	**23 03 02.8**	**-0.3**
ISK	**Istanbul-Kandi**	**0.48**	**10**	P	**Pg**	**23 02 56.3**	**-0.3**
ISK				S	**Sg**	**23 03 02.5**	**-0.6**
	3μm,0.4s						
ORLT	**Orhaneli**	**0.54**	**184**	PG	**Pb**	**23 02 58.1**	**-0.4**
ORLT				SG	**Sb**	**23 03 06.3**	**0.0**
HRT	**Hereke**	**0.60**	**67**	PG	**Pg**	**23 02 58.4**	**-0.4**
HRT				SG	**Sg**	**23 03 06.9**	**+0.2**
BGKT	**Bogazkoy**	**0.61**	**348**	PG	**Pg**	**23 02 58.4**	**-0.5**
BGKT				SG	**Sg**	**23 03 06.4**	**-0.5**
ADVT	**Abdulvahap**	**0.62**	**104**	PG	**Pg**	**23 02 59.3**	**+0.1**
ADVT				SG	**Sb**	**23 03 08.0**	**-0.6**
KLYT	**Kilyos**	**0.67**	**6**	PG	**Pg**	**23 02 59.5**	**-0.6**
KLYT				SG	**Sg**	**23 03 08.7**	**-0.2**
CTKS	**Kestanelik-??a**	**0.73**	**333**	PG	**Pg**	**23 03 00.7**	**-0.5**
SILT	**Sile**	**0.77**	**43**	PG	**Pg**	**23 03 01.8**	**-0.3**
CAVI	**Cavuskoy**	**0.79**	**119**	PG	**Pb**	**23 03 02.5**	**-0.2**
BILE	**Bilecik/Merkez**	**0.83**	**121**	P	**Pb**	**23 03 03.3**	**-0.1**
BILE				S	**Sn**	**23 03 15.3**	**-1.5**
BILE				*i* AML	AML	23 03 20.0	
	comp=N,2μm,0.2s						
BILE				*i* AML	AML	23 03 20.0	
	comp=E,2μm,0.3s						
SLVT	**Silivri**	**0.85**	**319**	PG	**Pg**	**23 03 03.1**	**-0.4**
EDC	**Edincik**	**0.86**	**254**	PG	**Pg**	**23 03 03.3**	**-0.4**
DST	**Dursunbey**	**1.01**	**194**	PG	**Pn**	**23 03 07.0**	**-0.1**
CTYL	**Yalikoy Yolu**	**1.01**	**331**	PG	**Pb**	**23 03 05.9**	**-0.6**
MRMT	**Marmara Adasi**	**1.03**	**271**	PG	**Pb**	**23 03 06.9**	**+0.1**
SAUV	**Serdivan-Sakar**	**1.06**	**81**	PG	**Pb**	**23 03 06.9**	**-0.5**
CRLT	**Corlu**	**1.06**	**301**	PG	**Pb**	**23 03 07.3**	**-0.1**
AUBOZ	**BOZOYUK**	**1.07**	**129**	PN	**Pb**	**23 03 07.2**	**-0.4**
GPA	**Golpazari**	**1.08**	**106**	PN	**Pn**	**23 03 08.2**	**+0.1**
GONE	**Gonen-Balikesi**	**1.10**	**241**	PN	**Pn**	**23 03 08.3**	**0.0**
KAYN	**Sakarya, Kayna**	**1.13**	**70**	P	**Pb**	**23 03 07.6**	**-0.8**
KAYN				S	**Sb**	**23 03 23.5**	**+0.5**
KAYN				*i* AML	AML	23 03 25.0	
	comp=N,2μm,0.7s						
KAYN				*i* AML	AML	23 03 25.0	
	comp=E,1μm,0.4s						
KNL	**Balıkesir**	**1.13**	**254**	P	**Pb**	**23 03 07.9**	**-0.6**
KNL				S	**Sn**	**23 03 24.9**	**+0.9**
KNL				*i* AML	AML	23 03 27.0	
	comp=E,2μm,0.5s						
KNL				*i* AML	AML	23 03 29.0	
	comp=N,2μm,0.5s						
TVSB	**Tavsanli**	**1.20**	**161**	PN	**Pg**	**23 03 09.6**	**-0.6**
GULT	**Gulveren**	**1.21**	**97**	PN	**Pb**	**23 03 10.2**	**+0.3**
ANDZ	**Kutahya, Merke**	**1.30**	**145**	P	**Pg**	**23 03 11.8**	**-0.3**
ANDZ				S	**Sg**	**23 03 29.4**	**+0.4**
ANDZ				*i* AML	AML	23 03 32.0	
	comp=E,306nm,0.4s						
ANDZ				*i* AML	AML	23 03 34.0	
	comp=N,376nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.35**	**275**	PN	**Pn**	**23 03 12.3**	**+0.6**
BORA	**Eskisehir**	**1.35**	**121**	PN	**Pg**	**23 03 12.7**	**-0.4**
SMAA	**Simav-Kutahya**	**1.49**	**179**	PN	**Pg**	**23 03 14.7**	**-0.9**
PHSR	**Pinarhisar**	**1.50**	**315**	PN	**Pn**	**23 03 14.2**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.53**	**218**	P	**Pn**	**23 03 14.4**	**+0.2**
STEP				S	**Sg**	**23 03 37.6**	**+1.2**
STEP				*i* AML	AML	23 03 39.0	
	comp=E,1μm,0.4s						
STEP				*i* AML	AML	23 03 43.0	
	comp=N,2μm,0.6s						
GDZ	**Gediz**	**1.55**	**164**	P	**Pn**	**23 03 14.4**	**-0.2**
GEDZ	**Gediz**	**1.58**	**167**	PN	**Pb**	**23 03 16.0**	**-0.3**
MDUB	**Mudurnu**	**1.72**	**93**	PN	**Pn**	**23 03 17.7**	**+0.8**
BUHA	**Balikesir, Bur**	**1.80**	**233**	P	**Pn**	**23 03 18.4**	**+0.6**
BUHA				S	**Sg**	**23 03 45.8**	**+0.9**
BUHA				*i* AML	AML	23 03 47.0	
	comp=E,955nm,0.3s						
BUHA				*i* AML	AML	23 03 48.0	
	comp=N,926nm,0.3s						
SGAZ	**Eskisehir, Sey**	**1.80**	**125**	P	**Pn**	**23 03 18.7**	**+0.8**
SGAZ				S	**Sg**	**23 03 46.1**	**+1.2**
SGAZ				*i* AML	AML	23 03 48.0	
	comp=N,238nm,0.3s						
SGAZ				*i* AML	AML	23 03 48.0	
	comp=E,191nm,0.3s						
KIRK	**Kırklareli**	**1.83**	**311**	P	**Pn**	**23 03 18.0**	**-0.3**
KIRK				S	**Sn**	**23 03 41.2**	**-0.2**
KIRK				*i* AML	AML	23 03 47.0	
	comp=N,143nm,0.5s						
KIRK				*i* AML	AML	23 03 48.0	
	comp=E,141nm,0.3s						
USAK	**Uak-Merkez**	**1.87**	**178**	P	**Pg**	**23 03 23.0**	**0.0**
USAK				S	**Sg**	**23 03 48.5**	**+1.2**
USAK				*i* AML	AML	23 03 50.0	
	comp=N,315nm,0.6s						
USAK				*i* AML	AML	23 04 00.0	
	comp=E,417nm,0.8s						
BAYC	**CANAKKALE_Bayr**	**2.02**	**246**	P	**Pn**	**23 03 21.0**	**0.0**
BAYC				S	**Sg**	**23 03 52.0**	**-0.1**
BAYC				*i* AML	AML	23 03 54.0	
	comp=E,392nm,0.4s						
BAYC				*i* AML	AML	23 03 55.0	
	comp=N,399nm,0.3s						
EDRB	**Edirne**	**2.08**	**308**	P	**Pn**	**23 03 21.4**	**-0.3**
EDRB				S	**Sn**	**23 03 47.5**	**-0.1**
	248nm,0.5s						
MANT	**Manisa**	**2.12**	**188**	P	**Pn**	**23 03 23.1**	**+0.7**
MANT				S	**Sg**	**23 03 54.4**	**-0.7**
MANT				*i* AML	AML	23 03 56.0	
	comp=E,395nm,0.5s						
MANT				*i* AML	AML	23 04 00.0	
	comp=N,354nm,0.6s						
EZN	**Ezine**	**2.15**	**250**	P	**Pn**	**23 03 22.8**	**+0.2**
EZN				S	**Sb**	**23 03 50.8**	**-1.5**
	610nm,0.4s						
ALN	**Alexandroupoli**	**2.22**	**279**	P	**Pn**	**23 03 23.3**	**-0.4**
ALN				S	**Sn**	**23 03 53.6**	**+2.6**
	342nm,0.4s						
PRK	**Paraskevi**	**2.45**	**238**	P	**Pn**	**23 03 28.3**	**+1.5**
SMTH	**Samothraki Isl**	**2.60**	**269**	P	**Pn**	**23 03 28.3**	**-0.6**
RDO	**Rodhopi**	**2.64**	**283**	P	**Pn**	**23 03 29.5**	**+0.1**
SIGR	**SIGRI**	**2.75**	**241**	P	**Pn**	**23 03 31.1**	**+0.3**
SIGR				S	**Sn**	**23 04 05.9**	**+2.0**
	525nm,0.5s						
ANTO	**Ankara**	**3.03**	**102**	⇑P	**Pb**	**23 03 42.6**	**+1.6**
CHOS	**Chios island**	**3.13**	**226**	P	**Pn**	**23 03 36.7**	**+0.4**
ICOR	**Ion Corvin**	**3.63**	**347**	⇑P	**Pn**	**23 03 44.9**	**+1.9**
BODT	**Bodrum**	**3.75**	**200**	P	**Pn**	**23 03 43.2**	**-1.4**
TIRR	**Tirgusor**	**3.89**	**354**	⇑P	**Pn**	**23 03 49.8**	**+3.3**
NVR	**Nevrokopi**	**3.92**	**283**	P	**Pn**	**23 03 47.2**	**+0.1**
TLBR	**Topalu**	**4.01**	**351**	⇑P	**Pn**	**23 03 51.6**	**+3.4**
SRS	**Serrai**	**4.09**	**279**	P	**Pn**	**23 03 49.0**	**-0.4**
HARR	**Harsova**	**4.17**	**350**	⇓P	**Pn**	**23 03 54.0**	**+3.6**
TPGR	**Topolog**	**4.28**	**355**	⇑P	**Pn**	**23 03 54.2**	**+2.2**
APE	**Apeiranthos**	**4.41**	**218**	⇓P	**Pn**	**23 03 58.3**	**+4.5**
TLCR		**4.60**	**359**	⇑P	**Pn**	**23 03 59.8**	**+3.5**
CFR	**Carcaliu**	**4.63**	**353**	⇓P	**Pn**	**23 03 59.5**	**+2.8**
VTS	**Vitosha**	**4.74**	**297**	⇓P	**Pn**	**23 03 59.6**	**+1.2**
STIP	**Stip**	**5.22**	**284**	*i* Pn	**Pn**	**23 04 03.2**	**-1.7**
SEV	**Sevastopol'**	**5.27**	**40**	*e*P	**Pn**	**23 04 06.0**	**+0.4**
SEV				Pm		23 04 10.9	
	comp=Z,4.0nm,0.3s						
SEV				*e*S	**Sn**	**23 05 03.3**	**-2.9**
SEV				Sm		23 05 06.9	
	comp=N,10.0nm,0.3s						
SEV				Sm		23 05 06.9	
	comp=E,11nm,0.3s						
MLR	**Muntele Rosu**	**5.37**	**337**	⇓P	**Pn**	**23 04 09.2**	**+2.2**
YAL	**Yalta**	**5.48**	**43**	*e*P	**Pn**	**23 04 09.2**	**+0.8**
YAL				Pm		23 04 09.3	
	comp=Z,10.0nm,0.2s						
YAL				*e*S	**Sn**	**23 05 07.3**	**-3.9**
YAL				Sm		23 05 08.1	
	comp=N,18nm,0.2s						
YAL				Sm		23 05 08.1	
	comp=E,27nm,0.3s						
VRI	**Vrincioaia**	**5.52**	**344**	⇓P	**Pn**	**23 04 12.1**	**+3.1**
BLKB	**Belogradchik**	**5.56**	**305**	⇑P	**Pn**	**23 04 09.6**	**0.0**
COVR	**Voineasa-Covas**	**5.62**	**340**	⇑P	**Pn**	**23 04 12.1**	**+1.7**
ALU	**Alushta**	**5.74**	**43**	*e*P	**Pn**	**23 04 12.5**	**+0.5**
ALU				Pm		23 04 13.1	
	comp=Z,5.0nm,0.3s						
ALU				*e*S	**Sn**	**23 05 12.9**	**-4.8**
ALU				Sm		23 05 16.1	
	comp=N,8.0nm,0.2s						
ALU				Sm		23 05 16.1	
	comp=E,11nm,0.5s						
SIM	**Simferopol'**	**5.79**	**39**	*e*P	**Pn**	**23 04 16.9**	**+4.3**
SIM				Pm		23 04 17.3	
	comp=Z,24nm,0.5s						
SIM				Sm		23 05 16.1	
	comp=E,17nm,0.4s						
SIM				*e*S	**Sn**	**23 05 18.7**	**-0.2**
SIM				Sm		23 05 19.5	
	comp=N,10.0nm,0.3s						
DOPR	**Dopca**	**5.97**	**335**	⇑P	**Pn**	**23 04 17.2**	**+2.0**
LOT	**Lotru**	**6.16**	**324**	⇓P	**Pn**	**23 04 18.8**	**+0.9**
BOVS	**Bovan**	**6.18**	**302**	⇓P	**Pn**	**23 04 19.7**	**+1.6**
SUDU	**Sudak**	**6.19**	**44**	*e*P	**Pn**	**23 04 19.3**	**+1.1**
SUDU				Pm		23 04 20.3	
	comp=Z,7.0nm,0.3s						
SUDU				*e*S	**Sn**	**23 05 27.9**	**-1.0**
SUDU				Sm		23 05 32.9	
	comp=N,30nm,0.5s						
SUDU				Sm		23 05 32.9	
	comp=E,12nm,0.3s						
HERR	**Herculane**	**6.44**	**314**	⇓P	**Pn**	**23 04 21.8**	**+0.1**
FEO	**Feodosiya**	**6.49**	**45**	*e*P	Pn	23 04 27.1	+4.9
FEO				Pm		23 04 27.6	
	comp=Z,7.0nm,0.2s						
FEO				*e*S	**Sn**	**23 05 36.6**	**+0.5**
FEO				Sm		23 05 36.7	
	comp=N,16nm,0.4s						
FEO				Sm		23 05 36.7	
	comp=E,13nm,0.4s						
MDVR	**Moldovita**	**6.78**	**311**	⇑P	**Pn**	**23 04 26.6**	**+0.3**
BZS	**Buzias**	**7.35**	**316**	⇑P	**Pn**	**23 04 36.0**	**+1.9**
BURAR	**Bucovina Array**	**7.52**	**340**	⇑P	**Pn**	**23 04 38.7**	**+2.2**

*IDC **08** 23:07:26.6±0.5, 29.°23S×61.°07E, h0km, mb4.2/18, mbtmp4.3/19, ML4.7/1, MS3.8/7, Error ellipse: s-maj=18.5km s-min=15.1km az=64.0*
*NEIC **08** 23:07:28.6±1.2, 29.°23S±0.°03×61.°0E±0.°1, h10km±1km, mb4.6/32, Error ellipse: s-maj=17.2km s-min=3.9km az=100.0*
ISC 08 23:07:28.5±0.4, 29.°25S±0.°07×60.°95E±0.°09, h10km, n94, σ1§16/86, mb4.5/36, MS3.9/7, 3C-3D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.33**	**329**	Pn	**Pn**	**23 09 39.4**	**-3.7**
ROCAM	**Rodrigues Isla**	**9.71**	**14**	Pn	**Pn**	**23 09 47.5**	**-0.7**
VOI	**Vohitsoka**	**14.71**	**297**	Pn	**Pn**	**23 10 56.3**	**-0.5**
ABPO	**Ambohimpanom**	**16.13**	**306**	Pn	**Pn**	**23 11 14.7**	**-0.8**
OPO	**Ambohidratompo**	**16.45**	**307**	Pn	**Pn**	**23 11 18.8**	**-0.9**
	0.3nm,0.3s,baz=123,slow=10,SNR=18						
OPO				Sn	Sn	23 14 06.8	-16
	0.1nm,0.3s,baz=96,slow=16,SNR=2.7						
	4.8nm,0.4s						
H08S1	**Diego Garcia H**	**24.08**	**29**	T	T	23 37 25.7	
	baz=204						
H08S2	**Diego Garcia H**	**24.08**	**29**	T	T	23 37 26.3	
	baz=204,slow=74						
H08S3	**Diego Garcia H**	**24.10**	**29**	T	T	23 37 27.1	
	baz=204,slow=74						
POGA	**Pongola**	**25.79**	**267**	P	**P**	**23 12 59.9**	**+0.2**
POGA				IAmb	IAmb	23 13 22.7	
	comp=Z,24nm,1.5s						
BOSA	**Boshof**	**31.17**	**262**	P	**P**	**23 13 49.7**	**+1.8**
	comp=Z,5.5nm,1.0s,baz=84,slow=5.3,SNR=4.2						
	comp=Z,5.5nm,1.0s						
BOSA	**Boshof**	**31.17**	**262**	P	**P**	**23 13 45.4**	**-2.5**
BOSA				IAmb	IAmb	23 14 00.7	
	comp=Z,10nm,1.3s						
MAW	**Mawson**	**38.40**	**179**	LR	LR	23 26 21.0	
	comp=Z,164nm,21.1s,baz=98,slow=30						
ATD	**Arta Tunnel**	**44.15**	**334**	P	**P**	**23 15 38.0**	**+0.5**
	comp=Z,3.0nm,0.4s,baz=183,slow=12,SNR=4.5						
	comp=Z,3.0nm,0.4s						
H01W2	**Cape Leeuwin H**	**44.99**	**111**	T	T	00 03 47.2	
	baz=262,slow=74,SNR=27						
H01W3	**Cape Leeuwin H**	**44.99**	**111**	T	T	00 03 47.5	
	baz=262,slow=74,SNR=28						
H01W1	**Cape Leeuwin H**	**45.00**	**111**	T	T	00 03 48.7	
	baz=262,slow=74,SNR=21						
CASY	**Casey**	**47.64**	**155**	P	**P**	**23 16 04.4**	**-0.1**
CASY				IAmb	IAmb	23 16 06.3	
	comp=Z,5.0nm,1.0s						
TROLL	**Troll, Antarti**	**52.82**	**199**	P	**P**	**23 16 44.1**	**+0.3**
UOSS	**Minazif**	**54.08**	**355**	P	**P**	**23 16 53.6**	**+0.3**
UOSS				IAmb	IAmb	23 17 20.6	
	comp=Z,11nm,1.4s						
SNAA	**Sanae**	**54.32**	**200**	P	**P**	**23 16 54.9**	**+0.1**
SNAA	**Sanae**	**54.32**	**200**	P	**P**	**23 16 54.6**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=111,slow=8.6,SNR=13						
	comp=Z,1.9nm,0.8s						
SNAA	**Sanae**	**54.32**	**200**	P	**P**	**23 16 54.9**	**+0.1**
RAYN	**Ar Rayn**	**54.53**	**343**	P	**P**	**23 16 56.3**	**-0.5**
VNA2	**Neumayer--Watz**	**55.59**	**202**	P	**P**	**23 17 04.3**	**+0.5**
	baz=75,slow=6.1						
VNA3	**Neumayer Olymp**	**56.37**	**202**	P	**P**	**23 17 09.8**	**+0.3**
CM31	**Chiang Mai Arr**	**59.95**	**42**	P	**P**	**23 17 34.2**	**-0.9**
CM31				IAmb	IAmb	23 17 43.6	
	comp=Z,8.9nm,1.2s			

GNI	Garni	70.67	347	P		P		23 18 44.6 +0.2
HOPE	Hope Point	70.89	218	P		P		23 18 45.7 +0.2
TOA0	Torodi Ar. Sit	71.01	298	P		P		23 18 46.6 -0.3
TOA0				IAmb		IAmb		23 18 50.2
	comp=Z,6.5nm,0.9s							
TORD	Torodi Ar. Bea	71.01	298	P		P		23 18 47.4 +0.5
	comp=Z,4.4nm,0.8s,baz=114,slow=4.5,SNR=21							
	comp=Z,4.4nm,0.8s							
KK31	Karatay Array	72.53	7	P		P		23 18 55.8 +0.4
KK31				IAmb		IAmb		23 18 58.4
	comp=Z,4.4nm,1.0s							
KKAR	Karatay Array	72.53	7	P		P		23 18 55.5 +0.1
DBIC	Dimbokro	72.56	288	P		P		23 18 56.1 -0.1
	comp=Z,5.2nm,0.8s,baz=100,slow=11,SNR=4.0							
	comp=Z,5.2nm,0.8s							
DBIC	Dimbokro	72.56	288	P		P		23 18 56.6 +0.4
DBIC				IAmb		IAmb		23 18 59.8
	comp=Z,6.7nm,0.8s							
AAK	Ala-Archa	72.61	10	P		P		23 18 56.6 +0.5
AAK				IAmb		IAmb		23 18 59.4
	comp=Z,5.6nm,1.1s							
BR131	Keskin Array S	73.18	338	P		P		23 18 58.8 -0.6
BR131				IAmb		IAmb		23 18 59.8
	comp=Z,6.9nm,0.9s							
BRTR	Keskin Array B	73.18	338	P		P		23 18 58.5 -1.0
	comp=Z,2.0nm,0.8s,baz=167,slow=5.7,SNR=7.3							
	comp=Z,2.0nm,0.8s							
BRTR	Keskin Array B	73.18	338	P		P		23 18 58.8 -0.6
KBZ	Khabaz	74.48	347	P		P		23 19 06.3 -0.4
	comp=Z,1.6nm,0.8s,baz=156,slow=22,SNR=3.0							
	comp=Z,1.6nm,0.8s							
KOWA	Kowa	76.27	295	P		P		23 19 18.0 +0.2
KOWA				IAmb		IAmb		23 19 21.4
	comp=Z,5.2nm,0.8s							
LZH	Lanzhou	76.50	35	*eP*		P		23 19 18.3 -0.5
LZH				pP		pwP		23 19 25.2 -1.2
WMQ	Urumqi	76.73	20	*eP*		P		23 19 22.1 +2.3
GTA	Gaotai	77.31	30	⇓P		P		23 19 25.2 +2.0
GTA				pP		pwP		23 19 31.3 +0.4
GTA				sP		PcP		23 19 35.2 +1.4
MK31	Makanchi Array	78.11	15	P		P		23 19 27.8 +0.4
MKAR	Makanchi Array	78.11	15	P		P		23 19 27.3 -0.1
	comp=Z,2.3nm,0.8s,baz=182,slow=3.6,SNR=14							
MKAR				LR		LR		23 51 01.9
	comp=Z,56nm,18.4s,baz=216,slow=34							
	comp=Z,2.3nm,0.8s							
MKAR	Makanchi Array	78.11	15	P		P		23 19 26.8 -0.6
ABKAR	Akbulak array	78.16	359	P		P		23 19 26.7 -0.8
CFR	Carcaliu	79.87	337	⇓P		P		23 19 37.9 +0.9
MLR	Muntele Rosu	80.91	336	⇑P		P		23 19 41.6 -1.2
MLR	Muntele Rosu	80.91	336	P		P		23 19 43.2 +0.4
MLR				IAmb		IAmb		23 19 49.4
	comp=Z,7.8nm,1.1s							
PLOR	Plostina	80.97	336	⇓P		P		23 19 40.9 -2.1
COVR	Voineasa-Covas	81.12	336	⇑P		P		23 19 45.0 +1.2
KURK	Kurchatov	81.14	11	P		P		23 19 43.7 0.0
KURK				IAmb		IAmb		23 19 46.5
	comp=Z,5.3nm,1.0s							
HERR	Herculane	81.71	333	⇑P		P		23 19 48.4 +1.5
NJ2	Nanjing	82.09	47	*eP*		P		23 19 50.4 +1.2
BURAR	Bucovina Array	82.99	337	P		P		23 19 53.8 +0.1
HHC	Hu-ho-hao-te	84.04	36	*eP*		P		23 19 59.5 +0.3
AKASG	Malin Array Be	84.40	340	P		P		23 20 00.3 -0.3
	comp=Z,0.9nm,0.6s,baz=162,slow=3.8,SNR=5.6							
	comp=Z,0.9nm,0.6s							
ARU	Arti	85.36	359	P		P		23 20 05.8 +0.4
ZAA0	Zalesovo Array	85.40	14	P		P		23 20 05.7 +0.1
ZAA0				IAmb		IAmb		23 20 07.9
	comp=Z,5.8nm,1.1s							
ZALV	Zalesovo Beam	85.40	14	P		P		23 20 05.4 -0.2
	comp=Z,1.9nm,0.6s,baz=204,slow=3.3,SNR=15							
	comp=Z,1.9nm,0.6s							
ZALV	Zalesovo Beam	85.40	14	P		P		23 20 05.6 0.0
CONA	Conrad Observa	86.83	332	*eP*		P		23 20 15.3 +2.3
	comp=Z,4.0nm,1.1s							
SONM	Songino Array	86.91	29	P		P		23 20 13.3 -0.2
	comp=Z,0.4nm,0.7s,baz=189,slow=4.0,SNR=3.8							
	comp=Z,0.4nm,0.7s							
SQTA	Sankt Quirin	88.32	329	*eP*		P		23 20 22.4 +2.2
	comp=Z,2.3nm,0.7s							
FETA	Feichten	88.39	328	*eP*		P		23 20 22.4 +1.7
	comp=Z,1.0nm,0.4s							
MOTA	Moosalm	88.46	329	*eP*		P		23 20 23.1 +2.2
	comp=Z,4.8nm,1.2s							
DAVA	Damuels	88.98	328	*eP*		P		23 20 25.6 +2.2
	comp=Z,2.2nm,0.6s							
URZ	Urewera	90.21	135	LR		LR		23 55 05.1
	comp=Z,92nm,18.1s,baz=43,slow=32							
ESDC	Sonseca Array	91.32	316	P		P		23 20 35.6 +1.2
	comp=Z,2.0nm,1.0s,baz=127,slow=3.9,SNR=9.1							
	comp=Z,2.0nm,1.0s							
ILAR	Eielson Array	140.39	18	PKP		PKPdf		23 26 54.0 -3.1
	comp=Z,0.4nm,0.8s,baz=7.4,slow=1.0,SNR=4.6							
YKA	Yellowknife Ar	146.62	356	PKPbc		PKPbc		23 27 09.0 -0.6
	comp=Z,4.0nm,0.8s,baz=355,slow=3.2,SNR=16							
ULM	Lac du Bonnet	152.68	327	PKPbc		PKPbc		23 27 23.8 -1.3
	comp=Z,5.0nm,0.6s,baz=85,slow=3.0,SNR=5.4							
PDAR	Pinedale Array	164.49	333	PKP		PKPdf		23 27 31.2 -1.5
	comp=Z,1.1nm,0.8s,baz=99,slow=2.8,SNR=6.5							
TXAR	Lajitas Array	166.57	274	PKP		PKPdf		23 27 33.5 -1.2
	comp=Z,1.0nm,0.8s,baz=126,slow=1.2,SNR=6.2							
NVAR	Mina Array Bea	170.82	356	PKP		PKPdf		23 27 37.7 +0.4
	comp=Z,1.1nm,0.8s,baz=266,slow=1.3,SNR=6.8							

*IDC **08** 23:14:45.4±2.6, 13°.59N×90°.63W, h0km, mb4.1/6, mbtmp4.0/8, ML4.1/2, Error ellipse: s-maj=50.8km s-min=34.2km az=175.0*
*GCG **08** 23:14:57.2±1.0, 13°.96N×91°.22W, h63km±20km, MD4.1*
*NEIC **08** 23:14:57.5±2.2, 13°.9N±0°.1×91°.03W±0°.08, h65km±17km, mb4.0/12, Md4.0(SNET), Error ellipse: s-maj=17.1km s-min=7.7km az=209.0*
ISC 08 23:14:55.6±1.3, 13°.73N±0°.09×91°.17W±0°.07, h71km±11km, n58, σ1§39/69, mb4.2/10, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.78	24	*eP*	Pn	23 15 10.8	-0.9
PCG	Pacaya	0.86	39	*eP*	Pn	23 15 12.0	-0.6
STG3	Santiaguito 3,	1.05	338	*eP*	Pn	23 15 13.4	-1.5
NBG	Las Nubes	1.17	43	*eP*	Pn	23 15 17.3	+0.8
NBG				*eS*	Sn	23 15 32.6	+0.5
NUBE	Las Nubes	1.36	82	*eP*	Pn	23 15 17.7	-1.1
NUBE				*eS*	Sn	23 15 34.3	-2.0
SLOZ	Alcaldia de Sa	1.38	77	*eP*	Pn	23 15 18.2	-0.8
SLOZ				*eS*	Sn	23 15 36.0	-0.6
RTR	El Retiro	1.49	83	*eP*	Pn	23 15 20.1	-0.4
SBLS	San Blas	1.51	86	*eP*	Pn	23 15 20.2	-0.7
SNJE	San Jose	1.52	85	*eP*	Pn	23 15 20.6	-0.5
SNJE				*eS*	Sn	23 15 40.0	-0.3
BOQS	Boqueron	1.84	90	*eP*	Pn	23 15 25.0	-0.2
BOQS				*eS*	Sn	23 15 46.5	-1.3
UEES	Universidad Ev	1.88	90	*eP*	Pn	23 15 25.2	-0.4
SNET	Serv Nac Est T	1.88	91	Pn	Pn	23 15 25.4	-0.3
SNET				Sn	Sn	23 15 48.4	-0.3
SNET	Serv Nac Est T	1.88	91	*eP*	Pn	23 15 25.9	+0.2
MRL	Marmol	1.97	47	⇓*eP*	Pn	23 15 27.9	+0.8
MRL				*eS*	Sn	23 15 55.7	+4.7
LFRS	El Faro	2.05	93	*eP*	Pn	23 15 28.1	+0.1
LFRS				*eS*	Sn	23 15 50.6	-2.1
SJTE	Alcalda de S	2.10	93	*eP*	Pn	23 15 29.1	+0.4
PAVA	Las Pavas	2.17	90	*eP*	Pn	23 15 29.5	-0.1
COEG	Centro de Oper	2.23	92	*eP*	Pn	23 15 30.9	+0.6
P5NO	Presa 5 de nov	2.35	83	*eP*	Pn	23 15 31.3	-0.7
SCLA	Alcaldia de Sa	2.37	90	*eP*	Pn	23 15 32.6	+0.3
COEB	Comit de Eme	2.58	95	*eP*	Pn	23 15 35.3	+0.2
CCIG	Comitan	2.71	340	Pn	Pn	23 15 37.8	+0.8
CCIG				Sn	Sn	23 16 09.9	+1.2
CNCH	Conchagua	3.27	97	*eP*	Pn	23 15 44.8	+0.2
TGUH	Tegucigalpa,Un	3.80	85	Pn	Pn	23 15 51.2	-0.6
CRIN	San Cristobal	4.14	104	Pn	Pn	23 15 55.4	-1.0
CMIG	Matias Romero	4.90	314	Pn	Pn	23 16 06.8	+0.1
	2.9nm,0.3s,baz=126,slow=9.9,SNR=15						
CMIG				Sn	Sn	23 16 59.3	-2.9
	9.3nm,0.3s,baz=263,slow=23,SNR=5.6						
	8.3nm,0.2s						
MATN	Matagalpa	5.17	98		Pn	23 16 09.9	-0.5
BOAB	BOACO BROADBAN	5.51	103		Pn	23 16 14.5	-0.6
ORTG	Ortega, Santa	6.51	120		Pn	23 16 30.0	+1.1
JTS	Las Juntas de	6.97	119	Pn	Pn	23 16 37.1	+2.0
TEIG	Tepich	7.03	23	Pn	Pn	23 16 35.6	-0.2
JACO	JACO, Garabito	7.55	122	Pn	Pn	23 16 44.4	+1.5
TLIG	Tlapa	8.08	299	Pn	Pn	23 16 51.8	+1.4
RIMA	Rio Macho	8.16	118	Pn	Pn	23 16 54.0	+2.4
SRBA	San Rafael, Bu	8.86	119	Pn	Pn	23 17 02.9	+1.9
SOR	Soroa	11.89	40		Pn	23 17 42.9	+0.7
TX32	Lajitas Array	19.37	325	P	Pn	23 19 17.9	+0.3
TXAR	Lajitas Array	19.37	325	P	Pn	23 19 18.0	+0.5
	0.2nm,0.3s,baz=151,slow=13,SNR=18						
	1.0nm,0.6s						
LRAL	Lakeview Retre	19.59	10	P	Pn	23 19 19.4	-0.7
LRAL				IAmb	IAmb	23 19 31.5	
	comp=Z,7.1nm,0.9s						
ABTX	Abilene, Hawle	20.34	339	P	P	23 19 26.5	+0.3
ABTX				IAmb	IAmb	23 19 27.8	
	comp=Z,4.7nm,0.7s						
LCAR	Lake Charles	22.25	0	P	P	23 19 44.7	-1.9
LCAR				IAmb	IAmb	23 20 06.4	
	comp=Z,6.3nm,0.7s						
CPCT	Cooper Cave	22.44	14	P	P	23 19 48.1	-0.7
TKL	Tuckaleechee C	22.83	16	P	P	23 19 52.0	-0.8
	comp=Z,3.9nm,0.4s,baz=182,slow=8.9,SNR=15						
	comp=Z,3.9nm,0.4s						
TKL	Tuckaleechee C	22.83	16	P	P	23 19 52.2	-0.6
V53A	Saluda	23.11	18	P	P	23 19 54.9	-0.7
V53A				IAmb	IAmb	23 20 09.8	
	comp=Z,1.7nm,0.6s						
T47A	Sharon Grove	23.45	8	P	P	23 19 57.4	-1.4
T47A				IAmb	IAmb	23 20 21.8	
	comp=Z,10nm,0.7s						
TZTN	Tazewell	23.73	15	P	P	23 20 00.3	-1.0
ANMO	Albuquerque	25.24	329	P	P	23 20 16.5	+1.3
	comp=Z,1.0nm,0.7s,baz=140,slow=9.8,SNR=5.5						
	comp=Z,1.0nm,0.7s						
ANMO	Albuquerque	25.24	329	P	P	23 20 16.4	+1.1
MTPU	Mount Pierson	30.57	326	P	P	23 21 04.8	+1.8
MTPU				IAmb	IAmb	23 21 06.8	
	comp=Z,2.5nm,0.7s						
MSU	Marysvale	30.91	327	P	P	23 21 07.9	+2.0
SADO	Sadowa	32.59	16	P	P	23 21 17.7	-2.5
	comp=Z,2.5nm,0.4s,baz=250,slow=7.3,SNR=6.3						
	comp=Z,2.5nm,0.4s						
NVAR	Mina Array Bea	34.39	321	P	P	23 21 38.9	+2.6
	comp=Z,2.3nm,0.8s,baz=130,slow=8.4,SNR=22						
NVAR				PcP	PcP	23 24 12.2	+1.5
	comp=Z,0.5nm,0.7s,baz=108,slow=2.9,SNR=4.0						
	comp=Z,2.3nm,0.8s						
NVAR	Mina Array Bea	34.39	321	P	P	23 21 39.4	+3.1
J08A	Circle Bar Ran	37.71	327	P	P	23 22 05.9	+1.5
SCHQ	Schefferville	45.20	20	P	P	23 23 03.3	-2.1
	comp=Z,1.9nm,0.4s,baz=229,slow=11,SNR=2.5						
	comp=Z,1.9nm,0.4s						
YKA	Yellowknife Ar	51.48	346	P	P	23 23 52.6	-1.0
	comp=Z,0.2nm,0.3s,baz=148,slow=7.9,SNR=4.8						
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	146.50	342	PKPbc	PKPbc	23 34 29.7	0.0
	comp=Z,1.3nm,0.5s,baz=338,slow=3.2,SNR=5.9						

*IDC **08** 23:20:32.4±3.9, 11°.77N×86°.03W, h129km±35km, mb3.7/7, mbtmp4.0/8, Error ellipse: s-maj=25.4km s-min=16.9km az=45.0*
*NEIC **08** 23:20:34.6±1.0, 11°.70N±0°.05×86°.25W±0°.05, h130km±8km, mb4.2/7, Error ellipse: s-maj=8.8km s-min=5.1km az=220.0*
*INET **08** 23:20:34.4±0.4, 11°.72N×86°.23W, h133km±4km, MW4.0*
*UCR **08** 23:20:36.0±2.3, 11°.62N×86°.45W, h20km±10km, ML3.9, MW3.8, mb4.2(NEIC)*
*SNET **08** 23:20:36.6±0.9, 11°.79N×86°.42W, h126km±24km, ML4.2*
ISC 08 23:20:33.6±0.7, 11°.72N±0°.04×86°.25W±0°.04, h136km±6km, n102, σ1§23/134, mb4.1/7, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	El Crucero	0.27	350	*eP*	Pn	23 20 52.2	-0.3
TISN	Laguna Tiscapa	0.42	358	*eP*	Pn	23 20 53.4	+0.4
MGAN	Managua	0.43	1	*eP*	Pn	23 20 53.4	+0.4
COPN	Copaltepe	0.57	324	*eP*	Pn	23 20 53.9	+0.2
HUEN		0.62	7	*eP*	Pn	23 20 54.8	+0.7
MOMN	Momotombo	0.74	338	*eP*	Pn	23 20 55.2	+0.2
CNGN	Cerro Negro	0.89	331	Pn	Pn	23 20 55.6	-0.6
CNGN				Sn	Sn	23 21 13.8	+0.4
CNGN	Cerro Negro	0.89	331	*eP*	Pn	23 20 55.5	-0.7
BOAB	BOACO BROADBAN	0.93	38		Pn	23 20 56.8	+0.4
BOAB				Sn	Sn	23 21 13.7	-0.1
BOAB	BOACO BROADBAN	0.93	38	*eP*	Pn	23 20 56.8	+0.4
BRAN	Las Pilas	1.00	355	*eP*	Pn	23 20 53.6	-3.5
ACON	Acoyapa	1.09	77		Pn	23 20 58.0	+0.2
ACON				Sn	Sn	23 21 16.0	-0.2
ACON	Acoyapa	1.09	77	*eP*	Pn	23 20 58.0	+0.2
HZTE	Horizontes, Gu	1.19	147		Pn	23 20 59.3	+0.5
HZTE				Sn	Sn	23 21 17.9	-0.2
HZTE	Horizontes, Gu	1.19	147	*eP*	Pn	23 20 59.4	+0.5
HZTE	Horizontes, Gu	1.19	147	*eP*	Pn	23 20 59.4	+0.5
GB1A	Borinquen Arri	1.22	137	*eP*	Pn	23 20 59.6	+0.3
GB1A				*eS*	Sn	23 21 18.7	-0.2
MATN	Matagalpa	1.25	15		Pn	23 21 00.2	+0.6
MATN	Matagalpa	1.25	15	*eP*	Pn	23 21 00.1	+0.6
CRIN	San Cristobal	1.25	322		Pn	23 21 00.2	+0.6
CRIN	San Cristobal	1.25	322	*eP*	Pn	23 21 00.1	+0.6
GPS2	Hotel Rincn d	1.30	137	*eP*	Pn	23 21 00.3	+0.2
GPS2				*eS*	Sn	23 21 20.0	-0.4
GUAB	Guayabo de Bag	1.42	135	*eP*	Pn	23 21 01.8	+0.4
GUAB				*eS*	Sn	23 21 22.8	+0.4
VMAR	Armenia, Volca	1.43	129	*eP*	Pn	23 21 01.5	+0.1
HORNC	Hornillas	1.45	133	*eP*	Pn	23 21 01.9	+0.2
HORNC				*eS*	Sn	23 21 23.8	+0.6
COLC	Colonia	1.47	135	*eP*	Pn	23 21 03.5	+1.7
COLC				*eS*	Sn	23 21 23.5	+0.1
CUI	Cuipilapa	1.50	134	⇑*eP*	Pn	23 21 02.8	+0.6
CUI				*eS*	Sn	23 21 24.6	+0.6
ORTG	Ortega, Santa	1.56	150		Pn	23 21 03.3	+0.5
ORTG	Ortega, Santa	1.56	150	*eP*	Pn	23 21 03.4	+0.5
ORTG				*eS*	Sn	23 21 24.1	-1.1
ORTG	Ortega, Santa	1.56	150	*eP*	Pn	23 21 03.4	+0.5
PTEN	Parque Tenorio	1.59	129	*i* P	Pn	23 21 03.5	+0.3
PTEN				*eS*	Sn	23 21 26.4	+0.6
VERA	Finca Concepci	1.61	122	*eP*	Pn	23 21 03.5	+0.2
SAJU	San Juanillo,	1.72	162	*eP*	Pn	23 21 04.8	+0.1
SAJU				*eS*	Sn	23 21 26.5	-1.9
JTS	Las Juntas de	1.91	138		Pn	23 21 07.1	+0.3
JTS	Las Juntas de	1.91	138	*eP*	Pn	23 21 08.0	+1.2
JTS				*eS*	Sn	23 21 32.1	-0.2
JTS	Las Juntas de	1.91	138	*eP*	Pn	23 21 07.3	+0.5
ESPN	Las Esperanzas	1.97	76	Pn	Pn	23 21 07.7	+0.2
ESPN	Las Esperanzas	1.97	76	*eP*	Pn	23 21 07.8	+0.3
INDI	Punta indio, G	1.98	158	*eP*	Pn	23 21 07.9	+0.2
INDI				*eS*	Sn	23 21 31.6	-2.3
COVE	Coope Vega, Sa	2.07	118	Pn	Pn	23 21 08.3	-0.4
CNCH	Conchagua	2.19	315	*eP*	Pn	23 21 10.9	+0.7
CNCH				*eS*	Sn	23 21 38.3	-0.2
CNCH				IAML		23 21 43.9	
	comp=Z,2μm,0.4s						
CNCH	Conchagua	2.19	315	*eP*	Pn	23 21 10.9	+0.7
CNCH				*eS*	Sn	23 21 38.3	-0.2
CNCH				IAML		23 21 43.9	
	comp=Z,2μm,0.4s						
LCND	La Caada	2.25	315	*eP*	Pn	23 21 11.6	+0.7
LCND				*eS*	Sn	23 21 40.0	+0.3
LCND				IAML		23 21 46.6	
	comp=Z,731nm,0.3s						
LCND	La Caada	2.25	315	*eP*	Pn	23 21 11.6	+0.7
LCND				*eS*	Sn	23 21 40.0	+0.3
LCND				IAML		23 21 46.6	
	comp=Z,731nm,0.3s						
LAFE	Finca La Fe, P	2.31	145	*eP*	Pn	23 21 12.1	+0.4
LAFE	Finca La Fe, P	2.31	145	*eP*	Pn	23 21 12.1	+0.4
TGUH	Tegucigalpa,Un	2.53	337		Pn	23 21 16.0	+1.5
TGUH	Tegucigalpa,Un	2.53	337	*eP*	Pn	23 21 16.1	+1.5
TGUH				*eS*	Sn	23 21 46.2	+0.1
TGUH	Tegucigalpa,Un	2.53	337	*eP*	Pn	23 21 16.1	+1.5
TGUH				*eS*	Sn	23 21 46.2	+0.1
JACO	JACO, Garabito	2.57	142	Pn	Pn	23 21 15.5	+0.5
JACO	JACO, Garabito	2.57	142	*eP*	Pn	23 21 15.5	+0.5
JACO	JACO, Garabito	2.57	142	*eP*	Pn	23 21 15.6	+0.7
LCY	Lacayo	2.62	311	*eP*	Pn	23 21 16.8	+1.2
LCY				*eS*	Sn	23 21 48.3	+0.3
LCY	Lacayo	2.62	311	*eP*	Pn	23 21 16.8	+1.2
LCY				*eS*	Sn	23 21 48.3	+0.3
PACA	Pacayal	2.67	311	*eP*	Pn	23 21 17.3	+1.0
PACA				IAML		23 22 00.2	
	comp=Z,7μm,0.2s						
PACA	Pacayal	2.67	311	*eP*	Pn	23 21 17.3	+1.0
PACA				IAML		23 22 00.2	
	comp=Z,7μm,0.2s						
COEB	Comit de Eme	2.84	309	*eP*	Pn	23 21 19.8	+1.3
COEB				IAML		23 21 57.3	
	comp=Z,553nm,0.3s						
COEB	Comit de Eme	2.84	309	*eP*	Pn	23 21 19.8	+1.3
COEB				IAML		23 21 57.3	
	comp=Z,553nm,0.3s						
RIMA	Rio Macho	3.04	129	Pn	Pn	23 21 21.7	+0.5
SCLA	Alcaldia de Sa	3.12	310	*eP*	Pn	23 21 23.0	+1.0
SCLA				*eS*	Sn	23 22 00.8	+1.4
SCLA				IAML		23 22 06.4	
	comp=Z,82nm,0.3s						
SCLA	Alcaldia de Sa	3.12	310	*eP*	Pn	23 21 23.0	+1.0
SCLA				*eS*	Sn	23 22 00.8	+1.4
SCLA				IAML		23 22 06.4	
	comp=Z,82nm,0.3s						
COEG	Centro de Oper	3.19	307	*eP*	Pn	23 21 24.0	+1.1
COEG				IAML		23 22 11.7	
	comp=Z,455nm,0.2s						
COEG	Centro de Oper	3.19	307	*eP*	Pn	23 21 24.0	+1.1
COEG				IAML		23 22 11.7	
	comp=Z,455nm,0.2s						
CDM	Cerro de Muert	3.26	131	*eP*	Pn	23 21 27.3	+3.1
SJTE	Alcalda de S	3.28	305	*eP*	Pn	23 21 25.3	+1.1
SJTE				IAML		23 22 07.5	
	comp=Z,337nm,0.3s						
SJTE	Alcalda de S	3.28	305	*eP*	Pn	23 21 25.3	+1.1
SJTE				IAML		23 22 07.5	
	comp=Z,337nm,0.3s						
P5NO	Presa 5 de nov	3.33	313	*eP*	Pn	23 21 25.7	+1.1
LFRS	El Faro	3.33	305	*eP*	Pn	23 21 26.3	+1.5
LFRS				*eS*	Sn	23 22 04.5	0.0
LFRS	El Faro	3.33	305	*eP*	Pn	23 21 26.3	+1.5
LFRS				*eS*	Sn	23 22 04.5	0.0
PEZE	Perez Zeledon,	3.43	132	Pn	Pn	23 21 28.5	+2.3
BOQS	Boqueron	3.57	305	*eP*	Pn	23 21 30.1	+2.0
BOQS				*eS*	Sn	23 22 10.6	+0.4
BOQS	Boqueron	3.57	305	*eP*	Pn	23 21 30.1	+2.0
BOQS				*eS*	Sn	23 22 10.6	+0.4
SRBA	San Rafael, Bu	3.77	131	Pn	Pn	23 21 32.2	+1.7
SRBA	San Rafael, Bu	3.77	131	*eP*	Pn	23 21 31.8	+1.2
CEVE	Cerro Verde	3.90	303	*eP*	Pn	23 21 34.3	+1.9
CEVE				IAML		23 22 29.7	
	comp=Z,709nm,0.5s						
CEVE	Cerro Verde	3.90	303	*eP*	Pn	23 21 34.3	+1.9
CEVE				IAML		23 22 29.7	
	comp=Z,709nm,0.5s						
NUBE	Las Nubes	4.07	303	*eP*	Pn	23 21 36.0	+1.5
NUBE	Las Nubes	4.07	303	*eP*	Pn	23 21 36.0	+1.5
CDITO	Canoas	4.56	133	Pn	Pn	23 21 41.8	+0.8
BCIP	Isla Barro Col	6.80	111	Pn	Pn	23 22 11.8	+0.8
CMIG	Matias Romero	9.92	304	P	Pn	23 22 53.6	+0.8
	comp=Z,0.8nm,0.3s,baz=176,slow=17,SNR=1.8						
CMIG				S	Sn	23 24 37.2	-5.3
	comp=Z,1.6nm,0.5s,baz=220,slow=8.5,SNR=2.3						
BAUV	El Baul	18.13	97	P	P	23 24 33.4	-1.9
BAUV				IAmb	IAmb	23 24 36.6	
	comp=Z,8.6nm,0.8s						
CRPR	Cabo Rojo, PR	19.52	69	P	P	23 24 52.2	+1.7
BIRV	Birongo	19.65	92	P	P	23 24 50.3	-1.6
BIRV				IAmb	IAmb	23 25 06.7	
	comp=Z,22nm,1.4s						
GCPR	Guaynabo City	20.54	69	P	P	23 25 02.8	+1.3
GCPR				IAmb	IAmb	23 25 04.3	
	comp=Z,8.7nm,0.8s						
MTP	Monte Pirata	20.98	70	P	P	23 25 06.8	+0.7
MTP				IAmb	IAmb	23 25 07.9	
	comp=Z,9.3nm,0.9s						
LRAL	Lakeview Retre	21.23	358	P	P	23 25 11.0	+2.3
PCRV	Puerto La Cruz	21.28	92	P	P	23 25 08.2	-1.2
	comp=Z,8.0nm,0.9s,baz=248,slow=5.4,SNR=1.8						
	comp=Z,8.0nm,0.9s						
GOGA	Godfrey	21.75	6	P	P	23 25 15.8	+1.7
TXAR	Lajitas Array	23.88	320	P	P	23 25 34.1	-0.7
	comp=Z,1.2nm,0.4s,baz=148,slow=10.0,SNR=30						
TXAR				PcP	PcP	23 29 14.5	+0.4
	comp=Z,0.5nm,0.9s,baz=146,slow=5.5,SNR=3.3	

JMA Felt I J1 at NEAR CHICHIJIMA ISLAND .
ISC 08 23:24:44.6±0.6, 26°.53N±0°.07×141°.80E±0°.10, h50km, n38, σ0876/40, mb4.2/17, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**0.35**	**72**	P	**Pn**	**23 24 54.4**	**+0.2**
JHH2				S	**Sn**	**23 25 00.8**	**-0.4**
JHH2	**Haha-jima-NKT2**	**0.35**	**72**	A	A	23 24 54.4	
	comp=E,58nm,0.4s,comp=E,35nm,0.5s						
CBIJ	**Chichi jima**	**0.67**	**31**	P	**Pn**	**23 24 58.1**	**+0.2**
CBIJ				*e*S	**Sn**	**23 25 07.2**	**-0.3**
CBIJ	**Chichi jima**	**0.67**	**31**	A	A	23 24 58.1	
	comp=E,7.0nm,1.1s,comp=E,8.0nm,0.5s						
JCJ	**Chichijima**	**0.67**	**31**	P	**Pn**	**23 24 57.9**	**-0.1**
	780nm,0.4s,baz=291,slow=22,SNR=231						
JCJ				S	**Sn**	**23 25 07.1**	**-0.5**
	2um,0.5s,baz=307,slow=23,SNR=16						
JCJ	**Chichijima**	**0.67**	**31**	Pn	**Pn**	**23 24 58.0**	**+0.1**
JCJ				Sn	**Sn**	**23 25 06.0**	**-1.6**
JMM	**Marumori**	**11.34**	**356**	Pn	**Pn**	**23 27 25.2**	**+1.4**
KLR	**Kul'dur**	**23.97**	**344**	P	**P**	**23 29 55.2**	**+1.0**
	1.6nm,0.8s,baz=170,slow=11,SNR=2.7						
TOLI2	**Tolitoli**	**32.36**	**222**	P	**P**	**23 31 10.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**40.25**	**268**	P	**P**	**23 32 18.4**	**+1.5**
	0.9nm,0.5s,baz=67,slow=5.5,SNR=4.2						
TIXI	**Tiksi**	**45.74**	**354**	P	**P**	**23 33 00.7**	**+0.2**
	2.2nm,0.7s,baz=90,slow=20						
TIXI	**Tiksi**	**45.74**	**354**	P	**P**	**23 33 00.7**	**+0.2**
TIXI				IAmb	IAmb	23 33 07.7	
	comp=Z,5.7nm,1.2s						
WB0	**Warramunga Arr**	**46.58**	**190**	P	**P**	**23 33 07.3**	**-0.4**
WRA	**Warramunga Arr**	**46.76**	**190**	P	**P**	**23 33 09.0**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=10,slow=8.5,SNR=35						
	comp=Z,3.6nm,0.7s						
WRA	**Warramunga Arr**	**46.76**	**190**	P	**P**	**23 33 08.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**47.05**	**201**	P	**P**	**23 33 11.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=20,slow=10,SNR=5.6						
	comp=Z,1.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**47.05**	**201**	P	**P**	**23 33 11.5**	**+0.1**
FITZ				IAmb	IAmb	23 33 35.3	
	comp=Z,5.8nm,1.2s						
ASAR	**Alice Springs**	**50.48**	**189**	P	**P**	**23 33 37.1**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=3.0,slow=5.1,SNR=1.8						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**50.48**	**189**	P	**P**	**23 33 37.6**	**-0.1**
MK31	**Makanchi Array**	**50.57**	**310**	P	**P**	**23 33 36.9**	**-1.3**
MK31				IAmb	IAmb	23 33 42.8	
	comp=Z,3.3nm,1.2s						
MKAR	**Makanchi Array**	**50.57**	**310**	P	**P**	**23 33 37.0**	**-1.2**
PSA00	**Pilbara Seismi**	**52.33**	**206**	P	**P**	**23 33 51.2**	**-0.3**
KURK	**Kurchatov**	**53.14**	**315**	P	**P**	**23 33 56.5**	**-0.7**
KURK				IAmb	IAmb	23 34 24.5	
	comp=Z,4.7nm,1.4s						
STKA	**Stephens Creek**	**58.08**	**180**	P	**P**	**23 34 32.4**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=355,slow=11,SNR=2.7						
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**58.08**	**180**	P	**P**	**23 34 32.3**	**-0.4**
STKA				IAmb	IAmb	23 34 50.3	
	comp=Z,2.6nm,1.3s						
ILAR	**Eielson Array**	**58.38**	**28**	P	**P**	**23 34 35.0**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=265,slow=6.0,SNR=3.3						
	comp=Z,0.4nm,0.8s						
KK31	**Karatay Array**	**59.14**	**306**	P	**P**	**23 34 39.9**	**-0.3**
KKAR	**Karatay Array**	**59.14**	**306**	P	**P**	**23 34 39.4**	**-0.8**
INK	**Inuvik**	**63.69**	**24**	P	**P**	**23 35 11.4**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=297,slow=4.5,SNR=2.0						
	comp=Z,1.3nm,0.9s						
ABKAR	**Akbulak array**	**65.25**	**314**	P	**P**	**23 35 19.6**	**-1.3**
YKA	**Yellowknife Ar**	**72.81**	**28**	P	**P**	**23 36 08.1**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=293,slow=6.5,SNR=2.8						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**73.96**	**341**	P	**P**	**23 36 14.9**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=47,slow=5.3,SNR=4.3						
	comp=Z,2.9nm,0.8s						
FIA1	**FINESS Array S**	**78.30**	**334**	P	**P**	**23 36 38.4**	**-0.7**
FINES	**FINESS Array B**	**78.30**	**334**	P	**P**	**23 36 38.6**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=71,slow=6.8,SNR=17						
	comp=Z,1.2nm,0.4s						
NB2	**NORSAR Subarra**	**84.01**	**338**	P	**P**	**23 37 09.1**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=43,slow=5.1						
NOA	**NORSAR Array B**	**84.01**	**338**	P	**P**	**23 37 09.1**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=35,slow=4.9,SNR=6.2						
	comp=Z,0.5nm,0.3s						
RAYN	**Ar Rayn**	**85.06**	**294**	P	**P**	**23 37 14.6**	**-0.9**
RAYN				IAmb	IAmb	23 37 16.0	
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**91.82**	**329**	P	**P**	**23 37 46.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=48,slow=1.5,SNR=4.1						
	comp=Z,0.3nm,0.6s						

MAN 08 23:25:00.3, 8°.41N×125°.70E, h22km, mb4.2, ML3.0, MS2.7, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.69**	**109**	⇑*i*P	Pb	23 25 12.6	-1.1
BIPH				*i* S	Sb	23 25 23.4	+0.6
CGP	**Cagayan de Oro**	**1.00**	**273**	⇑*i*P	Pb	23 25 18.0	-0.9
CGP				*i* S	Sn	23 25 32.1	-0.2
GHBP	**Garcia Hernand**	**1.82**	**312**	⇑*i*P	Pn	23 25 28.2	-2.2
GHBP				*i* S	Sn	23 25 50.5	-2.3
TABP	**Talibon, Bohol**	**2.15**	**321**	⇑*i*P	Pn	23 25 31.7	-3.1
TABP				*i* S	Sn	23 25 57.6	-3.2
LSIP	**Lazi, Siquijor**	**2.17**	**289**	⇓*i*P	Pn	23 25 33.3	-1.7
LSIP				*i* S	Sn	23 25 58.7	-2.6
TBP	**Tagbilaran**	**2.22**	**305**	⇑*e*P	Pn	23 25 34.1	-1.7
TBP				*i* S	Sn	23 26 00.9	-1.6

*NEIC **08** 23:40:38.3±0.4, 36°.282N±0°.010×97°.513W±0°.006, h4km±5km, Error ellipse: s-maj=1.5km s-min=0.5km az=158.0*
*TUL **08** 23:40:38.6±0.4, 36°.29N±0°.01×97°.51W±0°.01, h7km±4km, ML2.9, mb_Lg2.9/44(NEIC), Error ellipse: s-maj=1.6km s-min=1.1km az=156.0*
*ANF **08** 23:40:38.3±0.6, 36°.31N×97°.52W, h5km±5km, ML3.5/10, Error ellipse: s-maj=4.8km s-min=3.1km az=164.0*
ISC 08 23:40:38.7±1.2, 36°.29N±0°.02×97°.53W±0°.02, h6km±10km, n74, σ0849/68, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	**E0420 Rd and N**	**0.22**	**56**		**Pg**	**23 40 43.2**	**+0.3**
OK049				Sg	**Sg**	**23 40 46.4**	**+0.6**
OK050	**Pawnee Station**	**0.45**	**76**	Pg	**Pg**	**23 40 47.4**	**-0.1**
OK050				Sg	**Sg**	**23 40 53.5**	**+0.2**
OK048	**Pawnee Station**	**0.49**	**74**		**Pg**	**23 40 48.0**	**-0.1**
OK029	**Liberty Lake**	**0.49**	**173**		**Pg**	**23 40 48.2**	**+0.1**
OK045	**Pawnee Station**	**0.51**	**71**		**Pg**	**23 40 48.5**	**0.0**
OK046	**Pawnee Station**	**0.51**	**77**		**Pg**	**23 40 48.5**	**-0.1**
OK046				Sg	**Sg**	**23 40 55.4**	**+0.1**
OK033	**Mehan**	**0.53**	**117**		**Pg**	**23 40 48.9**	**0.0**
OK033				Sg	**Sg**	**23 40 56.0**	**+0.1**
OK044	**Pawnee Station**	**0.60**	**81**	Pg	**Pg**	**23 40 50.0**	**-0.2**
OK051	**E0350 and S346**	**0.60**	**68**		**Pg**	**23 40 50.0**	**-0.2**
OK031	**S. Brethren Rd**	**0.65**	**121**	Pg	**Pg**	**23 40 51.0**	**-0.1**
OK005	**Luther M Schoo**	**0.69**	**156**	Pg	**Pg**	**23 40 51.8**	**0.0**
OK009	**Oakdale Elemen**	**0.71**	**173**	Pg	**Pg**	**23 40 52.0**	**-0.2**
OK034	**N. Norfolk Rd.**	**0.71**	**112**		**Pg**	**23 40 52.1**	**-0.2**
OK025	**Westminster Rd**	**0.72**	**168**		**Pg**	**23 40 52.4**	**-0.1**
KAN13	**South Haven SW**	**0.73**	**3**		**Pg**	**23 40 52.6**	**0.0**
OK032	**Salt Plains WL**	**0.76**	**313**		**Pg**	**23 40 53.1**	**-0.1**
KAN17	**Caldwell West**	**0.78**	**346**	Pg	**Pg**	**23 40 53.6**	**0.0**
KAN09	**Caldwell North**	**0.85**	**355**		**Pg**	**23 40 54.9**	**-0.1**
KAN05	**Bluff City Nor**	**0.87**	**341**	Pg	**Pg**	**23 40 55.2**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**0.88**	**175**		**Pg**	**23 40 55.3**	**-0.3**
KAN01	**Argonia South**	**0.89**	**348**		**Pg**	**23 40 55.6**	**-0.1**
KS20	**Mayfield South**	**0.94**	**359**		**Pg**	**23 40 56.5**	**-0.3**
KAN10	**Anthony SW Sta**	**0.95**	**332**		**Pg**	**23 40 56.7**	**-0.2**
OK038	**West end E0370**	**1.00**	**282**		**Pg**	**23 40 57.6**	**-0.3**
KAN08	**Anthony NE Sta**	**1.01**	**339**		**Pg**	**23 40 57.7**	**-0.3**
KS21	**Milan North St**	**1.01**	**354**		**Pg**	**23 40 57.6**	**-0.3**
FNO	**Franklin**	**1.03**	**174**		**Pg**	**23 40 57.9**	**-0.5**
T35A	**Sooner Cattle**	**1.03**	**52**		**Pg**	**23 40 57.9**	**-0.5**
T35B	**Sooner Cattle**	**1.03**	**52**	P	**Pg**	**23 40 57.9**	**-0.6**
	baz=232						
T35B				S	**Sg**	**23 41 11.2**	**-0.7**
	baz=232						
KAN16	**Harper SW Stat**	**1.03**	**335**		**Pg**	**23 40 58.3**	**-0.2**
KAN12	**Harper NE Stat**	**1.08**	**340**	Pg	**Pg**	**23 40 58.9**	**-0.5**
U32A	**Winter Ranch,**	**1.20**	**275**	Pg	**Pg**	**23 41 01.0**	**-0.6**
U32A	**Winter Ranch,**	**1.20**	**275**	P	**Pg**	**23 41 01.0**	**-0.6**
	baz=94						
U32A				S	**Sb**	**23 41 17.5**	**0.0**
	baz=94						
TUL1	**Leonard**	**1.45**	**104**		**Pn**	**23 41 04.6**	**-0.9**
TUL1				IAmb_Lg		23 41 26.4	
	comp=Z,71nm,0.9s						
TUL1	**Leonard**	**1.45**	**104**	P	**Pn**	**23 41 04.6**	**-0.9**
	baz=286						
TUL1				S	**Sb**	**23 41 24.1**	**-0.9**
	baz=286						
X34A	**Smith Ranch, M**	**1.70**	**189**	Pg	**Pn**	**23 41 09.4**	**+0.5**
WMOK	**Wichita Mounta**	**1.85**	**214**	Pn	**Pn**	**23 41 11.0**	**0.0**
WMOK	**Wichita Mounta**	**1.85**	**214**	P	**Pn**	**23 41 11.3**	**+0.3**
	baz=33						
WMOK				S	**Sb**	**23 41 36.3**	**-0.1**
	baz=33						
R32A	**Long Quarter,**	**2.33**	**336**	Pn	**Pn**	**23 41 17.9**	**+0.2**
R32A	**Long Quarter,**	**2.33**	**336**	S	**Sn**	**23 41 47.4**	**+0.7**
	baz=156						
X37A	**Clayton**	**2.44**	**133**		**Pn**	**23 41 19.5**	**+0.4**
X37A				IAmb_Lg		23 41 57.6	
	comp=Z,49nm,0.7s						
X37A	**Clayton**	**2.44**	**133**	P	**Pn**	**23 41 19.6**	**+0.5**
	baz=315						
X37A				S	**Sn**	**23 41 50.1**	**+0.8**
	baz=315						
U38A	**Gravette**	**2.54**	**86**	Pn	**Pn**	**23 41 21.0**	**+0.5**
U38A	**Gravette**	**2.54**	**86**	P	**Pn**	**23 41 22.1**	**+1.6**
	baz=267						
HHAR	**Hobbs**	**2.90**	**89**		**Pn**	**23 41 25.8**	**+0.4**
KSU1	**Kansas State U**	**2.90**	**14**		**Pn**	**23 41 26.2**	**+0.7**
KSU1	**Kansas State U**	**2.90**	**14**	S	**Sn**	**23 42 00.8**	**0.0**
	baz=194						
Z35A	**Perchaven, San**	**2.96**	**176**	Pn	**Pn**	**23 41 26.8**	**+0.6**
S39A	**Bolivar**	**3.65**	**66**		**Pn**	**23 41 36.5**	**+0.8**
S39A				IAmb_Lg		23 42 42.2	
	comp=Z,23nm,0.8s						
MIAR	**Mount Ida**	**3.66**	**117**	Pn	**Pn**	**23 41 36.7**	**+0.8**
MIAR				IAmb_Lg		23 42 38.2	
	comp=Z,23nm,0.7s						
MIAR	**Mount Ida**	**3.66**	**117**	P	**Pn**	**23 41 36.5**	**+0.6**
	baz=300						
MIAR				S	**Sn**	**23 42 19.5**	**0.0**
	baz=300						
Z38A	**Mt. Pleasant**	**3.67**	**145**	IAmb_Lg		23 42 40.8	
	comp=Z,43nm,0.8s						
ABTX	**Abilene, Hawle**	**4.05**	**206**	IAmb_Lg		23 42 49.4	
	comp=Z,25nm,0.8s						
WHTX	**Lake Whitney,**	**4.28**	**179**	Pn	**Pn**	**23 41 44.5**	**0.0**
MGMO	**Mountain Grove**	**4.31**	**77**		**Pn**	**23 41 44.8**	**0.0**
MGMO				IAmb_Lg		23 42 53.9	
	comp=Z,26nm,0.7s						
WHAR	**Wooly Hollow**	**4.37**	**102**		**Pn**	**23 41 45.6**	**0.0**
FCAR	**Ozark Folk Cen**	**4.39**	**94**	IAmb_Lg		23 42 58.8	
	comp=Z,22nm,0.8s						
WLAR	**White Oak Lake**	**4.46**	**124**	IAmb_Lg		23 43 08.5	
	comp=Z,25nm,0.8s						
237A	**Washetta, Mont**	**4.50**	**161**	Pn	**Pn**	**23 41 46.9**	**-0.5**
P38A	**Dawn**	**4.59**	**42**	IAmb_Lg		23 43 06.0	
	comp=Z,30nm,0.8s						
R40A	**Maddies Statio**	**4.65**	**63**		**Pn**	**23 41 49.1**	**-0.3**
R40A	**Maddies Statio**	**4.65**	**63**	P	**Pn**	**23 41 49.4**	**0.0**
	baz=246						
KSCO	**Kaye Shedlock'**	**4.88**	**305**	IAmb_Lg		23 43 17.3	
	comp=Z,18nm,0.8s						
LCAR	**Lake Charles**	**5.16**	**91**	IAmb_Lg		23 43 23.2	
	comp=Z,18nm,0.9s						
CCM	**Cathedral Cave**	**5.32**	**69**		**Pn**	**23 41 57.5**	**-1.2**
CCM				IAmb_Lg		23 43 26.4	
	comp=Z,19nm,0.8s						
435B	**Jarrell**	**5.49**	**181**	IAmb_Lg		23 43 43.8	
	comp=Z,15nm,0.8s						
T25A	**Trinidad**	**5.60**	**281**	IAmb_Lg		23 43 42.7	
	comp=Z,20nm,0.9s						
SLM	**Saint Louis**	**6.26**	**66**	IAmb_Lg		23 43 56.9	
	comp=Z,24nm,0.8s						
SDCO	**Great Sand Dun**	**6.54**	**285**	IAmb_Lg		23 44 08.6	
	comp=Z,11nm,1.0s						
Q24A	**Divide**	**6.61**	**296**	IAmb_Lg		23 44 17.3	
	comp=Z,23nm,1.0s						
L40A	**Anamosa**	**7.57**	**38**	IAmb_Lg		23 44 43.8	
	comp=Z,16nm,0.9s						
PLAL	**Pickwick Lake**	**7.80**	**97**	IAmb_Lg		23 44 51.6	
	comp=Z,17nm,1.2s						
N23A	**Red Feather La**	**8.04**	**307**	IAmb_Lg		23 45 08.5	
	comp=Z,12nm,0.8s						
JFWS	**Jewell Farm**	**8.68**	**38**	IAmb_Lg		23 45 12.6	
	comp=Z,15nm,0.7s						

TAP 08 23:42:19.3, 24°.13N×121°.74E, h48km±1km, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**286**	*e*S	Sn	23 42 33.1	+0.7
	baz=286						
NACB	**Ninganchiao**	**0.14**	**289**	*e*P	Pn	23 42 27.4	+0.3
	baz=289						
NACB				*e*S	Sn	23 42 33.4	+0.8
	baz=289						
TWD	**Chiawan**	**0.14**	**250**	*e*P	Pn	23 42 27.5	+0.4
	baz=249						
TWD				*e*S	Sn	23 42 33.3	+0.8
	baz=249						
ETLH	**Xiulin Townshi**	**0.25**	**289**	P	Pn	23 42 28.1	+0.2
	baz=288						
ETLH				S	Sn	23 42 34.5	+0.5
	baz=288						
ETM	**Tongmen**	**0.28**	**234**	*e*P	Pn	23 42 28.0	-0.1
	baz=234						
ETM				*e*S	Sn	23 42 34.6	+0.4
	baz=234						
EWUT	**Wuta**	**0.32**	**6**	P	Pn	23 42 28.3	-0.1
	baz=6.0						
EWUT				S	Sn	23 42 35.8	+0.9
	baz=6.0						
ESL	**Shilin**	**0.42**	**222**	*e*P	Pn	23 42 29.0	-0.5
	baz=220						
ESL				*e*S	Sn	23 42 36.3	-0.5
	baz=220						
WHF	**Hehuan Shan**	**0.43**	**272**	P	Pn	23 42 30.2	+0.1
	baz=272						
WHF				*e*S	Sn	23 42 38.6	+0.9
	baz=272						
LATG	**Datong**	**0.45**	**334**	*e*P	Pn	23 42 30.3	+0.3
	baz=334						
LATG				*e*S	Sn	23 42 38.6	+1.0
	baz=334						
FUSS	**Fushou**	**0.47**	**285**	P	Pn	23 42 30.6	+0.3
	baz=284						
FUSS				S	Sn	23 42 38.8	+0.7
	baz=284						
TWC	**Suao**	**0.49**	**12**	P	Pn	23 42 31.3	+1.0
	baz=12						
NDT	**Datong Townshi**	**0.52**	**336**	*e*S	Sn	23 42 38.1	-0.6
	baz=336						
CHGB	**Renai**	**0.52**	**263**	P	Pn	23 42 31.3	+0.4
	baz=262						
CHGB				S	Sn	23 42 40.0	+0.8
	baz=262						
OWD	**Renai**	**0.54**	**252**	*e*P	Pn	23 42 31.4	+0.3
	baz=251						
OWD				*e*S	Sn	23 42 39.7	+0.2
	baz=251						
TDCB	**Techi**	**0.55**	**283**	P	Pn	23 42 31.6	+0.5
	baz=283						
TDCB				S	Sn	23 42 40.4	+0.8
	baz=283						
WUSB	**Renai**	**0.58**	**257**	P	Pn	23 42 31.9	+0.3
	baz=256						
WUSB				*e*S	Sn	23 42 40.7	+0.3
	baz=256						
TWE	**Neicheng**	**0.59**	**354**	*e*S	Sn	23 42 41.4	+1.0
	baz=355						
YHNB	**Yeheng**	**0.63**	**329**	P	Pn	23 42 32.8	+0.6
	baz=328						
YHNB				S	Sn	23 42 41.8	+0.4
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.64**	**348**	*e*P	Pn	23 42 32.9	+0.5
	baz=347						
FUSB				*e*S	Sn	23 42 42.4	+0.7
	baz=347						
NSK	**Sanguang**	**0.65**	**328**	*e*P	Pn	23 42 31.8	-0.5
	baz=328						
NSK				*e*S	Sn	23 42 41.2	-0.6
	baz=328						
VWDT	**VWDT**	**0.66**	**236**	*e*S	Sn	23 42 42.4	+0.5
	baz=235						
NFF	**Wufeng Townshi**	**0.76**	**312**	*e*P	Pn	23 42 34.2	+0.4
	baz=311						
NFF				*e*S	Sn	23 42 44.2	-0.1
	baz=311						
LIOB	**Emei**	**0.84**	**308**	*e*P	Pn	23 42 36.0	+1.2
	baz=308						
LIOB				*e*S	Sn	23 42 47.9	+1.8
	baz=308						
TYC	**Yuchr**	**0.84**	**255**	*e*P	Pn	23 42 35.5	+0.7
	baz=254						
TYC				*e*S	Sn	23 42 47.6	+1.6
	baz=254						
WHYT	**Xinyi Township**	**0.92**	**242**	*e*P	Pn	23 42 37.8	+1.9
	baz=242						
WHYT				*e*S	Sn	23 42 49.5	+1.4
	baz=242						

JMA 08 23:42:22.2±0.1, 25°.N±1°.×122°.4E±0°.9, h38km±2km, MV2.3/7, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.65**	**134**	P	Pn	23 42 34.8	-0.2
JYNG				*e*S	Sn	23 42 44.0	0.0
YOJ	**Yonaguni jima**	**0.69**	**130**	P	Pn	23 42 35.4	-0.1
YOJ				S	Sn	23 42 44.8	-0.1
IRIF	**Iriomote-Funau**	**1.31**	**115**	P	Pn	23 42 44.6	+0.6
IRIF				S	Sn	23 43 01.1	+0.8
HATJ	**Hateruma jima**	**1.51**	**124**	P	Pn	23 42 47.6	+0.9
HATJ				S	Sn	23 43 06.4	+1.3
JKRS	**Kuro-shima**	**1.58**	**115**	P	Pn	23 42 48.6	+0.9
JKRS				*e*S	Sn	23 43 07.8	+0.8
JIJ	**Ishigaki jima**	**1.65**	**109**	P	Pn	23 42 49.5	+0.9
JIJ				*e*S	Sn	23 43 09.7	+1.2

MAN 08 23:48:07.4, 9°.93N×124°.01E, h31km, mb3.9, ML2.6, MS2.2, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.28**	**210**	⇓*i*P	Pb	23 48 13.6	-1.2
TBP				*i* S	Sb	23 48 17.4	-2.2
TABP	**Talibon, Bohol**	**0.36**	**64**	⇑*e*P	Pn	23 48 17.5	+1.0
TABP				*e*S	Sn	23 48 23.9	+1.4
LLP	**Lapu-Lapu**	**0.38**	**354**	*e*P	Pn	23 48 17.9	+1.0
LLP				*i* S	Sn	23 48 24.4	+1.3
GHBP	**Garcia Hernand**	**0.43**	**134**	⇓*i*P	Pn	23 48 17.8	+0.3
GHBP				*i* S	Sn	23 48 25.1	+0.7
LSIP	**Lazi, Siquijor**	**0.88**	**205**	⇑*e*P	Pb	23 48 24.2	0.0
LSIP				*i* S	Sb	23 48 35.8	+0.1

*LDG **08** 23:57:08.3±0.1, 42°.76N×13°.16E, h10km, Ml2.5/14, Error ellipse: s-maj=2.2km s-min=1.4km az=48.0*
*PRU **08** 23:57:10.2±0.0, 42°.71N×13°.93E, h10km*
ROM 08 23:57:09.1±0.0, 42°.761N±0°.003×13°.118E±0°.004, h10km, ML2.8/58, 29C-29D, Error ellipse: s-maj=0.3km s-min=0.1km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**358**	⇓P	Pg	23 57 11.5	0.0
NRCA				S	Sg	23 57 13.4	+0.2
NRCA				AML	AML		
	comp=E,39100μm,0.2s						
NRCA				AML	AML		
	comp=E,41450μm,1.3s						
NRCA				AML	AML		
	comp=E,39050μm,0.2s						
NRCA				AML	AML		
	comp=N,37900μm,0.8s						
NRCA				AML	AML		
	comp=N,40950μm,0.8s						
T1202	**Accumoli, Fraz**	**0.10**	**126**	P	Pg	23 57 12.0	+0.2
T1202				S	Sg	23 57 13.9	+0.2
T1245	**Castelsantange**	**0.11**	**28**	⇑P	Pg	23 57 12.2	+0.2
T1245				S	Sg	23 57 14.2	+0.2
T1245				AML	AML		
	comp=N,76800μm,0.2s						
T1245				AML	AML		
	comp=N,76750μm,0.2s						
T1245				AML	AML		
	comp=E,28050μm,1.4s						
T1245				AML	AML		
	comp=N,74700μm,0.2s						
T1245				AML	AML		
	comp=E,26850μm,0.4s						
T1245				AML	AML		
	comp=N,76750μm,0.2s						
T1201	**Domo (RI)**	**0.14**	**137**	P	Pg	23 57 13.0	+0.6
T1201				S	Sg	23 57 16.0	+1.3
T1217	**Poggiodomo (PG**	**0.15**	**251**	⇓P	Pg	23 57 13.0	+0.6
T1217				S	Sg	23 57 15.9	+1.1
T1217				AML	AML		
	comp=E,9970μm,0.5s						
T1217				AML	AML		
	comp=N,10200μm,1.5s						
T1217				AML	AML		
	comp=E,9740μm,0.5s						
T1217				AML	AML		
	comp=N,10140μm,1.5s						
T1217				AML	AML		
	comp=E,9955μm,0.5s						
T1217				AML	AML		
	comp=E,9755μm,0.5s						
T1217				AML	AML		
	comp=N,10135μm,1.5s						
T1217				AML	AML		
	comp=E,9930μm,0.5s						
T1217				AML	AML		
	comp=E,9755μm,0.5s						
T1217				AML	AML		
	comp=N,10145μm,1.5s						
T1217				AML	AML		
	comp=N,10205μm,1.5s						
T1216	**Preci, Frazion**	**0.15**	**331**	P	Pg	23 57 12.9	+0.4
T1216				S	Sg	23 57 15.6	+0.8
T1216				AML	AML		
	comp=N,23750μm,0.5s						
T1216				AML	AML		
	comp=E,13550μm,1.3s						
T1216				AML	AML		
	comp=N,23750μm,0.4s						
T1216				AML	AML		
	comp=E,13550μm,1.3s						
MC2	**Monte Cornacci**	**0.16**	**19**	⇑P	Pg	23 57 13.2	+0.4
MC2				S	Sg	23 57 16.7	+1.3
LNSS	**Leonessa**	**0.17**	**200**	⇓P	Pg	23 57

SMA1				AML	AML	
	comp=E,16450μm,0.2s					
SMA1				AML	AML	
	comp=N,15950μm,0.6s					
FEMA	**Monte Fema**	**0.21**	**346**	P	Pg	23 57 14.0 +0.5
MMO1	**Montemonaco**	**0.21**	**48**	⇑P	Pg	23 57 13.8 +0.4
MMO1				S	Sg	23 57 17.3 +0.9
T1243	**Rocca Santa Ma**	**0.25**	**105**	P	Pg	23 57 14.6 +0.4
T1243				S	Sg	23 57 18.8 +1.1
RM33	**Pellescritta (**	**0.26**	**164**	⇓P	Pg	23 57 14.9 +0.5
RM33				S	Sg	23 57 19.2 +1.2
RM33				AML	AML	
	comp=E,4130μm,0.5s					
RM33				AML	AML	
	comp=N,4335μm,0.6s					
RM33				AML	AML	
	comp=E,4125μm,0.5s					
RM33				AML	AML	
	comp=N,4340μm,0.6s					
RM33				AML	AML	
	comp=E,4180μm,0.2s					
RM33				AML	AML	
	comp=E,4185μm,0.2s					
RM33				AML	AML	
	comp=N,4450μm,0.2s					
FDMO	**Fiordimonte**	**0.28**	**355**	⇓P	Pg	23 57 15.2 +0.4
FDMO				S	Sb	23 57 20.0 -1.0
FDMO				AML	AML	
	comp=N,2375μm,1.5s					
FDMO				AML	AML	
	comp=E,2140μm,1.5s					
AM05	**Amandola Campo**	**0.28**	**38**	⇑P	Pg	23 57 15.3 +0.6
AM05				S	Sb	23 57 20.7 -0.3
AM05				AML	AML	
	comp=E,831μm,0.4s					
AM05				AML	AML	
	comp=N,995μm,0.4s					
AM05				AML	AML	
	comp=N,208μm,0.2s					
AM05				AML	AML	
	comp=E,3645μm,1.0s					
AM05				AML	AML	
	comp=E,834μm,0.4s					
AM05				AML	AML	
	comp=N,998μm,0.4s					
CESI	**CESI - Serrava**	**0.29**	**327**	⇓P	Pg	23 57 15.5 +0.6
CESI				S	Sb	23 57 20.5 -0.9
CESI				AML	AML	
	comp=E,2975μm,0.5s					
CESI				AML	AML	
	comp=N,4825μm,0.2s					
CAMP	**Campotosto**	**0.31**	**136**	⇑P	Pg	23 57 15.7 +0.4
CAMP				S	Sb	23 57 20.8 -1.2
CAMP				AML	AML	
	comp=E,2635μm,0.3s					
CAMP				AML	AML	
	comp=N,1730μm,0.3s					
ARRO	**Arrone**	**0.32**	**235**	⇓P	Pg	23 57 16.0 +0.6
ARRO				AML	AML	
	comp=E,2360μm,0.5s					
ARRO				AML	AML	
	comp=N,1935μm,0.5s					
CSP1	**Cessapalombo**	**0.34**	**11**	⇑P	Pg	23 57 16.3 +0.4
CSP1				S	Sb	23 57 21.9 -0.9
CSP1				AML	AML	
	comp=E,2955μm,0.3s					
CSP1				AML	AML	
	comp=E,2950μm,0.3s					
CSP1				AML	AML	
	comp=N,3990μm,0.4s					
GUMA	**Gualdo di Mace**	**0.34**	**28**	⇑P	Pb	23 57 16.7 -0.6
GUMA				S	Sb	23 57 22.5 -0.3
GUMA				AML	AML	
	comp=E,7110μm,0.8s					
GUMA				AML	AML	
	comp=N,7865μm,1.3s					
GUMA				AML	AML	
	comp=E,7370μm,0.3s					
GUMA				AML	AML	
	comp=N,8825μm,1.2s					
T1247	**Pizzolo (AQ)**	**0.35**	**157**	⇓P	Pb	23 57 17.7 +0.4
T1247				AML	AML	
	comp=N,5920μm,0.3s					
T1247				AML	AML	
	comp=E,4115μm,1.4s					
TERO	**Teramo**	**0.38**	**111**	P	Pg	23 57 16.9 +0.2
TERO				S	Sb	23 57 23.0 -1.0
TERO				AML	AML	
	comp=E,3335μm,0.2s					
TERO				AML	AML	
	comp=N,3690μm,0.4s					
TERO				AML	AML	
	comp=E,3570μm,0.2s					
TERO				AML	AML	
	comp=N,4055μm,0.4s					
TERO				AML	AML	
	comp=E,3340μm,0.2s					
SEF1	**Sefro**	**0.41**	**342**	⇑P	Pb	23 57 17.8 -0.6
CESX	**Cesi**	**0.42**	**249**	⇓P	Pg	23 57 17.8 +0.3
CESX				AML	AML	
	comp=E,1510μm,0.4s					
CESX				AML	AML	
	comp=N,1595μm,0.3s					
ASSB	**Assisi San Ben**	**0.44**	**310**	⇓P	Pg	23 57 18.1 +0.4
ASSB				AML	AML	
	comp=E,1366μm,0.6s					
ASSB				AML	AML	
	comp=N,1575μm,1.4s					
OFFI	**Offida**	**0.45**	**67**	⇑P	Pb	23 57 19.2 0.0
OFFI				AML	AML	
	comp=E,3275μm,0.4s					
OFFI				AML	AML	
	comp=N,3480μm,0.5s					
GIGS	**Gran Sasso**	**0.46**	**133**	P	Pg	23 57 18.0 0.0
GIGS				S	Sg	23 57 25.0 +1.0
GIGS				AML	AML	
	comp=N,500μm,0.7s					
GIGS				AML	AML	
	comp=E,687μm,0.2s					
AQU	**L'Aquila**	**0.46**	**153**	P	Pg	23 57 18.5 +0.4
AQU				AML	AML	
	comp=E,1290μm,1.6s					
AQU				AML	AML	
	comp=N,1238μm,1.5s					
AQU				AML	AML	
	comp=E,1380μm,1.6s					
AQU				AML	AML	
	comp=N,1170μm,1.2s					
AQU				AML	AML	
	comp=N,1240μm,1.5s					
FIAM	**Fiamignano**	**0.49**	**180**	⇓P	Pg	23 57 18.9 +0.2
FIAM				AML	AML	
	comp=E,987μm,1.6s					
FIAM				AML	AML	
	comp=N,757μm,1.1s					
FIAM				AML	AML	
	comp=N,756μm,1.1s					
SNTG	**Esanatoglia**	**0.51**	**345**	⇓P	Pg	23 57 19.3 +0.2
SNTG				S	Sb	23 57 28.0 +0.3
SNTG				AML	AML	
	comp=E,730μm,0.4s					
SNTG				AML	AML	
	comp=N,727μm,0.9s					
SNTG				AML	AML	
	comp=E,730μm,0.5s					
SNTG				AML	AML	
	comp=E,700μm,0.4s					
SNTG				AML	AML	
	comp=N,746μm,0.9s					
SNTG				AML	AML	
	comp=N,726μm,0.9s					
ATCC	**AVT- Casa Cast**	**0.55**	**321**	⇓P	Pg	23 57 20.2 +0.4
ATCC				S	Sb	23 57 30.0 +1.2
ATCC				AML	AML	
	comp=N,1215μm,0.3s					
ATCC				AML	AML	
	comp=E,1540μm,0.6s					
TRTR	**Tortoreto Alta**	**0.59**	**85**	⇑P	Pb	23 57 22.0 +0.5
TRTR				AML	AML	
	comp=E,2850μm,0.5s					
TRTR				AML	AML	
	comp=N,1880μm,0.4s					
FOSV	**Fossato di Vic**	**0.59**	**334**	⇓P	Pg	23 57 20.8 +0.2
FOSV				AML	AML	
	comp=E,551μm,1.0s					
FOSV				AML	AML	
	comp=N,690μm,1.4s					
FOSV				AML	AML	
	comp=E,550μm,1.0s					
FAGN	**Fagnano**	**0.60**	**145**	⇑P	Pg	23 57 20.8 +0.1
FAGN				S	Sn	23 57 32.0 -1.6
FAGN				AML	AML	
	comp=E,3445μm,0.3s					
FAGN				AML	AML	
	comp=N,2550μm,0.8s					
CING	**Cingoli**	**0.62**	**5**	⇑P	Pg	23 57 21.3 +0.2
CING				AML	AML	
	comp=N,522μm,0.3s					
CING				AML	AML	
	comp=E,661μm,1.3s					
VCEL	**Villa Celiera**	**0.65**	**124**	⇑P	Pg	23 57 21.8 +0.1
VCEL				S	Sn	23 57 34.0 -0.8
VCEL				AML	AML	
	comp=E,1555μm,0.3s					
VCEL				AML	AML	
	comp=N,1370μm,0.9s					
VCEL				AML	AML	
	comp=E,1560μm,0.3s					
MURB	**Monte Urbino**	**0.66**	**319**	P	Pg	23 57 22.2 +0.3
MURB				AML	AML	
	comp=E,1650μm,0.3s					
MURB				AML	AML	
	comp=E,1645μm,0.3s					
MURB				AML	AML	
	comp=E,1815μm,0.3s					
MURB				AML	AML	
	comp=N,1815μm,1.0s					
MURB				AML	AML	
	comp=N,1720μm,1.0s					
SRES	**S.Oreste - Sor**	**0.69**	**221**	⇑P	Pb	23 57 22.9 -0.3
SRES				AML	AML	
	comp=E,356μm,1.0s					
SRES				AML	AML	
	comp=N,315μm,0.3s					
PP3	**Marolino**	**0.71**	**30**	⇑P	Pb	23 57 24.4 +0.8
PP3				AML	AML	
	comp=N,1970μm,0.7s					
PP3				AML	AML	
	comp=E,4290μm,0.4s					
PP3				AML	AML	
	comp=N,2040μm,0.7s					
PP3				AML	AML	
	comp=E,4185μm,0.4s					
SSFR	**Montelago di S**	**0.72**	**340**	⇓P	Pg	23 57 23.1 +0.2
SSFR				AML	AML	
	comp=E,1102μm,1.5s					
SSFR				AML	AML	
	comp=N,1610μm,0.2s					
SSFR				AML	AML	
	comp=E,1098μm,1.5s					
SSFR				AML	AML	
	comp=N,1445μm,0.2s					
T0110	**Collepietro**	**0.72**	**137**	⇑P	Pg	23 57 22.9 -0.2
T0110				AML	AML	
	comp=N,2120μm,0.3s					
T0110				AML	AML	
	comp=E,1810μm,1.6s					
ATFO	**Monte Foce - G**	**0.73**	**327**	⇓P	Pg	23 57 23.2 +0.1
ATFO				AML	AML	
	comp=E,472μm,1.5s					
ATFO				AML	AML	
	comp=N,486μm,0.8s					
ARVD	**Arcevia**	**0.75**	**350**	⇓P	Pg	23 57 23.5 0.0
ARVD				S	Sn	23 57 36.0 -1.2
ARVD				AML	AML	
	comp=E,314μm,0.5s					
ARVD				AML	AML	
	comp=N,224μm,0.7s					
MGAB	**Montegabbione**	**0.76**	**282**	⇑P	Pb	23 57 24.0 -0.3
MGAB				AML	AML	
	comp=E,1260μm,0.8s					
MGAB				AML	AML	
	comp=N,1520μm,0.4s					
MGAB				AML	AML	
	comp=E,1285μm,0.8s					
MGAB				AML	AML	
	comp=N,1600μm,0.4s					
MGAB				AML	AML	
	comp=N,1525μm,0.4s					
MTCE	**Montecelio**	**0.79**	**201**	⇓P	Pg	23 57 24.4 +0.1
MTCE				S	Sn	23 57 39.0 +0.9
MTCE				AML	AML	
	comp=E,324μm,0.5s					
MTCE				AML	AML	
	comp=N,364μm,0.6s					
FRON	**Frontone**	**0.81**	**339**	⇑P	Pg	23 57 24.5 -0.2
FRON				AML	AML	
	comp=N,394μm,0.5s					
FRON				AML	AML	
	comp=E,290μm,0.9s					
ATVO	**AVT- Monte Val**	**0.81**	**320**	⇓P	Pg	23 57 24.6 -0.1
ATVO				AML	AML	
	comp=N,377μm,1.0s					
ATVO				AML	AML	
	comp=E,336μm,1.6s					
ATVO				AML	AML	
	comp=N,376μm,1.0s					
CERT	**Cerreto**	**0.82**	**187**	P	Pg	23 57 24.4 -0.4
CERT				AML	AML	
	comp=E,572μm,0.5s					
CERT				AML	AML	
	comp=N,356μm,1.0s					
CERT				AML	AML	
	comp=E,572μm,0.5s					
CERT				AML	AML	
	comp=N,356μm,1.0s					
ATMI	**Monte Miggiano**	**0.85**	**313**	P	Pb	23 57 25.9 0.0
ATMI				AML	AML	
	comp=E,848μm,0.5s					
ATMI				AML	AML	
	comp=N,984μm,0.9s					
ATMI				AML	AML	
	comp=N,985μm,0.9s					
ATPI	**Pietralunga -**	**0.87**	**323**	⇑P	Pg	23 57 25.8 0.0
ATPI				AML	AML	
	comp=E,322μm,1.4s					
ATPI				AML	AML	
	comp=N,249μm,1.4s					
COR1	**Corinaldo**	**0.88**	**354**	⇓P	Pn	23 57 26.9 -0.5
COR1				AML	AML	
	comp=N,772μm,1.5s					
COR1				AML	AML	
	comp=E,563μm,0.7s					
PIEI	**Pieia**	**0.89**	**331**	⇑P	Pg	23 57 25.8 -0.3
PIEI				AML	AML	
	comp=N,218μm,0.3s					
PIEI				AML	AML	
	comp=E,258μm,0.6s					
SACS	**San Casciano d**	**0.89**	**276**	⇑P	Pb	23 57 26.6 -0.1
SACS				AML	AML	
	comp=N,529μm,1.3s					
SACS				AML	AML	
	comp=E,432μm,1.2s					
SACS				AML	AML	
	comp=N,549μm,1.3s					
SACS				AML	AML	
	comp=E,440μm,1.3s					
MPAG	**Monte Paganucc**	**0.91**	**343**	⇓P	Pg	23 57 26.4 -0.2
MPAG				AML	AML	
	comp=E,294μm,1.1s					
MPAG				AML	AML	
	comp=N,239μm,1.5s					
NARO	**Abbazia di Nar**	**0.94**	**335**	⇑P	Pg	23 57 26.7 -0.4
NARO				AML	AML	
	comp=E,246μm,1.2s					
NARO				AML	AML	
	comp=N,178μm,0.9s					
NARO				AML	AML	
	comp=E,245μm,1.2s					
APEC	**Apecchio**	**0.95**	**328**	⇑P	Pb	23 57 27.6 0.0
INTR	**Introdacqua**	**0.95**	**142**	⇑P	Pg	23 57 26.4 -1.0
INTR				AML	AML	
	comp=N,694μm,0.7s					
INTR				AML	AML	
	comp=E,360μm,0.9s					
FSSB	**Fossombrone**	**0.96**	**345**	P	Pg	23 57 27.5 -0.1
FSSB				AML	AML	
	comp=E,649μm,0.4s					
FSSB				AML	AML	
	comp=N,1125μm,0.4s					
FSSB				AML	AML	
	comp=E,648μm,0.4s					
LATE	**Laterza**	**0.98**	**262**	⇓P	Pn	23 57 28.7 -0.2
RMP	**Rome, Mte Porz**	**1.00**	**198**	⇓P	Pn	23 57 29.2 +0.1
RMP				AML	AML	
	comp=E,434μm,0.9s					
RMP				AML	AML	
	comp=N,425μm,1.5s					
CAFI	**Castiglion Fio**	**1.02**	**304**	⇓P	Pb	23 57 28.9 0.0
CAFI				AML	AML	
	comp=N,231μm,1.6s					
CAFI				AML	AML	
	comp=E,297μm,0.6s					
MCIV	**Monte Civitell**	**1.06**	**271**	⇑P	Pn	23 57 30.0 -0.1
MCIV				AML	AML	
	comp=N,154μm,0.5s					
MCIV				AML	AML	
	comp=E,214μm,0.4s					
LPEL	**Lama dei Pelig**	**1.06**	**132**	⇑P	Pg	23 57 29.1 -0.4
LPEL				S	Sn	23 57 46.0 +1.0
LPEL				AML	AML	
	comp=E,542μm,0.3s					
LPEL				AML	AML	
	comp=N,406μm,1.1s					
SF04	**Casetta**	**1.07**	**274**	⇑P	Pn	23 57 31.8 +1.5
GIUL	**Giuliano Di Ro**	**1.21**	**175**	⇑P	Pg	23 57 33.5 +1.2
GIUL				AML	AML	
	comp=N,119μm,0.5s					
GIUL				AML	AML	
	comp=E,126μm,1.1s					
CRE	**Caprese Michel**	**1.21**	**316**	P	Pg	23 57 33.7 +1.4
MAON	**Monte Argentar**	**1.50**	**258**	⇑P	Pb	23 57 37.1 0.0
TRIF	**Trifonti**	**1.67**	**283**	P	Pb	23 57 39.6 -0.3
TRIF				AML	AML	
	comp=N,73μm,0.7s					
TRIF				AML	AML	
	comp=E,67μm,0.3s					
PTRJ	**Pietraroja**	**1.75**	**143**	P	Pg	23 57 43.0 +0.4
MELA	**Melanico ??? S**	**1.83**	**125**	⇓P	Pg	23 57 43.5 -0.6
TREM	**Isole Tremiti**	**1.88**	**109**	S	Sg	23 58 11.0 +1.4
APRC	**Apricena**	**2.06**	**118**	⇓P	Pb	23 57 46.2 -0.4
SGRT	**San Giovanni R**	**2.19**	**116**	⇓P	Pb	23 57 47.6 -1.2
GRAM	**Graiana**	**2.81**	**309**	⇓P	Pb	23 57 59.2 -0.2
PGF	**Pioggiola**	**3.04**	**267**	*e*P	Pn	23 57 58.7 +1.3
PGF				*e*Sn	Sn	23 58 29.9 -4.0
	comp=E,1.1nm,0.3s					
OBKA	**Obir**	**3.88**	**15**	*e*Pn	Pn	23 58 09.8 +0.9
	comp=E,0.1nm,0.2s					
MYKA	**Terra Mystica**	**3.89**	**5**	*i* Pn	Pn	23 58 10.0 +1.1
	comp=E,0.1nm,0.1s					
ABTA	**Abfaltersbach**	**4.01**	**354**	*i* Pn	Pn	23 58 13.3 +2.7
	comp=E,0.6nm,0.2s					
ABTA				*e*Sn	Sn	23 59 00.3 +2.6
	comp=E,2.8nm,0.7s					
SBF	**Sospel**	**4.29**	**287**	*e*P	Pn	23 58 16.2 +1.7
SBF				*e*Sn	Sn	23 58 59.7 -4.9
	comp=E,6.7nm,0.5s					
KBA	**Koelnbreinsper**	**4.32**	**2**	*e*Pn	Pn	23 58 15.6 +0.7
	comp=E,1.0nm,0.5s					
FETA	**Feichten**	**4.58**	**339**	*i* Pn	Pn	23 58 22.2 +3.6
	comp=E,0.6nm,0.3s					
FETA				*e*Sn	Sn	23 59 14.7 +2.7
	comp=E,1.0nm,0.5s					
WTTA	**Wattenberg**	**4.62**	**347**	*i* Pn	Pn	23 58 23.0 +3.9
	comp=E,0.3nm,0.1s					
SQTA	**Sankt Quirin**	**4.66**	**344**	*i* Pn	Pn	23 58 22.6 +3.1
	comp=E,0.7nm,0.4s					
SQTA				*e*Sn	Sn	23 59 17.0 +3.2
	comp=E,0.8nm,0.3s					
WATA	**Walderalm**	**4.70**	**347**	*e*Pn	Pn	23 58 24.0 +3.8
	comp=E,0.2nm,0.1s					
WATA				*e*Sn	Sn	23 59 19.7 +4.8
	comp=E,2.2nm,0.5s					
MOTA	**Moosalm**	**4.80**	**343**	*e*Pn	Pn	23 58 24.1 +2.6
	comp=E,0.1nm,0.2s					
MOTA				*i* Sn	Sn	23 59 21.6 +4.3
	comp=E,1.6nm,0.5s					
LMR	**La Mourre**	**4.88**	**279**	*e*P	Pn	23 58 23.2 +0.8
LMR				*e*Sn	Sn	23 59 13.7 -5.2
	comp=E,0.4nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.94**	**4**	*i* Pn	Pn	23 58 26.3 +2.9
	comp=E,1.4nm,0.3s					
MBDF	**Montbardon**	**5.00**	**295**	*e*P	Pn	23 58 26.3 +2.0
MBDF				*e*Sn	Sn	23 59 16.4 -5.8
	comp=E,0.5nm,0.3s					
RETA	**Reutte**	**5.01**	**341**	*e*Pn	Pn	23 58 27.6 +3.2
	comp=E,0.1nm,0.1s					
DAVA	**Damuels**	**5.07**	**334**	*i* Pn	Pn	23 58 29.2 +3.9
	comp=E,0.2nm,0.1s					
DAVA				*i* Sn	Sn	23 59 25.8 +1.8
	comp=E,1.0nm,0.3s					
MOA	**Molln**	**5.15**	**9**	*i* Pn	Pn	23 58 28.5 +2.2
	comp=E,0.2nm,0.2s					
MOA				*e*Sn	Sn	23 59 28.1 +2.3
	comp=E,0.7nm,0.2s					
LPG	**La Plagne**	**5.34**	**303**	*e*P	Pn	23 58 31.3 +2.3
LPG				*e*Sn	Sn	23 59 24.8 -5.9
	comp=E,0.3nm,0.2s					
LPL	**La Plagne**	**5.36**	**303**	*e*P	Pn	23 58 31.7 +2.4
LPL				*e*Sn	Sn	23 59 25.5 -5.6
	comp=E,1.1nm,0.4s					
CONA	**Conrad Observa**	**5.52**	**20**	*e*Pn	Pn	23 58 33.5 +2.1
	comp=E,0.7nm,0.4s					
CONA				*i* Sn	Sn	23 59 36.6 +1.8
	comp=E,1.6nm,0.6s					
ORIF	**Oris-en-Rattie**	**5.66**	**295**	*e*P	Pn	23 58 36.6 +3.3
ORIF				*e*Sn	Sn	23 59 32.6 -5.8
	comp=E,0.8nm,0.4s					
CKRC	**Cesky Krumlov**	**6.12**	**7**	*e*SN	Sn	23 59 47.4 -2.1
KHC	**Kasperske Hory**	**6.38**	**3**	*e*PN	Pn	23 58 43.3 +0.2
KHC				*e*SN	Sn	23 59 54.5 -1.5
HINF	**Hinteralfeld**	**6.71**	**321**	*e*P	Pn	23 58 49.9 +2.2
HINF				*e*Sn	Sn	23 59 57.5 -6.7
	comp=E,2.6nm,0.4s					
LASF	**Ste Croix**	**6.87**	**284**	*e*P	Pn	23 58 52.0 +2.1
LASF				*e*Sn	Sn	00 00 01.3 -6.8
	comp=E,0.4nm,0.2s					
CDF	**Champ du Feu**	**6.98**	**326**	*e*P	Pn	23 58 52.9 +1.5
CDF				*e*Sn	Sn	00 00 03.9 -6.9
	comp=E,0.8nm,0.3s					
HAU	**Haudompre**	**7.08**	**320**	*e*P	Pn	23 58 54.2 +1.4
SMF	**Signal de Mont**	**7.66**	**304**	*e*P	Pn	23 59 03.3 +2.6
SMF				*e*Sn	Sn	00 00 20.2 -7.4
	comp=E,0.2nm,0.2s					
LOR	**Lormes**	**7.96**	**308**	*e*P	Pn	23 59 07.6 +2.9
	baz=123					
LOR				*e*Sn	Sn	00 00 27.5 -7.3
	comp=E,0.5nm,0.3s					
AVF	**Avril sur Loir**	**8.03**	**303**	*e*P	Pn	23 59 08.6 +2.9
CAF	**Calviac**	**8.28**	**289**	*e*P	Pn	23 59 12.0 +2.8
CAF				*e*Sn	Sn	00 00 34.6 -8.1
	comp=E,0.5nm,0.4s					
HYF	**Humbligny**	**8.68**	**305**	*e*P	Pn	23 59 18.2 +3.5

NOU ***09*** *00:04:22.9, 37°.13S×179°.66E, h0km, MLv4.2/11, Off E. Coast of N. Island, N.Z.*
IDC ***09*** *00:04:28.1±2.0, 37°.00S×178°.95E, h0km, mb4.1/2, mbtmp4.1/3, ML3.7/1, Error ellipse: s-maj=56.6km s-min=32.1km az=132.0*
NEIC ***09*** *00:04:30.1±1.4, 37°.23S±0°.08×179°.10E±0°.07, h17km±4km, mb4.4/7, Error ellipse: s-maj=13.4km s-min=5.0km az=147.0*
WEL ***09*** *00:04:32.4±1.4, 37°.5S±6°×17°.9E±1°.0, h13km±6km, M3.7/14, ML4.0/14, MLv3.7/14, Error ellipse: s-maj=0.0km s-min=0.0km az=94.1*

ISC 09 00:04:28.5±2.1, 37°.25S±0°.06×179°.18E±0°.07, h10km±10km, n135, σ1§26/138, mb4.2/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.76**	**245**		**Pb**	**00 04 44.2**	**+0.4**
MXZ				Sg	**Sg**	**00 04 51.6**	**-1.6**
MXZ	**Matakaoa Point**	**0.76**	**245**	P	**Pb**	**00 04 44.3**	**+0.4**
MXZ				S	**Sg**	**00 04 51.9**	**-1.3**
MXZ	**Matakaoa Point**	**0.76**	**245**	P	**Pb**	**00 04 44.3**	**+0.4**
WMGZ	**Waiomatatini S**	**0.83**	**226**	P	**Pn**	**00 04 48.1**	**+1.8**
WMGZ				S	**Sn**	**00 04 59.6**	**+1.0**
PKGZ	**Pakihiroa**	**1.08**	**233**	P	**Pn**	**00 04 50.6**	**+0.8**
PUZ	**Puketiti**	**1.10**	**221**	P	**Pn**	**00 04 51.9**	**+1.8**
PUZ				S	**Sn**	**00 05 06.2**	**+0.9**
HAZ	**Te Kaha**	**1.22**	**245**	P	**Pn**	**00 04 51.2**	**-0.4**
HAZ				S	**Sb**	**00 05 07.3**	**-0.2**
TWGZ	**Tauwhareparae**	**1.33**	**225**	P	**Pg**	**00 04 55.1**	**+1.0**
TWGZ				S	**Sg**	**00 05 11.8**	**+0.5**
RUGZ	**Raukumara Rang**	**1.39**	**238**	P	**Pg**	**00 04 55.3**	**0.0**
CNGZ	**Carnagh Statio**	**1.46**	**212**	P	**Pg**	**00 04 57.6**	**+1.1**

TKGZ	**Te Karaka**	**1.59 221**	P	**Pb**	**00 04 58.3 +0.3**
TKGZ			S	**Sb**	**00 05 17.9 -0.2**
WIZ	**White Island**	**1.61 259**	P	**Pn**	**00 04 55.9 -1.0**
MWZ	**Matawai**	**1.70 230**	P	**Pb**	**00 04 59.7 -0.2**
RIGZ	**Rimuhau**	**1.84 217**	P	**Pb**	**00 05 01.6 -0.7**
WHRZ	**Whale Island**	**1.85 250**	P	**Pb**	**00 05 01.9 -0.6**
RAGZ	**Rawiri**	**1.87 228**	P	**Pb**	**00 05 02.5 -0.4**
URZ	**Urewera**	**1.93 238**	Pn	**Pb**	**00 05 03.1 -0.6**
	64nm,0.3s,baz=77,slow=0.9,SNR=92				
URZ			Sn	**Sn**	**00 05 24.6 -1.0**
	87nm,0.3s,baz=225,slow=22,SNR=41				
URZ	**Urewera**	**1.93 238**		**Pb**	**00 05 02.6 -1.1**
URZ			Sn	**Sn**	**00 05 24.8 -0.8**
URZ	**Urewera**	**1.93 238**	P	**Pb**	**00 05 02.7 -0.9**
URZ	**Urewera**	**1.93 238**	P	**Pb**	**00 05 02.9 -0.8**
SNGZ	**Shannon Statio**	**2.11 223**	P	**Pn**	**00 05 05.4 +1.5**
EDRZ	**Edgecumbe**	**2.12 245**	P	**Pn**	**00 05 05.2 +1.1**
MARZ	**Manawahe**	**2.12 249**	P	**Pb**	**00 05 07.0 0.0**
KNZ	**Kokohu**	**2.13 213**	P	**Pn**	**00 05 04.9 +0.8**
MHGZ	**Mahia Peninsul**	**2.15 207**	P	**Pb**	**00 05 06.4 -1.2**
OPRZ	**Ohinepanea**	**2.17 253**	P	**Pn**	**00 05 05.1 +0.4**
RTZ	**Ruatahuna**	**2.21 231**	P	**Pn**	**00 05 06.8 +1.4**
MUGZ	**Murupara**	**2.27 236**	P	**Pn**	**00 05 07.2 +1.2**
MYRZ	**Mayor Island**	**2.34 268**	P	**Pn**	**00 05 08.1 +1.0**
RAHZ	**Arahi**	**2.35 224**	P	**Pn**	**00 05 08.5 +1.4**
TGRZ	**Tauranga**	**2.37 257**	P	**Pn**	**00 05 07.7 +0.3**
RRRZ	**Republican Roa**	**2.38 242**	P	**Pn**	**00 05 09.0 +1.4**
WHHZ	**Waihua**	**2.38 219**	P	**Pn**	**00 05 09.0 +1.3**
MTHZ	**Maungataniwha**	**2.44 228**	P	**Pn**	**00 05 09.9 +1.4**
KARZ	**Kaharoa**	**2.45 251**	P	**Pn**	**00 05 09.3 +0.7**
PRRZ	**Plateau Road**	**2.53 240**	P	**Pn**	**00 05 10.8 +1.1**
HRRZ	**Handcock Road**	**2.56 243**	P	**Pb**	**00 05 12.7 -1.8**
ALRZ	**Allen Road**	**2.60 239**	P	**Pn**	**00 05 11.6 +1.0**
NMHZ	**Naumai**	**2.63 225**	P	**Pn**	**00 05 12.6 +1.5**
KMRZ	**Kaimai**	**2.64 256**	P	**Pn**	**00 05 11.5 +0.3**
ARHZ	**Aropaoanui**	**2.65 220**	P	**Pn**	**00 05 12.4 +1.2**
KUZ	**Kuaotunu**	**2.81 279**	P	**Pn**	**00 05 12.3 -1.1**
KUZ	**Kuaotunu**	**2.81 279**	P	**Pn**	**00 05 12.4 -1.1**
BKZ	**Black Stump Fm**	**2.85 227**		**Pn**	**00 05 15.1 +1.0**
BKZ	**Black Stump Fm**	**2.85 227**	P	**Pn**	**00 05 15.2 +1.0**
BKZ	**Black Stump Fm**	**2.85 227**	P	**Pn**	**00 05 15.4 +1.2**
CKHZ	**Cape Kidnapper**	**2.92 214**	P	**Pn**	**00 05 15.3 +0.3**
MCHZ	**McNeill Hill**	**2.94 221**	P	**Pn**	**00 05 16.1 +0.8**
TOZ	**Tahuroa Road**	**2.96 259**	P	**Pn**	**00 05 15.1 -0.5**
KWHZ	**Kaweka Forest**	**3.07 224**	P	**Pn**	**00 05 17.6 +0.4**
KAHZ	**Kahuranaki**	**3.12 215**	P	**Pn**	**00 05 17.9 +0.1**
RITZ	**Rihia Road**	**3.14 236**	P	**Pn**	**00 05 19.3 +1.3**
GRZ	**Great Barrier**	**3.15 287**	P	**Pn**	**00 05 18.4 +0.3**
MKAZ	**Moumakai**	**3.21 271**	P	**Pn**	**00 05 18.2 -0.8**
KRHZ	**Kereru**	**3.25 222**	P	**Pn**	**00 05 19.6 0.0**
TMVZ	**Te Maari**	**3.31 235**	P	**Pn**	**00 05 21.3 +0.8**
BHHZ	**Black Hill Sta**	**3.32 227**	P	**Pn**	**00 05 21.1 +0.6**
ETVZ	**East Tongariro**	**3.32 234**	P	**Pn**	**00 05 20.2 -0.4**
PXZ	**Pawanui**	**3.32 212**	P	**Pn**	**00 05 20.0 -0.5**
NTVZ	**North Tongarir**	**3.32 235**	P	**Pn**	**00 05 21.5 +0.9**
OTVZ	**Oturere**	**3.36 234**	P	**Pn**	**00 05 22.7 +1.4**
NNVZ	**North Ngauruho**	**3.38 235**	P	**Pn**	**00 05 23.0 +1.6**
WTVZ	**West Tongariro**	**3.39 235**	P	**Pn**	**00 05 23.2 +1.7**
SNVZ	**South Ngauruho**	**3.39 234**	P	**Pn**	**00 05 22.5 +0.8**
ETAZ	**East Tamaki Re**	**3.41 274**	P	**Pn**	**00 05 21.5 -0.2**
NGZ	**Ngauruhoe**	**3.41 235**	P	**Pn**	**00 05 22.7 +0.7**
TUVZ	**Tukino**	**3.43 233**	P	**Pn**	**00 05 22.8 +0.7**
MOVZ	**Moawhango**	**3.45 230**	P	**Pn**	**00 05 22.8 +0.5**
MBAZ	**Motutapu North**	**3.46 277**	P	**Pn**	**00 05 23.1 +0.7**
TWVZ	**Taurewa**	**3.46 237**	P	**Pn**	**00 05 23.6 +1.0**
FWVZ	**Far West T-bar**	**3.49 234**	P	**Pn**	**00 05 24.0 +1.0**
WNVZ	**Wahianoa**	**3.50 232**	P	**Pn**	**00 05 23.7 +0.5**
WPHZ	**Waipukurau**	**3.54 216**	P	**Pn**	**00 05 23.4 -0.1**
ABAZ	**Army Bay**	**3.54 279**	P	**Pn**	**00 05 23.7 +0.2**
PNHZ	**Pukenui**	**3.54 220**	P	**Pn**	**00 05 23.3 -0.3**
EPAZ	**Eden Park BICE**	**3.56 275**	P	**Pn**	**00 05 25.5 +1.7**
PRHZ	**Porangahau**	**3.61 213**	P	**Pn**	**00 05 23.7 -0.8**
AWAZ	**Awhitu Peninsu**	**3.63 271**	P	**Pn**	**00 05 24.8 +0.1**
PKVZ	**Pokaka**	**3.64 235**	P	**Pn**	**00 05 26.8 +1.9**
HIZ	**Hauiti**	**3.65 248**	P	**Pn**	**00 05 27.4 +2.4**
WTAZ	**Waiatarua**	**3.69 273**	P	**Pn**	**00 05 25.9 +0.3**
RVAZ	**Riverhead Bore**	**3.71 276**	P	**Pn**	**00 05 25.8 0.0**
TSZ	**Takapari Road**	**3.77 221**	P	**Pn**	**00 05 25.6 -1.1**
ANWZ	**Angora Road**	**3.84 212**	P	**Pn**	**00 05 27.5 -0.2**
DVHZ	**Dannevirke**	**3.85 217**	P	**Pn**	**00 05 27.1 -0.7**
VRZ	**Vera Road**	**3.95 240**	P	**Pn**	**00 05 31.0 +1.8**
WCZ	**Waipu Caves**	**4.10 287**	P	**Pn**	**00 05 31.4 +0.2**
POWZ	**Post Office Ro**	**4.12 219**	P	**Pn**	**00 05 31.0 -0.4**
BFZ	**Birch Farm**	**4.12 213**		**Pn**	**00 05 30.0 -1.5**
BFZ	**Birch Farm**	**4.12 213**	P	**Pn**	**00 05 30.0 -1.5**
BFZ	**Birch Farm**	**4.12 213**	P	**Pn**	**00 05 30.3 -1.2**
WAZ	**Wanganui**	**4.13 231**	P	**Pn**	**00 05 32.8 +1.1**
LREZ	**Lake Rotokare**	**4.36 238**	P	**Pb**	**00 05 47.0 +1.9**
TIWZ	**Tintock**	**4.36 215**	P	**Pn**	**00 05 34.8 0.0**
MRZ	**Mangatainoka R**	**4.42 218**	P	**Pn**	**00 05 33.9 -1.7**
NEZ	**North Egmont**	**4.48 242**	P	**Pn**	**00 05 40.0 +3.5**
PKE	**Pukeiti**	**4.53 243**	P	**Pn**	**00 05 41.5 +4.4**
KHEZ	**Kahui Hut**	**4.55 242**	P	**Pn**	**00 05 41.2 +3.7**
TMWZ	**Te Maipa**	**4.62 212**	P	**Pn**	**00 05 36.5 -2.0**
HOWZ	**Holdsworth Sta**	**4.63 217**	P	**Pn**	**00 05 36.8 -1.7**
OGWZ	**Otaki Gorge**	**4.74 220**	P	**Pn**	**00 05 38.6 -1.4**
MTW	**Mount Morrison**	**4.84 215**	P	**Pn**	**00 05 39.3 -2.1**
OUZ	**Omahuta**	**4.94 292**		**Pn**	**00 05 43.5 +0.7**
OUZ	**Omahuta**	**4.94 292**	P	**Pn**	**00 05 43.5 +0.7**
OUZ	**Omahuta**	**4.94 292**	P	**Pn**	**00 05 43.4 +0.6**
CAW	**Cannon Point**	**5.01 218**	P	**Pn**	**00 05 42.1 -1.6**
PAWZ	**Paruwai Farm**	**5.05 214**	P	**Pn**	**00 05 42.3 -2.0**
MSWZ	**Moikau Station**	**5.16 215**	P	**Pn**	**00 05 43.6 -2.2**
TKNZ	**Takaka Hill**	**6.14 230**	P	**Pn**	**00 05 57.6 -1.6**
QRZ	**Quartz Range**	**6.29 233**	P	**Pn**	**00 05 59.8 -1.5**
QRZ	**Quartz Range**	**6.29 233**	P	**Pn**	**00 06 01.1 -0.2**
KHZ	**Kahutara**	**6.74 218**	P	**Pn**	**00 06 07.5 0.0**
CTZ	**Chatham Island**	**7.23 155**	P	**Pn**	**00 06 18.6 +4.4**
RPZ	**Rata Peaks**	**8.94 221**	Pn	**Pn**	**00 06 37.6 -0.2**
	0.8nm,0.3s,baz=63,slow=15,SNR=1.8				
RPZ			Sn	Sn	00 08 06.3 -12
	1.9nm,0.3s,baz=328,slow=20,SNR=11				
	5.1nm,0.6s				
RPZ	**Rata Peaks**	**8.94 221**	P	**Pn**	**00 06 37.9 +0.2**
ODZ	**Otahua Downs**	**10.10 217**	P	**Pn**	**00 06 54.0 +0.5**
CTAO	**Charters Tower**	**33.35 292**	P	**P**	**00 11 06.1 -0.8**
COEN	**Coen**	**39.54 296**	P	**P**	**00 11 59.6 -0.1**
COEN			IAmb	IAmb	00 12 19.7
	comp=Z,23nm,1.4s				
AS31	**Alice Springs**	**40.93 276**	P	**P**	**00 12 10.3 -1.1**
AS31			IAmb	IAmb	00 12 11.4
	comp=Z,1.1nm,1.0s				
ASAR	**Alice Springs**	**40.93 276**	P	**P**	**00 12 10.6 -0.8**
	comp=Z,1.4nm,0.8s,baz=118,slow=8.1,SNR=17				
	comp=Z,1.4nm,0.8s				
ASAR	**Alice Springs**	**40.93 276**	P	**P**	**00 12 10.2 -1.2**
WR0	**Warramunga Arr**	**42.38 281**	P	**P**	**00 12 22.4 -0.8**
WR0			IAmb	IAmb	00 12 25.4
	comp=Z,17nm,1.5s				
WRA	**Warramunga Arr**	**42.55 281**	P	**P**	**00 12 23.8 -0.8**
	comp=Z,2.3nm,0.5s,baz=123,slow=7.5,SNR=77				
	comp=Z,2.3nm,0.5s				
WRA	**Warramunga Arr**	**42.55 281**	P	**P**	**00 12 23.3 -1.3**
FITZ	**Fitzroy Crossi**	**50.42 277**	P	**P**	**00 13 25.9 -0.4**
FITZ			IAmb	IAmb	00 13 27.1
	comp=Z,6.6nm,1.2s				
QSPA	**South Pole Qui**	**52.88 180**	P	**P**	**00 13 45.0 +0.7**
QSPA			IAmb	IAmb	00 14 13.4
	comp=Z,4.9nm,1.5s				
H03S2	**Juan Fernandez**	**78.63 124**	T	T	01 43 04.7
	baz=231				
H03S1	**Juan Fernandez**	**78.64 124**	T	T	01 43 05.0
	baz=231				
H03S3	**Juan Fernandez**	**78.65 124**	T	T	01 43 13.8
	baz=231				
H03N3	**Juan Fernandez**	**78.86 124**	T	T	01 43 15.5
	baz=234,slow=72,SNR=16				
H03N2	**Juan Fernandez**	**78.87 123**	T	T	01 43 30.9
	baz=234,slow=72,SNR=18				
H03N1	**Juan Fernandez**	**78.88 124**	T	T	01 43 19.1
	baz=234,slow=72,SNR=19				
ARCES	**ARCESS Array B**	**144.66 344**	PKP	**PKPdf**	**00 24 04.0 -0.3**
	comp=Z,2.3nm,0.8s,baz=77,slow=1.9,SNR=2.1				
FINES	**FINESS Array B**	**150.51 334**	PKPbc	**PKPbc**	**00 24 19.8 +0.3**
	comp=Z,1.0nm,0.7s,baz=45,slow=4.1,SNR=9.2				
BRTR	**Keskin Array B**	**153.01 286**	PKPbc	**PKiKP**	**00 24 27.5 +1.2**
	comp=Z,0.6nm,0.7s,baz=134,slow=3.2,SNR=4.3				

*NEIC **09** 00:08:41.0±1.3, 22°.39N±0°.04×93°.84E±0°.06, h52km±6km, mb4.4/6, Error ellipse: s-maj=8.0km s-min=5.6km az=85.0*

*IDC **09** 00:08:42.2±2.5, 22°.22N×93°.71E, h69km±29km, mb3.4/3, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=42.8km s-min=17.3km az=33.0*

ISC 09 00:08:40.4±0.7, 22°.4N±0°.1×93°.85E±0°.06, h50km, n21, σ0s90/24, mb4.1/7, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.06**	**279**	P	**Pn**	**00 09 13.2**	**+0.7**
	109nm,0.4s,baz=107,slow=16,SNR=3.7						
BRDH				S	**Sn**	**00 09 37.5**	**+0.3**
	142nm,0.3s,baz=167,slow=22,SNR=9.1						
SHL	**Shillong**	**3.65**	**331**	Pn	**Pn**	**00 09 35.3**	**+0.7**
CHTO	**Chiang Mai**	**5.94**	**126**		**Pn**	**00 10 06.4**	**+0.6**
CM31	**Chiang Mai Arr**	**6.16**	**128**	Pn	**Pn**	**00 10 08.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**6.16**	**128**	P	**Pn**	**00 10 11.1**	**+2.2**
	1.0nm,0.3s,baz=303,slow=14,SNR=21						
	3.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**6.16**	**128**	Pn	**Pn**	**00 10 09.4**	**+0.5**
HYBB	**Hyderabad (bro**	**15.21**	**254**	*e*P	**P**	**00 12 16.2**	**0.0**
HYBB				*es*P	**sP**	**00 12 34.5**	**+0.2**
HYBB				*e*S	**S**	**00 15 14.3**	**+0.2**
MK31	**Makanchi Array**	**26.10**	**342**	P	**P**	**00 14 09.5**	**+0.1**
MK31				IAmb	IAmb	00 14 29.7	
	comp=Z,2.5nm,1.1s						
MKAR	**Makanchi Array**	**26.10**	**342**	P	**P**	**00 14 10.6**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=140,slow=9.1,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**26.10**	**342**	P	**P**	**00 14 09.5**	**+0.1**
KKAR	**Karatay Array**	**28.34**	**322**	P	**P**	**00 14 29.0**	**-0.6**
ABKAR	**Akbulak array**	**37.89**	**323**	P	**P**	**00 15 52.5**	**+0.1**
KNRA	**Kununurra**	**50.98**	**135**	P	**P**	**00 17 35.5**	**-1.8**
TIXI	**Tiksi**	**53.20**	**13**	P	**P**	**00 17 52.6**	**-0.5**
TIXI				IAmb	IAmb	00 18 01.9	
	comp=Z,6.7nm,1.3s						
WB0	**Warramunga Arr**	**57.64**	**134**	P	**P**	**00 18 24.9**	**-0.9**
WB0				IAmb	IAmb	00 18 52.1	
	comp=Z,8.3nm,1.4s						
WRA	**Warramunga Arr**	**57.73**	**134**	P	**P**	**00 18 25.8**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=323,slow=7.4,SNR=8.0						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**57.73**	**134**	P	**P**	**00 18 25.4**	**-1.0**
ASAR	**Alice Springs**	**60.09**	**137**	P	**P**	**00 18 42.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=318,slow=6.9,SNR=5.7						
	comp=Z,0.5nm,0.5s						
IMAR	**Indian Mountai**	**78.41**	**23**	P	**P**	**00 20 33.9**	**-1.5**
BMAR	**Burnt Mountain**	**80.67**	**19**	P	**P**	**00 20 48.6**	**+0.8**
N25K	**Chitina, Valde**	**84.21**	**24**	P	**P**	**00 21 06.3**	**-0.1**
N25K				IAmb	IAmb	00 21 27.5	
	comp=Z,6.2nm,1.5s						

ASRS 09 00:30:14.1±0.2, 50°.6N±0°.8×8°.7E±°, h5km, MLh3.3/21, 1C-3D, Error ellipse: s-maj=2.6km s-min=1.5km az=68.1, confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHBI	**Chibit, Altay**	**0.32**	**170**	⇓Pg	Pb	00 30 21.4	-0.9
CHBI				Sg	Sg	00 30 24.5	+0.1
ULGR	**Ulagan, Altay**	**0.35**	**90**	⇑Pg	Pn	00 30 24.5	-1.4
ULGR				Sg	Sb	00 30 29.6	+1.0
CUR	**Chagan-Uzun**	**0.80**	**131**	Pg	Pb	00 30 29.9	-0.5
CUR				Sg	Sg	00 30 40.3	+0.7
DGZ	**Jazzator, Alta**	**0.93**	**179**	⇓Pg	Pg	00 30 31.3	-0.5
DGZ				Sg	Sg	00 30 41.6	-2.2
SLNR	**Muhor-Tarhata,**	**1.08**	**141**	Sg	Sb	00 30 50.2	+0.2
ARTR	**Artybash**	**1.18**	**356**	⇓Pg	Pn	00 30 39.6	+2.4
ARTR				Sg	Sn	00 30 56.1	+2.4
GALT	**Gorno-Altaysk,**	**1.62**	**326**	Pg	Pg	00 30 47.5	+2.4
GALT				Sg	Sg	00 31 10.2	+4.0
UKR	**Ust'-Kan**	**1.71**	**282**	Pg	Pg	00 30 47.8	+1.0
UKR				Sg	Sg	00 31 10.4	+1.5
TASR	**Tashtagol**	**2.16**	**7**	Pg	Pg	00 30 57.4	+2.0
TASR				Sg	Sg	00 31 28.6	+5.3
ELT	**Eltsovka**	**2.74**	**345**	Pg	Pb	00 31 04.1	+0.7
ELT				Sg	Sg	00 31 43.5	+1.6
LUZB	**Luzhba, Kemero**	**3.17**	**16**	Pg	Pg	00 31 14.4	-0.4
LUZB				Sg	Sg	00 31 57.9	+1.9
DJO	**Djoy, Khakassi**	**3.20**	**46**	Pg	Pg	00 31 17.1	+1.8
DJO				Sg	Sg	00 31 58.1	+1.2
DJOS	**Djoyskaya Sosn**	**3.29**	**47**	Pg	Pg	00 31 18.5	+1.4
DJOS				Sg	Sg	00 32 03.5	+3.8
CERR	**Cheremushki**	**3.34**	**47**	Sg	Sg	00 32 04.3	+3.1
VCHU	**Verkh-Chumysh,**	**3.39**	**350**	Pg	Pg	00 31 19.1	+0.1
VCHU				Sg	Sg	00 32 03.4	+0.6
ERU	**Erunakovo, Kuz**	**3.52**	**360**	Sg	Sg	00 32 10.0	+3.0
KOTO	**Kotino, Kuzbas**	**3.58**	**355**	Sg	Sg	00 32 12.8	+3.8
BJR2	**Bachatsky-2, K**	**3.75**	**348**	Sg	Sg	00 32 18.1	+3.8
POMOR	**Pomortsevo, Ku**	**3.83**	**352**	Sg	Sg	00 32 21.0	+4.2
SALR	**Pechorkino, Sa**	**3.94**	**345**	Pg	Pg	00 31 28.6	-0.8
SALR				Sg	Sg	00 32 23.7	+3.2
ARDR	**Aradan**	**4.23**	**60**	Pg	Pg	00 31 32.8	-2.2
ARDR				Sg	Sg	00 32 28.1	-1.7
KZLR	**Kyzyl**	**4.56**	**74**	Sg	Sg	00 32 42.4	+2.1
KHAR	**Kharino, NSO,**	**4.62**	**331**	Sg	Sg	00 32 45.5	+3.1
BSTK	**Bystrovka, Nov**	**4.90**	**326**	Sg	Sg	00 32 55.3	+4.0
NVSII	**Novosibirsk**	**4.93**	**331**	Sg	Sg	00 32 54.2	+2.0
NVS	**Novosibirsk**	**4.93**	**331**	Sg	Sg	00 32 54.4	+2.2

*IDC **09** 00:48:00.8±1.9, 6°.65S×129°.75E, h0km, mb4.0/1, mbtmp3.7/4, ML3.7/3, MS2.8/1, Error ellipse: s-maj=70.9km s-min=27.5km az=77.0*
*DJA **09** 00:48:14.0±0.4, 7°.5±4°×13°.0E±°, h179km±13km, M3.9/7, mB2.2/1, mb3.7/7, MLv4.1/6, Mw(mB)0.7/1*

ISC 09 00:48:21.9±2.0, 7°.9S±0°.1×129°.54E±0°.08, h100km, n16, σ1s34/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.75**	**93**	P	**Pn**	**00 48 50.3**	**-1.0**
SAUI	**Saumlaki**	**1.75**	**93**	P	**Pn**	**00 48 50.7**	**-0.6**
SOEI	**Soe**	**5.53**	**250**	P	**Pn**	**00 49 41.6**	**-0.4**
	0.2nm70nm,0.8s						
SOEI	**Soe**	**5.53**	**250**	P	**Pn**	**00 49 41.8**	**-0.2**
KDU	**Kakadu**	**5.58**	**149**	P	**Pn**	**00 49 44.8**	**+2.3**
FAKI	**Fak Fak**	**5.62**	**29**	P	Pn	00 49 26.3	-17
FAKI				S	Sn	00 50 21.3	-25
FAKI	**Fak Fak**	**5.62**	**29**	P	Pn	00 49 26.8	-16
BATI	**Baumata**	**6.25**	**248**	P	**Pn**	**00 49 51.4**	**-0.2**
	0.0nm3.4nm0.2nm,0.8s						
KNRA	**Kununurra**	**7.78**	**186**	P	**Pn**	**00 50 14.8**	**+2.3**
FITZ	**Fitzroy Crossi**	**10.84**	**200**	Pn	**Pn**	**00 50 53.8**	**-0.3**
	0.2nm,0.3s,baz=20,slow=11,SNR=16						
FITZ				Sn	**Sn**	**00 52 54.0**	**+0.6**
	1.8nm,0.3s,baz=131,slow=22,SNR=9.4						
	0.9nm,0.3s						
WRAB	**Tennant Creek**	**12.85**	**159**	P	**Pn**	**00 51 22.0**	**+1.1**
WRA	**Warramunga Arr**	**12.86**	**159**	Pn	**Pn**	**00 51 20.1**	**-0.9**
	0.7nm,0.3s,baz=342,slow=14,SNR=28						
WRA				Sn	**Sn**	**00 53 40.0**	**-2.4**
	1.5nm,0.3s,baz=334,slow=22,SNR=11						
	0.7nm,0.3s						
DAV	**Davao City (W)**	**15.37**	**345**	LR	LR	00 58 22.0	
	comp=Z,36nm,18.1s,baz=347,slow=44						
ASAR	**Alice Springs**	**16.24**	**166**	Pn	**Pn**	**00 52 05.2**	**+0.9**
	0.2nm,0.3s,baz=342,slow=11,SNR=9.4						
ASAR				Sn	**Sn**	**00 55 04.5**	**+0.2**
	0.4nm,0.3s,baz=320,slow=18,SNR=7.1						
	0.5nm,0.6s						
WRKA	**Warakurna**	**17.10**	**184**	P	**Pn**	**00 52 15.1**	**+0.3**
MKAR	**Makanchi Array**	**68.72**	**327**	P	P	00 59 00.6	-14
	0.7nm,0.4s,baz=118,slow=8.1,SNR=11						
	0.7nm,0.4s						

*KRNET **09** 00:50:18.2±0.1, 40°.36N×77°.19E, mb3.1*
*NNC **09** 00:50:18.4±22.0, 39°.85N×77°.51E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=185.1km s-min=86.1km az=168.0*

ISC 09 00:50:15.2±3.0, 40°.3N±0°.1×77°.17E±0°.05, h16km±15km, n19, σ1s33/30, 17C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.48**	**324**	⇑*i*P	**Pg**	**00 50 44.9**	**+1.1**
	baz=19						
NRN				⇑*i*S	**Sg**	**00 51 03.9**	**+0.7**
	baz=19						
TARG	**Taragay, Kyrgy**	**1.56**	**18**	⇑*i*P	**Pb**	**00 50 45.1**	**+1.2**
	baz=18						
TARG				⇑*i*S	**Sg**	**00 51 05.1**	**-0.5**
	baz=18						
ULHL	**Ulahol**	**2.12**	**341**	P	**Pg**	**00 50 56.7**	**+0.8**
	SNR=35						
ULHL	**Ulahol**	**2.12**	**341**	⇓*i*P	**Pb**	**00 50 55.5**	**+2.1**
	baz=39						
ULHL				⇓*i*S	**Sg**	**00 51 22.5**	**-0.9**
	baz=39						
BOOM	**Boomskoye usch**	**2.43**	**338**	⇓*i*P	**Pb**	**00 50 59.5**	**+0.9**
	baz=37						
BOOM				⇓*i*S	**Sb**	**00 51 30.0**	**+1.7**
	baz=37						
ANVS	**Anan'yevo**	**2.56**	**8**	⇑*i*P	**Pb**	**00 51 01.4**	**+0.5**
	baz=8.0						
ANVS				⇑*i*S	**Sb**	**00 51 32.6**	**+0.3**
	baz=8.0						
ARLS	**Aral**	**2.69**	**308**	⇑*i*P	**Pb**	**00 51 03.9**	**+0.8**
	baz=6.0						
ARLS				⇑*i*S	**Sb**	**00 51 36.8**	**+0.9**
	baz=6.0						
TKM2	**Tokmak 2**	**2.92**	**337**	P	**Pb**	**00 51 09.2**	**+2.1**
	SNR=8.8						
TKM2	**Tokmak 2**	**2.92**	**337**	⇑*i*P	**Pb**	**00 51 06.3**	**-0.8**
	baz=35						
TKM2				⇑*i*S	**Sb**	**00 51 41.5**	**-1.1**
	baz=35						
KBK	**Karagaybulak**	**2.93**	**326**	P	**Pg**	**00 51 11.7**	**+0.3**
	SNR=13						
KBK	**Karagaybulak**	**2.93**	**326**	⇑*i*P	**Pb**	**00 51 06.5**	**-0.7**
	baz=24						
KBK				⇑*i*S	**Sb**	**00 51 42.5**	**-0.4**
	baz=24						
AAK	**Ala-Archa**	**3.12**	**321**	P	**Pg**	**00 51 15.1**	**0.0**
	SNR=11						
AAK	**Ala-Archa**	**3.12**	**321**	⇓*i*P	**Pb**	**00 51 09.6**	**-0.9**
	baz=19						
AAK				⇓*i*S	**Sb**	**00 51 47.2**	**-1.2**
	baz=19						
AML	**Almayashu**	**3.23**	**307**	P	**Pb**	**00 51 13.5**	**+1.1**
	SNR=7.8						
CHMS	**Chumysh**	**3.29**	**327**	P	**Pb**	**00 51 14.3**	**+1.0**
	SNR=13						
CHMS	**Chumysh**	**3.29**	**327**	⇑Pn	**Pb**	**00 51 13.7**	**+0.3**
	9.0nm,0.6s						
CHMS				⇑Sn	**Sg**	**00 51 58.8**	**-2.3**
	12nm,0.5s						
EKS2	**Erkin-Say**	**3.51**	**315**	P	**Pb**	**00 51 18.2**	**+1.1**
	SNR=5.1						
PDGK	**Podgornoye**	**3.54**	**29**	⇓Pn	**Pb**	**00 51 16.0**	**-1.5**
	5.4nm,0.6s						
PDGK				⇑Sn	**Sg**	**00 52 07.8**	**-1.0**
	18nm,0.7s						
KK31	**Karatay Array**	**5.75**	**302**	⇑P	Pb	00 51 52.8	-2.3
	0.8nm,0.6s,baz=128,slow=16,SNR=7.1						
KK31				⇑S	**Sg**	**00 53 16.4**	**-3.2**
	1.5nm,0.6s,baz=117,slow=28,SNR=2.7						

IDC 09 00:52:31.4±1.7, 11°.88N×144°.94E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=69.9km s-min=23.2km az=95.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.70**	**358**	Pn	Pn	00 53 02.5	+0.1
	25nm,0.3s,baz=184,slow=14,SNR=20						
GUMO				Sn	Sn	00 53 24.2	-0.6
	62nm,0.3s,baz=91,slow=18,SNR=15						
GUMO				LR	LR	00 53 41.5	
	comp=Z,38nm,18.0s,baz=160,slow=41						
H11N1	**WAKE ISLAND Hy**	**22.50**	**67**	T	T	01 22 10.9	
	baz=255,slow=75,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**22.50**	**67**	T	T	01 22 13.3	

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      baz=67
TUQ   Turquoise Moun  2.35 266  P    Pn   00 54 01.8 -1.0
      baz=84,SNR=87
TUQ                   Sb     Sb         00 54 37.3 +1.7
      baz=84
PRN   Pahroc Range    2.40 318         Pn   00 54 03.4 -0.1
PRN                   IAML               00 54 44.8
      comp=E,501nm,0.7s
PRN                   IAML               00 54 45.9
      comp=N,479nm,0.6s
MTPU  Mount Pierson   2.51  16         Pn   00 54 06.2 +1.1
MTPU                  IAML               00 54 41.0
      comp=N,233nm,0.7s
MTPU                  IAML               00 54 41.3
      comp=E,371nm,0.3s
SHOC  Shoshone, Teco  2.64 277  P    Pn   00 54 05.8 -0.7
      baz=95
W18A  Petrified Fore  2.75 100         Pn   00 54 09.0 +0.7
W18A  Petrified Fore  2.75 100  P    Pn   00 54 07.7 -0.6
      baz=281
W18A                  Sb     Sb         00 54 48.5 +1.3
      baz=281
X18A  Snowflake       2.77 112         Pn   00 54 08.7 +0.2
BC3   Big Chuckawall  2.79 226  P    Pn   00 54 07.3 -1.4
      baz=44
HEC   Hector,Ludlow   2.80 255  P    Pn   00 54 07.8 -1.0
      baz=72,SNR=32
HEC                   S      Sn         00 54 42.2 -0.7
      baz=72
TPNV  Topopah Spring  2.91 298         Pn   00 54 10.4 +0.1
TPNV                  IAML               00 54 54.8
      comp=E,138nm,0.6s
TPNV                  IAML               00 54 56.3
      comp=E,177nm,0.7s
TPNV  Topopah Spring  2.91 298  P    Pn   00 54 10.4 +0.1
      baz=117,SNR=252
TPNV                  Sb     Sb         00 54 53.3 +1.7
      baz=117
BELC  Belle Mtn. Jos  2.92 237  P    Pn   00 54 09.1 -1.4
      baz=55,SNR=12
BELC                  Sb     Sb         00 54 53.8 +1.9
      baz=55
MVU   Marysvale       2.95  13         Pn   00 54 11.7 +0.6
GLA   Glamis          2.96 210  Pn   Pn   00 54 10.1 -0.9
GLA                   IAML               00 55 03.4
      comp=N,159nm,0.6s
GLA                   IAML               00 55 09.3
      comp=E,266nm,0.7s
GLA   Glamis          2.96 210  P    Pn   00 54 10.1 -0.9
      baz=29
S11A  Rachel          2.96 314         Pn   00 54 10.2 -0.9
S11A                  IAML               00 54 59.7
      comp=E,298nm,0.7s
MSU   Marysvale       2.97  13         Pn   00 54 11.5 +0.2
PSUT  Pine Spring     2.98 348         Pn   00 54 10.4 -1.0
PSUT                  IAML               00 54 59.9
      comp=E,224nm,0.9s
PSUT                  IAML               00 55 07.7
      comp=N,160nm,0.8s
GWY   Greenwater Val  2.99 282         Pn   00 54 11.4 -0.1
GWY                   IAML               00 55 03.0
      comp=E,257nm,0.8s
GWY                   IAML               00 55 03.6
      comp=N,222nm,0.5s
GSC   Goldstone, Bar  3.08 265  Pn   Pn   00 54 11.7 -1.1
GSC                   IAML               00 55 06.5
      comp=N,130nm,1.1s
GSC                   IAML               00 55 07.6
      comp=E,175nm,1.1s
GSC   Goldstone, Bar  3.08 265  P    Pn   00 54 12.0 -0.8
      baz=83,SNR=11
WCT   Wildcat Mounta  3.12 293  Pn   Pn   00 54 12.6 -0.6
WCT                   IAML               00 55 08.8
      comp=E,93nm,1.1s
WCT                   IAML               00 55 10.4
      comp=N,75nm,1.2s
RRX   Edison Barstow  3.31 258  P    Pn   00 54 15.2 -0.7
      baz=76
RRX                   S      Sn         00 54 54.5 -1.0
      baz=76
R11A  Troy Canyon, C  3.40 324         Pn   00 54 16.7 -0.4
R11A                  IAML               00 55 17.8
      comp=N,55nm,1.0s
R11A  Troy Canyon, C  3.40 324  P    Pn   00 54 16.5 -0.6
      baz=143,SNR=45
R11A                  Sb     Sb         00 55 07.6 +1.9
      baz=143
PFO   Pinyon Flats O  3.45 235  Pn   Pn   00 54 17.1 -0.8
      comp=N,3.5nm,0.3s,baz=34,slow=9.3,SNR=39
PFO                   Lg     Lg         00 55 12.2
      comp=N,8.8nm,0.3s,baz=300,slow=22,SNR=13
      comp=N,7.3nm,0.3s
PFO   Pinyon Flats O  3.45 235         Pn   00 54 16.9 -0.9
PFO   Pinyon Flats O  3.45 235  P    Pn   00 54 17.1 -0.8
      baz=53,SNR=14
BBRC  Big Bear Solar  3.46 248  P    Pn   00 54 17.3 -0.7
      baz=65
SWSC  Sam W. Stewart  3.51 221  P    Pn   00 54 18.0 -0.5
      baz=39
Q16A  Castle Valley   3.62  24         Pn   00 54 21.0 +0.8
Q16A                  IAML               00 55 18.0
      comp=N,123nm,0.7s
MPMC  Manual Prospec  3.63 278  P    Pn   00 54 19.9 -0.5
      baz=96,SNR=6.2
214A  Organ Pipe Nat  3.66 177         Pn   00 54 21.2 +0.6
214A                  IAML               00 55 22.2
      comp=N,125nm,0.8s
214A                  IAML               00 55 28.0
      comp=E,114nm,0.7s
214A  Organ Pipe Nat  3.66 177  P    Pn   00 54 20.6 -0.1
      baz=356
LRMC  Laurel Mtn Rad  3.78 269  P    Pn   00 54 21.8 -0.6
      baz=86,SNR=26
LRMC                  S      Sn         00 55 06.3 -0.8
      baz=86
GMN   Gold Mountain   3.79 298         Pn   00 54 22.9 +0.3
GMN                   IAML               00 55 30.4
      comp=N,55nm,0.5s
TUC   Tucson          3.80 150         Pn   00 54 22.6 -0.1
TUC                   IAML               00 55 30.5
      comp=N,38nm,1.4s
TUC   Tucson          3.80 150  P    Pn   00 54 22.7 +0.1
      baz=331
YUH   Yuha Desert     3.81 220         Pn   00 54 22.0 -0.6
MONP2 Monument Peak   3.90 227  P    Pn   00 54 23.8 -0.3
      baz=44,SNR=9.4
IKP   In-Ko-Pah, Jac  3.90 221  P    Pn   00 54 23.7 -0.3
      baz=39,SNR=7.0
RMX   La Rumorosa     3.92 221         Pn   00 54 24.1 -0.3
TMUT  Trail Mountain  3.95  21         Pn   00 54 25.4 +0.5
TMUT                  IAML               00 55 37.5
      comp=E,140nm,0.6s
MURC  Murrieta        3.97 241  P    Pn   00 54 24.5 -0.3
      baz=58,SNR=18
MVCO  Mesa Verde      4.00  65         Pn   00 54 26.3 +0.9
MVCO  Mesa Verde      4.00  65  P    Pn   00 54 25.8 +0.4
      baz=248
SRU   San Rafael Swe  4.02  29         Pn   00 54 26.6 +0.9
BFSC  Mount Baldy Ra  4.03 251  P    Pn   00 54 25.4 -0.4
      baz=68,SNR=8.5
LCH   Last Change Ra  4.04 295         Pn   00 54 25.6 -0.3
MZP   Montezuma Peak  4.05 302         Pn   00 54 26.2 -0.1
PIX   Pinacate        4.07 185         Pn   00 54 25.9 -0.3
PIX                   IAML               00 55 40.1
      comp=E,39nm,1.1s
CCAC  Calif City Air  4.08 265         Pn   00 54 26.0 -0.5
CCAC                  IAML               00 55 38.0
      comp=E,97nm,1.2s
CCAC                  IAML               00 55 41.8
      comp=N,110nm,1.1s
ELS   Elsinore Mount  4.11 243         Pn   00 54 26.3 -0.5
EDW2  Edwards Air Fo  4.11 261  P    Pn   00 54 25.9 -1.0
      baz=78
CWC   Cottonwood Cre  4.16 283  P    Pn   00 54 26.9 -0.7
      baz=100
BAR   Barrett         4.20 227         Pn   00 54 27.9 -0.1
PV10  Paradox Valley  4.23  48         Pn   00 54 28.9 +0.3
P17A  Butcher Ranch,  4.26  25  Pn   Pn   00 54 30.1 +1.2
P17A                  IAML               00 55 37.4
      comp=N,72nm,0.6s
P17A                  IAML               00 55 38.9
      comp=E,109nm,0.9s
109C  Camp Elliot, M  4.33 232  Pn   Pn   00 54 29.1 -0.6
109C                  IAML               00 55 40.9
      comp=N,37nm,0.4s
109C                  IAML               00 55 42.2
      comp=E,36nm,0.5s
109C  Camp Elliot, M  4.33 232  P    Pn   00 54 29.6 -0.2
      baz=49,SNR=5.0
ESJX  Sierra Juarez   4.34 215         Pn   00 54 30.0 -0.1
NLU   North Lily Min  4.39  10         Pn   00 54 31.1 +0.2
ISA   Isabella, Lake  4.42 272  Pn   Pn   00 54 30.6 -0.4
ISA   Isabella, Lake  4.42 272  P    Pn   00 54 30.6 -0.4
      baz=89,SNR=10
CBX   Cerro Bola      4.46 223         Pn   00 54 32.2 +0.5
PASC  Pasadena Art C  4.46 253         Pn   00 54 31.2 -0.4
PASC                  IAML               00 55 45.9
      comp=E,38nm,0.5s
PASC                  IAML               00 55 51.8
      comp=N,33nm,0.9s
PV07  Paradox Valley  4.51  50         Pn   00 54 33.6 +1.2
DECC  Green Verdugo   4.55 254  P    Pn   00 54 32.4 -0.4
      baz=71
DUG   Dugway, Tooele  4.57   2  Pb   Pb   00 54 45.0 +0.9
      baz=183
P18A  Preston Nutter  4.58  28         Pn   00 54 34.7 +1.3
P18A                  IAML               00 55 56.1
      comp=N,84nm,0.6s
ARVC  Arvin           4.75 266  P    Pn   00 54 35.2 -0.3
      baz=82
NV11  Mina Array Sit  4.96 306         Pn   00 54 38.5 -0.1
NV11                  IAML               00 56 18.9
      comp=N,19nm,2.2s
NVAR  Mina Array Bea  5.05 305  Pn   Pn   00 54 40.3 +0.4
      comp=N,1.2nm,0.3s,baz=123,slow=15,SNR=16
NVAR                  Pg     Pb         00 54 55.5 +3.0
      comp=N,2.9nm,0.3s,baz=130,slow=16,SNR=27
NVAR                  Lg     Lg         00 56 01.7
      comp=N,2.8nm,0.3s,baz=123,slow=31,SNR=4.8
      comp=N,1.2nm,0.3s
LHV   Little Huntoon  5.10 303         Pn   00 54 40.5 +0.2
LHV                   IAML               00 56 10.7
      comp=E,44nm,1.7s
LHV                   IAML               00 56 13.3
      comp=N,44nm,0.8s
JLU   Jordanelle      5.13  14         Pn   00 54 41.6 +0.6
JLU                   IAML               00 56 17.4
      comp=N,15nm,1.1s
JLU                   IAML               00 56 18.7
      comp=E,16nm,1.7s
BCW   Bitter Crk WRg  5.25 264  Pn   Pn   00 54 41.7 -0.8
BCW                   IAML               00 56 14.6
      comp=N,44nm,1.8s
BCW                   IAML               00 56 20.2
      comp=E,48nm,1.1s
319A  Douglas         5.28 142  Pn   Pn   00 54 43.5 +0.6
RYN   Ryan            5.30 306         Pn   00 54 43.4 +0.1
RYN                   IAML               00 56 22.3
      comp=E,23nm,1.0s
RYN                   IAML               00 56 26.3
      comp=N,23nm,0.8s
121A  Cookes Peak, D  5.34 124  Pn   Pn   00 54 44.4 +0.5
121A                  IAML               00 56 17.3
      comp=E,49nm,0.7s
121A  Cookes Peak, D  5.34 124  P    Pn   00 54 44.4 +0.5
      baz=307
ELK   Elko            5.40 342  Pn   Pn   00 54 45.9 +1.2
      comp=E,0.4nm,0.3s,baz=190,slow=12,SNR=2.6
ELK                   Pg     Pb         00 54 57.1 -1.2
      comp=E,0.4nm,0.3s,baz=162,slow=13,SNR=4.8
ELK                   Lg     Lg         00 56 08.6
      comp=E,1.1nm,0.3s,baz=53,slow=20,SNR=6.6
S22A  4UR Ranch, Cre  5.43  65  Pn   Pn   00 54 45.5 +0.3
S22A  4UR Ranch, Cre  5.43  65  P    Pn   00 54 45.2  0.0
      baz=249
ANMO  Albuquerque     5.43  95  Pn   Pn   00 54 43.4 -1.7
      comp=E,0.5nm,0.4s,baz=279,slow=13,SNR=1.2
ANMO                  Pg     Pb         00 54 52.7 -6.2
      comp=E,0.4nm,0.3s,baz=271,slow=14,SNR=8.4
ANMO                  Lg     Lg         00 56 10.7
      comp=E,3.4nm,0.3s,baz=204,slow=19,SNR=9.8
ANMO  Albuquerque     5.43  95         Pn   00 54 47.3 +2.1
PKM   Mcpherson Peak  5.58 264  P    Pn   00 54 47.0 -0.2
      baz=80
O20A  White River Ci  5.89  39         Pn   00 54 52.7 +1.3
O20A  White River Ci  5.89  39  P    Pn   00 54 51.9 +0.5
      baz=222
YERR  Yerington       5.97 306         Pn   00 54 50.9 -1.6
SMCO  Snowmass        6.00  52         Pn   00 54 54.0 +0.9
SDCO  Great Sand Dun  6.42  69         Pn   00 54 58.6 -0.2
SDCO  Great Sand Dun  6.42  69  P    Pn   00 54 58.9 +0.1
      baz=253
Q24A  Divide          7.13  60         Pn   00 55 09.5 +1.0
T25A  Trinidad        7.13  75         Pn   00 55 09.4 +1.0
T25A  Trinidad        7.13  75  P    Pn   00 55 08.2 -0.3
      baz=260
RWWY  Rawlins         7.59  35         Pn   00 55 12.8 -1.9
BW06  Boulder Array   7.63  20  Pn   Pn   00 55 14.7 -0.6
BW06  Boulder Array   7.63  20  P    Pn   00 55 15.3 -0.1
      baz=202
PDAR  Pinedale Array  7.63  20  Pn   Pn   00 55 16.0 +0.6
      comp=E,0.3nm,0.3s,baz=181,slow=11,SNR=8.6
PDAR                  Lg     Lg         00 57 21.5
      comp=E,0.4nm,0.3s,baz=188,slow=30,SNR=2.3
      comp=E,0.5nm,0.5s
PDAR  Pinedale Array  7.63  20  Pn   Pn   00 55 15.9 +0.6
N23A  Red Feather La  7.68  45  Pn   Pn   00 55 17.3 +1.3
K22A  Casper          8.66  34  Pn   Pn   00 55 28.9 -0.4
K22A  Casper          8.66  34  P    Pn   00 55 28.9 -0.4
      baz=218
TXAR  Lajitas Array   10.10 126  Pn   Pn   00 55 50.4 +1.3
      comp=E,0.1nm,0.3s,baz=307,slow=14,SNR=3.1
TXAR                  Lg     Lg         00 58 38.1
      baz=289,slow=30,SNR=2.3
      comp=E,0.3nm,0.5s
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GUC ***09*** *01:02:40.9±0.8, 31°.35S×70°.66W, h122km±3km, ML4.3*
NEIC ***09*** *01:02:41.1±1.3, 31°.36S±0°.03×70°.60W±0°.08, h113km±10km, mb4.1/5, ML4.3(GUC), Error ellipse: s-maj=10.1km s-min=4.3km az=91.0*
SJA ***09*** *01:02:41.1±1.1, 31°.38S×70°.55W, h90km, ML4.2, MW4.1*
IDC ***09*** *01:02:42.6±0.7, 31°.31S×70°.35W, h112km±4km, mb3.7/8, mbtmp4.1/10, MS2.7/1, Error ellipse: s-maj=23.0km s-min=19.6km az=111.0*
VAO ***09*** *01:02:47.9±1.8, 31°.08S×69°.79W, h115km, mb4.2*
ISC 09 01:02:41.2±0.5,**31°.32S**±0°.03×**70°.48W**±0°.03,**h109**km±4km, **n143**,σ1§**46**/188,**mb4.0**/8,**6C-17D, Chile-Argentina border region**

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Code  Station Name      Δ°   AZ°  Phase ID   Time      Res
                                   Op    ISC  h m s     ISC
CO02  Combarbal       0.46 285         Pn   01 02 57.9 +0.1
CO02  Combarbal       0.46 285 ↑iP     Pn   01 02 57.9 +0.1
CO02                           i S     Sn   01 03 10.4 +0.1
CO02                           IAML       01 03 14.7
      comp=N,22µm,0.2s
CO02  Combarbal       0.46 285 eP      Pn   01 02 58.0 +0.1
CO02                           eS      Sn   01 03 11.1 +0.8
CO02                           IAML       01 03 13.1
      comp=Z,4µm,0.4s
CO03  El Pedregal     0.51 340         Pn   01 02 58.5 +0.3
CO03  El Pedregal     0.51 340 ↑iP     Pn   01 02 58.5 +0.3
CO03                           i S     Sn   01 03 11.7 +0.8
CO03  El Pedregal     0.51 340 eP      Pn   01 02 58.4 +0.3
CO03                           eS      Sn   01 03 12.2 +1.3
CO03                           IAML       01 03 14.3
      comp=Z,6µm,0.2s
RTLS  Leoncito        1.12 115 eP      Pn   01 03 05.0 +1.2
RTLS                           eS      Sn   01 03 22.5 +1.5
RTLS                           IAML       01 03 24.6
      comp=Z,2µm,0.3s
GO04  Tololo Observa  1.18 347         Pn   01 03 04.8 +0.3
GO04  Tololo Observa  1.18 347 ↑iP     Pn   01 03 04.7 +0.2
GO04  Tololo Observa  1.18 347 eP      Pn   01 03 04.0 -0.5
GO04                           eS      Sn   01 03 23.1 +1.0
CO06  Fray Jorge      1.18 303         Pn   01 03 04.4 +0.1
CO06  Fray Jorge      1.18 303 ↑iP     Pn   01 03 04.4 +0.1
CO06                           i S     Sn   01 03 21.8 +0.1
CO06                           IAML       01 03 23.3
      comp=N,6µm,0.3s
CO01  Juntas del Tor  1.38  14         Pn   01 03 08.1 +1.2
CO01  Juntas del Tor  1.38  14 eP      Pn   01 03 08.0 +1.2
CO01                           i S     Sn   01 03 27.8 +1.6
CO01  Juntas del Tor  1.38  14 eP      Pn   01 03 08.0 +1.2
CO01                           eS      Sn   01 03 27.8 +1.6
CO01                           IAML       01 03 29.3
      comp=Z,3µm,0.3s
VA06  Catapilco       1.42 209         Pn   01 03 06.4 -0.5
VA06  Catapilco       1.42 209 ↓iP     Pn   01 03 06.4 -0.5
VA06                           i S     Sn   01 03 25.2 -1.3
VA06                           IAML       01 03 28.8
      comp=N,6µm,0.6s
ACCO  Cerro Coronel   1.42  59 eP      Pn   01 03 08.0 +0.7
VA03  San Esteban     1.44 182         Pn   01 03 07.5 +0.1
VA03  San Esteban     1.44 182 ↓iP     Pn   01 03 07.4 +0.1
VA03                           i S     Sn   01 03 27.3 +0.2
VA03                           IAML       01 03 28.5
      comp=E,7µm,0.6s
VA03  San Esteban     1.44 182 eP      Pn   01 03 07.6 +0.3
VA03                           eS      Sn   01 03 28.5 +1.4
VA03                           IAML       01 03 29.7
      comp=Z,2µm,0.9s
AROD  Rodeo           1.44  37 eP      Pn   01 03 09.0 +1.4
AROD                           eS      Sn   01 03 24.9 -2.7
CO05  La Serena       1.54 335         Pn   01 03 08.6 +0.1
CO05  La Serena       1.54 335 ↑iP     Pn   01 03 08.6 +0.1
CO05                           i S     Sn   01 03 28.8 -0.3
CO05                           i S        01 03 28.9
ZON   Zonda           1.56  99         Pn   01 03 09.4 +0.7
ZON   Zonda           1.56  99 eP      Pn   01 03 09.3 +0.6
ZON                            eS      Sn   01 03 30.3 +0.7
ZON                            IAML       01 03 33.4
      comp=Z,2µm,0.3s
ACDV  Cuesta del Vie  1.64  46 eP      Pn   01 03 11.0 +1.2
ACDV                           eS      Sn   01 03 35.7 +4.1
ACDV                           IAML       01 03 44.1
      comp=Z,798nm,0.6s
SJA   San Juan        1.66  98 eP      Pn   01 03 10.9 +1.1
SJA                            eS      Sn   01 03 33.0 +1.2
SJA                            IAML       01 03 33.8
      comp=Z,4µm,0.3s
ROCH  El Roble        1.70 195 ↓iP     Pn   01 03 09.8 -0.9
ROCH                           IAML       01 03 35.5
      comp=N,3µm,0.3s
ROC1  El Roble        1.71 195         Pn   01 03 09.8 -1.0
ROC1  El Roble        1.71 195 eP      Pn   01 03 09.0 -1.7
ROC1                           eS      Sn   01 03 32.2 -1.0
RTLL  Cerro Villicun  1.72  91 eP      Pn   01 03 10.8 +0.1
RTLL                           eS      Sn   01 03 33.4 +0.3
RTCV  Cerro Valdivia  1.74 108 eP      Pn   01 03 11.8 +0.8
RTCV                           eP         01 03 12.0
RTCV                           eS      Sn   01 03 30.3 -3.4
PEL   Peldehue        1.82 185         Pn   01 03 11.6 -0.4
PEL   Peldehue        1.82 185 ↓iP     Pn   01 03 11.5 -0.4
PEL                            i S     Sn   01 03 34.7 -0.7
PEL                            IAML       01 03 37.2
      comp=N,2µm,0.3s
PEL   Peldehue        1.82 185 eP      Pn   01 03 11.6 -0.4
PEL                            eS      Sn   01 03 36.4 +0.9
ASAL  Salagasta       1.89 133 eP      Pn   01 03 14.0 +1.2
ASAL                           eS      Sn   01 03 33.8 -3.1
VA01  Torpederas      1.96 210         Pn   01 03 12.3 -1.3
VA01  Torpederas      1.96 210 eP      Pn   01 03 12.7 -0.9
VA01                           IAML       01 03 41.3
      comp=E,1µm,0.4s
VA01  Torpederas      1.96 210 eP      Pn   01 03 12.0 -1.6
VA01                           IAML       01 03 41.9
      comp=Z,718nm,0.5s
FCH   Farellones      2.01 175 ↓iP     Pn   01 03 15.2 +0.7
FCH                            i S     Sn   01 03 41.2 +1.2
FCH                            IAML       01 03 42.7
      comp=N,2µm,0.2s
ARCO  CERRO ARCO      2.01 139 eP      Pn   01 03 13.4 -0.9
ARCO                           eS      Sn   01 03 42.1 +2.4
ARCO                           IAML       01 03 44.4
      comp=Z,2µm,1.1s
MT02  Curacav         2.01 196         Pn   01 03 13.4 -0.9
MT02  Curacav         2.01 196 ↓iP     Pn   01 03 13.3 -0.9
MT02                           eS      Sn   01 03 38.0 -1.5
MT02                           IAML       01 03 38.9
      comp=E,1µm,0.3s
MT02  Curacav         2.01 196 eP      Pn   01 03 13.4 -0.9
MT02                           eS      Sn   01 03 38.9 -0.6
MT02                           IAML       01 03 40.7
      comp=Z,871nm,0.8s
MT05  Renca           2.08 186  Pn      Pn   01 03 14.7 -0.4
MT05  Renca           2.08 186 ↓iP     Pn   01 03 14.7 -0.4
MT05                           i S     Sn   01 03 41.0 -0.1
MT05                           IAML       01 03 44.5
      comp=N,4µm,0.4s
MT05  Renca           2.08 186 eP      Pn   01 03 14.7 -0.4
MT05                           eS      Sn   01 03 42.1 +1.0
MT03  Universidad Ad  2.17 181  Pn      Pn   01 03 16.2 -0.2
MT03  Universidad Ad  2.17 181 ↓iP     Pn   01 03 16.2 -0.2
MT03                           IAML       01 03 45.8
      comp=N,4µm,0.4s
MT03  Universidad Ad  2.17 181 eP      Pn   01 03 16.3 -0.1
MT03                           eS      Sn   01 03 44.9 +1.7
MT03                           IAML       01 03 45.7
      comp=Z,2µm,0.6s
AAGR  Agrelo          2.25 142 eP      Pn   01 03 13.5 -3.9
AAGR                           eS      Sn   01 03 41.0 -4.1
LCO   Las Campanas    2.31 355         Pn   01 03 18.8 +0.3
LCO   Las Campanas    2.31 355 ↑iP     Pn   01 03 18.7 +0.3
LCO                            i S     Sn   01 03 46.6 -0.3
LCO   Las Campanas    2.31 355 eP      Pn   01 03 18.0 -0.4
LCO                            eS      Sn   01 03 46.7 -0.2
LCO                            IAML       01 03 52.9
      comp=Z,3µm,0.2s
AC05  El Transito     2.48   4  Pn      Pn   01 03 21.5 +1.0
AC05  El Transito     2.48   4 ↓iP     Pn   01 03 21.5 +1.0
AC05                           i S     Sn   01 03 50.9 +0.2
AC05  El Transito     2.48   4 eP      Pn   01 03 21.0 +0.5
AC05                           eS      Sn   01 03 52.0 +1.3
AC05                           IAML       01 03 52.2
      comp=Z,4µm,0.3s
MT09  Talagante       2.48 190         Pn   01 03 19.3 -1.2
MT09  Talagante       2.48 190 ↓iP     Pn   01 03 19.4 -1.2
MT09                           IAML       01 03 53.6
      comp=E,1µm,0.5s
VA05  Santo Domingo   2.52 202         Pn   01 03 18.9 -1.9
VA05  Santo Domingo   2.52 202 ↓iP     Pn   01 03 19.3 -1.4
VA05                           i S     Sn   01 03 49.2 -1.9
VA05                           IAML       01 04 04.1
      comp=E,2µm,0.5s
LMEL  Las Melosas     2.53 175 ↓iP     Pn   01 03 21.6 +0.5
LMEL                           i S     Sn   01 03 53.0 +1.2
LMEL                           IAML       01 03 55.8
      comp=E,2µm,0.4s
MT01  Popeta          2.62 194         Pn   01 03 20.9 -1.1
MT01  Popeta          2.62 194 ↓iP     Pn   01 03 21.0 -1.1
MT01                           i S     Sn   01 03 51.4 -2.1
MT01                           IAML       01 03 53.7
      comp=N,970nm,0.4s
MT01  Popeta          2.62 194 eP      Pn   01 03 21.0 -1.1
MT01                           eS      Sn   01 03 52.5 -1.0
MT01                           IAML       01 03 55.4
      comp=Z,586nm,0.6s
BO04  La Punta        2.66 182         Pn   01 03 21.7 -1.1
BO04  La Punta        2.66 182 ↓iP     Pn   01 03 22.0 -0.7
BO04                           i S     Sn   01 03 53.8 -0.9
AVIZ  Vizcacheras     2.71 143 eP      Pn   01 03 18.9 -4.6
AVIZ                           eS      Sn   01 03 52.4 -3.6
BO01  Tunca           3.10 189         Pn   01 03 27.2 -1.3
BO01  Tunca           3.10 189 ↓iP     Pn   01 03 27.2 -1.3
BO01  Tunca           3.10 189 eP      Pn   01 03 27.3 -1.3
BO01                           eS      Sn   01 04 03.7 -1.3
BO01                           IAML       01 04 08.8
      comp=Z,302nm,0.6s
AC04  Llanos de Chal  3.15 350  Pn      Pn   01 03 29.4 +0.2
AC04  Llanos de Chal  3.15 350 eP      Pn   01 03 29.4 +0.2
AC04                           i S     Sn   01 04 05.2 -0.9
AC04  Llanos de Chal  3.15 350 eP      Pn   01 03 29.0 -0.2
AC04                           eS      Sn   01 04 02.0 -4.1
VCA   Vinchina        3.25  38 eP      Pn   01 03 31.1 +0.5
VCA                            IAML       01 04 18.2
      comp=Z,1µm,0.5s
BO02  Sierra Bellavi  3.47 184  Pn      Pn   01 03 32.4 -1.1
BO02  Sierra Bellavi  3.47 184 ↓iP     Pn   01 03 32.4 -1.1
BO02                           i S     Sn   01 04 11.6 -2.3
BO02  Sierra Bellavi  3.47 184 eP      Pn   01 03 32.0 -1.5
AC06  Mina Casimiro   3.95   2         Pn   01 03 39.8 -0.1
AC02  Maricunga       4.62  15  Pn      Pn   01 03 49.8 +0.3
AC02  Maricunga       4.62  15 ↓iP     Pn   01 03 49.8 +0.3
AC01  Pan de Azucar   5.16 359  Pn      Pn   01 03 54.4 -1.7
H03N1 Juan Fernandez  7.44 251  T       T    01 11 25.4
      baz=81,slow=72,SNR=262
H03N3 Juan Fernandez  7.45 251  T       T    01 11 22.1
      baz=81,slow=72,SNR=62
H03N2 Juan Fernandez  7.45 251  T       T    01 11 22.6
      baz=81,slow=72,SNR=247
PB10  IPOC Station P  7.78 360  Pn      Pn   01 04 30.2 -1.5
```

LVC Limon Verde 8.79 10 P Pn 01 04 42.1 -3.7
comp=Z,4.8nm,0.3s,baz=161,slow=7.9,SNR=20
LVC S Sn 01 06 19.7 -3.6
comp=Z,9.5nm,0.5s,baz=195,slow=16,SNR=1.7
LVC LR LR 01 09 09.7
comp=Z,49nm,18.4s,baz=198,slow=44
LVC Limon Verde 8.79 10 Pn 01 04 45.6 -0.1
PLCA Paso Flores 9.39 180 P Pn 01 04 51.5 -2.0
comp=Z,2.8nm,0.4s,baz=354,slow=12,SNR=15
TRQA Tornquist 9.70 136 Pn 01 04 55.6 -2.0
ITQB Itaqui 12.07 86 *eP* **Pn 01 05 27.5 -2.0**
CPUP Villa Florida 12.56 70 P **Pn 01 05 32.3 -3.6**
comp=Z,3.5nm,0.8s,baz=235,slow=12,SNR=7.4
CPUP S **Sn 01 07 46.8 -7.3**
comp=Z,4.3nm,0.6s,baz=212,slow=9.6,SNR=1.9
CPUP Villa Florida 12.56 70 *eP* **Pn 01 05 33.6 -2.3**
PB16 IPOC Station P 12.96 4 Pn 01 05 42.3 +0.4
RODS Rosario do Sul 13.17 90 *eP* **Pn 01 05 41.5 -2.6**
UNIS Unistalda (Bra 13.52 84 *eP* **Pn 01 05 46.6 -1.9**
PLTB Pedras Altas 14.40 96 *eP* **Pn 01 05 59.1 -0.8**
CRSM Crissiumal (Br 14.83 79 *eP* **Pn 01 06 03.2 -2.1**
MURT Porto Murtinho 15.00 53 *eP* **Pn 01 06 06.2 -1.4**
LPAZ La Paz 15.12 9 P **P 01 06 11.3 -1.0**
comp=Z,3.3nm,0.5s,baz=181,slow=6.0,SNR=24
LPAZ La Paz 15.12 9 Pn **Pn 01 06 09.8 +0.2**
LPAZ IAmb IAmb 01 06 11.7
comp=Z,4.9nm,0.7s
LPAZ La Paz 15.12 9 *eP* **P 01 06 11.5 -0.8**
ALGR Alto Alegre (B 15.32 85 *eP* **Pn 01 06 10.6 -1.0**
ANTJ Antonio Joao (15.91 58 *eP* **Pn 01 06 17.9 -1.1**
MCR1 Marechal Candi 16.06 69 *eP* **Pn 01 06 18.9 -1.8**
FRBT Francisco Belt 16.19 75 *eP* **Pn 01 06 20.7 -1.7**
BBSD Serra de San D 16.69 35 *eP* **Pn 01 06 27.5 -1.1**
SIV San Ignacio 17.51 32 P **P 01 06 37.6 -0.5**
comp=Z,6.5nm,0.9s,baz=206,slow=9.8,SNR=22
SIV pP **pP 01 07 00.9 +1.4**
comp=Z,4.3nm,0.9s,baz=194,slow=7.3,SNR=5.6
TER01 Tubaro-SC 18.71 87 *eP* **P 01 06 51.9 +0.6**
PTLB Pontes e Lacer 18.90 36 *eP* **Pn 01 06 55.2 +0.1**
PCMB Pacaembu 19.72 65 *eP* **P 01 07 01.9 -0.2**
FRTB Fartura 20.19 72 *eP* **P 01 07 07.6 +0.3**
SALV Santo Antonio 20.44 45 *eP* **P 01 07 10.8 +0.8**
VILB Vilhena 20.59 30 *eP* **P 01 07 12.0 +0.3**
ETMB Extrema 21.76 11 *eP* **P 01 07 25.2 +1.0**
PDRB Porto dos Gac 23.38 36 *eP* **P 01 07 42.0 +1.7**
BDFB Brasilia 25.77 58 P **P 01 08 02.0 -0.1**
comp=Z,2.3nm,0.4s,baz=217,slow=6.9,SNR=7.7
BDFB pP **pP 01 08 26.8 +0.1**
comp=Z,6.7nm,1.1s,baz=239,slow=9.0,SNR=4.0
comp=Z,2.3nm,0.4s
BDFB Brasilia 25.77 58 P **P 01 08 02.4 +0.3**
BDFB Brasilia 25.77 58 *eP* **P 01 08 02.2 +0.1**
VNA3 Neumayer Olymp 51.35 159 P **P 01 11 34.8 +0.7**
VNA1 Neumayer--Stat 51.63 158 P **P 01 11 37.1 +1.0**
VNA2 Neumayer--Watz 51.98 158 P **P 01 11 39.5 +0.8**
baz=282,slow=7.6
SNAA Sanae 53.58 159 P **P 01 11 51.3 +0.7**
SNAA Sanae 53.58 159 P **P 01 11 51.2 +0.7**
comp=Z,9.4nm,0.7s,baz=2.5,slow=6.8,SNR=3.2
comp=Z,9.4nm,0.7s
TROLL Troll, Antarti 55.29 159 P **P 01 12 03.8 +0.7**
VNDA Vanda 66.97 191 P **P 01 13 23.7 +2.1**
comp=Z,0.5nm,0.7s,baz=139,slow=3.8,SNR=4.2
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 68.08 329 P **P 01 13 31.1 +1.9**
comp=Z,0.2nm,0.5s,baz=153,slow=10,SNR=2.3
TXAR pP **pP 01 13 57.2 +0.2**
comp=Z,0.7nm,0.7s,baz=153,slow=8.4,SNR=5.3
comp=Z,0.2nm,0.5s
DBIC Dimbokro 73.08 71 P **P 01 13 59.8 0.0**
comp=Z,2.6nm,0.6s,baz=232,slow=7.6,SNR=1.9
comp=Z,2.6nm,0.6s
BOSA Boshof 80.14 117 P **P 01 14 40.0 +0.3**
comp=Z,1.7nm,0.6s,baz=276,slow=3.2,SNR=5.6
comp=Z,1.7nm,0.6s
TORD Torodi Ar. Bea 82.05 69 P **P 01 14 50.1 +0.3**
comp=Z,2.0nm,0.7s,baz=274,slow=5.9,SNR=18
TORD pP **pP 01 15 19.8 +0.6**
comp=Z,1.4nm,0.6s,baz=278,slow=6.0,SNR=4.9
comp=Z,2.0nm,0.7s
NVAR Mina Array Bea 82.47 324 P **P 01 14 53.6 +2.0**
comp=Z,0.2nm,0.5s,baz=156,slow=4.7,SNR=2.6
comp=Z,0.2nm,0.5s
WRA Warramunga Arr 123.73 208 PKP **PKiKP 01 21 26.6 -0.4**
comp=Z,0.3nm,0.4s,baz=156,slow=1.8,SNR=12
WRA pPKP **pPKPdf 01 21 56.5 -1.2**
comp=Z,0.2nm,0.5s,baz=155,slow=1.6,SNR=1.7
H11S2 WAKE ISLAND Hyl 27.10 270 T T 03 40 55.4
baz=116,slow=75,SNR=11
H11S1 WAKE ISLAND Hyl 27.11 270 T T 03 41 07.3
baz=116,slow=75,SNR=6.7
H11S3 WAKE ISLAND Hyl 27.11 270 T T 03 41 05.0
baz=116,slow=75,SNR=6.0
H11N3 WAKE ISLAND Hyl 27.44 272 T T 03 41 31.4
baz=117
H11N1 WAKE ISLAND Hyl 27.46 272 T T 03 41 29.9
baz=117
H11N2 WAKE ISLAND Hyl 27.46 272 T T 03 41 30.7
baz=117
ZALV Zalesovo Beam 151.26 31 PKPbc **PKiKP 01 22 22.3 +0.5**
comp=Z,2.0nm,0.4s,baz=302,slow=3.2,SNR=14
ZALV pPKPbc **pPKPbc 01 22 52.0 -0.1**
comp=Z,4.0nm,0.6s,baz=299,slow=3.3,SNR=7.2
KSH Kashi 151.59 64 PKPbc **PKiKP 01 22 23.7 +0.6**
MKAR Makanchi Array 153.99 46 PKPbc **PKiKP 01 22 28.3 +0.6**
comp=Z,0.3nm,0.4s,baz=313,slow=2.6,SNR=3.3
MKAR PKPab **PKPab 01 22 42.2 +0.7**
comp=Z,1.5nm,0.5s,baz=281,slow=3.2,SNR=15
MKAR pPKPbc **pPKPbc 01 23 00.3 +1.8**
comp=Z,0.7nm,0.6s,baz=279,slow=2.4,SNR=3.3
PZH PanZhiHua 171.67 123 PKP **PKPdf 01 22 35.9 -1.4**

*NOU **09** 01:23:57.3, 37.°08S×179.°73E, h0km, MLv3.9/7, Off E. Coast of N. Island, N.Z.*
*WEL **09** 01:24:08.7±1.4, 37°S±6°×17°9E±1°0, h9km±5km, M3.3/12, ML3.6/12, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=80.3*
ISC 09 01:24:06.7±2.5, 37.°16S±0.°08×178.°9E±0.°1, h10km, n70, σ1§04/73, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.64**	**231**	P	**Pg**	01 24 19.5	+0.4
MXZ				S	**Sg**	01 24 26.5	-0.9
MXZ	**Matakaoa Point**	**0.64**	**231**	P	**Pg**	01 24 19.7	+0.6
WMGZ	**Waiomatatini S**	**0.77**	**212**	P	**Pg**	01 24 23.6	+2.0
PKGZ	**Pakihiroa**	**0.99**	**223**	P	**Pg**	01 24 25.8	0.0
PUZ	**Puketiti**	**1.05**	**210**	P	**Pg**	01 24 27.3	+0.4
PUZ				S	**Sg**	01 24 42.1	+1.4
HAZ	**Te Kaha**	**1.09**	**237**	P	**Pb**	01 24 26.2	-1.4
TWGZ	**Tauwhareparae**	**1.26**	**216**	P	**Pn**	01 24 30.8	+0.4
RUGZ	**Raukumara Rang**	**1.28**	**231**	P	**Pn**	01 24 30.5	-0.2
WIZ	**White Island**	**1.43**	**255**	P	**Pn**	01 24 31.3	-1.4
CNGZ	**Carnagh Statio**	**1.44**	**203**	P	**Pn**	01 24 33.1	+0.2
CNGZ				S	**Sn**	01 24 53.0	+1.3
TKGZ	**Te Karaka**	**1.54**	**214**	P	**Pn**	01 24 35.7	+1.6
MWZ	**Matawai**	**1.61**	**223**	P	**Pn**	01 24 35.2	0.0
RAGZ	**Rawiri**	**1.79**	**222**	P	**Pn**	01 24 37.8	0.0
RIGZ	**Rimuhau**	**1.80**	**211**	P	**Pn**	01 24 37.4	-0.4
URZ	**Urewera**	**1.81**	**232**	P	**Pn**	01 24 38.0	+0.1
URZ				S	**Sn**	01 24 59.8	-1.1
URZ	**Urewera**	**1.81**	**232**	P	**Pn**	01 24 38.2	+0.3
EDRZ	**Edgecumbe**	**1.98**	**241**	P	**Pn**	01 24 41.8	+1.5
KNZ	**Kokohu**	**2.10**	**208**	P	**Pn**	01 24 40.6	-1.4
RTZ	**Ruatahuna**	**2.12**	**226**	P	**Pn**	01 24 42.8	+0.6
MHGZ	**Mahia Peninsul**	**2.14**	**202**	P	**Pn**	01 24 41.8	-0.7
MUGZ	**Murupara**	**2.16**	**232**	P	**Pn**	01 24 42.4	-0.3
RRRZ	**Republican Roa**	**2.25**	**238**	P	**Pn**	01 24 45.6	+1.7
RAHZ	**Arahi**	**2.28**	**219**	P	**Pn**	01 24 43.9	-0.5
KARZ	**Kaharoa**	**2.30**	**247**	P	**Pn**	01 24 45.4	+0.7
MTHZ	**Maungataniwha**	**2.36**	**224**	P	**Pn**	01 24 45.7	+0.1
KMRZ	**Kaimai**	**2.47**	**253**	P	**Pn**	01 24 46.8	-0.3
ALRZ	**Allen Road**	**2.48**	**235**	P	**Pn**	01 24 48.2	+1.1
NMHZ	**Naumai**	**2.56**	**220**	P	**Pn**	01 24 48.2	-0.1
ARHZ	**Aropaoanui**	**2.59**	**215**	P	**Pn**	01 24 47.9	-0.8
KUZ	**Kuaotunu**	**2.60**	**278**	P	**Pn**	01 24 47.2	-1.7
KUZ	**Kuaotunu**	**2.60**	**278**	P	**Pn**	01 24 47.3	-1.5
BKZ	**Black Stump Fm**	**2.77**	**223**	P	**Pn**	01 24 50.8	-0.5
BKZ	**Black Stump Fm**	**2.77**	**223**	P	**Pn**	01 24 50.9	-0.3
TOZ	**Tahuroa Road**	**2.79**	**257**	P	**Pn**	01 24 50.4	-1.0
MCHZ	**McNeill Hill**	**2.88**	**217**	P	**Pn**	01 24 51.5	-1.1
CKHZ	**Cape Kidnapper**	**2.89**	**210**	P	**Pn**	01 24 51.0	-1.7
GRZ	**Great Barrier**	**2.94**	**287**	P	**Pn**	01 24 52.5	-0.9
KWHZ	**Kaweka Forest**	**3.00**	**220**	P	**Pn**	01 24 53.1	-1.2
MKAZ	**Moumakai**	**3.01**	**270**	P	**Pn**	01 24 53.3	-1.2
WIAZ	**Waiheke Island**	**3.06**	**276**	P	**Pn**	01 24 54.0	-1.1
KAHZ	**Kahuranaki**	**3.08**	**211**	P	**Pn**	01 24 53.6	-1.9
KRHZ	**Kereru**	**3.19**	**218**	P	**Pn**	01 24 55.4	-1.6
TMVZ	**Te Maari**	**3.21**	**232**	P	**Pn**	01 24 56.7	-0.5
ETAZ	**East Tamaki Re**	**3.21**	**273**	P	**Pn**	01 24 56.4	-0.8
ETVZ	**East Tongariro**	**3.21**	**231**	P	**Pn**	01 24 56.7	-0.6
NTVZ	**North Tongarir**	**3.21**	**232**	P	**Pn**	01 24 57.1	-0.2
KRVZ	**Karewarewa**	**3.23**	**232**	P	**Pn**	01 24 57.6	0.0
BHHZ	**Black Hill Sta**	**3.24**	**223**	P	**Pn**	01 24 57.0	-0.6
MBAZ	**Motutapu North**	**3.25**	**276**	P	**Pn**	01 24 57.1	-0.7
OTVZ	**Oturere**	**3.26**	**231**	P	**Pn**	01 24 58.1	+0.1
NNVZ	**North Ngauruho**	**3.27**	**232**	P	**Pn**	01 24 58.1	-0.1
SNVZ	**South Ngauruho**	**3.29**	**231**	P	**Pn**	01 24 58.2	-0.2
NGZ	**Ngauruhoe**	**3.31**	**232**	P	**Pn**	01 24 57.8	-0.8
ABAZ	**Army Bay**	**3.33**	**278**	P	**Pn**	01 24 58.5	-0.4
TWVZ	**Taurewa**	**3.35**	**234**	P	**Pn**	01 24 59.3	+0.1
MOVZ	**Moawhango**	**3.36**	**227**	P	**Pn**	01 24 58.5	-0.8
WNVZ	**Wahianoa**	**3.40**	**230**	P	**Pn**	01 24 59.8	-0.1
AWAZ	**Awhitu Peninsu**	**3.43**	**270**	P	**Pn**	01 24 59.7	-0.5
HIZ	**Hauiti**	**3.50**	**246**	P	**Pn**	01 25 02.6	+1.4
HIZ	**Hauiti**	**3.50**	**246**	P	**Pn**	01 25 02.5	+1.4
RVAZ	**Riverhead Bore**	**3.51**	**275**	P	**Pn**	01 25 00.9	-0.4
VRZ	**Vera Road**	**3.83**	**238**	P	**Pn**	01 25 06.3	+0.6
WCZ	**Waipu Caves**	**3.89**	**287**	P	**Pn**	01 25 06.3	-0.2
WAZ	**Wanganui**	**4.04**	**229**	P	**Pn**	01 25 08.3	-0.3
BFZ	**Birch Farm**	**4.09**	**210**	P	Pn	01 25 05.5	-3.8
NEZ	**North Egmont**	**4.35**	**240**	P	**Pn**	01 25 15.4	+2.4
KHEZ	**Kahui Hut**	**4.42**	**240**	P	**Pn**	01 25 17.1	+3.2
OUZ	**Omahuta**	**4.73**	**293**	P	**Pn**	01 25 18.4	+0.3
OUZ	**Omahuta**	**4.73**	**293**	P	**Pn**	01 25 18.4	+0.3
CTZ	**Chatham Island**	**7.39**	**154**	P	**Pn**	01 25 53.9	-0.6

KRSC 09 01:30:55.2±1.4, 49.°03N×156.°55E, h31km±30km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.95**	**19**	P	Pn	01 31 43.2	+3.3
KDTR				S	Sn	01 32 18.1	+3.9
ASAK	**Asacha**	**3.47**	**14**	P	Pn	01 31 50.9	+3.8
MTVR	**Mutnovka**	**3.61**	**16**	S	Sn	01 32 35.6	+4.9
RUS	**Russkaya**	**3.63**	**19**	P	Pn	01 31 52.7	+3.5
RUS				S	Sn	01 32 34.2	+3.3
GRL	**Gorelyy**	**3.66**	**15**	P	Pn	01 31 54.1	+4.3
GRL				S	Sn	01 32 37.4	+5.5
KRX	**Arik**	**4.53**	**16**	P	Pn	01 32 07.1	+5.3
SPN	**Mys Shipunski**	**4.62**	**27**	S	Sn	01 33 01.2	+5.7
GNL	**Ganaly**	**4.75**	**10**	P	Pn	01 32 08.6	+3.8
MKZ	**Mys Kozlova**	**6.40**	**28**	P	Pn	01 32 32.3	+5.1

*NEIC **09** 01:42:52.1±1.3, 13.°88N±0.°08×120.°7E±0.°1, h91km±5km, mb4.6/43, Error ellipse: s-maj=15.7km s-min=11.7km az=76.0*
*MAN **09** 01:42:52.5, 13.°86N×120.°43E, h82km, mb5.0, ML3.9, MS3.9*
*IDC **09** 01:42:53.3±0.7, 13.°90N×120.°80E, h104km±5km, mb3.9/24, mbtmp4.3/24, MS2.9/4, Error ellipse: s-maj=23.7km s-min=13.6km az=62.0*
ISC 09 01:42:53.2±0.4, 13.°84N±0.°04×120.°49E±0.°05, h100km, n110, σ1§26/109, mb4.5/42, 9C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.26**	**246**	⇑*iP*	**Pn**	**01 43 06.6**	**-0.9**
LUBP				*i* S	**Sn**	**01 43 16.4**	**-1.9**
TGY	**Tagaytay City**	**0.51**	**59**	P	**Pn**	**01 43 09.1**	**0.0**
TGY	baz=270,slow=2.9			S	**Sn**	**01 43 20.9**	**-0.1**
	baz=270,slow=20						
TGY	**Tagaytay City**	**0.51**	**59**	⇑*eP*	**Pn**	**01 43 09.1**	**0.0**
TGY				*i* S	**Sn**	**01 43 20.6**	**-0.5**
LQP	**Lukban**	**1.06**	**75**	⇓*iP*	**Pn**	**01 43 14.3**	**-0.2**
LQP				*i* S	**Sn**	**01 43 29.6**	**-0.8**
PCPH	**Palayan**	**1.81**	**19**	⇓*eP*	**Pn**	**01 43 22.3**	**-1.1**
PCPH				*e*S	**Sn**	**01 43 45.3**	**-1.0**
GQP	**Guinayangan**	**1.90**	**88**	⇓*iP*	**Pn**	**01 43 25.4**	**+0.9**
GQP				*i* S	**Sn**	**01 43 50.0**	**+1.5**
JCNP	**Jose Panganiba**	**2.19**	**78**	⇓*eP*	**Pn**	**01 43 28.8**	**+0.5**
JCNP				*e*S	**Sn**	**01 43 57.2**	**+2.2**
JAP	**San Jose, Anti**	**3.39**	**155**	⇑*eP*	**Pn**	**01 43 45.0**	**+0.9**
APYP	**Conner**	**4.07**	**10**	⇑*eP*	**Pn**	**01 43 55.1**	**+1.9**
APYP				*i* S	**Sn**	**01 44 44.2**	**+4.3**
PACPP	**Pamplona Cagay**	**4.67**	**10**	⇓*eP*	**Pn**	**01 44 02.7**	**+1.3**
PACPP				*e*S	**Sn**	**01 44 55.7**	**+1.2**
LLP	**Lapu-Lapu**	**4.88**	**135**	*eP*	**Pn**	**01 44 05.9**	**+1.5**
LLP				*e*S	Sn	01 44 36.6	-23
DCPH	**Dipolog City**	**5.93**	**151**	⇑*eP*	Pn	01 44 21.6	+3.0
DCPH				*i* S	**Sn**	**01 45 28.0**	**+2.8**
PAGZ	**Pagadian**	**6.60**	**154**	⇑*eP*	Pn	01 44 31.5	+3.9
DAV	**Davao City (W)**	**8.38**	**143**	LR	LR	01 48 46.5
	comp=Z,53nm,18.6s,baz=348,slow=43					
MYLDM	**Lahad Datu**	**8.82**	**193**	Pn	**Pn**	**01 44 57.6**	**-0.4**
SBUM	**Sibu**	**13.96**	**217**		**P**	**01 46 11.5**	**+0.1**
KSM	**Kuching**	**15.88**	**220**		**Pn**	**01 46 32.4**	**+1.2**
WHN	**Wuhan**	**17.56**	**342**	⇑P	P	01 46 39.0	-12
NJ2	**Nanjing**	**18.19**	**356**	*eP*	**P**	**01 46 54.8**	**-3.4**
KAPI	**Kappang**	**18.74**	**182**	LR	LR	01 53 57.1
	comp=Z,31nm,19.0s,baz=38,slow=35					
CM31	**Chiang Mai Arr**	**21.19**	**285**	P	**P**	**01 47 32.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**21.19**	**285**	P	**P**	**01 47 33.8**	**+2.9**
	6.5nm,0.6s,baz=95,slow=7.9,SNR=23						
	6.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**21.19**	**285**	P	**P**	**01 47 32.0**	**+1.1**
CHTO	**Chiang Mai**	**21.25**	**286**	P	**P**	**01 47 32.5**	**+1.0**
PZH	**PanZhiHua**	**21.61**	**309**	P	**P**	**01 47 36.6**	**+1.3**
XAN	**Xi'an**	**22.68**	**334**	P	**P**	**01 47 46.5**	**+0.1**
CD2	**Chengdu**	**22.93**	**321**	P	**P**	**01 47 50.1**	**+1.2**
KSRS	**Korea Array**	**24.44**	**14**	LR	LR	01 57 17.3
	comp=Z,16nm,20.2s,baz=105,slow=36					
MAJO	**Matsushiro**	**27.62**	**32**	P	**P**	**01 48 30.9**	**-0.5**
HHC	**Hu-ho-hao-te**	**28.02**	**345**	*eP*	**P**	**01 48 36.6**	**+1.7**
GTA	**Gaotai**	**31.31**	**328**	*eP*	**P**	**01 49 06.1**	**+2.0**
GTA				pP	pP	01 49 13.3	-13
LSA	**Lhasa**	**31.36**	**305**	P	**P**	**01 49 06.3**	**+1.3**
LSA				IAmb	IAmb	01 49 08.6
	comp=Z,9.6nm,0.6s					
MDJ	**Mudanjiang**	**31.64**	**12**	P	**P**	**01 49 05.8**	**-0.9**
MDJ				IAmb	IAmb	01 49 20.4
	comp=Z,20nm,1.2s					
RAMN	**Ramite**	**34.22**	**298**	*eP*	**P**	**01 49 31.3**	**+1.5**
	comp=Z,76nm,0.6s					
JIRN	**Jiri**	**34.76**	**299**	*eP*	**P**	**01 49 36.1**	**+1.5**
	comp=Z,127nm,0.7s					
GUN	**Gumba**	**35.10**	**299**	*eP*	**P**	**01 49 39.0**	**+1.5**
	comp=Z,92nm,0.5s					
PKI	**Pulchoki**	**35.40**	**298**	*eP*	**P**	**01 49 40.9**	**+0.8**
	comp=Z,38nm,0.5s					
PKIN	**Phulchoki**	**35.42**	**298**	*eP*	**P**	**01 49 40.9**	**+0.8**
	comp=Z,45nm,0.4s					
DMN	**Daman**	**35.67**	**298**	*eP*	**P**	**01 49 43.2**	**+0.9**
	comp=Z,31nm,0.6s					
ULN	**Ulaanbaatar**	**35.72**	**344**	P	**P**	**01 49 42.2**	**-0.1**
SONM	**Songino Array**	**35.87**	**344**	P	**P**	**01 49 44.1**	**+0.6**
	comp=Z,7.3nm,0.6s,baz=162,slow=9.7,SNR=29						
	comp=Z,7.3nm,0.6s						
SONM	**Songino Array**	**35.87**	**344**	P	**P**	**01 49 43.5**	**0.0**
SONM				IAmb	IAmb	01 49 45.1
	comp=Z,6.7nm,0.7s					
GKN	**Gorkha**	**36.18**	**299**	*eP*	**P**	**01 49 47.1**	**+0.6**
	comp=Z,35nm,0.7s					
WRA	**Warramunga Arr**	**36.23**	**158**	P	**P**	**01 49 45.7**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=341,slow=9.1,SNR=11						
WRA				pP	**pP**	**01 50 08.1**	**-1.4**
	comp=Z,3.5nm,0.7s,baz=332,slow=10.0,SNR=15						
	comp=Z,0.4nm,0.5s						
KLR	**Kul'dur**	**36.49**	**12**	P	**P**	**01 49 48.5**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=243,slow=9.5,SNR=4.2						
	comp=Z,1.7nm,0.6s						
DANN	**Dangsing**	**37.02**	**299**	*eP*	**P**	**01 49 54.5**	**+0.7**
	comp=Z,44nm,0.8s						
AS31	**Alice Springs**	**39.52**	**160**	P	**P**	**01 50 13.0**	**-1.3**
ASAR	**Alice Springs**	**39.52**	**160**	P	**P**	**01 50 14.4**	**0.0**
	comp=Z,0.3nm,0.4s,baz=341,slow=7.5,SNR=7.2						
ASAR				pP	**pP**	**01 50 36.5**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=340,slow=7.3,SNR=14						
	comp=Z,0.3nm,0.4s						
WMQ	**Urumqi**	**40.97**	**323**	*eP*	**P**	**01 50 28.3**	**+2.0**
MK31	**Makanchi Array**	**45.80**	**324**	P	**P**	**01 51 05.3**	**+0.3**
MKAR	**Makanchi Array**	**45.80**	**324**	P	**P**	**01 51 06.0**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=118,slow=9.2,SNR=17						
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**45.80**	**324**	P	**P**	**01 51 05.0**	**0.0**
NIL	**Nilore**	**47.06**	**303**	P	**P**	**01 51 15.1**	**+0.1**
NIL				IAmb	IAmb	01 51 17.3
	comp=Z,15nm,1.4s						
NRN	**Naryn**	**47.33**	**314**	P	**P**	**01 51 18.3**	**+0.9**
NRN				IAmb	IAmb	01 51 19.8
	comp=Z,5.3nm,0.7s						
AAK	**Ala-Archa**	**48.82**	**315**	P	**P**	**01 51 30.2**	**+1.6**
	comp=Z,2.3nm,0.5s,baz=140,slow=8.0,SNR=8.1						
	comp=Z,2.3nm,0.5s						
AAK	**Ala-Archa**	**48.82**	**315**	P	**P**	**01 51 27.2**	**-1.4**
AAK				IAmb	IAmb	01 51 32.0
	comp=Z,2.9nm,0.7s						
ZAA0	**Zalesovo Array**	**48.84**	**333**	P	**P**	**01 51 28.1**	**-0.3**
ZAA0				IAmb	IAmb	01 51 28.7
	comp=Z,3.6nm,0.4s						
ZALV	**Zalesovo Beam**	**48.84**	**333**	P	**P**	**01 51 28.4**	**0.0**
	comp=Z,2.4nm,0.3s,baz=122,slow=7.0,SNR=13						
	comp=Z,2.4nm,0.3s						
ZALV	**Zalesovo Beam**	**48.84**	**333**	P	**P**	**01 51 27.0**	**-1.3**
KURBB	**Kurchatov Arra**	**49.96**	**326**	P	**P**	**01 51 37.8**	**+0.9**
	comp=Z,9.2nm,0.7s,baz=125,slow=7.7,SNR=50						
	comp=Z,9.2nm,0.7s						
KURK	**Kurchatov**	**49.96**	**326**	P	**P**	**01 51 37.0**	**0.0**
BTK	**Batken**	**50.59**	**311**	P	**P**	**01 51 42.5**	**+0.5**
BTK				IAmb	IAmb	01 51 44.4
	comp=Z,3.6nm,0.6s						
GAR	**Garm**	**50.67**	**309**	P	**P**	**01 51 42.9**	**+0.2**
CHGR	**Chuyangaron**	**51.46**	**309**	P	**P**	**01 51 48.0**	**-0.6**
KK31	**Karatay Array**	**51.73**	**314**	P	**P**	**01 51 50.7**	**+0.3**
KKAR	**Karatay Array**	**51.73**	**314**	P	**P**	**01 51 51.0**	**+0.6**
BVAR	**Borovoye Array**	**55.54**	**326**	P	**P**	**01 52 18.8**	**+0.8**
	comp=Z,4.8nm,0.5s,baz=111,slow=8.4,SNR=43						
	comp=Z,4.8nm,0.5s						
BRVK	**Borovoye**	**55.62**	**326**	P	**P**	**01 52 18.8**	**+0.2**
GEYT	**Alibeck**	**59.89**	**306**	P	**P**	**01 52 50.0**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=145,slow=3.6,SNR=11						
	comp=Z,5.4nm,0.8s						
GEYT	**Alibeck**	**59.89**	**306**	P	**P**	**01 52 49.7**	**+0.9**
GEYT				IAmb	IAmb	01 52 51.3
	comp=Z,5.4nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**59.89**	**306**	P	**P**	**01 52 49.7**	**+0.9**
GYA0B				IAmb	IAmb	01 52 51.2
	comp=Z,4.7nm,0.8s						
AMKA	**Amchitka**	**59.97**	**38**	P	**P**	**01 52 47.3**	**-1.7**
ABKAR	**Akbulak array**	**60.49**	**319**	P	**P**	**01 52 52.3**	**-0.3**
AKTO	**Aktyubinsk**	**61.98**	**320**	P	**P**	**01 53 03.1**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=99,slow=10,SNR=7.7						
	comp=Z,2.3nm,0.5s						
ARU	**Arti**	**63.16**	**327**	P	**P**	**01 53 10.2**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=109,slow=8.2,SNR=9.2						
	comp=Z,4.1nm,0.6s						
ARU	**Arti**	**63.16**	**327**	P	**P**	**01 53 09.5**	**-0.8**
ARU				IAmb	IAmb	01 53 10.9
	comp=Z,14nm,1.5s						
RAYN	**Ar Rayn**	**71.02**	**290**	P	**P**	**01 54 00.4**	**-0.4**
KVAR	**Kislovodsk Arr**	**71.78**	**312**	LR	LR	02 31 06.9
	comp=Z,271nm,19.5s,baz=218,slow=40						
GURO	**Guroymak-BITLI**	**72.55**	**306**	P	**P**	**01 54 10.4**	**+0.6**
MARD	**Mardin**	**73.63**	**305**	P	**P**	**01 54 16.0**	**-0.3**
MARD				IAmb	IAmb	01 54 17.5
	comp=Z,4.9nm,0.5s						
IMAR	**Indian Mountai**	**75.75**	**25**	P	**P**	**01 54 26.8**	**-0.9**
CAST	**Castle Rocks**	**76.59**	**28**	P	**P**	**01 54 31.3**	**-1.3**
BPAW	**Bear Paw Mtn.**	**77.03**	**27**	P	**P**	**01 54 34.6**	**-0.4**
ASF	**Jabal al Asfar**	**77.41**	**300**	P	**P**	**01 54 39.1**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=88,slow=4.5,SNR=5.1						
	comp=Z,2.3nm,0.8s						
MCK	**McKinley**	**77.97**	**27**	P	**P**	**01 54 38.7**	**-1.5**
MCK				IAmb	IAmb	01 54 40.2
	comp=Z,7.5nm,0.6s						
MDM	**Murphy Dome**	**78.12**	**26**	IAmb	IAmb	01

TKGZ	**Te Karaka**	**1.59 220**	P	**Pb**	**01 48 00.3**	**-0.3**
MWZ	**Matawai**	**1.70 229**	P	**Pb**	**01 48 01.7**	**-0.7**
WHRZ	**Whale Island**	**1.84 249**	P	**Pb**	**01 48 05.0**	**+0.2**
RIGZ	**Rimuhau**	**1.84 216**	P	**Pb**	**01 48 03.7**	**-1.2**
RAGZ	**Rawiri**	**1.87 227**	P	**Pb**	**01 48 04.4**	**-0.9**
URZ	**Urewera**	**1.92 237**	Pn	**Pb**	**01 48 05.1**	**-1.0**
	95nm,0.3s,baz=114,slow=2.3,SNR=210					
URZ			Sn	**Sn**	**01 48 28.2**	**-0.1**
	29nm,0.3s,baz=103,slow=2.0,SNR=6.5					
URZ	**Urewera**	**1.92 237**	P	**Pb**	**01 48 05.1**	**-1.0**
URZ	**Urewera**	**1.92 237**	P	**Pb**	**01 48 05.4**	**-0.7**
EDRZ	**Edgecumbe**	**2.11 244**	P	**Pb**	**01 48 07.6**	**-1.8**
MARZ	**Manawahe**	**2.11 248**	P	**Pb**	**01 48 08.6**	**-0.8**
SNGZ	**Shannon Statio**	**2.12 222**	P	**Pn**	**01 48 07.2**	**+0.5**
KNZ	**Kokohu**	**2.14 212**	P	**Pn**	**01 48 07.0**	**+0.1**
OPRZ	**Ohinepanea**	**2.15 252**	P	**Pn**	**01 48 07.5**	**+0.4**
MHGZ	**Mahia Peninsul**	**2.16 207**	P	**Pn**	**01 48 08.1**	**+0.9**
RTZ	**Ruatahuna**	**2.21 230**	P	**Pb**	**01 48 09.1**	**-2.0**
MUGZ	**Murupara**	**2.26 236**	P	**Pn**	**01 48 09.4**	**+0.7**
MYRZ	**Mayor Island**	**2.32 268**	P	**Pn**	**01 48 10.1**	**+0.7**
RAHZ	**Arahi**	**2.35 223**	P	**Pb**	**01 48 11.2**	**-2.3**
TGRZ	**Tauranga**	**2.35 257**	P	**Pn**	**01 48 10.3**	**+0.4**
RRRZ	**Republican Roa**	**2.37 241**	P	**Pn**	**01 48 11.2**	**+1.1**
OMRZ	**Omania**	**2.38 247**	P	**Pb**	**01 48 11.4**	**-2.5**
WHHZ	**Waihua**	**2.39 219**	P	**Pb**	**01 48 11.9**	**-2.2**
KARZ	**Kaharoa**	**2.44 250**	P	**Pn**	**01 48 11.9**	**+0.8**
HLRZ	**Highlands Stat**	**2.44 244**	P	**Pb**	**01 48 12.6**	**-2.5**
MTHZ	**Maungataniwha**	**2.44 228**	P	**Pn**	**01 48 12.3**	**+1.1**
PRRZ	**Plateau Road**	**2.53 239**	P	**Pn**	**01 48 13.0**	**+0.7**
UTU	**Utuhina**	**2.53 247**	P	**Pb**	**01 48 14.8**	**-1.8**
HRRZ	**Handcock Road**	**2.55 242**	P	**Pn**	**01 48 13.9**	**+1.2**
ALRZ	**Allen Road**	**2.59 238**	P	**Pn**	**01 48 14.1**	**+0.9**
KMRZ	**Kaimai**	**2.63 255**	P	**Pn**	**01 48 14.1**	**+0.5**
NMHZ	**Naumai**	**2.63 224**	P	**Pn**	**01 48 14.9**	**+1.1**
ARHZ	**Aropaoanui**	**2.65 219**	P	**Pn**	**01 48 14.5**	**+0.6**
KUZ	**Kuaotunu**	**2.79 279**	P	**Pn**	**01 48 14.6**	**-1.2**
KUZ	**Kuaotunu**	**2.79 279**	P	**Pn**	**01 48 14.7**	**-1.2**
BKZ	**Black Stump Fm**	**2.85 226**	P	**Pn**	**01 48 17.3**	**+0.5**
BKZ	**Black Stump Fm**	**2.85 226**	P	**Pn**	**01 48 17.1**	**+0.3**
CKHZ	**Cape Kidnapper**	**2.93 213**	P	**Pn**	**01 48 17.3**	**-0.4**
MCHZ	**McNeill Hill**	**2.94 220**	P	**Pn**	**01 48 18.1**	**+0.2**
TOZ	**Tahuroa Road**	**2.95 259**	P	**Pn**	**01 48 17.5**	**-0.5**
TLZ	**Tolley Road**	**3.07 248**	P	**Pn**	**01 48 20.9**	**+1.2**
KWHZ	**Kaweka Forest**	**3.07 223**	P	**Pn**	**01 48 19.6**	**-0.2**
GRZ	**Great Barrier**	**3.12 287**	P	**Pn**	**01 48 20.2**	**-0.2**
KAHZ	**Kahuranaki**	**3.13 214**	P	**Pn**	**01 48 20.1**	**-0.5**
RITZ	**Rihia Road**	**3.13 235**	P	**Pn**	**01 48 21.7**	**+1.1**
MKAZ	**Moumakai**	**3.19 271**	P	**Pn**	**01 48 20.7**	**-0.7**
KATZ	**Kakaramea**	**3.24 236**	P	**Pn**	**01 48 23.7**	**+1.6**
WIAZ	**Waiheke Island**	**3.24 276**	P	**Pn**	**01 48 23.6**	**+1.5**
KRHZ	**Kereru**	**3.26 221**	P	**Pn**	**01 48 22.0**	**-0.4**
TMVZ	**Te Maari**	**3.31 234**	P	**Pn**	**01 48 23.6**	**+0.4**
ETVZ	**East Tongariro**	**3.32 234**	P	**Pn**	**01 48 23.7**	**+0.4**
BHHZ	**Black Hill Sta**	**3.32 226**	P	**Pn**	**01 48 23.4**	**+0.2**
NTVZ	**North Tongarir**	**3.32 235**	P	**Pn**	**01 48 23.6**	**+0.3**
KRVZ	**Karewarewa**	**3.34 235**	P	**Pn**	**01 48 24.2**	**+0.7**
OTVZ	**Oturere**	**3.36 234**	P	**Pn**	**01 48 24.5**	**+0.6**
NNVZ	**North Ngauruho**	**3.38 235**	P	**Pn**	**01 48 24.8**	**+0.7**
WTVZ	**West Tongariro**	**3.38 235**	P	**Pn**	**01 48 25.0**	**+0.9**
ETAZ	**East Tamaki Re**	**3.39 273**	P	**Pn**	**01 48 23.8**	**-0.3**
SNVZ	**South Ngauruho**	**3.39 234**	P	**Pn**	**01 48 24.8**	**+0.5**
NGZ	**Ngauruhoe**	**3.41 234**	P	**Pn**	**01 48 24.9**	**+0.3**
MBAZ	**Motutapu North**	**3.43 276**	P	**Pn**	**01 48 25.1**	**+0.4**
MOVZ	**Moawhango**	**3.45 230**	P	**Pn**	**01 48 25.1**	**+0.1**
TWVZ	**Taurewa**	**3.46 237**	P	**Pn**	**01 48 25.9**	**+0.7**
WNVZ	**Wahianoa**	**3.50 232**	P	**Pn**	**01 48 25.8**	**0.0**
ABAZ	**Army Bay**	**3.52 279**	P	**Pn**	**01 48 26.5**	**+0.6**
EPAZ	**Eden Park BICE**	**3.54 274**	P	**Pn**	**01 48 28.4**	**+2.2**
HBAZ	**Herne Bay Bore**	**3.56 275**	P	**Pn**	**01 48 28.8**	**+2.5**
AWAZ	**Awhitu Peninsu**	**3.60 271**	P	**Pn**	**01 48 27.8**	**+0.7**
HIZ	**Hauiti**	**3.63 248**	P	**Pn**	**01 48 29.4**	**+1.9**
HIZ	**Hauiti**	**3.63 248**	P	**Pn**	**01 48 29.2**	**+1.7**
PKVZ	**Pokaka**	**3.64 234**	P	**Pn**	**01 48 28.5**	**+0.9**
WTAZ	**Waiatarua**	**3.67 273**	P	**Pn**	**01 48 29.6**	**+1.6**
RVAZ	**Riverhead Bore**	**3.69 276**	P	**Pn**	**01 48 28.4**	**+0.2**
VRZ	**Vera Road**	**3.95 240**	P	**Pn**	**01 48 33.1**	**+1.3**
WCZ	**Waipu Caves**	**4.07 287**	P	**Pn**	**01 48 33.9**	**+0.4**
WAZ	**Wanganui**	**4.13 231**	P	**Pn**	**01 48 34.8**	**+0.5**
NEZ	**North Egmont**	**4.47 241**	P	**Pn**	**01 48 42.9**	**+3.8**
KHEZ	**Kahui Hut**	**4.54 241**	P	**Pn**	**01 48 42.5**	**+2.5**
KHEZ	**Kahui Hut**	**4.54 241**	P	**Pn**	**01 48 43.4**	**+3.4**
NBEZ	**Newall Road No**	**4.63 242**	P	Pn	01 48 45.7	+4.5
OUZ	**Omahuta**	**4.92 292**	P	**Pn**	**01 48 46.1**	**+1.1**
OUZ	**Omahuta**	**4.92 292**	P	**Pn**	**01 48 46.2**	**+1.1**
DUWZ	**D'Urville Isla**	**5.42 227**	P	Pn	01 48 56.9	+4.9
QRZ	**Quartz Range**	**6.29 233**	P	**Pn**	**01 49 04.0**	**+0.1**
KHZ	**Kahutara**	**6.75 218**	P	**Pn**	**01 49 12.0**	**+1.8**
RPZ	**Rata Peaks**	**8.95 221**	Pn	**Pn**	**01 49 37.7**	**-2.8**
	0.4nm,0.3s,baz=342,slow=6.4,SNR=1.2					
RPZ			Sn	Sn	01 51 08.8	-13
	1.5nm,0.3s,baz=315,slow=13,SNR=5.9					
RAR	**Rarotonga**	**24.26 55**	LR	LR	02 03 18.5	
	comp=Z,27nm,18.1s,baz=228,slow=39					
STKA	**Stephens Creek**	**31.25 269**	P	**P**	**01 53 52.0**	**+0.8**
	2.1nm,0.5s,baz=99,slow=10,SNR=4.1					
	2.1nm,0.5s					
ASAR	**Alice Springs**	**40.91 276**	P	**P**	**01 55 13.5**	**-0.5**
	2.1nm,0.8s,baz=117,slow=7.5,SNR=14					
	2.1nm,0.8s					
WRA	**Warramunga Arr**	**42.52 281**	P	**P**	**01 55 26.6**	**-0.5**
	2.8nm,0.3s,baz=123,slow=7.0,SNR=138					
	2.8nm,0.3s					
H03N3	**Juan Fernandez**	**78.89 124**	T	T	03 26 30.8	
	baz=234,slow=72,SNR=4.7					
H03N2	**Juan Fernandez**	**78.90 124**	T	T	03 26 30.1	
	baz=234,slow=72,SNR=4.8					
H03N1	**Juan Fernandez**	**78.91 124**	T	T	03 26 30.6	
	baz=234,slow=72,SNR=4.7					
ARCES	**ARCESS Array B**	**144.63 344**	PKP	**PKPdf**	**02 07 06.9**	**-0.2**
	2.0nm,0.8s,baz=46,slow=3.9,SNR=6.9					
FINES	**FINESS Array B**	**150.48 334**	PKPbc	**PKiKP**	**02 07 22.5**	**-0.5**
	2.4nm,0.7s,baz=4.7,slow=3.2,SNR=11					
BRTR	**Keskin Array B**	**152.98 286**	PKPbc	**PKiKP**	**02 07 30.7**	**+1.6**
	0.3nm,0.4s,baz=165,slow=3.4,SNR=4.3					

*IDC **09** 02:16:47.3±1.2, 45˚.95N×152˚.48E, h0km, mb3.7/6, mbtmp3.7/6, MS2.6/2, Error ellipse: s-maj=40.1km s-min=30.5km az=84.0*
*SKHL **09** 02:16:52.1±0.3, 45˚.50N×152˚.70E, h75km±2km, mb4.6/3*
*MOS **09** 02:16:54.9±1.6, 45˚.95N×152˚.22E, h75km, mb4.5/1, Error ellipse: s-maj=28.7km s-min=17.4km az=147.0*

ISC 09 02:16:52.8±1.1, 45˚.8N±0˚.2×152˚.6E±0˚.1, h41km, n25, σ1§66/21, mb3.7/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.35**	**262**	*e*PN	**Pn**	**02 17 43.3**	**+0.8**
KUR				*i* S	**Sn**	**02 18 20.2**	**-0.8**
KUR				smax	smax		
	comp=N,496nm,0.4s						
KUR				smax	smax		
	comp=E,102nm,0.4s						
KUR	**Kuril'sk**	**3.35**	**262**	*e*P	**Pn**	**02 17 43.3**	**+0.8**
KUR				AMB	AMB	02 17 44.5	
	comp=E,50nm,0.3s						
KUR				*i* S	**Sn**	**02 18 21.5**	**+0.5**
KUR				A	A	02 18 28.5	
	comp=E,50nm,0.4s						
KUR				A	A	02 18 28.5	
	comp=E,100nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.07**	**252**	*e*PN	**Pn**	**02 18 07.5**	**+1.3**
YUK				*e*S	**Sn**	**02 19 05.7**	**+2.3**
YUK				pmax	pmax		
	comp=Z,105nm,0.4s						
YUK				pmax	pmax		
	comp=E,49nm,0.3s						
YUK				pmax	pmax		
	comp=N,69nm,0.2s						
YUK				smax	smax		
	comp=N,322nm,0.5s						
YUK				smax	smax		
	comp=E,76nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.07**	**252**	*e*P	**Pn**	**02 18 06.5**	**+0.3**
YUK				AMB	AMB	02 18 08.3	
	comp=E,40nm,0.4s						
YUK				*e*S	**Sn**	**02 19 02.5**	**-0.9**
YUK				A	A	02 19 12.5	
	comp=E,30nm,0.3s						
YUK				A	A	02 19 12.5	
	comp=E,80nm,0.3s						
NMR	**Nemuro--Hokkai**	**5.44**	**246**	*e*PN	**Pn**	**02 18 10.9**	**-0.3**
NMR				*e*S	**Sn**	**02 19 10.2**	**-2.4**
NMR	**Nemuro--Hokkai**	**5.44**	**246**	*e*P	**Pn**	**02 18 11.0**	**-0.3**
NMR				AMB	AMB	02 18 13.5	
	comp=E,20nm,0.3s						
NMR				*e*S	**Sn**	**02 19 10.2**	**-2.4**
NMR				A	A	02 19 17.7	
	comp=E,30nm,0.3s						
NMR				A	A	02 19 17.7	
	comp=E,30nm,0.3s						
RUSJ	**Misakicho**	**5.46**	**255**	PN	Pn	02 18 15.9	+4.4
RUSJ				*e*S	**Sn**	**02 19 17.2**	**+4.3**
AKK	**Akkeshi**	**6.18**	**246**	*e*P	**Pn**	**02 18 21.3**	**-0.1**
AKK				*e*S	**Sn**	**02 19 28.8**	**-2.0**
KLR	**Kul'dur**	**14.48**	**291**	LR	LR	02 25 31.3	
	comp=E,34nm,18.8s,baz=289,slow=36						
KSRS	**Korea Array**	**20.16**	**254**	LR	LR	02 29 27.7	
	comp=E,9.4nm,19.8s,baz=0.0,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.54**	**151**	T	T	02 53 12.7	
	baz=339,slow=75,SNR=74						
H11N1	**WAKE ISLAND Hy**	**28.55**	**151**	T	T	02 53 17.6	
	baz=339,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	**28.56**	**151**	T	T	02 53 14.1	
	baz=339,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**29.61**	**152**	T	T	02 54 31.9	
	baz=340,slow=76,SNR=55						
H11S3	**WAKE ISLAND Hy**	**29.62**	**152**	T	T	02 54 34.7	
	baz=340,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**29.63**	**152**	T	T	02 54 34.4	
	baz=340,slow=76,SNR=49						
MKAR	**Makanchi Array**	**47.06**	**298**	P	**P**	**02 25 19.4**	**-0.8**
	comp=E,0.2nm,0.5s,baz=70,slow=6.6,SNR=1.5						
	comp=E,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**58.65**	**341**	P	**P**	**02 26 44.7**	**-0.5**
	comp=E,2.1nm,1.0s,baz=12,slow=9.2,SNR=1.3						
	comp=E,2.1nm,1.0s						
FINES	**FINESS Array B**	**64.76**	**335**	P	**P**	**02 27 26.4**	**-0.1**
	comp=E,2.9nm,1.1s,baz=4.6,slow=7.0,SNR=3.4						
	comp=E,2.9nm,1.1s						
WRA	**Warramunga Arr**	**67.47**	**199**	P	**P**	**02 27 45.8**	**+1.6**
	comp=E,0.3nm,0.5s,baz=15,slow=6.8,SNR=6.2						
	comp=E,0.3nm,0.5s						
NOA	**NORSAR Array B**	**69.03**	**341**	P	**P**	**02 27 52.3**	**-1.4**
	comp=E,0.4nm,0.7s,baz=28,slow=6.5,SNR=3.5						
	comp=E,0.4nm,0.7s						
TXAR	**Lajitas Array**	**78.31**	**60**	P	**P**	**02 28 49.4**	**+0.7**
	comp=E,0.5nm,0.5s,baz=297,slow=5.2,SNR=6.4						
	comp=E,0.5nm,0.5s						
H03N2	**Juan Fernandez**	**139.12**	**91**	T	T	05 11 54.2	
	baz=308,slow=77,SNR=7.1						
H03N1	**Juan Fernandez**	**139.13**	**91**	T	T	05 11 56.7	
	baz=308,slow=77,SNR=7.0						
H03N3	**Juan Fernandez**	**139.13**	**91**	T	T	05 11 51.6	
	baz=308,slow=77,SNR=6.0						

*IDC **09** 02:27:44.8±1.0, 6˚.60S×150˚.52E, h0km, mb3.9/7, mbtmp4.0/9, ML1.9/1, MS2.7/1, Error ellipse: s-maj=42.1km s-min=16.0km az=124.0*

ISC 09 02:27:49.6±0.9, 6˚.6S±0˚.2×150˚.5E±0˚.2, h33km, n11, σ1§24/13, mb3.9/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.74**	**34**	Pn	**Pn**	**02 28 29.6**	**-1.7**
	49nm,0.4s,baz=302,slow=20,SNR=9.9						
KRVT				Sn	**Sn**	**02 29 05.3**	**+2.1**
	19nm,0.3s,baz=314,slow=6.4,SNR=4.2						
PMG	**Port Moresby**	**4.33**	**230**	Pn	**Pn**	**02 28 53.9**	**+0.8**
	5.1nm,0.3s,baz=348,slow=6.4,SNR=11						
PMG				Sn	**Sn**	**02 29 42.0**	**-0.4**
	16nm,0.3s,baz=339,slow=16,SNR=11						
	37nm,0.6s						
WRA	**Warramunga Arr**	**20.54**	**228**	P	**P**	**02 32 25.1**	**-0.4**
	7.9nm,0.9s,baz=52,slow=11,SNR=37						
WRA				S	**S**	**02 36 11.6**	**-2.2**
	0.4nm,0.8s,baz=42,slow=18,SNR=2.3						
	7.9nm,0.9s						
GUMO	**Guam**	**20.82**	**344**	LR	LR	02 38 51.1	
	comp=Z,19nm,19.9s,baz=130,slow=32						
ASAR	**Alice Springs**	**23.29**	**221**	P	**P**	**02 32 54.1**	**-0.6**
	2.1nm,0.7s,baz=56,slow=9.1,SNR=13						
	2.1nm,0.7s						
STKA	**Stephens Creek**	**26.49**	**197**	P	**P**	**02 33 23.2**	**-0.8**
	2.0nm,0.6s,baz=6.7,slow=10,SNR=4.4						
	2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.79**	**242**	P	**P**	**02 33 27.0**	**+0.1**
	1.8nm,0.5s,baz=45,slow=7.4,SNR=12						
FITZ				S	S	02 37 50.1	-11
	1.2nm,0.8s,baz=322,slow=19,SNR=1.7						
	1.8nm,0.5s						
SONM	**Songino Array**	**66.65**	**329**	P	**P**	**02 38 37.4**	**+0.3**
	0.6nm,0.7s,baz=149,slow=6.7,SNR=2.7						
	0.6nm,0.7s						
VNDA	**Vanda**	**71.14**	**177**	P	**P**	**02 39 05.5**	**+1.0**
	0.5nm,0.8s,baz=351,slow=6.5,SNR=2.4						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**84.68**	**22**	P	**P**	**02 40 19.9**	**+0.1**
	0.9nm,0.8s,baz=250,slow=4.6,SNR=5.7						
	0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.60**	**284**	PKPbc	**PKPbc**	**02 47 34.9**	**+0.6**
	1.0nm,0.5s,baz=41,slow=2.7,SNR=12						

*NEIC **09** 02:28:48.6, 64˚.67N×132˚.85W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.73; $M_{\theta\theta}$-5.78; $M_{\phi\phi}$5.05; $M_{r\theta}$-0.35; $M_{r\phi}$2.71; $M_{\theta\phi}$2.34; Fault plane solution: $M_0$6.53000×10^{14} NP1:ϕ_s60.00000°, δ70.00000°, λ10.00000°. NP2:ϕ_s327.00000°, δ81.00000°, λ160.00000°. Principal axes: T 6.5313, Plg21.0000°, Azm282.0000°; N 0.0005, Plg68.0000°, Azm123.0000°; P -6.5319, Plg7.0000°, Azm15.0000°;*
*NEIC **09** 02:28:48.1±1.4, 64˚.64N±0˚.05×132˚.9W±0˚.1, h4km±6km Error ellipse: s-maj=7.9km s-min=6.4km az=203.0*
*PGC **09** 02:28:48.8±0.3, 64˚.66N×133˚.04W, h1km, ML4.4/17, Mw4.5, 305km west of Norman Wells, Nt Southern Yukon Territory, Canada*
*NEIC **09** 02:28:48.8, 64˚.66N×133˚.04W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.67; $M_{\theta\theta}$-5.81; $M_{\phi\phi}$5.13; $M_{r\theta}$-2.37; $M_{r\phi}$2.58; $M_{\theta\phi}$4.52; Fault plane solution: $M_0$7.94000×10^{14} NP1:ϕ_s326.11000°, δ85.87000°, λ139.84000°. NP2:ϕ_s59.59000°, δ49.96000°, λ5.40000°. Principal axes: T 8.0183, Plg30.0000°, Azm275.0000°; N -0.1643, Plg50.0000°, Azm141.0000°; P -7.8540, Plg24.0000°, Azm20.0000°;*
*IDC **09** 02:28:49.3±0.6, 64˚.75N×132˚.89W, h0km, mb3.8/12, mbtmp3.8/17, ML4.0/5, MS3.2/12 Error ellipse: s-maj=10.9km s-min=7.7km az=57.0*
*AEIC **09** 02:28:49±1.3, 64˚.66N±0˚.05×132˚.9W±0˚.1, h15km±6km, Error ellipse: s-maj=8.5km s-min=7.8km az=93.0*
*ANF **09** 02:28:50.4±0.8, 64˚.64N×132˚.97W, h20km±7km, ML4.5/40, Error ellipse: s-maj=1.9km s-min=1.3km az=88.0*

ISC 09 02:28:48.5±0.4, 64˚.67N±0˚.02×132˚.85W±0˚.03, h10km, n255, σ1§90/323, mb3.8/14, MS3.4/7, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYO	**Mayo, Yukon**	**1.72**	**232**		**Pn**	**02 29 17.7**	**-0.8**
MAYO	**Mayo, Yukon**	**1.72**	**232**	Pn	**Pn**	**02 29 17.8**	**-0.7**
MAYO				Sg	**Sn**	**02 29 39.4**	**-0.9**
MAYO	**Mayo, Yukon**	**1.72**	**232**	P	**Pn**	**02 29 17.6**	**-0.8**
	baz=48,SNR=142						
MAYO				S	**Sn**	**02 29 39.1**	**-1.3**
	baz=48						
MMPY	**Sheldon Lake,**	**2.18**	**160**	Pn	**Pb**	**02 29 26.2**	**-1.8**
MMPY				Sg	**Sb**	**02 29 56.4**	**+1.4**
MMPY	**Sheldon Lake,**	**2.18**	**160**	P	**Pn**	**02 29 25.8**	**+1.0**
	baz=340,SNR=454						
MMPY				S	**Sn**	**02 29 52.9**	**+1.0**
	baz=340						
K29M	**Barlow Dome**	**2.20**	**250**	Pn	**Pn**	**02 29 24.7**	**-0.5**
K29M				Sg	**Sn**	**02 29 53.8**	**+1.2**
K29M	**Barlow Dome**	**2.20**	**250**	P	**Pn**	**02 29 24.5**	**-0.7**
	baz=65,SNR=245						
K29M				S	**Sn**	**02 29 52.5**	**0.0**
	baz=65						
J29M	**Klondike Camp**	**2.33**	**267**		**Pn**	**02 29 27.8**	**+0.9**
J29M	**Klondike Camp**	**2.33**	**267**	Pn	**Pn**	**02 29 27.9**	**+1.0**
J29M	**Klondike Camp**	**2.33**	**267**	P	**Pn**	**02 29 27.6**	**+0.7**
	baz=82,SNR=107						
J29M				Sb	**Sb**	**02 29 59.9**	**+0.5**
	baz=82						
EPYK	**Eagle Plains**	**2.35**	**318**		**Pn**	**02 29 27.3**	**+0.2**
EPYK				IAML		02 30 11.9	
	comp=N,2μm,0.9s						
EPYK	**Eagle Plains**	**2.35**	**318**		**Pn**	**02 29 27.5**	**+0.4**
EPYK				Sn	**Sn**	**02 29 56.5**	**+0.5**
EPYK	**Eagle Plains**	**2.35**	**318**	P	**Pn**	**02 29 27.4**	**+0.2**
	baz=137,SNR=136						
EPYK				S	**Sn**	**02 29 56.0**	**0.0**
	baz=137						
I29M	**Ogilvie Camp,**	**2.42**	**289**		**Pn**	**02 29 28.0**	**0.0**
I29M	**Ogilvie Camp,**	**2.42**	**289**	Pn	**Pn**	**02 29 28.1**	**0.0**
I29M	**Ogilvie Camp,**	**2.42**	**289**	P	**Pn**	**02 29 27.9**	**-0.2**
	baz=105,SNR=273						
FARO	**Faro, Yukon**	**2.46**	**185**		**Pn**	**02 29 28.7**	**0.0**
FARO	**Faro, Yukon**	**2.46**	**185**	Pn	**Pn**	**02 29 28.8**	**+0.1**
FARO	**Faro, Yukon**	**2.46**	**185**	P	**Pn**	**02 29 28.5**	**-0.2**
	baz=3.1,SNR=261						
M31M	**Drury Creek, Y**	**2.57**	**196**	Pn	**Pn**	**02 29 30.0**	**-0.2**
M31M	**Drury Creek, Y**	**2.57**	**196**	Pn	**Pn**	**02 29 30.0**	**-0.2**
M31M				Pg	**Pb**	**02 29 35.3**	**+0.6**
M31M	**Drury Creek, Y**	**2.57**	**196**	P	**Pn**	**02 29 30.1**	**-0.2**
	baz=13,SNR=93						
M31M				Sb	**Sb**	**02 30 07.8**	**+1.4**
	baz=13						
G30M	**tAoh Zraii Nji**	**2.70**	**331**	P	**Pn**	**02 29 31.9**	**-0.1**
	baz=149,SNR=79						
G30M				S	**Sn**	**02 30 04.8**	**0.0**
	baz=149						
F31M	**Tsiigehtchic**	**2.81**	**353**	P	**Pn**	**02 29 33.1**	**-0.2**
	baz=174,SNR=26						
F31M				S	**Sn**	**02 30 07.4**	**+0.2**
	baz=174						
L29M	**L29M**	**2.81**	**239**	P	**Pn**	**02 29 32.3**	**-1.2**
	baz=53,SNR=118						
DAWY	**Dawson**	**2.91**	**261**		**Pn**	**02 29 34.9**	**+0.1**
DAWY				IAML		02 30 20.8	
	comp=N,1μm,0.6s						
DAWY				IAML		02 30 21.5	
	comp=E,901nm,0.6s						
DAWY	**Dawson**	**2.91**	**261**	Pn	**Pn**	**02 29 34.4**	**-0.5**
DAWY				Pg	**Pb**	**02 29 39.6**	**-0.8**
DAWY				Sg	**Sb**	**02 30 15.3**	**-0.7**
DAWY	**Dawson**	**2.91**	**261**	P	**Pn**	**02 29 34.3**	**-0.5**
	baz=75,SNR=370						
M29M	**Somme Creek**	**3.36**	**231**	Pn	**Pn**	**02 29 40.0**	**-1.1**
M29M				Sn	**Sn**	**02 30 20.3**	**-0.8**
M29M				Sg	**Sb**	**02 30 28.0**	**-1.1**
M29M	**Somme Creek**	**3.36**	**231**	P	**Pn**	**02 29 40.0**	**-1.1**
	baz=45,SNR=46						
M29M				Sb	**Sb**	**02 30 28.1**	**-1.0**
	baz=45						
N31M	**Braeburn, Yuko**	**3.46**	**204**		**Pn**	**02 29 42.2**	**-0.3**
N31M				IAML		02 30 48.1	
	comp=N,584nm,1.0s						
N31M				IAML		02 30 49.7	
	comp=E,599nm,0.9s						
N31M	**Braeburn, Yuko**	**3.46**	**204**	Pn	**Pn**	**02 29 42.3**	**-0.2**
N31M	**Braeburn, Yuko**	**3.46**	**204**	P	**Pn**	**02 29 42.0**	**-0.4**
	baz=20,SNR=37						
N31M				Sb	**Sb**	**02 30 32.1**	**+0.1**
	baz=20						
N32M	**Quiet Lake**	**3.54**	**182**	Pn	**Pn**	**02 29 43.8**	**+0.3**
N32M				Pg	**Pg**	**02 29 53.8**	**-2.4**
N32M				Sn	**Sn**	**02 30 24.0**	**-1.3**
N32M				Sg	**Sb**	**02 30 35.3**	**+1.2**
N32M	**Quiet Lake**	**3.54**	**182**	P	**Pn**	**02 29 43.7**	**+0.3**
	baz=0.3						
N32M				Sb	**Sb**	**02 30 35.2**	**+1.2**
	baz=0.3						
EGAK	**Eagle**	**3.57**	**275**		**Pn**	**02 29 43.5**	**-0.3**
EGAK				IAML		02 30 45.0	
	comp=E,558nm,0.6s						
EGAK				IAML		02 30 48.2	
	comp=E,688nm,0.7s						
EGAK	**Eagle**	**3.57**	**275**	P	**Pn**	**02 29 43.3**	**-0.5**
	baz=88,SNR=38						
EGAK				Sb	**Sb**	**02 30 35.0**	**+0.1**
	baz=88						
INK	**Inuvik**	**3.66**	**356**	Pn	**Pn**	**02 29 45.5**	**+0.4**
	comp=E,3.8nm,0.3s,baz=177,slow=15,SNR=118						
INK				Pg	**Pg**	**02 29 55.4**	**-3.1**
	comp=E,14nm,0.3s,baz=176,slow=15,SNR=24						
INK				Sn	**Sn**	**02 30 29.7**	**+1.5**
	comp=E,15nm,0.3s,baz=149,slow=18,SNR=4.1						
INK				Lg	Lg	02 30 40.8	
	comp=E,31nm,0.3s,baz

HYT Sn **Sn** **02 30 45.9 -1.1**
HYT Haines Junctio 4.41 211 P **Pn** **02 29 55.4 -0.2**
baz=26,SNR=27
I26K Coal Creek Min 4.42 283 **Pn** **02 29 54.8 -0.8**
I26K IAML 02 31 10.7
comp=N,470nm,1.1s
I26K IAML 02 31 24.5
comp=E,309nm,0.7s
I26K Coal Creek Min 4.42 283 P **Pn** **02 29 54.6 -0.9**
baz=94
P33M Teslin, Yukon 4.48 180 Pn **Pn** **02 29 56.6 +0.2**
P33M IAML 02 31 16.4
comp=N,212nm,0.8s
P33M Teslin, Yukon 4.48 180 Pn **Pn** **02 29 56.5 +0.2**
P33M Sn **Sn** **02 30 49.0 +0.5**
P33M Sg **Sb** **02 31 04.5 +3.3**
P33M Teslin, Yukon 4.48 180 P **Pn** **02 29 56.4 -0.1**
baz=359,SNR=16
YUK3 Moose Creek 4.50 233 Pn **Pn** **02 29 56.4 -0.5**
YUK3 Sg **Sb** **02 31 04.0 +1.9**
YUK3 Moose Creek 4.50 233 P **Pn** **02 29 56.1 -0.8**
baz=46,SNR=21
YUK6 Outpost Mounta 4.51 217 Pn **Pn** **02 29 57.0 0.0**
YUK6 Sg **Sb** **02 31 06.0 +3.6**
YUK6 Outpost Mounta 4.51 217 P **Pn** **02 29 56.8 -0.3**
baz=31,SNR=16
J26L Joseph Creek 4.62 273 **Pn** **02 29 57.9 -0.5**
J26L IAML 02 31 23.1
comp=N,276nm,0.8s
J26L Joseph Creek 4.62 273 P **Pn** **02 29 57.5 -0.9**
baz=83,SNR=14
YUK2 White River 4.63 235 Pn **Pn** **02 29 57.9 -0.6**
YUK2 Sn **Sn** **02 30 50.4 -1.9**
YUK2 Sg **Sb** **02 31 07.4 +1.8**
M27K Edge Creek, AK 4.66 244 Pn **Pn** **02 29 58.4 -0.6**
M27K Sn **Sn** **02 30 50.9 -2.2**
M27K Sg **Sb** **02 31 10.0 +3.5**
M27K Edge Creek, AK 4.66 244 P **Pn** **02 29 58.1 -0.9**
baz=56,SNR=62
YUK7 Dusty Glacier 4.82 213 Pn **Pn** **02 30 01.5 +0.3**
YUK7 Sg **Sb** **02 31 16.6 +5.5**
SCRK Sand Creek 4.89 267 Pn **Pn** **02 30 01.9 -0.3**
SCRK IAML 02 31 24.8
comp=N,243nm,0.9s
SCRK Sand Creek 4.89 267 P **Pn** **02 30 01.4 -0.7**
baz=77,SNR=14
L26K Log Cabin Wild 4.93 255 P **Pn** **02 30 01.9 -0.6**
baz=66,SNR=15
WTLY Watson Lake, Y 4.95 156 **Pn** **02 30 04.0 +1.1**
WTLY IAML 02 31 31.7
comp=N,236nm,0.9s
WTLY Watson Lake, Y 4.95 156 Pn **Pn** **02 30 04.3 +1.5**
P30M Million Dollar 4.95 205 Pn **Pn** **02 30 02.9 +0.1**
P30M Sg **Sb** **02 31 18.6 +4.0**
P30M Million Dollar 4.95 205 P **Pn** **02 30 02.7 -0.2**
baz=20
E27K Coleen River 4.97 319 P **Pn** **02 30 02.9 -0.3**
baz=132,SNR=7.4
DOT Dot Lake 5.01 263 Pn **Pn** **02 30 03.5 -0.2**
DOT Sg **Sg** **02 31 23.0 -6.2**
G26K Porcupine Rive 5.04 302 P **Pn** **02 30 03.7 -0.4**
baz=112,SNR=9.9
M26K Nabesna, AK 5.08 248 IAML 02 31 34.8
comp=E,260nm,0.8s
M26K Nabesna, AK 5.08 248 P **Pn** **02 30 04.0 -0.7**
baz=59,SNR=21
P32M Atlin 5.12 185 Pn **Pn** **02 30 05.5 +0.4**
P32M Sg **Sb** **02 31 25.7 +6.3**
P32M Atlin 5.12 185 P **Pn** **02 30 05.3 +0.1**
baz=3.3
O29M Mount Kennedy 5.12 214 Pn **Pn** **02 30 05.7 +0.3**
O29M Mount Kennedy 5.12 214 P **Pn** **02 30 05.2 -0.2**
baz=28,SNR=45
O28M Mount Upton 5.17 224 Pn **Pn** **02 30 06.3 +0.3**
O28M Sn **Sn** **02 31 02.6 -3.2**
O28M Sg **Sb** **02 31 26.3 +5.2**
O28M Mount Upton 5.17 224 P **Pn** **02 30 05.8 -0.2**
baz=37,SNR=20
SKAG Skagway 5.36 194 **Pn** **02 30 08.7 +0.3**
SKAG IAML 02 31 37.1
comp=E,142nm,0.8s
SKAG IAML 02 31 49.7
comp=N,148nm,1.0s
SKAG Skagway 5.36 194 P **Pn** **02 30 08.9 +0.5**
baz=11,SNR=24
R33M Jennings River 5.37 170 Pn **Pn** **02 30 09.3 +0.6**
R33M Sn **Sn** **02 31 08.8 -1.8**
R33M Jennings River 5.37 170 P **Pn** **02 30 09.3 +0.6**
baz=350,SNR=13
LOGN Logan Glacier 5.38 228 IAML 02 31 37.8
comp=N,204nm,1.1s
LOGN IAML 02 31 42.7
comp=E,165nm,1.4s
LOGN Logan Glacier 5.38 228 Pn **Pn** **02 30 08.8 0.0**
LOGN Sg **Sb** **02 31 31.8 +4.7**
CTGM Chitina Glacie 5.38 230 **Pn** **02 30 08.9 0.0**
CTGM IAML 02 31 34.7
comp=N,188nm,1.4s
CTGM IAML 02 31 37.7
comp=E,226nm,1.2s
CTGM Chitina Glacie 5.38 230 Pn **Pn** **02 30 09.1 +0.2**
CTGM Sg **Sb** **02 31 31.0 +3.9**
CTG Chitna Glacier 5.38 230 P **Pn** **02 30 08.6 -0.2**
baz=42,SNR=16
J25K Salcha River, 5.38 275 **Pn** **02 30 08.3 -0.5**
J25K IAML 02 31 45.6
comp=E,126nm,0.9s
J25K IAML 02 31 49.8
comp=N,152nm,1.0s
J25K Salcha River, 5.38 275 P **Pn** **02 30 08.1 -0.8**
baz=84
BARN Barnard Glacie 5.42 232 **Pn** **02 30 09.1 -0.3**
BARN IAML 02 31 36.1
comp=N,207nm,0.8s
BARN IAML 02 31 47.8
comp=E,178nm,0.8s
PRP Porcupine Dome 5.42 285 Pn **Pn** **02 30 08.2 -1.2**
PRP Porcupine Dome 5.42 285 P **Pn** **02 30 08.7 -0.8**
baz=94,SNR=21
PLBC Pleasant Camp 5.49 199 Pn **Pn** **02 30 10.8 +0.6**
PLBC Sn **Sn** **02 31 11.4 -1.8**
PLBC Pleasant Camp 5.49 199 P **Pn** **02 30 10.6 +0.4**
baz=15,SNR=16
F26K Sheenjek River 5.49 309 P **Pn** **02 30 10.2 0.0**
baz=119,SNR=6.9
BMAR Burnt Mountain 5.52 305 Pn **Pn** **02 30 09.8 -0.8**
P29M Windy Craggy 5.55 207 Pn **Pn** **02 30 11.6 +0.5**
P29M Sg **Sb** **02 31 38.6 +6.7**
P29M Windy Craggy 5.55 207 P **Pn** **02 30 11.7 +0.5**
baz=22,SNR=9.0
PTPK Patty Peak 5.61 236 Pn **Pn** **02 30 12.1 0.0**
PTPK Sg **Sb** **02 31 36.7 +2.9**
H25K Birch Creek 5.63 292 P **Pn** **02 30 12.2 +0.1**
baz=101
BALM Baldy 5.67 234 Pn **Pn** **02 30 12.9 +0.1**
MCARA McCarthy VSAT 5.68 239 P **Pn** **02 30 12.9 0.0**
baz=50,SNR=9.9
K24K Donnelly Dome 5.71 267 P **Pn** **02 30 13.8 +0.5**
baz=76
TABL Table Mountain 5.72 226 Pn **Pn** **02 30 12.5 -1.1**
PCA Pinnacle 5.74 220 Pn **Pn** **02 30 11.6 -2.1**
PCA Sg **Sb** **02 31 44.9 +7.6**
PINM Pinnacle 5.74 220 P **Pn** **02 30 13.3 -0.3**
baz=33,SNR=8.0
Q32M Nakina River 5.74 177 P **Pn** **02 30 13.7 -0.2**
baz=357,SNR=8.7
KIAG Kiagna River 5.75 234 Pn **Pn** **02 30 13.2 -0.9**
KIAG Sn **Sn** **02 31 17.1 -3.0**
C36M Paulatuk 5.82 32 Pn **Pn** **02 30 15.3 +0.7**
C36M Paulatuk 5.82 32 Pn **Pn** **02 30 14.6 0.0**
C36M Sn **Sn** **02 31 19.0 -2.3**
C36M Paulatuk 5.82 32 P **Pn** **02 30 15.6 +1.0**
baz=221
PAX Paxson 5.84 259 P **Pn** **02 30 15.1 -0.1**
baz=67,SNR=15
G25K Bearman Lake 5.86 297 P **Pn** **02 30 15.8 +0.6**
baz=105
PNL Peninsula 5.88 214 Pn **Pn** **02 30 16.9 +1.3**
PNL Peninsula 5.88 214 P **Pn** **02 30 15.9 +0.3**
baz=28,SNR=5.2
VRDI Verde Repeater 5.94 239 Pn **Pn** **02 30 17.2 +0.6**
HARP HAARP 5.96 253 P **Pn** **02 30 16.9 +0.3**
baz=62
F25K Christian Rive 5.96 305 P **Pn** **02 30 16.6 -0.1**
baz=114,SNR=9.1

IL31 6.01 277 **Pn** **02 30 17.1 -0.3**
ILAR Eielson Array 6.01 277 Pn **Pn** **02 30 17.6 +0.2**
comp=E,1.0nm,0.3s,baz=85,slow=12,SNR=26
ILAR Lg Lg 02 31 51.4
comp=E,7.4nm,0.3s,baz=68,slow=28,SNR=7.0
ILAR LR LR 02 32 46.4
comp=E,152nm,19.0s,baz=78,slow=40
comp=E,3.3nm,0.6s
N25K Chitina, Valde 6.15 245 P **Pn** **02 30 19.2 -0.1**
baz=55
LIRD Liard River Hi 6.16 146 Sg **Sg** **02 31 59.4 -6.6**
E25K Arctic Village 6.17 310 P **Pn** **02 30 19.5 0.0**
baz=119
MESA MESA 6.17 227 **Pn** **02 30 19.8 0.0**
MESA MESA 6.17 227 P **Pn** **02 30 19.9 +0.1**
baz=39
BESE Bessie Mountai 6.19 190 Pn **Pn** **02 30 20.2 +0.3**
POKR Poker Plat Res 6.22 281 P **Pn** **02 30 19.8 -0.5**
baz=88
G24K Hadweenzic Riv 6.37 295 P **Pn** **02 30 22.3 0.0**
baz=102
DLBC Dease Lake 6.40 167 Pn **Pn** **02 30 24.1 +1.3**
comp=E,8.8nm,0.3s,baz=354,slow=10,SNR=74
DLBC Sn **Sn** **02 31 37.8 +1.9**
comp=E,2.0nm,0.3s,baz=131,slow=20,SNR=1.1
DLBC Lg Lg 02 32 05.4
comp=E,7.2nm,0.3s,baz=101,slow=21,SNR=18
DLBC LR LR 02 32 54.3
comp=E,150nm,18.6s,baz=306,slow=38
comp=E,26nm,0.4s
DLBC Dease Lake 6.40 167 Pn **Pn** **02 30 23.3 +0.6**
DLBC Dease Lake 6.40 167 Pn **Pn** **02 30 23.9 +1.1**
DLBC Sn **Sn** **02 31 35.9 +0.1**
DLBC Sg **Sg** **02 32 08.1 -5.6**
DLBC Dease Lake 6.40 167 P **Pn** **02 30 23.5 +0.7**
baz=348,SNR=26
H24K Noodor Dome 6.42 287 P **Pn** **02 30 22.1 -0.8**
baz=94
R32K Eaglecrest 6.47 188 P **Pn** **02 30 24.1 +0.5**
baz=5.7,SNR=7.7
M24K Tolsona, Glenn 6.51 253 Pn **Pn** **02 30 25.8 +1.4**
C27K Jago River 6.52 324 P **Pn** **02 30 25.2 +0.8**
baz=135
BMRM Bremner River 6.54 241 P **Pn** **02 30 25.1 +0.5**
baz=50
MDM Murphy Dome 6.57 279 Pn **Pn** **02 30 25.8 +0.7**
DHY Denali Highway 6.61 263 P **Pn** **02 30 25.6 -0.2**
baz=70
KLU Klutina 6.73 248 P **Pn** **02 30 27.8 +0.4**
baz=56,SNR=9.8
F24K Squaw Lake 6.74 302 P **Pn** **02 30 26.9 -0.5**
baz=108
S34M Telegraph Cree 6.83 172 Pn **Pn** **02 30 29.9 +1.2**
S34M Sg **Sg** **02 32 20.3 -7.2**
S34M Telegraph Cree 6.83 172 P **Pn** **02 30 29.6 +1.0**
baz=353,SNR=14
HMT Hamilton 6.84 236 Pn **Pn** **02 30 29.4 +0.7**
DIV Divide 6.88 245 Pn **Pn** **02 30 29.7 +0.3**
NBC2 NorthernBC 2 6.89 131 Pn **Pn** **02 30 31.2 +1.8**
WAT6 Susitna Watana 6.95 259 P **Pn** **02 30 30.3 -0.1**
baz=66
I23K Minto, Yukon-K 7.04 281 **Pn** **02 30 30.9 -0.5**
D25K Kavik River 7.05 317 P **Pn** **02 30 32.4 +0.7**
baz=126
MCK McKinley 7.08 270 P **Pn** **02 30 32.3 +0.2**
baz=75
H23K Yukon River 7.10 287 P **Pn** **02 30 31.5 -0.8**
baz=92
RND Reindeer 7.14 267 **Pn** **02 30 33.3 +0.4**
E24K Your Creek 7.14 305 P **Pn** **02 30 32.8 -0.1**
baz=112
WAT1 Susitna Watana 7.20 262 P **Pn** **02 30 33.8 +0.1**
baz=68
EYAK Cordova Ski Ar 7.24 241 Pn **Pn** **02 30 34.5 +0.3**
EYAK Cordova Ski Ar 7.24 241 P **Pn** **02 30 35.1 +0.9**
baz=49
S32K Killisnoo 7.28 187 P **Pn** **02 30 34.7 0.0**
baz=5.2
G23K Bananza Creek 7.37 294 P **Pn** **02 30 35.9 -0.2**
baz=98
FNBB Fort Nelson 7.43 137 Pn **Pn** **02 30 38.3 +1.3**
FNBB Sg **Sg** **02 32 40.4 -6.4**
COLD Coldfoot 7.53 298 Pn **Pn** **02 30 38.1 -0.1**
COLD Sn **Sn** **02 31 58.3 -5.2**
COLD Coldfoot 7.53 298 P **Pn** **02 30 38.2 +0.1**
baz=102
E23K Chandalar 7.54 304 P **Pn** **02 30 39.0 +0.7**
baz=109,SNR=6.3
SML Sawmill 7.55 255 P **Pn** **02 30 39.4 +0.8**
baz=61,SNR=16
GLI Glacier Island 7.55 246 P **Pn** **02 30 38.1 -0.4**
baz=54
MLY Manley 7.63 281 P **Pn** **02 30 39.5 -0.1**
baz=85
D24K Happy Valley 7.71 313 P **Pn** **02 30 41.6 +1.1**
baz=118
TOLK Toolik Lake Re 7.73 308 P **Pn** **02 30 41.2 +0.2**
baz=114,SNR=8.3
TRF Thorofare Moun 7.74 269 **Pn** **02 30 41.3 +0.1**
TRF Thorofare Moun 7.74 269 P **Pn** **02 30 41.4 +0.1**
baz=73,SNR=18
T35M Bob Quinn 7.82 169 Pn **Pn** **02 30 43.9 +1.6**
T35M Sg **Sg** **02 32 51.4 -7.8**
T35M Bob Quinn 7.82 169 P **Pn** **02 30 43.6 +1.4**
baz=351,SNR=13
A36M Sachs Harbour 7.86 18 Pn **Pn** **02 30 43.6 +0.9**
A36M Sachs Harbour 7.86 18 Pn **Pn** **02 30 43.3 +0.6**
A36M Sn **Sn** **02 32 06.4 -5.1**
A36M Sachs Harbour 7.86 18 P **Pn** **02 30 43.3 +0.6**
baz=205,SNR=15
BPAW Bear Paw Mtn. 7.88 274 P **Pn** **02 30 42.2 -0.8**
baz=78
C24K Franklin Bluff 7.95 317 P **Pn** **02 30 45.9 +1.9**
baz=122
G22K Bettles 7.98 295 P **Pn** **02 30 44.5 +0.2**
baz=98
D23K Nanushuk River 8.23 309 P **Pn** **02 30 48.7 +0.9**
baz=114
F22K John River 8.34 299 P **Pn** **02 30 50.5 +1.2**
baz=101
E22K Anaktuvuk Pass 8.35 303 P **Pn** **02 30 50.9 +1.5**
baz=106
YKA Yellowknife Ar 8.42 97 Pn **Pn** **02 30 50.2 -0.1**
comp=E,1.7nm,0.3s,baz=308,slow=15,SNR=67
YKA Sn **Sn** **02 32 21.1 -4.1**
comp=E,1.4nm,0.3s,baz=288,slow=24,SNR=4.8
YKA Lg Lg 02 33 12.0
comp=E,0.7nm,0.3s,baz=289,slow=28,SNR=5.1
comp=E,7.3nm,0.6s
YKA Yellowknife Ar 8.42 97 Pn **Pn** **02 30 51.2 +0.9**
H21K Melozitna Rive 8.45 286 P **Pn** **02 30 52.9 +2.1**
baz=88
RC01 Rabbit Creek A 8.50 253 P **Pn** **02 30 52.9 +1.4**
baz=58
CAST Castle Rocks 8.52 270 P **Pn** **02 30 52.2 +0.4**
baz=73
C23K Itkillik River 8.59 315 P **Pn** **02 30 53.3 +0.7**
baz=119
NBC5 NorthernBC 5 8.69 141 Pn **Pn** **02 30 56.0 +1.8**
SUA Susitna One 8.72 257 P **Pn** **02 30 56.9 +2.2**
baz=61
PPLA Purkeypile 8.74 267 P **Pn** **02 30 55.1 +0.3**
baz=70
G21K Allakaket 8.74 291 P **Pn** **02 30 54.5 -0.2**
baz=93
F21K Alatna River 8.79 296 P **Pn** **02 30 55.7 +0.2**
baz=98,SNR=5.7
SKT Skwentna 8.82 261 P **Pn** **02 30 57.6 +1.8**
baz=64
J20K Nowinta River 9.21 277 P **Pn** **02 31 02.4 +1.1**
baz=78
K20K Telida 9.39 272 **Pn** **02 31 04.2 +0.5**
K20K Telida 9.39 272 P **Pn** **02 31 04.8 +1.1**
baz=73
SPU Mount Spurr 9.41 257 Pn **Pn** **02 31 04.3 +0.3**
M20K Styx River 9.54 262 **Pn** **02 31 05.4 -0.4**
M20K Styx River 9.54 262 P **Pn** **02 31 08.7 +2.9**
baz=64
L20K Farewell, AK 9.61 266 P **Pn** **02 31 09.7 +2.9**
baz=68
MANA Manning 10.78 130 Pn **Pn** **02 31 21.9 -0.8**
GRNB Grenville Isla 10.96 171 Sg 02 34 29.1
DIB Dawson Inlet, 11.51 179 Pn **Pn** **02 31 34.4 +1.8**
KDAK Kodiak Island 11.71 243 LR LR 02 35 27.6
comp=E,41nm,20.9s,baz=263,slow=34
BBB Bella Bella 12.76 167 LR LR 02 36 13.7
comp=E,40nm,19.4s,baz=90,slow=35

EDM Edmonton 15.17 130 Pn **Pn** **02 32 22.0 -0.6**
EDM IAmb IAmb 02 32 50.0
comp=Z,4.8nm,0.7s
RES Resolute Bay 16.17 36 Pn **Pn** **02 32 34.4 -1.0**
comp=Z,0.6nm,0.3s,baz=275,slow=22,SNR=10
RES Sn **Sn** **02 35 24.1 -10**
comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=2.9
RES LR LR 02 38 13.7
comp=Z,55nm,20.1s,baz=288,slow=35
NEW Newport 18.50 145 P **Pn** **02 33 07.7 +3.0**
comp=Z,0.1nm,0.3s,baz=348,slow=7.8,SNR=5.2
comp=Z,2.0nm,0.8s
BMO Blue Mountains 21.67 149 P **P** **02 33 38.3 -0.8**
BMO IAmb IAmb 02 33 46.2
comp=Z,2.5nm,0.9s
I07A Izee 21.95 154 P **P** **02 33 42.6 +0.5**
I07A IAmb IAmb 02 33 50.0
comp=Z,3.5nm,1.1s
ULM Lac du Bonnet 24.11 109 LR LR 02 44 54.3
comp=Z,34nm,21.2s,baz=290,slow=40
SNOW Snow King Moun 24.63 139 P **P** **02 34 08.4 -0.7**
PD31 Pinedale Array 25.62 138 P **P** **02 34 17.0 -1.0**
PDAR Pinedale Array 25.62 138 P **P** **02 34 20.9 +2.9**
comp=Z,0.7nm,0.9s,baz=329,slow=5.2,SNR=5.3
comp=Z,0.7nm,0.9s
NVAR Mina Array Bea 27.65 155 P **P** **02 34 39.4 +3.1**
comp=Z,0.4nm,0.8s,baz=340,slow=7.8,SNR=3.2
comp=Z,0.4nm,0.8s
SADO Sadowa 35.42 98 LR LR 02 50 28.8
comp=Z,64nm,19.4s,baz=248,slow=37
TXAR Lajitas Array 39.83 138 P **P** **02 36 24.4 +2.6**
comp=Z,0.8nm,0.9s,baz=8.9,slow=6.4,SNR=4.1
comp=Z,0.8nm,0.9s
TKL Tuckaleechee C 41.12 111 LR LR 02 53 22.1
comp=Z,50nm,21.6s,baz=316,slow=36
NOA NORSAR Array B 51.75 21 P **P** **02 37 59.0 +3.5**
comp=Z,0.7nm,0.8s,baz=342,slow=7.6,SNR=2.4
NOA LR LR 03 02 14.8
comp=Z,18nm,18.9s,baz=335,slow=39
comp=Z,0.7nm,0.8s
HFS Hagfors 52.99 20 P **P** **02 38 06.4 +1.8**
comp=Z,2.0nm,0.8s,baz=20,slow=4.7,SNR=5.6
HFS LR LR 03 00 17.2
comp=Z,14nm,21.2s,baz=11,slow=36
comp=Z,2.0nm,0.8s
FINES FINESS Array B 53.21 12 P **P** **02 38 07.5 +1.3**
comp=Z,0.7nm,0.5s,baz=12,slow=9.9,SNR=9.4
comp=Z,0.7nm,0.5s
EKA Eskdalemuir Ar 54.28 33 P **P** **02 38 16.1 +2.0**
comp=Z,0.7nm,0.6s,baz=326,slow=6.2,SNR=5.6
comp=Z,0.7nm,0.6s
ZALV Zalesovo Beam 58.20 335 P **P** **02 38 44.5 +2.3**
comp=Z,0.7nm,0.4s,baz=28,slow=6.5,SNR=1.9
comp=Z,0.7nm,0.4s
SONM Songino Array 58.74 317 P **P** **02 38 48.3 +2.1**
comp=Z,1.1nm,0.8s,baz=31,slow=6.7,SNR=4.8
comp=Z,1.1nm,0.8s
ARU Arti 58.91 353 P **P** **02 38 49.8 +2.8**
comp=Z,1.8nm,0.5s,baz=45,slow=5.7,SNR=4.4
comp=Z,1.8nm,0.5s
HHC Hu-ho-hao-te 63.43 310 *e*P **P** **02 39 16.9 -1.2**
AKASG Malin Array Be 64.12 13 P **P** **02 39 24.2 +1.9**
comp=Z,0.8nm,0.5s,baz=354,slow=6.3,SNR=6.3
comp=Z,0.8nm,0.5s
MKAR Makanchi Array 65.53 334 P **P** **02 39 33.3 +1.7**
comp=Z,0.5nm,0.7s,baz=26,slow=6.9,SNR=2.0
comp=Z,0.5nm,0.7s
WMQ Urumqi 67.28 329 *e*P **P** **02 39 43.0 +0.1**
WMQ sP sP 02 39 50.9 +2.8
KRVT Keravat (AS076 87.55 255 LR LR 03 17 24.5
comp=Z,55nm,19.0s,baz=207,slow=33
SIJI Sorong 93.31 275 LR LR 03 17 58.3
comp=Z,37nm,21.9s,baz=159,slow=32

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*IDC **09** 02:33:57.0±1.7, 6°.44S×150°.02E, h0km, mb3.8/3, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=95.3km s-min=21.6km az=134.0*

ISC 09 02:33:59.9±2.0, 7°.2S±0°.3×150°.9E±0°.4, h35km, n6, σ1§27/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.04**	**22**	**Pn**	**Pn**	**02 34 45.0**	**-0.6**
	7.2nm,0.3s,baz=143,slow=5.1,SNR=2.3						
KRVT				Sn	**Sn**	**02 35 22.4**	**+1.6**
	5.2nm,0.3s,baz=119,slow=20,SNR=2.1						
	26nm,0.4s						
PMG	**Port Moresby**	**4.32**	**238**	Pn	**Pn**	**02 35 04.2**	**+1.2**
	6.2nm,0.3s,baz=48,slow=6.8,SNR=5.5						
PMG				Sn	**Sn**	**02 35 51.2**	**-1.0**
	9.6nm,0.3s,baz=108,slow=22,SNR=7.5						
WRA	**Warramunga Arr**	**20.48**	**230**	P	**P**	**02 38 34.7**	**-0.1**
	4.9nm,0.9s,baz=52,slow=10,SNR=24						
	4.9nm,0.9s						
ASAR	**Alice Springs**	**23.14**	**223**	P	**P**	**02 39 04.0**	**+0.8**
	1.5nm,0.7s,baz=56,slow=9.2,SNR=14						
	1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**26.89**	**244**	P	**P**	**02 39 36.5**	**-1.2**
	1.7nm,0.7s,baz=75,slow=6.9,SNR=6.3						
	1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.11**	**284**	PKPbc	**PKPbc**	**02 53 44.8**	**-0.8**
	0.7nm,0.9s,baz=52,slow=2.6,SNR=7.4						

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*OTT **09** 02:42:54.7±0.1, 76°.19N×70°.92W, h18km, ML3.2/3, 269km east from Craig Harbour, Nu Eastern Arctic Background Seismic Zone.*
*DNK **09** 02:42:54.8±1.8, 76°.17N×70°.99W, h0km±8km, ML2.1*

ISC 09 02:42:51.8±0.9, 76°.15N±0°.06×71°.22W±0°.05, h10km, n11, σ1§75/20, 1C, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TULEG	**Thule**	**0.69**	**54**	*e*	**Pb**	**02 43 05.6**	**-0.2**
	baz=234,slow=14						
TULEG				⇑*i*P	**Pb**	**02 43 05.8**	**0.0**
TULEG				*i* S	**Sg**	**02 43 13.9**	**-0.1**
TULEG				*i* S	**Sg**	**02 43 14.1**	**-0.1**
TULEG				IAML		02 43 15.4	
	comp=Z,279nm,0.3s						
TULEG	**Thule**	**0.69**	**54**	PG	**Pb**	**02 43 05.9**	**0.0**
TULEG				SG	**Sg**	**02 43 13.8**	**-0.3**
TULEG				Trac		02 43 14.7	
	comp=Z,337nm,0.2s						
NEEM	**North Greenlan**	**4.79**	**65**	*i* P	**Pn**	**02 44 07.1**	**+3.1**
NEEM				*i* S	**Sn**	**02 44 59.6**	**+0.1**
NEEM				IAML		02 45 21.6	
	comp=Z,12nm,0.4s						
EUNU	**Eureka**	**5.01**	**329**	PN	**Pn**	**02 44 08.7**	**+1.8**
EUNU				SN	**Sn**	**02 45 03.5**	**-1.2**
EUNU				Trac		02 45 38.2	
	comp=Z,349nm,3.7s						
UPNV	**Upernavik**	**5.26**	**122**	*e*S	**Sn**	**02 45 08.9**	**-1.9**
CLRN	**Clyde River**	**5.75**	**171**	PN	**Pn**	**02 44 19.0**	**+2.0**
CLRN				SN	**Sn**	**02 45 20.5**	**-2.4**
CLRN				Trac		02 45 22.4	
	comp=Z,3.1nm,0.1s						
RES	**Resolute Bay**	**6.13**	**268**	PN	**Pn**	**02 44 24.4**	**+2.2**
RES				SN	**Sn**	**02 45 30.1**	**-2.1**
RES				Trac		02 45 40.0	
	comp=Z,13nm,0.6s						
ILON	**Igloolik, Nuna**	**7.49**	**210**	PN	**Pn**	**02 44 42.8**	**+2.0**
ILON				SN	**Sn**	**02 46 03.7**	**-1.9**
ILON				Trac		02 46 33.5	
	comp=Z,160nm,2.3s						
NOR	**Nord**	**11.32**	**38**	*i* P	**Pn**	**02 45 30.9**	**-2.3**
NOR				*e*S	Sn	02 47 30.4	-9.1
NOR				IAML		02 48 09.1	
	comp=Z,1.8nm,0.3s						
DAG	**Danmarks Havn**	**11.99**	**62**	*e*P	**Pn**	**02 45 41.3**	**-1.0**
DAG				*i* S	Sn	02 47 44.5	-11
DAG				IAML		02 47 49.8	
	comp=Z,0.8nm,0.3s						
DBG	**Daneborg**	**12.79**	**73**	*e*P	**Pn**	**02 45 52.4**	**-0.9**
DBG				*e*S	Sn	02 48 04.4	-11

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*SOME **09** 02:53:24.6, 42°.25N×84°.13E, h10km*
*NNC **09** 02:53:49.0±9.0, 42°.68N×83°.18E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=82.7km s-min=49.9km az=140.0*

ISC 09 02:53:23.1±2.4, 42°.2N±0°.1×84°.21E±0°.08, h10km, n35, σ1§98/57, 2C-4D, Northern Xinjiang

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

KTMS	**Ketmen**	**3.09 295**	*e*P		**Pg**	**02 54 21.5**	**-0.8**
	3.3nm,0.2s						
KTMS			*e*S		**Sg**	**02 55 02.7**	**+0.3**
	26nm,0.1s						
SHLS	**Shalkode**	**3.62 287**	*e*P		**Pn**	**02 54 19.2**	**-0.2**
	6.7nm,0.1s						
SHLS	**Shalkode**	**3.62 287**	*e*P		**Pb**	**02 54 27.0**	**-0.3**
	6.1nm,0.1s						
SHLS			*e*S		**Sb**	**02 55 11.7**	**+0.3**
	42nm,0.1s						
SHLS	**Shalkode**	**3.62 287**	*e*S		**Sb**	**02 55 12.1**	**+0.7**
	61nm,0.1s						
PDGK	**Podgornoye**	**3.65 289**	⇓Pn		**Pg**	**02 54 31.2**	**-1.7**
	2.2nm,0.3s						
PDGK			⇑Lg		Lg	02 55 20.2	
	13nm,0.4s						
UZB	**Uzynbulak**	**3.94 285**	*e*P		**Pb**	**02 54 29.5**	**-3.1**
	1.4nm,0.2s						
UZB			*e*S		**Sg**	**02 55 29.5**	**0.0**
	12nm,0.4s						
UZB	**Uzynbulak**	**3.94 285**	*e*P		**Pb**	**02 54 34.8**	**+2.1**
	2.2nm,0.1s						
UZB			*e*S		**Sg**	**02 55 25.7**	**-3.8**
	12nm,0.2s						
KPKS	**Kokpek**	**4.25 289**	*e*P		**Pb**	**02 54 36.8**	**-1.2**
	2.8nm,0.2s						
KPKS			*e*S		**Sg**	**02 55 42.5**	**+3.0**
	22nm,0.4s						
KPKS	**Kokpek**	**4.25 289**	*e*P		**Pg**	**02 54 42.1**	**-2.4**
	3.1nm,0.2s						
KPKS			*e*S		**Sg**	**02 55 37.9**	**-1.7**
	23nm,0.0s						
ZHN	**Zhinishke**	**4.36 285**	*e*P		**Pb**	**02 54 39.3**	**-0.6**
	5.2nm,0.1s						
ZHN			*e*S		**Sg**	**02 55 46.2**	**+3.1**
	33nm,0.1s						
SATY	**Saty**	**4.36 283**	*e*P		**Pb**	**02 54 38.7**	**-1.3**
	2.2nm,0.1s						
SATY			*e*S		**Sg**	**02 55 45.0**	**+1.9**
	17nm,0.1s						
SATY	**Saty**	**4.36 283**	*e*P		**Pg**	**02 54 45.0**	**-1.7**
	2.8nm,0.1s						
SATY			*e*S		**Sg**	**02 55 43.1**	**-0.1**
	13nm,0.1s						
KURS	**Kuram**	**4.62 288**	*e*P		**Pb**	**02 54 45.0**	**+0.7**
KURS			*e*S		**Sg**	**02 55 55.9**	**+4.5**
KURS	**Kuram**	**4.62 288**	*e*P		**Pg**	**02 54 49.0**	**-2.5**
	5.2nm,0.4s						
KURS			*e*S		**Sg**	**02 55 49.9**	**-1.4**
	6.2nm,0.1s						
MK31	**Makanchi Array**	**4.78 344**	⇑Pn		**Pn**	**02 54 39.7**	**+4.5**
	1.7nm,0.4s,baz=156,slow=17,SNR=7.1						
MK31			⇓Lg		Lg	02 55 57.0	
	4.3nm,0.3s,baz=159,slow=29,SNR=8.1						
MAKZ	**Makanchi**	**4.86 342**	⇓Pn		**Pg**	**02 54 53.8**	**-2.4**
	3.8nm,0.7s						
MAKZ			⇓Lg		Lg	02 55 59.2	
	4.0nm,0.5s						
ARXS	**Arharly**	**5.07 295**	*e*P		**Pg**	**02 54 57.6**	**-2.6**
	3.5nm,0.4s						
ARXS			*e*S		**Sg**	**02 56 04.8**	**-1.1**
	12nm,0.0s						
ZSN	**Zaisan**	**5.25 5**	*e*P		**Pb**	**02 54 54.1**	**-1.0**
	2.1nm,0.1s						
ZSN	**Zaisan**	**5.25 5**	*e*P		**Pg**	**02 55 02.1**	**-1.6**
	4.8nm,0.3s						
ZSN			*e*S		**Sg**	**02 56 11.6**	**-0.1**
	23nm,0.3s						
ZSN	**Zaisan**	**5.25 5**	*e*S		**Sg**	**02 56 11.6**	**-0.1**
	20nm,0.3s						
KOTS	**Kotyrbulak**	**5.33 283**	*e*P		**Pb**	**02 54 56.4**	**+0.1**
	2.8nm,0.5s						
KOTS			*e*S		**Sg**	**02 56 16.3**	**+2.2**
	22nm,0.1s						
KOTS	**Kotyrbulak**	**5.33 283**	*e*P		**Pg**	**02 55 03.5**	**-1.6**
	2.3nm,0.2s						
KOTS			*e*S		**Sg**	**02 56 14.1**	**0.0**
	20nm,0.7s						
MDOK	**Medeo**	**5.36 283**	*e*P		**Pb**	**02 54 56.6**	**-0.4**
	1.9nm,0.5s						
MDOK	**Medeo**	**5.36 283**	*e*P		**Pg**	**02 55 04.8**	**-1.0**
	0.9nm,0.2s						
MDOK			*e*S		**Sg**	**02 56 16.8**	**+1.6**
	5.1nm,0.1s						
MDOK	**Medeo**	**5.36 283**	*e*S		**Sg**	**02 56 16.3**	**+1.1**
	8.8nm,0.7s						
TNSS	**Tian-Shan**	**5.42 281**	*e*P		**Pb**	**02 54 57.5**	**-0.6**
	1.9nm,0.6s						
TNSS	**Tian-Shan**	**5.42 281**	*e*P		**Pg**	**02 55 05.2**	**-1.7**
	0.9nm,0.3s						
TNSS			*e*S		**Sg**	**02 56 17.3**	**+0.2**
	1.7nm,0.6s						
TNSS	**Tian-Shan**	**5.42 281**	*e*S		**Sg**	**02 56 17.5**	**+0.4**
	2.7nm,0.6s						
CHKK	**Chushkaly**	**5.54 290**	*e*P		**Pb**	**02 55 01.8**	**+1.9**
	0.9nm,0.1s						
CHKK			*e*S		**Sg**	**02 56 25.3**	**+4.4**
	8.8nm,0.4s						
CHKK	**Chushkaly**	**5.54 290**	*e*P		**Pg**	**02 55 06.3**	**-2.9**
	0.9nm,0.0s						
CHKK			*e*S		**Sg**	**02 56 19.2**	**-1.7**
	5.8nm,0.0s						
KUU	**Kurty**	**6.00 289**	*e*P		**Pg**	**02 55 14.6**	**-3.4**
	1.1nm,0.2s						
KUU			*e*S		**Sg**	**02 56 34.3**	**-1.5**
	4.8nm,0.1s						
KST	**Kastek**	**6.14 281**	*e*P		**Pb**	**02 55 10.8**	**+0.7**
	3.1nm,0.1s						
KST	**Kastek**	**6.14 281**	*e*P		**Pg**	**02 55 19.0**	**-1.6**
	2.2nm,0.1s						
KST			*e*S		**Sg**	**02 56 41.2**	**+1.1**
	3.8nm,0.3s						
KST	**Kastek**	**6.14 281**	*e*S		**Sg**	**02 56 41.0**	**+0.8**
	6.2nm,1.1s						
KRBS	**Karabastau**	**6.43 286**	*e*P		**Pg**	**02 55 24.2**	**-2.1**
	0.9nm,0.2s						
KRBS			*e*S		**Sg**	**02 56 49.8**	**+0.2**
	2.8nm,0.1s						

IDC 09 03:03:35.5±51.0, 22°.05S×174°.71W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=968.7km s-min=174.2km az=86.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.93**	**246**	P	P	03 11 11.9	+0.3
	1.5nm,0.4s,baz=75,slow=8.0,SNR=3.9 1.5nm,0.4s						
ASAR	**Alice Springs**	**47.17**	**258**	P	P	03 12 09.8	-0.3
	1.7nm,0.4s,baz=97,slow=7.1,SNR=28 1.7nm,0.4s						
WRA	**Warramunga Arr**	**47.44**	**263**	P	P	03 12 12.0	-0.3
	3.3nm,0.6s,baz=102,slow=8.3,SNR=218 3.3nm,0.6s						

*NEIC **09** 03:05:03.6±1.1, 65°.43N±0°.04×144°.78W±0°.05, h6km±11km, Error ellipse: s-maj=5.7km s-min=2.7km az=162.0*
*ANF **09** 03:05:03.3±0.3, 65°.45N×144°.70W, h2km±2km, ML3.5/78, ML3.5/79, Error ellipse: s-maj=1.6km s-min=1.3km az=32.0*
*AEIC **09** 03:05:03±1.0, 65°.43N±0°.04×144°.73W±0°.07, h5km±7km, ML3.2, ML3.4/130(NEIC), Error ellipse: s-maj=6.3km s-min=3.1km az=144.0*

ISC 09 03:05:03.5±1.1, 65°.44N±0°.02×144°.72W±0°.02, h6km±10km, n157, σ0.81/155, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRP	**Porcupine Dome**	**0.35**	**283**	Pg	**Pg**	**03 05 10.7**	**+0.4**
PRP				IAML		03 05 16.4	
	comp=N,3μm,0.4s						
PRP	**Porcupine Dome**	**0.35**	**283**	P	**Pg**	**03 05 10.6**	**+0.4**
	baz=105,SNR=1000						
PRP				S	**Sg**	**03 05 15.2**	**+0.3**
	baz=105						
I26K	**Coal Creek Min**	**0.67**	**101**		**Pg**	**03 05 16.1**	**-0.2**
I26K	**Coal Creek Min**	**0.67**	**101**	P	**Pg**	**03 05 16.1**	**-0.2**
	baz=281						
I26K				S	**Sg**	**03 05 25.3**	**+0.3**
	baz=281						
J25K	**Salcha River,**	**0.88**	**199**	P	**Pg**	**03 05 20.2**	**0.0**
	baz=18,SNR=158						
J25K				S	**Sg**	**03 05 31.2**	**-0.3**
	baz=18						
H25K	**Birch Creek**	**0.95**	**332**	P	**Pb**	**03 05 22.3**	**0.0**
	baz=152,SNR=27						
J26L	**Joseph Creek**	**1.06**	**152**		**Pg**	**03 05 23.8**	**-0.1**
J26L	**Joseph Creek**	**1.06**	**152**	P	**Pg**	**03 05 23.8**	**-0.1**
	baz=332,SNR=128						
J26L				S	**Sg**	**03 05 37.6**	**0.0**
	baz=332						
IL31		**1.14**	**235**		**Pg**	**03 05 24.8**	**-0.4**
ILAR	**Eielson Array**	**1.14**	**235**	Pg	**Pg**	**03 05 24.1**	**-1.1**
FYU	**Fort Yukon**	**1.15**	**350**	Pg	**Pn**	**03 05 26.1**	**+0.1**
FYU				IAML		03 05 44.5	
	comp=N,733nm,1.0s						
FYU				IAML		03 05 45.8	
	comp=E,587nm,0.3s						
POKR	**Poker Plat Res**	**1.19**	**255**		**Pg**	**03 05 25.7**	**-0.5**
POKR	**Poker Plat Res**	**1.19**	**255**	P	**Pg**	**03 05 25.7**	**-0.5**
	baz=73,SNR=347						
I27K	**Kandik River**	**1.30**	**81**	P	**Pn**	**03 05 27.6**	**-0.7**
	baz=264,SNR=162						
H24K	**Noodor Dome**	**1.37**	**288**	Pn	**Pb**	**03 05 29.4**	**-0.1**
H24K				IAML		03 05 50.8	
	comp=N,889nm,0.5s						
H24K				IAML		03 05 52.0	
	comp=E,662nm,0.8s						
H24K	**Noodor Dome**	**1.37**	**288**	P	**Pb**	**03 05 29.4**	**-0.1**
	baz=106,SNR=199						
H24K				S	**Sn**	**03 05 47.4**	**-0.2**
	baz=106						
HDA	**Harding Lake**	**1.41**	**224**		**Pn**	**03 05 29.5**	**-0.1**
HDA				IAML		03 05 51.6	
	comp=E,533nm,0.8s						
HDA				IAML		03 05 52.2	
	comp=N,463nm,0.5s						
HDA	**Harding Lake**	**1.41**	**224**	P	**Pb**	**03 05 29.9**	**-0.2**
	baz=42,SNR=156						
COLA	**College**	**1.44**	**248**		**Pb**	**03 05 30.3**	**-0.4**
COLA	**College**	**1.44**	**248**	P	**Pb**	**03 05 30.3**	**-0.4**
	baz=66						
TCOL	**CIGO, UAF Yank**	**1.45**	**248**		**Pb**	**03 05 30.4**	**-0.4**
TCOL	**CIGO, UAF Yank**	**1.45**	**248**	P	**Pn**	**03 05 30.2**	**+0.1**
	baz=66,SNR=134						
G25K	**Bearman Lake**	**1.45**	**338**	P	**Pn**	**03 05 30.4**	**+0.3**
	baz=157,SNR=36						
SCRK	**Sand Creek**	**1.50**	**168**		**Pb**	**03 05 31.7**	**-0.1**
SCRK				IAML		03 05 51.5	
	comp=E,486nm,0.6s						
SCRK				IAML		03 05 56.1	
	comp=N,353nm,0.5s						
SCRK	**Sand Creek**	**1.50**	**168**	P	**Pb**	**03 05 31.6**	**-0.2**
	baz=348,SNR=211						
SCRK				S	**Sn**	**03 05 50.8**	**-0.1**
	baz=348						
CCB	**Clear Creek Bu**	**1.53**	**240**		**Pn**	**03 05 31.2**	**-0.1**
H27K	**Steamboat Moun**	**1.54**	**57**	P	**Pn**	**03 05 31.4**	**0.0**
	baz=240,SNR=159						
H27K				S	**Sb**	**03 05 52.5**	**+0.4**
	baz=240						
MDM	**Murphy Dome**	**1.56**	**254**	Pn	**Pn**	**03 05 31.7**	**-0.1**
MDM				IAML		03 05 55.4	
	comp=N,591nm,0.4s						
G26K	**Porcupine Rive**	**1.56**	**14**	P	**Pn**	**03 05 31.6**	**-0.1**
	baz=195,SNR=155						
G26K				S	**Sb**	**03 05 53.4**	**+0.6**
	baz=195						
EGAK	**Eagle**	**1.65**	**112**		**Pn**	**03 05 32.5**	**-0.4**
EGAK				IAML		03 05 58.8	
	comp=N,389nm,0.5s						
EGAK				IAML		03 05 59.6	
	comp=N,393nm,0.8s						
EGAK	**Eagle**	**1.65**	**112**	P	**Pn**	**03 05 32.9**	**0.0**
	baz=295,SNR=145						
G24K	**Hadweenzic Riv**	**1.69**	**320**	P	**Pn**	**03 05 33.5**	**-0.1**
	baz=138,SNR=111						
K24K	**Donnelly Dome**	**1.71**	**196**	P	**Pb**	**03 05 34.5**	**-0.8**
	baz=15,SNR=201						
RIDG	**Independent Ri**	**1.71**	**182**		**Pn**	**03 05 34.1**	**+0.3**
RIDG	**Independent Ri**	**1.71**	**182**	P	**Pb**	**03 05 34.4**	**-0.9**
	baz=1.6						
RIDG				S	**Sb**	**03 05 57.1**	**+0.1**
	baz=1.6						
WRH	**Wood River Hil**	**1.73**	**237**		**Pn**	**03 05 34.0**	**-0.1**
K27K	**Chicken**	**1.81**	**140**		**Pn**	**03 05 36.0**	**+0.8**
K27K				IAML		03 06 03.2	
	comp=E,426nm,0.7s						
K27K				IAML		03 06 05.2	
	comp=N,346nm,0.6s						
K27K	**Chicken**	**1.81**	**140**	P	**Pn**	**03 05 35.8**	**+0.6**
	baz=322						
DOT	**Dot Lake**	**1.82**	**171**		**Pn**	**03 05 35.7**	**+0.4**
G27K	**Doyon Strip**	**1.86**	**41**	P	**Pn**	**03 05 35.4**	**-0.4**
	baz=224,SNR=58						
I23K	**Minto, Yukon-K**	**1.97**	**264**		**Pn**	**03 05 37.3**	**-0.1**
I23K				IAML		03 06 09.4	
	comp=E,285nm,0.7s						
I23K				IAML		03 06 13.7	
	comp=N,302nm,0.6s						
I23K	**Minto, Yukon-K**	**1.97**	**264**	P	**Pn**	**03 05 37.2**	**-0.1**
	baz=80,SNR=257						
BMAR	**Burnt Mountain**	**2.00**	**2**		**Pn**	**03 05 37.4**	**-0.4**
NEA2	**Nenana**	**2.03**	**247**		**Pn**	**03 05 38.0**	**-0.3**
NEA2				IAML		03 06 10.8	
	comp=N,282nm,0.3s						
NEA2				IAML		03 06 15.2	
	comp=E,282nm,0.8s						
NEA2	**Nenana**	**2.03**	**247**	P	**Pn**	**03 05 37.9**	**-0.3**
	baz=64,SNR=84						
H23K	**Yukon River**	**2.04**	**283**		**Pn**	**03 05 38.4**	**0.0**
H23K				IAML		03 06 09.5	
	comp=N,277nm,0.7s						
H23K				IAML		03 06 11.8	
	comp=E,246nm,0.4s						
H23K	**Yukon River**	**2.04**	**283**	P	**Pn**	**03 05 38.1**	**-0.3**
	baz=99						
F25K	**Christian Rive**	**2.19**	**351**	P	**Pn**	**03 05 41.0**	**+0.5**
	baz=170,SNR=15						
F26K	**Sheenjek River**	**2.28**	**5**	P	**Pn**	**03 05 42.0**	**+0.4**
	baz=186,SNR=20						
F26K				S	**Sn**	**03 06 10.2**	**+0.2**
	baz=186						
BWN	**Browne**	**2.40**	**240**	IAML		03 06 25.9	
	comp=N,284nm,0.6s						
BWN				IAML		03 06 34.1	
	comp=E,260nm,0.7s						
F24K	**Squaw Lake**	**2.44**	**330**	P	**Pn**	**03 05 44.6**	**+0.7**
	baz=148,SNR=13						
L26K	**Log Cabin Wild**	**2.50**	**166**	P	**Pn**	**03 05 45.1**	**+0.5**
	baz=346,SNR=87						
MCK	**McKinley**	**2.50**	**229**	Pn	**Pn**	**03 05 44.2**	**-0.4**
MCK	**McKinley**	**2.50**	**229**	P	**Pn**	**03 05 45.0**	**+0.3**
	baz=45						
PAX	**Paxson**	**2.50**	**188**		**Pn**	**03 05 44.8**	**0.0**
PAX	**Paxson**	**2.50**	**188**	P	**Pn**	**03 05 45.5**	**+0.8**
	baz=7.1,SNR=11						
G23K	**Bananza Creek**	**2.51**	**303**	P	**Pn**	**03 05 44.6**	**-0.2**
	baz=118,SNR=14						
MENT	**Mentasta**	**2.55**	**170**	Pn	**Pn**	**03 05 45.7**	**+0.4**
MLY	**Manley**	**2.57**	**264**	Pn	**Pn**	**03 05 45.2**	**-0.5**
MLY				IAML		03 06 28.2	
	comp=N,139nm,0.3s						
MLY				IAML		03 06 34.4	
	comp=E,128nm,0.7s						
MLY	**Manley**	**2.57**	**264**	P	**Pn**	**03 05 45.1**	**-0.5**
	baz=78,SNR=102						
DHY	**Denali Highway**	**2.64**	**207**	Pn	**Pn**	**03 05 46.7**	**0.0**
DHY				IAML		03 06 27.4	
	comp=E,154nm,0.7s						
DHY				IAML		03 06 31.6	
	comp=N,167nm,0.7s						
DHY	**Denali Highway**	**2.64**	**207**	P	**Pn**	**03 05 48.1**	**+1.3**
	baz=25,SNR=31						
DAWY	**Dawson**	**2.67**	**119**		**Pn**	**03 05 46.9**	**-0.1**
DAWY				IAML		03 06 29.8	
	comp=E,216nm,0.5s						
DAWY	**Dawson**	**2.67**	**119**	P	**Pn**	**03 05 46.6**	**-0.4**
	baz=303						
I29M	**Ogilvie Camp,**	**2.68**	**89**		**Pn**	**03 05 46.7**	**-0.5**
L27K	**Beaver Creek,**	**2.70**	**151**		**Pn**	**03 05 47.9**	**+0.4**
L27K				IAML		03 06 31.2	
	comp=E,101nm,0.4s						
L27K	**Beaver Creek,**	**2.70**	**151**	P	**Pn**	**03 05 47.6**	**+0.2**
	baz=333						
BCAR	**Beaver Creek A**	**2.71**	**150**		**Pn**	**03 05 47.7**	**+0.2**
E25K	**Arctic Village**	**2.71**	**353**	P	**Pn**	**03 05 46.9**	**-0.7**
	baz=173,SNR=6.0						
H22K	**Ishtalitna Cre**	**2.80**	**282**	P	**Pn**	**03 05 48.3**	**-0.4**
	baz=97						
COLD	**Coldfoot**	**2.85**	**312**		**Pn**	**03 05 49.5**	**+0.1**
COLD	**Coldfoot**	**2.85**	**312**	P	**Pn**	**03 05 50.1**	**+0.7**
	baz=127						
J29M	**Klondike Camp**	**2.94**	**107**		**Pn**	**03 05 50.7**	**0.0**
BPAW	**Bear Paw Mtn.**	**3.00**	**246**	Pn	**Pn**	**03 05 51.2**	**-0.4**
BPAW				IAML		03 06 44.1	
	comp=N,138nm,0.7s						
BPAW				IAML		03 06 52.2	
	comp=E,99nm,0.6s						
BPAW	**Bear Paw Mtn.**	**3.00**	**246**	P	**Pn**	**03 05 51.0**	**-0.6**
	baz=61,SNR=6.9						
E27K	**Coleen River**	**3.02**	**23**	P	**Pn**	**03 05 49.0**	**-2.8**
	baz=206						
E24K	**Your Creek**	**3.04**	**332**	P	**Pn**	**03 05 53.0**	**+0.9**
	baz=149						
HARP	**HAARP**	**3.06**	**184**	P	**Pn**	**03 05 53.0**	**+0.6**
	baz=3.3,SNR=7.0						
I21K	**Tanana**	**3.06**	**268**	Pn	**Pn**	**03 05 51.5**	**-0.8**
I21K				IAML		03 06 45.8	
	comp=E,116nm,0.7s						
I21K	**Tanana**	**3.06**	**268**	P	**Pn**	**03 05 51.8**	**-0.5**
	baz=82						
WAT1	**Susitna Watana**	**3.11**	**214**	P	**Pn**	**03 05 53.9**	**+0.8**
	baz=31						
TRF	**Thorofare Moun**	**3.13**	**233**	P	**Pn**	**03 05 54.0**	**+0.5**
	baz=48,SNR=7.5						
M26K	**Nabesna, AK**	**3.14**	**165**	IAML		03 06 49.2	
	comp=N,85nm,0.8s						
M26K				IAML		03 06 49.2	
	comp=E,82nm,0.8s						
M26K	**Nabesna, AK**	**3.14**	**165**	P	**Pn**	**03 05 54.4**	**+0.9**
	baz=347,SNR=8.8						
WAT6	**Susitna Watana**	**3.16**	**206**	P	**Pn**	**03 05 55.2**	**+1.3**
	baz=24,SNR=8.1						
E23K	**Chandalar**	**3.27**	**326**	P	**Pn**	**03 05 56.6**	**+1.4**
	baz=142,SNR=18						
KTH	**Kantishna Hill**	**3.29**	**238**	IAML		03 06 52.5	
	comp=E,64nm,0.7s						
KTH				IAML		03 06 55.2	
	comp=N,75nm,1.0s						
M27K	**Edge Creek, AK**	**3.34**	**157**	IAML		03 06 57.9	
	comp=E,108nm,0.7s						
M27K	**Edge Creek, AK**	**3.34**	**157**	P	**Pn**	**03 05 57.5**	**+1.2**
	baz=339,SNR=15						
H21K	**Melozitna Rive**	**3.37**	**277**	IAML		03 06 51.5	
	comp=E,90nm,0.4s						
H21K				IAML		03 06 57.4	
	comp=N,62nm,0.7s						
H21K	**Melozitna Rive**	**3.37**	**277**	P	**Pn**	**03 05 56.1**	**-0.5**
	baz=90						
M24K	**Tolsona, Glenn**	**3.41**	**192**	P	**Pn**	**03 05 58.2**	**+1.1**
	baz=10						
EPYK	**Eagle Plains**	**3.41**	**70**		**Pn**	**03 05 56.5**	**-0.7**
EPYK				IAML		03 06 53.3	
	comp=N,77nm,0.9s						
EPYK	**Eagle Plains**	**3.41**	**70**	P	**Pn**	**03 05 56.8**	**-0.3**
	baz=258						
CHUM	**Lake Minchumin**	**3.62**	**248**	P	**Pn**	**03 05 59.5**	**-0.5**
	baz=61						
F22K	**John River**	**3.64**	**308**	P	**Pn**	**03 06 01.2**	**+0.8**
	baz=122						
L29M	**L29M**	**3.70**	**126**	P	**Pn**	**03 06 01.5**	**+0.2**
	baz=312						
TOLK	**Toolik Lake Re**	**3.74**	**332**		**Pn**	**03 06 02.3**	**+0.6**
TOLK	**Toolik Lake Re**	**3.74**	**332**	P	**Pn**	**03 06 02.9**	**+1.2**
	baz=147,SNR=16						
G21K	**Allakaket**	**3.75**	**291**	P	**Pn**	**03 06 02.0**	**+0.1**
	baz=103						
IMAR	**Indian Mountai**	**3.77**	**282**	Pn	**Pn**	**03 06 02.6**	**+0.5**
CAST	**Castle Rocks**	**3.78**	**241**		**Pn**	**03 06 01.9**	**-0.4**
CAST				IAML		03 07 07.9	
	comp=N,44nm,0.5s						
CAST				IAML		03 07 08.2	
	comp=E,43nm,0.5s						
CAST	**Castle Rocks**	**3.78**	**241**	P	**Pn**	**03 06 01.5**	**-0.7**
	baz=54						
SCM	**Sheep Creek Mo**	**3.80**	**199**	Pn	**Pn**	**03 06 01.4**	**-1.3**
SCM				IAML		03 07 06.5	
	comp=E,64nm,1.0s						
SCM	**Sheep Creek Mo**	**3.80**	**199**	P	**Pn**	**03 06 04.8**	**+2.2**
	baz=17,SNR=9.4						
M23K	**Glacier View**	**3.90**	**202**	P	**Pn**	**03 06 05.6**	**+1.7**
	baz=19,SNR=31						
E22K	**Anaktuvuk Pass**	**3.90**	**317**	P	**Pn**	**03 06 05.3**	**+1.4**
	baz=131						
D25K	**Kavik River**	**3.95**	**351**	P	**Pn**	**03 06 06.2**	**+1.6**
	baz=170,SNR=9.5						
F21K	**Alatna River**	**3.96**	**301**	P	**Pn**	**03 06 05.5**	**+0.8**
	baz=113						
SML	**Sawmill**	**3.99**	**206**	IAML		03 07 12.4	
	comp=E,62nm,0.6s						
SML				IAML		03 07 13.1	
	comp=N,76nm,0.9s						
SML	**Sawmill**	**3.99**	**206**	P	**Pn**	**03 06 07.3**	**+2.2**
	baz=22,SNR=8.0						
KLU	**Klutina**	**4.00**	**188**	IAML		03 07 09.7	
	comp=E,40nm,1.5s						
KLU				IAML		03 07 11.5	
	comp=N,55nm,0.6s						
KLU	**Klutina**	**4.00**	**188**	P	**Pn**	**03 06 07.4**	**+2.1**
	baz=7.1						
D24K	**Happy Valley**	**4.06**	**339**	P	**Pn**	**03 06 07.9**	**+2.0**
	baz=155						
M29M	**Somme Creek**	**4.08**	**135**	P	**Pn**	**03 06 07.1**	**+0.6**
	baz=320,SNR=6.2						
YUK3	**Moose Creek**	**4.14**	**151**	P	**Pn**	**03 06 08.2**	**+0.8**
	baz=334,SNR=13						
MCARA	**McCarthy VSAT**	**4.14**	**169**	Pn	**Pn**	**03 06 07.6**	**+0.4**
MCARA				IAML		03 07 19.8	
	comp=E,44nm,0.9s						
MCARA	**McCarthy VSAT**	**4.14**	**169**	P	**Pn**	**03 06 08.3**	**+1.2**
	baz=350						
PPLA	**Purkeypile**	**4.15**	**235**	Pn	**Pn**	**03 06 06.9**	**-0.5**
PPLA	**Purkeypile**	**4.15**	**235**	P	**Pn**	**03 06 07.3**	**0.0**
	baz=49						
C27K	**Jago River**	**4.22**	**5**	P	**Pn**	**03 06 09.2**	**+0.9**
	baz=186						
J20K	**Nowinta River**	**4.23**	**257**	P	**Pn**	**03 06 07.7**	**-0.6**
	baz=68						
D23K	**Nanushuk River**	**4.23**	**329**	P	**Pn**	**03 06 09.9**	**+1.5**
	baz=144						
VRDI	**Verde Repeater**	**4.27**	**172**		**Pn**	**03 06 09.1**	**0.0**
PMR	**Palmer**	**4.34**	**209**	Pn	**Pn**	**03 06 09.5**	**-0.3**
PMR				IAML		03 07 23.9	
	comp=E,33nm,1.2s						
DIV	**Divide**	**4.35**	**187**		**Pn**	**03 06 09.2**	**-1.0**
KNK	**Knik Glacier**	**4.38**	**204**	IAML		03 07 11.3	
	comp=E,47nm,0.5s						
KNK				IAML		03 07 22.3	
	comp=N,44nm,0.8s						
KNK	**Knik Glacier**	**4.38**	**204**	P	**Pn**	**03 06 11.8**	**+1.4**
	baz=21						
BMRM	**Bremner River**	**4.49**	**179**	P	**Pn**	**03 06 14.4**	**+2.4**
	baz=359,SNR=7.0						
C24K	**Franklin Bluff**	**4.56**	**342**	P	**Pn**	**03 06 14.7**	**+1.8**
	baz=159						
K20K	**Telida**	**4.56**	**247**	Pn	**Pn**	**03 06 12.1**	**-0.9**
K20K				IAML		03 07 28.3	
	comp=E,39nm,3.2s						
K20K				IAML		03 07 37.9	

LOGN	**Logan Glacier**	**4.93 158**	Pn	**Pn**	**03 06 18.5 +0.3**
LOGN			IAML		03 07 43.0
	comp=N,18nm,1.0s				
LOGN			IAML		03 07 45.7
	comp=E,18nm,0.9s				
YUK4	**Talbot Arm**	**4.93 144**	P	**Pn**	**03 06 18.5 +0.3**
	baz=328				
C23K	**Itkillik River**	**4.96 336**	P	**Pn**	**03 06 19.6 +1.3**
	baz=150				
BERG	**Berg Lake**	**5.09 174**	Pn	**Pn**	**03 06 20.4 +0.2**
BERG			IAML		03 07 53.8
	comp=N,22nm,3.0s				
BERG			IAML		03 08 14.2
	comp=E,20nm,2.7s				
HMT	**Hamilton**	**5.13 177**	IAML		03 09 28.4
	comp=N,23nm,3.8s				
M20K	**Styx River**	**5.17 230**	P	**Pn**	**03 06 22.5 +1.0**
	baz=43				
N30M	**Aishikik Lake**	**5.26 136**	P	**Pn**	**03 06 23.0 +0.5**
	baz=323				
INK	**Inuvik**	**5.26 52**	Pn	**Pn**	**03 06 22.0 -0.5**
INK	**Inuvik**	**5.26 52**	P	**Pn**	**03 06 22.8 +0.2**
	baz=242				
TABL	**Table Mountain**	**5.28 160**	Pn	**Pn**	**03 06 22.7 -0.2**
TABL			IAML		03 07 59.4
	comp=E,16nm,1.2s				
YUK6	**Outpost Mounta**	**5.35 145**	P	**Pn**	**03 06 25.0 +1.1**
	baz=330,SNR=6.1				
TTA	**Tatalina**	**5.54 248**	Pn	**Pn**	**03 06 26.6 +0.1**
L19K	**White Mountain**	**5.55 239**	Pn	**Pn**	**03 06 24.9 -1.7**
N31M	**Braeburn, Yuko**	**5.63 131**	Pn	**Pn**	**03 06 27.5 -0.3**
HYT	**Haines Junctio**	**5.67 141**	Pn	**Pn**	**03 06 29.5 +1.2**

*NOU **09** 03:17:09.3, 37.°11S×179.°45E, h0km, MLv3.6/6, Off E. Coast of N. Island, N.Z.*
*WEL **09** 03:17:15.4±1.7, 37.°S±8.°×17.°9E±1.°0, h5km±8km, M3.2/11, ML3.5/13, MLv3.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=89.9*
ISC 09 03:17:13.9±2.9, 37.16S±0.08×179.1E±0.1, h9km±13km, n51, σ0.84/56, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.73**	**236**	P	**Pb**	**03 17 28.4**	**-0.3**
MXZ				S	**Sg**	**03 17 36.4**	**-1.1**
MXZ	**Matakaoa Point**	**0.73**	**236**	P	**Pb**	**03 17 28.5**	**-0.3**
WMGZ	**Waiomatatini S**	**0.84**	**218**	P	**Pn**	**03 17 32.6**	**+0.7**
WMGZ				S	**Sn**	**03 17 44.2**	**-0.1**
PKGZ	**Pakihiroa**	**1.07**	**227**	P	**Pn**	**03 17 34.8**	**-0.4**
PKGZ				S	**Sb**	**03 17 49.5**	**+0.6**
PUZ	**Puketiti**	**1.12**	**215**	P	**Pg**	**03 17 36.4**	**+1.0**
PUZ				S	**Sg**	**03 17 50.5**	**+0.6**
HAZ	**Te Kaha**	**1.19**	**239**	P	**Pn**	**03 17 35.4**	**-1.2**
HAZ				S	**Sg**	**03 17 52.7**	**+0.6**
TWGZ	**Tauwhareparae**	**1.33**	**220**	P	**Pg**	**03 17 39.7**	**+0.1**
RUGZ	**Raukumara Rang**	**1.37**	**234**	P	**Pb**	**03 17 39.5**	**-0.3**
CNGZ	**Carnagh Statio**	**1.49**	**207**	P	**Pg**	**03 17 42.1**	**-0.4**
TKGZ	**Te Karaka**	**1.60**	**217**	P	**Pb**	**03 17 43.4**	**-0.3**
MWZ	**Matawai**	**1.70**	**226**	P	**Pb**	**03 17 44.6**	**-0.7**
RIGZ	**Rimuhau**	**1.86**	**213**	P	**Pn**	**03 17 46.4**	**+0.4**
RAGZ	**Rawiri**	**1.87**	**224**	P	**Pb**	**03 17 47.0**	**-1.2**
URZ	**Urewera**	**1.90**	**234**	P	**Pb**	**03 17 47.2**	**-1.5**
URZ	**Urewera**	**1.90**	**234**	P	**Pb**	**03 17 47.6**	**-1.2**
EDRZ	**Edgecumbe**	**2.08**	**242**	P	**Pn**	**03 17 49.7**	**+0.7**
OPRZ	**Ohinepanea**	**2.12**	**250**	P	**Pn**	**03 17 49.6**	**+0.2**
SNGZ	**Shannon Statio**	**2.12**	**220**	P	**Pn**	**03 17 50.2**	**+0.7**
MHGZ	**Mahia Peninsul**	**2.19**	**204**	P	**Pn**	**03 17 50.7**	**+0.3**
RTZ	**Ruatahuna**	**2.20**	**228**	P	**Pn**	**03 17 51.8**	**+1.1**
RAHZ	**Arahi**	**2.35**	**221**	P	**Pn**	**03 17 53.8**	**+1.1**
MTHZ	**Maungataniwha**	**2.44**	**225**	P	**Pn**	**03 17 54.8**	**+0.8**
KMRZ	**Kaimai**	**2.58**	**254**	P	**Pn**	**03 17 56.0**	**+0.1**
NMHZ	**Naumai**	**2.63**	**222**	P	**Pn**	**03 17 57.5**	**+0.9**
ARHZ	**Aropaoanui**	**2.66**	**217**	P	**Pn**	**03 17 57.2**	**+0.2**
KUZ	**Kuaotunu**	**2.71**	**278**	P	**Pn**	**03 17 56.5**	**-1.1**
KUZ	**Kuaotunu**	**2.71**	**278**	P	**Pn**	**03 17 56.5**	**-1.1**
BKZ	**Black Stump Fm**	**2.85**	**225**	P	**Pn**	**03 18 00.1**	**+0.5**
BKZ	**Black Stump Fm**	**2.85**	**225**	P	**Pn**	**03 18 00.3**	**+0.7**
MCHZ	**McNeill Hill**	**2.95**	**219**	P	**Pn**	**03 18 00.9**	**0.0**
GRZ	**Great Barrier**	**3.04**	**286**	P	**Pn**	**03 18 03.0**	**+0.8**
KWHZ	**Kaweka Forest**	**3.08**	**222**	P	**Pn**	**03 18 02.2**	**-0.5**
MKAZ	**Moumakai**	**3.12**	**270**	P	**Pn**	**03 18 02.4**	**-0.8**
KAHZ	**Kahuranaki**	**3.15**	**213**	P	**Pn**	**03 18 02.6**	**-1.0**
WIAZ	**Waiheke Island**	**3.17**	**275**	P	**Pn**	**03 18 03.7**	**-0.3**
TMVZ	**Te Maari**	**3.30**	**233**	P	**Pn**	**03 18 06.3**	**+0.6**
NTVZ	**North Tongarir**	**3.31**	**233**	P	**Pn**	**03 18 06.5**	**+0.6**
BHHZ	**Black Hill Sta**	**3.32**	**225**	P	**Pn**	**03 18 06.6**	**+0.6**
ETAZ	**East Tamaki Re**	**3.32**	**272**	P	**Pn**	**03 18 07.1**	**+1.1**
OTVZ	**Oturere**	**3.35**	**232**	P	**Pn**	**03 18 07.0**	**+0.5**
NNVZ	**North Ngauruho**	**3.36**	**233**	P	**Pn**	**03 18 07.5**	**+0.8**
MBAZ	**Motutapu North**	**3.37**	**275**	P	**Pn**	**03 18 07.6**	**+1.1**
SNVZ	**South Ngauruho**	**3.38**	**232**	P	**Pn**	**03 18 07.2**	**+0.2**
NGZ	**Ngauruhoe**	**3.40**	**233**	P	**Pn**	**03 18 07.8**	**+0.6**
AWAZ	**Awhitu Peninsu**	**3.54**	**270**	P	**Pn**	**03 18 09.4**	**+0.4**
RVAZ	**Riverhead Bore**	**3.62**	**275**	P	**Pn**	**03 18 10.9**	**+0.9**
WCZ	**Waipu Caves**	**4.00**	**286**	P	**Pn**	**03 18 15.5**	**+0.3**
BFZ	**Birch Farm**	**4.15**	**211**	P	**Pn**	**03 18 15.6**	**-1.8**
OUZ	**Omahuta**	**4.83**	**292**	P	**Pn**	**03 18 27.6**	**+0.9**
OUZ	**Omahuta**	**4.83**	**292**	P	**Pn**	**03 18 27.7**	**+0.9**
CTZ	**Chatham Island**	**7.34**	**155**	P	**Pn**	**03 19 03.0**	**+1.7**

WEL 09 03:53:26.7±1.8, 37.°S±9.°×17.°9E±1.°2, h12km±9km, M3.3/6, ML3.6/9, MLv3.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=92.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.60**	**229**	P	Pb	03 53 38.9	-0.2
MXZ				S	Sg	03 53 46.7	+0.4
WMGZ	**Waiomatatini S**	**0.74**	**210**	P	Pb	03 53 42.2	+0.5
WMGZ				S	Sn	03 53 53.5	-0.9
PKGZ	**Pakihiroa**	**0.96**	**221**	P	Pg	03 53 45.2	0.0
PUZ	**Puketiti**	**1.02**	**209**	P	Pb	03 53 45.7	-0.8
PUZ				S	Sg	03 53 58.7	-1.1
HAZ	**Te Kaha**	**1.05**	**236**	P	Pb	03 53 45.9	-0.9
HAZ				S	Sn	03 54 02.3	+0.5
TWGZ	**Tauwhareparae**	**1.23**	**215**	P	Pn	03 53 49.3	-0.6
RUGZ	**Raukumara Rang**	**1.24**	**230**	P	Pn	03 53 49.9	-0.1
CNGZ	**Carnagh Statio**	**1.41**	**202**	P	Pn	03 53 51.5	-0.8
TKGZ	**Te Karaka**	**1.51**	**213**	P	Pn	03 53 52.5	-1.1
MWZ	**Matawai**	**1.58**	**222**	P	Pn	03 53 53.9	-0.8
RAGZ	**Rawiri**	**1.76**	**221**	P	Pn	03 53 56.3	-0.8
RIGZ	**Rimuhau**	**1.77**	**210**	P	Pn	03 53 55.6	-1.6
URZ	**Urewera**	**1.77**	**232**	P	Pn	03 53 57.0	-0.2
EDRZ	**Edgecumbe**	**1.94**	**241**	P	Pn	03 53 59.9	+0.3
SNGZ	**Shannon Statio**	**2.02**	**217**	P	Pn	03 53 59.6	-1.0
KNZ	**Kokohu**	**2.08**	**207**	P	Pn	03 53 58.9	-2.5
RTZ	**Ruatahuna**	**2.08**	**226**	P	Pn	03 54 00.9	-0.6
MHGZ	**Mahia Peninsul**	**2.12**	**201**	P	Pn	03 53 60.0	-2.0
RAHZ	**Arahi**	**2.24**	**219**	P	Pn	03 54 03.1	-0.6
WHHZ	**Waihua**	**2.30**	**214**	P	Pn	03 54 03.1	-1.4
MTHZ	**Maungataniwha**	**2.33**	**223**	P	Pn	03 54 04.0	-0.8
NMHZ	**Naumai**	**2.52**	**220**	P	Pn	03 54 06.5	-1.2
KUZ	**Kuaotunu**	**2.56**	**279**	P	Pn	03 54 07.1	-1.0
BKZ	**Black Stump Fm**	**2.74**	**223**	P	Pn	03 54 09.2	-1.4
TOZ	**Tahuroa Road**	**2.75**	**257**	P	Pn	03 54 10.3	-0.3
MCHZ	**McNeill Hill**	**2.84**	**216**	P	Pn	03 54 10.1	-1.9
GRZ	**Great Barrier**	**2.90**	**287**	P	Pn	03 54 13.3	+0.6
KWHZ	**Kaweka Forest**	**2.96**	**220**	P	Pn	03 54 11.9	-1.8
MKAZ	**Moumakai**	**2.97**	**270**	P	Pn	03 54 13.1	-0.6
WIAZ	**Waiheke Island**	**3.02**	**276**	P	Pn	03 54 15.0	+0.6
KAHZ	**Kahuranaki**	**3.05**	**210**	P	Pn	03 54 12.0	-2.9
ETAZ	**East Tamaki Re**	**3.17**	**273**	P	Pn	03 54 16.3	-0.1
NTVZ	**North Tongarir**	**3.17**	**232**	P	Pn	03 54 15.7	-0.9
BHHZ	**Black Hill Sta**	**3.20**	**223**	P	Pn	03 54 15.5	-1.4
MBAZ	**Motutapu North**	**3.21**	**276**	P	Pn	03 54 18.0	+0.9
OTVZ	**Oturere**	**3.22**	**231**	P	Pn	03 54 16.6	-0.7
NNVZ	**North Ngauruho**	**3.23**	**232**	P	Pn	03 54 17.3	-0.1
SNVZ	**South Ngauruho**	**3.25**	**231**	P	Pn	03 54 16.5	-1.2
NGZ	**Ngauruhoe**	**3.27**	**231**	P	Pn	03 54 16.8	-1.1
TWVZ	**Taurewa**	**3.31**	**234**	P	Pn	03 54 18.3	-0.2
RVAZ	**Riverhead Bore**	**3.47**	**275**	P	Pn	03 54 21.7	+1.2
TSZ	**Takapari Road**	**3.68**	**218**	P	Pn	03 54 20.3	-3.2
WCZ	**Waipu Caves**	**3.85**	**287**	P	Pn	03 54 26.3	+0.5
OUZ	**Omahuta**	**4.70**	**293**	P	Pn	03 54 38.4	+0.9
CTZ	**Chatham Island**	**7.40**	**154**	P	Pn	03 55 12.2	-2.3

*IDC **09** 03:54:31.5±1.4, 35.°46N×23.°26E, h0km, mb3.7/5, mbtmp3.6/6, ML2.7/1, MS2.7/1, Error ellipse: s-maj=47.8km s-min=23.4km az=141.0*
*HLW **09** 03:54:37.9, 35.°38N×23.°68E, h33km±39km, Md3.5*
*ATH **09** 03:54:38.3, 35.°35N×23.°30E, h40km±3km, ML3.4/8, Error ellipse: s-maj=4.2km s-min=1.0km az=67.0*
*THE **09** 03:54:39.2, 35.°33N×23.°26E, h21km±1km, ML3.2/8, Error ellipse: s-maj=2.0km s-min=0.6km az=57.0*
ISC 09 03:54:37.6±1.0, 35.27N±0.05×23.27E±0.07, h43km±11km, n36, σ1.52/51, mb3.4/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.34**	**96**	P	**Pn**	**03 54 46.5**	**0.0**
KNDR				S	**Sn**	**03 54 51.8**	**-1.0**
	5μm,0.5s						
KNDR	**Palaiochora Ch**	**0.34**	**96**	P	**Pn**	**03 54 46.5**	**0.0**
KNDR				S	**Sn**	**03 54 52.3**	**-0.5**
KNDR				AML	AML	03 54 54.0	
	comp=E,20800μm,0.5s						
KNDR				AML	AML	03 54 57.0	
	comp=N,33357μm,0.5s						
RODP	**Rodopos**	**0.49**	**54**	P	**Pn**	**03 54 48.2**	**-0.2**
ANKY	**Antikythira Is**	**0.60**	**2**	P	**Pn**	**03 54 49.4**	**-0.3**
ANKY				S	**Sn**	**03 54 58.6**	**+0.2**
	comp=N,3μm,0.5s						
ANKY	**Antikythira Is**	**0.60**	**2**	P	**Pn**	**03 54 49.4**	**-0.3**
ANKY				S	**Sn**	**03 54 57.5**	**-0.9**
ANKY				AML	AML	03 54 59.2	
	comp=N,7538μm,0.5s						
ANKY				AML	AML	03 55 00.4	
	comp=E,5764μm,0.4s						
IMMV	**Iera Moni Meta**	**0.61**	**72**	P	**Pn**	**03 54 50.1**	**+0.2**
IMMV				S	**Sn**	**03 54 59.2**	**+0.5**
	comp=E,4μm,0.3s						
IMMV	**Iera Moni Meta**	**0.61**	**72**	P	**Pn**	**03 54 49.9**	**0.0**
IMMV				S	**Sn**	**03 54 58.6**	**-0.2**
IMMV				AML	AML	03 55 00.7	
	comp=N,7929μm,0.3s						
IMMV				AML	AML	03 55 01.5	
	comp=E,7802μm,0.4s						
CHAN	**Chania**	**0.68**	**68**	P	**Pn**	**03 54 51.2**	**+0.4**
CHAN				S	**Sn**	**03 55 00.5**	**+0.2**
CHAN				AML	AML	03 55 02.4	
	comp=E,6716μm,0.6s						
CHAN				AML	AML	03 55 03.1	
	comp=N,7310μm,0.4s						
GVD	**Gavdhos**	**0.80**	**122**	P	**Pn**	**03 54 54.4**	**+2.0**
GVD				S	**Sn**	**03 55 06.7**	**+3.6**
	comp=N,2μm,0.4s						
GVD	**Gavdhos**	**0.80**	**122**	P	**Pn**	**03 54 53.5**	**+1.2**
GVD				S	**Sn**	**03 55 05.7**	**+2.6**
GVD				AML	AML	03 55 13.1	
	comp=E,3391μm,0.4s						
GVD				AML	AML	03 55 17.2	
	comp=N,4130μm,0.5s						
GVDS	**Gavdos**	**0.80**	**122**	P	**Pn**	**03 54 54.2**	**+1.8**
GVDS				S	**Sn**	**03 55 06.8**	**+3.7**
	comp=N,1μm,0.2s						
KTHA	**Kythira Island**	**1.00**	**350**	P	**Pn**	**03 54 56.3**	**+1.1**
KTHA				S	**Sn**	**03 55 10.1**	**+1.9**
	comp=N,1μm,0.4s						
KTHA	**Kythira Island**	**1.00**	**350**	P	**Pn**	**03 54 56.2**	**+1.0**
KTHA				S	**Sn**	**03 55 08.2**	**+0.1**
KTHA				AML	AML	03 55 12.0	
	comp=E,3094μm,0.4s						
KTHA				AML	AML	03 55 12.0	
	comp=N,1367μm,0.5s						
PRNS	**Prines Rethymn**	**1.01**	**84**	P	**Pn**	**03 54 56.0**	**+0.7**
PRNS				S	**Sn**	**03 55 10.6**	**+2.3**
	comp=N,508nm,0.6s						
KTHR	**Kythira**	**1.01**	**348**	P	**Pn**	**03 54 56.1**	**+0.8**
KTHR				S	**Sn**	**03 55 09.8**	**+1.3**
	comp=N,1μm,0.4s						
KTHR	**Kythira**	**1.01**	**348**	P	**Pn**	**03 54 56.2**	**+0.8**
KTHR				AML	AML	03 55 12.1	
	comp=N,8817μm,0.4s						
KTHR				AML	AML	03 55 12.4	
	comp=E,8229μm,0.4s						
IDI	**Anoyia**	**1.32**	**89**	P	**Pn**	**03 55 01.3**	**+1.6**
VLI	**Veliai**	**1.47**	**349**	P	**Pn**	**03 55 02.8**	**+1.1**
VLI	**Veliai**	**1.47**	**349**	P	**Pn**	**03 55 02.7**	**+1.1**
VLI				S	**Sn**	**03 55 22.0**	**+2.3**
VLI				AML	AML	03 55 25.5	
	comp=N,1179μm,0.7s						
VLI				AML	AML	03 55 26.8	
	comp=E,900μm,0.9s						
EPID	**Epidavros**	**2.34**	**357**	P	**Pn**	**03 55 14.4**	**+0.8**
KLV	**Kalavryta, Ach**	**2.91**	**342**	P	**Pn**	**03 55 22.5**	**+1.0**
DRO	**Drossia**	**2.96**	**335**	P	**Pn**	**03 55 23.9**	**+1.8**
EFP	**Efpalio**	**3.34**	**341**	P	**Pn**	**03 55 29.7**	**+2.5**
SLUM	**Salum**	**4.10**	**156**	P	**Pn**	**03 55 39.0**	**+1.2**
	baz=161						
SWA2		**6.29**	**162**	P	**Pn**	**03 56 08.4**	**+0.6**
	baz=165						
SWA2				S	**Sn**	**03 57 14.9**	**-3.4**
	baz=165						
RYAN	**Fayoum**	**8.56**	**134**	P	**Pn**	**03 56 38.2**	**-0.7**
	baz=136						
GLL	**Jalalah**	**9.11**	**126**	P	**Pn**	**03 56 45.3**	**-1.2**
	baz=128						
HFRF	**Wahat Farafira**	**9.17**	**151**	P	**Pn**	**03 56 47.5**	**+0.2**
	baz=153						
HFRF				S	Sn	03 58 23.2	-6.0
	baz=153						
BRTR	**Keskin Array B**	**9.36**	**59**	Pn	**Pn**	**03 56 50.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=234,slow=15,SNR=4.2						
	comp=E,0.7nm,0.7s						
NBNS	**Bani Suef**	**9.50**	**132**	P	**Pn**	**03 56 51.1**	**-0.7**
	baz=134						
HFS	**Hagfors**	**25.65**	**349**	P	**P**	**04 00 01.1**	**-1.8**
	comp=E,2.4nm,0.9s,baz=166,slow=8.8,SNR=6.3						
	comp=E,2.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.41**	**227**	P	**P**	**04 00 37.9**	**+1.0**
	comp=E,0.5nm,0.5s,baz=31,slow=8.9,SNR=7.3						
	comp=E,0.5nm,0.5s						
ARU	**Arti**	**31.90**	**37**	LR	LR	04 16 04.4	
	comp=E,16nm,21.4s,baz=357,slow=41						
KURBB	**Kurchatov Arra**	**42.26**	**51**	P	**P**	**04 02 25.3**	**-1.2**
	comp=E,0.4nm,0.5s,baz=275,slow=8.4,SNR=4.4						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**45.00**	**56**	P	**P**	**04 02 47.7**	**-1.0**
	comp=E,0.3nm,0.5s,baz=271,slow=8.1,SNR=5.2						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**46.05**	**46**	P	**P**	**04 02 54.6**	**-2.1**
	comp=E,0.7nm,0.3s,baz=275,slow=7.9,SNR=4.2						
	comp=E,0.7nm,0.3s						

*IDC **09** 03:56:06.5±1.3, 6.°57S×131.°48E, h0km, mb4.0/5, mbtmp4.0/9, ML3.9/4, MS3.1/6, Error ellipse: s-maj=64.0km s-min=18.8km az=76.0*
*NEIC **09** 03:56:11.5±2.1, 6.°42S±0.°02×131.°3E±0.°2, h88km±10km, mb4.0/5, Error ellipse: s-maj=24.8km s-min=2.5km az=90.0*
ISC 09 03:56:11.1±0.7, 6.49S±0.05×131.4E±0.1, h100km, n27, σ2.19/22, mb3.9/8, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.48**	**182**	Pn	**Pn**	**03 56 36.7**	**-0.4**
FAKI	**Fak Fak**	**3.66**	**14**		**Pn**	**03 57 05.1**	**-0.6**
SIJI	**Sorong**	**5.58**	**359**	Pn	**Pn**	**03 57 32.5**	**+0.8**
	2.8nm,0.3s,baz=165,slow=20,SNR=5.2						
SIJI				Sn	**Sn**	**03 58 32.8**	**-1.9**
	2.3nm,0.3s,baz=240,slow=23,SNR=1.7						
	7.1nm,0.3s						
MTN	**Manton Dam**	**6.32**	**182**		**Pn**	**03 57 43.2**	**+1.5**
KNRA	**Kununurra**	**9.48**	**195**		**Pn**	**03 58 26.7**	**+2.0**
KAPI	**Kappang**	**11.63**	**277**	LR	LR	04 03 10.1	
	comp=Z,69nm,19.8s,baz=105,slow=36						
FITZ	**Fitzroy Crossi**	**12.81**	**205**	Pn	**Pn**	**03 59 10.2**	**+0.7**
	0.9nm,0.3s,baz=33,slow=11,SNR=29						
FITZ				Sn	**Sn**	**04 01 26.6**	**-3.9**
	0.3nm,0.3s,baz=92,slow=22,SNR=3.0						
FITZ				LR	LR	04 03 58.1	
	comp=Z,56nm,19.1s,baz=49,slow=37						
	5.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**12.81**	**205**		**Pn**	**03 59 10.5**	**+1.0**
TOLI2	**Tolitoli**	**12.97**	**305**	Pn	**Pn**	**03 59 09.9**	**-1.8**
WRA	**Warramunga Arr**	**13.68**	**168**	Pn	**Pn**	**03 59 21.4**	**+0.4**
	0.4nm,0.3s,baz=350,slow=13,SNR=19						
WRA				Sn	**Sn**	**04 01 45.8**	**-5.9**
	0.2nm,0.3s,baz=350,slow=22,SNR=4.5						
	1.7nm,0.6s						
PMG	**Port Moresby**	**15.92**	**102**	LR	LR	04 07 28.3	
	comp=Z,114nm,19.4s,baz=108,slow=43						
AS31	**Alice Springs**	**17.25**	**172**	P	**P**	**04 00 06.4**	**+0.5**
ASAR	**Alice Springs**	**17.25**	**172**	P	**Pn**	**04 00 09.5**	**+3.6**
	0.4nm,0.3s,baz=342,slow=8.8,SNR=17						
ASAR				S	**Sn**	**04 03 15.8**	**-2.1**
	0.8nm,0.8s,baz=358,slow=25,SNR=3.2						
	1.5nm,0.6s						
CTA	**Charters Tower**	**19.80**	**134**	LR	LR	04 09 11.7	
	comp=Z,112nm,20.3s,baz=82,slow=40						
CMAR	**Chiang Mai Arr**	**40.45**	**308**	P	P	04 03 47.9	+7.8
	1.2nm,0.3s,baz=133,slow=6.6,SNR=4.9						
CMAR				LR	LR	04 24 04.3	
	comp=Z,8.2nm,18.1s,baz=185,slow=41						
	1.2nm,0.3s						
URZ	**Urewera**	**52.05**	**134**	P	**P**	**04 05 11.8**	**+1.1**
PALK	**Pallekele**	**52.34**	**284**	LR	LR	04 30 02.1	
	comp=Z,16nm,18.1s,baz=249,slow=39						
MK31	**Makanchi Array**	**68.55**	**326**	P	**P**	**04 07 04.3**	**+1.3**
MK31				IAmb	IAmb	04 07 12.7	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**68.55**	**326**	P	P	04 07 12.2	+9.3
	comp=Z,1.6nm,0.5s,baz=118,slow=7.7,SNR=14						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**68.55**	**326**	P	**P**	**04 07 03.8**	**+0.8**
ZALV	**Zalesovo Beam**	**71.73**	**333**	P	**P**	**04 07 23.2**	**+1.0**
KURBB	**Kurchatov Arra**	**72.79**	**328**	P	P	04 07 37.7	+9.1
	comp=Z,0.8nm,0.7s,baz=126,slow=5.1,SNR=5.7						
	comp=Z,0.8nm,0.7s						
KURK	**Kurchatov**	**72.79**	**328**	P	**P**	**04 07 28.2**	**-0.4**
KURK				IAmb	IAmb	04 07 46.2	
	comp=Z,4.1nm,1.3s						
VNDA	**Vanda**	**72.79**	**173**	P	P	04 07 35.4	+7.1
	comp=Z,0.9nm,0.5s,baz=215,slow=12,SNR=11						
	comp=Z,0.9nm,0.5s						
KKAR	**Karatay Array**	**73.85**	**318**	P	**P**	**04 07 36.6**	**+1.6**
BVAR	**Borovoye Array**	**78.36**	**327**	P	P	04 08 09.5	+9.1
	comp=Z,0.4nm,0.5s,baz=101,slow=6.2,SNR=4.1						
	comp=Z,0.4nm,0.5s						
BRVK	**Borovoye**	**78.43**	**327**	P	**P**	**04 07 59.9**	**-0.9**
BRVK				IAmb	IAmb	04 08 12.5	
	comp=Z,1.3nm,0.8s						

*IDC **09** 03:57:09.9±1.6, 30.°99S×71.°45W, h0km, mb4.0/4, mbtmp3.8/8, ML3.5/4, Error ellipse: s-maj=36.2km s-min=35.4km az=6.0*
*GUC **09** 03:57:16.9±0.8, 30.°71S×71.°43W, h49km±2km, ML3.8*
ISC 09 03:57:18.1±0.9, 30.72S±0.04×71.34W±0.07, h37km±1km, n34, σ2.11/33, mb3.8/4, 4C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.26**	**280**	⇑*iP*	**Pn**	**03 57 24.8**	**-1.6**
CO06				*i* S	**Sn**	**03 57 29.9**	**-4.2**
CO06				IAML		03 57 31.8	
	comp=E,9μm,0.3s						
CO02	**Combarbal**	**0.56**	**149**	⇓*iP*	**Pn**	**03 57 29.8**	**-0.1**
CO02				*i* S	**Sn**	**03 57 39.0**	**+1.0**
CO02				IAML		03 57 40.2	
	comp=E,19μm,0.5s						
CO03	**El Pedregal**	**0.57**	**102**	⇓*iP*	**Pn**	**03 57 30.1**	**+0.3**
CO03				*i* S	**Sn**	**03 57 39.7**	**+1.7**
CO03				IAML		03 57 40.9	
	comp=E,7μm,0.2s						
GO04	**Tololo Observa**	**0.71**	**40**	⇓*iP*	**Pn**	**03 57 31.8**	**-0.1**
GO04				*i* S	**Sn**	**03 57 42.8**	**+1.1**
CO05	**La Serena**	**0.80**	**6**	*eP*	**Pn**	**03 57 32.2**	**-0.6**
CO05				*i* S	**Sn**	**03 57 43.8**	**+0.2**
CO05				IAML		03 57 50.1	
	comp=N,3μm,0.4s						
CO01	**Juntas del Tor**	**1.30**	**56**	⇓*iP*	**Pn**	**03 57 41.0**	**+1.1**
CO01				*e*S	**Sn**	**03 57 59.1**	**+2.9**
CO01				IAML		03 58 02.9	
	comp=N,1μm,0.4s						
LCO	**Las Campanas**	**1.79**	**18**	⇓*iP*	**Pn**	**03 57 46.6**	**0.0**
LCO				*i* S	**Sn**	**03 58 09.1**	**+0.8**
VA06	**Catapilco**	**1.84**	**179**	⇑*iP*	**Pn**	**03 57 47.1**	**+0.1**
VA06				IAML		03 58 17.4	
	comp=E,1μm,0.6s						
VA03	**San Esteban**	**2.15**	**162**	⇑*iP*	**Pn**	**03 57 52.5**	**+1.1**
VA03				IAML		03 58 25.2	
	comp=N,1μm,0.3s						
ROCH	**El Roble**	**2.26**	**173**	*eP*	**Pn**	**03 57 53.6**	**+0.5**
ROCH				IAML		03 58 27.9	
	comp=N,885nm,0.2s						
PEL	**Peldehue**	**2.48**	**167

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PB06  IPOC Station P   2.02 254  P   Pn   04 08 26.0 -1.4
PB06                             S   Sn   04 08 51.4 -3.9
PB06                             IAML      04 08 55.8
      57nm,0.2s
PB06  IPOC Station P   2.02 254  P   Pn   04 08 25.5 -1.9
PB15  IPOC Station P   2.12 240  P   Pn   04 08 27.5 -1.2
PB15  IPOC Station P   2.12 240  P   Pn   04 08 26.8 -1.9
PB02  IPOC Station P   2.40 290  P   Pn   04 08 29.8 -2.0
PB02  IPOC Station P   2.40 290  P   Pn   04 08 29.8 -2.0
PB02                             S   Sn   04 08 58.5 -4.5
PB02                             IAML      04 09 01.4
      59nm,0.2s
PB04  IPOC Station P   2.48 265  P   Pn   04 08 30.9 -2.0
PB04                             S   Sn   04 09 00.5 -4.5
PB04                             IAML      04 09 04.9
      64nm,0.1s
PB04  IPOC Station P   2.48 265  P   Pn   04 08 30.7 -2.2
GO01  Chusmiza         2.94 327  P   Pn   04 08 37.0 -1.9
GO01  Chusmiza         2.94 327  P   Pn   04 08 37.0 -1.9
TA01  Diego Aracena    2.97 301  P   Pn   04 08 35.6 -3.1
TA01                             S   Sn   04 09 10.2 -5.3
GO02  Mina Guanaco     3.58 212  P   Pn   04 08 44.9 -1.7
GO02  Mina Guanaco     3.58 212  P   Pn   04 08 44.9 -1.7
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*HLW **09** 04:11:06.9, 36.77N×26.97E, h31km±38km, Md4.1*
*IDC **09** 04:11:07.6±0.8, 36.75N×26.68E, h157km±12km, mb3.5/10, mbtmp3.9/19, Error ellipse: s-maj=16.3km s-min=10.6km az=171.0*
*ATH **09** 04:11:08.9, 36.52N×26.59E, h131km±18km, ML3.3/4, Error ellipse: s-maj=18.9km s-min=2.9km az=14.0*
*ISK **09** 04:11:08.9, 36.79N×26.67E, h162km±2km, ML2.9/19*
*GII **09** 04:11:12.5±0.3, 36.50N×27.02E, h159km, MD3.4/3*
*THE **09** 04:11:12.8, 36.66N×26.69E, h159km±3km, ML3.8/6, Error ellipse: s-maj=3.4km s-min=1.4km az=62.0*

ISC 09 04:11:07.5±0.6, 36.67N±0.04×26.72E±0.04, h165km±6km, n115, σ1.962/141, mb3.7/10, Dodecanese Islands

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Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                   Op   ISC     h m s      ISC
KOSK  Kos Island        0.22  68  PG   Pn   04 11 31.1 +1.5
KOSK                              SG   Sn   04 11 47.4 +0.9
KOSK  Kos Island        0.22  68  P    Pn   04 11 31.5 +1.9
KOSK                              S    Sn   04 11 47.8 +1.3
      345nm,0.6s
KOSK  Kos Island        0.22  68  P    Pn   04 11 30.4 +0.8
NIS1  Nisyros Isl.      0.37 100  PG   Pn   04 11 31.8 +1.7
NIS1  Nisyros Isl.      0.37 100  P    Pn   04 11 31.1 +1.0
NIS1                              AML  AML  04 11 51.6
      comp=N,706µm,0.9s
NIS1                              AML  AML  04 12 04.7
      comp=E,557µm,0.7s
BODT  Bodrum            0.61  50  PG   Pn   04 11 31.4 +0.3
BODT                              SG   Sn   04 11 48.8 -0.5
BODT  Bodrum            0.61  50  P    Pn   04 11 31.4 +0.3
BODT                              S    Sn   04 11 48.1 -1.2
DAT   Datca             0.69  85  PG   Pn   04 11 33.5 +1.8
DAT   Datca             0.69  85  P    Pn   04 11 33.3 +1.6
THR8  Santorini-Mono    1.03 256  P    Pn   04 11 35.4 +1.4
THR8  Santorini-Mono    1.03 256  P    Pn   04 11 35.0 +1.1
APE   Apeiranthos       1.03 293  PG   Pn   04 11 34.9 +0.9
APE   Apeiranthos       1.03 293  P    Pn   04 11 34.9 +0.9
APE   Apeiranthos       1.03 293  P    Pn   04 11 35.0 +1.0
SMG   Samos             1.04   5  P    Pn   04 11 34.5 +0.4
SMG                               S    Sn   04 11 53.7 -0.9
SANT  Santorini         1.06 254  PG   Pn   04 11 35.7 +1.5
SANT  Santorini         1.06 254  P    Pn   04 11 35.7 +1.5
SANT  Santorini         1.06 254  P    Pn   04 11 35.2 +1.0
THT2  Imerovigli        1.07 258  PG   Pn   04 11 35.6 +1.3
CMBO  Columbo, Santo    1.08 260  P    Pn   04 11 36.0 +1.7
CMBO  Columbo, Santo    1.08 260  P    Pn   04 11 35.2 +0.9
THR3  Thira Island,     1.09 257  P    Pn   04 11 36.0 +1.5
THR3  Thira Island,     1.09 257  P    Pn   04 11 35.7 +1.2
GCAM  G?zelcaml?        1.11  21  PG   Pn   04 11 35.1 +0.5
GCAM                              SG   Sn   04 11 54.9 -0.6
THR6  Thira Island,     1.11 254  P    Pn   04 11 36.3 +1.7
THR6  Thira Island,     1.11 254  P    Pn   04 11 35.9 +1.3
SAP3  Santorini-Thir    1.13 259  P    Pn   04 11 35.7 +0.9
THR5  Thira Island,     1.13 258  P    Pn   04 11 35.8 +1.0
THR9  Santorini-Faro    1.14 255  P    Pn   04 11 36.0 +1.2
KARP  Karpathos         1.17 162  PN   Pn   04 11 37.6 +2.3
KARP  Karpathos         1.17 162  P    Pn   04 11 37.5 +2.3
KARP                              S    Sn   04 11 54.9 -1.6
      comp=E,3µm,0.2s
KARP  Karpathos         1.17 162  P    Pn   04 11 37.2 +2.0
KARP                              AML  AML  04 12 01.9
      comp=N,6546µm,0.3s
KARP                              AML  AML  04 12 02.3
      comp=E,5005µm,0.2s
ARG   Arkhangelos       1.22 111  PN   Pn   04 11 38.3 +2.7
ARG   Arkhangelos       1.22 111  P    Pn   04 11 38.0 +2.5
ARG   Arkhangelos       1.22 111  P    Pn   04 11 38.0 +2.5
ARG                               AML  AML  04 12 02.2
      comp=N,1575µm,0.2s
ARG                               AML  AML  04 12 02.4
      comp=E,2597µm,0.3s
TURN  Turunc            1.23  85  PN   Pn   04 11 37.4 +1.8
YER   Yerkesik          1.34  69  PN   Pn   04 11 38.7 +2.0
YER   Yerkesik          1.34  69  P    Pn   04 11 38.7 +2.0
DALY  Dalyan (Mula)     1.56  84  PN   Pn   04 11 41.2 +2.4
AYDB  Zeytinkoy-Aydi    1.58  36  PN   Pn   04 11 39.9 +0.7
ZKR   Zakros            1.60 195  PN   Pn   04 11 41.9 +2.6
ZKR   Zakros            1.60 195  P    Pn   04 11 41.7 +2.4
ZKR   Zakros            1.60 195  P    Pn   04 11 41.4 +2.1
ZKR                               AML  AML  04 12 08.4
      comp=N,601µm,0.2s
ZKR                               AML  AML  04 12 09.2
      comp=E,1322µm,0.4s
URLA  Izmir             1.69 357  PN   Pn   04 11 40.1 -0.1
BLCB  Balcova           1.73   8  PN   Pn   04 11 41.3 +0.7
FRMA  Ierapetra Chan    1.83 206  P    Pn   04 11 43.9 +2.2
HRKL  Herakleio         1.89 225  PN   Pn   04 11 44.2 +1.9
HRKL  Herakleio         1.89 225  P    Pn   04 11 44.0 +1.7
HRKL                              S    Sn   04 12 09.9 +0.8
      comp=E,955nm,0.5s
HRKL  Herakleio         1.89 225  P    Pn   04 11 44.1 +1.7
FETY  Fethiye           1.90  90  PN   Pn   04 11 43.5 +1.0
IACM  Heraklion         1.91 225  P    Pn   04 11 44.4 +1.9
KSTL  Kastelli Herak    1.91 225  P    Pn   04 11 43.8 +1.3
IDI   Anoyia            2.02 228  P    Pn   04 11 44.9 +1.0
      comp=E,73nm,0.2s,baz=53,slow=6.6,SNR=925
IDI                               S    Sn   04 12 11.9 -0.1
      comp=E,125nm,0.3s,baz=8.3,slow=2.2,SNR=17
IDI   Anoyia            2.02 228  P    Pn   04 11 45.1 +1.2
IDI   Anoyia            2.02 228  P    Pn   04 11 45.1 +1.2
CAME  Cameli-Denizli    2.09  82  PN   Pn   04 11 46.6 +1.9
APMY  Acipayam-Deniz    2.21  68  PN   Pn   04 11 47.8 +1.7
PRNS  Prines Rethymn    2.22 235  P    Pn   04 11 47.7 +1.6
TMBK  Timbaki Herakl    2.25 226  P    Pn   04 11 48.5 +2.1
AKAS  Kas               2.37 100  PN   Pn   04 11 49.2 +1.3
IMMV  Iera Moni Meta    2.53 242  P    Pn   04 11 50.8 +1.1
IMMV                              S    Sn   04 12 21.3 -1.0
      comp=E,940nm,0.4s
RODP  Rodopos           2.64 246  P    Pn   04 11 52.2 +1.1
GVDS  Gavdos            2.81 230  P    Pn   04 11 55.2 +2.1
GVDS                              S    Sn   04 12 29.6 +1.1
      comp=E,442nm,0.3s
GVD   Gavdhos           2.81 230  P    Pn   04 11 55.3 +2.1
GVD                               S    Sn   04 12 29.0 +0.4
      comp=E,568nm,0.3s
ANKY  Antikythira Is    2.88 255  P    Pn   04 11 55.0 +1.1
KTHA  Kythira Island    2.98 263  P    Pn   04 11 55.9 +0.7
KTHR  Kythira           3.02 263  P    Pn   04 11 56.7 +0.9
VLI   Veliai            3.04 272  P    Pn   04 11 56.4 +0.4
DRO   Drossia           4.20 289  P    Pn   04 12 12.0 +1.3
TSLK  Tsoukalades, L    5.27 296  P    Pn   04 12 25.2 +0.6
SLUM  Salum             5.31 194  P    Pn   04 12 27.0 +1.7
      baz=196
SLUM                              S    Sn   04 13 23.9 -2.3
      baz=196
BRTR  Keskin Array B    6.24  59  P    Pn   04 12 38.9 +1.2
      comp=E,0.8nm,0.6s,baz=229,slow=13,SNR=5.0
SWA2                    7.48 189  P    Pn   04 12 55.2 +1.3
      baz=191
SWA2                              S    Sn   04 14 16.1 -1.8
      baz=191
HNAT  Natroun           7.74 154  P    Pn   04 12 58.5 +1.1
      baz=155
MMA0B Mount Meron ar    8.01 115  Pn   Pn   04 13 01.8 +0.7
MMAI  Mount Meron Ar    8.01 115  P    Pn   04 13 02.0 +0.9
      comp=E,11nm,0.4s,baz=302,slow=13,SNR=36
MMAI                              S    Sn   04 14 29.2 -1.4
      comp=E,1.0nm,0.3s,baz=284,slow=19,SNR=2.9
GEM   Giv'at Ha'Em      8.11 113  Pn   Pn   04 13 03.4 +1.1
RYAN  Fayoum            8.13 157  P    Pn   04 13 04.1 +1.5
      baz=159
NATI  Neve Ativ         8.14 112  Pn   Pn   04 13 03.9 +1.2
NATI                              Sn   Sn   04 14 32.1 -1.5
GLL   Jalalah           8.21 148  P    Pn   04 13 04.1 +0.3
      baz=149
KSHT  Keshet            8.33 114  Pn   Pn   04 13 06.7 +1.4
HMDT  Nahal Hemdat      8.50 119  Pn   Pn   04 13 09.4 +1.9
SUZ   Suez              8.52 141  P    Pn   04 13 08.0 +0.2
      baz=143
KZIT  Kziot             8.59 130  Pn   Pn   04 13 09.9 +1.2
KZIT                              Sn   Sn   04 14 43.6 -0.9
YTIR  Yattir            8.75 125  Pn   Pn   04 13 11.6 +0.8
YTIR                              Sn   Sn   04 14 46.9 -1.4
DSI   Dead Sea          8.79 123  Pn   Pn   04 13 13.1 +1.7
DSI                               Sn   Sn   04 14 49.1 -0.2
KRMI  Paran Flat        9.35 132  Pn   Pn   04 13 19.6 +0.9
KRMI                              Sn   Sn   04 15 00.4 -2.3
PRNI  Paran             9.35 130  Pn   Pn   04 13 19.8 +1.0
PRNI                              Sn   Sn   04 15 00.1 -2.7
ASF   Jabal al Asfar    9.53 115  P    Pn   04 13 23.9 +2.7
      comp=E,2.4nm,0.3s,baz=308,slow=6.6,SNR=6.1
HFRF  Wahat Farafira    9.59 171  P    Pn   04 13 24.3 +2.4
      baz=172
MBRI  Mt Berech         9.70 133  Pn   Pn   04 13 24.8 +1.4
MBRI                              Sn   Sn   04 15 09.6 -1.5
EIL   Elat              9.81 133  P    Pn   04 13 26.1 +1.3
      comp=E,5.5nm,0.5s,baz=337,slow=7.7,SNR=10.0
EIL                               S    Sn   04 15 11.0 -2.7
      comp=E,7.1nm,0.4s,baz=190,slow=16,SNR=7.3
EIL   Elat              9.81 133  Pn   Pn   04 13 26.9 +2.1
EIL                               Sn   Sn   04 15 11.4 -2.3
VAE   Valguarnera       9.87 278  P    Pn   04 13 26.1 +0.6
      comp=E,4.7nm,0.9s,baz=157,slow=15,SNR=2.2
VAE                               S    Sn   04 15 09.9 -5.2
      comp=E,11nm,0.5s,baz=334,slow=14,SNR=6.0
HKAT  Jabal Katrina    10.17 141  P    Pn   04 13 31.2 +1.4
      baz=142
HHRG  Al Ghardaqah     11.07 146  P    P    04 13 46.3 -2.8
      baz=148
KEST  Kesra            14.07 271  P    Pn   04 14 21.0 +1.4
      comp=E,3.5nm,0.9s,baz=89,slow=12,SNR=4.9
KEST                              S    Sn   04 16 50.5 -5.5
      comp=E,4.4nm,1.2s,baz=68,slow=19,SNR=2.5
AKASG Malin Array Be   14.14   7  P    Pn   04 14 19.5 -0.9
      comp=E,0.5nm,0.5s,baz=195,slow=11,SNR=7.7
KBZ   Khabaz           14.22  55  P    P    04 14 25.7 +1.8
      comp=E,1.2nm,0.5s,baz=246,slow=12,SNR=4.2
WTTA  Wattenberg       15.40 318  eP   P    04 14 38.2 +1.1
      comp=E,1.4nm,0.5s
GERES GERESS Array B   15.45 326  P    Pn   04 14 36.3 -0.4
      comp=E,0.4nm,0.7s,baz=137,slow=13,SNR=5.3
WATA  Walderalm        15.47 318  eP   P    04 14 38.5 +0.6
      comp=E,1.2nm,0.5s
SQTA  Sankt Quirin     15.60 317  eP   P    04 14 40.8 +1.4
      comp=E,2.9nm,0.9s
FETA  Feichten         15.75 316  eP   P    04 14 42.1 +1.1
      comp=E,1.4nm,0.6s
DAVOX Davos/Dischmat   16.10 314  P    P    04 14 45.6 +0.8
      comp=E,1.5nm,0.8s,baz=135,slow=13,SNR=2.8
ESDC  Sonseca Array    24.25 286  P    P    04 16 09.1 -0.2
      comp=E,0.9nm,0.6s,baz=81,slow=9.3,SNR=14
      comp=E,0.9nm,0.6s
FINES FINESS Array B   24.80 359  P    P    04 16 12.9 -0.9
      comp=E,5.6nm,1.1s,baz=170,slow=12,SNR=4.7
      comp=E,5.6nm,1.1s
HFS   Hagfors          24.93 344  P    P    04 16 13.9 -1.2
      comp=E,2.0nm,0.7s,baz=148,slow=8.5,SNR=1.5
      comp=E,2.0nm,0.7s
NOA   NORSAR Array B   26.30 343  P    P    04 16 28.2 +0.7
      comp=E,0.3nm,0.7s,baz=118,slow=5.0,SNR=1.3
      comp=E,0.3nm,0.7s
EKA   Eskdalemuir Ar   27.59 322  P    P    04 16 40.4 +1.5
      comp=E,0.7nm,0.6s,baz=48,slow=24,SNR=2.1
      comp=E,0.7nm,0.6s
TORD  Torodi Ar. Bea   32.43 230  P    P    04 17 23.6 +1.6
      comp=E,0.6nm,0.5s,baz=36,slow=8.9,SNR=16
      comp=E,0.6nm,0.5s
ARCES ARCESS Array B   32.93 359  P    P    04 17 26.6 +0.7
      comp=E,3.2nm,1.0s,baz=192,slow=7.2,SNR=2.3
      comp=E,3.2nm,1.0s
KURBB Kurchatov Arra   39.19  52  P    P    04 18 19.4 +0.2
      comp=E,3.0nm,0.8s,baz=275,slow=8.6,SNR=11
      comp=E,3.0nm,0.8s
MKAR  Makanchi Array   41.90  58  P    P    04 18 42.0 +0.5
      comp=E,0.7nm,0.4s,baz=269,slow=7.9,SNR=12
      comp=E,0.7nm,0.4s
ZALV  Zalesovo Beam    43.05  47  P    P    04 18 49.9 -0.7
      comp=E,1.0nm,0.3s,baz=280,slow=8.6,SNR=2.4
      comp=E,1.0nm,0.3s
```

*GCG **09** 04:22:29.4±0.8, 13.22N×89.88W, h14km±15km, MD3.8*

ISC 09 04:22:26.5±1.7, 13.25N±0.08×89.61W±0.04, h10km±12km, n39, σ0.35/46, 8D, El Salvador

```
Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                   Op   ISC     h m s      ISC
SNET  Serv Nac Est T    0.57  40  eP   Pn   04 22 40.7 -0.1
SNET                              IAML      04 22 56.2
      comp=Z,4µm,0.2s
CEVE  Cerro Verde       0.58 358  eP   Pn   04 22 40.9 -0.1
CEVE                              IAML      04 22 53.9
      comp=Z,8µm,0.4s
BOQS  Boqueron          0.58  33  eP   Pn   04 22 41.1 +0.1
BOQS                              eS   Sn   04 22 50.5 -0.2
SEMO  Seminario San     0.59  39  eP   Pn   04 22 40.7 -0.3
UEES  Universidad Ev    0.59  37  eP   Pn   04 22 41.1 +0.1
UEES                              IAML      04 22 51.6
      comp=Z,3µm,0.2s
SBLS  San Blas          0.59 359  eP   Pn   04 22 40.9 -0.3
UTEC  Universidad Te    0.60  41  eP   Pn   04 22 41.1  0.0
UESS  Universidad de    0.62  40  eP   Pn   04 22 41.2 -0.1
UESS                              IAML      04 22 55.0
      comp=Z,5µm,0.2s
SNJE  San Jose          0.62   0  eP   Pn   04 22 41.3 -0.3
IGN   Direccin Gen      0.63  42  eP   Pn   04 22 41.6  0.0
RTR   El Retiro         0.65 357  eP   Pn   04 22 41.8 -0.2
LFRS  El Faro           0.65  55  eP   Pn   04 22 41.7 -0.1
AEIL  Aeropuerto Ilo    0.66  47  eP   Pn   04 22 42.2 +0.3
AEIL                              IAML      04 23 01.6
      comp=Z,6µm,0.5s
NUBE  Las Nubes         0.67 346  eP   Pn   04 22 41.8 -0.4
SJTE  Alcalda de S      0.69  58  eP   Pn   04 22 42.2 -0.1
LFU   La Fuente         0.69  44  eP   Pn   04 22 42.6 +0.2
LFU                               eS   Sn   04 22 52.8 -0.5
UNIC  Universidad Ca    0.73   4  eP   Pn   04 22 42.9 -0.1
LBRS  Las Brisas        0.74  48  eP   Pn   04 22 43.2 +0.2
LBRS                              eS   Sn   04 22 55.2 +0.9
LOAL  Lomas de Alarc    0.77 347  eP   Pn   04 22 43.4  0.0
SLOZ  Alcaldia de Sa    0.80 348  eP   Pn   04 22 43.6 -0.2
PAVA  Las Pavas         0.80  54  eP   Pn   04 22 44.2 +0.3
SNVI  San Vicente       0.83  64  eP   Pn   04 22 44.5 +0.1
UESV  Universidad de    0.89  64  eP   Pn   04 22 45.1 +0.1
SCLA  Alcaldia de Sa    0.97  62  eP   Pn   04 22 46.4 +0.2
COEB  Comit de Eme      1.08  76  eP   Pb   04 22 47.3  0.0
PQSS  Presa 15 de Se    1.09  70  eP   Pn   04 22 47.7 -0.1
P5NO  Presa 5 de nov    1.11  48  eP   Pb   04 22 47.7 -0.1
LLGN  La Laguna         1.12  35  eP   Pb   04 22 47.7 -0.2
PACA  Pacayal           1.27  80  eP   Pg   04 22 50.7 -0.2
PACA                              IAML      04 23 14.3
      comp=Z,10µm,0.4s
LCY   Lacayo            1.29  82  eP   Pg   04 22 51.1 -0.2
LCY                               eS   Sb   04 23 07.8 +0.2
VSM   San Miguel        1.31  82  eP   Pg   04 22 51.6 -0.1
VSM                               eS   Sn   04 23 09.2 +0.5
PCG   Pacaya            1.50 320  eP   Pn   04 22 54.1 +0.5
NBG   Las Nubes         1.52 332  eP   Pb   04 22 54.8  0.0
NBG                               eS   Sg   04 23 15.8 +0.4
LCND  La Caada          1.67  88  eP   Pn   04 22 55.8  0.0
LCND                              IAML      04 23 22.0
      comp=Z,1µm,0.4s
FUG   Fuego 3           1.69 315  eP   Pn   04 22 56.6 +0.3
CNCH  Conchagua         1.73  89  eP   Pn   04 22 56.6  0.0
CNCH                              IAML      04 23 23.9
      comp=Z,4µm,0.3s
MRL   Marmol            1.83 358  eP   Pn   04 22 59.0 +0.8
STG3  Santiaguito 3,    2.40 308  eP   Pn   04 23 06.5 +0.5
STG3                              eS   Sn   04 23 34.4 -1.1
TGUH  Tegucigalpa,Un    2.41  70  eP   Pn   04 23 05.6 -0.4
```

IDC 09 04:37:46.2±2.8, 19.27S×179.99W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=284.5km s-min=36.1km az=161.0, Fiji Islands region

```
Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                   Op   ISC     h m s      ISC
WRA   Warramunga Arr   42.92 261  P    P    04 45 47.1 +0.1
      0.3nm,0.3s,baz=96,slow=7.6,SNR=15
      0.3nm,0.3s
ASAR  Alice Springs    42.99 256  P    P    04 45 47.4 -0.3
      0.6nm,0.6s,baz=96,slow=7.8,SNR=7.7
      0.6nm,0.6s
TXAR  Lajitas Array    87.99  58  P    P    04 50 38.7  0.0
      0.3nm,1.0s,baz=224,slow=6.3,SNR=1.4
      0.3nm,1.0s
```

*STR **09** 04:42:37.4±4.2, 42.1N×19.4E±3.1, h10km, MLv3.9/31, Error ellipse: s-maj=0.0km s-min=0.0km az=119.5, preliminary*
*BGR **09** 04:42:40.4±0.5, 42.31N×13.62E, h10km, ML3.9/27, Error ellipse: s-maj=8.9km s-min=7.8km az=98.0*
*ROM **09** 04:42:42.4±0.1, 42.740N±0.003×13.185E±0.005, h8km, ML3.6/109, Error ellipse: s-maj=0.4km s-min=0.2km az=76.0*
*IDC **09** 04:42:43.4±1.0, 42.88N×13.39E, h0km, mb3.8/7, mbtmp3.6/16, ML3.6/7, MS2.9/10, Error ellipse: s-maj=17.5km s-min=11.8km az=90.0*
*LDG **09** 04:42:43.0±0.1, 42.69N×13.16E, h10km, Ml3.4/24, Error ellipse: s-maj=5.3km s-min=3.0km az=41.0*
*PDG **09** 04:42:43.1±0.5, 42.73N×13.19E, h9km, ML3.7/11, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*PRU **09** 04:42:45.9±0.0, 42.90N×13.39E, h0km*

ISC 09 04:42:42.8±0.6, 42.73N±0.01×13.19E±0.02, h10km±3km, n344, σ2.916/424, mb3.9/6, MS3.0/3, 47C-20D, Central Italy

```
Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                   Op   ISC     h m s      ISC
T1202 Accumoli, Fraz   0.04 132  ⇓P   Pg   04 42 44.4 -0.5
T1202                             S    Sg   04 42 45.6 -0.8
T1244 Arquata del Tr   0.09  72  ⇑P   Pg   04 42 45.0 -0.4
T1244                             S    Sg   04 42 47.0 -0.2
T1204 Amatrice, Fraz   0.11 119  ⇑P   Pg   04 42 45.6 -0.1
T1204                             S    Sg   04 42 47.9 +0.1
T1204                             AML  AML
      comp=E,92400µm,0.5s
T1204                             AML  AML
      comp=N,72450µm,0.9s
T1204                             AML  AML
      comp=N,72500µm,0.9s
T1204                             AML  AML
      comp=E,92200µm,0.5s
NRCA  Norcia           0.12 333  ⇑P   Pg   04 42 45.3 -0.5
NRCA                              S    Sg   04 42 47.2 -0.7
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
NRCA                              AML  AML
T1245 Castelsantange   0.13   1  ⇑P   Pg   04 42 45.5 -0.5
T1245                             S    Sg   04 42 47.9 -0.3
T1245                             AML  AML
T1245                             AML  AML
T1245                             AML  AML
T1245                             AML  AML
T1245                             AML  AML
SMA1  SAN MARTINO      0.15 132  ⇓P   Pg   04 42 46.3 +0.1
SMA1                              S    Sg   04 42 49.2 +0.6
LNSS  Leonessa         0.17 220  ⇑P   Pg   04 42 46.8 +0.3
LNSS                              S    Sg   04 42 50.2 +1.1
LNSS                              AML  AML
      comp=N,54650µm,0.7s
LNSS                              AML  AML
      comp=E,67900µm,0.5s
MC2   Monte Cornacci   0.18   1  ⇑P   Pg   04 42 46.6 -0.3
MC2                               S    Sg   04 42 49.9 +0.2
T1217 Poggiodomo (PG   0.19 265  ⇑P   Pg   04 42 47.0 +0.1
T1217                             AML  AML
      comp=E,23500µm,0.8s
T1217                             AML  AML
      comp=N,23250µm,1.6s
T1217                             AML  AML
      comp=N,23300µm,1.6s
T1217                             AML  AML
      comp=E,23500µm,0.8s
T1217                             AML  AML
      comp=N,23250µm,1.6s
T1217                             AML  AML
      comp=N,23300µm,1.6s
T1217                             AML  AML
      comp=E,23350µm,0.8s
T1243 Rocca Santa Ma   0.20 100  ⇑P   Pg   04 42 46.8 -0.2
T1243                             S    Sb   04 42 50.1 +0.2
MMO1  Montemonaco      0.20  31  ⇑P   Pg   04 42 46.6 -0.5
MMO1                              S    Sg   04 42 49.6 -0.4
T1216 Preci, Frazion   0.20 323  ⇑P   Pg   04 42 46.9 -0.3
T1216                             AML  AML
      comp=E,49750µm,0.5s
T1216                             AML  AML
      comp=N,76650µm,0.7s
RM33  Pellescritta (   0.22 175  ⇑P   Pg   04 42 47.8 +0.3
RM33                              S    Sg   04 42 51.9 +1.3
RM33                              AML  AML
      comp=E,35700µm,1.5s
RM33                              AML  AML
      comp=N,32600µm,0.3s
RM33                              AML  AML
      comp=E,34950µm,1.5s
RM33                              AML  AML
      comp=E,35750µm,1.5s
RM33                              AML  AML
      comp=N,32650µm,0.3s
RM33                              AML  AML
      comp=N,32450µm,0.3s
T1241 Roccafluvione,   0.22  55  ⇑P   Pg   04 42 47.1 -0.3
T1241                             S    Sg   04 42 50.4 -0.2
T1241                             AML  AML
      comp=E,64500µm,0.6s
T1241                             AML  AML
      comp=N,73250µm,0.7s
T1241                             AML  AML
      comp=E,64450µm,0.6s
T1241                             AML  AML
      comp=E,63850µm,0.6s
T1241                             AML  AML
      comp=N,76650µm,0.7s
T1215 Vallo di Nera,   0.24 287  ⇑P   Pg   04 42 47.9  0.0
T1215                             S    Sg   04 42 52.2 +0.9
T1215                             AML  AML
      comp=E,14750µm,0.5s
T1215                             AML  AML
      comp=E,14800µm,0.5s
T1215                             AML  AML
      comp=N,10950µm,0.9s
T1215                             AML  AML
      comp=N,10945µm,0.9s
T1215                             AML  AML
      comp=E,14400µm,0.5s
T1215                             AML  AML
      comp=N,11100µm,0.9s
FEMA  Monte Fema       0.25 337  P    Pg   04 42 47.9 -0.2
FEMA                              S    Sg   04 42 51.9 +0.3
FEMA                              AML  AML
      comp=E,24750µm,0.4s
FEMA                              AML  AML
      comp=N,30950µm,1.6s
FEMA                              AML  AML
      comp=E,24750µm,0.4s
FEMA                              AML  AML
      comp=N,30950µm,1.6s
CAMP  Campotosto       0.25 140  ⇓P   Pg   04 42 48.1  0.0
CAMP                              S    Sg   04 42 52.5 +0.9
CAMP                              AML  AML
      comp=E,11400µm,0.7s
CAMP                              AML  AML
      comp=N,13275µm,0.6s
T1246 Crognaleto (TE   0.27 123  ⇓P   Pg   04 42 48.3  0.0
T1246                             S    Sb   04 42 52.7 -1.8
AM05  Amandola Campo   0.28  26  ⇑P   Pg   04 42 48.3 -0.2
AM05                              S    Sg   04 42 53.1 +0.9
AM05                              AML  AML
```

comp=N,8445µm,1.1s
AM05 AML AML
comp=E,36200µm,0.6s
AM05 AML AML
comp=E,7750µm,1.5s
AM05 AML AML
comp=N,8460µm,1.1s
AM05 AML AML
comp=N,2145µm,0.3s
AM05 AML AML
comp=E,7745µm,1.5s
AM05 AML AML
comp=E,36250µm,0.6s
T1247 Pizzolo (AQ) 0.30 164 ⇓P **Pb 04 42 50.5 +0.1**
T1247 S **Sb 04 42 55.5 +0.2**
T1247 AML AML
comp=E,28050µm,0.8s
T1247 AML AML
comp=N,31300µm,0.7s
FDMO Fiordimonte 0.32 347 P **Pg 04 42 48.9 -0.3**
FDMO AML AML
comp=E,12800µm,0.5s
FDMO AML AML
comp=N,11050µm,1.0s
TERO Teramo 0.33 109 P **Pg 04 42 49.2 -0.2**
TERO S **Sb 04 42 54.2 -1.9**
TERO AML AML
comp=N,25750µm,1.1s
TERO AML AML
comp=N,24900µm,1.1s
TERO AML AML
comp=E,22000µm,0.5s
TERO AML AML
comp=E,22700µm,0.6s
ARRO Arrone 0.34 244 ⇑P **Pg 04 42 49.9 +0.2**
ARRO AML AML
comp=N,9620µm,0.9s
ARRO AML AML
comp=E,6800µm,1.0s
CESI CESI - Serrava 0.34 323 ⇑P **Pg 04 42 49.5 -0.2**
CESI S **Sg 04 42 55.2 +0.9**
CESI AML AML
comp=E,15400µm,0.5s
CESI AML AML
comp=N,24250µm,0.3s
GUMA Gualdo di Mace 0.35 18 ⇑P **Pg 04 42 49.8 0.0**
GUMA S **Sb 04 42 56.2 -0.6**
GUMA AML AML
GUMA AML AML
comp=N,90200µm,0.5s
GUMA AML AML
GUMA AML AML
GUMA AML AML
CSP1 Cessapalombo 0.36 2 ⇑P **Pg 04 42 49.7 -0.3**
CSP1 S **Sg 04 42 55.7 +0.8**
CSP1 AML AML
comp=E,18650µm,0.3s
CSP1 AML AML
comp=N,31050µm,0.4s
CSP1 AML AML
comp=E,18600µm,0.3s
GIGS Gran Sasso 0.40 134 ⇓P **Pg 04 42 50.4 -0.3**
GIGS AML AML
comp=E,3315µm,0.8s
GIGS AML AML
comp=N,2825µm,0.7s
AQU L'Aquila 0.41 157 ⇓P **Pg 04 42 51.0 +0.1**
AQU AML AML
comp=E,10400µm,1.0s
AQU AML AML
comp=N,10265µm,1.1s
AQU AML AML
comp=E,10405µm,1.0s
AQU AML AML
comp=N,10715µm,1.0s
AQU AML AML
comp=N,10275µm,1.1s
AQU AML AML
comp=E,10550µm,1.0s
OFFI Offida 0.42 61 ⇑P **Pb 04 42 51.6 -0.8**
OFFI AML AML
comp=E,40250µm,0.6s
OFFI AML AML
comp=N,40650µm,0.6s
SEF1 Sefro 0.45 337 P **Pg 04 42 51.4 -0.4**
SEF1 S **Sg 04 42 58.7 +1.0**
SEF1 AML AML
comp=E,15300µm,1.2s
SEF1 AML AML
comp=N,9450µm,0.4s
MNTP Montappone 0.46 27 P **Pg 04 42 52.0 +0.2**
MNTP AML AML
comp=E,29900µm,1.2s
MNTP AML AML
comp=N,22400µm,0.3s
CESX Cesi 0.46 255 ⇑P **Pg 04 42 51.7 -0.2**
CESX AML AML
comp=E,10650µm,1.5s
CESX AML AML
comp=N,8595µm,0.6s
FIAM Fiamignano 0.46 186 ⇑P **Pg 04 42 51.9 0.0**
MDAR Monte D'Aria 0.46 356 P **Pg 04 42 51.6 -0.4**
MDAR AML AML
comp=E,7125µm,1.1s
MDAR AML AML
comp=N,11950µm,1.3s
MDAR AML AML
comp=N,11900µm,1.2s
PIO1 Pioraco 0.47 342 P **Pg 04 42 51.8 -0.2**
PIO1 AML AML
comp=E,9400µm,0.6s
PIO1 AML AML
comp=N,11100µm,0.5s
PIO1 AML AML
comp=E,9395µm,0.7s
FIU1 Fiuminata 0.49 338 P **Pg 04 42 52.3 -0.2**
FIU1 AML AML
comp=E,5195µm,1.6s
FIU1 AML AML
comp=N,7350µm,0.6s
ASSB Assisi San Ben 0.50 309 ⇑P **Pg 04 42 52.1 -0.4**
ASSB AML AML
comp=N,7855µm,0.4s
ASSB AML AML
comp=E,9985µm,0.5s
GAG1 Gagliole 0.52 350 P **Pg 04 42 52.7 -0.2**
GAG1 AML AML
comp=E,21750µm,0.4s
GAG1 AML AML
comp=N,13750µm,1.2s
TRTR Tortoreto Alta 0.54 81 ⇑P **Pb 04 42 54.3 -0.1**
TRTR AML AML
comp=E,30250µm,0.7s
TRTR AML AML
comp=N,27200µm,0.8s
FAGN Fagnano 0.55 147 ⇓P **Pg 04 42 53.1 -0.4**
FAGN AML AML
comp=N,10960µm,1.4s
FAGN AML AML
comp=E,12100µm,0.7s
SNTG Esanatoglia 0.56 341 ⇑P **Pg 04 42 53.1 -0.5**
SNTG S **Sg 04 43 01.7 +0.7**
SNTG AML AML
comp=E,3455µm,0.5s
SNTG AML AML
comp=N,4510µm,1.1s
SNTG AML AML
comp=E,3260µm,0.5s
SNTG AML AML
comp=N,4505µm,1.1s
SNTG AML AML
comp=N,4745µm,1.1s
VCEL Villa Celiera 0.59 124 ⇓P **Pg 04 42 54.1 -0.2**
VCEL AML AML
comp=E,9280µm,0.4s
VCEL AML AML
comp=N,11800µm,0.9s
VCEL AML AML
comp=E,9285µm,0.4s
TRE1 Treia 0.59 9 P **Pg 04 42 54.4 +0.1**
TRE1 AML AML
comp=E,14800µm,0.7s
TRE1 AML AML
comp=N,16500µm,0.6s
EL6 Elcito 0.60 354 ⇑P **Pg 04 42 54.0 -0.6**
EL6 AML AML
comp=E,7600µm,1.2s
EL6 AML AML
comp=N,8920µm,0.4s
EL6 AML AML
comp=E,7585µm,1.2s
EL6 AML AML
comp=E,7605µm,1.2s
EL6 AML AML
comp=N,8930µm,0.4s
ATCC AVT- Casa Cast 0.61 319 P **Pg 04 42 54.1 -0.5**
ATCC AML AML
comp=E,7640µm,0.5s
ATCC AML AML
comp=N,7990µm,0.4s
ATCC AML AML
comp=N,7995µm,0.4s
CADA Capodarco di F 0.63 42 P **Pb 04 42 56.1 +0.2**
FOSV Fossato di Vic 0.65 331 ⇑P **Pg 04 42 54.8 -0.6**
FOSV AML AML
comp=N,5580µm,1.4s
FOSV AML AML
comp=E,3735µm,0.4s
FOSV AML AML
comp=N,5585µm,1.4s
FOSV AML AML
comp=E,3740µm,0.4s
CING Cingoli 0.65 1 P **Pg 04 42 54.8 -0.6**
CING AML AML
comp=E,5440µm,0.4s
CING AML AML
comp=N,3635µm,0.4s
T0110 Collepietro 0.67 139 ⇓P **Pg 04 42 55.1 -0.6**
T0110 AML AML
comp=N,8000µm,0.5s
T0110 AML AML
comp=E,9015µm,0.9s
CIMA Civitanova Mar 0.68 31 P **Pb 04 42 56.8 0.0**
SRES S.Oreste - Sor 0.70 226 ⇑P **Pg 04 42 55.9 -0.5**
SRES AML AML
comp=E,2925µm,0.7s
SRES AML AML
comp=N,1935µm,0.9s
PP3 Marolino 0.72 25 P **Pg 04 42 57.0 +0.3**
PP3 AML AML
comp=E,26400µm,0.4s
PP3 AML AML
comp=E,27100µm,0.4s
PP3 AML AML
comp=N,23300µm,0.7s
PP3 AML AML
comp=N,23700µm,0.7s
MURB Monte Urbino 0.72 318 P **Pg 04 42 56.3 -0.5**
MURB AML AML
comp=E,10330µm,1.0s
MURB AML AML
comp=N,13600µm,1.1s
MURB AML AML
comp=E,11635µm,1.0s
MURB AML AML
comp=N,13050µm,1.1s
MURB AML AML
comp=N,13650µm,1.1s
MURB AML AML
comp=E,10290µm,1.0s
MMUR Monte Murano 0.72 349 P **Pg 04 42 56.3 -0.6**
MMUR AML AML
comp=E,9045µm,1.4s
MMUR AML AML
comp=N,6005µm,1.4s
MMUR AML AML
comp=E,9040µm,1.4s
PTQR Pietraquaria 0.72 167 P **Pg 04 42 56.1 -0.7**
PTQR AML AML
comp=N,1415µm,1.4s
PTQR AML AML
comp=E,2195µm,0.6s
SSFR Montelago di S 0.77 337 P **Pg 04 42 57.0 -0.7**
SSFR AML AML
comp=E,4695µm,0.3s
SSFR AML AML
comp=E,4800µm,0.3s
SSFR AML AML
comp=N,4935µm,0.2s
SSFR AML AML
comp=N,5155µm,0.2s
MTCE Montecelio 0.78 205 ⇑P **Pg 04 42 57.1 -0.8**
MTCE AML AML
comp=E,2655µm,0.6s
MTCE AML AML
comp=N,2250µm,0.5s
ATFO Monte Foce - G 0.78 325 P **Pg 04 42 57.1 -0.8**
ATFO AML AML
comp=N,5190µm,0.5s
ATFO AML AML
comp=E,4695µm,0.5s
ARVD Arcevia 0.79 347 P **Pg 04 42 57.4 -0.7**
ARVD AML AML
comp=N,2460µm,1.6s
ARVD AML AML
comp=E,2780µm,0.9s
CERT Cerreto 0.79 191 P **Pg 04 42 57.3 -0.8**
CERT AML AML
comp=E,4420µm,0.6s
CERT AML AML
comp=N,2755µm,0.7s
MGAB Montegabbione 0.81 283 P **Pg 04 42 58.0 -0.4**
MGAB AML AML
comp=E,11200µm,0.7s
MGAB AML AML
comp=N,9820µm,0.5s
MGAB AML AML
comp=N,9815µm,0.5s
MGAB AML AML
comp=E,11250µm,0.7s
MGAB AML AML
comp=E,12150µm,0.6s
MGAB AML AML
comp=N,9930µm,0.5s
FRON Frontone 0.86 337 P **Pg 04 42 58.4 -1.0**
ATVO AVT- Monte Val 0.87 319 ⇑P **Pg 04 42 58.6 -0.9**
ATVO AML AML
comp=E,3010µm,0.8s
ATVO AML AML
comp=E,3015µm,0.8s
ATVO AML AML
comp=N,3050µm,0.6s
AOI Ancona 0.88 20 P **Pg 04 42 59.3 -0.4**
AOI AML AML
comp=E,3695µm,0.3s
AOI AML AML
comp=N,4105µm,0.3s
AOI AML AML
comp=E,3700µm,0.3s
INTR Introdacqua 0.89 143 P **Pg 04 42 58.8 -1.2**
INTR AML AML
comp=N,4µm,0.8s
INTR AML AML
comp=E,2610µm,0.6s
INTR AML AML
comp=N,6200µm,0.8s
INTR AML AML
comp=E,3µm,0.6s
INTR AML AML
comp=N,4µm,0.8s
RCAV Rocca di Cave 0.90 192 P **Pg 04 42 59.3 -0.9**
RCAV AML AML
comp=N,4200µm,1.6s
RCAV AML AML
comp=E,3905µm,0.7s
ATMI Monte Miggiano 0.91 312 P **Pb 04 43 00.3 -0.3**
ATMI AML AML
comp=E,8995µm,0.5s
ATMI AML AML
comp=N,8985µm,0.5s
ATMI AML AML
comp=N,8980µm,0.5s
COR1 Corinaldo 0.91 352 P **Pg 04 43 00.6 +0.2**
COR1 AML AML
comp=E,7000µm,1.6s
COR1 AML AML
comp=N,8000µm,0.7s
COR1 AML AML
comp=E,9885µm,0.5s
COR1 AML AML
comp=N,8800µm,0.7s
VVLD Villa Vallelon 0.92 159 P **Pg 04 42 59.9 -0.6**
VVLD AML AML
comp=N,2405µm,0.7s
VVLD AML AML
comp=E,2270µm,1.0s
PIEI Pieia 0.94 330 P **Pb 04 42 59.8 -1.4**
PIEI AML AML
comp=N,2000µm,0.7s
PIEI AML AML
comp=E,1720µm,1.6s
PIEI AML AML
comp=N,2005µm,0.7s
GUAR Guarcino 0.94 174 P **Pb 04 43 01.4 +0.1**
SACS San Casciano d 0.95 278 P **Pb 04 43 00.6 -0.7**
SACS AML AML
comp=N,3585µm,0.6s
SACS AML AML
comp=E,2990µm,0.6s
MPAG Monte Paganucc 0.95 341 P **Pb 04 43 00.3 -1.2**
MPAG AML AML
comp=E,3625µm,0.8s
MPAG AML AML
comp=N,3390µm,0.8s
MPAG AML AML
comp=E,3700µm,0.5s
MPAG AML AML
comp=N,3165µm,0.5s
SENI Senigallia 0.98 2 P **Pb 04 43 01.9 0.0**
SENI AML AML
comp=E,17000µm,0.5s
SENI AML AML
comp=N,10200µm,0.3s
APEC Apecchio 1.00 326 AML AML
comp=E,686µm,0.5s
APEC AML AML
comp=N,780µm,0.8s
LPEL Lama dei Pelig 1.01 132 P **Pb 04 43 00.8 -1.6**
LPEL AML AML
comp=N,1820µm,0.7s
LPEL AML AML
comp=E,2845µm,0.9s
FSSB Fossombrone 1.01 343 P **Pb 04 43 01.4 -1.0**
FSSB AML AML
comp=N,11610µm,0.4s
FSSB AML AML
comp=E,7245µm,0.5s
LATE Laterza 1.03 264 ⇑P **Pb 04 43 01.9 -0.7**
BADI Badiali 1.04 319 P **Pb 04 43 01.9 -1.0**
CAFI Castiglion Fio 1.08 304 P **Pb 04 43 02.6 -0.9**
CAFI AML AML
comp=E,1675µm,0.7s
CAFI AML AML
comp=N,2215µm,0.9s
CAFI AML AML
comp=E,1745µm,0.7s
CAFI AML AML
comp=N,2115µm,0.9s
POFI Posta Fibreno 1.08 159 P **Pb 04 43 02.6 -1.1**
POFI AML AML
comp=E,1705µm,0.8s
POFI AML AML
comp=N,1228µm,1.1s
POFI AML AML
comp=N,1245µm,1.1s
POFI AML AML
comp=E,1755µm,0.8s
PE3 Peglio 1.09 333 P **Pb 04 43 02.9 -0.9**
PE3 AML AML
comp=N,9µm,0.4s
PE3 AML AML
comp=E,12µm,0.4s
TOLF Tolfa 1.10 233 ⇑P **Pn 04 43 03.2 -1.1**
TOLF AML AML
comp=E,1580µm,0.7s
TOLF AML AML
comp=N,1360µm,0.5s
MCIV Monte Civitell 1.11 273 P **Pn 04 43 03.2 -1.3**
MCIV AML AML
comp=N,1385µm,0.5s
MCIV AML AML
comp=E,1170µm,0.5s
SSP9 Sansepolcro 1.14 318 P **Pn 04 43 04.9 0.0**
SSP9 AML AML
comp=E,1970µm,0.8s
SSP9 AML AML
comp=N,2335µm,1.5s
GIUL Giuliano Di Ro 1.17 177 P **Pn 04 43 05.7 +0.4**
SF01 Poggio Pratacc 1.20 274 P **Pn 04 43 05.5 -0.1**
PESA Pesaro 1.24 348 P **Pn 04 43 06.4 +0.2**
PESA AML AML
comp=N,3440µm,0.4s
PESA AML AML
comp=E,5015µm,0.4s
CPGN Carpegna, Ital 1.24 330 AML AML
comp=E,3885µm,0.7s
CPGN AML AML
comp=E,4050µm,0.7s
CPGN AML AML
comp=N,4070µm,0.8s
CPGN AML AML
comp=N,3655µm,0.7s
RNI2 Rionero Sannit 1.25 145 P **Pn 04 43 06.2 -0.3**
RNI2 AML AML
comp=N,1515µm,0.7s
RNI2 AML AML
comp=N,1505µm,0.7s
RNI2 AML AML
comp=E,2130µm,1.1s
RNI2 AML AML
comp=E,2200µm,1.1s
ARCI Arcidosso 1.27 276 P **Pn 04 43 06.3 -0.3**
ARCI AML AML
comp=N,442µm,1.3s
ARCI AML AML
comp=E,379µm,1.4s
CRE Caprese Michel 1.27 315 P **Pn 04 43 06.4 -0.3**
CRE AML AML
comp=E,1415µm,0.6s
CRE AML AML
comp=N,1010µm,0.6s
CERA Filignano 1.29 151 P **Pn 04 43 06.6 -0.4**
CERA AML AML
comp=E,2185µm,0.7s
CERA AML AML
comp=E,2120µm,0.7s
CERA AML AML
comp=N,1890µm,0.7s
CERA AML AML
comp=N,1940µm,0.7s
FRES Fresagrandinar 1.33 124 P **Pg 04 43 09.1 +0.7**
TRIV Trivento 1.40 133 AML AML
comp=E,1460µm,1.1s
TRIV AML AML
comp=N,1194µm,1.1s
ASQU Asqua 1.48 317 P **Pn 04 43 10.0 +0.5**
SFI Santa Sofia 1.53 321 P **Pn 04 43 10.6 +0.4**
VAGA Valle Agricola 1.53 149 P **Pn 04 43 10.8 +0.5**
VAGA AML AML
comp=E,590µm,1.2s
VAGA AML AML
comp=N,816µm,0.6s
MAON Monte Argentar 1.55 259 ⇑P **Pn 04 43 10.3 -0.1**
MAON AML AML
comp=N,330µm,0.8s
MAON AML AML
comp=E,435µm,0.7s
FROS Frosini 1.56 289 P **Pn 04 43 10.7 0.0**
CSNT Castellina Chi 1.57 299 P **Pn 04 43 11.0 +0.1**
CSNT AML AML
comp=E,452µm,0.5s
CSNT AML AML
comp=N,466µm,0.5s
BSSO Busso 1.58 138 AML AML
comp=E,314µm,0.9s
BSSO AML AML
comp=N,822µm,0.9s
BSSO AML AML
comp=N,315µm,1.0s
BSSO AML AML
comp=E,734µm,0.8s
OSSC Osservatorio P 1.63 300 P **Pn 04 43 11.0 -0.5**
RUFI Rufina 1.65 313 P **Pn 04 43 12.3 +0.4**
RUFI AML AML
comp=E,738µm,0.9s
RUFI AML AML
comp=N,950µm,0.7s
CIGN Sant'Elia a Pi 1.67 129 P **Pg 04 43 14.1 -0.7**
CIGN AML AML
comp=N,438µm,0.8s

CIGN AML AML
comp=E,514µm,1.1s
CASP Castiglione de 1.71 273 P **Pn 04 43 12.6 -0.1**
CASP AML AML
comp=N,210µm,1.1s
CASP AML AML
comp=E,267µm,1.0s
TRIF Trifonti 1.72 284 ⇑P **Pn 04 43 13.0 +0.2**
TRIF AML AML
comp=E,450µm,0.5s
TRIF AML AML
comp=N,465µm,0.7s
SACR S. Croce Del S 1.75 139 P **Pb 04 43 15.3 +0.3**
MELA Melanico ??? S 1.77 125 P **Pb 04 43 15.0 -0.3**
MELA AML AML
comp=N,2245µm,0.7s
MELA AML AML
comp=E,2085µm,0.8s
MELA AML AML
comp=E,2085µm,0.8s
MELA AML AML
comp=N,2410µm,0.7s
TREM Isole Tremiti 1.82 109 P **Pb 04 43 15.9 -0.4**
TREM AML AML
comp=N,2000µm,1.6s
TREM AML AML
comp=E,1680µm,0.8s
VITU Vitulano (BN) 1.88 145 P **Pb 04 43 17.9 +0.5**
MOCO Biccari - m.te 2.00 132 P **Pb 04 43 18.9 -0.4**
APRC Apricena 2.00 118 P **Pb 04 43 17.7 -1.7**
APRC AML AML
comp=N,1028µm,0.9s
APRC AML AML
comp=E,632µm,0.7s
SGRT San Giovanni R 2.13 116 P **Pb 04 43 19.9 -1.7**
SGRT AML AML
comp=E,581µm,0.6s
SGRT AML AML
comp=N,679µm,0.4s
POPM Popiglio 2.21 307 AML AML
comp=N,257µm,0.5s
POPM AML AML
comp=E,233µm,0.5s
BRJN Brijuni 2.21 10 P **Pn 04 43 19.5 0.0**
MAIM Mastiano 2.29 302 P **Pn 04 43 21.4 +0.7**
MAIM AML AML
comp=N,227µm,0.6s
MAIM AML AML
comp=E,282µm,0.6s
CARD Cardoso 2.36 304 P **Pn 04 43 22.5 +0.9**
CARD AML AML
comp=N,374µm,0.5s
CARD AML AML
comp=E,310µm,0.5s
MORSI Morsiglia 2.82 276 P **Pn 04 43 29.0 +1.1**
GRAM Graiana 2.87 309 AML AML
comp=E,326µm,0.5s
GRAM AML AML
comp=N,400µm,0.6s
SMPL Sampolo 2.96 259 P **Pn 04 43 30.4 +0.6**
A050A Klekovaca 3.00 53 *e*Pn **Pn 04 43 32.1 +1.7**
CORF Corte 3.01 263 P **Pb 04 43 37.2 +0.7**
PGF Pioggiola 3.09 268 *e*Pn **Pn 04 43 31.6 -0.2**
PGF *e*Sn **Sn 04 44 05.2 -3.7**
comp=N,9.1nm,0.5s
PGF Pioggiola 3.09 268 P **Pn 04 43 33.1 +1.3**
PGF Pioggiola 3.09 268 P **Pn 04 43 33.1 +1.3**
AMUR Altamura 3.14 124 P **Pn 04 43 34.0 +1.7**
AMUR AML AML
comp=N,160µm,0.7s
AMUR AML AML
comp=E,237µm,0.5s
CEY Cerknica 3.14 16 *e*Pn **Pn 04 43 32.0 -0.3**
SABO M.te Sabotino 3.26 5 P **Pn 04 43 34.2 +0.2**
SABO AML AML
comp=E,425µm,0.9s
SABO AML AML
comp=N,672µm,0.6s
SABO AML AML
comp=N,2510µm,0.6s
SABO AML AML
comp=E,1870µm,0.7s
MGRS Mrkonjic Grad 3.30 58 *e*Pn **Pb 04 43 37.6 -3.8**
CGRP Cima Grappa 3.30 343 P **Pn 04 43 35.7 +1.0**
CGRP AML AML
comp=E,380µm,0.7s
CGRP AML AML
comp=N,374µm,0.5s
CGRP AML AML
comp=N,382µm,0.6s
CGRP AML AML
comp=E,386µm,0.5s
MATE Matera 3.36 127 ⇑P **Pn 04 43 37.0 +1.8**
AJAC Base Areonaval 3.38 258 P **Pn 04 43 36.7 +1.2**
LTRZ Laterza 3.45 127 P **Pn 04 43 38.5 +1.9**
DOSS Dosso del Somm 3.46 336 P **Pn 04 43 38.5 +1.6**
SALO Salr 3.46 327 P **Pn 04 43 39.1 +2.3**
NOCI Noci 3.49 122 P **Pn 04 43 38.8 +1.6**
NOCI AML AML
comp=N,168µm,1.1s
NOCI AML AML
comp=E,163µm,0.4s
CTI Castel Tesino 3.50 342 P **Pn 04 43 38.5 +1.1**
CTI AML AML
comp=E,252µm,0.7s
CTI AML AML
comp=N,210µm,0.8s
A051A Mrakovica 3.53 48 *e*Pn **Pn 04 43 39.0 +1.3**
BLY Banja Luka 3.53 54 *e*Pn **Pb 04 43 41.1 -4.3**
STAL STALIGIAL 3.55 355 P **Pn 04 43 38.6 +0.7**
STAL AML AML
comp=E,380µm,0.6s
STAL AML AML
comp=N,273µm,0.9s
MAGA Magasa 3.56 330 P **Pn 04 43 39.4 +1.2**
MAGA AML AML
comp=N,373µm,0.6s
MAGA AML AML
comp=E,670µm,0.7s
LUSI Trento, Gardas 3.61 334 P **Pn 04 43 40.2 +1.4**
LUSI AML AML
comp=N,227µm,1.5s
LUSI AML AML
comp=E,226µm,1.2s
CIMO Cimolais 3.62 352 P **Pn 04 43 39.4 +0.4**
CIMO AML AML
comp=E,86µm,0.7s
CIMO AML AML
comp=E,81µm,1.0s
CIMO AML AML
comp=N,75µm,0.9s
CIMO AML AML
comp=N,90µm,1.0s
GAGG Gaggia 3.71 335 P **Pn 04 43 42.0 +1.7**
CLUD Cludinico 3.73 357 P **Pn 04 43 41.0 +0.4**
CLUD AML AML
comp=E,251µm,0.8s
CLUD AML AML
comp=E,234µm,0.8s
CLUD AML AML
comp=N,205µm,0.7s
CLUD AML AML
comp=N,200µm,0.8s
ACOM Acomizza, Ital 3.83 3 P **Pn 04 43 42.8 +0.8**
ACOM AML AML
comp=N,256µm,0.7s
ACOM AML AML
comp=E,336µm,0.8s
ACOM AML AML
comp=E,321µm,0.6s
ACOM AML AML
comp=N,241µm,0.6s
ZOU Zoufplan 3.83 358 P **Pn 04 43 42.5 +0.5**
ZOU AML AML
comp=E,249µm,1.0s
ZOU AML AML
comp=E,253µm,1.0s
ZOU AML AML
comp=N,240µm,1.2s
ZOU AML AML
comp=N,260µm,1.3s
MABI Malga Bissina 3.84 331 P **Pn 04 43 43.9 +1.8**
MABI AML AML
comp=N,62µm,0.4s
MABI AML AML
comp=E,67µm,0.8s

OBKA Obir 3.90 14 *e*Pn **Pn 04 43 42.7 -0.2**
OBKA Obir 3.90 14 *e*Pn **Pn 04 43 43.3 +0.4**
comp=E,3.7nm,0.3s
OBKA Obir 3.90 14 *e*Pn **Pn 04 43 43.3 +0.4**
MYKA Terra Mystica 3.91 5 *e*Pn **Pn 04 43 44.0 +1.0**
comp=E,3.3nm,0.2s
A052A Srbac 3.92 51 *e*Pn **Pn 04 43 43.7 +0.6**
HCY Herceg Novi 3.93 92 *e*Pn **Pn 04 43 44.4 +1.2**
HCY Herceg Novi 3.93 92 *e*Pn **Pn 04 43 44.9 +1.7**
HCY *i* Sn **Sn 04 44 31.0 +1.7**
BRY Bratogost 3.94 86 *e*Pn **Pn 04 43 44.7 +1.2**
BRY Bratogost 3.94 86 ⇓*i*Pn **Pn 04 43 45.1 +1.6**
BRY *i* Sn **Sn 04 44 31.4 +1.6**
KOSI Kohlern 3.95 342 P **Pn 04 43 45.3 +1.7**
KOSI AML AML
comp=N,196µm,0.9s
KOSI AML AML
comp=E,259µm,1.6s
APPI Appiano 4.00 340 P **Pn 04 43 45.9 +1.6**
APPI AML AML
comp=E,186µm,0.4s
APPI AML AML
comp=N,190µm,0.4s
ABTA Abfaltersbach 4.05 353 *i* Pn **Pn 04 43 46.2 +1.4**
comp=N,17nm,0.4s,SNR=25
ABTA *e*Sn **Sn 04 44 36.6 +4.2**
comp=N,24nm,0.5s
CEME Cevo 4.23 91 ⇑*i*Pn **Pn 04 43 49.2 +1.8**
CEME *i* Sn **Sn 04 44 38.5 +1.6**
BUM Brajici-Budva 4.24 94 ⇑*i*Pn **Pn 04 43 49.3 +1.8**
BUM *i* Sn **Sn 04 44 38.6 +1.5**
NKME Niksic 4.25 88 ⇓*i*Pn **Pn 04 43 49.4 +1.8**
NKME *i* Sn **Sn 04 44 38.9 +1.7**
RISI Rein 4.29 350 P **Pn 04 43 50.3 +1.9**
RISI AML AML
comp=N,421µm,0.6s
RISI AML AML
comp=E,324µm,0.7s
SAOF Saorge 4.29 289 P **Pn 04 43 49.5 +1.3**
VSL Villasalto 4.33 223 P **Pn 04 43 50.0 +1.4**
VSL AML AML
comp=E,35µm,0.8s
VSL AML AML
comp=N,38µm,0.5s
SBF Sospel 4.35 287 *e*Pn **Pn 04 43 48.2 -0.8**
SBF Sospel 4.35 287 *e*P **Pn 04 43 50.3 +1.3**
SBF *e*Sn **Sn 04 44 34.7 -5.0**
comp=N,31nm,0.5s
KBA Koelnbreinsper 4.35 1 *e*Pn **Pn 04 43 50.1 +0.9**
comp=N,12nm,0.4s,SNR=5.9
KBA Koelnbreinsper 4.35 1 *e*Pn **Pn 04 43 50.7 +1.6**
KBA *e*Sn **Sn 04 44 40.8 +0.8**
MUGIO Muggio 4.36 318 AML AML
comp=E,78µm,0.6s
MUGIO AML AML
comp=N,58µm,0.5s
ROSI Rosskopf 4.38 344 ⇑P **Pn 04 43 51.6 +2.0**
ROSI AML AML
comp=E,230µm,1.1s
ROSI AML AML
comp=N,258µm,0.8s
TURF col de Turini 4.41 288 P **Pn 04 43 51.4 +1.5**
DRME Dracevica, Mon 4.47 95 *e*Pn **Pn 04 43 52.5 +1.9**
DRME Dracevica, Mon 4.47 95 ⇓*i*Pn **Pn 04 43 52.5 +1.9**
DRME *i* Sn **Sn 04 44 44.3 +1.6**
TTG Podgorica 4.49 92 ⇑*i*Pn **Pn 04 43 52.8 +1.9**
TTG *i* Sn **Sn 04 44 44.9 +1.8**
BEHE Becsehely 4.53 33 P **Pb 04 43 58.8 -3.7**
SPIF crte de Spivo 4.53 289 P **Pn 04 43 54.1 +2.5**
ULC Ulcinj 4.55 98 ⇑*i*Pn **Pn 04 43 53.6 +1.8**
ULC *i* Sn **Sn 04 44 46.4 +1.6**
PLE Pljevlja 4.59 80 *e*Pn **Pn 04 43 54.1 +1.8**
PLE *i* Sn **Sn 04 44 47.2 +1.5**
RUDO Rudo 4.61 77 *e*Pn **Pn 04 43 53.3 +0.8**
FETA Feichten 4.63 339 *e*Pn **Pn 04 43 55.0 +2.1**
comp=N,5.2nm,0.4s
KOME Kolasin 4.66 86 ⇑*i*Pn **Pn 04 43 55.1 +1.8**
KOME *i* Sn **Sn 04 44 48.9 +1.4**
WTTA Wattenberg 4.67 347 *e*Pn **Pn 04 43 55.3 +1.8**
comp=N,3.1nm,0.2s
WTTA Wattenberg 4.67 347 *e*Pn **Pn 04 43 55.5 +2.0**
BBLS Lazići 4.68 74 *e*Pn **Pn 04 43 55.6 +2.1**
DAVOX Davos/Dischmat 4.69 331 Pn **Pn 04 43 56.9 +3.2**
comp=N,3.6nm,0.3s,baz=143,slow=13,SNR=45
DAVOX Sn **Sn 04 44 51.8 +3.6**
comp=N,1.8nm,0.3s,baz=180,slow=20,SNR=1.7
DAVOX LR LR 04 46 01.8
comp=N,38nm,19.8s,baz=162,slow=43
comp=N,14nm,0.4s
DAVOX Davos/Dischmat 4.69 331 P **Pn 04 43 56.1 +2.4**
CALF Calern 4.69 285 P **Pn 04 43 54.8 +1.0**
SQTA Sankt Quirin 4.71 343 *e*Pn **Pn 04 43 55.9 +2.0**
comp=N,17nm,0.3s,SNR=10
WATA Walderalm 4.75 347 *e*Pn **Pn 04 43 57.0 +2.4**
comp=N,3.7nm,0.2s,SNR=8.3
ARSA Arzberg 4.81 19 *e*Pn **Pn 04 43 56.2 +0.8**
comp=N,5.5nm,0.5s,SNR=8.1
ARSA *e*Sn **Sn 04 44 48.9 -2.2**
comp=N,5.7nm,0.5s
ARSA Arzberg 4.81 19 *e*Pn **Pn 04 43 56.2 +0.8**
ARSA *e*Sn **Sn 04 44 49.1 -2.1**
MOTA Moosalm 4.84 343 *e*Pn **Pn 04 43 58.6 +2.7**
comp=N,7.1nm,0.4s,SNR=7.3
KOVH Kovagotottos 4.87 45 P **Pn 04 43 57.0 +1.0**
KOVH S **Sn 04 44 51.1 -1.3**
ENAUX Enaux 4.87 289 P **Pn 04 43 58.9 +2.7**
LMR La Mourre 4.93 279 *e*Pn **Pn 04 43 55.7 -1.2**
LMR La Mourre 4.93 279 *e*P **Pn 04 43 57.4 +0.5**
LMR *e*Sn **Sn 04 44 48.6 -5.4**
comp=N,4.6nm,0.6s
IVA Berane 4.94 86 ⇓*i*Pn **Pn 04 43 59.0 +1.9**
IVA *i* Sn **Sn 04 44 55.7 +1.4**
ZUGS Zugspitze, Sch 4.94 342 *e*Pn **Pn 04 44 00.4 +3.1**
ZUGS *e*Sn **Sn 04 45 00.6 +6.0**
SURF Saint Ours 4.95 293 P **Pn 04 43 59.8 +2.5**
BIOA Bad Ischl, Aus 4.97 4 *e*Pn **Pn 04 43 58.6 +1.0**
comp=N,6.7nm,0.3s,SNR=8.2
BIOA *e*Sn **Sn 04 44 58.5 +3.5**
comp=N,34nm,0.5s
JAUF Jausiers 4.97 292 P **Pn 04 43 59.4 +1.7**
PART Garmisch-Parte 4.99 344 *e*Pn **Pn 04 44 00.7 +2.9**
PART *e*Sn **Sn 04 44 59.2 +3.8**
PVY Plav 5.00 89 *e*Pn **Pn 04 43 59.8 +1.8**
PVY *i* Sn **Sn 04 44 57.1 +1.3**
RJOB Jochberg 5.01 357 *e*Pn **Pn 04 43 60.0 +1.8**
RJOB *e*Sn **Sn 04 44 58.2 +2.0**
TRIGF Trigance 5.05 284 P **Pn 04 44 00.5 +1.8**
RETA Reutte 5.06 341 *i* Pn **Pn 04 44 01.4 +2.7**
comp=N,5.7nm,0.4s,SNR=5.8
MBDF Montbardon 5.06 295 *e*Pn **Pn 04 44 00.6 +1.8**
MBDF *e*Sn **Sn 04 44 52.2 -5.2**
comp=N,28nm,0.8s
PLONS Plons/SG 5.09 329 *e*Pn **Pn 04 44 02.5 +3.3**
PLONS *e*Sn **Sn 04 45 01.9 +3.7**
CREF Crivoux 5.10 293 P **Pn 04 44 01.6 +2.2**
OBER Oberstdorf 5.11 337 *e*Pn **Pn 04 44 02.7 +3.3**
OBER *e*Sn **Sn 04 45 02.0 +3.6**
FLAF Flassans-sur-l 5.12 280 P **Pn 04 44 00.6 +1.1**
DAVA Damuels 5.12 334 *e*Pn **Pn 04 44 02.6 +3.0**
comp=N,8.6nm,0.5s,SNR=8.4
DAVA Damuels 5.12 334 *e*Pn **Pn 04 44 02.7 +3.0**
DAVA *e*Sn **Sn 04 45 04.7 +5.7**
DIVS Divibare 5.14 72 *e*Pn **Pn 04 44 01.2 +1.3**
MOA Molln 5.18 8 *e*Pn **Pn 04 44 01.2 +0.9**
comp=N,1.3nm,0.2s
MOA *e*Sn **Sn 04 44 58.6 -1.5**
comp=N,9.3nm,0.6s
MOA Molln 5.18 8 *e*Pn **Pn 04 44 00.6 +0.3**
MOA *e*Sn **Sn 04 45 04.1 +4.0**
MORH Mrgy, Hungar 5.23 46 P **Pn 04 44 02.3 +1.2**
DIX Grande Dixence 5.32 311 P **Pn 04 44 05.9 +3.3**
FRGS Fruska Gora 5.36 61 ⇓P **Pn 04 44 03.8 +0.9**
FRGS Fruska Gora 5.36 61 *e*Pn **Pn 04 43 58.9 -4.0**
LPG La Plagne 5.40 303 *e*Pn **Pn 04 44 03.0 -0.6**
LPG La Plagne 5.40 303 *e*P **Pn 04 44 07.0 +3.4**
LPG *e*Sn **Sn 04 45 00.4 -5.5**
comp=N,18nm,0.7s
UBR Ueberruh 5.41 337 *e*Pn **Pn 04 44 05.7 +2.2**
UBR *e*Sn **Sn 04 45 09.4 +3.6**
MPLH Magyarpolny 5.41 33 P **Pn 04 44 04.0 +0.5**
LPL La Plagne 5.42 303 *e*P **Pn 04 44 06.8 +3.0**
LPL *e*Sn **Sn 04 45 01.0 -5.3**
comp=N,26nm,1.0s

RONA Rosalia, Austr 5.43 23 *e*Pn **Pn 04 44 04.5 +0.6**
comp=N,6.8nm,0.5s,SNR=7.9
RONA *e*Sn **Sn 04 45 05.2 -1.2**
comp=N,9.3nm,0.5s
ARTF Artigues 5.47 282 P **Pn 04 44 06.1 +1.8**
SOP Sopron 5.50 25 P **Pn 04 44 06.2 +1.5**
CONA Conrad Observa 5.53 19 *e*Pn **Pn 04 44 05.7 +0.5**
comp=N,6.0nm,0.4s,SNR=7.3
CONA *e*Sn **Sn 04 45 07.9 -1.0**
comp=N,6.7nm,0.5s
WILA Wila 5.58 329 *e*Pn **Pn 04 44 09.5 +3.6**
WILA *e*Sn **Sn 04 45 13.1 +3.1**
BSTF la Bastide-des 5.62 284 P **Pn 04 44 08.3 +1.9**
OGSI Sixt 5.69 308 P **Pn 04 44 10.5 +3.2**
ORIF Oris-en-Rattie 5.72 295 *e*Pn **Pn 04 44 06.9 -1.0**
ORIF Oris-en-Rattie 5.72 295 *e*P **Pn 04 44 11.4 +3.5**
ORIF *e*Sn **Sn 04 45 08.7 -4.9**
comp=N,18nm,0.7s
ORIF Oris-en-Rattie 5.72 295 P **Pn 04 44 11.9 +4.0**
AIGLE Aigle 5.73 311 P **Pn 04 44 11.6 +3.6**
WALHA Wallhausen, DE 5.78 332 *e*Pn **Pn 04 44 11.7 +3.1**
OHR Ohrid 5.91 103 *i* Pn **Pn 04 44 12.9 +2.6**
SULZ Cheisacher 5.99 325 *e*Pn **Pn 04 44 14.6 +3.1**
SULZ *e*Sn **Sn 04 45 21.6 +1.5**
EMING Emmingen-Lipti 6.00 331 *e*Pn **Pn 04 44 13.4 +1.7**
EMING *e*Sn **Sn 04 45 20.9 +0.5**
SLE Schleitheim 6.03 328 *e*Pn **Pn 04 44 13.3 +1.3**
SLE Schleitheim 6.03 328 P **Pn 04 44 13.2 +1.2**
BALST Balsthal 6.03 322 *e*Pn **Pn 04 44 13.7 +1.7**
BALST *e*Sn **Sn 04 45 22.6 +1.5**
BALST Balsthal 6.03 322 P **Pn 04 44 14.7 +2.7**
GUT Gutenstein 6.06 333 P **Pn 04 44 16.3 +3.8**
METMA Mettma DE 6.08 327 *e*Pn **Pn 04 44 14.5 +1.7**
METMA *e*Sn **Sn 04 45 21.4 -0.9**
GEC2 GERESS Array S 6.13 3 *e*Sn **Sn 04 45 22.7 -0.9**
GERES GERESS Array B 6.13 3 Pn **Pn 04 44 13.8 +0.3**
comp=N,0.8nm,0.3s,baz=171,slow=13,SNR=19
GERES Sn **Sn 04 45 20.7 -2.9**
comp=N,1.4nm,0.3s,baz=170,slow=18,SNR=2.1
comp=N,1.3nm,0.4s
CKRC Cesky Krumlov 6.14 7 *e*PN **Pn 04 44 14.7 +1.1**
CKRC *e*SN **Sn 04 45 21.5 -2.3**
BERGE Lenzkirch (DE) 6.24 327 *e*Pn **Pn 04 44 16.2 +1.2**
BOURR Bourrignon 6.29 320 P **Pn 04 44 17.5 +1.9**
BOVS Bovan 6.29 79 ⇓P **Pn 04 44 16.7 +1.0**
FELD Feldberg im Sc 6.31 326 P **Pn 04 44 17.4 +1.4**
CABF La Chapelle 6.38 310 *e*Pn **Pn 04 44 17.2 +0.3**
CABF *e*Sn **Sn 04 45 24.0 -5.7**
comp=N,12nm,0.7s
OG35 Corcelles 6.38 304 P **Pn 04 44 19.3 +2.4**
KHC Kasperske Hory 6.41 2 *e*PN **Pn 04 44 17.4 +0.1**
KHC *e*SN **Sn 04 45 27.3 -3.1**
KHC *e*SG **Sg 04 46 04.0 -4.4**
KIZ Kirchzarten 6.41 326 P **Pn 04 44 18.5 +1.2**
WET Wettzell 6.42 358 *e*Pn **Pn 04 44 17.4 0.0**
WET *e*Sn **Sn 04 45 28.8 -1.9**
CHMF Charmoille 6.47 317 P **Pn 04 44 20.1 +2.0**
MDVR Moldovita 6.51 69 ⇓P **Pn 04 44 20.6 +2.0**
VIVF Saint-Julien-l 6.52 292 *e*P **Pn 04 44 20.7 +1.9**
VIVF *e*Sn **Sn 04 45 28.5 -4.6**
comp=N,46nm,1.6s
BFO Black Forest 6.56 330 *e*Pn **Pn 04 44 20.9 +1.6**
VOGT Vogtsburg - To 6.61 326 P **Pn 04 44 21.0 +1.0**
MOF Molkenrain 6.67 322 P **Pn 04 44 22.4 +1.6**
BOUC Bouclans 6.67 315 P **Pn 04 44 22.7 +1.9**
BZS Buzias 6.71 62 ⇑P **Pn 04 44 22.5 +1.1**
KRUC Moravsky 6.72 18 *e*PN **Pn 04 44 23.1 +1.7**
KRUC *e*SN **Sn 04 45 37.7 -0.3**
STIP Stip 6.76 96 *i* Pn **Pn 04 44 25.6 +3.5**
STIP *i* Sn **Sn 04 45 43.6 +4.5**
HINF Hinteralfeld 6.77 321 *e*P **Pn 04 44 25.0 +2.8**
HINF *e*Sn **Sn 04 45 35.1 -4.2**
comp=N,11nm,0.5s
RONF Ronchamp 6.79 319 P **Pn 04 44 23.9 +1.5**
JAVC Velka Javorina 6.88 26 *e*PN **Pn 04 44 24.6 +0.8**
LASF Ste Croix 6.93 284 *e*P **Pn 04 44 26.1 +1.7**
ECH Echery 6.93 324 *e*Pn **Pn 04 44 25.3 +0.9**
ECH *e*Sn **Sn 04 45 43.1 -0.2**
ECH Echery 6.93 324 P **Pn 04 44 25.6 +1.2**
VRAC Vranov 6.99 19 ⇑P **Pn 04 44 27.1 +1.8**
VRAC Vranov 6.99 19 Pn **Pn 04 44 26.4 +1.1**
comp=N,0.6nm,0.3s,baz=220,slow=14,SNR=5.1
VRAC Sn **Sn 04 45 40.6 -4.2**
comp=N,0.1nm,0.3s,baz=274,slow=19,SNR=2.0
VRAC LR LR 04 47 42.9
comp=N,60nm,18.2s,baz=188,slow=44
comp=N,2.0nm,0.5s
VRAC Vranov 6.99 19 *e*PN **Pn 04 44 26.8 +1.5**
BLKB Belogradchik 7.00 79 ⇑P **Pn 04 44 26.9 +1.5**
HERR Herculane 7.02 69 ⇓P **Pn 04 44 27.5 +2.0**
CDF Champ du Feu 7.03 326 *e*P **Pn 04 44 26.8 +0.9**
CDF *e*Sn **Sn 04 45 41.7 -4.2**
comp=N,4.8nm,0.5s
ROTZ Rotzenmuhle 7.07 355 *e*Pn **Pn 04 44 28.8 +2.4**
ROTZ *e*Sn **Sn 04 45 45.6 -1.2**
GRF Grafenberg Arr 7.10 350 *e*Sn **Sn 04 45 46.5 -0.8**
VAY Valandovo 7.13 98 *i* Pn **Pn 04 44 29.0 +1.9**
VAY *i* Sn **Sn 04 45 46.0 -2.1**
HAU Haudompre 7.14 320 *e*P **Pn 04 44 28.7 +1.4**
HAU *e*Sn **Sn 04 45 43.9 -4.6**
comp=N,36nm,0.7s
MANZ Manzenberg 7.30 355 *e*Pn **Pn 04 44 29.8 +0.4**
MANZ *e*Sn **Sn 04 45 49.4 -2.8**
GZR Gura Zlata 7.40 66 ⇑P **Pn 04 44 33.3 +2.3**
VTS Vitosha 7.41 87 ⇑P **Pn 04 44 33.1 +2.0**
KEST Kesra 7.60 204 Pn **Pn 04 44 37.6 +4.0**
comp=N,0.5nm,0.3s,baz=305,slow=5.8,SNR=12
comp=N,2.4nm,0.5s
MORC Moravsky Berou 7.67 22 ⇑P **Pn 04 44 36.2 +1.7**
MORC Moravsky Berou 7.67 22 *e*PN **Pn 04 44 36.5 +2.0**
SMF Signal de Mont 7.72 304 *e*P **Pn 04 44 37.1 +1.8**
SMF *e*Sn **Sn 04 45 57.7 -5.1**
comp=N,7.4nm,0.6s
KRLC Kraliky 7.76 17 *e*PN **Pn 04 44 35.9 +0.2**
PAGF Fort de Pagny 7.83 321 *e*P **Pn 04 44 39.3 +2.7**
baz=114
PAGF *e*Sn **Sn 04 45 58.7 -6.5**
comp=N,62nm,1.3s
DRGR 7.90 56 ⇓P **Pn 04 44 39.6 +1.8**
SFTF Sexfontaines 7.92 317 *e*P **Pn 04 44 40.6 +2.6**
baz=130
SFTF *e*Sn **Sn 04 46 00.6 -7.0**
comp=N,21nm,1.0s
DPC Dobruska-Polom 7.92 15 *e*PN **Pn 04 44 37.5 -0.5**
MOX Moxa 7.99 353 *e*Pn **Pn 04 44 39.9 +0.9**
MOX *e*Sn **Sn 04 46 05.5 -3.8**
LOR Lormes 8.02 308 *e*P **Pn 04 44 39.7 +0.4**
baz=123
LOR *e*Sn **Sn 04 46 04.5 -5.5**
comp=N,8.3nm,0.5s
MTLF Montolieu 8.06 278 *e*Pn **Pn 04 44 38.3 -1.6**
HROE Hohe Rhon--Fla 8.08 346 *e*Pn **Pn 04 44 41.0 +0.9**
AVF Avril sur Loir 8.09 303 *e*P **Pn 04 44 43.1 +2.8**
AVF *e*Sn Sn 04 46 04.0 -7.7
comp=N,2.8nm,0.6s
OSTC Ostas 8.10 14 *e*PN **Pn 04 44 41.6 +1.1**
CHVC Chvalec 8.10 13 *e*PN **Pn 04 44 40.9 +0.4**
MEZF Maizieres J'vi 8.11 318 *e*P **Pn 04 44 43.7 +3.1**
baz=131
MEZF *e*Sn **Sn 04 46 06.0 -6.2**
comp=N,58nm,1.6s
SSF Saint Saulge 8.12 306 *e*P **Pn 04 44 45.0 +4.3**
SSF *e*Sn **Sn 04 46 05.3 -7.2**
comp=N,6.5nm,0.7s
ABH Alteburg 8.15 333 *e*Pn **Pn 04 44 44.5 +3.4**
SAVF Savonnieres en 8.15 319 *e*P **Pn 04 44 44.1 +3.0**
baz=144
SAVF *e*Sn **Sn 04 46 06.5 -6.8**
comp=N,1.1nm,0.4s
BRG Berggiesshubel 8.16 3 *e*Sn **Sn 04 46 10.5 -3.1**
TNS Taunus Mts 8.18 338 *e*Pn **Pn 04 44 43.3 +1.8**
RIVT Riveris 8.28 330 *e*Pn **Pn 04 44 45.4 +2.6**
BGF Bois d'Agland 8.30 301 *e*P **Pn 04 44 45.9 +2.7**
BGF *e*Sn **Sn 04 46 11.4 -5.7**
comp=N,2.6nm,0.4s
CAF Calviac 8.34 289 *e*P **Pn 04 44 45.8 +2.1**
WLF Walferdange 8.48 327 *e*Pn **Pn 04 44 49.2 +3.6**
CLL Collm 8.58 359 *e*Sn **Sn 04 46 22.0 -1.9**
CLL *e*Sg **Sg 04 47 25.0 +6.9**
CLL Collm 8.58 359 *e*Sn **Sn 04 46 21.9 -1.9**
TCF Toulx Ste Croi 8.61 298 *e*P **Pn 04 44 51.0 +3.5**
RJF Les Rejaudoux 8.79 291 *e*P **Pn 04 44 54.3 +4.3**
VOIR 8.96 68 ⇓P **Pn 04 44 53.9 +1.6**

LFF La Frestale 9.26 288 *e*Pn **Pn 04 44 55.2 -1.2**
LFF *e*Sn Sn 04 46 30.4 -10
MLR Muntele Rosu 9.59 69 ⇑P **Pn 04 45 03.2 +2.3**
MLR Muntele Rosu 9.59 69 Pn **Pn 04 44 59.9 -1.0**
comp=N,0.1nm,0.3s,baz=231,slow=18,SNR=0.9
MLR LR LR 04 49 33.9
comp=N,122nm,18.2s,baz=253,slow=44
comp=N,0.3nm,0.3s
BAIF Baives 9.60 323 *e*P **Pn 04 45 05.3 +4.4**
FLN La Foliniere 11.29 307 *e*Pn **Pn 04 45 21.5 -2.6**
baz=128
IDI Anoyia 11.74 125 Sn **Sn 04 47 36.3 -5.2**
comp=N,0.1nm,0.3s,baz=9.8,slow=22,SNR=0.9
ESDC Sonseca Array 13.27 262 Pn **Pn 04 45 53.8 +2.5**
comp=N,0.4nm,0.7s,baz=73,slow=18,SNR=2.7
AKASG Malin Array Be 13.57 48 LR LR 04 51 29.3
comp=N,36nm,18.2s,baz=56,slow=39
BRTR Keskin Array B 15.68 94 LR LR 04 53 49.8
comp=N,46nm,18.3s,baz=286,slow=43
EKA Eskdalemuir Ar 16.50 326 Pn **P 04 46 37.1 +0.3**
baz=120,slow=29
comp=N,3.1nm,1.1s
MDT Midelt 17.17 241 LR LR 04 53 30.2
comp=N,23nm,20.7s,baz=320,slow=37
NOA NORSAR Array B 18.38 357 Pn **Pn 04 46 55.0 -2.6**
comp=N,0.4nm,0.7s,baz=176,slow=11,SNR=1.3
NOA LR LR 04 55 14.4
comp=N,15nm,18.4s,baz=250,slow=41
MMAI Mount Meron Ar 19.99 112 P **Pn 04 47 17.0 -0.2**
comp=N,0.2nm,0.3s,baz=316,slow=10.0,SNR=1.3
comp=N,0.5nm,0.3s
FINES FINESS Array B 20.27 18 P **P 04 47 18.7 +0.4**
comp=N,2.3nm,0.9s,baz=213,slow=12,SNR=1.2
comp=N,2.3nm,0.9s
KBZ Khabaz 21.62 77 P **P 04 47 34.2 +1.3**
comp=N,4.5nm,0.9s,baz=295,slow=6.6,SNR=6.1
comp=N,4.5nm,0.9s
BELG Belogornoye 24.95 55 P **P 04 48 07.3 +1.2**
comp=N,10nm,0.9s,baz=275,slow=5.9,SNR=2.1
comp=N,10nm,0.9s
KIRV Kirov 27.47 42 LR LR 05 00 42.0
comp=N,37nm,18.8s,baz=268,slow=40
TORD Torodi Ar. Bea 31.11 202 P **P 04 49 03.9 +2.5**
comp=N,0.9nm,0.8s,baz=33,slow=9.4,SNR=5.8
comp=N,0.9nm,0.8s
AAK Ala-Archa 44.17 68 LR LR 05 14 08.3
comp=N,17nm,18.3s,baz=294,slow=43
ZALV Zalesovo Beam 46.96 50 P **P 04 51 13.8 +0.3**
comp=N,0.4nm,0.3s,baz=309,slow=9.1,SNR=1.7
comp=N,0.4nm,0.3s
MKAR Makanchi Array 47.79 60 P **P 04 51 21.2 +1.0**
comp=N,0.8nm,0.7s,baz=282,slow=6.1,SNR=5.8
comp=N,0.8nm,0.7s
SONM Songino Array 61.85 50 P **P 04 53 03.8 +1.7**
comp=N,0.7nm,0.7s,baz=304,slow=9.2,SNR=5.5
comp=N,0.7nm,0.7s
MDP Montagnes des 68.88 257 LR LR 05 23 41.2
comp=N,21nm,18.2s,baz=48,slow=36

RSNC 09 04:56:46.8±0.9, 6°.83N×73°.16W, h143km±4km, ML3.2, Mw3.5, 5C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**185**	⇑*i*P	Pn	04 57 06.2	-0.5
BARC				*e*S	Sn	04 57 21.6	-0.2
BARC				*i*		04 57 23.6	
comp=Z,369nm,0.2s							
PAMC	**Pamplona, Colo**	**0.69**	**42**	*e*P	Pn	04 57 08.8	-0.3
PAMC				*e*S	Sn	04 57 26.0	0.0
PAMC				*i*		04 57 27.5	
comp=Z,250nm,0.4s							
RUSC	**La Rusia**	**0.93**	**175**	⇑*i*P	Pn	04 57 10.2	-0.7
RUSC				*e*S	Sn	04 57 28.4	-0.9
RUSC				*i*		04 57 30.9	
comp=Z,277nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	⇑*i*P	Pn	04 57 12.6	-1.4
PTBC				*e*S	Sn	04 57 34.0	-0.7
PTBC				*i*		04 57 36.0	
comp=Z,240nm,0.2s							
OCAC	**Ocana**	**1.41**	**354**	⇓*e*P	Pn	04 57 14.0	-1.1
OCAC				*e*S	Sn	04 57 36.1	-0.6
OCAC				*i*		04 57 41.3	
comp=Z,398nm,0.2s							
TAMC	**Tame, Arauca**	**1.42**	**106**	⇓*i*P	Pn	04 57 14.5	-0.5
TAMC				*e*S	Sn	04 57 36.2	-0.4
TAMC				*i*		04 57 36.8	
comp=Z,91nm,0.2s							
SPBC	**San Pablo de B**	**1.48**	**218**	⇑*e*P	Pn	04 57 15.1	-0.7
SPBC				*e*S	Sn	04 57 37.6	-0.3
SPBC				*i*		04 57 43.9	
comp=Z,235nm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.81**	**292**	*e*P	Pn	04 57 18.3	-1.0
ZARC				*e*S	Sn	04 57 44.2	0.0
ZARC				*i*		04 57 49.7	
comp=Z,257nm,0.4s							
NORC	**Norcasia**	**2.11**	**234**	*e*P	Pn	04 57 22.2	-0.7
NORC				*i*		04 57 55.2	
comp=Z,161nm,0.2s							
CHIC	**Chingaza**	**2.25**	**195**	*e*P	Pn	04 57 24.6	-0.5
CHIC				*e*S	Sn	04 57 54.1	-0.3
CHIC				*i*		04 57 57.4	
comp=Z,94nm,0.3s							
ROSC	**El Rosal**	**2.29**	**210**	*e*P	Pn	04 57 26.2	+0.8
ROSC				*e*S	Sn	04 57 56.2	+1.3
ROSC				*i*		04 58 02.8	
comp=Z,153nm,0.3s							
HELC	**Santa Helena**	**2.44**	**255**	*e*P	Pn	04 57 27.2	0.0
HELC				*e*S	Sn	04 57 56.8	-1.4
HELC				*i*		04 58 05.4	
comp=Z,108nm,0.3s							
UREC	**San Jos de Ur**	**2.53**	**291**	*e*P	Pn	04 57 26.1	-1.9
UREC				*e*S	Sn	04 57 55.8	-3.9
UREC				*i*		04 58 06.4	
comp=Z,112nm,0.4s							
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*e*P	Pn	04 57 30.7	0.0
GUY2C				*e*S	Sn	04 58 06.8	+2.4
GUY2C				*i*		04 58 14.5	
comp=Z,122nm,0.5s							
VILC	**Villavicencio,**	**2.75**	**191**	*e*P	Pn	04 57 30.2	-0.7
VILC				*e*S	Sn	04 58 04.4	-0.5
VILC				*i*		04 58 10.2	
comp=Z,105nm,0.4s							
PTGC	**Puerto Gaitan,**	**2.80**	**159**	⇑*e*P	Pn	04 57 29.5	-1.9
PTGC				*e*S	Sn	04 58 02.8	-3.1
PTGC				*i*		04 58 14.7	
comp=Z,52nm,0.3s							
CBOC	**Ciudad Bolivar**	**2.99**	**252**	*e*P	Pn	04 57 34.1	+0.1
CBOC				*e*S	Sn	04 58 09.4	-1.0
CBOC				*i*		04 58 11.8	
comp=Z,23nm,0.5s							
DBBC	**Dabeiba**	**3.03**	**274**	*e*P	Pn	04 57 34.0	-0.5
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P	Pn	04 57 36.1	-0.4
ARGC				*e*S	Sn	04 58 14.6	-0.4
ARGC				*i*		04 58 24.2	
comp=Z,23nm,0.2s							
ANIL	**Santa Ana**	**3.22**	**224**	*e*P	Pn	04 57 37.4	+0.4
ANIL				*e*S	Sn	04 58 17.8	+2.0
PRAC	**Prado**	**3.54**	**209**	*e*P	Pn	04 57 39.8	-1.1
PRAC				*e*S	Sn	04 58 22.6	-0.3
PRAC				*i*		04 58 28.9	
comp=Z,95nm,0.5s							
PLMC	**San Jos del P**	**3.65**	**239**	*e*P	Pn	04 57 42.0	-0.3
PLMC				*e*S	Sn	04 58 24.8	-0.6
PLMC				*i*		04 58 28.5	
comp=Z,30nm,0.4s							
SJCC	**San Jacinto, C**	**3.65**	**327**	*e*P	Pn	04 57 39.7	-2.7
SJCC				*e*S	Sn	04 58 20.8	-4.6
SJCC				*i*		04 58 24.6	
comp=Z,28nm,0.3s							
LCBC	**Los crdobas,**	**3.76**	**303**	*e*S	Sn	04 58 28.8	+0.8
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	⇓*e*P	Pn	04 57 46.1	-3.2
CRJC				*e*S	Sn	04 58 33.0	-4.9
CRJC				*i*		04 58 40.0	
comp=Z,40nm,0.2s							
YOTC	**Yotoco, Valle**	**4.25**	**228**	*e*P	Pn	04 57 49.6	-0.7
GUVC	**San Jose del G**	**4.29**	**173**	*e*P	Pn	04 57 49.2	-1.5
GUVC				*e*S	Sn	04 58 37.8	-2.6
GUVC				*i*		04 58 43.4	
comp=Z,23nm,0.2s							
URIC	**Uribia, Colomb**	**4.98**	**13**	*e*P	Pn	04 57 56.6	-3.3
URIC				*i*		04 58 57.4	
comp=Z,5.6nm,0.3s							
GARC	**Garzon, Huila**	**5.16**	**207**	*e*P	Pn	04 58 00.7	-1.8
GARC				*i*		04 59 02.0	
comp=Z,17nm,0.2s							
FLOC	**Florencia**	**5.77**	**206**	*e*P	Pn	04 58 09.5	-1.0
FLOC				*i*		04 59 19.4	
comp=Z,3.4nm,0.4s							
BBAC	**Balboa, Cauca**	**6.27**	**221**	*e*P	Pn	04 58 17.5	+0.1

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*IDC **09** 05:09:15.6±1.5, 35°.85N×71°.09E, h0km, mb3.7/4, mbtmp3.6/5, ML3.0/1, MS3.4/1, Error ellipse: s-maj=38.6km s-min=29.4km az=144.0*

ISC 09 05:09:27.5±1.1, 36°.15N±0°.10×71°.4E±0°.1, h100km, n16, σ1§50/16, mb3.6/3, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.98**	**355**	⇑P	Pn	05 11 07.8	+0.8
4.0nm,0.3s,baz=175,slow=13,SNR=168							
KK31				S	Sn	05 12 21.9	-3.0
5.4nm,0.5s,baz=178,slow=24,SNR=11							
PYUN	**Piuthan**	**12.67**	**126**	*e*P	Pn	05 12 23.0	-1.2
18nm,0.4s							
DANN	**Dangsing**	**13.02**	**123**	*e*P	Pn	05 12 28.1	-0.8
9.3nm,0.2s							
MKAR	**Makanchi Array**	**13.39**	**34**	Pn	Pn	05 12 34.2	+0.9
0.1nm,0.3s,baz=220,slow=13,SNR=1.3							
0.2nm,0.5s							
GKN	**Gorkha**	**13.84**	**122**	*e*P	Pn	05 12 38.5	-0.9
16nm,0.4s							
DMN	**Daman**	**14.41**	**122**	*e*P	Pn	05 12 45.7	-1.2
6.0nm,0.3s							
PKIN	**Phulchoki**	**14.63**	**122**	*e*P	Pn	05 12 48.1	-1.6
5.0nm,0.2s							
PKI	**Pulchoki**	**14.64**	**122**	*e*P	Pn	05 12 48.6	-1.3
6.9nm,0.4s							
GUN	**Gumba**	**14.76**	**120**	*e*P	Pn	05 12 50.5	-0.9
7.2nm,0.3s							
JIRN	**Jiri**	**15.13**	**120**	*e*P	Pn	05 12 54.9	-1.2
21nm,0.5s							
RAMN	**Ramite**	**15.85**	**121**	*e*P	Pn	05 13 04.0	-1.1
4.5nm,0.2s							
ZALV	**Zalesovo Beam**	**20.10**	**24**	P	**P**	05 13 53.1	+0.1
0.5nm,0.3s,baz=215,slow=10,SNR=3.5							
0.5nm,0.3s							
NRIK	**Noril'sk**	**34.41**	**10**	LR	LR	05 32 14.2	
comp=Z,56nm,19.7s,baz=15,slow=40							
FINES	**FINESS Array B**	**37.96**	**326**	P	**P**	05 16 36.3	+1.3
4.0nm,1.0s,baz=98,slow=7.2,SNR=3.5							
4.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**66.04**	**269**	P	**P**	05 20 02.5	-1.3
0.4nm,0.5s,baz=53,slow=5.9,SNR=9.7							
0.4nm,0.5s							
WRA	**Warramunga Arr**	**81.53**	**122**	P	**P**	05 21 35.8	+1.7
0.3nm,0.9s,baz=328,slow=4.9,SNR=1.2							
0.3nm,0.9s							

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*IDC **09** 05:15:27.7±4.3, 22°.50N×144°.06E, h95km±32km, mb3.3/6, mbtmp3.7/7, Error ellipse: s-maj=86.6km s-min=19.0km az=84.0*

ISC 09 05:15:29.9±3.1, 22°.4N±0°.2×143°.4E±0°.8, h100km, n7, σ1§21/5, mb3.8/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.78**	**347**	P	**Pn**	05 16 40.5	+0.8
62nm,0.9s,baz=128,slow=19,SNR=16							
JCJ				S	**Sn**	05 17 33.0	-0.9
52nm,0.4s,baz=278,slow=22,SNR=12							
KSRS	**Korea Array**	**20.05**	**322**	P	Pn	05 19 59.0	+1.3
0.6nm,0.4s,baz=150,slow=9.1,SNR=5.0							
0.6nm,0.4s							
KLR	**Kul'dur**	**28.30**	**344**	P	**P**	05 21 14.3	+0.5
1.6nm,0.5s,baz=159,slow=8.2,SNR=5.2							
1.6nm,0.5s							
WRA	**Warramunga Arr**	**43.01**	**192**	P	P	05 23 19.0	-0.6
0.1nm,0.3s,baz=16,slow=9.4,SNR=9.9							
0.1nm,0.3s							
FITZ	**Fitzroy Crossi**	**43.84**	**205**	P	P	05 23 27.8	+1.6
1.2nm,0.8s,baz=37,slow=10,SNR=1.7							
1.2nm,0.8s							
MKAR	**Makanchi Array**	**54.34**	**312**	P	**P**	05 24 46.4	+0.2
0.1nm,0.5s,baz=106,slow=8.2,SNR=1.6							
0.1nm,0.5s							
FINES	**FINESS Array B**	**82.61**	**334**	P	**P**	05 27 40.7	-1.1
1.7nm,0.9s,baz=66,slow=4.8,SNR=7.2							
1.7nm,0.9s							

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*IDC **09** 05:21:59.3±0.8, 3°.05S×130°.03E, h0km, mb3.9/8, mbtmp4.1/12, ML4.1/4, MS3.2/7, Error ellipse: s-maj=29.8km s-min=15.4km az=70.0*
*NEIC **09** 05:22:01.3±2.0, 3°.00S±0°.05×129°.78E±0°.06, h25km±5km, mb4.2/22, Error ellipse: s-maj=9.4km s-min=7.0km az=76.0*
*DJA **09** 05:22:02.6±0.3, 3°.S±2°.×13°.0E±°., h16km±3km, M4.2/12, mb4.5/8, mB5.0/1, MLv4.0/12, Mw(mB)4.4/1*

ISC 09 05:22:01.9±0.5, 3°.02S±0°.04×129°.98E±0°.05, h25km, n74, σ1§69/74, mb4.0/9, MS3.3/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.10**	**253**	P	**Pb**	05 22 25.4	+3.1
BNDI	**Bandanaira**	**1.50**	**183**	P	**Pb**	05 22 31.3	+2.2
BNDI	**Bandanaira**	**1.50**	**183**	P	**Pb**	05 22 32.1	+3.0
KRAI	**Karang Ratu**	**1.61**	**259**	P	**Pb**	05 22 32.2	+1.2
AAI	**Ambon**	**1.90**	**249**	P	**Pb**	05 22 36.8	+0.8
FAKI	**Fak Fak**	**2.27**	**88**		**Pn**	05 22 39.2	+1.4
FAKI				Sn	**Sb**	05 23 09.0	-0.9
FAKI	**Fak Fak**	**2.27**	**88**	P	**Pn**	05 22 39.1	+1.2
FAKI	**Fak Fak**	**2.27**	**88**	P	**Pn**	05 22 39.1	+1.2
SIJI	**Sorong**	**2.49**	**31**	Pn	**Pn**	05 22 40.5	-0.4
16nm,0.3s,baz=267,slow=9.2,SNR=42							
SIJI				Sn	**Sn**	05 23 09.8	-0.7
21nm,0.3s,baz=217,slow=20,SNR=11							
63nm,0.5s							
SIJI	**Sorong**	**2.49**	**31**	P	**Pn**	05 22 40.5	-0.4
SIJI				S	**Sn**	05 23 10.4	-0.1
SWI	**Sorong**	**2.49**	**31**	P	**Pn**	05 22 40.5	-0.4
NLAI	**Namlea**	**2.88**	**266**	P	**Pn**	05 22 49.6	+3.3
LBMI	**Labuha**	**3.42**	**314**	P	**Pn**	05 22 54.8	+1.0
SANI	**Sanana**	**4.10**	**283**	P	**Pn**	05 23 02.9	-0.2
SANI	**Sanana**	**4.10**	**283**	P	**Pn**	05 23 03.4	+0.3
RKPI	**Ransiki, Papua**	**4.45**	**70**	P	**Pn**	05 23 09.2	+1.3
SAUI	**Saumlaki**	**5.11**	**165**	Pn	**Pn**	05 23 16.4	-0.6
LUWI	**Luwuk**	**7.47**	**285**	Pn	**Pn**	05 23 45.9	-3.4
GTOI	**Gorontalo**	**7.85**	**297**	P	**Pn**	05 23 58.4	+3.7
0.0nm13nm,0.8s							
APSI	**Ampana**	**8.59**	**284**	P	**Pn**	05 24 06.3	+1.6
826nm81nm,0.8s							
MRSI	**Marisa**	**8.75**	**293**	P	**Pn**	05 24 08.5	+1.5
MTN	**Manton Dam**	**9.83**	**173**	Pn	**Pn**	05 24 20.3	-1.6
MTN				Sn	**Sn**	05 26 10.7	-0.8
MTN	**Manton Dam**	**9.83**	**173**	P	**Pn**	05 24 23.0	+1.2
TOLI2	**Tolitoli**	**10.07**	**294**	Pn	Pn	05 24 20.3	-4.8
KAPI	**Kappang**	**10.39**	**259**	Pn	**Pn**	05 24 29.9	+0.3
2.4nm,0.3s,baz=110,slow=14,SNR=6.0							
KAPI				LR	LR	05 29 24.2	
comp=Z,140nm,20.5s,baz=82,slow=43							
4.9nm,0.2s							
KAPI	**Kappang**	**10.39**	**259**	P	**Pn**	05 24 30.3	+0.8
DAV	**Davao City (W)**	**10.94**	**336**	LR	LR	05 30 09.5	
comp=Z,95nm,18.2s,baz=24,slow=45							
KNRA	**Kununurra**	**12.64**	**185**	Pn	**Pn**	05 24 59.6	-0.6
KNRA	**Kununurra**	**12.64**	**185**	P	**Pn**	05 25 00.2	-0.1
PLAI	**Plampang**	**13.44**	**244**	P	**Pn**	05 25 12.5	+1.3
FITZ	**Fitzroy Crossi**	**15.58**	**196**	Pn	**Pn**	05 25 40.2	+0.1
0.5nm,0.3s,baz=18,slow=5.5,SNR=20							
FITZ				Sn	**Sn**	05 28 28.3	-3.8
0.2nm,0.3s,baz=41,slow=19,SNR=1.2							
FITZ				LR	LR	05 33 20.3	
comp=Z,64nm,19.1s,baz=42,slow=44							
5.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**15.58**	**196**	Pn	**Pn**	05 25 38.9	-1.2
FITZ	**Fitzroy Crossi**	**15.58**	**196**	P	**Pn**	05 25 40.2	+0.1
COEN	**Coen**	**16.97**	**131**		**Pn**	05 25 57.9	0.0
COEN				IAmb	IAmb	05 26 10.0	
comp=Z,15nm,0.8s							
WB0	**Warramunga Arr**	**17.20**	**166**		**Pn**	05 25 58.0	-2.7
WB0				IAmb	IAmb	05 26 03.9	
comp=Z,8.5nm,0.7s							
WRAB	**Tennant Creek**	**17.35**	**166**	P	**Pn**	05 26 00.1	-2.4
WRAB				IAmb	IAmb	05 26 05.0	
comp=Z,27nm,1.5s							
WRAB	**Tennant Creek**	**17.35**	**166**	P	**Pn**	05 26 01.4	-1.1
WRA	**Warramunga Arr**	**17.35**	**166**	P	**Pn**	05 26 01.2	-1.5
comp=Z,0.8nm,0.3s,baz=350,slow=12,SNR=24							
WRA				S	Sn	05 29 04.4	-11
comp=Z,1.3nm,0.7s,baz=348,slow=23,SNR=3.6							
WRA				LR	LR	05 33 40.1	
comp=Z,122nm,18.7s,baz=7.0,slow=40							
comp=Z,4.1nm,0.7s							
WRA	**Warramunga Arr**	**17.35**	**166**	P	**Pn**	05 26 00.5	-2.2
WB2	**Warramunga Arr**	**17.36**	**166**	P	**Pn**	05 26 01.3	-1.4
WR0	**Warramunga Arr**	**17.42**	**166**	P	**Pn**	05 26 03.6	+0.2
WR0				IAmb	IAmb	05 26 10.7	
comp=Z,12nm,1.1s							
PMG	**Port Moresby**	**18.21**	**111**	P	**Pn**	05 26 11.7	-1.5
PMG				IAmb	IAmb	05 26 24.6	
comp=Z,32nm,1.0s							
SMRI	**Semarang**	**19.87**	**258**	P	**P**	05 26 28.5	-3.1
AS31	**Alice Springs**	**20.88**	**170**	P	**P**	05 26 43.5	+1.1
AS31				IAmb	IAmb	05 26 53.8	
comp=Z,7.3nm,0.7s							
ASAR	**Alice Springs**	**20.88**	**170**	P	**P**	05 26 43.2	+0.8
comp=Z,16nm,0.6s,baz=348,slow=10.0,SNR=176							
ASAR				S	**S**	05 30 31.0	-3.2
comp=Z,3.9nm,1.1s,baz=350,slow=21,SNR=5.1							
comp=Z,16nm,0.6s							
PSA00	**Pilbara Seismi**	**20.91**	**207**	P	**P**	05 26 42.4	-0.4
PSA00				IAmb	IAmb	05 26 47.7	
comp=Z,16nm,0.8s							
LEM	**Lembang**	**22.59**	**260**	LR	LR	05 37 12.2	
comp=Z,136nm,19.3s,baz=184,slow=40							
CTA	**Charters Tower**	**23.24**	**138**	P	**P**	05 27 08.6	+1.1
comp=Z,1.6nm,0.6s,baz=308,slow=19,SNR=1.8							
comp=Z,1.6nm,0.6s							
CTAO	**Charters Tower**	**23.24**	**138**	P	**P**	05 27 09.2	+1.7
CTAO				IAmb	IAmb	05 27 20.1	
comp=Z,15nm,1.4s							
FORT	**Forrest**	**27.68**	**184**	P	**P**	05 27 47.7	-0.4
PPSI	**Pulau Pagai**	**29.93**	**270**	pP	pP	05 28 13.8	-2.0
BBOO	**Buckleboo**	**30.18**	**170**	P	**P**	05 28 11.5	+1.1
STKA	**Stephens Creek**	**30.72**	**160**	P	**P**	05 28 16.0	+0.9
comp=Z,2.0nm,0.4s,baz=341,slow=8.8,SNR=4.6							
comp=Z,2.0nm,0.4s							
STKA	**Stephens Creek**	**30.72**	**160**	P	**P**	05 28 15.9	+0.8
NWAO	**Narrogin (SRO)**	**32.06**	**200**	P	**P**	05 28 24.9	-2.1
CMAR	**Chiang Mai Arr**	**37.27**	**306**	P	**P**	05 29 14.5	+2.3
comp=Z,0.6nm,0.3s,baz=144,slow=8.4,SNR=6.1							
comp=Z,0.6nm,0.3s							
KSRS	**Korea Array**	**40.31**	**357**	LR	LR	05 44 57.0	
comp=Z,14nm,21.1s,baz=120,slow=34							
USA0B	**Ussuriysk Arra**	**47.04**	**2**	P	**P**	05 30 30.2	-1.2
USRK	**Ussuriysk Ar.**	**47.04**	**2**	P	**P**	05 30 30.1	-1.3
SONM	**Songino Array**	**54.69**	**341**	P	**P**	05 31 29.8	+0.7
comp=Z,0.6nm,0.7s,baz=152,slow=6.3,SNR=3.8							
comp=Z,0.6nm,0.7s							
CASY	**Casey**	**64.61**	**189**	P	**P**	05 32 36.1	-0.8
CASY				IAmb	IAmb	05 32 42.3	
comp=Z,2.3nm,0.9s							
MK31	**Makanchi Array**	**64.92**	**326**	P	**P**	05 32 38.0	-1.4
MK31				IAmb	IAmb	05 32 53.6	
comp=Z,1.5nm,1.1s							
MKAR	**Makanchi Array**	**64.92**	**326**	P	**P**	05 32 40.5	+1.1
comp=Z,0.5nm,0.7s,baz=122,slow=8.9,SNR=5.3							
comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**64.92**	**326**	P	**P**	05 32 37.4	-2.1
MAKZ	**Makanchi**	**65.10**	**326**	P	**P**	05 32 37.7	-2.9
ZALV	**Zalesovo Beam**	**68.03**	**333**	P	**P**	05 33 01.7	+2.6
comp=Z,0.8nm,0.8s,baz=112,slow=6.4,SNR=3.9							
comp=Z,0.8nm,0.8s							
ZALV	**Zalesovo Beam**	**68.03**	**333**	P	**P**	05 32 57.8	-1.3
KURBB	**Kurchatov Arra**	**69.14**	**328**	LR	LR	06 04 53.0	
comp=Z,21nm,21.6s,baz=263,slow=37							
VNDA	**Vanda**	**76.38**	**173**	P	**P**	05 33 49.2	+0.5
comp=Z,0.7nm,0.6s,baz=321,slow=7.3,SNR=8.8							
comp=Z,0.7nm,0.6s							
VNDA	**Vanda**	**76.38**	**173**	P	**P**	05 33 49.5	+0.9
VNDA				IAmb	IAmb	05 34 12.7	
comp=Z,3.0nm,1.3s							
ABKAR	**Akbulak array**	**79.40**	**321**	P	**P**	05 34 03.6	-2.3
TORD	**Torodi Ar. Bea**	**127.92**	**284**	PKP	**PKPdf**	05 41 07.1	+0.4
comp=Z,0.3nm,0.6s,baz=86,slow=1.2,SNR=1.4							
CPUP	**Villa Florida**	**149.98**	**167**	PKPbc	**PKiKP**	05 41 52.7	+0.7
comp=Z,0.8nm,0.7s,baz=180,slow=1.0,SNR=1.5							
LPAZ	**La Paz**	**153.76**	**138**	PKPbc	**PKiKP**	05 42 03.3	+2.5
comp=Z,0.3nm,0.6s,baz=225,slow=4.3,SNR=1.5							

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*IDC **09** 05:53:07.9±3.0, 32°.64S×178°.13W, h0km, mb3.9/3, mbtmp3.8/4, ML2.9/1, Error ellipse: s-maj=65.2km s-min=46.3km az=128.0*

ISC 09 05:53:11.3±2.8, 32°.8S±0°.2×178°.4W±0°.4, h10km, n7, σ0§95/6, mb3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.55**	**213**	Pn	**Pn**	05 54 48.2	+0.5
0.2nm,0.3s,baz=34,slow=11,SNR=1.1							
URZ				Sn	**Sn**	05 56 02.0	-0.5
1.9nm,0.3s,baz=72,slow=20,SNR=7.1							
4.0nm,0.6s							
CTA	**Charters Tower**	**33.96**	**283**	P	**P**	05 59 56.0	+0.9
1.1nm,0.5s,baz=119,slow=9.6,SNR=5.8							
1.1nm,0.5s							
ASAR	**Alice Springs**	**42.73**	**270**	P	**P**	06 01 08.4	-0.5
0.9nm,0.7s,baz=108,slow=7.7,SNR=9.0							
0.9nm,0.7s							
WRA	**Warramunga Arr**	**43.94**	**275**	P	**P**	06 01 17.6	-1.0
0.5nm,0.3s,baz=113,slow=7.9,SNR=42							
0.5nm,0.3s							
VNA3	**Neumayer Olymp**	**75.91**	**176**	P	P	06 05 08.8	+11
VNA2	**Neumayer--Watz**	**76.34**	**177**	P	P	06 05 11.4	+11
baz=177,slow=4.5							
FINES	**FINESS Array B**	**147.30**	**338**	PKPbc	**PKPdf**	06 12 51.6	-0.3
2.0nm,0.8s,baz=54,slow=3.6,SNR=7.3		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.92**	**227**	Pn	**Pb**	**06 02 08.7**	**+1.8**
	127nm,0.3s,baz=82,slow=19,SNR=6.4						
RAO				Sn	**Sg**	**06 02 35.4**	**+1.9**
	594nm,0.3s,baz=268,slow=22,SNR=11						
	398nm,0.3s						
RAO	**Raoul Island**	**1.92**	**227**	Pn	**Pn**	**06 02 03.9**	**-0.7**
URZ	**Urewera**	**11.66**	**206**	Pn	**Pn**	**06 04 15.3**	**-3.1**
	0.7nm,0.3s,baz=246,slow=13,SNR=1.9						
URZ				Sn	**Sn**	**06 06 23.2**	**-5.3**
	1.5nm,0.3s,baz=101,slow=19,SNR=7.2						
AFI	**Afiamalu**	**14.60**	**18**	Sn	Sn	06 07 18.1	-22
	0.6nm,0.3s,baz=102,slow=23,SNR=1.6						
RAR	**Rarotonga**	**16.46**	**70**	Pn	Pn	06 05 15.0	-8.0
	1.5nm,0.3s,baz=293,slow=13,SNR=3.7						
RAR				Sn	Sn	06 08 00.6	-25
	0.6nm,0.3s,baz=68,slow=12,SNR=3.0						
RAR				LR	LR	06 10 46.2	
	comp=Z,973nm,19.6s,baz=252,slow=34						
DZM	**Mont Dzumac**	**16.68**	**287**	*e*Pn	**P**	**06 05 29.3**	**+1.0**
	144nm,1.6s						
DZM				*e*LR	LR	06 09 26.4	
	comp=Z,1μm,23.9s						
DZM	**Mont Dzumac**	**16.68**	**287**	Pn	**P**	**06 05 28.2**	**-0.1**
	0.3nm,0.3s,baz=105,slow=21,SNR=1.5						
DZM				LR	LR	06 10 47.9	
	comp=Z,800nm,19.3s,baz=108,slow=33						
	5.4nm,0.9s						
RPZ	**Rata Peaks**	**18.73**	**210**	P	**P**	**06 05 48.7**	**-2.0**
	6.7nm,0.9s,baz=21,slow=19,SNR=1.3						
RPZ				S	Sn	06 09 06.6	-14
	5.0nm,0.9s,baz=56,slow=6.5,SNR=1.0						
TBI	**Tubuai**	**24.62**	**85**	*e*LR	LR	06 12 35.8	
	comp=Z,14μm,21.2s						
TBI				*e*LR	LR	06 12 36.4	
	comp=Z,613nm,21.5s						
PAE	**Paea**	**26.63**	**73**	*e*T	T	06 34 19.0	
	3.6nm,0.3s						
PPT2	**Papeete2**	**26.67**	**73**	*e*LR	LR	06 13 28.8	
	comp=Z,486nm,21.8s						
PPT2				*e*LR	LR	06 13 29.0	
	comp=Z,513nm,21.0s						
PPT2	**Papeete2**	**26.67**	**73**	*e*T	T	06 34 21.6	
	1.5nm,0.3s						
PPT	**Papeete**	**26.68**	**73**	LR	LR	06 15 39.4	
	comp=Z,642nm,18.4s,baz=235,slow=32						
HNR	**Honiara**	**28.96**	**305**	LR	LR	06 17 25.3	
	comp=Z,4μm,20.3s,baz=180,slow=33						
VAH	**Vaihoa**	**29.44**	**71**	*e*T	T	06 37 49.6	
	6.3nm,0.2s						
CAN	**Canberra**	**30.32**	**247**	P	**P**	**06 07 44.3**	**+0.6**
CAN				IAmb	IAmb	06 07 50.0	
	comp=Z,11nm,1.0s						
CTA	**Charters Tower**	**34.97**	**275**	P	**P**	**06 08 25.9**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=117,slow=6.8,SNR=4.2						
CTA				LR	LR	06 22 33.4	
	comp=Z,948nm,18.1s,baz=84,slow=36						
	comp=Z,2.3nm,0.6s						
CTAO	**Charters Tower**	**34.97**	**275**	P	**P**	**06 08 24.0**	**-0.5**
STKA	**Stephens Creek**	**36.53**	**253**	LR	LR	06 23 27.5	
	comp=Z,368nm,18.4s,baz=69,slow=36						
TAOE	**Nuku Hiva Isla**	**39.01**	**68**	*e*S	S	06 14 44.7	-13
	comp=Z,74nm,23.1s						
TAOE				*e*LR	LR	06 19 09.6	
	comp=Z,395nm,20.9s						
AS31	**Alice Springs**	**44.78**	**264**	P	**P**	**06 09 44.5**	**-1.6**
ASAR	**Alice Springs**	**44.78**	**264**	P	**P**	**06 09 46.1**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=111,slow=7.4,SNR=7.0						
ASAR				LR	LR	06 28 51.0	
	comp=Z,620nm,18.1s,baz=145,slow=36						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**44.78**	**264**	P	**P**	**06 09 44.2**	**-1.8**
WR0	**Warramunga Arr**	**45.37**	**269**	P	**P**	**06 09 50.4**	**-0.3**
WR0				IAmb	IAmb	06 09 56.5	
	comp=Z,7.8nm,1.1s						
WB2	**Warramunga Arr**	**45.54**	**269**	P	**P**	**06 09 51.4**	**-0.7**
WB2				IAmb	IAmb	06 09 57.7	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**45.54**	**269**	P	**P**	**06 09 50.5**	**-1.6**
WRAB				IAmb	IAmb	06 09 57.6	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**45.55**	**269**	P	**P**	**06 09 51.5**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=112,slow=6.5,SNR=12						
WRA				LR	LR	06 28 27.3	
	comp=Z,232nm,18.7s,baz=123,slow=35						
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**45.55**	**269**	P	**P**	**06 09 51.1**	**-1.1**
SBA	**Scott Base**	**50.59**	**185**	P	**P**	**06 10 31.8**	**+1.5**
VNDA	**Vanda**	**50.68**	**186**	P	**P**	**06 10 32.9**	**+1.9**
	comp=Z,2.7nm,1.1s,baz=35,slow=6.0,SNR=6.7						
	comp=Z,2.7nm,1.1s						
VNDA	**Vanda**	**50.68**	**186**	P	**P**	**06 10 32.8**	**+1.8**
GUMO	**Guam**	**55.85**	**313**	LR	LR	06 33 30.6	
	comp=Z,89nm,20.9s,baz=120,slow=34						
SIJI	**Sorong**	**56.87**	**289**	LR	LR	06 34 47.0	
	comp=Z,135nm,21.8s,baz=240,slow=35						
CASY	**Casey**	**57.99**	**207**	P	**P**	**06 11 25.3**	**+1.0**
CASY				IAmb	IAmb	06 11 29.1	
	comp=Z,9.8nm,1.0s						
RPN	**Rapa Nui**	**58.68**	**106**	LR	LR	06 31 07.8	
	comp=Z,204nm,19.1s,baz=272,slow=30						
QSPA	**South Pole Qui**	**62.15**	**180**	P	**P**	**06 11 54.1**	**+1.0**
KAPI	**Kappang**	**64.67**	**278**	LR	LR	06 40 29.4	
	comp=Z,92nm,20.7s,baz=104,slow=36						
DAV	**Davao City (W)**	**65.99**	**293**	LR	LR	06 38 35.0	
	comp=Z,26nm,20.6s,baz=150,slow=34						
BELA	**Belgrano 2**	**72.00**	**172**	P	**P**	**06 12 56.2**	**+0.8**
BELA				IAmb	IAmb	06 12 57.5	
	comp=Z,8.8nm,1.1s						
PMSA	**Palmer Station**	**73.88**	**156**	P	**P**	**06 13 06.8**	**+0.1**
SBUM	**Sibu**	**74.86**	**281**	P	**P**	**06 13 11.8**	**-1.4**
SBUM				IAmb	IAmb	06 13 15.9	
	comp=Z,4.6nm,1.0s						
MAW	**Mawson**	**75.11**	**200**	P	**P**	**06 13 16.1**	**+2.4**
	comp=Z,3.4nm,0.8s,baz=111,slow=8.6,SNR=2.6						
	comp=Z,3.4nm,0.8s						
MAW	**Mawson**	**75.11**	**200**	P	**P**	**06 13 13.6**	**-0.1**
TROLL	**Troll, Antarti**	**80.31**	**180**	P	**P**	**06 13 44.2**	**+1.3**
SNAA	**Sanae**	**80.55**	**178**	P	**P**	**06 13 45.7**	**+1.6**
SNAA	**Sanae**	**80.55**	**178**	P	**P**	**06 13 44.7**	**+0.6**
SNAA				IAmb	IAmb	06 13 48.9	
	comp=Z,12nm,1.1s						
VNA3	**Neumayer Olymp**	**80.64**	**176**	P	**P**	**06 13 45.0**	**+0.5**
SHEM	**Shemya Is, Ala**	**80.77**	**354**	LR	LR	06 43 40.3	
	comp=Z,314nm,19.2s,baz=129,slow=31						
VNA2	**Neumayer--Watz**	**81.09**	**176**	P	**P**	**06 13 47.8**	**+1.0**
	baz=161,slow=4.0						
VNA1	**Neumayer--Stat**	**81.31**	**176**	P	**P**	**06 13 49.9**	**+1.9**
LPIG	**La Paz**	**81.99**	**57**	LR	LR	06 43 35.6	
	comp=Z,232nm,18.3s,baz=204,slow=31						
BCW	**Bitter Crk WRg**	**82.47**	**44**	P	**P**	**06 13 53.6**	**-1.2**
BCW				IAmb	IAmb	06 14 04.8	
	comp=Z,7.1nm,1.1s						
ESJX	**Sierra Juarez**	**82.78**	**48**	P	**P**	**06 13 54.5**	**-2.0**
PLCA	**Paso Flores**	**83.08**	**133**	P	**P**	**06 13 58.1**	**+0.1**
	comp=Z,7.7nm,1.1s,baz=227,slow=8.0,SNR=4.7						
PLCA				LR	LR	06 43 18.3	
	comp=Z,249nm,19.1s,baz=228,slow=30						
	comp=Z,7.7nm,1.1s						
PLCA	**Paso Flores**	**83.08**	**133**	P	**P**	**06 13 58.5**	**+0.5**
PFO	**Pinyon Flats O**	**83.46**	**47**	LR	LR	06 46 31.8	
	comp=Z,319nm,18.1s,baz=252,slow=32						
PFO	**Pinyon Flats O**	**83.46**	**47**	P	**P**	**06 13 60.0**	**0.0**
PFO				IAmb	IAmb	06 14 04.9	
	comp=Z,3.4nm,1.1s						
KSRS	**Korea Array**	**83.47**	**319**	P	**P**	**06 14 00.8**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=111,slow=6.7,SNR=4.8						
	comp=Z,2.8nm,0.9s						
KSAR	**Wonju Array Be**	**83.48**	**319**	P	**P**	**06 13 57.6**	**-2.2**
KMPM	**Mount Pierce**	**83.52**	**37**	P	**P**	**06 13 59.7**	**-0.3**
ISA	**Isabella, Lake**	**83.52**	**44**	P	**P**	**06 14 00.3**	**+0.2**
ISA				IAmb	IAmb	06 14 11.0	
	comp=Z,3.2nm,1.1s						
PETK	**Petropavlovsk-**	**83.83**	**345**	LR	LR	06 46 21.6	
	comp=Z,153nm,20.9s,baz=148,slow=32						
CMB	**Columbia Colle**	**83.96**	**41**	P	**P**	**06 14 02.6**	**+0.3**
CMB				IAmb	IAmb	06 14 04.9	
	comp=Z,6.6nm,1.1s						
GLA	**Glamis**	**84.17**	**48**	P	**P**	**06 14 03.9**	**+0.4**
GLA				IAmb	IAmb	06 14 04.7	
	comp=Z,6.5nm,1.1s						
AFDM	**Forest Hills D**	**84.24**	**40**	P	**P**	**06 14 03.1**	**-0.6**
AFDM				IAmb	IAmb	06 14 05.7	
	comp=Z,6.6nm,1.2s						
GSC	**Goldstone, Bar**	**84.32**	**45**	P	**P**	**06 14 03.7**	**-0.5**
GSC				IAmb	IAmb	06 14 07.3	
	comp=Z,2.5nm,0.9s						
ORV	**Oroville**	**84.35**	**39**	P	**P**	**06 14 04.3**	**+0.1**
ORV				IAmb	IAmb	06 14 04.9	
	comp=Z,3.3nm,1.0s						
HSIG		**84.38**	**53**	P	**P**	**06 14 03.7**	**-0.9**
MDPB	**Devils Postpil**	**84.45**	**42**	P	**P**	**06 14 04.3**	**-0.8**
OMMB	**Old Mammoth Mi**	**84.49**	**42**	P	**P**	**06 14 05.4**	**+0.1**
113A	**Mohawk Valley,**	**84.69**	**49**	IAmb	IAmb	06 14 09.1	
	comp=Z,4.5nm,1.1s						
WAKR	**Walker**	**84.83**	**41**	P	**P**	**06 14 06.8**	**0.0**
WAKR				IAmb	IAmb	06 14 14.7	
	comp=Z,3.6nm,1.2s						
214A	**Organ Pipe Nat**	**84.84**	**50**	IAmb	IAmb	06 14 08.6	
	comp=Z,3.9nm,0.8s						
GWY	**Greenwater Val**	**84.97**	**44**	IAmb	IAmb	06 14 08.9	
	comp=Z,6.9nm,1.2s						
PNTR	**Pine Nut**	**85.12**	**41**	P	**P**	**06 14 07.8**	**-0.6**
YBH	**Yreka Blue Hor**	**85.20**	**37**	LR	LR	06 44 56.6	
	comp=Z,188nm,21.1s,baz=242,slow=31						
YBH	**Yreka Blue Hor**	**85.20**	**37**	P	**P**	**06 14 08.2**	**-0.4**
LHV	**Little Huntoon**	**85.20**	**42**	IAmb	IAmb	06 14 13.8	
	comp=Z,7.1nm,1.2s						
BEKR	**Beckworth**	**85.21**	**40**	P	**P**	**06 14 08.2**	**-0.5**
BEKR				IAmb	IAmb	06 14 10.0	
	comp=Z,4.5nm,1.1s						
VCNR	**Virginia City**	**85.23**	**41**	IAmb	IAmb	06 14 10.3	
	comp=Z,6.4nm,1.2s						
YERR	**Yerington**	**85.26**	**41**	IAmb	IAmb	06 14 10.4	
	comp=Z,7.5nm,1.2s						
GMN	**Gold Mountain**	**85.33**	**43**	IAmb	IAmb	06 14 13.9	
	comp=Z,4.1nm,1.2s						
WCT	**Wildcat Mounta**	**85.39**	**44**	IAmb	IAmb	06 14 12.0	
	comp=Z,3.4nm,1.1s						
NVAR	**Mina Array Bea**	**85.44**	**42**	P	**P**	**06 14 09.4**	**-0.6**
	comp=Z,6.5nm,1.1s,baz=221,slow=7.8,SNR=23						
NVAR				LR	LR	06 48 29.0	
	comp=Z,412nm,18.0s,baz=221,slow=33						
	comp=Z,6.5nm,1.1s						
NV11	**Mina Array Sit**	**85.53**	**42**	IAmb	IAmb	06 14 13.6	
	comp=Z,3.4nm,1.1s						
PAHR	**Pah Rah Range**	**85.66**	**40**	IAmb	IAmb	06 14 16.8	
	comp=Z,3.3nm,1.1s						
V12A	**Nelson**	**85.82**	**46**	P	**P**	**06 14 10.9**	**-0.9**
V12A				IAmb	IAmb	06 14 13.7	
	comp=Z,5.0nm,1.2s						
TPH	**Tonopah**	**85.85**	**43**	P	**P**	**06 14 11.6**	**-0.5**
Y14A	**Wickenburg**	**85.91**	**48**	P	**P**	**06 14 11.3**	**-0.9**
USRK	**Ussuriysk Ar.**	**85.96**	**326**	LR	LR	06 47 36.7	
	comp=Z,136nm,19.9s,baz=123,slow=32						
KVN	**Kaiserville**	**85.97**	**42**	IAmb	IAmb	06 14 13.6	
	comp=Z,5.2nm,1.1s						
W13A	**Hualapai Mount**	**86.05**	**47**	IAmb	IAmb	06 14 15.0	
	comp=Z,4.7nm,1.1s						
TUC	**Tucson**	**86.43**	**51**	P	**P**	**06 14 14.8**	**-0.1**
MOD	**Modoc Plateau**	**86.62**	**38**	P	**P**	**06 14 15.5**	**-0.1**
PSI	**Prapat**	**86.67**	**275**	LR	LR	06 53 02.9	
	comp=Z,91nm,21.8s,baz=81,slow=36						
K05A	**Summer Lake**	**86.86**	**37**	P	**P**	**06 14 16.4**	**-0.4**
BMN	**Battle Mountai**	**87.38**	**41**	IAmb	IAmb	06 14 31.2	
	comp=Z,4.1nm,1.0s						
PINE	**Pine Mountain**	**87.56**	**37**	P	**P**	**06 14 19.7**	**-0.6**
PINE				IAmb	IAmb	06 14 24.6	
	comp=Z,5.2nm,1.1s						
CCUT	**Cedar City**	**87.89**	**45**		**P**	**06 14 21.6**	**-0.4**
CCUT				IAmb	IAmb	06 14 24.1	
	comp=Z,5.3nm,1.2s						
WVOR	**Wild Horse Val**	**87.89**	**39**	P	**P**	**06 14 21.1**	**-0.6**
WVOR				IAmb	IAmb	06 14 23.0	
	comp=Z,2.9nm,1.0s						
WUAZ	**Wupatki**	**87.94**	**48**		**P**	**06 14 22.0**	**-0.2**
SZCU	**Shurtz Canyon**	**88.09**	**45**	IAmb	IAmb	06 14 25.0	
	comp=Z,6.1nm,1.2s						
J08A	**Circle Bar Ran**	**88.60**	**38**	IAmb	IAmb	06 14 28.6	
	comp=Z,3.4nm,1.1s						
ELK	**Elko**	**88.74**	**42**	LR	LR	06 50 32.7	
	comp=Z,464nm,18.0s,baz=230,slow=33						
MTPU	**Mount Pierson**	**88.93**	**45**	IAmb	IAmb	06 14 30.4	
	comp=Z,6.3nm,1.2s						
MVU	**Marysvale**	**89.19**	**45**	IAmb	IAmb	06 14 32.8	
	comp=Z,6.9nm,1.1s						
G08A	**Pilot Rock**	**89.62**	**36**	IAmb	IAmb	06 14 32.5	
	comp=Z,7.2nm,1.2s						
KLR	**Kul'dur**	**89.69**	**329**	LR	LR	06 48 08.0	
	comp=Z,103nm,20.6s,baz=164,slow=31						
TX31	**Lajitas Ar. Si**	**89.82**	**56**	P	**P**	**06 14 30.4**	**-0.7**
TXAR	**Lajitas Array**	**89.82**	**56**	P	**P**	**06 14 30.9**	**-0.3**
	comp=Z,5.2nm,1.2s,baz=208,slow=4.3,SNR=11						
TXAR				LR	LR	06 48 41.5	
	comp=Z,135nm,18.1s,baz=244,slow=32						
	comp=Z,5.2nm,1.2s						
TXAR	**Lajitas Array**	**89.82**	**56**	P	**P**	**06 14 30.7**	**-0.4**
HAWA	**Hanford**	**90.06**	**35**	P	**P**	**06 14 32.0**	**+0.3**
MFID	**Camas Ranch**	**90.10**	**39**	P	**P**	**06 14 31.7**	**-0.4**
TMUT	**Trail Mountain**	**90.30**	**45**	IAmb	IAmb	06 14 45.7	
	comp=Z,4.4nm,1.2s						
CMIG	**Matias Romero**	**90.58**	**71**	LR	LR	06 47 21.9	
	comp=Z,100nm,19.3s,baz=234,slow=30						
P17A	**Butcher Ranch,**	**90.69**	**45**	IAmb	IAmb	06 14 35.9	
	comp=Z,2.6nm,1.1s						
HVU	**Hansel Valley**	**90.84**	**42**	IAmb	IAmb	06 14 39.2	
	comp=Z,4.0nm,1.0s						
E09A	**Wood Farm, Sta**	**90.86**	**36**	P	**P**	**06 14 35.4**	**0.0**
ANMO	**Albuquerque**	**90.89**	**50**	LR	LR	06 48 12.5	
	comp=Z,226nm,19.8s,baz=255,slow=31						
ANMO	**Albuquerque**	**90.89**	**50**	P	**P**	**06 14 35.5**	**-0.6**
ANMO				IAmb	IAmb	06 14 37.5	
	comp=Z,5.7nm,1.1s						
HLID	**Hailey**	**90.99**	**40**	IAmb	IAmb	06 14 38.4	
	comp=Z,3.4nm,1.1s						
PLID	**Pearl Lake**	**91.07**	**38**	IAmb	IAmb	06 14 39.0	
	comp=Z,3.4nm,1.1s						
EYAK	**Cordova Ski Ar**	**91.66**	**15**	IAmb	IAmb	06 14 47.7	
	comp=Z,4.4nm,1.2s						
GLI	**Glacier Island**	**91.66**	**14**	P	**P**	**06 14 39.0**	**+0.2**
FID	**Port Fidalgo**	**91.68**	**14**	P	**P**	**06 14 38.5**	**-0.3**
FID				IAmb	IAmb	06 14 42.4	
	comp=Z,2.9nm,1.1s						
NEW	**Newport**	**92.53**	**35**	LR	LR	06 49 11.0	
	comp=Z,375nm,20.8s,baz=234,slow=31						
NNA	**Nana**	**92.65**	**105**	LR	LR	06 48 22.2	
	comp=Z,47nm,19.0s,baz=244,slow=30						
REDW	**Red Top Meadow**	**92.93**	**42**	IAmb	IAmb	06 14 48.7	
	comp=Z,3.3nm,1.1s						
TPAW	**Teton Pass**	**92.94**	**41**	IAmb	IAmb	06 14 47.0	
	comp=Z,3.5nm,1.1s						
IMW	**Indian Meadow**	**93.19**	**41**	IAmb	IAmb	06 14 49.4	
	comp=Z,3.1nm,1.1s						
LOHW	**Long Hollow**	**93.22**	**42**	P	**P**	**06 14 46.7**	**0.0**
PDAR	**Pinedale Array**	**93.34**	**43**	P	**P**	**06 14 46.5**	**-0.9**
	comp=Z,1.0nm,1.0s,baz=225,slow=4.0,SNR=5.1						
PDAR				LR	LR	06 53 14.9	
	comp=Z,221nm,18.2s,baz=268,slow=33						
	comp=Z,1.0nm,1.0s						
QLMT	**Earthquake Lak**	**93.46**	**40**	P	**P**	**06 14 47.1**	**-0.7**
RND	**Reindeer**	**93.61**	**12**	P	**P**	**06 14 48.7**	**+0.8**
ATAH	**Atahualpa**	**93.64**	**100**	LR	LR	06 49 42.8	
	comp=Z,195nm,18.4s,baz=226,slow=31						
YHH	**Holmes Hill**	**93.77**	**40**	P	**P**	**06 14 48.6**	**-0.7**
YHH				IAmb	IAmb	06 14 52.0	
	comp=Z,3.2nm,1.1s						
LVC	**Limon Verde**	**93.80**	**118**	LR	LR	06 48 29.0	
	comp=Z,143nm,20.7s,baz=234,slow=30						
BOZ	**Bozeman (W)**	**93.81**	**40**	IAmb	IAmb	06 14 51.3	
	comp=Z,3.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**94.00**	**289**	P	**P**	**06 14 52.0**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=120,slow=3.6,SNR=5.4						
	comp=Z,1.2nm,0.3s						
ILAR	**Eielson Array**	**95.22**	**12**	P	**P**	**06 14 54.0**	**-1.1**
	comp=Z,3.4nm,1.2s,baz=223,slow=4.8,SNR=7.6						
ILAR				LR	LR	06 52 44.7	
	comp=Z,79nm,19.3s,baz=215,slow=32						
	comp=Z,3.4nm,1.2s						
RSSD	**Black Hills**	**97.44**	**44**	P	**P**	**06 15 04.9**	**-1.1**
LPAZ	**La Paz**	**97.77**	**113**	LR	LR	06 50 34.8	
	comp=Z,77nm,20.1s,baz=263,slow=30						
MKAR	**Makanchi Array**	**117.31**	**311**	PKP	**PKPdf**	**06 20 16.1**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=73,slow=4.6,SNR=2.7						
FINES	**FINESS Array B**	**143.31**	**342**	PKhKP	PKPpre	06 21 01.8	
	comp=Z,4.6nm,1.0s,baz=72,slow=4.5,SNR=7.5						
NB2	**NORSAR Subarra**	**146.53**	**353**	PKP	**PKPbc**	**06 21 12.4**	**-0.5**
	comp=Z,32nm,2.0s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**146.53**	**353**	PKPbc	**PKPdf**	**06 21 12.0**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=6.3,slow=4.0,SNR=8.9						
HFS	**Hagfors**	**147.10**	**351**	PKPbc	**PKPdf**	**06 21 13.4**	**+1.0**
	comp=Z,4.1nm,0.7s,baz=72,slow=9.3,SNR=3.1						
AKASG	**Malin Array Be**	**150.16**	**327**	PKPbc	**PKPbc**	**06 21 21.9**	**-0.8**
	comp=Z,6.9nm,1.0s,baz=42,slow=2.9,SNR=26						
ASF	**Jabal al Asfar**	**151.01**	**287**	PKPbc	**PKPbc**	**06 21 25.8**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=6.2,slow=3.4,SNR=7.7						
MMAI	**Mount Meron Ar**	**152.26**	**288**	PKiKP	**PKiKP**	**06 21 30.1**	**+1.5**
	comp=Z,0.6nm,0.2s,baz=108,slow=4.5,SNR=6.4						
BRTR	**Keskin Array B**	**152.61**	**303**	PKPbc	**PKiKP**	**06 21 29.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=48,slow=2.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**165.16**	**172**	PKP	**PKPdf**	**06 21 37.6**	**+0.4**
	comp=Z,1.9nm,1.1s,baz=166,slow=1.2,SNR=5.8						
TORD				PKPab	**PKPab**	**06 22 34.7**	**+0.7**
	comp=Z,8.6nm,1.1s,baz=185,slow=4.5,SNR=16						
ESDC	**Sonseca Array**	**166.70**	**27**	PKPab	**PKPab**	**06 22 38.2**	**-2.2**
	comp=Z,1.7nm,1.2s,baz=324,slow=3.7,SNR=4.7						
MDT	**Midelt**	**171.35**	**54**	PKP	**PKPdf**	**06 21 42.1**	**+1.1**
	comp=Z,4.0nm,1.2s,baz=293,slow=7.7,SNR=3.9						

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*NEIC **09** 06:02:01.9±1.0, 17°.7S±0°.2×178°.7W±0°.1, h597km±9km, mb4.0/58, Error ellipse: s-maj=26.2km s-min=16.4km az=145.0*

*IDC **09** 06:02:02.4±1.8, 17°.66S×178°.71W, h607km±18km, mb3.5/9, mbtmp4.4/11, Error ellipse: s-maj=51.8km s-min=14.2km az=150.0*

ISC 09 06:02:00.8±0.6, 17°.6S±0°.2×178°.7W±0°.1, h600km, n97, σ1°53/82, mb4.0/38, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.13**	**267**	P	P	06 03 23.3	+2.5
	30nm,0.6s,baz=143,slow=2.0,SNR=18						
AFI	**Afiamalu**	**7.58**	**62**	P	**P**	**06 03 54.9**	**-1.5**
	33nm,0.6s,baz=247,slow=7.7,SNR=4.8						
AFI	**Afiamalu**	**7.58**	**62**	P	**P**	**06 03 55.3**	**-1.0**
MARNC	**Mare, Loyalty**	**13.12**	**251**	P	**P**	**06 04 49.3**	**-1.6**
DZM	**Mont Dzumac**	**14.69**	**250**	P	**P**	**06 05 07.1**	**+0.8**
	3.5nm,0.6s,baz=78,slow=19,SNR=8.2						
ARMA	**Armidale**	**29.88**	**239**	P	**P**	**06 07 22.7**	**+1.0**
CTA	**Charters Tower**	**33.25**	**260**	P	**P**	**06 07 51.1**	**+0.8**
	5.5nm,0.6s,baz=93,slow=8.9,SNR=15						
	5.5nm,0.6s						
CTAO	**Charters Tower**	**33.25**	**260**	P	**P**	**06 07 51.4**	**+1.0**
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**06 08 34.2**	**+0.4**
	7.3nm,0.9s,baz=100,slow=12,SNR=6.3						
	7.3nm,0.9s						
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**06 08 34.9**	**+1.1**
BBOO	**Buckleboo**	**43.34**	**241**	P	**P**	**06 09 11.2**	**-0.3**
WR0	**Warramunga Arr**	**44.25**	**259**	P	**P**	**06 09 19.1**	**+0.3**
WR0				IAmb	IAmb	06 09 45.9	
	comp=Z,6.4nm,1.4s						
WB0	**Warramunga Arr**	**44.41**	**260**	P	**P**	**06 09 19.9**	**-0.1**
WB0				IAmb	IAmb	06 09 21.1	
	comp=Z,4.4nm,0.6s						
WB2	**Warramunga Arr**	**44.43**	**259**	P	**P**	**06 09 20.3**	**+0.2**
WB2				IAmb	IAmb	06 09 21.2	
	comp=Z,4.4nm,0.6s						
WRAB	**Tennant Creek**	**44.43**	**259**	P	**P**	**06 09 20.5**	**+0.4**
WRAB				IAmb	IAmb	06 09 21.1	
	comp=Z,3.9nm,0.6s						
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**	**06 09 20.6**	**+0.4**
	comp=Z,2.5nm,0.5s,baz=96,slow=7.1,SNR=94						
	comp=Z,2.5nm,0.5s						
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**	**06 09 20.0**	**-0.2**
AS31	**Alice Springs**	**44.63**	**254**	P	**P**	**06 09 22.1**	**+0.4**
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**06 09 22.2**	**+0.6**
	comp=Z,15nm,0.6s,baz=87,slow=8.7,SNR=174						
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**06 09 22.1**	**+0.4**
FORT	**Forrest**	**49.91**	**244**	P	**P**	**06 10 01.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**52.83**	**260**	P	**P**	**06 10 22.4**	**+0.3**
FITZ				IAmb	IAmb	06 10 32.4	
	comp=Z,10nm,1.4s						
SBA	**Sc

MCMT	McKenzie Canyo	86.16	41	P		P		06 13 41.0	+1.2
YHL	Hebgen Lake	87.21	41	IAmb		IAmb		06 13 47.8	
	comp=Z,4.0nm,0.9s								
PDAR	Pinedale Array	87.30	44	P		P		06 13 46.0	+0.8
	comp=Z,1.1nm,0.6s,baz=216,slow=3.3,SNR=17								
	comp=Z,1.1nm,0.6s								
ARCES	ARCESS Array B	125.96	350	PKP		PKiKP		06 19 55.0	-0.4
	comp=Z,4.0nm,1.0s,baz=25,slow=4.0,SNR=4.4								
FINES	FINESS Array B	132.82	344	PKP		PKiKP		06 20 09.3	-0.1
	comp=Z,3.1nm,0.9s,baz=64,slow=3.2,SNR=4.5								
BRTR	Keskin Array B	144.38	315	PKP		PKiKP		06 20 30.9	-3.1
	comp=Z,1.0nm,0.5s,baz=64,slow=2.9,SNR=4.8								
OSTC	Ostas	145.02	343	*e*PKP		PKiKP		06 20 32.4	-2.4
CHVC	Chvalec	145.03	344	*e*PKP		PKiKP		06 20 33.0	-1.8
CLL	Collm	145.10	347	*i* PKPbc		PKiKP		06 20 32.9	-2.0
	comp=Z,10.0nm,0.9s								
DPC	Dobruska-Polom	145.18	343	*e*PKP		PKiKP		06 20 33.1	-2.0
KRLC	Kraliky	145.29	342	*e*PKP		PKiKP		06 20 33.0	-2.4
MAUC	Maruska	145.61	341	*e*PKP		PKiKP		06 20 35.0	-1.0
MMAI	Mount Meron Ar	145.76	303	PKPbc		PKiKP		06 20 35.6	-1.3
	comp=Z,1.8nm,0.4s,baz=90,slow=5.3,SNR=4.8								
PRU	Pruhonice	145.98	345	*e*PKP		PKiKP		06 20 35.6	-1.1
KHC	Kasperske Hory	147.01	345	*e*PKP		PKPab		06 20 37.5	-3.1
CKRC	Cesky Krumlov	147.11	344	*e*PKP		PKPab		06 20 38.3	-2.7
GERES	GERESS Array B	147.24	345	PKPbc		PKPab		06 20 38.9	-2.8
	comp=Z,1.9nm,0.6s,baz=25,slow=2.7,SNR=25								
CONA	Conrad Observa	147.49	342	*e*P		PKPab		06 20 39.1	-3.6
	comp=Z,2.7nm,0.7s								
RONA	Rosalia, Austr	147.56	341	*e*P		PKPab		06 20 39.1	-3.8
	comp=Z,1.3nm,0.6s								
MOA	Molln	148.01	343	*e*P		PKPab		06 20 40.6	-4.2
	comp=Z,6.5nm,1.4s								
SOKA	Soboth	148.86	342	*e*P		PKiKP		06 20 42.6	-0.3
	comp=Z,4.0nm,1.0s								
OBKA	Obir	149.15	342	*e*P		PKiKP		06 20 42.7	-0.8
	comp=Z,6.3nm,1.0s								
WATA	Walderalm	149.16	346	*e*P		PKiKP		06 20 43.1	-0.5
	comp=Z,4.6nm,1.0s								
WTTA	Wattenberg	149.22	346	*e*P		PKiKP		06 20 43.5	-0.2
	comp=Z,3.7nm,0.7s								
MOTA	Moosalm	149.26	347	*e*P		PKiKP		06 20 43.8	0.0
	comp=Z,6.0nm,1.0s								
SQTA	Sankt Quirin	149.35	347	*e*P		PKiKP		06 20 44.0	0.0
	comp=Z,3.7nm,0.6s								
ABTA	Abfaltersbach	149.49	345	*e*P		PKiKP		06 20 43.7	-0.5
	comp=Z,3.1nm,0.6s,SNR=4.4								
FETA	Feichten	149.64	347	*e*P		PKiKP		06 20 44.9	+0.3
	comp=Z,4.3nm,0.8s								
DAVOX	Davos/Dischmat	150.05	348	PKPbc		PKiKP		06 20 45.6	+0.1
	comp=Z,5.6nm,0.7s,baz=333,slow=6.8,SNR=13								
ESDC	Sonseca Array	157.52	11	PKPab		PKPab		06 21 26.2	+0.8
	comp=Z,0.4nm,0.7s,baz=332,slow=4.5,SNR=3.1								

*IDC **09** 06:21:00.8±0.9, 38°.88N×27°.91E, h0km, mb3.5/5, mbtmp3.5/11, ML3.5/6, MS2.9/9, Error ellipse: s-maj=14.9km s-min=12.3km az=156.0*
*ISK **09** 06:21:00.2, 39°.01N×27°.72E, h13km, ML4.0/48*
*THE **09** 06:21:00.4, 38°.96N×27°.80E, h2km±1km, ML3.8/6, Error ellipse: s-maj=2.1km s-min=0.9km az=85.0*
*DDA **09** 06:21:00.6±0.0, 39°.01N×27°.73E, h14km±1km, MW4.0*
ISC 09 06:21:01.1±0.7, 39°.00N±0°.02×27°.76E±0°.02, h12km±5km, n153, σ1§10/190, mb3.5/5, MS2.7/4, 23C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.12	162	PG	Pg	06 21 04.3	+0.1
AKS				SG	Sg	06 21 07.0	+0.5
AKHS	Akhisar	0.12	162	P	Pb	06 21 04.5	-0.9
AKHS				*i* AML	AML	06 21 07.0	
	comp=N,26nm,0.5s						
AKHS				S	Sb	06 21 07.4	+0.9
GOMA	Golmarmara-Man	0.31	157	PG	Pb	06 21 07.7	-0.9
STEP	BALIKESIR_Sava	0.38	355	P	Pg	06 21 08.4	-0.3
STEP				*i* AML	AML	06 21 14.0	
	comp=N,1μm,0.5s						
STEP				S	Sb	06 21 14.3	-1.4
STEP				*i* AML	AML	06 21 17.0	
	comp=E,7μm,0.5s						
ZEDA	zmir-Bergama	0.54	267	P	Pg	06 21 11.2	-0.4
ZEDA				*i* AML	AML	06 21 18.0	
	comp=E,4μm,0.3s						
ZEDA				S	Sg	06 21 18.4	-0.2
ZEDA				*i* AML	AML	06 21 19.0	
	comp=N,2μm,0.3s						
DKL	Dikili	0.67	277	PG	Pg	06 21 13.6	-0.5
DKL				SG	Sg	06 21 22.4	-0.6
BUHA	Balikesir, Bur	0.73	314	P	Pg	06 21 14.6	-0.7
BUHA				S	Sg	06 21 24.1	-0.8
BUHA				*i* AML	AML	06 21 28.0	
	comp=E,2μm,0.8s						
BUHA				*i* AML	AML	06 21 28.0	
	comp=N,1μm,1.1s						
DEMI	Demirci	0.74	86	P	Pn	06 21 16.0	-1.5
DEMI				S	Sn	06 21 26.9	-1.9
DEMI				*i* AML	AML	06 21 29.0	
	comp=N,4μm,0.3s						
DEMI				*i* AML	AML	06 21 31.0	
	comp=E,4μm,0.2s						
BALY	Balya	0.75	351	P	Pg	06 21 14.2	-1.5
BALY				S	Sg	06 21 24.8	-0.7
BALY				*i* AML	AML	06 21 25.0	
	comp=N,3μm,0.6s						
BALY				*i* AML	AML	06 21 25.0	
	comp=E,3μm,0.5s						
MANT	Manisa	0.80	129	P	Pb	06 21 16.8	-0.3
MANT				S	Sn	06 21 28.6	-1.7
MANT				*i* AML	AML	06 21 31.0	
	comp=N,2μm,0.5s						
MANT				*i* AML	AML	06 21 32.0	
	comp=E,2μm,0.4s						
DURS	Dursunbey	0.82	42	P	Pb	06 21 16.3	-1.0
DURS				S	Sb	06 21 28.1	-0.2
DURS				*i* AML	AML	06 21 31.0	
	comp=N,3μm,0.2s						
BLCB	Balcova	0.83	223	PG	Pg	06 21 16.7	-0.4
BLCB				SG	Sg	06 21 28.2	+0.2
BLCB	Balcova	0.83	223	P	Pg	06 21 16.6	-0.5
BLCB				S	Sg	06 21 28.0	0.0
FOCM	Foa	0.85	251	PG	Pg	06 21 16.7	-0.9
FOCM				SG	Sg	06 21 28.3	-0.4
AYVA	Ayvalik	0.89	291	P	Pg	06 21 17.8	-0.5
AYVA				S	Sg	06 21 30.2	+0.3
AYVA				*i* AML	AML	06 21 32.0	
	comp=E,2μm,0.4s						
DST	Dursunbey	0.90	47	PG	Pb	06 21 18.1	-0.5
DST				SG	Sn	06 21 31.4	-1.2
SMAA	Simav-Kutahya	0.95	83	PG	Pn	06 21 20.2	-0.2
USAK	Uak-Merkez	1.02	106	P	Pn	06 21 20.6	-0.7
USAK				S	Sn	06 21 34.0	-1.5
USAK				*i* AML	AML	06 21 37.0	
	comp=N,916nm,0.6s						
GONE	Gonen-Balikesi	1.05	357	PG	Pb	06 21 20.5	-0.7
AYDB	Zeytinkoy-Aydi	1.05	175	PG	Pn	06 21 21.3	-0.5
URLA	Izmir	1.11	236	PN	Pb	06 21 20.5	-1.8
URLA	Izmir	1.11	236	P	Pb	06 21 20.5	-1.8
URLA				S	Sb	06 21 36.3	-0.5
URLA				*i* AML	AML	06 21 47.0	
	comp=E,2μm,0.6s						
DGB	zmir	1.17	216	P	Pn	06 21 22.3	-0.9
DGB				S	Sb	06 21 38.3	0.0
DGB				*i* AML	AML	06 21 40.0	
	comp=N,2μm,0.5s						
PRK	Paraskevi	1.19	283	P	Pg	06 21 24.1	+0.2
PRK				S	Sg	06 21 39.9	+0.6
	5μm,0.9s						
BAYC	CANAKKALE_Bayr	1.20	309	P	Pn	06 21 23.0	-0.7
BAYC				S	Sg	06 21 40.0	+0.2
BAYC				*i* AML	AML	06 21 41.0	
	comp=N,2μm,0.3s						
ZEYE	Izmir, Urla-Ze	1.24	233	P	Pn	06 21 23.4	-0.9
ZEYE				S	Sb	06 21 40.2	-0.3
GEDZ	Gediz	1.28	87	PN	Pg	06 21 25.5	-0.2
KNL	Balıkesir	1.28	352	P	Pb	06 21 24.8	-0.4
KNL				S	Sg	06 21 41.8	-0.7
AYDN	Tasoluk	1.34	176	P	Pn	06 21 25.4	-0.2
AYDN				S	Sn	06 21 43.2	-0.2
AYDN				*i* AML	AML	06 21 47.0	
	comp=N,2μm,0.5s						
GDZ	Gediz	1.34	86	P	Pb	06 21 25.1	-1.1
GDZ				S	Sg	06 21 43.9	-0.4
GDZ				*i* AML	AML	06 21 46.0	
	comp=N,2μm,0.8s						
GDZ				*i* AML	AML	06 21 46.0	
	comp=E,990nm,0.7s						
EDC	Edincik	1.35	3	PN	Pb	06 21 25.5	-0.8
KOCA	Canakkale, Ayv	1.36	292	P	Pn	06 21 25.3	-0.6
KOCA				S	Sn	06 21 42.7	-1.2
KOCA				*i* AML	AML	06 21 49.0	
	comp=N,2μm,0.5s						
KOCA				*i* AML	AML	06 21 54.0	
	comp=E,2μm,0.8s						
GCAM	G?zelcaml?	1.36	198	PN	Pn	06 21 25.5	-0.4
GCAM	G?zelcaml?	1.36	198	P	Pb	06 21 26.0	-0.4
GCAM				S	Sg	06 21 45.1	+0.2
GCAM				*i* AML	AML	06 21 47.0	
	comp=N,1μm,0.8s						
ORLT	Orhaneli	1.36	40	PN	Pb	06 21 25.7	-0.9
EZN	Ezine	1.39	307	PN	Pn	06 21 26.0	-0.2
EZN	Ezine	1.39	307	P	Pn	06 21 26.2	0.0
EZN				S	Sg	06 21 46.0	+0.2
	2μm,0.6s						
TVSB	Tavsanli	1.39	71	PN	Pb	06 21 26.0	-1.1
CHOS	Chios island	1.47	246	PN	Pn	06 21 26.9	-0.6
CHOS	Chios island	1.47	246	P	Pn	06 21 26.9	-0.6
CHOS				S	Sg	06 21 48.1	-0.3
	3μm,0.5s						
SMG	Samos	1.48	210	P	Pn	06 21 26.4	-1.1
SMG				S	Sb	06 21 47.3	+0.1
	5μm,0.5s						
PASA	Karahalli, USA	1.50	115	P	Pb	06 21 28.5	-0.4
PASA				S	Sg	06 21 53.6	+4.3
SIGR	SIGRI	1.50	279	PN	Pn	06 21 27.1	-0.7
SIGR	SIGRI	1.50	279	P	Pn	06 21 27.3	-0.5
SIGR				S	Sg	06 21 48.9	-0.4
	2μm,0.6s						
ULDT	Uludag	1.56	42	P	Pb	06 21 29.0	-1.0
ULDT				S	Sg	06 21 52.2	+0.9
ULDT				*i* AML	AML	06 21 54.0	
	comp=N,1μm,0.5s						
BOZC	Bozcaada	1.57	303	PN	Pn	06 21 28.4	-0.4
BOZC	Bozcaada	1.57	303	P	Pn	06 21 28.9	+0.1
BOZC				P	Pb	06 21 29.1	-1.0
BOZC				S	Sn	06 21 49.0	-0.1
BOZC				*i* AML	AML	06 21 52.0	
	comp=E,2μm,0.3s						
DDIM	Aydin, Didim	1.59	195	P	Pg	06 21 31.2	-0.4
DDIM				S	Sg	06 21 51.8	-0.5
DDIM				*i* AML	AML	06 21 56.0	
	comp=N,2μm,0.8s						
MRMT	Marmara Adasi	1.61	355	PN	Pn	06 21 29.1	-0.3
ECEA	Canakkale, Ece	1.61	311	P	Pn	06 21 29.5	+0.2
ECEA				S	Sb	06 21 51.8	+0.7
ECEA				*i* AML	AML	06 21 54.0	
	comp=N,2μm,0.7s						
MDNY	Mudanya-Bursa	1.62	32	PN	Pb	06 21 29.6	-1.3
IGD	Bursa	1.68	41	P	Pn	06 21 29.4	-0.9
GELI	Tayfur-Gelibol	1.72	325	PN	Pn	06 21 30.1	-0.7
ANDZ	Kutahya, Merke	1.73	72	P	Pg	06 21 33.6	-0.8
ANDZ				S	Sg	06 21 56.4	-0.5
ANDZ				*i* AML	AML	06 22 00.0	
	comp=N,477nm,0.6s						
ANDZ				*i* AML	AML	06 22 00.0	
	comp=E,727nm,0.6s						
RKY	Sarkoy-Tekirda	1.75	345	PN	Pn	06 21 30.9	-0.4
ARMT	Armutlu	1.78	28	PN	Pn	06 21 31.5	-0.2
MULA	Mugla, Merkez-	1.79	166	P	Pn	06 21 31.2	-0.7
GEMT	Gemlik	1.81	37	PN	Pn	06 21 32.1	+0.1
GADA	Gvkgeada	1.87	310	PN	Pn	06 21 32.8	-0.1
YER	Yerkesik	1.90	167	PN	Pn	06 21 33.3	-0.1
APMY	Acipayam-Deniz	1.95	141	PN	Pn	06 21 34.4	+0.4
BODT	Bodrum	1.96	191	PN	Pn	06 21 32.7	-1.5
BODT	Bodrum	1.96	191	P	Pn	06 21 32.4	-1.8
BODT				S	Sn	06 21 58.9	+0.1
AUBOZ	BOZOYUK	1.98	62	PN	Pn	06 21 34.2	-0.3
AUBOZ	BOZOYUK	1.98	62	P	Pb	06 21 35.7	-1.4
YLV	Yalova	2.00	38	PN	Pn	06 21 34.8	+0.1
CAVI	Cavuskoy	2.01	53	PN	Pn	06 21 34.6	-0.2
KESN	Edirne-Kesan	2.01	336	P	Pn	06 21 33.7	-1.4
CAVK	Edirne/Enez-Ca	2.09	325	P	Pb	06 21 37.2	-1.7
ADVT	Abdulvahap	2.09	46	PN	Pn	06 21 36.5	+0.6
SHUT	Suhut-Afyon	2.22	101	PN	Pb	06 21 39.2	-2.1
TURN	Turunc	2.25	170	PN	Pn	06 21 37.7	-0.4
TURN	Turunc	2.25	170	P	Pn	06 21 37.7	-0.4
SLVT	Silivri	2.26	9	PN	Pn	06 21 38.5	+0.3
GOLH	Golhisar	2.26	141	P	Pn	06 21 35.7	-2.6
BORA	Eskisehir	2.26	66	PN	Pn	06 21 38.8	+0.4
SMTH	Samothraki Isl	2.27	311	P	Pn	06 21 38.2	-0.1
DALY	Dalyan (Mula)	2.29	162	PN	Pn	06 21 39.3	+0.7
KAVV	Kandilli-Istan	2.29	25	PN	Pn	06 21 38.3	-0.4
ISK	Istanbul-Kandi	2.29	25	PN	Pn	06 21 38.2	-0.5
ISK	Istanbul-Kandi	2.29	25	P	Pn	06 21 38.2	-0.5
UKOP	Uzunkopru-Edir	2.30	338	PN	Pn	06 21 39.2	+0.4
CTKS	Kestanelik-??a	2.31	14	PN	Pn	06 21 38.9	0.0
ALN	Alexandroupoli	2.31	326	PN	Pn	06 21 39.2	+0.2
ALN	Alexandroupoli	2.31	326	P	Pn	06 21 39.2	+0.2
ALN				S	Sn	06 22 08.6	+1.3
	588nm,0.5s						
BGKT	Bogazkoy	2.31	19	PN	Pn	06 21 39.3	+0.3
HRT	Hereke	2.34	38	PN	Pn	06 21 39.4	0.0
CAME	Cameli-Denizli	2.38	149	PN	Pn	06 21 40.5	+0.4
NIS1	Nisyros Isl.	2.44	191	PN	Pn	06 21 41.0	+0.3
SRCK	Saricakaya, Es	2.45	64	PN	Pn	06 21 41.5	+0.7
CTYL	Yalikoy Yolu	2.51	9	PN	Pn	06 21 41.7	+0.1
GULT	Gulveren	2.56	55	PN	Pn	06 21 43.1	+0.6
FETY	Fethiye	2.58	156	PN	Pn	06 21 42.9	+0.2
CIFT	Cifteler, Eski	2.59	81	PN	Pn	06 21 43.8	+0.9
SILT	Sile	2.59	33	PN	Pn	06 21 43.1	+0.3
APE	Apeiranthos	2.61	223	⇑P	Pb	06 21 48.2	+0.4
APE	Apeiranthos	2.61	223	PN	Pn	06 21 42.0	-1.1
SAUV	Serdivan-Sakar	2.63	48	PN	Pn	06 21 44.1	+0.8
RDO	Rodhopi	2.74	322	P	Pn	06 21 45.2	+0.3
EDRB	Edirne	2.95	345	P	Pn	06 21 47.6	-0.2
SANT	Santorini	3.20	216	⇓P	Pg	06 22 00.5	-1.8
KDZ	Kurdzhali	3.20	327	P	Pn	06 21 51.6	+0.4
DIM	Dimitrovgrad	3.49	332	P	Pn	06 21 56.6	+1.4
RZN	Rozhen	3.56	320	P	Pn	06 21 58.5	+2.2
JMB	Yambol	3.58	346	*e*P	Pb	06 22 04.8	+0.5
NVR	Nevrokopi	3.80	309	P	Pn	06 22 00.0	+0.5
PLD	Plovdiv	3.88	324	P	Pn	06 22 01.3	+0.8
ANTO	Ankara	3.99	76	⇑P	Pb	06 22 12.8	+1.4
MMB	Musomiste	4.03	311	P	Pn	06 22 03.3	+0.7
IDI	Anoyia	4.36	213	Pn	Pn	06 22 06.5	-0.6
	0.8nm,0.3s,baz=7.0,slow=12,SNR=1.6						
IDI				Pg	Pb	06 22 18.4	+0.8
	1.0nm,0.3s,baz=355,slow=22,SNR=6.2						
IDI				Sn	Sn	06 22 55.8	-2.1
	2.4nm,0.3s,baz=148,slow=22,SNR=4.1						
IDI				Lg	Lg	06 23 20.1	
	0.8nm,0.3s,baz=307,slow=24,SNR=2.4						
IDI				LR	LR	06 24 01.2	
	comp=Z,112nm,18.5s,baz=9.0,slow=42						
	3.2nm,0.3s						
KKB	Krupnik	4.58	310	P	Pn	06 22 12.3	+2.1
PVL	Pavlikeni	4.60	337	P	Pn	06 22 09.6	-0.8
BRTR	Keskin Array B	4.61	79	Pn	Pn	06 22 12.2	+1.5
	1.1nm,0.3s,baz=253,slow=14,SNR=14						
BRTR				Pg	Pg	06 22 25.0	-4.4
	0.7nm,0.3s,baz=255,slow=14,SNR=5.1						
BRTR				Sn	Sn	06 23 03.9	-0.4
	0.3nm,0.3s,baz=260,slow=17,SNR=5.9						
BRTR				Lg	Lg	06 23 26.1	
	baz=259,slow=23						
BRTR				LR	LR	06 24 13.8	
	comp=Z,206nm,19.8s,baz=294,slow=43						
	2.7nm,0.4s						
VTS	Vitosha	4.99	318	P	Pn	06 22 18.2	+2.3
STIP	Stip	5.04	304	*i* Pn	Pn	06 22 16.7	+0.2
ICOR	Ion Corvin	5.12	0	⇑P	Pn	06 22 19.1	+1.6
TIRR	Tirgusor	5.48	5	⇑P	Pn	06 22 24.4	+1.9
BLKB	Belogradchik	6.00	322	⇑P	Pn	06 22 28.1	-1.6
CFR	Carcaliu	6.18	2	⇑P	Pn	06 22 32.6	+0.5
BOVS	Bovan	6.50	317	⇑P	Pn	06 22 34.3	-2.2
MLR	Muntele Rosu	6.63	349	⇑P	Pn	06 22 39.1	+0.7
MLR	Muntele Rosu	6.63	349	Pn	Pn	06 22 41.3	+3.0
	0.8nm,0.3s,baz=164,slow=2.8,SNR=5.9						
MLR				Sn	Sn	06 23 54.7	+0.8
	baz=90,slow=19						
MLR				Lg	Lg	06 24 37.1	
	0.4nm,0.3s,baz=233,slow=18,SNR=2.1						
MLR				LR	LR	06 25 51.5	
	comp=Z,96nm,18.3s,baz=150,slow=43						
	2.8nm,0.6s						
VOIR		6.74	344	⇑P	Pn	06 22 39.3	-0.6
PLOR	Plostina	6.90	354	⇑P	Pn	06 22 43.1	+1.0
VRI	Vrincioaia	6.91	354	⇑P	Pn	06 22 43.4	+1.3
COVR	Voineasa-Covas	6.94	351	⇑P	Pn	06 22 43.3	+0.7
LOT	Lotru	7.09	337	⇑P	Pn	06 22 44.2	-0.6
HERR	Herculane	7.10	328	⇑P	Pn	06 22 43.5	-1.2
OZUR		7.24	349	⇑P	Pn	06 22 47.2	+0.5
MDVR	Moldovita	7.33	324	⇑P	Pn	06 22 46.4	-1.6
GZR	Gura Zlata	7.38	332	⇑P	Pn	06 22 47.3	-1.4
TESR	Tescani	7.55	354	⇑P	Pn	06 22 51.8	+0.8
BZS	Buzias	8.03	327	⇑P	Pn	06 22 56.4	-1.0
BIZ	Bicaz	8.03	352	⇑P	Pn	06 22 58.4	+0.9
SIRR	Siria	8.54	330	⇓P	Pn	06 23 03.0	-1.6
MMAI	Mount Meron Ar	8.60	132	Pn	Pn	06 23 04.1	-1.3
	2.3nm,0.3s,baz=323,slow=16,SNR=1.9						
	0.7nm,0.3s						
DRGR		8.62	336	⇑P	Pn	06 23 05.1	-0.6
BURAR	Bucovina Array	8.81	349	⇑P	Pn	06 23 09.6	+1.3
MORH	Mrgy, Hungar	9.86	320	⇑P	Pn	06 23 20.2	-2.3
AKASG	Malin Array Be	11.75	5	LR	LR	06 28 07.3	
	comp=Z,39nm,20.5s,baz=258,slow=36						
KBZ	Khabaz	12.31	63	LR	LR	06 30 08.1	
	comp=Z,36nm,20.2s,baz=320,slow=45						
GNI	Garni	13.15	80	LR	LR	06 29 17.9	
	comp=Z,51nm,20.5s,baz=294,slow=38						
GERES	GERESS Array B	14.11	319	Pn	P	06 24 26.9	-1.5
	baz=127,slow=16,SNR=1.8						
	0.3nm,0.7s						
DAVOX	Davos/Dischmat	15.22	306	Pn	P	06 24 40.5	-0.4
	0.1nm,0.3s,baz=127,slow=10,SNR=2.5						
	0.7nm,0.4s						
FINES	FINESS Array B	22.50	358	P	P	06 26 01.4	+1.2
	3.5nm,1.1s,baz=163,slow=14,SNR=4.1						
	3.5nm,1.1s						
HFS	Hagfors	22.94	342	LR	LR	06 36 05.2	
	comp=Z,32nm,20.2s,baz=353,slow=39						
GEYT	Alibeck	23.74	83	P	P	06 26 15.3	+2.1
	1.5nm,0.6s,baz=292,slow=7.6,SNR=2.6						
	1.5nm,0.6s						
NOA	NORSAR Array B	24.35	340	LR	LR	06 36 32.1	
	comp=Z,20nm,18.9s,baz=60,slow=38						
ESDC	Sonseca Array	24.49	282	P	P	06 26 23.8	+3.7
	0.3nm,0.7s,baz=75,slow=12,SNR=2.3						
	0.3nm,0.7s						
ARU	Arti	26.75	39	LR	LR	06 38 21.1	
	comp=Z,22nm,19.1s,baz=318,slow=39						
TORD	Torodi Ar. Bea	34.56	229	P	P	06 27 50.2	+0.5
	0.7nm,0.9s,baz=36,slow=9.3,SNR=2.6						
	0.7nm,0.9s						
MKAR	Makanchi Array	40.00	61	P	P	06 28 36.5	+0.9
	0.6nm,0.7s,baz=272,slow=9.0,SNR=4.7						
	0.6nm,0.7s						
MDP	Montagnes des	79.35	268	LR	LR	07 07 24.8	
	comp=Z,111nm,18.2s,baz=208,slow=35						

*NOU **09** 06:32:21.8, 37°.28S×179°.36E, h0km, MLv3.9/6, Off E. Coast of N. Island, N.Z.*
*IDC **09** 06:32:25.9±1.8, 37°.06S×178°.80E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=37.8km s-min=29.8km az=117.0*
*WEL **09** 06:32:28.0±1.7, 37°.5±8°.×17°.9E±1°.5, h12km, M3.7/9, ML4.0/9, MLv3.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=93.5*
ISC 09 06:32:25.0±2.3, 37°.28S±0°.07×179°.11E±0°.08, h3km±12km, n96, σ1§18/96, mb3.7/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.70	246	P	Pg	06 32 38.2	-0.2
MXZ				S	Sg	06 32 46.2	-1.4
MXZ	Matakaoa Point	0.70	246	P	Pg	06 32 38.2	-0.2
WMGZ	Waiomatatini S	0.77	226	P	Pn	06 32 42.1	-0.7
WMGZ				S	Sn	06 32 54.1	-0.8
PKGZ	Pakihiroa	1.02	233	P	Pg	06 32 45.0	+0.4
PUZ	Puketiti	1.04	220	P	Pn	06 32 46.4	-0.1
PUZ				S	Sn	06 33 01.6	0.0
HAZ	Te Kaha	1.16	246	P	Pg	06 32 45.9	-1.3
TWGZ	Tauwhareparae	1.27	225	P	Pg	06 32 50.2	+0.9
RUGZ	Raukumara Rang	1.33	239	P	Pn	06 32 49.9	-0.6
CNGZ	Carnagh Statio	1.40	211	P	Pg	06 32 52.5	+0.7
CNGZ				S	Sg	06 33 12.8	+2.9
TKGZ	Te Karaka	1.53	221	P	Pn	06 32 51.9	-1.3
MWZ	Matawai	1.64	230	P	Pn	06 32 55.0	+0.3
RIGZ	Rimuhau	1.78	216	P	Pn	06 32 56.8	+0.1
WHRZ	Whale Island	1.79	251	P	Pn	06 32 55.6	-1.2
RAGZ	Rawiri	1.81	227	P	Pb	06 32 58.1	-0.7
URZ	Urewera	1.86	238	Pn	Pn	06 32 58.3	+0.6
	26nm,0.3s,baz=352,slow=4.8,SNR=155						
URZ				Sn	Sn	06 33 21.5	-0.3
	58nm,0.3s,baz=328,slow=20,SNR=7.3						
URZ	Urewera	1.86

WRA	**Warramunga Arr**	**42.51**	**281**	P	**P**	**06 40 20.8**	**-1.0**
	0.6nm,0.4s,baz=123,slow=7.6,SNR=26						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**52.84**	**180**	P	**P**	**06 41 44.7**	**+3.1**
	0.5nm,0.5s,baz=25,slow=0.6,SNR=2.1						
	0.5nm,0.5s						
H03S2	**Juan Fernandez**	**78.66**	**124**	T	T	08 10 57.7	
	baz=231,SNR=9.8						
H03S1	**Juan Fernandez**	**78.66**	**124**	T	T	08 10 59.0	
	baz=231,SNR=6.3						
H03S3	**Juan Fernandez**	**78.67**	**124**	T	T	08 10 58.0	
	baz=231,SNR=9.0						
H03N3	**Juan Fernandez**	**78.89**	**124**	T	T	08 11 09.4	
	baz=234,slow=72,SNR=43						
H03N2	**Juan Fernandez**	**78.89**	**124**	T	T	08 11 14.3	
	baz=234,slow=72,SNR=51						
H03N1	**Juan Fernandez**	**78.90**	**124**	T	T	08 11 09.8	
	baz=234,slow=72,SNR=35						
FINES	**FINESS Array B**	**150.52**	**334**	PKPbc	**PKiKP**	**06 52 17.4**	**-0.6**
	1.5nm,0.8s,baz=86,slow=4.3,SNR=6.9						

*SOME **09** 06:32:53.2, 42.°42N×86.°30E, h5km*
*IDC **09** 06:33:08.0±0.8, 42.°45N×85.°50E, h0km, mb3.8/7, mbtmp3.8/12, ML3.3/5, MS2.7/1, Error ellipse: s-maj=30.2km s-min=10.8km az=59.0*
*BJI **09** 06:33:12.0±0.0, 42.°58N×85.°88E, h10km, mb3.8/2, ML3.6/9*
*NNC **09** 06:33:15.1±4.4, 42.°89N×85.°71E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=38.4km s-min=22.5km az=99.0*

ISC 09 06:33:09.9±0.7, **42.°47N**±0.°05×**85.°81E**±0.°03, **h10**km, **n28,**
σ3°**34**/37, **mb3.7/7, 5C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.93**	**45**	Pg	**Pg**	**06 33 44.9**	**-2.0**
WMQ				Sg	**Sg**	**06 34 09.2**	**-2.8**
WMQ				smax	smax		
	comp=N,950nm,0.7s						
WMQ				smax	smax		
	comp=E,720nm,0.7s						
KTMS	**Ketmen**	**4.12**	**286**	*e*P	**Pn**	**06 34 15.6**	**+2.5**
	3.7nm,0.5s						
KTMS				*e*S	**Sb**	**06 35 16.3**	**+3.8**
	36nm,0.1s						
SHLS	**Shalkode**	**4.72**	**281**	*e*P	**Pn**	**06 34 22.7**	**+1.5**
	5.1nm,0.3s						
SHLS				*e*S	**Sb**	**06 35 28.5**	**-1.2**
	126nm,0.3s						
PDGK	**Podgornoye**	**4.72**	**283**	⇓Pn	**Pn**	**06 34 23.8**	**+2.5**
	1.2nm,0.2s						
PDGK				⇑Pg	Pb	06 34 39.3	+6.5
	35nm,0.8s						
PDGK				⇓Lg	Lg	06 35 37.0	
	44nm,0.7s						
DJR	**Jarkent**	**4.76**	**295**	*e*P	Pn	06 34 28.3	+6.5
	1.9nm,0.1s						
DJR				*e*S	**Sb**	**06 35 38.6**	**+7.7**
	34nm,0.1s						
MK31	**Makanchi Array**	**5.00**	**331**	Pn	**Pn**	**06 34 26.1**	**+1.1**
	1.4nm,0.2s,baz=147,slow=14,SNR=226						
MK31				Pg	**Pb**	**06 34 39.0**	**+1.6**
	5.7nm,0.4s,baz=142,slow=17,SNR=10.0						
MK31				⇑Sn	**Sn**	**06 35 19.4**	**-3.4**
	29nm,0.7s						
MK31				⇑Lg	Lg	06 35 43.9	
	11nm,0.3s,baz=141,slow=30,SNR=8.4						
MKAR	**Makanchi Array**	**5.00**	**331**	Pn	**Pn**	**06 34 25.8**	**+0.8**
	3.5nm,0.3s,baz=150,slow=13,SNR=114						
MKAR				Sn	**Sn**	**06 35 21.0**	**-1.8**
	4.6nm,0.3s,baz=156,slow=18,SNR=3.1						
MKAR				Lg	Lg	06 35 42.7	
	14nm,0.3s,baz=146,slow=30,SNR=14						
	6.3nm,0.3s						
ZSN	**Zaisan**	**5.03**	**353**	*e*P	Pn	06 34 29.6	+4.3
	7.4nm,0.0s						
ZSN				*e*S	**Sb**	**06 35 40.3**	**+2.0**
	38nm,0.1s						
UZB	**Uzynbulak**	**5.04**	**280**	*e*P	Pn	06 34 34.0	+8.4
	2.8nm,0.2s						
UZB				*e*S	**Sb**	**06 35 47.6**	**+8.7**
	26nm,0.9s						
MAKZ	**Makanchi**	**5.13**	**329**	⇓Pn	**Pn**	**06 34 28.1**	**+1.4**
	2.4nm,0.4s						
MAKZ				⇑Pg	**Pb**	**06 34 41.8**	**+2.2**
	7.8nm,0.5s						
MAKZ				⇑Sn	**Sn**	**06 35 25.3**	**-0.7**
	12nm,0.6s						
MAKZ				⇓Lg	Lg	06 35 46.7	
	36nm,0.6s						
KPKS	**Kokpek**	**5.32**	**283**	*e*P	Pb	06 34 39.4	-3.6
	4.5nm,0.1s						
KPKS				*e*S	Sb	06 35 57.4	+10
	108nm,0.5s						
ZHN	**Zhinishke**	**5.47**	**280**	*e*P	Pb	06 34 43.3	-2.3
	8.4nm,0.3s						
ZHN				*e*S	**Sg**	**06 36 03.3**	**-2.1**
	67nm,0.5s						
SATY	**Saty**	**5.48**	**279**	*e*P	Pb	06 34 43.3	-2.5
	6.0nm,0.2s						
SATY				*e*S	**Sg**	**06 36 03.8**	**-2.1**
	36nm,0.4s						
TDK	**Taldyqorghan**	**5.93**	**298**	*e*P	**Pb**	**06 34 50.8**	**-2.5**
	44nm,0.1s						
TDK				*e*S	**Sg**	**06 36 17.3**	**-2.9**
	117nm,0.8s						
ARXS	**Arharly**	**6.08**	**289**	*e*P	Pb	06 34 53.2	-2.7
	11nm,0.1s						
ARXS				*e*S	**Sg**	**06 36 20.6**	**-4.3**
	44nm,0.0s						
AAK	**Ala-Archa**	**8.36**	**275**	Pn	Pn	06 35 05.1	-6.0
	0.1nm,0.3s,baz=87,slow=15,SNR=1.3						
AAK				Lg	Lg	06 37 21.4	
	0.1nm,0.3s,baz=35,slow=19,SNR=2.5						
KURBB	**Kurchatov Arra**	**9.57**	**331**	Pn	**Pn**	**06 35 26.4**	**-1.2**
	0.1nm,0.3s,baz=145,slow=12,SNR=4.9						
KURBB				Sn	**Sn**	**06 37 09.3**	**-5.7**
	0.1nm,0.3s,baz=157,slow=17,SNR=4.1						
KURBB				Lg	Lg	06 38 06.0	
	0.3nm,0.3s,baz=146,slow=28,SNR=7.7						
	1.1nm,0.6s						
GTA	**Gaotai**	**11.03**	**101**	*e*P	**Pn**	**06 35 51.4**	**+3.7**
GTA				pP		06 35 55.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZALV	**Zalesovo Beam**	**11.51**	**357**	Pn	**Pn**	**06 35 51.9**	**-2.2**
	0.8nm,0.3s,baz=182,slow=14,SNR=12						
ZALV				Sn	**Sn**	**06 37 55.4**	**-7.2**
	0.4nm,0.3s,baz=183,slow=22,SNR=5.4						
ZALV				Lg	Lg	06 39 13.3	
	baz=172,slow=25						
ZALV				LR	LR	06 40 47.4	
	comp=Z,39nm,19.2s,baz=320,slow=40						
	2.0nm,0.4s						
BVAR	**Borovoye Array**	**14.77**	**321**	Pn	**Pn**	**06 36 35.4**	**-3.3**
	baz=131,slow=17,SNR=1.4						
BVAR				Lg	Lg	06 40 49.5	
	0.1nm,0.3s,baz=135,slow=27,SNR=2.2						
	0.2nm,0.4s						
SONM	**Songino Array**	**15.47**	**63**	Pn	**P**	**06 36 51.9**	**-0.7**
	0.3nm,0.3s,baz=255,slow=13,SNR=6.8						
SONM				Lg	Lg	06 41 25.9	
	0.2nm,0.3s,baz=270,slow=34,SNR=2.7						
	1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.41**	**151**	P	**P**	**06 38 48.6**	**+2.0**
	1.2nm,0.4s,baz=320,slow=9.3,SNR=8.2						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**39.72**	**320**	P	**P**	**06 40 41.2**	**-0.8**
	1.4nm,0.8s,baz=65,slow=7.8,SNR=1.0						
	1.4nm,0.8s						
ARCES	**ARCESS Array B**	**40.65**	**332**	P	**P**	**06 40 48.6**	**-1.2**
	3.8nm,1.1s,baz=93,slow=7.3,SNR=4.3						
	3.8nm,1.1s						
NOA	**NORSAR Array B**	**46.90**	**320**	P	**P**	**06 41 38.1**	**-2.0**
	0.5nm,0.8s,baz=78,slow=7.9,SNR=1.5						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**76.53**	**134**	P	**P**	**06 45 00.3**	**+0.1**
	1.0nm,0.7s,baz=330,slow=4.8,SNR=28						
	1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.94**	**276**	P	**P**	**06 45 00.5**	**-2.3**
	0.3nm,0.5s,baz=62,slow=9.5,SNR=2.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**79.36**	**136**	P	**P**	**06 45 15.9**	**-0.1**
	0.4nm,0.5s,baz=320,slow=5.5,SNR=5.7						
	0.4nm,0.5s						

*DJA **09** 06:49:44.4±0.6, 7.°5S×12.°9E±.°, h217km±19km, M3.8/5, mB3.5/2, mb3.6/5, MLv4.0/5, Mw(mB)2.4/2*
*IDC **09** 06:49:44.9±2.2, 7.°49S×128.°64E, h156km±28km, mb3.1/1, mbtmp3.7/5, Error ellipse: s-maj=26.4km s-min=21.2km az=117.0*

ISC 09 06:49:43.7±0.9, **7.°67S**±0.°07×**128.°82E**±0.°09, **h150**km, **n10,**
σ2°**80**/14, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.95**	**245**	P	**Pn**	**06 50 59.0**	**+2.3**
BATI	**Baumata**	**5.68**	**243**	P	**Pn**	**06 51 08.2**	**+2.0**
	0.4nm,0.5s,baz=222,slow=10.0,SNR=5.7						
BATI				S	**Sn**	**06 52 09.8**	**-0.9**
	0.1nm,0.3s,baz=249,slow=12,SNR=2.4						
BATI	**Baumata**	**5.68**	**243**	P	**Pn**	**06 51 08.6**	**+2.3**
	0.0nm5.6nm0.4nm,0.7s						
FAKI	**Fak Fak**	**5.83**	**36**	P	**Pn**	**06 51 08.1**	**-0.1**
	0.1nm22nm,1.2s						
SIJI	**Sorong**	**7.18**	**20**	P	**Pn**	**06 51 26.0**	**-0.3**
	6.2nm,0.3s,baz=229,slow=20,SNR=1.8						
FITZ	**Fitzroy Crossi**	**10.82**	**196**	P	**Pn**	**06 52 17.0**	**+2.5**
	1.3nm,0.5s,baz=28,slow=11,SNR=7.8						
FITZ				S	**Sn**	**06 54 09.8**	**-4.4**
	3.1nm,0.4s,baz=124,slow=23,SNR=8.4						
PLAI	**Plampang**	**10.99**	**263**	P	**Pn**	**06 52 15.1**	**-1.8**
WRA	**Warramunga Arr**	**13.32**	**157**	P	**P**	**06 52 49.7**	**-1.7**
	0.5nm,0.3s,baz=332,slow=14,SNR=27						
WRA				S	**Sn**	**06 55 11.2**	**-3.4**
	0.9nm,0.5s,baz=332,slow=22,SNR=5.0						
ASAR	**Alice Springs**	**16.64**	**164**	P	**Pn**	**06 53 33.4**	**+5.0**
	0.3nm,0.3s,baz=335,slow=9.4,SNR=3.3						
ASAR				S	**S**	**06 56 33.6**	**+0.3**
	0.3nm,0.4s,baz=320,slow=16,SNR=2.3						
MKAR	**Makanchi Array**	**68.15**	**328**	P	**P**	**07 00 26.5**	**-1.2**
	0.3nm,0.6s,baz=111,slow=8.2,SNR=3.6						
	0.3nm,0.6s						

*NOU **09** 06:53:14.1, 37.°19S×179.°67E, h0km, MLv3.9/8, Off E. Coast of N. Island, N.Z.*
*WEL **09** 06:53:24.2±1.1, 37.°5±4.°×17.°9E±.°, h15km±6km, M3.2/12, ML3.5/18, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=98.8*

ISC 09 06:53:21.1±2.6, **37.°27S**±0.°06×**179.°1E**±0.°1, **h16**km±10km,
n70, σ0°**92**/78, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.71**	**245**	P	**Pb**	**06 53 35.5**	**+0.4**
MXZ				S	**Sg**	**06 53 42.8**	**-1.7**
MXZ	**Matakaoa Point**	**0.71**	**245**	P	**Pg**	**06 53 35.3**	**+0.3**
WMGZ	**Waiomatatini S**	**0.79**	**225**	P	**Pn**	**06 53 38.9**	**+1.5**
PKGZ	**Pakihiroa**	**1.03**	**233**	P	**Pn**	**06 53 41.8**	**+0.8**
PKGZ				S	**Sg**	**06 53 54.2**	**-0.5**
PUZ	**Puketiti**	**1.05**	**220**	P	**Pn**	**06 53 42.6**	**+1.4**
PUZ				S	**Sg**	**06 53 56.2**	**+0.9**
HAZ	**Te Kaha**	**1.17**	**245**	P	**Pn**	**06 53 42.5**	**-0.3**
HAZ				S	**Sb**	**06 53 57.0**	**-0.8**
TWGZ	**Tauwhareparae**	**1.28**	**224**	P	**Pg**	**06 53 45.8**	**0.0**
TWGZ				S	**Sb**	**06 54 02.5**	**+1.5**
RUGZ	**Raukumara Rang**	**1.34**	**238**	P	**Pb**	**06 53 46.5**	**+0.6**
RUGZ				S	**Sn**	**06 54 01.7**	**-1.0**
CNGZ	**Carnagh Statio**	**1.41**	**210**	P	**Pg**	**06 53 48.3**	**-0.1**
TKGZ	**Te Karaka**	**1.54**	**220**	P	**Pn**	**06 53 49.0**	**+1.1**
MWZ	**Matawai**	**1.65**	**229**	P	**Pn**	**06 53 50.4**	**+1.0**
MWZ				S	**Sn**	**06 54 10.4**	**+0.1**
RIGZ	**Rimuhau**	**1.79**	**216**	P	**Pn**	**06 53 52.3**	**+0.9**
WHRZ	**Whale Island**	**1.80**	**250**	P	**Pn**	**06 53 52.0**	**+0.6**
RAGZ	**Rawiri**	**1.82**	**227**	P	**Pn**	**06 53 53.1**	**+1.3**
URZ	**Urewera**	**1.87**	**237**	P	**Pn**	**06 53 53.3**	**+0.9**
URZ				S	**Sn**	**06 54 14.9**	**-0.9**
URZ	**Urewera**	**1.87**	**237**	P	**Pn**	**06 53 53.5**	**+1.1**
EDRZ	**Edgecumbe**	**2.06**	**245**	P	**Pn**	**06 53 55.3**	**+0.2**
SNGZ	**Shannon Statio**	**2.06**	**222**	P	**Pn**	**06 53 56.1**	**+1.0**
MARZ	**Manawahe**	**2.07**	**249**	P	**Pn**	**06 53 55.0**	**-0.2**
KNZ	**Kokohu**	**2.09**	**213**	P	**Pn**	**06 53 55.7**	**+0.3**
MHGZ	**Mahia Peninsul**	**2.11**	**206**	P	**Pn**	**06 53 56.6**	**+0.9**
OPRZ	**Ohinepanea**	**2.12**	**253**	P	**Pn**	**06 53 55.7**	**-0.1**
RTZ	**Ruatahuna**	**2.16**	**231**	P	**Pn**	**06 53 57.3**	**+0.8**
MUGZ	**Murupara**	**2.22**	**236**	P	**Pn**	**06 53 57.7**	**+0.5**
MKRZ	**Makatiti**	**2.27**	**247**	P	**Pn**	**06 53 59.2**	**+1.1**
RAHZ	**Arahi**	**2.30**	**224**	P	**Pn**	**06 53 59.3**	**+1.0**
WHHZ	**Waihua**	**2.34**	**219**	P	**Pn**	**06 53 59.7**	**+0.8**
MTHZ	**Maungataniwha**	**2.40**	**228**	P	**Pn**	**06 54 00.8**	**+1.1**
ALRZ	**Allen Road**	**2.55**	**239**	P	**Pn**	**06 54 02.2**	**+0.4**
NMHZ	**Naumai**	**2.58**	**224**	P	**Pn**	**06 54 03.4**	**+1.1**
ARHZ	**Aropaoanui**	**2.60**	**219**	P	**Pn**	**06 54 03.1**	**+0.7**
KUZ	**Kuaotunu**	**2.77**	**280**	P	**Pn**	**06 54 03.7**	**-1.0**
KUZ	**Kuaotunu**	**2.77**	**280**	P	**Pn**	**06 54 03.8**	**-1.0**
BKZ	**Black Stump Fm**	**2.81**	**227**	P	**Pn**	**06 54 06.1**	**+0.7**
BKZ	**Black Stump Fm**	**2.81**	**227**	P	**Pn**	**06 54 06.1**	**+0.7**
CKHZ	**Cape Kidnapper**	**2.88**	**213**	P	**Pn**	**06 54 06.1**	**-0.1**
MCHZ	**McNeill Hill**	**2.89**	**220**	P	**Pn**	**06 54 06.8**	**+0.3**
TOZ	**Tahuroa Road**	**2.91**	**260**	P	**Pn**	**06 54 07.4**	**+0.7**
KWHZ	**Kaweka Forest**	**3.02**	**224**	P	**Pn**	**06 54 08.4**	**+0.1**
KAHZ	**Kahuranaki**	**3.08**	**214**	P	**Pn**	**06 54 08.8**	**-0.2**
GRZ	**Great Barrier**	**3.11**	**288**	P	**Pn**	**06 54 09.3**	**-0.1**
MKAZ	**Moumakai**	**3.16**	**272**	P	**Pn**	**06 54 09.8**	**-0.4**
KRHZ	**Kereru**	**3.21**	**221**	P	**Pn**	**06 54 10.1**	**-0.7**
WIAZ	**Waiheke Island**	**3.22**	**277**	P	**Pn**	**06 54 10.6**	**-0.4**
TMVZ	**Te Maari**	**3.26**	**234**	P	**Pn**	**06 54 11.9**	**+0.3**
BHHZ	**Black Hill Sta**	**3.27**	**226**	P	**Pn**	**06 54 11.9**	**+0.2**
NTVZ	**North Tongarir**	**3.27**	**235**	P	**Pn**	**06 54 12.6**	**+0.8**
PXZ	**Pawanui**	**3.28**	**212**	P	**Pn**	**06 54 10.6**	**-1.1**
OTVZ	**Oturere**	**3.31**	**234**	P	**Pn**	**06 54 12.6**	**+0.2**
NNVZ	**North Ngauruho**	**3.33**	**235**	P	**Pn**	**06 54 13.1**	**+0.5**
SNVZ	**South Ngauruho**	**3.34**	**234**	P	**Pn**	**06 54 13.0**	**+0.2**
NGZ	**Ngauruhoe**	**3.36**	**234**	P	**Pn**	**06 54 13.2**	**+0.2**
ETAZ	**East Tamaki Re**	**3.36**	**274**	P	**Pn**	**06 54 12.9**	**0.0**
MOVZ	**Moawhango**	**3.40**	**230**	P	**Pn**	**06 54 13.4**	**-0.2**
WNVZ	**Wahianoa**	**3.45**	**232**	P	**Pn**	**06 54 14.3**	**0.0**
PNHZ	**Pukenui**	**3.50**	**220**	P	**Pn**	**06 54 13.5**	**-1.3**
PRHZ	**Porangahau**	**3.57**	**212**	P	**Pn**	**06 54 14.3**	**-1.5**
HIZ	**Hauiti**	**3.59**	**248**	P	**Pn**	**06 54 17.9**	**+1.8**
HIZ	**Hauiti**	**3.59**	**248**	P	**Pn**	**06 54 17.8**	**+1.7**
RVAZ	**Riverhead Bore**	**3.67**	**276**	P	**Pn**	**06 54 17.4**	**+0.4**
TSZ	**Takapari Road**	**3.73**	**221**	P	**Pn**	**06 54 16.6**	**-1.4**
DVHZ	**Dannevirke**	**3.81**	**216**	P	**Pn**	**06 54 17.8**	**-1.2**
WCZ	**Waipu Caves**	**4.06**	**288**	P	**Pn**	**06 54 23.1**	**+0.6**
BFZ	**Birch Farm**	**4.08**	**212**	P	**Pn**	**06 54 20.8**	**-2.0**
WAZ	**Wanganui**	**4.08**	**231**	P	**Pn**	**06 54 23.4**	**+0.5**
OUZ	**Omahuta**	**4.91**	**293**	P	**Pn**	**06 54 35.3**	**+1.1**
OUZ	**Omahuta**	**4.91**	**293**	P	**Pn**	**06 54 35.2**	**+1.1**
BSWZ	**Blackbirch Sta**	**6.01**	**221**	P	**Pn**	**06 54 48.1**	**-1.3**
QRZ	**Quartz Range**	**6.24**	**233**	P	**Pn**	**06 54 50.4**	**-2.0**
KHZ	**Kahutara**	**6.70**	**218**	P	**Pn**	**06 54 58.4**	**-0.3**

*IDC **09** 06:56:23.8±1.4, 19.°98S×178.°17W, h599km±20km, mb3.0/5, mbtmp4.2/9, Error ellipse: s-maj=23.1km s-min=21.1km az=3.0*

ISC 09 06:56:22.7±0.8, **20.°2S**±0.°1×**178.°1W**±0.°1, **h569**km, **n12,**
σ1°**66**/12, **mb3.7/5, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**303**	P	**P**	**06 57 52.2**	**+3.2**
	5.2nm,0.3s,baz=112,slow=22,SNR=12						
AFI	**Afiamalu**	**8.68**	**45**	P	**P**	**06 58 28.3**	**+0.4**
	15nm,0.5s,baz=252,slow=5.3,SNR=4.0						
DZM	**Mont Dzumac**	**14.56**	**260**	P	**P**	**06 59 28.0**	**+0.4**
	1.9nm,0.5s,baz=88,slow=21,SNR=5.6						
URZ	**Urewera**	**18.49**	**192**	P	**P**	**07 00 03.4**	**-0.6**
	9.4nm,0.3s,baz=0.4,slow=2.6,SNR=19						
CTA	**Charters Tower**	**33.44**	**264**	P	**P**	**07 02 14.5**	**-1.1**
	5.2nm,0.4s,baz=87,slow=9.7,SNR=16						
	5.2nm,0.4s						
ASAR	**Alice Springs**	**44.52**	**256**	P	**P**	**07 03 43.5**	**-1.1**
	2.1nm,0.8s,baz=85,slow=8.4,SNR=25						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**44.57**	**262**	P	**P**	**07 03 43.2**	**-1.9**
	0.9nm,0.3s,baz=98,slow=7.5,SNR=74						
	0.9nm,0.3s						
VNDA	**Vanda**	**58.22**	**185**	P	**P**	**07 05 23.7**	**+1.2**
	0.4nm,0.6s,baz=14,slow=8.3,SNR=7.7						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**88.03**	**13**	P	**P**	**07 08 09.9**	**-2.4**
	0.2nm,0.5s,baz=208,slow=6.3,SNR=4.4						
	0.2nm,0.5s						
TROLL	**Troll, Antarti**	**88.04**	**180**	P	**P**	**07 08 13.4**	**+0.6**
VNA3	**Neumayer Olymp**	**88.46**	**176**	P	**P**	**07 08 14.7**	**+0.2**
VNA2	**Neumayer--Watz**	**88.90**	**177**	P	**P**	**07 08 17.1**	**+0.6**
	baz=184,slow=4.4						

UCR 09 07:00:36.8±2.4, **8.°73N**×**83.°30W, h8**km±9km, **MW4.3,**
Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.28**	**326**	*e*P	Pg	07 00 43.0	+0.7
EDPN				*e*S	Sb	07 00 48.7	-0.3
EDSV	**San Vito**	**0.34**	**74**	*e*P	Pg	07 00 44.0	+0.6
EDSV				*e*S	Sb	07 00 51.0	+0.3
CCOL	**Caracol de Cor**	**0.45**	**135**	*e*P	Pg	07 00 44.9	-0.7
CCOL				*e*S	Sg	07 00 52.5	+0.9
SRBA	**San Rafael, Bu**	**0.51**	**353**	*e*P	Pg	07 00 46.7	+0.1
SRBA				*e*S	Sb	07 00 54.7	-0.9
PEZE	**Perez Zeledon,**	**0.75**	**330**	*e*P	Pg	07 00 50.4	-0.9
PEZE				*e*S	Sb	07 01 01.9	-0.7
EDDO	**Dominical**	**0.76**	**313**	*e*P	Pg	07 00 50.8	-0.7
CDM	**Cerro de Muert**	**0.94**	**331**	*e*P	Pg	07 00 53.4	-1.5
LCR2	**La Lucha 2**	**1.23**	**325**	*e*P	Pb	07 00 57.5	-2.8
JACO	**JACO, Garabito**	**1.63**	**305**	*e*P	Pn	07 01 05.1	-0.8
LAFE	**Finca La Fe, P**	**1.92**	**304**	*e*P	Pn	07 01 09.0	-0.7
FORC	**Fortuna**	**2.19**	**322**	*e*P	Pn	07 01 14.3	+0.8
JTS	**Las Juntas de**	**2.25**	**314**	*e*P	Pn	07 01 14.1	-0.3
PTEN	**Parque Tenorio**	**2.58**	**320**	*e*P	Pn	07 01 20.4	+1.4
VERA	**Finca Concepci**	**2.62**	**324**	*e*P	Pn	07 01 20.8	+1.4
CUI	**Cuipilapa**	**2.66**	**316**	*e*P	Pn	07 01 20.8	+0.8
ORTG	**Ortega, Santa**	**2.68**	**307**	*e*P	Pn	07 01 20.6	+0.2
HORNC	**Hornillas**	**2.71**	**317**	*e*P	Pn	07 01 21.7	+1.0
GUAB	**Guayabo de Bag**	**2.74**	**316**	*e*P	Pn	07 01 22.3	+1.2
VMAR	**Armenia, Volca**	**2.74**	**319**	*e*P	Pn	07 01 22.8	+1.7
GB1A	**Borinquen Arri**	**2.93**	**315**	*e*P	Pn	07 01 25.8	+2.0

*SOME **09** 07:32:49.3, 40.°28N×77.°20E, h10km*
*NNC **09** 07:32:50.9±2.1, 40.°40N×77.°85E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=21.8km s-min=13.5km az=80.0*

KRNET 09 07:32:46.2±0.1, **40.°24N**×**77.°28E, mb2.3, 9C-11D,**
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.54**	**321**	⇑*i*P	Pn	07 33 15.2	0.0
NRN				⇑*i*S	Sn	07 33 36.6	+0.5
	baz=20						
TARG	**Taragay, Kyrgy**	**1.54**	**15**	⇑*i*P	Pn	07 33 15.2	-0.2
	baz=15						
TARG				⇑*i*S	Sn	07 33 36.3	0.0
	baz=15						
ULHL	**Ulahol**	**2.15**	**339**	⇓*i*P	Pb	07 33 25.6	-0.6
	baz=39						
ULHL				⇓*i*S	Sb	07 33 54.1	+0.5
	baz=39						
BOOM	**Boomskoye usch**	**2.47**	**336**	⇑*i*P	Pb	07 33 30.0	-1.5
	baz=36						
BOOM				⇑*i*S	Sb	07 34 01.8	-0.7
	baz=36						
ARLS	**Aral**	**2.76**	**307**	⇓*i*P	Pn	07 33 33.6	+1.7
	baz=7.0						
ARLS				⇓*i*S	Sn	07 34 08.4	+2.4
	baz=7.0						
TNSS	**Tian-Shan**	**2.81**	**355**	*e*P	Pg	07 33 40.5	+0.5
	1.9nm,0.1s						
TNSS				*e*S	Sg	07 34 16.6	+0.2
	3.8nm,0.6s						
TNSS	**Tian-Shan**	**2.81**	**355**	Pg	Pg	07 33 40.5	+0.5
	1.9nm,0.4s						
TNSS				Lg	Lg	07 34 16.5	
	3.9nm,0.8s						
IZV	**Izvestkoviy**	**2.84**	**350**	*e*P	Pg	07 33 41.9	+1.3
	0.1nm,0.0s						
IZV				*e*S	Sg	07 34 19.0	+1.6
	6.6nm,0.1s						
IZV	**Izvestkoviy**	**2.84**	**350**	Pg	Pg	07 33 42.1	+1.4
	0.1nm,0.1s						
IZV				Lg	Lg	07 34 19.0	
	7.2nm,0.5s						
MDOK	**Medeo**	**2.93**	**357**	*e*P	Pg	07 33 42.5	+0.2
	0.5nm,0.1s						
MDOK				*e*S	Sg	07 34 20.0	-0.3
	15nm,0.0s						
MDOK	**Medeo**	**2.93**	**357**	Pg	Pg	07 33 41.6	-0.7
	1.4nm,0.6s						
MDOK				Pg	Pb	07 33 43.1	+3.7
	1.8nm,0.3s						
MDOK				Lg	Lg	07 34 20.9	
	14nm,0.8s						
MDOK				Lg	Lg	07 34 21.5	
	17nm,0.8s						
TKM2	**Tok

LBTB IAmb IAmb 07 45 25.4
comp=Z,15nm,1.4s
SUR Sutherland 34.68 254 LR LR 07 57 43.2
comp=Z,46nm,19.6s,baz=134,slow=33
MAW Mawson 38.61 179 LR LR 07 57 58.8
comp=Z,122nm,21.4s,baz=96,slow=30
MBAR Mbarara 40.50 309 LR LR 08 01 51.4
comp=Z,95nm,20.2s,baz=122,slow=34
LODK Lodwar 40.66 318 P **P** **07 46 35.9 -0.6**
LODK IAmb IAmb 07 46 50.8
comp=Z,4.0nm,0.7s
PALK Pallekele 40.73 31 LR LR 07 59 56.3
comp=Z,41nm,18.1s,baz=316,slow=31
PALK Pallekele 40.73 31 P **P** **07 46 36.0 -0.9**
PALK IAmb IAmb 07 46 41.6
comp=Z,19nm,1.1s
ATD Arta Tunnel 44.02 334 LR LR 08 02 37.0
comp=Z,99nm,20.3s,baz=35,slow=32
H01W2 Cape Leeuwin H 44.92 112 T T 08 34 50.7
baz=261,slow=74,SNR=31
H01W3 Cape Leeuwin H 44.92 112 T T 08 34 51.1
baz=261,slow=74,SNR=29
H01W1 Cape Leeuwin H 44.94 112 T T 08 34 52.0
baz=261,slow=74,SNR=32
WSAR Wadi Sarin 52.02 357 LR LR 08 05 53.5
comp=Z,25nm,18.2s,baz=208,slow=31
SNAA Sanae 54.58 200 P **P** **07 48 22.2 -1.7**
comp=Z,0.9nm,0.9s,baz=106,slow=8.7,SNR=5.9
SNAA LR LR 08 07 52.3
comp=Z,38nm,19.3s,baz=14,slow=32
comp=Z,0.9nm,0.9s
FITZ Fitzroy Crossi 59.50 95 P **P** **07 48 59.1 -0.4**
comp=Z,3.2nm,0.9s,baz=237,slow=5.7,SNR=3.9
comp=Z,3.2nm,0.9s
CMAR Chiang Mai Arr 59.69 42 P **P** **07 49 02.0 +1.4**
comp=Z,2.5nm,0.3s,baz=220,slow=6.9,SNR=5.3
CMAR LR LR 08 11 24.2
comp=Z,16nm,20.1s,baz=235,slow=33
comp=Z,2.5nm,0.3s
QSPA South Pole Qui 61.12 180 P **P** **07 49 09.1 -1.0**
comp=Z,1.6nm,0.8s,baz=248,slow=6.2,SNR=5.5
QSPA LR LR 08 13 03.9
comp=Z,52nm,18.7s,baz=301,slow=34
comp=Z,1.6nm,0.8s
EIL Elat 63.50 335 LR LR 08 13 41.9
comp=Z,58nm,19.4s,baz=241,slow=33
VNDA Vanda 64.16 166 P **P** **07 49 28.9 -1.1**
comp=Z,0.8nm,0.7s,baz=275,slow=5.6,SNR=5.6
VNDA LR LR 08 15 24.6
comp=Z,89nm,18.1s,baz=268,slow=34
comp=Z,0.8nm,0.7s
ASAR Alice Springs 64.50 104 P **P** **07 49 32.0 -1.1**
comp=Z,2.2nm,0.7s,baz=243,slow=6.3,SNR=24
comp=Z,2.2nm,0.7s
ASAR Alice Springs 64.50 104 P **P** **07 49 33.0 -0.1**
SBA Scott Base 65.05 167 P **P** **07 49 36.5 +0.8**
WRA Warramunga Arr 66.32 100 P **P** **07 49 44.5 -0.4**
comp=Z,2.3nm,0.8s,baz=250,slow=5.3,SNR=19
comp=Z,2.3nm,0.8s
WRA Warramunga Arr 66.32 100 P **P** **07 49 45.1 +0.2**
WB2 Warramunga Arr 66.33 100 P **P** **07 49 45.0 +0.1**
WRAB Tennant Creek 66.33 100 P **P** **07 49 45.1 +0.1**
WRAB IAmb IAmb 07 50 04.4
comp=Z,9.5nm,1.2s
MMAI Mount Meron Ar 66.36 337 LR LR 08 15 39.3
comp=Z,48nm,19.7s,baz=182,slow=33
WB0 Warramunga Arr 66.43 100 P **P** **07 49 45.6 -0.1**
WB0 IAmb IAmb 07 50 14.5
comp=Z,8.0nm,1.2s
WR0 Warramunga Arr 66.48 101 P **P** **07 49 44.4 -1.5**
WR0 IAmb IAmb 07 50 11.1
comp=Z,9.5nm,1.2s
GNI Garni 70.50 347 LR LR 08 19 09.3
comp=Z,52nm,20.3s,baz=177,slow=34
TORD Torodi Ar. Bea 71.05 298 P **P** **07 50 14.7 +0.2**
comp=Z,2.3nm,0.9s,baz=115,slow=4.3,SNR=8.5
comp=Z,2.3nm,0.9s
AAK Ala-Archa 72.37 10 LR LR 08 18 58.0
comp=Z,28nm,21.1s,baz=177,slow=33
BRTR Keskin Array B 73.04 338 P **P** **07 50 26.7 +0.8**
comp=Z,0.9nm,0.8s,baz=177,slow=8.4,SNR=3.8
BRTR LR LR 08 20 42.9
comp=Z,26nm,20.2s,baz=108,slow=34
comp=Z,0.9nm,0.8s
KBZ Khabaz 74.31 346 LR LR 08 21 08.0
comp=Z,54nm,21.8s,baz=154,slow=34
PMSA Palmer Station 77.29 201 P **P** **07 50 52.5 +2.4**
MAKZ Makanchi 77.81 14 P **P** **07 50 52.7 -0.3**
MAKZ IAmb IAmb 07 50 58.4
comp=Z,2.7nm,0.9s
MK31 Makanchi Array 77.86 15 P **P** **07 50 54.0 +0.6**
MKAR Makanchi Array 77.86 15 P **P** **07 50 54.3 +0.9**
comp=Z,1.1nm,0.8s,baz=171,slow=5.2,SNR=9.2
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 77.86 15 P **P** **07 50 53.7 +0.3**
ABKAR Akbulak array 77.94 359 P **P** **07 50 54.9 +1.2**
AKTO Aktyubinsk 79.16 358 LR LR 08 23 44.0
comp=Z,24nm,19.2s,baz=190,slow=34
RPZ Rata Peaks 83.33 137 LR LR 08 19 36.5
comp=Z,75nm,21.4s,baz=268,slow=29
AKASG Malin Array Be 84.25 340 P **P** **07 51 27.7 +0.4**
comp=Z,0.2nm,0.4s,baz=161,slow=4.6,SNR=1.9
comp=Z,0.2nm,0.4s
ZALV Zalesovo Beam 85.15 14 P **P** **07 51 32.5 +0.8**
comp=Z,1.0nm,0.5s,baz=198,slow=4.2,SNR=5.2
ZALV LR LR 08 26 55.1
comp=Z,32nm,18.1s,baz=104,slow=34
comp=Z,1.0nm,0.5s
MDT Midelt 87.56 310 LR LR 08 30 32.6
comp=Z,47nm,19.1s,baz=128,slow=35
ESDC Sonseca Array 91.28 316 P **P** **07 52 02.6 +1.0**
comp=Z,1.1nm,1.1s,baz=104,slow=6.3,SNR=4.3
comp=Z,1.1nm,1.1s
ILAR Eielson Array 140.14 18 PKP **PKPdf** **07 58 22.9 -1.0**
comp=Z,0.4nm,0.9s,baz=309,slow=2.9,SNR=2.7
YKA Yellowknife Ar 146.42 356 PKPbc **PKPdf** **07 58 34.2 -0.8**
comp=Z,1.3nm,0.6s,baz=348,slow=2.7,SNR=6.1
ULM Lac du Bonnet 152.59 327 PKPbc **PKPbc** **07 58 51.9 -0.3**
comp=Z,4.1nm,0.7s,baz=124,slow=16,SNR=4.3
PDAR Pinedale Array 164.37 334 PKP **PKPdf** **07 58 59.0 -1.0**
comp=Z,1.1nm,1.0s,baz=77,slow=4.1,SNR=5.4
TXAR Lajitas Array 166.71 275 PKP **PKPdf** **07 59 01.9 -0.1**
comp=Z,0.4nm,0.7s,baz=134,slow=3.6,SNR=6.2
NVAR Mina Array Bea 170.62 357 PKP **PKPdf** **07 59 05.3 +0.8**
comp=Z,0.7nm,0.8s,baz=106,slow=0.9,SNR=5.8

IDC 09 07:42:22.8±5.9, 31.°46S×178.°67W, h0km, mb3.7/2,
mbtmp3.7/2, Error ellipse: s-maj=225.7km
s-min=62.9km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.49**	**268**	P	P	07 50 19.5	-0.5
	0.5nm,0.6s,baz=112,slow=7.2,SNR=6.5						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.58**	**274**	P	P	07 50 29.1	+0.2
	0.9nm,0.6s,baz=114,slow=8.0,SNR=14						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**145.93**	**339**	PKPbc	PKPdf	08 02 02.5	-0.3
	1.9nm,0.8s,baz=32,slow=5.4,SNR=1.4						

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*TAP **09** 07:42:35.7, 24.°59N×121.°62E, h53km, ML3.7, B*
*JMA **09** 07:42:35.3±0.2, 24.°6N±0.°3×12°2E±°, h55km±2km,*
MV2.7/10, TAIWAN REGION
ISC 09 07:42:36.1±1.2, 24.°62N±0.°02×121.°65E±0.°02, h52km±4km,
n140, σ0.°87/213, 16C-21D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.10**	**11**	⇓*i*P	**Pn**	**07 42 44.7**	**+0.5**
	baz=24						
TWE				*i* S	**Sn**	**07 42 51.1**	**+1.2**
	baz=24						
NDT	**Datong Townshi**	**0.12**	**263**	⇓P	**Pn**	**07 42 43.5**	**-0.8**
	baz=288						
NDT				*e*S	**Sn**	**07 42 49.4**	**-0.6**
	baz=288						
LATG	**Datong**	**0.14**	**233**	⇓*i*P	**Pn**	**07 42 44.8**	**+0.3**
	baz=247						
LATG				S	**Sn**	**07 42 50.8**	**+0.4**
	baz=247						
FUSB	**Fushanzhiwuyua**	**0.15**	**340**	⇓*i*P	**Pn**	**07 42 44.7**	**+0.2**
	baz=339						
FUSB				*i* S	**Sn**	**07 42 50.6**	**+0.2**
	baz=339						
ILA	**Ilan**	**0.17**	**32**	P	**Pn**	**07 42 45.1**	**+0.6**
	baz=36						
ILA				S	**Sn**	**07 42 52.1**	**+1.6**
	baz=36						
TWC	**Suao**	**0.19**	**92**	⇑*i*P	**Pn**	**07 42 44.9**	**+0.3**
	baz=85						
TWC				S	**Sn**	**07 42 51.2**	**+0.7**
	baz=85						
EWUT	**Wuta**	**0.21**	**145**	*e*P	**Pn**	**07 42 43.4**	**-1.3**
	baz=134						
EWUT				*e*S	**Sn**	**07 42 50.0**	**-0.8**
	baz=134						
YHNB	**Yeheng**	**0.25**	**282**	⇓*i*P	**Pn**	**07 42 45.0**	**-0.1**
	baz=299						
YHNB				*i* S	**Sn**	**07 42 51.7**	**+0.1**
	baz=299						
NSK	**Sanguang**	**0.27**	**283**	⇓*e*P	**Pn**	**07 42 44.1**	**-1.2**
	baz=299						
NSK				*i* S	**Sn**	**07 42 50.9**	**-0.9**
	baz=299						
NTC	**Toucheng**	**0.29**	**35**	*e*P	**Pn**	**07 42 45.9**	**+0.6**
	baz=36						
NTC				*e*S	**Sn**	**07 42 52.9**	**+1.0**
	baz=36						
NNS	**Nan Shan**	**0.30**	**235**	⇓*i*P	**Pn**	**07 42 44.7**	**-0.9**
	baz=235						
NNS				S	**Sn**	**07 42 51.5**	**-0.9**
	baz=235						
EGS		**0.35**	**49**	*e*P	**Pn**	**07 42 46.9**	**+1.1**
	baz=43						
NHDH	**Xindian Distri**	**0.36**	**342**	P	**Pn**	**07 42 46.0**	**0.0**
	baz=347						
NHDH				S	**Sn**	**07 42 53.2**	**+0.1**
	baz=347						
TWA	**Mucha**	**0.37**	**351**	⇓*i*P	**Pn**	**07 42 46.1**	**+0.1**
	baz=349						
TWA				*i* S	**Sn**	**07 42 53.4**	**+0.2**
	baz=349						
TATO	**Taipei**	**0.38**	**338**	⇓*i*P	**Pn**	**07 42 46.1**	**-0.1**
	baz=351						
TATO				S	**Sn**	**07 42 53.2**	**-0.3**
	baz=351						
TIPB	**Shuangxi**	**0.39**	**25**	⇓*i*P	**Pn**	**07 42 46.6**	**+0.3**
	baz=16						
TIPB				S	**Sn**	**07 42 53.9**	**+0.3**
	baz=16						
BACT	**New Taipei Cit**	**0.42**	**334**	P	**Pn**	**07 42 46.7**	**+0.1**
	baz=347						
BACT				*e*S	**Sn**	**07 42 54.8**	**+0.7**
	baz=347						
NHY	**Taipei**	**0.43**	**351**	*e*P	**Pn**	**07 42 47.9**	**+1.2**
	baz=355						
NHY				*e*S	**Sn**	**07 42 55.7**	**+1.5**
	baz=355						
TAP1	**Taipei**	**0.43**	**345**	*e*P	**Pn**	**07 42 46.9**	**+0.1**
	baz=348						
TAP1				*e*S	**Sn**	**07 42 54.6**	**+0.2**
	baz=348						
ETLH	**Xiulin Townshi**	**0.43**	**200**	⇑*i*P	**Pn**	**07 42 46.5**	**-0.4**
	baz=198						
ETLH				*e*S	**Sn**	**07 42 54.9**	**+0.3**
	baz=198						
TAP	**Taipei**	**0.44**	**343**	*e*P	**Pn**	**07 42 46.7**	**-0.1**
	baz=348						
TAP				S	**Sn**	**07 42 54.6**	**+0.2**
	baz=348						
NACB	**Ninganchiao**	**0.44**	**186**	⇑*i*P	**Pn**	**07 42 45.7**	**-1.1**
	baz=180						
NACB				S	**Sn**	**07 42 54.1**	**-0.5**
	baz=180						
ETL	**Fush Village**	**0.46**	**183**	P	**Pn**	**07 42 45.9**	**-1.1**
	baz=180						
NWF	**Wu-fen Shan**	**0.47**	**15**	⇑*i*P	**Pn**	**07 42 47.5**	**+0.3**
	baz=8.0						
NWF				*i* S	**Sn**	**07 42 55.4**	**+0.2**
	baz=8.0						
WFSB	**Wu-fen Shan**	**0.47**	**15**	⇑*i*P	**Pn**	**07 42 47.5**	**+0.4**
	baz=7.0						
WFSB				*i* S	**Sn**	**07 42 55.3**	**+0.2**
	baz=7.0						
NFF	**Wufeng Townshi**	**0.48**	**272**	⇓*e*P	**Pn**	**07 42 46.3**	**-1.0**
	baz=281						
NFF				*e*S	**Sn**	**07 42 54.8**	**-0.6**
	baz=281						
NTY	**Taoyuan**	**0.49**	**320**	P	**Pn**	**07 42 47.6**	**+0.2**
	baz=325						
NTY				*e*S	**Sn**	**07 42 56.5**	**+0.9**
	baz=325						
TWB1	**Santiao Chiao**	**0.50**	**39**	*e*P	**Pn**	**07 42 48.0**	**+0.6**
	baz=30						
TWB1				*e*S	**Sn**	**07 42 55.9**	**+0.2**
	baz=30						
FUSS	**Fushou**	**0.52**	**225**	⇑*i*P	**Pn**	**07 42 48.4**	**+0.4**
	baz=225						
FUSS				S	**Sn**	**07 42 57.0**	**+0.5**
	baz=225						
SXI1	**Grass Mountain**	**0.52**	**24**	⇑P	**Pn**	**07 42 47.9**	**+0.1**
	baz=17						
SXI1				*e*S	**Sn**	**07 42 56.4**	**+0.2**
	baz=17						
NJD	**Zhudong**	**0.52**	**283**	P	**Pn**	**07 42 47.9**	**+0.2**
	baz=298						
NJD				*e*S	**Sn**	**07 42 57.0**	**+0.9**
	baz=298						
TWS1	**Kuangyinshan**	**0.52**	**337**	⇓*i*P	**Pn**	**07 42 47.9**	**+0.1**
	baz=341						
TWS1				S	**Sn**	**07 42 56.8**	**+0.7**
	baz=341						
YM01	**YM01**	**0.53**	**353**	P	**Pn**	**07 42 47.8**	**-0.2**
	baz=348						
YM01				S	**Sn**	**07 42 55.9**	**-0.5**
	baz=348						
TWD	**Chiawan**	**0.54**	**185**	⇑P	**Pn**	**07 42 46.7**	**-1.2**
	baz=174						
TNOU	**National Taiwa**	**0.54**	**12**	*e*P	**Pn**	**07 42 47.9**	**-0.1**
	baz=5.0						
NCU	**National Centr**	**0.55**	**310**	⇓*i*P	**Pn**	**07 42 48.1**	**0.0**
	baz=315						
NCU				*e*S	**Sn**	**07 42 56.9**	**+0.3**
	baz=315						
TWT	**Tachien**	**0.56**	**230**	*i* P	**Pn**	**07 42 49.0**	**+0.6**
	baz=231						
TWT				*i* S	**Sn**	**07 42 58.0**	**+0.8**
	baz=231						
YM08	**YM08**	**0.57**	**355**	*e*P	**Pn**	**07 42 47.5**	**-0.9**
	baz=351						
YM08				*e*S	**Sn**	**07 42 56.3**	**-0.9**
	baz=351						
NTST	**Danshui**	**0.57**	**342**	*e*P	**Pn**	**07 42 48.5**	**+0.1**
	baz=354						
NTST				*e*S	**Sn**	**07 42 57.8**	**+0.6**
	baz=354						
TDCB	**Techi**	**0.57**	**231**	⇑*i*P	**Pn**	**07 42 49.0**	**+0.5**
	baz=231						
TDCB				*e*S	**Sn**	**07 42 57.7**	**+0.3**
	baz=231						
LIOB	**Emei**	**0.57**	**273**	⇓*i*P	**Pn**	**07 42 48.4**	**0.0**
	baz=276						
LIOB				S	**Sn**	**07 42 57.5**	**+0.2**
	baz=276						
ANP	**Anpu**	**0.58**	**349**	*e*P	**Pn**	**07 42 48.2**	**-0.3**
	baz=352						
NWRT	**Kuosheng**	**0.58**	**1**	*e*P	**Pn**	**07 42 48.3**	**-0.2**
	baz=12						
NWRT				*e*S	**Sn**	**07 42 57.1**	**-0.3**
	baz=12						
WHF	**Hehuan Shan**	**0.58**	**216**	⇑*i*P	**Pn**	**07 42 48.9**	**0.0**
	baz=208						
WHF				*i* S	**Sn**	**07 42 58.3**	**+0.2**
	baz=208						
NSTT	**Nanjuang**	**0.59**	**271**	⇓*i*P	**Pn**	**07 42 48.4**	**-0.1**
	baz=274						
NSTT				S	**Sn**	**07 42 57.5**	**0.0**
	baz=274						
HSN1	**Hsinchu**	**0.59**	**286**	⇓P	**Pn**	**07 42 48.7**	**+0.1**
	baz=299						
HSN1				*e*S	**Sn**	**07 42 58.1**	**+0.5**
	baz=299						
SBCB	**Hsinchu**	**0.62**	**286**	⇓P	**Pn**	**07 42 49.0**	**0.0**
	baz=301						
SBCB				*e*S	**Sn**	**07 42 58.6**	**+0.2**
	baz=301						
HWA	**Hwalien**	**0.64**	**183**	⇑P	**Pn**	**07 42 48.2**	**-0.9**
	baz=180						
HSN	**Hsinchu**	**0.64**	**287**	⇓*i*P	**Pn**	**07 42 48.9**	**-0.3**
	baz=294						
HSN				*i* S	**Sn**	**07 42 58.3**	**-0.3**
	baz=294						
TWY	**Chenhua**	**0.66**	**356**	*e*P	**Pn**	**07 42 49.9**	**+0.5**
	baz=352						
TWY				S	**Sn**	**07 42 59.7**	**+0.7**
	baz=352						
ETM	**Tongmen**	**0.66**	**192**	⇑P	**Pn**	**07 42 48.1**	**-1.4**
	baz=180						
NHW	**Xinwu Township**	**0.67**	**306**	⇓*i*P	**Pn**	**07 42 49.5**	**-0.1**
	baz=315						
NHW				S	**Sn**	**07 42 59.7**	**+0.4**
	baz=315						
NSM	**Shimen**	**0.67**	**356**	*e*P	**Pn**	**07 42 49.9**	**+0.4**
	baz=358						
CHGB	**Renai**	**0.70**	**218**	⇑*i*P	**Pn**	**07 42 50.5**	**+0.3**
	baz=211						
CHGB				S	**Sn**	**07 43 00.7**	**+0.3**
	baz=211						
NJN	**Zhunan**	**0.71**	**276**	*e*P	**Pn**	**07 42 50.0**	**0.0**
	baz=284						
WHP	**Taichung City**	**0.72**	**242**	⇓*i*P	**Pn**	**07 42 51.0**	**+0.7**
	baz=252						
WHP				S	**Sn**	**07 43 01.2**	**+0.6**
	baz=252						
TEYL	**Yanliau Villag**	**0.75**	**183**	*e*P	**Pn**	**07 42 49.5**	**-1.0**
	baz=181						
NMLH	**Miaoli**	**0.78**	**264**	*e*P	**Pn**	**07 42 50.9**	**-0.1**
	baz=266						
NMLH				S	**Sn**	**07 43 02.2**	**+0.4**
	baz=266						
OWD	**Renai**	**0.79**	**213**	*e*P	**Pn**	**07 42 51.4**	**+0.2**
	baz=203						
WUSB	**Renai**	**0.79**	**218**	⇑*i*P	**Pn**	**07 42 51.5**	**+0.3**
	baz=211						
WUSB				S	**Sn**	**07 43 02.3**	**+0.1**
	baz=211						
ESL	**Shilin**	**0.82**	**194**	⇑*i*P	**Pn**	**07 42 49.7**	**-1.9**
	baz=182						
NSY	**Sanyi**	**0.83**	**256**	⇓P	**Pn**	**07 42 51.9**	**+0.2**
	baz=257						
NSY				*e*S	**Sn**	**07 43 03.4**	**+0.4**
	baz=257						
WPL	**Puli Township**	**0.87**	**226**	*e*P	**Pn**	**07 42 53.0**	**+0.9**
	baz=220						
WCS	**Beigang Elemen**	**0.87**	**230**	*e*P	**Pn**	**07 42 51.9**	**-0.3**
	baz=241						
DPDB	**Guoxing**	**0.88**	**229**	*e*P	**Pn**	**07 42 53.2**	**+0.9**
	baz=239						
WDJ	**Dajia District**	**0.95**	**254**	*e*P	**Pn**	**07 42 53.4**	**+0.1**
	baz=255						
WDJ				S	**Sn**	**07 43 06.3**	**+0.4**
	baz=255						
EGFH	**Guangfu**	**0.96**	**192**	*e*P	**Pn**	**07 42 51.1**	**-2.3**
	baz=182						
VWDT	**VWDT**	**0.97**	**208**	⇑*i*P	**Pn**	**07 42 53.6**	**+0.1**
	baz=199						
VWDT				*e*S	**Sn**	**07 43 07.6**	**+1.2**
	baz=199						
SMLT	**Sun Moon Lake**	**1.00**	**223**	*e*P	**Pn**	**07 42 54.9**	**+1.0**
	baz=222						
SMLT				S	**Sn**	**07 43 08.5**	**+1.3**
	baz=222						
TCU	**Taichung**	**1.00**	**242**	*e*P	**Pn**	**07 42 54.5**	**+0.6**
	baz=241						
TYC	**Yuchr**	**1.01**	**226**	*e*P	**Pn**	**07 42 54.9**	**+0.8**
	baz=233						
TYC				*e*S	**Sn**	**07 43 08.6**	**+1.3**
	baz=233						
WWF	**Wufeng**	**1.04**	**237**	*e*P	**Pn**	**07 42 54.1**	**-0.2**
	baz=236						
SSLB	**Suanglung**	**1.04**	**218**	*e*P	**Pn**	**07 42 54.9**	**+0.4**
	baz=210						
SSLB				*e*S	**Sn**	**07 43 09.1**	**+1.1**
	baz=210						
WCHH	**Zhanghua**	**1.13**	**242**	*e*P	**Pn**	**07 42 56.0**	**+0.4**
	baz=252						
WNT1	**Nantou City**	**1.13**	**231**	*e*P	**Pn**	**07 42 56.5**	**+0.8**
	baz=242						
WNT1				*e*S	**Sn**	**07 43 11.1**	**+1.0**
	baz=242						
HGSD	**Ruisui**	**1.14**	**190**	*e*P	**Pn**	**07 42 54.6**	**-1.1**
	baz=188						
EHY	**Hungye**	**1.15**	**195**	*e*P	**Pn**	**07 42 54.9**	**-0.9**
	baz=183						
WNT	**Mingjian**	**1.15**	**230**	*e*P	**Pn**	**07 42 56.8**	**+0.9**
	baz=241						
WNT				*e*S	**Sn**	**07 43 11.1**	**+0.6**
	baz=241						
WJS	**Zhushan**	**1.15**	**227**	*e*P	**Pn**	**07 42 56.8**	**+0.9**
	baz=238						
WJS				*e*S	**Sn**	**07 43 11.5**	**+0.8**
	baz=238						
WHYT	**Xinyi Township**	**1.17**	**218**	*e*P	**Pn**	**07 42 57.3**	**+1.1**
	baz=217						
WHYT				*e*S	**Sn**	**07 43 13.0**	**+1.9**
	baz=217						
YOJ	**Yonaguni jima**	**1.25**	**97**	*e*P	**Pn**	**07 42 57.1**	**-0.2**
	baz=86						
YOJ				*e*S	**Sn**	**07 43 14.1**	**+1.0**
	baz=86						
YOJ	**Yonaguni jima**	**1.25**	**97**	P	**Pn**	**07 42 57.3**	**0.0**
YOJ				*e*S	**Sn**	**07 43 13.4**	**+0.3**
YULB	**Yu-li**	**1.26**	**195**	*e*P	**Pn**	**07 42 56.3**	**-1.1**
	baz=184						
YUS	**Yu-Shan**	**1.29**	**210**	*e*P	**Pn**	**07 42 58.4**	**+0.2**
	baz=197						
EYUL	**Yuli**	**1.30**	**193**	*e*P	**Pn**	**07 42 57.3**	**-0.6**
	baz=184						
TWF1	**Yuli**	**1.30**	**194**	*e*P	**Pn**	**07 42 57.0**	**-0.9**
	baz=185						
ECBN	**Changbin**	**1.31**	**188**	*e*P	**Pn**	**07 42 56.0**	**-2.0**
	baz=186						
ALS	**Alishan**	**1.34**	**215**	*e*P	**Pn**	**07 42 59.5**	**+0.7**
	baz=223						
ALS				*e*S	**Sn**	**07 43 17.7**	**+2.0**
	baz=223						
CHN5	**Tsauling**	**1.35**	**221**	*e*P	**Pn**	**07 42 58.0**	**-0.6**
	baz=219						
WGK	**Gukeng**	**1.36**	**227**	*e*P	**Pn**	**07 42 59.0**	**+0.3**
	baz=238						
WGK				S	**Sn**	**07 43 16.7**	**+1.1**
	baz=238						
FULB	**Fuli**	**1.45**	**193**	*e*P	**Pn**	**07 42 59.4**	**-0.6**
	baz=190						
WTCT	**Ta-ch'eng**	**1.45**	**239**	*e*P	**Pn**	**07 43 00.2**	**+0.2**
	baz=247						
WTCT				*e*S	**Sn**	**07 43 17.6**	**-0.4**
	baz=247						
WTK	**Tuku**	**1.47**	**231**	*e*P	**Pn**	**07 43 00.9**	**+0.6**
	baz=230						
WTK				*e*S	**Sn**	**07 43 19.2**	**+0.8**
	baz=230						
WCKO	**Fanlu**	**1.51**	**219**	*e*P	**Pn**	**07 43 01.4**	**+0.6**
	baz=217						
EHD	**Haiduan**	**1.52**	**195**	*e*P	**Pn**	**07 43 00.3**	**-0.6**
	baz=186						
CHKT	**Chengkung**	**1.53**	**190**	*e*P	**Pn**	**07 42 59.2**	**-1.9**
	baz=187						
CHY	**Chiayi**	**1.58**	**225**	*e*P	**Pn**	**07 43 02.1**	**+0.4**
	baz=233						
CHN4	**Tsaushan**	**1.59**	**218**	*e*P	**Pn**	**07 43 02.7**	**+0.9**
	baz=215						
TPUB	**Ta-pu**	**1.61**	**216**	*e*P	**Pn**	**07 43 02.5**	**+0.4**
	baz=213						
TPUB				*e*S	**Sn**	**07 43 24.2**	**+2.5**
	baz=213						
WSF	**Szhu**	**1.62**	**233**	*e*P	**Pn**	**07 43 01.9**	**-0.4**
	baz=242						
WSF				*e*S	**Sn**	**07 43 22.1**	**0.0**
	baz=242						
STYH	**Taoyuan**	**1.65**	**209**	*e*P	**Pn**	**07 43 02.8**	**+0.2**
	baz=195						
WTP	**Ta-pu**	**1.66**	**215**	*e*P	**Pn**	**07 43 03.8**	**+0.9**
	baz=214						
EDH	**Donghe**	**1.67**	**191**	*e*P	**Pn**	**07 43 02.7**	**-0.2**
	baz=180						
WSL	**Shuilin Townsh**	**1.69**	**230**	*e*P	**Pn**	**07 43 02.2**	**-1.0**
	baz=238						
WSL				*e*S	**Sn**	**07 43 23.2**	**-0.6**
	baz=238						
TWK	**Hsinying**	**1.71**	**218**	*e*P	**Pn**	**07 43 05.1**	**+1.5**
	baz=216						
TWK				*e*S	**Sn**	**07 43 26.2**	**+1.8**
	baz=216						
SNST	**Tainan City**	**1.74**	**217**	*e*P	**Pn**	**07 43 05.7**	**+1.7**
	baz=214						
CHN1	**Nanshi**	**1.75**	**216**	*e*P	**Pn**	**07 43 05.4**	**+1.2**
	baz=212						
LONT	**Longtian**	**1.77**	**196**	*e*P	**Pn**	**07 43 04.3**	**0.0**
	baz=184						
ICHU	**Yijhu**	**1.77**	**225**	*e*P	**Pn**	**07 43 06.0**	**+1.7**
	baz=222						

SGST	Jiashian	1.81 213	eP	Pn	07 43 05.4	+0.5
	baz=222					
CHN8	Yiju	1.82 226	eP	Pn	07 43 06.2	+1.2
	baz=234					
SLGT	Liugui	1.86 210	eP	Pn	07 43 07.0	+1.5
	baz=206					
TWG	Pinlang	1.86 196	eP	Pn	07 43 04.6	-1.0
	baz=185					
TWGBT	Beinan	1.86 196	eP	Pn	07 43 04.7	-0.9
	baz=185					
IRIF	Iriomote-Funau	1.92 98	P	Pn	07 43 05.8	-0.6
IRIF			S	Sn	07 43 28.9	-0.5
LDUT	Ludao	1.94 185	eP	Pn	07 43 05.0	-1.7
	baz=177					
SCST	Cishan	2.02 212	eP	Pn	07 43 09.4	+1.6
	baz=221					
VWUC	VWUC	2.03 281	eP	Pn	07 43 06.9	-1.0
	baz=281					
HATJ	Hateruma jima	2.05 105	eS	Sn	07 43 33.3	+0.8
SSD	Sandimen	2.08 207	eP	Pn	07 43 09.8	+1.2
	baz=215					
TWM1	Shoushan	2.11 212	eP	Pn	07 43 10.6	+1.6
	baz=208					
TSMG	Majia	2.11 206	eP	Pn	07 43 10.3	+1.3
	baz=215					
MATB	Ma-tsu	2.17 315	eP	Pn	07 43 08.9	-0.9
	baz=316					
JKRS	Kuro-shima	2.19 99	P	Pn	07 43 10.2	+0.2
JKRS			eS	Sn	07 43 35.7	-0.2
PHUB	P'eng-hu	2.19 240	eP	Pn	07 43 07.2	-2.9
	baz=238					
PHUB			eS	Sn	07 43 32.9	-3.1
	baz=238					
MASBT	Mashibuluo	2.20 205	eP	Pn	07 43 11.0	+0.7
	baz=215					
JIJ	Ishigaki jima	2.29 96	P	Pn	07 43 11.1	-0.4
JIJ			S	Sn	07 43 37.3	-1.1
PTMZ	Houxiangcun	2.33 281	eP	Pn	07 43 11.2	-0.8
	baz=281					
EAST	Anshuo	2.34 198	eP	Pn	07 43 13.8	+1.6
	baz=187					
TAWH	Dawu Township	2.37 197	eP	Pn	07 43 12.9	+0.4
	baz=187					
LYJJ	Jianjiangzhen	2.57 319	eP	Pn	07 43 14.2	-1.0
	baz=320					
XPSS	Dashiqiu	2.65 331	eP	Pn	07 43 15.3	-1.1
	baz=333					
SMST	Manzhou Townsh	2.69 196	eP	Pn	07 43 17.2	+0.3
	baz=185					
JTJ	Tarama	2.78 89	eP	Pn	07 43 18.9	+0.8
JTJ			eS	Sn	07 43 51.5	+0.9
KNM	Kinmen	2.93 267	eP	Pn	07 43 20.7	+0.5
	baz=265					
KNMB	Chin-men Tao	2.97 268	eP	Pn	07 43 19.4	-1.3
	baz=266					
AXDP	Jialang	3.35 276	eP	Pn	07 43 25.1	-0.9
	baz=275					
ZPLA	Ao Xicun	3.62 260	eP	Pn	07 43 28.5	-1.2
	baz=258					
DSXP	Dongshan	3.96 258	eP	Pn	07 43 33.3	-1.1
	baz=255					
SXFK	Yanhouchang	4.03 297	eP	Pn	07 43 34.1	-1.2
	baz=297					

IDC 09 07:56:26.7±6.8, 31°.37S×179°.52W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=276.6km s-min=60.9km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.77	269	P	P	08 04 17.7	-0.3
	1.3nm,0.9s,baz=113,slow=7.5,SNR=8.5 1.3nm,0.9s						
WRA	Warramunga Arr	42.85	274	P	P	08 04 26.8	0.0
	0.5nm,0.3s,baz=114,slow=7.7,SNR=42 0.5nm,0.3s						
FINES	FINESS Array B	145.59	338	PKPbc	PKPdf	08 16 05.5	-0.7
	5.8nm,1.1s,baz=42,slow=4.3,SNR=3.8						

*JMA **09** 08:16:58.9±0.1, 30°.N±1°.1×140°.E±°.1, h454km, MV3.7/39, NEAR TORISHIMA IS*
*IDC **09** 08:16:59.5±0.9, 29°.91N×138°.85E, h414km±10km, mb3.2/16, mbtmp4.0/19, Error ellipse: s-maj=19.0km s-min=9.6km az=84.0*

ISC 09 08:16:59.5±0.5, 29°.96N±0°.06×139°.13E±0°.09, h421km, n41, σ1§54/50, mb3.6/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.20	10	P	P	08 18 07.8	+2.1
	144nm,0.3s,baz=88,slow=16,SNR=31						
JHJ				S	S	08 18 59.5	-0.1
	41nm,0.3s,baz=254,slow=22,SNR=1.5						
CBIJ	Chichi jima	3.92	136	eP	P	08 18 12.7	+0.6
CBIJ				S	S	08 19 10.6	-0.6
JCJ	Chichijima	3.92	136	P	P	08 18 12.4	+0.3
	21nm,0.5s,baz=287,slow=18,SNR=6.1						
JCJ				S	S	08 19 09.5	-1.7
	120nm,0.3s,baz=273,slow=23,SNR=16						
JIE	Ise	4.87	336	P	P	08 18 24.2	+3.2
JKN2	Miekihoku	4.91	331	P	P	08 18 24.0	+2.8
BSO1	Boso 1	4.93	18	eP	P	08 18 23.0	+2.0
HMMJ	Hamamatsu 2	5.03	347	eP	P	08 18 24.7	+2.3
JOD2	Odawara 2	5.29	360	eP	P	08 18 26.6	+1.4
JOD2				eS	S	08 19 35.2	0.0
JHU	Hanno	5.88	1	P	P	08 18 31.7	+0.5
JHU				S	S	08 19 42.3	-4.1
JRY	Ryogami san	6.04	358	P	P	08 18 34.1	+1.1
JRY				S	S	08 19 48.6	-1.0
JYT	Yasato	6.31	8	P	P	08 18 36.1	+0.4
JYT				S	S	08 19 51.5	-3.3
JAG	Ashikaga	6.45	2	P	P	08 18 37.2	-0.1
JAG				S	S	08 19 53.3	-4.4
JHO	Hitachi	6.74	10	eP	P	08 18 40.8	-0.1
JHO				eS	S	08 20 00.5	-2.9
USRK	Ussuriysk Ar.	15.30	340	P	P	08 20 14.3	-0.1
	2.1nm,0.6s,baz=141,slow=8.1,SNR=4.4						
KLR	Kul'dur	20.05	346	P	P	08 21 04.8	+2.1
	0.9nm,0.4s,baz=164,slow=13,SNR=2.9 0.9nm,0.4s						
PETK	Petropavlovsk-	26.83	25	P	P	08 22 05.4	+1.8
	2.3nm,0.9s,baz=205,slow=6.4,SNR=4.7 2.3nm,0.9s						
MA2	Magadan	30.65	12	P	P	08 22 38.9	+1.9
	3.3nm,0.6s,baz=194,slow=14,SNR=4.0 3.3nm,0.6s						
SONM	Songino Array	30.80	315	P	P	08 22 38.5	-0.1
	0.3nm,0.4s,baz=107,slow=7.7,SNR=2.4 0.3nm,0.4s						
CMAR	Chiang Mai Arr	38.22	262	P	P	08 23 39.6	-2.0
	0.7nm,0.3s,baz=51,slow=7.4,SNR=6.5 0.7nm,0.3s						
TAPN	Taplejung	44.89	280	eP	P	08 24 34.4	-0.7
	4.2nm,0.4s						
ZALV	Zalesovo Beam	45.57	318	P	P	08 24 39.4	-0.2
	0.6nm,0.4s,baz=90,slow=7.4,SNR=3.1 0.6nm,0.4s						
RAMN	Ramite	45.95	280	eP	P	08 24 42.5	-0.8
	9.7nm,0.5s						
JIRN	Jiri	46.10	281	eP	P	08 24 44.5	-0.1
	17nm,0.4s						
GUN	Gumba	46.30	281	eP	P	08 24 46.2	+0.2
	8.8nm,0.4s						
MKAR	Makanchi Array	46.59	308	P	P	08 24 47.2	-0.4
	0.4nm,0.3s,baz=90,slow=7.8,SNR=6.3 0.4nm,0.3s						
PKI	Pulchoki	46.80	281	eP	P	08 24 49.0	-0.8
	5.7nm,0.8s						
PKIN	Phulchoki	46.80	281	eP	P	08 24 49.0	-0.8
	3.4nm,0.4s						
DANN	Dangsing	47.98	283	eP	P	08 24 58.6	-0.1
	14nm,0.6s						
PYUN	Piuthan	48.70	282	eP	P	08 25 04.0	-0.1
	24nm,0.5s						
WRA	Warramunga Arr	49.83	186	P	P	08 25 12.0	-0.2
	1.3nm,0.4s,baz=1.7,slow=7.7,SNR=62						
WRA				PcP	PcP	08 26 26.5	+0.9
	0.5nm,0.5s,baz=359,slow=3.9,SNR=6.3 1.3nm,0.4s						
ASAR	Alice Springs	53.55	186	P	P	08 25 39.3	0.0
	1.5nm,0.4s,baz=0.6,slow=6.2,SNR=34 1.5nm,0.4s						
ILAR	Eielson Array	56.53	30	P	P	08 26 00.7	+1.0
	0.3nm,0.6s,baz=263,slow=5.4,SNR=4.6 0.3nm,0.6s						
STKA	Stephens Creek	61.54	178	P	P	08 26 34.5	+0.5
	3.2nm,0.7s,baz=343,slow=11,SNR=6.6 3.2nm,0.7s						
ARCES	ARCESS Array B	69.95	340	P	P	08 27 27.1	+0.6
	1.4nm,0.7s,baz=67,slow=9.3,SNR=7.2 1.4nm,0.7s						
FINES	FINESS Array B	74.19	333	P	P	08 27 50.8	-0.5
	0.6nm,0.3s,baz=59,slow=4.6,SNR=10 0.6nm,0.3s						
AKASG	Malin Array Be	78.72	322	P	P	08 28 16.0	-0.6
	0.4nm,0.4s,baz=51,slow=6.1,SNR=3.6 0.4nm,0.4s						
NB2	NORSAR Subarra	79.95	337	P	P	08 28 22.5	-0.5
	comp=Z,0.2nm,0.5s,baz=41,slow=5.3						
NOA	NORSAR Array B	79.95	337	P	P	08 28 22.6	-0.5
	comp=Z,0.3nm,0.5s,baz=47,slow=4.9,SNR=4.2 comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	82.09	311	P	P	08 28 35.1	+0.4
	comp=Z,1.6nm,0.8s,baz=82,slow=4.0,SNR=4.7 comp=Z,1.6nm,0.8s						
TORD	Torodi Ar. Bea	120.69	310	PKP	PKiKP	08 35 02.3	-0.9
	comp=Z,0.3nm,0.7s,baz=24,slow=2.0,SNR=2.2						
LPAZ	La Paz	151.56	67	PKPbc	PKiKP	08 36 08.4	+1.9
	comp=Z,0.6nm,0.6s,baz=261,slow=4.6,SNR=3.7						

*IDC **09** 08:34:14.8±2.8, 8°.46S×117°.53E, h151km±22km, mb3.3/3, mbtmp3.8/6, MS2.8/1, Error ellipse: s-maj=32.2km s-min=11.9km az=56.0*
*DJA **09** 08:34:17.9±0.3, 8°.5S±5°.5×11°.8E±°.1, h174km±3km, M4.2/12, mb4.3/7, mB4.9/1, MLv4.2/12, Mw(mB)4.2/1*
*NEIC **09** 08:34:17.4±0.9, 8°.12S±0°.07×117°.89E±0°.06, h170km±10km, mb4.3/10, Error ellipse: s-maj=11.9km s-min=7.1km az=142.0*

ISC 09 08:34:17.3±0.6, 8°.33S±0°.06×117°.85E±0°.05, h170km, n43, σ2§02/51, mb3.6/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	Kabupaten Domp	0.49	111	P	Pn	08 34 42.5	+1.6
DBNI				S	Sn	08 35 01.6	+2.6
PLAI	Plampang	0.50	188	P	Pn	08 34 42.2	+1.2
PLAI				S	Sn	08 35 00.4	+1.1
TWSI	Taliwang, Sumb	1.04	247	P	Pn	08 34 45.8	+1.5
TWSI				S	Sn	08 35 06.9	+1.8
KLNI	Mataram	1.74	267	P	Pn	08 34 52.8	+1.9
SRBI	Singaraja	2.62	275	P	Pn	08 35 03.2	+2.3
IGBI	Denpasar	2.72	259	P	Pn	08 35 03.6	+1.5
RTBI	Rangdo, Negare	2.88	267	P	Pn	08 35 06.0	+1.9
BSSI	Bau Bau, Buton	3.40	51	P	Pn	08 35 12.2	+1.6
JAGI	Jajag, Banyuwa	3.66	268		Pn	08 35 14.4	+0.6
JAGI				Sn	Sn	08 35 59.4	+1.5
JAGI	Jajag, Banyuwa	3.66	268	P	Pn	08 35 14.6	+0.8
BKSI	Bulukumba	3.74	37	P	Pn	08 35 16.8	+1.9
KAPI	Kappang	3.79	30	P	Pn	08 35 16.8	+1.3
	6.7nm,0.6s,baz=216,slow=23,SNR=5.6						
KAPI				S	Sn	08 36 03.9	+2.9
	5.9nm,0.5s,baz=241,slow=23,SNR=1.4						
KAPI	Kappang	3.79	30	Pn	Pn	08 35 12.5	-3.1
KMMI	Kalianget	4.05	288	P	Pn	08 35 21.5	+2.7
MMRI	Maumere	4.35	94	Pn	Pn	08 35 22.5	-0.2
PWJI	Pagerwojo	5.99	272	P	Pn	08 35 46.7	+2.5
BATI	Baumata	6.04	108	P	Pn	08 35 44.7	-0.1
	0.2nm,0.3s,baz=252,slow=12,SNR=8.4						
BATI				S	Sn	08 36 50.4	-3.1
	0.2nm,0.4s,baz=234,slow=12,SNR=2.6						
SOEI	Soe	6.50	103		Pn	08 35 50.1	-0.9
SOEI	Soe	6.50	103	P	Pn	08 35 51.3	+0.4
	0.4nm2μm83nm,0.6s 0.8nm93nm,2.6s						
PCJI	Pacitan	6.61	271	P	Pn	08 35 53.7	+1.5
UGM	Wanagama	7.26	273	Pn	Pn	08 36 01.2	+0.2
MTKI	Muara Teweh, K	7.90	338	P	Pn	08 36 29.4	+20
CNJI	Cibinong	10.67	275	P	Pn	08 36 45.6	-0.3
	39nm,1.2s						
FITZ	Fitzroy Crossi	12.32	143	P	Pn	08 37 07.5	+0.3
	1.6nm,0.7s,baz=338,slow=12,SNR=2.2						
FITZ				S	Sn	08 39 18.5	-5.4
	3.1nm,0.3s,baz=179,slow=23,SNR=10						
FITZ				LR	LR	08 43 09.4	
	comp=Z,39nm,19.3s,baz=106,slow=43						
FITZ	Fitzroy Crossi	12.32	143	Pn	Pn	08 37 08.5	+1.3
MTN	Manton Dam	13.81	110		Pn	08 37 25.6	-0.6
FAKI	Fak Fak	15.30	70		Pn	08 37 42.7	-2.0
FAKI				IAmb	IAmb	08 38 11.7	
	comp=Z,30nm,1.1s						
MNAI	Manna	15.31	284	Pn	Pn	08 37 43.2	-1.7
MASI	Maura Aman, Be	16.36	287	P	P	08 37 52.0	-5.4
	comp=Z,94nm,0.5s						
WB0	Warramunga Arr	19.65	127	P	P	08 38 33.6	+0.4
WB0				IAmb	IAmb	08 38 33.9	
	comp=Z,7.3nm,0.6s						
WRA	Warramunga Arr	19.70	128	P	P	08 38 34.0	+0.3
	comp=Z,3.8nm,0.3s,baz=302,slow=12,SNR=183						
WRA				S	S	08 42 12.2	+5.4
	comp=Z,1.1nm,0.8s,baz=298,slow=24,SNR=2.8						
WRA	Warramunga Arr	19.70	128	P	P	08 38 34.0	+0.3
WRAB	Tennant Creek	19.70	128	P	P	08 38 34.3	+0.5
WRAB				IAmb	IAmb	08 38 34.6	
	comp=Z,7.9nm,0.5s						
WB2	Warramunga Arr	19.71	128	P	P	08 38 34.4	+0.5
WR0	Warramunga Arr	19.87	127	P	P	08 38 36.2	+0.7
WR0				IAmb	IAmb	08 38 37.2	
	comp=Z,17nm,1.2s						
AS31	Alice Springs	21.66	137	P	P	08 38 55.6	+0.9
AS31				IAmb	IAmb	08 38 57.1	
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	21.66	137	P	P	08 38 55.0	+0.4
	comp=Z,1.4nm,0.4s,baz=312,slow=9.1,SNR=35						
ASAR				S	S	08 42 45.9	+2.5
	comp=Z,0.2nm,0.5s,baz=314,slow=14,SNR=1.9 comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	21.66	137	P	P	08 38 54.9	+0.2
COEN	Coen	25.46	105	P	P	08 39 30.9	+1.0
SONM	Songino Array	56.83	351	P	P	08 43 43.8	-0.3
	comp=Z,1.1nm,0.8s,baz=168,slow=8.9,SNR=6.8 comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	63.35	333	P	P	08 44 28.3	-0.1
	comp=Z,0.2nm,0.3s,baz=141,slow=7.8,SNR=3.8 comp=Z,0.2nm,0.3s						
VNDA	Vanda	72.83	171	P	P	08 45 28.5	+1.6
ABKAR	Abkulak array	76.36	325	P	P	08 45 47.1	-0.6

WEL 09 08:48:04.6±0.7, 33°S±8°×17°9W±2°.1, h258km±13km, M4.1/22, mB4.7/18, ML4.5/7, MLv4.6/22, Mw(mB)3.9/18, Error ellipse: s-maj=0.0km s-min=0.0km az=110.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.71	19	S	S	08 49 50.7	-3.2
RIZ	Raoul Island	3.73	19	S	S	08 49 51.2	-3.1
MXZ	Matakaoa Point	5.14	202	P	Pn	08 49 26.9	+4.6
WMGZ	Waiomatatini S	5.35	200	P	Pn	08 49 28.4	+3.6
HAZ	Te Kaha	5.49	205	P	Pn	08 49 28.9	+2.3
HAZ				S	S	08 50 32.2	+0.1
PKGZ	Pakihiroa	5.51	202	P	Pn	08 49 31.9	+5.0
RUGZ	Raukumara Rang	5.72	205	P	Pn	08 49 32.7	+3.2
CNGZ	Carnagh Statio	6.03	199	P	Pn	08 49 36.6	+3.5
OPRZ	Ohinepanea	6.07	213	P	Pn	08 49 35.3	+1.7
TKGZ	Te Karaka	6.09	201	P	Pn	08 49 36.1	+2.2
MWZ	Matawai	6.10	204	P	Pn	08 49 36.4	+2.3
MARZ	Manawahe	6.13	211	P	Pn	08 49 36.8	+2.4
URZ	Urewera	6.19	207	P	Pn	08 49 34.7	-0.4
RAGZ	Rawiri	6.29	204	P	Pn	08 49 38.6	+2.2
MKRZ	Makatiti	6.35	212	P	Pn	08 49 40.6	+3.4
KARZ	Kaharoa	6.35	214	P	Pn	08 49 38.5	+1.3
KMRZ	Kaimai	6.36	216	P	Pn	08 49 40.0	+2.7
RIGZ	Rimuhau	6.36	201	P	Pn	08 49 37.8	+0.4
RIGZ				S	S	08 50 49.0	-2.8
OMRZ	Omania	6.37	212	P	Pn	08 49 39.8	+2.4
TOZ	Tahuroa Road	6.50	219	P	Pn	08 49 40.7	+1.7
MUGZ	Murupara	6.51	208	P	Pn	08 49 39.2	+0.1
SNGZ	Shannon Statio	6.57	203	P	Pn	08 49 40.4	+0.5
SNGZ				S	S	08 50 55.0	-1.4
HSRZ	Hossack Road	6.59	212	P	Pn	08 49 42.8	+2.6
HRRZ	Handcock Road	6.64	211	P	Pn	08 49 42.7	+1.9
PRRZ	Plateau Road	6.68	210	P	Pn	08 49 42.5	+1.2
MHGZ	Mahia Peninsul	6.74	199	P	Pn	08 49 45.5	+3.6
ALRZ	Allen Road	6.76	210	P	Pn	08 49 43.2	+0.9
RAHZ	Arahi	6.78	204	P	Pn	08 49 44.3	+1.8
RAHZ				S	S	08 51 01.3	+0.2
MRHZ	Matea Rd	6.96	209	P	Pn	08 49 45.0	+0.2
HIZ	Hauiti	7.42	218	P	Pn	08 49 51.4	+0.8
BHHZ	Black Hill Sta	7.66	208	P	Pn	08 49 50.5	-3.1
BHHZ				S	S	08 51 21.1	-0.3
PKVZ	Pokaka	7.79	212	P	Pn	08 49 53.3	-1.9
VRZ	Vera Road	7.94	216	P	Pn	08 49 56.0	-1.0
PNHZ	Pukenui	7.97	206	P	Pn	08 49 54.4	-3.2
WPHZ	Waipukurau	8.02	204	P	Pn	08 49 57.3	-0.8
WPHZ				S	S	08 51 29.6	-0.1
PRHZ	Porangahau	8.14	202	P	Pn	08 49 57.9	-1.7
PRHZ				S	S	08 51 30.0	-2.5
DVHZ	Dannevirke	8.33	205	P	Pn	08 49 59.6	-2.4
DVHZ				S	S	08 51 34.2	-2.5
WAZ	Wanganui	8.33	212	P	Pn	08 49 59.5	-2.5
ANWZ	Angora Road	8.37	203	P	Pn	08 50 01.3	-1.1
ANWZ				S	S	08 51 37.0	-0.6
PKE	Pukeiti	8.38	218	P	Pn	08 50 01.7	-1.0
POWZ	Post Office Ro	8.55	206	P	Pn	08 50 02.0	-2.8
POWZ				S	S	08 51 41.1	-0.8
BFZ	Birch Farm	8.64	203	P	Pn	08 50 02.9	-3.0
BFZ				S	S	08 51 40.7	-3.3
TIWZ	Tintock	8.85	204	P	Pn	08 50 06.2	-2.4
MRZ	Mangatainoka R	8.86	206	P	Pn	08 50 04.5	-4.1
MRZ				S	S	08 51 45.7	-3.2

WEL 09 08:50:14.7±0.9, 32°S±7°×17°8W±2°.1, h33km, M4.5/5, mB5.2/2, ML4.7/12, MLv4.5/5, Mw(mB)4.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=107.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.06	3	P	Pn	08 50 58.7	-2.0
GLKZ				S	Sn	08 51 35.9	-0.3
RIZ	Raoul Island	3.08	3	P	Pn	08 51 02.3	+1.3
RIZ				S	Sn	08 51 35.9	-0.7
MXZ	Matakaoa Point	6.00	208	P	Pn	08 51 40.3	-0.7
MXZ				S	Sn	08 52 52.0	+3.4
WMGZ	Waiomatatini S	6.18	207	P	Pn	08 51 45.6	+2.1
PKGZ	Pakihiroa	6.37	208	P	Pn	08 51 48.1	+1.9
PKGZ				S	Sn	08 52 58.9	+1.1
HAZ	Te Kaha	6.38	211	P	Pn	08 51 49.5	+3.2
HAZ				S	Sn	08 53 04.7	+6.7
RUGZ	Raukumara Rang	6.60	210	P	Pn	08 51 53.3	+3.9
RUGZ				S	Sn	08 53 06.7	+3.1
CNGZ	Carnagh Statio	6.84	205	P	Pn	08 51 48.4	-4.2
TKGZ	Te Karaka	6.94	207	P	Pn	08 51 55.9	+1.9
TKGZ				S	Sn	08 53 15.5	+3.8
MWZ	Matawai	6.97	210	P	Pn	08 51 55.3	+0.7
MWZ				S	Sn	08 53 12.2	-0.5
OPRZ	Ohinepanea	7.03	217	P	Pn	08 51 57.8	+2.5
URZ	Urewera	7.09	212	P	Pn	08 51 58.0	+1.9
URZ				S	Sn	08 53 13.2	-2.3
RIGZ	Rimuhau	7.20	207	P	Pn	08 51 57.6	-0.1
RIGZ				S	Sn	08 53 18.9	+0.7
SNGZ	Shannon Statio	7.43	209	P	Pn	08 52 02.0	+1.2
SNGZ				S	Sn	08 53 26.9	+2.9
TOZ	Tahuroa Road	7.52	222	P	Pn	08 52 07.6	+5.6
MHGZ	Mahia Peninsul	7.54	204	P	Pn	08 52 00.9	-1.4
MHGZ				S	Sn	08 53 26.7	+0.1
PNHZ	Pukenui	8.86	210	P	Pn	08 52 20.3	0.0
PNHZ				S	Sn	08 53 57.6	-1.4
DVHZ	Dannevirke	9.20	209	S	Sn	08 54 04.6	-2.7
POWZ	Post Office Ro	9.44	210	S	Sn	08 54 09.7	-3.6
BFZ	Birch Farm	9.49	207	P	Pn	08 52 27.0	-2.0
BFZ				S	Sn	08 54 12.3	-2.3
TIWZ	Tintock	9.71	208	S	Sn	08 54 17.4	-2.7
MRZ	Mangatainoka R	9.74	210	P	Pn	08 52 29.6	-2.9
MRZ				S	Sn	08 54 17.5	-3.2

*IDC **09** 08:51:59.6±7.7, 22°.13S×170°.28E, h101km±51km, mb3.2/2, mbtmp3.4/3, Error ellipse: s-maj=110.3km s-min=50.8km az=162.0*
*NOU **09** 08:52:01.7, 21°.20S×169°.88E, h0km, MLv3.6/10, Southeast of Loyalty Islands*

ISC 09 08:52:01.9±2.2, 21°.3S±0°.1×170°.1E±0°.2, h100km, n13, σ1§20/14, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.91	265	P	Pn	08 52 32.6	-0.7
LIFNC	LIFOU	2.71	281	P	Pn	08 52 43.2	-0.5
YATNC	Mamie plateau,	3.05	256	P	Pn	08 52 48.4	+0.1
OUENC	Ouen Island, N	3.19	250	P	Pn	08 52 52.2	+2.0
DZM	Mont Dzumac	3.45	257	P	Pn	08 52 53.9	+0.1
	1.3nm,0.3s,baz=112,slow=10,SNR=26						
DZM				S	Sn	08 53 34.4	+0.4
	8.9nm,0.3s,baz=359,slow=23,SNR=11						
DZM	Mont Dzumac	3.45	257	P	Pn	08 52 55.0	+1.2
ONTNC	Ouen Toro	3.50	253	P	Pn	08 52 55.6	+1.3
NOUC	Port Laguerre	3.59	257	P	Pn	08 52 56.1	+0.6
RTV	Rentapao	3.85	336	P	Pn	08 53 00.2	+1.1
KOUNC	Koumac, New Ca	5.47	277	P	Pn	08 53 22.7	+1.8
WRA	Warramunga Arr	33.43	266	P	P	08 58 29.9	-1.5
	0.2nm,0.4s,baz=101,slow=8.4,SNR=7.3 0.2nm,0.4s						
ASAR	Alice Springs	33.44	259	P	P	08 58 30.6	-1.0
	0.5nm,0.6s,baz=99,slow=8.6,SNR=8.0 0.5nm,0.6s						
GERES	GERESS Array B	146.70	331	PKPbc	PKPdf	09 11 30.6	+0.2
	0.4nm,0.6s,baz=44,slow=3.0,SNR=5.4						

*AEIC **09** 09:04:18±2.5, 51°.67N±0°.09×176°.8W±0°.2, h13km±7km, Error ellipse: s-maj=18.6km s-min=7.8km az=131.0*
*NEIC **09** 09:04:18.9±3.0, 51°.62N±0°.08×176°.78W±0°.09, h13km±12km, ML3.5(AEIC), Error ellipse: s-maj=12.6km s-min=6.3km az=152.0*
*IDC **09** 09:04:22.6±8.1, 51°.38N×175°.29W, h0km, mb3.3/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=155.2km s-min=65.8km az=99.0*

ISC 09 09:04:19.8±1.1, 51°.9N±0°.4×177°.0W±0°.1, h28km±10km, n17, σ1§70/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIWB	Kanaga Island	0.12	241		Pb	09 04 25.5	+0.4
ADK	Adak	0.19	98		Pb	09 04 24.6	-1.1
GSTR	Great Sitkin T	0.60	72		Pb	09 04 31.3	-0.6
AMKA	Amchitka	2.37	258		Pn	09 04 57.6	+0.8
NIKH	Nikolski High	5.09	75	Pn	Pn	09 05 35.8	+1.7
UNV	Unala

0.3nm,0.5s,baz=28,slow=9.2,SNR=7.7
WRA PcP PcP 09 41 49.8 -0.1
0.4nm,1.0s,baz=17,slow=3.1,SNR=1.4
0.3nm,0.5s
ASAR Alice Springs 43.43 200 P P 09 40 13.1 -0.2
0.4nm,0.7s,baz=18,slow=8.3,SNR=6.5
ASAR PcP PcP 09 42 01.8 +0.1
0.5nm,0.9s,baz=23,slow=2.0,SNR=2.4
0.4nm,0.7s
SONM Songino Array 45.66 321 P P 09 40 30.5 -0.5
0.4nm,0.6s,baz=116,slow=6.6,SNR=2.4
0.4nm,0.6s

*LDG **09** 10:33:01.7±0.1, 42°.62N×13°.23E, h11km, Md2.8/1, Ml2.6/11, Error ellipse: s-maj=2.4km s-min=1.8km az=42.0*
*PRU **09** 10:33:04.7±0.0, 42°.76N×13°.90E, h0km*
ROM 09 10:33:02.6±0.1, 42°.632N±0°.004×13°.212E±0°.006, h11km, ML2.8/46, 31C-16D, Error ellipse: s-maj=0.5km s-min=0.3km az=231.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**8**	⇓P	Pg	10 33 05.6	+0.3
T1202				S	Sg	10 33 07.6	+0.5
T1202				AML	AML		
	comp=E,36350μm,0.5s						
T1202				AML	AML		
	comp=N,78150μm,0.3s						
T1202				AML	AML		
	comp=N,78050μm,0.3s						
T1202				AML	AML		
	comp=E,36400μm,0.5s						
T1202				AML	AML		
	comp=N,78300μm,0.3s						
T1204	**Amatrice, Fraz**	**0.09**	**60**	⇓P	Pg	10 33 05.7	+0.3
T1204				S	Sg	10 33 07.6	+0.2
T1204				AML	AML		
	comp=E,30700μm,0.8s						
T1204				AML	AML		
	comp=N,16800μm,0.3s						
T1204				AML	AML		
	comp=E,30750μm,0.8s						
SMA1	**SAN MARTINO**	**0.09**	**91**	P	Pg	10 33 05.8	+0.4
SMA1				S	Sg	10 33 07.8	+0.4
SMA1				AML	AML		
	comp=E,88250μm,0.4s						
SMA1				AML	AML		
	comp=N,24200μm,0.9s						
RM33	**Pellescritta (**	**0.12**	**179**	⇑P	Pg	10 33 06.2	+0.4
RM33				S	Sg	10 33 08.7	+0.6
RM33				AML	AML		
	comp=N,9125μm,0.6s						
RM33				AML	AML		
	comp=E,9550μm,0.4s						
RM33				AML	AML		
	comp=N,9295μm,0.6s						
RM33				AML	AML		
	comp=N,9120μm,0.6s						
RM33				AML	AML		
	comp=E,9555μm,0.4s						
RM33				AML	AML		
	comp=N,9300μm,0.6s						
RM33				AML	AML		
	comp=E,9260μm,0.4s						
LNSS	**Leonessa**	**0.13**	**257**	⇑P	Pg	10 33 06.3	+0.5
LNSS				S	Sg	10 33 09.0	+0.8
LNSS				AML	AML		
	comp=E,26150μm,0.3s						
LNSS				AML	AML		
	comp=N,21850μm,0.2s						
CAMP	**Campotosto**	**0.17**	**123**	⇑P	Pg	10 33 06.9	+0.3
CAMP				S	Sg	10 33 09.9	+0.6
CAMP				AML	AML		
	comp=N,2375μm,0.5s						
CAMP				AML	AML		
	comp=E,2230μm,1.0s						
T1243	**Rocca Santa Ma**	**0.19**	**70**	P	Pg	10 33 06.9	+0.2
T1243				S	Sg	10 33 10.0	+0.4
T1247	**Pizzolo (AQ)**	**0.20**	**161**	⇑P	Pb	10 33 08.7	+0.4
T1247				AML	AML		
	comp=E,3975μm,0.5s						
T1247				AML	AML		
	comp=N,3930μm,0.4s						
NRCA	**Norcia**	**0.21**	**340**	⇓P	Pg	10 33 07.5	+0.3
NRCA				S	Sg	10 33 11.0	+0.6
NRCA				AML	AML		
	comp=E,18700μm,0.6s						
NRCA				AML	AML		
	comp=N,18050μm,0.1s						
NRCA				AML	AML		
	comp=N,16850μm,0.1s						
NRCA				AML	AML		
	comp=E,18700μm,0.6s						
NRCA				AML	AML		
	comp=N,16900μm,0.1s						
NRCA				AML	AML		
	comp=E,20150μm,0.6s						
T1217	**Poggiodomo (PG**	**0.22**	**291**	⇑P	Pg	10 33 07.7	+0.4
T1217				S	Sg	10 33 11.5	+0.9
T1217				AML	AML		
	comp=E,5145μm,0.5s						
T1217				AML	AML		
	comp=N,8390μm,0.5s						
T1217				AML	AML		
	comp=E,5045μm,0.3s						
T1217				AML	AML		
	comp=E,5140μm,0.5s						
T1217				AML	AML		
	comp=N,8395μm,0.5s						
T1217				AML	AML		
	comp=E,5050μm,0.3s						
T1217				AML	AML		
	comp=N,8025μm,0.5s						
T1217				AML	AML		
	comp=N,8415μm,0.5s						
T1217				AML	AML		
	comp=N,8045μm,0.5s						
T1245	**Castelsantange**	**0.23**	**355**	⇓P	Pg	10 33 07.8	+0.4
T1245				S	Sg	10 33 11.7	+0.9
T1245				AML	AML		
	comp=E,10565μm,0.4s						
T1245				AML	AML		
	comp=N,20650μm,1.2s						
T1245				AML	AML		
	comp=E,10530μm,0.4s						
T1245				AML	AML		
	comp=N,19600μm,1.2s						
T1245				AML	AML		
	comp=E,11600μm,0.4s						
T1241	**Roccafluvione,**	**0.28**	**36**	⇑P	Pg	10 33 08.5	+0.2
T1241				S	Sg	10 33 12.9	+0.8
T1241				AML	AML		
	comp=E,7185μm,0.2s						
T1241				AML	AML		
	comp=E,7100μm,0.2s						
T1241				AML	AML		
	comp=N,4105μm,0.4s						
T1241				AML	AML		
	comp=E,7190μm,0.2s						
T1241				AML	AML		
	comp=N,4330μm,0.4s						
MMO1	**Montemonaco**	**0.28**	**18**	⇑P	Pg	10 33 08.7	+0.2
MMO1				S	Sg	10 33 13.1	+0.8
MC2	**Monte Cornacci**	**0.28**	**357**	⇑P	Pg	10 33 08.8	+0.3
MC2				S	Sb	10 33 13.8	-0.8
TERO	**Teramo**	**0.29**	**92**	⇑P	Pg	10 33 08.6	0.0
TERO				S	Sg	10 33 12.9	+0.4
TERO				AML	AML		
	comp=E,2760μm,0.9s						
TERO				AML	AML		
	comp=N,2535μm,1.0s						
TERO				AML	AML		
	comp=E,2940μm,0.9s						
TERO				AML	AML		
	comp=E,2755μm,0.9s						
TERO				AML	AML		
	comp=N,2540μm,1.0s						
TERO				AML	AML		
	comp=N,2615μm,1.0s						
T1216	**Preci, Frazion**	**0.29**	**331**	⇓P	Pg	10 33 08.9	+0.2
T1216				S	Sg	10 33 13.8	+1.1
T1216				AML	AML		
	comp=E,3835μm,1.2s						
T1216				AML	AML		
	comp=N,5200μm,0.1s						
T1216				AML	AML		
	comp=N,5210μm,0.1s						
T1215	**Vallo di Nera,**	**0.30**	**304**	⇑P	Pg	10 33 09.1	+0.2
T1215				S	Sg	10 33 14.0	+1.0
T1215				AML	AML		
	comp=N,2855μm,0.3s						
T1215				AML	AML		
	comp=E,3150μm,0.9s						
T1215				AML	AML		
	comp=N,2935μm,1.4s						
T1215				AML	AML		
	comp=E,3085μm,0.9s						
T1215				AML	AML		
	comp=N,2860μm,0.3s						
T1215				AML	AML		
	comp=N,2935μm,1.4s						
T1215				AML	AML		
	comp=E,3155μm,0.9s						
GIGS	**Gran Sasso**	**0.32**	**125**	⇑P	Pg	10 33 09.1	0.0
GIGS				S	Sg	10 33 14.1	+0.6
GIGS				AML	AML		
	comp=E,692μm,0.3s						
GIGS				AML	AML		
	comp=N,624μm,0.1s						
GIGS				AML	AML		
	comp=N,625μm,0.1s						
ARRO	**Arrone**	**0.33**	**261**	⇑P	Pg	10 33 09.6	+0.3
ARRO				AML	AML		
	comp=N,2545μm,0.7s						
ARRO				AML	AML		
	comp=N,2550μm,0.7s						
ARRO				AML	AML		
	comp=E,2835μm,0.7s						
AM05	**Amandola Campo**	**0.36**	**17**	⇑P	Pg	10 33 10.2	+0.3
AM05				AML	AML		
	comp=E,870μm,1.1s						
AM05				AML	AML		
	comp=N,1034μm,1.2s						
AM05				AML	AML		
	comp=E,4715μm,1.1s						
AM05				AML	AML		
	comp=N,214μm,0.1s						
AM05				AML	AML		
	comp=E,871μm,1.1s						
AM05				AML	AML		
	comp=N,1036μm,1.2s						
FIAM	**Fiamignano**	**0.37**	**191**	⇑P	Pg	10 33 10.2	+0.2
FIAM				S	Sb	10 33 16.1	-0.9
FIAM				AML	AML		
	comp=E,2935μm,0.2s						
FIAM				AML	AML		
	comp=N,1880μm,0.8s						
FDMO	**Fiordimonte**	**0.41**	**347**	⇑P	Pg	10 33 11.0	+0.2
FDMO				AML	AML		
	comp=N,1255μm,1.3s						
FDMO				AML	AML		
	comp=E,1940μm,1.1s						
CESI	**CESI - Serrava**	**0.44**	**329**	⇓P	Pg	10 33 11.4	+0.2
CESI				S	Sb	10 33 18.2	-0.8
CESI				AML	AML		
	comp=E,1270μm,0.3s						
CESI				AML	AML		
	comp=N,2010μm,0.3s						
GUMA	**Gualdo di Mace**	**0.44**	**12**	⇑P	Pg	10 33 11.8	+0.5
GUMA				S	Sb	10 33 19.1	+0.1
GUMA				AML	AML		
	comp=E,11375μm,0.3s						
GUMA				AML	AML		
	comp=N,11575μm,0.5s						
GUMA				AML	AML		
	comp=N,11950μm,0.4s						
GUMA				AML	AML		
	comp=E,15800μm,0.3s						
GUMA				AML	AML		
	comp=N,11530μm,0.5s						
GUMA				AML	AML		
	comp=E,11400μm,0.3s						
FAGN	**Fagnano**	**0.46**	**143**	P	Pg	10 33 11.8	+0.1
FAGN				AML	AML		
	comp=E,1730μm,0.4s						
FAGN				AML	AML		
	comp=E,1735μm,0.4s						
FAGN				AML	AML		
	comp=N,1505μm,0.4s						
CSP1	**Cessapalombo**	**0.46**	**359**	⇑P	Pg	10 33 11.8	+0.1
CSP1				S	Sb	10 33 19.0	-0.7
CSP1				AML	AML		
	comp=E,2060μm,1.2s						
CSP1				AML	AML		
	comp=N,3105μm,0.3s						
OFFI	**Offida**	**0.46**	**49**	⇑P	Pb	10 33 12.6	-0.2
OFFI				S	Sb	10 33 21.2	+1.5
OFFI				AML	AML		
	comp=E,4475μm,0.5s						
OFFI				AML	AML		
	comp=N,3380μm,0.3s						
CESX	**Cesi**	**0.47**	**267**	⇑P	Pg	10 33 11.8	-0.1
CESX				AML	AML		
	comp=E,1780μm,0.6s						
CESX				AML	AML		
	comp=N,2355μm,0.7s						
VCEL	**Villa Celiera**	**0.52**	**117**	⇑P	Pg	10 33 13.1	+0.3
VCEL				S	Sb	10 33 21.5	0.0
VCEL				AML	AML		
	comp=E,2285μm,0.5s						
VCEL				AML	AML		
	comp=N,1935μm,0.6s						
VCEL				AML	AML		
	comp=E,2280μm,0.5s						
MNTP	**Montappone**	**0.54**	**20**	⇑P	Pb	10 33 13.9	-0.3
TRTR	**Tortoreto Alta**	**0.55**	**71**	⇑P	Pn	10 33 15.9	-0.5
ASSB	**Assisi San Ben**	**0.58**	**315**	P	Pg	10 33 13.1	-0.8
ASSB				AML	AML		
	comp=N,1265μm,0.5s						
ASSB				AML	AML		
	comp=E,1135μm,0.3s						
T0110	**Collepietro**	**0.58**	**134**	⇑P	Pg	10 33 13.9	-0.2
T0110				S	Sb	10 33 23.2	0.0
T0110				AML	AML		
	comp=E,918μm,0.4s						
T0110				AML	AML		
	comp=N,1275μm,0.5s						
T0110				AML	AML		
	comp=E,917μm,0.4s						
SRES	**S.Oreste - Sor**	**0.65**	**233**	S	Sn	10 33 27.0	-1.1
SNTG	**Esanatoglia**	**0.65**	**342**	⇓P	Pg	10 33 15.2	-0.2
SNTG				S	Sn	10 33 27.0	-1.2
SNTG				AML	AML		
	comp=E,381μm,1.0s						
SNTG				AML	AML		
	comp=N,501μm,0.5s						
SNTG				AML	AML		
	comp=E,352μm,0.2s						
SNTG				AML	AML		
	comp=N,503μm,0.5s						
SNTG				AML	AML		
	comp=N,502μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.69**	**323**	P	Pg	10 33 16.3	+0.2
ATCC				AML	AML		
	comp=E,712μm,0.5s						
ATCC				AML	AML		
	comp=N,667μm,0.7s						
MTCE	**Montecelio**	**0.70**	**210**	S	Sb	10 33 27.0	+0.5
CERT	**Cerreto**	**0.70**	**194**	⇑P	Pg	10 33 15.7	-0.6
CERT				AML	AML		
	comp=E,1080μm,0.5s						
CERT				AML	AML		
	comp=N,540μm,1.3s						
FOSV	**Fossato di Vic**	**0.74**	**334**	S	Sn	10 33 30.0	-0.3
CING	**Cingoli**	**0.74**	**359**	⇓P	Pg	10 33 17.0	0.0
CING				AML	AML		
	comp=E,1340μm,0.4s						
CING				AML	AML		
	comp=N,878μm,0.3s						
INTR	**Introdacqua**	**0.81**	**140**	⇓P	Pg	10 33 17.7	-0.5
INTR				AML	AML		
	comp=N,842μm,0.8s						
INTR				AML	AML		
	comp=E,340μm,0.6s						
INTR				AML	AML		
	comp=N,840μm,0.8s						
MGAB	**Montegabbione**	**0.86**	**289**	⇓P	Pg	10 33 19.2	0.0
MGAB				AML	AML		
	comp=N,984μm,0.4s						
MGAB				AML	AML		
	comp=N,972μm,0.4s						
MGAB				AML	AML		
	comp=E,1100μm,0.8s						
MGAB				AML	AML		
	comp=E,1205μm,0.8s						
SSFR	**Montelago di S**	**0.86**	**339**	⇑P	Pb	10 33 19.9	+0.2
SSFR				AML	AML		
	comp=E,726μm,1.4s						
SSFR				AML	AML		
	comp=N,1069μm,0.2s						
ATFO	**Monte Foce - G**	**0.87**	**328**	⇓P	Pb	10 33 20.3	+0.5
ATFO				AML	AML		
	comp=E,305μm,0.4s						
ATFO				AML	AML		
	comp=N,325μm,1.3s						
ARVD	**Arcevia**	**0.89**	**347**	P	Pg	10 33 19.7	-0.1
ARVD				S	Sn	10 33 34.0	0.0
ARVD				AML	AML		
	comp=N,343μm,0.8s						
ARVD				AML	AML		
	comp=E,344μm,1.2s						
AOI	**Ancona**	**0.96**	**17**	⇑P	Pn	10 33 23.2	+1.1
AOI				AML	AML		
	comp=N,582μm,1.1s						
AOI				AML	AML		
	comp=E,518μm,0.3s						
SACS	**San Casciano d**	**0.98**	**283**	⇓P	Pb	10 33 21.7	0.0
SACS				AML	AML		
	comp=E,314μm,0.8s						
SACS				AML	AML		
	comp=N,483μm,0.4s						
PIEI	**Pieia**	**1.03**	**331**	⇓P	Pg	10 33 22.4	-0.1
PIEI				AML	AML		
	comp=E,304μm,0.6s						
PIEI				AML	AML		
	comp=N,325μm,0.4s						
LATE	**Laterza**	**1.04**	**269**	P	Pb	10 33 22.7	+0.1
MPAG	**Monte Paganucc**	**1.05**	**342**	P	Pg	10 33 22.8	-0.1
MPAG				AML	AML		
	comp=N,293μm,0.9s						
MPAG				AML	AML		
	comp=E,276μm,0.8s						
TOLF	**Tolfa**	**1.06**	**238**	P	Pb	10 33 22.4	-0.7
TOLF				AML	AML		
	comp=E,308μm,1.1s						
TOLF				AML	AML		
	comp=N,261μm,1.1s						
GIUL	**Giuliano Di Ro**	**1.07**	**178**	⇓P	Pn	10 33 25.1	+1.4
GIUL				AML	AML		
	comp=E,246μm,0.7s						
GIUL				AML	AML		
	comp=N,218μm,0.6s						
FSSB	**Fossombrone**	**1.11**	**343**	⇑P	Pb	10 33 23.8	0.0
FSSB				AML	AML		
	comp=E,844μm,0.5s						
FSSB				AML	AML		
	comp=N,830μm,0.4s						
MCIV	**Monte Civitell**	**1.14**	**278**	⇓P	Pn	10 33 25.0	+0.4
MCIV				AML	AML		
	comp=E,218μm,0.3s						
MCIV				AML	AML		
	comp=N,165μm,0.5s						
CAFI	**Castiglion Fio**	**1.15**	**308**	P	Pb	10 33 23.8	-0.7
CAFI				AML	AML		
	comp=E,208μm,0.8s						
CAFI				AML	AML		
	comp=N,174μm,0.4s						
SF04	**Casetta**	**1.16**	**281**	⇑P	Pg	10 33 25.1	+0.1
PE3	**Peglio**	**1.19**	**334**	P	Pg	10 33 25.3	-0.1
PE3				AML	AML		
	comp=E,15μm,0.7s						
PE3				AML	AML		
	comp=N,5μm,0.9s						
CPGN	**Carpegna, Ital**	**1.34**	**331**	⇑P	Pg	10 33 30.4	+2.1
CRE	**Caprese Michel**	**1.35**	**317**	⇓P	Pg	10 33 29.9	+1.3
RUFI	**Rufina**	**1.73**	**315**	P	Pb	10 33 34.6	+0.1
CASP	**Castiglione de**	**1.74**	**276**	⇑P	Pn	10 33 33.1	+0.3
NDIM	**Novi di Modena**	**2.81**	**324**	⇑P	Pn	10 33 46.4	-1.0
MNTV	**Mantova**	**3.07**	**326**	S	Sg	10 34 39.0	-2.1
PGF	**Pioggiola**	**3.11**	**270**	*e*P	Pn	10 33 52.3	+0.6
PGF				*e*Sn	Sn	10 34 24.1	-4.8
	comp=N,2.2nm,0.5s						
OBKA	**Obir**	**3.99**	**13**	*i* Pn	Pn	10 34 04.8	+1.0
	comp=N,0.3nm,0.1s						
ABTA	**Abfaltersbach**	**4.14**	**353**	*e*Pn	Pn	10 34 06.2	+0.3
	comp=N,4.2nm,0.4s						
SBF	**Sospel**	**4.40**	**288**	*e*P	Pn	10 34 10.7	+1.4
SBF				*e*Sn	Sn	10 34 55.0	-5.5
	comp=N,23nm,0.9s						
KBA	**Koelnbreinsper**	**4.45**	**1**	*e*Pn	Pn	10 34 11.8	+1.6
	comp=N,0.8nm,0.2s						
FETA	**Feichten**	**4.73**	**339**	*e*Pn	Pn	10 34 16.6	+2.6
	comp=N,0.7nm,0.4s						
SQTA	**Sankt Quirin**	**4.80**	**343**	*e*Pn	Pn	10 34 17.8	+2.8
	comp=N,1.1nm,0.2s						
LMR	**La Mourre**	**4.97**	**280**	*e*P	Pn	10 34 17.2	+0.1
LMR				*e*Sn	Sn	10 35 08.3	-6.2
	comp=N,1.8nm,0.4s						
MBDF	**Montbardon**	**5.12**	**296**	*e*P	Pn	10 34 21.0	+1.7
MOA	**Molln**	**5.27**	**8**	*e*Pn	Pn	10 34 22.8	+1.5
	comp=N,0.4nm,0.2s						
LPG	**La Plagne**	**5.46**	**304**	*e*P	Pn	10 34 27.0	+2.8
CONA	**Conrad Observa**	**5.62**	**19**	*e*Pn	Pn	10 34 26.8	+0.7
	comp=N,0.6nm,0.3s						
KHC	**Kasperske Hory**	**6.50**	**2**	*e*PN	Pn	10 34 39.9	+1.6
KHC				*e*SN	Sn	10 35 50.3	-2.1
HINF	**Hinteralfeld**	**6.86**	**321**	*e*P	Pn	10 34 45.3	+2.2
HINF				*e*Sn	Sn	10 35 53.9	-7.2
	comp=N,0.5nm,0.4s						
CDF	**Champ du Feu**	**7.12**	**326**	*e*P	Pn	10 34 48.0	+1.2
CDF				*e*Sn	Sn	10 36 00.3	-7.5
	comp=N,0.7nm,0.4s						
HAU	**Haudompre**	**7.23**	**320**	*e*P	Pn	10 34 50.0	+1.8
HAU				*e*Sn	Sn	10 36 02.9	-7.3
	comp=N,2.7nm,0.5s						
SFTF	**Sexfontaines**	**8.00**	**317**	*e*P	Pn	10 35 01.8	+3.0
SFTF				*e*Sn	Sn	10 36 20.9	-8.4
	comp=N,2.9nm,0.5s						
LOR	**Lormes**	**8.09**	**308**	*e*P	Pn	10 35 02.3	+2.3
LOR				*e*Sn	Sn	10 36 23.0	-8.4
	comp=N,1.0nm,0.4s						

NOU 09 10:36:37.6, 14°.02S×166°.93E, h124km, MLv4.3/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.97**	**201**	P	Pn	10 38 17.0	-0.1
MARNC	**Mare, Loyalty**	**7.49**	**172**	P	Pn	10 38 23.2	-1.0
YATNC	**Mamie plateau,**	**8.00**	**180**	P	Pn	10 38 30.0	-1.0
DZM	**Mont Dzumac**	**8.02**	**183**	P	Pn	10 38 31.8	+0.4
OUENC	**Ouen Island, N**	**8.35**	**181**	P	Pn	10 38 36.9	+1.1

*MAN **09** 10:39:14.1, 9°.17N×125°.62E, h12km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY IV - SURIGAO CITY; TUBOD SURIGAO DEL NORTE; INTENSITY III - BUTUAN CITY; BACAUAG SURIGAO DEL NORTE; INTENSITY II - SOCORRO SURIGAO DEL NORTE; INTENSITY I - DAPA SURIGAO DEL NORTE.
*IDC **09** 10:39:15.9±3.5, 9°.19N×125°.70E, h30km±24km, mb4.2/22, mbtmp4.4/25, ML4.3/3, MS3.8/53, Error ellipse: s-maj=18.4km s-min=11.2km az=83.0*
*GCMT **09** 10:39:16.5±0.3, 9°.23N±0°.02×125°.68E±0°.03, h27km±1km, MW4.9/80, Moment Tensor Solution. s22,c24; s80,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.47±.14; $M_{\theta\theta}$1.02±.09; $M_{\phi\phi}$-1.49±.11; $M_{r\theta}$-1.15±.17; $M_{\theta\phi}$-1.87±.07; $M_{\phi r}$-0.99±.18; Best double couple: M_o2.65200×10^{16} NP1:ϕ_s71.00000°, δ90.00000°, λ-148.00000°. NP2: ϕ_s341.00000°, δ58.00000°, λ0.00000°. Principal axes: T 2.2410, Plg22.0000°, Azm201.0000°; N 0.8230, Plg58.0000°, Azm71.0000°; P -3.0620, Plg22.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **09** 10:39:18.9±0.5, 9°N±4°×12°6E±°, h43km±4km, M4.9/37, mb4.9/37, mB5.3/16, MLv5.3/4, Mw(mB)4.7/16, MwMwp5.4/3, Mwp5.6/3*
*BJI **09** 10:39:18.5±0.0, 8°.77N×125°.61E, h80km, mb4.6/42, mB5.0/24, Ms4.5/25, Ms7 4.2/25*
*NEIC **09** 10:39:20.5±2.0, 9°.11N±0°.09×125°.7E±0°.1, h65km±7km,*

mb4.8/45, Error ellipse: s-maj=16.2km s-min=12.0km az=65.0

ISC 09 10:39:15.5±0.8, 9°16N±0°03×125°75E±0°04, h26km±5km, n323,σ1§61/300, mb4.7/56, MS3.9/60, 12C-11D, Mindanao

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.67**	**337**	↑*e*P		**Pb**	**10 39 26.9**	**-1.8**
SCPH				*e*S		**Sb**	**10 39 35.8**	**-1.8**
BIPH	**Bislig**	**1.14**	**148**	↓*i*P		**Pn**	**10 39 34.6**	**-1.2**
BIPH				*e*S		**Sb**	**10 39 51.3**	**+0.2**
CGP	**Cagayan de Oro**	**1.26**	**236**	↑*e*P		**Pn**	**10 39 35.2**	**-2.3**
CGP				*i*S		**Sn**	**10 39 51.2**	**-2.4**
BUKP	**Musuan**	**1.45**	**208**	↑*i*P		**Pn**	**10 39 39.8**	**-0.3**
BUKP				*i*S		**Sb**	**10 40 00.7**	**+0.8**
GHBP	**Garcia Hernand**	**1.49**	**288**	↓*i*P		**Pn**	**10 39 38.1**	**-2.5**
GHBP				*i*S		**Sn**	**10 39 57.5**	**-1.7**
TABP	**Talibon, Bohol**	**1.68**	**303**	↓*i*P		**Pn**	**10 39 40.7**	**-2.5**
TABP				*e*S		**Sn**	**10 40 01.3**	**-2.6**
TBP	**Tagbilaran**	**1.94**	**286**	↓*i*P		**Pn**	**10 39 44.9**	**-1.9**
TBP				*i*S		**Sn**	**10 40 08.6**	**-1.8**
DAV	**Davao City (W)**	**2.08**	**185**	Pn		**Pn**	**10 39 50.2**	**+1.4**
	174nm,0.3s,baz=258,slow=5.7,SNR=5.6							
DAV				Sn		**Sb**	**10 40 17.2**	**-1.0**
	410nm,0.3s,baz=0.3,slow=16,SNR=7.7							
DAV				LR		LR	10 40 21.4	
	comp=Z,1μm,18.8s,baz=350,slow=31							
DAV				Lg		Lg	10 40 28.2	
	225nm,0.3s,baz=62,slow=21,SNR=5.8							
	499nm,0.4s							
DAV	**Davao City (W)**	**2.08**	**185**			**Pn**	**10 39 49.7**	**+0.8**
DAV	**Davao City (W)**	**2.08**	**185**	P		**Pb**	**10 39 50.9**	**-1.8**
DAV				S		Sb	10 40 29.2	+11
LSIP	**Lazi, Siquijor**	**2.10**	**269**	↓*i*P		**Pn**	**10 39 47.1**	**-1.9**
LSIP				*i*S		**Sn**	**10 40 12.3**	**-1.9**
LLP	**Lapu-Lapu**	**2.10**	**303**	↓*e*P		**Pn**	**10 39 47.3**	**-1.8**
LLP				*e*S		**Sn**	**10 40 13.9**	**-0.5**
KCP	**Kidapawan**	**2.24**	**197**	↑*e*P		**Pn**	**10 39 50.9**	**-0.1**
KCP				*i*S		**Sb**	**10 40 20.9**	**-1.7**
CTBH	**Cotabato--PC H**	**2.44**	**218**	↓*i*P		**Pn**	**10 39 53.3**	**-0.3**
DCPH	**Dipolog City**	**2.44**	**257**	↑*e*P		**Pn**	**10 39 53.3**	**-0.4**
DCPH				*e*S		**Sn**	**10 40 23.2**	**+0.5**
SNPH	**Sibulan**	**2.49**	**274**	↓*i*P		**Pn**	**10 39 53.1**	**-1.4**
SNPH				*i*S		**Sn**	**10 40 23.4**	**-0.6**
PAGZ	**Pagadian**	**2.69**	**241**	↑*e*P		**Pn**	**10 39 56.5**	**-0.5**
PAGZ				*e*S		**Sn**	**10 40 31.2**	**+2.5**
CNOP	**Candoni, Negro**	**3.14**	**282**	↓*e*P		**Pn**	**10 40 02.3**	**-1.1**
CNOP				*e*S		**Sn**	**10 40 43.2**	**+3.1**
GSPH	**General Santos**	**3.16**	**195**	*e*P		**Pb**	**10 40 14.6**	**+3.5**
JAP	**San Jose, Anti**	**4.07**	**293**	↑*e*P		**Pn**	**10 40 16.7**	**+0.6**
ZCP	**Zamboanga City**	**4.26**	**239**	↑*e*P		**Pb**	**10 40 30.4**	**+0.5**
ZCP				*e*S		**Sb**	**10 41 22.4**	**+1.5**
SGSI	**Sangihe**	**5.44**	**182**	P		**Pn**	**10 40 36.5**	**+1.5**
	2.3nm5μm568nm,0.5s							
JCNP	**Jose Panganiba**	**5.91**	**330**	↓*e*P		**Pn**	**10 40 44.3**	**+2.9**
JCNP				*e*S		**Sn**	**10 41 56.8**	**+8.5**
LQP	**Lukban**	**6.42**	**320**	↓*e*P		**Pn**	**10 40 49.9**	**+1.3**
GAMI	**Galela, Maluku**	**7.55**	**164**	P		**Pn**	**10 41 07.8**	**+3.8**
	0.6nm2μm129nm,0.9s							
PCPH	**Palayan**	**7.82**	**325**	↑*e*P		**Pn**	**10 41 09.2**	**+1.5**
MYLDM	**Lahad Datu**	**8.21**	**242**	Pn		Pn	10 41 18.8	+5.7
MYLDM	**Lahad Datu**	**8.21**	**242**	P		**Pn**	**10 41 16.6**	**+3.5**
	1μm36nm,1.2s							
TNTI	**Ternate**	**8.49**	**169**			**Pn**	**10 41 18.7**	**+1.8**
TNTI	**Ternate**	**8.49**	**169**	P		**Pn**	**10 41 18.7**	**+1.8**
	1μm106nm,1.2s							
I39PW	**PALAU INFRASON**	**8.85**	**100**	I			11 30 00.0	
	baz=282,slow=311,SNR=1.6							
GTOI	**Gorontalo**	**8.90**	**198**	P		**Pn**	**10 41 21.6**	**-0.9**
	313nm36nm,0.7s							
MRSI	**Marisa**	**9.43**	**204**	P		**Pn**	**10 41 30.8**	**+1.1**
	45nm,0.6s							
LUWI	**Luwuk**	**10.56**	**196**	Pn		Pn	10 41 52.0	+6.7
LUWI	**Luwuk**	**10.56**	**196**	P		**Pn**	**10 41 47.2**	**+1.9**
	2μm122nm,0.8s							
APSI	**Ampana**	**10.81**	**202**	P		**Pn**	**10 41 50.9**	**+2.2**
	970nm66nm,1.3s							
SANI	**Sanana**	**11.14**	**179**	P		**Pn**	**10 41 50.7**	**-2.5**
SIJI	**Sorong**	**11.38**	**151**	Pn		**Pn**	**10 41 58.1**	**+1.7**
	3.7nm,0.3s,baz=325,slow=15,SNR=6.8							
SIJI				LR		LR	10 47 21.5	
	comp=Z,222nm,19.9s,baz=260,slow=42							
	12nm,0.5s							
SIJI	**Sorong**	**11.38**	**151**	P		**Pn**	**10 41 58.2**	**+1.7**
	26nm,1.0s							
NLAI	**Namlea**	**12.39**	**174**	P		**Pn**	**10 42 10.8**	**+0.5**
	3μm24nm,0.6s							
KRAI	**Karang Ratu**	**12.67**	**168**	P		**Pn**	**10 42 15.7**	**+1.5**
	2μm33nm,1.2s							
TTSI	**Tana Toraja**	**13.49**	**206**	P		**Pn**	**10 42 27.7**	**+2.3**
	45nm,1.0s							
RKPI	**Ransiki, Papua**	**13.52**	**141**	P		**P**	**10 42 30.4**	**-4.3**
	1μm5μm87nm,1.4s							
SPSI	**Sidrap Palu**	**14.34**	**205**	P		**Pn**	**10 42 39.9**	**+2.9**
	773nm44nm,1.3s							
SBUM	**Sibu**	**15.02**	**244**			**P**	**10 42 52.3**	**+1.0**
SBUM	**Sibu**	**15.02**	**244**	P		**Pn**	**10 42 48.4**	**+2.2**
	53nm,1.2s							
KAPI	**Kappang**	**15.30**	**203**	Pn		**Pn**	**10 42 51.2**	**+1.3**
	0.4nm,0.3s,baz=23,slow=16,SNR=3.9							
KAPI				LR		LR	10 49 43.5	
	comp=Z,353nm,20.3s,baz=34,slow=41							
	16nm,1.1s							
KAPI	**Kappang**	**15.30**	**203**			**P**	**10 42 53.2**	**-1.3**
KAPI	**Kappang**	**15.30**	**203**	P		**Pn**	**10 42 51.8**	**+1.9**
	30nm,1.4s							
BKSI	**Bulukumba**	**15.44**	**202**	P		**Pn**	**10 42 52.8**	**+1.0**
	485nm27nm,2.1s							
BSSI	**Bau Bau, Buton**	**16.08**	**199**	P		**P**	**10 43 03.1**	**-0.1**
	980nm35nm,1.3s							
KSM	**Kuching**	**17.16**	**244**	P		**P**	**10 43 16.0**	**+0.9**
KSM	**Kuching**	**17.16**	**244**	P		**P**	**10 43 16.6**	**+1.5**
	15nm,1.1s							
JOW	**Kunigami**	**17.74**	**7**	P		**P**	**10 43 23.9**	**+2.5**
	25nm,0.7s,baz=186,slow=9.2,SNR=5.0							
JOW				LR		LR	10 49 15.3	
	comp=Z,505nm,19.9s,baz=146,slow=34							
QIZ	**Qiongzhong**	**18.27**	**304**			**P**	**10 43 29.8**	**+2.4**
QIZ				IAmb		IAmb	10 43 31.9	
	comp=Z,94nm,1.6s							
QIZ	**Qiongzhong**	**18.27**	**304**	P		**P**	**10 43 30.0**	**+2.6**
QIZ				S		**Sn**	**10 46 52.2**	**+1.5**
QIZ				pmax		pmax		
	comp=Z,31nm,1.6s							
QIZ				LR		LR		
	comp=Z,460nm,12.3s							
QIZ				LR		LR		
	comp=Z,590nm,14.3s							
QIZ				LR		LR		
	comp=Z,710nm,15.9s							
GENI	**Genyem**	**18.51**	**128**	P		**Pn**	**10 43 34.1**	**+3.8**
	comp=Z,89nm,1.2s							
SOEI	**Soe**	**18.85**	**185**			**Pn**	**10 43 34.3**	**-0.2**
SOEI				IAmb		IAmb	10 43 43.8	
	comp=Z,67nm,1.2s							
SOEI	**Soe**	**18.85**	**185**	P		**Pn**	**10 43 35.1**	**+0.6**
	comp=Z,118nm,1.0s							
DBNI	**Kabupaten Domp**	**19.05**	**203**	P		**Pn**	**10 43 36.8**	**0.0**
	comp=Z,2μmcomp=Z,80nm,1.5s							
DBNI				pP		sP	10 43 48.8	+2.0
	comp=Z,2μmcomp=Z,80nm,1.5s							
BATI	**Baumata**	**19.35**	**186**	P		**Pn**	**10 43 40.4**	**-0.1**
	comp=Z,2.6nmcomp=Z,0.4nm,0.8s							
BWJI	**Bawean**	**19.82**	**222**	P		**Pn**	**10 43 47.1**	**+1.1**
	comp=Z,639nm,1.3s							
KLNI	**Mataram**	**19.94**	**209**	P		**P**	**10 43 45.8**	**+0.1**
	comp=Z,94nm,1.2s							
UBPT	**Khong Chiam**	**20.73**	**289**	P		**P**	**10 43 54.3**	**+0.1**
UBPT				IAmb		IAmb	10 43 59.8	
	comp=Z,46nm,1.2s							
UBPT	**Khong Chiam**	**20.73**	**289**	P		Pn	10 43 58.5	+1.8
	comp=Z,34nm,1.4s							
MTN	**Manton Dam**	**22.50**	**166**	P		**P**	**10 44 12.8**	**-0.5**
MTN				IAmb		IAmb	10 44 23.0	
	comp=Z,43nm,1.1s							
JCJ	**Chichijima**	**23.66**	**39**	P		**P**	**10 44 26.0**	**+1.0**
	comp=Z,46nm,0.5s,baz=249,slow=8.6,SNR=9.2							
JCJ				LR		LR	10 51 37.5	
	comp=Z,107nm,21.2s,baz=114,slow=31							
	comp=Z,46nm,0.5s							
NJ2	**Nanjing**	**23.66**	**345**	*e*P		**P**	**10 44 23.2**	**-1.7**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
LEM	**Lembang**	**24.06**	**229**	P		**P**	**10 44 30.6**	**+1.5**
	comp=Z,48nm,0.8s,baz=135,slow=16,SNR=5.1							
	comp=Z,48nm,0.8s							
LEM	**Lembang**	**24.06**	**229**	P		**P**	**10 44 29.5**	**+0.4**
	comp=Z,50nm,1.0s							
TNG	**Tangerang**	**24.39**	**232**	P		**P**	**10 44 33.6**	**+1.7**
	comp=Z,57μmcomp=Z,391nm,0.4s							
SBJI	**Serang**	**24.76**	**233**	P		**P**	**10 44 36.3**	**+1.0**
	comp=Z,208nm,1.2s							
SBJI				pP		**sP**	**10 44 45.4**	**-1.3**
	comp=Z,208nm,1.2s							
KNRA	**Kununurra**	**24.86**	**173**	P		**P**	**10 44 35.5**	**-0.6**
GYA	**Guiyang**	**24.96**	**316**	↑P		**P**	**10 44 39.7**	**+2.5**
GYA				pmax		pmax		
	comp=Z,14nm,0.7s							
SKJI	**Sukabumi**	**24.98**	**231**	P		**P**	**10 44 38.5**	**+1.2**
	comp=Z,41nm,1.0s							
IPM	**Ipoh**	**24.98**	**261**	P		**P**	**10 44 37.2**	**-0.1**
IPM	**Ipoh**	**24.98**	**261**	P		**P**	**10 44 39.8**	**+2.4**
	comp=Z,19nm,0.8s							
KMI	**Kunming**	**27.05**	**309**	↑P		**P**	**10 45 01.4**	**+5.2**
KMI				pP		sP	10 45 15.6	+8.0
KMI				pmax		pmax		
	comp=Z,21nm,0.9s							
KMI				LR		LR		
	comp=Z,500nm,22.7s							
KMI				LR		LR		
	comp=Z,430nm,22.9s							
KMI				LR		LR		
	comp=Z,320nm,20.6s							
FITZ	**Fitzroy Crossi**	**27.09**	**180**	P		**P**	**10 44 55.6**	**-0.6**
	comp=Z,5.3nm,0.8s,baz=7.5,slow=5.2,SNR=9.3							
FITZ				LR		LR	10 57 30.8	
	comp=Z,93nm,19.0s,baz=19,slow=40							
	comp=Z,5.3nm,0.8s							
FITZ	**Fitzroy Crossi**	**27.09**	**180**	P		**P**	**10 44 55.5**	**-0.8**
FITZ				IAmb		IAmb	10 45 26.1	
	comp=Z,27nm,1.3s							
JHJ	**Hachijo jima 2**	**27.13**	**26**	LR		LR	10 56 52.7	
	comp=Z,111nm,18.2s,baz=56,slow=39							
PSI	**Prapat**	**27.41**	**258**	P		**P**	**10 45 00.1**	**+0.7**
	comp=Z,2.1nm,0.4s,baz=127,slow=4.0,SNR=3.8							
PSI				LR		LR	10 57 24.4	
	comp=Z,94nm,21.3s,baz=70,slow=40							
	comp=Z,2.1nm,0.4s							
PSI	**Prapat**	**27.41**	**258**	P		**P**	**10 44 59.3**	**-0.1**
	comp=Z,7.3nm,1.2s							
CMAR	**Chiang Mai Arr**	**27.59**	**292**	P		**P**	**10 45 01.1**	**+0.1**
	comp=Z,5.7nm,1.0s,baz=109,slow=7.0,SNR=27							
CMAR				PcP		**PcP**	**10 48 19.3**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=169,slow=0.5,SNR=4.3							
CMAR				LR		LR	10 56 21.4	
	comp=Z,201nm,19.8s,baz=115,slow=37							
	comp=Z,5.7nm,1.0s							
CMAR	**Chiang Mai Arr**	**27.59**	**292**	P		**P**	**10 45 00.1**	**-0.8**
CHTO	**Chiang Mai**	**27.69**	**293**	P		**P**	**10 44 59.8**	**-1.9**
LYN	**LuoYang**	**28.06**	**336**	*e*P		**P**	**10 45 09.1**	**+4.3**
LYN				pP		sP	10 45 22.4	+6.2
LYN				LR		LR		
	comp=Z,300nm,11.4s							
LYN				LR		LR		
	comp=Z,250nm,12.6s							
KSRS	**Korea Array**	**28.23**	**4**	P		**P**	**10 45 06.3**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=188,slow=8.9,SNR=5.3							
KSRS				LR		LR	10 56 15.3	
	comp=Z,246nm,21.2s,baz=175,slow=36							
	comp=Z,2.3nm,0.8s							
PZH	**PanZhiHua**	**28.54**	**310**	P		**P**	**10 45 12.5**	**+3.1**
PZH				S		**S**	**10 49 55.7**	**-0.4**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.1s							
PZH				pmax		pmax		
	comp=Z,80nm,5.1s							
PZH				LR		LR		
	comp=Z,620nm,18.6s							
PZH				LR		LR		
	comp=Z,730nm,18.6s							
PZH				LR		LR		
	comp=Z,1μm,18.1s							
XAN	**Xi'an**	**29.20**	**330**	P		**P**	**10 45 19.4**	**+4.3**
XAN				pP		sP	10 45 36.5	+10
XAN				pmax		pmax		
	comp=Z,7.0nm,0.8s							
XAN				LR		LR		
	comp=Z,490nm,11.3s							
XAN				LR		LR		
	comp=Z,600nm,13.9s							
XAN				LR		LR		
	comp=Z,480nm,15.3s							
HNS	**HongShan**	**29.84**	**342**	*e*P		P	10 45 30.5	+10
HNS				*e*S		S	10 50 27.8	+12
WRA	**Warramunga Arr**	**30.13**	**164**	P		**P**	**10 45 22.3**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=351,slow=9.3,SNR=4.0							
	comp=Z,0.7nm,0.7s							
LZH	**Lanzhou**	**33.41**	**327**	*e*P		P	10 45 57.0	+4.8
LZH				pP		sP	10 46 11.9	+8.2
LZH				sP		pP	10 46 20.0	+20
LZH				pmax		pmax		
	comp=Z,17nm,1.1s							
LZH				pmax		pmax		
	comp=Z,170nm,6.2s							
LZH				LR		LR		
	comp=Z,770nm,14.6s							
LZH				LR		LR		
	comp=Z,540nm,18.0s							
LZH				LR		LR		
	comp=Z,760nm,18.4s							
AS31	**Alice Springs**	**33.59**	**166**	P		**P**	**10 45 53.6**	**-0.1**
ASAR	**Alice Springs**	**33.59**	**166**	P		**P**	**10 45 53.0**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=343,slow=7.0,SNR=32							
ASAR				PcP		**PcP**	**10 48 35.7**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=339,slow=2.2,SNR=3.0							
ASAR				ScP		**ScP**	**10 52 17.8**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=332,slow=3.2,SNR=2.6							
ASAR				LR		LR	11 00 51.6	
	comp=Z,61nm,18.3s,baz=348,slow=38							
	comp=Z,1.5nm,0.5s							
HHC	**Hu-ho-hao-te**	**33.98**	**341**	*e*P		**P**	**10 45 57.6**	**+0.5**
HHC				pmax		pmax		
	comp=Z,28nm,0.9s							
HHC				pmax		pmax		
	comp=Z,180nm,4.7s							
CN2	**Changchun**	**34.51**	**360**	*e*P		**P**	**10 46 02.4**	**+0.9**
CN2				*e*PP		**PP**	**10 47 21.9**	**+1.9**
CN2				*e*S		**S**	**10 51 26.7**	**-1.9**
CN2				*e*sS		sS	10 51 57.8	+16
CN2				LR		LR		
	comp=Z,190nm,12.0s							
CN2				LR		LR		
	comp=Z,230nm,12.0s							
CN2				LR		LR		
	comp=Z,200nm,12.0s							
USA0B	**Ussuriysk Arra**	**35.33**	**8**	P		**P**	**10 46 08.5**	**-0.1**
USA0B				IAmb		IAmb	10 46 13.9	
	comp=Z,14nm,0.8s							
USRK	**Ussuriysk Ar.**	**35.33**	**8**	P		**P**	**10 46 08.4**	**-0.1**
	comp=Z,13nm,0.7s,baz=183,slow=7.2,SNR=5.4							
USRK				LR		LR	10 59 15.5	
	comp=Z,189nm,21.6s,baz=168,slow=34							
	comp=Z,13nm,0.7s							
USRK	**Ussuriysk Ar.**	**35.33**	**8**	P		**P**	**10 46 08.8**	**+0.2**
BRDH	**Bariadhala**	**35.34**	**296**	LR		LR	11 01 54.1	
	comp=Z,172nm,20.7s,baz=104,slow=38							
XLT	**XiLinHaoTe**	**35.62**	**348**	*e*P		**P**	**10 46 14.6**	**+3.4**
XLT				sP		sP	10 46 42.4	+20
XLT				pmax		pmax		
	comp=Z,8.0nm,1.0s							
XLT				pmax		pmax		
	comp=Z,110nm,5.1s							
GTA	**Gaotai**	**38.01**	**327**	↑P		P	10 46 40.7	+9.0
GTA				pP		sP	10 46 47.6	+4.4
GTA				PP		PnPn	10 48 14.6	+14
HNR	**Honiara**	**38.73**	**118**	LR		LR	11 02 58.0	
	comp=Z,639nm,18.5s,baz=248,slow=37							
GOMU	**GeErMu**	**38.92**	**319**	P		**P**	**10 46 39.7**	**0.0**
GOMU				S		**S**	**10 52 38.8**	**+1.9**
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.8s							
GOMU				pmax		pmax		
	comp=Z,61nm,4.1s							
GOMU				LR		LR		
	comp=Z,390nm,19.7s							
GOMU				LR		LR		
	comp=Z,290nm,18.7s							
GOMU				LR		LR		
	comp=Z,300nm,18.9s							
KLR	**Kul'dur**	**40.25**	**6**	LR		LR	11 02 20.6	
	comp=Z,123nm,21.0s,baz=200,slow=34							
H11S3	**WAKE ISLAND Hy**	**40.73**	**72**	T		T	11 29 59.6	
	baz=262,slow=75,SNR=242							
H11S1	**WAKE ISLAND Hy**	**40.74**	**72**	T		T	11 30 05.2	
	baz=262,slow=75,SNR=179							
H11S2	**WAKE ISLAND Hy**	**40.75**	**72**	T		T	11 29 57.3	
	baz=262,slow=75,SNR=111							
H11N1	**WAKE ISLAND Hy**	**41.09**	**71**	T		T	11 30 27.9	
	baz=264,slow=74,SNR=109							
H11N2	**WAKE ISLAND Hy**	**41.10**	**71**	T		T	11 30 30.0	
	baz=264,slow=74,SNR=86							
H11N3	**WAKE ISLAND Hy**	**41.11**	**71**	T		T	11 30 34.8	
	baz=264,slow=74,SNR=134							
SONM	**Songino Array**	**41.88**	**340**	P		**P**	**10 47 07.0**	**+3.3**
	comp=Z,0.5nm,0.5s,baz=164,slow=12,SNR=2.5							
SONM				LR		LR	11 06 21.6	
	comp=Z,173nm,18.6s,baz=154,slow=39							
NWAO	**Narrogin (SRO)**	**42.63**	**191**	LR		LR	11 08 51.3	
	comp=Z,54nm,18.9s,baz=156,slow=42							
STKA	**Stephens Creek**	**43.53**	**160**	P		**P**	**10 47 16.8**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=336,slow=14,SNR=5.1							
	comp=Z,2.5nm,0.7s							
STKA	**Stephens Creek**	**43.53**	**160**	P		**P**	**10 47 16.9**	**-0.2**
PALK	**Pallekele**	**44.61**	**271**	LR		LR	11 09 13.9	
	comp=Z,41nm,18.1s,baz=187,slow=40							
ARMA	**Armidale**	**46.55**	**149**	P		**P**	**10 47 41.2**	**-0.1**
WMQ	**Urumqi**	**47.79**	**323**	*e*P		**P**	**10 47 50.6**	**-0.2**
WMQ				pP		sP	10 48 08.8	+6.4
WMQ				pmax		pmax		
	comp=Z,36nm,0.7s							
WMQ				LR		LR		
	comp=Z,480nm,20.9s							
WMQ				LR		LR		
	comp=Z,330nm,20.9s							
WMQ				LR		LR		
	comp=Z,200nm,20.9s							
DZM	**Mont Dzumac**	**50.55**	**128**	*e*LR		LR	11 02 45.7	
	comp=Z,165nm,29.1s							
DZM	**Mont Dzumac**	**50.55**	**128**	P		**P**	**10 48 13.3**	**+1.1**
DZM				IAmb		IAmb	10 48 15.3	
	comp=Z,9.4nm,1.0s							
DZM	**Mont Dzumac**	**50.55**	**128**	P		**P**	**10 48 11.8**	**-0.5**
DZM				pP		sP	10 48 31.8	+7.8
DZM				sP		pP	10 48 39.4	+19
PEA0B	**Petropavlovsk-**	**50.85**	**24**	P		**P**	**10 48 14.7**	**+0.7**
PETK	**Petropavlovsk-**	**50.85**	**24**	P		**P**	**10 48 15.0**	**+1.1**
	comp=Z,5.3nm,0.7s,baz=180,slow=2.5,SNR=8.5							
PETK				LR		LR	11 09 04.1	
	comp=Z,122nm,20.5s,baz=239,slow=35							
	comp=Z,5.3nm,0.7s							
PETK	**Petropavlovsk-**	**50.85**	**24**	P		**P**	**10 48 14.7**	**+0.7**
MK31	**Makanchi Array**	**52.60**	**323**	P		**P**	**10 48 26.8**	**-0.4**
MK31				IAmb		IAmb	10 48 32.7	
	comp=Z,6.1nm,0.8s							
MKAR	**Makanchi Array**	**52.60**	**323**	P		**P**	**10 48 26.7**	**-0.5**
	comp=Z,4.1nm,0.6s,baz=123,slow=8.0,SNR=49							
	comp=Z,4.1nm,0.6s							
MKAR	**Makanchi Array**	**52.60**	**323**	P		**P**	**10 48 26.3**	**-0.8**
MAKZ	**Makanchi**	**52.80**	**323**	P		**P**	**10 48 28.9**	**+0.3**
MAKZ				IAmb		IAmb	10 48 33.7	
	comp=Z,6.6nm,0.8s							
YAK	**Yakutsk**	**52.85**	**2**	LR		LR	11 12 11.8	
	comp=Z,99nm,20.8s,baz=267,slow=37							
KSH	**Kashi**	**53.60**	**313**	P		**P**	**10 48 35.6**	**+0.8**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.5s							
MA2	**Magadan**	**53.73**	**15**	LR		LR	11 10 15.7	
	comp=Z,60nm,21.5s,baz=220,slow=35							
NIL	**Nilore**	**53.94**	**305**	P		**P**	**10 48 37.4**	**+0.2**
NIL	**Nilore**	**53.94**	**305**	P		**P**	**10 48 35.8**	**-1.5**
NIL				sP		sP	10 49 00.7	+12
NRN	**Naryn**	**54.27**	**315**	P		**P**	**10 48 39.1**	**-0.7**
NRN				IAmb		IAmb	10 48 40.6	
	comp=Z,15nm,1.4s							
ZALV	**Zalesovo Beam**	**55.35**	**332**	P		**P**	**10 48 45.3**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=115,slow=6.8,SNR=4.8							
ZALV				LR		LR	11 13 38.6	
	comp=Z,129nm,21.9s,baz=113,slow=37							
	comp=Z,0.9nm,0.4s							
AAK	**Ala-Archa**	**55.76**	**316**	LR		LR	11 15 06.0	
	comp=Z,242nm,20.0s,baz=93,slow=39							
AAK	**Ala-Archa**	**55.76**	**316**	P		**P**	**10 48 50.8**	**+0.4**
KURK	**Kurchatov**	**56.69**	**326**	P		**P**	**10 48 55.6**	**-1.1**
KURK	**Kurchatov**	**56.69**	**326**	P		P	10 48 51.0	-5.8
KURK				pP		sP	10 49 10.1	+1.7
GAR	**Garm**	**57.61**	**311**	P		**P**	**10 49 03.2**	**-0.4**
SHEM	**Shemya Is, Ala**	**58.35**	**32**	LR		LR	11 09 51.5	
	comp=Z,50nm,21.0s,baz=258,slow=32							
CHGR	**Chuyangaron**	**58.40**	**310**	P		**P**	**10 49 08.8**	**-0.3**
KK31	**Karatay Array**	**58.67**	**315**	P		**P**	**10 49 09.9**	**-0.9**
KK31				IAmb		IAmb	10 49 16.2	
	comp=Z,5.4nm,0.7s							
KKAR	**Karatay Array**	**58.67**	**315**	P		**P**	**10 49 09.1**	**-1.8**
BVAR	**Borovoye Array**	**62.29**	**326**	LR		LR	11 17 03.8	
	comp=Z,95nm,18.9s,baz=109,slow=36							
BRVK	**Borovoye**	**62.36**	**326**	P		**P**	**10 49 34.9**	**-0.8**
BRVK				IAmb		IAmb	10 49 40.8	
	comp=Z,6.9nm,0.8s							
BRVK	**Borovoye**	**62.36**	**326**	P		**P**	**10 49 33.3**	**-

BPAW	Bear Paw Mtn.	78.87	26	P	P	10 51 17.3	+1.1
BPAW				IAmb	IAmb	10 51 24.9	
	comp=Z,26nm,1.3s						
BPAW	Bear Paw Mtn.	78.87	26	P	P	10 51 16.1	-0.1
	baz=268,SNR=6.0						
SUA	Susitna One	78.91	29	P	P	10 51 15.3	-1.3
	baz=269						
MLY	Manley	79.01	25	P	P	10 51 17.0	-0.1
	baz=268						
TRF	Thorofare Moun	79.16	27	P	P	10 51 17.4	-0.7
	baz=269						
D23K	Nanushuk River	79.19	21	P	P	10 51 17.3	-0.6
	baz=267						
M22K	Willow	79.21	29	P	P	10 51 17.2	-0.9
	baz=269						
C23K	Itkillik River	79.26	21	P	P	10 51 18.2	0.0
	baz=267						
COLD	Coldfoot	79.31	23	P	P	10 51 19.3	+0.8
COLD				IAmb	IAmb	10 51 27.2	
	comp=Z,10nm,1.1s						
COLD	Coldfoot	79.31	23	P	P	10 51 18.0	-0.5
	baz=268						
G23K	Bananza Creek	79.36	24	P	P	10 51 18.2	-0.7
	baz=268						
RC01	Rabbit Creek A	79.39	29	P	P	10 51 18.6	-0.5
	baz=270						
SEW	Seward	79.53	30	P	P	10 51 18.2	-1.6
	baz=270						
H23K	Yukon River	79.53	25	P	P	10 51 19.7	-0.1
	baz=269						
E23K	Chandalar	79.55	22	P	P	10 51 20.4	+0.4
	baz=268						
TOLK	Toolik Lake Re	79.59	22	P	P	10 51 19.4	-0.7
	baz=268						
I23K	Minto, Yukon-K	79.60	25	P	P	10 51 21.9	+1.7
I23K				IAmb	IAmb	10 51 38.3	
	comp=Z,39nm,1.8s						
I23K	Minto, Yukon-K	79.60	25	P	P	10 51 19.5	-0.6
	baz=269						
PMR	Palmer	79.68	29	P	P	10 51 21.3	+0.7
PMR				IAmb	IAmb	10 51 26.2	
	comp=Z,11nm,1.0s						
PMR	Palmer	79.68	29	P	P	10 51 20.3	-0.4
	baz=270,SNR=5.1						
NEA2	Nenana	79.72	26	P	P	10 51 20.1	-0.7
	baz=270,SNR=5.6						
MCK	McKinley	79.77	27	P	P	10 51 21.5	+0.3
MCK				IAmb	IAmb	10 51 26.9	
	comp=Z,16nm,0.8s						
MCK	McKinley	79.77	27	P	P	10 51 20.4	-0.8
	baz=270						
RND	Reindeer	79.81	27	P	P	10 51 22.6	+1.1
RND				IAmb	IAmb	10 51 26.4	
	comp=Z,8.8nm,0.9s						
D24K	Happy Valley	79.87	21	P	P	10 51 20.9	-0.6
	baz=269						
C24K	Franklin Bluff	79.92	21	P	P	10 51 22.1	+0.3
	baz=269						
WAT1	Susitna Watana	79.95	28	P	P	10 51 20.4	-1.7
	baz=270						
E24K	Your Creek	79.98	22	P	P	10 51 22.1	-0.1
	baz=270						
KNK	Knik Glacier	80.00	29	P	P	10 51 23.5	+1.0
	baz=271						
SML	Sawmill	80.06	29	P	P	10 51 22.0	-0.8
	baz=271						
PWL	Port Wells	80.07	30	P	P	10 51 24.0	+1.2
PWL	Port Wells	80.07	30	P	P	10 51 22.3	-0.5
	baz=271						
F24K	Squaw Lake	80.20	23	P	P	10 51 23.6	+0.2
	baz=270						
H24K	Noodor Dome	80.22	25	P	P	10 51 22.5	-1.1
	baz=270						
KLMR	Klimovskoe	80.23	330	*e*P	P	10 51 23.5	-0.1
KLMR				AMP		10 51 29.8	
	comp=Z,21nm,1.5s						
TCOL	CIGO, UAF Yank	80.23	26	P	P	10 51 23.5	-0.1
	baz=271						
WAT6	Susitna Watana	80.33	28	P	P	10 51 23.1	-1.3
	baz=271						
M23K	Glacier View	80.35	29	P	P	10 51 24.4	+0.1
	baz=271						
G24K	Hadweenzic Riv	80.37	24	P	P	10 51 23.6	-0.7
	baz=271						
POKR	Poker Plat Res	80.41	25	P	P	10 51 23.2	-1.4
	baz=271						
DHY	Denali Highway	80.48	27	P	P	10 51 24.2	-1.0
	baz=271						
SCM	Sheep Creek Mo	80.54	29	P	P	10 51 24.5	-0.9
	baz=272						
P23K	Montague Islan	80.56	31	P	P	10 51 24.9	-0.5
	baz=272						
HDA	Harding Lake	80.64	26	P	P	10 51 25.6	-0.2
	baz=272						
ILAR	Eielson Array	80.65	26	P	P	10 51 25.4	-0.4
	comp=Z,0.8nm,0.6s,baz=251,slow=4.2,SNR=11						
	comp=Z,0.8nm,0.6s						
GLI	Glacier Island	80.68	30	P	P	10 51 25.6	-0.5
	baz=272						
G25K	Bearman Lake	80.92	24	P	P	10 51 26.8	-0.4
	baz=272						
H25K	Birch Creek	81.05	24	P	P	10 51 26.0	-1.9
	baz=272						
F25K	Christian Rive	81.06	23	P	P	10 51 26.4	-1.7
	baz=272						
M24K	Tolsona, Glenn	81.07	28	P	P	10 51 27.3	-0.9
	baz=273						
Q23K	Middleton Isla	81.11	31	P	P	10 51 28.2	-0.2
	baz=273						
K24K	Donnelly Dome	81.17	27	P	P	10 51 28.5	-0.2
	baz=273						
PRP	Porcupine Dome	81.20	25	P	P	10 51 29.2	+0.3
	baz=273						
KLU	Klutina	81.22	29	P	P	10 51 28.7	-0.3
	baz=273						
J25K	Salcha River,	81.31	26	P	P	10 51 30.5	+1.0
J25K	Salcha River,	81.31	26	P	P	10 51 29.2	-0.3
	baz=273						
PAX	Paxson	81.35	28	P	P	10 51 29.7	0.0
	baz=273						
EYAK	Cordova Ski Ar	81.35	30	P	P	10 51 28.2	-1.4
	baz=273						
HARP	HAARP	81.53	28	P	P	10 51 30.1	-0.6
	baz=273						
F26K	Sheenjek River	81.63	23	P	P	10 51 30.3	-0.8
	baz=274						
C27K	Jago River	81.67	21	P	P	10 51 30.7	-0.4
	baz=274						
G26K	Porcupine Rive	81.82	23	P	P	10 51 30.6	-1.4
	baz=274						
N25K	Chitina, Valde	81.85	29	P	P	10 51 29.9	-2.5
	baz=274						
BMRM	Bremner River	81.89	30	P	P	10 51 30.7	-1.9
	baz=274						
SCRK	Sand Creek	81.95	26	P	P	10 51 31.3	-1.6
	baz=274						
KAIM	Kayak Island	82.06	31	P	P	10 51 30.1	-3.3
	baz=274						
OBN	Obninsk	82.09	325	LR	LR	11 30 43.2	
	comp=Z,33nm,18.6s,baz=42,slow=38						
J26L	Joseph Creek	82.10	26	P	P	10 51 32.4	-1.3
	baz=275						
I26K	Coal Creek Min	82.20	25	P	P	10 51 36.2	+2.1
I26K	Coal Creek Min	82.20	25	P	P	10 51 33.2	-0.8
	baz=275						
L26K	Log Cabin Wild	82.32	27	P	P	10 51 33.5	-1.2
	baz=275						
VRDI	Verde Repeater	82.42	29	P	P	10 51 37.4	+1.8
M26K	Nabesna, AK	82.53	28	P	P	10 51 34.7	-1.3
	baz=275						
E27K	Colleen River	82.55	22	P	P	10 51 34.1	-1.8
	baz=276						
MCARA	McCarthy VSAT	82.62	29	P	P	10 51 36.0	-0.3
	baz=276						
G27K	Doyon Strip	82.67	24	P	P	10 51 36.9	+0.3
	baz=276						
H27K	Steamboat Moun	82.78	24	P	P	10 51 37.4	+0.3
	baz=276						
K27K	Chicken	82.79	26	P	P	10 51 37.6	+0.5
K27K				IAmb	IAmb	10 51 44.7	
	comp=Z,13nm,1.0s						
K27K	Chicken	82.79	26	P	P	10 51 36.9	-0.3
	baz=276						
I27K	Kandik River	82.81	25	P	P	10 51 36.1	-1.2
	baz=276,SNR=5.9						
L27K	Beaver Creek,	83.00	27	P	P	10 51 37.7	-0.7
	baz=276						
BCAR	Beaver Creek A	83.02	27	P	P	10 51 40.9	+2.4
M27K	Edge Creek, AK	83.06	28	P	P	10 51 37.4	-1.4
	baz=276						
EGAK	Eagle	83.10	26	P	P	10 51 37.9	-0.9
	baz=277						
CTG	Chitna Glacier	83.47	29	P	P	10 51 38.6	-2.3
	baz=277,SNR=12						
BVCY	Beaver Creek	83.52	28	P	P	10 51 39.7	-1.3
	baz=277						
YUK3	Moose Creek	83.79	28	P	P	10 51 41.1	-1.5
	baz=278						
DAWY	Dawson	83.95	26	P	P	10 51 42.5	-0.7
	baz=278,SNR=7.3						
O28M	Mount Upton	84.06	29	P	P	10 51 42.4	-1.7
	baz=278,SNR=6.3						
PINM	Pinnacle	84.12	30	P	P	10 51 42.8	-1.4
	baz=278,SNR=5.5						
I29M	Ogilvie Camp,	84.22	25	P	P	10 51 42.9	-1.6
	baz=279						
PNL	Peninsula	84.61	31	P	P	10 51 45.8	-0.8
	baz=279						
M29M	Somme Creek	84.62	28	P	P	10 51 45.6	-1.1
	baz=279,SNR=6.7						
L29M	L29M	84.66	27	P	P	10 51 45.5	-1.4
	baz=280,SNR=23						
EPYK	Eagle Plains	84.69	24	P	P	10 51 45.9	-1.0
	baz=280						
YUK4	Talbot Arm	84.71	29	P	P	10 51 46.5	-0.8
	baz=279						
G30M	tAoh Zraii Nji	84.77	23	P	P	10 51 46.9	-0.4
	baz=281						
K29M	Barlow Dome	84.81	26	P	P	10 51 46.2	-1.4
	baz=280						
YUK6	Outpost Mounta	84.92	29	P	P	10 51 47.0	-1.3
	baz=280						
O29M	Mount Kennedy	84.92	30	P	P	10 51 47.4	-0.9
	baz=279						
SPITS	Spitsbergen Ar	85.00	349	LR	LR	11 35 45.9	
	comp=Z,47nm,19.3s,baz=32,slow=40						
ARCES	ARCESS Array B	85.05	340	P	P	10 51 47.4	-1.2
	comp=Z,2.3nm,0.7s,baz=69,slow=6.6,SNR=9.4						
ARCES				LR	LR	11 34 06.3	
	comp=Z,66nm,18.3s,baz=71,slow=39						
	comp=Z,2.3nm,0.7s						
HYT	Haines Junctio	85.35	29	P	P	10 51 50.4	0.0
	baz=280						
MMAI	Mount Meron Ar	85.37	303	LR	LR	11 34 16.4	
	comp=Z,47nm,21.2s,baz=242,slow=39						
N30M	Aishikik Lake	85.43	29	P	P	10 51 50.2	-0.5
	baz=281,SNR=5.5						
P29M	Windy Craggy	85.45	30	P	P	10 51 50.0	-0.8
	baz=280						
INK	Inuvik	85.50	21	P	P	10 51 51.5	+0.7
INK	Inuvik	85.50	21	P	P	10 51 49.6	-1.2
	baz=283						
F31M	Tsiigehtchic	85.61	22	P	P	10 51 49.9	-1.5
	baz=283						
P30M	Million Dollar	85.74	30	P	P	10 51 50.5	-1.8
	baz=281						
BRTR	Keskin Array B	85.84	309	P	P	10 51 51.4	-2.0
	comp=Z,0.9nm,0.7s,baz=119,slow=1.8,SNR=3.2						
BRTR				LR	LR	11 36 00.9	
	comp=Z,37nm,19.4s,baz=153,slow=40						
	comp=Z,0.9nm,0.7s						
O30N	Mendenhall	86.04	29	P	P	10 51 47.8	-6.0
	baz=282						
N31M	Braeburn, Yuko	86.04	28	P	P	10 51 51.7	-2.0
	baz=282						
PLBC	Pleasant Camp	86.17	30	P	P	10 51 51.1	-3.2
	baz=281						
EIL	Elat	86.22	299	LR	LR	11 37 45.3	
	comp=Z,29nm,18.6s,baz=58,slow=41						
M31M	Drury Creek, Y	86.53	28	P	P	10 51 53.8	-2.3
	baz=283						
FINES	FINESS Array B	86.62	332	P	P	10 51 54.6	-1.9
	comp=Z,5.2nm,1.0s,baz=74,slow=5.1,SNR=19						
FINES				LR	LR	11 32 48.7	
	comp=Z,105nm,19.9s,baz=62,slow=37						
	comp=Z,5.2nm,1.0s						
FINES	FINESS Array B	86.62	332	P	P	10 51 54.9	-1.6
WHY	Whitehorse	86.64	29	P	P	10 51 53.7	-3.1
	baz=283						
SKAG	Skagway	86.68	30	P	P	10 51 54.2	-2.6
	baz=282						
FARO	Faro, Yukon	87.00	27	P	P	10 51 56.7	-1.8
	baz=284						
AKASG	Malin Array Be	87.09	321	P	P	10 51 56.7	-2.4
	comp=Z,0.3nm,0.5s,baz=65,slow=5.0,SNR=1.6						
AKASG				LR	LR	11 34 46.8	
	comp=Z,48nm,18.7s,baz=60,slow=38						
	comp=Z,0.3nm,0.5s						
N32M	Quiet Lake	87.39	28	P	P	10 51 58.8	-1.5
	baz=284						
PPT2	Papeete2	87.71	108	*e*LR	LR	11 19 59.3	
	comp=Z,90nm,29.0s						
TBI	Tubuai	88.85	114	*e*LR	LR	11 20 31.0	
	comp=Z,50nm,37.8s						
R33M	Jennings River	88.86	30	P	P	10 52 05.8	-1.7
	baz=286						
VNDA	Vanda	88.90	173	P	P	10 52 06.8	-0.2
	comp=Z,0.9nm,0.7s,baz=309,slow=6.1,SNR=10						
VNDA				LR	LR	11 33 13.3	
	comp=Z,25nm,18.7s,baz=318,slow=36						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	88.90	173	P	P	10 52 06.8	-0.2
VNDA				IAmb	IAmb	10 52 26.1	
	comp=Z,16nm,1.9s						
TGTN	Hyland Airport	89.51	27	P	P	10 52 07.8	-2.5
	baz=288						
WTLY	Watson Lake, Y	89.70	29	P	P	10 52 08.5	-2.8
	baz=288						
RES	Resolute Bay	92.67	10	LR	LR	11 37 57.4	
	comp=Z,34nm,19.4s,baz=24,slow=38						
HFS	Hagfors	92.79	332	LR	LR	11 36 30.4	
	comp=Z,153nm,21.6s,baz=74,slow=37						
NOA	NORSAR Array B	93.52	334	LR	LR	11 37 26.5	
	comp=Z,124nm,21.8s,baz=60,slow=37						
JMIC	Jan Mayen	94.38	346	LR	LR	11 38 58.9	
	comp=Z,42nm,20.3s,baz=8.0,slow=38						
YKA	Yellowknife Ar	94.97	24	P	P	10 52 36.0	+0.5
	comp=Z,1.5nm,0.6s,baz=185,slow=30,SNR=2.3						
YKA				LR	LR	11 39 02.9	
	comp=Z,27nm,19.2s,baz=230,slow=38						
	comp=Z,1.5nm,0.6s						
VRAC	Vranov	95.31	322	LR	LR	11 39 08.8	
	comp=Z,70nm,19.7s,baz=72,slow=38						
GERES	GERESS Array B	97.25	322	P	P	10 52 45.1	-1.2
	comp=Z,0.2nm,0.5s,baz=70,slow=4.4,SNR=3.7						
	comp=Z,0.2nm,0.5s						
QSPA	South Pole Qui	99.03	180	LR	LR	11 37 47.2	
	comp=Z,22nm,21.2s,baz=322,slow=35						
LSZ	Lusaka	99.61	256	LR	LR	11 35 49.3	
	comp=Z,33nm,18.0s,baz=324,slow=34						
TXAR	Lajitas Array	118.93	49	PKP	PKPdf	10 58 02.2	-0.4
	comp=Z,0.3nm,0.7s,baz=180,slow=2.3,SNR=2.7						
TORD	Torodi Ar. Bea	120.19	291	PKP	PKPdf	10 58 04.5	-0.7
	comp=Z,1.3nm,0.8s,baz=55,slow=2.0,SNR=6.4						
PLCA	Paso Flores	145.39	158	PKPbc	PKPbc	10 58 51.5	0.0
	comp=Z,5.8nm,0.9s,baz=209,slow=4.1,SNR=5.8						

ASRS 09 10:59:55.4±0.5,50°N±2°×9°1E±°,h10km,MLh4.0/17,1C,
Error ellipse: s-maj=5.5km s-min=2.7km az=132.4,
confirmed,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLNR	Muhor-Tarhata,	1.71	257	Pg	Pb	11 00 26.5	-0.5
SLNR				Sg	Sg	11 00 50.8	+0.5
CUR	Chagan-Uzun	1.73	268	⇑Pg	Pb	11 00 27.2	-0.1
CUR				Sg	Sg	11 00 54.2	+3.2
ULGR	Ulagan, Altay	2.01	284	Pn	Pg	11 00 33.1	-0.9
ULGR				Pg	Pb	11 00 35.6	+3.4
ULGR				Sg	Sg	11 01 05.2	+5.1
CHBI	Chibit, Altay	2.27	275	Pn	Pb	11 00 36.1	-0.4
CHBI				Pg	Pg	11 00 38.7	-0.2
CHBI				Sg	Sg	11 01 12.4	+4.1
DGZ	Jazzator, Alta	2.38	260	Pn	Pn	11 00 35.7	+1.1
DGZ				Pg	Pb	11 00 37.9	-0.5
DGZ				Sg	Sg	11 01 12.1	+0.4
DJO	Djoy, Khakassi	2.60	2	Pg	Pg	11 00 45.7	+0.4
DJO				Sg	Sg	11 01 20.8	+1.9
DJOS	Djoyskaya Sosn	2.62	5	Sg	Sg	11 01 21.8	+2.3
KZLR	Kyzyl	2.64	54	Sg	Sb	11 01 13.7	-1.7
ERNS	Erzin	2.65	87	Pg	Pn	11 00 36.2	-2.1
ERNS				Sg	Sn	11 01 08.4	-2.1
CERR	Cheremushki	2.68	5	Pg	Pg	11 00 46.0	-0.7
CERR				Sg	Sg	11 01 24.1	+2.6
ARDR	Aradan	2.83	31	Pg	Pb	11 00 44.5	-1.5
ARDR				Sg	Sb	11 01 21.8	+1.1
ARTR	Artybash	2.87	306	Pn	Pb	11 00 44.4	-2.3
ARTR				Pg	Pg	11 00 51.8	+1.5
ARTR				Sg	Sg	11 01 32.3	+4.9
TASR	Tashtagol	3.24	324	Pn	Pn	11 00 46.5	+0.2
TASR				Pg	Pg	11 00 58.1	+0.6
TASR				Sg	Sg	11 01 41.6	+2.1
GALT	Gorno-Altaysk,	3.67	301	Pg	Pg	11 01 04.5	-1.1
GALT				Sg	Sg	11 01 54.4	+1.4
LUZB	Luzhba, Kemero	3.72	340	Pn	Pb	11 00 58.2	-3.0
LUZB				Pg	Pg	11 01 05.0	-1.6
LUZB				Sg	Sg	11 01 58.4	+3.7
UKR	Ust'-Kan	4.06	283	Pg	Pg	11 01 10.6	-2.5
UKR				Sg	Sg	11 02 07.3	+1.6
KNGR	Kungurtug, Tuv	4.17	82	Pg	Pb	11 01 08.4	-0.5
KNGR				Sg	Sb	11 02 00.8	+1.4
ELT	Eltsovka	4.28	318	Pn	Pn	11 01 02.5	+1.9
ELT				Pg	Pg	11 01 15.8	-1.6
ELT				Sg	Sg	11 02 15.8	+3.0

*IDC **09** 11:11:07.9±1.0,29°.41S×61°.03E,h0km,mb3.7/5,*
mbtmp3.8/6,ML4.2/1,MS3.2/2,Error ellipse: s-maj=43.8km
s-min=24.8km az=34.0

ISC 09 11:11:10.2±1.0,29°.4S±0°.3×61°.0E±0°.2,h14km,n14,
σ0°.42/6,mb4.0/5,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	Ambohidratompo	16.61	308	P	Pn	11 15 03.0	+0.1
	0.1nm,0.3s,baz=114,slow=18,SNR=2.6						
OPO				Sn	Sn	11 17 51.4	-16
	baz=82,slow=20,SNR=1.5						
	1.8nm,0.3s						
H08S1	Diego Garcia H	24.20	29	T	T	11 41 11.1	
	baz=203						
H08S2	Diego Garcia H	24.21	29	T	T	11 41 09.6	
	baz=203						
H08S3	Diego Garcia H	24.22	29	T	T	11 41 10.1	
	baz=203						
ATD	Arta Tunnel	44.33	334	LR	LR	11 35 03.1	
	comp=Z,31nm,21.9s,baz=37,slow=32						
H01W2	Cape Leeuwin H	44.87	111	T	T	12 07 24.5	
	baz=261,slow=74,SNR=10						
H01W3	Cape Leeuwin H	44.87	111	T	T	12 07 05.4	
	baz=261,slow=74,SNR=9.6						
H01W1	Cape Leeuwin H	44.89	111	T	T	12 07 19.6	
	baz=261,slow=74,SNR=11						
VNDA	Vanda	63.81	166	P	P	11 21 41.8	+0.3
	0.4nm,0.6s,baz=269,slow=6.6,SNR=5.6						
	0.4nm,0.6s						
ASAR	Alice Springs	64.50	104	P	P	11 21 46.9	-0.1
	0.8nm,0.7s,baz=245,slow=6.3,SNR=12						
	0.8nm,0.7s						
WRA	Warramunga Arr	66.34	100	P	P	11 21 58.5	-0.4
	1.1nm,0.9s,baz=247,slow=5.7,SNR=8.5						
	1.1nm,0.9s						
TORD	Torodi Ar. Bea	71.14	298	P	P	11 22 28.4	-0.4
	1.2nm,0.8s,baz=112,slow=6.2,SNR=5.9						
	1.2nm,0.8s						
KBZ	Khabaz	74.67	346	LR	LR	11 53 11.5	
	comp=Z,17nm,21.8s,baz=140,slow=34						
MKAR	Makanchi Array	78.26	15	P	P	11 23 09.7	+0.4
	0.2nm,0.4s,baz=206,slow=6.3,SNR=3.8						
	0.2nm,0.4s						

*IDC **09** 11:18:20.1±1.7,44°.28N×129°.25W,h0km,mb3.4/5,*
mbtmp3.3/13,ML3.1/8,MS3.2/10,Error ellipse:
s-maj=35.0km s-min=14.7km az=49.0
*NEIC **09** 11:18:26.6±2.1,44°.3N±0°.1×128°.9W±0°.2,h10km±2km,*
ML3.4/34,Error ellipse: s-maj=25.2km s-min=16.3km
az=247.0

ISC 09 11:18:21.6±1.3,44°.2N±0°.1×129°.4W±0°.1,h10km,n43,
σ1°.51/36,mb3.6/4,MS3.3/4,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.93	109	Pn	Pn	11 19 20.8	-1.2
HEBO	Mount Hebo	4.14	74	Pn	Pn	11 19 23.9	-1.1
HEBO				IAML		11 21 04.1	
	comp=N,112nm,2.0s						
COR	Corvallis	4.38	83	Pn	Pn	11 19 28.3	+0.1
COR				IAML		11 20 14.9	
	comp=N,32nm,1.9s						
COR				IAML		11 21 22.1	
	comp=N,40nm,3.2s						
BUCK	Buck Mountain	4.61	88	Pn	Pn	11 19 32.5	+1.1
BUCK				IAML		11 20 21.4	
	comp=E,41nm,2.7s						
BUCK				IAML		11 20 42.4	
	comp=N,30nm,2.4s						
E03A	Lebam	4.72	59	Pn	Pn	11 19 32.6	-0.1
E03A				IAML		11 21 11.6	
	comp=N,50nm,2.3s						
E03A				IAML		11 21 30.3	
	comp=E,58nm,2.4s						
WISH	Wishkah	4.88	52	Pn	Pn	11 19 35.8	+0.8
HUMO	Hull Mountain	4.97	107	Pn	Pn	11 19 38.3	+2.0
NLWA	Neilton Lookou	4.99	49	Pn	Pn	11 19 36.8	+0.2
NLWA				IAML		11 20 20.1	
	comp=E,41nm,2.6s						
NLWA				IAML		11 20 39.8	
	comp=E,34nm,2.5s						
C03A	Quillayute Air	5.01	41	Pn	Pn	11 19 37.5	+0.7
H04A	Detroit Lake	5.19	83	Pn	Pn	11 19 40.1	+0.8
OZB	Mount Ozzard	5.44	28	Pn	Pn	11 19 44.1	+1.4
YBH	Yreka Blue Hor	5.51	115	Pn	Pn	11 19 44.0	+0.2
	comp=E,0.1nm,0.3s,baz=308,slow=18,SNR=2.5						
YBH				Sn	Sn	11 20 47.2	0.0
	baz=321,slow=18,SNR=1.0						
YBH				LR	LR	11 21 36.4	
	comp=E,194nm,20.6s,baz=314,slow=36						
	comp=E,0.6nm,0.5s						
YBH	Yreka Blue Hor	5.51	115	Pn	Pn	11 19 47.2	+3.4
B04A	Port Angeles	5.60	45		Pn	11 19 46.5	+1.6
B04A				IAML		11 20 57.4	
	comp=N,20nm,2.3s						
B04A				IAML		11 21 06.4	
	comp=E,21nm,3.7s						
HOOD	Mount Hood Mea	5.62	76		Pn	11 19 46.8	+1.4
HOOD				IAML		11 20 55.6	
	comp=E,30nm,2.6s						
HOOD				IAML		11 21 14.0	
	comp=N,23nm,3.6s						
LON	Longmire	5.90	62		Pn	11 19 48.5	-0.5
D05A	Enumclaw	5.97	58		Pn	11 19 51.8	+1.8
PGC	Sidney	6.03	41	Pn	Pn	11 19 51.6	+0.8
PINE	Pine Mountain	6.12	91		Pn	11 19 53.0	+0.7
K05A	Summer Lake	6.37	101	Pn	Pn	11 19 57.0	+1.3
CBB	Campbell River	6.42	24	Pn	Pn	11 19 59.0	+2.9
LTY	Liberty	6.81	61		Pn	11 20 01.7	0.0
I07A	Izee	7.12	88	Pn	Pn	11 20 07.2	+1.2
BBB	Bella Bella	8.00	6	Pn	Pn	11 20 15.2	-2.6
	comp=N,0.2nm,0.3s,baz=188,slow=11,SNR=2.0						
BBB				LR	LR	11 22 26.6	
	comp=N,48nm,19.0s,baz=176,slow=31						
	comp=N,4.5nm,0.8s						
NEW	Newport	9.41	60	Pn	Pn	11 20 36.3	-1.0
	comp=N,0.1nm,0.3s,baz=253,slow=20,SNR=1.9						
NEW				LR	LR	11 24 07.5	
	comp=N,136nm,21.7s,baz=256,slow=37						
	comp=N,0.9nm,0.5s						
NVAR	Mina Array Bea	10.16	121	Pn	Pn	11 20 48.0	+0.3
	baz=278,slow=18,SNR=1.7						
	comp=N,0.1nm,0.3s						
ELK	Elko	11.03	104	Pn	Pn	11 20 58.9

comp=N,0.4nm,0.7s,baz=199,slow=10,SNR=3.3
YKA LR LR 11 30 37.0
comp=N,88nm,19.0s,baz=228,slow=37
comp=N,0.4nm,0.7s
ILAR Eielson Array 22.78 341 P **P 11 23 25.0 +1.1**
comp=N,1.1nm,1.1s,baz=155,slow=9.0,SNR=7.7
comp=N,1.1nm,1.1s
TXAR Lajitas Array 25.28 117 P **P 11 23 49.0 +0.8**
comp=N,0.1nm,0.5s,baz=308,slow=7.8,SNR=2.1
TXAR LR LR 11 34 33.4
comp=N,36nm,18.2s,baz=303,slow=39
comp=N,0.1nm,0.5s
SADO Sadowa 35.39 71 LR LR 11 39 10.1
comp=N,62nm,19.2s,baz=286,slow=35
TKL Tuckaleechee C 35.63 88 LR LR 11 39 28.0
comp=N,63nm,19.4s,baz=319,slow=36
H11N3 WAKE ISLAND Hy 57.77 267 T T 12 30 28.3
baz=49,slow=75,SNR=387
H11N2 WAKE ISLAND Hy 57.77 267 T T 12 30 32.0
baz=49,slow=75,SNR=84
H11N1 WAKE ISLAND Hy 57.78 267 T T 12 30 34.1
baz=49,slow=75,SNR=96
H11S1 WAKE ISLAND Hy 58.70 266 T T 12 31 47.0
baz=48,slow=75,SNR=58
H11S2 WAKE ISLAND Hy 58.71 266 T T 12 31 47.4
baz=48,slow=75,SNR=37
H11S3 WAKE ISLAND Hy 58.72 266 T T 12 31 48.4
baz=48,slow=75,SNR=46
LPAZ La Paz 82.07 122 P **P 11 30 41.5 -1.5**
comp=N,0.7nm,0.6s,baz=333,slow=12,SNR=3.6
comp=N,0.7nm,0.6s
KURBB Kurchatov Arra 82.45 342 P **P 11 30 43.8 0.0**
comp=N,0.3nm,0.3s,baz=22,slow=5.2,SNR=1.5
comp=N,0.3nm,0.3s

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*JMA **09** 11:29:30.8±0.4,34°N±1°×14°2E±°, h22km±2km, MV3.4/34, FAR SE OFF BOSO PEN*
*IDC **09** 11:29:32.0±1.1,34.63N×141°.31E, h0km, mb3.5/6, mbtmp3.6/7, ML2.4/1, MS3.3/2, Error ellipse: s-maj=36.4km s-min=18.7km az=99.0*
ISC 09 11:29:35.0±1.0,**34°.51N**±0°.06×**141°.66E**±0°.07,**h27**km,**n26**, σ1§**40**/22,**mb3.6**/6,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.58**	**285**	P		**Pb**	**11 29 45.5**	**-0.7**
BSO1				X			11 29 56.4	
BSO2	**Boso 2**	**0.79**	**288**	*e*S		**Sn**	**11 30 02.0**	**+1.2**
BSO3	**Boso 3**	**0.99**	**288**	P		**Pn**	**11 29 52.9**	**0.0**
BSO3				S		**Sb**	**11 30 08.4**	**+2.4**
BSO4	**Boso 4**	**1.19**	**294**	P		**Pn**	**11 29 56.0**	**+0.2**
BSO4				*e*S		**Sb**	**11 30 13.4**	**+1.6**
CHOJ	**Chosi**	**1.36**	**331**	P		**Pn**	**11 29 58.0**	**-0.3**
JKUC	**kamogawauchiur**	**1.37**	**299**	P		**Pn**	**11 29 58.3**	**0.0**
JSMT	**Sammumatsuo**	**1.51**	**319**	*e*P		**Pn**	**11 30 00.7**	**+0.5**
JMYK	**Miyake Tsubota**	**1.80**	**256**	S		**Sn**	**11 30 27.2**	**+1.0**
JMKN	**Mikurajimanish**	**1.82**	**251**	*e*P		**Pn**	**11 30 03.8**	**-0.7**
JMKN				S		**Sn**	**11 30 27.2**	**+0.5**
JHJ	**Hachijo jima 2**	**2.09**	**229**	Pn		**Pn**	**11 30 08.1**	**-0.1**
	25nm,0.3s,baz=325,slow=20,SNR=25							
JHJ				Sn		**Sn**	**11 30 32.7**	**-0.6**
	63nm,0.3s,baz=61,slow=23,SNR=15							
JOD2	**Odawara 2**	**2.25**	**290**	P		**Pn**	**11 30 09.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**12.23**	**325**	Pn		**Pn**	**11 32 24.9**	**-2.4**
	0.2nm,0.3s,baz=124,slow=19,SNR=1.7							
	3.0nm,0.8s							
H11N2	**WAKE ISLAND Hy 26.75**	**117**		T		T	12 03 21.0	
	baz=309,slow=75,SNR=7.8							
H11N1	**WAKE ISLAND Hy 26.76**	**117**		T		T	12 03 22.9	
	baz=309,slow=75,SNR=6.7							
H11N3	**WAKE ISLAND Hy 26.77**	**117**		T		T	12 03 23.8	
	baz=309,slow=75,SNR=5.8							
H11S1	**WAKE ISLAND Hy 27.39**	**119**		T		T	12 04 24.9	
	baz=314,slow=74							
H11S3	**WAKE ISLAND Hy 27.39**	**119**		T		T	12 04 16.0	
	baz=314,slow=74							
H11S2	**WAKE ISLAND Hy 27.40**	**119**		T		T	12 04 13.1	
	baz=314							
SIJI	**Sorong**	**36.51**	**198**	LR		LR	11 49 24.2	
	comp=Z,30nm,18.9s,baz=109,slow=33							
MKAR	**Makanchi Array**	**45.67**	**304**	P		**P**	**11 37 50.0**	**-3.3**
	0.1nm,0.4s,baz=66,slow=7.0,SNR=1.6							
	0.1nm,0.4s							
ILAR	**Eielson Array**	**51.53**	**31**	P		**P**	**11 38 40.0**	**+1.9**
	0.5nm,0.7s,baz=244,slow=6.3,SNR=2.0							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**54.59**	**188**	P		**P**	**11 39 02.6**	**+1.5**
	0.4nm,0.4s,baz=2.9,slow=7.6,SNR=12							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**58.32**	**188**	P		**P**	**11 39 28.7**	**+1.1**
	0.3nm,0.9s,baz=6.0,slow=6.1,SNR=5.1							
	0.3nm,0.9s							
GNI	**Garni**	**73.39**	**307**	LR		LR	12 16 03.8	
	comp=Z,22nm,19.2s,baz=315,slow=38							
AKASG	**Malin Array Be**	**76.42**	**323**	P		**P**	**11 41 21.8**	**-0.1**
	0.5nm,0.5s,baz=44,slow=6.3,SNR=4.4							
	0.5nm,0.5s							
NOA	**NORSAR Array B**	**76.59**	**338**	P		**P**	**11 41 23.6**	**+0.8**
	0.6nm,0.8s,baz=40,slow=7.7,SNR=1.6							
	0.6nm,0.8s							

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*IDC **09** 12:04:09.0±1.0,38°.24N×20°.37E, h0km, mb3.8/10, mbtmp3.7/19, ML3.5/9, MS2.9/5, Error ellipse: s-maj=17.6km s-min=15.1km az=19.0*
*TIR **09** 12:04:10.8,38°.21N×20°.11E, h15km±2km, Md3.9, Ml4.2*
*PDG **09** 12:04:12.4±0.8,38°.26N×20°.22E, h17km±1km, ML4.0/10, Error ellipse: s-maj=1.1km s-min=1.6km az=0.0*
*THE **09** 12:04:12.9,38°.20N×20°.27E, h13km, ML4.0/12, Error ellipse: s-maj=1.4km s-min=0.6km az=69.0*
*ATH **09** 12:04:12.1,38°.17N×20°.26E, h18km, ML3.9/15, Error ellipse: s-maj=2.2km s-min=0.9km az=74.0*
ISC 09 12:04:11.3±0.7,**38°.16N**±0°.02×**20°.20E**±0°.03,**h19**km±2km, **n152**, σ1§**56**/205,**mb3.9**/10,**22C-3D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.12**	**70**	P		**Pg**	**12 04 15.8**	**+0.5**
KEF3				S		**Sg**	**12 04 17.9**	**-0.1**
KEF3	**Kipouria, Keph**	**0.12**	**70**	P		**Pg**	**12 04 15.8**	**+0.5**
KEF3				S		**Sg**	**12 04 18.1**	**+0.2**
DMLN	**Damoulianata-K**	**0.15**	**60**	P		**Pg**	**12 04 15.9**	**+0.2**
DMLN				S		**Sb**	**12 04 18.2**	**+1.9**
	300μm,0.4s							
LXR1	**Lixouri, Cepha**	**0.19**	**78**	P		**Pb**	**12 04 16.3**	**+0.9**
LXR1				S		**Sg**	**12 04 19.3**	**-0.1**
KEF4	**Livadi, Kephal**	**0.20**	**61**	P		**Pg**	**12 04 16.4**	**+0.1**
KEF4				S		**Sg**	**12 04 19.1**	**-0.5**
KEF4	**Livadi, Kephal**	**0.20**	**61**	P		**Pg**	**12 04 16.4**	**+0.1**
KEF4				S		**Sg**	**12 04 19.2**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.30**	**99**	P		**Pg**	**12 04 18.0**	**+0.1**
PSDA				S		**Sg**	**12 04 22.3**	**-0.2**
	96μm,0.2s							
PSDA	**Pessada-Kefalo**	**0.30**	**99**	P		**Pg**	**12 04 18.0**	**+0.1**
PSDA				S		**Sg**	**12 04 21.9**	**-0.6**
VLS	**Valsamata**	**0.30**	**87**	P		**Pg**	**12 04 17.8**	**-0.2**
VLS				S		**Sg**	**12 04 22.2**	**-0.3**
	59μm,0.1s							
VLS	**Valsamata**	**0.30**	**87**	P		**Pg**	**12 04 17.8**	**-0.2**
VLS				S		**Sg**	**12 04 21.9**	**-0.6**
VLS				AML		AML	12 04 22.3	
VLS				AML		AML	12 04 22.4	
	comp=E,93514μm,0.1s							
FSK	**Fiskardo**	**0.41**	**43**	P		**Pb**	**12 04 20.4**	**+0.3**
FSK				S		**Sg**	**12 04 24.7**	**-0.8**
	comp=E,30μm,0.4s							
FSK	**Fiskardo**	**0.41**	**43**	P		**Pb**	**12 04 20.3**	**+0.3**
FSK				S		**Sg**	**12 04 25.4**	**-0.1**
FSK				AML		AML	12 04 26.3	
	comp=E,63542μm,0.3s							
FSK				AML		AML	12 04 30.3	
	comp=N,54941μm,0.5s							
EVGI	**Lefkada island**	**0.58**	**38**	P		**Pg**	**12 04 22.4**	**-0.5**
EVGI	**Lefkada island**	**0.58**	**38**	P		**Pg**	**12 04 22.4**	**-0.5**
EVGI				S		**Sg**	**12 04 30.5**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.60**	**29**	P		**Pg**	**12 04 22.5**	**-0.7**
DRAG				S		**Sb**	**12 04 31.8**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.67**	**35**	P		**Pb**	**12 04 23.8**	**-0.6**
NYDR				S		**Sb**	**12 04 33.3**	**-0.1**
	comp=N,18μm,0.5s							
LTHK	**Lithakia**	**0.68**	**132**	P		**Pb**	**12 04 24.4**	**0.0**
LTHK				S		**Sn**	**12 04 35.3**	**-0.6**
	comp=N,11μm,0.4s							
LTHK	**Lithakia**	**0.68**	**132**	P		**Pb**	**12 04 24.2**	**-0.2**
LTHK				S		**Sb**	**12 04 33.3**	**0.0**
LTHK				AML		AML	12 04 40.7	
	comp=N,22552μm,0.4s							
LTHK				AML		AML	12 04 40.9	
	comp=E,18482μm,0.4s							
LKD2	**Lefkada island**	**0.72**	**30**	P		**Pb**	**12 04 24.7**	**-0.6**
LKD2	**Lefkada island**	**0.72**	**30**	P		**Pb**	**12 04 25.1**	**-0.2**
LKD2				S		**Sg**	**12 04 35.6**	**+0.5**
	baz=36							
LKD2	**Lefkada island**	**0.72**	**30**	P		**Pb**	**12 04 24.7**	**-0.6**
LKD2				S		**Sb**	**12 04 34.8**	**0.0**
LKD2				AML		AML	12 04 41.4	
	comp=E,29644μm,0.4s							
LKD2				AML		AML	12 04 42.4	
	comp=N,23386μm,0.4s							
TSLK	**Tsoukalades, L**	**0.75**	**28**	P		**Pb**	**12 04 25.6**	**-0.2**
TSLK				S		**Sg**	**12 04 36.6**	**+0.6**
	comp=N,20μm,0.5s							
TSLK	**Tsoukalades, L**	**0.75**	**28**	P		**Pb**	**12 04 25.4**	**-0.4**
TSLK				S		**Sb**	**12 04 35.9**	**+0.3**
TSLK				AML		AML	12 04 43.3	
	comp=E,46968μm,0.5s							
TSLK				AML		AML	12 04 45.9	
	comp=N,33073μm,0.5s							
RLS	**Riolos of Patr**	**1.00**	**96**	P		**Pb**	**12 04 29.9**	**-0.2**
RLS				S		**Sn**	**12 04 44.5**	**+0.5**
	comp=N,4μm,0.6s							
RLS	**Riolos of Patr**	**1.00**	**96**	P		**Pb**	**12 04 29.7**	**-0.4**
RLS				AML		AML	12 04 48.7	
	comp=N,13825μm,0.6s							
RLS				AML		AML	12 04 55.4	
	comp=E,3440μm,0.6s							
PVO	**Paravola**	**1.13**	**66**	P		**Pn**	**12 04 32.5**	**+0.3**
PVO	**Paravola**	**1.13**	**66**	P		**Pn**	**12 04 32.4**	**+0.3**
DRO	**Drossia**	**1.21**	**100**	P		**Pb**	**12 04 34.1**	**+0.5**
DRO				S		**Sg**	**12 04 50.5**	**0.0**
	comp=E,13μm,0.6s							
DRO	**Drossia**	**1.21**	**100**	P		**Pn**	**12 04 33.0**	**-0.2**
DRO				AML		AML	12 04 57.0	
	comp=N,23669μm,0.5s							
DRO				AML		AML	12 04 57.7	
	comp=E,26274μm,0.8s							
EFP	**Efpalio**	**1.36**	**78**	P		**Pb**	**12 04 36.4**	**+0.1**
EFP	**Efpalio**	**1.36**	**78**	P		**Pb**	**12 04 36.3**	**0.0**
EFP				AML		AML	12 05 02.8	
	comp=E,6342μm,0.5s							
EFP				AML		AML	12 05 07.9	
	comp=N,8618μm,0.6s							
IGT	**Igoumenitsa**	**1.37**	**4**	P		**Pb**	**12 04 36.9**	**+0.5**
IGT				S		**Sb**	**12 04 54.0**	**+0.4**
	comp=N,4μm,0.4s							
IGT	**Igoumenitsa**	**1.37**	**4**	P		**Pb**	**12 04 37.0**	**+0.6**
	baz=7.0							
IGT				S		**Sg**	**12 04 55.1**	**-0.6**
	baz=7.0							
IGT	**Igoumenitsa**	**1.37**	**4**	P		**Pb**	**12 04 36.9**	**+0.5**
IGT				AML		AML	12 05 00.1	
	comp=E,8687μm,0.4s							
IGT				AML		AML	12 05 08.8	
	comp=N,5502μm,0.4s							
LAKA	**Lakka**	**1.40**	**86**	P		**Pn**	**12 04 36.6**	**+0.7**
EVR	**Evrytania**	**1.47**	**59**	P		**Pn**	**12 04 37.3**	**+0.4**
EVR				AML		AML	12 05 09.6	
	comp=N,3854μm,0.7s							
EVR				AML		AML	12 05 10.2	
	comp=E,3841μm,0.6s							
SERG	**Sergoula**	**1.48**	**80**	P		**Pn**	**12 04 37.7**	**+0.7**
SERG				S		**Sb**	**12 04 57.3**	**+0.6**
	comp=E,2μm,0.6s							
SERG	**Sergoula**	**1.48**	**80**	P		**Pn**	**12 04 37.7**	**+0.7**
SERG				AML		AML	12 05 08.6	
	comp=E,4494μm,0.6s							
SERG				AML		AML	12 05 11.0	
	comp=N,5622μm,0.4s							
ALIK	**Aliki, Aigiali**	**1.51**	**86**	P		**Pn**	**12 04 38.0**	**+0.7**
KLV	**Kalavryta, Ach**	**1.54**	**94**	P		**Pb**	**12 04 39.2**	**0.0**
KLV	**Kalavryta, Ach**	**1.54**	**94**	P		**Pb**	**12 04 39.3**	**0.0**
KLV				AML		AML	12 05 10.0	
	comp=N,2347μm,0.8s							
KLV				AML		AML	12 05 13.3	
	comp=E,2837μm,0.7s							
JAN	**Janina**	**1.57**	**18**	P		**Pb**	**12 04 39.8**	**-0.1**
JAN	**Janina**	**1.57**	**18**	P		**Pn**	**12 04 39.3**	**+1.0**
JAN				AML		AML	12 05 05.5	
	comp=E,7324μm,0.7s							
JAN				AML		AML	12 05 09.1	
	comp=N,6046μm,1.2s							
KEK	**Kerkira**	**1.58**	**349**	P		**Pb**	**12 04 40.1**	**+0.2**
KEK	**Kerkira**	**1.58**	**349**	P		**Pb**	**12 04 40.1**	**+0.2**
KEK				AML		AML	12 05 11.5	
	comp=E,7300μm,0.5s							
KEK				AML		AML	12 05 13.3	
	comp=N,4290μm,0.5s							
ITM	**Ithomi**	**1.68**	**125**	P		**Pb**	**12 04 41.2**	**-0.5**
ITM				S		**Sb**	**12 05 03.7**	**+1.2**
	comp=N,2μm,0.5s							
ITM	**Ithomi**	**1.68**	**125**	P		**Pb**	**12 04 41.5**	**-0.2**
ITM				AML		AML	12 05 16.3	
	comp=E,2732μm,0.4s							
ITM				AML		AML	12 05 18.9	
	comp=N,3907μm,0.6s							
SRN	**Sarande**	**1.72**	**355**	P		**Pb**	**12 04 42.0**	**-0.3**
SRN	**Sarande**	**1.72**	**355**	P		**Pb**	**12 04 42.1**	**-0.2**
	baz=358							
SRN				S		**Sb**	**12 05 05.6**	**+2.0**
	baz=358							
SRN				AMP				
	comp=E,7.2nm,0.5s,baz=358							
LSK	**Leskovik**	**2.01**	**9**	P		**Pb**	**12 04 47.6**	**+0.4**
	baz=11							
LSK				S		**Sb**	**12 05 13.8**	**+1.8**
	baz=11							
LSK				AMP				
	comp=N,11nm,0.9s,baz=11							
SCTE	**Santa Cesarea**	**2.34**	**325**	P		**Pn**	**12 04 50.7**	**+2.0**
	baz=327							
VLO	**Vlora**	**2.37**	**347**	P		**Pb**	**12 04 52.1**	**-1.2**
	baz=349							
VLO				S		**Sb**	**12 05 23.1**	**+0.9**
	baz=349							
VLO				AMP				
	comp=E,9.1nm,0.5s,baz=349							
KBN	**Korca**	**2.50**	**10**	P		**Pb**	**12 04 54.6**	**-1.1**
	baz=12							
KBN				S		**Sb**	**12 05 27.2**	**+1.1**
	baz=12							
KBN				AMP				
	comp=N,3.2nm,0.8s,baz=12							
OHR	**Ohrid**	**2.98**	**9**	*i* Pn		**Pb**	**12 05 01.2**	**-2.6**
TIR	**Tirane**	**3.19**	**355**	P		**Pn**	**12 05 02.7**	**+2.2**
	baz=357							
TIR				S		**Sn**	**12 05 41.1**	**+3.1**
	baz=357							
TIR				AMP				
	comp=E,1.1nm,0.6s,baz=357							
PHP	**Peshkopia**	**3.52**	**3**	P		**Pn**	**12 05 07.5**	**+2.4**
	baz=4.0							
PHP				AMP				
	comp=N,1.4nm,0.4s,baz=4.0							
MATE	**Matera**	**3.68**	**314**	⇑P		**Pn**	**12 05 06.9**	**-0.2**
MATE				⇑S		**Sn**	**12 05 47.0**	**-2.9**
STIP	**Stip**	**3.84**	**23**	*i* Pn		**Pn**	**12 05 13.2**	**+3.7**
ULC	**Ulcinj**	**3.87**	**349**	⇓*i*Pn		**Pn**	**12 05 11.4**	**+1.6**
ULC				*i* Sn		**Sn**	**12 05 54.8**	**+0.1**
DRME	**Dracevica, Mon**	**4.09**	**349**	*e*Pn		**Pn**	**12 05 14.2**	**+1.3**
DRME	**Dracevica, Mon**	**4.09**	**349**	⇓*i*Pn		**Pn**	**12 05 14.6**	**+1.7**
DRME				*i* Sn		**Sn**	**12 06 00.2**	**-0.1**
BCI	**Bajram Curri**	**4.20**	**359**	P		**Pn**	**12 05 16.7**	**+2.3**
	baz=0.0							
BUM	**Brajici-Budva**	**4.25**	**347**	*e*Pn		**Pn**	**12 05 16.4**	**+1.2**
BUM				*i* Sn		**Sn**	**12 06 04.1**	**-0.2**
KKB	**Krupnik**	**4.31**	**30**	P		**Pn**	**12 05 19.3**	**+3.4**
TTG	**Podgorica**	**4.32**	**351**	*e*Pn		**Pn**	**12 05 17.5**	**+1.5**
TTG				*i* Sn		**Sn**	**12 06 05.7**	**-0.2**
MMB	**Musomiste**	**4.37**	**37**	P		**Pn**	**12 05 19.6**	**+2.9**
APE	**Apeiranthos**	**4.37**	**103**	⇑P		**Pb**	**12 05 24.3**	**-3.2**
PVY	**Plav**	**4.43**	**358**	⇑*i*Pn		**Pn**	**12 05 19.3**	**+1.6**
PVY				*i* Sn		**Sn**	**12 06 08.3**	**-0.5**
HCY	**Herceg Novi**	**4.47**	**344**	*e*Pn		**Pn**	**12 05 17.1**	**-1.0**
HCY	**Herceg Novi**	**4.47**	**344**	*e*Pn		**Pn**	**12 05 18.6**	**+0.5**
HCY				*i* Sn		**Sn**	**12 06 09.4**	**-0.3**
CEME	**Cevo**	**4.49**	**348**	*e*Pn		**Pn**	**12 05 19.3**	**+0.9**
CEME				*i* Sn		**Sn**	**12 06 09.7**	**-0.4**
VAE	**Valguarnera**	**4.64**	**263**	Pn		**Pn**	**12 05 23.3**	**+2.9**
	comp=N,1.5nm,0.3s,baz=16,slow=20,SNR=3.6							
VAE				Sn		**Sn**	**12 06 15.8**	**+2.0**
	comp=N,1.5nm,0.3s,baz=150,slow=20,SNR=2.1							
	comp=N,8.4nm,0.4s							
NKME	**Niksic**	**4.70**	**349**	*e*Pn		**Pn**	**12 05 22.9**	**+1.7**
NKME				*i* Sn		**Sn**	**12 06 14.7**	**-0.5**
IVA	**Berane**	**4.71**	**357**	⇑*i*Pn		**Pn**	**12 05 23.1**	**+1.7**
IVA				*i* Sn		**Sn**	**12 06 15.0**	**-0.6**
KOME	**Kolasin**	**4.71**	**354**	⇑*i*Pn		**Pn**	**12 05 23.1**	**+1.6**
KOME				*i* Sn		**Sn**	**12 06 14.9**	**-0.8**
IDI	**Anoyia**	**4.73**	**126**	Pn		**Pn**	**12 05 20.2**	**-1.5**
	comp=N,0.3nm,0.3s,baz=288,slow=13,SNR=1.4							
IDI				Sn		**Sn**	**12 06 14.1**	**-2.1**
	comp=N,3.2nm,0.3s,baz=249,slow=22,SNR=3.4							
	comp=N,0.9nm,0.4s							
BRY	**Bratogost**	**4.90**	**346**	*e*Pn		**Pn**	**12 05 24.5**	**+0.4**
BRY	**Bratogost**	**4.90**	**346**	*e*Pn		**Pn**	**12 05 24.7**	**+0.6**
BRY				*i* Sn		**Sn**	**12 06 19.6**	**-0.8**
VTS	**Vitosha**	**5.02**	**27**	⇑P		**Pn**	**12 05 28.2**	**+2.5**
VTS	**Vitosha**	**5.02**	**27**	P		**Pn**	**12 05 27.6**	**+1.9**
UPM	**Unac-Piva**	**5.13**	**349**	*e*Pn		**Pn**	**12 05 28.4**	**+1.1**
UPM	**Unac-Piva**	**5.13**	**349**	*e*Pn		**Pn**	**12 05 28.9**	**+1.6**
UPM				*i* Sn		**Sn**	**12 06 25.1**	**-1.0**
PLE	**Pljevlja**	**5.20**	**353**	⇑*i*Pn		**Pn**	**12 05 29.9**	**+1.7**
PLE				*i* Sn		**Sn**	**12 06 26.6**	**-1.1**
KDZ	**Kurdzhali**	**5.31**	**47**	P		**Pn**	**12 05 30.8**	**+1.2**
RUDO	**Rudo**	**5.49**	**354**	*e*Pn		**Pn**	**12 05 32.2**	**+0.2**
BOVS	**Bovan**	**5.58**	**11**	⇑P		**Pn**	**12 05 34.1**	**+0.8**
BBLS	**Lazići**	**5.73**	**354**	*e*Pn		**Pn**	**12 05 34.6**	**-0.8**
BLKB	**Belogradchik**	**5.77**	**18**	⇑P		**Pn**	**12 05 37.6**	**+1.6**
DIVS	**Divibare**	**5.93**	**359**	*e*Pn		**Pn**	**12 05 38.0**	**-0.2**
HAPS	**Han Pijesak,Bl**	**5.99**	**351**	*e*Pn		**Pn**	**12 05 39.6**	**+0.5**
SRKY	**Kupres RS**	**6.33**	**340**	*e*Pn		**Pn**	**12 05 45.5**	**+1.8**
TEKS	**Tekeris**	**6.40**	**356**	*e*Pn		**Pn**	**12 05 43.4**	**-1.2**
MGRS	**Mrkonjic Grad**	**6.67**	**340**	*e*Pn		**Pn**	**12 05 49.4**	**+1.0**
MDVR	**Moldovita**	**6.71**	**9**	⇑P		**Pn**	**12 05 50.2**	**+1.4**
A050A	**Klekovaca**	**6.89**	**338**	*e*Pn		**Pn**	**12 05 53.0**	**+1.6**
HERR	**Herculane**	**6.92**	**13**	⇑P		**Pn**	**12 05 52.9**	**+1.3**
BLY	**Banja Luka**	**6.96**	**342**	*e*Pn		**Pn**	**12 05 52.4**	**+0.2**
FRGS	**Fruska Gora**	**7.00**	**358**	⇑P		**Pn**	**12 05 53.2**	**+0.4**
FRGS	**Fruska Gora**	**7.00**	**358**	*e*Pn		**Pn**	**12 05 52.5**	**-0.3**
A051A	**Mrakovica**	**7.28**	**341**	*e*Pn		**Pn**	**12 05 57.2**	**+0.6**
GZR	**Gura Zlata**	**7.48**	**14**	⇑P		**Pn**	**12 06 00.7**	**+1.3**
BZS	**Buzias**	**7.52**	**8**	⇑P		**Pn**	**12 06 01.7**	**+1.8**
KOVH	**Kovagotottos**	**8.07**	**350**	P		**Pn**	**12 06 07.4**	**-0.1**
KOVH				S		**Sn**	**12 07 33.3**	**-5.0**
VOIR		**8.12**	**25**	⇓P		**Pn**	**12 06 10.0**	**+1.8**
MORH	**Mrgy, Hungar**	**8.13**	**352**	⇑P		**Pn**	**12 06 08.3**	**0.0**
MORH	**Mrgy, Hungar**	**8.13**	**352**	P		**Pn**	**12 06 07.6**	**-0.7**
SIRR	**Siria**	**8.17**	**7**	⇑P		**Pn**	**12 06 10.0**	**+1.2**
GBRS	**Gornja Briga**	**8.39**	**333**	*i* Pn		**Pn**	**12 06 13.7**	**+1.8**
GBRS				*e*Sn		**Sn**	**12 07 41.7**	**-4.4**
GBRS				IAML			12 07 47.0	
	comp=Z,94nm,0.9s							
MLR	**Muntele Rosu**	**8.48**	**28**	⇑P		**Pn**	**12 06 15.4**	**+2.2**
MLR	**Muntele Rosu**	**8.48**	**28**	Pn		**Pn**	**12 06 13.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=161,slow=12,SNR=1.9							
MLR				Sn		**Sn**	**12 07 50.6**	**+2.1**
	baz=167,slow=16							
MLR				LR		LR	12 09 39.3	
	comp=Z,76nm,19.2s,baz=206,slow=40							
	comp=Z,1.2nm,0.5s							
BEHE	**Becsehely**	**8.68**	**344**	P		**Pn**	**12 06 16.0**	**+0.2**
CEY	**Cerknica**	**8.71**	**332**	*e*Pn		**Pn**	**12 06 17.5**	**+1.3**
DRGR		**8.82**	**11**	⇑P		**Pn**	**12 06 18.5**	**+0.7**
KEST	**Kesra**	**9.02**	**258**	Pn		**Pn**	**12 06 22.8**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=62,slow=13,SNR=2.4							
KEST				Sn		**Sn**	**12 08 01.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=57,slow=14,SNR=1.3							
	comp=Z,1.3nm,0.5s							
PLOR	**Plostina**	**9.05**	**30**	⇑P		**Pn**	**12 06 23.3**	**+2.3**
VRI	**Vrincioaia**	**9.10**	**30**	⇑P		**Pn**	**12 06 24.0**	**+2.4**
MPLH	**Magyarpolny**	**9.21**	**349**	P		**Pn**	**12 06 22.4**	**-0.8**
SOKA	**Soboth**	**9.33**	**337**	*e*Pn		**Pn**	**12 06 25.0**	**+0.2**
	comp=Z,11nm,0.3s,SNR=8.4							
OBKA	**Obir**	**9.33**	**335**	*e*Pn		**Pn**	**12 06 24.5**	**-0.3**
OBKA	**Obir**	**9.33**	**335**	*e*Pn		**Pn**	**12 06 26.0**	**+1.2**
	comp=Z,6.7nm,0.4s,SNR=12							
ARSA	**Arzberg**	**9.71**	**341**	*i* Pn		**Pn**	**12 06 29.5**	**-0.5**
	comp=Z,2.5nm,0.3s,SNR=11							
MYKA	**Terra Mystica**	**9.75**	**332**	*e*Pn		**Pn**	**12 06 30.4**	**-0.2**
	comp=Z,3.5nm,0.4s							
BURAR	**Bucovina Array**	**10.13**	**20**	⇑P		**Pn**	**12 06 37.8**	**+2.0**
KBA	**Koelnbreinsper**	**10.24**	**333**	*e*Pn		**Pn**	**12 06 38.0**	**+0.6**
	com

*IDC **09** 12:23:04.5±0.9, 36°.50N×96°.98W, h0km, mb3.6/1, mbtmp3.6/7, ML2.9/5, MS3.5/2, Error ellipse: s-maj=12.6km s-min=9.1km az=137.0*
*TUL **09** 12:23:05.1±0.7, 36°.42N±0°.02×96°.89W±0°.02, h4km±3km, ML3.7, mb_Lg3.8/113(NEIC), Mwr3.5/36(NEIC), Error ellipse: s-maj=2.6km s-min=2.1km az=223.0*
*ANF **09** 12:23:05.5±0.6, 36°.43N×96°.88W, h5km, ML4.5/17, Error ellipse: s-maj=7.5km s-min=5.8km az=102.0*
*NEIC **09** 12:23:05.4±0.7, 36°.42N±0°.02×96°.89W±0°.02, h4km±3km, Error ellipse: s-maj=2.6km s-min=2.0km az=217.0*
*NEIC **09** 12:23:05.2, 36°.42N×96°.86W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.17; $M_{\theta\theta}$=0.53; $M_{\phi\phi}$=-0.36; $M_{r\theta}$=0.32; $M_{\theta\phi}$=2.38; $M_{\phi r}$=-0.50; Fault plane solution: M_0=2.49000×10^{14} NP1:ϕ_s=274.44000°, δ=78.71000°, λ=-9.14000°. NP2:ϕ_s=6.24000°, δ=81.04000°, λ=-168.56000°. Principal axes: T 2.5047, Plg=2.0000°, Azm=140.0000°; N -0.0208, Plg=76.0000°, Azm=44.0000°; P -2.4839, Plg=14.0000°, Azm=231.0000°;*

ISC 09 12:23:04.6±0.7, 36°.42N±0°.02×96°.89W±0°.02, h9km±4km, n129, σ1s57/119, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK046	**Pawnee Station**	**0.03**	**213**	Pg	**Pg**	**12 23 06.3**	**-0.1**
OK046				Sg	**Sg**	**12 23 07.0**	**-0.6**
OK045	**Pawnee Station**	**0.04**	**308**	Pg	**Pg**	**12 23 06.5**	**+0.1**
OK045				Sg	**Sg**	**12 23 07.4**	**-0.4**
OK048	**Pawnee Station**	**0.05**	**261**		**Pg**	**12 23 06.5**	**0.0**
OK048				Sg	**Sg**	**12 23 07.4**	**-0.5**
OK044	**Pawnee Station**	**0.09**	**125**	Pg	**Pg**	**12 23 07.5**	**+0.5**
OK044				Sg	**Sg**	**12 23 09.1**	**+0.4**
OK051	**E0350 and S346**	**0.09**	**26**	Pg	**Pg**	**12 23 07.6**	**+0.6**
OK051				Sg	**Sg**	**12 23 09.3**	**+0.5**
OK049	**E0420 Rd and N**	**0.34**	**267**		**Pg**	**12 23 11.9**	**+0.6**
OK049				Sg	**Sg**	**12 23 16.6**	**+0.8**
OK033	**Mehan**	**0.38**	**186**		**Pg**	**12 23 12.7**	**+0.6**
OK034	**N. Norfolk Rd.**	**0.44**	**161**	Pg	**Pg**	**12 23 13.8**	**+0.6**
OK031	**S. Brethren Rd**	**0.47**	**175**		**Pg**	**12 23 14.4**	**+0.7**
T35A	**Sooner Cattle**	**0.58**	**31**	Pg	**Pg**	**12 23 16.4**	**+0.6**
T35B	**Sooner Cattle**	**0.58**	**31**	P	**Pg**	**12 23 16.5**	**+0.7**
	baz=212						
T35B				S	**Sg**	**12 23 24.2**	**+0.8**
	baz=212						
KAN13	**South Haven SW**	**0.76**	**321**	Pg	**Pg**	**12 23 19.7**	**+0.5**
OK029	**Liberty Lake**	**0.78**	**217**	Pg	**Pg**	**12 23 19.9**	**+0.3**
OK005	**Luther M Schoo**	**0.81**	**198**		**Pg**	**12 23 20.6**	**+0.4**
OK025	**Westminster Rd**	**0.92**	**204**		**Pg**	**12 23 22.4**	**+0.1**
OK009	**Oakdale Elemen**	**0.95**	**208**		**Pg**	**12 23 23.2**	**+0.4**
OK011	**Prague**	**0.95**	**170**		**Pg**	**12 23 23.4**	**+0.5**
TUL1	**Leonard**	**1.02**	**120**	Pg	**Pg**	**12 23 24.6**	**+0.3**
TUL1	**Leonard**	**1.02**	**120**	P	**Pg**	**12 23 24.4**	**+0.1**
	baz=300						
TUL1				S	**Sg**	**12 23 37.9**	**+0.3**
	baz=300						
KS21	**Milan North St**	**1.06**	**324**	Pg	**Pg**	**12 23 25.3**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**1.11**	**204**		**Pg**	**12 23 25.5**	**-0.4**
OK032	**Salt Plains WL**	**1.13**	**290**		**Pg**	**12 23 26.4**	**0.0**
FNO	**Franklin**	**1.24**	**200**		**Pg**	**12 23 27.7**	**-0.7**
OK035	**E0210 Rd and N**	**1.50**	**281**		**Pn**	**12 23 32.9**	**+1.3**
OK038	**West end E0370**	**1.50**	**273**		**Pn**	**12 23 33.0**	**+1.3**
U32A	**Winter Ranch,**	**1.71**	**269**		**Pn**	**12 23 36.0**	**+1.4**
U32A	**Winter Ranch,**	**1.71**	**269**	P	**Pn**	**12 23 36.2**	**+1.6**
	baz=88,SNR=75						
U32A				S	**Sb**	**12 23 59.4**	**+1.7**
	baz=88						
X34A	**Smith Ranch, M**	**1.98**	**203**		**Pn**	**12 23 40.4**	**+2.2**
X34A				IAmb_Lg		12 24 11.1	
	comp=Z,445nm,0.8s						
U38A	**Gravette**	**2.02**	**89**		**Pn**	**12 23 41.1**	**+2.3**
U38A	**Gravette**	**2.02**	**89**	P	**Pn**	**12 23 41.2**	**+2.3**
	baz=270,SNR=84						
X37A	**Clayton**	**2.21**	**146**		**Pn**	**12 23 43.2**	**+1.8**
X37A	**Clayton**	**2.21**	**146**	P	**Pn**	**12 23 43.0**	**+1.6**
	baz=326,SNR=187						
X37A				Sb	**Sb**	**12 24 14.9**	**+2.7**
	baz=326						
WMOK	**Wichita Mounta**	**2.28**	**223**		**Pn**	**12 23 43.8**	**+1.4**
WMOK	**Wichita Mounta**	**2.28**	**223**	P	**Pn**	**12 23 44.0**	**+1.5**
	baz=42,SNR=152						
HHAR	**Hobbs**	**2.38**	**93**		**Pn**	**12 23 46.1**	**+2.3**
HHAR				IAmb_Lg		12 24 24.1	
	comp=Z,295nm,0.7s						
R32A	**Long Quarter,**	**2.47**	**324**	Pn	**Pn**	**12 23 46.8**	**+1.8**
R32A				IAmb_Lg		12 24 28.0	
	comp=Z,271nm,1.0s						
KSU1	**Kansas State U**	**2.68**	**5**		**Pn**	**12 23 50.0**	**+2.1**
KSU1				IAmb_Lg		12 24 35.7	
	comp=Z,225nm,0.9s						
Z35A	**Perchaven, San**	**3.10**	**186**		**Pn**	**12 23 55.1**	**+1.5**
Z35A	**Perchaven, San**	**3.10**	**186**	P	**Pn**	**12 23 55.7**	**+2.0**
	baz=5.4,SNR=19						
Z35A				S	**Sn**	**12 24 34.4**	**+3.6**
	baz=5.4						
S39A	**Bolivar**	**3.12**	**65**	Pn	**Pn**	**12 23 56.0**	**+2.1**
S39A				IAmb_Lg		12 24 51.8	
	comp=Z,291nm,1.0s						
S39A	**Bolivar**	**3.12**	**65**	P	**Pn**	**12 23 56.2**	**+2.3**
	baz=247,SNR=18						
MIAR	**Mount Ida**	**3.29**	**124**	IAmb_Lg		12 24 53.9	
	comp=Z,238nm,0.9s						
MIAR	**Mount Ida**	**3.29**	**124**	P	**Pn**	**12 23 58.1**	**+1.8**
	baz=306						
CBKS	**Cedar Bluff**	**3.29**	**317**	Pn	**Pn**	**12 23 57.0**	**+0.7**
CBKS	**Cedar Bluff**	**3.29**	**317**	P	**Pn**	**12 23 57.7**	**+1.4**
	baz=136,SNR=14						
Z38A	**Mt. Pleasant**	**3.52**	**153**	P	**Pn**	**12 24 01.1**	**+1.6**
	baz=334,SNR=5.4						
Z38A				S	**Sg**	**12 24 57.5**	**-0.2**
	baz=334						
MGMO	**Mountain Grove**	**3.78**	**78**		**Pn**	**12 24 04.5**	**+1.5**
FCAR	**Ozark Folk Cen**	**3.89**	**96**		**Pn**	**12 24 06.4**	**+1.9**
FCAR				IAmb_Lg		12 25 15.5	
	comp=Z,322nm,0.7s						
WHAR	**Wooly Hollow**	**3.90**	**105**		**Pn**	**12 24 06.5**	**+1.8**
WHAR				IAmb_Lg		12 25 10.6	
	comp=Z,250nm,0.7s						
UALR	**University of**	**4.05**	**113**		**Pn**	**12 24 07.9**	**+1.2**
UALR				IAmb_Lg		12 25 14.3	
	comp=Z,262nm,0.7s						
R40A	**Maddies Statio**	**4.12**	**62**		**Pn**	**12 24 08.8**	**+1.0**
R40A				IAmb_Lg		12 25 21.7	
	comp=Z,157nm,1.0s						
R40A	**Maddies Statio**	**4.12**	**62**	P	**Pn**	**12 24 09.3**	**+1.6**
	baz=244,SNR=36						
WLAR	**White Oak Lake**	**4.13**	**130**	Pn	**Pn**	**12 24 08.8**	**+1.0**
WLAR				IAmb_Lg		12 25 17.3	
	comp=Z,165nm,0.8s						
P38A	**Dawn**	**4.15**	**39**	Pn	**Pn**	**12 24 09.9**	**+1.8**
P38A				IAmb_Lg		12 25 22.8	
	comp=Z,132nm,0.7s						
AMTX	**Amarillo**	**4.20**	**250**	Pn	**Pn**	**12 24 10.0**	**+1.2**
AMTX				IAmb_Lg		12 25 24.3	
	comp=Z,190nm,0.8s						
AMTX	**Amarillo**	**4.20**	**250**	P	**Pn**	**12 24 10.4**	**+1.5**
	baz=67						
N33B	**J Bar K, Exete**	**4.33**	**354**	S	**Sn**	**12 25 04.5**	**+3.4**
	baz=174						
N33A	**J Bar K, Exete**	**4.33**	**354**		**Pn**	**12 24 12.5**	**+1.9**
N33A				IAmb_Lg		12 25 33.6	
	comp=Z,338nm,0.9s						
ABTX	**Abilene, Hawle**	**4.42**	**212**		**Pn**	**12 24 12.6**	**+0.7**
WHTX	**Lake Whitney,**	**4.45**	**186**		**Pn**	**12 24 13.7**	**+1.5**
WHTX	**Lake Whitney,**	**4.45**	**186**	P	**Pn**	**12 24 13.8**	**+1.6**
	baz=5.9,SNR=8.1						
WHTX				S	**Sn**	**12 25 04.6**	**+0.6**
	baz=5.9						
237A	**Washetta, Mont**	**4.50**	**168**		**Pn**	**12 24 13.8**	**+0.9**
237A	**Washetta, Mont**	**4.50**	**168**	P	**Pn**	**12 24 14.0**	**+1.1**
	baz=349,SNR=7.6						
237A				S	**Sn**	**12 25 06.2**	**+0.8**
	baz=349						
LCAR	**Lake Charles**	**4.65**	**93**	IAmb_Lg		12 25 39.9	
	comp=Z,207nm,0.9s						
CCM	**Cathedral Cave**	**4.79**	**68**	Pn	**Pn**	**12 24 18.3**	**+1.4**
CCM				IAmb_Lg		12 25 35.1	
	comp=Z,172nm,0.8s						
CCM	**Cathedral Cave**	**4.79**	**68**	P	**Pn**	**12 24 18.3**	**+1.4**
	baz=252,SNR=14						
CCAR	**Cane Creek**	**4.88**	**119**		**Pn**	**12 24 18.3**	**+0.2**
CCAR				IAmb_Lg		12 25 52.6	
	comp=Z,141nm,0.7s						
P40A	**Paris**	**4.92**	**49**	IAmb_Lg		12 25 49.5	
	comp=Z,251nm,1.0s						
BGNE	**Belgrade**	**5.07**	**349**	IAmb_Lg		12 25 51.1	
	comp=Z,238nm,0.8s						
PBMO	**Poplar Bluff**	**5.21**	**84**	IAmb_Lg		12 25 57.7	
	comp=Z,269nm,0.7s						
N38A	**Joes South For**	**5.22**	**32**	IAmb_Lg		12 25 54.4	
	comp=Z,264nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.23**	**301**	IAmb_Lg		12 25 59.6	
	comp=Z,113nm,0.7s						
MSTX	**Muleshoe**	**5.41**	**245**	Pn	**Pn**	**12 24 26.8**	**+1.3**
MSTX				IAmb_Lg		12 26 06.7	
	comp=Z,110nm,1.1s						
435B	**Jarrell**	**5.66**	**186**	IAmb_Lg		12 26 18.9	
	comp=Z,194nm,0.8s						
435B	**Jarrell**	**5.66**	**186**	P	**Pn**	**12 24 29.7**	**+0.9**
	baz=5.7						
143A	**Socs Landing,**	**5.85**	**128**		**Pn**	**12 24 31.4**	**0.0**
143A				IAmb_Lg		12 26 24.9	
	comp=Z,126nm,0.9s						
OGNE	**Ogallala**	**6.05**	**320**		**Pn**	**12 24 35.9**	**+1.6**
OGNE				IAmb_Lg		12 26 25.8	
	comp=Z,98nm,0.8s						
N41A	**Harden Midland**	**6.37**	**46**	IAmb_Lg		12 26 25.0	
	comp=Z,173nm,1.0s						
OXF	**Oxford**	**6.39**	**105**		**Pn**	**12 24 39.4**	**+0.5**
OXF	**Oxford**	**6.39**	**105**	P	**Pn**	**12 24 38.8**	**-0.1**
	baz=290						
JCT	**Junction City**	**6.41**	**203**		**Pn**	**12 24 39.5**	**+0.3**
Y45A	**Yeager Farm, C**	**6.53**	**111**	IAmb_Lg		12 26 41.3	
	comp=Z,153nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.64**	**59**		**Pn**	**12 24 43.4**	**+1.1**
P43A				IAmb_Lg		12 26 40.0	
	comp=Z,128nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.64**	**59**	P	**Pn**	**12 24 43.6**	**+1.3**
	baz=243,SNR=12						
Q44A	**Meyer Farm, Va**	**6.71**	**66**	Pn	**Pn**	**12 24 44.8**	**+1.5**
Q44A	**Meyer Farm, Va**	**6.71**	**66**	P	**Pn**	**12 24 44.9**	**+1.6**
	baz=251						
VBMS	**Vicksburg**	**6.73**	**127**	IAmb_Lg		12 26 57.4	
	comp=Z,99nm,1.3s						
K38A	**Parkersburg**	**6.98**	**26**	IAmb_Lg		12 27 05.7	
	comp=Z,164nm,0.8s						
Q24A	**Divide**	**7.03**	**294**	IAmb_Lg		12 26 59.8	
	comp=Z,96nm,0.9s						
L40A	**Anamosa**	**7.14**	**36**		**Pn**	**12 24 49.7**	**+0.5**
L40A				IAmb_Lg		12 26 58.6	
	comp=Z,96nm,0.8s						
HDIL	**Hopedale**	**7.24**	**53**		**Pn**	**12 24 51.1**	**+0.6**
HDIL				IAmb_Lg		12 27 03.4	
	comp=Z,152nm,0.9s						
HDIL	**Hopedale**	**7.24**	**53**	P	**Pn**	**12 24 51.0**	**+0.5**
	baz=238,SNR=8.7						
ECSD	**EROS Data Cent**	**7.30**	**2**	Pn	**Pn**	**12 24 53.1**	**+1.7**
ECSD				IAmb_Lg		12 26 58.1	
	comp=Z,72nm,1.0s						
PLAL	**Pickwick Lake**	**7.31**	**99**	IAmb_Lg		12 27 04.7	
	comp=Z,78nm,0.7s						
WVT	**Waverly**	**7.32**	**90**	IAmb_Lg		12 27 00.1	
	comp=Z,77nm,0.8s						
146A	**Union**	**7.48**	**118**	IAmb_Lg		12 27 18.1	
	comp=Z,75nm,0.7s						
O44A	**Mansfield**	**7.59**	**58**	IAmb_Lg		12 27 11.8	
	comp=Z,92nm,0.8s						
ISCO	**Idaho Springs**	**7.66**	**299**		**Pn**	**12 24 58.0**	**+1.4**
L42A	**Oliver, Polo**	**7.90**	**43**	IAmb_Lg		12 27 22.1	
	comp=Z,94nm,0.8s						
ANMO	**Albuquerque**	**7.93**	**262**	Pn	**Pn**	**12 25 01.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=79,slow=14,SNR=3.8						
ANMO				Pg	Pb	12 25 27.8	+5.6
	comp=Z,0.4nm,0.3s,baz=73,slow=19,SNR=8.4						
ANMO				Lg	Lg	12 27 09.9	
	comp=Z,1.3nm,0.3s,baz=14,slow=24,SNR=2.3						
	comp=Z,0.4nm,0.4s						
I37A	**Lemond, Waseca**	**8.04**	**18**	IAmb_Lg		12 27 36.6	
	comp=Z,102nm,0.9s						
SUSD	**Miller**	**8.16**	**350**	IAmb_Lg		12 27 32.3	
	comp=Z,73nm,0.7s						
JFWS	**Jewell Farm**	**8.26**	**36**		**Pn**	**12 25 04.3**	**-0.1**
JFWS				IAmb_Lg		12 27 35.0	
	comp=Z,74nm,0.8s						
JFWS	**Jewell Farm**	**8.26**	**36**	P	**Pn**	**12 25 05.2**	**+0.7**
	baz=220						
X48A	**Hartselle**	**8.27**	**101**	IAmb_Lg		12 27 28.7	
	comp=Z,81nm,1.0s						
P46A	**Rosedale**	**8.28**	**64**	IAmb_Lg		12 27 37.0	
	comp=Z,115nm,0.8s						
N23A	**Red Feather La**	**8.37**	**305**	Pn	**Pn**	**12 25 08.2**	**+1.9**
N23A				IAmb_Lg		12 27 35.2	
	comp=Z,69nm,0.8s						
LRAL	**Lakeview Retre**	**8.81**	**110**	IAmb_Lg		12 27 44.5	
	comp=Z,46nm,0.9s						
I40A	**Norwalk**	**8.87**	**31**		**Pn**	**12 25 13.6**	**+0.7**
I40A				IAmb_Lg		12 27 58.9	
	comp=Z,63nm,0.9s						
L44A	**Lake County Fo**	**9.02**	**48**	Pn	**Pn**	**12 25 15.1**	**+0.1**
L44A				IAmb_Lg		12 27 52.8	
	comp=Z,79nm,1.1s						
TX31	**Lajitas Ar. Si**	**9.08**	**221**		**Pn**	**12 25 16.5**	**+0.6**
TXAR	**Lajitas Array**	**9.08**	**221**	Pn	**Pn**	**12 25 14.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=49,slow=14,SNR=8.3						
TXAR				Pg		12 25 45.5	
	comp=Z,0.9nm,0.3s,baz=40,slow=14,SNR=6.8						
TXAR				Sn	**Sn**	**12 26 54.3**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=40,slow=14,SNR=1.1						
TXAR				Lg	Lg	12 27 46.7	
	comp=Z,1.6nm,0.3s,baz=41,slow=29,SNR=6.6						
	comp=Z,0.4nm,0.5s						
K43A	**Burlington**	**9.11**	**44**	Pn	**Pn**	**12 25 16.2**	**+0.1**
K43A				IAmb_Lg		12 27 55.3	
	comp=Z,122nm,1.1s						
SPMN	**Marine on St.**	**9.32**	**18**		**Pn**	**12 25 21.0**	**+2.0**
SPMN				IAmb_Lg		12 28 11.4	
	comp=Z,70nm,1.0s						
F33A	**5 Mile Ranch,**	**9.42**	**3**	IAmb_Lg		12 28 07.0	
	comp=Z,62nm,0.9s						
RSSD	**Black Hills**	**9.43**	**327**	Pn	**Pn**	**12 25 22.3**	**+1.6**
RSSD	**Black Hills**	**9.43**	**327**	P	**Pn**	**12 25 22.3**	**+1.6**
	baz=142						
I42A	**Draeger Farm,**	**9.63**	**37**	IAmb_Lg		12 28 21.5	
	comp=Z,81nm,1.3s						
K22A	**Casper**	**9.70**	**313**	IAmb_Lg		12 28 30.0	
	comp=Z,51nm,0.9s						
TKL	**Tuckaleechee C**	**10.65**	**90**	Pn	**Pn**	**12 25 38.9**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=256,slow=8.3,SNR=1.6						
TKL				Sn	**Sn**	**12 27 34.5**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=288,slow=20,SNR=3.7						
TKL				Lg	Lg	12 28 33.8	
	comp=Z,2.8nm,0.3s,baz=209,slow=24,SNR=7.9						
	comp=Z,5.2nm,0.9s						
L48A	**N Adams**	**11.12**	**57**	P	**Pn**	**12 25 44.1**	**+0.4**
	baz=244						
L48A				P	**Pn**	**12 25 44.1**	**+0.4**
	baz=244						
BW06	**Boulder Array**	**11.64**	**307**		**Pn**	**12 25 51.5**	**+0.4**
PD31	**Pinedale Array**	**11.64**	**307**	Pn	**Pn**	**12 25 50.9**	**-0.2**
PDAR	**Pinedale Array**	**11.64**	**307**	Pn	**Pn**	**12 25 50.7**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=114,slow=13,SNR=15						
PDAR				Pg		12 26 36.6	
	comp=Z,0.2nm,0.3s,baz=114,slow=13,SNR=2.5						
PDAR				Lg	Lg	12 29 03.5	
	comp=Z,0.4nm,0.3s,baz=112,slow=36,SNR=2.5						
ULM	**Lac du Bonnet**	**13.84**	**3**	Pn	**Pn**	**12 26 17.8**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=184,slow=18,SNR=1.6						
ULM				Sn	Sn	12 28 41.0	-14
	comp=Z,0.6nm,0.3s,baz=106,slow=9,SNR=2.1						
ULM				Lg	Lg	12 30 09.6	
	comp=Z,0.2nm,0.3s,baz=156,slow=20,SNR=3.2						
	comp=Z,1.4nm,0.4s						
SADO	**Sadowa**	**15.82**	**53**	Pn	**Pn**	**12 26 45.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=266,slow=16,SNR=1.1						
SADO				Sn	**Sn**	**12 29 35.2**	**-7.7**
	comp=Z,0.4nm,0.3s,baz=272,slow=22,SNR=2.3						
SADO				Lg	Lg	12 31 13.9	
	comp=Z,0.1nm,0.3s,baz=280,slow=17,SNR=1.6						
	comp=Z,3.2nm,0.8s						
LPIG	**La Paz**	**16.87**	**227**	LR	LR	12 34 07.6	
	comp=Z,39nm,18.8s,baz=332,slow=39						
ILAR	**Eielson Array**	**40.86**	**330**	P	**P**	**12 30 47.5**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=115,slow=6.6,SNR=6.7						
	comp=Z,0.7nm,0.7s						
SPITS	**Spitsbergen Ar**	**59.15**	**13**	LR	LR	12 57 42.4	
	comp=Z,142nm,18.9s,baz=168,slow=35						

*HEL **09** 12:30:16.5±0.0, 67°.83N×20°.20E, h1km, ML1.7, ML2.1(UPP), Confirmed Induced event*

*IDC **09** 12:30:17.0±1.3, 67°.82N×20°.52E, h0km, mbtmp2.8/3, ML2.0/2, Error ellipse: s-maj=19.2km s-min=9.1km az=115.0*
*BER **09** 12:30:17.4±1.6, 67°.73N×20°.35E, h0km±10km, ML1.7, Confirmed Induced event*

ISC 09 12:30:15.7±0.7, 67°.81N±0°.02×20°.25E±0°.02, h0km, n38, σ0s79/63, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**14**	*i* P	**Pg**	**12 30 18.8**	**+0.4**
KUA				*i* S	**Sg**	**12 30 20.7**	**+0.4**
RATU	**Laukkuluspa**	**0.25**	**272**	*i* P	**Pg**	**12 30 20.5**	**+0.1**
KOVU	**Salmi**	**0.41**	**356**	*i* P	**Pg**	**12 30 23.5**	**0.0**
KOVU				*i* S	**Sg**	**12 30 28.9**	**0.0**
NIKU	**Nikkaluokta**	**0.46**	**277**	*i* P	**Pg**	**12 30 24.4**	**-0.1**
LANU	**Lannavaara**	**0.70**	**69**	*e*P	**Pg**	**12 30 29.3**	**+0.2**
LANU				*e*S	**Sg**	**12 30 38.5**	**+0.4**
DUNU	**Dundret**	**0.71**	**170**	*i* P	**Pg**	**12 30 29.3**	**+0.1**
DUNU				*i* S	**Sg**	**12 30 38.9**	**+0.6**
MASU	**Masugnsbyn**	**0.76**	**117**	*i* P	**Pg**	**12 30 30.5**	**+0.2**
SALU	**Saltoluokta**	**0.80**	**238**	*e*P	**Pg**	**12 30 30.7**	**-0.2**
SALU				*e*S	**Sg**	**12 30 41.9**	**+0.7**
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	**Pg**	**12 30 39.1**	**+0.2**
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	**Pg**	**12 30 38.9**	**0.0**
KIF				*e*S	**Sg**	**12 30 54.7**	**+0.1**
KIF				MSG		12 30 57.0	
	comp=Z,9.0nm,0.1s						
PAJU	**Pajala**	**1.36**	**124**	*e*P	**Pg**	**12 30 41.1**	**-0.6**
PAJU				*e*S	**Sg**	**12 30 59.1**	**-0.3**
HEF	**Hetta**	**1.41**	**63**	*e*P	**Pn**	**12 30 42.0**	**-0.6**
HEF	**Hetta**	**1.41**	**63**	*e*P	**Pn**	**12 30 42.0**	**-0.6**
HEF				*e*S	**Sg**	**12 31 00.8**	**-0.2**
HEF	**Hetta**	**1.41**	**63**	*e*P	**Pn**	**12 30 41.9**	**-0.7**
HEF				*e*S	**Sg**	**12 31 00.3**	**-0.7**
HEF				MSG		12 31 06.3	
	comp=Z,3.9nm,0.2s						
ERTU	**Ertsjaerv**	**1.48**	**148**	*e*P	**Pn**	**12 30 42.9**	**-0.6**
ERTU				*e*S	**Sg**	**12 31 02.3**	**-0.7**
KLF	**Kolari**	**1.54**	**110**	*e*P	**Pn**	**12 30 44.0**	**-0.4**
KLF				*e*SG	**Sn**	**12 31 05.2**	**+0.1**
KTK1	**Kautokeino**	**1.64**	**41**	*e*P	**Pn**	**12 30 45.7**	**0.0**
KTK1				*e*S	**Sn**	**12 31 07.6**	**+0.2**
KTK1				IAML		12 31 11.0	
	comp=Z,8.9nm,0.3s						
KTK1	**Kautokeino**	**1.64**	**41**	*e*P	**Pn**	**12 30 45.4**	**-0.3**
KTK1				*e*S	**Sn**	**12 31 06.5**	**-0.9**
HARU	**Harads**	**1.68**	**170**	*e*P	**Pn**	**12 30 46.5**	**+0.2**
JETT	**Jettan, Norway**	**1.75**	**2**	*e*P	**Pn**	**12 30 47.5**	**+0.2**
JETT				*e*S	**Sn**	**12 31 10.1**	**-0.2**
JETT				IAML		12 31 14.4	
	comp=Z,28nm,0.3s						
TRO	**Tromso**	**1.89**	**346**	*e*P	**Pn**	**12 30 49.5**	**+0.3**
TRO				*e*S	**Sb**	**12 31 14.8**	**-0.3**
TRO				IAML		12 31 17.2	
	comp=Z,15nm,0.4s						
TRO	**Tromso**	**1.89**	**346**	*e*P	**Pn**	**12 30 49.6**	**+0.5**
TRO				*e*SG	**Sb**	**12 31 15.1**	**0.0**
STEI	**Steigen**	**1.90**	**276**	*e*P	**Pb**	**12 30 50.5**	**-0.6**
STEI				IAML		12 31 20.7	
	comp=Z,13nm,0.4s						
STEI	**Steigen**	**1.90**	**276**	*e*PG	**Pb**	**12 30 50.5**	**-0.6**
STEI				*e*SG	**Sg**	**12 31 16.6**	**0.0**
FAUS	**Fauske**	**1.95**	**259**	*e*P	**Pb**	**12 30 51.1**	**-0.8**
FAUS				*e*S	**Sn**	**12 31 14.5**	**-0.6**
FAUS				IAML		12 31 19.2	
	comp=Z,11nm,0.3s						
KALU	**Kalix**	**2.32**	**146**	*e*P	**Pn**	**12 30 56.4**	**+1.4**
KALU				*e*SG	**Sb**	**12 31 28.8**	**+1.4**
TOF	**Tornio**	**2.37**	**135**	*e*PB	**Pb**	**12 30 57.6**	**-1.5**
TOF				*e*SG	**Sb**	**12 31 29.6**	**+0.7**
TOF				MSG		12 31 31.2	
	comp=Z,4.5nm,0.2s						
SGF	**Sodankyl**	**2.43**	**96**	*e*P	**Pn**	**12 30 57.7**	**+1.1**
SGF				*e*SB	**Sn**	**12 31 28.9**	**+1.9**
SGF				MSG		12 31 34.8	
	comp=Z,2.9nm,0.2s						
LOF	**Lofoten**	**2.55**	**280**	*e*P	**Pn**	**12 30 59.1**	**+0.9**
LOF				*e*		12 31 35.5	
LOF				IAML		12 31 38.5	
	comp=Z,5.5nm,0.4s						
RNF	**Rovaniemi**	**2.55**	**116**	*e*PB	**Pn**	**12 31 00.3**	**+2.1**
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	**Pn**	**12 30 59.5**	**+0.8**
ARA0				*e*		12 31 32.5	
ARA0				IAML		12 31 38.9	
	comp=Z,5.2nm,0.4s						
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	**Pn**	**12 31 00.2**	**+1.5**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn	**Pn**	**12 30 59.

0.8nm,1.1s
STKA Stephens Creek 5.79 128 Pn **Pn 12 41 53.5 +2.2**
0.1nm,0.3s,baz=301,slow=12,SNR=1.4
STKA Sn **Sn 12 42 56.8 -1.0**
0.2nm,0.3s,baz=299,slow=18,SNR=3.7
2.0nm,0.9s
WC3 Warramunga Arr 8.61 348 P **Pn 12 42 32.7 +2.5**
baz=8.6
WRA Warramunga Arb 8.63 348 Pn **Pn 12 42 32.0 +1.5**
baz=170,slow=13,SNR=1.2
WRA Sn **Sn 12 44 02.5 -5.5**
baz=168,slow=24,SNR=1.1
0.4nm,0.8s

GCMT ***09*** *12:46:07.0±0.2, 62°.94S×0°.01×114°.24W±0°.02, h16km±1km, MW4.9/98, Moment Tensor Solution. s36,c43; s98,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.09; $M_{\theta\theta}$1.28±.09; $M_{\phi\phi}$-0.89±.09; $M_{r\theta}$0.99±.27; $M_{\theta\phi}$2.57±.08; $M_{\phi r}$1.10±.29; Best double couple: $M_0$3.09200×10^{16} NP1:ϕ_s11.00000°, δ84.00000°, λ158.00000°. NP2: ϕ_s104.00000°, δ68.00000°, λ7.00000°. Principal axes: T 3.5150, Plg20.0000°, Azm325.0000°; N -0.8420, Plg67.0000°, Azm176.0000°; P -2.6690, Plg11.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
IDC 09 12:46:01.2±1.5, 50°.88S×113°.83W, h0km, mb3.8/3, mbtmp3.8/3, MS4.1/41 Error ellipse: s-maj=88.1km s-min=39.2km az=147.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.03**	**138**	LR	LR	13 00 43.4	
	comp=Z,692nm,18.8s,baz=278,slow=30						
H03S2	**Juan Fernandez**	**30.54**	**70**	T	T	13 24 09.2	
	baz=224						
H03S1	**Juan Fernandez**	**30.55**	**70**	T	T	13 24 10.5	
	baz=224						
H03S3	**Juan Fernandez**	**30.56**	**70**	T	T	13 24 09.5	
	baz=224						
H03N3	**Juan Fernandez**	**30.81**	**69**	T	T	13 24 29.7	
	baz=229,slow=71,SNR=249						
H03N2	**Juan Fernandez**	**30.82**	**69**	T	T	13 24 23.0	
	baz=229,slow=71,SNR=365						
H03N1	**Juan Fernandez**	**30.83**	**69**	T	T	13 24 27.5	
	baz=229,slow=71,SNR=165						
PLCA	**Paso Flores**	**31.42**	**88**	LR	LR	13 01 53.9	
	comp=Z,214nm,21.9s,baz=234,slow=30						
TBI	**Tubuai**	**38.90**	**302**	*e*LR	LR	13 03 29.9	
	comp=Z,499nm,27.8s						
QSPA	**South Pole Qui**	**39.33**	**180**	LR	LR	13 09 02.7	
	comp=Z,230nm,18.8s,baz=100,slow=35						
VNDA	**Vanda**	**39.75**	**200**	LR	LR	13 07 48.1	
	comp=Z,60nm,18.6s,baz=100,slow=33						
MEH	**Mehetia**	**42.70**	**308**	*e*T	T	13 38 11.9	
	9.3nm,0.2s						
PAE	**Paea**	**43.65**	**306**	*e*T	T	13 39 21.3	
	0.7nm,0.3s						
PPT2	**Papeete2**	**43.71**	**306**	*e*S	S	13 00 17.3	-22
	78nm,25.2s						
PPT2				*e*LR	LR	13 05 42.8	
	comp=Z,862nm,26.8s						
PPT	**Papeete**	**43.73**	**306**	LR	LR	13 06 52.1	
	comp=Z,252nm,20.1s,baz=148,slow=29						
LVC	**Limon Verde**	**44.74**	**68**	LR	LR	13 08 03.6	
	comp=Z,176nm,18.6s,baz=230,slow=30						
RAR	**Rarotonga**	**46.42**	**292**	LR	LR	13 08 14.5	
	comp=Z,78nm,19.2s,baz=135,slow=29						
TAOE	**Nuku Hiva Isla**	**47.19**	**323**	*e*LR	LR	13 07 21.4	
	comp=Z,740nm,25.9s						
SNAA	**Sanae**	**48.54**	**157**	LR	LR	13 13 04.9	
	comp=Z,281nm,21.4s,baz=192,slow=34						
URZ	**Urewera**	**49.05**	**257**	LR	LR	13 11 04.3	
	comp=Z,280nm,19.4s,baz=211,slow=31						
CPUP	**Villa Florida**	**49.07**	**82**	LR	LR	13 12 08.6	
	comp=Z,222nm,21.5s,baz=231,slow=32						
NNA	**Nana**	**49.10**	**51**	LR	LR	13 09 54.3	
	comp=Z,301nm,20.9s,baz=208,slow=29						
RPZ	**Rata Peaks**	**49.40**	**247**	LR	LR	13 11 16.8	
	comp=Z,118nm,20.1s,baz=103,slow=31						
LPAZ	**La Paz**	**50.16**	**64**	P	P	12 54 58.6	-0.6
	3.5nm,1.1s,baz=211,slow=5.6,SNR=5.8						
	3.5nm,1.1s						
RAO	**Raoul Island**	**51.82**	**269**	LR	LR	13 16 26.1	
	comp=Z,39nm,18.1s,baz=90,slow=35						
ATAH	**Atahualpa**	**52.58**	**46**	LR	LR	13 12 10.2	
	comp=Z,276nm,18.6s,baz=226,slow=30						
SIV	**San Ignacio**	**54.51**	**70**	LR	LR	13 14 57.1	
	comp=Z,124nm,20.9s,baz=283,slow=32						
MAW	**Mawson**	**61.82**	**179**	LR	LR	13 22 41.1	
	comp=Z,304nm,18.3s,baz=175,slow=36						
ROSC	**El Rosal**	**65.03**	**44**	LR	LR	13 19 06.8	
	comp=Z,159nm,19.0s,baz=242,slow=30						
DZM	**Mont Dzumac**	**66.80**	**263**	*e*LR	LR	13 16 34.1	
	comp=Z,243nm,23.4s						
DZM	**Mont Dzumac**	**66.80**	**263**	LR	LR	13 18 57.9	
	comp=Z,123nm,20.4s,baz=125,slow=30						
CMIG	**Matias Romero**	**69.69**	**19**	LR	LR	13 21 03.3	
	comp=Z,62nm,18.3s,baz=214,slow=30						
SDV	**Santo Domingo**	**70.27**	**46**	LR	LR	13 23 31.8	
	comp=Z,103nm,20.7s,baz=171,slow=32						
STKA	**Stephens Creek**	**74.28**	**239**	LR	LR	13 25 15.0	
	comp=Z,90nm,18.0s,baz=193,slow=32						
LPIG	**La Paz**	**74.71**	**3**	LR	LR	13 23 08.4	
	comp=Z,131nm,18.2s,baz=195,slow=30						
MDP	**Montagnes des**	**76.36**	**64**	LR	LR	13 26 45.5	
	comp=Z,96nm,19.4s,baz=267,slow=32						
RCBR	**Riachuelo**	**77.89**	**84**	LR	LR	13 29 48.5	
	comp=Z,251nm,21.2s,baz=357,slow=34						
TXAR	**Lajitas Array**	**80.36**	**9**	P	P	12 58 14.2	+0.2
	0.4nm,0.8s,baz=171,slow=6.3,SNR=4.3						
	0.4nm,0.8s						
SJG	**San Juan**	**80.41**	**45**	LR	LR	13 30 08.1	
	comp=Z,56nm,19.7s,baz=258,slow=33						
CTA	**Charters Tower**	**80.70**	**250**	LR	LR	13 28 40.0	
	comp=Z,35nm,18.4s,baz=100,slow=32						
PFO	**Pinyon Flats O**	**84.15**	**358**	LR	LR	13 28 11.3	
	comp=Z,79nm,19.6s,baz=248,slow=30						
H01W1	**Cape Leeuwin H**	**84.72**	**218**	T	T	14 33 56.1	
	baz=151,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**84.72**	**218**	T	T	14 33 56.4	
	baz=151,slow=76,SNR=43						
H01W3	**Cape Leeuwin H**	**84.73**	**218**	T	T	14 33 57.4	
	baz=151,slow=76,SNR=36						
ASAR	**Alice Springs**	**84.91**	**238**	P	P	12 58 37.9	-0.2
	1.0nm,1.1s,baz=126,slow=6.2,SNR=4.2						
ASAR				LR	LR	13 31 43.7	
	comp=Z,121nm,20.2s,baz=160,slow=32						
	1.0nm,1.1s						
ANMO	**Albuquerque**	**85.70**	**6**	LR	LR	13 28 05.8	
	comp=Z,127nm,20.4s,baz=135,slow=30						
WRA	**Warramunga Arr**	**87.67**	**241**	LR	LR	13 31 00.1	
	comp=Z,124nm,19.9s,baz=144,slow=31						
SUR	**Sutherland**	**87.96**	**143**	LR	LR	13 30 05.8	
	comp=Z,163nm,21.8s,baz=206,slow=30						
PMG	**Port Moresby**	**88.41**	**257**	LR	LR	13 30 31.8	
	comp=Z,114nm,21.1s,baz=139,slow=30						
TKL	**Tuckaleechee C**	**90.14**	**24**	LR	LR	13 31 54.1	
	comp=Z,62nm,21.5s,baz=208,slow=30						
YBH	**Yreka Blue Hor**	**92.55**	**353**	LR	LR	13 31 37.7	
	comp=Z,141nm,19.2s,baz=200,slow=30						
BOSA	**Boshof**	**93.00**	**145**	LR	LR	13 35 35.5	
	comp=Z,76nm,18.6s,baz=192,slow=32						
PDAR	**Pinedale Array**	**93.34**	**3**	LR	LR	13 33 17.3	
	comp=Z,75nm,21.4s,baz=252,slow=30						
FITZ	**Fitzroy Crossi**	**93.85**	**235**	LR	LR	13 35 23.9	
	comp=Z,142nm,22.0s,baz=158,slow=32						
LBTB	**Lobatse**	**96.39**	**144**	LR	LR	13 35 04.1	
	comp=Z,178nm,21.5s,baz=208,slow=30						
H11S2	**WAKE ISLAND Hy**	**97.70**	**290**	T	T	14 47 46.4	
	baz=140,slow=76,SNR=174						
H11S3	**WAKE ISLAND Hy**	**97.71**	**290**	T	T	14 47 38.1	
	baz=140,slow=76,SNR=136						
H11S1	**WAKE ISLAND Hy**	**97.71**	**290**	T	T	14 47 39.6	
	baz=140,slow=76,SNR=111						
TSUM	**Tsumeb**	**98.23**	**134**	LR	LR	13 34 42.6	
	comp=Z,41nm,22.0s,baz=148,slow=30						
H11N3	**WAKE ISLAND Hy**	**98.52**	**291**	T	T	14 48 38.7	
	baz=142,slow=75,SNR=33						
H11N1	**WAKE ISLAND Hy**	**98.53**	**291**	T	T	14 48 36.2	
	baz=142,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**98.54**	**291**	T	T	14 48 49.2	
	baz=142,slow=75,SNR=19						
NEW	**Newport**	**98.80**	**358**	LR	LR	13 36 14.7	
	comp=Z,113nm,18.1s,baz=208,slow=30						
SADO	**Sadowa**	**99.90**	**24**	LR	LR	13 41 42.9	
	comp=Z,52nm,18.5s,baz=177,slow=33						
GERES	**GERESS Array B**	**146.70**	**73**	PKPbc	PKPbc	13 05 44.2	0.0
	0.2nm,0.6s,baz=224,slow=2.7,SNR=2.9						

NAO ***09*** *12:48:23.9±1.4, 62°.44N×2°.23E, ML3.7*
BJI ***09*** *12:48:24.0±0.0, 62°.40N×2°.30E, h5km, mb4.6/13, mB5.1/8, Ms4.9/2, Ms7 4.3/4*
IDC ***09*** *12:48:24.5±0.5, 62°.49N×2°.15E, h0km, mb4.3/24, mbtmp4.3/35, ML4.2/11, MS3.7/44, Error ellipse: s-maj=13.4km s-min=9.2km az=28.0*
LDG ***09*** *12:48:24.2±0.1, 62°.48N×2°.27E, h10km, Ml4.2/35, Error ellipse: s-maj=3.4km s-min=2.0km az=89.0*
MOS ***09*** *12:48:25.3±1.3, 62°.40N×2°.14E, h16km, mb4.7/30, Error ellipse: s-maj=10.5km s-min=4.8km az=102.1*
BGS ***09*** *12:48:26.1±1.4, 62°.49N×2°.18E, h28km±25km, ML3.8*
DNK ***09*** *12:48:26.0±4.7, 62°.38N×2°.45E, h5km, mb4.8, ML4.0, Probable volcanic*
NEIC ***09*** *12:48:26.5±1.9, 62°.41N±0°.08×2°.2E±0°.1, h10km±1km, mb4.8/52, Error ellipse: s-maj=15.2km s-min=5.3km az=30.0*
BER ***09*** *12:48:28.2±1.6, 62°.43N×2°.18E, h29km±8km, ML3.6, MW4.0, ML3.7(BGS), Confirmed Earthquake*
GCMT ***09*** *12:48:29.5±0.4, 62°.39N±0°.05×2°.38E±0°.06, h27km±1km, MW4.8/67, Moment Tensor Solution. s18,c21; s67,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.08±.18; $M_{\theta\theta}$-0.27±.10; $M_{\phi\phi}$-1.81±.11; $M_{r\theta}$0.74±.23; $M_{\theta\phi}$0.07±.07; $M_{\phi r}$0.11±.15; Best double couple: $M_0$2.05500×10^{16} NP1:ϕ_s13.00000°, δ48.00000°, λ112.00000°. NP2: ϕ_s162.00000°, δ46.00000°, λ67.00000°. Principal axes: T 2.2950, Plg74.0000°, Azm354.0000°; N -0.4790, Plg16.0000°, Azm179.0000°; P -1.8150, Plg1.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
UPP ***09*** *12:48:31.5±2.8, 62°.12N×3°.10E, h0km, ML3.4, Suspected explosion*
ISC 09 12:48:26.5±2.0, 62°.37N±0°.03×2°.27E±0°.03, h14km±12km, n703, σ2$09/756, mb4.7/76, MS3.7/40, 32C-42D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOO	**Floro**	**1.52**	**119**	Pn	**Pn**	**12 48 53.0**	**-0.1**
FOO				Sn	**Sn**	**12 49 11.2**	**-1.4**
FOO	**Floro**	**1.52**	**119**	⇓*iP*	**Pn**	**12 48 53.0**	**-0.1**
FOO				*e*S	**Sn**	**12 49 11.2**	**-1.4**
FOO				IAML		12 49 13.1	
	comp=N,750nm,0.3s						
FOO				IAML		12 49 13.1	
	comp=E,575nm,0.2s						
FOO	**Floro**	**1.52**	**119**	⇓*iP*	**Pn**	**12 48 53.0**	**-0.1**
FOO				*e*S	**Sn**	**12 49 11.2**	**-1.4**
FOO				IAML		12 49 13.1	
	comp=N,750nm,0.3s						
FOO				IAML		12 49 13.1	
	comp=E,575nm,0.2s						
FOO	**Floro**	**1.52**	**119**	⇓*iP*	**Pn**	**12 48 53.0**	**-0.1**
FOO				*e*S	**Sn**	**12 49 11.2**	**-1.4**
FOO				IAML		12 49 12.9	
	comp=Z,2μm,0.4s						
SUE	**Sulen**	**1.77**	**137**	⇓*iP*	**Pn**	**12 48 56.2**	**-0.3**
SUE				*e*S	**Sn**	**12 49 17.5**	**-1.3**
SUE				IAML		12 49 19.4	
	comp=Z,1μm,0.3s						
AKN	**Aaknes**	**2.22**	**93**	Pn	**Pn**	**12 49 03.4**	**+0.7**
AKN				Sn	**Sn**	**12 49 29.2**	**-0.7**
AKN	**Aaknes**	**2.22**	**93**	⇓*iP*	**Pn**	**12 49 03.3**	**+0.5**
AKN				*e*S	**Sn**	**12 49 29.0**	**-1.0**
HYA	**Hoyanger**	**2.22**	**121**	Pn	**Pn**	**12 49 02.8**	**+0.1**
HYA				Sn	**Sn**	**12 49 29.1**	**-0.7**
HYA	**Hoyanger**	**2.22**	**121**	⇓*iP*	**Pn**	**12 49 02.5**	**-0.2**
HYA				*e*S	**Sn**	**12 49 28.2**	**-1.7**
HYA				IAML		12 49 33.7	
	comp=Z,889nm,0.3s						
ASK	**Askoy**	**2.36**	**142**	⇓*iP*	**Pn**	**12 49 04.4**	**-0.2**
ASK				*e*S	**Sn**	**12 49 31.7**	**-1.5**
ASK				IAML		12 49 34.8	
	comp=Z,501nm,0.2s						
MOL	**Molde**	**2.46**	**83**	Pn	**Pn**	**12 49 04.7**	**-1.4**
MOL				Sn	**Sn**	**12 49 33.0**	**-2.8**
MOL	**Molde**	**2.46**	**83**	⇓*iP*	**Pn**	**12 49 04.6**	**-1.4**
MOL				*e*S	**Sn**	**12 49 32.5**	**-3.3**
MOL				IAML		12 49 35.1	
	comp=Z,604nm,0.2s						
BER	**Bergen**	**2.48**	**142**	Pn	**Pn**	**12 49 06.0**	**-0.2**
BER				Sn	**Sn**	**12 49 34.0**	**-2.2**
BER	**Bergen**	**2.48**	**142**	*e*P	**Pn**	**12 49 06.1**	**-0.2**
BER				*e*S	**Sn**	**12 49 34.2**	**-2.1**
BER				IAML		12 49 35.6	
	comp=E,182nm,0.2s						
BER				IAML		12 49 39.5	
	comp=N,131nm,0.3s						
BER	**Bergen**	**2.48**	**142**	*e*P	**Pn**	**12 49 06.1**	**-0.2**
BER				*e*S	**Sn**	**12 49 34.2**	**-2.1**
BER				IAML		12 49 35.6	
	comp=E,182nm,0.2s						
BER				IAML		12 49 39.5	
	comp=N,131nm,0.3s						
BER	**Bergen**	**2.48**	**142**	P	**Pn**	**12 49 06.0**	**-0.2**
BER	**Bergen**	**2.48**	**142**	⇓*iP*	**Pn**	**12 49 05.9**	**-0.4**
BER				*e*S	**Sn**	**12 49 34.2**	**-2.1**
BER				IAML		12 49 38.1	
	comp=Z,320nm,0.2s						
LRW	**Lerwick**	**2.79**	**218**	Pn	**Pn**	**12 49 10.6**	**+0.1**
LRW				Sn	**Sn**	**12 49 42.2**	**-1.8**
LRW	**Lerwick**	**2.79**	**218**	⇓*iP*	**Pn**	**12 49 10.7**	**+0.1**
LRW				*e*S	**Sn**	**12 49 42.4**	**-1.5**
LRW				IAML		12 49 44.1	
	comp=E,465nm,0.4s						
LRW				IAML		12 49 47.6	
	comp=N,557nm,0.3s						
LRW	**Lerwick**	**2.79**	**218**	⇓*iP*	**Pn**	**12 49 10.7**	**+0.1**
LRW				*e*S	**Sn**	**12 49 42.4**	**-1.5**
LRW				IAML		12 49 44.1	
	comp=E,465nm,0.4s						
LRW				IAML		12 49 47.6	
	comp=N,557nm,0.3s						
LRW	**Lerwick**	**2.79**	**218**	⇓*iP*	**Pn**	**12 49 10.6**	**+0.1**
LRW				*e*S	**Sn**	**12 49 41.7**	**-2.2**
LRW				IAML		12 49 48.4	
	comp=Z,484nm,0.3s						
DOMB	**Dombas**	**3.20**	**93**	Pn	**Pn**	**12 49 16.7**	**+0.4**
DOMB				Sn	**Sn**	**12 49 52.0**	**-2.2**
DOMB	**Dombas**	**3.20**	**93**	⇓*iP*	**Pn**	**12 49 16.7**	**+0.4**
DOMB				IAML		12 50 03.3	
	comp=Z,361nm,0.3s						
ODD1	**Odda**	**3.25**	**137**	⇓*iP*	**Pn**	**12 49 16.9**	**0.0**
ODD1				*e*S	**Sn**	**12 49 52.9**	**-2.4**
SKAR	**Skarslia**	**3.35**	**118**	⇓*iP*	**Pn**	**12 49 18.6**	**+0.3**
SKAR				*e*S	**Sn**	**12 49 55.9**	**-2.0**
SKAR				IAML		12 50 12.1	
	comp=Z,564nm,0.4s						
KMY	**Karmoy**	**3.49**	**154**	Pn	**Pn**	**12 49 19.5**	**-0.6**
KMY				Sn	**Sn**	**12 49 57.4**	**-3.7**
KMY	**Karmoy**	**3.49**	**154**	⇓*iP*	**Pn**	**12 49 19.4**	**-0.8**
KMY				*e*S	**Sn**	**12 49 57.4**	**-3.7**
BLS5	**Blasjo**	**3.59**	**143**	⇓*iP*	**Pn**	**12 49 21.4**	**-0.2**
BLS5				*e*S	**Sn**	**12 50 00.4**	**-3.4**
BLS5				IAML		12 50 02.3	
	comp=Z,279nm,0.3s						
TBLU	**Trondheim**	**3.77**	**73**	Pn	**Pn**	**12 49 23.7**	**-0.3**
TBLU				Sn	**Sn**	**12 50 06.4**	**-1.8**
TBLU	**Trondheim**	**3.77**	**73**	*e*P	**Pn**	**12 49 23.6**	**-0.5**
TBLU				*e*S	**Sn**	**12 50 06.8**	**-1.4**
TBLU				IAML		12 50 17.1	
	comp=Z,229nm,0.3s						
NC204	**NORSAR Array S**	**4.17**	**101**		**Pn**	**12 49 29.7**	**+0.1**
NBO00	**NORSAR Array S**	**4.27**	**105**		**Pn**	**12 49 30.9**	**0.0**
SOFL	**Sornfelli, Far**	**4.33**	**270**	*e*P	**Pn**	**12 49 29.2**	**-2.7**
SOFL	**Sornfelli, Far**	**4.33**	**270**	*e*P	**Pn**	**12 49 29.2**	**-2.7**
SOFL	**Sornfelli, Far**	**4.33**	**270**	*e*P	**Pn**	**12 49 29.1**	**-2.7**
SOFL				*e*S	**Sn**	**12 50 15.1**	**-7.1**
SOFL				IAML		12 50 18.4	
	comp=Z,221nm,0.3s						
NAO01	**NORSAR Array S**	**4.39**	**107**		**Pn**	**12 49 32.5**	**0.0**
NAO01	**NORSAR Array S**	**4.39**	**107**	⇓*iP*	**Pn**	**12 49 32.4**	**-0.2**
NAO01				*e*S	**Sn**	**12 50 19.4**	**-4.0**
NAO01				IAML		12 50 40.1	
	comp=Z,189nm,0.3s						
NB2	**NORSAR Subarra**	**4.46**	**103**	Pn	**Pn**	**12 49 33.4**	**-0.2**
	baz=292,slow=14						
NB2				Sn	**Sn**	**12 50 23.4**	**-1.8**
	baz=288,slow=28						
NB2	**NORSAR Subarra**	**4.46**	**103**	Pn	**Pn**	**12 49 33.4**	**-0.2**
	slow=14						
NB2				Sn	**Sn**	**12 50 23.4**	**-1.8**
	slow=28						
NOA	**NORSAR Array B**	**4.46**	**103**	Pn	**Pn**	**12 49 33.2**	**-0.3**
	comp=Z,2.6nm,0.3s,baz=290,slow=12,SNR=492						
NOA				Sn	**Sn**	**12 50 20.7**	**-4.6**
	comp=Z,3.1nm,0.3s,baz=296,slow=20,SNR=6.2						
	comp=Z,27nm,0.3s						
NC303	**NORSAR Array S**	**4.47**	**101**		**Pn**	**12 49 33.5**	**-0.2**
KONO	**Kongsberg**	**4.49**	**124**	Pn	**Pn**	**12 49 33.5**	**-0.4**
KONO	**Kongsberg**	**4.49**	**124**	P	**Pn**	**12 49 33.5**	**-0.4**
KONO	**Kongsberg**	**4.49**	**124**	*e*P	**Pn**	**12 49 33.3**	**-0.6**
KONO				*e*S	**Sn**	**12 50 22.3**	**-3.5**
KONO				IAML		12 50 30.4	
	comp=Z,113nm,0.5s						
NB201	**NORSAR Array S**	**4.49**	**103**		**Pn**	**12 49 33.9**	**-0.1**
NC405	**NORSAR Array S**	**4.66**	**101**	Pn	**Pn**	**12 49 36.3**	**0.0**
NC602	**NORSAR Array S**	**4.73**	**106**		**Pn**	**12 49 36.6**	**-0.6**
NRA0	**NORESS Array S**	**4.73**	**106**	Pn	**Pn**	**12 49 36.7**	**-0.5**
	baz=300,slow=12						
NRA0				Sn	**Sn**	**12 50 27.7**	**-4.0**
	baz=301,slow=22						
NRA0	**NORESS Array S**	**4.73**	**106**	Pn	**Pn**	**12 49 36.7**	**-0.5**
	slow=12						
NRA0				Sn	**Sn**	**12 50 27.7**	**-4.0**
	slow=22						
SNART	**Snartemo**	**4.73**	**147**	*e*P	**Pn**	**12 49 36.6**	**-0.6**
SNART				*e*S	**Sn**	**12 50 27.7**	**-3.9**
SNART				IAML		12 50 32.0	
	comp=Z,216nm,0.3s						
OSL	**Oslo**	**4.76**	**117**	*e*P	**Pn**	**12 49 37.7**	**+0.1**
OSL				*e*S	**Sn**	**12 50 29.4**	**-3.2**
OSL				IAML		12 50 58.7	
	comp=Z,254nm,0.5s						
NSS	**Namsos**	**4.86**	**59**	*e*P	**Pn**	**12 49 37.7**	**-1.3**
NSS				*e*S	**Sn**	**12 50 29.6**	**-5.4**
NSS				IAML		12 50 37.3	
	comp=Z,487nm,0.4s						
BIGH	**Upper Bighouse**	**4.95**	**221**	*e*P	**Pn**	**12 49 39.5**	**-0.7**
BIGH				*e*S	**Sn**	**12 50 31.6**	**-5.4**
BIGH				IAML		12 50 34.2	
	comp=E,170nm,0.4s						
BIGH				IAML		12 50 35.0	
	comp=N,132nm,0.5s						
BIGH	**Upper Bighouse**	**4.95**	**221**	*e*P	**Pn**	**12 49 39.5**	**-0.7**
BIGH				*e*S	**Sn**	**12 50 31.6**	**-5.4**
BIGH				IAML		12 50 34.2	
	comp=E,170nm,0.4s						
BIGH				IAML		12 50 35.0	
	comp=N,132nm,0.5s						
BIGH	**Upper Bighouse**	**4.95**	**221**	*e*P	**Pn**	**12 49 39.5**	**-0.7**
BIGH				*e*S	**Sn**	**12 50 31.8**	**-5.3**
HOMB	**Homborsund**	**5.15**	**140**	*e*P	**Pn**	**12 49 42.3**	**-0.6**
HOMB				*e*S	**Sn**	**12 50 36.9**	**-5.1**
HOMB				IAML		12 50 40.5	
	comp=Z,90nm,0.3s						
STRU	**Stroemstad**	**5.51**	**123**	*e*P	**Pn**	**12 49 46.5**	**-1.3**
STRU				*e*S	**Sn**	**12 50 44.1**	**-6.8**
STRU	**Stroemstad**	**5.51**	**123**	P	**Pn**	**12 49 46.6**	**-1.3**
STRU				S	**Sn**	**12 50 43.8**	**-7.0**
STRU	**Stroemstad**	**5.51**	**123**	P	**Pn**	**12 49 46.6**	**-1.3**
STRU				S	**Sn**	**12 50 43.8**	**-7.0**
MCD	**Coleburn Disti**	**5.54**	**212**	*e*P	**Pn**	**12 49 47.7**	**-0.7**
MCD	**Coleburn Disti**	**5.54**	**212**	*e*P	**Pn**	**12 49 47.7**	**-0.7**
MCD	**Coleburn Disti**	**5.54**	**212**	*e*P	**Pn**	**12 49 47.7**	**-0.7**
NOD	**Norderasen**	**5.85**	**74**	*e*P	**Pn**	**12 49 52.2**	**-0.5**
UDD	**Uddeholm**	**5.93**	**108**	P	**Pn**	**12 49 53.3**	**-0.4**
UDD				S	**Sn**	**12 50 56.0**	**-5.3**
HFS	**Hagfors**	**5.95**	**107**	Pn	**Pn**	**12 49 53.8**	**-0.3**
	comp=Z,21nm,0.3s,baz=282,slow=12,SNR=498						
HFS				Sn	**Sn**	**12 50 57.1**	**-4.7**
	comp=Z,24nm,0.3s,baz=295,slow=21,SNR=9.2						
HFS				LR	LR	12 52 35.8	
	comp=Z,264nm,21.8s,baz=319,slow=42						
	comp=Z,44nm,0.3s						
HFS	**Hagfors**	**5.95**	**107**	Pn	**Pn**	**12 49 53.7**	**-0.3**
	baz=301,slow=12						
HFS				Sn	**Sn**	**12 50 57.3**	**-4.5**
	baz=290,slow=28						
HFS	**Hagfors**	**5.95**	**107**	Pn	**Pn**	**12 49 53.7**	**-0.3**
	slow=12						
HFS				Sn	**Sn**	**12 50 57.3**	**-4.5**
	slow=28						
MDO	**Dochfour**	**5.96**	**217**	*e*P	**Pn**	**12 49 52.8**	**-1.3**
MDO	**Dochfour**	**5.96**	**217**	*e*P	**Pn**	**12 49 52.8**	**-1.3**
MDO	**Dochfour**	**5.96**	**217**	*e*P	**Pn**	**12 49 52.8**	**-1.3**
DRUM	**Mains of Drumt**	**5.98**	**206**	*e*P	**Pn**	**12 49 53.9**	**-0.5**
DRUM	**Mains of Drumt**	**5.98**	**206**	*e*P	**Pn**	**12 49 53.9**	**-0.5**
DRUM	**Mains of Drumt**	**5.98**	**206**	*e*P	**Pn**	**12 49 53.8**	**-0.6**
DRUM				*e*S	**Sn**	**12 50 56.6**	**-5.9**
STOK	**Stokkvaagen**	**6.13**	**45**	Pn	**Pn**	**12 49 53.5**	**-2.8**
STOK				Sn	Sn	12 50 55.8	-10
STOK	**Stokkvaagen**	**6.13**	**45**	*e*P	**Pn**	**12 49 53.8**	**-2.6**
STOK				*e*S	Sn	12 50 55.7	-10
KAC	**Achnashellach**	**6.19**	**221**	*e*P	**Pn**	**12 49 56.0**	**-1.2**
KAC	**Achnashellach**	**6.19**	**221**	*e*P	**Pn**	**12 49 56.0**	**-1.2**
KAC	**Achnashellach**	**6.19**	**221**	*e*P	**Pn**	**12 49 56.0**	**-1.2**
LEWI	**Lewis, Hebride**	**6.21**	**231**	*e*P	**Pn**	**12 49 55.9**	**-1.6**
LEWI	**Lewis, Hebride**	**6.21**	**231**	*e*P	**Pn**	**12 49

EBL Broad Law 7.16 205 *eP* **Pn 12 50 10.1 -0.4**
EBL Broad Law 7.16 205 *eP* **Pn 12 50 10.1 -0.4**
EBL Broad Law 7.16 205 *eP* **Pn 12 50 10.1 -0.4**
PGBU Glenifferbraes 7.43 211 *eP* **Pn 12 50 13.5 -0.8**
PGBU Glenifferbraes 7.43 211 *eP* **Pn 12 50 13.5 -0.8**
PGBU Glenifferbraes 7.43 211 *eP* **Pn 12 50 13.5 -0.8**
LOF Lofoten 7.46 34 *eP* **Pn 12 50 11.1 -3.6**
LOF *eS* Sn 12 51 27.6 -11
LOF IAML 12 51 33.5
comp=Z,154nm,0.5s
FAUS Fauske 7.47 42 *eP* **Pn 12 50 13.0 -1.8**
FAUS *eS* Sn 12 51 29.6 -10
FAUS IAML 12 51 38.4
comp=Z,277nm,0.3s
EKA Eskdalemuir Ar 7.59 204 Pn **Pn 12 50 15.8 -0.7**
baz=16,slow=12
EKA Sn **Sn 12 51 35.9 -6.3**
baz=16,slow=22
EKA LR LR 12 53 46.9
comp=Z,441nm,19.0s,baz=18,slow=42
comp=Z,5.6nm,0.3s
EKA Eskdalemuir Ar 7.59 204 Pn **Pn 12 50 15.6 -0.9**
EKA Sn **Sn 12 51 36.4 -5.8**
EKA Eskdalemuir Ar 7.59 204 Pn **Pn 12 50 15.6 -0.9**
EKA Sn **Sn 12 51 36.4 -5.8**
ESK Eskdalemuir 7.62 204 *eP* **Pn 12 50 16.2 -0.6**
ESK Eskdalemuir 7.62 204 *eP* **Pn 12 50 16.2 -0.6**
ESK Eskdalemuir 7.62 204 **Pn 12 50 17.2 +0.4**
ESK Eskdalemuir 7.62 204 P **Pn 12 50 17.2 +0.4**
ESK Eskdalemuir 7.62 204 *eP* **Pn 12 50 16.1 -0.7**
ESK *eS* **Sn 12 51 36.5 -6.3**
STEI Steigen 7.80 39 *eP* **Pn 12 50 16.8 -2.4**
STEI *eS* Sn 12 51 35.0 -12
STEI IAML 12 51 47.8
comp=Z,90nm,0.5s
UPP Uppsala 7.85 102 *eP* **Pn 12 50 19.4 -0.6**
EDMD Edmundbyers 7.87 198 *eP* **Pn 12 50 19.4 -1.0**
EDMD *eS* **Sn 12 51 43.0 -6.2**
NEWG New Galloway 8.02 208 *eP* **Pn 12 50 21.1 -1.1**
NEWG New Galloway 8.02 208 *eP* **Pn 12 50 21.1 -1.1**
NEWG New Galloway 8.02 208 *eP* **Pn 12 50 21.1 -1.1**
VIKU Vikbolandet 8.11 112 *eP* **Pn 12 50 23.4 -0.2**
GDLE Glaisdale, N Y 8.13 193 *eP* **Pn 12 50 22.6 -1.3**
GDLE *eS* Sn 12 51 46.0 -9.5
DEL Delary 8.35 130 *eP* **Pn 12 50 25.8 -1.1**
COP Copenhagen 8.50 137 *i* P **Pn 12 50 29.4 +0.5**
COP *eS* **Sn 12 51 56.5 -7.9**
SALU Saltoluokta 8.53 47 *eP* **Pn 12 50 27.8 -1.5**
SALU *eS* Sn 12 51 53.8 -11
AAL Aland 8.81 97 *eP* **Pn 12 50 31.5 -1.6**
RAF Rauma 9.35 90 *eP* **Pn 12 50 38.8 -1.7**
VAF Ylistaro 9.39 77 P **Pn 12 50 41.8 +0.7**
JMIC Jan Mayen 9.63 339 Pn **Pn 12 50 41.1 -3.2**
comp=Z,6.3nm,0.3s,baz=119,slow=14,SNR=1.2
JMIC Sn Sn 12 52 19.5 -13
comp=Z,10nm,0.3s,baz=138,slow=12,SNR=1.7
comp=Z,47nm,0.7s
JMIC Jan Mayen 9.63 339 Pn **Pn 12 50 42.5 -1.8**
JMIC Jan Mayen 9.63 339 Pn **Pn 12 50 42.5 -1.8**
BSD Bornholm Skovb 9.79 132 *eP* **Pn 12 50 46.1 -0.4**
BSD Bornholm Skovb 9.79 132 *i* P **Pn 12 50 44.9 -1.6**
BSD *i* S **Sn 12 52 29.5 -6.5**
TRO Tromso 9.92 36 *eP* **Pn 12 50 47.6 -0.7**
TRO *eS* Sn 12 52 23.9 -15
TRO IAML 12 52 40.8
comp=Z,26nm,0.5s
KIF Kilpisjarvi 10.09 41 Pn **Pn 12 50 49.2 -1.4**
KIF Sn **Sn 12 52 36.2 -7.2**
KIF Kilpisjarvi 10.09 41 Pn **Pn 12 50 49.2 -1.4**
KIF Sn **Sn 12 52 36.2 -7.2**
DSB Dublin 10.23 211 Pn **Pn 12 50 51.0 -1.7**
JETT Jettan, Norway 10.29 38 Pn **Pn 12 50 52.5 -0.8**
JETT Sn Sn 12 52 38.3 -10
JETT Jettan, Norway 10.29 38 Pn **Pn 12 50 52.5 -0.8**
JETT Sn Sn 12 52 38.3 -10
BORG Borgarnes 10.76 293 LR LR 12 54 43.7
comp=Z,324nm,18.2s,baz=106,slow=36
MEF Metsahovi 10.84 92 *eP* **Pn 12 50 58.6 -2.3**
KTK1 Kautokeino 10.86 43 *eP* **Pn 12 50 58.8 -2.3**
KTK1 *eS* Sn 12 52 49.6 -13
KTK1 IAML 12 52 58.5
comp=Z,34nm,0.4s
SLIT Slitere, Latvi 11.07 106 *eP* **Pn 12 51 02.3 -1.7**
MTSE Matsula 11.20 99 *eP* **Pn 12 51 05.5 -0.3**
FIA0 FINESS Array S 11.24 84 Pn **Pn 12 51 04.6 -1.9**
baz=299,slow=14
FIA0 Sn Sn 12 53 03.0 -8.7
baz=290,slow=22
FIA0 FINESS Array S 11.24 84 Pn **Pn 12 51 04.6 -1.9**
slow=14
FIA0 Sn Sn 12 53 03.0 -8.7
slow=22
FINES FINESS Array B 11.24 84 Pn **Pn 12 51 05.1 -1.3**
comp=Z,14nm,0.3s,baz=288,slow=12,SNR=334
FINES Sn **Sn 12 53 03.8 -7.9**
comp=Z,6.4nm,0.3s,baz=290,slow=22,SNR=9.3
comp=Z,35nm,0.4s
FINES FINESS Array B 11.24 84 Pn **Pn 12 51 05.4 -1.0**
FINES FINESS Array B 11.24 84 P **Pn 12 51 05.4 -1.0**
FIA1 FINESS Array S 11.24 84 Pn **Pn 12 51 06.0 -0.4**
ARA0 ARCESS Array S 11.81 43 Pn **Pn 12 51 11.3 -2.9**
baz=236,slow=14
ARA0 Sn Sn 12 53 11.8 -14
baz=236,slow=22
ARA0 ARCESS Array S 11.81 43 *eP* **Pn 12 51 11.3 -2.9**
ARA0 *eS* Sn 12 53 11.9 -14
ARA0 IAML 12 53 18.1
comp=Z,24nm,0.3s
ARCES ARCESS Array B 11.81 43 Pn **Pn 12 51 11.2 -3.0**
comp=Z,2.4nm,0.3s,baz=236,slow=13,SNR=84
ARCES Sn Sn 12 53 11.4 -14
comp=Z,2.6nm,0.3s,baz=237,slow=20,SNR=5.0
ARCES LR LR 12 56 53.0
comp=Z,327nm,19.5s,baz=266,slow=43
comp=Z,4.4nm,0.3s
HAMF Hammerfest 11.83 36 *eP* **Pn 12 51 12.8 -1.5**
HAMF IAML 12 53 24.9
comp=Z,14nm,0.4s
BSTI Sart Tilman 11.95 170 *dP* **Pn 12 51 15.4 -0.8**
MEM Membach 11.96 168 *dP* **Pn 12 51 15.2 -1.1**
MEM *dPP* **PbPb 12 51 56.6 +1.2**
BTNL Ternell 12.00 168 *dP* **Pn 12 51 18.4 +1.5**
BCLA Clavier 12.09 171 *dP* **Pn 12 51 17.2 -0.9**
BGES Gesves 12.11 171 *dP* **Pn 12 51 17.6 -0.8**
BMRD Maredsous 12.17 172 *dP* **Pn 12 51 18.8 -0.4**
RCHB Rochefort 12.35 171 *dP* **Pn 12 51 20.4 -1.2**
RCHB *dPP* **PbPb 12 52 04.5 +2.6**
DOU Dourbes 12.37 173 *dP* **Pn 12 51 20.9 -1.0**
DOU *dx* x 12 51 27.9
GIVF Givet 12.38 172 *ePn* **Pn 12 51 20.0 -2.0**
GIVF Givet 12.38 172 *eP* **Pn 12 51 25.5 +3.5**
GIVF *eSn* Sn 12 53 30.1 -9.4
comp=Z,23nm,0.4s
KEV Kevo 12.38 43 Pn **Pn 12 51 18.8 -3.2**
KEV Kevo 12.38 43 P **Pn 12 51 18.8 -3.2**
BAIF Baives 12.38 174 *ePn* **Pn 12 51 19.9 -2.2**
BAIF Baives 12.38 174 *eP* **Pn 12 51 24.8 +2.7**
BAIF *eSn* Sn 12 53 29.6 -10
comp=Z,24nm,0.5s
CLL Collm 12.52 147 Pn **Pn 12 51 24.5 +0.5**
CLL Collm 12.52 147 *eP* Pn 12 51 29.0 +5.0
CLL Collm 12.52 147 *ePn* **Pn 12 51 22.0 -2.0**
CLL *ex* x 12 51 32.0
CLL *eSn* Sn 12 53 27.0 -16
comp=Z,6.0nm,0.8s
CLL Lm MLR 12 56 00.0
comp=N,300nm,19.4s
CLL Lm MLR 12 56 00.0
comp=E,400nm,20.1s
VSU Vasula 12.67 97⇑ *eP* **Pn 12 51 24.2 -1.7**
VSU Vasula 12.67 97 *eP* **Pn 12 51 22.9 -2.9**
VSVD Vaisvydziai 12.77 110 *eP* Pn 12 51 22.5 -4.8
WLF Walferdange 12.91 169 Pn **Pn 12 51 29.5 +0.2**
WLF Walferdange 12.91 169 P **Pn 12 51 29.5 +0.2**
PABE Paberze 13.09 112 Pn **Pn 12 51 29.8 -1.9**
PABE Paberze 13.09 112 *eP* **Pn 12 51 29.8 -1.9**
PVCC Panska Ves 13.64 145 AMS AMS 12 57 40.0
comp=E,300nm,15.6s
FLN La Foliniere 13.72 188 *ePn* **Pn 12 51 37.6 -2.7**
FLN La Foliniere 13.72 188 *eP* **Pn 12 51 43.5 +3.2**
baz=9.0
FLN *eSn* Sn 12 54 00.9 -11
comp=E,8.7nm,0.4s

LDF La Druitiere 13.87 187 *ePn* **Pn 12 51 39.6 -2.8**
LDF La Druitiere 13.87 187 *eP* **Pn 12 51 45.0 +2.6**
LDF *eSn* Sn 12 54 04.5 -11
comp=E,11nm,0.4s
SAVF Savonnieres en 13.88 172 *eP* **Pn 12 51 45.2 +2.8**
baz=357
SAVF *eSn* Sn 12 54 03.1 -13
comp=E,7.9nm,0.5s
PAGF Fort de Pagny 13.98 170 *eP* **Pn 12 51 44.6 +0.7**
PAGF *eSn* Sn 12 54 07.2 -11
comp=E,20nm,0.7s
MEZF Maizieres J'vi 13.98 172 *eP* **Pn 12 51 43.8 -0.1**
MEZF *eSn* Sn 12 54 08.0 -11
comp=E,20nm,0.6s
ISAL Salakas 14.00 108 *eP* **Pn 12 51 40.0 -4.1**
ISAL IAmb IAmb 12 51 52.2
comp=Z,25nm,1.2s
CHVC Chvalec 14.01 141 AMS AMS 12 58 10.0
comp=Z,400nm,16.6s
UPC Upice 14.06 141 AMS AMS 12 58 20.0
comp=Z,400nm,15.9s
OSTC Ostas 14.08 141 AMS AMS 12 58 10.0
comp=Z,400nm,15.9s
GRR Gorron 14.12 189 *ePn* **Pn 12 51 42.9 -2.9**
GRR Gorron 14.12 189 *eP* **Pn 12 51 48.4 +2.6**
GRR *eSn* Sn 12 54 11.3 -11
comp=Z,14nm,0.4s
PRU Pruhonice 14.13 146 AMS AMS 12 58 20.0
comp=Z,300nm,16.9s
IIGN Ignalina 14.18 109 *eP* **Pn 12 51 43.6 -2.9**
IIGN IAmb IAmb 12 51 58.4
comp=Z,10nm,0.4s
GOPC GO Pecny, Ondr 14.26 145 AMS AMS 12 58 20.0
comp=Z,400nm,14.4s
CDF Champ du Feu 14.27 166 *eP* **Pn 12 51 50.1 +2.2**
CDF *eSn* Sn 12 54 13.2 -13
comp=Z,7.2nm,0.6s
SFTF Sexfontaines 14.28 172 *ePn* **Pn 12 51 45.3 -2.7**
SFTF Sexfontaines 14.28 172 *eP* **Pn 12 51 50.5 +2.5**
baz=345
SFTF *eSn* Sn 12 54 15.8 -10
comp=Z,10nm,0.4s
DPC Dobruska-Polom 14.29 141 AMS AMS 12 58 50.0
comp=Z,400nm,14.5s
ROSF Rostrenen 14.40 195 *ePn* **Pn 12 51 46.6 -3.1**
ROSF Rostrenen 14.40 195 *eP* **Pn 12 51 52.8 +3.1**
ROSF *eSn* Sn 12 54 18.5 -10
comp=Z,19nm,0.9s
SGMF Saint Gilles 14.40 193 *ePn* **Pn 12 51 46.8 -2.8**
SGMF Saint Gilles 14.40 193 *eP* **Pn 12 51 51.9 +2.3**
SGMF *eSn* Sn 12 54 18.8 -10
comp=Z,3.7nm,0.5s
BFO Black Forest 14.47 164 Pn **Pn 12 51 50.3 -0.4**
BFO Black Forest 14.47 164 P **Pn 12 51 50.3 -0.4**
LVZ Lovozero 14.56 54 Pn Pn 12 51 46.6 -5.2
LVZ Lovozero 14.56 54⇓ *eP* **Pn 12 51 53.0 +1.2**
LVZ pmax pmax
comp=Z,47nm,1.5s
HAU Haudompre 14.58 169 *ePn* **Pn 12 51 49.4 -2.7**
HAU Haudompre 14.58 169 *eP* **Pn 12 51 54.4 +2.3**
HAU *eSn* Sn 12 54 22.8 -10
comp=Z,5.5nm,0.4s
KRLC Kraliky 14.68 140 AMS AMS 12 58 40.0
comp=Z,300nm,14.6s
KHC Kasperske Hory 14.68 149 *eP* **Pn 12 51 54.4 +0.9**
KHC *e* 12 54 40.0
KHC MLR MLR
comp=Z,300nm,14.3s
KHC Kasperske Hory 14.68 149 *eP* **Pn 12 51 54.4 +0.9**
KHC *eS* **Sn 12 54 40.0 +4.3**
KHC AMS AMS 12 58 20.0
comp=Z,300nm,14.3s
NACGM Naroch 14.71 109 *eP* **Pn 12 51 50.9 -2.9**
QUIF Quistinic 14.80 194 *ePn* **Pn 12 51 53.3 -1.8**
QUIF Quistinic 14.80 194 *eP* **Pn 12 51 57.6 +2.5**
QUIF *eSn* Sn 12 54 28.0 -11
comp=Z,6.7nm,0.6s
HINF Hinteralfeld 14.81 168 *ePn* **Pn 12 51 52.2 -3.1**
HINF Hinteralfeld 14.81 168 *eP* **Pn 12 51 57.9 +2.6**
HINF *eSn* Sn 12 54 28.3 -11
comp=Z,4.9nm,0.5s
GERES GERESS Array B 14.97 150 Pn **Pn 12 51 56.5 -1.0**
comp=Z,0.1nm,0.3s,baz=338,slow=14,SNR=6.1
GERES Sn **Sn 12 54 34.0 -9.1**
comp=Z,0.1nm,0.3s,baz=357,slow=25,SNR=1.6
comp=Z,0.4nm,0.4s
TREC Trest 15.01 145 AMS AMS 12 58 50.0
comp=Z,300nm,17.0s
HYF Humbligny 15.13 179 *ePn* **Pn 12 51 57.0 -2.6**
HYF Humbligny 15.13 179 *eP* **Pn 12 52 01.3 +1.7**
HYF *eSn* Sn 12 54 35.9 -11
LOR Lormes 15.16 176 *ePn* **Pn 12 51 56.4 -3.5**
LOR Lormes 15.16 176 *eP* **Pn 12 52 01.8 +1.9**
baz=353
LOR *eSn* Sn 12 54 35.6 -12
comp=Z,14nm,0.6s
MORC Moravsky Berou 15.17 139 *ePN* **Pn 12 51 58.4 -1.6**
OKC Ostrava-Krasne 15.30 138 AMS AMS 12 58 40.0
comp=Z,200nm,16.2s
VRAC Vranov 15.31 142 ⇓P **P 12 52 08.8 +2.2**
VRAC Vranov 15.31 142 Pn **Pn 12 52 02.7 +0.9**
comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=1.9
VRAC LR LR 12 58 54.6
comp=Z,273nm,19.2s,baz=336,slow=41
comp=Z,0.7nm,0.4s
VRAC Vranov 15.31 142 *ePN* **Pn 12 51 59.4 -2.4**
SSF Saint Saulge 15.36 177 *ePn* **Pn 12 51 58.5 -4.0**
SSF Saint Saulge 15.36 177 *eP* **Pn 12 52 04.8 +2.3**
SSF *eSn* Sn 12 54 41.4 -11
comp=Z,5.6nm,0.5s
MNK Minsk 15.46 109 *i* P **Pn 12 52 01.2 -2.6**
comp=E,5.0nm,1.1s
MNK *i* P **Pn 12 52 01.2 -2.6**
comp=N,43nm,1.1s
MNK *i* P **Pn 12 52 01.2 -2.6**
comp=Z,27nm,1.1s,baz=311
MNK *i* PP **P 12 52 09.5 +1.3**
MNK *i* PPP PPP 12 52 17.0
MNK *i* S **Sn 12 54 52.8 -1.7**
MNK *i* SS **SnSn 12 55 08.3 +1.5**
MNK *i* SSS SSS 12 55 20.8
MNK *i* LQ LQ 12 56 24.1
MNK *i* LR LR 12 57 43.6
MNK *i* LRM MLR 12 58 46.4
comp=Z,277nm,12.9s
MNK *i* LRM MLR 12 58 56.1
comp=N,280nm,12.1s
MNK *i* LRM MLR 12 59 08.6
comp=E,38nm,13.2s
MAUC Maruska 15.62 139 *eS* **Sn 12 55 01.2 +2.6**
AVF Avril sur Loir 15.62 177 *ePn* **Pn 12 52 03.3 -2.6**
AVF Avril sur Loir 15.62 177 *eP* **Pn 12 52 08.1 +2.2**
AVF *eSn* Sn 12 54 46.4 -12
comp=E,17nm,1.0s
SMF Signal de Mont 15.78 176 *ePn* **Pn 12 52 05.6 -2.4**
SMF *eSn* Sn 12 54 49.7 -13
comp=E,9.1nm,0.6s
BGF Bois d'Agland 15.85 179 *eP* **Pn 12 52 10.8 +1.9**
BGF *eSn* Sn 12 54 53.3 -11
comp=E,25nm,0.6s
MFF Saint Martin d 15.86 186 *ePn* **Pn 12 52 05.2 -3.8**
MFF Saint Martin d 15.86 186 *eP* **Pn 12 52 09.9 +0.9**
MFF *eSn* Sn 12 54 52.6 -12
comp=E,6.2nm,0.4s
CABF La Chapelle 15.94 170 *eP* **P 12 52 12.6 -1.1**
CABF *eSn* Sn 12 54 54.7 -12
comp=E,12nm,0.7s
DAG Danmarks Havn 16.02 343 *i* P **P 12 52 13.6 -0.7**
MOA Molln 16.04 150 *ePn* **Pn 12 52 13.0 +1.6**
comp=E,7.5nm,1.5s
WTTA Wattenberg 16.04 156 *eP* **P 12 52 15.5 +0.6**
comp=E,3.1nm,0.7s
TCF Toulx Ste Croi 16.11 180 *ePn* **Pn 12 52 10.4 -1.9**
TCF *eSn* Sn 12 54 59.5 -11
comp=E,17nm,0.8s
DAVOX Davos/Dischmat 16.21 161 Pn **Pn 12 52 15.7 +2.0**
comp=E,0.3nm,0.3s,baz=7.1,slow=22,SNR=2.1
DAVOX Sn **Sn 12 55 09.2 -3.9**
comp=E,0.1nm,0.3s,baz=347,slow=14,SNR=1.6
DAVOX LR LR 12 59 38.2
comp=E,156nm,19.6s,baz=345,slow=41
comp=E,0.7nm,0.4s
CONA Conrad Observa 16.36 146 *ePn* **Pn 12 52 15.8 +0.3**
comp=E,5.7nm,1.6s
ZST Bratislava 16.46 143 *eP* **P 12 52 20.3 +1.0**

SPA0 Spitsbergen Ar 16.49 10 P **P 12 52 18.3 -1.1**
baz=182,slow=14
SPA0 Spitsbergen Ar 16.49 10 P **P 12 52 18.3 -1.1**
slow=14
SPITS Spitsbergen Ar 16.49 10 Pn **Pn 12 52 15.8 -1.1**
baz=176,slow=15
comp=E,1.3nm,0.3s
KBA Koelnbreinsper 16.56 153 Pn **Pn 12 52 18.6 +0.5**
comp=E,5.7nm,1.5s
VYHS Vyhne 16.70 139 *eP* **P 12 52 23.2 +1.2**
ABTA Abfaltersbach 16.70 155 *eP* **P 12 52 22.9 +0.7**
comp=E,9.6nm,1.2s
KBS Kingsbay 16.90 6 *i* P **P 12 52 26.3 +2.3**
LPL La Plagne 17.08 169 *eP* **P 12 52 26.6 +0.1**
LPL *eSn* Sn 12 55 22.7 -12
comp=E,2.3nm,0.5s
LPL La Plagne 17.08 169 *eP* **P 12 52 27.5 +1.0**
LPG La Plagne 17.10 169 *eP* **P 12 52 26.6 -0.2**
RJF Les Rejaudoux 17.10 182 *ePn* **Pn 12 52 23.0 -1.8**
RJF Les Rejaudoux 17.10 182 *eP* **P 12 52 27.3 +0.8**
RJF *eSn* Sn 12 55 23.5 -11
comp=E,19nm,0.9s
CRVS Cervenica-Dubn 17.20 133 P **Pn 12 52 26.9 +0.9**
CRVS pmax pmax
comp=Z,2.0nm,0.7s
LVV L'vov 17.36 126 *eP* **P 12 52 29.9 +0.7**
LVV *eS* **Sn 12 55 44.3 +3.7**
LVV MLR MLR
comp=E,200nm,13.0s
LVV MLR MLR
comp=N,200nm,14.0s
LVV MLR MLR
comp=Z,200nm,13.0s
CAF Calviac 17.48 180 *ePn* **Pn 12 52 28.8 -0.7**
CAF Calviac 17.48 180 *eP* **P 12 52 31.6 +0.9**
CAF *eSn* Sn 12 55 32.2 -11
comp=Z,5.8nm,0.5s
CAF Calviac 17.48 180 *eP* **P 12 52 31.8 +1.1**
CAF pmax pmax
comp=Z,2.0nm,0.3s
LFF La Frestale 17.48 184 *ePn* **Pn 12 52 28.4 -1.1**
LFF *eSn* Sn 12 55 32.3 -11
comp=Z,7.3nm,0.5s
LFF La Frestale 17.48 184 *eP* **P 12 52 31.4 +0.7**
LFF pmax pmax
comp=Z,4.0nm,0.4s
PSZ Piszkesteto 17.54 137 P **P 12 52 33.0 +1.6**
VIVF Saint-Julien-l 17.60 174 *ePn* **Pn 12 52 30.3 -0.7**
VIVF Saint-Julien-l 17.60 174 *eP* **P 12 52 33.4 +1.4**
VIVF *eSn* Sn 12 55 34.8 -12
comp=Z,2.3nm,0.4s
ORIF Oris-en-Rattie 17.61 171 *eP* **P 12 52 33.2 +1.0**
ORIF *eSn* Sn 12 55 35.3 -12
comp=Z,6.6nm,0.6s
KLMR Klimovskoe 17.62 78 *eP* **Pn 12 52 27.2 -3.9**
KLMR *e* 12 55 36.7
KLMR pmax pmax
comp=Z,77nm,1.4s
KLMR Klimovskoe 17.62 78 *ePn* **Pn 12 52 27.2 -3.9**
KLMR *ePn* **Pn 12 52 27.2 -3.9**
KLMR *ePn* **Pn 12 52 27.2 -3.9**
KLMR AMP 12 52 30.6
comp=Z,77nm,1.4s
KLMR *eSn* **Sn 12 55 36.8 -10**
KLMR *eSn* **Sn 12 55 36.8 -10**
UZH Uzhgorod 17.72 132 *eP* Pn 12 52 25.1 -7.3
UZH MLR MLR
comp=Z,20nm,13.0s
MBDF Montbardon 17.87 169 *ePn* **Pn 12 52 34.2 -0.3**
MBDF *eSn* Sn 12 55 41.3 -12
comp=Z,6.2nm,0.6s
TRPA Tarpa 18.23 132⇑P **Pn 12 52 39.2 +0.5**
TRPA Tarpa 18.23 132 P **P 12 52 39.5 +0.6**
LASF Ste Croix 18.35 176 *ePn* **P 12 52 42.4 +2.1**
LASF Ste Croix 18.35 176 *eP* P 12 52 47.5 +7.2
AKASG Malin Array Be 18.73 116 P **P 12 52 42.0 -2.3**
comp=Z,7.3nm,0.5s,baz=322,slow=12,SNR=18
AKASG S **Sn 12 56 08.7 -5.2**
comp=Z,0.5nm,0.4s,baz=315,slow=22,SNR=1.8
AKASG LR LR 13 00 35.4
comp=Z,346nm,18.8s,baz=316,slow=39
AKASG Malin Array Be 18.73 116 P **P 12 52 42.0 -2.3**
AKASG Malin Array Be 18.73 116 P **P 12 52 42.1 -2.3**
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKBB Malin Array Si 18.73 116 P **P 12 52 41.7 -2.7**
AKBB Malin Array Si 18.73 116 *c i* P **Pn 12 52 45.5 +0.7**
AKBB pmax pmax
comp=Z,18nm,0.8s
OBN Obninsk 19.03 97 P **P 12 52 46.9 -0.7**
comp=Z,1.4nm,0.3s,baz=319,slow=4.8,SNR=4.6
OBN LR LR 13 00 55.5
comp=Z,55nm,20.6s,baz=22,slow=39
comp=Z,3.4nm,0.4s
OBN Obninsk 19.03 97⇓ *eP* **P 12 52 47.6 +0.1**
OBN pmax pmax
comp=Z,31nm,1.1s
OBN MLR MLR
comp=Z,186nm,15.0s
MTLF Montolieu 19.06 180 *ePn* **Pn 12 52 50.6 +1.8**
MOS Moscow 19.15 94 *eP* **Pn 12 52 50.2 +0.4**
MOS *eS* **S 12 56 26.0 +0.6**
MOS pmax pmax
comp=Z,45nm,1.1s
SJPF Ste Jean 19.40 188 *ePn* **Pn 12 52 54.7 +1.8**
SJPF *eSn* **Sn 12 56 28.1 -1.9**
comp=Z,0.5nm,0.2s
EPF Esparros 19.40 184 *ePn* **Pn 12 52 54.7 +1.7**
DRGR 19.45 134⇑P **Pn 12 52 54.1 +0.5**
DRGR 19.45 134⇑P **Pn 12 52 54.1 +0.5**
SIRR Siria 19.56 137⇓P **P 12 52 53.8 +0.3**
ETSF Etsaut 19.57 186 *ePn* **Pn 12 52 56.8 +1.7**
BUR08 Bucovina Ar. S 19.59 128 **P 12 52 54.7 +0.7**
BURAR Bucovina Array 19.62 128⇑P **Pn 12 52 55.5 -0.2**
BURAR Bucovina Array 19.62 128 P **P 12 52 54.6 +0.3**
BURAR Bucovina Array 19.62 128⇑P **Pn 12 52 55.5 -0.2**
NOR Nord 19.97 352 *i* P **P 12 52 55.3 -2.4**
NOR IAmb IAmb 12 53 00.3
comp=Z,10nm,0.9s
PRGR Permogore 20.09 73 *eP* **P 12 52 57.0 -2.1**
PRGR *e* 12 56 46.7
PRGR pmax pmax
comp=Z,50nm,0.7s
BIZ Bicaz 20.52 128⇑P Pn 12 53 06.2 0.0
GZR Gura Zlata 20.70 136⇑P Pn 12 53 09.8 +1.5
MDVR Moldovita 20.91 138⇑P Pn 12 53 11.8 +1.1
HERR Herculane 21.04 137⇑P **P 12 53 14.6 +5.0**
TESR Tescani 21.08 128⇑P **P 12 53 12.7 +2.7**
DOPR Dopca 21.09 130⇑P **P 12 53 15.7 +5.7**
OZUR 21.12 130⇑P **P 12 53 11.4 +0.9**
VOIR 21.43 132⇑P **P 12 53 15.3 +1.5**
VOIR 21.43 132⇑P **P 12 53 15.3 +1.5**
COVR Voineasa-Covas 21.48 129⇑P **P 12 53 17.5 +3.2**
PLOR Plostina 21.64 129⇑P **P 12 53 17.6 +1.6**
PLOR Plostina 21.64 129⇑P **P 12 53 17.6 +1.6**
VRI Vrincioaia 21.66 128⇑P **P 12 53 18.5 +2.3**
VRI Vrincioaia 21.66 128⇑P **P 12 53 18.5 +2.3**
LPSR Galich'ya Gora 21.69 100 *eP* **P 12 53 16.4 -0.1**
LPSR pmax pmax
comp=Z,30nm,1.2s
MLR Muntele Rosu 21.70 130⇑P **P 12 53 18.8 +2.1**
MLR Muntele Rosu 21.70 130 P **P 12 53 17.4 +0.7**
comp=Z,3.7nm,0.9s,baz=337,slow=15,SNR=4.8
MLR LR LR 13 03 13.5
comp=Z,145nm,19.3s,baz=320,slow=41
comp=Z,3.7nm,0.9s
BOVS Bovan 21.94 140⇑P **P 12 53 23.8 +4.5**
BLKB Belogradchik 22.25 138⇑P **P 12 53 25.0 +2.4**
VORR Voronezh 22.44 101 *eP* **P 12 53 23.7 -0.8**
VORR pmax pmax
comp=Z,30nm,0.4s
NEEM North Greenlan 22.46 333 *i* P **P 12 53 23.2 -1.7**
NEEM IAmb IAmb 12 53 26.6
comp=Z,38nm,1.1s
SFJD Kangerlussuaq 22.48 305 P **P 12 53 24.3 -0.5**
comp=Z,9.6nm,1.2s,baz=46,slow=4.7,SNR=1.5
SFJD LR LR 13 00 50.9
comp=Z,136nm,19.5s,baz=73,slow=33
comp=Z,9.6nm,1.2s
VSR Storozhevoye 22.74 102 *eP* **P 12 53 27.4 -0.3**
VSR pmax pmax
comp=Z,20nm,0.8s
CFR Carcaliu 22.76 127⇑P **P 12 53 29.6 +1.6**
CFR Carcaliu 22.76 127⇑P **P 12 53 29.6 +1.6**

ESDC Sonseca Array 23.04 192 P **P 12 53 32.2 +1.3**
comp=Z,0.1nm,0.3s,baz=96,slow=10,SNR=2.6
KIRV Kirov 23.12 78 P **P 12 53 31.6 +0.1**
comp=Z,9.9nm,0.5s,baz=288,slow=19,SNR=2.6
KIRV LR LR 13 03 38.9
comp=Z,235nm,18.6s,baz=302,slow=40
comp=Z,9.9nm,0.5s
KIRV Kirov 23.12 78⇓ *e*P **P 12 53 33.7 +2.2**
TPGR Topolog 23.14 127 ⇓ P **P 12 53 34.3 +2.3**
VRH Novokhopyorsk 23.91 100 *e*P **P 12 53 39.3 -0.1**
VRH pmax pmax
comp=Z,10.0nm,0.5s
ALN Alexandroupoli 25.79 135 P **P 12 53 57.7 +1.1**
ALN IAmb IAmb 12 54 10.1
comp=Z,14nm,1.0s
ALN Alexandroupoli 25.79 135 P **P 12 53 57.7 +1.1**
ALN pmax pmax
comp=Z,14nm,1.0s
BELG Belogornoye 25.86 92 P **P 12 53 57.6 +0.5**
comp=Z,6.7nm,0.5s,baz=44,slow=4.6,SNR=2.0
BELG LR LR 13 04 59.4
comp=Z,143nm,20.7s,baz=284,slow=38
comp=Z,6.7nm,0.5s
BELG Belogornoye 25.86 92⇓ *e*P **P 12 53 56.7 -0.4**
BELG pmax pmax
comp=Z,5.0nm,1.4s
VAE Valguarnera 26.02 158 P **P 12 54 01.5 +2.7**
comp=Z,2.5nm,0.5s,baz=14,slow=12,SNR=1.2
comp=Z,2.5nm,0.5s
ARU Arti 28.44 76 P **P 12 54 21.8 +1.6**
comp=Z,2.0nm,0.3s,baz=316,slow=12,SNR=4.2
ARU LR LR 13 06 37.0
comp=Z,193nm,19.0s,baz=312,slow=38
comp=Z,2.0nm,0.3s
ARU Arti 28.44 76*c i*P **P 12 54 22.2 +1.9**
ARU 12 55 12.2
ARU PPP PPP 12 55 21.9
ARU S **S 12 59 13.0 +6.3**
ARU SS **SnSn 13 00 32.1 +7.4**
ARU pmax pmax
comp=Z,4.0nm,0.7s
ARU MLR MLR
comp=Z,232nm,15.0s
EUNU Eureka 29.19 339 **P 12 54 26.1 -0.7**
EUNU IAmb IAmb 12 54 58.8
comp=Z,23nm,1.6s
BR131 Keskin Array S 29.52 125 P **P 12 54 32.5 +2.3**
BR131 Keskin Array S 29.52 125 P **P 12 54 32.5 +2.3**
BR131 pmax pmax
comp=Z,6.0nm,1.0s
BRTR Keskin Array B 29.52 125 P **P 12 54 32.0 +1.8**
comp=Z,2.9nm,0.8s,baz=330,slow=5.4,SNR=9.3
BRTR LR LR 13 09 16.5
comp=Z,97nm,19.4s,baz=330,slow=42
comp=Z,2.9nm,0.8s
BRTR Keskin Array B 29.52 125 P **P 12 54 31.8 +1.6**
BRTR Keskin Array B 29.52 125 *i* P **P 12 54 33.5 +3.3**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 29.74 109 *e*P **P 12 54 33.8 +1.7**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,125nm,15.0s
KVAR Kislovodsk Arr 29.75 109 P **P 12 54 33.7 +1.6**
comp=Z,2.5nm,0.5s,baz=278,slow=15,SNR=2.3
KVAR LR LR 13 07 51.6
comp=Z,146nm,18.7s,baz=262,slow=39
comp=Z,2.5nm,0.5s
MDT Midelt 29.90 192 LR LR 13 08 52.3
comp=Z,68nm,18.3s,baz=344,slow=41
KBZ Khabaz 30.02 109 P **P 12 54 36.9 +2.5**
comp=Z,2.5nm,0.8s,baz=243,slow=6.8,SNR=2.7
KBZ LR LR 13 07 55.7
comp=Z,183nm,18.3s,baz=319,slow=39
comp=Z,2.5nm,0.8s
KBZ Khabaz 30.02 109⇑ *e*P **P 12 54 37.3 +3.0**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
FRB Frobisher Bay 30.63 304 LR LR 13 05 38.8
comp=Z,82nm,19.7s,baz=46,slow=34
AKTO Aktyubinsk 32.01 86 LR LR 13 09 06.7
comp=Z,211nm,18.9s,baz=317,slow=39
MAK Makhachkala 32.67 105 *e*P **P 12 54 54.6 -3.1**
MAK *e* 12 56 06.8
MAK *e*S **S 13 00 09.9 -3.3**
MAK *e*SS **SnSn 13 02 09.9 +1.9**
MAK MLR MLR
comp=Z,111nm,12.0s
RES Resolute Bay 33.14 331 LR LR 13 07 23.9
comp=Z,121nm,19.9s,baz=34,slow=34
GNI Garni 33.72 111⇓ *e*P **P 12 55 10.8 +3.7**
GNI pmax pmax
comp=Z,23nm,1.5s
SCHQ Schefferville 35.14 290 P **P 12 55 18.4 -0.7**
comp=Z,3.6nm,0.9s,baz=73,slow=18,SNR=1.7
comp=Z,3.6nm,0.9s
BVAR Borovoye Array 35.91 73 LR LR 13 11 41.7
comp=Z,110nm,19.8s,baz=314,slow=39
EIL Elat 38.99 132 LR LR 13 16 32.0
comp=Z,38nm,18.4s,baz=66,slow=43
KURK Kurchatov 41.16 70 P **P 12 56 10.0 +0.2**
KURK Kurchatov 41.16 70⇓ *e*P **P 12 56 12.3 +2.5**
KURK pmax pmax
comp=Z,9.0nm,1.4s
KURBB Kurchatov Arra 41.19 70 LR LR 13 15 19.8
comp=Z,65nm,19.6s,baz=238,slow=39
A36M Sachs Harbour 41.20 338 P **P 12 56 08.9 -1.0**
baz=34
TIXI Tiksi 41.32 23⇓ *e*P **P 12 56 12.5 +1.7**
TIXI pmax pmax
comp=Z,13nm,1.3s
ZAA0 Zalesovo Array 41.47 62 P **P 12 56 12.9 +0.6**
ZALV Zalesovo Beam 41.47 62 P **P 12 56 11.8 -0.5**
comp=Z,3.3nm,0.6s,baz=317,slow=9.3,SNR=5.6
ZALV PcP **PcP 12 58 09.3 -0.3**
comp=Z,1.1nm,0.6s,baz=329,slow=2.6,SNR=3.9
comp=Z,3.3nm,0.6s
ZALV Zalesovo Beam 41.47 62 P **P 12 56 12.7 +0.4**
ZALV Zalesovo Beam 41.47 62 P **P 12 56 12.7 +0.4**
GEYT Alibeck 41.54 99 P **P 12 56 14.1 +1.0**
comp=Z,2.5nm,0.7s,baz=0.0,slow=5.9,SNR=4.6
GEYT LR LR 13 16 15.5
comp=Z,65nm,20.1s,baz=335,slow=40
comp=Z,2.5nm,0.7s
PKME Peaks-Kenny Pk 43.07 281 P **P 12 56 25.7 +0.3**
baz=40
C36M Paulatuk 43.19 335 P **P 12 56 24.6 -1.5**
baz=33
KK31 Karatay Array 43.20 84 P **P 12 56 28.3 +1.7**
KK31 Karatay Array 43.20 84 P **P 12 56 28.3 +1.7**
KK31 pmax pmax
comp=Z,12nm,1.5s
KKAR Karatay Array 43.20 84 P **P 12 56 28.2 +1.6**
KKAR Karatay Array 43.20 84 P **P 12 56 28.2 +1.6**
LBNH Lisbon 45.06 282 P **P 12 56 41.0 -0.4**
baz=39
AAK Ala-Archa 45.41 81 LR LR 13 17 27.1
comp=Z,157nm,18.9s,baz=328,slow=38
AAK Ala-Archa 45.41 81⇑ *e*P **P 12 56 46.6 +2.2**
AAK pmax pmax
comp=Z,3.0nm,0.7s
DGZ Jazzator, Alta 45.71 65⇓ *e*P **P 12 56 50.0 +3.3**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
MK31 Makanchi Array 45.71 71 P **P 12 56 47.5 +0.9**
MK31 Makanchi Array 45.71 71 P **P 12 56 47.5 +0.9**
MK31 pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 45.71 71 P **P 12 56 47.2 +0.6**
comp=Z,1.6nm,0.7s,baz=324,slow=6.4,SNR=11
MKAR LR LR 13 17 09.0
comp=Z,92nm,20.1s,baz=342,slow=38
comp=Z,1.6nm,0.7s
MKAR Makanchi Array 45.71 71 P **P 12 56 47.5 +0.9**
MKAR Makanchi Array 45.71 71*ce*P **P 12 56 48.0 +1.4**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
A21K Barrow 45.78 351 P **P 12 56 45.2 -1.6**
baz=14
INK Inuvik 45.81 339 P **P 12 56 47.0 0.0**
INK IAmb IAmb 12 56 47.5
comp=Z,15nm,1.4s
INK Inuvik 45.81 339 P **P 12 56 47.0 0.0**
INK pmax pmax
comp=Z,15nm,1.5s
INK Inuvik 45.81 339 P **P 12 56 45.9 -1.1**
baz=27
C26K Camden Bay 45.98 345 P **P 12 56 47.2 -1.1**
baz=21
CHGR Chuyangaron 46.08 89 P **P 12 56 50.6 +0.9**
CHGR Chuyangaron 46.08 89 P **P 12 56 50.6 +0.9**
CHGR pmax pmax
comp=Z,18nm,0.9s
GAR Garm 46.35 87 P **P 12 56 53.2 +1.4**
C24K Franklin Bluff 46.61 347 P **P 12 56 51.9 -1.4**
baz=18
F31M Tsiigehtchic 46.63 338 P **P 12 56 52.9 -0.5**
baz=26
C23K Itkillik River 46.70 347 P **P 12 56 54.2 +0.2**
baz=17,SNR=5.2
YKA Yellowknife Ar 46.71 325 P **P 12 56 53.2 -1.0**
comp=Z,8.0nm,0.8s,baz=31,slow=8.5,SNR=16
YKA LR LR 13 15 22.1
comp=Z,103nm,20.6s,baz=35,slow=35
comp=Z,8.0nm,0.8s
YKA Yellowknife Ar 46.71 325 *i* P **P 12 56 54.0 -0.2**
YKA pmax pmax
comp=Z,8.0nm,0.8s
D25K Kavik River 46.72 345 P **P 12 56 53.9 -0.3**
baz=20
L61B Northampton 46.80 281 P **P 12 56 55.1 -0.1**
baz=38
D24K Happy Valley 47.16 346 P **P 12 56 57.4 -0.3**
baz=18
E27K Coleen River 47.17 343 P **P 12 56 57.0 -0.8**
baz=22,SNR=6.6
G30M tAoh Zraii Nji 47.46 339 P **P 12 56 59.3 -0.8**
baz=25
D23K Nanushuk River 47.54 347 P **P 12 56 60.0 -0.6**
baz=17
TOLK Toolik Lake Re 47.73 346 P **P 12 57 01.6 -0.6**
baz=17
E25K Arctic Village 47.76 344 P **P 12 57 01.7 -0.7**
baz=20
SADO Sadowa 47.89 288 LR LR 13 16 18.9
comp=Z,58nm,18.0s,baz=24,slow=35
F26K Sheenjek River 47.98 343 P **P 12 57 03.7 -0.3**
baz=20
KOWA Kowa 48.02 188 LR LR 13 21 41.1
comp=Z,136nm,18.2s,baz=118,slow=42
EPYK Eagle Plains 48.10 339 P **P 12 57 04.7 -0.3**
EPYK IAmb IAmb 12 57 05.3
comp=Z,11nm,0.8s
EPYK Eagle Plains 48.10 339 P **P 12 57 04.9 -0.1**
baz=24
E24K Your Creek 48.16 346 P **P 12 57 04.8 -0.6**
baz=18
F25K Christian Rive 48.27 344 P **P 12 57 06.4 +0.1**
baz=19,SNR=5.8
BMAR Burnt Mountain 48.29 344 P **P 12 57 07.7 +1.2**
E23K Chandalar 48.30 346 P **P 12 57 06.3 -0.3**
baz=17,SNR=7.2
E22K Anaktuvuk Pass 48.46 347 P **P 12 57 07.9 +0.1**
baz=16
G27K Doyon Strip 48.47 342 P **P 12 57 07.6 -0.2**
baz=22,SNR=5.5
KSH Kashi 48.56 82 P P 12 57 14.6 +5.6
KSH sP sP 12 57 21.3 +6.2
KSH pmax pmax
comp=Z,6.0nm,0.6s
F24K Squaw Lake 48.62 345 P **P 12 57 08.4 -0.6**
baz=18
G26K Porcupine Rive 48.63 343 P **P 12 57 08.9 -0.1**
baz=20,SNR=8.7
H27K Steamboat Moun 48.99 342 P **P 12 57 11.8 0.0**
baz=21,SNR=9.4
BOD Bodaibo 49.09 41 *e*P **P 12 57 11.6 -1.0**
BOD pmax pmax
comp=Z,6.0nm,1.2s
F22K John River 49.10 347 P **P 12 57 12.5 -0.2**
baz=16
G25K Bearman Lake 49.12 344 P **P 12 57 12.7 0.0**
baz=19
TOA0 Torodi Ar. Sit 49.15 181 P **P 12 57 13.2 -0.4**
TORD Torodi Ar. Bea 49.15 181 P **P 12 57 13.3 -0.2**
comp=Z,1.3nm,0.9s,baz=351,slow=7.9,SNR=5.3
TORD LR LR 13 20 30.1
comp=Z,82nm,18.7s,baz=224,slow=39
comp=Z,1.3nm,0.9s
FFC Flin Flon 49.15 312 P **P 12 57 13.1 -0.1**
FFC Flin Flon 49.15 312 P **P 12 57 13.1 -0.1**
FFC pmax pmax
comp=Z,12nm,0.8s
COLD Coldfoot 49.16 346 P **P 12 57 13.2 0.0**
baz=17
I29M Ogilvie Camp, 49.29 339 P **P 12 57 14.0 -0.2**
baz=23
G24K Hadweenzic Riv 49.35 345 P **P 12 57 14.8 +0.2**
baz=18,SNR=7.5
BILL Bilibino 49.38 8⇑ *e*P **P 12 57 15.7 +1.0**
BILL *e* 12 59 08.7
BILL *e*S S 13 04 10.6 -10
BILL pmax pmax
comp=Z,19nm,1.2s
F21K Alatna River 49.51 348 P **P 12 57 15.5 -0.3**
baz=15
H25K Birch Creek 49.55 344 P **P 12 57 16.4 +0.3**
baz=19
I27K Kandik River 49.59 341 P **P 12 57 16.3 -0.1**
baz=21,SNR=17
G22K Bettles 49.60 347 P **P 12 57 16.0 -0.4**
baz=16
G23K Bananza Creek 49.64 346 P **P 12 57 16.7 -0.1**
baz=17
YAK Yakutsk 49.71 29 LR LR 13 21 20.0
comp=Z,46nm,21.6s,baz=268,slow=40
YAK Yakutsk 49.71 29⇑ *i*P **P 12 57 17.8 +0.5**
YAK pmax pmax
comp=Z,11nm,0.8s
I26K Coal Creek Min 50.09 342 P **P 12 57 21.1 +0.9**
I26K IAmb IAmb 12 57 22.5
comp=Z,13nm,1.1s
I26K Coal Creek Min 50.09 342 P **P 12 57 20.1 -0.1**
baz=20,SNR=7.4
G21K Allakaket 50.20 348 P **P 12 57 21.3 +0.2**
baz=14
H24K Noodor Dome 50.23 345 P **P 12 57 22.6 +1.4**
H24K IAmb IAmb 12 57 23.7
comp=Z,11nm,0.9s
H24K Noodor Dome 50.23 345 P **P 12 57 21.6 +0.3**
baz=18,SNR=7.4
PRP Porcupine Dome 50.23 343 P **P 12 57 22.6 +1.2**
PRP IAmb IAmb 12 57 24.0
comp=Z,12nm,0.9s
PRP Porcupine Dome 50.23 343 P **P 12 57 21.8 +0.4**
baz=19,SNR=7.1
EGAK Eagle 50.29 341 P **P 12 57 21.7 0.0**
EGAK IAmb IAmb 12 57 23.0
comp=Z,14nm,1.1s
EGAK Eagle 50.29 341 P **P 12 57 22.0 +0.3**
baz=21,SNR=5.9
WMQ Urumqi 50.41 69 *e*P **P 12 57 26.5 +3.5**
WMQ LR LR
comp=Z,49nm,20.9s
H23K Yukon River 50.44 345 P **P 12 57 24.3 +1.5**
H23K IAmb IAmb 12 57 25.4
comp=Z,11nm,0.9s
H23K Yukon River 50.44 345 P **P 12 57 23.0 +0.1**
baz=17,SNR=6.4
MMPY Sheldon Lake, 50.51 334 P **P 12 57 23.6 +0.1**
baz=26,SNR=5.9
ULM Lac du Bonnet 50.52 305 P **P 12 57 21.9 -1.7**
comp=Z,2.3nm,0.6s,baz=350,slow=12,SNR=3.2
ULM LR LR 13 17 20.8
comp=Z,116nm,20.5s,baz=284,slow=34
comp=Z,2.3nm,0.6s
K29M Barlow Dome 50.56 338 P **P 12 57 24.0 0.0**
baz=23,SNR=10
H22K Ishtalitna Cre 50.58 346 P **P 12 57 24.3 +0.3**
baz=16,SNR=8.1
HILA High Level 50.67 324 P **P 12 57 24.7 0.0**
DAWY Dawson 50.67 339 P **P 12 57 25.1 +0.4**
DAWY IAmb IAmb 12 57 26.2
comp=Z,8.8nm,0.9s
DAWY Dawson 50.67 339 P **P 12 57 24.5 -0.1**
baz=22,SNR=12
IMAR Indian Mountai 50.74 348 P **P 12 57 25.7 +0.6**
POKR Poker Plat Res 50.86 344 P **P 12 57 25.8 -0.2**
baz=18
TGTN Hyland Airport 50.86 332 P **P 12 57 26.1 0.0**
baz=27
FLDN Fort Liard 50.89 329 P **P 12 57 26.2 -0.1**
baz=29
J26L Joseph Creek 50.91 342 P **P 12 57 27.4 +0.8**
J26L IAmb IAmb 12 57 28.4
comp=Z,11nm,0.9s
J26L Joseph Creek 50.91 342 P **P 12 57 26.6 0.0**
baz=20,SNR=11
H21K Melozitna Rive 50.96 347 P **P 12 57 28.0 +1.2**
H21K IAmb IAmb 12 57 29.4
comp=Z,9.7nm,0.8s
H21K Melozitna Rive 50.96 347 P **P 12 57 27.0 +0.2**
baz=15,SNR=8.4
J25K Salcha River, 51.06 343 P **P 12 57 28.6 +0.9**
J25K IAmb IAmb 12 57 29.7
comp=Z,12nm,0.9s
J25K Salcha River, 51.06 343 P **P 12 57 27.9 +0.3**
baz=19,SNR=9.7
I23K Minto, Yukon-K 51.07 345 P **P 12 57 28.4 +0.9**
baz=17
MDM Murphy Dome 51.11 344 P **P 12 57 29.3 +1.4**
MDM IAmb IAmb 12 57 30.1
comp=Z,14nm,1.0s
IL31 51.12 344 P **P 12 57 28.5 +0.6**
IL31 IAmb IAmb 12 57 29.9
comp=Z,16nm,1.2s
ILAR Eielson Array 51.12 344 P **P 12 57 27.1 -0.9**
comp=Z,6.9nm,1.0s,baz=16,slow=5.9,SNR=39
comp=Z,6.9nm,1.0s
ILAR Eielson Array 51.12 344 P **P 12 57 28.5 +0.6**
ILAR Eielson Array 51.12 344 P **P 12 57 28.5 +0.6**
K27K Chicken 51.13 341 P **P 12 57 29.4 +1.3**
K27K Chicken 51.13 341 P **P 12 57 28.5 +0.4**
baz=20,SNR=24
COLA College 51.14 344 P **P 12 57 28.7 +0.6**
COLA IAmb IAmb 12 57 30.3
comp=Z,15nm,0.9s
COLA College 51.14 344 P **P 12 57 28.7 +0.6**
COLA pmax pmax
comp=Z,15nm,0.9s
COLA College 51.14 344 P **P 12 57 28.5 +0.4**
baz=17
TCOL CIGO, UAF Yank 51.15 344 P **P 12 57 28.7 +0.6**
TCOL IAmb IAmb 12 57 30.3
comp=Z,15nm,0.9s
TCOL CIGO, UAF Yank 51.15 344 P **P 12 57 28.3 +0.2**
baz=17,SNR=5.1
M53A WI Miller and 51.22 287 P **P 12 57 29.9 +0.9**
baz=36
FARO Faro, Yukon 51.28 335 P **P 12 57 30.4 +1.1**
baz=25,SNR=8.9
I21K Tanana 51.34 346 P **P 12 57 30.3 +0.7**
baz=15
MLY Manley 51.34 346 P **P 12 57 29.7 0.0**
baz=16
L29M L29M 51.35 338 P **P 12 57 29.5 -0.3**
baz=22,SNR=7.6
SCRK Sand Creek 51.47 342 P **P 12 57 31.1 +0.3**
baz=19,SNR=6.4
HDA Harding Lake 51.47 343 P **P 12 57 30.9 +0.2**
baz=18
M31M Drury Creek, Y 51.51 336 P **P 12 57 31.7 +0.8**
baz=24
NEA2 Nenana 51.57 345 P **P 12 57 31.8 +0.5**
baz=17
UOSS Minazif 51.67 111 P **P 12 57 34.0 +1.4**
UOSS IAmb IAmb 12 57 45.6
comp=Z,14nm,0.8s
DOT Dot Lake 51.79 342 P **P 12 57 34.1 +1.0**
DOT IAmb IAmb 12 57 35.3
comp=Z,11nm,1.0s
K24K Donnelly Dome 51.89 343 P **P 12 57 34.3 +0.5**
baz=18
BCAR Beaver Creek A 52.00 340 P **P 12 57 36.0 +1.4**
L27K Beaver Creek, 52.01 340 P **P 12 57 36.2 +1.5**
L27K Beaver Creek, 52.01 340 P **P 12 57 35.2 +0.5**
baz=20,SNR=23
M29M Somme Creek 52.03 338 P **P 12 57 35.4 +0.5**
baz=22,SNR=17
N32M Quiet Lake 52.21 334 P **P 12 57 36.5 +0.3**
baz=24
WTLY Watson Lake, Y 52.24 331 P **P 12 57 36.7 +0.2**
baz=26
GCSA Galena City Sc 52.25 349 P **P 12 57 36.9 +0.5**
baz=12
BPAW Bear Paw Mtn. 52.27 346 P **P 12 57 36.9 +0.3**
baz=15
MCWV Mont Chateau 52.29 285 P **P 12 57 37.8 +0.8**
baz=36
MCK McKinley 52.38 344 P **P 12 57 37.5 +0.1**
baz=16,SNR=5.5
O53A New Philadelph 52.42 286 P **P 12 57 38.8 +0.8**
baz=36
N31M Braeburn, Yuko 52.43 336 P **P 12 57 37.7 -0.1**
baz=23,SNR=5.4
J20K Nowinta River 52.54 347 P **P 12 57 38.7 +0.1**
baz=14
CHUM Lake Minchumin 52.63 346 P **P 12 57 39.2 -0.1**
baz=15
PAX Paxson 52.64 342 P **P 12 57 39.5 0.0**
baz=18,SNR=6.0
M27K Edge Creek, AK 52.68 340 P **P 12 57 40.7 +0.9**
M27K Edge Creek, AK 52.68 340 P **P 12 57 39.6 -0.2**
baz=20,SNR=7.6
N30M Aishikik Lake 52.70 337 P **P 12 57 39.9 +0.1**
baz=22,SNR=14
DHY Denali Highway 52.81 343 P **P 12 57 40.6 -0.2**
baz=17
M26K Nabesna, AK 52.81 341 P **P 12 57 40.5 -0.2**
baz=20,SNR=10
YUK3 Moose Creek 52.99 339 P **P 12 57 42.2 0.0**
baz=21,SNR=11
P33M Teslin, Yukon 53.02 334 P **P 12 57 42.4 +0.2**
baz=24,SNR=6.0
WHY Whitehorse 53.02 335 P **P 12 57 43.0 +0.7**
WHY IAmb IAmb 12 57 44.2
comp=Z,13nm,0.9s
WHY Whitehorse 53.02 335 P **P 12 57 42.4 +0.1**
baz=23,SNR=10
ANM Nome 53.04 353 P **P 12 57 42.1 -0.1**
baz=7.2
CAST Castle Rocks 53.06 346 P **P 12 57 42.3 -0.1**
baz=15
YUK4 Talbot Arm 53.08 338 P **P 12 57 41.5 -1.3**
baz=22
HARP HAARP 53.14 342 P **P 12 57 42.9 -0.1**
baz=18
O30N Mendenhall 53.15 336 P **P 12 57 44.1 +1.0**
baz=23,SNR=14
WAT1 Susitna Watana 53.20 344 P **P 12 57 43.8 +0.3**
baz=16
ACSO Alum Creek Sta 53.22 288 P **P 12 57 44.7 +0.8**
baz=35
WAT6 Susitna Watana 53.33 343 P **P 12 57 44.5 -0.1**
baz=17,SNR=7.3
YUK8 Steele Glacier 53.34 338 P **P 12 57 45.2 +0.4**
baz=21,SNR=8.3
K20K Telida 53.34 347 P **P 12 57 45.9 +1.5**
K20K IAmb IAmb 12 57 47.3
comp=Z,14nm,1.1s
K20K Telida 53.34 347 P **P 12 57 45.0 +0.6**
baz=14
HYT Haines Junctio 53.36 337 P **P 12 57 46.2 +1.4**
HYT Haines Junctio 53.36 337 P **P 12 57 45.0 +0.2**
baz=22,SNR=6.3
SPMN Marine on St. 53.36 299 P **P 12 57 45.2 +0.3**
baz=35
R33M Jennings River 53.37 332 P **P 12 57 45.2 +0.3**
baz=25,SNR=6.2
YUK6 Outpost Mounta 53.41 337 P **P 12 57 45.1 -0.1**
baz=22,SNR=5.7
PPLA Purkeypile 53.58 346 P **P 12 57 46.2 -0.2**
baz=14
P32M Atlin 53.77 334 P **P 12 57 47.7 0.0**
baz=24
MCARA McCarthy VSAT 53.78 340 P **P 12 57 48.0 +0.2**
baz=19
N25K Chitina, Valde 53.81 341 P **P 12 57 48.1 0.0**
baz=18,SNR=8.7
O28M Mount Upton 53.89 338 P **P 12 57 48.8 -0.1**
baz=21
CTGM Chitina Glacie 53.90 339 P **P 12 57 49.3 +0.5**
CTGM IAmb IAmb 12 57 51.0
comp=Z,10nm,0.8s
CTG Chitna Glacier 53.90 339 P **P 12 57 49.7 +0.9**
baz=20,SNR=9.4
P30M Million Dollar 53.91 336 P **P 12 57 49.4 +0.6**
baz=22
SCM Sheep Creek Mo 53.99 343 P **P 12 57 49.8 +0.5**
baz=17,SNR=8.8

DLBC	Dease Lake	54.03 331	P	P	12 57 49.9 +0.2
	baz=25				
Q32M	Nakina River	54.04 333	P	P	12 57 50.3 +0.4
	baz=24				
O29M	Mount Kennedy	54.05 337	P	P	12 57 50.0 +0.2
	baz=21				
M23K	Glacier View	54.09 343	P	P	12 57 50.4 +0.4
	baz=17				
KLU	Klutina	54.12 342	P	P	12 57 50.7 +0.4
	baz=18				
SML	Sawmill	54.15 343	P	P	12 57 51.4 +0.9
SML			IAmb	IAmb	12 57 56.7
	comp=Z,14nm,1.0s				
SML	Sawmill	54.15 343	P	P	12 57 51.0 +0.5
	baz=16				
SKAG	Skagway	54.21 335	P	P	12 57 52.3 +1.4
SKAG			IAmb	IAmb	12 57 52.8
	comp=Z,9.5nm,0.9s				
SKAG	Skagway	54.21 335	P	P	12 57 50.8 0.0
	baz=23,SNR=6.3				
SKT	Skwentna	54.39 345	P	P	12 57 52.4 +0.2
	baz=15				
PLBC	Pleasant Camp	54.42 335	P	P	12 57 52.2 -0.2
	baz=22,SNR=6.6				
BMRM	Bremner River	54.42 341	P	P	12 57 52.9 +0.4
	baz=18,SNR=7.9				
M22K	Willow	54.44 344	P	P	12 57 52.5 +0.1
	baz=15				
PMR	Palmer	54.47 344	P	P	12 57 52.6 -0.1
	baz=16				
P29M	Windy Craggy	54.52 336	P	P	12 57 53.7 +0.6
	baz=22,SNR=10				
KNK	Knik Glacier	54.55 343	P	P	12 57 53.7 +0.3
	baz=16,SNR=5.9				
L19K	White Mountain	54.57 347	P	P	12 57 53.7 +0.2
	baz=13				
M20K	Styx River	54.67 346	P	P	12 57 54.4 +0.1
	baz=14				
MESA	MESA	54.75 339	P	P	12 57 55.1 +0.1
	baz=20				
S34M	Telegraph Cree	54.75 332	P	P	12 57 55.0 +0.2
	baz=24				
SONM	Songino Array	54.76 53	P	P	12 57 56.0 +0.9
	comp=Z,2.2nm,0.9s,baz=295,slow=5.4,SNR=9.1				
SONM			LR	LR	13 23 33.3
	comp=Z,72nm,19.1s,baz=270,slow=38				
	comp=Z,2.2nm,0.9s				
PNL	Peninsula	54.79 337	P	P	12 57 55.1 0.0
	baz=21				
M19K	Big River Lodg	54.79 347	P	P	12 57 55.2 +0.1
	baz=13				
SUA	Susitna One	54.80 345	P	P	12 57 55.1 -0.1
	baz=15				
GLI	Glacier Island	54.88 342	P	P	12 57 55.6 -0.1
	baz=17				
SFIN	Lafayette	54.91 291	P	P	12 57 56.6 +0.4
	baz=35				
ULN	Ulaanbaatar	54.97 53	eP	P	12 57 58.7 +1.9
ULN			pmax	pmax	
	comp=Z,9.0nm,2.5s				
EYAK	Cordova Ski Ar	55.00 341	P	P	12 57 56.4 -0.2
	baz=18				
BGLC	Bering Glacier	55.02 340	P	P	12 57 57.3 +0.7
	baz=19				
RC01	Rabbit Creek A	55.03 344	P	P	12 57 56.7 -0.1
	baz=16				
PWL	Port Wells	55.07 343	P	P	12 57 56.7 -0.4
	baz=16				
R32K	Eaglecrest	55.15 334	P	P	12 57 57.5 -0.2
	baz=23				
T35M	Bob Quinn	55.41 331	P	P	12 57 60.0 +0.4
	baz=25				
P23K	Montague Islan	55.77 342	P	P	12 58 01.8 -0.3
	baz=17				
DBIC	Dimbokro	55.83 189	LR	LR	13 25 38.5
	comp=Z,78nm,18.4s,baz=316,slow=40				
SEW	Seward	55.95 343	P	P	12 58 03.0 -0.4
	baz=16				
ECSD	EROS Data Cent	56.14 300	P	P	12 58 05.0 -0.1
ECSD			IAmb	IAmb	12 58 05.7
	comp=Z,8.9nm,0.9s				
ECSD	EROS Data Cent	56.14 300	P	P	12 58 05.1 +0.1
	baz=34				
WCI	Wyandotte Cave	56.33 289	P	P	12 58 06.8 +0.3
	baz=34				
O20K	Slope Mountain	56.37 345	P	P	12 58 05.6 -0.9
	baz=14				
WRAK	Wrangell Islan	56.39 332	P	P	12 58 06.3 -0.3
	baz=24				
ZEA	Zeya	56.44 36	eP	P	12 58 08.3 +1.3
SIT	Sitka	56.44 334	P	P	12 58 06.6 -0.3
	baz=22				
BRSE	Bradley Lake S	56.47 344	P	P	12 58 06.7 -0.5
	baz=15				
KMSC	Kings Mountain	56.67 283	P	P	12 58 09.3 +0.4
	baz=34				
LAO	LASA Array	57.33 309	P	P	12 58 13.4 -0.1
	baz=32				
EGMT	Eagleton	57.43 312	P	P	12 58 14.4 +0.1
	baz=31				
CCM	Cathedral Cave	58.63 293	P	P	12 58 22.4 -0.3
	baz=33				
RSSD	Black Hills	58.70 306	P	P	12 58 22.9 -0.5
	baz=32				
NEW	Newport	59.65 318	P	P	12 58 30.0 +0.4
	baz=28				
RLMT	Red Lodge	59.76 310	P	P	12 58 30.7 0.0
	baz=30				
MSO	Missoula	59.88 315	P	P	12 58 31.2 -0.2
MSO	Missoula	59.88 315	P	P	12 58 31.1 -0.2
	baz=29				
KSU1	Kansas State U	60.02 297	P	P	12 58 32.0 -0.2
	baz=32				
BOZ	Bozeman (W)	60.18 312	P	P	12 58 34.0 +0.6
	baz=29				
H17A	Grant Village	60.86 311	P	P	12 58 38.2 0.0
	baz=29				
K22A	Casper	60.90 307	P	P	12 58 37.9 -0.5
	baz=30				
LRAL	Lakeview Retre	60.99 286	P	P	12 58 39.0 +0.1
	baz=32				
YPP	Pitchstone Pla	61.05 311	P	P	12 58 40.3 +0.7
YPP			IAmb	IAmb	12 58 43.0
	comp=Z,18nm,1.8s				
PYUN	Piuthan	61.25 84	eP	P	12 58 44.2 +3.1
	comp=Z,37nm,1.0s				
MCMT	McKenzie Canyo	61.27 313	P	P	12 58 41.6 +0.6
DANN	Dangsing	61.40 83	eP	P	12 58 45.8 +3.7
	comp=Z,35nm,0.8s				
KLR	Kul'dur	61.72 35	LR	LR	13 31 29.1
	comp=Z,52nm,18.2s,baz=312,slow=42				
KLR	Kul'dur	61.72 35	eP	P	12 58 42.6 -1.1
KLR			pmax	pmax	
	comp=Z,8.0nm,1.8s				
PD31	Pinedale Array	61.91 309	P	P	12 58 44.9 -0.5
PDAR	Pinedale Array	61.91 309	P	P	12 58 44.3 -1.1
	comp=Z,2.5nm,0.8s,baz=55,slow=6.0,SNR=19				
	comp=Z,2.5nm,0.8s				
PDAR	Pinedale Array	61.91 309	P	P	12 58 45.2 -0.2
BW06	Boulder Array	61.91 309	P	P	12 58 44.8 -0.6
BW06	Boulder Array	61.91 309	P	P	12 58 45.0 -0.4
	baz=29				
GKN	Gorkha	62.10 83	eP	P	12 58 50.2 +3.5
PLID	Pearl Lake	62.10 315	P	P	12 58 45.6 -0.9
N23A	Red Feather La	62.20 306	P	P	12 58 47.1 -0.2
	baz=30				
MIAR	Mount Ida	62.60 292	P	P	12 58 50.1 +0.3
MIAR	Mount Ida	62.60 292	P	P	12 58 50.1 +0.3
MIAR			pmax	pmax	
	comp=Z,13nm,1.1s				
MIAR	Mount Ida	62.60 292	P	P	12 58 50.1 +0.3
	baz=31				
HHC	Hu-ho-hao-te	62.64 54	eP	P	12 58 51.9 +1.8
HHC			pmax	pmax	
	comp=Z,31nm,0.8s				
HHC			pmax	pmax	
	comp=Z,320nm,5.1s				
HHC			LR	LR	
	comp=Z,580nm,15.5s				
HHC			LR	LR	
	comp=Z,580nm,17.5s				
HHC			LR	LR	
	comp=Z,640nm,15.5s				
PKIN	Phulchoki	62.81 82	eP	P	12 58 55.1 +3.5
	comp=Z,7.3nm,0.7s				
PKI	Pulchoki	62.82 82	eP	P	12 58 55.1 +3.4
	comp=Z,14nm,1.0s				
HLID	Hailey	62.92 313	P	P	12 58 51.7 -0.2
	baz=28				
ISCO	Idaho Springs	63.02 305	P	P	12 58 52.0 -0.9
	baz=30				
JIRN	Jiri	63.11 81	eP	P	12 58 57.7 +4.0
	comp=Z,8.7nm,0.6s				
PETK	Petropavlovsk-	63.25 16	P	P	12 58 52.6 -1.2
	comp=Z,6.0nm,1.0s,baz=38,slow=7.5,SNR=5.9				
	comp=Z,6.0nm,1.0s				
Q24A	Divide	63.56 304	P	P	12 58 55.6 -0.9
	baz=30				
LZH	Lanzhou	63.70 62	eP	P	12 59 03.5 +6.2
LZH			pmax	pmax	
	comp=Z,11nm,1.0s				
O20A	White River Ci	63.72 307	P	P	12 58 56.6 -0.8
	baz=29				
RAMN	Ramite	63.90 82	eP	P	12 59 00.7 +1.9
	comp=Z,14nm,0.7s				
WMOK	Wichita Mounta	64.65 297	P	P	12 59 03.4 +0.1
	baz=30				
SDCO	Great Sand Dun	64.76 303	P	P	12 59 03.8 -0.5
	baz=29				
S22A	4UR Ranch, Cre	65.27 304	P	P	12 59 07.3 -0.4
	baz=29				
DUG	Dugway, Tooele	65.34 310	P	P	12 59 08.0 +0.1
	baz=28				
K05A	Summer Lake	65.79 317	P	P	12 59 12.2 +1.4
MVCO	Mesa Verde	66.38 305	P	P	12 59 14.3 -0.4
	baz=28				
MVU	Marysvale	66.62 309	P	P	12 59 16.1 -0.2
ABTX	Abilene, Hawle	66.83 296	P	P	12 59 17.8 +0.4
	baz=30				
MSTX	Muleshoe	66.95 299	P	P	12 59 19.0 +0.6
	baz=29				
ANMO	Albuquerque	67.58 303	P	P	12 59 22.7 +0.4
	baz=28				
R11A	Troy Canyon, C	67.96 311	P	P	12 59 25.0 +0.3
	baz=26				
YERR	Yerington	68.63 314	P	P	12 59 29.9 +0.9
JCT	Junction City	68.76 295	P	P	12 59 30.6 +1.0
	baz=29				
NVAR	Mina Array Bea	68.82 314	P	P	12 59 30.6 +0.5
	comp=Z,1.0nm,0.8s,baz=45,slow=6.6,SNR=10.0				
	comp=Z,1.0nm,0.8s				
WUAZ	Wupatki	68.95 307	P	P	12 59 31.2 +0.3
	baz=27				
TPNV	Topopah Spring	69.44 311	P	P	12 59 34.7 +0.8
	baz=26				
MLAC	Mammoth, Mammo	69.72 314	P	P	12 59 36.6 +0.8
	baz=25				
BRDH	Bariadhala	69.89 80	LR	LR	13 34 46.7
	comp=Z,114nm,18.3s,baz=268,slow=40				
FURC	Furnace Creek,	70.09 312	P	P	12 59 38.7 +1.1
	baz=26				
121A	Cookes Peak, D	70.22 303	P	P	12 59 39.5 +0.7
	baz=28				
833A	Chaparral WMA,	70.46 294	P	P	12 59 40.8 +0.7
	baz=29				
CWC	Cottonwood Cre	70.54 312	P	P	12 59 41.1 +0.4
	baz=25				
MPMC	Manual Prospec	70.68 312	P	P	12 59 41.5 -0.1
	baz=25				
PDMCI	Parker Dam,Lak	71.06 308	P	P	12 59 44.1 +0.5
	baz=26				
PZH	PanZhiHua	71.10 69	P	P	12 59 46.0 +1.8
PZH			pmax	pmax	
	comp=Z,10.0nm,1.0s				
PZH			pmax	pmax	
	comp=Z,150nm,5.9s				
GSC	Goldstone, Bar	71.12 311	P	P	12 59 44.4 +0.3
	baz=25				
GMRC	Granite Mounta	71.18 310	P	P	12 59 45.1 +0.6
	baz=26				
LRMC	Laurel Mtn Rad	71.27 312	P	P	12 59 45.9 +0.9
	baz=25				
KSRS	Korea Array	71.37 43	LR	LR	13 37 09.1
	comp=Z,37nm,18.3s,baz=340,slow=41				
ISA	Isabella, Lake	71.37 312	P	P	12 59 45.8 +0.2
	baz=25				
TXAR	Lajitas Array	71.37 298	P	P	12 59 45.7 -0.1
	comp=Z,1.7nm,1.0s,baz=58,slow=4.9,SNR=10				
TXAR			LR	LR	13 30 12.6
	comp=Z,91nm,19.9s,baz=18,slow=35				
	comp=Z,1.7nm,1.0s				
TXAR	Lajitas Array	71.37 298	P	P	12 59 45.9 +0.2
TXAR	Lajitas Array	71.37 298	P	P	12 59 45.9 +0.2
HEC	Hector,Ludlow	71.38 310	P	P	12 59 46.6 +1.0
	baz=26				
IRM	Iron Mountain	71.56 309	P	P	12 59 47.4 +0.7
	baz=26				
TUC	Tucson	71.58 305	P	P	12 59 47.7 +0.8
	baz=27				
EDW2	Edwards Air Fo	71.92 312	P	P	12 59 49.6 +0.7
	baz=25				
BELC	Belle Mtn. Jos	72.00 310	P	P	12 59 49.9 +0.4
	baz=26				
BC3	Big Chuckawall	72.12 309	P	P	12 59 50.8 +0.6
	baz=26				
SMMC	Simmler	72.21 313	P	P	12 59 51.1 +0.5
	baz=24				
BFSC	Mount Baldy Ra	72.38 311	P	P	12 59 52.2 +0.4
	baz=25				
GLA	Glamis	72.43 308	P	P	12 59 52.5 +0.5
	baz=26				
PFO	Pinyon Flats O	72.52 310	P	P	12 59 53.2 +0.6
	baz=25				
TPFO	Pinon Flats	72.52 310	P	P	12 59 53.0 +0.3
	baz=25				
PKM	Mcpherson Peak	72.53 313	P	P	12 59 52.7 0.0
	baz=24				
MURC	Murrieta	72.79 310	P	P	12 59 54.9 +0.7
	baz=25				
SWSC	Sam W. Stewart	72.88 309	P	P	12 59 54.8 +0.2
	baz=25				
MONP2	Monument Peak	73.15 310	P	P	12 59 57.1 +0.6
	baz=25				
IKP	In-Ko-Pah, Jac	73.26 309	P	P	12 59 58.0 +1.1
	baz=25				
CIS	Catalina Islan	73.40 311	P	P	12 59 57.3 -0.5
	baz=25				
SNCC	San Nicolas Is	73.93 312	P	P	12 59 59.4 -1.3
	baz=24				
CMAR	Chiang Mai Arr	76.88 75	P	P	13 00 19.1 +1.2
	comp=Z,0.9nm,0.3s,baz=335,slow=4.0,SNR=1.1				
CMAR			LR	LR	13 39 34.0
	comp=Z,32nm,18.5s,baz=160,slow=40				
	comp=Z,0.9nm,0.3s				
JHJ	Hachijo jima 2	78.90 35	LR	LR	13 40 02.7
	comp=Z,24nm,18.5s,baz=130,slow=39				
ROSC	El Rosal	79.52 260	P	P	13 00 34.0 +1.0
	comp=Z,4.1nm,0.4s,baz=1.0,slow=9.8,SNR=5.4				
	comp=Z,4.1nm,0.4s				
ROSC	El Rosal	79.52 260	P	P	13 00 34.0 +1.0
JOW	Kunigami	81.24 47	LR	LR	13 43 22.6
	comp=Z,43nm,18.4s,baz=274,slow=41				
OTAV	Otavalo	85.48 262	P	P	13 01 07.1 +2.9
OTAV			pmax	pmax	
	comp=Z,5.0nm,1.3s				
LPAZ	La Paz	95.53 245	LR	LR	13 39 44.9
	comp=Z,31nm,21.6s,baz=108,slow=32				
NNA	Nana	95.53 255	LR	LR	13 42 52.3
	comp=Z,20nm,19.3s,baz=220,slow=34				
DAV	Davao City (W)	98.39 57	LR	LR	13 50 42.1
	comp=Z,42nm,18.7s,baz=108,slow=38				
ASAR	Alice Springs	129.58 63	PKP	PKPdf	13 07 33.9 -0.5
	comp=Z,0.3nm,0.9s,baz=344,slow=1.6,SNR=2.6				

*IDC **09** 13:12:55.7±1.4, 3°.09N×126°.54E, h0km, mb3.5/5, mbtmp3.6/6, ML3.9/1, MS3.1/2, Error ellipse: s-maj=62.9km s-min=18.9km az=59.0*

*NEIC **09** 13:13:01.8±3.1, 2°.9N±0°.2×126°.3E±0°.2, h43km±14km, mb4.0/6, Error ellipse: s-maj=35.1km s-min=17.3km az=52.0*

ISC 09 13:13:00.2±0.9, 3°.2N±0°.1×126°.8E±0°.2, h35km, n22, σ1°34/16, mb3.5/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.46	166	Pn	Pn	13 13 38.0	0.0
DAV	Davao City (W)	4.04	343	LR	LR	13 15 43.7	
	comp=Z,59nm,18.8s,baz=168,slow=41						
LUWI	Luwuk	5.79	224	Pn	Pn	13 14 13.1	-11
SIJI	Sorong	6.03	132	Pn	Pn	13 14 27.6	+0.5
	3.2nm,0.3s,baz=319,slow=20,SNR=32						
SIJI				Sn	Sn	13 15 32.0	-2.9
	0.4nm,0.3s,baz=240,slow=20,SNR=2.0						
	8.2nm,0.3s						
FAKI	Fak Fak	8.17	138	Pn	Pn	13 14 59.0	+2.6
SOEI	Soe	13.09	191	Pn	Pn	13 15 58.3	-5.6
MTN	Manton Dam	16.50	165	P	Pn	13 16 50.0	+0.9
MTN				IAmb	IAmb	13 16 53.6	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	21.17	183	P	P	13 17 41.5	-1.2
	comp=Z,1.2nm,0.9s,baz=0.0,slow=11,SNR=1.4						
	comp=Z,1.2nm,0.9s						
WB0	Warramunga Arr	24.00	162	P	P	13 18 12.6	+0.7
WB0				IAmb	IAmb	13 18 13.9	
	comp=Z,4.9nm,1.1s						
WRAB	Tennant Creek	24.15	162	P	P	13 18 13.6	+0.4
WRAB				IAmb	IAmb	13 18 34.4	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	24.15	162	P	P	13 18 13.2	-0.1
	comp=Z,0.7nm,0.5s,baz=336,slow=11,SNR=16						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	24.15	162	P	P	13 18 13.8	+0.5
WB2	Warramunga Arr	24.16	162	P	P	13 18 13.6	+0.3
ASAR	Alice Springs	27.57	166	P	P	13 18 45.4	+1.1
	comp=Z,0.3nm,0.8s,baz=351,slow=7.5,SNR=6.9						
	comp=Z,0.3nm,0.8s						
CMAR	Chiang Mai Arr	31.19	301	P	P	13 19 17.3	+0.9
	comp=Z,0.2nm,0.3s,baz=142,slow=8.9,SNR=4.4						
	comp=Z,0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	41.91	66	T	T	14 03 57.9	
	baz=253						
H11S1	WAKE ISLAND Hy	41.93	66	T	T	14 04 06.5	
	baz=253						
H11S2	WAKE ISLAND Hy	41.93	66	T	T	14 04 02.4	
	baz=253						
MK31	Makanchi Array	58.03	325	P	P	13 22 48.9	-0.9
MKAR	Makanchi Array	58.03	325	P	P	13 22 48.7	-1.1
	comp=Z,0.7nm,0.4s,baz=120,slow=7.3,SNR=11						
	comp=Z,0.7nm,0.4s						
SHEM	Shemya Is, Ala	62.91	30	LR	LR	13 47 21.9	
	comp=Z,57nm,19.9s,baz=112,slow=33						
KKAR	Karatay Array	63.66	317	P	P	13 23 27.6	-0.6

*HVO **09** 13:44:28.6±2.9, 19°.46N±0°.02×154°.77W±0°.03, h13km±2km, ML3.9/48, ML4.0/52(NEIC), Error ellipse: s-maj=4.5km s-min=2.6km az=93.0*

NEIC 09 13:44:24.8±0.6, 19°.44N±0°.04×154°.66W±0°.07, h28km±10km, Error ellipse: s-maj=9.8km s-min=5.2km az=97.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHO	Puu Honuaula	0.22	280		Pn	13 44 32.0	-0.2
PHO					Sb	13 44 34.4	-1.0
JCUZ	Jacuzzi	0.42	262		Pn	13 44 35.2	+0.2
JCUZ					Sb	13 44 39.8	-0.3
JCUZ	Jacuzzi	0.42	262	IAML		13 44 40.4	
	comp=N,14μm,0.5s						
JCUZ				IAML		13 44 40.4	
	comp=E,39μm,0.5s						
NPOC	North of Pu'u	0.43	263		Pn	13 44 35.2	+0.1
NPOC					Sb	13 44 40.1	-0.2
NPOC	North of Pu'u	0.43	263	IAML		13 44 40.7	
	comp=E,34μm,0.7s						
NPOC				IAML		13 44 40.8	
	comp=N,15μm,0.5s						
KNHH	Kane Nui o Ham	0.48	263		Pn	13 44 36.0	+0.1
PUH	Pauahi	0.53	263		Pn	13 44 36.5	0.0
PUH					Sb	13 44 43.0	-0.1
PUH	Pauahi	0.53	263	IAML		13 44 46.2	
	comp=E,11μm,0.6s						
PUH				IAML		13 44 49.9	
	comp=N,11μm,0.6s						
BYL	Byron's Ledge	0.57	267		Sb	13 44 43.9	-0.3
BYL	Byron's Ledge	0.57	267		Pn	13 44 36.7	-0.4
BYL	Byron's Ledge	0.57	267	IAML		13 44 50.3	
	comp=E,10μm,0.4s						
BYL				IAML		13 44 50.5	
	comp=N,11μm,0.4s						
HATHI	Halema'uma'u T	0.57	268		Pn	13 44 37.0	0.0
HATHI					Sb	13 44 43.8	-0.4
HATHI	Halema'uma'u T	0.57	268	IAML		13 44 48.8	
	comp=N,12μm,0.6s						
KKO	Keanakako`i	0.57	266		Sb	13 44 44.4	0.0
KKO	Keanakako`i	0.57	266		Pn	13 44 37.0	-0.1
KKO	Keanakako`i	0.57	266	IAML		13 44 51.3	
	comp=E,7μm,0.9s						
KKO				IAML		13 44 51.6	
	comp=N,9μm,1.0s						
SBLHI	Steaming Bluff	0.57	269		Sb	13 44 44.0	-0.3
SBLHI	Steaming Bluff	0.57	269		Pn	13 44 36.9	-0.2
SBLHI	Steaming Bluff	0.57	269	IAML		13 44 52.3	
	comp=N,10μm,0.4s						
SBLHI				IAML		13 44 53.6	
	comp=E,8μm,0.4s						
RIM	Rim	0.58	265		Sb	13 44 44.4	-0.1
RIM	Rim	0.58	265		Pn	13 44 37.1	-0.1
RIM	Rim	0.58	265	IAML		13 44 44.8	
	comp=E,9μm,0.3s						
RIM				IAML		13 44 49.5	
	comp=N,13μm,0.5s						
RSD	Rainshed	0.58	272		Pn	13 44 37.5	+0.2
RSD					Sb	13 44 44.1	-0.5
UWB	Uwekahuna B	0.58	268		Pn	13 44 37.1	-0.2
UWB	Uwekahuna B	0.58	268		Sb	13 44 44.8	+0.2
NPH	North Pit	0.59	267		Pn	13 44 37.1	-0.2
OBL	Observatory Le	0.59	268		Pn	13 44 37.3	-0.1
OBL				IAML		13 44 53.0	
	comp=E,13μm,0.4s						
UWE	Uwekahuna	0.60	268		Pn	13 44 37.4	-0.1
UWE				IAML		13 44 54.7	
	comp=N,13μm,0.4s						
SDHHI	Sand Hill	0.60	265		Pn	13 44 37.3	-0.2
SDHHI				IAML		13 44 50.7	
	comp=N,11μm,0.6s						
SDHHI				IAML		13 44 53.1	
	comp=E,10μm,0.5s						
WRMHI	West Rim	0.60	267		Sn	13 44 45.9	-0.6
WRMHI	West Rim	0.60	267		Pn	13 44 37.4	-0.2
WRMHI	West Rim	0.60	267	IAML		13 44 53.3	
	comp=E,17μm,0.6s						
WRMHI				IAML		13 44 53.3	
	comp=N,9μm,0.4s						
HLP	Hilina Pali	0.63	257		Pn	13 44 38.2	+0.4
HLP					Sb	13 44 45.4	-0.4
HLP	Hilina Pali	0.63	257	IAML		13 44 54.2	
	comp=N,11μm,0.6s						
HLP				IAML		13 44 57.0	
	comp=E,13μm,0.6s						
MLH	Mauna Loa	0.69	274		Pn	13 44 38.8	0.0
MLH					Sb	13 44 47.6	0.0
MLH	Mauna Loa	0.69	274	IAML		13 44 49.5	
	comp=E,8μm,0.4s						
MLH				IAML		13 44 57.5	
	comp=N,9μm,0.4s						
HTC	Hot Caves	0.72	254		Pn	13 44 39.7	+0.5
AIN	Ainahou	0.76	265		Pn	13 44 39.9	+0.2
AIN				IAML		13 44 55.6	
	comp=E,8μm,0.3s						
HMH	Humu'ula Sheep	0.79	282		Sn	13 44 51.2	-0.2
HMH	Humu'ula Sheep	0.79	282		Pn	13 44 40.3	0.0
MLOA	Mauna Loa Obse	0.87	276		Pn	13 44 41.2	-0.3
MLOA				IAML		13 45 00.5	
	comp=N,5μm,0.4s						
POHA	Pohakuloa	0.88	291		Pn	13 44 41.2	-0.3
POHA				IAML		13 45 06.4	
	comp=N,6μm,0.6s						
MWH	Moku'aweowe	0.89	273		Pn	13 44 41.4	-0.4
HPO	Honuapo	0.91	248		Pb	13 44 42.0	0.0
KHU	Kahuku	0.92	258		Pn	13 44 41.8	-0.2
HUH	Hualalai	1.13	282		Pn	13 44 45.0	0.0
HPAH	Hawaii Prepara	1.14	301		Pn	13 44 44.6	-0.3
KHLU	Kahalu`u	1.17	278		Pn	13 44 44.9	-0.5
KHLU				IAML		13 45 09.0	
	comp=E,3μm,0.6s						
KHLU				IAML		13 45 09.1	
	comp=N,3μm,0.6s						
CPH	Captain Cook	1.19	272		Pn	13 44 45.0	-0.5
HLK	Haleakala	1.98	312	Pn	Pn	13 44 56.5	-0.2
KHLH	Kahului Airpor	2.20	311		Pn	13 44 59.8	+0.4
HON	Honolulu	3.65	301	Pn	Pn	13 45 19.0	-0.3
KIP	Kipapa	3.71	303	Pn	Pn	13 45 20.1	-0.1
OPA	Opana	3.85	306	Pn	Pn	13 45 21.9	-0.2
KEKH	Kekaha	5.36	299	Pn	Pn	13 45 42.5	-0.4

*IDC **09** 14:05:26.6±2.4, 36°.99S×179°.17E, h0km, mb4.4/2,*

mbtmp4.4/3,ML4.1/1,MS2.7/1,Error ellipse: s-maj=69.8km s-min=38.4km az=143.0
*WEL **09** 14:05:31.8±1.3,37°S±5°×17°9E±1°0,h12km,M3.5/13, ML3.7/12,MLv3.5/13,Error ellipse: s-maj=0.0km s-min=0.0km az=96.5*
*NEIC **09** 14:05:36.3±0.4,37°3S±0°2×177°9E±0°2,h10km±2km, mb4.8/10,Error ellipse: s-maj=45.4km s-min=5.5km az=34.0*
ISC 09 14:05:30.1±2.1,37°16S±0°06×179°03E±0°08,h12km±10km, n98,σ1§24/101,mb4.6/6,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.70**	**235**		**Pg**	**14 05 43.9**	**+0.2**
MXZ				Sg	**Sg**	14 05 51.1	-1.9
MXZ	**Matakaoa Point**	**0.70**	**235**	P	**Pg**	**14 05 44.0**	**+0.2**
MXZ				S	**Sg**	**14 05 52.1**	**-0.9**
WMGZ	**Waiomatatini S**	**0.82**	**216**	P	**Pb**	**14 05 48.1**	**+1.8**
WMGZ				S	**Sb**	**14 05 59.4**	**+2.1**
PKGZ	**Pakihiroa**	**1.05**	**226**	P	**Pg**	**14 05 50.4**	**+0.1**
PKGZ				S	**Sb**	**14 06 04.8**	**+0.8**
PUZ	**Puketiti**	**1.10**	**214**	P	**Pg**	**14 05 51.9**	**+0.6**
PUZ				S	**Sg**	**14 06 06.3**	**+0.7**
HAZ	**Te Kaha**	**1.16**	**239**	P	**Pg**	**14 05 50.9**	**-1.4**
HAZ				S	**Sn**	**14 06 07.4**	**-0.4**
TWGZ	**Tauwhareparae**	**1.31**	**219**	P	**Pn**	**14 05 55.1**	**+0.8**
RUGZ	**Raukumara Rang**	**1.34**	**233**	P	**Pn**	**14 05 55.4**	**+0.6**
RUGZ				S	**Sg**	**14 06 12.7**	**-0.7**
CNGZ	**Carnagh Statio**	**1.47**	**206**	P	**Pn**	**14 05 57.6**	**+1.1**
WIZ	**White Island**	**1.51**	**255**	P	**Pn**	**14 05 57.3**	**+0.3**
TKGZ	**Te Karaka**	**1.58**	**216**	P	**Pn**	**14 05 58.3**	**+0.4**
MWZ	**Matawai**	**1.67**	**225**	P	**Pn**	**14 05 59.8**	**+0.5**
RIGZ	**Rimuhau**	**1.84**	**213**	P	**Pn**	**14 06 01.6**	**0.0**
RAGZ	**Rawiri**	**1.85**	**223**	P	**Pn**	**14 06 02.5**	**+0.8**
URZ	**Urewera**	**1.88**	**234**	Pn	**Pn**	**14 06 02.9**	**+0.9**
	59nm,0.3s,baz=84,slow=19,SNR=288						
URZ				Sn	**Sn**	**14 06 24.9**	**-0.7**
	25nm,0.3s,baz=38,slow=19,SNR=5.5						
URZ				LR	LR	14 07 09.4	
	comp=Z,153nm,18.1s,baz=85,slow=50 143nm,0.3s						
URZ	**Urewera**	**1.88**	**234**	P	**Pn**	**14 06 02.7**	**+0.7**
EDRZ	**Edgecumbe**	**2.05**	**242**	P	**Pn**	**14 06 05.2**	**+0.8**
OPRZ	**Ohinepanea**	**2.08**	**250**	P	**Pn**	**14 06 05.1**	**+0.2**
SNGZ	**Shannon Statio**	**2.10**	**219**	P	**Pn**	**14 06 05.4**	**+0.3**
KNZ	**Kokohu**	**2.15**	**210**	P	**Pn**	**14 06 05.3**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.18**	**204**	P	**Pn**	**14 06 06.2**	**0.0**
RTZ	**Ruatahuna**	**2.18**	**228**	P	**Pn**	**14 06 06.8**	**+0.6**
TGRZ	**Tauranga**	**2.28**	**255**	P	**Pn**	**14 06 07.9**	**+0.4**
RRRZ	**Republican Roa**	**2.32**	**239**	P	**Pn**	**14 06 08.2**	**+0.2**
RAHZ	**Arahi**	**2.33**	**221**	P	**Pn**	**14 06 08.6**	**+0.3**
KARZ	**Kaharoa**	**2.37**	**248**	P	**Pn**	**14 06 09.3**	**+0.5**
WHHZ	**Waihua**	**2.38**	**216**	P	**Pn**	**14 06 09.0**	**0.0**
MTHZ	**Maungataniwha**	**2.42**	**225**	P	**Pn**	**14 06 10.4**	**+0.9**
PRRZ	**Plateau Road**	**2.48**	**237**	P	**Pn**	**14 06 10.8**	**+0.5**
ALRZ	**Allen Road**	**2.55**	**236**	P	**Pn**	**14 06 11.7**	**+0.5**
NMHZ	**Naumai**	**2.61**	**222**	P	**Pn**	**14 06 12.9**	**+0.7**
ARHZ	**Aropaoanui**	**2.64**	**217**	P	**Pn**	**14 06 12.5**	**0.0**
KUZ	**Kuaotunu**	**2.68**	**278**	P	**Pn**	**14 06 11.9**	**-1.2**
BKZ	**Black Stump Fm**	**2.83**	**224**	P	**Pn**	**14 06 15.1**	**-0.1**
TOZ	**Tahuroa Road**	**2.87**	**257**	P	**Pn**	**14 06 15.1**	**-0.4**
CKHZ	**Cape Kidnapper**	**2.93**	**211**	P	**Pn**	**14 06 15.5**	**-1.0**
MCHZ	**McNeill Hill**	**2.93**	**218**	P	**Pn**	**14 06 16.1**	**-0.3**
KWHZ	**Kaweka Forest**	**3.05**	**221**	P	**Pn**	**14 06 17.7**	**-0.5**
MKAZ	**Moumakai**	**3.09**	**270**	P	**Pn**	**14 06 17.9**	**-0.8**
KAHZ	**Kahuranaki**	**3.13**	**212**	P	**Pn**	**14 06 18.2**	**-1.0**
WIAZ	**Waiheke Island**	**3.14**	**276**	P	**Pn**	**14 06 18.9**	**-0.5**
KRHZ	**Kereru**	**3.24**	**219**	P	**Pn**	**14 06 19.8**	**-1.0**
TMVZ	**Te Maari**	**3.27**	**232**	P	**Pn**	**14 06 21.3**	**0.0**
ETAZ	**East Tamaki Re**	**3.29**	**272**	P	**Pn**	**14 06 21.1**	**-0.3**
BHHZ	**Black Hill Sta**	**3.29**	**224**	P	**Pn**	**14 06 21.2**	**-0.3**
OTVZ	**Oturere**	**3.32**	**232**	P	**Pn**	**14 06 22.2**	**+0.2**
PXZ	**Pawanui**	**3.33**	**210**	P	**Pn**	**14 06 20.1**	**-2.0**
MBAZ	**Motutapu North**	**3.33**	**275**	P	**Pn**	**14 06 22.1**	**+0.1**
WTVZ	**West Tongariro**	**3.34**	**233**	P	**Pn**	**14 06 23.2**	**+1.0**
SNVZ	**South Ngauruho**	**3.35**	**232**	P	**Pn**	**14 06 22.6**	**+0.1**
TUVZ	**Tukino**	**3.39**	**231**	P	**Pn**	**14 06 23.0**	**0.0**
ABAZ	**Army Bay**	**3.41**	**278**	P	**Pn**	**14 06 23.3**	**+0.2**
TWVZ	**Taurewa**	**3.42**	**235**	P	**Pn**	**14 06 23.4**	**+0.1**
MOVZ	**Moawhango**	**3.42**	**228**	P	**Pn**	**14 06 22.9**	**-0.4**
EPAZ	**Eden Park BICE**	**3.44**	**273**	P	**Pn**	**14 06 25.1**	**+1.6**
HBAZ	**Herne Bay Bore**	**3.46**	**274**	P	**Pn**	**14 06 24.5**	**+0.8**
WNVZ	**Wahianoa**	**3.46**	**230**	P	**Pn**	**14 06 24.2**	**+0.2**
AWAZ	**Awhitu Peninsu**	**3.51**	**270**	P	**Pn**	**14 06 24.6**	**+0.1**
PNHZ	**Pukenui**	**3.53**	**218**	P	**Pn**	**14 06 23.4**	**-1.4**
WPHZ	**Waipukurau**	**3.54**	**214**	P	**Pn**	**14 06 23.5**	**-1.4**
HIZ	**Hauiti**	**3.57**	**247**	P	**Pn**	**14 06 26.6**	**+1.3**
WTAZ	**Waiatarua**	**3.57**	**272**	P	**Pn**	**14 06 25.5**	**+0.2**
RVAZ	**Riverhead Bore**	**3.59**	**275**	P	**Pn**	**14 06 25.7**	**+0.2**
PKVZ	**Pokaka**	**3.60**	**233**	P	**Pn**	**14 06 26.9**	**+1.2**
PRHZ	**Porangahau**	**3.62**	**210**	P	**Pn**	**14 06 23.7**	**-2.4**
TSZ	**Takapari Road**	**3.76**	**219**	P	**Pn**	**14 06 25.9**	**-2.1**
DVHZ	**Dannevirke**	**3.85**	**215**	P	**Pn**	**14 06 27.2**	**-2.0**
VRZ	**Vera Road**	**3.90**	**238**	P	**Pn**	**14 06 30.8**	**+1.0**
WCZ	**Waipu Caves**	**3.96**	**287**	P	**Pn**	**14 06 31.0**	**+0.3**
WAZ	**Wanganui**	**4.10**	**230**	P	**Pn**	**14 06 32.8**	**+0.3**
POWZ	**Post Office Ro**	**4.11**	**217**	P	**Pn**	**14 06 31.7**	**-1.1**
BFZ	**Birch Farm**	**4.13**	**211**	Pn	Pn	14 06 29.8	-3.2
NEZ	**North Egmont**	**4.42**	**240**	P	**Pn**	**14 06 39.1**	**+2.0**
PKE	**Pukeiti**	**4.46**	**241**	P	**Pn**	**14 06 40.3**	**+2.7**
KHEZ	**Kahui Hut**	**4.49**	**240**	P	**Pn**	**14 06 40.3**	**+2.3**
OUZ	**Omahuta**	**4.80**	**292**	P	**Pn**	**14 06 43.0**	**+0.8**
MSWZ	**Moikau Station**	**5.16**	**213**	Pn	Pn	14 06 43.2	-4.0
CTZ	**Chatham Island**	**7.36**	**155**	P	**Pn**	**14 07 17.8**	**+0.6**
LTZ	**Lake Taylor**	**7.64**	**221**	Pn	**Pn**	**14 07 18.0**	**-3.3**
RPZ	**Rata Peaks**	**8.93**	**220**	Pn	Pn	14 07 35.2	-3.7
	0.4nm,0.3s,baz=142,slow=21,SNR=1.8						
RPZ				Sn	Sn	14 09 06.5	-13
	0.9nm,0.3s,baz=323,slow=20,SNR=8.9						
BBOO	**Buckleboo**	**35.25**	**264**	P	**P**	**14 12 22.3**	**-2.2**
COEN	**Coen**	**39.40**	**296**	P	**P**	**14 13 00.2**	**+0.3**
COEN				IAmb	IAmb	14 13 24.3	
	comp=Z,52nm,1.6s						
AS31	**Alice Springs**	**40.81**	**276**	P	**P**	**14 13 10.0**	**-1.6**
ASAR	**Alice Springs**	**40.81**	**276**	P	**P**	**14 13 10.4**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=116,slow=7.7,SNR=48						
ASAR				PcP	**PcP**	**14 15 09.8**	**-2.8**
	comp=Z,0.2nm,0.9s,baz=117,slow=3.8,SNR=1.1 comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**40.81**	**276**	P	**P**	**14 13 10.1**	**-1.5**
WR0	**Warramunga Arr**	**42.25**	**281**	P	**P**	**14 13 22.2**	**-1.2**
WR0				IAmb	IAmb	14 13 57.4	
	comp=Z,13nm,1.4s						
FORT	**Forrest**	**42.33**	**263**	P	**P**	**14 13 22.8**	**-1.2**
WRAB	**Tennant Creek**	**42.42**	**281**	P	**P**	**14 13 23.5**	**-1.3**
WRAB				IAmb	IAmb	14 13 24.1	
	comp=Z,6.3nm,0.5s						
WRA	**Warramunga Arr**	**42.42**	**281**	P	**P**	**14 13 23.6**	**-1.2**
	comp=Z,3.9nm,0.3s,baz=124,slow=7.3,SNR=215 comp=Z,3.9nm,0.3s						
MTN	**Manton Dam**	**49.06**	**287**	P	**P**	**14 14 14.9**	**-2.4**
MTN				IAmb	IAmb	14 15 43.5	
	comp=Z,21nm,1.3s						
KNRA	**Kununurra**	**49.20**	**282**	P	**P**	**14 14 17.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**50.29**	**277**	P	**P**	**14 14 25.7**	**-0.9**
QSPA	**South Pole Qui**	**52.97**	**180**	P	**P**	**14 14 48.8**	**+2.6**
H03N3	**Juan Fernandez**	**79.01**	**124**	T	T	15 44 20.5	
	baz=234,slow=72,SNR=4.9						
H03N2	**Juan Fernandez**	**79.01**	**124**	T	T	15 44 23.9	
	baz=234,slow=72,SNR=4.8						
H03N1	**Juan Fernandez**	**79.03**	**124**	T	T	15 44 21.7	
	baz=234,slow=72,SNR=4.7						
ARCES	**ARCESS Array B**	**144.54**	**344**	PKP	**PKPab**	**14 25 03.7**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=32,slow=3.6,SNR=3.9						
FINES	**FINESS Array B**	**150.39**	**334**	PKPbc	**PKPdf**	**14 25 19.3**	**+4.1**
	comp=Z,1.1nm,0.7s,baz=45,slow=1.0,SNR=4.5						

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*IDC **09** 14:16:01.1±1.2,6°78N×72°91W,h166km±15km,mb2.6/1, mbtmp3.6/3,Error ellipse: s-maj=47.3km s-min=15.0km az=132.0*
*RSNC **09** 14:16:02.8±0.9,6°83N×73°16W,h142km±4km,ML3.3, Mw3.6*
ISC 09 14:16:00.4±0.9,6°82N±0°03×73°10W±0°04,h156km±6km, n35,σ1§54/67,2C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**200**	↑*iP*	**Pn**	**14 16 22.1**	**+0.3**
BARC				*eS*	**Sn**	**14 16 37.1**	**-1.1**
BARC				*i*		14 16 38.6	
	comp=Z,842nm,0.2s						
PAMC	**Pamplona, Colo**	**0.65**	**38**	*eP*	**Pn**	**14 16 24.9**	**+1.0**
PAMC				*eS*	**Sn**	**14 16 41.7**	**-0.1**
PAMC				*i*		14 16 44.3	
	comp=Z,375nm,0.3s						
RUSC	**La Rusia**	**0.92**	**179**	*eP*	**Pn**	**14 16 26.1**	**+0.3**
RUSC				*eS*	**Sn**	**14 16 45.0**	**-0.1**
RUSC				*i*		14 16 47.0	
	comp=Z,110nm,0.1s						
TAMC	**Tame, Arauca**	**1.36**	**106**	↑*iP*	**Pn**	**14 16 30.5**	**+1.5**
TAMC				*eS*	**Sn**	**14 16 52.1**	**+1.2**
TAMC				*i*		14 16 53.8	
	comp=Z,103nm,0.6s						
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*eP*	**Pn**	**14 16 28.7**	**-0.5**
PTBC				*eS*	**Sn**	**14 16 49.7**	**-1.6**
PTBC				*i*		14 16 57.4	
	comp=Z,244nm,0.2s						
OCAC	**Ocana**	**1.43**	**351**	↓*iP*	**Pn**	**14 16 30.2**	**+0.3**
OCAC				*eS*	**Sn**	**14 16 51.9**	**-0.6**
OCAC				*i*		14 16 55.4	
	comp=Z,630nm,0.2s						
SPBC	**San Pablo de B**	**1.51**	**220**	*eP*	**Pn**	**14 16 31.1**	**+0.4**
SPBC				*eS*	**Sn**	**14 16 53.3**	**-0.6**
SPBC				*i*		14 16 58.2	
	comp=Z,328nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*eP*	**Pn**	**14 16 36.0**	**+1.6**
ZARC				*eS*	**Sn**	**14 17 01.0**	**+0.5**
ZARC				*i*		14 17 04.5	
	comp=Z,203nm,0.3s						
NORC	**Norcasia**	**2.16**	**235**	*eP*	**Pn**	**14 16 38.1**	**+0.3**
NORC				*eS*	**Sn**	**14 17 06.2**	**-0.4**
NORC				*i*		14 17 12.2	
	comp=Z,206nm,0.2s						
CHIC	**Chingaza**	**2.27**	**196**	*eP*	**Pn**	**14 16 40.5**	**+1.0**
CHIC				*eS*	**Sn**	**14 17 10.0**	**+0.5**
CHIC				*i*		14 17 17.1	
	comp=Z,115nm,0.4s						
ROSC	**El Rosal**	**2.31**	**212**	P	**Pn**	**14 16 41.9**	**+1.9**
	comp=Z,60nm,0.2s,baz=96,slow=16,SNR=87						
ROSC				S	**Sn**	**14 17 08.3**	**-2.2**
	comp=Z,46nm,0.3s,baz=168,slow=19,SNR=4.3						
ROSC	**El Rosal**	**2.31**	**212**	*eP*	**Pn**	**14 16 42.2**	**+2.2**
ROSC				*eS*	**Sn**	**14 17 11.4**	**+0.9**
ROSC				*i*		14 17 16.2	
	comp=Z,222nm,0.4s						
HELC	**Santa Helena**	**2.49**	**256**	*eP*	**Pn**	**14 16 44.4**	**+2.3**
HELC				*eS*	**Sn**	**14 17 14.9**	**+0.6**
HELC				*i*		14 17 20.7	
	comp=Z,102nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*eP*	**Pn**	**14 16 42.8**	**-0.1**
UREC				*eS*	**Sn**	**14 17 12.8**	**-2.9**
UREC				*i*		14 17 19.8	
	comp=Z,121nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.74**	**351**	*eP*	**Pn**	**14 16 46.8**	**+2.0**
LL1C				*eS*	**Sn**	**14 17 23.0**	**+3.7**
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*eP*	**Pn**	**14 16 46.5**	**+1.1**
GUY2C				*eS*	**Sn**	**14 17 20.4**	**+0.2**
GUY2C				*i*		14 17 30.4	
	comp=Z,112nm,0.6s						
VILC	**Villavicencio,**	**2.75**	**192**	*eP*	**Pn**	**14 16 46.1**	**+0.9**
VILC				*eS*	**Sn**	**14 17 20.5**	**+0.8**
VILC				*i*		14 17 24.6	
	comp=Z,135nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.78**	**160**	*eP*	**Pn**	**14 16 45.4**	**+0.1**
PTGC				*eS*	**Sn**	**14 17 18.9**	**-1.1**
PTGC				*i*		14 17 21.7	
	comp=Z,74nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*eP*	**Pn**	**14 16 50.4**	**+1.6**
CBOC				*eS*	**Sn**	**14 17 26.7**	**+0.5**
CBOC				*i*		14 17 35.6	
	comp=Z,32nm,0.4s						
DBBC	**Dabeiba**	**3.09**	**274**	*eP*	**Pn**	**14 16 50.8**	**+1.5**
DBBC				*eS*	**Sn**	**14 17 26.7**	**-0.4**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**14 16 51.4**	**+0.7**
	comp=Z,45nm,0.3s,baz=232,slow=11,SNR=24						
SDV				S	**Sn**	**14 17 28.4**	**-1.2**
	comp=Z,28nm,0.5s,baz=275,slow=16,SNR=11						
ANIL	**Santa Ana**	**3.26**	**225**	*eP*	**Pn**	**14 16 53.8**	**+2.2**
ANIL				*eS*	**Sn**	**14 17 33.4**	**+2.2**
ANIL				*i*		14 17 38.6	
	comp=Z,226nm,0.3s						
PRAC	**Prado**	**3.56**	**210**	*eP*	**Pn**	**14 16 53.1**	**-2.1**
PRAC				*eS*	**Sn**	**14 17 34.8**	**-3.1**
PRAC				*i*		14 17 42.4	
	comp=Z,172nm,0.3s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*eP*	**Pn**	**14 16 56.6**	**-0.2**
SJCC				*eS*	**Sn**	**14 17 37.6**	**-3.1**
SJCC				*i*		14 17 41.9	
	comp=Z,60nm,0.5s						
PLMC	**San Jos del P**	**3.69**	**239**	*eP*	**Pn**	**14 16 58.0**	**+1.1**
PLMC				*eS*	**Sn**	**14 17 40.7**	**-0.2**
PLMC				*i*		14 17 46.5	
	comp=Z,25nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*eP*	**Pn**	**14 17 02.5**	**-0.8**
CRJC				*eS*	**Sn**	**14 17 49.0**	**-3.2**
CRJC				*i*		14 17 58.2	
	comp=Z,34nm,0.1s						
GUVC	**San Jose del G**	**4.27**	**174**	*eP*	**Pn**	**14 17 05.1**	**+0.6**
GUVC				*eS*	**Sn**	**14 17 53.6**	**-0.8**
GUVC				*i*		14 17 57.3	
	comp=Z,35nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*eP*	**Pn**	**14 17 05.1**	**+0.4**
YOTC				*eS*	**Sn**	**14 17 55.3**	**+0.5**
URIC	**Uribia, Colomb**	**4.97**	**13**	*eP*	**Pn**	**14 17 12.6**	**-1.0**
URIC				*eS*	**Sn**	**14 18 09.1**	**-1.7**
GARC	**Garzon, Huila**	**5.18**	**207**	*eP*	**Pn**	**14 17 16.8**	**+0.1**
GARC				*eS*	**Sn**	**14 18 14.1**	**-2.1**
GARC				*i*		14 18 17.2	
	comp=Z,34nm,0.2s						
FLOC	**Florencia**	**5.79**	**206**	*eP*	**Pn**	**14 17 25.6**	**+1.1**
FLOC				*eS*	**Sn**	**14 18 26.6**	**-3.8**
FLOC				*i*		14 18 36.7	
	comp=Z,5.5nm,0.5s						
BBAC	**Balboa, Cauca**	**6.31**	**221**	*eP*	**Pn**	**14 17 33.7**	**+2.1**
BBAC				*eS*	**Sn**	**14 18 42.1**	**-0.8**
BBAC				*i*		14 18 50.1	
	comp=Z,3.9nm,0.3s						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**14 22 51.9**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=126,slow=9.1,SNR=2.1 comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**14 35 30.3**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=114,slow=3.8,SNR=4.4						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKiKP**	**14 35 34.0**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=107,slow=2.7,SNR=5.4						

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*IDC **09** 14:18:27.4±1.1,44°25N×129°35W,h0km,mb3.9/13, mbtmp3.9/20,ML3.3/7,MS3.6/22,Error ellipse: s-maj=27.3km s-min=12.2km az=44.0*
*NEIC **09** 14:18:36.7±1.2,45°07N±0°09×127°88W±0°07,h10km±1km, mb4.1/41,Error ellipse: s-maj=17.1km s-min=5.2km az=207.0*
ISC 09 14:18:35.4±0.7,45°06N±0°08×127°99W±0°09,h10km, n290,σ1§69/269,mb4.1/17,MS3.5/12,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**3.00**	**85**	Pn	**Pn**	**14 19 21.1**	**-2.0**
COR	**Corvallis**	**3.37**	**96**		**Pn**	**14 19 25.1**	**-3.0**
KEBM	**Edson Butte**	**3.43**	**128**		Pn	14 19 17.9	-11
E03A	**Lebam**	**3.44**	**63**		**Pn**	**14 19 29.0**	**0.0**
WISH	**Wishkah**	**3.59**	**53**		**Pn**	**14 19 31.4**	**+0.4**
BUCK	**Buck Mountain**	**3.68**	**102**		**Pn**	**14 19 28.2**	**-4.2**
NLWA	**Neilton Lookou**	**3.70**	**49**	Pn	**Pn**	**14 19 33.0**	**+0.4**
C03A	**Quillayute Air**	**3.74**	**38**	Pn	**Pn**	**14 19 33.5**	**+0.4**
H04A	**Detroit Lake**	**4.15**	**93**	Pn	**Pn**	**14 19 36.2**	**-2.6**
OZB	**Mount Ozzard**	**4.26**	**23**		**Pn**	**14 19 38.6**	**-1.8**
B04A	**Port Angeles**	**4.31**	**44**	Pn	**Pn**	**14 19 41.3**	**+0.2**
HOOD	**Mount Hood Mea**	**4.49**	**84**	Pn	**Pn**	**14 19 42.3**	**-1.3**
PGC	**Sidney**	**4.76**	**39**		**Pn**	**14 19 47.8**	**+0.7**
YBH	**Yreka Blue Hor**	**5.08**	**129**	Pn	**Pn**	**14 19 51.6**	**-0.1**
	0.4nm,0.3s,baz=296,slow=9.9,SNR=12						
YBH				Sn	**Sn**	**14 20 53.9**	**+3.4**
	baz=240,slow=20						
YBH				LR	LR	14 20 57.4	
	comp=Z,68nm,18.8s,baz=311,slow=27 2.5nm,0.5s						
PINE	**Pine Mountain**	**5.21**	**102**		**Pn**	**14 19 49.5**	**-4.0**
B06A	**Marblemount**	**5.66**	**50**		**Pn**	**14 20 00.9**	**+1.5**
I07A	**Izee**	**6.14**	**96**		**Pn**	**14 20 03.5**	**-2.8**
BBB	**Bella Bella**	**7.14**	**359**	Pn	Pn	14 20 25.4	+5.7
	0.1nm,0.3s,baz=200,slow=17,SNR=1.9						
BBB				LR	LR	14 23 01.3	
	comp=Z,557nm,18.7s,baz=180,slow=34 22nm,1.2s						
BMO	**Blue Mountains**	**7.59**	**88**		**Pn**	**14 20 23.9**	**-2.2**
F10A	**Beach Ranch, E**	**7.62**	**79**	Pn	**Pn**	**14 20 26.8**	**+0.3**
NVAR	**Mina Array Bea**	**9.81**	**129**	Pn	**Pn**	**14 20 57.2**	**+0.5**
	0.1nm,0.3s,baz=294,slow=12,SNR=6.5 2.1nm,0.9s						
NVAR	**Mina Array Bea**	**9.81**	**129**	Pn	**Pn**	**14 20 57.0**	**+0.3**
LHV	**Little Huntoon**	**9.83**	**130**	Pn	**Pn**	**14 20 57.0**	**+0.3**
NV11	**Mina Array Sit**	**9.89**	**129**		**Pn**	**14 20 59.4**	**+1.7**
MSO	**Missoula**	**9.95**	**75**	P	**Pn**	**14 20 57.5**	**-1.0**
	baz=265,SNR=6.4						
MDPB	**Devils Postpil**	**9.99**	**135**		**Pn**	**14 20 57.2**	**-2.0**
V35K	**Ketchikan**	**10.54**	**349**	P	**Pn**	**14 21 06.6**	**+0.3**
	baz=165						
PAGB	**Antelope Grade**	**11.02**	**145**	Pn	**Pn**	**14 21 13.6**	**+0.5**
CWC	**Cottonwood Cre**	**11.42**	**135**	P	**Pn**	**14 21 19.3**	**+0.7**
	baz=322						
VES	**Vestal, Richgr**	**11.43**	**141**	P	**Pn**	**14 21 15.6**	**-3.0**
	baz=327						
R11A	**Troy Canyon, C**	**11.44**	**122**	P	**Pn**	**14 21 20.1**	**+1.2**
	baz=310,SNR=6.3						
BOZ	**Bozeman (W)**	**11.54**	**82**	P	**Pn**	**14 21 21.6**	**+1.4**
	baz=273						
U33K	**Whale Pass**	**11.54**	**346**	P	**Pn**	**14 21 24.1**	**+4.2**
	baz=161						
WRAK	**Wrangell Islan**	**11.70**	**348**	P	**Pn**	**14 21 24.0**	**+1.8**
	baz=164						
S11A	**Rachel**	**11.80**	**125**		**Pn**	**14 21 24.8**	**+0.9**
ISA	**Isabella, Lake**	**11.85**	**139**	P	**Pn**	**14 21 23.4**	**-1.2**
	baz=326						
WCT	**Wildcat Mounta**	**11.91**	**130**	Pn	**Pn**	**14 21 27.4**	**+2.1**
TPNV	**Topopah Spring**	**12.00**	**128**	P	**Pn**	**14 21 27.7**	**+1.1**
	baz=316						
MPMC	**Manual Prospec**	**12.02**	**135**	P	**Pn**	**14 21 27.7**	**+0.9**
	baz=322						
FURC	**Furnace Creek,**	**12.02**	**132**	P	**Pn**	**14 21 29.6**	**+2.9**
	baz=319,SNR=16						
T35M	**Bob Quinn**	**12.03**	**354**	P	**Pn**	**14 21 26.6**	**-0.1**
	baz=172						
ARVC	**Arvin**	**12.14**	**142**	P	**Pn**	**14 21 25.4**	**-2.9**
	baz=328						
DUG	**Dugway, Tooele**	**12.19**	**108**	P	**Pn**	**14 21 30.1**	**+1.0**
	baz=299						
GWY	**Greenwater Val**	**12.34**	**132**	Pn	**Pn**	**14 21 31.2**	**0.0**
LRMC	**Laurel Mtn Rad**	**12.38**	**137**	P	**Pn**	**14 21 31.1**	**-0.7**
	baz=324						
H17A	**Grant Village**	**12.41**	**87**	P	**Pn**	**14 21 33.7**	**+1.4**
	baz=279,SNR=7.5						
EDW2	**Edwards Air Fo**	**12.72**	**140**	P	**Pn**	**14 21 34.5**	**-1.8**
	baz=326						
SHOC	**Shoshone, Teco**	**12.76**	**132**	P	**Pn**	**14 21 38.1**	**+1.2**
	baz=320,SNR=13						
EGMT	**Eagleton**	**12.90**	**70**	P	**Pn**	**14 21 38.1**	**-0.7**
	baz=263						
GSC	**Goldstone, Bar**	**12.95**	**135**	P	**Pn**	**14 21 37.6**	**-1.9**
	baz=323,SNR=7.1						
S34M	**Telegraph Cree**	**13.02**	**353**	P	**Pn**	**14 21 39.7**	**-0.6**
	baz=170,SNR=6.6						
TUQ	**Turquoise Moun**	**13.30**	**132**	P	**Pn**	**14 21 42.5**	**-1.8**
	baz=320						
DLBC	**Dease Lake**	**13.46**	**355**	Pn	**P**	**14 21 54.0**	**-1.8**
	baz=149,slow=18						
DLBC				LR	LR	14 26 37.6	
	comp=Z,518nm,22.0s,baz=166,slow=34						
DLBC	**Dease Lake**	**13.46**	**355**	P	**Pn**	**14 21 48.1**	**+1.7**
	baz=174						
BW06	**Boulder Array**	**13.49**	**93**	P	**Pn**	**14 21 44.9**	**-2.1**
	baz=286						
PDAR	**Pinedale Array**	**

WHY	Whitehorse	16.16 348		P		14 22 27.2 +1.4
WHY			IAmb	IAmb	14 22 29.8	
	comp=Z,14nm,1.4s					
WHY	Whitehorse	16.16 348	P	Pn		14 22 21.9 -0.6
	baz=162					
PNL	Peninsula	16.17 339	P	Pn		14 22 21.4 -1.1
	baz=150					
N32M	Quiet Lake	16.40 351	P	Pn		14 22 26.6 +1.1
	baz=167					
O30N	Mendenhall	16.46 346	P	Pn		14 22 28.4 +2.1
	baz=159					
BCPM	Bancas Point	16.48 339	Pn	Pn		14 22 27.1 +0.7
TGTN	Hyland Airport	16.50 360	P	Pn		14 22 28.2 +1.4
	baz=179					
O29M	Mount Kennedy	16.53 341	P	Pn		14 22 26.4 -0.8
	baz=152					
MVCO	Mesa Verde	16.62 111	P	P		14 22 31.4 +0.3
	baz=304					
DGMT	Dagmar	16.64 70	P	Pn		14 22 26.9 -1.7
	baz=267					
N23A	Red Feather La	16.65 97	P	Pn		14 22 28.6 -0.4
	baz=292					
PINM	Pinnacle	16.76 338	P	Pn		14 22 30.6 +0.6
	baz=148					
PCA	Pinnacle	16.76 338	Pn	Pn		14 22 31.3 +1.2
PCA			IAmb	IAmb	14 22 36.0	
	comp=Z,17nm,1.3s					
HYT	Haines Junctio	16.77 344	Pn	Pn		14 22 31.9 +1.6
HYT	Haines Junctio	16.77 344	P	Pn		14 22 30.0 -0.3
	baz=156,SNR=5.7					
YUK6	Outpost Mounta	17.06 343	P	Pn		14 22 34.6 +0.6
	baz=154,SNR=8.2					
RSSD	Black Hills	17.08 85	P	P		14 22 37.4 +1.2
	baz=282					
N31M	Braeburn, Yuko	17.08 347	P	Pn		14 22 33.9 -0.3
	baz=161					
N30M	Aishikik Lake	17.28 345	P	Pn		14 22 37.1 +0.5
	baz=158					
MESA	MESA	17.29 336	P	Pn		14 22 37.3 +0.4
	baz=145					
ISCO	Idaho Springs	17.32 100	P	Pn		14 22 38.1 +0.6
	baz=295					
X18A	Snowflake	17.36 121	Pn	Pn		14 22 38.1 +0.1
S22A	4UR Ranch, Cre	17.45 107	P	P		14 22 40.3 0.0
	baz=302					
FARO	Faro, Yukon	17.49 352	P	Pn		14 22 39.8 +0.7
	baz=167					
LOGN	Logan Glacier	17.58 339		Pn		14 22 41.9 +1.5
M31M	Drury Creek, Y	17.58 350	P	Pn		14 22 39.6 -0.6
	baz=165					
214A	Organ Pipe Nat	17.63 133	P	Pn		14 22 41.2 +0.1
	baz=323					
YUK8	Steele Glacier	17.67 341	P	Pn		14 22 41.1 -0.6
	baz=151					
MMPY	Sheldon Lake,	17.70 355	P	Pn		14 22 41.8 0.0
	baz=172,SNR=5.1					
ISLE	Juniper Island	17.75 336		Pn		14 22 44.0 +1.5
ISLE			IAmb	IAmb	14 22 48.2	
	comp=Z,19nm,1.4s					
WAX	Waxell Ridge	17.78 335		Pn		14 22 43.8 +1.0
WAX			IAmb	IAmb	14 22 51.8	
	comp=Z,22nm,1.5s					
CTG	Chitna Glacier	17.78 338	P	Pn		14 22 44.0 +1.1
	baz=147					
Q24A	Divide	18.01 102	P	Pn		14 22 45.7 -0.4
	baz=297					
YUK3	Moose Creek	18.27 341	P	Pn		14 22 48.2 -0.7
	baz=151					
SDCO	Great Sand Dun	18.35 106	P	Pn		14 22 50.7 +0.4
	baz=301,SNR=12					
WRGLY	Wrigley	18.39 7	P	Pn		14 22 50.3 +0.1
	baz=190					
M29M	Somme Creek	18.44 345	P	P		14 22 51.7 +0.7
	baz=156					
TUC	Tucson	18.46 128	P	P		14 22 50.4 -0.9
	baz=319					
EYAK	Cordova Ski Ar	18.77 332	P	P		14 22 55.0 +0.7
	baz=138					
P23K	Montague Islan	18.95 329	P	P		14 22 56.3 0.0
	baz=133					
L29M	L29M	19.00 346	P	P		14 22 57.8 +0.8
	baz=157					
M27K	Edge Creek, AK	19.11 340	P	P		14 22 58.1 -0.1
	baz=148					
YKA	Yellowknife Ar	19.11 19	P	Pn		14 23 03.8 +4.9
	comp=Z,6.7nm,1.0s,baz=214,slow=11,SNR=9.5					
YKA			LR	LR	14 30 45.1	
	comp=Z,288nm,18.3s,baz=206,slow=36					
	comp=Z,6.7nm,1.0s					
N25K	Chitina, Valde	19.22 335	P	P		14 22 59.4 0.0
	baz=142					
ANMO	Albuquerque	19.29 114	Pn	Pn		14 23 03.6 +2.1
	comp=Z,0.1nm,0.3s,baz=309,slow=9.2,SNR=6.9					
ANMO			LR	LR	14 31 05.7	
	comp=Z,272nm,19.3s,baz=299,slow=38					
	comp=Z,2.3nm,0.9s					
ANMO	Albuquerque	19.29 114	P	P		14 23 01.4 +0.9
ANMO	Albuquerque	19.29 114	P	P		14 22 60.0 -0.6
	baz=308					
OGNE	Ogallala	19.39 93	P	P		14 23 02.1 +0.6
	baz=291					
T25A	Trinidad	19.41 106	P	P		14 23 02.0 +0.2
	baz=302,SNR=7.0					
M26K	Nabesna, AK	19.42 339	P	Pn		14 23 03.9 +1.2
M26K	Nabesna, AK	19.42 339	P	P		14 23 01.6 0.0
	baz=146					
GLI	Glacier Island	19.46 331	P	P		14 23 02.1 +0.1
	baz=136					
KLU	Klutina	19.53 334	P	P		14 23 01.5 -1.3
	baz=139					
K29M	Barlow Dome	19.58 347	P	P		14 23 02.3 -1.1
	baz=159					
L27K	Beaver Creek,	19.70 341	P	P		14 23 05.6 +0.9
	baz=150					
KDAK	Kodiak Island	19.79 319	LR	LR		14 28 44.9
	comp=Z,87nm,19.4s,baz=146,slow=31					
319A	Douglas	20.00 127	P	P		14 23 08.5 +0.3
319A			IAmb	IAmb	14 23 15.8	
	comp=Z,14nm,1.0s					
HARP	HAARP	20.01 336	P	P		14 23 08.7 +0.8
	baz=142					
121A	Cookes Peak, D	20.05 122	P	P		14 23 08.9 +0.1
121A			IAmb	IAmb	14 23 17.5	
	comp=Z,25nm,1.1s					
121A	Cookes Peak, D	20.05 122	P	P		14 23 09.4 +0.6
	baz=315,SNR=12					
M24K	Tolsona, Glenn	20.08 335	P	P		14 23 09.5 +0.7
	baz=140					
DAWY	Dawson	20.10 345	P	P		14 23 10.4 +1.5
	baz=156					
O22K	Cooper Landing	20.13 328	P	P		14 23 09.2 -0.1
	baz=130					
SCM	Sheep Creek Mo	20.23 333	P	P		14 23 10.7 +0.2
	baz=137					
KNK	Knik Glacier	20.30 331	P	P		14 23 10.8 -0.4
	baz=134					
M23K	Glacier View	20.33 333	P	P		14 23 11.8 +0.3
	baz=136					
SML	Sawmill	20.54 332	P	P		14 23 12.6 -1.2
	baz=135					
K27K	Chicken	20.60 342	P	P		14 23 07.6 -6.7
	baz=150					
PMR	Palmer	20.66 331	P	P		14 23 11.1 -3.9
	baz=133					
CAPN	Captain Cook N	20.86 327	P	P		14 23 14.7 -2.5
	baz=128					
WAT6	Susitna Watana	20.92 334	P	P		14 23 15.9 -2.0
	baz=138					
SCRK	Sand Creek	20.99 340	P	P		14 23 16.9 -1.8
	baz=147					
RIDG	Independent Ri	21.01 339	P	P		14 23 17.0 -1.8
	baz=145					
M22K	Willow	21.12 330	P	P		14 23 21.9 +2.0
I29M	Ogilvie Camp,	21.13 348	P	P		14 23 19.5 -0.6
	baz=159					
SUA	Susitna One	21.15 329	P	P		14 23 18.5 -1.9
	baz=130					
DHY	Denali Highway	21.18 335	P	P		14 23 21.3 +0.5
DHY			IAmb	IAmb	14 23 29.2	
	comp=Z,19nm,1.3s					
DHY	Denali Highway	21.18 335	P	P		14 23 19.4 -1.3
	baz=139					
J26L	Joseph Creek	21.34 341	P	P		14 23 19.3 -3.0
	baz=148					
N20K	Mount Spurr	21.53 327	P	P		14 23 20.6 -3.8
	baz=128					
SPCR	Spurr Chakacha	21.53 327	P	P		14 23 20.5 -4.0
	baz=128					
CUT	Chulitna	21.61 331	P	P		14 23 23.8 -1.4
	baz=133					
SKT	Skwentna	21.77 329	P	P		14 23 24.0 -3.0
	baz=130					
O19K	Port Alsworth	21.81 323	P	P		14 23 25.2 -2.1
	baz=122					
J25K	Salcha River,	21.86 340	P	P		14 23 28.5 +0.6
J25K	Salcha River,	21.86 340	P	P		14 23 27.6 -0.4
	baz=145					
CBKS	Cedar Bluff	21.86 97	P	P		14 23 25.3 -2.9
	baz=296					
RND	Reindeer	21.87 335	P	P		14 23 29.4 +1.3
RND			IAmb	IAmb	14 23 37.5	
	comp=Z,11nm,1.2s					
EPYK	Eagle Plains	21.88 351	P	P		14 23 26.5 -1.6
	baz=163					
I27K	Kandik River	21.91 345	P	P		14 23 26.9 -1.6
	baz=153					
I26K	Coal Creek Min	21.95 343	P	P		14 23 28.7 -0.1
	baz=150					
HDA	Harding Lake	22.10 338	P	P		14 23 29.0 -1.4
	baz=142					
MCK	McKinley	22.14 335	P	P		14 23 30.4 -0.5
	baz=138					
ULM	Lac du Bonnet	22.14 65	P	P		14 23 36.4 +5.3
	comp=Z,13nm,1.1s,baz=272,slow=10,SNR=6.2					
ULM			LR	LR	14 32 51.9	
	comp=Z,226nm,18.8s,baz=280,slow=37					
	comp=Z,13nm,1.1s					
MSTX	Muleshoe	22.30 111	P	P		14 23 32.9 -0.1
	baz=308					
M20K	Styx River	22.30 328	P	P		14 23 32.0 -0.8
	baz=127					
TRF	Thorofare Moun	22.35 333	P	P		14 23 31.5 -1.9
	baz=135					
ILAR	Eielson Array	22.37 339	P	P		14 23 32.2 -1.1
	comp=Z,2.3nm,1.1s,baz=155,slow=8.4,SNR=13					
ILAR			LR	LR	14 30 52.1	
	comp=Z,162nm,18.6s,baz=136,slow=33					
	comp=Z,2.3nm,1.1s					
ILAR	Eielson Array	22.37 339	P	P		14 23 33.3 0.0
ECSD	EROS Data Cent	22.39 82	P	P		14 23 31.0 -2.9
	baz=284,SNR=5.9					
H27K	Steamboat Moun	22.45 346	P	P		14 23 33.4 -0.9
	baz=154					
AMTX	Amarillo	22.49 108	P	P		14 23 33.4 -1.6
	baz=305					
CCB	Clear Creek Bu	22.51 338	P	P		14 23 33.7 -1.1
CCB			IAmb	IAmb	14 23 40.9	
	comp=Z,13nm,1.3s					
PPLA	Purkeypile	22.60 331	P	P		14 23 34.3 -1.7
	baz=131					
PPLA	Purkeypile	22.60 331	P	P		14 23 34.9 -1.1
PRP	Porcupine Dome	22.65 341	P	P		14 23 33.6 -2.8
	baz=146					
N18K	Kilae Creek	22.72 323	P	P		14 23 34.0 -3.2
	baz=121					
M19K	Big River Lodg	22.79 327	P	P		14 23 33.9 -4.0
	baz=125					
O17K	Koliganek Bris	22.81 321	P	P		14 23 35.7 -2.3
	baz=117					
NEA2	Nenana	22.82 336	P	P		14 23 33.5 -4.7
	baz=139					
CAST	Castle Rocks	22.91 332	P	P		14 23 37.7 -1.5
	baz=132					
BPAW	Bear Paw Mtn.	23.03 334	P	P		14 23 38.6 -1.8
BPAW	Bear Paw Mtn.	23.03 334	P	P		14 23 37.7 -2.6
	baz=135					
L19K	White Mountain	23.13 327	P	P		14 23 38.4 -3.0
	baz=125					
L19K	White Mountain	23.13 327	P	P		14 23 36.7 -4.7
O16K	Kokwok River B	23.18 320	P	P		14 23 39.2 -2.7
	baz=115					
CHUM	Lake Minchumin	23.30 333	P	P		14 23 40.8 -2.3
	baz=132					
I23K	Minto, Yukon-K	23.32 337	P	P		14 23 41.8 -1.4
	baz=139					
I23K	Minto, Yukon-K	23.32 337	P	P		14 23 42.0 -1.3
H24K	Noodor Dome	23.47 339	P	P		14 23 43.1 -1.8
	baz=143					
INK	Inuvik	23.49 355	P	P		14 23 47.0 +2.1
	comp=Z,3.6nm,1.0s,baz=177,slow=12,SNR=3.3					
INK			LR	LR	14 32 47.8	
	comp=Z,128nm,20.6s,baz=143,slow=36					
	comp=Z,3.6nm,1.0s					
INK	Inuvik	23.49 355	P	P		14 23 43.3 -1.5
	baz=170					
K20K	Telida	23.55 330	P	P		14 23 41.9 -3.7
	baz=129					
MLY	Manley	23.63 336	P	P		14 23 46.6 +0.3
MLY			IAmb	IAmb	14 23 51.8	
	comp=Z,8.5nm,1.2s					
MLY	Manley	23.63 336	P	P		14 23 44.8 -1.6
	baz=137					
KAN16	Harper SW Stat	23.76 99		P		14 23 47.9 0.0
KAN12	Harper NE Stat	23.77 98		P		14 23 48.2 +0.3
H23K	Yukon River	23.89 338	P	P		14 23 47.0 -1.9
	baz=140					
KSU1	Kansas State U	23.95 93	P	P		14 23 50.7 +1.1
	baz=295					
G24K	Hadweenzic Riv	24.08 341	P	P		14 23 48.9 -1.7
	baz=144					
J20K	Nowinta River	24.10 332	P	P		14 23 48.3 -2.6
	baz=130					
F26K	Sheenjek River	24.23 345	P	P		14 23 51.1 -1.0
	baz=151					
E27K	Coleen River	24.25 348	P	P		14 23 50.5 -1.7
	baz=156					
C36M	Paulatuk	24.44 3	P	P		14 23 51.9 -1.9
	baz=186					
H22K	Ishtalitna Cre	24.44 337	P	P		14 23 51.9 -2.1
	baz=137					
WMOK	White Mounta	24.55 105	P	P		14 23 56.1 +0.9
	baz=304,SNR=8.5					
H21K	Melozitna Rive	24.68 335	P	P		14 23 53.6 -2.6
	baz=134					
G23K	Bananza Creek	24.70 339	P	P		14 23 53.8 -2.5
	baz=140					
TX31	Lajitas Ar. Si	24.80 121	P	P		14 23 56.2 -1.4
TX32	Lajitas Array	24.80 121	P	P		14 23 56.1 -1.5
TX32			IAmb	IAmb	14 24 04.2	
	comp=Z,5.8nm,1.2s					
TXAR	Lajitas Array	24.80 121	P	P		14 23 56.0 -1.6
	comp=Z,0.6nm,0.8s,baz=310,slow=7.0,SNR=8.5					
TXAR			LR	LR	14 34 02.7	
	comp=Z,83nm,18.0s,baz=300,slow=37					
	comp=Z,0.6nm,0.8s					
TXAR	Lajitas Array	24.80 121	P	P		14 23 56.4 -1.2
OK029	Liberty Lake	24.90 101		P		14 23 57.8 -0.5
OK025	Westminster Rd	25.09 101	P	P		14 24 00.4 +0.3
EYMN	Ely	25.14 70	P	P		14 23 59.4 -1.1
	baz=277					
COLD	Coldfoot	25.15 340	P	P		14 23 59.5 -0.8
	baz=141					
IMAR	Indian Mountai	25.19 335	P	P		14 24 03.0 +2.4
ABTX	Abilene, Hawle	25.19 110	P	P		14 23 58.9 -2.1
	baz=308					
G22K	Bettles	25.24 338	P	P		14 23 58.3 -2.8
	baz=138					
LPIG	La Paz	25.37 140	LR	LR		14 32 57.4
	comp=Z,57nm,19.0s,baz=319,slow=34					
GCSA	Galena City Sc	25.39 331	P	P		14 23 59.9 -2.5
	baz=127					
G21K	Allakaket	25.49 336	P	P		14 24 01.8 -1.7
	baz=135					
TOLK	Toolik Lake Re	26.12 342	P	P		14 24 08.2 -1.0
	baz=144					
C26K	Camden Bay	26.33 347	P	P		14 24 10.3 -0.8
	baz=152					
D24K	Happy Valley	26.39 343	P	P		14 24 10.2 -1.3
	baz=145					
CCM	Cathedral Cave	28.19 91	P	P		14 24 25.4 -2.7
	baz=296					
HDIL	Hopedale	28.56 85	P	P		14 24 31.2 0.0
	baz=292					
OXF	Oxford	31.20 96	P	P		14 24 56.2 +1.5
	baz=302					
WVT	Waverly	31.50 92	P	P		14 24 57.1 -0.3
	baz=299					
O48B	Farmland	31.59 83	P	P		14 24 56.6 -1.5
	baz=293					
WCI	Wyandotte Cave	31.63 88	P	P		14 24 58.4 0.0
	baz=296					
P49A	Miami Univ. Ec	32.19 84	P	P		14 25 04.8 +1.4
	baz=294					
RES	Resolute Bay	33.09 15	LR	LR		14 38 56.1
	comp=Z,80nm,19.4s,baz=24,slow=36					
ACSO	Alum Creek Sta	33.13 82	P	P		14 25 13.5 +1.9
	baz=294					
SADO	Sadowa	34.18 73	LR	LR		14 40 05.4
	comp=Z,145nm,20.5s,baz=342,slow=37					
TKL	Tuckaleechee C	34.61 90	LR	LR		14 40 33.1
	comp=Z,340nm,18.5s,baz=298,slow=37					
BLA	Blacksburg	36.24 85	P	P		14 25 39.0 +0.4
	baz=298					
KMSC	Kings Mountain	36.59 89	P	P		14 25 41.2 -0.4
	baz=300					
FRB	Frobisher Bay	37.62 39	LR	LR		14 42 04.7
	comp=Z,53nm,21.6s,baz=180,slow=36					
SHEM	Shemya Is, Ala	37.91 303	LR	LR		14 40 16.1
	comp=Z,64nm,18.0s,baz=72,slow=35					
SCHQ	Schefferville	39.36 53	LR	LR		14 43 21.5
	comp=Z,46nm,20.1s,baz=84,slow=37					
L61B	Northampton	39.38 74	P	P		14 26 02.6 -2.4
	baz=293					
SFJD	Kangerlussuaq	44.80 33	LR	LR		14 46 09.0
	comp=Z,105nm,18.1s,baz=288,slow=36					
H11N2	WAKE ISLAND Hy	58.82 267	T	T		15 30 36.2
	baz=49,slow=75,SNR=489					
H11N3	WAKE ISLAND Hy	58.82 267	T	T		15 30 37.3
	baz=49,slow=75,SNR=840					
H11N1	WAKE ISLAND Hy	58.83 267	T	T		15 30 41.1
	baz=49,slow=75,SNR=435					
H11S1	WAKE ISLAND Hy	59.76 266	T	T		15 31 51.3
	baz=48,slow=75,SNR=128					
H11S2	WAKE ISLAND Hy	59.77 266	T	T		15 31 51.7
	baz=48,slow=75,SNR=67					
H11S3	WAKE ISLAND Hy	59.78 266	T	T		15 31 52.6
	baz=48,slow=75,SNR=58					
NOA	NORSAR Array B	69.20 20	P	P		14 29 41.5 -0.4
	comp=Z,1.1nm,0.9s,baz=334,slow=5.6,SNR=3.4					
	comp=Z,1.1nm,0.9s					
FINES	FINESS Array B	71.80 13	P	P		14 29 57.1 -0.5
	comp=Z,4.1nm,1.0s,baz=343,slow=4.4,SNR=2.2					
	comp=Z,4.1nm,1.0s					
SONM	Songino Array	75.92 326	P	P		14 30 16.9 -5.3
	comp=Z,0.6nm,0.5s,baz=64,slow=6.6,SNR=2.3					
	comp=Z,0.6nm,0.5s					
ZALV	Zalesovo Beam	77.47 341	P	P		14 30 27.2 -3.5
	comp=Z,0.7nm,0.6s,baz=50,slow=4.5,SNR=3.6					
	comp=Z,0.7nm,0.6s					
HHC	Hu-ho-hao-te	79.21 318	eP	P		14 30 41.0 +0.3
GERES	GERESS Array B	80.67 25	P	P		14 30 47.5 -0.9
	comp=Z,0.3nm,0.7s,baz=358,slow=3.0,SNR=3.7					
	comp=Z,0.3nm,0.7s					
LPAZ	La Paz	81.66 123	P	P		14 30 49.6 -5.0
	comp=Z,3.5nm,0.7s,baz=305,slow=3.2,SNR=16					
	comp=Z,3.5nm,0.7s					
AKASG	Malin Array Be	82.60 14	P	P		14 30 56.1 -2.3
	comp=Z,0.2nm,0.3s,baz=340,slow=4.8,SNR=4.6					
	comp=Z,0.2nm,0.3s					
SIV	San Ignacio	85.75 117	P	P		14 31 09.7 -5.2
	comp=Z,0.6nm,0.3s,baz=304,slow=3.6,SNR=4.9					
	comp=Z,0.6nm,0.3s					
WMQ	Urumqi	85.98 335	eP	P		14 31 18.9 +3.1
PZH	PanZhiHua	95.59 317	P	P		14 32 01.7 +0.5

*NEIC **09** 14:18:45.3±2.1, 44°.84N±0°.09×128°.0W±0°.1, h10km±1km, mb4.5/26, ML3.4/32, Error ellipse: s-maj=17.3km s-min=12.5km az=230.0*

ISC 09 14:18:44.5±0.8, **44°.90N**±0°.08×**127°.95W**±0°.09, **h10**km, **n73**, σ1**§33**/69, **mb4.6/5, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	2.99	83	Pn	Pn	14 19 32.0	+0.1
HEBO				IAML		14 20 04.6	
	comp=N,110nm,0.1s						
HEBO				IAML		14 20 05.3	
	comp=E,136nm,0.3s						
COR	Corvallis	3.32	94	Pn	Pn	14 19 36.0	-0.5
E03A	Lebam	3.48	60	Pn	Pn	14 19 39.1	+0.4
E03A				IAML		14 20 12.6	
	comp=N,57nm,2.4s						
E03A				IAML		14 20 37.1	
	comp=E,63nm,0.6s						
BUCK	Buck Mountain	3.62	99	Pn	Pn	14 19 39.6	-1.0
WISH	Wishkah	3.66	51	Pn	Pn	14 19 42.8	+1.7
NLWA	Neilton Lookou	3.77	47	Pn	Pn	14 19 43.8	+1.1
NLWA				IAML		14 20 44.7	
	comp=E,62nm,2.6s						
C03A	Quillayute Air	3.84	36	Pn	Pn	14 19 44.2	+0.6
H04A	Detroit Lake	4.11	91	Pn	Pn	14 19 47.1	-0.3
OZB	Mount Ozzard	4.39	22	Pn	Pn	14 19 50.0	-1.3
OZB				IAML		14 22 04.3	
	comp=E,43nm,2.8s						
B04A	Port Angeles	4.40	43	Pn	Pn	14 19 52.0	+0.7
B04A				IAML		14 20 59.3	
	comp=E,35nm,1.0s						
B04A				IAML		14 21 00.3	
	comp=N,41nm,0.8s						
HOOD	Mount Hood Mea	4.48	82	Pn	Pn	14 19 54.0	+1.5
HOOD				IAML		14 21 08.9	
	comp=N,34nm,1.9s						
PGC	Sidney	4.86	38	Pn	Pn	14 19 57.9	+0.4
PINE	Pine Mountain	5.15	100	Pn	Pn	14 20 00.7	-1.0
PINE				IAML		14 21 14.4	
	comp=N,15nm,4.3s						
PINE				IAML		14 23 03.0	
	comp=E,16nm,4.0s						
G06A	Carlson Farm,	5.19	84	Pn	Pn	14 20 03.0	+0.8
G06A				IAML		14 22 14.6	
	comp=N,14nm,3.9s						
LTY	Liberty	5.58	62	Pn	Pn	14 20 09.2	+1.6
B06A	Marblemount	5.73	49	Pn	Pn	14 20 10.3	+0.8
A05A	Maple Falls	5.74	42	Pn	Pn	14 20 10.9	+1.3
HAWA	Hanford	6.08	73	Pn	Pn	14 20 15.9	+1.4
I07A	Izee	6.09	95	Pn	Pn	14 20 14.4	-0.3
G08A	Pilot Rock	6.38	83	Pn	Pn	14 20 18.7	+0.2
E08A	Dider Farm, El	6.42	73	Pn	Pn	14 20 21.0	+1.9
D08A	Wollman Farm,	6.65	68	Pn	Pn	14 20 23.6	+1.4
J08A	Circle Bar Ran	6.99	99	Pn	Pn	14 20 27.9	+1.0
LLLB	Lillooet	7.02	33	Pn	Pn	14 20 27.8	+0.4
C09A	Chrisman Ranch	7.29	63	Pn	Pn	14 20 32.4	+1.3
BMO	Blue Mountains	7.56	87	Pn	Pn	14 20 34.9	0.0
NEW	Newport	8.18	62	LR	LR	14 24 15.6	
	comp=N,290nm,21.5s,baz=246,slow=37						
NEW	Newport	8.18	62	Pn	Pn	14 20 43.9	+0.6
NEW	Newport	8.18	62	P	Pn	14 20 40.0	-3.2
	baz=251						
NEW	Newport	8.18	62				
	comp=N,3.0nm,0.5s						
NEW	Newport	8.18	62	Pn	Pn	14 20 43.6	+0.4
	comp=N,0.3nm,0.3s,baz=255,slow=20,SNR=4.3						
HLID	Hailey	9.81	93	Pn	Pn	14 21 07.0	+1.3
HLID	Hailey	9.81	93	P	Pn	14 21 07.9	+2.2
	baz=284,SNR=30						
MSO	Missoula	9.96	74	Pn	Pn	14 21 09.3	+1.6
ELK	Elko	10.22	110	LR	LR	14 25 25.3	
	comp=N,313nm,21.8s,baz=292,slow=38						
ELK	Elko	10.22	110				
	comp=N,4.2nm,1.0s						
ELK	Elko	10.22	110	Pn	Pn	14 21 10.5	-0.8
	comp=N,0.1nm,0.3s,baz=286,slow=9.9,SNR=12						
BCYI	Bear Canyon	10.39	88	Pn	Pn	14 21 15.3	+1.6
DSP	Deep Springs	10.63	132	Pn	Pn	14 21 17.9	+1.1
PAGB	Antelope Grade	10.88	145	Pn	Pn	14 21 22.6	+2.4
BOZ	Bozeman (W)	11.53	81	Pn	Pn	14 21 31.0	+1.8
YHL	Hebgen Lake	11.90	84	Pn	Pn	14 21 36.5	+2.1
YHB	Horse Butte	11.90	85	Pn	Pn	14 21 36.4	+2.0
YHH	Holmes Hill	12.14	84	Pn	Pn	14 21 39.9	+2.2
YPP	Pitchstone Pla	12.24	87	Pn	Pn	14 21 39.2	+0.1
MOOW	Moose Ponds	12.38	89	Pn	Pn	14 21 43.5	+2.6
PV14	Lion Creek, Pa	15.56	108		P	14 22 27.6	-0.8
PV22	Blue Mesa, Par	15.64	107	Pn	Pn	14 22 26.2	+1.1
PV12	Saucer Basin,	15.74	108	Pn	Pn	14 22 28.5	+2.1
PV12				IAmb	IAmb	14 22 33.4	
	comp=Z,16nm,1.1s						
PV03	Paradox Valley	15.74	108	Pn	Pn	14 22 28.1	+1.7
PV03				IAmb	IAmb	14 22 31.3	
	comp=Z,21nm,1.3s						
113A	Mohawk Valley,	16.36	133		P	14 22 37.5	+0.4
SMCO	Snowmass	16.58	103	Pn	Pn	14 22 38.4	+1.0
N23A	Red Feather La	16.60	96	Pn	Pn	14 22 38.2	+0.7
N23A				IAmb	IAmb	14 22 55.1	
	comp=Z,21nm,1.1s						

	comp=Z,95nm,1.3s					
M24K	**Tolsona, Glenn**	**20.23 335**	P	**P**	**14 23 20.4**	**+0.8**
M24K			IAmb	IAmb	14 23 26.2	
	comp=Z,33nm,1.4s					
F33A	**5 Mile Ranch,**	**22.19 76**	P	**P**	**14 23 38.6**	**-2.1**
F33A			IAmb	IAmb	14 23 39.2	
	comp=Z,18nm,0.8s					
EYMN	**Ely**	**25.16 70**	P	**P**	**14 24 06.1**	**-3.6**
EYMN			IAmb	IAmb	14 24 06.3	
	comp=Z,19nm,1.4s					
AKUT	**Akutan**	**25.95 304**	P	**P**	**14 24 18.1**	**+1.2**
MIAR	**Mount Ida**	**28.20 100**	P	**P**	**14 24 38.3**	**+1.1**
MIAR			IAmb	IAmb	14 24 56.3	
	comp=Z,16nm,1.4s					
BYL	**Byron's Ledge**	**34.06 231**	P	**P**	**14 25 29.2**	**+0.1**
UWB	**Uwekahuna B**	**34.06 231**	P	**P**	**14 25 28.7**	**-0.4**
OBL	**Observatory Le**	**34.07 231**	P	**P**	**14 25 28.9**	**-0.3**
UWE	**Uwekahuna**	**34.07 231**	P	**P**	**14 25 29.9**	**+0.7**
NPH	**North Pit**	**34.07 231**	P	**P**	**14 25 28.2**	**-1.0**
KKO	**Keanakako`i**	**34.08 231**	P	**P**	**14 25 29.3**	**+0.1**
RIM	**Rim**	**34.08 231**	P	**P**	**14 25 28.6**	**-0.7**
WRMHI	**West Rim**	**34.09 231**	P	**P**	**14 25 28.3**	**-1.0**
SDHHI	**Sand Hill**	**34.10 231**	P	**P**	**14 25 29.1**	**-0.3**
CELP	**Cerrillos**	**57.26 97**	P	**P**	**14 28 32.1**	**-0.1**
CELP			IAmb	IAmb	14 29 07.1	
	comp=Z,29nm,1.5s					
PB08	**IPOC Station P**	**83.96 126**	P	**P**	**14 31 14.7**	**-0.6**
PB08			IAmb	IAmb	14 31 15.9	
	comp=Z,3.9nm,0.8s					

*JMA **09** 14:32:37.1±0.1,24°.4N±0°.2×121°.8E±0°.4,h29km,MV2.4/10, TAIWAN REGION*
*TAP **09** 14:32:37.4,24°.45N×121°.82E,h16km,ML3.1,D*
ISC 09 14:32:37.0±0.8,24°.45N±0°.01×121°.84E±0°.02,h17km±5km, n72,σ0°.71/139,6C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.06**	**265**	P	**Pg**	**14 32 40.0**	**-0.2**
EWUT	baz=257			S	**Sg**	**14 32 42.4**	**+0.1**
TWC	**Suao**	**0.16**	**2**	⇑*i*P	**Pg**	**14 32 41.9**	**+0.6**
TWC	baz=14			*i*S	**Sg**	**14 32 44.7**	**+0.6**
LATG	**Datong**	**0.30**	**286**	⇑*i*P	**Pb**	**14 32 44.1**	**+0.1**
LATG	baz=287			*i*S	**Sg**	**14 32 48.4**	**+0.4**
TWE	**Neicheng**	**0.31**	**329**	⇑*i*P	**Pb**	**14 32 44.2**	**+0.1**
TWE	baz=335			*i*S	**Sg**	**14 32 48.6**	**+0.3**
ILA	**Ilan**	**0.33**	**345**	S	**Sb**	**14 32 49.7**	**+0.3**
NDT	**Datong Townshi**	**0.34**	**297**	⇑*i*P	**Pg**	**14 32 43.8**	**-0.3**
NDT	baz=298			S	**Sg**	**14 32 48.7**	**-0.2**
ETL	**Fush Village**	**0.35**	**215**	P	**Pb**	**14 32 44.7**	**-0.1**
ETL	baz=210			S	**Sb**	**14 32 49.8**	**-0.3**
NACB	**Ninganchiao**	**0.36**	**219**	⇓*i*P	**Pg**	**14 32 44.5**	**0.0**
NACB	baz=216			S	**Sb**	**14 32 49.8**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.39**	**323**	⇑*i*P	**Pb**	**14 32 45.5**	**+0.1**
FUSB	baz=318			S	**Sg**	**14 32 50.7**	**+0.3**
NTC	**Toucheng**	**0.40**	**358**	*e*P	**Pg**	**14 32 45.7**	**+0.4**
NTC	baz=2.0			*e*S	**Sg**	**14 32 51.1**	**+0.2**
ETLH	**Xiulin Townshi**	**0.41**	**234**	P	**Pb**	**14 32 45.7**	**-0.1**
ETLH	baz=231			*e*S	**Sb**	**14 32 51.8**	**0.0**
NNS	**Nan Shan**	**0.43**	**269**	P	**Pg**	**14 32 45.3**	**-0.5**
NNS	baz=267			*e*S	**Sg**	**14 32 51.1**	**-0.6**
TWD	**Chiawan**	**0.43**	**211**	*i*P	**Pg**	**14 32 46.0**	**+0.2**
TWD	baz=207			S	**Sb**	**14 32 52.2**	**-0.2**
YHNB	**Yeheng**	**0.48**	**297**	⇑P	**Pb**	**14 32 47.1**	**+0.1**
YHNB	baz=298			S	**Sb**	**14 32 53.4**	**-0.4**
NSK	**Sanguang**	**0.49**	**297**	*i*P	**Pg**	**14 32 46.3**	**-0.7**
NSK	baz=298			S	**Sg**	**14 32 52.9**	**-0.8**
HWA	**Hwalien**	**0.52**	**205**	*e*P	**Pb**	**14 32 48.2**	**+0.6**
TIPB	**Shuangxi**	**0.52**	**358**	*e*P	**Pb**	**14 32 47.9**	**+0.2**
TIPB	baz=1.0			S	**Sg**	**14 32 54.3**	**-0.1**
TWB1	**Santiao Chiao**	**0.57**	**13**	*e*P	**Pb**	**14 32 48.5**	**0.0**
TWB1	baz=17			*e*S	**Sb**	**14 32 55.9**	**-0.6**
ETM	**Tongmen**	**0.58**	**214**	*e*P	**Pb**	**14 32 48.3**	**-0.4**
ETM	baz=211			*e*S	**Sg**	**14 32 56.7**	**+0.5**
TWA	**Mucha**	**0.58**	**336**	*e*P	**Pn**	**14 32 49.8**	**-0.6**
TWA	baz=329			*e*S	**Sg**	**14 32 57.4**	**+1.2**
FUSS	**Fushou**	**0.58**	**250**	P	**Pg**	**14 32 49.1**	**+0.4**
FUSS	baz=248			*e*S	**Sg**	**14 32 57.0**	**+0.5**
NHDH	**Xindian Distri**	**0.59**	**331**	*e*P	**Pg**	**14 32 49.4**	**+0.8**
NHDH	baz=332			*e*S	**Sb**	**14 32 56.5**	**-0.3**
WHF	**Hehuan Shan**	**0.61**	**240**	P	**Pg**	**14 32 49.3**	**+0.1**
WHF	baz=238			*e*S	**Sg**	**14 32 57.9**	**+0.5**
TATO	**Taipei**	**0.61**	**328**	P	**Pg**	**14 32 49.5**	**+0.3**
TATO	baz=330			S	**Sb**	**14 32 57.1**	**-0.5**
NWF	**Wu-fen Shan**	**0.62**	**355**	*e*P	**Pg**	**14 32 50.1**	**+0.8**
NWF	baz=350			*e*S	**Sg**	**14 32 59.1**	**+1.5**
NHY	**Taipei**	**0.64**	**337**	*e*P	**Pn**	**14 32 51.8**	**+0.5**
NHY	baz=339			*e*S	**Sn**	**14 33 00.8**	**-0.2**
SXI1	**Grass Mountain**	**0.64**	**3**	P	**Pb**	**14 32 50.0**	**+0.2**
SXI1	baz=354			*e*S	**Sb**	**14 32 58.2**	**-0.3**
TDCB	**Techi**	**0.65**	**253**	P	**Pg**	**14 32 50.5**	**+0.6**
TDCB	baz=246			*e*S	**Sg**	**14 32 58.8**	**+0.1**
BACT	**New Taipei Cit**	**0.66**	**326**	*e*P	**Pn**	**14 32 51.0**	**-0.5**
BACT	baz=328			*e*S	**Sn**	**14 33 00.5**	**-0.9**
TAP	**Taipei**	**0.66**	**333**	P	**Pn**	**14 32 51.2**	**-0.4**
TAP	baz=326			*e*S	**Sg**	**14 32 59.9**	**+1.1**
NFF	**Wufeng Townshi**	**0.68**	**285**	*e*P	**Pb**	**14 32 49.6**	**-0.9**
NFF	baz=292			*e*S	**Sb**	**14 32 58.7**	**-1.0**
TNOU	**National Taiwa**	**0.70**	**355**	*e*P	**Pg**	**14 32 51.4**	**+0.6**
TNOU	baz=353			*e*S	**Sb**	**14 33 00.4**	**+0.3**
CHGB	**Renai**	**0.72**	**238**	P	**Pg**	**14 32 51.5**	**+0.3**
CHGB	baz=236			*e*S	**Sg**	**14 33 01.2**	**+0.3**
ESL	**Shilin**	**0.73**	**211**	P	**Pg**	**14 32 51.5**	**0.0**
ESL	baz=214			*e*S	**Sn**	**14 33 02.5**	**-1.0**
YM01	**YM01**	**0.74**	**340**	P	**Pn**	**14 32 52.4**	**-0.2**
YM01	baz=334			*e*S	**Sg**	**14 33 02.0**	**+0.8**
NTY	**Taoyuan**	**0.74**	**318**	*e*P	**Pn**	**14 32 52.7**	**0.0**
NTY	baz=326			*e*S	**Sn**	**14 33 03.3**	**-0.2**
TWS1	**Kuangyinshan**	**0.75**	**329**	P	**Pn**	**14 32 52.7**	**-0.2**
TWS1	baz=331			S	**Sn**	**14 33 03.7**	**-0.2**
YM08	**YM08**	**0.77**	**343**	*e*P	**Pg**	**14 32 52.5**	**+0.4**
YM08	baz=337			*e*S	**Sg**	**14 33 02.7**	**+0.4**
LIOB	**Emei**	**0.78**	**285**	*e*P	**Pn**	**14 32 53.4**	**+0.2**
LIOB	baz=276			*e*S	**Sn**	**14 33 03.4**	**-1.1**
OWD	**Renai**	**0.78**	**231**	*e*P	**Pg**	**14 32 52.2**	**-0.1**
OWD	baz=229			*e*S	**Sg**	**14 33 02.9**	**+0.1**
NSTT	**Nanjuang**	**0.79**	**283**	*e*P	**Pn**	**14 32 52.9**	**-0.5**
NSTT	baz=273			*e*S	**Sg**	**14 33 02.9**	**0.0**
ANP	**Anpu**	**0.79**	**338**	P	**Pg**	**14 32 53.0**	**+0.6**
ANP	baz=333			*e*S	**Sg**	**14 33 03.1**	**+0.1**
NCU	**National Centr**	**0.79**	**311**	*e*P	**Pg**	**14 32 52.9**	**+0.4**
NCU	baz=320			*e*S	**Sn**	**14 33 04.4**	**-0.4**
NTST	**Danshui**	**0.80**	**333**	*e*P	**Pn**	**14 32 53.5**	**0.0**
NTST	baz=348			*e*S	**Sn**	**14 33 04.6**	**-0.3**
WUSB	**Renai**	**0.80**	**236**	P	**Pg**	**14 32 52.8**	**+0.1**
WUSB	baz=234			*e*S	**Sg**	**14 33 03.5**	**+0.1**
SBCB	**Hsinchu**	**0.85**	**294**	*e*P	**Pn**	**14 32 54.6**	**+0.4**
SBCB	baz=294			*e*S	**Sn**	**14 33 06.9**	**+0.7**
EGFH	**Guangfu**	**0.86**	**206**	*e*P	**Pg**	**14 32 54.1**	**+0.2**
EGFH	baz=216			*e*S	**Sn**	**14 33 07.2**	**+0.6**
WPL	**Puli Township**	**0.92**	**242**	*e*P	**Pn**	**14 32 55.6**	**+0.5**
WPL	baz=240			*e*S	**Sn**	**14 33 07.1**	**-0.8**
WCS	**Beigang Elemen**	**0.94**	**245**	*e*P	**Pb**	**14 32 54.8**	**0.0**
WCS	baz=244			*e*S	**Sn**	**14 33 07.6**	**-0.8**
VWDT	**VWDT**	**0.94**	**223**	*e*P	**Pg**	**14 32 55.6**	**+0.2**
VWDT	baz=228			*e*S	**Sn**	**14 33 08.5**	**-0.1**
NMLH	**Miaoli**	**0.96**	**275**	*e*P	**Pg**	**14 32 56.7**	**+1.0**
NMLH	baz=275			*e*S	**Sn**	**14 33 09.3**	**+0.3**
JYNG	**Yonagunijimaku**	**1.00**	**90**	*e*P	**Pb**	**14 32 55.6**	**-0.4**
HGSD	**Ruisui**	**1.03**	**202**	*e*P	**Pg**	**14 32 58.1**	**+1.2**
HGSD	baz=215			*e*S	**Sg**	**14 33 14.6**	**+4.2**
SSLB	**Suanglung**	**1.05**	**231**	P	**Pg**	**14 32 57.2**	**-0.1**
SSLB	baz=229			*e*S	**Sg**	**14 33 11.4**	**+0.3**
YULB	**Yu-li**	**1.17**	**205**	*e*P	**Pb**	**14 32 59.0**	**+0.2**
YULB	baz=213			*e*S	**Sg**	**14 33 15.8**	**+1.0**
WNT	**Mingjian**	**1.20**	**242**	*e*P	**Pg**	**14 33 01.1**	**+0.9**
WNT	baz=240			*e*S	**Sg**	**14 33 18.2**	**+2.3**
TWF1	**Yuli**	**1.20**	**205**	*e*P	**Pg**	**14 32 59.9**	**-0.3**
TWF1	baz=211			*e*S	**Sg**	**14 33 16.3**	**+0.3**
ALS	**Alishan**	**1.33**	**226**	*e*P	**Pb**	**14 33 02.1**	**+0.4**
ALS	baz=210			*e*S	**Sg**	**14 33 21.7**	**+1.5**
WRL	**Guolierlin Hig**	**1.45**	**248**	*e*P	**Pb**	**14 33 04.0**	**+0.5**
WRL	baz=261			*e*S	**Sb**	**14 33 22.1**	**+0.5**
WCKO	**Fanlu**	**1.52**	**229**	*e*P	**Pg**	**14 33 05.4**	**-0.8**
WCKO	baz=213			*e*S	**Sg**	**14 33 27.0**	**+1.0**
TPUB	**Ta-pu**	**1.59**	**224**	*e*P	**Pg**	**14 33 07.1**	**-0.6**
TPUB	baz=209			*e*S	**Sg**	**14 33 28.7**	**+0.2**
TWK	**Hsinying**	**1.71**	**227**	*e*P	**Pb**	**14 33 08.0**	**0.0**
TWK	baz=211			*e*S	**Sg**	**14 33 31.9**	**-0.3**
IRIF	**Iriomote-Funau**	**1.73**	**93**	P	**Pn**	**14 33 05.8**	**-0.4**
IRIF				*e*S	**Sn**	**14 33 26.8**	**-1.1**
WSL	**Shuilin Townsh**	**1.74**	**238**	*e*P	**Pb**	**14 33 08.0**	**-0.6**
WSL	baz=250			*e*S	**Sb**	**14 33 31.0**	**+0.9**
CHN1	**Nanshi**	**1.74**	**224**	*e*P	**Pb**	**14 33 09.1**	**+0.5**
CHN1	baz=210			*e*S	**Sg**	**14 33 32.2**	**-1.0**
JKRS	**Kuro-shima**	**1.99**	**96**	P	**Pn**	**14 33 10.1**	**+0.3**
JKRS				S	**Sn**	**14 33 33.6**	**-0.7**
SSD	**Sandimen**	**2.03**	**213**	*e*P	**Pb**	**14 33 13.4**	**0.0**
SSD	baz=214			*e*S	**Sb**	**14 33 38.5**	**+0.2**
TSMG	**Majia**	**2.06**	**213**	*e*P	**Pb**	**14 33 12.8**	**-1.1**
TSMG	baz=213			*e*S	**Sb**	**14 33 39.5**	**+0.3**
JIJ	**Ishigaki jima**	**2.10**	**92**	P	**Pn**	**14 33 11.4**	**+0.1**
JIJ				S	**Sn**	**14 33 35.6**	**-1.5**
MASBT	**Mashibuluo**	**2.14**	**211**	*e*P	**Pb**	**14 33 14.4**	**-0.9**
MASBT	baz=212			*e*S	**Sb**	**14 33 40.6**	**-1.0**
JISG	**Ishigakijimahi**	**2.25**	**86**	*e*P	**Pn**	**14 33 12.7**	**-0.8**
JTJ	**Tarama**	**2.61**	**85**	*e*S	**Sn**	**14 33 49.7**	**-0.1**

IDC 09 14:32:40.5±2.4,14°.97S×176°.19W,h342km±53km, mb3.3/3,mbtmp4.0/4,Error ellipse: s-maj=133.7km s-min=52.5km az=159.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.40**	**77**	P	Pn	14 33 53.9	+0.5
	43nm,0.9s,baz=281,slow=18,SNR=8.5						
AFI				S	S	14 34 52.3	+0.1
	16nm,0.8s,baz=9.6,slow=23,SNR=1.0						
STKA	**Stephens Creek**	**41.94**	**239**	P	P	14 39 58.7	-0.3
	3.7nm,0.9s,baz=68,slow=9.2,SNR=6.3						
	3.7nm,0.9s						
WRA	**Warramunga Arr**	**47.32**	**257**	P	P	14 40 41.0	-0.4
	0.3nm,0.6s,baz=90,slow=7.8,SNR=11						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**47.69**	**252**	P	P	14 40 44.1	0.0
	3.2nm,0.5s,baz=85,slow=8.0,SNR=171						
ASAR				PcP	PcP	14 42 07.3	-0.2
	0.2nm,0.8s,baz=98,slow=3.3,SNR=1.5						
	3.2nm,0.5s						

*NOU **09** 14:40:12.5,36°.90S×177°.07E,h363km,MLv3.9/12,Off E.*

Coast of N. Island, N.Z.
*WEL **09** 14:40:21.1±0.7,37°.S±6°.×17°.7E±°,h289km±6km,M3.3/43, MLv3.3/43,Error ellipse: s-maj=0.0km s-min=0.0km az=48.3*
ISC 09 14:40:14.5±1.9,37°.06S±0°.10×176°.69E±0°.09, h338km±11km,n140,σ2°.10/156,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.75**	**207**	P	**Pn**	**14 40 59.7**	**+1.7**
OPRZ	**Ohinepanea**	**0.79**	**188**	P	**Pn**	**14 40 59.7**	**+1.7**
KUZ	**Kuaotunu**	**0.84**	**292**	P	**Pn**	**14 40 59.7**	**+1.4**
KUZ	**Kuaotunu**	**0.84**	**292**	P	**Pn**	**14 40 59.5**	**+1.2**
MARZ	**Manawahe**	**0.92**	**181**	P	**Pn**	**14 41 00.9**	**+2.4**
KMRZ	**Kaimai**	**0.98**	**217**	P	**Pn**	**14 41 01.1**	**+2.3**
HAZ	**Te Kaha**	**1.11**	**129**	P	**Pn**	**14 41 00.7**	**+1.3**
HAZ				S	**S**	**14 41 31.7**	**-3.5**
TOZ	**Tahuroa Road**	**1.16**	**234**	P	**Pn**	**14 41 01.8**	**+2.3**
RUGZ	**Raukumara Rang**	**1.19**	**139**	P	**Pn**	**14 41 00.8**	**+0.9**
RUGZ				S	**S**	**14 41 32.4**	**-3.9**
MKAZ	**Moumakai**	**1.22**	**268**	P	**Pn**	**14 41 01.8**	**+1.9**
URZ	**Urewera**	**1.24**	**165**	P	**Pn**	**14 41 01.2**	**+1.4**
URZ				S	**S**	**14 41 33.5**	**-2.9**
URZ	**Urewera**	**1.24**	**165**	P	**Pn**	**14 41 01.3**	**+1.4**
WIAZ	**Waiheke Island**	**1.28**	**282**	P	**Pn**	**14 41 01.9**	**+1.7**
RRRZ	**Republican Roa**	**1.28**	**186**	P	**Pn**	**14 41 02.0**	**+1.8**
HRRZ	**Handcock Road**	**1.36**	**194**	P	**Pn**	**14 41 02.9**	**+2.3**
GRRZ	**Galatos Road**	**1.36**	**200**	P	**Pn**	**14 41 02.9**	**+2.2**
PKGZ	**Pakihiroa**	**1.38**	**127**	P	**Pn**	**14 41 02.9**	**+2.2**
PKGZ				S	**S**	**14 41 36.0**	**-1.8**
MXZ	**Matakaoa Point**	**1.38**	**112**	P	**Pn**	**14 41 02.5**	**+1.8**
MXZ				S	**S**	**14 41 35.2**	**-2.5**
MUGZ	**Murupara**	**1.41**	**177**	P	**Pn**	**14 41 02.7**	**+1.9**
MUGZ				S	**S**	**14 41 35.4**	**-2.7**
ETAZ	**East Tamaki Re**	**1.42**	**274**	P	**Pn**	**14 41 02.8**	**+1.9**
MWZ	**Matawai**	**1.43**	**153**	P	**Pn**	**14 41 02.9**	**+1.9**
MWZ				S	**S**	**14 41 36.5**	**-1.8**
MBAZ	**Motutapu North**	**1.47**	**281**	P	**Pn**	**14 41 03.1**	**+1.9**
TWGZ	**Tauwhareparae**	**1.51**	**138**	P	**Pn**	**14 41 04.1**	**+2.6**
TWGZ				S	**S**	**14 41 38.6**	**-0.6**
WPRZ	**Whakapapatarin**	**1.51**	**196**	P	**Pn**	**14 41 03.8**	**+2.4**
ALRZ	**Allen Road**	**1.52**	**190**	P	**Pn**	**14 41 03.6**	**+2.1**
RAGZ	**Rawiri**	**1.54**	**158**	P	**Pn**	**14 41 04.1**	**+2.4**
RAGZ				S	**S**	**14 41 38.8**	**-0.7**
TLZ	**Tolley Road**	**1.56**	**216**	P	**Pn**	**14 41 04.6**	**+2.8**
WMGZ	**Waiomatatini S**	**1.57**	**119**	P	**Pn**	**14 41 03.9**	**+2.2**
WMGZ				S	**S**	**14 41 37.9**	**-1.7**
RTZ	**Ruatahuna**	**1.57**	**172**	P	**Pn**	**14 41 03.7**	**+1.9**
RTZ				S	**S**	**14 41 38.2**	**-1.6**
PUZ	**Puketiti**	**1.60**	**129**	P	**Pn**	**14 41 04.1**	**+2.1**
PUZ				S	**S**	**14 41 37.0**	**-3.1**
AWAZ	**Awhitu Peninsu**	**1.64**	**269**	P	**Pn**	**14 41 04.2**	**+2.0**
TKGZ	**Te Karaka**	**1.65**	**147**	P	**Pn**	**14 41 04.5**	**+2.3**
TKGZ				S	**S**	**14 41 39.3**	**-1.3**
MRHZ	**Matea Rd**	**1.78**	**187**	P	**Pn**	**14 41 05.0**	**+1.8**
MRHZ				S	**S**	**14 41 41.0**	**-1.1**
MTHZ	**Maungataniwha**	**1.79**	**176**	P	**Pn**	**14 41 05.2**	**+2.0**
MTHZ				S	**S**	**14 41 41.3**	**-1.0**
SNGZ	**Shannon Statio**	**1.79**	**164**	P	**Pn**	**14 41 05.6**	**+2.4**
SNGZ				S	**S**	**14 41 40.1**	**-2.2**
RIGZ	**Rimuhau**	**1.85**	**153**	P	**Pn**	**14 41 06.1**	**+2.5**
CNGZ	**Carnagh Statio**	**1.86**	**140**	P	**Pn**	**14 41 06.4**	**+2.9**
RAHZ	**Arahi**	**1.88**	**171**	P	**Pn**	**14 41 06.4**	**+2.6**
RATZ	**Rangitukua**	**1.94**	**202**	P	**Pn**	**14 41 06.4**	**+2.2**
NMHZ	**Naumai**	**2.03**	**177**	P	**Pn**	**14 41 07.7**	**+2.8**
HIZ	**Hauiti**	**2.05**	**225**	P	**Pn**	**14 41 08.3**	**+3.3**
HIZ	**Hauiti**	**2.05**	**225**	P	**Pn**	**14 41 08.3**	**+3.3**
WHHZ	**Waihua**	**2.06**	**168**	P	**Pn**	**14 41 07.6**	**+2.6**
KATZ	**Kakaramea**	**2.06**	**202**	P	**Pn**	**14 41 07.9**	**+2.6**
KNZ	**Kokohu**	**2.10**	**159**	P	**Pn**	**14 41 07.6**	**+2.3**
BKZ	**Black Stump Fm**	**2.10**	**184**	P	**Pn**	**14 41 07.3**	**+1.9**
BKZ	**Black Stump Fm**	**2.10**	**184**	P	**Pn**	**14 41 07.3**	**+1.9**
NTVZ	**North Tongarir**	**2.18**	**201**	P	**Pn**	**14 41 08.4**	**+2.3**
TMVZ	**Te Maari**	**2.19**	**201**	P	**Pn**	**14 41 08.6**	**+2.4**
WCZ	**Waipu Caves**	**2.20**	**300**	P	**Pn**	**14 41 08.0**	**+1.8**
ETVZ	**East Tongariro**	**2.21**	**200**	P	**Pn**	**14 41 08.4**	**+2.1**
ARHZ	**Aropaoanui**	**2.21**	**174**	P	**Pn**	**14 41 08.7**	**+2.6**
WTVZ	**West Tongariro**	**2.23**	**203**	P	**Pn**	**14 41 08.6**	**+2.2**
TWVZ	**Taurewa**	**2.23**	**206**	P	**Pn**	**14 41 08.8**	**+2.3**
OTVZ	**Oturere**	**2.25**	**201**	P	**Pn**	**14 41 09.1**	**+2.4**
SNVZ	**South Ngauruho**	**2.28**	**201**	P	**Pn**	**14 41 09.1**	**+2.2**
NGZ	**Ngauruhoe**	**2.28**	**202**	P	**Pn**	**14 41 09.3**	**+2.5**
MHGZ	**Mahia Peninsul**	**2.30**	**156**	P	**Pn**	**14 41 09.7**	**+2.9**
TUVZ	**Tukino**	**2.35**	**200**	P	**Pn**	**14 41 09.7**	**+2.2**
FWVZ	**Far West T-bar**	**2.37**	**202**	P	**Pn**	**14 41 09.6**	**+1.9**
KWHZ	**Kaweka Forest**	**2.37**	**185**	P	**Pn**	**14 41 09.8**	**+2.3**
MCHZ	**McNeill Hill**	**2.38**	**180**	P	**Pn**	**14 41 10.0**	**+2.6**
WHVZ	**Whangaehu Hut**	**2.38**	**201**	P	**Pn**	**14 41 09.9**	**+2.1**
TRVZ	**Turoa**	**2.41**	**202**	P	**Pn**	**14 41 10.1**	**+2.2**
WNVZ	**Wahianoa**	**2.42**	**201**	P	**Pn**	**14 41 10.1**	**+2.1**
MOVZ	**Moawhango**	**2.45**	**197**	P	**Pn**	**14 41 09.9**	**+1.8**
PKVZ	**Pokaka**	**2.46**	**205**	P	**Pn**	**14 41 10.4**	**+2.2**
BHHZ	**Black Hill Sta**	**2.47**	**191**	P	**Pn**	**14 41 10.3**	**+2.0**
MTVZ	**Mangateitei**	**2.51**	**202**	P	**Pn**	**14 41 11.1**	**+2.5**
VRZ	**Vera Road**	**2.56**	**216**	P	**Pn**	**14 41 11.7**	**+2.8**
KRHZ	**Kereru**	**2.59**	**185**	P	**Pn**	**14 41 11.2**	**+2.0**
CKHZ	**Cape Kidnapper**	**2.61**	**173**	P	**Pn**	**14 41 12.0**	**+2.6**
KAHZ	**Kahuranaki**	**2.73**	**177**	P	**Pn**	**14 41 13.0**	**+2.6**
PNHZ	**Pukenui**	**2.87**	**188**	P	**Pn**	**14 41 13.7**	**+1.9**
PXZ	**Pawanui**	**2.97**	**177**	P	**Pn**	**14 41 14.8**	**+2.3**
WAZ	**Wanganui**	**3.00**	**206**	P	**Pn**	**14 41 15.1**	**+2.2**
WPHZ	**Waipukurau**	**3.00**	**184**	P	**Pn**	**14 41 15.0**	**+2.1**
NEZ	**North Egmont**	**3.01**	**222**	P	**Pn**	**14 41 16.6**	**+3.6**
PKE	**Pukeiti**	**3.01**	**224**	P	**Pn**	**14 41 16.6**	**+3.6**
PREZ	**Palmer Road**	**3.03**	**220**	P	**Pn**	**14 41 17.0**	**+3.8**
TSZ	**Takapari Road**	**3.04**	**191**	P	**Pn**	**14 41 15.1**	**+1.8**
KHEZ	**Kahui Hut**	**3.07**	**223**	P	**Pn**	**14 41 17.0**	**+3.5**
KHEZ	**Kahui Hut**	**3.07**	**223**	P	**Pn**	**14 41 16.8**	**+3.2**
OUZ	**Omahuta**	**3.11**	**305**	P	**Pn**	**14 41 15.5**	**+1.6**
OUZ	**Omahuta**	**3.11**	**305**	P	**Pn**	**14 41 15.6**	**+1.6**
NBEZ	**Newall Road No**	**3.13**	**224**	P	**Pn**	**14 41 16.6**	**+2.6**
PRHZ	**Porangahau**	**3.20**	**181**	P	**Pn**	**14 41 17.0**	**+2.3**
DVHZ	**Dannevirke**	**3.26**	**187**	P	**Pn**	**14 41 17.2**	**+1.9**
OHWZ	**Ohakea**	**3.32**	**199**	P	**Pn**	**14 41 18.3**	**+2.5**
ANWZ	**Angora Road**	**3.40**	**183**	P	**Pn**	**14 41 19.1**	**+2.6**
POWZ	**Post Office Ro**	**3.40**	**192**	P	**Pn**	**14 41 18.4**	**+1.8**
PRWZ	**Pori Road**	**3.53**	**189**	P	**Pn**	**14 41 20.5**	**+2.6**
BFZ	**Birch Farm**	**3.63**	**185**	P	**Pn**	**14 41 21.0**	**+2.1**
BFZ	**Birch Farm**	**3.63**	**185**	P	**Pn**	**14 41 21.0**	**+2.1**
MRZ	**Mangatainoka R**	**3.70**	**193**	P	**Pn**	**14 41 21.1**	**+1.5**
TIWZ	**Tintock**	**3.76**	**189**	P	**Pn**	**14 41 22.2**	**+2.0**
CPWZ	**Castlepoint**	**3.86**	**186**	P	**Pn**	**14 41 24.2**	**+3.0**
OGWZ	**Otaki Gorge**	**3.93**	**197**	P	**Pn**	**14 41 23.6**	**+1.7**
HOWZ	**Holdsworth Sta**	**3.94**	**193**	P	**Pn**	**14 41 23.5**	**+1.4**
KIW	**Kapiti Island**	**4.04**	**200**	P	**Pn**	**14 41 24.6**	**+1.5**
TMWZ	**Te Maipa**	**4.09**	**189**	P	**Pn**	**14 41 25.4**	**+1.8**
MTW	**Mount Morrison**	**4.19**	**192**	P	**Pn**	**14 41 26.0**	**+1.3**
CAW	**Cannon Point**	**4.23**	**197**	P	**Pn**	**14 41 26.5**	**+1.4**
DUWZ	**D'Urville Isla**	**4.31**	**209**	P	**Pn**	**14 41 27.4**	**+1.4**
TRWZ	**Traveller**	**4.40**	**190**	P	**Pn**	**14 41 28.7**	**+1.8**
PAWZ	**Paruwai Farm**	**4.42**	**192**	P	**Pn**	**14 41 28.6**	**+1.5**
WELZ	**Wellington**	**4.47**	**199**	P	**Pn**	**14 41 29.1**	**+1.4**
MSWZ	**Moikau Station**	**4.49**	**194**	P	**Pn**	**14 41 29.1**	**+1.3**
SNZO	**South Karori**	**4.51**	**199**	P	**Pn**	**14 41 29.4**	**+1.3**
TCW	**Tory Channel**	**4.55**	**204**	P	**Pn**	**14 41 30.0**	**+1.6**
PLWZ	**Palliser**	**4.64**	**193**	P	**Pn**	**14 41 30.8**	**+1.3**
TUWZ	**Tuamarina**	**4.85**	**205**	P	**Pn**	**14 41 33.1**	**+1.3**
NNZ	**Nelson**	**4.88**	**211**	P	**Pn**	**14 41 33.0**	**+0.9**
TKNZ	**Takaka Hill**	**4.91**	**215**	P	**Pn**	**14 41 33.2**	**+0.7**
QRZ	**Quartz Range**	**4.96**	**220**	P	**Pn**	**14 41 33.4**	**+0.4**
CMWZ	**Cape Campbell**	**5.06**	**202**	P	**Pn**	**14 41 36.7**	**+2.7**
BSWZ	**Blackbirch Sta**	**5.13**	**204**	P	**Pn**	**14 41 36.7**	**+1.8**
MRNZ	**Matariki Terra**	**5.30**	**214

TMZ	**Timaru**	**8.49 209**	P	**Pn**	**14 42 15.5**	**+1.3**
ODZ	**Otahua Downs**	**9.19 208**	P	**P**	**14 42 25.0**	**-0.2**
ODZ	**Otahua Downs**	**9.19 208**	P	**Pn**	**14 42 24.9**	**+2.4**
37nm,2.3s						
JCZ	**Jackson Bay**	**9.23 218**	P	**Pn**	**14 42 23.3**	**+0.2**
JCZ	**Jackson Bay**	**9.23 218**	P	**Pn**	**14 42 24.7**	**+1.6**
46nm,1.8s						
WKZ	**Wanaka**	**9.68 214**	P	**Pn**	**14 42 29.2**	**+0.7**

BJI ***09*** *14:46:22.1±0.0, 1°.38N×127°.86E, h140km, mb5.3/84, mB5.4/61*

KLM ***09*** *14:46:25, 1°.67N×127°.68E, h125km, mb6.2*

NEIC ***09*** *14:46:25.6, 1°.78N×127°.50E, h119km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.86; $M_{\theta\theta}$1.40; $M_{\phi\phi}$-4.25; $M_{r\theta}$-1.93; $M_{\theta\phi}$2.90; $M_{\phi r}$-4.08; Fault plane solution: $M_0$6.55000×10^{17} NP1:ϕ_s191.58000°, δ73.48000°, λ126.88000°. NP2:ϕ_s302.34000°, δ39.92000°, λ26.30000°. Principal axes: T 6.5143, Plg48.0000°, Azm141.0000°; N 0.0639, Plg35.0000°, Azm360.0000°; P -6.5782, Plg20.0000°, Azm255.0000°;*

NEIC ***09*** *14:46:26.7±1.6, 1°.77N±0°.05×127°.45E±0°.06, h128km±1km, mb5.5/211, Mwb5.8/33, Mww5.8 Error ellipse: s-maj=10.4km s-min=7.4km az=250.0*

DJA ***09*** *14:46:26.7±0.2,2°N±2°×12°7E±°, h133km±1km, M5.8/107, mb5.8/107, mB6.3/94, MLv6.3/21, Mw(mB)6.0/94, MwMwp5.6/73, Mwp5.7/73*

GCMT ***09*** *14:46:27.7±0.1, 1°.82N±0°.01×127°.48E±0°.01, h141km, MW5.8/162, Moment Tensor Solution. s156,c341; s162,c496; Duration: 2s0 Moment tensor: Scale 10^{17} Nm; M_{rr}2.31±.04; $M_{\theta\theta}$1.41±.05; $M_{\phi\phi}$-3.71±.06; $M_{r\theta}$-1.93±.04; $M_{\theta\phi}$3.43±.05; $M_{\phi r}$-4.51±.04; Best double couple: $M_0$6.80900×10^{17} NP1:ϕ_s191.00000°, δ77.00000°, λ129.00000°. NP2:ϕ_s296.00000°, δ41.00000°, λ20.00000°. Principal axes: T 6.8740, Plg44.0000°, Azm139.0000°; N -0.1210, Plg38.0000°, Azm1.0000°; P -6.7440, Plg22.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

MOS ***09*** *14:46:27.4±0.9, 1°.74N×127°.40E, h157km, mb5.3/74 Error ellipse: s-maj=7.2km s-min=4.0km az=115.3*

IDC ***09*** *14:46:27.7±0.5, 1°.73N×127°.50E, h146km±4km, mb4.9/38, mbtmp5.3/42, MS4.6/48, Error ellipse: s-maj=9.1km s-min=5.8km az=66.0*

NEIC ***09*** *14:46:28, 1°.86N×127°.27E, h140km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.31; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-3.22; $M_{r\theta}$-1.31; $M_{\theta\phi}$2.86; $M_{\phi r}$-3.62; Fault plane solution: $M_0$5.59000×10^{17} NP1: ϕ_s297.00000°, δ40.00000°, λ25.00000°. NP2: ϕ_s188.00000°, δ74.00000°, λ127.00000°. Principal axes: T 5.5113, Plg47.0000°, Azm137.0000°; N 0.1550, Plg36.0000°, Azm356.0000°; P -5.6663, Plg20.0000°, Azm250.0000°;*

ISC 09 14:46:27.2±0.2, 1°.72N±0°.02×127°.45E±0°.03, h143km±1km, h143km:pP-P,n1463,σ1§48/1689, mb5.4/257, 48C-66D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.36**	**70**	P	**Pn**	**14 46 45.5**	**-1.5**
GAMI				S	**Sn**	**14 46 58.7**	**-3.4**
TNTI	**Ternate**	**0.94**	**185**	Pn	**Pn**	**14 46 50.7**	**0.0**
TNTI	**Ternate**	**0.94**	**185**	P	**Pn**	**14 46 50.6**	**-0.1**
TNTI				S	**Sn**	**14 47 08.4**	**-0.3**
TNTI	**Ternate**	**0.94**	**185**	P	**Pn**	**14 46 51.2**	**+0.5**
LBMI	**Labuha**	**2.34**	**179**	P	**Pn**	**14 47 06.7**	**+0.7**
LBMI				S	**Sn**	**14 47 37.7**	**+1.9**
SGSI	**Sangihe**	**2.74**	**316**	P	**Pn**	**14 47 09.0**	**-2.0**
KMSI	**Cibinong**	**3.65**	**252**	P	**Pn**	**14 47 22.6**	**-0.1**
KMSI				S	**Sn**	**14 48 05.6**	**-0.1**
SANI	**Sanana**	**4.01**	**201**	P	**Pn**	**14 47 26.2**	**-1.3**
SANI				S	**Sn**	**14 48 09.4**	**-4.9**
SANI	**Sanana**	**4.01**	**201**	P	**Pn**	**14 47 26.7**	**-0.8**
GTOI	**Gorontalo**	**4.57**	**256**	P	**Pn**	**14 47 36.2**	**+1.5**
GTOI				S	**Sn**	**14 48 28.4**	**+1.1**
SIJI	**Sorong**	**4.60**	**124**	P	**Pn**	**14 47 35.8**	**+0.6**
242nm,0.3s,baz=324,slow=13,SNR=262							
SIJI				S	**Sn**	**14 48 27.4**	**-0.7**
327nm,0.8s,baz=318,slow=18,SNR=3.7							
SIJI				ScS	**ScS**	**15 01 32.5**	**0.0**
0.8nm,0.3s,baz=17,slow=19,SNR=1.4							
SIJI	**Sorong**	**4.60**	**124**	P	**Pn**	**14 47 35.3**	**+0.1**
NLAI	**Namlea**	**4.93**	**184**	P	**Pn**	**14 47 39.1**	**-0.5**
22nm90μm976nm,0.7s							
GSPH	**General Santos**	**5.01**	**330**	⇓*i*P	**Pn**	**14 47 38.8**	**-1.9**
GSPH				*i* S	**Sn**	**14 48 33.9**	**-4.2**
KRAI	**Karang Ratu**	**5.09**	**169**	P	**Pn**	**14 47 43.3**	**+1.6**
4.8nm32μm21μm844nm,0.8s							
MSAI	**Masohi**	**5.24**	**164**	P	**Pn**	**14 47 45.9**	**+2.2**
1.1nm4μm279nm,0.6s							
AAI	**Ambon**	**5.42**	**172**	P	**Pn**	**14 47 47.2**	**+1.1**
7.3nm37μm17μm1μm,0.8s							
LUWI	**Luwuk**	**5.42**	**240**	Pn	**Pn**	**14 47 45.3**	**-0.8**
LUWI	**Luwuk**	**5.42**	**240**	P	**Pn**	**14 47 45.0**	**-1.1**
243nm39μm114μm8μm,0.6s							
LUWI	**Luwuk**	**5.42**	**240**	P	**Pn**	**14 47 46.6**	**+0.5**
DAV	**Davao City (W)**	**5.64**	**341**	P	**Pn**	**14 47 48.3**	**-0.7**
909nm,0.3s,baz=160,slow=3.0,SNR=31							
DAV				S	**Sn**	**14 48 49.6**	**-3.3**
1μm,0.6s,baz=278,slow=22,SNR=1.5							
DAV				LR	LR	14 50 22.8	
comp=Z,11μm,20.7s,baz=147,slow=42							
DAV	**Davao City (W)**	**5.64**	**341**	P	**Pn**	**14 47 47.5**	**-1.5**
DAV	**Davao City (W)**	**5.64**	**341**	P	**Pn**	**14 47 48.4**	**-0.6**
42nm24μm41μm4μm,0.9s							
DAV	**Davao City (W)**	**5.64**	**341**	P	**Pn**	**14 47 48.6**	**-0.4**
MRSI	**Marisa**	**5.64**	**257**	P	**Pn**	**14 47 49.0**	**-0.1**
52nm48μm162μm10μm,1.2s							
KCP	**Kidapawan**	**5.76**	**336**	⇑*e*P	**Pn**	**14 47 49.7**	**-1.0**
KCP				*i* S	**Sn**	**14 48 56.4**	**+0.5**
CTBH	**Cotabato--PC H**	**6.33**	**330**	⇑*e*P	**Pn**	**14 47 56.4**	**-1.9**
APSI	**Ampana**	**6.36**	**246**	P	**Pn**	**14 47 58.3**	**-0.4**
112nm30μm121μm10μm,1.1s							
BIPH	**Bislig**	**6.52**	**350**	⇑*e*P	**Pn**	**14 47 57.8**	**-2.9**
BIPH				*e*S	**Sn**	**14 49 17.3**	**+3.3**
FAKI	**Fak Fak**	**6.65**	**134**	Pn	**Pn**	**14 48 03.5**	**+1.0**
FAKI	**Fak Fak**	**6.65**	**134**	P	**Pn**	**14 48 03.5**	**+1.0**
8.3nm18μm35μm3μm,1.2s							
FAKI	**Fak Fak**	**6.65**	**134**	P	**Pn**	**14 48 03.8**	**+1.3**
BNDI	**Bandanaira**	**6.66**	**158**	P	**Pn**	**14 48 04.2**	**+1.5**
9.4nm25μm42μm2μm,1.9s							
BNDI	**Bandanaira**	**6.66**	**158**	P	**Pn**	**14 48 04.4**	**+1.7**
TOLI2	**Tolitoli**	**6.69**	**265**	Pn	**Pn**	**14 48 02.8**	**-0.4**
TOLI2	**Tolitoli**	**6.69**	**265**	P	**Pn**	**14 48 03.3**	**+0.2**
CGP	**Cagayan de Oro**	**7.24**	**338**	⇓*e*P	**Pn**	**14 48 08.8**	**-1.6**
PAGZ	**Pagadian**	**7.32**	**326**	⇑*e*P	**Pn**	**14 48 09.2**	**-2.3**
PAGZ				*e*S	**Sn**	**14 49 32.3**	**-1.0**
RKPI	**Ransiki, Papua**	**7.45**	**115**	P	**Pn**	**14 48 14.7**	**+1.4**
4.5nm14μm16μm2μm,1.0s							
ZCP	**Zamboanga City**	**7.46**	**314**	⇑*i*P	**Pn**	**14 48 12.3**	**-1.0**
ZCP				*i* S	**Sn**	**14 49 31.7**	**-4.9**
MPSI	**Mapaga**	**7.67**	**260**	P	**Pn**	**14 48 16.4**	**+0.1**
10nm29μm38μm2μm,1.5s							
DCPH	**Dipolog City**	**7.95**	**329**	⇑*e*P	**Pn**	**14 48 21.0**	**+1.1**
KKSI	**Kolaka, Sulawe**	**8.23**	**225**	P	**Pn**	**14 48 23.0**	**-0.8**
10nm14μm18μm1μm,0.8s							
SCPH	**Surigao**	**8.25**	**346**	⇓*i*P	**Pn**	**14 48 23.2**	**-0.8**
SCPH				*i* S	**Sn**	**14 49 49.4**	**-6.3**
LSIP	**Lazi, Siquijor**	**8.29**	**333**	⇑*e*P	**Pn**	**14 48 23.1**	**-1.4**
LSIP				*e*S	**Sn**	**14 49 56.3**	**-0.5**
GHBP	**Garcia Hernand**	**8.46**	**339**	⇑*i*P	**Pn**	**14 48 25.1**	**-1.6**
GHBP				*i* S	**Sn**	**14 49 58.5**	**-2.2**
BBSI	**Bau Bau**	**8.66**	**214**	P	**Pn**	**14 48 30.7**	**+1.3**
16nm858nm,1.4s							
SNPH	**Sibulan**	**8.66**	**331**	*e*P	**Pn**	**14 48 28.6**	**-0.9**
TBP	**Tagbilaran**	**8.69**	**336**	⇑*e*P	**Pn**	**14 48 27.4**	**-2.5**
TABP	**Talibon, Bohol**	**8.88**	**340**	⇑*i*P	**Pn**	**14 48 30.5**	**-1.9**
TABP				*i* S	**Sn**	**14 50 06.4**	**-4.6**
TTSI	**Tana Toraja**	**8.98**	**238**	P	**Pn**	**14 48 33.3**	**-0.4**
13μm73μm6μm,1.1s							
LLP	**Lapu-Lapu**	**9.22**	**338**	⇑*e*P	**Pn**	**14 48 35.4**	**-1.6**
LLP				*e*S	**Sn**	**14 50 17.2**	**-2.1**
CNOP	**Candoni, Negro**	**9.37**	**329**	⇑*i*P	**Pn**	**14 48 37.6**	**-1.4**
CNOP				*e*S	**Sn**	**14 50 18.0**	**-4.9**
SRPI	**Serui, Papua**	**9.48**	**112**	P	**Pn**	**14 48 41.2**	**+0.7**
9μm6μm224nm,0.9s							
SPSI	**Sidrap Palu**	**9.53**	**234**	P	**Pn**	**14 48 41.0**	**-0.1**
16μm65μm6μm,1.2s							
MYLDM	**Lahad Datu**	**9.57**	**291**		**Pn**	**14 48 42.5**	**+0.9**
MYLDM	**Lahad Datu**	**9.57**	**291**	P	**Pn**	**14 48 42.9**	**+1.2**
27μm35μm2μm,1.0s							
PMSI	**Majene**	**9.98**	**239**	P	**Pn**	**14 48 47.9**	**+0.7**
21μm35μm1μm,1.1s							
SGKI	**Sangatta, Kali**	**10.10**	**257**	P	**Pn**	**14 48 47.3**	**-1.4**
27μm78μm7μm,1.5s							
BKSI	**Bulukumba**	**10.12**	**226**	P	**Pn**	**14 48 48.9**	**-0.1**
11μm38μm2μm,0.5s							
KAPI	**Kapang**	**10.19**	**229**	P	**Pn**	**14 48 49.9**	**0.0**
1μm,0.5s,baz=33,slow=3.6,SNR=380							
KAPI				S	**Sn**	**14 50 39.1**	**-3.6**
628nm,0.3s,baz=58,slow=23,SNR=20							
KAPI	**Kappang**	**10.19**	**229**	Pn	**Pn**	**14 48 49.5**	**-0.3**
KAPI	**Kappang**	**10.19**	**229**	P	**Pn**	**14 48 50.3**	**+0.4**
10μm23μm1μm,0.5s							
KAPI	**Kappang**	**10.19**	**229**	P	**Pn**	**14 48 52.6**	**+2.7**
SAUI	**Saumlaki**	**10.37**	**158**	Pn	**Pn**	**14 48 51.9**	**-0.4**
SAUI	**Saumlaki**	**10.37**	**158**	P	**Pn**	**14 48 51.9**	**-0.4**
16μm20μm2μm,1.1s							
SAUI	**Saumlaki**	**10.37**	**158**	P	**Pn**	**14 48 52.2**	**-0.1**
BSSI	**Bau Bau, Buton**	**10.45**	**222**	P	**Pn**	**14 48 53.3**	**-0.1**
12μm22μm2μm,1.0s							
SMKI	**Samarinda**	**10.46**	**258**	P	**Pn**	**14 48 53.9**	**+0.4**
20μm22μm2μm,0.7s							
BKB	**Balikpapan**	**10.96**	**254**		**Pn**	**14 48 58.4**	**-1.8**
BKB	**Balikpapan**	**10.96**	**254**	P	**Pn**	**14 48 59.9**	**-0.2**
19μm16μm1μm,1.3s							
BKB	**Balikpapan**	**10.96**	**254**	P	**Pn**	**14 49 01.2**	**+1.1**
SPMM	**Sapulut**	**11.36**	**285**	P	**Pn**	**14 49 06.0**	**+0.5**
MMRI	**Maumere**	**11.52**	**207**	Pn	**Pn**	**14 49 07.6**	**+0.2**
MMRI	**Maumere**	**11.52**	**207**	P	**Pn**	**14 49 07.5**	**0.0**
8μm11μm427nm,0.8s							
PPR	**Puerto Princes**	**11.80**	**313**	⇓*e*P	**Pn**	**14 49 10.3**	**-0.9**
SOEI	**Soe**	**11.83**	**195**	Pn	**Pn**	**14 49 13.3**	**+1.7**
SOEI	**Soe**	**11.83**	**195**	P	**Pn**	**14 49 13.9**	**+2.3**
8μm11μm569nm,1.1s							
KKM	**Kota Kinabalu**	**12.01**	**291**		**Pn**	**14 49 14.1**	**+0.1**
KKM	**Kota Kinabalu**	**12.01**	**291**	P	**Pn**	**14 49 14.1**	**+0.1**
11μm9μm988nm,1.1s							
KKM	**Kota Kinabalu**	**12.01**	**291**	P	**Pn**	**14 49 14.3**	**+0.4**
BATI	**Baumata**	**12.43**	**198**	P	**Pn**	**14 49 21.9**	**+2.5**
baz=234,slow=12							
BATI	**Baumata**	**12.43**	**198**	P	**Pn**	**14 49 21.6**	**+2.2**
22nm1.9nm,0.7s							
MTKI	**Muara Teweh, K**	**12.83**	**258**	P	**Pn**	**14 49 24.3**	**-0.2**
16μm21μm739nm,0.9s							
JCNP	**Jose Panganiba**	**13.35**	**340**	⇑*e*P	**Pn**	**14 49 30.4**	**-0.8**
JCNP				*e*S	**Sn**	**14 51 57.9**	**-0.9**
GENI	**Genyem**	**13.41**	**109**	P	**Pn**	**14 49 33.4**	**+1.4**
24μm26μm2μm,1.2s							
BBKI	**Banjar Baru**	**13.61**	**248**	P	**Pn**	**14 49 35.1**	**+0.5**
20μm31μm1μm,2.0s							
LQP	**Lukban**	**13.63**	**335**	⇓*e*P	**Pn**	**14 49 35.2**	**+0.2**
DBNI	**Kabupaten Domp**	**13.64**	**222**	P	**P**	**14 49 37.2**	**-1.7**
27μm1μm,2.0s							
TGY	**Tagaytay City**	**13.89**	**333**	P	**Pn**	**14 49 39.5**	**+1.3**
497nm,1.0s,baz=90,slow=5.1							
LUBP	**Lubang**	**13.91**	**330**	⇑*e*P	**Pn**	**14 49 39.0**	**+0.7**
LUBP				*e*S	**Sn**	**14 52 08.9**	**-3.4**
PLAI	**Plampang**	**14.24**	**222**	P	**P**	**14 49 44.8**	**-0.7**
17μm23μm1μm,1.8s							
PLAI	**Plampang**	**14.24**	**222**	P	**P**	**14 49 44.8**	**-0.7**
TWSI	**Taliwang, Sumb**	**14.79**	**225**	P	**P**	**14 49 51.5**	**-0.2**
13μm13μm561nm,1.0s							
MTN	**Manton Dam**	**14.92**	**166**	P	**Pn**	**14 49 49.6**	**-1.4**
baz=15,SNR=56							
MTN	**Manton Dam**	**14.92**	**166**		**Pn**	**14 49 48.9**	**-2.1**
MTN	**Manton Dam**	**14.92**	**166**	P	**Pn**	**14 49 49.6**	**-1.4**
KDU	**Kakadu**	**15.15**	**161**	P	**Pn**	**14 49 51.9**	**-2.0**
baz=15,SNR=104							
KDU	**Kakadu**	**15.15**	**161**	P	**Pn**	**14 49 52.2**	**-1.7**
KLNI	**Mataram**	**15.15**	**228**	P	**P**	**14 49 56.3**	**+0.6**
20μm40μm2μm,2.0s							
SBUM	**Sibu**	**15.24**	**273**		**Pn**	**14 49 55.0**	**0.0**
SBUM	**Sibu**	**15.24**	**273**	P	**Pn**	**14 49 55.1**	**+0.1**
14μm15μm866nm,1.5s							
SBUM	**Sibu**	**15.24**	**273**	P	**P**	**14 49 56.0**	**-0.7**
SRBI	**Singaraja**	**15.61**	**231**	P	**P**	**14 50 00.9**	**+0.1**
21μm21μm1μm,1.8s							
DNP	**Denpasar**	**15.98**	**230**	P	**P**	**14 50 07.8**	**+2.9**
48μm77μm3μm,1.5s							
KMMI	**Kalianget**	**16.03**	**237**	P	**P**	**14 50 06.6**	**+1.2**
34μm56μm3μm,2.1s							
RTBI	**Rangdo, Negara**	**16.05**	**231**	P	**P**	**14 50 07.4**	**+1.7**
30μm33μm1μm,1.9s							
STKI	**Sintang**	**16.05**	**264**	P	**P**	**14 50 05.7**	**0.0**
28μm22μm553nm,1.4s							
IGBI	**Denpasar**	**16.12**	**229**	P	**P**	**14 50 08.7**	**+2.3**
21μm38μm1μm,2.2s							
ABJI	**Asem Bagus**	**16.22**	**234**	P	**P**	**14 50 09.7**	**+2.2**
988nm,1.8s							
JAGI	**Jajag, Banyuwa**	**16.68**	**232**	P	**Pn**	**14 50 13.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**16.68**	**232**	P	**Pn**	**14 50 15.1**	**+2.4**
34μm40μm1μm,1.2s							
KSM	**Kuching**	**17.14**	**269**	P	**Pn**	**14 50 18.3**	**+0.1**
KSM	**Kuching**	**17.14**	**269**	P	**Pn**	**14 50 18.6**	**+0.3**
23μm29μm1μm,2.5s							
KSM	**Kuching**	**17.14**	**269**	P	**Pn**	**14 50 19.0**	**+0.7**
KSM	**Kuching**	**17.14**	**269**	P	**Pn**	**14 50 19.6**	**+1.3**
KNRA	**Kununurra**	**17.33**	**176**	P	**P**	**14 50 19.6**	**-0.1**
baz=17,SNR=230							
KNRA	**Kununurra**	**17.33**	**176**	P	**P**	**14 50 19.4**	**-0.2**
KNRA	**Kununurra**	**17.33**	**176**	P	**Pn**	**14 50 20.3**	**-0.2**
PACPP	**Pamplona Cagay**	**17.68**	**341**	⇑*e*P	**P**	**14 50 23.2**	**-0.3**
TBJI	**Tambak Boyo**	**17.73**	**241**	P	**Pn**	**14 50 26.3**	**+1.0**
34μm50μm2μm,1.7s							
KRKI	**Karangkates**	**17.89**	**237**	P	**Pn**	**14 50 29.4**	**+2.2**
7μm458nm,0.8s							
PWJI	**Pagerwojo**	**18.36**	**238**	P	**Pn**	**14 50 33.2**	**+0.4**
44μm3μm,0.8s							
CICP	**Calayan Island**	**18.40**	**342**	⇑*e*P	**Pn**	**14 50 34.0**	**+0.9**
PCJI	**Pacitan**	**18.98**	**239**	P	**Pn**	**14 50 40.2**	**+0.1**
16μm44μm3μm,1.0s							
SMRI	**Semarang**	**19.08**	**243**	P	**Pn**	**14 50 40.1**	**-1.1**
SMRI	**Semarang**	**19.08**	**243**	P	**Pn**	**14 50 41.4**	**+0.2**
21μm38μm2μm,1.5s							
UGM	**Wanagama**	**19.40**	**240**		**Pn**	**14 50 44.8**	**-0.3**
UGM	**Wanagama**	**19.40**	**240**	P	**Pn**	**14 50 45.0**	**-0.1**
20μm45μm2μm,2.5s							
YOGI	**Yogyakarta**	**19.56**	**241**	P	**Pn**	**14 50 46.3**	**-0.5**
57μm5μm,1.1s							
FITZ	**Fitzroy Crossi**	**19.77**	**185**	P	**P**	**14 50 45.5**	**-0.7**
134nm,0.7s,baz=17,slow=8.8,SNR=201							
FITZ				S	**S**	**14 54 16.2**	**-5.2**
38nm,0.9s,baz=196,slow=19,SNR=2.4							
FITZ	**Fitzroy Crossi**	**19.77**	**185**	P	**P**	**14 50 45.7**	**-0.6**
baz=20							
MANU	**Manus Island**	**20.26**	**101**	P	**P**	**14 50 51.7**	**0.0**
TPI	**Tanjungpandan**	**20.28**	**257**	P	**P**	**14 50 52.5**	**+0.6**
7μm316nm,1.8s							
SCJI	**Gunung Srandil**	**20.49**	**243**	P	**P**	**14 50 54.6**	**+0.6**
9μm14μm666nm,1.9s							
JCJI	**Jatiwangi**	**20.81**	**247**	P	**P**	**14 50 58.8**	**+1.3**
20μm1μm,1.0s							
GUMO	**Guam**	**20.88**	**55**	P	**P**	**14 50 56.6**	**-1.6**
90nm,0.5s,baz=180,slow=1.0,SNR=12							
90nm,0.5s							
GUMO	**Guam**	**20.88**	**55**	P	**P**	**14 50 56.4**	**-1.9**
GUMO	**Guam**	**20.88**	**55**	P	**P**	**14 50 58.5**	**+0.2**
DLV	**T Lat**	**21.38**	**299**	P	**P**	**14 51 06.4**	**+2.6**
LEM	**Lembang**	**21.54**	**247**	P	**P**	**14 51 05.0**	**-0.5**
370nm,1.0s,baz=63,slow=7.1,SNR=20							
LEM				S	**S**	**14 54 57.4**	**+1.7**
42nm,0.9s,baz=333,slow=24,SNR=1.6							
370nm,1.0s							
PPBI	**Pangkal Pinang**	**21.66**	**260**	P	**P**	**14 51 06.4**	**-0.2**
18μm540nm,2.0s							
TWG	**Pinlang**	**21.88**	**344**	P	**P**	**14 51 05.9**	**-2.9**
COEN	**Coen**	**22.03**	**135**	P	**P**	**14 51 08.9**	**-1.6**
baz=22,SNR=74							
COEN	**Coen**	**22.03**	**135**	P	**P**	**14 51 08.6**	**-1.8**
COEN	**Coen**	**22.03**	**135**	P	**P**	**14 51 08.8**	**-1.6**
60nm,1.1s							
CBJI	**Citeko**	**22.10**	**248**	P	**P**	**14 51 11.2**	**+0.1**
14μm21μm928nm,1.6s							
CNJI	**Cibinong**	**22.17**	**246**	P	**P**	**14 51 12.8**	**+1.0**
4μm7μm560nm,0.9s							
TNG	**Tangerang**	**22.20**	**249**	P	**P**	**14 51 16.0**	**+3.8**
33μm2μm,1.4s							
YULB	**Yu-li**	**22.36**	**345**	P	**P**	**14 51 13.0**	**-0.7**
WB0	**Warramunga Arr**	**22.41**	**163**	P	**P**	**14 51 13.5**	**-0.7**
TPUB	**Ta-pu**	**22.45**	**343**	P	**P**	**14 51 13.6**	**-1.0**
TPUB	**Ta-pu**	**22.45**	**343**	P	**P**	**14 51 13.8**	**-0.8**
PMG	**Port Moresby**	**22.53**	**120**	P	**P**	**14 51 13.9**	**-1.4**
13nm,0.4s,baz=313,slow=9.5,SNR=24							
PMG				LR	LR	15 00 56.9	
comp=Z,4μm,19.4s,baz=300,slow=39							
13nm,0.4s							
PMG	**Port Moresby**	**22.53**	**120**	P	**P**	**14 51 14.7**	**-0.6**
PMG	**Port Moresby**	**22.53**	**120**	P	**P**	**14 51 14.7**	**-0.6**
PMG	**Port Moresby**	**22.53**	**120**	P	**P**	**14 51 13.4**	**-1.9**
12μm7μm151nm,2.4s							
PMG	**Port Moresby**	**22.53**	**120**	P	**P**	**14 51 15.2**	**-0.1**
WRAB	**Tennant Creek**	**22.55**	**163**	P	**P**	**14 51 14.9**	**-0.6**
WRAB	**Tennant Creek**	**22.55**	**163**	P	**P**	**14 51 15.0**	**-0.6**
WRAB	**Tennant Creek**	**22.55**	**163**	P	**P**	**14 51 15.2**	**-0.3**
WRA	**Warramunga Arr**	**22.56**	**163**	P	**P**	**14 51 14.9**	**-0.7**
646nm,0.5s,baz=344,slow=11,SNR=2721							
WRA				PcP	**PcP**	**14 55 04.6**	**+0.4**
3.9nm,0.4s,baz=356,slow=2.3,SNR=1.6							
WRA				S	**S**	**14 55 09.5**	**-2.9**
45nm,0.9s,baz=347,slow=18,SNR=13							
WRA				LR	LR	14 59 53.0	
comp=Z,3μm,20.6s,baz=334,slow=36							
WRA				P3KPbc		15 24 42.4	
0.5nm,0.9s,baz=160,slow=3.4,SNR=2.3							
WB2	**Warramunga Arr**	**22.56**	**163**	P	**P**	**14 51 15.2**	**-0.4**
baz=23							
WB2	**Warramunga Arr**	**22.56**	**163**	P	**P**	**14 51 14.9**	**-0.7**
SKJI	**Sukabumi**	**22.58**	**247**	P	**P**	**14 51 16.3**	**+0.4**
5μm392nm,0.8s							
SBJI	**Serang**	**22.67**	**250**	P	**P**	**14 51 16.4**	**-0.3**
20μm817nm,2.0s							
SSLB	**Suanglung**	**22.83**	**345**	P	**P**	**14 51 19.8**	**+1.7**
TPRI	**Tanjung Pinang**	**22.93**	**268**	P	**P**	**14 51 19.6**	**+0.4**
9μm10μm532nm,1.0s							
DSRI	**Dabo**	**22.97**	**265**	P	**P**	**14 51 20.1**	**+0.5**
10μm15μm823nm,1.8s							
JMJ	**Miyako jima 2**	**23.06**	**355**	P	**P**	**14 51 21.4**	**+1.2**
PMBI	**Palembang**	**23.14**	**259**	P	**P**	**14 51 22.6**	**+1.6**
PMBI	**Palembang**	**23.14**	**259**	P	**P**	**14 51 23.3**	**+2.2**
23μm2μm,0.9s							
BLSI	**Bandar Lampung**	**23.27**	**252**	P	**P**	**14 51 22.2**	**-0.1**
10μm14μm774nm,1.3s							
KLI	**Kotabumi**	**23.50**	**254**	P	**P**	**14 51 25.8**	**+1.4**
7μm13μm1μm,0.8s							
YHNB	**Yeheng**	**23.56**	**346**	P	**P**	**14 51 25.1**	**+0.2**
YHNB				IAmb	IAmb	14 51 58.4	
comp=Z,472nm,1.7s							
YHNB	**Yeheng**	**23.56**	**346**	P	**P**	**14 51 25.6**	**+0.7**
MYKOM	**Kota Tinggi**	**23.59**	**271**	P	**P**	**14 51 26.2**	**+1.0**
MYKOM	**Kota Tinggi**	**23.59**	**271**	P	**P**	**14 51 26.2**	**+1.0**
comp=Z,11μmcomp=Z,14μmcomp=Z,625nm,1.9s							
MYKOM	**Kota Tinggi**	**23.59**	**271**	P	**P**	**14 51 27.0**	**+1.8**
TATO	**Taipei**	**23.83**	**347**	P	**P**	**14 51 27.6**	**+0.4**
MBWA	**Marble Bar**	**23.96**	**198**	P	**P**	**14 51 28.4**	**0.0**
MBWA				IAmb	IAmb	14 51 30.0	
comp=Z,286nm,1.2s							
MBWA	**Marble Bar**	**23.96**	**198**	P	**P**	**14 51 28.4**	**0.0**
KASI	**Kota Agung**	**24.03**	**252**	P	**P**	**14 51 29.9**	**+0.7**
comp=Z,9μmcomp=Z,10μmcomp=Z,762nm,1.0s							
JMBI	**JAMBI**	**24.04**	**262**	P	**P**	**14 51 32.3**	**+3.0**
comp=Z,739μmcomp=Z,21μmcomp=Z,2μm,1.0s							
HKPS	**Hong Kong Po S**	**24.19**	**329**	P	**P**	**14 51 31.0**	**+0.4**
LWLI	**Liwa**

MNSI	**Mandailing Nat**	**27.88 268**	P	**P**	**14 52 04.0 +0.1**
	comp=Z,6μmcomp=Z,2μmcomp=Z,109nm,0.8s				
TV1H	**Townsville Har**	**28.21 139**	P	**P**	**14 52 07.5 +0.8**
CTA	**Charters Tower**	**28.45 141**	P	**P**	**14 52 08.7 -0.2**
	comp=Z,18nm,0.5s,baz=321,slow=9.4,SNR=63				
CTA			LR	LR	15 04 56.2
	comp=Z,3μm,18.4s,baz=323,slow=39				
	comp=Z,18nm,0.5s				
CTA	**Charters Tower**	**28.45 141**	P	**P**	**14 52 09.5 +0.6**
CTAO	**Charters Tower**	**28.45 141**	P	**P**	**14 52 09.2 +0.3**
CTAO			IAmb	IAmb	14 52 15.5
	comp=Z,254nm,1.6s				
CTAO	**Charters Tower**	**28.45 141**	P	**P**	**14 52 09.2 +0.3**
CTAO			pmax	pmax	
	comp=Z,254nm,1.6s				
CTAO	**Charters Tower**	**28.45 141**	P	**P**	**14 52 09.5 +0.6**
SISI	**Saibi**	**28.52 264**	P	**P**	**14 52 09.4 -0.1**
	comp=Z,6μmcomp=Z,4μmcomp=Z,158nm,1.2s				
RPSI	**Rantau Prapat**	**28.52 272**		**S**	**14 56 46.5 -0.8**
RPSI				**ScP**	**14 58 46.3 +0.3**
PSI	**Prapat**	**28.52 273**	P	**P**	**14 52 10.2 +0.4**
	comp=Z,98nm,0.8s,baz=93,slow=4.3,SNR=58				
PSI			S	**S**	**14 56 46.5 -1.0**
	comp=Z,2.1nm,0.3s,baz=306,slow=22,SNR=8.9				
PSI			ScP	**ScP**	**14 58 46.3 +0.1**
	comp=Z,9.7nm,0.4s,baz=60,slow=4.2,SNR=8.5				
PSI			ScS	**ScS**	**15 02 37.3 -2.8**
	comp=Z,2.9nm,0.6s,baz=336,slow=20,SNR=5.8				
	comp=Z,98nm,0.8s				
PSI	**Prapat**	**28.52 273**	P	**P**	**14 52 09.8 0.0**
	comp=Z,4μmcomp=Z,2μmcomp=Z,127nm,1.1s				
SRIT	**Nakonsritamara**	**28.55 285**	P	**P**	**14 52 10.0 +0.2**
JCJ	**Chichijima**	**28.93 28**	P	**P**	**14 52 11.2 -1.8**
	comp=Z,61nm,0.4s,baz=222,slow=12,SNR=22				
JCJ			LR	LR	15 01 08.3
	comp=Z,740nm,21.2s,baz=208,slow=30				
	comp=Z,61nm,0.4s				
JCJ	**Chichijima**	**28.93 28**	P	**P**	**14 52 11.5 -1.5**
JCJ	**Chichijima**	**28.93 28**	P	**P**	**14 52 12.2 -0.8**
MEEK	**Meekatharra**	**29.45 196**	P	**P**	**14 52 17.4 -0.2**
	baz=30,SNR=101				
MEEK	**Meekatharra**	**29.45 196**	P	**P**	**14 52 17.6 0.0**
KCSI	**Kotacane, Aceh**	**29.70 274**	P	**P**	**14 52 19.7 -0.4**
	comp=Z,3μmcomp=Z,144nm,0.9s				
SSE	**Sheshan**	**29.82 349**	P	**P**	**14 52 23.0 +2.2**
SSE			S	**S**	**14 57 12.5 +5.4**
SSE			pmax	pmax	
	comp=Z,15nm,0.9s				
SSE			pmax	pmax	
	comp=Z,400nm,4.2s				
SSE			LR	LR	
	comp=Z,720nm,18.2s				
SSE			LR	LR	
	comp=Z,1μm,18.6s				
GSI	**Gunungsitoli**	**29.87 270**	P	**P**	**14 52 20.4 -1.2**
GSI	**Gunungsitoli**	**29.87 270**	P	**P**	**14 52 20.9 -0.6**
	comp=Z,5μmcomp=Z,5μmcomp=Z,277nm,1.0s				
GSI	**Gunungsitoli**	**29.87 270**	P	**P**	**14 52 21.9 +0.4**
OOD	**Oodnadatta**	**30.39 165**	P	**P**	**14 52 25.4 -0.5**
SRDT	**SRDT**	**30.68 296**	P	**P**	**14 52 29.2 +0.6**
	comp=Z,3μmcomp=Z,161nm,1.6s				
MLSI	**Meulaboh, Aceh**	**31.11 275**	P	**P**	**14 52 34.0 +1.6**
	comp=Z,55nm,0.6s				
NJ2	**Nanjing**	**31.25 346**	*e*P	**P**	**14 52 35.7 +2.4**
NJ2			pmax	pmax	
	comp=Z,21nm,0.5s				
NJ2			LR	LR	
	comp=Z,1μm,12.3s				
NJ2			LR	LR	
	comp=Z,1μm,16.1s				
NJ2			LR	LR	
	comp=Z,850nm,11.8s				
WHN	**Wuhan**	**31.25 338**	⇓P	**P**	**14 52 35.3 +1.9**
WHN			S	**S**	**14 57 31.8 +2.4**
WHN			pmax	pmax	
	comp=Z,110nm,0.9s				
WHN			LR	LR	
	comp=Z,3μm,10.6s				
WHN			LR	LR	
	comp=Z,2μm,13.8s				
WHN			LR	LR	
	comp=Z,5μm,23.3s				
GYA	**Guiyang**	**31.69 323**	⇓P	**P**	**14 52 41.0 +3.5**
GYA			pP	pP	14 53 06.2 -1.1
GYA			PcP	**PcP**	**14 55 27.6 +1.5**
GYA			S	**S**	**14 57 40.5 +3.7**
GYA			pmax	pmax	
	comp=Z,48nm,1.3s				
GYA			LR	LR	
	comp=Z,810nm,17.8s				
GYA			LR	LR	
	comp=Z,1μm,14.5s				
GYA			LR	LR	
	comp=Z,990nm,20.0s				
INKA	**Innaminka**	**31.96 157**	P	**P**	**14 52 40.0 +0.4**
FORT	**Forrest**	**32.32 179**	P	**P**	**14 52 42.5 -0.3**
	baz=32,SNR=49				
FORT	**Forrest**	**32.32 179**	P	**P**	**14 52 42.1 -0.6**
FORT	**Forrest**	**32.32 179**	P	**P**	**14 52 42.5 -0.3**
MULG	**Mulgathing**	**32.44 169**	P	**P**	**14 52 43.9 +0.1**
QLP	**Quilpie**	**32.46 151**	P	**P**	**14 52 43.7 -0.4**
	baz=32,SNR=17				
QLP	**Quilpie**	**32.46 151**	P	**P**	**14 52 44.1 0.0**
MORW	**Morawa**	**32.50 199**	P	**P**	**14 52 44.3 -0.1**
	baz=33,SNR=20				
MORW	**Morawa**	**32.50 199**	P	**P**	**14 52 44.2 -0.1**
MORW			IAmb	IAmb	14 52 45.2
	comp=Z,177nm,1.6s				
MORW	**Morawa**	**32.50 199**	P	**P**	**14 52 44.3 -0.1**
CM31	**Chiang Mai Arr**	**32.53 303**	P	**P**	**14 52 45.6 +0.8**
CM31			IAmb	IAmb	14 52 48.5
	comp=Z,93nm,1.1s				
CMAR	**Chiang Mai Arr**	**32.53 303**	P	**P**	**14 52 46.0 +1.1**
	comp=Z,43nm,0.9s,baz=124,slow=7.1,SNR=124				
CMAR			PcP	**PcP**	**14 55 30.3 +1.9**
	comp=Z,8.3nm,0.9s,baz=190,slow=1.1,SNR=4.7				
CMAR			ScP	**ScP**	**14 59 00.5 +1.3**
	comp=Z,8.6nm,0.9s,baz=146,slow=2.6,SNR=11				
CMAR			LR	LR	15 06 51.9
	comp=Z,1μm,20.3s,baz=110,slow=38				
	comp=Z,43nm,0.9s				
CMAR	**Chiang Mai Arr**	**32.53 303**	P	**P**	**14 52 45.6 +0.8**
CHTO	**Chiang Mai**	**32.70 303**	P	**P**	**14 52 46.5 +0.2**
CHTO	**Chiang Mai**	**32.70 303**	P	**P**	**14 52 46.5 +0.2**
ENH	**Enshi**	**33.12 331**	P	**P**	**14 52 50.4 +0.5**
ENH			IAmb	IAmb	14 52 53.0
	comp=Z,96nm,0.7s				
ENH	**Enshi**	**33.12 331**	P	**P**	**14 52 49.4 -0.5**
ENH			pP	**pP**	**14 53 20.9 +1.1**
KMI	**Kunming**	**33.31 316**	⇓P	**P**	**14 52 53.9 +2.1**
KMI			S	**S**	**14 58 04.6 +2.4**
KMI			PcS	**PcS**	**14 59 18.3 +1.4**
KMI			pmax	pmax	
	comp=Z,830nm,3.5s				
KMI			LR	LR	
	comp=Z,3μm,22.4s				
KMI			LR	LR	
	comp=Z,2μm,22.3s				
KMI			LR	LR	
	comp=Z,2μm,22.4s				
JHJ	**Hachijo jima 2**	**33.32 19**	LR	LR	15 05 03.7
	comp=Z,912nm,19.1s,baz=246,slow=34				
COCO	**West Island**	**33.40 245**	P	**P**	**14 52 53.1 +0.7**
COCO	**West Island**	**33.40 245**	P	**P**	**14 52 53.1 +0.7**
JHS	**Saijyo**	**33.53 8**	P	**P**	**14 52 54.5 +1.2**
JHS			IAmb	IAmb	14 52 56.1
	comp=Z,52nm,0.9s				
RK1H	**Rockhampton Ha**	**33.55 139**	P	**P**	**14 52 54.2 +0.6**
LCRK	**Leigh Creek**	**33.59 163**	P	**P**	**14 52 53.9 +0.1**
BLDU	**Ballidu**	**33.74 197**	P	**P**	**14 52 54.9 -0.2**
	baz=34,SNR=124				
BLDU	**Ballidu**	**33.74 197**	P	**P**	**14 52 55.0 -0.2**
HNR	**Honiara**	**34.21 109**	LR	LR	15 08 18.7
	comp=Z,8μm,18.8s,baz=282,slow=38				
HNR	**Honiara**	**34.21 109**	P	**P**	**14 52 58.0 -1.4**
HNR	**Honiara**	**34.21 109**	P	**P**	**14 52 58.0 -1.4**
HNR			pmax	pmax	
	comp=Z,283nm,1.5s				
KLBR	**Kellerberrin**	**34.38 195**	P	**P**	**14 53 00.6 -0.1**
	baz=34,SNR=113				
KLBR	**Kellerberrin**	**34.38 195**	P	**P**	**14 53 00.7 0.0**
TJN	**Taejon**	**34.49 360**	P	**P**	**14 53 01.6 +0.2**
TJN	**Taejon**	**34.49 360**	P	**P**	**14 53 01.7 +0.2**
TJN			pmax	pmax	
	comp=Z,192nm,1.0s				
INU	**Inuyama**	**34.63 14**	P	**P**	**14 53 02.6 -0.1**
INU			IAmb	IAmb	14 54 12.4
	comp=Z,130nm,1.3s				
INU	**Inuyama**	**34.63 14**	P	**P**	**14 53 02.9 +0.2**
RMQ	**Roma**	**34.77 145**	P	**P**	**14 53 03.7 -0.5**
	baz=35,SNR=13				
RMQ	**Roma**	**34.77 145**	P	**P**	**14 53 04.3 +0.2**
PZH	**PanZhiHua**	**34.89 317**	P	**P**	**14 53 07.1 +1.8**
PZH			S	**S**	**14 58 25.9 -0.4**
PZH			SS	**SS**	**15 01 01.3 +0.5**
PZH			pmax	pmax	
	comp=Z,60nm,1.0s				
PZH			pmax	pmax	
	comp=Z,590nm,4.1s				
PZH			LR	LR	
	comp=Z,4μm,22.1s				
PZH			LR	LR	
	comp=Z,5μm,21.1s				
PZH			LR	LR	
	comp=Z,5μm,23.5s				
JGF	**Kuroka**	**34.95 14**	P	**P**	**14 53 04.1 -1.4**
MUN	**Mundaring**	**35.16 197**	P	**P**	**14 53 07.3 -0.1**
	baz=35,SNR=67				
MUN	**Mundaring**	**35.16 197**	P	**P**	**14 53 07.3 -0.1**
BBOO	**Buckleboo**	**35.29 167**	P	**P**	**14 53 08.2 -0.2**
	baz=35,SNR=581				
BBOO	**Buckleboo**	**35.29 167**	P	**P**	**14 53 08.0 -0.5**
BBOO	**Buckleboo**	**35.29 167**	P	**P**	**14 53 08.4 -0.1**
LYN	**LuoYang**	**35.53 338**	⇓*i*P	**P**	**14 53 10.7 +0.2**
LYN			pP	pP	14 53 41.2 +0.5
LYN			S	**S**	**14 58 34.2 -1.4**
LYN			pmax	pmax	
	comp=Z,30nm,0.5s				
LYN			pmax	pmax	
	comp=Z,140nm,6.3s				
KSAR	**Wonju Array Be**	**35.56 1**	P	**P**	**14 53 10.8 +0.2**
KSAR	**Wonju Array Be**	**35.56 1**	P	**P**	**14 53 10.8 +0.2**
KSRS	**Korea Array**	**35.57 1**	P	**P**	**14 53 11.0 +0.3**
	comp=Z,19nm,0.7s,baz=177,slow=9.3,SNR=59				
KSRS			PcP	**PcP**	**14 55 37.8 +1.1**
	comp=Z,6.3nm,0.7s,baz=187,slow=2.7,SNR=6.8				
KSRS			ScP	**ScP**	**14 59 09.8 +0.3**
	comp=Z,7.4nm,0.9s,baz=185,slow=4.0,SNR=8.7				
	comp=Z,19nm,0.7s				
KS19	**Wonju Array Si**	**35.62 1**	P	**P**	**14 53 11.2 0.0**
TIA	**Tai'an**	**35.63 346**	⇑P	**P**	**14 53 12.1 +0.7**
TIA			pP	**pwP**	**14 53 44.6 0.0**
TIA			S	**S**	**14 58 36.5 -0.6**
TIA			pmax	pmax	
	comp=Z,19nm,0.7s				
TIA			pmax	pmax	
	comp=Z,230nm,4.3s				
TIA			LR	LR	
	comp=Z,1μm,14.7s				
TIA			LR	LR	
	comp=Z,1μm,12.7s				
TIA			LR	LR	
	comp=Z,1μm,20.6s				
NWAO	**Narrogin (SRO)**	**35.78 195**	P	**P**	**14 53 12.8 +0.2**
	baz=36,SNR=66				
NWAO			P	**P**	**14 53 12.8 +0.2**
	baz=36,SNR=66				
NWAO	**Narrogin (SRO)**	**35.78 195**	P	**P**	**14 53 12.4 -0.2**
NWAO	**Narrogin (SRO)**	**35.78 195**	P	**P**	**14 53 12.4 -0.2**
NWAO			pmax	pmax	
	comp=Z,94nm,0.7s				
NWAO	**Narrogin (SRO)**	**35.78 195**	P	**P**	**14 53 12.9 +0.2**
PBA	**Port Blair**	**35.81 288**	IAmb	IAmb	14 54 48.3
	comp=Z,309nm,1.7s				
WHYH	**Whyalla**	**35.86 165**	P	**P**	**14 53 13.3 0.0**
STKA	**Stephens Creek**	**36.00 159**	P	**P**	**14 53 14.7 +0.1**
	comp=Z,160nm,0.6s,baz=333,slow=8.7,SNR=464				
STKA			pP	**pP**	**14 53 47.2 +1.6**
	comp=Z,28nm,0.6s,baz=336,slow=6.2,SNR=1.3				
STKA			PP	**PP**	**14 54 38.3 -1.1**
	comp=Z,85nm,0.9s,baz=322,slow=11,SNR=3.7				
STKA			S	**S**	**14 58 40.5 -2.4**
	comp=Z,18nm,1.1s,baz=193,slow=19,SNR=4.3				
STKA			LR	LR	15 09 12.4
	comp=Z,1μm,18.1s,baz=333,slow=38				
	comp=Z,160nm,0.6s				
STKA	**Stephens Creek**	**36.00 159**	P	**P**	**14 53 14.7 +0.1**
	baz=36,SNR=547				
STKA	**Stephens Creek**	**36.00 159**	P	**P**	**14 53 14.3 -0.3**
STKA			IAmb	IAmb	14 53 16.1
	comp=Z,247nm,1.9s				
STKA	**Stephens Creek**	**36.00 159**	P	**P**	**14 53 14.3 -0.3**
STKA			pmax	pmax	
	comp=Z,247nm,1.9s				
STKA	**Stephens Creek**	**36.00 159**	P	**P**	**14 53 14.6 +0.1**
MAJO	**Matsushiro**	**36.06 15**	P	**P**	**14 53 13.6 -1.4**
MAJO			IAmb	IAmb	14 53 53.1
	comp=Z,55nm,1.0s				
MAJO	**Matsushiro**	**36.06 15**	P	**P**	**14 53 13.6 -1.4**
MAJO			pmax	pmax	
	comp=Z,55nm,1.0s				
MAJO	**Matsushiro**	**36.06 15**	P	**P**	**14 53 14.2 -0.8**
PTPS	**Port Pirie**	**36.10 165**	P	**P**	**14 53 16.6 +1.3**
XAN	**Xi'an**	**36.53 334**	⇓P	**P**	**14 53 19.5 +0.4**
XAN			pP	pwP	14 53 52.6 +0.1
XAN			sP	sP	14 54 10.5 +5.1
XAN			S	**S**	**14 58 50.7 -0.2**
XAN			PcS	**PcS**	**14 59 28.0 +0.2**
XAN			sS	sS	14 59 46.4 +1.4
XAN			SS	**SS**	**15 01 27.4 -9.3**
XAN			ScS	**ScS**	**15 03 14.8 -5.3**
XAN			pmax	pmax	
	comp=Z,170nm,0.8s				
XAN			pmax	pmax	
	comp=Z,700nm,3.6s				
XAN			LR	LR	
	comp=Z,1μm,15.3s				
XAN			LR	LR	
	comp=Z,1μm,16.8s				
XAN			LR	LR	
	comp=Z,2μm,17.2s				
XAN	**Xi'an**	**36.53 334**	P	**P**	**14 53 18.6 -0.5**
XAN			pP	**pwP**	**14 53 54.9 +2.3**
HTT	**Hallett**	**36.59 164**	P	**P**	**14 53 19.8 +0.2**
	baz=37,SNR=118				
HTT	**Hallett**	**36.59 164**	P	**P**	**14 53 19.7 +0.1**
CD2	**Chengdu**	**36.69 325**	P	P	14 53 33.3 +13
CD2			PP	**PP**	**14 54 44.8 -2.2**
CD2			S	**S**	**14 58 51.7 -1.8**
CD2			sS	ScP	14 59 17.3 +3.4
CD2			SS	SnSn	15 01 56.6 +16
CMSA	**Cobar Meteorol**	**37.33 154**	P	**P**	**14 53 25.8 -0.1**
	baz=37,SNR=33				
CMSA	**Cobar Meteorol**	**37.33 154**	P	**P**	**14 53 26.3 +0.5**
DL2	**Dalian**	**37.40 353**	P	**P**	**14 53 26.8 +0.6**
DL2			pP	**pwP**	**14 54 00.8 +1.1**
DL2			S	**S**	**14 59 04.9 +1.1**
DL2			pmax	pmax	
	comp=Z,28nm,0.6s				
HNS	**HongShan**	**37.40 343**	⇑P	**P**	**14 53 27.5 +1.2**
HNS			pP	**pP**	**14 53 56.5 -0.2**
HNS			PP	**PnPn**	**14 55 03.4 +6.2**
HNS			S	**S**	**14 59 00.3 -3.6**
HNS			ScS	**ScS**	**15 03 25.9 +1.2**
HNS			pmax	pmax	
	comp=Z,20nm,0.7s				
HNS			LR	LR	
	comp=Z,1μm,14.7s				
HNS			LR	LR	
	comp=Z,1μm,13.9s				
HNS			LR	LR	
	comp=Z,960nm,16.5s				
RKGY	**Rocky Gully**	**37.45 194**	P	**P**	**14 53 28.0 +1.3**
	baz=38,SNR=27				
RKGY	**Rocky Gully**	**37.45 194**	P	**P**	**14 53 27.9 +1.2**
JSD	**Sado**	**37.49 14**	P	**P**	**14 53 26.6 -0.4**
JSD			IAmb	IAmb	14 54 38.0
	comp=Z,108nm,1.1s				
GHSS	**Government Hou**	**37.91 165**	P	**P**	**14 53 31.8 +1.2**
JMM	**Marumori**	**38.01 17**	P	**P**	**14 53 31.1 -0.4**
H01W3	**Cape Leeuwin H**	**38.49 198**	P	**P**	**14 53 37.2 +2.0**
	baz=32,slow=5.8,SNR=10				
H01W1	**Cape Leeuwin H**	**38.49 198**	P	**P**	**14 53 37.4 +2.2**
	baz=32,slow=5.8,SNR=7.3				
H01W2	**Cape Leeuwin H**	**38.50 198**	P	**P**	**14 53 37.2 +1.9**
	baz=32,slow=5.8,SNR=5.2				
ARMA	**Armidale**	**39.40 146**	P	**P**	**14 53 43.8 +0.6**
	baz=39,SNR=97				
ARMA	**Armidale**	**39.40 146**	P	**P**	**14 53 43.5 +0.2**
ARMA	**Armidale**	**39.40 146**	P	**P**	**14 53 44.1 +0.8**
BJT	**Baijiatuau**	**39.48 346**	P	**P**	**14 53 43.8 +0.1**
BJT			IAmb	IAmb	14 54 21.4
	comp=Z,121nm,1.0s				
BJT	**Baijiatuau**	**39.48 346**	P	**P**	**14 53 43.8 +0.1**
BJT			pmax	pmax	
	comp=Z,121nm,1.0s				
BJT	**Baijiatuau**	**39.48 346**	P	**P**	**14 53 43.0 -0.6**
BJT			pP	**pP**	**14 54 12.0 -2.3**
BJT			pwP	**pwP**	**14 54 18.5 +0.9**
BJI	**Beijing**	**39.50 346**	P	**P**	**14 53 44.2 +0.4**
BJI			PcP	**PcP**	**14 55 50.5 +1.8**
BJI			ScP	**ScP**	**14 59 24.8 +0.6**
BJI			S	**S**	**14 59 34.7 -0.7**
BJI			ScS	**ScS**	**15 03 38.5 +1.7**
BJI			pmax	pmax	
	comp=Z,59nm,0.8s				
BJI			pmax	pmax	
	comp=Z,280nm,3.8s				
BJI			LR	LR	
	comp=Z,170nm,13.9s				
BJI			LR	LR	
	comp=Z,680nm,14.7s				
BJI			LR	LR	
	comp=Z,730nm,14.1s				
SNY	**Shenyang**	**40.09 356**	⇑P	**P**	**14 53 49.1 +0.5**
SNY			pP	**pwP**	**14 54 25.2 +2.5**
SNY			S	**S**	**14 59 45.4 +1.3**
SNY			pmax	pmax	
	comp=Z,26nm,0.7s				
SNY			pmax	pmax	
	comp=Z,370nm,7.8s				
SNY			LR	LR	
	comp=Z,1μm,23.5s				
SNY			LR	LR	
	comp=Z,4μm,22.0s				
SNY			LR	LR	
	comp=Z,2μm,14.8s				
BRDH	**Bariadhala**	**40.53 304**	P	**P**	**14 53 54.0 +1.5**
	comp=Z,188nm,0.4s,baz=90,slow=7.8,SNR=1.2				
BRDH			S	**S**	**14 59 49.7 -1.6**
	comp=Z,150nm,0.4s,baz=272,slow=18,SNR=1.9				
ARPS	**Mount Arapiles**	**40.56 162**	P	**P**	**14 53 53.0 +0.4**
	baz=41,SNR=79				
ARPS	**Mount Arapiles**	**40.56 162**	P	**P**	**14 53 53.3 +0.7**
LZH	**Lanzhou**	**40.60 330**	*e*P	**P**	**14 53 55.2 +2.1**
LZH			pP	pwP	14 54 26.1 -1.0
LZH			sP	sP	14 54 37.8 -2.0
LZH			ScP	**ScP**	**14 59 30.6 +1.7**
LZH			*e*S	**S**	**14 59 54.0 +1.8**
LZH			SS	**SS**	**15 02 57.6 -0.6**
LZH			pmax	pmax	
	comp=Z,140nm,1.0s				
LZH			pmax	pmax	
	comp=Z,890nm,4.5s				
LZH			LR	LR	
	comp=Z,3μm,12.7s				
LZH			LR	LR	
	comp=Z,2μm,14.9s				
LZH			LR	LR	
	comp=Z,2μm,16.8s				
JTM	**Tenmabayashi**	**40.80 16**	P	**P**	**14 53 54.6 +0.1**
JTM			IAmb	IAmb	14 54 41.4
	comp=Z,165nm,1.2s				
MSHR	**Mys Shultsa**	**40.82 4**	*de*P	**P**	**14 53 55.3 +0.7**
MSHR			pmax	pmax	
	comp=Z,28nm,0.9s				
HHC	**Hu-ho-hao-te**	**41.52 342**	*e*P	**P**	**14 54 02.2 +1.6**
HHC			S	**S**	**15 00 08.4 +2.7**
HHC			SS	**SS**	**15 03 15.2 -1.1**
HHC			pmax	pmax	
	comp=Z,55nm,0.8s				
HHC			pmax	pmax	
	comp=Z,640nm,6.5s				
HHC			LR	LR	
	comp=Z,2μm,14.1s				
HHC			LR	LR	
	comp=Z,1μm,18.0s				
HHC			LR	LR	
	comp=Z,3μm,19.5s				
SYDH	**Sydney Hard Ro**	**41.55 150**	P	**P**	**14 54 02.0 +1.3**
SHL	**Shillong**	**41.66 308**	P	**P**	**14 54 01.2 -0.7**
SHL			IAmb	IAmb	14 54 04.6
	comp=Z,73nm,0.7s				
SHL	**Shillong**	**41.66 308**	P	**P**	**14 54 01.3 -0.7**
SHL			pmax	pmax	
	comp=Z,73nm,0.7s				
SHL	**Shillong**	**41.66 308**	P	**P**	**14 54 03.8 +1.8**
BTO	**Baotou**	**41.81 340**	*e*P	**P**	**14 54 04.7 +1.8**
BTO			S	**S**	**15 00 12.7 +2.8**
BTO			LR	LR	
	comp=Z,3μm,16.5s				
BTO			LR	LR	
	comp=Z,5μm,18.2s				
CN2	**Changchun**	**41.94 358**	*e*P	**P**	**14 54 02.0 -1.8**
CN2			*e*pP	pP	14 54 33.4 -1.2
CN2			*e*S	**S**	**15 00 09.9 -1.6**
CN2			*e*sS	sS	15 01 04.8 -1.7
CN2			*e*SS	**SS**	**15 03 15.7 -8.5**
CN2			pmax	pmax	
	comp=Z,20nm,1.1s				
CN2			pmax	pmax	
	comp=Z,130nm,5.5s				
CN2			LR	LR	
	comp=Z,530nm,13.0s				
CN2			LR	LR	
	comp=Z,370nm,13.0s				
CN2			LR	LR	
	comp=Z,420nm,14.0s				
BRAT	**Ballarat**	**41.95 160**	P	**P**	**14 54 04.9 +1.0**
CAN	**Canberra**	**42.00 153**	P	**P**	**14 54 04.5 0.0**
CAN	**Canberra**	**42.00 153**	P	**P**	**14 54 04.5 0.0**
CAN			pmax	pmax	
	comp=Z,457nm,1.9s				
CAN	**Canberra**	**42.00 153**	P	**P**	**14 54 05.7 +1.2**
CAN	**Canberra**	**42.00 153**	P	**P**	**14 54 04.3 -0.2**
CAN			pP	**pP**	**14 54 37.2 +1.0**
CNB	**Canberra Magne**	**42.16 153**	P	**P**	**14 54 07.1 +1.3**
	baz=42,SNR=24				
CNB	**Canberra Magne**	**42.16 153**	P	**P**	**14 54 07.1 +1.3**
KOUNC	**Koumac, New Ca**	**42.32 123**	P	**P**	**14 54 07.6 +0.4**
USA0B	**Ussuriysk Arra**	**42.50 5**	P	**P**	**14 54 08.7 +0.4**
USA0B	**Ussuriysk Arra**	**42.50 5**	P	**P**	**14 54 08.7 +0.4**
USA0B			pmax	pmax	
	comp=Z,57nm,1.1s				
USRK	**Ussuriysk Ar.**	**42.50 5**	P	**P**	**14 54 09.0 +0.7**
	comp=Z,52nm,1.0s,baz=187,slow=5.9,SNR=28				
	comp=Z,52nm,1.0s				
USRK	**Ussuriysk Ar.**	**42.50 5**	P	**P**	**14 54 08.4 +0.1**
USRK	**Ussuriysk Ar.**	**42.50 5**	P	**P**	**14 54 09.0 +0.7**
TOO	**Toolangi**	**42.51 159**	P	**P**	**14 54 09.9 +1.3**
	baz=43,SNR=49				
TOO	**Toolangi**	**42.51 159**	P	**P**	**14 54 09.4 +0.9**
TOO			IAmb	IAmb	14 54 10.5
	comp=Z,262nm,1.6s				
TOO	**Toolangi**	**42.51 159**	P	**P**	**14 54 09.5 +0.9**
TOO			pmax	pmax	
	comp=Z,262nm,1.6s				
TOO	**Toolangi**	**42.51 159**	P	**P**	**14 54 09.8 +1.3**
ERM	**Erimo**	**42.53 17**	P	**P**	**14 54 09.5 +0.9**
GEXS	**Deakin Univers**	**42.66 160**	P	**P**	**14 54 11.7 +2.1**
MDJ	**Mudanjiang**	**42.76 2**	P	**P**	**14 54 10.4 0.0**
MDJ			IAmb	IAmb	14 54 56.1
	comp=Z,64nm,0.9s				
MDJ	**Mudanjiang**	**42.76 2**	P	**P**	**14 54 11.1 +0.7**
MDJ			ScP	**ScP**	**14 59 32.9 -4.2**
MDJ			S	**S**	**15 00 23.0 -0.5**
MDJ			pmax	pmax	
	comp=Z,43nm,1.4s				
MDJ			LR	LR	
	comp=Z,650nm,9.2s				
MDJ			LR	LR	
	comp=Z,1μm,13.7s				
MDJ			LR	LR	
	comp=Z,1μm,16.1s				
XLT	**XiLinHaoTe**	**43.20 348**	⇓*i*P	**P**	**14 54 14.3 +0.2**
XLT			ScP	**ScP**	**14 59 39.5 +0.5**
XLT			S	**S**	**15 00 27.6 -2.6**
XLT			sS	sS	15 01 24.6 -0.8
XLT			pmax	pmax	
	comp=Z,43nm,0.8s				
XLT			pmax	pmax	
	comp=Z,160nm,4.8s				
XLT			LR	LR	
	comp=Z,1μm,14.3s				
XLT			LR	LR	
	comp=Z,1μm,16.4s				

MILA	**Mila**	**43.52 155**	P	**P**	**14 54 18.2**	**+1.5**
BNX	**BinXian**	**43.84 360**	⇑P	**P**	**14 54 18.7**	**-0.4**
BNX			pP	**pP**	**14 54 50.1**	**-0.1**
BNX			sP	**sP**	**14 55 05.0**	**-0.9**
BNX			PP	**PcP**	**14 56 00.1**	**-2.8**
BNX			S	**S**	**15 00 38.7**	**-0.6**
BNX			pmax	pmax		
	comp=Z,12nm,0.7s					
BNX			pmax	pmax		
	comp=Z,220nm,4.5s					
BNX			LR	LR		
	comp=Z,560nm,13.7s					
BNX			LR	LR		
	comp=Z,1μm,13.9s					
BNX			LR	LR		
	comp=Z,580nm,17.1s					
TEY	**Ternei**	**43.89 9**	⇑*e*P	**P**	**14 54 20.3**	**+0.9**
TEY			pmax	pmax		
	comp=N,30nm,0.6s					
TEY			pmax	pmax		
	comp=Z,60nm,0.6s					
TEY			pmax	pmax		
	comp=E,10.0nm,0.5s					
LSA	**Lhasa**	**44.31 312**	P	**P**	**14 54 23.3**	**-0.4**
LSA	**Lhasa**	**44.31 312**	P	**P**	**14 54 25.8**	**+2.1**
LSA			S	**S**	**15 00 46.0**	**-1.5**
LSA			SS	**ScS**	**15 04 01.5**	**-6.3**
LSA			pmax	pmax		
	comp=E,99nm,0.9s					
LSA	**Lhasa**	**44.31 312**	P	**P**	**14 54 23.3**	**-0.4**
LSA			pmax	pmax		
	comp=Z,299nm,1.7s					
LSA	**Lhasa**	**44.31 312**	P	**P**	**14 54 23.5**	**-0.2**
LSA	**Lhasa**	**44.31 312**	P	**P**	**14 54 24.7**	**+1.1**
LSA			pP	**pP**	**14 54 56.0**	**+1.0**
BWNR	**Bhubaneshwar**	**44.65 297**	*e*P	**P**	**14 54 26.5**	**+0.6**
NOUC	**Port Laguerre**	**44.70 124**	P	**P**	**14 54 26.6**	**+0.3**
NOUC	**Port Laguerre**	**44.70 124**	P	**P**	**14 54 23.9**	**-2.3**
NOUC			pP	**pP**	**14 54 58.6**	**+0.2**
NOUC			sP	**sP**	**14 55 14.2**	**-0.3**
DZM	**Mont Dzumac**	**44.80 124**	*e*P	**P**	**14 54 25.0**	**-2.2**
	comp=Z,205nm,1.6s					
DZM			*e*pP	**pP**	**14 54 53.8**	**-5.6**
	comp=Z,66nm,1.3s					
DZM	**Mont Dzumac**	**44.80 124**	*e*LR	LR	15 07 10.7	
	comp=Z,2μm,26.0s					
DZM	**Mont Dzumac**	**44.80 124**	LR	LR	15 15 34.7	
	comp=Z,601nm,18.1s,baz=316,slow=39					
DZM	**Mont Dzumac**	**44.80 124**	P	**P**	**14 54 27.3**	**+0.1**
DZM			IAmb	IAmb	14 54 29.5	
	comp=Z,233nm,1.6s					
DZM	**Mont Dzumac**	**44.80 124**	P	**P**	**14 54 27.8**	**+0.6**
DZM	**Mont Dzumac**	**44.80 124**	P	**P**	**14 54 25.6**	**-1.6**
DZM			pP	**pP**	**14 54 59.6**	**+0.3**
DZM			sP	**sP**	**14 55 15.8**	**+0.3**
LIFNC	**LIFOU**	**44.91 122**	P	**P**	**14 54 28.0**	**+0.1**
LIFNC	**LIFOU**	**44.91 122**	P	**P**	**14 54 28.7**	**+0.8**
ONTNC	**Ouen Toro**	**44.92 124**	P	**P**	**14 54 27.7**	**-0.3**
SLGI	**Shiliguri**	**44.94 307**	*e*P	**P**	**14 54 29.2**	**+1.1**
YATNC	**Mamie plateau,**	**45.17 124**	P	**P**	**14 54 30.8**	**+0.8**
GTA	**Gaotai**	**45.19 330**	⇓P	**P**	**14 54 31.4**	**+1.4**
GTA			pP	pP	14 55 02.6	+1.2
GTA			sP	sP	14 55 16.2	-0.9
GTA			PcP	**PcP**	**14 56 09.5**	**+1.6**
GTA			ScP	**ScP**	**14 59 48.8**	**+1.5**
GTA			S	**S**	**15 00 59.2**	**0.0**
GTA			ScS	**ScS**	**15 04 12.0**	**-0.3**
GTA			pmax	pmax		
	comp=Z,47nm,0.8s					
GTA			pmax	pmax		
	comp=Z,370nm,6.7s					
GTA			LR	LR		
	comp=Z,630nm,17.8s					
GTA			LR	LR		
	comp=Z,1μm,20.4s					
GTA			LR	LR		
	comp=Z,1μm,21.8s					
OUENC	**Ouen Island, N**	**45.29 124**	P	**P**	**14 54 30.4**	**-0.6**
OUENC			IAmb	IAmb	14 54 33.7	
	comp=Z,285nm,1.8s					
OUENC	**Ouen Island, N**	**45.29 124**	P	**P**	**14 54 31.6**	**+0.7**
GOMU	**GeErMu**	**45.71 322**	P	**P**	**14 54 36.2**	**+1.7**
GOMU			PcP	**PcP**	**14 56 11.4**	**+1.3**
GOMU			S	**S**	**15 01 09.2**	**+2.0**
GOMU			pmax	pmax		
	comp=Z,21nm,1.1s					
GOMU			LR	LR		
	comp=Z,270nm,17.0s					
GOMU			LR	LR		
	comp=Z,420nm,18.3s					
GOMU			LR	LR		
	comp=Z,530nm,17.4s					
BOK	**Bokaro**	**45.82 302**	*i* P	**P**	**14 54 34.9**	**-0.2**
BOK			IAmb	IAmb	14 54 39.7	
	comp=Z,38nm,0.8s					
BOK			*i* x	x	14 56 25.7	
MARNC	**Mare, Loyalty**	**45.87 122**	P	**P**	**14 54 35.7**	**+0.2**
MARNC	**Mare, Loyalty**	**45.87 122**	P	**P**	**14 54 36.8**	**+1.3**
RAGD	**RAYAGADA**	**46.44 295**	*e*P	**P**	**14 54 41.5**	**+1.5**
RAMN	**Ramite**	**46.51 306**	*e*P	**P**	**14 54 42.0**	**+1.3**
	comp=Z,344nm,1.0s					
PALK	**Pallekele**	**46.91 278**	S	**S**	**15 01 20.2**	**-4.2**
	comp=Z,4.4nm,0.8s,baz=279,slow=5.7,SNR=1.4					
PALK			LR	LR	15 19 05.1	
	comp=Z,575nm,18.0s,baz=192,slow=42					
PALK	**Pallekele**	**46.91 278**	P	**P**	**14 54 43.7**	**-0.1**
PALK			IAmb	IAmb	14 54 47.5	
	comp=Z,134nm,1.3s					
PALK	**Pallekele**	**46.91 278**	P	**P**	**14 54 43.7**	**-0.1**
PALK			pmax	pmax		
	comp=Z,134nm,1.3s					
PALK	**Pallekele**	**46.91 278**	P	**P**	**14 54 45.8**	**+2.0**
PALK	**Pallekele**	**46.91 278**	P	**P**	**14 54 44.1**	**+0.3**
	comp=Z,2μmcomp=Z,2μmcomp=Z,95nm,2.1s					
JHSG	**JHARSUGUGA**	**46.92 298**	*e*P	**P**	**14 54 44.9**	**+1.2**
YSS	**Yuzh-Sakhalins**	**46.99 14**	P	**P**	**14 54 43.9**	**+0.1**
YSS			IAmb	IAmb	14 56 17.4	
	comp=Z,80nm,1.2s					
YSS	**Yuzh-Sakhalins**	**46.99 14**	*e*P	**P**	**14 54 44.1**	**+0.3**
YSS			*e*		14 55 15.1	
YSS			*e**SP	**sP**	**14 55 36.2**	**+5.5**
YSS			*e*S	**S**	**15 01 24.2**	**-0.2**
YSS			pmax	pmax		
	comp=Z,30nm,0.7s					
YSS			pmax	pmax		
	comp=Z,600nm,5.5s					
YSS			smax	smax		
	comp=E,500nm,7.0s					
JIRN	**Jiri**	**47.14 307**	*e*P	**P**	**14 54 47.1**	**+1.3**
	comp=E,350nm,0.9s					
MOO	**Moorlands**	**47.43 160**	P	**P**	**14 54 47.2**	**-0.2**
	baz=48,SNR=12					
MOO	**Moorlands**	**47.43 160**	P	**P**	**14 54 47.9**	**+0.6**
KLR	**Kul'dur**	**47.48 4**	P	**P**	**14 54 47.5**	**-0.1**
	comp=E,6.5nm,0.3s,baz=198,slow=5.1,SNR=34					
KLR			pP	**pP**	**14 55 20.9**	**+1.9**
	comp=E,23nm,0.9s,baz=210,slow=7.5,SNR=3.8					
KLR			S	**S**	**15 01 26.6**	**-4.7**
	comp=E,0.7nm,0.5s,baz=251,slow=18,SNR=1.0					
KLR			LR	LR	15 14 34.9	
	comp=E,461nm,22.0s,baz=198,slow=36					
	comp=E,6.5nm,0.3s					
KLR	**Kul'dur**	**47.48 4**	*de*P	**P**	**14 54 47.6**	**0.0**
KLR			pmax	pmax		
	comp=Z,22nm,0.9s					
GUN	**Gumba**	**47.50 307**	*e*P	**P**	**14 54 49.8**	**+1.3**
	comp=Z,494nm,0.7s					
PKI	**Pulchoki**	**47.73 307**	*e*P	**P**	**14 54 51.0**	**+0.7**
	comp=Z,97nm,0.9s					
PKIN	**Phulchoki**	**47.74 307**	*e*P	**P**	**14 54 51.0**	**+0.7**
	comp=Z,57nm,0.4s					
TAU	**Tasmania Unive**	**47.89 160**	P	**P**	**14 54 51.7**	**+0.9**
DMN	**Daman**	**47.99 306**	*e*P	**P**	**14 54 53.1**	**+0.9**
	comp=Z,466nm,1.0s					
MDRS	**Chennai**	**48.06 286**	*e*P	**P**	**14 54 53.8**	**+1.2**
MDRS			IAmb	IAmb	14 54 59.9	
	comp=Z,77nm,0.4s					
VJD	**Vijayawada**	**48.34 291**	⇓*i*P	**P**	**14 54 56.1**	**+1.4**
BLSP	**Bilaspur**	**48.48 298**	⇓*i*P	**P**	**14 54 56.5**	**+0.7**
BLSP			*i* x	x	14 56 48.8	
GKN	**Gorkha**	**48.53 307**	*e*P	**P**	**14 54 57.1**	**+0.9**
	comp=Z,373nm,1.0s					
UGL	**Uglegorsk**	**48.82 13**	*e*P	**P**	**14 54 59.0**	**+1.1**
UGL			*e*S	**S**	**15 01 51.7**	**+1.6**
UGL			pmax	pmax		
	comp=Z,100nm,1.0s					
UGL			smax	smax		
	comp=E,1μm,6.5s					
UGL			smax	smax		
	comp=N,700nm,2.5s					
VLK	**Valmikinagar**	**48.87 305**	*e*P	**P**	**14 55 00.2**	**+1.6**
ULN	**Ulaanbaatar**	**49.24 342**	P	**P**	**14 55 01.7**	**+0.3**
ULN			IAmb	IAmb	14 55 39.9	
	comp=Z,101nm,1.1s					
ULN	**Ulaanbaatar**	**49.24 342**	*d i*P	**P**	**14 55 02.1**	**+0.8**
ULN			pmax	pmax		
	comp=Z,53nm,1.0s					
ULN	**Ulaanbaatar**	**49.24 342**	P	**P**	**14 55 02.8**	**+1.4**
ULN	**Ulaanbaatar**	**49.24 342**	P	**P**	**14 55 02.1**	**+0.8**
	comp=Z,10μmcomp=Z,6μmcomp=Z,232nm,0.9s					
ULN			pP	**pwP**	**14 55 36.1**	**-0.4**
	comp=Z,10μmcomp=Z,6μmcomp=Z,232nm,0.9s					
DANN	**Dangsing**	**49.38 307**	*e*P	**P**	**14 55 04.0**	**+1.1**
	comp=Z,708nm,0.8s					
SONM	**Songino Array**	**49.42 341**	P	**P**	**14 55 02.4**	**-0.3**
	comp=Z,15nm,0.6s,baz=157,slow=8.2,SNR=81					
SONM			pP	**pwP**	**14 55 36.8**	**-1.0**
	comp=Z,36nm,1.0s,baz=155,slow=8.3,SNR=5.6					
SONM			PP	**PP**	**14 56 57.9**	**-0.3**
	comp=Z,13nm,1.0s,baz=170,slow=9.9,SNR=1.6					
SONM			ScP	**ScP**	**15 00 05.1**	**+0.1**
	comp=Z,4.6nm,0.9s,baz=153,slow=4.5,SNR=3.7					
SONM			ScS	**ScS**	**15 04 38.1**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=122,slow=5.2,SNR=1.3					
SONM			LR	LR	15 17 45.7	
	comp=Z,820nm,21.3s,baz=150,slow=38					
	comp=Z,15nm,0.6s					
SONM	**Songino Array**	**49.42 341**	P	**P**	**14 55 02.7**	**0.0**
SONM			IAmb	IAmb	14 55 41.0	
	comp=Z,56nm,1.1s					
SONM	**Songino Array**	**49.42 341**	P	**P**	**14 55 02.7**	**0.0**
SONM			pmax	pmax		
	comp=Z,56nm,1.1s					
GRNR	**Gornyy**	**49.47 7**	⇑*i*P	**P**	**14 55 03.8**	**+1.0**
GRNR			*e*S	**S**	**15 02 02.0**	**+2.9**
GRNR			pmax	pmax		
	comp=N,8.0nm,0.6s					
GRNR			pmax	pmax		
	comp=E,4.0nm,0.6s					
GRNR			pmax	pmax		
	comp=Z,20nm,0.7s					
GRNR			smax	smax		
	comp=N,3.0nm,0.6s					
ALBI	**Allahabad**	**49.82 302**	⇓*i*P	**P**	**14 55 06.7**	**+0.8**
SALM	**Salem**	**49.82 284**	*e*P	**P**	**14 55 06.9**	**+0.8**
SALM			*i* x	x	14 57 08.1	
PYUN	**Piuthan**	**49.90 306**	*e*P	**P**	**14 55 08.1**	**+1.4**
	comp=N,625nm,0.8s					
KOD	**Kodaikanal**	**50.37 282**	⇓*i*P	**P**	**14 55 11.2**	**+0.7**
HYBB	**Hyderabad (bro**	**50.49 291**	*e*P	**P**	**14 55 12.1**	**+0.9**
HYBB			IVmB_BB		14 55 13.5	
	comp=Z,2μm,0.9s					
HYBB			*e*pP	**pP**	**14 55 40.7**	**-2.4**
HYBB			*e*sP	**sP**	**14 55 56.0**	**-2.7**
HYBB			*e*PcP	**PcP**	**14 56 27.2**	**0.0**
HYBB			*e*PP	**PP**	**14 57 08.6**	**+0.3**
HYBB			*e*ScP	**ScP**	**15 00 11.0**	**+0.9**
HYBB			*e*PcS	**PcS**	**15 00 26.4**	**+1.4**
HYBB			*e*S	**S**	**15 02 16.0**	**+1.5**
HYBB			*e*ScS	**ScS**	**15 04 48.9**	**+0.7**
TYV	**Tymovskoe**	**50.63 12**	*e*P	**P**	**14 55 12.7**	**+1.2**
TYV			*e*S	**S**	**15 02 17.8**	**+2.5**
TYV			pmax	pmax		
	comp=Z,300nm,3.0s					
TYV			pmax	pmax		
	comp=Z,17nm,1.2s					
TYV			smax	smax		
	comp=N,700nm,4.2s					
TYV			smax	smax		
	comp=E,700nm,4.2s					
JBP	**Jabalpur**	**50.69 299**	⇓*e*P	**P**	**14 55 12.7**	**+0.3**
JBP			*e*S	**S**	**15 02 17.6**	**+0.6**
TRD	**Trivandrum**	**50.70 280**	*e*P	**P**	**14 55 13.3**	**+0.6**
TRD			IAmb	IAmb	14 55 15.7	
	comp=Z,215nm,1.1s					
NGP	**Nagpur**	**50.94 296**	⇓*i*P	**P**	**14 55 15.3**	**+0.9**
PCHI	**Peechi**	**51.49 282**	⇓*e*P	**P**	**14 55 19.4**	**+0.8**
PCHI			*e*S	**S**	**15 02 27.4**	**-0.9**
ZEA	**Zeya**	**51.85 360**	*e*P	**P**	**14 55 20.5**	**-0.1**
ZEA			*e**PP	**pwP**	**14 56 00.1**	**+3.8**
ZEA			*e*		14 56 32.9	
ZEA			*e*		14 57 26.9	
ZEA			*e*S	**S**	**15 02 32.7**	**+0.8**
ZEA			*e*		15 04 57.9	
ZEA			pmax	pmax		
	comp=E,10.0nm,0.4s					
ZEA			pmax	pmax		
	comp=N,10.0nm,1.4s					
ZEA			pmax	pmax		
	comp=Z,20nm,0.7s					
ZEA			pmax	pmax		
	comp=N,200nm,4.7s					
ZEA			pmax	pmax		
	comp=Z,200nm,5.4s					
ZEA			smax	smax		
	comp=N,200nm,5.7s					
ZAK	**Zakamensk**	**52.65 341**	*e*P	**P**	**14 55 27.0**	**+0.3**
ZAK			pmax	pmax		
	comp=Z,5.0nm,0.9s					
JHNI	**Jhansi**	**52.66 301**	⇓*i*P	**P**	**14 55 26.4**	**-0.7**
AKL	**Akola**	**52.66 295**	⇓*i*P	**P**	**14 55 28.2**	**+1.0**
PTH	**Pithoragarh**	**52.70 306**	*e*P	**P**	**14 55 27.4**	**-0.1**
BHPL	**Bhopal**	**52.96 298**	⇓*i*P	**P**	**14 55 29.2**	**-0.2**
BHPL			IAmb	IAmb	14 55 31.6	
	comp=Z,130nm,0.7s					
MNGI	**Mangalore**	**53.27 285**	⇓*i*P	**P**	**14 55 32.1**	**+0.5**
MSVF	**Nonsavu**	**53.44 114**	LR	LR	15 17 44.1	
	comp=Z,1μm,21.3s,baz=306,slow=35					
MSVF	**Nonsavu**	**53.44 114**	P	**P**	**14 55 33.8**	**+0.9**
MSVF	**Nonsavu**	**53.44 114**	P	**P**	**14 55 33.8**	**+0.9**
MSVF			pmax	pmax		
	comp=Z,214nm,1.5s					
MSVF	**Nonsavu**	**53.44 114**	P	**P**	**14 55 34.1**	**+1.1**
MSVF	**Nonsavu**	**53.44 114**	P	**P**	**14 55 32.8**	**-0.2**
MSVF			pP	**pP**	**14 56 06.2**	**+0.1**
KAAM	**Kaadhehdhoo**	**54.46 269**	P	**P**	**14 55 40.5**	**+0.1**
KAAM	**Kaadhehdhoo**	**54.46 269**	P	**P**	**14 55 42.0**	**+1.7**
KAAM	**Kaadhehdhoo**	**54.46 269**	P	**P**	**14 55 41.7**	**+1.3**
	comp=Z,6μmcomp=Z,357nm,0.9s					
MOY	**Mondy**	**54.51 340**	*e*P	**P**	**14 55 41.3**	**+1.1**
MOY			pmax	pmax		
	comp=Z,43nm,2.1s					
MNCI	**Minicoy**	**54.53 279**	P	**P**	**14 55 41.0**	**+0.1**
MNCY	**Minicoy**	**54.56 279**	*e*P	**P**	**14 55 41.6**	**+0.6**
MNCY			IAmb	IAmb	14 55 45.6	
	comp=Z,402nm,1.5s					
KAD	**Karad**	**54.56 290**	⇓*i*P	**P**	**14 55 40.5**	**-0.6**
GOA	**Goa**	**54.59 288**	*e*P	**P**	**14 55 41.6**	**+0.3**
GOA			IAmb	IAmb	14 55 44.0	
	comp=Z,107nm,0.9s					
DDI	**Dehra Dun**	**54.73 306**	⇓*i*P	**P**	**14 55 43.0**	**+0.9**
DDI			IAmb	IAmb	14 55 53.4	
	comp=Z,218nm,0.9s					
WMQ	**Urumqi**	**54.78 325**	*e*P	**P**	**14 55 44.0**	**+1.7**
WMQ			pP	pwP	14 56 18.9	+0.9
WMQ			PcP	**PcP**	**14 56 46.2**	**+3.2**
WMQ			S	**S**	**15 03 11.2**	**-0.9**
WMQ			sS	sS	15 04 10.3	+2.0
WMQ			ScS	**ScS**	**15 05 12.7**	**-4.7**
WMQ			pmax	pmax		
	comp=Z,100nm,0.9s					
WMQ			pmax	pmax		
	comp=Z,300nm,5.3s					
WMQ			LR	LR		
	comp=Z,3μm,20.5s					
WMQ			LR	LR		
	comp=Z,2μm,17.3s					
WMQ			LR	LR		
	comp=Z,860nm,21.5s					
SONA	**Sohna**	**54.80 304**	*e*P	**P**	**14 55 42.5**	**-0.1**
POO	**Poona**	**55.10 291**	*e*P	**P**	**14 55 45.0**	**0.0**
POO			IAmb	IAmb	14 55 46.2	
	comp=Z,64nm,0.8s					
H08S2	**Diego Garcia H**	**55.60 260**	P	**P**	**14 55 48.7**	**+0.5**
	baz=42,slow=9.0,SNR=3.9					
H08S3	**Diego Garcia H**	**55.61 260**	P	**P**	**14 55 51.2**	**+2.9**
	baz=42,slow=9.0,SNR=4.3					
DGAR	**Diego Garcia**	**55.61 260**	P	**P**	**14 55 50.7**	**+2.0**
H08S1	**Diego Carcia H**	**55.62 260**	P	**P**	**14 55 49.9**	**+1.5**
	baz=42,slow=9.0,SNR=4.1					
SMLA	**Simla**	**55.74 307**	*e*P	**P**	**14 55 50.7**	**+1.4**
SMLA			IAmb	IAmb	14 55 54.3	
	comp=Z,164nm,0.6s					
AJM	**Ajmer**	**56.31 301**	⇓*i*P	**P**	**14 55 53.4**	**-0.1**
BHK	**Bhakra**	**56.44 307**	⇓*i*P	**P**	**14 55 55.0**	**+0.8**
BOD	**Bodaibo**	**56.95 351**	*e*P	**P**	**14 55 57.3**	**0.0**
BOD			*e*		14 56 34.6	
BOD			pmax	pmax		
	comp=Z,39nm,1.5s					
PEA0B	**Petropavlovsk-**	**57.02 21**	P	**P**	**14 55 58.0**	**0.0**
PEA0B			IAmb	IAmb	14 56 49.3	
	comp=Z,43nm,0.9s					
PEA0B	**Petropavlovsk-**	**57.02 21**	P	**P**	**14 55 58.0**	**0.0**
PEA0B			pmax	pmax		
	comp=Z,43nm,1.0s					
PETK	**Petropavlovsk-**	**57.02 21**	P	**P**	**14 55 57.6**	**-0.4**
	comp=Z,16nm,0.6s,baz=194,slow=5.3,SNR=119					
PETK			ScP	**ScP**	**15 00 37.2**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=209,slow=7.7,SNR=5.6					
	comp=Z,16nm,0.6s					
PETK	**Petropavlovsk-**	**57.02 21**	P	**P**	**14 55 57.9**	**-0.1**
PETK	**Petropavlovsk-**	**57.02 21**	P	**P**	**14 55 57.9**	**-0.1**
PET	**Petropavlovsk**	**57.31 22**	P	**P**	**14 56 00.5**	**+0.5**
PET	**Petropavlovsk**	**57.31 22**	⇓*e*P	**P**	**14 56 00.6**	**+0.7**
PET			pmax	pmax		
	comp=Z,64nm,1.1s					
PET	**Petropavlovsk**	**57.31 22**	P	**P**	**14 56 01.1**	**+1.2**
THN	**Thein Dam**	**57.36 308**	⇓*i*P	**P**	**14 56 01.2**	**+0.5**
JMU	**Jammu**	**58.11 308**	*e*P	**P**	**14 56 07.1**	**+1.2**
ZSN	**Zaisan**	**58.58 327**	*e*P	**P**	**14 56 08.8**	**-0.2**
ZSN			*e*S	**S**	**15 04 03.0**	**+1.2**
ZSN	**Zaisan**	**58.58 327**	*e*P	**P**	**14 56 08.8**	**-0.2**
	baz=327					
ZSN			*e*S	**S**	**15 04 03.1**	**+1.2**
	baz=327					
JCZ	**Jackson Bay**	**58.64 146**	P	**P**	**14 56 10.0**	**+0.5**
DGZ	**Jazzator, Alta**	**58.69 331**	*d i*P	**P**	**14 56 10.6**	**+0.7**
DGZ			pmax	pmax		
	comp=Z,47nm,1.7s					
QRZ	**Quartz Range**	**58.92 141**	P	**P**	**14 56 11.2**	**-0.2**
QRZ	**Quartz Range**	**58.92 141**	P	**P**	**14 56 11.8**	**+0.4**
MLZ	**Mavora Lakes**	**59.11 148**	P	**P**	**14 56 12.4**	**-0.2**
MLZ			IAmb	IAmb	14 58 11.9	
	comp=Z,54nm,1.4s					
TOZ	**Tahuroa Road**	**59.23 137**	P	**P**	**14 56 14.9**	**+1.4**
SHLS	**Shalkode**	**59.35 321**	*e*P	**P**	**14 56 12.7**	**-1.8**
SHLS			*e*S	**S**	**15 04 10.7**	**-1.4**
SHLS			pmax	pmax		
	comp=Z,19nm,0.7s					
SHLS	**Shalkode**	**59.35 321**	*e*P	**P**	**14 56 12.8**	**-1.8**
	comp=Z,19nm,0.7s,baz=321					
SHLS			*e*S	**S**	**15 04 10.8**	**-1.4**
	baz=321					
PDGK	**Podgornoye**	**59.42 321**	P	**P**	**14 56 14.9**	**-0.1**
MK31	**Makanchi Array**	**59.61 326**	P	**P**	**14 56 16.6**	**+0.5**
MK31			IAmb	IAmb	14 56 22.2	
	comp=Z,44nm,0.8s					
MK31	**Makanchi Array**	**59.61 326**	P	**P**	**14 56 16.6**	**+0.5**
MK31			pmax	pmax		
	comp=Z,44nm,0.8s					
MKAR	**Makanchi Array**	**59.61 326**	P	**P**	**14 56 16.9**	**+0.8**
	comp=Z,66nm,0.5s,baz=114,slow=7.7,SNR=810					
MKAR			ScP	**ScP**	**15 00 49.6**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=114,slow=6.8,SNR=3.8					
	comp=Z,66nm,0.5s					
MKAR	**Makanchi Array**	**59.61 326**	P	**P**	**14 56 16.8**	**+0.7**
LBZ	**Lake Benmore**	**59.62 146**	P	**P**	**14 56 15.8**	**-0.4**
UZB	**Uzynbulak**	**59.62 321**	*e*P	**P**	**14 56 15.8**	**-0.6**
UZB			*e*S	**S**	**15 04 14.2**	**-1.5**
UZB	**Uzynbulak**	**59.62 321**	*e*P	**P**	**14 56 15.8**	**-0.6**
	baz=320					
UZB			*e*S	**S**	**15 04 14.3**	**-1.5**
	baz=320					
RPZ	**Rata Peaks**	**59.71 145**	LR	LR	15 23 30.6	
	comp=Z,1μm,18.2s,baz=311,slow=37					
RPZ	**Rata Peaks**	**59.71 145**	P	**P**	**14 56 17.1**	**+0.3**
NIL	**Nilore**	**59.73 308**	P	**P**	**14 56 17.6**	**+0.4**
NIL			IAmb	IAmb	14 56 38.7	
	comp=Z,73nm,1.0s					
NIL	**Nilore**	**59.73 308**	P	**P**	**14 56 17.6**	**+0.4**
NIL			pmax	pmax		
	comp=Z,73nm,1.0s					
NIL	**Nilore**	**59.73 308**	P	**P**	**14 56 18.6**	**+1.4**
NIL	**Nilore**	**59.73 308**	P	P	14 56 11.0	-6.2
MAKZ	**Makanchi**	**59.80 325**	P	**P**	**14 56 17.7**	**+0.3**
MAKZ	**Makanchi**	**59.80 325**	P	**P**	**14 56 17.7**	**+0.3**
MAKZ			pmax	pmax		
	comp=Z,90nm,1.0s					
MAKZ	**Makanchi**	**59.80 325**	P	**P**	**14 56 16.8**	**-0.5**
MAKZ			pP	**pP**	**14 56 47.7**	**-2.8**
SATY	**Saty**	**59.97 320**	*d i*P	**P**	**14 56 19.8**	**+1.0**
SATY			*e*S	**S**	**15 04 20.1**	**0.0**
SATY			pmax	pmax		
	comp=Z,33nm,0.8s					
SATY	**Saty**	**59.97 320**	⇓*i*P	**P**	**14 56 19.8**	**+1.0**
	comp=Z,33nm,0.8s,baz=320					
SATY			*e*S	**S**	**15 04 20.2**	**0.0**
	baz=320					
KSH	**Kashi**	**59.97 316**	P	**P**	**14 56 21.3**	**+2.4**
KSH			pP	pP	14 56 51.0	-1.0
KSH			S	**S**	**15 04 23.0**	**+2.7**
KSH			ScS	**ScS**	**15 05 52.6**	**-3.2**
KSH			pmax	pmax		
	comp=Z,36nm,0.9s					
KSH			LR	LR		
	comp=Z,920nm,18.9s					
KSH			LR	LR		
	comp=Z,540nm,21.0s					
KSH			LR	LR		
	comp=Z,800nm,15.1s					
KPKS	**Kokpek**	**60.00 321**	*d i*P	**P**	**14 56 19.5**	**+0.6**
KPKS			*i* S	**S**	**15 04 19.1**	**-1.2**
KPKS			pmax	pmax		
	comp=Z,27nm,0.7s					
KPKS	**Kokpek**	**60.00 321**	⇓*i*P	**P**	**14 56 19.6**	**+0.6**
	comp=Z,27nm,0.7s,baz=321					
KPKS			*i* S	**S**	**15 04 19.2**	**-1.2**
	baz=321					
OTVZ	**Oturere**	**60.06 138**	P	**P**	**14 56 21.5**	**+2.0**
YAK	**Yakutsk**	**60.19 1**	P	**P**	**14 56 20.2**	**+0.5**
	comp=Z,59nm,0.7s,baz=194,slow=1.4,SNR=67					
YAK			pP	**pwP**	**14 56 54.7**	**-1.5**
	comp=Z,27nm,0.8s,baz=153,slow=5.1,SNR=2.7					
YAK			S	**S**	**15 04 19.0**	**-2.9**
	comp=Z,2.6nm,0.3s,baz=261,slow=1.8,SNR=1.8					
	comp=Z,59nm,0.7s					
YAK	**Yakutsk**	**60.19 1**	P	**P**	**14 56 19.4**	**-0.4**
YAK	**Yakutsk**	**60.19 1**	*e*P	**P**	**14 56 19.7**	**0.0**
YAK			*e**PP	**pwP**	**14 56 55.4**	**-0.9**
YAK			*e*		14 57 00.9	
YAK			*e*S	**S**	**15 04 21.7**	**-0.2**
YAK			*e**SS	**pS**	**15 05 00.9**	**+4.4**
YAK			*e*SS	**SS**	**15 08 19.0**	**-2.6**
YAK			pmax	pmax		
	comp=Z,90nm,0.8s					
Y

BKZ	**Black Stump Fm**	**60.62 138**	P	**P**	**14 56 22.9**	**-0.2**
BKZ	**Black Stump Fm**	**60.62 138**	P	**P**	**14 56 23.1**	**0.0**
KWHZ	**Kaweka Forest**	**60.70 138**	P	**P**	**14 56 24.6**	**+0.9**
NRN	**Naryn**	**60.79 318**	P	**P**	**14 56 24.6**	**0.0**
NRN			IAmb	IAmb	14 57 00.4	
	comp=Z,24nm,0.7s					
NRN	**Naryn**	**60.79 318**	P	**P**	**14 56 24.6**	**0.0**
NRN			pmax	pmax		
	comp=Z,25nm,0.7s					
RUGZ	**Raukumara Rang**	**60.84 136**	P	**P**	**14 56 26.4**	**+1.7**
RAHZ	**Arahi**	**60.89 137**	P	**P**	**14 56 25.3**	**+0.4**
MDOK	**Medeo**	**60.89 320**	*i* P	**P**	**14 56 25.9**	**+0.9**
MDOK			*i* S	**S**	**15 04 31.3**	**-0.6**
MDOK	**Medeo**	**60.89 320**	*i* P	**P**	**14 56 26.0**	**+0.9**
	baz=320					
MDOK			*i* S	**S**	**15 04 31.3**	**-0.6**
	baz=320					
TNSS	**Tian-Shan**	**60.90 320**	*i* P	**P**	**14 56 26.2**	**+0.8**
TNSS	**Tian-Shan**	**60.90 320**	*i* P	**P**	**14 56 26.3**	**+0.8**
	baz=320					
ARXS	**Arharly**	**60.90 321**	*e*P	**P**	**14 56 25.3**	**+0.3**
TDK	**Taldyqorghan**	**60.94 322**	*e*P	**P**	**14 56 25.8**	**+0.7**
TDK			*e*S	**S**	**15 04 28.2**	**-3.9**
TDK			pmax	pmax		
	comp=Z,37nm,0.9s					
TDK	**Taldyqorghan**	**60.94 322**	*e*P	**P**	**14 56 25.9**	**+0.7**
	comp=Z,37nm,0.9s,baz=322					
TDK			*e*S	**S**	**15 04 28.3**	**-3.9**
	baz=322					
ULHL	**Ulahol**	**61.00 319**	P	**P**	**14 56 27.5**	**+1.6**
	SNR=8.2					
SNGZ	**Shannon Statio**	**61.00 137**	P	**P**	**14 56 25.8**	**+0.1**
AAA	**Alma-Ata**	**61.00 320**	*e*P	**P**	**14 56 26.3**	**+0.7**
AAA	**Alma-Ata**	**61.00 320**	*e*P	**P**	**14 56 26.4**	**+0.7**
	baz=320					
KAHZ	**Kahuranaki**	**61.19 138**	P	**P**	**14 56 27.1**	**+0.2**
CHKK	**Chushkaly**	**61.26 320**⇓	*i*P	**P**	**14 56 27.8**	**+0.5**
CHKK	**Chushkaly**	**61.26 320**⇓	*i*P	**P**	**14 56 27.8**	**+0.5**
	baz=320					
BOOM	**Boomskoye usch**	**61.31 319**	P	**P**	**14 56 28.7**	**+0.8**
BOOM			IAmb	IAmb	14 57 07.2	
	comp=Z,34nm,0.9s					
BOOM	**Boomskoye usch**	**61.31 319**	P	**P**	**14 56 28.7**	**+0.8**
BOOM			pmax	pmax		
	comp=Z,34nm,1.0s					
KUU	**Kurty**	**61.69 320***d*	*i*P	**P**	**14 56 30.9**	**+0.7**
KUU			*e*S	**S**	**15 04 41.6**	**-0.1**
KUU			pmax	pmax		
	comp=Z,44nm,0.5s					
KUU	**Kurty**	**61.69 320**⇓	*i*P	**P**	**14 56 30.9**	**+0.7**
	comp=Z,44nm,0.5s,baz=320					
KUU			*e*S	**S**	**15 04 41.6**	**-0.1**
	baz=320					
TKM2	**Tokmak 2**	**61.73 319**	P	**P**	**14 56 31.9**	**+1.1**
	SNR=46					
TKM2	**Tokmak 2**	**61.73 319**	P	**P**	**14 56 31.1**	**+0.4**
KBK	**Karagaybulak**	**62.04 318**	P	**P**	**14 56 34.2**	**+1.4**
	SNR=20					
AFI	**Afiamalu**	**62.17 107**	LR	LR	15 21 24.5	
	comp=Z,423nm,21.2s,baz=299,slow=34					
CHMS	**Chumysh**	**62.32 319**	P	**P**	**14 56 35.1**	**+0.7**
	SNR=13					
AAK	**Ala-Archa**	**62.33 318**	P	**P**	**14 56 36.0**	**+1.3**
	SNR=20					
AAK	**Ala-Archa**	**62.33 318**	P	**P**	**14 56 34.8**	**+0.1**
	comp=Z,9.1nm,0.4s,baz=122,slow=6.2,SNR=25					
AAK			S	**S**	**15 04 47.3**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=201,slow=11,SNR=1.3					
	comp=Z,9.1nm,0.4s					
AAK	**Ala-Archa**	**62.33 318**	P	**P**	**14 56 35.4**	**+0.7**
AAK			IAmb	IAmb	14 57 25.9	
	comp=Z,54nm,1.4s					
AAK	**Ala-Archa**	**62.33 318***d*	*i*P	**P**	**14 56 35.7**	**+1.0**
AAK			pmax	pmax		
	comp=Z,25nm,1.1s					
AAK	**Ala-Archa**	**62.33 318**	P	**P**	**14 56 36.3**	**+1.5**
AAK	**Ala-Archa**	**62.33 318**	*i* P	**P**	**14 56 35.2**	**+0.5**
	SNR=26					
SGDS	**Sogindy**	**62.60 319***d*	*i*P	**P**	**14 56 36.7**	**+0.4**
SGDS			*i* S	**S**	**15 04 53.2**	**0.0**
SGDS	**Sogindy**	**62.60 319**⇓	*i*P	**P**	**14 56 36.8**	**+0.4**
	baz=319					
SGDS			*i* S	**S**	**15 04 53.3**	**0.0**
	baz=319					
USP	**Ospenovka**	**62.60 319**	P	**P**	**14 56 37.3**	**+0.9**
	SNR=49					
AML	**Almayashu**	**62.65 318**	P	**P**	**14 56 38.6**	**+1.5**
	SNR=15					
ZAA0	**Zalesovo Array**	**62.70 333**	P	**P**	**14 56 36.0**	**-0.7**
ZAA0			IAmb	IAmb	14 57 18.3	
	comp=Z,47nm,1.3s					
ZALV	**Zalesovo Beam**	**62.70 333**	P	**P**	**14 56 36.2**	**-0.5**
	comp=Z,6.1nm,0.3s,baz=132,slow=7.1,SNR=29					
ZALV			PKP2bc		15 25 44.8	
	comp=Z,2.0nm,0.9s,baz=270,slow=3.6,SNR=6.3					
ZALV			LR	LR	15 27 35.8	
	comp=Z,366nm,18.1s,baz=134,slow=39					
	comp=Z,6.1nm,0.3s					
ZALV	**Zalesovo Beam**	**62.70 333**	P	**P**	**14 56 35.7**	**-1.0**
ZALV	**Zalesovo Beam**	**62.70 333**	*i* P	**P**	**14 56 36.5**	**-0.2**
ZALV			pmax	pmax		
	comp=Z,6.0nm,0.3s					
EKS2	**Erkin-Say**	**62.82 318**	P	**P**	**14 56 39.4**	**+1.5**
	SNR=47					
DRK	**Karamyk**	**62.91 314**	P	**P**	**14 56 39.4**	**+0.6**
DRK			IAmb	IAmb	14 56 45.0	
	comp=Z,55nm,0.8s					
BTLS	**Baital**	**63.68 321***d*	*i*P	**P**	**14 56 43.4**	**+0.1**
BTLS			*e*S	**S**	**15 05 04.5**	**-1.9**
BTLS	**Baital**	**63.68 321**⇓	*i*P	**P**	**14 56 43.5**	**+0.1**
	baz=320					
BTLS			*e*S	**S**	**15 05 04.5**	**-1.9**
	baz=320					
GAR	**Garm**	**63.81 313**	P	**P**	**14 56 44.7**	**+0.2**
KURBB	**Kurchatov Arra**	**63.81 328**	P	**P**	**14 56 44.5**	**+0.4**
	comp=Z,57nm,0.6s,baz=126,slow=6.0,SNR=314					
KURBB			S	**S**	**15 05 02.5**	**-5.3**
	comp=Z,0.8nm,0.2s,baz=126,slow=15,SNR=5.0					
	comp=Z,57nm,0.6s					
KURBB	**Kurchatov Arra**	**63.81 328**	P	**P**	**14 56 44.1**	**0.0**
KURK	**Kurchatov**	**63.82 328**	P	**P**	**14 56 44.2**	**+0.1**
KURK	**Kurchatov**	**63.82 328**	P	**P**	**14 56 44.2**	**+0.1**
KURK			pmax	pmax		
	comp=Z,115nm,0.8s					
KURK	**Kurchatov**	**63.82 328**	P	**P**	**14 56 44.7**	**+0.6**
KURK	**Kurchatov**	**63.82 328**	P	**P**	**14 56 42.9**	**-1.2**
KURK			x	x	14 56 48.1	
KURK			pP	**pP**	**14 57 14.8**	**-2.8**
KURK			pwP	**pwP**	**14 57 20.9**	**+0.2**
SEY	**Seymchan**	**63.83 12**	P	**P**	**14 56 45.5**	**+1.6**
	comp=Z,39nm,0.8s,baz=222,slow=6.4,SNR=76					
	comp=Z,39nm,0.8s					
SEY	**Seymchan**	**63.83 12***ce*	P	**P**	**14 56 45.9**	**+1.9**
SEY			pmax	pmax		
	comp=Z,48nm,1.0s					
BTK	**Batken**	**63.83 314**	P	**P**	**14 56 44.8**	**+0.2**
BTK			IAmb	IAmb	14 57 23.6	
	comp=Z,41nm,0.8s					
BTK	**Batken**	**63.83 314**	P	**P**	**14 56 44.8**	**+0.2**
BTK			pmax	pmax		
	comp=Z,41nm,0.8s					
SHEM	**Shemya Is, Ala**	**63.84 30**	P	**P**	**14 56 45.0**	**+0.8**
	comp=Z,25nm,0.5s,baz=277,slow=17					
SHEM			LR	LR	15 19 27.8	
	comp=Z,222nm,20.1s,baz=212,slow=31					
	comp=Z,25nm,0.5s					
SMY	**Shemya**	**63.84 30**	P	**P**	**14 56 45.0**	**+0.8**
SMY	**Shemya**	**63.84 30**	P	**P**	**14 56 45.0**	**+0.8**
SMY			pmax	pmax		
	comp=Z,418nm,1.5s					
CHGR	**Chuyangaron**	**64.55 312**	P	**P**	**14 56 49.3**	**0.0**
CHGR	**Chuyangaron**	**64.55 312**	P	**P**	**14 56 49.3**	**0.0**
CHGR			pmax	pmax		
	comp=Z,235nm,1.5s					
DZA	**Taraz**	**64.56 317**	*e*P	**P**	**14 56 48.3**	**-0.8**
DZA	**Taraz**	**64.56 317**	*e*P	**P**	**14 56 48.4**	**-0.8**
	baz=317					
IUG	**Iuzhnay**	**65.16 316***d*	*i*P	**P**	**14 56 53.9**	**+0.7**
IUG			*e*S	**S**	**15 05 25.0**	**+0.1**
IUG	**Iuzhnay**	**65.16 316**⇓	*i*P	**P**	**14 56 53.1**	**-0.1**
	baz=316					
IUG			*e*S	**S**	**15 05 25.0**	**+0.1**
	baz=316					
KK31	**Karatay Array**	**65.19 317**	P	**P**	**14 56 52.9**	**-0.4**
KK31			IAmb	IAmb	14 57 32.4	
	comp=Z,36nm,0.9s					
KK31	**Karatay Array**	**65.19 317**	P	**P**	**14 56 52.9**	**-0.4**
KK31			pmax	pmax		
	comp=Z,36nm,0.9s					
KKAR	**Karatay Array**	**65.19 317**	P	**P**	**14 56 53.2**	**0.0**
KKAR	**Karatay Array**	**65.19 317**	P	**P**	**14 56 53.3**	**0.0**
TAS	**Tashkent**	**65.37 315**	P	**P**	**14 56 56.8**	**+2.3**
TAS			pmax	pmax		
	comp=Z,77nm,0.6s					
BRZS	**Berezniki**	**66.74 325**	*e*P	**P**	**14 57 02.9**	**-0.1**
BRZS			*e*S	**S**	**15 05 43.6**	**0.0**
BRZS	**Berezniki**	**66.74 325**	*e*P	**P**	**14 57 03.0**	**-0.1**
	baz=325					
BRZS			*e*S	**S**	**15 05 43.7**	**0.0**
	baz=325					
KIWB	**Kanaga Island**	**67.95 33**	P	**P**	**14 57 10.7**	**+0.1**
DRV	**Dumont d'Urvil**	**68.81 175**	P	**P**	**14 57 12.3**	**-3.3**
DRV			pP	**pP**	**14 57 46.9**	**-3.5**
DRV			sP	**sP**	**14 58 00.1**	**-5.6**
CASY	**Casey**	**68.92 187**	P	**P**	**14 57 16.4**	**+0.1**
CASY	**Casey**	**68.92 187**	P	**P**	**14 57 14.1**	**-2.2**
BVA0	**Borovoye Array**	**69.39 327**	*i* P	**P**	**14 57 19.2**	**-0.3**
BVAR	**Borovoye Array**	**69.39 327**	P	**P**	**14 57 19.6**	**0.0**
	comp=Z,17nm,0.6s,baz=128,slow=7.1,SNR=130					
BVAR			S	**S**	**15 06 12.7**	**-2.3**
	comp=Z,0.9nm,0.8s,baz=114,slow=15,SNR=5.5					
	comp=Z,17nm,0.6s					
BRVK	**Borovoye**	**69.46 327**	P	**P**	**14 57 19.8**	**-0.1**
BRVK			IAmb	IAmb	14 58 00.4	
	comp=Z,151nm,1.3s					
BRVK	**Borovoye**	**69.46 327***d*	*i*P	**P**	**14 57 19.9**	**-0.1**
BRVK			pmax	pmax		
	comp=Z,37nm,0.8s					
BRVK	**Borovoye**	**69.46 327**	P	**P**	**14 57 20.3**	**+0.4**
BRVK	**Borovoye**	**69.46 327**	P	**P**	**14 57 19.0**	**-0.9**
BRVK			pP	**pP**	**14 57 51.2**	**-2.7**
BRVK			pwP	**pwP**	**14 57 58.7**	**+2.0**
BRVK			sP	**sP**	**14 58 06.8**	**-2.2**
WBK	**Wadi Bani Khal**	**69.50 293**	P	**P**	**14 57 21.6**	**+0.7**
	SNR=5.7					
TIXI	**Tiksi**	**69.84 0**	P	**P**	**14 57 21.5**	**-0.3**
	comp=Z,9.0nm,0.3s,baz=90,slow=8.7					
	comp=Z,9.0nm,0.3s					
TIXI	**Tiksi**	**69.84 0**	P	**P**	**14 57 21.5**	**-0.3**
TIXI			IAmb	IAmb	14 58 08.6	
	comp=Z,57nm,1.1s					
TIXI	**Tiksi**	**69.84 0***c*	*i*P	**P**	**14 57 21.7**	**-0.1**
TIXI			pmax	pmax		
	comp=Z,44nm,1.5s					
WSAR	**Wadi Sarin**	**69.89 294**	LR	LR	15 34 10.4	
	comp=Z,181nm,18.0s,baz=112,slow=41					
MHTO	**MHTO**	**70.25 292**	P	**P**	**14 57 25.9**	**+0.5**
	SNR=20					
JMDO	**Jabal Madar**	**70.27 293**	P	**P**	**14 57 26.4**	**+0.8**
	SNR=7.4					
BIDO	**Bidbid**	**70.38 294**	P	**P**	**14 57 26.9**	**+0.8**
	SNR=11					
SMDO	**Samad**	**70.40 294**	P	**P**	**14 57 26.7**	**+0.3**
DQM	**DQM**	**70.55 290**	P	**P**	**14 57 28.5**	**+1.4**
	SNR=7.8					
HOQ	**Hoqain**	**71.13 294**	P	**P**	**14 57 32.0**	**+1.2**
	SNR=11					
BSY	**Bisya**	**71.14 293**	P	**P**	**14 57 31.7**	**+0.9**
	SNR=9.4					
BILL	**Bilibino**	**71.31 14**	P	**P**	**14 57 31.4**	**+0.6**
BILL	**Bilibino**	**71.31 14***ce*	P	**P**	**14 57 32.5**	**+1.7**
BILL			*e**PP	**pP**	**14 58 08.2**	**+2.9**
BILL			*e*		15 00 16.2	
BILL			*e*S	**SKiKP**	**15 07 04.8**	**+8.1**
BILL			pmax	pmax		
	comp=Z,28nm,1.4s					
ARQ	**Araqi**	**71.83 294**	P	**P**	**14 57 36.1**	**+1.2**
	SNR=11					
SHAO	**Shalim**	**72.19 288**	P	**P**	**14 57 38.1**	**+1.0**
SHAO	**Shalim**	**72.19 288**	*i* P	**P**	**14 57 37.5**	**+0.4**
	SNR=11					
UOSS	**Minazif**	**72.29 296**	P	**P**	**14 57 37.6**	**0.0**
UOSS	**Minazif**	**72.29 296**	P	**P**	**14 57 38.2**	**+0.6**
UOSS	**Minazif**	**72.29 296**	*i* P	**P**	**14 57 37.8**	**+0.2**
	SNR=7.9					
BANOM	**Banah**	**72.32 297**	P	**P**	**14 57 39.0**	**+1.3**
BANOM	**Banah**	**72.32 297**	*i* P	**P**	**14 57 38.0**	**+0.2**
	SNR=8.8					
HATD	**Hatta, Dubai**	**72.34 295**	P	**P**	**14 57 38.8**	**+0.9**
	SNR=8.5					
HATD	**Hatta, Dubai**	**72.34 295**	*i* P	**P**	**14 57 38.3**	**+0.4**
	SNR=16					
MSFE	**Esma-Masafi**	**72.38 296**	*i* P	**P**	**14 57 39.2**	**+1.1**
	SNR=12					
MASF	**Masafi**	**72.38 296**	P	**P**	**14 57 39.5**	**+1.4**
	SNR=7.4					
ASHO	**Ashiyiah**	**72.39 295**	P	**P**	**14 57 38.9**	**+0.7**
	SNR=7.2					
ASHO	**Ashiyiah**	**72.39 295**	*i* P	**P**	**14 57 38.8**	**+0.5**
	SNR=14					
SHME	**Shamm**	**72.47 297**	P	**P**	**14 57 40.5**	**+1.8**
NRIK	**Noril'sk**	**72.55 346**	P	**P**	**14 57 37.7**	**-0.5**
	comp=Z,31nm,0.6s,baz=125,slow=6.4,SNR=39					
NRIK			pP	**pwP**	**14 58 14.6**	**-1.0**
	comp=Z,37nm,0.7s,baz=120,slow=8.1,SNR=6.1					
NRIK			S	**S**	**15 06 45.5**	**-5.3**
	comp=Z,1.1nm,0.4s,baz=222,slow=5.5,SNR=1.2					
	comp=Z,31nm,0.6s					
NRIK	**Noril'sk**	**72.55 346***d*	*i*P	**P**	**14 57 38.0**	**-0.2**
NRIK			pmax	pmax		
	comp=Z,26nm,0.6s					
ALNE	**Al Ain**	**72.61 295**	P	**P**	**14 57 40.6**	**+1.1**
	SNR=40					
ALNE	**Al Ain**	**72.61 295**	*i* P	**P**	**14 57 39.9**	**+0.4**
	SNR=30					
GEYT	**Alibeck**	**72.71 309**	P	**P**	**14 57 40.7**	**+0.8**
	comp=Z,20nm,0.7s,baz=75,slow=1.6,SNR=50					
GEYT			LR	LR	15 30 56.9	
	comp=Z,307nm,21.6s,baz=102,slow=37					
	comp=Z,20nm,0.7s					
GEYT	**Alibeck**	**72.71 309**	P	**P**	**14 57 40.4**	**+0.5**
GYA0	**ALIBECK ARRAY**	**72.71 309**	P	**P**	**14 57 40.5**	**+0.6**
GYA0			pmax	pmax		
	comp=Z,35nm,0.9s					
GYA0B	**ALIBECK ARRAY**	**72.71 309**	P	**P**	**14 57 40.5**	**+0.6**
NAZ	**Nazwa, Dubai**	**72.78 296**	P	**P**	**14 57 41.2**	**+0.7**
NAZ	**Nazwa, Dubai**	**72.78 296**	P	**P**	**14 57 40.0**	**-0.5**
DMTO	**DMTO**	**72.82 288**	P	**P**	**14 57 41.4**	**+0.6**
FAQ	**Al Faqa, Dubai**	**72.82 295**	P	**P**	**14 57 41.3**	**+0.5**
	SNR=5.4					
FAQ	**Al Faqa, Dubai**	**72.82 295**	*i* P	**P**	**14 57 40.8**	**0.0**
	SNR=19					
UMZA	**Umm Al Zommool**	**73.01 293**	P	**P**	**14 57 42.4**	**+0.5**
ASUD	**Al Ashush, Dub**	**73.05 295**	P	**P**	**14 57 43.6**	**+1.5**
	SNR=8.1					
ASUD	**Al Ashush, Dub**	**73.05 295**	*i* P	**P**	**14 57 42.3**	**+0.2**
	SNR=21					
NIKH	**Nikolski High**	**73.05 35**	P	**P**	**14 57 41.9**	**+0.5**
	baz=250					
AJN	**Ajban**	**73.35 295**	P	**P**	**14 57 44.9**	**+1.0**
RBK	**Rabkut**	**73.51 288**	P	**P**	**14 57 45.3**	**+0.3**
DOK	**Doka**	**73.65 289**	P	**P**	**14 57 46.0**	**+0.3**
	SNR=13					
SPIA	**Saint Paul Isl**	**73.86 30**	P	**P**	**14 57 47.0**	**+0.8**
	baz=247					
WHFO	**Wadi Hawf**	**73.95 288**	P	**P**	**14 57 47.3**	**-0.2**
	SNR=7.5					
AB31	**Akbulak array**	**74.16 321**	*i* P	**P**	**14 57 47.5**	**-0.5**
ABKAR	**Akbulak array**	**74.16 321**	P	**P**	**14 57 47.5**	**-0.5**
MZWR	**Madinat Zayed**	**74.28 294**	P	**P**	**14 57 50.1**	**+0.9**
ABTO	**Aybut**	**74.37 287**	P	**P**	**14 57 50.2**	**+0.2**
MZR	**Muzera**	**74.58 293**	P	**P**	**14 57 52.1**	**+1.0**
	SNR=9.0					
MZR	**Muzera**	**74.58 293**	*i* P	**P**	**14 57 51.3**	**+0.2**
	SNR=18					
UNV	**Unalaska Valle**	**74.67 34**	P	**P**	**14 57 50.9**	**0.0**
UNV	**Unalaska Valle**	**74.67 34**	P	**P**	**14 57 51.5**	**+0.6**
	baz=251					
AKUT	**Akutan**	**75.17 34**	P	**P**	**14 57 54.4**	**+0.6**
GHWR	**Ruwais**	**75.21 294**	P	**P**	**14 57 55.5**	**+0.9**
JRN	**Qarnain Island**	**75.32 295**	P	**P**	**14 57 55.5**	**+0.3**
AKTO	**Aktyubinsk**	**75.68 322**	P	**P**	**14 57 56.8**	**+0.1**
	comp=Z,32nm,0.8s,baz=100,slow=7.2,SNR=91					
AKTO			LR	LR	15 34 07.5	
	comp=Z,575nm,20.5s,baz=104,slow=38					
	comp=Z,32nm,0.8s					
GAMB	**Gambell**	**75.94 24**	P	**P**	**14 57 59.0**	**+1.1**
	baz=244					
SVE	**Sverdlovsk**	**76.04 329**⇓	*i*P	**P**	**14 57 59.0**	**+0.3**
SVE			*e*S	**S**	**15 07 28.8**	**-1.5**
SVE			pmax	pmax		
	comp=Z,49nm,0.7s					
SLWR	**Sila**	**76.30 294**	P	**P**	**14 58 01.4**	**+0.6**
FALS	**False Pass**	**76.69 34**	P	**P**	**14 58 02.7**	**+0.3**
FALS	**False Pass**	**76.69 34**	P	**P**	**14 58 03.2**	**+0.8**
	baz=254					
ARU	**Arti**	**77.01 328**	LR	LR	15 33 52.7	
	comp=Z,321nm,18.0s,baz=103,slow=37					
ARU	**Arti**	**77.01 328**	P	**P**	**14 58 03.6**	**-0.6**
ARU			IAmb	IAmb	14 58 38.8	
	comp=Z,89nm,1.0s					
ARU	**Arti**	**77.01 328***d*	*i*P	**P**	**14 58 03.4**	**-0.8**
ARU			*PP	**pwP**	**14 58 40.7**	**-1.0**
ARU					15 00 58.5	
ARU			PPP	PPP	15 02 45.8	
ARU			S	**S**	**15 07 38.7**	**-2.1**
ARU			*SS	**sS**	**15 08 41.5**	**+0.6**
ARU			SSS	SSS	15 16 00.6	
ARU			pmax	pmax		
	comp=Z,27nm,0.7s					
SHMA	**Al-Shehemyia**	**77.09 296**	P	**P**	**14 58 06.0**	**+0.8**
SMRA	**Abu-Samra**	**77.14 295**	P	**P**	**14 58 06.0**	**+0.5**
MLOA	**Mauna Loa Obse**	**77.15 70**	P	**P**	**14 58 06.6**	**+0.4**
POHA	**Pohakuloa**	**77.20 70**	P	**P**	**14 58 07.2**	**+0.9**
HMH	**Humu'ula Sheep**	**77.24 70**	P	**P**	**14 58 07.8**	**+1.3**
AIN	**Ainahou**	**77.25 71**	P	**P**	**14 58 06.8**	**+0.3**
MLH	**Mauna Loa**	**77.33 71**	P	**P**	**14 58 07.4**	**+0.4**
SDPT	**Sand Point**	**78.45 34**	P	**P**	**14 58 12.5**	**+0.3**
SDPT	**Sand Point**	**78.45 34**	P	**P**	**14 58 12.8**	**+0.7**
	baz=256,SNR=6.7					
CNBA	**Chernabura Isl**	**78.83 34**	P	**P**	**14 58 14.3**	**+0.1**
CHNA	**Chernabura Isl**	**78.83 34**	P	**P**	**14 58 15.2**	**+1.0**
	baz=257					
CHGN	**Chignik**	**79.81 33**	P	**P**	**14 58 19.4**	**-0.1**
CHGN	**Chignik**	**79.81 33**	P	**P**	**14 58 20.2**	**+0.7**
	baz=258					
N16K	**Nishlik Lake**	**80.55 29**	P	**P**	**14 58 24.6**	**+1.2**
	baz=257					
P16K	**Nushagak River**	**80.61 30**	P	**P**	**14 58 25.1**	**+1.3**
	baz=258					
O16K	**Kokwok River B**	**80.69 30**	P	**P**	**14 58 25.3**	**+1.2**
	baz=257					
R17K	**Ugashik Creek**	**81.16 32**	P	**P**	**14 58 27.6**	**+0.9**
	baz=259					
AKT	**Akhty**	**81.16 312**⇑	*i*P	**P**	**14 58 27.8**	**+0.6**
AKT			pmax	pmax		
	comp=Z,16nm,0.6s					
O17K	**Koliganek Bris**	**81.22 30**	P	**P**	**14 58 28.2**	**+1.2**
	baz=258,SNR=5.5					
Q16K	**King Salmon**	**81.22 31**	P	**P**	**14 58 27.6**	**+0.6**
	baz=259					
CHIR	**Chirikof Islan**	**81.25 34**	P	**P**	**14 58 27.6**	**+0.4**
VNDA	**Vanda**	**81.35 173**	P	**P**	**14 58 27.3**	**0.0**
	comp=Z,38nm,0.8s,baz=318,slow=6.5,SNR=226					
VNDA			S	**S**	**15 08 18.8**	**-7.2**
	comp=Z,0.3nm,0.6s,baz=106,slow=13,SNR=1.3					
VNDA			PKKPbc	**PKKPbc**	**15 17 01.1**	**-3.8**
	comp=Z,0.7nm,0.5s,baz=207,slow=2.3,SNR=10					
VNDA			LR	LR	15 34 53.8	
	comp=Z,396nm,18.9s,baz=340,slow=36					
	comp=Z,38nm,0.8s					
VNDA	**Vanda**	**81.35 173**	P	**P**	**14 58 27.1**	**-0.2**
VNDA			IAmb	IAmb	14 58 29.5	
	comp=Z,40nm,0.8s					
VNDA	**Vanda**	**81.35 173**	P	**P**	**14 58 27.1**	**-0.2**
VNDA			pmax	pmax		
	comp=Z,40nm,0.8s					
P17K	**Kvichak River**	**81.43 30**	P	**P**	**14 58 28.6**	**+0.6**
	baz=259					
MAK	**Makhachkala**	**81.47 313**	*e*P	**P**	**14 58 27.5**	**-1.1**
MAK			*e**PP	**pP**	**14 59 03.8**	**+0.1**
MAK			*e**SP	**sP**	**14 59 19.7**	**+1.2**
MAK			*e*		15 01 32.7	
MAK			*e*PPP	PPP	15 03 24.1	
MAK			*e*S	**S**	**15 08 26.7**	**-1.8**
MAK			*e**SS	**sS**	**15 09 32.2**	**+2.9**
MAK			*e*SS	**SS**	**15 13 44.3**	**-3.9**
MAK			*e*SSS	SSS	15 17 12.1	
MAK			pmax	pmax		
	comp=Z,365nm,1.7s					
MAK			MLR	MLR		
	comp=Z,799nm,19.0s					
Q17K	**Contact Creek**	**81.54 31**	P	**P**	**14 58 28.7**	**-0.1**
	baz=260					
RAYN	**Ar Rayn**	**81.93 293**	P	**P**	**14 58 31.4**	**-0.1**
RAYN			IAmb	IAmb	14 59 13.4	
	comp=Z,68nm,1.0s					
RAYN	**Ar Rayn**	**81.93 293**	P	**P**	**14 58 31.5**	**-0.1**
RAYN			pmax	pmax		
	comp=Z,68nm,1.0s					
RAYN	**Ar Rayn**	**81.93 293**	P	**P**	**14 58 31.9**	**+0.3**
RAYN	**Ar Rayn**	**81.93 293**	*i* P	**P**	**14 58 31.9**	**+0.3**
	SNR=7.4					
VOI	**Vohitsoka**	**81.97 248**	P	**P**	**14 58 32.2**	**+0.3**
VOI			IAmb	IAmb	14 59 14.2	
	comp=Z,62nm,0.6s					
VOI	**Vohitsoka**	**81.97 248**	P	**P**	**14 58 32.7**	**+0.9**
N18K	**Kilae Creek**	**81.99 29**	P	**P**	**14 58 31.9**	**+0.9**
N18K	**Kilae Creek**	**81.99 29**	P	**P**	**14 58 32.0**	**+1.0**
	baz=259					
Q18K	**Katmai Hardscr**	**82.06 31**	P	**P**	**14 58 31.6**	**+0.1**
	baz=260					
MAW	**Mawson**	**82.13 200**	P	**P**	**14 58 32.2**	**+0.7**
	comp=Z,25nm,0.9s,baz=65,slow=8.9,SNR=18					
MAW			LR	LR	15 33 59.2	
	comp=Z,161nm,19.1s,baz=58,slow=35					
	comp=Z,25nm,0.9s					
MAW	**Mawson**	**82.13 200**	P	**P**	**14 58 32.4**	**+0.9**
	baz=82,SNR=13					
MAW	**Mawson**	**82.13 200**	P	**P**	**14 58 33.0**	**+1.5**
MAW	**Mawson**	**82.13 200**	P	**P**	**14 58 33.0**	**+1.5**
SII	**Sitkinak Islan**	**82.16 33**	P	**P**	**14 58 33.1**	**+1.1**
SII	**Sitkinak Islan**	**82.16 33**	P	**P**	**14 58 32.9**	**+0.9**
	baz=261					
O18K	**Koktuh Hills**	**82.17 30**	P	**P**	**14 58 33.4**	**+1.5**
	ba

M19K				IAmb	IAmb	14 59 28.2	
	comp=Z,46nm,1.1s						
M19K	**Big River Lodg**	**82.92**	**28**	**P**	**P**	**14 58 37.6**	**+1.7**
	baz=260,SNR=8.9						
P19K	**Oil Pt**	**83.13**	**30**	P	**P**	**14 58 37.9**	**+1.0**
	baz=262						
KDAK	**Kodiak Island**	**83.20**	**32**	LR	LR	15 31 50.1	
	comp=Z,247nm,19.7s,baz=264,slow=33						
KDAK	**Kodiak Island**	**83.20**	**32**	P	**P**	**14 58 38.1**	**+0.8**
KDAK				IAmb	IAmb	14 58 39.5	
	comp=Z,44nm,0.7s						
KDAK	**Kodiak Island**	**83.20**	**32**	P	**P**	**14 58 38.1**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,44nm,0.7s						
KDAK	**Kodiak Island**	**83.20**	**32**	P	**P**	**14 58 38.5**	**+1.2**
	baz=262						
L20K	**Farewell, AK**	**83.25**	**27**	P	**P**	**14 58 38.5**	**+1.0**
	baz=261						
K20K	**Telida**	**83.31**	**26**	P	**P**	**14 58 39.0**	**+1.2**
K20K				IAmb	IAmb	14 58 42.3	
	comp=Z,197nm,2.0s						
K20K	**Telida**	**83.31**	**26**	P	**P**	**14 58 39.3**	**+1.5**
	baz=260,SNR=9.4						
GNI	**Garni**	**83.32**	**310**	LR	LR	15 38 45.0	
	comp=Z,192nm,21.6s,baz=94,slow=38						
Q20K	**Shuyak Island**	**83.41**	**31**	P	**P**	**14 58 39.3**	**+1.0**
	baz=262						
J20K	**Nowinta River**	**83.41**	**26**	P	**P**	**14 58 39.3**	**+1.1**
J20K				IAmb	IAmb	14 58 42.7	
	comp=Z,70nm,1.4s						
J20K	**Nowinta River**	**83.41**	**26**	P	**P**	**14 58 39.4**	**+1.1**
	baz=260,SNR=8.6						
RSO	**Redoubt South**	**83.48**	**29**	P	**P**	**14 58 39.1**	**+0.1**
O20K	**Slope Mountain**	**83.49**	**30**	P	**P**	**14 58 38.9**	**+0.1**
	baz=262						
M20K	**Styx River**	**83.50**	**28**	P	**P**	**14 58 39.7**	**+0.8**
M20K				IAmb	IAmb	14 58 42.2	
	comp=Z,169nm,1.6s						
M20K	**Styx River**	**83.50**	**28**	P	**P**	**14 58 40.2**	**+1.3**
	baz=262,SNR=23						
PPT	**Papeete**	**83.81**	**108**	P	**P**	**14 58 41.0**	**-0.3**
	comp=Z,14nm,1.0s,baz=294,slow=20,SNR=1.7						
PPT				LR	LR	15 32 26.7	
	comp=Z,183nm,21.3s,baz=268,slow=33						
	comp=Z,14nm,1.0s						
PPT2	**Papeete2**	**83.82**	**108**	*e*P	**P**	**14 58 39.6**	**-1.8**
PPT2				*ep*P	**pP**	**14 59 11.2**	**-6.1**
	comp=Z,441nm,17.5s						
PPT2				*e*S	**S**	**15 08 54.5**	**+1.2**
	comp=Z,524nm,24.2s						
PPT2	**Papeete2**	**83.82**	**108**	*e*LR	LR	15 25 14.6	
	comp=Z,1μm,38.5s						
N20K	**Mount Spurr**	**83.84**	**29**	P	**P**	**14 58 40.6**	**-0.1**
	baz=262,SNR=6.4						
SPCR	**Spurr Chakacha**	**83.84**	**29**	P	**P**	**14 58 40.6**	**-0.1**
	baz=262						
IMAR	**Indian Mountai**	**83.88**	**24**	P	**P**	**14 58 41.5**	**+0.9**
SPU	**Mount Spurr**	**83.92**	**29**	P	**P**	**14 58 41.4**	**+0.4**
G21K	**Allakaket**	**84.07**	**23**	P	**P**	**14 58 42.8**	**+1.3**
	baz=261,SNR=8.0						
PPLA	**Purkeypile**	**84.08**	**27**	P	**P**	**14 58 42.8**	**+0.8**
PPLA				IAmb	IAmb	14 59 32.3	
	comp=Z,89nm,1.5s						
PPLA	**Purkeypile**	**84.08**	**27**	P	**P**	**14 58 42.3**	**+0.4**
	baz=262,SNR=6.3						
ZEI	**Tsey**	**84.10**	**313**	*e*P	**P**	**14 58 42.3**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,29nm,1.0s						
CNPM	**China Poot**	**84.12**	**30**	P	**P**	**14 58 42.2**	**+0.3**
CNPM				IAmb	IAmb	14 59 31.4	
	comp=Z,73nm,1.0s						
CHUM	**Lake Minchumin**	**84.16**	**26**	P	**P**	**14 58 43.2**	**+1.1**
	baz=262						
F21K	**Alatna River**	**84.19**	**23**	P	**P**	**14 58 43.2**	**+1.0**
	baz=261						
CAST	**Castle Rocks**	**84.20**	**26**	P	**P**	**14 58 43.3**	**+1.0**
CAST	**Castle Rocks**	**84.20**	**26**	P	**P**	**14 58 42.9**	**+0.5**
	baz=262,SNR=15						
H21K	**Melozitna Rive**	**84.21**	**24**	P	**P**	**14 58 43.1**	**+0.8**
H21K	**Melozitna Rive**	**84.21**	**24**	P	**P**	**14 58 43.6**	**+1.2**
	baz=261,SNR=11						
SKT	**Skwentna**	**84.27**	**28**	P	**P**	**14 58 42.2**	**-0.5**
SKT				IAmb	IAmb	14 58 44.5	
	comp=Z,43nm,0.5s						
SKT	**Skwentna**	**84.27**	**28**	P	**P**	**14 58 42.6**	**-0.1**
	baz=263,SNR=27						
BRLK	**Bradley Lake**	**84.32**	**30**	P	**P**	**14 58 43.2**	**+0.1**
BRLK				IAmb	IAmb	15 00 00.4	
	comp=Z,69nm,0.9s						
TBI	**Tubuai**	**84.33**	**114**	*e*P	**P**	**14 58 44.8**	**+1.0**
TBI				*ep*P	**pP**	**14 59 13.5**	**-6.3**
	comp=Z,584nm,20.0s						
TBI				*e*S	**S**	**15 08 59.1**	**+1.0**
	comp=Z,484nm,22.8s						
TBI	**Tubuai**	**84.33**	**114**	*e*LR	LR	15 25 28.8	
	comp=Z,1μm,39.8s						
ATD	**Arta Tunnel**	**84.38**	**281**	LR	LR	15 38 07.8	
	comp=Z,132nm,18.4s,baz=89,slow=37						
ATD	**Arta Tunnel**	**84.38**	**281**	P	**P**	**14 58 44.8**	**+0.5**
ATD				IAmb	IAmb	14 59 28.8	
	comp=Z,85nm,1.2s						
ATD	**Arta Tunnel**	**84.38**	**281**	*e*P	P	14 58 57.1	+13
ATD				*e*S	**S**	**15 09 00.2**	**+1.2**
ATD	**Arta Tunnel**	**84.38**	**281**	*e*P	**P**	**14 58 42.4**	**-1.9**
ATD				*e*S	**S**	**15 09 01.0**	**+1.9**
BRSE	**Bradley Lake S**	**84.39**	**30**	P	**P**	**14 58 43.5**	**+0.1**
	baz=264,SNR=6.2						
ONI	**Oni**	**84.42**	**312**	P	**P**	**14 58 44.2**	**+0.3**
ONI	**Oni**	**84.42**	**312**	P	**P**	**14 58 44.3**	**+0.3**
ONI				pmax	pmax		
	comp=Z,37nm,1.0s						
GEVA	**Gevas**	**84.54**	**308**	P	**P**	**14 58 45.5**	**+0.7**
GEVA				IAmb	IAmb	14 59 19.1	
	comp=Z,50nm,0.8s						
SUA	**Susitna One**	**84.58**	**29**	P	**P**	**14 58 44.5**	**+0.1**
SUA				IAmb	IAmb	14 58 46.2	
	comp=Z,100nm,1.1s						
SUA	**Susitna One**	**84.58**	**29**	P	**P**	**14 58 44.1**	**-0.3**
	baz=264,SNR=18						
PRGR	**Permogore**	**84.61**	**332**	*e*P	**P**	**14 58 43.7**	**-0.6**
PRGR				pmax	pmax		
	comp=Z,22nm,0.6s						
F22K	**John River**	**84.73**	**22**	P	**P**	**14 58 45.9**	**+0.9**
	baz=262,SNR=7.5						
KTH	**Kantishna Hill**	**84.74**	**26**	P	**P**	**14 58 45.5**	**+0.5**
KTH				IAmb	IAmb	14 59 35.9	
	comp=Z,68nm,1.6s						
BPAW	**Bear Paw Mtn.**	**84.77**	**26**	P	**P**	**14 58 45.7**	**+0.5**
BPAW	**Bear Paw Mtn.**	**84.77**	**26**	P	**P**	**14 58 45.9**	**+0.7**
	baz=263,SNR=10.0						
H22K	**Ishtalitna Cre**	**84.83**	**24**	P	**P**	**14 58 46.7**	**+1.2**
	baz=263						
GOF	**Gofitskoye**	**84.84**	**315⇑**	*e*P	P	14 58 54.8	+8.9
KBZ	**Khabaz**	**84.88**	**314**	P	**P**	**14 58 46.2**	**+0.2**
	comp=Z,8.3nm,1.1s,baz=119,slow=4.9,SNR=8.0						
KBZ				S	S	15 08 53.4	-9.4
	comp=Z,1.3nm,0.7s,baz=204,slow=6.7,SNR=1.7						
KBZ				LR	LR	15 44 04.5	
	comp=Z,154nm,18.1s,baz=74,slow=41						
	comp=Z,8.3nm,1.1s						
KBZ	**Khabaz**	**84.88**	**314**	*d i*P	**P**	**14 58 46.1**	**0.0**
KBZ				pmax	pmax		
	comp=Z,16nm,1.5s						
CUT	**Chulitna**	**84.90**	**28**	P	**P**	**14 58 45.6**	**-0.2**
CUT				IAmb	IAmb	14 59 35.2	
	comp=Z,196nm,1.8s						
CUT	**Chulitna**	**84.90**	**28**	P	**P**	**14 58 45.3**	**-0.5**
	baz=264,SNR=8.0						
M22K	**Willow**	**84.91**	**28**	P	**P**	**14 58 46.0**	**+0.2**
M22K	**Willow**	**84.91**	**28**	P	**P**	**14 58 45.3**	**-0.6**
	baz=264,SNR=22						
G22K	**Bettles**	**84.91**	**23**	P	**P**	**14 58 46.3**	**+0.5**
	baz=262,SNR=7.6						
E22K	**Anaktuvuk Pass**	**84.96**	**22**	P	**P**	**14 58 47.2**	**+1.1**
	baz=262,SNR=9.2						
O22K	**Cooper Landing**	**84.97**	**30**	P	**P**	**14 58 46.7**	**+0.5**
O22K	**Cooper Landing**	**84.97**	**30**	P	**P**	**14 58 46.2**	**0.0**
	baz=265,SNR=9.2						
NEY	**Neytrino**	**84.99**	**313⇑**	*e*P	**P**	**14 58 48.6**	**+1.7**
NEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLY	**Manley**	**84.99**	**25**	P	**P**	**14 58 46.6**	**+0.3**
MLY	**Manley**	**84.99**	**25**	P	**P**	**14 58 47.1**	**+0.9**
	baz=263,SNR=7.4						
TRF	**Thorofare Moun**	**85.01**	**27**	P	**P**	**14 58 46.0**	**-0.5**
TRF				IAmb	IAmb	14 59 37.1	
	comp=Z,57nm,1.3s						
TRF	**Thorofare Moun**	**85.01**	**27**	P	**P**	**14 58 46.4**	**-0.1**
	baz=264,SNR=7.3						
RC01	**Rabbit Creek A**	**85.02**	**29**	P	**P**	**14 58 46.3**	**-0.2**
RC01				IAmb	IAmb	14 58 47.7	
	comp=Z,47nm,0.6s						
RC01	**Rabbit Creek A**	**85.02**	**29**	P	**P**	**14 58 46.6**	**+0.1**
	baz=265,SNR=16						
KIV	**Kislovodsk**	**85.04**	**314**	*e*P	**P**	**14 58 46.9**	**-0.2**
KIV				*e**PP	**pwP**	**14 59 24.2**	**-0.9**
KIV				*e*		15 08 56.4	
KIV				*e*SS	SS	15 14 37.6	-3.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,142nm,20.0s						
SEW	**Seward**	**85.07**	**30**	P	**P**	**14 58 47.3**	**+0.6**
SEW				IAmb	IAmb	14 59 38.8	
	comp=Z,100nm,1.2s						
SEW	**Seward**	**85.07**	**30**	P	**P**	**14 58 46.4**	**-0.3**
	baz=265,SNR=8.2						
PMR	**Palmer**	**85.36**	**28**	P	**P**	**14 58 47.8**	**-0.3**
PMR				IAmb	IAmb	14 59 36.5	
	comp=Z,60nm,1.2s						
PMR	**Palmer**	**85.36**	**28**	P	**P**	**14 58 47.8**	**-0.3**
PMR				pmax	pmax		
	comp=Z,60nm,1.2s						
PMR	**Palmer**	**85.36**	**28**	P	**P**	**14 58 48.1**	**0.0**
	baz=265,SNR=16						
G23K	**Bananza Creek**	**85.47**	**23**	P	**P**	**14 58 49.8**	**+1.2**
	baz=264,SNR=6.5						
D23K	**Nanushuk River**	**85.48**	**21**	P	**P**	**14 58 49.7**	**+1.1**
	baz=263						
H23K	**Yukon River**	**85.57**	**24**	P	**P**	**14 58 49.6**	**+0.5**
H23K	**Yukon River**	**85.57**	**24**	P	**P**	**14 58 49.9**	**+0.7**
	baz=264,SNR=10						
I23K	**Minto, Yukon-K**	**85.58**	**25**	P	**P**	**14 58 49.7**	**+0.5**
I23K	**Minto, Yukon-K**	**85.58**	**25**	P	**P**	**14 58 49.6**	**+0.5**
	baz=265,SNR=9.2						
C23K	**Itkillik River**	**85.61**	**20**	P	**P**	**14 58 50.4**	**+1.2**
	baz=263,SNR=5.6						
MCK	**McKinley**	**85.64**	**26**	P	**P**	**14 58 49.4**	**-0.1**
MCK	**McKinley**	**85.64**	**26**	P	**P**	**14 58 49.4**	**-0.1**
MCK				pmax	pmax		
	comp=Z,31nm,1.0s						
MCK	**McKinley**	**85.64**	**26**	P	**P**	**14 58 49.0**	**-0.5**
	baz=265,SNR=9.4						
RND	**Reindeer**	**85.64**	**27**	P	**P**	**14 58 49.2**	**-0.4**
RND				IAmb	IAmb	14 58 50.6	
	comp=Z,21nm,0.6s						
RND	**Reindeer**	**85.64**	**27**	P	**P**	**14 58 49.2**	**-0.4**
RND				pmax	pmax		
	comp=Z,21nm,0.6s						
NEA2	**Nenana**	**85.65**	**25**	P	**P**	**14 58 49.7**	**+0.1**
NEA2	**Nenana**	**85.65**	**25**	P	**P**	**14 58 49.3**	**-0.3**
	baz=265						
KNK	**Knik Glacier**	**85.67**	**29**	P	**P**	**14 58 49.9**	**+0.2**
KNK				IAmb	IAmb	14 58 53.1	
	comp=Z,101nm,1.4s						
KNK	**Knik Glacier**	**85.67**	**29**	P	**P**	**14 58 50.1**	**+0.4**
	baz=266,SNR=18						
PWL	**Port Wells**	**85.69**	**29**	P	**P**	**14 58 49.7**	**-0.1**
PWL				IAmb	IAmb	14 59 42.0	
	comp=Z,86nm,1.2s						
PWL	**Port Wells**	**85.69**	**29**	P	**P**	**14 58 49.6**	**-0.1**
	baz=266,SNR=15						
WAT1	**Susitna Watana**	**85.73**	**27**	P	**P**	**14 58 49.7**	**-0.3**
	baz=266						
SML	**Sawmill**	**85.76**	**28**	P	**P**	**14 58 50.3**	**+0.1**
SML				IAmb	IAmb	14 59 37.0	
	comp=Z,46nm,1.0s						
SML	**Sawmill**	**85.76**	**28**	P	**P**	**14 58 50.4**	**+0.3**
	baz=266,SNR=16						
E23K	**Chandalar**	**85.77**	**22**	P	**P**	**14 58 51.2**	**+1.0**
	baz=264,SNR=14						
TOLK	**Toolik Lake Re**	**85.85**	**21**	P	**P**	**14 58 51.2**	**+0.7**
TOLK				IAmb	IAmb	14 59 43.3	
	comp=Z,72nm,1.4s						
TOLK	**Toolik Lake Re**	**85.85**	**21**	P	**P**	**14 58 51.4**	**+0.9**
	baz=264,SNR=6.6						
VRH	**Novokhopyorsk**	**85.99**	**321**	*e*P	**P**	**14 58 51.1**	**-0.3**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
M23K	**Glacier View**	**86.04**	**28**	P	**P**	**14 58 51.7**	**+0.1**
	baz=266,SNR=18						
MDM	**Murphy Dome**	**86.04**	**25**	P	**P**	**14 58 51.3**	**-0.2**
P23K	**Montague Islan**	**86.09**	**30**	P	**P**	**14 58 51.9**	**+0.1**
	baz=267						
WAT6	**Susitna Watana**	**86.09**	**28**	P	**P**	**14 58 52.5**	**+0.5**
	baz=266,SNR=13						
D24K	**Happy Valley**	**86.17**	**21**	P	**P**	**14 58 52.9**	**+1.0**
	baz=265						
TCOL	**CIGO, UAF Yank**	**86.19**	**25**	P	**P**	**14 58 52.8**	**+0.6**
	baz=266						
E24K	**Your Creek**	**86.19**	**22**	P	**P**	**14 58 53.1**	**+0.9**
	baz=265,SNR=5.2						
COLA	**College**	**86.20**	**25⇓**	*i*P	**P**	**14 58 52.4**	**+0.2**
COLA				pmax	pmax		
	comp=Z,34nm,2.4s						
COLA	**College**	**86.20**	**25**	P	**P**	**14 58 52.6**	**+0.4**
	baz=266						
CCB	**Clear Creek Bu**	**86.20**	**25**	P	**P**	**14 58 52.0**	**-0.2**
SCM	**Sheep Creek Mo**	**86.23**	**28**	P	**P**	**14 58 53.6**	**+1.0**
SCM				IAmb	IAmb	14 59 39.6	
	comp=Z,48nm,1.0s						
SCM	**Sheep Creek Mo**	**86.23**	**28**	P	**P**	**14 58 53.6**	**+1.0**
SCM				pmax	pmax		
	comp=Z,48nm,1.0s						
SCM	**Sheep Creek Mo**	**86.23**	**28**	P	**P**	**14 58 53.2**	**+0.7**
	baz=267,SNR=12						
H24K	**Noodor Dome**	**86.26**	**24**	P	**P**	**14 58 52.7**	**+0.2**
H24K	**Noodor Dome**	**86.26**	**24**	P	**P**	**14 58 53.6**	**+1.0**
	baz=266,SNR=6.8						
C24K	**Franklin Bluff**	**86.26**	**20**	P	**P**	**14 58 53.5**	**+1.1**
	baz=265						
DHY	**Denali Highway**	**86.29**	**27**	P	**P**	**14 58 53.1**	**+0.3**
DHY				IAmb	IAmb	14 59 45.7	
	comp=Z,94nm,2.0s						
DHY	**Denali Highway**	**86.29**	**27**	P	**P**	**14 58 53.6**	**+0.8**
	baz=266,SNR=8.2						
GLI	**Glacier Island**	**86.29**	**29**	P	**P**	**14 58 52.9**	**+0.2**
GLI				IAmb	IAmb	14 58 56.0	
	comp=Z,35nm,0.6s						
GLI	**Glacier Island**	**86.29**	**29**	P	**P**	**14 58 53.3**	**+0.5**
	baz=267,SNR=18						
MARD	**Mardin**	**86.32**	**307**	P	**P**	**14 58 52.9**	**-0.7**
MARD				IAmb	IAmb	14 59 31.2	
	comp=Z,29nm,0.8s						
F24K	**Squaw Lake**	**86.38**	**23**	P	**P**	**14 58 54.0**	**+0.9**
	baz=266						
POKR	**Poker Plat Res**	**86.39**	**25**	P	**P**	**14 58 53.5**	**+0.4**
	baz=266						
G24K	**Hadweenzic Riv**	**86.48**	**23**	P	**P**	**14 58 54.0**	**+0.4**
	baz=266,SNR=6.0						
HDA	**Harding Lake**	**86.56**	**26**	P	**P**	**14 58 52.9**	**-1.0**
HDA	**Harding Lake**	**86.56**	**26**	P	**P**	**14 58 53.3**	**-0.6**
	baz=267,SNR=8.3						
HIN	**Hinchinbrook I**	**86.56**	**30**	P	**P**	**14 58 54.3**	**+0.2**
HIN				IAmb	IAmb	14 59 46.8	
	comp=Z,90nm,1.6s						
FID	**Port Fidalgo**	**86.59**	**29**	P	**P**	**14 58 53.7**	**-0.5**
FID				IAmb	IAmb	14 59 44.4	
	comp=Z,167nm,2.0s						
IL31		**86.60**	**25**	P	**P**	**14 58 52.9**	**-1.3**
ILAR	**Eielson Array**	**86.60**	**25**	P	**P**	**14 58 52.3**	**-1.9**
	comp=Z,2.9nm,0.6s,baz=256,slow=4.6,SNR=52						
	comp=Z,2.9nm,0.6s						
ILAR	**Eielson Array**	**86.60**	**25**	P	**P**	**14 58 52.6**	**-1.6**
ILAR	**Eielson Array**	**86.60**	**25**	P	**P**	**14 58 52.6**	**-1.6**
M24K	**Tolsona, Glenn**	**86.79**	**28**	P	**P**	**14 58 55.9**	**+0.6**
M24K				IAmb	IAmb	14 59 45.1	
	comp=Z,60nm,1.1s						
M24K	**Tolsona, Glenn**	**86.79**	**28**	P	**P**	**14 58 55.3**	**+0.1**
	baz=268,SNR=5.4						
KLU	**Klutina**	**86.89**	**29**	P	**P**	**14 58 55.9**	**+0.2**
KLU	**Klutina**	**86.89**	**29**	P	**P**	**14 58 55.6**	**-0.1**
	baz=268,SNR=9.4						
EYAK	**Cordova Ski Ar**	**86.94**	**30**	P	**P**	**14 58 56.8**	**+0.9**
EYAK	**Cordova Ski Ar**	**86.94**	**30**	P	**P**	**14 58 56.0**	**+0.2**
	baz=268						
G25K	**Bearman Lake**	**87.03**	**23**	P	**P**	**14 58 57.4**	**+1.2**
	baz=268						
K24K	**Donnelly Dome**	**87.04**	**26**	P	**P**	**14 58 58.0**	**+1.6**
	baz=268						
H25K	**Birch Creek**	**87.12**	**24**	P	**P**	**14 58 57.7**	**+1.1**
	baz=268,SNR=6.7						
PAX	**Paxson**	**87.15**	**27**	P	**P**	**14 58 58.1**	**+1.1**
PAX	**Paxson**	**87.15**	**27**	P	**P**	**14 58 58.1**	**+1.1**
PAX				pmax	pmax		
	comp=Z,28nm,1.2s						
PAX	**Paxson**	**87.15**	**27**	P	**P**	**14 58 57.4**	**+0.4**
	baz=268						
SOC	**Sochi**	**87.18**	**313**	*e*P	**P**	**14 58 55.0**	**-2.5**
SOC				*e**PP	**pP**	**14 59 31.0**	**-1.9**
SOC				*e**SP	**sP**	**14 59 48.0**	**+0.3**
SOC				*e*		15 02 22.1	
SOC				*e*S	S	15 09 07.3	-18
SOC				*e**SS	**pS**	**15 10 17.6**	**+7.5**
PRP	**Porcupine Dome**	**87.21**	**25**	P	**P**	**14 58 57.0**	**-0.3**
	baz=268						
F25K	**Christian Rive**	**87.24**	**23**	P	**P**	**14 58 57.8**	**+0.5**
	baz=268						
J25K	**Salcha River,**	**87.25**	**26**	P	**P**	**14 58 56.3**	**-1.1**
J25K	**Salcha River,**	**87.25**	**26**	P	**P**	**14 58 56.7**	**-0.7**
	baz=268						
HARP	**HAARP**	**87.28**	**28**	P	**P**	**14 58 57.6**	**+0.1**
	baz=268						
E25K	**Arctic Village**	**87.29**	**22**	P	**P**	**14 58 57.8**	**+0.4**
	baz=268						
RIDG	**Independent Ri**	**87.45**	**26**	P	**P**	**14 58 58.0**	**-0.3**
	baz=269						
ANKE	**Ethiopia-Afar**	**87.47**	**279**	*e*P	**P**	**14 59 01.9**	**+2.0**
ANKE				*e*S	**pP**	**14 59 36.6**	**+1.3**
ANKE	**Ethiopia-Afar**	**87.47**	**279**	*e*P	P	14 59 13.7	+14
ANKE				*e*S	S	15 09 19.4	-10
ANKE	**Ethiopia-Afar**	**87.47**	**279**	*e*P	**P**	**14 59 03.3**	**+3.4**
KLMR	**Klimovskoe**	**87.50**	**331**	*e*P	**P**	**14 58 56.2**	**-2.3**
KLMR				***PP	**pP**	**14 59 34.7**	**+0.7**
KLMR				*e*		15 02 24.6	
KLMR				S	**SKSac**	**15 09 09.4**	**-3.5**
KLMR				SS	**SS**	**15 15 13.8**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,17nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,424nm,15.0s						
KLMR	**Klimovskoe**	**87.50**	**331**	*e*P	**P**	**14 58 56.3**	**-2.3**
KLMR				*e*P	**P**	**14 58 56.3**	**-2.3**
KLMR				*e*P	**P**	**14 58 56.3**	**-2.3**
KLMR				AMP		14 59 08.6	
	comp=Z,17nm,0.8s						
KLMR				pP	**pP**	**14 59 34.8**	**+0.7**
KLMR				*e*PP	**PP**	**15 02 24.7**	**-0.5**
KLMR				S	**SKSac**	**15 09 09.4**	**-3.5**
KLMR				S	**SKSac**	**15 09 09.4**	**-3.5**
KLMR				SS	**SS**	**15 15 13.8**	**-2.2**
KLMR				SS	**SS**	**15 15 13.8**	**-2.2**
KLMR				LR	LR	15 34 30.7	
KLMR				AMP		15 41 34.3	
	comp=Z,424nm,15.1s						
BMRM	**Bremner River**	**87.51**	**29**	P	**P**	**14 58 58.7**	**0.0**
BMRM				IAmb	IAmb	15 00 29.3	
	comp=Z,50nm,1.4s						
BMRM	**Bremner River**	**87.51**	**29**	P	**P**	**14 58 59.2**	**+0.5**
	baz=269						
N25K	**Chitina, Valde**	**87.52**	**29**	P	**P**	**14 58 59.0**	**+0.2**
N25K				IAmb	IAmb	14 59 48.7	
	comp=Z,42nm,1.4s						
N25K	**Chitina, Valde**	**87.52**	**29**	P	**P**	**14 58 59.3**	**+0.5**
	baz=269						
VORR	**Voronezh**	**87.57**	**321**	*e*P	**P**	**14 58 59.1**	**0.0**
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
C26K	**Camden Bay**	**87.58**	**20**	P	**P**	**14 58 59.3**	**+0.5**
	baz=268						
KAIM	**Kayak Island**	**87.59**	**30**	P	**P**	**14 58 59.4**	**+0.4**
	baz=269						
VSR	**Storozhevoye**	**87.60**	**321**	*e*P	**P**	**14 58 57.5**	**-1.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BMAR	**Burnt Mountain**	**87.64**	**23**	P	**P**	**14 59 00.1**	**+0.9**
LPSR	**Galich'ya Gora**	**87.75**	**322**	*e*P	**P**	**14 58 58.0**	**-1.9**
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
DOT	**Dot Lake**	**87.80**	**27**	P	**P**	**14 58 59.7**	**-0.3**
F26K	**Sheenjek River**	**87.82**	**22**	P	**P**	**14 59 00.9**	**+0.9**
	baz=269						
SCRK	**Sand Creek**	**87.84**	**26**	P	**P**	**14 59 00.6**	**+0.3**
SCRK	**Sand Creek**	**87.84**	**26**	P	**P**	**14 59 00.3**	**0.0**
	baz=270						
GLB	**Gilahina Butte**	**87.90**	**29**	P	**P**	**14 59 00.4**	**-0.1**
G26K	**Porcupine Rive**	**87.95**	**23**	P	**P**	**14 59 01.1**	**+0.6**
	baz=270						
BERG	**Berg Lake**	**87.95**	**30**	P	**P**	**14 59 00.8**	**+0.1**
MENT	**Mentasta**	**87.95**	**27**	P	**P**	**14 59 01.1**	**+0.3**
C27K	**Jago River**	**88.00**	**21**	P	**P**	**14 59 01.6**	**+0.9**
	baz=270						
J26L	**Joseph Creek**	**88.03**	**26**	P	**P**	**14 59 00.4**	**-0.7**
J26L	**Joseph Creek**	**88.03**	**26**	P	**P**	**14 59 01.1**	**-0.1**
	baz=270,SNR=20						
VRDI	**Verde Repeater**	**88.07**	**29**	P	**P**	**14 59 01.1**	**-0.5**
L26K	**Log Cabin Wild**	**88.12**	**27**	P	**P**	**14 59 02.2**	**+0.7**
	baz=270						
BGLC	**Bering Glacier**	**88.16**	**30**	P	**P**	**14 59 01.6**	**0.0**
	baz=270						
I26K	**Coal Creek Min**	**88.20**	**25**	P	**P**	**14 59 01.4**	**-0.4**
	baz=270						
MCARA	**McCarthy VSAT**	**88.28**	**29**	P	**P**	**14 59 02.6**	**+0.3**
MCARA	**McCarthy VSAT**	**88.28**	**29**	P	**P**	**14 59 03.1**	**+0.8**
	baz=270						
M26K	**Nabesna, AK**	**88.28**	**28**	P	**P**	**14 59 03.0**	**+0.7**
M26K	**Nabesna, AK**	**88.28**	**28**	P	**P**	**14 59 03.2**	**+0.9**
	baz=270						
TGL	**Tana Glacier**	**88.38**	**29**	P	**P**	**14 59 03.3**	**+0.4**
TGL				IAmb	IAmb	15 00 31.2	
	comp=Z,90nm,2.0s						
AAE	**Adis Abeba**	**88.44**	**279**	*e*P	P	14 59 15.7	+11
AAE				*e*S	**SKSac**	**15 09 24.1**	**+3.1**

OBN Obninsk 89.11 325 *ce*P **P 14 59 05.4 -0.9**
OBN *e**PP **pwP 14 59 44.4 -0.2**
OBN *e* 15 02 36.3
OBN *e*PPP PPP 15 04 38.5
OBN *i* SS SS 15 15 33.7 -5.9
OBN pmax pmax
comp=Z,83nm,1.6s
TABL Table Mountain 89.22 30 P **P 14 59 07.6 +0.6**
LOGN Logan Glacier 89.27 29 P **P 14 59 07.8 +0.7**
BVCY Beaver Creek 89.28 28 P **P 14 59 08.0 +1.0**
baz=272
KIBK Kibwezi 89.47 268 P **P 14 59 10.4 +1.4**
SNR=6.1
LVZ Lovozero 89.48 338⇓ *e*P **P 14 59 06.6 -1.2**
LVZ pmax pmax
comp=Z,77nm,1.8s
YUK3 Moose Creek 89.49 28 P **P 14 59 09.0 +0.7**
baz=273
O28M Mount Upton 89.67 29 P **P 14 59 09.0 -0.2**
baz=273
PCA Pinnacle 89.67 30 P **P 14 59 07.9 -1.0**
PCA IAmb IAmb 14 59 47.4
comp=Z,24nm,0.8s
PINM Pinnacle 89.68 30 P **P 14 59 08.9 0.0**
baz=273
YUK8 Steele Glacier 89.85 29 P **P 14 59 10.7 +0.7**
baz=273
DAWY Dawson 89.86 26 P **P 14 59 09.5 -0.2**
DAWY Dawson 89.86 26 P **P 14 59 10.5 +0.8**
baz=274,SNR=12
APA Apatity 89.98 337⇓ *i*P **P 14 59 05.3 -4.8**
APA pmax pmax
comp=Z,7.0nm,0.8s
PNL Peninsula 90.13 30 P **P 14 59 12.0 +1.0**
baz=274
I29M Ogilvie Camp, 90.23 25 P **P 14 59 11.3 0.0**
I29M Ogilvie Camp, 90.23 25 P **P 14 59 11.9 +0.5**
baz=275,SNR=9.1
KMBO Kilima Mbogo 90.23 269 P **P 14 59 14.1 +1.3**
comp=Z,0.2nm,0.7s,baz=52,slow=19,SNR=5.9
KMBO ScS **S 15 09 58.7 +3.2**
baz=186,slow=24,SNR=6.4
KMBO Kilima Mbogo 90.23 269 P **P 14 59 12.3 -0.4**
KMBO IAmb IAmb 14 59 55.9
comp=Z,41nm,1.1s
KMBO Kilima Mbogo 90.23 269 P **P 14 59 12.4 -0.4**
KMBO pmax pmax
comp=Z,41nm,1.1s
KMBO Kilima Mbogo 90.23 269 *i* P **P 14 59 13.6 +0.8**
SNR=7.2
YUK4 Talbot Arm 90.39 29 P **P 14 59 12.8 +0.4**
baz=274
M29M Somme Creek 90.39 28 P **P 14 59 13.7 +1.4**
baz=274,SNR=11
L29M L29M 90.49 27 P **P 14 59 13.6 +0.9**
baz=275,SNR=20
O29M Mount Kennedy 90.50 30 P **P 14 59 13.8 +1.0**
baz=274,SNR=7.0
DIKM Dikmen 90.52 312⇑ P P 14 59 29.4 +16
YUK6 Outpost Mounta 90.56 29 P **P 14 59 14.0 +0.8**
baz=274
K29M Barlow Dome 90.70 26 P **P 14 59 14.7 +1.0**
baz=275,SNR=11
EPYK Eagle Plains 90.79 24 P **P 14 59 14.4 +0.4**
baz=276
MMAI Mount Meron Ar 90.80 303 LR LR 15 47 41.5
comp=Z,184nm,18.8s,baz=320,slow=40
G30M tAoh Zraii Nji 90.92 23 P **P 14 59 14.1 -0.4**
baz=276
P29M Windy Craggy 90.97 30 P **P 14 59 15.5 +0.6**
P29M Windy Craggy 90.97 30 P **P 14 59 15.8 +0.9**
baz=275,SNR=8.1
HYT Haines Junctio 90.98 29 P **P 14 59 15.3 +0.2**
HYT Haines Junctio 90.98 29 P **P 14 59 15.9 +0.8**
baz=275,SNR=8.3
N30M Aishikik Lake 91.12 29 P **P 14 59 16.0 +0.4**
baz=276,SNR=6.9
SIM Simferopol' 91.17 315 *e*P **P 14 59 15.4 -0.7**
SIM *e*PS PS 15 11 07.0 -22
P30M Million Dollar 91.32 30 P **P 14 59 17.2 +0.6**
baz=276
EIL Elat 91.34 300 LR LR 15 46 17.6
comp=Z,268nm,18.3s,baz=66,slow=39
MAYO Mayo, Yukon 91.44 26 P **P 14 59 17.3 +0.3**
MAYO IAmb IAmb 15 00 33.6
comp=Z,31nm,0.7s
MAYO Mayo, Yukon 91.44 26 P **P 14 59 17.5 +0.5**
baz=277,SNR=5.7
QSPA South Pole Qui 91.63 180 P **P 14 59 17.4 -0.5**
comp=Z,12nm,0.7s,baz=5.3,slow=2.0,SNR=80
QSPA LR LR 15 42 06.1
comp=Z,480nm,19.5s,baz=348,slow=36
comp=Z,12nm,0.7s
O30N Mendenhall 91.68 29 P **P 14 59 18.8 +0.6**
baz=276
PLBC Pleasant Camp 91.69 31 P **P 14 59 19.3 +1.2**
baz=276,SNR=5.4
N31M Braeburn, Yuko 91.75 28 P **P 14 59 18.9 +0.4**
N31M IAmb IAmb 15 00 12.2
comp=Z,27nm,1.1s
N31M Braeburn, Yuko 91.75 28 P **P 14 59 18.9 +0.4**
baz=277,SNR=6.5
INK Inuvik 91.76 22 P **P 14 59 18.0 -0.3**
comp=Z,3.6nm,0.6s,baz=298,slow=6.6,SNR=4.2
INK LR LR 15 43 34.0
comp=Z,149nm,20.0s,baz=272,slow=37
comp=Z,3.6nm,0.6s
INK Inuvik 91.76 22 P **P 14 59 17.8 -0.5**
INK IAmb IAmb 15 00 08.6
comp=Z,24nm,1.2s
INK Inuvik 91.76 22 P **P 14 59 17.8 -0.5**
INK pmax pmax
comp=Z,24nm,1.2s
INK Inuvik 91.76 22 P **P 14 59 17.5 -0.8**
baz=279
F31M Tsiigehtchic 91.81 22 P **P 14 59 18.1 -0.5**
baz=279
BR131 Keskin Array S 91.85 310⇓ *e*P **P 14 59 19.2 -0.4**
BRTR Keskin Array B 91.85 310 P **P 14 59 18.6 -1.0**
comp=Z,2.0nm,0.8s,baz=122,slow=5.0,SNR=10
BRTR LR LR 15 47 16.9
comp=Z,121nm,19.9s,baz=90,slow=40
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 91.85 310 P **P 14 59 18.2 -1.4**
BRTR Keskin Array B 91.85 310 *i* P **P 14 59 19.2 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
SKAG Skagway 92.21 30 P **P 14 59 21.3 +0.7**
SKAG Skagway 92.21 30 P **P 14 59 20.9 +0.3**
baz=277,SNR=11
WHY Whitehorse 92.28 29 P **P 14 59 21.7 +0.7**
WHY IAmb IAmb 15 00 14.8
comp=Z,26nm,1.1s
WHY Whitehorse 92.28 29 P **P 14 59 21.1 0.0**
baz=278,SNR=12
M31M Drury Creek, Y 92.31 28 P **P 14 59 21.2 +0.2**
M31M Drury Creek, Y 92.31 28 P **P 14 59 21.5 +0.4**
baz=278
CSS Mathiatis 92.41 305 P **P 14 59 22.0 -0.2**
CSS IAmb IAmb 15 00 02.8
comp=Z,40nm,1.0s
BESE Bessie Mountai 92.57 31 P **P 14 59 22.8 +0.4**
BESE IAmb IAmb 15 00 43.5
comp=Z,22nm,1.2s
ARA0 ARCESS Array S 92.58 340 *e*P **P 14 59 21.2 -1.0**
ARA0 IAmb IAmb 14 59 22.5
comp=Z,20nm,0.8s
ARCES ARCESS Array B 92.58 340 P **P 14 59 21.1 -1.1**
comp=Z,17nm,0.7s,baz=78,slow=6.5,SNR=48
ARCES PKiKP **PKiKP 15 04 09.6 -0.2**
comp=Z,0.7nm,0.4s,baz=111,slow=1.4,SNR=11
ARCES PKKP **PKKPdf 15 16 33.3 -1.0**
comp=Z,1.1nm,0.7s,baz=250,slow=3.5,SNR=8.8
comp=Z,17nm,0.7s
SPA0 Spitsbergen Ar 92.58 349 *e*P **P 14 59 21.6 -0.4**
SPA0 IAmb IAmb 14 59 22.7
comp=Z,43nm,1.1s
SPITS Spitsbergen Ar 92.58 349 LR LR 15 47 50.4
comp=Z,287nm,19.1s,baz=24,slow=40
TAOE Nuku Hiva Isla 92.63 99 *e*LR LR 15 29 18.3
comp=Z,742nm,23.8s
R32K Eaglecrest 92.78 32 P **P 14 59 24.1 +0.9**
baz=278,SNR=6.6
FARO Faro, Yukon 92.79 28 P **P 14 59 23.5 +0.2**
FARO IAmb IAmb 15 00 40.3
comp=Z,35nm,1.0s
FARO Faro, Yukon 92.79 28 P **P 14 59 23.8 +0.6**
baz=279,SNR=38
JIS Juneau Island 92.85 32 P **P 14 59 24.2 +0.6**
JIS IAmb IAmb 14 59 25.6
comp=Z,13nm,0.6s
S32K Killisnoo 92.86 32 P **P 14 59 24.1 +0.5**
baz=278
HAMF Hammerfest 92.94 341 *e*P **P 14 59 22.8 -0.9**
HAMF IAmb IAmb 14 59 23.1
comp=Z,22nm,0.8s
P32M Atlin 93.01 30 P **P 14 59 25.5 +1.2**
baz=279,SNR=5.6
N32M Quiet Lake 93.08 29 P **P 14 59 25.5 +0.8**
baz=279
P33M Teslin, Yukon 93.36 30 P **P 14 59 26.5 +0.4**
baz=279,SNR=7.3
KTK1 Kautokeino 93.48 340 *e*P **P 14 59 24.1 -2.2**
KTK1 IAmb IAmb 14 59 25.6
comp=Z,89nm,2.0s
MMPY Sheldon Lake, 93.67 27 P **P 14 59 28.2 +0.8**
baz=281
Q32M Nakina River 93.84 31 P **P 14 59 29.5 +1.0**
baz=280,SNR=7.3
AKASG Malin Array Be 93.90 321 P **P 14 59 26.9 -1.7**
comp=Z,0.4nm,0.4s,baz=72,slow=4.9,SNR=5.0
AKASG PP **PP 15 03 16.9 +0.9**
comp=Z,3.3nm,0.9s,baz=68,slow=7.2,SNR=3.5
AKASG LR LR 15 45 49.2
comp=Z,247nm,21.7s,baz=78,slow=38
AKASG Malin Array Be 93.90 321 *i* P **P 14 59 30.2 +1.6**
FINES FINESS Array B 93.94 332 P **P 14 59 27.2 -1.2**
comp=Z,2.0nm,0.5s,baz=90,slow=5.7,SNR=21
FINES pP **pP 15 00 05.4 +1.2**
comp=Z,8.5nm,0.8s,baz=100,slow=7.9,SNR=5.0
FINES LR LR 15 44 18.7
comp=Z,538nm,20.3s,baz=82,slow=37
comp=Z,2.0nm,0.5s
FINES FINESS Array B 93.94 332 *i* P **P 14 59 28.2 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.5s
MNK Minsk 94.17 325 *i* P **P 14 59 26.3 -3.5**
comp=E,2.0nm,1.0s
MNK *i* P **P 14 59 26.3 -3.5**
comp=N,23nm,0.8s
MNK *i* P **P 14 59 26.3 -3.5**
comp=Z,5.0nm,0.8s,baz=81
MNK *i* pP **pP 15 00 03.5 -1.9**
MNK *i* PP **PP 15 03 14.8 -3.2**
MNK *i* PPP PPP 15 05 16.1
MNK *i* S **SKSac 15 09 46.5 -4.7**
MNK *i* sS pS 15 10 54.8 -20
MNK *i* SS **SS 15 16 50.5 -1.7**
MNK *i* SSS SSS 15 20 32.9
MNK *i* LRM MLR 15 42 20.2
comp=E,54nm,21.9s
MNK *i* LRM MLR 15 42 31.8
comp=N,901nm,21.3s
MNK *i* LRM MLR 15 43 00.8
comp=Z,291nm,20.0s
WRAK Wrangell Islan 94.22 33 P **P 14 59 30.5 +0.6**
WRAK IAmb IAmb 15 00 24.4
comp=Z,16nm,0.9s
WRAK Wrangell Islan 94.22 33 P **P 14 59 30.7 +0.8**
baz=280,SNR=5.2
JETT Jettan, Norway 94.31 340 *e*P **P 14 59 29.6 -0.5**
JETT IAmb IAmb 14 59 30.4
comp=Z,26nm,0.7s
R33M Jennings River 94.42 30 P **P 14 59 31.5 +0.5**
baz=281,SNR=13
S34M Telegraph Cree 94.62 32 P **P 14 59 32.1 +0.4**
baz=281
MILM Milestii Mici 94.66 317 *e*P **P 14 59 31.0 -1.1**
MILM *i* 15 09 53.0
NACGM Naroch 94.74 325⇓ *e*P **P 14 59 34.5 +2.2**
baz=82
TRO Tromso 94.78 341 *e*P **P 14 59 30.9 -1.3**
C36M Paulatuk 94.85 20 P **P 14 59 32.8 +0.3**
baz=288
TLCR 94.88 315⇑ P **P 14 59 31.7 -1.5**
TLCR 94.88 315⇑ P **P 14 59 31.7 -1.5**
DLBC Dease Lake 95.09 31 LR LR 15 37 24.4
comp=Z,204nm,21.5s,baz=280,slow=32
DLBC Dease Lake 95.09 31 P **P 14 59 34.2 +0.2**
DLBC IAmb IAmb 15 00 26.0
comp=Z,18nm,1.3s
DLBC Dease Lake 95.09 31 P **P 14 59 35.4 +1.4**
baz=282,SNR=6.5
TPGR Topolog 95.20 315⇑ P **P 14 59 34.5 -0.2**
T35M Bob Quinn 95.26 32 P **P 14 59 36.0 +1.2**
baz=281
TIRR Tirgusor 95.26 315⇑ P **P 14 59 34.1 -0.8**
TIRR Tirgusor 95.26 315⇑ P **P 14 59 34.1 -0.8**
TGTN Hyland Airport 95.28 28 P **P 14 59 35.9 +1.2**
baz=284
WTLY Watson Lake, Y 95.35 29 P **P 14 59 36.0 +0.9**
baz=283
CFR Carcaliu 95.36 315⇑ P 14 59 30.5 -4.9
TESR Tescani 96.19 317⇓ P **P 14 59 38.1 -1.1**
VRI Vrincioaia 96.24 316⇑ P **P 14 59 39.5 +0.1**
VRI Vrincioaia 96.24 316⇑ P **P 14 59 39.5 +0.1**
PLOR Plostina 96.30 316⇓ P **P 14 59 39.5 -0.2**
PLOR Plostina 96.30 316⇓ P **P 14 59 39.5 -0.2**
STEI Steigen 96.62 339 *e*P **P 14 59 39.4 -1.2**
STEI IAmb IAmb 14 59 44.7
comp=Z,26nm,1.3s
MBAR Mbarara 96.73 270 LR LR 15 40 14.5
comp=Z,376nm,21.9s,baz=70,slow=33
FAUS Fauske 96.80 339 *e*P **P 14 59 40.3 -1.1**
FAUS IAmb IAmb 14 59 46.7
comp=Z,14nm,1.2s
MLR Muntele Rosu 96.84 316 LR LR 15 50 17.9
comp=Z,402nm,20.5s,baz=69,slow=40
MLR Muntele Rosu 96.84 316 P **P 14 59 41.3 -1.0**
MLR IAmb IAmb 15 00 42.3
comp=Z,16nm,1.0s
MLR Muntele Rosu 96.84 316 P **P 14 59 41.3 -1.0**
MLR pmax pmax
comp=Z,16nm,1.0s
BURAR Bucovina Array 96.97 318⇑ P **P 14 59 42.7 -0.1**
BURAR Bucovina Array 96.97 318 P **P 14 59 42.1 -0.7**
BURAR IAmb IAmb 15 00 43.6
comp=Z,20nm,0.9s
BURAR Bucovina Array 96.97 318⇑ P **P 14 59 42.7 -0.1**
BUR08 Bucovina Ar. S 96.98 318 P **P 14 59 41.7 -1.2**
BUR08 IAmb IAmb 15 00 43.3
comp=Z,20nm,0.9s
WRGLY Wrigley 96.98 26 P **P 14 59 43.2 +0.9**
baz=286
BBB Bella Bella 97.47 37 LR LR 15 38 46.6
comp=Z,275nm,19.5s,baz=287,slow=32
VOIR 97.47 316⇓ P **P 14 59 42.7 -2.4**
VOIR 97.47 316⇓ P **P 14 59 42.7 -2.4**
MOR8 Moi Rana 97.56 338 *e*P **P 14 59 42.9 -2.0**
UZH Uzhgorod 98.69 320 *e*P **P 14 59 48.5 -1.8**
DRGR 98.81 318⇑ P **P 14 59 50.5 -0.5**
DRGR 98.81 318⇑ P **P 14 59 50.5 -0.5**
MATP Matopo 98.99 250 LR LR 15 45 17.9
comp=Z,219nm,18.1s,baz=62,slow=36
CRVS Cervenica-Dubn 99.17 320 *e*P **Pdif 14 59 50.8 -1.7**
DAG Danmarks Havn 99.33 353 *i* P **Pdif 14 59 51.0 -1.6**
LSZ Lusaka 99.39 255 P **Pdif 14 59 53.1 -1.2**
comp=Z,1.9nm,0.3s,baz=102,slow=3.4,SNR=4.7
LSZ LR LR 15 41 48.3
comp=Z,335nm,21.9s,baz=96,slow=33
comp=Z,1.9nm,0.3s
BLKB Belogradchik 99.48 315⇑ P **Pdif 14 59 53.5 -0.5**
RES Resolute Bay 99.65 10 LR LR 15 49 10.3
comp=Z,110nm,18.7s,baz=359,slow=38
NB2 NORSAR Subarra100.90 334 P **Pdif 14 59 58.3 -1.7**
comp=Z,3.4nm,0.9s,baz=67,slow=4.6
NB2 NORSAR Subarra100.90 334 P **Pdif 14 59 58.3 -1.7**
baz=67,slow=4.6
NOA NORSAR Array B 100.90 334 P **Pdif 14 59 58.6 -1.4**
comp=Z,2.2nm,0.8s,baz=66,slow=4.6,SNR=9.0
NOA PP **PP 15 04 11.1 +1.8**
comp=Z,1.1nm,1.0s,baz=90,slow=9.7,SNR=3.2
YKA Yellowknife Ar 101.02 25 P **Pdif 14 59 60.0 -0.4**
comp=Z,1.5nm,0.6s,baz=290,slow=4.4,SNR=5.8
YKA PKiKP **PKiKP 15 04 24.7 -0.2**
comp=Z,1.0nm,0.6s,baz=289,slow=2.0,SNR=6.7
YKA Yellowknife Ar 101.02 25 *i* P **Pdif 15 00 00.6 +0.2**
YKA pmax pmax
comp=Z,2.0nm,0.6s
OKC Ostrava-Krasne 101.03 321 AMS AMS 15 43 20.0
comp=Z,300nm,19.3s
MAUC Maruska 101.36 321 AMS AMS 15 50 00.0
comp=Z,600nm,14.8s
MORC Moravsky Berou 101.42 322 *e*PDIFF **Pdif 14 59 58.7 -3.9**
BOSA Boshof 101.53 241 PKiKP **PKiKP 15 04 27.6 +0.6**
comp=Z,2.1nm,0.7s,baz=34,slow=3.6,SNR=2.0
KRLC Kraliky 101.81 322 *e*PP **PKiKP 15 04 32.3 +5.6**
KRLC *e*SKS 15 10 21.9
KRLC AMS AMS 15 48 30.0
comp=Z,200nm,15.7s
TROLL Troll, Antarti 101.89 195 PKiKP **PKiKP 15 04 27.0 +0.6**
TROLL Troll, Antarti 101.89 195 Pdiff **Pdif 15 00 06.5 +2.2**
DPC Dobruska-Polom 102.01 322 *e*pP **pPdif 15 00 38.7 -2.2**
DPC *e*PP PP 15 04 07.3 -11
DPC *e*SKS 15 10 17.5
DPC AMS AMS 15 48 40.0
comp=Z,400nm,18.2s
OSTC Ostas 102.01 323 *e*pP **pPdif 15 00 41.7 +0.8**
OSTC *e*PP **PKiKP 15 04 23.5 -3.5**
OSTC *e*SKS 15 10 21.9
OSTC AMS AMS 15 50 40.0
comp=Z,500nm,17.9s
CHVC Chvalec 102.10 323 AMS AMS 15 47 20.0
comp=Z,400nm,19.4s
UPC Upice 102.15 323 *e*pP **pPdif 15 00 34.3 -7.2**
UPC *e*PP **PP 15 04 14.7 -4.3**
UPC *e*SKS 15 10 23.4
UPC AMS AMS 15 50 40.0
comp=Z,400nm,15.6s
VRAC Vranov 102.15 321 *e*PDIFF **Pdif 15 00 07.1 +1.3**
KRUC Moravsky 102.35 321 *e*PDIFF **Pdif 15 00 06.0 -0.6**
TREC Trest 102.84 321 AMS AMS 15 44 20.0
comp=Z,400nm,22.7s
PVCC Panska Ves 103.01 323 *e*PP **PP 15 04 20.5 -4.9**
PVCC AMS AMS 15 47 50.0
comp=Z,300nm,18.2s
CONA Conrad Observa 103.02 320 *e*P **PKiKP 15 04 31.1 +2.1**
comp=Z,7.8nm,1.2s
GOPC GO Pecny, Ondr 103.08 322 AMS AMS 15 49 20.0
comp=Z,300nm,18.8s
PRU Pruhonice 103.21 322 *e*pP **pPdif 15 00 44.6 -1.6**
PRU *e*PP **PP 15 04 22.0 -4.9**
PRU *e*SKS 15 10 29.2
PRU AMS AMS 15 49 10.0
comp=Z,400nm,17.8s
BRG Berggiesshubel 103.28 323 SS SS 15 19 07.0 +7.5
BRG Amp 15 50 52.0
comp=E,0.3nm,17.4s
BRG Amp 15 50 55.0
comp=Z,0.3nm,20.0s
BRG Amp 15 51 02.0
comp=N,0.2nm,21.9s
ARSA Arzberg 103.45 319 *i* P **PKiKP 15 04 31.3 +1.5**
comp=N,0.7nm,0.4s
SNAA Sanae 103.46 194 Pdiff **Pdif 15 00 13.2 +2.0**
comp=N,0.8nm,0.2s,baz=88,slow=7.7,SNR=4.9
CLL Collm 103.68 324 *e*pPdif **pPdif 15 00 49.0 +0.8**
CLL *e*x x 15 00 53.0
comp=Z,18nm,1.6s
CLL *e*x x 15 04 16.0
CLL *e*PP **PP 15 04 34.0 +3.6**
comp=Z,200nm,12.0s
CLL *e*(sPP) 15 05 10.0
CLL *e*SKSac **SKSac 15 10 40.0 +1.1**
CLL *e*Sdif **Sdif 15 11 46.0 -3.1**
CLL *e*sSdif sSdif 15 12 50.0 -1.5
CLL *e*SP **SP 15 13 23.0 -3.0**
CLL *e*PS **PS 15 13 54.0 +10**
CLL *e*sPPS 15 15 18.0
CLL *e*SS **SS 15 19 08.0 +2.9**
CLL *e*x x 15 22 54.0
CLL *e*(SSS) 15 24 00.0
CLL *e*x x 15 29 42.0
CLL LmV 15 51 00.0
comp=Z,400nm,18.5s
CKRC Cesky Krumlov 103.73 321 *e*pP **pPdif 15 00 41.7 -6.9**
CKRC *e*PP PP 15 04 16.1 -15
CKRC *e*SKS 15 10 30.7
MOA Molln 104.07 320 *e*P **PKiKP 15 04 31.1 +0.2**
comp=Z,0.2nm,0.2s
KHC Kasperske Hory 104.08 322 *e*pP **pPdif 15 00 49.0 -1.1**
KHC *e*x x 15 04 02.5
KHC *e*x x 15 04 17.5
KHC *e*PP **PKiKP 15 04 27.9 -3.0**
KHC *e*SKS 15 10 30.7
KHC AMS AMS 15 45 00.0
comp=Z,400nm,18.8s
GERES GERESS Array B 104.10 321 Pdiff **Pdif 15 00 14.3 -0.2**
comp=Z,0.2nm,0.5s,baz=76,slow=8.2,SNR=2.8
GERES PKiKP **PKiKP 15 04 31.2 +0.2**
comp=Z,0.9nm,0.5s,baz=62,slow=3.2,SNR=8.6
GERES SKP 15 07 52.6
comp=Z,0.4nm,0.5s,baz=82,slow=2.1,SNR=5.6
NKC Novy Kostel 104.39 323 AMS AMS 15 52 00.0
comp=Z,400nm,17.9s
VNA2 Neumayer--Watz 105.06 194 P **PP 15 04 37.8 -2.2**
baz=320,slow=5.6
VNA3 Neumayer Olymp 105.37 193 P **PKiKP 15 04 36.0 +3.4**
VNA1 Neumayer--Stat 105.46 194 P **PKiKP 15 04 33.0 +0.3**
WTTA Wattenberg 105.94 320 *e*P **PKiKP 15 04 34.7 +0.2**
comp=Z,3.3nm,0.6s
MOTA Moosalm 106.25 321 *e*P **PKiKP 15 04 35.5 +0.4**
comp=Z,4.0nm,0.7s
FETA Feichten 106.61 320 *e*P **PKiKP 15 04 37.2 +1.4**
comp=Z,3.6nm,1.1s
DAVA Damuels 107.05 321 *e*P **PKiKP 15 04 36.9 +0.3**
comp=Z,0.1nm,0.2s
NVAR Mina Array Bea 107.70 49 Pdiff **Pdif 15 00 30.9 -0.1**
comp=Z,0.2nm,0.5s,baz=292,slow=3.7,SNR=3.8
NVAR PKiKP **PKiKP 15 04 38.9 +0.8**
comp=Z,0.5nm,0.7s,baz=279,slow=1.7,SNR=4.2
NVAR PKKPbc **PKKPbc 15 15 52.9 -0.6**
comp=Z,1.1nm,0.7s,baz=135,slow=4.6,SNR=11
NVAR PKKPab **PKKPdf 15 16 06.9 +0.4**
comp=Z,0.8nm,0.8s,baz=124,slow=4.6,SNR=4.3
CWC Cottonwood Cre 108.44 51 P **PKiKP 15 04 40.0 +0.5**
baz=287
HLID Hailey 108.80 43 P **PKiKP 15 04 41.2 +1.2**
baz=292
GRAC Grapevine Rang 108.83 50 P **PKiKP 15 04 40.5 +0.5**
baz=287
EDW2 Edwards Air Fo 108.94 52 P **PKiKP 15 04 40.4 0.0**
baz=286
CIS Catalina Islan 109.00 54 P **PKiKP 15 04 40.6 +0.2**
baz=285
SCI2 San Clemente I 109.00 54 P **PKiKP 15 04 40.5 +0.1**
baz=285
MPMC Manual Prospec 109.00 51 P **PKiKP 15 04 40.9 +0.2**
baz=287
LRMC Laurel Mtn Rad 109.02 52 P **PKiKP 15 04 41.3 +0.7**
baz=287
BFSC Mount Baldy Ra 109.38 53 P **PKiKP 15 04 42.3 +0.9**
baz=286
TPNV Topopah Spring 109.69 50 P **PKiKP 15 04 42.0 +0.1**
baz=288
R11A Troy Canyon, C 109.75 48 P **PKiKP 15 04 42.5 +0.5**
baz=289
BOZ Bozeman (W) 109.84 40 P **PKiKP 15 04 42.7 +0.8**
baz=294
MURC Murrieta 109.93 53 P **PKiKP 15 04 42.3 0.0**
baz=286
EGMT Eagleton 109.96 37 P **PKiKP 15 04 42.6 +0.7**
baz=297
TUQ Turquoise Moun 110.40 51 P **PKiKP 15 04 43.3 0.0**
baz=288
PFO Pinyon Flats O 110.52 53 P **PKiKP 15 04 43.5 0.0**
baz=287
TPFO Pinon Flats 110.52 53 P **PKiKP 15 04 44.1 +0.6**
baz=287
MONP2 Monument Peak 110.75 54 P **PKiKP 15 04 44.7 +0.7**
baz=286
BELC Belle Mtn. Jos 110.77 53 P **PKiKP 15 04 44.8 +0.8**
baz=287
GMRC Granite Mounta 110.81 52 P **PKiKP 15 04 44.8 +0.8**
baz=288
H17A Grant Village 111.02 41 P **PKiKP 15 04 45.4 +1.1**
baz=295
IKP In-Ko-Pah, Jac 111.07 54 P **PKiKP 15 04 45.4 +1.0**
baz=287
DUG Dugway, Tooele 111.14 45 P **PKiKP 15 04 45.2 +0.7**
baz=292
SFJD Kangerlussuaq 111.43 359 *i* P **Pdif 15 00 40.0 -6.6**
KEST Kesra 111.46 310 PP **PP 15 05 25.6 -2.2**
comp=Z,11nm,1.0s,baz=12,slow=9.3,SNR=7.5
RLMT Red Lodge 111.55 40 P **PKiKP 15 04 46.3 +1.1**
baz=296
BW06 Boulder Array 112.38 42 P **PKiKP 15 04 47.3 +0.4**
baz=295
PDAR Pinedale Array 112.38 42 PKiKP **PKiKP 15 04 47.1 +0.3**

comp=Z,0.7nm,0.5s,baz=148,slow=2.5,SNR=7.2
PDAR PKKPbc **PKKPbc** 15 15 37.1 -1.5
comp=Z,1.0nm,0.6s,baz=118,slow=4.7,SNR=9.4
PDAR PKKPab **PKKPab** 15 15 45.6 -1.2
comp=Z,2.1nm,0.6s,baz=117,slow=7.0,SNR=13
LAO LASA Array 112.71 37 P **PKiKP** 15 04 47.6 +0.5
baz=299
LAO LASA Array 112.71 37 P **PKiKP** 15 04 48.3 +1.2
baz=299
WUAZ Wupatki 113.89 50 P **PKiKP** 15 04 50.4 +0.6
baz=291
214A Organ Pipe Nat 113.94 54 P **PKiKP** 15 04 50.1 +0.2
baz=288
O20A White River Ci 114.38 44 P **PKiKP** 15 04 51.3 +0.6
baz=295
K22A Casper 114.43 41 P **PKiKP** 15 04 50.9 +0.2
baz=298
K22A Casper 114.43 41 P **PKiKP** 15 04 51.0 +0.2
baz=298
RSSD Black Hills 115.32 39 **PKiKP** 15 04 52.0 -0.5
RSSD Black Hills 115.32 39 PKIKP **PKiKP** 15 04 52.0 -0.5
RSSD Black Hills 115.32 39 P **PKiKP** 15 04 52.1 -0.3
baz=300
RSSD Black Hills 115.32 39 P **PKPdf** 15 04 53.0 +0.5
baz=300
MVCO Mesa Verde 115.40 47 P **PKPdf** 15 04 53.4 +0.6
baz=294
TUC Tucson 115.45 53 P **PKPdf** 15 04 53.8 +0.9
baz=290
N23A Red Feather La 115.62 42 P **PKPdf** 15 04 53.4 +0.2
baz=297
MDND Maddock 115.90 33 P **PKiKP** 15 04 53.8 +0.7
baz=306
ISCO Idaho Springs 116.35 43 P **PKiKP** 15 04 54.9 +0.2
baz=297
ULM Lac du Bonnet 116.36 29 PKP **PKPdf** 15 04 53.3 -0.6
comp=Z,5.7nm,0.6s,baz=300,slow=1.1,SNR=7.7
S22A 4UR Ranch, Cre 116.39 46 PKPdf **PKPdf** 15 04 54.3 -0.5
S22A 4UR Ranch, Cre 116.39 46 P **PKiKP** 15 04 55.2 +0.4
baz=295
Q24A Divide 117.04 44 P **PKiKP** 15 04 56.7 +0.6
baz=297
SDCO Great Sand Dun 117.34 45 P **PKPdf** 15 04 56.5 -0.1
baz=296
121A Cookes Peak, D 117.75 52 P **PKiKP** 15 04 57.7 +0.2
baz=292
LENM Lemitar 117.75 50 **PKiKP** 15 04 58.1 +0.7
Y22D IRIS PASSCAL I 117.82 50 P **PKiKP** 15 04 57.6 +0.1
baz=293
Y22F Passcal Instru 117.82 50 P **PKPdf** 15 04 57.2 -0.3
baz=293
ANMO Albuquerque 117.82 49 PKPdf **PKPdf** 15 04 57.5 0.0
ANMO Albuquerque 117.82 49 PKIKP **PKPdf** 15 04 57.5 0.0
ANMO Albuquerque 117.82 49 P **PKPdf** 15 04 57.6 0.0
baz=294
ANMO Albuquerque 117.82 49 P **PKiKP** 15 04 58.1 +0.5
baz=294
Y22A Socorro 117.84 50 P **PKPdf** 15 04 57.5 0.0
baz=293
CRNM Carthage 118.01 50 **PKiKP** 15 04 58.0 +0.1
T25A Trinidad 118.39 46 PKPdf **PKiKP** 15 04 58.8 +0.2
T25A Trinidad 118.39 46 P **PKiKP** 15 04 59.1 +0.5
baz=297
B35A Bob, Littlefor 118.66 30 **PKPdf** 15 04 57.8 -0.6
F33A 5 Mile Ranch, 118.92 34 PKPdf **PKPdf** 15 04 58.9 -0.1
F33A 5 Mile Ranch, 118.92 34 P **PKPdf** 15 04 59.0 0.0
baz=308
ESDC Sonseca Array 119.43 318 PKP **PKPdf** 15 05 00.2 0.0
comp=Z,1.4nm,0.8s,baz=22,slow=2.9,SNR=11
ESDC PP **PP** 15 06 21.6 -1.7
comp=Z,1.8nm,0.9s,baz=49,slow=7.5,SNR=6.7
ESDC PKKPbc **PKKPbc** 15 15 13.2 -0.5
comp=Z,0.8nm,0.6s,baz=255,slow=4.0,SNR=9.4
ECSD EROS Data Cent 120.01 36 PKPdf **PKPdf** 15 05 00.5 -0.7
ECSD EROS Data Cent 120.01 36 P **PKPdf** 15 05 00.7 -0.5
baz=307
ECSD EROS Data Cent 120.01 36 P **PKPdf** 15 05 01.1 -0.1
baz=307
EYMN Ely 120.04 29 P **PKPdf** 15 05 01.2 0.0
baz=314
F36A Milaca 120.40 32 PKPdf **PKPdf** 15 05 01.1 -0.8
F36A Milaca 120.40 32 P **PKPdf** 15 05 01.4 -0.5
baz=311
BGNE Belgrade 120.43 39 PKPdf **PKPdf** 15 05 01.4 -0.7
BGNE Belgrade 120.43 39 P **PKPdf** 15 05 01.7 -0.4
baz=304
BGNE Belgrade 120.43 39 P **PKiKP** 15 05 02.3 +0.1
baz=304
MVO Moncorvo 120.62 321 *e*PKPdf **PKiKP** 15 05 03.7 +1.1
CLN7 Carlsbad 7 120.88 50 **PKPdf** 15 05 03.1 -0.2
PCAB Cabril 120.92 322 *e*PKPdf **PKiKP** 15 05 04.2 +1.0
PGAV Gavieira, Arco 120.92 323 *e*PKPdf **PKiKP** 15 05 04.1 +0.8
E38A The Farm, Brul 120.93 30 **PKPdf** 15 05 02.6 -0.3
E38A The Farm, Brul 120.93 30 P **PKPdf** 15 05 02.4 -0.5
baz=313
POLO Lamas de Olo 120.97 322 *e*PKPdf **PKiKP** 15 05 04.3 +0.9
PVRL Vila Real 120.98 322 *e*PKPdf **PKiKP** 15 05 04.1 +0.8
HTMS Hat Mesa 120.99 50 **PKPdf** 15 05 03.1 -0.5
MSTX Muleshoe 120.99 48 PKPdf **PKPdf** 15 05 03.2 -0.4
MSTX Muleshoe 120.99 48 P **PKiKP** 15 05 03.6 -0.1
baz=296
MSTX Muleshoe 120.99 48 P **PKiKP** 15 05 03.5 -0.1
baz=296
SPMN Marine on St. 121.20 32 P **PKiKP** 15 05 03.9 +0.4
baz=311
SPMN Marine on St. 121.20 32 P **PKiKP** 15 05 04.0 +0.4
baz=311
MTE Manteigas 121.37 321 *e*PKPdf **PKiKP** 15 05 04.9 +0.8
AMTX Amarillo 121.38 47 P **PKPdf** 15 05 03.9 -0.3
baz=298
PVIS Viseu 121.41 321 *e*PKPdf **PKiKP** 15 05 05.0 +0.8
PTO Porto 121.61 322 *e*PKPdf **PKiKP** 15 05 05.3 +0.8
PCBR Castelo Branco 121.64 320 *e*PKPdf **PKiKP** 15 05 05.3 +0.7
I37A Lemond, Waseca 121.66 34 **PKPdf** 15 05 04.2 -0.2
I37B Waseca 121.66 34 P **PKPdf** 15 05 03.9 -0.5
baz=310
PMRV Marv??o 121.81 320 *e*PKPdf **PKiKP** 15 05 05.2 +0.2
PCAS Casmilo, Conde 122.17 321 *e*PKPdf **PKPdf** 15 05 05.5 0.0
TX31 Lajitas Ar. Si 122.23 53 **PKPdf** 15 05 05.4 -0.7
TX31 Lajitas Ar. Si 122.23 53 P **PKPdf** 15 05 06.0 0.0
baz=293
TX32 Lajitas Array 122.23 53 **PKPdf** 15 05 05.6 -0.4
TXAR Lajitas Array 122.23 53 PKP **PKPdf** 15 05 06.1 +0.1
comp=Z,2.4nm,0.7s,baz=259,slow=0.9,SNR=33
TXAR PKKPab **PKKPbc** 15 15 03.1 +0.1
comp=Z,1.8nm,0.7s,baz=118,slow=6.0,SNR=19
TXAR Lajitas Array 122.23 53 **PKPdf** 15 05 05.8 -0.2
PESTR Estremoz 122.25 319 *e*PKPdf **PKiKP** 15 05 06.9 +1.1
PBAR Barrancos 122.26 318 *e*PKPdf **PKiKP** 15 05 06.6 +0.7
SCHQ Schefferville 122.42 10 PKP **PKPdf** 15 05 05.4 -0.1
comp=Z,5.0nm,0.5s,baz=319,slow=1.6,SNR=15
COWI Conover 122.49 29 **PKPdf** 15 05 05.5 -0.4
COWI Conover 122.49 29 P **PKPdf** 15 05 05.6 -0.4
baz=315
G40A Rib Lake 122.53 31 **PKPdf** 15 05 06.0 0.0
G40A Rib Lake 122.53 31 P **PKPdf** 15 05 05.4 -0.6
baz=314
PMTG Montargil 122.55 320 *e*PKPdf **PKPdf** 15 05 06.0 -0.2
PSBE So Bento 122.66 321 *e*PKPdf **PKiKP** 15 05 07.1 +0.4
KSU1 Kansas State U 122.70 40 PKPdf **PKPdf** 15 05 06.2 -0.4
KSU1 Kansas State U 122.70 40 P **PKPdf** 15 05 06.3 -0.2
baz=304
EVO Evora 122.71 319 *e*PKPdf **PKiKP** 15 05 07.6 +0.9
OK032 Salt Plains WL 122.89 43 **PKPdf** 15 05 07.0 +0.1
K38A Parkersburg 122.89 35 **PKPdf** 15 05 06.5 -0.2
K38A Parkersburg 122.89 35 P **PKPdf** 15 05 05.8 -0.9
baz=310
PBEJ Beja 122.89 319 *e*PKPdf **PKiKP** 15 05 08.1 +1.0
PVAQ Vaqueiros 123.13 318 *e*PKPdf **PKiKP** 15 05 08.6 +1.0
PCVE Castro Verde 123.22 318 *e*PKPdf **PKiKP** 15 05 08.6 +0.8
MESJ Messejana 123.23 319 *e*PKPdf **PKiKP** 15 05 08.2 +0.5
MESJ Messejana 123.23 319 *e*PKPdf **PKiKP** 15 05 08.5 +0.7
I40A Norwalk 123.26 32 **PKPdf** 15 05 06.6 -0.9
I40A Norwalk 123.26 32 P **PKPdf** 15 05 06.5 -0.9
baz=313
PNCL Nicolau / Gran 123.28 319 *e*PKPdf **PKiKP** 15 05 08.2 +0.3
WMOK Wichita Mounta 123.54 46 **PKPdf** 15 05 08.1 -0.2
WMOK Wichita Mounta 123.54 46 PKIKP **PKPdf** 15 05 08.1 -0.2
WMOK Wichita Mounta 123.54 46 P **PKPdf** 15 05 08.4 +0.1
baz=300
WMOK Wichita Mounta 123.54 46 P **PKiKP** 15 05 08.7 +0.2
baz=300
MORF Marmelete 123.81 318 *e*PKPdf **PKiKP** 15 05 09.3 +0.3
MORF Marmelete 123.81 318 *e*PKPdf **PKiKP** 15 05 09.8 +0.8
ABTX Abilene, Hawle 123.94 48 **PKPdf** 15 05 09.1 0.0
baz=298
ABTX Abilene, Hawle 123.94 48 P **PKPdf** 15 05 08.7 -0.4
baz=298
T35A Sooner Cattle 123.98 42 **PKPdf** 15 05 09.0 0.0
PFVI Vila Bisbo 124.02 318 *e*PKPdf **PKiKP** 15 05 10.6 +1.2
JFWS Jewell Farm 124.11 33 PKPdf **PKPdf** 15 05 08.2 -0.9
JFWS Jewell Farm 124.11 33 PKIKP **PKPdf** 15 05 08.2 -0.9
JFWS Jewell Farm 124.11 33 P **PKPdf** 15 05 08.4 -0.7
baz=313
JFWS Jewell Farm 124.11 33 P **PKPdf** 15 05 08.6 -0.5
baz=313
L40A Anamosa 124.14 34 **PKPdf** 15 05 08.4 -0.8
L40A Anamosa 124.14 34 P **PKPdf** 15 05 08.2 -1.0
baz=311
I42A Draeger Farm, 124.15 31 **PKPdf** 15 05 08.5 -0.6
TOA0 Torodi Ar. Sit 124.21 287 PKPdf **PKPdf** 15 05 09.8 -0.2
TORD Torodi Ar. Bea 124.21 287 PKP **PKPdf** 15 05 09.9 -0.1
comp=Z,14nm,0.7s,baz=54,slow=1.8,SNR=62
TORD PKKPab **PKKPab** 15 14 55.7 +0.8
comp=Z,2.0nm,0.5s,baz=268,slow=3.1,SNR=22
X34A Smith Ranch, M 124.29 45 **PKiKP** 15 05 10.4 +0.4
P38A Dawn 124.33 38 P **PKPdf** 15 05 09.3 -0.3
baz=308
OK034 N. Norfolk Rd. 124.33 43 **PKiKP** 15 05 10.0 -0.1
E46A Sault Ste Mari 124.55 26 PKPdf **PKPdf** 15 05 09.8 0.0
E46A Sault Ste Mari 124.55 26 P **PKiKP** 15 05 10.2 +0.1
baz=320
JCT Junction City 124.80 51 PKPdf **PKPdf** 15 05 10.6 -0.2
JCT Junction City 124.80 51 PKIKP **PKPdf** 15 05 10.6 -0.2
JCT Junction City 124.80 51 P **PKiKP** 15 05 11.2 0.0
baz=297
JCT Junction City 124.80 51 P **PKPdf** 15 05 10.3 -0.5
baz=297
TUL1 Leonard 125.01 43 P **PKPdf** 15 05 11.1 0.0
baz=304
P40A Paris 125.29 37 **PKPdf** 15 05 11.2 -0.2
P40A Paris 125.29 37 P **PKPdf** 15 05 11.4 0.0
baz=309
GLMI Grayling 125.58 28 P **PKPdf** 15 05 11.8 0.0
baz=319
S39A Bolivar 125.62 40 PKPdf **PKPdf** 15 05 11.8 -0.3
S39A Bolivar 125.62 40 P **PKPdf** 15 05 11.9 -0.3
baz=307
U38A Gravette 125.66 41 PKPdf **PKPdf** 15 05 12.3 0.0
U38A Gravette 125.66 41 P **PKPdf** 15 05 12.4 +0.1
baz=305
WHTX Lake Whitney, 125.86 48 P **PKiKP** 15 05 13.5 +0.3
baz=300
L44A Lake County Fo 125.87 32 P **PKPdf** 15 05 12.2 -0.2
baz=315
R40A Maddies Statio 125.92 38 **PKPdf** 15 05 12.4 -0.3
R40A Maddies Statio 125.92 38 P **PKPdf** 15 05 12.6 -0.1
baz=308
833A Chaparral WMA, 126.06 53 P **PKPdf** 15 05 13.4 +0.1
baz=296
HDIL Hopedale 126.23 34 **PKPdf** 15 05 12.9 -0.3
HDIL Hopedale 126.23 34 P **PKPdf** 15 05 13.3 +0.1
baz=312
HDIL Hopedale 126.23 34 P **PKiKP** 15 05 13.5 -0.1
baz=312
435B Jarrell 126.35 49 P **PKiKP** 15 05 14.1 -0.1
baz=299
J47A Sunmer 126.68 29 **PKPdf** 15 05 14.0 0.0
CCM Cathedral Cave 126.70 38 PKPdf **PKPdf** 15 05 14.2 0.0
CCM Cathedral Cave 126.70 38 PKIKP **PKPdf** 15 05 14.2 0.0
CCM Cathedral Cave 126.70 38 P **PKiKP** 15 05 14.6 -0.1
baz=309
CCM Cathedral Cave 126.70 38 P **PKPdf** 15 05 14.0 -0.2
baz=309
MIAR Mount Ida 127.28 43 PKPdf **PKiKP** 15 05 16.1 +0.2
MIAR Mount Ida 127.28 43 PKIKP **PKiKP** 15 05 16.1 +0.2
MIAR Mount Ida 127.28 43 P **PKiKP** 15 05 15.7 -0.2
baz=305
MIAR Mount Ida 127.28 43 P **PKPdf** 15 05 15.4 +0.1
baz=305
T42A Van Buren 127.43 39 P **PKPdf** 15 05 15.8 +0.2
baz=308
SFIN Lafayette 127.57 33 P **PKiKP** 15 05 16.3 0.0
baz=314
L48A N Adams 127.83 30 **PKPdf** 15 05 16.2 -0.1
L48A N Adams 127.83 30 P **PKPdf** 15 05 16.2 -0.1
baz=318
L48A P **PKPdf** 15 05 16.2 -0.1
baz=318
LCAR Lake Charles 127.98 40 PKPdf **PKPdf** 15 05 16.8 +0.1
NATX Nacogdoches 128.03 46 P **PKiKP** 15 05 17.6 +0.1
baz=302
OLIL Olney 128.14 35 **PKiKP** 15 05 17.3 -0.2
O48B Farmland 128.70 32 P **PKPdf** 15 05 18.1 +0.1
baz=316
N49A Columbus Grove 128.72 31 **PKPdf** 15 05 17.7 -0.3
N49A Columbus Grove 128.72 31 P **PKPdf** 15 05 17.5 -0.4
baz=318
N49A P **PKPdf** 15 05 17.5 -0.4
baz=318
BLO Bloomington 128.73 34 **PKPdf** 15 05 18.3 +0.3
BLO Bloomington 128.73 34 PKIKP **PKPdf** 15 05 18.3 +0.3
O49A Covington 129.18 31 PKPdf **PKPdf** 15 05 18.8 0.0
O49A Covington 129.18 31 P **PKPdf** 15 05 18.7 -0.2
baz=317
O49A P **PKPdf** 15 05 18.7 -0.2
baz=317
P49A Miami Univ. Ec 129.46 32 P **PKiKP** 15 05 19.9 -0.3
baz=317
WCI Wyandotte Cave 129.51 35 PKPdf **PKPdf** 15 05 19.5 -0.1
WCI Wyandotte Cave 129.51 35 PKIKP **PKPdf** 15 05 19.5 -0.1
WCI Wyandotte Cave 129.51 35 P **PKiKP** 15 05 20.1 -0.2
baz=314
ERPA Erie 129.80 27 P **PKPdf** 15 05 20.4 +0.4
baz=323
ACSO Alum Creek Sta 129.84 30 **PKPdf** 15 05 20.2 +0.1
ACSO Alum Creek Sta 129.84 30 P **PKiKP** 15 05 20.7 -0.2
baz=319
LONY Lake Ozonia 129.86 20 P **PKiKP** 15 05 20.5 -0.4
baz=331
T47A Sharon Grove 129.89 36 **PKiKP** 15 05 20.7 -0.4
WVT Waverly 130.03 38 PKPdf **PKPdf** 15 05 20.2 -0.4
WVT Waverly 130.03 38 PKIKP **PKPdf** 15 05 20.2 -0.4
WVT Waverly 130.03 38 P **PKPdf** 15 05 20.5 -0.1
baz=311
WVT Waverly 130.03 38 P **PKPdf** 15 05 20.9 +0.3
baz=311
M53A WI Miller and 130.03 28 P **PKiKP** 15 05 21.0 -0.2
baz=322
OXF Oxford 130.06 40 P **PKPdf** 15 05 20.8 +0.1
baz=309
Q51A Peebles 130.55 32 PKPdf **PKPdf** 15 05 21.5 0.0
PLAL Pickwick Lake 130.62 39 **PKPdf** 15 05 21.5 -0.2
O53A New Philadelph 130.70 29 P **PKPdf** 15 05 22.0 +0.2
baz=321
P52A Corning 130.72 30 **PKPdf** 15 05 21.5 -0.3
P52A Corning 130.72 30 P **PKPdf** 15 05 21.9 +0.1
baz=320
L56A Greenwood 130.84 25 **PKPdf** 15 05 22.3 +0.3
PKME Peaks-Kenny Pk 130.91 16 P **PKiKP** 15 05 22.5 -0.3
baz=338
CLTN Cedars of Leba 130.96 37 PKPdf **PKPdf** 15 05 22.6 +0.2
LBNH Lisbon 131.08 18 P **PKiKP** 15 05 23.0 -0.3
baz=334
O54A Avella 131.16 28 **PKPdf** 15 05 22.7 +0.1
T50A Nancy 131.18 35 **PKPdf** 15 05 22.8 +0.1
T50A Nancy 131.18 35 P **PKPdf** 15 05 22.5 -0.3
baz=315
T50A P **PKPdf** 15 05 22.5 -0.3
baz=315
BINY Binghamton 131.42 23 P **PKPdf** 15 05 23.3 +0.2
baz=328
S51A Beattyville 131.44 33 **PKPdf** 15 05 23.5 +0.3
KIC Kosan Boka 131.60 280⇑ *e*PKIKP **PKiKP** 15 05 25.2 0.0
comp=Z,9.7nm,0.5s
DBIC Dimbokro 131.67 280 PKP **PKPdf** 15 05 24.1 -0.1
comp=Z,6.6nm,0.7s,baz=72,slow=9.6,SNR=9.3
DBIC SKPbc **SKPbc** 15 08 36.3 -0.6
comp=Z,29nm,0.8s,baz=97,slow=3.6,SNR=15
MCWV Mont Chateau 131.82 28 P **PKiKP** 15 05 24.6 -0.3
baz=322
TIC Toumodi 131.84 280⇑ *i*PKIKP **PKiKP** 15 05 25.6 -0.1
comp=Z,7.3nm,0.2s
Q54A Coxs Mills 131.87 30 **PKPdf** 15 05 24.5 +0.5
LIC Lamto 131.91 280⇑ *i*PKIKP **PKiKP** 15 05 25.8 0.0
comp=Z,20nm,0.4s
SSPA Standing Stone 131.93 26 P **PKPdf** 15 05 24.3 +0.2
baz=325
PMAR Madeira 131.97 319 *e*PKPdf **PKiKP** 15 05 26.4 +0.7
W50A Signal Mountai 132.17 37 **PKPdf** 15 05 25.1 +0.3
TZTN Tazewell 132.25 34 P **PKiKP** 15 05 25.7 -0.2
baz=316
L61B Northampton 132.42 20 P **PKiKP** 15 05 26.2 +0.1
baz=332
LRAL Lakeview Retre 132.55 40 P **PKPdf** 15 05 25.8 +0.4
baz=310,SNR=5.3
PAL Palisades 133.24 22 P **PKiKP** 15 05 27.3 -0.5
baz=330
BLA Blacksburg 133.44 31 P **PKPdf** 15 05 27.1 +0.1
baz=320
BRAL Brewton 133.69 42 P **PKPdf** 15 05 27.7 0.0
baz=309
KMSC Kings Mountain 134.50 34 P **PKPdf** 15 05 29.1 +0.1
baz=318
GOGA Godfrey 134.50 37 P **PKPdf** 15 05 29.3 +0.2
baz=314
TIGA Tifton 135.77 39 P **PKPdf** 15 05 31.7 +0.1
baz=313
PLCA Paso Flores 137.88 160 PKP **PKiKP** 15 05 36.5 -0.8
comp=Z,6.0nm,0.7s,baz=215,slow=3.0,SNR=16
PLCA SKPbc **SKPbc** 15 08 56.7 +0.6
comp=Z,3.7nm,0.8s,baz=182,slow=4.3,SNR=4.4
PLCA Paso Flores 137.88 160 PKPdf **PKPdf** 15 05 36.0 +0.7
PLCA Paso Flores 137.88 160 *e*P **PKiKP** 15 05 39.5 +2.3
MT01 Popeta 143.54 153 PKPpre PKPpre 15 05 42.7
BO04 La Punta 143.72 154 PKPbc 15 05 43.5 -0.3
MT02 Curacav 144.10 153 PKPbc 15 05 45.1 +0.2
MT05 Renca 144.17 154 PKPdf PKPbc 15 05 45.9 +0.7
MT03 Universidad Ad 144.18 154 PKPdf **PKPdf** 15 05 46.1 -0.7
BOAB BOACO BROADBAND 144.23 66 PKPdf PKPbc 15 05 45.8 0.0
ROC1 El Roble 144.39 153 PKPbc 15 05 46.5 +0.4
PEL Peldehue 144.40 153 **PKPdf** 15 05 46.7 -0.5
PEL Peldehue 144.40 153 PKIKP **PKPdf** 15 05 46.7 -0.5
VA06 Catapilco 144.61 152 PKPdf PKPbc 15 05 46.7 +0.2
VA03 San Esteban 144.78 153 PKPbc 15 05 47.2 +0.1
ACON Acoyapa 144.85 66 **PKPab** 15 05 47.5 -0.2
CO02 Combarbal 145.87 151 **PKPbc** 15 05 50.7 0.0
CO03 El Pedregal 146.32 151 **PKPbc** 15 05 51.7 -0.3
HDC Heredia 146.49 69 *e*P **PKPab** 15 05 53.8 -0.4
ZON Zonda 146.65 154 **PKPbc** 15 05 52.8 0.0
ZON Zonda 146.65 154 PKP2 **PKPbc** 15 05 52.8 0.0
GO04 Tololo Observa 146.82 150 **PKPbc** 15 05 53.0 -0.6
CO01 Juntas del Tor 147.32 151 **PKPbc** 15 05 54.9 -0.1
SRBA San Rafael, Bu 147.43 70 PKPab **PKiKP** 15 05 56.9 -0.7
AC05 El Transito 148.17 150 PKPbc **PKPbc** 15 05 57.4 +0.2
AC04 Llanos de Chal 148.26 148 PKPbc **PKPbc** 15 05 57.5 +0.3
PLTB Pedras Altas 150.09 178 **PKPbc** 15 06 02.1 +0.4
PLTB Pedras Altas 150.09 178 *e*P **PKPbc** 15 05 59.8 -2.0
PB14 IPOC Station P 151.43 144 **PKPbc** 15 06 05.3 -0.1
CPSB Cacapava Do Su 151.45 178 *e*P **PKPdf** 15 06 01.7 +3.0
GO02 Mina Guanaco 151.47 146 **PKPbc** 15 06 05.6 +0.1
ITQB Itaqui 151.93 172 **PKiKP** 15 06 06.2 -0.2
SDDR Presa de Saban 152.39 41 **PKPbc** 15 06 07.0 -0.4
CNLB Canela 152.50 183 *e*P **PKPdf** 15 06 03.6 +3.2
PB15 IPOC Station P 153.06 144 **PKiKP** 15 06 09.3 +0.1
PB04 IPOC Station P 153.30 141 **PKiKP** 15 06 09.7 +0.1
PB06 IPOC Station P 153.38 143 **PKiKP** 15 06 09.7 0.0
ATAH Atahualpa 153.68 103 PKPbc **PKiKP** 15 06 11.3 +0.4
comp=Z,15nm,0.8s,baz=245,slow=3.5,SNR=8.7
NNA Nana 153.84 114 PKPbc **PKiKP** 15 06 11.9 +1.1
comp=Z,12nm,0.8s,baz=244,slow=6.5,SNR=5.4
LVC Limon Verde 153.84 144 PKPbc **PKiKP** 15 06 12.4 +1.4
comp=Z,8.0nm,0.5s,baz=237,slow=3.1,SNR=14
LVC PKPab **PKPab** 15 06 25.5 +1.2
comp=Z,10nm,0.5s,baz=214,slow=1.7,SNR=8.4
LVC Limon Verde 153.84 144 **PKiKP** 15 06 11.4 +0.4
LVC Limon Verde 153.84 144 PKIKP **PKiKP** 15 06 11.4 +0.4
LVC Limon Verde 153.84 144 *e*P **PKPdf** 15 06 05.2 +2.2
PB07 IPOC Station P 153.91 141 **PKiKP** 15 06 11.1 +0.1
OTAV Otavalo 154.03 86 *e*P **PKPdf** 15 06 05.2 +1.6
PB02 IPOC Station P 154.20 140 **PKiKP** 15 06 11.8 +0.3
ITAB Concordia 154.62 181 *e*P **PKPdf** 15 06 07.0 +3.7
PB01 IPOC Station P 154.66 141 **PKPbc** 15 06 12.2 -0.2
CPUP Villa Florida 155.10 170 PKP **PKPdf** 15 06 02.8 -1.2
comp=Z,3.3nm,0.9s,baz=256,slow=4.2,SNR=5.2
CPUP PKPbc PKPab 15 06 13.6 -15
comp=Z,8.3nm,0.9s,baz=174,slow=1.3,SNR=13
PET01 Itanhaem-SP 156.99 192 *e*P **PKPdf** 15 06 10.2 +3.6
ROSC El Rosal 157.29 73 PKP **PKPdf** 15 06 08.1 +0.3
comp=Z,4.5nm,0.4s,baz=332,slow=7.5,SNR=3.9
CAM01 Campos-RJ 157.37 207 *e*P **PKPdf** 15 06 08.9 +1.8
LPAZ La Paz 158.90 134 PKP **PKPdf** 15 06 10.4 +0.5
comp=Z,2.6nm,0.8s,baz=202,slow=5.4,SNR=9.5
LPAZ PKPab **PKPab** 15 06 47.3 +0.7
comp=Z,7.5nm,0.6s,baz=216,slow=6.3,SNR=11
LPAZ La Paz 158.90 134 *e*P **PKPdf** 15 06 12.7 +2.8
SDV Santo Domingo 159.13 59 PKP **PKPdf** 15 06 09.0 -0.7
comp=Z,3.4nm,0.3s,baz=335,slow=14,SNR=7.5
SDV PKPab **PKPab** 15 06 47.2 +0.1
comp=Z,7.2nm,0.4s,baz=295,slow=5.4,SNR=5.7
PMNB Patos De Minas 162.24 199 *e*P **PKPdf** 15 06 16.9 +4.0
SIV San Ignacio 163.51 150 PKP **PKPdf** 15 06 14.3 +0.3
comp=Z,2.6nm,0.8s,baz=205,slow=19,SNR=11
SIV PKPab **PKPab** 15 07 04.8 -1.1
comp=Z,9.5nm,0.7s,baz=211,slow=5.8,SNR=10
ETMB Extrema 164.21 121 *e*P **PKPdf** 15 06 17.8 +3.1
BDFB Brasilia 165.46 198 PKP **PKPdf** 15 06 16.0 +0.1
comp=Z,6.3nm,0.9s,baz=110,slow=5.9,SNR=7.0
BDFB PKPab **PKPab** 15 07 13.9 -0.6
comp=Z,6.0nm,0.9s,baz=196,slow=7.4,SNR=3.4
BOAV Boa Vista 171.04 63 *e*P **PKPdf** 15 06 23.8 +4.2
MALB Monte Alegre 178.28 95 *e*P **PKPdf** 15 06 25.4 +3.6
MCPB Macapa, AP 178.57 340 *e*P **PKPdf** 15 06 25.7 +3.9

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*BJI **09** 15:04:49.7±0.0, 14°.47N×119°.65E, h48km, mb4.6/42, mB5.3/17, Ms4.5/6, Ms7 4.3/6*
*MAN **09** 15:04:50.5, 14°.79N×119°.20E, h41km, mb5.4, ML4.4, MS4.6*
MAN INTENSITY III - SAN ANTONIO ZAMBALES.
*NEIC **09** 15:04:54.3±1.6, 14°.84N±0°.06×119°.24E±0°.07, h40km±7km, mb4.7/91, Error ellipse: s-maj=9.8km s-min=9.2km az=82.0*
*IDC **09** 15:04:56.5±1.4, 14°.79N×119°.36E, h68km±13km, mb4.1/30, mbtmp4.4/32, MS3.8/1, Error ellipse: s-maj=14.7km s-min=7.7km az=59.0*
ISC 09 15:04:53.8±0.8, 14°.80N±0°.04×119°.26E±0°.05, h46km±8km, n177, σ1°29/188, mb4.7/82, MS4.3/3, 10C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**1.43**	**138**	↓*i*P			**Pn**	**15 05 15.5**	**-1.9**
LUBP				*e*S			**Sn**	**15 05 33.3**	**-1.7**
TGY	**Tagaytay City**	**1.77**	**113**	P			**Pn**	**15 05 22.3**	**+0.2**
	baz=270,slow=4.6								
TGY				S			**Sn**	**15 05 44.9**	**+1.4**
	baz=270,slow=20								
TGY	**Tagaytay City**	**1.77**	**113**	⇑*e*P			**Pn**	**15 05 22.0**	**-0.1**
TGY				*i* S			**Sn**	**15 05 49.0**	**+5.5**
PCPH	**Palayan**	**1.93**	**67**	⇑*e*P			**Pn**	**15 05 22.1**	**-2.1**
PCPH				*e*S			**Sn**	**15 05 45.7**	**-1.5**
LQP	**Lukban**	**2.32**	**107**	⇑*i*P			**Pn**	**15 05 29.2**	**-0.5**
LQP				*i* S			**Sn**	**15 05 60.0**	**+2.9**
GQP	**Guinayangan**	**3.22**	**106**	⇑*e*P			**Pn**	**15 05 41.9**	**0.0**
GQP				*e*S			**Sn**	**15 06 20.8**	**+1.7**
SIPP	**Brgy, Tapao**	**3.31**	**20**	⇑*i*P			**Pn**	**15 05 43.4**	**+0.2**
SIPP				*i* S			Sn	15 06 34.8	+14
JCNP	**Jose Panganiba**	**3.37**	**98**	⇑*e*P			**Pn**	**15 05 44.0**	**0.0**
PACPP	**Pamplona Cagay**	**4.15**	**29**	⇑*e*P			**Pn**	**15 05 53.3**	**-1.5**
PACPP				*e*S			**Sn**	**15 06 39.1**	**-3.0**
CICP	**Calayan Island**	**4.92**	**25**	⇑*i*P			**Pn**	**15 06 06.4**	**+1.1**
CICP				*e*S			**Sn**	**15 07 00.2**	**-0.8**
PPR	**Puerto Princes**	**5.02**	**186**	⇑*e*P			**Pn**	**15 06 03.7**	**-3.0**
TWG	**Pinlang**	**8.16**	**12**				**Pn**	**15 06 49.3**	**-0.5**
CGP	**Cagayan de Oro**	**8.26**	**139**	⇑*e*P			Pn	15 06 41.8	-9.3
CGP				*e*S				15 06 55.7	
TPUB	**Ta-pu**	**8.55**	**9**	Pn			**Pn**	**15 06 54.2**	**-0.9**
YULB	**Yu-li**	**8.76**	**12**				**Pn**	**15 06 57.3**	**-0.7**
SSLB	**Suanglung**	**9.08**	**10**	Pn			**Pn**	**15 07 01.6**	**-0.7**
KKM	**Kota Kinabalu**	**9.20**	**199**	Pn			**Pn**	**15 07 02.5**	**-1.6**
MYLDM	**Lahad Datu**	**9.59**	**185**				**Pn**	**15 07 09.3**	**-0.1**
KNMB	**Chin-men Tao**	**9.64**	**355**	Pn			**Pn**	**15 07 07.9**	**-2.2**
QIZ	**Qiongzhong**	**9.94**	**296**	P			**Pn**	**15 07 10.9**	**-3.2**
QIZ				S			**Sn**	**15 09 07.8**	**+3.4**
YHNB	**Yeheng**	**10.02**	**11**	Pn			**Pn**	**15 07 15.3**	**+0.1**
SBUM	**Sibu**	**14.10**	**210**	Pn			**Pn**	**15 08 12.1**	**+1.0**
KSM	**Kuching**	**15.92**	**215**	Pn			**Pn**	**15 08 36.0**

comp=Z,4.0nm,0.7s,baz=346,slow=23,SNR=2.9
CMAR Chiang Mai Arr 19.80 283 P Pn 15 09 23.1 +0.6
comp=Z,3.8nm,0.8s,baz=93,slow=9.5,SNR=32
CMAR Chiang Mai Arr 19.80 283 P P 15 09 20.4 -0.2
PZH PanZhiHua 20.07 308 P Pn 15 09 27.5 +1.7
PZH pmax pmax
comp=Z,10.0nm,1.0s
LYN LuoYang 20.59 344 ⇓*iP* Pn 15 09 32.2 +0.5
LYN pmax pmax
comp=Z,40nm,0.7s
KULM Kulim 20.60 245 Pn Pn 15 09 32.3 +0.4
IPM Ipoh 20.67 242 P P 15 09 31.8 +1.6
XAN Xi'an 21.31 336 P P 15 09 39.2 +2.3
XAN pP sP 15 09 49.7 -1.8
XAN pmax pmax
comp=Z,14nm,0.8s
XAN LR LR
comp=Z,660nm,12.4s
XAN LR LR
comp=Z,690nm,11.5s
XAN LR LR
comp=Z,790nm,13.9s
TIA Tai'an 21.41 355 ⇓P **P 15 09 38.1 +0.3**
TIA pmax pmax
comp=Z,39nm,1.0s
FAKI Fak Fak 21.81 143 P P 15 09 43.5 +1.2
FAKI IAmb IAmb 15 10 21.5
comp=Z,45nm,1.4s
JMN Monobe 23.03 33 P P 15 09 56.6 +1.5
PSI Prapat 23.33 241 P P 15 09 59.3 +0.9
comp=Z,6.8nm,0.7s,baz=83,slow=13,SNR=6.1
comp=Z,6.8nm,0.7s
RPSI Rantau Prapat 23.39 241 P P 15 09 59.3 +0.5
JHS Saijyo 23.66 29 P P 15 10 00.9 -0.4
KSAR Wonju Array Be 23.82 17 P P 15 10 02.1 -0.5
KSRS Korea Array 23.84 17 P P 15 10 02.1 -0.7
comp=Z,11nm,0.9s,baz=198,slow=10,SNR=22
comp=Z,11nm,0.9s
KS19 Wonju Array Si 23.87 17 P P 15 10 02.0 -1.1
KS19 IAmb IAmb 15 10 19.7
comp=Z,46nm,1.4s
GUMO Guam 24.86 90 P P 15 10 10.3 -2.0
SOEI Soe 24.90 168 P P 15 10 11.7 -1.1
BATI Baumata 25.23 170 P P 15 10 15.5 -0.2
baz=28,slow=17
BJT Baijiatuau 25.27 354 P P 15 10 15.3 -0.4
BJT IAmb IAmb 15 10 18.5
comp=Z,16nm,1.0s
GSI Gunungsitoli 25.27 240 P P 15 10 15.3 -0.8
BJI Beijing 25.29 354 P P 15 10 15.9 0.0
BJI pmax pmax
comp=Z,9.0nm,0.7s
LZH Lanzhou 25.29 330 *e*P **P 15 10 17.7 +1.5**
LZH pP pP 15 10 27.9 +1.2
LZH pmax pmax
comp=Z,23nm,1.1s
HHC Hu-ho-hao-te 26.80 347 *e*P **P 15 10 32.0 +2.2**
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,320nm,4.7s
CN2 Changchun 29.38 9 *e*P **P 15 10 53.2 +0.5**
CN2 *es*P sP 15 11 06.7 -2.0
CN2 *e*S **S 15 15 43.5 +0.3**
CN2 *es*S **SnSn 15 17 16.5 +3.5**
CN2 LR LR
comp=Z,530nm,14.0s
CN2 LR LR
comp=Z,380nm,14.0s
CN2 LR LR
comp=Z,390nm,15.0s
GTA Gaotai 29.87 329 ⇑P **P 15 10 57.0 -0.2**
GTA pmax pmax
comp=Z,3.0nm,1.5s
GOMU GeErMu 30.51 319 P P 15 11 01.3 -1.9
GOMU pmax pmax
comp=Z,5.0nm,0.5s
USRK Ussuriysk Ar. 31.24 18 P P 15 11 09.2 +0.1
comp=Z,6.2nm,0.8s,baz=222,slow=13,SNR=6.5
comp=Z,6.2nm,0.8s
FITZ Fitzroy Crossi 33.29 169 P P 15 11 29.2 +1.9
comp=Z,2.5nm,0.9s,baz=8.1,slow=7.1,SNR=2.7
comp=Z,2.5nm,0.9s
FITZ Fitzroy Crossi 33.29 169 P P 15 11 28.6 +1.3
FITZ IAmb IAmb 15 11 40.1
comp=Z,9.8nm,1.1s
ULN Ulaanbaatar 34.48 345 P P 15 11 37.3 -0.2
SONM Songino Array 34.62 345 P P 15 11 38.8 +0.1
comp=Z,7.6nm,0.8s,baz=159,slow=9.1,SNR=26
comp=Z,7.6nm,0.8s
SONM Songino Array 34.62 345 P P 15 11 38.2 -0.5
SONM IAmb IAmb 15 11 39.8
comp=Z,7.2nm,0.9s
WB0 Warramunga Arr 37.44 156 P P 15 12 01.9 -1.1
WB0 IAmb IAmb 15 12 07.3
comp=Z,8.5nm,0.7s
WRAB Tennant Creek 37.58 156 P P 15 12 02.9 -1.2
WRAB IAmb IAmb 15 12 04.7
comp=Z,11nm,0.8s
WRA Warramunga Arr 37.58 156 P P 15 12 03.2 -0.9
comp=Z,8.3nm,0.8s,baz=337,slow=9.3,SNR=49
WRA S **S 15 17 45.2 -5.4**
comp=Z,1.8nm,1.2s,baz=338,slow=15,SNR=1.8
comp=Z,8.3nm,0.8s
WRA Warramunga Arr 37.58 156 P P 15 12 02.9 -1.2
WB2 Warramunga Arr 37.59 156 P P 15 12 03.0 -1.2
WB2 IAmb IAmb 15 12 04.7
comp=Z,13nm,0.8s
WR0 Warramunga Arr 37.67 156 P P 15 12 04.1 -0.8
WR0 IAmb IAmb 15 12 09.4
comp=Z,8.0nm,0.9s
WMQ Urumqi 39.49 323 *e*P **P 15 12 21.8 +1.7**
WMQ pmax pmax
comp=Z,23nm,1.1s
AS31 Alice Springs 40.83 159 P P 15 12 31.1 -0.2
ASAR Alice Springs 40.83 159 P P 15 12 31.2 0.0
comp=Z,4.5nm,0.6s,baz=335,slow=6.5,SNR=96
ASAR S **S 15 18 36.9 -2.5**
comp=Z,0.3nm,0.8s,baz=350,slow=21,SNR=2.8
ASAR LR LR 15 33 02.8
comp=Z,105nm,18.4s,baz=6.5,slow=41
comp=Z,4.5nm,0.6s
CTA Charters Tower 43.67 142 P P 15 12 54.9 +0.4
comp=Z,1.7nm,0.6s,baz=348,slow=9.3,SNR=2.3
comp=Z,1.7nm,0.6s
MK31 Makanchi Array 44.32 324 P P 15 13 00.2 +0.8
MKAR Makanchi Array 44.32 324 P P 15 13 00.3 +0.9
comp=Z,3.5nm,0.8s,baz=129,slow=9.4,SNR=16
MKAR PcP **PP 15 14 43.8 +0.4**
comp=Z,0.8nm,0.7s,baz=157,slow=4.7,SNR=3.0
comp=Z,3.5nm,0.8s
MKAR Makanchi Array 44.32 324 P P 15 13 00.1 +0.7
MAKZ Makanchi 44.51 324 P P 15 13 01.3 +0.4
NRN Naryn 45.81 314 P P 15 13 13.0 +1.3
AAK Ala-Archa 47.30 315 P P 15 13 25.5 +2.3
comp=Z,0.5nm,0.3s,baz=101,slow=5.2
comp=Z,0.5nm,0.3s
ZAA0 Zalesovo Array 47.44 333 P P 15 13 23.2 -0.6
ZALV Zalesovo Beam 47.44 333 P P 15 13 23.6 -0.2
comp=Z,1.9nm,0.5s,baz=152,slow=6.4,SNR=9.1
ZALV PcP **PcP 15 14 53.8 +0.2**
comp=Z,0.5nm,0.4s,baz=126,slow=3.9,SNR=1.9
comp=Z,1.9nm,0.5s
ZALV Zalesovo Beam 47.44 333 P P 15 13 23.1 -0.7
YAK Yakutsk 47.75 7 P P 15 13 24.8 -1.2
KURBB Kurchatov Arra 48.50 326 P P 15 13 33.0 +1.0
comp=Z,3.0nm,0.3s,baz=120,slow=8.6,SNR=16
comp=Z,3.0nm,0.3s
KURK Kurchatov 48.50 326 P P 15 13 32.6 +0.5
KURK IAmb IAmb 15 13 33.7
comp=Z,14nm,1.0s
PEA0B Petropavlovsk- 48.76 30 P P 15 13 34.9 +0.9
PETK Petropavlovsk- 48.76 30 P P 15 13 34.6 +0.6
comp=Z,5.5nm,0.6s,baz=216,slow=5.7,SNR=21
comp=Z,5.5nm,0.6s
PETK Petropavlovsk- 48.76 30 P P 15 13 34.4 +0.4
PET Petropavlovsk 49.17 30 P P 15 13 38.1 +1.0
BBOO Buckleboo 50.00 161 P P 15 13 43.3 -0.4
KK31 Karatay Array 50.21 314 P P 15 13 45.9 +0.6
KK31 IAmb IAmb 15 13 47.0
comp=Z,4.7nm,0.8s
KKAR Karatay Array 50.21 314 P P 15 13 45.9 +0.6
MA2 Magadan 50.34 20 P P 15 13 46.4 +0.4
STKA Stephens Creek 51.12 155 P P 15 13 52.3 +0.1
comp=Z,4.0nm,1.0s,baz=322,slow=12,SNR=2.1
comp=Z,4.0nm,1.0s

SEY Seymchan 53.39 18 P P 15 14 09.8 +1.2
comp=Z,7.5nm,0.7s,baz=233,slow=6.5,SNR=18
comp=Z,7.5nm,0.7s
BVAR Borovoye Array 54.08 326 P P 15 14 14.6 +0.7
comp=Z,3.1nm,0.6s,baz=113,slow=8.8,SNR=34
comp=Z,3.1nm,0.6s
BRVK Borovoye 54.15 326 P P 15 14 14.5 +0.2
BRVK IAmb IAmb 15 14 16.1
comp=Z,8.0nm,0.7s
TIXI Tiksi 57.12 4 P P 15 14 34.8 -0.5
TIXI IAmb IAmb 15 14 35.8
comp=Z,12nm,1.0s
NRIK Noril'sk 58.03 347 P P 15 14 42.1 +0.3
comp=Z,11nm,0.7s,baz=122,slow=7.0,SNR=14
comp=Z,11nm,0.7s
GEYT Alibeck 58.36 306 P P 15 14 46.5 +1.8
comp=Z,6.8nm,0.8s,baz=123,slow=5.5,SNR=15
comp=Z,6.8nm,0.8s
GEYT Alibeck 58.36 306 P P 15 14 46.1 +1.4
GYA0B ALIBECK ARRAY 58.36 306 P P 15 14 46.1 +1.4
GYA0B IAmb IAmb 15 14 47.4
comp=Z,7.1nm,0.9s
ABKAR Akbulak array 58.99 319 P P 15 14 49.6 +0.8
DZM Mont Dzumac 59.01 127 P P 15 14 49.2 -0.2
comp=Z,2.2nm,0.5s,baz=274,slow=16,SNR=11
comp=Z,2.2nm,0.5s
AKTO Aktyubinsk 60.47 320 P P 15 14 59.8 +0.8
comp=Z,5.6nm,0.8s,baz=94,slow=7.8,SNR=15
comp=Z,5.6nm,0.8s
ARU Arti 61.70 327 P P 15 15 07.1 -0.1
comp=Z,5.3nm,0.6s,baz=106,slow=18,SNR=3.2
comp=Z,5.3nm,0.6s
ARU Arti 61.70 327 P P 15 15 07.0 -0.2
ARU IAmb IAmb 15 15 08.0
comp=Z,5.9nm,0.8s
KIRV Kirov 66.99 328 P P 15 15 41.8 0.0
comp=Z,8.9nm,0.6s,baz=135,slow=2.9
comp=Z,8.9nm,0.6s
KLMR Klimovskoe 72.20 330 *e*P **P 15 16 12.8 -1.0**
KLMR AMP 15 16 14.3
comp=Z,10.0nm,1.1s
L19K White Mountain 75.12 29 P P 15 16 32.5 +1.5
L19K IAmb IAmb 15 16 38.8
comp=Z,17nm,1.5s
J20K Nowinta River 75.32 27 P P 15 16 33.6 +1.5
J20K IAmb IAmb 15 16 46.0
comp=Z,5.4nm,0.8s
IMAR Indian Mountai 75.38 25 P P 15 16 33.3 +0.9
K20K Telida 75.41 28 P P 15 16 34.4 +1.8
K20K IAmb IAmb 15 16 36.7
comp=Z,9.9nm,1.1s
H21K Melozitna Rive 75.79 25 P P 15 16 36.0 +1.2
H21K IAmb IAmb 15 16 38.9
comp=Z,4.7nm,0.8s
M20K Styx River 75.95 29 P P 15 16 36.7 +0.8
M20K IAmb IAmb 15 16 49.8
comp=Z,6.1nm,0.8s
CAST Castle Rocks 76.30 28 P P 15 16 39.0 +1.3
CAST IAmb IAmb 15 16 41.4
comp=Z,11nm,0.6s
PPLA Purkeypile 76.30 28 P P 15 16 38.9 +1.0
OHAK Old Harbor 76.33 34 P P 15 16 38.8 +0.9
SPU Mount Spurr 76.54 30 P P 15 16 39.4 +0.3
KDAK Kodiak Island 76.64 33 P P 15 16 40.7 +1.0
SKT Skwentna 76.70 29 P P 15 16 40.1 +0.1
SKT IAmb IAmb 15 17 02.3
comp=Z,14nm,1.4s
BPAW Bear Paw Mtn. 76.71 27 P P 15 16 41.0 +1.0
BPAW IAmb IAmb 15 16 44.1
comp=Z,8.5nm,1.0s
MLY Manley 76.71 26 P P 15 16 41.1 +1.1
MLY IAmb IAmb 15 16 43.9
comp=Z,5.5nm,0.6s
TOLK Toolik Lake Re 76.76 22 P P 15 16 41.7 +1.4
TOLK IAmb IAmb 15 16 55.3
comp=Z,20nm,1.4s
KEV Kevo 77.01 339 P P 15 16 41.5 0.0
TRF Thorofare Moun 77.09 27 P P 15 16 43.3 +0.9
TRF IAmb IAmb 15 16 46.2
comp=Z,15nm,1.5s
H23K Yukon River 77.11 25 P P 15 16 43.9 +1.6
SUA Susitna One 77.13 30 P P 15 16 43.1 +0.5
I23K Minto, Yukon-K 77.28 26 P P 15 16 44.9 +1.8
I23K IAmb IAmb 15 16 47.6
comp=Z,11nm,1.2s
BRLK Bradley Lake 77.28 31 P P 15 16 44.8 +1.4
BRTR Keskin Array B 77.37 308 P P 15 16 44.6 +0.2
comp=Z,0.5nm,0.5s,baz=79,slow=3.1,SNR=3.9
comp=Z,0.5nm,0.5s
BRTR Keskin Array B 77.37 308 P P 15 16 44.0 -0.4
NEA2 Nenana 77.47 26 P P 15 16 45.3 +1.0
NEA2 IAmb IAmb 15 16 48.1
comp=Z,4.8nm,0.8s
ARCES ARCESS Array B 77.56 339 P P 15 16 44.8 +0.1
comp=Z,4.0nm,0.9s,baz=79,slow=7.8,SNR=6.8
comp=Z,4.0nm,0.9s
MCK McKinley 77.66 27 P P 15 16 45.9 +0.5
MCK IAmb IAmb 15 16 48.7
comp=Z,9.4nm,1.0s
RND Reindeer 77.74 27 P P 15 16 46.1 +0.2
RND IAmb IAmb 15 16 49.8
comp=Z,7.9nm,1.0s
MDM Murphy Dome 77.78 26 P P 15 16 46.6 +0.6
PMR Palmer 77.88 29 P P 15 16 46.8 +0.3
PMR IAmb IAmb 15 16 49.3
comp=Z,9.1nm,0.9s
SEW Seward 77.95 31 P P 15 16 47.5 +0.6
SML Sawmill 78.22 29 P P 15 16 49.1 +0.5
SML IAmb IAmb 15 17 02.1
comp=Z,11nm,0.9s
KNK Knik Glacier 78.23 29 P P 15 16 49.3 +0.7
KNK IAmb IAmb 15 16 54.0
comp=Z,14nm,1.1s
ILAR Eielson Array 78.38 26 P P 15 16 48.3 -1.0
comp=Z,0.7nm,0.6s,baz=266,slow=5.1,SNR=13
comp=Z,0.7nm,0.6s
PWL Port Wells 78.38 30 P P 15 16 49.9 +0.5
HDA Harding Lake 78.41 26 P P 15 16 49.5 0.0
DHY Denali Highway 78.45 28 P P 15 16 50.7 +0.7
DHY IAmb IAmb 15 16 53.7
comp=Z,6.6nm,1.0s
FINES FINESS Array B 78.64 331 P P 15 16 51.0 +0.2
comp=Z,2.2nm,0.9s,baz=29,slow=4.4,SNR=4.2
comp=Z,2.2nm,0.9s
SCM Sheep Creek Mo 78.69 29 P P 15 16 52.1 +0.9
AKASG Malin Array Be 78.72 320 P P 15 16 50.8 -0.6
comp=Z,0.1nm,0.3s,baz=68,slow=3.6,SNR=4.1
BMAR Burnt Mountain 78.81 23 P P 15 16 53.2 +1.5
GLI Glacier Island 78.97 30 P P 15 16 52.9 +0.3
PAX Paxson 79.33 28 P P 15 16 55.7 +1.0
PAX IAmb IAmb 15 16 58.4
comp=Z,5.2nm,0.8s
HIN Hinchinbrook I 79.35 30 P P 15 16 55.6 +0.9
HIN IAmb IAmb 15 17 00.4
comp=Z,16nm,1.1s
KLU Klutina 79.41 29 P P 15 16 56.1 +0.9
KLU IAmb IAmb 15 17 09.3
comp=Z,8.3nm,0.9s
SCRK Sand Creek 79.77 26 P P 15 16 57.5 +0.5
I26K Coal Creek Min 79.82 25 P P 15 16 57.9 +0.8
I26K IAmb IAmb 15 17 01.1
comp=Z,10nm,1.2s
J26L Joseph Creek 79.83 26 P P 15 16 58.2 +0.8
N25K Chitina, Valde 80.01 29 P P 15 16 59.3 +0.9
GLB Gilahina Butte 80.41 29 P P 15 17 01.0 +0.5
GLB IAmb IAmb 15 17 15.1
comp=Z,5.9nm,0.9s
KAIM Kayak Island 80.46 31 P P 15 17 01.7 +1.0
KAIM IAmb IAmb 15 17 07.0
comp=Z,15nm,1.0s
M26K Nabesna, AK 80.56 28 P P 15 17 01.6 +0.3
M26K IAmb IAmb 15 17 05.4
comp=Z,6.1nm,0.7s
EGAK Eagle 80.77 25 P P 15 17 03.0 +0.8
L27K Beaver Creek, 80.92 27 P P 15 17 05.0 +1.8
L27K IAmb IAmb 15 17 08.0
comp=Z,15nm,1.5s
BCAR Beaver Creek A 80.94 27 P P 15 17 05.2 +1.8
M27K Edge Creek, AK 81.08 28 P P 15 17 05.4 +1.2
BARN Barnard Glacie 81.51 29 P P 15 17 08.2 +1.7
BARN IAmb IAmb 15 17 10.9
comp=Z,6.7nm,0.8s
CTGM Chitina Glacie 81.69 29 P P 15 17 07.8 +0.4
CTGM IAmb IAmb 15 17 12.0
comp=Z,14nm,0.9s
MLR Muntele Rosu 81.88 315 P P 15 17 10.0 +1.2
comp=Z,1.3nm,0.5s,baz=167,slow=14,SNR=3.9
comp=Z,1.3nm,0.5s
MLR Muntele Rosu 81.88 315 P P 15 17 09.7 +1.0
BURAR Bucovina Array 81.90 317 P P 15 17 09.8 +1.1
BUR08 Bucovina Ar. S 81.91 317 P P 15 17 09.7 +0.9
BUR08 IAmb IAmb 15 17 33.5
comp=Z,7.6nm,1.3s
HYT Haines Junctio 83.52 29 P P 15 17 17.8 +0.8
SKAG Skagway 85.01 30 P P 15 17 25.3 +1.0
SKAG IAmb IAmb 15 17 31.4
comp=Z,8.9nm,1.1s
C36M Paulatuk 85.22 19 P P 15 17 25.7 +0.5
NC405 NORSAR Array S 85.39 332 P P 15 17 26.0 -0.2
NB2 NORSAR Subarra 85.64 332 P P 15 17 26.8 -0.7
comp=Z,1.5nm,0.7s,baz=69,slow=5.1
NOA NORSAR Array B 85.64 332 P P 15 17 27.1 -0.4
comp=Z,0.6nm,0.6s,baz=70,slow=4.6,SNR=4.8
comp=Z,0.6nm,0.6s
NC204 NORSAR Array S 85.75 333 P P 15 17 27.8 -0.3
GERES GERESS Array B 88.89 320 P P 15 17 44.1 +0.5
comp=Z,0.6nm,0.8s,baz=89,slow=5.0,SNR=2.4
comp=Z,0.6nm,0.8s
YKA Yellowknife Ar 92.29 22 P P 15 17 59.5 +0.6
comp=Z,1.9nm,0.8s,baz=306,slow=4.5,SNR=6.2
comp=Z,1.9nm,0.8s
TXAR Lajitas Array 119.65 43 PKP **PKPdf 15 23 37.4 -2.2**
comp=Z,0.1nm,0.3s,baz=219,slow=2.3,SNR=2.4
PLCA Paso Flores 152.79 164 PKPbc **PKiKP 15 24 47.8 +1.4**
comp=Z,1.6nm,1.0s,baz=225,slow=1.4,SNR=1.6

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*ASRS **09** 15:16:05.6±0.2, 50°.N±1°.×8°.8E±°., h10km, MLh3.6/11, Error ellipse: s-maj=2.9km s-min=2.0km az=69.2, confirmed*
*NNC **09** 15:16:08.6±2.0, 50°.26N×87°.51E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=18.0km s-min=7.2km az=109.0*
*IDC **09** 15:16:08.4±2.4, 50°.27N×87°.55E, h0km, mb3.5/1, mbtmp3.5/5, ML3.2/4, MS4.1/2, Error ellipse: s-maj=23.8km s-min=13.2km az=90.0*

ISC 09 15:16:06.1±1.2, 50°.20N±0°.03×87°.75E±0°.03, h1km±10km, n28, σ1°.62/43, 5C-10D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CHBI	**Chibit, Altay**	**0.19**	**305**	⇓Pg	Pg	**Pg**	**15 16 10.1**	**+0.2**
CHBI				Sg	Sg	**Sg**	**15 16 11.7**	**-0.7**
CUR	**Chagan-Uzun**	**0.40**	**105**	⇑Pg	Pb	**Pb**	**15 16 16.0**	**-0.1**
CUR				Sg	Sb	**Sb**	**15 16 22.4**	**-0.3**
ULGR	**Ulagan, Altay**	**0.44**	**18**	⇓Pg	Pb	**Pb**	**15 16 16.4**	**-0.4**
ULGR				Sg	Sb	**Sb**	**15 16 22.8**	**-1.2**
DGZ	**Jazzator, Alta**	**0.54**	**202**	⇓Pg	Pb	**Pb**	**15 16 16.6**	**-1.9**
DGZ				Sg	Sg	**Sg**	**15 16 23.4**	**-0.1**
SLNR	**Muhor-Tarhata,**	**0.63**	**132**	Sg	Sn	**Sn**	**15 16 30.5**	**-2.6**
ARTR	**Artybash**	**1.63**	**350**	⇓Pg	Pn	**Pn**	**15 16 35.5**	**-0.4**
ARTR				Sg	Sn	**Sn**	**15 16 57.0**	**-0.5**
UKR	**Ust'-Kan**	**2.04**	**292**	Pg	Pb	**Pb**	**15 16 43.1**	**-0.9**
UKR				Sg	Sb	**Sb**	**15 17 10.3**	**+0.5**
GALT	**Gorno-Altaysk,**	**2.10**	**328**	Pg	Pn	**Pn**	**15 16 43.3**	**+1.0**
GALT				Sg	Sb	**Sb**	**15 17 11.7**	**+0.3**
TASR	**Tashtagol**	**2.56**	**2**	Pg	Pb	**Pb**	**15 16 52.5**	**-0.4**
TASR				Sg	Sb	**Sb**	**15 17 26.4**	**+1.5**
ELT	**Eltsovka**	**3.21**	**344**	Pg	Pb	**Pb**	**15 17 03.4**	**-0.4**
ELT				Sg	Sb	**Sb**	**15 17 43.8**	**+0.5**
DJO	**Djoy, Khakassi**	**3.37**	**39**	Pg	Pg	**Pg**	**15 17 10.8**	**+0.1**
DJO				Sg	Sg	**Sg**	**15 17 54.5**	**+0.2**
DJOS	**Djoyskaya Sosn**	**3.46**	**40**	Sg	Sg	**Sg**	**15 17 56.2**	**-0.8**
CERR	**Cheremushki**	**3.51**	**39**	Pg	Pg	**Pg**	**15 17 14.4**	**+1.2**
CERR				Sg	Sg	**Sg**	**15 17 59.2**	**+0.6**
LUZB	**Luzhba, Kemero**	**3.54**	**11**	Pg	Pb	**Pb**	**15 17 09.9**	**+0.4**
LUZB				Sg	Sg	**Sg**	**15 17 57.0**	**-2.6**
ZAA0	**Zalesovo Array**	**4.17**	**335**	⇓Pn	Pn	**Pn**	**15 17 11.8**	**+1.1**
	0.6nm,0.3s							
ZAA0				⇑Sn	Sn	**Sn**	**15 18 00.5**	**+0.5**
	1.5nm,0.3s							
ZALV	**Zalesovo Beam**	**4.17**	**335**	Pn	Pn	**Pn**	**15 17 11.8**	**+1.1**
	5.0nm,0.3s,baz=156,slow=13,SNR=48							
ZALV				Sn	Sn	**Sn**	**15 18 00.2**	**+0.2**
	3.6nm,0.3s,baz=160,slow=26,SNR=9.3							
ZALV				Lg	Lg	Lg	15 18 15.1	
	3.6nm,0.3s,baz=149,slow=27,SNR=6.9							
	10nm,0.3s							
SALR	**Pechorkino, Sa**	**4.41**	**344**	Sg	Sg	**Sg**	**15 18 25.0**	**-2.5**
MK31	**Makanchi Array**	**4.98**	**229**	⇓Sn	Sn	**Sn**	**15 18 21.9**	**+1.7**
MK31				Lg	Lg	Lg	15 18 43.6	
	11nm,0.5s,baz=50,slow=28,SNR=5.4							
MKAR	**Makanchi Array**	**4.98**	**229**	Pn	Pn	**Pn**	**15 17 25.0**	**+3.0**
	2.1nm,0.3s,baz=42,slow=13,SNR=107							
MKAR				Sn	Sn	**Sn**	**15 18 22.4**	**+2.3**
	1.9nm,0.3s,baz=42,slow=18,SNR=3.6							
MKAR				Lg	Lg	Lg	15 18 42.3	
	4.4nm,0.3s,baz=48,slow=28,SNR=9.5							
	3.4nm,0.3s							
KURK	**Kurchatov**	**5.85**	**279**	⇑Pn	Pn	**Pn**	**15 17 34.0**	**+0.1**
	0.9nm,0.3s							
KURK				⇓Lg	Lg	Lg	15 19 06.6	
	19nm,0.8s							
KURBB	**Kurchatov Arra**	**5.91**	**278**	Pn	Pn	**Pn**	**15 17 35.4**	**+0.7**
	0.3nm,0.3s,baz=92,slow=15,SNR=12							
KURBB				Sn	Sn	**Sn**	**15 18 42.8**	**-0.2**
	0.4nm,0.3s,baz=87,slow=28,SNR=5.0							
KURBB				Lg	Lg	Lg	15 19 07.1	
	0.2nm,0.3s,baz=91,slow=33,SNR=4.7							
	2.9nm,0.5s							
KURBB	**Kurchatov Arra**	**5.91**	**278**	⇑Pn	Pn	**Pn**	**15 17 35.1**	**+0.4**
	4.9nm,0.5s							
KURBB				⇓Sn	Sn	**Sn**	**15 18 44.4**	**+1.4**
KURBB				⇓Lg	Lg	Lg	15 19 08.7	
OTUK	**Ortayu**	**10.27**	**265**	⇓Pn	Pn	**Pn**	**15 18 34.8**	**+0.2**
	1.0nm,0.6s							
OTUK				⇑Lg	Lg	Lg	15 21 27.6	
	11nm,1.4s							
BVAR	**Borovoye Array**	**11.16**	**291**	Pn	Pn	**Pn**	**15 18 45.4**	**-1.2**
	0.2nm,0.3s,baz=103,slow=15,SNR=6.8							
BVAR				Sn	Sn	**Sn**	**15 20 45.5**	**-6.4**
	0.1nm,0.3s,baz=98,slow=20,SNR=2.2							
	0.4nm,0.5s							
AAK	**Ala-Archa**	**11.86**	**235**	Lg	Lg	Lg	15 22 20.0	
	0.1nm,0.3s,baz=237,slow=22,SNR=1.1							
ARCES	**ARCESS Array B**	**34.66**	**327**	LR	LR	LR	15 40 32.6	
	comp=Z,259nm,20.6s,baz=80,slow=42							
BRTR	**Keskin Array B**	**38.90**	**276**	P	P	**P**	**15 23 35.2**	**+2.0**
	0.5nm,0.7s,baz=54,slow=9.2,SNR=2.4							
	0.5nm,0.7s							
DAVOX	**Davos/Dischmat**	**49.51**	**298**	LR	LR	15 48 10.0		
	comp=Z,237nm,18.9s,baz=74,slow=39							

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*NEIC **09** 16:12:53.6±1.1, 19°.13N±0°.05×145°.3E±0°.2, h212km±10km, mb4.2/28, Error ellipse: s-maj=28.5km s-min=6.2km az=98.0*
*IDC **09** 16:12:53.9±2.4, 19°.09N×145°.34E, h220km±23km, mb3.5/10, mbtmp4.1/12, MS3.3/1, Error ellipse: s-maj=32.5km s-min=12.5km az=101.0*

ISC 09 16:12:52.3±0.6, 19°.12N±0°.06×145°.3E±0°.2, h200km, n47, σ0°.91/48, mb4.2/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GUMO	**Guam**	**5.51**	**184**	P	Pn	**Pn**	**16 14 15.1**	**+1.8**
	12nm,0.3s,baz=5.2,slow=23,SNR=1.9							
GUMO				S	Sn	**Sn**	**16 15 15.6**	**-1.7**
	14nm,0.3s,baz=360,slow=20,SNR=1.8							
GUMO	**Guam**	**5.51**	**184**	Pn	Pn	**Pn**	**16 14 14.6**	**+1.3**
JCJ	**Chichijima**	**8.45**	**341**	P	Pn	**Pn**	**16 14 52.5**	**+1.2**
	23nm,0.8s,baz=260,slow=21,SNR=1.1							
JCJ				S	Sn	**Sn**	**16 16 25.2**	**-1.1**
	39nm,0.8s,baz=241,slow=23,SNR=1.6							
JGF	**Kuroka**	**17.86**	**338**	Pn	Pn	**Pn**	**16 16 50.1**	**+1.4**
MAJO	**Matsushiro**	**18.45**	**342**	P	P	**P**	**16 16 52.0**	**-0.9**
FAKI	**Fak Fak**	**25.39**	**212**	P	P	**P**	**16 18 01.4**	**0.0**
PETK	**Petropavlovsk-**	**35.27**	**13**	P	P	**P**	**16 19 28.7**	**+1.0**
	1.8nm,0.8s,baz=224,slow=8.1,SNR=4.2							
	1.8nm,0.8s							
CTAO	**Charters Tower**	**38.97**	**179**	P	P	**P**	**16 19 59.7**	**+0.4**
WB0	**Warramunga Arr**	**40.10**	**196**	P	P	**P**	**16 20 08.2**	**-0.3**
WB0				IAmb	IAmb	16 20 09.6		
	comp=Z,8.8nm,1.2s							
WR0	**Warramunga Arr**	**40.24**	**196**	P	P	**P**	**16 20 09.3**	**-0.4**
WR0				IAmb	IAmb	16 20 33.7		
	comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	**40.27**	**196**	P	P	**P**	**16 20 09.6**	**-0.4**
WRAB				IAmb	IAmb	16 20 41.6		
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**40.28**	**196**	P	P	**P**	**16 20 09.4**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=27,slow=8.9,SNR=50							
	comp=Z,1.2nm,0.5s							

FITZ	Fitzroy Crossi	41.73	209	P	P	16 20 22.2	+0.3
ASAR	Alice Springs	43.95	195	P	P	16 20 39.2	-0.5
	comp=Z,0.7nm,0.5s,baz=15,slow=7.2,SNR=14						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	43.95	195	P	P	16 20 39.0	-0.7
BRDH	Bariadhala	50.04	284	LR	LR	16 43 14.1	
	comp=Z,33nm,19.7s,baz=142,slow=36						
MKAR	Makanchi Array	57.91	314	P	P	16 22 24.2	+0.7
	comp=Z,0.9nm,1.0s,baz=99,slow=8.9,SNR=2.7						
	comp=Z,0.9nm,1.0s						
J20K	Nowinta River	60.25	26	P	P	16 22 40.1	+1.0
J20K				IAmb	IAmb	16 22 46.4	
	comp=Z,13nm,1.5s						
SKT	Skwentna	60.76	29	P	P	16 22 42.1	-0.6
SKT				IAmb	IAmb	16 23 13.6	
	comp=Z,9.8nm,1.4s						
CAST	Castle Rocks	60.89	27	P	P	16 22 43.5	-0.1
RC01	Rabbit Creek A	61.38	30	P	P	16 22 46.5	-0.3
BPAW	Bear Paw Mtn.	61.55	27	P	P	16 22 47.9	-0.1
BPAW				IAmb	IAmb	16 22 48.9	
	comp=Z,3.5nm,0.8s						
TRF	Thorofare Moun	61.68	27	P	P	16 22 48.6	-0.5
MLY	Manley	61.90	26	P	P	16 22 50.8	+0.4
PWL	Port Wells	62.00	31	P	P	16 22 50.7	-0.3
PWL				IAmb	IAmb	16 23 21.9	
	comp=Z,7.5nm,1.1s						
I23K	Minto, Yukon-K	62.50	26	P	P	16 22 53.7	-0.5
I23K				IAmb	IAmb	16 23 18.1	
	comp=Z,5.3nm,1.4s						
SCM	Sheep Creek Mo	62.66	30	P	P	16 22 55.5	0.0
COLD	Coldfoot	62.72	23	P	P	16 22 55.6	-0.1
FID	Port Fidalgo	62.88	31	P	P	16 22 56.2	-0.6
FID				IAmb	IAmb	16 23 10.1	
	comp=Z,6.0nm,1.1s						
DHY	Denali Highway	62.88	28	P	P	16 22 57.2	+0.2
DHY				IAmb	IAmb	16 22 58.2	
	comp=Z,6.3nm,1.4s						
MDM	Murphy Dome	62.92	26	P	P	16 22 57.6	+0.5
MDM				IAmb	IAmb	16 23 34.9	
	comp=Z,3.9nm,1.3s						
CCB	Clear Creek Bu	63.02	26	P	P	16 22 57.0	-0.7
CCB				IAmb	IAmb	16 22 58.3	
	comp=Z,5.2nm,1.4s						
IL31		63.44	26	P	P	16 22 59.1	-1.3
ILAR	Eielson Array	63.44	26	P	P	16 22 59.1	-1.3
	comp=Z,0.6nm,0.5s,baz=256,slow=5.8,SNR=9.1						
	comp=Z,0.6nm,0.5s						
ILAR	Eielson Array	63.44	26	P	P	16 22 58.0	-2.4
PAX	Paxson	63.72	28	P	P	16 23 01.9	-0.5
PAX				IAmb	IAmb	16 23 24.8	
	comp=Z,4.8nm,1.3s						
J25K	Salcha River,	64.05	27	P	P	16 23 03.0	-1.4
L27K	Beaver Creek,	65.37	29	P	P	16 23 13.3	+0.2
BCAR	Beaver Creek A	65.39	29	P	P	16 23 13.4	+0.2
INK	Inuvik	69.13	23	P	P	16 23 35.9	-0.6
	comp=Z,0.5nm,0.4s,baz=252,slow=6.4,SNR=1.6						
	comp=Z,0.5nm,0.4s						
C36M	Paulatuk	72.50	22	P	P	16 23 56.3	-0.4
ABKAR	Abkulak array	72.78	317	P	P	16 23 58.0	-0.8
EUNU	Eureka	77.36	8	P	P	16 24 24.1	-0.4
EUNU				IAmb	IAmb	16 24 59.8	
	comp=Z,7.5nm,1.4s						
YKA	Yellowknife Ar	77.79	28	P	P	16 24 26.6	-0.5
	comp=Z,0.7nm,0.6s,baz=283,slow=5.9,SNR=2.4						
	comp=Z,0.7nm,0.6s						
ARCES	ARCESS Array B	81.98	342	P	P	16 24 49.6	+0.1
	comp=Z,6.1nm,1.1s,baz=56,slow=6.5,SNR=5.8						
	comp=Z,6.1nm,1.1s						
NVAR	Mina Array Bea	83.17	52	P	P	16 24 56.6	+0.1
	comp=Z,1.2nm,0.7s,baz=270,slow=5.9,SNR=12						
	comp=Z,1.2nm,0.7s						
FINES	FINESS Array B	86.35	335	P	P	16 25 09.5	-2.1
	comp=Z,4.7nm,1.1s,baz=58,slow=4.7,SNR=6.7						
	comp=Z,4.7nm,1.1s						

WEL 09 16:23:44.5±1.3, 33°S±24′×18°0E±6°8, h372km±22km, M4.2/4, mB4.2/3, ML4.2/11, MLv4.3/4, Mw(mB)3.3/3, Error ellipse: s-maj=0.1km s-min=0.0km az=107.2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	4.78	197	P	Pn	16 25 02.3	-0.4
HAZ				S	S	16 26 05.7	-0.4
PKGZ	Pakihiroa	4.84	194	P	Pn	16 25 03.6	+0.2
PKGZ				S	S	16 26 07.3	-0.2
RUGZ	Raukumara Rang	5.01	197	P	Pn	16 25 04.9	-0.3
MWZ	Matawai	5.39	197	P	Pn	16 25 09.9	+0.6
MWZ				S	S	16 26 19.1	+0.9
URZ	Urewera	5.44	201	P	Pn	16 25 09.5	-0.2
URZ				S	S	16 26 20.2	+1.2
MUGZ	Murupara	5.74	202	P	Pn	16 25 13.5	+0.5
RTZ	Ruatahuna	5.81	200	P	Pn	16 25 12.6	-1.3
NMHZ	Naumai	6.30	200	P	Pn	16 25 20.4	+0.9
BKZ	Black Stump Fm	6.46	202	P	Pn	16 25 21.1	-0.1
KWHZ	Kaweka Forest	6.72	201	P	Pn	16 25 24.4	+0.3
BHHZ	Black Hill Sta	6.89	203	P	Pn	16 25 25.9	-0.2
KRHZ	Kereru	6.94	201	P	Pn	16 25 26.3	-0.2
KAHZ	Kahuranaki	6.94	197	P	Pn	16 25 27.0	+0.4
PXZ	Pawanui	7.17	197	P	Pn	16 25 28.8	-0.4
PXZ				S	S	16 26 57.6	+3.0
PRHZ	Porangahau	7.45	197	P	Pn	16 25 32.6	+0.2
PRHZ				S	S	16 26 58.2	-2.4
BFZ	Birch Farm	7.94	198	P	Pn	16 25 38.0	0.0

IDC 09 16:32:18.6±5.2, 18°42S×178°60W, h561km±27km, mb2.6/2, mbtmp3.5/3, Error ellipse: s-maj=165.8km s-min=36.1km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.26	282	P	P	16 33 36.6	+0.3
	20nm,0.8s,baz=15,slow=2.2,SNR=11						
WRA	Warramunga Arr	44.36	260	P	P	16 39 39.7	-0.3
	0.7nm,1.2s,baz=97,slow=7.4,SNR=6.1						
WRA				PcP	PcP	16 41 11.8	+0.1
	0.4nm,0.8s,baz=104,slow=4.0,SNR=1.9						
	0.7nm,1.2s						
ASAR	Alice Springs	44.48	255	P	P	16 39 40.4	-0.5
	0.7nm,0.6s,baz=87,slow=8.0,SNR=9.8						
ASAR				PcP	PcP	16 41 12.8	+0.8
	0.2nm,0.6s,baz=109,slow=3.8,SNR=4.1						
	0.7nm,0.6s						
BRTR	Keskin Array B	145.01	314	PKPbc	PKPdf	16 50 52.7	-0.1
	0.6nm,0.8s,baz=42,slow=4.5,SNR=2.4						
GERES	GERESS Array B	148.06	345	PKPbc	PKPbc	16 51 00.5	-1.0
	0.4nm,0.5s,baz=48,slow=4.0,SNR=5.2						

*IDC **09** 16:36:46.8±0.7, 34°.53N×141°.60E, h0km, mb3.7/12, mbtmp3.8/14, ML3.9/2, MS2.8/1, Error ellipse: s-maj=22.4km s-min=15.7km az=113.0*
*NEIC **09** 16:36:47.8±1.7, 34°.59N±0°.06×141°.84E±0°.07, h10km±1km, mb4.5/9, Error ellipse: s-maj=10.6km s-min=8.1km az=317.0*
*JMA **09** 16:36:48.1±0.3, 34°.5N±0°.9×14°2E±°, h34km±2km, MV3.4/35, FAR SE OFF BOSO PEN*

ISC 09 16:36:48.3±2.0, 34°51N±0°.05×141°78E±0°.06, h16km±11km, n53, σ1§27/52, mb3.9/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.68	282	P	Pg	16 37 01.5	+0.1
BSO3	Boso 3	1.09	286	P	Pb	16 37 08.2	-0.4
BSO4	Boso 4	1.28	292	P	Pn	16 37 11.5	0.0
KTR	Katsuura	1.36	298	P	Pn	16 37 12.3	-0.4
KTR				eS	Sb	16 37 29.6	-1.0
CHOJ	Chosi	1.41	328	P	Pn	16 37 12.1	-1.2
CHOJ				eS	Sn	16 37 30.3	-1.3
JKUC	kamogawauchiur	1.45	297	P	Pn	16 37 13.3	-0.6
JKUC				eS	Sn	16 37 31.3	-1.4
JMYK	Miyake Tsubota	1.91	257	eP	Pn	16 37 20.0	-0.1
JMKN	Mikurajimanish	1.92	252	P	Pn	16 37 19.9	-0.5
JMKN				eS	Sn	16 37 43.0	-1.3
JIM2	Oshima 3	1.95	277	eP	Pn	16 37 20.4	-0.4
JYT	Yasato	2.15	323	Pn	Pn	16 37 21.9	-1.5
JHJ2	Mitsune	2.15	230	Pn	Pn	16 37 23.8	+0.3
JHJ	Hachijo jima 2	2.17	231	Pn	Pn	16 37 23.8	0.0
	38nm,0.3s,baz=354,slow=22,SNR=42						
JHJ				Sn	Sn	16 37 48.3	-2.1
	66nm,0.3s,baz=75,slow=24,SNR=6.2						
	78nm,0.3s						
JMM	Marumori	3.44	347		Pn	16 37 39.8	-1.5
MAJO	Matsushiro	3.55	306		Pn	16 37 41.5	-1.3
JGF	Kuroka	3.79	288		Pn	16 37 47.0	+0.9
INU	Inuyama	4.00	283	Pn	Pn	16 37 50.2	+1.2
JSD	Sado	4.52	322	Pn	Pn	16 37 55.7	-0.5
JTM	Tenmabayashi	6.29	355	Pn	Pn	16 38 19.3	-1.1
JHS	Saijyo	7.15	276	Pn	Pn	16 38 33.8	+1.5
JCJ	Chichijima	7.40	177	Pn	Pn	16 38 35.6	-0.1
	5.9nm,0.3s,baz=85,slow=23,SNR=13						
JCJ				Sn	Sn	16 39 54.2	-5.3
	0.2nm,0.3s,baz=318,slow=18,SNR=2.2						
	33nm,0.7s						
JCJ	Chichijima	7.40	177	Pn	Pn	16 38 36.6	+0.9
JEW	Eniwo	8.32	358	Pn	Pn	16 38 47.9	-0.4
KSRS	Korea Array	11.61	289	LR	LR	16 44 11.4	
	comp=Z,46nm,19.4s,baz=140,slow=39						
H11N2	WAKE ISLAND Hy	26.67	117	T	T	17 10 29.4	
	baz=309,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	26.67	117	T	T	17 10 34.9	
	baz=309,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	26.69	117	T	T	17 10 34.9	
	baz=309,slow=76,SNR=9.2						
H11S1	WAKE ISLAND Hy	27.30	119	T	T	17 11 24.7	
	baz=312,slow=75						
H11S3	WAKE ISLAND Hy	27.30	119	T	T	17 11 34.8	
	baz=312,slow=75						
H11S2	WAKE ISLAND Hy	27.32	119	T	T	17 11 33.2	
	baz=312,slow=75						
TIXI	Tiksi	37.82	353	P	P	16 44 03.5	-0.1
TIXI				IAmb	IAmb	16 44 27.0	
	comp=Z,8.8nm,1.0s						
CMAR	Chiang Mai Arr	41.22	258	P	P	16 44 31.7	-0.9
	comp=Z,0.2nm,0.5s,baz=43,slow=7.4,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	43.86	314	P	P	16 44 54.5	+0.8
	comp=Z,0.6nm,0.4s,baz=106,slow=9.7,SNR=2.7						
	comp=Z,0.6nm,0.4s						
MKAR	Makanchi Array	45.75	304	P	P	16 45 08.8	0.0
	comp=Z,0.5nm,0.6s,baz=83,slow=7.1,SNR=4.0						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	45.75	304	P	P	16 45 08.7	-0.2
KURBB	Kurchatov Arra	47.82	310	P	P	16 45 24.7	-0.3
	comp=Z,1.7nm,0.8s,baz=85,slow=7.1,SNR=12						
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	51.47	31	P	P	16 45 53.5	+0.9
	comp=Z,1.3nm,0.9s,baz=266,slow=6.4,SNR=9.4						
	comp=Z,1.3nm,0.9s						
WB0	Warramunga Arr	54.44	189	P	P	16 46 15.8	+0.9
WB0				IAmb	IAmb	16 46 16.3	
	comp=Z,4.7nm,0.9s						
FITZ	Fitzroy Crossi	54.53	199	P	P	16 46 16.8	+1.2
WRAB	Tennant Creek	54.60	189	P	P	16 46 17.0	+0.9
WRAB				IAmb	IAmb	16 46 26.8	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	54.61	188	P	P	16 46 17.0	+0.9
WB2	Warramunga Arr	54.61	189	P	P	16 46 17.0	+0.8
WB2				IAmb	IAmb	16 46 25.6	
	comp=Z,5.9nm,1.1s						
WRA	Warramunga Arr	54.62	189	P	P	16 46 17.0	+0.8
	comp=Z,0.6nm,0.3s,baz=1.4,slow=7.6,SNR=32						
	comp=Z,0.6nm,0.3s						
KKAR	Karatay Array	54.67	302	P	P	16 46 16.0	-0.6
INK	Inuvik	56.50	26	P	P	16 46 30.7	+1.5
	comp=Z,0.8nm,0.5s,baz=261,slow=6.2,SNR=1.9						
	comp=Z,0.8nm,0.5s						
INK	Inuvik	56.50	26	P	P	16 46 30.2	+1.0
ASAR	Alice Springs	58.34	188	P	P	16 46 43.8	+1.0
	comp=Z,0.5nm,0.8s,baz=358,slow=6.1,SNR=4.5						
	comp=Z,0.5nm,0.8s						
ABKAR	Abkulak array	59.81	311	P	P	16 46 52.6	-0.1
NVAR	Mina Array Bea	76.26	53	P	P	16 48 38.9	+2.3
	comp=Z,0.6nm,0.8s,baz=278,slow=5.8,SNR=5.8						
	comp=Z,0.6nm,0.8s						
AKASG	Malin Array Be	76.48	323	P	P	16 48 37.4	+0.1
	comp=Z,0.3nm,0.4s,baz=48,slow=6.5,SNR=4.2						
	comp=Z,0.3nm,0.4s						
NOA	NORSAR Array B	76.62	338	P	P	16 48 38.3	+0.4
	comp=Z,0.7nm,0.8s,baz=57,slow=5.0,SNR=1.0						
	comp=Z,0.7nm,0.8s						
NAO01	NORSAR Array S	76.88	338	P	P	16 48 39.1	-0.2
ULM	Lac du Bonnet	81.44	33	P	P	16 49 02.8	-1.7
ULM				IAmb	IAmb	16 49 38.0	
	comp=Z,4.2nm,0.9s						
TXAR	Lajitas Array	91.41	53	P	P	16 49 55.9	+1.8
	comp=Z,0.2nm,0.7s,baz=309,slow=5.7,SNR=1.7						
	comp=Z,0.2nm,0.7s						

*IDC **09** 16:43:39.7±1.6, 53°.18N×166°.64W, h0km, mb3.8/7, mbtmp3.9/8, ML3.0/1, MS3.4/2, Error ellipse: s-maj=38.4km s-min=21.2km az=3.0*
*AEIC **09** 16:43:40±3.8, 52°.76N±0°.07×166°.8W±0°.1, h5km±7km, Error ellipse: s-maj=12.0km s-min=6.8km az=142.0*
*NEIC **09** 16:43:45.7±2.5, 53°.2N±0°.2×167°.2W±0°.1, h20km±6km, mb3.8/10, ML3.6/6, ML3.4(AEIC), Error ellipse: s-maj=26.1km s-min=5.9km az=154.0*

ISC 09 16:43:44.9±1.0, 52°9N±0°.1×166°80W±0°.08, h37km, n45, σ1§99/38, mb3.8/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.94	11		Pn	16 44 00.7	-0.8
NIKH	Nikolski High	1.24	273		Pn	16 44 03.6	-2.1
AKUT	Akutan	1.36	26		Pn	16 44 06.9	-0.4
AKUT				IAML		16 44 33.0	
	comp=E,569nm,1.0s						
FALS	False Pass	2.79	45		Pn	16 44 28.6	+1.7
SDPT	Sand Point	4.44	54	Pn	Pn	16 44 51.7	+2.1
SDPT				IAML		16 46 21.4	
	comp=N,155nm,3.8s						
ADK	Adak	6.14	264	Pn	Pn	16 45 13.4	+0.5
KIWB	Kanaga Island	6.43	265	Pn	Pn	16 45 17.8	+0.9
AMKA	Amchitka	8.69	265	Pn	Pn	16 45 47.4	-0.5
KDAK	Kodiak Island	9.44	53	Pn	Pn	16 45 56.2	-2.0
	comp=N,0.2nm,0.3s,baz=229,slow=11,SNR=1.2						
KDAK				Sn	Sn	16 47 39.1	-3.8
	comp=N,0.1nm,0.3s,baz=327,slow=19,SNR=2.5						
	comp=N,5.7nm,0.8s						
O18K	Koktuh Hills	9.45	38	Pn	Pn	16 46 02.4	+4.1
M20K	Styx River	11.59	34	Pn	Pn	16 46 29.6	+2.0
K20K	Telida	12.40	28	Pn	Pn	16 46 38.2	-0.5
PWL	Port Wells	12.81	44	Pn	Pn	16 46 46.0	+1.7
SCM	Sheep Creek Mo	13.73	42	Pn	Pn	16 46 56.5	-0.3
BPAW	Bear Paw Mtn.	13.87	30	Pn	Pn	16 46 58.1	-0.5
RAGM	Ragged Mountai	14.22	50	Pn	Pn	16 47 06.5	+2.9
SUCK	Suckling Hills	14.53	51	P	P	16 47 16.8	+3.1
H21K	Melozitna Rive	14.58	23	P	P	16 47 15.8	+1.6
IMAR	Indian Mountai	14.63	21	P	P	16 47 16.3	+1.5
GLB	Gilahina Butte	15.03	46	Pn	Pn	16 47 17.8	+3.5
GLB				IAmb	IAmb	16 47 46.7	
	comp=Z,2.9nm,0.8s						
TGL	Tana Glacier	15.21	50	P	P	16 47 22.9	+1.6
TGL				IAmb	IAmb	16 47 39.6	
	comp=Z,6.0nm,0.9s						
BARN	Barnard Glacie	15.85	49	Pn	P	16 47 28.7	+0.2
BARN				IAmb	IAmb	16 47 45.0	
	comp=Z,4.5nm,0.9s						
LOGN	Logan Glacier	16.08	50	Pn	P	16 47 31.8	+0.8
LOGN				IAmb	IAmb	16 47 50.2	
	comp=Z,5.2nm,1.0s						
SCRK	Sand Creek	16.17	38	Pn	Pn	16 47 30.2	+1.1
HYT	Haines Junctio	17.73	52	Pn	P	16 47 50.4	+1.2
N31M	Braeburn, Yuko	18.70	50	P	Pn	16 48 02.8	+2.4
N31M				IAmb	IAmb	16 48 17.4	
	comp=Z,5.2nm,0.9s						
M31M	Drury Creek, Y	19.50	49	P	Pn	16 48 11.3	+1.3
PEA0B	Petropavlovsk-	21.23	285	Pn	P	16 48 30.1	+2.8
PETK	Petropavlovsk-	21.23	285	P	P	16 48 26.9	-0.4
	comp=Z,1.3nm,0.4s,baz=85,slow=12,SNR=27						
	comp=Z,1.3nm,0.4s						
PETK	Petropavlovsk-	21.23	285	Pn	P	16 48 29.5	+2.2
INK	Inuvik	22.02	33	P	P	16 48 32.0	-3.7
	comp=Z,2.6nm,1.1s,baz=270,slow=8.1,SNR=4.9						
	comp=Z,2.6nm,1.1s						
INK	Inuvik	22.02	33	P	P	16 48 36.6	+0.9
INK				IAmb	IAmb	16 48 47.1	
	comp=Z,6.3nm,1.1s						
YBH	Yreka Blue Hor	31.43	93	LR	LR	16 59 39.8	
	comp=Z,88nm,20.0s,baz=86,slow=31						
NVAR	Mina Array Bea	36.12	94	P	P	16 50 43.8	+0.3
	comp=Z,0.4nm,0.7s,baz=304,slow=8.5,SNR=4.1						
	comp=Z,0.4nm,0.7s						
KLR	Kul'dur	37.75	290	LR	LR	17 07 04.5	
	comp=Z,35nm,19.3s,baz=56,slow=37						
H11N2	WAKE ISLAND Hy	38.89	222	T	T	17 32 39.6	
	baz=25,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	38.89	222	T	T	17 32 40.2	
	baz=25,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	38.90	222	T	T	17 32 41.2	
	baz=25,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	40.07	221	T	T	17 34 08.4	
	baz=24,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	40.08	221	T	T	17 34 09.4	
	baz=24,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	40.08	221	T	T	17 34 11.1	
	baz=24,slow=76,SNR=10						
TXAR	Lajitas Array	51.18	91	P	P	16 52 42.9	-1.5
	comp=Z,0.3nm,0.7s,baz=303,slow=4.1,SNR=3.9						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	57.52	355	P	P	16 53 28.1	-1.7
	comp=Z,2.1nm,0.9s,baz=6.2,slow=9.2,SNR=2.2						
	comp=Z,2.1nm,0.9s						
FINES	FINESS Array B	65.52	353	P	P	16 54 23.2	-0.6
	comp=Z,4.3nm,1.1s,baz=0.0,slow=6.9,SNR=6.2						
	comp=Z,4.3nm,1.1s						
AKASG	Malin Array Be	75.87	350	P	P	16 55 26.2	-0.7
	comp=Z,1.2nm,0.5s,baz=14,slow=6.0,SNR=12						
	comp=Z,1.2nm,0.5s						

*BJI **09** 16:48:13.7±0.0, 22°.73S×174°.58W, h10km, mb5.2/35, mB5.6/19, Ms5.0/5, Ms7 4.5/5*
*NEIC **09** 16:48:15.3±2.8, 22°.82S±0°.07×174°.59W±0°.09, h10km±1km, mb5.1/62, Error ellipse: s-maj=14.1km s-min=11.9km az=113.0*
*IDC **09** 16:48:15.0±0.5, 22°.78S×175°.25W, h0km, mb4.6/17, mbtmp4.7/18, ML5.4/1, MS4.1/40, Error ellipse: s-maj=19.1km s-min=14.8km az=114.0*
*MOS **09** 16:48:17.8±3.1, 22°.94S×175°.55W, h10km, mb5.3/21, Error ellipse: s-maj=12.0km s-min=9.8km az=112.0*
*GCMT **09** 16:48:18.3±0.5, 23°.16S±0°.04×174°.49W±0°.04, h28km±1km, MW4.9/69, Moment Tensor Solution. s30,c36; s69,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.18±.24; $M_{\theta\theta}$-1.36±.15; $M_{\phi\phi}$-1.82±.15; $M_{r\theta}$1.14±.23; $M_{r\phi}$-1.01±.07; $M_{\theta\phi}$1.01±.20; Best double couple: $M_0$3.27600×10^{16} NP1:ϕ_s43.00000°, δ59.00000°, λ94.00000°. NP2: ϕ_s216.00000°, δ31.00000°, λ84.00000°. Principal axes: T 3.5610, Plg76.0000°, Azm323.0000°; N -0.5680, Plg3.0000°, Azm221.0000°; P -2.9920, Plg14.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **09** 16:48:21.2, 22°.62S×174°.44W, h98km, mb4.9/23, Tonga Islands Region*

ISC 09 16:48:15.4±0.7, 22°92S±0°.05×174°78W±0°.06, h11km±4km, h12km:pP-P, n482, σ1§37/452, mb5.2/76, MS4.2/44, 53C-8D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.93	51	Pn	Pn	16 49 39.4	-3.8
NIUE	Niue	5.93	51	P	Pn	16 49 39.7	-3.5
RAO	Raoul Island	6.91	203	Pn	Pn	16 49 56.2	-0.4
	76nm,0.3s,baz=50,slow=8.5,SNR=5.3						
RAO				Sn	Sn	16 51 10.7	-4.4
	72nm,0.3s,baz=99,slow=21,SNR=3.7						
	188nm,0.2s						
RAO	Raoul Island	6.91	203	Pn	Pn	16 49 57.9	+1.4
RAO	Raoul Island	6.91	203	P	Pn	16 49 57.9	+1.4
MSVF	Nonsavu	8.48	306	Pn	Pn	16 50 21.5	+3.2
	5.0nm,0.3s,baz=148,slow=14,SNR=30						
MSVF				Sn	Sn	16 51 31.7	-22
	baz=350,slow=14						
MSVF				LR	LR	16 53 09.9	
	comp=Z,2μm,20.4s,baz=135,slow=37						
MSVF	Nonsavu	8.48	306	Pn	Pn	16 50 21.2	+2.9
MSVF	Nonsavu	8.48	306	P	Pn	16 50 21.2	+2.9
MSVF	Nonsavu	8.48	306	P	Pn	16 50 22.1	+3.8
FUTU	Fugatoga	9.13	339	P	Pn	16 50 28.8	+1.6
AFI	Afiamalu	9.41	18	Pn	Pn	16 50 26.7	-4.3
	10nm,0.3s,baz=239,slow=12,SNR=5.6						
AFI				Sn	Sn	16 52 00.6	-16
	2.7nm,0.3s,baz=238,slow=23,SNR=1.3						
AFI	Afiamalu	9.41	18	Pn	Pn	16 50 27.6	-3.4
AFI	Afiamalu	9.41	18	P	Pn	16 50 28.4	-2.6
RAR	Rarotonga	14.02	86	Pn	Pn	16 51 30.7	-3.3
	12nm,0.3s,baz=204,slow=5.7,SNR=20						
RAR				Sn	Sn	16 53 51.9	-18
	1.8nm,0.3s,baz=23,slow=14,SNR=1.4						
RAR				LR	LR	16 56 42.8	
	comp=Z,704nm,18.7s,baz=282,slow=35						
RAR	Rarotonga	14.02	86	Pn	Pn	16 51 31.0	-3.0
RAR	Rarotonga	14.02	86	P	Pn	16 51 31.0	-3.0
MXZ	Matakaoa Point	15.76	201		P	16 52 02.0	+0.8
MARNC	Mare, Loyalty	15.99	272		Pn	16 52 03.4	+3.1
URZ	Urewera	16.79	203	Pn	Pn	16 52 08.5	-2.0
	1.3nm,0.3s,baz=344,slow=5.4,SNR=6.6						
URZ				Sn	Sn	16 55 00.5	-17
	0.5nm,0.3s,baz=188,slow=15,SNR=2.3						
LIFNC	LIFOU	16.83	274	Pn	Pn	16 52 12.9	+1.8
LIFNC				IAmb	IAmb	16 52 16.2	
	comp=Z,202nm,1.3s						
LIFNC	LIFOU	16.83	274	P	Pn	16 52 13.1	+2.0
YATNC	Mamie plateau,	16.96	269	P	P	16 52 16.1	+1.4
OUENC	Ouen Island, N	16.97	268		P	16 52 16.2	+1.4
OUENC	Ouen Island, N	16.97	268	P	P	16 52 16.7	+1.9
DZM	Mont Dzumac	17.37

comp=Z,20nm,0.9s
CTAO Charters Tower 36.29 267 P P 16 55 17.6 -1.6
RABL Rabaul 36.98 295 P P 16 55 23.3 -1.9
RABL IAmb IAmb 16 56 04.0
comp=Z,25nm,0.5s
TOO Toolangi 37.01 238 P P 16 55 24.6 -0.6
TOO Toolangi 37.01 238 P P 16 55 24.6 -0.6
TOO pmax pmax
comp=Z,87nm,1.6s
TOO Toolangi 37.01 238 P P 16 55 26.1 +0.9
QLP Quilpie 37.29 256 P P 16 55 26.0 -1.6
MTSU Mount Surprise 38.51 269 P P 16 55 36.9 -1.2
PMG Port Moresby 38.82 284 P P 16 55 38.1 -2.5
comp=Z,43nm,0.9s,baz=150,slow=8.4,SNR=6.2
PMG LR LR 17 09 52.8
comp=Z,275nm,20.2s,baz=126,slow=34
comp=Z,43nm,0.9s
PMG Port Moresby 38.82 284 P P 16 55 38.7 -1.9
PMG IAmb IAmb 16 55 39.8
comp=Z,53nm,0.9s
PMG Port Moresby 38.82 284 P P 16 55 38.7 -1.9
PMG pmax pmax
comp=Z,53nm,1.0s
PMG Port Moresby 38.82 284 P P 16 55 38.3 -2.3
comp=Z,65nm,1.1s
STKA Stephens Creek 39.53 247 P P 16 55 44.4 -2.0
comp=Z,5.8nm,0.7s,baz=96,slow=11,SNR=9.1
STKA LR LR 17 11 18.6
comp=Z,348nm,18.4s,baz=52,slow=35
comp=Z,5.8nm,0.7s
STKA Stephens Creek 39.53 247 P P 16 55 44.9 -1.5
STKA Stephens Creek 39.53 247 P P 16 55 44.9 -1.5
STKA pmax pmax
comp=Z,8.0nm,1.7s
COEN Coen 40.75 275 P P 16 55 55.8 -0.9
BBOO Buckleboo 44.23 246 P P 16 56 22.4 -2.5
AS31 Alice Springs 46.93 258 P P 16 56 44.0 -2.4
ASAR Alice Springs 46.93 258 P P 16 56 43.8 -2.6
comp=Z,24nm,0.9s,baz=100,slow=6.3,SNR=112
ASAR PcP PcP **16 58 18.5 -0.5**
comp=Z,1.5nm,0.8s,baz=97,slow=3.4,SNR=1.3
ASAR S S 17 03 30.6 -7.0
comp=Z,0.7nm,0.8s,baz=98,slow=15,SNR=5.5
ASAR LR LR 17 16 28.2
comp=Z,499nm,18.4s,baz=104,slow=36
comp=Z,24nm,0.9s
WR0 Warramunga Arr 47.08 264 P P 16 56 44.5 -3.1
WR0 IAmb IAmb 16 58 05.8
comp=Z,37nm,1.6s
WB2 Warramunga Arr 47.26 264 P P 16 56 45.8 -3.1
WB2 IAmb IAmb 16 56 50.7
comp=Z,20nm,0.8s
WB0 Warramunga Arr 47.26 264 P P 16 56 45.9 -3.1
WB0 IAmb IAmb 16 56 46.8
comp=Z,20nm,0.9s
WRAB Tennant Creek 47.26 264 P P 16 56 45.8 -3.3
WRAB IAmb IAmb 16 56 50.3
comp=Z,20nm,0.9s
WRAB Tennant Creek 47.26 264*de*P **P 16 56 46.2 -2.8**
WRAB pmax pmax
comp=Z,19nm,0.9s
WRA Warramunga Arr 47.27 264 P P 16 56 46.0 -3.1
comp=Z,17nm,0.9s,baz=96,slow=8.4,SNR=137
WRA LR LR 17 16 16.3
comp=Z,248nm,19.2s,baz=94,slow=36
comp=Z,17nm,0.9s
FORT Forrest 51.13 248 P P 16 57 16.3 -2.2
FORT IAmb IAmb 16 58 32.7
comp=Z,39nm,1.1s
MTN Manton Dam 52.20 271 P P 16 57 23.7 -3.0
MTN IAmb IAmb 16 57 55.1
comp=Z,72nm,1.9s
KNRA Kununurra 53.51 267 P P 16 57 33.7 -2.6
GUMO Guam 53.65 309 LR LR 17 17 18.4
comp=Z,73nm,21.8s,baz=120,slow=33
FAKI Fak Fak 54.96 283 P P 16 57 45.0 -1.9
FAKI IAmb IAmb 16 58 18.8
comp=Z,19nm,1.1s
SBA Scott Base 55.69 185 P P 16 57 52.7 +1.5
SBA IAmb IAmb 16 58 12.3
comp=Z,15nm,1.2s
SBA Scott Base 55.69 185 P P 16 57 52.7 +1.5
SBA pmax pmax
comp=Z,15nm,1.3s
FITZ Fitzroy Crossi 55.70 263 LR LR 17 21 37.8
comp=Z,226nm,19.4s,baz=96,slow=36
FITZ Fitzroy Crossi 55.70 263 P P 16 57 50.0 -2.1
FITZ IAmb IAmb 16 57 52.0
comp=Z,48nm,1.7s
VNDA Vanda 55.80 186 P P 16 57 55.7 +3.7
comp=Z,2.7nm,1.0s,baz=0.8,slow=6.8,SNR=13
VNDA LR LR 17 19 09.7
comp=Z,62nm,20.0s,baz=20,slow=33
comp=Z,2.7nm,1.0s
VNDA Vanda 55.80 186 P P 16 57 53.9 +1.9
VNDA Vanda 55.80 186 P P 16 57 53.9 +1.9
VNDA pmax pmax
comp=Z,6.0nm,1.2s
SIJI Sorong 56.75 285 P P 16 57 57.2 -2.6
comp=Z,29nm,1.3s
KRAI Karang Ratu 58.27 281 P P 16 58 08.2 -2.3
comp=Z,18nm,0.8s
SOEI Soe 59.57 272 P P 16 58 18.7 -1.1
SOEI Soe 59.57 272 P P 16 58 18.6 -1.1
comp=Z,34nm,0.9s
NWAO Narrogin (SRO) 59.99 244 LR LR 17 23 45.0
comp=Z,147nm,18.4s,baz=145,slow=36
PSA00 Pilbara Seismi 60.06 258 P P 16 58 21.1 -1.7
PSA00 IAmb IAmb 17 00 10.8
comp=Z,27nm,1.9s
MBWA Marble Bar 60.27 258 P P 16 58 21.1 -3.1
MBWA IAmb IAmb 16 58 24.6
comp=Z,25nm,1.1s
MORW Morawa 61.70 248 P P 16 58 32.5 -1.4
MMRI Maumere 61.84 272 P P 16 58 32.9 -2.1
CASY Casey 63.08 206 P P 16 58 42.6 +0.1
CASY IAmb IAmb 16 58 44.9
comp=Z,16nm,1.2s
JCJ Chichijima 64.83 318 LR LR 17 23 39.6
comp=Z,125nm,19.8s,baz=120,slow=33
KAPI Kappang 65.48 275 LR LR 17 27 10.0
comp=Z,62nm,19.4s,baz=128,slow=36
TWSI Taliwang, Sumb 66.74 270 P P 16 59 05.3 -1.9
comp=Z,33nm,1.6s
TOLI2 Tolitoli 67.03 282 P P 16 59 06.6 -2.4
TOLI2 IAmb IAmb 16 59 12.5
comp=Z,14nm,0.8s
QSPA South Pole Qui 67.16 180 P P 16 59 11.5 +2.3
comp=Z,5.9nm,1.0s,baz=44,slow=2.8,SNR=18
QSPA LR LR 17 23 36.1
comp=Z,133nm,21.9s,baz=46,slow=32
comp=Z,5.9nm,1.0s
QSPA South Pole Qui 67.16 180 P P 16 59 08.4 -0.7
QSPA IAmb IAmb 16 59 17.9
comp=Z,11nm,1.0s
MAJO Matsushiro 73.94 322 P P 16 59 49.6 -1.1
MAJO Matsushiro 73.94 322 P P 16 59 49.6 -1.1
MAJO pmax pmax
comp=Z,58nm,1.8s
JOW Kunigami 74.01 309 LR LR 17 30 11.8
comp=Z,119nm,19.6s,baz=124,slow=34
SHEM Shemya Is, Ala 75.95 353 LR LR 17 31 32.8
comp=Z,100nm,18.1s,baz=142,slow=34
KSM Kuching 76.70 277 P P 17 00 05.8 -1.4
BELA Belgrano 2 76.77 172 P P 17 00 07.1 +0.6
SMMC Simmler 77.76 43 P P 17 00 12.7 0.0
baz=230
LPIG La Paz 78.12 57 LR LR 17 29 40.6
comp=Z,163nm,18.1s,baz=228,slow=32
MURC Murrieta 78.51 46 P P 17 00 17.1 +0.2
baz=232
CHNA Chernabura Isl 78.53 9 P P 17 00 17.3 +1.0
baz=194
MONP2 Monument Peak 78.60 47 P P 17 00 17.1 -0.5
baz=233
IKP In-Ko-Pah, Jac 78.67 47 P P 17 00 17.4 -0.3
baz=233
VES Vestal, Richgr 78.67 43 P P 17 00 17.7 +0.1
baz=231
EDW2 Edwards Air Fo 78.77 45 P P 17 00 18.3 0.0
baz=232,SNR=7.7
SDPT Sand Point 78.91 8 P P 17 00 20.5 +2.1
baz=193
ISA Isabella, Lake 78.95 44 P P 17 00 19.9 +0.6
baz=231
PFO Pinyon Flats O 79.01 46 LR LR 17 32 29.8
comp=Z,153nm,18.1s,baz=218,slow=34
PFO Pinyon Flats O 79.01 46 P P 17 00 19.7 0.0
baz=233
TPFO Pinon Flats 79.01 46 P P 17 00 19.7 0.0
baz=233
PET Petropavlovsk 79.08 344⇑*e*P **P 17 00 19.9 +0.5**
PET pmax pmax
comp=Z,63nm,2.5s
LRMC Laurel Mtn Rad 79.34 44 P P 17 00 21.9 +0.4
baz=232
PEA0B Petropavlovsk- 79.40 344*de*P **P 17 00 20.9 -0.3**
PETK Petropavlovsk- 79.40 344 P P 17 00 21.6 +0.4
comp=Z,8.1nm,0.9s,baz=122,slow=3.8,SNR=11
PETK LR LR 17 36 35.8
comp=Z,48nm,18.6s,baz=122,slow=37
comp=Z,8.1nm,0.9s
PETK Petropavlovsk- 79.40 344 P P 17 00 21.1 0.0
YSS Yuzh-Sakhalins 79.41 332 *e*P **P 17 00 22.1 +0.7**
YSS pmax pmax
comp=Z,30nm,1.1s
BELC Belle Mtn. Jos 79.55 46 P P 17 00 22.8 +0.2
baz=233
CWC Cottonwood Cre 79.68 43 P P 17 00 23.6 +0.3
baz=231
BC3 Big Chuckawall 79.71 47 P P 17 00 24.0 +0.6
baz=234
GLA Glamis 79.78 48 P P 17 00 24.5 +0.7
baz=234
GSC Goldstone, Bar 79.80 45 P P 17 00 24.2 +0.3
baz=232
MPMC Manual Prospec 79.82 44 P P 17 00 24.5 +0.3
baz=232,SNR=6.6
HEC Hector,Ludlow 79.82 45 P P 17 00 24.4 +0.3
baz=233
SPIA Saint Paul Isl 79.88 3 P P 17 00 25.2 +1.6
baz=184
TIN Tinemaha, Big 79.97 43 P P 17 00 25.3 +0.5
baz=231
CHIR Chirikof Islan 80.11 11 P P 17 00 26.4 +1.5
baz=198
CHGN Chignik 80.12 9 P P 17 00 27.0 +2.0
baz=195
IRM Iron Mountain 80.21 47 P P 17 00 26.1 0.0
baz=234
GMRC Granite Mounta 80.24 46 P P 17 00 26.9 +0.6
baz=233
MAW Mawson 80.29 199 P P 17 00 28.0 +2.1
comp=Z,7.7nm,0.6s,baz=137,slow=5.9,SNR=8.3
comp=Z,7.7nm,0.6s
MAW Mawson 80.29 199 P P 17 00 28.1 +2.1
MAW Mawson 80.29 199 P P 17 00 28.1 +2.1
MAW pmax pmax
comp=Z,5.0nm,1.2s
YBH Yreka Blue Hor 80.36 37 LR LR 17 29 22.7
comp=Z,118nm,19.6s,baz=240,slow=31
TUQ Turquoise Moun 80.45 45 P P 17 00 27.8 +0.3
baz=233
FURC Furnace Creek, 80.47 44 P P 17 00 27.9 +0.5
baz=232
GRAC Grapevine Rang 80.47 43 P P 17 00 28.0 +0.6
baz=232
SHOC Shoshone, Teco 80.50 45 P P 17 00 28.3 +0.7
baz=233
KSRS Korea Array 80.68 317 P P 17 00 28.6 +0.2
comp=Z,2.4nm,0.8s,baz=128,slow=6.2,SNR=7.1
KSRS LR LR 17 32 06.9
comp=Z,54nm,20.0s,baz=110,slow=33
comp=Z,2.4nm,0.8s
KSRS Korea Array 80.68 317 *e*P **P 17 00 29.1 +0.6**
KSRS pmax pmax
comp=Z,3.0nm,0.8s
KSAR Wonju Array Be 80.70 317 P P 17 00 29.0 +0.4
KSAR Wonju Array Be 80.70 317 P P 17 00 29.0 +0.4
RYN Ryan 80.77 41 P P 17 00 28.7 -0.5
NVAR Mina Array Bea 80.78 42 P P 17 00 31.7 +2.4
comp=Z,3.3nm,0.8s,baz=224,slow=9.1,SNR=29
comp=Z,3.3nm,0.8s
TPNV Topopah Spring 81.15 44 P P 17 00 31.5 +0.3
baz=233,SNR=6.9
R17K Ugashik Creek 81.72 10 P P 17 00 34.8 +1.3
baz=197
H03S2 Juan Fernandez 82.16 123 T T 18 32 18.6
baz=247
TUC Tucson 82.17 50 P P 17 00 36.1 -0.5
baz=237
H03S1 Juan Fernandez 82.17 123 T T 18 32 20.0
baz=247
H03S3 Juan Fernandez 82.18 123 T T 18 32 23.0
baz=247
MASI Maura Aman, Be 82.32 270 P P 17 00 37.1 -0.7
comp=Z,26nm,1.9s
R11A Troy Canyon, C 82.42 43 P P 17 00 37.2 -0.7
baz=233
TYV Tymovskoe 82.49 334 *e*P P 17 00 49.3 +12
TYV pmax pmax
comp=Z,500nm,3.4s
TYV pmax pmax
comp=Z,25nm,1.2s
USA0B Ussuriysk Arra 82.65 324 P P 17 00 38.9 +0.1
USA0B Ussuriysk Arra 82.65 324 P P 17 00 38.9 +0.1
USA0B pmax pmax
comp=Z,37nm,1.2s
USRK Ussuriysk Ar. 82.65 324 P P 17 00 39.8 +1.0
comp=Z,18nm,0.9s,baz=130,slow=3.0,SNR=18
comp=Z,18nm,0.9s
USRK Ussuriysk Ar. 82.65 324 P P 17 00 39.0 +0.3
Q18K Katmai Hardscr 82.91 10 P P 17 00 40.6 +0.7
baz=198
P17K Kvichak River 83.20 9 P P 17 00 41.6 +0.4
baz=197
Q20K Shuyak Island 83.33 12 P P 17 00 43.1 +1.2
baz=200
O16K Kokwok River B 83.35 8 P P 17 00 42.7 +0.7
baz=195
P18K Big Mountain, 83.58 10 P P 17 00 43.5 +0.3
baz=198
NJ2 Nanjing 83.72 308 *e*P **P 17 00 42.4 -2.2**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
ELK Elko 84.07 41 LR LR 17 36 29.2
comp=Z,179nm,18.2s,baz=244,slow=34
MDJ Mudanjiang 84.22 324 P P 17 00 47.7 +0.9
MDJ pmax pmax
comp=Z,26nm,1.6s
O19K Port Alsworth 84.49 10 P P 17 00 49.4 +1.7
baz=199
BRSE Bradley Lake S 84.69 12 P P 17 00 49.1 +0.3
baz=202
N19K Bonanza Creek 85.05 10 P P 17 00 51.6 +0.8
baz=198
TROLL Troll, Antarti 85.30 179 P P 17 00 53.9 +1.7
PLCA Paso Flores 85.44 132 P P 17 00 55.9 +2.5
comp=Z,6.2nm,1.1s,baz=264,slow=10,SNR=3.3
PLCA LR LR 17 32 11.0
comp=Z,91nm,18.8s,baz=227,slow=31
comp=Z,2.6nm,1.1s
SNAA Sanae 85.50 177 P P 17 00 54.5 +1.4
SNAA Sanae 85.50 177 LR LR 17 36 20.7
comp=Z,250nm,19.9s,baz=191,slow=34
SNAA Sanae 85.50 177 P P 17 00 53.8 +0.7
SNAA Sanae 85.50 177 P P 17 00 53.8 +0.7
SNAA pmax pmax
comp=Z,6.0nm,1.0s
VNA3 Neumayer Olymp 85.52 175 P P 17 00 54.4 +1.3
CRAG Craig 85.76 22 P P 17 00 54.1 -0.2
baz=218
N20K Mount Spurr 85.79 11 P P 17 00 54.6 +0.2
baz=201
SPCR Spurr Chakacha 85.79 11 P P 17 00 54.5 +0.1
baz=201
TXAR Lajitas Array 85.88 56 P P 17 00 58.1 +2.4
comp=Z,2.2nm,0.9s,baz=212,slow=7.3,SNR=16
TXAR LR LR 17 34 52.7
comp=Z,93nm,18.2s,baz=258,slow=32
comp=Z,2.2nm,0.9s
VNA2 Neumayer--Watz 85.99 176 P P 17 00 57.2 +1.8
baz=190,slow=3.7
CN2 Changchun 86.05 321 *e*P **P 17 00 55.5 -0.5**
CN2 *es*P PcP 17 01 02.4 +3.8
CN2 SKS S 17 11 18.1 -12
CN2 *es*S ScS 17 11 36.3 -2.7
CN2 pmax pmax
comp=Z,20nm,1.1s
M19K Big River Lodg 86.10 10 P P 17 00 57.1 +1.3
baz=199
BNX BinXian 86.13 324 ⇓P **P 17 00 57.0 +0.6**
BNX pmax pmax
comp=Z,20nm,1.0s
BNX pmax pmax
comp=Z,150nm,3.7s
RC01 Rabbit Creek A 86.13 12 P P 17 00 55.8 -0.2
baz=203
KLR Kul'dur 86.14 328 LR LR 17 36 37.3
comp=Z,132nm,18.7s,baz=112,slow=34
KLR Kul'dur 86.14 328⇓*e*P **P 17 00 57.8 +1.5**
KLR pmax pmax
comp=Z,17nm,1.4s
PWL Port Wells 86.20 13 P P 17 00 55.9 -0.4
baz=204
VNA1 Neumayer--Stat 86.20 176 P P 17 00 58.3 +1.9
KAIM Kayak Island 86.21 15 P P 17 00 56.2 -0.2
baz=208
HLID Hailey 86.25 39 P P 17 00 56.8 -0.5
baz=233
M20K Styx River 86.28 10 P P 17 00 58.4 +1.6
baz=200
MNSI Mandailing Nat 86.29 272 P P 17 00 56.5 -1.4
comp=Z,11nm,1.2s
SUA Susitna One 86.29 11 P P 17 00 58.4 +1.4
baz=202
L19K White Mountain 86.30 9 P P 17 00 57.5 +0.7
baz=198
SIT Sitka 86.30 20 P P 17 00 58.3 +1.5
baz=216
IPM Ipoh 86.39 276 P P 17 00 58.1 -0.3
IPM Ipoh 86.39 276 P P 17 00 57.5 -1.0
comp=Z,28nm,1.9s
GAMB Gambell 86.44 1 P P 17 00 59.2 +1.8
baz=183
EYAK Cordova Ski Ar 86.46 14 P P 17 00 57.8 +0.2
baz=206
GLI Glacier Island 86.47 13 P P 17 00 58.3 +0.6
baz=205
ANMO Albuquerque 86.62 50 LR LR 17 36 08.1
comp=Z,212nm,18.2s,baz=260,slow=33
ANMO Albuquerque 86.62 50⇓*e*P **P 17 01 01.7 +2.4**
ANMO pmax pmax
comp=Z,14nm,2.7s
ANMO Albuquerque 86.62 50 P P 17 00 58.7 -0.6
baz=239
SKT Skwentna 86.64 11 P P 17 00 59.5 +1.0
baz=201
M22K Willow 86.68 11 P P 17 00 59.4 +0.8
baz=202
KNK Knik Glacier 86.68 12 P P 17 00 59.3 +0.6
baz=204
PMR Palmer 86.71 12 P P 17 00 59.1 +0.3
baz=203
L20K Farewell, AK 86.72 10 P P 17 01 00.3 +1.3
baz=199
WRAK Wrangell Islan 86.78 22 P P 17 01 00.6 +1.4
baz=218
MA2 Magadan 86.93 343 LR LR 17 34 03.2
comp=Z,48nm,19.7s,baz=94,slow=32
MESA MESA 87.03 16 P P 17 01 00.6 -0.1
baz=210
SML Sawmill 87.06 12 P P 17 00 59.9 -0.7
baz=204
BMRM Bremner River 87.09 14 P P 17 00 59.8 -1.0
baz=208
YAH Yahtse 87.24 16 P P 17 01 01.2 -0.5
YAH IAmb IAmb 17 01 13.4
comp=Z,8.6nm,1.0s
CUT Chulitna 87.25 11 P P 17 01 02.8 +1.4
baz=202
KLU Klutina 87.27 13 P P 17 01 02.8 +1.1
baz=206
SCM Sheep Creek Mo 87.29 13 P P 17 01 02.5 +0.7
baz=205
PPLA Purkeypile 87.38 10 P P 17 01 02.9 +0.6
baz=201
K20K Telida 87.53 9 P P 17 01 03.6 +0.8
baz=199
VRDI Verde Repeater 87.59 15 P P 17 01 02.9 -0.4
VRDI IAmb IAmb 17 01 05.9
comp=Z,7.6nm,1.1s
CMIG Matias Romero 87.62 70 LR LR 17 31 36.3
comp=Z,73nm,20.4s,baz=200,slow=30
NEW Newport 87.62 34 LR LR 17 35 41.4
comp=Z,190nm,18.1s,baz=216,slow=32
N25K Chitina, Valde 87.66 14 P P 17 01 02.6 -1.0
N25K IAmb IAmb 17 01 06.1
comp=Z,12nm,1.1s
N25K Chitina, Valde 87.66 14 P P 17 01 04.0 +0.5
baz=208,SNR=5.6
PSI Prapat 87.67 274 LR LR 17 43 06.4
comp=Z,64nm,18.2s,baz=131,slow=38
PSI Prapat 87.67 274 P P 17 01 03.8 -1.0
comp=Z,343nmcomp=Z,18nm,1.2s
P29M Windy Craggy 87.69 18 P P 17 01 04.5 +0.8
baz=214
M24K Tolsona, Glenn 87.77 13 P P 17 01 03.7 -0.3
baz=206
S22A 4UR Ranch, Cre 87.81 47 P P 17 01 04.0 -1.1
baz=239
MCARA McCarthy VSAT 87.82 15 P P 17 01 03.9 -0.3
baz=209
CTG Chitna Glacier 87.86 16 P P 17 01 05.0 +0.3
baz=210
WAT6 Susitna Watana 87.89 12 P P 17 01 04.7 0.0
baz=205,SNR=5.8
CAST Castle Rocks 87.89 10 P P 17 01 04.1 -0.5
CAST IAmb IAmb 17 01 17.3
comp=Z,11nm,1.2s
CAST Castle Rocks 87.89 10 P P 17 01 04.4 -0.1
baz=201
PLBC Pleasant Camp 87.94 19 P P 17 01 05.9 +1.1
baz=215
WAT1 Susitna Watana 87.96 12 P P 17 01 05.7 +0.8
baz=204
O28M Mount Upton 87.99 16 P P 17 01 06.4 +1.0
baz=211
O29M Mount Kennedy 88.02 17 P P 17 01 05.6 +0.3
baz=213
KTH Kantishna Hill 88.21 10 P P 17 01 05.7 -0.4
TRF Thorofare Moun 88.22 11 P P 17 01 05.9 -0.4
TRF Thorofare Moun 88.22 11 P P 17 01 07.0 +0.7
baz=202
HARP HAARP 88.25 13 P P 17 01 07.4 +1.2
baz=207
SKAG Skagway 88.25 19 P P 17 01 07.2 +1.0
baz=216
CHUM Lake Minchumin 88.29 10 P P 17 01 06.6 +0.3
baz=200
J20K Nowinta River 88.30 9 P P 17 01 07.1 +0.7
baz=199
P30M Million Dollar 88.31 18 P P 17 01 07.1 +0.4
baz=214
GSI Gunungsitoli 88.33 272 P P 17 01 08.2 +0.4
GSI Gunungsitoli 88.33 272 P P 17 01 06.7 -1.1
GSI pP **pP 17 01 08.9 0.0**
TNA Tin City 88.36 3 P P 17 01 07.6 +0.9
baz=186
S34M Telegraph Cree 88.36 22 P P 17 01 07.8 +1.0
baz=219
DHY Denali Highway 88.41 12 P P 17 01 07.4 +0.3
baz=205
RND Reindeer 88.43 11 P P 17 01 07.2 0.0
RND IAmb IAmb 17 01 09.4
comp=Z,14nm,1.1s
RND Reindeer 88.43 11 P P 17 01 07.2 0.0
RND pmax pmax
comp=Z,14nm,1.1s
GCSA Galena City Sc 88.48 8 P P 17 01 08.6 +1.4
baz=196
YUK8 Steele Glacier 88.53 16 P P 17 01 09.3 +1.4
baz=212
YUK6 Outpost Mounta 88.61 17 P P 17 01 08.0 -0.3
baz=213
PAX Paxson 88.69 13 P P 17 01 09.1 +0.6
baz=207
BPAW Bear Paw Mtn. 88.71 10 P P 17 01 08.7 +0.3
baz=202
BW06 Boulder Array 88.71 42 P P 17 01 09.2 0.0
baz=237
PDAR Pinedale Array 88.71 42 P P 17 01 10.5 +1.3
comp=Z,0.8nm,0.8s,baz=190,slow=3.7,SNR=8.0
PDAR LR LR 17 39 29.0
comp=Z,10nm,18.2s,baz=265,slow=35
comp=Z,0.8nm,0.8s
SDCO Great Sand Dun 88.71 48 P P 17 01 08.7 -0.7
baz=240
MCK McKinley 88.72 11 P P 17 01 09.7 +1.2
baz=204
M26K Nabesna, AK 88.72 14 P P 17 01 09.8 +1.2
baz=209,SNR=5.5

HYT	Haines Junctio	88.75	17	P	P	17 01 09.7	+0.9
	baz=214						
MSTX	Muleshoe	88.78	52	P	P	17 01 09.2	-0.4
	baz=241						
YUK3	Moose Creek	88.78	16	P	P	17 01 09.7	+0.7
	baz=211,SNR=6.9						
Q32M	Nakina River	88.80	21	P	P	17 01 09.3	+0.1
	baz=218						
YUK4	Talbot Arm	88.88	17	P	P	17 01 09.3	-0.2
	baz=213						
M27K	Edge Creek, AK	88.94	15	P	P	17 01 10.8	+1.1
	baz=210,SNR=11						
O30N	Mendenhall	89.09	18	P	P	17 01 10.3	-0.1
	baz=215						
DLBC	Dease Lake	89.14	22	P	P	17 01 11.5	+0.9
	baz=220						
T25A	Trinidad	89.16	49	P	P	17 01 10.7	-0.8
	baz=240						
L26K	Log Cabin Wild	89.19	14	P	P	17 01 12.3	+1.6
	baz=209						
SRIT	Nakonsritamara	89.30	280	P	P	17 01 13.5	+1.2
WHY	Whitehorse	89.35	18	P	P	17 01 11.2	-0.5
	baz=216						
K24K	Donnelly Dome	89.38	12	P	P	17 01 11.7	+0.2
	baz=206						
N30M	Aishikik Lake	89.39	17	P	P	17 01 11.6	-0.1
	baz=214						
SEY	Seymchan	89.43	346	*ce*P	P	17 01 13.4	+1.7
SEY				pmax	pmax		
	comp=Z,20nm,1.3s						
RIDG	Independent Ri	89.51	13	P	P	17 01 12.3	+0.1
	baz=207						
WRH	Wood River Hil	89.55	11	P	P	17 01 12.0	-0.3
WRH				IAmb	IAmb	17 01 20.9	
	comp=Z,14nm,0.9s						
I21K	Tanana	89.56	9	P	P	17 01 12.6	+0.3
	baz=201						
R33M	Jennings River	89.56	21	P	P	17 01 12.4	-0.2
	baz=220						
L27K	Beaver Creek,	89.56	14	P	P	17 01 12.9	+0.4
	baz=210						
BCAR	Beaver Creek A	89.58	14		P	17 01 13.8	+1.3
P33M	Teslin, Yukon	89.61	20	P	P	17 01 13.7	+0.9
	baz=218						
MLY	Manley	89.61	10	P	P	17 01 13.1	+0.4
	baz=202						
HDA	Harding Lake	89.70	12	P	P	17 01 13.2	+0.2
HDA				IAmb	IAmb	17 01 14.6	
	comp=Z,7.9nm,1.0s						
HDA	Harding Lake	89.70	12	P	P	17 01 13.9	+0.9
	baz=205						
BJI	Beijing	89.72	314	P	P	17 01 14.0	+0.4
BJI				SKS	S	17 11 42.5	-23
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CCB	Clear Creek Bu	89.76	11	P	P	17 01 13.6	+0.3
CCB				IAmb	IAmb	17 01 16.4	
	comp=Z,11nm,1.2s						
N31M	Braeburn, Yuko	89.77	18	P	P	17 01 14.5	+1.0
	baz=215						
M29M	Somme Creek	89.85	16	P	P	17 01 15.1	+1.2
	baz=213						
ENH	Enshi	89.87	303	P	P	17 01 14.4	-0.2
H21K	Melozitna Rive	89.89	9	P	P	17 01 14.6	+0.7
	baz=200						
SCRK	Sand Creek	89.90	13	P	P	17 01 15.0	+0.9
	baz=208						
I23K	Minto, Yukon-K	89.95	10	P	P	17 01 14.9	+0.7
	baz=203						
COLA	College	89.96	11⇑	*e*P	P	17 01 14.7	+0.6
COLA				pmax	pmax		
	comp=Z,14nm,1.3s						
MDM	Murphy Dome	89.97	11	P	P	17 01 14.4	+0.2
MDM				IAmb	IAmb	17 01 16.0	
	comp=Z,14nm,1.3s						
N23A	Red Feather La	90.01	45	P	P	17 01 14.7	-0.7
	baz=239						
IL31		90.04	12	P	P	17 01 14.7	+0.2
IL31				IAmb	IAmb	17 01 22.3	
	comp=Z,24nm,1.6s						
ILAR	Eielson Array	90.04	12	P	P	17 01 15.6	+1.0
	comp=Z,4.2nm,1.1s,baz=220,slow=5.2,SNR=18						
	comp=Z,4.2nm,1.1s						
ILAR	Eielson Array	90.04	12	P	P	17 01 14.7	+0.1
J25K	Salcha River,	90.18	12	P	P	17 01 16.5	+1.1
	baz=207						
POKR	Poker Flat Res	90.25	11	P	P	17 01 17.3	+1.7
	baz=205						
N32M	Quiet Lake	90.28	19	P	P	17 01 16.4	+0.6
	baz=218						
H22K	Ishtalitna Cre	90.32	9	P	P	17 01 17.5	+1.6
	baz=201						
K27K	Chicken	90.35	14	P	P	17 01 17.7	+1.6
	baz=210						
GYA	Guiyang	90.44	299	⇓P	P	17 01 18.3	+0.8
GYA				pmax	pmax		
	comp=Z,17nm,1.6s						
J26L	Joseph Creek	90.45	13	P	P	17 01 18.6	+2.0
	baz=208,SNR=18						
L29M	L29M	90.49	16	P	P	17 01 19.4	+2.5
	baz=213,SNR=9.2						
H23K	Yukon River	90.54	10	P	P	17 01 19.2	+2.3
	baz=203						
G21K	Allakaket	90.60	8	P	P	17 01 18.7	+1.5
	baz=199						
M31M	Drury Creek, Y	90.74	18	P	P	17 01 19.4	+1.5
	baz=216						
WTLY	Watson Lake, Y	90.82	21	P	P	17 01 19.8	+1.4
	baz=221						
PRP	Porcupine Dome	90.96	12	P	P	17 01 20.1	+1.0
	baz=207						
DAWY	Dawson	90.99	15	P	P	17 01 19.6	+0.5
	baz=212,SNR=5.8						
EGAK	Eagle	91.20	14	P	P	17 01 21.1	+1.1
	baz=210						
I26K	Coal Creek Min	91.24	13	P	P	17 01 20.6	+0.4
	baz=209						
K29M	Barlow Dome	91.26	16	P	P	17 01 21.4	+1.0
	baz=214,SNR=8.1						
G22K	Bettles	91.26	9	P	P	17 01 20.6	+0.4
	baz=201						
F21K	Alatna River	91.27	8	P	P	17 01 21.2	+0.9
	baz=199						
G23K	Bananza Creek	91.28	10	P	P	17 01 21.6	+1.2
	baz=202						
EGMT	Eagleton	91.47	37	P	P	17 01 21.7	-0.1
	baz=237						
F22K	John River	91.72	9	P	P	17 01 24.0	+1.6
	baz=201						
COLD	Coldfoot	91.74	9	P	P	17 01 24.0	+1.6
	baz=202						
MMPY	Sheldon Lake,	91.96	19	P	P	17 01 24.8	+1.2
	baz=219						
XAN	Xi'an	91.97	306	⇑P	P	17 01 25.2	+0.8
XAN				pP	sP	17 01 30.3	+3.7
XAN				pmax	pmax		
	comp=Z,29nm,1.1s						
XAN				pmax	pmax		
	comp=Z,120nm,3.6s						
TGTN	Hyland Airport	92.05	20	P	P	17 01 25.0	+0.9
	baz=222						
I29M	Ogilvie Camp,	92.34	14	P	P	17 01 26.6	+1.3
	baz=213						
E22K	Anaktuvuk Pass	92.35	8	P	P	17 01 25.5	+0.1
	baz=201						
H27K	Steamboat Moun	92.38	13	P	P	17 01 27.3	+1.8
	baz=210						
G26K	Porcupine Rive	92.57	12	P	P	17 01 28.0	+1.8
	baz=208						
RSSD	Black Hills	92.85	43	P	P	17 01 28.9	+0.5
	baz=240						
G27K	Doyon Strip	92.86	13	P	P	17 01 28.5	+0.9
	baz=210						
KMI	Kunming	93.10	296	⇑P	P	17 01 31.1	+1.1
KMI				sP	sP	17 01 36.7	+4.4
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	Hu-ho-hao-te	93.18	313	*e*P	P	17 01 31.7	+1.8
HHC				pmax	pmax		
	comp=Z,57nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,4.7s						
D23K	Nanushuk River	93.28	8	P	P	17 01 30.1	+0.5
	baz=202						
E25K	Arctic Village	93.29	11	P	P	17 01 31.2	+1.5
	baz=207						
EPYK	Eagle Plains	93.54	14	P	P	17 01 31.8	+0.9
	baz=214						
CM31	Chiang Mai Arr	93.73	288	P	P	17 01 32.9	+0.1
CMAR	Chiang Mai Arr	93.73	288	P	P	17 01 34.1	+1.3
	comp=Z,8.1nm,1.0s,baz=123,slow=2.9,SNR=43						
CMAR				LR	LR	17 42 07.7	
	comp=Z,50nm,19.7s,baz=100,slow=35						
	comp=Z,8.1nm,1.0s						
CMAR	Chiang Mai Arr	93.73	288	P	P	17 01 33.1	+0.3
CHTO	Chiang Mai	93.87	289	P	P	17 01 33.6	+0.2
CHTO	Chiang Mai	93.87	289	P	P	17 01 33.6	+0.2
G30M	tAoh Zraii Nji	94.16	14	P	P	17 01 35.4	+1.7
	baz=215						
PZH	PanZhiHua	94.48	297	P	P	17 01 38.8	+2.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,140nm,4.5s						
LVC	Limon Verde	94.87	117	LR	LR	17 37 05.3	
	comp=Z,111nm,18.6s,baz=232,slow=31						
F31M	Tsiigehtchic	95.10	15	P	P	17 01 39.0	+1.1
	baz=217						
YAK	Yakutsk	95.48	337	LR	LR	17 41 47.3	
	comp=Z,52nm,20.4s,baz=89,slow=34						
YAK	Yakutsk	95.48	337⇓	*e*P	P	17 01 41.9	+2.2
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
LZH	Lanzhou	96.61	306	*e*P	P	17 01 43.4	-2.4
LZH				pP	sP	17 01 48.2	+0.2
LZH				sP	pP	17 01 51.1	+3.7
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				LR	LR		
	comp=Z,290nm,14.4s						
LZH				LR	LR		
	comp=Z,230nm,15.3s						
LZH				LR	LR		
	comp=Z,130nm,15.8s						
YKA	Yellowknife Ar	97.47	24	LR	LR	17 39 52.4	
	comp=Z,73nm,18.1s,baz=215,slow=32						
LPAZ	La Paz	98.38	112	LR	LR	17 41 51.6	
	comp=Z,33nm,18.2s,baz=238,slow=32						
ULN	Ulaanbaatar	99.15	318⇑	*e*P	Pdif	17 01 55.2	-1.7
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	99.54	318	LR	LR	17 42 20.2	
	comp=Z,37nm,19.2s,baz=216,slow=33						
GTA	Gaotai	100.82	308	⇑P	Pdif	17 02 06.1	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,40nm,5.3s						
GTA				LR	LR		
	comp=Z,68nm,20.4s						
GTA				LR	LR		
	comp=Z,100nm,19.3s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
WMQ	Urumqi	110.77	310	*e*PKP	PKiKP	17 06 48.2	-0.3
ZALV	Zalesovo Beam	114.25	320	PKiKP	PKPdf	17 06 53.5	-1.2
	comp=Z,0.5nm,0.4s,baz=5,7,slow=1,4,SNR=2.6						
MK31	Makanchi Array	115.03	312	⇑*i*PKIKP	PKiKP	17 06 57.9	+1.4
MKAR	Makanchi Array	115.03	312	PKP	PKPdf	17 06 55.6	-0.8
	comp=Z,0.6nm,0.6s,baz=213,slow=1.8,SNR=5.2						
KURK	Kurchatov	117.80	316	⇑*i*PKIKP	PKiKP	17 07 03.2	+1.6
AAK	Ala-Archa	120.14	307	⇑*i*PKIKP	PKPdf	17 07 06.8	+0.2
BRVK	Borovoye	122.92	319	⇓*i*PKIKP	PKPdf	17 07 09.2	-2.2
KK31	Karatay Array	123.09	307		PKPdf	17 07 11.5	-0.6
KK31	Karatay Array	123.09	307	PKIKP	PKPdf	17 07 11.5	-0.6
KKAR	Karatay Array	123.09	307		PKPdf	17 07 11.4	-0.7
KKAR	Karatay Array	123.09	307	PKIKP	PKPdf	17 07 11.4	-0.7
ARU	Arti	128.89	325	*i* PKIKP	PKPdf	17 07 18.7	-4.0
ARCES	ARCESS Array B	131.81	351	PKP	PKiKP	17 07 29.1	+0.1
	comp=Z,0.9nm,0.5s,baz=48,slow=1.3,SNR=9.3						
ARCES	ARCESS Array B	131.81	351	*e*PKIKP	PKPdf	17 07 28.1	+0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GEYT	Alibeck	132.60	301	PKP	PKPdf	17 07 31.2	+0.8
	comp=Z,1.6nm,0.8s,baz=158,slow=4.2,SNR=5.0						
FINES	FINESS Array B	138.90	345	PKP	PKiKP	17 07 43.2	-0.3
	comp=Z,4.2nm,0.9s,baz=90,slow=1.5,SNR=5.0						
KIV	Kislovodsk	142.78	313	*i* PKIKP	PKPdf	17 07 50.7	+1.7
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,83nm,24.0s						
MBAR	Mbarara	145.89	230	⇑*i*PKIKP	PKPbc	17 07 56.9	+0.9
AKASG	Malin Array Be	146.56	332	PKPbc	PKPbc	17 07 56.3	-0.4
	comp=Z,7.1nm,0.6s,baz=41,slow=4.2,SNR=42						
AKASG				PP	PP	17 11 21.4	+1.9
	comp=Z,0.5nm,0.7s,baz=48,slow=6.1,SNR=4.6						
AKBB	Malin Array Si	146.56	332		PKPbc	17 07 56.2	-0.5
AKBB	Malin Array Si	146.56	332	PKIKP	PKPbc	17 07 56.2	-0.5
SIM	Simferopol'	147.76	320	*e*PKIKP	PKPbc	17 08 01.0	+0.7
SIM				*e*		17 08 08.0	
SIM				pmax	pmax		
	comp=Z,35nm,0.9s						
DIKM	Dikmen	148.71	314	⇑P	PKPab	17 08 07.7	+1.1
LVV	L'vov	149.35	336	*e*PKIKP	PKPbc	17 08 03.8	-0.4
MILM	Milestii Mici	149.44	327	⇑P	PKPdf	17 08 02.0	+2.0
MILM	Milestii Mici	149.44	327	⇑PKIKP	PKPdf	17 08 02.1	+2.0
BNN	Bunyan	149.48	308		PKPbc	17 08 04.2	-0.9
VASR	Vaslui	150.14	328	⇑P	PKPbc	17 08 04.3	-1.9
OJC	Ojcow	150.46	341	*e*PKP	PKPbc	17 08 05.9	-1.0
OJC	Ojcow	150.46	341		PKPbc	17 08 05.7	-1.2
OJC	Ojcow	150.46	341	PKIKP	PKPbc	17 08 05.7	-1.2
BURAR	Bucovina Array	150.62	332	⇑P	PKPbc	17 08 05.6	-1.9
BURAR	Bucovina Array	150.62	332	⇑PKIKP	PKPbc	17 08 05.6	-1.9
BR131	Keskin Array S	150.68	311		PKPbc	17 08 07.4	-0.5
BR131	Keskin Array S	150.68	311	*i* PKIKP	PKPbc	17 08 07.8	-0.1
BRTR	Keskin Array B	150.68	311	PKPbc	PKPbc	17 08 07.8	-0.1
	comp=Z,4.8nm,1.0s,baz=141,slow=2.5,SNR=16						
BRTR	Keskin Array B	150.68	311		PKPbc	17 08 07.5	-0.5
SCTR	Scanteiesti	150.71	326	⇑P	PKiKP	17 08 08.3	0.0
BIZ	Bicaz	150.73	330	⇑P	PKPbc	17 08 06.9	-0.7
GHRR		150.74	327	⇑P	PKPbc	17 08 07.1	-0.5
TESR	Tescani	150.78	329	⇑P	PKPbc	17 08 07.4	-0.4
KSP	Ksiaz	150.82	346	*e*PKP	PKiKP	17 08 09.0	+0.6
CFR	Carcaliu	150.97	325	⇑P	PKiKP	17 08 09.3	+0.5
UZH	Uzhgorod	150.98	336	*e*PKIKP	PKPbc	17 08 07.1	-1.1
UZH				*e*		17 08 13.3	
NIE	Niedzica	151.00	339	*e*PKP	PKiKP	17 08 09.6	+0.8
CLL	Collm	151.03	350	*e*PKPbc	PKiKP	17 08 09.0	+0.2
	comp=Z,12nm,1.1s						
TPGR	Topolog	151.04	325	⇑P	PKiKP	17 08 10.1	+1.1
CRVS	Cervenica-Dubn	151.05	338	*e*PKIKP	PKiKP	17 08 09.1	+0.2
OSTC	Ostas	151.11	345	⇑*e*PKP	PKPbc	17 08 08.5	0.0
OSTC				*e*PKPAB	sPKPab	17 08 19.2	+0.8
CHVC	Chvalec	151.12	346	⇑*e*PKP	PKiKP	17 08 09.4	+0.4
CHVC				*e*PKPAB	sPKPab	17 08 19.4	+1.0
ANTO	Ankara	151.19	312		PKPbc	17 08 08.4	-0.7
ANTO	Ankara	151.19	312	PKIKP	PKPbc	17 08 08.4	-0.7
UPC	Upice	151.20	346	*e*PKIKP	PKPbc	17 08 08.8	+0.2
UPC				*e*		17 08 20.1	
UPC	Upice	151.20	346	⇑*e*PKP	PKPbc	17 08 08.8	+0.2
UPC				*ep*PKP	sPKPab	17 08 20.1	+1.4
VRI	Vrincioaia	151.21	328	⇑P	PKPbc	17 08 09.1	+0.3
PLOR	Plostina	151.26	328	⇑P	PKPbc	17 08 09.0	0.0
DPC	Dobruska-Polom	151.28	345	*e*PKIKP	PKiKP	17 08 09.5	+0.1
DPC				*e*		17 08 17.2	
DPC	Dobruska-Polom	151.28	345	⇑*e*PKP	PKiKP	17 08 09.5	+0.1
DPC				*e*PKPAB	pPKPab	17 08 17.2	-1.3
OKC	Ostrava-Krasne	151.28	342	*e*PKIKP	PKiKP	17 08 09.4	+0.1
OKC	Ostrava-Krasne	151.28	342	⇑*e*PKP	PKiKP	17 08 09.4	+0.1
BRG	Berggiesshubel	151.28	348	*i* PKP	PKiKP	17 08 09.8	+0.5
BRG				Amp		17 08 12.5	
	comp=Z,7.8nm,0.9s						
BRG	Berggiesshubel	151.28	348	*i* PKIKP	PKiKP	17 08 09.8	+0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TRPA	Tarpa	151.30	335	⇑P	PKPbc	17 08 07.1	-1.8
KRLC	Kraliky	151.42	344	*e*PKIKP	PKPbc	17 08 08.5	-0.7
KRLC	Kraliky	151.42	344	⇑*e*PKP	PKPbc	17 08 08.5	-0.7
COVR	Voineasa-Covas	151.48	328	⇑P	PKiKP	17 08 10.2	+0.2
PVCC	Panska Ves	151.49	347	*e*PKIKP	PKiKP	17 08 10.2	+0.4
PVCC	Panska Ves	151.49	347	⇑*e*PKP	PKiKP	17 08 10.2	+0.4
MORC	Moravsky Berou	151.50	343	⇑P	PKPbc	17 08 07.3	-2.1
MORC	Moravsky Berou	151.50	343	⇑PKIKP	PKPbc	17 08 07.3	-2.1
MORC	Moravsky Berou	151.50	343	*e*PKP	PKPdf	17 08 02.7	-0.6
MORC				*e*		17 08 10.0	
DOPR	Dopca	151.78	329	⇑P	PKiKP	17 08 11.0	+0.4
MAUC	Maruska	151.79	342	⇑*e*PKP	PKiKP	17 08 11.2	+0.7
MAUC				*ex*	x	17 08 22.7	
MLR	Muntele Rosu	151.86	328	⇑P	PKiKP	17 08 11.3	+0.4
MLR	Muntele Rosu	151.86	328		PKPbc	17 08 10.1	-0.4
MLR	Muntele Rosu	151.86	328	⇑PKIKP	PKiKP	17 08 11.3	+0.4
PRU	Pruhonice	152.01	347	*e*PKIKP	PKiKP	17 08 11.0	+0.2
PRU	Pruhonice	152.01	347	⇑*e*PKP	PKiKP	17 08 11.0	+0.2
CJR	Cluj-Napoca	152.01	332	⇑P	PKiKP	17 08 11.0	0.0
NKC	Novy Kostel	152.16	350	*e*PKIKP	PKiKP	17 08 11.3	+0.1
NKC	Novy Kostel	152.16	350	⇑*e*PKP	PKiKP	17 08 11.3	+0.1
VRAC	Vranov	152.18	344	*e*PKP	PKPdf	17 08 03.6	-0.7
VRAC				*e*		17 08 11.0	
VRAC				*e*		17 08 20.2	
VYHS	Vyhne	152.28	340	*e*PKIKP	PKiKP	17 08 11.9	+0.4
VYHS				*e*		17 08 22.0	
DRGR		152.32	334	⇑P	PKPbc	17 08 11.7	+0.3
DRGR		152.32	334	⇑PKIKP	PKPbc	17 08 11.7	+0.3
VOIR		152.33	329	⇑P	PKiKP	17 08 13.2	+1.4
PSZ	Piszkesteto	152.44	338	⇑P	PKiKP	17 08 12.0	+0.1
PSZ	Piszkesteto	152.44	338	⇑PKIKP	PKiKP	17 08 12.0	+0.1
KRUC	Moravsky	152.45	344	*e*PKP	PKPdf	17 08 05.5	+0.8
KRUC				*e*		17 08 11.9	
KRUC				*e*		17 08 20.8	
BORA	Eskisehir	152.76	314		PKPbc	17 08 12.4	-0.3
MODS	Modra-Piesok	152.85	342	*e*PKIKP	PKiKP	17 08 13.2	+0.5
KHC	Kasperske Hory	153.02	348	*e*PKIKP	PKPbc	17 08 12.9	0.0
KHC	Kasperske Hory	153.02	348	⇑*e*PKP	PKPbc	17 08 12.9	0.0
KHC				*ex*	x	17 08 32.3	
CKRC	Cesky Krumlov	153.17	347	⇑*e*PKP	PKPbc	17 08 13.1	-0.1
SIRR	Siria	153.17	334	⇑P	PKiKP	17 08 14.5	+1.1
GERES	GERESS Array B	153.27	347	PKPbc	PKiKP	17 08 14.2	+0.6
	comp=Z,1.2nm,0.9s,baz=52,slow=2.4,SNR=7.0						
GZR	Gura Zlata	153.40	332	⇑P	PKiKP	17 08 14.6	+0.6
CONA	Conrad Observa	153.64	344	*e*P	PKPab	17 08 28.7	+1.9
	comp=Z,9.7nm,1.2s						
RONA	Rosalia, Austr	153.73	343	*e*P	PKPab	17 08 28.9	+1.7
	comp=Z,12nm,1.2s						
MOA	Molln	154.09	346	*e*P	PKPab	17 08 29.1	+0.5
	comp=Z,5.6nm,1.1s						
MORH	Mrgy, Hungar	154.34	338	⇑P	PKiKP	17 08 16.8	+1.0
BIOA	Bad Ischl, Aus	154.38	347	*e*P	PKPab	17 08 31.0	+1.1
	comp=Z,4.7nm,0.9s						
SOKA	Soboth	155.01	344	*e*P	PKPab	17 08 33.7	+1.0
	comp=Z,11nm,1.3s						
RETA	Reutte	155.09	351	*e*P	PKPab	17 08 33.7	+0.8
	comp=Z,6.9nm,1.2s						
WATA	Walderalm	155.11	350	*e*P	PKPab	17 08 34.2	+1.0
	comp=Z,2.4nm,0.8s						
WTTA	Wattenberg	155.17	350	*e*P	PKPab	17 08 34.4	+0.9
	comp=Z,3.3nm,0.8s						
MOTA	Moosalm	155.18	350	*e*P	PKPab	17 08 33.6	+0.1
	comp=Z,3.1nm,0.7s						
FETA	Feichten	155.55	351	*e*P	PKPab	17 08 36.2	+1.2
	comp=Z,3.7nm,1.0s						
ESDC	Sonseca Array	161.57	23	PKPab	PKPab	17 09 02.5	+1.2
	comp=Z,0.5nm,0.8s,baz=344,slow=5.0,SNR=4.2						
TORD	Torodi Ar. Bea	169.72	160	PKPab	PKPab	17 09 41.2	+3.7
	comp=Z,1.6nm,0.9s,baz=201,slow=4.6,SNR=5.1						
TORD				PP	PP	17 13 34.6	+8.6
	comp=Z,0.8nm,0.9s,baz=238,slow=2.7,SNR=2.5						

IDC 09 17:12:40.3±2.2, 1°.74N×127°.77E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=143.2km s-min=27.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.49	164	P	P	P	17 17 42.5	+0.9
	0.9nm,0.5s,baz=344,slow=11,SNR=20							
	0.9nm,0.5s							
ASAR	Alice Springs	25.95	167	P	P	P	17 18 13.9	-0.8
	0.5nm,0.5s,baz=345,slow=7.5,SNR=21							
	0.5nm,0.5s							
MKAR	Makanchi Array	59.77	325	P	P	P	17 22 47.4	+0.2
	0.4nm,0.7s,baz=141,slow=7.4,SNR=2.0							
	0.4nm,0.7s							

*JMA **09** 17:21:32.8±0.4, 44°.N±2°.×14°.8E±°, h0km, MV3.5/22, SE OFF ETOROFU*

*SKHL **09** 17:21:33.0±0.4, 44°.30N×148°.30E, h43km±3km, mb4.0/3*

ISC 09 17:21:31.3±3.7, 44°.3N±0°.1×148°.4E±0°.2, h35km, n14, σ0°98/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.00	340	*e*P	Pn	Pn	17 21 49.0	+0.1
KUR				AMB	AMB	AMB	17 21 49.3	
	100nm,0.3s							
KUR				*e*S	Sn	Sn	17 22 01.4	-0.4
KUR				A	A	A	17 22 04.9	
	170nm,0.3s							
KUR				A	A	A	17 22 04.9	
	290nm,0.3s							
YUK	Yuzh-Kuril'sk	1.82	263	*e*P	Pn	Pn	17 22 00.7	+0.7
YUK				AMB	AMB	AMB	17 22 03.3	
	70nm,0.3s							
YUK				*e*S	Sn	Sn	17 22 21.7	-0.1
YUK				A	A	A	17 22 25.1	
	110nm,0.3s							
YUK				A	A	A	17 22 25.1	
	100nm,0.3s							
NEM2	Nemuro 2	2.11	245	*e*P	Pn	Pn	17 22 04.4	+0.3
NEM2				*e*S	Sn	Sn	17 22 27.2	-1.8
NMR	Nemuro--Hokkai	2.12	245	*i* P	Pn	Pn	17 22 04.6	+0.4
NMR				AMB	AMB	AMB	17 22 07.1	
	10.0nm,0.2s							
NMR				*e*S	Sn	Sn	17 22 28.0	-1.2
NMR				A	A	A	17 22 33.6	
	40nm,0.2s							
NMR				A	A	A	17 22 33.6	
	30nm,0.2s							
JRA	Rausu	2.36	263	*e*P	Pn	Pn	17 22 09.6	+2.1
JNSB	Nemuroshibetsu	2.48	259	*e*P	Pn	Pn	17 22 10.8	+1.7
JKHN	Kushir

2.6nm,0.9s
VNDA Vanda 72.64 178 P P 17 39 23.0 -0.8
2.0nm,0.7s,baz=348,slow=5.4,SNR=14
2.0nm,0.7s
MKAR Makanchi Array 80.90 319 P P 17 40 09.9 -0.9
0.3nm,0.5s,baz=95,slow=8.8,SNR=1.6
0.3nm,0.5s
TORD Torodi Ar. Bea 151.00 288 PKPbc **PKPbc 17 47 48.2 -2.1**
1.8nm,0.7s,baz=83,slow=2.5,SNR=9.0

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*IDC **09** 17:31:09.2±0.9,51°.64N×172°.68W,h0km,mb3.8/14, mbtmp3.8/15,ML4.1/1,Error ellipse: s-maj=25.8km s-min=20.1km az=161.0*
*NEIC **09** 17:31:14.2±1.8,51°.5N±0°.2×172°.6W±0°.1,h50km±16km, mb3.8/39,Error ellipse: s-maj=30.9km s-min=10.3km az=163.0*
ISC 09 17:31:14.5±0.9,51°.7N±0°.2×172°.53W±0°.07,h35km,n63, σ0§99/61,mb3.7/14,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**2.23**	**283**	Pn	**Pn**	**17 31 50.4**	**+1.4**
ADK	**Adak**	**2.59**	**277**	Pn	**Pn**	**17 31 53.9**	**0.0**
NIKH	**Nikolski High**	**2.62**	**58**	Pn	**Pn**	**17 31 55.2**	**+1.0**
KIWB	**Kanaga Island**	**2.88**	**276**	Pn	**Pn**	**17 31 58.0**	**+0.2**
CNPM	**China Poot**	**14.34**	**48**	P	**P**	**17 34 41.5**	**+0.1**
SEW	**Seward**	**15.40**	**48**	Pn	**Pn**	**17 34 48.1**	**-0.8**
PPLA	**Purkeypile**	**15.66**	**36**	Pn	**Pn**	**17 34 51.3**	**-1.1**
PPLA				IAmb	IAmb	17 35 22.9	
	comp=Z,16nm,1.4s						
PWL	**Port Wells**	**16.21**	**46**	P	**Pn**	**17 34 57.0**	**-2.3**
PWL				IAmb	IAmb	17 35 13.6	
	comp=Z,16nm,1.5s						
KTH	**Kantishna Hill**	**16.51**	**35**	P	**P**	**17 35 06.6**	**+1.1**
TRF	**Thorofare Moun**	**16.68**	**36**	P	**P**	**17 35 07.8**	**+0.3**
TRF				IAmb	IAmb	17 35 42.2	
	comp=Z,10nm,1.4s						
BPAW	**Bear Paw Mtn.**	**16.82**	**34**	P	**P**	**17 35 10.4**	**+1.6**
HIN	**Hinchinbrook I**	**16.88**	**49**	P	**Pn**	**17 35 06.6**	**-1.1**
FID	**Port Fidalgo**	**17.01**	**47**	P	**Pn**	**17 35 07.7**	**-1.6**
FID				IAmb	IAmb	17 35 27.8	
	comp=Z,12nm,1.2s						
SCM	**Sheep Creek Mo**	**17.06**	**44**		**P**	**17 35 10.7**	**-0.8**
RND	**Reindeer**	**17.20**	**38**		**P**	**17 35 12.2**	**-0.9**
RND				IAmb	IAmb	17 35 25.9	
	comp=Z,11nm,1.5s						
KLU	**Klutina**	**17.53**	**45**	P	**P**	**17 35 16.3**	**-0.5**
DHY	**Denali Highway**	**17.61**	**40**	P	**P**	**17 35 19.2**	**+1.5**
M24K	**Tolsona, Glenn**	**17.67**	**43**	P	**P**	**17 35 18.8**	**+0.5**
M24K				IAmb	IAmb	17 35 57.4	
	comp=Z,8.4nm,1.2s						
HMT	**Hamilton**	**17.92**	**50**	P	**Pn**	**17 35 20.4**	**-0.2**
HMT				IAmb	IAmb	17 35 26.7	
	comp=Z,10nm,1.2s						
I23K	**Minto, Yukon-K**	**18.02**	**33**	P	**P**	**17 35 21.7**	**-0.3**
I23K				IAmb	IAmb	17 35 24.4	
	comp=Z,16nm,1.4s						
CCB	**Clear Creek Bu**	**18.26**	**35**	P	**P**	**17 35 23.7**	**-1.0**
CCB				IAmb	IAmb	17 35 28.4	
	comp=Z,8.7nm,1.4s						
MDM	**Murphy Dome**	**18.29**	**34**	P	**P**	**17 35 24.7**	**-0.4**
PAX	**Paxson**	**18.33**	**41**	P	**Pn**	**17 35 25.4**	**-0.3**
H23K	**Yukon River**	**18.38**	**31**	P	**Pn**	**17 35 26.3**	**0.0**
H23K				IAmb	IAmb	17 35 51.7	
	comp=Z,7.3nm,1.4s						
HDA	**Harding Lake**	**18.45**	**36**	P	**P**	**17 35 25.3**	**-1.4**
HDA				IAmb	IAmb	17 35 31.4	
	comp=Z,11nm,1.4s						
GLB	**Gilahina Butte**	**18.46**	**47**	P	**P**	**17 35 26.6**	**-0.4**
GLB				IAmb	IAmb	17 35 33.9	
	comp=Z,7.8nm,1.4s						
VRDI	**Verde Repeater**	**18.56**	**48**	P	**P**	**17 35 26.2**	**-2.0**
VRDI				IAmb	IAmb	17 35 32.9	
	comp=Z,8.2nm,1.4s						
WAX	**Waxell Ridge**	**18.62**	**50**	P	**P**	**17 35 26.1**	**-2.7**
WAX				IAmb	IAmb	17 35 33.3	
	comp=Z,14nm,1.4s						
IL31		**18.66**	**35**	P	**P**	**17 35 28.0**	**-1.1**
ILAR	**Eielson Array**	**18.66**	**35**	P	**P**	**17 35 27.6**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=236,slow=11,SNR=31						
	comp=Z,0.7nm,0.4s						
ILAR	**Eielson Array**	**18.66**	**35**	P	**Pn**	**17 35 29.8**	**+0.1**
TGL	**Tana Glacier**	**18.71**	**49**	P	**P**	**17 35 28.2**	**-1.6**
TGL				IAmb	IAmb	17 35 33.5	
	comp=Z,5.7nm,1.0s						
H24K	**Noodor Dome**	**18.93**	**32**		**Pn**	**17 35 33.0**	**+0.1**
H24K				IAmb	IAmb	17 35 36.4	
	comp=Z,8.9nm,1.3s						
YAH	**Yahtse**	**19.13**	**51**	P	**P**	**17 35 32.9**	**-1.6**
YAH				IAmb	IAmb	17 35 52.1	
	comp=Z,6.9nm,1.0s						
J25K	**Salcha River,**	**19.14**	**37**	P	**P**	**17 35 34.0**	**-0.3**
DOT	**Dot Lake**	**19.20**	**40**	P	**P**	**17 35 34.2**	**-0.8**
DOT				IAmb	IAmb	17 35 38.6	
	comp=Z,13nm,1.5s						
SCRK	**Sand Creek**	**19.37**	**39**	P	**P**	**17 35 36.3**	**-0.7**
SCRK				IAmb	IAmb	17 35 39.0	
	comp=Z,7.8nm,1.5s						
CTGM	**Chitina Glacie**	**19.48**	**49**		**Pn**	**17 35 39.2**	**-0.4**
CTGM				IAmb	IAmb	17 35 56.0	
	comp=Z,8.6nm,1.3s						
PRP	**Porcupine Dome**	**19.55**	**34**	P	**P**	**17 35 37.3**	**-1.6**
J26L	**Joseph Creek**	**19.77**	**38**	P	**P**	**17 35 41.2**	**-0.1**
K27K	**Chicken**	**20.16**	**40**	P	**P**	**17 35 45.6**	**+0.2**
TOLK	**Toolik Lake Re**	**20.29**	**24**	P	**P**	**17 35 46.9**	**+0.1**
I26K	**Coal Creek Min**	**20.30**	**36**	P	**P**	**17 35 46.0**	**-0.9**
EGAK	**Eagle**	**20.82**	**39**	P	**P**	**17 35 53.0**	**+0.3**
EGAK				IAmb	IAmb	17 35 55.3	
	comp=Z,5.2nm,0.7s						
P29M	**Windy Craggy**	**20.99**	**54**	P	**P**	**17 35 53.7**	**-0.8**
DLBC	**Dease Lake**	**24.93**	**57**	P	**P**	**17 36 34.2**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=268,slow=8.5,SNR=3.4						
	comp=Z,1.5nm,0.5s						
INK	**Inuvik**	**25.03**	**34**	P	**P**	**17 36 35.4**	**+0.6**
	comp=Z,3.0nm,0.5s,baz=239,slow=9.1,SNR=22						
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**25.03**	**34**	P	**P**	**17 36 35.1**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**35.71**	**215**	T	T	18 16 19.8	
	baz=21,slow=76,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	**35.72**	**215**	T	T	18 16 22.6	
	baz=21,slow=76,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**35.73**	**215**	T	T	18 16 21.6	
	baz=21,slow=76,SNR=4.0						
NVAR	**Mina Array Bea**	**39.62**	**88**	P	**P**	**17 38 44.4**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=319,slow=9.5,SNR=2.5						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**42.47**	**76**	P	**P**	**17 39 06.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=316,slow=5.0,SNR=8.4						
	comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**54.73**	**86**	P	**P**	**17 40 40.9**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=297,slow=8.0,SNR=2.3						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	**58.41**	**353**	P	**P**	**17 41 05.8**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=11,slow=7.3,SNR=4.6						
ARCES				PcP	**PcP**	**17 41 57.2**	**+0.9**
	comp=Z,2.2nm,1.0s,baz=2.9,slow=5.4,SNR=1.5						
	comp=Z,3.7nm,0.9s						
MKAR	**Makanchi Array**	**62.86**	**312**	P	**P**	**17 41 36.4**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=54,slow=7.5,SNR=2.2						
	comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**66.28**	**350**	P	**P**	**17 41 58.6**	**0.0**
	comp=Z,5.6nm,1.1s,baz=358,slow=4.6,SNR=4.4						
	comp=Z,5.6nm,1.1s						
NOA	**NORSAR Array B**	**67.62**	**358**	P	**P**	**17 42 07.8**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=3.5,slow=6.6,SNR=2.0						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	**76.37**	**346**	P	**P**	**17 42 59.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=18,slow=6.3,SNR=5.1						
	comp=Z,0.3nm,0.3s						
GERES	**GERESS Array B**	**79.75**	**356**	P	**P**	**17 43 17.9**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=1.4,slow=3.9,SNR=2.6						
	comp=Z,0.1nm,0.4s						
WRA	**Warramunga Arr**	**85.04**	**229**	P	**P**	**17 43 45.4**	**-0.9**
	comp=Z,0.3nm,0.9s,baz=36,slow=6.2,SNR=5.5						
	comp=Z,0.3nm,0.9s						
ASAR	**Alice Springs**	**88.45**	**228**	P	**P**	**17 44 03.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=28,slow=5.1,SNR=19						
	comp=Z,0.9nm,0.8s						
ESDC	**Sonseca Array**	**88.51**	**9**	P	**P**	**17 44 03.6**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=7.4,slow=4.0,SNR=2.2						
	comp=Z,0.3nm,0.7s						

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*MAN **09** 18:11:56.4,7°.86N×127°.16E,h75km,mb4.9,ML3.9,MS3.9*

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*NEIC **09** 18:11:59.6±1.7,8°.0N±0°.1×126°.98E±0°.06,h46km±11km, mb4.3/15,Error ellipse: s-maj=17.9km s-min=3.9km az=208.0*
*IDC **09** 18:12:04.4±3.2,7°.96N×126°.82E,h86km±28km,mb3.7/11, mbtmp4.0/11,MS2.9/5,Error ellipse: s-maj=35.4km s-min=12.9km az=72.0*
ISC 09 18:11:59.6±0.6,7°.96N±0°.05×127°.07E±0°.07,h46km,n62, σ1§50/66,mb4.2/17,MS2.7/3,6C-5D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.74**	**288**	‖ *iP*	**Pn**	**18 12 11.6**	**-2.1**
BIPH				*i* S	**Sn**	**18 12 20.6**	**-3.4**
DAV	**Davao City (W)**	**1.73**	**239**	P	**Pn**	**18 12 28.0**	**+0.8**
	976nm,0.7s,baz=69,slow=3.8,SNR=42						
DAV				S	**Sn**	**18 12 50.0**	**+2.0**
	1μm,0.6s,baz=243,slow=22,SNR=13						
DAV	**Davao City (W)**	**1.73**	**239**	Pn	**Pn**	**18 12 27.2**	**+0.1**
DAV	**Davao City (W)**	**1.73**	**239**	P	**Pn**	**18 12 29.4**	**+2.2**
KCP	**Kidapawan**	**2.18**	**244**	‖ *iP*	**Pn**	**18 12 32.7**	**-0.8**
KCP				*i* S	**Sn**	**18 13 03.3**	**+4.0**
SCPH	**Surigao**	**2.39**	**319**	‖ *eP*	**Pn**	**18 12 36.3**	**0.0**
SCPH				*eS*	**Sn**	**18 13 06.5**	**+2.0**
CGP	**Cagayan de Oro**	**2.41**	**282**	‖ *eP*	**Pn**	**18 12 36.5**	**+0.1**
CGP				*eS*	**Pn**	**18 12 36.5**	**+0.1**
CTBH	**Cotabato--PC H**	**2.90**	**255**	‖ *iP*	**Pn**	**18 12 42.6**	**-0.6**
GHBP	**Garcia Hernand**	**3.19**	**302**	‖ *eP*	**Pn**	**18 12 48.4**	**+1.1**
GHBP				*eS*	**Sn**	**18 13 26.4**	**+2.5**
LSIP	**Lazi, Siquijor**	**3.60**	**289**	‖ *eP*	**Pn**	**18 12 53.0**	**+0.1**
LSIP				*eS*	**Sn**	**18 13 32.0**	**-2.1**
TBP	**Tagbilaran**	**3.61**	**299**	*eP*	**Pn**	**18 12 53.7**	**+0.7**
TBP				*i* S	**Sn**	**18 13 36.2**	**+1.8**
DCPH	**Dipolog City**	**3.73**	**280**	‖ *eP*	**Pn**	**18 12 58.1**	**+3.3**
DCPH				*eS*	**Sn**	**18 13 39.5**	**+2.0**
LLP	**Lapu-Lapu**	**3.86**	**308**	‖ *iP*	**Pn**	**18 12 57.3**	**+0.8**
LLP				*i* S	**Sn**	**18 13 43.3**	**+2.7**
CNOP	**Candoni, Negro**	**4.76**	**293**	‖ *eP*	**Pn**	**18 13 10.7**	**+1.9**
CNOP				*eS*	**Sn**	**18 14 03.9**	**+1.2**
TNTI	**Ternate**	**7.15**	**178**	Pn	**Pn**	**18 13 40.8**	**-0.9**
TNTI	**Ternate**	**7.15**	**178**	P	**Pn**	**18 13 42.7**	**+1.1**
LQP	**Lukban**	**8.18**	**319**	‖ *eP*	Pn	18 14 06.6	+11
TOLI2	**Tolitoli**	**9.25**	**223**	Pn	**Pn**	**18 14 08.4**	**-2.1**
TOLI2	**Tolitoli**	**9.25**	**223**	P	**Pn**	**18 14 08.4**	**-2.1**
SANI	**Sanana**	**10.00**	**186**	P	**Pn**	**18 14 19.8**	**-1.0**
FAKI	**Fak Fak**	**11.98**	**154**	Pn	**Pn**	**18 14 47.6**	**-0.3**
KAPI	**Kappang**	**14.81**	**210**	LR	LR	18 21 51.3	
	comp=Z,21nm,19.2s,baz=23,slow=40						
SBUM	**Sibu**	**15.77**	**250**		**Pn**	**18 15 37.3**	**-1.3**
SBUM				IAmb	IAmb	18 15 45.4	
	comp=Z,15nm,0.7s						
JOW	**Kunigami**	**18.80**	**3**	LR	LR	18 23 21.8	
	comp=Z,30nm,18.8s,baz=196,slow=36						
JOW	**Kunigami**	**18.80**	**3**	P	Pn	18 16 29.2	+13
PLAI	**Plampang**	**19.08**	**209**	P	**P**	**18 16 18.3**	**-0.1**
MTN	**Manton Dam**	**21.06**	**169**	P	**P**	**18 16 38.9**	**-1.0**
MTN				IAmb	IAmb	18 17 20.9	
	comp=Z,10nm,1.0s						
KDU	**Kakadu**	**21.20**	**165**	P	**P**	**18 16 41.3**	**-0.2**
KNRA	**Kununurra**	**23.54**	**176**	P	**P**	**18 17 05.8**	**-0.1**
KNRA				IAmb	IAmb	18 17 12.9	
	comp=Z,13nm,0.7s						
JCJ	**Chichijima**	**23.82**	**35**	LR	LR	18 24 27.0	
	comp=Z,27nm,21.3s,baz=353,slow=31						
FITZ	**Fitzroy Crossi**	**25.93**	**183**	P	**P**	**18 17 28.1**	**+0.4**
	comp=Z,5.8nm,0.6s,baz=357,slow=4.3,SNR=30						
	comp=Z,5.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.93**	**183**	P	**P**	**18 17 27.1**	**-0.6**
FITZ				IAmb	IAmb	18 17 29.9	
	comp=Z,5.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.93**	**183**	P	**P**	**18 17 28.5**	**+0.8**
WB0	**Warramunga Arr**	**28.48**	**165**	P	**P**	**18 17 49.6**	**-1.0**
WB0				IAmb	IAmb	18 18 30.6	
	comp=Z,4.6nm,1.0s						
WRA	**Warramunga Arr**	**28.64**	**166**	P	**P**	**18 17 53.6**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=337,slow=11,SNR=9.4						
WRA				PcP	**PcP**	**18 21 02.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=344,slow=2.6,SNR=2.6						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**28.64**	**166**	P	**P**	**18 17 52.8**	**+0.8**
WR0	**Warramunga Arr**	**28.70**	**165**	P	**P**	**18 17 51.1**	**-1.5**
WR0				IAmb	IAmb	18 18 37.9	
	comp=Z,8.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.26**	**294**	LR	LR	18 29 28.3	
	comp=Z,17nm,20.2s,baz=240,slow=36						
PSA00	**Pilbara Seismi**	**30.19**	**193**	P	**P**	**18 18 03.7**	**-2.1**
PSA00	**Pilbara Seismi**	**30.19**	**193**	P	**P**	**18 18 05.3**	**-0.5**
AS31	**Alice Springs**	**32.13**	**168**	P	**P**	**18 18 23.3**	**+0.4**
ASAR	**Alice Springs**	**32.13**	**168**	P	**P**	**18 18 23.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=341,slow=7.6,SNR=19						
ASAR				PcP	**PcP**	**18 21 11.6**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=1.8,slow=2.1,SNR=5.3						
	comp=Z,0.4nm,0.3s						
MORW	**Morawa**	**38.32**	**196**	P	**P**	**18 19 15.0**	**-1.0**
FORT	**Forrest**	**38.53**	**179**	P	**P**	**18 19 17.9**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**40.28**	**69**	T	T	19 03 18.2	
	baz=265,slow=74,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**40.29**	**69**	T	T	19 03 16.1	
	baz=265,slow=74,SNR=5.1						
H11N3	**WAKE ISLAND Hy**	**40.30**	**69**	T	T	19 03 21.1	
	baz=265,slow=74,SNR=7.7						
KLR	**Kul'dur**	**41.32**	**5**	P	**P**	**18 19 42.4**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=177,slow=3.4,SNR=6.0						
	comp=Z,1.2nm,0.6s						
BBOO	**Buckleboo**	**41.44**	**169**	P	**P**	**18 19 41.9**	**+0.1**
BBOO				IAmb	IAmb	18 20 25.8	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**41.97**	**161**	P	**P**	**18 19 49.4**	**+3.1**
	comp=Z,3.0nm,0.7s,baz=324,slow=8.7,SNR=6.2						
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**41.97**	**161**	P	**P**	**18 19 46.5**	**+0.2**
MK31	**Makanchi Array**	**54.34**	**323**	P	**P**	**18 21 20.6**	**-1.0**
MK31				IAmb	IAmb	18 21 29.2	
	comp=Z,4.6nm,1.4s						
MKAR	**Makanchi Array**	**54.34**	**323**	P	**P**	**18 21 21.1**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=118,slow=7.7,SNR=11						
MKAR				PcP	**PcP**	**18 22 24.7**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=106,slow=5.6,SNR=3.6						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**54.34**	**323**	P	**P**	**18 21 20.2**	**-1.4**
KURBB	**Kurchatov Arra**	**58.41**	**326**	P	**P**	**18 21 49.7**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=126,slow=6.3,SNR=12						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	**64.01**	**326**	LR	LR	18 51 07.9	
	comp=Z,28nm,18.0s,baz=340,slow=37						
ILAR	**Eielson Array**	**81.16**	**26**	P	**P**	**18 24 11.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=256,slow=3.6,SNR=1.3						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**86.62**	**340**	P	**P**	**18 24 37.5**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=74,slow=6.7,SNR=6.9						
	comp=Z,2.1nm,0.8s						
VNDA	**Vanda**	**87.55**	**173**	P	**P**	**18 24 42.3**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=324,slow=6.7,SNR=7.6						
	comp=Z,1.1nm,0.8s						
VNDA	**Vanda**	**87.55**	**173**	P	**P**	**18 24 41.8**	**-0.3**
VNDA				IAmb	IAmb	18 24 44.3	
	comp=Z,3.6nm,1.3s						
FINES	**FINESS Array B**	**88.29**	**332**	P	**P**	**18 24 44.8**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=107,slow=2.0,SNR=7.8						
	comp=Z,0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**121.84**	**291**	PKP	**PKPdf**	**18 30 48.1**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=2.5						

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*SNET **09** 18:31:32.9±0.6,13°.22N×89°.67W,h32km±2km,ML3.4*
*GCG **09** 18:31:44.9±0.3,14°.23N×90°.09W,h74km±8km,MD3.6*
ISC 09 18:31:34.1±1.9,13°.3N±0°.1×89°.62W±0°.06,h50km,n28, σ0§51/32,3C-9D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.55**	**43**	‖ *iP*	**Pn**	**18 31 45.7**	**-0.4**
SNET				*eS*	**Sn**	**18 31 55.3**	**+0.6**
SNET				IAML		18 31 57.6	
	comp=Z,3μm,0.2s						
SBLS	**San Blas**	**0.55**	**360**	‖ *iP*	**Pn**	**18 31 45.7**	**-0.6**
BOQS	**Boqueron**	**0.56**	**36**	‖ *iP*	**Pn**	**18 31 46.1**	**-0.3**
UEES	**Universidad Ev**	**0.57**	**41**	‖ *iP*	**Pn**	**18 31 46.0**	**-0.4**
UEES				IAML		18 31 56.8	
	comp=Z,2μm,0.4s						
RTR	**El Retiro**	**0.61**	**358**	‖ *iP*	**Pn**	**18 31 46.6**	**-0.4**
IGN	**Direccin Gen**	**0.61**	**46**	‖ *iP*	**Pn**	**18 31 46.6**	**-0.2**
NUBE	**Las Nubes**	**0.64**	**346**	‖ *iP*	**Pn**	**18 31 46.5**	**-0.7**
NUBE				*eS*	**Sn**	**18 31 56.5**	**-0.2**
AEIL	**Aeropuerto Ilo**	**0.64**	**50**	‖ *iP*	**Pn**	**18 31 47.2**	**+0.1**
LFRS	**El Faro**	**0.64**	**58**	‖ *iP*	**Pn**	**18 31 46.9**	**-0.3**
LFU	**La Fuente**	**0.68**	**47**	‖ *iP*	**Pn**	**18 31 47.8**	**+0.1**
SJTE	**Alcalda de S**	**0.68**	**61**	*eP*	**Pn**	**18 31 47.4**	**-0.4**
UNIC	**Universidad Ca**	**0.70**	**6**	*eP*	**Pn**	**18 31 47.7**	**-0.3**
LBRS	**Las Brisas**	**0.72**	**51**	*iP*	**Pn**	**18 31 48.3**	**0.0**
LOAL	**Lomas de Alarc**	**0.73**	**348**	*eP*	**Pn**	**18 31 48.1**	**-0.3**
SLOZ	**Alcaldia de Sa**	**0.76**	**348**	‖ *iP*	**Pn**	**18 31 48.3**	**-0.4**
SLOZ				*eS*	**Sn**	**18 32 00.2**	**+1.0**
PAVA	**Las Pavas**	**0.79**	**57**	*eP*	**Pn**	**18 31 49.3**	**+0.1**
COEG	**Centro de Oper**	**0.79**	**65**	‖ *iP*	**Pn**	**18 31 49.0**	**-0.2**
COEG				IAML		18 32 05.2	
	comp=Z,1μm,0.3s						
SCLA	**Alcaldia de Sa**	**0.96**	**64**	*eP*	**Pn**	**18 31 51.6**	**+0.2**
COEB	**Comit de Eme**	**1.08**	**78**	*eP*	**Pn**	**18 31 52.6**	**-0.5**
COEB				IAML		18 32 12.1	
	comp=Z,360nm,0.4s						
P5NO	**Presa 5 de nov**	**1.09**	**50**	*eP*	**Pn**	**18 31 52.7**	**-0.4**
PACA	**Pacayal**	**1.27**	**82**	*eP*	**Pn**	**18 31 56.0**	**+0.3**
PCG	**Pacaya**	**1.46**	**319**	*eP*	**Pn**	**18 31 59.3**	**+0.9**
NBG	**Las Nubes**	**1.48**	**332**	*eP*	**Pn**	**18 31 58.5**	**-0.1**
FUG	**Fuego 3**	**1.66**	**314**	*eP*	**Pn**	**18 32 01.3**	**+0.3**
FUG				*eS*	**Sn**	**18 32 19.8**	**-1.4**
LCND	**La Caada**	**1.68**	**89**	*eP*	**Pn**	**18 32 01.0**	**-0.2**
CNCH	**Conchagua**	**1.74**	**90**	*eP*	**Pn**	**18 32 02.1**	**+0.1**
MRL	**Marmol**	**1.79**	**358**	*eP*	**Pn**	**18 32 03.7**	**+0.8**
STG3	**Santiaguito 3,**	**2.37**	**307**	*eP*	**Pn**	**18 32 10.9**	**+0.2**

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*IDC **09** 18:51:55.1±1.6,44°.35N×129°.37W,h0km,mb3.9/6, mbtmp3.8/15,ML3.3/9,MS3.7/15,Error ellipse: s-maj=31.2km s-min=14.3km az=55.0*
*GCMT **09** 18:51:56.0±0.5,44°.06N±0°.03×129°.61W±0°.04,h15km±2km, MW4.7/70,Moment Tensor Solution. s10,c11; s70,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.02±.10; $M_{\theta\theta}$-1.34±.09; $M_{\phi\phi}$1.36±.08; $M_{r\theta}$-0.35±.31; $M_{\theta\phi}$-0.33±.07; $M_{\phi r}$-0.58±.28; Best double couple: $M_0$1.54500×10^{16} NP1:ϕ_s218.00000°,δ88.00000°,λ26.00000°. NP2: ϕ_s127.00000°,δ64.00000°,λ178.00000°. Principal axes: T 1.5850, Plg19.0000°, Azm86.0000°; N -0.0820, Plg64.0000°, Azm222.0000°; P -1.5040, Plg17.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **09** 18:51:58.9±1.8,44°.31N±0°.08×129°.2W±0°.1,h10km±2km, mb4.1/32,ML3.5/36 Error ellipse: s-maj=16.8km s-min=11.7km az=231.0*
ISC 09 18:51:58.5±0.8,44°.32N±0°.08×129°.13W±0°.09,h10km, n291,σ1§12/273,mb4.2/9,MS3.6/11,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.77**	**111**	Pn	**Pn**	**18 52 55.1**	**-1.6**
KEBM				IAML		18 53 44.7	
	comp=N,64nm,1.8s						
KEBM				IAML		18 55 00.8	
	comp=E,82nm,4.9s						
HEBO	**Mount Hebo**	**3.93**	**75**	Pn	**Pn**	**18 52 59.2**	**+0.3**
HEBO				IAML		18 54 49.4	
	comp=N,77nm,2.4s						
COR	**Corvallis**	**4.18**	**84**		**Pn**	**18 53 03.3**	**+1.1**
COR				IAML		18 53 55.3	
	comp=N,54nm,0.8s						
COR				IAML		18 54 10.6	
	comp=N,43nm,1.9s						
BUCK	**Buck Mountain**	**4.41**	**89**		**Pn**	**18 53 06.5**	**+1.0**
BUCK				IAML		18 54 27.6	
	comp=E,41nm,2.4s						
BUCK				IAML		18 55 03.2	
	comp=N,45nm,3.1s						
DBO	**Dodson Butte**	**4.43**	**104**		**Pn**	**18 53 05.6**	**-0.2**
E03A	**Lebam**	**4.50**	**58**		**Pn**	**18 53 06.4**	**-0.3**
E03A				IAML		18 54 06.8	
	comp=E,57nm,2.5s						
E03A				IAML		18 54 09.5	
	comp=N,42nm,1.9s						
**W

BCYI	Bear Canyon	11.27	85	Pn	Pn	18 54 42.3 +2.6
VES	Vestal, Richgr	11.43	134	P	Pn	18 54 42.5 +0.8
	baz=321					
CRAG	Craig	11.45	348	P	Pn	18 54 42.5 +0.6
	baz=166					
WALA	Waterton Lakes	11.47	60	Pn	Pn	18 54 43.0 +0.7
CWC	Cottonwood Cre	11.52	129	P	Pn	18 54 44.9 +1.8
	baz=316					
MCMT	McKenzie Canyo	11.62	82	Pn	Pn	18 54 47.1 +2.5
R11A	Troy Canyon, C	11.79	116	P	Pn	18 54 48.8 +2.0
	baz=305,SNR=7.2					
ISA	Isabella, Lake	11.88	133	P	Pn	18 54 49.6 +1.6
	baz=320					
LRM	Limekiln Ridge	11.89	77	Pn	Pn	18 54 50.6 +2.5
U33K	Whale Pass	12.08	349	P	Pn	18 54 52.6 +2.1
	baz=166					
ARVC	Arvin	12.12	136	P	Pn	18 54 52.3 +1.2
	baz=322					
MPMC	Manual Prospec	12.12	129	P	Pn	18 54 51.8 +0.4
	baz=316					
FURC	Furnace Creek,	12.19	126	P	Pn	18 54 54.4 +2.3
	baz=314					
TPNV	Topopah Spring	12.23	123	P	Pn	18 54 54.1 +1.3
	baz=311					
WRAK	Wrangell Islan	12.29	352	Pn	Pn	18 54 54.8 +1.5
WRAK	Wrangell Islan	12.29	352	P	Pn	18 54 54.1 +0.8
	baz=169					
LRMC	Laurel Mtn Rad	12.44	131	P	Pn	18 54 57.3 +1.6
	baz=319					
BOZ	Bozeman (W)	12.46	78	Pn	Pn	18 54 57.9 +1.9
BOZ	Bozeman (W)	12.46	78	P	Pn	18 54 57.9 +1.9
	baz=270,SNR=11					
WAPA	Wapiti River	12.59	27	Pn	Pn	18 54 59.9 +2.3
T35M	Bob Quinn	12.70	357	P	Pn	18 55 00.8 +1.8
	baz=176					
EDW2	Edwards Air Fo	12.74	134	P	Pn	18 55 01.3 +1.7
	baz=321					
DUG	Dugway, Tooele	12.77	103	P	Pn	18 55 01.3 +1.3
	baz=294					
SHOC	Shoshone, Teco	12.93	126	P	Pn	18 55 03.7 +1.5
	baz=314					
GSC	Goldstone, Bar	13.06	129	P	Pn	18 55 06.3 +2.3
	baz=317,SNR=7.2					
AHID	Auburn Hatcher	13.17	90	Pn	Pn	18 55 07.0 +1.3
BFSC	Mount Baldy Ra	13.41	135	P	Pn	18 55 10.1 +1.2
	baz=322					
TUQ	Turquoise Moun	13.46	127	P	Pn	18 55 10.9 +1.4
	baz=315					
S32K	Killisnoo	13.60	347	P	Pn	18 55 12.2 +1.0
	baz=163					
HEC	Hector,Ludlow	13.66	130	P	Pn	18 55 13.0 +0.7
	baz=318					
S34M	Telegraph Cree	13.67	355	P	Pn	18 55 13.0 +0.8
	baz=174					
EGMT	Eagleton	13.92	68	P	Pn	18 55 16.6 +0.8
	baz=262					
GMRC	Granite Mounta	14.07	128	P	Pn	18 55 19.0 +1.1
	baz=317,SNR=6.8					
LCMT	Little Creek M	14.08	116	Pn	Pn	18 55 18.8 +0.8
RLMT	Red Lodge	14.14	80	P	Pn	18 55 19.9 +1.0
	baz=274,SNR=9.7					
DLBC	Dease Lake	14.15	358	Pn	Pn	18 55 17.7 -1.1
	comp=E,0.1nm,0.3s,baz=177,slow=18,SNR=1.7					
DLBC				LR	LR	19 00 04.6
	comp=E,735nm,20.3s,baz=170,slow=35					
	comp=E,0.3nm,0.3s					
DLBC	Dease Lake	14.15	358	Pn	Pn	18 55 22.6 +3.8
DLBC	Dease Lake	14.15	358	P	Pn	18 55 19.5 +0.7
	baz=178					
MURC	Murrieta	14.15	135	P	Pn	18 55 19.7 +0.7
	baz=323					
MTPU	Mount Pierson	14.21	110	Pn	Pn	18 55 21.4 +1.4
BW06	Boulder Array	14.28	89	Pn	Pn	18 55 23.0 +2.2
BW06	Boulder Array	14.28	89	P	Pn	18 55 21.5 +0.7
	baz=283					
PD31	Pinedale Array	14.28	89	Pn	Pn	18 55 22.8 +1.9
PDAR	Pinedale Array	14.28	89	Pn	Pn	18 55 23.8 +3.0
	baz=283,slow=9.0,SNR=7.5					
PDAR				LR	LR	19 01 04.2
	comp=E,409nm,20.0s,baz=274,slow=38					
	comp=E,1.0nm,0.8s					
PDAR	Pinedale Array	14.28	89	Pn	Pn	18 55 22.9 +2.1
JIS	Juneau Island	14.35	349	Pn	Pn	18 55 22.2 +0.8
R32K	Eaglecrest	14.37	348	P	Pn	18 55 22.6 +0.9
	baz=164					
BELC	Belle Mtn. Jos	14.47	131	P	Pn	18 55 24.5 +1.2
	baz=319					
MANA	Manning	14.49	26	Pn	Pn	18 55 25.0 +1.6
P17A	Butcher Ranch,	14.52	103		Pn	18 55 24.7 +0.6
PFO	Pinyon Flats O	14.52	133	Pn	P	18 55 28.3 -2.5
	comp=E,0.2nm,0.3s,baz=329,slow=8.5,SNR=4.5					
PFO				LR	LR	19 00 35.2
	comp=E,154nm,20.4s,baz=308,slow=35					
	comp=E,2.6nm,0.8s					
PFO	Pinyon Flats O	14.52	133	P	Pn	18 55 25.5 +1.4
	baz=321					
TPFO	Pinon Flats	14.53	133	P	Pn	18 55 24.9 +0.7
	baz=321					
IRM	Iron Mountain	14.82	128	P	Pn	18 55 30.1 +2.0
	baz=317,SNR=14					
RDMU	Red Mountain	14.91	98	Pn	Pn	18 55 29.7 +0.3
BC3	Big Chuckawall	15.03	130	P	Pn	18 55 31.4 +0.5
	baz=319					
MONP2	Monument Peak	15.10	135	P	Pn	18 55 32.5 +0.5
	baz=323					
R33M	Jennings River	15.14	356	P	Pn	18 55 33.8 +1.5
	baz=175,SNR=9.2					
PDMCI	Parker Dam,Lak	15.29	126	P	Pn	18 55 36.5 +2.2
	baz=315,SNR=5.1					
SWSC	Sam W. Stewart	15.38	133	P	Pn	18 55 37.3 +1.8
	baz=321,SNR=6.6					
CBX	Cerro Bola	15.45	137	Pn	Pn	18 55 37.9 +1.4
IKP	In-Ko-Pah, Jac	15.46	135	P	Pn	18 55 37.5 +0.9
	baz=323,SNR=9.9					
BLYC	Blythe	15.47	128	Pn	Pn	18 55 37.6 +0.9
BLYC				IAmb	IAmb	18 55 43.7
	comp=Z,7.6nm,0.9s					
P32M	Atlin	15.55	351	P	Pn	18 55 37.8 +0.2
	baz=168					
YUH	Yuha Desert	15.55	134	Pn	Pn	18 55 37.9 +0.1
YUH				IAmb	IAmb	18 55 44.8
	comp=Z,12nm,1.1s					
SKAG	Skagway	15.63	348	P	Pn	18 55 39.0 +0.5
	baz=163					
PLBC	Pleasant Camp	15.79	346	P	Pn	18 55 41.1 +0.4
	baz=161					
GLA	Glamis	15.82	130	P	Pn	18 55 42.3 +1.0
	baz=319					
O20A	White River Ci	16.02	98	Pn	Pn	18 55 43.9 0.0
O20A	White River Ci	16.02	98	P	Pn	18 55 45.4 +1.5
	baz=292,SNR=5.4					
ESJX	Sierra Juarez	16.05	136	Pn	Pn	18 55 43.8 -0.6
P33M	Teslin, Yukon	16.07	353	P	Pn	18 55 45.0 +0.6
	baz=170					
HILA	High Level	16.09	23	Pn	Pn	18 55 44.4 -0.1
PV23	Carpenter Ridg	16.18	104	Pn	Pn	18 55 46.4 +0.3
WUAZ	Wupatki	16.18	117	Pn	Pn	18 55 46.2 +0.2
WUAZ				IAmb	IAmb	18 55 59.5
	comp=Z,20nm,1.1s					
WUAZ	Wupatki	16.18	117	P	Pn	18 55 47.3 +1.2
	baz=308,SNR=8.3					
PV10	Paradox Valley	16.20	105	Pn	Pn	18 55 47.4 +1.1
PV10				IAmb	IAmb	18 55 56.7
	comp=Z,27nm,1.3s					
P29M	Windy Craggy	16.20	344	P	Pn	18 55 47.1 +1.0
	baz=158					
Y14A	Wickenburg	16.22	124	Pn	Pn	18 55 47.0 +0.6
LAO	LASA Array	16.22	74	P	Pn	18 55 46.8 +0.4
	baz=270					
K22A	Casper	16.48	88	P	Pn	18 55 49.5 -0.3
	baz=284					
P30M	Million Dollar	16.52	346	P	Pn	18 55 50.4 +0.3
	baz=160					
PNL	Peninsula	16.59	342	P	Pn	18 55 51.0 +0.1
	baz=154					
WHY	Whitehorse	16.73	350	Pn	Pn	18 55 52.4 -0.4
WHY	Whitehorse	16.73	350	P	Pn	18 55 53.2 +0.4
	baz=166					
O30N	Mendenhall	17.00	348	P	Pn	18 55 56.3 +0.2
	baz=163					
N32M	Quiet Lake	17.02	353	P	P	18 55 58.0 -0.3
	baz=170					
MVCO	Mesa Verde	17.14	107	Pn	Pn	18 55 58.9 +0.6
MVCO	Mesa Verde	17.14	107	P	Pn	18 55 59.1 +0.8
	baz=301					
PINM	Pinnacle	17.17	341	P	Pn	18 55 59.4 +1.2
	baz=152					
PCA	Pinnacle	17.17	341	Pn	Pn	18 55 58.1 -0.1
PCA				IAmb	IAmb	18 56 26.3
	comp=Z,23nm,1.5s					
TGTN	Hyland Airport	17.25	1	P	Pn	18 56 00.2 +1.0
	baz=182					
HYT	Haines Junctio	17.27	346	Pn	Pn	18 55 59.2 -0.4
HYT	Haines Junctio	17.27	346	P	Pn	18 56 00.1 +0.4
	baz=160,SNR=5.1					
N23A	Red Feather La	17.39	93	Pn	Pn	18 56 00.9 -0.5
N23A				IAmb	IAmb	18 56 22.3
	comp=Z,21nm,1.1s					
N23A	Red Feather La	17.39	93	P	Pn	18 56 01.7 -0.2
	baz=289					
YUK6	Outpost Mounta	17.54	345	P	Pn	18 56 03.4 +0.3
	baz=158					
DGMT	Dagmar	17.66	68	Pn	Pn	18 56 04.4 0.0
DGMT				IAmb	IAmb	18 56 17.2
	comp=Z,17nm,1.0s					
DGMT	Dagmar	17.66	68	P	Pn	18 56 04.8 +0.3
	baz=266					
X18A	Snowflake	17.71	117		Pn	18 56 06.1 +0.7
X18A				IAmb	IAmb	18 56 15.8
	comp=Z,14nm,1.2s					
214A	Organ Pipe Nat	17.77	128	P	Pn	18 56 06.5 +0.6
	baz=319					
N30M	Aishikik Lake	17.80	347	P	Pn	18 56 06.2 +0.1
	baz=161					
YUK4	Talbot Arm	17.96	345	P	P	18 56 09.7 +0.9
	baz=158					
RSSD	Black Hills	17.97	82		Pn	18 56 08.4 -0.1
RSSD				IAmb	IAmb	18 56 28.8
	comp=Z,27nm,1.5s					
RSSD	Black Hills	17.97	82	P	P	18 56 09.5 +0.4
	baz=279					
ISCO	Idaho Springs	18.01	96	Pn	Pn	18 56 08.5 -0.7
ISCO	Idaho Springs	18.01	96	P	P	18 56 10.3 +0.7
	baz=292					
S22A	4UR Ranch, Cre	18.03	104		Pn	18 56 08.9 -0.4
S22A				IAmb	IAmb	18 56 28.0
	comp=Z,20nm,1.4s					
S22A	4UR Ranch, Cre	18.03	104	P	P	18 56 10.8 +1.0
	baz=298					
FARO	Faro, Yukon	18.11	354	P	P	18 56 10.6 +0.3
	baz=170					
YUK8	Steele Glacier	18.13	343	P	Pn	18 56 10.1 -0.2
	baz=155					
M31M	Drury Creek, Y	18.18	352	P	Pn	18 56 10.5 -0.2
	baz=168					
MMPY	Sheldon Lake,	18.38	357	P	P	18 56 14.5 +1.3
	baz=175					
Q24A	Divide	18.67	98	P	P	18 56 17.4 +0.5
	baz=294					
TUC	Tucson	18.68	124	P	Pn	18 56 17.7 +0.5
	baz=315					
YUK3	Moose Creek	18.72	343	P	P	18 56 17.3 +0.2
	baz=154					
M29M	Somme Creek	18.95	347	P	P	18 56 19.1 -0.5
	baz=159					
SDCO	Great Sand Dun	18.96	102	P	P	18 56 20.7 +0.7
	baz=298,SNR=13					
MCARA	McCarthy VSAT	18.97	339	P	P	18 56 19.6 0.0
	baz=148					
M27K	Edge Creek, AK	19.54	342	P	P	18 56 26.0 0.0
	baz=152					
N25K	Chitina, Valde	19.57	338	P	P	18 56 26.5 +0.2
	baz=145					
GLI	Glacier Island	19.74	333	P	P	18 56 28.9 +0.8
ANMO	Albuquerque	19.76	111	P	Pn	18 56 30.5 +0.3
	comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=3.3					
ANMO				LR	LR	19 04 32.5
	comp=Z,345nm,19.5s,baz=302,slow=38					
	comp=Z,2.6nm,0.9s					
T25A	Trinidad	20.01	102	P	P	18 56 31.7 +0.2
T25A	Trinidad	20.01	102	P	P	18 56 32.4 +1.0
	baz=299,SNR=11					
YKA	Yellowknife Ar	20.07	20	P	P	18 56 29.8 -1.8
	comp=Z,3.1nm,1.0s,baz=208,slow=11,SNR=2.8					
YKA				LR	LR	19 04 58.1
	comp=Z,82nm,19.1s,baz=205,slow=39					
	comp=Z,3.1nm,1.0s					
BNM	Barren Site	20.11	113		P	18 56 32.7 +0.1
PWL	Port Wells	20.13	332	P	P	18 56 33.1 +0.8
	baz=137					
BCAR	Beaver Creek A	20.15	343		P	18 56 33.0 +0.4
319A	Douglas	20.25	123	P	P	18 56 34.5 +0.6
319A				IAmb	IAmb	18 56 43.0
	comp=Z,12nm,0.9s					
FFC	Flin Flon	20.34	50	P	P	18 56 34.9 +0.3
FFC				IAmb	IAmb	18 56 36.4
	comp=Z,14nm,1.0s					
121A	Cookes Peak, D	20.38	118	P	P	18 56 36.4 +1.0
121A	Cookes Peak, D	20.38	118	P	Pn	18 56 37.3 -0.2
	baz=311,SNR=12					
KSCO	Kaye Shedlock'	20.45	96	P	P	18 56 36.2 +0.1
	baz=294					
L26K	Log Cabin Wild	20.46	341	P	P	18 56 37.0 +1.1
	baz=150					
SCM	Sheep Creek Mo	20.54	335	P	P	18 56 36.3 -0.6
	baz=140					
SML	Sawmill	20.83	334	P	P	18 56 39.2 -0.8
	baz=139					
HSIG		21.04	130	P	P	18 56 42.6 +0.2
WAT6	Susitna Watana	21.24	336	P	P	18 56 44.5 0.0
	baz=141					
Q18K	Katmai Hardscr	21.39	321	P	P	18 56 45.9 -0.2
	baz=121					
SCRK	Sand Creek	21.43	342	P	P	18 56 46.6 +0.1
	baz=150					
DHY	Denali Highway	21.53	337	P	P	18 56 47.7 +0.1
	baz=142					
EGAK	Eagle	21.58	346	P	P	18 56 47.8 -0.2
	baz=156					
Q17K	Contact Creek	21.59	320	P	P	18 56 48.8 +0.5
	baz=119					
WAT1	Susitna Watana	21.67	336	P	P	18 56 49.0 0.0
	baz=140					
I29M	Ogilvie Camp,	21.69	350	P	P	18 56 50.0 +0.8
	baz=162					
SRIG	Santa Rosalia	21.73	136	P	P	18 56 50.2 +0.4
SRIG				IAmb	IAmb	18 56 51.1
	comp=Z,8.5nm,1.1s					
N20K	Mount Spurr	21.73	329	P	P	18 56 49.5 -0.2
	baz=131					
SPCR	Spurr Chakacha	21.73	329	P	P	18 56 49.5 -0.2
	baz=131					
J26L	Joseph Creek	21.79	343	P	P	18 56 50.4 0.0
	baz=151					
P18K	Big Mountain,	21.87	323	P	P	18 56 50.7 -0.5
	baz=122					
CHGN	Chignik	22.03	313	P	P	18 56 52.1 -0.7
	baz=111					
J25K	Salcha River,	22.29	341	P	P	18 56 55.3 -0.3
	baz=148					
I26K	Coal Creek Min	22.43	345	P	P	18 56 56.9 -0.1
	baz=153					
MCK	McKinley	22.48	337	P	P	18 56 57.0 -0.6
	baz=141					
EPYK	Eagle Plains	22.49	352	P	P	18 56 58.6 +0.9
EPYK				IAmb	IAmb	18 57 12.4
	comp=Z,15nm,1.4s					
EPYK	Eagle Plains	22.49	352	P	P	18 56 57.3 -0.4
	baz=166					
M20K	Styx River	22.51	330	P	P	18 56 57.8 -0.3
	baz=130					
TRF	Thorofare Moun	22.66	335	P	P	18 56 58.6 -1.2
	baz=138					
ILAR	Eielson Array	22.77	340	P	P	18 56 58.1 -2.6
	comp=Z,2.1nm,1.1s,baz=152,slow=6.7,SNR=10					
ILAR				LR	LR	19 04 19.4
	comp=Z,208nm,20.1s,baz=132,slow=33					
	comp=Z,2.1nm,1.1s					
ILAR	Eielson Array	22.77	340	P	P	18 56 59.6 -1.1
N18K	Kilae Creek	22.85	325	P	P	18 57 00.4 -1.2
	baz=124					
O17K	Koliganek Bris	22.88	322	P	P	18 57 00.4 -1.5
	baz=120					
H27K	Steamboat Moun	22.98	347	P	P	18 57 02.0 -1.0
	baz=157					
M19K	Big River Lodg	22.99	329	P	P	18 57 01.7 -1.3
	baz=128					
PRP	Porcupine Dome	23.09	343	P	P	18 57 03.3 -0.9
	baz=149					
NEA2	Nenana	23.19	338	P	P	18 57 04.2 -0.9
	baz=142					
ULM	Lac du Bonnet	23.19	63	P	P	18 57 05.7 +0.5
	comp=Z,12nm,1.0s,baz=247,slow=7.4,SNR=5.2					
	comp=Z,12nm,1.0s					
ULM	Lac du Bonnet	23.19	63	P	P	18 57 05.3 +0.1
CAST	Castle Rocks	23.20	334	P	P	18 57 03.9 -1.3
	baz=135					
AGMN	Agassiz Nation	23.21	68	P	P	18 57 05.1 -0.4
	baz=273					
O16K	Kokwok River B	23.24	321	P	P	18 57 04.4 -1.1
	baz=118					
ECSD	EROS Data Cent	23.31	80	P	P	18 57 06.8 +0.4
ECSD	EROS Data Cent	23.31	80	P	P	18 57 06.2 -0.2
	baz=283					
L19K	White Mountain	23.33	329	P	P	18 57 06.2 -0.3
	baz=128					
BPAW	Bear Paw Mtn.	23.35	336	P	P	18 57 06.2 -0.5
	baz=138					
I23K	Minto, Yukon-K	23.70	339	P	P	18 57 10.0 -0.1
	baz=142					
H25K	Birch Creek	23.80	343	P	P	18 57 10.4 -0.7
	baz=149					
K20K	Telida	23.81	332	P	P	18 57 10.4 -0.7
	baz=132					
H24K	Noodor Dome	23.89	341	P	P	18 57 11.5 -0.5
	baz=145					
MLY	Manley	23.98	337	P	P	18 57 12.1 -0.8
	baz=140					
INK	Inuvik	24.16	356	LR	LR	19 05 41.0
	comp=Z,220nm,21.2s,baz=210,slow=34					
H23K	Yukon River	24.29	340	P	P	18 57 14.9 -0.7
H23K				IAmb	IAmb	18 57 27.0
	comp=Z,5.4nm,1.2s					
G25K	Bearman Lake	24.29	344	P	P	18 57 14.9 -0.7
	baz=150					
J20K	Nowinta River	24.39	333	P	P	18 57 15.9 -0.6
	baz=133					
E27K	Coleen River	24.81	349	P	P	18 57 19.7 -0.7
	baz=158					
H22K	Ishtalitna Cre	24.82	338	P	P	18 57 19.5 -0.9
	baz=140					
F25K	Christian Rive	24.92	345	P	P	18 57 21.1 -0.3
	baz=151					
H21K	Melozitna Rive	25.03	337	P	P	18 57 21.7 -0.7
	baz=137					
G23K	Bananza Creek	25.11	340	P	P	18 57 23.1 -0.1
	baz=143					
TX32	Lajitas Array	25.14	118	P	P	18 57 24.0 +0.2
TX32				IAmb	IAmb	18 57 34.4
	comp=Z,10nm,1.4s					
TXAR	Lajitas Array	25.14	118	P	P	18 57 24.0 +0.2
	comp=Z,0.7nm,0.9s,baz=304,slow=8.9,SNR=5.9					
TXAR				LR	LR	19 07 05.9
	comp=Z,84nm,19.6s,baz=300,slow=36					
	comp=Z,0.7nm,0.9s					
TXAR	Lajitas Array	25.14	118	P	P	18 57 23.7 -0.1
LPIG	La Paz	25.36	137	LR	LR	19 06 14.3
	comp=Z,85nm,20.4s,baz=300,slow=34					
IMAR	Indian Mountai	25.53	337	P	P	18 57 26.5 -0.4
G22K	Bettles	25.64	340	P	P	18 57 28.1 +0.3
	baz=141					
SPMN	Marine on St.	25.67	75	P	P	18 57 28.5 +0.1
	baz=281					
G21K	Allakaket	25.86	338	P	P	18 57 30.0 +0.2
	baz=137					
EYMN	Ely	26.16	69	P	P	18 57 31.7 -1.0
	baz=276					
C27K	Jago River	26.44	349	P	P	18 57 34.4 -0.7
	baz=156					
D24K	Happy Valley	26.87	345	P	P	18 57 38.5 -0.5
	baz=148					
CCM	Cathedral Cave	29.00	89	P	P	18 57 57.2 -1.0
	baz=295					
HDIL	Hopedale	29.43	83	P	P	18 58 01.4 -0.7
	baz=291					
L44A	Lake County Fo	29.88	79	P	P	18 58 06.3 +0.3
	baz=288					
TNA	Tin City	30.02	329	P	P	18 58 07.2 +0.3
	baz=116					
SFIN	Lafayette	31.06	82	P	P	18 58 15.8 -0.7
	baz=291					
OXF	Oxford	31.94	94	P	P	18 58 24.1 -0.1
	baz=300					
WVT	Waverly	32.30	90	P	P	18 58 26.8 -0.5
	baz=298					
P49A	Miami Univ. Ec	33.08	83	P	P	18 58 33.3 -0.9
	baz=293					
RES	Resolute Bay	34.01	15	LR	LR	19 13 00.5
	comp=Z,90nm,19.0s,baz=345,slow=37					
P52A	Corning	34.87	81	P	P	18 58 49.1 -0.7
	baz=293					
SADO	Sadowa	35.17	71	LR	LR	19 13 32.2
	comp=Z,230nm,21.1s,baz=354,slow=37					
TZTN	Tazewell	35.18	87	P	P	18 58 51.7 -0.8
	baz=297					
TKL	Tuckaleechee C	35.43	88	LR	LR	19 14 00.1
	comp=Z,522nm,18.5s,baz=306,slow=37					
LBNH	Lisbon	40.22	69	P	P	18 59 34.7 -0.3
	baz=291					
TAOE	Nuku Hiva Isla	53.86	194	eLR	LR	19 16 55.2
	comp=Z,146nm,24.0s					
TAOE	Nuku Hiva Isla	53.86	194	eT	T	19 58 59.4
	comp=Z,24nm,0.2s					
H11N3	WAKE ISLAND Hy	57.97	267	T	T	20 04 20.2
	baz=49,slow=75,SNR=710					
H11N2	WAKE ISLAND Hy	57.97	267	T	T	20 04 18.3
	baz=49,slow=75,SNR=383					
H11N1	WAKE ISLAND Hy	57.99	267	T	T	20 04 19.4
	baz=49,slow=75,SNR=396					
H11S1	WAKE ISLAND Hy	58.91	266	T	T	20 05 21.9
	baz=48,slow=75,SNR=65					
H11S2	WAKE ISLAND Hy	58.92	266	T	T	20 05 27.4
	baz=48,slow=75,SNR=43					
H11S3	WAKE ISLAND Hy	58.93	266	T	T	20 05 21.4
	baz=48,slow=75,SNR=50					
TIAR	Tiarei	64.29	201	eT	T	20 12 01.1
	comp=Z,1.3nm,0.2s					
PPT2	Papeete2	64.38	202	eLR	LR	19 21 47.5
	comp=Z,50nm,24.8s					
TBI	Tubuai	69.87	200	eT	T	20 18 58.2
	comp=Z,3.2nm,0.3s					
HHC	Hu-ho-hao-te	79.22	318	eP	P	19 04 05.1 +1.3
LPAZ	La Paz	81.94	122	P	P	19 04 17.1 -2.1
	comp=Z,3.1nm,0.8s,baz=350,slow=8.9,SNR=14					
	comp=Z,3.1nm,0.8s					
AKASG	Malin Array Be	83.51	14	P	P	19 04 24.0 -2.2
	comp=Z,1.1nm,0.8s,baz=341,slow=4.7,SNR=4.4					
	comp=Z,1.1nm,0.8s					
WMQ	Urumqi	86.30	334	eP	P	19 04 42.3 +1.8
DZM	Mont Dzumac	88.44	237	eLR	LR	19 32 55.8
	comp=Z,88nm,23.9s					
PZH	PanZhiHua	95.56	316	P	P	19 05 25.4 +1.2

IDC ***09*** *18:54:26.5±1.8, 32°.43N×130°.82E, h0km, mb3.4/2, mbtmp3.2/3, ML2.8/1, MS3.4/1, Error ellipse: s-maj=62.6km s-min=27.9km az=79.0*

JMA ***09*** *18:54:28.6±0.1, 32°.6N±0°.2×130°.7E±0°.2, h9km, MV3.8/20, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

NIED ***09*** *18:54:28.6, 32°.55N×130°.74E, h9km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.57; $M_{\theta\theta}$2.00; $M_{\phi\phi}$-1.43; $M_{r\theta}$-1.11; $M_{\theta\phi}$3.38; $M_{\phi r}$1.81; Fault plane solution: $M_0$4.35000×10^{14} NP1: ϕ_s197.00000°, δ71.00000°, λ-160.00000°. NP2: ϕ_s100.00000°, δ71.00000°, λ-20.00000°.*

ISC 09 18:54:28.9±0.9, 32°.51N±0°.04×130°.81E±0°.10, h10km±6km, n9, σ1°.37/13, 2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	Izumi3	0.04	358	P	Pg	18 54 30.5	-0.3
JIU3				eS	Sg	18 54 31.9	-0.1
JZO	Okuchi	0.41	206	‖P	Pg	18 54 36.8	-0.3
JZO				‖eS	Sg	18 54 42.6	+0.1
JTA	Tamana	0.51	332	P	Pg	18 54 37.6	-1.2
JTA				eS	Sg	18 54 43.7	-1.8
JTZ	Takazaki	0.65	159	i P	Pb	18 54 42.8	+0.4
JTZ				S	Sb	18 54 52.4	+0.8
KSRS	Korea Array	5.47	335	Pn	Pn	18 55 50.6	+0.1
	0.3nm,0.3s,baz=153,slow=14,SNR=2.6						
KSRS				Pg	Pb	18

0.5nm,1.1s,baz=354,slow=7.6,SNR=1.6
0.5nm,1.1s

ILAR Eielson Array 57.87 30 P P 19 04 20.4 -0.3
0.3nm,0.7s,baz=275,slow=7.0,SNR=4.5
0.3nm,0.7s

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*IDC **09** 18:57:10.6±1.4, 53.07N×166.74W, h0km, mb3.8/17, mbtmp3.9/18, ML3.1/1, Error ellipse: s-maj=36.5km s-min=17.7km az=5.0*
*AEIC **09** 18:57:10±3.1, 52.71N±0.07×166.7W±0.1, h7km±8km, Error ellipse: s-maj=11.0km s-min=6.9km az=140.0*
*NEIC **09** 18:57:10.7±2.1, 52.6N±0.1×166.52W±0.09, h24km±14km, ML3.9/8, ML3.6/19(AEIC), Error ellipse: s-maj=18.7km s-min=5.9km az=160.0*

ISC 09 18:57:10.9±0.8, 52.8N±0.1×166.73W±0.07, h10km, n46, σ1.9±35/37, mb3.8/17, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.05**	**7**	Pn	**Pg**	**18 57 31.7**	**+0.6**
NIKH	**Nikolski High**	**1.30**	**278**		**Pn**	**18 57 34.8**	**-0.3**
AKUT	**Akutan**	**1.45**	**23**		**Pn**	**18 57 37.5**	**+0.4**
FALS	**False Pass**	**2.84**	**42**		**Pn**	**18 57 57.9**	**+1.6**
SDPT	**Sand Point**	**4.48**	**53**	Pn	**Pn**	**18 58 16.0**	**-2.8**
CNBA	**Chernabura Isl**	**4.69**	**62**	Pn	Pn	18 58 18.0	-3.6
CNBA				IAML		18 59 56.6	
	comp=N,111nm,3.9s						
CNBA				IAML		19 00 36.7	
	comp=E,102nm,3.7s						
SPIA	**Saint Paul Isl**	**4.83**	**337**	Pn	**Pn**	**18 58 25.2**	**+1.6**
GSTR	**Great Sitkin T**	**5.75**	**267**	Pn	**Pn**	**18 58 33.3**	**-3.0**
CHGN	**Chignik**	**5.97**	**51**	Pn	**Pn**	**18 58 39.5**	**+0.2**
ADK	**Adak**	**6.17**	**265**	Pn	**Pn**	**18 58 41.9**	**-0.1**
KIWB	**Kanaga Island**	**6.46**	**266**	Pn	**Pn**	**18 58 45.7**	**-0.3**
AMKA	**Amchitka**	**8.72**	**266**	Pn	**Pn**	**18 59 18.7**	**+1.7**
OHAK	**Old Harbor**	**8.90**	**55**	Pn	**Pn**	**18 59 18.2**	**-1.2**
KDAK	**Kodiak Island**	**9.48**	**53**	Pn	**Pn**	**18 59 28.3**	**+1.0**
	comp=E,0.2nm,0.3s,baz=237,slow=6.9,SNR=1.7						
KDAK				Sn	**Sn**	**19 01 10.9**	**-2.9**
	comp=E,0.2nm,0.3s,baz=330,slow=18,SNR=1.7						
	comp=E,11nm,1.0s						
RSO	**Redoubt South**	**10.85**	**39**	Pn	**Pn**	**18 59 46.3**	**0.0**
HIN	**Hinchinbrook I**	**13.44**	**48**	Pn	**Pn**	**19 00 20.1**	**-1.4**
SCM	**Sheep Creek Mo**	**13.79**	**41**	Pn	**Pn**	**19 00 24.8**	**-1.5**
KLU	**Klutina**	**14.19**	**44**	Pn	**Pn**	**19 00 29.7**	**-2.2**
HMT	**Hamilton**	**14.44**	**50**	Pn	**Pn**	**19 00 33.1**	**-2.1**
ILAR	**Eielson Array**	**15.70**	**33**	Pn	**Pn**	**19 00 53.7**	**+1.8**
	baz=230,slow=11,SNR=1.5						
PETK	**Petropavlovsk-**	**21.30**	**285**	P	**P**	**19 01 57.4**	**-0.1**
	comp=E,2.8nm,0.4s,baz=86,slow=14,SNR=39						
	comp=E,2.8nm,0.4s						
INK	**Inuvik**	**22.10**	**33**	P	**P**	**19 02 05.6**	**-0.3**
	comp=E,2.0nm,0.6s,baz=262,slow=12,SNR=4.5						
	comp=E,2.0nm,0.6s						
SEY	**Seymchan**	**23.57**	**312**	P	**P**	**19 02 21.2**	**0.0**
	comp=E,1.0nm,0.5s,baz=0.3,slow=21,SNR=1.8						
	comp=E,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**36.07**	**94**	P	**P**	**19 04 14.7**	**+1.9**
	comp=E,0.3nm,0.7s,baz=301,slow=7.7,SNR=3.9						
	comp=E,0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**38.83**	**222**	T	T	19 46 06.6	
	baz=25,slow=76,SNR=73						
H11N3	**WAKE ISLAND Hy**	**38.83**	**222**	T	T	19 46 11.0	
	baz=25,slow=76,SNR=85						
H11N1	**WAKE ISLAND Hy**	**38.84**	**222**	T	T	19 46 11.9	
	baz=25,slow=76,SNR=49						
H11S1	**WAKE ISLAND Hy**	**40.01**	**221**	T	T	19 47 36.2	
	baz=24,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**40.02**	**221**	T	T	19 47 38.6	
	baz=24,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**40.02**	**221**	T	T	19 47 38.4	
	baz=24,slow=76,SNR=35						
TXAR	**Lajitas Array**	**51.14**	**91**	P	**P**	**19 06 14.7**	**+0.7**
	comp=E,0.2nm,0.5s,baz=308,slow=6.2,SNR=5.3						
	comp=E,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**57.64**	**355**	P	**P**	**19 07 00.1**	**-0.6**
	comp=E,2.3nm,0.9s,baz=7.0,slow=8.2,SNR=6.5						
	comp=E,2.3nm,0.9s						
MKAR	**Makanchi Array**	**64.66**	**315**	P	**P**	**19 07 46.9**	**-1.6**
	comp=E,0.3nm,0.6s,baz=69,slow=7.9,SNR=1.2						
	comp=E,0.3nm,0.6s						
ARU	**Arti**	**64.95**	**334**	P	**P**	**19 07 49.9**	**-0.4**
	comp=E,1.6nm,0.5s,baz=27,slow=6.8,SNR=4.8						
	comp=E,1.6nm,0.5s						
FINES	**FINESS Array B**	**65.64**	**353**	P	**P**	**19 07 54.0**	**-0.6**
	comp=E,1.2nm,0.5s,baz=6.9,slow=6.5,SNR=14						
	comp=E,1.2nm,0.5s						
NOA	**NORSAR Array B**	**66.49**	**1**	P	**P**	**19 08 00.1**	**-0.1**
	comp=E,0.2nm,0.4s,baz=5.6,slow=7.1,SNR=1.7						
	comp=E,0.2nm,0.4s						
AKTO	**Aktyubinsk**	**70.42**	**331**	P	**P**	**19 08 25.2**	**+0.4**
	comp=E,2.0nm,0.6s,baz=56,slow=7.0,SNR=8.5						
	comp=E,2.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**71.37**	**10**	P	**P**	**19 08 30.6**	**+0.1**
	comp=E,0.5nm,0.6s,baz=359,slow=5.7,SNR=5.2						
	comp=E,0.5nm,0.6s						
AKASG	**Malin Array Be**	**75.99**	**350**	P	**P**	**19 08 57.1**	**-0.6**
	comp=E,2.2nm,0.5s,baz=13,slow=6.1,SNR=16						
	comp=E,2.2nm,0.5s						
GERES	**GERESS Array B**	**78.73**	**360**	P	**P**	**19 09 13.8**	**+0.5**
	comp=E,0.4nm,0.6s,baz=26,slow=6.5,SNR=4.2						
	comp=E,0.4nm,0.6s						
GEYT	**Alibeck**	**81.60**	**326**	P	**P**	**19 09 29.3**	**+0.4**
	comp=E,0.7nm,0.5s,baz=0.0,slow=1.4,SNR=2.5						
	comp=E,0.7nm,0.5s						
BRTR	**Keskin Array B**	**86.17**	**344**	P	**P**	**19 09 53.1**	**+0.8**
	comp=E,1.0nm,0.7s,baz=17,slow=1.7,SNR=5.7						
	comp=E,1.0nm,0.7s						
ESDC	**Sonseca Array**	**86.69**	**13**	P	**P**	**19 09 55.1**	**+0.3**
	comp=E,0.3nm,0.7s,baz=341,slow=5.0,SNR=1.9						
	comp=E,0.3nm,0.7s						
H03N2	**Juan Fernandez**	**114.60**	**113**	T	T	21 21 10.6	
	baz=322,slow=78,SNR=6.6						
H03N1	**Juan Fernandez**	**114.61**	**113**	T	T	21 21 03.5	
	baz=322,slow=78,SNR=6.1						
H03N3	**Juan Fernandez**	**114.62**	**113**	T	T	21 21 08.9	
	baz=322,slow=78,SNR=8.3						

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*IDC **09** 19:03:02.9±8.3, 8.05S×13.79W, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/9, Error ellipse: s-maj=216.6km s-min=19.6km az=172.0*

ISC 09 19:03:04.3±8.3, 8.5S±1.1×13.8W±0.2, h10km, n16, σ0.9±73/7, mb3.9/4, MS3.3/8, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR**	**0.71**	**290**	Pn	**Pn**	**19 03 19.9**	**-0.2**
	baz=133,slow=19						
H10N1				T	T	19 04 59.5	
	baz=99						
H10N2	**ASCENSION HYDR**	**0.72**	**291**	Pn	**Pn**	**19 03 20.3**	**0.0**
	baz=133,slow=19						
H10N2				T	T	19 05 06.2	
	baz=99						
H10N3	**ASCENSION HYDR**	**0.73**	**290**	Pn	**Pn**	**19 03 20.3**	**-0.1**
	baz=133,slow=19						
H10N3				T	T	19 05 00.7	
	baz=99						
DBIC	**Dimbokro**	**17.16**	**32**	LR	LR	19 12 16.8	
	comp=Z,76nm,20.0s,baz=205,slow=32						
KOWA	**Kowa**	**24.45**	**23**	LR	LR	19 16 43.7	
	comp=Z,103nm,19.4s,baz=309,slow=34						
TORD	**Torodi Ar. Bea**	**26.12**	**36**	P	**P**	**19 08 37.8**	**-0.8**
	1.7nm,0.7s,baz=214,slow=11,SNR=10						
	1.7nm,0.7s						
TSUM	**Tsumeb**	**32.38**	**113**	LR	LR	19 22 14.2	
	comp=Z,30nm,18.1s,baz=334,slow=36						
LBTB	**Lobatse**	**41.15**	**119**	LR	LR	19 25 01.6	
	comp=Z,37nm,20.8s,baz=294,slow=32						
LSZ	**Lusaka**	**41.68**	**104**	LR	LR	19 25 19.3	
	comp=Z,40nm,21.3s,baz=190,slow=32						
BOSA	**Boshof**	**42.05**	**124**	LR	LR	19 24 45.9	
	comp=Z,20nm,20.3s,baz=358,slow=31						
MBAR	**Mbarara**	**45.00**	**83**	LR	LR	19 28 22.9	
	comp=Z,120nm,18.6s,baz=246,slow=34						
CPUP	**Villa Florida**	**45.09**	**241**	LR	LR	19 28 26.4	
	comp=Z,48nm,18.1s,baz=42,slow=34						
SIV	**San Ignacio**	**46.80**	**256**	LR	LR	19 28 46.4	
	comp=Z,69nm,20.8s,baz=87,slow=33						
GERES	**GERESS Array B**	**61.63**	**20**	P	**P**	**19 13 23.3**	**+1.1**
	0.1nm,0.4s,baz=208,slow=9.9,SNR=1.9						
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**64.69**	**39**	P	**P**	**19 13 42.9**	**+0.1**
	0.6nm,0.8s,baz=241,slow=5.9,SNR=3.8						
	0.6nm,0.8s						
AKASG	**Malin Array Be**	**69.37**	**28**	P	**P**	**19 14 11.7**	**-0.4**
	1.3nm,0.7s,baz=226,slow=7.7,SNR=7.6						
	1.3nm,0.7s						

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*IDC **09** 19:08:45.0±0.7, 44.33N×129.39W, h0km, mb4.3/22, mbtmp4.2/31, ML3.7/9, MS4.2/70, Error ellipse: s-maj=20.3km s-min=9.8km az=38.0*
*GCMT **09** 19:08:46.6±0.2, 44.11N±0.01×129.65W±0.01, h18km±1km, MW5.1/131, Moment Tensor Solution. s60,c64; s131,c203; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.47±.15; Mθθ=5.05±.13; Mφφ=5.52±.14; Mrθ=1.45±.38; Mrφ=-1.54±.12; Mθφ=0.17±.28; Best double couple: M0=5.70900×10^16 NP1:φs=128.00000°, δ79.00000°, λ=-169.00000°. NP2:φs=36.00000°, δ79.00000°, λ=-11.00000°. Principal axes: T 5.7400, Plg0.0000°, Azm262.0000°; N -0.0600, Plg74.0000°, Azm170.0000°; P -5.6780, Plg16.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **09** 19:08:47.6±1.9, 44.28N±0.07×129.4W±0.1, h10km±1km, mb4.8/129, ML3.8/38, Mww5.0 Error ellipse: s-maj=15.6km s-min=10.2km az=231.0*
*MOS **09** 19:08:47.2±0.9, 44.31N×129.31W, h23km, mb5.0/35, Error ellipse: s-maj=8.0km s-min=5.6km az=127.0*
*NEIC **09** 19:08:53, 44.28N×129.36W, h12km, Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10^16Nm; Mrr=0.94; Mθθ=3.22; Mφφ4.16; Mrθ0.21; Mθφ=0.99; Mφr-2.36; Fault plane solution: M0=4.57000×10^16 NP1: φs=125.00000°, δ73.00000°, λ167.00000°. NP2: φs=219.00000°, δ78.00000°, λ18.00000°. Principal axes: T 5.2044, Plg21.0000°, Azm83.0000°; N -1.8440, Plg69.0000°, Azm253.0000°; P -3.3604, Plg3.0000°, Azm351.0000°;*

ISC 09 19:08:47.3±0.4, 44.23N±0.06×129.36W±0.06, h13km, n681, σ1.9±20/613, mb4.8/81, MS4.3/72, 8C-6D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.90**	**109**		**Pn**	**19 09 44.9**	**-1.9**
KEBM				IAML		19 11 14.7	
	comp=E,130nm,2.6s						
KEBM				IAML		19 11 35.0	
	comp=N,121nm,4.5s						
HEBO	**Mount Hebo**	**4.11**	**74**		**Pn**	**19 09 49.4**	**-0.5**
HEBO				IAML		19 11 59.0	
	comp=E,151nm,1.7s						
KBO	**Bosley Butte**	**4.26**	**117**	Pn	**Pn**	**19 09 50.5**	**-1.4**
KBO				IAML		19 11 03.2	
	comp=E,94nm,4.2s						
KBO				IAML		19 11 10.6	
	comp=N,92nm,3.7s						
COR	**Corvallis**	**4.35**	**83**		**Pn**	**19 09 53.1**	**0.0**
COR				IAML		19 11 00.2	
	comp=N,112nm,1.8s						
COR				IAML		19 11 11.2	
	comp=N,77nm,2.4s						
COR	**Corvallis**	**4.35**	**83**	P	**Pn**	**19 09 53.1**	**0.0**
DBO	**Dodson Butte**	**4.57**	**102**		**Pn**	**19 09 55.7**	**-0.5**
DBO				IAML		19 11 50.6	
	comp=N,66nm,4.8s						
BUCK	**Buck Mountain**	**4.58**	**88**		**Pn**	**19 09 56.6**	**+0.4**
BUCK				IAML		19 11 01.8	
	comp=N,88nm,2.4s						
E03A	**Lebam**	**4.69**	**58**	Pn	**Pn**	**19 09 56.5**	**-1.2**
E03A				IAML		19 10 59.8	
	comp=N,101nm,1.3s						
KRMB	**Red Mountain**	**4.83**	**122**		**Pn**	**19 09 60.0**	**+0.2**
WISH	**Wishkah**	**4.86**	**52**		**Pn**	**19 09 59.7**	**-0.3**
HUMO	**Hull Mountain**	**4.94**	**107**		**Pn**	**19 10 01.3**	**+0.2**
NLWA	**Neilton Lookou**	**4.97**	**49**		**Pn**	**19 10 00.7**	**-0.9**
NLWA				IAML		19 11 04.3	
	comp=N,60nm,1.5s						
C03A	**Quillayute Air**	**4.99**	**40**		**Pn**	**19 10 01.8**	**-0.1**
H04A	**Detroit Lake**	**5.15**	**82**		**Pn**	**19 10 04.1**	**0.0**
H04A				IAML		19 10 50.7	
	comp=E,50nm,1.1s						
H04A				IAML		19 11 15.9	
	comp=N,53nm,1.6s						
JCC	**Jacoby Creek,**	**5.21**	**129**	Pn	**Pn**	**19 10 04.8**	**-0.1**
JCC				IAML		19 12 25.9	
	comp=N,43nm,4.5s						
KHMM	**Horse Mountain**	**5.34**	**127**		**Pn**	**19 10 07.7**	**+0.8**
OZB	**Mount Ozzard**	**5.43**	**28**		**Pn**	**19 10 07.9**	**0.0**
OZB				IAML		19 11 35.1	
	comp=E,60nm,2.1s						
KMPM	**Mount Pierce**	**5.44**	**133**		**Pn**	**19 10 09.3**	**+1.2**
YBH	**Yreka Blue Hor**	**5.48**	**115**	Pn	**Pn**	**19 10 09.2**	**+0.5**
	comp=E,0.6nm,0.3s,baz=308,slow=9.2,SNR=16						
YBH				Sn	**Sn**	**19 11 09.7**	**-1.9**
	comp=E,0.1nm,0.3s,baz=222,slow=22,SNR=0.9						
YBH				LR	LR	19 11 15.7	
	comp=E,374nm,18.1s,baz=308,slow=27						
	comp=E,3.4nm,0.5s						
YBH	**Yreka Blue Hor**	**5.48**	**115**		**Pn**	**19 10 08.9**	**+0.3**
YBH	**Yreka Blue Hor**	**5.48**	**115**	P	**Pn**	**19 10 08.9**	**+0.3**
B04A	**Port Angeles**	**5.58**	**45**	Pn	**Pn**	**19 10 09.7**	**-0.3**
HOOD	**Mount Hood Mea**	**5.59**	**76**		**Pn**	**19 10 10.3**	**0.0**
KMRM	**Mail Ridge**	**5.80**	**132**		**Pn**	**19 10 14.3**	**+1.3**
D05A	**Enumclaw**	**5.95**	**58**		**Pn**	**19 10 15.3**	**+0.3**
PGC	**Sidney**	**6.01**	**41**	Pn	**Pn**	**19 10 15.5**	**-0.4**
PINE	**Pine Mountain**	**6.08**	**91**		**Pn**	**19 10 16.8**	**-0.3**
KCPM	**Cahto Peak**	**6.25**	**135**		**Pn**	**19 10 18.9**	**-0.5**
K05A	**Summer Lake**	**6.34**	**101**		**Pn**	**19 10 21.5**	**+0.9**
LTY	**Liberty**	**6.79**	**60**		**Pn**	**19 10 26.6**	**0.0**
F07A	**Phinny Hill Vi**	**6.88**	**73**		**Pn**	**19 10 27.8**	**0.0**
B06A	**Marblemount**	**6.93**	**49**		**Pn**	**19 10 29.0**	**+0.6**
MOD	**Modoc Plateau**	**7.03**	**106**	Pn	**Pn**	**19 10 31.8**	**+1.8**
HOPS	**Hopland Field**	**7.04**	**136**	Pn	**Pn**	**19 10 30.8**	**+0.9**
HAWA	**Hanford**	**7.26**	**69**	Pn	**Pn**	**19 10 33.3**	**+0.3**
G08A	**Pilot Rock**	**7.48**	**78**	Pn	**Pn**	**19 10 35.6**	**-0.5**
ORV	**Oroville**	**7.49**	**126**		**Pn**	**19 10 38.0**	**+1.8**
ORV	**Oroville**	**7.49**	**126**	P	**Pn**	**19 10 38.0**	**+1.8**
D08A	**Wollman Farm,**	**7.84**	**65**	Pn	**Pn**	**19 10 41.2**	**+0.2**
BBB	**Bella Bella**	**8.00**	**6**	Pn	**Pn**	**19 10 42.5**	**-0.6**
	comp=E,1.0nm,0.3s,baz=194,slow=9.9,SNR=10						
	comp=E,53nm,1.2s						
BBB	**Bella Bella**	**8.00**	**6**		**Pn**	**19 10 44.3**	**+1.1**
LLLB	**Lillooet**	**8.15**	**36**	Pn	**Pn**	**19 10 45.7**	**+0.5**
HG4B	**Hotspring**	**8.16**	**352**		**Pn**	**19 10 46.8**	**+1.5**
AFDM	**Forest Hills D**	**8.20**	**127**		**Pn**	**19 10 47.8**	**+1.7**
BMO	**Blue Mountains**	**8.63**	**82**		**Pn**	**19 10 52.2**	**+0.3**
BMO	**Blue Mountains**	**8.63**	**82**	P	**Pn**	**19 10 52.2**	**+0.3**
EMB	**Emerald Bay**	**8.69**	**124**		**Pn**	**19 10 54.9**	**+1.9**
CMB	**Columbia Colle**	**9.17**	**129**	Pn	**Pn**	**19 11 01.6**	**+2.4**
CMB	**Columbia Colle**	**9.17**	**129**	P	**Pn**	**19 11 01.6**	**+2.4**
DIB	**Dawson Inlet,**	**9.21**	**348**	Pn	**Pn**	**19 11 00.8**	**+1.1**
H02S1	**DAWSON INLET T**	**9.21**	**348**	T	T	19 20 22.2	
NEW	**Newport**	**9.38**	**60**	Pn	**Pn**	**19 11 01.1**	**-1.1**
	comp=E,0.7nm,0.3s,baz=238,slow=12,SNR=14						
NEW				LR	LR	19 14 32.3	
	comp=E,3μm,20.7s,baz=248,slow=37						
	comp=E,7.8nm,0.7s						
NEW	**Newport**	**9.38**	**60**	Pn	**Pn**	**19 11 01.9**	**-0.3**
NEW	**Newport**	**9.38**	**60**	P	**Pn**	**19 11 01.9**	**-0.3**
NEW	**Newport**	**9.38**	**60**	P	**Pn**	**19 11 01.8**	**-0.3**
	baz=249,SNR=18						
SAO	**San Andreas Ge**	**9.58**	**138**	Pn	**Pn**	**19 11 05.7**	**+0.8**
SAO	**San Andreas Ge**	**9.58**	**138**	P	**Pn**	**19 11 05.7**	**+0.8**
GRNB	**Grenville Isla**	**9.63**	**358**	Pn	**Pn**	**19 11 07.0**	**+1.5**
BBGB	**Big Mountain B**	**9.93**	**138**		**Pn**	**19 11 09.8**	**+0.1**
RUBB	**Prince Rupert**	**10.12**	**357**		**Pn**	**19 11 14.5**	**+2.4**
NVAR	**Mina Array Bea**	**10.13**	**121**	Pn	**Pn**	**19 11 15.5**	**+2.9**
	comp=E,0.3nm,0.3s,baz=299,slow=13,SNR=24						
	comp=E,5.4nm,0.8s						
NVAR	**Mina Array Bea**	**10.13**	**121**	Pn	**Pn**	**19 11 14.8**	**+2.3**
NV11	**Mina Array Sit**	**10.22**	**121**		**Pn**	**19 11 16.1**	**+2.4**
MLAC	**Mammoth, Mammo**	**10.33**	**126**	P	**Pn**	**19 11 15.7**	**+0.4**
	baz=313						
HLID	**Hailey**	**10.81**	**88**	Pn	**Pn**	**19 11 24.7**	**+2.9**
HLID	**Hailey**	**10.81**	**88**	P	**Pn**	**19 11 23.8**	**+2.0**
	baz=279,SNR=46						
VOG	**Valley Oaks Go**	**10.97**	**133**	P	**Pn**	**19 11 25.1**	**+1.3**
	baz=319						
ELK	**Elko**	**10.99**	**104**	Pn	**Pn**	**19 11 27.6**	**+3.2**
	comp=E,0.2nm,0.3s,baz=298,slow=12,SNR=17						
ELK				LR	LR	19 15 42.4	
	comp=E,2μm,21.2s,baz=292,slow=38						
	comp=E,7.3nm,1.0s						
TPH	**Tonopah**	**11.02**	**120**		**Pn**	**19 11 25.8**	**+1.1**
TPH	**Tonopah**	**11.02**	**120**	P	**Pn**	**19 11 25.8**	**+1.1**
JTMT	**Jette**	**11.06**	**66**	Pn	**Pn**	**19 11 25.8**	**+0.6**
TIN	**Tinemaha, Big**	**11.08**	**127**	P	**Pn**	**19 11 27.1**	**+1.7**
	baz=314						
MSO	**Missoula**	**11.12**	**71**	Pn	**Pn**	**19 11 26.2**	**+0.2**
MSO	**Missoula**	**11.12**	**71**	P	**Pn**	**19 11 26.5**	**+0.4**
	baz=262,SNR=30						
V35K	**Ketchikan**	**11.20**	**353**	P	**Pn**	**19 11 27.2**	**+0.3**
	baz=172,SNR=9.2						
BCYI	**Bear Canyon**	**11.44**	**84**	Pn	**Pn**	**19 11 33.0**	**+2.5**
SMMC	**Simmler**	**11.45**	**138**	P	**Pn**	**19 11 32.7**	**+2.3**
	baz=324						
VES	**Vestal, Richgr**	**11.49**	**133**	P	**Pn**	**19 11 31.7**	**+0.7**
	baz=320,SNR=12						
CRAG	**Craig**	**11.51**	**349**		**Pn**	**19 11 33.5**	**+2.4**
CRAG	**Craig**	**11.51**	**349**	P	**Pn**	**19 11 31.9**	**+0.7**
	baz=166,SNR=11						
CWC	**Cottonwood Cre**	**11.59**	**128**	P	**Pn**	**19 11 34.1**	**+1.6**
	baz=316						
GRAC	**Grapevine Rang**	**11.62**	**124**	P	**Pn**	**19 11 34.4**	**+1.6**
	baz=312						
WALA	**Waterton Lakes**	**11.66**	**60**	Pn	**Pn**	**19 11 33.4**	**+0.1**
MCMT	**McKenzie Canyo**	**11.80**	**81**		**Pn**	**19 11 36.7**	**+1.3**
PKM	**Mcpherson Peak**	**11.88**	**139**	P	**Pn**	**19 11 38.4**	**+1.9**
	baz=325						
R11A	**Troy Canyon, C**	**11.90**	**115**		**Pn**	**19 11 39.8**	**+3.0**
R11A	**Troy Canyon, C**	**11.90**	**115**	P	**Pn**	**19 11 38.8**	**+2.0**
	baz=304,SNR=17						
ISA	**Isabella, Lake**	**11.95**	**132**	Pn	**Pn**	**19 11 39.4**	**+2.1**
ISA	**Isabella, Lake**	**11.95**	**132**	P	**Pn**	**19 11 39.4**	**+2.1**
ISA	**Isabella, Lake**	**11.95**	**132**	P	**Pn**	**19 11 39.4**	**+2.1**
	baz=319,SNR=12						
LRM	**Limekiln Ridge**	**12.07**	**77**		**Pn**	**19 11 40.9**	**+1.8**
U33K	**Whale Pass**	**12.14**	**350**	P	**Pn**	**19 11 40.7**	**+1.0**
	baz=167,SNR=5.8						
ARVC	**Arvin**	**12.17**	**135**	P	**Pn**	**19 11 42.9**	**+2.6**
	baz=322						
MPMC	**Manual Prospec**	**12.20**	**128**	P	**Pn**	**19 11 43.0**	**+2.1**
	baz=316						
FURC	**Furnace Creek,**	**12.28**	**125**	P	**Pn**	**19 11 45.0**	**+3.2**
	baz=313,SNR=14						
SBC	**Santa Barbara**	**12.29**	**139**	P	**Pn**	**19 11 45.4**	**+3.5**
	baz=326						
TPNV	**Topopah Spring**	**12.33**	**122**	Pn	**Pn**	**19 11 45.2**	**+2.6**
TPNV	**Topopah Spring**	**12.33**	**122**	P	**Pn**	**19 11 45.2**	**+2.6**
TPNV	**Topopah Spring**	**12.33**	**122**	P	**Pn**	**19 11 45.3**	**+2.7**
	baz=310,SNR=20						
WRAK	**Wrangell Islan**	**12.35**	**352**	Pn	**Pn**	**19 11 44.4**	**+1.8**
WRAK	**Wrangell Islan**	**12.35**	**352**	P	**Pn**	**19 11 45.2**	**+2.6**
	baz=170,SNR=9.0						
LRMC	**Laurel Mtn Rad**	**12.51**	**130**	P	**Pn**	**19 11 46.0**	**+0.9**
	baz=318						
HRY	**Holter Researc**	**12.55**	**72**		**Pn**	**19 11 46.8**	**+1.2**
BRLDA	**Berland Lookou**	**12.57**	**34**		**Pn**	**19 11 47.1**	**+1.3**
CCAC	**Calif City Air**	**12.58**	**132**		**Pn**	**19 11 47.9**	**+2.0**
OSI	**Osito Audit: C**	**12.63**	**136**	P	**Pn**	**19 11 48.3**	**+1.7**
	baz=323						
BOZ	**Bozeman (W)**	**12.64**	**78**		**Pn**	**19 11 48.2**	**+1.3**
BOZ	**Bozeman (W)**	**12.64**	**78**	P	**Pn**	**19 11 48.2**	**+1.3**
BOZ	**Bozeman (W)**	**12.64**	**78**	P	**Pn**	**19 11 48.2**	**+1.3**
	baz=270,SNR=26						
WAPA	**Wapiti River**	**12.75**	**27**		**Pn**	**19 11 49.8**	**+1.7**
T35M	**Bob Quinn**	**12.78**	**358**	P	**Pn**	**19 11 50.6**	**+2.0**
	baz=177,SNR=17						
EDW2	**Edwards Air Fo**	**12.80**	**133**	P	**Pn**	**19 11 50.6**	**+1.7**
	baz=320,SNR=18						
T33K	**Petersburg**	**12.80**	**351**	P	**Pn**	**19 11 51.5**	**+2.8**
	baz=168						
DUG	**Dugway, Tooele**	**12.91**	**102**		**Pn**	**19 11 51.5**	**+1.0**
DUG	**Dugway, Tooele**	**12.91**	**102**	P	**Pn**	**19 11 51.5**	**+1.0**
DUG	**Dugway, Tooele**	**12.91**	**102**	P	**Pn**	**19 11 52.8**	**+2.3**
	baz=294						
YHB	**Horse Butte**	**12.98**	**81**		**Pn**	**19 11 53.6**	**+2.0**
SHOC	**Shoshone, Teco**	**13.01**	**125**	P	**Pn**	**19 11 55.0**	**+3.2**
	baz=314,SNR=7.1						
DECC	**Green Verdugo**	**13.11**	**136**	P	**Pn**	**19 11 56.5**	**+3.3**
	baz=323						
GSC	**Goldstone, Bar**	**13.13**	**129**		**Pn**	**19 11 56.1**	**+2.7**
GSC	**Goldstone, Bar**	**13.13**	**129**	P	**Pn**	**19 11 56.2**	**+2.7**
GSC	**Goldstone, Bar**	**13.13**	**129**	P	**Pn**	**19 11 56.7**	**+3.2**
	baz=317,SNR=19						
FXWY	**Fox Creek**	**13.23**	**86**		**Pn**	**19 11 57.6**	**+2

	baz=172					
IRM	Iron Mountain	14.90 128	P	P	19 12 21.2	-2.1
	baz=317,SNR=32					
BC3	Big Chuckawall	15.10 130	P	Pn	19 12 22.0	+1.7
	baz=319,SNR=11					
MONP2	Monument Peak	15.16 134	P	Pn	19 12 23.3	+2.0
	baz=322,SNR=23					
R33M	Jennings River	15.22 357	P	Pn	19 12 23.2	+1.4
	baz=176,SNR=26					
TKX	Tecate	15.32 135	Pn	Pn	19 12 24.2	+1.0
TKX			IAmb	IAmb	19 12 32.3	
	comp=Z,30nm,1.3s					
PDMCI	Parker Dam,Lak	15.38 125	P	Pn	19 12 25.9	+2.0
	baz=315,SNR=6.0					
SWSC	Sam W. Stewart	15.45 132	P	Pn	19 12 26.8	+2.0
	baz=321,SNR=7.2					
CBX	Cerro Bola	15.50 136	Pn	Pn	19 12 26.4	+0.8
IKP	In-Ko-Pah, Jac	15.51 134	P	Pn	19 12 27.7	+2.0
	baz=322,SNR=17					
BLYC	Blythe	15.55 127		Pn	19 12 27.6	+1.4
P32M	Atlin	15.61 352	P	Pn	19 12 27.9	+1.1
	baz=168					
SKAG	Skagway	15.68 349		Pn	19 12 28.0	+0.3
SKAG	Skagway	15.68 349	P	Pn	19 12 28.9	+1.2
	baz=164					
PLBC	Pleasant Camp	15.84 347	P	Pn	19 12 30.3	+0.6
	baz=161,SNR=9.0					
GLA	Glamis	15.89 130	P	Pn	19 12 32.3	+1.6
	baz=319					
WTLY	Watson Lake, Y	15.91 1		Pn	19 12 31.9	+1.2
WTLY	Watson Lake, Y	15.91 1	P	Pn	19 12 32.0	+1.2
	baz=182					
ESJX	Sierra Juarez	16.11 135		Pn	19 12 34.8	+1.2
P33M	Teslin, Yukon	16.14 354	Pn	Pn	19 12 34.8	+1.0
P33M	Teslin, Yukon	16.14 354	P	Pn	19 12 34.5	+0.8
	baz=171,SNR=14					
O20A	White River Ci	16.17 97		Pn	19 12 33.6	-0.7
O20A			IAmb	IAmb	19 12 41.3	
	comp=Z,63nm,0.9s					
O20A	White River Ci	16.17 97	P	Pn	19 12 34.7	+0.4
	baz=292,SNR=36					
HILA	High Level	16.24 24		Pn	19 12 34.4	-0.4
P29M	Windy Craggy	16.24 345		Pn	19 12 35.7	+0.8
P29M	Windy Craggy	16.24 345	P	Pn	19 12 35.1	+0.1
	baz=158,SNR=6.8					
WUAZ	Wupatki	16.29 116		Pn	19 12 37.3	+1.4
WUAZ	Wupatki	16.29 116	P	Pn	19 12 36.4	+0.5
	baz=308,SNR=9.2					
LAO	LASA Array	16.41 73		Pn	19 12 38.0	+0.8
LAO			IAmb	IAmb	19 12 42.7	
	comp=Z,37nm,1.0s					
LAO	LASA Array	16.41 73	P	Pn	19 12 37.6	+0.4
	baz=270					
FLDN	Fort Liard	16.42 10	P	Pn	19 12 37.4	+0.2
	baz=195					
P30M	Million Dollar	16.57 347	P	Pn	19 12 40.0	+0.9
	baz=160					
PNL	Peninsula	16.62 342	P	Pn	19 12 39.8	0.0
	baz=154					
K22A	Casper	16.65 87		Pn	19 12 41.3	+0.9
K22A	Casper	16.65 87	P	Pn	19 12 41.6	+1.2
	baz=283,SNR=5.8					
113A	Mohawk Valley,	16.70 128	P	P	19 12 42.9	-0.3
WHY	Whitehorse	16.79 351		Pn	19 12 42.8	+0.9
WHY			IAmb	IAmb	19 12 50.6	
	comp=Z,85nm,1.7s					
WHY	Whitehorse	16.79 351	P	P	19 12 43.5	-0.6
	baz=166,SNR=12					
O29M	Mount Kennedy	17.03 344	P	P	19 12 46.0	-0.8
	baz=157					
O30N	Mendenhall	17.05 349	P	P	19 12 46.1	-0.9
	baz=163,SNR=17					
N32M	Quiet Lake	17.09 354	P	P	19 12 47.3	-0.2
	baz=171					
PINM	Pinnacle	17.20 341	P	Pn	19 12 47.3	+0.2
	baz=153					
PCA	Pinnacle	17.20 341		Pn	19 12 47.3	+0.2
MVCO	Mesa Verde	17.27 107		P	19 12 49.7	-0.1
MVCO			IAmb	IAmb	19 12 57.9	
	comp=Z,133nm,1.4s					
MVCO	Mesa Verde	17.27 107	P	Pn	19 12 48.1	-0.2
	baz=301,SNR=25					
HYT	Haines Junctio	17.32 347		Pn	19 12 48.8	+0.1
HYT	Haines Junctio	17.32 347	P	Pn	19 12 48.1	-0.6
	baz=160,SNR=15					
TGTN	Hyland Airport	17.34 2	P	Pn	19 12 48.8	0.0
	baz=183,SNR=6.4					
SMCO	Snowmass	17.44 99		Pn	19 12 50.6	0.0
N23A	Red Feather La	17.55 93	Pn	Pn	19 12 51.5	-0.4
N23A			IAmb	IAmb	19 12 56.5	
	comp=Z,112nm,1.9s					
N23A	Red Feather La	17.55 93	P	Pn	19 12 51.8	0.0
	baz=289					
YUK6	Outpost Mounta	17.58 345	P	P	19 12 53.2	+0.2
	baz=158,SNR=17					
W18A	Petrified Fore	17.60 114	P	P	19 12 53.4	0.0
	baz=307,SNR=12					
MESA	MESA	17.68 339	P	Pn	19 12 53.4	+0.1
MESA			IAmb	IAmb	19 13 00.1	
	comp=Z,136nm,1.7s					
MESA	MESA	17.68 339	P	Pn	19 12 53.5	+0.3
	baz=149					
N31M	Braeburn, Yuko	17.70 350	P	Pn	19 12 53.1	-0.2
N31M	Braeburn, Yuko	17.70 350	P	Pn	19 12 53.0	-0.3
	baz=165,SNR=10.0					
TABL	Table Mountain	17.71 341		P	19 12 54.8	+0.4
O28M	Mount Upton	17.79 342	P	P	19 12 55.0	-0.4
	baz=154					
YAH	Yahtse	17.79 340	P	Pn	19 12 54.3	-0.4
YAH			IAmb	IAmb	19 13 01.7	
	comp=Z,51nm,1.6s					
214A	Organ Pipe Nat	17.84 128		Pn	19 12 55.4	+0.1
214A	Organ Pipe Nat	17.84 128	P	P	19 12 57.5	+1.6
	baz=318					
DGMT	Dagmar	17.85 67	P	Pn	19 12 55.4	+0.2
DGMT			IAmb	IAmb	19 12 58.5	
	comp=Z,111nm,1.2s					
DGMT	Dagmar	17.85 67	P	P	19 12 55.8	-0.1
	baz=266					
N30M	Aishikik Lake	17.86 348	P	P	19 12 56.5	+0.6
	baz=162,SNR=10.0					
BGLC	Bering Glacier	18.00 337	P	Pn	19 12 56.0	-0.8
	baz=146					
YUK4	Talbot Arm	18.01 345	P	P	19 12 58.3	+0.6
	baz=158,SNR=7.1					
LOGN	Logan Glacier	18.02 341	P	Pn	19 12 57.3	0.0
LOGN			IAmb	IAmb	19 13 06.8	
	comp=Z,49nm,1.6s					
SUCK	Suckling Hills	18.09 336		P	19 12 58.7	+0.2
SUCK			IAmb	IAmb	19 13 06.1	
	comp=Z,84nm,1.5s					
RSSD	Black Hills	18.15 81		Pn	19 12 58.4	-0.7
RSSD	Black Hills	18.15 81	P	Pn	19 12 58.4	-0.7
RSSD			pmax	pmax		
	comp=Z,18nm,0.9s					
RSSD	Black Hills	18.15 81	P	Pn	19 12 59.2	+0.1
	baz=279					
ISLE	Juniper Island	18.15 339	P	Pn	19 12 58.8	-0.2
WAX	Waxell Ridge	18.15 338	P	Pn	19 12 58.9	0.0
YUK8	Steele Glacier	18.16 344	P	P	19 13 00.4	+0.9
	baz=155,SNR=15					
KAIM	Kayak Island	18.17 335	P	P	19 13 00.6	+1.4
	baz=143					
ISCO	Idaho Springs	18.17 96	P	Pn	19 12 59.5	0.0
ISCO			IAmb	IAmb	19 13 05.1	
	comp=Z,29nm,0.9s					
ISCO	Idaho Springs	18.17 96	P	Pn	19 12 59.5	0.0
ISCO			pmax	pmax		
	comp=Z,29nm,0.9s					
ISCO	Idaho Springs	18.17 96	P	Pn	19 12 59.3	-0.2
	baz=292					
S22A	4UR Ranch, Cre	18.17 103	P	P	19 13 00.2	+0.4
	baz=298,SNR=20					
FARO	Faro, Yukon	18.18 354	P	P	19 13 00.6	+1.1
FARO	Faro, Yukon	18.18 354	P	P	19 13 01.0	+1.5
	baz=171,SNR=9.9					
CTG	Chitna Glacier	18.22 341	P	P	19 13 00.3	+0.4
	baz=152					
M31M	Drury Creek, Y	18.24 352	P	P	19 13 00.9	+0.8
M31M	Drury Creek, Y	18.24 352	P	P	19 13 00.9	+0.8
	baz=168					
BERG	Berg Lake	18.34 337	P	P	19 13 01.4	+0.3
BERG			IAmb	IAmb	19 13 09.0	
	comp=Z,69nm,1.7s					
BARN	Barnard Glacie	18.38 341	P	Pn	19 13 01.6	-0.1
Q23K	Middleton Isla	18.40 332	P	Pn	19 13 03.2	+1.4
	baz=138					
TGL	Tana Glacier	18.41 339	P	Pn	19 13 02.6	+0.5
TGL			IAmb	IAmb	19 13 09.0	
	comp=Z,87nm,1.7s					
HMT	Hamilton	18.45 336	P	Pn	19 13 03.7	+1.2
MMPY	Sheldon Lake,	18.46 357	P	Pn	19 13 03.7	+1.2
	baz=176,SNR=16					
YUK3	Moose Creek	18.75 343	P	Pn	19 13 07.3	+0.9
	baz=154,SNR=7.0					
TUC	Tucson	18.77 123	P	Pn	19 13 07.8	+1.2
TUC	Tucson	18.77 123	P	Pn	19 13 07.9	+1.2
TUC			pmax	pmax		
	comp=Z,7.0nm,1.0s					
TUC	Tucson	18.77 123	P	Pn	19 13 08.6	+1.9
	baz=315					
VRDI	Verde Repeater	18.97 339	P	P	19 13 08.5	+0.2
MCARA	McCarthy VSAT	18.99 340	P	P	19 13 08.2	-0.1
MCARA	McCarthy VSAT	18.99 340	P	Pn	19 13 09.3	+0.3
	baz=148					
M29M	Somme Creek	19.00 347	P	Pn	19 13 09.9	+0.7
	baz=160,SNR=6.3					
BMRM	Bremner River	19.07 337	P	P	19 13 09.4	+0.3
BMRM	Bremner River	19.07 337	P	Pn	19 13 10.9	+1.0
	baz=145					
EYAK	Cordova Ski Ar	19.07 335	P	Pn	19 13 10.4	+0.5
	baz=142					
SDCO	Great Sand Dun	19.10 102	P	Pn	19 13 11.1	+0.2
SDCO	Great Sand Dun	19.10 102	P	Pn	19 13 11.2	+0.3
	baz=298,SNR=17					
P23K	Montague Islan	19.18 332	P	Pn	19 13 11.0	-0.3
	baz=137					
HIN	Hinchinbrook I	19.18 334	P	Pn	19 13 11.6	+0.2
GLB	Gilahina Butte	19.24 339	P	Pn	19 13 11.8	-0.3
GLB			IAmb	IAmb	19 13 19.7	
	comp=Z,42nm,1.5s					
WRGLY	Wrigley	19.34 8	P	Pn	19 13 12.8	-0.3
	baz=193					
M27K	Edge Creek, AK	19.57 342	P	Pn	19 13 15.7	-0.5
	baz=152					
L29M	L29M	19.58 348	P	Pn	19 13 15.7	-0.4
	baz=161,SNR=8.5					
N25K	Chitina, Valde	19.59 338	P	Pn	19 13 15.8	-0.5
N25K			IAmb	IAmb	19 13 24.5	
	comp=Z,81nm,1.9s					
N25K	Chitina, Valde	19.59 338	P	Pn	19 13 16.3	+0.1
	baz=146					
GLI	Glacier Island	19.74 334	P	P	19 13 17.0	+0.5
GLI			IAmb	IAmb	19 13 24.6	
	comp=Z,176nm,1.9s					
GLI	Glacier Island	19.74 334	P	P	19 13 16.6	+0.1
	baz=140					
KDAK	Kodiak Island	19.80 321	P	P	19 13 17.0	-0.1
	comp=Z,0.3nm,0.3s,baz=27,slow=4.6,SNR=2.2					
KDAK			LR	LR	19 18 44.5	
	comp=Z,590nm,20.1s,baz=147,slow=30					
	comp=Z,8.2nm,0.8s					
M26K	Nabesna, AK	19.86 341	P	Pn	19 13 19.1	-0.4
	baz=150,SNR=8.6					
KLU	Klutina	19.87 336	P	P	19 13 17.8	-0.2
KLU			IAmb	IAmb	19 13 26.8	
	comp=Z,69nm,1.8s					
KLU	Klutina	19.87 336	P	P	19 13 18.2	+0.3
	baz=143					
ANMO	Albuquerque	19.88 110	P	Pn	19 13 19.9	-0.2
	comp=Z,0.2nm,0.3s,baz=306,slow=12,SNR=6.6					
ANMO			LR	LR	19 21 23.1	
	comp=Z,1μm,20.3s,baz=288,slow=38					
	comp=Z,4.0nm,0.8s					
ANMO	Albuquerque	19.88 110		Pn	19 13 20.2	+0.1
ANMO	Albuquerque	19.88 110	P	Pn	19 13 20.2	+0.1
ANMO			pmax	pmax		
	comp=Z,13nm,1.1s					
ANMO	Albuquerque	19.88 110	P	Pn	19 13 19.7	-0.4
	baz=305					
SEW	Seward	19.98 330	P	Pn	19 13 20.3	-0.5
SEW			IAmb	IAmb	19 13 28.1	
	comp=Z,61nm,1.3s					
SEW	Seward	19.98 330	P	Pn	19 13 20.1	-0.6
	baz=134					
Y22D	IRIS PASSCAL I	20.08 113	P	P	19 13 20.8	+0.2
	baz=307					
Y22F	Passcal Instru	20.08 113	P	Pn	19 13 22.1	-0.3
	baz=307					
PWL	Port Wells	20.13 332	P	P	19 13 20.2	-0.5
PWL	Port Wells	20.13 332	P	P	19 13 20.6	-0.2
	baz=137					
T25A	Trinidad	20.15 102	P	Pn	19 13 23.1	-0.2
	baz=299,SNR=16					
BCAR	Beaver Creek A	20.19 343	P	Pn	19 13 22.3	-1.0
L27K	Beaver Creek,	20.19 343	P	Pn	19 13 23.1	-0.3
	baz=153,SNR=12					
K29M	Barlow Dome	20.20 349	P	Pn	19 13 22.7	-0.8
	baz=163					
YKA	Yellowknife Ar	20.21 20	P	P	19 13 20.5	-1.1
	comp=Z,2.9nm,0.8s,baz=211,slow=11,SNR=10					
YKA			LR	LR	19 21 02.7	
	comp=Z,1μm,18.1s,baz=210,slow=37					
	comp=Z,2.9nm,0.8s					
YKA	Yellowknife Ar	20.21 20		P	19 13 20.8	-0.7
YKA	Yellowknife Ar	20.21 20	P	P	19 13 20.8	-0.7
BRSE	Bradley Lake S	20.21 328	P	P	19 13 21.6	-0.1
	baz=131					
E28A	Huff	20.22 73	P	P	19 13 21.8	0.0
O22K	Cooper Landing	20.34 330	P	P	19 13 23.5	+0.5
	baz=134					
OGNE	Ogallala	20.35 90	P	P	19 13 23.8	+0.4
	baz=289					
M24K	Tolsona, Glenn	20.43 337	P	Pn	19 13 25.9	-0.3
	baz=143,SNR=8.3					
121A	Cookes Peak, D	20.48 117	P	Pn	19 13 27.1	-0.1
121A			IAmb	IAmb	19 13 34.9	
	comp=Z,54nm,1.1s					
121A	Cookes Peak, D	20.48 117	P	Pn	19 13 26.7	-0.5
	baz=311,SNR=27					
L26K	Log Cabin Wild	20.49 342	P	P	19 13 24.5	-0.2
	baz=150					
FFC	Flin Flon	20.52 50	P	P	19 13 24.6	-0.4
FFC	Flin Flon	20.52 50	P	P	19 13 24.6	-0.4
FFC			pmax	pmax		
	comp=Z,262nm,2.0s					
SCM	Sheep Creek Mo	20.55 335	P	P	19 13 25.2	-0.2
SCM	Sheep Creek Mo	20.55 335	P	P	19 13 25.2	-0.2
SCM			pmax	pmax		
	comp=Z,197nm,1.7s					
SCM	Sheep Creek Mo	20.55 335	P	P	19 13 26.0	+0.6
	baz=141					
KNK	Knik Glacier	20.58 333	P	P	19 13 25.5	-0.2
	baz=138,SNR=11					
KSCO	Kaye Shedlock'	20.61 95	P	P	19 13 26.8	+0.6
KSCO			IAmb	IAmb	19 13 30.5	
	comp=Z,48nm,1.1s					
KSCO	Kaye Shedlock'	20.61 95	P	P	19 13 26.7	+0.5
	baz=294					
M23K	Glacier View	20.64 335	P	Pn	19 13 27.4	-1.2
	baz=140,SNR=10					
DAWY	Dawson	20.68 347	P	P	19 13 26.4	-0.2
DAWY			IAmb	IAmb	19 13 38.9	
	comp=Z,100nm,1.9s					
DAWY	Dawson	20.68 347	P	P	19 13 27.2	+0.5
	baz=159					
SML	Sawmill	20.84 334	P	Pn	19 13 29.6	-1.3
	baz=139					
MDND	Maddock	20.91 70	P	P	19 13 29.7	+0.5
	baz=271					
PMR	Palmer	20.93 333	P	P	19 13 29.0	-0.4
PMR			IAmb	IAmb	19 13 37.8	
	comp=Z,84nm,1.4s					
PMR	Palmer	20.93 333	P	P	19 13 29.0	-0.4
PMR			pmax	pmax		
	comp=Z,85nm,1.4s					
PMR	Palmer	20.93 333	P	P	19 13 30.2	+0.8
	baz=137					
PAX	Paxson	20.95 339	P	P	19 13 30.9	+1.1
	baz=146					
HSIG		21.11 130	P	P	19 13 32.4	+0.8
K27K	Chicken	21.11 344	P	P	19 13 32.3	+1.0
	baz=154					
DOT	Dot Lake	21.19 342	P	P	19 13 32.0	-0.3
DOT			IAmb	IAmb	19 13 44.6	
	comp=Z,49nm,1.6s					
WAT6	Susitna Watana	21.25 336	P	P	19 13 34.1	+1.1
	baz=141,SNR=16					
Q18K	Katmai Hardscr	21.35 322	P	P	19 13 34.5	+0.4
	baz=121					
M22K	Willow	21.37 332	P	P	19 13 35.0	+0.8
	baz=136					
SUA	Susitna One	21.38 331	P	P	19 13 33.5	-0.8
	baz=134,SNR=5.5					
SUA	Susitna One	21.38 331	P	P	19 13 35.6	+1.2
	baz=134,SNR=5.5					
RIDG	Independent Ri	21.45 341	P	P	19 13 36.0	+0.9
	baz=148					
SCRK	Sand Creek	21.46 342	P	P	19 13 35.2	0.0
SCRK			IAmb	IAmb	19 13 42.2	
	comp=Z,36nm,1.4s					
SCRK	Sand Creek	21.46 342	P	P	19 13 36.3	+1.1
	baz=150,SNR=14					
R17K	Ugashik Creek	21.50 318	P	P	19 13 36.8	+1.3
	baz=117					
DHY	Denali Highway	21.54 337	P	P	19 13 37.4	+1.3
	baz=143,SNR=11					
Q17K	Contact Creek	21.56 320	P	P	19 13 36.9	+0.7
	baz=119					
EGAK	Eagle	21.63 346	P	P	19 13 36.8	0.0
EGAK			IAmb	IAmb	19 13 51.0	
	comp=Z,69nm,1.9s					
EGAK	Eagle	21.63 346	P	P	19 13 38.1	+1.2
	baz=156					
SPU	Mount Spurr	21.65 330	P	P	19 13 36.8	-0.4
WAT1	Susitna Watana	21.68 336	P	P	19 13 38.5	+1.0
	baz=140					
N20K	Mount Spurr	21.72 329	P	P	19 13 38.6	+0.6
	baz=131,SNR=22					
SPCR	Spurr Chakacha	21.72 329	P	P	19 13 38.7	+0.7
	baz=131,SNR=17					
K24K	Donnelly Dome	21.73 340	P	P	19 13 38.9	+1.0
	baz=147					
I29M	Ogilvie Camp,	21.75 350	P	P	19 13 38.9	+0.7
	baz=162					
SRIG	Santa Rosalia	21.78 135	P	P	19 13 39.6	+0.9
SRIG			IAmb	IAmb	19 13 49.2	
	comp=Z,27nm,1.3s					
J26L	Joseph Creek	21.83 343	P	P	19 13 40.0	+0.9
	baz=152					
P18K	Big Mountain,	21.84 323	P	P	19 13 38.8	-0.4
	baz=122					
CUT	Chulitna	21.89 334	P	P	19 13 40.0	+0.3
	baz=136					
O19K	Port Alsworth	21.91 326	P	P	19 13 40.7	+0.8
	baz=126					
CHGN	Chignik	21.97 314	P	P	19 13 41.6	+1.1
	baz=111					
SKT	Skwentna	22.01 332	P	P	19 13 40.4	-0.7
SKT			IAmb	IAmb	19 13 49.2	
	comp=Z,114nm,1.8s					
SKT	Skwentna	22.01 332	P	P	19 13 41.8	+0.7
	baz=134,SNR=7.1					
O18K	Koktuh Hills	22.09 324	P	P	19 13 41.9	0.0
	baz=124					
Q16K	King Salmon	22.11 320	P	P	19 13 41.7	-0.3
	baz=119					
CHNA	Chernabura Isl	22.13 309	P	P	19 13 41.8	-0.6
	baz=106					
P17K	Kvichak River	22.27 322	P	P	19 13 43.4	-0.4
	baz=120					
J25K	Salcha River,	22.32 342	P	P	19 13 44.5	+0.2
	baz=148					
N19K	Bonanza Creek	22.34 327	P	P	19 13 45.2	+0.5
	baz=127,SNR=9.2					
I27K	Kandik River	22.46 347	P	P	19 13 45.9	0.0
	baz=156					
I26K	Coal Creek Min	22.47 345	P	P	19 13 46.8	+0.9
	baz=153					
MCK	McKinley	22.50 337	P	P	19 13 46.9	+0.7
	baz=141					
M20K	Styx River	22.50 330	P	P	19 13 46.8	+0.4
	baz=131					
HDA	Harding Lake	22.52 340	P	P	19 13 47.3	+0.9
	baz=145					
EPYK	Eagle Plains	22.55 352	P	P	19 13 47.4	+0.6
	baz=166,SNR=8.2					
TRF	Thorofare Moun	22.67 335	P	P	19 13 46.8	-1.5
TRF	Thorofare Moun	22.67 335	P	P	19 13 49.0	+0.8
	baz=138					
CBKS	Cedar Bluff	22.76 93	P	P	19 13 49.9	+0.7
	baz=294					
IL31		22.80 341	P	P	19 13 49.1	-0.2
IL31			IAmb	IAmb	19 13 57.4	
	comp=Z,55nm,1.6s					
ILAR	Eielson Array	22.80 341	P	P	19 13 49.4	-0.1
	comp=Z,12nm,1.0s,baz=154,slow=8.2,SNR=59					
ILAR			PcP	PcP	19 17 39.6	-0.6
	comp=Z,0.9nm,0.8s,baz=179,slow=2.6,SNR=7.4					
ILAR			LR	LR	19 21 09.7	
	comp=Z,1μm,19.6s,baz=144,slow=33					
	comp=Z,12nm,1.0s					
N18K	Kilae Creek	22.83 325	P	P	19 13 50.1	+0.3
N18K	Kilae Creek	22.83 325	P	P	19 13 51.5	+1.7
	baz=124,SNR=9.0					
O17K	Koliganek Bris	22.85 323	P	P	19 13 50.2	+0.3
	baz=120					
PPLA	Purkeypile	22.87 333	P	P	19 13 49.9	-0.4
PPLA	Purkeypile	22.87 333	P	P	19 13 51.8	+1.5
	baz=134,SNR=9.2					
P16K	Nushagak River	22.89 320	P	P	19 13 50.7	+0.3
	baz=118					
GDL2	Guadalupe Moun	22.92 113	P	P	19 13 52.1	+1.0
KTH	Kantishna Hill	22.94 335	P	P	19 13 51.2	+0.3
MSTX	Muleshoe	22.94 107	P	P	19 13 52.7	+1.4
	baz=305					
M19K	Big River Lodg	22.98 329	P	P	19 13 52.5	+1.2
	baz=129					
H27K	Steamboat Moun	23.03 347	P	P	19 13 52.5	+0.7
	baz=157,SNR=8.4					
G30M	tAoh Zraii Nji	23.10 353	P	P	19 13 53.5	+0.9
	baz=167					
COLA	College	23.12 340⇑	P	P	19 13 54.6	+1.9
COLA			pmax	pmax		
	comp=Z,19nm,1.6s					
PRP	Porcupine Dome	23.13 343	P	P	19 13 54.0	+1.1
	baz=149					
L20K	Farewell, AK	23.16 331	P	P	19 13 53.5	+0.3
	baz=131,SNR=9.5					
AMTX	Amarillo	23.20 104	P	P	19 13 53.5	-0.4
AMTX			IAmb	IAmb	19 14 02.4	
	comp=Z,32nm,0.9s					
AMTX	Amarillo	23.20 104	P	P	19 13 55.3	+1.4
	baz=302					
O16K	Kokwok River B	23.20 322	P	P	19 13 54.9	+1.3
	baz=119,SNR=8.0					
CAST	Castle Rocks	23.20 334	P	P	19 13 54.8	+1.2
	baz=135,SNR=9.4					
NEA2	Nenana	23.21 338	P	P	19 13 53.6	0.0
NEA2			IAmb	IAmb	19 14 02.3	
	comp=Z,53nm,1.4s					
NEA2	Nenana	23.21 338	P	P	19 13 53.9	+0.3
	baz=142,SNR=9.9					
POKR	Poker Plat Res	23.22 341	P	P	19 13 53.8	+0.1
	baz=146					
L19K	White Mountain	23.32 329	P	P	19 13 56.8	+2.0
	baz=129,SNR=19					
BPAW	Bear Paw Mtn.	23.36 336	P	P	19 13 56.3	+1.1
	baz=138					
ULM	Lac du Bonnet	23.38 63	P	P	19 13 54.9	-0.6
	comp=Z,17nm,0.9s,baz=270,slow=8.3,SNR=9.5					
ULM			LR	LR	19 22 48.5	
	comp=Z,1μm,20.7s,baz=276,slow=36					
	comp=Z,17nm,0.9s					
ULM	Lac du Bonnet	23.38 63	P	P	19 13 54.8	-0.6
ULM			IAmb	IAmb	19 13 58.1	
	comp=Z,37nm,1.1s					
ULM	Lac du Bonnet	23.38 63	P	P	19 13 54.8	-0.6
ULM			pmax	pmax		
	comp=Z,37nm,1.1s					
F31M	Tsiigehtchic	23.38 356	P	P	19 13 56.2	+0.9
	baz=172					
AGMN	Agassiz Nation	23.40 68	P	P	19 13 55.6	-0.1
	baz=273					
ECSD	EROS Data Cent	23.48 80	P	P	19 13 56.4	-0.2
ECSD			IAmb	IAmb	19 13 59.3	
	comp=Z,44nm,1.1s					
ECSD	EROS Data Cent	23.48 80	P	P	19 13 57.4	+0.8
	baz=283,SNR=10					
G27K	Doyon Strip	23.58 348	P	P	19 13 58.6	+1.2
	baz=158					
CHUM	Lake Minchumin	23.61 334	P	P	19 13 57.9	+0.4
	baz=136,SNR=6.4					
I23K	Minto, Yukon-K	23.73 339	P	P	19 13 58.7	0.0
I23K	Minto, Yukon-K	23.73 339	P	P	19 13 58.8	+0.1
	baz=142					
K20K	Telida	23.81 332	P	P	19 13 59.8	+0.2
	baz=132,SNR=9.1					
H25K	Birch Creek	23.84 344	P	P	19 14 00.5	+0.8
	baz=150					
H24K	Noodor Dome	23.92 341	P	P	19 14 00.4	-0.2

H24K IAmb IAmb 19 14 14.0
comp=Z,76nm,1.7s
H24K Noodor Dome 23.92 341 P **P 19 14 01.4 +0.7**
baz=146,SNR=6.6
N16K Nishlik Lake 23.93 323 P **P 19 14 00.5 -0.3**
baz=120
FYU Fort Yukon 23.98 344 P **P 19 14 02.1 +1.0**
MLY Manley 24.00 338 P **P 19 14 01.0 -0.4**
MLY Manley 24.00 338 P **P 19 14 01.7 +0.3**
baz=140,SNR=12
G26K Porcupine Rive 24.06 346 P **P 19 14 02.1 +0.2**
baz=154
INK Inuvik 24.23 356 P **P 19 14 02.3 -1.2**
comp=Z,5.8nm,1.0s,baz=137,slow=12,SNR=3.1
INK LR LR 19 23 14.5
comp=Z,760nm,18.9s,baz=166,slow=36
comp=Z,5.8nm,1.0s
INK Inuvik 24.23 356 P **P 19 14 03.2 -0.2**
INK IAmb IAmb 19 14 32.2
comp=Z,12nm,1.1s
INK Inuvik 24.23 356 P **P 19 14 03.2 -0.2**
INK pmax pmax
comp=Z,12nm,1.1s
INK Inuvik 24.23 356 P **P 19 14 03.4 0.0**
baz=173
FALS False Pass 24.29 308 P **P 19 14 04.7 +0.7**
baz=102
H23K Yukon River 24.31 340 P **P 19 14 04.1 -0.1**
H23K IAmb IAmb 19 14 12.2
comp=Z,72nm,1.8s
H23K Yukon River 24.31 340 P **P 19 14 04.4 +0.1**
baz=143
G25K Bearman Lake 24.33 344 P **P 19 14 05.2 +0.9**
baz=150,SNR=7.8
J20K Nowinta River 24.39 334 P **P 19 14 04.9 0.0**
J20K Nowinta River 24.39 334 P **P 19 14 06.5 +1.6**
baz=133,SNR=6.0
I21K Tanana 24.46 337 P **P 19 14 04.5 -1.0**
I21K IAmb IAmb 19 14 15.4
comp=Z,61nm,1.6s
I21K Tanana 24.46 337 P **P 19 14 06.4 +0.9**
baz=138
G24K Hadweenzic Riv 24.56 343 P **P 19 14 07.6 +1.2**
baz=148,SNR=8.9
BMAR Burnt Mountain 24.63 346 P **P 19 14 08.0 +0.9**
F26K Sheenjek River 24.79 347 P **P 19 14 09.6 +1.0**
baz=154
H22K Ishtalitna Cre 24.84 338 P **P 19 14 10.0 +1.0**
baz=140,SNR=16
E27K Coleen River 24.86 349 P **P 19 14 09.3 +0.1**
baz=159
KSU1 Kansas State U 24.89 90 P **P 19 14 09.1 -0.6**
KSU1 IAmb IAmb 19 14 24.8
comp=Z,28nm,0.9s
KSU1 Kansas State U 24.89 90 P **P 19 14 10.5 +0.8**
baz=293
N35A Tabor 24.96 86 P **P 19 14 10.7 +0.3**
F25K Christian Rive 24.96 345 P **P 19 14 11.0 +0.8**
baz=152
H21K Melozitna Rive 25.05 337 P **P 19 14 11.0 +0.1**
H21K IAmb IAmb 19 14 17.5
comp=Z,30nm,1.4s
H21K Melozitna Rive 25.05 337 P **P 19 14 11.5 +0.7**
baz=138,SNR=8.6
G23K Bananza Creek 25.14 341 P **P 19 14 12.6 +0.9**
baz=143,SNR=9.9
TXAR Lajitas Array 25.25 117 P **P 19 14 14.2 +1.1**
comp=Z,2.1nm,0.8s,baz=298,slow=3.9,SNR=8.4
comp=Z,2.1nm,0.8s
TXAR Lajitas Array 25.25 117 P **P 19 14 13.6 +0.5**
TXAR Lajitas Array 25.25 117 P **P 19 14 13.6 +0.5**
WMOK Wichita Mounta 25.31 101 P **P 19 14 13.9 +0.4**
WMOK Wichita Mounta 25.31 101 P **P 19 14 13.9 +0.4**
WMOK pmax pmax
comp=Z,50nm,1.2s
WMOK Wichita Mounta 25.31 101 P **P 19 14 14.6 +1.0**
baz=301,SNR=26
IMAR Indian Mountai 25.55 337 P **P 19 14 14.8 -0.6**
COLD Coldfoot 25.60 341 P **P 19 14 16.9 +1.1**
baz=144
GCSA Galena City Sc 25.66 333 P **P 19 14 17.0 +0.7**
baz=130
G22K Bettles 25.67 340 P **P 19 14 17.1 +0.7**
baz=141
ABTX Abilene, Hawle 25.86 106 P **P 19 14 18.9 +0.3**
ABTX IAmb IAmb 19 14 25.8
comp=Z,43nm,1.4s
ABTX Abilene, Hawle 25.86 106 P **P 19 14 19.7 +1.1**
baz=306
G21K Allakaket 25.87 338 P **P 19 14 18.5 +0.1**
baz=138
UNV Unalaska Valle 25.91 305 P **P 19 14 18.9 +0.1**
UNV Unalaska Valle 25.91 305 P **P 19 14 19.6 +0.9**
baz=96
E24K Your Creek 25.93 344 P **P 19 14 19.7 +0.8**
baz=147
FCC Fort Churchill 25.95 43 P **P 19 14 20.5 +1.4**
FCC Fort Churchill 25.95 43 P **P 19 14 20.5 +1.4**
FCC pmax pmax
comp=Z,152nm,1.9s
E23K Chandalar 26.15 343 P **P 19 14 21.7 +0.7**
baz=146
F22K John River 26.29 340 P **P 19 14 23.4 +1.3**
baz=141
EYMN Ely 26.34 68 P **P 19 14 22.9 +0.1**
EYMN IAmb IAmb 19 14 25.4
comp=Z,18nm,0.8s
EYMN Ely 26.34 68 P **P 19 14 23.7 +0.9**
baz=276,SNR=6.9
SCIA State Center 26.37 82 P **P 19 14 24.5 +1.4**
baz=288
F21K Alatna River 26.40 339 P **P 19 14 24.6 +1.5**
baz=139
TOLK Toolik Lake Re 26.63 344 P **P 19 14 25.8 +0.6**
TOLK IAmb IAmb 19 14 27.5
comp=Z,26nm,1.1s
TOLK Toolik Lake Re 26.63 344 P **P 19 14 27.3 +2.1**
baz=146,SNR=5.6
E22K Anaktuvuk Pass 26.70 341 P **P 19 14 27.1 +1.2**
baz=142
JCT Junction City 27.04 111 P **P 19 14 31.6 +2.4**
baz=309
D23K Nanushuk River 27.12 343 P **P 19 14 31.3 +1.7**
baz=145
JFWS Jewell Farm 28.19 79 P **P 19 14 39.2 -0.2**
JFWS Jewell Farm 28.19 79 P **P 19 14 39.2 -0.2**
JFWS pmax pmax
comp=Z,44nm,1.3s
JFWS Jewell Farm 28.19 79 P **P 19 14 40.4 +1.1**
baz=286
SPIA Saint Paul Isl 28.48 312 P **P 19 14 42.4 +0.6**
baz=99
ANM Nome 28.59 328 P **P 19 14 44.0 +1.2**
baz=118
L42A Oliver, Polo 28.87 80 P **P 19 14 45.2 -0.2**
MIAR Mount Ida 29.10 97 P **P 19 14 48.1 +0.6**
baz=300
CCM Cathedral Cave 29.16 89 P **P 19 14 48.1 0.0**
CCM IAmb IAmb 19 14 50.3
comp=Z,46nm,1.6s
CCM Cathedral Cave 29.16 89 P **P 19 14 48.1 0.0**
CCM pmax pmax
comp=Z,46nm,1.7s
CCM Cathedral Cave 29.16 89 P **P 19 14 48.6 +0.5**
baz=295
HDIL Hopedale 29.61 83 P **P 19 14 52.5 +0.4**
HDIL Hopedale 29.61 83 P **P 19 14 52.9 +0.9**
baz=291
WHAR Wooly Hollow 29.65 95 P **P 19 14 52.9 +0.4**
WHAR IAmb IAmb 19 14 55.6
comp=Z,22nm,1.1s
WLAR White Oak Lake 29.87 98 P **P 19 14 54.9 +0.5**
L44A Lake County Fo 30.05 79 P **P 19 14 55.6 -0.3**
baz=288
HKT Hockley 30.07 107 P **P 19 14 56.3 +0.2**
HKT IAmb IAmb 19 14 59.5
comp=Z,50nm,1.8s
HKT Hockley 30.07 107 P **P 19 14 56.3 +0.2**
HKT pmax pmax
comp=Z,50nm,1.8s
LCAR Lake Charles 30.10 92 P **P 19 14 56.6 +0.2**
LCAR IAmb IAmb 19 14 58.9
comp=Z,30nm,1.3s
SFIN Lafayette 31.24 82 P **P 19 15 06.8 +0.4**
baz=291
OXF Oxford 32.10 94 P **P 19 15 14.6 +0.6**
OXF Oxford 32.10 94 P **P 19 15 14.6 +0.6**

OXF pmax pmax
comp=Z,97nm,1.0s
OXF Oxford 32.10 94 P **P 19 15 15.3 +1.3**
baz=300,SNR=9.0
WVT Waverly 32.46 90 P **P 19 15 17.4 +0.2**
baz=298
VBMS Vicksburg 32.49 98 P **P 19 15 17.7 +0.2**
baz=303
L48A N Adams 32.58 78 P **P 19 15 18.1 -0.1**
WCI Wyandotte Cave 32.65 85 P **P 19 15 18.7 -0.1**
baz=295
O48B Farmland 32.66 81 P **P 19 15 19.0 +0.1**
baz=292
PLAL Pickwick Lake 32.82 92 P **P 19 15 20.4 0.0**
PLAL IAmb IAmb 19 15 22.8
comp=Z,24nm,1.1s
N49A Columbus Grove 33.11 80 P **P 19 15 22.7 -0.1**
P49A Miami Univ. Ec 33.25 82 P **P 19 15 24.2 +0.1**
baz=293
RES Resolute Bay 34.14 16 P **P 19 15 31.0 -0.4**
comp=Z,5.3nm,0.8s,baz=231,slow=10,SNR=8.0
RES LR LR 19 29 13.4
comp=Z,393nm,21.1s,baz=232,slow=36
comp=Z,5.3nm,0.8s
RES Resolute Bay 34.14 16 P **P 19 15 31.5 +0.1**
RES IAmb IAmb 19 15 52.0
comp=Z,12nm,1.1s
RES Resolute Bay 34.14 16 P **P 19 15 31.5 +0.1**
RES pmax pmax
comp=Z,12nm,1.2s
ACSO Alum Creek Sta 34.22 80 P **P 19 15 32.2 -0.2**
baz=292
LRAL Lakeview Retre 34.58 94 P **P 19 15 35.5 -0.2**
baz=302
P52A Corning 35.05 81 P **P 19 15 39.7 0.0**
baz=293
TZTN Tazewell 35.35 86 P **P 19 15 41.9 -0.4**
baz=297
SADO Sadowa 35.36 71 LR LR 19 30 22.4
comp=Z,1μm,20.3s,baz=347,slow=37
M53A WI Miller and 35.40 77 P **P 19 15 42.3 -0.3**
baz=291
O53A New Philadelph 35.46 79 P **P 19 15 42.7 -0.5**
baz=293
TKL Tuckaleechee C 35.59 88 LR LR 19 30 50.3
comp=Z,3μm,18.3s,baz=293,slow=37
GOGA Godfrey 36.92 91 P **P 19 15 55.2 -0.5**
baz=301
BLA Blacksburg 37.29 84 P **P 19 15 58.8 -0.1**
baz=297
SHEM Shemya Is, Ala 37.55 304 LR LR 19 27 58.4
comp=Z,280nm,18.9s,baz=104,slow=31
KMSC Kings Mountain 37.59 87 P **P 19 16 01.5 +0.1**
baz=299
SSPA Standing Stone 37.65 77 P **P 19 16 01.1 -0.8**
baz=293
TRQ Mont Tremblant 38.00 67 P **P 19 16 04.9 0.0**
TRQ IAmb IAmb 19 16 43.3
comp=Z,31nm,1.5s
FRB Frobisher Bay 38.87 38 LR LR 19 31 24.8
comp=Z,240nm,18.2s,baz=266,slow=35
EUNU Eureka 39.10 11 P **P 19 16 15.0 +1.3**
EUNU IAmb IAmb 19 17 28.2
comp=Z,38nm,1.9s
LBNH Lisbon 40.41 69 P **P 19 16 25.6 +0.6**
baz=291
BILL Bilibino 40.44 328⇑ *e*P **P 19 16 25.3 +0.4**
BILL *e* 19 18 03.9
BILL pmax pmax
comp=Z,12nm,0.4s
BILL MLR MLR
comp=Z,568nm,19.0s
SCHQ Schefferville 40.63 52 LR LR 19 33 01.8
comp=Z,588nm,20.9s,baz=303,slow=36
PKME Peaks-Kenny Pk 41.80 67 P **P 19 16 36.5 +0.1**
baz=291
SFJD Kangerlussuaq 46.02 32 LR LR 19 36 24.4
comp=Z,252nm,18.7s,baz=281,slow=36
PET Petropavlovsk 46.51 308⇓ *e*P **P 19 17 16.6 +2.6**
PET pmax pmax
comp=Z,31nm,1.2s
SEY Seymchan 46.76 322 P **P 19 17 14.2 -1.6**
comp=Z,7.5nm,0.9s,baz=18,slow=21,SNR=8.8
comp=Z,7.5nm,0.9s
SEY Seymchan 46.76 322 *ce*P **P 19 17 16.0 +0.2**
SEY pmax pmax
comp=Z,18nm,1.7s
PETK Petropavlovsk- 47.02 308 P **P 19 17 16.7 -1.3**
comp=Z,4.8nm,0.8s,baz=107,slow=7.9,SNR=6.8
PETK LR LR 19 33 58.4
comp=Z,242nm,21.4s,baz=76,slow=32
comp=Z,4.8nm,0.8s
PETK Petropavlovsk- 47.02 308 P **P 19 17 16.9 -1.1**
PETK Petropavlovsk- 47.02 308 P **P 19 17 16.9 -1.1**
MA2 Magadan 48.49 318 LR LR 19 36 43.5
comp=Z,223nm,19.3s,baz=75,slow=35
TAOE Nuku Hiva Isla 53.73 193 *e*LR LR 19 33 41.7
comp=Z,697nm,25.2s
TAOE Nuku Hiva Isla 53.73 193 *e*T T 20 15 46.7
comp=Z,60nm,0.2s
SPITS Spitsbergen Ar 56.10 8 LR LR 19 43 08.8
comp=Z,173nm,18.2s,baz=298,slow=37
YAK Yakutsk 56.73 326 LR LR 19 42 02.5
comp=Z,236nm,18.9s,baz=84,slow=35
YAK Yakutsk 56.73 326 P **P 19 18 29.4 -0.8**
YAK IAmb IAmb 19 18 30.6
comp=Z,11nm,0.8s
YAK Yakutsk 56.73 326 *ce*P **P 19 18 29.1 -1.1**
YAK pmax pmax
comp=Z,11nm,0.8s
JMIC Jan Mayen 57.59 19 LR LR 19 42 43.1
comp=Z,196nm,19.4s,baz=126,slow=35
H11N3 WAKE ISLAND Hy 57.80 267 T T 20 21 00.5
baz=49,slow=75,SNR=1292
H11N2 WAKE ISLAND Hy 57.80 267 T T 20 21 00.5
baz=49,slow=75,SNR=1230
H11N1 WAKE ISLAND Hy 57.82 267 T T 20 21 01.7
baz=49,slow=75,SNR=1119
H11S1 WAKE ISLAND Hy 58.74 266 T T 20 22 11.8
baz=48,slow=75,SNR=392
H11S2 WAKE ISLAND Hy 58.74 266 T T 20 22 06.1
baz=48,slow=75,SNR=363
H11S3 WAKE ISLAND Hy 58.75 266 T T 20 22 09.9
baz=48,slow=75,SNR=360
SDV Santo Domingo 61.61 106 P **P 19 19 06.4 +1.4**
SDV IAmb IAmb 19 19 12.5
comp=Z,8.6nm,1.1s
OTAV Otavalo 62.86 119 P **P 19 19 13.9 +0.3**
OTAV IAmb IAmb 19 19 21.7
comp=Z,6.5nm,1.0s
OTAV Otavalo 62.86 119 P **P 19 19 13.9 +0.3**
OTAV pmax pmax
comp=Z,7.0nm,1.0s
TULM Tulcn-Chalpat 62.91 118 P **P 19 19 14.4 +0.5**
KLR Kul'dur 63.12 313 LR LR 19 44 15.9
comp=Z,123nm,21.8s,baz=48,slow=34
KLR Kul'dur 63.12 313⇓ *e*P **P 19 19 13.7 -0.7**
KLR pmax pmax
comp=Z,8.0nm,1.7s
BAUV El Baul 63.37 104 P **P 19 19 16.6 +0.1**
NRIK Noril'sk 63.52 346 P **P 19 19 15.7 -1.0**
comp=Z,4.5nm,0.8s,baz=308,slow=6.3,SNR=4.4
NRIK LR LR 19 46 42.5
comp=Z,171nm,21.8s,baz=46,slow=36
comp=Z,4.5nm,0.8s
NRIK Noril'sk 63.52 346⇓ *i*P **P 19 19 16.3 -0.4**
NRIK pmax pmax
comp=Z,15nm,1.3s
TIAR Tiarei 64.15 201 *e*T T 20 28 50.2
comp=Z,3.7nm,0.3s
PPT Papeete 64.22 201 LR LR 19 40 21.3
comp=Z,101nm,18.0s,baz=3.5,slow=30
PPT2 Papeete2 64.24 201 *e*LR LR 19 38 33.7
comp=Z,284nm,26.8s
PPT2 Papeete2 64.24 201 *e*T T 20 28 58.8
comp=Z,4.6nm,0.4s
PAE Paea 64.31 201 *e*T T 20 29 01.9
comp=Z,0.8nm,0.2s
ARCES ARCESS Array B 65.05 9 LR LR 19 49 15.3
comp=Z,176nm,18.8s,baz=348,slow=37
BOD Bodaibo 65.50 328 *e*P **P 19 19 28.2 -1.6**
BOD pmax pmax
comp=Z,11nm,2.0s
MCRA Macar, Loja 65.55 124 P **P 19 19 30.6 -0.1**
MCRA IAmb IAmb 19 19 37.0
comp=Z,8.9nm,1.1s
USRK Ussuriysk Ar. 66.10 309 LR LR 19 46 59.8

comp=Z,103nm,20.0s,baz=27,slow=35
MAJO Matsushiro 67.20 299⇑ *i*P **P 19 19 40.3 -0.8**
MAJO pmax pmax
comp=Z,28nm,1.7s
RKT Rikitea 67.22 186 *e*T T 20 32 43.6
comp=Z,7.7nm,0.3s
JHJ Hachijo jima 2 68.35 295 LR LR 19 42 27.1
comp=Z,45nm,21.8s,baz=88,slow=30
TBI Tubuai 69.73 200 *e*LR LR 19 41 06.0
comp=Z,250nm,27.0s
TBI Tubuai 69.73 200 *e*T T 20 35 49.0
comp=Z,11nm,0.3s
NOA NORSAR Array B 70.31 19 P **P 19 19 59.7 -0.4**
comp=Z,2.5nm,1.1s,baz=332,slow=5.7,SNR=3.5
NOA LR LR 19 50 48.5
comp=Z,80nm,18.3s,baz=355,slow=36
comp=Z,2.5nm,1.1s
JCJ Chichijima 70.60 289 LR LR 19 44 40.8
comp=Z,232nm,21.9s,baz=86,slow=31
RAR Rarotonga 70.83 210 LR LR 19 42 44.1
comp=Z,138nm,20.4s,baz=330,slow=29
EKA Eskdalemuir Ar 70.86 29 P **P 19 20 02.9 -0.5**
comp=Z,2.4nm,1.1s,baz=325,slow=6.1,SNR=4.0
EKA LR LR 19 50 26.3
comp=Z,160nm,19.0s,baz=324,slow=35
comp=Z,2.4nm,1.1s
HFS Hagfors 71.68 18 LR LR 19 49 39.5
comp=Z,140nm,21.6s,baz=332,slow=34
FINES FINESS Array B 72.81 12 P **P 19 20 14.4 -0.7**
comp=Z,3.3nm,0.7s,baz=28,slow=4.5,SNR=8.9
FINES LR LR 19 53 10.8
comp=Z,151nm,18.0s,baz=348,slow=37
comp=Z,3.3nm,0.7s
FINES FINESS Array B 72.81 12 P **P 19 20 14.9 -0.1**
FINES FINESS Array B 72.81 12 *i* P **P 19 20 14.6 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.7s
KSRS Korea Array 72.84 306 LR LR 19 47 45.6
comp=Z,59nm,21.3s,baz=35,slow=32
PRGR Permogore 74.41 2 *e*P **P 19 20 24.3 -0.1**
PRGR pmax pmax
comp=Z,14nm,0.9s
KLMR Klimovskoe 74.88 6 *e*P **P 19 20 24.3 -2.9**
KLMR pmax pmax
comp=Z,16nm,1.3s
KLMR Klimovskoe 74.88 6 *e*P **P 19 20 24.4 -2.8**
KLMR AMP 19 20 32.8
comp=Z,16nm,1.3s
ULN Ulaanbaatar 75.75 325 P **P 19 20 32.2 -0.4**
ULN IAmb IAmb 19 20 47.5
comp=Z,13nm,1.6s
ULN Ulaanbaatar 75.75 325⇓ *e*P **P 19 20 32.8 +0.1**
ULN pmax pmax
comp=Z,8.0nm,2.1s
SONM Songino Array 76.05 325 P **P 19 20 34.1 -0.2**
comp=Z,4.0nm,0.8s,baz=46,slow=3.4,SNR=14
SONM LR LR 19 53 47.9
comp=Z,249nm,19.9s,baz=42,slow=36
comp=Z,4.0nm,0.8s
SONM Songino Array 76.05 325 P **P 19 20 33.9 -0.4**
SONM IAmb IAmb 19 20 59.9
comp=Z,6.0nm,1.1s
SONM Songino Array 76.05 325 P **P 19 20 33.9 -0.4**
SONM pmax pmax
comp=Z,6.0nm,1.1s
MDP Montagnes des 76.94 96 LR LR 19 58 42.9
comp=Z,116nm,18.2s,baz=264,slow=39
GUMO Guam 77.66 277 LR LR 19 47 53.8
comp=Z,177nm,20.6s,baz=64,slow=30
ZAA0 Zalesovo Array 77.93 340 P **P 19 20 44.3 -0.3**
ZAA0 IAmb IAmb 19 20 52.0
comp=Z,8.4nm,1.1s
ZALV Zalesovo Beam 77.93 340 P **P 19 20 44.0 -0.6**
comp=Z,4.1nm,0.8s,baz=17,slow=5.7,SNR=18
ZALV LR LR 19 56 06.8
comp=Z,144nm,21.2s,baz=29,slow=36
comp=Z,4.1nm,0.8s
ZALV Zalesovo Beam 77.93 340 P **P 19 20 44.2 -0.4**
ZALV Zalesovo Beam 77.93 340 *i* P **P 19 20 44.7 +0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.8s
MSVF Nonsavu 78.13 231 LR LR 19 47 13.5
comp=Z,208nm,20.5s,baz=72,slow=30
HHC Hu-ho-hao-te 79.17 318 *e*P **P 19 20 50.6 -1.3**
CLL Collm 79.41 23 *e*P **P 19 20 56.0 +3.2**
CLL pmax pmax
comp=Z,12nm,1.3s
CLL Collm 79.41 23 *e*P **P 19 20 56.0 +3.2**
comp=Z,12nm,1.3s
CLL L L 19 57 00.0
comp=Z,200nm,20.7s
ARU Arti 79.49 356 P **P 19 20 52.1 -1.0**
comp=Z,3.8nm,0.9s,baz=337,slow=5.8,SNR=6.0
comp=Z,3.8nm,0.9s
ARU Arti 79.49 356 P **P 19 20 52.4 -0.8**
ARU IAmb IAmb 19 21 00.4
comp=Z,8.3nm,1.1s
ARU Arti 79.49 356 *d i*P **P 19 20 53.1 0.0**
ARU 19 23 54.4
ARU S **S 19 30 57.0 +3.2**
ARU SS **SS 19 35 59.7 -0.2**
ARU pmax pmax
comp=Z,6.0nm,1.1s
MNK Minsk 79.75 13 *i* P **P 19 20 53.5 -1.0**
comp=E,1.0nm,0.9s
MNK *i* P **P 19 20 53.5 -1.0**
comp=N,28nm,1.0s
MNK *i* P **P 19 20 53.5 -1.0**
comp=Z,8.0nm,0.9s,baz=344
MNK *i* PP **PP 19 23 53.9 -0.9**
MNK *i* PPP PPP 19 25 43.9
MNK *i* S **S 19 30 56.3 -0.3**
MNK *i* SS **SS 19 36 05.0 +1.2**
MNK *i* SSS SSS 19 39 32.4
MNK *i* LQ LQ 19 50 57.2
MNK *i* LR LR 19 53 56.4
MNK *i* LRM MLR 19 58 01.9
comp=N,905nm,14.6s
MNK *i* LRM MLR 19 58 06.0
comp=Z,221nm,28.6s
MNK *i* LRM MLR 19 58 14.0
comp=E,17nm,15.3s
JOW Kunigami 79.95 298 LR LR 19 52 25.2
comp=E,47nm,18.6s,baz=17,slow=33
BRG Berggiesshubel 80.06 23 *e*P **P 19 20 56.7 +0.4**
BRG Amp 19 20 58.5
comp=Z,5.1nm,1.1s
BRG Amp 19 57 35.0
comp=Z,0.2nm,15.7s
BRG Amp 19 57 39.0
comp=N,0.2nm,15.9s
BRG Amp 19 57 55.0
comp=E,0.1nm,17.5s
BRG Berggiesshubel 80.06 23 *e*P **P 19 20 56.7 +0.4**
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG MLR MLR
comp=Z,233nm,15.7s
BRG MLR MLR
comp=N,178nm,15.9s
BRG MLR MLR
comp=E,113nm,17.5s
OBN Obninsk 80.31 8⇓ *e*P **P 19 21 00.1 +2.5**
OBN *e* 19 24 03.1
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,173nm,20.0s
OSTC Ostas 80.96 21 *e*P **P 19 21 01.3 +0.1**
DGZ Jazzator, Alta 81.09 337 *c i*P **P 19 21 02.4 +0.3**
DGZ pmax pmax
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 81.17 21 *e*P **P 19 21 02.2 -0.2**
DPC Dobruska-Polom 81.17 21 *e*P **P 19 21 02.2 -0.2**
KHC Kasperske Hory 81.53 24 *e*P **P 19 21 03.7 -0.6**
KHC Kasperske Hory 81.53 24 *e*P **P 19 21 03.7 -0.6**
KRLC Kraliky 81.55 21 *e*P **P 19 21 02.6 -1.8**
KRLC Kraliky 81.55 21 *e*P **P 19 21 02.6 -1.8**
BRVK Borovoye 81.63 348 P **P 19 21 04.7 0.0**
BRVK IAmb IAmb 19 21 05.9
comp=Z,5.6nm,0.8s
BRVK Borovoye 81.63 348 *ce*P **P 19 21 04.0 -0.7**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 81.65 348 P **P 19 21 04.3 -0.5**
comp=Z,2.3nm,0.8s,baz=20,slow=4.7,SNR=18
comp=Z,2.3nm,0.8s

GERES GERESS Array B 81.82 24 P **P 19 21 05.2 -0.8**
comp=Z,0.5nm,0.7s,baz=354,slow=4.0,SNR=6.4
comp=Z,0.5nm,0.7s
NJ2 Nanjing 81.92 307 *e*P **P 19 21 06.7 +0.1**
MORC Moravsky Berou 82.02 21 *e*P **P 19 21 05.7 -1.2**
LPAZ La Paz 82.03 122 P **P 19 21 07.6 -0.4**
comp=Z,7.4nm,0.8s,baz=345,slow=5.4,SNR=27
comp=Z,7.4nm,0.8s
LPAZ La Paz 82.03 122 P **P 19 21 07.2 -0.8**
LPAZ IAmb IAmb 19 21 09.4
comp=Z,8.9nm,0.9s
LPAZ La Paz 82.03 122 P **P 19 21 07.2 -0.8**
LPAZ pmax pmax
comp=Z,9.0nm,1.0s
RETA Reutte 82.14 26 *e*P **P 19 21 10.6 +3.0**
comp=Z,5.9nm,1.6s
VRAC Vranov 82.20 22 LR LR 19 59 45.3
comp=Z,98nm,18.1s,baz=334,slow=37
VRAC Vranov 82.20 22 *e*P **P 19 21 06.5 -1.3**
KURK Kurchatov 82.36 342 P **P 19 21 08.0 -0.6**
KURK IAmb IAmb 19 21 16.0
comp=Z,7.9nm,1.1s
KURK Kurchatov 82.36 342⇑ *e*P **P 19 21 08.1 -0.4**
KURK pmax pmax
comp=Z,12nm,2.5s
KRUC Moravsky 82.37 22 *e*P **P 19 21 09.0 +0.3**
KURBB Kurchatov Arra 82.46 343 LR LR 20 01 38.6
comp=Z,124nm,18.1s,baz=17,slow=38
FETA Feichten 82.55 26 P **P 19 21 12.4 +2.6**
comp=Z,4.5nm,1.5s
PB16 IPOC Station P 82.78 124 P **P 19 21 11.9 +0.1**
PB16 IAmb IAmb 19 21 30.1
comp=Z,24nm,1.8s
MOA Molln 82.88 24 *e*P P 19 21 16.3 +4.9
comp=Z,3.5nm,1.1s
HNR Honiara 83.03 250 LR LR 19 50 15.0
comp=Z,5μm,21.8s,baz=38,slow=30
ESDC Sonseca Array 83.07 39 P **P 19 21 11.3 -1.2**
comp=Z,0.8nm,1.0s,baz=72,slow=9.5,SNR=3.2
ESDC LR LR 19 56 23.2
comp=Z,160nm,18.2s,baz=324,slow=34
comp=Z,0.8nm,1.0s
ABTA Abfaltersbach 83.35 25 P **P 19 21 14.5 +0.6**
comp=Z,1.9nm,0.9s
VYHS Vyhne 83.53 21 *e*P **P 19 21 15.2 +0.5**
RONA Rosalia, Austr 83.59 23 *e*P **P 19 21 19.3 +4.2**
comp=Z,3.6nm,1.2s
AKASG Malin Array Be 83.63 14 P **P 19 21 14.0 -1.2**
comp=Z,1.1nm,0.6s,baz=345,slow=4.3,SNR=6.3
AKASG LR LR 19 58 05.0
comp=Z,217nm,21.4s,baz=8.5,slow=35
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 83.63 14 *i* P **P 19 21 15.5 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKBB Malin Array Si 83.63 14 P **P 19 21 14.4 -0.7**
AKBB Malin Array Si 83.63 14 P **P 19 21 14.4 -0.7**
AKBB pmax pmax
comp=Z,23nm,1.5s
BELG Belogornoye 83.72 2 LR LR 20 00 12.0
comp=Z,74nm,21.9s,baz=320,slow=37
VORR Voronezh 83.97 7 *e*P P 19 21 11.6 -5.2
VORR pmax pmax
comp=Z,30nm,0.5s
SOKA Soboth 84.16 24 *e*P **P 19 21 17.5 -0.6**
comp=Z,5.2nm,1.4s
KRVT Keravat (AS076 84.86 259 LR LR 19 53 56.5
comp=Z,204nm,19.2s,baz=83,slow=32
MKAR Makanchi Array 85.15 339 P **P 19 21 21.9 -1.1**
comp=Z,0.7nm,0.7s,baz=184,slow=23,SNR=5.1
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 85.15 339 P **P 19 21 22.6 -0.4**
MKAR Makanchi Array 85.15 339 *i* P **P 19 21 22.7 -0.3**
AKTO Aktyubinsk 85.50 355 P **P 19 21 23.7 -0.9**
comp=Z,0.8nm,0.4s,baz=24,slow=3.3,SNR=3.8
AKTO LR LR 20 00 32.2
comp=Z,110nm,21.6s,baz=4.7,slow=36
comp=Z,0.8nm,0.4s
RAO Raoul Island 85.54 221 LR LR 19 55 40.8
comp=Z,57nm,18.0s,baz=114,slow=33
BURAR Bucovina Array 85.83 17 P **P 19 21 26.9 +0.4**
SIV San Ignacio 86.24 116 LR LR 20 03 25.2
comp=Z,96nm,18.3s,baz=333,slow=38
WMQ Urumqi 86.31 334 *e*P **P 19 21 31.3 +2.4**
ABKAR Akbulak array 86.54 354 P **P 19 21 29.6 -0.1**
MLR Muntele Rosu 88.01 17 LR LR 20 03 29.8
comp=Z,204nm,18.4s,baz=334,slow=37
DZM Mont Dzumac 88.25 237 *e*LR LR 19 49 41.4
comp=Z,270nm,22.2s
MDT Midelt 88.29 44 LR LR 19 58 29.3
comp=Z,56nm,20.4s,baz=338,slow=34
GOMU GeErMu 90.48 326 P **P 19 21 51.4 +2.2**
AAK Ala-Archa 90.92 343 LR LR 20 05 42.1
comp=Z,183nm,18.4s,baz=32,slow=38
KK31 Karatay Array 91.25 346 P **P 19 21 51.7 -0.5**
KK31 IAmb IAmb 19 21 59.6
comp=Z,3.1nm,1.1s
KK31 Karatay Array 91.25 346 P **P 19 21 51.7 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,1.2s
PMG Port Moresby 91.86 259 LR LR 19 55 04.0
comp=Z,191nm,21.3s,baz=96,slow=30
KIV Kislovodsk 91.91 6 *e*P **P 19 21 55.6 +0.2**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KVAR Kislovodsk Arr 91.91 6 LR LR 20 06 28.3
comp=Z,81nm,19.8s,baz=279,slow=38
KBZ Khabaz 92.15 6 LR LR 20 06 40.3
comp=Z,112nm,19.4s,baz=5.0,slow=38
BDFB Brasilia 94.70 107 LR LR 20 07 12.5
comp=Z,172nm,21.2s,baz=322,slow=37
BRTR Keskin Array B 95.03 13 LR LR 20 06 22.5
comp=Z,91nm,20.6s,baz=14,slow=36
URZ Urewera 95.30 219 LR LR 19 57 42.4
comp=Z,78nm,19.9s,baz=110,slow=31
BBTS Babate 95.45 64 LR LR 20 04 44.7
comp=Z,310nm,18.0s,baz=332,slow=35
PZH PanZhiHua 95.51 316 P **P 19 22 12.0 -0.2**
DAV Davao City (W) 95.77 286 LR LR 19 59 12.7
comp=Z,214nm,20.3s,baz=53,slow=32
GNI Garni 95.83 5 LR LR 20 07 53.8
comp=Z,81nm,21.5s,baz=1.0,slow=37
CPUP Villa Florida 96.18 121 LR LR 20 06 01.9
comp=Z,61nm,19.5s,baz=5.5,slow=36
RCBR Riachuelo 96.50 92 LR LR 20 01 49.5
comp=Z,198nm,21.8s,baz=108,slow=33
SIJI Sorong 97.33 276 LR LR 19 56 49.6
comp=Z,96nm,21.4s,baz=40,slow=30
IDI Anoyia 97.46 21 LR LR 20 09 31.6
comp=Z,83nm,19.2s,baz=302,slow=37
GEYT Alibeck 97.94 354 LR LR 20 10 47.0
comp=Z,86nm,20.7s,baz=26,slow=38
CTA Charters Tower 99.86 252 LR LR 20 04 31.1
comp=Z,247nm,18.2s,baz=65,slow=34
VNDA Vanda 128.46 195 PKP **PKPdf 19 27 51.3 -1.0**
comp=Z,0.7nm,0.9s,baz=35,slow=3.1,SNR=5.7
SNAA Sanae 142.63 155 PKPdf **PKPdf 19 28 18.9 +0.1**
TROLL Troll, Antarti 144.08 157 PKPdf **PKPab 19 28 19.2 +0.1**

*IDC **09** 19:35:51.6±0.8, 6°.73N×72°.98W, h161km±11km, mb3.1/3, mbtmp3.8/6, Error ellipse: s-maj=32.9km s-min=8.0km az=133.0*
*RSNC **09** 19:35:52.5±0.9, 6°.82N×73°.11W, h152km±4km, ML3.6, Mw3.8*
ISC 09 19:35:51.6±0.8, **6°.83N**±0°.03×**73°.10W**±0°.04, **h154**km±6km, **n43**, σ1§**44**/78, **mb3.3**/3, **4C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**199**	⇓ *i*P	**Pn**	**19 36 13.1**	**+0.2**
BARC				*e*S	**Sn**	**19 36 28.8**	**-0.3**
BARC				*i*		19 36 31.0	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**0.64**	**38**⇑	*i*P	**Pn**	**19 36 15.9**	**+1.1**
PAMC				*e*S	**Sn**	**19 36 32.8**	**+0.4**
PAMC				*i*		19 36 36.4	
	comp=Z,450nm,0.5s						
RUSC	**La Rusia**	**0.94**	**179**	⇓ *i*P	**Pn**	**19 36 16.9**	**+0.1**
RUSC				*e*S	**Sn**	**19 36 35.4**	**-0.7**
RUSC				*i*		19 36 37.2	
	comp=Z,300nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**107**⇑	*i*P	**Pn**	**19 36 21.5**	**+1.4**
TAMC				*i*		19 36 42.4	
	comp=Z,284nm,0.4s						
TAMC				*e*S	**Sn**	**19 36 43.0**	**+1.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**19 36 19.5**	**-0.8**
PTBC				*e*S	**Sn**	**19 36 41.6**	**-0.7**
PTBC				*i*		19 36 47.2	
	comp=Z,438nm,0.3s						
OCAC	**Ocana**	**1.41**	**351**⇑	*e*P	**Pn**	**19 36 21.2**	**+0.4**
OCAC				*e*S	**Sn**	**19 36 43.8**	**+0.6**
OCAC				*i*		19 36 46.5	
	comp=Z,810nm,0.2s						
SPBC	**San Pablo de B**	**1.52**	**220**	*e*P	**Pn**	**19 36 22.0**	**+0.1**
SPBC				*e*S	**Sn**	**19 36 44.9**	**-0.1**
SPBC				*i*		19 36 49.0	
	comp=Z,838nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*e*P	**Pn**	**19 36 25.6**	**+0.1**
ZARC				*e*S	**Sn**	**19 36 51.2**	**-0.3**
ZARC				*i*		19 36 56.3	
	comp=Z,517nm,0.4s						
NORC	**Norcasia**	**2.17**	**234**	*e*P	**Pn**	**19 36 29.0**	**0.0**
NORC				*e*S	**Sn**	**19 36 57.5**	**-0.4**
NORC				*i*		19 37 06.7	
	comp=Z,316nm,0.4s						
CHIC	**Chingaza**	**2.28**	**196**	*e*P	**Pn**	**19 36 30.9**	**+0.2**
CHIC				*e*S	**Sn**	**19 37 00.6**	**-0.2**
CHIC				*i*		19 37 04.7	
	comp=Z,213nm,0.4s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**19 36 32.9**	**+1.6**
	comp=Z,131nm,0.3s,baz=307,slow=18,SNR=110						
ROSC				S	**Sn**	**19 37 02.0**	**+0.3**
	comp=Z,642nm,0.4s,baz=91,slow=17,SNR=18						
ROSC	**El Rosal**	**2.32**	**212**	⇓ *i*P	**Pn**	**19 36 32.8**	**+1.6**
ROSC				*e*S	**Sn**	**19 37 03.5**	**+1.7**
ROSC				*i*		19 37 07.8	
	comp=Z,791nm,0.4s						
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**19 36 33.6**	**+0.3**
HELC				*e*S	**Sn**	**19 37 05.6**	**+0.2**
HELC				*i*		19 37 11.2	
	comp=Z,225nm,0.3s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**19 36 33.5**	**-0.5**
UREC				*e*S	**Sn**	**19 37 04.8**	**-1.8**
UREC				*i*		19 37 16.9	
	comp=Z,231nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73**	**350**	*e*P	**Pn**	**19 36 38.3**	**+2.5**
LL1C				*e*S	**Sn**	**19 37 13.5**	**+3.5**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**19 36 37.2**	**+0.6**
GUY2C				*e*S	**Sn**	**19 37 15.5**	**+4.1**
GUY2C				*i*		19 37 19.4	
	comp=Z,313nm,0.3s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**19 36 37.0**	**+0.5**
VILC				*e*S	**Sn**	**19 37 10.8**	**-0.2**
VILC				*i*		19 37 13.8	
	comp=Z,390nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	⇓ *i*P	**Pn**	**19 36 36.2**	**-0.3**
PTGC				*e*S	**Sn**	**19 37 09.7**	**-1.6**
PTGC				*i*		19 37 12.6	
	comp=Z,138nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*e*P	**Pn**	**19 36 37.1**	**-0.7**
LL6C				*e*S	**Sn**	**19 37 12.7**	**-0.9**
LL6C				*i*		19 37 18.7	
	comp=Z,100nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**19 36 40.7**	**+0.7**
CBOC				*e*S	**Sn**	**19 37 18.4**	**+0.9**
CBOC				*i*		19 37 22.9	
	comp=Z,65nm,0.5s						
DBBC	**Dabeiba**	**3.10**	**274**	*e*P	**Pn**	**19 36 41.2**	**+0.7**
DBBC				*e*S	**Sn**	**19 37 17.0**	**-1.2**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**19 36 42.5**	**+0.9**
	comp=Z,116nm,0.3s,baz=190,slow=3.3,SNR=74						
SDV				S	**Sn**	**19 37 20.5**	**+0.1**
	comp=Z,38nm,0.4s,baz=274,slow=18,SNR=6.1						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**19 36 43.1**	**+1.3**
ARGC				*e*S	**Sn**	**19 37 23.0**	**+2.1**
ARGC				*i*		19 37 31.6	
	comp=Z,54nm,0.6s						
ANIL	**Santa Ana**	**3.27**	**225**	*e*P	**Pn**	**19 36 44.3**	**+1.4**
ANIL				*e*S	**Sn**	**19 37 24.2**	**+1.7**
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**19 36 46.2**	**-0.3**
PRAC				*e*S	**Sn**	**19 37 28.9**	**-0.3**
PRAC				*i*		19 37 37.8	
	comp=Z,241nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**326**⇑	*i*P	**Pn**	**19 36 47.3**	**-0.5**
SJCC				*e*S	**Sn**	**19 37 28.4**	**-3.2**
SJCC				*i*		19 37 43.3	
	comp=Z,68nm,0.4s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**19 36 48.6**	**+0.3**
PLMC				*e*S	**Sn**	**19 37 30.7**	**-1.5**
PLMC				*i*		19 37 36.8	
	comp=Z,53nm,0.6s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*S	**Sn**	**19 37 35.3**	**+0.6**
LCBC				*i*		19 37 39.0	
	comp=Z,62nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**19 36 53.4**	**-0.9**
CRJC				*e*S	**Sn**	**19 37 40.6**	**-2.4**
CRJC				*i*		19 37 48.5	
	comp=Z,116nm,0.3s						
GUVC	**San Jose del G**	**4.29**	**174**	*e*P	**Pn**	**19 36 55.5**	**-0.3**
GUVC				*e*S	**Sn**	**19 37 44.8**	**-0.9**
GUVC				*i*		19 37 50.6	
	comp=Z,65nm,0.4s						
YOTC	**Yotoco, Valle**	**4.30**	**229**	*e*P	**Pn**	**19 36 55.6**	**-0.4**
YOTC				*e*S	**Sn**	**19 37 50.4**	**+4.2**
BETC	**Betania**	**4.74**	**210**	*e*P	**Pn**	**19 37 01.1**	**-0.7**
BETC				*e*S	**Sn**	**19 37 53.0**	**-3.5**
BETC				*i*		19 38 00.3	
	comp=Z,28nm,0.3s						
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**19 37 03.4**	**-1.1**
URIC				*e*S	**Sn**	**19 37 59.4**	**-2.1**
URIC				*i*		19 38 06.1	
	comp=Z,23nm,0.4s						
MALC	**Bahia Malaga**	**5.06**	**237**	*e*P	**Pn**	**19 37 07.5**	**+1.5**
GARC	**Garzon, Huila**	**5.20**	**207**	*e*P	**Pn**	**19 37 07.1**	**-0.9**
GARC				*e*S	**Sn**	**19 38 04.3**	**-3.3**
GARC				*i*		19 38 09.7	
	comp=Z,58nm,0.5s						
FLOC	**Florencia**	**5.80**	**206**	*e*P	**Pn**	**19 37 15.7**	**-0.2**
FLOC				*e*S	**Sn**	**19 38 21.0**	**-0.8**
FLOC				*i*		19 38 27.1	
	comp=Z,12nm,0.5s						
BBAC	**Balboa, Cauca**	**6.32**	**221**	*e*P	**Pn**	**19 37 24.2**	**+1.4**
BBAC				*e*S	**Sn**	**19 38 32.9**	**-1.4**
PCRV	**Puerto La Cruz**	**9.00**	**68**	P	**Pn**	**19 37 57.8**	**-0.7**
	comp=Z,6.6nm,0.7s,baz=151,slow=23,SNR=1.8						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**19 42 42.6**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=130,slow=9.4,SNR=6.3						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**19 44 16.1**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=128,slow=10,SNR=4.1						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**19 46 03.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=134,slow=6.5,SNR=6.1						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**19 55 21.4**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=113,slow=3.3,SNR=1.4						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**19 55 24.4**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=104,slow=2.6,SNR=6.4						

*IDC **09** 19:37:31.3±0.8, 10°.65S×110°.49E, h0km, mb3.9/9, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=38.9km s-min=15.7km az=51.0*
ISC 09 19:37:33.5±0.7, **10°.79S**±0°.10×**110°.54E**±0°.08, **h35**km, **n22**, σ3§**63**/17, **mb3.9**/9, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**2.86**	**360**	P	Pn	19 38 18.5	+1.8
SMRI	**Semarang**	**3.72**	**358**	P	Pn	19 38 31.8	+3.3
JAGI	**Jajag, Banyuwa**	**4.24**	**57**	P	Pn	19 38 40.0	+4.3
XMIS	**Christmas Isla**	**4.81**	**273**	P	**Pn**	**19 38 39.4**	**-4.2**
LEM	**Lembang**	**4.88**	**324**	Sn	**Sn**	**19 39 39.2**	**-0.9**
	0.9nm,0.3s,baz=105,slow=12,SNR=3.5						
PLAI	**Plampang**	**7.39**	**75**	P	Pn	19 39 23.0	+4.0
MNAI	**Manna**	**9.86**	**310**	P	**Pn**	**19 39 50.9**	**-2.0**
GIRL	**Giralia**	**12.30**	**164**	P	**Pn**	**19 40 24.8**	**-1.5**
BATI	**Baumata**	**12.92**	**89**	Pn	**Pn**	**19 40 37.1**	**+2.3**
BATI				Sn	**Sn**	**19 42 53.6**	**-3.8**
	baz=218,slow=17						
SOEI	**Soe**	**13.55**	**87**	P	**P**	**19 40 48.7**	**-3.4**
FITZ	**Fitzroy Crossi**	**16.32**	**118**	Pn	**P**	**19 41 22.3**	**-0.5**
	0.3nm,0.3s,baz=295,slow=7.2,SNR=15						
FITZ				Sn	**Sn**	**19 44 13.0**	**-7.2**
	0.2nm,0.3s,baz=199,slow=16,SNR=1.8						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**24.66**	**114**	P	**P**	**19 42 55.5**	**+4.3**
	1.9nm,0.7s,baz=286,slow=11,SNR=20						
WRA				PcP	**PcP**	**19 46 31.7**	**+3.5**
	0.3nm,0.6s,baz=288,slow=1.8,SNR=1.7						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**25.68**	**123**	P	**P**	**19 43 04.2**	**+3.8**
	2.1nm,0.8s,baz=294,slow=8.7,SNR=24						
ASAR				PcP	**PcP**	**19 46 34.2**	**+3.7**
	0.4nm,0.7s,baz=297,slow=1.6,SNR=4.6						
	2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.23**	**338**	P	P	19 43 52.5	+2.6
	0.7nm,0.7s,baz=173,slow=8.2,SNR=8.5						
	0.7nm,0.7s						
STKA	**Stephens Creek**	**35.52**	**131**	P	P	19 44 31.8	+4.5
	5.2nm,1.0s,baz=309,slow=12,SNR=3.7						
	5.2nm,1.0s						
SONM	**Songino Array**	**58.48**	**357**	P	P	19 47 27.8	+1.6
	1.1nm,0.7s,baz=178,slow=7.7,SNR=4.1						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**62.65**	**339**	P	P	19 47 56.3	+1.8
	0.5nm,0.5s,baz=154,slow=8.0,SNR=7.0						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**68.09**	**344**	P	**P**	**19 48 30.9**	**+1.5**
	0.7nm,0.4s,baz=147,slow=6.4,SNR=4.7						
	0.7nm,0.4s						
VNDA	**Vanda**	**71.63**	**170**	P	**P**	**19 48 54.4**	**+3.4**
	0.8nm,0.7s,baz=348,slow=4.5,SNR=5.0						
	0.8nm,0.7s						
BRTR	**Keskin Array B**	**86.94**	**311**	P	P	19 50 18.3	+2.9
	0.6nm,0.7s,baz=126,slow=6.2,SNR=2.5						
	0.6nm,0.7s						
TXAR	**Lajitas Array**	**143.15**	**55**	PKP	**PKiKP**	**19 57 05.5**	**-2.4**
	0.3nm,0.8s,baz=316,slow=2.5,SNR=3.5						
BDFB	**Brasilia**	**146.22**	**219**	PKPbc	**PKiKP**	**19 57 15.0**	**+0.4**
	2.0nm,0.8s,baz=164,slow=7.0,SNR=3.6						

*IDC **09** 19:39:54.2±1.2, 56°.13S×27°.12W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=48.2km s-min=31.9km az=110.0*
ISC 09 19:40:02.6±0.9, **56°.1S**±0°.1×**27°.1W**±0°.3, **h63**km, **n13**, σ1§**12**/10, **mb4.2**/4, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.71**	**158**	P	**P**	**19 43 55.1**	**+1.7**
VNA3	**Neumayer Olymp**	**16.91**	**160**	P	**P**	**19 43 57.0**	**+1.3**
VNA2	**Neumayer--Watz**	**17.11**	**158**	P	**P**	**19 43 58.4**	**+0.5**
	baz=317,slow=13						
SNAA	**Sanae**	**18.66**	**156**	P	**P**	**19 44 14.4**	**-0.6**
TROLL	**Troll, Antarti**	**20.16**	**153**	P	**P**	**19 44 29.5**	**-1.9**
VNDA	**Vanda**	**46.49**	**183**	P	**P**	**19 48 22.4**	**-0.3**
	0.4nm,0.6s,baz=182,slow=5.5,SNR=2.3						
	0.4nm,0.6s						
H10N1	**ASCENSION HYDR**	**49.19**	**17**	T	T	20 42 17.8	
	baz=189						
H10N3	**ASCENSION HYDR**	**49.19**	**17**	T	T	20 42 14.3	
	baz=189,slow=74						
H10N2	**ASCENSION HYDR**	**49.20**	**17**	T	T	20 42 17.7	
	baz=189,slow=74						
LPAZ	**La Paz**	**50.45**	**305**	P	**P**	**19 48 54.4**	**-0.1**
	0.7nm,0.3s,baz=166,slow=4.2,SNR=3.4						
	0.7nm,0.3s						
DBIC	**Dimbokro**	**65.23**	**25**	P	**P**	**19 50 37.2**	**0.0**
	3.9nm,1.0s,baz=186,slow=10,SNR=2.5						
	3.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.11**	**29**	P	**P**	**19 51 26.2**	**+0.3**
	1.2nm,0.4s,baz=200,slow=6.4,SNR=24						
	1.2nm,0.4s						
ILAR	**Eielson Array**	**150.19**	**312**	PKPbc	**PKPbc**	**19 59 44.7**	**0.0**
	1.2nm,0.9s,baz=128,slow=1.4,SNR=8.2						

*NIC **09** 19:41:50.0±0.0, 35°.08N×27°.77E, h7km±5km, Ml3.4/4*
*ISK **09** 19:41:51.2, 35°.07N×27°.75E, h5km, ML3.0/14*
*DDA **09** 19:41:52.1±0.0, 35°.11N×27°.75E, h8km±4km, ML2.7*
*ATH **09** 19:41:53.4, 35°.30N×27°.58E, h47km±5km, ML2.8/4, Error ellipse: s-maj=6.9km s-min=2.7km az=328.0*
ISC 09 19:41:50.7±1.4, **35°.08N**±0°.05×**27°.78E**±0°.03, **h8**km±10km, **n66**, σ1§**85**/82, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.69**	**313**	PG	**Pg**	**19 42 03.8**	**-0.2**
KARP				SG	**Sb**	**19 42 14.6**	**0.0**
KARP	**Karpathos**	**0.69**	**313**	P	**Pg**	**19 42 03.4**	**-0.6**
KARP	**Karpathos**	**0.69**	**313**	P	**Pg**	**19 42 03.4**	**-0.6**
KARP				S	**Sg**	**19 42 13.7**	**+0.7**
KARP				AML	AML	19 42 14.7	
	5.0nm,0.5s						
KARP				AML	AML	19 42 14.7	
	5.0nm,0.5s						
KARP				AML	AML	19 42 14.8	
	5.5nm,0.6s						
KARP				AML	AML	19 42 14.8	
	5.5nm,0.6s						
KARP	**Karpathos**	**0.69**	**313**	P	**Pg**	**19 42 03.5**	**-0.4**
KARP				S	**Sg**	**19 42 12.1**	**-0.8**
KARP				AML	AML	19 42 15.0	
	comp=E,5008μm,0.5s						
KARP				AML	AML	19 42 16.1	
	comp=N,4741μm,0.4s						
ARG	**Arkhangelos**	**1.17**	**14**	PN	**Pn**	**19 42 14.1**	**+0.8**
ARG	**Arkhangelos**	**1.17**	**14**	P	**Pn**	**19 42 14.5**	**+1.2**
ARG	**Arkhangelos**	**1.17**	**14**	P	**Pb**	**19 42 12.8**	**-0.4**
ARG	**Arkhangelos**	**1.17**	**14**	P	**Pb**	**19 42 12.7**	**-0.4**
ARG				AML	AML	19 42 40.5	
	comp=E,724μm,0.4s						
ARG				AML	AML	19 42 41.4	
	comp=N,610μm,0.6s						
ZKR	**Zakros**	**1.28**	**272**	PN	**Pn**	**19 42 15.2**	**+0.3**
ZKR	**Zakros**	**1.28**	**272**	P	**Pn**	**19 42 14.3**	**-0.6**
ZKR				S	**Sb**	**19 42 33.1**	**+1.8**
ZKR	**Zakros**	**1.28**	**272**	P	**Pn**	**19 42 14.7**	**-0.2**
ZKR				AML	AML	19 42 41.7	
	comp=E,754μm,0.4s						
ZKR				AML	AML	19 42 46.2	
	comp=N,484μm,0.8s						
NIS1	**Nisyros Isl.**	**1.59**	**342**	PN	**Pb**	**19 42 20.8**	**+0.4**
TURN	**Turunc**	**1.73**	**12**	PN	**Pb**	**19 42 22.8**	**0.0**
TURN				SN	**Sg**	**19 42 45.8**	**-0.7**
TURN	**Turunc**	**1.73**	**12**	P	**Pb**	**19 42 23.7**	**+0.9**
TURN				S	**Sb**	**19 42 44.3**	**-0.3**
TURN				*i* AML	AML	19 42 57.0	
	comp=N,64nm,0.4s						
TURN				*i* AML	AML	19 43 03.0	
	comp=N,61nm,0.6s						
KOSK	**Kos Island**	**1.79**	**339**	PN	**Pb**	**19 42 23.7**	**0.0**
DALY	**Dalyan (Mula)**	**1.87**	**22**	PN	**Pb**	**19 42 24.8**	**-0.3**
AKAS	**Kas**	**1.88**	**52**	P	**Pn**	**19 42 23.3**	**0.0**
BDRM	**Kayabasi**	**2.00**	**352**	P	**Pn**	**19 42 26.0**	**+1.2**
BDRM				S	**Sn**	**19 42 50.0**	**0.0**
BODT	**Bodrum**	**2.01**	**349**	PN	**Pn**	**19 42 26.8**	**+1.8**
BODT	**Bodrum**	**2.01**	**349**	P	**Pn**	**19 42 25.5**	**+0.5**
BODT				S	**Sn**	**19 42 50.7**	**+0.4**
YER	**Yerkesik**	**2.09**	**11**	PN	**Pb**	**19 42 28.1**	**-0.8**
YER	**Yerkesik

GVDS	**Gavdos**	**3.04**	**267**	PN	**Pn**	**19 42 41.5**	**+2.5**
GVD	**Gavdhos**	**3.04**	**267**	PN	**Pn**	**19 42 41.1**	**+2.0**
IMMV	**Iera Moni Meta**	**3.13**	**278**	PN	**Pn**	**19 42 42.4**	**+2.1**
IMMV	**Iera Moni Meta**	**3.13**	**278**	P	**Pn**	**19 42 43.7**	**+3.4**
IMMV	**Iera Moni Meta**	**3.13**	**278**	P	**Pn**	**19 42 43.5**	**+3.2**
OSC1	**CSNet OBS 1**	**3.30**	**118**	P	**Pn**	**19 42 41.9**	**-0.7**
ZEYE	**Izmir, Urla-Ze**	**3.31**	**342**	P	**Pn**	**19 42 39.3**	**-3.6**
KNDR	**Palaiochora Ch**	**3.36**	**274**	PN	**Pn**	**19 42 46.5**	**+3.1**
KEPZ	**Antalya-Kepez**	**3.59**	**59**	P	**Pn**	**19 42 47.8**	**+1.0**
KEPZ				S	**Sn**	**19 43 30.4**	**+1.0**
KEPZ				*i* AML	AML	19 43 42.0	
	comp=N,14nm,0.8s						
AKMS	**Akamas**	**3.74**	**90**	P	**Pn**	**19 42 49.3**	**+0.6**
AKMS				AML	AML	19 43 35.8	
	comp=N,0.2nm,0.9s						
AKMS				AML	AML	19 43 43.5	
	comp=N,0.1nm,1.1s						
GAZI	**Gazipasa**	**3.87**	**71**	P	**Pn**	**19 42 50.8**	**+0.2**
GAZI				S	**Sn**	**19 43 30.5**	**-5.7**
GAZI				*i* AML	AML	19 43 45.0	
	comp=N,16nm,0.9s						
GAZI				*i* AML	AML	19 44 05.0	
	comp=N,14nm,0.9s						
NATA	**Nata**	**3.95**	**93**	P	**Pn**	**19 42 52.0**	**+0.4**
ALFC	**Alefka**	**3.95**	**88**	P	**Pn**	**19 42 50.8**	**-0.8**
ALFC				AML	AML	19 43 42.5	
	comp=N,0.1nm,0.8s						
ALFC				AML	AML	19 43 42.9	
	comp=N,0.2nm,1.0s						
SEDI	**Konya, Seydise**	**3.99**	**52**	P	**Pn**	**19 42 54.7**	**+2.4**
SEDI				S	**Sn**	**19 43 43.4**	**+4.1**
SEDI				*i* AML	AML	19 43 51.0	
	comp=N,14nm,0.5s						
SEDI				*i* AML	AML	19 43 58.0	
	comp=N,14nm,0.6s						
KTHR	**Kythira**	**4.06**	**288**	P	**Pn**	**19 42 54.7**	**+1.6**
SZAC	**Souni**	**4.21**	**93**	P	**Pn**	**19 42 55.0**	**-0.1**
SZAC				AML	AML	19 43 47.4	
	comp=N,0.1nm,0.6s						
SZAC				AML	AML	19 43 50.9	
	comp=N,0.2nm,0.5s						
OSC2	**CSNet OBS 4**	**4.23**	**117**	P	**Pn**	**19 42 54.9**	**-0.5**
VLI	**Veliai**	**4.26**	**294**	P	**Pn**	**19 42 56.8**	**+1.0**
ERMK	**Ermenek**	**4.45**	**68**	P	**Pn**	**19 43 00.8**	**+2.2**
ERMK				S	**Sn**	**19 43 51.9**	**+1.1**
ERMK				*i* AML	AML	19 44 12.0	
	comp=N,13nm,0.8s						
ERMK				*i* AML	AML	19 44 12.0	
	comp=N,19nm,0.5s						
ASGA	**Asgata**	**4.50**	**92**	P	**Pn**	**19 42 59.7**	**+0.5**
CSS	**Mathiatis**	**4.56**	**90**	P	**Pn**	**19 42 59.8**	**-0.2**
KKBE	**Karaman, Kazim**	**4.69**	**61**	P	**Pn**	**19 43 03.2**	**+1.3**
KKBE				S	**Sn**	**19 43 56.5**	**0.0**

*IDC **09** 19:56:02.1±2.9, 35°.69N×137°.73E, h0km, mb3.3/2, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=85.1km s-min=30.2km az=61.0*
*JMA **09** 19:56:33.1±0.5, 37°.N±2°.×13°.5E±°, h374km±4km, MV3.2/23, SEA OF JAPAN*

ISC 09 19:56:32.7±1.1, 37°.1N±0°.1×135°.1E±0°.1, h400km, n11, σ1§77/11, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	**2.02**	**139**	*e*P	**Pn**	**19 57 26.6**	**-2.2**
MAT	**Matsushiro**	**2.54**	**103**	*e*P	**Pn**	**19 57 30.6**	**-1.7**
JIE	**Ise**	**3.03**	**154**	*e*P	**Pn**	**19 57 34.6**	**-1.6**
JMM	**Marumori**	**4.57**	**79**	*e*P	**Pn**	**19 57 49.2**	**-1.0**
JFK	**Kawauchi**	**4.59**	**85**	*e*P	**Pn**	**19 57 49.3**	**-1.2**
JTO	**Tosashimizu**	**4.68**	**205**	*e*P	**Pn**	**19 57 49.7**	**-1.8**
JMK	**Ichinoseki**	**5.14**	**68**	*e*P	**Pn**	**19 57 55.7**	**-0.3**
KSRS	**Korea Array**	**5.75**	**275**	Pn	**Pn**	**19 58 01.2**	**-1.2**
	0.3nm,0.3s,baz=94,slow=12,SNR=8.0 2.9nm,0.8s						
USRK	**Ussurisyk Ar.**	**7.44**	**342**	Pn	**Pn**	**19 58 21.1**	**0.0**
	0.4nm,0.3s,baz=158,slow=12,SNR=6.1 3.3nm,0.7s						
WRA	**Warramunga Arr**	**56.78**	**181**	P	**P**	**20 05 38.5**	**+1.6**
	0.2nm,0.3s,baz=359,slow=7.5,SNR=6.4 0.2nm,0.3s						
ASAR	**Alice Springs**	**60.49**	**181**	P	**P**	**20 06 04.3**	**+2.2**
	0.3nm,0.9s,baz=6.5,slow=7.4,SNR=0.9 0.3nm,0.9s						

IDC 09 20:16:26.6±2.2, 13°.60N×50°.81E, h0km, mb3.5/5, mbtmp3.5/5, MS3.2/2, Error ellipse: s-maj=61.0km s-min=28.3km az=171.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**25.09**	**14**	P	P	20 21 54.3	+1.2
	0.8nm,0.5s,baz=198,slow=7.3,SNR=2.4 0.8nm,0.5s						
GNI	**Garni**	**26.98**	**350**	LR	LR	20 35 22.2	
	comp=Z,39nm,19.8s,baz=145,slow=42						
KBZ	**Khabaz**	**30.79**	**349**	LR	LR	20 37 49.0	
	comp=Z,48nm,19.2s,baz=76,slow=42						
MKAR	**Makanchi Array**	**42.31**	**32**	P	P	20 24 20.4	-1.8
	0.4nm,0.6s,baz=218,slow=8.7,SNR=1.7 0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**46.41**	**77**	P	P	20 24 55.7	+0.4
	0.3nm,0.4s,baz=274,slow=9.2,SNR=4.7 0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**47.72**	**275**	P	P	20 25 05.1	-0.5
	0.6nm,0.7s,baz=89,slow=8.5,SNR=3.7 0.6nm,0.7s						
ESDC	**Sonseca Array**	**54.45**	**309**	P	P	20 25 56.3	+0.3
	0.7nm,1.0s,baz=106,slow=7.0,SNR=4.3 0.7nm,1.0s						

*IDC **09** 20:28:13.8±3.6, 24°.56N×95°.08E, h150km±37km, mb3.1/5, mbtmp3.5/6, MS3.6/1, Error ellipse: s-maj=129.9km s-min=18.3km az=55.0*

ISC 09 20:28:10.8±1.0, 24°.8N±0°.2×95°.1E±0°.2, h112km, n14, σ1§47/14, mb3.5/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.19**	**150**	P	**Pn**	**20 29 54.8**	**+1.5**
	1.0nm,0.7s,baz=327,slow=13,SNR=11						
RAMN	**Ramite**	**8.00**	**288**	*e*P	**Pn**	**20 30 04.9**	**+0.5**
	7.9nm,0.3s						
JIRN	**Jiri**	**8.54**	**292**	*e*P	**Pn**	**20 30 13.6**	**+1.7**
	7.6nm,0.3s						
GUN	**Gumba**	**8.88**	**293**	*e*P	**Pn**	**20 30 18.6**	**+2.1**
	17nm,0.5s						
PKI	**Pulchoki**	**9.18**	**290**	*e*P	**Pn**	**20 30 20.9**	**+0.4**
	7.1nm,0.4s						
PKIN	**Phulchoki**	**9.19**	**290**	*e*P	**Pn**	**20 30 21.5**	**+0.9**
	4.8nm,0.3s						
PKIN				*e*S	**Sn**	**20 32 00.6**	**-1.8**
DMN	**Daman**	**9.45**	**290**	*e*P	**Pn**	**20 30 25.3**	**+1.2**
	2.6nm,0.3s						
GKN	**Gorkha**	**9.96**	**291**	*e*P	**Pn**	**20 30 31.8**	**+0.9**
	12nm,0.5s						
MKAR	**Makanchi Array**	**24.28**	**338**	P	**P**	**20 33 18.2**	**+0.7**
	0.6nm,0.7s,baz=150,slow=10,SNR=5.3 0.6nm,0.7s						
KVAR	**Kislovodsk Arr**	**46.51**	**308**	LR	LR	21 00 48.8	
	comp=Z,73nm,19.2s,baz=78,slow=42						
AKASG	**Malin Array Be**	**56.13**	**316**	P	**P**	**20 37 37.7**	**-0.8**
	0.2nm,0.4s,baz=74,slow=6.8,SNR=3.0 0.2nm,0.4s						
WRA	**Warramunga Arr**	**58.55**	**136**	P	**P**	**20 37 54.0**	**-1.9**
	0.4nm,0.9s,baz=324,slow=7.5,SNR=5.2 0.4nm,0.9s						
FINES	**FINESS Array B**	**58.58**	**328**	P	**P**	**20 37 55.9**	**+0.4**
	2.7nm,0.9s,baz=90,slow=4.4,SNR=1.3 2.7nm,0.9s						
ASAR	**Alice Springs**	**61.06**	**139**	P	**P**	**20 38 11.4**	**-1.6**
	0.3nm,0.7s,baz=332,slow=7.3,SNR=2.4 0.3nm,0.7s						

*IDC **09** 20:51:44.1±1.4, 20°.62S×178°.43W, h542km±13km, mb3.3/10, mbtmp4.2/12, Error ellipse: s-maj=22.7km s-min=13.1km az=144.0*

ISC 09 20:51:47.7±0.8, 20°.5S±0°.1×178°.7W±0°.1, h587km, n15, σ2§25/16, mb3.7/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.12**	**311**	P	P	20 53 08.4	-4.9
	24nm,0.5s,baz=295,slow=23,SNR=30						
MSVF				S	**S**	**20 54 17.8**	**-5.1**
	34nm,1.0s,baz=310,slow=19,SNR=2.3						
DZM	**Mont Dzumac**	**13.97**	**261**	P	**P**	**20 54 45.1**	**-1.5**
	19nm,0.8s,baz=80,slow=17,SNR=12						
RPZ	**Rata Peaks**	**24.72**	**198**	P	**P**	**20 56 21.6**	**-2.3**
	3.8nm,0.6s,baz=79,slow=5.2,SNR=1.5 3.8nm,0.6s						
STKA	**Stephens Creek**	**37.23**	**244**	P	**P**	**20 58 11.1**	**+0.4**
	2.8nm,0.8s,baz=60,slow=6.5,SNR=4.0 2.8nm,0.8s						
ASAR	**Alice Springs**	**43.91**	**257**	P	**P**	**20 59 04.8**	**+0.9**
	9.4nm,0.8s,baz=98,slow=8.0,SNR=79						
ASAR				S	**S**	**21 04 58.2**	**+4.4**
	0.9nm,0.9s,baz=90,slow=13,SNR=4.4 9.4nm,0.8s						
WRA	**Warramunga Arr**	**43.98**	**262**	P	**P**	**20 59 05.1**	**+0.7**
	2.2nm,0.3s,baz=97,slow=7.4,SNR=117 2.2nm,0.3s						
VNDA	**Vanda**	**57.89**	**185**	P	**P**	**21 00 43.1**	**-0.9**
	0.4nm,0.8s,baz=1.7,slow=7.9,SNR=1.9 0.4nm,0.8s						
PETK	**Petropavlovsk-**	**76.08**	**346**	P	**P**	**21 02 37.4**	**+1.8**
	1.7nm,0.8s,baz=122,slow=11,SNR=2.4 1.7nm,0.8s						
NVAR	**Mina Array Bea**	**81.44**	**44**	P	**P**	**21 03 04.3**	**-0.4**
	0.6nm,0.7s,baz=224,slow=7.6,SNR=6.8 0.6nm,0.7s						
TXAR	**Lajitas Array**	**87.57**	**58**	P	**P**	**21 03 35.0**	**+0.4**
	1.1nm,1.0s,baz=221,slow=6.6,SNR=8.7 1.1nm,1.0s						
ILAR	**Eielson Array**	**88.42**	**13**	P	**P**	**21 03 38.0**	**+0.4**
	1.2nm,0.9s,baz=225,slow=5.6,SNR=7.5 1.2nm,0.9s						
PDAR	**Pinedale Array**	**89.37**	**43**	P	**P**	**21 03 42.5**	**-0.3**
	0.6nm,0.7s,baz=204,slow=3.3,SNR=6.7 0.6nm,0.7s						
AKASG	**Malin Array Be**	**142.68**	**331**	PKP	**PKPdf**	**21 10 13.0**	**-1.6**
	0.9nm,0.4s,baz=42,slow=4.4,SNR=12						
BRTR	**Keskin Array B**	**146.35**	**312**	PKPbc	**PKPbc**	**21 10 25.5**	**+1.5**
	0.5nm,0.6s,baz=149,slow=6.7,SNR=2.9						
GERES	**GERESS Array B**	**150.00**	**344**	PKPbc	**PKiKP**	**21 10 34.7**	**+1.4**
	0.1nm,0.5s,baz=122,slow=4.8,SNR=5.7						

*ISK **09** 20:58:22.0, 35°.02N×37°.48E, h2km, ML2.5/8*
*DDA **09** 20:58:23.7±0.0, 35°.43N×37°.69E, h7km±2km, ML2.5*

ISC 09 20:58:21.3±1.9, 35°.37N±0°.06×37°.90E±0°.05, h8km±13km, n20, σ1§09/26, 2C, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**1.55**	**335**	P	**Pn**	**20 58 48.8**	**-0.6**
KUZU				S	**Sb**	**20 59 08.5**	**-1.8**
KUZU				*i* AML	AML	20 59 16.0	
	comp=N,89nm,0.3s						
KUZU				*i* AML	AML	20 59 22.0	
	comp=E,93nm,0.2s						
YAYL	**Yayladag**	**1.60**	**295**	PN	**Pn**	**20 58 51.1**	**+1.0**
YAYL				SN	**Sg**	**20 59 12.3**	**-0.6**
SURC	**SANLIURFA_SURC**	**1.61**	**21**	P	**Pn**	**20 58 50.1**	**-0.1**
SURC				S	**Sg**	**20 59 13.0**	**-0.3**
TAHT	**Tahtakopru-Hat**	**1.72**	**306**	PN	**Pb**	**20 58 53.9**	**+0.7**
TAHT				SN	**Sg**	**20 59 17.3**	**+0.7**
HWQ	**Hawqa**	**1.94**	**236**	*e*P	**Pn**	**20 58 54.4**	**-0.4**
GZT	**Gaziantep**	**2.00**	**352**	P	**Pb**	**20 58 59.2**	**+1.1**
SANL	**SANLIURFA_Merk**	**2.00**	**26**	P	**Pb**	**20 58 58.5**	**+0.4**
SANL				S	**Sg**	**20 59 24.5**	**-1.2**
SANL				*i* AML	AML	20 59 29.0	
	comp=N,37nm,0.2s						
SANL				*i* AML	AML	20 59 33.0	
	comp=E,39nm,0.2s						
KAMA	**Osmaniye**	**2.07**	**332**	P	**Pn**	**20 58 56.6**	**+0.1**
HCB	**Kahramanmara**	**2.13**	**338**	P	**Pn**	**20 58 58.2**	**+0.9**
HCB				S	**Sn**	**20 59 23.3**	**-0.6**
HCB				*i* AML	AML	20 59 36.0	
	comp=E,31nm,0.4s						
HCB				*i* AML	AML	20 59 36.0	
	comp=N,20nm,0.4s						
KMRS	**Kahramanmaras**	**2.28**	**340**	PN	**Pg**	**20 59 05.5**	**+0.4**
CEYT	**Ceyhan**	**2.39**	**314**	PN	**Pb**	**20 59 04.3**	**-0.3**
ANDN	**Andirin**	**2.54**	**331**	P	**Pn**	**20 59 04.0**	**+1.0**
DQRL	**Deir Qamar**	**2.54**	**230**	*e*P	**Pn**	**20 59 03.0**	**+0.1**
KOZT	**Kozan**	**2.69**	**322**	PN	**Pb**	**20 59 09.4**	**-0.4**
MERS	**Mersin**	**3.12**	**300**	PN	**Pn**	**20 59 12.7**	**+1.8**
KIZK	**Mersin**	**3.25**	**291**	PN	**Pn**	**20 59 13.5**	**+0.9**
CMRD	**Camardi-Nigde**	**3.28**	**315**	PN	**Pb**	**20 59 16.8**	**-3.0**
KEBE	**Keben-Mersin**	**3.57**	**289**	PN	**Pn**	**20 59 17.7**	**+0.7**
COPA	**Copaceanca**	**13.10**	**316**	↑P	**P**	**21 01 38.3**	**+0.4**
VOIR		**14.02**	**320**	↑P	**P**	**21 01 49.1**	**+0.8**

*NOU **09** 21:04:11.1, 34°.49S×177°.38W, h98km, mb4.5/12, South of Kermadec Islands*
*IDC **09** 21:04:24.2±0.8, 34°.94S×179°.14W, h0km, mb4.4/6, mbtmp4.5/9, ML4.4/3, MS3.4/4, Error ellipse: s-maj=27.1km s-min=20.2km az=122.0*
*NEIC **09** 21:04:25.6±1.0, 34°.96S±0°.08×179°.0W±0°.1, h10km±1km, mb4.6/10, Error ellipse: s-maj=20.6km s-min=11.7km az=111.0*
*WEL **09** 21:04:26.4±0.9, 35°.S±10°×17°.9W±2°.0, h33km, M4.6/11, ML4.9/11, MLv4.6/11, Error ellipse: s-maj=0.0km s-min=0.0km az=115.5*

ISC 09 21:04:28.9±0.6, 34°.97S±0°.06×178°.94W±0°.09, h35km, n78, σ1§61/86, mb4.6/11, MS3.4/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.42**	**220**	Pn	**Pn**	**21 05 18.5**	**-1.1**
MXZ				Sn	**Sn**	**21 05 58.5**	**-0.4**
MXZ	**Matakaoa Point**	**3.42**	**220**	P	**Pn**	**21 05 18.4**	**-1.2**
MXZ				S	**Sn**	**21 05 57.8**	**-1.1**
MXZ	**Matakaoa Point**	**3.42**	**220**	P	**Pn**	**21 05 19.6**	**0.0**
WMGZ	**Waiomatatini S**	**3.56**	**216**	P	**Pn**	**21 05 20.9**	**-0.7**
WMGZ				S	**Sn**	**21 06 02.6**	**+0.1**
PKGZ	**Pakihiroa**	**3.78**	**219**	P	**Pn**	**21 05 24.1**	**-0.6**
PKGZ				S	**Sn**	**21 06 07.4**	**-0.6**
PUZ	**Puketiti**	**3.84**	**215**	P	**Pn**	**21 05 25.1**	**-0.3**
PUZ				S	**Sn**	**21 06 08.8**	**-0.5**
HAZ	**Te Kaha**	**3.84**	**223**	P	**Pn**	**21 05 25.0**	**-0.4**
HAZ				S	**Sn**	**21 06 10.6**	**+1.2**
RUGZ	**Raukumara Rang**	**4.05**	**221**	P	**Pn**	**21 05 28.2**	**-0.3**
RUGZ				S	**Sn**	**21 06 15.4**	**+0.7**
TWGZ	**Tauwhareparae**	**4.05**	**217**	P	**Pn**	**21 05 28.3**	**-0.2**
TWGZ				S	**Sn**	**21 06 14.0**	**-0.6**
CNGZ	**Carnagh Statio**	**4.19**	**212**	P	**Pn**	**21 05 29.4**	**-0.9**
TKGZ	**Te Karaka**	**4.32**	**216**	P	**Pn**	**21 05 31.7**	**-0.4**
TKGZ				S	**Sn**	**21 06 19.3**	**-2.0**
WHRZ	**Whale Island**	**4.38**	**228**	P	**Pn**	**21 05 32.9**	**0.0**
WHRZ				S	**Sn**	**21 06 23.3**	**+0.6**
MWZ	**Matawai**	**4.40**	**219**	P	**Pn**	**21 05 31.7**	**-1.5**
MWZ				S	**Sn**	**21 06 21.4**	**-1.9**
URZ	**Urewera**	**4.57**	**223**	Pn	**Pn**	**21 05 34.5**	**-1.0**
	20nm,0.3s,baz=66,slow=1.7,SNR=91						
URZ				Sn	**Sn**	**21 06 26.0**	**-1.4**
	31nm,0.3s,baz=267,slow=21,SNR=15 86nm,0.5s						
URZ	**Urewera**	**4.57**	**223**	P	**Pn**	**21 05 35.0**	**-0.5**
RAGZ	**Rawiri**	**4.58**	**219**	P	**Pn**	**21 05 35.4**	**-0.3**
RAGZ				S	**Sn**	**21 06 26.3**	**-1.4**
OPRZ	**Ohinepanea**	**4.63**	**230**	P	**Pn**	**21 05 35.5**	**-0.9**
KUZ	**Kuaotunu**	**4.69**	**246**	P	**Pn**	**21 05 37.1**	**0.0**
BKZ	**Black Stump Fm**	**5.56**	**220**	Pn	**Pn**	**21 05 47.2**	**-1.9**
BKZ				Sn	**Sn**	**21 06 51.0**	**-0.8**
BKZ	**Black Stump Fm**	**5.56**	**220**	P	**Pn**	**21 05 47.9**	**-1.2**
GLKZ	**Green Lake**	**5.75**	**9**	P	Pn	21 05 45.7	-6.0
GLKZ				S	**Sn**	**21 06 49.5**	**-7.0**
RAO	**Raoul Island**	**5.76**	**9**	Pn	**Pn**	**21 05 52.5**	**+0.6**
	33nm,0.3s,baz=90,slow=22,SNR=1.7						
RAO				Sn	**Sn**	**21 06 53.4**	**-3.4**
	142nm,0.3s,baz=288,slow=22,SNR=5.3 140nm,0.4s						
RAO	**Raoul Island**	**5.76**	**9**	Pn	**Pn**	**21 05 51.2**	**-0.7**
HIZ	**Hauiti**	**6.11**	**233**	Pn	**Pn**	**21 05 56.3**	**-0.4**
HIZ	**Hauiti**	**6.11**	**233**	P	**Pn**	**21 05 56.5**	**-0.2**
OUZ	**Omahuta**	**6.13**	**265**		**Pn**	**21 05 57.4**	**+0.5**
OUZ	**Omahuta**	**6.13**	**265**	P	**Pn**	**21 05 57.4**	**+0.5**
BFZ	**Birch Farm**	**6.86**	**212**	Pn	**Pn**	**21 06 04.2**	**-2.8**
BFZ	**Birch Farm**	**6.86**	**212**	P	**Pn**	**21 06 03.9**	**-3.0**
QRZ	**Quartz Range**	**8.93**	**227**	P	**Pn**	**21 06 34.7**	**-0.6**
THZ	**Tophouse**	**9.33**	**221**	Pn	**Pn**	**21 06 38.9**	**-1.9**
KHZ	**Kahutara**	**9.48**	**216**	Pn	**Pn**	**21 06 39.5**	**-3.3**
KHZ	**Kahutara**	**9.48**	**216**	P	**Pn**	**21 06 39.9**	**-2.9**
RPZ	**Rata Peaks**	**11.67**	**219**	Pn	**Pn**	**21 07 10.4**	**-2.4**
	0.8nm,0.3s,baz=47,slow=20,SNR=2.0						
RPZ				Sn	Sn	21 09 09.0	-13
	2.3nm,0.3s,baz=346,slow=19,SNR=12 4.9nm,0.5s						
RPZ	**Rata Peaks**	**11.67**	**219**	P	**Pn**	**21 07 10.5**	**-2.3**
	30nm,0.5s						
ODZ	**Otahua Downs**	**12.84**	**215**	P	Pn	21 07 24.2	-4.6
JCZ	**Jackson Bay**	**13.12**	**222**	P	**Pn**	**21 07 29.5**	**-3.3**
DZM	**Mont Dzumac**	**18.14**	**311**	*e*LR	LR	21 12 31.3	
	comp=Z,172nm,26.2s						
DZM	**Mont Dzumac**	**18.14**	**311**	P	**Pn**	**21 08 39.0**	**+0.9**
	7.3nm,0.8s,baz=141,slow=13,SNR=6.7						
DZM				LR	LR	21 14 40.7	
	comp=Z,101nm,19.3s,baz=70,slow=34						
TBI	**Tubuai**	**28.12**	**74**	*e*LR	LR	21 16 46.5	
	comp=Z,148nm,30.5s						
TBI	**Tubuai**	**28.12**	**74**	*e*T	T	21 39 35.5	
	3.9nm,0.3s						
PAE	**Paea**	**31.29**	**64**	*e*T	T	21 43 08.6	
	2.1nm,0.2s						
PPT2	**Papeete2**	**31.34**	**64**	*e*LR	LR	21 18 08.2	
	comp=Z,60nm,24.2s						
STKA	**Stephens Creek**	**32.94**	**264**	P	**P**	**21 11 00.4**	**+0.3**
	2.2nm,0.8s,baz=62,slow=14,SNR=1.6 2.2nm,0.8s						
VAH	**Vaihoa**	**34.28**	**63**	*e*T	T	21 47 00.4	
	3.7nm,0.2s						
AS31	**Alice Springs**	**42.29**	**272**	P	**P**	**21 12 18.3**	**-1.0**
AS31				IAmb	IAmb	21 12 18.6	
	comp=Z,3.9nm,0.6s						
ASAR	**Alice Springs**	**42.29**	**272**	P	**P**	**21 12 18.1**	**-1.2**
	comp=Z,7.6nm,0.5s,baz=114,slow=8.0,SNR=146						
ASAR				LR	LR	21 29 40.3	
	comp=Z,61nm,19.2s,baz=172,slow=36 comp=Z,7.6nm,0.5s						
ASAR	**Alice Springs**	**42.29**	**272**	P	**P**	**21 12 17.6**	**-1.7**
WR0	**Warramunga Arr**	**43.52**	**278**	P	**P**	**21 12 27.8**	**-1.4**
WB2	**Warramunga Arr**	**43.68**	**277**	P	**P**	**21 12 29.3**	**-1.2**
WRAB	**Tennant Creek**	**43.68**	**277**	P	**P**	**21 12 29.1**	**-1.4**
WRAB				IAmb	IAmb	21 12 29.8	
	comp=Z,8.7nm,0.6s						
WRA	**Warramunga Arr**	**43.69**	**277**	P	**P**	**21 12 29.3**	**-1.3**
	comp=Z,6.2nm,0.6s,baz=118,slow=7.6,SNR=115						
WRA				PcP	**PcP**	**21 14 16.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=114,slow=3.1,SNR=2.0 comp=Z,6.2nm,0.6s						
WRA	**Warramunga Arr**	**43.69**	**277**	P	**P**	**21 12 29.3**	**-1.3**
WB0	**Warramunga Arr**	**43.73**	**278**	P	**P**	**21 12 29.6**	**-1.4**
WB0				IAmb	IAmb	21 12 30.2	
	comp=Z,6.9nm,0.7s						
FORT	**Forrest**	**44.29**	**260**	P	**P**	**21 12 34.4**	**-0.9**
CASY	**Casey**	**50.77**	**209**	P	**P**	**21 13 25.2**	**+0.2**
CASY				IAmb	IAmb	21 13 26.2	
	comp=Z,6.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.72**	**274**	LR	LR	21 35 31.8	
	comp=Z,49nm,18.1s,baz=112,slow=36						
FITZ	**Fitzroy Crossi**	**51.72**	**274**	P	**P**	**21 13 32.0**	**-0.8**
PSA00	**Pilbara Seismi**	**54.79**	**267**	P	**P**	**21 13 54.0**	**-1.4**
PSA00				IAmb	IAmb	21 14 34.4	
	comp=Z,6.7nm,1.3s						
QSPA	**South Pole Qui**	**55.16**	**180**	P	**P**	**21 13 59.4**	**+1.8**
	comp=Z,3.4nm,0.9s,baz=25,slow=4.2,SNR=7.8 comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	**55.16**	**180**	P	**P**	**21 14 02.1**	**+4.5**
QSPA				IAmb	IAmb	21 14 14.7	
	comp=Z,4.4nm,0.6s						
SIJI	**Sorong**	**57.41**	**295**	LR	LR	21 38 10.8	
	comp=Z,25nm,19.2s,baz=137,slow=35						
TROLL	**Troll, Antarti**	**73.32**	**180**	P	**P**	**21 15 57.3**	**+0.8**
SNAA	**Sanae**	**73.62**	**179**	P	**P**	**21 15 58.7**	**+0.4**
VNA3	**Neumayer Olymp**	**73.81**	**176**	P	**P**	**21 15 59.7**	**+0.4**
VNA2	**Neumayer--Watz**	**74.23**	**177**	P	**P**	**21 16 02.4**	**+0.7**
	baz=178,slow=5.4						
VNA1	**Neumayer--Stat**	**74.47**	**177**	P	**P**	**21 16 03.8**	**+0.8**
PETK	**Petropavlovsk-**	**90.03**	**346**	P	**P**	**21 17 26.2**	**+1.9**
	comp=Z,4.1nm,0.8s,baz=129,slow=5.7,SNR=4.3 comp=Z,4.1nm,0.8s						
NVAR	**Mina Array Bea**	**92.11**	**43**	P	**P**	**21 17 36.1**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=222,slow=9.3,SNR=3.7 comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**142.84**	**346**	PKP	**PKPdf**	**21 23 55.7**	**-1.8**
	comp=Z,2.0nm,0.9s,baz=41,slow=2.9,SNR=1.2						
KBZ	**Khabaz**	**146.78**	**298**	PKPbc	**PKPdf**	**21 24 06.7**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=146,slow=4.3,SNR=2.2						
FINES	**FINESS Array B**	**149.09**	**337**	PKPbc	**PKPbc**	**21 24 12.4**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=134,slow=4.0,SNR=10						
DBIC	**Dimbokro**	**151.32**	**168**	PKPbc	**PKPbc**	**21 24 19.8**	**+0.4**
	comp=Z,4.5nm,0.9s,baz=70,slow=4.8,SNR=4.1						
NB2	**NORSAR Subarra**	**153.10**	**349**	PKP	**PKPbc**	**21 24 22.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**153.10**	**349**	PKPbc	**PKPbc**	**21 24 22.5**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=23,slow=3.4,SNR=1.4				

GOF smax smax
comp=E,1μm,0.6s
GOF Gofitskoye 0.92 72 *i* Pg **Pg 21 41 09.8 -0.3**
GOF *i* Sg **Sg 21 41 22.7 +0.6**
KIV Kislovodsk 1.05 142 *i* PG **Pg 21 41 12.3 -0.2**
KIV Kislovodsk 1.05 142 *i* Pg **Pg 21 41 12.2 -0.4**
KIV *e*Sg **Sg 21 41 25.5 -0.6**
KIV0 Kislovodsk Arr 1.05 142 *i* Pg **Pg 21 41 12.2 -0.4**
KIV0 *e*Sg **Sg 21 41 25.9 -0.3**
KVAR Kislovodsk Arr 1.05 142 Pg **Pg 21 41 12.4 -0.2**
baz=66,slow=20
KVAR Lg Lg 21 41 25.4
baz=6.7,slow=10
BEYR Belyy Ugol+ 1.06 137 *i* PG **Pg 21 41 12.4 -0.5**
BEYR Belyy Ugol+ 1.06 137 *i* Pg **Pg 21 41 12.3 -0.6**
BEYR *i* Sg **Sg 21 41 26.6 0.0**
SHA1 Shidzhatmaz 1.22 149 *i* PG **Pg 21 41 15.4 -0.4**
SHA1 Shidzhatmaz 1.22 149 *i* Pg **Pg 21 41 15.5 -0.4**
SHA1 *i* Sg **Sg 21 41 31.4 -0.2**
ERBR Yeremizino-Bor 1.31 315 *e*PG **Pn 21 41 18.0 +0.7**
ERBR *i* S **Sn 21 41 36.6 +1.5**
ERBR Yeremizino-Bor 1.31 315 *e*Pg **Pn 21 41 18.0 +0.7**
ERBR *e*Sg **Sn 21 41 36.5 +1.5**
KBZ Khabaz 1.32 143 Pg **Pg 21 41 16.8 -1.0**
comp=E,53nm,0.3s,baz=313,slow=11,SNR=746
KBZ Lg Lg 21 41 33.5
comp=E,62nm,0.3s,baz=352,slow=14,SNR=11
KBZ Khabaz 1.32 143 *i* PG **Pg 21 41 17.1 -0.6**
KBZ Khabaz 1.32 143 *i* Pg **Pg 21 41 16.8 -1.0**
KBZ *e*Sg **Sg 21 41 34.5 -0.4**
GUZR Guzeripl' 1.44 237 *i* PG **Pn 21 41 19.1 0.0**
GUZR Guzeripl' 1.44 237 *i* Pg **Pn 21 41 19.0 0.0**
GUZR *e*Sg **Sb 21 41 38.1 -0.2**
DOMR Dombai 1.50 185 *i* PN **Pn 21 41 19.8 -0.2**
DOMR Dombai 1.50 185 *i* Pg **Pn 21 41 19.8 -0.2**
DOMR *e*Sg **Sb 21 41 39.7 -0.3**
KBTC Kuba-Taba 1.51 130 ⇑*i* PN **Pb 21 41 20.9 +0.1**
KBTC *e*S **Sg 21 41 42.2 +1.3**
KBTC Kuba-Taba 1.51 130 *i* Pg **Pb 21 41 20.8 +0.1**
KBTC *e*Sg **Sg 21 41 41.8 +0.9**
NEY Neytrino 1.68 156 *i* PN **Pn 21 41 23.5 +1.1**
NEY Neytrino 1.68 156 *e*Pg **Pn 21 41 23.3 +1.0**
NEY *i* Pg **Pn 21 41 23.5 +1.1**
NEY *e*Sg **Sn 21 41 44.6 +0.4**
NEY *e*Sg **Sb 21 41 44.9 -0.2**
GOYR Goytkh 1.82 254 *i* PN **Pn 21 41 25.9 +1.7**
GOYR *e*S **Sb 21 41 49.9 +0.9**
GOYR Goytkh 1.82 254 *i* Pg **Pn 21 41 25.8 +1.7**
GOYR *e*Sg **Sb 21 41 51.0 +2.0**
VSLR Vesyoloye 1.84 225 *e*PN **Pb 21 41 26.3 -0.1**
VSLR Vesyoloye 1.84 225 *e*Pg **Pb 21 41 26.3 -0.1**
VSLR *e*Sg **Sg 21 41 51.8 +0.2**
SOC Sochi 1.92 232 *e*PN **Pn 21 41 27.6 +2.0**
SOC pmax pmax
comp=Z,32nm,0.5s
SOC Sochi 1.92 232 *e*Pg **Pn 21 41 27.4 +1.8**
SOC *e*Sg **Sb 21 41 52.9 +0.8**
LZRR Lazarevskoye 1.94 245 *i* PN **Pn 21 41 27.4 +1.6**
LZRR Lazarevskoye 1.94 245 *i* Pg **Pn 21 41 27.4 +1.6**
LZRR *e*Sg **Sn 21 41 52.5 +2.2**
PRTR Priterechnaya 2.06 119 *e*PN **Pb 21 41 31.0 +0.8**
PRTR *e*S **Sg 21 41 59.4 +0.8**
PRTR Priterechnaya 2.06 119 *e*Pg **Pn 21 41 27.9 +0.4**
PRTR *e*Sg **Sn 21 41 54.8 +1.4**
LSNR Lesken 2.10 135 *e*PN **Pb 21 41 31.1 +0.2**
LSNR *e*S **Sg 21 41 59.9 0.0**
LSNR Lesken 2.10 135 *e*Pg **Pb 21 41 31.1 +0.2**
STDR Stavd-Durt 2.16 130 *e*PN **Pg 21 41 33.0 -0.8**
STDR *e*S **Sg 21 42 02.9 +1.1**
STDR Stavd-Durt 2.16 130 *e*Pg **Pb 21 41 30.9 -1.0**
STDR *e*Sg **Sn 21 41 57.7 +1.8**
DIGR Digorskoe uzhe 2.28 145 *e*PN **Pb 21 41 34.0 -0.1**
DIGR *e*S **Sb 21 42 03.1 +0.5**
TRKR Terskaya 2.36 116 *e*PN **Pn 21 41 32.8 +1.2**
TRKR *e*S **Sn 21 42 02.3 +1.6**
TRKR Terskaya 2.36 116 *e*Pn **Pn 21 41 32.8 +1.2**
TRKR *e*Sn **Sn 21 42 02.4 +1.6**
KORR Kora 2.36 135 *e*PN **Pg 21 41 36.8 -0.9**
KORR *e*S **Sg 21 42 07.0 -1.3**
KORR Kora 2.36 135 *e*Pn **Pb 21 41 34.5 -0.8**
KORR *e*Sn **Sn 21 42 01.3 +0.4**
ARNR Ardon 2.41 131 *e*PN **Pn 21 41 33.9 +1.6**
ARNR *e*S **Sn 21 42 03.5 +1.5**
ARNR Ardon 2.41 131 *e*Pn **Pn 21 41 33.9 +1.6**
ARNR *e*Sn **Sn 21 42 03.5 +1.5**
BTKR Batakoyurt 2.43 125 *e*PN **Pb 21 41 37.1 +0.6**
BTKR *e*S **Sb 21 42 07.0 +0.4**
ONI Oni 2.50 151 P **Pb 21 41 36.3 -1.5**
ONI S **Sg 21 42 10.9 -1.9**
ONI Oni 2.50 151 PN **Pb 21 41 36.3 -1.5**
ONI S **Sg 21 42 10.9 -1.9**
ZEI Tsey 2.51 142 *e*PN **Pb 21 41 38.8 +0.8**
ZEI *e*S **Sb 21 42 10.3 +1.1**
TKB Tkibuli 2.58 160 P **Pn 21 41 37.3 +2.5**
TKB Tkibuli 2.58 160 PN **Pn 21 41 37.3 +2.5**
SPGR Shapsug 2.66 270 *e*PN **Pn 21 41 37.9 +2.2**
SPGR *e*S **Sb 21 42 13.0 -0.2**
LACR Lac 2.66 136 *e*PN **Pb 21 41 40.8 +0.2**
LACR *e*S **Sg 21 42 15.9 -2.1**
GL1R Gelendzhik 2.67 266 *e*PN **Pn 21 41 36.8 +0.9**
GL1R *e*S **Sn 21 42 12.3 +3.8**
GL1R Gelendzhik 2.67 266 *e*Pn **Pn 21 41 36.8 +0.9**
GL1R *e*Sn **Sn 21 42 12.3 +3.8**
KMGR Komgaron 2.81 127 *e*PN **Pn 21 41 39.6 +1.8**
KMGR *e*S **Sn 21 42 13.8 +1.8**
KMGR Komgaron 2.81 127 *e*Pn **Pn 21 41 39.6 +1.8**
KMGR *e*Sn **Sn 21 42 13.8 +1.8**
PNSH Pansheti 2.96 136 P **Pn 21 41 41.3 +1.2**
PNSH S **Sb 21 42 24.8 +2.6**
PNSH Pansheti 2.96 136 PN **Pn 21 41 41.3 +1.2**
PNSH S **Sb 21 42 24.8 +2.6**
ALIG Mtskhetisjvari 3.00 153 P **Pn 21 41 42.2 +1.8**
ANN Anapa 3.11 272 *e*PN **Pn 21 41 45.3 +3.4**
ANN *e*S **Sb 21 42 25.0 -1.2**
ANN Anapa 3.11 272 *e*Pn **Pn 21 41 45.3 +3.4**
ANN *e*Sn **Sb 21 42 25.0 -1.2**
ABS Abastumani 3.12 166 P **Pn 21 41 45.1 +2.9**
ABS S **Sg 21 42 34.3 +1.6**
ABS Abastumani 3.12 166 PN **Pn 21 41 45.1 +2.9**
ABS S **Sg 21 42 34.3 +1.6**
SHTL Shatili 3.23 130 P **Pn 21 41 46.3 +2.5**
SHTL S **Sn 21 42 24.9 +2.4**
BKRG Bakuriani 3.28 157 P **Pg 21 41 53.9 -1.4**
BKRG S **Sg 21 42 37.7 0.0**
BKRG Bakuriani 3.28 157 PN **Pg 21 41 53.9 -1.4**
BKRG S **Sg 21 42 37.7 0.0**
GROC Groznyy 3.29 117 PN **Pn 21 41 45.5 +1.1**
GROC *e* 21 42 27.0
GROC pmax pmax
comp=Z,8.0nm,0.4s
GROC smax smax
comp=E,81nm,2.1s
GROC smax smax
comp=N,32nm,2.0s
GROC smax smax
comp=E,62nm,0.6s
GROC MLR MLR
comp=Z,38nm,1.0s
GROC Groznyy 3.29 117 *e*Pn **Pn 21 41 45.4 +1.0**
GROC *e*Sn **Sn 21 42 24.0 +0.3**
AKH Akhalkalaki 3.59 159 *i* PN **Pn 21 41 50.2 +1.4**
AKH Akhalkalaki 3.59 159 *i* Pn **Pn 21 41 50.2 +1.4**
AKH *i* Sn **Sn 21 42 31.2 -0.4**
DVE Vedeno 3.62 119 *e*PN **Pn 21 41 49.7 +0.7**
DVE *e*S **Sn 21 42 32.3 +0.3**
DVE Vedeno 3.62 119 *e*Pn **Pn 21 41 49.7 +0.7**
DVE *e*Sn **Sn 21 42 32.3 +0.3**
DLMR Dylym 3.89 115 *e*PN **Pn 21 41 52.9 +0.3**
DLMR *e*S **Sn 21 42 37.1 -1.4**
DLMR Dylym 3.89 115 *e*Pn **Pn 21 41 52.9 +0.3**
DLMR *e*Sn **Sn 21 42 37.1 -1.4**
UNCR Uncukul 4.17 118 *e*PN **Pn 21 41 57.0 +0.5**
UNCR *e*S **Sn 21 42 46.2 +0.7**
UNCR Uncukul 4.17 118 *e*Pn **Pn 21 41 57.0 +0.5**
UNCR *e*Sn **Sn 21 42 46.2 +0.7**
KRNR Karanay 4.18 116 *e*PN **Pn 21 41 56.9 +0.2**
KRNR *e*S **Sn 21 42 44.7 -1.2**
KRNR Karanay 4.18 116 *e*Pn **Pn 21 41 56.9 +0.2**
KRNR *e*Sn **Sn 21 42 44.7 -1.2**
DGRG David-gareji 4.24 141 P **Pg 21 42 11.3 -2.3**
DGRG David-gareji 4.24 141 PN **Pg 21 42 11.3 -2.3**
BUJR Buynaksk 4.31 115 *e*PN **Pn 21 41 59.9 +1.4**
BUJR *e*S **Sn 21 42 49.8 +0.8**
BUJR Buynaksk 4.31 115 *e*Pn **Pn 21 41 59.9 +1.4**
BUJR *e*Sn **Sn 21 42 49.8 +0.8**
ARKR Arakani 4.35 118 *e*PN **Pn 21 41 59.9 +0.9**
ARKR *e*S **Sn 21 42 50.3 +0.3**
ARKR Arakani 4.35 118 *e*Pn **Pn 21 41 60.0 +0.9**
ARKR *e*Sn **Sn 21 42 50.3 +0.3**
GNBR Gunib 4.45 121 *c*e PN **Pn 21 42 01.6 +1.2**
GNBR Gunib 4.45 121 *e*Pn **Pn 21 42 01.6 +1.2**
FEO Feodosiya 4.56 275 *e*PN **Pn 21 42 03.9 +2.0**
FEO *e*S **Sn 21 42 58.9 +3.8**
FEO pmax pmax
comp=Z,5.0nm,0.2s
FEO smax smax
comp=N,23nm,0.5s
FEO smax smax
comp=E,3.0nm,0.2s
FEO Feodosiya 4.56 275 *e*Pn **Pn 21 42 03.9 +2.0**
FEO Feodosiya 4.56 275 *e*P **Pn 21 42 03.9 +2.0**
FEO Pm 21 42 04.0
comp=Z,5.0nm,0.2s
FEO *e*S **Sn 21 42 58.9 +3.8**
FEO Sm 21 42 59.3
comp=N,23nm,0.5s
FEO Sm 21 42 59.3
comp=E,3.0nm,0.2s
KMKR Kumukh 4.68 123 *e*PN **Pn 21 42 05.1 +1.4**
KMKR *e*S **Sn 21 42 59.7 +1.4**
KMKR Kumukh 4.68 123 *e*Pn **Pn 21 42 05.1 +1.4**
SUDU Sudak 4.84 274 *e*P **Pn 21 42 05.4 -0.3**
SUDU Pm 21 42 08.5
comp=Z,9.0nm,0.4s
SUDU *e*S **Sn 21 43 01.3 -0.6**
SUDU Sm 21 43 09.0
comp=N,12nm,0.4s
SUDU Sm 21 43 09.0
comp=E,4.0nm,0.3s
SUDU Sudak 4.84 274 *e*PN **Pn 21 42 05.4 -0.3**
SUDU *e*S **Sn 21 43 01.3 -0.6**
SUDU pmax pmax
comp=Z,9.0nm,0.4s
SUDU smax smax
comp=N,12nm,0.4s
SUDU smax smax
comp=E,4.0nm,0.3s
SUDU Sudak 4.84 274 *e*Sn **Sn 21 43 01.3 -0.6**
ALU Alushta 5.27 271 *e*P **Pn 21 42 12.5 +0.9**
ALU Pm 21 42 12.8
comp=Z,2.0nm,0.3s
ALU *e*S **Sn 21 43 12.6 0.0**
ALU Sm 21 43 13.6
comp=N,3.0nm,0.4s
ALU Alushta 5.27 271 *e*PN **Pn 21 42 12.5 +0.9**
ALU *e*S **Sn 21 43 12.6 0.0**
ALU pmax pmax
comp=Z,2.0nm,0.3s
ALU smax smax
comp=N,3.0nm,0.4s
ALU Alushta 5.27 271 *e*Pn **Pn 21 42 12.5 +0.9**
ALU *e*Sn **Sn 21 43 12.6 0.0**
YAL Yalta 5.47 270 *e*P **Pn 21 42 14.2 -0.1**
YAL Pm 21 42 15.0
comp=Z,8.0nm,0.3s
YAL *e*S **Sn 21 43 16.5 -0.9**
YAL Sm 21 43 19.1
comp=N,7.0nm,0.2s
YAL Sm 21 43 19.1
comp=E,12nm,0.4s
YAL Yalta 5.47 270 *e*P **Pn 21 42 14.2 -0.1**
YAL *e*S **Sn 21 43 16.5 -0.9**
YAL pmax pmax
comp=Z,8.0nm,0.4s
YAL smax smax
comp=N,7.0nm,0.2s
YAL smax smax
comp=E,12nm,0.4s
YAL Yalta 5.47 270 *e*Pn **Pn 21 42 14.2 -0.1**
YAL *e*Sn **Sn 21 43 16.5 -0.9**
SEV Sevastopol' 5.81 270 *e*P **Pn 21 42 18.6 -0.4**
SEV Pm 21 42 21.0
comp=Z,2.0nm,0.2s
SEV *e*S **Sn 21 43 25.0 -0.8**
SEV Sm 21 43 26.0
comp=N,5.0nm,0.4s
SEV Sm 21 43 26.0
comp=E,2.0nm,0.2s
SEV Sevastopol' 5.81 270 *e*P **Pn 21 42 18.6 -0.4**
SEV *e*S **Sn 21 43 25.0 -0.8**
SEV pmax pmax
comp=Z,2.0nm,0.2s
SEV smax smax
comp=N,5.0nm,0.4s
SEV smax smax
comp=E,2.0nm,0.3s
SEV Sevastopol' 5.81 270 *e*Pn **Pn 21 42 18.6 -0.4**
SEV *e*Sn **Sn 21 43 25.0 -0.8**
VORR Voronezh 7.10 347 *e*P Pn 21 42 31.3 -5.4
VORR pmax pmax
comp=Z,10.0nm,0.4s
BRTR Keskin Array B 7.89 233 Pn **Pn 21 42 49.6 +1.9**
comp=Z,0.1nm,0.3s,baz=34,slow=10,SNR=2.0
comp=Z,0.2nm,0.4s
BELG Belogornoye 8.53 25 Pn **Pn 21 42 54.3 -2.0**
comp=Z,2.2nm,0.3s,baz=247,slow=0.5,SNR=12
BELG Sn Sn 21 44 24.6 -8.1
comp=Z,0.7nm,0.3s,baz=248,slow=23,SNR=1.4
BELG Lg Lg 21 45 18.5
comp=Z,0.5nm,0.3s,baz=82,slow=17,SNR=1.3
AKASG Malin Array Be 10.33 309 Pn **Pn 21 43 17.8 -3.1**
comp=Z,0.3nm,0.3s,baz=116,slow=11,SNR=1.8
AKASG Sn **Sn 21 45 09.6 -7.2**
comp=Z,0.4nm,0.3s,baz=124,slow=25,SNR=3.4
AKASG Lg Lg 21 46 10.4
baz=119,slow=30
comp=Z,0.1nm,0.3s
MLR Muntele Rosu 11.23 279 Pn **Pn 21 43 31.0 -2.4**
comp=Z,0.1nm,0.3s,baz=9.5,slow=11,SNR=2.0
MLR Sn **Sn 21 45 32.5 -6.7**
baz=180,slow=20
comp=Z,0.5nm,0.4s
AKTO Aktyubinsk 12.30 57 Pn **Pn 21 43 46.4 -1.5**
comp=Z,0.5nm,0.3s,baz=256,slow=4.7,SNR=7.4
AKTO Sn Sn 21 45 50.6 -15
comp=Z,0.1nm,0.3s,baz=49,slow=22,SNR=1.4
comp=Z,1.2nm,0.3s
AKTO Aktyubinsk 12.30 57 P **Pn 21 43 44.8 -3.1**
AKTO Aktyubinsk 12.30 57 ⇓P **Pn 21 43 44.8 -3.1**
comp=Z,1.7nm,1.4s
AKTO ⇓S Sn 21 45 50.5 -15
comp=Z,0.4nm,0.5s
AB31 Akbulak array 13.15 64 P **Pn 21 43 59.9 +0.4**
AB31 Akbulak array 13.15 64 P **Pn 21 43 59.9 +0.4**
comp=Z,0.1nm,0.3s,baz=256,slow=11,SNR=11
AB31 ⇓S Sn 21 46 06.8 -19
comp=Z,0.4nm,0.7s,baz=252,slow=19,SNR=5.3
GEYT Alibeck 14.03 114 LR LR 21 49 58.2
comp=Z,23nm,20.0s,baz=262,slow=39
KIRV Kirov 14.59 16 LR LR 21 49 24.9
comp=Z,30nm,22.0s,baz=63,slow=35
FINES FINESS Array B 19.08 337 P **P 21 45 15.9 +0.6**
comp=Z,0.2nm,0.3s,baz=145,slow=13,SNR=8.9
comp=Z,4.7nm,0.9s
BVAR Borovoye Array 20.41 56 P **P 21 45 30.7 +0.8**
comp=Z,0.1nm,0.3s,baz=262,slow=17,SNR=2.9
comp=Z,0.1nm,0.3s
TORD Torodi Ar. Bea 46.43 240 P **P 21 49 19.4 -0.5**
comp=Z,0.5nm,1.0s,baz=40,slow=9.3,SNR=2.1
comp=Z,0.5nm,1.0s

NOU 09 21:51:12.6, 15°.53S×167°.55E, h111km, MLv4.5/9,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.27 164**		P	Pn	21 51 49.7	+0.7
LIFNC	**LIFOU**	**5.23 183**		P	Pn	21 52 27.2	-1.3
KOUNC	**Koumac, New Ca**	**5.88 211**		P	Pn	21 52 38.2	+0.9
YATNC	**Mamie plateau,**	**6.52 185**		P	Pn	21 52 45.6	-0.5
DZM	**Mont Dzumac**	**6.59 189**		P	Pn	21 52 47.6	+0.5

*JMA **09** 21:59:10.4±1.2, 47°.N×6°.×15°.4E±°, h30km, MV3.9/9,*
KURILE ISLANDS REGION
*IDC **09** 21:59:20.2±4.0, 47°.63N×153°.12E, h112km±32km, mb3.3/6,*
mbtmp3.6/7, MS2.2/1, Error ellipse: s-maj=49.2km
s-min=21.9km az=138.0
ISC 09 21:59:10.2±1.4, 46°.8N±0°.2×153°.9E±0°.2, h35km, n26,
σ2°.52/18, mb3.6/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**6.71 242**		*e*P	**Pn**	**22 00 46.7**	**+0.7**
NEM2				*e*S	**Sn**	**22 01 57.9**	**-3.4**
PETK	**Petropavlovsk-**	**6.78 20**		P	**Pn**	**22 00 48.0**	**+1.0**
	2.3nm,0.8s,baz=199,slow=13,SNR=1.4						
PETK				S	**Sn**	**22 02 00.5**	**-2.4**
	2.8nm,1.0s,baz=355,slow=33,SNR=1.2						
JNK	**Nakash**	**7.23 247**		*e*P	**Pn**	**22 00 55.5**	**+2.2**
JAK	**Akkeshi**	**7.55 243**		*e*P	**Pn**	**22 00 58.9**	**+1.3**
JAK				*e*S	**Sn**	**22 02 20.1**	**-1.8**
JAR	**Ashorobuto**	**7.97 248**		*e*P	**Pn**	**22 01 06.0**	**+2.5**
JAR				*e*S	**Sn**	**22 02 32.4**	**+0.1**
JOB	**Onbets**	**8.13 245**		*e*P	**Pn**	**22 01 07.5**	**+1.8**
JKK2	**Kamakawa 2**	**8.37 254**		*e*P	Pn	22 01 14.3	+5.3
JWK2	**Keihoku**	**8.47 264**		*e*P	**Pn**	**22 01 14.5**	**+4.3**
JCH	**Churui**	**8.58 245**		*e*P	**Pn**	**22 01 12.4**	**+0.6**
JCH				*e*S	**Sn**	**22 02 44.0**	**-3.3**
JNBK	**Urakawa-nobuka**	**9.14 244**		*e*P	**Pn**	**22 01 19.9**	**+0.4**
MA2	**Magadan**	**12.93 353**		LR	LR	22 07 42.3	
	comp=Z,10.0nm,18.5s,baz=116,slow=42						
KSRS	**Korea Array**	**21.32 253**		P	**P**	**22 03 56.9**	**+3.1**
	0.8nm,0.5s,baz=53,slow=11,SNR=1.8						
	0.8nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.03 154**		T	T	22 37 03.9	
	baz=341,slow=76,SNR=152						
H11N1	**WAKE ISLAND Hy**	**29.04 154**		T	T	22 37 04.0	
	baz=341,slow=76,SNR=122						
H11N3	**WAKE ISLAND Hy**	**29.04 154**		T	T	22 37 04.1	
	baz=341,slow=76,SNR=122						
H11S1	**WAKE ISLAND Hy**	**30.12 155**		T	T	22 38 26.6	
	baz=342,slow=76,SNR=200						
H11S3	**WAKE ISLAND Hy**	**30.13 155**		T	T	22 38 26.5	
	baz=342,slow=76,SNR=181						
H11S2	**WAKE ISLAND Hy**	**30.14 155**		T	T	22 38 25.6	
	baz=342,slow=76,SNR=180						
CMAR	**Chiang Mai Arr**	**52.90 257**		P	**P**	**22 08 21.8**	**-0.9**
	0.5nm,0.3s,baz=34,slow=9.8,SNR=2.3						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**64.22 335**		P	P	22 09 35.9	-5.1
	1.5nm,0.7s,baz=25,slow=9.5,SNR=7.6						
	1.5nm,0.7s						
NOA	**NORSAR Array B**	**68.35 341**		P	**P**	**22 10 03.8**	**-3.6**
	0.6nm,0.9s,baz=29,slow=6.3,SNR=2.0						
	0.6nm,0.9s						
AKASG	**Malin Array Be**	**71.80 327**		P	P	22 10 24.1	-4.6
	0.2nm,0.3s,baz=212,slow=27,SNR=2.6						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**77.00 61**		P	**P**	**22 11 01.4**	**+1.9**
	0.1nm,0.4s,baz=292,slow=2.8,SNR=2.0						
	0.1nm,0.4s						
H03N2	**Juan Fernandez**	**138.22 91**		T	T	00 53 31.7	
	baz=308,slow=77,SNR=16						
H03N1	**Juan Fernandez**	**138.24 91**		T	T	00 53 30.3	
	baz=308,slow=77,SNR=21						
H03N3	**Juan Fernandez**	**138.24 91**		T	T	00 53 32.5	
	baz=308,slow=77,SNR=17						

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*IDC **09** 22:10:21.7±5.1, 35°.97N×71°.40E, h95km±33km, mb3.4/6,*
mbtmp3.7/12, Error ellipse: s-maj=61.6km s-min=26.2km
az=148.0
ISC 09 22:10:23.8±0.9, 36°.27N±0°.08×71°.35E±0°.09, h100km, n23,
σ1°.77/25, mb3.5/5, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.81 20**		P	**Pn**	**22 12 02.7**	**+1.5**
	3.1nm,0.4s,baz=212,slow=8.9,SNR=10						
AAK				S	**Sn**	**22 13 15.4**	**-1.8**
	3.6nm,0.8s,baz=358,slow=23,SNR=6.5						
KK31	**Karatay Array**	**6.85 355**		Pn	**Pn**	**22 12 02.0**	**+0.4**
	4.0nm,0.3s,baz=186,slow=14,SNR=50						
KK31				Sn	**Sn**	**22 13 13.1**	**-5.0**
	2.0nm,0.3s,baz=183,slow=17,SNR=8.0						
GEYT	**Alibeck**	**10.70 283**		P	**Pn**	**22 12 53.3**	**-0.7**
	0.6nm,0.3s,baz=91,slow=12,SNR=2.6						
GEYT				S	Sn	22 14 45.5	-6.2
	0.9nm,0.4s,baz=153,slow=13,SNR=2.2						
PYUN	**Piuthan**	**12.78 126**		*e*P	**Pn**	**22 13 21.7**	**-0.3**
	10nm,0.4s						
MKAR	**Makanchi Array**	**13.32 34**		P	**Pn**	**22 13 30.9**	**+2.2**
	0.8nm,0.9s,baz=215,slow=10,SNR=1.9						
GKN	**Gorkha**	**13.94 122**		*e*P	**Pn**	**22 13 36.2**	**-1.0**
	10nm,0.4s						
DMN	**Daman**	**14.52 123**		*e*P	**Pn**	**22 13 43.6**	**-1.0**
PKIN	**Phulchoki**	**14.73 122**		*e*P	**Pn**	**22 13 46.9**	**-0.5**
	7.2nm,0.4s						
PKI	**Pulchoki**	**14.75 122**		*e*P	**Pn**	**22 13 47.0**	**-0.6**
	4.6nm,0.4s						
GUN	**Gumba**	**14.86 120**		*e*P	**Pn**	**22 13 47.1**	**-2.0**
	4.9nm,0.3s						
JIRN	**Jiri**	**15.23 120**		*e*P	**Pn**	**22 13 51.9**	**-1.9**
	8.4nm,0.4s						
KURBB	**Kurchatov Arra**	**15.25 18**		P	**P**	**22 13 55.9**	**-0.3**
	0.4nm,0.3s,baz=207,slow=10,SNR=6.6						
RAMN	**Ramite**	**15.96 121**		*e*P	**Pn**	**22 14 00.8**	**-2.0**
	6.2nm,0.5s						
TAPN	**Taplejung**	**16.49 118**		*e*P	**Pn**	**22 14 07.4**	**-2.0**
	6.1nm,0.6s						
BVAR	**Borovoye Array**	**16.77 358**		P	**P**	**22 14 14.0**	**+1.2**
	0.4nm,0.4s,baz=160,slow=8.9,SNR=2.4						
AKTO	**Aktyubinsk**	**17.12 330**		P	**P**	**22 14 18.6**	**+1.9**
	2.4nm,0.7s,baz=154,slow=8.0,SNR=9.5						
AKTO				S	Sn	22 17 16.1	-11
	0.5nm,0.4s,baz=339,slow=21,SNR=2.3						
ZALV	**Zalesovo Beam**	**20.01 24**		P	**P**	**22 14 48.9**	**+0.6**
	2.2nm,0.4s,baz=208,slow=10,SNR=13						
	2.2nm,0.4s						
ARU	**Arti**	**21.94 341**		P	**P**	**22 15 10.3**	**+1.3**
	1.5nm,0.6s,baz=145,slow=16,SNR=3.3						
	1.5nm,0.6s						
FINES	**FINESS Array B**	**37.83 326**		P	**P**	**22 17 31.5**	**+1.2**
	4.3nm,1.0s,baz=131,slow=8.6,SNR=2.2						
	4.3nm,1.0s						
ARCES	**ARCESS Array B**	**41.46 338**		P	**P**	**22 18 01.6**	**+1.3**
	0.7nm,0.6s,baz=121,slow=9.0,SNR=4.2						
	0.7nm,0.6s						
NB2	**NORSAR Subarra**	**44.73 323**		P	**P**	**22 18 28.5**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.73 323**		P	**P**	**22 18 26.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.8,SNR=4.2						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.99 269**		P	**P**	**22 20 58.7**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=53,slow=6.5,SNR=1.6						
	comp=Z,0.2nm,0.6s						

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*IDC **09** 22:14:06.3±0.8, 29°.81S×179°.36W, h318km±10km, mb2.8/2,*
mbtmp3.8/3, Error ellipse: s-maj=36.5km s-min=25.2km
az=140.0
ISC 09 22:14:07.6±1.0, 30°.26S±0°.08×178°.9W±0°.2, h350km, n43,
σ1°.77/60, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.30 40**		P	**Pn**	**22 14 53.7**	**-1.1**
GLKZ				S	**S**	**22 15 29.3**	**-3.2**
RAO	**Raoul Island**	**1.31 40**		P	Pn	22 14 51.1	-3.7
	125nm,0.3s,baz=106,slow=21,SNR=2.2						
RAO				S	S	22 15 25.9	-6.7
	196nm,0.3s,baz=273,slow=23,SNR=6.7						
MXZ	**Matakaoa Point**	**7.65 197**		P	**Pn**	**22 16 01.7**	**+4.2**
MXZ				S	**S**	**22 17 27.0**	**0.0**
WMGZ	**Waiomatatini S**	**7.87 196**		P	**Pn**	**22 16 02.5**	**+2.4**
WMGZ				S	**S**	**22 17 31.6**	**-0.1**
HAZ	**Te Kaha**	**7.97 199**		P	**Pn**	**22 16 02.1**	**+0.8**
HAZ				S	**S**	**22 17 32.7**	**-1.3**
PKGZ	**Pakihiroa**	**8.02 198**		P	**Pn**	**22 16 05.8**	**+3.9**
PKGZ				S	**S**	**22 17 33.6**	**-1.5**
WCZ	**Waipu Caves**	**8.02 223**		P	**Pn**	**22 16 04.9**	**+3.0**
PUZ	**Puketiti**	**8.14 196**		S	**S**	**22 17 36.2**	**-1.6**
RUGZ	**Raukumara Rang**	**8.20 199**		P	**Pn**	**22 16 05.4**	**+1.2**
RUGZ				S	**S**	**22 17 37.9**	**-1.3**
TWGZ	**Tauwhareparae**	**8.31 197**		P	**Pn**	**22 16 06.4**	**+1.0**
TWGZ				S	**S**	**22 17 41.7**	**+0.1**
CNGZ	**Carnagh Statio**	**8.55 196**		P	**P**	**22 16 10.5**	**-0.3**
MWZ	**Matawai**	**8.58 199**		P	**P**	**22 16 11.5**	**+0.3**
MWZ				S	**S**	**22 17 46.2**	**-1.3**

TKGZ Te Karaka 8.60 197 P **P** **22 16 12.7 +1.4**
TKGZ S **S** **22 17 46.1 -1.5**
URZ Urewera 8.64 201 P **P** **22 16 11.4 -0.4**
6.9nm,0.3s,baz=345,slow=5.4,SNR=10.0
URZ S **S** **22 17 46.4 -2.2**
7.1nm,0.3s,baz=113,slow=16,SNR=2.9
URZ Urewera 8.64 201 P **P** **22 16 11.8 0.0**
URZ S **S** **22 17 46.2 -2.4**
RIGZ Rimuhau 8.87 197 P **Pn** **22 16 09.9 -2.1**
RIGZ S **S** **22 17 52.2 -1.4**
MUGZ Murupara 8.95 202 P **Pn** **22 16 14.0 +1.1**
RTZ Ruatahuna 9.01 201 P **Pn** **22 16 10.5 -3.2**
SNGZ Shannon Statio 9.05 199 P **P** **22 16 16.8 +0.3**
SNGZ S **S** **22 17 57.4 -0.3**
MTHZ Maungataniwha 9.27 201 P **P** **22 16 19.3 +0.4**
MTHZ S **S** **22 18 02.0 -0.4**
BKZ Black Stump Fm 9.66 202 P **P** **22 16 23.4 +0.2**
BKZ S **S** **22 18 06.4 -4.8**
NTVZ North Tongarir 9.89 205 P **P** **22 16 27.1 +1.3**
KWHZ Kaweka Forest 9.92 202 P **P** **22 16 26.6 +0.4**
KWHZ S **S** **22 18 15.7 -1.2**
OTVZ Oturere 9.95 205 P **P** **22 16 27.0 +0.4**
SNVZ South Ngauruho 9.98 205 P **P** **22 16 27.2 +0.3**
KAHZ Kahuranaki 10.13 199 P **Pn** **22 16 28.2 +1.2**
KAHZ S **S** **22 18 22.9 +1.5**
VRZ Vera Road 10.27 209 P **P** **22 16 33.5 +3.6**
PXZ Pawanui 10.35 198 P **P** **22 16 30.8 0.0**
PXZ S **S** **22 18 25.2 -0.9**
MHEZ Mangahewa 10.42 211 P **P** **22 16 32.7 +1.1**
PNHZ Pukenui 10.44 201 P **P** **22 16 31.8 -0.1**
PNHZ S **S** **22 18 26.5 -1.7**
PRHZ Porangahau 10.63 199 P **P** **22 16 34.8 +0.8**
PRHZ S **S** **22 18 32.3 -0.2**
BFZ Birch Farm 11.13 200 P **P** **22 16 40.0 +0.5**
MRZ Mangatainoka R 11.31 202 P **Pn** **22 16 40.9 -0.2**
TIWZ Tintock 11.32 201 P **P** **22 16 42.4 +0.7**
TMWZ Te Maipa 11.62 200 P **Pn** **22 16 45.3 +0.5**
MSVF Nonsavu 12.78 347 P P 22 16 54.8 -3.3
23nm,0.7s,baz=176,slow=9.4,SNR=13
DZM Mont Dzumac 15.48 298 P **P** **22 17 28.0 +0.3**
5.5nm,0.6s,baz=158,slow=8.6,SNR=11
ASAR Alice Springs 42.35 267 P **P** **22 21 26.1 -2.8**
0.3nm,0.6s,baz=248,slow=37,SNR=2.1
0.3nm,0.6s
WRA Warramunga Arr 43.33 272 P **P** **22 21 34.8 -1.9**
0.9nm,0.8s,baz=114,slow=6.9,SNR=8.2
0.9nm,0.8s
FINES FINESS Array B 144.75 339 PKP PKPbc 22 33 02.3 0.0
1.7nm,0.5s,baz=62,slow=3.2,SNR=13
NOA NORSAR Array B 148.49 351 PKPbc **PKPbc** **22 33 13.3 +0.5**
0.5nm,0.5s,baz=14,slow=4.1,SNR=2.3
AKASG **Malin Array Be 150.72 322** PKPbc **PKPbc** **22 33 19.2 +0.8**
0.9nm,0.6s,baz=50,slow=3.1,SNR=5.2
TORD Torodi Ar. Bea 162.96 182 PKPab **PKPab** **22 34 23.6 +3.3**
0.2nm,0.5s,baz=186,slow=3.1,SNR=1.4

*IDC **09** 22:15:31.8±3.1, 36°.34N×141°.06E, h40km±28km, mb3.5/12, mbtmp3.8/16, ML3.4/2, MS2.8/3, Error ellipse: s-maj=25.4km s-min=15.4km az=72.0*
*JMA **09** 22:15:32.0±0.1, 36°.4N±0°.3×140°.9E±0°.9, h46km±1km, MD3.8/34, MV4.1/34, E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .
*NEIC **09** 22:15:32.4±1.1, 36°.36N±0°.01×140°.90E±0°.07, h40km±8km, mb4.4/10, Error ellipse: s-maj=7.9km s-min=2.0km az=89.0*
*NIED **09** 22:15:32.0, 36°.35N×140°.92E, h46km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.18; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-5.27; $M_{r\theta}$-1.20; $M_{\phi\theta}$-0.43; $M_{\phi r}$1.53; Fault plane solution: $M_0$5.59000×10^{14} NP1: ϕ_s197.00000°, δ39.00000°, λ111.00000°. NP2: ϕ_s351.00000°, δ54.00000°, λ74.00000°.*
ISC 09 22:15:32.2±1.0, 36°.36N±0°.04×140°.97E±0°.07, h40km±9km, n53, σ0°99/49, mb4.0/18, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.31**	**267**	*i* P	**Pn**	**22 15 40.6**	**0.0**
JHYU				S	**Sn**	**22 15 46.4**	**-0.1**
JHYU	**Hitachinakayam**	**0.31**	**267**	A	A	22 15 40.6	
	comp=E,30nm,0.7s,comp=E,15nm,0.3s						
JHO	**Hitachi**	**0.41**	**308**	P	**Pn**	**22 15 41.4**	**-0.4**
JHO				S	**Sn**	**22 15 47.8**	**-0.8**
JHO	**Hitachi**	**0.41**	**308**	A	A	22 15 41.4	
	comp=E,9.0nm,1.5s,comp=E,7.0nm,0.9s						
JIHU	**Itakohorinouch**	**0.53**	**223**	*i* P	**Pn**	**22 15 43.6**	**+0.2**
JIHU				S	**Sn**	**22 15 52.0**	**+0.7**
JIHU	**Itakohorinouch**	**0.53**	**223**	A	A	22 15 43.6	
	comp=E,28nm,0.6s,comp=E,34nm,0.9s						
JYT	**Yasato**	**0.64**	**258**		**Pn**	**22 15 44.2**	**-0.6**
JYT				Sn	**Sn**	**22 15 52.7**	**-1.2**
JYT	**Yasato**	**0.64**	**258**	⇓P	**Pn**	**22 15 44.3**	**-0.6**
JYT				⇓S	**Sn**	**22 15 52.7**	**-1.2**
JYT	**Yasato**	**0.64**	**258**	A	A	22 15 44.3	
	comp=E,9.0nm,0.3s,comp=E,13nm,0.3s						
JFFD	**Fukushimafurud**	**0.80**	**336**	A	A	22 15 46.9	
	comp=E,4.0nm,0.4s,comp=E,4.0nm,0.6s						
JSMT	**Sammumatsuo**	**0.83**	**211**	P	**Pn**	**22 15 47.6**	**+0.1**
JSMT				S	**Sn**	**22 15 58.8**	**+0.3**
JFK	**Kawauchi**	**1.01**	**356**	P	**Pn**	**22 15 49.0**	**-0.9**
JAG	**Ashikaga**	**1.23**	**273**	⇓P	**Pn**	**22 15 52.6**	**-0.3**
JMM	**Marumori**	**1.51**	**355**		**Pn**	**22 15 56.8**	**0.0**
JMM				Sn	**Sn**	**22 16 15.1**	**-0.1**
MAJO	**Matsushiro**	**2.24**	**276**		**Pn**	**22 16 07.8**	**+1.0**
JSD	**Sado**	**2.74**	**309**		**Pn**	**22 16 13.0**	**-0.6**
JGF	**Kuroka**	**3.03**	**257**		**Pn**	**22 16 20.0**	**+2.3**
INU	**Inuyama**	**3.37**	**254**		**Pn**	**22 16 23.2**	**+1.0**
JHJ	**Hachijo jima 2**	**3.38**	**197**	Pn	**Pn**	**22 16 22.1**	**-0.3**
	12nm,0.3s,baz=53,slow=13,SNR=17						
JHJ				Sn	**Sn**	**22 17 01.3**	**0.0**
	22nm,0.3s,baz=269,slow=23,SNR=8.0						
	74nm,0.8s						
JCJ	**Chichijima**	**9.29**	**173**	Pn	**Pn**	**22 17 41.0**	**-2.6**
	18nm,0.3s,baz=355,slow=22,SNR=6.3						
JCJ				Sn	Sn	22 19 14.3	-13
	1.9nm,0.3s,baz=303,slow=21,SNR=1.5						
JCJ				LR	LR	22 20 34.9	
	comp=Z,24nm,21.1s,baz=94,slow=33						
USRK	**Ussuriysk Ar.**	**10.41**	**322**	Pn	**Pn**	**22 18 00.6**	**+1.8**
	3.2nm,0.7s,baz=140,slow=12,SNR=2.2						
KSRS	**Korea Array**	**10.51**	**280**	Pn	**Pn**	**22 18 01.6**	**+1.4**
	0.2nm,0.3s,baz=93,slow=14,SNR=2.2						
KSRS				LR	LR	22 21 59.8	
	comp=Z,23nm,21.7s,baz=100,slow=37						
	1.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.12**	**119**	T	T	22 50 41.9	
	baz=312,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.13**	**119**	T	T	22 50 46.1	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**28.14**	**119**	T	T	22 50 44.9	
	baz=312,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.80**	**121**	T	T	22 51 32.3	
	baz=314,slow=75,SNR=96						
H11S3	**WAKE ISLAND Hy**	**28.80**	**121**	T	T	22 51 39.1	
	baz=314,slow=75,SNR=66						
H11S2	**WAKE ISLAND Hy**	**28.82**	**121**	T	T	22 51 40.2	
	baz=314,slow=75,SNR=87						
ZALV	**Zalesovo Beam**	**42.11**	**313**	P	**P**	**22 23 20.1**	**0.0**
	0.4nm,0.4s,baz=90,slow=7.4,SNR=4.0						
	0.4nm,0.4s						
MK31	**Makanchi Array**	**44.18**	**303**	P	**P**	**22 23 36.8**	**-0.3**
MKAR	**Makanchi Array**	**44.18**	**303**	P	**P**	**22 23 38.3**	**+1.2**
	0.3nm,0.7s,baz=93,slow=8.7,SNR=1.9						
	0.3nm,0.7s						
KURK	**Kurchatov**	**46.07**	**309**	P	**P**	**22 23 52.0**	**+0.1**
KURK				IAmb	IAmb	22 24 08.8	
	comp=Z,2.1nm,0.7s						
KURBB	**Kurchatov Arra**	**46.14**	**308**	P	**P**	**22 23 52.3**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=86,slow=8.0,SNR=12						
	comp=Z,0.8nm,0.4s						
CHIR	**Chirikof Islan**	**46.27**	**44**	P	**P**	**22 23 53.4**	**-0.1**
K20K	**Telida**	**47.08**	**34**	P	**P**	**22 24 01.1**	**+1.4**
K20K				IAmb	IAmb	22 24 28.7	
	comp=Z,7.4nm,1.4s						
ILAR	**Eielson Array**	**50.25**	**32**	P	**P**	**22 24 22.3**	**-1.7**
	comp=Z,0.8nm,0.9s,baz=254,slow=5.5,SNR=6.3						
	comp=Z,0.8nm,0.9s						
BVAR	**Borovoye Array**	**50.77**	**313**	P	**P**	**22 24 27.7**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=61,slow=6.8,SNR=3.0						
	comp=Z,0.2nm,0.4s						
INK	**Inuvik**	**55.15**	**27**	P	**P**	**22 25 00.7**	**+0.6**
INK				IAmb	IAmb	22 25 38.8	
	comp=Z,5.6nm,1.1s						
CHGR	**Chuyangaron**	**55.64**	**296**	P	**P**	**22 25 04.3**	**+0.1**
CHGR				IAmb	IAmb	22 25 26.0	
	comp=Z,3.8nm,0.8s						
WB0	**Warramunga Arr**	**56.17**	**187**	P	**P**	**22 25 07.1**	**-0.9**
WB0				IAmb	IAmb	22 25 43.8	
	comp=Z,6.7nm,1.4s						
WR0	**Warramunga Arr**	**56.34**	**187**	P	**P**	**22 25 08.4**	**-0.8**
WB2	**Warramunga Arr**	**56.34**	**187**	P	**P**	**22 25 08.4**	**-0.9**
WB2				IAmb	IAmb	22 25 09.3	
	comp=Z,5.6nm,1.0s						
WRA	**Warramunga Arr**	**56.35**	**188**	P	**P**	**22 25 08.6**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=4.3,slow=7.5,SNR=20						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**56.35**	**188**	P	**P**	**22 25 07.2**	**-2.0**
ARU	**Arti**	**56.63**	**319**	P	**P**	**22 25 10.7**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=103,slow=1.3,SNR=4.7						
	comp=Z,1.7nm,0.4s						
RSD	**Rainshed**	**57.83**	**89**	P	**P**	**22 25 21.4**	**+1.3**
ABKAR	**Akbulak array**	**58.10**	**310**	P	**P**	**22 25 21.2**	**-0.2**
ASAR	**Alice Springs**	**60.07**	**187**	P	**P**	**22 25 35.0**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=20,slow=7.7,SNR=6.9						
	comp=Z,0.7nm,0.7s						
MSVF	**Nonsavu**	**64.21**	**140**	LR	LR	22 55 21.5	
	comp=Z,34nm,18.0s,baz=4.9,slow=37						
AKASG	**Malin Array Be**	**74.61**	**322**	P	**P**	**22 27 06.1**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=47,slow=6.3,SNR=2.1						
	comp=Z,0.4nm,0.6s						
NOA	**NORSAR Array B**	**74.67**	**337**	P	**P**	**22 27 07.2**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=30,slow=3.5,SNR=1.9						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	**75.68**	**53**	P	**P**	**22 27 14.8**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=256,slow=6.1,SNR=2.0						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**78.39**	**45**	P	**P**	**22 27 28.5**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=262,slow=3.5,SNR=2.3						
	comp=Z,0.2nm,0.7s						

*IDC **09** 22:38:09.3±0.9, 20°.63S×72°.29W, h0km, mb3.8/8, mbtmp3.8/10, ML3.8/2, MS3.0/5, Error ellipse: s-maj=26.2km s-min=20.1km az=41.0*
*GUC **09** 22:38:14.4±0.7, 20°.84S×72°.11W, h25km±3km, ML3.8*
*VAO **09** 22:38:18.3±1.3, 20°.38S×71°.84W, h10km, mb4.2*
ISC 09 22:38:12.3±0.8, 20.78S±0°.04×72.23W±0°.07, h10km, n69, σ2°13/79, mb3.9/7, 17C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**1.93**	**84**	⇑*i* P	**Pn**	**22 38 43.9**	**-1.4**
TA01				*i* S	**Sn**	**22 39 07.1**	**-2.5**
TA01				IAML		22 39 07.7	
	comp=N,1μm,0.3s						
TA01	**Diego Aracena**	**1.93**	**84**	⇑*e* P	Pn	22 38 43.6	-1.6
TA01				*e* S	**Sn**	**22 39 06.9**	**-2.7**
TA01				IAML		22 39 07.7	
	comp=N,1μm,0.3s						
PATCX	**Punta Patache**	**1.95**	**92**	⇑*e* P	**Pn**	**22 38 44.1**	**-1.4**
PATCX				*e* S	**Sn**	**22 39 06.6**	**-3.5**
PATCX				IAML		22 39 11.5	
	comp=E,689nm,0.6s						
PATCX	**Punta Patache**	**1.95**	**92**	⇑*e* P	**Pn**	**22 38 44.1**	**-1.4**
PATCX				*e* S	**Sn**	**22 39 06.6**	**-3.5**
PATCX				IAML		22 39 11.5	
	comp=E,689nm,0.6s						
TA02	**Huaiquique**	**2.04**	**76**	⇑*e* P	**Pn**	**22 38 45.4**	**-1.2**
TA02				*e* S	**Sn**	**22 39 09.8**	**-2.3**
TA02				IAML		22 39 14.2	
	comp=N,1μm,0.1s						
TA02	**Huaiquique**	**2.04**	**76**	⇑*e* P	**Pn**	**22 38 45.4**	**-1.2**
TA02				*e* S	**Sn**	**22 39 09.8**	**-2.3**
TA02				IAML		22 39 14.2	
	comp=N,1μm,0.1s						
PB02	**IPOC Station P**	**2.25**	**104**	*e* P	**Pn**	**22 38 48.5**	**-1.2**
PB02				*i* S	**Sn**	**22 39 14.5**	**-3.1**
PB02				IAML		22 39 19.8	
	comp=E,1μm,0.3s						
PB02	**IPOC Station P**	**2.25**	**104**	⇑*e* P	Pn	22 38 48.1	-1.6
PB02				*e* S	**Sn**	**22 39 13.4**	**-4.2**
PB02				IAML		22 39 19.8	
	comp=E,1μm,0.3s						
HMBC	**Humberstone**	**2.25**	**78**	⇑*e* P	**Pn**	**22 38 48.6**	**-1.2**
HMBC				*e* S	**Sn**	**22 39 15.7**	**-2.1**
HMBC				IAML		22 39 20.6	
	comp=N,1μm,0.6s						
HMBC	**Humberstone**	**2.25**	**78**	⇑*e* P	**Pn**	**22 38 48.6**	**-1.2**
HMBC				*e* S	**Sn**	**22 39 15.7**	**-2.1**
HMBC				IAML		22 39 20.6	
	comp=N,1μm,0.6s						
PB07	**IPOC Station P**	**2.38**	**114**	*e* P	**Pn**	**22 38 50.2**	**-1.4**
PB07				*e* S	**Sn**	**22 39 18.4**	**-2.7**
PB07				IAML		22 39 21.1	
	comp=N,498nm,0.6s						
PB07	**IPOC Station P**	**2.38**	**114**	*e* P	**Pn**	**22 38 50.2**	**-1.4**
PB07				*e* S	**Sn**	**22 39 18.4**	**-2.7**
PB07				IAML		22 39 21.1	
	comp=N,498nm,0.6s						
PB04	**IPOC Station P**	**2.48**	**129**	*e* P	**Pn**	**22 38 51.5**	**-1.5**
PB04				*i* S	**Sn**	**22 39 19.6**	**-3.8**
PB04				IAML		22 39 21.8	
	comp=N,713nm,0.4s						
PB04	**IPOC Station P**	**2.48**	**129**	*e* P	**Pn**	**22 38 51.5**	**-1.5**
PB01	**IPOC Station P**	**2.58**	**96**	*e* P	**Pn**	**22 38 53.4**	**-0.8**
PB01				*i* S	**Sn**	**22 39 23.2**	**-2.5**
PB01				IAML		22 39 28.3	
	comp=E,699nm,0.3s						
PB01	**IPOC Station P**	**2.58**	**96**	⇑*e* P	**Pn**	**22 38 53.2**	**-1.1**
PB01				*e* S	**Sn**	**22 39 22.6**	**-3.2**
PB01				IAML		22 39 28.3	
	comp=E,699nm,0.3s						
PB12	**IPOC Station P**	**2.80**	**40**	⇑*i* P	Pn	22 38 55.1	-2.2
PB12				*i* S	**Sn**	**22 39 27.7**	**-3.6**
PB12				IAML		22 39 30.3	
	comp=N,329nm,0.5s						
PB08	**IPOC Station P**	**2.96**	**78**	⇑*i* P	**Pn**	**22 38 59.1**	**-0.6**
PB08				*i* S	**Sn**	**22 39 33.6**	**-1.8**
PB08				IAML		22 39 40.5	
	comp=N,216nm,0.4s						
PB09	**IPOC Station P**	**2.97**	**111**	*e* P	**Pn**	**22 39 00.0**	**+0.4**
PB09				*i* S	**Sn**	**22 39 35.3**	**-0.1**
PB09				IAML		22 39 38.3	
	comp=E,672nm,0.4s						
GO01	**Chusmiza**	**3.06**	**69**	⇑*e* P	**Pn**	**22 39 00.5**	**-0.7**
GO01				*e* S	**Sn**	**22 39 37.1**	**-1.1**
GO01	**Chusmiza**	**3.06**	**69**	⇑*e* P	**Pn**	**22 39 00.5**	**-0.7**
GO01				*e* S	**Sn**	**22 39 37.1**	**-1.1**
PB06	**IPOC Station P**	**3.13**	**128**	⇑*e* P	**Pn**	**22 39 00.5**	**-1.4**
PB06				*e* S	**Sn**	**22 39 36.9**	**-2.5**
PB06				IAML		22 39 42.4	
	comp=E,237nm,0.3s						
PB06	**IPOC Station P**	**3.13**	**128**	⇑*e* P	**Pn**	**22 39 00.5**	**-1.4**
PB06				*e* S	**Sn**	**22 39 36.9**	**-2.5**
PB06				IAML		22 39 42.4	
	comp=E,237nm,0.3s						
PB10	**IPOC Station P**	**3.14**	**151**	*e* P	Pn	22 38 59.2	-2.6
PB10				*i* S	Sn	22 39 33.6	-5.8
PB10				IAML		22 39 37.3	
	comp=N,450nm,0.4s						
PB15	**IPOC Station P**	**3.52**	**134**	*e* P	**Pn**	**22 39 06.3**	**-1.0**
PB15				*i* S	**Sn**	**22 39 45.9**	**-3.4**
PB16	**IPOC Station P**	**3.54**	**47**	⇑*i* P	**Pn**	**22 39 06.8**	**-1.0**
PB16				*i* S	**Sn**	**22 39 47.6**	**-2.4**
PB16				IAML		22 39 51.6	
	comp=N,231nm,0.5s						
LVC	**Limon Verde**	**3.59**	**121**	Pn	**Pn**	**22 39 08.9**	**+0.6**
	comp=N,3.1nm,0.3s,baz=268,slow=9.6,SNR=15						
LVC				Sn	**Sn**	**22 39 52.1**	**+1.1**
	comp=N,37nm,0.3s,baz=50,slow=20,SNR=35						
	comp=N,15nm,0.5s						
PB14	**IPOC Station P**	**4.19**	**157**	*e* P	Pn	22 39 13.5	-3.1
PB14				*i* S	Sn	22 39 59.3	-6.4
LPAZ	**La Paz**	**5.92**	**42**	Pn	**Pn**	**22 39 42.1**	**+1.5**
	comp=N,1.7nm,0.3s,baz=206,slow=6.7,SNR=42						
LPAZ				LR	LR	22 41 03.4	
	comp=N,59nm,19.3s,baz=230,slow=30						
SIV	**San Ignacio**	**11.61**	**68**	Pn	Pn	22 40 55.8	-2.5
	comp=N,0.1nm,0.3s,baz=263,slow=9.6,SNR=34						
SIV				LR	LR	22 45 06.7	
	comp=N,36nm,21.0s,baz=254,slow=36						
	comp=N,6.0nm,0.6s						
H03N1	**Juan Fernandez**	**13.94**	**204**	T	T	22 56 02.6	
	baz=27,slow=72,SNR=7.9						
H03N2	**Juan Fernandez**	**13.95**	**204**	T	T	22 56 00.5	
	baz=27,slow=72,SNR=7.3						
H03N3	**Juan Fernandez**	**13.96**	**204**	T	T	22 56 00.8	
	baz=27,slow=72,SNR=7.8						
CPUP	**Villa Florida**	**14.74**	**115**	LR	LR	22 47 01.7	
	comp=N,50nm,20.1s,baz=218,slow=36						
CPUP	**Villa Florida**	**14.74**	**115**	*e* P	**Pn**	**22 41 44.9**	**+4.0**
AQDB	**Aquidauana**	**15.48**	**92**	*e* P	**Pn**	**22 41 50.6**	**-0.3**
SALV	**Santo Antonio**	**16.43**	**76**	*e* P	**Pn**	**22 42 02.4**	**-0.7**
ITQB	**Itaqui**	**16.66**	**125**	*e* P	**P**	**22 42 11.1**	**+2.7**
PP1B	**Ponte de Pedra**	**16.69**	**82**	*e* P	**Pn**	**22 42 07.9**	**+1.4**
PDRB	**Porto dos Gac**	**17.44**	**61**	*e* P	**Pn**	**22 42 17.0**	**+1.1**
CLDB	**Colider**	**18.61**	**61**	*e* P	**P**	**22 42 29.8**	**-0.2**
PTGB	**Pitanga**	**19.01**	**106**	*e* P	**Pn**	**22 42 38.6**	**+3.5**
CPSB	**Cacapava Do Su**	**19.45**	**123**	*e* P	**Pn**	**22 42 44.6**	**+4.3**
PLTB	**Pedras Altas**	**19.94**	**127**	*e* P	**Pn**	**22 42 49.8**	**+3.6**
PLCA	**Paso Flores**	**19.94**	**176**	P	**P**	**22 42 45.1**	**+0.6**
	comp=N,2.6nm,0.9s,baz=1.2,slow=10,SNR=7.5						
	comp=N,2.6nm,0.9s						
MACA	**Manacapuru-AM**	**20.81**	**34**	*e* P	**P**	**22 42 54.1**	**0.0**
FRTB	**Fartura**	**21.16**	**101**	*e* P	**P**	**22 43 01.5**	**+3.6**
NPGB	**Novo Progresso**	**21.29**	**53**	*e* P	**P**	**22 42 59.9**	**+0.6**
BB19B	**Bebedouro**	**22.14**	**95**	*e* P	**P**	**22 43 11.6**	**+3.2**
IPMB	**Ipameri, GO**	**22.83**	**87**	*e* P	**P**	**22 43 18.3**	**+2.6**
ITTB	**Itaituba**	**22.88**	**47**	*e* P	**P**	**22 43 15.3**	**-1.0**
VAO	**Valinhos**	**23.54**	**100**	*e* P	**P**	**22 43 25.8**	**+2.7**
BDFB	**Brasilia**	**23.56**	**81**	P	**P**	**22 43 22.5**	**-0.7**
	comp=N,2.8nm,0.8s,baz=253,slow=17,SNR=4.3						
	comp=N,2.8nm,0.8s						
BDFB	**Brasilia**	**23.56**	**81**	*e* P	**P**	**22 43 25.1**	**+1.8**
SMTB	**Santa Maria do**	**26.56**	**67**	*e* P	**P**	**22 43 52.3**	**+1.6**
JANB	**Januaria**	**27.15**	**83**	*e* P	**P**	**22 43 57.8**	**+1.7**
SDBA	**SAO DESIDERIO**	**27.45**	**77**	*e* P	**P**	**22 44 00.5**	**+1.7**
MCPB	**Macapa, AP**	**28.30**	**47**	*e* P	**P**	**22 44 07.4**	**+1.2**
MDP	**Montagnes des**	**32.12**	**39**	LR	LR	22 58 03.9	
	comp=N,53nm,18.2s,baz=188,slow=37						
TXAR	**Lajitas Array**	**58.31**	**328**	P	P	22 48 05.3	-2.3
	comp=N,0.2nm,0.8s,baz=159,slow=10,SNR=1.6						
	comp=N,0.2nm,0.8s						
QSPA	**South Pole Qui**	**69.41**	**180**	P	**P**	**22 49 19.7**	**-0.7**
	comp=N,0.7nm,0.7s,baz=185,slow=1.7,SNR=5.2						
	comp=N,0.7nm,0.7s						
DBIC	**Dimbokro**	**71.53**	**75**	P	**P**	**22 49 32.3**	**-1.7**
	comp=N,5.2nm,0.9s,baz=241,slow=9.0,SNR=4.1						
	comp=N,5.2nm,0.9s						
PDAR	**Pinedale Array**	**71.98**	**332**	P	P	22 49 33.5	-2.8
	comp=N,0.2nm,0.5s,baz=138,slow=11,SNR=1.9						
	comp=N,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**73.05**	**324**	P	**P**	**22 49 41.2**	**-1.6**
	comp=N,0.1nm,0.4s,baz=135,slow=8.4,SNR=2.3						
	comp=N,0.1nm,0.4s						
KOWA	**Kowa**	**75.61**	**68**	LR	LR	23 21 04.3	
	comp=N,23nm,20.6s,baz=314,slow=34						
TORD	**Torodi Ar. Bea**	**80.06**	**72**	P	**P**	**22 50 22.0**	**-0.8**
	comp=N,5.0nm,0.8s,baz=251,slow=4.9,SNR=24						
	comp=N,5.0nm,0.8s						
WRA	**Warramunga Arr**	**131.89**	**214**	PKP	**PKPdf**	**22 57 25.3**	**-1.5**
	comp=N,0.2nm,0.5s,baz=137,slow=1.8,SNR=1.5						
ZALV	**Zalesovo Beam**	**142.54**	**22**	PKhKP	PKPpre	22 57 40.4	
	comp=N,0.5nm,0.3s,baz=336,slow=3.2,SNR=2.2						
MKAR	**Makanchi Array**	**146.79**	**33**	PKPbc	**PKPdf**	**22 57 52.2**	**-0.7**
	comp=N,1.0nm,0.7s,baz=300,slow=1.7,SNR=2.4						

*IDC **09** 22:52:19.6±1.1, 41°.12N×48°.55E, h0km, mb3.5/8, mbtmp3.5/18, ML3.2/8, MS2.5/3, Error ellipse: s-maj=20.2km s-min=11.2km az=155.0*
*MOS **09** 22:52:24.7±0.0, 41°.08N×48°.56E, h22km, MPVA4.6*
*AZER **09** 22:52:25.0±0.1, 41°.11N×48°.54E, h45km, Error ellipse: s-maj=1.3km s-min=0.9km az=35.0*
*DRS **09** 22:52:27.5±0.0, 40°.87N×48°.63E, h26km*
*NNC **09** 22:52:28.2±8.7, 41°.46N×49°.46E, h0km, mb3.7, Error ellipse: s-maj=86.2km s-min=31.6km az=71.0*
ISC 09 22:52:24.2±1.0, 41°.13N±0°.02×48°.52E±0°.02, h17km±6km, n167, σ2°33/274, mb3.3/8, 6C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUBA	**Quba, Azerbaij**	**0.23**	**356**	P	Pg	22 52 34.6	+5.1
	SNR=229						
QUBA				S	Sg	22 52 41.4	+8.2
XNQ	**Khinaliq**	**0.29**	**279**	P	**Pn**	**22 52 35.0**	**+1.2**
	SNR=2232						
XNQ				S	**Sb**	**22 52 42.1**	**+6.5**
SIZA	**Siyzn**	**0.29**	**100**	P	**Pn**	**22 52 34.9**	**+1.1**
	SNR=262						
SIZA				S	**Sb**	**22 52 42.2**	**+6.6**
PQL	**Pirkuli**	**0.34**	**170**	P	**Pn**	**22 52 35.6**	**+1.1**
	SNR=549						
PQL				S	**Sb**	**22 52 43.5**	**+6.5**
ATGJ	**Altiaghaj**	**0.41**	**129**	P	**Pn**	**22 52 36.3**	**+0.8**
	SNR=81						
ATGJ				S	**Sb**	**22 52 44.3**	**+5.2**
IML	**Ismayilli**	**0.42**	**217**	P	**Pn**	**22 52 36.4**	**

comp=Z,371nm,0.3s
KMKR smax smax
comp=E,2μm,0.4s
KMKR Kumukh 1.46 314 *i* Pg **Pg 22 52 52.4 +0.1**
KMKR *e*Sg **Sg 22 53 12.3 +0.9**
AGDM Agdam 1.48 227 Pn **Pn 22 52 50.9 +1.0**
SNR=291
AGDM Sn **Sb 22 53 11.4 +1.8**
SGKR Sergokala 1.48 335 *e*P **Pb 22 52 52.4 +1.2**
SGKR *e*S **Sg 22 53 12.1 +0.2**
SGKR Sergokala 1.48 335 *e*Pg **Pb 22 52 52.4 +1.2**
SGKR *e*Sg **Sg 22 53 12.1 +0.2**
ZKTA Zakatala 1.51 290 P **Pn 22 52 52.4 +1.9**
ZKTA Zakatala 1.51 290 Pn **Pn 22 52 52.4 +1.9**
SNR=84
ZKTA Sg **Sg 22 53 15.5 +2.5**
BLQ Beylaqan 1.58 208 Pn **Pn 22 52 52.1 +0.7**
SNR=14
BLQ Sn **Sn 22 53 12.5 +1.1**
GNBR Gunib 1.71 318 *e*P **Pb 22 52 56.2 +1.0**
GNBR *e*S **Sg 22 53 19.4 -0.1**
GNBR Gunib 1.71 318 *e*Pg **Pb 22 52 56.2 +1.0**
GNBR *e*Sg **Sg 22 53 19.4 -0.1**
GANJ Ganja 1.73 255 P **Pn 22 52 53.9 +0.5**
GANJ Ganja 1.73 255 Pn **Pn 22 52 54.0 +0.5**
SNR=272
GANJ Sn **Sn 22 53 15.6 +0.5**
DDFL Dedoflistskaro 1.83 281 P **Pb 22 52 59.1 +1.8**
DDFL Dedoflistskaro 1.83 281 P **Pb 22 52 59.1 +1.8**
LGD Lagodekhi 1.85 293 P **Pn 22 52 56.9 +1.8**
LGD S **Sg 22 53 24.8 +1.1**
LGD Lagodekhi 1.85 293 P **Pn 22 52 56.9 +1.8**
LGD S **Sg 22 53 24.8 +1.1**
ARKR Arakani 1.86 323 ⇑*i*P **Pb 22 52 58.1 +0.3**
ARKR *i* S **Sb 22 53 23.2 +2.4**
ARKR pmax pmax
comp=Z,104nm,0.7s
ARKR smax smax
comp=E,354nm,0.6s
ARKR Arakani 1.86 323 *i* Pg **Pb 22 52 58.1 +0.3**
ARKR *e*Sg **Sb 22 53 22.4 +1.6**
GLBA Clilabad 1.88 183 Pn **Pn 22 52 56.3 +0.7**
SNR=24
GLBA Sn **Sn 22 53 19.4 +0.5**
QRD Qoradiz 1.90 209 Pn **Pn 22 52 56.2 +0.5**
SNR=28
QRD Sn **Sn 22 53 19.6 +0.4**
XNZR Khunzakh 1.96 317 *e*Pg **Pb 22 52 59.4 -0.1**
XNZR *e*Sg **Sb 22 53 25.1 +1.5**
MAK Makhachkala 1.98 338 *i* P **Pb 22 53 00.1 +0.3**
MAK *e*S **Sb 22 53 26.4 +2.3**
MAK Makhachkala 1.98 338 *i* Pg **Pb 22 53 00.1 +0.3**
MAK *e*Sg **Sb 22 53 26.4 +2.3**
BUJR Buynaksk 2.00 329 *e*P **Pb 22 53 00.1 +0.1**
BUJR *e*S **Sb 22 53 26.2 +1.6**
BUJR Buynaksk 2.00 329 *e*Pg **Pb 22 53 00.1 +0.1**
BUJR *e*Sg **Sb 22 53 26.2 +1.6**
UNCR Uncukul 2.04 322 *e*P **Pb 22 53 01.0 +0.2**
UNCR *i* S **Sg 22 53 29.2 -0.7**
UNCR pmax pmax
comp=Z,81nm,0.2s
UNCR smax smax
comp=N,575nm,0.8s
UNCR Uncukul 2.04 322 *e*Pg **Pb 22 53 01.0 +0.2**
UNCR *e*Sg **Sb 22 53 27.3 +1.4**
KRNR Karanay 2.08 325 *i* P **Pb 22 53 01.5 0.0**
KRNR *e*S **Sb 22 53 27.7 +0.6**
KRNR Karanay 2.08 325 *i* Pg **Pb 22 53 01.4 0.0**
KRNR *e*Sg **Sb 22 53 27.7 +0.6**
GDB GEDABAY 2.13 260 Pn **Pn 22 52 59.5 +0.4**
SNR=88
GDB Sn **Sn 22 53 24.6 -0.6**
KANR Karaman 2.21 340 *e*P **Pb 22 53 03.8 +0.3**
KANR *e*S **Sb 22 53 32.3 +1.8**
KANR Karaman 2.21 340 *e*Pn **Pb 22 53 03.8 +0.3**
KANR *e*Sn **Sb 22 53 32.3 +1.8**
YRD Yardimli 2.22 186 Pn **Pn 22 53 00.3 0.0**
SNR=66
YRD Sn **Sn 22 53 27.6 +0.2**
DBC Dubki 2.27 327 *e*P **Pn 22 53 03.6 +2.7**
DBC *e*S **Sn 22 53 32.3 +3.7**
DBC Dubki 2.27 327 *e*Pn **Pn 22 53 03.6 +2.7**
DBC *e*Sn **Sn 22 53 32.3 +3.7**
QZX Qazax, Azerbai 2.38 269 Pn **Pn 22 53 03.1 +0.8**
SNR=54
QZX Sn **Sn 22 53 31.6 +0.5**
DGRG David-gareji 2.39 279 P **Pn 22 53 03.4 +0.8**
DGRG S **Sn 22 53 33.5 +2.1**
DGRG David-gareji 2.39 279 P **Pn 22 53 03.4 +0.8**
DGRG S **Sn 22 53 33.5 +2.1**
DLMR Dylym 2.40 325 *e*P **Pn 22 53 05.7 +3.1**
DLMR *e*S **Sb 22 53 35.8 -0.3**
DLMR Dylym 2.40 325 *e*Pn **Pn 22 53 05.7 +3.1**
DLMR *e*Sn **Sb 22 53 35.8 -0.3**
LKRN Lenkeran, Azer 2.42 175 P **Pb 22 53 06.2 -1.0**
LKRN Lenkeran, Azer 2.42 175 Pn **Pn 22 53 02.8 -0.2**
comp=N,0.6nm,0.2s
LKRN Sn **Sn 22 53 31.8 -0.3**
LRK Lerik 2.48 183 Pn **Pn 22 53 03.8 -0.1**
SNR=22
LRK Sn **Sn 22 53 34.0 0.0**
DVE Vedeno 2.55 317 *e*P **Pn 22 53 07.8 +3.0**
DVE *e*S **Sn 22 53 38.5 +3.0**
DVE Vedeno 2.55 317 *e*Pn **Pn 22 53 07.8 +3.0**
DVE *e*Sn **Sn 22 53 38.5 +3.0**
ASTR Astara 2.57 175 Pn **Pn 22 53 04.5 -0.5**
SNR=8.9
ASTR Sn **Sn 22 53 34.8 -1.1**
SBZ Shahbuz 2.85 234 Pn **Pn 22 53 10.6 +1.6**
SNR=82
SBZ Sn **Sn 22 53 44.7 +1.8**
BTNK Botanikuri 2.85 282 P Pn 22 53 02.9 -6.0
BTNK Botanikuri 2.85 282 P Pn 22 53 02.9 -6.0
SEAG Tbilisi Sea 2.86 284 P **Pn 22 53 10.7 +1.7**
SEAG S **Sn 22 53 44.0 +0.9**
SEAG Tbilisi Sea 2.86 284 P **Pn 22 53 10.7 +1.7**
SEAG S **Sn 22 53 43.9 +0.9**
GROC Groznyy 2.90 317 *e*P **Pn 22 53 12.6 +3.1**
GROC *e*S **Sn 22 53 47.8 +3.9**
GROC Groznyy 2.90 317 *e*Pn **Pn 22 53 12.6 +3.1**
GROC *e*Sn **Sn 22 53 47.8 +3.9**
ORD Ordubad 2.93 222 Pn **Pn 22 53 11.3 +1.4**
SNR=45
ORD Sn **Sn 22 53 46.0 +1.3**
SHTL Shatili 2.94 302 P **Pn 22 53 13.1 +2.9**
NAX Nakhchivan 3.03 231 P **Pn 22 53 13.0 +1.7**
NAX Nakhchivan 3.03 231 Pn **Pn 22 53 13.1 +1.7**
SNR=21
NAX Sn **Sn 22 53 47.9 +0.7**
GNI Garni 3.03 252 Pn **Pn 22 53 13.4 +2.0**
comp=N,4.3nm,0.3s,baz=60,slow=19,SNR=11
GNI Garni 3.03 252 *e*P **Pn 22 53 13.6 +2.1**
GNI *e*S **Sb 22 53 53.1 -1.4**
GNI Garni 3.03 252 *e*Pn **Pn 22 53 13.6 +2.1**
GNI *e*Sn **Sb 22 53 53.1 -1.4**
KZRT Kazreti 3.11 276 P **Pn 22 53 13.2 +0.7**
KZRT Kazreti 3.11 276 P **Pn 22 53 13.2 +0.7**
HYR Heyderabad 3.13 245 Pn **Pn 22 53 14.4 +1.6**
SNR=8.0
HYR Sn **Sn 22 53 49.7 0.0**
DMNI Dmanisi 3.27 275 P **Pn 22 53 15.1 +0.4**
DMNI S **Sn 22 53 51.9 -1.3**
DMNI Dmanisi 3.27 275 P **Pn 22 53 15.1 +0.4**
DMNI S **Sn 22 53 51.9 -1.3**
PNSH Pansheti 3.28 299 P **Pn 22 53 17.1 +2.2**
PNSH Pansheti 3.28 299 P **Pn 22 53 17.1 +2.2**
KMGR Komgaron 3.33 307 *e*P **Pn 22 53 19.3 +3.8**
KMGR *e*S **Sn 22 53 57.6 +2.9**
KMGR Komgaron 3.33 307 *e*Pn **Pn 22 53 19.3 +3.8**
KMGR *e*Sn **Sn 22 53 57.6 +2.9**
BRNG Burnasheti 3.56 280 P **Pn 22 53 20.3 +1.5**
LACR Lac 3.58 300 *e*P Pn 22 53 23.7 +4.8
LACR *e*S **Sn 22 54 03.3 +2.5**
LACR Lac 3.58 300 *e*Pn Pn 22 53 23.7 +4.8
LACR *e*Sn **Sn 22 54 03.4 +2.5**
BTKR Batakoyurt 3.71 309 *e*P **Pn 22 53 23.8 +3.1**
BTKR *e*S **Sn 22 54 06.0 +2.1**
BTKR Batakoyurt 3.71 309 *e*Pn **Pn 22 53 23.8 +3.1**
BTKR *e*Sn **Sn 22 54 06.0 +2.1**
ARNR Ardon 3.76 305 *e*P **Pn 22 53 24.4 +3.1**
ARNR *e*S **Sn 22 54 06.3 +1.2**
ARNR Ardon 3.76 305 *e*Pn **Pn 22 53 24.4 +3.1**
ARNR *e*Sn **Sn 22 54 06.3 +1.2**
ALIG Mtskhetisjvari 3.78 287 P **Pn 22 53 23.2 +1.6**
ALIG S **Sn 22 54 04.1 -1.6**
AKH Akhalkalaki 3.80 276 P **Pn 22 53 24.5 +2.5**
AKH Akhalkalaki 3.80 276 *e*P **Pn 22 53 24.1 +2.1**
AKH *e*S **Sn 22 54 07.7 +1.4**
AKH Akhalkalaki 3.80 276 *e*Pn **Pn 22 53 24.1 +2.1**
AKH *e*Sn **Sn 22 54 07.7 +1.4**
BKRG Bakuriani 3.81 281 P **Pn 22 53 23.6 +1.5**
BKRG Bakuriani 3.81 281 P **Pn 22 53 23.6 +1.5**
TRKR Terskaya 3.82 314 *e*P **Pn 22 53 19.6 -2.5**
TRKR *e*S **Sn 22 54 07.0 +0.4**
ZEI Tsey 3.82 297 *e*P **Pn 22 53 25.1 +2.7**
ZEI *e*S **Sn 22 54 08.8 +1.8**
ZEI Tsey 3.82 297 *e*Pn **Pn 22 53 25.1 +2.7**
ZEI *e*Sn **Sn 22 54 08.8 +1.8**
KORR Kora 3.84 302 *e*P **Pn 22 53 24.8 +2.3**
KORR *e*S **Sn 22 54 10.4 +3.1**
KORR Kora 3.84 302 *e*Pn **Pn 22 53 24.8 +2.3**
KORR *e*Sn **Sn 22 54 10.4 +3.1**
STDR Stavd-Durt 3.99 306 *e*P **Pn 22 53 26.7 +2.1**
STDR *e*S **Sn 22 54 12.6 +1.7**
STDR Stavd-Durt 3.99 306 *e*Pn **Pn 22 53 26.7 +2.1**
STDR *e*Sn **Sn 22 54 12.6 +1.7**
ONI Oni 4.05 293 P **Pn 22 53 28.0 +2.6**
ONI Oni 4.05 293 P **Pn 22 53 28.0 +2.6**
DIGR Digorskoe uzhe 4.08 297 *e*P **Pn 22 53 28.6 +2.7**
DIGR *e*S **Sn 22 54 16.3 +2.9**
DIGR Digorskoe uzhe 4.08 297 *e*Pn **Pn 22 53 28.6 +2.7**
DIGR *e*Sn **Sn 22 54 16.3 +2.9**
PRTR Priterechnaya 4.09 311 *e*P **Pn 22 53 27.7 +1.9**
PRTR *e*S **Sn 22 54 13.6 +0.4**
PRTR Priterechnaya 4.09 311 *e*Pn **Pn 22 53 27.7 +1.9**
PRTR *e*Sn **Sn 22 54 13.6 +0.4**
LSNR Lesken 4.09 303 *e*P **Pn 22 53 27.5 +1.5**
LSNR *e*S **Sn 22 54 15.3 +1.8**
LSNR Lesken 4.09 303 *e*Pn **Pn 22 53 27.5 +1.5**
LSNR *e*Sn **Sn 22 54 15.3 +1.8**
TKB Tkibuli 4.31 288 P **Pn 22 53 30.8 +1.9**
TKB Tkibuli 4.31 288 P **Pn 22 53 30.8 +1.9**
ABS Abastumani 4.33 280 P **Pn 22 53 31.2 +1.9**
ABS Abastumani 4.33 280 P **Pn 22 53 31.2 +1.9**
KBTC Kuba-Taba 4.64 307 *e*P **Pn 22 53 35.5 +2.1**
KBTC *e*S **Sn 22 54 24.5 -2.3**
KBTC Kuba-Taba 4.64 307 *e*Pn **Pn 22 53 35.5 +2.1**
NEY Neytrino 4.80 298 *e*P **Pn 22 53 39.0 +3.2**
NEY *e*S **Sn 22 54 33.6 +2.6**
NEY Neytrino 4.80 298 *e*Pn **Pn 22 53 39.0 +3.2**
NEY *e*Sn **Sn 22 54 33.6 +2.6**
KBZ Khabaz 4.90 304 Pn **Pn 22 53 37.5 +0.5**
comp=N,0.1nm,0.3s,baz=134,slow=18,SNR=1.4
KBZ Sn **Sn 22 54 29.8 -3.5**
comp=N,1.3nm,0.3s,baz=170,slow=12,SNR=2.5
comp=N,0.4nm,0.3s
KBZ Khabaz 4.90 304 *e*P Pn 22 53 42.0 +5.0
KBZ *e*S **Sn 22 54 31.3 -2.0**
SHA1 Shidzhatmaz 5.06 303 *e*P **Pn 22 53 41.8 +2.4**
SHA1 *e*S **Sn 22 54 37.6 +0.1**
SHA1 Shidzhatmaz 5.06 303 *e*Pn **Pn 22 53 41.8 +2.4**
SHA1 *e*Sn **Sn 22 54 37.6 +0.1**
BEYR Belyy Ugol+ 5.10 306 *e*P **Pn 22 53 40.2 +0.4**
BEYR *e*S **Sn 22 54 34.8 -3.5**
KVAR Kislovodsk Arr 5.15 305 Pn **Pn 22 53 40.2 -0.2**
baz=107,slow=10
KVAR Sn **Sn 22 54 35.7 -3.8**
baz=298,slow=22
comp=N,1.5nm,0.5s
KIV Kislovodsk 5.15 305 *e*P **Pn 22 53 41.5 +1.0**
KIV *e*S **Sn 22 54 36.6 -3.0**
ALER Alexandrovskoy 5.49 313 *e*P **Pn 22 53 45.5 +0.4**
ALER *e*S **Sn 22 54 44.1 -3.7**
GYB4 ALIBECK ARRAY 8.06 110 ⇑S **Pn 22 54 17.9 -2.5**
GYB4 ⇓S **Sn 22 55 46.7 -4.5**
GEYT Alibeck 8.08 110 Pn **Pn 22 54 17.5 -3.2**
comp=N,0.3nm,0.3s,baz=320,slow=48,SNR=2.7
GEYT Sn **Sn 22 55 43.6 -7.9**
comp=N,0.2nm,0.3s,baz=143,slow=40,SNR=1.2
comp=N,0.7nm,0.4s
BELG Belogornoye 11.29 357 Pn **Pn 22 55 01.6 -2.9**
comp=N,6.8nm,0.4s,baz=187,slow=19,SNR=8.2
BELG Sn Sn 22 57 00.3 -10
comp=N,1.0nm,0.3s,baz=230,slow=2.1,SNR=2.7
AKTO Aktyubinsk 11.42 32 Pn **Pn 22 55 02.6 -3.8**
comp=N,0.4nm,0.3s,baz=206,slow=12,SNR=7.8
AKTO Sn Sn 22 57 03.4 -10
comp=N,0.7nm,0.3s,baz=340,slow=18,SNR=9.3
AKTO LR LR 23 01 30.4
comp=N,8.5nm,20.0s,baz=259,slow=48
comp=N,1.2nm,0.3s
AKTO Aktyubinsk 11.42 32 P **Pn 22 55 02.9 -3.5**
AKTO S Sn 22 57 04.2 -9.3
AKTO Aktyubinsk 11.42 32 ⇓P **Pn 22 55 02.8 -3.6**
comp=N,1.2nm,0.5s
AKTO ⇑S Sn 22 57 04.2 -9.3
comp=N,6.1nm,0.5s
AB31 Akbulak array 11.44 41 P **Pn 22 55 04.3 -2.3**
AB31 S Sn 22 57 05.5 -8.4
AB31 Akbulak array 11.44 41 ⇓P **Pn 22 55 04.8 -1.8**
comp=N,0.4nm,0.6s,baz=227,slow=13,SNR=10
AB31 ⇓S Sn 22 57 05.5 -8.4
comp=N,2.0nm,0.6s,baz=216,slow=24,SNR=4.4
MMAI Mount Meron Ar 13.22 236 LR LR 23 01 25.3
comp=N,33nm,18.0s,baz=132,slow=41
KK31 Karatay Array 16.44 76 P **P 22 56 18.4 +1.8**
KK31 S Sn 22 59 05.6 -10
KK31 Karatay Array 16.44 76 P **P 22 56 18.4 +1.8**
comp=N,1.1nm,0.5s,baz=286,slow=9.5,SNR=4.3
KK31 ⇓S Sn 22 59 05.6 -10
comp=N,2.2nm,1.0s,baz=0.6,slow=1.7,SNR=3.8
AKASG Malin Array Be 16.45 312 Pn **Pn 22 56 09.7 -4.2**
comp=N,0.4nm,0.3s,baz=116,slow=11,SNR=1.5
comp=N,0.1nm,0.2s
ARU Arti 16.66 20 Pn **Pn 22 56 11.3 -5.3**
baz=161,slow=10,SNR=5.4
ARU Sn Sn 22 59 04.7 -16
baz=94,slow=23,SNR=1.7
comp=N,2.4nm,0.3s
BVAR Borovoye Array 18.98 44 P **P 22 56 43.0 -1.5**
comp=N,0.2nm,0.3s,baz=240,slow=12,SNR=8.4
BVAR S Sn 23 00 03.2 -14
comp=N,0.3nm,0.5s,baz=234,slow=21,SNR=2.6
comp=N,0.5nm,0.4s
IDI Anoyia 19.43 260 P **P 22 56 47.5 -2.2**
comp=N,0.2nm,0.3s,baz=51,slow=13,SNR=1.9
comp=N,2.1nm,0.6s
KURBB Kurchatov Arra 22.82 55 P **P 22 57 23.5 -2.5**
comp=N,0.3nm,0.6s,baz=260,slow=11,SNR=1.6
comp=N,0.3nm,0.6s
KURK Kurchatov 22.89 55 P **P 22 57 23.5 -3.3**
FINES FINESS Array B 24.48 334 P **P 22 57 39.6 -2.4**
comp=N,1.9nm,0.4s,baz=136,slow=10,SNR=21
comp=N,1.9nm,0.4s
MKAR Makanchi Array 24.84 65 P **P 22 57 43.7 -1.8**
comp=N,0.4nm,0.7s,baz=252,slow=8.6,SNR=1.6
comp=N,0.4nm,0.7s
GERES GERESS Array B 25.63 299 P **P 22 57 52.5 -0.2**
comp=N,0.1nm,0.5s,baz=100,slow=11,SNR=1.3
comp=N,0.1nm,0.5s
ZALV Zalesovo Beam 27.33 50 LR LR 23 10 52.5
comp=N,19nm,18.8s,baz=338,slow=41
HFS Hagfors 28.64 323 P **P 22 58 16.4 -3.1**
comp=N,2.2nm,0.8s,baz=127,slow=10.0,SNR=9.0
comp=N,2.2nm,0.8s
NOA NORSAR Array B 30.14 324 P **P 22 58 29.5 -3.3**
comp=N,0.1nm,0.3s,baz=119,slow=7.7,SNR=1.0
comp=N,0.1nm,0.3s
ARCES ARCESS Array B 30.92 344 P **P 22 58 38.0 -1.6**
comp=N,0.9nm,0.6s,baz=148,slow=9.9,SNR=7.1
comp=N,0.9nm,0.6s
ARCES ARCESS Array B 30.92 344 P **P 22 58 38.0 -1.6**
TORD Torodi Ar. Bea 49.33 249 P **P 23 01 09.4 -3.1**
comp=N,0.2nm,0.5s,baz=32,slow=7.4,SNR=7.7
comp=N,0.2nm,0.5s

INET ***09*** *22:54:53.1±0.9, 13°.39N×91°.80W, h15km, MW4.0*
GCG ***09*** *22:55:05.9±0.5, 14°.26N×90°.10W, h206km±11km, MD4.0*
SNET ***09*** *22:55:06.8±0.5, 14°.31N×90°.11W, h191km±3km, ML3.4*
NEIC ***09*** *22:55:07.6±1.5, 14°.31N±0°.07×90°.13W±0°.04, h196km±6km, mb4.8/51, Error ellipse: s-maj=10.4km s-min=4.7km az=169.0*
IDC ***09*** *22:55:07.7±1.0, 14°.37N×89°.86W, h209km±8km, mb3.7/21, mbtmp4.2/23, Error ellipse: s-maj=20.0km s-min=8.9km az=49.0*
ISC 09 22:55:06.4±0.5,**14°.27N**±0°.06×**90°.10W**±0°.05,**h203**km±4km,
n353,σ1§**09**/362,**mb4.6**/43,**16C-2D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**0.39**	**128**	⇑*e*P		**Pn**	**22 55 33.0**	**-0.6**
SLOZ				*e*S		**S**	**22 55 53.2**	**-1.5**
NBG	**Las Nubes**	**0.40**	**323**	*e*P		**Pn**	**22 55 34.6**	**+0.7**
NUBE	**Las Nubes**	**0.48**	**140**	⇑*i*P		**Pn**	**22 55 33.5**	**-0.6**
PCG	**Pacaya**	**0.51**	**284**	*e*P		**Pn**	**22 55 34.8**	**+0.6**
RTR	**El Retiro**	**0.57**	**130**	⇑*i*P		**Pn**	**22 55 34.3**	**-0.1**
SNJE	**San Jose**	**0.62**	**130**	⇑*i*P		**Pn**	**22 55 34.4**	**-0.3**
SBLS	**San Blas**	**0.63**	**133**	⇑*i*P		**Pn**	**22 55 34.5**	**-0.3**
CEVE	**Cerro Verde**	**0.64**	**134**	⇑*i*P		**Pn**	**22 55 34.6**	**-0.2**
FUG	**Fuego 3**	**0.74**	**284**	*e*P		**Pn**	**22 55 35.5**	**+0.3**
ESQI	**Esquipulas**	**0.79**	**68**			**Pn**	**22 55 35.4**	**0.0**
ESQI				Sn		**S**	**22 55 56.5**	**-1.2**
ESQI	**Esquipulas**	**0.79**	**68**	⇑*i*P		**Pn**	**22 55 35.4**	**0.0**
ESQI				*e*S		**S**	**22 55 56.7**	**-1.0**
ESQI				IAML			22 55 59.3	
comp=Z,368nm,0.6s								
MRL	**Marmol**	**0.90**	**26**	*e*P		**Pn**	**22 55 36.9**	**+0.8**
BOQS	**Boqueron**	**0.95**	**124**	⇑*i*P		**Pn**	**22 55 36.4**	**-0.1**
UEES	**Universidad Ev**	**1.00**	**123**	⇑*i*P		**Pn**	**22 55 36.6**	**0.0**
SNET	**Serv Nac Est T**	**1.02**	**124**			**Pn**	**22 55 36.3**	**-0.5**
SNET	**Serv Nac Est T**	**1.02**	**124**	⇑*i*P		**Pn**	**22 55 36.7**	**-0.1**
LFU	**La Fuente**	**1.09**	**118**	*i* P		**Pn**	**22 55 37.3**	**0.0**
LBRS	**Las Brisas**	**1.15**	**117**	⇑*i*P		**Pn**	**22 55 37.9**	**+0.2**
LFRS	**El Faro**	**1.19**	**122**	⇑*i*P		**Pn**	**22 55 38.0**	**0.0**
SJTE	**Alcalda de S**	**1.24**	**121**	⇑*i*P		**Pn**	**22 55 38.4**	**0.0**
PAVA	**Las Pavas**	**1.25**	**116**	⇑*i*P		**Pn**	**22 55 38.6**	**+0.1**
P5NO	**Presa 5 de nov**	**1.33**	**102**	⇑*i*P		**Pn**	**22 55 38.6**	**-0.4**
COEG	**Centro de Oper**	**1.35**	**118**	*i* P		**Pn**	**22 55 39.2**	**0.0**
SCLA	**Alcaldia de Sa**	**1.44**	**113**	⇑*i*P		**Pn**	**22 55 40.3**	**+0.3**
STG3	**Santiaguito 3,**	**1.49**	**287**	*e*P		**Pn**	**22 55 41.0**	**+0.5**
STG3				*e*S		**S**	**22 56 08.8**	**+2.2**
RTAL	**Retalhuleu**	**1.57**	**280**	Pn		**Pn**	**22 55 40.6**	**-0.4**
RTAL				Sn		**S**	**22 56 06.7**	**-0.8**
RTAL	**Retalhuleu**	**1.57**	**280**	*i* P		**Pn**	**22 55 40.7**	**-0.4**
COEB	**Comit de Eme**	**1.70**	**117**	*e*P		**Pn**	**22 55 42.7**	**+0.3**
HUEH	**Huehuetenango**	**1.71**	**308**			**Pn**	**22 55 42.6**	**0.0**
HUEH	**Huehuetenango**	**1.71**	**308**	*e*P		**Pn**	**22 55 42.6**	**0.0**
PACA	**Pacayal**	**1.90**	**115**	*e*P		**Pn**	**22 55 44.6**	**+0.3**
CNCH	**Conchagua**	**2.41**	**114**	*e*P		**Pn**	**22 55 50.3**	**+0.6**
PETF	**Flores**	**2.64**	**5**			**Pn**	**22 55 52.0**	**-0.1**
PETF	**Flores**	**2.64**	**5**	⇓*i*P		**Pn**	**22 55 52.0**	**-0.1**
PETF	**Flores**	**2.64**	**5**	*e*P		**Pn**	**22 55 51.9**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.75**	**94**			**Pn**	**22 55 54.0**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.75**	**94**	*e*P		**Pn**	**22 55 54.1**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.75**	**94**	⇓*i*P		**Pn**	**22 55 54.0**	**+0.6**
CCIG	**Comitan**	**2.81**	**316**			**Pn**	**22 55 53.6**	**-0.6**
CRIN	**San Cristobal**	**3.35**	**117**			**Pn**	**22 56 02.1**	**+1.6**
CRIN	**San Cristobal**	**3.35**	**117**	*e*P		**Pn**	**22 56 02.5**	**+2.0**
CNGN	**Cerro Negro**	**3.75**	**118**			**Pn**	**22 56 06.6**	**+1.3**
CNGN	**Cerro Negro**	**3.75**	**118**	*e*P		**Pn**	**22 56 06.7**	**+1.4**
MOMN	**Momotombo**	**3.93**	**118**	*e*P		**Pn**	**22 56 09.4**	**+1.9**
COPN	**Copaltepe**	**4.00**	**121**	*e*P		**Pn**	**22 56 09.6**	**+1.3**
MATN	**Matagalpa**	**4.27**	**108**			**Pn**	**22 56 12.6**	**+0.8**
BOAB	**BOACO BROADBAN**	**4.68**	**112**	Pn		**Pn**	**22 56 18.1**	**+1.3**
ACON	**Acoyapa**	**5.31**	**115**			**Pn**	**22 56 26.5**	**+1.6**
CMIG	**Matias Romero**	**5.40**	**302**	P		**Pn**	**22 56 25.7**	**-0.3**
comp=Z,3.3nm,0.3s,baz=164,slow=12,SNR=12								
CMIG				S		S	22 57 19.1	-9.4
comp=Z,34nm,0.7s,baz=28,slow=12,SNR=15								
HZTE	**Horizontes, Gu**	**5.64**	**128**	Pn		**Pn**	**22 56 31.3**	**+2.1**
ORTG	**Ortega, Santa**	**5.97**	**130**	Pn		**Pn**	**22 56 35.2**	**+1.7**
TEIG	**Tepich**	**6.17**	**16**	Pn		**Pn**	**22 56 35.9**	**-0.1**
JTS	**Las Juntas de**	**6.40**	**128**	Pn		**Pn**	**22 56 40.8**	**+1.8**
JTS	**Las Juntas de**	**6.40**	**128**	*e*P		**Pn**	**22 56 40.4**	**+1.4**
HDC	**Heredia**	**7.23**	**125**	Pn		**Pn**	**22 56 52.1**	**+2.3**
RIMA	**Rio Macho**	**7.56**	**126**			**Pn**	**22 56 56.3**	**+2.1**
PEZE	**Perez Zeledon,**	**7.94**	**127**			**Pn**	**22 57 00.9**	**+1.9**
SRBA	**San Rafael, Bu**	**8.28**	**126**			**Pn**	**22 57 05.5**	**+1.9**
MTDJ	**Mount Denham**	**12.69**	**70**	P		**P**	**22 58 05.3**	**+1.7**
MTDJ	**Mount Denham**	**12.69**	**70**	*e*P		**P**	**22 58 06.7**	**+3.0**
DWPF	**Disney Wildern**	**15.96**	**29**	P		**P**	**22 58 41.2**	**+1.5**
baz=212								
ZARC	**Zaragoza, Cauc**	**16.40**	**113**	*e*P		**Pn**	**22 58 45.1**	**-0.5**
833A	**Chaparral WMA,**	**16.44**	**330**	P		**Pn**	**22 58 46.0**	**+0.2**
833A	**Chaparral WMA,**	**16.44**	**330**	P		**Pn**	**22 58 47.2**	**+1.3**
baz=147								
BRAL	**Brewton**	**17.05**	**9**	P		**P**	**22 58 52.3**	**+0.6**
baz=190								
GUY2C	**Guyana, Caldas**	**17.06**	**120**	*e*P		**Pn**	**22 58 54.1**	**+0.2**
344A	**Westbrook Farm**	**17.11**	**358**	P		**P**	**22 58 53.4**	**+1.0**
342A	**Flagon Creek P**	**17.15**	**354**	P		**P**	**22 58 53.7**	**+1.0**
PTBC	**PUERTO BERRIO,**	**17.18**	**115**	*e*P		**P**	**22 58 53.1**	**-0.3**
NORC	**Norcasia**	**17.30**	**118**	*e*P		**Pn**	**22 58 55.8**	**-0.5**
BBAC	**Balboa, Cauca**	**17.59**	**133**	*e*P		**Pn**	**22 59 00.8**	**+1.0**
435B	**Jarrell**	**17.82**	**339**	P		**P**	**22 59 01.4**	**+1.3**
435B	**Jarrell**	**17.82**	**339**	P		**P**	**22 59 01.4**	**+1.3**
baz=156								
VBMS	**Vicksburg**	**17.87**	**359**	P		**P**	**22 59 02.0**	**+1.4**
VBMS	**Vicksburg**	**17.87**	**359**	P		**P**	**22 59 01.7**	**+1.1**
baz=179								
NATX	**Nacogdoches**	**17.91**	**347**	P		**P**	**22 59 02.1**	**+1.1**
NATX	**Nacogdoches**	**17.91**	**347**	P		**P**	**22 59 02.8**	**+1.8**
baz=166								
TIGA	**Tifton**	**18.10**	**18**	P		**P**	**22 59 03.8**	**+0.6**
TIGA	**Tifton**	**18.10**	**18**	P		**P**	**22 59 03.4**	**+0.3**
baz=201								
PRAC	**Prado**	**18.31**	**124**	*e*P		**Pn**	**22 59 07.0**	**-1.0**
PAMC	**Pamplona, Colo**	**18.42**	**110**	*e*P		**P**	**22 59 06.8**	**-0.5**
JCT	**Junction City**	**18.44**	**333**	P		**P**	**22 59 07.9**	**+0.9**
JCT	**Junction City**	**18.44**	**333**	P		**P**	**22 59 07.8**	**+0.9**
baz=149,SNR=12								
RUSC	**La Rusia**	**18.69**	**115**	*e*P		**P**	**22 59 10.6**	**+0.4**
CHIC	**Chingaza**	**18.75**	**119**	*e*P		**Pn**	**22 59 11.9**	**-1.8**
WHTX	**Lake Whitney,**	**18.88**	**340**			**P**	**22 59 12.3**	**+0.7**
WHTX	**Lake Whitney,**	**18.88**	**340**	P		**P**	**22 59 12.0**	**+0.5**
baz=158,SNR=19								
LRAL	**Lakeview Retre**	**18.89**	**8**	P		**P**	**22 59 13.3**	**+1.6**
LRAL	**Lakeview Retre**	**18.89**	**8**	P		**P**	**22 59 12.1**	**+0.4**
baz=189,SNR=7.0								
Z47A	**Carrollton**	**18.94**	**5**	P		**P**	**22 59 13.7**	**+1.6**
152A	**Waverly Hall**	**18.96**	**14**	P		**P**	**22 59 14.2**	**+1.7**
SC01	**Santiago de Io**	**19.23**	**72**	P		**Pn**	**22 59 18.2**	**-0.7**
154A	**Montrose**	**19.34**	**18**	P		**P**	**22 59 18.2**	**+1.7**
Z51A	**Franklin**	**19.48**	**12**	P		**P**	**22 59 20.3**	**+2.2**
Y45A	**Yeager Farm, C**	**19.52**	**1**	P		**P**	**22 59 20.8**	**+2.4**
WLAR	**White Oak Lake**	**19.53**	**352**	P		**Pn

WVT	Waverly	21.86	5	P	P	22 59 42.6	-0.4
	baz=186						
FNO	Franklin	21.91	344		P	22 59 43.4	-0.1
CLTN	Cedars of Leba	21.99	8	P	P	22 59 45.4	+1.1
TKL	Tuckaleechee C	22.04	14	P	P	22 59 45.8	+1.0
	comp=Z,41nm,1.1s,baz=180,slow=6.4,SNR=23						
	comp=Z,41nm,1.1s						
TKL	Tuckaleechee C	22.04	14	P	P	22 59 46.0	+1.2
V51A	Loudon	22.06	13	P	P	22 59 45.8	+0.9
TUL1	Leonard	22.15	348	P	P	22 59 45.7	0.0
	baz=165						
KMSC	Kings Mountain	22.23	19	P	P	22 59 46.0	-0.5
	baz=203						
BAUV	El Baul	22.24	101	P	P	22 59 45.2	-1.6
V53A	Saluda	22.29	16	P	P	22 59 48.3	+1.1
U49A	Red Boiling Sp	22.49	9	P	P	22 59 49.5	+0.7
T45A	Paducah	22.70	3	P	P	22 59 52.0	+1.3
MSTX	Muleshoe	22.73	332	P	P	22 59 50.4	-0.8
MSTX	Muleshoe	22.73	332	P	P	22 59 51.3	+0.1
	baz=147,SNR=7.8						
T47A	Sharon Grove	22.78	6	P	P	22 59 52.5	+1.0
OBIP	Obispado Ponce	22.87	77	P	P	22 59 54.9	+2.4
MGMO	Mountain Grove	22.87	356	P	P	22 59 52.3	-0.1
TZTN	Tazewell	22.94	14	P	P	22 59 53.9	+0.9
TZTN	Tazewell	22.94	14	P	P	22 59 52.8	-0.2
	baz=196						
AMTX	Amarillo	23.03	335	P	P	22 59 54.4	+0.5
AMTX	Amarillo	23.03	335	P	P	22 59 54.6	+0.7
	baz=150						
T50A	Nancy	23.14	11	P	P	22 59 55.8	+1.1
S44A	Carbondale	23.34	2	P	P	22 59 57.9	+1.4
SIUC	Southern Illin	23.36	2	P	P	22 59 57.2	+0.5
S39A	Bolivar	23.50	354	P	P	22 59 58.0	0.0
KAN13	South Haven SW	23.59	345		P	22 59 59.5	+0.7
V58A	Windy Hill, Pi	23.59	23	P	P	22 59 59.8	+0.9
KAN17	Caldwell West	23.69	345		P	23 00 00.1	+0.4
USIN	University of	23.70	5	P	P	23 00 01.4	+1.6
CCM	Cathedral Cave	23.71	358	P	P	23 00 00.8	+0.8
CCM				IAmb	IAmb	23 00 02.3	
	comp=Z,20nm,0.8s						
CCM	Cathedral Cave	23.71	358	P	P	23 00 00.1	+0.2
	baz=177						
KAN06	Argonia West S	23.91	345	P	P	23 00 02.2	+0.5
KAN08	Anthony NE Sta	23.92	344	P	P	23 00 02.5	+0.7
R40A	Maddies Statio	24.00	356	P	P	23 00 02.9	+0.4
R40A				IAmb	IAmb	23 00 05.3	
	comp=Z,8.5nm,0.7s						
WCI	Wyandotte Cave	24.10	7	P	P	23 00 04.6	+1.1
WCI	Wyandotte Cave	24.10	7	P	P	23 00 04.5	+1.1
	baz=189						
121A	Cookes Peak, D	24.31	321	P	P	23 00 05.9	+0.3
121A	Cookes Peak, D	24.31	321	P	P	23 00 06.8	+1.2
	baz=134						
BLA	Blacksburg	24.42	19	P	P	23 00 06.6	+0.2
	baz=203						
OLIL	Olney	24.43	4	P	P	23 00 07.5	+1.1
OLIL				IAmb	IAmb	23 00 08.7	
	comp=Z,18nm,0.7s						
Q44A	Meyer Farm, Va	24.56	2	P	P	23 00 08.3	+0.7
Q44A				IAmb	IAmb	23 00 11.6	
	comp=Z,29nm,0.8s						
Y22D	IRIS PASSCAL I	24.92	325	P	P	23 00 12.7	+1.6
	baz=138						
Y22F	Passcal Instru	24.92	325	P	P	23 00 12.1	+1.0
	baz=138						
BLO	Bloomington	25.01	7	P	P	23 00 12.6	+0.9
BLO				IAmb	IAmb	23 00 13.2	
	comp=Z,15nm,0.8s						
P40A	Paris	25.22	356	P	P	23 00 13.4	-0.2
P40A				IAmb	IAmb	23 00 14.7	
	comp=Z,14nm,0.5s						
ANMO	Albuquerque	25.33	327	P	P	23 00 16.7	+1.9
	comp=Z,0.7nm,0.6s,baz=139,slow=9.3,SNR=3.1						
	comp=Z,0.7nm,0.6s						
ANMO	Albuquerque	25.33	327	P	P	23 00 15.5	+0.7
	baz=140						
Q51A	Peebles	25.37	12	P	P	23 00 15.0	0.0
Q51A				IAmb	IAmb	23 00 18.0	
	comp=Z,22nm,0.7s						
KSU1	Kansas State U	25.39	348	P	P	23 00 15.9	+0.7
	baz=165						
P49A	Miami Univ. Ec	25.61	10	P	P	23 00 17.1	0.0
	baz=192						
P51A	Williamsport	25.87	13	P	P	23 00 20.1	+0.6
CBKS	Cedar Bluff	25.89	343	P	P	23 00 20.2	+0.5
	baz=158						
TUC	Tucson	26.06	317	P	P	23 00 22.9	+1.5
	baz=129						
T25A	Trinidad	26.11	333	P	P	23 00 22.7	+0.9
T25A				IAmb	IAmb	23 00 25.2	
	comp=Z,7.1nm,0.7s						
T25A	Trinidad	26.11	333	P	P	23 00 22.9	+1.0
	baz=147						
SFIN	Lafayette	26.14	5	P	P	23 00 22.1	+0.3
	baz=187						
HDIL	Hopedale	26.20	1	P	P	23 00 23.0	+0.6
	baz=182						
P52A	Corning	26.22	14	P	P	23 00 22.7	+0.2
	baz=198						
O48B	Farmland	26.25	9	P	P	23 00 23.0	+0.2
	baz=191						
ACSO	Alum Creek Sta	26.61	12	P	P	23 00 26.5	+0.5
	baz=196						
KSCO	Kaye Shedlock'	27.01	338	P	P	23 00 30.5	+0.7
	baz=152						
O53A	New Philadelph	27.03	15	P	P	23 00 30.3	+0.5
	baz=199						
SDCO	Great Sand Dun	27.09	332	P	P	23 00 32.4	+1.6
	baz=146						
214A	Organ Pipe Nat	27.22	314	P	P	23 00 33.3	+1.6
	baz=125						
S22A	4UR Ranch, Cre	27.71	331	P	P	23 00 37.6	+1.4
	baz=143						
L40A	Anamosa	27.71	358	P	P	23 00 36.7	+0.9
L40A				IAmb	IAmb	23 00 37.0	
	comp=Z,22nm,1.1s						
Q24A	Divide	27.95	334	P	P	23 00 38.9	+0.5
	baz=148						
M53A	WI Miller and	28.29	15	P	P	23 00 41.0	0.0
	baz=200						
SSPA	Standing Stone	28.35	20	P	P	23 00 42.0	+0.5
	baz=206						
JFWS	Jewell Farm	28.55	360	P	P	23 00 43.6	+0.4
	baz=180						
SMCO	Snowmass	28.93	332	P	P	23 00 49.7	+2.6
ERPA	Erie	29.10	16	P	P	23 00 48.2	+0.1
	baz=200						
I42A	Draeger Farm,	29.54	2	P	P	23 00 52.4	+0.4
I42A				IAmb	IAmb	23 00 53.0	
	comp=Z,15nm,0.8s						
I37A	Lemond, Waseca	29.78	355	P	P	23 00 54.8	+0.7
I45A	Fountain	29.85	6	P	P	23 00 54.8	+0.1
ECSD	EROS Data Cent	29.89	350	P	P	23 00 55.2	+0.1
ECSD				IAmb	IAmb	23 00 56.5	
	comp=Z,18nm,1.1s						
ECSD	EROS Data Cent	29.89	350	P	P	23 00 55.0	-0.1
	baz=167,SNR=9.5						
BC3	Big Chuckawall	30.02	314	P	P	23 00 57.7	+1.3
	baz=124						
PAL	Palisades	30.14	25	P	P	23 00 58.2	+0.9
	baz=213						
O20A	White River Ci	30.28	332	P	P	23 01 01.0	+2.2
O20A	White River Ci	30.28	332	P	P	23 01 00.8	+2.0
	baz=143						
MONP2	Monument Peak	30.29	312	P	P	23 00 59.9	+0.9
	baz=122						
BINY	Binghamton	30.39	21	P	P	23 01 00.1	+0.5
	baz=208						
TPFO	Pinon Flats	30.69	313	P	P	23 01 03.6	+1.2
	baz=123						
GMRC	Granite Mounta	30.80	316	P	P	23 01 05.0	+1.6
	baz=125						
GLMI	Grayling	30.81	8	P	P	23 01 03.2	+0.1
	baz=190						
G45A	Suttons Bay	30.90	6	P	P	23 01 04.1	+0.2
SPMN	Marine on St.	30.94	356	P	P	23 01 04.5	+0.2
SPMN	Marine on St.	30.94	356	P	P	23 01 04.5	+0.2
	baz=175,SNR=15						
SUSD	Miller	31.01	348	P	P	23 01 05.4	+0.5
	baz=163						
MURC	Murrieta	31.21	313	P	P	23 01 08.2	+1.3
	baz=122						
HEC	Hector,Ludlow	31.28	316	P	P	23 01 09.3	+1.9
	baz=124						
F36A	Milaca	31.62	355	P	P	23 01 09.9	-0.4
F36A				IAmb	IAmb	23 01 15.5	
	comp=Z,26nm,1.7s						
COWI	Conover	31.74	1	P	P	23 01 11.6	+0.3
COWI				IAmb	IAmb	23 01 11.8	
	comp=Z,20nm,0.6s						
F33A	5 Mile Ranch,	31.90	352	P	P	23 01 12.6	-0.1
F33A				IAmb	IAmb	23 01 13.1	
	comp=Z,33nm,1.2s						
E43A	Lone Tree Farm	32.11	4	P	P	23 01 14.7	+0.2
E43A				IAmb	IAmb	23 01 15.1	
	comp=Z,15nm,0.7s						
E38A	The Farm, Brul	32.26	358	P	P	23 01 16.2	+0.4
E38A				IAmb	IAmb	23 01 16.4	
	comp=Z,21nm,0.5s						
EDW2	Edwards Air Fo	32.45	314	P	P	23 01 18.6	+0.9
	baz=122						
MPMC	Manual Prospec	32.75	316	P	P	23 01 21.1	+0.7
	baz=125						
PDAR	Pinedale Array	32.98	333	P	P	23 01 23.4	+1.0
	comp=Z,0.7nm,0.4s,baz=128,slow=9.6,SNR=4.9						
	comp=Z,0.7nm,0.4s						
LONY	Lake Ozonia	33.01	21	P	P	23 01 22.4	+0.1
	baz=208						
ARVC	Arvin	33.16	314	P	P	23 01 25.2	+1.4
	baz=122						
ISA	Isabella, Lake	33.20	315	P	P	23 01 25.5	+1.3
	baz=123						
SBC	Santa Barbara	33.44	312	P	P	23 01 26.9	+0.7
	baz=120						
EYMN	Ely	33.60	358	P	P	23 01 26.9	-0.5
	baz=178						
AHID	Auburn Hatcher	33.67	332	P	P	23 01 29.0	+0.6
HVU	Hansel Valley	33.73	329	P	P	23 01 29.9	+1.1
REDW	Red Top Meadow	34.02	332	P	P	23 01 31.5	+0.1
REDW				IAmb	IAmb	23 01 33.9	
	comp=Z,21nm,0.6s						
SNOW	Snow King Moun	34.06	333	P	P	23 01 32.8	+1.0
SNOW				IAmb	IAmb	23 01 34.8	
	comp=Z,24nm,0.6s						
LOHW	Long Hollow	34.11	333	P	P	23 01 33.0	+0.8
B35A	Bob, Littlefor	34.12	356	P	P	23 01 31.6	-0.3
B35A				IAmb	IAmb	23 01 32.3	
	comp=Z,23nm,1.2s						
TPAW	Teton Pass	34.17	333	P	P	23 01 34.3	+1.6
TPAW				IAmb	IAmb	23 01 35.2	
	comp=Z,27nm,1.5s						
AGMN	Agassiz Nation	34.26	353	P	P	23 01 33.4	+0.3
AGMN	Agassiz Nation	34.26	353	P	P	23 01 33.2	+0.1
	baz=170,SNR=14						
MDND	Maddock	34.40	349	P	P	23 01 35.4	+1.1
MDND	Maddock	34.40	349	P	P	23 01 34.7	+0.4
	baz=164,SNR=7.2						
NVAR	Mina Array Bea	34.65	319	P	P	23 01 39.0	+2.2
	comp=Z,1.0nm,0.6s,baz=130,slow=8.3,SNR=10						
NVAR				pP	pP	23 02 20.7	+1.3
	comp=Z,0.6nm,0.8s,baz=121,slow=7.8,SNR=1.1						
	comp=Z,1.0nm,0.6s						
RLMT	Red Lodge	34.78	336	P	P	23 01 37.9	0.0
	baz=146						
HLID	Hailey	35.86	329	P	P	23 01 47.6	+0.6
	baz=137						
DGMT	Dagmar	36.04	344	P	P	23 01 49.9	+1.6
DGMT				IAmb	IAmb	23 01 50.4	
	comp=Z,30nm,0.8s						
DGMT	Dagmar	36.04	344	P	P	23 01 49.0	+0.7
	baz=156,SNR=6.6						
MCMT	McKenzie Canyo	36.07	332	P	P	23 01 50.4	+1.5
BOZ	Bozeman (W)	36.14	334	P	P	23 01 50.8	+1.4
BOZ	Bozeman (W)	36.14	334	P	P	23 01 50.3	+1.0
	baz=143						
ULM	Lac du Bonnet	36.19	354	P	P	23 01 48.9	-0.7
	comp=Z,18nm,0.5s,baz=171,slow=9.8,SNR=28						
	comp=Z,18nm,0.5s						
ULM	Lac du Bonnet	36.19	354	P	P	23 01 49.0	-0.6
ULM				IAmb	IAmb	23 01 49.6	
	comp=Z,20nm,0.6s						
LPAZ	La Paz	37.32	144	P	P	23 02 01.4	+1.3
	comp=Z,1.4nm,0.6s,baz=329,slow=9.7,SNR=6.9						
	comp=Z,1.4nm,0.6s						
EGMT	Eagleton	37.40	338	P	P	23 02 00.4	+0.6
EGMT				IAmb	IAmb	23 02 02.1	
	comp=Z,11nm,0.6s						
EGMT	Eagleton	37.40	338	P	P	23 02 00.6	+0.8
	baz=148,SNR=5.2						
MSO	Missoula	38.10	333	P	P	23 02 06.9	+1.2
MSO	Missoula	38.10	333	P	P	23 02 07.0	+1.3
	baz=141						
F10A	Beach Ranch, E	38.99	330	P	P	23 02 13.5	+0.3
NEW	Newport	40.60	332	P	P	23 02 27.1	+0.8
	baz=138						
SCHQ	Schefferville	44.35	19	P	P	23 02 56.2	-0.1
	comp=Z,12nm,0.5s,baz=212,slow=6.8,SNR=32						
	comp=Z,12nm,0.5s						
SCHQ	Schefferville	44.35	19	P	P	23 02 56.4	+0.1
SCHQ				IAmb	IAmb	23 02 56.7	
	comp=Z,37nm,1.3s						
BDFB	Brasilia	51.12	124	P	P	23 03 48.1	-0.9
	comp=Z,1.1nm,0.4s,baz=276,slow=9.2,SNR=2.1						
	comp=Z,1.1nm,0.4s						
YKA	Yellowknife Ar	51.21	346	P	P	23 03 49.0	+0.2
	comp=Z,2.0nm,0.6s,baz=136,slow=7.4,SNR=27						
YKA				pP	pP	23 04 34.5	+0.3
	comp=Z,2.6nm,0.9s,baz=144,slow=7.4,SNR=4.7						
	comp=Z,2.0nm,0.6s						
CPUP	Villa Florida	51.42	142	P	P	23 03 50.6	-0.3
	comp=Z,0.6nm,0.4s,baz=352,slow=3.0,SNR=3.4						
CPUP				PcP	PcP	23 05 03.8	+1.2
	comp=Z,1.2nm,0.9s,baz=301,slow=5.9,SNR=3.9						
	comp=Z,0.6nm,0.4s						
T35M	Bob Quinn	52.36	334	P	P	23 03 57.6	+0.1
	baz=128						
DLBC	Dease Lake	53.18	335	P	P	23 04 04.5	+1.0
	comp=Z,3.3nm,0.7s,baz=136,slow=3.8,SNR=11						
	comp=Z,3.3nm,0.7s						
DLBC	Dease Lake	53.18	335	P	P	23 04 04.7	+1.2
DLBC	Dease Lake	53.18	335	P	P	23 04 04.9	+1.4
	baz=129						
S34M	Telegraph Cree	53.31	334	P	P	23 04 05.1	+0.8
	baz=128						
R33M	Jennings River	54.16	336	P	P	23 04 11.4	+0.7
	baz=129						
WRGLY	Wrigley	54.19	342	P	P	23 04 11.2	+0.5
	baz=139						
Q32M	Nakina River	54.42	335	P	P	23 04 13.7	+1.1
	baz=127						
MMPY	Sheldon Lake,	56.31	339	P	P	23 04 26.6	+0.7
	baz=130						
PLBC	Pleasant Camp	56.44	334	P	P	23 04 27.0	+0.2
	baz=123						
WHY	Whitehorse	56.49	335	P	P	23 04 27.3	+0.1
	baz=125						
O30N	Mendenhall	57.04	335	P	P	23 04 31.4	+0.3
	baz=124						
P30M	Million Dollar	57.05	334	P	P	23 04 31.1	0.0
	baz=123						
P29M	Windy Craggy	57.12	333	P	P	23 04 31.9	+0.3
	baz=122						
N30M	Aishikik Lake	57.83	335	P	P	23 04 37.4	+0.9
	baz=123						
YUK8	Steele Glacier	58.83	335	P	P	23 04 43.6	-0.2
	baz=120						
M29M	Somme Creek	58.91	336	P	P	23 04 44.1	0.0
	baz=122						
L29M	L29M	59.14	337	P	P	23 04 46.4	+0.9
	baz=123						
K29M	Barlow Dome	59.32	338	P	P	23 04 46.8	0.0
	baz=124						
M27K	Edge Creek, AK	60.24	335	P	P	23 04 53.0	-0.2
	baz=119						
MCARA	McCarthy VSAT	60.26	334	P	P	23 04 53.1	-0.1
	baz=117						
RES	Resolute Bay	60.47	359	P	P	23 04 54.1	-0.2
	comp=Z,3.0nm,0.4s,baz=168,slow=8.4,SNR=15						
	comp=Z,3.0nm,0.4s						
EPYK	Eagle Plains	60.49	340	P	P	23 04 53.7	-1.0
	baz=126						
L27K	Beaver Creek,	60.56	336	P	P	23 04 54.6	-0.6
	baz=119						
INK	Inuvik	60.72	343	P	P	23 04 56.1	+0.1
	comp=Z,2.0nm,0.5s,baz=151,slow=6.8,SNR=4.4						
	comp=Z,2.0nm,0.5s						
INK	Inuvik	60.72	343	P	P	23 04 54.8	-1.3
	baz=130						
M26K	Nabesna, AK	60.72	335	P	P	23 04 55.0	-1.3
	baz=118						
BMRM	Bremner River	60.77	333	P	P	23 04 55.1	-1.5
	baz=115						
Q23K	Middleton Isla	60.93	331	P	P	23 04 56.1	-1.6
	baz=113						
N25K	Chitina, Valde	61.04	334	P	P	23 04 55.8	-2.7
	baz=116						
EYAK	Cordova Ski Ar	61.10	332	P	P	23 04 56.3	-2.5
	baz=114						
K27K	Chicken	61.13	337	P	P	23 04 57.0	-1.9
	baz=119						
EGAK	Eagle	61.16	338	P	P	23 04 56.5	-2.7
	baz=121						
KLU	Klutina	61.56	333	P	P	23 05 00.3	-1.8
	baz=114						
I27K	Kandik River	61.75	338	P	P	23 05 00.9	-2.3
	baz=120						
GLI	Glacier Island	61.84	332	P	P	23 05 02.6	-1.2
	baz=113						
SCRK	Sand Creek	61.84	336	P	P	23 05 01.6	-2.3
	baz=117						
J26L	Joseph Creek	61.93	337	P	P	23 05 03.9	-0.5
	baz=118						
M24K	Tolsona, Glenn	61.93	334	P	P	23 05 00.8	-3.6
	baz=114						
PAX	Paxson	61.99	335	P	P	23 05 03.3	-1.6
	baz=115						
H27K	Steamboat Moun	62.04	339	P	P	23 05 03.1	-2.0
	baz=121						
RIDG	Independent Ri	62.08	336	P	P	23 05 03.2	-2.2
	baz=116						
I26K	Coal Creek Min	62.16	338	P	P	23 05 04.4	-1.5
	baz=119						
G27K	Doyon Strip	62.38	340	P	P	23 05 05.4	-1.9
	baz=121						
PWL	Port Wells	62.40	332	P	P	23 05 06.5	-1.0
	baz=112						
M23K	Glacier View	62.47	333	P	P	23 05 06.3	-1.7
	baz=113						
SEW	Seward	62.64	331	P	P	23 05 08.2	-0.9
	baz=110						
KNK	Knik Glacier	62.66	333	P	P	23 05 09.9	+0.7
	baz=112						
J25K	Salcha River,	62.67	336	P	P	23 05 10.2	+0.8
	baz=116						
E27K	Coleen River	63.08	341	P	P	23 05 12.1	+0.2
	baz=122						
PRP	Porcupine Dome	63.13	337	P	P	23 05 12.7	+0.2
	baz=116						
HDA	Harding Lake	63.20	336	P	P	23 05 12.6	-0.2
	baz=115						
ILAR	Eielson Array	63.33	336	P	P	23 05 13.3	-0.2
	comp=Z,1.1nm,0.9s,baz=166,slow=4.6,SNR=12						
ILAR				pP	pP	23 06 00.6	-0.3
	comp=Z,0.5nm,0.9s,baz=119,slow=5.6,SNR=2.0						
	comp=Z,1.1nm,0.9s						
SUA	Susitna One	63.70	332	P	P	23 05 16.6	+0.4
	baz=110						
G25K	Bearman Lake	63.90	339	P	P	23 05 17.4	+0.2
	baz=116						
SII	Sitkinak Islan	63.99	326	P	P	23 05 18.3	+0.2
	baz=104						
NEA2	Nenana	64.12	336	P	P	23 05 18.7	0.0
	baz=113						
F25K	Christian Rive	64.12	339	P	P	23 05 18.1	-0.7
	baz=117						
O20K	Slope Mountain	64.14	330	P	P	23 05 18.1	-0.9
	baz=107						
H24K	Noodor Dome	64.15	337	P	P	23 05 18.6	-0.4
	baz=114						
TRF	Thorofare Moun	64.19	334	P	P	23 05 18.2	-1.3
	baz=111						
SKT	Skwentna	64.23	333	P	P	23 05 19.3	-0.2
	baz=109						
G24K	Hadweenzic Riv	64.37	338	P	P	23 05 19.2	-1.1
	baz=115						
I23K	Minto, Yukon-K	64.44	336	P	P	23 05 20.6	-0.2
	baz=113						
BPAW	Bear Paw Mtn.	64.71	335	P	P	23 05 22.4	-0.2
	baz=110						
MLY	Manley	64.94	336	P	P	23 05 23.3	-0.8
	baz=111						
C26K	Camden Bay	64.99	342	P	P	23 05 23.3	-0.9
	baz=119						
L20K	Farewell, AK	65.43	333	P	P	23 05 26.6	-0.6
	baz=107						
H22K	Ishtalitna Cre	65.50	337	P	P	23 05 27.4	-0.2
	baz=111						
N18K	Kilae Creek	65.87	331	P	P	23 05 29.9	-0.1
	baz=104						
F22K	John River	66.38	338	P	P	23 05 33.6	+0.4
	baz=111						
E22K	Anaktuvuk Pass	66.47	339	P	P	23 05 33.3	-0.5
	baz=111						
F21K	Alatna River	66.75	338	P	P	23 05 36.0	+0.4
	baz=109						
ESDC	Sonseca Array	78.10	52	P	P	23 06 41.9	-1.3
	comp=Z,1.0nm,0.6s,baz=286,slow=4.4,SNR=5.9						
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	83.03	29	P	P	23 07 08.5	-0.4
	comp=Z,0.5nm,0.7s,baz=289,slow=5.1,SNR=3.5						
	comp=Z,0.5nm,0.7s						
DBIC	Dimbokro	83.79	85	P	P	23 07 12.2	-1.4
	comp=Z,2.0nm,0.3s,baz=316,slow=3.6,SNR=15						
	comp=Z,2.0nm,0.3s						
HFS	Hagfors	84.47	29	P	P	23 07 14.4	-1.7
	comp=Z,3.3nm,1.0s,baz=316,slow=4.0,SNR=4.1						
	comp=Z,3.3nm,1.0s						
ARCES	ARCESS Array B	85.30	19	P	P	23 07 18.8	-1.3
	comp=Z,1.4nm,0.8s,baz=294,slow=4.4,SNR=5.2						
	comp=Z,1.4nm,0.8s						
GERES	GERESS Array B	88.22	40	P	P	23 07 32.5	-2.3
	comp=Z,0.2nm,0.4s,baz=318,slow=3.6,SNR=4.7						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	88.52	77	P	P	23 07 34.1	-2.6
	comp=Z,0.3nm,0.5s,baz=288,slow=4.0,SNR=9.5						
	comp=Z,0.3nm,0.5s						
BOSA	Boshof	118.80	115	PKP	PKiKP	23 13 30.9	-0.4
	comp=Z,1.6nm,0.8s,baz=315,slow=4.3,SNR=1.5						
MKAR	Makanchi Array	118.84	6	PKP	PKPdf	23 13 29.0	-1.8
	comp=Z,0.2nm,0.3s,baz=336,slow=3.1,SNR=6.3						
LZH	Lanzhou	128.21	346	ePKP	PKiKP	23 13 53.0	+3.1
LZH				sPKP		23 14 54.6	
STKA	Stephens Creek	129.79	240	PKP	PKiKP	23 13 53.4	+0.5
	comp=Z,3.9nm,0.9s,baz=104,slow=8.0,SNR=4.5						
WRA	Warramunga Arr	137.25	256	PKhKP	PKPpre	23 13 56.7	
	comp=Z,0.3nm,0.4s,baz=89,slow=3.4,SNR=10.0						
WRA				PKP	PKiKP	23 14 07.5	-0.9
	comp=Z,1.3nm,0.7s,baz=90,slow=2.0,SNR=11						
ASAR	Alice Springs	137.49	251	PKhKP	PKPpre	23 13 58.5	
	comp=Z,0.5nm,0.4s,baz=110,slow=3.9,SNR=11						
PZH	PanZhiHua	137.87	344	PKP	PKiKP	23 14 10.6	+1.0
CMAR	Chiang Mai Arr	146.28	344	PKPbc	PKPbc	23 14 23.1	-0.9
	comp=Z,0.8nm,0.4s,baz=337,slow=2.8,SNR=5.6						

TRN 09 23:03:35.0, 15.92N×61.03W, h45km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAGL	Barre de l'ile	0.25	278	eP	Pn	23 03 45.2	+2.0
MAGL				eS	Sn	23 03 51.6	+2.6
MDVC	Dominica, Viel	0.47	231	eP	Pn	23 03 47.4	+1.8
MDVC				eS	Sn	23 03 55.3	+2.2
MDCT	Cottage Hill,	0.51	235	eP	Pn	23 03 47.8	+1.6
MDCT				eS	Sn	23 03 56.7	+2.6
CBE	Ff, Capester	0.58	285	eP	Pn	23 03 49.4	+2.4
CBE				eS	Sn	23 03 58.5	+2.9

ZAM	**Aeronautique**	**1.34 180**	*e*P	Pn	23 03 58.8 +1.6
MVM	**Montagne Vaucl**	**1.36 175**	*e*P	Pn	23 03 59.5 +1.9
TRMF	**Trois Ilets**	**1.37 181**	*e*P	Pn	23 03 59.4 +1.7
MLYT	**Lee's Yard**	**1.38 306**	*e*P	Pn	23 04 05.5 +7.7
MLYT			*e*S	Sn	23 04 23.3 +8.5
BIM	**Bigot**	**1.39 182**	*e*P	Pn	23 03 59.6 +1.6
BIM			*e*S	Sn	23 04 16.9 +1.7
MBFL	**Flemmings, Mon**	**1.41 306**	*e*P	Pn	23 04 00.2 +2.0
MBFL			*e*S	Sn	23 04 17.5 +1.9
MPOM	**Morne Pois Mar**	**1.47 174**	*e*P	Pn	23 04 00.8 +1.7
MPOM			*e*S	Sn	23 04 18.8 +1.7
SLBI	**Saint Lucia, B**	**1.88 178**	*e*P	Pn	23 04 07.0 +2.2
SLBI			*e*S	Sn	23 04 28.8 +1.6
ANWB	**Willy Bob**	**1.89 337**	*e*P	Pn	23 04 05.9 +1.1
ANWB			*e*S	Sn	23 04 29.3 +1.9
SLCP	**Castries, St.**	**1.90 179**	*e*P	Pn	23 04 07.1 +2.2
SLCP			*e*S	Sn	23 04 29.3 +1.7
SLB	**Belfond**	**2.08 180**	*e*P	Pn	23 04 09.7 +2.3
SLB			*e*S	Sn	23 04 34.1 +2.0
MCLT	**Moule a Chique**	**2.19 178**	*e*P	Pn	23 04 10.3 +1.3
MCLT			*e*S	Sn	23 04 36.0 +1.1
SVB	**Belmont**	**2.64 185**	*e*P	Pn	23 04 17.4 +2.3
SVB			*e*S	Sn	23 04 48.1 +2.2
SMRT	**St. Maarten**	**2.89 318**	*e*P	Pn	23 04 20.1 +1.5
SMRT			*e*S	Sn	23 04 52.5 +0.4
GRGR	**Grenville**	**3.81 189**	*e*P	Pn	23 04 32.7 +1.5
GRGR			*e*S	Sn	23 05 16.8 +2.0
GRFF	**Grenada Fort F**	**3.91 190**	*e*S	Sn	23 05 17.6 +0.5
AOPR	**Arecibo Observ**	**5.99 295**	*e*P	Pn	23 05 04.0 +2.9

*MDD **09** 23:03:43.0±0.7, 35°.90N×2°.78E, h0km, Mb4.2/19, M_mb3.5/19, Error ellipse: s-maj=6.6km s-min=3.6km az=141.0*
*CRAAG **09** 23:03:42.2, 36°.05N×2°.70E, Ml3.9*
*IDC **09** 23:03:42.2±1.3, 36°.13N×2°.81E, h0km, mb3.4/3, mbtmp3.5/6, ML3.3/3, MS2.9/2, Error ellipse: s-maj=27.3km s-min=17.8km az=160.0*
*LDG **09** 23:03:44.4±0.2, 35°.83N×2°.83E, h10km, Ml3.0/26, Error ellipse: s-maj=4.8km s-min=2.8km az=155.0*

ISC 09 23:03:44.5±0.9,**36°.10N**±0°.06×**2°.77E**±0°.05,**h15**km,**n65,**
σ1**97**/103,**mb3.3**/3,**15C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.54**	**84**	P	**Pg**	**23 03 55.5**	**+0.2**
ABA	**Alger-Bouzarea**	**0.73**	**17**	P	**Pg**	**23 03 58.9**	**+0.2**
EANR	**'Aín N'Sour**	**1.36**	**264**	P	**Pn**	**23 04 07.6**	**-1.4**
EIBI	**Ibiza**	**3.13**	**339**	P	**Pn**	**23 04 34.3**	**+1.0**
EIBI				⇑*i*Vmb_V		23 04 34.9	
	758nm,SNR=2.2						
EIBI				S	**Sn**	**23 05 09.4**	**-1.1**
EMUR	**La Murta**	**3.65**	**300**	P	**Pn**	**23 04 40.1**	**-0.4**
EMUR				⇑*i*Vmb_V		23 04 45.0	
	150nm,SNR=2.8						
EMUR				S	**Sn**	**23 05 20.0**	**-3.3**
ETOS	**Mallorca**	**3.66**	**1**	P	**Pn**	**23 04 41.9**	**+1.4**
ETOS				⇑*i*Vmb_V		23 04 44.3	
	1μm,SNR=3.1						
ETOS				S	**Sn**	**23 05 24.8**	**+1.3**
AFON	**Font Roja**	**3.67**	**315**	P	**Pn**	**23 04 42.4**	**+1.6**
AFON				⇑*i*Vmb_V		23 04 48.5	
	104nm,SNR=3.5						
AFON				S	**Sn**	**23 05 28.0**	**+4.1**
EZAR	**Zarzadilla de**	**3.99**	**298**	P	**Pn**	**23 04 44.7**	**-0.5**
EZAR				⇑*i*Vmb_V		23 04 45.8	
	81nm,SNR=4.6						
EZAR				S	**Sn**	**23 05 30.6**	**-1.1**
ETOB	**Tobarra**	**4.27**	**308**	P	**Pn**	**23 04 50.1**	**+1.0**
ETOB				⇑*i*Vmb_V		23 04 53.3	
	251nm,SNR=2.9						
ETOB				S	**Sn**	**23 05 39.2**	**+0.5**
ECHE	**Chera**	**4.57**	**321**	P	**Pn**	**23 04 54.8**	**+1.7**
ECHE				⇑*i*Vmb_V		23 05 00.6	
	94nm,SNR=2.9						
ECHE				S	**Sn**	**23 05 48.9**	**+3.0**
EBER	**Berja**	**4.63**	**282**	P	**Pn**	**23 04 52.5**	**-1.6**
EBER				⇑*i*Vmb_V		23 04 53.4	
	211nm,SNR=2.9						
EBER				S	**Sn**	**23 05 46.9**	**-0.7**
EMOS	**Mosqueruela**	**4.96**	**330**	P	**Pn**	**23 04 59.8**	**+1.2**
EMOS				⇑*i*Vmb_V		23 05 00.7	
	368nm,SNR=2.6						
EMOS				S	**Sn**	**23 05 54.9**	**-0.9**
EQES	**Quesada**	**4.98**	**292**	P	**Pn**	**23 04 59.6**	**+0.9**
EQES				⇑*i*Vmb_V		23 05 04.2	
	165nm,SNR=2.7						
EQES				S	**Sn**	**23 05 57.3**	**+1.2**
ERTA	**Horta de San J**	**5.21**	**339**	P	**Pn**	**23 05 03.7**	**+1.8**
ELGU	**Los Guajares,**	**5.21**	**280**	P	**Pn**	**23 05 00.2**	**-1.7**
ELGU				⇑*i*Vmb_V		23 05 02.0	
	230nm,SNR=3.0						
ELGU				S	**Sn**	**23 06 00.8**	**-1.0**
KEST	**Kesra**	**5.35**	**92**	Pn	**Pn**	**23 05 04.6**	**+0.7**
	0.5nm,0.3s,baz=66,slow=20,SNR=17						
KEST				Sn	**Sn**	**23 06 04.2**	**-1.1**
	0.3nm,0.3s,baz=60,slow=20,SNR=1.4						
	8.0nm,1.2s						
EPOB	**Poblet**	**5.41**	**346**	P	**Pn**	**23 05 06.0**	**+1.4**
EPOB				⇑*i*Vmb_V		23 05 11.8	
	80nm,SNR=2.9						
EPOB				S	**Sn**	**23 06 06.5**	**-0.1**
EGOR	**Sierra Gorda,**	**5.62**	**282**	P	**Pn**	**23 05 08.4**	**+0.7**
EGOR				⇑*i*Vmb_V		23 05 12.9	
	102nm,SNR=2.2						
EGOR				S	**Sn**	**23 06 14.9**	**+2.8**
ETOR	**Torete**	**6.04**	**323**	P	**Pn**	**23 05 15.6**	**+2.2**
ETOR				⇑*i*Vmb_V		23 05 20.3	
	52nm,SNR=0.6						
EMIJ	**Mijas**	**6.11**	**277**	P	**Pn**	**23 05 11.9**	**-2.3**
EMIJ				⇑*i*Vmb_V		23 05 17.4	
	93nm,SNR=2.6						
EMIJ				S	**Sn**	**23 06 19.6**	**-4.2**
EJON	**La Jonquera**	**6.34**	**1**	P	**Pn**	**23 05 19.9**	**+2.6**
EJON				S	**Sn**	**23 06 29.5**	**0.0**
ESDC	**Sonseca Array**	**6.41**	**306**	Pn	**Pn**	**23 05 18.8**	**+0.4**
	0.4nm,0.3s,baz=120,slow=13,SNR=22						
ESDC				Sn	**Sn**	**23 06 30.5**	**-0.8**
	0.1nm,0.3s,baz=118,slow=25,SNR=4.7						
ESDC				LR	LR	23 07 11.0	
	comp=Z,30nm,18.2s,baz=140,slow=32						
	2.1nm,0.6s						
PAB	**San Pablo**	**6.60**	**304**	P	**Pn**	**23 05 21.5**	**+0.5**
MDT	**Midelt**	**6.92**	**244**	Pn	**Pn**	**23 05 25.3**	**-0.1**
	0.4nm,0.3s,baz=82,slow=16,SNR=22						
MDT				Lg	Lg	23 07 24.5	
	0.8nm,0.3s,baz=266,slow=13,SNR=4.7						
	5.2nm,0.7s						
EPF	**Esparros**	**7.17**	**346**	*e*Pn	**Pn**	**23 05 31.0**	**+2.2**
EPF				*e*Sn	**Sn**	**23 06 50.3**	**+0.3**
	1.8nm,0.3s						
MTLF	**Montolieu**	**7.24**	**357**	*e*Pn	**Pn**	**23 05 31.8**	**+2.0**
MTLF				*e*Sn	**Sn**	**23 06 50.8**	**-0.9**
	0.4nm,0.2s						
ETSF	**Etsaut**	**7.26**	**340**	*e*Pn	**Pn**	**23 05 32.4**	**+2.4**
ETSF				*e*Sn	**Sn**	**23 06 52.4**	**+0.2**
	1.3nm,0.4s						
SJPF	**Ste Jean**	**7.65**	**337**	*e*Pn	**Pn**	**23 05 37.3**	**+1.9**
SJPF				*e*Sn	**Sn**	**23 07 01.8**	**+0.1**
	0.4nm,0.3s						
LMR	**La Mourre**	**7.77**	**21**	*e*Pn	**Pn**	**23 05 37.8**	**+0.8**
LMR				*e*Sn	**Sn**	**23 07 02.2**	**-2.6**
LASF	**Ste Croix**	**8.01**	**6**	*e*Pn	**Pn**	**23 05 42.0**	**+1.7**
LASF				*e*Sn	**Sn**	**23 07 07.8**	**-2.8**
	4.7nm,0.6s						
PGF	**Pioggiola**	**8.04**	**35**	*e*Pn	**Pn**	**23 05 41.7**	**+0.9**
PGF				*e*Sn	**Sn**	**23 07 08.0**	**-3.6**
PBAR	**Barrancos**	**8.10**	**288**	*e*Pn	**Pn**	**23 05 42.1**	**+0.5**
PVAQ	**Vaqueiros**	**8.52**	**282**	*e*Pn	**Pn**	**23 05 46.5**	**-0.8**
SBF	**Sospel**	**8.54**	**23**	*e*Pn	**Pn**	**23 05 48.3**	**+0.7**
SBF				*e*Sn	**Sn**	**23 07 21.5**	**-2.1**
	2.6nm,0.3s						
ELAN	**Lanestosa**	**8.57**	**328**	P	**Pn**	**23 05 50.9**	**+2.8**
CAF	**Calviac**	**8.83**	**357**	*e*Pn	**Pn**	**23 05 53.6**	**+2.0**
CAF				*e*Sn	**Sn**	**23 07 30.3**	**-0.5**
	0.6nm,0.3s						
VIVF	**Saint-Julien-l**	**8.86**	**9**	*e*Pn	**Pn**	**23 05 54.3**	**+2.3**
VIVF				*e*Sn	**Sn**	**23 07 30.5**	**-1.1**
	1.2nm,0.5s						
LFF	**La Frestale**	**8.96**	**351**	*e*Pn	**Pn**	**23 05 54.7**	**+1.4**
LFF				*e*Sn	**Sn**	**23 07 33.3**	**-0.6**
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**9.12**	**14**	*e*Pn	**Pn**	**23 05 58.3**	**+2.7**
MBDF	**Montbardon**	**9.14**	**18**	*e*Pn	**Pn**	**23 05 58.4**	**+2.5**
MBDF				*e*Sn	**Sn**	**23 07 37.0**	**-1.5**
	0.1nm,0.2s						
RJF	**Les Rejaudoux**	**9.24**	**354**	*e*Pn	**Pn**	**23 05 58.6**	**+1.4**
RJF				*e*Sn	**Sn**	**23 07 40.1**	**-0.7**
	0.5nm,0.3s						
EARI	**Arriondas**	**9.46**	**322**	P	**Pn**	**23 06 02.2**	**+2.0**
LPG	**La Plagne**	**9.86**	**17**	*e*Pn	**Pn**	**23 06 09.1**	**+3.2**
LPG				*e*Sn	**Sn**	**23 07 54.2**	**-2.2**
	0.4nm,0.3s						
LPL	**La Plagne**	**9.87**	**16**	*e*Pn	**Pn**	**23 06 10.7**	**+4.7**
LPL				*e*Sn	**Sn**	**23 07 54.6**	**-2.0**
	0.5nm,0.5s						
TCF	**Toulx Ste Croi**	**10.19**	**358**	*e*Pn	**Pn**	**23 06 12.3**	**+2.2**
TCF	**Toulx Ste Croi**	**10.19**	**358**	*e*Pg	Pn	23 06 58.2	+48
TCF				*e*Sn	**Sn**	**23 08 02.6**	**-1.4**
	0.2nm,0.3s						
SMF	**Signal de Mont**	**10.56**	**4**	*e*Pn	**Pn**	**23 06 18.4**	**+3.1**
SMF	**Signal de Mont**	**10.56**	**4**	*e*Pg	Pn	23 07 04.2	+49
AVF	**Avril sur Loir**	**10.69**	**2**	*e*Pn	**Pn**	**23 06 18.5**	**+1.5**
MFF	**Saint Martin d**	**10.72**	**349**	*e*Pn	**Pn**	**23 06 18.7**	**+1.4**
MFF				*e*Sn	**Sn**	**23 08 15.4**	**-1.6**
	4.3nm,0.7s						
CABF	**La Chapelle**	**10.79**	**12**	*e*Pn	**Pn**	**23 06 20.9**	**+2.5**
CABF				*e*Sn	**Sn**	**23 08 16.6**	**-2.3**
	0.8nm,0.3s						
SSF	**Saint Saulge**	**10.96**	**3**	*e*Pn	**Pn**	**23 06 22.4**	**+1.7**
HINF	**Hinteralfeld**	**12.09**	**13**	*e*Pn	**Pn**	**23 06 37.2**	**+1.0**
HINF				*e*Sn	**Sn**	**23 08 46.8**	**-3.9**
	1.0nm,0.5s						
GRR	**Gorron**	**12.57**	**349**	*e*Pn	**Pn**	**23 06 43.9**	**+1.3**
GRR				*e*Sn	**Sn**	**23 08 59.4**	**-2.8**
	0.2nm,0.2s						
QUIF	**Quistinic**	**12.60**	**341**	*e*Pn	**Pn**	**23 06 44.2**	**+1.2**
QUIF				*e*Sn	**Sn**	**23 08 59.9**	**-3.1**
	0.5nm,0.3s						
LDF	**La Druitiere**	**12.66**	**351**	*e*Pn	**Pn**	**23 06 46.1**	**+2.1**
LDF				*e*Sn	**Sn**	**23 09 01.6**	**-3.0**
	0.2nm,0.4s						
CDF	**Champ du Feu**	**12.74**	**14**	*e*Pn	**Pn**	**23 06 46.4**	**+1.3**
CDF				*e*Sn	**Sn**	**23 09 03.0**	**-3.7**
	0.7nm,0.4s						
SGMF	**Saint Gilles**	**12.76**	**344**	*e*Pn	**Pn**	**23 06 46.6**	**+1.3**
SGMF				*e*Sn	**Sn**	**23 09 04.1**	**-3.0**
	0.5nm,0.2s						
FLN	**La Foliniere**	**12.88**	**350**	*e*Pn	**Pn**	**23 06 48.5**	**+1.6**
	baz=170						
ROSF	**Rostrenen**	**13.01**	**342**	*e*Pn	**Pn**	**23 06 49.8**	**+1.1**
GERES	**GERESS Array B**	**15.05**	**29**	Pn	**Pn**	**23 07 20.0**	**+3.4**
	baz=207,slow=11,SNR=8.3						
TORD	**Torodi Ar. Bea**	**22.88**	**183**	P	**P**	**23 08 46.7**	**-0.9**
	0.9nm,0.9s,baz=353,slow=11,SNR=4.3						
	0.9nm,0.9s						
AKASG	**Malin Array Be**	**23.96**	**44**	P	**P**	**23 08 56.7**	**-1.4**
	0.3nm,0.3s,baz=242,slow=10,SNR=4.3						
	0.3nm,0.3s						
LSZ	**Lusaka**	**56.47**	**150**	LR	LR	23 39 02.7	
	comp=Z,29nm,19.8s,baz=140,slow=38						
MKAR	**Makanchi Array**	**58.17**	**53**	P	**P**	**23 13 38.3**	**+0.6**
	0.4nm,0.5s,baz=289,slow=5.4,SNR=5.2						
	0.4nm,0.5s						

*IDC **09** 23:23:45.5±1.6, 16°.42S×174°.92W, h0km, mb4.1/6, mbtmp4.1/6, MS3.9/50, Error ellipse: s-maj=79.7km s-min=28.5km az=151.0*
*NEIC **09** 23:23:50.4±1.7, 16°.4S±0°.1×174°.9W±0°.1, h23km±6km, mb4.6/30, Error ellipse: s-maj=19.1km s-min=14.8km az=119.0*
*GCMT **09** 23:23:50.4±0.3, 16°.67S±0°.03×174°.34W±0°.02, h14km±1km, MW4.8/87, Moment Tensor Solution. s17,c19; s87,c101; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}-1.97±.14; $M_{\theta\theta}$0.44±.09; $M_{\phi\phi}$1.53±.09; $M_{r\theta}$-0.14±.23; $M_{\phi\phi}$0.41±.05; $M_{\phi r}$0.06±.19; Best double couple: $M_0$1.82200×10^16^ NP1:φs194.00000°, δ45.00000°, λ-95.00000°. NP2: φs22.00000°, δ45.00000°, λ-85.00000°. Principal axes: T 1.6640, Plg0.0000°, Azm288.0000°; N 0.3120, Plg4.0000°, Azm198.0000°; P -1.9810, Plg86.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 23:23:51.1±0.5,**16°.5S**±0°.1×**174°.88W**±0°.10,**h35**km,**n163,**
σ1**16**/102,**mb4.5**/21,**MS4.0**/50,**21C-3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.92**	**50**	Pn	**Pn**	**23 24 47.7**	**-1.3**
NIUE	**Niue**	**5.39**	**120**	Pn	**Pn**	**23 25 08.6**	**-0.5**
MSVF	**Nonsavu**	**6.88**	**258**	LR	LR	23 27 45.7	
	comp=Z,2μm,19.5s,baz=107,slow=35						
RAO	**Raoul Island**	**13.04**	**192**	LR	LR	23 30 51.8	
	comp=Z,130nm,20.8s,baz=64,slow=33						
RAR	**Rarotonga**	**15.06**	**111**	LR	LR	23 31 46.6	
	comp=Z,270nm,19.8s,baz=296,slow=32						
LIFNC	**LIFOU**	**17.48**	**253**	P	**P**	**23 27 53.4**	**+0.2**
LIFNC				IAmb	IAmb	23 28 07.4	
	comp=Z,32nm,1.0s						
OUENC	**Ouen Island, N**	**18.23**	**248**	P	**Pn**	**23 28 02.3**	**+0.9**
DZM	**Mont Dzumac**	**18.49**	**249**	*e*P	**P**	**23 28 02.8**	**-1.7**
	comp=Z,54nm,27.7s						
DZM				*e*LR	LR	23 32 39.2	
	comp=Z,2μm,25.4s						
DZM	**Mont Dzumac**	**18.49**	**249**	LR	LR	23 34 05.0	
	comp=Z,830nm,19.7s,baz=48,slow=34						
DZM	**Mont Dzumac**	**18.49**	**249**	P	**Pn**	**23 28 05.0**	**+0.2**
PAE	**Paea**	**24.21**	**97**	*e*T	T	23 53 38.0	
	comp=Z,2.3nm,0.2s						
PPT2	**Papeete2**	**24.22**	**96**	*e*LR	LR	23 34 12.0	
	comp=Z,635nm,28.8s						
PPT2				*e*LR	LR	23 34 12.3	
	comp=Z,922nm,26.5s						
PPT2	**Papeete2**	**24.22**	**96**	*e*T	T	23 53 38.0	
	comp=Z,2.9nm,0.3s						
PPT	**Papeete**	**24.22**	**96**	LR	LR	23 35 47.3	
	comp=Z,212nm,21.1s,baz=200,slow=30						
TBI	**Tubuai**	**24.84**	**110**	*e*LR	LR	23 34 32.8	
	comp=Z,13μm,26.2s						
TBI				*e*LR	LR	23 34 33.3	
	comp=Z,966nm,28.8s						
TBI	**Tubuai**	**24.84**	**110**	*e*T	T	23 54 23.0	
	comp=Z,6.7nm,0.3s						
HNR	**Honiara**	**25.49**	**283**	LR	LR	23 37 49.7	
	comp=Z,13μm,19.8s,baz=128,slow=33						
MEH	**Mehetia**	**25.65**	**97**	*e*T	T	23 55 27.9	
	comp=Z,7.3nm,0.2s						
VAH	**Vaihoa**	**26.24**	**91**	*e*T	T	23 56 12.0	
	comp=Z,5.1nm,0.2s						
RPZ	**Rata Peaks**	**29.68**	**201**	LR	LR	23 42 03.7	
	comp=Z,193nm,18.2s,baz=94,slow=37						
KRVT	**Keravat (AS076**	**34.65**	**287**	LR	LR	23 43 09.3	
	comp=Z,417nm,21.0s,baz=233,slow=34						
TAOE	**Nuku Hiva Isla**	**34.68**	**82**	*e*LR	LR	23 38 59.2	
	comp=Z,541nm,27.6s						
TAOE	**Nuku Hiva Isla**	**34.68**	**82**	*e*T	T	00 06 43.3	
	comp=Z,56nm,0.3s						
CTA	**Charters Tower**	**37.03**	**258**	LR	LR	23 44 32.6	
	comp=Z,281nm,19.1s,baz=80,slow=34						
PMG	**Port Moresby**	**37.61**	**276**	LR	LR	23 43 49.7	
	comp=Z,189nm,22.0s,baz=96,slow=32						
RKT	**Rikitea**	**38.04**	**107**	*e*T	T	00 10 52.5	
	comp=Z,5.3nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**39.17**	**332**	T	T	00 13 17.9	
	baz=150,slow=75,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**39.18**	**332**	T	T	00 13 21.9	
	baz=150,slow=75,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**39.19**	**332**	T	T	00 13 20.6	
	baz=150,slow=75,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**40.16**	**333**	T	T	00 14 32.2	
	baz=152,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**40.16**	**333**	T	T	00 14 32.6	
	baz=152,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**40.17**	**333**	T	T	00 14 30.0	
	baz=152,slow=76,SNR=11						
STKA	**Stephens Creek**	**42.28**	**241**	LR	LR	23 49 08.5	
	comp=Z,93nm,18.4s,baz=33,slow=36						
WB2	**Warramunga Arr**	**48.21**	**258**	P	**P**	**23 32 27.0**	**-1.8**
WRA	**Warramunga Arr**	**48.23**	**258**	LR	LR	23 51 39.7	
	comp=Z,172nm,19.6s,baz=107,slow=35						
WRA	**Warramunga Arr**	**48.23**	**258**	P	**P**	**23 32 27.4**	**-1.5**
AS31	**Alice Springs**	**48.44**	**253**	P	**P**	**23 32 29.9**	**-0.6**
ASAR	**Alice Springs**	**48.44**	**253**	P	**P**	**23 32 30.0**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=86,slow=8.4,SNR=52						
ASAR				LR	LR	23 52 12.7	
	comp=Z,367nm,18.2s,baz=107,slow=35						
	comp=Z,8.0nm,0.8s						
ASAR	**Alice Springs**	**48.44**	**253**	P	**P**	**23 32 28.6**	**-1.9**
GUMO	**Guam**	**49.73**	**305**	LR	LR	23 50 33.5	
	comp=Z,76nm,21.6s,baz=118,slow=32						
SIJI	**Sorong**	**55.24**	**281**	LR	LR	23 56 10.8	
	comp=Z,140nm,20.9s,baz=270,slow=35						
FITZ	**Fitzroy Crossi**	**56.61**	**259**	LR	LR	23 56 40.8	
	comp=Z,224nm,19.0s,baz=92,slow=35						
JCJ	**Chichijima**	**60.09**	**316**	LR	LR	23 55 35.6	
	comp=Z,129nm,20.7s,baz=91,slow=32						
RPN	**Rapa Nui**	**61.20**	**112**	LR	LR	23 55 10.8	
	comp=Z,61nm,21.8s,baz=284,slow=31						
PSA00	**Pilbara Seismi**	**61.55**	**254**	P	**P**	**23 34 05.8**	**+0.6**
VNDA	**Vanda**	**62.19**	**186**	LR	LR	23 57 37.6	
	comp=Z,25nm,19.6s,baz=316,slow=33						
NWAO	**Narrogin (SRO)**	**62.87**	**241**	LR	LR	00 00 22.4	
	comp=Z,51nm,19.2s,baz=194,slow=35						
DAV	**Davao City (W)**	**63.36**	**287**	LR	LR	00 00 24.1	
	comp=Z,60nm,18.7s,baz=102,slow=35						
JHJ	**Hachijo jima 2**	**65.61**	**319**	LR	LR	00 04 28.0	
	comp=Z,46nm,18.0s,baz=78,slow=37						
SHEM	**Shemya Is, Ala**	**69.55**	**353**	LR	LR	23 58 52.2	
	comp=Z,58nm,21.4s,baz=101,slow=30						
JOW	**Kunigami**	**69.97**	**307**	LR	LR	23 59 03.9	
	comp=Z,111nm,22.0s,baz=3.5,slow=30						
PETK	**Petropavlovsk-**	**73.21**	**343**	P	**P**	**23 35 18.1**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=142,slow=7.3,SNR=1.6						
PETK				LR	LR	00 00 29.5	
	comp=Z,53nm,21.6s,baz=147,slow=30						
	comp=Z,3.3nm,0.9s						
PETK	**Petropavlovsk-**	**73.21**	**343**	P	**P**	**23 35 18.2**	**0.0**
QSPA	**South Pole Qui**	**73.59**	**180**	LR	LR	00 01 08.9	
	comp=Z,25nm,21.9s,baz=28,slow=30						
QSPA	**South Pole Qui**	**73.59**	**180**	P	**P**	**23 35 21.3**	**+0.7**
QSPA				IAmb	IAmb	23 35 25.2	
	comp=Z,5.9nm,1.1s						
PFO	**Pinyon Flats O**	**74.68**	**47**	LR	LR	23 59 13.7	
	comp=Z,118nm,21.2s,baz=263,slow=28						
LPIG	**La Paz**	**74.80**	**59**	LR	LR	23 59 47.4	
	comp=Z,116nm,19.7s,baz=236,slow=29						
YBH	**Yreka Blue Hor**	**75.30**	**38**	LR	LR	00 00 01.7	
	comp=Z,90nm,21.1s,baz=206,slow=29						
KSRS	**Korea Array**	**75.92**	**316**	LR	LR	00 06 29.7	
	comp=Z,18nm,19.0s,baz=150,slow=34						
NVAR	**Mina Array Bea**	**76.06**	**42**	P	**P**	**23 35 35.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=240,slow=7.2,SNR=2.2						
NVAR				LR	LR	00 00 40.6	
	comp=Z,107nm,21.4s,baz=268,slow=29						
	comp=Z,0.2nm,0.5s						
LEM	**Lembang**	**76.15**	**267**	LR	LR	00 10 02.6	
	comp=Z,86nm,18.5s,baz=136,slow=36						
USRK	**Ussuriysk Ar.**	**77.38**	**324**	LR	LR	00 05 39.6	
	comp=Z,86nm,19.2s,baz=100,slow=32						
ELK	**Elko**	**79.31**	**42**	LR	LR	00 03 26.9	
	comp=Z,70nm,20.3s,baz=235,slow=30						
MSU	**Marysvale**	**80.17**	**45**	P	**P**	**23 35 58.6**	**+0.3**
GLI	**Glacier Island**	**80.23**	**13**	P	**P**	**23 35 59.1**	**+1.3**
BERG	**Berg Lake**	**80.60**	**15**		**P**	**23 36 01.7**	**+1.9**
BERG				IAmb	IAmb	23 36 17.1	
	comp=Z,8.8nm,1.1s						
KLR	**Kul'dur**	**80.64**	**328**	LR	LR	00 06 31.4	
	comp=Z,38nm,21.1s,baz=132,slow=32						
MA2	**Magadan**	**80.74**	**343**	LR	LR	00 06 33.0	
	comp=Z,49nm,21.1s,baz=126,slow=32						
BMRM	**Bremner River**	**80.88**	**14**	P	**P**	**23 36 02.0**	**+0.7**
ISLE	**Juniper Island**	**81.13**	**16**	P	**P**	**23 36 05.1**	**+2.3**
VRDI	**Verde Repeater**	**81.39**	**15**	P	**P**	**23 36 04.8**	**+0.7**
VRDI				IAmb	IAmb	23 36 09.2	
	comp=Z,6.7nm,1.1s						
N25K	**Chitina, Valde**	**81.44**	**14**	P	**P**	**23 36 03.8**	**-0.5**
N25K				IAmb	IAmb	23 36 09.5	
	comp=Z,8.6nm,1.1s						
GLB	**Gilahina Butte**	**81.48**	**15**	P	**P**	**23 36 06.2**	**+1.6**
GLB				IAmb	IAmb	23 36 09.6	
	comp=Z,5.1nm,1.1s						
TXAR	**Lajitas Array**	**82.38**	**57**	P	**P**	**23 36 09.5**	**-0.5**
	comp=Z,0.7nm,1.0s,baz=204,slow=2.7,SNR=4.3						
TXAR				LR	LR	00 05 29.5	
	comp=Z,84nm,18.5s,baz=238,slow=30						
	comp=Z,0.7nm,1.0s						
M26K	**Nabesna, AK**	**82.51**	**14**	P	**P**	**23 36 11.4**	**+1.5**
ANMO	**Albuquerque**	**82.57**	**50**	LR	LR	00 05 30.1	
	comp=Z,89nm,18.5s,baz=238,slow=30						
ANMO	**Albuquerque**	**82.57**	**50**	P	**P**	**23 36

MORC	Moravsky Berou	145.27 346	⇑P	PKiKP	23 43 30.6	+1.4
MORC	Moravsky Berou	145.27 346	*e*PKP	PKPdf	23 43 24.8	-0.4
MORC			*e*		23 43 29.8	
SLCR	Slobozia Conac	145.31 332	⇑P	PKiKP	23 43 31.2	+1.9
TRPA	Tarpa	145.32 339	⇑P	PKPdf	23 43 25.5	+0.3
ARCR	ARCALIA	145.55 337	⇓P	PKPab	23 43 26.7	+0.6
TPGR	Topolog	145.56 330	⇑P	PKPab	23 43 26.9	+0.7
VRI	Vrincioaia	145.56 333	⇑P	PKPab	23 43 26.5	+0.2
MAUC	Maruska	145.59 345	*e*PKP	PKiKP	23 43 27.7	-2.1
PLOR	Plostina	145.61 333	⇑P	PKPab	23 43 26.5	0.0
PRU	Pruhonice	145.69 349	*e*PKP	PKPab	23 43 26.8	+0.2
OZUR		145.79 334	⇓P	PKPab	23 43 27.6	+0.5
NKC	Novy Kostel	145.79 352	*e*PKP	PKiKP	23 43 31.0	+0.8
HARR	Harsova	145.92 330	⇑P	PKiKP	23 43 28.6	-1.9
VRAC	Vranov	145.93 347	⇑P	PKiKP	23 43 32.8	+2.3
VRAC	Vranov	145.93 347	*e*PKP	PKPab	23 43 27.2	-0.3
VRAC			*e*		23 43 31.7	
BRTR	Keskin Array B	146.04 319	PKPbc	PKPdf	23 43 25.1	-1.9
	comp=Z,3.0nm,1.1s,baz=191,slow=2.0,SNR=10.0					
DOPR	Dopca	146.05 334	⇑P	PKPab	23 43 28.7	+0.6
JAVC	Velka Javorina	146.09 345	*e*PKP	PKiKP	23 43 29.0	-1.9
JAVC			*e*		23 43 33.3	
MLR	Muntele Rosu	146.20 333	⇓P	PKPab	23 43 28.8	0.0
KRUC	Moravsky	146.20 347	*e*PKP	PKPab	23 43 27.8	-0.7
KRUC			*e*		23 43 32.3	
DRGR		146.41 338	⇑P	PKPbc	23 43 28.1	-0.5
VOIR		146.62 334	⇑P	PKPab	23 43 30.4	0.0
KHC	Kasperske Hory	146.69 350	*e*PKP	PKPbc	23 43 28.8	-0.5
CKRC	Cesky Krumlov	146.86 349	*e*PKP	PKPbc	23 43 29.4	-0.4
GERES	GERESS Array B	146.94 350	PKPbc	PKPbc	23 43 28.5	-1.6
	comp=Z,0.9nm,0.9s,baz=297,slow=0.9,SNR=7.0					
SIRR	Siria	147.23 339	⇑P	PKPab	23 43 31.5	-1.2
CONA	Conrad Observa	147.39 347	*e*P	PKiKP	23 43 36.0	+2.4
	comp=Z,11nm,1.3s,SNR=7.4					
RONA	Rosalia, Austr	147.51 346	*e*P	PKiKP	23 43 36.7	+2.9
	comp=Z,7.1nm,1.2s					
GZR	Gura Zlata	147.57 337	⇑P	PKPbc	23 43 31.9	0.0
MOA	Molln	147.80 348	*e*P	PKPab	23 43 37.1	+2.3
	comp=Z,6.8nm,1.7s					
BZS	Buzias	147.81 338	⇑P	PKiKP	23 43 33.5	-1.0
ARSA	Arzberg	148.11 347	*e*P	PKPab	23 43 37.6	+1.6
	comp=Z,5.1nm,1.2s					
HERR	Herculane	148.14 336	⇑P	PKPbc	23 43 33.1	-0.2
MORH	Mrgy, Hungar	148.26 342	⇑P	PKPbc	23 43 33.6	0.0
RETA	Reutte	148.71 353	*e*P	PKPab	23 43 39.3	+0.8
	comp=Z,6.5nm,1.1s					
WATA	Walderalm	148.75 352	*i* P	PKPab	23 43 39.2	+0.4
	comp=Z,14nm,1.5s					
SOKA	Soboth	148.76 347	*e*P	PKPab	23 43 39.1	+0.4
	comp=Z,12nm,1.2s					
MOTA	Moosalm	148.80 352	*e*P	PKPab	23 43 39.7	+0.7
	comp=Z,8.2nm,1.2s					
WTTA	Wattenberg	148.81 351	*e*P	PKPab	23 43 39.2	+0.1
	comp=Z,10nm,1.2s					
FRGS	Fruska Gora	148.83 340	⇑P	PKPab	23 43 40.9	+1.9
SQTA	Sankt Quirin	148.91 352	*e*P	PKPab	23 43 39.9	+0.5
	comp=Z,12nm,1.4s					
DAVA	Damuels	149.00 354	*e*P	PKPab	23 43 39.8	0.0
	comp=Z,13nm,1.3s					
FETA	Feichten	149.17 353	*e*P	PKPab	23 43 41.6	+1.1
	comp=Z,12nm,1.2s					
ABTA	Abfaltersbach	149.18 350	*e*P	PKPab	23 43 39.5	-0.9
	comp=Z,13nm,1.3s					
VTS	Vitosha	149.67 333	⇑P	PKiKP	23 43 38.9	+0.3

*SOME **09** 23:43:21.8, 40.°68N×82.°48E, h10km*
*NNC **09** 23:43:27.5±3.6, 41.°14N×83.°54E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=29.6km s-min=18.2km az=153.0
ISC 09 23:43:23.2±2.5, 40.°7N±0.°1×82.°47E±0.°07, h10km, n21,
σ2§69/41, 4C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	3.13	330	*e*P	Pg	23 44 21.3	-2.0
	1.5nm,0.0s						
KTMS				*e*S	Sg	23 45 03.7	-0.2
	9.4nm,0.0s						
SHLS	Shalkode	3.30	318	*e*P	Pb	23 44 22.5	+0.5
	4.7nm,0.3s						
SHLS				*e*S	Sg	23 45 06.3	-2.9
	47nm,0.1s						
PDGK	Podgornoye	3.41	320	⇑P	Pg	23 44 25.8	-2.8
	17nm,1.4s						
PDGK				⇑S	Sg	23 45 12.9	+0.1
	50nm,0.7s						
UZB	Uzynbulak	3.52	314	*e*P	Pg	23 44 29.6	-1.2
	3.1nm,0.3s						
UZB				*e*S	Sg	23 45 18.6	+2.1
	35nm,0.3s						
SATY	Saty	3.82	309	*e*P	Pg	23 44 34.2	-2.3
	9.8nm,0.5s						
SATY				*e*S	Sg	23 45 26.2	+0.3
	36nm,0.2s						
ZHN	Zhinishke	3.87	310	*e*P	Pg	23 44 34.7	-2.6
	5.5nm,0.4s						
ZHN				*e*S	Sg	23 45 27.1	-0.4
	48nm,0.5s						
KPKS	Kokpek	3.92	315	*e*P	Pb	23 44 33.6	+1.1
	9.9nm,0.1s						
KPKS				*e*S	Sg	23 45 25.9	-3.3
	68nm,0.0s						
DJR	Jarkent	4.10	332	*e*P	Pb	23 44 38.1	+2.5
	1.6nm,0.0s						
DJR				*e*S	Sg	23 45 32.9	-2.1
	18nm,0.2s						
BLB	Baldybastay	4.47	320	*e*P	Pb	23 44 43.8	+1.9
	2.9nm,0.1s						
BLB				*e*S	Sg	23 45 43.4	-3.5
	10nm,0.4s						
KOTS	Kotyrbulak	4.71	304	*e*P	Pb	23 44 47.8	+1.8
	2.6nm,0.2s						
KOTS				*e*S	Sg	23 45 49.4	-5.1
	41nm,0.1s						
MDOK	Medeo	4.72	303	⇓Pn	Pb	23 44 48.1	+2.0
	14nm,1.2s						
MDOK				⇓Sn	Sg	23 45 50.8	-3.8
	58nm,1.8s						
TNSS	Tian-Shan	4.72	301	*e*P	Pb	23 44 48.4	+2.1
	2.2nm,0.4s						
TNSS				*e*S	Sg	23 45 50.6	-4.3
	4.1nm,0.5s						
MTBS	Maitube	5.10	300	*e*P	Pb	23 44 53.3	+0.7
	5.6nm,0.3s						
MTBS				*e*S	Sb	23 45 58.6	+4.6
	4.2nm,0.4s						
CHKK	Chushkaly	5.12	309	*e*P	Pg	23 44 59.2	-2.1
	0.6nm,0.1s						
CHKK				*e*S	Sg	23 46 09.4	+1.7
	5.0nm,0.2s						
KTBS	Karatobe	5.23	307	*e*P	Pg	23 45 01.5	-1.8
	0.8nm,0.3s						
KTBS				*e*S	Sg	23 46 13.5	+2.5
	20nm,0.4s						
KST	Kastek	5.38	298	*e*P	Pb	23 44 59.4	+2.1
	1.4nm,0.0s						
KST				*e*S	Sg	23 46 09.2	-6.7
	5.1nm,0.0s						
TKM2	Tokmak 2	5.58	295	⇓Pn	Pb	23 44 59.7	-1.2
	1.1nm,0.3s						
TKM2				⇓Sn	Sb	23 46 10.3	+2.4
	2.3nm,0.4s						
KRBS	Karabastau	5.85	303	*e*P	Pg	23 45 12.3	-2.9
	1.0nm,0.0s						
KRBS				*e*S	Sg	23 46 32.0	+1.0
	1.2nm,0.4s						
MK31	Makanchi Array	6.06	359	⇓Pn	Pn	23 44 54.7	+1.8
	0.2nm,0.2s,baz=29,slow=14,SNR=51						
MK31				⇓Sn	Sn	23 46 02.1	-0.2
	1.2nm,0.4s,baz=161,slow=27,SNR=4.2						
MAKZ	Makanchi	6.08	357	⇑Pn	Pn	23 44 54.8	+1.7
	1.6nm,0.5s						
MAKZ				⇑Sn	Sn	23 46 01.6	-1.2
	0.9nm,0.3s						
ZSN	Zaisan	6.93	14	*e*P	Pg	23 45 29.3	-6.5
	3.2nm,0.3s						
ZSN				*e*S	Sg	23 47 01.5	-4.1
	9.4nm,0.1s						

*AEIC **09** 23:46:39±2.9, 52.°27N±0.°08×169.°56W±0.°07, h25km±6km,*
Error ellipse: s-maj=12.1km s-min=6.1km az=177.0
*NEIC **09** 23:46:40.8±2.7, 52.°33N±0.°05×169.°6W±0.°1, h46km±10km,*
mb3.6/44, ML3.5/14(AEIC), Error ellipse: s-maj=11.2km
s-min=4.1km az=128.0

*IDC **09** 23:46:43.2±6.4, 52.°69N×169.°78W, h57km±58km, mb3.4/9,*
mbtmp3.7/11, ML3.3/2, MS3.5/4, Error ellipse:
s-maj=46.5km s-min=18.4km az=5.0
ISC 09 23:46:40.7±0.9, 52.°4N±0.°1×169.°67W±0.°07, h40km, n100,
σ1§47/89, mb3.7/10, MS3.5/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.76	41		Pn	23 46 54.0	-0.8
UNV	Unalaska Valle	2.39	52		Pn	23 47 17.4	+0.1
AKUT	Akutan	2.91	52		Pn	23 47 26.6	+2.1
GSTR	Great Sitkin T	3.94	268	Pn	Pn	23 47 39.9	+1.3
ADK	Adak	4.35	266		Pn	23 47 45.1	+0.9
KIWB	Kanaga Island	4.64	266	Pn	Pn	23 47 50.5	+2.3
SPIA	Saint Paul Isl	4.80	356	Pn	Pn	23 47 53.7	+3.4
SDPT	Sand Point	6.18	58	Pn	Pn	23 48 12.0	+2.7
CNBA	Chernabura Isl	6.47	64	Pn	Pn	23 48 14.4	+1.2
AMKA	Amchitka	6.91	266	Pn	Pn	23 48 20.4	+1.2
CHGN	Chignik	7.65	55	Pn	Pn	23 48 30.7	+1.4
CHIR	Chirikof Islan	8.93	62	Pn	Pn	23 48 46.1	-0.9
KDAK	Kodiak Island	11.16	54	Pn	Pn	23 49 16.8	-0.6
N18K	Kilae Creek	11.23	37	Pn	Pn	23 49 20.2	+1.7
GAMB	Gambell	11.46	355	Pn	Pn	23 49 20.0	-1.4
CNPM	China Poot	12.52	48	Pn	Pn	23 49 36.2	+0.2
M19K	Big River Lodg	12.59	35	Pn	Pn	23 49 38.4	+1.5
L19K	White Mountain	12.62	33	Pn	Pn	23 49 40.7	+3.3
M20K	Styx River	13.03	37	Pn	Pn	23 49 47.2	+4.2
SEW	Seward	13.58	47	Pn	Pn	23 49 49.9	-0.6
O22K	Cooper Landing	13.63	46	Pn	Pn	23 49 51.4	+0.2
SKT	Skwentna	13.69	38	P	P	23 49 57.3	-2.6
SUA	Susitna One	13.70	41	Pn	Pn	23 49 53.3	+1.1
K20K	Telida	13.71	31	P	P	23 49 57.3	-2.9
PPLA	Purkeypile	14.02	35	P	P	23 50 05.2	+1.5
J20K	Nowinta River	14.29	28	P	P	23 50 04.8	-1.7
CAST	Castle Rocks	14.40	33	P	P	23 50 07.1	-0.7
PWL	Port Wells	14.41	46	Pn	Pn	23 50 00.7	-1.1
SML	Sawmill	14.86	42	Pn	Pn	23 50 10.3	+2.5
KTH	Kantishna Hill	14.88	34	P	P	23 50 13.4	+0.2
GLI	Glacier Island	14.97	47	Pn	Pn	23 50 08.6	-0.6
TRF	Thorofare Moun	15.04	35	P	P	23 50 14.4	-0.6
TRF				IAmb	IAmb	23 50 35.3	
	comp=Z,7.1nm,1.3s						
HIN	Hinchinbrook I	15.05	49	Pn	Pn	23 50 08.7	-1.6
FID	Port Fidalgo	15.20	48	Pn	Pn	23 50 09.4	-2.8
FID				IAmb	IAmb	23 50 25.7	
	comp=Z,5.6nm,1.0s						
BPAW	Bear Paw Mtn.	15.22	32	P	P	23 50 16.4	-0.5
BPAW				IAmb	IAmb	23 50 17.3	
	comp=Z,3.7nm,0.8s						
SCM	Sheep Creek Mo	15.29	43	Pn	Pn	23 50 13.2	-0.3
EYAK	Cordova Ski Ar	15.45	49	Pn	Pn	23 50 13.9	-1.6
EYAK				IAmb	IAmb	23 50 20.7	
	comp=Z,6.8nm,1.3s						
RND	Reindeer	15.53	37	P	P	23 50 19.5	-0.8
RND				IAmb	IAmb	23 50 51.6	
	comp=Z,4.6nm,1.2s						
I21K	Tanana	15.66	28	P	P	23 50 23.8	+2.1
I21K				IAmb	IAmb	23 50 26.2	
	comp=Z,8.4nm,1.4s						
KLU	Klutina	15.74	45	Pn	Pn	23 50 18.0	-1.4
H21K	Melozitna Rive	15.79	26		P	23 50 25.6	+2.5
H21K				IAmb	IAmb	23 50 39.4	
	comp=Z,8.2nm,1.5s						
IMAR	Indian Mountai	15.79	24	P	P	23 50 23.0	-0.2
MLY	Manley	15.93	30	P	P	23 50 26.1	+1.3
HMT	Hamilton	16.07	50	Pn	Pn	23 50 22.6	-0.9
BMRM	Bremner River	16.13	48	Pn	Pn	23 50 22.8	-1.5
SUCK	Suckling Hills	16.23	52	P	P	23 50 30.2	+2.2
N25K	Chitina, Valde	16.37	46	Pn	Pn	23 50 26.0	-1.3
N25K				IAmb	IAmb	23 50 50.8	
	comp=Z,6.2nm,1.4s						
WRH	Wood River Hil	16.43	34	Pn	Pn	23 50 28.1	+0.1
WRH				IAmb	IAmb	23 50 44.3	
	comp=Z,7.3nm,1.4s						
I23K	Minto, Yukon-K	16.44	31	P	P	23 50 30.3	-0.1
CCB	Clear Creek Bu	16.64	34	Pn	Pn	23 50 30.8	+0.2
CCB				IAmb	IAmb	23 50 57.2	
	comp=Z,7.2nm,1.5s						
GLB	Gilahina Butte	16.66	47	Pn	Pn	23 50 29.8	-1.1
GLB				IAmb	IAmb	23 51 00.1	
	comp=Z,12nm,1.5s						
MDM	Murphy Dome	16.68	33	Pn	Pn	23 50 31.4	+0.2
VRDI	Verde Repeater	16.74	48	Pn	Pn	23 50 31.3	-0.8
VRDI				IAmb	IAmb	23 50 46.2	
	comp=Z,5.6nm,1.3s						
WAX	Waxell Ridge	16.78	51		Pn	23 50 32.8	+0.4
H23K	Yukon River	16.84	29	P	P	23 50 36.2	+1.3
TGL	Tana Glacier	16.88	50	Pn	Pn	23 50 33.8	+0.1
TGL				IAmb	IAmb	23 51 01.3	
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	17.03	35	P	Pn	23 50 34.4	-1.1
	comp=Z,0.1nm,0.3s,baz=224,slow=10.0,SNR=5.8						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	17.03	35	Pn	Pn	23 50 35.6	+0.1
ISLE	Juniper Island	17.06	51		Pn	23 50 36.1	0.0
ISLE				IAmb	IAmb	23 51 06.9	
	comp=Z,4.9nm,1.0s						
H24K	Noodor Dome	17.36	31	P	P	23 50 41.7	+1.1
M26K	Nabesna, AK	17.38	44	P	Pn	23 50 39.9	+0.1
M26K				IAmb	IAmb	23 51 00.1	
	comp=Z,6.1nm,1.4s						
J25K	Salcha River,	17.48	36	Pn	Pn	23 50 40.1	-1.0
DOT	Dot Lake	17.48	40	P	Pn	23 50 41.5	+0.4
DOT				IAmb	IAmb	23 51 25.7	
	comp=Z,6.8nm,1.5s						
BARN	Barnard Glacie	17.51	49	Pn	Pn	23 50 40.7	-1.0
CTGM	Chitina Glacie	17.64	50		Pn	23 50 43.6	+0.4
SCRK	Sand Creek	17.66	39	Pn	Pn	23 50 42.1	-1.3
M27K	Edge Creek, AK	17.84	45		P	23 50 46.2	+0.1
M27K				IAmb	IAmb	23 51 09.6	
	comp=Z,4.8nm,1.2s						
J26L	Joseph Creek	18.08	38		Pn	23 50 48.7	+0.1
BCAR	Beaver Creek A	18.15	43	P	P	23 50 48.7	-0.6
K27K	Chicken	18.43	40		P	23 50 52.8	+0.4
K27K				IAmb	IAmb	23 51 21.9	
	comp=Z,5.4nm,1.4s						
I26K	Coal Creek Min	18.64	36	P	P	23 50 54.0	-0.7
I26K				IAmb	IAmb	23 51 02.7	
	comp=Z,6.9nm,1.4s						
TOLK	Toolik Lake Re	18.88	23	Pn	Pn	23 50 59.1	+0.9
P29M	Windy Craggy	19.11	55	Pn	Pn	23 51 02.5	+1.6
BMAR	Burnt Mountain	19.39	30	Pn	Pn	23 51 04.6	+0.3
HYT	Haines Junctio	19.42	52	Pn	Pn	23 51 06.3	+1.5
PEA0B	Petropavlovsk-	19.68	285	P	P	23 51 06.4	+0.3
PETK	Petropavlovsk-	19.68	285	P	P	23 51 05.9	-0.2
	comp=Z,0.8nm,0.3s,baz=89,slow=13,SNR=9.7						
	comp=Z,2.1nm,0.4s						
PETK	Petropavlovsk-	19.68	285	P	P	23 51 05.6	-0.4
SKAG	Skagway	20.30	56	Pn	Pn	23 51 15.1	+0.1
N31M	Braeburn, Yuko	20.37	50	Pn	Pn	23 51 15.7	-0.2
N31M				IAmb	IAmb	23 51 35.5	
	comp=Z,4.5nm,0.8s						
BESE	Bessie Mountai	20.49	59	P	P	23 51 14.6	-0.4
BESE				IAmb	IAmb	23 51 20.0	
	comp=Z,3.0nm,0.8s						
P33M	Teslin, Yukon	21.63	54	P	P	23 51 28.0	+0.8
P33M				IAmb	IAmb	23 51 52.8	
	comp=Z,2.5nm,0.8s						
DLBC	Dease Lake	23.03	59	P	P	23 51 43.6	+1.6
	comp=Z,0.7nm,0.4s,baz=296,slow=15,SNR=3.4						
	comp=Z,0.7nm,0.4s						
H11N2	WAKE ISLAND Hy	37.37	218	T	T	00 33 27.2	
	baz=24,SNR=3.9						
H11N3	WAKE ISLAND Hy	37.37	218	T	T	00 33 32.0	
	baz=24,slow=74,SNR=7.2						
H11N1	WAKE ISLAND Hy	37.38	218	T	T	00 33 34.8	
	baz=24,slow=74,SNR=3.0						
H11S1	WAKE ISLAND Hy	38.56	218	T	T	00 35 04.3	
	baz=23,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	38.57	218	T	T	00 35 01.3	
	baz=23,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	38.57	218	T	T	00 35 09.2	
	baz=23,slow=76,SNR=22						
PDAR	Pinedale Array	40.58	79	P	P	23 54 17.1	+0.7
	comp=Z,0.5nm,0.5s,baz=301,slow=4.4,SNR=7.3						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	51.12	301	P	P	23 55 36.3	-2.9
	comp=Z,0.3nm,0.5s,baz=46,slow=10,SNR=1.5						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	52.93	89	P	P	23 55 53.3	+0.4
	comp=Z,0.2nm,0.7s,baz=310,slow=6.0,SNR=4.0						
	comp=Z,0.2nm,0.7s						
SADO	Sadowa	56.59	59	LR	LR	00 19 50.0	
	comp=Z,61nm,20.8s,baz=201,slow=35						
ZALV	Zalesovo Beam	57.27	317	LR	LR	00 22 10.5	
	comp=Z,38nm,21.4s,baz=68,slow=37						
BVAR	Borovoye Array	63.57	324	P	P	23 57 07.3	+0.6
	comp=Z,0.4nm,0.5s,baz=46,slow=8.5,SNR=5.6						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	63.65	313	P	P	23 57 05.2	-2.2
	comp=Z,0.6nm,0.8s,baz=59,slow=8.1,SNR=1.7						
MKAR				LR	LR	00 25 00.1	
	comp=Z,26nm,21.9s,baz=119,slow=36						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	65.81	352	P	P	23 57 20.8	-0.4
	comp=Z,2.5nm,1.0s,baz=348,slow=10.0,SNR=3.4						
	comp=Z,2.5nm,1.0s						
HFS	Hagfors	67.78	358	P	P	23 57 30.9	-2.9
	comp=Z,0.6nm,0.4s,baz=7.6,slow=4.5,SNR=5.1						
	comp=Z,0.6nm,0.4s						
AAK	Ala-Archa	70.34	315	LR	LR	00 31 40.9	
	comp=Z,25nm,18.2s,baz=92,slow=38						
CMAR	Chiang Mai Arr	76.43	283	P	P	23 58 27.0	+0.9
	comp=Z,0.8nm,0.5s,baz=34,slow=8.7,SNR=4.9						
	comp=Z,0.8nm,0.5s						

*IDC **10** 00:05:43.8±2.0, 59.°26N×152.°57W, h42km±23km, mb3.5/11,*
mbtmp3.7/13, ML3.7/2, Error ellipse: s-maj=20.4km
s-min=13.2km az=89.0
*NEIC **10** 00:05:45.0±1.3, 59.°07N±0.°03×152.°20W±0.°05, h40km±8km,*
Error ellipse: s-maj=4.7km s-min=3.5km az=145.0
*AEIC **10** 00:05:45±1.0, 59.°13N±0.°03×152.°25W±0.°06, h57km±6km,*
ML3.5, mb3.9/4(NEIC), ML3.7/125(NEIC), Mwr3.7/22(NEIC),
Error ellipse: s-maj=4.6km s-min=3.8km az=138.0
*NEIC **10** 00:05:45, 59.°13N×152.°25W, h38km, Moment Tensor*
Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.50;
$M_{\theta\theta}$=2.80; $M_{\phi\phi}$=-1.30; $M_{r\theta}$=1.41; $M_{r\phi}$=-3.10; $M_{\theta\phi}$=1.65; Fault
plane solution: M_0=4.49000×10^{14} NP1:ϕ_s=259.09000°,
δ=69.41000°, λ=-149.81000°. NP2:ϕ_s=157.53000°,
δ=61.91000°, λ=-23.49000°. Principal axes: T 4.5041,
Plg5.0000°, Azm27.0000°; N -0.0217, Plg54.0000°,
Azm290.0000°; P -4.4823, Plg36.0000°, Azm120.0000°;
ISC 10 00:05:45.4±0.7, 59.°13N±0.°03×152.°24W±0.°03, h61km±7km,
n302, σ0§85/311, mb3.7/12, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYI	Shuyak Island	0.53	189		Pn	00 05 57.2	-0.5
SYI					Sn	00 06 06.6	-0.1
HOM	Homer	0.61	30		Pn	00 05 58.2	-0.5
HOM				Sn	Sn	00 06 07.9	-0.5
HOM	Homer	0.61	30	P	Pn	00 05 58.4	-0.3
	baz=210						
HOM				S	Sn	00 06 08.5	+0.2
	baz=210						
AU22	Augustine Moun	0.62	293		Pn	00 05 58.2	-0.5
AU22					Sn	00 06 08.5	-0.1
AUQ	Augustine Qik'	0.64	291		Pn	00 05 58.7	-0.4
AUQ					Sn	00 06 09.0	-0.1
CNPM	China Poot	0.65	52	Pn	Pn	00 05 58.8	-0.3
CNPM				Sn	Sn	00 06 09.1	-0.1
CNPM				IAML		00 06 09.9	
	comp=N,4μm,0.6s						
CNPM				IAML		00 06 10.1	
	comp=E,4μm,0.3s						
AUCH	Augustine Cone	0.66	291		Pn	00 05 59.0	-0.3
P19K	Oil Pt	0.73	316		Pn	00 05 59.5	-0.6
P19K	Oil Pt	0.73	316	Sn	Sn	00 06 10.5	-0.4
P19K	Oil Pt	0.73	316	P	Pn	00 05 59.5	-0.6
	baz=136						
P19K				S	Sn	00 06 11.0	+0.1
	baz=136						
Q19K	Cape Douglas,	0.75	255	Pn	Pn	00 05 59.8	-0.6
Q19K				Sn	Sn	00 06 10.7	-0.7
Q19K	Cape Douglas,	0.75	255	P	Pn	00 05 59.8	-0.6
	baz=74						
Q19K				S	Sn	00 06 10.9	-0.5
	baz=74						
BRLK	Bradley Lake	0.94	47		Pn	00 06 02.0	-0.7
BRLK				Sn	Sn	00 06 15.2	-0.3
BRLK				IAML		00 06 16.3	
	comp=E,3μm,0.6s						
BRLK				IAML		00 06 17.8	
	comp=N,3μm,0.3s						
IVE	Iliamna Volcan	0.97	336		Pn	00 06 02.5	-0.7
IVE					Sn	00 06 15.6	-0.8
O20K	Slope Mountain	0.97	349		Pn	00 06 03.1	-0.1
O20K					Sn	00 06 16.8	+0.4
O20K	Slope Mountain	0.97	349	P	Pn	00 06 03.1	-0.1
	baz=168						
O20K				S	Sn	00 06 16.8	+0.4
	baz=168						
BRSE	Bradley Lake S	0.98	51		Pn	00 06 02.8	-0.4
BRSE					Sn	00 06 16.9	+0.5
BRSE	Bradley Lake S	0.98	51	P	Pn	00 06 02.8	-0.4
	baz=232						
BRSE				S	Sn	00 06 16.9	+0.5
	baz=232						
KAPH	Katmai Pasha	1.22	245		Pn	00 06 06.5	+0.1
KAPH					Sn	00 06 22.4	+0.3
RED	Redoubt Volcan	1.32	348		Pn	00 06 07.2	-0.5
RED					Sn	00 06 24.4	-0.1
RDSO	Redoubt South	1.35	349		Pn	00 06 07.8	-0.5
KAHG	Katmai Hook Gl	1.36	243		Pn	00 06 08.5	+0.2
RSO	Redoubt South	1.36	349		Pn	00 06 08.0	-0.4
KDAK	Kodiak Island	1.36	188	P	Pn	00 06 07.8	-0.5
	comp=N,137nm,0.3s,baz=59,slow=14,SNR=729						
KDAK				S	Sn	00 06 25.9	+0.5
	comp=N,371nm,0.4s,baz=216,

baz=180
CNTC Contact Creek 2.09 247 Pn Pn 00 06 17.8 -0.3
SPCN Chakachatna No 2.10 1 Pn 00 06 18.7 +0.4
SPCP Crater Peak Br 2.14 1 Pn 00 06 19.3 +0.4
P17K Kvichak River 2.16 274 Pn 00 06 18.3 -0.7
SPCG Spurr Capps Gl 2.17 3 Pn 00 06 19.7 +0.4
FIS Fire Island 2.26 26 Pn Pn 00 06 20.5 +0.2
FIS IAML 00 06 55.5
comp=E,646nm,0.5s
FIS IAML 00 07 10.2
comp=N,638nm,0.8s
RC01 Rabbit Creek A 2.33 31 Pn Pn 00 06 21.2 0.0
RC01 IAML 00 06 50.7
comp=E,278nm,0.4s
RC01 IAML 00 06 55.0
comp=N,312nm,0.4s
RC01 Rabbit Creek A 2.33 31 P Pn 00 06 21.3 0.0
baz=214
STLK Strandline Lak 2.38 5 Pn 00 06 22.7 +0.5
N18K Kilae Creek 2.41 312 Pn Pn 00 06 21.5 -0.9
N18K IAML 00 07 01.2
comp=E,446nm,0.7s
N18K IAML 00 07 04.2
comp=N,363nm,1.2s
N18K Kilae Creek 2.41 312 P Pn 00 06 21.5 -0.9
baz=129
SUA Susitna One 2.46 17 Pn 00 06 23.5 +0.4
SUA IAML 00 07 10.6
comp=E,534nm,0.9s
SUA Susitna One 2.46 17 P Pn 00 06 23.5 +0.4
baz=198
O17K Koliganek Bris 2.56 287 Pn 00 06 23.6 -0.8
SVW2 Sparrevohn 2.59 321 Pn 00 06 23.9 -1.0
SVW2 IAML 00 07 07.0
comp=N,224nm,0.5s
SVW2 IAML 00 07 09.0
comp=E,280nm,0.7s
P23K Montague Islan 2.61 68 Pn 00 06 24.4 -0.7
PWL Port Wells 2.62 47 Pn 00 06 24.5 -0.8
PWL IAML 00 07 07.5
comp=E,265nm,0.5s
PWL IAML 00 07 10.7
comp=N,354nm,0.5s
SII Sitkinak Islan 2.78 203 Pn Pn 00 06 25.5 -1.9
SII IAML 00 07 19.4
comp=N,327nm,1.1s
M20K Styx River 2.80 351 Pn 00 06 27.1 -0.6
M20K Styx River 2.80 351 P Pn 00 06 27.9 +0.1
baz=171
M22K Willow 2.83 21 Pn 00 06 28.9 +0.7
M22K Willow 2.83 21 P Pn 00 06 28.0 -0.1
baz=203
SKT Skwentna 2.88 7 Pn 00 06 29.4 +0.6
SKT IAML 00 07 09.1
comp=N,190nm,0.9s
SKT Skwentna 2.88 7 P Pn 00 06 28.7 -0.1
baz=187
PMR Palmer 2.91 31 Pn 00 06 28.7 -0.5
PMR IAML 00 07 11.8
comp=E,166nm,0.6s
PMR Palmer 2.91 31 P Pn 00 06 28.7 -0.5
baz=213
KNK Knik Glacier 2.96 38 Pn 00 06 29.3 -0.7
KNK Knik Glacier 2.96 38 IAML 00 07 15.7
comp=N,228nm,0.6s
KNK IAML 00 07 15.9
comp=E,248nm,0.7s
KNK Knik Glacier 2.96 38 P Pn 00 06 29.3 -0.7
baz=221
P16K Nushagak River 2.97 271 Pn 00 06 29.8 -0.2
M19K Big River Lodg 2.98 340 Pn 00 06 30.0 -0.2
M19K Big River Lodg 2.98 340 P Pn 00 06 30.0 -0.2
baz=158
O16K Kokwok River B 3.03 281 Pn 00 06 30.3 -0.5
Q23K Middleton Isla 3.04 82 Pn Pn 00 06 29.6 -1.3
Q23K Middleton Isla 3.04 82 P Pn 00 06 30.6 -0.3
baz=267
MID Middleton Isla 3.04 82 Pn Pn 00 06 29.6 -1.4
GLI Glacier Island 3.12 54 Pn 00 06 30.4 -1.7
GLI IAML 00 07 23.2
comp=E,172nm,0.5s
GLI Glacier Island 3.12 54 P Pn 00 06 30.5 -1.7
baz=238
HIN Hinchinbrook I 3.17 64 Pn 00 06 32.2 -0.6
HIN IAML 00 07 32.0
comp=N,190nm,0.7s
HIN IAML 00 07 35.1
comp=E,152nm,0.9s
SML Sawmill 3.31 34 Pn 00 06 34.2 -0.5
SML Sawmill 3.31 34 IAML 00 07 28.0
comp=E,166nm,0.8s
SML IAML 00 07 32.6
comp=N,199nm,0.6s
SML Sawmill 3.31 34 P Pn 00 06 34.2 -0.5
baz=218
L19K White Mountain 3.32 338 Pn 00 06 34.7 -0.1
L19K White Mountain 3.32 338 IAML 00 07 31.1
comp=E,150nm,1.0s
L19K IAML 00 07 33.0
comp=N,149nm,0.8s
L19K White Mountain 3.32 338 P Pn 00 06 34.7 -0.1
baz=156
FID Port Fidalgo 3.32 58 Pn 00 06 33.0 -1.9
FID IAML 00 07 27.8
comp=N,131nm,0.8s
FID IAML 00 07 28.2
comp=E,128nm,0.5s
JPK Jack Peak 3.42 53 Pn 00 06 35.1 -1.1
CUT Chulitna 3.42 16 Pn 00 06 36.1 -0.1
CUT Chulitna 3.42 16 P Pn 00 06 36.1 -0.1
baz=197
L20K Farewell, AK 3.46 347 Pn 00 06 36.8 +0.1
L20K Farewell, AK 3.46 347 P Pn 00 06 36.8 +0.1
baz=166
M23K Glacier View 3.48 38 Pn 00 06 36.6 -0.4
N16K Nishlik Lake 3.56 295 Pn 00 06 37.9 -0.2
EYAK Cordova Ski Ar 3.57 64 Pn Pn 00 06 37.2 -1.1
EYAK Cordova Ski Ar 3.57 64 P Pn 00 06 37.1 -1.1
baz=249
SCM Sheep Creek Mo 3.64 40 Pn 00 06 39.0 -0.3
SCM IAML 00 07 41.2
comp=N,104nm,0.7s
SCM IAML 00 07 46.7
comp=E,161nm,0.7s
PPLA Purkeypile 3.78 0 Pn 00 06 41.6 +0.4
PPLA Purkeypile 3.78 0 P Pn 00 06 41.5 +0.3
baz=180
CHIR Chirikof Islan 3.79 210 Pn Pn 00 06 39.9 -1.3
CHIR IAML 00 08 44.2
comp=E,168nm,2.6s
DIV Divide 3.81 55 Pn 00 06 40.6 -0.9
KLU Klutina 3.94 50 Pn 00 06 42.7 -0.6
KLU Klutina 3.94 50 P Pn 00 06 42.7 -0.6
baz=236
RAGM Ragged Mountai 4.03 69 Pn Pn 00 06 43.7 -0.9
RAGM IAML 00 07 35.5
comp=E,74nm,0.6s
GOAT Goat Mountain 4.06 66 Pn 00 06 44.0 -1.0
KAIM Kayak Island 4.06 75 Pn Pn 00 06 44.5 -0.5
KAIM IAML 00 07 36.3
comp=N,67nm,0.6s
KAIM Kayak Island 4.06 75 P Pn 00 06 45.0 0.0
baz=262
WAT6 Susitna Watana 4.10 31 Pn 00 06 45.4 -0.2
WAT6 Susitna Watana 4.10 31 P Pn 00 06 45.4 -0.2
baz=214
WAT1 Susitna Watana 4.12 24 Pn 00 06 46.0 +0.2
WAT1 Susitna Watana 4.12 24 P Pn 00 06 46.0 +0.2
baz=208
TT01 Tatalina 4.21 336 Pn 00 06 46.7 -0.3
HMT Hamilton 4.22 70 Pn 00 06 46.7 -0.4
HMT IAML 00 07 36.9
comp=N,81nm,0.6s
M24K Tolsona, Glenn 4.22 42 Pn 00 06 47.0 -0.2
M24K Tolsona, Glenn 4.22 42 IAML 00 08 02.5
comp=E,123nm,0.6s
M24K IAML 00 08 12.4
comp=N,108nm,0.8s
M24K Tolsona, Glenn 4.22 42 P Pn 00 06 47.0 -0.2
baz=228
TTA Tatalina 4.23 336 Pn Pn 00 06 47.1 -0.2
TTA IAML 00 08 00.7
comp=E,85nm,1.3s
TTA IAML 00 08 08.0
comp=N,60nm,1.2s
BMRM Bremner River 4.25 61 Pn 00 06 46.5 -1.1
baz=237
POKR Poker Plat Res 6.42 18 Pn 00 07 17.3 +0.1
POKR Poker Plat Res 6.42 18 P Pn 00 07 16.2 -0.9
baz=203
BC03 6.42 48 Pn 00 07 16.8 -0.3
BCAR Beaver Creek A 6.42 48 Pn Pn 00 07 17.6 +0.3
BCPM Bancas Point 6.46 77 Pn Pn 00 07 17.5 -0.3
H21K Melozitna Rive 6.56 358 Pn 00 07 18.6 -0.5
H21K Melozitna Rive 6.56 358 P Pn 00 07 18.6 -0.5
baz=178
PNL Peninsula 6.58 80 Pn 00 07 18.8 -0.7
J26L Joseph Creek 6.77 34 Pn 00 07 21.4 -0.7
J26L Joseph Creek 6.77 34 P Pn 00 07 20.6 -1.5
baz=221
H22K Ishtalitna Cre 6.80 3 Pn 00 07 21.3 -1.1
H23K Yukon River 6.83 9 Pn 00 07 22.7 -0.2
H23K Yukon River 6.83 9 P Pn 00 07 21.9 -0.9
baz=192
IM03 6.91 355 Pn 00 07 21.1 -2.8
O29M Mount Kennedy 7.01 75 Pn 00 07 21.5 -3.9
H24K Noodor Dome 7.03 15 Pn 00 07 25.5 0.0
H24K Noodor Dome 7.03 15 P Pn 00 07 22.6 -2.9
baz=199
YUK4 Talbot Arm 7.12 66 P Pn 00 07 26.5 -0.5
baz=257
PRP Porcupine Dome 7.13 23 Pn 00 07 27.4 +0.5
PRP Porcupine Dome 7.13 23 P Pn 00 07 25.2 -1.8
baz=209
YUK6 Outpost Mounta 7.18 69 Pn 00 07 28.0 +0.1
YUK6 Outpost Mounta 7.18 69 P Pn 00 07 28.0 +0.1
baz=261
YUK7 Dusty Glacier 7.24 73 Pn 00 07 26.8 -1.9
P29M Windy Craggy 7.42 80 Pn 00 07 30.5 -0.5
G21K Allakaket 7.44 356 Pn 00 07 30.1 -0.9
YUK5 Granite Creek 7.46 68 Pn 00 07 31.6 +0.1
M29M Somme Creek 7.51 58 Pn 00 07 31.9 -0.3
HYT Haines Junctio 7.58 71 Pn Pn 00 07 32.9 -0.3
G23K Bananza Creek 7.68 7 Pn 00 07 33.8 -0.6
EGAK Eagle 7.70 38 Pn 00 07 35.1 +0.5
N30M Aishikik Lake 7.88 66 Pn 00 07 35.9 -1.3
G24K Hadweenzic Riv 7.90 14 Pn 00 07 35.1 -2.3
G25K Bearman Lake 8.15 17 Pn 00 07 37.9 -2.9
COLD Coldfoot 8.18 6 Pn Pn 00 07 41.3 0.0
SKAG Skagway 8.66 81 Pn Pn 00 07 47.6 -0.2
I29M Ogilvie Camp, 9.00 40 Pn Pn 00 07 54.2 +1.8
BMAR Burnt Mountain 9.01 19 Pn Pn 00 07 52.4 -0.1
BESE Bessie Mountai 9.03 86 Pn Pn 00 07 52.6 -0.3
SIT Sitka 9.19 96 Pn Pn 00 07 53.8 -1.3
M31M Drury Creek, Y 9.28 63 Pn Pn 00 07 55.6 -0.6
JIS Juneau Island 9.33 88 Pn Pn 00 07 57.5 +0.5
UNV Unalaska Valle 9.49 242 Pn Pn 00 07 58.8 -0.4
TOLK Toolik Lake Re 9.62 6 Pn Pn 00 08 02.0 +1.1
P33M Teslin, Yukon 9.88 75 Pn Pn 00 08 04.2 -0.3
EPYK Eagle Plains 10.14 38 Pn Pn 00 08 10.1 +2.1
DLBC Dease Lake 11.54 84 P Pn 00 08 26.3 -0.9
comp=N,0.2nm,0.3s,baz=226,slow=14,SNR=4.0
comp=N,0.7nm,0.4s
DLBC Dease Lake 11.54 84 Pn Pn 00 08 26.5 -0.6
C36M Paulatuk 15.77 38 Pn Pn 00 09 24.1 +0.8
KIWB Kanaga Island 15.81 253 P P 00 09 26.7 0.0
A36M Sachs Harbour 16.82 29 P 00 09 38.2 +0.6
A36M IAmb IAmb 00 09 40.4
comp=Z,9.3nm,0.9s
ELK Elko 29.55 112 P P 00 11 47.2 +3.0
comp=Z,0.9nm,0.7s,baz=293,slow=6.4,SNR=5.2
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 29.96 119 P P 00 11 50.4 +2.5
comp=Z,0.7nm,0.8s,baz=318,slow=5.9,SNR=5.6
comp=Z,0.7nm,0.8s
WCT Wildcat Mounta 32.06 118 P P 00 12 09.4 +3.2
WCT IAmb IAmb 00 12 09.7
comp=Z,1.6nm,0.8s
WUAZ Wupatki 35.55 113 P P 00 12 38.1 +1.6
TXAR Lajitas Array 44.31 110 P P 00 13 51.3 +2.2
comp=Z,0.9nm,0.8s,baz=335,slow=5.5,SNR=8.8
comp=Z,0.9nm,0.8s
ARCES ARCESS Array B 51.62 1 P P 00 14 43.5 -1.5
comp=Z,1.0nm,0.6s,baz=9.9,slow=9.9,SNR=9.2
comp=Z,1.0nm,0.6s
SONM Songino Array 55.62 307 P P 00 15 14.0 -0.6
comp=Z,0.5nm,0.6s,baz=46,slow=4.8,SNR=2.5
comp=Z,0.5nm,0.6s
ZALV Zalesovo Beam 58.31 324 P P 00 15 33.6 +0.3
comp=Z,0.5nm,0.5s,baz=38,slow=7.3,SNR=2.8
comp=Z,0.5nm,0.5s
NOA NORSAR Array B 59.47 9 P P 00 15 41.5 +0.1
comp=Z,0.5nm,0.7s,baz=352,slow=6.7,SNR=3.6
comp=Z,0.5nm,0.7s
FINES FINESS Array B 59.75 1 P P 00 15 41.9 -1.2
comp=Z,1.8nm,0.8s,baz=28,slow=6.3,SNR=4.7
comp=Z,1.8nm,0.8s
BVAR Borovoye Array 63.02 333 P P 00 16 05.5 +0.1
comp=Z,0.7nm,0.6s,baz=26,slow=7.4,SNR=6.1
comp=Z,0.7nm,0.6s
EKA Eskdalemuir Ar 63.23 19 P P 00 16 06.2 -0.5
comp=Z,0.3nm,0.5s,baz=329,slow=5.5,SNR=3.5
comp=Z,0.3nm,0.5s
AKASG Malin Array Be 70.52 359 P P 00 16 51.3 -1.7
comp=Z,0.4nm,0.4s,baz=7.7,slow=6.6,SNR=5.2
comp=Z,0.4nm,0.4s

UCR ***10*** *00:17:05.2±2.0, 7°36N×82°80W, h6km±16km, MW4.3*
UPA ***10*** *00:17:05.2±1.3, 7°31N×82°76W, h8km±6km, MW4.5*
ISC 10 00:17:02.8±2.4, 7°26N±0°08×82°79W±0°04, h3km±13km, n56, σ1°02/75, 1C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**1.22**	**16**	*eP*	**Pg**	**00 17 26.0**	**-0.1**
DVD				*eS*	**Sg**	**00 17 41.6**	**-0.4**
CDITO	**Canoas**	**1.31**	**356**	*eP*	**Pn**	**00 17 27.6**	**-0.4**
CDITO				*eS*	**Sb**	**00 17 45.4**	**+0.1**
REME3	**Remedios, Chir**	**1.35**	**44**	*eP*	**Pn**	**00 17 27.8**	**-0.7**
PTJ1	**Puerto Jimnez**	**1.37**	**338**	*eP*	**Pn**	**00 17 26.9**	**-1.9**
PTJ1				*eS*	**Sb**	**00 17 46.6**	**-0.3**
BCO2	**Palmira**	**1.47**	**10**	*eP*	**Pn**	**00 17 30.1**	**-0.3**
BCO2				*eS*	**Sn**	**00 17 49.5**	**-0.8**
BRU2	**Volcan**	**1.53**	**4⇓**	*eP*	**Pn**	**00 17 30.7**	**-0.5**
BRU2				*eS*	**Sn**	**00 17 49.8**	**-1.8**
BRU2	**Volcan**	**1.53**	**4**	*eP*	**Pn**	**00 17 31.1**	**-0.1**
BRU2				*eS*	**Sn**	**00 17 50.8**	**-0.8**
BC3P	**Paso Ancho**	**1.56**	**6**	*eP*	**Pn**	**00 17 31.6**	**0.0**
BC3P				*eS*	**Sn**	**00 17 52.1**	**-0.3**
LNBQ3	**Los Naranjos,**	**1.56**	**13**	*eP*	**Pn**	**00 17 31.5**	**-0.1**
LNBQ3				*eS*	**Sn**	**00 17 52.2**	**-0.2**
EDSV	**San Vito**	**1.56**	**353**	*eP*	**Pn**	**00 17 29.9**	**-1.7**
POTG	**Potrero Grande**	**1.81**	**350**	*eP*	**Pn**	**00 17 34.8**	**-0.2**
EDPN	**Palmar Norte**	**1.82**	**339**	*eP*	**Pn**	**00 17 35.4**	**+0.4**
EDPN				*eS*	**Sn**	**00 17 57.9**	**-0.6**
CACAO	**El Cacao, Vera**	**1.91**	**87**	*eP*	**Pn**	**00 17 35.8**	**-0.5**
CACAO				*eS*	**Sn**	**00 17 59.2**	**-1.7**
SRBA	**San Rafael, Bu**	**2.04**	**344**	*eP*	**Pn**	**00 17 38.0**	**-0.2**
SRBA				*eS*	**Sn**	**00 18 04.5**	**+0.3**
CNI2	**El Empalme, Bo**	**2.17**	**8**	*eP*	**Pn**	**00 17 41.4**	**+1.6**
CNI2				*eS*	**Sn**	**00 18 06.3**	**-1.0**
EDDO	**Dominical**	**2.25**	**332**	*eP*	**Pn**	**00 17 40.4**	**-0.5**
PEZE	**Perez Zeledon,**	**2.29**	**337**	*eP*	**Pn**	**00 17 41.7**	**+0.2**
CDM	**Cerro de Muert**	**2.48**	**337**	*eP*	**Pn**	**00 17 44.5**	**0.0**
RIMA	**Rio Macho**	**2.71**	**337**	*eP*	**Pn**	**00 17 47.6**	**+0.1**
PNME	**Penonome**	**2.73**	**63**	*eP*	**Pn**	**00 17 48.9**	**+1.4**
PNME				*eS*	**Sn**	**00 18 20.6**	**-0.4**
LCR2	**La Lucha 2**	**2.75**	**334**	*eP*	**Pn**	**00 17 48.0**	**0.0**
OCM	**Ochomogo**	**2.87**	**336**	*eP*	**Pn**	**00 17 49.8**	**+0.2**
BATAN	**Batan**	**2.88**	**348**	*eP*	**Pn**	**00 17 51.9**	**+2.2**
BATAN				*eS*	**Sn**	**00 18 24.9**	**0.0**
JACO	**JACO, Garabito**	**3.02**	**322**	*eP*	**Pn**	**00 17 51.1**	**-0.5**
HDC	**Heredia**	**3.02**	**334**	*eP*	**Pn**	**00 17 53.9**	**+2.2**
HDC	**Heredia**	**3.02**	**334**	*eS*	**Sn**	**00 18 28.9**	**+0.3**
RIFO	**Rio Frio, Sara**	**3.24**	**340**	*eP*	**Pn**	**00 17 56.7**	**+2.2**
LAFE	**Finca La Fe, P**	**3.29**	**320**	*eP*	**Pn**	**00 17 55.0**	**-0.2**
BCIP	**Isla Barro Col**	**3.48**	**57**	*eP*	**Pn**	**00 17 58.8**	**+0.9**
BCIP				*eS*	**Sn**	**00 18 38.7**	**-0.9**
UPA	**Univ. de Panam**	**3.65**	**62**	*eP*	**Pn**	**00 18 01.1**	**+0.9**
UPA				*eS*	**Sn**	**00 18 43.1**	**-0.6**
FORC	**Fortuna**	**3.69**	**330**	*eP*	**Pn**	**00 18 02.9**	**+2.1**
JTS	**Las Juntas de**	**3.70**	**325**	*eP*	**Pn**	**00 18 01.6**	**+0.7**
JTS	**Las Juntas de**	**3.70**	**325**	*eP*	**Pn**	**00 18 01.8**	**+0.9**
JTS				*eS*	**Sn**	**00 18 44.9**	**-0.1**
INDI	**Punta indio, G**	**3.73**	**314**	*eP*	**Pn**	**00 18 01.1**	**-0.2**
GRZA	**Playa Garza**	**3.86**	**313⇑**	*iP*	**Pn**	**00 18 02.8**	**-0.3**
NICO	**Nicoya**	**3.88**	**318**	*eP*	**Pn**	**00 18 04.7**	**+1.3**
SAJU	**San Juanillo,**	**4.02**	**314**	*eP*	**Pn**	**00 18 04.5**	**-0.8**

BMRM Bremner River 4.25 61 P Pn 00 06 46.5 -1.1
baz=248
CAST Castle Rocks 4.30 1 Pn 00 06 48.0 -0.3
CAST Castle Rocks 4.30 1 P Pn 00 06 48.0 -0.3
baz=181
K20K Telida 4.33 349 Pn 00 06 48.7 +0.1
K20K Telida 4.33 349 IAML 00 08 08.8
comp=E,58nm,1.1s
K20K IAML 00 08 17.2
comp=N,56nm,0.8s
K20K Telida 4.33 349 P Pn 00 06 48.7 +0.1
baz=168
NICHA Nichawak Mount 4.34 72 Pn 00 06 48.3 -0.4
CHGN Chignik 4.36 232 Pn Pn 00 06 48.3 -0.7
CHGN IAML 00 08 36.5
comp=E,62nm,0.1s
SUCK Suckling Hills 4.40 74 Pn Pn 00 06 49.4 -0.2
TRF Thorofare Moun 4.44 11 Pn 00 06 50.5 +0.3
TRF Thorofare Moun 4.44 11 P Pn 00 06 50.4 +0.2
baz=193
KTH Kantishna Hill 4.48 8 Pn 00 06 51.6 +0.8
BERG Berg Lake 4.50 70 Pn 00 06 50.5 -0.5
BERG Berg Lake 4.50 70 IAML 00 07 41.2
comp=E,76nm,0.5s
BERG IAML 00 07 41.8
comp=N,79nm,0.5s
N25K Chitina, Valde 4.53 54 Pn 00 06 51.1 -0.3
N25K Chitina, Valde 4.53 54 P Pn 00 06 51.1 -0.3
baz=240
RND Reindeer 4.59 19 Pn 00 06 52.5 +0.2
RND Reindeer 4.59 19 IAML 00 07 58.8
comp=E,69nm,0.7s
RND IAML 00 08 07.6
comp=N,76nm,0.8s
DHY Denali Highway 4.61 29 Pn 00 06 52.7 +0.2
DHY Denali Highway 4.61 29 IAML 00 07 47.1
comp=N,92nm,0.5s
DHY IAML 00 08 02.1
comp=E,81nm,0.7s
DHY Denali Highway 4.61 29 P Pn 00 06 52.7 +0.2
baz=213
GRIN Grindle Hills 4.66 72 Pn 00 06 52.8 -0.4
KHIT Khitrov Hills 4.73 70 Pn 00 06 53.5 -0.7
CHUM Lake Minchumin 4.77 360 Pn 00 06 53.1 -1.5
CHUM Lake Minchumin 4.77 360 P Pn 00 06 53.1 -1.5
baz=180
HARP HAARP 4.78 44 Pn 00 06 54.7 0.0
HARP HAARP 4.78 44 P Pn 00 06 54.7 0.0
baz=230
GLB Gilahina Butte 4.79 57 Pn 00 06 54.0 -1.0
WACK Wrangell Chich 4.84 50 Pn 00 06 55.3 -0.5
VRDI Verde Repeater 4.87 61 Pn 00 06 55.0 -1.1
WASW Wrangell South 4.87 51 Pn 00 06 55.8 -0.5
MCK McKinley 4.88 18 Pn Pn 00 06 56.7 +0.5
MCK IAML 00 08 27.6
comp=E,61nm,1.8s
MCK McKinley 4.88 18 P Pn 00 06 56.3 +0.1
baz=200
SNH Sunshine Point 4.88 74 Pn Pn 00 06 56.2 0.0
WAX Waxell Ridge 4.92 70 Pn 00 06 56.2 -0.6
WAX Waxell Ridge 4.92 70 IAML 00 07 52.9
comp=E,69nm,0.3s
TGL Tana Glacier 5.00 67 Pn Pn 00 06 57.8 -0.2
TGL IAML 00 07 54.4
comp=N,33nm,0.6s
BPAW Bear Paw Mtn. 5.02 6 Pn 00 06 58.1 0.0
BPAW IAML 00 08 02.2
comp=E,39nm,0.4s
BPAW IAML 00 08 33.3
comp=N,42nm,1.4s
BPAW Bear Paw Mtn. 5.02 6 P Pn 00 06 58.0 -0.1
baz=187
PAX Paxson 5.06 38 Pn 00 06 58.5 -0.3
PAX Paxson 5.06 38 P Pn 00 06 58.5 -0.3
baz=224
BARK Barkley Ridge 5.09 71 Pn 00 06 59.0 -0.1
MCARA McCarthy VSAT 5.12 60 Pn 00 06 58.5 -0.8
MCARA McCarthy VSAT 5.12 60 IAML 00 08 02.0
comp=E,42nm,0.8s
MCARA IAML 00 08 02.7
comp=N,46nm,0.7s
MCARA McCarthy VSAT 5.12 60 P Pn 00 06 58.5 -0.8
baz=248
J20K Nowinta River 5.14 351 Pn 00 06 59.6 -0.1
J20K Nowinta River 5.14 351 IAML 00 08 41.7
comp=E,44nm,0.7s
J20K IAML 00 08 55.8
comp=N,41nm,1.1s
J20K Nowinta River 5.14 351 P Pn 00 06 59.6 -0.1
baz=169
ISLE Juniper Island 5.20 69 Pn 00 07 00.1 -0.6
ISLE Juniper Island 5.20 69 IAML 00 07 59.6
comp=N,50nm,0.5s
KIAG Kiagna River 5.27 66 Pn 00 07 01.5 -0.2
PTPK Patty Peak 5.30 63 Pn 00 07 01.2 -0.8
BAGL Bagley Icefiel 5.30 71 Pn 00 07 01.9 0.0
BALM Baldy 5.31 65 Pn 00 07 01.5 -0.6
MESA MESA 5.32 74 Pn 00 07 02.2 -0.2
MESA MESA 5.32 74 P Pn 00 07 02.2 -0.2
baz=263
YAH Yahtse 5.45 72 Pn 00 07 04.0 -0.1
M26K Nabesna, AK 5.59 50 Pn 00 07 05.6 -0.3
M26K Nabesna, AK 5.59 50 P Pn 00 07 05.6 -0.3
baz=238
K24K Donnelly Dome 5.62 31 Pn 00 07 06.9 +0.6
BARN Barnard Glacie 5.64 65 Pn 00 07 06.1 -0.6
NEA2 Nenana 5.68 14 Pn 00 07 06.6 -0.5
NEA2 Nenana 5.68 14 P Pn 00 07 06.6 -0.5
baz=197
WRH Wood River Hil 5.71 18 Pn 00 07 06.7 -0.7
CHX Chaix Hills 5.73 76 Pn 00 07 07.6 -0.2
TABL Table Mountain 5.76 72 Pn 00 07 08.4 +0.1
CTG Chitna Glacier 5.76 67 P Pn 00 07 08.5 +0.2
baz=256
CTGM Chitina Glacie 5.77 67 Pn 00 07 08.5 +0.1
RIDG Independent Ri 5.83 34 Pn 00 07 09.1 -0.1
RIDG Independent Ri 5.83 34 P Pn 00 07 09.0 -0.1
baz=221
HDA Harding Lake 5.86 23 Pn 00 07 09.3 -0.3
HDA Harding Lake 5.86 23 P Pn 00 07 08.5 -1.0
baz=208
LOGN Logan Glacier 5.89 68 Pn 00 07 09.9 -0.2
SAMH Samovar Hills 5.90 75 Pn 00 07 10.3 +0.1
CCB Clear Creek Bu 5.92 19 Pn 00 07 09.9 -0.4
MLY Manley 5.96 6 Pn 00 07 10.8 -0.1
MLY Manley 5.96 6 P Pn 00 07 10.7 -0.3
baz=188
DOT Dot Lake 6.00 37 Pn 00 07 11.8 +0.4
M27K Edge Creek, AK 6.02 53 Pn Pn 00 07 11.8 -0.1
M27K Edge Creek, AK 6.02 53 P Pn 00 07 11.2 -0.7
baz=242
GCSA Galena City Sc 6.04 341 Pn 00 07 11.7 -0.3
GCSA Galena City Sc 6.04 341 P Pn 00 07 11.7 -0.3
baz=157
I21K Tanana 6.07 1 Pn 00 07 12.3 -0.1
I21K Tanana 6.07 1 P Pn 00 07 12.0 -0.4
baz=181
COLA College 6.12 18 Pn 00 07 12.9 -0.1
MDM Murphy Dome 6.14 16 Pn 00 07 13.0 -0.4
PCA Pinnacle 6.16 76 Pn 00 07 13.4 -0.3
PINM Pinnacle 6.16 76 P Pn 00 07 13.3 -0.4
baz=266
I23K Minto, Yukon-K 6.19 11 Pn 00 07 13.8 -0.1
I23K Minto, Yukon-K 6.19 11 P Pn 00 07 13.8 -0.1
baz=194
IL31 6.20 22 Pn 00 07 13.8 -0.2
ILAR Eielson Array 6.20 22 P Pn 00 07 13.6 -0.6
comp=N,2.1nm,0.3s,baz=203,slow=14,SNR=52
ILAR S Sn 00 08 19.9 -3.5
comp=N,4.6nm,0.5s,baz=196,slow=16,SNR=5.0
comp=N,3.8nm,0.3s
ILAR Eielson Array 6.20 22 Pn 00 07 13.8 -0.3
YUK2 White River 6.23 60 Pn 00 07 14.7 -0.1
SCRK Sand Creek 6.26 36 Pn 00 07 14.6 -0.4
SCRK Sand Creek 6.26 36 P Pn 00 07 14.6 -0.4
baz=223
O28M Mount Upton 6.27 70 Pn 00 07 15.7 +0.2
J25K Salcha River, 6.39 28 Pn 00 07 16.3 -0.5
J25K Salcha River, 6.39 28 P Pn 00 07 15.9 -0.9
baz=214
YUK3 Moose Creek 6.40 61 Pn 00 07 16.3 -0.8
YUK3 Moose Creek 6.40 61 P Pn 00 07 16.3 -0.8
baz=251
L27K Beaver Creek, 6.40 48 Pn 00 07 17.5 +0.5
L27K Beaver Creek, 6.40 48 P Pn 00 07 15.9 -1.1

ACAL	Aguas Claras	4.02	327	eP	Pn	00 18 06.8	+1.4
ORTG	Ortega, Santa	4.06	320	eP	Pn	00 18 06.1	+0.2
PTEN	Parque Tenorio	4.06	328	eP	Pn	00 18 07.5	+1.6
CUI	Cuipilapa	4.11	325	eP	Pn	00 18 07.5	+0.9
COLC	Colonia	4.14	325	eP	Pn	00 18 08.2	+1.1
HORNC	Hornillas	4.17	326	eP	Pn	00 18 08.2	+0.8
LIM1	Limonal	4.20	325	eP	Pn	00 18 08.6	+0.9
MESS	Mesas	4.20	326	eP	Pn	00 18 09.0	+1.2
GPS2	Hotel Rincn d	4.30	324	eP	Pn	00 18 10.3	+1.1
GPS1	Guardaparques	4.32	324	eP	Pn	00 18 10.9	+1.5
VRLE	La Escondida,	4.33	324	eP	Pn	00 18 10.8	+1.1
LAPC	Finca la Perla	4.36	323	eP	Pn	00 18 11.1	+1.1
LAPC				eS	Sn	00 19 01.9	+0.6
BUEV	Buena Vista	4.37	324	eP	Pn	00 18 11.2	+1.1
GB1A	Borinquen Arri	4.38	324	eP	Pn	00 18 11.4	+1.1
GBS3	Finca Las Img	4.38	323	eP	Pn	00 18 11.3	+1.0
BUAI	Buenos Aires	4.39	325	eP	Pn	00 18 11.4	+1.0
HZTE	Horizontes, Gu	4.41	321	eP	Pn	00 18 12.0	+1.3
TOTI	Torti	4.73	69	eP	Pn	00 18 16.7	+1.6
TOTI				eS	Sn	00 19 11.2	+0.6
ACON	Acoyapa	5.24	333	eP	Pn	00 18 23.2	+1.2

IDC 10 00:17:51.8±4.2, 16°.06S×175°.21W, h0km, mb3.8/2, mbtmp3.8/2, MS3.7/34, Error ellipse: s-maj=262.2km s-min=37.5km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.67	255	LR	LR	00 22 00.4	
	comp=Z,2μm,18.8s,baz=66,slow=37						
RAR	Rarotonga	15.49	112	LR	LR	00 25 41.4	
	comp=Z,182nm,20.1s,baz=307,slow=30						
DZM	Mont Dzumac	18.34	248	eLR	LR	00 26 44.7	
	comp=Z,747nm,25.6s						
DZM	Mont Dzumac	18.34	248	LR	LR	00 28 10.6	
	comp=Z,414nm,19.4s,baz=48,slow=34						
URZ	Urewera	23.13	196	LR	LR	00 30 04.9	
	comp=Z,200nm,19.4s,baz=106,slow=32						
PAE	Paea	24.57	97	eT	T	00 47 35.6	
	0.9nm,0.2s						
PPT2	Papeete2	24.57	97	eLR	LR	00 28 17.0	
	comp=Z,432nm,26.2s						
PPT2	Papeete2	24.57	97	eT	T	00 47 32.7	
	2.1nm,0.3s						
PPT	Papete	24.58	97	LR	LR	00 29 51.9	
	comp=Z,100nm,21.3s,baz=210,slow=29						
TBI	Tubuai	25.27	111	eLR	LR	00 28 37.7	
	comp=Z,433nm,29.2s						
TBI	Tubuai	25.27	111	eT	T	00 48 32.2	
	5.1nm,0.3s						
TAOE	Nuku Hiva Isla	34.93	82	eLR	LR	00 33 04.1	
	comp=Z,273nm,28.4s						
PMG	Port Moresby	37.26	276	LR	LR	00 38 31.8	
	comp=Z,88nm,20.5s,baz=76,slow=33						
WRA	Warramunga Arr	48.00	257	LR	LR	00 45 35.5	
	comp=Z,102nm,19.2s,baz=82,slow=35						
ASAR	Alice Springs	48.25	252	P	P	00 26 34.8	-0.2
	2.9nm,0.9s,baz=84,slow=8.4,SNR=15						
ASAR				LR	LR	00 45 59.4	
	comp=Z,178nm,19.3s,baz=156,slow=35						
	2.9nm,0.9s						
GUMO	Guam	49.25	305	LR	LR	00 45 23.7	
	comp=Z,18nm,19.7s,baz=132,slow=34						
FITZ	Fitzroy Crossi	56.37	259	LR	LR	00 50 55.8	
	comp=Z,149nm,18.1s,baz=92,slow=35						
DAV	Davao City (W)	62.95	287	LR	LR	00 54 29.8	
	comp=Z,33nm,18.8s,baz=146,slow=35						
JHJ	Hachijo jima 2	65.11	319	LR	LR	00 54 16.3	
	comp=Z,11nm,20.1s,baz=302,slow=34						
PFO	Pinyon Flats O	74.64	48	LR	LR	00 53 52.2	
	comp=Z,90nm,19.4s,baz=262,slow=29						
LPIG	La Paz	74.86	59	LR	LR	00 53 16.1	
	comp=Z,66nm,19.0s,baz=220,slow=28						
YBH	Yreka Blue Hor	75.18	38	LR	LR	00 56 17.5	
	comp=Z,53nm,19.6s,baz=240,slow=31						
KSRS	Korea Array	75.42	316	LR	LR	01 00 16.3	
	comp=Z,8.0nm,19.0s,baz=145,slow=34						
LEM	Lembang	75.86	267	LR	LR	01 04 17.1	
	comp=Z,42nm,18.4s,baz=186,slow=37						
KDAK	Kodiak Island	75.92	12	LR	LR	00 57 36.8	
	comp=Z,30nm,19.0s,baz=203,slow=31						
ELK	Elko	76.23	42	LR	LR	00 56 34.6	
	comp=Z,42nm,20.1s,baz=241,slow=29						
KLR	Kul'dur	80.14	328	LR	LR	01 03 39.3	
	comp=Z,17nm,18.7s,baz=246,slow=34						
MA2	Magadan	80.28	343	LR	LR	01 00 04.6	
	comp=Z,26nm,21.6s,baz=108,slow=32						
NEW	Newport	82.23	35	LR	LR	01 02 46.9	
	comp=Z,31nm,18.4s,baz=269,slow=33						
TXAR	Lajitas Array	82.42	57	LR	LR	01 00 13.8	
	comp=Z,56nm,18.1s,baz=265,slow=31						
ANMO	Albuquerque	82.56	51	LR	LR	00 59 35.6	
	comp=Z,49nm,18.3s,baz=266,slow=30						
DLBC	Dease Lake	82.95	22	LR	LR	01 03 42.2	
	comp=Z,39nm,18.6s,baz=134,slow=33						
PDAR	Pinedale Array	83.92	42	P	P	00 30 24.2	+0.1
	0.3nm,0.7s,baz=163,slow=3.5,SNR=3.7						
PDAR				LR	LR	00 59 24.9	
	comp=Z,38nm,19.6s,baz=270,slow=30						
	0.3nm,0.7s						
CMIG	Matias Romero	85.74	71	LR	LR	00 59 06.5	
	comp=Z,48nm,21.9s,baz=233,slow=29						
PSI	Prapat	86.80	274	LR	LR	01 10 11.2	
	comp=Z,56nm,18.9s,baz=142,slow=36						
CMAR	Chiang Mai Arr	91.17	289	LR	LR	01 08 00.6	
	comp=Z,21nm,21.5s,baz=120,slow=33						
YKA	Yellowknife Ar	91.39	24	LR	LR	01 04 47.5	
	comp=Z,20nm,20.8s,baz=194,slow=31						
ATAH	Atahualpa	94.55	99	LR	LR	01 02 47.3	
	comp=Z,55nm,20.7s,baz=250,slow=28						
NNA	Nana	94.59	104	LR	LR	01 06 39.4	
	comp=Z,32nm,18.1s,baz=194,slow=31						
ULM	Lac du Bonnet	95.54	39	LR	LR	01 07 48.1	
	comp=Z,47nm,18.4s,baz=14,slow=31						
LVC	Limon Verde	98.29	116	LR	LR	01 07 41.0	
	comp=Z,34nm,18.2s,baz=224,slow=30						
BRTR	Keskin Array B	145.54	319	PKPbc	PKPab	00 37 33.0	+0.2
	0.8nm,1.0s,baz=90,slow=2.9,SNR=3.1						
GERES	GERESS Array B	146.50	349	PKPbc	PKPdf	00 37 33.2	-0.6
	0.3nm,0.7s,baz=5.7,slow=1.0,SNR=3.7						

IDC 10 00:18:39.3±1.1, 1°.80S×120°.88E, h0km, mb3.7/6, mbtmp3.7/7, ML3.8/1, MS2.9/3, Error ellipse: s-maj=43.5km s-min=17.8km az=71.0
DJA 10 00:18:42.2±1.0, 2°.5±2°.×12°.1E±°, h10km±8km, M4.4/13, mb4.7/2, MLv4.3/13
NEIC 10 00:18:45.0±1.1, 1°.96S±0°.05×120°.73E±0°.06, h28km±4km, mb4.1/5, Error ellipse: s-maj=8.6km s-min=7.7km az=74.0
ISC 10 00:18:45.4±1.1, 1°.92S±0°.04×120°.73E±0°.05, h43km±15km, n33, σ1§34/38, mb3.8/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	1.36	43	P	Pn	00 19 06.3	-1.6
APSI				S	Sn	00 19 26.0	+1.3
TTSI	Tana Toraja	1.44	219	P	Pn	00 19 06.6	-2.5
TTSI				S	Sn	00 19 24.9	-1.9
LUWI	Luwuk	2.22	67		Pn	00 19 20.0	+0.3
LUWI				Sn	Sn	00 19 46.6	+0.7
LUWI	Luwuk	2.22	67	P	Pn	00 19 18.7	-1.0
SPSI	Sidrap Palu	2.25	205	P	Pn	00 19 20.3	+0.2
SPSI				S	Sn	00 19 49.1	+2.4
MPSI	Mapaga	2.39	340	P	Pn	00 19 19.8	-2.2
PMSI	Majene	2.40	229	P	Pn	00 19 20.8	-1.4
KKSI	Kolaka, Sulawe	2.42	158	P	Pn	00 19 22.7	+0.1
MRSI	Marisa	2.67	27	P	Pn	00 19 23.4	-2.5
MRSI				S	Sn	00 19 56.6	-0.4
TOLI2	Tolitoli	3.01	1		Pn	00 19 31.2	+0.6
TOLI2				Sn	Sn	00 20 06.7	+1.3
KAPI	Kappang	3.23	198	Pn	Pn	00 19 34.1	+0.5
	8.8nm,0.3s,baz=74,slow=4.0,SNR=17						
KAPI				Sn	Sn	00 20 13.4	+2.6
	22nm,0.3s,baz=34,slow=23,SNR=8.7						
	15nm,0.3s						
KAPI	Kappang	3.23	198		Pn	00 19 34.0	+0.4
KAPI	Kappang	3.23	198	P	Pn	00 19 34.0	+0.4
GTOI	Gorontalo	3.41	42	P	Pn	00 19 35.5	-0.6
BKSI	Bulukumba	3.44	190	P	Pn	00 19 36.9	+0.4
BKB	Balikpapan	3.88	280	Pn	Pn	00 19 42.6	-0.1
BBSI	Bau Bau	4.00	153	P	Pn	00 19 44.3	+0.1
MYLDM	Lahad Datu	7.39	342		Pn	00 20 32.5	+1.7
MYLDM	Lahad Datu	7.39	342	P	Pn	00 20 32.5	+1.7
LEM	Lembang	13.95	249	LR	LR	00 26 53.7	
	comp=Z,42nm,21.1s,baz=105,slow=35						
FITZ	Fitzroy Crossi	16.79	164	LR	LR	00 29 04.6	
	comp=Z,53nm,18.2s,baz=56,slow=37						
WB0	Warramunga Arr	22.21	144	P	P	00 23 39.0	+0.6
WB0				IAmb	IAmb	00 23 44.2	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	22.32	144	P	P	00 23 38.9	-0.7
	comp=Z,1.3nm,0.9s,baz=316,slow=12,SNR=10						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	22.32	144	P	P	00 23 39.4	-0.2
WB2	Warramunga Arr	22.32	144	P	P	00 23 39.1	-0.5
WB2				IAmb	IAmb	00 23 49.8	
	comp=Z,5.3nm,1.1s						
WR0	Warramunga Arr	22.45	144	P	P	00 23 40.4	-0.6
WR0				IAmb	IAmb	00 24 02.3	
	comp=Z,10nm,1.4s						
ASAR	Alice Springs	25.11	150	P	P	00 24 06.2	-0.3
	comp=Z,0.2nm,0.5s,baz=342,slow=12,SNR=4.2						
	comp=Z,0.2nm,0.5s						
CMAR	Chiang Mai Arr	29.49	314	P	P	00 24 45.6	-0.1
	comp=Z,0.6nm,0.3s,baz=143,slow=7.7,SNR=5.3						
CMAR				LR	LR	00 38 18.0	
	comp=Z,13nm,18.2s,baz=185,slow=40						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	51.11	348	P	P	00 27 42.8	-1.1
	comp=Z,0.9nm,0.8s,baz=169,slow=8.4,SNR=2.9						
	comp=Z,0.9nm,0.8s						
MK31	Makanchi Array	59.09	330	P	P	00 28 44.1	+2.7
MKAR	Makanchi Array	59.09	330	P	P	00 28 41.5	+0.1
	comp=Z,1.0nm,0.6s,baz=140,slow=7.5,SNR=1.7						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	59.09	330	P	P	00 28 41.9	+0.5
ZALV	Zalesovo Beam	63.15	337	P	P	00 29 08.6	-0.2
	comp=Z,0.8nm,0.6s,baz=153,slow=5.0,SNR=4.9						
	comp=Z,0.8nm,0.6s						

UPA 10 00:32:56.4±2.8, 7°.25N×82°.77W, h19km±18km, MW3.9
UCR 10 00:32:57.1±1.9, 7°.22N×82°.87W, h36km±999km, MW4.0
ISC 10 00:32:51.9±3.4, 7°.19N±0°.09×82°.81W±0°.06, h4km±24km, n35, σ1§76/49, 1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	David	1.29	16	eP	Pn	00 33 16.6	-0.2
DVD				eS	Sb	00 33 32.1	-1.6
CDITO	Canoas	1.38	357	eP	Pn	00 33 17.7	-0.2
CDITO				eS	Sn	00 33 34.2	-2.5
REME3	Remedios, Chir	1.42	43	eP	Pn	00 33 19.2	+0.7
BCO2	Palmira	1.55	10	eP	Pn	00 33 21.0	+0.5
BCO2				eS	Sn	00 33 39.3	-1.8
BRU2	Volcan	1.60	4	eP	Pn	00 33 21.6	+0.4
BRU2	Volcan	1.60	4	↓eP	Pn	00 33 21.6	+0.4
BRU2				eS	Sn	00 33 41.4	-1.0
LNBQ3	Los Naranjos,	1.64	13	eP	Pn	00 33 22.1	+0.4
LNBQ3				eS	Sn	00 33 42.4	-0.8
CACAO	El Cacao, Vera	1.94	85	eP	Pn	00 33 26.4	+0.8
CACAO	El Cacao, Vera	1.94	85	eP	Pn	00 33 26.3	+0.6
CACAO				eS	Sn	00 33 48.0	-2.5
CNI2	El Empalme, Bo	2.25	9	eP	Pb	00 33 33.1	-0.1
CNI2				eS	Sn	00 33 58.9	+0.7
CHIT3	Chitre	2.49	72	eP	Pn	00 33 34.9	+1.6
CHIT3				eS	Sn	00 34 03.1	-1.1
CDM	Cerro de Muert	2.53	338	eP	Pn	00 33 35.5	+1.2
RIMA	Rio Macho	2.77	338	eP	Pn	00 33 38.5	+1.2
PNME	Penonome	2.78	62	eP	Pn	00 33 40.1	+2.9
PNME				eS	Sn	00 34 11.6	+0.4
LCR2	La Lucha 2	2.80	335	eP	Pn	00 33 38.8	+1.0
OCM	Ochomogo	2.92	337	eP	Pn	00 33 40.8	+1.4
BATAN	Batan	2.95	349	eP	Pn	00 33 42.6	+3.0
BATAN				eS	Sn	00 34 17.4	+2.0
JACO	JACO, Garabito	3.07	323	eP	Pn	00 33 41.5	+0.3
HDC	Heredia	3.08	335	eP	Pn	00 33 43.5	+2.0
HDC				eS	Sn	00 34 19.1	+0.2
HDC	Heredia	3.08	335	eP	Pn	00 33 43.5	+2.0
HDC				eS	Sn	00 34 19.4	+0.5
LAFE	Finca La Fe, P	3.33	322	eP	Pn	00 33 45.9	+1.0
BCIP	Isla Barro Col	3.54	56	eP	Pn	00 33 50.4	+2.7
BCIP	Isla Barro Col	3.54	56	eP	Pn	00 33 50.2	+2.5
BCIP				eS	Sn	00 34 29.7	-0.4
FORC	Fortuna	3.74	331	eP	Pn	00 33 53.8	+3.3
JTS	Las Juntas de	3.74	326	eP	Pn	00 33 52.1	+1.6
JTS	Las Juntas de	3.74	326	eP	Pn	00 33 52.4	+1.8
JTS				eS	Sn	00 34 34.2	-0.9
INDI	Punta indio, G	3.77	315	eP	Pn	00 33 52.0	+1.2
GRZA	Playa Garza	3.89	314	eP	Pn	00 33 53.7	+1.1
ORTG	Ortega, Santa	4.10	320	eP	Pn	00 33 56.9	+1.4
CUI	Cuipilapa	4.16	326	eP	Pn	00 33 58.7	+2.4
VMAR	Armenia, Volca	4.26	328	eP	Pn	00 34 00.0	+2.2
HZTE	Horizontes, Gu	4.46	322	eP	Pn	00 34 02.7	+2.3
UPD2	Meteti	4.94	74	eP	Pb	00 34 16.8	-2.2
CBOC	Ciudad Bolivar	6.88	101	eP	Pn	00 34 36.1	+2.3
GUY2C	Guyana, Caldas	7.65	104	eP	Pn	00 34 48.6	+3.9

NEIC 10 00:34:16.7±0.5, 52°.42N±0°.05×166°.90W±0°.06, h10km±2km, ML3.3/28(AEIC), Error ellipse: s-maj=10.5km s-min=3.1km az=144.0
AEIC 10 00:34:17±0.8, 52°.46N±0°.06×166°.94W±0°.06, h3km±7km, Error ellipse: s-maj=8.1km s-min=5.4km az=185.0
IDC 10 00:34:24.0±5.5, 52°.81N×166°.86W, h43km±51km, mb3.5/12, mbtmp3.7/13, ML2.8/1, MS3.5/1, Error ellipse: s-maj=39.7km s-min=18.4km az=15.0
ISC 10 00:34:20.6±0.8, 52°.54N±0°.08×166°.94W±0°.06, h25km, n39, σ1§32/41, mb3.8/13, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	1.05	326		Pn	00 34 38.1	-1.6
OKFG					Sb	00 34 54.0	+0.6
OKTU	Okmok Mt. Tuli	1.08	322		Pn	00 34 39.4	-0.7
OKSP	Okmok Steeple	1.09	312		Pn	00 34 39.0	-1.2
OKER	Okmok East Rim	1.14	324		Pb	00 34 40.5	-1.1
OKNC	Okmok New Cone	1.16	322		Pb	00 34 40.8	-1.2
OKNC					Sb	00 34 59.0	+2.3
NIKH	Nikolski High	1.24	291		Pn	00 34 41.0	-1.4
MGOD	Makushin Gods	1.26	2		Pn	00 34 41.9	-0.7
UNV	Unalaska Valle	1.33	11		Pn	00 34 42.5	-1.1
UNV	Unalaska Valle	1.33	11		Sb	00 35 04.5	+3.1
MNAT	Makushin Natee	1.35	6		Pn	00 34 43.2	-0.7
MNAT					Sb	00 35 02.8	+0.6
MCIR	Makushin Cirqu	1.41	1		Pb	00 34 44.6	-1.6
MTBL	Makushin Table	1.44	6		Pn	00 34 44.9	-0.2
AKMO	Akutan Morgan	1.65	19		Pn	00 34 47.8	-0.1
ZRO	Akutan Zero	1.66	20		Pn	00 34 48.1	+0.1
AKRB	Akutan Reef Bi	1.68	18		Pb	00 34 48.5	-2.2
LVA	Lava Point	1.71	18		Pn	00 34 48.7	-0.1
AKLV	Akutan Long Va	1.73	20		Pn	00 34 48.4	-0.6
AKUT	Akutan	1.74	23	Pn	Pn	00 34 48.8	-0.3
AKGG	Akutan Green G	1.75	18		Pn	00 34 48.5	-0.9
AKSA	Akutan Strait	1.76	24		Pn	00 34 48.5	-0.9
CHGN	Chignik	6.24	49	Pn	Pn	00 35 49.4	-1.5
AMKA	Amchitka	8.58	268	Pn	Pn	00 36 20.9	-2.1
OHAK	Old Harbor	9.15	54	Pn	Pn	00 36 29.4	-1.5
ILAR	Eielson Array	15.99	32	P	Pn	00 38 03.3	-0.2
	baz=236,slow=11,SNR=2.7						
	0.4nm,0.8s						
PETK	Petropavlovsk-	21.25	286	P	P	00 39 06.5	+2.0
	1.9nm,0.5s,baz=87,slow=12,SNR=13						
	1.9nm,0.5s						
DLBC	Dease Lake	21.52	59	P	P	00 39 10.2	+2.7
	1.6nm,0.9s,baz=265,slow=11,SNR=3.5						
INK	Inuvik	22.39	33	P	P	00 39 14.9	-1.7
	2.4nm,0.6s,baz=236,slow=7.3,SNR=8.5						
	2.4nm,0.6s						
NVAR	Mina Array Bea	36.18	93	P	P	00 41 22.6	+1.4
	0.6nm,0.6s,baz=327,slow=5.7,SNR=2.6						
	0.6nm,0.6s						
PDAR	Pinedale Array	38.91	81	P	P	00 41 44.9	+0.7
	0.5nm,0.8s,baz=305,slow=5.2,SNR=3.9						
	0.5nm,0.8s						
TXAR	Lajitas Array	51.26	91	P	P	00 43 22.4	+0.1
	0.6nm,0.6s,baz=306,slow=5.3,SNR=7.9						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	58.29	319	P	P	00 44 12.3	-0.4
	0.4nm,0.4s,baz=91,slow=7.2,SNR=2.3						
	0.4nm,0.4s						
TKL	Tuckaleechee C	58.75	71	LR	LR	01 09 23.9	
	comp=Z,41nm,20.9s,baz=288,slow=36						
MKAR	Makanchi Array	64.75	315	P	P	00 44 55.5	-1.0
	0.9nm,0.7s,baz=50,slow=8.0,SNR=5.8						
	0.9nm,0.7s						
FINES	FINESS Array B	65.89	353	P	P	00 45 02.6	-0.9
	2.1nm,0.6s,baz=43,slow=8.6,SNR=12						
	2.1nm,0.6s						
NB2	NORSAR Subarra	66.76	1	P	P	00 45 08.6	-0.6
	comp=Z,0.5nm,0.6s,baz=360,slow=6.5						
NOA	NORSAR Array B	66.76	1	P	P	00 45 08.8	-0.4
	comp=Z,0.8nm,0.7s,baz=1.0,slow=6.1,SNR=3.8						
	comp=Z,0.8nm,0.7s						
AKASG	Malin Array Be	76.23	350	P	P	00 46 05.9	-0.4
	comp=Z,0.8nm,0.5s,baz=0.2,slow=5.2,SNR=5.2						
	comp=Z,0.8nm,0.5s						
GERES	GERESS Array B	78.99	360	P	P	00 46 22.6	+0.7
	comp=Z,0.3nm,0.6s,baz=292,slow=3.6,SNR=3.8						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	86.39	344	P	P	00 47 01.6	+1.0
	comp=Z,0.8nm,0.8s,baz=23,slow=4.1,SNR=6.0						
	comp=Z,0.8nm,0.8s						

IDC 10 00:37:05.1±4.2, 19°.21S×175°.80W, h0km, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=239.5km s-min=46.5km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.84	255	P	P	00 45 38.2	+1.0
	4.1nm,0.6s,baz=88,slow=8.2,SNR=42						
	4.1nm,0.6s						
WRA	Warramunga Arr	46.84	260	P	P	00 45 36.4	-0.9
	0.6nm,0.5s,baz=97,slow=6.8,SNR=24						
WRA				PcP	PcP	00 47 08.3	-2.1
	0.1nm,0.3s,baz=98,slow=3.9,SNR=1.8						
	0.6nm,0.5s						
GERES	GERESS Array B	149.46	348	PKPbc	PKPbc	00 56 56.6	+0.2
	0.6nm,0.4s,baz=16,slow=2.8,SNR=9.8						

KRSC 10 00:53:58.0±1.1, 55°.41N×161°.48E, h118km±14km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	Tumrok	0.77	261	eP	Pn	00 54 19.5	+1.6
TUMR				eS	Sn	00 54 34.2	+1.4
KMNR	Kamenistaya	0.78	297	eP	Pn	00 54 19.7	+1.7
KMNR				eS	Sn	00 54 35.0	+2.0
MKZ	Mys Kozlova	0.87	170	eP	Pn	00 54 20.3	+1.7
MKZ				eS	Sn	00 54 36.3	+2.2
KRSR	Krestovskiy	0.96	328	eP	Pn	00 54 21.4	+1.9
KLY	Klyuchi	1.02	333	eP	Pn	00 54 20.9	+0.9
KLY				eS	Sn	00 54 37.1	+0.5
KBG	Krutoberegovo	1.09	39	eS	Sn	00 54 39.6	+1.6
KBTR	Krutoberegovo	1.10	43	eP	Pn	00 54 22.7	+1.9
KBTR				eS	Sn	00 54 39.8	+1.6
KOZ	Kozyrevsk	1.11	306	eP	Pn	00 54 22.5	+1.5
BDR	Baidarnaya	1.17	353	eP	Pn	00 54 23.3	+1.6
BDR				eS	Sn	00 54 40.7	+1.1
SMKR	Semkarok	1.18	360	eP	Pn	00 54 23.4	+1.7
SMKR				eS	Sn	00 54 41.0	+1.3
SRKR	Sorokina	1.26	352	eP	Pn	00 54 24.0	+1.4
SRKR				eS	Sn	00 54 42.8	+1.5
SRDR	Sredinnyy	1.34	313	eP	Pn	00 54 24.6	+1.0
SRDR				eS	Sn	00 54 43.3	+0.3
SPN	Mys Shipunski	2.47	201	eP	Pn	00 54 38.1	+0.8
SPN				eS	Sn	00 55 05.7	-1.7
NLC	Nalytchevo	2.57	210	eP	Pn	00 54 40.5	+2.0
NLC				eS	Sn	00 55 09.8	+0.2
BKI	Bering	2.58	93	eP	Pn	00 54 40.9	+2.3
BKI				eS	Sn	00 55 10.7	+0.8
SDLR	Sedlovina	2.62	216	eP	Pn	00 54 41.9	+2.5
KRER	Koryakskii	2.65	218	eP	Pn	00 54 43.0	+3.2
SMAR	Somma	2.66	217	eP	Pn	00 54 42.7	+2.7
AVH	Avacha	2.68	218	eP	Pn	00 54 43.3	+3.2
GNL	Ganaly	2.68	232	eP	Pn	00 54 42.6	+2.5
UGLR	Uglovaya	2.70	216	eP	Pn	00 54 43.7	+3.4
RUS	Russkaya	3.46	212	eP	Pn	00 54 51.6	+1.4
KDTR	Khodutka, Kamc	4.14	211	eP	Pn	00 55 00.1	+0.9
KDTR				eS	Sn	00 55 45.6	-1.1

SIGU 10 01:18:53.4, 45°.27N×24°.93E, h5km
BEO 10 01:18:53.1±0.4, 45°.24N×25°.13E, h0km, ML2.8/5
BUC 10 01:18:53.9±0.2, 45°.28N×24°.89E, h5km±1km, ml2.6/16, Error ellipse: s-maj=1.5km s-min=1.2km az=64.0
MCSM 10 01:18:55.3±0.5, 45°.N±4°.×2°.5E±°, h5km±4km, MLv2.6
ISC 10 01:18:53.6±1.1, 45°.26N±0°.02×24°.90E±0°.02, h3km±9km, n74, σ1§11/108, 34C-21D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTUR	Matau	0.12	105	↓P	Pg	01 18 56.2	+0.4
MTUR	Matau	0.12	105	↓P	Pg	01 18 56.2	+0.4
VOIR		0.21	29	↑P	Pg	01 18 57.7	+0.1
VOIR				↓S	Sg	01 19 00.5	+0.1
VOIR		0.21	29	↑P	Pg	01 18 57.7	+0.1
VOIR				↓S	Sg	01 19 00.5	+0.1
HUMR	Humele	0.73	176	↓P	Pb	01 19 08.7	-0.2
HUMR	Humele	0.73	176	↓P	Pb	01 19

RAKU Pm 01 19 50.9
RAKU *i* S **Sn** **01 20 15.0 +1.0**
RAKU Sm 01 20 38.4
NSLU Nyzhne Selyshc 2.96 354 *e*P **Pn** **01 19 43.9 +2.5**
NSLU Pm 01 19 56.1
NSLU *i* S **Sb** **01 20 22.3 -1.2**
NSLU Sm 01 20 52.3
KSV Kosov 3.06 2 *i* P **Pn** **01 19 43.4 +0.5**
KSV Pm 01 19 56.7
KSV *i* S **Sn** **01 20 21.4 +1.4**
KSV Sm 01 20 56.1
TRSU Trosnyk 3.14 335 *e*P **Pn** **01 19 44.2 +0.3**
TRSU Pm 01 19 56.8
TRSU *i* S **Sn** **01 20 23.0 +1.1**
TRSU Sm 01 20 42.9
KORU Korolevo 3.15 338 *i* P **Pn** **01 19 44.8 +0.8**
KORU Pm 01 19 45.4
KORU *i* S **Sn** **01 20 23.3 +1.2**
KORU Sm 01 20 46.9
BOSS Bosilegrad 3.27 213 *e*Pn **Pn** **01 19 46.0 +0.3**
GRUS Gruza 3.29 247 *e*Pn **Pn** **01 19 48.1 +2.1**
GRUS *e*Sn **Sb** **01 20 31.2 -1.8**
BARS Barje 3.30 223 *e*Pn **Pn** **01 19 46.3 +0.1**
BARS *e*Sn **Sb** **01 20 30.3 -3.1**
TRPA Tarpa 3.30 331 P **Pn** **01 19 46.4 +0.2**
BRIU Brid 3.34 338 *e*P **Pn** **01 19 47.9 +1.2**
BRIU Pm 01 19 48.8
BRIU ⇓*i* S **Sn** **01 20 28.4 +1.5**
BRIU Sm 01 20 50.8
STNU Starunia 3.47 356 *i* P **Pn** **01 19 49.1 +0.7**
STNU *i* S **Sn** **01 20 31.7 +1.7**
KMPD K-Podol'skiy 3.48 17 Pn **Pn** **01 19 50.4 +1.9**
KMPD pP **Pb** **01 19 51.1 -4.6**
KMPD sP Pg 01 19 52.1 -8.1
MUKU Mukachevo 3.54 335 *e*P **Pn** **01 19 50.6 +1.2**
MUKU Pm 01 19 51.7
MUKU *i* S **Sn** **01 20 33.4 +1.6**
MUKU Sm 01 20 54.9
NDNU Novodnistrovsk 3.74 26 *i* P **Pn** **01 19 52.7 +0.5**
NDNU *i* S **Sn** **01 20 38.0 +1.3**
IVAS Ivanjica 3.80 245 *e*Pn **Pn** **01 19 52.5 -0.5**
HORU Horodok 4.09 14 *i* P **Pn** **01 19 58.0 +1.0**
HORU Pm 01 20 02.3
HORU *i* S **Sn** **01 20 46.9 +1.5**
HORU Sm 01 21 24.1
SRS Serrai 4.25 194 *e*Pn **Pn** **01 19 56.7 -2.4**
SRS *e*Sn **Sn** **01 20 46.4 -2.8**
PSZ Piszkesteto 4.36 309 P **Pn** **01 20 02.4 +1.6**
MORH Mrgy, Hungar 4.49 285 P **Pn** **01 20 03.7 +1.2**
KOVH Kovagotottos 4.84 282 P **Pn** **01 20 06.1 -1.2**
NE55 Skvira 5.50 34 Pn **Pn** **01 20 18.8 +2.4**
AK04 Malin Array Si 6.17 26 Pn **Pn** **01 20 26.3 +0.8**

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*IDC **10** 01:39:44.0±1.5, 27°.00S×178°.13W, h201km±15km, mb3.4/2, mbtmp4.3/4, Error ellipse: s-maj=30.2km s-min=23.9km az=76.0*
ISC 10 01:39:43.8±1.1, 27°.0S±0°.1×178°.1W±0°.3, h200km, n11, σ0s75/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.28 175**		P	**Pn**	**01 40 25.3**	**+0.1**
	328nm,0.3s,baz=58,slow=10,SNR=10						
RAO				S	**Sn**	**01 40 57.9**	**+0.1**
	732nm,0.4s,baz=87,slow=22,SNR=13						
MSVF	**Nonsavu**	**9.85 338**		P	**Pn**	**01 42 01.5**	**+0.3**
	36nm,0.8s,baz=146,slow=13,SNR=12						
ASAR	**Alice Springs**	**43.29 263**		P	**P**	**01 47 26.0**	**0.0**
	0.7nm,0.7s,baz=104,slow=7.7,SNR=4.5						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**43.96 269**		P	**P**	**01 47 31.0**	**-0.4**
	2.9nm,0.8s,baz=107,slow=7.4,SNR=14						
	2.9nm,0.8s						
ARCES	**ARCESS Array B**	**135.22 348**		PKP	**PKPdf**	**01 58 39.5**	**+0.9**
	1.9nm,0.9s,baz=39,slow=7.8,SNR=3.6						
FINES	**FINESS Array B**	**141.88 341**		PKhKP	PKPpre	01 58 44.6	
	2.1nm,0.8s,baz=57,slow=7.0,SNR=5.7						
NB2	**NORSAR Subarra**	**145.35 352**		PKP	**PKPdf**	**01 58 57.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=8.7,slow=3.0						
NOA	**NORSAR Array B**	**145.35 352**		PKPbc	**PKPdf**	**01 58 57.0**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=15,slow=2.7,SNR=5.5						
AKASG	**Malin Array Be**	**148.45 326**		PKPbc	**PKPbc**	**01 59 05.1**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=44,slow=4.1,SNR=9.2						
MMAI	**Mount Meron Ar**	**150.42 290**		PKPbc	**PKPbc**	**01 59 12.0**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=79,slow=6.4,SNR=7.6						
MMAI				PKPab	**PKPab**	**01 59 20.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=100,slow=6.0,SNR=4.1						
BRTR	**Keskin Array B**	**150.73 304**		PKPbc	**PKPbc**	**01 59 11.4**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=151,slow=5.1,SNR=5.1						
BRTR				PKPab	**PKPab**	**01 59 19.9**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=111,slow=3.8,SNR=8.4						

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*IDC **10** 01:58:03.8±2.7, 36°.41N×71°.05E, h192km±24km, mb3.6/11, mbtmp4.1/18, MS3.0/1, Error ellipse: s-maj=18.4km s-min=16.3km az=134.0*
*NNC **10** 01:58:05.9±4.4, 37°.16N×70°.60E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=42.6km s-min=20.3km az=153.0*
*NEIC **10** 01:58:05.8±1.4, 36°.61N±0°.07×70°.93E±0°.09, h209km±6km, mb4.4/15, Error ellipse: s-maj=10.2km s-min=9.5km az=130.0*
ISC 10 01:58:04.7±0.4, 36°.62N±0°.05×70°.98E±0°.04, h200km, n96, σ1s81/108, mb4.0/18, 9C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.44 348**		Pn	**Pn**	**01 58 49.5**	**+1.5**
CHGR	**Chuyangaron**	**2.50 325**		Pn	**Pn**	**01 58 49.9**	**+1.3**
KBL	**Kabul**	**2.61 218**		Pn	**Pn**	**01 58 51.5**	**+1.4**
CEP	**Cherat**	**2.89 165**		P	**Pn**	**01 58 56.0**	**+2.7**
CEP				S	**Sn**	**01 59 33.0**	**+1.9**
DRK	**Karamyk**	**2.93 12**		Pn	**Pn**	**01 58 55.3**	**+1.6**
BTK	**Batken**	**3.44 358**		Pn	**Pn**	**01 59 01.9**	**+2.3**
CHCP	**Chirah Chowk**	**3.50 147**		P	**Pn**	**01 59 02.2**	**+1.8**
NIL	**Nilore**	**3.50 147**		Pn	**Pn**	**01 59 02.2**	**+1.8**
TAS	**Tashkent**	**4.88 345**		Pn	**Pn**	**01 59 19.3**	**+1.8**
KSH	**Kashi**	**4.89 52**		Pn	**Pn**	**01 59 15.0**	**-2.7**
KSH				Sn	Sn	02 00 05.3	-10
SARP	**Sargodha**	**4.89 163**		P	**Pn**	**01 59 18.5**	**+0.8**
JMU	**Jammu**	**5.06 139**		*e*S	**Sn**	**02 00 16.2**	**-2.8**
THN	**Thein Dam**	**5.72 136**		*e*P	**Pn**	**01 59 29.6**	**+1.3**
THN				*e*S	**Sn**	**02 00 33.0**	**-1.4**
AML	**Almayashu**	**5.89 20**		P	**Pn**	**01 59 31.9**	**+1.1**
	SNR=85						
NRN	**Naryn**	**6.19 38**		Pn	**Pn**	**01 59 34.6**	**0.0**
UCH	**Uchtor**	**6.23 25**		P	**Pn**	**01 59 36.5**	**+1.2**
	SNR=36						
EKS2	**Erkin-Say**	**6.41 19**		P	**Pn**	**01 59 38.2**	**+0.9**
	SNR=10						
KK31	**Karatay Array**	**6.49 357**		Pn	**Pn**	**01 59 38.9**	**+0.7**
KK31	**Karatay Array**	**6.49 357**		⇑P	**Pn**	**01 59 38.0**	**-0.2**
	19nm,0.5s,baz=180,slow=12,SNR=334						
KK31				⇑S	**Sn**	**02 00 47.6**	**-4.7**
	54nm,0.7s,baz=180,slow=22,SNR=12						
KKAR	**Karatay Array**	**6.49 357**		Pn	**Pn**	**01 59 38.7**	**+0.6**
AAK	**Ala-Archa**	**6.59 23**		P	**Pn**	**01 59 40.8**	**+1.1**
	SNR=17						
AAK	**Ala-Archa**	**6.59 23**		P	**Pn**	**01 59 41.2**	**+1.5**
	13nm,0.4s,baz=188,slow=6.0,SNR=45						
AAK				S	**Sn**	**02 00 53.7**	**-1.3**
	28nm,0.6s,baz=20,slow=20,SNR=17						
AAK	**Ala-Archa**	**6.59 23**		Pn	**Pn**	**01 59 40.6**	**+0.9**
KBK	**Karagaybulak**	**6.76 26**		P	**Pn**	**01 59 43.4**	**+1.5**
	SNR=8.8						
BHK	**Bhakra**	**6.88 137**		*e*P	**Pn**	**01 59 43.7**	**+0.3**
BHK				*e*S	**Sn**	**02 00 58.3**	**-3.3**
CHMS	**Chumysh**	**7.00 23**		P	**Pn**	**01 59 45.9**	**+1.0**
	SNR=9.2						
CHMS	**Chumysh**	**7.00 23**		⇑P	**Pn**	**01 59 45.6**	**+0.7**
	8.6nm,0.5s						
CHMS				⇑S	**Sn**	**02 01 01.5**	**-2.9**
	22nm,0.6s						
BOOM	**Boomskoye usch**	**7.00 32**		Pn	**Pn**	**01 59 45.7**	**+0.7**
USP	**Ospenovka**	**7.17 21**		P	**Pn**	**01 59 46.1**	**-0.9**
	SNR=7.7						
TKM2	**Tokmak 2**	**7.23 28**		P	**Pn**	**01 59 48.9**	**+0.9**
	SNR=21						
TKM2	**Tokmak 2**	**7.23 28**		⇑P	**Pn**	**01 59 48.6**	**+0.6**
	32nm,0.7s						
TKM2				⇑S	**Sn**	**02 01 06.6**	**-3.5**
	19nm,0.8s						
TARG	**Taragay, Kyrgy**	**7.36 44**		Pn	**Pn**	**01 59 48.1**	**-1.8**
SMLA	**Simla**	**7.51 135**		*e*P	**Pn**	**01 59 51.7**	**+0.2**
SMLA				*e*S	**Sn**	**02 01 12.3**	**-4.2**
SMLA				IAML		02 01 17.5	
	comp=E,163nm,0.4s						
SMLA				IAML		02 01 20.6	
	comp=N,128nm,0.4s						
GEYT	**Alibeck**	**10.34 281**		P	**Pn**	**02 00 28.8**	**+0.5**
	comp=N,0.8nm,0.3s,baz=103,slow=12,SNR=3.3						
GEYT				S	**Sn**	**02 02 17.6**	**-6.1**
	comp=N,1.7nm,0.5s,baz=87,slow=16,SNR=1.7						
GEYT	**Alibeck**	**10.34 281**		Pn	**Pn**	**02 00 28.0**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**10.34 281**		Pn	**Pn**	**02 00 28.4**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**10.34 281**		⇑P	**P**	**02 00 33.4**	**-2.4**
GYA0B				⇑S	**Sn**	**02 02 20.5**	**-3.2**
OTUK	**Ortayu**	**11.66 4**		⇓P	**Pn**	**02 00 45.0**	**-0.1**
	comp=N,5.2nm,0.8s						
MAKZ	**Makanchi**	**13.07 35**		Pn	**Pn**	**02 01 02.9**	**+0.1**
MK31	**Makanchi Array**	**13.20 36**		Pn	**Pn**	**02 01 05.2**	**+0.6**
MKAR	**Makanchi Array**	**13.20 36**		P	**Pn**	**02 01 04.4**	**-0.2**
	comp=N,1.0nm,0.7s,baz=213,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**13.20 36**		Pn	**Pn**	**02 01 04.6**	**0.0**
PYUN	**Piuthan**	**13.22 127**		*e*P	**Pn**	**02 01 04.8**	**-0.4**
	comp=N,13nm,0.3s						
DANN	**Dangsing**	**13.57 124**		*e*P	**Pn**	**02 01 09.1**	**-0.5**
	comp=N,23nm,0.4s						
GKN	**Gorkha**	**14.38 123**		*e*P	**Pn**	**02 01 19.7**	**+0.2**
	comp=N,34nm,0.5s						
BHPL	**Bhopal**	**14.45 156**		*e*P	**P**	**02 01 23.0**	**+1.4**
WMQ	**Urumqi**	**14.64 55**		*e*P	**P**	**02 01 25.3**	**+1.8**
DMN	**Daman**	**14.95 123**		*e*P	**Pn**	**02 01 26.6**	**0.0**
	comp=N,28nm,0.3s						
AB31	**Akbulak array**	**14.97 331**		P	**Pn**	**02 01 26.3**	**-0.1**
	comp=N,9.8nm,0.7s,baz=144,slow=12,SNR=119						
AB31				⇓S	**S**	**02 04 09.8**	**-2.7**
	comp=N,2.3nm,0.8s,baz=169,slow=21,SNR=5.9						
ABKAR	**Akbulak array**	**14.97 331**			**Pn**	**02 01 26.2**	**-0.2**
KURBB	**Kurchatov Arra**	**15.02 19**		P	**Pn**	**02 01 26.8**	**-0.1**
	comp=N,1.2nm,0.2s,baz=210,slow=10,SNR=4.5						
PKIN	**Phulchoki**	**15.17 122**		*e*P	**Pn**	**02 01 29.1**	**-0.1**
	comp=N,33nm,0.4s						
PKI	**Pulchoki**	**15.18 122**		*e*P	**Pn**	**02 01 29.5**	**0.0**
	comp=N,18nm,0.5s						
GUN	**Gumba**	**15.29 120**		*e*P	**Pn**	**02 01 30.7**	**-0.1**
	comp=N,24nm,0.4s						
JIRN	**Jiri**	**15.66 120**		*e*P	**P**	**02 01 35.7**	**+0.4**
	comp=N,33nm,0.4s						
JIRN				*e*S	**S**	**02 04 20.6**	**-8.7**
RAMN	**Ramite**	**16.39 122**		*e*P	**P**	**02 01 44.0**	**+0.8**
	comp=N,16nm,0.6s						
BVAR	**Borovoye Array**	**16.41 359**		P	**P**	**02 01 44.3**	**+1.4**
	comp=N,2.3nm,0.5s,baz=159,slow=13,SNR=16						
BRVK	**Borovoye**	**16.45 359**			**P**	**02 01 43.3**	**0.0**
AKTO	**Aktyubinsk**	**16.67 330**		P	**Pn**	**02 01 48.1**	**+1.3**
	comp=N,5.3nm,0.7s,baz=137,slow=10,SNR=18						
AKTO	**Aktyubinsk**	**16.67 330**		⇓P	**Pn**	**02 01 47.9**	**+1.1**
	comp=N,9.6nm,0.8s						
AKTO				⇑S	**S**	**02 04 50.2**	**+0.6**
	comp=N,2.1nm,0.8s						
TAPN	**Taplejung**	**16.91 118**		*e*P	**Pn**	**02 01 51.2**	**+0.9**
	comp=N,20nm,0.5s						
ZALV	**Zalesovo Beam**	**19.81 25**		P	**P**	**02 02 21.7**	**+1.9**
	comp=Z,1.9nm,0.5s,baz=219,slow=11,SNR=8.2						
ZALV	**Zalesovo Beam**	**19.81 25**		P	**P**	**02 02 19.8**	**0.0**
ARU	**Arti**	**21.52 341**		P	**P**	**02 02 40.7**	**+3.0**
	comp=N,1.3nm,0.3s,baz=200,slow=11,SNR=3.5						
	comp=N,1.3nm,0.3s						
PZH	**PanZhiHua**	**27.98 102**		P	**P**	**02 03 38.1**	**+1.1**
HHC	**Hu-ho-hao-te**	**31.73 70**		*e*P	**P**	**02 04 11.6**	**+1.7**
ELL	**Elmali**	**32.76 283**		P	**P**	**02 04 18.8**	**-0.1**
AKASG	**Malin Array Be**	**32.86 309**		P	**P**	**02 04 21.0**	**+1.6**
	comp=N,0.7nm,0.5s,baz=80,slow=7.4,SNR=6.8						
	comp=N,0.7nm,0.5s						
BURAR	**Bucovina Array**	**35.21 303**		P	**P**	**02 04 39.9**	**+0.1**
FIA1	**FINESS Array S**	**37.38 326**		P	**P**	**02 04 57.9**	**+0.1**
FIA1				IAmb	IAmb	02 05 20.5	
	comp=Z,14nm,1.1s						
FINES	**FINESS Array B**	**37.38 326**		P	**P**	**02 04 59.8**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=123,slow=10,SNR=20						
	comp=Z,1.1nm,0.3s						
FINES	**FINESS Array B**	**37.38 326**		P	**P**	**02 04 59.1**	**+1.3**
VRAC	**Vranov**	**40.92 306**		LR	LR	02 25 29.7	
	comp=Z,19nm,20.2s,baz=18,slow=40						
ARCES	**ARCESS Array B**	**41.03 338**		P	**P**	**02 05 30.1**	**+2.1**
	comp=Z,1.0nm,0.4s,baz=118,slow=8.5,SNR=13						
	comp=Z,1.0nm,0.4s						
NC405	**NORSAR Array S**	**44.04 323**		P	**P**	**02 05 53.7**	**+1.4**
NB201	**NORSAR Array S**	**44.24 323**		P	**P**	**02 05 54.3**	**+0.4**
NB201				IAmb	IAmb	02 06 33.8	
	comp=Z,25nm,1.3s						
NB2	**NORSAR Subarra**	**44.28 323**		P	**P**	**02 05 55.2**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=96,slow=7.4						
NOA	**NORSAR Array B**	**44.28 323**		P	**P**	**02 05 55.5**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=97,slow=7.7,SNR=9.6						
	comp=Z,1.8nm,0.6s						
TOA0	**Torodi Ar. Sit**	**65.71 269**		P	**P**	**02 08 27.1**	**-1.1**
TOA0				IAmb	IAmb	02 08 28.5	
	comp=Z,4.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**65.71 269**		P	**P**	**02 08 27.5**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=49,slow=6.0,SNR=43						
	comp=Z,0.9nm,0.4s						
KOWA	**Kowa**	**69.55 273**		P	**P**	**02 08 50.7**	**-1.5**
KOWA				IAmb	IAmb	02 09 11.3	
	comp=Z,9.1nm,1.4s						
TOLK	**Toolik Lake Re**	**70.81 15**		P	**P**	**02 09 00.0**	**+1.0**
TOLK				IAmb	IAmb	02 09 39.4	
	comp=Z,18nm,1.2s						
IMAR	**Indian Mountai**	**72.06 18**		P	**P**	**02 09 06.9**	**+0.4**
C36M	**Paulatuk**	**73.76 6**		P	**P**	**02 09 16.8**	**+0.5**
INK	**Inuvik**	**73.79 9**		P	**P**	**02 09 17.6**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=346,slow=9.9,SNR=5.5						
	comp=Z,1.5nm,0.6s						
INK	**Inuvik**	**73.79 9**		P	**P**	**02 09 18.0**	**+1.5**
CAST	**Castle Rocks**	**74.57 19**		P	**P**	**02 09 22.0**	**+0.8**
CAST				IAmb	IAmb	02 09 22.9	
	comp=Z,8.0nm,1.5s						
LBTB	**Lobatse**	**74.76 222**		P	**P**	**02 09 23.3**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=25,slow=9.1,SNR=6.1						
	comp=Z,1.3nm,0.5s						
LBTB	**Lobatse**	**74.76 222**		P	**P**	**02 09 23.4**	**+0.5**
LBTB				IAmb	IAmb	02 09 47.4	
	comp=Z,8.4nm,1.2s						
BCAR	**Beaver Creek A**	**77.25 15**		P	**P**	**02 09 37.9**	**+1.5**
BOSA	**Boshof**	**77.83 220**		P	**P**	**02 09 39.4**	**-0.7**
	comp=Z,7.5nm,1.3s,baz=59,slow=5.9,SNR=3.6						
	comp=Z,7.5nm,1.3s						
BOSA	**Boshof**	**77.83 220**		P	**P**	**02 09 39.8**	**-0.3**
BOSA				IAmb	IAmb	02 10 00.5	
	comp=Z,16nm,1.5s						
YKA	**Yellowknife Ar**	**81.13 3**		P	**P**	**02 09 57.7**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=352,slow=5.2,SNR=6.5						
	comp=Z,0.9nm,0.5s						
P33M	**Teslin, Yukon**	**81.55 12**		P	**P**	**02 10 00.2**	**+0.6**
WB2	**Warramunga Arr**	**82.07 122**		P	**P**	**02 10 02.2**	**-0.7**
WB2				IAmb	IAmb	02 10 04.2	
	comp=Z,6.4nm,0.9s						
ASAR	**Alice Springs**	**84.33 125**		P	**P**	**02 10 14.1**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=310,slow=4.9,SNR=7.6						
	comp=Z,1.1nm,0.7s						

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*IDC **10** 02:02:58.7±0.8, 54°.98S×31°.73W, h0km, mb3.9/9, mbtmp3.9/9, MS3.5/21, Error ellipse: s-maj=27.4km s-min=18.1km az=60.0*
*NEIC **10** 02:03:00.1±1.7, 55°.02S±0°.09×31°.9W±0°.2, h10km±1km, mb4.5/24, Error ellipse: s-maj=16.1km s-min=14.3km az=336.0*
ISC 10 02:03:00.1±0.6, 54°.99S±0°.10×31°.9W±0°.1, h10km, n56, σ0s88/37, mb4.4/16, MS3.5/20, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.76 283**		Pn	**Pn**	**02 03 44.1**	**-0.2**
PMSA	**Palmer Station**	**18.65 225**		LR	LR	02 13 54.8	
	comp=Z,143nm,18.4s,baz=80,slow=35						
VNA1	**Neumayer--Stat**	**18.84 156**		P	**Pn**	**02 07 21.8**	**+1.6**
VNA3	**Neumayer Olymp**	**18.94 158**		P	**Pn**	**02 07 23.4**	**+1.9**
VNA2	**Neumayer--Watz**	**19.23 156**		P	**Pn**	**02 07 26.9**	**+1.9**
	baz=313,slow=11						
SNAA	**Sanae**	**20.84 154**		P	**P**	**02 07 41.5**	**-0.1**
SNAA	**Sanae**	**20.84 154**		P	**P**	**02 07 41.3**	**-0.3**
	1.1nm,0.8s,baz=300,slow=10,SNR=11						
SNAA				LR	LR	02 14 40.7	
	comp=Z,49nm,18.3s,baz=350,slow=34						
	1.1nm,0.8s						
SNAA	**Sanae**	**20.84 154**		P	**P**	**02 07 40.9**	**-0.7**
TROLL	**Troll, Antarti**	**22.41 153**		P	**P**	**02 07 58.5**	**-0.1**
BELA	**Belgrano 2**	**23.01 181**		P	**P**	**02 08 03.3**	**-1.4**
MG05	**Puerto Natales**	**24.23 261**		P	**P**	**02 08 14.7**	**-2.1**
GO09	**Cerro Castillo**	**24.30 262**		P	**P**	**02 08 16.6**	**-0.8**
TRQA	**Tornquist**	**26.44 297**		P	**P**	**02 08 36.9**	**-0.1**
PLTB	**Pedras Altas**	**27.84 318**		P	**P**	**02 08 50.2**	**+0.6**
PLTB				IAmb	IAmb	02 09 06.9	
	comp=Z,12nm,1.4s						
PLCA	**Paso Flores**	**29.16 283**		P	**P**	**02 09 02.5**	**+1.1**
	comp=Z,1.7nm,1.1s,baz=117,slow=9.0,SNR=1.7						
PLCA				LR	LR	02 20 30.3	
	comp=Z,174nm,18.2s,baz=172,slow=36						
	comp=Z,1.7nm,1.1s						
CPUP	**Villa Florida**	**34.14 317**		P	**P**	**02 09 45.0**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=121,slow=12,SNR=4.6						
CPUP				LR	LR	02 25 08.9	
	comp=Z,53nm,18.6s,baz=214,slow=39						
	comp=Z,1.2nm,0.6s						
CPUP	**Villa Florida**	**34.14 317**		P	**P**	**02 09 45.2**	**+0.1**
CPUP				IAmb	IAmb	02 10 02.7	
	comp=Z,6.8nm,1.2s						
MT01	**Popeta**	**34.50 291**		P	**P**	**02 09 48.0**	**-0.2**
QSPA	**South Pole Qui**	**35.27 180**		P	**P**	**02 09 54.7**	**0.0**
	comp=Z,2.7nm,0.7s,baz=202,slow=2.1,SNR=9.7						
	comp=Z,2.7nm,0.7s						
QSPA	**South Pole Qui**	**35.27 180**		P	**P**	**02 09 55.0**	**+0.3**
QSPA				IAmb	IAmb	02 09 56.7	
	comp=Z,6.6nm,1.1s						
CO01	**Juntas del Tor**	**36.94 297**		P	**P**	**02 10 09.9**	**+0.5**
CO01				IAmb	IAmb	02 10 30.7	
	comp=Z,9.0nm,1.2s						
AC05	**El Transito**	**37.95 298**		P	**P**	**02 10 18.5**	**+0.6**
AC05				IAmb	IAmb	02 10 41.9	
	comp=Z,21nm,1.3s						
GO02	**Mina Guanaco**	**40.63 302**		P	**P**	**02 10 41.0**	**+0.5**
GO02				IAmb	IAmb	02 10 46.5	
	comp=Z,19nm,1.4s						
LVC	**Limon Verde**	**42.47 305**		LR	LR	02 32 13.8	
	comp=Z,37nm,18.1s,baz=187,slow=41						
SUR	**Sutherland**	**43.03 81**		LR	LR	02 25 10.2	
	comp=Z,40nm,18.9s,baz=222,slow=31						
PB01	**IPOC Station P**	**44.08 305**		P	**P**	**02 11 08.8**	**+0.5**
PB01				IAmb	IAmb	02 11 15.2	
	comp=Z,5.2nm,0.9s						
SIV	**San Ignacio**	**44.95 318**		P	**P**	**02 11 15.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=160,slow=3.6,SNR=3.6						
SIV				LR	LR	02 29 00.9	
	comp=Z,19nm,19.3s,baz=210,slow=35						
	comp=Z,0.5nm,0.4s						
PB16	**IPOC Station P**	**46.43 307**		P	**P**	**02 11 27.8**	**+0.2**
PB16				IAmb	IAmb	02 11 55.5	
	comp=Z,5.4nm,1.5s						
VNDA	**Vanda**	**47.48 184**		P	**P**	**02 11 34.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=191,slow=6.2,SNR=5.7						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**47.48 184**		P	**P**	**02 11 33.7**	**-0.8**
LPAZ	**La Paz**	**47.60 310**		P	**P**	**02 11 37.7**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=132,slow=6.6,SNR=9.5						
LPAZ				LR	LR	02 34 23.9	
	comp=Z,22nm,18.4s,baz=150,slow=40						
	comp=Z,2.0nm,0.7s						
LPAZ	**La Paz**	**47.60 310**		P	**P**	**02 11 36.9**	**+0.1**
LPAZ				IAmb	IAmb	02 11 55.5	
	comp=Z,2.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.92 23**		T	T	03 03 46.3	
	baz=27,slow=74,SNR=5.3						
H10S3	**ASCENSION HYDR**	**47.92 23**		T	T	03 03 44.1	
	baz=193,slow=74,SNR=10						
BOSA	**Boshof**	**48.38 81**		LR	LR	02 27 56.8	
	comp=Z,26nm,18.9s,baz=163,slow=31						
BOSA	**Boshof**	**48.38 81**		P	**P**	**02 11 42.1**	**-0.1**
H10N1	**ASCENSION HYDR**	**49.03 23**		T	T	03 05 09.3	
	baz=192,slow=75,SNR=18						
H10N3	**ASCENSION HYDR**	**49.03 23**		T	T	03 05 11.4	
	baz=192,slow=75,SNR=23						
H10N2	**ASCENSION HYDR**	**49.05 23**		T	T	03 05 08.9	
	baz=192,slow=75,SNR=22						
RCBR	**Riachuelo**	**49.12 355**		LR	LR	02 30 10.7	
	comp=Z,50nm,18.3s,baz=317,slow=33						
LBTB	**Lobatse**	**51.35 78**		P	**P**	**02 12 03.6**	**-1.2**
	comp=Z,3.4nm,0.9s,baz=222,slow=7.1,SNR=4.2						
LBTB				LR	LR	02 31 27.2	
	comp=Z,14nm,18.6s,baz=186,slow=33						
	comp=Z,3.4nm,0.9s						
LBTB	**Lobatse**	**51.35 78**		P	**P**	**02 12 03.3**	**-1.5**
LBTB				IAmb	IAmb	02 12 16.4	
	comp=Z,6.1nm,1.0s						
TSUM	**Tsumeb**	**51.61 66**		LR	LR	02 31 31.4	
	comp=Z,22nm,18.2s,baz=154,slow=33						
LSZ	**Lusaka**	**60.57 74**		LR	LR	02 36 48.8	
	comp=Z,58nm,18.5s,baz=186,slow=34						
MDP	**Montagnes des**	**62.31 337**		LR	LR	02 38

ARA0	**ARCESS Array S**	**6.87**	**113**	Pn	**Pn**	**02 09 40.5**	**+2.1**
	baz=325,slow=12						
ARA0				Sn	**Sn**	**02 10 54.4**	**-2.1**
	baz=315,slow=22						
ARA0	**ARCESS Array S**	**6.87**	**113**	Pn	**Pn**	**02 09 40.5**	**+2.1**
	baz=325,slow=12						
ARA0				Sn	**Sn**	**02 10 54.4**	**-2.1**
	baz=315,slow=22						
SALU	**Saltoluokta**	**6.96**	**142**	*e*P	**Pn**	**02 09 42.5**	**+2.9**
KONS	**Konsvik**	**7.03**	**161**	*e*P	**Pn**	**02 09 41.8**	**+1.3**
KEV	**Kevo**	**7.13**	**109**	*e*P	**Pn**	**02 09 45.3**	**+3.3**
MOR8	**Moi Rana**	**7.49**	**157**	*e*P	**Pn**	**02 09 48.5**	**+1.7**
SCO	**Scoresbysund**	**9.47**	**268**	*i* P	Pn	02 10 08.0	-5.9

*SFS **10** 02:14:28.0, 34.°72N×5.°87W, ML2.7, SOUK ARBA GHARB (MARRUECOS)*
*MDD **10** 02:14:28.4±0.6, 34.°72N×5.°90W, h8km±4km, mb_Lg2.7/14, Error ellipse: s-maj=3.5km s-min=3.2km az=178.0*
*CNRM **10** 02:14:28.6, 34.°66N×5.°89W, h7km, ml3.0*
*LDG **10** 02:14:29.1±0.2, 34.°73N×5.°83W, h5km, Ml2.5/3, Error ellipse: s-maj=4.4km s-min=2.7km az=8.0*
*INMG **10** 02:14:29.4±1.3, 34.°65N×5.°91W, h46km±8km, ML2.6, Error ellipse: s-maj=5.2km s-min=3.8km az=25.0*

ISC 10 02:14:28.9±1.1, 34.°76N±0.°02×5.°92W±0.°02, h26km±12km, n84, σ1°61/143, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHEFC	**Chefchaouen**	**0.58**	**54**	P	**Pb**	**02 14 40.0**	**-0.7**
CHEFC	**Chefchaouen**	**0.58**	**54**	P	**Pb**	**02 14 39.9**	**-0.7**
CHEFC				S	**Sb**	**02 14 47.5**	**-1.1**
SMIR	**Smir Dam**	**1.02**	**25**	P	**Pn**	**02 14 49.0**	**+1.6**
SMIR	**Smir Dam**	**1.02**	**25**	P	**Pn**	**02 14 49.2**	**+1.8**
SMIR				S	**Sb**	**02 14 59.9**	**-0.9**
ECEU	**Ceuta**	**1.22**	**21**	P	**Pb**	**02 14 51.7**	**+0.5**
ECEU				*i* Vmb_Lg		02 15 20.7	
CEU	**Ceuta**	**1.22**	**21**	P	**Pb**	**02 14 51.9**	**+0.7**
CEU				S	**Sn**	**02 15 09.5**	**+3.7**
LCRM	**LCR**	**1.39**	**140**	S	**Sb**	**02 15 11.0**	**-0.6**
LCRM	**LCR**	**1.39**	**140**	P	**Pn**	**02 14 51.7**	**-0.9**
LCRM				S	**Sb**	**02 15 12.0**	**+0.5**
PVLZ	**Peæn de**	**1.39**	**72**	P	**Pb**	**02 14 53.5**	**-0.6**
PVLZ				S	**Sb**	**02 15 13.1**	**+1.7**
IFR	**Ifrane**	**1.41**	**152**	P	**Pn**	**02 14 52.0**	**-0.9**
IFR				S	**Sn**	**02 15 10.6**	**-0.1**
ZHG	**ZHG**	**1.45**	**205**	P	**Pb**	**02 14 55.3**	**+0.1**
ZHG	**ZHG**	**1.45**	**205**	P	**Pb**	**02 14 53.9**	**-1.3**
ZHG				S	**Sb**	**02 15 15.0**	**+1.8**
PALE	**Palemas**	**1.69**	**74**	P	**Pb**	**02 14 59.1**	**-0.1**
PALE	**Palemas**	**1.69**	**74**	P	**Pn**	**02 14 57.3**	**+0.7**
PALE				S	**Sb**	**02 15 19.9**	**-0.1**
AKLM	**AKL**	**1.71**	**98**	P	**Pn**	**02 14 57.6**	**+0.5**
AKLM	**AKL**	**1.71**	**98**	P	**Pn**	**02 14 57.8**	**+0.7**
AKLM				S	**Sn**	**02 15 18.5**	**+0.4**
EJIF	**Jimena Fronter**	**1.72**	**12**	P	**Pb**	**02 14 59.5**	**-0.3**
AVE	**Averroes**	**1.92**	**221**	P	**Pb**	**02 15 01.1**	**-2.1**
AVE				S	**Sb**	**02 15 30.8**	**+4.1**
AVE	**Averroes**	**1.92**	**221**	P	**Pb**	**02 15 01.1**	**-2.1**
AVE	**Averroes**	**1.92**	**221**	P	**Pb**	**02 15 01.0**	**-2.1**
AVE				S	**Sn**	**02 15 24.4**	**+1.3**
EMIJ	**Mijas**	**2.02**	**27**	P	**Pn**	**02 15 01.6**	**+0.3**
EMIJ				S	**Sn**	**02 15 26.9**	**+1.1**
ESPR	**Espera**	**2.10**	**1**	P	**Pn**	**02 15 03.6**	**+1.3**
ESPR				S	**Sn**	**02 15 29.4**	**+1.7**
ESPR				*i* Vmb_Lg		02 15 32.5	
MDT	**Midelt**	**2.23**	**150**	P	**Pn**	**02 15 03.9**	**-0.3**
MDT	**Midelt**	**2.23**	**150**	P	**Pn**	**02 15 03.9**	**-0.3**
MDT				S	**Sn**	**02 15 32.0**	**+1.1**
EMAL	**Malaga-Limoner**	**2.33**	**31**	P	**Pn**	**02 15 05.0**	**-0.5**
EMAL				S	**Sb**	**02 15 41.7**	**+3.1**
EGOR	**Sierra Gorda,**	**2.76**	**32**	P	**Pn**	**02 15 13.1**	**+1.5**
EGOR				S	**Sn**	**02 15 44.9**	**+0.8**
EGOR				*i* Vmb_Lg		02 16 04.5	
JBK	**JBK**	**2.80**	**98**	P	**Pn**	**02 15 12.0**	**-0.1**
JBK	**JBK**	**2.80**	**98**	P	**Pn**	**02 15 11.2**	**-0.9**
JBK				S	**Sn**	**02 15 44.8**	**-0.2**
ELGU	**Los Guajares,**	**2.81**	**41**	P	**Pn**	**02 15 11.3**	**-0.8**
ELGU				S	**Sn**	**02 15 45.7**	**+0.6**
ELGU				*i* Vmb_Lg		02 15 50.7	
SRHM	**Skhour des Reh**	**2.82**	**216**	P	**Pb**	**02 15 16.3**	**-2.3**
SRHM				S	**Sb**	**02 15 52.8**	**0.0**
TAF	**Taforalt**	**2.88**	**88**	P	**Pn**	**02 15 15.4**	**+2.2**
TAF				S	**Sn**	**02 15 48.7**	**+1.7**
PVAQ	**Vaqueiros**	**3.01**	**332**	*e*P	**Pn**	**02 15 15.9**	**+1.0**
PVAQ				*e*S	**Sn**	**02 15 50.4**	**+0.3**
PVAQ				A	A	02 15 51.9	
	18nm,0.6s						
EGRO	**El Granado**	**3.04**	**336**	P	**Pn**	**02 15 16.1**	**+0.9**
EGRO				S	**Sn**	**02 15 51.1**	**+0.3**
EGRO				*i* Vmb_Lg		02 15 52.2	
EMIN	**Mina Concepcio**	**3.06**	**349**	P	**Pn**	**02 15 16.0**	**+0.5**
EMIN				S	**Sn**	**02 15 50.9**	**-0.4**
EMIN				*i* Vmb_Lg		02 15 56.1	
EBER	**Berja**	**3.25**	**48**	P	**Pn**	**02 15 18.4**	**+0.1**
EBER				S	**Sn**	**02 15 57.3**	**+1.0**
ECAB	**El Cabril**	**3.33**	**7**	P	**Pn**	**02 15 19.9**	**+0.7**
ECAB				S	**Sn**	**02 15 58.1**	**+0.1**
ECAB				*i* Vmb_Lg		02 16 07.2	
PCVE	**Castro Verde**	**3.34**	**330**	*e*P	**Pn**	**02 15 20.6**	**+1.3**
PCVE				*e*S	**Sn**	**02 15 58.4**	**+0.3**
PCVE				A	A	02 16 00.3	
	6.6nm,0.5s						
MORF	**Marmelete**	**3.37**	**320**	*e*P	**Pn**	**02 15 19.1**	**-0.7**
MORF				*e*S	**Sn**	**02 15 59.3**	**+0.3**
MORF				A	A	02 16 01.1	
	4.7nm,0.2s						
PBAR	**Barrancos**	**3.52**	**345**	*e*P	**Pn**	**02 15 22.7**	**+0.8**
PBAR				*e*S	**Sn**	**02 16 01.6**	**-1.1**
PBAR				A	A	02 16 03.0	
	14nm,0.5s						
EADA	**Adamuz**	**3.56**	**17**	P	**Pn**	**02 15 23.2**	**+0.7**
EADA				S	**Sn**	**02 16 02.9**	**-0.9**
EADA				*i* Vmb_Lg		02 16 07.9	
PTEO	**Sao Teotonio**	**3.59**	**322**	*e*P	**Pn**	**02 15 23.7**	**+0.9**
PTEO				*e*S	**Sn**	**02 16 04.2**	**-0.1**
PTEO				A	A	02 16 11.2	
	7.0nm,0.3s						
MESJ	**Messejana**	**3.59**	**329**	*e*P	**Pn**	**02 15 23.8**	**+1.0**
MESJ				*e*S	**Sn**	**02 16 04.2**	**-0.1**
MESJ				IAML		02 16 06.1	
	comp=N,13nm,0.3s						
MESJ	**Messejana**	**3.59**	**329**	*e*P	**Pn**	**02 15 23.8**	**+1.0**
MESJ				*e*S	**Sn**	**02 16 04.7**	**+0.4**
MESJ				A	A	02 16 07.5	
	comp=N,6.4nm,0.5s						
PBEJ	**Beja**	**3.62**	**335**	*e*S	**Sn**	**02 16 04.9**	**-0.1**
PBEJ				A	A	02 16 07.8	
	comp=N,3.4nm,0.1s						
ENIJ	**Nijar**	**3.73**	**53**	P	**Pn**	**02 15 24.9**	**+0.1**
EQES	**Quesada**	**3.81**	**36**	P	**Pn**	**02 15 27.3**	**+1.4**
EQES				S	**Sn**	**02 16 08.7**	**-1.1**
EQES				*i* Vmb_Lg		02 16 16.2	
OUK	**Oukaimeden**	**3.91**	**205**	P	**Pn**	**02 15 28.1**	**+0.6**
OUK	**Oukaimeden**	**3.91**	**205**	P	**Pn**	**02 15 28.2**	**+0.7**
OUK				S	**Sn**	**02 16 12.3**	**-0.3**
PNCL	**Nicolau / Gran**	**3.95**	**329**	*e*P	**Pn**	**02 15 28.4**	**+0.7**
PNCL				*e*S	**Sn**	**02 16 12.9**	**-0.3**
PNCL				A	A	02 16 15.1	
	comp=N,2.5nm,0.4s						
EBAD	**Badajoz**	**4.08**	**348**	P	**Pn**	**02 15 30.4**	**+0.9**
EBAD				S	**Sn**	**02 16 15.2**	**-1.2**
EBAD				*i* Vmb_Lg		02 16 18.0	
EVO	**Evora**	**4.12**	**336**	P	**Pn**	**02 15 31.2**	**+1.1**
EVO				S	**Sn**	**02 16 15.2**	**-2.2**
EVO	**Evora**	**4.12**	**336**	*e*P	**Pn**	**02 15 31.4**	**+1.3**
EVO				*e*S	**Sn**	**02 16 17.7**	**+0.2**
EVO				A	A	02 16 19.0	
	comp=N,9.8nm,0.3s						
PESTR	**Estremoz**	**4.31**	**342**	*e*P	**Pn**	**02 15 34.2**	**+1.5**
PESTR				*e*S	**Sn**	**02 16 22.2**	**+0.1**
PESTR				A	A	02 16 23.4	
	comp=N,6.5nm,0.2s						
PESTR	**Estremoz**	**4.31**	**342**	P	**Pn**	**02 15 34.1**	**+1.3**
PESTR	**Estremoz**	**4.31**	**342**	P	**Pn**	**02 15 34.9**	**+2.1**
PESTR				S	**Sn**	**02 16 22.6**	**+0.5**
PMTG	**Montargil**	**4.68**	**337**	*e*P	**Pn**	**02 15 38.8**	**+1.0**
PMTG				*e*S	**Sn**	**02 16 30.9**	**-0.3**
PMTG				A	A	02 16 32.3	
	comp=N,5.0nm,0.4s						
FIGM	**Figuig**	**4.69**	**123**	P	**Pn**	**02 15 39.0**	**+0.9**
FIGM	**Figuig**	**4.69**	**123**	P	**Pn**	**02 15 37.9**	**-0.2**
FIGM				S	**Sn**	**02 16 34.3**	**+2.6**
TTIG	**Tnine Tigouga,**	**4.71**	**208**	P	**Pn**	**02 15 36.9**	**-1.5**
TTIG				S	**Sn**	**02 16 31.3**	**-1.0**
PMRV	**Marv??o**	**4.80**	**346**	*e*P	**Pn**	**02 15 40.5**	**+1.0**
PMRV				*e*S	**Sn**	**02 16 33.8**	**-0.5**
PMRV				A	A	02 16 34.9	
	comp=N,6.8nm,0.6s						
PAB	**San Pablo**	**4.94**	**14**	P	**Pn**	**02 15 41.5**	**+0.1**
PAB				S	**Sn**	**02 16 33.8**	**-3.8**
PAB				*i* Vmb_Lg		02 16 38.0	
PMAFR	**Mafra**	**4.98**	**328**	*e*S	**Sn**	**02 16 38.6**	**0.0**
ESDC	**Sonseca Array**	**5.14**	**17**	S	**Sn**	**02 16 39.9**	**-2.9**
ESDC				*i* Vmb_Lg		02 16 42.2	
PCBR	**Castelo Branco**	**5.22**	**347**	*e*P	**Pn**	**02 15 46.4**	**+1.2**
PCBR				*e*S	**Sn**	**02 16 41.8**	**-2.7**
PCBR				A	A	02 16 44.5	
	comp=N,7.8nm,0.4s						
ETOB	**Tobarra**	**5.23**	**41**	P	**Pn**	**02 15 45.9**	**+0.6**
ETOB				S	**Sn**	**02 16 43.9**	**-1.0**
PSBE	**So Bento**	**5.27**	**335**	*e*P	**Pn**	**02 15 48.2**	**+2.3**
PSBE				*e*S	**Sn**	**02 16 44.9**	**-0.9**
EPLA	**Plasencia**	**5.29**	**359**	P	**Pn**	**02 15 46.9**	**+0.6**
EPLA				S	**Sn**	**02 16 45.4**	**-1.0**
EPLA				*i* Vmb_Lg		02 16 47.6	
MTE	**Manteigas**	**5.77**	**348**	*e*P	**Pn**	**02 15 54.1**	**+1.2**
MTE				*e*S	**Sn**	**02 16 56.6**	**-1.7**
MTE				A	A	02 16 58.1	
	comp=N,7.3nm,0.4s						
GUD	**Guadarrama**	**6.03**	**13**	S	**Sn**	**02 17 02.1**	**-2.7**
PVIS	**Viseu**	**6.15**	**346**	*e*P	**Pn**	**02 15 59.4**	**+1.4**
PVIS				*e*S	**Sn**	**02 17 05.9**	**-1.5**
PVIS				A	A	02 17 07.2	
	comp=N,4.7nm,0.6s						
MVO	**Moncorvo**	**6.45**	**353**	*e*P	**Pn**	**02 16 03.5**	**+1.3**
MVO				*e*S	**Sn**	**02 17 12.6**	**-2.3**
MVO				A	A	02 17 14.2	
	comp=N,7.2nm,0.4s						
PVRL	**Vila Real**	**6.66**	**348**	*e*S	**Sn**	**02 17 16.8**	**-3.1**
PVRL				A	A	02 17 18.9	
	comp=N,8.4nm,0.3s						
POLO	**Lamas de Olo**	**6.76**	**348**	*e*P	**Pn**	**02 16 07.7**	**+1.2**
POLO				*e*S	**Sn**	**02 17 19.5**	**-3.2**
POLO				A	A	02 17 21.7	
	comp=N,2.6nm,0.3s						
ETOR	**Torete**	**6.77**	**26**	P	**Pn**	**02 16 06.9**	**+0.3**
ETOR				S	**Sn**	**02 17 20.1**	**-2.9**
PBRG	**Braganca**	**7.06**	**355**	*e*P	**Pn**	**02 16 11.6**	**+1.1**
PCAB	**Cabril**	**7.13**	**347**	*e*S	**Sn**	**02 17 28.0**	**-3.6**
ECAL	**Calabor**	**7.20**	**355**	P	**Pn**	**02 16 13.5**	**+1.1**
ECAL				S	**Sn**	**02 17 31.2**	**-2.1**
ELOB	**Lobios**	**7.29**	**347**	P	**Pn**	**02 16 15.0**	**+1.3**
ELOB				S	**Sn**	**02 17 32.7**	**-2.9**
PGAV	**Gavieira, Arco**	**7.42**	**346**	*e*S	**Sn**	**02 17 35.5**	**-3.4**
EAGO	**Agolada(Pontev**	**8.21**	**349**	S	**Sn**	**02 17 55.3**	**-2.7**
ELAN	**Lanestosa**	**8.67**	**12**	P	**Pn**	**02 16 34.0**	**+1.3**
SJPF	**Ste Jean**	**9.10**	**22**	*e*Pn	**Pn**	**02 16 38.8**	**+0.3**
SJPF				*e*Sn	**Sn**	**02 18 16.3**	**-3.7**
	comp=N,0.2nm,0.2s						
ETSF	**Etsaut**	**9.13**	**26**	*e*Pn	**Pn**	**02 16 39.2**	**+0.2**
ETSF				*e*Sn	**Sn**	**02 18 15.6**	**-5.3**
	comp=N,0.3nm,0.3s						
EPF	**Esparros**	**9.58**	**29**	*e*Pn	**Pn**	**02 16 45.3**	**+0.2**
EPF				*e*Sn	**Sn**	**02 18 27.2**	**-4.8**
	comp=N,0.1nm,0.2s						

IDC 10 02:17:07.6±2.4, 1.°84N×126.°40E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=201.1km s-min=28.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.01**	**161**	P	P	02 22 12.8	-1.5
	0.3nm,0.6s,baz=339,slow=11,SNR=6.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**26.39**	**164**	P	P	02 22 47.6	+1.7
	0.4nm,0.8s,baz=358,slow=8.3,SNR=1.7						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	02 27 08.5	-0.2
	0.4nm,0.7s,baz=129,slow=9.3,SNR=1.5						
	0.4nm,0.7s						

*IDC **10** 02:58:08.3±1.5, 40.°13N×19.°87E, h0km, mb3.4/4, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=35.7km s-min=20.8km az=114.0*
*ATH **10** 02:58:09.7, 40.°09N×19.°77E, h29km±5km, ML3.1/11, Error ellipse: s-maj=5.9km s-min=1.8km az=239.0*
*PDG **10** 02:58:10.0±0.4, 40.°13N×19.°83E, h8km, ML3.2/13, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*THE **10** 02:58:11.0, 40.°11N×19.°90E, h0km±2km, ML3.0/5, Error ellipse: s-maj=3.9km s-min=1.1km az=306.0*

ISC 10 02:58:11.0±1.2, 40.°03N±0.°02×19.°91E±0.°03, h18km±9km, n95, σ1°35/119, mb3.5/4, 9C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASA	**Kassiopi**	**0.29**	**176**	P	**Pb**	**02 58 17.2**	**-0.4**
KASA				S	**Sb**	**02 58 23.1**	**+1.1**
KASA				AML	AML	02 58 25.0	
	comp=E,10163μm,0.5s						
KASA				AML	AML	02 58 26.7	
	comp=N,8467μm,0.5s						
KEK	**Kerkira**	**0.33**	**195**	P	**Pb**	**02 58 18.3**	**-0.1**
KEK				S	**Sb**	**02 58 25.1**	**+1.7**
	comp=N,5μm,0.4s						
KEK	**Kerkira**	**0.33**	**195**	P	**Pb**	**02 58 18.0**	**-0.4**
KEK				S	**Sb**	**02 58 24.5**	**+1.1**
KEK				AML	AML	02 58 26.2	
	comp=E,8926μm,0.2s						
KEK				AML	AML	02 58 26.8	
	comp=N,9058μm,0.3s						
IGT	**Igoumenitsa**	**0.59**	**147**	P	**Pb**	**02 58 23.0**	**+0.1**
IGT				S	**Sn**	**02 58 33.6**	**-0.2**
	comp=N,1μm,0.5s						
IGT	**Igoumenitsa**	**0.59**	**147**	P	**Pb**	**02 58 22.8**	**0.0**
IGT				S	**Sn**	**02 58 32.9**	**-0.9**
IGT				AML	AML	02 58 38.5	
	comp=N,2259μm,0.5s						
IGT				AML	AML	02 58 38.6	
	comp=E,2158μm,0.4s						
JAN	**Janina**	**0.81**	**117**	P	**Pg**	**02 58 26.4**	**-0.5**
JAN	**Janina**	**0.81**	**117**	P	**Pg**	**02 58 26.2**	**-0.8**
JAN				S	**Sn**	**02 58 39.3**	**0.0**
JAN				AML	AML	02 58 42.5	
	comp=E,4058μm,0.3s						
JAN				AML	AML	02 58 44.2	
	comp=N,3215μm,0.6s						
NEST	**Nestorio**	**0.95**	**66**	P	**Pb**	**02 58 27.8**	**-1.2**
NEST				S	**Sg**	**02 58 42.5**	**+0.4**
	comp=N,710nm,0.8s						
NEST	**Nestorio**	**0.95**	**66**	P	**Pb**	**02 58 27.9**	**-1.2**
NEST				S	**Sn**	**02 58 42.9**	**+0.2**
NEST				AML	AML	02 58 48.4	
	comp=N,2119μm,0.7s						
NEST				AML	AML	02 58 49.6	
	comp=E,1450μm,0.5s						
PENT	**Pentalofos**	**0.95**	**80**	P	**Pb**	**02 58 28.3**	**-0.8**
PENT	**Pentalofos**	**0.95**	**80**	P	**Pb**	**02 58 28.3**	**-0.8**
KPRO	**Kipourio**	**1.12**	**93**	P	**Pb**	**02 58 31.5**	**-0.4**
OHR	**Ohrid**	**1.27**	**32**	*i* Pn	**Pn**	**02 58 33.9**	**0.0**
TSLK	**Tsoukalades, L**	**1.34**	**154**	P	**Pg**	**02 58 36.2**	**-0.6**
TSLK				S	**Sg**	**02 58 57.4**	**+3.2**
	comp=E,1μm,0.6s						
TSLK	**Tsoukalades, L**	**1.34**	**154**	P	**Pg**	**02 58 36.3**	**-0.6**
TSLK				S	**Sg**	**02 58 54.0**	**-0.2**
TSLK				AML	AML	02 58 58.7	
	comp=E,2872μm,0.5s						
TSLK				AML	AML	02 59 03.0	
	comp=N,1793μm,0.6s						
LKD2	**Lefkada island**	**1.37**	**155**	P	**Pg**	**02 58 37.1**	**-0.3**
LKD2	**Lefkada island**	**1.37**	**155**	P	**Pg**	**02 58 36.9**	**-0.5**
LKD2				AML	AML	02 59 00.5	
	comp=N,957μm,0.4s						
LKD2				AML	AML	02 59 03.5	
	comp=E,1707μm,0.6s						
DRAG	**Dragano-Lefkad**	**1.44**	**159**	P	**Pg**	**02 58 39.5**	**+0.7**
KZN	**Kozani**	**1.45**	**79**	P	**Pb**	**02 58 38.2**	**+0.6**
KZN				S	**Sg**	**02 58 58.5**	**+0.6**
	comp=E,572nm,0.7s						
KZN	**Kozani**	**1.45**	**79**	P	**Pb**	**02 58 38.2**	**+0.6**
KZN				AML	AML	02 59 01.1	
	comp=N,982μm,0.9s						
KZN				AML	AML	02 59 04.5	
	comp=E,1305μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.45**	**155**	P	**Pb**	**02 58 37.8**	**+0.3**
EVGI	**Lefkada island**	**1.52**	**157**	P	**Pg**	**02 58 40.6**	**+0.2**
FSK	**Fiskardo**	**1.65**	**162**	P	**Pb**	**02 58 41.1**	**+0.2**
FSK				AML	AML	02 59 13.8	
	comp=E,557μm,0.5s						
FSK				AML	AML	02 59 16.6	
	comp=N,568μm,0.7s						
THL	**Klokotos Trika**	**1.69**	**105**	P	**Pb**	**02 58 42.2**	**+0.7**
THL	**Klokotos Trika**	**1.69**	**105**	P	**Pb**	**02 58 42.2**	**+0.7**
THL				AML	AML	02 59 06.9	
	comp=E,741μm,0.5s						
THL				AML	AML	02 59 07.9	
	comp=N,632μm,0.6s						
TYRN	**Tyrnavos**	**1.81**	**99**	P	**Pb**	**02 58 43.9**	**+0.2**
EVR	**Evrytania**	**1.84**	**127**	P	**Pg**	**02 58 45.3**	**-1.1**
EVR	**Evrytania**	**1.84**	**127**	P	**Pg**	**02 58 45.3**	**-1.1**
EVR				AML	AML	02 59 18.0	
	comp=E,446μm,0.8s						
EVR				AML	AML	02 59 23.9	
	comp=N,486μm,0.6s						
PVO	**Paravola**	**1.89**	**138**	P	**Pb**	**02 58 44.6**	**-0.4**
LIT	**Litokhoron**	**1.98**	**87**	P	**Pb**	**02 58 45.8**	**-0.7**
LIT	**Litokhoron**	**1.98**	**87**	P	**Pb**	**02 58 45.8**	**-0.7**
ULC	**Ulcinj**	**1.99**	**346**	*e*Pn	**Pn**	**02 58 43.2**	**-0.7**
ULC				*i* Sn	**Sb**	**02 59 10.4**	**-0.9**
MAKR	**Makrakomi, Fth**	**2.00**	**120**	P	**Pb**	**02 58 47.5**	**+0.7**
MAKR	**Makrakomi, Fth**	**2.00**	**120**	P	**Pb**	**02 58 47.7**	**+0.9**
DRME	**Dracevica, Mon**	**2.22**	**346**	*e*Pn	**Pn**	**02 58 45.8**	**-1.1**
DRME	**Dracevica, Mon**	**2.22**	**346**	⇓*i*Pn	**Pn**	**02 58 46.8**	**-0.1**
DRME				*e*Sn	**Sn**	**02 59 15.8**	**+1.9**
EFP	**Efpalio**	**2.23**	**135**	P	**Pb**	**02 58 50.2**	**-0.5**
EFP	**Efpalio**	**2.23**	**135**	P	**Pb**	**02 58 50.0**	**-0.8**
SERG	**Sergoula**	**2.32**	**133**	P	**Pb**	**02 58 51.3**	**-1.0**
SERG	**Sergoula**	**2.32**	**133**	P	**Pb**	**02 58 51.0**	**-1.4**
BUM	**Brajici-Budva**	**2.39**	**342**	*e*Pn	**Pn**	**02 58 48.7**	**-0.7**
BUM				*i* Sn	**Sn**	**02 59 19.9**	**+1.6**
STIP	**Stip**	**2.39**	**45**	*i* Pn	**Pb**	**02 58 53.3**	**-0.3**
VAY	**Valandovo**	**2.40**	**57**	*i* Pn	**Pb**	**02 58 52.5**	**-1.1**
LAKA	**Lakka**	**2.41**	**137**	P	**Pb**	**02 58 52.2**	**-1.6**
LAKA	**Lakka**	**2.41**	**137**	P	**Pb**	**02 58 52.1**	**-1.7**
TTG	**Podgorica**	**2.45**	**349**	⇓*i*Pn	**Pn**	**02 58 50.0**	**0.0**
TTG				*i* Sn	**Sn**	**02 59 21.2**	**+1.8**
PVY	**Plav**	**2.56**	**1**	*e*Pn	**Pn**	**02 58 51.8**	**+0.1**
PVY				*i* Sn	**Sn**	**02 59 24.1**	**+1.6**
CEME	**Cevo**	**2.62**	**344**	*e*Pn	**Pn**	**02 58 51.4**	**-1.1**
CEME				*i* Sn	**Sn**	**02 59 25.2**	**+1.3**
HCY	**Herceg Novi**	**2.64**	**337**	*e*Pn	**Pn**	**02 58 50.5**	**-2.2**
HCY	**Herceg Novi**	**2.64**	**337**	*e*Pn	**Pn**	**02 58 52.6**	**-0.1**
HCY				*i* Sn	**Sn**	**02 59 25.7**	**+1.5**
KLV	**Kalavryta, Ach**	**2.64**	**138**	P	**Pb**	**02 58 55.5**	**-2.3**
SOH	**Sokhos**	**2.74**	**72**	P	**Pn**	**02 58 56.0**	**+1.8**
NKME	**Niksic**	**2.83**	**346**	⇓*i*Pn	**Pn**	**02 58 55.3**	**0.0**
NKME				*i* Sn	**Sn**	**02 59 30.3**	**+1.4**
KOME	**Kolasin**	**2.83**	**354**	⇑*i*Pn	**Pn**	**02 58 55.4**	**0.0**
KOME				*i* Sn	**Sn**	**02 59 30.5**	**+1.4**
IVA	**Berane**	**2.84**	**360**	*e*Pn	**Pn**	**02 58 55.6**	**+0.1**
IVA				*i* Sn	**Sn**	**02 59 30.8**	**+1.6**
BRY	**Bratogost**	**3.05**	**341**	*e*Pn	**Pn**	**02 58 58.2**	**-0.2**
BRY	**Bratogost**	**3.05**	**341**	*e*Pn	**Pn**	**02 58 58.3**	**-0.2**
BRY				*i* Sn	**Sn**	**02 59 34.1**	**-0.4**
UPM	**Unac-Piva**	**3.26**	**347**	*e*Pn	**Pn**	**02 59 00.6**	**-0.8**
UPM	**Unac-Piva**	**3.26**	**347**	⇓*i*Pn	**Pn**	**02 59 01.3**	**-0.1**
UPM				*i* Sn	**Sn**	**02 59 40.5**	**+0.8**
PLE	**Pljevlja**	**3.32**	**353**	⇓*i*Pn	**Pn**	**02 59 02.2**	**+0.1**
PLE				*i* Sn	**Sn**	**02 59 42.2**	**+1.0**
VTS	**Vitosha**	**3.60**	**43**	⇑P	**Pn**	**02 59 08.1**	**+2.1**
RUDO	**Rudo**	**3.61**	**354**	*e*Pn	**Pn**	**02 59 06.9**	**+0.9**
BOVS	**Bovan**	**3.84**	**20**	⇓P	**Pn**	**02 59 09.2**	**0.0**
BBLS	**Lazići**	**3.85**	**355**	*e*Pn	**Pn**	**02 59 13.4**	**+4.0**
DIVS	**Divibare**	**4.06**	**1**	*e*Pn	**Pn**	**02 59 11.7**	**-0.6**
HAPS	**Han Pijesak,Bl**	**4.11**	**350**	*e*Pn	**Pn**	**02 59 11.6**	**-1.5**
BLKB	**Belogradchik**	**4.14**	**29**	⇑P	**Pn**	**02 59 14.8**	**+1.4**
SRKY	**Kupres RS**	**4.52**	**334**	*e*Pn	**Pn**	**02 59 15.9**	**-2.7**
MDVR	**Moldovita**	**4.93**	**15**	⇑P	**Pn**	**02 59 25.0**	**+0.8**
A050A	**Klekovaca**	**5.11**	**332**	*e*Pn	**Pn**	**02 59 26.0**	**-0.6**
FRGS	**Fruska Gora**	**5.12**	**359**	*e*Pn	**Pn**	**02

0.4nm,0.8s

*NOU **10** 03:00:26.8, 37°.13S×179°.76E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **10** 03:00:33.3±1.5, 37°.S±6°.×17°.9E±°, h15km±11km, M3.3/20, ML3.6/31, MLv3.3/20, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*

ISC 10 03:00:31.4±2.8, 37.09S±0.08×179.3E±0.1, h6km±12km, n46, σ0.66/53, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.93**	**240**	P	**Pg**	**03 00 49.5**	**+0.2**
MXZ				S	**Sg**	**03 01 00.6**	**-0.8**
MXZ	**Matakaoa Point**	**0.93**	**240**	P	**Pg**	**03 00 49.6**	**+0.3**
WMGZ	**Waiomatatini S**	**1.02**	**225**	P	**Pn**	**03 00 53.1**	**+0.9**
WMGZ				S	**Sn**	**03 01 07.2**	**+0.3**
PKGZ	**Pakihiroa**	**1.27**	**231**	P	**Pg**	**03 00 56.4**	**+0.7**
PKGZ				S	**Sb**	**03 01 12.7**	**+0.5**
HAZ	**Te Kaha**	**1.39**	**241**	P	**Pn**	**03 00 56.8**	**-0.5**
HAZ				S	**Sn**	**03 01 15.5**	**-0.5**
TWGZ	**Tauwhareparae**	**1.52**	**224**	P	**Pb**	**03 01 00.2**	**+0.3**
TWGZ				S	**Sn**	**03 01 19.6**	**+0.4**
RUGZ	**Raukumara Rang**	**1.57**	**236**	P	**Pb**	**03 01 00.8**	**-0.1**
RUGZ				S	**Sn**	**03 01 20.6**	**0.0**
CNGZ	**Carnagh Statio**	**1.64**	**212**	P	**Pg**	**03 01 02.5**	**-0.4**
TKGZ	**Te Karaka**	**1.78**	**221**	P	**Pn**	**03 01 03.4**	**+0.8**
MWZ	**Matawai**	**1.88**	**228**	P	**Pn**	**03 01 04.8**	**+0.7**
RAGZ	**Rawiri**	**2.06**	**227**	P	**Pn**	**03 01 07.1**	**+0.6**
RAGZ				S	**Sn**	**03 01 31.5**	**-1.1**
URZ	**Urewera**	**2.10**	**236**	P	**Pn**	**03 01 07.4**	**+0.3**
SNGZ	**Shannon Statio**	**2.30**	**222**	P	**Pn**	**03 01 10.2**	**+0.4**
KNZ	**Kokohu**	**2.32**	**214**	P	**Pn**	**03 01 09.9**	**-0.2**
MHGZ	**Mahia Peninsul**	**2.34**	**208**	P	**Pn**	**03 01 10.9**	**+0.5**
RTZ	**Ruatahuna**	**2.39**	**230**	P	**Pn**	**03 01 11.9**	**+0.7**
MUGZ	**Murupara**	**2.45**	**235**	P	**Pn**	**03 01 12.1**	**+0.3**
RAHZ	**Arahi**	**2.53**	**223**	P	**Pn**	**03 01 14.1**	**+1.0**
MTHZ	**Maungataniwha**	**2.63**	**227**	P	**Pn**	**03 01 14.9**	**+0.5**
NMHZ	**Naumai**	**2.82**	**224**	P	**Pn**	**03 01 17.7**	**+0.7**
ARHZ	**Aropaoanui**	**2.84**	**220**	P	**Pn**	**03 01 17.4**	**+0.2**
KUZ	**Kuaotunu**	**2.91**	**276**	P	**Pn**	**03 01 17.2**	**-0.9**
BKZ	**Black Stump Fm**	**3.04**	**226**	P	**Pn**	**03 01 19.9**	**-0.2**
BKZ	**Black Stump Fm**	**3.04**	**226**	P	**Pn**	**03 01 19.6**	**-0.4**
TOZ	**Tahuroa Road**	**3.10**	**257**	P	**Pn**	**03 01 19.6**	**-1.2**
MCHZ	**McNeill Hill**	**3.12**	**221**	P	**Pn**	**03 01 21.0**	**-0.2**
KWHZ	**Kaweka Forest**	**3.26**	**224**	P	**Pn**	**03 01 22.3**	**-0.7**
KAHZ	**Kahuranaki**	**3.31**	**215**	P	**Pn**	**03 01 22.7**	**-1.0**
MKAZ	**Moumakai**	**3.32**	**269**	P	**Pn**	**03 01 22.9**	**-1.0**
TMVZ	**Te Maari**	**3.49**	**234**	P	**Pn**	**03 01 26.1**	**-0.2**
ETVZ	**East Tongariro**	**3.50**	**233**	P	**Pn**	**03 01 26.4**	**-0.1**
NTVZ	**North Tongarir**	**3.50**	**234**	P	**Pn**	**03 01 26.5**	**0.0**
OTVZ	**Oturere**	**3.54**	**233**	P	**Pn**	**03 01 27.1**	**+0.1**
NNVZ	**North Ngauruho**	**3.56**	**234**	P	**Pn**	**03 01 27.9**	**+0.6**
WTVZ	**West Tongariro**	**3.57**	**234**	P	**Pn**	**03 01 27.8**	**+0.4**
SNVZ	**South Ngauruho**	**3.57**	**233**	P	**Pn**	**03 01 27.3**	**-0.2**
NGZ	**Ngauruhoe**	**3.59**	**234**	P	**Pn**	**03 01 27.6**	**-0.2**
MOVZ	**Moawhango**	**3.63**	**229**	P	**Pn**	**03 01 27.8**	**-0.4**
TWVZ	**Taurewa**	**3.64**	**236**	P	**Pn**	**03 01 28.5**	**+0.2**
HIZ	**Hauiti**	**3.81**	**247**	P	**Pn**	**03 01 31.6**	**+1.1**
HIZ	**Hauiti**	**3.81**	**247**	P	**Pn**	**03 01 31.0**	**+0.5**
WCZ	**Waipu Caves**	**4.17**	**285**	P	**Pn**	**03 01 35.5**	**0.0**
BFZ	**Birch Farm**	**4.31**	**213**	P	**Pn**	**03 01 35.5**	**-1.9**
OUZ	**Omahuta**	**4.99**	**290**	P	**Pn**	**03 01 47.3**	**+0.5**
OUZ	**Omahuta**	**4.99**	**290**	P	**Pn**	**03 01 47.6**	**+0.8**
QRZ	**Quartz Range**	**6.47**	**233**	P	**Pn**	**03 02 06.8**	**-0.3**
	76nm,2.6s						

*IDC **10** 03:41:38.6±1.4, 2°.32S×133°.89E, h0km, mb3.9/4, mbtmp4.1/7, ML4.2/3, MS3.4/12, Error ellipse: s-maj=44.1km s-min=21.9km az=79.0*
*DJA **10** 03:41:43.5±1.0, 2°.S±6°.×13°.4E±°, h19km±9km, M4.4/6, mb4.6/3, MLv4.3/6*

ISC 10 03:41:42.5±0.8, 2.22S±0.08×133.83E±0.06, h25km, n22, σ2.03/15, mb4.1/4, MS3.4/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.79**	**26**	P	**Pb**	**03 41 55.5**	**-2.1**
SRPI	**Serui, Papua**	**2.44**	**82**	P	**Pb**	**03 42 24.9**	**-0.7**
SRPI				S	**Sn**	**03 42 52.6**	**+2.9**
SIJI	**Sorong**	**2.89**	**298**	Pn	**Pn**	**03 42 28.0**	**+0.9**
	32nm,0.3s,baz=68,slow=23,SNR=106						
SIJI				LR	LR	03 44 10.6	
	comp=Z,498nm,19.6s,baz=178,slow=51						
	84nm,0.3s						
SIJI	**Sorong**	**2.89**	**298**	P	**Pn**	**03 42 27.9**	**+0.9**
MSAI	**Masohi**	**5.02**	**257**	P	**Pn**	**03 42 58.9**	**+2.6**
	0.1nm15nm,0.5s						
MSAI				S	**Sn**	**03 43 54.3**	**+0.8**
	0.1nm15nm,0.5s						
KRAI	**Karang Ratu**	**5.54**	**259**	P	**Pn**	**03 43 04.3**	**+0.9**
	0.3nm30nm,0.7s						
AAI	**Ambon**	**5.81**	**255**	P	**Pn**	**03 43 09.5**	**+2.3**
DAV	**Davao City (W)**	**12.37**	**318**	LR	LR	03 49 16.2	
	comp=Z,54nm,18.3s,baz=150,slow=37						
PMG	**Port Moresby**	**15.05**	**119**	LR	LR	03 52 30.0	
	comp=Z,120nm,19.1s,baz=126,slow=44						
WRA	**Warramunga Arr**	**17.62**	**178**	P	**Pn**	**03 45 43.6**	**-2.9**
	0.5nm,0.3s,baz=358,slow=12,SNR=34						
WRA				LR	LR	03 53 20.1	
	comp=Z,101nm,18.9s,baz=8.5,slow=40						
	1.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.70**	**206**	P	**Pn**	**03 45 44.2**	**-3.3**
	1.0nm,0.3s,baz=30,slow=11,SNR=62						
FITZ				S	Sn	03 48 49.9	-14
	6.3nm,1.1s,baz=204,slow=13,SNR=5.6						
	5.2nm,0.5s						
ASAR	**Alice Springs**	**21.32**	**180**	P	**P**	**03 46 27.4**	**-0.3**
	9.7nm,0.8s,baz=5.3,slow=11,SNR=29						
ASAR				LR	LR	03 55 36.4	
	comp=Z,142nm,20.0s,baz=345,slow=40						
	9.7nm,0.8s						
CTA	**Charters Tower**	**21.51**	**147**	LR	LR	03 55 56.3	
	comp=Z,126nm,18.0s,baz=294,slow=40						
STKA	**Stephens Creek**	**30.39**	**167**	LR	LR	04 01 38.8	
	comp=Z,91nm,18.5s,baz=13,slow=40						
JHJ	**Hachijo jima 2**	**35.60**	**9**	LR	LR	03 59 53.0	
	comp=Z,33nm,20.7s,baz=274,slow=31						
URZ	**Urewera**	**53.39**	**138**	LR	LR	04 13 10.4	
	comp=Z,26nm,21.6s,baz=70,slow=36						
PALK	**Pallekele**	**53.84**	**281**	LR	LR	04 15 00.9	
	comp=Z,15nm,18.7s,baz=205,slow=37						
MKAR	**Makanchi Array**	**66.48**	**324**	P	**P**	**03 52 31.2**	**+1.2**
	1.2nm,0.6s,baz=112,slow=7.9,SNR=9.8						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**69.12**	**331**	P	**P**	**03 52 46.4**	**0.0**
	0.6nm,0.6s,baz=132,slow=4.1,SNR=2.3						
	0.6nm,0.6s						
VNDA	**Vanda**	**76.73**	**174**	LR	LR	04 25 27.5	
	comp=Z,37nm,20.0s,baz=322,slow=34						
ILAR	**Eielson Array**	**87.43**	**25**	P	**P**	**03 54 28.0**	**+0.5**
	0.4nm,0.8s,baz=252,slow=5.6,SNR=1.9						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**87.72**	**180**	LR	LR	04 33 31.4	
	comp=Z,53nm,18.8s,baz=336,slow=36						

KRSC 10 03:46:44.6±2.5, 48°.72N×157°.14E, h18km±49km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.07**	**342**	*e*P	Pn	03 47 17.6	-0.8
KDTR	**Khodutka, Kamc**	**3.15**	**11**	*e*P	Pb	03 47 37.0	-3.0
KDTR				*e*S	Sn	03 48 12.3	+2.0
ASAK	**Asacha**	**3.70**	**7**	*e*P	Pn	03 47 42.8	+1.9
RUS	**Russkaya**	**3.82**	**13**	*e*P	Pn	03 47 46.0	+3.6
RUS				*e*S	Sn	03 48 30.2	+3.4
GRL	**Gorelyy**	**3.88**	**8**	*e*P	Pb	03 47 48.0	-4.5
GRL				*e*S	Sb	03 48 33.9	-5.3
AVH	**Avacha**	**4.66**	**12**	*e*P	Pn	03 47 59.3	+5.2
SMAR	**Somma**	**4.67**	**12**	*e*P	Pn	03 47 59.3	+5.0
SDLR	**Sedlovina**	**4.69**	**13**	*e*P	Pn	03 47 58.7	+4.1
KRER	**Koryakskii**	**4.70**	**12**	*e*P	Pn	03 48 00.1	+5.4
KRX	**Arik**	**4.74**	**11**	*e*P	Pb	03 48 01.2	-6.0
KRX				*e*S	Sn	03 48 56.6	+6.8
SPN	**Mys Shipunski**	**4.75**	**21**	*e*P	Pn	03 48 00.0	+4.8
SPN				*e*S	Sn	03 48 54.8	+5.1
GNL	**Ganaly**	**5.01**	**5**	*e*P	Pn	03 48 03.7	+4.8
MKZ	**Mys Kozlova**	**6.50**	**24**	*e*P	Pn	03 48 23.8	+4.6
TUMR	**Tumrok**	**6.83**	**15**	*e*P	Pn	03 48 27.1	+3.2
KBTR	**Krutoberegovo**	**8.26**	**23**	*e*P	Pn	03 48 47.9	+4.6

*CNRM **10** 03:47:36.9, 37°.05N×8°.01W, h8km, ml2.0*
*MDD **10** 03:47:38.9±0.4, 37°.13N×7°.91W, h11km, mb_Lg2.4/7, Error ellipse: s-maj=3.2km s-min=2.4km az=25.0*
*SFS **10** 03:47:38.0, 37°.11N×7°.93W, ML2.5, FARO(PORTUGAL)*
*INMG **10** 03:47:39.7±1.4, 37°.15N×7°.93W, h3km±2km, ML2.0, Error ellipse: s-maj=1.8km s-min=1.5km az=122.0*

ISC 10 03:47:37.9±0.8, 37.12N±0.02×7.91W±0.02, h15km±5km, n50, σ1.01/108, 3C-5D, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFARO	**Faro**	**0.10**	**185**	⇑*e*Pg	**Pg**	**03 47 41.8**	**+0.6**
PFARO				*e*Sg	**Sg**	**03 47 44.1**	**+0.8**
PFARO				A	A	03 47 45.2	
	472nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.12**	**353**	⇓*i*Pg	**Pg**	**03 47 40.1**	**-1.4**
PBDV				*e*Sg	**Sg**	**03 47 42.5**	**-1.4**
PTAV	**Tavira**	**0.20**	**89**	*e*Pg	**Pb**	**03 47 43.4**	**+0.1**
PTAV				*e*Sg	**Sb**	**03 47 46.9**	**-0.1**
PTAV				A	A	03 47 48.3	
	278nm,0.6s						
PALBU	**Albufeira**	**0.27**	**265**	*e*Pg	**Pb**	**03 47 44.2**	**-0.2**
PALBU				*e*Sg	**Sb**	**03 47 48.3**	**-0.5**
PVAQ	**Vaqueiros**	**0.32**	**29**	⇑*i*Pg	**Pb**	**03 47 45.5**	**+0.2**
PVAQ				*e*Sg	**Sg**	**03 47 49.9**	**+0.7**
PVAQ				A	A	03 47 50.6	
	161nm,0.2s						
PVAQ	**Vaqueiros**	**0.32**	**29**	P	**Pb**	**03 47 45.6**	**+0.2**
PVAQ				S	**Sb**	**03 47 50.4**	**0.0**
PPOR	**Portimao**	**0.50**	**271**	*e*Pg	**Pb**	**03 47 48.7**	**+0.4**
PPOR				*e*Sg	**Sb**	**03 47 55.3**	**-0.1**
PCVE	**Castro Verde**	**0.52**	**349**	⇓*i*Pg	**Pb**	**03 47 48.8**	**+0.1**
PCVE				*e*Sg	**Sg**	**03 47 55.6**	**+0.4**
PCVE				A	A	03 47 56.7	
	19nm,0.1s						
EGRO	**El Granado**	**0.54**	**40**	⇑Pg	**Pb**	**03 47 49.3**	**+0.4**
EGRO				Sg	**Sg**	**03 47 56.0**	**+0.4**
MORF	**Marmelete**	**0.62**	**287**	*e*P	**Pg**	**03 47 50.1**	**+0.1**
MORF				*e*S	**Sg**	**03 47 58.0**	**-0.4**
MORF				IAML		03 48 01.4	
	comp=N,170nm,0.2s						
MORF	**Marmelete**	**0.62**	**287**	*e*Pg	**Pg**	**03 47 50.2**	**+0.1**
MORF				*e*Sg	**Sb**	**03 47 58.8**	**-0.1**
MORF				A	A	03 48 01.1	
	comp=N,81nm,0.1s						
PLAGO	**Lagos**	**0.62**	**268**	*e*Pg	**Pb**	**03 47 50.9**	**+0.5**
PLAGO				*e*Sg	**Sb**	**03 47 58.9**	**0.0**
PLAGO				A	A	03 48 02.2	
	comp=N,290nm,0.6s						
PFVI	**Vila Bisbo**	**0.73**	**271**	⇓*i*P	**Pg**	**03 47 52.0**	**-0.2**
PFVI				*e*S	**Sb**	**03 48 02.5**	**+0.4**
PFVI				A	A	03 48 04.2	
	comp=N,40nm,0.1s						
PFVI	**Vila Bisbo**	**0.73**	**271**	P	**Pg**	**03 47 49.9**	**-2.2**
PFVI				S	**Sg**	**03 47 58.2**	**-3.7**
PALJ	**Aljezur**	**0.73**	**286**	*e*Sg	**Sb**	**03 48 03.0**	**+0.8**
MESJ	**Messejana**	**0.76**	**341**	*e*P	**Pg**	**03 47 52.8**	**+0.1**
MESJ				*e*S	**Sg**	**03 48 02.5**	**-0.1**
MESJ				IAML		03 48 05.1	
	comp=N,46nm,0.1s						
MESJ	**Messejana**	**0.76**	**341**	⇓*e*P	**Pg**	**03 47 52.8**	**+0.1**
MESJ				*e*S	**Sb**	**03 48 03.8**	**+0.9**
MESJ				A	A	03 48 05.9	
	comp=N,18nm,0.2s						
PTEO	**Sao Teotonio**	**0.77**	**303**	*e*P	**Pg**	**03 47 52.9**	**-0.1**
PTEO				*e*S	**Sb**	**03 48 03.5**	**+0.2**
PTEO				A	A	03 48 06.5	
	comp=N,27nm,0.2s						
PBEJ	**Beja**	**0.90**	**2**	*e*P	**Pg**	**03 47 55.7**	**+0.3**
PBEJ				*e*S	**Sg**	**03 48 07.4**	**+0.1**
PBEJ				A	A	03 48 09.5	
	comp=N,32nm,0.1s						
PNCL	**Nicolau / Gran**	**1.10**	**334**	*e*P	**Pb**	**03 47 58.8**	**+0.1**
PNCL				*e*S	**Sg**	**03 48 13.7**	**+0.1**
PNCL				A	A	03 48 14.3	
	comp=N,24nm,0.2s						
EMIN	**Mina Concepcio**	**1.18**	**56**	Pg	**Pn**	**03 47 60.0**	**+0.2**
EMIN				Sg	**Sn**	**03 48 15.9**	**+0.4**
EMIN				*i* Vmb_Lg		03 48 17.9	
PBAR	**Barrancos**	**1.26**	**33**	*e*P	**Pg**	**03 48 02.3**	**+0.1**
PBAR				*e*S	**Sg**	**03 48 18.6**	**0.0**
PBAR				A	A	03 48 19.9	
	comp=N,10nm,0.2s						
EVO	**Evora**	**1.41**	**357**	P	**Pb**	**03 48 04.1**	**+0.2**
EVO				S	**Sb**	**03 48 22.1**	**+0.4**
EVO	**Evora**	**1.41**	**357**	⇓*e*P	**Pg**	**03 48 04.8**	**-0.3**
EVO				*e*S	**Sg**	**03 48 22.9**	**-0.5**
EVO				A	A	03 48 24.7	
	comp=N,22nm,0.1s						
ESPR	**Espera**	**1.67**	**98**	Pn	**Pb**	**03 48 07.7**	**-0.5**
ESPR				Pg	**Pg**	**03 48 09.3**	**-0.6**
ESPR				Sg	**Sb**	**03 48 30.5**	**+1.5**
ESPR				*i* Vmb_Lg		03 48 35.2	
PESTR	**Estremoz**	**1.76**	**8**	*e*Pn	**Pb**	**03 48 09.1**	**-0.8**
PESTR				*e*Sg	**Sg**	**03 48 33.4**	**-1.2**
PESTR				A	A	03 48 35.5	
	comp=N,9.6nm,0.2s						
PESTR	**Estremoz**	**1.76**	**8**	P	**Pg**	**03 48 11.1**	**-0.6**
PESTR				S	**Sb**	**03 48 32.3**	**+0.5**
EBAD	**Badajoz**	**1.78**	**23**	Pn	**Pn**	**03 48 07.9**	**-0.2**
EBAD				Pg	**Pb**	**03 48 10.7**	**+0.5**
EBAD				Sn	**Sn**	**03 48 29.7**	**-0.7**
EBAD				Sg	**Sb**	**03 48 33.1**	**+0.8**
EBAD				*i* Vmb_Lg		03 48 35.7	
PACT	**Alcochete**	**1.80**	**336**	*e*Pg	**Pg**	**03 48 12.6**	**+0.2**
PACT				*e*Sg	**Sg**	**03 48 36.4**	**+0.6**
PACT				A	A	03 48 37.0	
	comp=N,11nm,0.6s						
PMST	**Lisbon--Monsan**	**1.90**	**328**	*e*Pg	**Pg**	**03 48 14.7**	**+0.3**
PMST				*e*Sg	**Sg**	**03 48 39.3**	**+0.2**
PMST				A	A	03 48 41.0	
	comp=N,6.0nm,0.4s						
PMTG	**Montargil**	**1.96**	**353**	*e*Pn	**Pn**	**03 48 10.8**	**+0.2**
PMTG	**Montargil**	**1.96**	**353**	*e*Pg	**Pg**	**03 48 14.6**	**-0.9**
PMTG				*e*Sn	**Sn**	**03 48 35.5**	**+0.6**
PMTG				*e*Sg	**Sg**	**03 48 41.7**	**+0.7**
PMTG				A	A	03 48 44.2	
	comp=N,6.1nm,0.3s						
PMAFR	**Mafra**	**2.13**	**330**	*e*Pn	**Pn**	**03 48 14.0**	**+1.1**
PMAFR	**Mafra**	**2.13**	**330**	*e*Pg	**Pg**	**03 48 18.0**	**-0.7**
PMAFR				*e*Sn	**Sn**	**03 48 39.0**	**0.0**
PMAFR				A	A	03 48 39.6	
	comp=N,12nm,0.2s						
ECAB	**El Cabril**	**2.20**	**64**	Pn	**Pn**	**03 48 14.1**	**+0.3**
ECAB				Pg	**Pb**	**03 48 18.2**	**+0.9**
ECAB				Sn	**Sn**	**03 48 40.0**	**-0.7**
ECAB				Sg	**Sb**	**03 48 44.3**	**-0.1**
ECAB				*i* Vmb_Lg		03 48 48.1	
PMRV	**Marv??o**	**2.34**	**10**	*e*Pn	**Pn**	**03 48 15.8**	**0.0**
PMRV	**Marv??o**	**2.34**	**10**	*e*Pg	**Pb**	**03 48 20.9**	**+1.2**
PMRV				*e*Sn	**Sn**	**03 48 44.8**	**+0.5**
PMRV				*e*Sg	**Sb**	**03 48 50.4**	**+2.0**
PMRV				A	A	03 48 52.0	
	comp=N,10nm,0.5s						
PSBE	**So Bento**	**2.49**	**344**	*e*Pn	**Pn**	**03 48 18.5**	**+0.6**
PSBE	**So Bento**	**2.49**	**344**	*e*Pg	**Pg**	**03 48 25.1**	**-0.5**
PSBE				*e*Sn	**Sn**	**03 48 48.4**	**+0.5**
PSBE				*e*Sg	**Sg**	**03 48 57.5**	**-0.4**
PSBE				A	A	03 49 08.1	
	comp=N,2.7nm,0.6s						
SMIR	**Smir Dam**	**2.50**	**124**	P	**Pn**	**03 48 18.2**	**+0.3**
SMIR				S	**Sn**	**03 48 48.2**	**+0.2**
PCBR	**Castelo Branco**	**2.74**	**7**	*e*Pn	**Pn**	**03 48 21.8**	**+0.6**
PCBR				*e*Sn	**Sn**	**03 48 54.0**	**0.0**
PCBR				*e*Sg	**Sg**	**03 49 04.3**	**-1.5**
PCBR				A	A	03 49 05.3	
	comp=N,2.6nm,0.3s						
EADA	**Adamuz**	**2.84**	**67**	Pn	**Pn**	**03 48 23.7**	**+1.0**
EADA				Pg	**Pb**	**03 48 30.7**	**+2.3**
EADA				Sn	**Sn**	**03 48 57.9**	**+1.1**
EADA				Sg	**Sg**	**03 49 07.2**	**-2.1**
EADA				*i* Vmb_Lg		03 49 09.0	
PCAS	**Casmilo, Conde**	**2.96**	**351**	*e*Pg	**Pg**	**03 48 33.1**	**-1.6**
PCAS				*e*Sn	**Sn**	**03 48 59.9**	**+0.3**
PCAS				*e*Sg	**Sg**	**03 49 13.7**	**+0.6**
PCAS				A	A	03 49 14.9	
	comp=N,2.4nm,0.6s						
EPLA	**Plasencia**	**3.27**	**25**	Sn	**Sn**	**03 49 06.1**	**-1.1**
EPLA				Sg	**Sg**	**03 49 20.2**	**-2.7**
EPLA				*i* Vmb_Lg		03 49 20.7	
PAB	**San Pablo**	**3.70**	**48**	Pn	**Pn**	**03 48 34.1**	**-0.5**
PAB				Sn	**Sn**	**03 49 15.1**	**-2.9**
PAB				Sg	**Sg**	**03 49 34.2**	**-2.6**
PAB				*i* Vmb_Lg		03 49 38.3	
ZHG	**ZHG**	**3.81**	**164**	P	**Pn**	**03 48 36.0**	**-0.1**
ZHG				S	**Sn**	**03 49 23.4**	**+2.8**
EQES	**Quesada**	**3.91**	**79**	Pn	**Pn**	**03 48 37.7**	**+0.2**
EQES				Sn	**Sn**	**03 49 21.9**	**-1.3**
AKLM	**AKL**	**4.20**	**127**	P	**Pn**	**03 48 40.6**	**-0.8**
AKLM				S	**Sn**	**03 49 30.2**	**0.0**
MD31	**MD31**	**4.97**	**148**	P	**Pn**	**03 48 51.1**	**-1.0**
MD31				S	**Sn**	**03 49 51.0**	**+1.7**
MDT	**Midelt**	**5.08**	**147**	P	**Pn**	**03 48 52.8**	**-0.7**
MDT				S	**Sn**	**03 49 53.6**	**+1.6**

IDC 10 03:51:20.1±1.0, 5.19S×151.09E, h137km±27km, mb3.0/3, mbtmp3.4/3, Error ellipse: s-maj=119.4km s-min=29.9km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.28**	**47**	P	Pn	03 51 47.6	+1.2
	56nm,0.4s,baz=84,slow=2.0,SNR=4.8						
KRVT				S	Sn	03 52 06.3	-0.2
	139nm,0.8s,baz=175,slow=22,SNR=11						
WRA	**Warramunga Arr**	**21.93**	**227**	P	P	03 56 02.7	0.0
	0.3nm,0.3s,baz=51,slow=9.9,SNR=10						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**24.73**	**220**	P	P	03 56 28.6	-0.3
	0.2nm,0.3s,baz=60,slow=9.3,SNR=2.0						
	0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**27.98**	**241**	P	P	03 56 58.3	+0.2
	0.3nm,0.4s,baz=38,slow=9.9,SNR=1.1						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**148.80**	**287**	PKPbc	PKPbc	04 10 51.8	-0.8
	0.1nm,0.3s,baz=91,slow=2.0,SNR=5.6						

IDC 10 03:57:01.8±15.0, 16.73S×179.43W, h550km±169km, mb2.9/3, mbtmp3.8/3, Error ellipse: s-maj=254.8km s-min=59.9km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.90**	**258**	P	P	04 04 20.0	-0.3
	0.3nm,0.3s,baz=95,slow=8.0,SNR=19						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.19**	**253**	P	P	04 04 22.6	+0.1
	1.4nm,0.5s,baz=85,slow=8.4,SNR=21						
	1.4nm,0.5s						
PDAR	**Pinedale Array**	**87.17**	**44**	P	P	04 08 50.4	+0.3
	0.3nm,0.6s,baz=232,slow=4.9,SNR=3.5						
	0.3nm,0.6s						
BRTR	**Keskin Array B**	**143.27**	**315**	PKP	PKPbc	04 15 32.4	-0.1
	0.3nm,0.5s,baz=112,slow=3.9,SNR=4.1						

*NEIC **10** 04:23:02.0±1.2, 8°.42N±0°.06×126°.1E±0°.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=25.1km s-min=7.2km az=107.0*
*MAN **10** 04:23:02.6, 8°.35N×125°.93E, h12km, mb5.1, ML4.0, MS4.1*
MAN INTENSITY III - ROSARIO AGUSAN DEL SUR; INTENSITY II - LA PAZ AND TALACOGON AGUSAN DEL SUR.
*IDC **10** 04:23:03.1±3.3, 8°.44N×126°.14E, h25km±23km, mb3.7/9, mbtmp3.9/9, MS2.5/1, Error ellipse: s-maj=37.8km s-min=16.4km az=89.0*

ISC 10 04:23:03.7±1.4, 8.37N±0.04×126.06E±0.05, h30km±10km, n45, σ1.12/54, mb4.2/17, 8C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.35**	**121**	⇑*i*P	**Pn**	**04 23 12.0**	**-0.8**
BIPH				*i* S	**Sn**	**04 23 18.9**	**+0.1**
CGP	**Cagayan de Oro**	**1.35**	**274**	⇑*e*P	**Pn**	**04 23 24.5**	**-2.1**
CGP				*i* S	**Sn**	**04 23 41.5**	**-2.0**
DAV	**Davao City (W)**	**1.38**	**200**	Pg	**Pb**	**04 23 28.9**	**+0.1**
	209nm,0.3s,baz=47,slow=2.8,SNR=24						
DAV				Lg	Lg	04 23 51.8	
	159nm,0.3s,baz=257,slow=22,SNR=10						
DAV				LR	LR	04 23 52.9	
	comp=Z,274nm,18.8s,baz=332,slow=34						
DAV	**Davao City (W)**	**1.38**	**200**	Pn	**Pb**	**04 23 27.8**	**-1.0**
SCPH	**Surigao**	**1.51**	**338**	⇓*e*P	**Pb**	**04 23 30.4**	**-0.8**
SCPH				*e*S	**Sb**	**04 23 52.0**	**+2.1**
KCP	**Kidapawan**	**1.66**	**215**	⇑*i*P	**Pn**	**04 23 29.8**	**-1.1**
KCP				*i* S	**Sn**	**04 23 51.8**	**+0.6**
GHBP	**Garcia Hernand**	**2.12**	**306**	⇑*i*P	**Pn**	**04 23 37.0**	**-0.2**
GHBP				*i* S	**Sn**	**04 24 03.7**

comp=Z,0.3nm,0.8s,baz=239,slow=6.9,SNR=2.5
comp=Z,0.3nm,0.8s
K27K Chickie 83.36 26 P **P** 04 35 29.3 +1.6
FINES FINESS Array B 87.45 332 P **P** 04 35 47.2 -1.0
comp=Z,2.8nm,0.9s,baz=126,slow=5.2,SNR=4.6
comp=Z,2.8nm,0.9s
TORD Torodi Ar. Bea 120.75 291 PKP **PKPdf** 04 41 52.8 -1.2
comp=Z,0.4nm,0.7s,baz=64,slow=3.2,SNR=4.1

*IDC **10** 04:35:17.9±1.8, 2°.42S×133°.73E, h0km, mb3.9/3, mbtmp4.0/6, ML3.9/3, MS3.1/7, Error ellipse: s-maj=46.7km s-min=20.2km az=67.0*
ISC 10 04:35:22.6±1.7, 2.76S±0°.10×133°.2E±0°.2, h10km, n11, σ1§82/8, MS3.1/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.71**	**314**	Pn	**Pn**	**04 36 05.2**	**-1.0**
	26nm,0.3s,baz=13,slow=24,SNR=31						
SIJI				Pg	**Pb**	**04 36 12.6**	**+1.4**
	74nm,0.3s,baz=98,slow=14,SNR=20						
SIJI				Sn	**Sn**	**04 36 39.7**	**+0.6**
	1.9nm,0.3s,baz=77,slow=18,SNR=1.2						
	55nm,0.3s						
DAV	**Davao City (W)**	**12.39**	**322**	LR	LR	04 43 36.4	
	comp=Z,45nm,19.3s,baz=157,slow=40						
PMG	**Port Moresby**	**15.35**	**116**	LR	LR	04 46 25.9	
	comp=Z,81nm,21.1s,baz=336,slow=44						
FITZ	**Fitzroy Crossi**	**16.96**	**205**	P	**Pn**	**04 39 21.5**	**+1.4**
	0.6nm,0.3s,baz=34,slow=11,SNR=20						
FITZ				S	**Sn**	**04 42 26.4**	**-2.4**
	1.7nm,0.7s,baz=205,slow=17,SNR=1.8						
	9.0nm,0.7s						
WRA	**Warramunga Arr**	**17.11**	**176**	P	**Pn**	**04 39 23.4**	**+1.2**
	0.3nm,0.3s,baz=356,slow=12,SNR=26						
WRA				LR	LR	04 47 04.5	
	comp=Z,72nm,19.5s,baz=20,slow=40						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**20.79**	**178**	P	**P**	**04 40 05.2**	**+1.0**
	4.9nm,0.8s,baz=5.0,slow=12,SNR=20						
ASAR				LR	LR	04 49 12.0	
	comp=Z,119nm,18.6s,baz=346,slow=40						
	4.9nm,0.8s						
CTA	**Charters Tower**	**21.41**	**144**	LR	LR	04 50 11.7	
	comp=Z,89nm,19.9s,baz=292,slow=42						
JOW	**Kunigami**	**29.80**	**351**	LR	LR	04 51 10.5	
	comp=Z,37nm,21.7s,baz=124,slow=32						
KSRS	**Korea Array**	**40.31**	**353**	LR	LR	04 57 13.7	
	comp=Z,8.4nm,21.8s,baz=165,slow=33						
MKAR	**Makanchi Array**	**66.56**	**324**	P	P	04 46 08.2	-4.8
	0.8nm,0.6s,baz=108,slow=7.9,SNR=5.9						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**69.30**	**332**	P	**P**	**04 46 28.3**	**-1.7**
	0.3nm,0.3s,baz=116,slow=10,SNR=1.9						
	0.3nm,0.3s						

*DNK **10** 04:36:53.6±1.0, 82°.86N×6°.67W, h36km±46km, ML1.8*
BER 10 04:36:55.0±1.9, 82°.53N×6°.25W, h10km, ML2.1, Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.72**	**242**	*e*P	Pn	04 37 22.4	-2.5
NOR				*e*S	Sn	04 37 43.0	-3.9
NOR	**Nord**	**1.72**	**242**	*i* P	Pn	04 37 22.4	-2.6
NOR				*i* S	Sn	04 37 42.6	-4.3
NOR				IAML		04 37 44.5	
	comp=Z,12nm,0.3s						
KBS	**Kingsbay**	**4.63**	**132**	*e*P	Pn	04 38 03.2	-1.7
KBS				*e*S	Sn	04 38 52.5	-6.1
KBS				IAML		04 38 55.0	
	comp=Z,4.6nm,1.0s						
KBS	**Kingsbay**	**4.63**	**132**	*i* P	Pn	04 38 02.8	-2.1
SPA0	**Spitsbergen Ar**	**5.73**	**127**	*e*P	Pn	04 38 18.1	-1.9
SPA0				*e*S	Sn	04 39 18.2	-7.5
SPA0				IAML		04 39 40.6	
	comp=Z,3.7nm,0.8s						
DAG	**Danmarks Havn**	**6.18**	**207**	*e*P	Pn	04 38 24.9	-1.2
DAG				*e*S	Sn	04 39 30.2	-6.5
DAG	**Danmarks Havn**	**6.18**	**207**	*i* S	Sn	04 39 31.2	-5.5
DAG				IAML		04 39 37.3	
	comp=Z,2.3nm,0.6s						
HSPB	**Hornsund (broa**	**6.70**	**134**	*e*P	Pn	04 38 32.0	-1.2
HSPB				IAML		04 39 47.9	
	comp=Z,5.0nm,0.6s						
DBG	**Daneborg**	**8.69**	**206**	*i* S	Sn	04 40 28.6	-10

ROM 10 04:46:53.5±0.2, 42°.846N±0°.004×13°.056E±0°.006, h6km±1km, ML1.3/1, Error ellipse: s-maj=0.6km s-min=0.1km az=332.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**107**	P	Pg	04 46 55.1	+0.1
NRCA				S	Sg	04 46 56.1	+0.1
NRCA				AML	AML		
	comp=E,360μm,0.8s						
NRCA				AML	AML		
	comp=N,418μm,0.2s						
NRCA				AML	AML		
	comp=N,446μm,0.2s						
NRCA				AML	AML		
	comp=E,316μm,0.8s						
T1216	**Preci, Frazion**	**0.05**	**328**	P	Pg	04 46 55.2	+0.1
T1245	**Castelsantange**	**0.10**	**84**	P	Pg	04 46 56.2	+0.4
T1245				S	Sg	04 46 58.2	+0.9
T1245				AML	AML		
	comp=E,75μm,0.6s						
T1245				AML	AML		
	comp=N,83μm,0.9s						
T1245				AML	AML		
	comp=E,406μm,0.1s						
T1245				AML	AML		
	comp=N,205μm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**56**	P	Pg	04 46 56.9	+0.7
T1215	**Vallo di Nera,**	**0.14**	**252**	P	Pg	04 46 57.0	+0.5
T1215				S	Sg	04 46 59.5	+1.0
T1202	**Accumoli, Fraz**	**0.19**	**139**	P	Pg	04 46 58.1	+0.8
FDMO	**Fiordimonte**	**0.19**	**7**	P	Pg	04 46 57.8	+0.4
FDMO				S	Sg	04 47 00.9	+0.9
MMO1	**Montemonaco**	**0.21**	**75**	P	Pg	04 46 58.0	+0.4
MMO1				S	Sg	04 47 01.5	+1.1
LNSS	**Leonessa**	**0.24**	**183**	P	Pg	04 46 58.4	+0.1
LNSS				S	Sg	04 47 03.2	+1.6

*SSNC **10** 04:47:16.6±3.1, 20°.14N×71°.51W, h10km, MD3.6, MW2.8*
*OSPL **10** 04:47:24.2±3.2, 19°.85N×72°.01W, h0km±15km, ML2.4*
ISC 10 04:47:22.7±1.1, 19°.84N±0°.06×71°.98W±0°.04, h10km, n10, σ1§97/15, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**1.07**	**142**	*i* P	**Pg**	**04 47 42.7**	**-0.7**
SDDR				*e*S	**Sg**	**04 47 56.8**	**-0.7**
SC01	**Santiago de lo**	**1.25**	**109**	*i* P	**Pn**	**04 47 46.9**	**+0.6**
SC01				*e*S	**Sn**	**04 48 06.2**	**+3.0**
SC01				IAML		04 48 09.7	
	comp=Z,119nm,0.3s						
PAPH	**Port-au-Prince**	**1.34**	**193**	*i* P	**Pn**	**04 47 48.1**	**+0.5**
PAPH				*e*S	**Sb**	**04 48 06.7**	**+1.3**
PAPH				IAML		04 48 07.5	
	comp=Z,38nm,0.2s						
LOPE2	**Hotel El Peder**	**1.81**	**173**	*i* P	**Pn**	**04 47 56.0**	**+2.0**
LOPE2				IAML		04 48 21.9	
	comp=Z,33nm,0.6s						
GRTK	**Grand Turk**	**1.84**	**25**	*e*S	**Sn**	**04 48 17.9**	**+0.1**
BANI	**BANI**	**2.10**	**133**	*i* P	Pn	04 47 50.8	-7.4
BANI				*e*S	**Sn**	**04 48 19.3**	**-5.1**
BANI				IAML		04 48 27.9	
	comp=Z,26nm,0.5s						
GTBY	**Guantanamo Bay**	**2.95**	**272**	*e*P	**Pn**	**04 48 08.7**	**-1.0**
GTBY				*e*S	**Sn**	**04 48 45.3**	**+0.2**
GTBY	**Guantanamo Bay**	**2.95**	**272**	*i* P	**Pn**	**04 48 09.7**	**0.0**
GTBY				*e*S	**Sn**	**04 48 44.5**	**-0.6**
GTBY				IAML		04 48 49.7	
	comp=Z,22nm,2.5s						
HLGC	**Holguin**	**3.97**	**286**	*e*P	**Pn**	**04 48 23.3**	**-0.4**
HLGC				*e*S	**Sn**	**04 49 11.9**	**+1.6**
HLGC				IAML		04 49 20.2	
	comp=E,5.5nm,0.3s						
HLGC				IAML		04 49 20.6	
	comp=N,4.5nm,0.3s						

CCCC Cccc 5.59 285 *e*P Pn 04 48 39.8 -6.2

*KRNET **10** 05:08:20.5±0.1, 42°.82N×69°.79E, mb3.0*
*SOME **10** 05:08:21.9, 42°.88N×70°.10E, h0km*
*NNC **10** 05:08:22.4±0.4, 42°.84N×70°.15E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=6.5km s-min=1.9km az=130.0*
ISC 10 05:08:22.3±2.0, 42°.94N±0°.06×69°.9E±0°.1, h10km, n38, σ2§93/65, 21C-13D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK08	**Karatay Array**	**0.50**	**71**	⇑P	**Pg**	**05 08 29.5**	**-2.5**
KK08				⇑S	**Sg**	**05 08 34.7**	**-3.8**
KK07	**Karatay Array**	**0.50**	**73**	⇑P	**Pg**	**05 08 29.4**	**-2.7**
KK07				⇓S	**Sg**	**05 08 34.5**	**-4.2**
KK03	**Karatay Array**	**0.51**	**71**	⇑P	**Pg**	**05 08 29.6**	**-2.5**
KK03				⇓S	**Sg**	**05 08 34.9**	**-4.0**
KK01	**Karatay Array**	**0.51**	**71**	⇑P	**Pg**	**05 08 29.7**	**-2.5**
KK01				⇑S	**Sg**	**05 08 34.7**	**-4.3**
KK09	**Karatay Array**	**0.51**	**69**	⇑P	**Pg**	**05 08 29.7**	**-2.6**
KK09				⇓S	**Sg**	**05 08 35.2**	**-3.8**
KK04	**Karatay Array**	**0.51**	**71**	⇑P	**Pg**	**05 08 29.8**	**-2.5**
KK04				⇓S	**Sg**	**05 08 35.2**	**-3.9**
KK02	**Karatay Array**	**0.51**	**72**	⇑P	**Pg**	**05 08 29.7**	**-2.6**
KK02				⇑S	**Sg**	**05 08 34.7**	**-4.4**
KK31	**Karatay Array**	**0.51**	**72**	⇓P	**Pg**	**05 08 29.7**	**-2.6**
	3.8nm,0.2s,baz=60,slow=24,SNR=80						
KK31				⇑S	**Sg**	**05 08 35.1**	**-4.0**
	23nm,0.2s,baz=234,slow=33,SNR=8.2						
KK06	**Karatay Array**	**0.52**	**73**	⇑P	**Pg**	**05 08 29.8**	**-2.6**
KK06				⇑S	**Sg**	**05 08 35.3**	**-4.0**
KK05	**Karatay Array**	**0.53**	**71**	⇑P	**Pg**	**05 08 30.0**	**-2.5**
KK05				⇑S	**Sg**	**05 08 35.6**	**-3.9**
IUG	**Iuzhnay**	**0.81**	**170**	*e*P	**Pg**	**05 08 36.4**	**-1.4**
	16nm,0.1s						
IUG				*e*S	**Sg**	**05 08 47.8**	**-0.6**
	868nm,0.2s						
TRKS	**Terek-Say**	**1.71**	**145**	⇑*e*P	**Pn**	**05 08 52.1**	**-0.2**
	baz=42						
TRKS				⇑*i*S	**Sb**	**05 09 15.5**	**0.0**
	baz=42						
EKS2	**Erkin-Say**	**2.91**	**94**	⇓*e*P	**Pn**	**05 09 10.5**	**+1.8**
	baz=92						
EKS2				⇓*e*S	**Sb**	**05 09 46.9**	**-3.0**
	baz=92						
BTK	**Batken**	**2.97**	**165**	⇓*e*P	**Pn**	**05 09 09.5**	**-0.1**
	baz=64						
BTK				⇓*e*S	**Sn**	**05 09 45.1**	**-0.3**
	baz=64						
USP	**Ospenovka**	**3.42**	**83**	⇑*e*P	**Pn**	**05 09 17.9**	**+2.1**
	baz=81						
USP				⇑*e*S	**Sn**	**05 09 59.8**	**+3.4**
	baz=81						
ARLS	**Aral**	**3.49**	**107**	⇓*e*P	**Pn**	**05 09 18.3**	**+1.5**
	baz=4.0						
ARLS				⇓*e*S	**Sn**	**05 10 00.4**	**+2.2**
	baz=4.0						
UCH	**Uchtor**	**3.52**	**100**	⇓*e*P	**Pn**	**05 09 19.1**	**+1.6**
	baz=98						
UCH				⇓*e*S	**Sn**	**05 10 01.5**	**+2.1**
	baz=98						
SGDS	**Sogindy**	**3.54**	**80**	*e*P	**Pb**	**05 09 23.1**	**-1.9**
	3.2nm,0.3s						
SGDS				*e*S	**Sb**	**05 10 07.0**	**-0.9**
	11nm,0.2s						
BTLS	**Baital**	**3.69**	**54**	*e*P	**Pg**	**05 09 30.0**	**-2.8**
	2.1nm,0.1s						
BTLS				*e*S	**Sg**	**05 10 19.2**	**-1.4**
	5.3nm,0.2s						
BTLS	**Baital**	**3.69**	**54**	Pg	**Pg**	**05 09 30.5**	**-2.4**
	2.3nm,0.2s						
BTLS				Lg	Lg	05 10 19.2	
	5.2nm,0.4s						
TKM2	**Tokmak 2**	**4.22**	**88**	⇑Pg	**Pb**	**05 09 35.7**	**-1.1**
	2.3nm,0.7s						
TKM2				⇑Lg	Lg	05 10 28.7	
	9.4nm,0.6s						
KRBS	**Karabastau**	**4.32**	**78**	*e*P	**Pb**	**05 09 36.7**	**-1.6**
	2.0nm,0.4s						
KRBS				*e*S	**Sb**	**05 10 30.5**	**0.0**
	13nm,0.3s						
KRBS	**Karabastau**	**4.32**	**78**	Pg	**Pb**	**05 09 36.7**	**-1.6**
	2.5nm,0.3s						
KRBS				Lg	Lg	05 10 30.5	
	12nm,0.6s						
KST	**Kastek**	**4.49**	**87**	*e*P	**Pb**	**05 09 40.9**	**-0.3**
	4.6nm,0.4s						
KST				*e*S	**Sb**	**05 10 37.7**	**+2.2**
	10nm,0.6s						
KST	**Kastek**	**4.49**	**87**	Pg	**Pb**	**05 09 40.9**	**-0.3**
	4.6nm,0.4s						
KST				Lg	Lg	05 10 37.7	
	10nm,0.6s						
KUU	**Kurty**	**4.82**	**76**	*e*P	**Pb**	**05 09 47.5**	**+0.6**
	1.4nm,0.2s						
KUU				*e*S	**Sb**	**05 10 48.9**	**+3.9**
	15nm,0.3s						
IZV	**Izvestkoviy**	**4.96**	**87**	Pg	**Pb**	**05 09 49.7**	**+0.3**
IZV				Lg	Lg	05 10 53.0	
KTBS	**Karatobe**	**5.05**	**79**	*e*P	**Pb**	**05 09 51.7**	**+1.0**
	0.8nm,0.3s						
KTBS				*e*S	**Sb**	**05 10 56.6**	**+5.2**
	32nm,0.4s						
KTBS	**Karatobe**	**5.05**	**79**	Pg	**Pb**	**05 09 52.0**	**+1.3**
	0.8nm,0.3s						
KTBS				Lg	Lg	05 10 56.6	
	32nm,0.4s						
CHKK	**Chushkaly**	**5.28**	**78**	*e*P	**Pb**	**05 09 55.2**	**+0.5**
	1.7nm,0.3s						
CHKK				*e*S	**Sb**	**05 11 02.4**	**+4.2**
	12nm,0.3s						
CHKK	**Chushkaly**	**5.28**	**78**	Pg	**Pb**	**05 09 55.2**	**+0.5**
	1.7nm,0.3s						
CHKK				Lg	Lg	05 11 02.4	
	10nm,0.5s						
CHKK	**Chushkaly**	**5.28**	**78**	*e*S	**Sb**	**05 11 02.4**	**+4.2**
	10nm,0.2s						
ARXS	**Arharly**	**5.94**	**75**	*e*P	**Pb**	**05 10 07.3**	**+1.4**
	3.5nm,0.5s						
ARXS				*e*S	**Sb**	**05 11 23.1**	**+6.1**
	8.0nm,0.3s						
ARXS	**Arharly**	**5.94**	**75**	Pg	**Pb**	**05 10 06.9**	**+1.1**
	3.2nm,0.6s						
ARXS				Lg	Lg	05 11 23.1	
	8.0nm,0.5s						
BLB	**Baldybastay**	**6.38**	**77**	*e*P	**Pb**	**05 10 14.5**	**+1.0**
	3.1nm,0.5s						
BLB				*e*S	**Sb**	**05 11 35.2**	**+5.4**
	6.8nm,0.3s						
BLB	**Baldybastay**	**6.38**	**77**	*e*S	**Sb**	**05 11 34.9**	**+5.0**
	6.8nm,0.3s						
KPKS	**Kokpek**	**6.48**	**82**	*e*P	**Pb**	**05 10 16.9**	**+1.7**
	3.7nm,0.9s						
KPKS				*e*S	**Sb**	**05 11 39.3**	**+6.6**
	6.1nm,0.5s						
KPKS	**Kokpek**	**6.48**	**82**	Pg	**Pb**	**05 10 16.9**	**+1.7**
	3.7nm,0.9s						
KPKS				Lg	Lg	05 11 39.3	
	6.1nm,0.8s						

SOME 10 05:10:21.5, 43°.55N×75°.35E, h5km, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBS	**Karabastau**	**0.28**	**58**	*e*P	Pg	05 10 27.1	+0.2
	2.1nm,0.3s						
KRBS				*e*S	Sg	05 10 31.2	+0.6
	7.0nm,0.2s						
MTBS	**Maitube**	**0.89**	**118**	*e*P	Pg	05 10 37.8	-0.8
	1.6nm,0.1s						
MTBS				*e*S	Sg	05 10 49.8	-0.4
	9.5nm,0.4s						
CHKK	**Chushkaly**	**1.23**	**75**	*e*P	Pb	05 10 45.2	0.0
	0.8nm,0.1s						
TNSS	**Tian-Shan**	**1.27**	**113**	*e*P	Pg	05 10 45.4	-0.5
	4.0nm,1.1s						
TNSS				*e*S	Sg	05 11 02.7	+0.2
	4.5nm,0.7s						
MDOK	**Medeo**	**1.30**	**107**	*e*P	Pg	05 10 46.3	0.0
	6.7nm,0.9s						
MDOK				*e*S	Sn	05 11 04.1	-0.1
	11nm,0.6s						
ARXS	**Arharly**	**1.91**	**69**	*e*P	Pb	05 10 56.8	-0.1
	2.7nm,0.3s						
ARXS				*e*S	Sg	05 11 22.1	-0.8
	8.0nm,0.3s						
BLB	**Baldybastay**	**2.33**	**75**	*e*P	Pb	05 11 04.3	+0.2
	3.7nm,0.0s						

*IDC **10** 05:24:29.8±1.6, 60°.38N×153°.81W, h154km±14km, mb3.6/10, mbtmp4.0/15, Error ellipse: s-maj=20.6km s-min=11.6km az=37.0*
*NEIC **10** 05:24:30.1±1.7, 60°.30N±0°.04×153°.59W±0°.09, h175km±4km, Error ellipse: s-maj=6.5km s-min=5.7km az=53.0*
*AEIC **10** 05:24:30±1.6, 60°.28N±0°.04×153°.51W±0°.09, h176km±3km, ML3.8, mb4.1/40(NEIC), ML3.9/136(NEIC), Error ellipse: s-maj=6.5km s-min=6.2km az=48.0*
*ANF **10** 05:24:30.6±0.1, 60°.29N×153°.52W, h165km±1km, ML3.9/74, Error ellipse: s-maj=1.6km s-min=1.3km az=114.0*
ISC 10 05:24:30.6±0.6, 60°.30N±0°.03×153°.51W±0°.03, h172km±5km, n484, σ1§10/512, mb4.1/28, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.37**	**138**		**Pn**	**05 24 54.0**	**-0.2**
IVE					**Sn**	**05 25 12.4**	**+0.1**
RDWB	**Redoubt West**	**0.39**	**60**		**Pn**	**05 24 54.2**	**-0.1**
RDWB					**Sn**	**05 25 11.9**	**-0.6**
RED	**Redoubt Volcan**	**0.39**	**71**		**Pn**	**05 24 54.0**	**-0.2**
RED					**Sn**	**05 25 11.8**	**-0.5**
NCT	**North Crescent**	**0.39**	**47**		**Pn**	**05 24 54.2**	**0.0**
NCT					**Sn**	**05 25 12.1**	**-0.3**
RSO	**Redoubt South**	**0.41**	**66**		**Pn**	**05 24 54.4**	**0.0**
RDSO	**Redoubt South**	**0.41**	**67**		**Pn**	**05 24 54.3**	**-0.1**
RDJH	**Redoubt Jeurge**	**0.46**	**50**		**Pn**	**05 24 54.6**	**0.0**
O20K	**Slope Mountain**	**0.49**	**115**		**Pn**	**05 24 54.6**	**0.0**
O20K					**Sn**	**05 25 13.2**	**+0.2**
O20K	**Slope Mountain**	**0.49**	**115**	P	**Pn**	**05 24 54.8**	**+0.2**
	baz=294,SNR=96						
O20K				S	**Sn**	**05 25 13.4**	**+0.5**
	baz=294						
DFR	**Drift River**	**0.51**	**54**		**Pn**	**05 24 54.5**	**-0.1**
P19K	**Oil Pt**	**0.66**	**168**		**Pn**	**05 24 55.2**	**-0.2**
P19K	**Oil Pt**	**0.66**	**168**	IAML		05 24 56.3	
	comp=E,571nm,0.3s						
P19K				IAML		05 24 57.2	
	comp=N,596nm,0.5s						
P19K					**Sn**	**05 25 14.2**	**-0.2**
P19K	**Oil Pt**	**0.66**	**168**	P	**Pn**	**05 24 55.4**	**0.0**
	baz=347,SNR=84						
P19K				S	**Sn**	**05 25 14.0**	**-0.3**
	baz=347						
N19K	**Bonanza Creek**	**0.71**	**318**		**Pn**	**05 24 55.5**	**-0.2**
N19K	**Bonanza Creek**	**0.71**	**318**	IAML		05 24 56.3	
	comp=E,93nm,0.4s						
N19K				IAML		05 24 57.2	
	comp=N,121nm,0.4s						
N19K					**Sn**	**05 25 13.9**	**-1.2**
N19K	**Bonanza Creek**	**0.71**	**318**	P	**Pn**	**05 24 55.5**	**-0.2**
	baz=138,SNR=113						
N19K				S	**Sn**	**05 25 13.7**	**-1.3**
	baz=138						
AU22	**Augustine Moun**	**0.93**	**175**		**Pn**	**05 24 57.0**	**0.0**
AU22					**Sn**	**05 25 16.9**	**-0.4**
AUCH	**Augustine Cone**	**0.94**	**178**		**Pn**	**05 24 57.3**	**+0.1**
AUQ	**Augustine Qik'**	**0.94**	**177**		**Pn**	**05 24 57.1**	**-0.1**
CKL	**Chakachamna La**	**1.07**	**32**		**Pn**	**05 24 58.7**	**+0.5**
N20K	**Mount Spurr**	**1.11**	**35**	P	**Pn**	**05 24 58.8**	**+0.3**
	baz=215,SNR=504						
N20K				S	**Sn**	**05 25 19.6**	**-0.4**
	baz=215						
CKT	**Bend**	**1.11**	**35**		**Pn**	**05 24 58.7**	**+0.2**
HOM	**Homer**	**1.14**	**123**		**Pn**	**05 24 58.7**	**+0.1**
HOM					**Sn**	**05 25 20.4**	**+0.2**
HOM	**Homer**	**1.14**	**123**	IAML		05 25 21.8	
	comp=E,6μm,0.4s						
HOM				IAML		05 25 22.0	
	comp=N,5μm,0.5s						
HOM	**Homer**	**1.14**	**123**	P	**Pn**	**05 24 58.7**	**+0.1**
	baz=304,SNR=21						
HOM				S	**Sn**	**05 25 20.5**	**+0.3**
	baz=304						
SPCN	**Chakachatna No**	**1.14**	**34**		**Pn**	**05 24 59.2**	**+0.5**
SPU	**Mount Spurr**	**1.14**	**38**		**Pn**	**05 24 58.8**	**+0.1**
SPCP	**Crater Peak Br**	**1.18**	**34**		**Pn**	**05 24 59.6**	**+0.5**
N18K	**Kilae Creek**	**1.24**	**289**		**Pn**	**05 24 59.2**	**-0.2**
N18K					**Sn**	**05 25 20.4**	**-1.4**
N18K	**Kilae Creek**	**1.24**	**289**	P	**Pn**	**05 24 59.4**	**-0.2**
	baz=108,SNR=244						
N18K				S	**Sn**	**05 25 20.2**	**-1.6**
	baz=108						
SPCG	**Spurr Capps Gl**	**1.24**	**36**		**Pn**	**05 24 59.9**	**+0.2**
P18K	**Big Mountain,**	**1.25**	**224**		**Pn**	**05 24 59.2**	**-0.5**
P18K	**Big Mountain,**	**1.25**	**224**	P	**Pn**	**05 24 59.2**	**-0.5**
	baz=43						
P18K				S	**Sn**	**05 25 20.2**	**-1.9**
	baz=43						
CAPN	**Captain Cook N**	**1.26**	**67**		**Pn**	**05 25 00.8**	**+1.3**
CAPN	**Captain Cook N**	**1.26**	**67**	IAML		05 25 27.4	
	comp=E,2μm,0.3s						
CAPN				IAML		05 25 31.0	
	comp=N,2μm,0.4s						
CAPN	**Captain Cook N**	**1.26**	**67**	P	**Pn**	**05 25 00.9**	**+1.3**
	baz=248,SNR=6.9						
SVW2	**Sparrevohn**	**1.30**	**309**		**Pn**	**05 24 59.6**	**-0.5**
SVW2	**Sparrevohn**	**1.30**	**309**	IAML		05 25 01.1	
	comp=E,339nm,0.4s						
SVW2					**Sn**	**05 25 21.3**	**-1.5**
SVW2				IAML		05 25 21.8	
	comp=N,427nm,0.8s						
Q19K	**Cape Douglas,**	**1.37**	**183**		**Pn**	**05 25 00.3**	**-0.5**
Q19K	**Cape Douglas,**	**1.37**	**183**		**Sn**	**05 25 22.5**	**-1.5**
Q19K				IAML		05 25 27.4	
	comp=N,1μm,0.8s						
Q19K				IAML		05 25 31.3	
	comp=E,1μm,0.9s						
Q19K	**Cape Douglas,**	**1.37**	**183**	P	**Pn**	**05 25 00.3**	**-0.5**
	baz=2.6,SNR=22						
Q19K				S	**Sn**	**05 25 22.7**	**-1.3**
	baz=2.6						
CNPM	**China Poot**	**1.38**	**123**		**Pn**	**05 25 00.7**	**-0.1**
CNPM					**Sn**	**05 25 23.0**	**-1.1**
BRLK	**Bradley Lake**	**1.42**	**111**		**Pn**	**05 25 00.9**	**-0.3**
STLK	**Strandline Lak**	**1.46**	**33**		**Pn**	**05 25 01.8**	**+0.3**
BRSE	**Bradley Lake S**	**1.50**	**111**		**Pn**	**05 25 01.8**	**-0.1**
BRSE	**Bradley Lake S**	**1.50**	**111**	P	**Pn**	**05 25 01.9**	**-0.1**
	baz=292,SNR=327						
BRSE				S	**Sn**	**05 25 24.7**	**-1.4**
	baz=292						
M20K	**Styx River**	**1.60**	**6**		**Pn**	**05 25 03.7**	**+0.7**
M20K	**Styx River**	**1.60**	**6**	P	**Pn**	**05 25 03.6**	**+0.7**
	baz=187,SNR=59						
M20K				S	**Sn**	**05 25 27.6**	**-0.5**
	baz=187						
SLKM	**Skilak Lake**	**1.65**	**81**		**Pn**	**05 25 02.6**	**-0.8**
M19K	**Big River Lodg**	**1.67**	**346**		**Pn**	**05 25 03.5**	**-0.1**
M19K	**Big River Lodg**	**1.67**	**346**	P	**Pn**	**05 25 03.5**	**-0.1**
	baz=165,SNR=68						
M19K				S	**Sn**	**05 25 28.6**	**-0.6

P17K	Kvichak River	1.85	235		Pn	05 25 05.6	+0.2
P17K	Kvichak River	1.85	235	P	Pn	05 25 05.5	0.0
	baz=52						
O17K	Koliganek Bris	1.87	255		Pn	05 25 05.8	0.0
O17K	Koliganek Bris	1.87	255	P	Pn	05 25 05.8	0.0
	baz=73						
O17K				S	Sn	05 25 32.2	-0.7
	baz=73						
O22K	Cooper Landing	1.89	83		Pn	05 25 05.2	-0.7
O22K					Sn	05 25 32.6	-0.6
O22K				IAML		05 25 33.5	
	comp=E,2µm,0.3s						
O22K	Cooper Landing	1.89	83	P	Pn	05 25 05.1	-0.7
	baz=266,SNR=45						
O22K				S	Sn	05 25 32.2	-1.0
	baz=266						
SKT	Skwentna	1.94	29		Pn	05 25 06.9	+0.4
SKT	Skwentna	1.94	29	IAML		05 25 34.9	
	comp=N,444nm,0.4s						
SKT	Skwentna	1.94	29	P	Pn	05 25 07.0	+0.4
	baz=210,SNR=275						
SKT				S	Sn	05 25 33.9	-0.5
	baz=210						
L19K	White Mountain	2.00	342		Pn	05 25 06.9	-0.2
L19K	White Mountain	2.00	342	P	Pn	05 25 06.9	-0.2
	baz=161,SNR=75						
L19K				S	Sn	05 25 34.9	-0.7
	baz=161						
RC01	Rabbit Creek A	2.02	65		Pn	05 25 06.4	-0.9
RC01				IAML		05 25 35.9	
	comp=N,935nm,0.3s						
RC01				IAML		05 25 35.9	
	comp=E,1µm,0.2s						
RC01	Rabbit Creek A	2.02	65	P	Pn	05 25 06.4	-0.9
	baz=248,SNR=50						
RC01				S	Sn	05 25 35.1	-0.7
	baz=248						
KAWH	Katmai	2.03	200		Pn	05 25 06.8	-0.8
SEW	Seward	2.04	94		Pn	05 25 06.8	-0.6
SEW	Seward	2.04	94	P	Pn	05 25 06.9	-0.6
	baz=277,SNR=41						
SEW				S	Sn	05 25 34.3	-1.7
	baz=277						
KVTA	Katmai Vly 10	2.13	206		Pn	05 25 08.1	-0.4
KAKN	Katmai Knife C	2.16	202		Pn	05 25 08.2	-0.8
L20K	Farewell, AK	2.20	356		Pn	05 25 09.8	+0.4
L20K	Farewell, AK	2.20	356	P	Pn	05 25 09.8	+0.4
	baz=175,SNR=58						
L20K				S	Sn	05 25 39.2	-0.3
	baz=175						
M22K	Willow	2.21	47		Pn	05 25 08.8	-0.5
M22K	Willow	2.21	47	IAML		05 25 43.9	
	comp=N,1µm,0.4s						
M22K	Willow	2.21	47	P	Pn	05 25 08.9	-0.5
	baz=230,SNR=73						
M22K				S	Sn	05 25 39.4	-0.1
	baz=230						
Q16K	King Salmon	2.28	226		Pn	05 25 10.2	-0.1
Q16K	King Salmon	2.28	226	P	Pn	05 25 10.4	+0.1
	baz=44,SNR=9.6						
Q16K				S	Sn	05 25 40.7	-0.3
	baz=44						
ANCK	Angle Creek	2.34	207		Pn	05 25 10.5	-0.5
CNTC	Contact Creek	2.37	212		Pn	05 25 11.1	-0.4
Q17K	Contact Creek	2.38	212	P	Pn	05 25 11.0	-0.5
	baz=30,SNR=9.1						
Q17K				S	Sn	05 25 41.7	-1.5
	baz=30						
O16K	Kokwok River B	2.41	255		Pn	05 25 11.8	0.0
O16K	Kokwok River B	2.41	255	P	Pn	05 25 11.7	0.0
	baz=71,SNR=26						
O16K				S	Sn	05 25 43.0	-0.7
	baz=71						
PMR	Palmer	2.50	57		Pn	05 25 11.2	-1.6
PMR				IAML		05 25 44.2	
	comp=N,658nm,0.1s						
PMR				IAML		05 25 44.5	
	comp=E,578nm,0.2s						
PMR	Palmer	2.50	57	P	Pn	05 25 11.2	-1.6
	baz=240,SNR=53						
PMR				S	Sn	05 25 43.7	-1.9
	baz=240						
KDAK	Kodiak Island	2.57	169	P	Pn	05 25 11.6	-2.0
	comp=E,14nm,0.3s,baz=43,slow=12,SNR=84						
KDAK				S	Sn	05 25 43.5	-3.5
	comp=E,312nm,0.3s,baz=305,slow=23,SNR=82						
KDAK	Kodiak Island	2.57	169		Pn	05 25 12.0	-1.6
KDAK	Kodiak Island	2.57	169	IAML		05 25 45.2	
	comp=E,1µm,0.4s						
KDAK				IAML		05 25 45.4	
	comp=E,662nm,0.4s						
KDAK	Kodiak Island	2.57	169	P	Pn	05 25 11.6	-2.0
	baz=350						
P16K	Nushagak River	2.60	243		Pn	05 25 14.0	-0.1
P16K	Nushagak River	2.60	243	P	Pn	05 25 12.7	-1.3
	baz=59						
N16K	Nishlik Lake	2.62	276		Pn	05 25 14.3	+0.1
N16K	Nishlik Lake	2.62	276	P	Pn	05 25 14.4	+0.2
	baz=92,SNR=52						
PWL	Port Wells	2.62	75		Pn	05 25 12.5	-1.7
PWL				IAML		05 25 49.4	
	comp=E,920nm,0.4s						
PWL				IAML		05 25 51.3	
	comp=N,768nm,0.5s						
PWL	Port Wells	2.62	75	P	Pn	05 25 12.7	-1.5
	baz=260,SNR=55						
CUT	Chulitna	2.63	35		Pn	05 25 14.0	-0.4
CUT	Chulitna	2.63	35	P	Pn	05 25 13.9	-0.4
	baz=218,SNR=88						
GHO	Glory Hole Cre	2.68	54		Pn	05 25 13.7	-1.3
GHO	Glory Hole Cre	2.68	54	IAML		05 25 48.4	
	comp=E,908nm,0.4s						
GHO				IAML		05 25 48.8	
	comp=N,902nm,0.3s						
PPLA	Purkeypile	2.69	13		Pn	05 25 14.7	-0.4
PPLA	Purkeypile	2.69	13	P	Pn	05 25 16.0	+0.9
	baz=194,SNR=19						
KNK	Knik Glacier	2.71	63		Pn	05 25 14.0	-1.4
KNK				IAML		05 25 50.6	
	comp=N,845nm,0.4s						
KNK				IAML		05 25 50.7	
	comp=E,670nm,0.5s						
KNK	Knik Glacier	2.71	63	P	Pn	05 25 14.1	-1.4
	baz=248,SNR=50						
TT01	Tatalina	2.88	337		Pn	05 25 16.8	-0.6
TTA	Tatalina	2.90	337		Pn	05 25 17.3	-0.4
TTA	Tatalina	2.90	337	P	Pn	05 25 17.1	-0.6
	baz=155,SNR=48						
SML	Sawmill	2.94	57		Pn	05 25 16.7	-1.5
SML				IAML		05 25 55.5	
	comp=N,455nm,0.4s						
SML				IAML		05 25 56.0	
	comp=E,259nm,0.5s						
SML	Sawmill	2.94	57	P	Pn	05 25 16.7	-1.5
	baz=241,SNR=38						
R17K	Ugashik Creek	3.05	210	P	Pn	05 25 18.9	-0.6
	baz=28						
P23K	Montague Islan	3.07	93		Pn	05 25 19.7	0.0
P23K	Montague Islan	3.07	93	P	Pn	05 25 19.7	0.0
	baz=278						
K20K	Telida	3.08	355		Pn	05 25 20.2	+0.3
K20K	Telida	3.08	355	P	Pn	05 25 20.3	+0.4
	baz=175,SNR=82						
OHAK	Old Harbor	3.08	178		Pn	05 25 17.6	-2.3
OHAK	Old Harbor	3.08	178	IAML		05 25 55.0	
	comp=N,384nm,0.5s						
OHAK				IAML		05 25 55.8	
	comp=E,437nm,0.4s						
OHAK	Old Harbor	3.08	178	P	Pn	05 25 17.6	-2.3
	baz=358						
M23K	Glacier View	3.19	59		Pn	05 25 19.9	-1.3
M23K	Glacier View	3.19	59	P	Pn	05 25 20.0	-1.2
	baz=244,SNR=61						
CAST	Castle Rocks	3.21	12		Pn	05 25 21.6	+0.2
CAST	Castle Rocks	3.21	12	P	Pn	05 25 21.6	+0.2
	baz=193,SNR=47						
GLI	Glacier Island	3.22	77		Pn	05 25 19.5	-2.1
GLI	Glacier Island	3.22	77	P	Pn	05 25 20.1	-1.4
	baz=262						
SCM	Sheep Creek Mo	3.38	60		Pn	05 25 22.5	-1.1
SCM	Sheep Creek Mo	3.38	60	IAML		05 26 07.3	
	comp=E,394nm,0.7s						
SCM				IAML		05 26 07.6	
	comp=N,288nm,0.2s						
SCM	Sheep Creek Mo	3.38	60	P	Pn	05 25 22.5	-1.1
	baz=245,SNR=57						
WAT1	Susitna Watana	3.48	41		Pn	05 25 24.1	-0.8
WAT1	Susitna Watana	3.48	41	P	Pn	05 25 24.0	-0.8
	baz=225						
HIN	Hinchinbrook I	3.48	85		Pn	05 25 23.6	-1.4
KTH	Kantishna Hill	3.49	19		Pn	05 25 24.6	-0.4
FID	Port Fidalgo	3.51	79		Pn	05 25 23.4	-1.7
TRF	Thorofare Moun	3.51	24		Pn	05 25 24.9	-0.5
TRF				IAML		05 26 10.6	
	comp=E,120nm,0.7s						
TRF				IAML		05 26 12.7	
	comp=N,148nm,0.5s						
TRF	Thorofare Moun	3.51	24	P	Pn	05 25 25.2	-0.1
	baz=207,SNR=28						
TRF				S	Sn	05 26 05.7	-2.5
	baz=207						
WAT6	Susitna Watana	3.60	48		Pn	05 25 25.5	-0.9
WAT6	Susitna Watana	3.60	48	P	Pn	05 25 25.6	-0.8
	baz=233,SNR=44						
VMT	TAPS Tl Valdez	3.60	74		Pn	05 25 25.4	-0.9
CHUM	Lake Minchumin	3.64	8		Pn	05 25 27.0	+0.2
CHUM	Lake Minchumin	3.64	8	P	Pn	05 25 27.0	+0.2
	baz=189,SNR=12						
Q23K	Middleton Isla	3.71	100		Pn	05 25 26.8	-1.0
Q23K				IAML		05 26 13.7	
	comp=N,344nm,0.8s						
Q23K				IAML		05 26 14.0	
	comp=E,260nm,1.1s						
Q23K	Middleton Isla	3.71	100	P	Pn	05 25 27.6	-0.2
	baz=286						
MID	Middleton Isla	3.72	100		Pn	05 25 26.8	-1.0
MID				IAML		05 26 13.7	
	comp=N,284nm,0.8s						
MID				IAML		05 26 14.0	
	comp=E,288nm,1.1s						
RND	Reindeer	3.82	33		Pn	05 25 28.1	-1.1
RND				IAML		05 26 15.6	
	comp=E,115nm,0.4s						
RND				IAML		05 26 17.1	
	comp=N,98nm,0.3s						
EYAK	Cordova Ski Ar	3.86	83		Pn	05 25 28.9	-0.7
EYAK	Cordova Ski Ar	3.86	83	P	Pn	05 25 29.1	-0.4
	baz=269,SNR=54						
DIV	Divide	3.89	74		Pn	05 25 29.1	-1.0
KLU	Klutina	3.90	69		Pn	05 25 29.2	-0.9
KLU	Klutina	3.90	69	P	Pn	05 25 29.3	-0.9
	baz=255,SNR=195						
J20K	Nowinta River	3.91	356		Pn	05 25 30.6	+0.4
J20K	Nowinta River	3.91	356	P	Pn	05 25 30.6	+0.4
	baz=175,SNR=60						
M24K	Tolsona, Glenn	3.99	60		Pn	05 25 31.1	-0.2
M24K				IAML		05 26 21.4	
	comp=E,290nm,0.5s						
M24K				IAML		05 26 22.1	
	comp=N,265nm,0.5s						
M24K	Tolsona, Glenn	3.99	60	P	Pn	05 25 31.1	-0.2
	baz=246,SNR=45						
BPAW	Bear Paw Mtn.	4.00	16		Pn	05 25 30.6	-0.8
BPAW				IAML		05 26 16.5	
	comp=E,82nm,0.9s						
BPAW				IAML		05 26 16.9	
	comp=N,144nm,0.8s						
BPAW	Bear Paw Mtn.	4.00	16	P	Pn	05 25 30.5	-0.8
	baz=198,SNR=24						
DHY	Denali Highway	4.04	44		Pn	05 25 31.2	-0.8
DHY				IAML		05 26 22.0	
	comp=E,217nm,0.5s						
DHY				IAML		05 26 22.8	
	comp=N,277nm,0.5s						
DHY	Denali Highway	4.04	44	P	Pn	05 25 31.5	-0.5
	baz=229,SNR=28						
MCK	McKinley	4.07	30		Pn	05 25 31.4	-0.9
MCK				IAML		05 26 22.7	
	comp=E,110nm,0.4s						
MCK				IAML		05 26 23.0	
	comp=N,82nm,0.4s						
MCK	McKinley	4.07	30	P	Pn	05 25 31.9	-0.4
	baz=214,SNR=16						
PS11	TAPS Pump St11	4.28	62		Pn	05 25 34.9	-0.1
BWN	Browne	4.33	24		Pn	05 25 35.6	0.0
BWN				IAML		05 26 30.4	
	comp=N,92nm,1.0s						
BWN				IAML		05 26 49.0	
	comp=E,85nm,0.7s						
GOAT	Goat Mountain	4.36	82		Pn	05 25 35.3	-0.8
RAGM	Ragged Mountai	4.39	85		Pn	05 25 35.9	-0.6
BMRM	Bremner River	4.44	77		Pn	05 25 36.1	-1.0
BMRM	Bremner River	4.44	77	P	Pn	05 25 36.2	-0.9
	baz=265,SNR=53						
N25K	Chitina, Valde	4.54	69		Pn	05 25 37.8	-0.6
N25K	Chitina, Valde	4.54	69	P	Pn	05 25 37.9	-0.5
	baz=257,SNR=178						
HARP	HAARP	4.54	59		Pn	05 25 38.5	+0.2
HARP	HAARP	4.54	59	P	Pn	05 25 38.3	-0.1
	baz=246,SNR=45						
KAIM	Kayak Island	4.56	91	P	Pn	05 25 38.6	-0.1
	baz=278						
HMT	Hamilton	4.60	85		Pn	05 25 38.6	-0.6
PAX	Paxson	4.68	52		Pn	05 25 39.4	-0.9
PAX	Paxson	4.68	52	P	Pn	05 25 40.1	-0.1
	baz=238,SNR=37						
GCSA	Galena City Sc	4.73	342	P	Pn	05 25 40.8	+0.1
	baz=159,SNR=28						
NICHA	Nichawak Mount	4.75	87		Pn	05 25 41.1	0.0
CHGN	Chignik	4.77	215	Pn	Pn	05 25 39.2	-2.1
NEA2	Nenana	4.78	24		Pn	05 25 40.3	-1.1
NEA2	Nenana	4.78	24	IAML		05 26 34.9	
	comp=E,45nm,0.5s						
NEA2	Nenana	4.78	24	P	Pn	05 25 40.3	-1.1
	baz=208,SNR=32						
PS10	TAPS Pump St10	4.83	46		Pn	05 25 42.9	+0.8
SUCK	Suckling Hills	4.87	88		Pn	05 25 42.3	-0.3
SUCK				IAML		05 26 41.1	
	comp=N,119nm,0.5s						
SUCK				IAML		05 26 44.5	
	comp=E,126nm,0.7s						
BERG	Berg Lake	4.88	85		Pn	05 25 42.5	-0.2
GLB	Gilahina Butte	4.88	72		Pn	05 25 42.5	-0.4
GLB				IAML		05 26 39.8	
	comp=E,171nm,0.5s						
WRH	Wood River Hil	4.89	29		Pn	05 25 41.9	-0.9
WRH	Wood River Hil	4.89	29	IAML		05 26 38.0	
	comp=N,48nm,0.5s						
WRH				IAML		05 26 38.1	
	comp=E,34nm,0.5s						
MLY	Manley	4.92	14		Pn	05 25 42.5	-0.9
MLY	Manley	4.92	14	P	Pn	05 25 42.4	-0.9
	baz=196,SNR=15						
I21K	Tanana	4.95	7		Pn	05 25 43.2	-0.4
I21K				IAML		05 26 38.8	
	comp=E,42nm,1.0s						
I21K	Tanana	4.95	7	P	Pn	05 25 43.1	-0.5
	baz=189,SNR=7.2						
VRDI	Verde Repeater	5.02	75		Pn	05 25 44.1	-0.6
VRDI				IAML		05 26 44.0	
	comp=E,124nm,0.4s						
VRDI				IAML		05 26 45.3	
	comp=N,103nm,0.7s						
K24K	Donnelly Dome	5.06	43		Pn	05 25 46.0	+0.9
K24K	Donnelly Dome	5.06	43	P	Pn	05 25 45.9	+0.9
	baz=229,SNR=78						
GRIN	Grindle Hills	5.07	86		Pn	05 25 45.5	+0.2
KHIT	Khitrov Hills	5.10	84		Pn	05 25 45.6	-0.1
BGLC	Bering Glacier	5.11	88	P	Pn	05 25 46.5	+0.9
	baz=276						
CCB	Clear Creek Bu	5.11	29		Pn	05 25 44.7	-1.0
CCB				IAML		05 26 46.1	
	comp=E,38nm,0.3s						
CCB				IAML		05 26 47.1	
	comp=N,32nm,0.3s						
HDA	Harding Lake	5.13	34		Pn	05 25 45.1	-0.9
HDA	Harding Lake	5.13	34	P	Pn	05 25 45.4	-0.6
	baz=219,SNR=39						
I23K	Minto, Yukon-K	5.23	20	Pn	Pn	05 25 46.7	-0.6
I23K				IAML		05 26 46.2	
	comp=N,36nm,0.8s						
I23K	Minto, Yukon-K	5.23	20	P	Pn	05 25 46.6	-0.6
	baz=203,SNR=16						
MCARA	McCarthy VSAT	5.25	73		Pn	05 25 47.5	-0.1
MCARA	McCarthy VSAT	5.25	73	P	Pn	05 25 47.9	+0.4
	baz=262,SNR=61						
MDM	Murphy Dome	5.28	25		Pn	05 25 47.3	-0.6
TCOL	CIGO, UAF Yank	5.28	27		Pn	05 25 47.7	-0.3
TCOL				IAML		05 26 49.0	
	comp=E,124nm,0.7s						
TCOL	CIGO, UAF Yank	5.28	27	P	Pn	05 25 47.5	-0.4
	baz=212,SNR=16						
COLA	College	5.29	27		Pn	05 25 46.8	-1.1
COLA	College	5.29	27	P	Pn	05 25 47.4	-0.5
	baz=212						
WAX	Waxell Ridge	5.29	84		Pn	05 25 47.7	-0.6
TGL	Tana Glacier	5.30	80		Pn	05 25 48.4	+0.1
TGL				IAML		05 26 54.8	
	comp=N,117nm,0.6s						
SNH	Sunshine Point	5.32	87		Pn	05 25 48.1	-0.5
SNH				IAML		05 26 51.2	
	comp=N,91nm,0.4s						
SNH				IAML		05 26 51.4	
	comp=E,120nm,0.6s						
RIDG	Independent Ri	5.34	46		Pn	05 25 48.9	0.0
RIDG	Independent Ri	5.34	46	IAML		05 27 07.5	
	comp=N,113nm,0.7s						
RIDG	Independent Ri	5.34	46	P	Pn	05 25 48.9	0.0
	baz=234,SNR=56						
MENT	Mentasta	5.37	56		Pn	05 25 49.0	-0.1
MENT	Mentasta	5.37	56	IAML		05 27 09.0	
	comp=N,103nm,0.5s						
MENT				IAML		05 27 11.7	
	comp=E,99nm,0.6s						
H21K	Melozitna Rive	5.39	3		Pn	05 25 49.2	-0.2
H21K	Melozitna Rive	5.39	3	P	Pn	05 25 49.1	-0.3
	baz=184,SNR=8.7						
IL31		5.44	31		Pn	05 25 49.0	-0.9
ILAR	Eielson Array	5.44	31	P	Pn	05 25 49.5	-0.5
	comp=E,14nm,0.4s,baz=220,slow=14,SNR=215						
ILAR				S	Sn	05 26 46.1	-6.2
	comp=E,3.9nm,0.4s,baz=215,slow=17,SNR=5.0						
ILAR	Eielson Array	5.44	31	Pn	Pn	05 25 49.0	-0.9
BARK	Barkley Ridge	5.47	84		Pn	05 25 50.4	-0.2
M26K	Nabesna, AK	5.48	63		Pn	05 25 50.4	-0.3
M26K	Nabesna, AK	5.48	63	P	Pn	05 25 51.3	+0.6
	baz=252,SNR=112						
PTPK	Patty Peak	5.49	76		Pn	05 25 51.1	+0.2
KIAG	Kiagna River	5.53	79		Pn	05 25 51.5	+0.1
ISLE	Juniper Island	5.54	82		Pn	05 25 51.1	-0.4
BALM	Baldy	5.54	77		Pn	05 25 51.5	0.0
L26K	Log Cabin Wild	5.56	56		Pn	05 25 51.4	-0.3
L26K	Log Cabin Wild	5.56	56	P	Pn	05 25 52.5	+0.8
	baz=245,SNR=37						
DOT	Dot Lake	5.58	49		Pn	05 25 51.6	-0.4
POKR	Poker Plat Res	5.59	27		Pn	05 25 51.6	-0.4
POKR	Poker Plat Res	5.59	27	P	Pn	05 25 51.5	-0.4
	baz=213,SNR=12						
BAGL	Bagley Icefiel	5.67	83		Pn	05 25 53.5	+0.5
H22K	Ishtalitna Cre	5.70	9		Pn	05 25 53.7	+0.2
IM03		5.71	359		Pn	05 25 53.8	+0.3
IMAR	Indian Mountai	5.71	359		Pn	05 25 53.3	-0.3
J25K	Salcha River,	5.75	38		Pn	05 25 53.7	-0.4
J25K	Salcha River,	5.75	38	P	Pn	05 25 53.7	-0.4
	baz=225,SNR=38						
MESA	MESA	5.76	86		Pn	05 25 54.3	-0.2
MESA	MESA	5.76	86	P	Pn	05 25 55.0	+0.5
	baz=276,SNR=65						
SCRK	Sand Creek	5.79	46		Pn	05 25 54.3	-0.5
SCRK	Sand Creek	5.79	46	P	Pn	05 25 54.3	-0.5
	baz=235,SNR=21						
H23K	Yukon River	5.83	16		Pn	05 25 54.4	-0.9
H23K	Yukon River	5.83	16	P	Pn	05 25 54.5	-0.7
	baz=200,SNR=8.5						
YAH	Yahtse	5.85	84		Pn	05 25 54.8	-0.8
BARN	Barnard Glacie	5.88	77		Pn	05 25 55.9	-0.1
M27K	Edge Creek, AK	5.97	65		Pn	05 25 57.0	-0.2
M27K	Edge Creek, AK	5.97	65	P	Pn	05 25 58.1	+1.0
	baz=255,SNR=99						
CTG	Chitna Glacier	6.03	78	P	Pn	05 25 58.4	+0.5
	baz=269,SNR=46						
CTGM	Chitina Glacie	6.03	78		Pn	05 25 58.0	0.0
H24K	Noodor Dome	6.12	22		Pn	05 25 58.5	-0.6
H24K	Noodor Dome	6.12	22	P	Pn	05 25 58.1	-0.9
	baz=207						
TABL	Table Mountain	6.14	83		Pn	05 25 59.5	0.0
CHX	Chaix Hills	6.19	87		Pn	05 26 00.6	+0.5
LOGN	Logan Glacier	6.19	80		Pn	05 26 00.3	+0.2
SDPT	Sand Point	6.20	220	P	Pn	05 25 58.4	-1.6
	baz=34						
L27K	Beaver Creek,	6.21	58		Pn	05 26 00.7	+0.5
L27K	Beaver Creek,	6.21	58	P	Pn	05 26 00.5	+0.3
	baz=249,SNR=21						
BC03		6.23	58		Pn	05 26 00.9	+0.5
BCAR	Beaver Creek A	6.23	58	Pn	Pn	05 26 01.0	+0.5
G21K	Allakaket	6.25	0	P	Pn	05 26 00.5	-0.1
	baz=180						
J26L	Joseph Creek	6.26	43		Pn	05 26 00.1	-0.8
J26L	Joseph Creek	6.26	43	P	Pn	05 26 00.2	-0.6
	baz=232,SNR=18						
YUK2	White River	6.33	71		Pn	05 26 02.1	+0.2
SAMH	Samovar Hills	6.35	86		Pn	05 26 02.9	+0.7
PRP	Porcupine Dome	6.38	31		Pn	05 26 01.9	-0.6
PRP	Porcupine Dome	6.38	31	P	Pn	05 26 01.9	-0.6
	baz=218,SNR=14						
BVCY	Beaver Creek	6.44	65	P	Pn	05 26 03.7	+0.4
	baz=256,SNR=13						
YUK3	Moose Creek	6.51	71		Pn	05 26 04.6	+0.2
YUK3	Moose Creek	6.51	71	P	Pn	05 26 04.5	+0.1
	baz=262,SNR=30						
K27K	Chicken	6.53	50		Pn	05 26 04.0	-0.4
K27K	Chicken	6.53	50	P	Pn	05 26 04.1	-0.3
	baz=240						
O28M	Mount Upton	6.59	80		Pn	05 26 06.0	+0.5
O28M	Mount Upton	6.59	80	P	Pn	05 26 05.8	+0.3
	baz=272,SNR=87						
PCA	Pinnacle	6.61	86		Pn	05 26 05.1	-0.5
PINM	Pinnacle	6.62	86	P	Pn	05 26 05.8	+0.2
	baz=277,SNR=22						
G23K	Bananza Creek	6.63	12	P	Pn	05 26 04.7	-1.0
	baz=195,SNR=7.2						
YUK8	Steele Glacier	6.80	76	P	Pn	05 26 08.4	+0.2
	baz=268,SNR=28						
I26K	Coal Creek Min	6.91	39		Pn	05 26 08.4	-0.9
I26K	Coal Creek Min	6.91	39	P	Pn	05 26 08.5	-0.9
	baz=228						
H25K	Birch Creek	6.92	27		Pn	05 26 09.6	+0.1
H25K	Birch Creek	6.92	27	P	Pn	05 26 08.4	-1.0
	baz=214						
BCPM	Bancas Point	6.94	87		Pn	05 26 09.2	-0.6
F21K	Alatna River	6.96	0	P	Pn	05 26 09.7	-0.2
	baz=180						
G24K	Hadweenzic Riv	6.97	20		Pn	05 26 09.6	-0.5
G24K	Hadweenzic Riv	6.97	20	P	Pn	05 26 08.8	-1.3
	baz=206,SNR=5.1						
COLD	Coldfoot	7.11	10	P	Pn	05 26 11.4	-0.6
	baz=193						
PNL	Peninsula	7.11	89		Pn	05 26 12.5	+0.4
PNL	Peninsula	7.11	89	P	Pn	05 26 11.7	-0.4
	baz=281,SNR=19						
EGAK	Eagle	7.26	46		Pn	05 26 12.4	-1.6
EGAK	Eagle	7.26	46	P	Pn	05 26 13.3	-0.7
	baz=237,SNR=6.2						
F22K	John River	7.26	4	P	Pn	05 26 13.2	-0.8
	baz=185						
G25K	Bearman Lake	7.28	24		Pn	05 26 13.1	-1.1
G25K	Bearman Lake	7.28	24	P	Pn	05 26 14.2	-0.1
	baz=210						
FYU	Fort Yukon	7.30	27

P29M	Windy Craggy	7.94	88		Pn	05 26 23.3	+0.2
P29M	Windy Craggy	7.94	88	P	Pn	05 26 24.6	+1.5
	baz=282,SNR=70						
G26K	Porcupine Rive	7.95	29		Pn	05 26 22.6	-0.4
G26K	Porcupine Rive	7.95	29	P	Pn	05 26 22.6	-0.4
	baz=217						
H27K	Steamboat Moun	8.03	37		Pn	05 26 23.2	-0.9
H27K	Steamboat Moun	8.03	37	P	Pn	05 26 23.2	-0.9
	baz=228						
F25K	Christian Rive	8.10	22		Pn	05 26 24.3	-0.8
F25K	Christian Rive	8.10	22	P	Pn	05 26 23.7	-1.3
	baz=209						
N30M	Aishikik Lake	8.10	75		Pn	05 26 24.5	-0.6
N30M	Aishikik Lake	8.10	75	P	Pn	05 26 24.4	-0.8
	baz=269,SNR=16						
BMAR	Burnt Mountain	8.16	25	Pn	Pn	05 26 25.2	-0.8
J29M	Klondike Camp	8.23	53		Pn	05 26 26.4	-0.4
J29M	Klondike Camp	8.23	53	P	Pn	05 26 27.5	+0.6
	baz=246						
P30M	Million Dollar	8.24	84	P	Pn	05 26 28.9	+1.8
	baz=278						
K29M	Barlow Dome	8.30	58		Pn	05 26 28.9	+1.0
K29M	Barlow Dome	8.30	58	P	Pn	05 26 28.7	+0.9
	baz=252,SNR=16						
G27K	Doyon Strip	8.39	34		Pn	05 26 28.4	-0.5
G27K	Doyon Strip	8.39	34	P	Pn	05 26 28.2	-0.8
	baz=224						
F26K	Sheenjek River	8.48	25	P	Pn	05 26 30.4	+0.4
	baz=213						
TOLK	Toolik Lake Re	8.55	10	Pn	Pn	05 26 30.3	-0.6
I29M	Ogilvie Camp,	8.60	47		Pn	05 26 31.7	0.0
I29M	Ogilvie Camp,	8.60	47	P	Pn	05 26 31.8	+0.2
	baz=241						
O30N	Mendenhall	8.60	79		Pn	05 26 31.5	-0.2
O30N	Mendenhall	8.60	79	P	Pn	05 26 31.6	-0.2
	baz=274,SNR=11						
PLBC	Pleasant Camp	8.66	88		Pn	05 26 34.0	+1.5
PLBC	Pleasant Camp	8.66	88	P	Pn	05 26 33.5	+1.0
	baz=283,SNR=22						
N31M	Braeburn, Yuko	8.72	74		Pn	05 26 33.2	-0.2
N31M	Braeburn, Yuko	8.72	74	P	Pn	05 26 33.6	+0.2
	baz=270						
MAYO	Mayo, Yukon	8.93	61	Pn	Pn	05 26 36.2	+0.2
MAYO	Mayo, Yukon	8.93	61	P	Pn	05 26 36.3	+0.3
	baz=256						
AKUT	Akutan	9.06	232	Pn	Pn	05 26 37.6	-0.2
SKAG	Skagway	9.18	87		Pn	05 26 39.0	-0.3
SKAG	Skagway	9.18	87	P	Pn	05 26 40.7	+1.4
	baz=283						
WHY	Whitehorse	9.20	80		Pn	05 26 39.9	+0.1
WHY	Whitehorse	9.20	80	P	Pn	05 26 39.2	-0.5
	baz=276,SNR=7.6						
M31M	Drury Creek, Y	9.40	70	Pn	Pn	05 26 43.4	+1.1
M31M	Drury Creek, Y	9.40	70	P	Pn	05 26 42.8	+0.5
	baz=267						
UNV	Unalaska Valle	9.57	233	Pn	Pn	05 26 42.7	-1.8
BESE	Bessie Mountai	9.65	92	Pn	Pn	05 26 45.6	0.0
EPYK	Eagle Plains	9.67	44		Pn	05 26 46.0	+0.2
EPYK	Eagle Plains	9.67	44	P	Pn	05 26 45.0	-0.8
	baz=239,SNR=8.5						
FARO	Faro, Yukon	9.89	70		Pn	05 26 49.3	+0.6
FARO	Faro, Yukon	9.89	70	P	Pn	05 26 48.2	-0.5
	baz=268						
R32K	Eaglecrest	9.92	93		Pn	05 26 50.9	+1.9
R32K	Eaglecrest	9.92	93	P	Pn	05 26 49.4	+0.4
	baz=290						
P32M	Atlin	9.95	85		Pn	05 26 49.1	-0.4
P32M	Atlin	9.95	85	P	Pn	05 26 49.5	0.0
	baz=282						
JIS	Juneau Island	9.99	93		Pn	05 26 52.3	+2.4
SIT	Sitka	10.00	101	Pn	Pn	05 26 50.3	+0.2
SIT	Sitka	10.00	101	P	Pn	05 26 49.9	-0.2
	baz=296						
G30M	tAoh Zraii Nji	10.17	41	P	Pn	05 26 51.8	-0.5
	baz=237						
S32K	Killisnoo	10.19	98	P	Pn	05 26 53.0	+0.4
	baz=294						
P33M	Teslin, Yukon	10.28	81	Pn	Pn	05 26 52.5	-1.4
P33M	Teslin, Yukon	10.28	81	P	Pn	05 26 52.8	-1.0
	baz=279,SNR=7.5						
Q32M	Nakina River	10.83	88	P	Pn	05 27 00.6	-0.5
	baz=286,SNR=7.0						
MMPY	Sheldon Lake,	10.88	68	P	Pn	05 27 01.2	-0.4
	baz=268						
R33M	Jennings River	11.36	85	P	Pn	05 27 08.9	+1.0
	baz=284,SNR=6.3						
U33K	Whale Pass	11.52	102	P	Pn	05 27 10.3	+0.5
	baz=300						
S34M	Telegraph Cree	11.73	92	P	Pn	05 27 12.5	-0.1
	baz=291						
WRAK	Wrangell Islan	11.75	100	P	Pn	05 27 13.2	+0.3
	baz=298						
INK	Inuvik	11.76	39	P	Pn	05 27 13.4	+0.6
	comp=E,3.0nm,0.8s,baz=229,slow=16,SNR=6.8						
INK	Inuvik	11.76	39	Pn	Pn	05 27 12.8	0.0
INK	Inuvik	11.76	39	P	Pn	05 27 13.5	+0.6
	baz=237						
CRAG	Craig	11.86	105	Pn	Pn	05 27 13.8	-0.4
DLBC	Dease Lake	12.10	89	P	Pn	05 27 19.4	+2.0
	comp=E,1.4nm,0.3s,baz=308,slow=12,SNR=3.8						
DLBC	Dease Lake	12.10	89	P	Pn	05 27 18.1	+0.7
	baz=289						
WTLY	Watson Lake, Y	12.27	80	P	Pn	05 27 20.6	+1.0
	baz=282						
TGTN	Hyland Airport	12.32	73	P	Pn	05 27 21.4	+1.3
	baz=275						
T35M	Bob Quinn	12.54	95	P	Pn	05 27 24.3	+1.4
	baz=295						
V35K	Ketchikan	12.66	103	P	Pn	05 27 24.6	+0.2
	baz=302						
C36M	Paulatuk	15.29	41		Pn	05 27 56.4	-0.7
C36M	Paulatuk	15.29	41	P	P	05 27 57.2	-0.8
	baz=248						
YKA	Yellowknife Ar	18.57	66	P	Pn	05 28 35.2	-1.2
	comp=E,1.9nm,0.7s,baz=278,slow=9.9,SNR=15						
WAPA	Wapiti River	18.84	91	P	P	05 28 37.6	+0.4
OZB	Mount Ozzard	19.62	113	P	P	05 28 45.1	-0.5
BRLDA	Berland Lookou	20.32	92	P	Pn	05 28 54.8	-2.6
NLWA	Neilton Lookou	21.51	114	P	P	05 29 06.5	+0.7
NLWA				IAmb	IAmb	05 29 11.2	
	comp=Z,12nm,1.4s						
EDM	Edmonton	22.82	90	P	P	05 29 20.2	+1.8
B08A	Colville Reser	22.94	106	P	P	05 29 20.7	+1.1
B08A				IAmb	IAmb	05 29 22.9	
	comp=Z,5.8nm,0.7s						
LTY	Liberty	23.09	110	P	P	05 29 22.3	+1.3
LTY				IAmb	IAmb	05 29 24.3	
	comp=Z,4.1nm,0.6s						
NEW	Newport	24.07	104	P	P	05 29 30.8	+1.0
	comp=Z,2.4nm,0.6s,baz=326,slow=15,SNR=4.6						
	comp=Z,2.4nm,0.6s						
NEW	Newport	24.07	104	P	P	05 29 30.1	+0.2
	baz=314						
F10A	Beach Ranch, E	25.65	108	P	P	05 29 46.5	+2.3
F10A				IAmb	IAmb	05 29 47.3	
	comp=Z,3.9nm,0.7s						
KRMB	Red Mountain	26.12	123	P	P	05 29 52.3	+3.7
BMO	Blue Mountains	26.44	109	P	P	05 29 53.8	+2.4
K05A	Summer Lake	26.45	117	P	P	05 29 55.2	+3.7
K05A				IAmb	IAmb	05 29 55.3	
	comp=Z,3.8nm,0.9s						
YBH	Yreka Blue Hor	26.46	121	P	P	05 29 55.2	+3.7
	comp=Z,1.8nm,0.6s,baz=359,slow=7.4,SNR=12						
	comp=Z,1.8nm,0.6s						
YBH	Yreka Blue Hor	26.46	121	P	P	05 29 55.2	+3.7
YBH				IAmb	IAmb	05 29 55.9	
	comp=Z,2.1nm,0.7s						
MSO	Missoula	26.61	102	P	P	05 29 52.2	-0.7
	baz=315						
PLID	Pearl Lake	26.89	107	P	P	05 29 57.3	+1.8
HRY	Holter Researc	27.73	100	P	P	05 30 05.2	+2.4
EGMT	Eagleton	27.85	96	P	P	05 30 03.8	0.0
	baz=312						
MCMT	McKenzie Canyo	28.59	104	P	P	05 30 13.2	+2.6
BOZ	Bozeman (W)	28.62	102	P	P	05 30 11.0	+0.3
	baz=316						
HLID	Hailey	28.78	108	P	P	05 30 14.8	+2.6
HLID	Hailey	28.78	108	P	P	05 30 12.6	+0.4
	baz=319						
BEKR	Beckworth	29.01	120	P	P	05 30 17.0	+2.8
BEKR				IAmb	IAmb	05 30 17.2	
	comp=Z,1.9nm,0.6s						
YHH	Holmes Hill	29.59	102	P	P	05 30 22.4	+2.9
YHH				IAmb	IAmb	05 30 23.1	
	comp=Z,2.4nm,0.7s						
PNTR	Pine Nut	29.98	120	P	P	05 30 26.2	+3.3
PNTR				IAmb	IAmb	05 30 26.5	
	comp=Z,4.9nm,0.9s						
RLMT	Red Lodge	30.12	100	P	P	05 30 25.3	+1.2
	baz=316						
IMW	Indian Meadow	30.20	104	P	P	05 30 28.2	+3.4
IMW				IAmb	IAmb	05 30 29.0	
	comp=Z,5.2nm,0.8s						
DGMT	Dagmar	30.31	91	P	P	05 30 25.4	-0.1
	baz=312						
FXWY	Fox Creek	30.35	104	P	P	05 30 27.2	+1.1
FXWY				IAmb	IAmb	05 30 29.9	
	comp=Z,2.8nm,0.7s						
TPAW	Teton Pass	30.50	104	P	P	05 30 30.9	+3.4
LAO	LASA Array	30.51	95	P	P	05 30 26.0	-1.3
	baz=314						
WAKR	Walker	30.54	120	P	P	05 30 31.1	+3.3
LOHW	Long Hollow	30.57	104	P	P	05 30 31.0	+2.9
LOHW				IAmb	IAmb	05 30 32.0	
	comp=Z,3.1nm,0.8s						
ELK	Elko	30.59	112	P	P	05 30 31.6	+3.4
ELK				IAmb	IAmb	05 30 32.3	
	comp=Z,2.7nm,0.9s						
SNOW	Snow King Moun	30.61	104	P	P	05 30 31.9	+3.4
REDW	Red Top Meadow	30.64	104	P	P	05 30 32.1	+3.4
REDW				IAmb	IAmb	05 30 32.5	
	comp=Z,2.6nm,0.8s						
KVN	Kaiserville	30.66	118	P	P	05 30 32.1	+3.2
RYN	Ryan	30.83	119	P	P	05 30 33.1	+2.8
HVU	Hansel Valley	30.92	108	P	P	05 30 34.0	+2.9
NVAR	Mina Array Bea	31.09	119	P	P	05 30 35.6	+2.9
	comp=Z,1.4nm,0.7s,baz=308,slow=8.8,SNR=16						
NVAR				ScP	ScP	05 36 51.0	+1.1
	comp=Z,0.5nm,0.6s,baz=332,slow=3.5,SNR=5.7						
	comp=Z,1.4nm,0.7s						
NVAR	Mina Array Bea	31.09	119	P	P	05 30 35.1	+2.5
BW06	Boulder Array	31.71	104	P	P	05 30 36.2	-1.8
	baz=319						
PDAR	Pinedale Array	31.71	104	P	P	05 30 40.5	+2.5
	comp=Z,0.7nm,0.5s,baz=326,slow=3.5,SNR=11						
	comp=Z,0.7nm,0.5s						
PDAR	Pinedale Array	31.71	104	P	P	05 30 40.0	+1.9
TCUT	Toone Canyon	32.09	108	P	P	05 30 43.8	+2.4
DUG	Dugway, Tooele	32.15	110	P	P	05 30 41.2	-0.6
	baz=322						
R11A	Troy Canyon, C	32.36	115	P	P	05 30 43.0	-0.8
	baz=325						
NLU	North Lily Min	32.68	110	P	P	05 30 48.4	+1.9
NLU				IAmb	IAmb	05 30 49.8	
	comp=Z,2.3nm,0.7s						
GRAC	Grapevine Rang	32.69	119	P	P	05 30 46.8	+0.3
	baz=327						
CWC	Cottonwood Cre	32.85	120	P	P	05 30 48.1	+0.1
	baz=328						
VES	Vestal, Richgr	32.94	122	P	P	05 30 48.6	+0.1
	baz=329						
WCT	Wildcat Mounta	33.19	118	P	P	05 30 49.4	-1.4
TPNV	Topopah Spring	33.22	118	P	P	05 30 51.7	+0.5
	baz=327						
K22A	Casper	33.28	101	P	P	05 30 51.1	-0.5
	baz=318						
ULM	Lac du Bonnet	33.28	81	P	P	05 30 51.8	+0.4
	comp=Z,2.7nm,0.4s,baz=307,slow=5.9,SNR=5.2						
	comp=Z,2.7nm,0.4s						
RSSD	Black Hills	33.42	96	P	P	05 30 55.0	+2.1
RSSD				IAmb	IAmb	05 30 58.6	
	comp=Z,2.0nm,0.4s						
RSSD	Black Hills	33.42	96	P	P	05 30 53.3	+0.4
	baz=317						
MPMC	Manual Prospec	33.43	120	P	P	05 30 53.5	+0.5
	baz=328						
PKM	Mcpherson Peak	33.45	124	P	P	05 30 53.7	+0.5
	baz=330						
LRMC	Laurel Mtn Rad	33.84	121	P	P	05 30 57.1	+0.6
	baz=328						
O20A	White River Ci	34.36	105	P	P	05 31 01.2	+0.1
	baz=321						
AGMN	Agassiz Nation	34.57	84	P	P	05 31 02.4	-0.1
	baz=312						
PV01	Paradox Valley	35.78	108	P	P	05 31 15.5	+2.2
PV01				IAmb	IAmb	05 31 46.6	
	comp=Z,4.8nm,0.8s						
IRM	Iron Mountain	36.05	119	P	P	05 31 15.5	+0.1
	baz=328						
PDMCI	Parker Dam,Lak	36.37	118	P	P	05 31 19.2	+1.3
	baz=328						
MVCO	Mesa Verde	36.56	109	P	P	05 31 20.2	+0.4
	baz=324						
MONP2	Monument Peak	36.59	122	P	P	05 31 21.0	+1.0
	baz=330						
WUAZ	Wupatki	36.60	113	P	P	05 31 20.5	+0.4
	baz=326						
SWSC	Sam W. Stewart	36.81	121	P	P	05 31 21.2	-0.4
	baz=330						
S22A	4UR Ranch, Cre	36.92	106	P	P	05 31 22.8	-0.2
	baz=323						
IKP	In-Ko-Pah, Jac	36.93	121	P	P	05 31 22.7	-0.1
	baz=330						
SDCO	Great Sand Dun	37.56	105	P	P	05 31 29.9	+1.5
	baz=323						
SPMN	Marine on St.	38.21	85	P	P	05 31 33.3	0.0
	baz=316						
BGNE	Belgrade	38.34	94	P	P	05 31 34.7	+0.2
	baz=319						
ANMO	Albuquerque	39.36	109	P	P	05 31 43.5	+0.3
	baz=325						
G40A	Rib Lake	39.47	83	P	P	05 31 42.2	-1.6
G40A				IAmb	IAmb	05 31 46.7	
	comp=Z,9.3nm,1.2s						
121A	Cookes Peak, D	40.73	112	P	P	05 31 54.8	+0.3
	baz=327						
KSU1	Kansas State U	40.86	95	P	P	05 31 55.7	+0.4
	baz=320						
L40A	Anamosa	41.30	87	P	P	05 31 59.9	+1.0
AMTX	Amarillo	41.69	104	P	P	05 32 02.6	+0.4
	baz=324						
MSTX	Muleshoe	41.91	106	P	P	05 32 04.2	+0.2
	baz=325						
VLDQ	Val d'Or	43.61	71	P	P	05 32 15.0	-2.4
R40A	Maddies Statio	43.64	92	P	P	05 32 18.1	+0.3
R40A				IAmb	IAmb	05 32 18.3	
	comp=Z,10nm,1.4s						
TXAR	Lajitas Array	45.33	110	P	P	05 32 33.8	+2.5
	comp=Z,1.1nm,0.7s,baz=288,slow=5.9,SNR=12						
	comp=Z,1.1nm,0.7s						
JCT	Junction City	46.20	105	P	P	05 32 39.2	+1.2
	baz=326						
LCCO2	Lakeland CC 2,	46.50	80	P	P	05 32 39.7	-0.5
OXF	Oxford	48.03	92	P	P	05 32 52.7	+0.5
	baz=323						
SONM	Songino Array	54.41	305	P	P	05 33 40.1	+0.6
	comp=Z,2.1nm,0.6s,baz=46,slow=6.3,SNR=9.1						
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	56.98	323	P	P	05 33 57.3	-0.3
	comp=Z,1.5nm,0.5s,baz=30,slow=6.2,SNR=7.4						
	comp=Z,1.5nm,0.5s						
FINES	FINESS Array B	58.59	0	P	P	05 34 08.7	+0.1
	comp=Z,2.7nm,1.0s,baz=10,slow=12,SNR=4.3						
	comp=Z,2.7nm,1.0s						
MKAR	Makanchi Array	64.04	321	P	P	05 34 45.0	-0.5
	comp=Z,0.6nm,0.5s,baz=33,slow=6.1,SNR=8.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	64.04	321	P	P	05 34 45.3	-0.2
ABKAR	Akbulak array	67.49	337	P	P	05 35 07.3	-0.1
KKAR	Karatay Array	70.84	327	P	P	05 35 28.5	+0.3

NIC 10 05:28:15.6±0.0, 34°.61N×32°.88E, h9km±1km, MI1.6/5, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	Souni	0.14	0	P	Pg	05 28 19.0	+0.1
SZAC				AML	AML	05 28 21.7	
	1.9nm,0.1s						
SZAC				AML	AML	05 28 21.7	
	1.9nm,0.1s						
SZAC				S	Sg	05 28 21.9	+0.9
SZAC				AML	AML	05 28 23.4	
	1.6nm,0.2s						
SZAC				AML	AML	05 28 23.4	
	1.6nm,0.2s						
NATA	Nata	0.30	303	P	Pg	05 28 22.4	+0.7
NATA				S	Sg	05 28 27.1	+1.2
NATA				AML	AML	05 28 33.7	
	0.5nm,0.6s						
NATA				AML	AML	05 28 33.7	
	0.5nm,0.6s						
NATA				AML	AML	05 28 34.2	
	0.4nm,0.6s						
NATA				AML	AML	05 28 34.2	
	0.4nm,0.6s						
ASGA	Asgata	0.35	60	P	Pg	05 28 23.1	+0.6
ASGA				S	Sg	05 28 27.2	+0.1
ASGA				AML	AML	05 28 29.5	
	0.3nm,0.2s						
ASGA				AML	AML	05 28 29.5	
	0.3nm,0.2s						
ASGA				AML	AML	05 28 29.7	
	0.3nm,0.3s						
ASGA				AML	AML	05 28 29.7	
	0.3nm,0.3s						
CSS	Mathiatis	0.51	47	S	Sb	05 28 33.5	-0.8
ALFC	Alefka	0.59	337	P	Pg	05 28 26.7	-0.4
ALFC				S	Sb	05 28 36.8	+0.2
ALFC				AML	AML	05 28 37.8	
	0.1nm,0.5s						
ALFC				AML	AML	05 28 37.8	
	0.1nm,0.5s						
ALFC				AML	AML	05 28 39.5	
	0.2nm,0.5s						
ALFC				AML	AML	05 28 39.5	
	0.2nm,0.5s						
AKMS	Akamas	0.60	312	P	Pg	05 28 27.9	+0.5
AKMS				S	Sb	05 28 36.5	-0.6
AKMS				AML	AML	05 28 38.8	
	0.1nm,0.9s						
AKMS				AML	AML	05 28 38.8	
	0.1nm,0.9s						
AKMS				AML	AML	05 28 44.4	
	0.1nm,0.5s						
AKMS				AML	AML	05 28 44.4	
	0.1nm,0.5s						

NIC 10 05:28:50.1±0.0, 34°.59N×32°.90E, h6km, MI1.7/5, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	Souni	0.17	354	P	Pg	05 28 53.8	+0.3
SZAC				AML	AML	05 28 56.5	
	1.7nm,0.1s						
SZAC				AML	AML	05 28 56.5	
	1.7nm,0.1s						
SZAC				S	Sg	05 28 56.8	+1.0
SZAC				AML	AML	05 28 58.2	
	1.7nm,0.2s						
SZAC				AML	AML	05 28 58.2	
	1.7nm,0.2s						
NATA	Nata	0.34	305	P	Pg	05 28 57.1	+0.5
NATA				S	Sb	05 29 02.9	-1.2
NATA				AML	AML	05 29 05.4	
	0.5nm,0.7s						
NATA				AML	AML	05 29 05.4	
	0.5nm,0.7s						
NATA				AML	AML	05 29 09.0	
	0.5nm,0.6s						
NATA				AML	AML	05 29 09.0	
	0.5nm,0.6s						
ASGA	Asgata	0.35	55	P	Pg	05 28 57.3	+0.5
ASGA				S	Sb	05 29 03.5	-0.9
ASGA				AML	AML	05 29 04.3	
	0.3nm,0.2s						
ASGA				AML	AML	05 29 04.3	
	0.3nm,0.2s						
ASGA				AML	AML	05 29 04.5	
	0.3nm,0.3s						
ASGA				AML	AML	05 29 04.5	
	0.3nm,0.3s						
CSS	Mathiatis	0.51	43	S	Sb	05 29 08.7	-0.6
ALFC	Alefka	0.62	336	P	Pg	05 29 02.3	+0.3
ALFC				S	Sb	05 29 11.5	-0.8
ALFC				AML	AML	05 29 14.2	
	0.2nm,0.6s						
ALFC				AML	AML	05 29 14.2	
	0.2nm,0.6s						
ALFC				AML	AML	05 29 14.9	
	0.2nm,0.3s						
ALFC				AML	AML	05 29 14.9	
	0.2nm,0.3s						
AKMS	Akamas	0.64	313	P	Pg	05 29 02.9	+0.6
AKMS				S	Sb	05 29 12.7	-0.1
AKMS				AML	AML	05 29 14.7	
	0.1nm,0.8s						
AKMS				AML	AML	05 29 14.7	
	0.1nm,0.8s						
AKMS				AML	AML	05 29 16.7	
	0.1nm,0.3s						
AKMS				AML	AML	05 29 16.7	
	0.1nm,0.3s						

KRNET 10 05:39:40.7±0.1, 39°.41N×71°.87E, mb2.6, 5C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	1.04	309	⇑eP	Pg	05 40 00.1	-0.5
	baz=9.0						
BTK				⇑eS	Sg	05 40 14.2	+0.2
	baz=9.0						
GAR	Garm	1.27	252	⇑eP	Pg	05 40 04.2	-0.9
	baz=52						
GAR				⇑eS	Sg	05 40 21.5	0.0
	baz=52						
CHGR	Chuyangaron	2.24	251	⇓eP	Pn	05 40 19.7	+0.6
	baz=51						
CHGR				⇓eS	Sn	05 40 48.2	+0.7
	baz=51						
ARLS	Aral	3.08	37	⇓eP	Pn	05 40 31.4	+0.6
	baz=37						
ARLS				⇓eS	Sn	05 41 08.7	+0.2
	baz=37						
KK31	Karatay Array	3.83	345	⇑Pg	Pb	05 40 51.6	+2.5
	1.8nm,0.6s,baz=162,slow=14,SNR=8.9						
KK31				⇓Lg	Lg	05 41 37.9	
	1.2nm,0.4s,baz=164,slow=31						

NOU ***10*** *06:01:04.4, 37°.29S×179°.70E, h0km, MLv4.3/8, Off E. Coast of N. Island, N.Z.*
WEL ***10*** *06:01:12.9±1.3, 37°.5±4°.4×17°.9E±°, h10km±5km, M3.9/27, ML4.1/27, MLv3.9/27, Error ellipse: s-maj=0.0km s-min=0.0km az=86.0*
NEIC ***10*** *06:01:16.5±1.4, 37°.72S±0°.09×178°.64E±0°.09, h39km±4km, mb4.2/6, Error ellipse: s-maj=15.3km s-min=6.3km az=214.0*
IDC ***10*** *06:01:30.1±2.0, 37°.86S×176°.99E, h70km±34km, mb3.6/2, mbtmp3.9/3, ML3.6/1, MS3.2/1, Error ellipse: s-maj=80.7km s-min=39.6km az=164.0*

ISC 10 06:01:10.4±2.0, 37°.48S±0°.05×179°.16E±0°.08, h14km±10km, n140, σ1°89/148, mb4.0/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	0.68	240	P	Pn	06 01 27.4	+1.7
MXZ	Matakaoa Point	0.69	263		Pn	06 01 24.8	-0.9
MXZ					Sg	06 01 31.1	-1.8
MXZ	Matakaoa Point	0.69	263	P	Pn	06 01 24.7	-0.9
MXZ				S	Sg	06 01 32.5	-0.3
MXZ	Matakaoa Point	0.69	263	P	Pn	06 01 24.9	-0.8
PUZ	Puketiti	0.93	230	P	Pn	06 01 31.1	+2.1
PUZ				S	Sn	06 01 44.0	+1.9
PKGZ	Pakihiroa	0.95	244	P	Pn	06 01 30.8	+1.4
PKGZ				S	Sn	06 01 42.8	0.0
HAZ	Te Kaha	1.13	256	P	Pg	06 01 32.4	+0.2
HAZ				S	Sb	06 01 47.3	+1.0
TWGZ	Tauwhareparae	1.17	233	P	Pg	06 01 34.8	+1.9
TWGZ				S	Sn	06 01 51.7	+3.6
CNGZ	Carnagh Statio	1.25	217	P	Pg	06 01 36.9	+2.3
CNGZ				S	Sg	06 01 54.9	+4.0
RUGZ	Raukumara Rang	1.27	247	P	Pg	06 01 35.7	+0.7
RUGZ				S	Sg	06 01 51.9	+0.3
TKGZ	Te Karaka	1.41	227	P	Pg	06 01 37.8	+0.2
MWZ	Matawai	1.55	236	P	Pg	06 01 39.4	-0.8
WIZ	White Island	1.57	268	P

780nm,0.5s,baz=319,slow=21,SNR=19
URZ Urewera 1.80 244 P Pb 06 01 43.1 0.0
URZ Urewera 1.80 244 P Pb 06 01 43.4 +0.3
KNZ Kokohu 1.93 217 P Pb 06 01 44.6 -0.8
SNGZ Shannon Statio 1.94 227 P Pb 06 01 44.8 -0.7
MHGZ Mahia Peninsul 1.94 210 P Pb 06 01 45.4 -0.2
EDRZ Edgecumbe 2.02 251 P Pb 06 01 46.1 -0.8
MARZ Manawahe 2.04 255 P Pb 06 01 46.7 -0.5
RTZ Ruatahuna 2.06 236 P Pb 06 01 47.1 -0.6
OPRZ Ohinepanea 2.10 259 P Pb 06 01 46.3 -1.9
RAHZ Arahi 2.17 228 P Pb 06 01 48.5 -1.1
WHHZ Waihua 2.20 223 P Pb 06 01 48.9 -1.1
MKRZ Makatiti 2.23 252 P Pb 06 01 50.6 0.0
RRRZ Republican Roa 2.26 247 P Pb 06 01 49.7 -1.4
MTHZ Maungataniwha 2.29 232 P Pb 06 01 50.1 -1.4
OMRZ Omania 2.30 253 P Pb 06 01 51.4 -0.3
TGRZ Tauranga 2.32 263 P Pn 06 01 49.5 +1.4
MYRZ Mayor Island 2.33 274 P Pn 06 01 49.5 +1.1
HLRZ Highlands Stat 2.35 250 P Pb 06 01 50.8 -1.8
KARZ Kaharoa 2.37 256 P Pb 06 01 50.6 -2.4
PRRZ Plateau Road 2.41 244 P Pb 06 01 51.0 -2.6
NGRZ Ngongotaha 2.44 254 P Pb 06 01 52.9 -1.2
HRRZ Handcock Road 2.45 247 P Pb 06 01 52.1 -2.2
UTU Utuhina 2.45 253 P Pb 06 01 55.0 +0.7
HSRZ Hossack Road 2.45 249 P Pb 06 01 53.2 -1.1
NMHZ Naumai 2.46 228 P Pb 06 01 52.2 -2.2
ARHZ Aropaoanui 2.46 223 P Pb 06 01 52.2 -2.3
ALRZ Allen Road 2.47 243 P Pn 06 01 51.9 +1.6
MRHZ Matea Rd 2.55 237 P Pb 06 01 53.3 -2.7
BKZ Black Stump Fm 2.69 230 Pn Pn 06 01 55.0 +1.7
BKZ Sn Sn 06 01 18.3 -7.4
BKZ Black Stump Fm 2.69 230 P Pn 06 01 55.2 +1.9
BKZ Black Stump Fm 2.69 230 P Pn 06 01 55.2 +1.9
CKHZ Cape Kidnapper 2.72 216 P Pn 06 01 55.1 +1.4
MCHZ McNeill Hill 2.75 224 P Pn 06 01 55.9 +1.7
KUZ Kuaotunu 2.85 284 P Pn 06 01 54.3 -1.1
KUZ Kuaotunu 2.85 284 P Pn 06 01 54.5 -0.9
KWHZ Kaweka Forest 2.90 227 P Pn 06 01 57.4 +1.2
TOZ Tahuroa Road 2.92 264 P Pn 06 01 57.6 +1.2
KAHZ Kahuranaki 2.92 217 P Pn 06 01 57.7 +1.2
RATZ Rangitukua 3.01 242 P Pn 06 01 59.8 +2.1
KATZ Kakaramea 3.11 240 P Pn 06 02 01.2 +2.0
PXZ Pawanui 3.12 215 P Pn 06 01 59.8 +0.7
TMVZ Te Maari 3.17 238 P Pn 06 02 01.5 +1.5
ETVZ East Tongariro 3.18 238 P Pn 06 02 01.5 +1.4
NTVZ North Tongarir 3.18 238 P Pn 06 02 01.7 +1.5
KRVZ Karewarewa 3.20 239 P Pn 06 02 02.0 +1.5
MKAZ Moumakai 3.21 276 P Pn 06 02 00.3 -0.1
GRZ Great Barrier 3.21 291 P Pn 06 02 00.3 -0.2
NNVZ North Ngauruho 3.24 238 P Pn 06 02 02.6 +1.7
WTVZ West Tongariro 3.25 239 P Pn 06 02 02.9 +1.9
SNVZ South Ngauruho 3.25 237 P Pn 06 02 02.6 +1.4
NGZ Ngauruhoe 3.27 238 P Pn 06 02 02.9 +1.5
TUVZ Tukino 3.28 236 P Pn 06 02 03.2 +1.6
WIAZ Waiheke Island 3.29 281 P Pn 06 02 01.2 -0.3
MOVZ Moawhango 3.29 233 P Pn 06 02 03.0 +1.3
TWVZ Taurewa 3.33 240 P Pn 06 02 03.8 +1.6
WHVZ Whangaehu Hut 3.33 236 P Pn 06 02 03.8 +1.5
WPHZ Waipukurau 3.34 219 P Pn 06 02 03.2 +1.0
FWVZ Far West T-bar 3.34 237 P Pn 06 02 04.0 +1.5
WNVZ Wahianoa 3.35 236 P Pn 06 02 04.0 +1.5
PNHZ Pukenui 3.36 223 P Pn 06 02 02.7 +0.2
TRVZ Turoa 3.37 236 P Pn 06 02 04.3 +1.5
PRHZ Porangahau 3.41 215 P Pn 06 02 03.5 +0.3
ETAZ East Tamaki Re 3.42 278 P Pn 06 02 03.5 +0.2
MTVZ Mangateliri 3.47 238 P Pn 06 02 05.5 +1.5
MBAZ Motutapu North 3.48 281 P Pn 06 02 05.5 +1.4
PKVZ Pokaka 3.50 238 P Pn 06 02 06.1 +1.7
HIZ Hauiti 3.55 252 Pn Pn 06 02 01.8 -3.3
HIZ Hauiti 3.55 252 P Pn 06 02 07.7 +2.5
HIZ Hauiti 3.55 252 P Pn 06 02 07.9 +2.8
ABAZ Army Bay 3.57 283 P Pn 06 02 06.8 +1.4
EPAZ Eden Park BICE 3.58 278 P Pn 06 02 07.5 +2.0
TSZ Takapari Road 3.59 223 P Pn 06 02 05.6 -0.1
HBAZ Herne Bay Bore 3.59 279 P Pn 06 02 07.6 +1.9
AWAZ Awhitu Peninsu 3.63 275 P Pn 06 02 08.3 +2.1
ANWZ Angora Road 3.64 214 P Pn 06 02 06.7 +0.5
DVHZ Dannevirke 3.66 219 P Pn 06 02 06.8 +0.2
WTAZ Waiatarua 3.70 277 P Pn 06 02 09.3 +2.1
RVAZ Riverhead Bore 3.73 280 P Pn 06 02 08.1 +0.5
VRZ Vera Road 3.83 243 P Pn 06 02 11.8 +2.8
BFZ Birch Farm 3.92 214 Pn Pn 06 02 09.8 -0.4
BFZ Birch Farm 3.92 214 P Pn 06 02 10.0 -0.2
POWZ Post Office Ro 3.93 221 P Pn 06 02 10.3 -0.2
PRWZ Pori Road 3.95 218 P Pn 06 02 10.9 +0.3
WAZ Wanganui 3.98 234 P Pn 06 02 12.7 +1.6
TIWZ Tintock 4.16 217 P Pn 06 02 13.2 -0.3
WCZ Waipu Caves 4.17 290 P Pn 06 02 13.8 +0.2
LREZ Lake Rotokare 4.22 241 P Pn 06 02 16.7 +2.3
PREZ Palmer Road 4.35 243 P Pn 06 02 19.4 +3.3
NEZ North Egmont 4.36 244 P Pn 06 02 19.5 +3.2
PKE Pukeiti 4.41 246 P Pn 06 02 20.7 +3.7
KHEZ Kahui Hut 4.43 244 P Pn 06 02 20.4 +3.1
KHEZ Kahui Hut 4.43 244 P Pn 06 02 20.6 +3.3
MSWZ Moikau Station 4.96 216 Pn Pn 06 02 22.4 -2.1
OUZ Omahuta 5.03 295 Pn Pn 06 02 26.1 +0.7
OUZ Omahuta 5.03 295 P Pn 06 02 26.1 +0.7
OUZ Omahuta 5.03 295 P Pn 06 02 26.1 +0.7
PLWZ Palliser 5.08 215 Pn Pn 06 02 24.2 -1.9
SNZO South Karori 5.15 221 Pn Pn 06 02 22.8 -4.3
DUWZ D'Urville Isla 5.25 229 P Pn 06 02 27.8 -0.7
TUWZ Tuamarina 5.64 224 P Pb 06 02 42.0 -6.6
NNZ Nelson 5.83 228 Pn Pn 06 02 32.6 -3.8
BSWZ Blackbirch Sta 5.88 222 Pn Pn 06 02 33.5 -3.6
QRZ Quartz Range 6.14 235 Pn Pn 06 02 37.9 -2.8
THZ Tophouse 6.45 227 Pn Pn 06 02 42.9 -2.1
KHZ Kahutara 6.55 219 Pn Pn 06 02 43.8 -2.5
CTZ Chatham Island 7.02 154 P Pn 06 02 57.9 +5.1
LTZ Lake Taylor 7.47 223 Pn Pn 06 02 55.9 -3.2
MQZ McQueen's Vall 7.95 216 Pn Pn 06 03 03.0 -2.4
OXZ Oxford 7.97 221 Pn Pn 06 03 03.8 -2.0
RPZ Rata Peaks 8.76 222 P Pn 06 03 14.1 -2.5
0.9nm,0.3s,baz=68,slow=5.4,SNR=1.6
RPZ S Sn 06 04 44.0 -11
15nm,0.7s,baz=104,slow=18,SNR=8.5
3.9nm,0.4s
FOZ Fox Glacier 9.33 227 Pn Pn 06 03 21.4 -3.0
LBZ Lake Benmore 9.68 222 Pn Pn 06 03 27.3 -1.9
ODZ Otahua Downs 9.90 218 Pn Pn 06 03 29.4 -2.8
ASAR Alice Springs 40.95 276 P P 06 08 52.6 -0.1
1.4nm,0.8s,baz=125,slow=8.2,SNR=12
1.4nm,0.8s
WR0 Warramunga Arr 42.42 282 P P 06 09 02.6 -2.2
WB2 Warramunga Arr 42.58 281 P P 06 09 05.2 -0.9
WB2 IAmb IAmb 06 09 06.4
comp=Z,7.7nm,1.3s
WRAB Tennant Creek 42.58 281 P P 06 09 05.3 -0.8
WRAB IAmb IAmb 06 09 16.1
comp=Z,5.7nm,1.2s
WRA Warramunga Arr 42.59 281 P P 06 09 05.9 -0.3
comp=Z,1.0nm,0.5s,baz=123,slow=7.8,SNR=22
WRA LR LR 06 25 54.8
comp=Z,32nm,20.9s,baz=110,slow=36
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 42.59 281 P P 06 09 04.2 -1.9
WB0 Warramunga Arr 42.64 282 P P 06 09 06.2 -0.4
WB0 IAmb IAmb 06 09 22.3
comp=Z,10nm,1.2s
FITZ Fitzroy Crossi 50.44 277 P P 06 10 06.3 -1.4
QSPA South Pole Qui 52.64 180 P P 06 10 25.3 +1.5
QSPA IAmb IAmb 06 10 52.7
comp=Z,1.7nm,1.0s
FINES FINESS Array B 150.72 334 PKPbc PKPab 06 21 11.9 +3.6
comp=Z,1.4nm,0.8s,baz=29,slow=3.2,SNR=3.5

*IDC **10** 06:04:00.9±1.3, 32°.79N×139°.08E, h0km, mb3.6/3, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=30.9km s-min=15.3km az=140.0*
*JMA **10** 06:04:01.0±0.1, 33°.6N±0°.4×140°.8E±0°.9, h51km, MV3.8/32, E OFF HACHIJOJIMA ISLAND*
*NEIC **10** 06:04:08.7±1.1, 32°.80N±0°.08×139°.5E±0°.1, h52km±6km, mb4.4/8, Error ellipse: s-maj=15.9km s-min=5.0km az=131.0*
ISC 10 06:03:58.5±1.6, 33°.51N±0°.04×140°.91E±0°.06, h25km±12km, n34, σ1°36/35, mb4.3/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2				Sn	Sb	06 04 29.2	-0.7
JHJ2	Mitsune	1.00 247		*i* P	Pb	06 04 18.3	+1.2
JHJ2				*e*S	Sn	06 04 29.9	-0.2
JHJ	Hachijo jima 2	1.02 248		Pn	Pb	06 04 18.3	+0.8
	486nm,0.3s,baz=343,slow=18,SNR=126						
JHJ				Sn	Sb	06 04 29.8	-0.8
	915nm,0.3s,baz=102,slow=22,SNR=35						
JHCJ	Hachijojimakas	1.03 245		*i* P	Pb	06 04 18.5	+0.8
BSO1	Boso 1	1.14 3		P	Pb	06 04 20.3	+1.1
JMKN	Mikurajimanish	1.17 289		*i* P	Pb	06 04 19.8	-0.1
JMYK	Miyake Tsubota	1.26 296		P	Pb	06 04 21.4	-0.2
JMYK				*e*S	Sb	06 04 35.8	-1.6
BSO3	Boso 3	1.33 346		P	Pb	06 04 22.8	+0.2
JAOM	Aogashimamukai	1.42 223		*e*S	Sn	06 04 41.4	+0.7
BSO4	Boso 4	1.55 342		*i* P	Pb	06 04 26.1	-0.3
JKO	Kozu shima	1.62 295		*e*P	Pb	06 04 26.4	-1.4
JKO				*e*S	Sn	06 04 45.0	-0.5
JTHY	Toshimahigashi	1.68 307		*e*S	Sn	06 04 46.4	-0.7
JIM2	Oshima 3	1.72 315		P	Pn	06 04 27.6	+0.8
JIZS	Izushimoda	2.07 306		P	Pb	06 04 33.1	-2.3
KTJ3	Kamata3	2.08 313		P	Pn	06 04 32.6	+0.9
JOD2	Odawara 2	2.31 320		*i* P	Pn	06 04 36.0	+1.1
JGF	Kuroka	3.60 306			Pn	06 04 55.6	+3.0
INU	Inuyama	3.70 301		Pn	Pn	06 04 54.7	+0.7
JMN	Monobe	5.87 274		Pn	Pn	06 05 17.7	-6.2
JCJ	Chichijima	6.49 170		Pn	Pn	06 05 33.1	+0.7
	2.8nm,0.3s,baz=288,slow=20,SNR=2.5						
JCJ				Sn	Sn	06 06 41.2	-4.4
	2.7nm,0.3s,baz=286,slow=20,SNR=1.5						
	133nm,1.1s						
USRK	Ussuriysk Ar.	12.73 330		Pn	P	06 07 08.0	-0.6
USA0B	Ussuriysk Arra	12.73 330		Pn	P	06 07 08.7	0.0
MKAR	Makanchi Array	45.72 305		P	P	06 12 16.3	-1.1
	0.2nm,0.5s,baz=95,slow=6.7,SNR=1.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.72 305		P	P	06 12 19.9	+2.4
PPLA	Purkeypile	50.31 33		P	P	06 13 09.5	+17
CAST	Castle Rocks	50.38 33		P	P	06 13 09.2	+16
WB0	Warramunga Arr	53.34 188		P	P	06 13 16.2	+0.5
WR0	Warramunga Arr	53.52 187		P	P	06 13 17.0	0.0
WR0				IAmb	IAmb	06 13 36.6	
	comp=Z,7.8nm,1.4s						
WB2	Warramunga Arr	53.52 188		P	P	06 13 17.2	+0.2
WB2				IAmb	IAmb	06 13 28.9	
	comp=Z,6.6nm,1.4s						
WRA	Warramunga Arr	53.52 188		P	P	06 13 17.0	0.0
	comp=Z,0.8nm,0.3s,baz=5.8,slow=7.5,SNR=31						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	53.52 188		P	P	06 13 17.2	+0.2
GLB	Gilahina Butte	54.27 35		P	P	06 13 38.3	+16
GLB				IAmb	IAmb	06 13 54.2	
	comp=Z,4.1nm,1.3s						
VRDI	Verde Repeater	54.46 35		P	P	06 13 40.1	+16
VRDI				IAmb	IAmb	06 13 55.4	
	comp=Z,5.0nm,1.4s						
ASAR	Alice Springs	57.25 188		P	P	06 13 43.8	0.0
	comp=Z,0.3nm,0.4s,baz=4.3,slow=6.9,SNR=4.7						
	comp=Z,0.3nm,0.4s						

*IDC **10** 06:11:49.5±2.7, 71°.48N×3°.22W, h0km, mb3.6/2, mbtmp3.8/5, ML3.2/3, MS3.0/7, Error ellipse: s-maj=48.5km s-min=29.2km az=109.0*
*BER **10** 06:11:51.2±1.6, 71°.53N×4°.60W, h10km, ML3.0, Confirmed Earthquake*
*DNK **10** 06:11:58.1±4.0, 72°.12N×4°.92W, h36km±999km, ML2.7*
ISC 10 06:11:47.7±0.9, 71°.72N±0°.08×4°.38W±0°.07, h10km, n21, σ2°48/18, MS2.9/4, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBG	Daneborg	5.31 307		*e*P	Pn	06 13 09.0	+2.1
DBG				*e*S	Sn	06 14 06.9	-1.2
DBG	Daneborg	5.31 307		*i* P	Pn	06 13 09.1	+2.1
DAG	Danmarks Havn	6.37 329		*e*P	Pn	06 13 23.5	+2.0
DAG				*e*		06 14 25.9	
DAG	Danmarks Havn	6.37 329		*i* P	Pn	06 13 24.3	+2.8
DAG				*i* S	Sn	06 14 30.5	-3.6
DAG				IAML		06 14 37.0	
	comp=Z,3.6nm,0.7s						
HSPB	Hornsund (broa	7.51 36		*e*P	Pn	06 13 38.9	+1.9
HSPB				*e*S	Sn	06 14 60.0	-2.1
HSPB				IAML		06 15 01.9	
	comp=Z,17nm,0.8s						
KBS	Kingsbay	8.29 22		*e*P	Pn	06 13 51.1	+3.3
KBS	Kingsbay	8.29 22		*i* P	Pn	06 13 50.5	+2.7
SPA0	Spitsbergen Ar	8.37 30		*e*P	Pn	06 13 52.0	+3.2
SPITS	Spitsbergen Ar	8.37 30		Pn	Pn	06 13 51.4	+2.5
	baz=230,slow=17						
	comp=Z,11nm,0.7s						
ARCES	ARCESS Array B	10.10 88		Pn	Pn	06 14 09.8	-2.8
	comp=Z,0.1nm,0.3s,baz=298,slow=12,SNR=6.4						
	comp=Z,3.2nm,0.9s						
NOR	Nord	10.29 350		*e*P	Pn	06 14 17.4	+2.3
NOR				*e*		06 16 05.5	
NOR	Nord	10.29 350		*i* P	Pn	06 14 19.0	+3.9
NOA	NORSAR Array B	12.35 142		LR	LR	06 18 55.7	
	comp=Z,60nm,20.9s,baz=340,slow=36						
HFS	Hagfors	13.67 139		Pn	Pn	06 15 00.5	-0.8
	comp=Z,0.2nm,0.3s,baz=354,slow=12,SNR=5.8						
HFS				LR	LR	06 19 35.8	
	comp=Z,76nm,21.0s,baz=298,slow=35						
	comp=Z,1.5nm,0.6s						
EKA	Eskdalemuir Ar	16.46 178		Pn	P	06 15 41.6	+0.4
	baz=353,slow=11						
SFJD	Kangerlussuaq	16.60 276		LR	LR	06 21 52.5	
	comp=Z,25nm,18.5s,baz=9.0,slow=36						
VRAC	Vranov	24.45 146		LR	LR	06 26 58.5	
	comp=Z,22nm,18.0s,baz=334,slow=38						
AKASG	Malin Array Be	25.91 126		P	P	06 17 19.8	+0.3
	comp=Z,0.5nm,0.4s,baz=336,slow=9.8,SNR=4.7						
AKASG				LR	LR	06 26 44.2	
	comp=Z,22nm,19.7s,baz=31,slow=35						
	comp=Z,0.5nm,0.4s						
MLR	Muntele Rosu	29.99 135		LR	LR	06 30 22.6	
	comp=Z,35nm,19.5s,baz=245,slow=38						
NEW	Newport	51.36 308		LR	LR	06 43 09.5	
	comp=Z,47nm,19.5s,baz=260,slow=36						
TORD	Torodi Ar. Bea	58.66 173		P	P	06 21 45.4	+0.5
	comp=Z,0.6nm,0.7s,baz=1.5,slow=6.9,SNR=3.9						
	comp=Z,0.6nm,0.7s						

*KRNET **10** 06:25:02.7±0.1, 39°.50N×71°.97E, h15km, mb3.1*
*NNC **10** 06:25:05.8±3.8, 39°.62N×72°.08E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=27.3km s-min=13.3km az=179.0*
*SOME **10** 06:25:05.8, 39°.72N×72°.10E, h0km*
ISC 10 06:25:01.2±1.5, 39°.53N±0°.06×72°.08E±0°.04, h1km±11km, n19, σ1°10/30, 11C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.22 256		⇑*e*P	Pg	06 25 06.0	+0.5
	baz=64						
DRK				⇑*e*S	Sg	06 25 08.2	-0.1
	baz=64						
BTK	Batken	1.10 299		⇓*e*P	Pb	06 25 22.4	-0.6
	baz=3.0						
BTK				⇓*e*S	Sb	06 25 37.0	-0.9
	baz=3.0						
OHH	Osh	1.13 29		⇑*i* P	Pn	06 25 24.9	+0.7
	baz=31						
OHH				⇑*e*S	Sn	06 25 41.5	+1.2
	baz=31						
GAR	Garm	1.47 249		⇑*e*P	Pn	06 25 28.2	-0.6
	baz=49						
GAR				⇑*e*S	Sn	06 25 47.1	-1.6
	baz=49						
TRKS	Terek-Say	2.12 341		⇓*e*P	Pb	06 25 39.5	-0.9
	baz=43						
TRKS				⇓*e*S	Sb	06 26 06.1	-1.2
	baz=43						
ARK	Arkit	2.26 358		⇑*e*P	Pb	06 25 42.8	-0.1
	baz=60						
ARK				⇑*e*S	Sb	06 26 12.1	+0.7
	baz=60						
CHGR	Chuyangaron	2.43 250		⇑*e*P	Pn	06 25 43.4	+1.3
	baz=50						
CHGR				⇑*e*S	Sn	06 26 12.9	+0.4
	baz=50						
IUG	Iuzhnay	3.04 330		*e*P	Pg	06 26 00.5	+1.2
	325nm,0.6s						
IUG				*e*S	Sg	06 26 40.2	+1.5
	80nm,0.5s						
IUG	Iuzhnay	3.04 330		Pg	Pg	06 26 00.5	+1.2
	325nm,0.6s						
IUG				Lg	Lg	06 26 40.2	
	80nm,0.5s						
KK31	Karatay Array	3.75 342		⇑Pg	Pg	06 26 13.0	-0.1
	5.4nm,0.5s,baz=168,slow=17,SNR=30						
KK31				⇓Lg	Lg	06 27 00.3	
	12nm,0.8s,baz=160,slow=29,SNR=5.6						
CHMS	Chumysh	4.01 29		⇓Pg	Pb	06 26 14.7	+2.2
	6.5nm,0.6s						
CHMS				⇓Lg	Lg	06 27 13.9	
	9.4nm,0.7s						
TKM2	Tokmak 2	4.30 37		⇓Lg	Lg	06 27 22.0	
	4.8nm,0.7s						
KRBS	Karabastau	4.96 32		*e*P	Pg	06 26 36.2	+0.1
	2.3nm,0.6s						
KRBS				*e*S	Sg	06 27 40.8	+0.4
	3.4nm,0.5s						
KRBS	Karabastau	4.96 32		Pg	Pg	06 26 36.2	+0.1
	2.3nm,0.6s						
KRBS				Lg	Lg	06 27 40.8	
	3.4nm,0.5s						
KUU	Kurty	5.40 35		*e*P	Pg	06 26 43.7	-0.9
	2.1nm,0.5s						
KUU				*e*S	Sg	06 27 53.8	-0.7
	3.8nm,0.6s						
KUU	Kurty	5.40 35		Pg	Pg	06 26 43.7	-0.9
	1.3nm,0.7s						
KUU				Lg	Lg	06 27 53.8	
	3.8nm,0.6s						
KTBS	Karatobe	5.42 38		*e*P	Pg	06 26 44.0	-1.0
	1.7nm,0.6s						
KTBS				*e*S	Sg	06 27 54.4	-0.7
	5.6nm,0.3s						
BTLS	Baital	5.69 14		*e*P	Pg	06 26 48.5	-1.8
	1.2nm,0.4s						
BTLS				*e*S	Sg	06 28 02.4	-1.6
	3.2nm,0.5s						
BTLS	Baital	5.69 14		Pg	Pg	06 26 48.9	-1.3
	0.8nm,0.3s						
BTLS				Lg	Lg	06 28 02.4	
	1.7nm,0.7s						

*AEIC **10** 06:25:05±2.6, 53°.41N±0°.08×165°.53W±0°.08, h34km±8km, ML2.6/34, mb3.5/4(NEIC), Error ellipse: s-maj=11.0km s-min=6.6km az=173.0*
NEIC 10 06:25:04.2±2.2, 53°.4N±0°.1×165°.54W±0°.08, h22km±16km, Error ellipse: s-maj=16.5km s-min=4.8km az=160.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.73 308			Pn	06 25 19.3	0.0
UNV					Sn	06 25 29.7	-0.1
ZRO	Akutan Zero	0.74 339			Pn	06 25 19.3	-0.1
AKSA	Akutan Strait	0.75 353			Pn	06 25 19.2	-0.3
AKSA					Sn	06 25 29.7	-0.4
AKMO	Akutan Morgan	0.75 338			Pn	06 25 19.5	0.0
AKMO					Sn	06 25 30.7	+0.5
AKUT	Akutan	0.75 349			Pn	06 25 19.4	-0.1
AKUT					Sn	06 25 30.4	+0.1
AKRB	Akutan Reef Bi	0.80 337			Pn	06 25 20.3	+0.1
AKLV	Akutan Long Va	0.81 342			Pn	06 25 20.0	-0.3
LVA	Lava Point	0.82 339			Pn	06 25 20.5	0.0
MNAT	Makushin Natee	0.84 306			Pn	06 25 21.0	+0.3
MNAT					Sn	06 25 32.7	+0.3
MTBL	Makushin Table	0.89 311			Pn	06 25 21.9	+0.4
MTBL					Sn	06 25 34.5	+0.7
MGOD	Makushin Gods	0.89 297			Pn	06 25 21.7	+0.2
MCIR	Makushin Cirqu	0.98 305			Pn	06 25 23.3	+0.6
MCIR					Sn	06 25 36.7	+0.7
WESP	Westdahl Peak	1.20 23			Pb	06 25 26.2	-0.1
WESN	West Dahl Not	1.30 25			Pb	06 25 27.9	0.0
SSLS	Shishaldin Sou	1.60 34			Pn	06 25 31.6	+0.3
WTUG	Tugumak	1.60 24			Pn	06 25 31.6	+0.3
SSBA	Shishaldin	1.61 31			Pn	06 25 32.0	+0.6
BRPK	Brown Peak	1.64 40			Pn	06 25 32.1	+0.4
SSLN	Shishaldin Nor	1.68 32			Pn	06 25 33.1	+0.8
ISLZ	Isanotski Laza	1.71 38			Pn	06 25 32.9	+0.2
ISNN	Isanotski Nort	1.77 35			Pn	06 25 34.5	+0.9
FALS	False Pass	1.92 40			Pn	06 25 34.5	-1.1
NIKH	Nikolski High	2.04 259			Pn	06 25 36.3	-1.0
SDPT	Sand Point	3.55 55			Pn	06 25 58.0	+0.1
RSO	Redoubt South	9.93 39			Pn	06 27 21.9	-3.8
BRLK	Bradley Lake	10.28 46			Pn	06 27 26.3	-4.0
L19K	White Mountain	10.47 29			Pn	06 27 30.9	-2.0
SEW	Seward	11.07 46			Pn	06 27 39.4	-1.7
SUA	Susitna One	11.32 39			Pn	06 27 44.1	-0.6
SKT	Skwentna	11.38 35			Pn	06 27 45.8	+0.5
RC01	Rabbit Creek A	11.49 42			Pn	06 27 45.0	-1.7
K20K	Telida	11.63 26			Pn	06 27 46.7	-2.1
PWL	Port Wells	11.94 44			Pn	06 27 49.7	-3.2
TNA	Tin City	12.26 355			Pn	06 27 55.9	-1.4
HIN	Hinchinbrook I	12.51 48			Pn	06 27 58.2	-2.5
KLU	Klutina	13.27 45			Pn	06 28 07.7	-3.4
M24K	Tolsona, Glenn	13.47 42			Pn	06 28 11.2	-2.7
HMT	Hamilton	13.51 51			Pn	06 28 11.6	-2.7
N25K	Chitina, Valde	13.88 45			Pn	06 28 16.0	-3.5
WRH	Wood River Hil	14.23 32			Pn	06 28 22.6	-1.5
I23K	Minto, Yukon-K	14.33 28			Pn	06 28 24.4	-1.1
CCB	Clear Creek Bu	14.44 32			Pn	06 28 24.4	-2.6
MDM	Murphy Dome	14.52 30			Pn	06 28 25.7	-2.5
BARN	Barnard Glacie	14.96 50			Pn	06 28 32.2	-2.1
CTGM	Chitina Glacie	15.08 50			Pn	06 28 32.1	-3.7
LOGN	Logan Glacier	15.19 51			Pn	06 28 35.2	-2.1
LOGN					IAmb	IAmb	06 29 16.6
	comp=Z,2.4nm,0.9s						
HYT	Haines Junctio	16.83 53			Pn	Pn	06 28 57.2	-1.2
DAWY	Dawson	17.12 41			Pn	Pn	06 29 00.5	-1.5
DAWY					IAmb	IAmb	06 29 35.9	
	comp=Z,5.7nm,1.4s						

*IDC **10** 06:28:21.6±2.8, 35°.81N×139°.68E, h85km±29km, mb3.5/7, mbtmp3.9/8, MS2.7/1, Error ellipse: s-maj=28.5km s-min=20.9km az=73.0*
*NEIC **10** 06:28:21.4±1.4, 35°.92N±0°.04×139°.83E±0°.08, h81km±4km, mb4.5/13, Error ellipse: s-maj=10.0km s-min=5.9km az=108.0*
*JMA **10** 06:28:21.7±0.1, 35°.9N±0°.4×139°.8E±0°.4, h75km±1km, MV3.5/34, EASTERN SAITAMA PREF*
JMA Felt I J1 at EASTERN SAITAMA PREF .
*NIED **10** 06:28:21.7, 35°.93N×139°.81E, h75km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.55; $M_{\theta\theta}$2.23; $M_{\phi\phi}$1.32; $M_{r\theta}$-3.30; $M_{\theta\phi}$2.58; $M_{\phi r}$0.33; Fault plane solution: $M_0$5.22000×10^{14} NP1: ϕ_s205.00000°, δ35.00000°, λ-135.00000°. NP2: ϕ_s76.00000°, δ66.00000°, λ-63.00000°.*
ISC 10 06:28:21.0±0.8, 35°.89N±0°.04×139°.82E±0°.05, h79km±6km, n50, σ0°79/54, mb4.1/14, 5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.45 42			Pn	06 28 34.5	+0.3
JYT	Yasato	0.45 42		*i* P	Pn	06 28 34.6	+0.3
JYT				S	Sn	06 28 44.0	0.0
JAG	Ashikaga	0.61 331		*i* P	Pn

JHJ2 Mitsune 2.77 180 Pn **Pn 06 29 04.4 +1.1**
JTM Tenmabayashi 4.99 11 Pn **Pn 06 29 34.4 +1.1**
JMN Monobe 5.34 248 Pn **Pn 06 29 38.7 +0.4**
JHS Saijyo 5.55 263 Pn **Pn 06 29 42.5 +1.5**
ERM Erimo 6.64 22 Pn **Pn 06 29 54.7 -1.2**
JEW Eniwo 7.05 10 Pn **Pn 06 30 02.4 +0.8**
H11N2 WAKE ISLAND Hy 28.72 117 T T 07 04 03.9
baz=308,slow=75,SNR=9.7
H11N1 WAKE ISLAND Hy 28.73 117 T T 07 04 06.7
baz=308,slow=75,SNR=10
H11N3 WAKE ISLAND Hy 28.74 117 T T 07 04 07.5
baz=308,slow=75,SNR=7.7
ZALV Zalesovo Beam 41.75 313 P **P 06 36 02.2 +0.1**
1.1nm,0.4s,baz=58,slow=3.7,SNR=3.8
1.1nm,0.4s
ZALV Zalesovo Beam 41.75 313 P **P 06 36 02.0 -0.2**
MKAR Makanchi Array 43.65 303 P **P 06 36 17.5 -0.2**
KURK Kurchatov 45.64 309 P **P 06 36 32.2 -1.2**
KURK IAmb IAmb 06 36 33.5
comp=Z,5.3nm,1.2s
KURBB Kurchatov Arra 45.70 309 P **P 06 36 33.5 -0.5**
comp=Z,0.9nm,0.4s,baz=84,slow=8.1,SNR=6.6
comp=Z,0.9nm,0.4s
ILAR Eielson Array 51.14 32 P **P 06 37 14.8 -0.7**
comp=Z,0.6nm,0.9s,baz=265,slow=7.8,SNR=4.4
comp=Z,0.6nm,0.9s
J25K Salcha River, 51.80 32 P **P 06 37 20.7 +0.2**
J25K IAmb IAmb 06 37 36.8
comp=Z,5.8nm,1.4s
EYAK Cordova Ski Ar 52.04 37 P **P 06 37 21.0 -1.2**
EYAK IAmb IAmb 06 37 48.1
comp=Z,6.5nm,1.2s
RIDG Independent Ri 52.10 33 P **P 06 37 22.0 -0.7**
RIDG IAmb IAmb 06 37 32.2
comp=Z,5.2nm,1.0s
FITZ Fitzroy Crossi 55.35 196 P **P 06 37 47.3 +0.5**
FITZ IAmb IAmb 06 37 59.9
comp=Z,2.5nm,1.1s
WB0 Warramunga Arr 55.59 186 P **P 06 37 47.6 -0.9**
WB2 Warramunga Arr 55.77 186 P **P 06 37 49.3 -0.5**
WB2 IAmb IAmb 06 38 06.8
comp=Z,7.5nm,1.3s
WR0 Warramunga Arr 55.77 186 P **P 06 37 50.3 +0.5**
WR0 IAmb IAmb 06 38 10.1
comp=Z,11nm,1.4s
WRA Warramunga Arr 55.77 186 P **P 06 37 48.8 -1.1**
comp=Z,0.6nm,0.4s,baz=0.7,slow=7.4,SNR=22
comp=Z,0.6nm,0.4s
WRA Warramunga Arr 55.77 186 P **P 06 37 48.1 -1.7**
INK Inuvik 55.98 27 P **P 06 37 49.3 -1.4**
ABKAR Akbulak array 57.70 310 P **P 06 38 02.5 -0.7**
PSA00 Pilbara Seismi 60.20 201 P **P 06 38 20.2 -0.6**
EUNU Eureka 61.50 8 P **P 06 38 29.1 +0.1**
ARCES ARCESS Array B 64.61 339 P **P 06 38 49.6 0.0**
comp=Z,0.6nm,0.6s,baz=41,slow=8.1,SNR=4.8
comp=Z,0.6nm,0.6s
FINES FINESS Array B 69.22 332 P **P 06 39 18.7 -0.3**
KVN Kaiserville 76.47 52 P **P 06 40 03.8 +1.2**
NVAR Mina Array Bea 76.70 52 P **P 06 40 05.5 +1.6**
comp=Z,0.8nm,0.7s,baz=289,slow=5.3,SNR=9.6
comp=Z,0.8nm,0.7s
NVAR Mina Array Bea 76.70 52 P **P 06 40 05.6 +1.8**
TXAR Lajitas Array 91.83 51 P **P 06 41 21.5 +0.9**
comp=Z,0.2nm,0.5s,baz=305,slow=4.9,SNR=3.7
comp=Z,0.2nm,0.5s

*DMN **10** 06:52:39.6±0.0,28°.03N×87°.60E,h60km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NDI **10** 06:52:40.6±2.6,27°.84N×87°.37E,h13km±13km,ML4.3*
*IDC **10** 06:52:50.9±1.4,29°.52N×88°.02E,h0km,mb3.7/4, mbtmp3.7/5,ML3.7/1,MS3.1/3,Error ellipse: s-maj=43.1km s-min=30.0km az=69.0*

ISC 10 06:52:40.9±1.4,28°.03N±0°.07×87°.40E±0°.04,h32km±12km, n29,σ1§89/36,mb3.8/4,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**0.73**	**158**	*e*Pg	**Pb**	**06 52 55.5**	**+0.1**
TAPN				*e*Sg	**Sn**	**06 53 06.7**	**+1.2**
16μm,0.3s							
JIRN	**Jiri**	**1.13**	**251**	*e*Pg	**Pb**	**06 53 02.5**	**+0.3**
JIRN				*e*Sg	**Sn**	**06 53 19.6**	**+4.2**
16μm,0.3s							
RAMN	**Ramite**	**1.29**	**214**	*e*Pg	**Pn**	**06 53 03.8**	**+0.9**
RAMN				*e*Sg	**Sb**	**06 53 22.0**	**+0.9**
17μm,0.4s							
GUN	**Gumba**	**1.35**	**265**	*e*Pg	**Pb**	**06 53 05.9**	**+0.1**
GUN				*e*Sg	**Sb**	**06 53 24.3**	**+1.4**
5μm,0.3s							
SLGI	**Shiliguri**	**1.60**	**145**	*e*Pg	**Pb**	**06 53 09.3**	**-0.6**
SLGI				*i* Sg	**Sn**	**06 53 29.4**	**+2.9**
PKI	**Pulchoki**	**1.82**	**256**	*e*Pg	**Pn**	**06 53 11.6**	**+1.3**
PKI				*e*Sg	**Sb**	**06 53 35.0**	**-1.3**
7μm,0.6s							
PKIN	**Phulchoki**	**1.83**	**256**	*e*Pg	**Pn**	**06 53 11.9**	**+1.6**
PKIN				*e*Sg	**Sb**	**06 53 35.3**	**-1.2**
6μm,0.4s							
KKN	**Kakani**	**1.89**	**263**	*e*Pg	**Pn**	**06 53 12.8**	**+1.7**
KKN				*e*Sg	**Sb**	**06 53 37.1**	**-1.1**
2μm,0.2s							
DMN	**Daman**	**2.07**	**259**	*e*Pg	**Pn**	**06 53 15.0**	**+1.3**
DMN				*e*Sg	**Sn**	**06 53 41.3**	**+2.8**
2μm,0.4s							
GKN	**Gorkha**	**2.44**	**270**	*e*Pg	**Pn**	**06 53 20.0**	**+1.3**
GKN				*e*Sn	**Sn**	**06 53 50.0**	**+2.5**
1μm,0.2s							
VLK	**Valmikinagar**	**3.21**	**258**	*e*P	**Pn**	**06 53 29.3**	**+0.3**
VLK				*e*S	**Sn**	**06 54 06.2**	**-0.1**
DANN	**Dangsing**	**3.23**	**277**	*e*Pn	**Pn**	**06 53 29.0**	**-0.6**
DANN				*e*Sn	**Sn**	**06 54 08.3**	**+1.2**
529nm,0.3s							
KOLN	**Koldanda**	**3.37**	**266**	*e*Pg	**Pn**	**06 53 32.0**	**+0.5**
KOLN				*e*Sn	**Sn**	**06 54 10.7**	**+0.2**
370nm,0.3s							
PYUN	**Piuthan**	**3.90**	**272**	*e*Pn	**Pn**	**06 53 39.1**	**+0.4**
PYUN				*e*Sn	**Sn**	**06 54 24.5**	**+1.0**
295nm,0.3s							
BOK	**Bokaro**	**4.43**	**198**	*i* x	x	06 53 30.3	
BOK				*i* x	x	06 54 08.7	
SHL	**Shillong**	**4.70**	**120**	*e*P	**Pn**	**06 53 49.8**	**+0.1**
SHL				*e*S	**Sn**	**06 54 41.1**	**-2.2**
SHL				IAML		06 55 03.1	
comp=E,262nm,0.3s							
VAR	**Varanasi**	**4.77**	**236**	*e*S	**Sn**	**06 54 43.4**	**-1.3**
JBP	**Jabalpur**	**8.26**	**236**	*ex*	Pn	06 54 27.8	-11
JBP				*e*S	**Sn**	**06 56 06.3**	**-4.4**
DDI	**Dehra Dun**	**8.48**	**288**	*e*S	**Sn**	**06 56 11.9**	**-4.3**
DDI				IAML		06 56 16.3	
comp=N,349nm,0.3s							
DDI				IAML		06 56 17.8	
comp=E,225nm,0.4s							
BHPL	**Bhopal**	**10.18**	**244**	*e*P	Pn	06 54 58.2	-6.7
BHPL				*e*S	Sn	06 56 46.7	-11
AJM	**Ajmer**	**11.46**	**265**	*ex*	**Pn**	**06 55 20.0**	**-2.3**
AJM				*i* x	Sn	06 57 17.0	-12
POO	**Poona**	**15.62**	**236**	*ex*	x	06 58 53.0	
MKAR	**Makanchi Array**	**19.16**	**349**	P	**P**	**06 57 02.1**	**+0.6**
comp=E,0.2nm,0.3s,baz=177,slow=9.9,SNR=4.6							
MKAR				LR	LR	07 05 00.3	
comp=E,17nm,19.9s,baz=66,slow=41							
comp=E,0.4nm,0.3s							
SONM	**Songino Array**	**24.69**	**32**	P	**P**	**06 57 58.2**	**-0.8**
comp=E,0.7nm,0.4s,baz=218,slow=11,SNR=4.4							
comp=E,0.7nm,0.4s							
ASF	**Jabal al Asfar**	**43.57**	**288**	LR	LR	07 21 29.8	
comp=E,168nm,21.6s,baz=288,slow=39							
NOA	**NORSAR Array B**	**59.26**	**327**	LR	LR	07 31 03.0	
comp=E,11nm,21.0s,baz=10.0,slow=39							
WRA	**Warramunga Arr**	**65.84**	**131**	P	P	07 03 43.2	+20
comp=E,0.8nm,0.6s,baz=326,slow=6.3,SNR=3.0							
comp=E,0.8nm,0.6s							
ASAR	**Alice Springs**	**68.21**	**134**	P	P	07 03 56.9	+18
comp=E,0.6nm,0.5s,baz=315,slow=6.7,SNR=4.1							
comp=E,0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**80.20**	**280**	P	P	07 05 04.8	+16
comp=E,0.4nm,0.7s,baz=57,slow=5.1,SNR=2.4							
comp=E,0.4nm,0.7s							

NNC 10 06:53:23.6±16.0,53°.57N×91°.49E,h0km,mb3.7,mpv3.4, 6C-2D,Error ellipse: s-maj=127.2km s-min=86.8km az=54.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.98**	**278**	⇑Pg	Pb	06 54 33.3	-1.2
1.5nm,0.5s							
ZAA0				⇑Lg	Lg	06 55 26.2	
8.7nm,1.0s							
KURK	**Kurchatov**	**8.41**	**255**	⇑Lg	Lg	06 57 48.4	
30nm,1.2s							
KURBB	**Kurchatov Arra**	**8.51**	**255**	⇑Pn	Pn	06 55 30.0	+2.2
1.7nm,0.3s							
KURBB				⇑Sn	Sn	06 57 04.7	+0.2
17nm,0.8s							
KURBB				⇓Lg	Lg	06 57 52.0	
43nm,0.9s							
MK31	**Makanchi Array**	**8.98**	**225**	Pn	Pn	06 55 37.8	+3.3
1.2nm,0.6s,baz=41,slow=14,SNR=16							
MK31				⇑Sn	Sn	06 57 19.1	+2.8
2.0nm,0.7s							
MK31				⇓Lg	Lg	06 58 08.4	
15nm,1.2s,baz=50,slow=29							

*SEA **10** 06:56:01.2±1.3,47°.53N±0°.01×120°.37W±0°.02,h5km±6km, ML2.1/8,ML2.3/42(NEIC),Error ellipse: s-maj=2.2km s-min=1.5km az=111.0*

NEIC 10 06:56:00.8±1.3,47°.523N±0°.007×120°.34W±0°.02, h7km±6km,Error ellipse: s-maj=2.4km s-min=0.5km az=111.0,Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETW	**Entiat**	**0.08**	**2**		Pg	06 56 03.0	0.0
SLFW	**Sugar Loaf**	**0.27**	**331**		Pg	06 56 06.1	-0.2
SLFW					Sg	06 56 09.6	-0.3
WTV	**Waterville**	**0.31**	**56**		Pg	06 56 07.3	+0.3
CBSW	**Chelan Butte S**	**0.34**	**35**		Pg	06 56 07.7	0.0
LTY	**Liberty**	**0.35**	**221**	Pg	Pg	06 56 07.7	0.0
LTY	**Liberty**	**0.35**	**221**		Sg	06 56 12.6	+0.3
TBM	**Table Mountain**	**0.40**	**207**		Pg	06 56 08.8	+0.3
WRW	**Wenatchee Ridg**	**0.50**	**312**		Pg	06 56 10.1	-0.3
TWW	**Teanaway**	**0.53**	**223**		Pg	06 56 11.5	+0.5
NLW	**Nelson Butte**	**0.56**	**360**		Pg	06 56 11.4	-0.3
DHW2	**Dyer Hill 2**	**0.60**	**39**		Pg	06 56 12.3	-0.2
EBG	**Ellensburg**	**0.63**	**195**		Pg	06 56 13.4	+0.4
SAW	**Saint Andrews**	**0.66**	**74**		Pg	06 56 13.4	-0.1
BVW	**Beverly**	**0.78**	**156**		Pg	06 56 16.1	+0.3
GPW	**Glacier Peak**	**0.80**	**318**		Pg	06 56 15.4	-0.9
FHE	**Frenchman Hill**	**0.81**	**135**		Pg	06 56 16.8	+0.4
NAC	**Naches**	**0.86**	**203**		Pg	06 56 17.7	+0.4
WAH2	**Wahluke Slope**	**0.93**	**145**		Pb	06 56 19.1	-0.1
MDW	**Midway**	**0.99**	**156**		Pg	06 56 20.0	+0.2
RATT	**Rattlesnake La**	**1.00**	**265**		Pg	06 56 19.8	-0.3
LOCW	**Locke Island**	**1.02**	**142**		Pb	06 56 20.7	0.0
D08A	**Wollman Farm,**	**1.07**	**115**		Pg	06 56 20.8	-0.6
D08A				IAML		06 56 38.2	
comp=N,60nm,0.1s							
D08A				IAML		06 56 39.5	
comp=E,66nm,0.1s							
B08A	**Colville Reser**	**1.07**	**39**		Pg	06 56 20.8	-0.7
B08A				IAML		06 56 35.8	
comp=N,81nm,0.1s							
B08A				IAML		06 56 36.9	
comp=E,80nm,0.2s							
FMW	**Mount Fremont**	**1.09**	**237**		Pg	06 56 20.5	-1.2
BENWA	**Benson Ranch**	**1.09**	**157**		Pg	06 56 21.8	0.0
GBL	**Gable Mountain**	**1.10**	**147**		Pn	06 56 22.5	-0.2
GBL	**Gable Mountain**	**1.10**	**147**		Pg	06 56 22.1	+0.1
OD2	**Odessa Site #2**	**1.11**	**96**		Pg	06 56 21.5	-0.6
PANH	**Panhandle Gap,**	**1.11**	**234**		Pg	06 56 21.1	-1.0
SNIWA	**Snively Ranch**	**1.16**	**156**		Pb	06 56 23.2	+0.1
WPW	**White Pass**	**1.17**	**226**		Pg	06 56 22.1	-1.1
D05A	**Enumclaw**	**1.17**	**254**		Pg	06 56 22.5	-0.9
RCM	**Mount Rainier-**	**1.18**	**235**		Pg	06 56 22.4	-1.0
OBSR	**Observation Ro**	**1.19**	**239**		Pg	06 56 22.9	-0.7
RSW	**Rattlesnake Hi**	**1.24**	**155**		Pg	06 56 24.0	-0.6
REMR	**Mount Rainier-**	**1.25**	**236**		Pg	06 56 24.0	-0.8
HAWA	**Hanford**	**1.26**	**154**		Pn	06 56 24.6	-0.3
HAWA				IAML		06 56 43.2	
comp=E,39nm,0.2s							
HAWA				IAML		06 56 44.1	
comp=E,49nm,0.5s							
B06A	**Marblemount**	**1.26**	**323**	Pg	Pn	06 56 24.5	-0.3
B06A				IAML		06 56 42.6	
comp=E,43nm,0.3s							
B06A				IAML		06 56 43.1	
comp=N,51nm,0.2s							
H2OWA	**Water**	**1.29**	**151**		Pb	06 56 25.3	-0.1
GLK	**Glacier Lake**	**1.30**	**223**		Pn	06 56 24.8	-0.6
WIW	**Wooded Island**	**1.31**	**146**		Pn	06 56 25.4	-0.1
E08A	**Dider Farm, El**	**1.35**	**139**	Pn	Pn	06 56 26.2	+0.1
E08A				IAML		06 56 45.9	
comp=E,70nm,0.2s							
E08A				IAML		06 56 46.2	
comp=N,45nm,0.3s							
B941	**Kapowsin**	**1.39**	**248**		Pn	06 56 25.8	-0.8
C09A	**Chrisman Ranch**	**1.42**	**78**		Pn	06 56 26.0	-1.1
BLTW	**Bickleton**	**1.61**	**176**		Pn	06 56 30.0	+0.3
ASR	**Mount Adams--S**	**1.62**	**213**		Pb	06 56 30.9	-0.2
F07A	**Phinny Hill Vi**	**1.65**	**170**		Pn	06 56 30.7	+0.5
F07A				IAML		06 57 00.2	
comp=N,43nm,0.7s							
GMW	**Gold Mountain**	**1.66**	**272**		Pb	06 56 31.1	-0.7
GNW	**Green Mountain**	**1.69**	**272**		Pb	06 56 31.5	-0.7
B013	**Quilcene**	**1.76**	**280**		Pn	06 56 32.5	+0.7
B201	**Coldwater, Mou**	**1.80**	**228**		Pn	06 56 33.1	+0.8
CDFW	**Cedar Flats**	**1.83**	**220**		Pb	06 56 33.9	-0.9
HDW	**Hoodsport**	**1.84**	**275**		Pn	06 56 33.7	+0.7
PNT	**Penticton**	**1.86**	**15**		Pn	06 56 33.0	-0.1
A05A	**Maple Falls**	**1.88**	**322**	Pn	Pn	06 56 32.5	-0.9
B04A	**Port Angeles**	**2.20**	**285**	Pn	Pn	06 56 38.2	+0.4
NEW	**Newport**	**2.29**	**70**		Pn	06 56 37.9	-1.1
NEW				IAML		06 57 13.9	
comp=N,20nm,0.3s							
NEW				IAML		06 57 14.2	
comp=N,19nm,0.6s							
G06A	**Carlson Farm,**	**2.30**	**185**	Pn	Pn	06 56 39.4	+0.2
G06A				IAML		06 57 14.1	
comp=N,17nm,4.1s							
G06A				IAML		06 57 31.5	
comp=E,13nm,4.5s							
PALME	**Palmer Lift, M**	**2.36**	**204**		Pg	06 56 45.2	-0.9
WISH	**Wishkah**	**2.37**	**261**	Pn	Pn	06 56 39.8	-0.3
PGC	**Sidney**	**2.37**	**300**	Pn	Pn	06 56 39.7	-0.4
HOOD	**Mount Hood Mea**	**2.38**	**203**	Pn	Pn	06 56 39.5	-0.9
HOOD				IAML		06 58 00.4	
comp=N,17nm,2.8s							
HOOD				IAML		06 58 06.4	
comp=E,17nm,0.7s							
NLWA	**Neilton Lookou**	**2.40**	**268**	Pn	Pn	06 56 40.7	+0.2
NLWA				IAML		06 57 29.4	
comp=E,15nm,3.5s							
NLWA				IAML		06 57 43.1	
comp=E,15nm,4.9s							
E03A	**Lebam**	**2.41**	**247**	Pn	Pn	06 56 39.8	-0.9
E03A				IAML		06 56 55.9	
comp=N,19nm,3.1s							
E03A				IAML		06 57 17.3	
comp=E,18nm,4.6s							
G08A	**Pilot Rock**	**2.43**	**156**	Pn	Pn	06 56 40.3	-0.8
F10A	**Beach Ranch, E**	**2.64**	**125**		Pn	06 56 44.1	+0.2
F10A				IAML		06 57 34.5	
comp=E,17nm,0.3s							
I07A	**Izee**	**3.49**	**170**	Pn	Pn	06 56 56.4	+0.8
JTMT	**Jette**	**4.10**	**85**	Pn	Pn	06 57 03.3	-0.7
MSO	**Missoula**	**4.42**	**97**	Pn	Pn	06 57 07.5	-0.9

*IDC **10** 06:56:08.3±0.9,0°.69S×133°.37E,h0km,mb4.0/8, mbtmp4.0/11,ML4.3/3,MS3.2/5,Error ellipse: s-maj=26.9km s-min=16.0km az=68.0*
*NEIC **10** 06:56:10.4±1.5,0°.4S±0°.1×132°.3E±0°.1,h44km±14km, mb4.2/13,Error ellipse: s-maj=22.4km s-min=12.3km az=49.0*
*DJA **10** 06:56:13.6±1.6,1°.5±8°×13°.3E±°,h26km±20km,M4.4/7, mb4.6/2,mB4.9/2,MLv4.3/7,Mw(mB)4.2/2,MwMwp5.1/1, Mwp5.3/1*

ISC 10 06:56:15.3±1.4,0°.88S±0°.07×133°.22E±0°.05,h47km±13km, n48,σ2§30/48,mb3.8/9,MS3.3/3,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.15**	**123**	P	**Pn**	**06 56 34.5**	**-0.4**
RKPI				S	**Sn**	**06 56 51.1**	**+1.6**
SIJI	**Sorong**	**1.95**	**270**	Pn	**Pn**	**06 56 46.4**	**+0.5**
207nm,0.3s,baz=324,slow=21,SNR=95							
SIJI				Sn	**Sn**	**06 57 11.9**	**+2.6**
77nm,0.3s,baz=284,slow=21,SNR=11							
SIJI				LR	LR	06 57 47.6	
comp=Z,461nm,18.7s,baz=271,slow=47							
324nm,0.3s							
SIJI	**Sorong**	**1.95**	**270**	P	**Pn**	**06 56 46.0**	**+0.1**
SIJI				S	**Sn**	**06 57 11.2**	**+1.9**
SWI	**Sorong**	**1.96**	**271**	P	**Pn**	**06 56 45.2**	**-0.8**
SWI				S	**Sn**	**06 57 12.0**	**+2.6**
FAKI	**Fak Fak**	**2.24**	**206**		**Pn**	**06 56 50.8**	**+0.9**
FAKI	**Fak Fak**	**2.24**	**206**	P	**Pn**	**06 56 51.5**	**+1.5**
FAKI				S	**Sn**	**06 57 20.4**	**+4.0**
FAKI	**Fak Fak**	**2.24**	**206**	P	Pn	06 56 53.0	+3.0
MSAI	**Masohi**	**4.94**	**240**	P	Pn	06 57 29.5	+2.6
0.1nm446nm25nm,0.7s							
KRAI	**Karang Ratu**	**5.39**	**243**	P	Pn	06 57 35.2	+2.0
SAUI	**Saumlaki**	**7.31**	**195**	Pn	**Pn**	**06 57 56.9**	**-2.6**
LUWI	**Luwuk**	**10.45**	**269**	Pn	Pn	06 58 25.2	-17
KDU	**Kakadu**	**11.75**	**184**	P	**Pn**	**06 58 59.5**	**-0.8**
MTN	**Manton Dam**	**12.06**	**190**		**Pn**	**06 59 03.4**	**-1.2**
MTN	**Manton Dam**	**12.06**	**190**	P	**Pn**	**06 59 03.5**	**-1.1**
TOLI2	**Tolitoli**	**12.59**	**279**	Pn	Pn	06 58 52.8	-19
KNRA	**Kununurra**	**15.34**	**196**		**Pn**	**06 59 47.2**	**-1.6**
KNRA				IAmb	IAmb	06 59 51.3	
comp=Z,43nm,0.6s							
KNRA	**Kununurra**	**15.34**	**196**	P	**Pn**	**06 59 47.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**18.66**	**203**	P	**Pn**	**07 00 29.2**	**-0.9**
comp=Z,0.6nm,0.3s,baz=38,slow=11,SNR=16							
FITZ				S	**Sn**	**07 03 48.8**	**-9.2**
comp=Z,2.5nm,0.6s,baz=216,slow=19,SNR=3.3							
FITZ				LR	LR	07 08 42.6	
comp=Z,38nm,18.2s,baz=35,slow=40							
comp=Z,1.4nm,0.3s							
FITZ	**Fitzroy Crossi**	**18.66**	**203**	P	**P**	**07 00 26.2**	**-3.2**
FITZ				IAmb	IAmb	07 00 41.0	
comp=Z,15nm,1.4s							
FITZ	**Fitzroy Crossi**	**18.66**	**203**	P	**Pn**	**07 00 28.9**	**-1.2**
WB0	**Warramunga Arr**	**18.80**	**177**	P	**Pn**	**07 00 32.3**	**+0.5**
WB0				IAmb	IAmb	07 00 34.7	
comp=Z,9.0nm,0.8s							
WRAB	**Tennant Creek**	**18.97**	**177**	P	**P**	**07 00 32.7**	**-0.1**
WRAB	**Tennant Creek**	**18.97**	**177**	P	**Pn**	**07 00 33.2**	**-0.6**
WRA	**Warramunga Arr**	**18.98**	**177**	P	**P**	**07 00 33.0**	**+0.1**
comp=Z,0.6nm,0.3s,baz=355,slow=11,SNR=40							
comp=Z,4.7nm,0.7s							
WRA	**Warramunga Arr**	**18.98**	**177**	P	**Pn**	**07 00 33.3**	**-0.6**
WB2	**Warramunga Arr**	**18.98**	**177**	P	**Pn**	**07 00 33.7**	**-0.3**
WB2				IAmb	IAmb	07 00 36.2	
comp=Z,12nm,1.1s							
WR0	**Warramunga Arr**	**19.00**	**176**	P	**Pn**	**07 00 34.1**	**-0.2**
WR0				IAmb	IAmb	07 00 42.9	
comp=Z,29nm,1.5s							
AS31	**Alice Springs**	**22.66**	**178**	P	**P**	**07 01 14.1**	**+1.4**
AS01	**Alice Springs**	**22.66**	**178**	P	**P**	**07 01 13.4**	**+0.7**
ASAR	**Alice Springs**	**22.66**	**178**	P	**P**	**07 01 13.6**	**+0.9**
comp=Z,13nm,0.6s,baz=8.2,slow=9.4,SNR=69							
ASAR				LR	LR	07 10 32.3	
comp=Z,55nm,21.0s,baz=334,slow=38							
comp=Z,13nm,0.6s							
CTA	**Charters Tower**	**22.96**	**147**	P	**P**	**07 01 17.1**	**+1.3**
comp=Z,3.7nm,0.9s,baz=334,slow=13,SNR=2.1							
CTA				LR	LR	07 11 36.6	
comp=Z,112nm,18.3s,baz=256,slow=40							
comp=Z,3.7nm,0.9s							
SMRI	**Semarang**	**23.52**	**254**	P	P	07 01 08.9	-12
PSA00	**Pilbara Seismi**	**24.35**	**211**	P	**P**	**07 01 22.2**	**-6.7**
PSA00				IAmb	IAmb	07 01 32.7	
comp=Z,7.7nm,1.0s							
PSA00	**Pilbara Seismi**	**24.35**	**211**	P	**P**	**07 01 31.4**	**+2.5**
WRKA	**Warakurna**	**24.48**	**191**	P	**P**	**07 01 32.0**	**+1.9**
OOD	**Oodnadatta**	**26.86**	**175**	P	**P**	**07 01 53.0**	**+1.4**
LCRK	**Leigh Creek**	**29.78**	**171**	P	**P**	**07 02 19.2**	**+1.6**
FORT	**Forrest**	**30.13**	**189**	P	**P**	**07 02 22.8**	**+2.1**
STKA	**Stephens Creek**	**31.83**	**166**	P	**P**	**07 02 36.5**	**+0.8**
comp=Z,5.1nm,0.8s,baz=343,slow=7.6,SNR=8.5							
STKA				LR	LR	07 16 39.4	
comp=Z,71nm,19.6s,baz=21,slow=38							
comp=Z,5.1nm,0.8s							
STKA	**Stephens Creek**	**31.83**	**166**	P	**P**	**07 02 36.1**	**+0.5**
STKA				IAmb	IAmb	07 02 58.5	
comp=Z,4.7nm,1.4s							
BBOO	**Buckleboo**	**31.87**	**175**	P	**P**	**07 02 36.9**	**+0.9**
BLDU	**Ballidu**	**33.47**	**206**	P	**P**	**07 02 51.6**	**+1.6**
BKZ	**Black Stump Fm**	**54.86**	**139**	P	**P**	**07 05 42.9**	**+1.9**
MKAR	**Makanchi Array**	**65.05**	**324**	P	**P**	**07 06 50.5**	**-0.2**
comp=Z,0.9nm,0.6s,baz=108,slow=8.5,SNR=8.6							
comp=Z,0.9nm,0.6s							
KURBB	**Kurchatov Arra**	**69.12**	**326**	P	**P**	**07 07 15.6**	**-0.9**
comp=Z,0.6nm,0.6s,baz=122,slow=5.9,SNR=6.7							
comp=Z,0.6nm,0.6s							
BVAR	**Borovoye Array**	**74.72**	**326**	P	**P**	**07 07 49.4**	**-0.6**
comp=Z,0.2nm,0.4s,baz=77,slow=6.2,SNR=2.2							
comp=Z,0.2nm,0.4s							
VNDA	**Vanda**	**78.12**	**174**	P	**P**	**07 08 09.2**	**+0.3**
comp=Z,0.8nm,0.8s,baz=325,slow=6.1,SNR=5.1							
comp=Z,0.8nm,0.8s							
ILAR	**Eielson Array**	**86.48**	**25**	P	**P**	**07 08 51.1**	**-1.6**
comp=Z,0.4nm,0.9s,baz=248,slow=4.8,SNR=2.5							
comp=Z,0.4nm,0.9s							

DJA 10 07:12:19.1±0.8,3°S±4°×12°9E±°,h11km±7km,M4.1/8, mb5.0/1,MLv3.7/8,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.78**	**179**	P	Pg	07 12 33.5	-0.7
MSAI				S	Sn	07 12 49.5	+1.7
KRAI	**Karang Ratu**	**0.92**	**215**	P	Pg	07 12 36.1	-0.7
AAI	**Ambon**	**1.33**	**213**	P	Pb	07 12 44.1	-0.1

70nm,0.9s
SEM Semipalatinsk 1.06 61 *e*P **Pg 07 28 15.4 +0.3**
26nm,0.1s
SEM *e*S **Sn 07 28 31.8 -1.0**
52nm,0.1s
SEM Semipalatinsk 1.06 61 P **Pg 07 28 15.4 +0.3**
26nm,0.1s
SEM S **Sn 07 28 31.8 -1.0**
52nm,0.1s
MAKZ Makanchi 3.75 144 ⇑Pg **Pg 07 29 04.6 -1.9**
3.9nm,0.6s
MAKZ ⇑Lg Lg 07 29 57.8
17nm,0.6s
MK31 Makanchi Array 3.88 142 ⇑Pn **Pb 07 29 00.6 -3.4**
0.5nm,0.2s,baz=278,slow=6.3,SNR=97
MK31 ⇑Pg **Pg 07 29 08.1 -1.0**
1.6nm,0.3s,baz=325,slow=13,SNR=22
MK31 ⇓Lg Lg 07 30 03.4
11nm,0.5s,baz=333,slow=27,SNR=14
MKAR Makanchi Array 3.88 142 Pn **Pb 07 29 00.3 -3.7**
1.0nm,0.3s,baz=321,slow=10,SNR=147
MKAR Pg **Pg 07 29 08.5 -0.5**
2.0nm,0.3s,baz=322,slow=15,SNR=14
MKAR Lg Lg 07 30 03.8
3.0nm,0.3s,baz=328,slow=27,SNR=12
1.0nm,0.3s
BRZS Berezniki 3.96 274 *e*P **Pb 07 29 07.0 +1.7**
2.2nm,0.1s
BRZS *e*S **Sg 07 30 00.1 -1.7**
8.5nm,0.2s
OTUK Ortayu 4.56 251 ⇓Pn **Pn 07 29 07.6 +2.6**
3.2nm,0.5s
OTUK ⇑Pg **Pg 07 29 19.9 -2.2**
0.9nm,0.3s
OTUK ⇓Lg Lg 07 30 22.1
3.7nm,0.5s
ZSN Zaisan 4.70 119 *e*P **Pb 07 29 19.5 +1.5**
2.1nm,0.1s
ZSN *e*S **Sg 07 30 21.1 -4.7**
3.0nm,0.1s
ZSN Zaisan 4.70 119 Pg **Pg 07 29 23.4 -1.4**
3.8nm,0.2s
ZSN Lg Lg 07 30 27.8
7.5nm,0.6s
I46RU ZALESOVO INFRA 5.51 40 I 07 58 50.0
baz=222,slow=325,SNR=2.1
ZALV Zalesovo Beam 5.51 40 Pn **Pn 07 29 21.1 +3.2**
1.5nm,0.3s,baz=231,slow=14,SNR=21
ZALV Lg Lg 07 30 45.4
0.4nm,0.3s,baz=234,slow=17,SNR=2.0
2.7nm,0.3s
DJR Jarkent 5.61 173 *e*P **Pg 07 29 41.2 -1.0**
1.0nm,0.1s
DJR *e*S **Sg 07 30 58.6 +3.8**
5.3nm,0.3s
DJR Jarkent 5.61 173 Pg **Pg 07 29 41.1 -1.0**
2.2nm,0.4s
DJR Lg Lg 07 30 58.6
6.4nm,0.7s
BTLS Baital 5.83 215 *e*P **Pg 07 29 44.3 -2.1**
0.8nm,0.2s
BTLS *e*S **Sg 07 31 03.5 +1.6**
2.3nm,0.3s
BVA0 Borovoye Array 6.12 304 ⇓Pn **Pn 07 29 26.9 +0.5**
1.4nm,0.7s,baz=105,slow=15,SNR=5.5
BVA0 ⇑Sn **Sn 07 30 34.6 -2.5**
0.9nm,0.5s,baz=113,slow=25,SNR=3.8
BVA0 ⇑Lg Lg 07 31 06.3
2.1nm,0.6s
BVAR Borovoye Array 6.12 304 Pn **Pn 07 29 27.9 +1.5**
0.2nm,0.3s,baz=123,slow=13,SNR=2.5
BVAR Sn **Sn 07 30 36.3 -0.8**
0.6nm,0.3s,baz=107,slow=26,SNR=5.4
0.3nm,0.3s
BRVK Borovoye 6.19 304 ⇑Pn **Pn 07 29 28.2 +0.8**
1.9nm,0.8s
BRVK ⇓Sn **Sn 07 30 38.0 -0.8**
1.4nm,0.4s
BRVK ⇑Lg Lg 07 31 08.4
1.7nm,0.5s
KPKS Kokpek 6.43 181 *e*P **Pg 07 29 55.5 -2.5**
1.6nm,0.1s
KPKS *e*S **Sg 07 31 22.5 +1.2**
5.5nm,0.5s
KRBS Karabastau 6.56 200 *e*P **Pg 07 29 58.2 -2.2**
0.8nm,0.2s
KRBS *e*S **Sg 07 31 27.4 +1.9**
5.1nm,0.2s

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*IDC **10** 07:44:35.5±2.3, 17°.59S×178°.78W, h611km±21km, mb2.8/6, mbtmp3.7/7, Error ellipse: s-maj=103.3km s-min=20.3km az=153.0*

ISC 10 07:44:34.5±1.8, 17°.6S±0°.7×178°.7W±0°.4, h600km, n8, σ0°88/9, mb3.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.12 268**		P	**P**	**07 45 55.9**	**+1.4**
18nm,0.7s,baz=161,slow=9.5,SNR=5.6							
WRA	**Warramunga Arr**	**44.43 259**		P	**P**	**07 51 53.4**	**-0.5**
0.2nm,0.5s,baz=97,slow=7.1,SNR=2.1							
WRA				PcP	**PcP**	**07 53 23.2**	**-1.0**
0.5nm,0.9s,baz=90,slow=3.4,SNR=2.4							
ASAR	**Alice Springs**	**44.62 254**		P	**P**	**07 51 54.7**	**-0.6**
0.2nm,0.5s							
0.5nm,0.5s,baz=84,slow=9.0,SNR=7.1							
0.5nm,0.5s							
NVAR	**Mina Array Bea**	**79.40 44**		P	**P**	**07 55 40.2**	**+0.3**
0.5nm,0.7s,baz=218,slow=7.7,SNR=7.0							
0.5nm,0.7s							
ILAR	**Eielson Array**	**85.67 13**		P	**P**	**07 56 09.9**	**-0.6**
0.3nm,0.4s,baz=216,slow=4.8,SNR=6.7							
0.3nm,0.4s							
TXAR	**Lajitas Array**	**86.06 58**		P	**P**	**07 56 13.8**	**+0.5**
0.7nm,0.7s,baz=219,slow=6.1,SNR=11							
0.7nm,0.7s							
PDAR	**Pinedale Array**	**87.33 44**		P	**P**	**07 56 18.5**	**-0.6**
0.5nm,0.7s,baz=228,slow=1.8,SNR=4.7							
0.5nm,0.7s							
GERES	**GERESS Array B**	**147.28 345**		PKPbc	**PKPbc**	**08 03 11.9**	**+0.2**
0.3nm,0.4s,baz=270,slow=2.7,SNR=3.4							

IDC 10 07:53:54.5±3.3, 54°.30N×87°.34E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=29.8km s-min=20.3km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.53 258**		I		08 03 40.0	
baz=76,slow=333,SNR=3.7							
ZALV	**Zalesovo Beam**	**1.53 258**		Pg	Pn	07 54 21.0	-2.0
1.6nm,0.3s,baz=76,slow=16,SNR=10							
ZALV				Lg	Lg	07 54 43.2	
1.4nm,0.3s,baz=75,slow=28,SNR=3.4							
KURBB	**Kurchatov Arra**	**6.52 239**		Pn	Pn	07 55 32.9	+1.2
0.1nm,0.3s,baz=56,slow=14,SNR=9.9							
KURBB				Lg	Lg	07 57 21.0	
baz=47,slow=30,SNR=2.8							
1.4nm,0.5s							
MKAR	**Makanchi Array**	**8.17 205**		Pn	Pn	07 55 55.1	+0.7
0.1nm,0.3s,baz=24,slow=14,SNR=4.8							
0.2nm,0.3s							

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*NEIC **10** 08:01:01.7±0.5, 22°.91S±0°.07×171°.3E±0°.1, h10km±2km, mb4.3/6, Error ellipse: s-maj=22.6km s-min=11.1km az=78.0*
*IDC **10** 08:01:02.7±2.2, 23°.23S×171°.12E, h0km, mb4.1/6, mbtmp4.1/7, ML3.7/1, Error ellipse: s-maj=104.1km s-min=27.3km az=165.0*
*NOU **10** 08:01:18.7, 23°.22S×169°.87E, h0km, MLv3.6/5, Southeast of Loyalty Islands*

ISC 10 08:01:07.4±0.8, 23°.0S±0°.2×171°.0E±0°.1, h31km, n30, σ1§36/31, mb4.1/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.15 299**			**Pn**	**08 01 51.9**	**-3.1**
MARNC	**Mare, Loyalty**	**3.15 299**		P	**Pn**	**08 01 57.1**	**+2.1**
OUENC	**Ouen Island, N**	**3.89 278**		Pn	**Pn**	**08 02 04.8**	**-0.3**
OUENC	**Ouen Island, N**	**3.89 278**		P	**Pn**	**08 02 05.7**	**+0.6**
LIFNC	**LIFOU**	**4.15 302**		Pn	**Pn**	**08 02 07.3**	**-1.4**
LIFNC	**LIFOU**	**4.15 302**		P	Pb	08 02 15.9	-3.9
ONTNC	**Ouen Toro**	**4.26 279**		Pn	**Pn**	**08 02 09.2**	**-1.1**
ONTNC	**Ouen Toro**	**4.26 279**		P	**Pn**	**08 02 12.1**	**+1.9**
DZM	**Mont Dzumac**	**4.32 282**		Pn	**Pn**	**08 02 11.2**	**+0.1**
4.0nm,0.3s,baz=120,slow=14,SNR=43							
DZM				Sn	**Sn**	**08 03 00.4**	**-0.1**
7.2nm,0.3s,baz=148,slow=23,SNR=6.6							
17nm,0.5s							
DZM	**Mont Dzumac**	**4.32 282**			**Pn**	**08 02 10.5**	**-0.6**
NOUC	**Port Laguerre**	**4.44 281**		P	**Pn**	**08 02 13.2**	**+0.5**
KOUNC	**Koumac, New Ca**	**6.71 290**		Pn	**Pn**	**08 02 43.8**	**-0.1**
ASAR	**Alice Springs**	**34.01 261**		P	**P**	**08 07 48.6**	**-0.2**
1.6nm,0.9s,baz=93,slow=9.7,SNR=6.8							
1.6nm,0.9s							
WR0	**Warramunga Arr**	**34.01 268**		P	**P**	**08 07 47.0**	**-1.7**
WR0				IAmb	IAmb	08 07 47.5	
comp=Z,1.9nm,1.0s							
WB0	**Warramunga Arr**	**34.19 268**		P	**P**	**08 07 48.7**	**-1.6**
WB0				IAmb	IAmb	08 07 55.3	
comp=Z,5.2nm,1.1s							
WB2	**Warramunga Arr**	**34.19 268**		P	**P**	**08 07 48.8**	**-1.6**
WB2				IAmb	IAmb	08 08 08.3	
comp=Z,11nm,1.3s							
WRA	**Warramunga Arr**	**34.20 268**		P	**P**	**08 07 50.0**	**-0.5**
comp=Z,0.8nm,1.0s,baz=97,slow=8.3,SNR=4.2							
comp=Z,0.8nm,1.0s							
WRA	**Warramunga Arr**	**34.20 268**		P	**P**	**08 07 48.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**42.63 268**		P	**P**	**08 09 02.7**	**+1.4**
comp=Z,4.5nm,0.9s,baz=129,slow=8.9,SNR=6.6							
comp=Z,4.5nm,0.9s							
FITZ	**Fitzroy Crossi**	**42.63 268**		P	**P**	**08 08 59.5**	**-1.8**
FITZ				IAmb	IAmb	08 09 06.5	
comp=Z,7.7nm,1.2s							
QSPA	**South Pole Qui**	**67.05 180**		P	**P**	**08 11 55.6**	**-1.9**
CMAR	**Chiang Mai Arr**	**81.55 294**		P	**P**	**08 13 25.5**	**+2.9**
comp=Z,1.4nm,0.3s,baz=142,slow=4.6,SNR=1.5							
comp=Z,1.4nm,0.3s							
TROLL	**Troll, Antarti**	**84.89 184**		P	**P**	**08 13 39.8**	**+0.7**
SNAA	**Sanae**	**85.46 182**		P	**P**	**08 13 42.1**	**+0.3**
VNA3	**Neumayer Olymp**	**85.99 180**		P	**P**	**08 13 44.6**	**+0.2**
VNA2	**Neumayer--Watz**	**86.30 181**		P	**P**	**08 13 46.4**	**+0.5**
baz=151,slow=4.4							
NVAR	**Mina Array Bea**	**90.09 48**		P	**P**	**08 14 04.6**	**-0.1**
comp=Z,0.8nm,0.7s,baz=231,slow=7.4,SNR=9.4							
comp=Z,0.8nm,0.7s							
SONM	**Songino Array**	**91.22 322**		P	**P**	**08 14 09.9**	**+0.3**
comp=Z,0.6nm,0.7s,baz=123,slow=5.3,SNR=2.7							
comp=Z,0.6nm,0.7s							
CLL	**Collm**	**147.03 334**		*i* PKPbc	**PKPbc**	**08 20 47.2**	**+0.3**
comp=Z,7.0nm,1.0s							
CLL				*i* PKiKP	**PKiKP**	**08 20 50.3**	**+0.9**
CLL				*ex*	x	08 21 05.0	
GERES	**GERESS Array B**	**148.59 331**		PKPbc	**PKiKP**	**08 20 52.3**	**-0.5**
comp=Z,1.2nm,0.6s,baz=48,slow=2.0,SNR=8.2							

IDC 10 08:17:55.7±2.2, 53°.71N×86°.88E, h0km, mbtmp3.0/3, ML2.9/3, Error ellipse: s-maj=20.3km s-min=13.1km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.25 282**		I		08 26 40.0	
baz=98,slow=331,SNR=2.9							
ZALV	**Zalesovo Beam**	**1.25 282**		Pg	Pg	08 18 18.0	-1.5
3.1nm,0.3s,baz=105,slow=17,SNR=22							
ZALV				Lg	Lg	08 18 35.8	
1.8nm,0.3s,baz=104,slow=28,SNR=15							
KURBB	**Kurchatov Arra**	**6.00 242**		Pn	Pn	08 19 26.4	+0.8
0.1nm,0.3s,baz=60,slow=13,SNR=6.3							
KURBB				Sn	Sn	08 20 35.4	+0.5
baz=271,slow=18,SNR=1.6							
KURBB				Lg	Lg	08 21 05.2	
baz=61,slow=36,SNR=3.0							
0.6nm,0.3s							
MKAR	**Makanchi Array**	**7.53 205**		Pn	Pn	08 19 47.7	+1.1
0.4nm,0.3s,baz=24,slow=14,SNR=15							
MKAR				Lg	Lg	08 21 55.2	
baz=16,slow=41,SNR=3.5							
0.4nm,0.3s							
BVAR	**Borovoye Array**	**9.89 273**		Pn	Pn	08 20 18.5	-0.4
0.1nm,0.3s,baz=81,slow=18,SNR=1.9							
0.2nm,0.4s							

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*LVSN **10** 08:21:17.0±1.2, 59°.66N×22°.13E, h0km±18km, ML1.4*

HEL 10 08:21:14.3±0.2, 60°.74N×26°.87E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.39 121**		PG	Pg	08 21 21.4	-0.4
baz=293							
VJF				SG	Sg	08 21 27.2	+0.3
PVF	**Pernaja**	**0.54 249**		PG	Pg	08 21 23.8	-0.8
PVF				SG	Sg	08 21 30.9	-0.6
FIA0	**FINESS Array S**	**0.80 332**		PG	Pg	08 21 28.6	-1.1
baz=152							
FIA0				SB	Sb	08 21 43.7	+1.2
NUR	**Nurmijrvi**	**1.12 259**		PB	Pg	08 21 34.8	-1.0
MEF	**Metsahovi**	**1.33 248**		*e*P	Pg	08 21 38.5	-1.3
MEF				*e*S	Sg	08 21 55.6	-1.6
MEF				AML	AML	08 21 59.6	
comp=E,9.5nm,0.7s							
MEF				AML	AML	08 22 01.2	
comp=N,12nm,0.4s							
MEF				AML	AML	08 22 04.3	
comp=Z,10nm,0.8s							
MEF	**Metsahovi**	**1.33 248**		PG	Pg	08 21 38.4	-1.5
MEF				MSG		08 21 54.5	
comp=Z,3.2nm,0.2s							
MEF				SN	Sn	08 22 00.8	+2.2
KAF	**Kangasniemi**	**1.40 349**		PG	Pn	08 21 39.6	-1.5
baz=177							
KAF				MSG		08 21 56.5	
comp=Z,0.8nm,0.2s							
KAF				SG	Sg	08 21 59.1	-0.2
KEF	**Keuruu**	**1.72 327**		PG	Pn	08 21 45.2	-0.3
KEF				MSG		08 22 05.6	
comp=Z,1.1nm,0.2s							
KEF				SN	Sb	08 22 09.3	+0.3
RAF	**Rauma**	**2.51 279**		*e*S	Pn	08 21 58.1	+1.8
RAF	**Rauma**	**2.51 279**		MSG		08 22 28.4	
comp=Z,1.0nm,0.2s							
RAF				SG	Sb	08 22 31.8	+0.2
MTSE	**Matsula**	**2.56 219**		*e*S	Pn	08 21 55.8	-1.2
MTSE	**Matsula**	**2.56 219**		PG	Pb	08 21 59.1	-1.9

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*NEIC **10** 08:24:59.7±1.7, 1°.63N±0°.10×124°.8E±0°.2, h551km±20km, mb4.1/11, Error ellipse: s-maj=25.6km s-min=12.6km az=71.0*
*IDC **10** 08:25:07.0±10.0, 0°.98N×124°.32E, h650km±178km, mb2.9/4, mbtmp3.9/5, Error ellipse: s-maj=116.0km s-min=40.9km az=50.0*

ISC 10 08:24:59.6±1.1, 1°.5N±0°.1×124°.8E±0°.1, h550km, n22, σ1§00/22, mb4.1/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.65 106**		P	**P**	**08 26 11.6**	**-1.1**
LUWI	**Luwuk**	**3.26 219**		S	**S**	**08 27 19.0**	**+0.3**
SOEI	**Soe**	**11.20 183**		P	**P**	**08 27 31.9**	**+1.7**
KSM	**Kuching**	**14.51 270**		P	**P**	**08 28 03.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**14.54 227**		P	**P**	**08 28 04.4**	**-0.1**
MTN	**Manton Dam**	**15.57 156**		P	**P**	**08 28 16.5**	**+1.5**
MTN				IAmb	IAmb	08 28 44.2	
comp=Z,18nm,1.4s							
KNRA	**Kununurra**	**17.51 167**		P	**P**	**08 28 34.2**	**+1.1**
KNRA				IAmb	IAmb	08 28 40.9	
comp=Z,12nm,1.4s							
FITZ	**Fitzroy Crossi**	**19.50 178**		P	**P**	**08 28 49.5**	**-1.8**
comp=Z,0.7nm,0.3s,baz=353,slow=12,SNR=7.9							
FITZ	**Fitzroy Crossi**	**19.50 178**		P	**P**	**08 28 50.2**	**-1.0**
FITZ				IAmb	IAmb	08 28 57.6	
comp=Z,1.8nm,1.1s							
WB0	**Warramunga Arr**	**23.13 157**		P	**P**	**08 29 24.5**	**+0.5**
WB0				IAmb	IAmb	08 29 24.7	
comp=Z,3.9nm,0.3s							
WRAB	**Tennant Creek**	**23.27 157**		P	**P**	**08 29 25.9**	**+0.7**
WRA	**Warramunga Arr**	**23.27 157**		P	**P**	**08 29 25.5**	**+0.3**
comp=Z,2.1nm,0.4s,baz=334,slow=10,SNR=32							
comp=Z,2.1nm,0.4s							
WRA	**Warramunga Arr**	**23.27 157**		P	**P**	**08 29 24.7**	**-0.5**
WB2	**Warramunga Arr**	**23.28 157**		P	**P**	**08 29 25.6**	**+0.3**
WB2				IAmb	IAmb	08 29 39.8	
comp=Z,3.2nm,1.1s							
WR0	**Warramunga Arr**	**23.37 156**		P	**P**	**08 29 26.6**	**+0.6**
WR0				IAmb	IAmb	08 29 30.5	
comp=Z,7.2nm,1.4s							
AS31	**Alice Springs**	**26.54 161**		P	**P**	**08 29 54.7**	**+0.7**
ASAR	**Alice Springs**	**26.54 161**		P	**P**	**08 29 54.5**	**+0.4**
comp=Z,1.8nm,0.3s,baz=338,slow=6.9,SNR=41							
comp=Z,1.8nm,0.3s							
ASAR	**Alice Springs**	**26.54 161**		P	**P**	**08 29 54.8**	**+0.7**
BBOO	**Buckleboo**	**35.75 164**		P	**P**	**08 31 11.8**	**-0.9**
STKA	**Stephens Creek**	**36.81 156**		P	**P**	**08 31 20.5**	**-1.0**
comp=Z,2.4nm,0.9s,baz=324,slow=8.7,SNR=6.4							
comp=Z,2.4nm,0.9s							
STKA	**Stephens Creek**	**36.81 156**		P	**P**	**08 31 20.6**	**-0.9**
STKA				IAmb	IAmb	08 31 27.1	
comp=Z,3.8nm,1.5s							
MKAR	**Makanchi Array**	**58.33 327**		P	**P**	**08 34 03.4**	**+1.1**
comp=Z,0.4nm,0.6s,baz=124,slow=7.2,SNR=3.7							
comp=Z,0.4nm,0.6s							

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*NEIC **10** 08:29:31.3±0.8, 4°.2N±0°.1×123°.2E±0°.2, h547km±7km, mb4.2/25, Error ellipse: s-maj=27.6km s-min=13.4km az=55.0*
*DJA **10** 08:29:32.3±0.8, 4°N±5°×12°3E±°, h537km±9km, M4.4/7, mb4.5/4, mB4.7/4, MLv4.5/7, Mw(mB)4.0/4*
*IDC **10** 08:29:32.8±1.1, 4°.16N×123°.12E, h576km±14km, mb3.4/20, mbtmp4.4/21, Error ellipse: s-maj=24.7km s-min=6.7km az=67.0*

ISC 10 08:29:32.2±0.4, 4°.08N±0°.06×123°.12E±0°.08, h573km, n85, σ1§46/94, mb4.1/33, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**3.59 166**		P	**P**	**08 30 52.9**	**0.0**
TOLI2	**Tolitoli**	**3.76 218**		P	**P**	**08 30 51.6**	**-2.5**
MRSI	**Marisa**	**3.77 198**		P	**P**	**08 30 53.1**	**-1.0**
MRSI				S	**S**	**08 31 57.4**	**-3.3**
DAV	**Davao City (W)**	**3.85 39**		P	**P**	**08 30 53.8**	**-0.9**
151nm,0.3s,baz=180,slow=8.1,SNR=1.4							
DAV				S	**S**	**08 31 59.7**	**-2.1**
134nm,0.4s,baz=46,slow=12,SNR=1.3							
MYLDM	**Lahad Datu**	**4.73 284**		P	**P**	**08 30 58.9**	**-2.4**
MYLDM	**Lahad Datu**	**4.73 284**		P	**P**	**08 31 00.5**	**-0.7**
MPSI	**Mapaga**	**4.92 221**		P	**P**	**08 31 01.6**	**-1.1**
0.1nm999nm26nm,0.8s							
MPSI				S	**S**	**08 32 13.9**	**-2.7**
0.1nm999nm26nm,0.8s							
LUWI	**Luwuk**	**5.10 184**		P	**P**	**08 31 02.7**	**-1.5**
TNTI	**Ternate**	**5.37 128**		P	**P**	**08 31 03.9**	**-2.6**
TNTI	**Ternate**	**5.37 128**		P	**P**	**08 31 05.1**	**-1.4**
0.7nm3μm135nm,1.1s							
TNTI				S	**S**	**08 32 19.9**	**-3.6**
0.7nm3μm135nm,1.1s							
TNTI	**Ternate**	**5.37 128**		P	**P**	**08 31 05.2**	**-1.3**
SANI	**Sanana**	**6.73 155**		P	**P**	**08 31 16.0**	**-2.6**
0.4nm1μm76nm,0.7s							
SANI				S	**S**	**08 32 40.3**	**-5.4**
0.4nm1μm76nm,0.7s							
SANI	**Sanana**	**6.73 155**		P	**P**	**08 31 16.1**	**-2.6**
KKM	**Kota Kinabalu**	**7.15 286**		P	**P**	**08 31 20.5**	**-2.1**
KKM	**Kota Kinabalu**	**7.15 286**		P	**P**	**08 31 20.6**	**-2.0**
KKM	**Kota Kinabalu**	**7.15 286**		P	**P**	**08 31 20.9**	**-1.7**
SBUM	**Sibu**	**11.00 262**		P	**P**	**08 32 00.3**	**-0.3**
MTN	**Manton Dam**	**18.61 155**		P	**P**	**08 33 13.5**	**-1.1**
KDU	**Kakadu**	**19.08 151**		P	**P**	**08 33 19.9**	**+1.0**
KNRA	**Kununurra**	**20.41 164**		P	**P**	**08 33 31.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**22.18 174**		P	**P**	**08 33 48.0**	**+1.2**
3.0nm,0.6s,baz=333,slow=9.0,SNR=13							
3.0nm,0.6s							
FITZ	**Fitzroy Crossi**	**22.18 174**		P	**P**	**08 33 47.8**	**+1.0**
FITZ				IAmb	IAmb	08 33 51.1	
comp=Z,11nm,1.2s							
WB0	**Warramunga Arr**	**26.16 155**		P	**P**	**08 34 22.8**	**+0.7**
WB0				IAmb	IAmb	08 34 26.1	
comp=Z,14nm,1.1s							
WRAB	**Tennant Creek**	**26.30 156**		P	**P**	**08 34 23.9**	**+0.7**
WRAB				IAmb	IAmb	08 34 26.8	
comp=Z,14nm,1.0s							
WRAB	**Tennant Creek**	**26.30 156**		P	**P**	**08 34 24.6**	**+1.4**
WRA	**Warramunga Arr**	**26.30 156**		P	**P**	**08 34 23.9**	**+0.6**
comp=Z,6.1nm,0.3s,baz=336,slow=9.5,SNR=78							
WRA				S	**S**	**08 38 15.1**	**-1.5**
comp=Z,1.1nm,0.8s,baz=336,slow=16,SNR=5.6							
WRA				ScP	**ScP**	**08 40 17.9**	**+1.6**
comp=Z,0.5nm,0.6s,baz=337,slow=2.9,SNR=5.4							
comp=Z,6.1nm,0.3s							
WRA	**Warramunga Arr**	**26.30 156**		P	**P**	**08 34 23.2**	**-0.1**
WB2	**Warramunga Arr**	**26.30 156**		P	**P**	**08 34 24.0**	**+0.7**
WB1	**Warramunga Ar.**	**26.32 156**		P	**P**	**08 34 24.4**	**+1.0**
WR0	**Warramunga Arr**	**26.40 155**		P	**P**	**08 34 24.7**	**+0.5**
WR0				IAmb	IAmb	08 34 27.5	
comp=Z,3.8nm,0.6s							
COEN	**Coen**	**26.78 132**		P	**P**	**08 34 26.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**27.62 303**		P	**P**	**08 34 35.1**	**+0.3**
comp=Z,2.0nm,0.4s,baz=124,slow=7.6,SNR=11							
comp=Z,2.0nm,0.4s							
CHTO	**Chiang Mai**	**27.79 304**		P	**P**	**08 34 36.3**	**0.0**
QIS	**Mount Isa**	**29.35 147**		P	**P**	**08 34 51.8**	**+1.9**
WRKA	**Warakurna**	**29.38 170**		P	**P**	**08 34 52.0**	**+1.9**
AS31	**Alice Springs**	**29.52 160**		P	**P**	**08 34 52.6**	**+1.3**
AS31				IAmb	IAmb	08 34 55.6	
comp=Z,2.5nm,0.7s							
ASAR	**Alice Springs**	**29.52 160**		P	**P**	**08 34 52.9**	**+1.5**
comp=Z,7.2nm,0.7s,baz=339,slow=7.0,SNR=48							
ASAR				S	**S**	**08 39 07.5**	**+0.9**
comp=Z,2.8nm,0.9s,baz=350,slow=21,SNR=12							
ASAR				ScP	**ScP**	**08 40 28.1**	**+1.8**
comp=Z,1.3nm,0.5s,baz=344,slow=3.0,SNR=13							
comp=Z,7.2nm,0.7s							
ASAR	**Alice Springs**	**29.52 160**		P	**P**	**08 34 52.7**	**+1.4**
CTA	**Charters Tower**	**33.07 137**		P	**P**	**08 35 23.6**	**+1.9**
comp=Z,3.4nm,0.7s,baz=315,slow=10.0,SNR=3.8							
comp=Z,3.4nm,0.7s							
KSRS	**Korea Array**	**33.51 7**		P	**P**	**08 35 25.3**	**+0.4**
comp=Z,0.8nm,0.6s,baz=181,slow=9.8,SNR=2.2							
comp=Z,0.8nm,0.6s							
NWAO	**Narrogin (SRO)**	**37.23 188**		P	**P**	**08 35 57.1**	**+1.2**
comp=Z,3.0nm,0.5s,baz=231,slow=14,SNR=1.3							
comp=Z,3.0nm,0.5s							
BBOO	**Buckleboo**	**38.69 162**		P	**P**	**08 36 10.0**	**+2.2**
STKA	**Stephens Creek**	**39.85 155**		P	**P**	**08 36 19.2**	**+2.1**
comp=Z,7.6nm,0.6s,baz=338,slow=8.0,SNR=14							
comp=Z,7.6nm,0.6s							
STKA	**Stephens Creek**	**39.85 155**		P	**P**	**08 36 19.3**	**+2.2**
TAPN	**Taplejung**	**40.93 308**		*e*P	**P**	**08 36 25.9**	**-0.3**
comp=Z,10.0nm,0.6s							
RAMN	**Ramite**	**41.63 307**		*e*P	**P**	**08 36 32.2**	**+0.6**
comp=Z,12nm,0.6s							
JIRN	**Jiri**	**42.27 308**		*e*P	**P**	**08 36 37.0**	**+0.2**
comp=Z,16nm,0.5s							
GUN	**Gumba**	**42.63 308**		*e*P	**P**	**08 36 40.1**	**+0.5**
comp=Z,27nm,0.6s							
PKI	**Pulchoki**	**42.85 307**		*e*P	**P**	**08 36 41.1**	**-0.2**
comp=Z,5.5nm,0.4s							
PKIN	**Phulchoki**	**42.87 307**		*e*P	**P**	**08 36 41.1**	**-0.2**
comp=Z,5.2nm,0.2s							
DMN	**Daman**	**43.11 307**		*e*P	**P**	**08

KURK	**Kurchatov**	**59.54 329**	P	**P**	**08 38 41.3**	**+0.3**
KURK			IAmb	IAmb	08 38 44.1	
	comp=Z,14nm,0.8s					
CHGR	**Chuyangaron**	**59.77 313**	P	**P**	**08 38 43.4**	**+0.4**
CHGR			IAmb	IAmb	08 38 47.1	
	comp=Z,9.9nm,0.9s					
KK31	**Karatay Array**	**60.54 318**	P	**P**	**08 38 48.4**	**+0.5**
KKAR	**Karatay Array**	**60.54 318**	P	**P**	**08 38 48.3**	**+0.5**
KKAR	**Karatay Array**	**60.54 318**	P	**P**	**08 38 48.6**	**+0.8**
KKAR			IAmb	IAmb	08 38 51.0	
	comp=Z,3.2nm,0.7s					
BVAR	**Borovoye Array**	**65.09 328**	P	**P**	**08 39 16.6**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=134,slow=8.3,SNR=8.6					
	comp=Z,2.2nm,0.6s					
BRVK	**Borovoye**	**65.16 328**	P	**P**	**08 39 17.5**	**+0.2**
BRVK			IAmb	IAmb	08 39 20.3	
	comp=Z,6.4nm,0.9s					
GEYT	**Alibeck**	**67.87 309**	P	**P**	**08 39 35.1**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=116,slow=6.6,SNR=4.8					
	comp=Z,2.6nm,0.6s					
NRIK	**Noril'sk**	**69.26 347**	P	**P**	**08 39 42.2**	**+0.1**
	comp=Z,2.9nm,0.4s,baz=62,slow=5.1,SNR=2.0					
	comp=Z,2.9nm,0.4s					
ABKAR	**Akbulak array**	**69.61 321**	P	**P**	**08 39 44.4**	**-0.2**
AKTO	**Aktyubinsk**	**71.16 322**	P	**P**	**08 39 53.5**	**-0.2**
	comp=Z,2.2nm,0.3s,baz=106,slow=7.1,SNR=12					
	comp=Z,2.2nm,0.3s					
ARU	**Arti**	**72.73 328**	P	**P**	**08 40 01.5**	**-1.1**
	comp=Z,10nm,0.2s,baz=78,slow=2.8,SNR=4.9					
RAYN	**Ar Rayn**	**77.03 293**	P	**P**	**08 40 27.6**	**+0.2**
RAYN			IAmb	IAmb	08 40 30.9	
	comp=Z,3.7nm,0.8s					
GEVA	**Gevas**	**79.68 308**	P	**P**	**08 40 42.4**	**+1.0**
GEVA			IAmb	IAmb	08 40 45.3	
	comp=Z,6.4nm,0.8s					
KLMR	**Klimovskoe**	**83.33 331**	*e*P	**P**	**08 40 58.3**	**-1.0**
KLMR			AMP		08 41 02.5	
	comp=Z,10.0nm,1.1s					
BRTR	**Keskin Array B**	**87.02 309**	P	**P**	**08 41 17.0**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=62,slow=5.7,SNR=4.2					
	comp=Z,0.9nm,0.7s					
AKASG	**Malin Array Be**	**89.34 321**	P	**P**	**08 41 26.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=68,slow=4.7,SNR=2.4					
	comp=Z,0.2nm,0.3s					
SPITS	**Spitsbergen Ar**	**89.43 349**	P	**P**	**08 41 27.8**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=79,slow=10,SNR=1.8					
	comp=Z,7.4nm,0.8s					
FINES	**FINESS Array B**	**89.81 332**	P	**P**	**08 41 29.5**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=66,slow=3.4,SNR=7.9					
	comp=Z,1.6nm,0.5s					
TORD	**Torodi Ar. Bea**	**119.38 287**	PKP	**PKPdf**	**08 47 18.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=62,slow=1.0,SNR=2.7					

TAP 10 08:33:27.7,24°.55N×121°.85E,h8km,ML1.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.06**	**357**	*i* P	Pg	08 33 30.2	+0.7
TWC	baz=7.0			*i* S	Sg	08 33 31.4	+0.7
	baz=7.0						
EWUT	**Wuta**	**0.12**	**213**	*i* P	Pg	08 33 31.1	+0.7
EWUT	baz=212			*i* S	Sg	08 33 33.7	+1.4
	baz=212						
ILA	**Ilan**	**0.23**	**336**	*e*P	Pg	08 33 33.8	+1.4
TWE	**Neicheng**	**0.24**	**315**	P	Pg	08 33 34.1	+1.6
TWE	baz=317			S	Sg	08 33 37.3	+1.6
	baz=317						
LATG	**Datong**	**0.30**	**267**	P	Pb	08 33 35.3	-0.1
LATG	baz=267			*e*S	Sb	08 33 39.9	-0.6
	baz=267						
EGS		**0.30**	**14**	*i* P	Pb	08 33 35.5	+0.2
EGS	baz=16			*i* S	Sb	08 33 39.7	-0.8
	baz=16						
NTC	**Toucheng**	**0.30**	**356**	*e*P	Pb	08 33 34.6	-0.7
NTC	baz=356			*e*S	Sb	08 33 39.5	-1.0
	baz=356						
NDT	**Datong Townshi**	**0.31**	**279**	P	Pg	08 33 34.6	+0.7
NDT	baz=279			S	Sb	08 33 40.5	-0.4
	baz=279						
FUSB	**Fushanzhiwuyua**	**0.32**	**311**	*e*P	Pb	08 33 35.5	-0.2
FUSB	baz=310			S	Sb	08 33 40.0	-1.0
	baz=310						
TIPB	**Shuangxi**	**0.42**	**357**	P	Pb	08 33 36.9	-0.5
TIPB	baz=356			*e*S	Sb	08 33 43.2	-0.8
	baz=356						
ETL	**Fush Village**	**0.44**	**208**	*e*S	Sb	08 33 44.4	-0.2
NACB	**Ninganchiao**	**0.44**	**212**	*e*P	Pb	08 33 37.4	-0.4
NACB	baz=211			S	Sb	08 33 44.3	-0.3
	baz=211						
YHNB	**Yeheng**	**0.45**	**285**	P	Pb	08 33 38.1	+0.2
YHNB	baz=285			S	Sb	08 33 45.2	+0.4
	baz=285						
NSK	**Sanguang**	**0.47**	**286**	P	Pb	08 33 37.8	-0.5
NSK	baz=285			*i* S	Sb	08 33 44.3	-1.0
	baz=285						
ETLH	**Xiulin Townshi**	**0.48**	**225**	S	Sb	08 33 45.3	-0.5
TWD	**Chiawan**	**0.52**	**207**	*e*S	Sb	08 33 46.9	0.0
SXI1	**Grass Mountain**	**0.54**	**2**	*e*P	Pb	08 33 39.0	-0.5
TAP	**Taipei**	**0.58**	**327**	*e*P	Pg	08 33 39.4	+0.5
HWA	**Hwalien**	**0.61**	**202**	*e*P	Pb	08 33 41.1	+0.4
HWA	baz=200			*e*S	Sb	08 33 50.2	+0.7
	baz=200						
FUSS	**Fushou**	**0.63**	**242**	*e*P	Pb	08 33 41.6	+0.5
	baz=241						

MOS ***10*** *08:35:05.6±2.5, 15°.43S×174°.98W, h10km, mb5.3/20, MS5.4/9, Error ellipse: s-maj=12.1km s-min=8.5km az=145.4*

NEIC ***10*** *08:35:05.6±2.4, 15°.37S±0°.08×174°.82W±0°.07, h10km±1km, mb5.2/84, Ms_20 5.4/290, Mwb5.6/27, Error ellipse: s-maj=13.5km s-min=11.0km az=164.0*

IDC ***10*** *08:35:06.9±0.6, 15°.44S×175°.37W, h0km, mb4.3/20, mbtmp4.3/21, ML4.7/1, MS5.1/59, Error ellipse: s-maj=26.0km s-min=13.8km az=145.0*

NEIC ***10*** *08:35:06.6, 15°.40S×174°.83W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$1.81; $M_{\phi\phi}$-2.04; $M_{r\theta}$-0.19; $M_{\theta\phi}$1.87; $M_{\phi r}$-0.38; Fault plane solution: $M_0$2.73000×10^{17} NP1:ϕ_s202.73000°, δ88.29000°, λ170.78000°. NP2:ϕ_s293.01000°, δ80.78000°, λ1.74000°. Principal axes: T 2.6135, Plg8.0000°, Azm158.0000°; N 0.2137, Plg81.0000°, Azm12.0000°; P -2.8272, Plg5.0000°, Azm248.0000°;*

NOU ***10*** *08:35:13.3, 15°.44S×174°.81W, h44km, mb5.1/38, Tonga Islands*

GCMT ***10*** *08:35:14.6±0.1, 15°.34S±0°.01×175°.14W±0°.01, h12km, MW5.6/166, Moment Tensor Solution. s134,c252; s166,c334; Duration: 1!5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.38±.03; $M_{\theta\theta}$2.42±.03; $M_{\phi\phi}$-2.04±.03; $M_{r\theta}$0.64±.07; $M_{\theta\phi}$1.96±.02; $M_{\phi r}$-0.55±.07; Best double couple: $M_0$3.09900×10^{17} NP1:ϕ_s293.00000°, δ83.00000°, λ-16.00000°. NP2:ϕ_s25.00000°, δ74.00000°, λ-173.00000°. Principal axes: T 3.2050, Plg7.0000°, Azm340.0000°; N -0.2120, Plg73.0000°, Azm92.0000°; P -2.9930, Plg16.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 08:35:06.7±0.6, 15°.36S±0°.06×174°.78W±0°.04, h13km±3km, h14km:pP-P,n574,σ2936/399, mb5.2/85, MS5.3/223, 22C-22D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.24**	**64**		**Pn**	**08 35 56.0**	**-1.4**
AFI	**Afiamalu**	**3.24**	**64**	P	**Pn**	**08 35 56.0**	**-1.4**
AFI	**Afiamalu**	**3.24**	**64**	P	**Pb**	**08 36 02.4**	**-1.8**
FUTU	**Fugatoga**	**3.40**	**287**	P	**Pb**	**08 36 05.6**	**-1.2**
NIUE	**Niue**	**5.93**	**129**	P	**Pn**	**08 36 37.6**	**+3.4**
	baz=6.2,SNR=11						
NIUE	**Niue**	**5.93**	**129**		**Pn**	**08 36 31.8**	**-2.5**
NIUE	**Niue**	**5.93**	**129**	P	**Pn**	**08 36 37.8**	**+3.6**
MSVF	**Nonsavu**	**7.27**	**250**	Pn	Pn	08 36 47.1	-5.7
	0.5nm,0.3s,baz=180,slow=15,SNR=2.9						
MSVF				LR	LR	08 39 09.2	
	comp=Z,51μm,19.2s,baz=84,slow=36						
	21nm,1.0s						
MSVF	**Nonsavu**	**7.27**	**250**	Pn	**Pn**	**08 36 49.7**	**-3.1**
MSVF	**Nonsavu**	**7.27**	**250**	‖*e*P	**Pn**	**08 36 51.8**	**-1.0**
MSVF				pmax	pmax		
	comp=Z,83nm,1.3s						
MSVF	**Nonsavu**	**7.27**	**250**	P	**Pn**	**08 36 55.4**	**+2.6**
FUNA	**Funafuti**	**8.99**	**318**	Pn	**Pn**	**08 37 13.6**	**-2.8**
RAO	**Raoul Island**	**14.13**	**191**	LR	LR	08 42 58.9	
	comp=Z,21μm,18.6s,baz=12,slow=34						
RAR	**Rarotonga**	**15.38**	**114**	LR	LR	08 43 48.8	
	comp=Z,2μm,18.2s,baz=292,slow=33						
RTV	**Rentapao**	**16.29**	**259**	P	**P**	**08 38 58.4**	**+0.2**
MARNC	**Mare, Loyalty**	**17.41**	**247**		**Pn**	**08 39 08.7**	**-0.7**
MARNC	**Mare, Loyalty**	**17.41**	**247**	P	**P**	**08 39 10.4**	**-0.3**
LIFNC	**LIFOU**	**17.92**	**250**		**Pn**	**08 39 14.2**	**-1.6**
LIFNC	**LIFOU**	**17.92**	**250**	P	**P**	**08 39 18.9**	**+2.5**
YATNC	**Mamie plateau,**	**18.59**	**246**	P	**Pn**	**08 39 28.9**	**+4.9**
OUENC	**Ouen Island, N**	**18.75**	**245**		**P**	**08 39 23.9**	**-1.5**
OUENC	**Ouen Island, N**	**18.75**	**245**	P	**Pn**	**08 39 26.2**	**+0.3**
DZM	**Mont Dzumac**	**18.99**	**247**	*e*Pn	**P**	**08 39 26.9**	**-1.4**
	comp=Z,454nm,1.4s						
DZM				*e*LR	LR	08 43 52.3	
	comp=Z,24μm,25.1s						
DZM	**Mont Dzumac**	**18.99**	**247**	P	**P**	**08 39 26.9**	**-1.4**
	comp=Z,59nm,1.1s,baz=94,slow=15,SNR=12						
DZM				LR	LR	08 45 24.6	
	comp=Z,12μm,20.7s,baz=71,slow=34						
DZM	**Mont Dzumac**	**18.99**	**247**		**P**	**08 39 27.4**	**-0.8**
DZM				IAmb	IAmb	08 39 37.6	
	comp=Z,122nm,0.9s						
DZM	**Mont Dzumac**	**18.99**	**247**	P	**Pn**	**08 39 28.6**	**-0.4**
	comp=Z,152nm,1.7s						
ONTNC	**Ouen Toro**	**19.05**	**246**		**P**	**08 39 27.8**	**-1.0**
ONTNC	**Ouen Toro**	**19.05**	**246**	P	**Pn**	**08 39 29.7**	**+0.1**
	comp=Z,296nm,1.4s						
NOUC	**Port Laguerre**	**19.12**	**247**	P	**P**	**08 39 29.8**	**+0.2**
KOUNC	**Koumac, New Ca**	**20.57**	**252**	P	**P**	**08 39 44.9**	**-0.6**
KOUNC				IAmb	IAmb	08 39 60.0	
	comp=Z,292nm,1.5s						
KOUNC				IAMs_20	IAMs_20	08 46 12.1	
	comp=Z,17μm,19.0s						
KOUNC	**Koumac, New Ca**	**20.57**	**252**	P	Pn	08 39 51.1	+3.4
TARA	**Tarawa**	**20.59**	**323**	P	**P**	**08 39 44.1**	**-1.5**
TARA	**Tarawa**	**20.59**	**323**	P	Pn	08 39 48.8	+0.9
OUZ	**Omahuta**	**22.36**	**206**	P	**P**	**08 40 04.8**	**+0.2**
MXZ	**Mataoaa Point**	**22.95**	**194**	IAMs_20	IAMs_20	08 47 36.3	
	comp=Z,15μm,20.0s						
URZ	**Urewera**	**23.91**	**196**	P	**P**	**08 40 17.4**	**-2.9**
	comp=Z,11nm,1.0s,baz=79,slow=10,SNR=2.1						
URZ				LR	LR	08 49 07.1	
	comp=Z,11μm,18.8s,baz=104,slow=36						
URZ	**Urewera**	**23.91**	**196**	P	**P**	**08 40 19.1**	**-1.2**
URZ				IAMs_20	IAMs_20	08 48 46.7	
	comp=Z,11μm,21.0s						
PAE	**Paea**	**24.26**	**99**	*e*T	T	09 05 46.3	
	comp=Z,4.3nm,0.3s						
PPT	**Papeete**	**24.26**	**99**	LR	LR	08 47 32.9	
	comp=Z,3μm,20.2s,baz=269,slow=30						
PPT2	**Papeete2**	**24.26**	**99**	*e*LR	LR	08 46 22.5	
	comp=Z,9μm,25.5s						
PPT2	**Papeete2**	**24.26**	**99**	*e*T	T	09 05 40.8	
	comp=Z,6.9nm,0.3s						
TIAR	**Tiarei**	**24.48**	**99**	*e*T	T	09 05 59.8	
	comp=Z,2.4nm,0.3s						
HIZ	**Hauiti**	**24.81**	**200**	IAMs_20	IAMs_20	08 48 55.4	
	comp=Z,8μm,20.0s						
BKZ	**Black Stump Fm**	**24.93**	**196**	P	**P**	**08 40 28.3**	**-1.3**
TBI	**Tubuai**	**25.14**	**112**	*e*LR	LR	08 46 46.3	
	comp=Z,4μm,28.2s						
TBI	**Tubuai**	**25.14**	**112**	*e*T	T	09 06 50.3	
	comp=Z,13nm,0.3s						
MEH	**Mehetia**	**25.71**	**99**	*e*T	T	09 07 44.0	
	comp=Z,7.1nm,0.3s						
PMOR	**Pomariorio Ree**	**25.94**	**93**	*e*T	T	09 08 09.2	
	comp=Z,4.6nm,0.2s						
VAH	**Vaihoa**	**26.18**	**93**	*e*T	T	09 08 16.5	
	comp=Z,6.5nm,0.3s						
QRZ	**Quartz Range**	**27.67**	**201**	IAMs_20	IAMs_20	08 51 13.1	
	comp=Z,7μm,18.0s						
THZ	**Tophouse**	**28.38**	**200**	IAMs_20	IAMs_20	08 52 30.0	
	comp=Z,7μm,19.0s						
KWAJ	**Kwajalein Atol**	**29.68**	**323**	IAMs_20	IAMs_20	08 50 14.2	
	comp=Z,9μm,20.0s						
RPZ	**Rata Peaks**	**30.74**	**200**	LR	LR	08 53 28.6	
	comp=Z,7μm,18.5s,baz=48,slow=36						
RPZ	**Rata Peaks**	**30.74**	**200**	IAMs_20	IAMs_20	08 53 26.3	
	comp=Z,8μm,20.0s						
WKZ	**Wanaka**	**32.42**	**202**	IAMs_20	IAMs_20	08 54 18.8	
	comp=Z,9μm,21.0s						
TAOE	**Nuku Hiva Isla**	**34.44**	**83**	*e*S	**S**	**08 47 23.9**	**+1.2**
	comp=Z,512nm,29.2s						
TAOE				*e*LR	LR	08 51 04.9	
	comp=Z,11μm,26.9s						
TAOE	**Nuku Hiva Isla**	**34.44**	**83**	*e*T	T	09 18 33.4	
	comp=Z,48nm,0.2s						
KRVT	**Keravat (AS076**	**34.45**	**285**	P	**P**	**08 41 53.1**	**-1.3**
	comp=Z,22nm,0.3s,baz=121,slow=12,SNR=1.9						
PATS	**Pohnpei**	**34.60**	**308**	IAMs_20	IAMs_20	08 52 09.2	
	comp=Z,8μm,21.0s						
RMQ	**Roma**	**35.70**	**246**	P	**P**	**08 42 07.0**	**+1.8**
	baz=36,SNR=4.3						
RMQ	**Roma**	**35.70**	**246**	P	**P**	**08 42 08.2**	**+3.1**
TV1H	**Townsville Har**	**36.84**	**258**	P	P	08 42 20.1	+5.1
	comp=Z,9.4nm,1.2s						
CTA	**Charters Tower**	**37.36**	**257**	P	**P**	**08 42 16.6**	**-2.8**
	comp=Z,3.1nm,0.8s,baz=83,slow=8.1,SNR=3.0						
CTA				LR	LR	08 55 49.7	
	comp=Z,3μm,19.1s,baz=78,slow=34						
	comp=Z,3.1nm,0.8s						
CTA	**Charters Tower**	**37.36**	**257**	P	**P**	**08 42 20.2**	**+0.8**
CTAO	**Charters Tower**	**37.36**	**257**	P	**P**	**08 42 17.8**	**-1.6**
CTAO	**Charters Tower**	**37.36**	**257**	P	**P**	**08 42 17.8**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,20nm,1.2s						
CTAO	**Charters Tower**	**37.36**	**257**	P	**P**	**08 42 20.5**	**+1.1**
PMG	**Port Moresby**	**37.61**	**274**	P	**P**	**08 42 19.8**	**-1.7**
	comp=Z,25nm,0.9s,baz=73,slow=11,SNR=3.2						
PMG				LR	LR	08 54 01.1	
	comp=Z,4μm,21.9s,baz=80,slow=31						
	comp=Z,25nm,0.9s						
PMG	**Port Moresby**	**37.61**	**274**	P	**P**	**08 42 19.4**	**-2.1**
PMG	**Port Moresby**	**37.61**	**274**	P	**P**	**08 42 19.4**	**-2.1**
PMG				pmax	pmax		
	comp=Z,95nm,1.1s						
PMG	**Port Moresby**	**37.61**	**274**	P	**P**	**08 42 19.9**	**-1.7**
	comp=Z,92nm,1.1s						
PMG	**Port Moresby**	**37.61**	**274**	P	**P**	**08 42 24.0**	**+2.5**
CAN	**Canberra**	**38.01**	**232**	IAMs_20	IAMs_20	08 58 14.8	
	comp=Z,5μm,19.0s						
H11S2	**WAKE ISLAND Hy**	**38.27**	**331**	T	T	09 23 19.8	
	baz=149,slow=75,SNR=54						
RKT	**Rikitea**	**38.27**	**108**	*e*T	T	09 23 27.8	
	comp=Z,9.1nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**38.28**	**331**	T	T	09 23 20.8	
	baz=149,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**38.28**	**331**	T	T	09 23 21.2	
	baz=149,slow=75,SNR=44						
WAKE	**Wake Island**	**38.98**	**331**	IAMs_20	IAMs_20	08 54 55.7	
	comp=Z,5μm,20.0s						
MTSU	**Mount Surprise**	**39.22**	**260**	P	**P**	**08 42 32.1**	**-3.0**
	baz=39,SNR=4.7						
MTSU	**Mount Surprise**	**39.22**	**260**	P	**P**	**08 42 34.5**	**-0.6**
H11N3	**WAKE ISLAND Hy**	**39.24**	**332**	T	T	09 24 30.4	
	baz=151,slow=76,SNR=55						
H11N1	**WAKE ISLAND Hy**	**39.24**	**332**	T	T	09 24 20.1	
	baz=151,slow=76,SNR=80						
H11N2	**WAKE ISLAND Hy**	**39.26**	**332**	T	T	09 24 31.5	
	baz=151,slow=76,SNR=58						
CMSA	**Cobar Meteorol**	**39.44**	**239**	P	**P**	**08 42 35.9**	**-0.8**
	baz=39,SNR=8.7						
CMSA	**Cobar Meteorol**	**39.44**	**239**	P	**P**	**08 42 40.5**	**+3.8**
QLP	**Quilpie**	**39.71**	**247**	P	P	08 42 44.7	+5.6
COEN	**Coen**	**40.66**	**266**	P	**P**	**08 42 45.5**	**-1.6**
COEN	**Coen**	**40.66**	**266**	P	**P**	**08 42 45.7**	**-1.4**
TOO	**Toolangi**	**41.47**	**230**	P	**P**	**08 42 52.3**	**-1.2**
	baz=41,SNR=4.4						
TOO	**Toolangi**	**41.47**	**230**	P	**P**	**08 42 51.9**	**-1.6**
TOO	**Toolangi**	**41.47**	**230**	P	**P**	**08 42 51.9**	**-1.6**
TOO				pmax	pmax		
	comp=Z,183nm,2.0s						
STKA	**Stephens Creek**	**42.91**	**240**	P	**P**	**08 43 04.0**	**-1.3**
	comp=Z,16nm,1.1s,baz=71,slow=9.5,SNR=8.4						
STKA				LR	LR	08 58 47.6	
	comp=Z,3μm,20.8s,baz=77,slow=34						
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**42.91**	**240**	P	**P**	**08 43 04.9**	**-0.4**
	baz=43,SNR=7.5						
STKA	**Stephens Creek**	**42.91**	**240**	P	**P**	**08 43 03.7**	**-1.6**
STKA	**Stephens Creek**	**42.91**	**240**	P	**P**	**08 43 03.7**	**-1.6**
STKA				pmax	pmax		
	comp=Z,11nm,1.3s						
STKA	**Stephens Creek**	**42.91**	**240**	P	**P**	**08 43 07.6**	**+2.3**
	comp=Z,10nm,3.0s						
INKA	**Innaminka**	**42.95**	**246**	P	**P**	**08 43 10.3**	**+4.7**
QIS	**Mount Isa**	**43.60**	**256**	P	**P**	**08 43 14.8**	**+3.8**
OOD	**Oodnadatta**	**47.41**	**246**	P	**P**	**08 43 45.2**	**+4.1**
WR0	**Warramunga Arr**	**48.37**	**257**	P	**P**	**08 43 46.1**	**-2.6**
WR0				IAmb	IAmb	08 43 52.7	
	comp=Z,40nm,1.4s						
WB0	**Warramunga Arr**	**48.52**	**257**	P	**P**	**08 43 46.9**	**-2.9**
WB2	**Warramunga Arr**	**48.55**	**257**	P	**P**	**08 43 47.1**	**-3.0**
WRAB	**Tennant Creek**	**48.55**	**257**	P	**P**	**08 43 47.8**	**-2.3**
WRAB	**Tennant Creek**	**48.55**	**257**	IAMs_20	IAMs_20	09 01 09.2	
	comp=Z,3μm,22.0s						
WRAB	**Tennant Creek**	**48.55**	**257**	P	**P**	**08 43 47.8**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,135nm,1.8s						
WRA	**Warramunga Arr**	**48.56**	**257**	P	**P**	**08 43 46.9**	**-3.3**
	comp=Z,5.4nm,1.0s,baz=89,slow=6.4,SNR=20						
WRA				PcP	**PcP**	**08 45 16.6**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=87,slow=3.7,SNR=2.8						
WRA				LR	LR	09 02 06.0	
	comp=Z,3μm,21.4s,baz=92,slow=34						
	comp=Z,5.4nm,1.0s						
WRA	**Warramunga Arr**	**48.56**	**257**	P	**P**	**08 43 47.8**	**-2.4**
WRA	**Warramunga Arr**	**48.56**	**257**	P	**P**	**08 43 47.8**	**-2.4**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AS01	**Alice Springs**	**48.82**	**252**	P	**P**	**08 43 51.2**	**-1.0**
AS31	**Alice Springs**	**48.86**	**252**	P	**P**	**08 43 50.4**	**-2.1**
ASAR	**Alice Springs**	**48.86**	**252**	P	**P**	**08 43 49.2**	**-3.3**
	comp=Z,9.1nm,1.1s,baz=87,slow=7.8,SNR=24						
ASAR				LR	LR	09 02 15.7	
	comp=Z,7μm,21.8s,baz=90,slow=34						
	comp=Z,9.1nm,1.1s						
ASAR	**Alice Springs**	**48.86**	**252**	P	**P**	**08 43 49.6**	**-2.9**
ASAR	**Alice Springs**	**48.86**	**252**	P	**P**	**08 43 49.6**	**-2.9**
GUMO	**Guam**	**49.20**	**304**	LR	LR	09 01 37.2	
	comp=Z,1μm,19.9s,baz=110,slow=33						
KDU	**Kakadu**	**51.15**	**266**	P	**P**	**08 44 11.7**	**+1.8**
MTN	**Manton Dam**	**52.41**	**265**	P	**P**	**08 44 17.7**	**-1.7**
MTN				IAmb	IAmb	08 44 44.9	
	comp=Z,30nm,1.1s						
WRKA	**Warakurna**	**53.96**	**250**	P	**P**	**08 44 29.0**	**-1.7**
	baz=54,SNR=10						
WRKA	**Warakurna**	**53.96**	**250**	P	**P**	**08 44 29.6**	**-1.1**
KNRA	**Kununurra**	**54.26**	**262**	P	**P**	**08 44 31.1**	**-1.8**
KNRA				IAmb	IAmb	08 44 37.5	
	comp=Z,65nm,1.6s						
SIJI	**Sorong**	**55.14**	**280**	P	**P**	**08 44 37.8**	**-1.6**
	comp=Z,58nm,1.0s						
FITZ	**Fitzroy Crossi**	**56.92**	**258**	LR	LR	09 06 48.9	
	comp=Z,3μm,21.3s,baz=104,slow=34						
FITZ	**Fitzroy Crossi**	**56.92**	**258**	P	**P**	**08 44 52.0**	**0.0**
	baz=57,SNR=3.5						
FITZ	**Fitzroy Crossi**	**56.92**	**258**	P	**P**	**08 44 49.4**	**-2.6**
FITZ				IAmb	IAmb	08 44 58.5	
	comp=Z,80nm,2.0s						
KRAI	**Karang Ratu**	**57.17**	**276**	P	**P**	**08 44 53.5**	**-0.4**
	comp=Z,4μmcomp=Z,22nm,1.1s						
JCJ	**Chichijima**	**59.38**	**315**	LR	LR	09 06 28.8	
	comp=Z,3μm,20.6s,baz=110,slow=32						
SOEI	**Soe**	**59.60**	**268**	P	**P**	**08 45 08.6**	**-2.4**
SOEI	**Soe**	**59.60**	**268**	P	**P**	**08 45 07.7**	**-3.3**
	comp=Z,65nm,1.3s						
SANI	**Sanana**	**59.84**	**277**	P	**P**	**08 45 10.3**	**-2.2**
	comp=Z,664nmcomp=Z,24nm,0.9s						
RPN	**Rapa Nui**	**61.53**	**113**	LR	LR	09 07 09.0	
	comp=Z,475nm,18.5s,baz=270,slow=31						
PSA00	**Pilbara Seismi**	**61.94**	**254**	P	**P**	**08 45 24.0**	**-2.7**
PSA00				IAmb	IAmb	08 45 35.3	
	comp=Z,43nm,1.4s						
DAV	**Davao City (W)**	**63.15**	**286**	LR	LR	09 09 56.4	
	comp=Z,871nm,21.7s,baz=106,slow=33						
SBA	**Scott Base**	**63.19**	**184**	P	**P**	**08 45 32.7**	**-1.4**
SBA				IAmb	IAmb	08 45 46.4	
	comp=Z,39nm,1.4s						
SBA	**Scott Base**	**63.19**	**184**	P	**P**	**08 45 32.7**	**-1.4**
SBA				pmax	pmax		
	comp=Z,39nm,1.4s						
VNDA	**Vanda**	**63.28**	**186**	P	**P**	**08 45 35.5**	**+0.8**
	comp=Z,4.7nm,1.1s,baz=11,slow=7.5,SNR=12						
VNDA				LR	LR	09 09 41.0	
	comp=Z,451nm,20.1s,baz=32,slow=33						
	comp=Z,4.7nm,1.1s						
VNDA	**Vanda**	**63.28**	**186**	P	**P**	**08 45 34.7**	**0.0**
VNDA				IAmb	IAmb	08 45 51.3	
	comp=Z,21nm,1.4s						
VNDA	**Vanda**	**63.28**	**186**	P	**P**	**08 45 34.7**	**0.0**
VNDA				pmax	pmax		
	comp=Z,21nm,1.4s						
NWAO	**Narrogin (SRO)**	**63.48**	**241**	LR

comp=Z,2µm,22.0s
YUH Yuha Desert 73.76 49 P **P 08 46 40.9 0.0**
PFO Pinyon Flats O 73.87 48 LR LR 09 14 34.6
comp=Z,1µm,18.1s,baz=242,slow=32
PFO Pinyon Flats O 73.87 48 P **P 08 46 40.6 -1.1**
PFO Pinyon Flats O 73.87 48 IAms_20 IAms_20 09 11 11.6
comp=Z,2µm,20.0s
PFO Pinyon Flats O 73.87 48 P **P 08 46 40.6 -1.1**
PFO pmax pmax
comp=Z,23nm,1.6s
SWSC Sam W. Stewart 74.00 49 P **P 08 46 45.1 +2.8**
baz=239
LPIG La Paz 74.15 59 LR LR 09 13 23.0
comp=Z,1µm,18.8s,baz=244,slow=31
YBH Yreka Blue Hor 74.38 38 P P 08 46 49.5 +5.0
comp=Z,2.4nm,1.0s,baz=211,slow=2.3,SNR=5.6
YBH LR LR 09 13 31.7
comp=Z,725nm,20.2s,baz=236,slow=31
comp=Z,2.4nm,1.0s
BELC Belle Mtn. Jos 74.40 48 P **P 08 46 47.5 +2.7**
baz=239
MPMC Manual Prospec 74.44 45 P **P 08 46 49.1 +4.0**
baz=237
BC3 Big Chuckawall 74.61 48 P **P 08 46 50.3 +4.3**
baz=239
QSPA South Pole Qui 74.68 180 LR LR 09 14 11.2
comp=Z,973nm,21.4s,baz=38,slow=31
QSPA South Pole Qui 74.68 180 P **P 08 46 45.7 -0.2**
QSPA IAmb IAmb 08 46 53.1
comp=Z,35nm,1.2s
BEKR Beckworth 74.69 40 P **P 08 46 46.3 -0.1**
BEKR IAmb IAmb 08 47 15.9
comp=Z,34nm,1.5s
PNTR Pine Nut 74.73 41 P **P 08 46 45.9 -0.8**
PNTR IAmb IAmb 08 47 19.2
comp=Z,41nm,1.5s
GRAC Grapevine Rang 75.03 44 P **P 08 46 51.2 +2.9**
baz=237
GMRC Granite Mounta 75.04 47 P **P 08 46 53.1 +4.6**
baz=239
GWY Greenwater Val 75.07 45 P **P 08 46 48.3 -0.4**
FURC Furnace Creek, 75.09 45 P **P 08 46 53.1 +4.6**
baz=238
IRM Iron Mountain 75.09 48 P **P 08 46 52.2 +3.6**
baz=239
KDAK Kodiak Island 75.15 12 LR LR 09 14 14.0
comp=Z,1µm,19.9s,baz=227,slow=31
KDAK Kodiak Island 75.15 12 IAms_20 IAms_20 09 13 01.2
comp=Z,2µm,20.0s
NVAR Mina Array Bea 75.19 43 P P 08 46 54.8 +5.4
comp=Z,1.8nm,1.0s,baz=224,slow=8.0,SNR=12
NVAR LR LR 09 13 46.7
comp=Z,1µm,19.8s,baz=235,slow=31
comp=Z,1.8nm,1.0s
NVAR Mina Array Bea 75.19 43 P **P 08 46 48.4 -1.0**
SHOC Shoshone, Teco 75.19 46 P **P 08 46 53.7 +4.5**
baz=238
KSRS Korea Array 75.21 316 P **P 08 46 48.8 -0.4**
comp=Z,0.5nm,0.5s,baz=134,slow=8.8,SNR=2.4
KSRS LR LR 09 17 13.2
comp=Z,778nm,19.3s,baz=120,slow=34
comp=Z,0.5nm,0.5s
KSAR Wonju Array Be 75.23 316 P **P 08 46 47.0 -2.3**
KSAR Wonju Array Be 75.23 316 P **P 08 46 47.0 -2.3**
GMN Gold Mountain 75.27 44 P **P 08 46 50.3 +0.4**
BLYC Blythe 75.33 48 P **P 08 46 51.2 +1.2**
BLYC IAmb IAmb 08 47 07.9
comp=Z,43nm,1.6s
214A Organ Pipe Nat 75.71 51 P **P 08 46 55.8 +3.5**
baz=241
TYV Tymovskoe 75.72 334 *e*P P 08 47 04.1 +12
TYV *e*S S 08 56 57.3 +24
TYV pmax pmax
comp=Z,13nm,1.0s
TYV pmax pmax
comp=Z,300nm,5.0s
TYV smax smax
comp=N,200nm,4.8s
TYV smax smax
comp=E,400nm,4.8s
TPNV Topopah Spring 75.76 45 IAms_20 IAms_20 09 15 50.5
comp=Z,2µm,18.0s
KSM Kuching 75.86 276 P **P 08 46 52.8 -0.7**
comp=Z,20nm,1.5s
Q19K Cape Douglas, 76.02 11 IAms_20 IAms_20 09 14 16.0
comp=Z,2µm,19.0s
INCN Inchon 76.09 316 IAms_20 IAms_20 09 17 38.3
comp=Z,1µm,20.0s
LEM Lembang 76.31 267 LR LR 09 19 14.4
comp=Z,1µm,21.5s,baz=107,slow=35
USRK Ussuriysk Ar. 76.56 324 LR LR 09 14 19.2
comp=Z,4µm,21.9s,baz=118,slow=31
P19K Oil Pt 76.77 11 IAms_20 IAms_20 09 15 08.9
comp=Z,2µm,20.0s
R11A Troy Canyon, C 76.95 44 P **P 08 47 02.1 +2.7**
baz=238
CNPM China Poot 77.04 12 IAms_20 IAms_20 09 15 35.0
comp=Z,2µm,20.0s
HOM Homer 77.08 12 IAms_20 IAms_20 09 15 55.0
comp=Z,2µm,20.0s
O19K Port Alsworth 77.08 10 P **P 08 47 02.6 +3.3**
baz=200
BRLK Bradley Lake 77.33 12 IAms_20 IAms_20 09 15 42.3
comp=Z,2µm,19.0s
BRSE Bradley Lake S 77.34 12 P **P 08 47 04.3 +3.5**
baz=204
TUC Tucson 77.40 51 P **P 08 47 02.3 +0.4**
TUC IAmb IAmb 08 47 20.2
comp=Z,27nm,1.4s
TUC Tucson 77.40 51 IAms_20 IAms_20 09 14 12.0
comp=Z,2µm,20.0s
TUC Tucson 77.40 51 P **P 08 47 02.3 +0.4**
N19K Bonanza Creek 77.64 10 IAms_20 IAms_20 09 13 26.8
comp=Z,1µm,22.0s
N19K Bonanza Creek 77.64 10 P **P 08 47 06.0 +3.4**
baz=200
SEW Seward 77.94 13 P **P 08 47 07.9 +3.8**
baz=205
KNB Kanab 78.16 46 P **P 08 47 07.0 +0.8**
KNB Kanab 78.16 46 P **P 08 47 07.0 +0.8**
KNB pmax pmax
comp=Z,97nm,1.9s
MDJ Mudanjiang 78.19 323 P **P 08 47 05.9 0.0**
MDJ S **S 08 57 05.2 +4.9**
MDJ sS sS 08 57 09.0 +2.9
MDJ pmax pmax
comp=Z,8.0nm,0.5s
MDJ pmax pmax
comp=Z,180nm,9.8s
MDJ LR LR
comp=Z,1µm,22.8s
MDJ LR LR
comp=Z,2µm,23.9s
MDJ LR LR
comp=Z,4µm,23.3s
O22K Cooper Landing 78.22 12 IAms_20 IAms_20 09 15 50.3
comp=Z,1µm,20.0s
P23K Montague Islan 78.29 14 P **P 08 47 09.6 +3.5**
baz=207
ELK Elko 78.44 42 LR LR 09 15 07.5
comp=Z,743nm,20.7s,baz=247,slow=30
BBB Bella Bella 78.45 27 LR LR 09 15 24.3
comp=Z,523nm,19.4s,baz=234,slow=31
WUAZ Wupatki 78.45 48 IAms_20 IAms_20 09 16 50.0
comp=Z,1µm,18.0s
M19K Big River Lodg 78.68 10 IAms_20 IAms_20 09 20 12.4
comp=Z,1µm,18.0s
M19K Big River Lodg 78.68 10 P **P 08 47 11.4 +3.2**
baz=200
HIN Hinchinbrook I 78.85 14 IAms_20 IAms_20 09 14 36.0
comp=Z,2µm,21.0s
PWL Port Wells 78.86 13 P **P 08 47 07.7 -1.5**
PWL IAmb IAmb 08 47 20.2
comp=Z,24nm,1.0s
PWL IAms_20 IAms_20 09 16 13.1
comp=Z,1µm,20.0s
PWL Port Wells 78.86 13 P **P 08 47 12.4 +3.1**
baz=206
L19K White Mountain 78.87 9 P **P 08 47 13.8 +4.5**
baz=200
M20K Styx River 78.87 10 IAms_20 IAms_20 09 16 06.5
comp=Z,1µm,20.0s
SUA Susitna One 78.92 11 P **P 08 47 07.7 -2.0**
SUA IAms_20 IAms_20 09 16 07.7
comp=Z,2µm,20.0s
SUA Susitna One 78.92 11 P **P 08 47 13.0 +3.3**
baz=204
GAMB Gambell 78.92 1 IAms_20 IAms_20 09 14 45.5
comp=Z,2µm,22.0s
NJ2 Nanjing 79.09 308 *e*P **P 08 47 14.8 +3.7**
NJ2 pmax pmax
comp=Z,29nm,1.3s
NJ2 LR LR
comp=Z,660nm,13.3s
NJ2 LR LR
comp=Z,920nm,20.8s
NJ2 LR LR
comp=Z,2µm,22.7s
GLI Glacier Island 79.15 13 IAms_20 IAms_20 09 15 48.8
comp=Z,2µm,21.0s
GLI Glacier Island 79.15 13 P **P 08 47 14.2 +3.4**
baz=207
FID Port Fidalgo 79.17 14 IAms_20 IAms_20 09 15 05.2
comp=Z,2µm,21.0s
SUCK Suckling Hills 79.23 15 IAms_20 IAms_20 09 14 43.0
comp=Z,2µm,21.0s
SKT Skwentna 79.25 11 IAms_20 IAms_20 09 17 39.4
comp=Z,1µm,20.0s
M22K Willow 79.31 12 IAms_20 IAms_20 09 16 08.9
comp=Z,2µm,21.0s
M22K Willow 79.31 12 P **P 08 47 15.1 +3.5**
baz=204
KNK Knik Glacier 79.33 13 IAms_20 IAms_20 09 15 39.7
comp=Z,1µm,21.0s
TTA Tatalina 79.41 9 P **P 08 47 16.5 +4.2**
baz=198
SNH Sunshine Point 79.56 16 IAms_20 IAms_20 09 16 54.8
comp=Z,2µm,20.0s
SML Sawmill 79.71 12 IAms_20 IAms_20 09 15 52.8
comp=Z,1µm,20.0s
MA2 Magadan 79.73 343 LR LR 09 16 32.6
comp=Z,2µm,21.8s,baz=152,slow=31
MA2 Magadan 79.73 343 IAms_20 IAms_20 09 16 42.6
comp=Z,2µm,21.0s
MA2 Magadan 79.73 343⇑ *e*P **P 08 47 12.0 -2.0**
MA2 pmax pmax
comp=Z,35nm,1.4s
KLR Kul'dur 79.77 328 P **P 08 47 15.4 +0.9**
comp=Z,1.0nm,0.8s,baz=275,slow=17,SNR=1.9
KLR LR LR 09 23 56.3
comp=Z,566nm,18.0s,baz=138,slow=37
comp=Z,1.0nm,0.8s
KLR Kul'dur 79.77 328 *de*P **P 08 47 15.0 +0.5**
KLR pmax pmax
comp=Z,5.0nm,1.5s
WAX Waxell Ridge 79.79 15 P **P 08 47 13.1 -1.3**
MESA MESA 79.79 16 P **P 08 47 12.4 -2.1**
MESA IAmb IAmb 08 49 10.7
comp=Z,29nm,0.9s
MESA IAms_20 IAms_20 09 16 32.0
comp=Z,2µm,20.0s
MESA MESA 79.79 16 P **P 08 47 18.3 +3.7**
baz=212
BMRM Bremner River 79.80 14 P **P 08 47 12.7 -1.8**
BMRM IAmb IAmb 08 47 27.4
comp=Z,33nm,1.0s
BMRM Bremner River 79.80 14 P **P 08 47 17.2 +2.8**
baz=210
WRAK Wrangell Islan 79.81 22 P **P 08 47 13.4 -1.1**
CUT Chulitna 79.87 11 IAms_20 IAms_20 09 17 48.0
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 79.95 13 IAms_20 IAms_20 09 15 36.0
comp=Z,1µm,20.0s
SCM Sheep Creek Mo 79.95 13 P **P 08 47 18.3 +3.0**
baz=207
KLU Klutina 79.96 14 IAms_20 IAms_20 09 15 32.2
comp=Z,2µm,21.0s
KLU Klutina 79.96 14 P **P 08 47 17.2 +1.9**
baz=208
ANM Nome 80.00 4 IAms_20 IAms_20 09 15 30.1
comp=Z,1µm,21.0s
YAH Yahtse 80.00 16 IAms_20 IAms_20 09 16 40.4
comp=Z,2µm,20.0s
ISLE Juniper Island 80.05 16 IAms_20 IAms_20 09 14 47.8
comp=Z,2µm,21.0s
TGL Tana Glacier 80.06 15 IAms_20 IAms_20 09 17 10.9
comp=Z,2µm,20.0s
PNL Peninsula 80.07 17 P **P 08 47 20.0 +4.1**
baz=214
K20K Telida 80.10 9 P **P 08 47 14.1 -1.9**
K20K IAmb IAmb 08 47 29.2
comp=Z,69nm,1.8s
K20K Telida 80.10 9 P **P 08 47 19.9 +4.0**
baz=200
NLU North Lily Min 80.11 44 P **P 08 47 13.8 -3.1**
ZAIG Zacatecas 80.17 63 P **P 08 47 15.9 -1.6**
CN2 Changchun 80.21 321 *e*P **P 08 47 17.6 +0.6**
CN2 *e*S **S 08 57 22.2 +0.3**
CN2 SS **SS 09 02 32.5 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,500nm,19.0s
CN2 LR LR
comp=Z,900nm,19.0s
CN2 LR LR
comp=Z,900nm,21.3s
Q16A Castle Valley 80.22 45 P **P 08 47 16.0 -1.4**
TABL Table Mountain 80.23 16 IAms_20 IAms_20 09 16 48.6
comp=Z,2µm,20.0s
BCPM Bancas Point 80.24 17 IAms_20 IAms_20 09 14 21.9
comp=Z,2µm,20.0s
VRDI Verde Repeater 80.31 15 P **P 08 47 21.4 +4.0**
VRDI IAmb IAmb 08 47 30.4
comp=Z,35nm,1.4s
VRDI IAms_20 IAms_20 09 17 01.6
comp=Z,1µm,20.0s
N25K Chitina, Valde 80.36 14 IAms_20 IAms_20 09 15 01.0
comp=Z,1µm,21.0s
N25K Chitina, Valde 80.36 14 P **P 08 47 20.5 +3.0**
baz=210
GLB Gilahina Butte 80.41 15 IAms_20 IAms_20 09 17 14.1
comp=Z,1µm,20.0s
EPT El Paso 80.43 53 IAms_20 IAms_20 09 15 29.4
comp=Z,2µm,20.0s
M24K Tolsona, Glenn 80.44 13 P **P 08 47 21.2 +3.3**
baz=208
CAST Castle Rocks 80.48 10 IAms_20 IAms_20 09 21 48.1
comp=Z,1µm,18.0s
CAST Castle Rocks 80.48 10 P **P 08 47 20.9 +2.8**
baz=202
P29M Windy Craggy 80.53 18 IAms_20 IAms_20 09 19 44.5
comp=Z,2µm,19.0s
P29M Windy Craggy 80.53 18 P **P 08 47 20.8 +2.4**
baz=216
MCARA McCarthy VSAT 80.55 15 IAms_20 IAms_20 09 17 27.9
comp=Z,1µm,20.0s
MCARA McCarthy VSAT 80.55 15 P **P 08 47 21.8 +3.4**
baz=211
HVU Hansel Valley 80.56 42 P **P 08 47 20.3 +1.2**
HVU IAmb IAmb 08 47 33.7
comp=Z,53nm,2.0s
HVU Hansel Valley 80.56 42 P **P 08 47 20.3 +1.2**
HVU pmax pmax
comp=Z,53nm,2.0s
LOGN Logan Glacier 80.59 16 IAms_20 IAms_20 09 14 33.1
comp=Z,2µm,22.0s
BARN Barnard Glacie 80.62 16 P **P 08 47 18.5 -0.5**
BARN IAmb IAmb 08 47 32.4
comp=Z,43nm,1.4s
BARN IAms_20 IAms_20 09 17 29.8
comp=Z,2µm,20.0s
CTG Chitna Glacier 80.62 16 P **P 08 47 22.1 +3.2**
baz=213
CTGM Chitina Glacie 80.62 16 IAms_20 IAms_20 09 17 29.9
comp=Z,2µm,20.0s
O28M Mount Upton 80.77 16 P **P 08 47 22.6 +2.7**
baz=214
KTH Kantishna Hill 80.81 11 P **P 08 47 20.1 +0.2**
KTH IAmb IAmb 08 47 32.8
comp=Z,44nm,1.3s
KTH IAms_20 IAms_20 09 18 18.7
comp=Z,1µm,20.0s
TRF Thorofare Moun 80.83 11 P **P 08 47 21.3 +1.2**
TRF Thorofare Moun 80.83 11 P **P 08 47 22.2 +2.1**
baz=204
J20K Nowinta River 80.86 9 P **P 08 47 21.5 +1.5**
baz=200
CHUM Lake Minchumin 80.88 10 P **P 08 47 22.7 +2.6**
baz=202
GCSA Galena City Sc 81.02 8 P **P 08 47 24.3 +3.5**
baz=198
Y22D IRIS PASSCAL I 81.08 51 IAms_20 IAms_20 09 16 11.6
comp=Z,1µm,20.0s
SKAG Skagway 81.13 19 P **P 08 47 24.6 +3.0**
baz=218
P30M Million Dollar 81.16 18 P **P 08 47 25.0 +3.2**
baz=217
HWUT Hardware Ranch 81.26 43 IAms_20 IAms_20 09 17 08.0
comp=Z,1µm,20.0s
MVCO Mesa Verde 81.29 48 IAms_20 IAms_20 09 16 00.1
comp=Z,1µm,20.0s
MCK McKinley 81.34 11 P **P 08 47 21.9 -0.7**
MCK IAmb IAmb 08 47 51.8
comp=Z,40nm,1.4s
MCK IAms_20 IAms_20 09 17 12.6
comp=Z,2µm,20.0s
MCK McKinley 81.34 11 P **P 08 47 21.9 -0.7**
MCK pmax pmax
comp=Z,40nm,1.4s
MCK McKinley 81.34 11 P **P 08 47 25.7 +3.1**
baz=205
PAX Paxson 81.36 13 P **P 08 47 24.7 +1.9**
baz=209
S34M Telegraph Cree 81.37 22 P **P 08 47 26.4 +3.5**
baz=222
NEW Newport 81.43 35 P **P 08 47 27.1 +3.7**
comp=Z,0.4nm,0.3s,baz=231,slow=14,SNR=1.2
NEW LR LR 09 18 00.7
comp=Z,438nm,19.4s,baz=233,slow=32
comp=Z,0.4nm,0.3s
M26K Nabesna, AK 81.43 14 P **P 08 47 24.2 +1.1**
M26K IAmb IAmb 08 47 36.3
comp=Z,28nm,1.2s
M26K IAms_20 IAms_20 09 16 09.2
comp=Z,1µm,21.0s
M26K Nabesna, AK 81.43 14 P **P 08 47 25.6 +2.4**
baz=211
QIZ Qiongzhong 81.66 292 IAms_20 IAms_20 09 17 14.8
comp=Z,1µm,21.0s
QIZ Qiongzhong 81.66 292 P **P 08 47 27.8 +2.5**
QIZ PP **PP 08 50 36.5 +4.2**
QIZ S **S 08 57 41.5 +3.5**
QIZ LR LR
comp=Z,930nm,29.3s
QIZ LR LR
comp=Z,640nm,21.2s
QIZ LR LR
comp=Z,1µm,22.7s
M27K Edge Creek, AK 81.67 15 IAms_20 IAms_20 09 18 06.5
comp=Z,1µm,19.0s
M27K Edge Creek, AK 81.67 15 P **P 08 47 27.9 +3.4**
baz=212
TXAR Lajitas Array 81.69 57 P P 08 47 31.1 +5.7
comp=Z,2.0nm,1.1s,baz=226,slow=5.1,SNR=9.3
TXAR LR LR 09 17 37.2
comp=Z,782nm,18.2s,baz=235,slow=31
comp=Z,2.0nm,1.1s
TXAR Lajitas Array 81.69 57 P **P 08 47 23.8 -1.6**
ANMO Albuquerque 81.80 50 LR LR 09 17 26.0
comp=Z,1µm,19.3s,baz=239,slow=31
ANMO Albuquerque 81.80 50 P **P 08 47 25.2 -0.7**
ANMO IAmb IAmb 08 47 43.8
comp=Z,34nm,1.4s
ANMO Albuquerque 81.80 50 IAms_20 IAms_20 09 16 56.5
comp=Z,2µm,20.0s
ANMO Albuquerque 81.80 50 P **P 08 47 25.2 -0.7**
ANMO pmax pmax
comp=Z,34nm,1.4s
ANMO Albuquerque 81.80 50 P P 08 47 31.6 +5.7
baz=245
L26K Log Cabin Wild 81.89 14 P **P 08 47 26.7 +1.2**
L26K IAmb IAmb 08 47 45.6
comp=Z,28nm,1.6s
L26K IAms_20 IAms_20 09 18 26.3
comp=Z,2µm,20.0s
L26K Log Cabin Wild 81.89 14 P **P 08 47 28.5 +3.0**
baz=211
O30N Mendenhall 81.94 18 P **P 08 47 28.2 +2.4**
baz=218
K24K Donnelly Dome 82.03 13 P **P 08 47 29.0 +2.7**
baz=208
NEA2 Nenana 82.10 11 P **P 08 47 28.8 +2.2**
baz=205
I21K Tanana 82.14 10 P **P 08 47 28.5 +1.7**
baz=202
SEY Seymchan 82.14 345 P **P 08 47 28.8 +2.0**
comp=Z,4.3nm,0.9s,baz=165,slow=6.4,SNR=4.3
comp=Z,4.3nm,0.9s
DLBC Dease Lake 82.16 22 LR LR 09 16 21.0
comp=Z,1µm,21.5s,baz=234,slow=30
DLBC Dease Lake 82.16 22 P **P 08 47 29.1 +2.0**
baz=223
WRH Wood River Hil 82.17 11 IAms_20 IAms_20 09 18 09.6
comp=Z,2µm,20.0s
RIDG Independent Ri 82.17 13 IAms_20 IAms_20 09 18 27.8
comp=Z,1µm,20.0s
RIDG Independent Ri 82.17 13 P **P 08 47 29.5 +2.4**
baz=209
MLY Manley 82.20 10 P **P 08 47 25.6 -1.5**
MLY Manley 82.20 10 P **P 08 47 28.5 +1.4**
baz=203
DOT Dot Lake 82.27 13 P **P 08 47 26.6 -0.9**
DOT IAmb IAmb 08 47 39.8
comp=Z,30nm,1.3s
L27K Beaver Creek, 82.28 14 P **P 08 47 26.0 -1.6**
L27K IAmb IAmb 08 47 41.1
comp=Z,25nm,1.6s
L27K IAms_20 IAms_20 09 16 33.6
comp=Z,1µm,21.0s
L27K Beaver Creek, 82.28 14 P **P 08 47 29.5 +1.9**
baz=212
BCAR Beaver Creek A 82.29 14 P **P 08 47 26.0 -1.7**
HDA Harding Lake 82.33 12 P **P 08 47 27.1 -0.7**
HDA IAmb IAmb 08 47 39.9
comp=Z,19nm,1.0s
HDA IAms_20 IAms_20 09 16 04.0
comp=Z,1µm,22.0s
CCB Clear Creek Bu 82.38 11 P **P 08 47 27.7 -0.3**
CCB IAms_20 IAms_20 09 17 55.2
comp=Z,2µm,20.0s
H21K Melozitna Rive 82.46 9 P **P 08 47 29.4 +0.9**
H21K IAmb IAmb 08 47 41.2
comp=Z,38nm,1.6s
H21K IAms_20 IAms_20 09 21 41.1
comp=Z,1µm,19.0s
R33M Jennings River 82.53 21 P **P 08 47 31.0 +1.9**
baz=222
I23K Minto, Yukon-K 82.55 11 P **P 08 47 28.5 -0.4**
I23K IAmb IAmb 08 47 41.5
comp=Z,39nm,1.5s
I23K IAms_20 IAms_20 09 19 42.7
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 82.55 11 P **P 08 47 31.4 +2.6**
baz=205
SCRK Sand Creek 82.57 13 P **P 08 47 29.2 +0.1**
SCRK IAms_20 IAms_20 09 16 57.2
comp=Z,2µm,21.0s
SCRK Sand Creek 82.57 13 P **P 08 47 32.1 +2.9**
baz=210
TCOL CIGO, UAF Yank 82.57 11 P **P 08 47 28.5 -0.5**
TCOL IAmb IAmb 08 47 40.9
comp=Z,34nm,1.2s
TCOL IAms_20 IAms_20 09 19 32.3
comp=Z,2µm,20.0s
COLA College 82.58 11 P **P 08 47 28.5 -0.5**
COLA IAmb IAmb 08 47 40.9
comp=Z,41nm,1.3s
COLA College 82.58 11 IAms_20 IAms_20 09 19 32.3
comp=Z,2µm,20.0s
COLA College 82.58 11 P **P 08 47 28.5 -0.5**
COLA pmax pmax
comp=Z,41nm,1.3s
REDW Red Top Meadow 82.58 41 P **P 08 47 28.3 -1.5**
REDW IAmb IAmb 08 47 45.3
comp=Z,48nm,1.4s
MDM Murphy Dome 82.58 11 P **P 08 47 29.9 +0.8**
MDM IAms_20 IAms_20 09 19 03.6
comp=Z,2µm,20.0s
N31M Braeburn, Yuko 82.60 18 P **P 08 47 29.7 +0.4**
N31M IAmb IAmb 08 47 54.7
comp=Z,18nm,0.8s
N31M IAms_20 IAms_20 09 16 43.2
comp=Z,2µm,20.0s
IMAR Indian Mountai 82.62 9 P **P 08 47 30.4 +1.1**
ILAR Eielson Array 82.67 12 P **P 08 47 32.9 +3.3**
comp=Z,1.2nm,0.9s,baz=225,slow=6.2,SNR=8.8
ILAR LR LR 09 17 21.4
comp=Z,1µm,21.9s,baz=202,slow=31

comp=Z,1.2nm,0.9s
S22A 4UR Ranch, Cre 82.72 48 P **P 08 47 33.4 +2.6**
baz=244
J25K Salcha River, 82.83 12 P **P 08 47 33.7 +3.2**
baz=208
POKR Poker Plat Res 82.87 11 IAMs_20 IAMs_20 09 19 02.3
comp=Z,2μm,20.0s
H22K Ishtalitna Cre 82.90 9 P **P 08 47 33.8 +3.0**
baz=203
K27K Chicken 83.05 14 IAMs_20 IAMs_20 09 18 22.9
comp=Z,1μm,21.0s
K27K Chicken 83.05 14 P **P 08 47 35.3 +3.8**
baz=212
J26L Joseph Creek 83.12 13 IAMs_20 IAMs_20 09 18 47.8
comp=Z,2μm,20.0s
J26L Joseph Creek 83.12 13 P **P 08 47 36.0 +4.0**
baz=210
PDAR Pinedale Array 83.12 42 P **P 08 47 36.8 +4.1**
comp=Z,0.9nm,0.7s,baz=220,slow=2.5,SNR=9.1
PDAR LR LR 09 20 23.2
comp=Z,694nm,18.8s,baz=244,slow=32
comp=Z,0.9nm,0.7s
G21K Allakaket 83.16 8 P **P 08 47 35.7 +3.6**
baz=201
SMCO Snowmass 83.24 46 IAMs_20 IAMs_20 09 21 06.6
comp=Z,1μm,19.0s
PRP Porcupine Dome 83.60 12 P **P 08 47 33.6 -1.0**
RDOG Red Dog Mine 83.63 4 IAMs_20 IAMs_20 09 26 02.0
comp=Z,2μm,22.0s
SDCO Great Sand Dun 83.67 48 IAMs_20 IAMs_20 09 19 33.1
comp=Z,1μm,19.0s
G22K Bettles 83.83 9 P **P 08 47 36.9 +1.4**
baz=203
G23K Bananza Creek 83.87 10 P **P 08 47 37.3 +1.6**
baz=204
EGAK Eagle 83.89 14 P **P 08 47 35.8 -0.1**
EGAK IAMs_20 IAMs_20 09 17 27.3
comp=Z,2μm,22.0s
I26K Coal Creek Min 83.90 13 IAMs_20 IAMs_20 09 20 37.5
comp=Z,1μm,19.0s
I26K Coal Creek Min 83.90 13 P **P 08 47 38.1 +2.2**
baz=211
MSTX Muleshoe 84.19 53 P **P 08 47 38.3 +0.1**
MSTX Muleshoe 84.19 53 P P 08 47 44.2 +6.0
baz=247
BELA Belgrano 2 84.22 172 P **P 08 47 36.0 -1.5**
BELA IAmb IAmb 08 47 41.8
comp=Z,24nm,1.7s
BILL Bilibino 84.30 353 *i* P **P 08 47 40.7 +2.8**
BILL pmax pmax
comp=Z,14nm,1.2s
BILL MLR MLR
comp=Z,810nm,19.0s
COLD Coldfoot 84.31 9 P **P 08 47 40.7 +2.7**
baz=204
J29M Klondike Camp 84.33 15 IAMs_20 IAMs_20 09 17 26.9
comp=Z,1μm,21.0s
HNS HongShan 84.43 311 ⇓P **P 08 47 41.5 +2.3**
HNS S **S 08 58 13.3 +7.9**
HNS pmax pmax
comp=Z,15nm,0.9s
HNS pmax pmax
comp=Z,210nm,6.9s
HNS LR LR
comp=Z,370nm,18.0s
HNS LR LR
comp=Z,1μm,20.2s
HNS LR LR
comp=Z,1μm,19.6s
BJI Beijing 84.48 314 P **P 08 47 40.2 +0.8**
BJI sP **pwP 08 47 47.2 +1.5**
BJI S **S 08 58 10.7 +4.9**
BJI pmax pmax
comp=Z,10.0nm,0.9s
BJI pmax pmax
comp=Z,84nm,3.5s
BJI LR LR
comp=Z,110nm,19.6s
BJI LR LR
comp=Z,700nm,18.2s
BJI LR LR
comp=Z,830nm,19.7s
FYU Fort Yukon 84.58 11 IAMs_20 IAMs_20 09 17 58.4
comp=Z,1μm,21.0s
PMSA Palmer Station 84.75 156 LR LR 09 17 19.2
comp=Z,1μm,20.9s,baz=240,slow=30
E22K Anaktuvuk Pass 84.91 8 P **P 08 47 43.7 +2.7**
baz=202
F24K Squaw Lake 84.96 10 P **P 08 47 44.2 +2.9**
baz=206
H27K Steamboat Moun 85.05 13 P **P 08 47 43.0 +1.2**
baz=212
I29M Ogilvie Camp, 85.05 14 P **P 08 47 40.5 -1.3**
I29M IAMs_20 IAMs_20 09 20 43.0
comp=Z,1μm,20.0s
I29M Ogilvie Camp, 85.05 14 P **P 08 47 44.1 +2.3**
baz=215
CMIG Matias Romero 85.12 71 LR LR 09 17 12.6
comp=Z,1μm,20.2s,baz=238,slow=30
E23K Chandalar 85.17 9 P **P 08 47 45.2 +2.9**
baz=204
G26K Porcupine Rive 85.20 12 P **P 08 47 46.2 +3.8**
baz=210
AMTX Amarillo 85.37 52 IAMs_20 IAMs_20 09 18 49.1
comp=Z,2μm,20.0s
BMAR Burnt Mountain 85.47 11 P **P 08 47 42.3 -1.5**
TOLK Toolik Lake Re 85.71 9 IAMs_20 IAMs_20 09 19 06.1
comp=Z,1μm,22.0s
F26K Sheenjek River 85.78 11 P **P 08 47 48.5 +3.2**
baz=210
ABTX Abilene, Hawle 86.12 55 P P 08 47 52.8 +5.0
baz=249
ABTX Abilene, Hawle 86.12 55 P **P 08 47 50.1 +2.3**
baz=249
XLT XiLinHaoTe 86.19 317 ⇑ *i*P **P 08 47 49.9 +1.9**
XLT pP pwP 08 47 54.3 0.0
XLT sP sP 08 47 57.3 +4.5
XLT SKS S 08 58 08.6 -14
XLT S **SKKSac 08 58 19.4 -2.3**
XLT sS ScS 08 58 32.1 +0.5
XLT SS **SS 09 04 01.4 -0.8**
XLT pmax pmax
comp=Z,10.0nm,1.1s
XLT pmax pmax
comp=Z,140nm,4.1s
XLT LR LR
comp=Z,54nm,18.0s
XLT LR LR
comp=Z,520nm,20.9s
XLT LR LR
comp=Z,790nm,18.4s
EPYK Eagle Plains 86.26 14 IAMs_20 IAMs_20 09 17 51.8
comp=Z,1μm,22.0s
H03S2 Juan Fernandez 86.33 124 T T 10 23 39.0
baz=251
H03S1 Juan Fernandez 86.34 124 T T 10 23 44.6
baz=251
H03S3 Juan Fernandez 86.34 124 T T 10 23 53.3
baz=251
GYA Guiyang 86.86 298 ⇓P **P 08 47 51.0 -0.7**
GYA S **S 08 58 33.6 +3.6**
GYA pmax pmax
comp=Z,170nm,6.6s
GYA LR LR
comp=Z,540nm,20.6s
G30M tAoh Zrail Nji 86.87 14 P **P 08 47 53.3 +2.5**
baz=217
435B Jarrell 87.13 57 IAMs_20 IAMs_20 09 19 50.1
comp=Z,1μm,20.0s
PSI Prapat 87.17 274 LR LR 09 24 12.6
comp=Z,324nm,21.6s,baz=137,slow=34
PSI Prapat 87.17 274 P **P 08 47 53.3 -0.2**
comp=Z,7.4nm,1.4s
MAW Mawson 87.40 199 LR LR 09 26 14.8
comp=Z,1μm,18.1s,baz=118,slow=35
OGNE Ogallala 87.42 46 IAMs_20 IAMs_20 09 19 36.3
comp=Z,997nm,20.0s
XAN Xi'an 87.53 306 ⇑P **P 08 47 55.8 +1.1**
XAN pP pwP 08 47 59.6 -1.4
XAN sP sP 08 48 02.0 +2.4
XAN PP **PP 08 51 21.1 +1.2**
XAN SKS S 08 58 22.4 -14
XAN S **ScS 08 58 38.7 -4.3**
XAN pmax pmax
comp=Z,18nm,1.2s
XAN pmax pmax
comp=Z,130nm,4.1s
XAN LR LR
comp=Z,580nm,18.4s
XAN LR LR
comp=Z,690nm,18.4s
XAN LR LR
comp=Z,960nm,21.0s
F31M Tsiigehtchic 87.83 15 P **P 08 47 57.0 +1.8**
baz=219
HHC Hu-ho-hao-te 88.03 313 *e*P **P 08 47 59.7 +2.7**
HHC SKS S 08 58 25.3 -15
HHC S **ScS 08 58 48.2 +1.2**
HHC SS **SS 09 04 33.4 +4.2**
HHC pmax pmax
comp=Z,43nm,0.9s
HHC pmax pmax
comp=Z,240nm,5.1s
HHC LR LR
comp=Z,830nm,19.0s
HHC LR LR
comp=Z,1μm,19.7s
HHC LR LR
comp=Z,2μm,19.0s
HKT Hockley 88.29 58 IAMs_20 IAMs_20 09 25 34.8
comp=Z,1μm,19.0s
INK Inuvik 88.55 14 P P 08 48 03.5 +4.8
comp=Z,1.9nm,0.8s,baz=162,slow=3.2,SNR=2.3
INK LR LR 09 21 03.9
comp=Z,746nm,21.2s,baz=204,slow=31
comp=Z,1.9nm,0.8s
YAK Yakutsk 88.56 337 LR LR 09 24 26.9
comp=Z,698nm,20.4s,baz=91,slow=34
OK025 Westminster Rd 88.94 53 IAMs_20 IAMs_20 09 20 59.7
comp=Z,2μm,20.0s
BTO Baotou 89.03 313 *e*P P 08 48 10.2 +8.5
BTO S **SKiKP 08 56 31.1 -4.2**
KMI Kunming 89.81 296 ⇑P **P 08 48 09.2 +3.3**
KMI sP pwP 08 48 16.8 +4.6
KMI S **S 08 58 57.6 -0.8**
KMI pmax pmax
comp=Z,11nm,0.6s
KMI LR LR
comp=Z,510nm,21.8s
KMI LR LR
comp=Z,790nm,23.3s
KMI LR LR
comp=Z,1μm,23.3s
NATX Nacogdoches 89.82 57 IAMs_20 IAMs_20 09 23 08.1
comp=Z,1μm,20.0s
PLCA Paso Flores 90.52 133 LR LR 09 20 45.9
comp=Z,1μm,20.6s,baz=239,slow=30
YKA Yellowknife Ar 90.59 24 P P 08 48 13.6 +5.3
comp=Z,2.5nm,0.9s,baz=243,slow=4.1,SNR=2.8
YKA LR LR 09 26 23.4
comp=Z,707nm,18.1s,baz=239,slow=34
comp=Z,2.5nm,0.9s
KSU1 Kansas State U 90.65 50 IAMs_20 IAMs_20 09 23 15.0
comp=Z,1μm,18.0s
PZH PanZhiHua 91.07 297 P **P 08 48 13.1 +1.5**
PZH S **S 08 59 14.6 +4.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,150nm,4.7s
PZH LR LR
comp=Z,360nm,20.2s
PZH LR LR
comp=Z,370nm,19.0s
PZH LR LR
comp=Z,590nm,19.2s
TGUH Tegucigalpa,Un 91.30 76 IAMs_20 IAMs_20 09 19 34.9
comp=Z,2μm,21.0s
CMAR Chiang Mai Arr 91.34 289 P **P 08 48 14.7 +1.8**
comp=Z,2.3nm,0.3s,baz=74,slow=3.9,SNR=1.8
CMAR LR LR 09 24 30.2
comp=Z,463nm,21.8s,baz=95,slow=33
comp=Z,2.3nm,0.3s
MIAR Mount Ida 91.53 55 IAMs_20 IAMs_20 09 23 05.5
comp=Z,1μm,20.0s
C36M Paulatuk 91.68 16 IAMs_20 IAMs_20 09 28 06.2
comp=Z,1μm,21.0s
JTS Las Juntas de 92.51 80 ⇑ *e*P **P 08 48 15.7 -2.7**
JTS pmax pmax
comp=Z,7.0nm,1.3s
TROLL Troll, Antarti 92.82 179 P **P 08 48 21.0 +2.0**
SNAA Sanae 93.01 177 LR LR 09 24 48.3
comp=Z,2μm,21.8s,baz=192,slow=32
VNA3 Neumayer Olymp 93.01 175 P **P 08 48 21.4 +1.8**
PEL Peldehue 93.08 125 IAMs_20 IAMs_20 09 20 01.2
comp=Z,936nm,19.0s
HDC Heredia 93.23 81 IAMs_20 IAMs_20 09 19 20.1
comp=Z,1μm,22.0s
VNA2 Neumayer--Watz 93.49 176 P **P 08 48 24.3 +2.5**
baz=188,slow=3.8
ULN Ulaanbaatar 93.52 319 ⇑ *e*P **P 08 48 22.9 +0.4**
ULN pmax pmax
comp=Z,2.0nm,1.1s
VNA1 Neumayer--Stat 93.70 176 P **P 08 48 25.3 +2.6**
SONM Songino Array 93.93 319 P **P 08 48 23.9 -0.5**
comp=Z,0.2nm,0.3s,baz=131,slow=4.4,SNR=5.1
SONM LR LR 09 25 49.7
comp=Z,801nm,21.8s,baz=108,slow=32
comp=Z,0.2nm,0.3s
SONM Songino Array 93.93 319 P **P 08 48 25.0 +0.6**
SONM Songino Array 93.93 319 P **P 08 48 25.0 +0.6**
SONM pmax pmax
comp=Z,9.0nm,1.6s
SCIA State Center 93.98 48 IAMs_20 IAMs_20 09 23 49.0
comp=Z,1μm,20.0s
ATAH Atahualpa 94.24 99 LR LR 09 21 02.1
comp=Z,1μm,20.9s,baz=253,slow=29
NNA Nana 94.36 104 LR LR 09 21 42.0
comp=Z,499nm,21.0s,baz=252,slow=30
TIXI Tiksi 94.61 345 LR LR 09 25 57.1
comp=Z,1μm,21.7s,baz=90,slow=32
ULM Lac du Bonnet 94.74 39 LR LR 09 25 16.3
comp=Z,628nm,20.5s,baz=258,slow=32
GTA Gaotai 96.12 309 *e*P P 08 48 45.0 +10
WVT Waverly 96.48 54 IAMs_20 IAMs_20 09 26 25.5
comp=Z,2μm,20.0s
LVC Limon Verde 98.23 116 LR LR 09 22 20.3
comp=Z,524nm,21.3s,baz=251,slow=29
MTDJ Mount Denham 101.39 74 IAMs_20 IAMs_20 09 26 44.1
comp=Z,776nm,19.0s
TULEG Thule 108.54 14 IAMs_20 IAMs_20 09 35 42.7
comp=Z,863nm,20.0s
AAK Ala-Archa 115.44 310 IAMs_20 IAMs_20 09 38 52.0
comp=Z,924nm,21.0s
GDHS Morne Mazeau, 115.82 79 IAMs_20 IAMs_20 09 35 09.5
comp=Z,675nm,21.0s
KBS Kingsbay 116.33 359 IAMs_20 IAMs_20 09 37 06.0
comp=Z,728nm,20.0s
BVAR Borovoye Array 117.04 322 PKP **PKiKP 08 53 52.3 +1.0**
comp=Z,0.8nm,0.7s,baz=43,slow=4.9,SNR=1.6
ARU Arti 122.61 328 *i* PKIKP **PKiKP 08 54 07.4 +5.3**
ARU SS SS 09 12 20.8 +0.6
ARU MLR MLR
comp=Z,2μm,20.0s
AKTO Aktyubinsk 125.13 321 PKP **PKiKP 08 54 07.7 +0.4**
comp=Z,0.6nm,0.5s,baz=27,slow=6.8,SNR=1.7
KIRV Kirov 125.91 333 PKP **PKiKP 08 54 11.6 +3.1**
comp=Z,5.9nm,0.4s,baz=23,slow=7.7,SNR=1.4
MSEY Mahe Island 126.41 252 IAMs_20 IAMs_20 09 43 28.2
comp=Z,989nm,20.0s
KLMR Klimovskoe 128.29 339 *e*PKIKP **PKPdf 08 54 09.1 -3.5**
KLMR pmax pmax
comp=Z,27nm,1.7s
KLMR Klimovskoe 128.29 339 *e*PKPdf **PKPdf 08 54 09.2 -3.4**
KLMR AMP 08 54 25.1
comp=Z,27nm,1.7s
KLMR LR LR 09 37 18.0
KLMR AMP 09 41 44.3
comp=Z,857nm,24.7s
GEYT Alibeck 128.42 306 PKP **PKiKP 08 54 15.9 +1.6**
comp=Z,1.1nm,0.5s,baz=67,slow=4.8,SNR=1.8
MOS Moscow 132.67 336 *i* PKIKP PKiKP 08 54 30.4 +8.2
MOS *e* 09 19 30.0
OBN Obninsk 133.54 336 IAMs_20 IAMs_20 09 54 41.0
comp=Z,942nm,21.0s
OBN Obninsk 133.54 336 ⇑ *e*PKIKP **PKPdf 08 54 21.3 -1.4**
OBN *e* 08 56 49.5
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,838nm,20.0s
VSU Vasula 134.08 344 ⇑ *i*PKIKP **PKPdf 08 54 22.8 -0.8**
MAK Makhachkala 134.65 316 *e*P **Pdif 08 51 20.9 -4.9**
MAK *e* 09 01 28.2
MAK *e*SS SS 09 14 45.3 -4.6
KONO Kongsberg 135.66 357 IAMs_20 IAMs_20 09 57 16.7
comp=Z,709nm,20.0s
MNK Minsk 137.15 341 *i* PKP **PKPdf 08 54 28.5 -1.0**
comp=E,2.0nm,1.0s
MNK *i* PKP **PKPdf 08 54 28.5 -1.0**
comp=N,11nm,1.0s
MNK *i* PKP **PKPdf 08 54 28.5 -1.0**
comp=Z,10.0nm,1.0s,baz=33
MNK *i* PP **PP 08 57 12.2 -0.9**
MNK *i* PPP PPP 09 00 10.9
MNK *i* SKS **SKSdf 09 01 39.3 -0.7**
MNK *i* SKKS **SKKSdf 09 11 10.1 -9.4**
MNK *i* SS **SS 09 15 18.6 +0.3**
MNK *i* SSS SSS 09 19 51.0
MNK *i* LR LR 09 44 36.1
MNK *i* LRM MLR 09 50 09.9
comp=E,198nm,20.0s
MNK *i* LRM MLR 09 52 16.6
comp=Z,1μm,20.0s
MNK *i* LRM MLR 09 53 03.8
comp=N,1μm,20.0s
KIV Kislovodsk 137.32 320 IAMs_20 IAMs_20 09 52 58.1
comp=Z,770nm,22.0s
KIV Kislovodsk 137.32 320 *i* PKIKP **PKiKP 08 54 31.7 -0.5**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,805nm,24.0s
GNI Garni 137.69 314 IAMs_20 IAMs_20 09 55 05.5
comp=Z,616nm,21.0s
AKASG Malin Array Be 139.78 336 PKP **PKiKP 08 54 37.2 +0.4**
comp=Z,1.5nm,0.8s,baz=26,slow=1.9,SNR=5.4
ANN Anapa 140.00 324 *i* PKIKP **PKiKP 08 54 43.1 +5.7**
ANN pmax pmax
comp=Z,37nm,1.5s
RAYN Ar Rayn 141.26 288 IAMs_20 IAMs_20 10 00 06.9
comp=Z,589nm,20.0s
LSZ Lusaka 142.03 218 IAMs_20 IAMs_20 09 57 26.4
comp=Z,614nm,18.0s
KIBK Kibwezi 143.07 244 IAMs_20 IAMs_20 09 55 13.0
comp=Z,727nm,19.0s
TSUM Tsumeb 143.56 200 IAMs_20 IAMs_20 09 57 30.4
comp=Z,836nm,22.0s
CLL Collm 143.60 352 *i* PKIKP **PKPdf 08 54 40.7 -0.6**
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 143.60 352 *i* PKPdf **PKPdf 08 54 40.7 -0.6**
comp=Z,4.0nm,1.0s
CLL *e*PKPIp 08 54 56.0
CLL *e*PP **PP 08 57 50.0 -2.5**
CLL *e*SS SS 09 16 36.0 +2.6
CLL *e*SSS SSS 09 22 00.0
CLL LmV 09 55 00.0
comp=Z,900nm,22.0s
OSTC Ostas 143.78 348 AMS AMS 09 56 10.0
comp=Z,1μm,22.2s
CHVC Chvalec 143.79 348 AMS AMS 09 56 50.0
comp=Z,1μm,26.0s
BURAR Bucovina Array 143.83 337 ⇓P **PKiKP 08 54 49.5 +4.1**
BURAR Bucovina Array 143.83 337 ⇓PKIKP **PKiKP 08 54 49.5 +4.1**
UPC Upice 143.87 348 AMS AMS 09 56 20.0
comp=Z,1μm,23.7s
BRG Berggiesshubel 143.88 351 *e*PKP **PKiKP 08 54 50.4 +5.2**
BRG Amp 08 54 52.3
comp=Z,3.9nm,0.9s
BRG Berggiesshubel 143.88 351 *e*PKIKP **PKiKP 08 54 50.4 +5.2**
BRG pmax pmax
comp=Z,4.0nm,0.9s
DPC Dobruska-Polom 143.96 348 *e*PKIKP **PKPdf 08 54 41.3 -0.7**
DPC MLR MLR
comp=Z,2μm,24.0s
DPC Dobruska-Polom 143.96 348 *e*PKP **PKPdf 08 54 41.3 -0.7**
DPC AMS AMS 09 56 30.0
comp=Z,2μm,24.0s
UZH Uzhgorod 143.98 341 *e*PKIKP **PKiKP 08 54 45.0 -0.5**
BIZ Bicaz 144.03 335 ⇑P **PKiKP 08 54 48.2 +2.5**
OKC Ostrava-Krasne 144.04 346 AMS AMS 09 54 40.0
comp=Z,1μm,20.0s
PVCC Panska Ves 144.12 350 AMS AMS 09 57 40.0
comp=Z,1μm,21.0s
KRLC Kraliky 144.12 347 *e*PKIKP **PKiKP 08 54 50.4 +4.5**
KRLC MLR MLR
comp=Z,1μm,22.2s
KRLC Kraliky 144.12 347 *e*PKP **PKiKP 08 54 50.4 +4.5**
KRLC AMS AMS 09 56 10.0
comp=Z,1μm,22.2s
MORC Moravsky Berou 144.24 346 *e*PKP **PKPdf 08 54 43.8 +1.3**
KMBO Kilima Mbogo 144.35 245 PKP **PKPdf 08 54 44.1 +0.1**
comp=Z,0.1nm,0.4s,baz=111,slow=23,SNR=5.1
KMBO Kilima Mbogo 144.35 245 IAMs_20 IAMs_20 09 54 39.2
comp=Z,591nm,20.0s
BNN Bunyan 144.36 317 **PKPdf 08 54 43.0 -0.2**
PRU Pruhonice 144.64 350 AMS AMS 09 58 30.0
comp=Z,1μm,20.7s
TPGR Topolov 144.66 331 ⇓P **PKiKP 08 54 45.6 -1.5**
GOPC GO Pecny, Ondr 144.67 349 AMS AMS 09 58 40.0
comp=Z,1μm,21.4s
NKC Novy Kostel 144.73 352 AMS AMS 09 57 10.0
comp=Z,900nm,21.0s
MEM Membach 144.84 359 *d*PKP **PKiKP 08 54 46.1 -1.1**
VRAC Vranov 144.89 347 ⇑P **PKPdf 08 54 43.4 -0.2**
VRAC Vranov 144.89 347 PKP **PKPdf 08 54 45.1 +1.5**
comp=Z,3.0nm,0.5s,baz=120,slow=3.7,SNR=5.2
VRAC Vranov 144.89 347 *e*PKP **PKPdf 08 54 44.8 +1.2**
TIRR Tirgusor 144.96 331 ⇓P **PKiKP 08 54 46.0 -1.7**
TIRR Tirgusor 144.96 331 ⇓PKIKP **PKiKP 08 54 46.0 -1.7**
BCLA Clavier 145.03 360 *d*PKPdf **PKPab 08 54 43.3 +0.2**
BCLA *dp*PKiKP **pPKiKP 08 54 50.0 -1.3**
BGES Gesves 145.07 0 *d*PKP **PKiKP 08 54 47.3 -0.4**
JAVC Velka Javorina 145.07 346 *e*PKP **PKiKP 08 54 46.2 -1.6**
BHOU Houvegnez 145.09 359 *d*PKP **PKiKP 08 54 46.6 -1.2**
BHOU *dp*PKP **sPKPdf 08 54 50.4 +1.5**
VYHS Vyhne 145.11 344 *e*PKIKP **PKiKP 08 54 48.7 +0.8**
VYHS *e* 08 54 54.1
DOPR Dopca 145.11 335 ⇓P **PKiKP 08 54 50.1 +2.1**
TREC Trest 145.13 348 AMS AMS 09 58 30.0
comp=Z,1μm,22.0s
BMRD Maredsous 145.15 1 *d*PKP **PKiKP 08 54 46.6 -1.3**
BMRD *dp*PKP **sPKPdf 08 54 50.6 +1.7**
KRUC Moravsky 145.17 347 *e*PKP **PKPdf 08 54 45.2 +1.1**
MLR Muntele Rosu 145.27 334 ⇑P **PKiKP 08 54 47.0 -1.4**
MLR Muntele Rosu 145.27 334 PKPbc **PKiKP 08 54 46.6 -1.9**
comp=Z,2.4nm,0.7s,baz=71,slow=2.7,SNR=5.6
MLR Muntele Rosu 145.27 334 ⇑PKIKP **PKiKP 08 54 47.0 -1.4**
BRTR Keskin Array B 145.28 320 PKP **PKPdf 08 54 46.1 +1.3**
comp=Z,15nm,0.9s,baz=101,slow=2.5,SNR=58
ISR Istrita 145.31 333 ⇑P **PKiKP 08 54 47.1 -1.3**
ISR Istrita 145.31 333 ⇑PKIKP **PKiKP 08 54 47.1 -1.3**
DOU Dourbes 145.35 1 *dp*PKiKP **PKiKP 08 54 50.8 +2.5**
GRA1 Grafenberg Arr 145.41 353 IAMs_20 IAMs_20 10 05 20.5
comp=Z,711nm,19.0s
GRFO Grafenberg 145.41 353 IAMs_20 IAMs_20 10 05 20.5
comp=Z,732nm,20.0s
MODS Modra-Piesok 145.61 346 *e*PKIKP **PKiKP 08 54 48.9 0.0**
MODS *e* 08 54 56.8
KHC Kasperske Hory 145.63 350 *e*PKP2 **PKiKP 08 54 47.9 -1.1**
KHC MLR MLR
comp=Z,1μm,24.3s
KHC Kasperske Hory 145.63 350 *e*PKP **PKiKP 08 54 47.9 -1.1**
KHC AMS AMS 09 55 10.0
comp=Z,1μm,24.3s
VOIR 145.68 335 ⇑P **PKiKP 08 54 48.4 -0.8**
VOIR 145.68 335 ⇑PKIKP **PKiKP 08 54 48.4 -0.8**
ANTO Ankara 145.72 321 IAMs_20 IAMs_20 10 10 53.3
comp=Z,418nm,20.0s
WLF Walferdange 145.78 359 *dp*PKP **PKiKP 08 54 52.5 +3.3**
CKRC Cesky Krumlov 145.81 349 *e*PKP **PKiKP 08 54 48.3 -1.0**
GERES GERESS Array B 145.89 350 PKPbc **PKPab 08 54 47.9 +1.4**
comp=Z,3.2nm,0.9s,baz=59,slow=3.8,SNR=9.0
ARR Arges 145.91 335 ⇑P **PKiKP 08 54 49.8 +0.1**
SIRR Siria 146.25 339 ⇑P **PKiKP 08 54 49.8 -0.5**
CONA Conrad Observa 146.35 347 *e*P **PKiKP 08 54 50.9 +0.3**
comp=Z,47nm,1.5s
RONA Rosalia, Austr 146.47 346 *e*P **PKiKP 08 54 51.5 +0.7**
comp=Z,15nm,1.0s
STU Stuttgart 146.52 355 IAMs_20 IAMs_20 09 59 13.8
comp=Z,504nm,20.0s
FURI Furi 146.70 263 IAMs_20 IAMs_20 09 55 12.8
comp=Z,760nm,21.0s
MOA Molln 146.75 349 *e*P **PKiKP 08 54 51.8 +0.5**
comp=Z,13nm,0.9s
BIOA Bad Ischl, Aus 147.02 350 *e*P **PKiKP 08 54 54.0 +2.1**
comp=Z,31nm,1.3s
BFO Black Forest 147.02 356 **PKPdf 08 54 43.8 -3.5**

BFO IAMs_20 IAMs_20 09 57 39.1
comp=Z,570nm,22.0s
BFO Black Forest 147.02 356 PKHKP PKPpre 08 54 43.8
BFO MLR MLR
comp=Z,600nm,22.0s
ARSA Arzberg 147.07 347 *e*P **PKiKP 08 54 51.5 -0.4**
comp=Z,20nm,1.4s
HERR Herculane 147.18 337 ⇑P **PKiKP 08 54 52.5 +0.3**
MORH Mrgy, Hungar 147.25 343 ⇑P **PKPab 08 54 51.5 -0.1**
RETA Reutte 147.64 353 *e*P **PKPab 08 54 54.5 +1.2**
comp=Z,24nm,1.0s
KBA Koelnbreinsper 147.66 350 *e*P **PKPab 08 54 55.0 +1.5**
comp=Z,13nm,1.0s
WATA Walderalm 147.68 352 *e*P **PKPab 08 54 53.7 +0.2**
comp=Z,26nm,2.2s
SOKA Soboth 147.72 347 *e*P **PKiKP 08 54 53.2 -0.2**
comp=Z,20nm,1.2s
MOTA Moosalm 147.74 353 *e*P **PKPab 08 54 53.8 0.0**
comp=Z,34nm,1.3s
WTTA Wattenberg 147.75 352 *e*P **PKPab 08 54 54.5 +0.6**
comp=Z,38nm,1.7s
FRGS Fruska Gora 147.84 340 ⇑P **PKPab 08 54 55.3 +1.2**
SQTA Sankt Quirin 147.85 352 *e*P **PKPab 08 54 54.4 +0.2**
comp=Z,6.9nm,0.8s
DAVA Damuels 147.93 354 *e*P **PKPab 08 54 54.5 -0.1**
comp=Z,20nm,1.0s
OBKA Obir 147.98 348 *e*P **PKPab 08 54 55.1 +0.4**
comp=Z,9.9nm,1.5s
MYKA Terra Mystica 148.04 349 *e*P **PKPab 08 54 55.1 +0.2**
comp=Z,11nm,1.0s
LODK Lodwar 148.04 251 IAMs_20 IAMs_20 09 54 12.7
comp=Z,644nm,21.0s
GHAJ Ghor Haditha 148.08 305 IAMs_20 IAMs_20 10 03 23.2
comp=Z,579nm,21.0s
FETA Feichten 148.10 353 *e*P **PKiKP 08 54 54.4 +0.1**
comp=Z,18nm,1.2s
CSS Mathiatis 148.11 313 IAMs_20 IAMs_20 10 10 21.4
comp=Z,484nm,20.0s
ABTA Abfaltersbach 148.12 350 *e*P **PKPab 08 54 55.0 -0.2**
comp=Z,14nm,0.9s
ISP Isparta 148.37 320 IAMs_20 IAMs_20 10 01 10.5
comp=Z,710nm,22.0s
DAVOX Davos/Dischmat 148.43 354 PKPbc **PKiKP 08 54 55.8 +0.8**
comp=Z,9.5nm,0.9s,baz=18,slow=6.4,SNR=7.5
FUORN Ofenpass-Fuorn 148.55 353 IAMs_20 IAMs_20 10 01 29.5
comp=Z,791nm,22.0s
VTS Vitosha 148.74 334 ⇓P **PKPab 08 54 58.9 +1.0**
VTS Vitosha 148.74 334 ⇓PKP2 **PKPab 08 54 58.9 +1.0**
KARP Karpathos 151.90 320 IAMs_20 IAMs_20 10 06 07.0
comp=Z,653nm,21.0s
MTE Manteigas 152.68 22 IAMs_20 IAMs_20 10 16 15.3
comp=Z,643nm,20.0s
ESDC Sonseca Array 154.48 17 PKPbc **PKiKP 08 55 08.0 +0.5**
comp=Z,0.8nm,1.0s,baz=349,slow=5.5,SNR=2.9
ESDC PKPab **pPKPab 08 55 23.2 -2.1**
comp=Z,1.9nm,1.1s,baz=340,slow=3.6,SNR=4.3
CART Cartagena 157.18 13 IAMs_20 IAMs_20 10 08 34.7
comp=Z,590nm,21.0s
TORD Torodi Ar. Bea 175.93 122 PKP **PKPdf 08 55 19.2 +1.5**
comp=Z,0.9nm,1.0s,baz=318,slow=1.9,SNR=2.7
TORD PKPab **sPKPab 08 57 02.2 +0.7**
comp=Z,0.7nm,0.8s,baz=286,slow=2.6,SNR=2.6

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*KOLA **10** 08:39:45.8, 67°.35N×20°.00E, h0km, ML2.3*
*IDC **10** 08:39:47.0±0.9, 67°.13N×21°.07E, h0km, mbtmp3.0/4, ML2.4/4, Error ellipse: s-maj=15.6km s-min=7.6km az=116.0*
*HEL **10** 08:39:46.5±0.0, 67°.19N×20°.65E, h1km, ML2.0, ML2.7(UPP), Confirmed Induced event*
*DNK **10** 08:39:46.2±0.5, 67°.19N×20°.67E, h0km, ML2.7(UPP), Suspected explosion*
*BER **10** 08:39:47.7±1.3, 67°.12N×20°.94E, h0km, ML2.0, Suspected explosion*

ISC 10 08:39:45.4±0.7, 67°.19N±0°.02×20°.68E±0°.02, h0km, n46, σ0°88/69, Sweden

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**211**	P	**Pg**	**08 39 47.8**	**+0.8**
DUNU				S	**Sg**	**08 39 49.0**	**+1.0**
DUNU	**Dundret**	**0.08**	**211**	*i* P	**Pg**	**08 39 47.8**	**+0.8**
DUNU				*i* S	**Sg**	**08 39 49.0**	**+1.0**
MASU	**Masugnsbyn**	**0.58**	**62**	P	**Pg**	**08 39 57.2**	**+0.8**
MASU	**Masugnsbyn**	**0.58**	**62**	*i* P	**Pg**	**08 39 57.2**	**+0.8**
RATU	**Laukkuluspa**	**0.76**	**327**	P	**Pg**	**08 40 00.1**	**+0.2**
RATU				S	**Sg**	**08 40 09.7**	**0.0**
RATU	**Laukkuluspa**	**0.76**	**327**	*i* P	**Pg**	**08 40 00.1**	**+0.2**
RATU				*i* S	**Sg**	**08 40 09.7**	**0.0**
SALU	**Saltoluokta**	**0.86**	**284**	P	**Pg**	**08 40 02.0**	**+0.1**
SALU				S	**Sg**	**08 40 13.7**	**+0.6**
SALU	**Saltoluokta**	**0.86**	**284**	*i* P	**Pg**	**08 40 02.0**	**+0.1**
SALU				*i* S	**Sg**	**08 40 13.7**	**+0.6**
ERTU	**Ertsjaerv**	**0.88**	**136**	P	**Pg**	**08 40 02.1**	**-0.1**
ERTU	**Ertsjaerv**	**0.88**	**136**	*e*P	**Pg**	**08 40 02.0**	**-0.1**
ERTU				*e*S	**Sg**	**08 40 13.8**	**+0.3**
NIKU	**Nikkaluokta**	**0.93**	**318**	P	**Pg**	**08 40 03.1**	**0.0**
NIKU	**Nikkaluokta**	**0.93**	**318**	*e*P	**Pg**	**08 40 03.1**	**0.0**
PAJU	**Pajala**	**0.97**	**99**	P	**Pg**	**08 40 03.9**	**0.0**
PAJU	**Pajala**	**0.97**	**99**	*e*P	**Pg**	**08 40 03.9**	**0.0**
PAJU				*e*S	**Sg**	**08 40 16.7**	**+0.3**
LANU	**Lannavaara**	**1.00**	**30**	P	**Pg**	**08 40 04.4**	**-0.1**
LANU	**Lannavaara**	**1.00**	**30**	*e*P	**Pg**	**08 40 04.4**	**-0.1**
LANU				*e*S	**Sg**	**08 40 17.2**	**-0.1**
HARU	**Harads**	**1.04**	**173**	P	**Pg**	**08 40 04.8**	**-0.4**
HARU	**Harads**	**1.04**	**173**	*e*P	**Pg**	**08 40 04.8**	**-0.4**
KOVU	**Salmi**	**1.05**	**349**	P	**Pg**	**08 40 05.2**	**-0.3**
KOVU	**Salmi**	**1.05**	**349**	*e*P	**Pg**	**08 40 05.2**	**-0.3**
KLF	**Kolari**	**1.28**	**87**	*e*P	**Pg**	**08 40 09.6**	**-0.3**
KLF				*e*S	**Sg**	**08 40 25.5**	**-0.9**
HEF	**Hetta**	**1.67**	**41**	*e*P	**Pn**	**08 40 15.3**	**-0.5**
HEF	**Hetta**	**1.67**	**41**	*e*P	**Pn**	**08 40 15.8**	**0.0**
HEF				*e*S	**Sn**	**08 40 36.9**	**-0.9**
HEF				MSG		08 40 41.6	
	comp=Z,11nm,0.2s						
KALU	**Kalix**	**1.72**	**140**	P	**Pn**	**08 40 16.9**	**+0.4**
KALU	**Kalix**	**1.72**	**140**	*e*P	**Pn**	**08 40 16.9**	**+0.4**
KALU				*e*S	**Sn**	**08 40 39.1**	**+0.1**
SJUU	**Sjulsmark**	**1.73**	**167**	P	**Pn**	**08 40 17.1**	**+0.4**
SJUU	**Sjulsmark**	**1.73**	**167**	*e*P	**Pn**	**08 40 17.1**	**+0.4**
KIF	**Kilpisjarvi**	**1.82**	**1**	*e*P	**Pb**	**08 40 19.0**	**-0.5**
KIF	**Kilpisjarvi**	**1.82**	**1**	*e*P	**Pb**	**08 40 19.2**	**-0.3**
KIF				*e*S	**Sg**	**08 40 43.7**	**-0.2**
TOF	**Tornio**	**1.83**	**126**	*e*P	**Pb**	**08 40 19.1**	**-0.6**
TOF				*e*S	**Sb**	**08 40 42.7**	**-0.4**
TOF				MSG		08 40 47.5	
	comp=Z,12nm,0.2s						
KTK1	**Kautokeino**	**2.06**	**27**	*e*P	**Pb**	**08 40 23.0**	**-0.7**
KTK1				IAML		08 40 52.4	
	comp=Z,29nm,0.4s						
KTK1	**Kautokeino**	**2.06**	**27**	*e*P	**Pb**	**08 40 23.1**	**-0.7**
KTK1				*e*S	**Sn**	**08 40 48.2**	**+0.6**
FAUS	**Fauske**	**2.10**	**278**	*e*P	**Pb**	**08 40 23.2**	**-1.0**
FAUS				IAML		08 40 54.0	
	comp=Z,17nm,0.5s						
RNF	**Rovaniemi**	**2.19**	**103**	*e*P	**Pn**	**08 40 24.3**	**+1.4**
RNF				*e*S	**Sb**	**08 40 52.1**	**-1.2**
STEI	**Steigen**	**2.21**	**292**	*e*P	**Pb**	**08 40 25.8**	**-0.4**
STEI				IAML		08 40 57.9	
	comp=Z,9.2nm,0.4s						
JETT	**Jettan, Norway**	**2.38**	**358**	*e*P	**Pn**	**08 40 27.2**	**+1.6**
JETT				IAML		08 41 06.8	
	comp=Z,15nm,0.2s						
MOR8	**Moi Rana**	**2.69**	**250**	*e*P	**Pn**	**08 40 29.2**	**-0.6**
MOR8				IAML		08 41 08.0	
	comp=Z,15nm,0.3s						
ARCES	**ARCESS Array B**	**2.96**	**35**	Pn	**Pn**	**08 40 34.5**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=213,slow=13,SNR=85						
ARCES				Sn	**Sn**	**08 41 11.5**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=216,slow=23,SNR=8.4						
	comp=Z,2.0nm,0.3s						
ARCES	**ARCESS Array B**	**2.96**	**35**	P	**Pn**	**08 40 34.5**	**+1.0**
ARCES				S	**Sn**	**08 41 10.4**	**+0.7**
KEV	**Kevo**	**3.47**	**39**	*e*P	**Pn**	**08 40 41.1**	**+0.5**
APA0	**Apatity Array**	**4.77**	**79**	S	**Sn**	**08 41 53.5**	**-0.8**
PRVG	**Vayda Guba**	**4.95**	**54**	P	**Pn**	**08 41 03.2**	**+2.3**
PRVG				S	**Sn**	**08 41 59.9**	**+1.2**
LVZ	**Lovozero**	**5.40**	**76**	P	**Pn**	**08 41 08.5**	**+1.4**
LVZ				S	**Sn**	**08 42 12.4**	**+2.5**
FINES	**FINESS Array B**	**6.23**	**155**	Pn	**Pn**	**08 41 19.7**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=347,slow=12,SNR=13						
FINES				Sn	**Sn**	**08 42 29.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=2.0						
FINES				Lg	Lg	08 42 55.4	
	comp=Z,0.2nm,0.3s,baz=346,slow=29,SNR=2.0						
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**7.43**	**218**	Pn	**Pn**	**08 41 35.5**	**+0.6**
	baz=30,slow=11,SNR=3.9						
NOA				Sn	**Sn**	**08 43 00.0**	**+0.2**
	baz=163,slow=15,SNR=1.4						
NOA				Lg	Lg	08 43 38.7	
	baz=71,slow=8.2,SNR=3.7						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**7.73**	**207**	Pn	**Pn**	**08 41 38.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=21,slow=14,SNR=7.5						
HFS				Sn	**Sn**	**08 43 04.4**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=23,slow=20,SNR=4.6						
	comp=Z,0.8nm,0.3s						

ISK 10 08:53:01.1, 40°.49N×29°.30E, h0km, ML1.7/7, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
YLV	**Yalova**	**0.09**	**37**	PG	Pg	08 53 04.4	+1.5
YLV				SG	Sg	08 53 06.6	+2.4
ADVT	**Abdulvahap**	**0.34**	**100**	PG	Pg	08 53 08.5	+0.9
ADVT				SG	Sg	08 53 13.7	+1.7
ARMT	**Armutlu**	**0.34**	**283**	PG	Pg	08 53 08.5	+0.9
ARMT				SG	Sg	08 53 13.6	+1.6
HRT	**Hereke**	**0.43**	**40**	PG	Pg	08 53 09.9	+0.5
CAVI	**Cavuskoy**	**0.51**	**125**	PG	Pg	08 53 11.3	+0.5
KLYT	**Kilyos**	**0.79**	**346**	PG	Pg	08 53 16.7	+0.5
GULT	**Gulveren**	**0.93**	**93**	PG	Pb	08 53 19.6	-0.6
TVSB	**Tavsanli**	**1.05**	**173**	PG	Pb	08 53 21.9	-0.3
BORA	**Eskisehir**	**1.08**	**124**	PG	Pb	08 53 22.2	-0.4

IDC 10 08:57:12.6±2.0, 53°.91N×86°.45E, h0km, mbtmp3.0/4, ML2.9/4, Error ellipse: s-maj=16.3km s-min=11.5km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**273**	I		09 04 40.0	
	baz=88,slow=333,SNR=1.9						
ZALV	**Zalesovo Beam**	**0.96**	**273**	Pg	Pg	08 57 29.8	-1.3
	1.0nm,0.3s,baz=93,slow=18,SNR=8.8						
ZALV				Lg	Lg	08 57 45.2	
	2.2nm,0.3s,baz=93,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**5.87**	**239**	Pn	Pn	08 58 41.9	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=5.2						
KURBB				Lg	Lg	09 00 17.4	
	baz=45,slow=32,SNR=1.9						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**7.61**	**202**	Pn	Pn	08 59 05.2	+0.5
	0.1nm,0.3s,baz=21,slow=14,SNR=4.4						
MKAR				Lg	Lg	09 01 12.2	
	0.1nm,0.3s,baz=19,slow=27,SNR=2.3						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**9.62**	**271**	Pn	Pn	08 59 31.6	-0.6
	0.1nm,0.3s,baz=76,slow=18,SNR=2.5						
	0.3nm,0.4s						
SONM	**Songino Array**	**13.96**	**108**	Pn	Pn	09 00 33.7	+2.1
	0.2nm,0.3s,baz=302,slow=14,SNR=2.4						
	0.3nm,0.4s						

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*IDC **10** 09:14:37.2±2.5, 47°.29N×120°.88W, h0km, mb2.4/1, mbtmp3.1/6, ML3.2/5, Error ellipse: s-maj=34.2km s-min=8.2km az=135.0*
*NEIC **10** 09:14:41.9±1.8, 46°.94N±0°.01×120°.42W±0°.02, h7km±6km, Error ellipse: s-maj=1.8km s-min=1.5km az=45.0*
*SEA **10** 09:14:42.2±1.7, 46°.92N±0°.01×120°.44W±0°.02, h8km±6km, ML3.1/12, ML3.3/54(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=59.0*

ISC 10 09:14:42.1±0.9, 46°.95N±0°.02×120°.43W±0°.02, h11km±8km, n97, σ1°07/106, Washington

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EBG	**Ellensburg**	**0.10**	**248**		**Pg**	**09 14 45.1**	**+0.1**
TBM	**Table Mountain**	**0.25**	**332**		**Pb**	**09 14 48.4**	**-0.3**
NAC	**Naches**	**0.35**	**232**		**Pg**	**09 14 49.1**	**0.0**
LTY	**Liberty**	**0.35**	**332**		**Pg**	**09 14 49.4**	**+0.2**
LTY	**Liberty**	**0.35**	**332**		**Sb**	**09 14 55.1**	**-0.9**
TWW	**Teanaway**	**0.36**	**302**		**Pb**	**09 14 50.2**	**-0.3**
MXC	**Moxie City**	**0.38**	**166**		**Pg**	**09 14 49.0**	**-0.7**
BVW	**Beverly**	**0.40**	**110**		**Pg**	**09 14 49.9**	**-0.1**
YA2	**Yakima**	**0.43**	**190**		**Pg**	**09 14 50.2**	**-0.4**
YA2					**Sb**	**09 14 57.2**	**-0.9**
BRVW	**Black Rock Val**	**0.55**	**147**		**Pg**	**09 14 52.3**	**-0.6**
MDW	**Midway**	**0.57**	**126**		**Pg**	**09 14 52.6**	**-0.5**
WAH2	**Wahluke Slope**	**0.62**	**108**		**Pg**	**09 14 53.9**	**-0.3**
FHE	**Frenchman Hill**	**0.64**	**89**		**Pg**	**09 14 54.5**	**0.0**
FHE					**Sg**	**09 15 03.6**	**+0.7**
GBB	**Gable Butte**	**0.65**	**121**		**Pg**	**09 14 54.2**	**-0.5**
GBB					**Sg**	**09 15 03.1**	**-0.1**
BENWA	**Benson Ranch**	**0.65**	**131**		**Pg**	**09 14 54.0**	**-0.7**
ETW	**Entiat**	**0.66**	**6**		**Pg**	**09 14 54.9**	**-0.1**
TRW	**Toppenish Ridg**	**0.66**	**187**		**Pg**	**09 14 54.4**	**-0.6**
SNIWA	**Snively Ranch**	**0.72**	**132**		**Pg**	**09 14 55.2**	**-0.7**
LOCW	**Locke Island**	**0.72**	**108**		**Pg**	**09 14 55.7**	**-0.3**
CRF	**Corfu**	**0.72**	**99**		**Pg**	**09 14 55.8**	**-0.3**
GBL	**Gable Mountain**	**0.75**	**117**		**Pg**	**09 14 56.1**	**-0.5**
GBL	**Gable Mountain**	**0.75**	**117**		**Pg**	**09 14 56.5**	**-0.2**
GBL					**Sg**	**09 15 06.5**	**+0.1**
SR41	**SR410 Landslid**	**0.76**	**266**		**Pg**	**09 14 56.2**	**-0.7**
SR41					**Sg**	**09 15 06.7**	**-0.2**
RSW	**Rattlesnake Hi**	**0.80**	**134**		**Pg**	**09 14 56.7**	**-0.9**
WPW	**White Pass**	**0.81**	**252**		**Pg**	**09 14 56.7**	**-1.0**
SLFW	**Sugar Loaf**	**0.81**	**355**		**Pg**	**09 14 57.5**	**-0.4**
WTV	**Waterville**	**0.82**	**23**		**Pg**	**09 14 58.0**	**0.0**
HAWA	**Hanford**	**0.83**	**132**	Pg	**Pg**	**09 14 57.2**	**-0.9**
MJ2	**May Junction 2**	**0.83**	**118**		**Pg**	**09 14 57.4**	**-0.7**
PANH	**Panhandle Gap,**	**0.84**	**264**		**Pg**	**09 14 57.5**	**-0.8**
PANH					**Sg**	**09 15 09.1**	**-0.2**
FMW	**Mount Fremont**	**0.85**	**269**		**Pg**	**09 14 57.8**	**-0.8**
OT3	**Othello 3**	**0.87**	**108**		**Pg**	**09 14 58.4**	**-0.4**
H2OWA	**Water**	**0.89**	**128**		**Pg**	**09 14 58.2**	**-1.0**
H2OWA					**Sg**	**09 15 10.6**	**-0.1**
CBSW	**Chelan Butte S**	**0.90**	**17**		**Pg**	**09 14 59.2**	**-0.2**
RCS	**Mount Rainier-**	**0.90**	**266**		**Pg**	**09 14 58.6**	**-0.8**
GLK	**Glacier Lake**	**0.90**	**245**		**Pg**	**09 14 58.7**	**-0.8**
RCM	**Mount Rainier-**	**0.90**	**263**		**Pg**	**09 14 58.7**	**-0.8**
RCM					**Sg**	**09 15 11.0**	**-0.4**
WIW	**Wooded Island**	**0.94**	**123**		**Pg**	**09 14 59.2**	**-1.0**
WIW	**Wooded Island**	**0.94**	**123**		**Pg**	**09 14 59.4**	**-0.9**
WIW					**Sg**	**09 15 12.0**	**-0.4**
OBSR	**Observation Ro**	**0.95**	**268**		**Pg**	**09 14 59.6**	**-0.9**
WRW	**Wenatchee Ridg**	**0.96**	**341**		**Pg**	**09 14 59.9**	**-0.7**
GSM	**Grass Mountain**	**0.97**	**286**		**Pg**	**09 15 00.5**	**-0.3**
LON	**Longmire**	**0.97**	**259**		**Pg**	**09 14 59.7**	**-1.0**
REMR	**Mount Rainier-**	**0.98**	**263**		**Pg**	**09 15 00.1**	**-0.9**
SAW	**Saint Andrews**	**1.03**	**42**		**Pg**	**09 15 01.5**	**-0.4**
D08A	**Wollman Farm,**	**1.04**	**83**		**Pg**	**09 15 01.1**	**-0.9**
D08A				IAML		09 15 16.0	
	comp=N,470nm,0.3s						
E08A	**Dider Farm, El**	**1.05**	**115**		**Pg**	**09 15 01.0**	**-1.2**
E08A				IAML		09 15 15.0	
	comp=N,959nm,0.2s						
RATT	**Rattlesnake La**	**1.05**	**297**		**Pg**	**09 15 01.6**	**-0.7**
D05A	**Enumclaw**	**1.09**	**283**		**Pg**	**09 15 02.5**	**-0.7**
D05A				IAML		09 15 21.5	
	comp=N,885nm,0.5s						
D05A				IAML		09 15 21.9	
	comp=E,722nm,0.3s						
F07A	**Phinny Hill Vi**	**1.11**	**162**		**Pg**	**09 15 02.0**	**-1.4**
F07A				IAML		09 15 24.9	
	comp=E,798nm,0.4s						
NLW	**Nelson Butte**	**1.13**	**3**		**Pg**	**09 15 03.3**	**-0.6**
C05A	**Tolt Reservoir**	**1.14**	**311**		**Pg**	**09 15 03.1**	**-0.9**
OD2	**Odessa Site #2**	**1.25**	**69**		**Pg**	**09 15 04.5**	**-1.1**
SEPW	**September Lobe**	**1.43**	**239**		**Pn**	**09 15 08.0**	**-0.2**
B08A	**Colville Reser**	**1.59**	**27**		**Pn**	**09 15 09.4**	**-0.8**
B08A				IAML		09 15 34.3	
	comp=N,462nm,0.3s						
B08A				IAML		09 15 34.8	
	comp=E,429nm,0.4s						
E09A	**Wood Farm, Sta**	**1.63**	**105**		**Pn**	**09 15 09.6**	**-1.0**
E09A				IAML		09 15 33.6	
	comp=E,281nm,0.1s						
E09A				IAML		09 15 34.8	
	comp=N,307nm,0.1s						
SHRK	**Shell Rock**	**1.67**	**208**		**Pn**	**09 15 11.0**	**-0.3**
C09A	**Chrisman Ranch**	**1.69**	**59**		**Pn**	**09 15 11.1**	**-0.5**
B06A	**Marblemount**	**1.73**	**336**		**Pn**	**09 15 13.1**	**+1.2**
B06A				IAML		09 15 47.7	
	comp=N,376nm,0.4s						
LNOR	**Lincton Mounta**	**1.83**	**125**		**Pn**	**09 15 14.2**	**+0.6**
HOOD	**Mount Hood Mea**	**1.84**	**208**		**Pn**	**09 15 13.4**	**-0.3**
HOOD				IAML		09 15 39.4	
	comp=N,386nm,0.3s						
HOOD				IAML		09 15 49.0	
	comp=E,253nm,0.9s						
B013	**Quilcene**	**1.90**	**298**		**Pn**	**09 15 15.6**	**+1.3**
TDH	**Tom, Dick, Har**	**1.91**	**210**		**Pn**	**09 15 14.9**	**+0.2**
G08A	**Pilot Rock**	**1.95**	**148**		**Pn**	**09 15 14.8**	**-0.3**
VBEM	**Beaver Butte**	**2.05**	**204**		**Pn**	**09 15 17.6**	**+1.0**
SHUK	**Shuksan-Mt. Ba**	**2.08**	**337**		**Pb**	**09 15 19.2**	**-0.8**
E03A	**Lebam**	**2.19**	**261**	Pn	**Pn**	**09 15 20.1**	**+1.7**
E03A				IAML		09 15 59.7	
	comp=E,150nm,0.7s						
B04A	**Port Angeles**	**2.36**	**299**		**Pn**	**09 15 22.5**	**+1.7**
B04A				IAML		09 15 59.8	
	comp=N,118nm,0.8s						
VDB	**Vedder Mountai**	**2.37**	**332**		**Pb**	**09 15 24.8**	**+0.1**
OLQ	**Olympics--Lake**	**2.37**	**285**		**Pb**	**09 15 23.5**	**-1.3**
NLWA	**Neilton Lookou**	**2.39**	**282**		**Pn**	**09 15 22.2**	**+1.1**
F10A	**Beach Ranch, E**	**2.42**	**113**		**Pn**	**09 15 21.5**	**-0.1**
PNT	**Penticton**	**2.43**	**13**		**Pg**	**09 15 27.8**	**-0.9**
H04A	**Detroit Lake**	**2.58**	**209**	Pn	**Pn**	**09 15 23.6**	**-0.2**
H04A				IAML		09 16 00.8	
	comp=N,135nm,0.7s						
H04A				IAML		09 16 00.9	
	comp=E,135nm,0.3s						
NEW	**Newport**	**2.59**	**58**	Pn	**Pn**	**09 15 23.2**	**-0.8**
	comp=E,3.1nm,0.3s,baz=240,slow=17,SNR=28						
NEW				Sn	**Sn**	**09 15 55.8**	**+0.3**
	comp=E,7.5nm,0.3s,baz=197,slow=20,SNR=8.3						
NEW				Lg	Lg	09 16 03.1	
	comp=E,21nm,0.3s,baz=128,slow=19,SNR=9.3						
	comp=E,6.5nm,0.3s						
NEW	**Newport**	**2.59**	**58**	Pn	**Pn**	**09 15 23.2**	**-0.8**
NEW				IAML		09 16 07.7	
	comp=E,110nm,0.5s						
NEW				IAML		09 16 10.0	
	comp=E,130nm,0.5s						
PGC	**Sidney**	**2.66**	**311**		**Pb**	**09 15 27.6**	**-2.0**
PGC				IAML		09 16 02.7	
	comp=N,101nm,0.7s						
PGC				IAML		09 16 04.2	
	comp=E,133nm,0.6s						
I07A	**Izee**	**2.94**	**167**	Pn	**Pn**	**09 15 28.9**	**+0.1**
I07A				IAML		09 16 20.6	
	comp=E,84nm,1.1s						
BMO	**Blue Mountains**	**3.02**	**133**		**Pn**	**09 15 29.9**	**0.0**
BMO				IAML		09 16 24.4	
	comp=E,51nm,1.1s						
PINE	**Pine Mountain**	**3.18**	**187**	Pn	**Pn**	**09 15 33.0**	**+0.9**
BUCK	**Buck Mountain**	**3.29**	**214**	Pn	**Pn**	**09 15 36.9**	**+3.3**
BUCK				IAML		09 16 45.1	
	comp=E,49nm,2.1s						
PLID	**Pearl Lake**	**3.60**	**120**		**Pn**	**09 15 38.3**	**+0.3**
J08A	**Circle Bar Ran**	**3.85**	**158**		**Pn**	**09 15 41.6**	**+0.3**
JTMT	**Jette**	**4.25**	**77**		**Pn**	**09 15 45.9**	**-1.0**
MFID	**Camas Ranch**	**4.80**	**136**	Pn	**Pn**	**09 15 52.7**	**-1.7**
MFID				IAML		09 17 13.9	
	comp=E,14nm,0.7s						
MFID				IAML		09 17 17.0	
	comp=E,26nm,1.1s						
WALA	**Waterton Lakes**	**4.86**	**62**	Pn	**Pn**	**09 15 55.9**	**+0.7**
WALA				IAML		09 17 22.3	
	comp=E,26nm,0.9s						
HLID	**Hailey**	**5.43**	**126**	Pn	**Pn**	**09 16 02.7**	**-0.3**
YBH	**Yreka Blue Hor**	**5.47**	**198**	Pn	**Pn**	**09 16 06.3**	**+2.8**
	comp=E,0.2nm,0.3s,baz=12,slow=16,SNR=14						
YBH				Lg	Lg	09 17 27.9	
	comp=E,0.2nm,0.3s,baz=114,slow=17,SNR=1.7						
	comp=E,4.3nm,0.8s						
YBH	**Yreka Blue Hor**	**5.47**	**198**	Pn	**Pn**	**09 16 06.0**	**+2.5**
BCYI	**Bear Canyon**	**5.59**	**116**		**Pn**	**09 16 05.3**	**+0.1**
LRM	**Limekiln Ridge**	**5.63**	**99**		**Pn**	**09 16 06.3**	**+0.4**
YHB	**Horse Butte**	**6.81**	**105**		**Pn**	**09 16 22.8**	**+0.7**
YHH	**Holmes Hill**	**7.03**	**104**	Pn	**Pn**	**09 16 25.2**	**+0.1**
ELK	**Elko**	**7.25**	**147**	Pn	Pn	09 16 34.0	+6.0
	comp=E,0.1nm,0.3s,baz=332,slow=15,SNR=6.7						
ELK				Lg	Lg	09 18 27.7	
	comp=E,0.2nm,0.3s,baz=17,slow=20,SNR=2.1						
	comp=E,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**8.65**	**169**	Pn	**Pn**	**09 16 51.5**	**+4.1**
	baz=348,slow=12,SNR=9.1						
	comp=E,1.2nm,0.7s						
PDAR	**Pinedale Array**	**8.78**	**115**	Pn	**Pn**	**09 16 52.9**	**+3.8**
	comp=E,0.1nm,0.3s,baz=305,slow=9.8,SNR=5.8						
	comp=E,0.6nm,0.7s						
TXAR	**Lajitas Array**	**21.90**	**138**	P	**P**	**09 19 37.3**	**+2.2**
	comp=E,0.1nm,0.6s,baz=327,slow=9.7,SNR=2.2						
	comp=E,0.1nm,0.6s						

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*IDC **10** 09:26:17.9±1.0, 29°.48S×60°.97E, h0km, mb3.8/5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.81	62		Pn	09 46 58.4	-2.4
NIUE	Niue	6.07	124	Pn	Pn	09 47 32.3	+0.4
MSVF	Nonsavu	6.73	252	LR	LR	09 50 00.9	
	comp=Z,9μm,19.0s,baz=62,slow=35						
RAO	Raoul Island	13.69	190	LR	LR	09 53 04.0	
	comp=Z,1μm,21.3s,baz=353,slow=32						
OUENC	Ouen Island, N	18.19	246	P	Pn	09 50 11.9	-2.8
DZM	Mont Dzumac	18.43	247	eLR	LR	09 54 44.4	
	comp=Z,4μm,25.4s						
DZM	Mont Dzumac	18.43	247	P	P	09 50 18.4	+0.6
	0.2nm,0.3s,baz=77,slow=16,SNR=3.5						
DZM				LR	LR	09 56 16.3	
	comp=Z,2μm,19.9s,baz=53,slow=33						
	22nm,1.2s						
PAE	Paea	24.65	98	eT	T	10 16 56.8	
	2.0nm,0.3s						
PPT	Papeete	24.66	98	LR	LR	09 57 42.0	
	comp=Z,243nm,20.6s,baz=270,slow=29						
PPT2	Papeete2	24.66	98	eLR	LR	09 57 17.4	
	comp=Z,812nm,24.8s						
PPT2	Papeete2	24.66	98	eT	T	10 16 59.7	
	4.4nm,0.4s						
TVO	Taravao	24.97	98	eT	T	10 17 17.5	
	2.3nm,0.4s						
TBI	Tubuai	25.43	111	eT	T	10 18 06.8	
	10.0nm,0.3s						
TAOE	Nuku Hiva Isla	34.93	83	eLR	LR	10 02 00.1	
	comp=Z,2μm,26.3s						
TAOE	Nuku Hiva Isla	34.93	83	eT	T	10 29 34.7	
	20nm,0.2s						
CTA	Charters Tower	36.84	257	LR	LR	10 06 41.5	
	comp=Z,543nm,19.0s,baz=80,slow=34						
PMG	Port Moresby	37.19	275	LR	LR	10 04 53.1	
	comp=Z,562nm,21.4s,baz=54,slow=30						
H11S2	WAKE ISLAND Hy	38.36	332	T	T	10 33 42.0	
	baz=149,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	38.38	332	T	T	10 34 04.5	
	baz=149,slow=76,SNR=8.7						
H11S1	WAKE ISLAND Hy	38.38	332	T	T	10 33 59.1	
	baz=149,slow=76,SNR=5.1						
H11N3	WAKE ISLAND Hy	39.35	333	T	T	10 34 59.6	
	baz=152,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	39.35	333	T	T	10 35 06.0	
	baz=152,slow=76,SNR=45						
H11N2	WAKE ISLAND Hy	39.37	333	T	T	10 35 03.0	
	baz=152,slow=76,SNR=38						
STKA	Stephens Creek	42.34	240	LR	LR	10 09 39.3	
	comp=Z,578nm,20.3s,baz=72,slow=34						
WB2	Warramunga Arr	48.03	257	P	P	09 54 44.1	+2.3
WRA	Warramunga Arr	48.04	257	P	P	09 54 40.7	-1.2
	1.3nm,0.9s,baz=85,slow=6.8,SNR=9.0						
WRA				PcP	PcP	09 56 09.2	-0.6
	0.3nm,0.9s,baz=96,slow=3.6,SNR=1.3						
WRA				LR	LR	10 12 22.0	
	comp=Z,435nm,21.4s,baz=92,slow=33						
	1.3nm,0.9s						
WRA	Warramunga Arr	48.04	257	P	P	09 54 40.2	-1.7
AS31	Alice Springs	48.32	252	P	P	09 54 43.0	-1.0
ASAR	Alice Springs	48.32	252	P	P	09 54 43.8	-0.3
	2.9nm,0.7s,baz=84,slow=8.0,SNR=30						
ASAR				PcP	PcP	09 56 10.0	-0.8
	0.7nm,1.0s,baz=93,slow=4.6,SNR=0.9						
ASAR				LR	LR	10 13 07.5	
	comp=Z,1μm,21.8s,baz=102,slow=34						
	2.9nm,0.7s						
ASAR	Alice Springs	48.32	252	P	P	09 54 41.7	-2.4
SIJI	Sorong	54.76	280	LR	LR	10 17 51.5	
	comp=Z,319nm,21.0s,baz=78,slow=35						
FITZ	Fitzroy Crossi	56.40	259	P	P	09 55 44.1	0.0
	2.8nm,1.1s,baz=137,slow=5.7,SNR=1.4						
FITZ				LR	LR	10 17 30.1	
	comp=Z,494nm,22.0s,baz=97,slow=33						
	2.8nm,1.1s						
JCJ	Chichijima	59.32	315	LR	LR	10 17 00.1	
	comp=Z,552nm,21.3s,baz=142,slow=31						
RPN	Rapa Nui	61.80	113	LR	LR	10 14 43.8	
	comp=Z,40nm,20.7s,baz=305,slow=28						
DAV	Davao City (W)	62.82	287	LR	LR	10 22 02.9	
	comp=Z,124nm,19.5s,baz=123,slow=34						
VNDA	Vanda	62.88	185	LR	LR	10 20 05.9	
	comp=Z,114nm,19.3s,baz=31,slow=33						
NWAO	Narrogin (SRO)	62.91	241	LR	LR	10 23 13.2	
	comp=Z,516nm,18.8s,baz=288,slow=36						
KAPI	Kappang	64.61	272	LR	LR	10 23 01.7	
	comp=Z,102nm,20.8s,baz=100,slow=34						
JHJ	Hachijo jima 2	64.83	319	LR	LR	10 26 29.0	
	comp=Z,140nm,18.0s,baz=146,slow=37						
SHEM	Shemya Is, Ala	68.79	353	LR	LR	10 20 20.4	
	comp=Z,334nm,21.6s,baz=144,slow=30						
JOW	Kunigami	69.25	307	LR	LR	10 21 24.7	
	comp=Z,387nm,21.6s,baz=122,slow=30						
PETK	Petropavlovsk-	72.41	343	P	P	09 57 32.1	+3.9
	5.4nm,0.9s,baz=155,slow=10,SNR=4.5						
PETK				LR	LR	10 23 12.8	
	comp=Z,294nm,21.3s,baz=151,slow=30						
	5.4nm,0.9s						
SAO	San Andreas Ge	72.77	43	P	P	09 57 29.6	-1.1
BBGB	Big Mountain B	72.92	43	P	P	09 57 31.2	-0.6
ISA	Isabella, Lake	74.13	45	P	P	09 57 38.0	-0.8
ISA				IAmb	IAmb	09 57 40.2	
	comp=Z,5.8nm,1.3s						
CMB	Columbia Colle	74.19	42	P	P	09 57 39.7	+0.6
CMB				IAmb	IAmb	09 57 41.1	
	comp=Z,5.5nm,1.2s						
QSPA	South Pole Qui	74.32	180	LR	LR	10 24 55.2	
	comp=Z,142nm,21.7s,baz=36,slow=32						
PFO	Pinyon Flats O	74.45	48	LR	LR	10 25 36.7	
	comp=Z,275nm,18.0s,baz=247,slow=32						
LPIG	La Paz	74.72	59	LR	LR	10 24 17.3	
	comp=Z,214nm,19.2s,baz=270,slow=31						
OMMB	Old Mammoth Mi	74.85	43	P	P	09 57 43.9	+0.6
OMMB				IAmb	IAmb	09 57 45.5	
	comp=Z,7.3nm,1.5s						
YBH	Yreka Blue Hor	74.94	38	LR	LR	10 22 16.8	
	comp=Z,158nm,21.7s,baz=240,slow=29						
WAKR	Walker	75.07	42	P	P	09 57 44.4	0.0
GSC	Goldstone, Bar	75.08	46	P	P	09 57 43.4	-1.1
GSC				IAmb	IAmb	09 58 24.8	
	comp=Z,6.6nm,1.3s						
KSRS	Korea Array	75.15	316	LR	LR	10 28 14.5	
	comp=Z,154nm,19.3s,baz=120,slow=33						
YERR	Yerington	75.47	42	IAmb	IAmb	09 58 17.0	
	comp=Z,4.5nm,1.2s						
LHV	Little Huntoon	75.53	43	IAmb	IAmb	09 57 52.7	
	comp=Z,7.9nm,1.3s						
KDAK	Kodiak Island	75.60	12	LR	LR	10 23 08.5	
	comp=Z,186nm,21.5s,baz=220,slow=29						
NVAR	Mina Array Bea	75.76	43	P	P	09 57 48.6	+0.1
	comp=Z,1.5nm,0.9s,baz=228,slow=9.6,SNR=13						
NVAR				LR	LR	10 24 58.4	
	comp=Z,183nm,19.5s,baz=229,slow=31						
	comp=Z,1.5nm,0.9s						
PAHR	Pah Rah Range	75.78	41	IAmb	IAmb	09 57 57.9	
	comp=Z,6.2nm,1.4s						
LEM	Lembang	75.84	267	LR	LR	10 30 39.0	
	comp=Z,158nm,22.0s,baz=111,slow=35						
NV11	Mina Array Sit	75.86	43	P	P	09 57 48.8	-0.1
NV11				IAmb	IAmb	09 57 50.2	
	comp=Z,8.6nm,1.4s						
113A	Mohawk Valley,	75.97	50	IAmb	IAmb	09 58 10.4	
	comp=Z,6.9nm,1.4s						
USRK	Ussuriysk Ar.	76.58	324	LR	LR	10 25 21.7	
	comp=Z,622nm,21.9s,baz=122,slow=30						
V12A	Nelson	76.67	47	IAmb	IAmb	09 58 20.3	
	comp=Z,7.8nm,1.4s						
W13A	Hualapai Mount	77.03	48	IAmb	IAmb	09 57 57.4	
	comp=Z,3.3nm,1.1s						
WVOR	Wild Horse Val	77.80	39	IAmb	IAmb	09 58 00.9	
	comp=Z,4.5nm,1.2s						
TUC	Tucson	77.97	51	P	P	09 58 00.9	+0.1
TUC				IAmb	IAmb	09 58 02.7	
	comp=Z,5.1nm,1.2s						
LCMT	Little Creek M	78.44	46	IAmb	IAmb	09 58 09.4	
	comp=Z,5.4nm,1.5s						
D05A	Enumclaw	78.70	34	P	P	09 58 05.0	+0.6
KNB	Kanab	78.73	46	IAmb	IAmb	09 58 34.1	
	comp=Z,9.6nm,1.5s						
BBB	Bella Bella	78.98	27	LR	LR	10 28 24.5	
	comp=Z,59nm,19.6s,baz=344,slow=32						
ELK	Elko	79.01	42	LR	LR	10 26 21.6	
	comp=Z,124nm,18.1s,baz=270,slow=31						
ELK	Elko	79.01	42	IAmb	IAmb	09 58 08.5	
	comp=Z,7.4nm,1.5s						
G08A	Pilot Rock	79.25	37	P	P	09 58 07.1	-0.5
G08A				IAmb	IAmb	09 58 08.7	
	comp=Z,6.1nm,1.3s						
KLR	Kul'dur	79.83	328	LR	LR	10 35 23.8	
	comp=Z,95nm,18.0s,baz=132,slow=37						
MA2	Magadan	79.94	343	LR	LR	10 27 46.6	
	comp=Z,311nm,21.8s,baz=160,slow=31						
D08A	Wollman Farm,	80.29	35	P	P	09 58 13.3	+0.2
HLID	Hailey	81.01	40	IAmb	IAmb	09 58 19.2	
	comp=Z,5.0nm,1.1s						
M26K	Nabesna, AK	81.89	15	IAmb	IAmb	09 58 30.2	
	comp=Z,9.5nm,1.2s						
NEW	Newport	81.98	35	LR	LR	10 27 54.2	
	comp=Z,150nm,18.9s,baz=146,slow=31						
TX32	Lajitas Array	82.27	57	IAmb	IAmb	09 58 44.2	
	comp=Z,6.5nm,1.5s						
TXAR	Lajitas Array	82.27	57	P	P	09 58 23.5	-0.6
	comp=Z,1.4nm,1.1s,baz=236,slow=5.9,SNR=9.5						
TXAR				LR	LR	10 27 35.5	
	comp=Z,214nm,19.2s,baz=280,slow=30						
	comp=Z,1.4nm,1.1s						
ANMO	Albuquerque	82.37	51	LR	LR	10 28 19.2	
	comp=Z,294nm,19.0s,baz=277,slow=31						
ANMO	Albuquerque	82.37	51	P	P	09 58 24.8	+0.1
ANMO				IAmb	IAmb	09 58 48.6	
	comp=Z,6.0nm,1.2s						
ILAR	Eielson Array	83.11	12	P	P	09 58 28.9	+1.3
	comp=Z,0.3nm,0.8s,baz=209,slow=5.0,SNR=2.0						
	comp=Z,0.3nm,0.8s						
TPAW	Teton Pass	83.15	41	IAmb	IAmb	09 58 30.6	
	comp=Z,6.0nm,1.1s						
REDW	Red Top Meadow	83.15	41	P	P	09 58 28.3	-0.3
S22A	4UR Ranch, Cre	83.30	48	P	P	09 58 29.1	-0.4
PDAR	Pinedale Array	83.70	42	P	P	09 58 30.8	-0.6
	comp=Z,1.8nm,0.9s,baz=212,slow=3.2,SNR=12						
PDAR				LR	LR	10 29 02.6	
	comp=Z,126nm,20.1s,baz=292,slow=31						
	comp=Z,1.8nm,0.9s						
YHH	Holmes Hill	83.84	40	P	P	09 58 33.2	+1.0
PMSA	Palmer Station	84.60	156	LR	LR	10 28 04.7	
	comp=Z,196nm,21.5s,baz=296,slow=30						
CMIG	Matias Romero	85.67	71	LR	LR	10 30 23.9	
	comp=Z,198nm,18.2s,baz=332,slow=31						
H03S2	Juan Fernandez	86.50	124	T	T	11 34 51.0	
	baz=250						
H03S1	Juan Fernandez	86.52	124	T	T	11 34 52.2	
	baz=250						
H03S3	Juan Fernandez	86.52	124	T	T	11 34 50.1	
	baz=250						
MAW	Mawson	86.92	199	LR	LR	10 37 00.8	
	comp=Z,201nm,18.3s,baz=92,slow=35						
YAK	Yakutsk	88.71	337	LR	LR	10 34 59.0	
	comp=Z,105nm,20.4s,baz=90,slow=33						
PLCA	Paso Flores	90.61	133	LR	LR	10 33 23.4	
	comp=Z,184nm,18.3s,baz=254,slow=32						
CMAR	Chiang Mai Arr	91.03	289	LR	LR	10 35 11.2	
	comp=Z,100nm,21.9s,baz=115,slow=32						
SNAA	Sanae	92.67	178	LR	LR	10 35 32.4	
	comp=Z,277nm,21.8s,baz=194,slow=32						
SONM	Songino Array	93.90	319	LR	LR	10 37 04.5	
	comp=Z,146nm,21.5s,baz=73,slow=32						
ATAH	Atahualpa	94.63	99	LR	LR	10 31 46.5	
	comp=Z,201nm,21.9s,baz=338,slow=29						
TIXI	Tiksi	94.84	345	LR	LR	10 37 32.1	
	comp=Z,222nm,20.8s,baz=90,slow=32						
ULM	Lac du Bonnet	95.30	39	LR	LR	10 35 03.3	
	comp=Z,177nm,18.6s,baz=48,slow=31						
LVC	Limon Verde	98.47	116	LR	LR	10 33 57.8	
	comp=Z,162nm,20.2s,baz=274,slow=29						
BRTR	Keskin Array B	145.26	319	PKPbc	PKPbc	10 05 40.1	0.0
	comp=Z,4.6nm,0.9s,baz=94,slow=2.6,SNR=15						
GERES	GERESS Array B	146.16	349	PKPbc	PKPdf	10 05 41.4	-0.3
	comp=Z,0.3nm,0.5s,baz=96,slow=3.0,SNR=4.5						

*MAN **10** 09:52:20.9, 5°.53N×127°.10E, h14km, mb5.1, ML4.1, MS4.2*
*DJA **10** 09:52:24.6±0.7, 5°N±5°×12°7E±°, h49km±7km, M4.6/12, mB5.0/7, mb4.6/12, MLv4.8/9, Mw(mB)4.3/7*
*NEIC **10** 09:52:25.7±2.0, 5°.45N±0°.06×126°.75E±0°.08, h55km±9km, mb4.5/24, Error ellipse: s-maj=13.5km s-min=3.3km az=54.0*
*IDC **10** 09:52:26.5±1.7, 5°.48N×126°.83E, h72km±15km, mb3.8/13, mbtmp4.1/16, MS3.3/2, Error ellipse: s-maj=34.4km s-min=9.8km az=67.0*

ISC 10 09:52:24.7±0.5, 5°.38N±0°.05×126°.81E±0°.07, h50km, n82, σ1°90/88, mb4.4/24, 8C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	1.98	291	⇑eP	Pn	09 52 53.3	-2.6
GSPH				iS	Sn	09 53 19.8	+0.1
DAV	Davao City (W)	2.08	324	P	Pn	09 52 57.8	+0.7
	349nm,0.3s,baz=39,slow=2.2,SNR=12						
DAV				S	Sn	09 53 23.2	+1.4
	2μm,0.7s,baz=233,slow=14,SNR=9.8						
DAV				LR	LR	09 53 41.1	
	comp=Z,800nm,20.8s,baz=101,slow=37						
DAV	Davao City (W)	2.08	324	P	Pn	09 52 57.2	+0.1
SGSI	Sangihe	2.12	217	P	Pn	09 52 58.7	+1.1
KCP	Kidapawan	2.36	313	⇓eP	Pn	09 53 00.0	-1.0
KCP				iS	Sn	09 53 27.3	-1.5
BIPH	Bislig	2.82	351	⇑iP	Pn	09 53 04.8	-2.5
BIPH				iS	Sn	09 53 42.2	+2.1
BUKP	Musuan	3.03	325	⇑eP	Pn	09 53 10.2	0.0
BUKP				iS	Sn	09 53 47.9	+2.6
CTBH	Cotabato--PC H	3.14	306	⇑iP	Pn	09 53 12.6	+0.9
GAMI	Galela, Maluku	3.65	165	P	Pn	09 53 19.1	+0.4
CGP	Cagayan de Oro	3.71	326	⇑eP	Pn	09 53 21.4	+1.9
CGP				eS	Sn	09 54 08.0	+6.1
SCPH	Surigao	4.56	343	⇓eP	Pn	09 53 33.1	+1.9
SCPH				eS	Sn	09 54 27.1	+4.1
TNTI	Ternate	4.61	173	Pn	Pn	09 53 33.5	+1.6
TNTI	Ternate	4.61	173	P	Pn	09 53 33.1	+1.2
LSIP	Lazi, Siquijor	4.88	320	⇑iP	Pn	09 53 37.2	+1.6
GHBP	Garcia Hernand	4.89	330	⇑iP	Pn	09 53 36.6	+0.8
GHBP				iS	Sn	09 54 35.8	+4.7
TBP	Tagbilaran	5.19	326	eP	Pn	09 53 34.9	-4.9
TBP				iS	Sn	09 54 43.5	+5.1
TABP	Talibon, Bohol	5.29	332	⇑eP	Pn	09 53 41.0	-0.2
TABP				iS	Sn	09 54 39.1	-1.7
GTOI	Gorontalo	6.05	219	P	Pn	09 53 53.4	+1.7
	0.1nm246nm18nm,0.8s						
MRSI	Marisa	6.88	225	P	Pn	09 54 04.9	+1.8
	0.5nm970nm73nm,0.5s						
TOLI2	Tolitoli	7.37	235	Pn	Pn	09 54 09.1	-0.6
TOLI2					Sn	09 55 31.9	-0.1
SANI	Sanana	7.43	186	P	Pn	09 54 08.5	-2.0
	0.2nm868nm30nm,0.8s						
LUWI	Luwuk	7.55	212	Pn	Pn	09 54 14.3	+2.1
LUWI	Luwuk	7.55	212	P	Pn	09 54 14.0	+1.8
	0.6nm3μm139nm,1.1s						
SIJI	Sorong	7.64	144	P	Pn	09 54 14.9	+1.5
	9.2nm,0.4s,baz=132,slow=23,SNR=2.5						
MYLDM	Lahad Datu	8.28	269		Pn	09 54 22.2	-0.1
MYLDM	Lahad Datu	8.28	269	P	Pn	09 54 23.8	+1.5
	58nm,1.2s						
MPSI	Mapaga	8.53	234	P	Pn	09 54 39.0	+13
KRAI	Karang Ratu	8.79	170	P	Pn	09 54 31.3	+2.1
	4μm44nm,0.8s						
LQP	Lukban	10.11	329	⇓eP	Pn	09 54 51.7	+4.2
TTSI	Tana Toraja	10.90	220	P	Pn	09 55 18.2	+20
KAPI	Kappang	12.51	214	P	Pn	09 55 24.4	+4.3
	3.3nm,0.4s,baz=24,slow=15,SNR=1.7						
SBUM	Sibu	14.85	259	Pn	Pn	09 55 51.6	-0.1
KSM	Kuching	16.93	257		Pn	09 56 19.0	+0.8
KSM	Kuching	16.93	257	P	P	09 56 20.6	+1.1
	12nm,0.8s						
MTN	Manton Dam	18.61	167	P	P	09 56 36.8	-1.3
MTN				IAmb	IAmb	09 56 37.5	
	comp=Z,22nm,0.9s						
KNRA	Kununurra	21.01	175		P	09 57 04.5	+0.3
KNRA				IAmb	IAmb	09 57 12.0	
	comp=Z,20nm,0.7s						
FITZ	Fitzroy Crossi	23.36	183	P	P	09 57 29.4	+0.5
	comp=Z,3.9nm,0.7s,baz=26,slow=7.0,SNR=8.7						
	comp=Z,3.9nm,0.7s						
FITZ	Fitzroy Crossi	23.36	183	P	P	09 57 29.1	+0.2
COEN	Coen	25.16	140	P	P	09 57 46.2	+0.8
COEN				IAmb	IAmb	09 58 02.6	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	26.08	164	P	P	09 57 55.4	+1.6
WB0				IAmb	IAmb	09 57 57.5	
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	26.23	164	P	P	09 57 56.7	+1.6
WRAB				IAmb	IAmb	09 58 23.2	
	comp=Z,19nm,1.0s						
WRA	Warramunga Arr	26.23	164	P	P	09 57 56.1	+0.9
	comp=Z,12nm,1.0s,baz=345,slow=10.0,SNR=40						
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	26.23	164	P	P	09 57 56.1	+0.9
WB2	Warramunga Arr	26.23	164	P	P	09 57 57.3	+2.1
WB2				IAmb	IAmb	09 58 23.6	
	comp=Z,14nm,0.8s						
WR0	Warramunga Arr	26.30	163	P	P	09 57 56.9	+1.1
WR0				IAmb	IAmb	09 57 59.3	
	comp=Z,15nm,1.0s						
PSA00	Pilbara Seismi	27.64	194	P	P	09 58 08.6	+0.8
PSA00				IAmb	IAmb	09 58 35.7	
	comp=Z,18nm,1.2s						
AS31	Alice Springs	29.69	167	P	P	09 58 27.5	+1.5
ASAR	Alice Springs	29.69	167	P	P	09 58 26.1	+0.1
	comp=Z,0.8nm,0.7s,baz=347,slow=6.3,SNR=15						
ASAR				PcP	PcP	10 01 28.9	-0.6
	comp=Z,0.4nm,0.6s,baz=357,slow=3.0,SNR=2.5						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	29.69	167	P	P	09 58 27.3	+1.2
CMAR	Chiang Mai Arr	30.14	298	P	P	09 58 29.1	-1.1
	comp=Z,0.8nm,0.3s,baz=109,slow=7.8,SNR=4.6						
CMAR				LR	LR	10 10 40.0	
	comp=Z,43nm,20.4s,baz=310,slow=36						
	comp=Z,0.8nm,0.3s						
PZH	PanZhiHua	31.84	314	P	P	09 58 47.4	+2.2
XAN	Xi'an	33.00	332	P	P	09 58 50.3	-4.8
XAN				pP	pP	09 58 55.8	-11
BBOO	Buckleboo	38.98	168	P	P	09 59 47.4	+1.1
STKA	Stephens Creek	39.64	160	P	P	09 59 52.6	+0.9
	comp=Z,7.9nm,1.0s,baz=311,slow=5.2,SNR=4.6						
	comp=Z,7.9nm,1.0s						
STKA	Stephens Creek	39.64	160	P	P	09 59 52.7	+0.9
H11N1	WAKE ISLAND Hy	41.50	66	T	T	10 44 41.1	
	baz=254						
H11N2	WAKE ISLAND Hy	41.51	66	T	T	10 45 19.1	
	baz=254						
H11N3	WAKE ISLAND Hy	41.52	66	T	T	10 44 49.4	
	baz=254						
ARMA	Armidale	42.80	148	P	P	10 00 17.9	0.0
KLR	Kul'dur	43.89	5	P	P	10 00 25.6	-0.7
	comp=Z,0.6nm,0.5s,baz=116,slow=10,SNR=2.1						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	45.77	341	P	P	10 00 40.9	-0.5
	comp=Z,0.5nm,0.3s,baz=145,slow=5.3,SNR=2.2						
	comp=Z,0.5nm,0.3s						
MK31	Makanchi Array	56.26	325	P	P	10 01 59.7	-0.5
MKAR	Makanchi Array	56.26	325	P	P	10 01 58.5	-1.6
	comp=Z,1.3nm,0.5s,baz=112,slow=8.0,SNR=14						
MKAR				PcP	PcP	10 02 56.8	-0.4
	comp=Z,1.4nm,0.7s,baz=123,slow=4.5,SNR=4.8						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	56.26	325	P	P	10 01 59.0	-1.1
NIL	Nilore	57.00	307	P	P	10 02 03.1	-2.4
ZAA0	Zalesovo Array	59.17	333	P	P	10 02 18.2	-2.1
ZAA0				IAmb	IAmb	10 02 26.1	
	comp=Z,3.2nm,0.9s						
ZALV	Zalesovo Beam	59.17	333	P	P	10 02 18.2	-2.1
	comp=Z,1.0nm,0.5s,baz=289,slow=36,SNR=2.5						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	59.17	333	P	P	10 02 18.6	-1.7
KURK	Kurchatov	60.41	327	P	P	10 02 27.1	-1.8
KURK				IAmb	IAmb	10 02 31.2	
	comp=Z,6.8nm,1.1s						
GAR	Garm	60.88	312	P	P	10 02 30.1	-2.4
KK31	Karatay Array	62.09	316	P	P	10 02 37.6	-2.9
KK31				IAmb	IAmb	10 02 44.9	
	comp=Z,3.9nm,1.3s						
KKAR	Karatay Array	62.09	316	P	P	10 02 38.7	-1.8
BKZ	Black Stump Fm	63.75	139	P	P	10 02 52.9	+1.3
SNZO	South Karori	63.79	141	P	P	10 02 51.7	0.0
BRVK	Borovoye	66.06	327	P	P	10 03 06.0	-0.3
BRVK				IAmb	IAmb	10 03 06.9	
	comp=Z,4.7nm,0.8s						
ABKAR	Akbulak array	70.94	320	P	P	10 03 35.7	-1.1
ILAR	Eielson Array	83.59	25	P	P	10 04 45.8	-1.6
	comp=Z,0.4nm,0.9s,baz=266,slow=6.1,SNR=2.7						
	comp=Z,0.4nm,0.9s						
KLMR	Klimovskoe	84.02	331	eP	P	10 04 47.5	-2.1
KLMR				AMP		10 04 58.8	
	comp=Z,25nm,1.8s						
ARCES	ARCESS Array B	88.94	340	P	P	10 05 12.9	-0.7
	comp=Z,0.9nm,0.6s,baz=72,slow=8.0,SNR=1.2						
	comp=Z,0.9nm,0.6s						
BRTR	Keskin Array B	89.04	310	P	P	10 05 12.6	-2.3
	comp=Z,0.3nm,0.4s,baz=136,slow=44,SNR=2.2						
	comp=Z,0.3nm,0.4s						
FINES	FINESS Array B	90.43	332	P	P	10 05 19.1	-1.5
	comp=Z,5.2nm,1.1s,baz=159,slow=5.9,SNR=1.4						
	comp=Z,5.2nm,1.1s						
TORD	Torodi Ar. Bea	122.47	289	PKP	PKPdf	10 11 15.7	+0.1
	comp=Z,0.3nm,0.5s,baz=25,slow=1.0,SNR=2.0						

*IDC **10** 09:54:37.9±1.1, 28°.46S×178°.14W, h204km±6km, mb3.3/4, mbtmp3.9/4, Error ellipse: s-maj=34.6km s-min=22.9km az=33.0*

ISC 10 09:54:36.9±1.7, 28°.3S±0°.3×178°.1W±0°.3, h200km, n14, σ1°10/14, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.97	171	P	Pn	09 55 08.6	+2.3
	1μm,0.2s,baz=77,slow=6.0,SNR=58						
RAO				S

DDIM				*i* AML	AML	10 29 47.0	
	comp=E,268nm,0.4s						
DDIM				*i* AML	AML	10 29 48.0	
	comp=E,266nm,0.2s						
TURN	**Turunc**	**0.67**	**93**	PG	**Pg**	**10 29 33.6**	**-0.8**
TURN				SG	**Sb**	**10 29 44.4**	**-0.2**
TURN	**Turunc**	**0.67**	**93**	P	**Pg**	**10 29 33.5**	**-0.9**
TURN				S	**Sb**	**10 29 44.1**	**-0.4**
TURN				*i* AML	AML	10 29 46.0	
	comp=E,220nm,0.3s						
TURN				*i* AML	AML	10 29 46.0	
	comp=E,180nm,0.2s						
YER	**Yerkesik**	**0.77**	**65**	PG	**Pb**	**10 29 36.8**	**-0.2**
YER				SG	**Sb**	**10 29 47.9**	**+0.4**
ARG	**Arkhangelos**	**0.83**	**135**	PG	**Pg**	**10 29 37.2**	**-0.2**
ARG				SG	**Sb**	**10 29 49.2**	**+0.1**
ARG	**Arkhangelos**	**0.83**	**135**	P	**Pb**	**10 29 38.6**	**+0.7**
ARG	**Arkhangelos**	**0.83**	**135**	P	**Pg**	**10 29 37.3**	**0.0**
ARG				S	**Sb**	**10 29 48.9**	**-0.2**
ARG				AML	AML	10 29 52.0	
	comp=N,290μm,0.3s						
ARG				AML	AML	10 29 52.2	
	comp=E,548μm,0.4s						
MULA	**Mugla, Merkez-**	**0.85**	**58**	P	**Pg**	**10 29 38.0**	**0.0**
MULA				S	**Sg**	**10 29 49.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.90**	**351**	PG	**Pb**	**10 29 39.4**	**+0.3**
GCAM				SG	**Sn**	**10 29 52.7**	**-0.5**
GCAM	**G?zelcaml?**	**0.90**	**351**	P	**Pg**	**10 29 38.4**	**-0.3**
GCAM				S	**Sb**	**10 29 52.1**	**+0.9**
GCAM				*i* AML	AML	10 29 56.0	
	comp=E,150nm,0.6s						
GCAM				*i* AML	AML	10 29 56.0	
	comp=E,126nm,0.5s						
AYDN	**Tasoluk**	**0.93**	**24**	P	**Pg**	**10 29 38.6**	**-0.7**
AYDN				S	**Sg**	**10 29 51.3**	**-0.1**
AYDN				*i* AML	AML	10 29 53.0	
	comp=E,177nm,0.6s						
AYDN				*i* AML	AML	10 29 57.0	
	comp=E,172nm,0.5s						
DALY	**Dalyan (Mula)**	**1.00**	**89**	PG	**Pg**	**10 29 40.5**	**-0.1**
SMG	**Samos**	**1.01**	**333**	P	**Pg**	**10 29 40.0**	**-0.8**
SMG				S	**Sb**	**10 29 54.9**	**+0.6**
	comp=E,288nm,0.3s						
SMG	**Samos**	**1.01**	**333**	P	**Pg**	**10 29 40.3**	**-0.5**
SMG				S	**Sb**	**10 29 55.1**	**+0.8**
SMG				AML	AML	10 29 58.4	
	comp=E,697μm,0.3s						
SMG				AML	AML	10 30 01.5	
	comp=N,459μm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.20**	**19**	PN	**Pg**	**10 29 43.9**	**-0.6**
KARP	**Karpathos**	**1.28**	**189**	PN	**Pn**	**10 29 45.0**	**-0.3**
KARP	**Karpathos**	**1.28**	**189**	P	**Pn**	**10 29 44.8**	**-0.6**
DGB	**zmir**	**1.31**	**341**	P	**Pn**	**10 29 44.7**	**-1.0**
FETY	**Fethiye**	**1.36**	**97**	PN	**Pn**	**10 29 46.5**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.37**	**61**	P	**Pn**	**10 29 46.8**	**+0.2**
CAME	**Cameli-Denizli**	**1.52**	**84**	PN	**Pn**	**10 29 49.4**	**+0.5**
APE	**Apeiranthos**	**1.53**	**280**	PN	**Pn**	**10 29 48.4**	**-0.4**
BLCB	**Balcova**	**1.60**	**350**	PN	**Pb**	**10 29 51.5**	**+0.4**
URLA	**Izmir**	**1.68**	**338**	PN	**Pn**	**10 29 51.8**	**+0.9**
AKAS	**Kas**	**1.86**	**107**	PN	**Pn**	**10 29 54.6**	**+1.1**
CHOS	**Chios island**	**1.91**	**326**	PN	**Pn**	**10 29 54.8**	**+0.8**

IDC 10 10:29:48.4±5.9, 49°41′S×108°95′E, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=436.0km s-min=78.3km az=126.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.99**	**17**	T	T	10 48 22.0	
	baz=199,slow=74,SNR=7.4						
H01W1	**Cape Leeuwin H**	**15.00**	**17**	T	T	10 48 22.6	
	baz=199,slow=74,SNR=8.9						
H01W3	**Cape Leeuwin H**	**15.01**	**17**	T	T	10 48 33.3	
	baz=199,slow=74,SNR=8.7						
ASAR	**Alice Springs**	**32.30**	**46**	P	P	10 36 19.2	+0.2
	0.4nm,0.6s,baz=211,slow=8.0,SNR=5.3						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**35.72**	**44**	P	P	10 36 48.5	-0.3
	0.5nm,0.7s,baz=209,slow=8.9,SNR=5.0						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**144.78**	**90**	PKP	PKPbc	10 49 26.4	+0.4
	0.2nm,0.6s,baz=197,slow=2.7,SNR=2.5						

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*IDC **10** 10:42:18.3±1.1, 15°84S×175°67W, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=52.5km s-min=25.9km az=143.0*

ISC 10 10:42:23.8±1.0, 15°38S±0°3×175°7W±0°3, h35km, n7, σ1°07/7, mb3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.56**	**257**	P	**P**	**10 50 56.8**	**+0.4**
	0.8nm,0.9s,baz=89,slow=7.4,SNR=4.6						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**47.84**	**252**	P	**P**	**10 50 58.5**	**0.0**
	2.0nm,0.8s,baz=84,slow=7.1,SNR=12						
	2.0nm,0.8s						
QSPA	**South Pole Qui**	**74.21**	**180**	P	**P**	**10 53 57.1**	**+0.1**
	1.0nm,0.9s,baz=4.5,slow=3.6,SNR=2.1						
	1.0nm,0.9s						
NVAR	**Mina Array Bea**	**76.16**	**43**	P	**P**	**10 54 08.2**	**-0.5**
	0.4nm,0.8s,baz=228,slow=9.4,SNR=4.0						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**83.32**	**12**	P	**P**	**10 54 47.7**	**+1.0**
	0.3nm,0.7s,baz=211,slow=5.1,SNR=1.8						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	**84.09**	**43**	P	**P**	**10 54 51.5**	**+0.1**
	0.3nm,0.8s,baz=203,slow=6.7,SNR=2.2						
	0.3nm,0.8s						
BRTR	**Keskin Array B**	**145.04**	**319**	PKPbc	**PKPbc**	**11 01 55.6**	**-1.7**
	1.5nm,0.7s,baz=113,slow=2.8,SNR=5.6						

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*NEIC **10** 10:42:57.2±2.1, 15°5S±0°1×175°0W±0°1, h10km±1km, mb4.5/14, Error ellipse: s-maj=25.5km s-min=17.4km az=316.0*

*IDC **10** 10:43:01.8±5.3, 15°39S×175°59W, h54km±46km, mb3.9/11, mbtmp4.1/12, ML4.5/1, MS4.7/19, Error ellipse: s-maj=30.1km s-min=20.4km az=125.0*

*GCMT **10** 10:43:03.2±0.1, 15°27S±0°01×175°21W±0°01, h12km, MW5.2/133, Moment Tensor Solution. s77,c110; s133,c231; Duration: 1s0 Moment tensor: Scale 10^16 Nm; M_{rr}0.93±.13; $M_{\theta\theta}$3.48±.14; $M_{\phi\phi}$-4.41±.11; $M_{r\theta}$1.09±.33; $M_{\theta\phi}$6.58±.10; $M_{\phi r}$-1.68±.29; Best double couple: $M_0$7.88400×10^16 NP1:ϕ_s285.00000°, δ82.00000°, λ-9.00000°. NP2:ϕ_s16.00000°, δ81.00000°, λ-172.00000°. Principal axes: T 7.2090, Plg1.0000°, Azm331.0000°; N 1.3480, Plg78.0000°, Azm66.0000°; P -8.5580, Plg12.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 10:42:55.6±0.6, 15°45±0°1×175°10W±0°08, h10km, n60, σ1°91/34, mb4.4/15, MS4.8/21, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.55**	**65**		**Pn**	**10 43 51.0**	**+0.2**
AFI	**Afiamalu**	**3.55**	**65**	P	**Pn**	**10 43 51.0**	**+0.2**
NIUE	**Niue**	**6.14**	**127**	Pn	**Pn**	**10 44 26.2**	**-0.2**
MSVF	**Nonsavu**	**6.96**	**250**	P	**Pn**	**10 44 35.8**	**-2.0**
	0.3nm,0.3s,baz=18,slow=9.6,SNR=3.2						
	31nm,1.2s						
RAO	**Raoul Island**	**14.01**	**190**	LR	LR	10 49 57.1	
	comp=Z,2μm,21.7s,baz=358,slow=30						
MARNC	**Mare, Loyalty**	**17.10**	**247**		**Pn**	**10 46 56.5**	**+1.6**
DZM	**Mont Dzumac**	**18.68**	**246**	*e*LR	LR	10 51 42.0	
	comp=Z,8μm,25.1s						
DZM	**Mont Dzumac**	**18.68**	**246**	P	**P**	**10 47 15.0**	**+0.8**
URZ	**Urewera**	**23.77**	**195**	LR	LR	10 56 32.5	
	comp=Z,2μm,19.1s,baz=104,slow=34						
PAE	**Paea**	**24.56**	**99**	*e*T	T	11 13 47.0	
	2.6nm,0.3s						
PPT2	**Papeete2**	**24.56**	**99**	*e*LR	LR	10 54 09.5	
	comp=Z,2μm,25.0s						
PPT2	**Papeete2**	**24.56**	**99**	*e*T	T	11 13 49.2	
	5.3nm,0.4s						
TIAR	**Tiarei**	**24.78**	**99**	*e*T	T	11 13 57.3	
	1.4nm,0.3s						
TVO	**Taravao**	**24.88**	**99**	*e*T	T	11 14 04.1	
	2.8nm,0.4s						
TBI	**Tubuai**	**25.41**	**112**	*e*LR	LR	10 54 34.0	
	comp=Z,394nm,31.0s						
TBI	**Tubuai**	**25.41**	**112**	*e*T	T	11 14 55.3	
	11nm,0.3s						
PMOR	**Pomariorio Ree**	**26.25**	**93**	*e*T	T	11 16 08.0	
	4.1nm,0.4s						
RPZ	**Rata Peaks**	**30.58**	**200**	LR	LR	11 00 03.5	
	comp=Z,2μm,21.0s,baz=32,slow=34						
KRVT	**Keravat (AS076**	**34.16**	**285**	LR	LR	11 01 28.9	
	comp=Z,670nm,20.4s,baz=258,slow=33						
TAOE	**Nuku Hiva Isla**	**34.75**	**83**	*e*S	**S**	**10 55 11.8**	**-5.4**
	124nm,33.8s						
TAOE				*e*LR	LR	10 58 52.0	
	comp=Z,3μm,26.8s						
TAOE	**Nuku Hiva Isla**	**34.75**	**83**	*e*T	T	11 26 36.3	
	25nm,0.2s						
CTA	**Charters Tower**	**37.04**	**257**	LR	LR	11 03 35.8	
	comp=Z,1μm,19.2s,baz=82,slow=34						
STKA	**Stephens Creek**	**42.61**	**240**	P	P	10 50 47.8	-4.5
	4.1nm,1.0s,baz=90,slow=9.1,SNR=2.4						
STKA				LR	LR	11 06 33.4	
	comp=Z,1μm,20.1s,baz=76,slow=33						
	4.1nm,1.0s						
BBOO	**Buckleboo**	**47.39**	**239**	P	**P**	**10 51 30.9**	**+0.6**
WR0	**Warramunga Arr**	**48.05**	**257**	P	**P**	**10 51 37.7**	**+2.1**
WB0	**Warramunga Arr**	**48.20**	**257**	P	**P**	**10 51 36.3**	**-0.5**
WB2	**Warramunga Arr**	**48.23**	**257**	P	**P**	**10 51 37.9**	**+0.8**
WRAB	**Tennant Creek**	**48.23**	**257**	P	**P**	**10 51 40.4**	**+3.3**
WRA	**Warramunga Arr**	**48.24**	**257**	P	**P**	**10 51 34.4**	**-2.7**
	3.9nm,1.0s,baz=91,slow=7.2,SNR=9.1						
	3.9nm,1.0s						
WRA	**Warramunga Arr**	**48.24**	**257**	P	**P**	**10 51 36.4**	**-0.7**
AS31	**Alice Springs**	**48.55**	**252**	P	**P**	**10 51 39.7**	**+0.3**
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**10 51 37.2**	**-2.2**
	4.8nm,0.8s,baz=86,slow=8.2,SNR=9.6						
	4.8nm,0.8s						
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**10 51 39.5**	**0.0**
VNDA	**Vanda**	**63.20**	**185**	P	**P**	**10 53 24.1**	**+0.6**
	2.1nm,1.0s,baz=9.6,slow=6.7,SNR=6.6						
	2.1nm,1.0s						
SHEM	**Shemya Is, Ala**	**68.50**	**353**	LR	LR	11 18 46.2	
	comp=Z,506nm,19.9s,baz=141,slow=31						
JOW	**Kunigami**	**69.18**	**307**	LR	LR	11 18 41.1	
	comp=Z,570nm,21.7s,baz=114,slow=31						
PETK	**Petropavlovsk-**	**72.16**	**343**	P	**P**	**10 54 18.0**	**-2.4**
	3.3nm,0.9s,baz=188,slow=9.7,SNR=2.0						
PETK				LR	LR	11 19 55.3	
	comp=Z,548nm,21.7s,baz=149,slow=31						
	3.3nm,0.9s						
ISA	**Isabella, Lake**	**73.82**	**45**	P	**P**	**10 54 33.4**	**+2.7**
ISA				IAmb	IAmb	10 54 35.0	
	comp=Z,4.3nm,1.1s						
LPIG	**La Paz**	**74.45**	**59**	LR	LR	11 21 10.2	
	comp=Z,530nm,18.9s,baz=250,slow=31						
QSPA	**South Pole Qui**	**74.63**	**180**	P	**P**	**10 54 34.8**	**-0.2**
	comp=Z,4.3nm,1.0s,baz=56,slow=1.6,SNR=7.4						
	comp=Z,4.3nm,1.0s						
QSPA	**South Pole Qui**	**74.63**	**180**	P	**P**	**10 54 36.4**	**+1.4**
RYN	**Ryan**	**75.41**	**42**	P	**P**	**10 54 39.8**	**-0.2**
RYN				IAmb	IAmb	10 54 58.9	
	comp=Z,5.3nm,1.3s						
NVAR	**Mina Array Bea**	**75.45**	**43**	P	**P**	**10 54 42.3**	**+2.0**
	comp=Z,1.0nm,1.0s,baz=230,slow=9.8,SNR=5.4						
NVAR				LR	LR	11 20 31.8	
	comp=Z,447nm,20.9s,baz=231,slow=30						
	comp=Z,1.0nm,1.0s						
NVAR	**Mina Array Bea**	**75.45**	**43**	P	**P**	**10 54 41.9**	**+1.6**
NV11	**Mina Array Sit**	**75.54**	**43**	P	**P**	**10 54 42.7**	**+2.0**
NV11				IAmb	IAmb	10 54 59.7	
	comp=Z,7.8nm,1.2s						
SHPR	**Sheep Range**	**76.54**	**46**	P	**P**	**10 54 47.8**	**+1.3**
SHPR				IAmb	IAmb	10 55 05.7	
	comp=Z,6.5nm,1.5s						
MA2	**Magadan**	**79.69**	**343**	LR	LR	11 24 18.8	
	comp=Z,461nm,21.5s,baz=154,slow=31						
TXAR	**Lajitas Array**	**81.99**	**57**	P	**P**	**10 55 19.2**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=247,slow=9.2,SNR=4.2						
TXAR				LR	LR	11 24 37.5	
	comp=Z,487nm,18.8s,baz=241,slow=30						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**	**82.79**	**12**	P	**P**	**10 55 21.2**	**+1.6**
	comp=Z,1.1nm,1.0s,baz=218,slow=5.2,SNR=4.7						
	comp=Z,1.1nm,1.0s						
PDAR	**Pinedale Array**	**83.38**	**42**	P	**P**	**10 55 23.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=204,slow=3.3,SNR=6.8						
	comp=Z,1.5nm,0.9s						
CMIG	**Matias Romero**	**85.44**	**71**	LR	LR	11 25 20.3	
	comp=Z,433nm,19.7s,baz=231,slow=30						
PSI	**Prapat**	**86.86**	**274**	LR	LR	11 34 39.8	
	comp=Z,119nm,21.1s,baz=128,slow=36						
MAW	**Mawson**	**87.25**	**199**	LR	LR	11 32 38.5	
	comp=Z,238nm,18.1s,baz=116,slow=34						
CMAR	**Chiang Mai Arr**	**91.06**	**289**	P	**P**	**10 55 58.3**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=184,slow=9.0,SNR=1.9						
	comp=Z,0.3nm,0.3s						
SNAA	**Sanae**	**92.97**	**178**	LR	LR	11 32 26.5	
	comp=Z,398nm,21.7s,baz=191,slow=32						
ATAH	**Atahualpa**	**94.54**	**99**	LR	LR	11 29 11.4	
	comp=Z,394nm,21.3s,baz=258,slow=29						
ULM	**Lac du Bonnet**	**94.98**	**39**	LR	LR	11 32 48.7	
	comp=Z,307nm,19.4s,baz=254,slow=31						
BRTR	**Keskin Array B**	**145.12**	**320**	PKP	**PKPbc**	**11 02 32.8**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=80,slow=1.5,SNR=9.7						
GERES	**GERESS Array B**	**145.89**	**350**	PKPbc	**PKPdf**	**11 02 35.0**	**+0.1**
	comp=Z,0.2nm,0.2s,baz=343,slow=2.0,SNR=1.2						
TORD	**Torodi Ar. Bea**	**176.16**	**126**	PKP	**PKPdf**	**11 03 06.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=303,slow=1.8,SNR=2.1						

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*MEX **10** 10:43:23.0±0.5, 13°61N×93°14W, h16km±209km, MD3.9*
*GCG **10** 10:43:26.1±0.3, 14°10N×92°87W, h100km±19km, MD3.6*

ISC 10 10:43:22.7±4.0, 13°8N±0°1×93°01W±0°07, h15km±27km, n10, σ1°55/19, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.49**	**30**	*e*P	**Pn**	**10 43 49.1**	**-0.2**
PATR				*e*S	**Sb**	**10 44 09.9**	**+0.7**
CHUJ	**Union Juarez**	**1.54**	**35**	*e*P	**Pn**	**10 43 49.9**	**0.0**
CHUJ				*e*S	**Sb**	**10 44 10.5**	**-0.1**
PAVE	**Pavencul**	**1.59**	**31**	*e*P	**Pn**	**10 43 50.6**	**0.0**
PAVE				*e*S	**Sb**	**10 44 12.7**	**+0.8**
STG3	**Santiaguito 3,**	**1.66**	**58**	*e*P	**Pn**	**10 43 52.0**	**+0.5**
PCIG		**1.88**	**354**	*e*P	**Pn**	**10 43 54.7**	**+0.3**
PCIG				*e*S	**Sn**	**10 44 17.9**	**0.0**
FUG	**Fuego 3**	**2.20**	**73**	*e*P	**Pn**	**10 43 59.5**	**+0.6**
FUG				*e*S	**Sn**	**10 44 25.6**	**-0.4**
CCIG	**Comitan**	**2.59**	**19**	*e*P	**Pb**	**10 44 08.0**	**-1.0**
CCIG				*e*S	**Sn**	**10 44 37.9**	**+2.3**
TGIG		**2.94**	**358**	*e*P	**Pn**	**10 44 09.3**	**+0.3**
TGIG				*e*S	**Sn**	**10 44 42.6**	**-1.6**
UXUV	**UXUV**	**3.64**	**343**	*e*P	**Pn**	**10 44 21.8**	**+3.1**
UXUV				*e*S	**Sn**	**10 45 01.9**	**+0.4**
CMIG	**Matias Romero**	**3.72**	**331**	*e*P	**Pn**	**10 44 20.8**	**+1.1**
CMIG				*e*S	**Sn**	**10 44 59.5**	**-3.8**

NOU 10 10:43:30.8, 14°28S×172°84W, h24km, MLv3.1/6, Samoa Islands, Samoa Islands

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*IDC **10** 10:49:45.5±2.6, 17°41S×178°79W, h618km±24km, mb2.7/8, mbtmp3.6/9, Error ellipse: s-maj=130.7km s-min=18.4km az=154.0*

ISC 10 10:49:44.6±1.9, 17°3S±0°7×178°8W±0°4, h600km, n9, σ1°24/9, mb3.1/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.06**	**261**	P	**P**	**10 51 06.6**	**+2.4**
	4.4nm,0.6s,baz=90,slow=20,SNR=1.3						
CTA	**Charters Tower**	**33.20**	**260**	P	**P**	**10 55 32.7**	**-1.0**
	2.4nm,1.0s,baz=102,slow=9.3,SNR=1.7						
	2.4nm,1.0s						
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**10 57 03.0**	**-0.6**
	0.7nm,0.5s,baz=95,slow=7.4,SNR=24						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**10 57 04.6**	**-0.8**
	2.3nm,0.5s,baz=87,slow=8.6,SNR=48						
	2.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**52.78**	**260**	P	**P**	**10 58 05.5**	**0.0**
	0.6nm,0.7s,baz=68,slow=11,SNR=1.0						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**79.22**	**44**	P	**P**	**11 00 48.3**	**-0.7**
	0.1nm,0.4s,baz=230,slow=8.2,SNR=2.1						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**85.35**	**13**	P	**P**	**11 01 19.3**	**+0.4**
	0.1nm,0.4s,baz=216,slow=9.0,SNR=1.3						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**85.96**	**58**	P	**P**	**11 01 23.1**	**+0.2**
	0.2nm,0.6s,baz=212,slow=8.3,SNR=3.2						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**87.14**	**44**	P	**P**	**11 01 27.6**	**-0.7**
	0.3nm,0.7s,baz=228,slow=3.5,SNR=2.7						
	0.3nm,0.7s						

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*BEO **10** 10:50:36.8±0.4, 43°22N×19°81E, h0km, ML2.3/13*
*RHSSO **10** 10:50:37.3±0.3, 43°28N×19°86E, h3km±2km, ML2.6/6*
*PDG **10** 10:50:37.6±0.4, 43°22N×19°81E, h0km±11km, MD2.5/2, ML2.5/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ISC 10 10:50:36.4±1.0, 43°28N±0°02×19°80E±0°02, h4km±8km, n49, σ1°01/95, 18C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.13**	**96**	*e*Pg	**Pg**	**10 50 39.0**	**-0.1**
SJES				*e*Sg	**Sg**	**10 50 40.5**	**-0.3**
SJES	**Sjenica**	**0.13**	**96**	*e*Pg	**Pg**	**10 50 39.0**	**-0.1**
SJES				*e*Sg	**Sg**	**10 50 40.7**	**-0.1**
PLE	**Pljevlja**	**0.30**	**281**	⇑*i*Pg	**Pb**	**10 50 43.6**	**-0.9**
PLE				*i* Sg	**Sb**	**10 50 48.7**	**-1.2**
IVAS	**Ivanjica**	**0.40**	**41**	*e*Pg	**Pg**	**10 50 43.8**	**-0.3**
IVAS				*e*Sg	**Sg**	**10 50 48.9**	**-0.4**
IVA	**Berane**	**0.41**	**170**	⇑*i*Pg	**Pg**	**10 50 44.1**	**-0.2**
IVA				*i* Sg	**Sg**	**10 50 49.5**	**-0.2**
RUDO	**Rudo**	**0.46**	**318**	*e*Pg	**Pg**	**10 50 45.6**	**+0.3**
RUDO				*e*Sg	**Sb**	**10 50 52.6**	**-1.8**
RUDO	**Rudo**	**0.46**	**318**	*e*Pg	**Pg**	**10 50 45.6**	**+0.3**
RUDO				*e*Sg	**Sb**	**10 50 52.4**	**-2.0**
KOME	**Kolasin**	**0.47**	**206**	⇑*i*Pg	**Pg**	**10 50 45.5**	**0.0**
KOME				*i* Sg	**Sg**	**10 50 52.0**	**+0.4**
BBLS	**Lazići**	**0.66**	**334**	*e*Pg	**Pb**	**10 50 50.1**	**-0.4**
BBLS				*e*Sg	**Sb**	**10 50 59.5**	**-0.5**
BBLS	**Lazići**	**0.66**	**334**	*e*Pg	**Pb**	**10 50 50.3**	**-0.2**
BBLS				*e*Sg	**Sb**	**10 51 00.3**	**+0.3**
UPM	**Unac-Piva**	**0.66**	**264**	⇓*i*Pg	**Pb**	**10 50 50.5**	**0.0**
UPM				*e*Sg	**Sb**	**10 50 59.7**	**-0.4**
UPM	**Unac-Piva**	**0.66**	**264**	⇑*i*Pg	**Pb**	**10 50 49.8**	**-0.7**
UPM				*i* Sg	**Sb**	**10 51 00.1**	**0.0**
PVY	**Plav**	**0.69**	**170**	⇓*i*Pg	**Pg**	**10 50 49.3**	**-0.4**
PVY				*i* Sg	**Sg**	**10 50 59.1**	**+0.5**
NKME	**Niksic**	**0.80**	**231**	⇓*i*Pg	**Pg**	**10 50 51.9**	**+0.1**
NKME				*i* Sg	**Sb**	**10 51 03.9**	**-0.2**
DIVS	**Divibare**	**0.83**	**10**	*e*Pg	**Pg**	**10 50 52.2**	**-0.2**
DIVS				*e*Sg	**Sg**	**10 51 04.5**	**+1.2**
DIVS	**Divibare**	**0.83**	**10**	*e*Pg	**Pb**	**10 50 53.4**	**-0.1**
DIVS				*e*Sg	**Sb**	**10 51 06.2**	**+1.1**
GRUS	**Gruza**	**0.91**	**47**	*e*Pg	**Pg**	**10 50 53.8**	**0.0**
GRUS				*e*Sg	**Sb**	**10 51 07.4**	**+0.3**
TTG	**Podgorica**	**0.93**	**205**	⇓*i*Pg	**Pg**	**10 50 54.0**	**-0.3**
TTG				*i* Sg	**Sb**	**10 51 07.8**	**0.0**
SELS	**Selova**	**0.97**	**93**	*e*Pg	**Pg**	**10 50 53.8**	**-1.2**
SELS				*e*Sg	**Sg**	**10 51 06.6**	**-0.9**
CEME	**Cevo**	**0.97**	**222**	⇑*i*Pg	**Pg**	**10 50 54.9**	**-0.2**
CEME				*i* Sg	**Sb**	**10 51 09.5**	**+0.4**
BRY	**Bratogost**	**0.99**	**248**	*e*Pg	**Pb**	**10 50 55.9**	**-0.4**
BRY				*e*Sg	**Sb**	**10 51 09.2**	**-0.6**
BRY	**Bratogost**	**0.99**	**248**	⇑*i*Pg	**Pb**	**10 50 55.8**	**-0.5**
BRY				*i* Sg	**Sn**	**10 51 11.1**	**-0.7**
HAPS	**Han Pijesak,Bl**	**1.02**	**323**	*e*Pg	**Pb**	**10 50 56.5**	**-0.2**
HAPS				*e*Sg	**Sb**	**10 51 10.0**	**-0.4**
TRUS	**Trudelj**	**1.05**	**25**	*e*Pg	**Pn**	**10 50 58.5**	**+0.6**
TRUS				*e*Sg	**Sb**	**10 51 12.6**	**+1.5**
DRME	**Dracevica, Mon**	**1.18**	**203**	⇑*i*Pg	**Pb**	**10 50 59.4**	**+0.1**
DRME				*e*Sg	**Sb**	**10 51 15.4**	**+0.5**
DRME	**Dracevica, Mon**	**1.18**	**203**	⇑*i*Pg	**Pg**	**10 50 58.5**	**-0.5**
DRME				*i* Sg	**Sn**	**10 51 16.0**	**-0.1**
BUM	**Brajici-Budva**	**1.18**	**215**	⇑*i*Pg	**Pg**	**10 50 58.7**	**-0.3**
BUM				*i* Sg	**Sn**	**10 51 16.3**	**+0.1**
TEKS	**Tekeris**	**1.29**	**351**	*e*Pg	**Pg**	**10 50 59.9**	**-1.2**
TEKS				*e*Sg	**Sb**	**10 51 18.7**	**+0.6**
TEKS	**Tekeris**	**1.29**	**351**	*e*Pg	**Pg**	**10 51 01.0**	**-0.1**
TEKS				*e*Sg	**Sn**	**10 51 20.3**	**+1.4**
DBRK	**Dubrovnik**	**1.35**	**244**	*e*Pn	**Pn**	**10 51 02.1**	**0.0**
DBRK				Sn	**Sn**	**10 51 22.0**	**+1.5**
ULC	**Ulcinj**	**1.37**	**197**	⇓*i*Pg	**Pn**	**10 51 02.0**	**-0.3**
ULC				*i* Sg	**Sn**	**10 51 22.6**	**+1.6**
BOVS	**Bovan**	**1.44**	**75**	⇑P	**Pn**	**10 51 04.2**	**+1.1**
BOVS				⇓S	**Sb**	**10 51 20.7**	**-1.6**
BOVS	**Bovan**	**1.44**	**75**	*e*Pg	**Pn**	**10 51 04.3**	**+1

	10nm,0.3s					
DJR				Lg	Lg	10 52 44.7
	36nm,0.4s					
KTMS	**Ketmen**	**3.55 205**	*e*P	**Pb**	**10 52 19.3**	**-0.9**
	5.5nm,0.3s					
KTMS			*e*S	**Sb**	**10 53 04.2**	**+0.8**
	8.9nm,0.1s					
BLB	**Baldybastay**	**3.80 229**	*e*P	**Pb**	**10 52 24.6**	**+0.2**
	30nm,0.4s					
BLB			*e*S	**Sb**	**10 53 13.8**	**+3.3**
	33nm,0.5s					
BLB	**Baldybastay**	**3.80 229**	Pg	**Pb**	**10 52 24.6**	**+0.2**
	30nm,0.4s					
BLB			Lg	Lg	10 53 13.8	
	33nm,0.5s					
PDGK	**Podgornoye**	**3.94 213**	⇓Pn	**Pn**	**10 52 18.5**	**+0.6**
	1.7nm,0.3s					
PDGK			⇓Pg	**Pb**	**10 52 27.8**	**+0.9**
	9.0nm,0.7s					
PDGK			⇑Lg	Lg	10 53 18.5	
	39nm,0.6s					
SEM	**Semipalatinsk**	**4.01 340**	*e*P	**Pg**	**10 52 31.6**	**-2.5**
	4.7nm,0.1s					
SEM			*e*S	**Sg**	**10 53 25.3**	**-0.8**
	28nm,0.2s					
ARXS	**Arharly**	**4.07 235**	*e*P	**Pb**	**10 52 28.6**	**-0.4**
	9.4nm,0.3s					
ARXS			*e*S	**Sb**	**10 53 21.1**	**+2.7**
	41nm,0.4s					
ARXS	**Arharly**	**4.07 235**	Pg	**Pb**	**10 52 28.6**	**-0.4**
	9.4nm,0.3s					
ARXS			Lg	Lg	10 53 21.1	
	41nm,0.4s					
SHLS	**Shalkode**	**4.10 212**	*e*P	**Pb**	**10 52 25.5**	**-4.1**
	8.9nm,0.3s					
SHLS			*e*S	**Sb**	**10 53 14.8**	**-4.4**
	30nm,0.3s					
SHLS	**Shalkode**	**4.10 212**	Pg	**Pb**	**10 52 25.5**	**-4.1**
	8.9nm,0.3s					
SHLS			Lg	Lg	10 53 14.8	
	30nm,0.3s					
KPKS	**Kokpek**	**4.16 221**	*e*P	**Pb**	**10 52 30.1**	**-0.6**
	12nm,0.1s					
KPKS			*e*S	**Sb**	**10 53 23.1**	**+2.1**
	94nm,0.5s					
KPKS	**Kokpek**	**4.16 221**	Pg	**Pb**	**10 52 30.1**	**-0.6**
	12nm,0.1s					
KPKS			Lg	Lg	10 53 23.1	
	94nm,0.5s					
UZB	**Uzynbulak**	**4.28 216**	*e*P	**Pb**	**10 52 31.7**	**-1.0**
	2.6nm,0.2s					
UZB			*e*S	**Sb**	**10 53 25.3**	**+1.0**
	18nm,0.3s					
UZB	**Uzynbulak**	**4.28 216**	Pg	**Pb**	**10 52 31.7**	**-1.0**
	2.6nm,0.2s					
UZB			Lg	Lg	10 53 25.3	
	18nm,0.3s					
DGZ	**Jazzator, Alta**	**4.51 46**	Pn	Pn	10 52 29.9	+4.2
DGZ			Pg	**Pg**	**10 52 41.0**	**-2.6**
DGZ			Sg	**Sg**	**10 53 40.4**	**-1.7**
UKR	**Ust'-Kan**	**4.54 19**	Pn	**Pn**	**10 52 29.3**	**+3.2**
UKR			Pg	**Pg**	**10 52 40.9**	**-3.2**
UKR			Sg	**Sg**	**10 53 41.9**	**-1.0**
SATY	**Saty**	**4.61 220**	*e*P	**Pb**	**10 52 38.7**	**+0.4**
	3.6nm,0.1s					
SATY			*e*S	**Sb**	**10 53 37.5**	**+3.6**
	35nm,0.3s					
SATY	**Saty**	**4.61 220**	Pg	**Pb**	**10 52 38.7**	**+0.4**
	3.6nm,0.1s					
SATY			Lg	Lg	10 53 37.5	
	35nm,0.3s					
KURBB	**Kurchatov Arra**	**4.73 328**	⇓Pn	**Pn**	**10 52 28.3**	**-0.2**
	2.0nm,0.3s					
KURBB			⇓Pg	**Pb**	**10 52 40.4**	**+0.2**
	5.5nm,0.4s					
KURBB			⇑Lg	Lg	10 53 45.9	
	93nm,0.5s					
CHKK	**Chushkaly**	**4.77 236**	*e*P	**Pb**	**10 52 40.5**	**-0.4**
	1.7nm,0.4s					
CHKK			*e*S	**Sb**	**10 53 40.9**	**+2.6**
	22nm,0.4s					
CHKK	**Chushkaly**	**4.77 236**	Pg	**Pb**	**10 52 40.5**	**-0.4**
	1.7nm,0.4s					
CHKK			Lg	Lg	10 53 40.9	
	22nm,0.4s					
KURK	**Kurchatov**	**4.77 329**	⇓Pn	**Pn**	**10 52 30.0**	**+0.8**
	2.3nm,0.7s					
KURK			⇑Pg	**Pb**	**10 52 42.1**	**+1.1**
	2.6nm,0.4s					
KURK			⇑Lg	Lg	10 53 44.9	
	68nm,0.7s					
CHBI	**Chibit, Altay**	**4.96 41**	Pn	Pn	10 52 36.7	+4.9
CHBI			Pg	**Pg**	**10 52 50.7**	**-1.5**
CHBI			Sg	**Sg**	**10 53 56.3**	**-0.2**
KTBS	**Karatobe**	**5.03 236**	*e*P	**Pb**	**10 52 45.8**	**+0.4**
	3.5nm,0.4s					
KTBS			*e*S	**Sb**	**10 53 49.9**	**+4.0**
	39nm,0.5s					
KTBS	**Karatobe**	**5.03 236**	Pg	**Pb**	**10 52 45.8**	**+0.4**
	3.5nm,0.4s					
KTBS			Lg	Lg	10 53 49.9	
	39nm,0.5s					
SLNR	**Muhor-Tarhata,**	**5.09 50**	Sg	**Sg**	**10 54 01.0**	**+0.5**
KOTS	**Kotyrbulak**	**5.11 230**	*e*P	**Pb**	**10 52 48.7**	**+1.9**
	4.9nm,0.5s					
KOTS			*e*S	**Sb**	**10 53 55.0**	**+6.8**
	32nm,0.5s					
KOTS	**Kotyrbulak**	**5.11 230**	Pg	**Pb**	**10 52 48.7**	**+1.9**
	4.9nm,0.5s					
KOTS			Lg	Lg	10 53 55.1	
	32nm,0.5s					
KUU	**Kurty**	**5.12 239**	*e*P	**Pb**	**10 52 47.1**	**+0.2**
	3.1nm,0.2s					
KUU			*e*S	**Sb**	**10 53 52.1**	**+3.6**
	27nm,0.3s					
KUU	**Kurty**	**5.12 239**	Pg	**Pb**	**10 52 47.2**	**+0.2**
	3.1nm,0.2s					
KUU			Lg	Lg	10 53 52.1	
	27nm,0.3s					
MDOK	**Medeo**	**5.19 229**	*e*P	**Pb**	**10 52 49.3**	**+1.1**
	2.8nm,0.4s					
MDOK			*e*S	**Sb**	**10 53 55.8**	**+5.1**
	14nm,0.5s					
MDOK	**Medeo**	**5.19 229**	Pg	**Pb**	**10 52 45.5**	**-2.7**
	5.7nm,0.7s					
MDOK			Pg	Pg	10 52 49.3	-7.3
	2.8nm,0.4s					
MDOK			Lg	Lg	10 53 55.8	
	14nm,0.5s					
MDOK			Lg	Lg	10 53 56.0	
	14nm,0.6s					
CUR	**Chagan-Uzun**	**5.22 47**	Pn	**Pn**	**10 52 38.7**	**+3.2**
CUR			Pg	**Pg**	**10 52 54.8**	**-2.4**
CUR			Sg	**Sg**	**10 54 04.2**	**-0.6**
TNSS	**Tian-Shan**	**5.33 229**	*e*P	**Pb**	**10 52 52.2**	**+1.4**
	3.3nm,0.5s					
TNSS			*e*S	**Sb**	**10 54 00.5**	**+5.6**
	7.8nm,0.4s					
TNSS	**Tian-Shan**	**5.33 229**	Pg	**Pb**	**10 52 52.2**	**+1.4**
	3.3nm,0.5s					
TNSS			Lg	Lg	10 54 00.5	
	7.8nm,0.4s					
ULGR	**Ulagan, Altay**	**5.39 41**	Pn	**Pn**	**10 52 41.6**	**+3.8**
ULGR			Sg	**Sg**	**10 54 08.6**	**-1.6**
IZV	**Izvestkoviy**	**5.51 231**	*e*P	**Pb**	**10 52 55.1**	**+1.5**
IZV			*e*S	**Sb**	**10 54 06.1**	**+6.3**
IZV	**Izvestkoviy**	**5.51 231**	Pg	**Pb**	**10 52 55.1**	**+1.5**
IZV			Lg	Lg	10 54 06.1	
MTBS	**Maitube**	**5.54 233**	*e*P	**Pb**	**10 52 54.2**	**0.0**
	2.8nm,0.1s					
MTBS			*e*S	**Sb**	**10 54 04.1**	**+3.3**
	15nm,0.3s					
MTBS	**Maitube**	**5.54 233**	Pg	**Pb**	**10 52 54.2**	**0.0**
	2.8nm,0.1s					
MTBS			Lg	Lg	10 54 04.1	
	15nm,0.3s					
KRBS	**Karabastau**	**5.63 241**	*e*P	**Pb**	**10 52 56.5**	**+0.9**
	1.6nm,0.3s					
KRBS			*e*S	**Sb**	**10 54 08.5**	**+5.3**
	9.3nm,0.5s					
KRBS	**Karabastau**	**5.63 241**	Pg	**Pb**	**10 52 56.5**	**+0.9**
	1.6nm,0.3s					
KRBS			Lg	Lg	10 54 08.5	
	9.3nm,0.5s					
GALT	**Gorno-Altaysk,**	**5.77 22**	Sg	**Sg**	**10 54 19.5**	**-2.8**
ARTR	**Artybash**	**6.03 30**	Pn	**Pn**	**10 52 50.4**	**+3.9**
ARTR			Sg	**Sg**	**10 54 26.5**	**-4.3**
BTLS	**Baital**	**6.08 258**	*e*P	**Pb**	**10 53 06.1**	**+2.8**
	3.0nm,0.2s					
BTLS			*e*S	**Sg**	**10 54 24.7**	**-7.8**
	5.8nm,0.7s					
BTLS	**Baital**	**6.08 258**	Pg	**Pb**	**10 53 06.1**	**+2.8**
	3.0nm,0.2s					
BTLS			Lg	Lg	10 54 24.7	
	5.8nm,0.7s					
TKM2	**Tokmak 2**	**6.14 235**	⇓Lg	Lg	10 54 26.9	
	7.5nm,0.8s					
OTUK	**Ortayu**	**7.03 287**	⇓Pn	**Pn**	**10 52 59.9**	**-0.3**
	1.4nm,0.7s					
OTUK			⇓Lg	Lg	10 54 55.6	
	22nm,0.9s					
ELT	**Eltsovka**	**7.04 19**	Pn	Pn	10 53 05.2	+4.9
ELT			Pg	**Pg**	**10 53 27.9**	**-4.0**
ELT			S	**Sn**	**10 54 22.2**	**+2.0**
ELT			Sg	**Sg**	**10 55 00.6**	**-2.4**
TASR	**Tashtagol**	**7.04 28**	Pn	**Pn**	**10 53 03.2**	**+2.9**
TASR			Pg	**Pg**	**10 53 30.0**	**-2.0**
TASR			S	**Sn**	**10 54 23.0**	**+2.6**
TASR			Sg	**Sg**	**10 54 59.4**	**-3.7**
NVS	**Novosibirsk**	**8.20 3**	S	**Sn**	**10 54 49.0**	**+0.3**
NVSII	**Novosibirsk**	**8.20 3**	S	**Sn**	**10 54 49.4**	**+0.7**
KK31	**Karatay Array**	**9.19 251**	⇑Pn	**Pn**	**10 53 27.2**	**-2.6**
	0.4nm,0.3s,baz=351,slow=40,SNR=7.2					
KK31			⇑Sn	**Sn**	**10 55 12.6**	**-0.7**
	1.1nm,0.5s					
KK31			⇑Lg	Lg	10 56 04.9	
	2.8nm,0.6s					

IDC 10 11:05:52.6±3.5, 17°.71S×178°.84W, h576km±23km, mb2.9/4, mbtmp3.7/5, Error ellipse: s-maj=218.8km s-min=23.6km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.97**	**269**	P	P	11 07 09.7	0.0
	5.5nm,0.5s,baz=73,slow=19,SNR=4.2						
WRA	**Warramunga Arr**	**44.27**	**259**	P	P	11 13 11.8	-0.4
	0.5nm,0.7s,baz=96,slow=7.0,SNR=12						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**44.45**	**254**	P	P	11 13 13.7	0.0
	4.8nm,0.5s,baz=88,slow=8.2,SNR=120						
	4.8nm,0.5s						
TXAR	**Lajitas Array**	**86.23**	**58**	P	P	11 17 34.5	+0.2
	0.4nm,1.0s,baz=214,slow=6.2,SNR=3.4						
	0.4nm,1.0s						
PDAR	**Pinedale Array**	**87.49**	**44**	P	P	11 17 39.6	-0.4
	0.1nm,0.5s,baz=224,slow=3.8,SNR=1.9						
	0.1nm,0.5s						

IDC 10 11:17:44.1±2.4, 7°.39S×150°.85E, h0km, mb3.1/2, mbtmp3.4/4, ML1.3/1, MS2.9/1, Error ellipse: s-maj=88.2km s-min=21.4km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.28**	**21**	Pn	Pn	11 18 39.0	+2.2
	11nm,0.4s,baz=196,slow=18,SNR=2.2						
KRVT				Sn	Sn	11 19 16.3	-0.2
	12nm,0.3s,baz=219,slow=21,SNR=13						
KRVT				LR	LR	11 19 58.5	
	comp=Z,162nm,18.1s,baz=115,slow=41						
PMG	**Port Moresby**	**4.16**	**241**	Pn	Pn	11 18 49.7	+0.7
	1.3nm,0.3s,baz=56,slow=7.3,SNR=3.1						
PMG				Sn	Sn	11 19 37.8	-0.6
	3.7nm,0.3s,baz=72,slow=20,SNR=7.9						
	13nm,0.7s						
WRA	**Warramunga Arr**	**20.30**	**230**	P	P	11 22 22.0	+0.3
	0.7nm,0.6s,baz=57,slow=12,SNR=12						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**22.94**	**223**	P	P	11 22 50.6	+0.5
	0.3nm,0.4s,baz=55,slow=9.4,SNR=13						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**149.13**	**283**	PKPbc	PKPbc	11 37 33.6	-2.0
	0.2nm,0.3s,baz=75,slow=3.1,SNR=1.2						

STR 10 11:20:13.1±0.6, 50°N±10°×°±°, h0km, MLv2.9/8, Error ellipse: s-maj=0.0km s-min=0.0km az=157.3, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSA	**Saint Aubin**	**1.18**	**251**	Sg	Sb	11 20 52.1	0.0
JSA	**Saint Aubin**	**1.18**	**251**	Pg	Pg	11 20 34.5	-1.1
HMNX	**Herstmonceux**	**1.38**	**22**	Pn	Pg	11 20 37.8	-1.8
ELSH	**Elham, Standar**	**1.87**	**33**	Pn	Pn	11 20 45.3	-1.1
MENF	**Mencas**	**1.95**	**59**	Pn	Pn	11 20 46.3	-1.2
ROSF	**Rostrenen**	**2.23**	**237**	Pn	Pn	11 20 49.9	-1.4
DYA	**Yadsworthy**	**2.38**	**292**	Pn	Pn	11 20 51.8	-1.6
CLF	**Chambon-Foret**	**2.39**	**130**	Pn	Pn	11 20 54.8	+1.3
MCH1	**Michaelchurch**	**2.89**	**327**	Pn	Pn	11 20 59.2	-1.2
CCA1	**Carnmenellis**	**3.13**	**283**	Pn	Pn	11 21 02.2	-1.4
DOU	**Dourbes**	**3.32**	**79**	Pn	Pn	11 21 04.9	-1.4

*IDC **10** 11:33:49.5±0.9, 29°.27S×61°.25E, h0km, mb3.8/7, mbtmp3.8/8, ML4.3/1, Error ellipse: s-maj=34.7km s-min=23.9km az=39.0*
*NEIC **10** 11:33:50.6±2.2, 29°.0S±0°.1×61°.24E±0°.09, h10km±1km, mb4.4/8, Error ellipse: s-maj=24.9km s-min=7.6km az=208.0*

ISC 10 11:33:50.6±0.6, 29°.1S±0°.1×61°.3E±0°.1, h10km, n29, σ1.9/26/23, mb4.0/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.33**	**326**		**Pn**	**11 36 03.6**	**-1.6**
VOI	**Vohitsoka**	**14.87**	**295**		**Pn**	**11 37 20.5**	**-0.6**
ABPO	**Ambohimpanom**	**16.25**	**305**	P	**P**	**11 37 41.3**	**-0.9**
OPO	**Ambohidratompo**	**16.57**	**306**	Pn	**Pn**	**11 37 44.3**	**+1.1**
	0.1nm,0.3s,baz=118,slow=10,SNR=7.5						
OPO				Sn	Sn	11 40 33.8	-14
	baz=119,slow=15,SNR=1.4						
	2.6nm,0.5s						
H08S1	**Diego Carcia H**	**23.79**	**29**	T	T	12 03 49.1	
	baz=204,slow=76,SNR=3.8						
H08S2	**Diego Garcia H**	**23.80**	**29**	T	T	12 03 49.6	
	baz=204,slow=76,SNR=4.1						
H08S3	**Diego Garcia H**	**23.81**	**29**	T	T	12 03 51.6	
	baz=204,slow=76,SNR=6.8						
H01W2	**Cape Leeuwin H**	**44.80**	**112**	T	T	12 29 46.4	
	baz=261,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**44.80**	**112**	T	T	12 29 46.7	
	baz=261,slow=75,SNR=12						
H01W1	**Cape Leeuwin H**	**44.82**	**112**	T	T	12 29 47.7	
	baz=261,slow=75,SNR=13						
UGM	**Wanagama**	**50.81**	**76**	P	**P**	**11 42 50.1**	**-1.5**
SNAA	**Sanae**	**54.58**	**200**	P	**P**	**11 43 17.9**	**-0.8**
SNAA				IAmb	IAmb	11 43 27.7	
	comp=Z,1.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.64**	**42**	P	**P**	**11 43 55.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=218,slow=5.7,SNR=1.5						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**61.08**	**180**	P	**P**	**11 44 04.4**	**-0.2**
QSPA				IAmb	IAmb	11 44 34.0	
	comp=Z,6.2nm,1.4s						
VNDA	**Vanda**	**64.10**	**166**	P	**P**	**11 44 22.4**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=274,slow=6.8,SNR=6.1						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**64.10**	**166**	P	**P**	**11 44 24.7**	**+0.3**
ASAR	**Alice Springs**	**64.38**	**104**	P	**P**	**11 44 27.6**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=241,slow=6.3,SNR=22						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**64.38**	**104**	P	**P**	**11 44 28.1**	**+1.0**
WRA	**Warramunga Arr**	**66.20**	**100**	P	**P**	**11 44 40.1**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=246,slow=5.8,SNR=7.2						
	comp=Z,1.2nm,0.8s						
WB2	**Warramunga Arr**	**66.21**	**100**	P	**P**	**11 44 37.9**	**-1.1**
WB2				IAmb	IAmb	11 44 41.9	
	comp=Z,8.8nm,1.3s						
WRAB	**Tennant Creek**	**66.21**	**100**	P	**P**	**11 44 39.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**71.17**	**297**	P	**P**	**11 45 11.3**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=96,slow=6.2,SNR=4.8						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**77.87**	**15**	P	**P**	**11 45 49.5**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=205,slow=7.4,SNR=4.2						
	comp=Z,0.4nm,0.8s						
ABKAR	**Akbulak array**	**77.98**	**359**	P	**P**	**11 45 48.9**	**+0.2**
BRVK	**Borovoye**	**82.16**	**5**	P	**P**	**11 46 08.9**	**-2.3**
BRVK				IAmb	IAmb	11 46 09.4	
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**85.16**	**14**	P	**P**	**11 46 28.0**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=255,slow=4.3,SNR=1.8						
	comp=Z,0.4nm,0.3s						
PDAR	**Pinedale Array**	**164.46**	**334**	PKP	**PKPdf**	**11 53 55.2**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=101,slow=3.0,SNR=4.1						
TXAR	**Lajitas Array**	**166.82**	**275**	PKP	**PKPdf**	**11 53 58.1**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=99,slow=5.6,SNR=4.6						
NVAR	**Mina Array Bea**	**170.66**	**358**	PKP	**PKPdf**	**11 54 01.2**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=88,slow=2.3,SNR=3.7						

*JMA **10** 11:36:36.7±0.1, 24°.0N±0°.6×122°.4E±0°.2, h13km±1km, MV2.6/10, NW OFF ISHIGAKIJIMA IS*
*TAP **10** 11:36:36.5, 23°.99N×122°.43E, h27km, ML3.1, D*

ISC 10 11:36:36.5±1.0, 23°.97N±0°.02×122°.44E±0°.02, h32km±11km, n104, σ0.91/181, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.67**	**44**	P	**Pb**	**11 36 49.5**	**-0.3**
JYNG				*e*S	**Sb**	**11 36 58.3**	**-0.6**
YOJ	**Yonaguni jima**	**0.72**	**47**	P	**Pb**	**11 36 50.4**	**-0.2**
	baz=54						
YOJ				S	**Sb**	**11 36 59.5**	**-0.7**
	baz=54						
YOJ	**Yonaguni jima**	**0.72**	**47**	P	**Pb**	**11 36 50.5**	**-0.1**
YOJ				S	**Sb**	**11 36 59.9**	**-0.3**
HWA	**Hwalien**	**0.76**	**271**	P	**Pn**	**11 36 51.2**	**+0.2**
	baz=256						
EWUT	**Wuta**	**0.77**	**309**	*i* P	**Pn**	**11 36 49.5**	**-1.6**
	baz=307						
EWUT				*i* S	**Sn**	**11 36 59.9**	**-1.6**
	baz=307						
ETL	**Fush Village**	**0.77**	**285**	P	**Pn**	**11 36 50.8**	**-0.3**
	baz=267						
ETL				S	**Sb**	**11 37 01.8**	**+0.2**
	baz=267						
TEYL	**Yanliau Villag**	**0.77**	**263**	*e*S	**Sn**	**11 37 01.2**	**-0.5**
	baz=252						
TWD	**Chiawan**	**0.78**	**278**	*i* P	**Pn**	**11 36 50.6**	**-0.6**
	baz=276						
TWD				*i* S	**Sn**	**11 37 01.1**	**-0.7**
	baz=276						
NACB	**Ninganchiao**	**0.80**	**285**	P	**Pn**	**11 36 50.9**	**-0.6**
	baz=270						
TWC	**Suao**	**0.83**	**320**	*i* P	**Pn**	**11 36 51.3**	**-0.7**
	baz=320						
TWC				*i* S	**Sn**	**11 37 01.2**	**-2.0**
	baz=320						
ETM	**Tongmen**	**0.86**	**270**	P	**Pn**	**11 36 51.6**	**-0.8**
	baz=260						
ETM				S	**Sn**	**11 37 03.6**	**-0.3**
	baz=260						
ETLH	**Xiulin Townshi**	**0.90**	**285**	P	**Pn**	**11 36 52.9**	**-0.1**
	baz=271						
ETLH				S	**Sb**	**11 37 05.5**	**0.0**
	baz=271						
ESL	**Shilin**	**0.93**	**261**	*i* P	**Pn**	**11 36 52.4**	**-1.0**
	baz=259						
EGFH	**Guangfu**	**0.97**	**252**	*i* P	**Pn**	**11 36 54.0**	**+0.1**
	baz=250						
EGFH				*i* S	**Sn**	**11 37 07.0**	**+0.4**
	baz=250						
EGS		**0.99**	**332**	P	**Pb**	**11 36 55.5**	**+0.4**
	baz=320						
EGS				*i* S	**Sb**	**11 37 08.0**	**+0.2**
	baz=320						
LATG	**Datong**	**1.00**	**304**	P	**Pb**	**11 36 54.9**	**-0.5**
	baz=303						
LATG				S	**Sb**	**11 37 08.3**	**0.0**
	baz=303						
ILA	**Ilan**	**1.01**	**322**	*e*S	**Sb**	**11 37 08.9**	**+0.4**
	baz=321						
TWE	**Neicheng**	**1.03**	**317**	*i* P	**Pb**	**11 36 55.1**	**-0.6**
	baz=316						
TWE				*i* S	**Sb**	**11 37 09.0**	**+0.1**
	baz=316						
HGSD	**Ruisui**	**1.04**	**243**	P	**Pn**	**11 36 54.4**	**-0.5**
	baz=241						
HGSD				S	**Sn**	**11 37 08.0**	**-0.4**
	baz=241						
NTC	**Toucheng**	**1.04**	**328**	*i* P	**Pb**	**11 36 56.1**	**+0.1**
	baz=327						
NTC				*i* S	**Sb**	**11 37 08.9**	**-0.4**
	baz=327						
NDT	**Datong Townshi**	**1.05**	**307**	P	**Pn**	**11 36 55.0**	**0.0**
	baz=306						
NDT				S	**Sn**	**11 37 07.9**	**-0.8**
	baz=306						
NNS	**Nan Shan**	**1.08**	**296**	*i* P	**Pn**	**11 36 55.0**	**-0.5**
	baz=294						
NNS				*i* S	**Sb**	**11 37 10.4**	**-0.1**
	baz=294						
WHF	**Hehuan Shan**	**1.08**	**280**	*i* P	**Pn**	**11 36 55.6**	**-0.2**
	baz=278						
WHF				S	**Sn**	**11 37 10.1**	**+0.1**
	baz=278						
FUSB	**Fushanzhiwuyua**	**1.10**	**316**	P	**Pb**	**11 36 56.8**	**-0.3**
	baz=315						
FUSB				S	**Sb**	**11 37 11.8**	**+0.6**
	baz=315						
TWB1	**Santiao Chiao**	**1.11**	**339**	*i* P	**Pb**	**11 36 56.9**	**-0.3**
	baz=355						
TWB1				*i* S	**Sb**	**11 37 11.8**	**+0.4**
	baz=355						
EHY	**Hungye**	**1.12**	**246**	*i* P	**Pn**	**11 36 56.2**	**+0.3**
	baz=259						
EHY				*i* S	**Sn**	**11 37 10.2**	**0.0**
	baz=259						
FUSS	**Fushou**	**1.12**	**285**	*i* P	**Pn**	**11 36 56.6**	**+0.4**
	baz=283						
FUSS				*i* S	**Sb**	**11 37 12.1**	**+0.2**
	baz=283						
TIPB	**Shuangxi**	**1.14**	**331**	*i* P	**Pb**	**11 36 57.6**	**-0.2**
	baz=330						
TIPB				*i* S	**Sb**	**11 37 11.9**	**-0.3**
	baz=330						
OWD	**Renai**	**1.15**	**270**	*i* P	**Pn**	**11 36 56.9**	**+0.3**
	baz=268						
OWD				*i* S	**Sn**	**11 37 11.3**	**0.0**
	baz=268						
CHGB	**Renai**	**1.16**	**275**	P	**Pn**	**11 36 57.0**	**+0.3**
	baz=262						
CHGB				S	**Sb**	**11 37 12.4**	**-0.4**
	baz=262						
TWT	**Tachien**	**1.19**	**284**	S	**Sb**	**11 37 14.4**	**+0.8**
	baz=270						
YULB	**Yu-li**	**1.19**	**241**	P	**Pn**	**11 36 57.1**	**+0.2**
	baz=240						
YULB				S	**Sn**	**11 37 12.1**	**0.0**
	baz=240						
YHNB	**Yeheng**	**1.19**	**306**	P	**Pb**	**11 36 58.1**	**-0.4**
	baz=292						
YHNB				S	**Sb**	**11 37 13.2**	**-0.5**
	baz=292						
EYUL	**Yuli**	**1.20**	**239**	*i* P	**Pn**	**11 36 57.1**	**+0.1**
	baz=238						
EYUL				*i* S	**Sn**	**11 37 12.5**	**+0.3**
	baz=238						
TDCB	**Techi**	**1.20**	**284**	P	**Pb**	**11 36 58.3**	**-0.4**
	baz=270						
TDCB				S	**Sb**	**11 37 13.8**	**-0.2**
	baz=270						
VWDT	**VWDT**	**1.20**	**260**	P	**Pn**	**11 36 57.8**	**+0.7**
	baz=258						
VWDT				S	**Sb**	**11 37 13.7**	**-0.2**
	baz=258						
WUSB	**Renai**	**1.21**	**271**	P	**Pn**	**11 36 57

TWA	Mucha	1.27 323	*i* P	Pb	11 37 00.2	+0.4
	baz=322					
TWA			*i* S	Sb	11 37 15.6	-0.3
	baz=322					
NHDH	Xindian Distri	1.29 320	*i* P	Pb	11 37 00.6	+0.4
	baz=319					
NHDH			S	Sb	11 37 17.2	+0.7
	baz=319					
FULB	Fuli	1.30 234	*i* P	Pn	11 36 58.2	-0.2
	baz=222					
FULB			*i* S	Sn	11 37 14.6	-0.1
	baz=222					
SSLB	Suanglung	1.37 263	P	Pn	11 37 00.3	+0.9
	baz=261					
SSLB			S	Sn	11 37 16.8	+0.3
	baz=261					
NFF	Wufeng Townshi	1.37 299	P	Pn	11 36 59.8	+0.3
	baz=297					
NFF			S	Sb	11 37 19.3	+0.4
	baz=297					
EHD	Haiduan	1.39 234	P	Pn	11 36 58.6	-1.1
	baz=248					
EHD			*e*S	Sn	11 37 15.8	-1.2
	baz=248					
WHP	Taichung City	1.40 283	*i* P	Pb	11 37 02.5	+0.4
	baz=272					
WCS	Beigang Elemen	1.40 274	*i* P	Pn	11 36 59.8	0.0
	baz=264					
WCS			*e*S	Sb	11 37 18.5	-1.0
	baz=264					
SMLT	Sun Moon Lake	1.41 267	*i* P	Pb	11 37 01.6	-0.7
	baz=256					
YM01	YM01	1.41 326	P	Pb	11 37 01.6	-0.7
	baz=341					
YM01			S	Sb	11 37 19.5	-0.4
	baz=341					
EDH	Donghe	1.44 227	*i* P	Pn	11 37 00.0	-0.3
	baz=216					
EDH			*i* S	Sn	11 37 16.7	-1.4
	baz=216					
YUS	Yu-Shan	1.44 251	*i* P	Pn	11 37 01.6	+0.8
	baz=249					
YUS			*i* S	Sn	11 37 19.7	+0.8
	baz=249					
TYC	Yuchr	1.45 268	*i* P	Pn	11 37 01.7	+1.2
	baz=266					
LIOB	Emei	1.46 298	*i* P	Pb	11 37 03.0	-0.1
	baz=297					
TWS1	Kuangyinshan	1.46 321	P	Pb	11 37 03.3	+0.2
	baz=320					
TWS1			S	Sb	11 37 21.9	+0.7
	baz=320					
JKRS	Kuro-shima	1.46 79	P	Pb	11 37 02.9	-0.2
JKRS			*e*S	Sb	11 37 22.6	+1.2
NSTT	Nanjuang	1.47 297	*i* P	Pb	11 37 03.1	-0.1
	baz=296					
ANP	Anpu	1.47 326	*i* P	Pb	11 37 03.1	-0.2
	baz=325					
WHYT	Xinyi Township	1.47 260	*i* P	Pb	11 37 03.0	-0.3
	baz=246					
WHYT			S	Sb	11 37 22.1	+0.4
	baz=246					
NTST	Danshui	1.49 323	*e*S	Sb	11 37 22.1	0.0
	baz=339					
ELDTW	Lidau	1.52 239	*i* P	Pn	11 37 01.4	-0.1
	baz=238					
ELDTW			S	Sn	11 37 20.1	-0.1
	baz=238					
ALS	Alishan	1.56 253	*i* P	Pb	11 37 04.1	-0.8
	baz=251					
ALS			*i* S	Sb	11 37 23.5	-1.0
	baz=251					
LDUT	Ludao	1.56 215	*i* P	Pn	11 37 01.6	-0.5
	baz=214					
LDUT			*i* S	Sn	11 37 19.4	-1.8
	baz=214					
WJS	Zhushan	1.57 265	P	Pb	11 37 05.0	+0.1
	baz=263					
WJS			S	Sb	11 37 26.2	+1.8
	baz=263					
LONT	Longtian	1.60 229	P	Pn	11 37 03.0	+0.4
	baz=241					
LONT			*i* S	Sn	11 37 22.7	+0.5
	baz=241					
NMLH	Miaoli	1.60 291	P	Pb	11 37 05.0	-0.5
	baz=290					
WNT	Mingjian	1.60 267	P	Pb	11 37 05.3	-0.2
	baz=265					
WNT			*i* S	Sb	11 37 25.7	+0.3
	baz=265					
JIJ	Ishigaki jima	1.61 75	P	Pb	11 37 05.3	-0.2
JIJ			S	Sb	11 37 25.9	+0.3
TCU	Taichung	1.62 277	P	Pb	11 37 05.5	-0.2
	baz=274					
TCU			*i* S	Sb	11 37 27.0	+1.2
	baz=274					
WDJ	Dajia District	1.68 283	*e*P	Pb	11 37 06.0	-0.8
	baz=282					
TWGBT	Beinan	1.69 228	P	Pn	11 37 03.8	-0.1
	baz=239					
TWGBT			S	Sn	11 37 24.6	+0.2
	baz=239					
TWG	Pinlang	1.69 228	*i* P	Pn	11 37 04.0	+0.1
	baz=239					
TWG			*i* S	Sn	11 37 24.6	+0.1
	baz=239					
STYH	Taoyuan	1.72 243	S	Sn	11 37 26.1	+1.1
	baz=233					
WCHH	Zhanghua	1.72 274	P	Pb	11 37 07.5	+0.1
	baz=272					
WCHH			S	Sb	11 37 29.9	+1.2
	baz=272					
WCKO	Fanlu	1.76 253	*i* S	Sb	11 37 28.9	-1.0
	baz=251					
WDLH	Douliu	1.76 261	P	Pb	11 37 07.2	-0.9
	baz=259					
WDLH			*i* S	Sb	11 37 30.1	+0.3
	baz=259					
TPUB	Ta-pu	1.78 249	P	Pb	11 37 07.3	-1.2
	baz=247					
TPUB			S	Sb	11 37 29.6	-0.9
	baz=247					
WTP	Ta-pu	1.82 247	P	Pn	11 37 07.2	+1.6
	baz=245					
WTP			S	Sb	11 37 30.9	-0.6
	baz=245					
WRL	Guolierlin Hig	1.88 268	*i* P	Pn	11 37 08.1	+1.6
	baz=281					
WRL			*i* S	Sb	11 37 31.9	-1.5
	baz=281					
CHY	Chiayi	1.90 256	S	Sb	11 37 33.6	-0.3
	baz=254					
CHN1	Nanshi	1.92 246	*i* P	Pb	11 37 10.1	-0.7
	baz=245					
CHN1			*i* S	Sb	11 37 34.6	+0.3
	baz=245					
SGST	Jiashian	1.92 243	S	Sn	11 37 32.5	+2.6
	baz=233					
TWK	Hsinying	1.92 249	*i* P	Pb	11 37 09.4	-1.5
	baz=247					
TWK			*i* S	Sb	11 37 34.1	-0.4
	baz=247					
WSF	Szhu	2.05 261	S	Sb	11 37 37.5	-0.7
	baz=259					
SSD	Sandimen	2.06 234	P	Pn	11 37 11.1	+2.2
	baz=227					
SSD			S	Sn	11 37 36.3	+2.9
	baz=227					
ICHU	Yijhu	2.07 253	P	Pb	11 37 11.7	-1.7
	baz=252					
ICHU			*e*S	Sb	11 37 37.1	-1.6
	baz=252					
TSMG	Majia	2.07 233	*i* P	Pn	11 37 10.3	+1.2
	baz=227					
TSMG			S	Sn	11 37 34.5	+0.7
	baz=227					
WSL	Shuilin Townsh	2.07 258	P	Pn	11 37 10.2	+1.2
	baz=256					
WSL			S	Sn	11 37 36.3	+2.6
	baz=256					
SCST	Cishan	2.08 239	P	Pb	11 37 12.7	-0.9
	baz=227					
SCST			S	Sb	11 37 39.8	+0.7
	baz=227					
LAY	Lan-yu	2.09 203	P	Pn	11 37 09.1	-0.2
	baz=202					
LYUB	Lan-yu	2.11 202	*e*S	Sn	11 37 33.6	-1.1
	baz=202					
CHN8	Yiju	2.13 254	S	Sb	11 37 38.9	-1.6
	baz=252					
MASBT	Mashibuluo	2.14 231	P	Pn	11 37 11.1	+1.1
	baz=225					
MASBT			*e*S	Sn	11 37 37.4	+2.0
	baz=225					
EAST	Anshuo	2.15 223	*i* P	Pn	11 37 10.6	+0.4
	baz=222					
TAWH	Dawu Township	2.16 222	P	Pn	11 37 08.8	-1.5
	baz=230					
TAWH			S	Sn	11 37 34.8	-1.1
	baz=230					
JTJ	Tarama	2.17 72	P	Pb	11 37 13.5	-1.6
JTJ			S	Sb	11 37 40.8	-0.9
SLIU	Shizi	2.30 221	P	Pn	11 37 15.0	+2.7
	baz=229					
SCZT	Fangliau	2.31 227	P	Pn	11 37 14.1	+1.8
	baz=219					
SCZT			S	Sn	11 37 40.4	+0.8
	baz=219					
TSCK	Chigu Township	2.31 250	P	Pn	11 37 13.8	+1.5
	baz=248					
TSCK			S	Sn	11 37 41.8	+2.3
	baz=248					
SMST	Manzhou Townsh	2.43 218	P	Pn	11 37 14.3	+0.2
	baz=217					
SMST			S	Sn	11 37 42.8	0.0
	baz=217					
PHUB	P'eng-hu	2.66 261	S	Sn	11 37 50.1	+1.7
	baz=273					
PNG	Penghu	2.67 262	S	Sn	11 37 50.4	+1.9
	baz=260					

IDC 10 12:07:33.2±3.6, 3°.03S×141°.05E, h0km, mb3.1/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=133.5km s-min=30.8km az=92.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.04	201	P	Pn	12 11 45.2	-0.4
	0.1nm,0.3s,baz=23,slow=12,SNR=6.1 0.3nm,0.4s						
ASAR	Alice Springs	21.65	198	P	P	12 12 24.9	-0.6
	0.4nm,0.7s,baz=26,slow=11,SNR=6.7 0.4nm,0.7s						
SONM	Songino Array	59.03	333	P	P	12 17 35.6	+0.5
	0.2nm,0.4s,baz=157,slow=7.7,SNR=1.4 0.2nm,0.4s						

IDC 10 12:12:52.8±1.2, 41°.05S×88°.68W, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/7, Error ellipse: s-maj=95.9km s-min=30.8km az=83.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	10.58	50	T	T	12 26 37.2	
	baz=223,SNR=216						
H03S1	Juan Fernandez	10.59	50	T	T	12 26 42.1	
	baz=223,SNR=249						
H03S3	Juan Fernandez	10.60	50	T	T	12 26 37.5	
	baz=223,SNR=263						
H03N3	Juan Fernandez	10.86	49	T	T	12 26 59.6	
	baz=224,slow=71,SNR=57						
H03N2	Juan Fernandez	10.86	49	T	T	12 27 06.3	
	baz=224,slow=71,SNR=119						
H03N1	Juan Fernandez	10.87	49	T	T	12 26 58.6	
	baz=224,slow=71,SNR=49						
RPN	Rapa Nui	21.96	303	LR	LR	12 23 47.0	
	comp=Z,82nm,20.1s,baz=280,slow=30						
LVC	Limon Verde	24.80	48	LR	LR	12 25 08.6	
	comp=Z,108nm,21.5s,baz=214,slow=30						
LPAZ	La Paz	30.41	42	LR	LR	12 27 01.8	
	comp=Z,33nm,21.7s,baz=219,slow=28						
NNA	Nana	30.76	23	LR	LR	12 28 00.7	
	comp=Z,72nm,19.5s,baz=220,slow=30						
ATAH	Atahualpa	35.00	18	LR	LR	12 30 57.7	
	comp=Z,78nm,18.9s,baz=222,slow=31						
QSPA	South Pole Qui	49.18	180	P	P	12 21 42.2	-0.1
	0.7nm,0.8s,baz=220,slow=2.9,SNR=5.6 0.7nm,0.8s						
VNDA	Vanda	54.28	195	LR	LR	12 42 57.7	
	comp=Z,29nm,18.7s,baz=160,slow=33						
URZ	Urewera	68.92	237	LR	LR	12 47 54.3	
	comp=Z,77nm,19.8s,baz=277,slow=30						
TXAR	Lajitas Array	71.39	346	P	P	12 24 14.6	-0.1
	0.8nm,0.9s,baz=163,slow=8.7,SNR=8.9 0.8nm,0.9s						
NVAR	Mina Array Bea	83.61	337	P	P	12 25 22.9	-0.1
	1.4nm,0.9s,baz=170,slow=6.1,SNR=8.7 1.4nm,0.9s						
PDAR	Pinedale Array	85.54	345	P	P	12 25 32.9	+0.3
	0.2nm,0.6s,baz=146,slow=8.7,SNR=2.3 0.2nm,0.6s						
MKAR	Makanchi Array	171.32	46	PKPab	PKPab	12 34 22.6	-0.3
	1.2nm,1.1s,baz=328,slow=5.1,SNR=3.7						

*IDC **10** 12:17:48.8±3.6, 24°.19N×94°.83E, h137km±38km, mb3.3/7, mbtmp3.6/8, MS3.4/2, Error ellipse: s-maj=72.4km s-min=16.3km az=55.0*

ISC 10 12:17:45.8±1.0, 24°.6N±0°.1×95°.4E±0°.1, h100km, n18, σ1§55/18, mb3.5/7, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	3.93	241	P	Pn	12 18 45.4	+1.4
	69nm,0.4s,baz=268,slow=19,SNR=1.5						
BRDH				S	Sn	12 19 28.4	-0.7
	91nm,0.3s,baz=271,slow=23,SNR=6.3						
CMAR	Chiang Mai Arr	6.98	151	P	Pn	12 19 26.9	+1.5
	0.4nm,0.5s,baz=326,slow=11,SNR=2.1						
TAPN	Taplejung	7.41	293	*e*P	Pn	12 19 33.7	+2.2
	15nm,0.3s						
RAMN	Ramite	8.24	288	*e*P	Pn	12 19 44.2	+1.5
	14nm,0.3s						
JIRN	Jiri	8.78	292	*e*P	Pn	12 19 51.7	+1.4
	7.8nm,0.2s						
GUN	Gumba	9.12	293	*e*P	Pn	12 19 56.6	+1.7
	6.0nm,0.3s						
PKI	Pulchoki	9.42	290	*e*P	Pn	12 19 59.5	+0.6
	3.6nm,0.2s						
PKIN	Phulchoki	9.43	290	*e*P	Pn	12 19 59.7	+0.7
	8.1nm,0.3s						
DMN	Daman	9.69	290	*e*P	Pn	12 20 02.4	-0.1
GKN	Gorkha	10.20	292	*e*P	Pn	12 20 09.5	+0.2
	6.4nm,0.3s						
MKAR	Makanchi Array	24.47	338	P	P	12 22 57.1	+1.8
	1.1nm,0.6s,baz=148,slow=11,SNR=14 1.1nm,0.6s						
AAK	Ala-Archa	24.89	321	P	P	12 23 01.3	+1.9
	1.5nm,0.5s,baz=98,slow=4.5,SNR=4.0 1.5nm,0.5s						
KURBB	Kurchatov Arra	29.04	338	P	P	12 23 36.9	+0.6
	0.4nm,0.5s,baz=146,slow=9.3,SNR=4.3 0.4nm,0.5s						
GEYT	Alibeck	34.26	302	P	P	12 24 19.1	-3.2
	1.6nm,0.4s,baz=117,slow=8.7,SNR=2.8						
GEYT				LR	LR	12 41 00.6	
	comp=Z,76nm,20.9s,baz=323,slow=41 1.6nm,0.4s						
WRA	Warramunga Arr	58.32	136	P	P	12 27 29.8	-0.7
	0.1nm,0.6s,baz=322,slow=7.6,SNR=1.2 0.1nm,0.6s						
ARCES	ARCESS Array B	60.13	338	P	P	12 27 42.5	+0.1
	1.5nm,0.8s,baz=103,slow=5.5,SNR=5.7 1.5nm,0.8s						
ASAR	Alice Springs	60.83	139	P	P	12 27 47.1	-0.7
	0.2nm,0.7s,baz=317,slow=6.2,SNR=1.9 0.2nm,0.7s						
IDI	Anoyia	60.85	298	LR	LR	12 58 23.9	
	comp=Z,31nm,20.6s,baz=18,slow=40						

*NOU **10** 12:20:19.7, 37°.42S×179°.70E, h0km, MLv4.2/9, Off E. Coast of N. Island, N.Z.*
*WEL **10** 12:20:27.5±1.4, 37°.S±4°.×17°.9E±°., h14km±5km, M3.8/60, ML4.0/63, MLv3.8/60, Error ellipse: s-maj=0.0km s-min=0.0km az=75.4*
*IDC **10** 12:20:31.1±4.1, 38°.29S×179°.26E, h74km±29km, mb3.4/3, mbtmp3.7/4, Error ellipse: s-maj=34.3km s-min=32.6km az=47.0*

ISC 10 12:20:24.2±2.1, 37°.47S±0°.05×179°.31E±0°.07, h9km±11km, n130, σ1§41/136, mb3.5/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	0.79	244	P	Pn	12 20 42.7	+1.2
WMGZ				S	Sn	12 20 52.4	-0.9
MXZ	Matakaoa Point	0.80	263	P	Pb	12 20 40.1	-0.2
MXZ				S	Sg	12 20 47.4	-2.6
MXZ	Matakaoa Point	0.80	263	P	Pb	12 20 40.0	-0.2
PUZ	Puketiti	1.02	234	P	Pn	12 20 46.4	+1.7
PUZ				S	Sn	12 20 58.9	-0.3
PKGZ	Pakihiroa	1.06	247	P	Pn	12 20 46.1	+0.8
PKGZ				S	Sg	12 20 58.3	-0.1
HAZ	Te Kaha	1.24	256	P	Pn	12 20 47.8	+0.1
TWGZ	Tauwhareparae	1.26	236	P	Pg	12 20 50.1	+1.7
TWGZ				S	Sn	12 21 05.8	+0.7
CNGZ	Carnagh Statio	1.33	220	P	Pg	12 20 52.2	+2.5
RUGZ	Raukumara Rang	1.38	249	P	Pg	12 20 51.0	+0.3
RUGZ				S	Sb	12 21 07.3	-0.7
TKGZ	Te Karaka	1.50	230	P	Pg	12 20 53.2	+0.2
MWZ	Matawai	1.65	238	P	Pb	12 20 54.7	0.0
WIZ	White Island	1.69	268	P	Pb	12 20 54.9	-0.4
RIGZ	Rimuhau	1.73	224	P	Pb	12 20 56.4	+0.3
RAGZ	Rawiri	1.81	235	P	Pb	12 20 57.2	-0.3
WHRZ	Whale Island	1.89	258	P	Pb	12 20 58.3	-0.5
URZ	Urewera	1.91	245	P	Pn	12 20 57.6	+0.8
	148nm,0.3s,baz=174,slow=1.4,SNR=287						
URZ				S	Sn	12 21 19.9	-1.0
	516nm,0.5s,baz=84,slow=22,SNR=27						
URZ	Urewera	1.91	245	P	Pb	12 20 58.5	-0.6
URZ	Urewera	1.91	245	P	Pb	12 20 58.5	-0.6
MHGZ	Mahia Peninsul	2.01	213	P	Pb	12 21 00.6	-0.2
KNZ	Kokohu	2.01	219	P	Pb	12 20 59.9	-0.9
SNGZ	Shannon Statio	2.03	229	P	Pn	12 21 00.1	+1.6
EDRZ	Edgecumbe	2.13	252	P	Pn	12 21 01.4	+1.5
MARZ	Manawahe	2.15	255	P	Pn	12 21 01.1	+0.9
RTZ	Ruatahuna	2.16	237	P	Pb	12 21 02.3	-1.2
OPRZ	Ohinepanea	2.21	260	P	Pn	12 21 01.7	+0.6
MUGZ	Murupara	2.24	243	P	Pn	12 21 02.7	+1.2
RAHZ	Arahi	2.27	230	P	Pn	12 21 03.8	+1.9
WHHZ	Waihua	2.29	225	P	Pn	12 21 04.0	+2.0
RRRZ	Republican Roa	2.37	248	P	Pn	12 21 04.9	+1.7
LIRZ	Lichensteins R	2.38	256	P	Pn	12 21 05.3	+2.0
MTHZ	Maungataniwha	2.38	234	P	Pn	12 21 05.4	+2.0
OMRZ	Omania	2.41	254	P	Pn	12 21 05.6	+1.8
TGRZ	Tauranga	2.43	263	P	Pn	12 21 05.3	+1.3
MYRZ	Mayor Island	2.45	274	P	Pn	12 21 03.6	-0.7
HLRZ	Highlands Stat	2.46	251	P	Pn	12 21 06.3	+1.8
KARZ	Kaharoa	2.49	256	P	Pn	12 21 06.0	+1.1
PRRZ	Plateau Road	2.52	245	P	Pn	12 21 06.4	+1.1
NMHZ	Naumai	2.55	230	P	Pn	12 21 07.6	+1.8
NGRZ	Ngongotaha	2.55	255	P	Pn	12 21 07.7	+2.0
HRRZ	Handcock Road	2.56	248	P	Pn	12 21 07.2	+1.3
HSRZ	Hossack Road	2.56	250	P	Pn	12 21 07.8	+1.9
UTU	Utuhina	2.56	253	P	Pb	12 21 09.6	-0.7
ALRZ	Allen Road	2.58	244	P	Pn	12 21 07.4	+1.3
MRHZ	Matea Rd	2.65	238	P	Pn	12 21 08.6	+1.5
KMRZ	Kaimai	2.70	261	P	Pn	12 21 08.5	+0.8
BKZ	Black Stump Fm	2.79	232	P	Pn	12 21 10.4	+1.4
BKZ	Black Stump Fm	2.79	232	P	Pn	12 21 10.5	+1.5
CKHZ	Cape Kidnapper	2.79	218	P	Pn	12 21 10.4	+1.3
MCHZ	McNeill Hill	2.84	225	P	Pn	12 21 11.1	+1.5
KUTZ	Kaahu Road	2.93	249	P	Pn	12 21 12.2	+1.2
KUZ	Kuaotunu	2.96	283	P	Pn	12 21 09.7	-1.6
KUZ	Kuaotunu	2.96	283	P	Pn	12 21 11.3	0.0
KWHZ	Kaweka Forest	2.99	228	P	Pn	12 21 12.8	+1.0
KAHZ	Kahuranaki	3.00	219	P	Pn	12 21 13.0	+1.1
TOZ	Tahuroa Road	3.03	264	P	Pn	12 21 12.7	+0.4
TLZ	Tolley Road	3.10	253	P	Pn	12 21 14.5	+1.2
RATZ	Rangitukua	3.11	242	P	Pn	12 21 15.2	+1.7
KRHZ	Kereru	3.16	226	P	Pn	12 21 14.6	+0.5
PXZ	Pawanui	3.19	216	P	Pn	12 21 15.3	+0.8
KATZ	Kakaramea	3.21	241	P	Pn	12 21 16.4	+1.4
TMVZ	Te Maari	3.27	239	P	Pn	12 21 16.9	+1.1
ETVZ	East Tongariro	3.28	238	P	Pn	12 21 16.9	+1.1
NTVZ	North Tongarir	3.29	239	P	Pn	12 21 17.0	+1.1
KRVZ	Karewarewa	3.31	240	P	Pn	12 21 17.3	+1.1
GRZ	Great Barrier	3.32	290	P	Pn	12 21 16.2	0.0
MKAZ	Moumakai	3.33	275	P	Pn	12 21 15.6	-0.7
NNVZ	North Ngauruho	3.34	239	P	Pn	12 21 18.0	+1.3
SNVZ	South Ngauruho	3.35	238	P	Pn	12 21 17.9	+1.0
WTVZ	West Tongariro	3.35	240	P	Pn	12 21 18.4	+1.6
NGZ	Ngauruhoe	3.37	239	P	Pn	12 21 18.2	+1.0
TUVZ	Tukino	3.38	237	P	Pn	12 21 18.6	+1.3
WIAZ	Waiheke Island	3.40	280	P	Pn	12 21 16.7	-0.7
WPRZ	Waipukurau	3.42	220	P	Pn	12 21 18.2	+0.5
WHVZ	Whangaehu Hut	3.44	237	P	Pn	12 21 19.2	+1.2
TWVZ	Taurewa	3.44	241	P	Pn	12 21 19.2	+1.3
PNHZ	Pukenui	3.44	224	P	Pn	12 21 18.0	0.0
FWVZ	Far West T-bar	3.44	238	P	Pn	12 21 19.3	+1.1
WNVZ	Wahianoa	3.45	236	P	Pn	12 21 19.3	+1.0
TRVZ	Turoa	3.47	237	P	Pn	12 21 19.5	+0.9
PRHZ	Porangahau	3.48	216	P	Pn	12 21 18.7	+0.2
ETAZ	East Tamaki Re	3.53	277	P	Pn	12 21 19.3	+0.1
MBAZ	Motutapu North	3.59	280	P	Pn	12 21 20.1	+0.1
HIZ	Hauiti	3.67	252	P	Pn	12 21 22.9	+1.9
HIZ	Hauiti	3.67	252	P	Pn	12 21 23.1	+2.1
TSZ	Takapari Road	3.67	224	P	Pn	12 21 20.8	-0.4
ABAZ	Army Bay	3.68	282	P	Pn	12 21 22.1	+0.8
HBAZ	Herne Bay Bore	3.71	278	P	Pn	12 21 23.0	+1.4
ANWZ	Angora Road	3.71	216	P	Pn	12 21 22.2	+0.6
DVHZ	Dannevirke	3.74	220	P	Pn	12 21 22.1	+0.1
AWAZ	Awhitu Peninsu	3.74	275	P	Pn	12 21 23.6	+1.6
WTAZ	Waiatarua	3.82	277	P	Pn	12 21 24.7	+1.6
RVAZ	Riverhead Bore	3.84	279	P	Pn	12 21 23.3	-0.1
VRZ	Vera Road	3.94	244	P	Pn	12 21 26.6	+1.9
BFZ	Birch Farm	3.99	216	P	Pn	12 21 25.2	-0.3
BFZ	Birch Farm	3.99	216	P	Pn	12 21 25.5	0.0
POWZ	Post Office Ro	4.01	222	P	Pn	12 21 25.6	-0.2
PRWZ	Pori Road	4.03	219	P	Pn	12 21 26.4	+0.5
WAZ	Wanganui	4.08	235	P	Pn	12 21 28.4	+1.7
CPWZ	Castlepoint	4.20	214	P	Pn	12 21 27.6	-0.7
WCZ	Waipu Caves	4.27	290	P	Pn	12 21 29.1	-0.2
MRZ	Mangatainoka R	4.31	221	P	Pn	12 21 28.8	-1.0
LREZ	Lake Rotokare	4.33	241	P	Pn	12 21 32.1	+2.0
DREZ	Durham Road	4.37	245	P	Pn	12 21 33.5	+2.9
PREZ	Palmer Road	4.45	244	P	Pn	12 21 34.8	+2.9
NEZ	North Egmont	4.47	245	P	Pn	12 21 34.9	+2.7
TMWZ	Te Maipa	4.49	215	P	Pn	12 21 31.6	-0.9
HOWZ	Holdsworth Sta	4.51	220	P	Pn	12 21 31.5	-1.2
PKE	Pukeiti	4.52	246	P	Pn	12 21 36.4	+3.6
KHEZ	Kahui Hut	4.54	245	P	Pn	12 21 36.4	+3.4
NBEZ	Newall Road No	4.63	246	P	Pn	12 21 37.4	+3.0
OGWZ	Otaki Gorge	4.63	223	P	Pn	12 21 33.4	-1.0
KIW	Kapiti Island	4.81	224	P	Pn	12 21 35.4	-1.3
TRWZ	Traveller	4.82	214	P	Pn	12 21 35.3	-1.6
CAW	Cannon Point	4.90	221	P	Pn	12 21 36.2	-1.7
PAWZ	Paruwai Farm	4.92	216	P	Pn	12 21 37.2	-1.2
MSWZ	Moikau Station	5.04	217	P	Pn	12 21 38.0	-1.8
OUZ	Omahuta	5.13	294	P	Pn	12 21 41.5	+0.3
OUZ	Omahuta	5.13	294	P	Pn	12 21 41.4	+0.3
PLWZ	Palliser	5.15	216	P	Pn	12 21 39.6	-1.9
DUWZ	D'Urville Isla	5.34	230	P	Pn	12 21 42.9	-1.2
TCW	Tory Channel	5.40	225	P	Pn	12 21 42.8	-2.0
TUWZ	Tuamarina	5.73	225	P	Pn	12 21 47.4	-1.9
BSWZ	Blackbirch Sta	5.96	223	P	Pn	12 21 50.6	-1.9
QRZ	Quartz Range	6.24	235	P	Pn	12 21 56.0	-0.4
KHZ	Kahutara	6.63	220	P	Pn	12 22 00.3	-1.4
CTZ	Chatham Island	6.98	155	P	Pn	12 22 13.1	+6.6
RPZ	Rata Peaks	8.84	223	P	Pn	12 22 28.4	-3.8
	12nm,1.1s,baz=22,slow=17,SNR=1.4						
RPZ				S	Sn	12 23 59.3	-13

λ119.25000°. Principal axes: T 1.0686, Plg66.0000°, Azm167.0000°; N 0.2446, Plg24.0000°, Azm2.0000°; P -1.3132, Plg6.0000°, Azm270.0000°;
*NEIC **10** 12:21:19.6±2.1, 30°.42S±0°.05×72°.10W±0°.06, h18km±3km, mb4.4/8, Mwr4.0/12, ML4.3(GUC) Error ellipse: s-maj=8.4km s-min=6.4km az=119.0*
*GUC **10** 12:21:21.8±0.6, 30°.45S×71°.87W, h18km±1km, ML4.3*
ISC 10 12:21:17.0±1.4, 30°.40S±0°.02×72°.01W±0°.04, h3km±9km, n104, σ1§57/134, mb4.4/7, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.42**	**130**		**Pb**	**12 21 28.5**	**+1.3**
CO06				Sg	**Sb**	**12 21 34.0**	**0.0**
CO06	**Fray Jorge**	**0.42**	**130**	*e*P	**Pb**	**12 21 28.4**	**+1.3**
CO06				*i* S	**Sb**	**12 21 32.9**	**-1.0**
CO05	**La Serena**	**0.83**	**54**		**Pn**	**12 21 36.0**	**+0.4**
CO05				Sg	**Sn**	**12 21 46.6**	**-1.6**
CO05	**La Serena**	**0.83**	**54**	*e*P	**Pn**	**12 21 35.9**	**+0.4**
CO05				*i* S	**Sn**	**12 21 46.4**	**-1.9**
CO05				IAML		12 21 49.6	
	comp=N,15μm,0.3s						
GO04	**Tololo Observa**	**1.08**	**78**		**Pn**	**12 21 39.7**	**+0.5**
GO04	**Tololo Observa**	**1.08**	**78**	*e*P	**Pn**	**12 21 39.6**	**+0.4**
GO04				*i* S	**Sn**	**12 21 53.0**	**-1.8**
GO04				IAML		12 21 58.5	
	comp=N,27μm,0.4s						
GO04	**Tololo Observa**	**1.08**	**78**	*e*P	**Pn**	**12 21 39.6**	**+0.4**
GO04				*e*S	**Sn**	**12 21 56.0**	**+1.3**
CO02	**Combarbal**	**1.18**	**133**		**Pg**	**12 21 40.9**	**+1.2**
CO02	**Combarbal**	**1.18**	**133**	*e*P	**Pg**	**12 21 40.9**	**+1.2**
CO02				*i* S	**Sn**	**12 21 55.5**	**-1.8**
CO02				IAML		12 22 03.8	
	comp=N,18μm,0.4s						
CO02	**Combarbal**	**1.18**	**133**	*e*P	**Pg**	**12 21 40.9**	**+1.2**
CO02				*e*S	**Sg**	**12 21 57.9**	**+2.9**
CO02				IAML		12 21 59.4	
	comp=Z,6μm,0.3s						
CO03	**El Pedregal**	**1.22**	**111**	Pn	**Pg**	**12 21 41.4**	**+0.9**
CO03	**El Pedregal**	**1.22**	**111**	*e*P	**Pg**	**12 21 41.3**	**+0.9**
CO03				*i* S	**Sn**	**12 21 56.1**	**-2.0**
CO03				IAML		12 21 59.6	
	comp=N,9μm,0.5s						
CO01	**Juntas del Tor**	**1.72**	**76**		**Pb**	**12 21 50.0**	**+0.7**
CO01	**Juntas del Tor**	**1.72**	**76**	*e*P	**Pb**	**12 21 50.1**	**+0.7**
CO01				*i* S	**Sg**	**12 22 11.4**	**-0.7**
CO01	**Juntas del Tor**	**1.72**	**76**	*e*P	**Pg**	**12 21 50.3**	**+0.4**
CO01				*e*S	**Sg**	**12 22 12.7**	**+0.5**
CO01				IAML		12 22 14.0	
	comp=Z,2μm,0.3s						
LCO	**Las Campanas**	**1.80**	**40**		**Pb**	**12 21 50.8**	**+0.1**
LCO	**Las Campanas**	**1.80**	**40**	*e*P	**Pb**	**12 21 51.0**	**+0.3**
AC05	**El Transito**	**2.18**	**45**	Pn	**Pb**	**12 21 56.7**	**-0.4**
AC05	**El Transito**	**2.18**	**45**	*e*P	**Pb**	**12 21 56.0**	**-1.1**
AC05				*e*S	**Sb**	**12 22 23.2**	**-1.3**
AC05				IAML		12 22 30.8	
	comp=Z,1μm,0.7s						
AROD	**Rodeo**	**2.21**	**84**	*e*P	**Pb**	**12 21 58.8**	**+1.0**
AROD				*e*S	**Sb**	**12 22 23.2**	**-2.5**
AROD				*e*S	**Sg**	**12 22 27.5**	**-0.6**
VA06	**Catapilco**	**2.24**	**164**		**Pn**	**12 21 55.5**	**+0.6**
VA06	**Catapilco**	**2.24**	**164**	*i* S	**Sb**	**12 22 26.0**	**-0.1**
VA06				IAML		12 22 32.7	
	comp=E,3μm,0.6s						
AC04	**Llanos de Chal**	**2.34**	**21**	Pn	**Pn**	**12 21 57.5**	**+1.1**
AC04	**Llanos de Chal**	**2.34**	**21**	*e*P	**Pn**	**12 21 57.2**	**+0.9**
AC04				*e*S	**Sb**	**12 22 30.2**	**+1.1**
ACDV	**Cuesta del Vie**	**2.51**	**85**	*e*P	**Pb**	**12 22 03.0**	**+0.1**
ACDV				*e*S	**Sb**	**12 22 32.7**	**-1.6**
ACDV				IAML		12 22 42.8	
	comp=Z,791nm,0.6s						
ACCO	**Cerro Coronel**	**2.55**	**95**	*e*P	**Pb**	**12 22 04.0**	**+0.4**
ACCO				*e*S	**Sb**	**12 22 33.7**	**-1.8**
ACCO				*e*S	**Sg**	**12 22 41.4**	**+2.4**
VA01	**Torpederas**	**2.63**	**173**	Pn	**Pn**	**12 22 00.5**	**+0.2**
VA03	**San Esteban**	**2.66**	**152**		**Pn**	**12 22 02.5**	**+1.6**
VA03	**San Esteban**	**2.66**	**152**	*i* S	**Sb**	**12 22 37.0**	**-1.5**
VA03				IAML		12 22 43.8	
	comp=N,2μm,0.3s						
VA03	**San Esteban**	**2.66**	**152**	*e*P	**Pn**	**12 22 03.0**	**+2.1**
VA03				IAML		12 22 45.9	
	comp=Z,1μm,0.5s						
ROC1	**El Roble**	**2.70**	**162**		**Pn**	**12 22 02.4**	**+0.9**
ROC1	**El Roble**	**2.70**	**162**	*e*P	**Pn**	**12 22 02.5**	**+0.9**
ROC1				*e*S	**Sn**	**12 22 36.0**	**+1.1**
RTLS	**Leoncito**	**2.71**	**122**	*e*P	**Pb**	**12 22 06.0**	**-0.4**
RTLS				IAML		12 22 51.9	
	comp=Z,782nm,0.6s						
MT02	**Curacav**	**2.94**	**166**		**Pn**	**12 22 05.8**	**+1.1**
MT02	**Curacav**	**2.94**	**166**	*i* S	**Sb**	**12 22 44.4**	**-2.1**
MT02	**Curacav**	**2.94**	**166**	*e*P	**Pn**	**12 22 05.3**	**+0.7**
MT02				IAML		12 22 58.4	
	comp=Z,623nm,0.7s						
PEL	**Peldehue**	**2.96**	**158**		**Pn**	**12 22 05.9**	**+1.0**
PEL	**Peldehue**	**2.96**	**158**	*e*P	**Pn**	**12 22 06.6**	**+1.7**
PEL				*e*S	**Sg**	**12 22 50.8**	**-1.2**
ZON	**Zonda**	**3.08**	**113**	Pn	**Pn**	**12 22 06.3**	**-0.3**
MT05	**Renca**	**3.17**	**160**		**Pn**	**12 22 09.1**	**+1.2**
MT05	**Renca**	**3.17**	**160**	*e*P	**Pn**	**12 22 09.0**	**+1.2**
MT05				*e*S	**Sb**	**12 22 49.2**	**-3.9**
MT05				IAML		12 22 59.7	
	comp=Z,914nm,0.8s						
RTLL	**Cerro Villicun**	**3.18**	**108**	*e*P	**Pb**	**12 22 11.8**	**-2.4**
VA05	**Santo Domingo**	**3.26**	**174**		**Pn**	**12 22 08.7**	**-0.3**
MT03	**Universidad Ad**	**3.33**	**158**		**Pn**	**12 22 11.8**	**+1.7**
MT03	**Universidad Ad**	**3.33**	**158**	*e*P	**Pn**	**12 22 12.0**	**+1.8**
MT03				IAML		12 23 11.7	
	comp=Z,720nm,1.2s						
AC06	**Mina Casimiro**	**3.37**	**26**		**Pn**	**12 22 12.1**	**+1.5**
MT09	**Talagante**	**3.47**	**166**		**Pn**	**12 22 13.7**	**+1.6**
ASAL	**Salagasta**	**3.48**	**130**	*e*P	**Pb**	**12 22 17.0**	**-2.4**
ASAL				*e*S	**Sb**	**12 22 59.7**	**-2.4**
ASAL				*e*S	**Sg**	**12 23 02.7**	**-6.2**
MT01	**Popeta**	**3.51**	**170**	Pn	**Pn**	**12 22 13.0**	**+0.6**
MT01	**Popeta**	**3.51**	**170**	*e*P	**Pn**	**12 22 13.2**	**+0.8**
MT01				*e*S	**Sb**	**12 23 02.7**	**-0.1**
MT01				IAML		12 23 11.8	
	comp=Z,341nm,0.6s						
ARCO	**CERRO ARCO**	**3.58**	**134**	*e*P	**Pn**	**12 22 13.2**	**-0.3**
ARCO				*e*P	**Pb**	**12 22 18.9**	**-2.1**
ARCO				*e*S	**Sb**	**12 23 06.7**	**+1.8**
ARCO				IAML		12 23 18.9	
	comp=Z,408nm,0.6s						
VCA	**Vinchina**	**3.71**	**64**	*e*P	**Pb**	**12 22 21.0**	**-2.3**
LMEL	**Las Melosas**	**3.76**	**156**		**Pn**	**12 22 18.4**	**+2.3**
LMEL	**Las Melosas**	**3.76**	**156**	*e*P	**Pn**	**12 22 19.1**	**+3.0**
LMEL				*i* S	**Sn**	**12 23 03.0**	**+2.1**
BO04	**La Punta**	**3.77**	**162**		**Pn**	**12 22 17.1**	**+1.1**
BO04	**La Punta**	**3.77**	**162**	*e*P	**Pn**	**12 22 17.4**	**+1.4**
AAGR	**Agrelo**	**3.81**	**135**	*e*P	**Pb**	**12 22 21.0**	**-3.9**
AAGR				*e*S	**Sg**	**12 23 15.2**	**-4.2**
AAGR				*e*S	Sb	12 23 22.9	+11
BO01	**Tunca**	**4.05**	**169**	Pn	**Pn**	**12 22 20.8**	**+0.9**
BO01	**Tunca**	**4.05**	**169**	*e*P	**Pn**	**12 22 21.0**	**+1.1**
BO01				*e*S	**Sn**	**12 23 07.7**	**-0.2**
BO01				IAML		12 23 36.7	
	comp=Z,171nm,0.8s						
AC02	**Maricunga**	**4.37**	**36**	Pn	**Pn**	**12 22 27.0**	**+2.3**
AC02	**Maricunga**	**4.37**	**36**	*e*P	**Pn**	**12 22 27.8**	**+3.1**
AC02				*e*S	**Sn**	**12 23 15.2**	**-1.1**
AC01	**Pan de Azucar**	**4.42**	**17**	Pn	**Pn**	**12 22 24.6**	**-0.4**
AC01	**Pan de Azucar**	**4.42**	**17**	*e*P	**Pn**	**12 22 25.0**	**0.0**
AC01				*e*S	**Sg**	**12 23 36.7**	**-2.3**
BO02	**Sierra Bellavi**	**4.50**	**167**		**Pn**	**12 22 27.2**	**+1.1**
BO02	**Sierra Bellavi**	**4.50**	**167**	*e*S	**Sb**	**12 23 33.7**	**+2.4**
GO05	**Huala**	**4.59**	**179**	Pn	**Pn**	**12 22 26.7**	**-0.7**
ML02	**Panimavida**	**5.37**	**175**		**Pn**	**12 22 38.4**	**+0.4**
GO02	**Mina Guanaco**	**5.64**	**23**	Pn	**Pn**	**12 22 42.5**	**+0.3**
BI05	**Punta Hualpn**	**6.40**	**189**	Pn	**Pn**	**12 22 51.5**	**-0.7**
H03N1	**Juan Fernandez**	**6.60**	**241**	Pn	**Pn**	**12 22 54.5**	**-0.1**
	baz=112,slow=19						
H03N1				T	T	12 29 56.6	
	baz=71,slow=72,SNR=2452						
H03N2	**Juan Fernandez**	**6.61**	**241**	Pn	**Pn**	**12 22 54.6**	**-0.2**
	baz=112,slow=19						
H03N2				T	T	12 29 56.1	
	baz=71,slow=72,SNR=2691						
H03N3	**Juan Fernandez**	**6.61**	**241**	Pn	**Pn**	**12 22 54.6**	**-0.3**
	baz=112,slow=19						
H03N3				T	T	12 29 56.4	
	baz=71,slow=72,SNR=1849						
VA04	**Juan Fernndez**	**6.63**	**239**		**Pn**	**12 22 55.0**	**-0.3**
H03S1	**Juan Fernandez**	**6.78**	**238**	Pn	**Pn**	**12 22 55.8**	**-1.3**
PB04	**IPOC Station P**	**8.21**	**12**	Pn	**Pn**	**12 23 16.0**	**-1.2**
LVC	**Limon Verde**	**8.24**	**20**	Pn	**Pn**	**12 23 16.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=130,slow=21,SNR=1.4						
LVC				Sn	**Sn**	**12 24 49.6**	**-2.1**
	comp=Z,1.3nm,0.3s,baz=100,slow=21,SNR=2.4						
	comp=Z,1.0nm,0.3s						
PLCA	**Paso Flores**	**10.37**	**174**	Pn	**Pn**	**12 23 47.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=2.9						
	comp=Z,0.9nm,0.3s						
TRQA	**Tornquist**	**11.27**	**135**	Pn	**Pn**	**12 24 01.5**	**+2.5**
CPUP	**Villa Florida**	**13.55**	**76**	Pn	**Pn**	**12 24 30.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=249,slow=13,SNR=1.5						
	comp=Z,0.7nm,0.4s						
CPUP	**Villa Florida**	**13.55**	**76**	Pn	**Pn**	**12 24 33.8**	**+3.6**
LPAZ	**La Paz**	**14.49**	**15**	Pn	**Pn**	**12 24 44.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=209,slow=13,SNR=2.2						
	comp=Z,0.6nm,0.5s						
LPAZ	**La Paz**	**14.49**	**15**	P	**P**	**12 24 51.2**	**+0.5**
SIV	**San Ignacio**	**17.50**	**37**	P	**P**	**12 25 23.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=213,slow=10,SNR=25						
	comp=Z,6.2nm,0.8s						
BDFB	**Brasilia**	**26.45**	**62**	P	**P**	**12 26 54.5**	**-1.0**
	comp=Z,3.0nm,0.4s,baz=253,slow=7.3,SNR=4.6						
	comp=Z,3.0nm,0.4s						
BDFB	**Brasilia**	**26.45**	**62**	P	**P**	**12 26 54.8**	**-0.7**
BDFB				IAmb	IAmb	12 26 57.6	
	comp=Z,8.8nm,1.1s						
PMSA	**Palmer Station**	**34.75**	**174**	P	**P**	**12 28 06.6**	**-1.5**
	comp=Z,38nm,0.6s,baz=282,slow=9.3,SNR=48						
SMAI	**San Martin Ant**	**37.87**	**177**	P	**P**	**12 28 35.5**	**+0.8**
SMAI				IAmb	IAmb	12 29 16.4	
	comp=Z,11nm,1.4s						
BELA	**Belgrano 2**	**50.41**	**170**	P	**P**	**12 30 16.3**	**+1.1**
BELA				IAmb	IAmb	12 30 50.6	
	comp=Z,7.0nm,1.5s						
VNA3	**Neumayer Olymp**	**52.68**	**159**	P	**P**	**12 30 33.2**	**+0.9**
VNA2	**Neumayer--Watz**	**53.32**	**158**	P	**P**	**12 30 37.8**	**+0.9**
	baz=282,slow=7.8						
SNAA	**Sanae**	**54.91**	**159**	P	**P**	**12 30 49.4**	**+0.8**
SNAA	**Sanae**	**54.91**	**159**		**P**	**12 30 49.0**	**+0.4**
SNAA				IAmb	IAmb	12 30 50.0	
	comp=Z,2.7nm,0.7s						
TROLL	**Troll, Antarti**	**56.62**	**159**	P	**P**	**12 31 01.8**	**+0.8**
QSPA	**South Pole Qui**	**59.82**	**180**	P	**P**	**12 31 23.6**	**+0.1**
VNDA	**Vanda**	**67.62**	**191**	P	**P**	**12 32 15.0**	**+0.4**
DBIC	**Dimbokro**	**74.04**	**72**	P	**P**	**12 32 54.5**	**0.0**
	comp=Z,5.7nm,1.0s,baz=255,slow=7.8,SNR=4.1						
	comp=Z,5.7nm,1.0s						
TOA0	**Torodi Ar. Sit**	**82.98**	**70**	P	**P**	**12 33 43.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**82.98**	**70**	P	**P**	**12 33 44.0**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=278,slow=6.1,SNR=6.0						
	comp=Z,1.3nm,0.8s						
H11S2	**WAKE ISLAND Hyl**	**25.77**	**272**	T	T	14 59 07.2	
	baz=116,slow=74,SNR=24						
H11S1	**WAKE ISLAND Hyl**	**25.78**	**272**	T	T	14 59 03.0	
	baz=116,slow=74,SNR=11						
H11S3	**WAKE ISLAND Hyl**	**25.78**	**272**	T	T	14 59 10.0	
	baz=116,slow=74,SNR=17						
ZALV	**Zalesovo Beam**	**151.13**	**29**	PKPbc	**PKiKP**	**12 41 12.5**	**+0.8**
	comp=Z,6.8nm,0.7s,baz=298,slow=3.4,SNR=29						
MKAR	**Makanchi Array**	**154.26**	**43**	PKP	**PKPdf**	**12 41 11.5**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=30,slow=7.3,SNR=2.2						
MKAR				PKPbc	**PKiKP**	**12 41 18.6**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=302,slow=2.7,SNR=4.2						
PZH	**PanZhiHua**	**173.27**	**124**	PKP	**PKPdf**	**12 41 26.0**	**-2.3**

*MDD **10** 12:51:14.1±1.8, 32°.40N×7°.68W, h0km, Mb3.9/2, M_mb3.2/3, Error ellipse: s-maj=23.1km s-min=14.1km az=95.0*
INMG 10 12:51:14.0±0.9, 32°.35N×7°.90W, h10km, ML2.2, 2C, Error ellipse: s-maj=11.5km s-min=4.3km az=48.0, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVAQ	**Vaqueiros**	**5.04**	**2**	*e*Pn	Pn	12 52 29.0	-0.7
PVAQ				*e*Sn	Sn	12 53 24.9	-3.1
PVAQ				A	A	12 53 26.3	
	1.7nm,0.6s						
EGRO	**El Granado**	**5.18**	**4**	P	Pn	12 52 31.0	-0.6
EGRO				⇑*i*Vmb_V		12 52 32.0	
	69nm,SNR=1.1						
EGRO				S	Sn	12 53 26.1	-5.3
PCVE	**Castro Verde**	**5.27**	**359**	*e*Pn	Pn	12 52 32.6	-0.2
PCVE				*e*Sn	Sn	12 53 30.1	-3.5
PCVE				A	A	12 53 33.2	
	1.2nm,0.9s						
MESJ	**Messejana**	**5.48**	**357**	*e*Sn	Sn	12 53 33.8	-5.1
MESJ				A	A	12 53 40.3	
	1.6nm,0.5s						
EMIN	**Mina Concepcio**	**5.50**	**10**	P	Pn	12 52 34.8	-1.1
PBAR	**Barrancos**	**5.86**	**7**	*e*Pn	Pn	12 52 40.6	-0.2
PBAR				*e*Sn	Sn	12 53 45.1	-2.9
EADA	**Adamuz**	**6.41**	**24**	P	Pn	12 52 46.9	-1.6
EADA				⇑*i*Vmb_V		12 52 48.0	
	59nm,SNR=1.3						
EADA				S	Sn	12 53 54.7	-7.0

IDC 10 12:52:08.8±2.2, 2°.59N×128°.28E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=173.5km s-min=24.0km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.17**	**165**	P	P	12 57 17.5	+0.3
	0.2nm,0.3s,baz=345,slow=11,SNR=4.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**26.67**	**168**	P	P	12 57 49.2	-0.5
	0.1nm,0.4s,baz=352,slow=6.9,SNR=4.9						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.36**	**325**	P	P	13 02 13.4	+0.5
	0.1nm,0.4s,baz=129,slow=7.4,SNR=2.0						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.52**	**327**	P	P	13 02 40.6	-0.3
	0.2nm,0.5s,baz=125,slow=5.6,SNR=2.3						
	0.2nm,0.5s						

*IDC **10** 13:01:59.1±1.1, 45°.64N×150°.24E, h0km, mb3.7/9, mbtmp3.7/9, Error ellipse: s-maj=34.6km s-min=28.2km az=24.0*
*SKHL **10** 13:02:11.8±0.4, 45°.20N×150°.30E, h119km±5km, mb4.5/3, msha5.3/3*
*MOS **10** 13:02:12.1±1.3, 45°.57N×149°.97E, h120km, mb4.2/1, Error ellipse: s-maj=24.0km s-min=16.9km az=139.2*
*JMA **10** 13:02:13.6±0.6, 45°N±4°×15°0E±°, h115km, MV3.5/12, KURILE ISLANDS REGION*
ISC 10 13:02:10.4±0.9, 45°.03N±0°.10×150°.41E±0°.08, h100km, n41, σ2§08/44, mb3.6/9, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.81**	**277**	*e*PN	**Pn**	**13 02 40.9**	**+0.5**
KUR				*i* S	**Sn**	**13 03 02.6**	**-0.7**
KUR				pmax	pmax		
	comp=Z,151nm,0.2s						
KUR				pmax	pmax		
	comp=N,60nm,0.3s						
KUR				smax	smax		
	comp=N,550nm,0.2s						
KUR				smax	smax		
	comp=E,372nm,0.3s						
KUR	**Kuril'sk**	**1.81**	**277**	*e*P	**Pn**	**13 02 40.9**	**+0.5**
KUR				AMB	AMB	13 02 45.5	
	comp=E,120nm,0.5s						
KUR				*i* S	**Sn**	**13 03 02.7**	**-0.6**
KUR				A	A	13 03 04.7	
	comp=E,550nm,0.4s						
KUR				A	A	13 03 04.7	
	comp=E,380nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.40**	**255**	*d*PN	**Pn**	**13 03 03.5**	**+2.1**
YUK				*i* S	**Sn**	**13 03 41.9**	**+1.1**
YUK				pmax	pmax		
	comp=Z,140nm,0.2s						
YUK				smax	smax		
	comp=N,107nm,0.2s						
YUK				smax	smax		
	comp=E,179nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.40**	**255**	*i* P	**Pn**	**13 03 03.5**	**+2.1**
YUK				AMB	AMB	13 03 05.1	
	comp=E,30nm,0.3s						
YUK				*i* S	**Sn**	**13 03 41.9**	**+1.1**
YUK				A	A	13 03 48.7	
	comp=E,130nm,0.4s						
YUK				A	A	13 03 48.7	
	comp=E,180nm,0.4s						
NEM2	**Nemuro 2**	**3.74**	**245**	*e*P	**Pn**	**13 03 07.4**	**+1.4**
NEM2				*e*S	**Sn**	**13 03 48.9**	**-0.2**
NMR	**Nemuro--Hokkai**	**3.75**	**245**	⇑*i*PN	**Pn**	**13 03 07.3**	**+1.2**
NMR				*i* S	**Sn**	**13 03 48.8**	**-0.5**
NMR	**Nemuro--Hokkai**	**3.75**	**245**	*i* P	**Pn**	**13 03 07.4**	**+1.3**
NMR				AMB	AMB	13 03 09.4	
	comp=E,20nm,0.3s						
NMR				*i* S	**Sn**	**13 03 49.1**	**-0.2**
NMR				A	A	13 03 53.6	
	comp=E,30nm,0.2s						
NMR				A	A	13 03 53.6	
	comp=E,30nm,0.2s						
RUSJ	**Misakicho**	**3.80**	**258**	*e*PN	**Pn**	**13 03 09.7**	**+2.9**
RUSJ				*e*S	**Sn**	**13 03 53.6**	**+3.1**
JRA	**Rausu**	**3.94**	**256**	*e*P	**Pn**	**13 03 11.2**	**+2.6**
JNK	**Nakash**	**4.33**	**253**	*e*P	**Pn**	**13 03 16.0**	**+2.0**
JNK				*e*S	**Sn**	**13 04 04.0**	**+0.8**
AKK	**Akkeshi**	**4.49**	**245**	*e*P	**Pn**	**13 03 17.2**	**+1.1**
AKK				*e*S	**Sn**	**13 04 06.7**	**-0.4**
JAK	**Akkeshi**	**4.59**	**246**	*e*P	**Pn**	**13 03 18.5**	**+1.0**
JAK				*e*S	**Sn**	**13 04 09.2**	**-0.4**
JTKR	**Abashiri--Toko**	**4.77**	**260**	*e*P	**Pn**	**13 03 21.7**	**+1.9**
JAR	**Ashorobuto**	**5.08**	**252**	*e*P	**Pn**	**13 03 26.4**	**+2.3**
JAR				*e*S	**Sn**	**13 04 22.8**	**+1.4**
JOB	**Onbets**	**5.20**	**248**	*e*P	**Pn**	**13 03 27.5**	**+1.8**
JOB				*e*S	**Sn**	**13 04 24.7**	**+0.4**
JKK2	**Kamakawa 2**	**5.60**	**261**	*e*P	**Pn**	**13 03 33.5**	**+2.3**
JCH	**Churui**	**5.64**	**247**	*e*P	**Pn**	**13 03 33.1**	**+1.5**
JCH				*e*S	**Sn**	**13 04 33.8**	**-1.2**
JNBK	**Urakawa-nobuka**	**6.19**	**246**	*e*P	**Pn**	**13 03 39.9**	**+0.7**
JNBK				*e*S	**Sn**	**13 04 44.9**	**-3.6**
JANG	**Nango**	**8.03**	**238**	*e*P	**Pn**	**13 04 03.9**	**-0.3**
JANG				*e*S	**Sn**	**13 05 28.3**	**-4.9**
JTH	**Tanohata**	**8.10**	**234**	*e*S	**Sn**	**13 05 30.1**	**-5.0**
H11N2	**WAKE ISLAND Hy**	**28.70**	**146**	T	T	13 39 01.8	
	baz=336						
H11N1	**WAKE ISLAND Hy**	**28.71**	**146**	T	T	13 39 02.9	
	baz=336,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.71**	**146**	T	T	13 39 13.8	
	baz=336,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.73**	**148**	T	T	13 40 19.7	
	baz=337,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**29.74**	**148**	T	T	13 40 26.9	
	baz=337,slow=76,SNR=64						
H11S2	**WAKE ISLAND Hy**	**29.75**	**148**	T	T	13 40 17.9	
	baz=337,slow=76,SNR=56						
MKAR	**Makanchi Array**	**46.06**	**298**	P	**P**	**13 10 21.8**	**-2.2**
	comp=E,0.6nm,0.6s,baz=63,slow=6.1,SNR=6.0						
	comp=E,0.6nm,0.6s						
KURK	**Kurchatov**	**46.75**	**304**	P	**P**	**13 10 27.5**	**-1.7**
KURK	**Kurchatov**	**46.75**	**304**	*e*P	**P**	**13 10 27.5**	**-1.7**
KURBB	**Kurchatov Arra**	**46.84**	**304**	P	**P**	13 10 27.5	-2.4
	comp=E,0.5nm,0.4s,baz=75,slow=8.1,SNR=5.6						
	comp=E,0.5nm,0.4s						
FINES	**FINESS Array B**	**64.78**	**334**	P	**P**	13 12 34.5	-3.2
	comp=E,0.8nm,0.6s,baz=31,slow=8.9,SNR=4.5						
	comp=E,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**64.92**	**60**	P	**P**	**13 12 39.2**	**-0.2**
	comp=E,0.2nm,0.6s,baz=294,slow=6.8,SNR=2.1						
	comp=E,0.2nm,0.6s						
NOA	**NORSAR Array B**	**69.23**	**340**	P	P	13 13 03.2	-2.7
	comp=E,0.7nm,0.5s,baz=29,slow=6.4,SNR=3.4						
	comp=E,0.7nm,0.5s						
ASAR	**Alice Springs**	**70.00**	**196**	P	**P**	**13 13 15.6**	**+4.5**
	comp=E,0.3nm,0.8s,baz=11,slow=5.2,SNR=4.1						
	comp=E,0.3nm,0.8s						
AKASG	**Malin Array Be**	**71.90**	**325**	P	P	13 13 19.9	-2.3
	comp=E,0.9nm,0.4s,baz=35,slow=6.0,SNR=5.7						
	comp=E,0.9nm,0.4s						
AKASG	**Malin Array Be**	**71.90**	**325**	P	**P**	**13 13 20.0**	**-2.3**
GERES	**GERESS Array B**	**79.14**	**333**	P	**P**	**13 14 02.4**	**-1.5**
	comp=E,0.2nm,0.3s,baz=28,slow=4.4,SNR=2.2						
	comp=E,0.2nm,0.3s						
TXAR	**Lajitas Array**	**80.00**	**58**	P	**P**	**13 14 10.0**	**+1.2**
	comp=E,0.1nm,0.5s,baz=305,slow=3.2,SNR=3.6						
	comp=E,0.1nm,0.5s						
H03N2	**Juan Fernandez**	**140.63**	**90**	T	T	15 58 42.0	
	baz=306						
H03N3	**Juan Fernandez**	**140.65**	**90**	T	T	15 58 31.1	
	baz=306						
H03N1	**Juan Fernandez**	**140.65**	**90**	T	T	15 58 42.5	
	baz=306						

*JMA **10** 13:09:10.7±0.3, 43°N±1°×14°8E±°, h0km, MV4.0/33, SE OFF ETOROFU*
*SKHL **10**

ϕ_s13.00000°, δ49.00000°, λ67.00000°.
IDC **10** 13:11:25.9±1.8, 46°.90N±147°.09E, h309km±15km, mb3.7/18, mbtmp4.4/25 Error ellipse: s-maj=17.0km s-min=9.6km az=166.0
ISC 10 13:11:23.3±0.4, 46°.55N±0°.05×147°.32E±0°.05, h300km, n439, σ1⇕32/462, mb4.2/103, 8C-7D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.37**	**164**	*c i* PN		**Pn**	**13 12 05.0**	**-0.7**
KUR				S		**S**	**13 12 43.5**	**+4.1**
KUR				pmax		pmax		
	comp=Z,653nm,0.4s							
KUR				pmax		pmax		
	comp=N,170nm,0.3s							
KUR				pmax		pmax		
	comp=E,66nm,0.4s							
KUR				smax		smax		
	comp=E,178nm,0.5s							
KUR				smax		smax		
	comp=N,85nm,0.2s							
KUR	**Kuril'sk**	**1.37**	**164**	*i* P		**Pn**	**13 12 05.0**	**-0.7**
KUR				AMB		AMB	13 12 05.6	
	comp=N,420nm,0.3s							
KUR				*e*S		**S**	**13 12 38.4**	**-1.0**
KUR				A		A	13 12 54.8	
	comp=N,150nm,0.4s							
KUR				A		A	13 12 54.8	
	comp=N,170nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.71**	**203**	*c i* PN		**Pn**	**13 12 15.8**	**-0.6**
YUK				*e*S		**S**	**13 13 00.4**	**+1.7**
YUK				pmax		pmax		
	comp=Z,2μm,0.2s							
YUK				pmax		pmax		
	comp=E,437nm,0.3s							
YUK				pmax		pmax		
	comp=N,309nm,0.2s							
YUK				smax		smax		
	comp=N,304nm,0.2s							
YUK				smax		smax		
	comp=E,752nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.71**	**203**	*i* P		**Pn**	**13 12 15.9**	**-0.5**
YUK				AMB		AMB	13 12 17.2	
	comp=E,580nm,0.4s							
YUK				*e*S		**S**	**13 12 58.0**	**-0.7**
YUK				A		A	13 13 03.3	
	comp=E,310nm,0.5s							
YUK				A		A	13 13 03.3	
	comp=E,770nm,0.5s							
RUSJ	**Misakicho**	**2.84**	**212⇑**	*i* PN		**Pn**	**13 12 17.5**	**-0.1**
JRA	**Rausu**	**3.04**	**212**	*e* P		**Pn**	**13 12 19.0**	**-0.5**
YSS	**Yuzh-Sakhalins**	**3.16**	**279**			**Pn**	**13 12 20.3**	**-0.4**
YSS	**Yuzh-Sakhalins**	**3.16**	**279**	*ce* PN		**Pn**	**13 12 20.6**	**0.0**
YSS				*e*S		**S**	**13 13 05.2**	**-1.2**
YSS				pmax		pmax		
	comp=Z,70nm,1.0s							
YSS				smax		smax		
	comp=N,30nm,1.3s							
YSS				smax		smax		
	comp=E,40nm,1.1s							
YSS	**Yuzh-Sakhalins**	**3.16**	**279**	*e* P		**Pn**	**13 12 20.6**	**0.0**
YSS				AMB		AMB	13 12 21.1	
	comp=E,40nm,0.4s							
YSS				*e*S		**S**	**13 13 05.7**	**-0.7**
YSS				A		A	13 13 07.3	
	comp=E,30nm,0.7s							
YSS				A		A	13 13 07.3	
	comp=E,50nm,0.7s							
NMR	**Nemuro--Hokkai**	**3.37**	**200⇑**	*i* PN		**Pn**	**13 12 20.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**3.37**	**200**	*i* P		**Pn**	**13 12 20.7**	**-2.2**
NEM2	**Nemuro 2**	**3.37**	**200**	*e* P		**Pn**	**13 12 20.5**	**-2.4**
NEM2				*e*S		**S**	**13 13 04.5**	**-5.9**
JNK	**Nakash**	**3.49**	**213**	*e* P		**Pn**	**13 12 23.6**	**-0.5**
JTKR	**Abashiri--Toko**	**3.53**	**224**	*e* P		**Pn**	**13 12 24.7**	**+0.3**
JTKR				*e*S		**S**	**13 13 12.4**	**-0.9**
JSE	**Soyaes**	**3.67**	**246**	*e* P		**Pn**	**13 12 26.6**	**+0.6**
JMP	**Maruseppu**	**3.77**	**229**	*e* P		**Pn**	**13 12 27.6**	**+0.5**
AKK	**Akkeshi**	**3.94**	**207**	*e* P		**Pn**	**13 12 26.8**	**-2.2**
JWK2	**Keihoku**	**3.98**	**254**	*e* P		**Pn**	**13 12 30.7**	**+1.5**
JAK	**Akkeshi**	**4.01**	**209**	*e* P		**Pn**	**13 12 27.9**	**-1.8**
JAK				*e*S		**S**	**13 13 17.3**	**-5.6**
JAR	**Ashorobuto**	**4.11**	**219**	*e* P		**Pn**	**13 12 30.9**	**+0.1**
JAR				*e*S		**S**	**13 13 23.9**	**-1.0**
JKK2	**Kamakawa 2**	**4.19**	**232**	*e* P		**Pn**	**13 12 32.7**	**+1.0**
JRBN	**Rebuntou**	**4.50**	**258**	*e* P		**Pn**	**13 12 35.2**	**+0.1**
JFR	**Furan**	**4.77**	**226**	*e* P		**Pn**	**13 12 39.0**	**+0.8**
JCH	**Churui**	**4.84**	**217**	*e* P		**Pn**	**13 12 37.5**	**-1.5**
JCH				*e*S		**S**	**13 13 33.6**	**-6.3**
JBT2	**Biratori 2**	**5.17**	**225**	*e* P		**Pn**	**13 12 42.7**	**-0.1**
JBT2				*e*S		**S**	**13 13 44.4**	**-2.3**
JNBK	**Urakawa-nobuka**	**5.37**	**219**	*e* P		**Pn**	**13 12 43.0**	**-2.3**
JNBK				*e*S		S	13 13 42.9	-8.2
ERM	**Erimo**	**5.43**	**215**	Pn		**Pn**	**13 12 44.6**	**-1.2**
ERM	**Erimo**	**5.43**	**215**	PN		**Pn**	**13 12 44.7**	**-1.2**
JEW	**Eniwo**	**5.59**	**231**	Pn		**Pn**	**13 12 48.2**	**+0.4**
JEW	**Eniwo**	**5.59**	**231**	*e*S		**S**	**13 13 52.7**	**-3.0**
JOT	**Ohata**	**6.86**	**223**	*e* P		**Pn**	**13 13 00.6**	**-2.4**
JOT				*e*S		S	13 14 15.0	-8.6
SKR	**Severo-Kuril's**	**7.15**	**51**	*e* PN		**Pn**	**13 13 06.5**	**+0.2**
SKR				*e*S		**S**	**13 14 21.4**	**-8.3**
SKR				pmax		pmax		
	comp=Z,142nm,0.6s							
SKR				smax		smax		
	comp=E,90nm,0.8s							
SKR				smax		smax		
	comp=N,120nm,0.8s							
SKR	**Severo-Kuril's**	**7.15**	**51**	*e* P		**Pn**	**13 13 06.1**	**-0.2**
SKR				AMB		AMB	13 13 07.2	
	comp=N,150nm,0.6s							
SKR				*e*S		**S**	**13 14 26.2**	**-3.5**
SKR				A		A	13 14 32.1	
	comp=N,160nm,0.8s							
SKR				A		A	13 14 32.1	
	comp=N,100nm,0.8s							
JOSM	**Okushiri--Mats**	**7.18**	**234**	*e* P		**Pn**	**13 13 06.1**	**-0.8**
JTM	**Tenmabayashi**	**7.32**	**220**	Pn		**Pn**	**13 13 06.1**	**-2.6**
JSI2	**Shiura 2**	**7.42**	**225**	*e* P		**Pn**	**13 13 07.8**	**-2.0**
JSI2				*e*S		S	13 14 27.1	-8.9
JANG	**Nango**	**7.47**	**216**	*e* P		**Pn**	**13 13 07.3**	**-3.2**
JANG				*e*S		S	13 14 26.6	-11
OKH	**Okha**	**7.56**	**340**	*e*S		**S**	**13 14 42.1**	**+3.4**
OKH				A		A	13 15 13.3	
	comp=N,90nm,0.7s							
OKH				A		A	13 15 13.3	
	comp=N,330nm,0.7s							
JIW	**Iwasaki**	**7.97**	**224**	*e* P		**Pn**	**13 13 14.4**	**-2.2**
PEA0B	**Petropavlovsk-**	**9.38**	**42**	Pn		**Pn**	**13 13 33.1**	**-0.6**
PEA0B	**Petropavlovsk-**	**9.38**	**42**	PN		**Pn**	**13 13 33.1**	**-0.6**
PETK	**Petropavlovsk-**	**9.38**	**42**	P		**Pn**	**13 13 33.4**	**-0.3**
	comp=N,4.4nm,0.7s,baz=213,slow=10,SNR=8.1							
PET	**Petropavlovsk**	**9.78**	**44**	Pn		**Pn**	**13 13 38.7**	**+0.1**
PET	**Petropavlovsk**	**9.78**	**44⇑**	*e* PN		**Pn**	**13 13 38.3**	**-0.2**
PET	**Petropavlovsk**	**9.78**	**44**	*e* P		**Pn**	**13 13 38.6**	**+0.1**
PET				*e*S		**S**	**13 15 25.5**	**-3.3**
JMM	**Marumori**	**9.93**	**211**	Pn		**Pn**	**13 13 40.6**	**0.0**
KLR	**Kul'dur**	**10.79**	**290**	P		**P**	**13 13 51.4**	**-2.3**
	comp=N,2.4nm,0.5s,baz=100,slow=15,SNR=7.3							
KLR	**Kul'dur**	**10.79**	**290⇑**	*e* PN		**P**	**13 13 51.8**	**-1.9**
KLR				pmax		pmax		
	comp=Z,12nm,1.5s							
KLR	**Kul'dur**	**10.79**	**290**	*e* P		**P**	**13 13 51.8**	**-1.9**
JSD	**Sado**	**10.82**	**221**	Pn		**Pn**	**13 13 50.9**	**-0.6**
USA0B	**Ussuriysk Arra**	**11.04**	**263**			**Pn**	**13 13 54.4**	**+0.3**
USA0B	**Ussuriysk Arra**	**11.04**	**263**	PN		**Pn**	**13 13 54.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**11.04**	**263**	P		**P**	**13 13 54.7**	**-1.8**
	comp=Z,14nm,0.4s,baz=71,slow=11,SNR=36							
USRK	**Ussuriysk Ar.**	**11.04**	**263**	Pn		**Pn**	**13 13 53.9**	**-0.2**
VLA	**Vladivostok**	**11.48**	**258**	*ce* PN		**P**	**13 14 00.7**	**-0.7**
VLA				pmax		pmax		
	comp=Z,14nm,0.8s							
VLA	**Vladivostok**	**11.48**	**258**	*e* P		**P**	**13 14 00.7**	**-0.7**
JYT	**Yasato**	**11.61**	**210**			**Pn**	**13 14 02.4**	**+1.3**
MAJO	**Matsushiro**	**12.09**	**217**			**Pn**	**13 14 07.8**	**+0.8**
MAJO	**Matsushiro**	**12.09**	**217**	PN		**Pn**	**13 14 07.8**	**+0.8**
MSHR	**Mys Shultsa**	**12.19**	**257⇑**	*e* PN		**Pn**	**13 14 07.1**	**-1.0**
MSHR				pmax		pmax		
	comp=Z,27nm,0.8s							
MDJ	**Mudanjiang**	**12.57**	**268**			**Pn**	**13 14 12.0**	**-0.7**
MA2	**Magadan**	**13.21**	**8**	P		**P**	**13 14 20.6**	**+0.1**
	comp=Z,28nm,0.8s,baz=179,slow=8.1,SNR=14							
MA2	**Magadan**	**13.21**	**8**	P		**Pn**	**13 14 18.8**	**-1.5**
MA2	**Magadan**	**13.21**	**8⇓**	*e* PN		**P**	**13 14 20.5**	**+0.1**
MA2				pmax		pmax		
	comp=Z,45nm,0.9s							
JGF	**Kuroka**	**13.25**	**218**	P		**P**	**13 14 22.1**	**+0.9**
INU	**Inuyama**	**13.61**	**218**	P		**Pn**	**13 14 26.5**	**+1.2**
KBG	**Krutoberegovo**	**13.63**	**39**	*e* P		**Pn**	**13 14 25.4**	**+0.2**
KBG				AMB		AMB	13 14 27.1	
	comp=Z,10.0nm,0.6s							
ZEA	**Zeya**	**14.71**	**307**	*e* P		**Pn**	**13 14 39.3**	**+1.2**
ZEA				AMB		AMB	13 14 40.7	
	comp=Z,10.0nm,0.2s							
JHS	**Saijyo**	**15.74**	**228**	P		**Pn**	**13 14 51.4**	**+1.0**
JMN	**Monobe**	**16.39**	**223**	P		**P**	**13 14 56.8**	**+1.2**
SEY	**Seymchan**	**16.67**	**8**	P		**P**	**13 14 57.9**	**-0.4**
	comp=Z,19nm,1.0s,baz=193,slow=9.4,SNR=20							
KSRS	**Korea Array**	**17.00**	**245**	P		**Pn**	**13 15 04.5**	**-0.6**
	comp=Z,12nm,0.8s,baz=54,slow=10.0,SNR=34							
KS19	**Wonju Array Si**	**17.01**	**245**	P		**Pn**	**13 15 04.4**	**-0.8**
KS19				IAmb		IAmb	13 15 07.7	
	comp=Z,12nm,0.8s							
KSAR	**Wonju Array Be**	**17.04**	**245**	P		**Pn**	**13 15 04.2**	**-1.3**
KSAR	**Wonju Array Be**	**17.04**	**245**	P		**Pn**	**13 15 04.2**	**-1.3**
TJN	**Taejon**	**18.03**	**243⇓**	*e* P		**P**	**13 15 15.1**	**+1.8**
YAK	**Yakutsk**	**18.51**	**333**	P		**P**	**13 15 17.1**	**-1.0**
	comp=Z,9.5nm,0.4s,baz=344,slow=3.9,SNR=12							
YAK	**Yakutsk**	**18.51**	**333**	P		**P**	**13 15 16.6**	**-1.5**
YAK	**Yakutsk**	**18.51**	**333**	*e* P		**P**	**13 15 16.9**	**-1.2**
YAK				*e*S		**S**	**13 18 32.6**	**-0.3**
YAK				pmax		pmax		
	comp=Z,38nm,0.9s							
YAK				pmax		pmax		
	comp=N,13nm,1.1s							
YAK				pmax		pmax		
	comp=E,10.0nm,0.9s							
YAK				smax		smax		
	comp=E,61nm,2.5s							
YAK				smax		smax		
	comp=N,54nm,2.3s							
BILL	**Bilibino**	**23.65**	**18**	*i* P		**P**	**13 16 08.1**	**+0.3**
BILL				pmax		pmax		
	comp=Z,10.0nm,1.2s							
BILL	**Bilibino**	**23.65**	**18**	*e* P		**P**	**13 16 08.1**	**+0.3**
TIXI	**Tiksi**	**26.65**	**347**	P		**P**	**13 16 32.4**	**-2.3**
TIXI				IAmb		IAmb	13 16 48.6	
	comp=Z,8.3nm,1.0s							
TIXI	**Tiksi**	**26.65**	**347**	P		**P**	**13 16 32.4**	**-2.3**
TIXI				pmax		pmax		
	comp=Z,8.0nm,1.0s							
SONM	**Songino Array**	**27.61**	**288**	P		**P**	**13 16 47.2**	**+3.5**
	comp=Z,0.4nm,0.4s,baz=69,slow=8.2,SNR=3.4							
SONM				ScP		**ScP**	**13 23 05.3**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=82,slow=2.0,SNR=5.0							
SPIA	**Saint Paul Isl**	**27.83**	**52**	P		**P**	**13 16 46.3**	**+1.0**
	baz=266							
NIKH	**Nikolski High**	**28.67**	**61**	P		**P**	**13 16 54.1**	**+1.4**
AKUT	**Akutan**	**30.40**	**58**	P		**P**	**13 17 10.1**	**+2.2**
N16K	**Nishlik Lake**	**33.90**	**46**	P		**P**	**13 17 39.3**	**+1.1**
	baz=271							
O16K	**Kokwok River B**	**34.27**	**47**	P		**P**	**13 17 42.6**	**+1.3**
	baz=273							
R16K	**Pilot Point**	**34.68**	**51**	P		**P**	**13 17 47.2**	**+2.4**
	baz=276							
GCSA	**Galena City Sc**	**34.91**	**38**	P		**P**	**13 17 46.9**	**+0.3**
	baz=266							
TTA	**Tatalina**	**35.22**	**42**	P		**P**	**13 17 51.2**	**+1.8**
TTA				IAmb		IAmb	13 17 54.9	
	comp=Z,7.7nm,1.1s							
TTA	**Tatalina**	**35.22**	**42**	P		**P**	**13 17 51.2**	**+1.8**
TTA				pmax		pmax		
	comp=Z,8.0nm,1.1s							
TTA	**Tatalina**	**35.22**	**42**	P		**P**	**13 17 50.6**	**+1.1**
	baz=270							
R17K	**Ugashik Creek**	**35.31**	**51**	P		**P**	**13 17 51.4**	**+1.2**
	baz=277							
N18K	**Kilae Creek**	**35.32**	**45**	P		**P**	**13 17 51.6**	**+1.3**
N18K				IAmb		IAmb	13 18 31.8	
	comp=Z,9.9nm,1.1s							
N18K	**Kilae Creek**	**35.32**	**45**	P		**P**	**13 17 51.7**	**+1.4**
	baz=273							
SVW2	**Sparrevohn**	**35.45**	**45**	P		**P**	**13 17 51.5**	**+0.2**
SVW2				IAmb		IAmb	13 17 56.2	
	comp=Z,12nm,1.4s							
L19K	**White Mountain**	**35.76**	**43**	P		**P**	**13 17 54.6**	**+0.6**
L19K				IAmb		IAmb	13 18 03.2	
	comp=Z,18nm,1.4s							
Q18K	**Katmai Hardscr**	**35.92**	**49**	P		**P**	**13 17 56.6**	**+1.1**
	baz=277							
CHIR	**Chirikof Islan**	**35.98**	**54**	P		**P**	**13 17 58.2**	**+2.3**
	baz=280							
M19K	**Big River Lodg**	**35.99**	**43**	P		**P**	**13 17 57.2**	**+1.4**
M19K				IAmb		IAmb	13 18 12.4	
	comp=Z,15nm,1.4s							
M19K	**Big River Lodg**	**35.99**	**43**	P		**P**	**13 17 56.5**	**+0.6**
	baz=273							
N19K	**Bonanza Creek**	**36.00**	**45**	P		**P**	**13 17 57.4**	**+1.3**
	baz=277							
J20K	**Nowinta River**	**36.07**	**39**	P		**P**	**13 17 57.1**	**+0.6**
J20K				IAmb		IAmb	13 17 58.4	
	comp=Z,5.7nm,0.7s							
J20K	**Nowinta River**	**36.07**	**39**	P		**P**	**13 17 57.4**	**+0.9**
	baz=270							
K20K	**Telida**	**36.10**	**41**	P		**P**	**13 17 57.8**	**+1.0**
K20K				IAmb		IAmb	13 17 60.0	
	comp=Z,10nm,1.5s							
K20K	**Telida**	**36.10**	**41**	P		**P**	**13 17 57.6**	**+0.8**
	baz=271							
IMAR	**Indian Mountai**	**36.29**	**36**	P		**P**	**13 17 58.5**	**+0.1**
G21K	**Allakaket**	**36.42**	**35**	P		**P**	**13 17 59.4**	**0.0**
	baz=267							
F21K	**Alatna River**	**36.47**	**34**	P		**P**	**13 17 59.9**	**0.0**
	baz=266							
M20K	**Styx River**	**36.59**	**43**	P		**P**	**13 18 02.6**	**+1.6**
M20K	**Styx River**	**36.59**	**43**	P		**P**	**13 18 02.2**	**+1.2**
	baz=274							
Q19K	**Cape Douglas,**	**36.60**	**48**	P		**P**	**13 18 01.3**	**+0.2**
H21K	**Melozitna Rive**	**36.67**	**37**	P		**P**	**13 18 01.4**	**-0.2**
H21K	**Melozitna Rive**	**36.67**	**37**	P		**P**	**13 18 01.7**	**+0.2**
	baz=269							
PPLA	**Purkeypile**	**36.97**	**42**	P		**P**	**13 18 05.7**	**+1.4**
PPLA				IAmb		IAmb	13 18 11.6	
	comp=Z,6.0nm,0.9s							
PPLA	**Purkeypile**	**36.97**	**42**	P		**P**	**13 18 05.0**	**+0.7**
	baz=273							
CAST	**Castle Rocks**	**36.99**	**41**	P		**P**	**13 18 05.5**	**+1.2**
CAST				IAmb		IAmb	13 18 06.4	
	comp=Z,6.5nm,0.6s							
CAST	**Castle Rocks**	**36.99**	**41**	P		**P**	**13 18 05.0**	**+0.7**
	baz=272							
F22K	**John River**	**37.00**	**34**	P		**P**	**13 18 03.9**	**-0.4**
	baz=267							
OHAK	**Old Harbor**	**37.03**	**51**	P		**P**	**13 18 05.5**	**+0.9**
N20K	**Mount Spurr**	**37.08**	**44**	P		**P**	**13 18 06.3**	**+1.2**
	baz=275							
SPU	**Mount Spurr**	**37.15**	**44**	P		**P**	**13 18 07.1**	**+1.4**
E22K	**Anaktuvuk Pass**	**37.17**	**33**	P		**P**	**13 18 05.5**	**-0.3**
	baz=266							
G22K	**Bettles**	**37.23**	**35**	P		**P**	**13 18 05.8**	**-0.4**
	baz=268							
H22K	**Ishtalitna Cre**	**37.26**	**37**	P		**P**	**13 18 06.7**	**+0.2**
	baz=270							
KDAK	**Kodiak Island**	**37.31**	**50**	P		**P**	**13 18 07.6**	**+0.6**
KDAK	**Kodiak Island**	**37.31**	**50**	P		**P**	**13 18 07.6**	**+0.6**
KDAK				pmax		pmax		
	comp=Z,78nm,1.5s							
SKT	**Skwentna**	**37.33**	**43**	P		**P**	**13 18 08.2**	**+1.0**
	baz=275							
KTH	**Kantishna Hill**	**37.51**	**40**	P		**P**	**13 18 09.9**	**+1.2**
KTH				IAmb		IAmb	13 18 10.8	
	comp=Z,20nm,1.5s							
MLY	**Manley**	**37.53**	**38**	P		**P**	**13 18 09.7**	**+0.8**
MLY				IAmb		IAmb	13 18 14.1	
	comp=Z,2.9nm,0.4s							
MLY	**Manley**	**37.53**	**38**	P		**P**	**13 18 09.6**	**+0.8**
	baz=272							
D23K	**Nanushuk River**	**37.65**	**31**	P		**P**	**13 18 09.5**	**-0.1**
	baz=266							
CNPM	**Chena Poot**	**37.75**	**47**	P		**P**	**13 18 10.6**	**-0.1**
SUA	**Susitna One**	**37.75**	**44**	P		**P**	**13 18 11.2**	**+0.4**
SUA				IAmb		IAmb	13 18 11.8	
	comp=Z,12nm,1.1s							
SUA	**Susitna One**	**37.75**	**44**	P		**P**	**13 18 11.5**	**+0.7**
	baz=276							
TRF	**Thorofare Moun**	**37.80**	**41**	P		**P**	**13 18 11.2**	**0.0**
TRF				IAmb		IAmb	13 18 42.4	
	comp=Z,11nm,1.2s							
TRF	**Thorofare Moun**	**37.80**	**41**	P		**P**	**13 18 11.8**	**+0.6**
	baz=274							
G23K	**Bananza Creek**	**37.81**	**35**	P		**P**	**13 18 11.1**	**0.0**
	baz=270							
BRLK	**Bradley Lake**	**37.89**	**47**	P		**P**	**13 18 12.2**	**+0.4**
E23K	**Chandalar**	**37.99**	**33**	P		**P**	**13 18 12.0**	**-0.7**
	baz=269							
H23K	**Yukon River**	**38.02**	**37**	P		**P**	**13 18 13.6**	**+0.8**
H23K				IAmb		IAmb	13 18 15.6	
	comp=Z,3.9nm,0.6s							
H23K	**Yukon River**	**38.02**	**37**	P		**P**	**13 18 12.5**	**-0.3**
	baz=272							
M22K	**Willow**	**38.02**	**43**	P		**P**	**13 18 13.7**	**+0.9**
	baz=276							
TOLK	**Toolik Lake Re**	**38.03**	**32**	P		**P**	**13 18 12.7**	**-0.2**
TOLK				IAmb		IAmb	13 18 32.5	
	comp=Z,22nm,1.5s							
TOLK	**Toolik Lake Re**	**38.03**	**32**	P		**P**	**13 18 11.9**	**-1.0**
	baz=268							
I23K	**Minto, Yukon-K**	**38.11**	**38**	P		**P**	**13 18 14.1**	**+0.6**
I23K				IAmb		IAmb	13 18 16.1	
	comp=Z,4.6nm,0.4s							
I23K	**Minto, Yukon-K**	**38.11**	**38**	P		**P**	**13 18 14.2**	**+0.7**
	baz=273							
BWN	**Browne**	**38.12**	**39**	P		**P**	**13 18 15.4**	**+1.7**
NEA2	**Nenana**	**38.27**	**39**	P		**P**	**13 18 15.3**	**+0.5**
NEA2				IAmb		IAmb	13 18 16.2	
	comp=Z,8.0nm,0.6s							
NEA2	**Nenana**	**38.27**	**39**	P		**P**	**13 18 15.4**	**+0.5**
	baz=274,SNR=8.2							
RC01	**Rabbit Creek A**	**38.28**	**44**	P		**P**	**13 18 15.3**	**+0.3**
RC01	**Rabbit Creek A**	**38.28**	**44**	P		**P**	**13 18 15.6**	**+0.6**
	baz=278							
D24K	**Happy Valley**	**38.32**	**31**	P		**P**	**13 18 14.8**	**-0.5**
	baz=268							
O22K	**Cooper Landing**	**38.37**	**45**	P		**P**	**13 18 16.2**	**+0.5**
O22K	**Cooper Landing**	**38.37**	**45**	P		**P**	**13 18 16.5**	**+0.8**
	baz=278							
MCK	**McKinley**	**38.38**	**40**	P		**P**	**13 18 16.6**	**+0.7**
MCK				IAmb		IAmb	13 18 18.2	
	comp=Z,5.2nm,0.8s							
MCK	**McKinley**	**38.38**	**40**	P		**P**	**13 18 16.6**	**+0.7**
MCK				pmax		pmax		
	comp=Z,5.0nm,0.8s							
MCK	**McKinley**	**38.38**	**40**	P		**P**	**13 18 15.7**	**-0.2**
	baz=275							
C24K	**Franklin Bluff**	**38.39**	**30**	P		**P**	**13 18 15.2**	**-0.6**
	baz=267							
E24K	**Your Creek**	**38.42**	**33**	P		**P**	**13 18 15.4**	**-0.7**
	baz=270							
PMR	**Palmer**	**38.51**	**43**	P		**P**	**13 18 17.5**	**+0.6**
PMR	**Palmer**	**38.51**	**43**	P		**P**	**13 18 17.5**	**+0.6**
PMR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
PMR	**Palmer**	**38.51**	**43**	P		**P**	**13 18 18.0**	**+1.2**
	baz=277							
SEW	**Seward**	**38.55**	**46**	P		**P**	**13 18 17.6**	**+0.4**
SEW				IAmb		IAmb	13 18 44.7	
	comp=Z,17nm,1.2s							
MDM	**Murphy Dome**	**38.60**	**38**	P		**P**	**13 18 18.2**	**+0.5**
WAT1	**Susitna Watana**	**38.64**	**41**	P		**P**	**13 18 18.4**	**+0.4**
	baz=276							
F24K	**Squaw Lake**	**38.65**	**34**	P		**P**	**13 18 17.5**	**-0.5**
	baz=271							
H24K	**Noodor Dome**	**38.70**	**37**	P		**P**	**13 18 18.4**	**-0.1**
H24K				IAmb		IAmb	13 18 20.1	
	comp=Z,11nm,1.5s							
H24K	**Noodor Dome**	**38.70**	**37**	P		**P**	**13 18 18.4**	**-0.1**
	baz=273							
TCOL	**CIGO, UAF Yank**	**38.76**	**38**	P		**P**	**13 18 19.1**	**+0.2**
TCOL				IAmb		IAmb	13 18 22.1	
	comp=Z,12nm,0.8s							
TCOL	**CIGO, UAF Yank**	**38.76**	**38**	P		**P**	**13 18 19.5**	**+0.5**
	baz=274,SNR=5.1							
COLA	**College**	**38.77**	**38**	P		**P**	**13 18 19.2**	**+0.3**
COLA				IAmb		IAmb	13 18 22.1	
	comp=Z,11nm,0.8s							
COLA	**College**	**38.77**	**38**	P		**P**	**13 18 19.2**	**+0.3**
COLA				pmax		pmax		
	comp=Z,11nm,0.8s							
COLA	**College**	**38.77**	**38**	P		**P**	**13 18 19.6**	**+0.6**
	baz=274							
CCB	**Clear Creek Bu**	**38.80**	**38**	P		**P**	**13 18 19.6**	**+0.3**
G24K	**Hadweenzic Riv**	**38.83**	**35**	P		**P**	**13 18 19.8**	**+0.3**
	baz=272							
KNK	**Knik Glacier**	**38.85**	**44**	P		**P**	**13 18 20.3**	**+0.5**
	baz=278							
SML	**Sawmill**	**38.86**	**43**	P		**P**	**13 18 20.6**	**+0.8**
SML				IAmb		IAmb	13 18 21.5	
	comp=Z,12nm,0.6s							
SML	**Sawmill**	**38.86**	**43**	P		**P**	**13 18 20.2**	**+0.4**
	baz=278							
POKR	**Poker Plat Res**	**38.93**	**38**	P		**P**	**13 18 21.3**	**+1.0**
POKR				IAmb		IAmb	13 18 23.6	
	comp=Z,9.1nm,0.4s							
POKR	**Poker Plat Res**	**38.93**	**38**	P		**P**	**13 18 20.6**	**+0.2**
	baz=274							
DHY	**Denali Highway**	**39.15**	**41**	P		**P**	**13 18 22.6**	**+0.4**
DHY				IAmb		IAmb	13 18 25.1	
	comp=Z,6.8nm,0.6s							
DHY	**Denali Highway**	**39.15**	**41**	P		**P**	**13 18 22.7**	**+0.4**
	baz=

baz=279,SNR=6.4
J26L Joseph Creek 40.64 38 P P 13 18 34.3 -0.1
J26L Joseph Creek 40.64 38 P P 13 18 34.3 -0.1
baz=278
N25K Chitina, Valde 40.65 43 P P 13 18 35.4 +0.9
baz=281
I26K Coal Creek Min 40.70 37 P P 13 18 33.9 -0.9
I26K Coal Creek Min 40.70 37 P P 13 18 35.2 +0.4
baz=278
BMRM Bremner River 40.77 44 P P 13 18 36.7 +1.2
baz=282
RAGM Ragged Mountai 40.85 45 P P 13 18 37.2 +1.0
RAGM IAmb IAmb 13 19 12.6
comp=Z,18nm,1.4s
L26K Log Cabin Wild 40.97 41 P P 13 18 37.8 +0.8
baz=280
E27K Coleen River 40.99 33 P P 13 18 36.7 -0.4
baz=276
GLB Gilahina Butte 41.05 43 P P 13 18 38.4 +0.6
GLB IAmb IAmb 13 18 45.4
comp=Z,4.4nm,0.5s
PZH PanZhiHua 41.05 257 P P 13 18 37.5 -0.8
HMT Hamilton 41.06 45 P P 13 18 39.3 +1.5
HMT IAmb IAmb 13 18 53.1
comp=Z,18nm,1.3s
KAIM Kayak Island 41.07 45 P P 13 18 39.1 +1.3
baz=283
G27K Doyon Strip 41.12 35 P P 13 18 38.3 +0.1
baz=277
M26K Nabesna, AK 41.24 41 P P 13 18 40.4 +1.1
M26K IAmb IAmb 13 18 41.9
comp=Z,6.9nm,0.7s
M26K Nabesna, AK 41.24 41 P P 13 18 40.5 +1.2
baz=281,SNR=7.4
H27K Steamboat Moun 41.25 36 P P 13 18 39.4 +0.2
baz=278
VRDI Verde Repeater 41.26 43 P P 13 18 40.5 +0.9
I27K Kandik River 41.30 37 P P 13 18 39.5 -0.2
baz=279
BERG Berg Lake 41.32 45 P P 13 18 41.2 +1.3
BERG IAmb IAmb 13 18 46.5
comp=Z,14nm,1.4s
K27K Chicken 41.36 39 P P 13 18 41.0 +0.8
K27K IAmb IAmb 13 18 43.4
comp=Z,6.3nm,0.7s
MCARA McCarthy VSAT 41.43 43 P P 13 18 42.4 +1.6
MCARA IAmb IAmb 13 19 01.7
comp=Z,17nm,1.4s
MCARA McCarthy VSAT 41.43 43 P P 13 18 41.9 +1.2
baz=282
EGAK Eagle 41.62 38 P P 13 18 42.0 -0.2
EGAK Eagle 41.62 38 P P 13 18 42.2 -0.1
baz=280,SNR=6.7
L27K Beaver Creek, 41.64 40 P P 13 18 43.4 +0.9
L27K Beaver Creek, 41.64 40 P P 13 18 43.8 +1.3
baz=281,SNR=12
TGL Tana Glacier 41.66 44 P P 13 18 44.1 +1.3
BCAR Beaver Creek A 41.66 40 P P 13 18 43.8 +1.1
WAX Waxell Ridge 41.72 44 P P 13 18 44.8 +1.6
WAX IAmb IAmb 13 18 45.3
comp=Z,11nm,0.4s
M27K Edge Creek, AK 41.76 41 P P 13 18 44.9 +1.3
M27K IAmb IAmb 13 18 46.0
comp=Z,9.9nm,0.7s
M27K Edge Creek, AK 41.76 41 P P 13 18 44.9 +1.3
baz=282,SNR=14
SNH Sunshine Point 41.79 45 P P 13 18 45.7 +2.0
SNH IAmb IAmb 13 18 49.0
comp=Z,18nm,1.0s
ISLE Juniper Island 41.93 44 P P 13 18 46.1 +1.1
ISLE IAmb IAmb 13 18 49.1
comp=Z,7.6nm,0.4s
BARN Barnard Glacie 42.15 43 P P 13 18 48.1 +1.4
BARN IAmb IAmb 13 18 50.8
comp=Z,17nm,1.4s
BVCY Beaver Creek 42.21 41 P P 13 18 48.3 +1.2
baz=283
MESA MESA 42.22 45 P P 13 18 48.9 +1.5
MESA IAmb IAmb 13 18 53.0
comp=Z,9.1nm,1.0s
MESA MESA 42.22 45 P P 13 18 48.4 +1.0
baz=284
YAH Yahtse 42.27 44 P P 13 18 49.1 +1.3
YAH IAmb IAmb 13 18 52.8
comp=Z,6.7nm,0.7s
CTG Chitna Glacier 42.32 43 P P 13 18 49.6 +1.5
baz=284,SNR=6.2
CTGM Chitina Glacie 42.32 43 P P 13 18 49.3 +1.2
CTGM IAmb IAmb 13 18 50.3
comp=Z,7.1nm,0.6s
DAWY Dawson 42.51 39 P P 13 18 49.8 +0.4
DAWY Dawson 42.51 39 P P 13 18 49.7 +0.2
baz=282
LOGN Logan Glacier 42.51 43 P P 13 18 50.6 +0.9
YUK3 Moose Creek 42.54 42 P P 13 18 51.1 +1.2
baz=284
TABL Table Mountain 42.54 44 P P 13 18 50.7 +0.7
I29M Ogilvie Camp, 42.70 37 P P 13 18 51.0 0.0
baz=282
O28M Mount Upton 42.91 43 P P 13 18 54.1 +1.1
baz=285
YUK8 Steele Glacier 42.98 43 P P 13 18 54.7 +1.2
baz=285
PCA Pinnacle 43.06 44 P P 13 18 54.9 +1.0
PINM Pinnacle 43.06 44 P P 13 18 55.3 +1.4
baz=286
EPYK Eagle Plains 43.14 35 P P 13 18 54.8 +0.4
EPYK IAmb IAmb 13 18 56.9
comp=Z,9.7nm,0.3s
EPYK Eagle Plains 43.14 35 P P 13 18 54.9 +0.4
baz=282,SNR=6.5
G30M tAoh Zraii Nji 43.21 34 P P 13 18 55.0 0.0
baz=282
L29M L29M 43.27 40 P P 13 18 57.2 +1.6
baz=284,SNR=11
M29M Somme Creek 43.29 41 P P 13 18 57.1 +1.3
baz=285
K29M Barlow Dome 43.36 39 P P 13 18 56.8 +0.5
baz=284
MK31 Makanchi Array 43.45 295 P P 13 18 56.8 -0.4
MK31 Makanchi Array 43.45 295 P P 13 18 56.8 -0.4
MKAR Makanchi Array 43.45 295 P P 13 18 56.9 -0.2
comp=Z,0.3nm,0.5s,baz=52,slow=7.3,SNR=2.6
MKAR PcP **PcP 13 20 39.5 +0.2**
comp=Z,0.3nm,0.3s,baz=64,slow=3.4,SNR=7.3
MKAR ScP **ScP 13 24 02.3 +0.9**
comp=Z,0.4nm,0.7s,baz=82,slow=3.2,SNR=3.9
YUK4 Talbot Arm 43.49 42 P P 13 18 58.5 +1.1
baz=286
YUK6 Outpost Mounta 43.73 43 P P 13 19 00.2 +0.8
baz=286
INK Inuvik 43.94 32 P P 13 19 00.6 -0.1
comp=Z,12nm,0.4s,baz=296,slow=8.2,SNR=98
comp=Z,12nm,0.4s
INK Inuvik 43.94 32 P P 13 19 00.3 -0.3
INK IAmb IAmb 13 19 02.2
comp=Z,12nm,0.5s
INK Inuvik 43.94 32 P P 13 19 00.4 -0.3
INK pmax pmax
comp=Z,12nm,0.5s
INK Inuvik 43.94 32 P P 13 19 00.4 -0.3
baz=283,SNR=12
F31M Tsiigehtchic 44.05 33 P P 13 19 01.8 +0.2
baz=283
KURK Kurchatov 44.11 302 P P 13 19 01.6 -0.7
KURK Kurchatov 44.11 302 P P 13 19 01.6 -0.7
KURK pmax pmax
comp=Z,2.0nm,0.9s
KURK Kurchatov 44.11 302 *eP* **P 13 19 01.9 -0.4**
HYT Haines Junctio 44.17 43 P P 13 19 04.6 +1.9
HYT IAmb IAmb 13 19 05.8
comp=Z,16nm,0.8s
HYT Haines Junctio 44.17 43 P P 13 19 04.8 +2.1
baz=287,SNR=17
N30M Aishikik Lake 44.18 42 P P 13 19 03.7 +1.0
baz=287
KURBB Kurchatov Arra 44.20 302 P P 13 19 02.2 -0.8
comp=Z,0.9nm,0.4s,baz=70,slow=8.5,SNR=9.5
KURBB PcP **PcP 13 20 42.1 +0.4**
comp=Z,0.9nm,0.3s,baz=74,slow=3.0,SNR=6.3
comp=Z,0.9nm,0.4s
P29M Windy Craggy 44.41 45 P P 13 19 06.8 +2.2
P29M IAmb IAmb 13 19 07.7
comp=Z,10nm,0.6s
P29M Windy Craggy 44.41 45 P P 13 19 06.6 +2.0
baz=288,SNR=8.3

P30M Million Dollar 44.63 44 P P 13 19 08.4 +2.1
baz=288
N31M Braeburn, Yuko 44.77 42 P P 13 19 09.3 +1.9
N31M IAmb IAmb 13 19 10.3
comp=Z,5.6nm,0.7s
N31M Braeburn, Yuko 44.77 42 P P 13 19 09.3 +1.9
baz=288,SNR=5.4
O30N Mendenhall 44.84 43 P P 13 19 09.5 +1.5
baz=288
PLBC Pleasant Camp 45.13 44 P P 13 19 11.8 +1.7
baz=289
M31M Drury Creek, Y 45.18 40 P P 13 19 12.1 +1.5
M31M Drury Creek, Y 45.18 40 P P 13 19 12.1 +1.5
baz=288
WHY Whitehorse 45.44 42 P P 13 19 13.8 +1.1
WHY Whitehorse 45.44 42 P P 13 19 14.1 +1.4
baz=289
SKAG Skagway 45.63 44 P P 13 19 15.7 +1.7
baz=290
FARO Faro, Yukon 45.64 40 P P 13 19 15.0 +0.9
FARO Faro, Yukon 45.64 40 P P 13 19 15.4 +1.3
baz=289
A36M Sachs Harbour 45.79 26 P P 13 19 15.6 +0.6
A36M IAmb IAmb 13 19 16.6
comp=Z,18nm,0.8s
A36M Sachs Harbour 45.79 26 P P 13 19 13.4 -1.7
baz=286
MMPY Sheldon Lake, 46.43 39 P P 13 19 21.7 +1.5
baz=290
R32K Eagle Creek 46.44 46 P P 13 19 22.0 +1.8
baz=292
P33M Teslin, Yukon 46.56 43 P P 13 19 22.9 +1.5
P33M Teslin, Yukon 46.56 43 P P 13 19 23.1 +1.7
baz=291,SNR=6.2
C36M Paulatuk 46.96 29 P P 13 19 23.6 -0.5
C36M Paulatuk 46.96 29 P P 13 19 23.6 -0.5
baz=290
Q32M Nakina River 47.28 44 P P 13 19 28.3 +1.3
baz=292
R33M Jennings River 47.73 43 P P 13 19 32.1 +1.7
baz=293
TGTN Hyland Airport 48.14 40 P P 13 19 34.8 +1.4
baz=293
S34M Telegraph Cree 48.24 45 P P 13 19 35.8 +1.8
baz=294
WTLY Watson Lake, Y 48.46 42 P P 13 19 36.9 +1.1
WTLY Watson Lake, Y 48.46 42 P P 13 19 37.5 +1.7
baz=294
DLBC Dease Lake 48.56 44 P P 13 19 38.8 +2.2
DLBC Dease Lake 48.56 44 P P 13 19 38.6 +2.1
baz=294
T35M Bob Quinn 49.06 46 P P 13 19 42.5 +2.2
baz=295
V35K Ketchikan 49.08 48 P P 13 19 43.1 +2.7
baz=296
EUNU Eureka 50.09 11 P P 13 19 46.4 -1.4
RES Resolute Bay 52.26 17 P P 13 20 02.7 -1.0
RES IAmb IAmb 13 20 04.6
comp=Z,25nm,1.4s
RES Resolute Bay 52.26 17 P P 13 20 02.7 -1.0
RES pmax pmax
comp=Z,25nm,1.4s
ARU Arti 52.41 315 P P 13 20 04.4 -0.8
comp=Z,3.0nm,0.4s,baz=358,slow=8.5,SNR=5.8
comp=Z,3.0nm,0.4s
ARU Arti 52.41 315 *d iP* **P 13 20 04.3 -0.8**
ARU *PP **pP 13 21 05.6 -3.0**
ARU 13 22 02.5
ARU pmax pmax
comp=Z,3.0nm,0.5s
YKA Yellowknife Ar 53.42 35 P P 13 20 12.3 -0.1
comp=Z,4.3nm,0.5s,baz=300,slow=7.2,SNR=24
comp=Z,4.3nm,0.5s
YKA Yellowknife Ar 53.42 35 P P 13 20 12.0 -0.4
HILA High Level 54.51 40 P P 13 20 21.1 +0.8
ABKAR Akbulak array 55.43 307 P P 13 20 26.4 -0.6
AKTO Aktyubinsk 55.83 309 P P 13 20 28.6 -1.1
comp=Z,0.5nm,0.3s,baz=51,slow=14,SNR=2.1
comp=Z,0.5nm,0.3s
ARCES ARCESS Array B 56.67 339 P P 13 20 34.2 -1.2
comp=Z,4.1nm,0.9s,baz=50,slow=7.6,SNR=8.9
comp=Z,4.1nm,0.9s
BRLDA Berland Lookou 56.81 44 P P 13 20 38.0 +1.3
BRLDA IAmb IAmb 13 20 38.7
comp=Z,6.6nm,0.5s
EDM Edmonton 59.28 44 P P 13 20 54.8 +1.2
EDM IAmb IAmb 13 20 55.4
comp=Z,4.8nm,0.6s
EDM Edmonton 59.28 44 P P 13 20 54.8 +1.2
EDM pmax pmax
comp=Z,5.0nm,0.6s
FIA1 FINESS Array S 62.44 332 P P 13 21 13.3 -1.3
FINES FINESS Array B 62.45 332 P P 13 21 13.4 -1.2
comp=Z,9.9nm,0.5s,baz=40,slow=7.8,SNR=59
comp=Z,9.9nm,0.5s
FINES FINESS Array B 62.45 332 P P 13 21 13.2 -1.4
FINES FINESS Array B 62.45 332 *i* P **P 13 21 13.3 -1.3**
FINES pmax pmax
comp=Z,10.0nm,0.5s
MSO Missoula 62.99 50 P P 13 21 20.2 +1.6
baz=310
PLID Pearl Lake 63.01 52 P P 13 21 20.4 +1.4
GEYT Alibeck 63.22 298 P P 13 21 20.6 +0.4
comp=Z,0.9nm,0.3s,baz=15,slow=6.0,SNR=1.9
comp=Z,0.9nm,0.3s
FFC Flin Flon 63.39 37 P P 13 21 21.7 +0.8
FFC IAmb IAmb 13 21 57.7
comp=Z,3.5nm,0.8s
FFC Flin Flon 63.39 37 P P 13 21 21.7 +0.8
FFC pmax pmax
comp=Z,3.0nm,0.8s
FCC Fort Churchill 63.55 31 P P 13 21 21.8 0.0
FCC Fort Churchill 63.55 31 P P 13 21 21.8 0.0
FCC pmax pmax
comp=Z,20nm,1.0s
BEKR Beckworth 63.87 59 P P 13 21 25.9 +1.4
EGMT Eagleton 64.36 47 P P 13 21 28.5 +1.0
EGMT IAmb IAmb 13 21 37.3
comp=Z,11nm,1.4s
EGMT Eagleton 64.36 47 P P 13 21 28.8 +1.3
baz=312
LRM Limekiln Ridge 64.43 50 P P 13 21 29.0 +0.8
BOZ Bozeman (W) 65.02 49 P P 13 21 33.1 +1.3
BOZ IAmb IAmb 13 21 33.9
comp=Z,2.6nm,0.8s
BOZ Bozeman (W) 65.02 49 P P 13 21 33.1 +1.3
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 65.02 49 P P 13 21 33.2 +1.4
baz=312
YERR Yerington 65.10 59 P P 13 21 33.8 +1.4
YERR IAmb IAmb 13 21 35.0
comp=Z,6.4nm,1.2s
WAKR Walker 65.29 60 P P 13 21 35.5 +1.8
BMN Battle Mountai 65.33 57 P P 13 21 35.5 +1.6
BMN IAmb IAmb 13 21 36.3
comp=Z,1.9nm,0.5s
BMN Battle Mountai 65.33 57 P P 13 21 35.5 +1.6
BMN pmax pmax
comp=Z,2.0nm,0.5s
KVN Kaiserville 65.72 58 P P 13 21 38.0 +1.6
KVN IAmb IAmb 13 21 38.7
comp=Z,2.3nm,0.6s
KVN Kaiserville 65.72 58 P P 13 21 38.0 +1.6
KVN pmax pmax
comp=Z,2.0nm,0.6s
LHV Little Huntoon 66.01 59 P P 13 21 40.4 +2.4
LHV IAmb IAmb 13 21 41.4
comp=Z,3.7nm,0.9s
NVAR Mina Array Bea 66.01 59 P P 13 21 40.2 +1.9
comp=Z,1.3nm,0.7s,baz=289,slow=6.5,SNR=17
comp=Z,1.3nm,0.7s
NVAR Mina Array Bea 66.01 59 P P 13 21 39.6 +1.3
MDPB Devils Postpil 66.08 60 P P 13 21 39.9 +1.1
DGMT Dagmar 66.77 43 P P 13 21 43.5 +0.8
baz=315
NC303 NORSAR Array S 66.84 339 P P 13 21 41.9 -1.0
NC405 NORSAR Array S 66.85 338 P P 13 21 41.9 -1.1
DSP Deep Springs 66.91 60 P P 13 21 45.8 +2.1
NC204 NORSAR Array S 66.95 339 P P 13 21 42.6 -1.0
NB201 NORSAR Array S 67.01 338 P P 13 21 42.7 -1.2
NB2 NORSAR Subarra 67.04 339 P P 13 21 42.9 -1.3
comp=Z,2.6nm,0.6s,baz=30,slow=6.5
NOA NORSAR Array B 67.04 339 P P 13 21 43.2 -0.9
comp=Z,2.8nm,0.6s,baz=30,slow=6.7,SNR=18
comp=Z,2.8nm,0.6s

LCH Last Change Ra 67.19 60 P P 13 21 46.9 +1.2
NC602 NORSAR Array S 67.22 338 P P 13 21 44.1 -1.1
CWC Cottonwood Cre 67.46 60 P P 13 21 48.6 +1.2
baz=312
R11A Troy Canyon, C 67.66 58 P P 13 21 49.6 +1.0
R11A Troy Canyon, C 67.66 58 P P 13 21 50.0 +1.3
baz=312
KIV Kislovodsk 68.00 311 *eP* **P 13 21 51.1 +0.6**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 68.00 311 *eP* **P 13 21 51.1 +0.6**
DUG Dugway, Tooele 68.00 54 P P 13 21 52.4 +1.8
DUG IAmb IAmb 13 22 16.2
comp=Z,5.3nm,1.5s
DUG Dugway, Tooele 68.00 54 P P 13 21 52.4 +1.8
DUG pmax pmax
comp=Z,5.0nm,1.5s
BW06 Boulder Array 68.03 51 P P 13 21 51.8 +0.9
BW06 Boulder Array 68.03 51 P P 13 21 51.8 +0.9
baz=314
PD31 Pinedale Array 68.03 51 P P 13 21 52.0 +1.1
PDAR Pinedale Array 68.03 51 P P 13 21 52.2 +1.3
comp=Z,1.0nm,0.4s,baz=279,slow=2.0,SNR=10
comp=Z,1.0nm,0.4s
PDAR Pinedale Array 68.03 51 P P 13 21 51.8 +0.9
KBZ Khabaz 68.05 311 P P 13 21 51.2 +0.6
comp=Z,3.5nm,0.6s,baz=51,slow=6.5,SNR=8.0
comp=Z,3.5nm,0.6s
KBZ Khabaz 68.05 311 *deP* **P 13 21 51.5 +0.9**
KBZ *i* *PP **pP 13 22 56.3 -0.7**
KBZ pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 68.05 311 *eP* **P 13 21 51.5 +0.9**
MPMC Manual Prospec 68.07 60 P P 13 21 52.9 +1.7
baz=312
FURC Furnace Creek, 68.17 60 P P 13 21 53.3 +1.8
baz=313
ULM Lac du Bonnet 69.21 38 P P 13 21 57.0 -0.6
ULM IAmb IAmb 13 22 34.0
comp=Z,7.2nm,1.1s
ULM Lac du Bonnet 69.21 38 P P 13 21 57.1 -0.6
ULM pmax pmax
comp=Z,7.0nm,1.2s
AKASG Malin Array Be 69.40 323 P P 13 21 57.9 -0.9
comp=Z,2.6nm,0.4s,baz=37,slow=6.3,SNR=19
comp=Z,2.6nm,0.4s
AKASG Malin Array Be 69.40 323 P P 13 21 58.1 -0.7
AKASG Malin Array Be 69.40 323 P P 13 21 58.1 -0.7
AKBB Malin Array Si 69.40 323 P P 13 21 57.5 -1.3
AKBB Malin Array Si 69.40 323 P P 13 21 57.6 -1.3
AKBB pmax pmax
comp=Z,7.0nm,0.6s
RSSD Black Hills 69.93 47 P P 13 22 03.3 +0.8
baz=316
IRM Iron Mountain 70.77 61 P P 13 22 09.0 +1.6
baz=314
ASAR Alice Springs 70.93 193 P P 13 22 12.0 +3.7
comp=Z,0.1nm,0.5s,baz=9.8,slow=6.0,SNR=1.3
IKP In-Ko-Pah, Jac 71.22 62 P P 13 22 11.6 +1.3
baz=314
PV13 Radium Mtn., P 71.65 54 P P 13 22 13.2 +0.3
PV13 IAmb IAmb 13 22 33.3
comp=Z,6.4nm,1.4s
ESJX Sierra Juarez 71.77 63 P P 13 22 14.8 +1.3
ESJX IAmb IAmb 13 22 48.9
comp=Z,4.9nm,1.4s
SMCO Snowmass 71.94 52 P P 13 22 14.6 -0.2
SMCO IAmb IAmb 13 22 46.1
comp=Z,4.7nm,1.4s
EYMN Ely 72.82 37 P P 13 22 18.9 -0.4
baz=322
S22A 4UR Ranch, Cre 73.04 53 P P 13 22 22.1 +0.9
baz=316
BUR08 Bucovina Ar. S 73.44 323 P P 13 22 22.7 -0.4
BUR08 IAmb IAmb 13 22 23.7
comp=Z,3.7nm,0.6s
BURAR Bucovina Array 73.46 323 P P 13 22 22.8 -0.4
BURAR IAmb IAmb 13 22 24.1
comp=Z,2.9nm,0.7s
MORC Moravsky Berou 74.65 329 P P 13 22 30.2 +0.3
MORC IAmb IAmb 13 22 30.9
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 74.65 329 P P 13 22 30.2 +0.3
MORC pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 74.89 332 P P 13 22 30.5 -0.6
CLL Collm 74.89 332 P P 13 22 30.5 -0.6
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 74.89 332 ‖ *iP* **P 13 22 30.8 -0.3**
comp=Z,7.0nm,0.5s
ESK Eskdalemuir 75.51 343 P P 13 22 34.7 +0.2
ESK Eskdalemuir 75.51 343 P P 13 22 34.7 +0.2
ESK pmax pmax
comp=Z,27nm,1.4s
BRTR Keskin Array B 75.71 313 P P 13 22 34.8 -1.4
comp=Z,1.3nm,0.8s,baz=59,slow=4.8,SNR=6.7
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 75.71 313 P P 13 22 36.6 +0.4
BRTR Keskin Array B 75.71 313 *i* P **P 13 22 37.0 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 76.78 331 P P 13 22 41.0 -1.0
comp=Z,0.9nm,0.5s,baz=40,slow=5.2,SNR=7.4
comp=Z,0.9nm,0.5s
GERES GERESS Array B 76.78 331 P P 13 22 41.0 -1.0
VLDQ Val d'Or 77.95 29 P P 13 22 47.5 -0.8
ECH Echery 79.42 334 P P 13 22 56.1 -0.2
ECH IAmb IAmb 13 23 26.6
comp=Z,5.4nm,1.3s
ECH Echery 79.42 334 P P 13 22 56.1 -0.2
ECH pmax pmax
comp=Z,5.0nm,1.3s
TRQ Mont Tremblant 80.56 28 P P 13 23 02.6 +0.2
TX31 Lajitas Ar. Si 81.00 57 P P 13 23 06.4 +1.3
TX31 IAmb IAmb 13 23 08.1
comp=Z,5.4nm,0.8s
TX32 Lajitas Array 81.00 57 P P 13 23 06.6 +1.4
TXAR Lajitas Array 81.01 57 P P 13 23 06.8 +1.7
comp=Z,1.0nm,0.5s,baz=289,slow=3.6,SNR=23
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 81.01 57 P P 13 23 06.6 +1.4
E62A Clayton Lake 81.75 25 P P 13 23 09.1 +0.6
FDMO Fiordimonte 82.01 328 P P 13 23 09.9 -0.1
BATG Bathurst New B 82.10 22 P P 13 23 10.7 +0.3
WHAR Wooly Hollow 82.50 45 P P 13 23 13.4 +0.7
G62A West of Eustis 82.72 26 P P 13 23 14.6 +1.0
F64A Sherman 82.77 24 P P 13 23 13.7 -0.2
H62A Milan 83.11 27 P P 13 23 16.1 +0.5
I63A Otisfield 83.76 26 P P 13 23 19.9 +1.0
L59A Walton 83.96 30 P P 13 23 20.2 +0.2
M57A Sunshine Farm, 83.97 32 P P 13 23 20.3 +0.3
PLCA Paso Flores 152.18 92 PKPbc **PKiKP 13 30 44.6 +1.4**
comp=Z,1.9nm,0.8s,baz=297,slow=4.5,SNR=5.4

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*ATH **10** 13:14:39.6, 40.05N×20.60E, h17km±4km, ML2.6/4, Error ellipse: s-maj=5.6km s-min=1.2km az=116.0*
*THE **10** 13:14:39.3, 40.04N×20.61E, h11km±1km, ML2.4/6, Error ellipse: s-maj=1.9km s-min=0.8km az=312.0*

ISC 10 13:14:39.2±1.1, **40.03N**±0.03×**20.60E**±0.03, **h15**km±11km, **n18**, σ0=**72**/29, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.42**	**152**	P	**Pg**	**13 14 47.2**	**-0.4**
JAN				S	**Sg**	**13 14 54.2**	**+0.9**
2μm,0.4s							
JAN	**Janina**	**0.42**	**152**	P	**Pg**	**13 14 47.2**	**-0.4**
JAN				S	**Sb**	**13 14 54.8**	**+0.3**
JAN				AML	AML	13 14 57.1	
comp=E,4130μm,0.3s							
JAN				AML	AML	13 14 57.5	
comp=N,1949μm,0.4s							
NEST	**Nestorio**	**0.52**	**42**	P	**Pg**	**13 14 49.4**	**-0.1**
NEST				S	**Sb**	**13 14 57.0**	**-0.4**
comp=N,608nm,0.8s							
NEST	**Nestorio**	**0.52**	**42**	P	**Pg**	**13 14 49.4**	**-0.1**
NEST				S	**Sb**	**13 14 56.8**	**-0.6**
NEST				AML	AML	13 14 58.9	
comp=N,1524μm,0.7s							
NEST				AML	AML	13 15 01.1	
comp=E,1454μm,0.7s							
IGT	**Igoumenitsa**	**0.54**	**203**	P	**Pg**	**13 14 49.7**	**-0.1**
IGT				S	**Sb**	**13 14 58.8**	**+1.0**

MOS ***10*** *13:16:10.0±1.6, 15°.35S×175°.34W, h10km, mb5.1/21, Error ellipse: s-maj=16.1km s-min=10.0km az=154.2*
NEIC ***10*** *13:16:11.7±2.3, 15°.28S±0°.09×175°.17W±0°.08, h10km±1km, mb5.2/49, Error ellipse: s-maj=16.7km s-min=11.0km az=153.0*
GCMT ***10*** *13:16:17.7±0.1, 15°.24S±0°.01×175°.33W±0°.01, h12km, MW5.2/148, Moment Tensor Solution. s88,c140; s148,c257; Duration: 1ꝑ0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.01; $M_{\theta\theta}$0.63±.01; $M_{\phi\phi}$-0.47±.01; $M_{r\theta}$0.13±.03; $M_{\theta\phi}$0.67±.01; $M_{\phi r}$-0.15±.03; Best double couple: $M_0$0.89500×10^{17} NP1:ϕ_s289.00000°, δ81.00000°, λ-13.00000°. NP2:ϕ_s21.00000°, δ77.00000°, λ-171.00000°. Principal axes: T 0.9450, Plg3.0000°, Azm335.0000°; N -0.1000, Plg75.0000°, Azm75.0000°; P -0.8450, Plg15.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***10*** *13:16:19.5±3.6, 15°.37S×175°.81W, h49km±33km, mb4.4/14, mbtmp4.7/16, ML4.7/2, MS4.4/58 Error ellipse: s-maj=24.7km s-min=17.6km az=141.0*

ISC 10 13:16:11.9±0.3, 15°.26S±0°.06×175°.31W±0°.06, h10km, n482, σ1ꝑ93/416, mb5.1/56, MS4.5/64, 18C-14D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.67**	**69**	Pn	**Pn**	**13 17 06.1**	**-2.8**
AFI	**Afiamalu**	**3.67**	**69**	P	**Pn**	**13 17 06.1**	**-2.8**
NIUE	**Niue**	**6.39**	**127**	P	**Pn**	**13 17 43.9**	**-2.2**
baz=6.1,SNR=4.1							
NIUE	**Niue**	**6.39**	**127**	Pn	**Pn**	**13 17 44.0**	**-2.2**
MSVF	**Nonsavu**	**6.83**	**248**	P	**Pn**	**13 17 52.4**	**+0.2**
1.2nm,0.3s,baz=88,slow=17,SNR=9.5							
MSVF				S	Sn	13 19 02.5	-7.7
17nm,0.9s,baz=75,slow=20,SNR=0.9							
MSVF				LR	LR	13 20 09.1	
comp=Z,9μm,20.0s,baz=70,slow=36 45nm,1.1s							
MSVF	**Nonsavu**	**6.83**	**248**	Pn	**Pn**	**13 17 53.1**	**+0.9**
RAO	**Raoul Island**	**14.13**	**189**	LR	LR	13 24 02.8	
comp=Z,5μm,18.2s,baz=344,slow=33							
RAO	**Raoul Island**	**14.13**	**189**	P	**P**	**13 19 42.3**	**+2.4**
RAR	**Rarotonga**	**15.89**	**114**	LR	LR	13 24 32.4	
comp=Z,546nm,21.5s,baz=288,slow=30							
MARNC	**Mare, Loyalty**	**16.97**	**246**	P	**P**	**13 20 11.9**	**+0.4**
LIFNC	**LIFOU**	**17.48**	**249**	Pn	**Pn**	**13 20 14.2**	**-1.7**
OUENC	**Ouen Island, N**	**18.32**	**244**		**P**	**13 20 27.1**	**+0.7**
DZM	**Mont Dzumac**	**18.56**	**246**	*e*Pn	**P**	**13 20 30.0**	**+0.9**
475nm,1.2s							
DZM				*e*LR	LR	13 24 50.2	
comp=Z,5μm,25.3s							
DZM	**Mont Dzumac**	**18.56**	**246**	P	**P**	**13 20 29.1**	**0.0**
0.8nm,0.3s,baz=81,slow=14,SNR=26							
DZM				LR	LR	13 26 24.8	
comp=Z,2μm,20.3s,baz=76,slow=34 94nm,1.0s							
DZM	**Mont Dzumac**	**18.56**	**246**		**Pn**	**13 20 30.7**	**+1.4**
DZM				IAmb	IAmb	13 20 37.6	
comp=Z,173nm,1.0s							
ONTNC	**Ouen Toro**	**18.62**	**245**		**Pn**	**13 20 31.2**	**+1.2**
KOUNC	**Koumac, New Ca**	**20.11**	**252**		Pn	13 20 48.2	+0.3
KOUNC				IAmb	IAmb	13 21 02.7	
comp=Z,90nm,0.9s							
TARA	**Tarawa**	**20.20**	**324**	P	**P**	**13 20 46.6**	**-0.4**
URZ	**Urewera**	**23.87**	**195**	P	**P**	**13 21 25.9**	**+0.4**
comp=Z,9.9nm,0.5s,baz=9.2,slow=14,SNR=13							
URZ				LR	LR	13 30 11.7	
comp=Z,2μm,19.8s,baz=107,slow=35 comp=Z,9.9nm,0.5s							
PAE	**Paea**	**24.78**	**99**	*e*T	T	13 47 05.9	
comp=Z,3.2nm,0.3s							
PPT	**Papeete**	**24.79**	**99**	LR	LR	13 28 40.6	
comp=Z,386nm,20.5s,baz=270,slow=29							
PPT2	**Papeete2**	**24.79**	**99**	*e*LR	LR	13 27 37.3	
comp=Z,1μm,25.2s							
PPT2	**Papeete2**	**24.79**	**99**	*e*T	T	13 47 08.5	
comp=Z,7.0nm,0.3s							
HNR	**Honiara**	**24.84**	**281**	LR	LR	13 29 40.4	
comp=Z,24μm,21.4s,baz=116,slow=33							
TIAR	**Tiarei**	**25.00**	**99**	*e*T	T	13 47 17.9	
comp=Z,1.7nm,0.3s							
TBI	**Tubuai**	**25.66**	**112**	*e*LR	LR	13 28 00.0	
comp=Z,297nm,25.2s							
TBI	**Tubuai**	**25.66**	**112**	*e*T	T	13 48 22.6	
comp=Z,12nm,0.3s							
BFZ	**Birch Farm**	**26.37**	**195**	P	**P**	**13 21 47.7**	**-0.7**
PMOR	**Pomariorio Ree**	**26.46**	**93**	*e*T	T	13 49 38.5	
comp=Z,6.0nm,0.3s							
VAH	**Vaihoa**	**26.70**	**94**	*e*T	T	13 49 45.8	
comp=Z,7.4nm,0.3s							
TUWZ	**Tuamarina**	**27.69**	**198**	P	**P**	**13 21 59.1**	**-1.1**
THZ	**Tophouse**	**28.31**	**199**	P	**P**	**13 22 05.6**	**-0.1**
THZ				IAmb	IAmb	13 22 10.3	
comp=Z,139nm,1.9s							
ARMA	**Armidale**	**33.85**	**238**	P	**P**	**13 22 54.0**	**-0.8**
baz=34,SNR=9.6							
ARMA	**Armidale**	**33.85**	**238**	P	**P**	**13 22 53.8**	**-1.0**
KRVT	**Keravat (AS076**	**33.92**	**285**	P	**P**	**13 22 54.1**	**-1.4**
comp=Z,9.0nm,0.7s,baz=100,slow=18,SNR=1.9 comp=Z,9.0nm,0.7s							
TAOE	**Nuku Hiva Isla**	**34.94**	**84**	*e*S	**S**	**13 28 33.9**	**-2.4**
comp=Z,124nm,30.4s							
TAOE				*e*LR	LR	13 32 18.6	
comp=Z,2μm,24.0s							
TAOE	**Nuku Hiva Isla**	**34.94**	**84**	*e*T	T	13 59 49.9	
comp=Z,50nm,0.2s							
RMQ	**Roma**	**35.27**	**246**	P	**P**	**13 23 06.7**	**-0.4**
baz=35,SNR=8.5							
CTA	**Charters Tower**	**36.88**	**257**	LR	LR	13 36 48.8	
comp=Z,625nm,19.2s,baz=78,slow=34							
CTA	**Charters Tower**	**36.88**	**257**	P	**P**	**13 23 20.8**	**-0.2**
CTA				pmax	pmax		
comp=Z,21nm,1.2s							
CTAO	**Charters Tower**	**36.88**	**257**	P	**P**	**13 23 19.2**	**-1.7**
CTAO	**Charters Tower**	**36.88**	**257**	P	**P**	**13 23 19.3**	**-1.7**
CTAO				pmax	pmax		
comp=Z,30nm,1.3s							
PMG	**Port Moresby**	**37.09**	**275**	P	**P**	**13 23 21.5**	**-1.3**
comp=Z,37nm,0.9s,baz=87,slow=6.8,SNR=4.2							
PMG				LR	LR	13 35 00.4	
comp=Z,871nm,21.8s,baz=70,slow=31 comp=Z,37nm,0.9s							
PMG	**Port Moresby**	**37.09**	**275⇑**	*e*P	**P**	**13 23 22.6**	**-0.1**
PMG				pmax	pmax		
comp=Z,78nm,1.0s							
PMG	**Port Moresby**	**37.09**	**275**	P	**P**	**13 23 23.2**	**+0.5**
comp=Z,83nm,1.0s							
H11S2	**WAKE ISLAND Hy**	**37.93**	**332**	T	T	14 04 08.3	
baz=149,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**37.94**	**332**	T	T	14 04 04.1	
baz=149,slow=76,SNR=15							
H11S1	**WAKE ISLAND Hy**	**37.95**	**332**	T	T	14 04 12.4	
baz=149,slow=76,SNR=14							
MTSU	**Mount Surprise**	**38.73**	**260**	P	**P**	**13 23 35.6**	**-1.0**
baz=39,SNR=6.3							
RKT	**Rikitea**	**38.79**	**108**	*e*T	T	14 04 48.1	
comp=Z,7.7nm,0.3s							
H11N3	**WAKE ISLAND Hy**	**38.91**	**333**	T	T	14 05 05.3	
baz=152,slow=76,SNR=28							
H11N1	**WAKE ISLAND Hy**	**38.92**	**333**	T	T	14 04 58.1	
baz=152,slow=76,SNR=51							
H11N2	**WAKE ISLAND Hy**	**38.93**	**333**	T	T	14 05 06.4	
baz=152,slow=76,SNR=45							
CMSA	**Cobar Meteorol**	**39.05**	**239**	P	**P**	**13 23 37.4**	**-1.7**
baz=39,SNR=19							
PUH	**Pauahi**	**39.69**	**31**	P	**P**	**13 23 44.2**	**-0.5**
COEN	**Coen**	**40.15**	**266**	P	**P**	**13 23 48.4**	**-0.1**
baz=40,SNR=7.0							
COEN	**Coen**	**40.15**	**266**	P	**P**	**13 23 48.6**	**+0.1**
TAU	**Tasmania Unive**	**42.18**	**222**	P	**P**	**13 24 03.8**	**-1.1**
TAU				pmax	pmax		
comp=Z,80nm,2.9s							
STKA	**Stephens Creek**	**42.52**	**239**	P	**P**	**13 24 07.0**	**-0.8**
comp=Z,13nm,0.9s,baz=63,slow=7.3,SNR=9.4							
STKA				LR	LR	13 39 57.8	
comp=Z,600nm,20.1s,baz=75,slow=34 comp=Z,13nm,0.9s							
STKA	**Stephens Creek**	**42.52**	**239**	P	**P**	**13 24 07.5**	**-0.3**
baz=42,SNR=5.9							
STKA	**Stephens Creek**	**42.52**	**239**	P	**P**	**13 24 06.0**	**-1.7**
STKA	**Stephens Creek**	**42.52**	**239**	P	**P**	**13 24 06.1**	**-1.7**
STKA				pmax	pmax		
comp=Z,6.0nm,1.1s							
HTT	**Hallett**	**45.05**	**238**	P	**P**	**13 24 27.6**	**-0.6**
baz=45,SNR=4.1							
BBOO	**Buckleboo**	**47.30**	**239**	P	**P**	**13 24 43.5**	**-2.3**
BBOO				IAmb	IAmb	13 25 02.1	
comp=Z,36nm,1.1s							
WR0	**Warramunga Arr**	**47.89**	**257**	P	**P**	**13 24 48.5**	**-2.2**
WR0				IAmb	IAmb	13 24 59.4	
comp=Z,21nm,1.2s							
WB0	**Warramunga Arr**	**48.04**	**257**	P	**P**	**13 24 49.8**	**-2.1**
WB0				IAmb	IAmb	13 24 59.7	
comp=Z,50nm,1.4s							
WB2	**Warramunga Arr**	**48.07**	**257**	P	**P**	**13 24 50.0**	**-2.1**
WRAB	**Tennant Creek**	**48.07**	**257⇑**	*e*P	**P**	**13 24 50.2**	**-1.9**
WRAB				pmax	pmax		
comp=Z,35nm,1.7s							
WRA	**Warramunga Arr**	**48.08**	**257**	P	**P**	**13 24 49.9**	**-2.2**
comp=Z,12nm,1.0s,baz=90,slow=7.3,SNR=41							
WRA				PcP	**PcP**	**13 26 20.1**	**+0.1**
comp=Z,1.3nm,0.8s,baz=104,slow=3.2,SNR=1.4							
WRA				LR	LR	13 43 04.9	
comp=Z,316nm,21.8s,baz=94,slow=34 comp=Z,12nm,1.0s							
WRA	**Warramunga Arr**	**48.08**	**257**	P	**P**	**13 24 49.6**	**-2.5**
WRA	**Warramunga Arr**	**48.08**	**257**	*i* P	**P**	**13 24 50.2**	**-2.0**
WRA				pmax	pmax		
comp=Z,12nm,1.0s							
AS31	**Alice Springs**	**48.40**	**252**	P	**P**	**13 24 52.1**	**-2.5**
ASAR	**Alice Springs**	**48.40**	**252**	P	**P**	**13 24 52.2**	**-2.4**
comp=Z,25nm,0.9s,baz=85,slow=8.3,SNR=123							
ASAR				PcP	**PcP**	**13 26 24.6**	**+3.5**
comp=Z,3.9nm,0.9s,baz=100,slow=3.8,SNR=4.4							
ASAR				LR	LR	13 43 14.8	
comp=Z,1μm,21.6s,baz=95,slow=34 comp=Z,25nm,0.9s							
GUMO	**Guam**	**48.72**	**304**	LR	LR	13 42 26.1	
comp=Z,327nm,20.4s,baz=116,slow=32							
KDU	**Kakadu**	**50.64**	**266**	P	**P**	**13 25 11.7**	**-0.1**
baz=51,SNR=6.7							
MTN	**Manton Dam**	**51.91**	**266**	P	**P**	**13 25 20.4**	**-0.8**
baz=52,SNR=5.3							
MTN	**Manton Dam**	**51.91**	**266**	P	**P**	**13 25 19.6**	**-1.7**
MTN				IAmb	IAmb	13 25 29.5	
comp=Z,37nm,1.4s							
WRKA	**Warakurna**	**53.51**	**250**	P	**P**	**13 25 31.7**	**-1.4**
baz=53,SNR=34							
KNRA	**Kununurra**	**53.77**	**262**	P	**P**	**13 25 32.8**	**-2.1**
baz=54,SNR=3.8							
KNRA	**Kununurra**	**53.77**	**262**	P	**P**	**13 25 33.7**	**-1.3**
KNRA				IAmb	IAmb	13 25 40.8	
comp=Z,70nm,1.8s							
FORT	**Forrest**	**53.84**	**243**	P	**P**	**13 25 32.6**	**-2.7**
FORT				IAmb	IAmb	13 25 41.0	
comp=Z,31nm,0.8s							
SIJI	**Sorong**	**54.62**	**280**	LR	LR	13 47 58.6	
comp=Z,371nm,20.5s,baz=77,slow=35							
SIJI	**Sorong**	**54.62**	**280**	P	**P**	**13 25 41.0**	**-0.3**
comp=Z,1μmcomp=Z,36nm,1.1s							
SWI	**Sorong**	**54.63**	**280**	P	**P**	**13 25 40.9**	**-0.4**
comp=Z,44nm,1.0s							
FITZ	**Fitzroy Crossi**	**56.44**	**258**	LR	LR	13 47 37.2	
comp=Z,698nm,21.9s,baz=96,slow=34							
FITZ	**Fitzroy Crossi**	**56.44**	**258**	P	**P**	**13 25 54.3**	**+0.1**
baz=56,SNR=3.7							
FITZ	**Fitzroy Crossi**	**56.44**	**258**	P	**P**	**13 25 53.4**	**-0.9**
FITZ				IAmb	IAmb	13 26 04.4	
comp=Z,38nm,1.4s							
KRAI	**Karang Ratu**	**56.65**	**276**	P	**P**	**13 25 55.6**	**-0.3**
comp=Z,19nm,0.9s							
JCJ	**Chichijima**	**58.95**	**315**	LR	LR	13 47 17.8	
comp=Z,616nm,20.6s,baz=124,slow=32							
SOEI	**Soe**	**59.09**	**268**	P	**P**	**13 26 13.5**	**+0.3**
comp=Z,1μmcomp=Z,84nm,1.2s							
SANI	**Sanana**	**59.31**	**277**	P	**P**	**13 26 13.6**	**-0.9**
comp=Z,19nm,0.9s							
PSA00	**Pilbara Seismi**	**61.48**	**254**	P	**P**	**13 26 27.4**	**-1.9**
PSA00				IAmb	IAmb	13 26 39.5	
comp=Z,22nm,0.9s							
RPN	**Rapa Nui**	**62.04**	**113**	LR	LR	13 47 55.2	
comp=Z,134nm,18.3s,baz=277,slow=30							
DAV	**Davao City (W)**	**62.63**	**286**	LR	LR	13 52 28.1	
comp=Z,190nm,18.1s,baz=110,slow=35							
NWAO	**Narrogin (SRO)**	**63.08**	**241**	LR	LR	13 52 06.7	
comp=Z,622nm,21.4s,baz=284,slow=34							
SBA	**Scott Base**	**63.25**	**184**	P	**P**	**13 26 40.4**	**+0.2**
SBA				IAmb	IAmb	13 26 55.4	
comp=Z,31nm,1.6s							
SBA	**Scott Base**	**63.25**	**184**	P	**P**	**13 26 40.4**	**+0.2**
SBA				pmax	pmax		
comp=Z,31nm,1.7s							
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**13 26 41.3**	**+0.6**
comp=Z,1.3nm,0.8s,baz=18,slow=7.5,SNR=4.1							
VNDA				LR	LR	13 49 26.1	
comp=Z,128nm,21.6s,baz=36,slow=31 comp=Z,1.3nm,0.8s							
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**13 26 40.8**	**+0.1**
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**13 26 40.8**	**+0.1**
VNDA				pmax	pmax		
comp=Z,15nm,1.5s							
MRSI	**Marisa**	**63.91**	**278**	P	**P**	**13 26 46.9**	**+1.3**
JHJ	**Hachijo jima 2**	**64.44**	**319**	LR	LR	13 56 19.3	
comp=Z,134nm,18.2s,baz=116,slow=37							
KAPI	**Kappang**	**64.53**	**272**	LR	LR	13 53 09.3	
comp=Z,131nm,21.3s,baz=98,slow=34							
SHEM	**Shemya Is, Ala**	**68.33**	**353**	LR	LR	13 50 29.8	
comp=Z,532nm,21.9s,baz=114,slow=30							
JOW	**Kunigami**	**68.92**	**307**	LR	LR	13 52 05.8	
comp=Z,448nm,21.8s,baz=130,slow=31							
SNCC	**San Nicolas Is**	**71.82**	**47**	P	**P**	**13 27 35.9**	**+0.9**
baz=237							
PEA0B	**Petropavlovsk-**	**71.95**	**343⇑**	*e*P	**P**	**13 27 34.8**	**-0.6**
PETK	**Petropavlovsk-**	**71.95**	**343**	P	**P**	**13 27 36.1**	**+0.7**
comp=Z,4.5nm,0.8s,baz=179,slow=6.5,SNR=4.0							
PETK				LR	LR	13 53 10.0	
comp=Z,532nm,21.9s,baz=149,slow=31 comp=Z,4.5nm,0.8s							
PETK	**Petropavlovsk-**	**71.95**	**343**	P	**P**	**13 27 35.2**	**-0.2**
SCZ2	**Santa Cruz Isl**	**72.14**	**46**	P	**P**	**13 27 36.9**	**-0.1**
baz=237							
SPIA	**Saint Paul Isl**	**72.29**	**3**	P	**P**	**13 27 38.2**	**+0.9**
baz=185							
SBC	**Santa Barbara**	**72.33**	**46**	P	**P**	**13 27 38.0**	**0.0**
baz=236							
SCI2	**San Clemente I**	**72.36**	**48**	P	**P**	**13 27 37.9**	**-0.4**
baz=238							
PKM	**Mcpherson Peak**	**72.51**	**45**	P	**P**	**13 27 40.0**	**+0.6**
baz=236,SNR=7.9							
CIS	**Catalina Islan**	**72.68**	**47**	P	**P**	**13 27 40.6**	**+0.4**
baz=238							
KMRM	**Mail Ridge**	**73.09**	**39**	P	**P**	**13 27 41.6**	**-0.9**
OSI	**Osito Audit: C**	**73.11**	**46**	P	**P**	**13 27 44.2**	**+1.4**
baz=237							
ARVC	**Arvin**	**73.32**	**46**	P	**P**	**13 27 45.8**	**+1.9**
baz=237							
VES	**Vestal, Richgr**	**73.53**	**45**	P	**P**	**13 27 47.2**	**+2.0**
baz=237							
MURC	**Murrieta**	**73.65**	**48**	P	**P**	**13 27 46.4**	**+0.4**
baz=238							
BFSC	**Mount Baldy Ra**	**73.66**	**47**	P	**P**	**13 27 47.5**	**+1.4**
baz=238							
SII	**Sitkinak Islan**	**73.70**	**12**	P	**P**	**13 27 49.1**	**+3.4**
baz=201							
EDW2	**Edwards Air Fo**	**73.76**	**46**	P	**P**	**13 27 48.4**	**+1.8**
baz=238,SNR=11							
MONP2	**Monument Peak**	**73.84**	**49**	P	**P**	**13 27 49.6**	**+2.3**
baz=239,SNR=8.3							
ISA	**Isabella, Lake**	**73.85**	**45**	P	**P**	**13 27 48.7**	**+1.5**
baz=237,SNR=11							
IKP	**In-Ko-Pah, Jac**	**73.95**	**49**	P	**P**	**13 27 49.4**	**+1.6**
baz=239,SNR=6.0							
PFO	**Pinyon Flats O**	**74.18**	**48**	LR	LR	13 52 30.0	
comp=Z,308nm,20.9s,baz=244,slow=29							
PFO	**Pinyon Flats O**	**74.18**	**48**	P	**P**	**13 27 52.1**	**+2.9**
baz=239,SNR=7.7							
TPFO	**Pinon Flats**	**74.19**	**48**	P	**P**	**13 27 51.6**	**+2.4**
baz=239,SNR=7.3							
LRMC	**Laurel Mtn Rad**	**74.30**	**46**	P	**P**	**13 27 53.0**	**+3.2**
baz=238							
SWSC	**Sam W. Stewart**	**74.32**	**49**	P	**P**	**13 27 51.6**	**+1.7**
baz=240							
CWC	**Cottonwood Cre**	**74.54**	**45**	P	**P**	**13 27 52.7**	**+1.4**
baz=237							
LPIG	**La Paz**	**74.54**	**59**	LR	LR	13 51 41.4	
comp=Z,257nm,21.5s,baz=250,slow=28							
YBH	**Yreka Blue Hor**	**74.61**	**38**	LR	LR	13 52 44.5	
comp=Z,108nm,21.8s,baz=236,slow=29							
BELC	**Belle Mtn. Jos**	**74.71**	**48**	P	**P**	**13 27 53.1**	**+0.8**
baz=239,SNR=8.1							
MPMC	**Manual Prospec**	**74.74**	**45**	P	**P**	**13 27 53.6**	**+1.1**
baz=238,SNR=17							
TIN	**Tinemaha, Big**	**74.77**	**44**	P	**P**	**13 27 53.8**	**+1.3**
baz=237							
KSRS	**Korea Array**	**74.78**	**316**	LR	LR	13 58 22.0	
comp=Z,136nm,19.1s,baz=110,slow=34							
QSPA	**South Pole Qui**	**74.78**	**180**	LR	LR	13 55 15.0	
comp=Z,134nm,21.0s,baz=37,slow=31							
QSPA	**South Pole Qui**	**74.78**	**180**	P	**P**	**13 27 51.5**	**-0.7**
GSC	**Goldstone, Bar**	**74.81**	**46**	P	**P**	**13 27 55.1**	**+2.3**
baz=238,SNR=8.3							
HEC	**Hector,Ludlow**	**74.90**	**47**	P	**P**	**13 27 54.4**	**+1.2**
baz=239							
BC3	**Big Chuckawall**	**74.93**	**48**	P	**P**	**13 27 54.9**	**+1.3**
baz=240,SNR=11							
GLA	**Glamis**	**75.08**	**49**	P	**P**	**13 27 55.4**	**+1.1**
baz=240,SNR=8.3							
KDAK	**Kodiak Island**	**75.17**	**12**	LR	LR	13 53 07.6	
comp=Z,311nm,21.7s,baz=224,slow=29							
GRAC	**Grapevine Rang**	**75.32**	**45**	P	**P**	**13 27 57.5**	**+1.9**
baz=238,SNR=6.5							
GMRC	**Granite Mounta**	**75.35**	**47**	P	**P**	**13 27 58.9**	**+2.9**
baz=239,SNR=10							
FURC	**Furnace Creek,**	**75.38**	**45**	P	**P**	**13 27 56.9**	**+1.0**
baz=238,SNR=7.5							
IRM	**Iron Mountain**	**75.40**	**48**	P	**P**	**13 27 58.0**	**+1.8**
baz=240,SNR=15							
NVAR	**Mina Array Bea**	**75.47**	**43**	P	P	13 28 01.7	+5.0
comp=Z,8.8nm,1.1s,baz=230,slow=7.5,SNR=26							
NVAR				LR	LR	13 54 32.2	
comp=Z,187nm,19.0s,baz=237,slow=30 comp=Z,8.8nm,1.1s							
TUQ	**Turquoise Moun**	**75.50**	**47**	P	**P**	**13 27 58.5**	**+1.7**
baz=239,SNR=7.4							
Q18K	**Katmai Hardscr**	**75.50**	**11**	P	**P**	**13 27 57.8**	**+1.6**
baz=200							
LEM	**Lembang**	**75.80**	**267**	LR	LR	14 00 24.4	
comp=Z,244nm,21.5s,baz=216,slow=35							
LEM	**Lembang**	**75.80**	**267**	P	**P**	**13 27 58.5**	**-0.5**
LEM				pmax	pmax		
comp=Z,28nm,0.8s							
214A	**Organ Pipe Nat**	**76.05**	**51**	P	**P**	**13 27 59.3**	**-0.6**
baz=242,SNR=5.0							
TPNV	**Topopah Spring**	**76.05**	**45**	P	**P**	**13 27 59.2**	**-0.7**
baz=238,SNR=7.2							
USRK	**Ussuriysk Ar.**	**76.18**	**324**	LR	LR	13 55 30.1	
comp=Z,875nm,21.9s,baz=125,slow=31							
PDMCI	**Parker Dam,Lak**	**76.20**	**48**	P	**P**	**13 28 03.5**	**+2.8**
baz=240,SNR=5.5							
O18K	**Koktuh Hills**	**76.60**	**10**	P	**P**	**13 28 04.1**	**+1.7**
baz=200							
N16K	**Nishlik Lake**	**76.64**	**8**	P	**P**	**13 28 04.8**	**+2.2**
baz=196							
O19K	**Port Alsworth**	**77.08**	**11**	P	**P**	**13 28 08.6**	**+3.6**
baz=201							
R11A	**Troy Canyon, C**	**77.23**	**44**	P	**P**	**13 28 08.4**	**+1.7**
baz=238,SNR=9.7							
O20K	**Slope Mountain**	**77.29**	**11**	P	**P**	**13 28 07.4**	**+1.1**
baz=202							
BRSE	**Bradley Lake S**	**77.35**	**12**	P	**P**	**13 28 08.8**	**+2.2**
baz=204							
C03A	**Quillayute Air**	**77.47**	**32**	P	**P**	**13 28 06.2**	**-1.3**
WVOR	**Wild Horse Val**	**77.48**	**39**	P	**P**	**13 28 05.9**	**-2.0**
WVOR	**Wild Horse Val**	**77.48**	**39**	P	**P**	**13 28 05.9**	**-2.0**
WVOR				pmax	pmax		
comp=Z,18nm,1.3s							
N19K	**Bonanza Creek**	**77.63**	**10**	P	**P**	**13 28 10.1**	**+1.9**
baz=200							
TUC	**Tucson**	**77.74**	**51**	P	**P**	**13 28 10.4**	**+0.9**
baz=243							
SEW	**Seward**	**77.95**	**13**	P	**P**	**13 28 11.0**	**+1.1**
baz=205							
Q23K	**Middleton Isla**	**78.06**	**15**	P	**P**	**13 28 12.1**	**+1.6**
baz=208							
N20K	**Mount Spurr**	**78.40**	**11**	P	**P**	**13 28 13.8**	**+1.3**
baz=203							
NJ2	**Nanjing**	**78.62**	**308**	*e*P	**P**	**13 28 14.8**	**+0.6**
NJ2				pmax	pmax		
comp=Z,11nm,0.6s							
M19K	**Big River Lodg**	**78.67**	**10**	P	**P**	**13 28 15.6**	**+1.7**
baz=200							
ELK	**Elko**	**78.71**	**42**	LR	LR	13 56 14.0	
comp=Z,159nm,20.4s,baz=244,slow=30							
WUAZ	**Wupatki**	**78.77**	**48**	P	**P**	**13 28 16.8**	**+1.5**
baz=242,SNR=13							
RC01	**Rabbit Creek A**	**78.79**	**12**	P	**P**	**13 28 16.7**	**+2.2**
baz=205							
GAMB	**Gambell**	**78.83**	**2**	P	**P**	**13 28 18.2**	**+3.6**
baz=183							
L19K	**White Mountain**	**78.86**	**10**	P	**P**	**13 28 18.2**	**+3.3**
baz=200							
M20K	**Styx River**	**78.87**	**11**	P	**P**	**13 28 16.6**	**+1.6**
baz=202							
PWL	**Port Wells**	**78.88**	**13**	P	**P**	**13 28 17.2**	**+2.1**
baz=206,SNR=6.8							
CRAG	**Craig**	**78.92**	**23**	P	**P**	**13 28 16.9**	**+1.6**
baz=221							
SUA	**Susitna One**	**78.92**	**12**	P	**P**	**13 28 15.5**	**+0.1**
SUA	**Susitna One**	**78.92**	**12**	P	**P**	**13 28 15.8**	**+0.4**
baz=204,SNR=5.4							
KAIM	**Kayak Island**	**78.98**	**15**	P	**P**	**13 28 16.0**	**+0.5**
baz=210							
GLI	**Glacier Island**	**79.17**	**14**	P	**P**	**13 28 18.2**	**+1.6**
baz=208,SNR=6.7							
EYAK	**Cordova Ski Ar**	**79.19**	**14**	P	**P**	**13 28 18.3**	**+1.6**
baz=209		

CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,17.2s						
WAX	**Waxell Ridge**	**79.83**	**16**	P	**P**	**13 28 19.4**	**-1.0**
WAX				IAmb	IAmb	13 28 29.2	
	comp=Z,20nm,0.8s						
BMRM	**Bremner River**	**79.83**	**15**	P	**P**	**13 28 23.2**	**+2.9**
	baz=210,SNR=8.0						
M23K	**Glacier View**	**79.84**	**13**	P	**P**	**13 28 22.7**	**+2.4**
	baz=207						
CUT	**Chulitna**	**79.88**	**12**	P	**P**	**13 28 22.9**	**+2.5**
	baz=204						
S32K	**Killisnoo**	**79.92**	**21**	P	**P**	**13 28 22.1**	**+1.4**
	baz=220						
WRAK	**Wrangell Islan**	**79.92**	**23**	P	**P**	**13 28 22.0**	**+1.3**
	baz=222						
ANM	**Nome**	**79.94**	**4**	P	**P**	**13 28 22.5**	**+1.8**
	baz=190						
SCM	**Sheep Creek Mo**	**79.97**	**13**	P	**P**	**13 28 22.5**	**+1.5**
	baz=207,SNR=6.5						
PPLA	**Purkeypile**	**79.98**	**11**	P	**P**	**13 28 22.3**	**+1.2**
	baz=202						
KLU	**Klutina**	**79.98**	**14**	P	**P**	**13 28 22.6**	**+1.4**
	baz=209						
DUG	**Dugway, Tooele**	**80.02**	**44**	P	**P**	**13 28 23.1**	**+1.1**
	baz=240,SNR=7.8						
K20K	**Telida**	**80.09**	**10**	P	**P**	**13 28 20.7**	**-0.9**
K20K				IAmb	IAmb	13 28 33.1	
	comp=Z,32nm,1.4s						
K20K	**Telida**	**80.09**	**10**	P	**P**	**13 28 23.0**	**+1.4**
	baz=201						
PNL	**Peninsula**	**80.13**	**18**	P	**P**	**13 28 24.1**	**+2.2**
	baz=215,SNR=7.2						
R31K	**City Hall, Gus**	**80.26**	**20**	P	**P**	**13 28 24.7**	**+2.2**
	baz=218						
N25K	**Chitina, Valde**	**80.39**	**14**	P	**P**	**13 28 22.7**	**-0.7**
N25K				IAmb	IAmb	13 28 34.6	
	comp=Z,21nm,0.9s						
N25K	**Chitina, Valde**	**80.39**	**14**	P	**P**	**13 28 24.5**	**+1.1**
	baz=210,SNR=7.7						
GLB	**Gilahina Butte**	**80.44**	**15**	P	**P**	**13 28 23.2**	**-0.3**
M24K	**Tolsona, Glenn**	**80.47**	**13**	P	**P**	**13 28 25.4**	**+1.7**
	baz=208						
CAST	**Castle Rocks**	**80.48**	**10**	P	**P**	**13 28 25.6**	**+1.9**
	baz=202						
WAT6	**Susitna Watana**	**80.55**	**13**	P	**P**	**13 28 25.9**	**+1.6**
	baz=207						
R32K	**Eaglecrest**	**80.56**	**20**	P	**P**	**13 28 25.5**	**+1.3**
	baz=220						
MCARA	**McCarthy VSAT**	**80.59**	**15**	P	**P**	**13 28 25.0**	**+0.7**
	baz=211,SNR=7.6						
P29M	**Windy Craggy**	**80.59**	**18**	P	**P**	**13 28 26.3**	**+1.9**
	baz=216,SNR=6.2						
WAT1	**Susitna Watana**	**80.60**	**12**	P	**P**	**13 28 25.9**	**+1.5**
	baz=206						
BARN	**Barnard Glacie**	**80.66**	**16**	P	**P**	**13 28 26.4**	**+1.4**
BARN				IAmb	IAmb	13 28 36.2	
	comp=Z,37nm,1.2s						
CTG	**Chitna Glacier**	**80.67**	**16**	P	**P**	**13 28 26.5**	**+1.6**
	baz=213,SNR=8.3						
HLID	**Hailey**	**80.70**	**40**	P	**P**	**13 28 25.8**	**+0.2**
	baz=238,SNR=15						
O28M	**Mount Upton**	**80.82**	**17**	P	**P**	**13 28 28.2**	**+2.3**
	baz=214,SNR=6.6						
TRF	**Thorofare Moun**	**80.83**	**11**	P	**P**	**13 28 24.8**	**-1.0**
TRF				IAmb	IAmb	13 28 34.7	
	comp=Z,32nm,1.2s						
TRF	**Thorofare Moun**	**80.83**	**11**	P	**P**	**13 28 28.5**	**+2.8**
	baz=204						
J20K	**Nowinta River**	**80.85**	**9**	P	**P**	**13 28 25.9**	**+0.3**
J20K				IAmb	IAmb	13 28 37.2	
	comp=Z,28nm,1.1s						
J20K	**Nowinta River**	**80.85**	**9**	P	**P**	**13 28 26.7**	**+1.1**
	baz=200,SNR=7.3						
CHUM	**Lake Minchumin**	**80.87**	**10**	P	**P**	**13 28 27.1**	**+1.4**
	baz=202						
PLBC	**Pleasant Camp**	**80.88**	**19**	P	**P**	**13 28 27.0**	**+1.1**
	baz=218						
O29M	**Mount Kennedy**	**80.89**	**18**	P	**P**	**13 28 27.9**	**+1.8**
	baz=216						
HARP	**HAARP**	**80.95**	**14**	P	**P**	**13 28 28.6**	**+2.3**
	baz=209						
GCSA	**Galena City Sc**	**80.99**	**8**	P	**P**	**13 28 27.5**	**+1.2**
	baz=198,SNR=5.5						
DHY	**Denali Highway**	**81.06**	**12**	P	**P**	**13 28 28.4**	**+1.4**
	baz=207						
QIZ	**Qiongzhong**	**81.15**	**292**	P	**P**	**13 28 27.3**	**-0.9**
SKAG	**Skagway**	**81.21**	**19**	P	**P**	**13 28 29.3**	**+1.7**
	baz=219						
P30M	**Million Dollar**	**81.22**	**18**	P	**P**	**13 28 29.9**	**+2.1**
	baz=217,SNR=9.3						
BPAW	**Bear Paw Mtn.**	**81.30**	**11**	P	**P**	**13 28 30.7**	**+2.7**
	baz=204						
MCK	**McKinley**	**81.34**	**12**	P	**P**	**13 28 28.6**	**+0.3**
MCK				IAmb	IAmb	13 28 39.1	
	comp=Z,29nm,1.0s						
MCK	**McKinley**	**81.34**	**12**	P	**P**	**13 28 28.6**	**+0.3**
MCK				pmax	pmax		
	comp=Z,29nm,1.0s						
MCK	**McKinley**	**81.34**	**12**	P	**P**	**13 28 30.4**	**+2.1**
	baz=206,SNR=7.0						
YUK8	**Steele Glacier**	**81.36**	**16**	P	**P**	**13 28 30.7**	**+1.9**
	baz=214						
PAX	**Paxson**	**81.38**	**13**	P	**P**	**13 28 31.9**	**+3.3**
	baz=209						
M26K	**Nabesna, AK**	**81.46**	**15**	P	**P**	**13 28 29.5**	**+0.5**
M26K				IAmb	IAmb	13 28 37.7	
	comp=Z,22nm,0.9s						
M26K	**Nabesna, AK**	**81.46**	**15**	P	**P**	**13 28 31.7**	**+2.6**
	baz=211,SNR=9.0						
S34M	**Telegraph Cree**	**81.47**	**22**	P	**P**	**13 28 32.0**	**+2.9**
	baz=223,SNR=8.4						
YUK6	**Outpost Mounta**	**81.47**	**17**	P	**P**	**13 28 32.1**	**+2.7**
	baz=216						
YUK3	**Moose Creek**	**81.58**	**16**	P	**P**	**13 28 31.6**	**+1.7**
	baz=214						
HYT	**Haines Junctio**	**81.63**	**18**	P	**P**	**13 28 31.8**	**+1.8**
	baz=217						
NEW	**Newport**	**81.64**	**35**	LR	LR	13 58 45.8	
	comp=Z,126nm,18.4s,baz=232,slow=31						
NEW	**Newport**	**81.64**	**35**	P	**P**	**13 28 30.9**	**+0.6**
	baz=236						
M27K	**Edge Creek, AK**	**81.70**	**15**	P	**P**	**13 28 32.5**	**+2.1**
	baz=212,SNR=10						
YUK4	**Talbot Arm**	**81.72**	**17**	P	**P**	**13 28 33.9**	**+3.3**
	baz=216						
PV20	**West Nyswonger**	**81.78**	**47**	P	**P**	**13 28 30.2**	**-1.3**
PV20				IAmb	IAmb	13 29 07.3	
	comp=Z,46nm,1.7s						
P32M	**Atlin**	**81.83**	**20**	P	**P**	**13 28 33.4**	**+2.3**
	baz=220						
Q32M	**Nakina River**	**81.85**	**21**	P	**P**	**13 28 33.7**	**+2.4**
	baz=222,SNR=5.3						
L26K	**Log Cabin Wild**	**81.92**	**14**	P	**P**	**13 28 35.1**	**+3.7**
	baz=211,SNR=7.9						
SEY	**Seymchan**	**81.92**	**346**	LR	LR	14 00 51.0	
	comp=Z,375nm,21.4s,baz=150,slow=33						
O30N	**Mendenhall**	**82.00**	**18**	P	**P**	**13 28 32.6**	**+0.7**
	baz=218,SNR=6.9						
BVCY	**Beaver Creek**	**82.01**	**15**	P	**P**	**13 28 33.8**	**+1.9**
	baz=213						
K24K	**Donnelly Dome**	**82.05**	**13**	P	**P**	**13 28 35.4**	**+3.3**
	baz=208,SNR=7.6						
TXAR	**Lajitas Array**	**82.07**	**57**	P	P	13 28 38.5	+5.5
	comp=Z,4.8nm,1.1s,baz=243,slow=4.0,SNR=19						
TXAR				LR	LR	13 57 05.1	
	comp=Z,230nm,21.4s,baz=232,slow=30						
	comp=Z,4.8nm,1.1s						
NEA2	**Nenana**	**82.10**	**11**	P	**P**	**13 28 35.9**	**+3.6**
	baz=205						
I21K	**Tanana**	**82.13**	**10**	P	**P**	**13 28 35.4**	**+3.1**
	baz=202						
ANMO	**Albuquerque**	**82.13**	**51**	LR	LR	13 56 36.3	
	comp=Z,311nm,22.0s,baz=240,slow=29						
ANMO	**Albuquerque**	**82.13**	**51**	P	**P**	**13 28 33.3**	**-0.1**
	baz=245						
RIDG	**Independent Ri**	**82.19**	**13**	P	**P**	**13 28 35.3**	**+2.4**
	baz=209						
MLY	**Manley**	**82.20**	**10**	P	**P**	**13 28 33.5**	**+0.6**
MLY	**Manley**	**82.20**	**10**	P	**P**	**13 28 35.6**	**+2.7**
	baz=204,SNR=9.1						
DLBC	**Dease Lake**	**82.26**	**22**	LR	LR	13 57 46.7	
	comp=Z,227nm,20.8s,baz=230,slow=30						
DLBC	**Dease Lake**	**82.26**	**22**	P	**P**	**13 28 35.5**	**+2.2**
	baz=224						
N30M	**Aishikik Lake**	**82.26**	**17**	P	**P**	**13 28 35.9**	**+2.7**
	baz=217						
WHY	**Whitehorse**	**82.29**	**19**	P	**P**	**13 28 36.1**	**+2.6**
	baz=219						
DOT	**Dot Lake**	**82.29**	**14**	P	**P**	**13 28 34.2**	**+0.9**
DOT				IAmb	IAmb	13 28 44.4	
	comp=Z,24nm,1.2s						
L27K	**Beaver Creek,**	**82.31**	**15**	P	**P**	**13 28 35.9**	**+2.4**
	baz=212						
BCAR	**Beaver Creek A**	**82.33**	**15**	P	**P**	**13 28 32.8**	**-0.7**
HDA	**Harding Lake**	**82.34**	**12**	P	**P**	**13 28 36.9**	**+3.4**
	baz=207,SNR=8.2						
CCB	**Clear Creek Bu**	**82.39**	**12**	P	**P**	**13 28 34.6**	**+0.9**
CCB				IAmb	IAmb	13 28 41.7	
	comp=Z,17nm,1.0s						
H21K	**Melozitna Rive**	**82.44**	**9**	P	**P**	**13 28 37.3**	**+3.2**
	baz=202						
I23K	**Minto, Yukon-K**	**82.55**	**11**	P	**P**	**13 28 37.6**	**+3.0**
	baz=205						
TCOL	**CIGO, UAF Yank**	**82.58**	**11**	P	**P**	**13 28 37.5**	**+2.8**
	baz=206,SNR=6.4						
COLA	**College**	**82.58**	**11**	P	**P**	**13 28 34.6**	**-0.1**
COLA				IAmb	IAmb	13 28 42.7	
	comp=Z,21nm,0.8s						
COLA	**College**	**82.58**	**11**	P	**P**	**13 28 34.6**	**-0.1**
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
COLA	**College**	**82.58**	**11**	P	**P**	**13 28 37.7**	**+3.0**
	baz=206						
SCRK	**Sand Creek**	**82.59**	**13**	P	**P**	**13 28 37.7**	**+2.8**
	baz=210,SNR=6.6						
IMAR	**Indian Mountai**	**82.60**	**9**	P	**P**	**13 28 36.0**	**+1.2**
P33M	**Teslin, Yukon**	**82.60**	**20**	P	**P**	**13 28 38.1**	**+3.0**
	baz=221						
R33M	**Jennings River**	**82.62**	**21**	P	**P**	**13 28 37.8**	**+2.5**
	baz=223						
N31M	**Braeburn, Yuko**	**82.66**	**18**	P	**P**	**13 28 37.1**	**+1.8**
	baz=218						
M29M	**Somme Creek**	**82.67**	**16**	P	**P**	**13 28 38.3**	**+2.9**
	baz=216						
IL31		**82.68**	**12**	P	**P**	**13 28 35.9**	**+0.7**
IL31				IAmb	IAmb	13 28 46.9	
	comp=Z,40nm,1.5s						
ILAR	**Eielson Array**	**82.68**	**12**	P	**P**	**13 28 36.9**	**+1.6**
	comp=Z,2.0nm,1.0s,baz=233,slow=6.1,SNR=9.3						
ILAR				LR	LR	13 58 24.8	
	comp=Z,165nm,21.8s,baz=219,slow=30						
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**82.68**	**12**	P	**P**	**13 28 35.4**	**+0.2**
MSO	**Missoula**	**82.68**	**37**	P	**P**	**13 28 38.5**	**+2.7**
	baz=238,SNR=7.4						
J25K	**Salcha River,**	**82.85**	**13**	P	**P**	**13 28 37.8**	**+1.6**
	baz=209,SNR=5.6						
POKR	**Poker Plat Res**	**82.88**	**11**	P	**P**	**13 28 39.9**	**+3.6**
	baz=207						
H22K	**Ishtalitna Cre**	**82.89**	**10**	P	**P**	**13 28 39.3**	**+3.0**
	baz=203,SNR=6.2						
S22A	**4UR Ranch, Cre**	**83.04**	**48**	P	**P**	**13 28 38.4**	**+0.2**
	baz=245						
O20A	**White River Ci**	**83.08**	**45**	P	**P**	**13 28 39.8**	**+1.5**
	baz=243,SNR=7.2						
H23K	**Yukon River**	**83.13**	**10**	P	**P**	**13 28 39.1**	**+1.5**
	baz=205						
G21K	**Allakaket**	**83.14**	**9**	P	**P**	**13 28 40.4**	**+2.8**
	baz=201,SNR=6.6						
J26L	**Joseph Creek**	**83.14**	**13**	P	**P**	**13 28 38.4**	**+0.6**
J26L	**Joseph Creek**	**83.14**	**13**	P	**P**	**13 28 41.0**	**+3.3**
	baz=211						
QLMT	**Earthquake Lak**	**83.19**	**40**	P	**P**	**13 28 38.2**	**-0.4**
N32M	**Quiet Lake**	**83.23**	**19**	P	**P**	**13 28 40.6**	**+2.3**
	baz=221						
L29M	**L29M**	**83.30**	**16**	P	**P**	**13 28 41.8**	**+3.2**
	baz=216,SNR=9.4						
BW06	**Boulder Array**	**83.40**	**43**	P	**P**	**13 28 41.2**	**+1.4**
	baz=242,SNR=8.3						
PDAR	**Pinedale Array**	**83.40**	**43**	P	**P**	**13 28 42.5**	**+2.7**
	comp=Z,7.9nm,1.0s,baz=225,slow=3.4,SNR=25						
PDAR				LR	LR	13 59 25.8	
	comp=Z,136nm,20.0s,baz=246,slow=31						
	comp=Z,7.9nm,1.0s						
H24K	**Noodor Dome**	**83.44**	**11**	P	**P**	**13 28 42.4**	**+3.1**
	baz=206						
BOZ	**Bozeman (W)**	**83.44**	**39**	P	**P**	**13 28 42.4**	**+2.5**
	baz=240,SNR=13						
RDOG	**Red Dog Mine**	**83.57**	**5**	P	**P**	**13 28 42.7**	**+2.9**
	baz=192						
PRP	**Porcupine Dome**	**83.61**	**12**	P	**P**	**13 28 40.7**	**+0.4**
PRP	**Porcupine Dome**	**83.61**	**12**	P	**P**	**13 28 43.0**	**+2.7**
	baz=209,SNR=6.0						
M31M	**Drury Creek, Y**	**83.63**	**18**	P	**P**	**13 28 44.1**	**+3.8**
	baz=219						
DAWY	**Dawson**	**83.75**	**15**	P	**P**	**13 28 42.1**	**+1.2**
DAWY	**Dawson**	**83.75**	**15**	P	**P**	**13 28 43.3**	**+2.4**
	baz=215,SNR=9.5						
F21K	**Alatna River**	**83.80**	**8**	P	**P**	**13 28 44.2**	**+3.2**
	baz=201						
G22K	**Bettles**	**83.81**	**9**	P	**P**	**13 28 43.9**	**+2.8**
	baz=203						
G23K	**Bananza Creek**	**83.86**	**10**	P	**P**	**13 28 43.7**	**+2.3**
	baz=204,SNR=6.9						
WTLY	**Watson Lake, Y**	**83.90**	**21**	P	**P**	**13 28 43.9**	**+2.1**
	baz=225,SNR=6.2						
EGAK	**Eagle**	**83.92**	**14**	P	**P**	**13 28 43.9**	**+2.2**
	baz=213,SNR=8.6						
I26K	**Coal Creek Min**	**83.92**	**13**	P	**P**	**13 28 44.6**	**+2.9**
	baz=211						
FARO	**Faro, Yukon**	**83.97**	**18**	P	**P**	**13 28 43.6**	**+1.6**
	baz=220						
HNS	**HongShan**	**83.98**	**311**	⇓P	P	13 28 50.6	+8.0
HNS	**HongShan**	**83.98**	**311**	ScS	S	13 39 28.9	+22
SDCO	**Great Sand Dun**	**83.99**	**48**	P	**P**	**13 28 43.9**	**+0.9**
	baz=245						
K29M	**Barlow Dome**	**84.05**	**16**	P	**P**	**13 28 44.8**	**+2.2**
	baz=216						
BILL	**Bilibino**	**84.14**	**353**	*i* P	**P**	**13 28 40.5**	**-2.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H25K	**Birch Creek**	**84.21**	**12**	P	**P**	**13 28 45.0**	**+1.9**
	baz=208						
F22K	**John River**	**84.26**	**9**	P	**P**	**13 28 46.5**	**+3.2**
	baz=202,SNR=8.7						
MAYO	**Mayo, Yukon**	**84.29**	**17**	P	**P**	**13 28 46.2**	**+2.5**
	baz=218						
I27K	**Kandik River**	**84.51**	**13**	P	**P**	**13 28 46.6**	**+1.9**
	baz=212,SNR=6.4						
MSTX	**Muleshoe**	**84.53**	**53**	P	**P**	**13 28 47.4**	**+1.7**
	baz=248						
T25A	**Trinidad**	**84.54**	**49**	P	**P**	**13 28 46.7**	**+0.9**
	baz=246						
RLMT	**Red Lodge**	**84.68**	**41**	P	**P**	**13 28 46.3**	**+0.1**
	baz=242						
Q24A	**Divide**	**84.75**	**47**	P	**P**	**13 28 46.8**	**-0.1**
	baz=246						
E22K	**Anaktuvuk Pass**	**84.89**	**9**	P	**P**	**13 28 48.3**	**+1.7**
	baz=203						
MMPY	**Sheldon Lake,**	**84.90**	**19**	P	**P**	**13 28 49.0**	**+2.2**
	baz=222,SNR=8.5						
F24K	**Squaw Lake**	**84.95**	**10**	P	**P**	**13 28 48.1**	**+1.2**
	baz=206,SNR=7.1						
N23A	**Red Feather La**	**84.99**	**45**	P	**P**	**13 28 47.8**	**-0.2**
	baz=245						
PMSA	**Palmer Station**	**85.05**	**156**	LR	LR	13 58 06.0	
	comp=Z,280nm,20.7s,baz=271,slow=29						
H27K	**Steamboat Moun**	**85.06**	**13**	P	**P**	**13 28 50.3**	**+2.8**
	baz=212,SNR=8.7						
I29M	**Ogilvie Camp,**	**85.09**	**15**	P	**P**	**13 28 49.9**	**+2.3**
	baz=216,SNR=9.3						
TGTN	**Hyland Airport**	**85.09**	**21**	P	**P**	**13 28 48.7**	**+0.9**
	baz=225						
E23K	**Chandalar**	**85.15**	**9**	P	**P**	**13 28 50.6**	**+2.6**
	baz=205,SNR=12						
G26K	**Porcupine Rive**	**85.21**	**12**	P	**P**	**13 28 50.8**	**+2.6**
	baz=210,SNR=24						
K22A	**Casper**	**85.35**	**44**	P	**P**	**13 28 51.3**	**+1.6**
	baz=244						
E24K	**Your Creek**	**85.35**	**10**	P	**P**	**13 28 51.7**	**+2.8**
	baz=206						
F25K	**Christian Rive**	**85.42**	**11**	P	**P**	**13 28 52.3**	**+3.0**
	baz=208,SNR=8.5						
BMAR	**Burnt Mountain**	**85.47**	**11**	P	**P**	**13 28 50.8**	**+1.2**
G27K	**Doyon Strip**	**85.53**	**13**	P	**P**	**13 28 52.8**	**+3.0**
	baz=212						
CMIG	**Matias Romero**	**85.58**	**71**	LR	LR	13 58 29.3	
	comp=Z,170nm,19.8s,baz=223,slow=29						
TOLK	**Toolik Lake Re**	**85.69**	**9**	P	**P**	**13 28 52.0**	**+1.4**
	baz=205						
AMTX	**Amarillo**	**85.71**	**52**	P	**P**	**13 28 52.6**	**+1.1**
	baz=248						
EGMT	**Eagleton**	**85.74**	**38**	P	**P**	**13 28 53.1**	**+1.8**
	baz=242						
F26K	**Sheenjek River**	**85.78**	**11**	P	**P**	**13 28 52.7**	**+1.6**
	baz=210,SNR=8.6						
D23K	**Nanushuk River**	**85.82**	**9**	P	**P**	**13 28 52.9**	**+1.8**
	baz=204,SNR=8.7						
E25K	**Arctic Village**	**85.89**	**11**	P	**P**	**13 28 54.2**	**+2.6**
	baz=208,SNR=6.8						
D24K	**Happy Valley**	**86.27**	**9**	P	**P**	**13 28 55.0**	**+1.6**
	baz=205						
EPYK	**Eagle Plains**	**86.29**	**15**	P	**P**	**13 28 54.8**	**+1.3**
	baz=217						
ABTX	**Abilene, Hawle**	**86.48**	**55**	P	**P**	**13 28 56.2**	**+0.8**
	baz=249						
C23K	**Itkillik River**	**86.63**	**8**	P	**P**	**13 28 55.0**	**-0.2**
	baz=204						
E27K	**Coleen River**	**86.71**	**12**	P	**P**	**13 28 57.2**	**+1.6**
	baz=212						
C24K	**Franklin Bluff**	**86.81**	**9**	P	**P**	**13 28 57.4**	**+1.5**
	baz=206						
H03S2	**Juan Fernandez**	**86.81**	**124**	T	T	15 05 02.9	
	baz=251						
D25K	**Kavik River**	**86.82**	**10**	P	**P**	**13 28 58.3**	**+2.2**
	baz=208						
H03S1	**Juan Fernandez**	**86.82**	**124**	T	T	15 05 02.2	
	baz=251						
H03S3	**Juan Fernandez**	**86.83**	**124**	T	T	15 05 09.0	
	baz=251						
G30M	**tAoh Zraii Nji**	**86.90**	**14**	P	**P**	**13 28 58.6**	**+2.1**
	baz=217,SNR=7.5						
H03N2	**Juan Fernandez**	**86.91**	**124**	T	T	15 05 09.8	
	baz=257,slow=73,SNR=6.3						
H03N3	**Juan Fernandez**	**86.92**	**124**	T	T	15 05 11.0	
	baz=257,slow=73,SNR=7.1						
H03N1	**Juan Fernandez**	**86.93**	**124**	T	T	15 05 05.2	
	baz=257,slow=73,SNR=5.1						
XAN	**Xi'an**	**87.06**	**306**	⇑P	**P**	**13 29 01.8**	**+3.7**
XAN				pP	pwP	13 29 07.4	+3.8
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=Z,210nm,19.6s						
XAN				LR	LR		
	comp=Z,200nm,19.2s						
XAN				LR	LR		
	comp=Z,320nm,20.8s						
LAO	**LASA Array**	**87.28**	**40**	P	**P**	**13 29 00.2**	**+1.2**
	baz=244						
MAW	**Mawson**	**87.33**	**199**	LR	LR	14 07 47.2	
	comp=Z,141nm,18.2s,baz=116,slow=36						
C27K	**Jago River**	**87.54**	**11**	P	**P**	**13 29 01.7**	**+2.2**
	baz=210						
C26K	**Camden Bay**	**87.59**	**10**	P	**P**	**13 29 01.1**	**+1.4**
	baz=209						
HHC	**Hu-ho-hao-te**	**87.59**	**313**	*e*P	**P**	**13 28 59.0**	**-1.6**
RSSD	**Black Hills**	**87.61**	**43**	P	**P**	**13 29 01.7**	**+0.9**
	baz=246						
OGNE	**Ogallala**	**87.73**	**47**	P	**P**	**13 29 01.5**	**+0.3**
	baz=248						
F31M	**Tsiigehtchic**	**87.86**	**15**	P	**P**	**13 29 03.8**	**+2.7**
	baz=220,SNR=10						
WMOK	**Wichita Mounta**	**87.89**	**53**	P	**P**	**13 29 02.1**	**0.0**
	baz=250						
YAK	**Yakutsk**	**88.27**	**337**	LR	LR	14 05 57.5	
	comp=Z,105nm,19.5s,baz=89,slow=34						
YAK	**Yakutsk**	**88.27**	**337**⇑	*e*P	**P**	**13 29 00.9**	**-2.2**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**88.58**	**14**	LR	LR	14 05 44.2	
	comp=Z,76nm,18.2s,baz=211,slow=33						
INK	**Inuvik**	**88.58**	**14**	P	**P**	**13 29 06.9**	**+2.4**
	baz=220,SNR=7.3						
HKT	**Hockley**	**88.68**	**59**⇑	*e*P	**P**	**13 29 01.4**	**-4.4**
HKT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DGMT	**Dagmar**	**89.27**	**39**	P	**P**	**13 29 09.6**	**+1.4**
	baz=246						
PZH	**PanZhiHua**	**90.57**	**297**	P	**P**	**13 29 14.0**	**-1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,6.1s						
YKA	**Yellowknife Ar**	**90.71**	**24**	P	**P**	**13 29 18.4**	**+3.8**
	comp=Z,5.0nm,0.9s,baz=241,slow=4.5,SNR=7.5						
YKA				LR	LR	14 02 51.8	
	comp=Z,98nm,19.2s,baz=256,slow=31						
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.83**	**289**	P	**P**	**13 29 18.0**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=92,slow=2.7,SNR=2.1						
CMAR				LR	LR	14 05 17.7	
	comp=Z,130nm,21.7s,baz=105,slow=32						
	comp=Z,0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**90.83**	**289**	P	**P**	**13 29 18.0**	**+1.8**
PLCA	**Paso Flores**	**90.96**	**133**	LR	LR	14 01 53.8	
	comp=Z,262nm,20.5s,baz=241,slow=30						
LZH	**Lanzhou**	**91.66**	**307**	*e*P	P	13 29 30.0	+10
LZH				pP	pwP	13 29 36.1	+11
TROLL	**Troll, Antarti**	**92.93**	**179**	P	**P**	**13 29 27.9**	**+2.8**
ULN	**Ulaanbaatar**	**93.11**	**319**⇓	*e*P	**P**	**13 29 25.4**	**-0.9**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SNAA	**Sanae**	**93.13**	**178**	P	**P**	**13 29 29.5**	**+3.6**
SNAA	**Sanae**	**93.13**	**178**	LR	LR	14 05 43.2	
	comp=Z,324nm,22.0s,baz=191,slow=32						
VNA3	**Neumayer Olymp**	**93.15**	**175**	P	**P**	**13 29 28.7**	**+2.7**
SONM	**Songino Array**	**93.52**	**319**	P	**P**	**13 29 28.6**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=128,slow=9.5,SNR=3.2						
SONM				LR	LR	14 06 49.9	
	comp=Z,185nm,21.9s,baz=110,slow=32						
VNA2	**Neumayer--Watz**	**93.63**	**176**	P	**P**	**13 29 28.1**	**-0.1**
	baz=177,slow=2.8						
VNA1	**Neumayer--Stat**	**93.84**	**176**	P	**P**	**13 29 32.4**	**+3.3**
TIXI	**Tiksi**	**94.38**	**345**	LR	LR	14 07 09.0	
	comp=Z,320nm,21.5s,baz=90,slow=32						
ATAH	**Atahualpa**	**94.76**	**99**	LR	LR	14 02 09.7	
	comp=Z,184nm,20.5s,baz=246,slow=29						
NNA	**Nana**	**94.88**	**104**	LR	LR	14 02 39.3	
	comp=Z,74nm,21.8s,baz=252,slow=29						
ULM	**Lac du Bonnet**	**94.99**	**39**	L

AKASG **Malin Array Be** 139.48 336 PKP **PKPdf** 13 35 40.6 +1.0
comp=Z,0.3nm,0.4s,baz=44,slow=1.4,SNR=1.3
AKBB **Malin Array Si** 139.48 336⇑ *i*PKIKP **PKPdf** 13 35 39.3 -0.3
ANN **Anapa** 139.61 324 *i* PKIKP **PKiKP** 13 35 49.5 +7.1
ANN pmax pmax
comp=Z,33nm,1.7s
ANN MLR MLR
comp=Z,350nm,23.0s
ANN MLR MLR
comp=N,245nm,18.0s
PCED **Cedros** 142.54 45 *e*P **PKKPdf** 13 45 03.2 +1.6
HOR **Horta** 142.64 45 *e*P **PKKPdf** 13 45 01.7 +0.3
CLL **Collm** 143.43 351 *e*PKPdf **PKiKP** 13 35 49.0 -1.0
comp=Z,4.0nm,0.9s
CLL *e*SS SS 13 57 42.0 +4.6
PAGU **Agualva, Azore** 143.50 44 *e*P **PKKPdf** 13 44 59.1 -0.7
ADH **Angra Heroismo** 143.52 44 *e*P **PKKPdf** 13 44 59.1 -0.6
BURAR **Bucovina Array** 143.53 336 ⇑P **PKiKP** 13 35 54.7 +4.2
BRG **Berggiesshubel** 143.70 350 *e*(P) **PKiKP** 13 35 52.0 +1.4
BRG Amp 13 35 53.7
comp=Z,21nm,2.0s
BRG **Berggiesshubel** 143.70 350 *e*PKIKP **PKiKP** 13 35 52.0 +1.4
BRG pmax pmax
comp=Z,21nm,2.0s
UZH **Uzhgorod** 143.71 340 *e*PKIKP PKPab 13 35 43.2 -0.8
UZH *e* 13 35 50.8
DPC **Dobruska-Polom** 143.75 347 *e*PKIKP **PKiKP** 13 35 54.2 +3.4
DPC **Dobruska-Polom** 143.75 347 *e*PKP **PKiKP** 13 35 54.2 +3.4
KRLC **Kraliky** 143.91 347 *e*PKIKP **PKiKP** 13 35 54.4 +3.3
KRLC **Kraliky** 143.91 347 *e*PKP **PKiKP** 13 35 54.4 +3.3
MEM **Membach** 144.73 359 *d*PKP **PKiKP** 13 35 52.2 -0.5
MEM *dp*PKP **sPKPdf** 13 35 54.5 +1.8
BTNL **Ternell** 144.75 358 *d*PKP **PKPdf** 13 35 49.6 +0.6
BTNL *dp*PKP **PKiKP** 13 35 53.7 +0.9
VYHS **Vyhne** 144.87 344 *e*PKIKP **PKiKP** 13 35 52.8 -0.3
BR131 **Keskin Array S** 144.87 320 **PKPab** 13 35 48.6 -0.2
BR131 **Keskin Array S** 144.87 320 *c i*PKIKP **PKPdf** 13 35 49.8 0.0
BRTR **Keskin Array B** 144.87 320 PKP **PKPdf** 13 35 49.8 0.0
comp=Z,20nm,0.8s,baz=115,slow=1.8,SNR=40
BRTR **Keskin Array B** 144.87 320 **PKPab** 13 35 48.5 -0.2
BRTR **Keskin Array B** 144.87 320 *c i*PKIKP **PKiKP** 13 35 52.4 -1.2
BRTR pmax pmax
comp=Z,20nm,0.8s
BCLA **Clavier** 144.93 359 *d*PKP **PKiKP** 13 35 53.7 +0.6
MLR **Muntele Rosu** 144.95 334 ⇑P **PKiKP** 13 35 54.7 +1.2
BGES **Gesves** 144.97 360 *dp*PKP **PKiKP** 13 35 54.6 +1.5
PGRON **Lagoa das Cont** 145.23 44 *e*P **PKKPdf** 13 44 55.9 -0.6
DOU **Dourbes** 145.26 0 *d*PKP **PKiKP** 13 35 52.9 -0.9
VOIR 145.37 334 ⇓P **PKPab** 13 35 52.2 +1.9
MODS **Modra-Piesok** 145.39 345 *e*PKIKP **PKiKP** 13 35 52.7 -1.5
KHC **Kasperske Hory** 145.45 350 *e*PKIKP **PKiKP** 13 35 54.0 -0.3
KHC **Kasperske Hory** 145.45 350 *e*PKP **PKiKP** 13 35 54.0 -0.3
ARR **Arges** 145.60 335 ⇓P **PKiKP** 13 35 54.0 -0.8
CKRC **Cesky Krumlov** 145.61 349 *e*PKP **PKiKP** 13 35 57.3 +2.7
WLF **Walferdange** 145.67 358 *dp*PKP **PKiKP** 13 35 57.0 +2.3
GERES **GERESS Array B** 145.70 349 PKPbc **PKiKP** 13 35 53.9 -1.0
comp=Z,3.0nm,0.8s,baz=46,slow=7.6,SNR=11
CONA **Conrad Observa** 146.14 346 *e*P **PKiKP** 13 35 54.7 -1.2
comp=Z,6.4nm,0.9s
GZR **Gura Zlata** 146.31 337 ⇓P **PKiKP** 13 35 57.0 +0.8
HERR **Herculane** 146.88 337 ⇑P **PKiKP** 13 35 59.2 +1.8
RETA **Reutte** 147.47 352 *e*P **PKPdf** 13 35 51.8 -2.1
comp=Z,9.7nm,1.0s
SOKA **Soboth** 147.51 347 *e*P **PKPdf** 13 35 51.8 -2.1
comp=Z,8.8nm,1.3s
WTTA **Wattenberg** 147.57 351 *e*P **PKPdf** 13 35 54.1 -0.1
comp=Z,8.5nm,1.0s
SQTA **Sankt Quirin** 147.68 352 *e*P **PKPdf** 13 35 53.5 -0.8
comp=Z,3.1nm,0.8s
OBKA **Obir** 147.77 347 *e*P **PKPdf** 13 35 53.5 -0.9
comp=Z,9.1nm,1.2s
DAVA **Damuels** 147.78 353 *e*P **PKPdf** 13 35 54.3 -0.2
comp=Z,3.9nm,0.8s
BLKB **Belogradchik** 147.83 335 ⇑P **PKPab** 13 36 01.6 +1.8
ABTA **Abfaltersbach** 147.94 350 *e*P **PKPdf** 13 35 54.3 -0.4
comp=Z,16nm,1.4s
FETA **Feichten** 147.94 352 *e*P **PKPdf** 13 35 55.5 +0.8
comp=Z,12nm,1.1s
BOVS **Bovan** 148.21 336 ⇓P **PKPab** 13 36 01.6 +0.4
FUORN **Ofenpass-Fuorn** 148.39 353 PKPab **PKiKP** 13 36 00.6 -0.1
RDO **Rodhopi** 148.50 329 **PKiKP** 13 36 01.5 +0.7
POLO **Lamas de Olo** 151.82 20 *e*PKPab **PKPab** 13 36 12.8 -3.4
MVO **Moncorvo** 152.26 19 *e*PKPab **PKPab** 13 36 13.7 -4.3
MTE **Manteigas** 152.78 21 *e*PKPab **PKiKP** 13 36 13.8 +4.1
PMRV **Marv??o** 153.69 21 *e*PKPbc **PKiKP** 13 36 12.4 +0.8
ESDC **Sonseca Array** 154.52 16 PKPbc **PKiKP** 13 36 14.8 +1.4
comp=Z,0.7nm,0.7s,baz=313,slow=1.8,SNR=5.0
ESDC PKPab **sPKPab** 13 36 32.5 +1.3
comp=Z,5.5nm,1.0s,baz=328,slow=3.6,SNR=14
PBAR **Barrancos** 154.93 22 *e*PKPab **PKPab** 13 36 23.9 -5.4
TORD **Torodi Ar. Bea** 176.41 125 PKP **PKPdf** 13 36 26.3 +2.8
comp=Z,2.3nm,1.1s,baz=238,slow=1.4,SNR=5.6

*ATH **10** 13:23:20.7, 35.°36N×23.°11E, h49km±4km, ML3.1/8, Error ellipse: s-maj=5.7km s-min=1.3km az=57.0*
*THE **10** 13:23:22.9, 35.°44N×23.°18E, h39km±3km, ML3.0/5, Error ellipse: s-maj=3.2km s-min=0.7km az=58.0*
*IDC **10** 13:23:25.9±5.7, 34.°94N×23.°64E, h104km±54km, mb3.2/3, mbtmp3.5/4, Error ellipse: s-maj=295.6km s-min=25.5km az=140.0*
ISC 10 13:23:21.4±1.2, 35.°38N±0.°06×23.°14E±0.°07, h47km±11km, n33, σ1°22/45, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.47**	**108**	P	**Pn**	**13 23 31.4**	**-0.6**
KNDR	1μm,0.5s			S	**Sn**	**13 23 40.0**	**+0.4**
KNDR	**Palaiochora Ch**	**0.47**	**108**	P	**Pn**	**13 23 31.4**	**-0.6**
KNDR				S	**Sn**	**13 23 39.9**	**+0.4**
KNDR	comp=N,7896μm,0.7s			AML	AML	13 23 43.4	
KNDR	comp=E,7648μm,0.4s			AML	AML	13 23 46.3	
ANKY	**Antikythira Is**	**0.51**	**15**	P	**Pn**	**13 23 32.1**	**-0.4**
ANKY				S	**Sn**	**13 23 39.6**	**-0.9**
ANKY	comp=E,2μm,0.5s						
ANKY	**Antikythira Is**	**0.51**	**15**	P	**Pn**	**13 23 32.1**	**-0.4**
ANKY				S	**Sn**	**13 23 41.3**	**+0.8**
ANKY	comp=N,4480μm,0.4s			AML	AML	13 23 43.2	
ANKY	comp=E,3031μm,0.5s			AML	AML	13 23 45.5	
IMMV	**Iera Moni Meta**	**0.69**	**83**	P	**Pn**	**13 23 35.7**	**+0.8**
IMMV				S	**Sn**	**13 23 44.4**	**-0.2**
IMMV	comp=E,2μm,0.7s						
IMMV	**Iera Moni Meta**	**0.69**	**83**	P	**Pn**	**13 23 35.5**	**+0.7**
IMMV				S	**Sn**	**13 23 46.3**	**+1.7**
IMMV	comp=N,3004μm,0.7s			AML	AML	13 23 48.3	
IMMV	comp=E,3182μm,0.6s			AML	AML	13 23 49.9	
CHAN	**Chania**	**0.75**	**79**	P	**Pn**	**13 23 36.7**	**+1.1**
CHAN				S	**Sn**	**13 23 47.9**	**+2.0**
CHAN	comp=E,1974μm,0.5s			AML	AML	13 23 51.2	
CHAN	comp=N,2114μm,0.9s			AML	AML	13 23 57.0	
KTHA	**Kythira Island**	**0.88**	**356**	P	**Pn**	**13 23 38.2**	**+0.7**
KTHA				S	**Sn**	**13 23 48.9**	**-0.3**
KTHA	comp=N,785nm,0.7s						
KTHA	**Kythira Island**	**0.88**	**356**	P	**Pn**	**13 23 38.1**	**+0.7**
KTHA				S	**Sn**	**13 23 50.8**	**+1.6**
KTHA	comp=E,2370μm,0.8s			AML	AML	13 23 52.6	
KTHA	comp=N,769μm,0.6s			AML	AML	13 23 55.4	
KTHR	**Kythira**	**0.89**	**353**	P	**Pn**	**13 23 37.8**	**+0.3**
KTHR	**Kythira**	**0.89**	**353**	P	**Pn**	**13 23 37.9**	**+0.4**
KTHR				S	**Sn**	**13 23 51.1**	**+1.7**
KTHR	comp=E,4221μm,0.6s			AML	AML	13 23 53.0	
KTHR	comp=N,6647μm,0.4s			AML	AML	13 23 53.1	
GVDS	**Gavdos**	**0.94**	**124**	P	**Pn**	**13 23 38.5**	**+0.3**
GVD	**Gavdhos**	**0.94**	**124**	P	**Pn**	**13 23 39.6**	**+1.4**
GVD				S	**Sn**	**13 23 52.0**	**+1.4**
GVD	comp=N,672nm,0.4s						
GVD	**Gavdhos**	**0.94**	**124**	P	**Pn**	**13 23 39.7**	**+1.4**
GVD				S	**Sn**	**13 23 52.3**	**+1.7**
GVD	comp=N,997μm,0.6s			AML	AML	13 24 00.6	
GVD	comp=E,1061μm,0.4s			AML	AML	13 24 03.1	
PRNS	**Prines Rethymn**	**1.11**	**90**	P	**Pn**	**13 23 40.6**	**+0.1**
MNVA	**Monemvasia**	**1.31**	**356**	P	**Pn**	**13 23 45.6**	**+2.3**
IDI	**Anoyia**	**1.43**	**93**	P	**Pn**	**13 23 45.7**	**+0.8**
IDI	**Anoyia**	**1.43**	**93**	P	**Pn**	**13 23 46.4**	**+1.4**
IDI				AML	AML	13 24 15.2	
IDI	comp=E,262μm,0.4s			AML	AML	13 24 15.5	
IDI	comp=N,382μm,0.6s						
PYL	**PYLOS**	**1.89**	**324**	P	**Pn**	**13 23 51.7**	**+0.5**
THR5	**Thira Island,**	**2.07**	**59**	P	**Pn**	**13 23 53.4**	**-0.2**
THR6	**Thira Island,**	**2.08**	**61**	P	**Pn**	**13 23 54.8**	**+1.1**
SAP3	**Santorini-Thir**	**2.08**	**59**	P	**Pn**	**13 23 55.0**	**+1.3**
SANT	**Santorini**	**2.13**	**62**	P	**Pn**	**13 23 55.0**	**+0.6**
THR8	**Santorini-Mono**	**2.16**	**61**	P	**Pn**	**13 23 55.4**	**+0.6**
VLY	**Voula,Athens**	**2.52**	**12**	P	**Pn**	**13 24 00.4**	**+0.5**
ZKR	**Zakros**	**2.53**	**95**	P	**Pn**	**13 24 00.9**	**+1.0**
DION	**Dionisos Attik**	**2.77**	**13**	P	**Pn**	**13 24 03.4**	**+0.2**
KLV	**Kalavryta, Ach**	**2.78**	**344**	P	**Pn**	**13 24 04.9**	**+1.5**
SERG	**Sergoula**	**3.15**	**344**	P	**Pn**	**13 24 10.0**	**+1.5**
BRTR	**Keskin Array B**	**9.39**	**59**	P	**Pn**	**13 25 36.9**	**+2.7**
	comp=N,1.0nm,0.8s,baz=225,slow=14,SNR=6.0						
TORD	**Torodi Ar. Bea**	**29.40**	**227**	P	**P**	**13 29 19.5**	**-0.9**
	comp=N,0.2nm,0.4s,baz=37,slow=8.7,SNR=2.3						
	comp=N,0.2nm,0.4s						
MKAR	**Makanchi Array**	**45.03**	**56**	P	**P**	**13 31 30.8**	**-1.5**
	comp=N,0.3nm,0.5s,baz=264,slow=9.3,SNR=5.5						
	comp=N,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**46.05**	**46**	P	**P**	**13 31 38.1**	**-2.1**
	comp=N,0.6nm,0.4s,baz=268,slow=8.1,SNR=3.0						
	comp=N,0.6nm,0.4s						

IDC 10 13:36:24.3±6.0, 5.°11S×142.°04E, h0km, mb3.3/3, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=228.1km s-min=32.2km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.54**	**206**	Pn	Pn	13 40 18.6	+0.7
	baz=27,slow=12,SNR=1.5						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**20.04**	**202**	P	P	13 40 58.8	-0.5
	0.2nm,0.5s,baz=28,slow=11,SNR=7.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**73.71**	**322**	P	P	13 48 02.0	+1.7
	0.2nm,0.5s,baz=108,slow=5.0,SNR=1.9						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**75.68**	**329**	P	P	13 48 09.9	-1.6
	0.6nm,0.5s,baz=124,slow=6.3,SNR=2.3						
	0.6nm,0.5s						

DJA 10 13:38:21.6±0.3, 9.°5±3.°×11.°5E±.°, h12km±2km, M3.9/12, mb4.1/2, MLv3.7/12, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.10**	**277**	P	Pg	13 38 26.0	+1.6
DNP				S	Sg	13 38 29.6	+3.1
IGBI	**Denpasar**	**0.21**	**232**	P	Pg	13 38 26.4	+0.3
IGBI				S	Sg	13 38 29.7	+0.6
RTBI	**Rangdo, Negare**	**0.43**	**302**	P	Pg	13 38 30.3	+0.2
RTBI				S	Sb	13 38 36.8	-0.8
SRBI	**Singaraja**	**0.61**	**351**	P	Pb	13 38 34.0	-0.2
SRBI				S	Sb	13 38 43.5	+0.8
KLNI	**Mataram**	**0.82**	**71**	P	Pg	13 38 37.1	-0.4
KLNI				S	Sb	13 38 49.3	+0.5
JAGI	**Jajag, Banyuwa**	**1.17**	**281**	P	Pb	13 38 41.5	-2.2
JAGI				S	Sb	13 38 58.7	-0.1
TWSI	**Taliwang, Sumb**	**1.56**	**92**	P	Pn	13 38 48.6	-0.5
TWSI				S	Sn	13 39 08.1	-1.1
KMMI	**Kalianget**	**2.10**	**321**	P	Pb	13 38 58.5	-1.2
PLAI	**Plampang**	**2.44**	**93**	P	Pn	13 39 03.0	+1.7
PLAI				S	Sn	13 39 33.1	+2.0
PWJI	**Pagerwojo**	**3.53**	**281**	P	Pn	13 39 16.9	+0.6
PCJI	**Pacitan**	**4.12**	**277**	P	Pn	13 39 24.8	+0.4
UGM	**Wanagama**	**4.80**	**279**	P	Pn	13 39 34.0	+0.2
BSSI	**Bau Bau, Buton**	**5.73**	**64**	P	Pn	13 39 45.7	-0.8
	0.1nm22nm,0.9s						
BKSI	**Bulukumba**	**5.83**	**55**	P	Pn	13 39 47.3	-0.7

IDC 10 13:44:12.7±5.2, 41.°45N×29.°28W, h0km, mb3.8/5, mbtmp3.8/5, MS3.4/10, Error ellipse: s-maj=180.9km s-min=30.4km az=172.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**19.30**	**87**	LR	LR	13 54 52.0	
	comp=Z,60nm,19.2s,baz=298,slow=33						
MDT	**Midelt**	**21.42**	**106**	LR	LR	13 55 10.4	
	comp=Z,62nm,21.4s,baz=317,slow=31						
EKA	**Eskdalemuir Ar**	**22.05**	**42**	LR	LR	13 56 13.0	
	comp=Z,50nm,21.5s,baz=62,slow=33						
NOA	**NORSAR Array B**	**31.32**	**37**	LR	LR	14 01 01.0	
	comp=Z,14nm,19.9s,baz=0.0,slow=32						
HFS	**Hagfors**	**32.20**	**40**	LR	LR	14 01 28.6	
	comp=Z,37nm,20.3s,baz=287,slow=32						
AKASG	**Malin Array Be**	**40.65**	**56**	LR	LR	14 07 43.7	
	comp=Z,45nm,20.2s,baz=322,slow=35						
TKL	**Tuckaleechee C**	**42.42**	**281**	LR	LR	14 08 28.9	
	comp=Z,208nm,18.2s,baz=272,slow=34						
RES	**Resolute Bay**	**44.10**	**340**	LR	LR	14 09 35.2	
	comp=Z,109nm,18.7s,baz=248,slow=34						
SDV	**Santo Domingo**	**48.79**	**240**	LR	LR	14 10 45.0	
	comp=Z,108nm,20.1s,baz=272,slow=33						
PDAR	**Pinedale Array**	**57.35**	**300**	P	P	13 54 02.6	-0.1
	0.9nm,1.0s,baz=90,slow=4.5,SNR=4.4						
	0.9nm,1.0s						
NEW	**Newport**	**59.37**	**309**	P	P	13 54 16.6	0.0
	1.7nm,0.8s,baz=49,slow=9.3						
	1.7nm,0.8s						
TXAR	**Lajitas Array**	**60.13**	**284**	P	P	13 54 22.1	-0.1
	0.6nm,0.9s,baz=74,slow=6.7,SNR=4.4						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**68.78**	**41**	P	P	13 55 18.0	-0.2
	0.5nm,0.2s,baz=323,slow=5.8,SNR=4.0						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**73.19**	**42**	P	P	13 55 45.5	+0.3
	0.4nm,0.7s,baz=324,slow=7.1,SNR=4.1						
	0.4nm,0.7s						
BOSA	**Boshof**	**86.02**	**134**	LR	LR	14 33 25.7	
	comp=Z,110nm,19.0s,baz=182,slow=34						

IDC 10 13:46:11.5±17.0, 38.°30N×112.°36E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=285.5km s-min=117.3km az=112.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.61**	**301**	P	P	13 51 24.7	+0.6
	0.4nm,0.5s,baz=91,slow=11,SNR=5.6						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**24.47**	**319**	P	P	13 51 32.4	+0.4
	1.0nm,0.9s,baz=123,slow=10,SNR=1.7						
	1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**26.86**	**308**	P	P	13 51 53.2	-0.4
	0.4nm,0.5s,baz=107,slow=8.6,SNR=4.8						
	0.4nm,0.5s						
GEYT	**Alibeck**	**42.15**	**287**	P	P	13 54 05.2	-0.6
	1.2nm,0.4s,baz=63,slow=9.9,SNR=1.7						
	1.2nm,0.4s						

*NEIC **10** 13:54:27.3±1.1, 55.°3N±0.°1×153.°87W±0.°09, h26km±15km, ML3.6/22, ML3.5(AEIC), Error ellipse: s-maj=17.1km s-min=6.1km az=161.0*
*IDC **10** 13:54:27.9±0.9, 55.°63N×154.°52W, h0km, mb4.0/18, mbtmp4.0/19, ML3.5/1, Error ellipse: s-maj=25.1km s-min=17.6km az=6.0*
*AEIC **10** 13:54:30±1.0, 55.°40N±0.°10×153.°92W±0.°09, h4km±8km, Error ellipse: s-maj=14.8km s-min=6.4km az=164.0*
ISC 10 13:54:31.0±0.8, 55.°48N±0.°10×153.°93W±0.°07, h35km, n126, σ1°36/117, mb4.1/18, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**1.02**	**290**		**Pn**	**13 54 47.4**	**-1.3**
CHIR	**Chirikof Islan**	**1.02**	**290**	IAML		13 55 14.9	
	comp=E,1μm,1.1s						
SII	**Sitkinak Islan**	**1.09**	**353**		**Pn**	**13 54 47.4**	**-2.3**
SII				IAML		13 55 19.0	
	comp=E,1μm,0.9s						
SII	comp=N,1μm,0.8s			IAML		13 55 25.5	
OHAK	**Old Harbor**	**1.78**	**11**		**Pn**	**13 54 58.4**	**-0.8**
KDAK	**Kodiak Island**	**2.42**	**17**	Pn	**Pn**	**13 55 07.1**	**-0.9**
	comp=N,11nm,0.3s,baz=202,slow=3.7,SNR=258						
KDAK				Sn	**Sn**	**13 55 34.8**	**-1.6**
	comp=N,17nm,0.3s,baz=74,slow=23,SNR=51						
	comp=N,37nm,0.4s						
KDAK	**Kodiak Island**	**2.42**	**17**	Pn	**Pn**	**13 55 07.4**	**-0.6**
R17K	**Ugashik Creek**	**2.55**	**329**		**Pn**	**13 55 09.0**	**-0.8**
CHGN	**Chignik**	**2.66**	**290**	Pn	**Pn**	**13 55 11.0**	**-0.2**
KABR	**Katmai Barrier**	**2.72**	**348**		**Pn**	**13 55 10.4**	**-1.7**
ANCK	**Angle Creek**	**2.85**	**343**		**Pn**	**13 55 12.7**	**-1.3**
R16K	**Pilot Point**	**2.91**	**317**		**Pn**	**13 55 13.6**	**-1.0**
CNTC	**Contact Creek**	**2.99**	**340**		**Pn**	**13 55 14.9**	**-1.0**
KAHC	**Katmai Hardscr**	**3.23**	**350**		**Pn**	**13 55 17.7**	**-1.5**
SYI	**Shuyak Island**	**3.25**	**14**		**Pn**	**13 55 18.9**	**-0.5**
Q19K	**Cape Douglas,**	**3.46**	**2**		**Pn**	**13 55 22.1**	**-0.2**
Q19K	**Cape Douglas,**	**3.46**	**2**	IAML		13 56 43.0	
	comp=N,197nm,1.2s						
Q16K	**King Salmon**	**3.53**	**336**		**Pn**	**13 55 22.6**	**-0.6**
P19K	**Oil Pt**	**4.20**	**5**		**Pn**	**13 55 32.0**	**-0.4**
P19K	**Oil Pt**	**4.20**	**5**	IAML		13 56 17.2	
	comp=E,103nm,2.7s						
P19K				IAML		13 56 27.4	
	comp=N,76nm,1.8s						
CNPM	**China Poot**	**4.31**	**19**	Pn	**Pn**	**13 55 33.8**	**-0.1**
CNPM				IAML		13 56 25.0	
	comp=N,47nm,2.2s						
CNPM				IAML		13 57 12.2	
	comp=E,46nm,2.4s						
HOM	**Homer**	**4.36**	**15**		**Pn**	**13 55 34.6**	**0.0**
O18K	**Koktuh Hills**	**4.44**	**352**		**Pn**	**13 55 34.9**	**-0.8**
O18K	**Koktuh Hills**	**4.44**	**352**	IAML		13 57 13.6	
	comp=E,37nm,3.2s						
O18K				IAML		13 58 37.6	
	comp=N,32nm,3.1s						
IVE	**Iliamna Volcan**	**4.57**	**6**		**Pn**	**13 55 37.6**	**0.0**
BRLK	**Bradley Lake**	**4.59**	**20**	Pn	**Pn**	**13 55 37.1**	**-0.8**
BRLK				IAML		13 56 39.6	
	comp=N,43nm,1.8s						
BRSE	**Bradley Lake S**	**4.60**	**21**		**Pn**	**13 55 37.2**	**-0.8**
O20K	**Slope Mountain**	**4.66**	**8**		**Pn**	**13 55 37.9**	**-1.0**
RED	**Redoubt Volcan**	**4.99**	**7**		**Pn**	**13 55 42.4**	**-1.0**
RSO	**Redoubt South**	**5.03**	**7**		**Pn**	**13 55 44.0**	**-0.1**
RDWB	**Redoubt West**	**5.05**	**6**		**Pn**	**13 55 43.5**	**-0.8**
SEW	**Seward**	**5.22**	**25**		**Pn**	**13 55 44.9**	**-1.4**
N18K	**Kilae Creek**	**5.32**	**350**		**Pn**	**13 55 46.6**	**-1.2**
N19K	**Bonanza Creek**	**5.35**	**357**	Pn	**Pn**	**13 55 47.4**	**-1.0**
SLKM	**Skilak Lake**	**5.41**	**20**		**Pn**	**13 55 48.4**	**-0.7**
FALS	**False Pass**	**5.47**	**267**		**Pn**	**13 55 45.3**	**-4.6**
O22K	**Cooper Landing**	**5.49**	**22**		**Pn**	**13 55 49.6**	**-0.5**
ISLZ	**Isanotski Laza**	**5.67**	**266**		**Pn**	**13 55 48.1**	**-4.5**
Q23K	**Middleton Isla**	**5.69**	**43**		**Pn**	**13 55 50.6**	**-2.2**
MID	**Middleton Isla**	**5.69**	**43**		**Pn**	**13 55 50.5**	**-2.4**
SVW2	**Sparrevohn**	**5.70**	**352**	Pn	**Pn**	**13 55 51.8**	**-1.2**
P23K	**Montague Islan**	**5.72**	**35**		**Pn**	**13 55 51.8**	**-1.4**
SPU	**Mount Spurr**	**5.80**	**9**	Pn	**Pn**	**13 55 54.0**	**-0.5**
SPCP	**Crater Peak Br**	**5.88**	**8**		**Pn**	**13 55 54.6**	**-0.9**
FIS	**Fire Island**	**6.00**	**17**	Pn	**Pn**	**13 55 58.3**	**+1.1**
RC01	**Rabbit Creek A**	**6.04**	**20**		**Pn**	**13 55 57.5**	**-0.2**
STLK	**Strandline Lak**	**6.13**	**9**		**Pn**	**13 55 58.8**	**-0.2**
PWL	**Port Wells**	**6.15**	**26**		**Pn**	**13 55 58.5**	**-0.7**
WESE	**West Dahl East**	**6.22**	**265**		**Pn**	**13 55 56.3**	**-3.9**
SUA	**Susitna One**	**6.23**	**14**		**Pn**	**13 56 00.0**	**-0.3**
HIN	**Hinchinbrook I**	**6.32**	**36**		**Pn**	**13 56 00.8**	**-0.6**
M20K	**Styx River**	**6.43**	**3**		**Pn**	**13 56 02.8**	**-0.3**
M19K	**Big River Lodg**	**6.45**	**358**		**Pn**	**13 56 02.3**	**-0.9**
GLI	**Glacier Island**	**6.50**	**31**		**Pn**	**13 56 02.8**	**-1.3**
FID	**Port Fidalgo**	**6.59**	**34**		**Pn**	**13 56 02.8**	**-2.4**
M22K	**Willow**	**6.59**	**16**		**Pn**	**13 56 05.0**	**-0.3**
KNK	**Knik Glacier**	**6.60**	**24**		**Pn**	**13 56 04.1**	**-1.3**
PMR	**Palmer**	**6.62**	**20**		**Pn**	**13 56 06.7**	**+1.1**
SKT	**Skwentna**	**6.63**	**10**		**Pn**	**13 56 05.3**	**-0.5**
EYAK	**Cordova Ski Ar**	**6.68**	**37**		**Pn**	**13 56 05.8**	**-0.6**
L19K	**White Mountain**	**6.74**	**356**		**Pn**	**13 56 06.9**	**-0.3**
SML	**Sawmill**	**6.98**	**22**		**Pn**	**13 56 09.9**	**-0.7**
GOAT	**Goat Mountain**	**7.07**	**40**		**Pn**	**13 56 10.3**	**-1.5**
SCM	**Sheep Creek Mo**	**7.24**	**26**		**Pn**	**13 56 13.6**	**-0.5**
KLU	**Klutina**	**7.34**	**32**		**Pn**	**13 56 14.7**	**-0.8**
GRIN	**Grindle Hills**	**7.42**	**45**		**Pn**	**13 56 15.5**	**-1.1**
UNV	**Unalaska Valle**	**7.48**	**263**		**Pn**	**13 56 13.4**	**-4.0**
TT01	**Tatalina**	**7.52**	**353**		**Pn**	**13 56 17.2**	**-0.8**
M24K	**Tolsona, Glenn**	**7.76**	**28**		**Pn**	**13 56 20.4**	**-0.9**
N25K	**Chitina, Valde**	**7.84**	**35**		**Pn**	**13 56 21.0**	**-1.4**
K20K	**Telida**	**7.90**	**360**		**Pn**	**13 56 22.5**	**-0.7**
GLB	**Gilahina Butte**	**7.98**	**37**		**Pn**	**13 56 23.4**	**-1.0**
ISLE	**Juniper Island**	**8.00**	**45**		**Pn**	**13 56 23.4**	**-1.3**
CAST	**Castle Rocks**	**8.02**	**6**		**Pn**	**13 56 24.6**	**-0.2**
BAGL	**Bagley Icefiel**	**8.04**	**47**		**Pn**	**13 56 24.0**	**-1.1**
KIAG	**Kiagna River**	**8.18**	**43**		**Pn**	**13 56 26.5**	**-0.7**
TRF	**Thorofare Moun**	**8.20**	**12**		**Pn**	**13 56 27.7**	**+0.2**
BALM	**Baldy**	**8.26**	**43**		**Pn**	**13 56 27.9**	**-0.3**
DHY	**Denali Highway**	**8.32**	**21**		**Pn**	**13 56 28.6**	**-0.4**
RND	**Reindeer**	**8.36**	**16**		**Pn**	**13 56 28.6**	**-0.9**
PCA	**Pinnacle**	**8.64**	**52**		**Pn**	**13 56 32.5**	**-0.8**
J20K	**Nowinta River**	**8.72**	**359**		**Pn**	**13 56 33.9**	**-0.6**
PNL	**Peninsula**	**8.86**	**56**		**Pn**	**13 56 33.8**	**-2.6**
**

comp=Z,2.7nm,0.8s,baz=76,slow=6.1,SNR=1.4
comp=Z,2.7nm,0.8s
KURBB **Kurchatov Arra** 65.61 326 P **P** 14 05 10.9 +0.1
comp=Z,0.4nm,0.3s,baz=28,slow=6.6,SNR=5.4
comp=Z,0.4nm,0.3s
BVAR **Borovoye Array** 65.84 332 P **P** 14 05 12.8 +0.4
comp=Z,1.2nm,0.7s,baz=31,slow=6.7,SNR=9.2
comp=Z,1.2nm,0.7s
EKA **Eskdalemuir Ar** 66.99 18 P **P** 14 05 21.5 +1.9
comp=Z,1.4nm,0.7s,baz=323,slow=4.6,SNR=3.4
comp=Z,1.4nm,0.7s
MKAR **Makanchi Array** 67.67 322 P **P** 14 05 23.8 -0.4
comp=Z,0.6nm,0.7s,baz=48,slow=5.4,SNR=5.4
comp=Z,0.6nm,0.7s
AKTO **Aktyubinsk** 71.14 339 P **P** 14 05 46.0 +0.6
comp=Z,1.1nm,0.7s,baz=337,slow=8.1,SNR=3.7
comp=Z,1.1nm,0.7s
ESDC **Sonseca Array** 81.81 23 P **P** 14 06 48.1 +2.1
comp=Z,0.5nm,0.8s,baz=344,slow=4.3,SNR=4.1
comp=Z,0.5nm,0.8s
GEYT **Alibeck** 83.01 335 P **P** 14 06 53.8 +1.5
comp=Z,1.0nm,0.4s,baz=2.9,slow=2.9,SNR=2.1
comp=Z,1.0nm,0.4s
CMAR **Chiang Mai Arr** 84.28 294 P **P** 14 06 59.2 +0.1
comp=Z,1.3nm,0.7s,baz=12,slow=4.6,SNR=11
comp=Z,1.3nm,0.7s

*JMA **10** 13:59:09.8±0.4,36°.N±1°.×12°.9E±°, h28km, MV3.5/15, S KOREAN PENINSULA REG*
*KMA **10** 13:59:10.2±0.0,35°.77N×129°.18E, h14km, Error ellipse: s-maj=0.5km s-min=0.3km az=291.0*
*KEA **10** 13:59:10.4,35°.86N×129°.08E, h16km, ML3.5/1*
ISC 10 13:59:08.4±1.2,35°.78N±0°.02×129°.21E±0°.03, h7km±11km, n71,σ1§23/77, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	**Daegu** SNR=2145	0.25	268	P	**Pg**	13 59 15.6	+2.2
YOCB	**Yeongcheon** SNR=262	0.29	313	P	**Pb**	13 59 16.5	+0.6
KSPHA	**Pohang** SNR=528	0.43	18	P	**Pb**	13 59 19.5	+1.0
MIYA	**Miryang-si** SNR=77	0.47	233	P	**Pg**	13 59 19.1	+1.6
KSDAU	**Deagu-acc** SNR=210	0.49	283	P	**Pb**	13 59 19.8	+0.3
KSBUS	**Busan** SNR=846	0.54	188	P	**Pg**	13 59 20.1	+1.4
KSCHR	**CHANGNYEONG** SNR=128	0.63	248	P	**Pg**	13 59 21.8	+1.2
KSADO	**Andong** SNR=1012	0.67	342	P	**Pb**	13 59 23.3	+0.9
EUSB	**Uiseong** SNR=114	0.71	324	P	**Pb**	13 59 23.9	+0.7
YODB	**Yeongdeok** SNR=358	0.77	12	P	**Pb**	13 59 25.2	+1.0
YEYB	**Yeongyang** SNR=137	0.85	353	P	**Pg**	13 59 26.5	+1.7
KSGUM	**GUMI** SNR=86	0.87	302	P	**Pg**	13 59 26.6	+1.4
EURB	**Uiryeong-eup** SNR=51	0.88	239	P	**Pb**	13 59 26.0	0.0
ADOA	**Andong Acc Bor** SNR=46	0.89	333	P	**Pn**	13 59 27.1	-0.3
KSULJ	**Uljin** SNR=722	0.94	10	P	**Pn**	13 59 28.1	0.0
KSGIC	**Gimchen** SNR=327	0.95	289	P	**Pg**	13 59 27.8	+1.2
HACA	**Hapcheon Acc B** SNR=88	0.97	248	P	**Pb**	13 59 27.7	0.0
KUJA	**Jangpyeong** SNR=23	1.02	209	P	**Pb**	13 59 28.3	-0.1
KSSAJ	**Sangju** SNR=110	1.06	307	P	**Pn**	13 59 29.8	+0.1
KSYCH	**Yecheon** SNR=17	1.06	324	P	**Pg**	13 59 30.1	+1.3
KSTOY	**TONGYEONG** SNR=59	1.13	214	P	**Pn**	13 59 30.1	-0.5
DUSB	**Deogyusan** SNR=458	1.17	276	P	**Pn**	13 59 31.5	+0.2
CHYB	**Chungyang** SNR=283	1.19	349	P	**Pg**	13 59 32.1	+0.9
HAMB	**Hamyang** SNR=86	1.22	258	P	**Pn**	13 59 32.0	+0.1
YOJB	**Youngju** SNR=319	1.23	333	P	**Pb**	13 59 32.5	+0.6
JTU	**Tsushima**	1.26	173	P	**Pn**	13 59 32.4	-0.1
JTU				S	**Sb**	13 59 49.0	-0.1
KSMGY	**Mungyeong** SNR=122	1.27	314	P	**Pb**	13 59 33.4	+0.6
OKCB	**Cheongsan-myeo** SNR=149	1.28	297	P	**Pb**	13 59 33.4	+0.5
KSBON	**Boeun** SNR=255	1.35	303	P	**Pb**	13 59 34.8	+0.7
KSTBA	**Taebaek** SNR=368	1.36	351	P	**Pb**	13 59 34.9	+0.7
YKDB	**Yokjido** SNR=178	1.39	214	P	**Pn**	13 59 34.3	+0.1
JTSM	**Tsushimamitsus**	1.45	174	P	**Pn**	13 59 35.1	+0.1
JTSM				eS	**Sn**	13 59 53.2	-1.1
IMWB	**Imwonan-gil** SNR=104	1.46	4	P	**Pg**	13 59 37.4	+0.9
KSCHJ	**Chungju** SNR=91	1.48	318	P	**Pb**	13 59 36.2	-0.1
GWYB	**Gwangyang** SNR=44	1.49	237	P	**Pn**	13 59 36.3	+0.6
NAWB	**Namwon** SNR=219	1.52	257	P	**Pn**	13 59 37.0	+0.9
KSJEO	**Jeonju** SNR=226	1.56	276	P	**Pn**	13 59 37.4	+0.7
KSTEJ	**Daejeon** SNR=8.6	1.60	292	P	**Pb**	13 59 39.1	+0.7
JECH	**Jecheon** SNR=44	1.60	330	P	**Pb**	13 59 38.0	-0.4
SUCA	**Sunchang** SNR=34	1.73	257	P	**Pn**	13 59 40.0	+1.0
YNDB	**Yeoundo** SNR=35	1.77	221	P	**Pn**	13 59 40.0	+0.5
BURB	**Buron** SNR=38	1.87	321	P	**Pn**	13 59 42.0	+1.1
JHGM	**Hagimishima**	1.87	122	eP	**Pb**	13 59 43.4	+0.5
JHGM				eS	**Sn**	14 00 04.6	-0.1
KSWJU	**Wonju** SNR=67	1.87	330	P	**Pn**	13 59 41.7	+0.8
KSJEU	**Jeongeup** SNR=82	1.88	262	P	**Pn**	13 59 42.0	+1.0
KSCEA	**Cheonan** SNR=20	1.89	304	P	**Pn**	13 59 42.0	+0.9
KSKWJ	**Gwangju** SNR=129	1.91	252	P	**Pn**	13 59 42.1	+0.7
KSKWJ	**Gwangju** SNR=34	1.91	252	P	**Pn**	13 59 43.0	+1.5
BOSB	**Boseong-gun** SNR=198	1.92	239	P	**Pn**	13 59 42.0	+0.4
KSDGY	**Daegwallycong** SNR=32	1.96	347	P	**Pb**	13 59 44.0	-0.5
KOHB	**KOHEUNG** SNR=59	1.96	234	P	**Pn**	13 59 42.7	+0.5
JII	**Iki**	2.02	168	eP	**Pn**	13 59 44.2	+1.2
JII				eS	**Sn**	14 00 08.6	0.0
JTY	**Toyota**	2.15	134	eP	**Pn**	13 59 44.4	-0.3
SMKB	**Mukjeong-gil** SNR=85	2.16	268	P	**Pn**	13 59 45.5	+0.7
KSCHC	**Chuncheon** SNR=12	2.29	331	P	**Pn**	13 59 47.6	+0.9
HAWB	**Hwaseong-si** SNR=8.8	2.36	304	P	**Pn**	13 59 49.0	+1.4
KSSES	**Seosan** SNR=18	2.44	295	P	**Pn**	13 59 50.0	+1.2
ANMD	**Anmado** SNR=28	2.63	261	P	**Pn**	13 59 52.2	+1.0
ECDB	**Euchungdo** SNR=7.5	2.64	278	P	**Pn**	13 59 52.1	+0.6
HWCB	**Hwacheon** SNR=8.2	2.73	334	P	**Pn**	13 59 53.6	+0.9
JGT2	**ShimaneMisato**	2.79	104	eP	**Pn**	13 59 54.5	+1.0
JGT2				eS	**Sn**	14 00 26.7	-0.7
BGDB	**Bigeumdo** SNR=22	2.85	250	P	**Pn**	13 59 55.0	+0.6
KSMUS	**Musan** SNR=8.1	2.88	318	P	**Pn**	13 59 55.7	+0.9
KSDEI	**Deokjeokdo** SNR=18	2.90	301	P	**Pn**	13 59 56.3	+1.2
CJD	**Chujado** SNR=12	3.01	234	P	**Pn**	13 59 58.0	+1.5
HUK2	**Heuksan-myeon**	3.26	252	P	**Pn**	14 00 00.4	+0.4
	SNR=11						
HJU	**Haeju**	3.59	310	Pg	**Pb**	14 00 14.6	+2.4
HJU				Sg	**Sg**	14 01 00.8	-3.0
HJU				AML	AML		
	comp=N,235nm,0.6s						
HJU				AML	AML		
	comp=E,132nm,0.6s						
HJU				AML	AML		
	comp=Z,196nm,1.2s						
SRW	**Sariwon**	3.88	316	Sg	**Sg**	14 01 09.5	-3.4
HHU	**Hamhung**	4.35	343	Sg	**Sg**	14 01 25.5	-2.6
PYS	**Pyongsong**	4.37	323	Sg	**Sg**	14 01 25.4	-3.4
SUJ	**Sinuiju**	5.70	321	Sg	**Sg**	14 02 07.8	-3.6

HEL 10 14:01:28.9±0.2,67°.63N×33°.76E, h0km, ML1.7,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	0.43	52	PG	Pg	14 01 36.2	-0.9
LVZ				SG	Sg	14 01 42.8	0.0
VRF	**Varrio**	1.59	276	PG	Pn	14 01 57.2	-1.1
VRF				MSG		14 02 16.3	
	comp=Z,7.0nm,0.2s						
VRF				SG	Sn	14 02 17.3	-2.1
OLKF	**Oulanka, Finla** baz=54	2.16	234	PG	Pn	14 02 07.3	+1.2
OLKF				SG	Sb	14 02 36.7	+0.6
KU6	**Riekki**	2.22	225	PG	Pb	14 02 08.6	-1.2
KU6				MSG		14 02 34.7	
	comp=Z,3.2nm,0.2s						
KU6				SG	Sb	14 02 38.0	+0.1
MSF	**Maaselka**	2.55	229	PG	Pb	14 02 14.1	-1.3
MSF				SG	Sb	14 02 48.6	+1.4
SGF	**Sodankyl**	2.78	269	SG	Sb	14 02 53.6	-0.4
KEV	**Kevo**	3.26	314	PN	Pn	14 02 21.2	+0.1
KEV				SN	Sn	14 02 59.8	-0.7
ARA0	**ARCESS Array S** baz=118	3.58	306	PN	Pn	14 02 27.4	+1.8
ARA0				SN	Sn	14 03 09.6	+1.1
RMF	**Romuvaara**	3.77	206	PN	Pn	14 02 28.7	+0.5
KLF	**Kolari**	3.80	268	PN	Pn	14 02 26.8	-1.7
HEF	**Hetta**	3.87	286	PN	Pn	14 02 29.4	-0.2
HEF				SN	Sn	14 03 15.9	+0.1
TOF	**Tornio**	4.04	252	PG	Pb	14 02 42.8	+2.0
KTK1	**Kautokeino**	4.14	294	SG	Sb	14 03 35.4	+2.4
PAJU	**Pajala**	4.17	266	PG	Pb	14 02 42.2	-0.8
PAJU				SN	Sn	14 03 22.6	-0.4
LANU	**Lannavaara**	4.48	281	PN	Pn	14 02 39.7	+1.7
KALU	**Kalix**	4.49	251	SG	Sg	14 03 49.3	-3.7
ERTU	**Ertsjaerv**	4.65	262	SN	Sn	14 03 33.5	-1.3

HEL 10 14:01:56.4±0.1,67°.94N×25°.64E, h0km, ML0.9,
ML0.9(UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEF	**Hetta**	0.88	303	eP	Pg	14 02 11.9	-1.2
HEF				eS	Sg	14 02 23.3	-1.2
KLF	**Kolari**	0.96	223	eP	Pg	14 02 13.9	-0.9
KLF				eS	Sg	14 02 25.9	-1.3
PAJU	**Pajala**	1.34	228	eP	Pg	14 02 20.6	-1.4
PAJU				eS	Sg	14 02 37.3	-2.1
RNF	**Rovaniemi** baz=70	1.35	174	PN	Pg	14 02 20.2	-2.0
RNF	**Rovaniemi**	1.35	174	eP	Pg	14 02 20.3	-1.9
RNF				eS	Sg	14 02 37.8	-1.8
RNF				MSG		14 02 42.9	
	comp=Z,0.8nm,0.1s						
LANU	**Lannavaara**	1.38	276	eP	Pg	14 02 21.4	-1.4
LANU				eS	Sg	14 02 38.7	-2.0
MASU	**Masugnsbyn**	1.48	252	eP	Pn	14 02 22.7	-1.5
ARA0	**ARCESS Array S**	1.60	358	eP	Pn	14 02 24.9	-1.0
ERTU	**Ertsjaerv**	1.94	225	eP	Pn	14 02 30.7	+0.2
ERTU				eS	Sn	14 02 56.0	+0.5

*MEX **10** 14:02:14.6±0.8, 19°.84N×105°.74W, h13km±28km, MD4.1*
*IDC **10** 14:02:18.2±10.0, 20°.30N×106°.03W, h0km, mb3.1/3, mbtmp3.2/4, ML3.6/1, MS2.9/1, Error ellipse: s-maj=159.1km s-min=76.3km az=143.0*
ISC 10 14:02:12.8±2.2,19°.93N±0°.05×105°.49W±0°.09, h4km±12km, n20,σ1§07/26, mb3.1/3, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	0.60	135	eP	**Pn**	14 02 27.1	-1.0
CJM				eS	**Sn**	14 02 36.7	-1.6
PUVA	**Puert Vallarta**	0.74	20	eP	**Pn**	14 02 29.3	-0.8
PUVA				i S	**Sn**	14 02 40.6	-1.2
ANIG	**Ahuacatlan**	1.44	39	eP	**Pg**	14 02 40.3	-0.2
ANIG				eS	**Sg**	14 03 01.7	+2.5
R15V		1.61	118	eP	**Pb**	14 02 42.6	-0.5
R15V				eS	**Sb**	14 03 03.2	-0.7
TEPI	**Tepic**	1.68	19	eP	**Pg**	14 02 44.0	-1.0
TEPI				eS	**Sg**	14 03 05.1	-1.7
CDAR	**Ciudad de Arme**	1.71	125	eP	**Pn**	14 02 43.3	-0.1
CDAR				i S	**Sn**	14 03 04.6	-1.1
INCO	**Volcan de Coli**	1.82	102	eP	**Pb**	14 02 47.1	+0.2
INCO				eS	**Sb**	14 03 10.0	-0.3
MNGA	**Volcan de Coli**	1.82	104	eP	**Pb**	14 02 46.8	-0.1
MNGA				i S	**Sb**	14 03 10.1	0.0
EZ5V		1.83	104	eP	**Pg**	14 02 47.8	-0.2
EZ5V				eS	**Sb**	14 03 10.8	+0.3
COIG	**Colima**	1.85	113	eP	**Pb**	14 02 46.9	-0.4
COIG				eS	**Sb**	14 03 10.6	-0.3
JUBC	**Volcan de Coli**	1.85	102	eP	**Pg**	14 02 48.3	-0.1
JUBC				eS	**Sg**	14 03 13.8	+1.3
AAIG	**Aguscalientes**	3.54	55	e	**Pb**	14 03 16.2	-0.1
AAIG				e		14 03 56.2	
LPIG	**La Paz**	6.10	314	LR	LR	14 05 27.5	
	comp=Z,101nm,18.1s,baz=21,slow=34						
TXAR	**Lajitas Array**	9.51	10	Pn	Pn	14 04 35.3	+4.6
	0.2nm,0.3s,baz=194,slow=15,SNR=7.2						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	21.52	332	P	**P**	14 07 04.2	+1.0
	0.6nm,0.7s,baz=157,slow=12,SNR=6.7						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	23.03	352	P	**P**	14 07 19.0	-0.2
	0.4nm,0.7s,baz=181,slow=12,SNR=4.1						
	0.4nm,0.7s						
ILAR	**Eielson Array**	52.51	339	P	**P**	14 11 29.0	+2.1
	0.3nm,0.7s,baz=131,slow=7.3,SNR=2.3						
	0.3nm,0.7s						
H11N3	**WAKE ISLAND Hy**	81.33	288	T	T	15 44 06.5	
	baz=66						
H11N2	**WAKE ISLAND Hy**	81.34	288	T	T	15 44 06.3	
	baz=66						
H11N1	**WAKE ISLAND Hy**	81.35	288	T	T	15 44 03.7	
	baz=66						

*IDC **10** 14:10:57.9±1.4,28°.07N×54°.99E, h0km, mb3.5/6, mbtmp3.6/7, ML3.4/1, MS3.9/2, Error ellipse: s-maj=26.9km s-min=24.7km az=55.0*
*TEH **10** 14:11:00.8,28°.23N×55°.22E, h20km, ML3.4*
ISC 10 14:11:00.5±0.7,28°.21N±0°.04×55°.23E±0°.04, h10km, n55, σ1§24/55, mb3.4/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	0.93	235	ePg	**Pg**	14 11 19.2	+0.9
LAR1				e		14 11 46.5	
	comp=Z,16μm,0.4s						
GENO	**Geno**	1.16	134	ePg	**Pb**	14 11 22.9	+0.2
GENO				eSg	**Sn**	14 11 41.3	+2.4
GENO				e		14 11 43.5	
	comp=Z,7μm,0.8s						
IBND	**Bandar-abas**	1.39	123	ePg	**Pn**	14 11 26.3	+0.5
IBND				e		14 12 13.3	
	comp=Z,9μm,1.0s						
JHRM	**Jahrom**	1.49	282	ePg	**Pn**	14 11 28.2	+0.9
NGRK	**Negar Kerman**	1.94	42	ePn	**Pn**	14 11 34.1	+0.2
NGRK				e		14 12 09.3	
	comp=Z,3μm,0.4s						
QIR1	**Qir**	1.94	278	ePg	**Pb**	14 11 37.1	+1.1
LMD1	**Lamerd**	2.02	245	ePn	**Pn**	14 11 35.5	+0.8
KHNJ	**Kahnooj**	2.20	96	ePn	**Pn**	14 11 37.3	+0.2
KRBR	**Kerman**	2.22	37	ePn	**Pn**	14 11 37.9	+0.3
TVBK	**TV Kerman**	2.22	37	ePn	**Pn**	14 11 37.7	0.0
TVBK				e		14 12 14.6	
	comp=Z,4μm,0.5s						
SHME	**Shamm**	2.30	159	ePn	**Pn**	14 11 38.9	+0.5
KHGB	**Koh Gabri**	2.42	26	ePn	**Pn**	14 11 41.3	+1.0
KHGB				e		14 12 20.6	
	comp=Z,2μm,0.5s						
BANOM	**Banah**	2.47	157	ePn	**Pn**	14 11 41.6	+0.8
UMQ	**Umm Al-Quwin**	2.70	172	ePn	**Pn**	14 11 45.1	+1.2
SHI	**Shiraz**	2.78	302	ePn	**Pn**	14 11 45.2	0.0
MSFE	**Esma-Masafi**	2.96	163	ePn	**Pn**	14 11 49.1	+1.6
KBAM	**BAM**	2.98	71	ePn	**Pn**	14 11 48.6	+0.7
KBAM				e		14 12 48.9	
	comp=Z,894nm,0.8s						
ESRB	**Sir Abu**	3.10	197	ePn	**Pn**	14 11 50.2	+0.7
IMEH	**Mehriz**	3.22	351	ePn	**Pn**	14 11 52.2	+0.9
JASK	**Jask - Hormozg**	3.31	134	ePn	**Pn**	14 11 54.1	+1.7
UOSS	**Minazif**	3.36	165	ePn	**Pn**	14 11 54.0	+0.9
FAQ	**Al Faqa, Dubai**	3.46	175	ePn	**Pn**	14 11 55.1	+0.7
AHBU	**AHRAM**	3.52	282	ePn	**Pn**	14 11 56.8	+1.6
ASUD	**Al Ashush, Dub**	3.57	179	ePn	**Pn**	14 11 57.6	+1.7
ASHO	**Ashiyiah**	3.59	168	ePn	**Pn**	14 11 57.5	+1.3
JRN	**Qarnain Island**	3.89	214	ePn	**Pn**	14 12 00.8	+0.5
ISAD	**Sadrabad**	3.93	340	ePn	**Pn**	14 12 01.6	+0.5
YZKH	**Yazd**	4.21	353	ePn	**Pn**	14 12 05.7	+1.0
KLNJ	**Kolanjah**	4.22	312	ePn	**Pn**	14 12 06.5	+1.3
IRAM	**Ramesheh**	4.36	326	ePn	**Pn**	14 12 07.6	+0.7
TPRV	**Parvadeh(Tabas**	4.97	14	ePn	**Pn**	14 12 15.0	-0.2
NASN	**Na'in**	5.03	336	ePn	**Pn**	14 12 18.2	+1.9
BSRN	**Basiran**	5.04	41	ePn	**Pn**	14 12 17.4	+1.1
ZHSF	**Zahedan**	5.06	73	ePn	**Pn**	14 12 18.3	+1.7
NHDN	**Nehbandan**	5.26	52	ePn	**Pn**	14 12 19.4	+0.2
IZEF	**Zefreh**	5.30	333	ePn	**Pn**	14 12 20.2	+0.2
IKOO	**Kooshah**	5.32	37	ePn	**Pn**	14 12 21.0	+0.8
UMZA	**Um Al Zommool**	5.47	181	ePn	**Pn**	14 12 22.8	+0.8
TKDS	**Koohdasht(Taba**	5.63	16	ePn	**Pn**	14 12 23.8	-0.5
TABS	**Tabas**	5.66	16	ePn	**Pn**	14 12 25.5	+0.7
WSAR	**Wadi Sarin**	5.82	147	Pn	**Pn**	14 12 27.2	+0.3
	comp=Z,1.1nm,0.3s,baz=0.0,slow=13,SNR=9.4						
WSAR				Sn	**Sn**	14 13 32.0	-1.7
	comp=Z,0.7nm,0.3s,baz=78,slow=21,SNR=4.4						
	comp=Z,3.6nm,0.4s						
IPIR	**Pirpir**	5.83	321	ePn	**Pn**	14 12 27.1	-0.1
TNSJ	**Nastanj**	5.86	11	ePn	**Pn**	14 12 27.6	+0.1
SRVN	**Saravan**	6.40	96	ePn	**Pn**	14 12 36.4	+1.4
ISFB	**Sefidab**	6.64	338	ePn	**Pn**	14 12 39.0	+0.8
KHMZ	**Khomeyn**	7.13	322	ePn	**Pn**	14 12 46.9	+1.8
BRTR	**Keskin Array B**	21.22	308	P	**P**	14 15 45.9	-0.6
	comp=Z,0.7nm,0.6s,baz=129,slow=11,SNR=3.2						
	comp=Z,0.7nm,0.6s						
AAK	**Ala-Archa**	21.23	42	P	**P**	14 15 48.7	+2.0
	comp=Z,0.5nm,0.3s,baz=240,slow=8.1,SNR=1.5						
	comp=Z,0.5nm,0.3s						
AKTO	**Aktyubinsk**	22.30	5	P	**P**	14 15 59.9	+1.9
	comp=Z,0.9nm,0.7s,baz=190,slow=11,SNR=3.8						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	33.60	32	P	**P**	14 17 40.6	-0.1
	comp=Z,0.8nm,0.5s,baz=231,slow=9.4,SNR=4.0						
	comp=Z,0.8nm,0.5s						
NB2	**NORSAR Subarra**	43.97	331	P	**P**	14 19 05.0	-2.6
	comp=Z,0.1nm,0.3s,baz=113,slow=7.9						
NOA	**NORSAR Array B**	43.97	331	P	**P**	14 19 05.3	-2.4
	comp=Z,0.5nm,0.6s,baz=117,slow=7.8,SNR=3.9						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	51.88	265	P	**P**	14 20 06.6	-2.9
	comp=Z,0.6nm,0.5s,baz=59,slow=7.4,SNR=7.0						
	comp=Z,0.6nm,0.5s						
KOWA	**Kowa**	56.35	269	LR	LR	14 44 48.1	
	comp=Z,121nm,21.5s,baz=134,slow=36						
PETK	**Petropavlovsk-**	74.92	38	LR	LR	14 58 44.7	
	comp=Z,60nm,18.5s,baz=140,slow=38						

*NEIC **10** 14:45:58.5±0.3,54°.79N±0°.09×160°.46W±0°.07, h26km±4km, Error ellipse: s-maj=12.5km s-min=5.1km az=191.0*
AEIC 10 14:45:58±0.6,54°.78N±0°.08×160°.47W±0°.07, h29km±4km, ML2.5, Error ellipse: s-maj=12.2km s-min=5.0km az=192.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	0.51	85		Pn	14 46 09.6	+0.2
SDPT	**Sand Point**	0.57	360		Pn	14 46 10.7	+0.4
PS1A	**Pavlof South-1**	0.98	312		Pb	14 46 16.4	+0.1
PS4A	**Pavlof South-4**	0.98	306		Pb	14 46 16.5	+0.1
HAG	**Hague Volcano**	0.99	304		Pb	14 46 16.5	0.0
FALS	**False Pass**	1.71	274		Pn	14 46 26.8	+1.0
ISNN	**Isanotski Nort**	1.92	273		Pn	14 46 29.5	+0.8
CHIR	**Chirikof Islan**	2.96	67		Pn	14 46 44.4	+1.4

MAN 10 14:51:28.8,6°.59N×126°.71E, h36km, mb4.4, ML3.3, MS3.1,
5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	0.58	308	⇑eP	Pn	14 51 41.4	+0.8
MATI				eS	Sn	14 51 47.4	-1.5
DDMP	**Don Marcelino,**	1.10	244	⇑eP	Pn	14 51 48.1	+0.4
DDMP				eS	Sn	14 52 02.5	+0.8
BIPH	**Bislig**	1.63	348	⇑iP	Pn	14 51 55.1	+0.2
BIPH				i S	Sn	14 52 15.1	+0.4
KCP	**Kidapawan**	1.67	285	⇓eP	Pn	14 51 54.5	-1.0
BUKP	**Musuan**	2.08	308	⇑eP	Pn	14 51 57.5	-3.8
BUKP				eS	Sn	14 52 29.1	+3.1
CGP	**Cagayan de Oro**	2.73	313	⇑eP	Pn	14 52 14.3	+4.2
CGP				eS	Sn	14 52 46.5	+4.6

*NEIC **10** 14:55:47.9±1.9,21°.90S±0°.04×68°.47W±0°.08, h119km±8km, Error ellipse: s-maj=11.1km s-min=5.5km az=68.0*
*IDC **10** 14:55:47.3±0.7,21°.93S×68°.13W, h98km±9km, mb3.7/3, mbtmp3.9/6, Error ellipse: s-maj=26.5km s-min=12.0km az=115.0*
*VAO **10** 14:55:48.6±0.4,21°.95S×68°.39W, h117km, mb4.1*
*GUC **10** 14:55:48.6±0.7,21°.89S×68°.46W, h117km±6km, ML3.8*
ISC 10 14:55:48.0±0.6,21°.90S±0°.03×68°.42W±0°.05, h117km±6km, n84,σ1§33/97, mb4.1/4, 6C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.77	277		**Pn**	14 56 08.0	+0.2
PB09	**IPOC Station P**	0.77	277	⇑iP	**Pn**	14 56 08.2	+0.4
PB09				eS	**Sn**	14 56 22.9	+0.1
PB09				IAML		14 56 25.6	
	comp=E,2μm,0.4s						
LVC	**Limon Verde**	0.84	213	P	**Pn**	14 56 08.7	0.0
	comp=E,406nm,0.3s,baz=39,slow=5.3,SNR=1183						
LVC				S	**Sn**	14 56 23.6	-0.7
	comp=E,522nm,0.3s,baz=240,slow=20,SNR=58						
LVC	**Limon Verde**	0.84	213		**Pn**	14 56 08.5	-0.2
LVC	**Limon Verde**	0.84	213	eP	**Pn**	14 56 08.7	0.0
AF01	**San Pedro de A**	1.07	168		**Pn**	14 56 11.3	+0.4
PB01	**IPOC Station P**	1.31	310		**Pn**	14 56 12.7	-0.4
PB06	**IPOC Station P**	1.34	233		**Pn**	14 56 13.2	-0.4
PB06	**IPOC Station P

PATCX IAML 14 56 49.3
comp=N,2μm,0.3s
TA01 Diego Aracena 2.11 309 Pn **Pn 14 56 21.4 -1.3**
TA01 Diego Aracena 2.11 309 *eP* **Pn 14 56 21.4 -1.3**
TA01 *eS* **Sn 14 56 47.8 -1.5**
TA01 IAML 14 56 49.6
comp=N,1μm,0.3s
HMBC Humberstone 2.12 319⇑*iP* **Pn 14 56 22.2 -0.7**
HMBC *eS* **Sn 14 56 48.1 -1.5**
HMBC IAML 14 56 51.4
comp=E,1μm,0.2s
TA02 Huaiquique 2.27 315 Pn 14 56 23.6 -1.2
GO01 Chusmiza 2.33 342 Pn 14 56 24.9 -1.1
GO01 Chusmiza 2.33 342 *eP* **Pn 14 56 27.2 +1.2**
GO01 *eS* **Sn 14 56 56.5 +1.4**
GO01 IAML 14 56 58.8
comp=N,509nm,0.3s
PB10 IPOC Station P 2.54 230 Pn **Pn 14 56 26.6 -1.7**
PB10 IPOC Station P 2.54 230 *eP* **Pn 14 56 27.7 -0.5**
PB10 *eS* **Sn 14 56 55.7 -3.6**
PB10 IAML 14 57 05.3
comp=N,292nm,0.3s
PB14 IPOC Station P 3.27 214 Pn **Pn 14 56 36.5 -1.6**
GO02 Mina Guanaco 3.42 198 Pn **Pn 14 56 38.9 -1.2**
PB12 IPOC Station P 3.73 331 Pn **Pn 14 56 42.0 -2.0**
AC01 Pan de Azucar 4.68 205 Pn 14 56 54.0 -2.6
AC02 Maricunga 4.96 187 Pn 14 56 60.0 -0.9
LPAZ La Paz 5.59 3 P **Pn 14 57 10.8 +1.3**
comp=N,1.2nm,0.4s,baz=172,slow=7.1,SNR=5.9
LPAZ S **Sn 14 58 11.8 -1.0**
comp=N,2.2nm,0.5s,baz=184,slow=11,SNR=3.5
LPAZ La Paz 5.59 3 Pn **Pn 14 57 11.9 +2.5**
LPAZ La Paz 5.59 3 *eP* **Pn 14 57 11.4 +1.9**
AC06 Mina Casimiro 5.71 198 Pn **Pn 14 57 07.3 -3.3**
AC05 El Transito 7.11 193 Pn **Pn 14 57 25.8 -3.7**
GO04 Tololo Observa 8.52 194 Pn Pn 14 57 43.3 -5.4
SIV San Ignacio 9.10 51 P **Pn 14 57 54.1 -2.3**
comp=N,8.6nm,0.5s,baz=238,slow=11,SNR=36
SIV S **Sn 14 59 31.4 -5.8**
comp=N,1.8nm,0.6s,baz=307,slow=20,SNR=2.4
PTLB Pontes e Lacer 10.88 55 *eP* **Pn 14 58 19.5 -1.0**
ANTJ Antonio Joao (11.52 93 *eP* **Pn 14 58 28.8 -0.3**
VILB Vilhena 11.85 43 *eP* **Pn 14 58 33.4 -0.1**
ETMB Extrema 12.20 10 *eP* **Pn 14 58 38.8 +0.8**
SALV Santo Antonio 13.43 66 *eP* **Pn 14 58 55.8 +1.7**
UNIS Unistalda (Bra 14.00 123 *eP* **Pn 14 59 01.3 0.0**
TRCB Terra Rica 14.63 96 P **P 14 59 13.4 +0.8**
TRCB Terra Rica 14.63 96 *eP* **P 14 59 11.2 -1.4**
PDRB Porto dos Gac 15.15 49 *eP* **P 14 59 17.6 -0.8**
ALGR Alto Alegre (B 15.51 119 *eP* **Pn 14 59 20.7 +0.3**
ITAB Concordia 15.74 113 P **Pn 14 59 23.9 +0.7**
ITAB IAmb IAmb 14 59 58.4
comp=Z,25nm,1.5s
ITAB Concordia 15.74 113 *eP* **Pn 14 59 23.9 +0.7**
CPSB Cacapava Do Su 15.88 125 *eP* **Pn 14 59 24.4 -0.7**
CLDB Colider 16.32 50 *eP* **Pn 14 59 30.7 +0.2**
PLTB Pedras Altas 16.46 130 P **Pn 14 59 31.5 -0.6**
CNLB Canela 17.47 119 *eP* **P 14 59 43.1 -0.8**
FRTB Fartura 17.47 98 *eP* **Pn 14 59 44.6 +0.1**
BB19B Bebedouro 18.53 91 *eP* **P 14 59 55.9 +0.2**
PLCA Paso Flores 18.87 185 P **P 15 00 00.1 +1.0**
comp=Z,1.4nm,0.6s,baz=1.5,slow=13,SNR=6.5
PLCA Paso Flores 18.87 185 P **P 14 59 58.6 -0.5**
PLCA IAmb IAmb 15 00 09.7
comp=Z,9.1nm,1.4s
PLCA Paso Flores 18.87 185 *eP* **P 14 59 60.0 +0.8**
SNDB Serra Nova Dou 19.11 62 *eP* **P 15 00 01.0 -0.9**
IPMB Ipameri, GO 19.39 82 *eP* **P 15 00 04.8 -0.2**
PET01 Itanhaem-SP 19.60 101 *eP* **P 15 00 06.8 -0.3**
VAO Valinhos 19.86 97 *eP* **P 15 00 09.5 -0.6**
MACA Manacapuru-AM 20.08 23 *eP* Pn 15 00 13.8 -1.5
BDFB Brasilia 20.29 76 *eP* **P 15 00 16.0 +1.2**
PMNB Patos De Minas 20.89 85 *eP* **P 15 00 22.1 +0.8**
PARB Paraibuna 21.09 98 *eP* **P 15 00 23.6 +0.3**
JANB Januaria 23.84 78 *eP* **P 15 00 49.9 -0.8**
MALB Monte Alegre 24.22 37 *eP* **P 15 00 53.9 -0.2**
BOAV Boa Vista 25.35 19 *eP* **P 15 01 04.8 +0.5**
GUA01 Guaratinga, BA 27.50 84 *eP* **P 15 01 24.1 +0.4**
VNA3 Neumayer Olymp 59.56 161 P **P 15 05 39.6 +0.7**
TROLL Troll, Antarti 63.47 161 P **P 15 06 06.2 +0.9**
QSPA South Pole Qui 68.30 180 P **P 15 06 37.2 +0.9**
QSPA IAmb IAmb 15 06 38.6
comp=Z,9.7nm,1.4s
DBIC Dimbokro 68.41 73 P **P 15 06 37.4 -0.4**
comp=Z,2.4nm,0.8s,baz=254,slow=7.9,SNR=5.3
comp=Z,2.4nm,0.8s
DBIC Dimbokro 68.41 73 P **P 15 06 37.3 -0.4**
NVAR Mina Array Bea 76.08 322 P **P 15 07 26.2 +3.1**
comp=Z,0.2nm,0.5s,baz=121,slow=9.6,SNR=2.5
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 77.06 70 P **P 15 07 28.8 0.0**
comp=Z,1.3nm,0.5s,baz=260,slow=6.0,SNR=16
comp=Z,1.3nm,0.5s
ASAR Alice Springs 129.77 207 PKP **PKPdf 15 14 44.6 +0.2**
comp=Z,0.4nm,0.9s,baz=148,slow=2.0,SNR=1.9
WRA Warramunga Arr 132.84 210 PKP **PKPdf 15 14 50.7 +0.5**
comp=Z,0.5nm,1.0s,baz=155,slow=1.8,SNR=2.0
MKAR Makanchi Array 145.68 37 PKPbc **PKPab 15 15 14.7 +1.0**
comp=Z,0.2nm,0.5s,baz=292,slow=4.5,SNR=2.3

IDC 10 14:58:34.6±6.4, 15°.33S×176°.33W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=411.1km s-min=86.4km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.11**	**257**	P	P	15 07 08.9	0.0
	0.7nm,1.0s,baz=92,slow=7.6,SNR=1.7						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**47.45**	**252**	P	P	15 07 11.3	-0.2
	0.6nm,0.8s,baz=86,slow=8.6,SNR=7.9						
	0.6nm,0.8s						
BRTR	**Keskin Array B**	**144.28**	**319**	PKP	PKPdf	15 18 12.4	-0.7
	0.9nm,0.7s,baz=44,slow=2.4,SNR=4.8						

*IDC **10** 15:03:21.5±0.9, 15°.41S×175°.67W, h0km, mb3.9/8, mbtmp3.9/8, MS3.9/42, Error ellipse: s-maj=50.3km s-min=22.6km az=144.0*
*GCMT **10** 15:03:29.0±0.3, 15°.33S±0°.02×175°.35W±0°.02, h12km, MW4.8/76, Moment Tensor Solution. s12,c12; s76,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~0.04±.06; $M_{\theta\theta}$0.72±.07; $M_{\phi\phi}$~0.67±.05; $M_{r\theta}$0.18±.18; $M_{\theta\phi}$1.26±.04; $M_{\phi r}$~0.89±.18; Best double couple: $M_0$1.67900×10^{16} NP1:φs16.00000°, δ81.00000°, λ-152.00000°. NP2: φs281.00000°, δ62.00000°, λ-10.00000°. Principal axes: T 1.5250, Plg13.0000°, Azm146.0000°; N 0.3090, Plg61.0000°, Azm32.0000°; P -1.8340, Plg26.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 10 15:03:26.6±0.9, 15°.4S±0°.3×175°.9W±0°.2, h35km, n59, σ1§46/11, mb3.9/8, MS3.9/41, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.22**	**247**	LR	LR	15 07 18.7	
	comp=Z,3μm,19.2s,baz=87,slow=37						
RAO	**Raoul Island**	**13.90**	**187**	LR	LR	15 11 12.2	
	comp=Z,672nm,18.2s,baz=89,slow=34						
DZM	**Mont Dzumac**	**17.95**	**246**	*eP*	**Pn**	**15 07 30.9**	**-2.7**
	277nm,25.5s						
DZM				*e*LR	LR	15 11 49.8	
	comp=Z,1μm,25.0s						
DZM	**Mont Dzumac**	**17.95**	**246**	LR	LR	15 13 34.0	
	comp=Z,591nm,19.9s,baz=54,slow=34						
URZ	**Urewera**	**23.58**	**194**	LR	LR	15 17 21.1	
	comp=Z,397nm,19.4s,baz=106,slow=36						
PAE	**Paea**	**25.36**	**99**	*e*T	T	15 34 28.4	
	2.3nm,0.3s						
PPT	**Papeete**	**25.36**	**99**	LR	LR	15 15 40.2	
	comp=Z,115nm,21.9s,baz=234,slow=29						
PPT2	**Papeete2**	**25.36**	**99**	*e*LR	LR	15 14 36.0	
	comp=Z,313nm,25.2s						
PPT2	**Papeete2**	**25.36**	**99**	*e*T	T	15 34 22.9	
	4.3nm,0.3s						
TVO	**Taravao**	**25.67**	**99**	*e*T	T	15 34 42.2	
	1.7nm,0.3s						
TBI	**Tubuai**	**26.16**	**112**	*e*T	T	15 35 35.4	
	11nm,0.3s						
TAOE	**Nuku Hiva Isla**	**35.55**	**84**	*e*LR	LR	15 19 18.0	
	comp=Z,541nm,26.6s						

CTA	**Charters Tower**	**36.26**	**257**	LR	LR	15 23 49.4	
	comp=Z,153nm,18.8s,baz=80,slow=34						
PMG	**Port Moresby**	**36.50**	**275**	LR	LR	15 22 10.3	
	comp=Z,162nm,21.1s,baz=80,slow=31						
H11S2	**WAKE ISLAND Hy**	**37.77**	**332**	T	T	15 51 03.5	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**37.78**	**332**	T	T	15 51 07.9	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**37.79**	**332**	T	T	15 51 05.5	
	baz=149						
H11N3	**WAKE ISLAND Hy**	**38.77**	**334**	T	T	15 52 22.2	
	baz=152,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**38.77**	**334**	T	T	15 52 10.2	
	baz=152,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**38.78**	**334**	T	T	15 52 25.5	
	baz=152,slow=76,SNR=11						
STKA	**Stephens Creek**	**41.93**	**239**	LR	LR	15 27 17.1	
	comp=Z,160nm,18.6s,baz=51,slow=34						
WRA	**Warramunga Arr**	**47.46**	**257**	P	**P**	**15 12 00.2**	**+1.8**
	1.0nm,1.0s,baz=91,slow=8.4,SNR=5.1						
WRA				LR	LR	15 30 14.4	
	comp=Z,99nm,21.1s,baz=92,slow=34						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**47.79**	**252**	P	**P**	**15 12 02.9**	**+2.0**
	1.8nm,0.8s,baz=88,slow=7.8,SNR=18						
ASAR				LR	LR	15 30 25.5	
	comp=Z,296nm,21.8s,baz=158,slow=34						
	1.8nm,0.8s						
GUMO	**Guam**	**48.30**	**305**	LR	LR	15 29 46.1	
	comp=Z,64nm,19.5s,baz=127,slow=33						
SIJI	**Sorong**	**54.05**	**280**	LR	LR	15 35 09.1	
	comp=Z,93nm,20.4s,baz=110,slow=35						
JCJ	**Chichijima**	**58.63**	**316**	LR	LR	15 34 47.6	
	comp=Z,146nm,20.0s,baz=114,slow=32						
DAV	**Davao City (W)**	**62.09**	**287**	LR	LR	15 39 19.5	
	comp=Z,33nm,19.3s,baz=34,slow=35						
NWAO	**Narrogin (SRO)**	**62.49**	**241**	LR	LR	15 41 20.7	
	comp=Z,179nm,18.2s,baz=20,slow=36						
KAPI	**Kappang**	**63.94**	**272**	LR	LR	15 40 30.8	
	comp=Z,43nm,18.4s,baz=86,slow=35						
SHEM	**Shemya Is, Ala**	**68.39**	**353**	LR	LR	15 37 17.5	
	comp=Z,108nm,21.9s,baz=298,slow=30						
JOW	**Kunigami**	**68.53**	**307**	LR	LR	15 39 04.7	
	comp=Z,106nm,21.3s,baz=130,slow=31						
PETK	**Petropavlovsk-**	**71.92**	**344**	LR	LR	15 39 13.1	
	comp=Z,110nm,21.9s,baz=153,slow=30						
KSRS	**Korea Array**	**74.47**	**317**	LR	LR	15 45 32.0	
	comp=Z,35nm,19.0s,baz=115,slow=34						
QSPA	**South Pole Qui**	**74.64**	**180**	P	**P**	**15 15 02.4**	**+0.1**
	1.4nm,1.0s,baz=80,slow=9.7,SNR=2.5						
QSPA				LR	LR	15 42 26.0	
	comp=Z,29nm,21.6s,baz=352,slow=31						
	1.4nm,1.0s						
PFO	**Pinyon Flats O**	**74.73**	**48**	LR	LR	15 39 27.5	
	comp=Z,102nm,19.5s,baz=238,slow=29						
LEM	**Lembang**	**75.19**	**267**	LR	LR	15 47 24.3	
	comp=Z,57nm,21.6s,baz=173,slow=35						
KDAK	**Kodiak Island**	**75.43**	**13**	LR	LR	15 40 18.8	
	comp=Z,70nm,20.7s,baz=206,slow=29						
USRK	**Ussuriysk Ar.**	**75.94**	**324**	LR	LR	15 42 40.0	
	comp=Z,185nm,21.6s,baz=117,slow=31						
NVAR	**Mina Array Bea**	**75.98**	**43**	P	**P**	**15 15 09.5**	**-1.0**
	0.8nm,0.9s,baz=232,slow=8.7,SNR=3.8						
NVAR				LR	LR	15 41 11.5	
	comp=Z,53nm,21.2s,baz=114,slow=30						
	0.8nm,0.9s						
KLR	**Kul'dur**	**79.21**	**328**	LR	LR	15 44 35.6	
	comp=Z,49nm,21.8s,baz=139,slow=31						
ELK	**Elko**	**79.22**	**42**	LR	LR	15 42 26.7	
	comp=Z,49nm,19.8s,baz=302,slow=30						
MA2	**Magadan**	**79.45**	**343**	LR	LR	15 45 15.3	
	comp=Z,78nm,20.9s,baz=144,slow=32						
TXAR	**Lajitas Array**	**82.65**	**57**	P	**P**	**15 15 47.5**	**+0.6**
	0.4nm,0.9s,baz=224,slow=3.8,SNR=4.1						
TXAR				LR	LR	15 43 40.5	
	comp=Z,85nm,21.8s,baz=232,slow=29						
	0.4nm,0.9s						
ANMO	**Albuquerque**	**82.69**	**51**	LR	LR	15 47 39.4	
	comp=Z,82nm,18.4s,baz=234,slow=32						
ILAR	**Eielson Array**	**82.94**	**12**	P	**P**	**15 15 47.7**	**+0.2**
	0.8nm,1.1s,baz=211,slow=6.3,SNR=4.7						
	0.8nm,1.1s						
PDAR	**Pinedale Array**	**83.91**	**43**	P	**P**	**15 15 52.5**	**-0.8**
	1.5nm,1.0s,baz=212,slow=3.2,SNR=6.8						
PDAR				LR	LR	15 46 01.5	
	comp=Z,47nm,20.5s,baz=161,slow=31						
	1.5nm,1.0s						
PMSA	**Palmer Station**	**85.16**	**156**	LR	LR	15 45 36.8	
	comp=Z,74nm,20.5s,baz=284,slow=30						
CMIG	**Matias Romero**	**86.19**	**71**	LR	LR	15 45 29.2	
	comp=Z,73nm,20.3s,baz=208,slow=29						
MAW	**Mawson**	**87.00**	**199**	LR	LR	15 52 29.5	
	comp=Z,39nm,18.5s,baz=114,slow=34						
YAK	**Yakutsk**	**88.16**	**337**	LR	LR	15 52 46.7	
	comp=Z,26nm,21.2s,baz=89,slow=34						
INK	**Inuvik**	**88.87**	**15**	P	**P**	**15 16 16.2**	**-0.4**
	1.8nm,1.0s,baz=225,slow=5.7,SNR=2.1						
	1.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**90.30**	**289**	LR	LR	15 52 38.5	
	comp=Z,24nm,21.4s,baz=185,slow=33						
PLCA	**Paso Flores**	**91.31**	**133**	LR	LR	15 49 12.4	
	comp=Z,70nm,19.9s,baz=234,slow=30						
SNAA	**Sanae**	**93.01**	**178**	LR	LR	15 52 52.6	
	comp=Z,66nm,21.8s,baz=190,slow=32						
SONM	**Songino Array**	**93.23**	**319**	LR	LR	15 54 21.6	
	comp=Z,38nm,19.3s,baz=74,slow=33						
TIXI	**Tiksi**	**94.36**	**345**	LR	LR	15 54 18.2	
	comp=Z,56nm,21.6s,baz=180,slow=32						
LVC	**Limon Verde**	**99.21**	**116**	LR	LR	15 51 17.0	
	comp=Z,35nm,19.9s,baz=224,slow=29						
BRTR	**Keskin Array B**	**144.59**	**319**	PKP	**PKPdf**	**15 22 59.8**	**-0.2**
	2.1nm,0.8s,baz=118,slow=1.9,SNR=10						
MMAI	**Mount Meron Ar**	**146.65**	**307**	PKPbc	**PKPab**	**15 23 06.6**	**+0.2**
	0.4nm,0.3s,baz=59,slow=5.6,SNR=2.3						

*CNRM **10** 15:14:44.5, 35°.88N×1°.75W, h3km, ml2.0*
*MDD **10** 15:14:49.0±0.9, 35°.87N×1°.84W, h12km±9km, mb_Lg2.5/6, Error ellipse: s-maj=5.9km s-min=4.3km az=33.0*
ISC 10 15:14:46.0±1.6, 35°.91N±0°.04×1°.80W±0°.05, h17km±12km, n16, σ1§37/25, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**1.11**	**343**	P	**Pg**	**15 15 09.1**	**+1.5**
ENIJ				S	**Sn**	**15 15 22.2**	**+0.4**
ENIJ				*i* Vmb_Lg		15 15 23.6	
GOG	**Mont Gurugu**	**1.19**	**235**	P	**Pn**	**15 15 08.4**	**+0.5**
GOG				S	**Sb**	**15 15 23.7**	**+0.5**
TAF	**Taforalt**	**1.20**	**205**	P	**Pn**	**15 15 07.4**	**-0.7**
TAF				S	**Sb**	**15 15 23.1**	**-0.4**
EBER	**Berja**	**1.32**	**319**	P	**Pg**	**15 15 11.8**	**+0.2**
EBER				S	**Sb**	**15 15 26.7**	**-0.5**
EBER				*i* Vmb_Lg		15 15 31.6	
JBK	**JBK**	**1.69**	**202**	P	**Pn**	**15 15 16.1**	**+1.2**
ELGU	**Los Guajares,**	**1.76**	**304**	P	**Pn**	**15 15 16.5**	**+0.7**
ELGU				S	**Sn**	**15 15 35.2**	**-2.5**
ELGU				*i* Vmb_Lg		15 15 38.2	
CART	**Cartagena**	**1.80**	**21**	P	**Pg**	**15 15 19.0**	**-1.6**
CART				S	**Sn**	**15 15 38.0**	**-0.5**
EMUR	**La Murta**	**1.98**	**13**	P	**Pb**	**15 15 22.2**	**+0.5**
EMUR				S	**Sb**	**15 15 44.3**	**-1.8**
EMUR				*i* Vmb_Lg		15 15 46.8	
EQES	**Quesada**	**2.15**	**332**	P	**Pg**	**15 15 25.9**	**-1.4**
EQES				S	**Sb**	**15 15 51.5**	**+0.5**
EQES				*i* Vmb_Lg		15 15 54.1	
EGOR	**Sierra Gorda,**	**2.21**	**304**	P	**Pb**	**15 15 25.7**	**+0.1**
EMIJ	**Mijas**	**2.49**	**286**	S	**Sn**	**15 15 53.3**	**-2.5**
ETOB	**Tobarra**	**2.74**	**4**	P	**Pb**	**15 15 33.7**	**-0.9**
ETOB				S	**Sn**	**15 16 04.1**	**+2.0**
MDT	**Midelt**	**3.86**	**218**	P	**Pn**	**15 15 46.2**	**+1.6**
MD31	**MD31**	**3.89**	**220**	P	**Pn**	**15 15 46.1**	**+1.0**
EIBI	**Ibiza**	**4.00**	**38**	S	**Sn**	**15 16 33.8**	**+0.9**
PVAQ	**Vaqueiros**	**4.99**	**289**	P	**Pn**	**15 16 01.9**	**+1.9**

*KRNET **10** 15:19:30.1±0.1, 41°.38N×77°.30E, h11km, mb2.6*
*SOME **10** 15:19:31.2, 41°.42N×77°.25E, h5km*
*NNC **10** 15:19:32.2±0.9, 41°.38N×77°.28E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=5.9km s-min=4.1km az=1.0*
ISC 10 15:19:30.6±1.7, 41°.33N±0°.06×77°.21E±0°.03, h2km±12km, n45, σ1§14/77, 13C-9D, Kyrgyzstan-Xinjiang border region

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

TARG	**Taragay, Kyrgy**	**0.60**	**48**	⇓*iP*	**Pg**	**15 19 39.9**	**-2.3**
	baz=47						
TARG				⇓*iS*	**Sg**	**15 19 47.4**	**-2.6**
	baz=47						
NRN	**Naryn**	**0.91**	**277**	⇑*iP*	**Pg**	**15 19 49.2**	**+1.1**
	baz=73						
NRN				⇑*iS*	**Sn**	**15 20 03.4**	**-1.3**
	baz=73						
ULHL	**Ulahol**	**1.16**	**322**	⇑*iP*	**Pb**	**15 19 52.3**	**-1.3**
	baz=18						
ULHL				⇑*iS*	**Sg**	**15 20 08.5**	**+0.5**
	baz=18						
BOOM	**Boomskoye usch**	**1.49**	**321**	⇑*iP*	**Pn**	**15 19 58.5**	**-0.2**
	baz=18						
BOOM				⇑*iS*	**Sg**	**15 20 19.1**	**+0.5**
	baz=18						
TNSS	**Tian-Shan**	**1.71**	**354**	*eP*	**Pb**	**15 20 02.8**	**-0.3**
	57nm,0.1s						
TNSS				*eS*	**Sg**	**15 20 25.5**	**-0.3**
	24nm,0.3s						
TNSS	**Tian-Shan**	**1.71**	**354**	P	**Pb**	**15 20 02.8**	**-0.3**
	57nm,0.1s						
TNSS				S	**Sg**	**15 20 25.5**	**-0.3**
	24nm,0.3s						
MDOK	**Medeo**	**1.83**	**356**	*eP*	**Pb**	**15 20 04.6**	**-0.4**
	13nm,0.1s						
MDOK				*eS*	**Sb**	**15 20 28.6**	**+0.1**
	34nm,0.4s						
MDOK	**Medeo**	**1.83**	**356**	Pg	**Pb**	**15 20 04.6**	**-0.4**
	13nm,0.1s						
MDOK				⇑P	**Pg**	**15 20 04.9**	**-0.9**
	11nm,0.4s						
MDOK				Lg	Lg	15 20 28.6	
	34nm,0.4s						
MDOK				⇓S	**Sb**	**15 20 28.8**	**+0.3**
	14nm,0.4s						
MTBS	**Maitube**	**1.89**	**342**	*eP*	**Pb**	**15 20 05.9**	**+0.1**
	25nm,0.2s						
MTBS				*eS*	**Sg**	**15 20 30.8**	**-0.5**
	39nm,0.2s						
MTBS	**Maitube**	**1.89**	**342**	P	**Pb**	**15 20 05.9**	**+0.1**
	25nm,0.2s						
MTBS				S	**Sg**	**15 20 30.8**	**-0.5**
	39nm,0.2s						
AAA	**Alma-Ata**	**1.89**	**354**	*eP*	**Pb**	**15 20 06.3**	**+0.5**
	117nm,0.2s						
AAA				*eS*	**Sg**	**15 20 31.7**	**+0.4**
KNDC	**Almaty**	**1.89**	**355**	⇓Pg	**Pb**	**15 20 06.0**	**+0.1**
	11nm,0.2s						
KNDC				⇑Lg	Lg	15 20 31.9	
	126nm,0.5s						
KOTS	**Kotyrbulak**	**1.90**	**358**	*eP*	**Pb**	**15 20 06.2**	**+0.1**
	35nm,0.2s						
KOTS				*eS*	**Sg**	**15 20 31.5**	**-0.3**
	81nm,0.3s						
KOTS	**Kotyrbulak**	**1.90**	**358**	P	**Pb**	**15 20 06.2**	**+0.1**
	35nm,0.2s						
KOTS				S	**Sg**	**15 20 31.5**	**-0.3**
	81nm,0.3s						
KST	**Kastek**	**1.94**	**332**	*eP*	**Pb**	**15 20 07.1**	**+0.2**
	11nm,0.2s						
KST				*eS*	**Sg**	**15 20 32.9**	**-0.1**
	56nm,0.6s						
KST	**Kastek**	**1.94**	**332**	P	**Pb**	**15 20 07.1**	**+0.2**
	11nm,0.2s						
KST				S	**Sg**	**15 20 32.9**	**-0.1**
	56nm,0.6s						
SATY	**Saty**	**1.94**	**27**	*eP*	**Pb**	**15 20 06.3**	**-0.5**
	14nm,0.2s						
SATY				*eS*	**Sb**	**15 20 31.4**	**-0.2**
	28nm,0.1s						
SATY	**Saty**	**1.94**	**27**	P	**Pb**	**15 20 06.3**	**-0.5**
	14nm,0.2s						
SATY				S	**Sb**	**15 20 31.4**	**-0.2**
	28nm,0.1s						
TKM2	**Tokmak 2**	**1.99**	**324**	⇓*iP*	**Pb**	**15 20 07.2**	**-0.5**
	baz=21						
TKM2				⇓*iS*	**Sb**	**15 20 33.7**	**+0.7**
	baz=21						
TKM2	**Tokmak 2**	**1.99**	**324**	⇓Pg	**Pb**	**15 20 08.0**	**+0.3**
	1.6nm,0.2s						
TKM2				⇑Lg	Lg	15 20 35.0	
	15nm,0.6s						
ZHN	**Zhinishke**	**2.05**	**26**	*eP*	**Pb**	**15 20 08.0**	**-0.7**
ZHN				*eS*	**Sb**	**15 20 34.2**	**-0.5**
ZHN	**Zhinishke**	**2.05**	**26**	Pg	**Pb**	**15 20 08.0**	**-0.7**
ZHN				Lg	Lg	15 20 34.2	
ARLS	**Aral**	**2.23**	**285**	⇑*iP*	**Pb**	**15 20 10.7**	**-1.0**
	baz=83						
ARLS				⇑*iS*	**Sb**	**15 20 40.4**	**+0.7**
	baz=83						
UZB	**Uzynbulak**	**2.26**	**36**	*eP*	**Pb**	**15 20 12.0**	**-0.3**
	13nm,0.3s						
UZB				*eS*	**Sb**	**15 20 41.1**	**+0.4**
	20nm,0.5s						
UZB	**Uzynbulak**	**2.26**	**36**	Pg	**Pb**	**15 20 12.0**	**-0.3**
	13nm,0.3s						
UZB				Lg	Lg	15 20 41.1	
	20nm,0.5s						
KURS	**Kuram**	**2.27**	**18**	*eP*	**Pb**	**15 20 12.3**	**0.0**
	2.0nm,0.1s						
KURS				*eS*	**Sb**	**15 20 41.9**	**+1.0**
	16nm,0.7s						
KURS	**Kuram**	**2.27**	**18**	Pg	**Pb**	**15 20 12.3**	**0.0**
	2.0nm,0.1s						
KURS				Lg	Lg	15 20 41.9	
	16nm,0.7s						
KPKS	**Kokpek**	**2.40**	**27**	*eP*	**Pb**	**15 20 14.2**	**-0.4**
	11nm,0.2s						
KPKS				*eS*	**Sb**	**15 20 45.0**	**+0.4**
	34nm,0.4s						
KPKS	**Kokpek**	**2.40**	**27**	Pg	**Pb**	**15 20 14.2**	**-0.4**
	11nm,0.2s						
KPKS				Lg	Lg	15 20 45.0	
	34nm,0.4s						
KTBS	**Karatobe**	**2.41**	**351**	*eP*	**Pb**	**15 20 14.5**	**-0.3**
	4.4nm,0.2s						
KTBS				*eS*	**Sb**	**15 20 45.6**	**+0.7**
	65nm,0.4s						
KTBS	**Karatobe**	**2.41**	**351**	Pg	**Pb**	**15 20 14.5**	**-0.3**
	4.4nm,0.2s						
KTBS				Lg	Lg	15 20 45.7	
	65nm,0.4s						
CHMS	**Chumysh**	**2.47**	**313**	⇑Pg	**Pb**	**15 20 15.7**	**0.0**
	2.2nm,0.3s						
CHMS				⇑Lg	Lg	15 20 50.4	
	9.1nm,0.6s						
SHLS	**Shalkode**	**2.48**	**42**	*eP*	**Pg**	**15 20 20.2**	**+2.1**
	7.6nm,0.1s						
SHLS				*eS*	**Sg**	**15 20

15nm,0.2s
BLB eS Sb 15 21 00.9 +1.3
54nm,0.4s
BLB Baldybastay 2.92 18 Pg Pb 15 20 23.4 -0.1
15nm,0.2s
BLB Lg Lg 15 21 00.9
54nm,0.4s
BTLS Baital 4.37 329 eP Pb 15 20 50.0 +2.0
1.8nm,0.1s
BTLS eS Sg 15 21 46.3 -4.6
6.0nm,0.3s

IDC 10 15:27:58.5±2.5, 2°.06N×126°.23E, h1km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=237.2km s-min=27.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.27**	**160**	P	P	15 33 07.4	-0.6
	0.6nm,0.4s,baz=338,slow=9.9,SNR=6.5 0.6nm,0.4s						
ASAR	**Alice Springs**	**26.64**	**164**	P	P	15 33 38.9	-0.3
	0.1nm,0.5s,baz=347,slow=12,SNR=5.4 0.1nm,0.5s						
MKAR	**Makanchi Array**	**58.64**	**326**	P	P	15 37 58.3	+0.7
	0.2nm,0.5s,baz=121,slow=7.3,SNR=2.3 0.2nm,0.5s						

*IPEC **10** 15:40:54.8±0.4, 51°.48N×16°.31E, h1km±2km, ML2.8/5, Error ellipse: s-maj=2.9km s-min=1.2km az=32.0*
*PRU **10** 15:40:55.4±0.0, 51°.46N×16°.20E, h0km*
*DNK **10** 15:40:55.9±1.3, 51°.48N×16°.73E, h28km±46km, ML3.0*
*BGR **10** 15:40:56.0±0.4, 51°.42N×16°.22E, h1km, ML3.3/16, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
*IDC **10** 15:40:55.8±0.6, 51°.44N×16°.11E, h0km, mb3.4/1, mbtmp3.4/9, ML3.0/8, MS3.4/1, Error ellipse: s-maj=11.0km s-min=6.0km az=109.0*
*VIE **10** 15:40:56.2±1.0, 51°.37N×16°.24E, h0km, mb2.9/10, ml3.1/10, Error ellipse: s-maj=11.5km s-min=4.9km az=60.0 62 km WNW of Wroclaw Suspected Mining induced.*
*MCSM **10** 15:40:56.8±1.1, 51°N±5°×1°6E±°, h2km±2km, ML3.2*
ISC 10 15:40:53.8±0.6, 51°.51N±0°.02×16°.24E±0°.02, h0km, n95, σ1§46/172, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**177**	ePg	Pg	15 41 07.3	+0.9
KSP				eSg	Sg	15 41 15.2	+0.1
KSP	**Ksiaz**	**0.66**	**177**	ePg	Pg	15 41 07.4	+0.9
KSP				eSg	Sg	15 41 14.9	-0.2
KSP	**Ksiaz**	**0.66**	**177**	Pg	Pg	15 41 07.2	+0.7
KSP				Sg	Sg	15 41 15.7	+0.6
CHVC	**Chvalec**	**0.93**	**187**	ePG	Pb	15 41 12.3	-0.4
CHVC				eSG	Sg	15 41 23.6	+0.1
	comp=Z,131nm,0.4s						
CHVC	**Chvalec**	**0.93**	**187**	Pg	Pb	15 41 12.3	-0.4
OSTC	**Ostas**	**0.95**	**181**	ePG	Pg	15 41 12.3	+0.3
OSTC				eSG	Sg	15 41 24.1	-0.2
	comp=Z,136nm,0.6s						
OSTC	**Ostas**	**0.95**	**181**	Pg	Pb	15 41 12.8	-0.3
OSTC				Sg	Sg	15 41 25.3	+1.0
UPC	**Upice**	**1.01**	**188**	ePG	Pg	15 41 13.6	+0.4
UPC				eSG	Sg	15 41 26.5	+0.3
	comp=Z,483nm,0.4s						
UPC	**Upice**	**1.01**	**188**	Pg	Pg	15 41 13.5	+0.4
DPC	**Dobruska-Polom**	**1.16**	**177**	ePG	Pg	15 41 16.2	+0.3
DPC				eSG	Sg	15 41 30.3	-0.6
	comp=Z,130nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**177**	ePg	Pg	15 41 16.2	+0.3
DPC				eSg	Sg	15 41 30.5	-0.4
DPC	**Dobruska-Polom**	**1.16**	**177**	Pg	Pg	15 41 16.1	+0.2
PVCC	**Panska Ves**	**1.44**	**228**	ePG	Pb	15 41 21.8	+0.3
PVCC				eSG	Sb	15 41 40.3	0.0
	comp=Z,614nm,0.4s						
KRLC	**Kraliky**	**1.47**	**166**	ePG	Pn	15 41 21.7	+0.1
KRLC				eSG	Sg	15 41 40.3	-0.7
	comp=Z,85nm,0.3s						
BRG	**Berggiesshubel**	**1.58**	**247**	Pn	Pn	15 41 23.1	0.0
BRG				Pg	Pg	15 41 25.1	+1.1
BRG				Sg	Sg	15 41 45.3	+0.8
BRG				Amp		15 41 47.4	
	comp=Z,120nm,0.5s						
BRG	**Berggiesshubel**	**1.58**	**247**	ePn	Pn	15 41 23.1	0.0
BRG				eSg	Sg	15 41 45.1	+0.6
RUE	**Ruedersdorf**	**1.81**	**304**	eP	Pn	15 41 26.9	+0.8
RUE				eS	Sb	15 41 51.4	+0.5
RUE				IAML		15 42 00.6	
	comp=Z,1μm,0.2s						
GOPC	**GO Pecny, Ondr**	**1.84**	**211**	ePG	Pn	15 41 27.5	+0.8
GOPC				eSG	Sb	15 41 51.9	0.0
	comp=Z,73nm,0.5s						
PRU	**Pruhonice**	**1.86**	**216**	ePG	Pn	15 41 27.6	+0.7
PRU				eSG	Sb	15 41 52.5	0.0
	comp=Z,150nm,0.5s						
GKP	**Gorka Klasztor**	**1.87**	**19**	eP	Pg	15 41 32.9	+3.3
FBE	**Freiberg**	**1.91**	**253**	ePn	Pn	15 41 28.1	+0.6
FBE				ePg	Pg	15 41 31.1	+0.7
FBE				eSg	Sg	15 41 56.0	+1.0
MORC	**Moravsky Berou**	**1.92**	**154**	ePN	Pn	15 41 27.9	+0.2
MORC				eSG	Sb	15 41 54.0	-0.2
MORC	**Moravsky Berou**	**1.92**	**154**	ePn	Pn	15 41 28.1	+0.4
MORC				eSg	Sb	15 41 54.6	+0.5
MORC	**Moravsky Berou**	**1.92**	**154**	ePn	Pn	15 41 27.9	+0.2
	baz=336						
MORC				eSg	Sb	15 41 53.9	-0.2
	comp=Z,52nm,0.5s,baz=336						
CLL	**Collm**	**2.04**	**266**	*i* Pn	Pn	15 41 29.6	+0.2
	comp=Z,7.0nm,0.5s						
CLL				*i* Pg	Pg	15 41 32.7	-0.2
CLL				*i* x	x	15 41 36.0	
CLL				*i* Sg	Sg	15 42 00.4	+1.1
	comp=Z,49nm,0.5s						
CLL	**Collm**	**2.04**	**266**	ePn	Pn	15 41 29.6	+0.2
CLL				ePg	Pg	15 41 32.6	-0.2
CLL				eSg	Sg	15 42 00.4	+1.1
OKC	**Ostrava-Krasne**	**2.06**	**143**	ePG	Pg	15 41 33.3	0.0
OKC				eSG	Sg	15 41 59.5	-0.5
	comp=Z,88nm,0.6s						
OKC	**Ostrava-Krasne**	**2.06**	**143**	ePg	Pg	15 41 33.3	0.0
VRAC	**Vranov**	**2.21**	**174**	Pn	Pn	15 41 32.6	+0.9
	comp=Z,4.5nm,0.3s,baz=347,slow=11,SNR=12						
VRAC				Sn	Sn	15 42 00.9	+1.2
	comp=Z,9.0nm,0.3s,baz=92,slow=21,SNR=9.6 comp=Z,13nm,0.4s						
VRAC	**Vranov**	**2.21**	**174**	ePN	Pn	15 41 32.1	+0.4
VRAC				eSG	Sb	15 42 02.9	+0.4
VRAC	**Vranov**	**2.21**	**174**	ePn	Pn	15 41 32.1	+0.4
	baz=355						
VRAC				eSg	Sb	15 42 02.9	+0.4
	comp=Z,48nm,0.4s,baz=355						
TREC	**Trest**	**2.27**	**193**	ePG	Pb	15 41 36.0	+0.5
TREC				eSG	Sb	15 42 04.3	+0.2
	comp=Z,45nm,0.3s						
MAUC	**Maruska**	**2.37**	**154**	ePN	Pn	15 41 34.8	+0.9
MAUC				ePG	Pg	15 41 38.7	-0.5
MAUC				eSG	Sg	15 42 10.4	+0.5
	comp=Z,230nm,1.1s						
KRUC	**Moravsky**	**2.45**	**178**	ePN	Pn	15 41 35.5	+0.5
KRUC				eSG	Sb	15 42 10.8	+1.5
KRUC	**Moravsky**	**2.45**	**178**	ePn	Pn	15 41 35.4	+0.5
	baz=359						
KRUC				eSg	Sb	15 42 10.8	+1.5
	comp=Z,50nm,0.8s,baz=359						
OJC	**Ojcow**	**2.59**	**118**	ePg	Pb	15 41 42.5	+1.3
OJC				*i* Sgd		15 42 16.9	
OJC	**Ojcow**	**2.59**	**118**	ePg	Pg	15 41 43.0	-0.4
OJC				eSg	Sg	15 42 17.0	-0.1
TANN	**Tannenbergstha**	**2.63**	**247**	ePn	Pn	15 41 38.5	+1.0
TANN				ePg	Pg	15 41 44.6	+0.5
TANN				eSg	Sg	15 42 17.1	-1.1
WERD	**Werda**	**2.70**	**248**	ePn	Pn	15 41 39.3	+0.8
WERD				ePg	Pg	15 41 45.2	-0.4
WERD				eSg	Sg	15 42 20.7	+0.1
NKC	**Novy Kostel**	**2.72**	**244**	ePN	Pn	15 41 39.7	+1.0
NKC				ePG	Pg	15 41 45.0	-0.9
NKC				eSG	Sg	15 42 21.4	+0.3
	comp=Z,88nm,0.3s						
KHC	**Kasperske Hory**	**2.93**	**217**	ePN	Pn	15 41 42.5	+0.9
KHC				ePG	Pb	15 41 48.1	+1.3
KHC				eSN	Sn	15 42 17.5	0.0
KHC				eSG	Sg	15 42 25.7	-2.1
	comp=Z,34nm,0.5s						
CKRC	**Cesky Krumlov**	**2.96**	**206**	ePN	Pn	15 41 43.2	+1.1
CKRC				ePG	Pb	15 41 48.7	+1.3
CKRC				eSG	Sg	15 42 26.9	-2.0
MANZ	**Manzenberg**	**3.03**	**242**	ePn	Pn	15 41 44.0	+0.9
MANZ				ePg	Pg	15 41 52.6	+0.7
MANZ				eSg	Sg	15 42 31.4	+0.2
MOX	**Moxa**	**3.04**	**255**	ePn	Pn	15 41 43.7	+0.5
MOX				ePg	Pg	15 41 52.3	+0.2
MOX				eSg	Sg	15 42 30.6	-0.9
ROTZ	**Rotzenmuhle**	**3.10**	**237**	ePn	Pn	15 41 45.0	+1.0
ROTZ				eSg	Sg	15 42 32.0	-1.5
GEC2	**GERESS Array S**	**3.12**	**213**	ePn	Pn	15 41 45.5	+1.2
GEC2				ePg	Pb	15 41 51.6	+1.4
GEC2				eSg	Sg	15 42 31.9	-2.2
GERES	**GERESS Array B**	**3.12**	**213**	Pn	Pn	15 41 44.9	+0.5
	comp=Z,1.3nm,0.3s,baz=34,slow=13,SNR=27						
GERES				Pg	Pb	15 41 51.3	+1.1
	comp=Z,11nm,0.3s,baz=32,slow=17,SNR=59						
GERES				Sn	Sn	15 42 22.0	-0.4
	comp=Z,4.6nm,0.3s,baz=31,slow=25,SNR=5.1						
GERES				Lg	Lg	15 42 30.5	
	comp=Z,12nm,0.3s,baz=33,slow=31,SNR=10.0 comp=Z,3.2nm,0.5s						
WET	**Wettzell**	**3.20**	**224**	ePn	Pn	15 41 45.7	+0.4
WET				eSg	Sg	15 42 34.8	-1.7
NIE	**Niedzica**	**3.33**	**127**	eP	Pg	15 41 57.0	-0.6
NIE				eS	Sg	15 42 41.4	+0.8
CONA	**Conrad Observa**	**3.59**	**184**	*i* Pn	Pn	15 41 51.6	+0.9
	comp=Z,1.2nm,0.3s						
CONA				eSg	Sg	15 42 47.8	-1.2
	comp=Z,32nm,0.5s						
CLZ	**Clausthal**	**3.67**	**278**	eSg	Sg	15 42 52.5	+0.9
GRF	**Grafenberg Arr**	**3.68**	**242**	ePn	Pn	15 41 53.0	+1.1
GRF				eSg	Sg	15 42 49.7	-2.2
BSD	**Bornholm Skovb**	**3.70**	**348**	eP	Pn	15 41 53.0	+0.8
BSD	**Bornholm Skovb**	**3.70**	**348**	*i* P	Pn	15 41 52.2	0.0
BSD				*i* S	Sn	15 42 34.4	-2.1
BSD				IAML		15 42 41.5	
	comp=Z,16nm,0.7s						
RONA	**Rosalia, Austr**	**3.81**	**179**	eSg	Sg	15 42 56.2	+0.1
	comp=Z,24nm,0.5s						
MOA	**Molln**	**3.88**	**200**	*i* Pn	Pn	15 41 55.8	+1.1
	comp=Z,7.1nm,0.3s,SNR=9.5						
MOA				eSg	Sg	15 42 59.0	+0.7
	comp=Z,32nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	Sg	Sg	15 43 07.5	-0.4
	comp=Z,48nm,0.5s						
ARSA	**Arzberg**	**4.28**	**187**	*i* Pn	Pn	15 41 59.3	-0.9
	comp=Z,2.6nm,0.3s						
ARSA				eSg	Sg	15 43 12.0	+0.7
	comp=Z,16nm,0.4s						
LUNU	**Lund**	**4.46**	**339**	*i* P	Pn	15 42 04.5	+1.9
LUNU				*i* S	Sn	15 42 54.5	-0.6
BLEU	**Blekinge**	**4.82**	**357**	*i* P	Pn	15 42 08.5	+1.0
BLEU				*i* S	Sn	15 43 00.5	-3.4
BJUU	**Bjuv**	**4.96**	**339**	*i* P	Pn	15 42 11.4	+1.9
BJUU				*i* S	Sn	15 43 05.4	-2.0
OBKA	**Obir**	**5.12**	**193**	Sg	Sg	15 43 37.9	-0.4
	comp=Z,12nm,0.5s						
WATA	**Walderalm**	**5.17**	**218**	*i* Pn	Pn	15 42 14.0	+1.6
	comp=Z,2.5nm,0.3s						
WATA				eSg	Sg	15 43 39.0	-0.7
	comp=Z,9.7nm,0.4s						
DEL	**Delary**	**5.17**	**345**	eP	Pn	15 42 12.9	+0.6
DEL				IAML		15 43 14.2	
	comp=Z,3.3nm,0.3s						
DEL	**Delary**	**5.17**	**345**	*i* P	Pn	15 42 12.7	+0.4
DEL				*i* S	Sn	15 43 10.1	-2.5
MYKA	**Terra Mystica**	**5.17**	**200**	Sg	Sg	15 43 40.5	+0.7
	comp=Z,5.1nm,0.3s						
WTTA	**Wattenberg**	**5.20**	**217**	*i* Pn	Pn	15 42 14.6	+1.7
	comp=Z,1.3nm,0.2s						
WTTA				eSg	Sg	15 43 39.3	-1.5
	comp=Z,13nm,0.6s						
ABTA	**Abfaltersbach**	**5.35**	**209**	Sg	Sg	15 43 44.2	-1.5
	comp=Z,11nm,0.5s						
PABE	**Paberze**	**6.11**	**46**	eP	Pn	15 42 27.7	+2.5
PABE				IAML		15 43 08.0	
	comp=Z,5.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**6.31**	**224**	Pn	Pn	15 42 30.3	+2.2
	comp=Z,0.4nm,0.3s,baz=354,slow=19,SNR=2.2						
DAVOX				Sn	Sn	15 43 42.3	+1.4
	comp=Z,0.4nm,0.3s,baz=329,slow=19,SNR=1.5						
DAVOX				Lg	Lg	15 44 12.6	
	comp=Z,0.7nm,0.3s,baz=197,slow=19,SNR=4.1 comp=Z,1.3nm,0.4s						
VIKU	**Vikbolandet**	**7.02**	**2**	eP	Pn	15 42 39.2	+1.5
MI28	**Mi28,Pidlybu**	**7.20**	**90**	Pn	Pn	15 42 42.1	+1.9
MI29	**MI29, Kamyanyy**	**7.41**	**94**	Pn	Pn	15 42 47.3	+4.2
MI29				pP	Pn	15 42 49.2	+6.1
LUBAR	**Lubar, Ukraine**	**7.48**	**98**	Pn	Pn	15 42 46.2	+2.1
AK20	**Malin Array Si**	**8.07**	**90**	Pn	Pn	15 42 54.3	+2.1
AK18	**Malin Array Si**	**8.11**	**91**	Pn	Pn	15 42 54.8	+2.1
AK23	**Malin Array Si**	**8.14**	**90**	Pn	Pn	15 42 55.2	+2.1
AK23				pP	Pn	15 42 56.3	+3.2
AK16	**Malin Array Si**	**8.14**	**91**	Pn	Pn	15 42 55.5	+2.3
AK16				pP	Pn	15 42 56.5	+3.3
AK15	**Malin Array Si**	**8.15**	**91**	Pn	Pn	15 42 55.5	+2.2
AK15				pP	Pn	15 42 56.5	+3.2
AK14	**Malin Array Si**	**8.15**	**91**	Pn	Pn	15 42 55.5	+2.2
AK03	**Malin Array Si**	**8.21**	**90**	Pn	Pn	15 42 56.2	+2.2
AK01	**Malin Array Si**	**8.21**	**91**	Pn	Pn	15 42 56.1	+2.1
AK01				pP	Pn	15 42 57.0	+3.0
AK02	**Malin Array Si**	**8.21**	**91**	Pn	Pn	15 42 55.6	+1.5
AKASG	**Malin Array Be**	**8.21**	**91**	Pn	Pn	15 42 53.9	-0.2
	comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=5.0						
AKASG				Sn	Sn	15 44 23.9	-3.7
	comp=Z,0.8nm,0.3s,baz=276,slow=23,SNR=2.6						
AKASG				Lg	Lg	15 45 21.4	
	comp=Z,0.3nm,0.3s,baz=274,slow=26,SNR=1.5 comp=Z,0.6nm,0.4s						
AKBB	**Malin Array Si**	**8.21**	**91**	Pn	Pn	15 42 56.2	+2.1
AKBB				pP	Pn	15 42 57.2	+3.1
MTSE	**Matsula**	**8.42**	**28**	eP	Pn	15 42 58.6	+1.6
HFS	**Hagfors**	**8.77**	**352**	Pn	Pn	15 43 02.5	+0.8
	comp=Z,0.3nm,0.3s,baz=164,slow=14,SNR=7.4						
HFS				Sn	Sn	15 44 39.0	-2.0
	comp=Z,0.2nm,0.3s,baz=162,slow=26,SNR=1.2 comp=Z,1.1nm,0.5s						
MEF	**Metsahovi**	**9.85**	**24**	eP	Pn	15 43 19.4	+2.9
NOA	**NORSAR Array B**	**9.96**	**346**	Pn	Pn	15 43 17.1	-0.9
	baz=160,slow=11,SNR=3.9 comp=Z,0.4nm,0.6s						
RAF	**Rauma**	**10.02**	**16**	eP	Pn	15 43 20.2	+1.4
FINES	**FINESS Array B**	**11.33**	**25**	Pn	Pn	15 43 35.0	-1.7
	comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=10						
FINES				Sn	Sn	15 45 37.4	-6.5
	comp=Z,0.2nm,0.3s,baz=212,slow=21,SNR=2.0 comp=Z,2.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**12.18**	**296**	Pn	Pn	15 43 45.7	-2.7
	baz=100,slow=13						
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	P	15 45 10.6	-1.8
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=11 comp=Z,0.7nm,0.4s						
AAK	**Ala-Archa**	**39.69**	**79**	LR	LR	16 07 15.2	
	comp=Z,53nm,20.4s,baz=84,slow=40						
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P	P	15 48 31.0	+0.6
	comp=Z,0.4nm,0.7s,baz=358,slow=8.8,SNR=2.7 comp=Z,0.4nm,0.7s						

*NEIC **10** 16:00:42.4±2.3, 37°.87N±0°.06×141°.77E±0°.08, h48km±9km, mb4.6/7, Error ellipse: s-maj=10.2km s-min=8.6km az=124.0*
*JMA **10** 16:00:42.0±0.1, 37°.8N±0°.2×141°.8E±0°.4, h51km, MD4.0/40, MV4.5/40, SE OFF MIYAGI PREF*
JMA Felt II J1 at SE OFF MIYAGI PREF .
*NIED **10** 16:00:42.0, 37°.84N×141°.79E, h51km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.77; $M_{\theta\theta}$-5.22; $M_{\phi\phi}$-0.55; $M_{r\theta}$-1.06; $M_{\theta\phi}$2.77; $M_{\phi r}$-0.49; Fault plane solution: $M_0$6.26000×10^{14} NP1: ϕ_s125.00000°, δ42.00000°, λ104.00000°. NP2: ϕ_s286.00000°, δ49.00000°, λ77.00000°.*
*IDC **10** 16:00:43.1±2.6, 37°.78N×141°.73E, h62km±25km, mb3.5/12, mbtmp3.9/16, ML2.5/2, MS3.0/4 Error ellipse: s-maj=22.0km s-min=14.8km az=88.0*
ISC 10 16:00:41.4±1.1, 37°.79N±0°.04×141°.89E±0°.06, h45km±10km, n77, σ1§15/70, mb4.0/17, MS3.0/3, 12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibo**	**0.62**	**327**	P	Pn	16 00 53.9	0.0
JIKH				S	Sn	16 01 02.2	-0.7
JIKH	**Ishinomakibo**	**0.62**	**327**	A	A	16 00 53.9	
	comp=E,26nm,0.2s,comp=E,19nm,0.8s						
JIO	**Ouri**	**0.79**	**327**	P	Pn	16 00 56.1	-0.1
JIO				S	Sn	16 01 05.9	-1.0
JIO	**Ouri**	**0.79**	**327**	A	A	16 00 56.1	
	comp=E,19nm,0.4s,comp=E,17nm,0.3s						
JMST	**Minamisoumatoc**	**0.80**	**265**	P	Pn	16 00 56.2	-0.1
JMST				S	Sn	16 01 06.4	-0.7
JMST	**Minamisoumatoc**	**0.80**	**265**	A	A	16 00 56.2	
	comp=E,20nm,0.8s,comp=E,22nm,0.3s						
JMM	**Marumori**	**0.87**	**275**		Pn	16 00 56.7	-0.6
JMM				Sn	Sn	16 01 06.4	-2.5
JMM	**Marumori**	**0.87**	**275**	*i* P	Pn	16 00 57.1	-0.2
JMM				S	Sn	16 01 07.9	-1.0
JMM	**Marumori**	**0.87**	**275**	A	A	16 00 57.1	
	comp=E,12nm,0.2s,comp=E,11nm,0.3s						
JFK	**Kawauchi**	**0.91**	**243**	⇓*i*P	Pn	16 00 57.9	0.0
JFK				⇓S	Sn	16 01 09.0	-1.0
JFK	**Kawauchi**	**0.91**	**243**	A	A	16 00 57.9	
	comp=E,7.0nm,0.2s,comp=E,8.0nm,0.4s						
JKMT	**Kesennumamotoy**	**1.07**	**342**	⇓P	Pn	16 00 59.9	-0.1
JKMT				⇓S	Sn	16 01 12.8	-0.9
JKMT	**Kesennumamotoy**	**1.07**	**342**	A	A	16 00 59.9	
	comp=N,7.0nm,0.7s						
JOU	**Okura**	**1.12**	**301**	*i* P	Pn	16 01 00.6	-0.2
JOU				S	Sn	16 01 13.9	-1.2
JOU	**Okura**	**1.12**	**301**	A	A	16 01 00.6	
	comp=E,13nm,0.4s,comp=E,16nm,0.5s						
JMK	**Ichinoseki**	**1.27**	**336**	⇓*i*P	Pn	16 01 02.9	+0.1
JMK				⇓S	Sn	16 01 17.9	-0.7
JMK	**Ichinoseki**	**1.27**	**336**	A	A	16 01 02.9	
	comp=E,4.0nm,0.9s,comp=E,3.0nm,0.6s						
JYS	**Shirataka**	**1.50**	**287**	*i* P	Pn	16 01 06.1	+0.1
JYS	**Shirataka**	**1.50**	**287**	A	A	16 01 06.1	
	comp=E,3.0nm,2.5s,comp=E,4.0nm,2.3s						
JYK	**Kaneyama**	**1.65**	**313**	⇓*i*P	Pn	16 01 08.1	+0.2
JYK				⇓*e*S	Sn	16 01 27.3	-0.6
JOM	**Ohasama**	**1.74**	**345**	⇓*i*P	Pn	16 01 09.5	+0.3
JOM				⇓S	Sn	16 01 30.5	+0.3
JOM	**Ohasama**	**1.74**	**345**	A	A	16 01 09.5	
	comp=E,5.0nm,0.5s,comp=E,3.0nm,0.2s						
JFY	**Yanaizu**	**1.78**	**258**	*i* P	Pn	16 01 10.4	+0.7
JFY				S	Sn	16 01 31.7	+0.5
JRG	**Rokugo**	**1.88**	**329**	⇓*i*P	Pn	16 01 11.8	+0.7
JRG				⇓S	Sn	16 01 35.0	+1.4
JRG	**Rokugo**	**1.88**	**329**	A	A	16 01 11.8	
	comp=E,8.0nm,0.6s,comp=E,6.0nm,0.9s						
JYA	**Atsumi**	**1.89**	**296**	P	Pn	16 01 11.6	+0.3
JYA				*e*S	Sn	16 01 34.8	+0.9
JYA	**Atsumi**	**1.89**	**296**	A	A	16 01 11.6	
	comp=E,4.0nm,0.5s,comp=E,3.0nm,0.7s						
JYT	**Yasato**	**2.07**	**222**	Pn	Pn	16 01 13.7	0.0
JSD	**Sado**	**2.88**	**276**	Pn	Pn	16 01 25.0	+0.2
JTM	**Tenmabayashi**	**3.06**	**348**		Pn	16 01 27.3	+0.1
MAJO	**Matsushiro**	**3.20**	**248**	Pn	Pn	16 01 30.5	+1.3
JGF	**Kuroka**	**4.25**	**240**	Pn	Pn	16 01 46.0	+2.4
ERM	**Erimo**	**4.33**	**13**		Pn	16 01 43.9	-0.7
INU	**Inuyama**	**4.62**	**240**	Pn	Pn	16 01 50.7	+2.0
JHJ2	**Mitsune**	**4.97**	**201**	Pn	Pn	16 01 56.0	+2.5
JHJ	**Hachijo jima 2**	**4.97**	**201**	P	Pn	16 01 54.9	+1.4
	130nm,0.3s,baz=22,slow=17,SNR=6.0						
JHJ				S	Sn	16 02 47.3	-2.4
	144nm,0.4s,baz=83,slow=23,SNR=2.0						
JEW	**Eniwo**	**5.05**	**356**	Pn	Pn	16 01 55.4	+0.8
JHS	**Saijyo**	**7.61**	**251**	Pn	Pn	16 02 32.3	+2.6
YSS	**Yuzh-Sakhalins**	**9.18**	**4**	Pn	Pn	16 02 51.7	+0.6
USRK	**Ussuriysk Ar.**	**9.84**	**314**	P	Pn	16 03 01.7	+1.4
	0.3nm,0.3s,baz=116,slow=14,SNR=5.8 1.5nm,0.5s						
JCJ	**Chichijima**	**10.67**	**179**	P	Pn	16 03 11.4	-0.2
	28nm,0.5s,baz=307,slow=20,SNR=1.2						
JCJ				S	Sn	16 05 00.6	-9.2
	27nm,0.4s,baz=324,slow=23,SNR=1.8						
KSRS	**Korea Array**	**11.09**	**273**	P	Pn	16 03 21.5	+4.2
	1.2nm,0.7s,baz=83,slow=14,SNR=5.4						
KLR	**Kul'dur**	**13.58**	**331**	LR	LR	16 08 25.9	
	comp=Z,43nm,18.1s,baz=166,slow=34						
PETK	**Petropavlovsk-**	**18.84**	**31**	P	P	16 04 57.0	-0.4
	0.1nm,0.3s,baz=221,slow=13,SNR=2.1 3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.60**	**287**	*e*P	P	16 05 47.4	-0.9
SEY	**Seymchan**	**25.97**	**11**	P	P	16 06 11.2	+1.7
	2.7nm,1.0s,baz=176,slow=19,SNR=2.0 2.7nm,1.0s						
SONM	**Songino Array**	**27.69**	**303**	P	P	16 06 25.1	-0.1
	0.6nm,0.6s,baz=111,slow=8.2,SNR=3.4						
SONM				LR	LR	16 18 06.3	
	comp=Z,26nm,18.2s,baz=72,slow=38 0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	16 36 48.0	
	baz=316,slow=76,SNR=524						
H11N1	**WAKE ISLAND Hy**	**28.23**	**123**	T	T	16 36 55.4	
	baz=316,slow=76,SNR=807						
H11N3	**WAKE ISLAND Hy**	**28.24**	**123**	T	T	16 36 53.5	
	baz=316,slow=76,SNR=688						
H11S1	**WAKE ISLAND Hy**	**28.96**	**125**	T	T	16 37 44.5	
	baz=317,slow=76,SNR=129						
**H11S

TAP 10 16:04:11.1, 21.19N×121.88E, h181km, ML3.2, 1C-1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu** baz=341	**0.85**	**341**	*i* P	Pn	16 04 37.5	-0.4
LYUB				*i* S	Sn	16 04 56.8	-1.9
LAY	**Lan-yu** baz=340	**0.90**	**340**	*e*P	Pn	16 04 37.5	-0.7
LAY				*e*S	Sn	16 04 58.1	-1.1
TSEB	**Hengchuen, Pin** baz=303	**1.15**	**308**	P	Pn	16 04 41.3	+1.3
TSEB				*e*S	Sn	16 05 03.1	+0.6
TWKBT	**Hengchun** baz=305	**1.24**	**307**	*e*P	Pn	16 04 41.4	+0.6
TWKBT				*e*S	Sn	16 05 02.9	-0.9
TWK1	**Hengchun** baz=305	**1.25**	**307**	P	Pn	16 04 41.5	+0.6
TWK1				*e*S	Sn	16 05 03.1	-0.9
SMST	**Manzhou Townsh** baz=313	**1.27**	**311**	P	Pn	16 04 41.3	+0.3
SMST				*e*S	Sn	16 05 03.1	-1.2
HEN	**Hengchun** baz=300	**1.33**	**307**	*e*P	Pn	16 04 42.3	+0.7
HEN				*e*S	Sn	16 05 04.9	-0.4
SLIU	**Shizi** baz=323	**1.43**	**316**	P	Pn	16 04 42.7	+0.2
SLIU				*e*S	Sn	16 05 06.2	-0.7
TAWH	**Dawu Township** baz=321	**1.47**	**321**	*e*P	Pn	16 04 40.5	-2.3
TAWH				*e*S	Sn	16 05 04.7	-2.8
EAST	**Anshuo** baz=321	**1.52**	**321**	*i* P	Pn	16 04 43.3	-0.1
EAST				*e*S	Sn	16 05 06.9	-1.6
SCZT	**Fangliau** baz=320	**1.66**	**315**	P	Pn	16 04 44.9	+0.3
SCZT				*e*S	Sn	16 05 10.2	-0.5
TWGBT	**Beinan** baz=329	**1.78**	**336**	*e*P	Pn	16 04 45.5	-0.4
TWGBT				*e*S	Sn	16 05 11.0	-2.0
TWG	**Pinlang** baz=329	**1.79**	**335**	*e*P	Pn	16 04 45.8	-0.2
TWG				*e*S	Sn	16 05 11.6	-1.6
MASBT	**Mashibuluo** baz=324	**1.83**	**321**	P	Pn	16 04 46.7	+0.4
MASBT				*e*S	Sn	16 05 12.1	-1.8
TSMG	**Majia** baz=328	**1.89**	**323**	P	Pn	16 04 47.6	+0.6
TSMG				*e*S	Sn	16 05 13.3	-1.8
WSSB	**Gushan** baz=314	**2.08**	**314**	*e*P	Pn	16 04 50.5	+1.3
WSSB				*e*S	Sn	16 05 19.9	+1.2
SCST	**Cishan** baz=330	**2.12**	**323**	*e*P	Pn	16 04 50.5	+1.1
SCST				*e*S	Sn	16 05 19.1	-0.4
ELDTW	**Lidau** baz=338	**2.14**	**338**	*e*P	Pn	16 04 50.5	+0.7
ELDTW				*e*S	Sn	16 05 19.3	-0.8
SGST	**Jiashian** baz=328	**2.23**	**328**	*e*P	Pn	16 04 50.5	-0.2
SGST				*e*S	Sn	16 05 20.9	-0.8
YULB	**Yu-li** baz=338	**2.25**	**346**	*e*P	Pn	16 04 51.6	+0.6
YULB				*e*S	Sn	16 05 20.8	-1.5
CHN1	**Nanshi** baz=328	**2.34**	**328**	*e*P	Pn	16 04 52.7	+0.6
CHN1				*e*S	Sn	16 05 22.8	-1.2
WTP	**Ta-pu** baz=330	**2.35**	**330**	*e*P	Pn	16 04 52.2	0.0
WTP				*e*S	Sn	16 05 23.1	-1.3
TPUB	**Ta-pu** baz=331	**2.40**	**331**	*e*P	Pn	16 04 52.9	+0.3
TPUB				*e*S	Sn	16 05 23.4	-1.7
TWK	**Hsinying** baz=328	**2.43**	**328**	*e*P	Pn	16 04 53.9	+0.8
TWK				*e*S	Sn	16 05 24.5	-1.4
YUS	**Yu-Shan** baz=332	**2.44**	**340**	*e*P	Pn	16 04 54.0	+0.4
YUS				*e*S	Sn	16 05 25.9	-0.9
CHN4	**Tsaushan** baz=331	**2.46**	**331**	*e*P	Pn	16 04 53.8	+0.5
CHN4				*e*S	Sn	16 05 24.6	-1.7
ALS	**Alishan** baz=337	**2.51**	**337⇓**	*e*P	Pn	16 04 54.2	-0.1
ALS				*e*S	Sn	16 05 26.2	-1.8
WCKO	**Fanlu** baz=328	**2.53**	**332**	*e*P	Pn	16 04 55.1	+0.9
WCKO				*e*S	Sn	16 05 25.9	-1.9
TSCK	**Chigu Township** baz=314	**2.56**	**320**	*e*P	Pn	16 04 54.3	-0.2
TSCK				*e*S	Sn	16 05 26.7	-1.7
VWDT	**VWDT** baz=338	**2.64**	**345**	*e*P	Pn	16 04 56.2	+0.8
VWDT				*e*S	Sn	16 05 30.4	+0.3
SSLB	**Suanglung** baz=335	**2.72**	**342**	*e*P	Pn	16 04 57.6	+1.2
SSLB				*e*S	Sn	16 05 30.8	-1.1
PACPP	**Pamplona Cagay**	**2.77**	**190⇑**	*i* P	Pn	16 04 55.2	-1.8
SMLT	**Sun Moon Lake** baz=335	**2.83**	**342**	*e*P	Pn	16 04 57.9	+0.1
SMLT				*e*S	Sn	16 05 34.6	+0.3
WUSB	**Renai** baz=338	**2.87**	**346**	*e*P	Pn	16 04 59.2	+0.9
WUSB				*e*S	Sn	16 05 34.4	-1.0
WCS	**Beigang Elemen** baz=337	**2.99**	**343**	*e*P	Pn	16 05 00.4	+0.8
WCS				*e*S	Sn	16 05 36.1	-1.5
PNG	**Penghu** baz=323	**3.19**	**318**	*e*P	Pn	16 05 02.2	+0.1
PNG				*e*S	Sn	16 05 41.3	-0.8

IDC 10 16:08:09.1±6.8, 15.31S×175.61W, h0km, mb3.7/2, mbtmp3.7/2, MS3.4/23, Error ellipse: s-maj=473.2km s-min=81.6km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** comp=Z,545nm,20.0s,baz=0.9,slow=36	**6.54**	**247**	LR	LR	16 12 07.5	
DZM	**Mont Dzumac** comp=Z,155nm,20.0s,baz=26,slow=34	**18.27**	**246**	LR	LR	16 18 24.1	
URZ	**Urewera** comp=Z,190nm,19.1s,baz=110,slow=35	**23.75**	**194**	LR	LR	16 21 59.3	
HNR	**Honiara** comp=Z,2μm,18.8s,baz=104,slow=33	**24.57**	**281**	LR	LR	16 21 37.6	
PPT	**Papeete** comp=Z,28nm,20.6s,baz=130,slow=30	**25.06**	**99**	LR	LR	16 20 37.3	
CTA	**Charters Tower** comp=Z,41nm,18.1s,baz=80,slow=34	**36.59**	**257**	LR	LR	16 28 46.3	
PMG	**Port Moresby** comp=Z,63nm,21.1s,baz=81,slow=33	**36.80**	**275**	LR	LR	16 28 14.2	
H11N3	**WAKE ISLAND Hy** baz=152,slow=76,SNR=3.4	**38.82**	**333**	T	T	16 57 06.2	
H11N1	**WAKE ISLAND Hy** baz=152,slow=76,SNR=9.4	**38.82**	**333**	T	T	16 57 08.3	
H11N2	**WAKE ISLAND Hy** baz=152,slow=76,SNR=3.5	**38.84**	**333**	T	T	16 57 03.7	
WRA	**Warramunga Arr** 1.0nm,1.0s,baz=91,slow=8.0,SNR=3.6	**47.79**	**257**	P	P	16 16 48.2	-0.4
WRA				LR	LR	16 34 07.3	
	comp=Z,70nm,21.3s,baz=110,slow=33 1.0nm,1.0s						
ASAR	**Alice Springs** 1.2nm,0.7s,baz=86,slow=8.1,SNR=14 1.2nm,0.7s	**48.11**	**252**	P	P	16 16 51.1	0.0
GUMO	**Guam** comp=Z,21nm,19.9s,baz=144,slow=33	**48.51**	**304**	LR	LR	16 34 46.0	
VNDA	**Vanda** comp=Z,16nm,20.4s,baz=2.5,slow=32	**63.26**	**185**	LR	LR	16 41 43.6	
SHEM	**Shemya Is, Ala** comp=Z,28nm,21.5s,baz=299,slow=32	**68.34**	**353**	LR	LR	16 44 29.6	
JOW	**Kunigami** comp=Z,36nm,21.7s,baz=119,slow=30	**68.72**	**307**	LR	LR	16 42 22.5	
PETK	**Petropavlovsk-** comp=Z,41nm,21.6s,baz=128,slow=31	**71.91**	**343**	LR	LR	16 44 58.2	
KSRS	**Korea Array** comp=Z,7.3nm,18.8s,baz=100,slow=34	**74.61**	**317**	LR	LR	16 49 53.0	
USRK	**Ussuriysk Ar.** comp=Z,68nm,22.0s,baz=147,slow=31	**76.04**	**324**	LR	LR	16 47 16.9	
KLR	**Kul'dur** comp=Z,10nm,22.0s,baz=197,slow=32	**79.30**	**328**	LR	LR	16 49 48.3	
MA2	**Magadan** comp=Z,29nm,20.4s,baz=142,slow=31	**79.45**	**343**	LR	LR	16 49 20.3	
TXAR	**Lajitas Array** comp=Z,30nm,18.3s,baz=297,slow=30	**82.34**	**57**	LR	LR	16 48 51.4	
ANMO	**Albuquerque** comp=Z,27nm,18.3s,baz=261,slow=30	**82.38**	**51**	LR	LR	16 49 49.0	
CMIG	**Matias Romero** comp=Z,21nm,18.8s,baz=248,slow=29	**85.86**	**71**	LR	LR	16 49 56.1	
CMAR	**Chiang Mai Arr** comp=Z,6.6nm,21.6s,baz=220,slow=33	**90.56**	**289**	LR	LR	16 57 38.6	
PLCA	**Paso Flores** comp=Z,30nm,18.6s,baz=310,slow=30	**91.15**	**133**	LR	LR	16 53 50.2	
SONM	**Songino Array** comp=Z,15nm,21.1s,baz=100,slow=32	**93.36**	**319**	LR	LR	16 58 02.5	
LVC	**Limon Verde** comp=Z,30nm,18.1s,baz=246,slow=30	**98.97**	**116**	LR	LR	16 57 07.7	
BRTR	**Keskin Array B** 0.6nm,0.7s,baz=76,slow=1.8,SNR=2.4	**144.72**	**319**	PKP	PKPbc	16 27 47.8	+0.6

*NOU **10** 16:26:42.7, 16.68S×177.06W, h462km, mb4.4/32, Fiji Islands Region*
*NEIC **10** 16:27:02.7±1.7, 17.9S±0.1×178.6W±0.1, h552km±8km, mb4.2/75, Error ellipse: s-maj=20.4km s-min=15.2km az=138.0*
*IDC **10** 16:27:05.5±1.1, 17.72S×178.83W, h579km±10km, mb3.4/9, mbtmp4.4/11, Error ellipse: s-maj=27.9km s-min=11.9km az=145.0*

ISC 10 16:27:05.0±0.5, 17.95S±0.09×178.72W±0.09, h579km, n142, σ1.06/142, mb4.2/48, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 70nm,0.7s,baz=87,slow=3.3,SNR=52	**3.08**	**274**	P	**P**	**16 28 22.1**	**-1.0**
MSVF				S	**S**	**16 29 26.7**	**+0.2**
	7.5nm,0.9s,baz=141,slow=20,SNR=1.0						
MSVF	**Nonsavu**	**3.08**	**274**	P	**P**	**16 28 21.9**	**-1.2**
AFI	**Afiamalu**	**7.80**	**60**	P	P	16 28 55.2	-6.7
DVP	**Devils Point**	**12.47**	**269**	P	P	16 29 44.3	-4.2
MARNC	**Mare, Loyalty**	**12.96**	**252**	P	**P**	**16 29 51.5**	**-2.0**
MARNC	**Mare, Loyalty**	**12.96**	**252**	P	**P**	**16 29 52.1**	**-1.4**
LIFNC	**LIFOU**	**13.54**	**256**	P	**P**	**16 29 57.3**	**-2.2**
LIFNC	**LIFOU**	**13.54**	**256**	P	**P**	**16 29 57.5**	**-2.0**
YATNC	**Mamie plateau,**	**14.12**	**251**	P	**P**	**16 30 04.3**	**-1.1**
OUENC	**Ouen Island, N**	**14.26**	**249**	P	**P**	**16 30 05.3**	**-1.5**
OUENC	**Ouen Island, N**	**14.26**	**249**	P	**P**	**16 30 06.9**	**+0.1**
DZM	**Mont Dzumac** 15nm,0.5s,baz=104,slow=17,SNR=25	**14.53**	**251**	P	**P**	**16 30 08.1**	**-1.4**
DZM	**Mont Dzumac**	**14.53**	**251**	P	**P**	**16 30 10.0**	**+0.5**
ONTNC	**Ouen Toro**	**14.58**	**250**	P	**P**	**16 30 11.1**	**+1.3**
NOUC	**Port Laguerre**	**14.66**	**251**	P	**P**	**16 30 09.8**	**-0.9**
KOUNC	**Koumac, New Ca**	**16.25**	**258**	P	**P**	**16 30 26.3**	**+0.6**
KOUNC	**Koumac, New Ca**	**16.25**	**258**	P	**P**	**16 30 26.4**	**+0.6**
OUZ	**Omahuta**	**18.51**	**200**	P	**P**	**16 30 46.1**	**+0.1**
KUZ	**Kuaotunu**	**19.35**	**194**	P	**P**	**16 30 52.4**	**-1.3**
URZ	**Urewera** 5.0nm,0.3s,baz=335,slow=2.1,SNR=10	**20.56**	**189**	P	**P**	**16 31 01.8**	**-2.8**
URZ	**Urewera**	**20.56**	**189**	P	**P**	**16 31 01.7**	**-2.9**
URZ	**Urewera**	**20.56**	**189**	P	**P**	**16 31 01.6**	**-3.0**
BKZ	**Black Stump Fm**	**21.55**	**190**	P	**P**	**16 31 10.8**	**-2.8**
BKZ				IAmb	IAmb	16 31 33.0	
	comp=Z,18nm,1.4s						
BKZ	**Black Stump Fm**	**21.55**	**190**	P	**P**	**16 31 11.6**	**-1.9**
QRZ	**Quartz Range**	**24.01**	**196**	P	**P**	**16 31 34.4**	**-0.9**
QRZ	**Quartz Range**	**24.01**	**196**	P	**P**	**16 31 35.7**	**+0.3**
KHZ	**Kahutara**	**25.26**	**194**	P	**P**	**16 31 44.1**	**-2.3**
WKZ	**Wanaka**	**28.70**	**198**	P	**P**	**16 32 14.7**	**-1.8**
ARMA	**Armidale**	**29.66**	**240**	P	**P**	**16 32 26.4**	**+1.2**
CTAO	**Charters Tower**	**33.14**	**261**	P	**P**	**16 32 55.0**	**+0.1**
CTAO				IAmb	IAmb	16 32 55.5	
	comp=Z,6.3nm,0.8s						
CAN	**Canberra**	**33.44**	**232**	P	**P**	**16 32 57.2**	**+0.1**
CAN	**Canberra**	**33.44**	**232**	P	**P**	**16 32 57.9**	**+0.7**
MTSU	**Mount Surprise**	**35.10**	**264**	P	**P**	**16 33 11.5**	**+0.2**
COEN	**Coen**	**36.80**	**271**	P	**P**	**16 33 25.6**	**+0.4**
TOO	**Toolangi**	**36.91**	**231**	P	**P**	**16 33 26.6**	**+0.7**
TOO	**Toolangi**	**36.91**	**231**	P	**P**	**16 33 27.4**	**+1.5**
BRAT	**Ballarat**	**38.06**	**231**	P	**P**	**16 33 37.3**	**+2.2**
STKA	**Stephens Creek** comp=Z,6.8nm,0.4s,baz=90,slow=6.8,SNR=58 comp=Z,6.8nm,0.4s	**38.35**	**241**	P	**P**	**16 33 38.7**	**+1.1**
STKA	**Stephens Creek**	**38.35**	**241**	P	**P**	**16 33 38.8**	**+1.1**
STKA				IAmb	IAmb	16 33 39.6	
	comp=Z,3.9nm,1.0s						
STKA	**Stephens Creek**	**38.35**	**241**	P	**P**	**16 33 38.9**	**+1.3**
INKA	**Innaminka**	**38.45**	**248**	P	**P**	**16 33 39.8**	**+1.3**
HTT	**Hallett**	**40.87**	**239**	P	**P**	**16 33 59.1**	**+1.3**
LCRK	**Leigh Creek**	**40.97**	**244**	P	**P**	**16 33 59.6**	**+1.0**
OOD	**Oodnadatta**	**42.92**	**248**	P	**P**	**16 34 15.3**	**+1.3**
BBOO	**Buckleboo**	**43.12**	**241**	P	**P**	**16 34 16.2**	**+0.7**
BBOO	**Buckleboo**	**43.12**	**241**	P	**P**	**16 34 16.3**	**+0.8**
WB2	**Warramunga Arr**	**44.32**	**260**	P	**P**	**16 34 24.3**	**-0.6**
WB2				IAmb	IAmb	16 34 25.4	
	comp=Z,6.0nm,0.6s						
WRAB	**Tennant Creek**	**44.32**	**260**	P	**P**	**16 34 24.5**	**-0.4**
WB1	**Warramunga Ar.**	**44.32**	**260**	P	**P**	**16 34 24.7**	**-0.2**
WRA	**Warramunga Arr** comp=Z,3.7nm,0.5s,baz=93,slow=7.0,SNR=74 comp=Z,3.7nm,0.5s	**44.33**	**260**	P	**P**	**16 34 24.6**	**-0.3**
WRA	**Warramunga Arr**	**44.33**	**260**	P	**P**	**16 34 24.3**	**-0.7**
AS01	**Alice Springs**	**44.45**	**254**	P	**P**	**16 34 26.3**	**+0.4**
AS31	**Alice Springs**	**44.49**	**254**	P	**P**	**16 34 26.4**	**+0.2**
ASAR	**Alice Springs** comp=Z,63nm,0.6s,baz=89,slow=7.9,SNR=2093	**44.49**	**254**	P	**P**	**16 34 26.5**	**+0.3**
ASAR				S	**S**	**16 40 19.9**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=87,slow=16,SNR=4.3						
MULG	**Mulgathing**	**44.52**	**245**	P	**P**	**16 34 26.9**	**+0.6**
WRKA	**Warakurna**	**49.55**	**252**	P	**P**	**16 35 04.5**	**+0.4**
FORT	**Forrest**	**49.72**	**245**	P	**P**	**16 35 05.2**	**0.0**
FORT	**Forrest**	**49.72**	**245**	P	**P**	**16 35 04.9**	**-0.3**
KNRA	**Kununurra**	**50.19**	**264**	P	**P**	**16 35 08.8**	**0.0**
KNRA				IAmb	IAmb	16 35 09.0	
	comp=Z,17nm,1.2s						
KNRA	**Kununurra**	**50.19**	**264**	P	**P**	**16 35 07.2**	**-1.6**
SOEI	**Soe**	**55.77**	**270**	P	**P**	**16 35 49.3**	**+0.6**
SOEI				IAmb	IAmb	16 35 50.9	
	comp=Z,10nm,0.7s						
PSA00	**Pilbara Seismi**	**57.61**	**255**	P	**P**	**16 36 00.9**	**-0.1**
PSA00				IAmb	IAmb	16 36 18.3	
	comp=Z,20nm,1.4s						
MBWA	**Marble Bar**	**57.77**	**256**	P	**P**	**16 36 02.0**	**-0.1**
MBWA				IAmb	IAmb	16 36 36.2	
	comp=Z,23nm,1.4s						
MORW	**Morawa**	**60.19**	**246**	P	**P**	**16 36 18.4**	**+0.2**
MORW				IAmb	IAmb	16 37 01.2	
	comp=Z,22nm,1.3s						
VNDA	**Vanda** comp=Z,0.4nm,0.6s,baz=4.7,slow=6.4,SNR=2.1 comp=Z,0.4nm,0.6s	**60.38**	**185**	P	**P**	**16 36 19.7**	**+1.2**
VNDA	**Vanda**	**60.38**	**185**	P	**P**	**16 36 20.0**	**+1.5**
GIRL	**Giralia**	**62.59**	**253**	P	**P**	**16 36 35.2**	**+1.3**
CASY	**Casey**	**65.97**	**205**	P	**P**	**16 36 55.2**	**+0.7**
CASY				IAmb	IAmb	16 37 00.4	
	comp=Z,6.9nm,1.1s						
MAJO	**Matsushiro**	**67.76**	**324**	P	**P**	**16 37 05.2**	**-0.7**
MAJO				IAmb	IAmb	16 37 42.5	
	comp=Z,17nm,1.4s						
UGM	**Wanagama**	**69.34**	**268**	P	**P**	**16 37 15.9**	**-0.1**
QSPA	**South Pole Qui**	**72.10**	**180**	P	**P**	**16 37 32.0**	**+0.6**
PEA0B	**Petropavlovsk-**	**73.64**	**345**	P	**P**	**16 37 39.9**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,2.5nm,0.6s,baz=136,slow=8.6,SNR=14 comp=Z,2.5nm,0.6s	**73.64**	**345**	P	**P**	**16 37 39.3**	**-0.8**
PETK	**Petropavlovsk-**	**73.64**	**345**	P	**P**	**16 37 39.8**	**-0.3**
KMRM	**Mail Ridge**	**77.24**	**40**	P	**P**	**16 38 00.8**	**+0.4**
KMRM				IAmb	IAmb	16 38 01.7	
	comp=Z,11nm,0.9s						
ISA	**Isabella, Lake**	**78.06**	**46**	P	**P**	**16 38 04.7**	**-0.3**
YBH	**Yreka Blue Hor**	**78.75**	**39**	P	**P**	**16 38 08.7**	**+0.2**
WAKR	**Walker**	**78.96**	**43**	P	**P**	**16 38 10.1**	**+0.2**
BEKR	**Beckworth**	**79.12**	**42**	P	**P**	**16 38 10.5**	**-0.1**
PNTR	**Pine Nut**	**79.17**	**43**	P	**P**	**16 38 10.3**	**-0.7**
PNTR				IAmb	IAmb	16 38 11.9	
	comp=Z,6.1nm,0.8s						
DSP	**Deep Springs**	**79.32**	**45**	P	**P**	**16 38 11.5**	**0.0**
LHV	**Little Huntoon**	**79.43**	**44**	P	**P**	**16 38 12.3**	**+0.2**
LCH	**Last Change Ra**	**79.46**	**45**	P	**P**	**16 38 12.1**	**-0.4**
NVAR	**Mina Array Bea** comp=Z,2.0nm,0.7s,baz=224,slow=8.5,SNR=13 comp=Z,2.0nm,0.7s	**79.66**	**44**	P	**P**	**16 38 13.7**	**+0.1**
O18K	**Koktuh Hills**	**79.86**	**12**	P	**P**	**16 38 12.9**	**-0.9**
O18K				IAmb	IAmb	16 38 42.4	
	comp=Z,16nm,0.8s						
KVN	**Kaiserville**	**80.13**	**44**	P	**P**	**16 38 15.3**	**-0.6**
MOD	**Modoc Plateau**	**80.31**	**40**	P	**P**	**16 38 16.5**	**-0.3**
MOD				IAmb	IAmb	16 38 17.5	
	comp=Z,3.7nm,0.7s						
CNPM	**China Poot**	**80.39**	**14**	P	**P**	**16 38 16.1**	**-0.5**
K05A	**Summer Lake**	**80.42**	**39**	P	**P**	**16 38 17.6**	**+0.2**
BRLK	**Bradley Lake**	**80.69**	**14**	P	**P**	**16 38 17.4**	**-0.8**
H04A	**Detroit Lake**	**80.81**	**37**	P	**P**	**16 38 18.4**	**-0.7**
H04A				IAmb	IAmb	16 38 53.0	
	comp=Z,6.7nm,1.3s						
PINE	**Pine Mountain**	**81.01**	**38**	P	**P**	**16 38 20.4**	**0.0**
PINE				IAmb	IAmb	16 38 43.8	
	comp=Z,7.3nm,1.5s						
PRN	**Pahroc Range**	**81.32**	**46**	P	**P**	**16 38 22.1**	**+0.1**
BMN	**Battle Mountai**	**81.44**	**43**	P	**P**	**16 38 22.1**	**-0.5**
M19K	**Big River Lodg**	**81.91**	**11**	P	**P**	**16 38 23.0**	**-1.3**
M19K				IAmb	IAmb	16 38 50.4	
	comp=Z,16nm,1.4s						
I07A	**Izee**	**82.03**	**39**	P	**P**	**16 38 25.4**	**-0.1**
I07A				IAmb	IAmb	16 38 26.4	
	comp=Z,4.3nm,0.9s						
L19K	**White Mountain**	**82.08**	**11**	P	**P**	**16 38 25.1**	**0.0**
BELA	**Belgrano 2**	**82.16**	**173**	P	**P**	**16 38 25.4**	**-0.1**
SUA	**Susitna One**	**82.24**	**13**	P	**P**	**16 38 25.1**	**-1.0**
SUA				IAmb	IAmb	16 38 26.4	
	comp=Z,5.6nm,0.7s						
KNB	**Kanab**	**82.68**	**47**	P	**P**	**16 38 29.0**	**0.0**
ELK	**Elko**	**82.89**	**43**	P	**P**	**16 38 29.3**	**-0.8**
G08A	**Pilot Rock**	**83.03**	**38**	P	**P**	**16 38 30.2**	**-0.3**
G08A				IAmb	IAmb	16 38 31.2	
	comp=Z,8.4nm,1.4s						
K20K	**Telida**	**83.30**	**11**	P	**P**	**16 38 30.7**	**-0.6**
K20K				IAmb	IAmb	16 38 31.5	
	comp=Z,6.9nm,0.9s						
WAX	**Waxell Ridge**	**83.32**	**17**	P	**P**	**16 38 30.8**	**-0.7**
WAX				IAmb	IAmb	16 38 31.9	
	comp=Z,10nm,1.2s						
SCM	**Sheep Creek Mo**	**83.34**	**14**	P	**P**	**16 38 30.4**	**-1.2**
CAST	**Castle Rocks**	**83.73**	**12**	P	**P**	**16 38 31.6**	**-1.8**
CAST				IAmb	IAmb	16 38 32.5	
	comp=Z,6.0nm,0.7s						
N25K	**Chitina, Valde**	**83.82**	**16**	P	**P**	**16 38 33.5**	**-0.5**
N25K				IAmb	IAmb	16 38 33.7	
	comp=Z,6.2nm,0.6s						
GLB	**Gilahina Butte**	**83.89**	**16**	P	**P**	**16 38 33.5**	**-0.8**
GLB				IAmb	IAmb	16 38 34.1	
	comp=Z,4.6nm,0.6s						
J20K	**Nowinta River**	**84.04**	**11**	P	**P**	**16 38 34.5**	**-0.4**
J20K				IAmb	IAmb	16 38 34.9	
	comp=Z,5.6nm,1.0s						
TRF	**Thorofare Moun**	**84.11**	**12**	P	**P**	**16 38 33.9**	**-1.6**
TRF				IAmb	IAmb	16 38 35.5	
	comp=Z,9.2nm,0.8s						
BARN	**Barnard Glacie**	**84.16**	**17**	P	**P**	**16 38 35.1**	**-0.7**
BARN				IAmb	IAmb	16 38 36.0	
	comp=Z,4.3nm,0.8s						
CTGM	**Chitina Glacie**	**84.17**	**17**	P	**P**	**16 38 35.0**	**-0.8**
CTGM				IAmb	IAmb	16 38 35.9	
	comp=Z,4.1nm,0.8s						
P29M	**Windy Craggy**	**84.19**	**20**	P	**P**	**16 38 35.8**	**0.0**
P29M				IAmb	IAmb	16 38 36.5	
	comp=Z,3.8nm,0.7s						
RND	**Reindeer**	**84.38**	**13**	P	**P**	**16 38 36.2**	**-0.5**
RND				IAmb	IAmb	16 38 36.5	
	comp=Z,7.4nm,0.8s						
MCK	**McKinley**	**84.65**	**13**	P	**P**	**16 38 37.2**	**-0.7**
MCK				IAmb	IAmb	16 38 49.0	
	comp=Z,5.5nm,1.1s						
M27K	**Edge Creek, AK**	**85.16**	**16**	P	**P**	**16 38 40.4**	**-0.2**
M27K				IAmb	IAmb	16 38 40.6	
	comp=Z,5.1nm,0.9s						
LENM	**Lemitar**	**85.64**	**52**	P	**P**	**16 38 42.4**	**-1.2**
CCB	**Clear Creek Bu**	**85.69**	**13**	P	**P**	**16 38 41.0**	**-1.9**
CCB				IAmb	IAmb	16 38 41.7	
	comp=Z,7.1nm,1.3s						
IMAR	**Indian Mountai**	**85.77**	**10**	P	**P**	**16 38 42.3**	**-0.9**
IL31		**86.00**	**13**	P	**P**	**16 38 42.9**	**-1.4**
IL31				IAmb	IAmb	16 39 27.1	
	comp=Z,4.3nm,1.4s						
ILAR	**Eielson Array** comp=Z,1.2nm,0.4s,baz=222,slow=5.3,SNR=19 comp=Z,1.2nm,0.4s	**86.00**	**13**	P	**P**	**16 38 42.9**	**-1.4**
ILAR	**Eielson Array**	**86.00**	**13**	P	**P**	**16 38 43.0**	**-1.4**
J25K	**Salcha River,**	**86.19**	**14**	P	**P**	**16 38 44.5**	**-0.9**
J25K				IAmb	IAmb	16 38 45.0	
	comp=Z,3.1nm,0.5s						
TXAR	**Lajitas Array** comp=Z,2.0nm,0.8s,baz=217,slow=6.2,SNR=23 comp=Z,2.0nm,0.8s	**86.27**	**58**	P	**P**	**16 38 47.5**	**+0.9**
J26L	**Joseph Creek**	**86.52**	**14**	P	**P**	**16 38 46.9**	**0.0**
J26L				IAmb	IAmb	16 38 47.1	
	comp=Z,2.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**87.09**	**315**	*e*P	**P**	**16 38 52.9**	**+2.7**
EGAK	**Eagle**	**87.33**	**15**	P	**P**	**16 38 50.4**	**-0.2**
EGAK				IAmb	IAmb	16 38 50.7	
	comp=Z,2.3nm,0.8s						
PDAR	**Pinedale Array** comp=Z,1.2nm,0.6s,baz=222,slow=3.4,SNR=11 comp=Z,1.2nm,0.6s	**87.59**	**44**	P	**P**	**16 38 52.4**	**-0.3**
BMAR	**Burnt Mountain**	**88.76**	**13**	P	**P**	**16 38 57.2**	**-0.1**
PZH	**PanZhiHua**	**88.91**	**298**	P	**P**	**16 38 59.4**	**+0.3**
INK	**Inuvik** comp=Z,1.2nm,0.8s,baz=246,slow=5.4,SNR=4.3 comp=Z,1.2nm,0.8s	**92.00**	**15**	P	**P**	**16 39 10.9**	**-1.2**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=101,slow=2.9,SNR=4.5	**108.95**	**314**	PKiKP	**PKiKP**	**16 44 28.0**	**-1.4**
BVAR	**Borovoye Array** comp=Z,0.3nm,0.4s,baz=94,slow=2.3,SNR=4.7	**116.69**	**321**	PKP	**PKPdf**	**16 44 43.3**	**-0.6**
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.9s,baz=48,slow=2.7,SNR=4.0	**126.30**	**350**	PKP	**PKPdf**	**16 45 01.7**	**-0.2**
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,baz=44,slow=3.9,SNR=1.8	**140.46**	**332**	PKhKP	PKPpre	16 45 21.8	
AK

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.10**	**284**	P	P	16 31 23.1	+2.4
	26nm,0.5s,baz=126,slow=13,SNR=27						
MSVF	**Nonsavu**	**4.10**	**284**	P	P	16 31 22.9	+2.3
AFI	**Afiamalu**	**7.51**	**51**	P	P	16 31 49.5	+0.3
BKZ	**Black Stump Fm**	**20.94**	**193**	P	**P**	**16 33 56.0**	**-0.4**
BKZ				IAmb	IAmb	16 34 27.3	
	comp=Z,25nm,1.5s						
QRZ	**Quartz Range**	**23.52**	**199**	P	**P**	**16 34 19.9**	**+0.6**
NNZ	**Nelson**	**23.63**	**197**	P	**P**	**16 34 19.9**	**-0.4**
THZ	**Tophouse**	**24.27**	**197**	P	**P**	**16 34 26.4**	**+0.4**
LTZ	**Lake Taylor**	**25.39**	**197**	P	**P**	**16 34 35.4**	**-0.4**
LTZ				IAmb	IAmb	16 34 59.0	
	comp=Z,17nm,1.1s						
COEN	**Coen**	**37.72**	**271**	P	P	16 36 21.9	+1.2
COEN				IAmb	IAmb	16 36 40.7	
	comp=Z,22nm,1.3s						
STKA	**Stephens Creek**	**38.76**	**242**	P	P	16 36 30.2	+1.3
	comp=Z,1.1nm,0.3s,baz=81,slow=9.2,SNR=4.7						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**38.76**	**242**	P	P	16 36 29.9	+1.0
BBOO	**Buckleboo**	**43.53**	**242**	P	**P**	**16 37 06.9**	**+0.3**
WB0	**Warramunga Arr**	**45.05**	**261**	P	**P**	**16 37 18.1**	**-0.3**
WB0				IAmb	IAmb	16 37 47.0	
	comp=Z,9.8nm,1.4s						
WB2	**Warramunga Arr**	**45.07**	**260**	P	**P**	**16 37 18.6**	**+0.1**
WB2				IAmb	IAmb	16 37 48.5	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**45.08**	**260**	P	P	16 37 18.9	+0.3
	comp=Z,1.4nm,0.4s,baz=98,slow=7.4,SNR=9.9						
	comp=Z,1.4nm,0.4s						
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**16 37 18.5**	**-0.1**
AS31	**Alice Springs**	**45.15**	**255**	P	**P**	**16 37 19.1**	**0.0**
ASAR	**Alice Springs**	**45.15**	**255**	P	P	16 37 19.6	+0.5
	comp=Z,3.4nm,0.7s,baz=94,slow=7.3,SNR=10						
ASAR				PcP	**PcP**	**16 38 47.1**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=100,slow=3.9,SNR=3.3						
ASAR				ScP	**ScP**	**16 41 42.3**	**-0.4**
	comp=Z,0.6nm,1.1s,baz=101,slow=4.8,SNR=1.8						
	comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**45.15**	**255**	P	P	16 37 19.5	+0.3
MTN	**Manton Dam**	**49.38**	**269**	P	**P**	**16 37 50.7**	**-0.1**
MTN				IAmb	IAmb	16 38 34.2	
	comp=Z,19nm,1.5s						
FORT	**Forrest**	**50.20**	**245**	P	**P**	**16 37 56.6**	**+0.1**
FORT				IAmb	IAmb	16 38 33.4	
	comp=Z,19nm,1.1s						
KNRA	**Kununurra**	**51.01**	**265**	P	**P**	**16 38 02.1**	**-0.5**
KNRA				IAmb	IAmb	16 38 03.6	
	comp=Z,6.6nm,0.8s						
PSA00	**Pilbara Seismi**	**58.29**	**256**	P	**P**	**16 38 53.2**	**-0.1**
PSA00				IAmb	IAmb	16 39 12.2	
	comp=Z,22nm,1.4s						
EMB	**Emerald Bay**	**78.77**	**42**	P	P	16 40 58.9	+2.6
EMB				IAmb	IAmb	16 40 59.8	
	comp=Z,4.7nm,0.6s						
ELK	**Elko**	**82.86**	**43**	P	P	16 41 19.2	+1.9
BCAR	**Beaver Creek A**	**86.30**	**16**	P	P	16 41 33.9	+0.6

*ISK **10** 16:33:46.4, 34°.99N×33°.20E, h8km, ML2.3/14*
*NIC **10** 16:33:46.9±0.0, 34°.92N×33°.23E, h1km±1.31km, Ml3.0/5*
*GII **10** 16:33:50.1±0.0, 34°.93N×33°.35E, h25km, Mm2.6/3*
ISC 10 16:33:47.0±0.9,**34°.95N**±0°.03×**33°.23E**±0°.03,**h11**km±6km,
n31,σ0°.**62**/40,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Mathiatis**	**0.08**	**82**	PG	**Pg**	**16 33 49.2**	**-0.3**
CSS	**Mathiatis**	**0.08**	**82**	P	**Pg**	**16 33 49.3**	**-0.2**
CSS				S	**Sg**	**16 33 50.7**	**-0.7**
CSS				AML	AML	16 33 50.8	
	54nm,0.1s						
CSS				AML	AML	16 33 50.8	
	54nm,0.1s						
CSS				AML	AML	16 33 50.8	
	28nm,0.1s						
CSS				AML	AML	16 33 50.8	
	28nm,0.1s						
ASGA	**Asgata**	**0.17**	**175**	P	**Pg**	**16 33 50.5**	**-0.2**
ASGA				S	**Sg**	**16 33 52.8**	**-0.5**
ASGA				AML	AML	16 33 53.1	
	17nm,0.1s						
ASGA				AML	AML	16 33 53.1	
	17nm,0.1s						
ASGA				AML	AML	16 33 53.1	
	26nm,0.2s						
ASGA				AML	AML	16 33 53.1	
	26nm,0.2s						
ATHAL	**Athalassa**	**0.23**	**35**	P	**Pg**	**16 33 52.5**	**+0.7**
ATHAL				S	**Sg**	**16 33 57.2**	**+2.0**
ATHAL				AML	AML	16 33 58.1	
	14nm,0.7s						
ATHAL				AML	AML	16 33 58.1	
	14nm,0.7s						
ATHAL				AML	AML	16 33 58.2	
	20nm,0.3s						
ATHAL				AML	AML	16 33 58.2	
	20nm,0.3s						
LEF	**Lefka**	**0.33**	**301**	PG	**Pg**	**16 33 53.2**	**-0.4**
LEF				SG	**Sg**	**16 33 58.3**	**+0.4**
MVOU	**Mavrovouni**	**0.34**	**79**	P	**Pg**	**16 33 52.9**	**-0.8**
MVOU				AML	AML	16 33 57.0	
	4.3nm,0.2s						
MVOU				AML	AML	16 33 58.1	
	2.8nm,0.3s						
SZAC	**Souni**	**0.35**	**236**	P	**Pg**	**16 33 54.3**	**+0.4**
SZAC				S	**Sg**	**16 33 59.0**	**+0.4**
LFK	**Lefkose**	**0.41**	**37**	PG	**Pg**	**16 33 54.7**	**-0.4**
LFK				SG	**Sg**	**16 34 00.9**	**+0.3**
ALFC	**Alefka**	**0.56**	**292**	P	**Pg**	**16 33 57.3**	**-0.6**
ALFC				AML	AML	16 34 06.4	
	1.5nm,0.1s						
ALFC				AML	AML	16 34 06.6	
	1.8nm,0.1s						
NATA	**Nata**	**0.57**	**253**	P	**Pb**	**16 33 59.1**	**+0.1**
PARAL	**Paralimni**	**0.67**	**86**	P	**Pb**	**16 34 00.9**	**+0.3**
AKMS	**Akamas**	**0.74**	**275**	P	**Pb**	**16 34 02.0**	**+0.2**
EREN	**Erenkoy**	**0.96**	**53**	PG	**Pg**	**16 34 05.5**	**0.0**
TEKE	**Tekeli-Mersin**	**1.19**	**355**	PN	**Pb**	**16 34 09.1**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.23**	**12**	PN	**Pn**	**16 34 09.7**	**-0.4**
IKL	**Isikli**	**1.34**	**16**	PN	**Pn**	**16 34 11.6**	**+0.1**
BERE	**Bereket-Mersin**	**1.39**	**360**	PN	**Pn**	**16 34 12.3**	**-0.2**
GAZI	**Gazipasa**	**1.48**	**330**	PN	**Pn**	**16 34 13.5**	**-0.1**
TEVE	**Tevekalti-Mers**	**1.49**	**7**	PN	**Pn**	**16 34 13.5**	**-0.3**
KEBE	**Keben-Mersin**	**1.54**	**15**	PN	**Pn**	**16 34 14.5**	**0.0**
KIZK	**Mersin**	**1.70**	**26**	PN	**Pn**	**16 34 16.8**	**+0.3**
HDMB	**Hadim**	**2.10**	**343**	PN	**Pn**	**16 34 22.6**	**+0.4**
KRMN	**Karaman**	**2.22**	**1**	PN	**Pn**	**16 34 24.1**	**+0.3**
MMA0B	**Mount Meron ar**	**2.64**	**136**	Pn	**Pn**	**16 34 29.9**	**+0.3**
MMA0B				Sn	**Sn**	**16 35 01.1**	**-0.5**
GEM	**Giv'at Ha'Em**	**2.66**	**130**	Pn	**Pn**	**16 34 30.2**	**+0.4**
NATI	**Neve Ativ**	**2.67**	**128**	Pn	**Pn**	**16 34 30.9**	**+1.0**
NATI				Sn	**Sn**	**16 35 01.1**	**-1.2**
SEYD	**Seydisehir-KON**	**2.70**	**336**	PN	**Pn**	**16 34 30.8**	**+0.4**
CMRD	**Camardi-Nigde**	**3.06**	**27**	PN	**Pn**	**16 34 36.2**	**+0.9**
HMDT	**Nahal Hemdat**	**3.30**	**144**	Pn	**Pn**	**16 34 39.3**	**+0.7**
HMDT				Sn	**Sn**	**16 35 17.1**	**-0.7**
SALP	**Salfit**	**3.31**	**150**	Pn	**Pn**	**16 34 39.1**	**+0.4**
DSI	**Dead Sea**	**3.82**	**151**	Pn	**Pn**	**16 34 46.4**	**+0.7**

*NOU **10** 16:36:42.8, 38°.51S×175°.83E, h246km, MLv3.2/10, North Island, New Zealand*
WEL 10 16:36:50.8,**39°.S**±7°×**17°.6E**±°,**h162**km±13km,**M2.8**/49,
ML2.3/7,**MLv2.8**/49,**Error ellipse: s-maj=0.0km**
s-min=0.0km az=100.9,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATZ	**Rangitukua**	**0.24**	**178**	P	Pn	16 37 13.1	+0.5
WPRZ	**Whakapapatarin**	**0.33**	**71**	P	Pn	16 37 13.2	+0.3
TLZ	**Tolley Road**	**0.34**	**329**	P	Pn	16 37 13.2	+0.3
KATZ	**Kakaramea**	**0.35**	**188**	P	Pn	16 37 13.6	+0.5
NTVZ	**North Tongarir**	**0.47**	**188**	P	Pn	16 37 14.3	+0.7
KRVZ	**Karewarewa**	**0.48**	**191**	P	Pn	16 37 14.2	+0.7
TMVZ	**Te Maari**	**0.49**	**185**	P	Pn	16 37 14.3	+0.7
WTVZ	**West Tongariro**	**0.51**	**195**	P	Pn	16 37 14.4	+0.7
ETVZ	**East Tongariro**	**0.51**	**184**	P	Pn	16 37 14.5	+0.8
TWVZ	**Taurewa**	**0.51**	**210**	P	Pn	16 37 14.2	+0.5
NNVZ	**North Ngauruho**	**0.52**	**193**	P	Pn	16 37 14.5	+0.7
MRHZ	**Matea Rd**	**0.55**	**112**	P	Pn	16 37 13.9	+0.1
NGZ	**Ngauruhoe**	**0.56**	**193**	P	Pn	16 37 14.6	+0.6
SNVZ	**South Ngauruho**	**0.57**	**190**	P	Pn	16 37 14.6	+0.6
TUVZ	**Tukino**	**0.65**	**187**	P	Pn	16 37 15.2	+0.8
FWVZ	**Far West T-bar**	**0.65**	**194**	P	Pn	16 37 15.1	+0.5
WHVZ	**Whangaehu Hut**	**0.67**	**192**	P	Pn	16 37 15.4	+0.7
TRVZ	**Turoa**	**0.69**	**194**	P	Pn	16 37 15.6	+0.8
WNVZ	**Wahianoa**	**0.71**	**190**	P	Pn	16 37 15.5	+0.7
PKVZ	**Pokaka**	**0.74**	**206**	P	Pn	16 37 14.4	-0.5
MOVZ	**Moawhango**	**0.78**	**180**	P	Pn	16 37 15.5	+0.4
BKZ	**Black Stump Fm**	**0.78**	**134**	P	Pn	16 37 15.5	+0.4
BKZ	**Black Stump Fm**	**0.78**	**134**	P	Pn	16 37 15.5	+0.3
MTVZ	**Mangateitei**	**0.79**	**197**	P	Pn	16 37 16.0	+0.8
MUGZ	**Murupara**	**0.81**	**80**	P	Pn	16 37 14.8	-0.5
MTHZ	**Maungataniwha**	**0.87**	**105**	P	Pn	16 37 16.0	+0.2
TOZ	**Tahuroa Road**	**0.92**	**347**	P	Pn	16 37 15.6	-0.5
VRZ	**Vera Road**	**0.93**	**237**	P	Pn	16 37 16.6	+0.5
NMHZ	**Naumai**	**0.94**	**120**	P	Pn	16 37 17.4	+1.1
KWHZ	**Kaweka Forest**	**0.95**	**147**	P	Pn	16 37 17.1	+0.8
RTZ	**Ruatahuna**	**0.95**	**90**	P	Pn	16 37 16.2	-0.3
RAHZ	**Arahi**	**1.07**	**106**	P	Pn	16 37 17.8	+0.4
MCHZ	**McNeill Hill**	**1.09**	**139**	P	Pn	16 37 18.6	+1.2
KRHZ	**Kereru**	**1.12**	**155**	P	Pn	16 37 18.3	+0.6
URZ	**Urewera**	**1.12**	**71**	P	Pn	16 37 16.6	-1.1
URZ	**Urewera**	**1.12**	**71**	P	Pn	16 37 16.6	-1.1
ARHZ	**Aropaoanui**	**1.15**	**124**	P	Pn	16 37 18.7	+0.7
WHHZ	**Waihua**	**1.23**	**112**	P	Pn	16 37 19.1	+0.4
SNGZ	**Shannon Statio**	**1.25**	**98**	P	Pn	16 37 18.9	0.0
WAZ	**Wanganui**	**1.28**	**208**	P	Pn	16 37 19.3	+0.3
PNHZ	**Pukenui**	**1.33**	**165**	P	Pn	16 37 19.9	+0.2
LREZ	**Lake Rotokare**	**1.35**	**231**	P	Pn	16 37 20.3	+0.6
MWZ	**Matawai**	**1.42**	**79**	P	Pn	16 37 19.5	-1.0
PREZ	**Palmer Road**	**1.44**	**240**	P	Pn	16 37 20.9	+0.2
TSZ	**Takapari Road**	**1.44**	**174**	P	Pn	16 37 20.8	+0.1
NEZ	**North Egmont**	**1.45**	**243**	P	Pn	16 37 21.0	+0.1
CKHZ	**Cape Kidnapper**	**1.45**	**136**	P	Pn	16 37 21.4	+0.7
KAHZ	**Kahuranaki**	**1.45**	**144**	P	Pn	16 37 21.5	+0.7
PKE	**Pukeiti**	**1.50**	**247**	P	Pn	16 37 21.2	0.0
KHEZ	**Kahui Hut**	**1.52**	**243**	P	Pn	16 37 21.5	0.0
KHEZ	**Kahui Hut**	**1.52**	**243**	P	Pn	16 37 21.8	+0.3
WPHZ	**Waipukurau**	**1.53**	**160**	P	Pn	16 37 21.7	+0.2
KNZ	**Kokohu**	**1.54**	**105**	P	Pn	16 37 21.4	-0.2
RIGZ	**Rimuhau**	**1.57**	**93**	P	Pn	16 37 21.6	-0.4
MKAZ	**Moumakai**	**1.59**	**342**	P	Pn	16 37 20.9	-1.4
PXZ	**Pawanui**	**1.64**	**149**	P	Pn	16 37 22.7	0.0
RUGZ	**Raukumara Rang**	**1.65**	**67**	P	Pn	16 37 20.7	-2.2
TKGZ	**Te Karaka**	**1.65**	**84**	P	Pn	16 37 22.5	-0.2
DVHZ	**Dannevirke**	**1.70**	**169**	P	Pn	16 37 22.9	-0.4
MHGZ	**Mahia Peninsul**	**1.75**	**108**	P	Pn	16 37 23.7	-0.2
PRHZ	**Porangahau**	**1.77**	**158**	P	Pn	16 37 24.0	-0.1
AWAZ	**Awhitu Peninsu**	**1.79**	**338**	P	Pn	16 37 23.0	-1.4
ETAZ	**East Tamaki Re**	**1.80**	**338**	P	Pn	16 37 22.8	-1.6
TWGZ	**Tauwhareparae**	**1.80**	**76**	P	Pn	16 37 23.8	-0.7
HAZ	**Te Kaha**	**1.81**	**62**	P	Pn	16 37 22.3	-2.3
KUZ	**Kuaotunu**	**1.88**	**359**	P	Pn	16 37 23.0	-2.3
KUZ	**Kuaotunu**	**1.88**	**359**	P	Pn	16 37 23.6	-1.7
WIAZ	**Waiheke Island**	**1.90**	**345**	P	Pn	16 37 23.8	-1.7
ANWZ	**Angora Road**	**1.91**	**163**	P	Pn	16 37 25.4	-0.2
CNGZ	**Carnagh Statio**	**1.92**	**86**	P	Pn	16 37 25.4	-0.4
PRWZ	**Pori Road**	**1.93**	**175**	P	Pn	16 37 25.4	-0.4
PKGZ	**Pakihiroa**	**1.97**	**69**	P	Pn	16 37 23.2	-3.1
MBAZ	**Motutapu North**	**1.98**	**339**	P	Pn	16 37 24.7	-1.7
MRZ	**Mangatainoka R**	**2.04**	**184**	P	Pn	16 37 26.1	-0.9
PUZ	**Puketiti**	**2.04**	**75**	P	Pn	16 37 25.4	-1.7
BFZ	**Birch Farm**	**2.09**	**170**	P	Pn	16 37 26.7	-0.9
BFZ	**Birch Farm**	**2.09**	**170**	P	Pn	16 37 26.7	-0.9
OGWZ	**Otaki Gorge**	**2.23**	**192**	P	Pn	16 37 28.4	-0.9
WMGZ	**Waiomatatini S**	**2.24**	**70**	P	Pn	16 37 27.5	-1.9
MXZ	**Matakaoa Point**	**2.27**	**63**	P	Pn	16 37 27.9	-1.9
MXZ	**Matakaoa Point**	**2.27**	**63**	P	Pn	16 37 27.8	-2.0
HOWZ	**Holdsworth Sta**	**2.27**	**185**	P	Pn	16 37 28.4	-1.4
KIW	**Kapiti Island**	**2.33**	**196**	P	Pn	16 37 29.0	-1.4
TMWZ	**Te Maipa**	**2.48**	**178**	P	Pn	16 37 30.7	-1.5
MTW	**Mount Morrison**	**2.54**	**184**	P	Pn	16 37 31.1	-1.8
DUWZ	**D'Urville Isla**	**2.59**	**213**	P	Pn	16 37 31.7	-1.9
WEL	**Wellington**	**2.76**	**196**	P	Pn	16 37 33.8	-1.8
TRWZ	**Traveller**	**2.77**	**181**	P	Pn	16 37 33.8	-1.9
SNZO	**South Karori**	**2.80**	**197**	P	Pn	16 37 34.2	-1.9
MSWZ	**Moikau Station**	**2.81**	**188**	P	Pn	16 37 34.1	-2.2
TCW	**Tory Channel**	**2.82**	**203**	P	Pn	16 37 34.5	-1.8
PLWZ	**Palliser**	**2.96**	**187**	P	Pn	16 37 35.7	-2.5
TUWZ	**Tuamarina**	**3.13**	**206**	P	Pn	16 37 38.0	-2.1
NNZ	**Nelson**	**3.17**	**215**	P	Pn	16 37 38.2	-2.5
TKNZ	**Takaka Hill**	**3.23**	**221**	P	Pn	16 37 38.1	-3.3
QRZ	**Quartz Range**	**3.32**	**228**	P	Pn	16 37 39.0	-3.6
QRZ	**Quartz Range**	**3.32**	**228**	P	Pn	16 37 40.3	-2.3
BSWZ	**Blackbirch Sta**	**3.41**	**204**	P	Pn	16 37 41.3	-2.4
MRNZ	**Matariki Terra**	**3.60**	**219**	P	Pn	16 37 42.9	-3.2
THZ	**Tophouse**	**3.82**	**214**	P	Pn	16 37 46.1	-2.9
KHZ	**Kahutara**	**4.15**	**203**	P	Pn	16 37 50.4	-2.7
KHZ	**Kahutara**	**4.15**	**203**	P	Pn	16 37 50.5	-2.6
GVZ	**Greta Valley S**	**4.80**	**205**	P	Pn	16 37 58.4	-3.4
MQZ	**McQueen's Vall**	**5.59**	**204**	P	Pn	16 38 07.3	-4.8
TMZ	**Timaru**	**6.77**	**210**	P	Pn	16 38 23.1	-4.6
ODZ	**Otahua Downs**	**7.46**	**209**	P	Pn	16 38 32.6	-4.2

*CNRM **10** 17:13:52.8, 36°.51N×7°.33W, h21km, ml3.0*
*SFS **10** 17:13:53.0, 36°.61N×7°.24W, ML3.2, GOLFO DE CADIZ*
*LDG **10** 17:13:53.7±0.4, 36°.84N×7°.01W, h15km, Ml2.7/2, Error ellipse: s-maj=8.5km s-min=3.9km az=18.0*
*MDD **10** 17:13:53.1±0.5, 36°.61N×7°.24W, h13km±3km, mb_Lg3.2/30, Error ellipse: s-maj=3.3km s-min=1.9km az=27.0*
*INMG **10** 17:13:54.1±1.4, 36°.55N×7°.22W, h20km±2km, ML3.0, Error ellipse: s-maj=2.0km s-min=1.7km az=14.0*
ISC 10 17:13:51.1±1.1,**36°.61N**±0°.03×**7°.16W**±0°.02,**h18**km±7km,
n94,σ1°**57**/170,**1C-10D**,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNO	**Arenosillo**	**0.60**	**35**	P	**Pn**	**17 14 06.6**	**+1.8**
ARNO				S	**Sn**	**17 14 15.5**	**+1.4**
PTAV	**Tavira**	**0.65**	**323**	*e*Pg	**Pn**	**17 14 06.4**	**+0.9**
PTAV				*e*Sg	**Sb**	**17 14 15.3**	**+2.5**
PTAV				A	A	17 14 16.4	
	373nm,0.9s						
PFARO	**Faro**	**0.74**	**305**	*e*Sg	**Sb**	**17 14 17.7**	**+2.4**
PFARO				A	A	17 14 19.7	
	731nm,0.6s						
PBDV	**Barranco-do-Ve**	**0.89**	**316**	*e*P	**Pg**	**17 14 07.3**	**-1.1**
PBDV				*e*S	**Sg**	**17 14 19.2**	**-0.9**
PBDV				A	A	17 14 23.3	
	189nm,0.2s						
PVAQ	**Vaqueiros**	**0.91**	**331**	‖*i*P	**Pn**	**17 14 10.2**	**+1.1**
PVAQ				*e*S	**Sb**	**17 14 22.2**	**+1.9**
PVAQ				A	A	17 14 26.7	
	286nm,0.2s						
PVAQ	**Vaqueiros**	**0.91**	**331**	P	**Pn**	**17 14 10.1**	**+1.0**
PVAQ				S	**Sb**	**17 14 22.5**	**+2.2**
EGRO	**El Granado**	**0.96**	**345**	P	**Pn**	**17 14 11.1**	**+1.3**
EGRO				S	**Sg**	**17 14 22.4**	**-0.1**
PALBU	**Albufeira**	**1.00**	**300**	*e*P	**Pn**	**17 14 11.1**	**+0.8**
PALBU				*e*S	**Sb**	**17 14 24.6**	**+1.8**
PALBU				A	A	17 14 26.1	
	543nm,0.4s						
ESPR	**Espera**	**1.08**	**76**	P	**Pn**	**17 14 13.6**	**+2.2**
ESPR				S	**Sn**	**17 14 27.0**	**+1.0**
ESPR				*i* Vmb_Lg		17 14 29.2	
EMIN	**Mina Concepcio**	**1.22**	**18**	P	**Pg**	**17 14 15.5**	**+0.7**
EMIN				S	**Sg**	**17 14 30.4**	**-0.4**
EMIN				*i* Vmb_Lg		17 14 34.4	
PCVE	**Castro Verde**	**1.24**	**326**	‖*e*P	**Pb**	**17 14 14.8**	**+0.7**
PCVE				*e*S	**Sb**	**17 14 30.9**	**+1.1**
PCVE				A	A	17 14 34.8	
	146nm,0.2s						
PLAGO	**Lagos**	**1.32**	**292**	*e*S	**Sb**	**17 14 32.1**	**+0.2**
PLAGO				A	A	17 14 41.4	
	430nm,0.8s						
EJIF	**Jimena Fronter**	**1.37**	**96**	P	**Pg**	**17 14 18.4**	**+0.8**
MORF	**Marmelete**	**1.38**	**301**	*e*P	**Pn**	**17 14 16.0**	**+0.4**
MORF				*e*S	**Sb**	**17 14 32.3**	**-1.6**
MORF				IAML		17 14 41.9	
	comp=N,437nm,0.4s						
MORF	**Marmelete**	**1.38**	**301**	‖*e*Pn	**Pn**	**17 14 16.1**	**+0.4**
MORF				*e*Sn	**Sb**	**17 14 33.3**	**-0.6**
MORF				*e*Sg	**Sg**	**17 14 36.8**	**+0.9**
MORF				A	A	17 14 38.2	
	comp=N,204nm,0.1s						
PFVI	**Vila Bisbo**	**1.44**	**292**	*e*Pn	**Pn**	**17 14 16.9**	**+0.6**
PFVI				*e*Sn	**Sn**	**17 14 34.0**	**-0.8**
PFVI				*e*Sg	**Sg**	**17 14 38.1**	**+0.6**
PFVI				A	A	17 14 41.0	
	comp=N,174nm,0.3s						
PFVI	**Vila Bisbo**	**1.44**	**292**	P	**Pg**	**17 14 19.0**	**+0.2**
PFVI				S	**Sn**	**17 14 33.9**	**-0.8**
PALJ	**Aljezur**	**1.49**	**299**	*e*Sn	**Sn**	**17 14 35.8**	**-0.3**
PALJ				A	A	17 14 47.4	
	comp=N,469nm,0.5s						
MESJ	**Messejana**	**1.49**	**326**	*e*P	**Pn**	**17 14 18.3**	**+1.2**
MESJ				*e*S	**Sn**	**17 14 35.6**	**-0.6**
MESJ				IAML		17 14 42.4	
	comp=E,223nm,0.3s						
MESJ	**Messejana**	**1.49**	**326**	‖*e*Pn	**Pn**	**17 14 18.3**	**+1.2**
MESJ				Sg	**Sg**	**17 14 40.5**	**+1.1**
MESJ				A	A	17 14 43.7	
	comp=E,153nm,0.2s						
PBEJ	**Beja**	**1.53**	**339**	*e*Pn	**Pn**	**17 14 18.8**	**+1.2**
PBEJ				*e*Sn	**Sn**	**17 14 38.6**	**+1.6**
PBEJ				A	A	17 14 43.6	
	comp=E,114nm,0.2s						
PSVI	**Cabo S. Vicent**	**1.53**	**286**	*e*Sn	**Sn**	**17 14 36.2**	**-0.8**
PTEO	**Sao Teotonio**	**1.56**	**307**	‖*i*Pn	**Pn**	**17 14 19.1**	**+1.1**
PTEO				*e*Sn	**Sn**	**17 14 38.0**	**+0.1**
PTEO				*e*Sg	**Sg**	**17 14 42.7**	**+1.1**
PTEO				A	A	17 14 46.8	
	comp=E,101nm,0.2s						
PBAR	**Barrancos**	**1.57**	**4**	‖*e*Pn	**Pb**	**17 14 19.7**	**0.0**
PBAR				*e*Sg	**Sg**	**17 14 42.5**	**+0.7**
PBAR				A	A	17 14 43.2	
	comp=E,222nm,0.3s						
ECEU	**Ceuta**	**1.61**	**116**	P	**Pg**	**17 14 21.0**	**-1.1**
ECEU				*i* Vmb_Lg		17 14 50.0	
SMIR	**Smir Dam**	**1.71**	**122**	P	**Pg**	**17 14 22.9**	**-1.2**
PNCL	**Nicolau / Gran**	**1.86**	**324**	‖*e*Pn	**Pn**	**17 14 23.2**	**+1.1**
PNCL				*e*Sn	**Sn**	**17 14 45.5**	**+0.4**
PNCL				*e*Sg	**Sg**	**17 14 52.7**	**+1.7**
PNCL				A	A	17 14 55.6	
	comp=E,98nm,0.2s						
EMIJ	**Mijas**	**1.92**	**90**	P	**Pb**	**17 14 25.2**	**-0.5**
EMIJ				S	**Sb**	**17 14 49.6**	**+0.2**
EMIJ				*i* Vmb_Lg		17 15 00.6	
ECAB	**El Cabril**	**2.02**	**43**	P	**Pn**	**17 14 25.9**	**+1.5**
ECAB				S	**Sn**	**17 14 50.7**	**+1.5**
ECAB				*i* Vmb_Lg		17 14 58.2	
EVO	**Evora**	**2.04**	**341**	P	**Pn**	**17 14 25.9**	**+1.4**
EVO				S	**Sb**	**17 14 52.8**	**+0.1**
EVO	**Evora**	**2.04**	**341**	‖*e*Pn	**Pn**	**17 14 26.0**	**+1.4**
EVO				*e*Sn	**Sn**	**17 14 50.1**	**+0.5**
EVO				A	A	17 15 01.1	
	comp=E,115nm,0.1s						
CHEFC	**Chefchaouen**	**2.10**	**135**	P	**Pb**	**17 14 28.2**	**-0.6**
EBAD	**Badajoz**	**2.15**	**3**	P	**Pn**	**17 14 27.4**	**+1.3**
EBAD				S	**Sn**	**17 14 52.2**	**-0.2**
EMAL	**Malaga-Limoner**	**2.20**	**85**	P	**Pg**	**17 14 32.1**	**-1.3**
EMAL				S	**Sb**	**17 14 56.3**	**-1.1**
PESTR	**Estremoz**	**2.28**	**352**	*e*Pn	**Pn**	**17 14 29.2**	**+1.2**
PESTR				*e*Sg	**Sg**	**17 15 04.3**	**-0.3**
PESTR				A	A	17 15 08.5	
	comp=E,53nm,0.3s						
PESTR	**Estremoz**	**2.28**	**352**	P	**Pn**	**17 14 29.1**	**+1.2**
EGOR	**Sierra Gorda,**	**2.50**	**77**	P	**Pb**	**17 14 34.4**	**-1.2**
EGOR				S	**Sn**	**17 15 03.7**	**+2.5**
EGOR				*i* Vmb_Lg		17 15 14.3	
PACT	**Alcochete**	**2.53**	**329**	*e*Pn	**Pn**	**17 14 33.0**	**+1.6**
PACT				*e*Sg	**Sg**	**17 15 14.2**	**+1.6**
PACT				A	A	17 15 20.8	
	comp=E,93nm,0.4s						
EADA	**Adamuz**	**2.58

PCAB	**Cabril**	**5.14**	**353**	*e*Pn	**Pn**	**17 15 08.4**	**+1.1**
PCAB				*e*Sn	**Sn**	**17 16 04.0**	**-2.2**
PCAB				A	A	17 16 49.8	
	comp=E,18nm,0.7s						
PBRG	**Braganca**	**5.20**	**3**	*e*Pn	**Pn**	**17 15 09.4**	**+1.3**
PBRG				*e*Sn	**Sn**	**17 16 05.8**	**-1.9**
PBRG				A	A	17 16 40.5	
	comp=E,11nm,0.6s						
ELOB	**Lobios**	**5.30**	**353**	P	**Pn**	**17 15 10.1**	**+0.5**
ELOB				S	**Sn**	**17 16 08.6**	**-1.6**
ELOB				*i* Vmb_Lg		17 16 11.8	
EAH	**EAH**	**5.34**	**203**	P	**Pn**	**17 15 09.6**	**-0.3**
ECAL	**Calabor**	**5.34**	**3**	P	**Pn**	**17 15 10.8**	**+0.7**
ECAL				S	**Sn**	**17 16 09.6**	**-1.5**
ECAL				*i* Vmb_Lg		17 16 28.9	
OUK	**Oukaimeden**	**5.42**	**186**	P	**Pn**	**17 15 12.1**	**+0.7**
PGAV	**Gavieira, Arco**	**5.42**	**351**	*e*Pn	**Pn**	**17 15 12.3**	**+1.1**
PGAV				*e*Sn	**Sn**	**17 16 10.5**	**-2.7**
PGAV				A	A	17 16 53.2	
	comp=E,11nm,0.6s						
AFON	**Font Roja**	**5.64**	**67**	S	**Sn**	**17 16 18.7**	**+0.1**
EZAM	**Zamans**	**5.66**	**348**	P	**Pn**	**17 15 13.7**	**-0.7**
EZAM				S	**Sn**	**17 16 16.3**	**-2.7**
EZAM				*i* Vmb_Lg		17 16 31.9	
ECHE	**Chera**	**5.72**	**57**	P	**Pn**	**17 15 15.8**	**+0.5**
ECHE				S	**Sn**	**17 16 18.1**	**-2.4**
ECHE				*i* Vmb_Lg		17 16 19.6	
ETOR	**Torete**	**5.80**	**42**	P	**Pn**	**17 15 17.0**	**+0.6**
ETOR				S	**Sn**	**17 16 20.8**	**-1.7**
ETOR				*i* Vmb_Lg		17 16 23.6	
TTIG	**Tnine Tigouga,**	**6.14**	**190**	P	**Pn**	**17 15 18.6**	**-2.5**
EAGO	**Agolada(Pontev**	**6.23**	**354**	P	**Pn**	**17 15 22.8**	**+0.6**
EAGO				S	**Sn**	**17 16 29.8**	**-3.2**
EAGO				*i* Vmb_Lg		17 16 34.0	
EMOS	**Mosqueruela**	**6.45**	**52**	P	**Pn**	**17 15 26.4**	**+1.0**
EMOS				S	**Sn**	**17 16 37.4**	**-1.3**
EMOS				*i* Vmb_Lg		17 16 49.4	
EMAZ	**Mazaricos**	**6.49**	**348**	P	**Pn**	**17 15 25.8**	**+0.1**
EMAZ				*i* Vmb_Lg		17 17 00.6	
EARI	**Arriondas**	**6.85**	**12**	P	**Pn**	**17 15 31.7**	**+0.9**
EARI				S	**Sn**	**17 16 44.5**	**-3.9**
EARI				*i* Vmb_Lg		17 16 47.3	
EIBI	**Ibiza**	**7.15**	**68**	S	**Sn**	**17 16 51.0**	**-4.7**
ELAN	**Lanestosa**	**7.21**	**22**	P	**Pn**	**17 15 36.5**	**+0.8**
ELAN				S	Sn	17 16 49.3	-7.9
ELAN				*i* Vmb_Lg		17 17 28.4	
EORO	**Oroz-Betelu**	**7.73**	**34**	P	**Pn**	**17 15 44.8**	**+2.0**
EORO				*i* Vmb_Lg		17 20 08.1	
EALK	**Alkurruntz**	**7.91**	**32**	P	**Pn**	**17 15 45.2**	**0.0**
EALK				S	**Sn**	**17 17 10.2**	**-4.1**
SJPF	**Ste Jean**	**7.94**	**33**	*e*P	**Pn**	**17 15 47.7**	**+2.0**
SJPF				*e*Sn	Sn	17 17 04.0	-11
	comp=E,0.9nm,0.2s						
ETSF	**Etsaut**	**8.08**	**37**	*e*P	**Pn**	**17 15 49.6**	**+1.9**
ETSF				*e*Sn	Sn	17 17 07.7	-11
	comp=E,0.3nm,0.2s						
EPF	**Esparros**	**8.63**	**40**	*e*P	**Pn**	**17 15 57.1**	**+2.0**
EPF				*e*Sn	Sn	17 17 19.3	-13
MTLF	**Montolieu**	**9.85**	**44**	*e*Pn	**Pn**	**17 16 10.3**	**-1.5**

IDC 10 17:18:15.2±2.3, 61°.42S×153°.42E, h0km, mb4.2/3, mbtmp4.1/4, ML3.9/1, MS3.6/21, Error ellipse: s-maj=144.0km s-min=33.2km az=79.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.41**	**174**	Pn	Pn	17 22 05.2	-1.2
	0.4nm,0.3s,baz=340,slow=13,SNR=26						
VNDA				LR	LR	17 27 44.2	
	comp=Z,335nm,19.6s,baz=356,slow=35						
	1.9nm,0.5s						
RPZ	**Rata Peaks**	**20.60**	**39**	LR	LR	17 28 53.9	
	comp=Z,312nm,21.1s,baz=258,slow=31						
URZ	**Urewera**	**27.46**	**43**	LR	LR	17 35 03.4	
	comp=Z,130nm,18.1s,baz=296,slow=37						
QSPA	**South Pole Qui**	**28.67**	**180**	LR	LR	17 36 08.1	
	comp=Z,118nm,19.3s,baz=13,slow=37						
STKA	**Stephens Creek**	**30.55**	**340**	LR	LR	17 34 23.7	
	comp=Z,94nm,19.1s,baz=184,slow=32						
MAW	**Mawson**	**36.09**	**221**	LR	LR	17 39 58.5	
	comp=Z,160nm,19.8s,baz=114,slow=36						
H01W1	**Cape Leeuwin H**	**36.36**	**299**	T	T	18 04 15.7	
	baz=148,slow=76,SNR=67						
H01W2	**Cape Leeuwin H**	**36.36**	**299**	T	T	18 04 16.1	
	baz=148,slow=76,SNR=60						
H01W3	**Cape Leeuwin H**	**36.37**	**299**	T	T	18 04 17.0	
	baz=148,slow=76,SNR=46						
ASAR	**Alice Springs**	**40.05**	**332**	P	P	17 25 51.9	0.0
	2.7nm,0.9s,baz=167,slow=8.2,SNR=14						
ASAR				PcP	PcP	17 27 55.9	-0.8
	0.7nm,0.9s,baz=151,slow=2.7,SNR=3.8						
	2.7nm,0.9s						
DZM	**Mont Dzumac**	**40.35**	**19**	*e*LR	LR	17 36 44.0	
	comp=Z,216nm,25.9s						
DZM	**Mont Dzumac**	**40.35**	**19**	LR	LR	17 38 29.1	
	comp=Z,120nm,19.5s,baz=212,slow=30						
CTA	**Charters Tower**	**41.60**	**350**	P	P	17 26 04.5	-0.2
	6.5nm,1.1s,baz=178,slow=12,SNR=4.4						
CTA				LR	LR	17 40 20.8	
	comp=Z,131nm,20.8s,baz=170,slow=32						
	6.5nm,1.1s						
WRA	**Warramunga Arr**	**43.55**	**333**	P	P	17 26 19.9	-0.6
	2.6nm,1.0s,baz=167,slow=7.2,SNR=11						
	2.6nm,1.0s						
SNAA	**Sanae**	**46.17**	**190**	LR	LR	17 46 44.1	
	comp=Z,232nm,18.6s,baz=180,slow=37						
MSVF	**Nonsavu**	**47.00**	**33**	LR	LR	17 42 11.0	
	comp=Z,67nm,20.3s,baz=340,slow=31						
PMSA	**Palmer Station**	**51.05**	**160**	LR	LR	17 45 55.8	
	comp=Z,58nm,20.8s,baz=198,slow=32						
HNR	**Honiara**	**52.12**	**8**	LR	LR	17 44 16.1	
	comp=Z,2μm,21.5s,baz=180,slow=30						
PMG	**Port Moresby**	**52.12**	**352**	LR	LR	17 46 20.4	
	comp=Z,97nm,19.7s,baz=86,slow=32						
TBI	**Tubuai**	**54.17**	**72**	*e*LR	LR	17 44 12.2	
	comp=Z,82nm,27.8s						
TBI	**Tubuai**	**54.17**	**72**	*e*T	T	18 25 19.8	
	14nm,0.3s						
PPT2	**Papeete2**	**59.13**	**69**	*e*LR	LR	17 46 25.9	
	comp=Z,44nm,20.2s						
PPT	**Papeete**	**59.15**	**69**	LR	LR	17 46 42.1	
	comp=Z,49nm,20.0s,baz=172,slow=29						
RKT	**Rikitea**	**61.19**	**86**	*e*T	T	18 34 11.0	
	14nm,0.3s						
KAPI	**Kappang**	**61.65**	**321**	LR	LR	17 53 39.6	
	comp=Z,39nm,19.1s,baz=144,slow=34						
VAH	**Vaihoa**	**62.07**	**69**	*e*T	T	18 35 16.0	
	9.5nm,0.3s						
GUMO	**Guam**	**75.07**	**351**	LR	LR	18 01 32.0	
	comp=Z,18nm,18.0s,baz=177,slow=35						
H03S1	**Juan Fernandez**	**76.03**	**137**	T	T	18 54 14.1	
	baz=202						
H03S2	**Juan Fernandez**	**76.03**	**137**	T	T	18 54 12.8	
	baz=202						
H03S3	**Juan Fernandez**	**76.04**	**137**	T	T	18 54 13.6	
	baz=202						
SUR	**Sutherland**	**78.94**	**219**	LR	LR	18 01 39.9	
	comp=Z,31nm,21.9s,baz=158,slow=33						
H08S2	**Diego Garcia H**	**78.98**	**274**	T	T	18 57 52.5	
	baz=149,slow=76,SNR=16						
H08S1	**Diego Carcia H**	**78.99**	**274**	T	T	18 57 52.2	
	baz=149,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**79.00**	**274**	T	T	18 57 58.1	
	baz=149,slow=76,SNR=21						
BOSA	**Boshof**	**80.99**	**224**	LR	LR	18 05 06.3	
	comp=Z,29nm,18.4s,baz=185,slow=35						
LBTB	**Lobatse**	**84.19**	**226**	LR	LR	18 05 12.9	
	comp=Z,23nm,19.8s,baz=171,slow=34						
PALK	**Pallekele**	**88.20**	**289**	LR	LR	18 07 02.1	
	comp=Z,25nm,18.2s,baz=244,slow=33						
CMAR	**Chiang Mai Arr**	**90.61**	**309**	LR	LR	18 11 08.1	
	comp=Z,14nm,19.1s,baz=205,slow=35						
TSUM	**Tsumeb**	**92.25**	**221**	LR	LR	18 12 10.1	
	comp=Z,28nm,18.7s,baz=150,slow=35						
AKASG	**Malin Array Be**	**148.05**	**276**	PKPbc	PKPbc	17 38 02.2	+0.8
	0.2nm,0.5s,baz=129,slow=1.3,SNR=1.3						

*KRNET **10** 17:22:22.9±0.1, 41°.97N×80°.61E, mb3.5*
*SOME **10** 17:22:23.4, 42°.30N×80°.60E, h5km*
*NNC **10** 17:22:24.9±0.7, 42°.29N×80°.52E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=4.6km s-min=3.5km az=143.0*

ISC 10 17:22:25.7±1.3, 42°.36N±0°.05×80°.51E±0°.04, h10km, n57, σ2s 05/93, 18C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.09**	**354**	*e*P	**Pb**	**17 22 46.2**	**-0.6**
	32nm,0.0s						
KTMS				*e*S	**Sn**	**17 23 02.4**	**-0.1**
	88nm,0.3s						
KTMS	**Ketmen**	**1.09**	**354**	P	**Pb**	**17 22 46.2**	**-0.6**
	32nm,0.0s						
KTMS				S	**Sn**	**17 23 02.4**	**-0.1**
	88nm,0.3s						
SHLS	**Shalkode**	**1.11**	**316**	*e*P	**Pb**	**17 22 44.2**	**-2.9**
	37nm,0.2s						
SHLS				*e*S	**Sb**	**17 22 59.1**	**-2.5**
	724nm,0.3s						
SHLS	**Shalkode**	**1.11**	**316**	P	**Pb**	**17 22 44.2**	**-2.9**
	37nm,0.2s						
SHLS				S	**Sb**	**17 22 59.2**	**-2.5**
	724nm,0.3s						
PDGK	**Podgornoye**	**1.23**	**323**	⇑P	**Pb**	**17 22 48.9**	**-0.1**
	6.5nm,0.4s						
PDGK				⇑S	**Sn**	**17 23 06.9**	**+1.2**
	44nm,0.4s						
UZB	**Uzynbulak**	**1.35**	**306**	*e*P	**Pb**	**17 22 51.1**	**-0.1**
	11nm,0.4s						
UZB				*e*S	**Sg**	**17 23 10.9**	**+1.8**
	83nm,0.3s						
UZB	**Uzynbulak**	**1.35**	**306**	P	**Pb**	**17 22 51.1**	**-0.1**
	11nm,0.4s						
UZB				S	**Sg**	**17 23 10.9**	**+1.8**
	83nm,0.3s						
SATY	**Saty**	**1.70**	**295**	*e*P	**Pg**	**17 22 58.1**	**-0.2**
	48nm,0.5s						
SATY				*e*S	**Sg**	**17 23 23.4**	**+3.1**
	188nm,0.3s						
ZHN	**Zhinishke**	**1.73**	**299**	*e*P	**Pb**	**17 22 57.9**	**+0.4**
	96nm,0.3s						
ZHN				*e*S	**Sg**	**17 23 23.2**	**+1.9**
	330nm,0.3s						
ZHN	**Zhinishke**	**1.73**	**299**	Pg	**Pb**	**17 22 57.9**	**+0.4**
	96nm,0.3s						
ZHN				Lg	Lg	17 23 23.2	
	330nm,0.3s						
KPKS	**Kokpek**	**1.74**	**310**	*e*P	**Pb**	**17 22 58.1**	**+0.3**
	41nm,0.2s						
KPKS				*e*S	**Sg**	**17 23 23.1**	**+1.5**
	308nm,0.3s						
DJR	**Jarkent**	**2.04**	**345**	*e*P	**Pb**	**17 23 03.4**	**+0.5**
	8.6nm,0.2s						
DJR				*e*S	**Sg**	**17 23 31.9**	**+0.6**
	60nm,0.5s						
DJR	**Jarkent**	**2.04**	**345**	Pg	**Pb**	**17 23 03.4**	**+0.5**
	8.6nm,0.2s						
DJR				Lg	Lg	17 23 31.9	
	60nm,0.5s						
KURS	**Kuram**	**2.06**	**304**	*e*P	**Pb**	**17 23 03.7**	**+0.6**
	24nm,0.6s						
KURS				*e*S	**Sg**	**17 23 32.8**	**+1.1**
	56nm,0.8s						
KURS	**Kuram**	**2.06**	**304**	Pg	**Pb**	**17 23 03.7**	**+0.6**
	24nm,0.6s						
KURS				Lg	Lg	17 23 32.8	
	56nm,0.8s						
TARG	**Taragay, Kyrgy**	**2.11**	**254**	⇑*e*P	**Pn**	**17 23 01.5**	**+0.1**
	baz=64						
TARG				⇑*e*S	**Sb**	**17 23 29.9**	**-0.7**
	baz=64						
ANVS	**Anan'yevo**	**2.14**	**282**	⇑*e*P	**Pb**	**17 23 04.7**	**+0.1**
	baz=92						
ANVS				⇑*e*S	**Sg**	**17 23 35.0**	**+0.5**
	baz=92						
BLB	**Baldybastay**	**2.29**	**320**	*e*P	**Pb**	**17 23 07.7**	**+0.6**
	33nm,0.2s						
BLB				*e*S	**Sg**	**17 23 39.7**	**+0.6**
	204nm,0.4s						
BLB	**Baldybastay**	**2.29**	**320**	Pg	**Pb**	**17 23 07.7**	**+0.6**
	33nm,0.2s						
BLB				Lg	Lg	17 23 39.7	
	204nm,0.4s						
KOTS	**Kotyrbulak**	**2.65**	**290**	*e*P	**Pb**	**17 23 14.0**	**+0.7**
	29nm,0.3s						
KOTS				*e*S	**Sg**	**17 23 51.2**	**+0.4**
	150nm,0.7s						
KOTS	**Kotyrbulak**	**2.65**	**290**	Pg	**Pb**	**17 23 14.0**	**+0.7**
	29nm,0.3s						
KOTS				Lg	Lg	17 23 51.2	
	150nm,0.7s						
MDOK	**Medeo**	**2.67**	**289**	*e*P	**Pb**	**17 23 13.9**	**+0.3**
	12nm,0.2s						
MDOK				*e*S	**Sg**	**17 23 50.4**	**-1.1**
	56nm,1.3s						
MDOK	**Medeo**	**2.67**	**289**	⇓Pg	**Pb**	**17 23 13.6**	**-0.1**
	12nm,0.6s						
MDOK				Pg	**Pb**	**17 23 13.9**	**+0.3**
	12nm,0.2s						
MDOK				Lg	Lg	17 23 50.4	
	56nm,1.3s						
MDOK				⇓Lg	Lg	17 23 51.3	
	79nm,0.8s						
ARXS	**Arharly**	**2.70**	**314**	*e*P	**Pb**	**17 23 14.4**	**+0.3**
	7.9nm,0.4s						
ARXS				*e*S	**Sg**	**17 23 51.2**	**-1.0**
	93nm,0.5s						
TNSS	**Tian-Shan**	**2.71**	**286**	*e*P	**Pb**	**17 23 14.5**	**0.0**
	24nm,0.3s						
TNSS				*e*S	**Sg**	**17 23 51.5**	**-1.3**
	32nm,0.4s						
TNSS	**Tian-Shan**	**2.71**	**286**	Pg	**Pb**	**17 23 14.5**	**0.0**
	24nm,0.3s						
TNSS				Lg	Lg	17 23 51.5	
	32nm,0.4s						
KNDC	**Almaty**	**2.75**	**289**	⇑Pg	**Pb**	**17 23 15.3**	**+0.5**
	23nm,0.5s						
KNDC				⇑Lg	Lg	17 23 54.3	
	297nm,0.9s						
AAA	**Alma-Ata**	**2.78**	**289**	*e*P	**Pg**	**17 23 17.6**	**-1.3**
AAA				*e*S	**Sg**	**17 23 56.1**	**+1.2**
AAA	**Alma-Ata**	**2.78**	**289**	Pg	**Pg**	**17 23 17.6**	**-1.3**
AAA				Lg	Lg	17 23 56.1	
CHKK	**Chushkaly**	**2.98**	**301**	*e*P	**Pb**	**17 23 20.1**	**+1.3**
	5.8nm,0.4s						
CHKK				*e*S	**Sg**	**17 24 00.6**	**-0.8**
	42nm,0.4s						
CHKK	**Chushkaly**	**2.98**	**301**	Pg	**Pb**	**17 23 20.1**	**+1.3**
	5.8nm,0.4s						
CHKK				Lg	Lg	17 24 00.6	
	42nm,0.4s						
TDK	**Taldyqorghan**	**3.05**	**331**	*e*P	**Pb**	**17 23 20.8**	**+0.7**
	22nm,0.3s						
TDK				*e*S	**Sg**	**17 24 01.6**	**-2.0**
	88nm,0.9s						
TDK	**Taldyqorghan**	**3.05**	**331**	Pg	**Pb**	**17 23 20.8**	**+0.7**
	22nm,0.3s						
TDK				Lg	Lg	17 24 01.6	
	88nm,0.9s						
MTBS	**Maitube**	**3.10**	**286**	*e*P	**Pb**	**17 23 22.1**	**+1.1**
	9.4nm,0.4s						
MTBS				*e*S	**Sg**	**17 24 03.7**	**-1.6**
	58nm,0.5s						
MTBS	**Maitube**	**3.10**	**286**	Pg	**Pb**	**17 23 22.1**	**+1.1**
	9.4nm,0.4s						
MTBS				Lg	Lg	17 24 03.7	
	58nm,0.5s						
KTBS	**Karatobe**	**3.11**	**297**	*e*P	**Pb**	**17 23 22.7**	**+1.5**
	10nm,0.3s						
KTBS				*e*S	**Sg**	**17 24 05.1**	**-0.5**
	160nm,0.5s						
KTBS	**Karatobe**	**3.11**	**297**	Pg	**Pb**	**17 23 22.7**	**+1.5**
	10nm,0.3s						
KTBS				Lg	Lg	17 24 05.1	
	160nm,0.5s						
ULHL	**Ulahol**	**3.17**	**269**	⇓*e*P	**Pn**	**17 23 17.5**	**+1.8**
	baz=76						
ULHL				⇓*e*S	**Sb**	**17 23 57.5**	**-3.4**
	baz=76						
BOOM	**Boomskoye usch**	**3.38**	**274**	⇓*e*P	**Pn**	**17 23 20.9**	**+2.2**
	baz=80						
BOOM				⇓*e*S	**Sb**	**17 24 03.2**	**-3.9**
	baz=80						
KUU	**Kurty**	**3.42**	**298**	*e*P	**Pb**	**17 23 27.2**	**+1.0**
	2.8nm,0.3s						
KUU				*e*S	**Sg**	**17 24 13.0**	**-2.3**
	26nm,0.6s						
KUU	**Kurty**	**3.42**	**298**	Pg	**Pb**	**17 23 27.2**	**+1.0**
	2.8nm,0.3s						
KUU				Lg	Lg	17 24 13.0	
	26nm,0.6s						
KST	**Kastek**	**3.42**	**283**	*e*P	**Pb**	**17 23 27.5**	**+1.1**
	12nm,0.3s						
KST				*e*S	**Sg**	**17 24 13.7**	**-1.7**
	34nm,0.6s						
KST	**Kastek**	**3.42**	**283**	Pg	**Pb**	**17 23 27.5**	**+1.1**
	12nm,0.3s						
KST				Lg	Lg	17 24 13.7	
	34nm,0.6s						
NRN	**Naryn**	**3.49**	**256**	⇑*e*P	**Pn**	**17 23 21.1**	**+0.8**
	baz=63						
NRN				⇑*e*S	**Sn**	**17 24 03.5**	**+1.7**
	baz=63						
TKM2	**Tokmak 2**	**3.67**	**280**	⇓*e*P	**Pn**	**17 23 25.4**	**+2.8**
	baz=86						
TKM2				⇓*e*S	**Sb**	**17 24 11.0**	**-4.3**
	baz=86						
TKM2	**Tokmak 2**	**3.67**	**280**	⇑Pn	**Pn**	**17 23 24.4**	**+1.8**
	3.3nm,0.4s						
TKM2				⇑Lg	Lg	17 24 20.8	
	14nm,0.5s						
KRBS	**Karabastau**	**3.79**	**292**	*e*P	**Pb**	**17 23 33.8**	**+1.2**
	4.1nm,0.4s						
KRBS				*e*S	**Sg**	**17 24 23.9**	**-3.3**
	15nm,0.5s						
KRBS	**Karabastau**	**3.79**	**292**	Pg	**Pb**	**17 23 33.8**	**+1.2**
	4.1nm,0.4s						
KRBS				Lg	Lg	17 24 23.9	
	15nm,0.5s						
CHMS	**Chumysh**	**4.29**	**281**	⇑Pg	**Pb**	**17 23 43.0**	**+1.8**
	4.3nm,0.9s						
CHMS				⇑Lg	Lg	17 24 41.3	
	7.4nm,0.5s						
UCH	**Uchtor**	**4.45**	**270**	⇓*e*P	**Pn**	**17 23 35.4**	**+1.8**
	baz=75						
UCH				⇓*e*S	**Sn**	**17 24 28.5**	**+2.9**
	baz=75						
MAKZ	**Makanchi**	**4.57**	**13**	⇓Pn	**Pn**	**17 23 37.0**	**+2.1**
	1.9nm,0.3s						
MAKZ				⇓Sn	**Sn**	**17 24 34.5**	**+6.4**
	1.4nm,0.5s						
MAKZ				⇑Lg	Lg	17 24 52.9	
	2.9nm,0.6s						
MK31	**Makanchi Array**	**4.62**	**15**	Pn	**Pn**	**17 23 36.8**	**+1.4**
	0.9nm,0.3s,baz=197,slow=12,SNR=96						
MK31				⇓Sn	**Sn**	**17 24 33.8**	**+4.7**
	1.1nm,0.3s,baz=194,slow=24,SNR=7.0						
MK31				⇓Lg	Lg	17 24 51.7	
	6.6nm,0.7s,baz=193,slow=28,SNR=6.8						
BTLS	**Baital**	**5.40**	**302**	*e*P	**Pb**	**17 24 03.9**	**+3.9**
	1.4nm,0.3s						
BTLS				*e*S	**Sg**	**17 25 16.4**	**-2.5**
	4.8nm,1.0s						
BTLS	**Baital**	**5.40**	**302**	Pg	**Pb**	**17 24 03.9**	**+3.9**
	1.4nm,0.3s						
BTLS				Lg	Lg	17 25 16.4	
	4.8nm,1.0s						
ZSN	**Zaisan**	**5.96**	**30**	*e*P	**Pb**	**17 24 11.9**	**+2.3**
	3.5nm,0.3s						
ZSN				*e*S	**Sg**	**17 25 29.5**	**-7.3**
	6.4nm,0.6s						
KK31	**Karatay Array**	**7.40**	**279**	⇑Pg	**Pg**	**17 24 43.0**	**-4.2**
	0.3nm,0.3s,baz=92,slow=17,SNR=4.0						
KK31				⇑Lg	Lg	17 26 23.0	
	0.7nm,0.3s,baz=88,slow=27,SNR=5.3						
OTUK	**Ortayu**	**8.23**	**318**	⇑Lg	Lg	17 26 48.3	
	3.5nm,0.8s						

*SNET **10** 17:43:54.3±1.4, 12°.79N×88°.47W, h28km±5km, ML3.4*
*INET **10** 17:43:54.4±0.5, 12°.76N×88°.34W, h14km±9km, MW3.6*
ISC 10 17:43:53.7±1.6, 12°.7N±0°.1×88°.43W±0°.06, h54km±32km, n19, σ0s 52/32, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.70**	**11**	*e*P	**Pn**	**17 44 07.9**	**+0.1**
PACA	**Pacayal**	**0.74**	**8**	*e*P	**Pn**	**17 44 08.6**	**+0.2**
PACA				*e*S	**Sn**	**17 44 19.1**	**+0.1**
PACA	**Pacayal**	**0.74**	**8**	*e*P	**Pn**	**17 44 08.4**	**+0.1**
COEB	**Comit de Eme**	**0.77**	**353**	*e*P	**Pn**	**17 44 08.6**	**-0.1**
COEB				*e*S	**Sn**	**17 44 19.2**	**-0.5**
COEB				IAML		17 44 26.8	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**0.78**	**42**	*e*P	**Pn**	**17 44 08.2**	**-0.5**
LCND				*e*S	**Sn**	**17 44 20.4**	**+0.8**
LCND				IAML		17 44 24.0	
	comp=Z,2μm,0.3s						
CNCH	**Conchagua**	**0.80**	**47**	*e*P	**Pn**	**17 44 08.5**	**-0.5**
CNCH				*e*S	**Sn**	**17 44 20.3**	**+0.1**
COEG	**Centro de Oper**	**0.99**	**334**	*e*P	**Pn**	**17 44 11.5**	**0.0**
COEG				*e*S	**Sn**	**17 44 24.4**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.01**	**343**	*e*P	**Pn**	**17 44 12.1**	**+0.3**
SCLA				*e*S	**Sn**	**17 44 25.5**	**+0.4**
SJTE	**Alcalda de S**	**1.05**	**327**	*e*P	**Pn**	**17 44 11.6**	**-0.7**
SJTE				*e*S	**Sn**	**17 44 25.3**	**-0.7**
LFRS	**El Faro**	**1.08**	**325**	*e*P	**Pn**	**17 44 12.7**	**-0.1**
PAVA	**Las Pavas**	**1.10**	**333**	*e*P	**Pn**	**17 44 13.6**	**+0.6**
PAVA				*e*S	**Sn**	**17 44 27.8**	**+0.6**
P5NO	**Presa 5 de nov**	**1.29**	**346**	*e*P	**Pn**	**17 44 15.4**	**-0.1**
P5NO				*e*S	**Sn**	**17 44 31.6**	**-0.1**
CRIN	**San Cristobal**	**1.34**	**91**	*e*P	**Pn**	**17 44 16.9**	**+0.7**
CRIN				*e*S	**Sn**	**17 44 34.0**	**+0.9**
TEL3	**Telica 3**	**1.55**	**96**	*e*P	**Pn**	**17 44 19.4**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.73**	**40**	*e*P	**Pn**	**17 44 21.9**	**+0.2**
NUBE	**Las Nubes**	**1.76**	**312**	*e*P	**Pn**	**17 44 22.6**	**+0.6**
NUBE				*e*S	**Sn**	**17 44 43.0**	**-0.4**
MOMN	**Momotombo**	**1.87**	**100**	*e*P	**Pn**	**17 44 23.5**	**+0.1**
MOMN				*e*S	**Sn**	**17 44 44.7**	**-1.2**
COPN	**Copaltepe**	**1.87**	**107**	*e*P	**Pn**	**17 44 23.5**	**+0.1**
MATN	**Matagalpa**	**2.45**	**85**	*e*P	**Pn**	**17 44 31.3**	**0.0**
MATN				*e*S	**Sn**	**17 44 59.2**	**-0.9**

*IDC **10** 17:59:49.6±0.8, 2°.95N×78°.74W, h0km, mb3.9/12, mbtmp4.0/15, ML2.8/2, MS3.4/26, Error ellipse: s-maj=24.1km s-min=19.3km az=38.0*
*RSNC **10** 17:59:50.9±1.2, 3°.10N×78°.80W, h7km±5km, ML3.6, Mw3.9*
*NEIC **10** 17:59:51.4±2.4, 2°.98N±0°.06×78°.57W±0°.08, h10km±1km, mb4.7/65, Error ellipse: s-maj=13.4km s-min=9.5km az=82.0*
**ISC 10 17:59:49.8±2.5, 3°.07N±0°.03×78°.69W±0°.04, h2km±16km, n159, σ1s 88/160, mb4.7

BETC eS Sb 18 01 26.2 -2.6
BETC i 18 01 35.5
comp=Z,203nm,0.5s
GARC Garzon, Huila 3.31 105 eP Pn 18 00 45.6 +2.7
GARC eS Sn 18 01 22.2 -0.7
FLOC Florencia 3.37 116 ⇓iP Pn 18 00 45.1 +1.5
FLOC i 18 01 34.0
comp=Z,119nm,0.5s
ANIL Santa Ana 3.57 67 eP Pn 18 00 47.7 +1.2
ANIL eS Sn 18 01 28.6 -0.9
ANIL i 18 01 39.4
comp=Z,406nm,0.5s
SLOR San Lorenzo - 3.78 177 Pn Pn 18 00 49.5 0.0
PRAC Prado 3.85 80 eP Pn 18 00 51.9 +1.7
PRAC eS Sn 18 01 39.2 +3.2
PRAC i 18 01 53.0
comp=Z,131nm,0.6s
CBOC Ciudad Bolivar 3.85 44 eP Pn 18 00 50.4 +0.1
CBOC i 18 02 13.0
comp=Z,100nm,0.2s
GUY2C Guyana, Caldas 3.95 57 eP Pn 18 00 52.6 +0.8
GUY2C eS Sn 18 01 38.8 -0.2
GUY2C i 18 01 44.2
comp=Z,68nm,0.7s
HELC Santa Helena 4.42 45 eP Pn 18 01 01.2 +2.9
HELC eS Sn 18 01 46.3 -4.3
HELC i 18 02 16.2
comp=Z,23nm,0.6s
NORC Norcasia 4.54 57 eP Pn 18 01 01.9 +2.2
NORC eS Sn 18 01 55.2 +2.0
NORC i 18 01 57.5
comp=Z,42nm,0.7s
ROSC El Rosal 4.70 68 Pn Pn 18 01 05.5 +3.4
comp=Z,6.0nm,0.3s,baz=32,slow=22,SNR=6.3
ROSC Sn Sn 18 02 02.8 +5.3
comp=Z,4.4nm,0.3s,baz=219,slow=22,SNR=5.7
comp=Z,18nm,0.4s
ROSC El Rosal 4.70 68 Pn Pn 18 01 02.9 +0.7
ROSC El Rosal 4.70 68 eP Pn 18 01 04.2 +2.0
ROSC i 18 01 41.9
comp=Z,36nm,0.5s
PTLC Puerto Leguiza 4.84 126 eP Pb 18 01 17.2 +1.8
PTLC eS Sb 18 02 09.4 -4.7
PTLC i 18 02 46.2
comp=Z,42nm,0.6s
SPBC San Pablo de B 5.27 61 eP Pn 18 01 14.2 +4.4
SPBC eS Sn 18 02 01.1 -10
PTBC PUERTO BERRIO, 5.45 51 eP Pn 18 01 13.2 +1.1
PTBC eS Sn 18 02 12.5 -2.9
PTBC i 18 02 45.1
comp=Z,14nm,0.7s
COHC Cochancay 5.53 186 Pn Pn 18 01 11.8 -1.4
UREC San Jos de Ur 5.61 34 eP Pn 18 01 18.5 +4.1
ZARC Zaragoza, Cauc 5.82 41 eP Pn 18 01 20.7 +3.5
ZARC eS Sn 18 02 26.3 +1.8
ZARC i 18 02 48.0
comp=Z,14nm,0.7s
BCIP Isla Barro Col 6.17 349 Pn Pn 18 01 25.3 +3.4
BOSC San Juan Bosco 6.18 178 Pn Pn 18 01 19.7 -2.6
RUSC La Rusia 6.25 63 eP Pn 18 01 27.0 +3.5
RUSC i 18 02 47.7
comp=Z,11nm,0.7s
RUSC eS Sb 18 02 48.1 -7.2
BARC Barichara 6.51 57 eP Pn 18 01 28.8 +1.9
BARC i 18 02 49.5
comp=Z,26nm,0.6s
ARNL Arenillas 6.71 192 Pn Pn 18 01 27.8 -1.7
PAMC Pamplona, Colo 7.32 54 eP Pn 18 01 44.7 +6.5
PAMC eS Sn 18 02 59.6 -2.6
PAMC i 18 03 15.4
comp=Z,7.8nm,0.5s
MCRA Macar, Loja 7.50 190 Pn Pn 18 01 39.4 -0.9
SRBA San Rafael, Bu 7.69 323 Pn Pn 18 01 41.0 -2.0
RIMA Rio Macho 8.41 323 Pn Pn 18 01 57.7 +4.7
SDV Santo Domingo 9.88 54 Pn Pn 18 02 16.3 +3.2
comp=Z,1.1nm,0.3s,baz=352,slow=17,SNR=1.6
SDV Sn Sn 18 04 04.1 -0.7
comp=Z,1.0nm,0.3s,baz=261,slow=23,SNR=1.7
SDV LR LR 18 06 09.2
comp=Z,88nm,18.6s,baz=212,slow=38
comp=Z,4.0nm,0.4s
SDV Santo Domingo 9.88 54 Pn Pn 18 02 14.1 +1.0
BOAB BOACO BROADBAN 11.60 324 Pn Pn 18 02 37.5 +0.9
BAUV El Baul 12.09 61 Pn Pn 18 02 40.3 -2.9
TGUH Tegucigalpa,Un 13.82 323 Pn Pn 18 03 05.6 -1.4
NNA Nana 15.07 173 Pn Pn 18 03 25.4 +1.4
comp=Z,1.8nm,0.3s,baz=186,slow=23,SNR=2.1
NNA LR LR 18 10 04.5
comp=Z,188nm,18.1s,baz=342,slow=41
DR12 Loma Pena Alta 18.09 30 Pn Pn 18 03 59.5 -2.9
GRGR Grenville 19.12 61 P P 18 04 14.5 +0.2
AOPR Arecibo Observ 19.16 37 P P 18 04 14.8 0.0
SJG San Juan 19.35 39 P Pn 18 04 20.1 +2.3
comp=Z,5.4nm,0.3s,baz=150,slow=5.3,SNR=3.9
SJG LR LR 18 12 43.9
comp=Z,92nm,20.1s,baz=132,slow=40
GCPR Guaynabo City 19.54 38 P P 18 04 18.3 -0.6
GCPR IAmb IAmb 18 04 26.9
comp=Z,25nm,0.9s
HUMP Col San Antoni 19.56 39 P P 18 04 18.7 -0.4
HUMP IAmb IAmb 18 04 31.9
comp=Z,35nm,1.0s
CMIG Matias Romero 21.15 312 P P 18 04 38.1 +1.8
comp=Z,1.7nm,0.5s,baz=158,slow=7.6,SNR=2.2
CMIG LR LR 18 11 45.2
comp=Z,129nm,18.6s,baz=166,slow=34
comp=Z,1.7nm,0.5s
LPAZ La Paz 21.88 152 LR LR 18 13 54.8
comp=Z,108nm,21.7s,baz=292,slow=39
GO01 Chusmiza 24.45 158 P P 18 05 09.5 -1.2
PB01 IPOC Station P 25.60 160 P P 18 05 21.0 +0.2
PB01 IAmb IAmb 18 05 23.2
comp=Z,25nm,1.3s
PB02 IPOC Station P 25.72 161 P P 18 05 20.0 -1.9
PB02 IAmb IAmb 18 05 26.9
comp=Z,36nm,1.2s
SIV San Ignacio 25.73 138 LR LR 18 14 49.2
comp=Z,96nm,18.8s,baz=292,slow=35
LVC Limon Verde 27.25 160 LR LR 18 17 40.0
comp=Z,93nm,19.4s,baz=20,slow=39
PB15 IPOC Station P 27.62 161 P P 18 05 38.7 -0.4
PB15 IAmb IAmb 18 05 39.2
comp=Z,34nm,1.4s
TKL Tuckaleechee C 32.77 352 LR LR 18 20 26.3
comp=Z,52nm,18.8s,baz=140,slow=38
V48A Smith Brothers 33.37 348 P P 18 06 30.2 +0.6
S61A Accomac 34.56 4 P P 18 06 39.0 -0.8
TXAR Lajitas Array 35.28 320 P P 18 06 47.3 +0.9
comp=Z,0.4nm,0.7s,baz=126,slow=6.4,SNR=3.7
TXAR PcP PcP 18 09 16.9 -0.3
comp=Z,1.0nm,0.8s,baz=142,slow=6.3,SNR=6.6
TXAR LR LR 18 21 44.6
comp=Z,71nm,18.3s,baz=156,slow=37
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 35.28 320 P P 18 06 47.6 +1.2
TX31 Lajitas Ar. Si 35.28 320 P P 18 06 48.0 +1.6
BDFB Brasilia 35.59 122 LR LR 18 23 54.6
comp=Z,38nm,21.2s,baz=357,slow=41
ZON Zonda 35.72 165 P P 18 06 51.0 +1.0
ZON IAmb IAmb 18 06 54.0
comp=Z,17nm,1.4s
CPUP Villa Florida 35.79 146 LR LR 18 23 33.7
comp=Z,89nm,18.5s,baz=5.0,slow=40
CCM Cathedral Cave 36.67 343 P P 18 06 57.8 -0.2
CCM IAmb IAmb 18 07 03.2
comp=Z,13nm,0.7s
BO04 La Punta 37.64 169 P P 18 07 05.8 -0.5
BO04 IAmb IAmb 18 07 09.4
comp=Z,11nm,0.9s
KSU1 Kansas State U 39.40 338 P P 18 07 20.9 -0.2
KSU1 IAmb IAmb 18 07 26.8
comp=Z,12nm,0.8s
ANMO Albuquerque 40.87 324 LR LR 18 27 02.8
comp=Z,56nm,18.8s,baz=146,slow=40
ANMO Albuquerque 40.87 324 P P 18 07 35.1 +1.5
SADO Sadowa 41.53 360 LR LR 18 23 51.3
comp=Z,53nm,21.6s,baz=192,slow=35
SDCO Great Sand Dun 42.36 328 P P 18 07 47.8 +1.9
214A Organ Pipe Nat 43.05 316 P P 18 07 52.8 +1.4
ECSD EROS Data Cent 43.50 341 P P 18 07 54.0 -0.7
ECSD IAmb IAmb 18 08 25.0
comp=Z,43nm,2.0s
RCBR Riachuelo 43.63 102 LR LR 18 26 00.2
comp=Z,101nm,19.2s,baz=85,slow=36
LL04 Puerto Octay 44.14 173 P P 18 08 00.4 +0.5
LL04 IAmb IAmb 18 08 01.4
comp=Z,14nm,1.1s
PLCA Paso Flores 44.22 171 P P 18 08 01.0 +0.4
comp=Z,12nm,0.9s,baz=350,slow=8.9,SNR=21
PLCA LR LR 18 25 27.1
comp=Z,39nm,18.5s,baz=1.5,slow=35
comp=Z,12nm,0.9s
PLCA Paso Flores 44.22 171 P P 18 08 01.6 +1.0
PLCA IAmb IAmb 18 08 02.3
comp=Z,13nm,0.8s
PV13 Radium Mtn., P 44.48 326 P P 18 08 01.3 -1.7
PV13 IAmb IAmb 18 08 11.8
comp=Z,24nm,2.0s
F36A Milaca 44.55 345 P P 18 08 02.1 -1.0
F36A IAmb IAmb 18 08 07.6
comp=Z,8.1nm,0.9s
E38A The Farm, Brul 44.79 347 P P 18 08 02.5 -2.4
PHWY Pilot Hill 45.03 331 P P 18 08 07.9 +0.5
GLA Glamis 45.08 316 P P 18 08 06.0 -1.5
GLA IAmb IAmb 18 08 21.8
comp=Z,17nm,1.8s
CBX Cerro Bola 45.99 314 P P 18 08 13.7 -1.2
SRU San Rafael Swe 46.10 325 P P 18 08 14.2 -1.5
PFO Pinyon Flats O 46.53 315 LR LR 18 28 25.6
comp=Z,67nm,18.2s,baz=160,slow=37
BW06 Boulder Array 48.15 330 P P 18 08 30.1 -1.7
PDAR Pinedale Array 48.15 330 P P 18 08 32.7 +1.0
comp=Z,0.3nm,0.6s,baz=113,slow=11,SNR=3.7
PDAR PcP PcP 18 09 58.9 -0.4
comp=Z,0.1nm,0.5s,baz=48,slow=1.3,SNR=2.4
PDAR LR LR 18 30 29.2
comp=Z,40nm,20.6s,baz=122,slow=38
comp=Z,0.3nm,0.6s
CCAC Calif City Air 48.44 316 P P 18 08 33.0 -0.9
CCAC IAmb IAmb 18 08 41.8
comp=Z,8.6nm,0.9s
BGU Big Grassy Mou 48.74 325 P P 18 08 35.6 -0.7
GMN Gold Mountain 49.11 319 P P 18 08 39.7 +0.5
ULM Lac du Bonnet 49.22 345 P P 18 08 41.1 +1.6
comp=Z,4.1nm,0.7s,baz=122,slow=9.5,SNR=2.3
ULM LR LR 18 29 30.3
comp=Z,34nm,20.3s,baz=40,slow=36
comp=Z,4.1nm,0.7s
NVAR Mina Array Bea 50.43 319 P P 18 08 50.4 +1.2
comp=Z,0.9nm,0.7s,baz=129,slow=6.8,SNR=9.2
NVAR PcP PcP 18 10 08.2 +0.6
comp=Z,1.4nm,0.8s,baz=131,slow=4.1,SNR=5.1
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 50.43 319 P P 18 08 51.2 +2.0
GCMT Greycliff 50.43 332 P P 18 08 49.9 +0.8
LHV Little Huntoon 50.46 319 P P 18 08 51.9 +2.8
LHV IAmb IAmb 18 09 03.1
comp=Z,10.0nm,1.5s
BMN Battle Mountai 50.91 322 P P 18 08 54.6 +1.8
BOZ Bozeman (W) 51.23 331 P P 18 08 56.1 +1.1
HLID Hailey 51.26 327 P P 18 08 56.1 +0.7
WVOR Wild Horse Val 52.95 323 P P 18 09 09.1 +1.2
WVOR IAmb IAmb 18 09 15.1
comp=Z,8.2nm,0.9s
F10A Beach Ranch, E 54.35 328 P P 18 09 19.9 +1.8
F10A IAmb IAmb 18 09 25.9
comp=Z,11nm,1.4s
I07A Izee 54.44 325 P P 18 09 19.1 +0.3
I07A IAmb IAmb 18 09 33.6
comp=Z,8.4nm,1.5s
YBH Yreka Blue Hor 55.06 321 LR LR 18 33 50.3
comp=Z,42nm,18.6s,baz=132,slow=37
E09A Wood Farm, Sta 55.19 328 P P 18 09 24.2 +0.2
E09A IAmb IAmb 18 09 27.5
comp=Z,16nm,1.6s
NEW Newport 55.79 330 LR LR 18 34 41.5
comp=Z,40nm,19.8s,baz=144,slow=37
HOOD Mount Hood Mea 56.41 325 P P 18 09 34.0 +1.0
HOOD IAmb IAmb 18 09 42.2
comp=Z,14nm,1.1s
EDM Edmonton 57.56 336 P P 18 09 39.6 -1.3
EDM IAmb IAmb 18 09 47.7
comp=Z,13nm,1.1s
BRLDA Berland Lookou 59.87 335 P P 18 09 57.4 +0.3
BBB Bella Bella 63.78 329 LR LR 18 40 26.0
comp=Z,20nm,18.8s,baz=176,slow=38
YKA Yellowknife Ar 65.00 343 P P 18 10 30.9 -0.2
comp=Z,1.7nm,0.8s,baz=130,slow=6.8,SNR=4.8
comp=Z,1.7nm,0.8s
DLBC Dease Lake 68.08 334 LR LR 18 47 06.3
comp=Z,40nm,18.4s,baz=112,slow=42
P33M Teslin, Yukon 70.23 335 P P 18 11 05.0 +0.7
P33M IAmb IAmb 18 11 17.2
comp=Z,7.1nm,1.4s
N31M Braeburn, Yuko 72.12 335 P P 18 11 16.2 +0.5
N31M IAmb IAmb 18 11 43.3
comp=Z,23nm,1.9s
RES Resolute Bay 72.18 356 LR LR 18 45 00.9
comp=Z,24nm,18.9s,baz=18,slow=38
MESA MESA 74.30 332 P P 18 11 28.3 -0.5
DAWY Dawson 74.78 337 P P 18 11 31.3 0.0
MDT Midelt 74.97 57 LR LR 18 40 04.2
comp=Z,24nm,22.0s,baz=138,slow=32
M27K Edge Creek, AK 75.10 334 P P 18 11 34.9 +1.6
M27K IAmb IAmb 18 11 46.1
comp=Z,20nm,1.8s
BCAR Beaver Creek A 75.34 335 P P 18 11 35.6 +1.0
L27K Beaver Creek, 75.36 335 P P 18 11 34.9 +0.3
L27K IAmb IAmb 18 11 41.8
comp=Z,6.5nm,0.9s
BMRM Bremner River 75.81 333 P P 18 11 38.6 +1.3
BMRM IAmb IAmb 18 12 20.9
comp=Z,8.5nm,1.2s
L26K Log Cabin Wild 75.98 335 P P 18 11 39.5 +1.3
L26K IAmb IAmb 18 11 45.5
comp=Z,6.8nm,1.1s
ESDC Sonseca Array 76.30 50 P P 18 11 40.6 +0.1
comp=Z,0.7nm,0.7s,baz=252,slow=6.5,SNR=5.9
comp=Z,0.7nm,0.7s
SCRK Sand Creek 76.60 336 P P 18 11 41.7 -0.1
SCRK IAmb IAmb 18 11 44.5
comp=Z,5.1nm,1.0s
HDA Harding Lake 77.96 336 P P 18 11 49.5 +0.2
HDA IAmb IAmb 18 11 55.4
comp=Z,5.7nm,1.0s
ILAR Eielson Array 78.06 336 P P 18 11 49.7 -0.1
comp=Z,0.7nm,0.9s,baz=104,slow=5.8,SNR=5.6
ILAR LR LR 18 50 25.3
comp=Z,27nm,18.3s,baz=292,slow=39
comp=Z,0.7nm,0.9s
BMAR Burnt Mountain 78.08 339 P P 18 11 50.6 +0.6
CAST Castle Rocks 79.87 334 P P 18 11 58.0 -1.8
TORD Torodi Ar. Bea 79.95 77 P P 18 12 00.6 -0.6
comp=Z,0.5nm,0.5s,baz=284,slow=6.8,SNR=4.8
comp=Z,0.5nm,0.5s
M20K Styx River 80.00 332 P P 18 11 59.0 -1.7
DAVA Damuels 86.79 43 *i* P P 18 12 37.3 +1.2
comp=Z,8.5nm,1.0s
NOA NORSAR Array B 87.29 29 P P 18 12 38.2 +0.1
comp=Z,0.9nm,1.0s,baz=276,slow=4.3,SNR=2.1
comp=Z,0.9nm,1.0s
FETA Feichten 87.38 43 *e*P P 18 12 40.4 +1.4
comp=Z,5.7nm,1.1s
ABTA Abfaltersbach 88.61 43 *i* P P 18 12 45.6 +0.9
comp=Z,7.2nm,1.1s
CLL Collm 88.69 39 *e*P P 18 12 45.0 +0.2
comp=Z,7.0nm,1.4s
GERES GERESS Array B 89.29 41 P P 18 12 49.5 +1.6
comp=Z,0.5nm,0.6s,baz=304,slow=2.3,SNR=5.7
comp=Z,0.5nm,0.6s
INTR Introdacqua 89.90 48 P P 18 12 50.8 0.0
OBKA Obir 90.03 44 *i* P P 18 12 49.3 -2.1
comp=Z,7.4nm,0.9s
QSPA South Pole Qui 93.10 180 P P 18 13 05.3 +0.1
TSUM Tsumeb 96.92 109 LR LR 18 56 46.5
comp=Z,22nm,18.1s,baz=208,slow=35
H11N3 WAKE ISLAND Hyl 11.77 293 T T 20 19 46.5
baz=79
H11N2 WAKE ISLAND Hyl 11.78 293 T T 20 19 43.9
baz=79
H11N1 WAKE ISLAND Hyl 11.78 293 T T 20 19 45.1
baz=79
KURBB Kurchatov Arra 123.06 17 PKP **PKPdf** 18 18 48.1 +0.1
comp=Z,0.2nm,0.2s,baz=0.0,slow=1.9,SNR=1.7
MKAR Makanchi Array 127.59 16 PKP **PKPdf** 18 18 56.3 -0.7
comp=Z,0.3nm,0.6s,baz=343,slow=3.0,SNR=3.6
SONM Songino Array 129.11 356 PKP **PKPdf** 18 18 59.7 -0.2
comp=Z,1.4nm,0.9s,baz=345,slow=3.5,SNR=5.5
ASAR Alice Springs 142.43 234 PKhKP PKPpre 18 19 20.1
comp=Z,1.3nm,0.6s,baz=118,slow=3.8,SNR=29
WB2 Warramunga Arr 143.66 240 PKPbc 18 19 24.4 -0.4
WRA Warramunga Arr 143.67 240 PKP PKPbc 18 19 24.7 -0.1
comp=Z,6.3nm,0.9s,baz=112,slow=3.1,SNR=25
WRA Warramunga Arr 143.67 240 PKPbc 18 19 24.6 -0.3
WB0 Warramunga Arr 143.69 240 PKPbc 18 19 24.5 -0.5
CMAR Chiang Mai Arr 158.48 6 PKPab **PKPab** 18 20 24.2 -0.1
comp=Z,0.8nm,0.6s,baz=334,slow=5.8,SNR=6.9

*IDC **10** 18:01:15.3±0.7,21°.77S×67°.10W,h180km±9km, mb3.8/6, mbtmp4.2/11, Error ellipse: s-maj=16.9km s-min=10.8km az=125.0*
*SCB **10** 18:01:16.6±1.4,21°.73S×67°.18W,h198km±2km, ML4.2/4, MW3.7, Error ellipse: s-maj=7.3km s-min=3.8km az=0.0*
*VAO **10** 18:01:16.1±0.4,21°.70S×67°.42W,h219km, mb4.1*
*GUC **10** 18:01:16.8±0.7,21°.79S×67°.45W,h218km±9km, ML4.8*
*NEIC **10** 18:01:16.7±1.1,21°.84S±0°.04×67°.4W±0°.1,h197km±13km, mb4.1/4, Error ellipse: s-maj=18.9km s-min=4.8km az=80.0*

ISC 10 18:01:15.1±0.6,**21°.81S**±0°.04×**67°.21W**±0°.04,**h188**km±6km, **n144**,σ1§**46**/179,**mb4.0**/6,**18C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.45**	**218**			**Pn**		**18 01 47.8**	**+0.1**
MOCB	**Mochara**	**1.57**	**70**	P		**Pn**		**18 01 50.2**	**+1.2**
MOCB				S		**Sn**		**18 02 12.3**	**-2.8**
MOCB				IAML				18 02 17.9	
1μm,0.3s									
YJA	**Yavi**	**1.62**	**103**	P		**Pn**		**18 01 50.9**	**+1.5**
LVC	**Limon Verde**	**1.76**	**243**	P		**Pn**		**18 01 52.3**	**+1.6**
340nm,0.4s,baz=96,slow=5.1,SNR=546									
LVC				S		**Sn**		**18 02 19.4**	**+1.0**
186nm,0.3s,baz=229,slow=21,SNR=42									
LVC				LR		LR		18 02 35.9	
comp=Z,151nm,21.6s,baz=130,slow=43									
LVC	**Limon Verde**	**1.76**	**243**	P		**Pn**		**18 01 52.3**	**+1.6**
LVC				IAML				18 02 22.1	
347nm,0.2s									
LVC	**Limon Verde**	**1.76**	**243**	*e*P		**Pn**		**18 01 52.2**	**+1.6**
PB09	**IPOC Station P**	**1.89**	**270**			**Pn**		**18 01 51.8**	**0.0**
PB09					Sn	**Sn**		**18 02 20.6**	**+0.4**
PB01	**IPOC Station P**	**2.25**	**289**			**Pn**		**18 01 56.3**	**+0.7**
PB01					Sn	**Sn**		**18 02 27.3**	**+0.3**
PB01	**IPOC Station P**	**2.25**	**289**	⇑*i*P		**Pn**		**18 01 56.4**	**+0.7**
PB01				*e*S		**Sn**		**18 02 27.1**	**0.0**
PB01				IAML				18 02 28.1	
comp=N,3μm,0.3s									
PB01	**IPOC Station P**	**2.25**	**289**	⇑*i*P		**Pn**		**18 01 56.4**	**+0.7**
PB01				*e*S		**Sn**		**18 02 27.1**	**0.0**
PB01				IAML				18 02 28.1	
comp=N,3μm,0.3s									
AOVT	**TarijaAcel**	**2.35**	**84**	P		**Pn**		**18 01 57.7**	**+0.9**
PB06	**IPOC Station P**	**2.36**	**247**			**Pn**		**18 01 57.6**	**+0.8**
PB06	**IPOC Station P**	**2.36**	**247**	⇑*i*P		**Pn**		**18 01 57.8**	**+0.9**
PB06				*e*S		**Sn**		**18 02 29.6**	**+0.2**
PB06				IAML				18 02 31.0	
comp=E,3μm,0.2s									
PB06	**IPOC Station P**	**2.36**	**247**	⇑*i*P		**Pn**		**18 01 57.8**	**+0.9**
PB06				*e*S		**Sn**		**18 02 29.6**	**+0.2**
PB06				IAML				18 02 31.0	
comp=E,3μm,0.2s									
PB06	**IPOC Station P**	**2.36**	**247**	P		**Pn**		**18 01 58.0**	**+1.1**
PB08	**IPOC Station P**	**2.46**	**312**			**Pn**		**18 01 59.7**	**+1.5**
PB08					Sn	**Sn**		**18 02 31.6**	**-0.2**
PB08	**IPOC Station P**	**2.46**	**312**	⇑*i*P		**Pn**		**18 01 60.0**	**+1.7**
PB08				*e*S		**Sn**		**18 02 32.3**	**+0.6**
PB08				IAML				18 02 33.6	
comp=N,608nm,0.5s									
PB08	**IPOC Station P**	**2.46**	**312**	⇑*i*P		**Pn**		**18 01 60.0**	**+1.7**
PB08				*e*S		**Sn**		**18 02 32.3**	**+0.6**
PB08				IAML				18 02 33.6	
comp=N,608nm,0.5s									
PB07	**IPOC Station P**	**2.49**	**271**	Pn		**Pn**		**18 01 58.7**	**+0.4**
PB07					Sn	**Sn**		**18 02 30.0**	**-1.9**
PB07	**IPOC Station P**	**2.49**	**271**	*e*P		**Pn**		**18 01 59.2**	**+0.9**
PB07				*e*S		**Sn**		**18 02 31.0**	**-0.9**
PB07				IAML				18 02 32.1	
comp=N,4μm,0.1s									
PB07	**IPOC Station P**	**2.49**	**271**	*e*P		**Pn**		**18 01 59.2**	**+0.9**
PB07				*e*S		**Sn**		**18 02 31.0**	**-0.9**
PB07				IAML				18 02 32.1	
comp=N,4μm,0.1s									
PB15	**IPOC Station P**	**2.51**	**236**			**Pn**		**18 01 59.8**	**+1.2**
PB15	**IPOC Station P**	**2.51**	**236**	⇑*i*P		**Pn**		**18 01 59.9**	**+1.2**
PB15				*e*S		**Sn**		**18 02 33.5**	**+1.0**
PB15	**IPOC Station P**	**2.51**	**236**	⇑*i*P		**Pn**		**18 01 59.9**	**+1.2**
PB15				*e*S		**Sn**		**18 02 33.5**	**+1.0**
PB15	**IPOC Station P**	**2.51**	**236**	P		**Pn**		**18 01 59.9**	**+1.2**
PB02	**IPOC Station P**	**2.54**	**281**			**Pn**		**18 01 59.4**	**+0.4**
PB02					Sn	**Sn**		**18 02 31.2**	**-1.8**
PB02	**IPOC Station P**	**2.54**	**281**	*e*P		**Pn**		**18 01 59.5**	**+0.6**
PB02				*e*S		**Sn**		**18 02 31.9**	**-1.1**
PB02				IAML				18 02 33.3	
comp=E,4μm,0.2s									
PB02	**IPOC Station P**	**2.54**	**281**	⇑*e*P		**Pn**		**18 01 59.5**	**+0.6**
PB02				*e*S		**Sn**		**18 02 31.9**	**-1.1**
PB02				IAML				18 02 33.3	
comp=E,4μm,0.2s									
PB02	**IPOC Station P**	**2.54**	**281**	P		**Pn**		**18 01 59.7**	**+0.8**
PB02				IAML				18 02 33.2	
comp=E,4μm,0.2s									
PB04	**IPOC Station P**	**2.77**	**259**	Pn		**Pn**		**18 02 02.1**	**+0.5**
PB04					Sn	**Sn**		**18 02 34.4**	**-3.5**
PB04	**IPOC Station P**	**2.77**	**259**	P		**Pn**		**18 02 02.5**	**+0.9**
GO01	**Chusmiza**	**2.82**	**319**	Pn		**Pn**		**18 02 03.7**	**+1.1**
GO01	**Chusmiza**	**2.82**	**319**	⇑*i*P		**Pn**		**18 02 03.8**	**+1.2**
GO01				*e*S		**Sn**		**18 02 41.6**	**+2.1**
GO01				IAML				18 02 45.1	
comp=E,1μm,0.1s									
GO01	**Chusmiza**	**2.82**	**319**	⇑*i*P		**Pn**		**18 02 03.8**	**+1.2**
GO01				*e*S		**Sn**		**18 02 41.6**	**+2.1**
GO01				IAML				18 02 45.1	
comp=E,1μm,0.1s									
GO01	**Chusmiza**	**2.82**	**319**	P		**Pn**		**18 02 03.5**	**+0.9**
GO01				IAML				18 02 45.5	
comp=E,330nm,0.3s									
PATCX	**Punta Patache**	**2.91**	**289**			**Pn**		**18 02 03.6**	**+0.3**
PATCX	**Punta Patache**	**2.91**	**289**	⇑*i*P		**Pn**		**18 02 03.5**	**+0.3**
PATCX				*e*S		**Sn**		**18 02 39.0**	**-1.7**
PATCX				IAML				18 02 40.6	
comp=N,3μm,0.3s									
PATCX	**Punta Patache**	**2.91**	**289**	⇑*i*P		**Pn**		**18 02 03.5**	**+0.3**
PATCX				*e*S		**Sn**		**18 02 39.0**	**-1.7**
PATCX				IAML				18 02 40.6	
comp=N,3μm,0.3s									
HMBC	**Humberstone**	**2.92**	**301**	⇑*i*P		**Pn**		**18 02 03.4**	**0.0**
HMBC				*e*S		**Sn**		**18 02 39.1**	**-1.9**
HMBC				IAML				18 02 39.9	
comp=N,4μm,0.4s									
HMBC	**Humberstone**	**2.92**	**301**	⇑*i*P		**Pn**		**18 02 03.4**	**0.0**
HMBC				*e*S		**Sn**		**18 02 39.1**	**-1.9**
HMBC				IAML				18 02 39.9	
comp=N,4μm,0.4s									
TA01	**Diego Aracena**	**3.03**	**294**			**Pn**		**18 02 04.4**	**-0.2**
TA01					Sn	**Sn**		**18 02 41.1**	**-2.0**
TA01	**Diego Aracena**	**3.03**	**294**	⇑*i*P		**Pn**		**18 02 04.3**	**-0.3**
TA01				*e*S		**Sn**		**18 02 40.9**	**-2.3**
TA01				IAML				18 02 42.9	
comp=N,2μm,0.4s									
TA01	**Diego Aracena**	**3.03**	**294**	⇑*i*P		**Pn**		**18 02 04.3**	**-0.3**
TA01				*e*S		**Sn**		**18 02 40.9**	**-2.3**
TA01				IAML				18 02 42.9	
comp=N,2μm,0.4s									
TA01	**Diego Aracena**	**3.03**	**294**	P		**Pn**		**18 02 04.6**	**0.0**
TA02	**Huaiquique**	**3.12**	**299**			**Pn**		**18 02 05.4**	**-0.4**
TA02	**Huaiquique**	**3.12**	**299**	*e*P		**Pn**		**18 02 05.3**	**-0.4**
TA02				*e*S		**Sn**		**18 02 42.6**	**-2.5**
TA02				IAML				18 02 44.5	
comp=N,2μm,0.4s									
TA02	**Huaiquique**	**3.12**	**299**	*e*P		**Pn**		**18 02 05.3**	**-0.4**
TA02				*e*S		**Sn**		**18 02 42.6**	**-2.5**
TA02				IAML				18 02 44.5	
comp=N,2μm,0.4s									
TA02	**Huaiquique**	**3.12**	**299**	P		**Pn**		**18 02 05.6**	**-0.1**
PB10	**IPOC Station P**	**3.52**	**241**	Pn		**Pn**		**18 02 10.5**	**0.0**
PB10	**IPOC Station P**	**3.52**	**241**	*e*P		**Pn**		**18 02 11.0**	**+0.5**
PB10				*e*S		**Sn**		**18 02 50.7**	**-3.2**
PB10				IAML				18 02 52.5	
comp=E,727nm,0.3s									
PB10	**IPOC Station P**	**3.52**	**241**	*e*P		**Pn**		**18 02 11.0**	**+0.5**
PB10				*e*S		**Sn**		**18 02 50.7**	**-3.2**
PB10				IAML				18 02 52.5	

comp=E,727nm,0.3s
GO02 Mina Guanaco 3.99 213 Pn **Pn 18 02 17.6 +1.0**
PB14 IPOC Station P 4.06 226 Pn **Pn 18 02 17.2 -0.4**
PB16 IPOC Station P 4.07 328 Pn **Pn 18 02 19.2 +1.1**
PB12 IPOC Station P 4.32 317 Pn **Pn 18 02 19.4 -1.3**
BBOE La Paz, Chanca 5.02 352 P **Pn 18 02 29.8 -0.3**
AC02 Maricunga 5.30 199 Pn **Pn 18 02 34.2 +0.6**
BBOD La Paz, Gloria 5.31 345 P **Pn 18 02 33.4 -0.4**
AC01 Pan de Azucar 5.32 215 Pn 18 02 32.5 -0.8
LPAZ La Paz 5.56 351 P **Pn 18 02 38.6 +1.5**
comp=E,5.5nm,0.5s,baz=154,slow=6.3,SNR=26
LPAZ S **Sn 18 03 40.5 -1.2**
comp=E,12nm,0.7s,baz=352,slow=19,SNR=1.9
LPAZ La Paz 5.56 351 Pn **Pn 18 02 38.5 +1.3**
AC06 Mina Casimiro 6.22 207 Pn 18 02 43.3 -1.8
AC04 Llanos de Chal 7.27 208 Pn **Pn 18 02 55.8 -3.0**
AC05 El Transito 7.53 201 Pn **Pn 18 03 00.8 -1.5**
BBSD Serra de San D 7.74 55 P **Pn 18 03 04.2 -0.9**
SIV San Ignacio 8.20 46 P **Pn 18 03 09.5 -1.6**
comp=E,60nm,0.4s,baz=241,slow=10,SNR=262
SIV S **Sn 18 04 39.0 -4.2**
comp=E,11nm,0.5s,baz=148,slow=18,SNR=7.8
SIV San Ignacio 8.20 46 P **Pn 18 03 10.1 -1.0**
CO01 Juntas del Tor 8.54 197 Pn **Pn 18 03 15.8 +0.1**
MURT Porto Murtinho 8.93 91 P **Pn 18 03 20.4 -0.2**
GO04 Tololo Observa 8.93 200 Pn **Pn 18 03 18.5 -2.3**
CO03 El Pedregal 9.52 198 Pn **Pn 18 03 26.1 -2.2**
CO06 Fray Jorge 9.68 203 Pn **Pn 18 03 27.2 -3.1**
CO02 Combarbal 9.95 199 Pn **Pn 18 03 30.8 -3.2**
CPUP Villa Florida 10.09 118 P **Pn 18 03 36.3 +0.6**
comp=E,2.7nm,0.7s,baz=304,slow=12,SNR=7.7
CPUP Villa Florida 10.09 118 Pn **Pn 18 03 37.6 +1.9**
CPUP Villa Florida 10.09 118 *eP* **Pn 18 03 39.1 +3.4**
ANTJ Antonio Joao (10.41 93 *eP* **Pn 18 03 42.1 +2.1**
AQDB Aquidauana 10.83 85 *eP* **Pn 18 03 47.0 +1.7**
VILB Vilhena 11.06 38 *eP* **Pn 18 03 49.4 +1.0**
VA03 San Esteban 11.31 194 Pn **Pn 18 03 50.4 -1.1**
MT02 Curacav 11.93 196 Pn **Pn 18 03 56.6 -2.7**
AZCA Azaras, Argent 11.95 124 *eP* **Pn 18 04 01.6 +2.0**
ETMB Extrema 11.96 5 *eP* **Pn 18 03 58.8 -1.1**
MT09 Talagante 12.38 195 Pn **Pn 18 04 05.3 +0.1**
SALV Santo Antonio 12.38 64 *eP* **Pn 18 04 07.1 +1.8**
BO04 La Punta 12.50 193 P **P 18 04 08.2 -2.8**
UNIS Unistalda (Bra 13.13 126 *eP* **Pn 18 04 15.8 +1.1**
BO02 Sierra Bellavi 13.31 193 P **P 18 04 18.1 -2.0**
TRCB Terra Rica 13.53 97 P 18 04 22.4 -0.2
RODS Rosario do Sul 13.74 131 *eP* **P 18 04 24.5 -0.3**
PTGB Pitanga 14.22 105 *eP* **P 18 04 32.5 +2.2**
PDRB Porto dos Gac 14.26 46 *eP* **Pn 18 04 29.4 +0.5**
ALGR Alto Alegre (B 14.59 121 *eP* **P 18 04 35.6 +1.3**
ITAB Concordia 14.75 114 P 18 04 37.4 +1.4
ITAB Concordia 14.75 114 *eP* **P 18 04 37.6 +1.7**
PCMB Pacaembu 14.83 92 *eP* **P 18 04 38.9 +1.9**
CPSB Cacapava Do Su 15.04 128 *eP* **P 18 04 40.7 +1.6**
CLDB Colider 15.42 47 *eP* **Pn 18 04 44.3 +1.1**
PLTB Pedras Altas 15.67 132 P **P 18 04 46.7 +0.5**
PLTB Pedras Altas 15.67 132 *eP* **P 18 04 47.5 +1.4**
FRTB Fartura 16.38 99 *eP* **Pn 18 04 56.5 +1.9**
CNLB Canela 16.54 120 *eP* **Pn 18 04 56.9 +0.4**
TRQA Tornquist 16.81 166 Pn 18 04 59.9 +0.2
TRQA IAmb IAmb 18 05 08.2
comp=Z,5.0nm,0.7s
BB19B Bebedouro 17.41 91 *eP* **P 18 05 06.8 +1.4**
TER01 Tubaro-SC 17.68 116 *eP* **P 18 05 08.3 +0.1**
SNDB Serra Nova Dou 18.09 60 *eP* **P 18 05 13.1 +0.3**
RCLB Rio Claro- Sao 18.25 96 *eP* **P 18 05 15.7 +1.1**
IPMB Ipameri, GO 18.27 81 *eP* **P 18 05 15.7 +0.9**
PET01 Itanhaem-SP 18.51 102 *eP* **P 18 05 18.0 +0.6**
NPGB Novo Progresso 18.61 40 *eP* **P 18 05 17.6 -1.0**
VAO Valinhos 18.76 97 *eP* **P 18 05 20.7 +0.6**
PLCA Paso Flores 19.08 188 P **Pn 18 05 24.3 -2.1**
comp=Z,2.1nm,0.8s,baz=15,slow=10,SNR=4.4
PLCA Paso Flores 19.08 188 P **P 18 05 22.1 -1.2**
PLCA Paso Flores 19.08 188 *eP* **Pn 18 05 24.6 -1.8**
BDFB Brasilia 19.18 75 P **P 18 05 25.4 +0.6**
comp=Z,1.9nm,0.3s,baz=252,slow=15,SNR=4.2
BDFB Brasilia 19.18 75 P **P 18 05 25.4 +0.6**
BDFB IAmb IAmb 18 06 08.3
comp=Z,11nm,1.4s
BDFB Brasilia 19.18 75 *eP* **P 18 05 25.9 +1.1**
PMNB Patos De Minas 19.77 84 *eP* **P 18 05 32.0 +0.9**
PARB Paraibuna 20.00 98 *eP* **P 18 05 33.6 +0.2**
ITTB Itaituba 20.60 34 *eP* **P 18 05 39.0 -0.8**
DIAM Diamantina, MG 22.38 85 *eP* **P 18 05 57.6 -0.5**
MC01 Montes Claros 22.54 81 *eP* **P 18 05 58.7 -0.8**
JANB Januaria 22.73 77 *eP* **P 18 05 60.0 -1.3**
SMTB Santa Maria do 22.85 59 *eP* **P 18 06 02.7 +0.4**
PRPB Parauapebas 22.91 50 *eP* **P 18 06 01.3 -1.5**
SDBA SAO DESIDERIO 23.25 70 *eP* **P 18 06 04.6 -1.4**
NAN01 Guarapari, ES 25.77 86 *eP* **P 18 06 29.3 +0.6**
GUA01 Guaratinga, BA 26.38 83 *eP* **P 18 06 34.5 +0.2**
GDU01 Guandu, BA 27.49 78 *eP* **P 18 06 42.8 -1.4**
VNA3 Neumayer Olymp 59.28 161 P **P 18 10 58.3 +1.8**
VNA1 Neumayer--Stat 59.47 161 P **P 18 10 59.9 +2.1**
SNAA Sanae 61.48 161 P **P 18 11 13.0 +1.5**
TROLL Troll, Antarti 63.19 161 P **P 18 11 24.7 +1.8**
DBIC Dimbokro 67.31 72 P **P 18 11 50.3 +0.1**
comp=E,4.0nm,0.7s,baz=238,slow=4.0,SNR=4.1
comp=Z,4.0nm,0.7s
PDAR Pinedale Array 75.17 329 P **P 18 12 38.9 +1.9**
comp=Z,0.2nm,0.5s,baz=124,slow=11,SNR=2.3
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 75.98 70 P **P 18 12 41.9 +0.1**
comp=Z,9.0nm,0.5s,baz=258,slow=5.9,SNR=100
comp=Z,9.0nm,0.5s
BOSA Boshof 81.91 117 P **P 18 13 14.9 +0.8**
comp=Z,3.0nm,0.6s,baz=262,slow=3.7,SNR=6.4
comp=Z,3.0nm,0.6s
ESDC Sonseca Array 84.95 44 P **P 18 13 30.1 +1.0**
comp=Z,1.0nm,0.8s,baz=259,slow=4.5,SNR=5.1
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 92.01 340 P **P 18 14 03.4 +1.5**
comp=Z,0.9nm,0.8s,baz=135,slow=4.2,SNR=1.9
comp=Z,0.9nm,0.8s
ASAR Alice Springs 130.35 206 PKP **PKiKP 18 20 04.5 -0.2**
comp=Z,0.3nm,0.5s,baz=132,slow=1.7,SNR=5.0
WRA Warramunga Arr 133.46 208 PKP **PKPdf 18 20 09.2 -0.5**
comp=Z,0.3nm,0.6s,baz=173,slow=1.6,SNR=0.8
ZALV Zalesovo Beam 141.54 26 PKP **PKPdf 18 20 22.2 -1.3**
comp=Z,0.4nm,0.4s,baz=316,slow=4.0,SNR=2.1
MKAR Makanchi Array 144.94 37 PKP **PKPab 18 20 30.4 +0.8**
comp=Z,4.1nm,0.7s,baz=310,slow=3.5,SNR=32
PZH PanZhiHua 168.89 63 PKP **PKPdf 18 20 56.1 -4.1**

IDC 10 18:14:37.5±35.0, 26°.56S×178°.59W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=626.0km s-min=145.4km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.85**	**274**	P	P	18 21 13.0	-0.2
	2.3nm,0.8s,baz=97,slow=9.3,SNR=2.7						
	2.3nm,0.8s						
STKA	**Stephens Creek**	**35.02**	**252**	P	P	18 21 30.3	-1.6
	1.7nm,0.6s,baz=104,slow=8.8,SNR=3.8						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**42.93**	**263**	P	P	18 22 39.0	+0.6
	1.2nm,0.6s,baz=90,slow=7.5,SNR=35						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**43.56**	**268**	P	P	18 22 43.8	+0.3
	1.5nm,0.8s,baz=107,slow=7.7,SNR=5.1						
	1.5nm,0.8s						

IDC 10 18:29:13.5±3.9, 4°.67S×142°.97E, h0km, mb3.2/2, mbtmp3.4/3, ML3.8/1, Error ellipse: s-maj=168.7km s-min=25.6km az=101.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.35**	**208**	P	Pn	18 33 17.1	-0.2
	0.4nm,0.3s,baz=24,slow=13,SNR=9.3						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**20.81**	**204**	P	P	18 33 56.3	-0.4
	0.2nm,0.4s,baz=29,slow=12,SNR=6.3						
	0.2nm,0.4s						
JHJ	**Hachijo jima 2**	**37.71**	**356**	P	P	18 36 29.5	-1.4
	268nm,0.5s,baz=176,slow=15,SNR=7.3						
SONM	**Songino Array**	**61.35**	**333**	P	P	18 39 32.9	+1.6
	0.6nm,1.1s,baz=132,slow=6.0,SNR=3.6						
	0.6nm,1.1s						

IDC 10 18:32:10.1±2.9, 6°.28S×130°.70E, h200km±39km, mb3.2/1, mbtmp3.8/4, Error ellipse: s-maj=85.3km s-min=15.9km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.41**	**6**	P	Pn	18 33 29.8	0.0
	3.6nm,0.3s,baz=174,slow=10,SNR=18						
SIJI				S	Sn	18 34 32.0	-0.8
	14nm,0.2s,baz=219,slow=22,SNR=12						
WRA	**Warramunga Arr**	**14.03**	**166**	P	P	18 35 22.2	-0.1
	0.8nm,0.3s,baz=345,slow=12,SNR=12						
WRA				S	S	18 37 48.2	-8.7
	0.8nm,0.4s,baz=340,slow=20,SNR=6.8						
ASAR	**Alice Springs**	**17.56**	**170**	P	P	18 36 02.0	+0.8
	1.7nm,0.5s,baz=345,slow=10.0,SNR=33						
ASAR				S	S	18 39 11.2	-2.2
	0.2nm,0.5s,baz=342,slow=27,SNR=2.0						
MKAR	**Makanchi Array**	**68.01**	**326**	P	P	18 42 48.3	+0.4
	0.4nm,0.5s,baz=116,slow=7.7,SNR=5.7						
	0.4nm,0.5s						

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*IDC **10** 18:32:09.8±2.6, 36°.06N×29°.90E, h0km, mb3.3/2, mbtmp3.2/3, ML2.7/1, MS2.8/1, Error ellipse: s-maj=74.0km s-min=24.7km az=132.0*
*DDA **10** 18:32:11.3±0.0, 37°.05N×28°.81E, h15km±3km, ML2.4*
*ISK **10** 18:32:11.1, 37°.07N×28°.86E, h10km, ML2.9/19*
*ATH **10** 18:32:12.2, 37°.10N×28°.75E, h63km±11km, ML2.7/3, Error ellipse: s-maj=11.7km s-min=1.9km az=169.0*
*THE **10** 18:32:12.2, 36°.99N×28°.74E, h0km±1km, ML2.5/3, Error ellipse: s-maj=2.5km s-min=1.1km az=37.0*
ISC 10 18:32:11.8±1.1, 37°.04N±0°.02×28°.81E±0°.02, h5km±9km, n50, σ1§57/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.26**	**209**	PG	**Pb**	**18 32 17.5**	**-1.5**
DALY				SG	**Sb**	**18 32 22.4**	**-1.3**
CAME	**Cameli-Denizli**	**0.41**	**104**	PG	**Pg**	**18 32 19.0**	**-0.7**
CAME				SG	**Sg**	**18 32 25.0**	**0.0**
CAEL	**Denizli, Camel**	**0.41**	**79**	P	**Pg**	**18 32 19.1**	**-0.7**
CAEL				S	**Sb**	**18 32 27.0**	**-1.4**
CAEL				*i* AML	AML	18 32 29.0	
	comp=E,1μm,0.6s						
CAEL				*i* AML	AML	18 32 30.0	
	comp=N,931nm,0.8s						
TAVA	**DENIZLI_Tavas**	**0.43**	**11**	P	**Pg**	**18 32 19.1**	**-0.9**
TAVA				S	**Sg**	**18 32 25.9**	**+0.1**
TAVA				*i* AML	AML	18 32 27.0	
	comp=E,554nm,0.3s						
TAVA				*i* AML	AML	18 32 28.0	
	comp=N,571nm,0.4s						
YER	**Yerkesik**	**0.43**	**282**	PG	**Pb**	**18 32 20.7**	**-1.3**
YER				SG	**Sb**	**18 32 27.5**	**-1.3**
YER	**Yerkesik**	**0.43**	**282**	P	**Pg**	**18 32 20.1**	**0.0**
MULA	**Mugla, Merkez-**	**0.45**	**298**	P	**Pg**	**18 32 20.2**	**-0.2**
MULA				S	**Sb**	**18 32 27.4**	**-1.8**
MULA				*i* AML	AML	18 32 30.0	
	comp=N,312nm,0.4s						
MULA				*i* AML	AML	18 32 32.0	
	comp=E,447nm,0.4s						
FETY	**Fethiye**	**0.46**	**152**	PG	**Pg**	**18 32 19.6**	**-1.1**
TURN	**Turunc**	**0.53**	**240**	PG	**Pb**	**18 32 22.8**	**-0.7**
TURN				SG	**Sb**	**18 32 30.9**	**-0.6**
APMY	**Acipayam-Deniz**	**0.58**	**42**	PG	**Pg**	**18 32 22.1**	**-0.8**
APMY				SG	**Sg**	**18 32 29.8**	**-0.7**
ELL	**Elmali**	**0.93**	**108**	PG	**Pg**	**18 32 28.9**	**-0.7**
ARG	**Arkhangelos**	**0.99**	**214**	PG	**Pn**	**18 32 31.7**	**-0.7**
ARG	**Arkhangelos**	**0.99**	**214**	P	**Pg**	**18 32 30.5**	**-0.3**
ARG				S	**Sb**	**18 32 44.2**	**-0.7**
	188nm,0.6s						
ARG	**Arkhangelos**	**0.99**	**214**	P	**Pn**	**18 32 32.6**	**+0.2**
ARG				S	**Sn**	**18 32 47.1**	**+0.3**
ARG				AML	AML	18 32 53.5	
	comp=E,387μm,0.4s						
ARG				AML	AML	18 32 54.1	
	comp=N,405μm,0.5s						
AKAS	**Kas**	**1.03**	**142**	PG	**Pg**	**18 32 31.0**	**-0.6**
KSL	**Kastellorizon**	**1.09**	**145**	P	**Pn**	**18 32 32.8**	**-0.9**
KSL				S	**Sn**	**18 32 49.0**	**-0.1**
	comp=N,372nm,0.5s						
KSL	**Kastellorizon**	**1.09**	**145**	P	**Pn**	**18 32 34.3**	**+0.6**
KSL				S	**Sn**	**18 32 51.3**	**+2.2**
KSL				AML	AML	18 32 54.9	
	comp=E,669μm,0.6s						
KSL				AML	AML	18 32 55.0	
	comp=N,819μm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.16**	**321**	PN	**Pn**	**18 32 33.7**	**-1.2**
BRDR	**BURDUR-Merkez**	**1.19**	**56**	P	**Pg**	**18 32 35.0**	**+0.4**
BRDR				S	**Sn**	**18 32 54.2**	**+2.4**
BRDR				*i* AML	AML	18 32 56.0	
	comp=N,64nm,0.5s						
BRDR				*i* AML	AML	18 32 59.0	
	comp=N,60nm,0.3s						
BODT	**Bodrum**	**1.20**	**271**	PN	**Pg**	**18 32 35.0**	**+0.2**
BODT	**Bodrum**	**1.20**	**271**	P	**Pb**	**18 32 33.6**	**-1.5**
BODT				S	**Sn**	**18 32 51.6**	**-0.4**
KORT	**Korkueli**	**1.23**	**92**	PN	**Pn**	**18 32 34.6**	**-1.2**
BASM	**Basmaki-Afyon**	**1.32**	**48**	PN	**Pn**	**18 32 35.6**	**-1.4**
DDIM	**Aydin, Didim**	**1.32**	**289**	P	**Pg**	**18 32 37.8**	**+0.7**
DDIM				S	**Sg**	**18 32 58.6**	**+4.4**
DDIM				*i* AML	AML	18 33 04.0	
	comp=N,113nm,1.0s						
DDIM				*i* AML	AML	18 33 05.0	
	comp=N,103nm,0.5s						
NIS1	**Nisyros Isl.**	**1.38**	**252**	PN	**Pb**	**18 32 37.4**	**-0.8**
NIS1	**Nisyros Isl.**	**1.38**	**252**	P	**Pb**	**18 32 37.3**	**-0.9**
GCAM	**G?zelcami?**	**1.42**	**298**	PN	**Pb**	**18 32 37.7**	**-1.0**
AKUM	**Antalya-Kumluc**	**1.43**	**120**	P	**Pg**	**18 32 41.0**	**+1.9**
AKUM				S	**Sg**	**18 33 02.5**	**+4.9**
AKUM				*i* AML	AML	18 33 06.0	
	comp=N,45nm,0.6s						
AKUM				*i* AML	AML	18 33 13.0	
	comp=N,36nm,0.5s						
MANT	**Manisa**	**1.46**	**352**	P	**Pb**	**18 32 38.4**	**-1.2**
MANT				S	**Sg**	**18 32 59.5**	**+0.8**
MANT				*i* AML	AML	18 33 03.0	
	comp=N,40nm,0.9s						
MANT				*i* AML	AML	18 33 05.0	
	comp=N,32nm,0.6s						
ANTB	**Antalya**	**1.48**	**95**	PN	**Pn**	**18 32 37.9**	**-1.2**
KOSK	**Kos Island**	**1.50**	**259**	PN	**Pb**	**18 32 39.5**	**-0.6**
KOSK	**Kos Island**	**1.50**	**259**	P	**Pg**	**18 32 40.4**	**-0.1**
KZIL	**AFYON_Kizioren**	**1.61**	**41**	P	**Pb**	**18 32 41.1**	**-1.0**
USAK	**Uak-Merkez**	**1.68**	**6**	P	**Pn**	**18 32 41.4**	**-0.5**
USAK				*i* AML	AML	18 33 17.0	
	comp=N,34nm,0.5s						
SMG	**Samos**	**1.71**	**293**	P	**Pn**	**18 32 41.6**	**-0.7**
SMG				S	**Sb**	**18 33 03.6**	**-1.9**
	comp=N,95nm,0.8s						
SMG	**Samos**	**1.71**	**293**	P	**Pn**	**18 32 41.8**	**-0.5**
DGB	**zmir**	**1.83**	**304**	P	**Pn**	**18 32 43.5**	**-0.5**
DGB				S	**Sg**	**18 33 13.1**	**+2.4**
DGB				*i* AML	AML	18 33 17.0	
	comp=N,24nm,0.7s						
DGB				*i* AML	AML	18 33 20.0	
	comp=N,31nm,1.1s						
BLCB	**Balcova**	**1.94**	**314**	PN	**Pn**	**18 32 45.3**	**-0.1**
KARP	**Karpathos**	**2.00**	**222**	PN	**Pn**	**18 32 46.4**	**+0.1**
KARP	**Karpathos**	**2.00**	**222**	P	**Pb**	**18 32 48.4**	**-0.3**
KARP				S	**Sg**	**18 33 14.4**	**-1.7**
KARP				AML	AML	18 33 23.5	
	comp=N,305μm,0.4s						
KARP				AML	AML	18 33 27.5	
	comp=E,233μm,0.7s						
GDZ	**Gediz**	**2.11**	**14**	P	**Pn**	**18 32 46.9**	**-1.0**
GDZ				S	**Sg**	**18 33 24.6**	**+5.0**
GDZ				*i* AML	AML	18 33 26.0	
	comp=E,25nm,0.8s						
GDZ				*i* AML	AML	18 33 27.0	
	comp=E,21nm,0.7s						
ZEYE	**Izmir, Urla-Ze**	**2.19**	**304**	P	**Pb**	**18 32 49.3**	**-2.6**
ZEYE				S	**Sg**	**18 33 26.2**	**+4.2**
ZEYE				*i* AML	AML	18 33 33.0	
	comp=E,36nm,0.7s						
ZEYE				*i* AML	AML	18 33 33.0	
	comp=E,18nm,0.9s						
URLA	**Izmir**	**2.19**	**307**	PN	**Pn**	**18 32 48.7**	**-0.3**
ZEDA	**zmir-Bergama**	**2.36**	**325**	P	**Pn**	**18 32 51.1**	**-0.1**
SEDI	**Konya, Seydise**	**2.38**	**79**	P	**Pb**	**18 32 53.7**	**-1.6**
SEDI				S	**Sb**	**18 33 25.2**	**+0.1**
SEDI				*i* AML	AML	18 33 29.0	
	comp=E,12nm,0.5s						
SEDI				*i* AML	AML	18 33 34.0	
	comp=E,11nm,0.6s						
STEP	**BALIKESIR_Sava**	**2.48**	**340**	P	**Pn**	**18 32 51.9**	**-1.0**
STEP				*i* AML	AML	18 33 40.0	
	comp=E,38nm,0.6s						
STEP				*i* AML	AML	18 33 43.0	
	comp=E,31nm,0.6s						
BRTR	**Keskin Array B**	**4.64**	**53**	Pn	**Pn**	**18 33 24.1**	**+1.3**
	comp=E,0.3nm,0.3s,baz=230,slow=14,SNR=10						
BRTR				Sn	**Sn**	**18 34 19.4**	**+2.3**
	comp=E,0.1nm,0.3s,baz=220,slow=18,SNR=1.9						
	comp=E,1.7nm,0.6s						
FINES	**FINESS Array B**	**24.48**	**357**	LR	LR	18 49 23.0	
	comp=E,20nm,19.9s,baz=38,slow=40						
NOA	**NORSAR Array B**	**26.46**	**341**	P	P	18 37 59.3	+10
	comp=E,0.2nm,0.6s,baz=142,slow=8.4,SNR=1.7						
	comp=E,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**33.97**	**233**	P	**P**	**18 38 56.3**	**-0.1**
	comp=E,0.3nm,0.5s,baz=43,slow=8.7,SNR=2.0						
	comp=E,0.3nm,0.5s						

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*NOU **10** 18:33:09.5, 37°.14S×179°.61E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **10** 18:33:26.5, 38°.5±17°.×17°.8E±1°.1, h38km±14km, M2.8/18, ML3.2/22, MLv2.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=18.9*
ISC 10 18:33:15.9±3.9, 37°.1S±0°.2×179°.3E±0°.3, h35km, n53, σ1§00/51, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.88**	**241**	P	**Pn**	**18 33 30.2**	**-1.5**
MXZ	**Matakaoa Point**	**0.88**	**241**	P	**Pn**	**18 33 30.2**	**-1.5**
WMGZ	**Waiomatatini S**	**0.96**	**225**	P	**Pn**	**18 33 34.0**	**+1.0**
PKGZ	**Pakihiroa**	**1.21**	**231**	P	**Pn**	**18 33 36.9**	**+0.4**
HAZ	**Te Kaha**	**1.34**	**242**	P	**Pn**	**18 33 37.3**	**-0.8**
TWGZ	**Tauwhareparae**	**1.46**	**224**	P	**Pn**	**18 33 41.0**	**+1.2**
RUGZ	**Raukumara Rang**	**1.51**	**236**	P	**Pn**	**18 33 41.6**	**+0.9**
CNGZ	**Carnagh Statio**	**1.59**	**212**	P	**Pn**	**18 33 43.2**	**+1.7**
WIZ	**White Island**	**1.70**	**256**	P	**Pn**	**18 33 43.1**	**0.0**
MWZ	**Matawai**	**1.83**	**229**	P	**Pn**	**18 33 45.6**	**+0.7**
WHRZ	**Whale Island**	**1.96**	**248**	P	**Pn**	**18 33 49.3**	**+2.6**
RIGZ	**Rimuhau**	**1.97**	**217**	P	**Pn**	**18 33 47.2**	**+0.4**
URZ	**Urewera**	**2.05**	**236**	P	**Pn**	**18 33 48.5**	**+0.7**
URZ	**Urewera**	**2.05**	**236**	P	**Pn**	**18 33 48.6**	**+0.8**
SNGZ	**Shannon Statio**	**2.24**	**222**	P	**Pn**	**18 33 51.4**	**+0.8**
KNZ	**Kokohu**	**2.27**	**213**	P	**Pn**	**18 33 50.6**	**-0.2**
RTZ	**Ruatahuna**	**2.34**	**230**	P	**Pn**	**18 33 53.1**	**+1.2**
MYRZ	**Mayor Island**	**2.42**	**266**	P	**Pn**	**18 33 52.8**	**-0.3**
MTHZ	**Maungataniwha**	**2.57**	**228**	P	**Pn**	**18 33 55.7**	**+0.6**
NMHZ	**Naumai**	**2.76**	**224**	P	**Pn**	**18 33 58.7**	**+1.0**
ARHZ	**Aropaoanui**	**2.78**	**219**	P	**Pn**	**18 33 58.4**	**+0.5**
KUZ	**Kuaotunu**	**2.87**	**277**	P	**Pn**	**18 33 58.9**	**-0.3**
KUZ	**Kuaotunu**	**2.87**	**277**	P	**Pn**	**18 33 58.9**	**-0.3**
BKZ	**Black Stump Fm**	**2.98**	**226**	P	**Pn**	**18 34 00.9**	**+0.1**
BKZ	**Black Stump Fm**	**2.98**	**226**	P	**Pn**	**18 34 01.1**	**+0.3**
TOZ	**Tahuroa Road**	**3.06**	**258**	P	**Pn**	**18 34 00.8**	**-0.9**
MCHZ	**McNeill Hill**	**3.07**	**221**	P	**Pn**	**18 34 02.2**	**+0.3**
GRZ	**Great Barrier**	**3.19**	**285**	P	**Pn**	**18 34 03.4**	**-0.1**
KWHZ	**Kaweka Forest**	**3.20**	**224**	P	**Pn**	**18 34 03.5**	**-0.2**
KAHZ	**Kahuranaki**	**3.25**	**215**	P	**Pn**	**18 34 03.6**	**-0.8**
MKAZ	**Moumakai**	**3.29**	**269**	P	**Pn**	**18 34 04.2**	**-0.7**
WIAZ	**Waiheke Island**	**3.33**	**275**	P	**Pn**	**18 34 05.9**	**+0.4**
KRHZ	**Kereru**	**3.38**	**221**	P	**Pn**	**18 34 06.1**	**-0.2**
TMVZ	**Te Maari**	**3.44**	**234**	P	**Pn**	**18 34 07.2**	**+0.2**
ETVZ	**East Tongariro**	**3.44**	**234**	P	**Pn**	**18 34 07.3**	**+0.1**
NTVZ	**North Tongarir**	**3.45**	**234**	P	**Pn**	**18 34 07.4**	**+0.2**
OTVZ	**Oturere**	**3.49**	**233**	P	**Pn**	**18 34 07.6**	**-0.3**
NNVZ	**North Ngauruho**	**3.50**	**234**	P	**Pn**	**18 34 09.4**	**+1.4**
WTVZ	**West Tongariro**	**3.51**	**235**	P	**Pn**	**18 34 10.0**	**+1.9**
SNVZ	**South Ngauruho**	**3.52**	**233**	P	**Pn**	**18 34 08.3**	**+0.1**
MBAZ	**Motutapu North**	**3.52**	**275**	P	**Pn**	**18 34 08.7**	**+0.5**
NGZ	**Ngauruhoe**	**3.54**	**234**	P	**Pn**	**18 34 08.8**	**+0.3**
MOVZ	**Moawhango**	**3.58**	**230**	P	**Pn**	**18 34 08.9**	**0.0**
HIZ	**Hauiti**	**3.76**	**247**	P	**Pn**	**18 34 13.0**	**+1.6**
TSZ	**Takapari Road**	**3.90**	**221**	P	**Pn**	**18 34 12.4**	**-1.0**
BFZ	**Birch Farm**	**4.25**	**213**	P	**Pn**	**18 34 16.6**	**-1.6**
BFZ	**Birch Farm**	**4.25**	**213**	P	**Pn**	**18 34 16.7**	**-1.5**
OUZ	**Omahuta**	**4.97**	**291**	P	**Pn**	**18 34 29.0**	**+1.0**
OUZ	**Omahuta**	**4.97**	**291**	P	**Pn**	**18 34 29.3**	**+1.2**
CAW	**Cannon Point**	**5.14**	**218**	P	Pn	18 34 35.1	+4.7
QRZ	**Quartz Range**	**6.41**	**233**	P	**Pn**	**18 34 46.3**	**-1.6**
CTZ	**Chatham Island**	**7.30**	**156**	P	**Pn**	**18 35 01.2**	**+1.3**
WVZ	**Waitaha Valley**	**8.82**	**225**	P	Pn	18 35 27.5	+6.6

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*ISN **10** 18:50:07.9±1.4, 37°.30N×42°.43E, h24km±12km, ML3.1*
*DDA **10** 18:50:08.9±0.0, 37°.14N×42°.54E, h1km±1km, ML2.5*
*ISK **10** 18:50:10.8, 37°.30N×42°.48E, h1km, ML3.0/13*
ISC 10 18:50:09.7±1.2, 37°.17N±0°.03×42°.59E±0°.03, h5km±10km, n32, σ1§40/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERV	**Siirt/Pervari-**	**0.78**	**357**	P	**Pg**	**18 50 24.1**	**-0.6**
HAKT	**HAKKARI**	**0.97**	**66**	P	**Pb**	**18 50 28.0**	**-1.2**
HAKT				S	**Sn**	**18 50 42.8**	**-1.9**
HAKT				*i* AML	AML	18 50 49.0	
	comp=N,123nm,0.5s			

OZAP *i* AML AML 18 51 22.0
comp=N,22nm,1.1s
MLAZ Malazgirt-MUS 1.97 359 PN **Pn 18 50 44.4 +0.4**
VMUR Van-Muradiye 1.98 23 P **Pg 18 50 46.7 -1.0**
VMUR S **Sg 18 51 16.7 +3.3**
VMUR *i* AML AML 18 51 20.0
comp=E,40nm,1.1s
VMUR *i* AML AML 18 51 24.0
comp=N,43nm,1.1s
DYBB Diyarbakir 2.10 293 PN **Pn 18 50 46.7 +1.1**
DYBB SN **Sn 18 51 12.2 0.0**
VRTB Varto-Mus 2.18 336 PN **Pn 18 50 47.1 +0.2**
CLDR Caldiran 2.24 28 PN **Pb 18 50 49.0 -1.8**
IKRK Kirkuk 2.26 141 *e*Pg **Pg 18 50 52.0 -1.0**
IKRK *e*Sg **Sg 18 51 22.0 -0.3**
IKRK AML AML 18 51 37.5
comp=N,138nm,0.8s
IKRK AML AML 18 51 54.9
comp=E,118nm,0.6s
BNGB Bingl 2.37 321 PN **Pn 18 50 49.8 +0.5**
AGRB Hanur-Agry 2.43 7 PN **Pn 18 50 51.7 +1.4**
KARO Karliova-Bingo 2.46 331 PN **Pn 18 50 51.3 +0.6**
YEDI Yedisu-Bingol 2.78 325 PN **Pn 18 50 56.1 +1.0**
URFA Urfa 3.02 276 PN **Pn 18 50 59.9 +1.7**
PTK Pertek 3.06 305 PN **Pn 18 51 00.1 +1.2**
ARPR Arapgir-MALATY 3.87 301 PN **Pn 18 51 11.4 +1.4**
BHD Baghdad 4.15 159 *e*Pn **Pn 18 51 14.0 +0.2**
BHD *e*Sn **Sn 18 52 03.0 +0.3**
IBDR Badra 4.88 145 *e*Pn **Pn 18 51 24.0 +0.1**
IBDR *e*Sn **Sn 18 52 21.0 +0.2**

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*IDC **10** 18:54:01.0±4.4,30.°08N×140.°48E,h0km,mb3.4/3, mbtmp3.5/4,ML3.0/1,Error ellipse: s-maj=161.4km s-min=30.9km az=60.0*
*JMA **10** 18:54:01.6±0.3,31.°N±2.°×14.°3E±.°,h143km,MV3.0/35, FAR E OFF IZU ISLANDS*

ISC 10 18:53:59.4±1.6,30.°71N±0.°08×142.°2E±0.°4,h35km,n10, σ1°43/13,mb3.5/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.60**	**180**	Pn	**Pn**	**18 54 54.1**	**+1.4**
	1.5nm,0.3s,baz=206,slow=22,SNR=1.9						
JCJ				Sn	**Sn**	**18 55 31.4**	**-2.7**
	5.2nm,0.3s,baz=311,slow=19,SNR=1.0						
	84nm,0.9s						
BSO1	**Boso 1**	**4.06**	**346**	*e*P	**Pn**	**18 54 59.3**	**+0.7**
BSO1				*e*S	**Sn**	**18 55 44.6**	**-0.1**
BSO3	**Boso 3**	**4.32**	**341**	*e*S	**Sn**	**18 55 50.0**	**-1.4**
JKUC	**kamogawauchiur**	**4.74**	**340**	*e*P	**Pn**	**18 55 09.3**	**+0.9**
JOD2	**Odawara 2**	**5.24**	**331**	*e*P	**Pn**	**18 55 16.3**	**+1.0**
JHU	**Hanno**	**5.68**	**335**	*e*P	**Pn**	**18 55 21.5**	**+0.2**
JHU				*e*S	**Sn**	**18 56 23.4**	**-1.8**
JHO	**Hitachi**	**6.04**	**347**	P	**Pn**	**18 55 24.8**	**-1.4**
MKAR	**Makanchi Array**	**48.25**	**307**	P	**P**	**19 02 37.3**	**+0.5**
	0.3nm,0.7s,baz=87,slow=9.4,SNR=2.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**50.93**	**190**	P	**P**	**19 02 57.1**	**-0.3**
	0.3nm,0.3s,baz=5.1,slow=7.6,SNR=4.6						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**54.65**	**189**	P	**P**	**19 03 26.1**	**+1.2**
	0.4nm,0.9s,baz=4.2,slow=5.7,SNR=2.2						
	0.4nm,0.9s						

HEL 10 19:01:10.0±0.3,65.°84N×24.°72E,h0km,ML0.7, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOF	**Tornio**	**0.29**	**326**	PG	Pg	19 01 14.4	-1.2
KALU	**Kalix**	**0.56**	**273**	PG	Pg	19 01 20.9	+0.2
KALU				SG	Sg	19 01 27.1	-0.9
OUL	**Oulu**	**0.90**	**146**	PG	Pg	19 01 25.9	-1.3
	baz=324						
ERTU	**Ertsjaerv**	**1.25**	**306**	PN	Pg	19 01 34.1	+0.1
PAJU	**Pajala**	**1.35**	**332**	PN	Pb	19 01 36.3	+0.1
PAJU				SN	Sn	19 01 55.1	+0.3
OBF0	**Syolatti, Pyha**	**1.36**	**189**	PG	Pg	19 01 34.2	-1.9
KLF	**Kolari**	**1.43**	**348**	PN	Pn	19 01 37.2	0.0
KLF				SN	Sn	19 01 56.7	0.0
OUF	**Merijarvi**	**1.48**	**180**	PG	Pn	19 01 37.4	-0.4
OUF				MSG		19 01 54.3	
	comp=Z,0.5nm,0.2s						
OBF8	**Ulkokalla**	**1.61**	**200**	PG	Pn	19 01 38.2	-1.3
LANU	**Lannavaara**	**2.47**	**335**	PG	Pb	19 01 55.4	+0.2
KTK1	**Kautokeino**	**3.24**	**351**	PG	Pb	19 02 08.3	0.0
ARA0	**ARCESS Array S**	**3.73**	**4**	PG	Pb	19 02 15.3	-1.3

BER 10 19:01:42.9±1.4,70.°32N×22.°74E,h0km,ML0.6, Suspected explosion,Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAMF	**Hammerfest**	**0.45**	**44**	*e*P	Pg	19 01 50.6	-1.0
HAMF				*e*S	Sg	19 01 57.2	-0.2
HAMF				IAML		19 02 10.9	
	comp=Z,4.0nm,0.6s						
ARA0	**ARCESS Array S**	**1.24**	**128**	*e*Pg	Pg	19 02 06.4	-0.1
ARA0				*e*S	Sg	19 02 20.8	-1.8
ARA0				IAML		19 02 41.7	
	comp=Z,2.0nm,0.7s						
KTK1	**Kautokeino**	**1.33**	**172**	*e*P	Pg	19 02 05.8	-2.5
KTK1				IAML		19 02 29.9	
	comp=Z,1.5nm,0.6s						
KIF	**Kilpisjarvi**	**1.49**	**208**	*e*P	Pn	19 02 08.8	-2.0
KIF	**Kilpisjarvi**	**1.49**	**208**	PB	Pn	19 02 08.8	-2.0
KEV	**Kevo**	**1.57**	**109**	*e*Pg	Pn	19 02 11.2	-0.7
KEV				*e*Sg	Sn	19 02 32.4	-0.5
KEV	**Kevo**	**1.57**	**109**	PN	Pn	19 02 11.1	-0.8

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*SKHL **10** 19:45:26.1±0.1,44.°40N×149.°40E,h53km±6km,mb4.5/4*
*JMA **10** 19:45:27.2±0.6,45.°N±3.°×14.°9E±.°,h30km,MV4.1/14,SE OFF ETOROFU*
*NIED **10** 19:45:27.2,44.°71N×149.°11E,h30km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.92; $M_{\theta\theta}$=4.86; $M_{\phi\phi}$=-3.94; $M_{r\theta}$=3.98; $M_{\theta\phi}$=0.08; $M_{\phi r}$=0.75; Fault plane solution: M_0=5.58000×10^{14} NP1: ϕ_s=140.00000°,δ53.00000°,λ3.00000°. NP2:ϕ_s=48.00000°, δ88.00000°,λ143.00000°.*

ISC 10 19:45:22.3±3.6,44.°27N±0.°07×149.°6E±0.°2,h36km,n16, σ2°80/30,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.59**	**308**	*i* P	**Pn**	**19 45 47.7**	**-0.1**
KUR				AMB	AMB	19 45 49.8	
	80nm,0.2s						
KUR				*e*S	**Sn**	**19 46 03.8**	**-3.2**
KUR				A	A	19 46 04.4	
	1μm,0.5s						
KUR				A	A	19 46 04.4	
	770nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.73**	**266**	*i* P	**Pn**	**19 46 05.1**	**+1.7**
YUK				AMB	AMB	19 46 06.7	
	200nm,0.4s						
YUK				*e*S	**Sn**	**19 46 34.4**	**-0.7**
YUK				A	A	19 46 52.7	
	560nm,0.6s						
YUK				A	A	19 46 52.7	
	290nm,0.6s						
NEM2	**Nemuro 2**	**2.96**	**254**	*e*P	**Pn**	**19 46 08.5**	**+1.9**
NEM2				*e*S	**Sn**	**19 46 39.0**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.97**	**254**	*e*P	**Pn**	**19 46 08.7**	**+1.9**
NMR				AMB	AMB	19 46 12.4	
	30nm,0.2s						
NMR				*i* S	**Sn**	**19 46 40.5**	**-0.6**
NMR				A	A	19 46 48.5	
	90nm,0.3s						
NMR				A	A	19 46 48.5	
	120nm,0.3s						
JRA	**Rausu**	**3.27**	**266**	*e*P	**Pn**	**19 46 13.5**	**+2.7**
JRA				*e*S	**Sn**	**19 46 48.2**	**-0.3**
JNK	**Nakash**	**3.62**	**261**	*e*P	**Pn**	**19 46 18.1**	**+2.4**
JNK				*e*S	**Sn**	**19 46 55.8**	**-1.3**
AKK	**Akkeshi**	**3.70**	**252**	*e*P	**Pn**	**19 46 19.3**	**+2.5**
AKK				*e*S	**Sn**	**19 46 58.5**	**-0.6**
JAK	**Akkeshi**	**3.80**	**252**	*e*P	**Pn**	**19 46 20.4**	**+2.1**
JAK				*e*S	**Sn**	**19 47 00.4**	**-1.4**
JTKR	**Abashiri--Toko**	**4.13**	**268**	*e*P	**Pn**	**19 46 25.9**	**+3.1**
JAR	**Ashorobuto**	**4.36**	**259**	*e*P	**Pn**	**19 46 29.2**	**+3.3**
JAR				*e*S	**Sn**	**19 47 16.0**	**+0.6**
JOB	**Onbets**	**4.43**	**254**	*e*P	**Pn**	**19 46 29.6**	**+2.7**
JCH	**Churui**	**4.86**	**252**	*e*P	**Pn**	**19 46 35.5**	**+2.8**
JCH				*e*S	**Sn**	**19 47 26.1**	**-1.7**
JNBK	**Urakawa-nobuka**	**5.40**	**251**	*e*P	**Pn**	**19 46 42.9**	**+2.6**
JNBK				*e*S	**Sn**	**19 47 39.6**	**-1.6**
YSS	**Yuzh-Sakhalins**	**5.52**	**301**	*e*P	**Pn**	**19 46 43.8**	**+1.9**
YSS				AMB	AMB	19 46 47.6	
	20nm,0.4s						
YSS				*e*S	**Sn**	**19 47 42.0**	**-2.1**
YSS				A	A	19 47 50.3	
	20nm,0.5s						
YSS				A	A	19 47 50.3	
	10.0nm,0.5s						
JANG	**Nango**	**7.17**	**240**	*e*P	**Pn**	**19 47 06.2**	**+1.7**
JANG				*e*S	**Sn**	**19 48 17.8**	**-6.8**
JTH	**Tanohata**	**7.22**	**236**	*e*P	**Pn**	**19 47 07.2**	**+2.0**
JTH				*e*S	**Sn**	**19 48 18.8**	**-7.0**

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*NEIC **10** 20:01:32.8±0.7,43.°79N±0.°05×105.°32W±0.°05,h0km±2km, ML3.2/70,Error ellipse: s-maj=9.0km s-min=5.7km az=330.0*
*IDC **10** 20:01:33.0±0.9,44.°03N×105.°77W,h0km,mb3.8/3, mbtmp3.5/8,ML3.1/5,Error ellipse: s-maj=24.4km s-min=8.6km az=145.0*

ISC 10 20:01:32.0±0.8,43.°79N±0.°05×105.°38W±0.°05,h0km,n70, σ1°35/70,mb3.9/3,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**71**		**Pg**	**20 01 51.4**	**-0.2**
K22A	**Casper**	**1.41**	**217**	Pn	**Pg**	**20 01 58.3**	**-0.7**
K22A				IAML		20 02 24.6	
	comp=E,218nm,0.8s						
PHWY	**Pilot Hill**	**2.48**	**181**	Pn	**Pn**	**20 02 14.8**	**+0.8**
PHWY				IAML		20 02 57.1	
	comp=E,86nm,0.6s						
RWWY	**Rawlins**	**2.49**	**213**	Pn	**Pn**	**20 02 15.2**	**+1.2**
RWWY				IAML		20 02 53.0	
	comp=E,112nm,0.7s						
N23A	**Red Feather La**	**2.92**	**188**	Pn	**Pn**	**20 02 20.7**	**+0.8**
N23A				IAML		20 03 04.3	
	comp=N,107nm,0.7s						
N23A				IAML		20 03 12.3	
	comp=E,75nm,0.8s						
LAO	**LASA Array**	**2.96**	**349**		**Pn**	**20 02 21.4**	**+1.1**
RLMT	**Red Lodge**	**3.09**	**297**	Pn	**Pn**	**20 02 23.2**	**+1.1**
RLMT				IAML		20 03 22.4	
	comp=E,43nm,0.7s						
RLMT				IAML		20 03 30.2	
	comp=E,38nm,1.0s						
BW06	**Boulder Array**	**3.22**	**253**	Pn	**Pn**	**20 02 23.0**	**-1.0**
BW06				IAML		20 03 22.5	
	comp=E,39nm,0.9s						
PD31	**Pinedale Array**	**3.22**	**253**	Pn	**Pn**	**20 02 25.4**	**+1.4**
PDAR	**Pinedale Array**	**3.22**	**253**	Pn	**Pn**	**20 02 23.9**	**0.0**
	comp=E,2.5nm,0.3s,baz=63,slow=18,SNR=30						
PDAR				Pg	**Pg**	**20 02 33.4**	**-0.3**
	comp=E,3.7nm,0.3s,baz=71,slow=20,SNR=28						
PDAR				Lg	Lg	20 03 08.9	
	comp=E,6.5nm,0.3s,baz=74,slow=37,SNR=3.7						
	comp=E,3.3nm,0.4s						
PDAR	**Pinedale Array**	**3.22**	**253**	Pn	**Pn**	**20 02 25.0**	**+1.0**
GCMT	**Greycliff**	**3.65**	**305**	Pn	**Pn**	**20 02 30.9**	**+1.1**
OGNE	**Ogallala**	**3.77**	**138**		**Pn**	**20 02 31.3**	**-0.2**
H17A	**Grant Village**	**3.79**	**281**	Pn	**Pn**	**20 02 29.4**	**-2.5**
LOHW	**Long Hollow**	**3.79**	**269**		**Pn**	**20 02 29.3**	**-2.6**
MOOW	**Moose Ponds**	**3.89**	**271**		**Pn**	**20 02 30.5**	**-2.7**
SNOW	**Snow King Moun**	**3.92**	**267**		**Pn**	**20 02 31.4**	**-2.1**
SNOW				IAML		20 03 28.9	
	comp=E,42nm,4.5s						
SNOW				IAML		20 03 55.9	
	comp=E,39nm,0.8s						
YNR	**Norris Junctio**	**3.92**	**286**	Pn	**Pn**	**20 02 31.0**	**-2.6**
YNR				IAML		20 03 17.5	
	comp=E,20nm,3.9s						
YFT	**Old Faithful**	**3.98**	**281**		**Pn**	**20 02 33.2**	**-1.4**
ISCO	**Idaho Springs**	**3.99**	**183**	Pn	**Pn**	**20 02 33.2**	**-1.4**
ISCO				IAML		20 03 42.4	
	comp=E,20nm,0.9s						
ISCO				IAML		20 03 48.8	
	comp=E,20nm,3.7s						
REDW	**Red Top Meadow**	**4.00**	**266**	Pn	**Pn**	**20 02 35.6**	**+0.9**
REDW				IAML		20 03 54.8	
	comp=E,39nm,0.7s						
IMW	**Indian Meadow**	**4.02**	**273**	Pn	**Pn**	**20 02 37.0**	**+1.9**
IMW				IAML		20 03 53.1	
	comp=E,21nm,1.2s						
IMW				IAML		20 04 02.4	
	comp=E,23nm,0.6s						
YHH	**Holmes Hill**	**4.05**	**286**	Pn	**Pn**	**20 02 38.4**	**+2.8**
YHH				IAML		20 03 15.0	
	comp=E,17nm,4.5s						
YHH				IAML		20 03 49.0	
	comp=N,17nm,1.1s						
TPAW	**Teton Pass**	**4.05**	**268**	Pn	**Pn**	**20 02 34.5**	**-1.0**
TPAW				IAML		20 04 00.1	
	comp=N,20nm,2.6s						
TPAW				IAML		20 04 08.4	
	comp=N,30nm,0.9s						
FXWY	**Fox Creek**	**4.10**	**270**	Pn	**Pn**	**20 02 36.6**	**+0.5**
O20A	**White River Ci**	**4.23**	**211**		**Pn**	**20 02 37.5**	**-0.3**
O20A				IAML		20 04 23.6	
	comp=E,29nm,4.0s						
YHL	**Hebgen Lake**	**4.30**	**286**		**Pn**	**20 02 37.9**	**-1.0**
YHL				IAML		20 04 10.6	
	comp=N,27nm,0.9s						
YHL				IAML		20 04 13.7	
	comp=E,33nm,0.8s						
AHID	**Auburn Hatcher**	**4.30**	**258**		**Pn**	**20 02 38.3**	**-0.5**
E28A	**Huff**	**4.33**	**48**		**Pn**	**20 02 38.3**	**-0.8**
ECR	**Eagle Creek**	**4.43**	**263**		**Pn**	**20 02 38.2**	**-2.4**
RDMU	**Red Mountain**	**4.47**	**226**		**Pn**	**20 02 39.3**	**-1.9**
RDMU				IAML		20 04 02.0	
	comp=E,28nm,2.7s						
RDMU				IAML		20 04 04.7	
	comp=N,24nm,1.0s						
DGMT	**Dagmar**	**4.76**	**10**		**Pn**	**20 02 43.9**	**-1.0**
SMCO	**Snowmass**	**4.76**	**195**		**Pn**	**20 02 43.6**	**-1.7**
SMCO				IAML		20 04 03.2	
	comp=N,26nm,2.7s						
BOZ	**Bozeman (W)**	**4.81**	**294**	Pn	**Pn**	**20 02 45.6**	**-0.1**
BOZ				IAML		20 04 10.7	
	comp=N,17nm,0.9s						
BOZ				IAML		20 04 20.6	
	comp=N,15nm,4.8s						
Q24A	**Divide**	**4.82**	**178**		**Pn**	**20 02 46.7**	**+0.6**
Q24A				IAML		20 04 08.1	
	comp=E,23nm,0.7s						
Q24A				IAML		20 05 10.2	
	comp=N,22nm,4.6s						
K31A	**O'Neill**	**4.98**	**101**	Pn	Pn	20 02 43.1	-4.9
HWUT	**Hardware Ranch**	**5.05**	**247**	Pn	**Pn**	**20 02 48.6**	**-0.6**
TCUT	**Toone Canyon**	**5.20**	**241**	Pn	**Pn**	**20 02 51.3**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.20**	**156**	Pn	**Pn**	**20 02 48.9**	**-2.3**
EGMT	**Eagleton**	**5.22**	**326**		**Pn**	**20 02 51.8**	**+0.4**
LRM	**Limekiln Ridge**	**5.43**	**294**	Pn	**Pn**	**20 02 54.5**	**+0.2**
MCMT	**McKenzie Canyo**	**5.46**	**284**	Pn	**Pn**	**20 02 55.6**	**+0.8**
P18A	**Preston Nutter**	**5.53**	**223**	Pn	**Pn**	**20 02 56.7**	**+1.0**
CTU	**Camp Tracy**	**5.65**	**239**	Pn	**Pn**	**20 02 56.8**	**-0.5**
MDND	**Maddock**	**5.73**	**43**	Pn	**Pn**	**20 02 57.5**	**-0.7**
SPUT	**South Promonto**	**5.78**	**247**		**Pn**	**20 02 57.5**	**-1.6**
HVU	**Hansel Valley**	**5.80**	**252**	Pn	**Pn**	**20 03 00.8**	**+1.4**
PV22	**Blue Mesa, Par**	**5.84**	**207**	Pn	**Pn**	**20 02 58.8**	**-1.2**
PV07	**Paradox Valley**	**5.89**	**206**	Pn	**Pn**	**20 03 01.1**	**+0.5**
P17A	**Butcher Ranch,**	**5.89**	**225**	Pn	**Pn**	**20 03 02.0**	**+1.4**
PV15	**Paradox Valley**	**5.92**	**204**	Pn	**Pn**	**20 03 01.1**	**0.0**
SDCO	**Great Sand Dun**	**6.04**	**181**	Pn	**Pn**	**20 03 04.7**	**+1.9**
SRU	**San Rafael Swe**	**6.06**	**221**	Pn	**Pn**	**20 03 02.7**	**-0.3**
PV11	**David Mesa, Pa**	**6.08**	**207**		**Pn**	**20 03 04.8**	**+1.4**
PV13	**Radium Mtn., P**	**6.20**	**206**	Pn	**Pn**	**20 03 05.6**	**+0.7**
TMUT	**Trail Mountain**	**6.26**	**226**		**Pn**	**20 03 07.3**	**+1.4**
NLU	**North Lily Min**	**6.29**	**235**	Pn	**Pn**	**20 03 06.8**	**+0.5**
BGU	**Big Grassy Mou**	**6.35**	**246**	Pn	**Pn**	**20 03 07.8**	**+0.9**
ECSD	**EROS Data Cent**	**6.35**	**87**	Pn	**Pn**	**20 03 07.1**	**+0.3**
Q16A	**Castle Valley**	**6.53**	**224**	Pn	**Pn**	**20 03 07.0**	**-2.4**
DUG	**Dugway, Tooele**	**6.60**	**240**	Pn	**Pn**	**20 03 09.0**	**-1.4**
MSU	**Marysvale**	**7.35**	**227**	Pn	**Pn**	**20 03 21.5**	**+0.8**
TCRU	**Three Creeks R**	**7.42**	**228**	Pn	**Pn**	**20 03 22.4**	**+0.6**
ELK	**Elko**	**7.92**	**251**	Pn	**Pn**	**20 03 30.1**	**+1.5**
	comp=N,0.1nm,0.3s,baz=51,slow=14,SNR=2.4						
	comp=N,0.6nm,0.6s						
ULM	**Lac du Bonnet**	**9.16**	**42**	Pn	**Pn**	**20 03 44.5**	**-0.8**
	comp=N,1.3nm,0.3s,baz=228,slow=12,SNR=7.1						
ULM				Lg	Lg	20 06 14.0	
	comp=N,0.4nm,0.3s,baz=287,slow=19,SNR=1.9						
	comp=N,3.5nm,0.4s						
NVAR	**Mina Array Bea**	**11.12**	**246**	Pn	**Pn**	**20 04 15.2**	**+2.8**
	comp=N,0.1nm,0.3s,baz=53,slow=14,SNR=4.2						
	comp=N,0.7nm,0.7s						
TXAR	**Lajitas Array**	**14.49**	**174**	Pn	**P**	**20 05 04.9**	**-0.4**
	baz=12,slow=14,SNR=2.0						
TXAR				Lg	Lg	20 09 10.3	
	baz=5.2,slow=31,SNR=2.8						
	comp=N,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**82.25**	**354**	P	**P**	**20 13 54.7**	**0.0**
	comp=N,0.4nm,0.5s,baz=352,slow=7.3,SNR=1.9						
	comp=N,0.4nm,0.5s						
SONM	**Songino Array**	**84.56**	**339**	P	**P**	**20 14 07.2**	**+0.2**
	comp=N,0.6nm,0.8s,baz=357,slow=4.9,SNR=2.5						
	comp=N,0.6nm,0.8s						
MKAR	**Makanchi Array**	**89.55**	**355**	P	**P**	**20 14 31.1**	**+0.1**
	comp=N,0.5nm,0.7s,baz=5.7,slow=3.7,SNR=5.7						
	comp=N,0.5nm,0.7s						

IDC 10 20:06:13.0±6.1,15.°53S×176.°85W,h394km±31km, mb3.2/2,mbtmp3.8/3,Error ellipse: s-maj=237.1km s-min=36.5km az=139.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.35**	**245**	P	Pn	20 07 38.9	+0.3
	6.1nm,0.6s,baz=65,slow=15,SNR=6.2						
ASAR	**Alice Springs**	**46.90**	**252**	P	P	20 14 05.7	-0.5
	0.5nm,0.3s,baz=83,slow=8.1,SNR=10						
	0.5nm,0.3s						
ILAR	**Eielson Array**	**83.25**	**12**	P	P	20 17 55.5	-0.6
	0.7nm,0.6s,baz=225,slow=5.1,SNR=5.6						
	0.7nm,0.6s						
BRTR	**Keskin Array B**	**144.09**	**318**	PKP	PKPab	20 25 01.7	-0.3
	0.3nm,0.5s,baz=149,slow=3.0,SNR=4.2						
MMAI	**Mount Meron Ar**	**146.02**	**307**	PKPbc	PKPbc	20 25 08.6	+0.6
	0.8nm,0.5s,baz=85,slow=6.1,SNR=3.9						

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*JMA **10** 20:18:02.8±0.2,23.°1N±0.°7×12.°2E±.°,h5km±2km,MV3.6/13, TAIWAN REGION*
*TAP **10** 20:18:04.3,23.°11N×121.°50E,h13km,ML4.0,C*
*NEIC **10** 20:18:04.0±2.1,22.°96N±0.°09×121.°59E±0.°04, h35km±13km,Error ellipse: s-maj=13.4km s-min=3.2km az=159.0*

ISC 10 20:18:03.1±0.9,23.°08N±0.°02×121.°56E±0.°02,h19km±2km, n175,σ0°98/252,23C-27D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.18**	**277**	*e*S	**Sb**	**20 18 07.6**	**-1.9**
	baz=266						
ECBN	**Changbin**	**0.26**	**337**	⇑*i*P	**Pg**	**20 18 09.1**	**-0.1**
	baz=355						
ECBN				*i* S	**Sb**	**20 18 12.7**	**-0.2**
	baz=355						
EDH	**Donghe**	**0.26**	**246**	⇑*i*P	**Pg**	**20 18 09.7**	**+0.5**
	baz=225						
EDH				*i* S	**Sg**	**20 18 13.6**	**+0.4**
	baz=225						
FULB	**Fuli**	**0.27**	**296**	⇓*i*P	**Pg**	**20 18 09.3**	**-0.1**
	baz=297						
FULB				*i* S	**Sb**	**20 18 13.0**	**-0.5**
	baz=297						
ECS	**Chishang**	**0.32**	**273**	⇑*i*P	**Pb**	**20 18 10.6**	**+0.4**
	baz=266						
ECS				S	**Sb**	**20 18 15.5**	**+0.6**
	baz=266						
EHD	**Haiduan**	**0.34**	**282**	⇓*e*P	**Pg**	**20 18 09.5**	**-0.9**
	baz=279						
EHD				*e*S	**Sg**	**20 18 13.4**	**-1.9**
	baz=279						
EYUL	**Yuli**	**0.35**	**320**	⇓P	**Pb**	**20 18 11.2**	**+0.4**
	baz=327						
EYUL				S	**Sb**	**20 18 16.3**	**+0.4**
	baz=327						
TWF1	**Yuli**	**0.36**	**318**	⇓*i*P	**Pb**	**20 18 11.3**	**+0.2**
	baz=325						
TWF1				S	**Sb**	**20 18 16.5**	**0.0**
	baz=325						
YULB	**Yu-li**	**0.40**	**322**	Pg	**Pb**	**20 18 11.5**	**-0.1**
YULB	**Yu-li**	**0.40**	**322**	⇓*i*P	**Pb**	**20 18 11.9**	**+0.3**
	baz=328						
YULB				*i* S	**Sb**	**20 18 17.8**	**+0.4**
	baz=328						
LDUT	**Ludao**	**0.41**	**192**	⇑*i*P	**Pn**	**20 18 12.7**	**-1.3**
	baz=192						
LDUT				*e*S	**Sn**	**20 18 19.4**	**-1.7**
	baz=192						
HGSD	**Ruisui**	**0.43**	**343**	⇑*i*P	**Pb**	**20 18 12.6**	**+0.4**
	baz=352						
HGSD				*i* S	**Sb**	**20 18 18.3**	**0.0**
	baz=352						
LONT	**Longtian**	**0.43**	**247**	*e*P	**Pb**	**20 18 12.5**	**+0.2**
	baz=237						
LONT				*e*S	**Sb**	**20 18 19.1**	**+0.7**
	baz=237						
EHY	**Hungye**	**0.48**	**333**	⇑*i*P	**Pb**	**20 18 13.5**	**+0.5**
	baz=341						
EHY				S	**Sb**	**20 18 20.0**	**+0.4**
	baz=341						
TTN	**Taitung**	**0.50**	**230**	⇑*e*P	**Pg**	**20 18 12.2**	**-1.1**
	baz=220						
TTN				*e*S	**Sb**	**20 18 20.3**	**+0.1**
	baz=220						
ELDTW	**Lidau**	**0.51**	**282**	⇓*i*P	**Pb**	**20 18 13.2**	**-0.4**
	baz=280						
ELDTW				S	**Sg**	**20 18 19.1**	**-1.6**
	baz=280						
TWGBT	**Beinan**	**0.51**	**240**	⇑*i*P	**Pg**	**20 18 13.9**	**+0.3**
	baz=246						
TWGBT				*i* S	**Sb**	**20 18 20.9**	**+0.3**
	baz=246						
TWG	**Pinlang**	**0.52**	**240**	Pg	**Pg**	**20 18 13.6**	**-0.1**
TWG	**Pinlang**	**0.52**	**240**	⇑*i*P	**Pg**	**20 18 14.0**	**+0.3**
	baz=219						
TWG				*e*S	**Sb**	**20 18 20.6**	**-0.1**
	baz=219						
EGFH	**Guangfu**	**0.60**	**348**	*e*P	**Pn**	**20 18 16.0**	**-0.7**
	baz=355						
TEGC	**Jichi Village**	**0.63**	**358**	*e*P	**Pn**	**20 18 16.3**	**-0.8**
	baz=18						
YUS	**Yu-Shan**	**0.69**	**306**	⇓*i*

	baz=23						
WHYT	**Xinyi Township**	**0.90**	**314**	⇓P	**Pn**	**20 18 20.9**	**+0.2**
	baz=310						
WHYT				*e*S	**Sg**	**20 18 31.9**	**-0.7**
	baz=310						
SSLB	**Suanglung**	**0.90**	**322**		**Pg**	**20 18 20.3**	**-0.5**
SSLB	**Suanglung**	**0.90**	**322**	⇓*i*P	**Pn**	**20 18 20.6**	**-0.2**
	baz=338						
SSLB				S	**Sb**	**20 18 31.1**	**-0.7**
	baz=338						
SGST	**Jiashian**	**0.90**	**270**	⇓*i*P	**Pb**	**20 18 19.8**	**-0.3**
	baz=267						
SGST				*e*S	**Sb**	**20 18 31.1**	**-0.6**
	baz=267						
SSD	**Sandimen**	**0.92**	**249**	⇑*i*P	**Pb**	**20 18 19.9**	**-0.5**
	baz=243						
SSD				*e*S	**Sb**	**20 18 30.4**	**-1.9**
	baz=243						
TSMG	**Majia**	**0.92**	**246**	*e*P	**Pn**	**20 18 20.3**	**-0.8**
	baz=229						
CHN4	**Tsaushan**	**0.93**	**287**	⇓*e*P	**Pn**	**20 18 20.5**	**-0.7**
	baz=287						
CHN4				*e*S	**Sn**	**20 18 33.6**	**-0.4**
	baz=287						
OWD	**Renai**	**0.94**	**338**	*e*P	**Pn**	**20 18 21.0**	**-0.4**
	baz=356						
WCKO	**Fanlu**	**0.95**	**292**	⇓P	**Pn**	**20 18 20.9**	**-0.6**
	baz=293						
WCKO				S	**Sg**	**20 18 33.8**	**-0.5**
	baz=293						
EAST	**Anshuo**	**0.95**	**224**	*e*P	**Pb**	**20 18 20.6**	**-0.5**
	baz=217						
CHN1	**Nanshi**	**0.96**	**277**	⇓*i*P	**Pg**	**20 18 22.0**	**+0.1**
	baz=275						
CHN1				S	**Sn**	**20 18 35.0**	**+0.3**
	baz=275						
CHN5	**Tsauling**	**0.96**	**303**	⇓P	**Pn**	**20 18 21.3**	**-0.4**
	baz=303						
MASBT	**Mashibuluo**	**0.97**	**242**	⇑*i*P	**Pn**	**20 18 21.1**	**-0.7**
	baz=226						
SNST	**Tainan City**	**0.99**	**278**	P	**Pg**	**20 18 23.4**	**+1.0**
	baz=277						
SNST				*e*S	**Sn**	**20 18 37.4**	**+1.9**
	baz=277						
WUSB	**Renai**	**1.00**	**336**	P	**Pg**	**20 18 22.1**	**-0.5**
	baz=340						
TWD	**Chiawan**	**1.00**	**2**	⇑*e*P	**Pb**	**20 18 21.7**	**-0.1**
	baz=23						
SCST	**Cishan**	**1.00**	**259**	⇑P	**Pg**	**20 18 22.9**	**+0.3**
	baz=250						
SCST				*e*S	**Sg**	**20 18 37.1**	**+1.2**
	baz=250						
SMLT	**Sun Moon Lake**	**1.00**	**323**	P	**Pg**	**20 18 22.6**	**-0.2**
	baz=340						
SMLT				*e*S	**Sg**	**20 18 36.0**	**0.0**
	baz=340						
TWK	**Hsinying**	**1.01**	**281**	⇓*i*P	**Pg**	**20 18 22.6**	**-0.2**
	baz=279						
TWK				S	**Sg**	**20 18 36.7**	**+0.7**
	baz=279						
LAY	**Lan-yu**	**1.03**	**181**	*e*P	**Pb**	**20 18 21.6**	**-0.8**
	baz=175						
CHGB	**Renai**	**1.04**	**340**	⇑P	**Pg**	**20 18 23.0**	**-0.4**
	baz=357						
TYC	**Yuchr**	**1.05**	**322**	*e*P	**Pg**	**20 18 23.2**	**-0.3**
	baz=339						
TYC				*e*S	**Sg**	**20 18 38.1**	**+0.8**
	baz=339						
SGLT	**Jiouru**	**1.05**	**251**	*e*P	**Pg**	**20 18 24.0**	**+0.5**
	baz=246						
TSPT	**Pingtung City**	**1.06**	**248**	*e*P	**Pg**	**20 18 26.9**	**+3.1**
	baz=234						
WJS	**Zhushan**	**1.06**	**314**	*e*P	**Pg**	**20 18 24.7**	**+0.8**
	baz=330						
WJS				*e*S	**Sg**	**20 18 39.4**	**+1.5**
	baz=330						
LYUB	**Lan-yu**	**1.07**	**179**	*e*P	**Pb**	**20 18 21.3**	**-1.7**
	baz=173						
LYUB				*e*S	**Sb**	**20 18 33.6**	**-3.0**
	baz=173						
ETL	**Fush Village**	**1.08**	**3**	P	**Pn**	**20 18 23.1**	**-0.2**
	baz=23						
TWM1	**Shoushan**	**1.08**	**257**	⇑*i*P	**Pg**	**20 18 24.9**	**+0.8**
	baz=252						
TWM1				*e*S	**Sg**	**20 18 41.9**	**+3.5**
	baz=252						
WPL	**Puli Township**	**1.08**	**329**	*e*P	**Pg**	**20 18 23.9**	**-0.3**
	baz=343						
NACB	**Ninganchiao**	**1.09**	**2**	Pn	**Pn**	**20 18 22.7**	**-0.7**
NACB	**Ninganchiao**	**1.09**	**2**	*e*P	**Pn**	**20 18 22.7**	**-0.7**
	baz=22						
CHN2	**Minshiung**	**1.10**	**295**	⇓P	**Pg**	**20 18 25.1**	**+0.7**
	baz=295						
CHN2				S	**Sg**	**20 18 40.1**	**+1.2**
	baz=295						
WHF	**Hehuan Shan**	**1.10**	**346**	⇑*i*P	**Pb**	**20 18 23.5**	**-0.2**
	baz=352						
WHF				S	**Sn**	**20 18 38.2**	**-0.5**
	baz=352						
WGK	**Gukeng**	**1.10**	**304**	⇓*i*P	**Pg**	**20 18 25.0**	**+0.5**
	baz=305						
WGK				*e*S	**Sg**	**20 18 40.2**	**+1.3**
	baz=305						
CHN3	**Shinhua**	**1.10**	**270**	*e*P	**Pg**	**20 18 25.7**	**+1.2**
	baz=269						
CHN3				*e*S	**Sg**	**20 18 41.6**	**+2.6**
	baz=269						
SLIU	**Shizi**	**1.11**	**220**	*e*P	**Pb**	**20 18 23.2**	**-0.5**
	baz=213						
DPDB	**Guoxing**	**1.11**	**329**	*e*P	**Pg**	**20 18 24.8**	**0.0**
	baz=343						
DPDB				*e*S	**Sg**	**20 18 38.9**	**-0.6**
	baz=343						
SCZT	**Fangliau**	**1.12**	**231**	⇑*e*P	**Pb**	**20 18 23.5**	**-0.3**
	baz=225						
SHHT	**Tainan City**	**1.12**	**267**	*e*P	**Pg**	**20 18 25.1**	**+0.3**
	baz=264						
WDLH	**Douliu**	**1.12**	**303**	*e*P	**Pg**	**20 18 25.5**	**+0.6**
	baz=305						
WDLH				*e*S	**Sg**	**20 18 41.9**	**+2.3**
	baz=305						
CHY	**Chiayi**	**1.13**	**292**	⇓P	**Pg**	**20 18 25.3**	**+0.2**
	baz=292						
CHY				*e*S	**Sg**	**20 18 41.0**	**+1.2**
	baz=292						
ETLH	**Xiulin Townshi**	**1.13**	**356**	*e*P	**Pb**	**20 18 23.8**	**-0.3**
	baz=2.0						
WNT	**Mingjian**	**1.13**	**315**	⇓*i*P	**Pg**	**20 18 25.7**	**+0.6**
	baz=319						
WNT				*e*S	**Sg**	**20 18 41.0**	**+1.0**
	baz=319						
WCS	**Beigang Elemen**	**1.14**	**329**	*e*P	**Pb**	**20 18 24.0**	**-0.3**
	baz=342						
WNT1	**Nantou City**	**1.16**	**316**	*e*P	**Pg**	**20 18 26.2**	**+0.6**
	baz=319						
WNT1				*e*S	**Sg**	**20 18 41.4**	**+0.6**
	baz=319						
SSHA	**Shanhua**	**1.17**	**273**	*e*P	**Pg**	**20 18 27.0**	**+1.1**
	baz=282						
SSHA				*e*S	**Sg**	**20 18 43.8**	**+2.5**
	baz=282						
SNJT	**Kaohsiung City**	**1.18**	**254**	*e*P	**Pg**	**20 18 27.2**	**+1.3**
	baz=249						
FUSS	**Fushou**	**1.20**	**346**	*e*P	**Pg**	**20 18 25.9**	**-0.6**
	baz=4.0						
ICHU	**Yijhu**	**1.21**	**284**	⇓P	**Pg**	**20 18 26.8**	**+0.1**
	baz=282						
ICHU				S	**Sg**	**20 18 43.6**	**+1.1**
	baz=282						
TWT	**Tachien**	**1.22**	**343**	*e*P	**Pg**	**20 18 26.1**	**-0.8**
	baz=347						
TDCB	**Techi**	**1.23**	**343**	*e*P	**Pb**	**20 18 26.0**	**+0.2**
	baz=347						
TAI1	**Yung-k'ang**	**1.23**	**268**	*e*P	**Pg**	**20 18 27.7**	**+0.7**
	baz=264						
TAI1				*e*S	**Sg**	**20 18 43.5**	**+0.4**
	baz=264						
WTK	**Tuku**	**1.24**	**300**	*e*P	**Pg**	**20 18 28.0**	**+0.9**
	baz=301						
WTK				*e*S	**Sg**	**20 18 44.1**	**+0.8**
	baz=301						
WWF	**Wufeng**	**1.25**	**321**	*e*P	**Pg**	**20 18 26.7**	**-0.6**
	baz=325						
WWF				*e*S	**Sg**	**20 18 43.4**	**-0.2**
	baz=325						
SMST	**Manzhou Townsh**	**1.25**	**213**	*e*P	**Pn**	**20 18 25.2**	**-0.3**
	baz=206						
WYL	**Yuanlin Townsh**	**1.26**	**314**	*e*P	**Pg**	**20 18 27.7**	**+0.2**
	baz=318						
WYL				*e*S	**Sg**	**20 18 44.4**	**+0.4**
	baz=318						
KAU	**Kaohsiung**	**1.26**	**247**	*e*P	**Pg**	**20 18 30.1**	**+2.5**
	baz=241						
SCLT	**Jiali**	**1.26**	**275**	⇑P	**Pg**	**20 18 27.8**	**+0.2**
	baz=272						
SCLT				S	**Sg**	**20 18 45.5**	**+1.3**
	baz=272						
CHN8	**Yiju**	**1.27**	**282**	P	**Pg**	**20 18 27.6**	**-0.1**
	baz=281						
CHN8				*e*S	**Sg**	**20 18 45.4**	**+1.0**
	baz=281						
WSSB	**Gushan**	**1.27**	**250**	*e*P	**Pg**	**20 18 28.4**	**+0.6**
	baz=244						
WSSB				*e*S	**Sg**	**20 18 47.6**	**+3.1**
	baz=244						
WSL	**Shuilin Townsh**	**1.30**	**290**	⇓*e*P	**Pb**	**20 18 27.0**	**0.0**
	baz=290						
WSL				*e*S	**Sg**	**20 18 44.7**	**-0.8**
	baz=290						
WLCH	**Liuqiu**	**1.31**	**237**	*e*P	**Pg**	**20 18 30.7**	**+2.2**
	baz=224						
HEN	**Hengchun**	**1.31**	**216**	*e*P	**Pg**	**20 18 28.9**	**+0.4**
	baz=197						
WHP	**Taichung City**	**1.32**	**335**	*e*P	**Pg**	**20 18 29.4**	**+0.6**
	baz=347						
TSEB	**Hengchuen, Pin**	**1.32**	**208**	*e*P	**Pg**	**20 18 29.9**	**+1.2**
	baz=203						
TWKBT	**Hengchun**	**1.33**	**212**	*e*P	**Pn**	**20 18 26.4**	**-0.2**
	baz=195						
TWK1	**Hengchun**	**1.33**	**212**	*e*P	**Pn**	**20 18 26.5**	**-0.2**
	baz=195						
TCU	**Taichung**	**1.34**	**323**	*e*P	**Pg**	**20 18 29.4**	**+0.3**
	baz=327						
WSF	**Szhu**	**1.35**	**295**	⇓P	**Pg**	**20 18 28.5**	**-0.8**
	baz=295						
WSF				*i* S	**Sg**	**20 18 46.3**	**-0.7**
	baz=295						
WCHH	**Zhanghua**	**1.36**	**317**	*e*P	**Pg**	**20 18 29.4**	**0.0**
	baz=320						
TSCK	**Chigu Township**	**1.36**	**273**	*e*P	**Pg**	**20 18 28.6**	**-0.9**
	baz=270						
WRL	**Guolierlin Hig**	**1.36**	**307**	*e*P	**Pb**	**20 18 28.1**	**+0.1**
	baz=309						
WRL				*e*S	**Sg**	**20 18 46.4**	**-0.9**
	baz=309						
NNS	**Nan Shan**	**1.37**	**353**	*e*P	**Pn**	**20 18 26.9**	**-0.4**
	baz=16						
EWUT	**Wuta**	**1.38**	**8**	*e*P	**Pn**	**20 18 26.5**	**-0.8**
	baz=15						
WTCT	**Ta-ch'eng**	**1.41**	**304**	*e*P	**Pg**	**20 18 29.8**	**-0.7**
	baz=306						
WTCT				*e*S	**Sg**	**20 18 48.2**	**-0.7**
	baz=306						
WMLT	**Mailiao**	**1.43**	**301**	*e*P	**Pg**	**20 18 30.1**	**-0.6**
	baz=302						
LATG	**Datong**	**1.45**	**359**	*e*P	**Pb**	**20 18 28.9**	**-0.7**
	baz=5.0						
NDT	**Datong Townshi**	**1.52**	**358**	*e*P	**Pn**	**20 18 29.1**	**-0.2**
	baz=19						
NSY	**Sanyi**	**1.52**	**331**	*e*P	**Pg**	**20 18 32.3**	**-0.2**
	baz=354						
NSY				*e*S	**Sg**	**20 18 52.5**	**+0.1**
	baz=354						
WDJ	**Dajia District**	**1.52**	**326**	⇓P	**Pg**	**20 18 32.2**	**-0.3**
	baz=331						
WDJ				S	**Sg**	**20 18 52.1**	**-0.2**
	baz=331						
TWC	**Suao**	**1.55**	**10**	*e*P	**Pn**	**20 18 30.0**	**+0.3**
	baz=30						
YHNB	**Yeheng**	**1.59**	**354**	Pn	**Pb**	**20 18 31.4**	**-0.6**
YHNB	**Yeheng**	**1.59**	**354**	⇑P	**Pb**	**20 18 31.4**	**-0.6**
	baz=16						
NFF	**Wufeng Townshi**	**1.60**	**345**	*e*P	**Pb**	**20 18 31.2**	**-0.9**
	baz=350						
NSK	**Sanguang**	**1.60**	**353**	⇑P	**Pn**	**20 18 30.3**	**-0.2**
	baz=15						
NMLH	**Miaoli**	**1.61**	**334**	*e*P	**Pg**	**20 18 33.4**	**-0.9**
	baz=357						
NMLH				*e*S	**Sg**	**20 18 55.3**	**-0.1**
	baz=357						
NSTT	**Nanjuang**	**1.63**	**342**	*e*P	**Pb**	**20 18 33.0**	**+0.4**
	baz=347						
LIOB	**Emei**	**1.64**	**342**	*e*P	**Pb**	**20 18 33.2**	**+0.5**
	baz=348						
TWE	**Neicheng**	**1.64**	**3**	*e*P	**Pn**	**20 18 31.6**	**+0.7**
	baz=10.0						
FUSB	**Fushanzhiwuyua**	**1.67**	**1**	*e*P	**Pb**	**20 18 32.2**	**-1.2**
	baz=7.0						
NJD	**Zhudong**	**1.71**	**345**	*e*P	**Pg**	**20 18 35.3**	**-0.7**
	baz=352						
WDGT	**Dungji**	**1.76**	**276**	*e*P	**Pb**	**20 18 33.3**	**-1.5**
	baz=273						
HSN1	**Hsinchu**	**1.76**	**344**	*e*P	**Pg**	**20 18 36.1**	**-1.0**
	baz=350						
NTC	**Toucheng**	**1.79**	**8**	*e*P	**Pn**	**20 18 33.5**	**+0.5**
	baz=359						
SBCB	**Hsinchu**	**1.79**	**343**	*e*P	**Pg**	**20 18 36.6**	**-1.0**
	baz=349						
EGS		**1.79**	**11**	*e*P	**Pb**	**20 18 35.0**	**-0.4**
	baz=18						
HSN	**Hsinchu**	**1.80**	**343**	*e*P	**Pg**	**20 18 37.8**	**0.0**
	baz=350						
JYNG	**Yonagunijimaku**	**1.86**	**43**	*e*P	**Pn**	**20 18 32.3**	**-1.8**
JYNG				S	**Sn**	**20 18 57.8**	**+0.8**
NHDH	**Xindian Distri**	**1.88**	**359**	*e*P	**Pb**	**20 18 36.0**	**-0.8**
	baz=18						
PHUB	**P'eng-hu**	**1.88**	**284**	*e*P	**Pn**	**20 18 34.7**	**+0.5**
	baz=282						
PHUB				*e*S	**Sn**	**20 18 57.1**	**-0.3**
	baz=282						
TATO	**Taipei**	**1.89**	**358**	Pn	**Pb**	**20 18 36.1**	**-1.0**
TATO	**Taipei**	**1.89**	**358**	*e*P	**Pb**	**20 18 35.8**	**-1.2**
	baz=17						
TWA	**Mucha**	**1.89**	**1**	*e*P	**Pb**	**20 18 36.2**	**-0.9**
	baz=20						
TIPB	**Shuangxi**	**1.90**	**7**	*e*P	**Pb**	**20 18 36.5**	**-0.8**
PNG	**Penghu**	**1.91**	**285**	P	**Pb**	**20 18 35.8**	**-1.5**
	baz=283						
PNG				*e*S	**Sn**	**20 18 58.7**	**+0.6**
	baz=283						
YOJ	**Yonaguni jima**	**1.91**	**44**	Pn	**Pn**	**20 18 35.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.91**	**44**	*e*P	**Pn**	**20 18 35.7**	**+1.0**
	baz=61						
YOJ				S	**Sb**	**20 18 59.7**	**-1.2**
	baz=61						
YOJ	**Yonaguni jima**	**1.91**	**44**	P	**Pn**	**20 18 35.8**	**+1.0**
YOJ				S	**Sn**	**20 18 59.5**	**+1.3**
TWB1	**Santiao Chiao**	**1.96**	**11**	*e*P	**Pn**	**20 18 36.5**	**+1.2**
	baz=19						
VCHM	**Qimei**	**1.97**	**274**	*e*P	**Pb**	**20 18 36.4**	**-1.9**
	baz=271						
VCHM				*e*S	**Sn**	**20 18 59.7**	**+0.2**
	baz=271						
NWF	**Wu-fen Shan**	**1.99**	**6**	*e*P	**Pb**	**20 18 38.4**	**-0.5**
	baz=13						
WFSB	**Wu-fen Shan**	**1.99**	**6**	*e*P	**Pb**	**20 18 38.4**	**-0.5**
	baz=13						
TWS1	**Kuangyinshan**	**2.02**	**356**	*e*P	**Pb**	**20 18 39.1**	**-0.1**
	baz=22						
SXI1	**Grass Mountain**	**2.03**	**8**	*e*P	**Pb**	**20 18 38.3**	**-1.2**
	baz=359						
YM01	**YM01**	**2.06**	**0**	*e*P	**Pb**	**20 18 39.3**	**-0.7**
	baz=7.0						
NTST	**Danshui**	**2.08**	**357**	*e*P	**Pn**	**20 18 38.4**	**+1.4**
	baz=22						
ANP	**Anpu**	**2.10**	**359**	*e*P	**Pb**	**20 18 39.0**	**-1.7**
	baz=6.0						
HATJ	**Hateruma jima**	**2.28**	**64**	P	**Pn**	**20 18 40.9**	**+1.2**
HATJ				*e*S	**Sn**	**20 19 07.4**	**+0.2**
IRIF	**Iriomote-Funau**	**2.35**	**57**	*e*P	**Pn**	**20 18 42.3**	**+1.7**
IRIF				*e*S	**Sn**	**20 19 10.6**	**+1.6**
JKRS	**Kuro-shima**	**2.52**	**62**	P	**Pn**	**20 18 44.3**	**+1.2**
JKRS				*e*S	**Sn**	**20 19 13.9**	**+0.6**
JIJ	**Ishigaki jima**	**2.69**	**61**	P	**Pn**	**20 18 46.6**	**+1.2**
JIJ				*e*S	**Sn**	**20 19 17.1**	**-0.3**
VWUC	**VWUC**	**2.71**	**315**	*e*P	**Pn**	**20 18 46.8**	**+1.1**
	baz=320						
PTMZ	**Houxiangcun**	**2.96**	**312**	*e*P	**Pn**	**20 18 50.1**	**+1.0**
	baz=316						
KNM	**Kinmen**	**3.16**	**296**	*e*P	**Pn**	**20 18 54.0**	**+2.1**
	baz=294						
KNMB	**Chin-men Tao**	**3.22**	**296**	Pn	**Pn**	**20 18 53.6**	**+1.0**
KNMB	**Chin-men Tao**	**3.22**	**296**	*e*P	**Pn**	**20 18 53.3**	**+0.7**
	baz=297						
JTJ	**Tarama**	**3.27**	**61**	P	**Pn**	**20 18 54.8**	**+1.5**
JTJ				*e*S	**Sn**	**20 19 31.8**	**+0.1**
MATB	**Ma-tsu**	**3.40**	**335**	*e*P	**Pn**	**20 18 56.1**	**+1.0**
	baz=342						
MSUT	**Lienchiang**	**3.42**	**334**	*e*P	**Pn**	**20 18 57.1**	**+1.7**
	baz=342						
ZPLA	**Ao Xicun**	**3.60**	**284**	*e*P	**Pn**	**20 18 58.9**	**+1.0**
	baz=280						
AXDP	**Jialang**	**3.75**	**300**	*e*P	**Pn**	**20 19 00.9**	**+0.9**
	baz=303						
JMJ2	**Miyako jima3**	**3.82**	**64**	P	**Pn**	**20 19 02.6**	**+1.7**
JMJ2				*e*S	**Sn**	**20 19 46.2**	**+0.8**
LYJJ	**Jianjiangzhen**	**3.82**	**335**	*e*P	**Pn**	**20 19 02.1**	**+1.1**
	baz=343						
JMJ	**Miyako jima 2**	**3.83**	**62**	*e*P	**Pn**	**20 19 02.7**	**+1.6**
	baz=65						
JIKM	**Ikemajima**	**3.84**	**61**	S	**Sn**	**20 19 47.1**	**+1.3**
DSXP	**Dongshan**	**3.85**	**280**	*e*P	**Pn**	**20 19 02.6**	**+1.3**
	baz=276						
JOGS	**Gusukube**	**3.90**	**64**	*e*P	**Pn**	**20 19 04.0**	**+2.0**
JOGS				*e*S	**Sn**	**20 19 47.9**	**+0.7**
XPSS	**Dashiqiu**	**4.03**	**342**	*e*P	**Pn**	**20 19 04.7**	**+0.9**
	baz=351						
SXFK	**Yanhouchang**	**4.86**	**314**	*e*P	**Pn**	**20 19 16.1**	**+0.8**
	baz=320						
JOW	**Kunigami**	**7.15**	**57**	Pn	**Pn**	**20 19 47.2**	**+0.6**
MKAR	**Makanchi Array**	**39.37**	**317**	P	**P**	**20 25 30.8**	**-0.7**

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*IDC **10** 20:24:17.1±3.0, 9°.20N×125°.74E, h0km, mb3.6/4, mbtmp3.6/4, MS2.5/1, Error ellipse: s-maj=266.9km s-min=26.7km az=64.0*
*MAN **10** 20:24:23.3, 9°.36N×126°.23E, h29km, mb4.6, ML3.4, MS3.3*
ISC 10 20:24:19.5±1.4, 9°.21N±0°.03×126°.35E±0°.06, h16km±9km, n33, σ1§57/43, mb3.6/4, 18C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.61**	**339**	⇑*e*P	**Pn**	**20 24 34.2**	**+0.6**
GLSP				*e*S	**Sg**	**20 24 40.4**	**+0.8**
BUTP	**Butuan**	**0.76**	**251**	⇑*e*P	**Pn**	**20 24 37.2**	**+1.6**
BUTP				*e*S	**Sn**	**20 24 47.3**	**+0.6**
SCPH	**Surigao**	**1.02**	**304**	⇑*i*P	**Pb**	**20 24 39.3**	**+0.5**
SCPH				*i* S	**Sg**	**20 24 52.2**	**-0.3**
MSLP	**Maasin**	**1.73**	**302**	⇑*e*P	**Pn**	**20 24 49.0**	**0.0**
MSLP				*e*S	**Sn**	**20 25 09.2**	**-1.5**
CGP	**Cagayan de Oro**	**1.80**	**245**	⇑*i*P	**Pb**	**20 24 52.0**	**-0.1**
CGP				*i* S	**Sn**	**20 25 13.2**	**+0.7**
BUKP	**Musuan**	**1.83**	**224**	⇑*e*P	**Pg**	**20 24 54.4**	**-0.4**
BUKP				*e*S	**Sg**	**20 25 18.9**	**+0.3**
BUKP	**Musuan**	**1.83**	**224**	⇑*e*P	**Pg**	**20 24 54.7**	**-0.1**
BUKP				*e*S	**Sg**	**20 25 19.2**	**+0.5**
GHBP	**Garcia Hernand**	**2.04**	**282**	⇓*e*P	**Pn**	**20 24 54.5**	**+1.3**
GHBP				*i* S	**Sn**	**20 25 18.2**	**-0.3**
TABP	**Talibon, Bohol**	**2.17**	**294**	⇓*e*P	**Pn**	**20 24 55.3**	**+0.2**
TABP				*i* S	**Sn**	**20 25 18.9**	**-2.8**
MATI	**Mati**	**2.25**	**182**	⇑*e*P	Pn	20 24 52.2	-4.0
MATI				*e*S	**Sg**	**20 25 31.0**	**-1.1**
DAV	**Davao City (W)**	**2.26**	**200**	LR	LR	20 26 07.0	
	comp=Z,110nm,18.3s,baz=350,slow=52						
KCP	**Kidapawan**	**2.52**	**210**	⇑*e*P	**Pn**	**20 25 01.2**	**+1.3**
KCP				*i* S	**Sb**	**20 25 35.0**	**-0.3**
BESP	**Borongan**	**2.54**	**339**	⇑*e*P	**Pn**	**20 25 01.7**	**+1.6**
BESP				*e*S	**Sn**	**20 25 33.5**	**+2.8**
LLP	**Lapu-Lapu**	**2.59**	**295**	⇑*i*P	**Pn**	**20 25 03.3**	**+2.5**
LLP				*i* S	**Sn**	**20 25 32.5**	**+0.4**
LSIP	**Lazi, Siquijor**	**2.68**	**268**	⇑*i*P	**Pn**	**20 25 03.6**	**+1.5**
LSIP				*i* S	**Sn**	**20 25 33.2**	**-1.1**
CTBH	**Cotabato--PC H**	**2.87**	**227**	⇓*i*P	**Pb**	**20 25 08.7**	**-1.8**
DCPH	**Dipolog City**	**3.02**	**258**	⇑*e*P	**Pb**	**20 25 12.0**	**-1.0**
DCPH				*e*S	**Sn**	**20 25 43.0**	**+0.2**
DDMP	**Don Marcelino,**	**3.15**	**192**	⇑*e*P	**Pn**	**20 25 09.8**	**+1.2**
DDMP				*e*S	**Sb**	**20 25 51.7**	**-1.8**
PAGZ	**Pagadian**	**3.23**	**245**	⇑*e*P	**Pn**	**20 25 11.7**	**+2.1**
PAGZ				*e*S	**Sn**	**20 25 48.0**	**+0.1**
CNP	**Catarman**	**3.67**	**333**	⇑*e*P	**Pn**	**20 25 16.9**	**+1.1**
CNP				*e*S	Sn	20 25 51.2	-7.5
CNOP	**Candoni, Negro**	**3.71**	**280**	⇑*e*P	**Pn**	**20 25 18.1**	**+1.8**
CNOP				*e*S	Sn	20 25 47.5	-12
RCP	**Roxas**	**4.24**	**304**	⇓*e*P	**Pn**	**20 25 26.6**	**+3.1**
PVCP	**Virac**	**4.86**	**334**	⇑*e*P	**Pn**	**20 25 33.2**	**+1.2**
PVCP				*e*S	**Sn**	**20 26 23.9**	**-4.2**
WRA	**Warramunga Arr**	**30.02**	**165**	P	**P**	**20 30 29.2**	**+1.2**
	0.5nm,1.0s,baz=344,slow=8.6,SNR=1.4 0.5nm,1.0s						
ASAR	**Alice Springs**	**33.50**	**167**	P	**P**	**20 30 59.5**	**+1.0**
	0.3nm,0.3s,baz=345,slow=7.1,SNR=9.9 0.3nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**40.16**	**72**	T	T	21 14 54.7	
	baz=270,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hy**	**40.17**	**72**	T	T	21 14 57.8	
	baz=270						
H11S2	**WAKE ISLAND Hy**	**40.17**	**72**	T	T	21 14 53.2	
	baz=270,slow=74,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**40.53**	**70**	T	T	21 15 23.9	
	baz=260						
H11N2	**WAKE ISLAND Hy**	**40.53**	**70**	T	T	21 15 29.9	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**40.54**	**70**	T	T	21 15 33.3	
	baz=260						
STKA	**Stephens Creek**	**43.38**	**161**	P	**P**	**20 32 22.8**	**+1.3**
	1.9nm,0.9s,baz=338,slow=11,SNR=1.4 1.9nm,0.9s						
MKAR	**Makanchi Array**	**52.91**	**323**	P	**P**	**20 33 32.5**	**-2.6**
	0.4nm,0.6s,baz=132,slow=6.5,SNR=4.9 0.4nm,0.6s						

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*TUL **10** 20:27:55±0.4, 36°.436N±0°.008×96°.903W±0°.007, h4km, ML3.2, mb_Lg3.4/94(NEIC), Error ellipse: s-maj=1.1km s-min=0.8km az=172.0*
*ANF **10** 20:27:55.2±0.8, 36°.44N×96°.91W, h4km±5km, ML4.1/17, Error ellipse: s-maj=4.1km s-min=3.4km az=96.0*
*NEIC **10** 20:27:55.0±0.6, 36°.442N±0°.008×96°.92W±0°.01, h4km±1km, Error ellipse: s-maj=1.3km s-min=1.0km az=118.0*
*IDC **10** 20:27:58.5±1.1, 36°.69N×97°.34W, h0km, mb3.3/1, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=17.3km s-min=13.3km az=129.0*
**ISC 10 20:27

KAN10	Anthony SW Sta	1.17	306	Pg	Pg	20 28 17.2	-0.1
KAN16	Harper SW Stat	1.22	311	Pg	Pg	20 28 18.1	0.0
KAN12	Harper NE Stat	1.23	315	Pg	Pg	20 28 18.1	-0.2
FNO	Franklin	1.25	199	Pg	Pg	20 28 18.0	-0.7
OK035	E0210 Rd and N	1.48	281		Pn	20 28 22.6	+0.6
OK038	West end E0370	1.48	272		Pn	20 28 22.6	+0.6
X34A	Smith Ranch, M	1.98	203		Pb	20 28 30.8	-0.5
U38A	Gravette	2.03	89		Pn	20 28 31.1	+1.5
U38A	comp=Z,145nm,0.7s			IAmb_Lg		20 29 02.8	
U38A	Gravette	2.03	89	P	Pn	20 28 31.3	+1.7
	baz=271,SNR=60						
U38A				S	Sb	20 28 58.6	+0.9
	baz=271						
X37A	Clayton	2.23	145		Pn	20 28 33.5	+1.2
X37A	Clayton	2.23	145	P	Pn	20 28 33.5	+1.2
	baz=327,SNR=53						
X37A				S	Sb	20 29 02.7	-0.7
	baz=327						
WMOK	Wichita Mounta	2.28	223	Pn	Pn	20 28 33.7	+0.6
WMOK				IAmb_Lg		20 29 08.1	
	comp=Z,116nm,1.1s						
WMOK	Wichita Mounta	2.28	223	P	Pn	20 28 33.9	+0.9
	baz=42,SNR=40						
WMOK				S	Sn	20 29 04.0	+2.5
	baz=42						
HHAR	Hobbs	2.40	93		Pn	20 28 36.0	+1.3
HHAR				IAmb_Lg		20 29 16.6	
	comp=Z,95nm,0.8s						
R32A	Long Quarter,	2.45	325		Pn	20 28 35.8	+0.4
R32A				IAmb_Lg		20 29 17.5	
	comp=Z,107nm,0.8s						
R32A	Long Quarter,	2.45	325	S	Sn	20 29 07.5	+1.9
	baz=143						
KSU1	Kansas State U	2.67	5	Pn	Pn	20 28 38.6	+0.3
KSU1				IAmb_Lg		20 29 20.4	
	comp=Z,112nm,0.9s						
Z35A	Perchaven, San	3.11	185	Pn	Pn	20 28 45.4	+0.9
Z35A	Perchaven, San	3.11	185	P	Pn	20 28 46.1	+1.6
	baz=5.5,SNR=7.5						
S39A	Bolivar	3.13	65	Pn	Pn	20 28 45.1	+0.5
S39A				IAmb_Lg		20 29 39.9	
	comp=Z,114nm,0.9s						
CBKS	Cedar Bluff	3.27	317	Pn	Pn	20 28 47.1	+0.5
CBKS	Cedar Bluff	3.27	317	P	Pn	20 28 47.7	+1.0
	baz=136						
MIAR	Mount Ida	3.31	124		Pn	20 28 47.4	+0.3
MIAR				IAmb_Lg		20 29 45.4	
	comp=Z,130nm,1.0s						
MIAR	Mount Ida	3.31	124	P	Pn	20 28 48.4	+1.2
	baz=306,SNR=9.5						
Z38A	Mt. Pleasant	3.54	153	IAmb_Lg		20 29 56.3	
	comp=Z,74nm,0.9s						
Z38A	Mt. Pleasant	3.54	153	P	Pn	20 28 51.9	+1.6
	baz=334						
MGMO	Mountain Grove	3.79	78		Pn	20 28 55.1	+1.3
MGMO				IAmb_Lg		20 30 04.5	
	comp=Z,55nm,0.8s						
FCAR	Ozark Folk Cen	3.91	97	Pn	Pn	20 28 56.5	+1.1
FCAR				IAmb_Lg		20 30 02.2	
	comp=Z,82nm,1.0s						
WHAR	Wooly Hollow	3.92	106	Pn	Pn	20 28 55.9	+0.3
WHAR				IAmb_Lg		20 30 07.6	
	comp=Z,85nm,0.7s						
UALR	University of	4.07	113	Pn	Pn	20 28 57.5	-0.1
UALR				IAmb_Lg		20 30 10.6	
	comp=Z,119nm,1.0s						
R40A	Maddies Statio	4.13	62	Pn	Pn	20 28 58.8	+0.4
R40A				IAmb_Lg		20 30 05.6	
	comp=Z,138nm,0.9s						
R40A	Maddies Statio	4.13	62	P	Pn	20 28 59.4	+0.9
	baz=245,SNR=16						
P38A	Dawn	4.15	39	Pn	Pn	20 28 59.0	+0.3
P38A				IAmb_Lg		20 30 08.2	
	comp=Z,111nm,0.8s						
P38A	Dawn	4.15	39	P	Pn	20 28 59.6	+0.9
	baz=221						
WLAR	White Oak Lake	4.15	130	IAmb_Lg		20 30 09.2	
	comp=Z,84nm,0.7s						
AMTX	Amarillo	4.18	250	IAmb_Lg		20 30 12.1	
	comp=Z,84nm,0.8s						
ABTX	Abilene, Hawle	4.42	211	S	Sn	20 29 53.8	-0.6
	baz=30						
N35A	Tabor	4.53	12	P	Pn	20 29 04.9	+1.0
	baz=193						
N35A				S	Sn	20 29 58.6	+1.8
	baz=193						
LCAR	Lake Charles	4.66	93	IAmb_Lg		20 30 33.2	
	comp=Z,43nm,0.7s						
CCM	Cathedral Cave	4.80	69	IAmb_Lg		20 30 23.5	
	comp=Z,127nm,1.0s						
CCAR	Cane Creek	4.90	119	IAmb_Lg		20 30 42.3	
	comp=Z,79nm,1.1s						
NATX	Nacogdoches	5.03	158	IAmb_Lg		20 30 36.6	
	comp=Z,39nm,0.9s						
BGNE	Belgrade	5.06	349	IAmb_Lg		20 30 42.8	
	comp=Z,80nm,0.8s						
KSCO	Kaye Shedlock'	5.21	301	Pn	Pn	20 29 13.7	+0.3
KSCO				IAmb_Lg		20 30 42.5	
	comp=Z,42nm,0.7s						
KSCO	Kaye Shedlock'	5.21	301	P	Pn	20 29 14.2	+0.8
	baz=118,SNR=5.7						
N38A	Joes South For	5.21	32	S	Sn	20 30 13.3	-0.4
	baz=214						
PBMO	Poplar Bluff	5.22	84	IAmb_Lg		20 30 40.2	
	comp=Z,62nm,0.8s						
PBMO	Poplar Bluff	5.22	84	S	Sn	20 30 15.0	+1.1
	baz=268						
435B	Jarrell	5.67	186	IAmb_Lg		20 31 09.1	
	comp=Z,48nm,0.8s						
PEBM	Pemiscott Bayo	5.70	91	IAmb_Lg		20 31 00.2	
	comp=Z,103nm,0.9s						
SLM	Saint Louis	5.74	66	IAmb_Lg		20 30 56.0	
	comp=Z,90nm,0.7s						
OGNE	Ogallala	6.03	320	Pn	Pn	20 29 25.3	+0.7
OGNE				IAmb_Lg		20 31 16.1	
	comp=Z,50nm,0.7s						
T25A	Trinidad	6.06	279	Pn	Pn	20 29 25.0	-0.2
T25A				IAmb_Lg		20 31 18.4	
	comp=Z,38nm,0.8s						
HALT	Halls	6.14	93	IAmb_Lg		20 31 16.8	
	comp=Z,42nm,0.7s						
K31A	O'Neill	6.34	348	IAmb_Lg		20 31 25.6	
	comp=Z,86nm,0.8s						
OXF	Oxford	6.41	105	IAmb_Lg		20 31 19.1	
	comp=Z,60nm,0.9s						
JCT	Junction City	6.42	203	IAmb_Lg		20 31 33.4	
	comp=Z,59nm,0.9s						
K38A	Parkersburg	6.97	26	IAmb_Lg		20 31 45.4	
	comp=Z,77nm,0.8s						
SDCO	Great Sand Dun	6.99	283	Pn	Pn	20 29 37.3	-0.7
BRIGG	Briggsdale	7.13	308	IAmb_Lg		20 31 49.7	
	comp=Z,40nm,0.8s						
L40A	Anamosa	7.14	36	Pn	Pn	20 29 38.4	-1.3
L40A				IAmb_Lg		20 31 44.8	
	comp=Z,38nm,0.8s						
ECSD	EROS Data Cent	7.29	2	Pn	Pn	20 29 41.8	0.0
PLAL	Pickwick Lake	7.33	99	Pn	Pn	20 29 41.7	-0.6
O44A	Mansfield	7.60	58	IAmb_Lg		20 32 01.2	
	comp=Z,57nm,0.8s						
T47A	Sharon Grove	7.89	83	IAmb_Lg		20 32 15.7	
	comp=Z,66nm,1.0s						
L42A	Oliver, Polo	7.90	43	IAmb_Lg		20 32 14.9	
	comp=Z,45nm,0.8s						
ANMO	Albuquerque	7.91	262	Pn	Pn	20 29 50.6	0.0
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=1.8						
ANMO				Pg	Pb	20 30 19.5	+7.0
	comp=Z,0.4nm,0.3s,baz=84,slow=17,SNR=7.8						
ANMO				Lg	Lg	20 32 00.2	
	comp=Z,0.6nm,0.3s,baz=54,slow=8.2,SNR=2.7						
	comp=Z,0.4nm,0.3s						
I37A	Lemond, Waseca	8.03	18	IAmb_Lg		20 32 18.1	
	comp=Z,67nm,1.2s						
PHWY	Pilot Hill	8.25	309	IAmb_Lg		20 32 31.4	
	comp=Z,25nm,1.1s						
JFWS	Jewell Farm	8.26	36	IAmb_Lg		20 32 20.9	
	comp=Z,56nm,0.7s						
X48A	Hartselle	8.29	101	IAmb_Lg		20 32 16.3	
	comp=Z,23nm,0.9s						
N23A	Red Feather La	8.35	305	Pn	Pn	20 29 57.7	+1.0
N23A				IAmb_Lg		20 32 43.6	
	comp=Z,37nm,0.9s						
M44A	Midewin, Midew	8.49	52	IAmb_Lg		20 32 28.5	
	comp=Z,48nm,0.8s						
SFIN	Lafayette	8.65	60	IAmb_Lg		20 32 29.4	
	comp=Z,60nm,1.1s						
TX32	Lajitas Array	9.08	221	Pn	Pn	20 30 05.6	-1.0
TXAR	Lajitas Array	9.08	221	Pn	Pn	20 30 08.9	+2.4
	comp=Z,0.1nm,0.3s,baz=45,slow=11,SNR=5.7						
TXAR				Pg		20 30 38.5	
	comp=Z,0.3nm,0.3s,baz=43,slow=15,SNR=6.0						
TXAR				Lg	Lg	20 32 38.0	
	comp=Z,1.1nm,0.3s,baz=38,slow=27,SNR=6.4						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	9.08	221	Pn	Pn	20 30 06.1	-0.4
RSSD	Black Hills	9.41	327	IAmb_Lg		20 33 02.7	
	comp=Z,38nm,1.1s						
I42A	Draeger Farm,	9.63	37	IAmb_Lg		20 33 01.8	
	comp=Z,42nm,1.1s						
TKL	Tuckaleechee C	10.66	90	Pn	Pn	20 30 36.9	+8.8
	comp=Z,0.3nm,0.3s,baz=309,slow=6.5,SNR=2.0						
	comp=Z,2.5nm,0.7s						
PDAR	Pinedale Array	11.62	307	Pn	Pn	20 30 40.5	-0.9
	comp=Z,0.1nm,0.3s,baz=118,slow=12,SNR=5.6						
	comp=Z,0.8nm,0.8s						
ULM	Lac du Bonnet	13.83	3	Pn	Pn	20 31 07.5	-3.7
	comp=Z,0.3nm,0.3s,baz=179,slow=11,SNR=2.0						
ULM				Lg	Lg	20 34 59.0	
	comp=Z,0.3nm,0.3s,baz=25,slow=19,SNR=2.9						
	comp=Z,2.3nm,0.6s						
SADO	Sadowa	15.83	53	Lg	Lg	20 36 07.0	
	comp=Z,0.2nm,0.3s,baz=101,slow=21,SNR=1.9						
ILAR	Eielson Array	40.84	330	P	P	20 35 38.9	+1.9
	comp=Z,0.4nm,0.8s,baz=121,slow=7.1,SNR=4.6						
	comp=Z,0.4nm,0.8s						

*IDC **10** 20:41:00.0±0.8, 32°.19N×142°.84E, h0km, mb3.9/11, mbtmp3.9/14, ML3.4/3, Error ellipse: s-maj=24.5km s-min=17.3km az=84.0*
*NEIC **10** 20:41:02.4±0.5, 32°.20N±0°.08×142°.76E±0°.08, h12km±5km, mb4.3/8, Error ellipse: s-maj=12.5km s-min=7.9km az=210.0*
*JMA **10** 20:41:03.5±0.4, 32°N±2°×14°3E±°, h46km, MV4.1/36, FAR E OFF IZU ISLANDS*

ISC 10 20:41:01.2±0.6, 32°.17N±0°.05×142°.74E±0°.07, h10km, n46, σ1°80/54, mb3.9/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.64	292	eP	Pn	20 41 43.4	-0.5
JHJ	Hachijo jima 2	2.67	292	Pn	Pn	20 41 43.1	-1.1
	17nm,0.3s,baz=244,slow=23,SNR=1.6						
JHJ				Sn	Sn	20 42 12.5	-4.1
	59nm,0.3s,baz=240,slow=23,SNR=1.8						
	155nm,0.6s						
JMKN	Mikurajimanish	3.16	304	eS	Sn	20 42 25.4	-3.3
BSO3	Boso 3	3.22	325	eP	Pn	20 41 52.6	+1.0
JOD2	Odawara 2	4.34	316	eP	Pn	20 42 06.8	-0.4
JYT	Yasato	4.57	333	Pn	Pn	20 42 10.7	+0.4
JYT	Yasato	4.57	333	eP	Pn	20 42 11.3	+1.0
JHU	Hanno	4.67	323	eP	Pn	20 42 11.2	-0.5
JHU				eS	Sn	20 43 03.7	-2.2
JHO	Hitachi	4.78	339	eP	Pn	20 42 13.4	0.0
JRY	Ryogami san	4.99	321	eP	Pn	20 42 16.9	+0.7
JRY				eS	Sn	20 43 11.8	-2.1
JAG	Ashikaga	5.04	328	eP	Pn	20 42 17.6	+0.7
CBIJ	Chichi jima	5.07	186	eP	Pn	20 42 18.2	+0.8
CBIJ				eS	Sn	20 43 11.8	-4.2
JCJ	Chichijima	5.08	186	Pn	Pn	20 42 17.9	+0.5
	4.0nm,0.3s,baz=266,slow=23,SNR=6.4						
JCJ				Sn	Sn	20 43 11.0	-5.1
	12nm,0.3s,baz=293,slow=21,SNR=1.9						
	73nm,0.8s						
JCJ	Chichijima	5.08	186	Pn	Pn	20 42 18.4	+1.0
JNY	Yasuok	5.16	309	eP	Pn	20 42 21.0	+2.4
JGF	Kuroka	5.64	309	Pn	Pn	20 42 25.3	+0.2
MJAR	Matsushiro Arr	5.75	321	Pn	Pn	20 42 27.4	+0.8
	0.3nm,0.3s,baz=156,slow=10,SNR=19						
MJAR				Sn	Sn	20 43 29.7	-3.0
	0.2nm,0.3s,baz=30,slow=8.7,SNR=4.6						
	1.9nm,0.3s						
MAJO	Matsushiro	5.75	321		Pn	20 42 27.3	+0.6
MJB9	Matsu-Tunnel	5.76	321	Pn	Pn	20 42 27.3	+0.6
JMM	Marumori	5.91	345	Pn	Pn	20 42 28.9	+0.2
JWT	Wachi	6.86	299	Pn	Pn	20 42 42.6	+0.8
JMK	Ichinoseki	6.88	350	eP	Pn	20 42 41.6	-0.6
JMK				S	Sn	20 43 54.0	-6.6
JSD	Sado	6.91	329	Pn	Pn	20 42 42.9	+0.3
JMN	Monobe	7.61	284	Pn	Pn	20 42 52.6	+0.4
PETK	Petropavlovsk-	23.55	23	P	P	20 46 09.8	-1.9
	11nm,1.1s,baz=224,slow=6.2,SNR=3.7						
	11nm,1.1s						
SONM	Songino Array	31.59	310	P	P	20 47 25.8	+1.7
	1.0nm,0.8s,baz=112,slow=9.7,SNR=6.2						
	1.0nm,0.8s						
MTN	Manton Dam	46.11	196	P	P	20 49 26.4	+0.7
MK31	Makanchi Array	47.75	306	P	P	20 49 38.6	+0.3
MK31				IAmb	IAmb	20 49 40.4	
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	47.75	306	P	P	20 49 39.9	+1.5
	comp=Z,0.5nm,0.5s,baz=85,slow=9.6,SNR=7.9						
MKAR				PcP	PcP	20 51 07.3	-0.1
	comp=Z,0.4nm,0.7s,baz=72,slow=6.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	47.75	306	P	P	20 49 38.3	-0.1
WB0	Warramunga Arr	52.25	190	P	P	20 50 13.2	+0.5
WB0				IAmb	IAmb	20 51 43.0	
	comp=Z,18nm,1.5s						
WB2	Warramunga Arr	52.43	190	P	P	20 50 14.5	+0.5
WRA	Warramunga Arr	52.43	190	P	P	20 50 14.4	+0.3
	comp=Z,0.9nm,0.4s,baz=9.5,slow=7.8,SNR=8.7						
	comp=Z,0.9nm,0.4s						
WRA	Warramunga Arr	52.43	190	P	P	20 50 13.8	-0.2
ASAR	Alice Springs	56.16	190	P	P	20 50 41.7	+0.5
	comp=Z,0.5nm,0.5s,baz=17,slow=12,SNR=12						
	comp=Z,0.5nm,0.5s						
MBWA	Marble Bar	57.41	206	P	P	20 50 50.0	-0.1
PSA00	Pilbara Seismi	57.75	205	P	P	20 50 52.9	+0.5
INK	Inuvik	58.25	26	P	P	20 50 55.8	+0.4
	comp=Z,2.7nm,1.0s,baz=304,slow=3.9,SNR=3.1						
	comp=Z,2.7nm,1.0s						
ABKAR	Akbulak array	61.97	313	P	P	20 51 21.8	+0.5
FORT	Forrest	64.13	194		P	20 51 36.6	+1.0
FINES	FINESS Array B	73.64	333	P	P	20 52 34.2	-0.3
	comp=Z,3.0nm,0.9s,baz=87,slow=7.1,SNR=5.3						
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	73.64	333	P	P	20 52 35.4	+0.9
NVAR	Mina Array Bea	77.04	53	P	P	20 52 55.2	+0.3
	comp=Z,0.3nm,0.4s,baz=293,slow=4.7,SNR=3.5						
	comp=Z,0.3nm,0.4s						
NOA	NORSAR Array B	79.10	338	P	P	20 53 06.3	+0.7
	comp=Z,0.8nm,0.8s,baz=34,slow=4.8,SNR=2.0						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	82.92	313	P	P	20 53 27.5	+0.9
	comp=Z,0.6nm,0.8s,baz=36,slow=6.5,SNR=3.7						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	92.19	53	P	P	20 54 12.8	+1.2
	comp=Z,0.4nm,0.9s,baz=316,slow=3.8,SNR=3.1						
	comp=Z,0.4nm,0.9s						

*IDC **10** 20:41:26.4±1.7, 32°.93S×72°.00W, h0km, mb3.8/3, mbtmp3.6/6, ML3.5/3, MS3.3/3, Error ellipse: s-maj=45.0km s-min=32.3km az=91.0*
*GUC **10** 20:41:29.4±0.7, 32°.94S×72°.04W, h24km±5km, ML3.6*

ISC 10 20:41:27.9±1.7, 32°.94S±0°.03×72°.03W±0°.06, h11km±10km, n32, σ0°68/36, mb3.9/3, 3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	0.34	105	iP	Pb	20 41 36.6	+0.7
VA01				eS	Sb	20 41 41.9	+0.7
VA01				IAML		20 41 42.6	
	comp=N,6μm,0.3s						
VA06	Catapilco	0.72	59	⇓iP	Pb	20 41 42.9	+0.5
VA06				eS	Sb	20 41 53.2	+0.8
VA06				IAML		20 41 55.9	
	comp=E,5μm,0.4s						
VA05	Santo Domingo	0.80	154	eP	Pb	20 41 44.1	+0.3
VA05				eS	Sb	20 41 54.9	+0.2
VA05				IAML		20 41 56.7	
	comp=E,7μm,0.5s						
MT02	Curacav	0.82	114	iP	Pb	20 41 44.2	+0.1
MT02				eS	Sb	20 41 55.0	-0.2
ROCH	El Roble	0.86	93	⇓iP	Pb	20 41 45.2	+0.2
ROCH				iP	Pb	20 41 45.1	+0.2
ROCH				eS	Sb	20 41 56.7	+0.1
ROCH				eS	Sn	20 41 56.9	-1.9
ROCH				IAML		20 42 00.8	
	comp=N,4μm,0.4s						
ROCH				IAML		20 42 02.2	
	comp=E,4μm,0.6s						
MT01	Popeta	1.13	145	eP	Pb	20 41 49.3	-0.2
MT01				eS	Sb	20 42 03.9	-0.4
MT01				IAML		20 42 05.4	
	comp=E,2μm,0.3s						
MT05	Renca	1.18	113	eP	Pg	20 41 50.4	-0.2
MT05				eS	Sn	20 42 06.6	+0.1
MT05				IAML		20 42 09.8	
	comp=E,4μm,0.4s						
MT09	Talagante	1.21	134	eP	Pb	20 41 50.7	-0.2
MT09				eS	Sg	20 42 06.6	-0.4
MT09				IAML		20 42 17.2	
	comp=N,3μm,0.5s						
VA03	San Esteban	1.26	83	eP	Pb	20 41 51.5	-0.2
VA03				eS	Sg	20 42 08.4	-0.1
VA03				IAML		20 42 12.1	
	comp=N,5μm,0.5s						
MT03	Universidad Ad	1.39	114	eS	Sg	20 42 14.1	+1.4
MT03				IAML		20 42 20.5	
	comp=N,4μm,0.3s						
FCH	Farellones	1.51	105	⇓iP	Pb	20 41 55.9	-0.2
FCH				eS	Sg	20 42 16.1	-0.5
FCH				IAML		20 42 22.0	
	comp=E,1μm,0.2s						
LMEL	Las Melosas	1.78	121	eP	Pb	20 42 00.2	-0.4
LMEL				eS	Sb	20 42 23.4	+0.3
CO02	Combarbal	1.94	27	eP	Pn	20 42 01.2	+0.4
CO02				eS	Sg	20 42 28.9	-1.3
GO05	Huala	2.07	178	IAML		20 42 41.0	
	comp=E,378nm,0.7s						
CO03	El Pedregal	2.38	29	eP	Pn	20 42 07.7	+0.7
CO03				eS	Sg	20 42 44.2	-0.2
CO03				IAML		20 42 50.0	
	comp=E,415nm,0.7s						
H03N1	Juan Fernandez	5.79	263	T	T	20 49 40.4	
	baz=88,slow=73,SNR=68						
H03N3	Juan Fernandez	5.80	263	T	T	20 49 47.1	
	baz=88,slow=73,SNR=91						
H03N2	Juan Fernandez	5.81	263	T	T	20 49 37.1	
	baz=88,slow=73,SNR=90						
H03S1	Juan Fernandez	5.82	259	T	T	20 49 14.3	
	baz=84,SNR=37						
H03S3	Juan Fernandez	5.82	259	T	T	20 49 15.7	
	baz=84,SNR=41						
H03S2	Juan Fernandez	5.84	259	T	T	20 49 10.6	
	baz=84,SNR=54						
PLCA	Paso Flores	7.87	172	Pn	Pn	20 43 22.6	+0.2
	comp=E,0.1nm,0.3s,baz=330,slow=12,SNR=4.9						
PLCA				LR	LR	20 46 33.2	
	comp=E,127nm,18.6s,baz=321,slow=39						
	comp=E,1.1nm,0.6s						
LPAZ	La Paz	16.95	13	Pn	Pn	20 45 25.1	-0.6
	comp=E,0.1nm,0.3s,baz=181,slow=5.0,SNR=5.3						
	comp=E,0.9nm,0.7s						
SIV	San Ignacio	19.57	33	P	P	20 45 55.4	-0.5
	baz=220,slow=15,SNR=2.0						
SIV				LR	LR	20 54 38.0	
	comp=E,59nm,19.2s,baz=270,slow=40						
	comp=E,1.3nm,1.0s						
BDFB	Brasilia	27.74	57	P	P	20 47 18.0	+1.2
	comp=E,1.9nm,0.4s,baz=204,slow=7.0,SNR=4.0						
	comp=E,1.9nm,0.4s						
TXAR	Lajitas Array	68.81	331	P	P	20 52 33.0	+0.7
	comp=E,0.2nm,0.5s,baz=151,slow=8.0,SNR=3.9						
	comp=E,0.2nm,0.5s						
TORD	Torodi Ar. Bea	83.84	70	P	P	20 53 56.9	-1.0
	comp=E,0.6nm,0.7s,baz=267,slow=3.8,SNR=3.5						
	comp=E,0.6nm,0.7s						
LSZ	Lusaka	90.13	108	LR	LR	21 31 06.7	
	comp=E,28nm,19.4s,baz=123,slow=33						
H11S2	WAKE ISLAND Hyl	25.78	270	T	T	23 19 33.4	
	baz=117,SNR=4.0						
H11S1	WAKE ISLAND Hyl	25.80	270	T	T	23 19 36.2	
	baz=117						
H11S3	WAKE ISLAND Hyl	25.80	270	T	T	23 19 34.1	
	baz=117						
MKAR	Makanchi Array	156.05	47	PKPab	PKPab	21 01 49.3	-0.1
	comp=E,0.3nm,0.6s,baz=285,slow=5.6,SNR=2.7						

*IDC **10** 21:13:34.2±5.2, 38°.22N×74°.48E, h52km±43km, mb3.4/2, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=60.9km s-min=27.1km az=159.0*
*SOME **10** 21:13:35.3, 39°.18N×74°.15E, h10km*

ISC 10 21:13:30.3±1.8, 38°.1N±0°.1×74°.58E±0°.09, h10km, n19, σ3°19/23, 1C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.08	351	P	Pn	21 14 36.7	+3.5
	SNR=26						
UCH	Uchtor	4.12	359	P	Pn	21 14 37.6	+3.8
	SNR=51						
ULHL	Ulahol	4.33	17	P	Pn	21 14 39.9	+3.5
	SNR=6.9						
AAK	Ala-Archa	4.53	359	P	Pn	21 14 43.5	+4.4
	SNR=6.1						
KBK	Karagaybulak	4.56	3	P	Pn	21 14 43.7	+4.2
	SNR=7.0						
EKS2	Erkin-Say	4.60	353	P	Pn	21 14 44.2	+4.2
	SNR=6.7						
TKM2	Tokmak 2	4.88	9	P	Pn	21 14 47.9	+3.9
	SNR=38						
TKM2	Tokmak 2	4.88	9	⇓Pn	Pn	21 14 47.7	+3.8
	21nm,0.6s						
TKM2				⇑Sn	Sn	21 15 40.2	-0.3
	34nm,0.6s						
CHMS	Chumysh	4.89	1	P	Pn	21 14 48.0	+3.9
	SNR=8.6						
KST	Kastek	5.05	12	eP	Pn	21 14 50.5	+4.3
	9.1nm,0.7s						
KST				eS	Sn	21 15 45.6	+1.0
	24nm,0.4s						
IUG	Iuzhnay	5.34	321	eP	Pn	21 14 53.3	+3.2
	95nm,0.3s						
IUG				eS	Sn	21 15 50.6	-1.1
	47nm,0.4s						
KK31	Karatay Array	5.88	330	⇓Pn	Pn	21 15 00.5	+2.9
	0.5nm,0.2s,baz=149,slow=13,SNR=27						
KK31				⇓Sn	Sn	21 16 02.9	-2.0
	2.0nm,0.3s,baz=150,slow=22,SNR=4.8						
KPKS	Kokpek	6.20	29	eP	Pb	21 15 16.7	-1.7
	0.8nm,0.3s						
KPKS				eS	Sb	21 16 30.8	-1.9
	7.7n

IDC 10 21:45:30.7±2.0, 0.10N×126.22E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=189.2km s-min=25.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.45**	**159**	P	P	21 50 20.1	-0.6
	0.8nm,0.5s,baz=337,slow=11,SNR=6.1						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**24.78**	**163**	P	P	21 50 54.9	+0.4
	0.6nm,0.4s,baz=341,slow=11,SNR=6.8						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**60.26**	**327**	P	P	21 55 40.9	-0.1
	0.2nm,0.3s,baz=121,slow=7.6,SNR=7.4						
	0.2nm,0.3s						

MAN 10 22:17:13.1, 16.51N×121.25E, h28km, mb3.6, ML2.3, MS1.7, 7C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.65**	**236**	eP	Pn	22 17 26.9	+0.4
SMPP				eS	Sn	22 17 36.9	+1.0
SAMP	**Sagada Mountai**	**0.65**	**330**	eP	Pb	22 17 25.9	-0.2
SAMP				eS	Sn	22 17 35.6	-0.4
BALP	**Baler**	**0.83**	**157**	eP	Pn	22 17 28.8	-0.2
BALP				eS	Sn	22 17 40.6	+0.3
PCPH	**Palayan**	**0.96**	**189**	eP	Pb	22 17 31.5	+0.4
PCPH				eS	Sn	22 17 45.5	+2.1
PALP	**Palanan**	**1.26**	**64**	eP	Pn	22 17 30.6	-4.2
BOLP	**Bolinao**	**1.28**	**264**	eP	Pb	22 17 37.4	+0.8
BOLP				eS	Sb	22 17 57.7	+4.9
PACPP	**Pamplona Cagay**	**1.94**	**3**	eP	Pn	22 17 44.8	+0.6
PACPP				i S	Sn	22 18 08.8	+1.2

*IDC **10** 22:19:36.0±2.4, 21.59S×170.18E, h99km±20km, mb4.2/12, mbtmp4.5/15, MS3.2/12, Error ellipse: s-maj=19.7km s-min=17.3km az=7.0*
*NOU **10** 22:19:35.2, 21.54S×170.14E, h84km, mb4.9/34, Southeast of Loyalty Islands*
*NEIC **10** 22:19:35.5±1.4, 21.5S±0.1×170.1E±0.1, h83km±7km, mb4.5/27, Error ellipse: s-maj=17.9km s-min=12.4km az=206.0*

ISC 10 22:19:33.3±0.8, 21.4S±0.1×170.23E±0.08, h100km, n137, σ1992/71, mb4.6/28, 4D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.05**	**266**	Pn	**Pn**	**22 20 05.8**	**-0.7**
MARNC				Sn	**Sn**	**22 20 28.8**	**-3.1**
MARNC	**Mare, Loyalty**	**2.05**	**266**	P	**Pn**	**22 20 06.1**	**-0.4**
LIFNC	**LIFOU**	**2.85**	**281**	Pn	**Pn**	**22 20 16.8**	**-0.2**
LIFNC				Sn	**Sn**	**22 20 48.0**	**-2.8**
LIFNC	**LIFOU**	**2.85**	**281**	P	**Pn**	**22 20 17.0**	**0.0**
YATNC	**Mamie plateau,**	**3.18**	**257**	P	**Pn**	**22 20 21.1**	**-0.3**
OUENC	**Ouen Island, N**	**3.32**	**251**	Pn	**Pn**	**22 20 22.9**	**-0.4**
OUENC	**Ouen Island, N**	**3.32**	**251**	P	**Pn**	**22 20 23.3**	**0.0**
DZM	**Mont Dzumac**	**3.59**	**258**	ePn	**Pn**	**22 20 26.7**	**-0.3**
	208nm,0.8s						
DZM				eSn	**Sn**	**22 21 06.4**	**-2.2**
	1μm,0.9s						
DZM				eLR	LR	22 21 13.6	
	comp=Z,570nm,27.5s						
DZM	**Mont Dzumac**	**3.59**	**258**	P	**Pn**	**22 20 27.3**	**+0.3**
	74nm,0.3s,baz=119,slow=12,SNR=574						
DZM				S	**Sn**	**22 21 06.6**	**-2.0**
	550nm,0.3s,baz=122,slow=21,SNR=33						
DZM				LR	LR	22 21 30.7	
	comp=Z,168nm,20.9s,baz=152,slow=33						
DZM	**Mont Dzumac**	**3.59**	**258**	Pn	**Pn**	**22 20 27.2**	**+0.2**
DZM	**Mont Dzumac**	**3.59**	**258**	P	**Pn**	**22 20 27.5**	**+0.5**
ONTNC	**Ouen Toro**	**3.63**	**254**	Pn	**Pn**	**22 20 27.4**	**-0.1**
ONTNC	**Ouen Toro**	**3.63**	**254**	P	**Pn**	**22 20 27.8**	**+0.3**
NOUC	**Port Laguerre**	**3.72**	**258**	P	**Pn**	**22 20 29.2**	**+0.5**
RTV	**Rentapao**	**3.94**	**334**	P	Pn	22 20 36.1	+4.4
DVP	**Devils Point**	**4.10**	**332**	P	Pn	22 20 36.3	+2.5
MSVF	**Nonsavu**	**8.21**	**65**	P	Pn	22 21 35.0	+5.3
	7.9nm,0.8s,baz=267,slow=11,SNR=5.1						
OUZ	**Omahuta**	**14.12**	**169**		**P**	**22 22 49.5**	**-3.6**
URZ	**Urewera**	**17.85**	**162**	P	**Pn**	**22 23 35.9**	**+0.8**
	9.5nm,0.9s,baz=78,slow=7.5,SNR=4.4						
URZ	**Urewera**	**17.85**	**162**		Pn	22 23 36.6	+1.5
BKZ	**Black Stump Fm**	**18.54**	**165**		**Pn**	**22 23 43.9**	**+0.5**
BKZ				IAmb	IAmb	22 23 47.3	
	comp=Z,22nm,1.1s						
ARMA	**Armidale**	**18.99**	**238**	P	**Pn**	**22 23 48.4**	**-0.5**
CTA	**Charters Tower**	**22.46**	**269**	P	**P**	**22 24 26.9**	**+2.6**
	comp=Z,4.5nm,0.3s,baz=92,slow=12,SNR=9.0						
CTA				LR	LR	22 31 26.7	
	comp=Z,93nm,21.5s,baz=84,slow=32						
	comp=Z,4.5nm,0.3s						
CTA	**Charters Tower**	**22.46**	**269**	P	**P**	**22 24 27.7**	**+3.5**
CTAO	**Charters Tower**	**22.46**	**269**	P	**P**	**22 24 26.2**	**+1.9**
CTAO	**Charters Tower**	**22.46**	**269**	P	**P**	**22 24 27.8**	**+3.5**
CNB	**Canberra Magne**	**22.97**	**228**	P	**P**	**22 24 30.0**	**+0.7**
CAN	**Canberra**	**23.23**	**229**	P	**P**	**22 24 33.9**	**+2.1**
CAN				IAmb	IAmb	22 24 35.9	
	comp=Z,21nm,0.9s						
CMSA	**Cobar Meteorol**	**24.14**	**240**	P	**P**	**22 24 42.8**	**+2.8**
PMG	**Port Moresby**	**25.18**	**295**	P	P	22 24 53.1	+3.5
	comp=Z,16nm,0.7s,baz=112,slow=5.9,SNR=3.8						
	comp=Z,16nm,0.7s						
STKA	**Stephens Creek**	**27.58**	**242**	P	**P**	**22 25 13.9**	**+2.8**
	comp=Z,3.9nm,0.3s,baz=65,slow=8.6,SNR=10						
	comp=Z,3.9nm,0.3s						
STKA	**Stephens Creek**	**27.58**	**242**	P	**P**	**22 25 13.2**	**+2.1**
STKA	**Stephens Creek**	**27.58**	**242**	P	**P**	**22 25 14.0**	**+2.9**
QIS	**Mount Isa**	**28.59**	**266**	P	P	22 25 23.3	+3.1
LCRK	**Leigh Creek**	**30.10**	**246**	P	P	22 25 36.1	+2.7
HTT	**Hallett**	**30.17**	**240**	P	P	22 25 36.7	+2.6
OOD	**Oodnadatta**	**31.98**	**252**	P	P	22 25 53.1	+3.1
	comp=Z,28nm,0.8s						
BBOO	**Buckleboo**	**32.35**	**242**	P	**P**	**22 25 53.6**	**+0.4**
BBOO				IAmb	IAmb	22 26 05.3	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**32.35**	**242**	P	P	22 25 55.4	+2.1
WR0	**Warramunga Arr**	**33.38**	**266**	P	P	22 26 03.8	+1.5
WR0				IAmb	IAmb	22 26 07.1	
	comp=Z,9.3nm,0.9s						
AS01	**Alice Springs**	**33.54**	**259**	P	P	22 26 05.7	+2.0
WB0	**Warramunga Arr**	**33.55**	**266**	P	P	22 26 05.4	+1.6
WB0				IAmb	IAmb	22 26 08.3	
	comp=Z,7.9nm,0.8s						
WB2	**Warramunga Arr**	**33.56**	**266**	P	P	22 26 05.3	+1.4
WB2				IAmb	IAmb	22 26 07.1	
	comp=Z,13nm,1.1s						
WB1	**Warramunga Ar.**	**33.56**	**266**	P	P	22 26 05.6	+1.7
WRAB	**Tennant Creek**	**33.56**	**266**	P	P	22 26 05.6	+1.7
WRA	**Warramunga Arr**	**33.57**	**266**	P	P	22 26 05.5	+1.5
	comp=Z,4.2nm,0.3s,baz=98,slow=7.7,SNR=65						
WRA				LR	LR	22 38 49.1	
	comp=Z,132nm,18.7s,baz=96,slow=34						
	comp=Z,4.2nm,0.3s						
WRA	**Warramunga Arr**	**33.57**	**266**	P	**P**	**22 26 05.1**	**+1.1**
AS31	**Alice Springs**	**33.58**	**259**	P	P	22 26 05.9	+1.8
AS31				IAmb	IAmb	22 26 06.7	
	comp=Z,4.3nm,0.6s						
ASAR	**Alice Springs**	**33.58**	**259**	P	P	22 26 05.9	+1.8
	comp=Z,9.1nm,0.7s,baz=73,slow=8.2,SNR=76						
ASAR				PcP	**PcP**	**22 28 43.7**	**+1.3**
	comp=Z,2.1nm,1.3s,baz=91,slow=3.7,SNR=4.4						
ASAR				LR	LR	22 38 41.1	
	comp=Z,110nm,18.9s,baz=160,slow=34						
	comp=Z,9.1nm,0.7s						
ASAR	**Alice Springs**	**33.58**	**259**	P	P	22 26 05.4	+1.3
MULG	**Mulgathing**	**33.63**	**247**	P	P	22 26 06.8	+2.4
TBI	**Tubuai**	**37.25**	**101**	eLR	LR	22 36 47.8	
	comp=Z,78nm,27.2s						
PPT2	**Papeete2**	**38.01**	**91**	eLR	LR	22 37 08.9	
	comp=Z,107nm,29.2s						
MTN	**Manton Dam**	**38.23**	**276**	P	P	22 26 46.0	+2.2
MTN	**Manton Dam**	**38.23**	**276**	P	P	22 26 46.1	+2.3
WRKA	**Warakurna**	**38.61**	**256**	P	P	22 26 49.0	+2.0
FORT	**Forrest**	**38.83**	**247**	P	P	22 26 50.6	+1.9
FORT	**Forrest**	**38.83**	**247**	P	P	22 26 50.7	+2.0
KNRA	**Kununurra**	**39.64**	**271**	P	P	22 26 57.4	+1.9
KNRA				IAmb	IAmb	22 26 58.5	
	comp=Z,8.6nm,0.8s						
FAKI	**Fak Fak**	**41.23**	**291**	P	**P**	**22 27 08.1**	**-0.6**
	comp=Z,13nm,1.4s						
GUMO	**Guam**	**42.74**	**322**	LR	LR	22 42 48.6	
	comp=Z,16nm,20.4s,baz=124,slow=32						
SOEI	**Soe**	**45.60**	**277**	P	**P**	**22 27 44.0**	**0.0**
	comp=Z,10nm,0.8s						
PSA00	**Pilbara Seismi**	**46.72**	**260**	P	P	22 27 54.8	+2.3
PSA00				IAmb	IAmb	22 28 03.1	
	comp=Z,9.9nm,1.1s						
PSA00	**Pilbara Seismi**	**46.72**	**260**	P	P	22 27 54.9	+2.4
MBWA	**Marble Bar**	**46.89**	**261**	P	P	22 27 56.3	+2.4
MBWA	**Marble Bar**	**46.89**	**261**	P	P	22 27 56.4	+2.5
SANI	**Sanana**	**47.14**	**288**	P	**P**	**22 27 56.2**	**+0.3**
	comp=Z,22nm,1.1s						
MEEK	**Meekatharra**	**47.19**	**253**	P	P	22 27 58.1	+1.9
KLBR	**Kellerberrin**	**47.68**	**246**	P	P	22 28 01.8	+1.9
NWAO	**Narrogin (SRO)**	**48.10**	**244**	LR	LR	22 47 12.2	
	comp=Z,51nm,19.4s,baz=24,slow=34						
NWAO	**Narrogin (SRO)**	**48.10**	**244**	P	P	22 28 05.0	+1.8
NWAO	**Narrogin (SRO)**	**48.10**	**244**	P	P	22 28 05.1	+2.0
BLDU	**Ballidu**	**48.60**	**248**	P	P	22 28 08.4	+1.4
MORW	**Morawa**	**49.27**	**250**	P	P	22 28 14.1	+1.9
MORW	**Morawa**	**49.27**	**250**	P	P	22 28 14.3	+2.2
TOLI2	**Tolitoli**	**53.21**	**288**	P	P	22 28 43.4	+1.7
VNDA	**Vanda**	**56.35**	**182**	P	P	22 29 04.1	+0.6
	comp=Z,0.9nm,1.0s,baz=3.0,slow=7.5,SNR=3.6						
	comp=Z,0.9nm,1.0s						
SBA	**Scott Base**	**56.56**	**181**	P	P	22 29 06.9	+2.0
SBA				IAmb	IAmb	22 29 08.7	
	comp=Z,9.4nm,1.1s						
CASY	**Casey**	**58.57**	**204**	P	P	22 29 20.3	+1.2
CASY				IAmb	IAmb	22 29 36.9	
	comp=Z,3.6nm,1.0s						
QSPA	**South Pole Qui**	**68.70**	**180**	P	P	22 30 27.4	+1.5
QSPA				IAmb	IAmb	22 30 29.0	
	comp=Z,6.8nm,1.1s						
KSRS	**Korea Array**	**70.78**	**325**	LR	LR	23 01 08.3	
	comp=Z,7.8nm,18.8s,baz=170,slow=35						
PETK	**Petropavlovsk-**	**74.95**	**352**	P	P	22 31 06.5	+3.3
	comp=Z,4.5nm,1.0s,baz=170,slow=7.9,SNR=2.1						
	comp=Z,4.5nm,1.0s						
CN2	**Changchun**	**76.75**	**328**	eP	P	22 31 20.4	+6.8
MAW	**Mawson**	**76.82**	**202**	P	P	22 31 16.0	+2.2
	comp=Z,4.0nm,0.9s,baz=247,slow=19,SNR=4.7						
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**76.82**	**202**	P	P	22 31 16.7	+3.0
BELA	**Belgrano 2**	**79.91**	**175**	P	P	22 31 31.4	+0.7
BELA				IAmb	IAmb	22 31 31.9	
	comp=Z,3.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.22**	**294**	P	P	22 31 37.5	+4.2
	comp=Z,1.2nm,0.3s,baz=131,slow=4.2,SNR=12						
CMAR				LR	LR	23 09 15.6	
	comp=Z,4.1nm,18.4s,baz=195,slow=37						
	comp=Z,1.2nm,0.3s						
XAN	**Xi'an**	**80.22**	**312**	P	P	22 31 36.7	+3.7
CHTO	**Chiang Mai**	**80.38**	**294**	P	P	22 31 36.9	+2.8
PZH	**PanZhiHua**	**81.63**	**303**	P	P	22 31 45.3	+4.5
MA2	**Magadan**	**82.21**	**350**	LR	LR	23 03 30.7	
	comp=Z,23nm,19.8s,baz=142,slow=32						
HHC	**Hu-ho-hao-te**	**82.43**	**319**	eP	P	22 31 48.5	+3.9
TROLL	**Troll, Antarti**	**86.49**	**184**	P	P	22 32 06.1	+1.4
SNAA	**Sanae**	**87.09**	**182**	P	P	22 32 08.3	+0.8
SNAA	**Sanae**	**87.09**	**182**	P	P	22 32 08.2	+0.7
	comp=Z,2.1nm,0.7s,baz=202,slow=5.4,SNR=14						
	comp=Z,2.1nm,0.7s						
SNAA	**Sanae**	**87.09**	**182**	P	P	22 32 07.9	+0.4
SNAA				IAmb	IAmb	22 32 09.5	
	comp=Z,3.2nm,0.9s						
VNA3	**Neumayer Olymp**	**87.64**	**180**	P	P	22 32 10.8	+0.7
VNA2	**Neumayer--Watz**	**87.94**	**181**	P	P	22 32 12.8	+1.3
	baz=180,slow=4.8						
VNA1	**Neumayer--Stat**	**88.23**	**181**	P	P	22 32 14.2	+1.3
YAK	**Yakutsk**	**89.17**	**342**	LR	LR	23 07 52.0	
	comp=Z,11nm,19.6s,baz=91,slow=32						
SONM	**Songino Array**	**89.47**	**323**	P	P	22 32 22.7	+3.6
	comp=Z,1.7nm,1.0s,baz=135,slow=5.7,SNR=6.1						
	comp=Z,1.7nm,1.0s						
PALK	**Pallekele**	**92.17**	**277**	LR	LR	23 16 03.5	
	comp=Z,7.3nm,19.1s,baz=233,slow=37						
PLCA	**Paso Flores**	**96.33**	**138**	P	P	22 32 54.1	+3.1
	comp=Z,2.5nm,1.0s,baz=166,slow=4.2,SNR=3.2						
	comp=Z,2.5nm,1.0s						
TXAR	**Lajitas Array**	**96.96**	**61**	LR	LR	23 09 52.5	
	comp=Z,12nm,18.5s,baz=280,slow=31						
ARCES	**ARCESS Array B**	**127.35**	**345**	PKP	**PKiKP**	**22 38 27.8**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=54,slow=2.1,SNR=22						
FINES	**FINESS Array B**	**132.90**	**337**	PKP	**PKiKP**	**22 38 38.8**	**+1.4**
	comp=Z,7.8nm,1.1s,baz=132,slow=2.8,SNR=5.9						
OSTC	**Ostas**	**144.43**	**331**	ePKP	**PKiKP**	**22 38 59.2**	**-2.2**
KRLC	**Kraliky**	**144.51**	**330**	ePKP	**PKiKP**	**22 38 58.5**	**-3.1**
DPC	**Dobruska-Polom**	**144.53**	**331**	ePKP	**PKiKP**	**22 38 59.4**	**-2.2**
PVCC	**Panska Ves**	**145.17**	**333**	ePKP	**PKiKP**	**22 39 01.9**	**-0.9**
CLL	**Collm**	**145.23**	**335**		**PKiKP**	**22 39 01.1**	**-1.8**
PRU	**Pruhonice**	**145.58**	**332**	ePKP	**PKiKP**	**22 39 02.3**	**-1.4**
NKC	**Novy Kostel**	**146.28**	**334**	ePKP	**PKiKP**	**22 39 05.0**	**-0.2**
RONA	**Rosalia, Austr**	**146.37**	**328**	i P	**PKiKP**	**22 39 06.0**	**+0.5**
	comp=Z,6.9nm,1.0s						
CONA	**Conrad Observa**	**146.43**	**328**	i P	**PKiKP**	**22 39 06.4**	**+0.7**
	comp=Z,9.9nm,1.0s						
CKRC	**Cesky Krumlov**	**146.54**	**331**	ePKP	**PKiKP**	**22 39 05.8**	**0.0**
KHC	**Kasperske Hory**	**146.64**	**332**	PKPdf	**PKiKP**	**22 39 04.8**	**-1.1**
KHC	**Kasperske Hory**	**146.64**	**332**	ePKP	**PKiKP**	**22 39 05.7**	**-0.3**
KHC				epPKP	pPKPab	22 39 27.3	-3.6
GEC2	**GERESS Array S**	**146.79**	**331**	PKPdf	**PKiKP**	**22 39 06.5**	**+0.1**
GERES	**GERESS Array B**	**146.79**	**331**	PKPbc	**PKiKP**	**22 39 06.5**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=49,slow=2.5,SNR=35						
MOA	**Molln**	**147.26**	**330**	eP	**PKiKP**	**22 39 08.0**	**+0.7**
	comp=Z,6.2nm,1.3s						
SOKA	**Soboth**	**147.70**	**327**	i P	**PKPab**	**22 39 08.9**	**0.0**
	comp=Z,8.9nm,1.0s						
BTNL	**Ternell**	**148.27**	**341**	dPKP	**PKPab**	**22 39 10.1**	**-0.8**
MEM	**Membach**	**148.28**	**341**	dPKP	**PKPab**	**22 39 10.2**	**-0.8**
WATA	**Walderalm**	**148.87**	**331**	i P	**PKPab**	**22 39 11.2**	**-2.4**
	comp=Z,5.6nm,1.1s						
ABTA	**Abfaltersbach**	**148.88**	**330**	i P	**PKPab**	**22 39 11.4**	**-2.2**
	comp=Z,9.9nm,1.1s						
WTTA	**Wattenberg**	**148.90**	**331**	i P	**PKPab**	**22 39 12.6**	**-1.2**
	comp=Z,14nm,1.2s						
BMRD	**Maredsous**	**148.93**	**342**	dPKP	**PKPab**	**22 39 11.4**	**-2.1**
WLF	**Walferdange**	**149.06**	**340**		**PKPab**	**22 39 12.3**	**-1.8**
WLF	**Walferdange**	**149.06**	**340**	dPKP	**PKPab**	**22 39 12.5**	**-1.6**
MOTA	**Moosalm**	**149.07**	**332**	i P	**PKPab**	**22 39 12.5**	**-2.0**
	comp=Z,14nm,1.1s						
RETA	**Reutte**	**149.11**	**332**	i P	**PKPab**	**22 39 12.6**	**-1.9**
	comp=Z,7.3nm,1.3s						
SQTA	**Sankt Quirin**	**149.12**	**332**	eP	**PKPab**	**22 39 12.8**	**-1.8**
	comp=Z,9.3nm,0.8s						
FETA	**Feichten**	**149.49**	**332**	i P	**PKPab**	**22 39 13.9**	**-2.3**
	comp=Z,12nm,1.1s						
DAVA	**Damuels**	**149.65**	**333**	i P	**PKPab**	**22 39 13.6**	**-3.2**
	comp=Z,13nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**150.00**	**332**		**PKPab**	**22 39 11.1**	**-7.3**
TORD	**Torodi Ar. Bea**	**166.34**	**235**	PKPab	**PKPab**	**22 40 30.9**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=118,slow=4.7,SNR=4.2						

*NEIC **10** 22:38:54.4±1.3, 4.31N±0.08×78.57W±0.09, h10km±1km, mb4.4/17, Error ellipse: s-maj=16.0km s-min=13.3km az=108.0*
*RSNC **10** 22:39:04.1±1.2, 3.74N×77.92W, h0km±7km, ML3.5*
*IDC **10** 22:39:16.8±2.7, 3.67N×76.98W, h110km±23km, mb3.6/8, mbtmp3.9/10, MS3.2/5, Error ellipse: s-maj=25.5km s-min=17.9km az=44.0*
*VAO **10** 22:39:31.0±1.6, 2.92N×76.43W, h168km±13km, mb4.1*

ISC 10 22:38:57.1±1.5, 4.11N±0.04×78.37W±0.05, h25km±10km, n73, σ2944/83, mb4.1/15, MS3.5/3, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**1.04**	**95**	eP	**Pb**	**22 39 15.7**	**-0.7**
MALC				eS	**Sb**	**22 39 26.5**	**-3.1**
MALC				i		22 39 31.3	
	comp=Z,3μm,0.3s						
GR1C	**Gorgona, Isla**	**1.11**	**169**	eP	**Pb**	**22 39 18.8**	**+1.1**
GR1C				eS	**Sb**	**22 39 31.7**	**-0.1**
YOTC	**Yotoco, Valle**	**2.02**	**93**	eP	**Pn**	**22 39 29.1**	**-0.7**
YOTC				eS	**Sn**	**22 39 51.5**	**-2.9**
YOTC				i		22 39 51.8	
	comp=Z,761nm,0.5s						
PLMC	**San Jos del P**	**2.23**	**69**	eP	**Pn**	**22 39 33.2**	**+0.6**
PLMC				eS	**Sn**	**22 40 01.2**	**+1.9**
PLMC				i		22 40 15.5	
	comp=Z,318nm,0.7s						
TUMC	**Tumaco**	**2.29**	**189**	eP	Pb	22 39 43.1	+5.2
POPC	**Popayan, Colom**	**2.30**	**133**	eP	**Pn**	**22 39 32.7**	**-1.0**
POPC				eS	**Sn**	**22 39 54.4**	**-6.9**
POPC				i		22 40 03.5	
	comp=Z,179nm,0.5s						
BBAC	**Balboa, Cauca**	**2.35**	**151**	eP	**Pn**	**22 39 34.4**	**0.0**
BBAC				eS	**Sn**	**22 39 59.9**	**-2.8**
BBAC				i		22 40 22.7	
	comp=Z,224nm,0.8s						
CRUC	**La Cruz**	**2.89**	**151**	eP	**Pn**	**22 39 43.7**	**+1.7**
CRUC				eS	**Sn**	**22 40 14.2**	**-1.9**
CBOC	**Ciudad Bolivar**	**2.93**	**53**	eP	**Pb**	**22 39 49.1**	**+0.3**
CBOC				eS	**Sb**	**22 40 30.6**	**+6.4**
CBOC				i		22 40 53.2	
	comp=Z,62nm,0.6s						
ANIL	**Santa Ana**	**2.98**	**83**	eP	**Pn**	**22 39 44.2**	**+1.1**
ANIL				eS	**Sn**	**22 40 20.2**	**+1.8**
ANIL				i		22 40 29.6	
	comp=Z,389nm,0.6s						
GCUF	**Volcan Galeras**	**3.04**	**160**	eP	**Pn**	**22 39 46.2**	**+2.1**
GCUF				eS	**Sn**	**22 40 19.1**	**-0.8**
GCUF				i		22 40 31.1	
	comp=Z,138nm,0.6s						
GUY2C	**Guyana, Caldas**	**3.20**	**70**	eP	**Pn**	**22 39 48.7**	**+2.5**
GUY2C				eS	**Sb**	**22 40 29.2**	**-3.0**
GUY2C				i		22 40 41.3	
	comp=Z,152nm,0.6s						
MAPC	**Malpelo**	**3.23**	**268**	eP	Pb	22 39 57.8	+4.0
BETC	**Betania**	**3.25**	**116**	eP	**Pn**	**22 39 49.2**	**+2.6**
BETC				eS	**Sn**	**22 40 23.1**	**-1.5**
BETC				i		22 40 38.0	
	comp=Z,200nm,0.6s						
TULM	**Tulcn-Chalpat**	**3.42**	**170**	Pn	**Pn**	**22 39 51.9**	**+2.6**
GARC	**Garzon, Huila**	**3.45**	**123**	eP	**Pn**	**22 39 51.4**	**+1.9**
GARC				eS	**Sn**	**22 40 30.9**	**+1.2**
GARC				i		22 40 37.1	
	comp=Z,148nm,0.3s						
HELC	**Santa Helena**	**3.51**	**54**	eP	**Pb**	**22 39 54.1**	**-4.6**
HELC				eS	**Sb**	**22 40 45.3**	**+4.2**
FLOC	**Florencia**	**3.69**	**133**	eP	**Pn**	**22 39 54.2**	**+1.5**
FLOC				eS	**Sn**	**22 40 31.7**	**-3.8**
BONI	**La Bonita**	**3.72**	**167**	eP	**Pb**	**22 40 01.2**	**-1.2**
BONI				eS	**Sn**	**22 40 37.0**	**+0.4**
BONI				i		22 40 40.7	
	comp=Z,41nm,0.3s						
CUSE	**Cuicocha Este**	**3.77**	**180**	eP	**Pn**	**22 39 58.6**	**+4.4**
CUSE				eS	**Sn**	**22 40 36.7**	**-1.3**
CUSE				i		22 40 48.2	
	comp=Z,290nm,0.4s						
NORC	**Norcasia**	**3.78**	**67**	eP	**Pn**	**22 39 57.8**	**+3.9**
NORC				eS	**Sb**	**22 40 47.5**	**-1.1**
IMBA	**Imbabura, San**	**3.81**	**177**	Pn	**Pn**	**22 39 57.5**	**+2.9**
PAC1	**Pacto, Paraso**	**3.84**	**186**	eP	**Pn**	**22 39 58.4**	**+3.7**
PAC1				eS	**Sn**	**22 40 38.7**	**-0.4**
PAC1				i		22 40 43.5	
	comp=Z,252nm,0.1s						
OTAV	**Otavalo**	**3.84**	**181**	Pn	**Pn**	**22 39 57.6**	**+2.4**
PULU	**Pululahua**	**4.06**	**182**	Pn	**Pn**	**22 39 59.1**	**+1.1**
ROSC	**El Rosal**	**4.11**	**80**	P	**Pn**	**22 40 02.7**	**+4.0**
	comp=Z,45nm,0.3s,baz=314,slow=7.2,SNR=12						
ROSC	**El Rosal**	**4.11**	**80**	Pn	**Pn**	**22 40 01.9**	**+3.2**
CHIC	**Chingaza**	**4.66**	**83**	eP	**Pn**	**22 40 09.7**	**+3.4**
CHIC				eS	**Sn**	**22 41 00.2**	**+0.4**
CHIC				i		22 41 13.0	
	comp=Z,49nm,0.6s						
VILC	**Villavicencio,**	**4.67**	**90**	eP	**Pn**	**22 40 09.6**	**+3.5**
VILC				eS	**Sn**	**22 41 02.0**	**+2.4**
SLOR	**San Lorenzo -**	**4.80**	**181**	Pn	**Pn**	**22 40 09.7**	**+1.3**
SDV	**Santo Domingo**	**9.04**	**58**	P	Pn	22 41 13.0	+6.7
	comp=Z,5.8nm,0.4s,baz=4.2,slow=16,SNR=3.8						
SDV				LR	LR	22 44 08.3	
	comp=Z,88nm,18.5s,baz=248,slow=36						
SDV	**Santo Domingo**	**9.04**	**58**	eP	Pn	22 41 28.0	+22
BAUV	**El Baul**	**11.33**	**64**	Pn	**Pn**	**22 41 36.9**	**-0.7**
BOAV	**Boa Vista**	**17.90**	**95**	eP	**P**	**22 43 05.6**	**+0.5**
SJG	**San Juan**	**18.35**	**40**	LR	LR	22 49 39.5	
	comp=Z,37nm,21.0s,baz=279,slow=35						
ETMB	**Extrema**	**18.38**	**139**	eP	**P**	**22 43 09.8**	**-0.5**
TOSP	**Speyside**	**19.05**	**67**	P	**P**	**22 43 17.6**	**-0.2**
TOSP				IAmb	IAmb	22 43 30.9	
	comp=Z,59nm,1.0s						
MPOM	**Morne Pois Mar**	**20.09**	**58**	P	**P**	**22 43 29.1**	**+0.1**
LPAZ	**La Paz**	**22.65**	**154**	P	**P**	**22 43 58.0**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=336,slow=11,SNR=8.4						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**22.65**	**154**	P	**P**	**22 43 58.0**	**+0.7**
LPAZ	**La Paz**	**22.65**	**154**	eP	**P**	**22 43 58.4**	**+1.1**
PB16	**IPOC Station P**	**23.95**	**159**	P	**P**	**22 44 11.1**	**+0.9**
PB16				IAmb	IAmb

JNB	Noboribetsu	0.20	334	P	Pn	22 57 55.1	-0.2
JNB				eS	Sn	22 58 07.6	-0.6
JKB	Kayabe	0.41	193	P	Pn	22 57 56.3	+0.3
JKB				eS	Sn	22 58 09.6	+0.2
JEW	Eniwo	0.59	21	Pn	Pn	22 57 56.9	-0.2
JEW				Sn	Sn	22 58 11.2	-0.3
JEW	Eniwo	0.59	21	eP	Pn	22 57 57.3	+0.2
JEW				eS	Sn	22 58 11.5	0.0
JYM2	Yakumo 2	0.61	254	eP	Pn	22 57 57.5	+0.3
JIAM	Iburiatsuma	0.66	59	eP	Pn	22 57 58.0	+0.5
JIAM				eS	Sn	22 58 13.0	+0.8
JSH	Shimam	0.90	294	eP	Pn	22 57 59.8	+0.3
JOT	Ohata	0.91	185	eP	Pn	22 58 00.3	+0.7
JSR	Shiriuchi	0.94	217	eP	Pn	22 58 00.6	+0.7
JHST	Hiyamasetana	0.96	279	eP	Pn	22 58 00.3	+0.2
JHST				eS	Sn	22 58 16.4	-0.3
JISS	Ishikarishitsu	1.01	11	P	Pn	22 58 01.0	+0.5
JISS				eS	Sn	22 58 18.2	+0.6
JBT2	Biratori 2	1.02	61	eP	Pn	22 58 00.7	0.0
JOMM	Oshimamatsumae	1.15	229	eP	Pn	22 58 02.8	+0.8
JNBK	Urakawa-nobuka	1.18	90	eP	Pn	22 58 02.5	+0.2
JOSM	Okushiri--Mats	1.27	261	eP	Pn	22 58 03.5	+0.3
JOSM				eS	Sn	22 58 22.4	+0.1
JTM	Tenmabayashi	1.50	183	Pn	Pn	22 58 06.8	+1.0
JTM				Sn	Sn	22 58 27.1	+0.3
ERM	Erimo	1.51	100	Pn	Pn	22 58 06.7	+0.8
ERM					Sn	22 58 27.7	+0.7
JHR	Hokuryu	1.52	16	eP	Pn	22 58 06.6	+0.7
JHR				eS	Sn	22 58 28.4	+1.2
JCH	Churui	1.66	78	eP	Pn	22 58 07.9	+0.2
JCH				eS	Sn	22 58 30.0	-0.2
JANG	Nango	1.93	172	eP	Pn	22 58 10.8	-0.1
JANG				eS	Sn	22 58 34.8	-1.2
JKK2	Kamakawa 2	1.97	36	eP	Pn	22 58 11.5	+0.2
JKK2				eS	Sn	22 58 35.6	-1.2
JMM	Marumori	4.42	184		Pn	22 58 42.9	-0.5
JMM				Sn	Sn	22 59 32.6	-1.4
JSD	Sado	4.79	209	Pn	Pn	22 58 49.5	+1.3
MAJO	Matsushiro	6.17	203	Pn	Pn	22 59 06.6	-0.4
USA0B	Ussuriysk Arra	6.96	289	Pn	Pn	22 59 17.9	+0.4
USRK	Ussuriysk Ar.	6.96	289	P	Pn	22 59 18.6	+1.1
	3.6nm,0.7s,baz=85,slow=12,SNR=5.8						
USRK	Ussuriysk Ar.	6.96	289	Pn	Pn	22 59 16.7	-0.9
JGF	Kuroka	7.30	205	Pn	Pn	22 59 23.1	+0.9
INU	Inuyama	7.64	206	Pn	Pn	22 59 25.6	-1.1
XLT	XiLinHaoTe	18.37	284	eP	Pn	23 01 56.4	+12
XLT				pP	pP	23 02 04.8	+0.1
XLT				sP	pwP	23 02 10.8	+2.4
XLT				PcP	PcP	23 05 58.0	-11
SEY	Seymchan	21.71	14	P	P	23 02 17.5	-1.5
	1.4nm,0.4s,baz=226,slow=21,SNR=4.3						
	1.4nm,0.4s						
HHC	Hu-ho-hao-te	22.14	276	eP	P	23 02 33.6	+10
SONM	Songino Array	25.03	295	P	P	23 02 50.5	-0.1
	1.4nm,0.5s,baz=81,slow=8.0,SNR=9.7						
	1.4nm,0.5s						
PZH	PanZhiHua	35.78	257	P	P	23 04 33.1	+7.6
ZAA0	Zalesovo Array	38.39	308	P	P	23 04 46.8	-0.3
ZALV	Zalesovo Beam	38.39	308	P	P	23 04 47.8	+0.7
	5.9nm,0.5s,baz=92,slow=8.1,SNR=29						
	5.9nm,0.5s						
ZALV	Zalesovo Beam	38.39	308	P	P	23 04 46.4	-0.6
MK31	Makanchi Array	41.35	297	P	P	23 05 11.4	-0.2
MK31				IAmb	IAmb	23 05 13.2	
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	41.35	297	P	P	23 05 11.4	-0.2
	comp=Z,2.8nm,0.6s,baz=83,slow=9.3,SNR=28						
MKAR				PcP	PcP	23 07 07.1	-0.4
	comp=Z,0.2nm,0.7s,baz=81,slow=3.8,SNR=1.9						
	comp=Z,2.8nm,0.6s						
MKAR	Makanchi Array	41.35	297	P	P	23 05 11.2	-0.4
MAKZ	Makanchi	41.56	297	P	P	23 05 12.9	-0.4
MAKZ				IAmb	IAmb	23 05 14.9	
	comp=Z,4.3nm,0.7s						
IMAR	Indian Mountai	42.31	33	P	P	23 05 19.0	-0.1
KURK	Kurchatov	42.69	304	P	P	23 05 22.2	-0.2
KURK				IAmb	IAmb	23 05 24.7	
	comp=Z,6.5nm,0.9s						
KURBB	Kurchatov Arra	42.77	304	P	P	23 05 22.6	-0.5
	comp=Z,4.5nm,0.5s,baz=76,slow=9.0,SNR=33						
	comp=Z,4.5nm,0.5s						
TOLK	Toolik Lake Re	43.95	30	P	P	23 05 32.6	+0.2
TOLK				IAmb	IAmb	23 05 46.8	
	comp=Z,6.5nm,1.2s						
ILAR	Eielson Array	45.24	35	P	P	23 05 43.8	+1.2
	comp=Z,0.3nm,0.6s,baz=259,slow=8.7,SNR=1.1						
	comp=Z,0.3nm,0.6s						
RAMN	Ramite	46.66	269	eP	P	23 05 55.1	+0.6
	comp=Z,12nm,0.7s						
GUN	Gumba	46.67	271	eP	P	23 05 55.4	+0.7
	comp=Z,31nm,0.4s						
BVAR	Borovoye Array	47.01	309	P	P	23 05 56.3	-0.3
	comp=Z,0.8nm,0.3s,baz=81,slow=10,SNR=7.7						
	comp=Z,0.8nm,0.3s						
BOOM	Boomskoye usch	47.06	293	P	P	23 05 57.1	-0.3
BOOM				IAmb	IAmb	23 06 08.6	
	comp=Z,11nm,1.4s						
PKI	Pulchoki	47.21	271	eP	P	23 05 59.1	+0.3
	comp=Z,2.2nm,0.3s						
PKIN	Phulchoki	47.21	271	eP	P	23 05 59.2	+0.4
	comp=Z,4.6nm,0.5s						
DMN	Daman	47.41	271	eP	P	23 06 00.9	+0.6
	comp=Z,8.0nm,0.6s						
K27K	Chicken	47.42	36	P	P	23 05 59.9	+0.3
K27K				IAmb	IAmb	23 06 12.8	
	comp=Z,4.9nm,1.1s						
GKN	Gorkha	47.54	272	eP	P	23 06 01.6	+0.4
	comp=Z,9.7nm,0.6s						
L27K	Beaver Creek,	47.72	37	P	P	23 06 02.5	+0.5
L27K				IAmb	IAmb	23 06 18.9	
	comp=Z,7.8nm,1.5s						
BCAR	Beaver Creek A	47.74	37	P	P	23 06 03.2	+1.1
M27K	Edge Creek, AK	47.85	38	P	P	23 06 03.6	+0.4
AAK	Ala-Archa	47.99	294	P	P	23 06 03.6	-0.9
DANN	Dangsing	48.01	272	eP	P	23 06 05.9	+0.9
	comp=Z,43nm,0.6s						
PYUN	Piuthan	48.71	273	eP	P	23 06 10.8	+0.5
	comp=Z,4.2nm,0.4s						
INK	Inuvik	49.85	29	P	P	23 06 18.3	+0.3
	comp=Z,0.6nm,0.5s,baz=282,slow=4.4,SNR=4.8						
	comp=Z,0.6nm,0.5s						
INK	Inuvik	49.85	29	P	P	23 06 18.4	+0.3
HYT	Haines Junctio	50.27	39	P	P	23 06 22.5	+0.9
HYT				IAmb	IAmb	23 06 54.7	
	comp=Z,7.8nm,1.4s						
KK31	Karatay Array	50.47	296	P	P	23 06 23.2	0.0
KK31				IAmb	IAmb	23 06 26.1	
	comp=Z,1.9nm,0.6s						
KKAR	Karatay Array	50.47	296	P	P	23 06 22.6	-0.6
ARU	Arti	52.38	316	P	P	23 06 36.4	-0.7
	comp=Z,1.4nm,0.4s,baz=68,slow=5.4,SNR=3.1						
	comp=Z,1.4nm,0.4s						
CHGR	Chuyangaron	53.38	292	P	P	23 06 44.4	-0.5
ABKAR	Akbulak array	54.50	307	P	P	23 06 52.5	-0.2
AKTO	Aktyubinsk	55.11	309	P	P	23 06 56.9	-0.2
	comp=Z,0.9nm,0.6s,baz=99,slow=13,SNR=2.4						
	comp=Z,0.9nm,0.6s						
KNRA	Kununurra	58.79	194	P	P	23 07 22.8	-0.5
WRA	Warramunga Arr	62.23	187	P	P	23 07 47.0	+0.3
	comp=Z,0.3nm,0.4s,baz=7.6,slow=7.6,SNR=2.3						
	comp=Z,0.3nm,0.4s						
FINES	FINESS Array B	64.11	331	P	P	23 07 58.0	-0.6
	comp=Z,0.9nm,0.4s,baz=46,slow=8.2,SNR=9.2						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	64.11	331	P	P	23 07 57.9	-0.6
NOA	NORSAR Array B	69.29	336	P	P	23 08 30.8	-0.7
	comp=Z,0.5nm,0.7s,baz=41,slow=6.1,SNR=2.4						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	72.04	54	P	P	23 08 49.4	+0.5
	comp=Z,0.1nm,0.4s,baz=290,slow=5.4,SNR=2.4						
	comp=Z,0.1nm,0.4s						
BURAR	Bucovina Array	74.10	321	P	P	23 09 00.8	+0.2
TXAR	Lajitas Array	87.07	52	P	P	23 10 10.5	+0.5
	comp=Z,0.2nm,0.7s,baz=308,slow=4.4,SNR=3.0						
	comp=Z,0.2nm,0.7s						
CPUP	Villa Florida	158.02	49	PKP	PKPdf	23 17 20.9	+0.6
	comp=Z,2.3nm,0.3s,baz=23,slow=3.4,SNR=4.9						

AUST 10 23:14:26.5±1.4, 30°.78S×121°.44E, h0km, Error ellipse: s-maj=19.0km s-min=9.5km az=29.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBL	Kambalda	0.70	147	P	Pg	23 14 39.8	-0.1
	baz=0.7						
KMBL				S	Sg	23 14 49.4	+0.4
	baz=0.7						
KLBR	Kellerberrin	3.26	255	P	Pn	23 15 20.7	+1.8
	baz=3.3						
KLBR				S	Sn	23 16 00.3	+2.0
	baz=3.3						
BLDU	Ballidu	4.08	271	P	Pn	23 15 29.6	-0.5
	baz=4.1						
BLDU				S	Sn	23 16 18.9	+0.4
	baz=4.1						
MEEK	Meekatharra	4.81	328	P	Pn	23 15 39.3	-1.0
	baz=4.8						
MORW	Morawa	4.99	289	P	Pn	23 15 43.1	+0.4
	baz=5.0						
FORT	Forrest	5.70	92	P	Pn	23 15 53.4	+1.0
	baz=5.7						

SKHL 10 23:15:54.0±0.6, 44°.80N×151°.80E, h45km±4km, mb4.3/3
JMA 10 23:15:54.4±0.9, 46°N±6°×15°1E±°, h30km, MV4.2/12, KURILE ISLANDS REGION, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.49	260	eP	Pb	23 16 36.1	-2.3
KUR				AMB	AMB	23 16 38.8	
	50nm,0.4s						
KUR				eS	Sb	23 17 07.7	-0.9
KUR				A	A	23 17 19.6	
	90nm,0.5s						
KUR				A	A	23 17 19.6	
	60nm,0.5s						
NEM2	Nemuro 2	4.64	242	eP	Pn	23 17 01.4	-1.0
NEM2				eS	Sn	23 17 51.5	-3.6
NMR	Nemuro--Hokkai	4.65	242	eP	Pn	23 17 01.3	-1.1
NMR				AMB	AMB	23 17 03.5	
	20nm,0.4s						
NMR				eS	Sn	23 17 51.3	-4.0
NMR				A	A	23 18 02.8	
	20nm,0.2s						
NMR				A	A	23 18 02.8	
	20nm,0.2s						
JRA	Rausu	4.77	250	eP	Pn	23 17 05.9	+1.8
JNK	Nakash	5.18	248	eP	Pn	23 17 10.8	+1.0
JNK				eS	Sn	23 18 04.8	-3.8
AKK	Akkeshi	5.38	242	eP	Pn	23 17 11.6	-0.9
AKK				eS	Sn	23 18 10.1	-3.3
JAK	Akkeshi	5.48	243	eP	Pn	23 17 13.2	-0.7
JAR	Ashorobuto	5.93	249	eP	Pn	23 17 21.7	+1.6
JAR				eS	Sn	23 18 27.1	+0.1
JOB	Onbets	6.07	245	eP	Pn	23 17 22.4	+0.4
JOB				eS	Sn	23 18 27.4	-3.1
JKK2	Kamakawa 2	6.39	256	eP	Pn	23 17 29.5	+3.1
JCH	Churui	6.52	245	eP	Pn	23 17 27.9	-0.3
JCH				eS	Sn	23 18 37.6	-3.9
JNBK	Urakawa-nobuka	7.08	244	eP	Pn	23 17 35.2	-0.6

SOME 10 23:21:09.6, 40°.75N×78°.45E, h5km
NNC 10 23:21:10.4±1.3, 40°.70N×78°.44E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.7km s-min=7.0km az=171.0
KRNET 10 23:21:11.6±0.1, 40°.85N×78°.31E, mb2.5
ISC 10 23:21:10.5±2.4, 40°.77N±0°.09×78°.32E±0°.05, h7km±16km, n46, σ1s48/72, 15C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.03	338	↑iP	Pg	23 21 30.1	-0.3
	baz=37						
TARG				↑iS	Sb	23 21 43.7	-1.3
	baz=37						
NRN	Naryn	1.88	291	↓iP	Pb	23 21 46.2	+0.9
	baz=89						
NRN				↓iS	Sg	23 22 11.7	+0.9
	baz=89						
ANVS	Anan'yevo	2.07	347	↑iP	Pb	23 21 48.8	+0.2
	baz=46						
ANVS				↑iS	Sg	23 22 15.8	-1.3
	baz=46						
ULHL	Ulahol	2.15	314	↑iP	Pb	23 21 50.2	+0.3
	baz=13						
ULHL				↑iS	Sg	23 22 17.9	-1.6
	baz=13						
SATY	Saty	2.29	2	eP	Pg	23 21 54.6	+0.3
	9.8nm,0.4s						
SATY				eS	Sg	23 22 26.6	+2.5
	34nm,0.9s						
SATY	Saty	2.29	2	Pg	Pg	23 21 54.6	+0.3
	9.8nm,0.4s						
SATY				Lg	Lg	23 22 26.6	
	34nm,0.9s						
ZHN	Zhinishke	2.40	2	eP	Pg	23 21 56.5	0.0
ZHN				eS	Sg	23 22 30.4	+2.8
ZHN	Zhinishke	2.40	2	Pg	Pg	23 21 56.5	0.0
ZHN				Lg	Lg	23 22 30.4	
UZB	Uzynbulak	2.43	12	eP	Pg	23 21 56.6	-0.5
	1.3nm,0.2s						
UZB				eS	Sg	23 22 30.2	+1.5
	14nm,0.5s						
UZB	Uzynbulak	2.43	12	Pg	Pg	23 21 56.6	-0.5
	1.3nm,0.2s						
UZB				Lg	Lg	23 22 30.2	
	14nm,0.5s						
BOOM	Boomskoye usch	2.48	315	↑iP	Pb	23 21 54.7	-0.8
	baz=14						
BOOM				↑iS	Sb	23 22 25.9	-0.4
	baz=14						
TNSS	Tian-Shan	2.49	336	eP	Pg	23 21 58.0	-0.1
	13nm,0.4s						
TNSS				eS	Sg	23 22 32.5	+2.0
	8.2nm,0.4s						
TNSS	Tian-Shan	2.49	336	Pg	Pg	23 21 58.0	-0.1
	13nm,0.4s						
TNSS				Lg	Lg	23 22 32.5	
	8.2nm,0.4s						
SHLS	Shalkode	2.53	19	eP	Pg	23 21 58.4	-0.7
	13nm,0.5s						
SHLS				eS	Sg	23 22 33.1	+1.2
	26nm,0.5s						
SHLS	Shalkode	2.53	19	Pg	Pg	23 21 58.4	-0.7
	13nm,0.5s						
SHLS				Lg	Lg	23 22 33.1	
	26nm,0.5s						
MDOK	Medeo	2.57	339	eP	Pg	23 21 59.5	-0.4
	8.1nm,0.5s						
MDOK				eS	Sg	23 22 35.3	+2.1
	25nm,0.9s						
MDOK	Medeo	2.57	339	Pg	Pg	23 21 59.4	-0.4
	5.7nm,0.5s						
MDOK				Pg	Pg	23 21 59.5	-0.4
	8.1nm,0.5s						
MDOK				↓Lg	Lg	23 22 35.2	
	13nm,0.5s						
MDOK				Lg	Lg	23 22 35.3	
	25nm,0.9s						
KOTS	Kotyrbulak	2.62	340	eP	Pg	23 22 00.6	-0.1
	6.1nm,0.2s						
KOTS				eS	Sg	23 22 37.2	+2.4
	27nm,0.5s						
KOTS	Kotyrbulak	2.62	340	Pg	Pg	23 22 00.6	-0.1
	6.1nm,0.2s						
KOTS				Lg	Lg	23 22 37.2	
	27nm,0.5s						
KNDC	Almaty	2.65	338	↑Pg	Pg	23 22 00.9	-0.3
	13nm,0.6s						
KNDC				↑Lg	Lg	23 22 38.3	
	51nm,0.7s						
PDGK	Podgornoye	2.70	18	↓Pg	Pb	23 21 57.6	-1.7
	1.8nm,0.3s						
PDGK				↓Lg	Lg	23 22 37.6	
	20nm,0.8s						
KPKS	Kokpek	2.71	6	eP	Pg	23 22 01.8	-0.7
	12nm,0.2s						
KPKS				eS	Sg	23 22 39.0	+1.5
	30nm,0.2s						
KPKS	Kokpek	2.71	6	Pg	Pg	23 22 01.7	-0.7
	12nm,0.2s						
KPKS				Lg	Lg	23 22 39.0	
KURS	Kuram	2.72	358	eP	Pg	23 22 02.3	-0.3
	6.0nm,0.5s						
KURS				eS	Sg	23 22 40.1	+2.2
	8.7nm,1.2s						
KURS	Kuram	2.72	358	Pg	Pg	23 22 02.3	-0.3
	6.0nm,0.5s						
KURS				Lg	Lg	23 22 40.1	
	8.7nm,1.2s						
MTBS	Maitube	2.75	330	eP	Pg	23 22 02.8	-0.4
	6.1nm,0.2s						
MTBS				eS	Sg	23 22 40.9	+2.1
	17nm,0.5s						
MTBS	Maitube	2.75	330	Pg	Pg	23 22 02.8	-0.4
	6.1nm,0.2s						
MTBS				Lg	Lg	23 22 40.9	
	17nm,0.5s						
KST	Kastek	2.87	323	eP	Pg	23 22 04.7	-0.9
	4.0nm,0.9s						
KST				eS	Sg	23 22 44.0	+1.2
	18nm,0.8s						
KST	Kastek	2.87	323	Pg	Pg	23 22 04.7	-0.9
	4.0nm,0.9s						
KST				Lg	Lg	23 22 44.0	
	18nm,0.8s						
TKM2	Tokmak 2	2.96	317	↑iP	Pb	23 22 01.2	-2.5
	baz=17						
TKM2				↑iS	Sb	23 22 37.7	-2.5
	baz=17						
TKM2	Tokmak 2	2.96	317	↓Pg	Pg	23 22 05.9	-1.3
	2.4nm,0.5s						
TKM2				↑Lg	Lg	23 22 47.1	
	8.2nm,0.8s						
KTBS	Karatobe	3.18	338	eP	Pg	23 22 10.2	-1.3
	3.4nm,0.4s						
KTBS				eS	Sg	23 22 53.6	+0.9
	30nm,0.4s						
KTBS	Karatobe	3.18	338	Pg	Pg	23 22 10.2	-1.3
	3.4nm,0.4s						
KTBS				Lg	Lg	23 22 53.6	
	30nm,0.4s						
ARLS	Aral	3.20	291	↑iP	Pn	23 22 04.9	+3.4
	baz=90						
ARLS				↑iS	Sb	23 22 43.9	-3.2
	baz=90						
CHKK	Chushkaly	3.24	343	eP	Pg	23 22 12.1	-0.4
	2.7nm,0.1s						
CHKK				eS	Sg	23 22 56.4	+2.0
	15nm,0.4s						
CHKK	Chushkaly	3.24	343	Pg	Pg	23 22 12.1	-0.4
	2.7nm,0.1s						
CHKK				Lg	Lg	23 22 56.4	
	15nm,0.4s						
BLB	Baldybastay	3.33	2	eP	Pg	23 22 13.3	-1.0
	13nm,0.3s						
BLB				eS	Sg	23 22 58.6	+1.2
	12nm,0.4s						
BLB	Baldybastay	3.33	2	Pg	Pg	23 22 13.3	-1.0
	13nm,0.3s						
BLB				Lg	Lg	23 22 58.6	
	12nm,0.4s						
KUU	Kurty	3.45	335	eP	Pg	23 22 14.5	-2.1
	1.8nm,0.3s						
KUU				eS	Sg	23 23 00.7	-0.6
	6.7nm,0.8s						
KUU	Kurty	3.45	335	Pg	Pg	23 22 14.5	-2.1
	1.8nm,0.3s						
KUU				Lg	Lg	23 23 00.7	
	6.7nm,0.8s						
ARXS	Arharly	3.46	354	eP	Pg	23 22 15.5	-1.3
	5.5nm,0.7s						
ARXS				eS	Sg	23 23 02.5	+0.8
	6.4nm,0.5s						
ARXS	Arharly	3.46	354	Pg	Pg	23 22 15.5	-1.3
	5.5nm,0.7s						
ARXS				Lg	Lg	23 23 02.4	
	6.4nm,0.5s						
KRBS	Karabastau	3.52	327	eP	Pg	23 22 15.9	-2.1
	1.9nm,0.2s						
KRBS				eS	Sg	23 23 03.5	-0.2
	9.2nm,0.8s						
KRBS	Karabastau	3.52	327	Pg	Pg	23 22 15.9	-2.1
	1.9nm,0.2s						
KRBS				Lg	Lg	23 23 03.5	
	9.2nm,0.8s						
DJR	Jarkent	3.72	16	eP	Pg	23 22 19.1	-2.7
	1.1nm,0.1s						
DJR				eS	Sg	23 23 08.9	-1.2
	5.7nm,0.5s						
DJR	Jarkent	3.72	16	Pg	Pg	23 22 19.1	-2.7
	1.1nm,0.1s						
DJR				Lg	Lg	23 23 08.9	
	5.7nm,0.5s						

TRN 10 23:24:40.6, 11°.90N×62°.17W, h143km, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRFF	Grenada Fort F	0.45	70	eP	Pn	23 25 00.5	-0.4
GRFF				eS	Sn	23 25 16.7	+0.3
GRGR	Grenville	0.56	65	eP	Pn	23 25 00.9	-0.6
GRGR				eS	Sn	23 25 17.0	-0.3
GCMP	Grenada, Carri	0.93	51	iP	Pn	23 25 03.3	-0.9
GCMP				eS	Sn	23 25 19.0	-3.1
TRN	Trinidad (W)	1.45	149	eP	Pn	23 25 10.4	+1.2
TRN				eS	Sn	23 25 29.3	-1.6
SVB	Belmont	1.64	33	eP	Pn	23 25 11.4	+0.2
TOSP	Speyside	1.71	110	eP	Pn	23 25 11.8	-0.2
TOSP				eS	Sn	23 25 33.0	-2.9
MCLT	Moule a Chique	2.17	33	eP	Pn	23 25 18.3	+1.0
MCLT				eS	Sn	23 25 43.8	-1.7
SLB	Belfond	2.21	30	eP	Pn	23 25 18.6	+0.7
SLBI	Saint Lucia, B	2.41	29	eP	Pn	23 25 19.6	-0.8
SLBI				eS	Sn	23 25 48.6	-2.3
BCHC	Barbados, Cave	2.77	63	eS	Sn	23 25 57.6	-1.2
BBGH	Gun Hill	2.83	64	eP	Pn	23 25 24.6	-1.0
BBGH				eS	Sn	23 25 58.9	-1.5
MPOM	Morne Pois Mar	2.84	27	eP	Pn	23 25 25.8	+0.1
MPOM				eS	Sn	23 25 58.8	-1.6
BBSP	Saint Philip	2.91	65	eS	Sn	23 26 00.0	-2.0
MAGL	Barre de l'île	4.12	12	eP	Pn	23 25 42.5	+0.2

SOME 10 23:37:37.6, 39°.18N×74°.45E, h20km
NNC 10 23:37:44.6±4.3, 39°.40N×75°.07E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=33.9km s-min=19.8km az=162.0
ISC 10 23:37:38.7±2.6, 39°.3N±0°.1×74°.32E±0°.04, h10km, n31, σ3s05/48, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	3.76	14	↑Pn	Pb	23 38 41.3	-4.0
	1.1nm,0.3s						
TKM2				↑Pg	Pg	23 38 50.3	-0.4
	3.1nm,0.3s						
TKM2				↑Lg	Lg	23 39 34.9	
	13nm,0.7s						
KST	Kastek	3.96	18	eP	Pg	23 38 52.1	-2.4
	3.7nm,0.3s						
KST				eS	Sg	23 39 46.4	+0.7
	20nm,0.5s						
KST	Kastek	3.96	18	Pg	Pg	23 38 52.1	-2.4
	3.7nm,0.3s						
KST				Lg	Lg	23 39 46.4	
	20nm,0.5s						
TNSS	Tian-Shan	4.24	27	eP	Pb	23 38 55.6	+2.0
	3.7nm,0.3s						
TNSS				eS	Sg	23 39 52.3	-2.6
	6.1nm,0.7s						
TNSS	Tian-Shan	4.24	27	Pg	Pb	23 38 55.6	+2.0
	3.7nm,0.3s						
TNSS				Lg	Lg	23 39 52.3	
	6.1nm,0.7s						
IUG	Iuzhnay	4.34	313	eP	Pb	23 38 56.7	+1.6
	70nm,0.3s						
IUG				eS	Sb	23 39 54.0	+6.5
	19nm,0.6s						
IUG	Iuzhnay	4.34	313	Pg	Pb	23 38 56.7	+1.6
	70nm,0.3s						
IUG				Lg	Lg	23 39 54.0	
	19nm,0.6s						

6.2nm,0.5s
KOTS eS **Sg** 23 39 59.8 -2.5
24nm,0.8s
KOTS Kotyrbulak 4.47 27 Pg **Pb** 23 39 00.0 +2.7
6.2nm,0.5s
KOTS Lg Lg 23 39 59.8
24nm,0.8s
KRBS Karabastau 4.53 13 eP **Pg** 23 39 03.1 -2.2
2.5nm,0.6s
KRBS eS **Sg** 23 40 05.2 +1.3
4.9nm,0.6s
KRBS Karabastau 4.53 13 Pg **Pg** 23 39 03.1 -2.2
2.5nm,0.6s
KRBS Lg Lg 23 40 05.2
4.9nm,0.6s
KTBS Karatobe 4.77 21 eP **Pg** 23 39 06.2 -3.8
5.6nm,0.5s
KTBS eS **Sg** 23 40 10.7 -1.0
13nm,0.5s
KTBS Karatobe 4.77 21 Pg **Pg** 23 39 06.2 -3.8
5.6nm,0.5s
KTBS Lg Lg 23 40 10.7
13nm,0.5s
KK31 Karatay Array 4.78 324 ⇓Pn **Pb** 23 39 00.0 -2.5
0.5nm,0.2s,baz=121,slow=12,SNR=9.5
KK31 ⇑Sn **Sb** 23 40 00.2 +0.2
1.1nm,0.4s,baz=156,slow=46,SNR=4.8
KK31 ⇑Lg Lg 23 40 24.4
1.9nm,0.5s,baz=123,slow=27
KUU Kurty 4.85 18 eP **Pg** 23 39 08.0 -3.5
2.9nm,0.4s
KUU eS **Sg** 23 40 13.6 -0.7
15nm,0.6s
KUU Kurty 4.85 18 Pg **Pg** 23 39 08.0 -3.5
2.9nm,0.4s
KUU Lg Lg 23 40 13.6
15nm,0.6s
SATY Saty 4.87 38 eP **Pb** 23 39 05.1 +1.0
6.7nm,0.7s
SATY eS **Sb** 23 40 08.4 +5.6
14nm,0.8s
SATY Saty 4.87 38 Pg **Pb** 23 39 05.1 +1.0
6.7nm,0.7s
SATY Lg Lg 23 40 08.4
14nm,0.8s
CHKK Chushkaly 4.99 23 eP **Pg** 23 39 10.0 -4.1
1.0nm,0.1s
CHKK eS **Sg** 23 40 17.6 -1.1
8.2nm,0.5s
CHKK Chushkaly 4.99 23 Pg **Pg** 23 39 10.0 -4.1
1.0nm,0.1s
CHKK Lg Lg 23 40 17.6
8.2nm,0.5s
KURS Kuram 5.10 33 eP **Pb** 23 39 09.0 +1.0
5.4nm,0.5s
KURS eS **Sb** 23 40 14.9 +5.5
8.5nm,0.7s
UZB Uzynbulak 5.24 41 eP **Pb** 23 39 09.9 -0.6
2.9nm,0.3s
UZB eS **Sb** 23 40 17.1 +3.6
5.5nm,0.8s
KPKS Kokpek 5.31 37 eP **Pb** 23 39 12.4 +0.8
4.2nm,0.5s
KPKS eS **Sb** 23 40 21.7 +6.2
20nm,0.9s
KPKS Kokpek 5.31 37 Pg **Pb** 23 39 12.5 +0.8
4.2nm,0.5s
KPKS Lg Lg 23 40 21.7
20nm,0.9s
SHLS Shalkode 5.48 43 eP **Pg** 23 39 20.9 -2.6
3.8nm,0.3s
SHLS eS **Sg** 23 40 35.8 +1.3
11nm,1.0s
SHLS Shalkode 5.48 43 Pg **Pg** 23 39 20.9 -2.6
3.8nm,0.3s
SHLS Lg Lg 23 40 35.8
11nm,1.0s
ARXS Arharly 5.58 27 eP **Pg** 23 39 21.0 -4.5
3.7nm,0.8s
ARXS eS **Sg** 23 40 36.6 -1.2
5.2nm,1.1s
ARXS Arharly 5.58 27 Pg **Pg** 23 39 21.0 -4.5
3.7nm,0.8s
ARXS Lg Lg 23 40 36.6
5.2nm,1.1s
PDGK Podgornoye 5.61 42 ⇓Pg **Pb** 23 39 14.5 -2.3
4.7nm,0.9s
PDGK ⇑Lg Lg 23 40 25.9
12nm,0.9s

MAN 10 23:40:23.0, 9.°36N×126.°26E, h32km, mb3.9, ML2.6, MS2.2, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.45**	**342**	⇑eP	Pn	23 40 34.1	+0.9
GLSP				eS	Sn	23 40 41.4	+1.2
BUTP	**Butuan**	**0.74**	**239**	⇑eP	Pn	23 40 37.1	-0.1
BUTP				eS	Sn	23 40 48.0	+0.6
SCPH	**Surigao**	**0.87**	**299**	⇓eP	Pb	23 40 39.5	-0.2
SCPH				eS	Sb	23 40 51.6	+0.5
BIPH	**Bislig**	**1.17**	**175**	⇓eP	Pn	23 40 42.4	-0.7
BIPH				eS	Sn	23 40 57.3	-0.7
TABP	**Talibon, Bohol**	**2.04**	**291**	⇑iP	Pb	23 40 57.4	-2.0
TABP				iS	Sn	23 41 19.5	0.0

*SOME **10** 23:42:00.5, 39.°42N×73.°58E, h15km*
*KRNET **10** 23:42:02.6±0.1, 39.°52N×73.°59E, mb2.9*
*NNC **10** 23:42:02.8±3.4, 39.°58N×73.°54E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=26.8km s-min=11.5km az=171.0
ISC 10 23:42:00.7±1.7, 39.°49N±0.°07×73.°61E±0.°04, h3km±18km, n21, σ2§25/35, 10C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.21**	**329**	⇑iP	Pg	23 42 25.3	+1.4
OHH	baz=29			⇑iS	Sg	23 42 41.4	+1.8
DRK	**Karamyk**	**1.40**	**270**	⇑iP	Pg	23 42 28.8	+1.2
DRK	baz=69			⇑iS	Sg	23 42 48.4	+2.7
BTK	**Batken**	**2.23**	**286**	⇑iP	Pg	23 42 42.6	-0.8
BTK	baz=85			⇑iS	Sg	23 43 11.8	-0.4
ARLS	**Aral**	**2.43**	**13**	⇑iP	Pb	23 42 45.1	-0.1
ARLS	baz=13			⇑iS	Sb	23 43 16.5	+0.9
GAR	**Garm**	**2.60**	**260**	⇓iP	Pb	23 42 47.7	-0.4
GAR	baz=60			⇓iS	Sg	23 43 20.8	-3.6
TRKS	**Terek-Say**	**2.77**	**318**	⇓iP	Pb	23 42 49.1	-2.0
TRKS	baz=17			⇓iS	Sb	23 43 23.0	-2.5
UCH	**Uchtor**	**2.82**	**14**	⇓iP	Pb	23 42 51.1	-0.9
UCH	baz=14			⇓iS	Sb	23 43 26.2	-0.9
TKM2	**Tokmak 2**	**3.74**	**23**	⇑Pg	Pg	23 43 12.2	-0.2
TKM2	2.4nm,0.6s			⇑Lg	Lg	23 43 59.7	
IUG	**Iuzhnay**	**3.80**	**315**	eP	Pb	23 43 10.2	+1.8
IUG	37nm,0.3s			eS	Sg	23 44 01.4	-1.3
IUG	**Iuzhnay**	**3.80**	**315**	Pg	Pb	23 43 10.2	+1.8
IUG	37nm,0.3s			Lg	Lg	23 44 01.4	
KST	**Kastek**	**3.97**	**26**	eP	Pb	23 43 13.4	+2.0
KST	2.4nm,0.1s			eS	Sg	23 44 06.5	-1.6
KK31	**Karatay Array**	**4.30**	**328**	⇓Pg	Pb	23 43 19.1	+2.2
KK31	0.4nm,0.3s			Lg	Lg	23 44 14.2	
KRBS	**Karabastau**	**4.48**	**20**	eP	Pb	23 43 22.7	+2.6
KRBS	2.2nm,0.4s			eS	Sg	23 44 22.8	-1.8
KRBS	**Karabastau**	**4.48**	**20**	Pg	Pb	23 43 22.7	+2.6
KRBS	2.2nm,0.4s			Lg	Lg	23 44 22.7	
MDOK	**Medeo**	**4.49**	**34**	eP	Pb	23 43 23.1	+2.8
MDOK	3.6nm,0.4s			eS	Sg	23 44 22.9	-2.0
MDOK	**Medeo**	**4.49**	**34**	Pg	Pb	23 43 22.4	+2.1
MDOK	3.2nm,0.7s			Pg	Pg	23 43 23.1	-3.7
MDOK	1.3nm,0.2s			Lg	Lg	23 44 22.9	
MDOK				Lg	Lg	23 44 26.4	
KOTS	**Kotyrbulak**	**4.57**	**34**	eP	Pb	23 43 23.2	+1.4
KOTS	9.2nm,1.0s			eS	Sg	23 44 23.7	-3.9
KTBS	**Karatobe**	**4.80**	**28**	eP	Pb	23 43 28.8	+3.2
KTBS	7.6nm,0.3s			eS	Sg	23 44 33.2	-1.8
KTBS	**Karatobe**	**4.80**	**28**	Pg	Pb	23 43 28.8	+3.2
KTBS	7.2nm,0.4s			Lg	Lg	23 44 33.2	
KUU	**Kurty**	**4.85**	**24**	eP	Pb	23 43 28.9	+2.6
KUU	1.6nm,0.5s			eS	Sg	23 44 33.3	-3.1
KUU	**Kurty**	**4.85**	**24**	Pg	Pb	23 43 28.9	+2.6
KUU	1.6nm,0.5s			Lg	Lg	23 44 33.3	

*IDC **11** 00:23:34.8±5.3, 35.°98N×70.°38E, h195km±39km, mb3.2/2, mbtmp4.0/7, Error ellipse: s-maj=71.2km s-min=20.9km az=150.0*
*NNC **11** 00:23:40.6±3.4, 36.°70N×70.°01E, h169km±50km, mb3.0, mpv3.6, Error ellipse: s-maj=35.8km s-min=18.0km az=156.0*
ISC 11 00:23:39.6±0.8, 36.°55N±0.°07×70.°11E±0.°07, h213km, n33, σ1§35/39, 3C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**6.19**	**130**	eP	Pn	00 25 10.0	+0.5
THN				eS	S	00 26 18.0	-2.6
AML	**Almayashu**	**6.22**	**25**	P	Pn	00 25 11.2	+1.0
KK31	SNR=26 **Karatay Array**	**6.55**	**3**	P	Pn	00 25 14.6	+0.5
KK31	1.3nm,0.4s,baz=195,slow=14,SNR=38			⇓S	S	00 26 25.4	-3.7
UCH	4.3nm,0.7s,baz=190,slow=21,SNR=4.7 **Uchtor**	**6.61**	**30**	P	Pn	00 25 16.6	+1.3
EKS2	SNR=11 **Erkin-Say**	**6.72**	**24**	P	Pn	00 25 17.7	+1.3
AAK	SNR=15 **Ala-Archa**	**6.95**	**28**	P	Pn	00 25 20.9	+1.5
AAK	SNR=19 **Ala-Archa**	**6.95**	**28**	P	Pn	00 25 20.7	+1.3
AAK	11nm,0.3s,baz=202,slow=5.3,SNR=40			S	S	00 26 38.4	-0.4
CHMS	6.4nm,0.5s,baz=345,slow=22,SNR=17 **Chumysh**	**7.36**	**28**	⇓P	Pn	00 25 25.5	+1.0
CHMS	2.8nm,0.5s			⇑S	S	00 26 45.4	-2.8
USP	8.7nm,0.7s **Ospenovka**	**7.50**	**25**	P	Pn	00 25 27.0	+0.6
TKM2	SNR=5.7 **Tokmak 2**	**7.63**	**32**	P	Pn	00 25 29.1	+0.9
TKM2	SNR=7.2 **Tokmak 2**	**7.63**	**32**	⇓P	Pn	00 25 28.8	+0.5
TKM2	2.7nm,0.5s			⇓S	S	00 26 53.2	-1.6
GEYT	7.3nm,0.7s **Alibeck**	**9.66**	**282**	P	Pn	00 25 53.5	-0.8
GYA0B	5.1nm,0.5s,baz=112,slow=11,SNR=14 **ALIBECK ARRAY**	**9.66**	**282**	⇓Pn	Pn	00 25 52.7	-1.7
OTUK	**Ortayu**	**11.80**	**7**	⇓P	Pn	00 26 21.6	+0.1
MAKZ	4.7nm,1.4s **Makanchi**	**13.53**	**37**	⇑P	Pn	00 26 43.0	-0.2
MK31	3.6nm,0.6s **Makanchi Array**	**13.68**	**38**	P	Pn	00 26 45.2	+0.3
MKAR	4.2nm,0.9s,baz=195,slow=6.3,SNR=15 **Makanchi Array**	**13.68**	**38**	P	Pn	00 26 45.5	+0.5
PYUN	1.9nm,0.7s,baz=219,slow=15,SNR=13 **Piuthan**	**13.76**	**124**	eP	Pn	00 26 45.4	-0.9
DANN	8.3nm,0.3s **Dangsing**	**14.12**	**122**	eP	Pn	00 26 51.3	+0.4
AB31	12nm,0.3s **Akbulak array**	**14.70**	**333**	P	P	00 27 00.7	+2.5
GKN	0.5nm,0.7s,baz=150,slow=11,SNR=6.3 **Gorkha**	**14.94**	**121**	eP	Pn	00 27 00.4	-0.4
KURBB	12nm,0.4s **Kurchatov Arra**	**15.31**	**21**	P	Pn	00 27 05.0	+0.1
DMN	0.7nm,0.4s,baz=212,slow=11,SNR=9.2 **Daman**	**15.51**	**121**	eP	P	00 27 08.0	+0.4
PKIN	14nm,0.4s **Phulchoki**	**15.73**	**120**	eP	P	00 27 10.5	+0.4
PKI	18nm,0.4s **Pulchoki**	**15.74**	**120**	eP	P	00 27 10.7	+0.4
GUN	12nm,0.4s **Gumba**	**15.87**	**118**	eP	Pn	00 27 13.2	+1.1
JIRN	9.2nm,0.4s **Jiri**	**16.24**	**119**	eP	P	00 27 16.3	+0.6
AKTO	24nm,0.5s **Aktyubinsk**	**16.39**	**332**	P	Pn	00 27 19.2	+1.4
AKTO	0.5nm,0.4s,baz=157,slow=7.7,SNR=2.1			S	S	00 30 15.8	-1.6
BVA0	0.4nm,0.4s,baz=250,slow=18,SNR=1.3 **Borovoye Array**	**16.47**	**1**	⇑P	Pn	00 27 20.6	+1.8
BVAR	2.2nm,0.8s,baz=165,slow=10,SNR=20 **Borovoye Array**	**16.47**	**1**	P	Pn	00 27 19.7	+0.9
RAMN	1.5nm,0.4s,baz=166,slow=11,SNR=19 **Ramite**	**16.96**	**120**	eP	P	00 27 24.2	+0.7
ZALV	10nm,0.7s **Zalesovo Beam**	**20.17**	**26**	P	P	00 27 58.2	+0.5
	3.5nm,0.5s,baz=218,slow=11,SNR=18 3.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.00**	**268**	P	P	00 33 56.3	-0.9
	0.4nm,0.8s,baz=40,slow=6.5,SNR=4.1 0.4nm,0.8s						

*BJI **11** 00:34:02.0±0.0, 8.°70S×111.°20E, h100km, mb4.8/29, mB5.0/11*
*DJA **11** 00:34:02.0±0.2, 9.°S±3.°×11.°1E±.°, h71km±3km, M4.9/30, mb4.7/30, mB5.6/10, MLv4.8/19, Mw(mB)5.1/10, MwMwp5.4/2, Mwp5.5/2*
*NEIC **11** 00:34:03.3±2.7, 8.°63S±0.°07×111.°22E±0.°06, h93km±6km, mb4.4/37, Error ellipse: s-maj=10.7km s-min=8.0km az=216.0*
*IDC **11** 00:34:05.1±1.7, 8.°40S×111.°38E, h103km±14km, mb4.1/27, mbtmp4.4/29, MS3.1/10, Error ellipse: s-maj=16.8km s-min=9.5km az=34.0*
ISC 11 00:34:02.5±0.7, 8.°66S±0.°05×111.°30E±0.°04, h87km±6km, n137, σ1§42/143, mb4.4/48, 1C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.48**	**345**	P	Pn	00 34 15.7	-1.1
PWJI	**Pagerwojo**	**0.80**	**38**	P	Pn	00 34 19.4	-0.4
PWJI				S	Sn	00 34 32.0	-0.7
UGM	**Wanagama**	**1.07**	**314**		Pn	00 34 23.1	+0.1
UGM				Sn	Sn	00 34 37.8	-0.4
UGM	**Wanagama**	**1.07**	**314**	P	Pn	00 34 22.9	0.0
UGM				S	Sn	00 34 37.7	-0.4
KRKI	**Karangkates**	**1.24**	**66**	P	Pn	00 34 25.1	+0.2
KRKI				S	Sn	00 34 41.5	-0.2
SMRI	**Semarang**	**1.81**	**332**	Pn	Pn	00 34 33.0	+0.7
SMRI	**Semarang**	**1.81**	**332**	P	Pn	00 34 33.8	+1.6
SMRI				S	Sn	00 34 57.2	+2.4
TBJI	**Tambak Boyo**	**1.91**	**16**	P	Pn	00 34 34.5	+1.1
TBJI				S	Sn	00 34 57.8	+0.9
SCJI	**Gunung Srandil**	**2.33**	**295**	P	Pn	00 34 38.8	-0.2
JAGI	**Jajag, Banyuwa**	**2.82**	**86**	Pn	Pn	00 34 46.0	+0.4
JAGI	**Jajag, Banyuwa**	**2.82**	**86**	P	Pn	00 34 45.8	+0.2
JAGI				S	Sn	00 35 17.5	-1.3
KMMI	**Kalianget**	**3.08**	**59**	P	Pn	00 34 48.6	-0.5
BWJI	**Bawean**	**3.10**	**26**	P	Pn	00 34 50.6	+1.3
RTBI	**Rangdo, Negare**	**3.60**	**87**	P	Pn	00 34 56.5	+0.3
IGBI	**Denpasar**	**3.80**	**93**	P	Pn	00 34 58.2	-0.6
DNP	**Denpasar**	**3.86**	**91**	P	Pn	00 35 00.4	+0.7
SRBI	**Singaraja**	**3.91**	**82**	P	Pn	00 35 00.6	+0.3
LEM	**Lembang**	**4.08**	**296**	P	Pn	00 35 04.8	+2.0
LEM	167nm,0.8s,baz=104,slow=9.0,SNR=19			S	Sn	00 35 52.2	+2.7
LEM	221nm,0.6s,baz=310,slow=22,SNR=5.7 **Lembang**	**4.08**	**296**	P	Pn	00 35 04.1	+1.3
CNJI	**Cibinong**	**4.35**	**288**	P	Pn	00 35 06.3	0.0
SKJI	**Sukabumi**	**4.98**	**289**	P	Pn	00 35 15.8	+0.9
TWSI	1.5nm2μm174nm,0.6s **Taliwang, Sumb**	**5.51**	**91**	P	Pn	00 35 23.0	+0.8
XMIS	0.5nm5μm43nm,0.6s **Christmas Isla**	**5.86**	**252**	Pn	Pn	00 35 24.7	-2.2
PBKI	**Pangkalan Bun**	**5.93**	**4**	P	Pn	00 35 29.1	+1.3
BBKI	0.8nm106nm,0.8s **Banjar Baru**	**6.25**	**34**	P	Pn	00 35 34.0	+1.8
PLAI	0.7nm7μm58nm,0.7s **Plampang**	**6.40**	**92**	P	Pn	00 35 35.2	+0.9
PPBI	0.6nm3μm121nm,0.7s **Pangkal Pinang**	**8.25**	**321**	P	Pn	00 36 01.5	+2.0
MTKI	24μm37nm,0.7s **Muara Teweh, K**	**8.46**	**25**	P	Pn	00 36 04.5	+2.1
KAPI	383nm,0.4s **Kappang**	**9.13**	**67**	P	Pn	00 36 13.1	+1.6
KAPI	11nm,0.5s,baz=230,slow=13,SNR=7.5			LR	LR	00 41 03.7	
KAPI	comp=Z,44nm,18.1s,baz=268,slow=47 **Kappang**	**9.13**	**67**	Pn	Pn	00 36 13.3	+1.8
KAPI	**Kappang**	**9.13**	**67**	P	Pn	00 36 13.4	+1.8
BKSI	26nm,1.2s **Bulukumba**	**9.36**	**70**	P	Pn	00 36 15.7	+1.1
BSSI	23nm,0.8s **Bau Bau, Buton**	**9.45**	**75**	P	Pn	00 36 17.0	+1.2
BNSI	34nm,0.8s **Bone**	**9.71**	**65**	P	Pn	00 36 19.5	0.0
KSM	14nm,0.9s **Kuching**	**10.11**	**354**	Pn	Pn	00 36 25.1	+0.2
KSM	**Kuching**	**10.11**	**354**	P	Pn	00 36 27.2	+2.3
TTSI	18nm,1.1s **Tana Toraja**	**10.14**	**57**	P	Pn	00 36 26.9	+1.6
BBSI	3μm19nm,0.7s **Bau Bau**	**11.62**	**75**	P	Pn	00 36 46.7	+1.3
MPSI	28nm,1.1s **Mapaga**	**12.38**	**44**	P	Pn	00 36 58.7	+3.1
SOEI	**Soe**	**12.84**	**96**	Pn	Pn	00 37 01.2	-0.7
SOEI	**Soe**	**12.84**	**96**	P	Pn	00 36 59.7	-2.3
MRSI	61nm,0.8s **Marisa**	**13.95**	**50**	P	Pn	00 37 17.4	+1.0
GIRL	759nm28nm,0.7s **Giralia**	**14.19**	**169**	Pn	Pn	00 37 17.8	-1.7
MBWA	**Marble Bar**	**14.85**	**148**	Pn	Pn	00 37 25.5	-2.5
GTOI	**Gorontalo**	**14.88**	**52**	P	Pn	00 37 29.3	+0.9
PSA00	9.7nm,0.8s **Pilbara Seismi**	**15.25**	**148**	Pn	Pn	00 37 31.4	-1.7
SANI	**Sanana**	**16.02**	**67**	P	Pn	00 37 43.3	+0.5
NLAI	54nm,0.9s **Namlea**	**16.60**	**72**	P	P	00 37 52.2	+1.1
KULM	18nm,0.5s **Kulim**	**17.46**	**322**		P	00 37 57.4	-3.2
KULM				IAmb	IAmb	00 38 25.2	
AAI	comp=Z,46nm,1.5s **Ambon**	**17.50**	**75**	P	Pn	00 38 03.9	+2.8
KRAI	comp=Z,122nm,0.6s **Karang Ratu**	**17.80**	**74**	P	P	00 38 03.8	-0.5
KNRA	comp=Z,42nm,0.8s **Kununurra**	**18.43**	**114**		Pn	00 38 12.4	+0.2
KNRA				IAmb	IAmb	00 38 12.5	
GAMI	comp=Z,32nm,1.2s **Galela, Maluku**	**19.46**	**58**	P	P	00 38 22.9	+0.4
MTN	comp=Z,6μmcomp=Z,110nm,0.8s **Manton Dam**	**19.92**	**104**	P	P	00 38 28.3	+0.9
MTN				IAmb	IAmb	00 38 39.7	
MORW	comp=Z,21nm,0.9s **Morawa**	**20.79**	**168**	P	Pn	00 38 38.5	-1.4
MORW				IAmb	IAmb	00 38 41.9	
DAV	comp=Z,23nm,1.1s **Davao City (W)**	**21.13**	**43**	LR	LR	00 48 36.9	
SIJI	comp=Z,23nm,20.2s,baz=203,slow=42 **Sorong**	**21.33**	**70**	P	P	00 38 42.7	0.0
	comp=Z,30nm,0.8s,baz=319,slow=3.9,SNR=11						
SIJI	comp=Z,30nm,0.8s **Sorong**	**21.33**	**70**	P	P	00 38 42.5	-0.2
FAKI	comp=Z,1μmcomp=Z,27nm,0.8s **Fak Fak**	**21.59**	**76**	P	P	00 38 44.9	-0.6
FAKI				IAmb	IAmb	00 38 50.2	
FAKI	comp=Z,18nm,0.7s **Fak Fak**	**21.59**	**76**	P	P	00 38 45.7	+0.2
RKPI	comp=Z,30nm,0.8s **Ransiki, Papua**	**23.85**	**74**	P	P	00 39 08.1	0.0
WB0	comp=Z,5μmcomp=Z,115nm,0.6s **Warramunga Arr**	**24.92**	**119**	P	P	00 39 18.7	+0.9
WRA	**Warramunga Arr**	**24.94**	**119**	P	P	00 39 18.8	+0.8
WRA	comp=Z,6.9nm,0.9s,baz=294,slow=11,SNR=35			PcP	PcP	00 42 52.1	+0.7
WRA	comp=Z,0.5nm,0.6s,baz=278,slow=1.8,SNR=2.5 comp=Z,6.9nm,0.9s **Warramunga Arr**	**24.94**	**119**	P	P	00 39 19.0	+1.1
WB2	**Warramunga Arr**	**24.95**	**119**	P	P	00 39 18.9	+0.8
WB2				IAmb	IAmb	00 39 21.2	
WR0	comp=Z,11nm,0.8s **Warramunga Arr**	**25.12**	**119**	P	P	00 39 20.8	+1.3
WR0				IAmb	IAmb	00 39 23.2	
ASAR	comp=Z,13nm,1.0s **Alice Springs**	**26.28**	**127**	P	P	00 39 31.7	+1.7
ASAR	comp=Z,2.2nm,0.6s,baz=301,slow=9.3,SNR=18			PcP	PcP	00 42 55.7	+1.2
ASAR	comp=Z,1.0nm,0.6s,baz=301,slow=1.8,SNR=6.5 comp=Z,2.2nm,0.6s **Alice Springs**	**26.28**	**127**	P	P	00 39 33.3	+3.3
AS31	**Alice Springs**	**26.28**	**127**	P	P	00 39 32.7	+2.6
FORT	**Forrest**	**27.00**	**147**	P	P	00 39 40.0	+3.7
CMAR	**Chiang Mai Arr**	**29.58**	**336**	P	P	00 39 59.0	-0.3
CMAR	comp=Z,1.6nm,0.4s,baz=170,slow=8.3,SNR=8.2			PcP	PcP	00 43 03.5	+0.9
CMAR	comp=Z,1.2nm,0.3s,baz=201,slow=3.9,SNR=5.2			LR	LR	00 51 57.0	
COEN	comp=Z,27nm,20.8s,baz=145,slow=36 comp=Z,1.6nm,0.4s **Coen**	**31.67**	**103**	P	P	00 40 18.5	+0.5
PZH	**PanZhiHua**	**36.16**	**345**	P	P	00 40 58.9	+2.1
PZH				pmax	pmax		
PZH	comp=Z,10.0nm,0.6s			pmax	pmax		
STKA	comp=Z,80nm,3.8s **Stephens Creek**	**36.39**	**134**	P	P	00 41 00.6	+1.9
STKA	comp=Z,2.3nm,0.7s,baz=310,slow=13,SNR=3.9			PcP	PcP	00 43 22.8	+1.4
STKA	comp=Z,1.2nm,0.5s,baz=292,slow=5.4,SNR=1.8 **Stephens Creek**	**36.39**	**134**	P	P	00 41 00.3	+1.7
H08S2	comp=Z,2.3nm,0.7s **Diego Garcia H**	**38.42**	**269**	T	T	01 22 12.2	
H08S3	baz=96,slow=74 **Diego Garcia H**	**38.43**	**269**	T	T	01 22 18.4	
H08S1	baz=96,slow=74 **Diego Garcia H**	**38.44**	**269**	T	T	01 22 09.8	
JOW	baz=96 **Kunigami**	**38.93**	**25**	LR	LR	00 57 53.2	
NJ2	comp=Z,25nm,21.1s,baz=296,slow=37 **Nanjing**	**41.12**	**10**	eP	P	00 41 39.8	+1.8
NJ2				pmax	pmax		
XAN	comp=Z,10.0nm,0.5s **Xi'an**	**42.52**	**357**	P	P	00 41 48.4	-1.2
XAN				pmax	pmax		
HNS	comp=Z,6.0nm,1.2s **HongShan**	**45.92**	**4**	⇑P	P	00 42 15.8	-0.8
HNS				pmax	pmax		
JMN	comp=Z,7.0nm,0.8s **Monobe**	**47.29**	**26**	P	P	00 42 27.2	-0.2
KSRS	**Korea Array**	**48.44**	**18**	P	P	00 42 35.3	-0.8
KSRS	comp=Z,1.3nm,0.5s,baz=202,slow=7.1,SNR=6.2			LR	LR	01 03 44.7	
GTA	comp=Z,13nm,19.7s,baz=355,slow=37 **Gaotai**	**49.00**	**348**	eP	P	00 42 41.7	+1.1
GTA				sP	sP	00 43 15.5	+3.8
GTA				pmax	pmax		
BTO	comp=Z,3.0nm,0.9s **Baotou**	**49.03**	**359**	eP	P	00 42 41.6	+0.8
HHC	**Hu-ho-hao-te**	**49.26**	**0**	eP	P	00 42 45.6	+3.1
HHC				pmax	pmax		
HHC	comp=Z,30nm,1.0s			pmax	pmax		
MJAR	comp=Z,230nm,4.4s **Matsushiro Arr**	**51.58**	**28**	P	P	00 42 58.0	-1.9
MJAR	comp=Z,3.6nm,0.7s,baz=194,slow=8.5,SNR=8.0			LR	LR	01 02 58.0	

comp=Z,13nm,21.9s,baz=134,slow=34
comp=Z,3.6nm,0.7s
PAF Port-aux-Franc 53.10 213 P **P 00 43 09.6 -0.14**
CN2 Changchun 53.77 13 *e*P **P 00 43 14.4 -1.5**
CN2 sP sP 00 43 49.2 +1.8
CN2 S **S 00 50 41.1 -2.7**
CN2 sS sS 00 51 22.2 +1.6
OUENC Ouen Island, N 54.94 111 P **P 00 43 22.7 -2.2**
USRK Ussuriysk Ar. 55.85 18 P **P 00 43 29.9 -1.1**
comp=Z,6.1nm,0.9s,baz=192,slow=7.1,SNR=5.9
comp=Z,6.1nm,0.9s
ULN Ulaanbaatar 56.40 357 P **P 00 43 34.2 -0.8**
SONM Songino Array 56.41 356 P **P 00 43 34.3 -0.8**
comp=Z,3.9nm,0.6s,baz=176,slow=8.4,SNR=27
SONM PcP **PcP 00 44 31.3 +0.2**
comp=Z,2.9nm,0.6s,baz=168,slow=3.7,SNR=10
SONM LR LR 01 10 16.8
comp=Z,26nm,19.2s,baz=121,slow=39
comp=Z,3.9nm,0.6s
SONM Songino Array 56.41 356 P **P 00 43 34.5 -0.5**
SONM IAmb IAmb 00 43 35.1
comp=Z,3.2nm,0.7s
WMQ Urumqi 56.45 340 *e*P **P 00 43 37.6 +2.2**
WMQ pmax pmax
comp=Z,19nm,0.6s
BOOM Boomskoye usch 60.28 330 P **P 00 44 00.6 -1.7**
WSAR Wadi Sarin 60.48 303 P **P 00 44 03.8 +0.1**
comp=Z,4.3nm,0.8s,baz=204,slow=7.0,SNR=3.9
comp=Z,4.3nm,0.8s
MK31 Makanchi Array 60.96 338 P **P 00 44 05.4 -1.1**
MK31 IAmb IAmb 00 44 05.8
comp=Z,1.7nm,0.5s
MKAR Makanchi Array 60.96 338 P **P 00 44 05.4 -1.1**
comp=Z,2.6nm,0.4s,baz=152,slow=7.5,SNR=48
comp=Z,2.6nm,0.4s
MAKZ Makanchi 61.09 337 P **P 00 44 07.1 -0.4**
MAKZ IAmb IAmb 00 44 25.2
comp=Z,2.5nm,0.6s
UOSS Minazif 63.20 303 P **P 00 44 20.3 -1.7**
VOI Vohitsoka 63.22 250 P **P 00 44 20.5 -1.8**
KURK Kurchatov 65.57 338 P **P 00 44 35.6 -1.2**
ZAA0 Zalesovo Array 66.27 343 P **P 00 44 39.9 -1.3**
ZAA0 IAmb IAmb 00 44 40.4
comp=Z,4.0nm,0.9s
ZALV Zalesovo Beam 66.27 343 P **P 00 44 39.9 -1.4**
comp=Z,3.4nm,0.6s,baz=150,slow=4.3,SNR=18
ZALV LR LR 01 16 08.3
comp=Z,21nm,18.1s,baz=56,slow=38
comp=Z,3.4nm,0.6s
GEYT Alibeck 67.86 317 P **P 00 44 51.0 -0.7**
comp=Z,2.2nm,0.6s,baz=157,slow=8.0,SNR=5.8
comp=Z,2.2nm,0.6s
GEYT Alibeck 67.86 317 P **P 00 44 50.3 -1.4**
GEYT IAmb IAmb 00 44 51.6
comp=Z,3.3nm,0.8s
BVAR Borovoye Array 70.60 335 P **P 00 45 07.5 -0.8**
comp=Z,1.2nm,0.6s,baz=147,slow=8.5,SNR=11
comp=Z,1.2nm,0.6s
RAYN Ar Rayn 71.78 298 P **P 00 45 15.9 -0.3**
ABKAR Akbulak array 73.05 328 P **P 00 45 22.4 -0.7**
ABKAR IAmb IAmb 00 45 22.8
comp=Z,7.4nm,0.9s
VNDA Vanda 73.58 170 P **P 00 45 27.8 +2.0**
comp=Z,1.2nm,0.8s,baz=295,slow=7.0,SNR=7.3
comp=Z,1.2nm,0.8s
VNDA Vanda 73.58 170 P **P 00 45 27.5 +1.7**
AKTO Aktyubinsk 74.75 328 P **P 00 45 32.6 -0.3**
comp=Z,1.7nm,0.6s,baz=87,slow=3.9,SNR=8.2
comp=Z,1.7nm,0.6s
ARU Arti 77.98 333 P **P 00 45 50.3 -0.8**
comp=Z,1.6nm,0.6s,baz=177,slow=6.8,SNR=4.5
ARU LR LR 01 27 21.0
comp=Z,18nm,18.6s,baz=36,slow=41
comp=Z,1.6nm,0.6s
GNI Garni 78.15 314 P **P 00 45 52.6 0.0**
GNI IAmb IAmb 00 46 24.9
comp=Z,5.2nm,0.9s
GEVA Gevas 78.70 312 P **P 00 45 54.7 -1.0**
GEVA IAmb IAmb 00 46 04.4
comp=Z,6.7nm,0.9s
GURO Guroymak-BITLI 79.54 312 P **P 00 46 00.8 +0.5**
NRIK Noril'sk 79.55 352 P **P 00 45 58.8 -0.6**
comp=Z,1.3nm,0.5s,baz=111,slow=8.6,SNR=2.4
comp=Z,1.3nm,0.5s
KBZ Khabaz 80.75 317 P **P 00 46 06.7 +0.2**
comp=Z,3.9nm,0.8s,baz=162,slow=6.7,SNR=8.0
comp=Z,3.9nm,0.8s
KVAR Kislovodsk Arr 80.97 317 P **P 00 46 07.9 +0.1**
comp=Z,1.0nm,0.5s,baz=69,slow=17,SNR=1.3
comp=Z,1.0nm,0.5s
KIV Kislovodsk 80.97 317 P **P 00 46 08.1 +0.3**
KIV IAmb IAmb 00 46 10.2
comp=Z,4.4nm,0.7s
TIXI Tiksi 80.98 6 P **P 00 46 05.6 -1.4**
TIXI IAmb IAmb 00 46 06.4
comp=Z,8.5nm,0.9s
KOPT Kop Dagi 81.15 313 P **P 00 46 10.1 +1.1**
KOPT IAmb IAmb 00 46 13.9
comp=Z,5.7nm,0.8s
QSPA South Pole Qui 81.34 180 P **P 00 46 11.0 +1.7**
QSPA IAmb IAmb 00 46 12.3
comp=Z,6.6nm,1.3s
ASF Jabal al Asfar 81.60 304 P **P 00 46 12.2 +0.9**
comp=Z,3.2nm,0.7s,baz=99,slow=4.8,SNR=8.0
comp=Z,3.2nm,0.7s
BOSA Boshof 82.46 242 LR LR 01 16 46.7
comp=Z,30nm,18.6s,baz=147,slow=31
MMAI Mount Meron Ar 83.03 305 P **P 00 46 19.6 +0.8**
comp=Z,2.7nm,0.8s,baz=105,slow=8.0,SNR=5.5
comp=Z,2.7nm,0.8s
KIRV Kirov 83.30 332 P **P 00 46 19.4 -0.1**
comp=Z,11nm,0.7s,baz=281,slow=5.1,SNR=4.7
comp=Z,11nm,0.7s
BRTR Keskin Array B 86.12 311 P **P 00 46 34.2 -0.1**
comp=Z,2.3nm,0.9s,baz=120,slow=5.6,SNR=12
comp=Z,2.3nm,0.9s
OBN Obninsk 88.44 326 P **P 00 46 44.5 -0.4**
comp=Z,4.2nm,0.7s,baz=19,slow=5.3,SNR=5.7
comp=Z,4.2nm,0.7s
KLMR Klimovskoe 88.80 332 *e*P **P 00 46 43.4 -3.0**
KLMR AMP 00 46 47.4
comp=Z,17nm,1.6s
SNAA Sanae 89.20 197 P **P 00 46 51.0 +2.6**
AKASG Malin Array Be 91.65 321 P **P 00 46 58.7 -1.2**
comp=Z,0.2nm,0.3s,baz=80,slow=5.7,SNR=2.4
comp=Z,0.2nm,0.3s
FINES FINESS Array B 95.26 331 P **P 00 47 15.9 -0.4**
comp=Z,2.6nm,0.9s,baz=144,slow=10,SNR=6.0
comp=Z,2.6nm,0.9s
TXAR Lajitas Array 141.29 53 PKhKP PKPpre 00 53 18.4
comp=Z,0.3nm,0.7s,baz=269,slow=0.5,SNR=4.7
CPUP Villa Florida 143.51 197 PKP **PKPdf 00 53 28.4 +0.6**
comp=Z,1.1nm,0.9s,baz=182,slow=1.3,SNR=1.9

KRSC 11 00:40:56.9±2.1, 50°.63N×155°.77E, h267km±16km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.87**	**50**	*e*P	Pn	00 41 39.9	+0.4
KDTR				*e*S	S	00 42 11.9	-1.4
RUS	**Russkaya**	**2.49**	**42**	*e*P	Pn	00 41 46.3	+1.2
RUS				*e*S	S	00 42 25.0	+1.6
SMAR	**Somma**	**3.23**	**34**	*e*P	Pn	00 41 55.8	+2.8
SDLR	**Sedlovina**	**3.28**	**35**	*e*P	Pn	00 41 55.5	+2.1
SDLR				*e*S	S	00 42 38.4	+0.1
GNL	**Ganaly**	**3.35**	**23**	*e*P	Pn	00 41 53.7	-0.4
SPN	**Mys Shipunski**	**3.61**	**45**	*e*S	S	00 42 43.7	-1.1
MKZ	**Mys Kozlova**	**5.35**	**40**	*e*P	Pn	00 42 18.5	+1.3
MKZ				*e*S	S	00 43 19.7	-1.9
KBTR	**Krutoberegovo**	**6.99**	**34**	*e*P	Pn	00 42 39.8	+2.3

ISU 11 00:42:00, 40°.37N×67°.98E, h18km
ISC 11 00:41:49.0±3.6, 39°.9N±0°.2×68°.4E±0°.1, h10km, n4, σ0s27/5, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMG	**Chimgan**	**2.08**	**36**	P	**Pb**	**00 42 26.7**	**-0.2**
NUT	**Nurota**	**2.17**	**289**	P	**Pg**	**00 42 30.5**	**-0.1**
NUT				S	**Sn**	**00 42 52.3**	**+0.1**
KK31	**Karatay Array**	**3.59**	**26**	⇓Pg	Pb	00 43 02.4	+10
	0.1nm,0.2s,baz=219,slow=12,SNR=3.0						
KK31				⇑Pg	Pg	00 43 11.3	+13
	0.2nm,0.2s						
KK31				⇑Sn	**Sg**	**00 43 44.4**	**0.0**
	0.3nm,0.3s,baz=221,slow=28,SNR=5.3						
KK31				⇑Lg	Lg	00 43 57.4	
	0.7nm,0.3s,baz=221,slow=28,SNR=5.3						
BVA0	**Borovoye Array**	**13.22**	**5**	P	**P**	**00 45 07.0**	**+0.3**
	0.2nm,0.6s,baz=145,slow=8.4,SNR=9.6						

IDC 11 01:01:00.1±0.7, 23°.05N×143°.73E, h0km, mb3.9/14, mbtmp3.9/15, ML3.8/1, MS3.1/3, Error ellipse: s-maj=29.8km s-min=15.6km az=81.0
NEIC 11 01:01:07.4±1.6, 23°.2N±0°.1×144°.0E±0°.3, h56km±12km, mb4.3/10, Error ellipse: s-maj=47.3km s-min=8.1km az=70.0
ISC 11 01:01:05.2±0.6, 23°.06N±0°.07×143°.8E±0°.2, h34km, n36, σ0s83/33, mb4.0/20, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.28**	**340**	Pn	**Pn**	**01 02 06.9**	**-1.1**
	5.1nm,0.3s,baz=314,slow=18,SNR=1.9						
JCJ				Sn	**Sn**	**01 02 54.7**	**-1.9**
	16nm,0.3s,baz=123,slow=23,SNR=8.3						
	84nm,0.9s						
JCJ	**Chichijima**	**4.28**	**340**	Pn	**Pn**	**01 02 09.6**	**+1.7**
JCJ				Sn	**Sn**	**01 02 57.8**	**+1.1**
JOW	**Kunigami**	**14.57**	**288**	LR	LR	01 09 53.7	
	comp=Z,58nm,18.2s,baz=250,slow=37						
KSRS	**Korea Array**	**19.80**	**320**	P	**Pn**	**01 05 34.7**	**+0.2**
	1.2nm,0.6s,baz=139,slow=14,SNR=4.1						
KSAR	**Wonju Array Be**	**19.82**	**320**	P	**Pn**	**01 05 34.6**	**-0.1**
H11N1	**WAKE ISLAND Hy**	**21.75**	**94**	T	T	01 28 15.3	
	baz=283,slow=74,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**21.75**	**94**	T	T	01 28 14.6	
	baz=283,slow=74,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**21.77**	**94**	T	T	01 28 08.5	
	baz=283,slow=74,SNR=5.2						
USRK	**Ussuriysk Ar.**	**23.22**	**338**	P	**P**	**01 06 09.6**	**+0.4**
	3.1nm,0.7s,baz=160,slow=9.2,SNR=4.2						
	3.1nm,0.7s						
DAV	**Davao City (W)**	**23.67**	**231**	LR	LR	01 13 50.3	
	comp=Z,34nm,21.5s,baz=337,slow=33						
KLR	**Kul'dur**	**27.80**	**343**	P	**P**	**01 06 51.2**	**+0.2**
	1.7nm,0.7s,baz=134,slow=8.6,SNR=6.0						
	1.7nm,0.7s						
TOLI2	**Tolitoli**	**31.24**	**229**	P	**P**	**01 07 23.5**	**+1.6**
SONM	**Songino Array**	**38.67**	**319**	P	**P**	**01 08 25.6**	**-0.2**
	0.4nm,0.4s,baz=126,slow=6.2,SNR=2.9						
	0.4nm,0.4s						
CTAO	**Charters Tower**	**42.95**	**177**	P	**P**	**01 09 00.8**	**-0.3**
CTAO				IAmb	IAmb	01 09 02.0	
	comp=Z,4.2nm,0.7s						
WB0	**Warramunga Arr**	**43.55**	**193**	P	**P**	**01 09 05.5**	**-0.5**
WB0				IAmb	IAmb	01 09 27.9	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**43.73**	**193**	P	**P**	**01 09 05.9**	**-1.5**
WRA	**Warramunga Arr**	**43.73**	**193**	P	**P**	**01 09 07.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=11,slow=8.1,SNR=8.3						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**43.73**	**193**	P	**P**	**01 09 07.5**	**0.0**
ASAR	**Alice Springs**	**47.44**	**192**	P	**P**	**01 09 36.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=16,slow=11,SNR=5.7						
ASAR				LR	LR	01 28 28.2	
	comp=Z,32nm,20.0s,baz=164,slow=35						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**53.51**	**321**	P	**P**	**01 10 21.8**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=119,slow=8.6,SNR=5.5						
	comp=Z,0.8nm,0.5s						
MK31	**Makanchi Array**	**54.21**	**312**	P	**P**	**01 10 28.0**	**+0.4**
MK31				IAmb	IAmb	01 10 29.4	
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**54.21**	**312**	P	**P**	**01 10 27.6**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=89,slow=9.1,SNR=14						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**54.67**	**182**	P	**P**	**01 10 30.4**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=354,slow=9.7,SNR=4.2						
	comp=Z,2.1nm,0.7s						
NRIK	**Noril'sk**	**56.92**	**339**	P	**P**	**01 10 46.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=123,slow=6.9,SNR=4.7						
	comp=Z,1.8nm,0.6s						
ILAR	**Eielson Array**	**60.57**	**27**	P	**P**	**01 11 11.8**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=248,slow=5.4,SNR=5.5						
	comp=Z,0.7nm,0.7s						
KK31	**Karatay Array**	**62.67**	**308**	P	**P**	**01 11 26.9**	**+0.2**
KK31				IAmb	IAmb	01 11 28.2	
	comp=Z,1.8nm,0.7s						
KKAR	**Karatay Array**	**62.67**	**308**	P	**P**	**01 11 26.8**	**+0.1**
KKAR				IAmb	IAmb	01 11 28.2	
	comp=Z,1.8nm,0.7s						
ARU	**Arti**	**68.51**	**323**	P	**P**	**01 12 03.5**	**-0.6**
ARU				IAmb	IAmb	01 12 04.0	
	comp=Z,2.2nm,0.6s						
ABKAR	**Akbulak array**	**68.97**	**316**	P	**P**	**01 12 06.7**	**-0.4**
ABKAR	**Akbulak array**	**68.97**	**316**	P	**P**	**01 12 06.2**	**-0.9**
ABKAR				IAmb	IAmb	01 12 32.2	
	comp=Z,1.2nm,0.9s						
YKA	**Yellowknife Ar**	**74.99**	**28**	P	**P**	**01 12 43.2**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=284,slow=7.6,SNR=2.0						
	comp=Z,0.9nm,0.7s						
KBZ	**Khabaz**	**81.84**	**314**	P	**P**	**01 13 21.4**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=61,slow=7.6,SNR=4.7						
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**81.85**	**52**	P	**P**	**01 13 23.0**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=272,slow=5.4,SNR=5.2						
	comp=Z,0.6nm,0.7s						
FINES	**FINESS Array B**	**82.20**	**335**	P	**P**	**01 13 21.5**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=70,slow=4.6,SNR=11						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**128.32**	**310**	PKP	**PKPdf**	**01 20 08.6**	**-0.5**
	comp=Z,0.2nm,0.8s,baz=42,slow=1.1,SNR=0.8						
PLCA	**Paso Flores**	**146.20**	**130**	PKPbc	**PKPab**	**01 20 43.0**	**-0.1**
	comp=Z,5.4nm,1.2s,baz=237,slow=2.9,SNR=5.8						

IDC 11 01:24:38.4±0.7, 34°.51N×141°.56E, h0km, mb3.8/12, mbtmp3.9/15, ML2.7/2, MS2.9/4, Error ellipse: s-maj=17.9km s-min=15.6km az=102.0
NEIC 11 01:24:39.6±1.7, 34°.58N±0°.04×141°.51E±0°.08, h5km±3km, mb4.4/11, Error ellipse: s-maj=11.4km s-min=3.7km az=120.0
JMA 11 01:24:39.1±0.4, 35°.N±1°.×14°.2E±°., h27km±1km, MV3.5/34, FAR SE OFF BOSO PEN
ISC 11 01:24:39.8±3.4, 34°.55N±0°.04×141°.70E±0°.06, h11km±21km, n59, σ1s04/64, mb4.1/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.60**	**280**	P	**Pb**	**01 24 52.1**	**+0.1**
BSO3	**Boso 3**	**1.01**	**285**	P	**Pb**	**01 24 59.4**	**+0.3**
BSO4	**Boso 4**	**1.20**	**292**	P	**Pn**	**01 25 02.2**	**-0.1**
CHOJ	**Chosi**	**1.34**	**329**	P	**Pn**	**01 25 03.4**	**-1.0**
CHOJ				S	**Sn**	**01 25 21.5**	**-0.6**
JKUC	**kamogawauchiur**	**1.37**	**297**	P	**Pn**	**01 25 04.1**	**-0.8**
JKUC				*e*S	**Sn**	**01 25 22.6**	**-0.3**
JMYK	**Miyake Tsubota**	**1.84**	**255**	*e*P	**Pn**	**01 25 11.7**	**+0.4**
JMYK				S	**Sn**	**01 25 34.7**	**+0.1**
JMKN	**Mikurajimanish**	**1.86**	**250**	P	**Pn**	**01 25 10.9**	**-0.7**
JMKN				*e*S	**Sn**	**01 25 33.5**	**-1.5**
JIM2	**Oshima 3**	**1.88**	**276**	*e*P	**Pn**	**01 25 12.3**	**+0.5**
JYT	**Yasato**	**2.08**	**324**	Pn	**Pn**	**01 25 13.3**	**-1.1**
JYT				Sn	**Sn**	**01 25 38.8**	**-1.5**
JHJ2	**Mitsune**	**2.12**	**228**	Pn	**Pn**	**01 25 14.7**	**-0.5**
JHJ2					**Sn**	**01 25 42.0**	**+0.5**
JHJ2	**Mitsune**	**2.12**	**228**	S	**Sn**	**01 25 41.4**	**-0.1**
JHJ	**Hachijo jima 2**	**2.14**	**229**	Pn	**Pn**	**01 25 14.1**	**-1.3**
	6.4nm,0.3s,baz=252,slow=20,SNR=1.1						
JHJ				Sn	**Sn**	**01 25 40.5**	**-1.4**
	161nm,0.3s,baz=68,slow=22,SNR=6.5						
	286nm,0.8s						
JOD2	**Odawara 2**	**2.26**	**289**	P	**Pn**	**01 25 16.6**	**-0.4**
JIZS	**Izushimoda**	**2.33**	**275**	P	**Pn**	**01 25 17.7**	**-0.3**
JIZS				S	**Sn**	**01 25 46.8**	**+0.2**
JAG	**Ashikaga**	**2.62**	**316**	P	**Pn**	**01 25 21.6**	**-0.3**
JAG				*e*S	**Sn**	**01 25 52.6**	**-1.1**
JRY	**Ryogami san**	**2.71**	**303**	P	**Pn**	**01 25 23.2**	**-0.2**
JRY				*e*S	**Sn**	**01 25 56.2**	**0.0**
JYN	**Shimob**	**2.75**	**291**	P	**Pn**	**01 25 23.5**	**-0.4**
JYN				S	**Sn**	**01 25 56.2**	**-1.0**
JMM	**Marumori**	**3.39**	**348**		**Pn**	**01 25 31.6**	**-0.9**
MJAR	**Matsushiro Arr**	**3.47**	**306**	Pn	**Pn**	**01 25 33.2**	**-0.5**
	0.6nm,0.3s,baz=115,slow=8.6,SNR=21						
MJAR				Sn	**Sn**	**01 26 14.7**	**0.0**
	0.8nm,0.3s,baz=131,slow=23,SNR=5.2						
MJAR				LR	LR	01 26 33.3	
	comp=Z,42nm,19.4s,baz=93,slow=34						
	3.3nm,0.4s						
MAJO	**Matsushiro**	**3.47**	**306**		**Pn**	**01 25 33.0**	**-0.7**
MJB9	**Matsu-Tunnel**	**3.47**	**306**	Pn	**Pn**	**01 25 33.9**	**+0.2**
JGF	**Kuroka**	**3.71**	**288**		**Pn**	**01 25 37.8**	**+0.8**
JSD	**Sado**	**4.45**	**322**		**Pn**	**01 25 45.8**	**-1.4**
JTM	**Tenmabayashi**	**6.25**	**356**	Pn	**Pn**	**01 26 10.4**	**-1.4**
JCJ	**Chichijima**	**7.44**	**177**	Pn	**Pn**	**01 26 27.9**	**-0.4**
	97nm,1.0s,baz=114,slow=23,SNR=5.1						
JCJ				Sn	**Sn**	**01 27 49.1**	**-3.6**
	8.7nm,0.3s,baz=266,slow=19,SNR=1.6						
KLR	**Kul'dur**	**16.41**	**336**	LR	LR	01 35 13.6	
	comp=Z,21nm,18.2s,baz=296,slow=39						
H11N2	**WAKE ISLAND Hy**	**26.75**	**117**	T	T	01 58 29.6	
	baz=309,slow=75,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	**26.76**	**117**	T	T	01 58 29.3	
	baz=309,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**26.77**	**117**	T	T	01 58 31.1	
	baz=309,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**27.38**	**119**	T	T	01 59 17.6	
	baz=312,slow=75,SNR=6.2						
H11S3	**WAKE ISLAND Hy**	**27.38**	**119**	T	T	01 59 18.5	
	baz=312,slow=75,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**27.40**	**119**	T	T	01 59 21.2	
	baz=312,slow=75,SNR=5.1						
YAK	**Yakutsk**	**28.54**	**348**	LR	LR	01 42 44.5	
	comp=Z,34nm,18.0s,baz=93,slow=38						
SONM	**Songino Array**	**29.42**	**308**	P	**P**	**01 30 44.0**	**+0.8**
	0.4nm,0.4s,baz=116,slow=10,SNR=4.1						
	0.4nm,0.4s						
SONM	**Songino Array**	**29.42**	**308**	P	**P**	**01 30 43.6**	**+0.3**
ZALV	**Zalesovo Beam**	**43.78**	**314**	P	**P**	**01 32 45.2**	**0.0**
	0.6nm,0.5s,baz=94,slow=5.9,SNR=4.3						
	0.6nm,0.5s						
MK31	**Makanchi Array**	**45.67**	**304**	P	**P**	**01 32 59.6**	**-0.8**
MK31				IAmb	IAmb	01 33 14.5	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**45.67**	**304**	P	**P**	**01 33 00.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=90,slow=8.8,SNR=4.3						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**45.67**	**304**	P	**P**	**01 32 59.1**	**-1.3**
KURK	**Kurchatov**	**47.67**	**310**	P	**P**	**01 33 13.7**	**-2.3**
KURK				IAmb	IAmb	01 33 16.5	
	comp=Z,4.1nm,0.9s						
KURBB	**Kurchatov Arra**	**47.74**	**310**	P	**P**	**01 33 16.0**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=84,slow=7.5,SNR=14						
	comp=Z,1.4nm,0.7s						
ILAR	**Eielson Array**	**51.48**	**31**	P	**P**	**01 33 45.8**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=264,slow=5.9,SNR=21						
	comp=Z,1.9nm,0.7s						
WB2	**Warramunga Arr**	**54.64**	**188**	P	**P**	**01 34 08.8**	**+0.3**
WB2				IAmb	IAmb	01 34 13.5	
	comp=Z,4.5nm,1.0s						
WRA	**Warramunga Arr**	**54.64**	**188**	P	**P**	**01 34 08.3**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=4.4,slow=7.4,SNR=9.7						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**54.64**	**188**	P	**P**	**01 34 07.5**	**-1.1**
DAWY	**Dawson**	**54.77**	**32**	P	**P**	**01 34 11.1**	**+1.9**
DAWY				IAmb	IAmb	01 34 21.8	
	comp=Z,6.2nm,1.5s						
INK	**Inuvik**	**56.49**	**26**	P	**P**	**01 34 22.5**	**+1.2**
	comp=Z,2.5nm,0.6s,baz=299,slow=5.2,SNR=9.6						
	comp=Z,2.5nm,0.6s						
ASAR	**Alice Springs**	**58.37**	**188**	P	**P**	**01 34 35.1**	**0.0**
	comp=Z,0.6nm,0.8s,baz=20,slow=8.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
ABKAR	**Akbulak array**	**59.73**	**311**	P	**P**	**01 34 43.9**	**-0.4**
ABKAR				IAmb	IAmb	01 34 44.1	
	comp=Z,2.1nm,0.6s						
NVAR	**Mina Array Bea**	**76.30**	**53**	P	**P**	**01 36 30.7**	**+1.8**
	comp=Z,0.9nm,0.7s,baz=284,slow=5.4,SNR=10						
	comp=Z,0.9nm,0.7s						
AKASG	**Malin Array Be**	**76.40**	**323**	P	**P**	**01 36 28.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=46,slow=6.4,SNR=6.0						
AKASG				LR	LR	02 11 39.7	
	comp=Z,31nm,18.6s,baz=328,slow=37						
	comp=Z,0.5nm,0.4s						
NOA	**NORSAR Array B**	**76.56**	**338**	P	**P**	**01 36 29.7**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=38,slow=6.0,SNR=2.2						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**79.25**	**45**	P	**P**	**01 36 46.3**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=302,slow=7.2,SNR=2.2						
	comp=Z,0.3nm,0.6s						
RDMU	**Red Mountain**	**80.57**	**47**	P	**P**	**01 36 54.6**	**+2.1**
RDMU				IAmb	IAmb	01 36 56.2	
	comp=Z,5.9nm,1.2s						
RAYN	**Ar Rayn**	**81.82**	**293**	P	**P**	**01 36 58.0**	**-1.2**
RAYN				IAmb	IAmb	01 36 59.5	
	comp=Z,1.7nm,0.8s						
PV23	**Carpenter Ridg**	**82.21**	**48**	P	**P**	**01 37 02.6**	**+1.3**
PV11	**David Mesa, Pa**	**82.39**	**48**	P	**P**	**01 37 03.6**	**+1.4**
LPAZ	**La Paz**	**147.68**	**63**	PKPbc	**PKPbc**	**01 44 26.5**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=267,slow=3.0,SNR=6.6						
SIV	**San Ignacio**	**152.44**	**54**	PKPbc	**PKiKP**	**01 44 36.9**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=222,slow=5.3,SNR=4.2						

IDC 11 01:24:40.9±0.5, 29°.31S×61°.14E, h0km, mb4.1/17, mbtmp4.2/18, ML4.6/1, MS3.5/32, Error ellipse: s-maj=18.0km s-min=16.1km az=32.0
NEIC 11 01:24:41.8±1.8, 29°.2S±0°.1×60°.9E±0°.2, h10km±1km, mb4.9/12, Error ellipse: s-maj=32.6km s-min=17.8km az=242.0
ISC 11 01:24:42.4±0.5, 29°.2S±0°.1×61°.0E±0°.1, h10km, n63, σ1s16/36, mb4.4/21, MS3.6/31, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.31**	**328**		**Pn**	**01 26 53.7**	**-3.2**
RER				Sn	Sn	01 28 32.2	-10
VOI	**Vohitsoka**	**14.75**	**296**		**Pn**	**01 28 08.8**	**-2.5**
ABPO	**Ambohimpanom**	**16.15**	**306**	P	**Pn**	**01 28 30.0**	**+0.2**
ABPO				Sn	Sn	01 31 17.5	-12
OPO	**Ambohidratompo**	**16.48**	**307**	Pn	**P**	**01 28 35.1**	**-1.5**
	0.2nm,0.3s,baz=118,slow=11,SNR=6.2						
OPO				Sn	Sn	01 31 24.5	-13
	0.1nm,0.3s,baz=124,slow=18,SNR=3.1						
OPO				LR	LR	01 33 29.6	
	comp=Z,82nm,19.0s,baz=18,slow=32						
	4.1nm,0.4s						
**H08S1

1.0nm,0.3s
QSPA South Pole Qui 60.97 180 P P 01 34 54.6 -1.1
2.5nm,0.8s,baz=213,slow=1.1,SNR=7.9
QSPA LR LR 01 57 43.8
comp=Z,73nm,21.2s,baz=307,slow=33
2.5nm,0.8s
QSPA South Pole Qui 60.97 180 P P 01 34 55.0 -0.7
QSPA IAmb IAmb 01 34 57.0
comp=Z,12nm,1.4s
NIL Nilore 63.56 11 P P 01 35 12.3 -0.8
KBL Kabul 63.83 7 P P 01 35 13.5 -1.7
KBL IAmb IAmb 01 35 20.7
comp=Z,4.2nm,1.1s
VNDA Vanda 64.04 166 P P 01 35 15.3 -0.5
comp=Z,1.4nm,0.8s,baz=289,slow=6.3,SNR=7.6
comp=Z,1.4nm,0.8s
VNDA Vanda 64.04 166 P P 01 35 14.7 -1.1
VNDA IAmb IAmb 01 35 18.5
comp=Z,16nm,1.9s
ASAR Alice Springs 64.55 104 P P 01 35 19.4 -0.6
comp=Z,2.5nm,0.7s,baz=243,slow=6.2,SNR=20
comp=Z,2.5nm,0.7s
AS31 Alice Springs 64.55 104 P P 01 35 18.2 -1.9
SBA Scott Base 64.92 167 P P 01 35 21.3 -0.3
SBA IAmb IAmb 01 37 07.9
comp=Z,21nm,1.9s
WRA Warramunga Arr 66.37 100 P P 01 35 31.1 -0.8
comp=Z,2.8nm,0.9s,baz=245,slow=5.3,SNR=8.1
comp=Z,2.8nm,0.9s
WB2 Warramunga Arr 66.38 100 P P 01 35 31.6 -0.4
WB2 IAmb IAmb 01 35 32.2
comp=Z,21nm,1.4s
WB0 Warramunga Arr 66.49 100 P P 01 35 32.6 0.0
WR0 Warramunga Arr 66.54 101 P P 01 35 33.0 0.0
WR0 IAmb IAmb 01 37 59.7
comp=Z,30nm,1.9s
GYA0B ALIBECK ARRAY 66.82 357 P P 01 35 35.2 +1.0
GNI Garni 70.62 347 LR LR 02 05 26.0
comp=Z,62nm,19.8s,baz=166,slow=35
TORD Torodi Ar. Bea 71.05 298 P P 01 36 01.9 +0.8
comp=Z,2.8nm,0.9s,baz=96,slow=6.8,SNR=16
TORD LR LR 02 07 23.2
comp=Z,82nm,18.2s,baz=206,slow=36
comp=Z,2.8nm,0.9s
AAK Ala-Archa 72.53 10 LR LR 02 04 43.5
comp=Z,43nm,19.1s,baz=200,slow=33
DBIC Dimbokro 72.61 288 P P 01 36 12.2 +1.8
comp=Z,3.5nm,0.8s,baz=143,slow=7.6,SNR=3.8
DBIC LR LR 02 04 39.6
comp=Z,27nm,21.4s,baz=142,slow=33
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 73.14 338 P P 01 36 14.4 +1.1
comp=Z,1.3nm,0.9s,baz=155,slow=8.3,SNR=7.2
comp=Z,1.3nm,0.9s
KBZ Khabaz 74.44 346 LR LR 02 06 54.0
comp=Z,72nm,21.9s,baz=148,slow=34
KOWA Kowa 76.31 295 LR LR 02 09 57.6
comp=Z,47nm,18.8s,baz=95,slow=36
MKAR Makanchi Array 78.03 15 P P 01 36 41.3 +0.3
comp=Z,1.6nm,0.9s,baz=176,slow=6.9,SNR=6.8
MKAR LR LR 02 07 42.3
comp=Z,28nm,18.6s,baz=302,slow=33
comp=Z,1.6nm,0.9s
AKTO Aktyubinsk 79.31 358 LR LR 02 09 30.4
comp=Z,29nm,18.8s,baz=182,slow=34
KEST Kesra 80.85 320 LR LR 02 14 20.2
comp=Z,61nm,18.1s,baz=184,slow=37
MLR Muntele Rosu 80.88 336 LR LR 02 10 38.2
comp=Z,20nm,19.8s,baz=266,slow=34
KURBB Kurchatov Arra 80.95 11 P P 01 36 57.0 +0.3
comp=Z,0.9nm,0.8s,baz=206,slow=6.2,SNR=5.8
comp=Z,0.9nm,0.8s
BELG Belogornoye 82.07 352 LR LR 02 15 01.5
comp=Z,13nm,18.1s,baz=138,slow=37
AKASG Malin Array Be 84.37 340 P P 01 37 15.5 +1.1
comp=Z,0.5nm,0.4s,baz=158,slow=3.4,SNR=5.4
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 85.31 14 P P 01 37 19.2 +0.1
comp=Z,1.1nm,0.5s,baz=228,slow=3.6,SNR=6.9
ZALV LR LR 02 11 56.2
comp=Z,24nm,19.3s,baz=334,slow=33
comp=Z,1.1nm,0.5s
BBTS Babate 86.55 289 LR LR 02 14 49.3
comp=Z,42nm,19.6s,baz=108,slow=35
MDT Midelt 87.59 310 LR LR 02 16 38.0
comp=Z,40nm,18.7s,baz=132,slow=36
VRAC Vranov 87.60 333 LR LR 02 15 40.1
comp=Z,11nm,20.8s,baz=150,slow=35
KIRV Kirov 87.97 354 LR LR 02 17 00.9
comp=Z,17nm,18.6s,baz=145,slow=36
DAVOX Davos/Dischmat 88.59 328 LR LR 02 19 14.1
comp=Z,15nm,18.6s,baz=76,slow=37
ESDC Sonseca Array 91.33 316 P P 01 37 49.9 +1.5
comp=Z,1.3nm,1.0s,baz=106,slow=4.3,SNR=5.6
comp=Z,1.3nm,1.0s
FINES FINESS Array B 94.65 344 LR LR 02 20 47.1
comp=Z,21nm,20.8s,baz=152,slow=36
NOA NORSAR Array B 98.58 338 LR LR 02 22 58.5
comp=Z,14nm,19.7s,baz=115,slow=35
YKA Yellowknife Ar 146.56 356 PKPbc PKPbc 01 44 22.9 -0.4
comp=Z,2.1nm,0.6s,baz=345,slow=3.2,SNR=6.9
ULM Lac du Bonnet 152.67 327 PKPbc PKPbc 01 44 38.3 -0.7
comp=Z,4.1nm,0.7s,baz=53,slow=4.5,SNR=3.3
PDAR Pinedale Array 164.47 333 PKP PKPdf 01 44 46.4 -0.2
comp=Z,1.0nm,0.8s,baz=132,slow=2.2,SNR=8.5
TXAR Lajitas Array 166.64 274 PKP PKPdf 01 44 49.4 +0.7
comp=Z,0.6nm,0.9s,baz=136,slow=1.0,SNR=4.6
NVAR Mina Array Bea 170.76 357 PKP PKPdf 01 44 52.4 +1.2
comp=Z,0.9nm,0.8s,baz=207,slow=2.1,SNR=6.4

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*NEIC **11** 02:01:56.4±1.6, 47.°9S±0.°1×99.°4E±0.°2, h10km±1km, mb4.6/12, Error ellipse: s-maj=28.4km s-min=19.2km az=288.0*
*IDC **11** 02:01:57.4±0.8, 48.°16S×99.°72E, h0km, mb4.3/9, mbtmp4.3/9, MS4.0/30, Error ellipse: s-maj=31.0km s-min=16.6km az=127.0*
*GCMT **11** 02:02:01.4±0.3, 48.°15S±0.°02×99.°61E±0.°03, h24km±1km, MW4.9/87, Moment Tensor Solution. s18,c19; s87,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.86±.19; $M_{\theta\theta}$2.71±.14; $M_{\phi\phi}$-1.85±.13; $M_{r\theta}$-1.52±.22; $M_{\theta\phi}$1.40±.12; $M_{r\phi}$0.10±.18; Best double couple: $M_0$3.01500×10^{16} NP1:ϕ_s116.00000°, δ87.00000°, λ-29.00000°. NP2: ϕ_s208.00000°, δ61.00000°, λ-177.00000°. Principal axes: T 3.5750, Plg18.0000°, Azm166.0000°; N -1.1210, Plg61.0000°, Azm291.0000°; P -2.4550, Plg22.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 02:01:57.6±0.6, 48.°0S±0.°1×99.°7E±0.°1, h12km, n58, σ1$67/31, mb4.4/12, MS4.1/31, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**16.97**	**45**	T	T	02 23 18.2	
	baz=214,slow=74,SNR=75						
H01W1	**Cape Leeuwin H**	**16.98**	**45**	T	T	02 23 20.5	
	baz=214,slow=74,SNR=84						
H01W3	**Cape Leeuwin H**	**16.98**	**45**	T	T	02 23 23.7	
	baz=214,slow=74,SNR=123						
CASY	**Casey**	**19.19**	**167**	P	**Pn**	**02 06 21.2**	**-0.6**
CASY				IAmb	IAmb	02 06 40.8	
	comp=Z,24nm,1.3s						
NWAO	**Narrogin (SRO)**	**20.07**	**48**	LR	LR	02 12 31.6	
	comp=Z,434nm,21.8s,baz=78,slow=32						
MAW	**Mawson**	**27.06**	**210**	P	**P**	**02 07 40.0**	**+0.6**
	comp=Z,5.1nm,1.1s,baz=67,slow=13,SNR=4.7						
MAW				LR	LR	02 16 34.1	
	comp=Z,214nm,18.1s,baz=53,slow=32						
	comp=Z,5.1nm,1.1s						
MAW	**Mawson**	**27.06**	**210**	P	**P**	**02 07 36.1**	**-3.3**
STKA	**Stephens Creek**	**35.47**	**78**	P	**P**	**02 08 55.1**	**+1.2**
	comp=Z,5.0nm,1.0s,baz=231,slow=21,SNR=3.9						
STKA				LR	LR	02 20 49.6	
	comp=Z,294nm,19.2s,baz=207,slow=32						
	comp=Z,5.0nm,1.0s						
STKA	**Stephens Creek**	**35.47**	**78**	P	**P**	**02 08 54.8**	**+1.0**
ASAR	**Alice Springs**	**36.42**	**60**	P	**P**	**02 09 03.4**	**+1.4**
	comp=Z,1.7nm,0.9s,baz=214,slow=7.7,SNR=11						
ASAR				PcP	**PcP**	**02 11 29.3**	**+3.1**
	comp=Z,0.8nm,0.7s,baz=189,slow=2.4,SNR=5.3						
ASAR				LR	LR	02 22 18.7	
	comp=Z,238nm,18.5s,baz=182,slow=34						
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**36.42**	**60**	P	**P**	**02 09 02.5**	**+0.4**
AS31	**Alice Springs**	**36.42**	**60**	P	**P**	**02 09 01.3**	**-0.8**
VNDA	**Vanda**	**37.68**	**162**	P	**P**	**02 09 12.8**	**+0.6**
	comp=Z,2.9nm,1.1s,baz=284,slow=10.0,SNR=8.2						
VNDA				LR	LR	02 23 32.5	
	comp=Z,467nm,18.0s,baz=282,slow=34						
	comp=Z,2.9nm,1.1s						
VNDA	**Vanda**	**37.68**	**162**	P	**P**	**02 09 12.8**	**+0.6**
VNDA				IAmb	IAmb	02 09 20.9	
	comp=Z,4.2nm,0.9s						
WRA	**Warramunga Arr**	**39.58**	**57**	P	**P**	**02 09 30.1**	**+1.3**
	comp=Z,2.7nm,0.9s,baz=218,slow=8.9,SNR=13						
WRA				LR	LR	02 23 54.7	
	comp=Z,374nm,20.7s,baz=203,slow=33						
	comp=Z,2.7nm,0.9s						
WRA	**Warramunga Arr**	**39.58**	**57**	P	**P**	**02 09 26.4**	**-2.3**
WB2	**Warramunga Arr**	**39.59**	**57**	P	**P**	**02 09 28.6**	**-0.2**
WB2				IAmb	IAmb	02 09 37.6	
	comp=Z,13nm,1.2s						
LEM	**Lembang**	**41.59**	**12**	LR	LR	02 23 37.9	
	comp=Z,300nm,19.6s,baz=186,slow=31						
QSPA	**South Pole Qui**	**42.13**	**180**	P	**P**	**02 09 49.7**	**+0.3**
	comp=Z,16nm,1.0s,baz=321,slow=3.6,SNR=18						
QSPA				LR	LR	02 26 20.9	
	comp=Z,507nm,18.4s,baz=319,slow=35						
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**42.13**	**180**	P	**P**	**02 09 49.2**	**-0.3**
QSPA				IAmb	IAmb	02 09 57.2	
	comp=Z,20nm,0.8s						
KAPI	**Kappang**	**46.17**	**28**	LR	LR	02 28 00.2	
	comp=Z,86nm,21.5s,baz=200,slow=34						
H08S2	**Diego Garcia H**	**46.36**	**321**	T	T	03 00 02.1	
	baz=155,slow=76,SNR=13						
H08S1	**Diego Garcia H**	**46.37**	**321**	T	T	02 59 53.9	
	baz=155,slow=76,SNR=6.8						
H08S3	**Diego Garcia H**	**46.38**	**321**	T	T	02 59 52.1	
	baz=155,slow=76,SNR=18						
CTA	**Charters Tower**	**46.63**	**70**	LR	LR	02 28 36.4	
	comp=Z,172nm,19.0s,baz=252,slow=34						
CTAO	**Charters Tower**	**46.63**	**70**	P	**P**	**02 10 23.6**	**-2.2**
CTAO				IAmb	IAmb	02 10 29.9	
	comp=Z,10nm,1.1s						
TROLL	**Troll, Antarti**	**47.28**	**205**	P	**P**	**02 10 29.9**	**-0.4**
FOZ	**Fox Glacier**	**47.60**	**112**	P	**P**	**02 10 31.8**	**-1.2**
SNAA	**Sanae**	**48.93**	**204**	P	**P**	**02 10 43.0**	**-0.1**
SNAA	**Sanae**	**48.93**	**204**	P	**P**	**02 10 42.9**	**-0.1**
	comp=Z,9.8nm,1.1s,baz=130,slow=8.5,SNR=22						
SNAA				LR	LR	02 29 43.7	
	comp=Z,420nm,18.7s,baz=108,slow=34						
	comp=Z,9.8nm,1.1s						
SNAA	**Sanae**	**48.93**	**204**	P	**P**	**02 10 42.7**	**-0.4**
VNA2	**Neumayer--Watz**	**50.57**	**204**	P	**P**	**02 10 55.3**	**-0.2**
	baz=108,slow=5.6						
PSI	**Prapat**	**50.60**	**359**	LR	LR	02 30 50.8	
	comp=Z,142nm,18.1s,baz=176,slow=34						
VNA1	**Neumayer--Stat**	**50.97**	**204**	P	**P**	**02 10 58.4**	**0.0**
PALK	**Pallekele**	**57.53**	**338**	LR	LR	02 32 56.6	
	comp=Z,116nm,20.7s,baz=256,slow=32						
BOSA	**Boshof**	**59.22**	**260**	LR	LR	02 33 44.0	
	comp=Z,154nm,18.4s,baz=180,slow=32						
DAV	**Davao City (W)**	**59.42**	**30**	LR	LR	02 37 22.4	
	comp=Z,56nm,20.7s,baz=144,slow=36						
SUR	**Sutherland**	**59.68**	**254**	LR	LR	02 32 08.3	
	comp=Z,162nm,20.4s,baz=149,slow=30						
LBTB	**Lobatse**	**61.39**	**264**	P	**P**	**02 12 15.2**	**+1.6**
	comp=Z,1.7nm,0.7s,baz=159,slow=9.8,SNR=1.8						
LBTB				LR	LR	02 34 51.3	
	comp=Z,92nm,19.1s,baz=141,slow=32						
	comp=Z,1.7nm,0.7s						
HNR	**Honiara**	**63.32**	**74**	LR	LR	02 37 06.9	
	comp=Z,2μm,22.0s,baz=206,slow=33						
CMAR	**Chiang Mai Arr**	**66.16**	**359**	P	**P**	**02 12 47.7**	**+2.8**
	comp=Z,2.4nm,0.3s,baz=195,slow=5.6,SNR=2.0						
CMAR				LR	LR	02 38 20.3	
	comp=Z,195nm,20.7s,baz=185,slow=33						
	comp=Z,2.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**66.16**	**359**	P	**P**	**02 12 43.5**	**-1.4**
LSZ	**Lusaka**	**66.42**	**273**	LR	LR	02 37 58.6	
	comp=Z,111nm,19.3s,baz=140,slow=32						
PMSA	**Palmer Station**	**66.84**	**188**	LR	LR	02 42 09.0	
	comp=Z,265nm,18.9s,baz=174,slow=36						
TSUM	**Tsumeb**	**70.75**	**263**	LR	LR	02 39 46.0	
	comp=Z,176nm,18.9s,baz=158,slow=32						
MBAR	**Mbarara**	**75.57**	**286**	LR	LR	02 43 19.3	
	comp=Z,54nm,18.1s,baz=132,slow=33						
ATD	**Arta Tunnel**	**77.70**	**303**	LR	LR	02 43 11.2	
	comp=Z,38nm,19.1s,baz=34,slow=32						
WSAR	**Wadi Sarin**	**79.91**	**322**	LR	LR	02 43 01.7	
	comp=Z,91nm,22.0s,baz=146,slow=31						
NIL	**Nilore**	**84.67**	**338**	P	**P**	**02 14 29.2**	**-1.7**
NIL				IAmb	IAmb	02 14 37.9	
	comp=Z,7.4nm,1.1s						
KBL	**Kabul**	**86.63**	**335**	P	**P**	**02 14 37.3**	**-3.5**
KSRS	**Korea Array**	**88.74**	**22**	LR	LR	02 52 21.5	
	comp=Z,20nm,21.8s,baz=200,slow=34						
PLCA	**Paso Flores**	**91.21**	**187**	LR	LR	02 54 37.0	
	comp=Z,181nm,20.8s,baz=185,slow=35						
AAK	**Ala-Archa**	**92.96**	**342**	LR	LR	02 53 14.2	
	comp=Z,62nm,21.5s,baz=170,slow=33						
MKAR	**Makanchi Array**	**95.63**	**348**	LR	LR	02 56 34.7	
	comp=Z,69nm,19.5s,baz=218,slow=34						
SONM	**Songino Array**	**95.64**	**5**	LR	LR	02 58 29.4	
	comp=Z,56nm,19.4s,baz=140,slow=35						
EIL	**Elat**	**96.62**	**308**	LR	LR	02 52 55.8	
	comp=Z,83nm,19.4s,baz=213,slow=32						
NVAR	**Mina Array Bea**	**150.98**	**95**	PKPbc	**PKiKP**	**02 21 51.7**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=232,slow=3.7,SNR=16						
TXAR	**Lajitas Array**	**154.10**	**128**	PKPbc	**PKiKP**	**02 22 00.1**	**+2.8**
	comp=Z,0.5nm,1.0s,baz=217,slow=4.4,SNR=3.5						

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*IDC **11** 02:05:11.5±0.8, 48.°08S×99.°64E, h0km, mb4.5/9, mbtmp4.5/9, Error ellipse: s-maj=28.4km s-min=16.1km az=124.0*
*NEIC **11** 02:05:12.8±1.5, 48.°14S±0.°07×99.°6E±0.°2, h10km±1km, mb4.7/15, Error ellipse: s-maj=28.9km s-min=6.8km az=288.0*

ISC 11 02:05:12.9±0.6, 48.°1S±0.°1×99.°6E±0.°1, h12km, n38, σ0$69/33, mb4.5/14, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.05**	**45**	T	T	02 26 37.9	
	baz=214,slow=74,SNR=64						
H01W1	**Cape Leeuwin H**	**17.06**	**45**	T	T	02 26 38.7	
	baz=214,slow=74,SNR=61						
H01W3	**Cape Leeuwin H**	**17.06**	**45**	T	T	02 26 38.7	
	baz=214,slow=74,SNR=62						
CASY	**Casey**	**19.09**	**166**	P	**P**	**02 09 34.9**	**-0.2**
CASY				IAmb	IAmb	02 09 54.7	
	comp=Z,34nm,1.4s						
MAW	**Mawson**	**26.97**	**210**	P	**P**	**02 10 55.2**	**+1.3**
	comp=Z,9.0nm,1.2s,baz=62,slow=14,SNR=4.2						
	comp=Z,9.0nm,1.2s						
MAW	**Mawson**	**26.97**	**210**	P	**P**	**02 10 51.5**	**-2.5**
STKA	**Stephens Creek**	**35.50**	**78**	P	**P**	**02 12 09.7**	**+0.2**
	comp=Z,10.0nm,1.1s,baz=261,slow=3.0,SNR=5.5						
	comp=Z,10.0nm,1.1s						
STKA	**Stephens Creek**	**35.50**	**78**	P	**P**	**02 12 08.2**	**-1.2**
ASAR	**Alice Springs**	**36.48**	**60**	P	**P**	**02 12 17.9**	**0.0**
	comp=Z,3.3nm,0.8s,baz=219,slow=7.3,SNR=16						
ASAR				PcP	**PcP**	**02 14 41.8**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=184,slow=2.1,SNR=2.3						
	comp=Z,3.3nm,0.8s						
ASAR	**Alice Springs**	**36.48**	**60**	P	**P**	**02 12 17.1**	**-0.7**
AS31	**Alice Springs**	**36.48**	**60**	P	**P**	**02 12 17.2**	**-0.7**
VNDA	**Vanda**	**37.59**	**162**	P	**P**	**02 12 27.6**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=280,slow=10,SNR=11						
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**37.59**	**162**	P	**P**	**02 12 27.3**	**+0.6**
VNDA				IAmb	IAmb	02 12 35.1	
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**39.64**	**57**	P	**P**	**02 12 44.8**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=217,slow=8.3,SNR=15						
	comp=Z,4.4nm,0.9s						
WB2	**Warramunga Arr**	**39.65**	**57**	P	**P**	**02 12 45.1**	**+0.5**
WB2				IAmb	IAmb	02 12 45.1	
	comp=Z,9.5nm,1.1s						
WB0	**Warramunga Arr**	**39.81**	**57**	P	**P**	**02 12 46.2**	**+0.3**
WB0				IAmb	IAmb	02 12 48.9	
	comp=Z,18nm,1.3s						
QSPA	**South Pole Qui**	**42.03**	**180**	P	**P**	**02 13 04.4**	**+0.4**
	comp=Z,20nm,1.0s,baz=322,slow=3.9,SNR=16						
	comp=Z,20nm,1.0s						
QSPA	**South Pole Qui**	**42.03**	**180**	P	**P**	**02 13 04.5**	**+0.6**
QSPA				IAmb	IAmb	02 13 11.8	
	comp=Z,24nm,0.8s						
H08S2	**Diego Garcia H**	**46.43**	**321**	T	T	03 03 06.3	
	baz=153,slow=76,SNR=10.0						
H08S1	**Diego Garcia H**	**46.44**	**321**	T	T	03 03 15.8	
	baz=153						
H08S3	**Diego Garcia H**	**46.45**	**321**	T	T	03 03 10.4	
	baz=153,slow=76						
CTAO	**Charters Tower**	**46.67**	**70**	P	**P**	**02 13 41.8**	**+0.3**
CTAO				IAmb	IAmb	02 13 44.8	
	comp=Z,17nm,1.2s						
TROLL	**Troll, Antarti**	**47.18**	**205**	P	**P**	**02 13 44.7**	**-0.2**
SNAA	**Sanae**	**48.83**	**204**	P	**P**	**02 13 57.6**	**0.0**
SNAA	**Sanae**	**48.83**	**204**	P	**P**	**02 13 57.6**	**0.0**
	comp=Z,10nm,1.0s,baz=129,slow=10,SNR=14						
	comp=Z,10nm,1.0s						
SNAA	**Sanae**	**48.83**	**204**	P	**P**	**02 13 57.6**	**0.0**
SNAA				IAmb	IAmb	02 14 00.3	
	comp=Z,16nm,1.1s						
VNA2	**Neumayer--Watz**	**50.48**	**204**	P	**P**	**02 14 09.9**	**-0.2**
	baz=105,slow=7.0						
VNA1	**Neumayer--Stat**	**50.87**	**204**	P	**P**	**02 14 13.1**	**+0.1**
BOSA	**Boshof**	**59.19**	**260**	P	**P**	**02 15 14.2**	**+0.2**
	comp=Z,4.5nm,1.0s,baz=58,slow=17,SNR=3.6						
	comp=Z,4.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**66.27**	**359**	P	**P**	**02 16 01.4**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=195,slow=5.3,SNR=9.3						
	comp=Z,2.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**66.27**	**359**	P	**P**	**02 16 00.8**	**0.0**
PMSA	**Palmer Station**	**66.74**	**188**	P	**P**	**02 16 02.4**	**-0.9**
NIL	**Nilore**	**84.76**	**338**	P	**P**	**02 17 46.6**	**0.0**
RAYN	**Ar Rayn**	**86.23**	**312**	P	**P**	**02 17 54.1**	**-0.1**
RAYN				IAmb	IAmb	02 18 00.3	
	comp=Z,3.3nm,1.2s						
KBL	**Kabul**	**86.72**	**335**	P	**P**	**02 17 56.9**	**+0.3**
KBL				IAmb	IAmb	02 18 02.2	
	comp=Z,6.7nm,0.7s						
JHS	**Saijyo**	**87.98**	**27**	P	**P**	**02 18 01.9**	**-0.5**
NVAR	**Mina Array Bea**	**150.98**	**95**	PKPbc	**PKiKP**	**02 25 06.2**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=216,slow=4.9,SNR=14						
TXAR	**Lajitas Array**	**154.05**	**128**	PKPbc	**PKiKP**	**02 25 12.7**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=194,slow=3.3,SNR=1.8						

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*NEIC **11** 02:06:17.6±1.0, 42.°48N±0.°06×141.°13E±0.°10, h142km±5km, mb4.3/12, Error ellipse: s-maj=10.5km s-min=8.7km az=96.0*
*JMA **11** 02:06:17.6±0.1, 42.°4N±0.°3×141.°1E±0.°5, h135km, MV3.2/40, IBURI REGION*
*IDC **11** 02:06:18.4±2.0, 42.°44N×141.°00E, h148km±20km, mb3.4/12, mbtmp3.8/17, Error ellipse: s-maj=16.4km s-min=15.6km az=17.0*

ISC 11 02:06:17.3±0.6, 42.°41N±0.°04×141.°07E±0.°04, h139km±5km, n66, σ0$68/78, mb3.9/19, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	**0.06**	**340**	*eP*	**Pn**	**02 06 35.8**	**-0.2**
JNB				*eS*	**Sn**	**02 06 49.8**	**-0.4**
JEW	**Eniwo**	**0.51**	**33**		**Pn**	**02 06 37.7**	**+0.2**
JEW				Sn	**Sn**	**02 06 52.9**	**+0.1**
JEW	**Eniwo**	**0.51**	**33**	*eP*	**Pn**	**02 06 37.7**	**+0.2**
JEW				*eS*	**Sn**	**02 06 52.9**	**+0.1**
JKB	**Kayabe**	**0.52**	**183**	*eP*	**Pn**	**02 06 37.4**	**-0.1**
JYM2	**Yakumo 2**	**0.59**	**241**	*eP*	**Pn**	**02 06 38.0**	**+0.1**
JYM2				*eS*	**Sn**	**02 06 53.1**	**-0.4**
JIAM	**Iburiatsuma**	**0.67**	**71**	*eP*	**Pn**	**02 06 38.7**	**+0.4**
JIAM				*eS*	**Sn**	**02 06 54.9**	**+0.6**
JSH	**Shimam**	**0.79**	**287**	*eP*	**Pn**	**02 06 39.2**	**0.0**
JSH				*eS*	**Sn**	**02 06 55.4**	**-0.5**
JHST	**Hiyamasetana**	**0.88**	**271**	*eP*	**Pn**	**02 06 39.7**	**-0.3**
JHST				*eS*	**Sn**	**02 06 56.3**	**-0.9**
JISS	**Ishikarishitsu**	**0.90**	**17**	*eP*	**Pn**	**02 06 40.6**	**+0.5**
JISS				*eS*	**Sn**	**02 06 58.0**	**+0.4**
JSR	**Shiriuchi**	**1.00**	**209**	*eP*	**Pn**	**02 06 41.2**	**+0.1**
JSR				*eS*	**Sn**	**02 06 58.8**	**-0.3**
JBT2	**Biratori 2**	**1.02**	**69**	*eP*	**Pn**	**02 06 41.1**	**-0.1**
JBT2				*eS*	**Sn**	**02 06 59.6**	**+0.2**
JOT	**Ohata**	**1.03**	**181**	*eP*	**Pn**	**02 06 41.3**	**0.0**
JOMM	**Oshimamatsumae**	**1.19**	**222**	*eP*	**Pn**	**02 06 43.0**	**+0.3**
JOMM				*eS*	**Sn**	**02 07 02.5**	**+0.4**
JOSM	**Okushiri--Mats**	**1.23**	**255**	*eP*	**Pn**	**02 06 43.0**	**-0.1**
JOSM				*eS*	**Sn**	**02 07 02.1**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.26**	**95**	*eP*	**Pn**	**02 06 43.6**	**+0.2**
JHR	**Hokuryu**	**1.42**	**20**	*eP*	**Pn**	**02 06 45.9**	**+0.8**
JEM	**Erimo**	**1.60**	**104**		**Pn**	**02 06 48.0**	**+0.9**
ERM	**Erimo**	**1.60**	**104**	Pn	**Pn**	**02 06 47.9**	**+0.8**
ERM				Sn	**Sn**	**02 07 09.8**	**-0.1**
JTM	**Tenmabayashi**	**1.62**	**180**	Pn	**Pn**	**02 06 47.6**	**+0.2**
JCH	**Churui**	**1.71**	**82**	P	**Pn**	**02 06 48.5**	**+0.1**
JCH				*eS*	**Sn**	**02 07 11.4**	**-0.7**
JKK2	**Kamakawa 2**	**1.91**	**40**	*eP*	**Pn**	**02 06 50.7**	**+0.1**
JKK2				*eS*	**Sn**	**02 07 16.1**	**-0.2**
JANG	**Nango**	**2.06**	**170**	*eP*	**Pn**	**02 06 51.6**	**-0.9**
JANG				*eS*	**Sn**	**02 07 17.6**	**-2.0**
JSS	**Shosan**	**2.07**	**16**	*eP*	**Pn**	**02 06 53.5**	**+1.0**
JAR	**Ashorobuto**	**2.18**	**65**	*eP*	**Pn**	**02 06 53.2**	**-0.6**
JAR				*eS*	**Sn**	**02 07 20.3**	**-1.6**
JMM	**Marumori**	**4.54**	**183**	Pn	**Pn**	**02 07 23.5**	**-1.0**
YSS	**Yuzh-Sakhalins**	**4.70**	**14**		**Pn**	**02 07 25.4**	**-1.0**
JSD	**Sado**	**4.87**	**207**	Pn	**Pn**	**02 07 29.6**	**+0.9**
MJAR	**Matsushiro Arr**	**6.26**	**202**	P	**Pn**	**02 07 48.5**	**+1.0**
	1.7nm,0.4s,baz=16,slow=13,SNR=5.4						
MJAR				S	**Sn**	**02 09 00.1**	**+2.2**
	2.6nm,0.6s,baz=41,slow=29,SNR=2.1						
USRK	**Ussuriysk Ar.**	**6.86**	**288**	P	**Pn**	**02 07 56.4**	**+1.0**
	3.6nm,0.6s,baz=87,slow=14,SNR=2.1						
KLR	**Kul'dur**	**9.42**	**320**	P	**Pn**	**02 08 29.4**	**-0.2**
	2.3nm,0.8s,baz=133,slow=14,SNR=7.1						
KSRS	**Korea Array**	**11.24**	**248**	P	**Pn**	**02 08 54.3**	**+0.5**
	1.5nm,0.7s,ba

WRA	Warramunga Arr	62.35	187	P		P	02 16 25.4	+0.4
	comp=Z,0.1nm,0.5s,baz=3.7,slow=7.1,SNR=1.3							
	comp=Z,0.1nm,0.5s							
FINES	FINESS Array B	63.96	331	P		P	02 16 34.5	-0.7
	comp=Z,1.8nm,0.6s,baz=57,slow=7.0,SNR=15							
	comp=Z,1.8nm,0.6s							
NB2	NORSAR Subarra	69.14	336	P		P	02 17 07.5	-0.6
	comp=Z,0.5nm,0.6s,baz=36,slow=6.5							
NOA	NORSAR Array B	69.14	336	P		P	02 17 07.5	-0.6
	comp=Z,0.7nm,0.6s,baz=39,slow=6.2,SNR=5.8							
	comp=Z,0.7nm,0.6s							
AKASG	Malin Array Be	69.92	321	P		P	02 17 12.2	-0.8
	comp=Z,0.7nm,0.4s,baz=42,slow=6.0,SNR=7.3							
	comp=Z,0.7nm,0.4s							
NVAR	Mina Array Bea	72.02	54	P		P	02 17 26.7	+0.5
	comp=Z,0.4nm,0.7s,baz=264,slow=6.0,SNR=3.7							
	comp=Z,0.4nm,0.7s							
PDAR	Pinedale Array	74.11	46	P		P	02 17 38.6	+0.1
	comp=Z,0.6nm,0.7s,baz=343,slow=1.5,SNR=5.5							
	comp=Z,0.6nm,0.7s							
TXAR	Lajitas Array	87.05	52	P		P	02 18 47.7	+0.3
	comp=Z,0.1nm,0.5s,baz=286,slow=3.7,SNR=2.0							
	comp=Z,0.1nm,0.5s							

*IDC **11** 02:08:47.8±1.3, 34°.08S×71°.49W, h0km, mb3.4/4, mbtmp3.5/6, ML3.5/2, MS3.2/1, Error ellipse: s-maj=56.5km s-min=24.6km az=88.0*
*GUC **11** 02:08:49.6±0.8, 34°.09S×72°.15W, h38km±2km, ML3.3*
ISC 11 02:08:49.5±1.4, 34°.10S±0°.03×72°.06W±0°.06, h15km±8km, n31, σ1§02/41, mb3.5/3, 12C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO03	Pichilemu	0.40	168	⇓eP		Pb	02 08 58.8 +0.5
BO03				eS		Sb	02 09 05.4 +1.1
BO03				IAML			02 09 09.8
	comp=N,3μm,0.4s						
VA05	Santo Domingo	0.58	40	⇑eP		Pg	02 09 01.6 +0.8
VA05				i S		Sg	02 09 10.2 +1.7
VA05				IAML			02 09 15.2
	comp=N,3μm,0.2s						
MT01	Popeta	0.71	71	eP		Pb	02 09 04.4 +0.7
MT01				eS		Sn	02 09 15.4 -0.4
BO01	Tunca	0.86	110	eP		Pn	02 09 06.7 -0.4
BO01				eS		Sn	02 09 18.8 -0.6
GO05	Huala	0.91	173	⇑eP		Pg	02 09 06.6 -0.5
GO05				eS		Sb	02 09 19.6 +0.5
GO05				IAML			02 09 21.9
	comp=E,3μm,0.4s						
MT09	Talagante	0.95	70	eP		Pb	02 09 08.3 +0.6
MT09				eS		Sn	02 09 21.8 0.0
MT09				IAML			02 09 30.9
	comp=N,1μm,0.4s						
MT02	Curacav	1.14	43	⇑eP		Pb	02 09 10.0 -0.9
MT02				eS		Sb	02 09 26.3 +0.8
BO04	La Punta	1.21	85	⇑eP		Pb	02 09 11.8 -0.3
BO04				i S		Sn	02 09 28.7 +0.6
BO04				IAML			02 09 36.9
	comp=E,522nm,0.5s						
BO02	Sierra Bellavi	1.26	123	⇑eP		Pn	02 09 13.0 +0.3
BO02				eS		Sn	02 09 30.4 +0.9
MT05	Renca	1.31	58	eS		Sn	02 09 31.3 +0.7
MT05				IAML			02 09 40.6
	comp=E,659nm,0.4s						
MT03	Universidad Ad	1.43	65	⇑eP		Pn	02 09 15.2 +0.2
MT03				eS		Sg	02 09 34.3 -1.2
MT03				IAML			02 09 44.7
	comp=E,709nm,0.3s						
ROCH	El Roble	1.43	38	⇑eP		Pn	02 09 14.6 -0.5
ROCH				eS		Sn	02 09 33.8 +0.1
ROCH				IAML			02 09 45.9
	comp=N,690nm,0.5s						
PEL	Peldehue	1.49	51	⇑eP		Pn	02 09 16.4 +0.5
PEL				eS		Sb	02 09 36.7 +0.9
PEL				IAML			02 09 47.1
	comp=E,747nm,0.6s						
LMEL	Las Melosas	1.56	81	⇑eP		Pb	02 09 17.8 -0.4
LMEL				⇓eS		Sg	02 09 38.6 -1.2
LMEL				IAML			02 09 47.6
	comp=N,793nm,0.3s						
FCH	Farellones	1.66	63	⇑eP		Pn	02 09 19.2 +0.7
FCH				eS		Sg	02 09 42.6 -0.5
FCH				IAML			02 09 51.0
	comp=N,346nm,0.4s						
VA06	Catapilco	1.66	23	⇑eP		Pn	02 09 16.2 -1.9
VA06				eS		Sn	02 09 39.7 +0.5
VA06				IAML			02 09 47.3
	comp=E,494nm,0.5s						
VA03	San Esteban	1.84	44	⇑eP		Pn	02 09 20.7 +0.1
VA03				eS		Sn	02 09 45.1 +1.4
VA03				IAML			02 09 56.3
	comp=E,856nm,0.8s						
H03S1	Juan Fernandez	5.70	271	T		T	02 16 10.9
	baz=100						
H03S3	Juan Fernandez	5.70	271	T		T	02 16 13.7
	baz=100						
H03S2	Juan Fernandez	5.71	271	T		T	02 16 10.5
	baz=100						
H03N1	Juan Fernandez	5.75	275	T		T	02 16 26.1
	baz=94						
H03N3	Juan Fernandez	5.75	275	T		T	02 16 22.1
	baz=94						
H03N2	Juan Fernandez	5.76	275	T		T	02 16 25.0
	baz=94						
PLCA	Paso Flores	6.73	170	Pn		Pn	02 10 28.0 +0.2
	comp=E,0.3nm,0.3s,baz=349,slow=10,SNR=12						
	comp=E,1.0nm,0.4s						
LPAZ	La Paz	18.09	12	P		Pn	02 12 60.0 -1.0
	baz=186,slow=11,SNR=4.1						
	comp=E,1.0nm,0.7s						
SIV	San Ignacio	20.57	31	P		P	02 13 26.0 -1.9
	comp=E,1.1nm,0.6s,baz=202,slow=9.2,SNR=7.3						
SIV				LR		LR	02 22 44.8
	comp=E,60nm,18.6s,baz=281,slow=41						
	comp=E,1.1nm,0.6s						
SNAA	Sanae	51.50	158	P		P	02 17 53.7 -0.4
	comp=E,0.4nm,0.6s,baz=260,slow=9.5,SNR=2.0						
	comp=E,0.4nm,0.6s						
TXAR	Lajitas Array	69.81	331	P		P	02 20 02.0 +2.5
	comp=E,0.1nm,0.6s,baz=148,slow=5.2,SNR=2.0						
	comp=E,0.1nm,0.6s						
TORD	Torodi Ar. Bea	84.26	70	P		P	02 21 19.7 -1.3
	comp=E,0.5nm,0.7s,baz=253,slow=3.8,SNR=4.3						
	comp=E,0.5nm,0.7s						
BVAR	Borovoye Array	147.37	43	PKPbc		PKPdf	02 28 31.1 +1.4
	comp=E,0.4nm,0.7s,baz=285,slow=5.8,SNR=3.9						
KURBB	Kurchatov Arra	152.96	43	PKPbc		PKPbc	02 28 44.3 -1.4
	comp=E,0.1nm,0.3s,baz=301,slow=3.0,SNR=4.1						

MAN 11 02:19:56.8, 9°.42N×123°.98E, h16km, mb4.5, ML3.3, MS3.1, 7C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.74	264	⇑iP		Pg	02 20 10.7 -0.5
SNPH				i S		Sg	02 20 19.7 -1.4
LLP	Lapu-Lapu	0.89	359	⇓iP		Pb	02 20 13.4 -0.5
LLP				i S		Sb	02 20 25.8 +0.1
CGP	Cagayan de Oro	1.19	144	⇑eP		Pn	02 20 17.4 -1.3
CGP				i S		Sb	02 20 32.7 -1.4
SCPH	Surigao	1.53	76	⇓iP		Pn	02 20 22.8 -0.6
SCPH				i S		Sb	02 20 43.9 0.0
CTBH	Cotabato--PC H	2.20	173	⇑iP		Pn	02 20 33.2 +0.6
CTBH				i S		Sn	02 21 00.3 +0.8
RCP	Roxas	2.45	330	⇑eP		Pn	02 20 36.7 +0.5
RCP				eS		Sn	02 21 06.5 +0.7
KCP	Kidapawan	2.63	155	⇑eP		Pb	02 20 42.7 -0.9
KCP	Kidapawan	2.63	155	⇑eP		Pb	02 20 42.7 -0.9
BIPH	Bislig	2.65	117	⇑eP		Pn	02 20 40.0 +1.1
BIPH				i S		Sn	02 21 09.4 -1.3

*IDC **11** 02:22:33.0±2.9, 36°.22N×67°.88E, h0km, mb3.5/2, mbtmp3.4/6, ML3.1/4, Error ellipse: s-maj=58.2km s-min=22.7km az=151.0*
ISC 11 02:22:39.5±2.3, 36°.6N±0°.3×67°.7E±0°.2, h35km, n8, σ1§14/8, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	Alibeck	7.71	283	Pn		Pn	02 24 29.0 -0.3
	0.4nm,0.3s,baz=106,slow=9.1,SNR=3.7						
	1.0nm,0.4s						
AAK	Ala-Archa	8.01	39	Pn		Pn	02 24 34.5 +0.9
	0.3nm,0.3s,baz=222,slow=14,SNR=3.6						
	1.0nm,0.3s						
MKAR	Makanchi Array	14.92	42	Pn		Pn	02 26 05.9 -1.9
	baz=226,slow=14,SNR=2.8						
	0.5nm,0.9s						
AKTO	Aktyubinsk	15.47	336	Pn		Pn	02 26 14.7 -0.3
	0.1nm,0.3s,baz=147,slow=12,SNR=3.6						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	16.05	26	Pn		P	02 26 24.5 -0.9
	baz=214,slow=10,SNR=11						
BVAR	Borovoye Array	16.53	6	Pn		P	02 26 31.6 +0.8
	0.1nm,0.3s,baz=170,slow=12,SNR=3.6						
ZALV	Zalesovo Beam	21.04	29	P		P	02 27 20.6 +0.5
	1.2nm,0.5s,baz=226,slow=10.0,SNR=6.5						
	4.0nm,0.5s						
TORD	Torodi Ar. Bea	63.03	267	P		P	02 33 03.7 +0.4
	0.3nm,0.7s,baz=58,slow=7.7,SNR=2.1						
	0.3nm,0.7s						

GCMT 11 02:35:20.0±0.3, 59°.29S±0°.02×159°.34E±0°.04, h33km±1km, MW5.0/87, Moment Tensor Solution. s28,c29; s87,c109; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}1.10±.22; $M_{\theta\theta}$-3.66±.14; $M_{\phi\phi}$2.56±.15; $M_{r\theta}$0.14±.15; $M_{\theta\phi}$1.03±.12; $M_{\phi r}$1.85±.21; Best double couple: $M_0$3.88200×10^{16} NP1:ϕ_s319.00000°, δ69.00000°, λ154.00000°. NP2:ϕ_s59.00000°, δ66.00000°, λ23.00000°. Principal axes: T 3.9330, Plg33.0000°, Azm278.0000°; N -0.1010, Plg57.0000°, Azm103.0000°; P -3.8320, Plg2.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	37.53	11	eLR	LR	02 52 53.6	
	comp=Z,382nm,21.8s						
TBI	Tubuai	50.67	68	eLR	LR	02 58 41.1	
	comp=Z,393nm,25.8s						
TBI	Tubuai	50.67	68	eT	T	03 38 40.4	
	28nm,0.4s						
PAE	Paea	55.51	64	eT	T	03 44 42.3	
	3.3nm,0.3s						
TVO	Taravao	55.56	65	eT	T	03 44 47.4	
	4.2nm,0.4s						
PPT2	Papeete2	55.58	64	eLR	LR	03 00 58.8	
	comp=Z,344nm,23.2s						
PPT2	Papeete2	55.58	64	eT	T	03 44 48.7	
	9.1nm,0.4s						
TIAR	Tiarei	55.71	64	eT	T	03 44 53.3	
	0.9nm,0.2s						
RKT	Rikitea	58.02	82	eT	T	03 47 45.0	
	20nm,0.4s						
VAH	Vaihoa	58.53	65	eT	T	03 48 31.0	
	13nm,0.3s						
TAOE	Nuku Hiva Isla	67.61	68	eLR	LR	03 06 31.3	
	comp=Z,259nm,26.1s						

*IDC **11** 02:38:28.3±1.8, 10°.00S×154°.51E, h0km, mb3.8/5, mbtmp3.9/5, MS3.2/1 Error ellipse: s-maj=74.0km s-min=26.7km az=123.0*
ISC 11 02:38:31.2±1.7, 10°.0S±0°.3×154°.5E±0°.4, h18km, n7, σ0§31/6, mb3.9/5, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	12.79	218	LR	LR	02 45 28.1	
	comp=Z,104nm,18.8s,baz=88,slow=33						
WRA	Warramunga Arr	21.82	241	P		P	02 43 22.9 +0.2
	3.5nm,1.0s,baz=65,slow=10,SNR=11						
	3.5nm,1.0s						
ASAR	Alice Springs	23.89	233	P		P	02 43 43.7 -0.4
	1.3nm,0.9s,baz=62,slow=8.8,SNR=8.1						
	1.3nm,0.9s						
STKA	Stephens Creek	24.82	207	P		P	02 43 52.7 +0.2
	2.9nm,0.7s,baz=19,slow=12,SNR=5.3						
	2.9nm,0.7s						
MKAR	Makanchi Array	85.35	319	P		P	02 51 07.5 0.0
	1.1nm,0.9s,baz=103,slow=4.6,SNR=5.4						
	1.1nm,0.9s						
ILAR	Eielson Array	86.35	22	P		P	02 51 12.0 +0.1
	0.6nm,0.8s,baz=241,slow=5.4,SNR=5.3						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	153.20	279	PKPbc		PKiKP	02 58 29.0 -0.3
	0.3nm,0.6s,baz=348,slow=0.5,SNR=1.8						

MAN 11 03:23:47.8, 9°.74N×125°.07E, h24km, mb4.4, ML3.3, MS3.0, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.42	84	⇓iP		Pb	03 23 55.7 -0.9
SCPH				i S		Sb	03 24 02.4 -0.2
LLP	Lapu-Lapu	1.23	298	⇑iP		Pb	03 24 10.1 -0.3
LLP				i S		Sb	03 24 26.7 +0.9
CGP	Cagayan de Oro	1.32	196	⇑eP		Pn	03 24 09.8 -1.0
CGP				eS		Sn	03 24 25.8 -1.9
BIPH	Bislig	2.00	140	⇑eP		Pb	03 24 22.6 -0.9
BIPH				eS		Sn	03 24 44.6 +0.2
RCP	Roxas	2.92	309	⇑eP		Pn	03 24 34.7 +2.0
RCP				eS		Sn	03 25 09.1 +2.0

*IDC **11** 03:29:35.0±4.4, 3°.63S×101°.11E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=194.2km s-min=23.8km az=54.0*
*NEIC **11** 03:29:44.1±0.8, 3°.61S±0°.08×101°.4E±0°.1, h71km±12km, mb4.2/7, Error ellipse: s-maj=19.8km s-min=8.3km az=59.0*
*DJA **11** 03:29:44.5±0.6, 3°.5±4°×10°.2E±°, h33km±9km, M3.8/8, MLv3.8/8*
ISC 11 03:29:43.6±0.8, 3°.35S±0°.07×101°.57E±0°.06, h50km, n29, σ1§31/30, mb4.2/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.70	72	P	Pn	03 29 58.4	+1.1
MASI				S	Sn	03 30 08.3	+1.0
UBSI	University, Be	0.81	120	P	Pn	03 29 59.7	+1.0
UBSI				S	Sn	03 30 11.2	+1.5
KSI	Kapahiang	1.06	106	P	Pn	03 30 02.8	+0.7
KSI				S	Sn	03 30 16.6	+0.7
PPSI	Pulau Pagai	1.67	291	P	Pn	03 30 11.7	+1.3
MNAI	Manna	1.70	126	Pn	Pn	03 30 11.7	+0.8
MNAI				Sn	Sn	03 30 33.9	+2.4
MNAI	Manna	1.70	126	P	Pn	03 30 11.5	+0.6
SDSI	Sungai Dareh	2.41	357	P	Pn	03 30 21.8	+1.2
SISI	Saibi	3.20	309	P	Pn	03 30 32.9	+1.6
KASI	Kota Agung	3.62	127	P	Pn	03 30 38.3	+1.1
DSRI	Dabo	4.14	46	P	Pn	03 30 45.4	+1.1
GSI	Gunungsitoli	6.11	319	Pn	Pn	03 31 12.9	+1.5
H08S2	Diego Garcia H	29.25	260	T	T	04 05 31.7	
	baz=84,slow=74,SNR=3.7						
H08S3	Diego Garcia H	29.26	260	T	T	04 05 32.3	
	baz=84,slow=74,SNR=3.8						
H08S1	Diego Carcia H	29.27	260	T	T	04 05 29.4	
	baz=84						
WRA	Warramunga Arr	35.96	120	P	P	03 36 39.6	-0.1
	0.2nm,0.6s,baz=306,slow=8.8,SNR=2.1						
	0.2nm,0.6s						
WRA	Warramunga Arr	35.96	120	P	P	03 36 36.0	-3.7
WB2	Warramunga Arr	35.97	120	P	P	03 36 39.7	-0.1
ASAR	Alice Springs	37.19	126	P	P	03 36 50.5	+0.3
	0.2nm,0.4s,baz=303,slow=7.9,SNR=2.2						
	0.2nm,0.4s						
SONM	Songino Array	51.15	4	P	P	03 38 42.4	+0.8
	0.5nm,0.5s,baz=195,slow=9.0,SNR=3.2						
	0.5nm,0.5s						
ULN	Ulaanbaatar	51.23	5	P	P	03 38 42.3	+0.1
ULN				IAmb	IAmb	03 38 55.1	
	comp=Z,5.0nm,1.4s						
MK31	Makanchi Array	52.76	343	P	P	03 38 52.5	-1.0
MK31				IAmb	IAmb	03 38 53.2	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	52.76	343	P	P	03 38 53.0	-0.5
	comp=Z,1.5nm,0.6s,baz=150,slow=8.1,SNR=14						
	comp=Z,1.5nm,0.6s						
MKAR	Makanchi Array	52.76	343	P	P	03 38 52.8	-0.7
KURK	Kurchatov	57.35	343	P	P	03 39 25.6	-0.9
KURK				IAmb	IAmb	03 39 54.9	
	comp=Z,4.3nm,1.4s						
ZAA0	Zalesovo Array	58.79	349	P	P	03 39 35.2	-1.3
ZAA0				IAmb	IAmb	03 39 35.5	
	comp=Z,2.4nm,0.9s						
ZALV	Zalesovo Beam	58.79	349	P	P	03 39 35.6	-0.9
	comp=Z,1.5nm,0.3s,baz=169,slow=6.6,SNR=8.8						
	comp=Z,1.5nm,0.3s						
ABKAR	Akbulak array	63.58	331	P	P	03 40 07.8	-1.3
ABKAR	Akbulak array	63.58	331	P	P	03 40 08.1	-1.0
ABKAR				IAmb	IAmb	03 40 46.6	
	comp=Z,3.2nm,1.4s						
TXAR	Lajitas Array	144.77	40	PKPbc	PKPab	03 49 14.4	-0.3
	comp=Z,0.2nm,0.4s,baz=247,slow=1.9,SNR=7.8						

KRSC 11 03:32:57.4±1.3, 51°.98N×158°.79E, h61km±13km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.47	249	eP	Pn	03 33 10.4	+1.3
KDTR				eS	Sn	03 33 18.1	+0.4
RUS	Russkaya	0.49	339	eP	Pn	03 33 10.7	+1.4
RUS				eS	Sn	03 33 18.7	+0.8
MTVR	Mutnovka	0.63	324	eP	Pn	03 33 12.5	+1.5
MTVR				eS	Sn	03 33 22.2	+1.2
ASAK	Asacha	0.68	307	eP	Pn	03 33 13.6	+2.0
ASAK				eS	Sn	03 33 23.3	+1.4
GRL	Gorelyy	0.73	323	eP	Pn	03 33 14.2	+2.1
GRL				eS	Sn	03 33 24.8	+1.9
KRMR	Karymshinskiy	0.95	335	eP	Pn	03 33 16.8	+2.1
KRMR				eS	Sn	03 33 29.6	+2.1
PET	Petropavlovsk	1.05	355	eP	Pn	03 33 18.1	+2.0
PET				eS	Sn	03 33 31.6	+1.6
UGLR	Uglovaya	1.23	1	eS	Sn	03 33 36.8	+2.3
NLC	Nalytchevo	1.24	16	eP	Pn	03 33 19.4	+0.8
NLC				eS	Sn	03 33 33.9	-0.6
SMAR	Somma	1.29	0	eP	Pn	03 33 22.4	+3.0
SDLR	Sedlovina	1.30	2	eP	Pn	03 33 21.0	+1.4
SDLR				eS	Sn	03 33 36.2	+0.1
KOK	Koryaka	1.32	356	eP	Pn	03 33 22.7	+2.9
KOK				eS	Sn	03 33 39.2	+2.7
KRER	Koryakskii	1.33	359	eP	Pn	03 33 22.6	+2.6
KRER				eS	Sn	03 33 37.8	+0.9
SPN	Mys Shipunski	1.35	33	eP	Pn	03 33 22.7	+2.6
SPN				eS	Sn	03 33 39.4	+2.3
APC	Apacha	1.38	314	eP	Pn	03 33 22.8	+2.4
GNL	Ganaly	1.80	344	eP	Pn	03 33 28.9	+2.7
GNL				eS	Sn	03 33 49.5	+1.5
SKR	Severo-Kuril's	2.12	233	eP	Pn	03 33 32.0	+1.6
SKR				eS	Sn	03 33 56.7	+1.1
MKZ	Mys Kozlova	3.13	33	eP	Pn	03 33 46.6	+2.5
MKZ				eS	Sn	03 34 21.3	+1.1
KBTR	Krutoberegovo	4.86	28	eP	Pn	03 34 11.7	+3.9

*DJA **11** 03:41:49.1±1.9, 5°.N±8°×12°.7E±°, h27km±21km, M4.3/8, mb4.3/7, mB5.7/2, MLv4.2/8, Mw(mB)5.2/2*
*IDC **11** 03:41:53.1±2.2, 5°.15N×127°.18E, h92km±19km, mb3.7/6, mbtmp4.1/8, MS2.5/2, Error ellipse: s-maj=73.2km s-min=12.1km az=63.0*
*NEIC **11** 03:41:53.2±1.9, 5°.09N±0°.07×126°.9E±0°.2, h95km±10km, mb4.3/10, Error ellipse: s-maj=23.5km s-min=6.5km az=69.0*
ISC 11 03:41:51.4±0.6, 4°.91N±0°.05×126°.86E±0°.08, h76km, n39, σ1§87/42, mb4.2/11, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.80	228	P	Pn	03 42 20.4	-0.2
SGSI				S	Sn	03 42 43.9	+1.2
DAV	Davao City (W)	2.50	329	P	Pn	03 42 33.3	+3.3
	275nm,0.4s,baz=117,slow=4.5,SNR=2.3						
DAV				S	Sn	03 43 01.8	+2.4
	152nm,0.4s,baz=256,slow=20,SNR=1.4						
DAV	Davao City (W)	2.50	329	Pn	Pn	03 42 29.8	-0.2
KCP	Kidapawan	2.73	320	⇑eP	Pn	03 42 31.2	-2.0
KCP				i S	Sn	03 43 08.3	+3.1
KCP	Kidapawan	2.73	320	⇑eP	Pn	03 42 31.2	-2.0
KCP				i S	Sn	03 43 08.3	+3.1
GAMI	Galela, Maluku	3.19	163	P	Pn	03 42 40.0	+0.7
BIPH	Bislig	3.29	351	⇑eP	Pn	03 42 37.5	-3.3
BIPH				eS	Sn	03 43 24.2	+5.4
TNTI	Ternate	4.14	173	Pn	Pn	03 42 55.9	+3.6
TNTI	Ternate	4.14	173	P	Pn	03 42 52.2	-0.1
LBMI	Labuha	5.54	173	P	Pn	03 43 12.2	+0.7
	0.3nm57nm,0.5s						
GTOI	Gorontalo	5.72	222	P	Pn	03 43 15.0	+1.1
	0.1nm6.2nm,0.6s						
MRSI	Marisa	6.59	228	P	Pn	03 43 26.0	+0.2
	0.1nm25nm,0.6s						
SANI	Sanana	6.96	187	P	Pn	03 43 28.7	-2.2
LUWI	Luwuk	7.18	215	Pn	Pn	03 43 36.2	+2.3
SIJI	Sorong	7.23	142	P	Pn	03 43 35.1	+0.5
	7.7nm,0.4s,baz=348,slow=19,SNR=7.2						
SIJI				LR	LR	03 45 46.5	
	comp=Z,37nm,20.2s,baz=214,slow=32						
SIJI	Sorong	7.23	142	P	Pn	03 43 35.1	+0.5
	0.1nm9.2nm,0.5s						
NLAI	Namlea	8.10	178	P	Pn	03 43 46.4	+0.1
	4μm25nm,0.4s						
KRAI	Karang Ratu	8.31	169	P	Pn	03 43 50.3	+1.0
	4μm14nm,0.5s						
FAKI	Fak Fak	9.46	145	Pn	Pn	03 44 05.7	+0.8
FAKI	Fak Fak	9.46	145	P	Pn	03 44 06.9	+1.9
MTN	Manton Dam	18.14	166	P	P	03 45 56.6	-1.1
KNRA	Kununurra	20.54	175	P	P	03 46 25.0	+1.1
KNRA				IAmb	IAmb	03 46 28.7	
	comp=Z,6.6nm,0.6s						
WB0	Warramunga Arr	25.61	163	P	P	03 47 14.7	+0.7
WRA	Warramunga Arr	25.77	164	P	P	03 47 16.6	+1.3
	comp=Z,3.9nm,0.6s,baz=343,slow=10,SNR=30						
	comp=Z,3.9nm,0.6s						
WRA	Warramunga Arr	25.77	164	P	P	03 47 16.3	+1.0
WB2	Warramunga Arr	25.77	164	P	P	03 47 16.1	+0.8
WB2				IAmb	IAmb	03 47 18.5	
	comp=Z,17nm,1.3s						
WR0	Warramunga Arr	25.84	163	P	P	03 47 17.1	+1.1
WR0				IAmb	IAmb	03 47 19.6	
	comp=Z,7.2nm,0.9s						
ASAR	Alice Springs	29.22	167	P	P	03 47 48.1	+1.9
	comp=Z,0.5nm,0.5s,baz=354,slow=8.4,SNR=6.8						
	comp=Z,0.5nm,0.5s						
CMAR	Chiang Mai Arr	30.41	299	LR	LR	04 01 26.2	
	comp=Z,8.0nm,18.3s,baz=40,slow=38						
STKA	Stephens Creek	39.18	160	P	P	03 49 13.4	+1.3
	comp=Z,1.5nm,0.4s,baz=352,slow=10,SNR=4.2						
	comp=Z,1.5nm,0.4s						
TARA	Tarawa	46.12	93	P	P	03 50 07.6	-1.0
SONM	Songino Array	46.23	341	P	P	03 50 09.0	-0.2
	comp=Z,0.6nm,0.5s,baz=164,slow=7.0,SNR=3.3						
	comp=Z

KAPI	Kappang	4.05	5	P	Pn	03 50 25.5	+0.3
IGBI	Denpasar	4.23	273	P	Pn	03 50 27.5	-0.1
RTBI	Rangdo, Negare	4.47	278	P	Pn	03 50 29.4	-1.4
JAGI	Jajag, Banyuwa	5.24	276	P	Pn	03 50 41.0	-0.1

*IDC **11** 04:01:34.0±1.4, 21°.76S×174°.35E, h0km, mb3.9/3, mbtmp4.1/5, ML5.6/1, MS3.6/13, Error ellipse: s-maj=50.8km s-min=23.0km az=142.0*

ISC 11 04:01:38.5±1.0, 22°.0S±0°.1×174°.6E±0°.1, h35km, n22, σ1§36/10, mb3.9/3, MS3.6/14, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.35	37	Pn	Pn	04 02 54.9	-1.1
	7.1nm,0.3s,baz=215,slow=19,SNR=20						
MSVF				Sn	Sn	04 03 58.3	+1.8
	4.6nm,0.3s,baz=108,slow=19,SNR=2.2						
	12nm,0.4s						
DZM	Mont Dzumac	7.61	268	eLR	LR	04 05 20.5	
	comp=Z,491nm,22.8s						
DZM	Mont Dzumac	7.61	268	Pn	Pn	04 03 28.8	+1.8
	0.2nm,0.3s,baz=292,slow=14,SNR=1.5						
DZM				Sn	Sn	04 04 51.9	-0.2
	0.1nm,0.3s,baz=328,slow=14,SNR=1.3						
AFI	Afiamalu	15.23	60	LR	LR	04 09 45.8	
	comp=Z,153nm,20.9s,baz=232,slow=32						
URZ	Urewera	16.30	173	Pn	P	04 05 28.3	+1.0
	15nm,1.0s,baz=8.2,slow=5.5,SNR=5.9						
URZ				LR	LR	04 09 28.8	
	comp=Z,70nm,20.9s,baz=106,slow=29						
CTA	Charters Tower	26.55	269	LR	LR	04 16 55.5	
	comp=Z,170nm,18.6s,baz=84,slow=35						
STKA	Stephens Creek	30.94	244	LR	LR	04 19 09.0	
	comp=Z,111nm,18.8s,baz=30,slow=34						
TBI	Tubuai	33.09	99	eLR	LR	04 17 02.6	
	comp=Z,75nm,25.8s						
PPT2	Papeete2	33.90	89	eLR	LR	04 17 25.7	
	comp=Z,110nm,24.0s						
PPT	Papeete	33.91	89	LR	LR	04 18 06.7	
	comp=Z,66nm,21.6s,baz=357,slow=29						
ASAR	Alice Springs	37.49	259	P	P	04 08 47.8	-1.4
	1.3nm,0.8s,baz=89,slow=8.1,SNR=13						
ASAR				LR	LR	04 23 38.9	
	comp=Z,133nm,19.8s,baz=161,slow=36						
	1.3nm,0.8s						
WRA	Warramunga Arr	37.61	266	P	P	04 08 48.7	-1.5
	0.8nm,1.0s,baz=95,slow=8.3,SNR=3.3						
WRA				LR	LR	04 24 21.2	
	comp=Z,133nm,18.7s,baz=113,slow=37						
	0.8nm,1.0s						
TAOE	Nuku Hiva Isla	45.33	80	eLR	LR	04 22 43.6	
	comp=Z,133nm,26.8s						
VNDA	Vanda	55.87	183	LR	LR	04 31 25.2	
	comp=Z,34nm,20.1s,baz=340,slow=32						
QSPA	South Pole Qui	68.03	180	LR	LR	04 40 23.0	
	comp=Z,22nm,18.1s,baz=16,slow=34						
PFO	Pinyon Flats O	85.81	51	LR	LR	04 49 37.6	
	comp=Z,45nm,18.5s,baz=223,slow=34						
YBH	Yreka Blue Hor	85.89	42	LR	LR	04 45 31.0	
	comp=Z,44nm,19.0s,baz=265,slow=31						
ILAR	Eielson Array	91.48	15	P	P	04 14 40.8	0.0
	0.9nm,0.7s,baz=231,slow=4.8,SNR=9.1						
	0.9nm,0.7s						
NEW	Newport	92.74	38	LR	LR	04 49 51.6	
	comp=Z,21nm,19.1s,baz=133,slow=31						
TXAR	Lajitas Array	93.71	60	LR	LR	04 50 43.5	
	comp=Z,24nm,18.1s,baz=234,slow=31						
GERES	GERESS Array B	149.25	335	PKPbc	PKPbc	04 21 23.1	-0.3
	1.1nm,0.8s,baz=50,slow=3.1,SNR=6.7						
DAVOX	Davos/Dischmat	152.41	337	PKPbc	PKiKP	04 21 31.2	-0.2
	2.0nm,0.6s,baz=14,slow=8.3,SNR=4.9						

*TRN **11** 04:07:45.8, 9°.29N×61°.43W, h58km*
*FUNV **11** 04:07:47.9, 9°.34N×61°.32W, h31km, MW4.0*

ISC 11 04:07:47.3±2.4, 9°.4N±0°.1×61°.5W±0°.1, h44km, n23, σ1§59/32, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	1.25	4	eP	Pn	04 08 09.1	+0.8
TOSP	Speyside	2.11	26	eP	Pn	04 08 19.4	-0.8
TOSP				eS	Sn	04 08 45.2	0.0
GRFF	Grenada Fort F	2.65	355	eP	Pn	04 08 27.6	+0.1
GRFF				eS	Sn	04 08 58.8	+0.4
GRGR	Grenville	2.72	357	eP	Pn	04 08 29.2	+0.6
GRGR				eS	Sn	04 09 01.5	+1.2
GCMP	Grenada, Carri	3.07	1	eP	Pn	04 08 33.2	-0.1
GCMP				eS	Sn	04 09 09.0	+0.2
PRGV	PARIAGUAN	3.17	259	eP	Pn	04 08 37.4	+2.7
PCRV	Puerto La Cruz	3.19	284	eP	Pn	04 08 37.0	+2.0
SVB	Belmont	3.86	4	eP	Pn	04 08 45.3	+1.1
SVB				eS	Sn	04 09 28.5	+0.2
MCLT	Moule a Chique	4.32	7	eS	Sn	04 09 38.4	-1.3
SLBI	Saint Lucia, B	4.63	6	eP	Pn	04 08 55.8	+1.1
SLBI	Saint Lucia, B	4.63	6	eS	Sn	04 09 46.0	-1.1
MERV	Las Mercedes	4.74	269	eP	Pn	04 08 58.1	+1.8
MERV				eS	Sn	04 09 50.0	-0.1
MPOM	Morne Pois Mar	5.06	7	eP	Pn	04 09 01.4	+0.8
MPOM	Morne Pois Mar	5.06	7	eS	Sn	04 09 55.3	-2.5
BIM	Bigot	5.11	5	eP	Pn	04 09 02.6	+1.3
BIM	Bigot	5.11	5	eS	Sn	04 09 58.4	-0.7
CACV	CAICARA DEL OR	5.31	250	eP	Pn	04 08 58.6	-5.6
TACV	Tcata	5.50	278	eP	Pn	04 09 07.8	+1.0
TACV				eS	Sn	04 10 08.0	-0.8
BENV	Beln	6.04	276	eP	Pn	04 09 15.3	+1.0
BENV				eS	Sn	04 10 20.8	-1.5
BAUV	El Baul	6.48	267	eP	Pn	04 09 20.5	+0.4
BAUV	El Baul	6.48	267	eS	Sn	04 10 28.9	-4.0
BAUV	El Baul	6.48	267	||eP	Pn	04 09 21.5	+1.4
BAUV				eS	Sn	04 10 30.0	-2.8
MAPV	Macapo	6.88	274	eP	Pn	04 09 26.8	+1.1
MAPV				eS	Sn	04 10 39.8	-3.0

WEL 11 04:10:51.2±1.5, 37°S±5°×17°9E±°, h11km±7km, M3.4/23, ML3.7/27, MLv3.4/23, Error ellipse: s-maj=0.0km s-min=0.0km az=90.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.84	233	P	Pg	04 11 07.0	-0.4
MXZ				S	Sg	04 11 16.6	-1.8
WMGZ	Waiomatatini S	0.96	218	P	Pn	04 11 10.6	+0.1
WMGZ				S	Sn	04 11 24.3	+0.2
PKGZ	Pakihiroa	1.19	226	P	Pb	04 11 13.5	-0.2
PKGZ				S	Sb	04 11 29.1	-0.1
PUZ	Puketiti	1.23	215	P	Pn	04 11 14.2	-0.2
PUZ				S	Sg	04 11 30.7	-0.2
HAZ	Te Kaha	1.29	237	P	Pn	04 11 14.9	-0.3
TWGZ	Tauwhareparae	1.45	220	P	Pn	04 11 17.6	+0.2
TWGZ				S	Sg	04 11 37.3	-0.6
RUGZ	Raukumara Rang	1.48	232	P	Pb	04 11 18.3	-0.5
RUGZ				S	Sb	04 11 37.4	-0.1
CNGZ	Carnagh Statio	1.60	208	P	Pn	04 11 20.0	+0.5
TKGZ	Te Karaka	1.72	217	P	Pn	04 11 20.9	-0.1
MWZ	Matawai	1.81	225	P	Pn	04 11 22.3	0.0
WHRZ	Whale Island	1.91	245	P	Pn	04 11 23.6	0.0
RAGZ	Rawiri	1.98	223	P	Pn	04 11 24.8	+0.1
URZ	Urewera	2.01	233	P	Pn	04 11 25.2	+0.2
EDRZ	Edgecumbe	2.18	241	P	Pn	04 11 27.9	+0.5
SNGZ	Shannon Statio	2.23	219	P	Pn	04 11 27.6	-0.5
KNZ	Kokohu	2.28	210	P	Pn	04 11 27.3	-1.4
MHGZ	Mahia Peninsul	2.31	205	P	Pn	04 11 28.4	-0.7
RTZ	Ruatahuna	2.31	227	P	Pn	04 11 29.4	+0.1
MYRZ	Mayor Island	2.34	264	P	Pn	04 11 28.8	-0.7
MUGZ	Murupara	2.36	233	P	Pn	04 11 29.7	-0.1
RAHZ	Arahi	2.47	221	P	Pn	04 11 31.0	-0.4
WHHZ	Waihua	2.52	216	P	Pn	04 11 31.3	-0.7
MTHZ	Maungataniwha	2.56	225	P	Pn	04 11 32.7	+0.2
ALRZ	Allen Road	2.68	235	P	Pn	04 11 34.4	+0.1
NMHZ	Naumai	2.75	222	P	Pn	04 11 35.4	+0.1
KUZ	Kuaotunu	2.77	276	P	Pn	04 11 34.3	-1.1
ARHZ	Aropaoanui	2.78	217	P	Pn	04 11 34.9	-0.7
TOZ	Tahuroa Road	2.98	256	P	Pn	04 11 38.2	-0.2
CKHZ	Cape Kidnapper	3.06	212	P	Pn	04 11 37.7	-1.8
MCHZ	McNeill Hill	3.06	218	P	Pn	04 11 38.6	-0.9
GRZ	Great Barrier	3.08	284	P	Pn	04 11 40.3	+0.6
MKAZ	Moumakai	3.19	268	P	Pn	04 11 40.5	-0.7
KAHZ	Kahuranaki	3.26	213	P	Pn	04 11 40.4	-1.8
ETVZ	East Tongariro	3.41	232	P	Pn	04 11 44.0	-0.4
NTVZ	North Tongarir	3.41	232	P	Pn	04 11 44.1	-0.3
MBAZ	Motutapu North	3.42	274	P	Pn	04 11 44.6	+0.1
BHHZ	Black Hill Sta	3.43	224	P	Pn	04 11 43.7	-0.9
KRVZ	Karewarewa	3.43	233	P	Pn	04 11 44.6	-0.1
OTVZ	Oturere	3.46	232	P	Pn	04 11 44.8	-0.3
NNVZ	North Ngauruho	3.47	232	P	Pn	04 11 45.3	0.0
SNVZ	South Ngauruho	3.49	232	P	Pn	04 11 44.8	-0.7
WNVZ	Wahianoa	3.60	230	P	Pn	04 11 46.5	-0.5
HIZ	Hauiti	3.70	246	P	Pn	04 11 49.6	+1.4
TSZ	Takapari Road	3.90	219	P	Pn	04 11 48.6	-2.4
WCZ	Waipu Caves	4.03	285	P	Pn	04 11 53.4	+0.6
OUZ	Omahuta	4.86	291	P	Pn	04 12 05.4	+1.2

*TIF **11** 04:11:29.9, 41°.84N×43°.79E, h13km±1km*
*DDA **11** 04:11:29.7±0.0, 41°.84N×43°.76E, h7km±1km, ML2.5*
*NORS **11** 04:11:29.4±0.0, 41°.85N×43°.76E, h5km, MPVA3.6*

ISC 11 04:11:30.8±0.9, 41°.78N±0°.02×43°.77E±0°.02, h13km±7km, n38, σ1§35/73, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRNG	Burnasheti	0.16	165	P	Pg	04 11 35.4	+0.8
BRNG				S	Sb	04 11 39.6	+0.6
BKRG	Bakuriani	0.19	265	P	Pg	04 11 35.0	-0.1
BKRG				S	Sg	04 11 38.9	+0.8
ALIG	Mtskhetisjvari	0.34	344	P	Pg	04 11 36.4	-1.3
ALIG				S	Sg	04 11 40.9	-1.4
AKH	Akhalkalaki	0.42	210	P	Pb	04 11 40.0	-0.3
AKH				S	Sb	04 11 46.9	+0.3
DMNI	Dmanisi	0.55	145	P	Pg	04 11 41.5	0.0
DMNI				S	Sg	04 11 49.7	+0.9
AZMN	Azmana	0.59	219	P	Pg	04 11 40.3	-2.0
AZMN				S	Sg	04 11 49.5	-0.6
ABS	Abastumani	0.72	269	P	Pg	04 11 44.3	-0.5
ABS				S	Sb	04 11 56.0	+0.9
SEAG	Tbilisi Sea	0.77	91	P	Pg	04 11 44.5	-1.2
SEAG				S	Sg	04 11 56.2	+0.3
BTNK	Botanikuri	0.78	97	P	Pg	04 11 37.5	-8.3
BTNK				S	Sg	04 11 48.8	-7.1
TKB	Tkibuli	0.81	315	P	Pg	04 11 45.6	-1.0
TKB				S	Sg	04 11 56.7	-0.5
EPOS	Posof	0.83	251	P	Pg	04 11 45.9	-0.9
EPOS				*i* AML	AML	04 11 59.0	
	comp=E,106nm,0.7s						
EPOS				S	Sn	04 11 59.4	-1.1
EPOS				*i* AML	AML	04 12 02.0	
	comp=N,192nm,0.5s						
ONI	Oni	0.85	344	P	Pg	04 11 45.7	-1.5
ONI				S	Sg	04 11 57.0	-1.2
GUDG	Gudauri	0.86	37	P	Pg	04 11 46.5	-1.0
GUDG				S	Sg	04 11 58.2	-0.7
ZEI	Tsey	1.01	5	*i* Pg	Pb	04 11 48.9	-1.5
ZEI				*e*Sg	Sb	04 12 04.0	+0.2
EAK	Akyaka	1.10	187	P	Pb	04 11 51.0	-0.8
LACR	Lac	1.12	20	*e*Pg	Pb	04 11 50.5	-1.6
LACR				*e*Sg	Sb	04 12 07.1	+0.5
DIGR	Digorskoe uzhe	1.13	353	*e*Pg	Pb	04 11 51.1	-1.3
DIGR				*e*Sg	Sg	04 12 07.9	+0.6
DGRG	David-gareji	1.25	105	P	Pn	04 11 53.1	-0.8
DGRG				S	Sg	04 12 12.1	+1.2
KORR	Kora	1.33	9	*e*Pg	Pn	04 11 55.0	-0.1
KORR				*e*Sg	Sg	04 12 14.0	+0.5
SHTL	Shatili	1.35	49	P	Pn	04 11 54.8	-0.7
SHTL				S	Sn	04 12 13.0	-0.5
VLKR	Vladikavkaz	1.44	28	*e*Pg	Pb	04 11 58.0	+0.5
VLKR				*e*Sg	Sg	04 12 18.9	+1.9
ARNR	Ardon	1.45	15	*e*Pg	Pg	04 11 58.7	+0.1
ARNR				*e*Sg	Sg	04 12 19.6	+2.1
LSNR	Lesken	1.50	2	*i* Pg	Pb	04 11 59.0	+0.5
LSNR				*e*Sg	Sg	04 12 20.1	+1.0
KMGR	Komgaron	1.51	32	*e*Pg	Pg	04 12 00.2	+0.4
KMGR				*e*Sg	Sg	04 12 21.2	+1.7
DAGI	Agillar	1.56	244	P	Pb	04 12 00.0	+0.4
DAGI				S	Sg	04 12 22.6	+1.6
DAGI				*i* AML	AML	04 12 25.0	
	comp=N,38nm,0.8s						
DAGI				*i* AML	AML	04 12 26.0	
	comp=E,39nm,0.4s						
BATM	Batumi	1.57	264	P	Pb	04 11 59.3	-0.3
BATM				S	Sg	04 12 21.4	+0.2
STDR	Stavd-Durt	1.60	8	*e*Pg	Pg	04 12 01.6	0.0
STDR				*e*Sg	Sg	04 12 25.2	+2.8
DBOC	Borcka	1.64	255	P	Pb	04 12 00.9	0.0
DBOC				S	Sg	04 12 23.6	+0.1
DBOC				*i* AML	AML	04 12 26.0	
	comp=E,44nm,0.3s						
NEY	Neytrino	1.66	333	*e*Pg	Pb	04 12 00.9	-0.5
NEY				*e*Sg	Sb	04 12 22.1	-0.3
BTKR	Batakoyurt	1.69	19	*e*Pg	Pb	04 12 02.4	+0.6
BTKR				*e*Sg	Sg	04 12 27.5	+2.2
DBAD	Bademkaya	1.74	245	P	Pb	04 12 02.9	+0.3
DBAD				S	Sg	04 12 27.7	+1.0
DBAD				*i* AML	AML	04 12 29.0	
	comp=E,76nm,0.4s						
DBAD				*i* AML	AML	04 12 30.0	
	comp=N,74nm,0.9s						
DDEM	Demirkent	1.76	241	P	Pb	04 12 03.6	+0.6
DDEM				S	Sg	04 12 28.5	+1.1
DDEM				*i* AML	AML	04 12 31.0	
	comp=E,76nm,0.5s						
DDEM				*i* AML	AML	04 12 31.0	
	comp=N,83nm,0.3s						
DDFL	Dedoflistskaro	1.79	100	P	Pg	04 12 05.8	+0.6
LGD	Lagodekhi	1.85	87	P	Pn	04 12 03.7	+1.5
LGD				S	Sb	04 12 29.0	+1.5
KBTC	Kuba-Taba	2.06	353	*e*Pg	Pb	04 12 08.7	+0.7
KBTC				*e*Sg	Sg	04 12 37.0	+0.1
GROC	Groznyy	2.07	46	*e*Pg	Pb	04 12 08.2	0.0
GROC				*e*Sg	Sg	04 12 36.5	-0.7
DVE	Vedeno	2.11	55	*e*Pg	Pb	04 12 08.4	-0.5
DVE				*e*Sg	Sb	04 12 36.7	+1.8
SHA1	Shidzhatmaz	2.12	338	*e*Pg	Pb	04 12 09.6	+0.3
SHA1				*e*Sg	Sb	04 12 37.1	+1.4

*NEIC **11** 04:52:42.9±1.4, 8°.90S±0°.08×111°.27E±0°.05, h56km±5km, mb4.2/14, Error ellipse: s-maj=12.3km s-min=7.0km az=196.0*
*DJA **11** 04:52:43.1±0.4, 9°S±3°×11°1E±°, h37km±8km, M4.7/15, mB5.5/3, mb5.1/2, MLv4.4/15, Mw(mB)5.0/3*
*IDC **11** 04:52:45.4±2.4, 8°.40S×111°.40E, h101km±26km, mb3.7/8, mbtmp4.1/9, MS2.8/4, Error ellipse: s-maj=32.3km s-min=13.7km az=43.0*

ISC 11 04:52:42.6±0.8, 8°.76S±0°.06×111°.31E±0°.04, h70km±8km, n68, σ1§35/72, mb4.1/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	0.57	347	P	Pn	04 52 56.5	+0.3
PCJI				S	Sn	04 53 05.9	-0.2
PWJI	Pagerwojo	0.88	34	P	Pn	04 52 59.9	+0.2
PWJI				S	Sn	04 53 12.3	0.0
UGM	Wanagama	1.14	317	Pn	Pn	04 53 03.4	+0.4
UGM				Sn	Sn	04 53 18.5	+0.3
UGM	Wanagama	1.14	317	P	Pn	04 53 03.6	+0.6
UGM				S	Sn	04 53 18.4	+0.2
UGM	Wanagama	1.14	317	P	Pn	04 53 03.9	+0.9
KRKI	Karangkates	1.28	62	P	Pn	04 53 05.8	+1.1
KRKI				S	Sn	04 53 22.2	+0.9
SMRI	Semarang	1.90	333	Pn	Pn	04 53 14.6	+1.6
SMRI				Sn	Sn	04 53 37.1	+1.0
SMRI	Semarang	1.90	333	P	Pn	04 53 14.3	+1.3
SMRI				S	Sn	04 53 38.0	+1.9
SMRI	Semarang	1.90	333	P	Pn	04 53 14.9	+1.9
TBJI	Tambak Boyo	2.00	16	P	Pn	04 53 15.3	+1.0
TBJI				S	Sn	04 53 38.8	+0.4
BJII	Banjamegara	2.12	312	P	Pn	04 53 23.9	+7.9
SCJI	Gunung Srandil	2.37	297	P	Pn	04 53 19.1	-0.2
JAGI	Jajag, Banyuwa	2.83	84		Pn	04 53 26.4	+0.8
JAGI				Sn	Sn	04 53 58.3	-0.3
JAGI	Jajag, Banyuwa	2.83	84	P	Pn	04 53 25.9	+0.4
JAGI	Jajag, Banyuwa	2.83	84	P	Pn	04 53 26.6	+1.1
KMMI	Kalianget	3.14	57	P	Pn	04 53 29.2	-0.5
BWJI	Bawean	3.19	25	P	Pn	04 53 31.6	+1.2
RTBI	Rangdo, Negare	3.61	86	P	Pn	04 53 37.8	+1.6
IGBI	Denpasar	3.80	91	P	Pn	04 53 39.5	+0.8
SRBI	Singaraja	3.92	80	P	Pn	04 53 41.2	+0.8
LEM	Lembang	4.13	297	P	Pn	04 53 45.2	+1.8
	70nm,0.8s,baz=118,slow=9.4,SNR=9.4						
LEM				S	Sn	04 54 33.1	+2.6
	73nm,0.5s,baz=297,slow=21,SNR=4.1						
LEM				LR	LR	04 55 05.8	
	comp=Z,75nm,21.2s,baz=174,slow=35						
LEM	Lembang	4.13	297	P	Pn	04 53 44.3	+0.9
CNJI	Cibinong	4.38	289	P	Pn	04 53 47.2	+0.5
KLNI	Mataram	4.75	86	P	Pn	04 53 52.0	+0.3
TWSI	Taliwang, Sumb	5.51	90	P	Pn	04 54 03.4	+1.2
	0.4nm2μm45nm,0.5s						
XMI	Christmas Isla	5.79	253	P	Pn	04 54 05.2	-0.8
XMIS	Christmas Isla	5.83	252	Pn	Pn	04 54 05.3	-1.3
XMIS	Christmas Isla	5.83	252	P	Pn	04 54 05.2	-1.4
PLAI	Plampang	6.40	91	P	Pn	04 54 16.0	+1.7
PLAI	Plampang	6.40	91	P	Pn	04 54 16.3	+2.0
KAPI	Kappang	9.17	67	LR	LR	04 58 55.0	
	comp=Z,37nm,19.7s,baz=276,slow=41						
SOEI	Soe	12.83	95	Pn	Pn	04 55 41.2	-1.1
GIRL	Giralia	14.09	169	Pn	Pn	04 55 57.9	-1.0
GIRL	Giralia	14.09	169	P	Pn	04 55 57.4	-1.5
MBWA	Marble Bar	14.76	148	Pn	Pn	04 56 05.8	-1.9
MBWA	Marble Bar	14.76	148	P	Pn	04 56 06.5	-1.2
PSA00	Pilbara Seismi	15.16	148	Pn	Pn	04 56 11.0	-1.8
PSA00				IAmb	IAmb	04 56 22.1	
	comp=Z,20nm,1.4s						
PSA00	Pilbara Seismi	15.16	148	Pn	Pn	04 56 10.4	-2.4
PSA00				IAmb	IAmb	04 56 35.0	
	comp=Z,7.5nm,1.4s						
PSA00	Pilbara Seismi	15.16	148	P	Pn	04 56 12.1	-0.8
PSI	Prapat	16.86	312	LR	LR	05 03 19.1	
	comp=Z,68nm,18.6s,baz=356,slow=38						
KNRA	Kununurra	18.39	114	P	Pn	04 56 52.9	+0.1
KNRA				IAmb	IAmb	04 56 53.5	
	comp=Z,8.6nm,0.6s						
KNRA	Kununurra	18.39	114	P	Pn	04 56 53.0	+0.1
MTN	Manton Dam	19.89	104	P	P	04 57 09.4	+0.9
MTN				IAmb	IAmb	04 57 13.8	
	comp=Z,12nm,0.6s						
DAV	Davao City (W)	21.20	43	LR	LR	05 07 58.3	
	comp=Z,34nm,18.1s,baz=338,slow=44						
SIJI	Sorong	21.36	70	P	P	04 57 22.9	-1.6
	comp=Z,11nm,0.7s,baz=288,slow=13,SNR=3.3						
	comp=Z,11nm,0.7s						
FAKI	Fak Fak	21.62	76	P	P	04 57 29.0	+1.8
FAKI				IAmb	IAmb	04 57 30.8	
	comp=Z,8.1nm,0.5s						
FAKI	Fak Fak	21.62	76	P	P	04 57 29.2	+2.0
NWAO	Narrogin (SRO)	24.67	168	P	P	04 57 57.0	0.0
WB0	Warramunga Arr	24.87	119	P	P	04 57 59.4	+0.4
WB0				IAmb	IAmb	04 58 01.1	
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	24.89	119	P	P	04 57 59.5	+0.3
	comp=Z,2.9nm,0.8s,baz=295,slow=11,SNR=28						
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	24.89	119	P	P	04 57 60.0	+0.8
WRAB	Tennant Creek	24.90	119	P	P	04 58 00.0	+0.8
WB2	Warramunga Arr	24.90	119	P	P	04 57 58.6	-0.7
WB2				IAmb	IAmb	04 58 01.8	
	comp=Z,5.6nm,0.8s						
WR0	Warramunga Arr	25.07	119	P	P	04 58 01.6	+0.8
WR0				IAmb	IAmb	04 58 03.2	
	comp=Z,17nm,1.2s						
ASAR	Alice Springs	26.22	127	P	P	04 58 11.9	+0.8
	comp=Z,1.5nm,0.4s,baz=304,slow=9.7,SNR=22						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	26.22	127	P	P	04 58 12.4	+1.2
STKA	Stephens Creek	36.32	134	P	P	04 59 42.3	+2.5
	comp=Z,1.5nm,0.7s,baz=304,slow=9.1,SNR=2.9						
	comp=Z,1.5nm,0.7s						
H08S2	Diego Garcia H	38.42	269	T	T	05 40 50.1	
	baz=94,slow=74						
H08S3	Diego Garcia H	38.43	269	T	T	05 40 56.6	
	baz=94,slow=74						
H08S1	Diego Garcia H	38.44	269	T	T	05 40 56.6	
	baz=94						
SONM	Songino Array	56.51	356	P	P	05 02 15.1	-2.6
	comp=Z,1.0nm,0.6s,baz=168,slow=8.9,SNR=3.2						
SONM				PcP	PcP	05 03 12.0	-1.7
	comp=Z,0.9nm,0.5s,baz=169,slow=4.1,SNR=3.5						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	61.05	338	P	P	05 02 46.2	-2.9
	comp=Z,0.7nm,0.4s,baz=154,slow=7.4,SNR=6.4						
	comp=Z,0.7nm,0.4s						
VOI	Vohitsoka	63.18	250	P	P	05 03 04.6	+0.6
ZALV	Zalesovo Beam	66.36	343	P	P	05 03 20.4	-3.4
	comp=Z,0.5nm,0.3s,baz=173,slow=3.6,SNR=4.1						
	comp=Z,0.5nm,0.3s						
VNDA	Vanda	73.48	170	P	P	05 04 08.3	+1.1
	comp=Z,0.7nm,0.8s,baz=290,slow=6.4,SNR=3.7						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	73.48	170	P	P	05 04 07.8	+0.6
QSPA	South Pole Qui	81.24	180	P	P	05 04 52.1	+1.2
QSPA				IAmb	IAmb	05 05 35.6	
	comp=Z,2.6nm,1.2s						
SNAA	Sanae	89.11	197	P	P	05 05 31.4	+1.4

**GCMT 11 05:04:55.0±0.2, 54°.79S±0°.01×1°.75E±0°.02, h28km±1km, MW5.2/136, Moment Tensor Solution. s53,c66; s136,c195; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.54±.19; $M_{\theta\theta}

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Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHE				Pg	**Pb**	**05 18 00.1**	**+1.4**
ECHE				Sg	**Sg**	**05 18 23.2**	**+1.3**
ECHE				*i* Vmb_Lg		05 18 27.6	
EQUE	**Quentar**	**1.85**	**249**	Pg	**Pb**	**05 18 01.5**	**+0.5**
EQUE				Sg	**Sg**	**05 18 28.3**	**+2.0**
EQUE				*i* Vmb_Lg		05 18 30.7	
ELGU	**Los Guajares,**	**2.13**	**242**	Pn	**Pn**	**05 18 03.8**	**+0.8**
ELGU				*i* Vmb_Lg		05 18 47.9	
EIBI	**Ibiza**	**2.35**	**60**	Pn	**Pn**	**05 18 05.1**	**-0.9**
EIBI				Sn	**Sn**	**05 18 33.9**	**-1.2**
EIBI				*i* Vmb_Lg		05 18 36.1	
EGOR	**Sierra Gorda,**	**2.38**	**252**	Pg	**Pb**	**05 18 10.5**	**+0.3**
EGOR				*i* Vmb_Lg		05 18 52.0	
EMOS	**Mosqueruela**	**2.54**	**14**	Pn	**Pn**	**05 18 08.7**	**-0.1**
EMOS				Pg	**Pb**	**05 18 14.1**	**+1.1**
EMOS				Sg	**Sb**	**05 18 46.5**	**+1.9**
EMOS				*i* Vmb_Lg		05 18 52.3	
EADA	**Adamuz**	**2.62**	**277**	Pn	**Pn**	**05 18 09.8**	**+0.1**
EADA				Sn	**Sb**	**05 18 44.3**	**-2.2**
EADA				Sg	**Sg**	**05 18 52.0**	**+1.0**
EADA				*i* Vmb_Lg		05 18 59.0	
ESDC	**Sonseca Array**	**2.75**	**311**	Pn	**Pn**	**05 18 12.9**	**+1.4**
ESDC				Pg	**Pg**	**05 18 20.4**	**+0.9**
ESDC				Sg	**Sg**	**05 18 54.4**	**-0.7**
ESDC				*i* Vmb_Lg		05 18 58.5	
UCM	**Universidad Co**	**2.85**	**328**	P	**Pg**	**05 18 21.1**	**-0.5**
UCM				S	**Sg**	**05 18 58.9**	**+0.4**
PAB	**San Pablo**	**2.91**	**305**	Pn	**Pn**	**05 18 14.1**	**+0.4**
PAB				Sg	**Sg**	**05 19 00.3**	**-0.1**
PAB				*i* Vmb_Lg		05 19 05.0	
PAB	**San Pablo**	**2.91**	**305**	P	**Pn**	**05 18 14.1**	**+0.4**
ETOR	**Torete**	**2.98**	**349**	Pn	**Pn**	**05 18 15.6**	**+0.9**
ETOR				Pg	**Pg**	**05 18 24.2**	**+0.2**
ETOR				Sg	**Sg**	**05 19 03.5**	**+0.9**
ETOR				*i* Vmb_Lg		05 19 08.3	
TAF	**Taforalt**	**3.21**	**197**	P	**Pn**	**05 18 18.1**	**+0.3**
ECAB	**El Cabril**	**3.27**	**274**	⇑Pn	**Pn**	**05 18 18.7**	**0.0**
ECAB				Sn	**Sn**	**05 18 58.7**	**+0.8**
ECAB				Sg	**Sg**	**05 19 10.3**	**-1.7**
ECAB				*i* Vmb_Lg		05 19 16.1	
GUD	**Guadarrama**	**3.54**	**322**	Pn	**Pn**	**05 18 23.5**	**+1.1**
GUD				Pg	**Pg**	**05 18 33.2**	**-1.4**
GUD				Sn	**Sn**	**05 19 07.2**	**+2.7**
GUD				Sg	**Sg**	**05 19 18.0**	**-2.5**
GUD				*i* Vmb_Lg		05 19 23.9	
JBK	**JBK**	**3.70**	**197**	P	**Pn**	**05 18 24.6**	**-0.1**
ETOS	**Mallorca**	**3.71**	**58**	Pn	**Pn**	**05 18 24.4**	**-0.1**
ETOS				*i* Vmb_Lg		05 18 51.5	
ETOS				Sn	**Sn**	**05 19 09.3**	**+0.8**
AKLM	**AKL**	**3.97**	**212**	P	**Pn**	**05 18 29.0**	**+0.7**
EMIN	**Mina Concepcio**	**4.27**	**270**	Pn	**Pn**	**05 18 32.3**	**0.0**
EPLA	**Plasencia**	**4.32**	**302**	Pn	**Pn**	**05 18 33.5**	**+0.4**
EPLA				Sn	**Sn**	**05 19 24.0**	**+0.3**
EPLA				Sg	**Sg**	**05 19 44.1**	**-1.6**
EPLA				*i* Vmb_Lg		05 19 49.3	
PBAR	**Barrancos**	**4.55**	**275**	*e*Pn	**Pn**	**05 18 36.5**	**+0.3**
PBAR				*e*Sn	**Sn**	**05 19 29.4**	**0.0**
PBAR				*e*Sg	**Sg**	**05 19 51.9**	**-1.2**
PBAR				A	A	05 19 56.3	
	5.8nm,0.5s						
ECHI	**Chisagues Biel**	**4.90**	**13**	Pn	**Pn**	**05 18 42.1**	**+1.1**
ECHI				*i* Vmb_Lg		05 20 21.3	
EGRO	**El Granado**	**4.93**	**268**	Pn	**Pn**	**05 18 41.4**	**0.0**
EGRO				*i* Vmb_Lg		05 20 21.4	
EORO	**Oroz-Betelu**	**4.99**	**360**	Pn	**Pn**	**05 18 44.2**	**+1.9**
EORO				*i* Vmb_Lg		05 20 30.1	
PMRV	**Marv??o**	**5.02**	**290**	*e*Sg	**Sg**	**05 20 07.2**	**-0.9**
PMRV				A	A	05 20 21.9	
	8.4nm,0.6s						
ETSF	**Etsaut**	**5.03**	**6**	*e*Pn	**Pn**	**05 18 44.7**	**+1.9**
ETSF	**Etsaut**	**5.03**	**6**	*e*Pg	**Pg**	**05 19 03.1**	**-0.1**
ETSF				*e*Sg	**Sg**	**05 20 08.5**	**+0.2**
	4.6nm,0.6s						
PESTR	**Estremoz**	**5.05**	**283**	*e*Pn	**Pn**	**05 18 43.8**	**+0.7**
PESTR				*e*Sn	**Sn**	**05 19 41.6**	**-0.1**
PESTR				*e*Sg	**Sg**	**05 20 07.2**	**-1.9**
PESTR				A	A	05 20 16.1	
	6.2nm,0.6s						
PVAQ	**Vaqueiros**	**5.13**	**266**	*e*Pn	**Pn**	**05 18 44.0**	**-0.1**
PVAQ				*e*Sn	**Sn**	**05 19 42.8**	**-0.8**
PVAQ				A	A	05 20 16.2	
	3.4nm,0.5s						
PVAQ	**Vaqueiros**	**5.13**	**266**	P	**Pn**	**05 18 44.1**	**-0.1**
PCBR	**Castelo Branco**	**5.21**	**294**	*e*Sg	**Sg**	**05 20 12.8**	**-1.4**
PCBR				A	A	05 20 26.1	
	4.3nm,0.8s						
SJPF	**Ste Jean**	**5.21**	**0**	*e*Pn	**Pn**	**05 18 47.1**	**+1.8**
SJPF	**Ste Jean**	**5.21**	**0**	*e*Pg	**Pg**	**05 19 06.9**	**+0.2**
SJPF				*e*Sg	**Sg**	**05 20 12.7**	**-1.5**
	3.6nm,0.6s						
EPF	**Esparros**	**5.28**	**13**	*e*Pn	**Pn**	**05 18 47.3**	**+1.1**
EPF				*e*Sg	**Sg**	**05 20 14.1**	**-2.2**
	5.3nm,0.6s						
EALK	**Alkurruntz**	**5.32**	**358**	Pn	**Pn**	**05 18 49.8**	**+3.0**
EALK				*i* Vmb_Lg		05 22 25.4	
EVO	**Evora**	**5.34**	**279**	*e*Sg	**Sg**	**05 20 16.8**	**-1.5**
EVO				A	A	05 20 34.7	
	3.6nm,0.5s						
PCVE	**Castro Verde**	**5.36**	**269**	*e*Pn	**Pn**	**05 18 47.4**	**+0.1**
PCVE				*e*Sg	**Sg**	**05 20 18.5**	**-0.5**
PCVE				A	A	05 20 23.6	
	3.8nm,0.6s						
MTE	**Manteigas**	**5.47**	**299**	*e*Sg	**Sg**	**05 20 19.4**	**-3.2**
MTE				A	A	05 20 33.3	
	5.2nm,0.4s						
MESJ	**Messejana**	**5.49**	**272**	*e*P	**Pn**	**05 18 48.6**	**-0.5**
MESJ	**Messejana**	**5.49**	**272**	*e*Pn	**Pn**	**05 18 49.7**	**+0.6**
MVO	**Moncorvo**	**5.51**	**308**	*e*Pn	**Pn**	**05 18 50.1**	**+0.6**
MVO				*e*Sg	**Sg**	**05 20 24.4**	**+0.5**
MVO				A	A	05 20 29.0	
	9.8nm,0.6s						
PMTG	**Montargil**	**5.57**	**284**	*e*Sg	**Sg**	**05 20 22.6**	**-3.2**
PMTG				A	A	05 20 35.7	
	7.6nm,0.6s						
PNCL	**Nicolau / Gran**	**5.73**	**274**	*e*Pn	**Pn**	**05 18 53.1**	**+0.8**
PNCL				*e*Sg	**Sg**	**05 20 29.1**	**-1.7**
PNCL				A	A	05 20 40.6	
	3.6nm,0.6s						
PBRG	**Braganca**	**5.74**	**315**	*e*Pn	**Pn**	**05 18 54.5**	**+2.0**
PBRG				*e*Sg	**Sg**	**05 20 28.1**	**-2.9**
PBRG				A	A	05 20 37.5	
	6.0nm,0.5s						
MDT	**Midelt**	**5.75**	**209**	P	**Pn**	**05 18 54.0**	**+1.2**
MD31	**MD31**	**5.76**	**211**	P	**Pn**	**05 18 53.5**	**+0.5**
ECAL	**Calabor**	**5.82**	**316**	Pn	**Pn**	**05 18 54.7**	**+1.0**
ECAL				Sn	**Sn**	**05 19 57.8**	**-3.0**
ECAL				Sg	**Sg**	**05 20 32.5**	**-1.3**
ECAL				*i* Vmb_Lg		05 20 44.8	
PVIS	**Viseu**	**5.85**	**301**	*e*Sg	**Sg**	**05 20 34.1**	**-0.6**
PVIS				A	A	05 20 42.0	
	3.9nm,0.5s						
MORF	**Marmelete**	**5.88**	**266**	*e*Pn	**Pn**	**05 18 55.3**	**+0.8**
PCAS	**Casmilo, Conde**	**6.02**	**293**	*e*Pn	**Pn**	**05 18 58.3**	**+1.9**
PCAS				*e*Sg	**Sg**	**05 20 35.6**	**-4.6**
PCAS				A	A	05 20 50.3	
	5.1nm,0.5s						
POLO	**Lamas de Olo**	**6.11**	**307**	*e*Sg	**Sg**	**05 20 44.1**	**+1.1**
POLO				A	A	05 20 57.6	
	2.1nm,0.4s						
EARI	**Arriondas**	**6.17**	**332**	Pn	**Pn**	**05 18 59.8**	**+1.3**
EARI				Sg	**Sg**	**05 20 40.9**	**-4.1**
PGAV	**Gavieira, Arco**	**6.73**	**309**	*e*Pn	**Pn**	**05 19 07.4**	**+1.1**
EPON	**Pontenova**	**7.03**	**322**	Pn	**Pn**	**05 19 11.7**	**+1.5**
EPON				Sg	**Sg**	**05 21 12.5**	**+0.2**
LFF	**La Frestale**	**7.20**	**12**	*e*Pn	**Pn**	**05 19 12.8**	**+0.3**
CAF	**Calviac**	**7.46**	**19**	*e*Pn	**Pn**	**05 19 16.6**	**+0.4**

*IDC **11** 05:28:28.8±0.7, 62°.78S×158°.10W, h0km, mb4.4/10, mbtmp4.3/11, ML3.9/1, MS4.2/30, Error ellipse: s-maj=26.8km s-min=16.7km az=26.0*
*NEIC **11** 05:28:31.4±2.6, 62°.88S±0°.08×158°.1W±0°.3, h10km±1km, mb4.6/11, Error ellipse: s-maj=21.0km s-min=11.1km az=296.0*
*GCMT **11** 05:28:35.5±0.2, 62°.90S±0°.01×158°.24W±0°.03, h18km±1km, MW5.1/115, Moment Tensor Solution. s46,c56; s115,c163; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}-1.19±.17; $M_{\theta\theta}$5.36±.18; $M_{\phi\phi}$-4.16±.13; $M_{r\theta}$0.15±.33; $M_{r\phi}$1.92±.11; $M_{\theta\phi}$2.19±.40; Best double couple: $M_0$5.67400×10^16^ NP1:ϕ_s217.00000°, δ76.00000°,*

λ-157.00000°. NP2:ϕ_s121.00000°, δ68.00000°, λ-16.00000°. Principal axes: T 5.7820, Plg5.0000°, Azm348.0000°; N -0.2050, Plg63.0000°, Azm248.0000°; P -5.5670, Plg26.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 11 05:28:30.5±0.6, 62°.85±0°.1×158°.0W±0°.1, h10km, n63, σ0°.79/36, mb4.7/12, MS4.2/29, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**18.67**	**202**		**Pn**	**05 32 49.1**	**+0.6**
SBA				IAmb	IAmb	05 33 29.3	
	comp=Z,30nm,1.5s						
VNDA	**Vanda**	**19.41**	**205**	P	**Pn**	**05 32 57.3**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=74,slow=17,SNR=38						
VNDA				LR	LR	05 38 25.8	
	comp=Z,867nm,20.6s,baz=64,slow=31						
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**19.41**	**205**		**Pn**	**05 32 57.7**	**+0.3**
BSWZ	**Blackbirch Sta**	**26.81**	**309**	P	**P**	**05 34 11.6**	**+1.1**
QSPA	**South Pole Qui**	**27.35**	**180**	P	**P**	**05 34 15.2**	**-0.2**
	comp=Z,5.2nm,1.1s,baz=72,slow=4.4,SNR=8.2						
QSPA				LR	LR	05 43 09.7	
	comp=Z,510nm,21.4s,baz=63,slow=32						
	comp=Z,5.2nm,1.1s						
QSPA	**South Pole Qui**	**27.35**	**180**	P	**P**	**05 34 16.2**	**+0.8**
QSPA				IAmb	IAmb	05 34 20.2	
	comp=Z,26nm,1.5s						
URZ	**Urewera**	**28.82**	**317**	LR	LR	05 42 49.7	
	comp=Z,612nm,21.9s,baz=248,slow=30						
PMSA	**Palmer Station**	**37.95**	**136**	LR	LR	05 49 18.0	
	comp=Z,451nm,18.7s,baz=230,slow=33						
RAR	**Rarotonga**	**41.54**	**358**	LR	LR	05 48 53.4	
	comp=Z,371nm,21.5s,baz=209,slow=30						
VNA3	**Neumayer Olymp**	**44.49**	**166**	P	**P**	**05 36 40.9**	**-0.4**
SNAA	**Sanae**	**44.75**	**169**	P	**P**	**05 36 42.8**	**-0.6**
SNAA	**Sanae**	**44.75**	**169**	P	**P**	**05 36 41.8**	**-1.6**
	comp=Z,2.7nm,1.1s,baz=214,slow=6.6,SNR=5.6						
SNAA				LR	LR	05 53 52.6	
	comp=Z,314nm,20.9s,baz=212,slow=34						
	comp=Z,2.7nm,1.1s						
SNAA	**Sanae**	**44.75**	**169**	P	**P**	**05 36 43.5**	**+0.1**
SNAA				IAmb	IAmb	05 36 59.1	
	comp=Z,5.4nm,1.1s						
TROLL	**Troll, Antarti**	**44.84**	**172**	P	**P**	**05 36 44.6**	**+0.4**
VNA2	**Neumayer--Watz**	**45.03**	**167**	P	**P**	**05 36 45.3**	**-0.3**
	baz=198,slow=7.1						
VNA1	**Neumayer--Stat**	**45.20**	**166**	P	**P**	**05 36 47.0**	**+0.1**
PPT	**Papeete**	**45.54**	**11**	LR	LR	05 50 53.4	
	comp=Z,293nm,20.2s,baz=183,slow=30						
MAW	**Mawson**	**46.62**	**200**	LR	LR	05 54 56.9	
	comp=Z,221nm,18.1s,baz=154,slow=34						
DZM	**Mont Dzumac**	**47.23**	**313**	P	**P**	**05 37 03.4**	**-0.1**
	comp=Z,23nm,1.1s,baz=231,slow=16,SNR=4.5						
	comp=Z,23nm,1.1s						
RPN	**Rapa Nui**	**47.68**	**65**	LR	LR	05 52 23.0	
	comp=Z,304nm,21.4s,baz=211,slow=30						
STKA	**Stephens Creek**	**48.69**	**280**	P	**P**	**05 37 14.2**	**-0.5**
	comp=Z,6.0nm,0.9s,baz=130,slow=8.9,SNR=4.8						
STKA				LR	LR	05 54 50.1	
	comp=Z,244nm,18.0s,baz=161,slow=32						
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**48.69**	**280**	P	**P**	**05 37 14.3**	**-0.3**
AFI	**Afiamalu**	**49.76**	**342**	LR	LR	05 52 23.1	
	comp=Z,186nm,21.5s,baz=172,slow=29						
PLCA	**Paso Flores**	**53.67**	**110**	P	**P**	**05 37 51.8**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=198,slow=13,SNR=1.5						
PLCA				LR	LR	05 54 56.6	
	comp=Z,204nm,22.0s,baz=208,slow=30						
	comp=Z,1.0nm,0.8s						
PLCA	**Paso Flores**	**53.67**	**110**	P	**P**	**05 37 52.6**	**+0.6**
PLCA				IAmb	IAmb	05 38 20.7	
	comp=Z,6.7nm,1.1s						
H03S2	**Juan Fernandez**	**55.64**	**98**	T	T	06 38 47.5	
	baz=210						
H03S1	**Juan Fernandez**	**55.64**	**98**	T	T	06 38 48.8	
	baz=210						
H03S3	**Juan Fernandez**	**55.66**	**98**	T	T	06 38 47.3	
	baz=210						
CTA	**Charters Tower**	**56.85**	**292**	LR	LR	05 59 31.9	
	comp=Z,171nm,19.3s,baz=113,slow=33						
CTAO	**Charters Tower**	**56.85**	**292**	P	**P**	**05 38 16.1**	**+1.0**
CTAO				IAmb	IAmb	05 38 30.3	
	comp=Z,9.6nm,1.2s						
H01W1	**Cape Leeuwin H**	**58.66**	**254**	T	T	06 42 29.7	
	baz=147						
H01W2	**Cape Leeuwin H**	**58.66**	**254**	T	T	06 42 24.6	
	baz=147						
H01W3	**Cape Leeuwin H**	**58.68**	**254**	T	T	06 42 37.2	
	baz=147						
BO01	**Tunca**	**58.71**	**105**	P	**P**	**05 38 27.3**	**-0.6**
NWAO	**Narrogin (SRO)**	**58.94**	**258**	P	**P**	**05 38 30.2**	**+0.6**
	comp=Z,11nm,0.9s,baz=61,slow=11						
NWAO				LR	LR	05 58 24.8	
	comp=Z,210nm,18.6s,baz=66,slow=30						
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**59.20**	**278**	P	**P**	**05 38 31.0**	**-0.6**
	comp=Z,5.5nm,0.9s,baz=148,slow=7.1,SNR=22						
ASAR				LR	LR	05 59 57.8	
	comp=Z,388nm,21.3s,baz=160,slow=32						
	comp=Z,5.5nm,0.9s						
WB2	**Warramunga Arr**	**62.23**	**281**	P	**P**	**05 38 51.7**	**-0.5**
WB2				IAmb	IAmb	05 38 52.8	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**62.23**	**281**	P	**P**	**05 38 50.7**	**-1.6**
	comp=Z,3.9nm,1.1s,baz=155,slow=6.0,SNR=10						
WRA				LR	LR	06 02 46.4	
	comp=Z,185nm,18.7s,baz=128,slow=33						
	comp=Z,3.9nm,1.1s						
WB0	**Warramunga Arr**	**62.36**	**281**	P	**P**	**05 38 51.8**	**-1.3**
KRVT	**Keravat (AS076**	**68.81**	**305**	LR	LR	06 06 17.4	
	comp=Z,101nm,20.6s,baz=265,slow=33						
LVC	**Limon Verde**	**69.77**	**100**	LR	LR	06 01 44.9	
	comp=Z,228nm,21.9s,baz=212,slow=29						
CPUP	**Villa Florida**	**71.64**	**112**	P	**P**	**05 39 51.5**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=173,slow=2.8,SNR=3.0						
CPUP				LR	LR	06 07 16.6	
	comp=Z,161nm,19.5s,baz=214,slow=32						
	comp=Z,1.7nm,0.7s						
NNA	**Nana**	**75.40**	**88**	LR	LR	06 04 46.6	
	comp=Z,127nm,19.2s,baz=202,slow=29						
LPAZ	**La Paz**	**75.63**	**98**	P	**P**	**05 40 16.8**	**+0.5**
	comp=Z,6.0nm,1.3s,baz=176,slow=4.1,SNR=7.8						
	comp=Z,6.0nm,1.3s						
LPAZ	**La Paz**	**75.63**	**98**	P	**P**	**05 40 17.6**	**+1.3**
LPAZ				IAmb	IAmb	05 40 36.5	
	comp=Z,13nm,1.4s						
SIV	**San Ignacio**	**79.08**	**104**	LR	LR	06 09 33.3	
	comp=Z,104nm,19.4s,baz=258,slow=31						
KAPI	**Kappang**	**82.00**	**275**	LR	LR	06 13 47.8	
	comp=Z,157nm,20.7s,baz=138,slow=33						
BDFB	**Brasilia**	**85.06**	**115**	LR	LR	06 16 07.4	
	comp=Z,311nm,20.0s,baz=145,slow=34						
SUR	**Sutherland**	**85.18**	**179**	LR	LR	06 14 47.2	
	comp=Z,434nm,21.3s,baz=166,slow=33						
LEM	**Lembang**	**85.97**	**263**	LR	LR	06 16 00.2	
	comp=Z,122nm,18.4s,baz=153,slow=33						
BOSA	**Boshof**	**88.90**	**183**	LR	LR	06 19 25.7	
	comp=Z,180nm,18.1s,baz=190,slow=34						
DAV	**Davao City (W)**	**90.06**	**285**	LR	LR	06 21 40.4	
	comp=Z,38nm,19.0s,baz=166,slow=35						
LBTB	**Lobatse**	**92.47**	**183**	LR	LR	06 18 29.7	
	comp=Z,193nm,21.9s,baz=176,slow=32						
SDV	**Santo Domingo**	**96.64**	**84**	LR	LR	06 18 36.7	
	comp=Z,98nm,21.4s,baz=190,slow=31						
TSUM	**Tsumeb**	**98.23**	**176**	LR	LR	06 24 52.0	
	comp=Z,128nm,18.0s,baz=146,slow=34						
ILAR	**Eielson Array**	**127.50**	**6**	PKP	**PKiKP**	**05 47 33.9**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=219,slow=2.0,SNR=7.6						
TORD	**Torodi Ar. Bea**	**128.40**	**155**	PKP	**PKPdf**	**05 47 36.0**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=200,slow=1.6,SNR=2.4						
MDT	**Midelt**	**145.63**	**138**	PKPbc	**PKPbc**	**05 48 08.5**	**-0.2**
	comp=Z,1.9nm,1.0s,baz=243,slow=3.5,SNR=2.9						
GEYT	**Alibeck**	**146.85**	**239**	PKPbc	**PKPab**	**05 48 12.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=204,slow=3.2,SNR=2.0						
ZALV	**Zalesovo Beam**	**147.16**	**284**	PKPbc	**PKPbc**	**05 48 12.4**	**0.0**
	baz=164,slow=1.0						
KURBB	**Kurchatov Arra**	**147.77**	**275**	PKPbc	**PKPbc**	**05 48 12.8**	**-1.4**
	comp=Z,1.1nm,0.2s,baz=136,slow=2.0,SNR=12						
ASF	**Jabal al Asfar**	**147.94**	**204**	PKPbc	**PKPdf**	**05 48 13.1**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=244,slow=6.9,SNR=1.8						
ESDC	**Sonseca Array**	**152.12**	**134**	PKPbc	**PKiKP**	**05 48 26.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=207,slow=4.7,SNR=2.0						

TEH 11 05:31:42.7, 29°.48N×59°.91E, h8km, ML3.8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHSF	**Zahedan**	**0.76**	**80**	*e*Pn	Pg	05 31 57.3	-0.1
ZHDN	**Zahedan**	**0.79**	**96**	*e*Pg	Pg	05 31 57.5	-0.4
KBAM	**BAM**	**1.32**	**255**	*e*Sg	Sn	05 32 25.3	0.0
KBAM				*e*Pg	Pn	05 32 07.3	-0.2
KBAM				*e*		05 32 27.8	
	comp=Z,41μm,0.3s						
NHDN	**Nehbandan**	**1.91**	**4**	*e*Pn	Pb	05 32 17.3	-0.6
NHDN				*e*		05 32 52.1	
	comp=Z,5μm,0.6s						
CHMN	**Cheshme madani**	**2.10**	**281**	*e*Pn	Pn	05 32 19.2	+0.7
CHMN				*e*		05 32 50.2	
	comp=Z,8μm,0.2s						
KHNJ	**Kahnooj**	**2.47**	**232**	*e*Pn	Pn	05 32 24.7	+1.5
KHNJ				*e*		05 33 03.8	
	comp=Z,3μm,0.6s						
BSRN	**Basiran**	**2.57**	**345**	*e*Pn	Pn	05 32 26.2	+1.4
NGRK	**Negar Kerman**	**2.78**	**274**	*e*Pn	Pn	05 32 29.5	+1.7
NGRK				*e*		05 33 11.5	
	comp=Z,3μm,0.2s						
KRBR	**Kerman**	**2.79**	**281**	*e*Pn	Pn	05 32 29.9	+2.0
TVBK	**TV Kerman**	**2.79**	**281**	*e*Pn	Pn	05 32 29.5	+1.6
TVBK				*e*		05 33 14.8	
	comp=Z,6μm,0.3s						
SRVN	**Saravan**	**3.01**	**133**	*e*Pn	Pn	05 32 32.1	+1.3
IKOO	**Kooshah**	**3.04**	**345**	*e*Pn	Pn	05 32 33.1	+1.8
IKOO				*e*		05 33 24.8	
	comp=Z,2μm,0.2s						
KHGB	**Koh Gabri**	**3.11**	**288**	*e*Pn	Pn	05 32 34.2	+1.9
KHGB				*e*		05 33 30.2	
	comp=Z,2μm,0.9s						
IDAH	**Dahanechah**	**3.25**	**359**	*e*Pn	Pn	05 32 35.6	+1.4
ITEG	**Tejag**	**3.55**	**344**	*e*Pn	Pn	05 32 39.7	+1.4
GENO	**Geno**	**3.89**	**239**	*e*Pn	Pn	05 32 45.1	+2.2
GENO				*e*		05 33 02.1	
	comp=Z,814nm,0.6s						
CHBR	**Chabahar**	**3.90**	**172**	*e*Pn	Pn	05 32 45.7	+2.8
AFRZ	**Afriz**	**4.01**	**349**	*e*Pn	Pn	05 32 45.9	+1.4
JASK	**Jask - Hormozg**	**4.03**	**207**	*e*Pn	Pn	05 32 45.7	+1.0
SHRT	**Shahrakht**	**4.17**	**4**	*e*Pn	Pn	05 32 48.2	+1.5
IBAF	**Bafgh**	**4.30**	**300**	*e*Pn	Pn	05 32 50.0	+1.5
TPRV	**Parvadeh(Tabas**	**4.49**	**323**	*e*Pn	Pn	05 32 52.9	+1.8
TKDS	**Koohdasht(Taba**	**4.76**	**331**	*e*Pn	Pn	05 32 56.9	+2.0
TABS	**Tabas**	**4.79**	**331**	*e*Pn	Pn	05 32 57.2	+1.9
TNSJ	**Nastanj**	**5.28**	**329**	*e*Pn	Pn	05 33 03.8	+1.8
YZKH	**Yazd**	**5.41**	**304**	*e*Pn	Pn	05 33 06.2	+2.4
SBZV	**Sabzevar**	**7.16**	**345**	*e*Pn	Pn	05 33 30.0	+2.1
SHRO	**Shahrood**	**7.28**	**334**	*e*Pn	Pn	05 33 31.0	+1.6

*IDC **11** 05:37:26.1±0.7, 17°.56S×178°.46W, h528km±7km, mb3.9/24, mbtmp4.8/27, Error ellipse: s-maj=10.9km s-min=9.0km az=153.0*
*NOU **11** 05:37:26.3, 17°.50S×178°.32W, h531km, mb5.0/73, Fiji Islands Region*
*NEIC **11** 05:37:26.3±2.2, 17°.5S±0°.1×178°.4W±0°.1, h526km±6km, mb4.7/69, Error ellipse: s-maj=16.5km s-min=14.4km az=148.0*

ISC 11 05:37:27.3±0.3, 17°.60S±0°.06×178°.42W±0°.05, h547km, n259, σ1°.28/275, mb4.7/70, 2C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.28**	**5**	P	**P**	**05 38 42.1**	**-1.9**
MSVF	**Nonsavu**	**3.37**	**267**	P	**P**	**05 38 42.5**	**-2.1**
	347nm,0.9s,baz=128,slow=6.9,SNR=83						
MSVF				S	**S**	**05 39 46.1**	**-1.4**
	55nm,1.1s,baz=75,slow=23,SNR=7.4						
MSVF	**Nonsavu**	**3.37**	**267**	P	**P**	**05 38 43.7**	**-0.9**
MSVF	**Nonsavu**	**3.37**	**267**	P	**P**	**05 38 44.5**	**-0.1**
AFI	**Afiamalu**	**7.37**	**61**	P	**P**	**05 39 14.3**	**-4.6**
	374nm,0.7s,baz=268,slow=11,SNR=24						
AFI				S	S	05 40 39.0	-11
	71nm,0.8s,baz=199,slow=21,SNR=1.2						
AFI	**Afiamalu**	**7.37**	**61**	P	**P**	**05 39 14.9**	**-4.0**
NIUE	**Niue**	**8.19**	**102**	P	**P**	**05 39 25.4**	**-1.4**
	baz=8.2,SNR=11						
NIUE				S	**S**	**05 41 02.0**	**-3.0**
	baz=8.2						
NIUE	**Niue**	**

CTAO	Charters Tower	33.49 260	P	P	05 43 21.4	-0.6
CTAO			IAmb	IAmb	05 43 22.4	
comp=Z,38nm,0.8s						
CTAO	Charters Tower	33.49 260	P	P	05 43 21.9	0.0
CNB	Canberra Magne	33.61 232	P	P	05 43 23.5	+0.7
baz=34,SNR=16						
CNB	Canberra Magne	33.61 232	P	P	05 43 23.5	+0.7
CAN	Canberra	33.89 232	P	P	05 43 25.6	+0.5
CAN			IAmb	IAmb	05 43 26.5	
comp=Z,26nm,0.9s						
CAN	Canberra	33.89 232	P	P	05 43 25.8	+0.7
PMG	Port Moresby	34.40 279	P	P	05 43 29.8	+0.3
comp=Z,73nm,0.8s,baz=81,slow=5.9,SNR=16						
comp=Z,73nm,0.8s						
PMG	Port Moresby	34.40 279	P	P	05 43 30.3	+0.7
PMG	Port Moresby	34.40 279	P	P	05 43 29.5	-0.1
comp=Z,115nm,0.9s						
PMG	Port Moresby	34.40 279	P	P	05 43 30.9	+1.3
CMSA	Cobar Meteorol	35.30 240	P	P	05 43 36.8	0.0
baz=35,SNR=47						
CMSA	Cobar Meteorol	35.30 240	P	P	05 43 37.1	+0.3
comp=Z,90nm,0.8s						
MTSU	Mount Surprise	35.44 263	P	P	05 43 37.5	-0.7
baz=35,SNR=22						
MTSU	Mount Surprise	35.44 263	P	P	05 43 37.8	-0.4
QLP	Quilpie	35.64 249	P	P	05 43 39.6	-0.1
baz=36,SNR=14						
QLP	Quilpie	35.64 249	P	P	05 43 39.8	+0.1
MANU	Manus Island	36.98 291	P	P	05 43 52.1	+1.1
COEN	Coen	37.10 270	P	P	05 43 52.5	+0.7
baz=37,SNR=16						
COEN	Coen	37.10 270	P	P	05 43 52.6	+0.7
COEN			IAmb	IAmb	05 43 53.2	
comp=Z,38nm,0.7s						
COEN	Coen	37.10 270	P	P	05 43 52.5	+0.7
TOO	Toolangi	37.36 230	P	P	05 43 54.3	+0.6
baz=37,SNR=21						
TOO	Toolangi	37.36 230	P	P	05 43 55.1	+1.3
TOO	Toolangi	37.36 230	P	P	05 43 54.9	+1.1
BRAT	Ballarat	38.51 231	P	P	05 44 04.8	+1.8
STKA	Stephens Creek	38.77 241	P	P	05 44 05.5	+0.2
comp=Z,37nm,0.7s,baz=85,slow=9.5,SNR=48						
STKA			PcP	PcP	05 46 03.1	+0.3
comp=Z,6.7nm,0.9s,baz=107,slow=6.9,SNR=3.1						
comp=Z,37nm,0.7s						
STKA	Stephens Creek	38.77 241	P	P	05 44 06.0	+0.6
baz=39,SNR=32						
STKA	Stephens Creek	38.77 241	IAmb	IAmb	05 44 07.0	
comp=Z,15nm,1.0s						
STKA	Stephens Creek	38.77 241	P	P	05 44 06.3	+1.0
INKA	Innaminka	38.86 247	P	P	05 44 07.1	+1.1
QIS	Mount Isa	39.71 259	P	P	05 44 12.2	-0.8
baz=40,SNR=5.3						
QIS	Mount Isa	39.71 259	P	P	05 44 13.0	0.0
ARPS	Mount Arapiles	39.83 233	P	P	05 44 14.4	+0.6
baz=40,SNR=5.6						
ARPS	Mount Arapiles	39.83 233	P	P	05 44 14.3	+0.6
HTT	Hallett	41.30 239	P	P	05 44 26.2	+0.7
baz=41,SNR=29						
HTT	Hallett	41.30 239	P	P	05 44 26.4	+0.8
LCRK	Leigh Creek	41.39 244	P	P	05 44 26.8	+0.6
WHYH	Whyalla	42.33 240	P	P	05 44 34.7	+1.1
GENI	Genyem	43.28 285	P	P	05 44 43.3	+2.0
comp=Z,231nm,0.9s						
OOD	Oodnadatta	43.33 248	P	P	05 44 42.4	+0.9
BBOO	Buckleboo	43.55 241	P	P	05 44 43.2	+0.1
baz=44,SNR=52						
BBOO	Buckleboo	43.55 241	P	P	05 44 43.3	+0.1
BBOO	Buckleboo	43.55 241	P	P	05 44 43.7	+0.5
WR0	Warramunga Arr	44.49 259	IAmb	IAmb	05 44 53.1	
comp=Z,33nm,1.2s						
WB0	Warramunga Arr	44.65 259	P	P	05 44 51.2	-0.7
WB0			IAmb	IAmb	05 44 51.9	
comp=Z,54nm,1.1s						
WC3	Warramunga Arr	44.65 259	P	P	05 44 50.7	-1.2
baz=45						
WB2	Warramunga Arr	44.67 259	IAmb	IAmb	05 44 52.2	
comp=Z,34nm,0.8s						
WRAB	Tennant Creek	44.67 259	P	P	05 44 51.5	-0.5
WRAB			IAmb	IAmb	05 44 52.1	
comp=Z,27nm,0.8s						
WRAB	Tennant Creek	44.67 259	P	P	05 44 51.4	-0.6
WRA	Warramunga Arr	44.68 259	P	P	05 44 51.0	-1.1
comp=Z,19nm,0.8s,baz=96,slow=7.0,SNR=227						
WRA			PcP	PcP	05 46 23.3	+0.4
comp=Z,7.4nm,0.9s,baz=89,slow=3.7,SNR=8.4						
WRA			ScP	ScP	05 49 25.4	+2.1
comp=Z,3.0nm,0.9s,baz=86,slow=4.4,SNR=6.0						
WRA			S	S	05 50 46.3	-3.0
comp=Z,0.4nm,0.8s,baz=96,slow=12,SNR=1.6						
comp=Z,19nm,0.8s						
WRA	Warramunga Arr	44.68 259	P	P	05 44 50.0	-2.2
AS31	Alice Springs	44.87 254	P	P	05 44 53.5	0.0
ASAR	Alice Springs	44.87 254	P	P	05 44 53.1	-0.4
comp=Z,206nm,0.7s,baz=86,slow=8.4,SNR=1096						
ASAR			PcP	PcP	05 46 24.0	+0.5
comp=Z,12nm,0.8s,baz=99,slow=3.9,SNR=10						
ASAR			ScP	ScP	05 49 25.8	+1.8
comp=Z,1.8nm,0.8s,baz=92,slow=4.3,SNR=4.5						
ASAR			S	S	05 50 49.5	-2.3
comp=Z,1.9nm,1.0s,baz=95,slow=14,SNR=6.3						
MULG	Mulgathing	44.94 245	P	P	05 44 54.2	+0.3
KDU	Kakadu	47.56 269	P	P	05 45 13.4	-0.5
baz=48,SNR=55						
KDU	Kakadu	47.56 269	P	P	05 45 14.1	+0.2
GUMO	Guam	47.68 308	P	P	05 45 14.5	-0.3
comp=Z,35nm,0.3s,baz=183,slow=19,SNR=2.4						
comp=Z,35nm,0.3s						
MTN	Manton Dam	48.80 268	P	P	05 45 22.8	-0.4
baz=49,SNR=15						
MTN	Manton Dam	48.80 268	P	P	05 45 23.0	-0.2
MTN	Manton Dam	48.80 268	P	P	05 45 23.1	-0.2
WRKA	Warakurna	49.94 252	P	P	05 45 31.4	-0.1
baz=50,SNR=170						
WRKA	Warakurna	49.94 252	P	P	05 45 31.8	+0.3
FORT	Forrest	50.13 244	P	P	05 45 32.4	-0.4
baz=50,SNR=55						
FORT	Forrest	50.13 244	P	P	05 45 31.5	-1.3
FORT	Forrest	50.13 244	P	P	05 45 32.7	-0.1
FAKI	Fak Fak	50.51 281	P	P	05 45 34.9	-0.9
FAKI			IAmb	IAmb	05 45 36.9	
comp=Z,66nm,1.4s						
FAKI	Fak Fak	50.51 281	P	P	05 45 36.3	+0.5
KNRA	Kununurra	50.52 264	P	P	05 45 35.7	-0.1
baz=50,SNR=22						
KNRA	Kununurra	50.52 264	P	P	05 45 35.0	-0.8
KNRA	Kununurra	50.52 264	P	P	05 45 36.0	+0.2
BNDI	Bandanaira	52.19 278	P	P	05 45 49.9	+2.0
comp=Z,102nm,0.7s						
SOEI	Soe	56.06 270	P	P	05 46 16.7	+1.3
SOEI	Soe	56.06 270	P	P	05 46 17.4	+2.0
TNTI	Ternate	56.38 283	P	P	05 46 19.0	+1.6
comp=Z,77nm,0.9s						
SANI	Sanana	56.69 279	P	P	05 46 19.5	0.0
comp=Z,92nm,1.0s						
PSA00	Pilbara Seismi	57.98 255	P	P	05 46 28.5	+0.2
PSA00	Pilbara Seismi	57.98 255	IAmb	IAmb	05 46 29.0	
comp=Z,39nm,0.9s						
PSA00	Pilbara Seismi	57.98 255	P	P	05 46 28.4	+0.2
MBWA	Marble Bar	58.14 256	P	P	05 46 29.5	+0.1
MBWA			IAmb	IAmb	05 46 30.1	
comp=Z,61nm,1.0s						
MBWA	Marble Bar	58.14 256	P	P	05 46 29.5	+0.1
MEEK	Meekatharra	58.54 249	P	P	05 46 31.6	-0.4
baz=58,SNR=14						
MEEK	Meekatharra	58.54 249	P	P	05 46 31.9	-0.1
KLBR	Kellerberrin	58.96 243	P	P	05 46 34.4	-0.3
baz=59,SNR=13						
KLBR	Kellerberrin	58.96 243	P	P	05 46 34.6	-0.1
NWAO	Narrogin (SRO)	59.35 242	P	P	05 46 37.4	+0.2
NWAO			IAmb	IAmb	05 46 38.2	
comp=Z,37nm,1.2s						
BLDU	Ballidu	59.91 244	P	P	05 46 40.7	-0.4
baz=60,SNR=11						
BLDU	Ballidu	59.91 244	P	P	05 46 41.1	+0.1
MORW	Morawa	60.60 246	P	P	05 46 45.6	0.0
baz=61,SNR=7.4						
MORW	Morawa	60.60 246	P	P	05 46 45.6	0.0
MORW			IAmb	IAmb	05 46 46.2	
comp=Z,18nm,0.7s						
MORW	Morawa	60.60 246	P	P	05 46 45.8	+0.2
SBA	Scott Base	60.73 184	P	P	05 46 48.1	+2.5
VNDA	Vanda	60.75 185	P	P	05 46 46.8	+1.1
comp=Z,0.9nm,0.6s,baz=342,slow=5.4,SNR=8.8						
comp=Z,0.9nm,0.6s						
VNDA	Vanda	60.75 185	P	P	05 46 47.6	+1.8

KAPI	Kappang	61.67 274	P	P	05 46 53.2	+0.4
KAPI			IAmb	IAmb	05 46 54.0	
comp=Z,20nm,0.7s						
KAPI	Kappang	61.67 274	P	P	05 46 53.8	+1.0
PLAI	Plampang	62.49 269	P	P	05 46 58.6	+0.4
TOLI2	Tolitoli	62.65 281	IAmb	IAmb	05 47 03.4	
comp=Z,18nm,0.8s						
GIRL	Giralia	62.98 253	P	P	05 47 01.3	+0.1
baz=63,SNR=12						
GIRL	Giralia	62.98 253	P	P	05 47 02.5	+1.3
JAGI	Jajag, Banyuwa	66.04 268	P	P	05 47 20.2	-0.5
CASY	Casey	66.42 205	P	P	05 47 23.2	+1.1
CASY			IAmb	IAmb	05 47 23.9	
comp=Z,17nm,1.0s						
MJAR	Matsushiro Arr	67.66 323	P	P	05 47 29.7	-0.5
comp=Z,4.5nm,0.7s,baz=144,slow=6.2,SNR=9.4						
comp=Z,4.5nm,0.7s						
KKM	Kota Kinabalu	68.66 284	P	P	05 47 36.7	-0.1
KKM			IAmb	IAmb	05 47 38.3	
comp=Z,20nm,0.7s						
KKM	Kota Kinabalu	68.66 284	P	P	05 47 37.8	+0.9
comp=Z,40nm,0.8s						
UGM	Wanagama	69.65 268	P	P	05 47 43.0	+0.3
JHS	Saijyo	69.66 319	P	P	05 47 42.8	+0.5
JHS			IAmb	IAmb	05 47 44.5	
comp=Z,27nm,1.2s						
SBUM	Sibu	71.15 279	P	P	05 47 51.6	+0.1
QSPA	South Pole Qui	72.45 180	P	P	05 47 59.3	+0.9
comp=Z,17nm,1.0s,baz=36,slow=1.8,SNR=38						
comp=Z,17nm,1.0s						
QSPA	South Pole Qui	72.45 180	P	P	05 47 57.5	-0.9
QSPA			IAmb	IAmb	05 48 00.8	
comp=Z,18nm,0.9s						
KSM	Kuching	72.64 277	P	P	05 48 01.3	+1.1
comp=Z,82nm,1.1s						
KSRS	Korea Array	74.47 318	P	P	05 48 10.8	+0.8
comp=Z,2.1nm,0.7s,baz=130,slow=5.7,SNR=8.6						
comp=Z,2.1nm,0.7s						
NJ2	Nanjing	77.74 309	*e*P	P	05 48 28.3	+0.1
KDAK	Kodiak Island	78.10 14	P	P	05 48 29.1	-0.4
comp=Z,18nm,1.0s,baz=131,slow=20,SNR=1.9						
comp=Z,18nm,1.0s						
NVAR	Mina Array Bea	79.20 44	P	P	05 48 37.2	+1.0
comp=Z,1.0nm,0.8s,baz=224,slow=8.4,SNR=10						
NVAR			pP	pP	05 50 30.2	-1.7
comp=Z,2.6nm,1.0s,baz=225,slow=7.3,SNR=5.2						
comp=Z,1.0nm,0.8s						
CN2	Changchun	79.77 322	*e*P	P	05 48 36.1	-2.7
CN2			*e*PP	PP	05 51 48.5	-1.8
CN2			SKS	S	05 57 57.9	+1.0
GLI	Glacier Island	82.16 15	IAmb	IAmb	05 48 50.8	
comp=Z,9.5nm,0.8s						
IPM	Ipoh	82.38 277	IAmb	IAmb	05 48 54.9	
comp=Z,34nm,0.8s						
IPM	Ipoh	82.38 277	P	P	05 48 54.0	+1.1
BELA	Belgrano 2	82.47 173	P	P	05 48 52.8	+0.6
BELA			IAmb	IAmb	05 48 53.9	
comp=Z,21nm,0.7s						
SCM	Sheep Creek Mo	82.93 14	IAmb	IAmb	05 48 55.4	
comp=Z,23nm,1.0s						
CAST	Castle Rocks	83.33 12	P	P	05 48 55.1	-1.4
CAST			IAmb	IAmb	05 48 56.2	
comp=Z,11nm,0.9s						
N25K	Chitina, Valde	83.41 16	P	P	05 48 56.3	-0.8
N25K			IAmb	IAmb	05 48 58.0	
comp=Z,9.0nm,0.8s						
SEY	Seymchan	83.47 347	P	P	05 48 56.9	-0.4
comp=Z,7.9nm,0.6s,baz=148,slow=6.6,SNR=13						
comp=Z,7.9nm,0.6s						
LYN	LuoYang	83.63 309	⇑P	P	05 48 59.2	+0.5
TRF	Thorofare Moun	83.71 12	IAmb	IAmb	05 48 59.2	
comp=Z,14nm,0.8s						
RPSI	Rantau Prapat	83.82 275	IAmb	IAmb	05 49 01.3	
comp=Z,28nm,0.9s						
PSI	Prapat	83.85 275	P	P	05 49 00.5	+0.1
RND	Reindeer	83.97 13	IAmb	IAmb	05 49 00.5	
comp=Z,12nm,0.7s						
MAW	Mawson	84.15 200	P	P	05 49 01.7	+1.1
comp=Z,10nm,0.8s,baz=125,slow=5.6,SNR=19						
comp=Z,10nm,0.8s						
MAW	Mawson	84.15 200	P	P	05 49 02.4	+1.8
baz=84,SNR=4.2						
MAW	Mawson	84.15 200	P	P	05 49 00.7	0.0
M26K	Nabesna, AK	84.49 16	IAmb	IAmb	05 49 04.0	
comp=Z,7.7nm,1.0s						
GSI	Gunungsitoli	84.68 273	P	P	05 49 06.1	+1.7
HDA	Harding Lake	85.26 13	P	P	05 49 05.7	-0.2
HDA			IAmb	IAmb	05 49 06.5	
comp=Z,7.1nm,0.8s						
XLT	XiLinHaoTe	85.51 319	*e*P	P	05 49 09.0	+1.2
XLT			pP	pP	05 51 01.5	-4.8
XLT			sP	sP	05 51 50.1	-11
ILAR	Eielson Array	85.59 13	P	P	05 49 06.8	-0.7
comp=Z,2.4nm,0.8s,baz=223,slow=5.0,SNR=13						
comp=Z,2.4nm,0.8s						
TX31	Lajitas Ar. Si	85.83 58	P	P	05 49 11.9	+2.2
TX32	Lajitas Array	85.83 58	P	P	05 49 11.1	+1.4
TXAR	Lajitas Array	85.83 58	P	P	05 49 11.2	+1.5
comp=Z,1.0nm,0.7s,baz=216,slow=5.8,SNR=16						
TXAR			pP	pP	05 51 06.3	-1.3
comp=Z,0.6nm,1.0s,baz=241,slow=3.7,SNR=3.3						
comp=Z,1.0nm,0.7s						
XAN	Xi'an	86.07 307	⇑P	P	05 49 11.7	+1.1
HHC	Hu-ho-hao-te	87.05 314	*e*P	P	05 49 17.6	+2.4
COLD	Coldfoot	87.11 11	IAmb	IAmb	05 49 50.5	
comp=Z,11nm,1.4s						
PDAR	Pinedale Array	87.13 43	P	P	05 49 15.5	-0.2
comp=Z,0.3nm,0.5s,baz=222,slow=2.0,SNR=5.1						
PDAR			pP	pP	05 51 12.7	-1.7
comp=Z,0.9nm,0.9s,baz=209,slow=2.7,SNR=4.7						
comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	88.78 290	P	P	05 49 24.2	+0.6
comp=Z,3.6nm,0.8s,baz=108,slow=2.7,SNR=22						
comp=Z,3.6nm,0.8s						
CHTO	Chiang Mai	88.89 290	P	P	05 49 23.6	-0.6
PZH	PanZhiHua	89.01 298	P	P	05 49 26.8	+2.1
TROLL	Troll, Antarti	90.62 180	P	P	05 49 32.2	+0.9
TROLL			S	S	05 59 39.3	-1.0
SNAA	Sanae	90.91 179	P	P	05 49 33.1	+0.6
SNAA			S	S	05 59 38.4	-4.4
SNAA	Sanae	90.91 179	P	P	05 49 31.9	-0.6
SNAA			IAmb	IAmb	05 49 33.9	
comp=Z,6.1nm,0.7s						
VNA3	Neumayer Olymp	91.05 176	P	P	05 49 33.8	+0.7
VNA3			S	S	05 59 43.7	-0.2
VNA2	Neumayer--Watz	91.49 177	P	P	05 49 36.1	+0.9
baz=184,slow=3.9						
VNA2			S	S	05 59 45.9	-1.9
INK	Inuvik	91.59 15	P	P	05 49 34.6	-0.8
comp=Z,3.0nm,0.8s,baz=250,slow=3.7,SNR=4.7						
comp=Z,3.0nm,0.8s						
VNA1	Neumayer--Stat	91.72 177	P	P	05 49 37.2	+1.1
VNA1			S	S	05 59 51.6	+1.9
SONM	Songino Array	93.31 319	P	P	05 49 43.8	-0.2
comp=Z,0.9nm,0.7s,baz=128,slow=4.0,SNR=4.3						
comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	94.05 25	P	P	05 49 46.9	0.0
comp=Z,1.4nm,0.8s,baz=233,slow=5.0,SNR=4.2						
comp=Z,1.4nm,0.8s						
GTA	Gaotai	94.83 310	*e*P	P	05 49 55.4	+4.2
ARCES	ARCESS Array B	126.01 350	PKP	PKPdf	05 55 26.2	-0.6
comp=Z,2.4nm,0.7s,baz=327,slow=2.0,SNR=4.6						
FINES	FINESS Array B	132.89 344	SKPbc	SKPab	05 58 19.6	+0.5
comp=Z,1.4nm,0.6s,baz=76,slow=5.9,SNR=6.5						
MNK	Minsk	137.97 337	*i* PKP	PKPdf	05 55 49.8	+0.1
MNK			*i* PKP	PKPdf	05 55 49.8	+0.1
comp=E,2.0nm,0.8s						
MNK			*i* PKP	PKPdf	05 55 49.8	+0.1
comp=N,44nm,0.9s						
MNK			*i* PKP	PKPdf	05 55 49.8	+0.1
comp=Z,11nm,0.9s,baz=220						
MNK			*i* pPKP	pPKPdf	05 57 56.4	-1.4
MNK			*i* PP	PP	05 58 44.4	-0.5
MNK			*i* PPP	PPP	06 01 51.5	
MNK			*i* SKS	SKSdf	06 02 08.1	-0.3
MNK			*i* SKKS	SKKSdf	06 11 42.7	-2.3
MNK			*i* SS	SS	06 16 15.4	+3.4
MNK			*i* SSS	SSS	06 21 30.9	
AKASG	Malin Array Be	140.28 333	PKP	PKPdf	05 55 55.0	+1.0
comp=Z,0.9nm,0.5s,baz=43,slow=2.9,SNR=4.9						
LODK	Lodwar	144.02 251	PKPdf	PKPbc	05 56 01.2	-0.1
BURAR	Bucovina Array	144.34 332		PKPab	05 56 02.1	+0.4
BR131	Keskin Array S	144.56 315		PKPbc	05 56 02.6	+0.3
BRTR	Keskin Array B	144.56 315	PKP	PKPab	05 56 02.8	-0.1
comp=Z,7.1nm,0.8s,baz=128,slow=3.4,SNR=21						
BRTR	Keskin Array B	144.56 315	PKPdf	PKPdf	05 56 01.6	-0.5
KSP	Ksiaz	144.81 344	*e*PKP	PKPab	05 56 03.5	+0.2

NIE	Niedzica	144.84 339	*e*PKP	PKPab	05 56 03.9	+0.4
OSTC	Ostas	145.09 344	*e*PKP	PKPab	05 56 04.1	-0.3
CHVC	Chvalec	145.11 344	*e*PKP	PKPab	05 56 04.2	-0.3
CLL	Collm	145.16 347	⇓*i*PKPbc	PKPbc	05 56 04.0	+0.5
comp=Z,46nm,1.4s						
UPC	Upice	145.19 344	*e*PKP	PKPbc	05 56 04.2	+0.5
DPC	Dobruska-Polom	145.25 343	*e*PKP	PKPab	05 56 04.5	-0.5
BRG	Berggiesshubel	145.36 346	*i* PKP	PKPab	05 56 04.8	-0.6
KRLC	Kraliky	145.37 343	*e*PKP	PKPbc	05 56 04.4	+0.1
MORC	Moravsky Berou	145.42 342	*e*PKP	PKPbc	05 56 05.0	+0.6
MLR	Muntele Rosu	145.56 329		PKPbc	05 56 05.5	+0.4
MAUC	Maruska	145.69 341	*e*PKP	PKPbc	05 56 05.7	+0.5
PRU	Pruhonice	146.04 345	*e*PKP	PKPbc	05 56 06.9	+0.8
MBAR	Mbarara	146.08 241		PKPab	05 56 08.8	-0.8
VRAC	Vranov	146.11 342	*e*PKP	PKPbc	05 56 07.3	+0.9
JAVC	Velka Javorina	146.19 341	*e*PKP	PKPab	05 56 08.2	-0.6
KRUC	Moravsky	146.39 342	*e*PKP	PKPbc	05 56 07.9	+0.8
BORA	Eskisehir	146.58 318		PKPbc	05 56 07.5	-0.5
MEM	Membach	146.88 355	*d*PKP	PKPbc	05 56 07.4	-0.9
BTNL	Ternell	146.89 355	*d*PKP	PKPbc	05 56 08.8	+0.3
BSTI	Sart Tilman	146.94 355	*d*PKP	PKPbc	05 56 09.4	+0.9
KHC	Kasperske Hory	147.07 345	*e*PKP	PKPbc	05 56 09.5	+0.5
KHC	Kasperske Hory	147.07 345	*ex*	x	05 56 09.5	
CKRC	Cesky Krumlov	147.18 344	*e*PKP	PKPbc	05 56 08.4	-0.9
GERES	GERESS Array B	147.31 345	PKPbc	PKPbc	05 56 10.3	+0.6
comp=Z,4.5nm,0.7s,baz=38,slow=2.4,SNR=23						
CONA	Conrad Observa	147.57 342	*i* P	PKPbc	05 56 10.8	+0.4
comp=Z,9.9nm,0.7s						
RONA	Rosalia, Austr	147.64 341	*i* P	PKiKP	05 56 11.8	-0.2
comp=Z,11nm,0.8s						
WLF	Walferdange	147.80 354	*d*PKP	PKPbc	05 56 11.4	+0.6
MOA	Molln	148.09 344	*i* P	PKiKP	05 56 12.5	-0.4
comp=Z,7.2nm,1.2s						
BIOA	Bad Ischl, Aus	148.40 344	*i* P	PKPbc	05 56 12.9	+0.5
comp=Z,2.3nm,0.4s						
BFO	Black Forest	148.86 351		PKPbc	05 56 13.4	-0.1
SOKA	Soboth	148.94 342	*i* P	PKPbc	05 56 14.2	+0.3
comp=Z,8.5nm,1.1s						
WATA	Walderalm	149.22 347	*i* P	PKiKP	05 56 15.2	-0.2
comp=Z,5.1nm,0.5s						
OBKA	Obir	149.23 342	*i* P	PKPbc	05 56 14.6	0.0
comp=Z,7.1nm,1.0s						
WTTA	Wattenberg	149.28 347	*i* P	PKiKP	05 56 15.6	0.0
comp=Z,12nm,0.5s						
MOTA	Moosalm	149.32 347	*i* P	PKiKP	05 56 15.4	-0.3
comp=Z,16nm,1.1s						
MYKA	Terra Mystica	149.38 344	*i* P	PKPbc	05 56 14.9	0.0
comp=Z,7.0nm,0.6s						
SQTA	Sankt Quirin	149.41 347	*i* P	PKiKP	05 56 15.8	0.0
comp=Z,11nm,0.7s						
ABTA	Abfaltersbach	149.56 345	*e*P	PKPbc	05 56 15.6	+0.2
comp=Z,11nm,0.6s						
FETA	Feichten	149.70 348	*e*P	PKiKP	05 56 16.6	+0.1
comp=Z,11nm,1.0s						
CRNS	Crni Vrh	149.71 342	*i* PKPbc	PKPbc	05 56 15.7	0.0
BOJS	Bojanci	149.93 341	*i* PKPbc	PKiKP	05 56 16.9	+0.1
STAL	STALIGIAL	149.96 344		PKPbc	05 56 14.4	-1.9
TORD	Torodi Ar. Bea	175.57 181	PKP	PKPdf	05 56 34.9	-0.7
comp=Z,1.1nm,0.8s,baz=130,slow=2.3,SNR=5.7						
TORD			PKPab	PKPab	05 58 16.7	-0.1
comp=Z,1.0nm,0.6s,baz=199,slow=3.9,SNR=5.8						

SKHL ***11*** *05:44:06.1±0.3,46°.80N×152°.60E,h134km±8km,mb5.2/5, msh5.2/3,msha5.9/3*

MOS ***11*** *05:44:06.3±1.1,47°.07N×152°.28E,h137km,mb4.3/12, Error ellipse: s-maj=8.3km s-min=6.1km az=88.1*

NEIC ***11*** *05:44:07.9±1.6,47°.2N±0°.2×152°.1E±0°.2,h130km±11km, mb4.7/22,Error ellipse: s-maj=27.6km s-min=5.7km az=148.0*

IDC ***11*** *05:44:08.4±2.5,47°.20N×152°.12E,h136km±21km, mb3.8/23,mbtmp4.2/29,MS3.2/3,Error ellipse: s-maj=14.8km s-min=11.5km az=143.0*

NIED ***11*** *05:44:10.6,46°.18N×152°.31E,h141km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.36; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.18; $M_{r\theta}$-4.61; $M_{\theta\phi}$-0.60; $M_{\phi r}$-1.34; Fault plane solution: $M_0$4.96000×10^{15} NP1: ϕ_s14.00000°,δ11.00000°,λ33.00000°. NP2:ϕ_s251.00000°, δ84.00000°,λ99.00000°.*

JMA ***11*** *05:44:10.6±0.7,46°.N±4°.×15°.2E±°,h141km,MV4.1/15, KURILE ISLANDS REGION*

ISC 11 05:44:08.7±0.5,47°.02N±0°.05×152°.19E±0°.06,h150km, n213,σ2^{S}01/231,mb4.4/53,29C-11D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.49	241	*e*PN	Pn	05 45 01.9	-0.3
KUR				*e*S	Sn	05 45 43.8	0.0
KUR				pmax	pmax		
comp=Z,129nm,0.6s							
KUR				smax	smax		
comp=E,471nm,0.5s							
KUR				smax	smax		
comp=N,163nm,0.4s							
KUR	Kuril'sk	3.49	241	*e*P	Pn	05 45 01.8	-0.4
KUR				AMB	AMB	05 45 03.0	
comp=N,120nm,0.4s							
KUR				*e*S	Sn	05 45 43.8	0.0
KUR				A	A	05 45 46.8	
comp=N,310nm,0.5s							
KUR				A	A	05 45 46.8	
comp=N,620nm,0.5s							
SKR	Severo-Kuril's	4.50	34	*e*PN	Pn	05 45 12.6	-2.7
SKR				*e*S	Sn	05

comp=Z,10nm,0.8s,baz=197,slow=11,SNR=16
PETK LR LR 05 47 59.5
comp=Z,245nm,21.5s,baz=88,slow=33
JOB Onbets 7.21 238 *e*P **Pn 05 45 49.7 -1.7**
JOB *e*S **Sn 05 47 06.9 -5.1**
JKK2 Kamakawa 2 7.34 248 *e*P **Pn 05 45 53.9 +0.7**
TYV Tymovskoe 7.36 305 *e*PN **Pn 05 45 54.9 +1.5**
TYV *e*S **Sn 05 47 16.7 +1.1**
TYV pmax pmax
comp=Z,400nm,3.3s
TYV pmax pmax
comp=Z,21nm,0.7s
TYV smax smax
comp=N,10.0nm,0.6s
TYV smax smax
comp=E,15nm,0.6s
TYV smax smax
comp=E,300nm,3.7s
TYV Tymovskoe 7.36 305 *e*P **Pn 05 45 54.9 +1.5**
TYV AMB AMB 05 45 55.5
comp=E,400nm,3.0s
TYV AMB AMB 05 45 56.6
comp=E,20nm,0.7s
TYV *e*S **Sn 05 47 16.7 +1.1**
TYV A A 05 47 17.3
comp=E,10.0nm,0.6s
TYV A A 05 47 17.3
comp=E,20nm,0.6s
TYV A A 05 47 19.9
comp=E,200nm,4.0s
TYV A A 05 47 19.9
comp=E,300nm,4.0s
JCH Churui 7.66 238 *e*P **Pn 05 45 55.2 -2.3**
JCH *e*S **Sn 05 47 15.5 -7.3**
JAB Ashibetsu 7.86 247 *e*P **Pn 05 46 00.9 +0.9**
JRBN Rebuntou 7.88 262 *e*P **Pn 05 46 02.7 +2.4**
ERM Erimo 8.16 235 **Pn 05 46 03.0 -1.1**
ERM Erimo 8.16 235 *d i*PN **Pn 05 46 02.3 -1.8**
JNBK Urakawa-nobuka 8.22 238 *e*P **Pn 05 46 01.6 -3.3**
JNBK *e*S Sn 05 47 26.8 -10
JANG Nango 10.18 233 *e*S Sn 05 48 10.9 -13
MA2 Magadan 12.61 357 P **Pn 05 46 59.5 -3.1**
comp=E,5.6nm,0.7s,baz=200,slow=16,SNR=1.7
MA2 Magadan 12.61 357⇓ *e*PN **Pn 05 47 00.5 -2.1**
MA2 pmax pmax
comp=Z,28nm,2.5s
JSD Sado 13.62 234 Pn **Pn 05 47 16.2 +0.6**
KLR Kul'dur 13.83 287 P **P 05 47 19.2 -2.5**
comp=Z,5.6nm,0.5s,baz=78,slow=9.4,SNR=24
KLR Kul'dur 13.83 287⇓ *e*P **P 05 47 20.1 -1.5**
KLR pmax pmax
comp=Z,14nm,1.2s
KLR Kul'dur 13.83 287 *e*P **Pn 05 47 17.8 -0.4**
USRK Ussuriysk Ar. 14.41 266 P **Pn 05 47 25.6 0.0**
comp=Z,6.0nm,0.6s,baz=72,slow=14,SNR=9.0
USRK Ussuriysk Ar. 14.41 266 Pn **Pn 05 47 24.6 -0.9**
MAJO Matsushiro 14.75 230 Pn **Pn 05 47 29.3 -0.6**
MAJO Matsushiro 14.75 230 *c i*P **Pn 05 47 29.3 -0.6**
MAJO pmax pmax
comp=Z,4.0nm,0.8s
JGF Kuroka 15.91 230 **P 05 47 45.5 +0.6**
SEY Seymchan 15.95 0 P **P 05 47 42.9 -2.1**
comp=Z,1.1nm,0.3s,baz=191,slow=12,SNR=4.9
SEY Seymchan 15.95 0 *c e*P **P 05 47 44.0 -1.1**
SEY pmax pmax
comp=Z,14nm,2.5s
SEY Seymchan 15.95 0 *e*P **P 05 47 44.0 -1.1**
ZEA Zeya 17.21 302 *e*P **Pn 05 48 02.7 +2.9**
ZEA Zeya 17.21 302 *e*P **Pn 05 48 01.0 +1.2**
ZEA AMB AMB 05 48 02.8
comp=Z,30nm,0.5s
CN2 Changchun 19.01 270 *e*P **P 05 48 17.6 -1.1**
CN2 Changchun 19.01 270 *e*pP pP 05 48 39.8 -4.0
CN2 Changchun 19.01 270 *e*sP sP 05 48 59.5 -2.7
CN2 Changchun 19.01 270 *e*S **S 05 51 40.9 -5.6**
YAK Yakutsk 19.76 328 P **Pn 05 48 26.1 -3.5**
comp=Z,16nm,0.4s,baz=132,slow=14,SNR=4.3
YAK LR LR 05 56 34.5
comp=Z,25nm,18.6s,baz=106,slow=38
YAK Yakutsk 19.76 328 *e*P **Pn 05 48 26.4 -3.2**
YAK pmax pmax
comp=Z,23nm,0.8s
YAK pmax pmax
comp=N,5.0nm,1.0s
KSRS Korea Array 20.28 251 P Pn 05 48 35.1 -0.9
comp=N,10nm,0.8s,baz=56,slow=11,SNR=38
comp=N,10nm,0.8s
KSAR Wonju Array Be 20.31 251 P **P 05 48 33.2 +0.5**
KSAR Wonju Array Be 20.31 251 P **P 05 48 33.2 +0.5**
BILL Bilibino 22.28 14⇑ *e*P **P 05 48 52.1 -1.1**
BILL *PP **pP 05 49 17.0 -2.5**
BILL pmax pmax
comp=Z,3.0nm,0.9s
NJ2 Nanjing 29.47 252 *e*P **P 05 49 57.2 -1.1**
H11N2 WAKE ISLAND Hy 29.75 151 T T 06 21 43.1
baz=340,slow=76,SNR=320
H11N1 WAKE ISLAND Hy 29.77 151 T T 06 21 52.4
baz=340,slow=76,SNR=239
H11N3 WAKE ISLAND Hy 29.77 151 T T 06 21 43.7
baz=340,slow=76,SNR=208
ULN Ulaanbaatar 30.21 288⇑ *e*P **P 05 50 05.3 +0.4**
ULN pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 30.21 288 *e*P **P 05 50 05.3 +0.4**
SONM Songino Array 30.64 289 P **P 05 50 08.3 -0.4**
comp=Z,1.1nm,0.6s,baz=69,slow=7.1,SNR=4.5
comp=Z,1.1nm,0.6s
H11S1 WAKE ISLAND Hy 30.83 152 T T 06 23 06.3
baz=341,slow=76,SNR=256
H11S3 WAKE ISLAND Hy 30.84 152 T T 06 23 05.0
baz=341,slow=76,SNR=325
H11S2 WAKE ISLAND Hy 30.85 152 T T 06 23 11.0
baz=341,slow=76,SNR=287
LYN LuoYang 32.21 262⇓ *i*P **P 05 50 23.7 +1.3**
IMAR Indian Mountai 33.93 36 P **P 05 50 36.9 -0.1**
XAN Xi'an 34.91 264⇑ P **P 05 50 47.2 +1.4**
ILAR Eielson Array 36.74 39 P **P 05 51 01.9 +0.9**
comp=Z,0.4nm,0.9s,baz=257,slow=8.2,SNR=2.0
comp=Z,0.4nm,0.9s
GTA Gaotai 38.30 278 *e*P **P 05 51 16.3 +1.7**
BCAR Beaver Creek A 39.12 41 P **P 05 51 22.0 +1.0**
INK Inuvik 41.77 32 P **P 05 51 43.6 +1.0**
comp=Z,1.0nm,0.7s,baz=301,slow=5.9,SNR=1.7
comp=Z,1.0nm,0.7s
DGZ Jazzator, Alta 41.92 298⇓ *e*P **P 05 51 45.5 +1.2**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 41.94 305 P **P 05 51 42.7 -1.4**
ZALV Zalesovo Beam 41.94 305 P **P 05 51 43.3 -0.9**
comp=Z,2.7nm,0.6s,baz=58,slow=7.8,SNR=9.1
ZALV PcP **PcP 05 53 36.1 -0.5**
comp=Z,0.5nm,0.3s,baz=29,slow=3.3,SNR=2.1
comp=Z,2.7nm,0.6s
GOMU GeErMu 43.35 277 P **P 05 51 57.7 +1.5**
PZH PanZhiHua 44.42 261 P **P 05 52 03.9 -0.7**
MK31 Makanchi Array 46.25 297 P **P 05 52 18.9 +0.3**
MK31 Makanchi Array 46.25 297 *c i*P **P 05 52 18.6 -0.1**
MK31 *i *PP **pP 05 52 48.8 -2.4**
MKAR Makanchi Array 46.25 297 P **P 05 52 18.5 -0.2**
comp=Z,4.2nm,0.6s,baz=69,slow=7.5,SNR=26
MKAR PcP **PcP 05 53 51.3 -0.3**
comp=Z,0.7nm,0.8s,baz=46,slow=6.2,SNR=2.4
comp=Z,4.2nm,0.6s
MKAR Makanchi Array 46.25 297 P **P 05 52 19.1 +0.4**
MKAR Makanchi Array 46.25 297 P **P 05 52 19.1 +0.4**
MKAR Makanchi Array 46.25 297 *e*P **P 05 52 19.1 +0.4**
KURK Kurchatov 46.69 303 P **P 05 52 21.8 -0.1**
KURK IAmb IAmb 05 52 22.5
comp=Z,8.7nm,0.7s
KURK Kurchatov 46.69 303 *c i*P **P 05 52 21.5 -0.4**
KURK pmax pmax
comp=Z,15nm,1.3s
KURK Kurchatov 46.69 303 *e*P **P 05 52 21.5 -0.4**
KURBB Kurchatov Arra 46.78 303 P **P 05 52 22.2 -0.4**
comp=Z,4.5nm,0.6s,baz=68,slow=8.5,SNR=26
KURBB LR LR 06 14 48.9
comp=Z,47nm,18.1s,baz=202,slow=40
comp=Z,4.5nm,0.6s
EUNU Eureka 48.99 11 P **P 05 52 40.3 +0.9**
EUNU IAmb IAmb 05 52 41.0
comp=Z,13nm,1.2s
LSA Lhasa 49.62 272 P **P 05 52 46.9 +1.6**
LSA Lhasa 49.62 272 P **P 05 52 46.9 +1.6**
LSA pmax pmax
comp=Z,14nm,0.6s

BRVK Borovoye 50.24 309 P **P 05 52 49.0 0.0**
BRVK IAmb IAmb 05 52 50.0
comp=Z,6.3nm,0.9s
BRVK Borovoye 50.24 309 *d e*P **P 05 52 49.2 +0.2**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 50.24 309 *e*P **P 05 52 49.1 0.0**
RES Resolute Bay 50.79 18 P **P 05 52 53.6 +0.8**
comp=Z,1.9nm,0.6s,baz=307,slow=8.8,SNR=4.8
comp=Z,1.9nm,0.6s
CMAR Chiang Mai Arr 51.82 255 P **P 05 53 03.7 +2.4**
comp=Z,1.4nm,0.3s,baz=35,slow=6.9,SNR=5.7
comp=Z,1.4nm,0.3s
BOOM Boomskoye usch 52.33 295 P **P 05 53 06.4 +1.4**
BOOM Boomskoye usch 52.33 295 P **P 05 53 06.4 +1.4**
BOOM pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 53.15 296 P **P 05 53 11.5 +0.5**
AAK IAmb IAmb 05 53 13.3
comp=Z,4.0nm,0.7s
AAK Ala-Archa 53.15 296 *d e*P **P 05 53 12.1 +1.1**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 53.15 296 *e*P **P 05 53 12.1 +1.1**
TAPN Taplejung 53.45 272 *e*P **P 05 53 15.8 +2.2**
comp=Z,21nm,0.7s
JIRN Jiri 54.29 274 *e*P **P 05 53 21.9 +2.2**
comp=Z,58nm,0.8s
GUN Gumba 54.34 274 *e*P **P 05 53 22.2 +2.1**
comp=Z,21nm,0.5s
ARU Arti 54.39 317 *d i*P **P 05 53 19.3 -0.2**
ARU *PP **pP 05 53 52.1 -1.0**
ARU S **S 06 00 47.4 +1.6**
ARU SS **SS 06 04 31.4 +2.0**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 54.39 317 *e*P **P 05 53 19.3 -0.2**
RAMN Ramite 54.47 273 *e*P **P 05 53 22.8 +1.9**
comp=Z,48nm,0.8s
PKI Pulchoki 54.88 274 *e*P **P 05 53 25.8 +1.9**
comp=Z,16nm,0.7s
PKIN Phulchoki 54.89 274 *e*P **P 05 53 25.8 +1.9**
comp=Z,14nm,0.6s
DMN Daman 55.06 274 *e*P **P 05 53 27.5 +2.3**
comp=Z,52nm,0.9s
GKN Gorkha 55.13 275 *e*P **P 05 53 27.7 +2.2**
comp=Z,64nm,0.8s
KK31 Karatay Array 55.31 298 P **P 05 53 26.9 +0.4**
KK31 Karatay Array 55.31 298 P **P 05 53 26.9 +0.4**
KK31 pmax pmax
comp=Z,3.0nm,1.0s
KKAR Karatay Array 55.31 298 P **P 05 53 26.2 -0.3**
KKAR Karatay Array 55.31 298 P **P 05 53 26.2 -0.3**
DANN Dangsing 55.51 276 *e*P **P 05 53 30.9 +2.5**
comp=Z,69nm,0.6s
ARCES ARCESS Array B 57.39 340 P **P 05 53 40.0 -0.7**
comp=Z,2.3nm,0.8s,baz=29,slow=6.9,SNR=9.1
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 57.39 340 P **P 05 53 40.0 -0.7**
ABKAR Akbulak array 57.77 309 P **P 05 53 43.6 0.0**
GAR Garm 57.83 294 P **P 05 53 45.5 +1.1**
GAR IAmb IAmb 05 53 47.0
comp=Z,19nm,1.2s
CHGR Chuyangaron 58.76 295 P **P 05 53 50.9 +0.1**
CHGR Chuyangaron 58.76 295 P **P 05 53 50.9 +0.1**
CHGR pmax pmax
comp=Z,15nm,0.8s
NIL Nilore 59.22 288 P **P 05 53 55.3 +1.3**
NIL Nilore 59.22 288 P **P 05 53 55.3 +1.3**
NIL pmax pmax
comp=Z,12nm,0.6s
NVAR Mina Array Bea 62.87 62 P **P 05 54 19.9 +1.1**
comp=Z,0.2nm,0.5s,baz=316,slow=7.0,SNR=3.0
comp=Z,0.2nm,0.5s
FINES FINESS Array B 63.53 334 P **P 05 54 22.2 -0.2**
comp=Z,5.2nm,0.6s,baz=36,slow=7.9,SNR=22
comp=Z,5.2nm,0.6s
FINES FINESS Array B 63.53 334 P **P 05 54 22.4 0.0**
FINES FINESS Array B 63.53 334 P **P 05 54 22.4 0.0**
OBN Obninsk 64.73 325⇓ *e*P **P 05 54 30.4 +0.1**
OBN 05 55 02.0
OBN pmax pmax
comp=Z,15nm,0.5s
OBN Obninsk 64.73 325 *e*P **P 05 54 30.4 +0.1**
PDAR Pinedale Array 65.10 53 P **P 05 54 34.9 +1.6**
comp=Z,0.3nm,0.8s,baz=265,slow=2.3,SNR=2.4
comp=Z,0.3nm,0.8s
GEYT Alibeck 65.92 300 P **P 05 54 37.9 -0.5**
comp=Z,3.5nm,0.7s,baz=5.2,slow=4.9,SNR=5.3
comp=Z,3.5nm,0.7s
NB2 NORSAR Subarra 67.77 341 P **P 05 54 50.1 +0.4**
comp=Z,1.5nm,0.5s,baz=27,slow=6.5
NOA NORSAR Array B 67.77 341 P **P 05 54 49.6 0.0**
comp=Z,1.9nm,0.6s,baz=27,slow=6.3,SNR=11
comp=Z,1.9nm,0.6s
NORES NORESS Array B 67.97 340 P **P 05 54 51.4 +0.6**
MNK Minsk 68.44 329 *i* P **P 05 54 52.9 -0.9**
MNK *i *PP **pP 05 55 25.8 -3.1**
MNK *i* 05 57 23.2
MNK *i* PPP PPP 05 59 04.5
MNK *i* S **S 06 03 42.9 -0.2**
MNK *i *SS **sS 06 04 41.0 -3.6**
MNK *i* SS **SS 06 08 15.7 +7.2**
MNK pmax pmax
comp=N,10.0nm,0.6s
MNK pmax pmax
comp=Z,2.0nm,0.6s
MNK pmax pmax
comp=E,3.0nm,1.1s
MNK Minsk 68.44 329 *i* P **P 05 54 53.0 -0.9**
comp=E,3.0nm,1.1s
MNK *i* P **P 05 54 53.0 -0.9**
comp=N,10.0nm,0.6s
MNK *i* P **P 05 54 53.0 -0.9**
comp=Z,2.0nm,0.6s,baz=217
MNK *i* pP **pP 05 55 25.9 -3.1**
MNK *i* PP **PP 05 57 23.3 -2.9**
MNK *i* PPP PPP 05 59 04.6
MNK *i* S **S 06 03 43.0 -0.2**
MNK *i* sS **sS 06 04 41.0 -3.6**
MNK *i* SS **SS 06 08 15.8 +7.2**
MNK *i* LQ LQ 06 19 25.0
MNK *i* LR LR 06 23 31.1
MNK *i* LRM MLR 06 30 48.9
comp=Z,5μm,18.1s
MNK *i* LRM MLR 06 30 49.8
comp=E,1μm,19.9s
MNK *i* LRM MLR 06 31 16.0
comp=N,542nm,18.1s
WRA Warramunga Arr 68.56 198 P **P 05 54 56.1 +1.2**
comp=N,1.3nm,0.8s,baz=15,slow=6.8,SNR=9.1
comp=N,1.3nm,0.8s
KBZ Khabaz 70.22 313 P **P 05 55 05.9 +1.0**
comp=N,4.9nm,0.8s,baz=57,slow=3.7,SNR=12
comp=N,4.9nm,0.8s
KBZ Khabaz 70.22 313 *d e*P **P 05 55 06.6 +1.6**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 70.22 313 *e*P **P 05 55 06.6 +1.6**
AKASG Malin Array Be 70.97 326 P **P 05 55 09.4 0.0**
comp=Z,5.5nm,0.5s,baz=35,slow=6.2,SNR=41
comp=Z,5.5nm,0.5s
AKBB Malin Array Si 70.97 326 P **P 05 55 08.7 -0.8**
AKBB IAmb IAmb 05 55 10.1
comp=Z,7.8nm,0.6s
AKBB Malin Array Si 70.97 326⇑ *e*P **P 05 55 09.1 -0.3**
ASAR Alice Springs 72.26 198 P **P 05 55 20.0 +2.6**
comp=Z,4.0nm,0.8s,baz=13,slow=5.7,SNR=34
comp=Z,4.0nm,0.8s
BUR08 Bucovina Ar. S 75.00 326 P **P 05 55 32.4 -1.0**
BUR08 IAmb IAmb 05 56 03.2
comp=Z,8.2nm,0.8s
BURAR Bucovina Array 75.01 326⇑ P **P 05 55 34.2 +0.8**
BURAR Bucovina Array 75.01 326 P **P 05 55 34.1 +0.7**
BURAR IAmb IAmb 05 56 03.5
comp=Z,9.8nm,0.8s
BURAR Bucovina Array 75.01 326⇑ P **P 05 55 34.2 +0.8**
BIZ Bicaz 75.23 325⇑ P **P 05 55 36.4 +1.9**
TESR Tescani 75.36 324⇑ P **P 05 55 36.7 +1.4**
CHVC Chvalec 75.67 333 *e*P **P 05 55 37.6 +0.6**
UPC Upice 75.76 333 *e*P **P 05 55 39.0 +1.5**
UPC Upice 75.76 333 *e*P **P 05 55 39.0 +1.5**
DPC Dobruska-Polom 75.80 333 *e*P **P 05 55 38.9 +1.1**
DPC Dobruska-Polom 75.80 333 *e*P **P 05 55 38.9 +1.1**
KRLC Kraliky 75.89 332 *e*P **P 05 55 39.1 +0.8**
KRLC Kraliky 75.89 332 *e*P **P 05 55 39.1 +0.8**

MORC Moravsky Berou 75.91 332⇑ P **P 05 55 39.2 +0.8**
MORC Moravsky Berou 75.91 332⇑ P **P 05 55 39.2 +0.8**
MORC Moravsky Berou 75.91 332 *e*P **P 05 55 39.9 +1.5**
EKA Eskdalemuir Ar 75.93 346 P **P 05 55 39.0 +0.7**
CLL Collm 75.96 335 P **P 05 55 38.2 -0.3**
CLL Collm 75.96 335 *i* P **P 05 55 39.3 +0.7**
CLL pmax pmax
comp=Z,13nm,0.9s
CLL Collm 75.96 335 *i* P **P 05 55 39.3 +0.7**
comp=Z,13nm,0.9s
UOSS Minazif 76.05 292 P **P 05 55 41.5 +1.9**
UOSS IAmb IAmb 05 55 41.8
comp=Z,10.0nm,0.8s
BRG Berggiesshubel 76.07 334 Amp 05 56 05.8
comp=Z,8.8nm,0.8s
MLR Muntele Rosu 76.48 324⇑ P **P 05 55 44.4 +2.6**
MLR Muntele Rosu 76.48 324 P **P 05 55 42.6 +0.8**
MLR IAmb IAmb 05 56 06.6
comp=Z,14nm,1.1s
MLR Muntele Rosu 76.48 324⇑ P **P 05 55 44.4 +2.6**
VRAC Vranov 76.62 332 *e*P **P 05 55 44.0 +1.6**
JAVC Velka Javorina 76.66 331 *e*P **P 05 55 44.8 +2.1**
PRU Pruhonice 76.67 333 *e*P **P 05 55 43.7 +1.1**
PRU Pruhonice 76.67 333 *e*P **P 05 55 43.7 +1.1**
VOIR 76.88 325⇑ P **P 05 55 45.5 +1.5**
VOIR 76.88 325⇑ P **P 05 55 45.5 +1.5**
KRUC Moravsky 76.90 332 *e*P **P 05 55 45.6 +1.7**
ARR Arges 77.10 325⇑ P **P 05 55 47.6 +2.3**
SIRR Siria 77.48 327⇑ P **P 05 55 49.3 +2.1**
KHC Kasperske Hory 77.72 334 *e*P **P 05 55 49.9 +1.3**
KHC Kasperske Hory 77.72 334 *e*P **P 05 55 49.9 +1.3**
BRTR Keskin Array B 77.76 316 P **P 05 55 50.4 +1.3**
comp=Z,2.8nm,0.9s,baz=58,slow=4.7,SNR=9.1
comp=Z,2.8nm,0.9s
CKRC Cesky Krumlov 77.77 333 *e*P **P 05 55 50.4 +1.6**
TXAR Lajitas Array 77.91 60 P **P 05 55 50.6 +0.6**
comp=Z,0.7nm,0.7s,baz=306,slow=3.7,SNR=11
comp=Z,0.7nm,0.7s
GERES GERESS Array B 77.94 333 P **P 05 55 50.6 +0.7**
comp=Z,1.7nm,0.6s,baz=35,slow=4.9,SNR=13
comp=Z,1.7nm,0.6s
BZS Buzias 78.05 327⇑ P **P 05 55 51.1 +0.7**
BZS Buzias 78.05 327⇑ P **P 05 55 51.1 +0.7**
CONA Conrad Observa 78.06 332 *i* P **P 05 55 52.4 +1.9**
comp=Z,5.0nm,0.6s
RONA Rosalia, Austr 78.12 331 *i* P **P 05 55 52.8 +1.9**
comp=Z,8.5nm,1.0s
HERR Herculane 78.37 326⇑ P **P 05 55 53.3 +1.2**
MORH Mrgy, Hungar 78.61 329⇑ P **P 05 55 54.2 +0.8**
BLKB Belogradchik 79.33 325⇑ P **P 05 55 58.3 +0.9**
SOKA Soboth 79.43 332 *i* P **P 05 55 59.7 +1.6**
comp=Z,5.7nm,0.7s
KBA Koelnbreinsper 79.61 333 *i* P **P 05 56 01.4 +2.3**
comp=Z,8.4nm,0.6s
BOVS Bovan 79.69 326⇑ P **P 05 55 59.7 +0.3**
WATA Walderalm 79.93 334 *i* P **P 05 56 02.4 +1.7**
comp=Z,4.4nm,0.5s
VTS Vitosha 79.95 324⇑ P **P 05 56 02.7 +1.7**
VTS Vitosha 79.95 324 P **P 05 56 01.9 +0.8**
VTS IAmb IAmb 05 56 03.5
comp=Z,12nm,0.8s
VTS Vitosha 79.95 324⇑ P **P 05 56 02.7 +1.7**
WTTA Wattenberg 79.97 334 *i* P **P 05 56 03.2 +2.1**
comp=Z,11nm,0.5s
MOTA Moosalm 80.06 334 *i* P **P 05 56 02.7 +1.2**
comp=Z,4.9nm,0.7s
FUORN Ofenpass-Fuorn 80.96 335 P **P 05 56 07.4 +0.9**
FUORN IAmb IAmb 05 56 18.8
comp=Z,18nm,0.8s
ESDC Sonseca Array 91.11 342 P **P 05 56 56.3 +0.2**
comp=Z,0.5nm,0.7s,baz=348,slow=5.6,SNR=4.4
comp=Z,0.5nm,0.7s
H03N2 Juan Fernandez 139.39 89 T T 08 39 05.3
baz=308,slow=77,SNR=12
H03N1 Juan Fernandez 139.40 89 T T 08 39 02.9
baz=308,slow=77,SNR=14
H03N3 Juan Fernandez 139.40 89 T T 08 39 06.6
baz=308,slow=77,SNR=15
TROLL Troll, Antarti 151.24 199 P **PKiKP 06 03 44.9 +1.5**
SNAA Sanae 152.63 197 P **PKiKP 06 03 47.3 +1.1**
VNA2 Neumayer--Watz 154.10 195 P **PKiKP 06 03 50.7 +1.5**
baz=133,slow=0.7
VNA3 Neumayer Olymp 154.21 193 P **PKiKP 06 03 50.7 +1.3**

VAO ***11*** *05:46:29.2±0.4, 31°.72S×67°.66W, h10km, mb4.4*
IDC ***11*** *05:46:31.4±0.7, 31°.34S×67°.24W, h0km, mb4.1/9, mbtmp4.1/14, ML4.4/5, MS3.5/6, Error ellipse: s-maj=21.7km s-min=16.1km az=100.0*
SJA ***11*** *05:46:34.5±0.7, 31°.28S×67°.38W, h18km±3km, ML4.7, MW4.4*
GUC ***11*** *05:46:36.2±0.6, 31°.33S×67°.32W, h16km±6km, ML4.8*
NEIC ***11*** *05:46:38.3±1.9, 31°.33S±0°.07×67°.25W±0°.09, h47km±12km, mb4.6/12, Md4.2(SJA), Error ellipse: s-maj=10.8km s-min=9.4km az=74.0*

ISC 11 05:46:34.7±1.0, 31°.30S±0°.02×67°.28W±0°.03, h16km±6km, n168, σ2°17/198, mb4.3/11, 8C-6D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**1.02**	**268**	*e*P	**Pb**	**05 46 52.9**	**-1.1**
RTLL				*e*S	**Sb**	**05 47 05.6**	**-1.6**
SJA	**San Juan**	**1.12**	**258**	*e*P	**Pn**	**05 46 54.8**	**-1.0**
SJA				*e*S	**Sb**	**05 47 09.3**	**-0.6**
RTCV	**Cerro Valdivia**	**1.21**	**242**	*e*P	**Pn**	**05 46 55.9**	**-1.1**
RTCV				*e*S	**Sb**	**05 47 10.9**	**-1.8**
ZON	**Zonda**	**1.22**	**258**		**Pn**	**05 46 56.1**	**-1.1**
ZON	**Zonda**	**1.22**	**258**	*e*P	**Pn**	**05 46 56.0**	**-1.1**
ZON				*e*S	**Sb**	**05 47 13.2**	**+0.3**
ACCO	**Cerro Coronel**	**1.69**	**294**	*e*P	**Pn**	**05 47 05.5**	**+1.7**
MRA	**San Martin**	**1.74**	**130**	*e*P	Pn	05 46 56.0	-8.3
MRA				*e*P	**Pb**	**05 47 07.3**	**+0.9**
MRA				*e*S	**Sg**	**05 47 31.2**	**+0.3**
MRA				IAML		05 47 33.7	
comp=Z,7μm,0.3s							
RTLS	**Leoncito**	**1.79**	**253**	*e*P	**Pn**	**05 47 06.0**	**+0.8**
RTLS				*e*S	**Sn**	**05 47 29.8**	**+2.0**
ASAL	**Salagasta**	**1.85**	**225**	*e*P	**Pn**	**05 47 07.1**	**+1.3**
ASAL				*e*S	Sn	05 47 12.8	-16
ACLC	**CERRO LA CRUZ**	**1.89**	**9**	*e*P	Pn	05 46 57.8	-8.6
ACLC				*e*S	**Sb**	**05 47 33.0**	**+0.8**
ACLC				IAML		05 47 40.8	
comp=Z,10μm,0.5s							
ACDV	**Cuesta del Vie**	**1.94**	**305**	*e*P	**Pn**	**05 47 09.6**	**+2.5**
ACDV				*e*S	**Sn**	**05 47 29.5**	**-1.7**
ARCO	**CERRO ARCO**	**2.08**	**222**	*e*P	**Pn**	**05 47 10.4**	**+1.3**
ARCO				*e*S	**Sn**	**05 47 37.2**	**+2.4**
ARCO				IAML		05 47 50.8	
comp=Z,3μm,0.3s							
AROD	**Rodeo**	**2.19**	**300**	*e*S	**Sn**	**05 47 34.5**	**-3.3**
AAGR	**Agrelo**	**2.21**	**216**	*e*P	**Pn**	**05 47 12.1**	**+1.3**
TCA	**Tanti**	**2.30**	**92**	*e*P	**Pb**	**05 47 15.3**	**-0.5**
TCA				*e*S	**Sb**	**05 47 44.7**	**+0.6**
TCA				IAML		05 48 00.4	
comp=Z,3μm,0.6s							
AVIZ	**Vizcacheras**	**2.41**	**205**	*e*P	**Pn**	**05 47 14.9**	**+1.4**
VCA	**Vinchina**	**2.67**	**342**⇑	*e*P	**Pn**	**05 47 21.1**	**+3.8**
VCA				*e*S	**Sb**	**05 47 55.4**	**+0.5**
VCA				IAML		05 48 05.1	
comp=N,4μm,0.4s							
VCA	**Vinchina**	**2.67**	**342**⇑	*e*P	**Pn**	**05 47 21.1**	**+3.8**
VCA				*e*S	**Sb**	**05 47 55.4**	**+0.5**
VCA				IAML		05 48 05.1	
comp=N,4μm,0.4s							
VCA	**Vinchina**	**2.67**	**342**	*e*P	Pn	05 47 02.7	-15
VCA				*e*S	**Sb**	**05 47 58.8**	**+3.9**
VCA				*e*S	**Sg**	**05 47 59.5**	**-1.1**
VCA				IAML		05 48 04.7	
comp=Z,3μm,0.3s							
CO01	**Juntas del Tor**	**2.75**	**298**		**Pn**	**05 47 22.0**	**+3.6**
CO01	**Juntas del Tor**	**2.75**	**298**⇑	*e*P	**Pn**	**05 47 22.2**	**+3.8**
CO01				*e*S	**Sn**	**05 47 56.4**	**+4.9**
CO01	**Juntas del Tor**	**2.75**	**298**⇑	*e*P	**Pn**	**05 47 22.2**	**+3.8**
CO01				*e*S	**Sn**	**05 47 56.4**	**+4.9**
CO03	**El Pedregal**	**2.96**	**278**		**Pn**	**05 47 23.8**	**+2.7**
CO03	**El Pedregal**	**2.96**	**278**⇓	*e*P	**Pn**	**05 47 24.2**	**+3.2**
CO03				*e*S	**Sn**	**05 48 00.0**	**+3.7**
CO03				IAML		05 48 06.5	
comp=E,2μm,0.5s							
CO03	**El Pedregal**	**2.96**	**278**⇓	*e*P	**Pn**	**05 47 24.2**	**+3.2**
CO03				*e*S	**Sn**	**05 48 00.0**	**+3.7**
CO03				IAML		05 48 06.5	

comp=E,2μm,0.5s
CYA Choya 3.12 25 *e*P **Pn 05 47 26.4 +3.1**
CYA *e*S **Sn 05 48 01.0 +0.8**
CYA IAML 05 48 22.4
comp=Z,3μm,0.4s
VA03 San Esteban 3.14 241 **Pn 05 47 26.2 +2.7**
VA03 San Esteban 3.14 241⇓ *e*P **Pn 05 47 26.4 +2.9**
VA03 *e*S **Sn 05 48 04.3 +3.6**
VA03 IAML 05 48 17.0
comp=E,3μm,0.8s
VA03 San Esteban 3.14 241⇓ *e*P **Pn 05 47 26.4 +2.9**
VA03 *e*S **Sn 05 48 04.3 +3.6**
VA03 IAML 05 48 17.0
comp=E,3μm,0.8s
CO02 Combarbal 3.19 271 **Pn 05 47 26.8 +2.6**
CO02 Combarbal 3.19 271⇓ *e*P **Pn 05 47 26.8 +2.6**
CO02 *e*S **Sn 05 48 06.0 +4.1**
CO02 IAML 05 48 16.1
comp=N,3μm,0.5s
CO02 Combarbal 3.19 271⇓ *e*P **Pn 05 47 26.8 +2.6**
CO02 *e*S **Sn 05 48 06.0 +4.1**
CO02 IAML 05 48 16.1
comp=N,3μm,0.5s
GO04 Tololo Observa 3.23 289 Pn **Pn 05 47 28.4 +3.5**
GO04 Tololo Observa 3.23 289⇑ *e*P **Pn 05 47 28.0 +3.0**
GO04 *e*S **Sn 05 48 07.2 +4.0**
GO04 Tololo Observa 3.23 289⇑ *e*P **Pn 05 47 28.0 +3.0**
GO04 *e*S **Sn 05 48 07.2 +4.0**
TINO Tinogasta 3.23 356 *e*S **Sb 05 48 14.5 +3.6**
FCH Farellones 3.25 231 *e*P **Pn 05 47 27.7 +2.3**
FCH *e*S **Sn 05 48 09.3 +5.4**
FCH IAML 05 48 18.3
comp=N,1μm,0.3s
FCH Farellones 3.25 231 *e*P **Pn 05 47 27.7 +2.3**
FCH *i* S **Sn 05 48 08.6 +4.7**
FCH IAML 05 48 18.3
comp=N,1μm,0.3s
PEL Peldehue 3.42 237 **Pn 05 47 28.9 +1.4**
PEL Peldehue 3.42 237 *e*P **Pn 05 47 29.6 +2.1**
PEL *e*S **Sn 05 48 10.8 +3.2**
PEL IAML 05 48 23.2
comp=E,720nm,0.5s
PEL Peldehue 3.42 237 *e*P **Pn 05 47 29.6 +2.1**
PEL *e*S **Sn 05 48 10.8 +3.2**
PEL IAML 05 48 23.2
comp=E,720nm,0.5s
PEL Peldehue 3.42 237 *e*P **Pn 05 47 29.8 +2.4**
PEL *e*S **Sb 05 48 15.5 -0.9**
MT03 Universidad Ad 3.50 230 **Pn 05 47 30.6 +2.0**
MT03 Universidad Ad 3.50 230 IAML 05 48 24.9
comp=E,1μm,0.5s
MT03 Universidad Ad 3.50 230 IAML 05 48 24.9
comp=E,1μm,0.5s
LMEL Las Melosas 3.54 223 **Pn 05 47 31.4 +2.2**
AC05 El Transito 3.57 313 **Pn 05 47 33.3 +3.8**
ROC1 El Roble 3.58 241 Pn **Pn 05 47 31.4 +1.6**
MT05 Renca 3.59 234 Pn **Pn 05 47 31.7 +1.8**
MT05 Renca 3.59 234⇑ *e*P **Pn 05 47 32.2 +2.4**
MT05 *e*S **Sn 05 48 15.5 +3.5**
MT05 IAML 05 48 28.1
comp=E,2μm,0.4s
MT05 Renca 3.59 234⇑ *e*P **Pn 05 47 32.2 +2.4**
MT05 *e*S **Sn 05 48 15.5 +3.5**
MT05 IAML 05 48 28.1
comp=E,2μm,0.4s
RFA San Rafael 3.61 196 *e*S **Sb 05 48 26.7 +5.0**
RFA IAML 05 48 32.4
comp=Z,3μm,0.7s
VA06 Catapilco 3.64 249 **Pn 05 47 31.1 +0.7**
CO05 La Serena 3.67 291 **Pn 05 47 33.0 +2.2**
LCO Las Campanas 3.73 307 Pn **Pn 05 47 34.7 +2.8**
CO06 Fray Jorge 3.79 278 **Pn 05 47 33.9 +1.5**
MT02 Curacav 3.81 238 **Pn 05 47 33.5 +0.8**
BO04 La Punta 3.88 225 **Pn 05 47 35.5 +1.7**
MT09 Talagante 3.99 231 **Pn 05 47 36.4 +1.1**
VA01 Torpederas 4.08 244 **Pn 05 47 36.6 +0.2**
VA05 Santo Domingo 4.35 236 **Pn 05 47 40.7 +0.6**
AC04 Llanos de Chal 4.51 312 **Pn 05 47 44.2 +1.8**
AC02 Maricunga 4.73 340 **Pn 05 47 50.0 +4.2**
AC06 Mina Casimiro 4.75 325 **Pn 05 47 47.6 +1.9**
EDS3 Malargue 4.80 201 *e*S **Sb 05 48 59.5 +3.4**
AHML Horco Molle 4.81 21 *e*P **Pn 05 47 49.2 +2.7**
AHML *e*S **Sg 05 49 04.0 -5.1**
AHML IAML 05 49 21.4
comp=Z,756nm,0.4s
GO05 Huala 5.38 225 *e*P **Pn 05 47 54.1 -0.2**
AC01 Pan de Azucar 5.90 330 **Pn 05 48 02.8 +1.4**
ASTB Santa Barbara 7.74 20 *e*P **Pn 05 48 29.3 +2.5**
ALOL LOMAS DE OLMED 8.01 22 *e*P **Pn 05 48 28.5 -1.9**
TRQA Tornquist 8.04 149 Pn **Pn 05 48 31.9 +1.1**
HJA Humahuaca 8.23 12 *e*P **Pn 05 48 37.4 +3.7**
PB10 IPOC Station P 8.28 339 Pn **Pn 05 48 34.8 +0.7**
AF01 San Pedro de A 8.35 354 **Pn 05 48 36.7 +1.3**
LVC Limon Verde 8.77 350 Pn **Pn 05 48 42.0 +0.8**
comp=Z,3.3nm,0.3s,baz=152,slow=4.2,SNR=20
LVC Sn **Sn 05 50 26.8 +6.8**
comp=Z,1.7nm,0.3s,baz=225,slow=19,SNR=1.2
LVC Lg Lg 05 51 11.7
comp=Z,1.4nm,0.3s,baz=270,slow=19,SNR=2.0
LVC LR LR 05 52 35.2
comp=Z,318nm,21.4s,baz=183,slow=41
comp=Z,8.8nm,0.3s
LVC Limon Verde 8.77 350 Pn **Pn 05 48 43.0 +1.8**
ITQB Itaqui 9.34 83 Pn **Pn 05 48 50.1 +1.4**
ITQB Itaqui 9.34 83 *e*P **Pn 05 48 50.0 +1.4**
PLCA Paso Flores 9.78 195 Pn **Pn 05 48 54.4 -0.4**
comp=Z,0.8nm,0.3s,baz=15,slow=11,SNR=31
PLCA Lg Lg 05 51 31.9
comp=Z,0.7nm,0.3s,baz=58,slow=18,SNR=2.0
comp=Z,2.5nm,0.4s
PLCA Paso Flores 9.78 195 Pn **Pn 05 48 56.2 +1.4**
CPUP Villa Florida 10.03 63 Pn **Pn 05 48 58.4 +0.2**
comp=Z,2.3nm,0.3s,baz=246,slow=12,SNR=16
CPUP Sn **Sn 05 50 49.4 -1.0**
comp=Z,0.8nm,0.3s,baz=225,slow=18,SNR=1.6
CPUP Lg Lg 05 51 50.8
comp=Z,3.3nm,0.3s,baz=194,slow=17,SNR=2.9
CPUP LR LR 05 53 22.6
comp=Z,273nm,18.1s,baz=221,slow=41
comp=Z,6.8nm,0.3s
CPUP Villa Florida 10.03 63 **Pn 05 48 58.7 +0.5**
AZCA Azaras, Argent 10.34 75 *e*P **Pn 05 49 03.6 +1.3**
PB01 IPOC Station P 10.40 349 Pn 05 48 59.3 -4.0
RODS Rosario do Sul 10.43 88 *e*P **Pn 05 49 04.0 +0.3**
LL04 Puerto Octay 10.45 202 Pn **Pn 05 49 02.3 -1.5**
UNIS Unistalda (Bra 10.80 81 *e*P **Pn 05 49 09.4 +0.7**
PB08 IPOC Station P 11.23 351 **Pn 05 49 14.7 -0.3**
PLTB Pedras Altas 11.68 96 **Pn 05 49 19.8 -0.9**
PLTB Pedras Altas 11.68 96 *e*P **Pn 05 49 19.2 -1.6**
GO01 Chusmiza 11.71 351 **Pn 05 49 20.4 -1.1**
CPSB Cacapava Do Su 11.93 89 *e*P **Pn 05 49 23.6 -0.6**
CRSM Crissiumal (Br 12.15 75 *e*P **Pn 05 49 28.8 +1.6**
ALGR Alto Alegre (B 12.60 82 *e*P **Pn 05 49 34.2 +0.9**
PB16 IPOC Station P 13.06 351 Pn **Pn 05 49 40.4 +0.3**
MCR1 Marechal Candi 13.54 63 *e*P **Pn 05 49 50.0 +3.8**
FRBT Francisco Belt 13.56 71 *e*P **Pn 05 49 47.4 +0.9**
ANTJ Antonio Joao (13.68 50 *e*P **Pn 05 49 50.4 +2.3**
ITAB Concordia 13.83 77 Pn **Pn 05 49 52.1 +2.0**
ITAB Concordia 13.83 77 *e*P **Pn 05 49 51.3 +1.2**
CNLB Canela 14.33 86 *e*P **Pn 05 49 56.7 -0.3**
BBRB Robore, Bolivi 14.62 29 *e*P **Pn 05 50 02.1 +1.1**
PTGB Pitanga 14.95 68 *e*P **Pn 05 50 07.0 +1.6**
LPAZ La Paz 14.96 357 Pn **Pn 05 50 06.9 +0.8**
comp=Z,0.4nm,0.3s,baz=134,slow=6.4,SNR=16
LPAZ LR LR 05 56 39.0
comp=Z,214nm,21.2s,baz=198,slow=40
comp=Z,2.0nm,0.5s
LPAZ La Paz 14.96 357 *e*P **Pn 05 50 06.7 +0.6**
AQDB Aquidauana 14.98 47 Pn **Pn 05 50 07.6 +1.8**
AQDB Aquidauana 14.98 47 *e*P **Pn 05 50 07.6 +1.8**
BBSD Serra de San D 15.30 25 *e*P **Pn 05 50 11.3 +1.3**
TER01 Tubaro-SC 15.98 85 *e*P **Pn 05 50 19.2 +0.3**
SIV San Ignacio 16.25 22 Pn **Pn 05 50 21.5 -1.0**
baz=203,slow=12,SNR=11
SIV LR LR 05 57 21.7
comp=Z,99nm,19.9s,baz=206,slow=40
comp=Z,2.1nm,0.5s
RPRD Ribas do Rio P 16.27 52 *e*P **P 05 50 25.5 -0.1**
TIJ01 Guaruva-PR 17.15 74 *e*P **Pn 05 50 33.8 -0.1**
PCMB Pacaembu 17.27 60 *e*P **P 05 50 36.7 0.0**
PTLB Pontes e Lacer 17.44 27 *e*P **P 05 50 39.8 +1.2**
SALV Santo Antonio 18.62 37 *e*P **P 05 50 52.4 +0.9**
VILB Vilhena 19.39 21 *e*P **P 05 51 00.6 +0.6**

BB19B Bebedouro 19.65 63 *e*P **P 05 51 02.7 -0.1**
RCLB Rio Claro- Sao 19.69 68 *e*P **P 05 51 03.9 +0.6**
VAO Valinhos 19.86 70 *e*P **P 05 51 05.1 0.0**
PARB Paraibuna 20.79 73 *e*P **P 05 51 15.9 +0.6**
ETMB Extrema 21.39 3 *e*P **P 05 51 22.6 +0.9**
IPMB Ipameri, GO 21.78 57 *e*P **P 05 51 25.6 -0.3**
PDRB Porto dos Gac 21.88 29 *e*P **P 05 51 26.4 -0.6**
PMNB Patos De Minas 22.73 61 *e*P **P 05 51 35.7 -0.4**
BDFB Brasilia 23.50 53 P **P 05 51 42.5 -1.6**
comp=Z,6.2nm,0.6s,baz=223,slow=8.4,SNR=14
comp=Z,6.2nm,0.6s
BDFB Brasilia 23.50 53 P **P 05 51 43.0 -1.1**
BDFB IAmb IAmb 05 51 43.4
comp=Z,7.8nm,0.7s
BDFB Brasilia 23.50 53 *e*P **P 05 51 43.4 -0.7**
CZSB Cruzeiro do Su 23.99 347 *e*P **P 05 51 47.8 -0.8**
SNDB Serra Nova Dou 24.24 41 *e*P **P 05 51 50.2 -0.8**
MC01 Montes Claros 25.72 61 *e*P **P 05 52 04.5 0.0**
JANB Januaria 26.51 58 *e*P **P 05 52 10.6 -1.0**
SDBA SAO DESIDERIO 27.91 53 *e*P **P 05 52 23.3 -0.9**
MACA Manacapuru-AM 28.67 14 *e*P **P 05 52 32.0 +1.1**
SMTB Santa Maria do 28.89 44 *e*P **P 05 52 31.3 -1.5**
ITTB Itaituba 28.91 24 *e*P **P 05 52 33.6 +0.6**
GUA01 Guaratinga, BA 28.97 66 *e*P **P 05 52 33.6 0.0**
MCRA Macar, Loja 29.32 333 P **P 05 52 36.9 +0.1**
SGCB Sto Gabriel d 31.00 0 *e*P **P 05 52 50.4 -1.1**
MALB Monte Alegre 31.76 25 *e*P **P 05 52 59.6 +1.4**
PMSA Palmer Station 33.56 177 LR LR 06 05 58.0
comp=Z,50nm,19.5s,baz=258,slow=35
MCPB Macapa, AP 33.98 28 *e*P **P 05 53 18.7 +1.0**
BOAV Boa Vista 34.12 12 *e*P **P 05 53 18.9 +0.1**
BAUV El Baul 40.02 359 P **P 05 54 07.6 -1.3**
BAUV IAmb IAmb 05 54 22.0
comp=Z,13nm,0.9s
BCIP Isla Barro Col 41.99 341 P **P 05 54 26.2 +1.0**
BCIP IAmb IAmb 05 54 38.7
comp=Z,14nm,1.0s
BELA Belgrano 2 48.88 171 P **P 05 55 18.8 -0.4**
CRPR Cabo Rojo, PR 49.02 0 P **P 05 55 19.1 -1.7**
CELP Cerrillos 49.09 1 P **P 05 55 20.1 -1.3**
VNA3 Neumayer Olymp 50.40 159 P **P 05 55 32.0 +1.2**
VNA1 Neumayer--Stat 50.64 158 P **P 05 55 35.6 +3.1**
VNA2 Neumayer--Watz 51.00 159 P **P 05 55 35.4 +0.1**
baz=285,slow=9.5
SNAA Sanae 52.62 159 P **P 05 55 47.6 +0.2**
SNAA Sanae 52.62 159 P **P 05 55 46.8 -0.7**
comp=Z,0.4nm,0.3s,baz=307,slow=4.7,SNR=12
comp=Z,0.4nm,0.3s
TROLL Troll, Antarti 54.33 159 P **P 05 56 00.4 +0.2**
TXAR Lajitas Array 69.52 326 P **P 05 57 42.4 -0.3**
comp=Z,0.5nm,0.7s,baz=150,slow=7.6,SNR=4.8
comp=Z,0.5nm,0.7s
DBIC Dimbokro 70.49 69 P **P 05 57 47.9 -1.0**
comp=Z,4.4nm,0.9s,baz=287,slow=4.4,SNR=4.3
comp=Z,4.4nm,0.9s
MAW Mawson 74.58 162 P **P 05 58 11.9 -0.5**
comp=Z,1.2nm,0.8s,baz=205,slow=6.9,SNR=2.0
comp=Z,1.2nm,0.8s
SADO Sadowa 76.47 351 LR LR 06 36 55.5
comp=Z,56nm,18.3s,baz=178,slow=40
BOSA Boshof 77.71 116 P **P 05 58 30.3 -0.8**
comp=Z,1.2nm,0.4s,baz=240,slow=3.4,SNR=4.0
comp=Z,1.2nm,0.4s
TORD Torodi Ar. Bea 79.50 68 P **P 05 58 40.6 -0.3**
comp=Z,4.7nm,0.6s,baz=280,slow=6.0,SNR=40
comp=Z,4.7nm,0.6s
NVAR Mina Array Bea 84.09 322 P **P 05 59 05.2 +0.3**
comp=Z,0.3nm,0.7s,baz=174,slow=2.7,SNR=2.7
comp=Z,0.3nm,0.7s
ESDC Sonseca Array 91.83 44 P **P 05 59 41.6 -0.3**
comp=Z,0.4nm,0.7s,baz=217,slow=6.1,SNR=2.2
comp=Z,0.4nm,0.7s
ASAR Alice Springs 121.70 203 PKP **PKPdf 06 05 26.4 -2.0**
comp=Z,0.2nm,0.3s,baz=149,slow=2.1,SNR=2.2
WRA Warramunga Arr 124.99 205 PKP **PKPdf 06 05 33.0 -1.7**
comp=Z,0.9nm,0.5s,baz=164,slow=1.7,SNR=21
KSH Kashi 149.12 64 PKPbc **PKPdf 06 06 18.7 +0.5**
KSH pPKP pPKPdf 06 06 25.6 +1.5
ZALV Zalesovo Beam 149.78 33 PKPbc **PKPbc 06 06 22.6 -0.7**
comp=Z,2.1nm,0.5s,baz=305,slow=2.6,SNR=13
MKAR Makanchi Array 151.97 48 PKPbc **PKPbc 06 06 27.8 -1.0**
comp=Z,1.5nm,0.5s,baz=286,slow=1.8,SNR=17
MKAR PKPab **sPKPbc 06 06 37.4 +0.8**
comp=Z,2.9nm,0.6s,baz=279,slow=2.3,SNR=16
SONM Songino Array 162.79 15 PKPab **PKPab 06 07 24.0 -0.7**
comp=Z,0.8nm,0.7s,baz=304,slow=2.9,SNR=4.2
CN2 Changchun 163.97 325 *e*PKP **PKPdf 06 06 33.3 -3.6**
CN2 *e*PP **PP 06 11 15.9 +0.5**

ROM 11 05:54:16.7±0.1, 42°.737N±0°.003×13°.195E±0°.005,
h10km, ML1.6/6, 4C-3D, Error ellipse: s-maj=0.4km
s-min=0.1km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**146**	P	Pg	05 54 18.8	+0.1
T1202				S	Sg	05 54 20.0	-0.2
T1202				AML	AML		
	comp=E,1449μm,0.1s						
T1202				AML	AML		
	comp=N,2575μm,0.8s						
T1202				AML	AML		
	comp=N,2585μm,0.8s						
T1202				AML	AML		
	comp=E,1452μm,0.1s						
T1204	**Amatrice, Fraz**	**0.11**	**124**	⇑P	Pg	05 54 20.0	+0.5
T1204				S	Sg	05 54 22.2	+0.7
NRCA	**Norcia**	**0.11**	**329**	P	Pg	05 54 19.8	+0.2
NRCA				S	Sg	05 54 21.9	+0.4
NRCA				AML	AML		
	comp=E,628μm,0.1s						
NRCA				AML	AML		
	comp=E,725μm,0.1s						
NRCA				AML	AML		
	comp=N,831μm,0.7s						
NRCA				AML	AML		
	comp=N,725μm,1.0s						
T1245	**Castelsantange**	**0.12**	**358**	P	Pg	05 54 20.3	+0.6
T1245				AML	AML		
	comp=E,371μm,0.7s						
T1245				AML	AML		
	comp=N,578μm,0.3s						
SMA1	**SAN MARTINO**	**0.15**	**136**	P	Pg	05 54 20.7	+0.6
SMA1				S	Sg	05 54 23.6	+1.1
SMA1				AML	AML		
	comp=E,110μm,0.6s						
SMA1				AML	AML		
	comp=N,106μm,1.5s						
LNSS	**Leonessa**	**0.18**	**220**	P	Pg	05 54 21.1	+0.6
LNSS				S	Sg	05 54 24.3	+1.2
LNSS				AML	AML		
	comp=E,140μm,0.1s						
LNSS				AML	AML		
	comp=N,186μm,0.3s						
MC2	**Monte Cornacci**	**0.18**	**359**	⇓P	Pg	05 54 21.2	+0.6
MC2				S	Sg	05 54 24.8	+1.5
MMO1	**Montemonaco**	**0.19**	**31**	P	Pg	05 54 21.2	+0.5
T1243	**Rocca Santa Ma**	**0.19**	**102**	⇑P	Pg	05 54 21.2	+0.5
T1243				S	Sg	05 54 24.6	+1.0
T1216	**Preci, Frazion**	**0.20**	**320**	P	Pg	05 54 21.5	+0.6
T1216				S	Sg	05 54 24.9	+1.1
T1241	**Roccafluvione,**	**0.21**	**55**	P	Pg	05 54 21.7	+0.6
T1241				S	Sg	05 54 25.4	+1.3
T1241				AML	AML		
	comp=N,79μm,1.4s						
T1241				AML	AML		
	comp=E,68μm,0.8s						
T1241				AML	AML		
	comp=N,79μm,1.4s						
RM33	**Pellescritta (**	**0.23**	**176**	⇑P	Pg	05 54 22.1	+0.7
RM33				AML	AML		
	comp=E,60μm,1.5s						
RM33				AML	AML		
	comp=N,53μm,0.2s						
T1215	**Vallo di Nera,**	**0.25**	**285**	⇑P	Pg	05 54 22.3	+0.5
CAMP	**Campotosto**	**0.26**	**142**	P	Pg	05 54 22.6	+0.7
CAMP				S	Sb	05 54 26.8	-1.2
FDMO	**Fiordimonte**	**0.31**	**345**	⇓P	Pg	05 54 23.5	+0.6
TERO	**Teramo**	**0.32**	**111**	⇓P	Pg	05 54 22.9	-0.2

ROM 11 05:54:38.0±0.1, 42°.808N±0°.003×13°.223E±0°.004,
h9km, ML1.6/2, 2C, Error ellipse: s-maj=0.3km
s-min=0.1km az=207.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**332**	P	Pg	05 54 40.1	0.0
T1245				S	Sg	05 54 41.4	-0.3
T1245				AML	AML		
	comp=N,578μm,0.3s						
T1245				AML	AML		
	comp=E,371μm,0.7s						
NRCA	**Norcia**	**0.08**	**288**	⇑P	Pg	05 54 40.7	+0.3
NRCA				S	Sg	05 54 42.4	+0.3
NRCA				AML	AML		
	comp=N,725μm,1.0s						
NRCA				AML	AML		
	comp=E,725μm,0.1s						
NRCA				AML	AML		
	comp=E,628μm,0.1s						
NRCA				AML	AML		
	comp=N,831μm,0.7s						
T1202	**Accumoli, Fraz**	**0.10**	**179**	P	Pg	05 54 41.2	+0.6
T1202				S	Sg	05 54 43.4	+0.9
MC2	**Monte Cornacci**	**0.11**	**347**	P	Pg	05 54 41.2	+0.4
MC2				S	Sg	05 54 43.7	+0.9
MMO1	**Montemonaco**	**0.12**	**40**	⇑P	Pg	05 54 41.3	+0.4
MMO1				S	Sg	05 54 43.3	+0.4
T1241	**Roccafluvione,**	**0.16**	**73**	P	Pg	05 54 42.1	+0.6
T1241				S	Sg	05 54 45.0	+1.1
T1216	**Preci, Frazion**	**0.17**	**299**	P	Pg	05 54 42.2	+0.6
T1216				S	Sg	05 54 45.2	+1.0
T1243	**Rocca Santa Ma**	**0.20**	**124**	P	Pg	05 54 42.6	+0.4
T1243				S	Sg	05 54 46.0	+1.0
T1217	**Poggiodomo (PG**	**0.23**	**246**	P	Pg	05 54 43.4	+0.6
T1217				S	Sg	05 54 47.4	+1.4
LNSS	**Leonessa**	**0.24**	**213**	P	Pg	05 54 43.9	+0.9
LNSS				S	Sg	05 54 48.4	+2.0
FDMO	**Fiordimonte**	**0.25**	**336**	P	Pg	05 54 43.7	+0.6
FDMO				S	Sg	05 54 47.9	+1.5
T1215	**Vallo di Nera,**	**0.26**	**269**	P	Pg	05 54 44.0	+0.7
T1215				S	Sb	05 54 48.3	-1.1
GUMA	**Gualdo di Mace**	**0.27**	**18**	P	Pb	05 54 44.5	-0.5
GUMA				S	Sb	05 54 49.2	-0.5
TERO	**Teramo**	**0.34**	**123**	P	Pg	05 54 45.0	+0.3
TERO				S	Sb	05 54 50.7	-1.0

IDC 11 06:10:24.3±3.7, 3°.36S×152°.30E, h0km, mb3.7/2,
mbtmp3.7/2, Error ellipse: s-maj=161.8km
s-min=47.8km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.05**	**225**	P	P	06 15 41.8	+0.4
	1.7nm,0.5s,baz=51,slow=9.5,SNR=44						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**26.90**	**220**	P	P	06 16 07.6	+0.3
	0.2nm,0.3s,baz=53,slow=9.1,SNR=2.8						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**149.36**	**290**	PKPbc	PKPbc	06 30 15.3	-1.0
	0.4nm,0.5s,baz=84,slow=2.2,SNR=7.1						

TAP ***11*** *06:22:54.1, 24°.75N×122°.54E, h105km, ML3.1, D*
JMA ***11*** *06:22:54.2±0.3, 25°.N±3°.×122°.5E±0°.7, h102km±2km,*
MV1.9/9, NW OFF ISHIGAKIJIMA IS
ISC 11 06:22:54.3±1.5, 24°.69N±0°.04×122°.55E±0°.03, h103km±9km,
n73, σ1°.06/142, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**119**	P	**Pn**	**06 23 10.6**	**+0.3**
	baz=130						
YOJ				*e*S	**Sn**	**06 23 23.3**	**+1.0**
	baz=130						
YOJ	**Yonaguni jima**	**0.48**	**119**	P	**Pn**	**06 23 10.5**	**+0.2**
YOJ				S	**Sn**	**06 23 22.4**	**+0.1**
TWB1	**Santiao Chiao**	**0.59**	**302**	*i* P	**Pn**	**06 23 11.2**	**+0.1**
	baz=297						
TWB1				S	**Sn**	**06 23 23.7**	**-0.1**
	baz=297						
TWC	**Suao**	**0.64**	**263**	*i* P	**Pn**	**06 23 11.6**	**+0.2**
	baz=253						
TWC				*i* S	**Sn**	**06 23 24.0**	**-0.4**
	baz=253						
NTC	**Toucheng**	**0.67**	**284**	P	**Pn**	**06 23 11.6**	**-0.1**
	baz=279						
NTC				S	**Sn**	**06 23 24.5**	**-0.3**
	baz=279						
TIPB	**Shuangxi**	**0.71**	**293**	P	**Pn**	**06 23 12.4**	**+0.3**
	baz=283						
TIPB				S	**Sn**	**06 23 25.5**	**-0.1**
	baz=283						
SXI1	**Grass Mountain**	**0.73**	**303**	P	**Pn**	**06 23 12.3**	**0.0**
	baz=294						
SXI1				S	**Sn**	**06 23 25.9**	**0.0**
	baz=294						
EWUT	**Wuta**	**0.74**	**251**	P	**Pn**	**06 23 12.1**	**-0.2**
	baz=247						
EWUT				S	**Sn**	**06 23 25.6**	**-0.3**
	baz=247						
TWE	**Neicheng**	**0.80**	**272**	P	**Pn**	**06 23 13.5**	**+0.6**
	baz=264						
TWE				*e*S	**Sn**	**06 23 26.0**	**-0.9**
	baz=264						
FUSB	**Fushanzhiwuyua**	**0.87**	**275**	*i* P	**Pn**	**06 23 13.9**	**+0.2**
	baz=271						
FUSB				S	**Sn**	**06 23 27.8**	**-0.6**
	baz=271						
LATG	**Datong**	**0.94**	**261**	P	**Pn**	**06 23 15.4**	**+0.9**
	baz=253						
LATG				*e*S	**Sn**	**06 23 30.1**	**+0.5**
	baz=253						
NDT	**Datong Townshi**	**0.94**	**265**	*e*P	**Pn**	**06 23 13.4**	**-1.0**
	baz=264						
NDT				*e*S	**Sn**	**06 23 28.3**	**-1.2**
	baz=264						
YM01	**YM01**	**0.99**	**297**	P	**Pn**	**06 23 15.3**	**+0.4**
	baz=286						
YM01				*i* S	**Sn**	**06 23 30.2**	**-0.3**
	baz=286						
ETL	**Fush Village**	**0.99**	**238**	*i* P	**Pn**	**06 23 15.2**	**+0.2**
	baz=235						
ETL				*e*S	**Sn**	**06 23 29.1**	**-1.4**
	baz=235						
TATO	**Taipei**	**1.00**	**286**	P	**Pn**	**06 23 14.9**	**0.0**
	baz=275						
TATO				S	**Sn**	**06 23 29.5**	**-1.0**
	baz=275						
NACB	**Ninganchiao**	**1.01**	**239**	P	**Pn**	**06 23 15.0**	**0.0**
	baz=237						
NACB				S	**Sn**	**06 23 30.8**	**+0.1**
	baz=237						
PCYT	**Pengchaiyu**	**1.03**	**335**	*e*P	**Pn**	**06 23 14.9**	**-0.4**
	baz=337						
TWD	**Chiawan**	**1.06**	**235**	P	**Pn**	**06 23 15.9**	**+0.4**
	baz=227						
TWD				*i* S	**Sn**	**06 23 31.3**	**-0.3**
	baz=227						
YHNB	**Yeheng**	**1.06**	**269**	P	**Pn**	**06 23 16.3**	**+0.6**
	baz=272						
YHNB				S	**Sn**	**06 23 32.1**	**+0.2**
	baz=272						
NSK	**Sanguang**	**1.08**	**269**	P	**Pn**	**06 23 15.4**	**-0.5**
	baz=272						
NSK				*e*S	**Sn**	**06 23 31.2**	**-1.0**
	baz=272						
ETLH	**Xiulin Townshi**	**1.08**	**244**	*i* P	**Pn**	**06 23 16.2**	**+0.2**
	baz=236						
ETLH				S	**Sn**	**06 23 32.1**	**-0.2**
	baz=236						
NNSB	**Datong**	**1.09**	**256**	P	**Pn**	**06 23 16.6**	**+0.5**
	baz=248						
NNSB				S	**Sn**	**06 23 32.5**	**0.0**
	baz=248						
NNS	**Nan Shan**	**1.10**	**257**	P	**Pn**	**06 23 15.9**	**-0.3**
	baz=249						
NNS				S	**Sn**	**06 23 31.8**	**-0.8**
	baz=249						
TWS1	**Kuangyinshan**	**1.10**	**292**	P	**Pn**	**06 23 16.1**	**+0.1**
	baz=281						
TWS1				S	**Sn**	**06 23 32.5**	**+0.1**
	baz=281						
IRIF	**Iriomote-Funau**	**1.14**	**108**	P	**Pn**	**06 23 16.6**	**+0.1**
IRIF				S	**Sn**	**06 23 33.0**	**-0.1**
ETM	**Tongmen**	**1.20**	**233**	P	**Pn**	**06 23 17.4**	**+0.1**
	baz=225						
ETM				S	**Sn**	**06 23 33.9**	**-0.6**

	baz=225					
FUSS	Fushou	1.27 250	eP	Pn	06 23 19.0	+0.8
	baz=243					
FUSS			S	Sn	06 23 36.3	+0.1
	baz=243					
WHF	Hehuan Shan	1.29 245	P	Pn	06 23 19.0	+0.4
	baz=237					
WHF			eS	Sn	06 23 36.9	-0.1
	baz=237					
NFF	Wufeng Townshi	1.30 268	eP	Pn	06 23 17.9	-0.5
	baz=269					
NFF			S	Sn	06 23 36.1	-0.5
	baz=269					
HATJ	Hateruma jima	1.31 119	P	Pn	06 23 19.4	+0.9
HATJ			eS	Sn	06 23 37.9	+1.2
TDCB	Techi	1.34 251	P	Pn	06 23 19.9	+1.0
	baz=242					
TDCB			S	Sn	06 23 37.7	+0.2
	baz=242					
ESL	Shilin	1.34 229	P	Pn	06 23 18.6	-0.2
	baz=236					
ESL			S	Sn	06 23 36.7	-0.7
	baz=236					
LIOB	Emei	1.39 268	P	Pn	06 23 20.0	+0.5
	baz=265					
LIOB			S	Sn	06 23 38.1	-0.4
	baz=265					
CHGB	Renai	1.40 244	i P	Pn	06 23 20.4	+0.7
	baz=236					
CHGB			S	Sn	06 23 39.1	+0.1
	baz=236					
NSTT	Nanjuang	1.41 268	i P	Pn	06 23 20.0	+0.4
	baz=265					
NSTT			eS	Sn	06 23 39.1	+0.3
	baz=265					
JKRS	Kuro-shima	1.41 109	P	Pn	06 23 20.1	+0.4
JKRS			S	Sn	06 23 39.6	+0.8
EGFH	Guangfu	1.44 225	i P	Pn	06 23 19.9	-0.1
	baz=219					
EGFH			S	Sn	06 23 39.4	-0.2
	baz=219					
OWD	Renai	1.45 240	P	Pn	06 23 20.7	+0.4
	baz=234					
OWD			S	Sn	06 23 39.9	-0.1
	baz=234					
WUSB	Renai	1.48 242	eP	Pn	06 23 21.6	+1.0
	baz=236					
WUSB			S	Sn	06 23 40.7	+0.2
	baz=236					
JIJ	Ishigaki jima	1.49 102	P	Pn	06 23 20.8	+0.2
JIJ			S	Sn	06 23 40.2	-0.4
WHP	Taichung City	1.52 254	P	Pn	06 23 22.3	+1.3
	baz=252					
WHP			S	Sn	06 23 42.3	+1.1
	baz=252					
HGSD	Ruisui	1.57 221	P	Pn	06 23 21.8	+0.1
	baz=220					
HGSD			S	Sn	06 23 42.5	+0.1
	baz=220					
VWDT	VWDT	1.59 234	P	Pn	06 23 22.4	+0.6
	baz=228					
VWDT			S	Sn	06 23 42.5	-0.1
	baz=228					
WCS	Beigang Elemen	1.62 247	P	Pn	06 23 22.6	+0.4
	baz=241					
WCS			eS	Sn	06 23 43.3	-0.1
	baz=241					
EHY	Hungye	1.63 224	i P	Pn	06 23 22.1	-0.3
	baz=216					
EHY			S	Sn	06 23 43.0	-0.6
	baz=216					
SMLT	Sun Moon Lake	1.71 242	P	Pn	06 23 25.1	+1.7
	baz=235					
SMLT			eS	Sn	06 23 48.6	+3.1
	baz=235					
SSLB	Suanglung	1.71 238	eP	Pn	06 23 25.0	+1.6
	baz=233					
SSLB			eS	Sn	06 23 46.7	+1.2
	baz=233					
YULB	Yu-li	1.73 222	eP	Pn	06 23 23.3	-0.2
	baz=228					
YULB			eS	Sn	06 23 44.8	-1.1
	baz=228					
TYC	Yuchr	1.73 243	P	Pn	06 23 25.2	+1.6
	baz=241					
TYC			eS	Sn	06 23 47.9	+2.1
	baz=241					
EYUL	Yuli	1.75 220	eP	Pn	06 23 24.9	+1.1
	baz=227					
EYUL			eS	Sn	06 23 47.1	+0.8
	baz=227					
TWF1	Yuli	1.76 221	eP	Pn	06 23 23.6	-0.3
	baz=226					
TWF1			S	Sn	06 23 45.7	-0.8
	baz=226					
WWF	Wufeng	1.81 249	P	Pn	06 23 24.7	+0.2
	baz=256					
WHYT	Xinyi Township	1.84 238	eP	Pn	06 23 26.7	+1.7
	baz=231					
WHYT			eS	Sn	06 23 51.1	+2.8
	baz=231					
FULB	Fuli	1.88 218	eP	Pn	06 23 26.8	+1.3
	baz=212					
FULB			eS	Sn	06 23 49.9	+0.7
	baz=212					
YUS	Yu-Shan	1.89 231	eP	Pn	06 23 26.9	+0.8
	baz=224					
YUS			eS	Sn	06 23 50.3	+0.1
	baz=224					
JTJ	Tarama	1.96 91	S	Sn	06 23 51.0	-0.1
EHD	Haiduan	1.97 219	eP	Pn	06 23 25.1	-1.5
	baz=224					
EHD			eS	Sn	06 23 48.9	-2.3
	baz=224					
ALS	Alishan	1.98 234	P	Pn	06 23 28.3	+1.3
	baz=227					
ALS			eS	Sn	06 23 55.0	+3.0
	baz=227					
CHN5	Tsauling	2.02 238	eP	Pn	06 23 27.7	+0.3
	baz=246					
CHN5			S	Sn	06 23 54.0	+1.3
	baz=246					
ELDTW	Lidau	2.05 223	P	Pn	06 23 28.1	+0.4
	baz=221					
ELDTW			eS	Sn	06 23 53.3	0.0
	baz=221					
EDH	Donghe	2.06 214	P	Pn	06 23 27.7	0.0
	baz=209					
EDH			S	Sn	06 23 52.0	-1.3
	baz=209					
WRL	Guolierlin Hig	2.13 249	P	Pn	06 23 28.3	-0.4
	baz=254					
WRL			eS	Sn	06 23 54.0	-0.9
	baz=254					
TPUB	Ta-pu	2.23 232	P	Pn	06 23 32.0	+1.9
	baz=231					
TPUB			eS	Sn	06 24 00.3	+2.8
	baz=231					
LDUT	Ludao	2.24 206	P	Pn	06 23 30.1	0.0
	baz=210					
LDUT			eS	Sn	06 23 56.2	-1.3
	baz=210					
WTP	Ta-pu	2.28 231	P	Pn	06 23 32.5	+1.9
	baz=230					
WTP			eS	Sn	06 24 01.2	+2.7
	baz=230					
CHN1	Nanshi	2.38 231	P	Pn	06 23 33.5	+1.5
	baz=230					
CHN1			eS	Sn	06 24 03.9	+3.1
	baz=230					
WSL	Shuilin Townsh	2.42 242	eP	Pn	06 23 32.0	-0.4
	baz=240					
WSL			S	Sn	06 24 01.9	+0.3
	baz=240					
SCST	Cishan	2.60 227	eP	Pn	06 23 35.7	+0.9
	baz=226					
MASBT	Mashibuluo	2.71 221	eP	Pn	06 23 37.2	+0.8
	baz=220					
MASBT			eS	Sn	06 24 08.5	-0.2
	baz=220					
LAY	Lan-yu	2.80 199	eP	Pn	06 23 36.9	-0.6
	baz=203					
LAY			eS	Sn	06 24 08.2	-2.4
	baz=203					
LYUB	Lan-yu	2.82 198	eP	Pn	06 23 35.2	-2.5
	baz=202					
LYUB			eS	Sn	06 24 08.0	-3.2
	baz=202					
VWUC	VWUC	2.83 277	eP	Pn	06 23 37.0	-0.8
	baz=274					
VWUC			eS	Sn	06 24 10.0	-1.3
	baz=274					
PHUB	P'eng-hu	2.96 247	P	Pn	06 23 39.4	-0.1
	baz=246					
PHUB			eS	Sn	06 24 13.3	-1.2
	baz=246					

IDC 11 06:52:51.0±2.4, 10°.48S×124°.23E, h0km, mb3.6/1, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=214.0km s-min=34.9km az=54.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.54	135	Pn	Pn	06 56 03.7	-0.9
	0.1nm,0.3s,baz=311,slow=14,SNR=3.4						
WRA				Sn	Sn	06 58 27.1	-8.8
	0.1nm,0.3s,baz=310,slow=26,SNR=1.8 0.3nm,0.5s						
ASAR	Alice Springs	16.03	146	Pn	Pn	06 56 38.9	+0.9
	0.1nm,0.3s,baz=320,slow=12,SNR=6.8						
ASAR				Sn	Sn	06 59 33.6	-2.9
	0.1nm,0.3s,baz=320,slow=20,SNR=2.4 0.3nm,0.4s						
MKAR	Makanchi Array	68.20	330	P	P	07 03 53.3	0.0
	0.3nm,0.4s,baz=152,slow=7.4,SNR=2.4 0.3nm,0.4s						

INET 11 06:59:09.4±1.4, 12°.50N×87°.89W, h15km±20km, MW3.1
SNET 11 06:59:12.4±0.9, 12°.50N×87°.73W, h59km±21km, ML3.0

ISC 11 06:59:11.8±1.7, 12°.5N±0°.1×87°.68W±0°.07, h74km±18km, n24, σ0°.49/35, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.65	73	eP	Pn	06 59 26.7	+0.2
CRIN				eS	Sn	06 59 38.5	+1.0
CNCH	Conchagua	0.78	349	⇓eP	Pn	06 59 27.4	-0.7
CNCH				eS	Sn	06 59 40.5	+0.4
TEL3	Telica 3	0.82	85	eP	Pn	06 59 28.1	-0.3
LCND	La Caada	0.82	346	⇓eP	Pn	06 59 27.8	-0.6
LCND				eS	Sn	06 59 40.2	-0.6
LCND				IAML		06 59 42.3	
	comp=Z,577nm,0.4s						
CNGN	Cerro Negro	0.96	90	eP	Pn	06 59 28.9	-1.2
CNGN				eS	Sn	06 59 44.8	+1.1
CNRM	Centro Naciona	1.07	334	eP	Pn	06 59 31.4	0.0
CNRM				eS	Sn	06 59 45.9	-0.2
COPN	Copaltepe	1.11	107	eP	Pn	06 59 31.8	-0.2
MOMN	Momotombo	1.12	95	eP	Pn	06 59 31.9	-0.2
PACA	Pacayal	1.14	327	eP	Pn	06 59 32.5	+0.1
PACA				eS	Sn	06 59 47.7	-0.1
PACA				IAML		06 59 49.2	
	comp=Z,6μm,0.3s						
COEB	Comit de Eme	1.29	320	eP	Pn	06 59 34.3	0.0
COEB				IAML		06 59 54.1	
	comp=Z,201nm,0.4s						
BRAN	Las Pilas	1.32	81	eP	Pn	06 59 35.2	+0.7
PQSS	Presa 15 de Se	1.40	323	eP	Pn	06 59 35.7	+0.1
PQSS				eS	Sn	06 59 54.0	+0.4
MGAN	Managua	1.45	104	eP	Pn	06 59 36.4	+0.2
MGAN				eS	Sn	06 59 54.3	-0.3
HUEN		1.48	96	eP	Pn	06 59 36.6	-0.1
UESV	Universidad de	1.56	316	eP	Pn	06 59 38.0	+0.3
UESV				eS	Sn	06 59 57.4	+0.1
UESV				IAML		06 59 58.7	
	comp=Z,132nm,0.2s						
SCLA	Alcaldia de Sa	1.57	320	eP	Pn	06 59 37.8	0.0
TGUH	Tegucigalpa,Un	1.59	14	eP	Pn	06 59 38.4	+0.2
COEG	Centro de Oper	1.61	314	eP	Pn	06 59 38.5	0.0
COEG				IAML		07 00 01.9	
	comp=Z,152nm,0.3s						
SJTE	Alcalda de S	1.70	311	eP	Pn	06 59 39.6	0.0
SJTE				eS	Sn	07 00 00.3	-0.3
SJTE				IAML		07 00 03.9	
	comp=Z,49nm,0.2s						
PAVA	Las Pavas	1.71	315	eP	Pn	06 59 40.7	+0.8
PAVA				IAML		07 00 04.9	
	comp=Z,88nm,0.3s						
MATN	Matagalpa	1.77	76	eP	Pn	06 59 40.3	-0.2
P5NO	Presa 5 de nov	1.81	325	eP	Pn	06 59 40.8	-0.2
P5NO				IAML		07 00 05.1	
	comp=Z,37nm,0.6s						
BOAB	BOACO BROADBAN	.97	91	eP	Pn	06 59 42.8	-0.3
BOAB				eS	Sn	07 00 06.5	-0.6
NUBE	Las Nubes	2.47	304	eP	Pn	06 59 50.0	-0.1
NUBE				IAML		07 00 23.5	
	comp=Z,37nm,0.3s						

NEIC 11 07:12:53.0±0.5, 26°.7S±0°.1×177°.2W±0°.2, h36km±9km, mb4.3/7, Error ellipse: s-maj=21.9km s-min=18.8km az=148.0
IDC 11 07:13:20.2±19.0, 25°.12S×178°.16W, h259km±137km, mb3.6/2, mbtmp4.1/3, Error ellipse: s-maj=224.6km s-min=31.9km az=140.0

ISC 11 07:12:53.3±0.9, 26°.7S±0°.1×177°.1W±0°.1, h50km, n15, σ1°.26/15, mb4.2/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	9.99	332	P	Pn	07 15 15.5	+1.2
	7.3nm,0.8s,baz=152,slow=15,SNR=4.9						
NIUE	Niue	10.05	43	Pn	Pn	07 15 15.0	-0.2
BFZ	Birch Farm	15.00	200		Pn	07 16 22.0	-0.1
CTAO	Charters Tower	34.19	273	P	P	07 19 34.4	+0.2
CTAO				IAmb	IAmb	07 19 36.5	
	comp=Z,5.7nm,0.6s						
AS31	Alice Springs	44.24	263	P	P	07 20 56.9	-1.2
ASAR	Alice Springs	44.24	263	P	P	07 20 58.4	+0.3
	comp=Z,1.4nm,0.4s,baz=94,slow=7.7,SNR=25						
	comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	44.24	263	P	P	07 20 58.0	-0.1
WR0	Warramunga Arr	44.71	268	P	P	07 21 01.3	-0.5
WR0				IAmb	IAmb	07 21 07.7	
	comp=Z,2.3nm,1.1s						
WB2	Warramunga Arr	44.88	268	P	P	07 21 02.4	-0.8
WB2				IAmb	IAmb	07 21 38.3	
	comp=Z,5.6nm,1.3s						
WRA	Warramunga Arr	44.89	268	P	P	07 21 02.4	-0.9
	comp=Z,1.5nm,0.3s,baz=104,slow=6.2,SNR=55						
	comp=Z,1.5nm,0.3s						
WB0	Warramunga Arr	44.90	268	P	P	07 21 02.7	-0.6
WB0				IAmb	IAmb	07 21 19.5	
	comp=Z,8.9nm,1.4s						
KNRA	Kununurra	51.34	271	P	P	07 21 51.6	-1.4
SNAA	Sanae	81.82	178	P	P	07 25 08.2	+1.5
SNAA				IAmb	IAmb	07 25 28.4	
	comp=Z,3.2nm,1.5s						
NOA	NORSAR Array B	145.21	353	PKP	PKPbc	07 32 21.5	-3.0
	comp=Z,1.0nm,0.7s,baz=2.5,slow=2.3,SNR=3.7						
AKASG	Malin Array Be	148.74	327	PKPbc	PKPdf	07 32 31.8	+0.8
	comp=Z,1.3nm,0.5s,baz=44,slow=4.1,SNR=8.0						

NDI 11 07:30:13.7±4.2, 25°.34N×94°.92E, h105km±15km, mb4.5
BJI 11 07:30:13.6±0.0, 25°.45N×95°.08E, h90km, mb4.5/37, mB4.7/18
NEIC 11 07:30:14.3±2.2, 25°.25N±0°.04×95°.00E±0°.08, h95km±7km, mb4.7/44, Error ellipse: s-maj=10.1km s-min=5.3km az=103.0
IDC 11 07:30:14.1±1.6, 25°.12N×94°.93E, h96km±14km, mb4.1/27, mbtmp4.4/29, MS3.2/16, Error ellipse: s-maj=13.3km s-min=9.4km az=70.0

ISC 11 07:30:13.5±0.6, 25°.25N±0°.04×95°.03E±0°.05, h93km±5km, n162, σ1°.66/169, mb4.6/49, 9C-5D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.07	247	eP	Pn	07 30 33.8	-0.5
IMP				eS	Sn	07 30 48.8	-1.1
MOKO	MOKOCHONG	1.16	337	eP	Pn	07 30 34.8	-0.7
MOKO				eS	Sn	07 30 51.0	-0.9
JORH	JORHAT	1.64	335	eP	Pn	07 30 44.3	+3.1
JORH				eS	Sn	07 31 07.3	+5.1
JORH				ex	x	07 31 08.0	
SILR	SILCHAR	2.07	257	eP	Pn	07 30 47.4	+0.6
SILR				eS	Sn	07 31 13.0	+0.9
LKP	Lekhapani	2.20	19	eP	Pn	07 30 48.3	-0.2
DIBR	DIBRUGARH	2.21	357	ex	Pn	07 30 48.9	+0.3
DIBR				eS	Sn	07 31 13.6	-1.8
ITAN	ITANAGAR	2.22	328	eP	Pn	07 30 48.2	-0.5
ITAN				eS	Sn	07 31 13.0	-2.7
TEZP	TEZPUR	2.42	305	eP	Pn	07 30 49.6	-1.8
TEZP				eS	Sn	07 31 16.4	-4.0
ZIRO	ZIRO	2.50	335	eP	Pn	07 30 51.1	-1.5
ZIRO				eS	Sn	07 31 18.8	-3.7
SHL	Shillong	2.86	277		Pn	07 30 55.8	-1.6
BRDH	Bariadhala	4.02	231	P	Pn	07 31 11.8	-1.1
	51nm,0.3s,baz=271,slow=20,SNR=1.3						
BRDH				S	Sn	07 31 57.0	-2.0
	1μm,0.3s,baz=270,slow=19,SNR=29						
LSA	Lhasa	5.61	323	Pn	Pn	07 31 35.2	+0.3
LSA	Lhasa	5.61	323	P	Pn	07 31 35.4	+0.5
PZH	PanZhiHua	6.18	77	P	Pn	07 31 44.9	+2.6
PZH				smax	smax		
	comp=N,30nm,1.1s						
PZH				smax	smax		
	comp=E,20nm,1.3s						
PZH				LR	LR		
	comp=N,180nm,4.5s						
PZH				LR	LR		
	comp=E,170nm,5.0s						
PZH				LR	LR		
	comp=Z,180nm,9.4s						
KMI	Kunming	6.99	89	⇓P	Pn	07 31 56.5	+3.0
KMI				pmax	pmax		
	comp=Z,95nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,3.5s						
KMI				LR	LR		
	comp=N,260nm,8.4s						
KMI				LR	LR		
	comp=E,250nm,5.2s						
KMI				LR	LR		
	comp=Z,170nm,8.4s						
CHTO	Chiang Mai	7.37	150	Pn	Pn	07 31 58.8	+0.3
CM31	Chiang Mai Arr	7.68	151		Pn	07 32 03.2	+0.5
CMAR	Chiang Mai Arr	7.68	151	P	Pn	07 32 04.0	+1.3
	38nm,0.8s,baz=326,slow=13,SNR=173						
CMAR				LR	LR	07 35 24.9	
	comp=Z,63nm,20.6s,baz=335,slow=41						
CMAR	Chiang Mai Arr	7.68	151	Pn	Pn	07 32 03.7	+0.9
RAMN	Ramite	7.76	284	eP	Pn	07 32 02.6	-1.4
	171nm,0.3s						
RAMN	Ramite	7.76	284	eP	Pn	07 32 02.6	-1.4
	171nm,0.3s						
JIRN	Jiri	8.27	289	eP	Pn	07 32 09.5	-1.6
	183nm,0.4s						
JIRN	Jiri	8.27	289	eP	Pn	07 32 09.6	-1.6
	183nm,0.4s						
BOK	Bokaro	8.45	262	eP	Pn	07 32 11.5	-1.7
GUN	Gumba	8.61	290	eP	Pn	07 32 14.1	-1.5
	201nm,0.5s						
GUN	Gumba	8.61	290	eP	Pn	07 32 14.1	-1.5
	201nm,0.5s						
PKI	Pulchoki	8.93	287	eP	Pn	07 32 17.7	-2.2
	49nm,0.4s						
PKI	Pulchoki	8.93	287	eP	Pn	07 32 17.8	-2.2
	53nm,0.4s						
PKIN	Phulchoki	8.94	287	eP	Pn	07 32 17.8	-2.3
	104nm,0.4s						
PKIN	Phulchoki	8.94	287	eP	Pn	07 32 17.7	-2.3
	104nm,0.4s						
DMN	Daman	9.20	287	eP	Pn	07 32 21.0	-2.6
	66nm,0.4s						
DMN	Daman	9.20	287	eP	Pn	07 32 21.0	-2.6
	38nm,0.3s						
GKN	Gorkha	9.69	289	eP	Pn	07 32 27.5	-2.7
	166nm,0.3s						
GKN	Gorkha	9.69	289	eP	Pn	07 32 27.6	-2.7
	166nm,0.3s						
BWNR	Bhubaneshwar	9.83	242	eP	Pn	07 32 31.5	-0.6
DANN	Dangsing	10.53	290	eP	Pn	07 32 38.6	-3.1
	71nm,0.5s						
DANN	Dangsing	10.53	290	eP	Pn	07 32 38.7	-3.0
	71nm,0.5s						
GYA	Guiyang	10.55	81	⇓iP	Pn	07 32 45.0	+3.1
GOMU	GeErMu	10.91	359	P	Pn	07 32 44.5	-2.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,74nm,4.5s						
ALBI	Allahabad	11.96	273	eP	Pn	07 32 57.8	-3.0
BLSP	Bilaspur	12.22	258	eP	Pn	07 33 01.6	-2.7
LZH	Lanzhou	13.19	33	eP	Pn	07 33 16.1	-1.2
LZH				pP	P	07 33 33.2	+9.4
LZH				sP		07 33 45.0	
LZH				pmax	pmax		
	comp=Z,38nm,1.1s						
ENH	Enshi	13.74	65		Pn	07 33 24.0	-0.4
PTH	Pithoragarh	13.83	291	eP	Pn	07 33 22.1	-3.6
JBP	Jabalpur	13.88	265	eP	Pn	07 33 24.1	-2.2
JBP				IAmb	IAmb	07 33 32.2	
	comp=Z,21nm,0.6s						
JBP				ex	x	07 35 49.9	
GTA	Gaotai	14.68	15	eP	Pn	07 33 41.2	+4.6
GTA				pP	P	07 33 55.3	+15
GTA				sP		07 34 06.8	
XAN	Xi'an	14.91	51	⇓P	Pn	07 33 37.0	-2.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JHNI	Jhansi	14.91	274	eP	Pn	07 33 34.0	-5.5
NGP	Nagpur	15.24	258	eP	Pn	07 33 41.6	-2.2
BHPL	Bhopal	16.18	267	eP	Pn	07 33 51.8	-3.6
BHPL				IAmb	IAmb	07 33 55.5	
	comp=Z,38nm,0.8s						
SMLA	Simla	16.79	294	eP	Pn	07 33 57.9	-5.0
SMLA				IAmb	IAmb	07 34 05.0	
	comp=Z,22nm,0.2s						
HYB	Hyderabad	17.20	246	eP	P	07 34 10.0	+1.7
HYB				IAmb	IAmb	07 34 10.8	
	comp=Z,13nm,0.8s						
HYBB	Hyderabad (bro	17.20	246	eP	P	07 34 09.9	+1.6
HYBB				eS	Sn	07 37 20.3	+0.9
AJM	Ajmer	18.39	278	eP	P	07 34 20.7	-0.6
WMQ	Urumqi	19.47	344	eP	Pn	07 34 34.6	-0.4
WMQ				pP	pP	07 34 52.2	+1.0
WMQ				sP	sP	07 35 06.8	+3.6
WMQ				pmax	pmax		
	comp=Z,53nm,0.7s						
HHC	Hu-ho-hao-te	20.78	37	eP	Pn	07 34 49.2	-1.2
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,4.1s						
KSH	Kashi	21.41	316	P	P	07 34 55.6	+1.6
KSH				sP	sP	07 35 25.5	+1.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TARG	Taragay, Kyrgy	21.76	323	P	P	07 34 57.5	-0.4
NJ2	Nanjing	21.95	67	eP	P	07 34 59.3	-0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PALK	Pallekele	22.52	220	P	P	07 35 07.3	+1.5
	comp=Z,12nm,0.7s,baz=128,slow=11,SNR=5.7						
PALK				LR	LR	07 47 02.6	
	comp=Z,33nm,18.4s,baz=157,slow=45						
PALK	Pallekele	22.52	220	P	P	07 35 06.9	+1.2
PSI	Prapat	22.64	170	P	P	07 35 08.7	+1.7
	comp=Z,7.1nm,0.6s,baz=321,slow=13,SNR=5.8						
	comp=Z,7.1nm,0.6s						
BOOM	Boomskoye usch	23.29	322	P	P	07 35 16.0	+2.6
MK31	Makanchi Array	23.77	338	P	P	07 35 18.9	+1.4
MKAR	Makanchi Array	23.77	338	P	P	07 35 18.6	+1.1
	comp=Z,6.3nm,0.5s,baz=154,slow=8.5,SNR=87						
MKAR				PcP	PcP	07 39 00.1	+1.5
	comp=Z,0.5nm,0.3s,baz=203,slow=3.2,SNR=5.9						
MKAR				ScP	ScP	07 42 28.8	+0.3
	comp=Z,1.8nm,0.9s,baz=111,slow=3.6,SNR=4.5						
MKAR				LR	LR	07 46 17.2	
	comp=Z,49nm,19.0s,baz=162,slow=40						
	comp=Z,6.3nm,0.5s						
MKAR	Makanchi Array	23.77	338	P	P	07 35 18.8	+1.3
MAKZ	Makanchi	23.89	337	P	P	07 35 20.3	+1.8
GSI	Gunungsitoli	23.94	174	P	P	07 35 18.9	-0.2
SONM	Songino Array	24.27	19	P	P	07 35 22.5	+0.5
	comp=Z,2.2nm,0.7s,baz=198,slow=10,SNR=9.2						
SONM				S	S	07 39 32.8	-1.4
	comp=Z,0.4nm,0.4s,baz=131,slow=44,SNR=1.0						
	comp=Z,2.2nm,0.7s						
GAR	Garm	24.92	309	P	P	07 35 29.4	+1.3
GAR				IAmb	IAmb	07 35 30.4	
	comp=Z,46nm,1.1s						

BTK Batken 25.06 312 P P 07 35 31.4 +2.1
BTK IAmb IAmb 07 36 15.7
comp=Z,17nm,0.7s
CHGR Chuyangaron 25.59 308 P P 07 35 35.1 +0.9
CHGR IAmb IAmb 07 36 00.9
comp=Z,22nm,1.2s
KURBB Kurchatov Arra 28.34 338 P P 07 35 59.7 +1.2
comp=Z,1.7nm,0.5s,baz=155,slow=7.2,SNR=16
KURBB PcP **PcP 07 39 09.7 +0.7**
comp=Z,1.2nm,0.4s,baz=146,slow=2.4,SNR=17
KURBB ScP **ScP 07 42 42.0 +0.2**
comp=Z,1.2nm,0.6s,baz=143,slow=2.7,SNR=4.3
comp=Z,1.7nm,0.5s
KURK Kurchatov 28.39 338 P P 07 36 00.1 +1.2
ZAA0 Zalesovo Array 29.66 348 P P 07 36 10.8 +0.7
ZALV Zalesovo Beam 29.66 348 P P 07 36 11.4 +1.3
comp=Z,1.7nm,0.3s,baz=159,slow=7.8,SNR=6.1
ZALV LR LR 07 49 57.3
comp=Z,25nm,18.9s,baz=240,slow=40
comp=Z,1.7nm,0.3s
JOW Kunigami 29.87 80 LR LR 07 49 40.3
comp=Z,54nm,18.3s,baz=278,slow=39
KSRS Korea Array 30.46 59 LR LR 07 50 01.7
comp=Z,26nm,19.3s,baz=30,slow=39
CN2 Changchun 30.90 46 *eP* **P 07 36 19.8 -1.4**
CN2 pP pP 07 36 41.6 -0.9
CN2 S **S 07 41 14.7 -3.9**
CN2 sS sS 07 41 53.2 -2.3
BVAR Borovoye Array 33.35 333 P P 07 36 43.7 +1.1
comp=Z,1.4nm,0.4s,baz=139,slow=11,SNR=12
BVAR PcP **PcP 07 39 22.5 +0.2**
comp=Z,1.4nm,0.5s,baz=149,slow=3.4,SNR=4.9
BVAR LR LR 07 52 30.2
comp=Z,58nm,19.8s,baz=131,slow=40
comp=Z,1.4nm,0.4s
GEYT Alibeck 33.67 301 P P 07 36 47.3 +1.7
comp=Z,1.8nm,0.5s,baz=106,slow=15,SNR=3.8
comp=Z,1.8nm,0.5s
ABKAR Akbulak array 36.29 320 P P 07 37 09.2 +1.3
ABKAR Akbulak array 36.29 320 P P 07 37 09.4 +1.5
ABKAR IAmb IAmb 07 37 10.2
comp=Z,8.6nm,1.1s
AKTO Aktyubinsk 37.95 321 P P 07 37 22.8 +0.9
comp=Z,3.6nm,0.3s,baz=104,slow=6.7,SNR=28
AKTO LR LR 07 54 23.5
comp=Z,37nm,18.5s,baz=139,slow=38
comp=Z,3.6nm,0.3s
MJAR Matsushiro Arr 38.44 62 LR LR 07 54 31.9
comp=Z,28nm,21.9s,baz=252,slow=38
KAPI Kappang 38.50 138 LR LR 07 54 46.7
comp=Z,20nm,19.2s,baz=314,slow=38
ARU Arti 40.77 330 P P 07 37 46.2 +0.9
comp=Z,7.3nm,0.2s,baz=104,slow=10,SNR=5.2
comp=Z,7.3nm,0.2s
JCJ Chichijima 42.17 77 LR LR 07 54 52.5
comp=Z,23nm,20.3s,baz=228,slow=35
NRIK Noril'sk 44.33 356 P P 07 38 14.7 +0.8
comp=Z,1.5nm,0.3s,baz=163,slow=7.7,SNR=5.7
comp=Z,1.5nm,0.3s
RAYN Ar Rayn 44.93 279 P P 07 38 19.4 -0.1
FAKI Fak Fak 45.68 122 P P 07 38 24.4 -0.9
FAKI IAmb IAmb 07 38 25.8
comp=Z,6.6nm,0.7s
KIRV Kirov 46.12 329 P P 07 38 29.9 +1.8
comp=Z,10nm,0.4s,baz=118,slow=7.5,SNR=4.6
comp=Z,10nm,0.4s
TIXI Tiksi 50.16 13 P P 07 38 59.4 +0.3
comp=Z,3.8nm,0.3s,baz=270,slow=8.1
comp=Z,3.8nm,0.3s
TIXI Tiksi 50.16 13 P P 07 38 59.4 +0.3
TIXI IAmb IAmb 07 39 05.7
comp=Z,16nm,1.5s
MA2 Magadan 51.34 33 LR LR 08 03 34.0
comp=Z,32nm,18.9s,baz=222,slow=38
KLMR Klimovskoe 51.61 329 *eP* **P 07 39 09.5 -0.6**
KLMR AMP 07 39 11.8
comp=Z,16nm,1.3s
KLMR *es*P **sP 07 39 42.7 -1.1**
MBWA Marble Bar 52.00 150 P P 07 39 13.0 -0.5
MBWA IAmb IAmb 07 39 13.5
comp=Z,8.9nm,0.8s
KNRA Kununurra 52.31 137 P P 07 39 15.3 -0.5
KNRA IAmb IAmb 07 39 23.6
comp=Z,5.5nm,0.9s
PSA00 Pilbara Seismi 52.42 150 P P 07 39 16.3 -0.3
PSA00 IAmb IAmb 07 39 16.8
comp=Z,11nm,1.1s
BZK Bozkurt 52.42 305 P P 07 39 15.9 -0.6
BRTR Keskin Array B 52.81 302 P P 07 39 20.5 +0.9
comp=Z,2.8nm,0.7s,baz=122,slow=6.8,SNR=14
comp=Z,2.8nm,0.7s
BRTR Keskin Array B 52.81 302 P P 07 39 19.9 +0.3
BORA Eskisehir 55.24 302 P P 07 39 36.9 -0.3
BORA IAmb IAmb 07 39 38.3
comp=Z,10nm,0.8s
AKASG Malin Array Be 55.70 315 P P 07 39 40.1 -0.1
comp=Z,1.1nm,0.3s,baz=79,slow=6.4,SNR=16
comp=Z,1.1nm,0.3s
AKBB Malin Array Si 55.70 315 P P 07 39 40.4 +0.3
AKBB IAmb IAmb 07 39 40.9
comp=Z,7.2nm,0.9s
ELL Elmali 56.03 299 P P 07 39 44.0 +1.1
TLCR 56.06 309 ⇑P P 07 39 43.7 +0.9
AKAS Kas 56.34 298 P P 07 39 44.5 -0.7
CFR Carcaliu 56.54 309 ⇑P P 07 39 46.6 +0.3
VRI Vrincioaia 57.49 310 ⇓P P 07 39 54.2 +1.3
PLOR Plostina 57.54 310 ⇑P P 07 39 54.3 +0.9
MORW Morawa 57.66 158 P P 07 39 54.0 -0.2
MORW IAmb IAmb 07 40 00.6
comp=Z,11nm,1.1s
BIZ Bicaz 57.85 311 ⇑P P 07 39 55.8 +0.4
COVR Voineasa-Covas 57.85 310 ⇓P P 07 39 56.2 +0.7
MLR Muntele Rosu 58.06 309 ⇑P P 07 39 58.1 +1.0
MLR Muntele Rosu 58.06 309 P P 07 39 58.9 +1.8
FIA1 FINESS Array S 58.10 328 P P 07 39 57.9 +1.0
FIA1 IAmb IAmb 07 40 38.6
comp=Z,17nm,1.2s
FINES FINESS Array B 58.10 328 P P 07 39 57.7 +0.8
comp=Z,3.0nm,0.5s,baz=97,slow=6.5,SNR=23
comp=Z,3.0nm,0.5s
FINES FINESS Array B 58.10 328 P P 07 39 57.9 +1.0
BURAR Bucovina Array 58.41 312 ⇑P P 07 40 00.7 +1.3
KARP Karpathos 58.41 298 P P 07 40 00.2 +0.6
BUR08 Bucovina Ar. S 58.42 312 P P 07 39 59.8 +0.2
WB0 Warramunga Arr 58.89 136 P P 07 40 01.8 -1.2
WB0 IAmb IAmb 07 40 03.3
comp=Z,4.5nm,0.8s
WRA Warramunga Arr 58.99 136 P P 07 40 02.6 -1.1
comp=Z,2.8nm,0.7s,baz=321,slow=7.5,SNR=31
comp=Z,2.8nm,0.7s
WB2 Warramunga Arr 58.99 136 P P 07 40 03.0 -0.7
WB2 IAmb IAmb 07 40 03.4
comp=Z,4.1nm,0.8s
WR0 Warramunga Arr 59.12 136 P P 07 40 03.7 -0.9
WR0 IAmb IAmb 07 40 04.8
comp=Z,5.6nm,0.9s
ARCES ARCESS Array B 59.43 338 P P 07 40 06.9 +0.8
comp=Z,1.1nm,0.5s,baz=97,slow=6.5,SNR=9.8
ARCES LR LR 08 08 59.4
comp=Z,29nm,19.7s,baz=252,slow=39
comp=Z,1.1nm,0.5s
LOT Lotru 59.59 309 ⇑P P 07 40 07.3 -0.4
SANT Santorini 59.63 299 ⇑P P 07 40 06.5 -1.5
SANT Santorini 59.63 299 P P 07 40 07.6 -0.4
BLKB Belogradchik 60.59 307 ⇑P P 07 40 14.6 +0.1
AS31 Alice Springs 61.51 139 P P 07 40 20.1 -0.7
ASAR Alice Springs 61.51 139 P P 07 40 20.3 -0.5
comp=Z,2.4nm,0.7s,baz=319,slow=6.7,SNR=28
comp=Z,2.4nm,0.7s
ASAR Alice Springs 61.51 139 P P 07 40 19.9 -0.9
NWAO Narrogin (SRO) 61.60 159 P P 07 40 20.5 -0.8
ITM Ithomi 62.25 300 P P 07 40 25.0 -0.8
HFS Hagfors 64.17 327 LR LR 08 11 08.2
comp=Z,40nm,19.0s,baz=52,slow=38
NC405 NORSAR Array S 65.03 328 P P 07 40 44.5 +0.9
NB2 NORSAR Subarra 65.28 328 P P 07 40 45.5 +0.3
comp=Z,2.2nm,0.5s,baz=82,slow=6.5
NOA NORSAR Array B 65.28 328 P P 07 40 45.4 +0.1
comp=Z,3.0nm,0.6s,baz=83,slow=6.4,SNR=14
NOA LR LR 08 12 18.1
comp=Z,18nm,18.1s,baz=110,slow=39
comp=Z,3.0nm,0.6s
NC204 NORSAR Array S 65.47 328 P P 07 40 47.4 +1.0
GERES GERESS Array B 65.87 314 P P 07 40 50.2 +0.8
comp=Z,2.4nm,0.6s,baz=77,slow=7.0,SNR=15
comp=Z,2.4nm,0.6s

VOI Vohitsoka 66.25 229 P P 07 40 52.5 +0.5
VOI IAmb IAmb 07 40 52.9
comp=Z,21nm,1.0s
BBOO Buckleboo 69.73 144 P P 07 41 12.5 -1.1
BBOO IAmb IAmb 07 41 16.0
comp=Z,30nm,1.4s
STKA Stephens Creek 72.14 140 P P 07 41 26.9 -1.2
comp=Z,1.7nm,0.6s,baz=305,slow=4.8,SNR=6.9
comp=Z,1.7nm,0.6s
H21K Melozitna Rive 75.85 23 P P 07 41 49.7 +0.4
BMAR Burnt Mountain 77.61 20 P P 07 42 00.5 +1.3
MDM Murphy Dome 77.85 23 P P 07 42 01.0 +0.4
MDM IAmb IAmb 07 42 25.7
comp=Z,17nm,1.4s
ILAR Eielson Array 78.43 23 P P 07 42 03.0 -0.8
comp=Z,0.9nm,0.8s,baz=294,slow=4.6,SNR=7.5
comp=Z,0.9nm,0.8s
INK Inuvik 80.15 16 P P 07 42 13.5 +0.5
comp=Z,2.6nm,0.5s,baz=351,slow=4.2,SNR=4.8
comp=Z,2.6nm,0.5s
ESDC Sonseca Array 80.76 309 P P 07 42 16.6 -0.4
comp=Z,1.4nm,0.9s,baz=54,slow=4.4,SNR=6.2
comp=Z,1.4nm,0.9s
BCAR Beaver Creek A 81.26 23 P P 07 42 19.8 +0.7
LBTB Lobatse 83.67 239 LR LR 08 19 03.3
comp=Z,16nm,18.3s,baz=90,slow=35
BOSA Boshof 85.81 236 P P 07 42 43.5 +0.5
comp=Z,4.1nm,0.6s,baz=76,slow=3.6,SNR=11
comp=Z,4.1nm,0.6s
TORD Torodi Ar. Bea 87.44 283 P P 07 42 51.8 +0.6
comp=Z,1.4nm,0.4s,baz=53,slow=4.4,SNR=25
comp=Z,1.4nm,0.4s
MAW Mawson 95.63 192 P P 07 43 23.9 -3.9
comp=Z,6.8nm,0.7s,baz=170,slow=11,SNR=11
DBIC Dimbokro 96.05 280 P P 07 43 31.1 0.0
comp=Z,1.4nm,0.5s,baz=87,slow=6.9,SNR=4.0
comp=Z,1.4nm,0.5s
TXAR Lajitas Array 122.83 19 PKP PKPdf 07 48 58.8 -0.6
comp=Z,0.3nm,0.4s,baz=327,slow=0.5,SNR=9.6
BDFB Brasilia 144.17 278 PKP PKPbc 07 49 38.1 +0.3
comp=Z,8.4nm,0.7s,baz=81,slow=2.4,SNR=16
ROSC El Rosal 148.35 339 PKPbc PKiKP 07 49 51.6 -0.4
comp=Z,11nm,0.3s,baz=102,slow=3.6,SNR=9.1
CPUP Villa Florida 155.10 262 PKPbc PKPbc 07 50 03.3
comp=Z,1.1nm,0.5s,baz=87,slow=4.1,SNR=4.2
CPUP PKPab **PKPab 07 50 21.1 -0.1**
comp=Z,1.2nm,0.6s,baz=84,slow=3.8,SNR=4.0
LPAZ La Paz 161.91 296 PKP PKPdf 07 50 05.3 -0.1
comp=Z,0.9nm,0.8s,baz=45,slow=2.9,SNR=5.8

IDC 11 07:30:36.5±2.2, 2°.34N×123°.79E, h0km, mb3.6/3, mbtmp3.6/3, MS2.9/1, Error ellipse: s-maj=285.4km s-min=28.3km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.45**	**155**	P	P	07 35 57.3	+0.1
	0.7nm,0.5s,baz=334,slow=9.8,SNR=22						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**27.66**	**160**	P	P	07 36 26.2	-0.1
	0.2nm,0.3s,baz=341,slow=7.4,SNR=6.6						
	0.2nm,0.3s						
PALK	**Pallekele**	**43.19**	**278**	LR	LR	07 57 42.0	
	comp=Z,16nm,19.4s,baz=135,slow=38						
MKAR	**Makanchi Array**	**57.07**	**327**	P	P	07 40 24.5	-0.1
	0.3nm,0.3s,baz=123,slow=5.3,SNR=1.6						
	0.3nm,0.3s						

MAN 11 07:32:49.0, 13°.59N×120°.59E, h99km, mb5.0, ML4.0, MS4.0, 3C-4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**293**	⇓*iP*	Pn	07 33 05.4	+1.6
LUBP				*i*S	Sn	07 33 17.5	+2.7
JCNP	**Jose Panganiba**	**2.16**	**71**	*e*S	Sn	07 33 50.5	+0.4
JCNP	**Jose Panganiba**	**2.16**	**71**	⇓*eP*	Pn	07 33 24.2	+0.7
PACPP	**Pamplona Cagay**	**4.89**	**9**	⇓*eP*	Pn	07 33 59.9	-0.3
PACPP				*i*S	Sn	07 35 00.3	+4.7
TABP	**Talibon, Bohol**	**5.05**	**133**	⇑*eP*	Pn	07 34 03.6	+1.2
GHBP	**Garcia Hernand**	**5.38**	**137**	⇑*eP*	Pn	07 34 08.3	+1.5
CICP	**Calayan Island**	**5.70**	**9**	⇑*iP*	Pn	07 34 12.6	+1.4
BUKP	**Musuan**	**7.18**	**142**	⇓*eP*	Pn	07 34 34.7	+3.3

SOME ***11*** *07:35:32.9, 39°.52N×73°.80E, h15km*
KRNET ***11*** *07:35:33.1±0.1, 39°.47N×73°.73E, mb3.9*
IDC ***11*** *07:35:35.3±1.8, 39°.56N×73°.48E, h0km, mb3.7/6, mbtmp3.7/10, ML3.4/4, MS3.1/4, Error ellipse: s-maj=31.2km s-min=17.0km az=131.0*
NNC ***11*** *07:35:39.5±0.9, 39°.71N×73.65E, h4km±4km, mb4.5, mpv4.2, Error ellipse: s-maj=7.4km s-min=3.5km az=175.0*
ISC 11 07:35:35.9±1.5, 39°.65N±0°.05×73.71E±0°.03, h8km±10km, n81, σ2.9 06/109, mb3.8/6, MS3.4/3, 35C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.13**	**321**	⇑*iP*	**Pg**	**07 35 57.5**	**-0.1**
	baz=26						
OHH				⇑*iS*	**Sn**	**07 36 15.4**	**+1.5**
	baz=26						
DRK	**Karamyk**	**1.49**	**264**	⇑*iP*	**Pn**	**07 36 01.4**	**-1.8**
	baz=71						
DRK				⇑*iS*	**Sn**	**07 36 22.0**	**-1.0**
	baz=71						
ARLS	**Aral**	**2.26**	**12**	⇑*eP*	**Pb**	**07 36 16.2**	**-0.9**
	baz=11						
ARLS				⇑*iS*	**Sg**	**07 36 47.4**	**-1.2**
	baz=11						
BTK	**Batken**	**2.27**	**281**	⇑*eP*	**Pn**	**07 36 14.6**	**+0.8**
	baz=86						
BTK				⇑*iS*	**Sb**	**07 36 45.2**	**-0.1**
	baz=86						
AML	**Almayashu**	**2.48**	**360**	P	**Pb**	**07 36 21.4**	**+0.3**
	SNR=18						
NRN	**Naryn**	**2.50**	**44**	⇑*eP*	**Pn**	**07 36 18.6**	**+1.4**
	baz=41						
NRN				⇑*iS*	**Sb**	**07 36 51.6**	**-0.7**
	baz=41						
ARK	**Arkit**	**2.53**	**329**	⇑*eP*	**Pb**	**07 36 19.8**	**-1.8**
	baz=31						
ARK				⇑*iS*	**Sb**	**07 36 53.8**	**+0.8**
	baz=31						
UCH	**Uchtor**	**2.65**	**13**	P	**Pb**	**07 36 24.3**	**+0.3**
	SNR=32						
UCH	**Uchtor**	**2.65**	**13**	⇓*iP*	**Pb**	**07 36 21.9**	**-2.0**
	baz=12						
UCH				⇓*eS*	**Sb**	**07 36 57.4**	**+0.6**
	baz=12						
GAR	**Garm**	**2.71**	**257**	⇑*iP*	**Pn**	**07 36 19.8**	**-0.1**
	baz=61						
GAR				⇑*iS*	**Sn**	**07 36 54.1**	**+1.1**
	baz=61						
EKS2	**Erkin-Say**	**3.01**	**1**	P	**Pb**	**07 36 30.0**	**+0.1**
	SNR=7.2						
EKS2	**Erkin-Say**	**3.01**	**1**	⇑*eP*	**Pn**	**07 36 26.7**	**+2.6**
	baz=1.0						
EKS2				⇑*iS*	**Sb**	**07 37 05.9**	**-1.1**
	baz=1.0						
AAK	**Ala-Archa**	**3.05**	**11**	P	**Pb**	**07 36 29.9**	**-0.7**
	SNR=11						
AAK	**Ala-Archa**	**3.05**	**11**	Pn	**Pb**	**07 36 30.2**	**-0.3**
	7.0nm,0.3s,baz=148,slow=5.7,SNR=25						
AAK				Lg	Lg	07 37 14.2	
	7.8nm,0.3s,baz=344,slow=21,SNR=16						
	15nm,0.3s						
AAK	**Ala-Archa**	**3.05**	**11**	⇑*eP*	**Pn**	**07 36 27.3**	**+2.7**
	baz=10.0						
AAK				⇑*iS*	**Sb**	**07 37 06.7**	**-1.3**
	baz=10.0						
KBK	**Karagaybulak**	**3.15**	**17**	P	**Pb**	**07 36 32.4**	**+0.1**
	SNR=10						
KBK	**Karagaybulak**	**3.15**	**17**	⇑*iP*	**Pn**	**07 36 28.6**	**+2.6**
	baz=16						
KBK				⇑*iS*	**Sb**	**07 37 08.8**	**-2.1**
	baz=16						
ULHL	**Ulahol**	**3.23**	**36**	P	**Pg**	**07 36 37.9**	**+0.1**
	SNR=10						
ULHL	**Ulahol**	**3.23**	**36**	⇓*iP*	**Pn**	**07 36 29.3**	**+2.2**
	baz=34						
ULHL				⇓*iS*	**Sb**	**07 37 10.2**	**-3.0**
	baz=34						
BOOM	**Boomskoye usch**	**3.30**	**30**	⇑*eP*	**Pn**	**07 36 30.3**	**+2.2**
	baz=28						
BOOM				⇑*iS*	**Sb**	**07 37 12.3**	**-3.0**
	baz=28						
CHMS	**Chumysh**	**3.44**	**13**	⇑*eP*	**Pn**	**07 36 32.4**	**+2.5**
	baz=12						
CHMS				⇑*iS*	**Sb**	**07 37 15.9**	**-3.2**
	baz=12						
TKM2	**Tokmak 2**	**3.57**	**23**	⇑*eP*	**Pn**	**07 36 34.3**	**+2.5**
	baz=22						
TKM2				⇑*iS*	**Sb**	**07 37 18.9**	**-4.1**
	baz=22						
USP	**Ospenovka**	**3.67**	**9**	P	**Pb**	**07 36 42.1**	**+1.1**
	SNR=6.9						
USP	**Ospenovka**	**3.67**	**9**	⇓*iP*	**Pn**	**07 36 35.7**	**+2.7**
	baz=8.0						
USP				⇓*iS*	**Sb**	**07 37 21.4**	**-4.3**
	baz=8.0						
DZA	**Taraz**	**3.71**	**332**	*eP*	**Pg**	**07 36 45.0**	**-1.9**
	92nm,0.1s						
DZA				*eS*	**Sg**	**07 37 36.8**	**+1.8**
	270nm,0.2s						
DZA	**Taraz**	**3.71**	**332**	Pg	**Pg**	**07 36 45.4**	**-1.5**
	92nm,0.1s						
DZA				Lg	Lg	07 37 35.7	
	270nm,0.2s						
IUG	**Iuzhnay**	**3.75**	**313**	*eP*	**Pg**	**07 36 47.1**	**-0.6**
	976nm,0.7s						
IUG				*eS*	**Sg**	**07 37 40.5**	**+4.3**
	398nm,0.8s						
IUG	**Iuzhnay**	**3.75**	**313**	Pg	**Pg**	**07 36 45.5**	**-2.1**
	976nm,0.7s						
IUG				Lg	Lg	07 37 35.6	
	398nm,0.8s						
KST	**Kastek**	**3.79**	**26**	*eP*	**Pg**	**07 36 46.7**	**-1.9**
	22nm,0.4s						
KST				*eS*	**Sg**	**07 37 40.0**	**+2.2**
	76nm,0.6s						
KST	**Kastek**	**3.79**	**26**	Pg	**Pg**	**07 36 46.7**	**-1.9**
	22nm,0.4s						
KST				Lg	Lg	07 37 37.7	
	76nm,0.6s						
MTBS	**Maitube**	**4.04**	**30**	*eP*	**Pg**	**07 36 51.7**	**-1.6**
	17nm,0.4s						
MTBS				*eS*	**Sg**	**07 37 48.3**	**+2.7**
	48nm,0.3s						
MTBS	**Maitube**	**4.04**	**30**	Pg	**Pg**	**07 36 51.7**	**-1.6**
	17nm,0.4s						
MTBS				Lg	Lg	07 37 46.3	
	48nm,0.3s						
CHM	**Chimkent**	**4.10**	**312**	*eP*	**Pb**	**07 36 50.9**	**+2.5**
	7.9nm,0.4s						
CHM				*eS*	**Sg**	**07 37 47.1**	**-0.4**
	216nm,0.2s						
KK31	**Karatay Array**	**4.21**	**326**	Pn	**Pn**	**07 36 44.5**	**+4.1**
	1.7nm,0.3s,baz=130,slow=12,SNR=24						
KK31				⇓Pg	**Pg**	**07 36 54.4**	**-2.1**
	14nm,0.6s,baz=146,slow=20,SNR=7.6						
KK31					Sn	**Sn**	**07 37 32.6**	**+2.8**
	24nm,0.7s,baz=156,slow=16,SNR=4.9						
KK31				⇑Lg	Lg	07 37 49.3	
	55nm,0.7s,baz=147,slow=27,SNR=3.8						
KRBS	**Karabastau**	**4.31**	**19**	*eP*	**Pg**	**07 36 55.9**	**-2.5**
	19nm,0.5s						
KRBS				*eS*	**Sg**	**07 37 55.9**	**+1.7**
	40nm,0.6s						
KRBS	**Karabastau**	**4.31**	**19**	Pg	**Pg**	**07 36 57.1**	**-1.3**
	19nm,0.5s						
KRBS				Lg	Lg	07 37 55.8	
	40nm,0.6s						
MDOK	**Medeo**	**4.32**	**34**	*eP*	**Pg**	**07 36 56.8**	**-1.9**
	18nm,0.3s						
MDOK				*eS*	**Sg**	**07 37 57.7**	**+3.1**
	47nm,1.2s						
MDOK	**Medeo**	**4.32**	**34**	⇑Pg	**Pg**	**07 36 58.2**	**-0.4**
	13nm,0.6s						
MDOK				Pg	**Pg**	**07 36 58.3**	**-0.4**
	18nm,0.3s						
MDOK				⇑Lg	Lg	07 37 56.6	
	97nm,1.3s						
MDOK				Lg	Lg	07 37 57.7	
	47nm,1.2s						
KNDC	**Almaty**	**4.33**	**33**	⇑Pg	**Pg**	**07 36 58.1**	**-0.7**
	37nm,0.4s						
KNDC				⇑Lg	Lg	07 37 55.6	
	255nm,0.9s						
KOTS	**Kotyrbulak**	**4.40**	**34**	*eP*	**Pg**	**07 36 58.0**	**-2.3**
	21nm,0.4s						
KOTS				*eS*	**Sg**	**07 37 59.7**	**+2.4**
	179nm,0.8s						
KOTS	**Kotyrbulak**	**4.40**	**34**	Pg	**Pg**	**07 36 59.4**	**-0.9**
	21nm,0.4s						
KOTS				Lg	Lg	07 37 59.7	
	179nm,0.8s						
KUU	**Kurty**	**4.68**	**24**	*eP*	**Pg**	**07 37 02.6**	**-2.9**
	15nm,0.7s						
KUU				*eS*	**Sg**	**07 38 08.1**	**+2.0**
	84nm,0.6s						
KUU	**Kurty**	**4.68**	**24**	Pg	**Pg**	**07 37 05.3**	**-0.2**
	15nm,0.7s						
KUU				Lg	Lg	07 38 09.9	
	84nm,0.6s						
SATY	**Saty**	**4.91**	**44**	*eP*	**Pg**	**07 37 07.5**	**-2.4**
	23nm,0.6s						
SATY				*eS*	**Sg**	**07 38 15.8**	**+2.2**
	32nm,1.0s						
SATY	**Saty**	**4.91**	**44**	Pg	**Pg**	**07 37 07.8**	**-2.1**
	23nm,0.6s						
SATY				Lg	Lg	07 38 14.3	
	32nm,1.0s						
ZHN	**Zhinishke**	**5.00**	**44**	*eP*	**Pg**	**07 37 09.1**	**-2.6**
	17nm,0.2s						
ZHN				*eS*	**Sg**	**07 38 18.5**	**+2.0**
	19nm,0.2s						
ZHN	**Zhinishke**	**5.00**	**44**	Pg	**Pg**	**07 37 09.8**	**-1.9**
	17nm,0.2s						
ZHN				Lg	Lg	07 38 17.4	
	19nm,0.2s						
KURS	**Kuram**	**5.09**	**40**	*eP*	**Pg**	**07 37 10.4**	**-3.0**
	15nm,0.5s						
KURS				*eS*	**Sg**	**07 38 20.9**	**+1.5**
	33nm,0.6s						
KURS	**Kuram**	**5.09**	**40**	Pg	**Pg**	**07 37 11.2**	**-2.2**
	15nm,0.5s						
KURS				Lg	Lg	07 38 20.0	
	33nm,0.6s						
UZB	**Uzynbulak**	**5.31**	**47**	*eP*	**Pg**	**07 37 14.7**	**-2.9**
	7.1nm,0.4s						
UZB				*eS*	**Sg**	**07 38 28.0**	**+1.7**
	19nm,0.8s						
UZB	**Uzynbulak**	**5.31**	**47**	Pg	**Pg**	**07 37 15.9**	**-1.7**
	7.1nm,0.4s						
UZB				Lg	Lg	07 38 28.0	
	19nm,0.8s						
KPKS	**Kokpek**	**5.34**	**43**	*eP*	**Pg**	**07 37 14.9**	**-3.2**
	15nm,0.7s						
KPKS				*eS*	**Sg**	**07 38 28.0**	**+0.7**
	40nm,0.5s						
KPKS	**Kokpek**	**5.34**	**43**	Pg	**Pg**	**07 37 15.9**	**-2.2**
	15nm,0.7s						
KPKS				Lg	Lg	07 38 28.0	
	40nm,0.5s						
BTLS	**Baital**	**5.40**	**3**	*eP*	**Pg**	**07 37 15.2**	**-4.1**
	11nm,0.6s						
BTLS				*eS*	**Sg**	**07 38 28.3**	**-0.9**
	28nm,0.7s						
BTLS	**Baital**	**5.40**	**3**	Pg	**Pg**	**07 37 17.4**	**-1.9**
	11nm,0.6s						
BTLS				Lg	Lg	07 38 30.6	
	28nm,0.7s						
SHLS	**Shalkode**	**5.57**	**49**	*eP*	**Pg**	**07 37 24.4**	**+1.9**
	7.2nm,0.5s						
SHLS				*eS*	Sg	07 38 44.0	+9.3
	17nm,1.2s						
SHLS	**Shalkode**	**5.57**	**49**	Pg	**Pg**	**07 37 25.3**	**+2.7**
	7.2nm,0.5s						
SHLS				Lg	Lg	07 38 44.0	
	17nm,1.2s						
PDGK	**Podgornoye**	**5.69**	**48**	⇑Pg	**Pg**	**07 37 24.2**	**-0.7**
	12nm,0.9s						
PDGK				⇑Lg	Lg	07 38 39.1	
	40nm,1.2s						
BLB	**Baldybastay**	**5.70**	**37**	*eP*	**Pg**	**07 37 21.7**	**-3.3**
	15nm,0.5s						
BLB				*eS*	**Sg**	**07 38 40.2**	**+1.5**
	34nm,0.4s						
BLB	**Baldybastay**	**5.70**	**37**	Pg	**Pg**	**07 37 23.0**	**-2.0**
	15nm,0.5s						
BLB				Lg	Lg	07 38 40.3	
	34nm,0.4s						

CHCP	**Chirah Chowk**	**5.99**	**184**	P	**Pn**	**07 37 06.6**	**+1.7**
CEP	**Cherat**	**5.99**	**195**	P	**Pn**	**07 37 06.1**	**+1.1**
DJR	**Jarkent**	**6.51**	**42**	Pg	**Pg**	**07 37 38.7**	**-1.9**
2.7nm,0.3s							
DJR				Lg	Lg	07 39 07.3	
13nm,0.6s							
OTUK	**Ortayu**	**8.65**	**354**	⇑Pn	**Pn**	**07 37 44.6**	**+3.2**
4.3nm,1.0s							
OTUK				⇑Lg	Lg	07 40 10.9	
27nm,0.8s							
MKAR	**Makanchi Array**	**9.50**	**38**	Lg	Lg	07 40 47.4	
0.1nm,0.3s,baz=224,slow=25,SNR=3.7							
KURBB	**Kurchatov Arra**	**11.49**	**16**	Lg	Lg	07 41 42.8	
0.1nm,0.3s,baz=207,slow=27,SNR=14							
KURBB	**Kurchatov Arra**	**11.49**	**16**	⇓Lg	Lg	07 41 41.5	
23nm,1.0s							
KURK	**Kurchatov**	**11.60**	**16**	⇓Lg	Lg	07 41 42.5	
27nm,1.4s							
BVAR	**Borovoye Array**	**13.58**	**351**	Pn	**Pn**	**07 38 48.8**	**+0.1**
0.2nm,0.3s,baz=166,slow=13,SNR=3.7							
1.0nm,0.6s							
AKTO	**Aktyubinsk**	**15.44**	**319**	Pn	**Pn**	**07 39 12.3**	**-1.7**
0.3nm,0.3s,baz=130,slow=13,SNR=6.3							
AKTO				LR	LR	07 45 28.8	
comp=Z,34nm,20.6s,baz=159,slow=39							
2.1nm,0.8s							
ZALV	**Zalesovo Beam**	**16.17**	**24**	Pn	**P**	**07 39 25.7**	**-1.0**
0.3nm,0.3s,baz=200,slow=17,SNR=4.4							
1.9nm,0.6s							
SONM	**Songino Array**	**24.85**	**60**	P	**P**	**07 41 02.0**	**+3.2**
0.5nm,0.6s,baz=268,slow=9.9,SNR=2.1							
0.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**30.35**	**127**	LR	LR	07 56 18.8	
comp=Z,17nm,18.0s,baz=190,slow=41							
BRTR	**Keskin Array B**	**30.66**	**283**	P	**P**	**07 41 50.5**	**-0.5**
0.9nm,0.7s,baz=96,slow=9.1,SNR=3.4							
0.9nm,0.7s							
AKASG	**Malin Array Be**	**32.78**	**305**	P	**P**	**07 42 08.9**	**-0.5**
0.2nm,0.4s,baz=79,slow=6.8,SNR=1.8							
0.2nm,0.4s							
FINES	**FINESS Array B**	**36.16**	**323**	P	**P**	**07 42 38.9**	**+0.4**
1.1nm,0.4s,baz=115,slow=9.3,SNR=4.3							
1.1nm,0.4s							
NB2	**NORSAR Subarra**	**43.22**	**321**	P	**P**	**07 43 36.6**	**-0.7**
comp=Z,0.9nm,0.5s,baz=91,slow=8.6							
NOA	**NORSAR Array B**	**43.22**	**321**	P	**P**	**07 43 36.1**	**-1.2**
comp=Z,1.2nm,0.6s,baz=91,slow=7.9,SNR=5.5							
comp=Z,1.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.92**	**269**	P	**P**	**07 46 34.1**	**-1.3**
comp=Z,0.7nm,0.9s,baz=49,slow=6.5,SNR=3.3							
comp=Z,0.7nm,0.9s							
DBIC	**Dimbokro**	**76.98**	**268**	LR	LR	08 28 17.4	
comp=Z,18nm,18.7s,baz=140,slow=41							
ELK	**Elko**	**99.57**	**7**	LR	LR	08 39 10.1	
comp=Z,27nm,18.0s,baz=96,slow=38							

*SOME **11** 08:01:24.8, 39°.57N×73°.18E, h0km*
*KRNET **11** 08:01:26.2±0.1, 39°.27N×73°.74E, mb3.2*
*NNC **11** 08:01:28.9±1.9, 39°.65N×73°.28E, h0km, mb4.0, mpv3.5,*
Error ellipse: s-maj=15.9km s-min=7.2km az=171.0

ISC 11 08:01:32.0±1.2, 39°.62N±0°.06×73°.46E±0°.03, h10km, n29, σ2§01/47, 6C-11D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.04**	**330**	⇓*iP*	**Pn**	**08 01 53.7**	**+1.0**
baz=30							
OHH				⇓*iS*	**Sn**	**08 02 14.0**	**+6.7**
baz=30							
DRK	**Karamyk**	**1.29**	**264**	⇓*iP*	**Pn**	**08 01 55.0**	**-1.4**
baz=79							
DRK				⇓*iS*	**Sn**	**08 02 15.7**	**+1.9**
baz=79							
BTK	**Batken**	**2.08**	**283**	⇓*iP*	**Pb**	**08 02 08.8**	**-1.0**
baz=90							
BTK				⇓*iS*	**Sg**	**08 02 40.0**	**+1.2**
baz=90							
ARLS	**Aral**	**2.33**	**16**	⇑*iP*	**Pb**	**08 02 12.0**	**-2.2**
baz=10.0							
ARLS				⇑*iS*	**Sg**	**08 02 45.5**	**-1.4**
baz=10.0							
GAR	**Garm**	**2.51**	**257**	⇑*iP*	**Pn**	**08 02 13.0**	**0.0**
baz=65							
GAR				⇑*iS*	**Sb**	**08 02 46.9**	**-1.5**
baz=65							
TRKS	**Terek-Say**	**2.60**	**318**	⇑*iP*	**Pb**	**08 02 16.6**	**-2.1**
baz=19							
TRKS				⇑*iS*	**Sg**	**08 02 53.8**	**-1.6**
baz=19							
NRN	**Naryn**	**2.65**	**46**	⇓*iP*	**Pn**	**08 02 13.7**	**-1.4**
baz=38							
NRN				⇓*iS*	**Sn**	**08 02 48.6**	**+1.1**
baz=38							
UCH	**Uchtor**	**2.72**	**17**	⇓*iP*	**Pn**	**08 02 17.7**	**+1.5**
baz=11							
UCH				⇓*iS*	**Sb**	**08 02 55.8**	**+1.1**
baz=11							
IUG	**Iuzhnay**	**3.62**	**315**	*eP*	**Pn**	**08 02 30.7**	**+2.5**
203nm,0.6s							
IUG				*eS*	**Sb**	**08 03 18.1**	**-2.0**
29nm,0.4s							
IUG	**Iuzhnay**	**3.62**	**315**	Pg	**Pn**	**08 02 30.7**	**+2.5**
203nm,0.6s							
IUG				Lg	Lg	08 03 18.1	
29nm,0.4s							
KST	**Kastek**	**3.90**	**28**	*eP*	**Pb**	**08 02 40.3**	**-0.7**
4.3nm,0.4s							
KST				*eS*	**Sg**	**08 03 34.6**	**-2.7**
10nm,0.5s							
KST	**Kastek**	**3.90**	**28**	Pg	**Pb**	**08 02 40.3**	**-0.7**
4.3nm,0.4s							
KST				Lg	Lg	08 03 34.6	
10nm,0.5s							
KK31	**Karatay Array**	**4.12**	**328**	⇓Pn	**Pn**	**08 02 34.2**	**-0.8**
0.5nm,0.3s,baz=129,slow=12,SNR=9.6							
KK31				Lg	Lg	08 03 38.4	
2.0nm,0.3s,baz=145,slow=31,SNR=4.5							
MTBS	**Maitube**	**4.16**	**32**	*eP*	**Pb**	**08 02 45.2**	**-0.1**
3.1nm,0.2s							
MTBS				*eS*	**Sg**	**08 03 43.2**	**-2.3**
6.7nm,0.3s							
MTBS	**Maitube**	**4.16**	**32**	Pg	**Pb**	**08 02 45.2**	**-0.1**
3.1nm,0.2s							
MTBS				Lg	Lg	08 03 43.2	
6.7nm,0.3s							
KRBS	**Karabastau**	**4.40**	**21**	*eP*	**Pb**	**08 02 49.4**	**+0.1**
2.7nm,0.3s							
KRBS				*eS*	**Sg**	**08 03 50.4**	**-2.7**
7.1nm,0.7s							
KRBS	**Karabastau**	**4.40**	**21**	Pg	**Pb**	**08 02 49.4**	**+0.1**
2.7nm,0.3s							
KRBS				Lg	Lg	08 03 50.4	
7.1nm,0.7s							
MDOK	**Medeo**	**4.45**	**36**	*eP*	**Pb**	**08 02 50.8**	**+0.5**
2.8nm,0.4s							
MDOK				*eS*	**Sg**	**08 03 52.9**	**-2.0**
6.6nm,0.7s							
MDOK	**Medeo**	**4.45**	**36**	Pg	**Pb**	**08 02 50.8**	**+0.5**
2.8nm,0.4s							
MDOK				Lg	Lg	08 03 52.1	
9.2nm,0.8s							
MDOK				Lg	Lg	08 03 52.9	
6.6nm,0.7s							
KOTS	**Kotyrbulak**	**4.54**	**36**	*eP*	**Pb**	**08 02 52.4**	**+0.6**
4.6nm,0.3s							
KOTS				*eS*	**Sg**	**08 03 55.4**	**-2.2**
21nm,0.3s							
KOTS	**Kotyrbulak**	**4.54**	**36**	Pg	**Pb**	**08 02 52.4**	**+0.6**
4.6nm,0.3s							
KOTS				Lg	Lg	08 03 55.4	
21nm,0.3s							
KUU	**Kurty**	**4.78**	**26**	*eP*	**Pb**	**08 02 56.2**	**+0.3**
2.3nm,0.5s							
KUU				*eS*	**Sg**	**08 04 02.2**	**-3.3**
11nm,0.6s							
KUU	**Kurty**	**4.78**	**26**	Pg	**Pb**	**08 02 56.2**	**+0.3**
2.3nm,0.5s							
KUU				Lg	Lg	08 04 02.2	
11nm,0.6s							
SATY	**Saty**	**5.07**	**46**	*eP*	**Pb**	**08 03 02.6**	**+1.8**
3.6nm,0.4s							
SATY				*eS*	**Sg**	**08 04 12.9**	**-1.7**
6.5nm,0.2s							
SATY	**Saty**	**5.07**	**46**	Pg	**Pb**	**08 03 02.6**	**+1.8**
3.6nm,0.4s							
SATY				Lg	Lg	08 04 12.9	
6.5nm,0.2s							

BTLS	**Baital**	**5.43**	**4**	*eP*	**Pb**	**08 03 07.9**	**+1.0**
2.0nm,0.3s							
BTLS				*eS*	**Sg**	**08 04 22.3**	**-4.0**
3.3nm,0.5s							
BTLS	**Baital**	**5.43**	**4**	Pg	**Pb**	**08 03 07.9**	**+1.0**
2.0nm,0.3s							
BTLS				Lg	Lg	08 04 22.3	
3.3nm,0.5s							
UZB	**Uzynbulak**	**5.47**	**48**	*eP*	**Pb**	**08 03 09.8**	**+2.2**
1.2nm,0.3s							
UZB				*eS*	**Sg**	**08 04 25.4**	**-2.2**
3.3nm,0.2s							
UZB	**Uzynbulak**	**5.47**	**48**	Pg	**Pb**	**08 03 09.8**	**+2.2**
1.2nm,0.3s							
UZB				Lg	Lg	08 04 25.4	
3.3nm,0.2s							

*NNC **11** 08:02:18.7±2.2, 53°.40N×90°.74E, h0km, mb3.2, mpv2.9,*
Error ellipse: s-maj=17.1km s-min=11.5km az=64.0,
Suspected Mining explosion.
*IDC **11** 08:02:19.6±3.5, 53°.65N×90°.80E, h0km, mbtmp3.1/3,*
ML2.6/3, Error ellipse: s-maj=32.5km s-min=25.1km
az=28.0

ISC 11 08:02:21.0±4.1, 53°.4N±0°.1×90°.7E±0°.2, h0km, n9, σ1§87/9, 4C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.53**	**281**	I		08 29 10.0	
baz=87,slow=332,SNR=3.8							
ZAA0	**Zalesovo Array**	**3.53**	**281**	⇑Pg	**Pb**	**08 03 24.4**	**+0.1**
0.7nm,0.8s							
ZAA0				⇓Lg	Lg	08 04 11.1	
2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**3.53**	**281**	Pn	**Pn**	**08 03 17.4**	**+0.4**
1.2nm,0.3s,baz=90,slow=13,SNR=10							
ZALV				Lg	Lg	08 04 11.6	
2.0nm,0.3s,baz=93,slow=26,SNR=9.3							
1.6nm,0.3s							
KURK	**Kurchatov**	**7.90**	**255**	⇑Lg	Lg	08 06 32.5	
14nm,0.9s							
KURBB	**Kurchatov Arra**	**7.99**	**255**	Pn	**Pn**	**08 04 18.4**	**+0.1**
0.1nm,0.3s,baz=66,slow=15,SNR=8.4							
KURBB				Sn	**Sn**	**08 05 50.7**	**+1.4**
baz=69,slow=28,SNR=8.9							
KURBB				Lg	Lg	08 06 35.5	
baz=64,slow=31,SNR=7.4							
1.0nm,0.4s							
KURBB	**Kurchatov Arra**	**7.99**	**255**	⇓Pn	**Pn**	**08 04 16.4**	**-1.9**
1.6nm,0.4s							
KURBB				⇓Sn	**Sn**	**08 05 48.3**	**-1.1**
6.9nm,0.7s							
KURBB				⇓Lg	Lg	08 06 34.2	
16nm,1.0s							
MK31	**Makanchi Array**	**8.52**	**223**	⇑Pn	**Pn**	**08 04 22.9**	**-2.7**
0.2nm,0.5s,baz=40,slow=14,SNR=3.6							
MK31				⇑Sn	**Sn**	**08 06 03.1**	**+0.7**
0.5nm,0.6s,baz=196,slow=19,SNR=4.0							
MK31				⇓Lg	Lg	08 06 51.3	
6.6nm,1.1s,baz=39,slow=26,SNR=4.3							
MKAR	**Makanchi Array**	**8.52**	**223**	Pn	**Pn**	**08 04 28.1**	**+2.5**
0.1nm,0.3s,baz=31,slow=13,SNR=5.0							
MKAR				Lg	Lg	08 06 54.4	
baz=31,slow=31,SNR=5.3							
0.4nm,0.5s							
SONM	**Songino Array**	**11.42**	**113**	Lg	Lg	08 08 13.9	
0.1nm,0.3s,baz=326,slow=47,SNR=1.9							

NOU 11 08:08:17.5, 17°.03S×168°.31E, h34km, MLv4.0/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.70**	**190**	P	Pb	08 08 31.5	+0.1
RTV	**Rentapao**	**0.77**	**172**	P	Pb	08 08 33.0	+0.5
LIFNC	**LIFOU**	**3.86**	**195**	P	Pn	08 09 13.5	-1.0
MARNC	**Mare, Loyalty**	**4.43**	**183**	P	Pn	08 09 22.5	+0.1
YATNC	**Mamie plateau,**	**5.18**	**195**	P	Pn	08 09 31.5	-1.1
DZM	**Mont Dzumac**	**5.31**	**199**	P	Pn	08 09 34.9	+0.3
NOUC	**Port Laguerre**	**5.39**	**200**	P	Pn	08 09 35.7	+0.2
ONTNC	**Ouen Toro**	**5.53**	**198**	P	Pn	08 09 38.4	+0.9
OUENC	**Ouen Island, N**	**5.54**	**194**	P	Pn	08 09 38.5	+1.0

IDC 11 08:13:42.0±2.1, 54°.49N×83°.61E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=17.5km s-min=10.6km az=160.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**127**	I		08 19 00.0	
0.1nm,0.9s,baz=309,slow=323,SNR=3.4							
ZALV	**Zalesovo Beam**	**0.90**	**127**	Pg	Pg	08 13 58.6	-0.5
2.5nm,0.3s,baz=306,slow=15,SNR=16							
ZALV				Lg	Lg	08 14 12.6	
3.0nm,0.3s,baz=307,slow=28,SNR=8.4							
KURBB	**Kurchatov Arra**	**4.96**	**221**	Pn	Pn	08 14 58.3	+0.6
baz=39,slow=13,SNR=3.2							
KURBB				Lg	Lg	08 16 20.4	
baz=39,slow=30,SNR=3.1							
0.1nm,0.3s							
MKAR	**Makanchi Array**	**7.75**	**187**	Pn	Pn	08 15 35.8	-0.3
0.1nm,0.3s,baz=10,slow=12,SNR=4.1							
MKAR				Lg	Lg	08 17 47.1	
0.1nm,0.3s,baz=355,slow=29,SNR=4.3							
0.3nm,0.5s							

*IDC **11** 08:14:56.1±3.0, 51°.95N×173°.78W, h0km, mb3.3/3,*
mbtmp3.3/4, ML3.7/1, Error ellipse: s-maj=78.7km
s-min=35.8km az=17.0
*AEIC **11** 08:14:58±3.4, 51°.7N±0°.3×173°.9W±0°.1, h46km±10km,*
Error ellipse: s-maj=50.7km s-min=9.8km az=172.0
*NEIC **11** 08:14:59.4±0.9, 51°.1N±0°.2×173°.9W±0°.1, h39km±71km,*
ML3.1(AEIC), Error ellipse: s-maj=32.3km s-min=11.3km
az=179.0

ISC 11 08:14:59.9±1.8, 51°.5N±0°.3×173°.91W±0°.07, h35km, n15, σ2§27/9, mb3.3/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.45**	**294**		**Pn**	**08 15 26.3**	**+2.6**
ADK	**Adak**	**1.76**	**283**		**Pn**	**08 15 28.5**	**+0.6**
KIWB	**Kanaga Island**	**2.04**	**281**		**Pn**	**08 15 32.8**	**+1.0**
NIKH	**Nikolski High**	**3.43**	**63**	Pn	**Pn**	**08 15 51.1**	**+0.3**
UNV	**Unalaska Valle**	**5.07**	**60**	Pn	**Pn**	**08 16 16.6**	**+3.3**
ILAR	**Eielson Array**	**19.27**	**36**	P	**P**	**08 19 18.2**	**-2.9**
0.2nm,0.3s,baz=238,slow=9.9,SNR=8.5							
0.5nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**35.12**	**213**	T	T	08 59 50.5	
baz=21,slow=76,SNR=22							
H11N3	**WAKE ISLAND Hy**	**35.13**	**213**	T	T	08 59 42.6	
baz=21,slow=76,SNR=22							
H11N1	**WAKE ISLAND Hy**	**35.14**	**213**	T	T	08 59 52.0	
baz=21,slow=76,SNR=18							
H11S1	**WAKE ISLAND Hy**	**36.33**	**212**	T	T	09 01 07.7	
baz=20,slow=76,SNR=35							
H11S2	**WAKE ISLAND Hy**	**36.34**	**212**	T	T	09 01 06.9	
baz=20,slow=76,SNR=29							
H11S3	**WAKE ISLAND Hy**	**36.35**	**212**	T	T	09 01 05.4	
baz=20,slow=76,SNR=22							
NVAR	**Mina Array Bea**	**40.49**	**86**	P	**P**	**08 22 36.6**	**+1.2**
0.1nm,0.5s,baz=307,slow=8.9,SNR=1.7							
0.1nm,0.5s							
PDAR	**Pinedale Array**	**43.33**	**75**	P	**P**	**08 22 57.2**	**-1.4**
0.3nm,0.5s,baz=320,slow=5.1,SNR=4.5							
0.3nm,0.5s							
BVAR	**Borovoye Array**	**62.70**	**322**	P	**P**	**08 25 20.4**	**-0.5**
0.3nm,0.4s,baz=72,slow=4.7,SNR=1.8							
0.3nm,0.4s							

IDC 11 08:18:47.0±2.6, 53°.69N×87°.03E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=24.6km s-min=15.6km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**282**	I		08 27 50.0	
baz=101,slow=332,SNR=4.0							
ZALV	**Zalesovo Beam**	**1.33**	**282**	Pg	Pg	08 19 10.7	-1.9
0.9nm,0.3s,baz=104,slow=17,SNR=9.7							
ZALV				Lg	Lg	08 19 29.6	
0.9nm,0.3s,baz=103,slow=25,SNR=7.6							
ZALV				Rg	Rg	08 19 36.1	
3.3nm,0.6s,baz=101,slow=29,SNR=5.0							
KURBB	**Kurchatov Arra**	**6.06**	**243**	Pn	Pn	08 20 19.0	+1.1
baz=60,slow=14,SNR=4.9							
KURBB				Lg	Lg	08 21 59.6	
baz=60,slow=27							
0.6nm,0.6s							
MKAR	**Makanchi Array**	**7.54**	**206**	Pn	Pn	08 20 39.6	+1.5
0.1nm,0.3s,baz=28,slow=14,SNR=5.9							
MKAR				Lg	Lg	08 22 46.3	
baz=28,slow=34,SNR=2.5							
0.2nm,0.4s							

IDC 11 08:19:24.6±3.3, 53°.63N×88°.09E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=28.5km s-min=19.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**281**	I		08 32 50.0	
baz=101,slow=334,SNR=2.6							
ZALV	**Zalesovo Beam**	**1.96**	**281**	Pn	Pn	08 19 58.0	-1.1
0.9nm,0.3s,baz=98,slow=15,SNR=7.5							
ZALV				Lg	Lg	08 20 26.7	
2.7nm,0.3s,baz=96,slow=25,SNR=9.9							
KURBB	**Kurchatov Arra**	**6.61**	**247**	Pn	Pn	08 21 03.6	+0.7
0.1nm,0.3s,baz=62,slow=14,SNR=1.7							
KURBB				Lg	Lg	08 22 56.2	
baz=62,slow=34,SNR=2.5							
0.7nm,0.4s							
MKAR	**Makanchi Array**	**7.79**	**211**	Pn	Pn	08 21 20.4	+1.3
0.1nm,0.3s,baz=24,slow=13,SNR=1.9							
MKAR				Lg	Lg	08 23 31.5	
0.1nm,0.3s,baz=24,slow=33,SNR=1.5							
0.2nm,0.5s							

IDC 11 08:38:46.7±2.4, 7°.93N×137°.85E, h0km, mb3.5/3, mbtmp3.5/3, MS2.6/3, Error ellipse: s-maj=139.7km s-min=24.9km az=83.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**10.93**	**217**	LR	LR	08 44 45.0	
comp=Z,33nm,19.1s,baz=32,slow=33							
DAV	**Davao City (W)**	**12.20**	**267**	LR	LR	08 47 01.1	
comp=Z,18nm,18.6s,baz=210,slow=40							
JCJ	**Chichijima**	**19.50**	**12**	LR	LR	08 48 57.9	
comp=Z,23nm,21.4s,baz=68,slow=31							
WRA	**Warramunga Arr**	**27.91**	**187**	P	P	08 44 37.4	-1.3
1.0nm,1.2s,baz=4.7,slow=9.9,SNR=2.3							
1.0nm,1.2s							
H11S3	**WAKE ISLAND Hy**	**29.92**	**67**	T	T	09 17 37.7	
baz=253,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**29.94**	**67**	T	T	09 17 44.1	
baz=253,slow=75,SNR=7.8							
H11S2	**WAKE ISLAND Hy**	**29.94**	**67**	T	T	09 17 34.0	
baz=253,slow=75,SNR=13							
ASAR	**Alice Springs**	**31.64**	**187**	P	P	08 45 13.0	+1.3
0.3nm,0.9s,baz=16,slow=12,SNR=1.5							
0.3nm,0.9s							
MKAR	**Makanchi Array**	**61.03**	**320**	P	P	08 49 02.2	0.0
0.6nm,0.6s,baz=107,slow=8.1,SNR=6.7							
0.6nm,0.6s							
NRIK	**Noril'sk**	**69.35**	**343**	P	P	08 49 55.8	0.0
7.1nm,0.4s,baz=113,slow=6.9,SNR=12							

*NNC **11** 08:40:35.2±1.4, 54°.32N×86°.55E, h0km, mb2.8, mpv2.7,*
Error ellipse: s-maj=23.6km s-min=7.9km az=168.0,
Suspected Mining explosion.
*IDC **11** 08:40:36.2±2.6, 54°.06N×86°.62E, h0km, mbtmp3.0/2,*
ML2.7/2, Error ellipse: s-maj=21.4km s-min=12.4km
az=63.0

ISC 11 08:40:37.9±4.4, 54°.0N±0°.2×86°.5E±0°.2, h0km, n8, σ1§41/8, 4C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**266**	I		08 47 50.0	
baz=83,slow=328,SNR=5.6							
ZAA0	**Zalesovo Array**	**0.98**	**266**	⇑Pn	**Pg**	**08 40 55.7**	**-1.0**
0.2nm,0.3s							
ZAA0				⇑S	**Sg**	**08 41 10.8**	**+1.5**
3.5nm,0.8s							
ZALV	**Zalesovo Beam**	**0.98**	**266**	Pg	**Pg**	**08 40 55.3**	**-1.3**
1.2nm,0.3s,baz=84,slow=18,SNR=11							
ZALV				Lg	Lg	08 41 11.7	
2.6nm,0.3s,baz=84,slow=31,SNR=14							
ZALV				Rg	Rg	08 41 16.2	
35nm,1.0s,baz=87,slow=32,SNR=11							
KURK	**Kurchatov**	**5.84**	**239**	⇑Lg	Lg	08 43 46.3	
4.7nm,1.1s							
KURBB	**Kurchatov Arra**	**5.94**	**238**	Pn	**Pn**	**08 42 07.4**	**+0.4**
0.1nm,0.3s,baz=56,slow=14,SNR=16							
KURBB				Lg	Lg	08 43 49.0	
baz=58,slow=32,SNR=5.3							
3.4nm,0.8s							
KURBB	**Kurchatov Arra**	**5.94**	**238**	⇑Pn	**Pn**	**08 42 08.0**	**+1.0**
2.9nm,0.6s							
KURBB				⇓Lg	Lg	08 43 50.5	
5.9nm,0.8s							
MK31	**Makanchi Array**	**7.71**	**202**	Pn	**Pn**	**08 42 32.7**	**+1.4**
0.5nm,0.7s,baz=26,slow=14,SNR=8.9							
MK31				Lg	Lg	08 44 48.2	
0.6nm,0.5s,baz=26,slow=28,SNR=3.7							
MKAR	**Makanchi Array**	**7.71**	**202**	Pn	**Pn**	**08 42 32.0**	**+0.6**
0.1nm,0.3s,baz=26,slow=14,SNR=6.4							
MKAR				Sn	**Sn**	**08 43 58.1**	**-1.2**
0.1nm,0.3s,baz=28,slow=28,SNR=3.7							
MKAR				Lg	Lg	08 44 42.8	
0.1nm,0.3s,baz=27,slow=29,SNR=5.4							
0.2nm,0.4s							

*IDC **11** 09:34:39.5±1.0, 20°.12N×147°.28E, h0km, mb3.8/8,*
mbtmp3.8/9, ML4.2/1, MS2.8/5, Error ellipse: s-maj=35.8km
s-min=19.7km az=82.0

ISC 11 09:34:40.9±0.9, 20°.17N±0°.09×147°.4E±0°.2, h10km, n26, σ0§68/17, mb3.6/8, MS2.7/3, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.98**	**201**	Pn	**Pn**	**09 36 22.7**	**-0.5**
4.3nm,0.3s,baz=360,slow=19,SNR=1.2							
GUMO				Sn	**Sn**	**09 37 44.2**	**+1.5**
3.5nm,0.3s,baz=160,slow=19,SNR=2.0							
GUMO				LR	LR	09 38 56.3	
comp=Z,67nm,19.3s,baz=35,slow=37							
36nm,0.9s							
H11S3	**WAKE ISLAND Hy**	**18.28**	**92**	T	T	09 57 34.8	
baz=280,slow=74,SNR=6.5							
H11S1	**WAKE ISLAND Hy**	**18.29**	**92**	T	T	09 57 24.9	
baz=280,slow=74,SNR=6.2							
H11S2	**WAKE ISLAND Hy**	**18.30**	**92**	T	T	09 57 09.3	
baz=280,slow=74,SNR=4.0							
H11N1	**WAKE ISLAND Hy**	**18.33**	**88**	T	T	09 57 11.1	
baz=276,slow=74,SNR=3.3

7.5nm,0.7s
PKIN Phulchoki 56.68 290 *e*P **P 09 44 24.9 -0.3**
4.2nm,0.4s
GKN Gorkha 57.30 291 *e*P **P 09 44 29.7 +0.3**
10nm,0.6s
ZALV Zalesovo Beam 57.85 322 P **P 09 44 32.2 -0.4**
1.6nm,0.5s,baz=101,slow=6.9,SNR=6.2
1.6nm,0.5s
DANN Dangsing 58.03 291 *e*P **P 09 44 35.3 +0.6**
39nm,0.6s
MKAR Makanchi Array 58.62 313 P **P 09 44 38.4 +0.1**
0.6nm,0.6s,baz=92,slow=9.2,SNR=6.2
0.6nm,0.6s
NVAR Mina Array Bea 80.97 52 P **P 09 46 57.1 +0.9**
0.4nm,0.7s,baz=268,slow=5.8,SNR=4.1
0.4nm,0.7s
FINES FINESS Array B 86.22 336 P **P 09 47 21.8 -0.6**
2.8nm,1.0s,baz=57,slow=8.4,SNR=2.2
2.8nm,1.0s
LPAZ La Paz 146.07 89 PKPbc **PKPab 09 54 23.5 +0.2**
0.9nm,0.7s,baz=315,slow=4.3,SNR=4.4

ROM 11 09:35:27.3±0.1, 42°.808N±0°.004×13°.194E±0°.004, h11km, ML1.1/1, Error ellipse: s-maj=0.4km s-min=0.3km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**355**	P	Pg	09 35 29.9	+0.2
T1245				S	Sg	09 35 31.4	0.0
T1202	**Accumoli, Fraz**	**0.11**	**168**	P	Pg	09 35 30.7	+0.4
T1202				S	Sg	09 35 32.9	+0.6
T1241	**Roccafluvione,**	**0.18**	**74**	P	Pg	09 35 32.0	+0.7
T1241				S	Sg	09 35 35.3	+1.2
T1217	**Poggiodomo (PG**	**0.22**	**244**	P	Pg	09 35 32.5	+0.6
T1217				S	Sg	09 35 36.3	+1.3
T1243	**Rocca Santa Ma**	**0.22**	**121**	P	Pg	09 35 32.4	+0.5
T1243				S	Sg	09 35 36.0	+0.9
T1215	**Vallo di Nera,**	**0.24**	**269**	P	Pg	09 35 32.8	+0.5
T1215				S	Sg	09 35 36.7	+1.0
T1215				AML	AML		
	comp=E,70μm,1.6s						
T1215				AML	AML		
	comp=N,78μm,1.6s						

PRU 11 09:37:12.5±0.0, 51°.45N×16°.22E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.87**	**187**	*e*PG	Pg	09 37 28.9	-0.2
CHVC				*e*SG	Sg	09 37 40.2	-0.2
	comp=Z,2.1nm,0.3s						
OSTC	**Ostas**	**0.90**	**180**	*e*PG	Pg	09 37 29.4	-0.2
OSTC				*e*SG	Sg	09 37 41.8	+0.6
	comp=Z,3.2nm,0.5s						
UPC	**Upice**	**0.95**	**188**	*e*PG	Pg	09 37 30.3	-0.4
UPC				*e*SG	Sg	09 37 42.8	-0.3
	comp=Z,7.5nm,0.3s						
DPC	**Dobruska-Polom**	**1.10**	**177**	*e*PG	Pg	09 37 32.9	-0.7
DPC				*e*SG	Sg	09 37 47.9	0.0
	comp=Z,1.9nm,0.3s						
KRLC	**Kraliky**	**1.42**	**165**	*e*PG	Pn	09 37 38.5	-1.1
KRLC				*e*SG	Sg	09 37 57.9	-0.2
	comp=Z,1.9nm,0.3s						

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*DDA **11** 09:38:01.7±0.0, 38°.79N×24°.79E, h0km±2km, MW3.5*
*ISK **11** 09:38:04.5, 38°.85N×24°.84E, h6km, ML3.3/22*
*ATH **11** 09:38:06.5, 38°.86N×24°.90E, h43km±5km, ML3.2/6, Error ellipse: s-maj=5.5km s-min=1.1km az=24.0*
*THE **11** 09:38:07.2, 38°.84N×24°.94E, h13km±1km, ML3.2/10, Error ellipse: s-maj=1.5km s-min=0.6km az=348.0*
ISC 11 09:38:06.6±1.0, 38°.84N±0°.02×24°.92E±0°.02, h14km±9km, n80, σ0°.66/107, 5C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYMI	**Kymi, Euboea I**	**0.67**	**253**	P	**Pb**	**09 38 20.5**	**+0.4**
KYMI				S	**Sn**	**09 38 30.9**	**-1.1**
	2μm,0.5s						
KYMI	**Kymi, Euboea I**	**0.67**	**253**	P	**Pb**	**09 38 20.4**	**+0.4**
KYMI				S	**Sb**	**09 38 29.3**	**+0.1**
KYMI				AML	AML	09 38 33.0	
	comp=N,3821μm,0.6s						
KYMI				AML	AML	09 38 33.9	
	comp=E,4015μm,0.3s						
EFSA	**Agios Efstrati**	**0.70**	**5**	P	**Pg**	**09 38 20.4**	**+0.1**
EFSA				S	**Sb**	**09 38 30.6**	**+0.3**
EFSA				AML	AML	09 38 33.1	
	comp=E,3026μm,0.3s						
EFSA				AML	AML	09 38 34.0	
	comp=N,3221μm,0.6s						
SIGR	**SIGRI**	**0.82**	**63**	PG	**Pg**	**09 38 22.5**	**-0.1**
SIGR				SG	**Sb**	**09 38 33.9**	**+0.2**
SIGR	**SIGRI**	**0.82**	**63**	P	**Pg**	**09 38 22.4**	**-0.1**
SIGR				S	**Sg**	**09 38 33.3**	**-0.1**
	comp=N,2μm,0.3s						
SIGR	**SIGRI**	**0.82**	**63**	P	**Pb**	**09 38 23.1**	**+0.4**
SIGR				S	**Sg**	**09 38 33.2**	**-0.1**
SIGR				AML	AML	09 38 36.7	
	comp=N,3884μm,0.2s						
SIGR				AML	AML	09 38 37.7	
	comp=E,3288μm,0.4s						
ALNA	**Alonissos**	**0.87**	**291**	P	**Pg**	**09 38 23.4**	**-0.1**
CHOS	**Chios island**	**1.00**	**116**	PG	**Pg**	**09 38 25.9**	**0.0**
CHOS				SG	**Sn**	**09 38 39.9**	**-0.4**
CHOS	**Chios island**	**1.00**	**116**	P	**Pn**	**09 38 26.2**	**-0.1**
CHOS				S	**Sn**	**09 38 39.8**	**-0.5**
	comp=E,2μm,0.5s						
CHOS	**Chios island**	**1.00**	**116**	P	**Pg**	**09 38 26.0**	**0.0**
CHOS				S	**Sg**	**09 38 39.2**	**+0.2**
CHOS				AML	AML	09 38 43.0	
	comp=E,2757μm,0.8s						
CHOS				AML	AML	09 38 47.4	
	comp=N,2694μm,0.5s						
DION	**Dionisos Attik**	**1.08**	**226**	P	**Pb**	**09 38 26.9**	**-0.2**
DION				S	**Sn**	**09 38 42.2**	**+0.1**
	comp=N,2μm,0.5s						
DION	**Dionisos Attik**	**1.08**	**226**	P	**Pb**	**09 38 27.1**	**0.0**
DION				S	**Sn**	**09 38 42.3**	**+0.1**
DION				AML	AML	09 38 47.2	
	comp=E,2911μm,0.5s						
DION				AML	AML	09 38 48.5	
	comp=N,2683μm,0.6s						
GPNR	**Gulpinar-Canak**	**1.13**	**56**	PN	**Pb**	**09 38 27.3**	**-0.7**
PRK	**Paraskevi**	**1.13**	**68**	P	**Pg**	**09 38 28.3**	**-0.1**
PRK				S	**Sn**	**09 38 43.8**	**+0.3**
	comp=N,2μm,0.6s						
PTL	**Penteli**	**1.14**	**227**	P	**Pb**	**09 38 27.9**	**-0.2**
PTL				S	**Sg**	**09 38 43.5**	**+0.1**
	comp=N,828nm,0.4s						
PTL	**Penteli**	**1.14**	**227**	P	**Pb**	**09 38 27.8**	**-0.2**
KOCA	**Canakkale, Ayv**	**1.16**	**55**	P	**Pb**	**09 38 27.7**	**-0.8**
KOCA				S	**Sb**	**09 38 42.5**	**-0.9**
ATHU	**Athens Univers**	**1.24**	**226**	P	**Pn**	**09 38 29.2**	**-0.4**
ATHU	**Athens Univers**	**1.24**	**226**	P	**Pn**	**09 38 29.1**	**-0.4**
ATH	**Athens Observa**	**1.28**	**228**	P	**Pn**	**09 38 29.0**	**-1.0**
ATH				S	**Sg**	**09 38 48.4**	**+0.6**
	comp=N,578nm,0.4s						
ATH	**Athens Observa**	**1.28**	**228**	P	**Pn**	**09 38 29.5**	**-0.5**
TNSA	**Tinos**	**1.31**	**171**	P	**Pn**	**09 38 30.2**	**-0.3**
VLY	**Voula,Athens**	**1.32**	**222**	P	**Pn**	**09 38 30.2**	**-0.4**
VLY	**Voula,Athens**	**1.32**	**222**	P	**Pn**	**09 38 30.3**	**-0.3**
BOZC	**Bozcaada**	**1.34**	**41**	PN	**Pn**	**09 38 30.0**	**-0.9**
BOZC				SN	**Sg**	**09 38 49.8**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.38**	**115**	P	**Pb**	**09 38 32.3**	**+0.1**
ZEYE				S	**Sg**	**09 38 50.8**	**-0.3**
NEO	**Neokhori**	**1.40**	**290**	P	**Pn**	**09 38 31.9**	**+0.1**
NEO	**Neokhori**	**1.40**	**290**	P	**Pn**	**09 38 31.8**	**+0.1**
URLA	**Izmir**	**1.40**	**109**	PN	**Pn**	**09 38 31.7**	**-0.1**
FOCM	**Foa**	**1.43**	**94**	PN	**Pn**	**09 38 32.5**	**+0.4**
VILL	**Villia**	**1.43**	**242**	P	**Pn**	**09 38 31.9**	**-0.2**
VILL				S	**Sg**	**09 38 51.9**	**-0.6**
	comp=N,670nm,0.4s						
VIL2	**Platees**	**1.43**	**245**	P	**Pn**	**09 38 31.8**	**-0.5**
VIL2				S	**Sb**	**09 38 51.4**	**+0.2**
VIL2				AML	AML	09 38 57.6	
	comp=E,1376μm,0.5s						
VIL2				AML	AML	09 38 59.0	
	comp=N,1032μm,0.4s						
XOR	**Xorichti**	**1.44**	**292**	P	**Pn**	**09 38 32.5**	**+0.1**
XOR				S	**Sg**	**09 38 52.3**	**-0.7**
	comp=N,332nm,0.4s						
XOR	**Xorichti**	**1.44**	**292**	P	**Pn**	**09 38 32.4**	**0.0**
EZN	**Ezine**	**1.47**	**47**	PN	**Pn**	**09 38 32.0**	**-0.8**
EZN				SN	**Sg**	**09 38 53.3**	**-0.8**
EZN	**Ezine**	**1.47**	**47**	P	**Pn**	**09 38 31.9**	**-0.8**
EZN				S	**Sn**	**09 38 51.1**	**-0.8**
	comp=N,765nm,0.7s						
LKR	**Lokris**	**1.51**	**264**	P	**Pn**	**09 38 33.1**	**-0.2**
ECEA	**Canakkale, Ece**	**1.55**	**39**	P	**Pn**	**09 38 32.8**	**-1.0**
ECEA				S	**Sg**	**09 38 57.6**	**+1.1**
GADA	**Gvkgeada**	**1.55**	**29**	PN	**Pn**	**09 38 32.9**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.56**	**54**	P	**Pn**	**09 38 33.1**	**-0.8**
GOKA	**anakkale-Gk**	**1.56**	**29**	P	**Pn**	**09 38 32.9**	**-1.0**
GOKA				S	**Sg**	**09 38 57.0**	**+0.3**
DKL	**Dikili**	**1.57**	**81**	PN	**Pn**	**09 38 34.4**	**+0.3**
OUR	**Ouranopolis**	**1.66**	**335**	P	**Pn**	**09 38 35.2**	**-0.1**
ZEDA	**zmir-Bergama**	**1.69**	**85**	P	**Pn**	**09 38 35.2**	**-0.6**
BLCB	**Balcova**	**1.73**	**104**	PN	**Pn**	**09 38 36.6**	**+0.4**
DGB	**zmir**	**1.73**	**116**	P	**Pn**	**09 38 37.0**	**+0.7**
DGB				S	**Sg**	**09 39 02.4**	**+0.1**
LOUT	**Loutraki**	**1.74**	**242**	P	**Pn**	**09 38 37.0**	**+0.5**
AXAR	**Agios Charalam**	**1.76**	**268**	P	**Pn**	**09 38 36.9**	**+0.1**
AXAR	**Agios Charalam**	**1.76**	**268**	P	**Pn**	**09 38 37.1**	**+0.3**
BUHA	**Balikesir, Bur**	**1.81**	**68**	P	**Pb**	**09 38 39.4**	**-0.1**
BUHA				S	**Sg**	**09 39 04.3**	**-0.5**
APE	**Apeiranthos**	**1.83**	**164**	⇑P	**Pn**	**09 38 37.9**	**+0.2**
APE	**Apeiranthos**	**1.83**	**164**	PN	**Pn**	**09 38 37.2**	**-0.5**
APE	**Apeiranthos**	**1.83**	**164**	P	**Pn**	**09 38 37.4**	**-0.3**
SMG	**Samos**	**1.89**	**126**	P	**Pn**	**09 38 38.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.97**	**37**	PN	**Pn**	**09 38 39.2**	**-0.4**
GCAM	**G?zelcami?**	**2.15**	**121**	PN	**Pn**	**09 38 42.6**	**+0.6**
MHLO	**Agia Marina, M**	**2.18**	**191**	P	**Pn**	**09 38 42.3**	**-0.2**
ALN	**Alexandroupoli**	**2.23**	**23**	PN	**Pn**	**09 38 42.9**	**-0.3**
ALN	**Alexandroupoli**	**2.23**	**23**	P	**Pn**	**09 38 42.4**	**-0.8**
STEP	**BALIKESIR_Sava**	**2.25**	**75**	S	**Sg**	**09 39 18.1**	**-0.7**
RDO	**Rodhopi**	**2.36**	**12**	P	**Pn**	**09 38 44.4**	**-0.5**
KNL	**Balıkesir**	**2.48**	**54**	P	**Pn**	**09 38 47.5**	**+1.0**
KNL				S	**Sb**	**09 39 23.1**	**+1.9**
SANT	**Santorini**	**2.50**	**170**	⇑P	**Pn**	**09 38 44.2**	**-2.7**
SANT	**Santorini**	**2.50**	**170**	PN	**Pn**	**09 38 46.6**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**2.50**	**110**	PN	**Pn**	**09 38 47.5**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.54**	**43**	PN	**Pn**	**09 38 47.5**	**0.0**
VLI	**Veliai**	**2.63**	**217**	P	**Pn**	**09 38 48.6**	**-0.1**
DRO	**Drossia**	**2.67**	**252**	P	**Pn**	**09 38 50.2**	**+1.0**
EDC	**Edincik**	**2.73**	**56**	PN	**Pn**	**09 38 50.7**	**+0.6**
RZN	**Rozhen**	**2.85**	**357**	*i* P	**Pn**	**09 38 52.0**	**+0.1**
MMB	**Musomiste**	**2.90**	**342**	*i* P	**Pn**	**09 38 51.7**	**-0.7**
DAT	**Datca**	**2.98**	**134**	PN	**Pn**	**09 38 54.1**	**+0.5**
YER	**Yerkesik**	**3.16**	**122**	PN	**Pn**	**09 38 56.8**	**+0.8**
KKB	**Krupnik**	**3.33**	**336**	*i* P	**Pn**	**09 38 58.5**	**+0.1**
TURN	**Turunc**	**3.34**	**127**	PN	**Pn**	**09 38 59.5**	**+1.0**
STIP	**Stip**	**3.54**	**325**	*i* Pn	**Pn**	**09 39 01.4**	**+0.3**
TVSB	**Tavsanli**	**3.59**	**79**	PN	**Pn**	**09 39 03.0**	**+1.1**
VTS	**Vitosha**	**3.99**	**342**	⇑P	**Pn**	**09 39 09.4**	**+1.9**
BLKB	**Belogradchik**	**5.07**	**341**	⇑P	**Pn**	**09 39 23.6**	**+1.3**
HERR	**Herculane**	**6.32**	**344**	⇑P	**Pn**	**09 39 38.4**	**-0.9**

ROM 11 09:41:15.9±0.1, 42°.777N±0°.003×13°.141E±0°.005, h3km±2km, Md1.2/2, 1C, Error ellipse: s-maj=0.3km s-min=0.2km az=285.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**341**	P	Pg	09 41 17.2	0.0
NRCA				S	Sg	09 41 18.4	+0.3
NRCA				AML	AML		
	comp=N,248μm,0.7s						
NRCA				AML	AML		
	comp=E,452μm,0.5s						
NRCA				AML	AML		
	comp=N,248μm,0.7s						
NRCA				END			
T1245	**Castelsantange**	**0.09**	**24**	P	Pg	09 41 17.6	0.0
T1245				S	Sg	09 41 19.4	+0.5
T1245				AML	AML		
	comp=E,4130μm,1.5s						
T1245				AML	AML		
	comp=N,4100μm,1.5s						
T1245				AML	AML		
	comp=E,160μm,0.2s						
T1245				AML	AML		
	comp=N,270μm,0.2s						
T1245				END			
T1202	**Accumoli, Fraz**	**0.10**	**140**	⇑P	Pg	09 41 17.9	0.0
T1202				S	Sg	09 41 19.8	+0.7
T1217	**Poggiodomo (PG**	**0.17**	**247**	P	Pg	09 41 19.5	+0.3
T1217				S	Sg	09 41 22.6	+1.2
LNSS	**Leonessa**	**0.19**	**203**	P	Pg	09 41 20.2	+0.7
LNSS				S	Sg	09 41 23.1	+1.1
T1215	**Vallo di Nera,**	**0.20**	**277**	P	Pg	09 41 20.4	+0.6
T1215				S	Sg	09 41 23.7	+1.2
FDMO	**Fiordimonte**	**0.26**	**351**	P	Pg	09 41 22.1	+1.2

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*DJA **11** 10:01:59.4±0.3, 2°.S±6°.×12°.5E±°, h10km, M4.2/11, mB5.2/3, mb4.2/2, MLv4.2/11, Mw(mB)4.6/3*
*IDC **11** 10:02:04.2±3.0, 2°.11S×124°.85E, h43km±35km, mb3.1/4, mbtmp3.6/6, ML3.9/2, Error ellipse: s-maj=31.2km s-min=25.5km az=53.0*
ISC 11 10:02:01.5±1.0, 1°.95S±0°.08×124°.83E±0°.05, h26km, n15, σ1°.49/17, mb3.6/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.16**	**95**	P	**Pn**	**10 02 20.5**	**-1.6**
SANI				S	**Sn**	**10 02 33.7**	**-3.5**
LUWI	**Luwuk**	**2.25**	**294**	P	**Pn**	**10 02 35.7**	**-1.3**
NLAI	**Namlea**	**2.60**	**119**	P	**Pn**	**10 02 42.6**	**+0.6**
NLAI				S	**Sn**	**10 03 11.9**	**-0.9**
LBMI	**Labuha**	**2.97**	**64**	P	**Pn**	**10 02 48.0**	**+0.9**
APSI	**Ampana**	**3.34**	**288**	P	**Pn**	**10 02 51.3**	**-0.8**
MRSI	**Marisa**	**3.76**	**310**	P	**Pn**	**10 02 57.8**	**-0.1**
KRAI	**Karang Ratu**	**3.81**	**111**	P	**Pn**	**10 02 59.3**	**+0.7**
MPSI	**Mapaga**	**5.43**	**295**	P	**Pn**	**10 03 21.2**	**+0.4**
SPSI	**Sidrap Palu**	**5.43**	**248**	P	**Pn**	**10 03 20.7**	**-0.2**
KAPI	**Kappang**	**5.91**	**239**	P	**Pn**	**10 03 28.5**	**+1.1**
	1.5nm,0.3s,baz=66,slow=9.1,SNR=6.1						
	2.9nm,0.3s						
SIJI	**Sorong**	**6.53**	**81**	P	**Pn**	**10 03 37.7**	**+1.8**
	6.4nm,0.3s,baz=234,slow=19,SNR=30						
	11nm,0.3s						
WRA	**Warramunga Arr**	**20.15**	**153**	P	**P**	**10 06 33.1**	**-0.9**
	0.4nm,0.6s,baz=331,slow=11,SNR=11						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**23.31**	**159**	P	**P**	**10 07 07.5**	**-0.1**
	0.6nm,0.8s,baz=337,slow=11,SNR=3.5						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**61.23**	**328**	P	**P**	**10 12 14.8**	**+0.5**
	0.2nm,0.4s,baz=122,slow=6.1,SNR=4.1						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**64.84**	**335**	P	**P**	**10 12 40.5**	**+2.4**
	0.4nm,0.3s,baz=123,slow=5.3,SNR=2.0						
	0.4nm,0.3s						

MAN 11 10:02:37.4, 6°.64N×126°.50E, h29km, mb4.5, ML3.4, MS3.3, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.39**	**322**	⇓*e*P	Pn	10 02 47.6	+0.5
MATI				*e*S	Sn	10 02 54.1	+0.6
DDMP	**Don Marcelino,**	**0.94**	**236**	⇑*e*P	Pn	10 02 53.7	-0.9
DDMP				*e*S	Sb	10 03 07.5	+0.2
KCP	**Kidapawan**	**1.45**	**285**	⇑*e*P	Pn	10 03 00.7	-0.9
KCP				*i* S	Sn	10 03 17.6	-2.1
BIPH	**Bislig**	**1.54**	**355**	⇑*e*P	Pn	10 03 02.6	-0.3
BIPH				*e*S	Sn	10 03 20.2	-1.9
BUKP	**Musuan**	**1.89**	**311**	⇑*e*P	Pn	10 03 07.9	+0.2
BUKP				*e*S	Sn	10 03 31.4	+0.9
CGP	**Cagayan de Oro**	**2.54**	**315**	⇑*e*P	Pn	10 03 17.6	+0.9
CGP				*e*S	Sn	10 03 47.1	+0.4

IDC 11 10:11:52.8±1.7, 0°.87N×125°.35E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=189.9km s-min=22.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.49**	**157**	P	P	10 16 53.9	-0.2
	0.3nm,0.3s,baz=335,slow=11,SNR=8.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.77**	**162**	P	P	10 17 25.6	+0.1
	0.2nm,0.4s,baz=348,slow=7.3,SNR=7.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.14**	**327**	P	P	10 21 56.0	+0.6
	0.4nm,0.5s,baz=116,slow=8.8,SNR=4.3						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.42**	**329**	P	P	10 22 23.6	-0.7
	0.5nm,0.6s,baz=119,slow=7.6,SNR=2.1						
	0.5nm,0.6s						

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*NNC **11** 10:13:53.3±0.6, 51°.58N×75°.26E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=11.0km s-min=3.6km az=24.0, Suspected Mining explosion.*
*IDC **11** 10:13:57.8±1.0, 51°.75N×75°.65E, h0km, mbtmp2.5/4, ML1.8/4, Error ellipse: s-maj=21.6km s-min=7.8km az=29.0*
ISC 11 10:13:54.1±1.1, 51°.7N±0°.1×75°.28E±0°.08, h0km, n11, σ1°.18/10, 4C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.29**	**116**	Pn	**Pn**	**10 14 34.7**	**+1.5**
	0.2nm,0.3s,baz=305,slow=19,SNR=25						
KURBB				Lg	Lg	10 15 05.9	
	0.2nm,0.3s,baz=307,slow=30,SNR=17						
	1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**2.29**	**116**	⇑Pg	**Pb**	**10 14 35.3**	**-1.1**
	6.3nm,0.6s						
KURBB				⇓Lg	Lg	10 15 05.8	
	35nm,0.6s						
KURK	**Kurchatov**	**2.30**	**113**	⇓Pg	**Pn**	**10 14 34.5**	**+1.1**
	4.0nm,0.8s						
KURK				⇑Lg	Lg	10 15 05.2	
	14nm,0.8s						
BVA0	**Borovoye Array**	**3.30**	**296**	Pg	**Pb**	**10 14 54.1**	**+0.6**
	2.0nm,0.7s,baz=228,slow=40,SNR=6.0						
BVA0				⇓Lg	Lg	10 15 38.2	
	2.4nm,0.8s,baz=122,slow=30,SNR=4.2						
BVAR	**Borovoye Array**	**3.30**	**296**	Pn	**Pb**	**10 14 53.4**	**-0.1**
	0.1nm,0.3s,baz=113,slow=15,SNR=5.8						
BVAR				Sn	**Sb**	**10 15 32.2**	**-2.0**
	0.2nm,0.3s,baz=103,slow=24,SNR=4.0						
BVAR				Lg	Lg	10 15 49.4	
	0.4nm,0.3s,baz=90,slow=31,SNR=6.3						
	1.0nm,0.7s						
OTUK	**Ortayu**	**3.91**	**210**	⇓Lg	Lg	10 15 54.4	
	6.1nm,1.1s						
I46RU	**ZALESOVO INFRA**	**6.22**	**65**	I		10 47 40.0	
	baz=250,slow=322,SNR=4.7						
ZALV	**Zalesovo Beam**	**6.22**	**65**	Pn	**Pn**	**10 15 27.8**	**+0.6**
	0.2nm,0.3s,baz=258,slow=15,SNR=3.8						
ZALV				Lg	Lg	10 17 08.1	
	0.1nm,0.3s,baz=256,slow=28,SNR=2.6						
	0.7nm,0.4s						
MAKZ	**Makanchi**	**6.54**	**135**	⇑Lg	Lg	10 17 19.7	
	3.9nm,0.8s						
MK31	**Makanchi Array**	**6.69**	**134**	⇓Sn	**Sn**	**10 16 50.2**	**-0.3**
	0.9nm,0.8s,baz=307,slow=26,SNR=3.8						
MK31				⇑Lg	Lg	10 17 24.6	
	1.2nm,0.6s,baz=321,slow=30,SNR=6.5						
MKAR	**Makanchi Array**	**6.69**	**134**	Pn	**Pn**	**10 15 34.1**	**+0.5**
	baz=316,slow=12,SNR=4.1						
MKAR				Sn	**Sn**	**10 16 50.8**	**+0.3**
	0.1nm,0.3s,baz=316,slow=24,SNR=5.3						
MKAR				Lg	Lg	10 17 24.6	
	0.2nm,0.3s,baz=322,slow=26,SNR=8.0						
	0.5nm,0.8s						

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*IDC **11** 10:23:17.0±3.0, 42°.59N×141°.09E, h125km±26km, mb3.4/15, mbtmp3.7/18, Error ellipse: s-maj=17.7km s-min=15.5km az=118.0*
*JMA **11** 10:23:19.1±0.1, 42°.7N±0°.5×141°.0E±0°.6, h149km±1km, MV3.0/36, IBURI REGION*
ISC 11 10:23:19.3±0.7, 42°.63N±0°.07×141°.00E±0°.05, h148km±5km, n35, σ0°.77/43, mb3.5/15, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	**0.16**	**169**	P	**Pn**	**10 23 39.1**	**-0.2**
JEW	**Eniwo**	**0.40**	**57**	P	**Pn**	**10 23 40.2**	**+0.3**
JEW				*e*S	**Sn**	**10 23 56.4**	**+0.8**
JIAM	**Iburiatsuma**	**0.68**	**90**	*e*P	**Pn**	**10 23 42.0**	**+0.6**
JIAM				*e*S	**Sn**	**10 23 59.4**	**+1.1**
JYM2	**Yakumo 2**	**0.69**	**222**	*e*P	**Pn**	**10 23 41.6**	**+0.1**
JYM2				*e*S	**Sn**	**10 23 57.8**	**-0.5**
JSH	**Shimam**	**0.70**	**272**	P	**Pn**	**10 23 41.5**	**0.0**
JSH				*e*S	**Sn**	**10 23 58.1**	**-0.4**
JISS	**Ishikarishitsu**	**0.72**	**25**	*e*P	**Pn**	**10 23 41.8**	**+0.2**
JKB	**Kayabe**	**0.74**	**178**	*e*P	**Pn**	**10 23 41.9**	**0.0**
JBT2	**Biratori 2**	**1.02**	**81**	*e*P	**Pn**	**10 23 44.1**	**+0.1**
JBT2				*e*S	**Sn**	**10 24 02.6**	**-0.2**
JSR	**Shiriuchi**	**1.18**	**202**	*e*P	**Pn**	**10 23 45.6**	**+0.1**
JHR	**Hokuryu**	**1.24**	**25**	*e*P	**Pn**	**10 23 46.4**	**+0.4**
JOT	**Ohata**	**1.25**	**178**	*e*P	**Pn**	**10 23 46.3**	**+0.2**
JOSM	**Okushiri--Mats**	**1.25**	**245**	*e*P	**Pn**	**10 23 46.1**	**0.0**
JNBK	**Urakawa-nobuka**	**1.35**	**104**	*e*P	**Pn**	**10 23 47.4**	**+0.3**
JCH	**Churui**	**1.75**	**90**	*e*P	**Pn**	**10 23 51.4**	**+0.1**
JCH				*e*S	**Sn**	**10 24 14.8**	**-1.1**
JKK2	**Kamakawa 2**	**1.79**	**45**	P	**Pn**	**10 23 51.9**	**+0.1**
JKK2				*e*S	**Sn**	**10 24 16.1**	**-0.6**
JSS	**Shosan**	**1.88**	**19**	*e*P	**Pn**	**10 23 53.4**	**+0.6**
JAR	**Ashorobuto**	**2.14**	**71**	*e*P	**Pn**	**10 23 55.7**	**-0.2**
JAR				*e*S	**Sn**	**10 24 22.0**	**-2.1**
USRK	**Ussuriysk Ar.**	**6.75**	**287**	P	**Pn**	**10 24 54.5**	**-1.3**
	1.7nm,0.7s,baz=90,slow=14,SNR=7.4						
KLR	**Kul'dur**	**9.22**	**319**	P	**Pn**	**10 25 28.2**	**-0.6**
	2.3nm,0.7s,baz=141,

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T1245                                  S    Sg    10 37 23.2 +0.7
T1245                                  AML  AML
      comp=E,54µm,0.3s
T1245                                  AML  AML
      comp=N,78µm,0.3s
T1245                                  AML  AML
      comp=N,198µm,1.1s
T1245                                  AML  AML
      comp=E,164µm,0.2s
NRCA  Norcia          0.11 322         P    Pg    10 37 20.3 +0.2
NRCA                                   S    Sg    10 37 22.4 +0.1
NRCA                                   AML  AML
      comp=E,114µm,0.3s
NRCA                                   AML  AML
      comp=N,101µm,1.4s
NRCA                                   AML  AML
      comp=E,114µm,0.3s
NRCA                                   AML  AML
      comp=N,101µm,1.4s
MMO1  Montemonaco     0.18  30 ⇑P       Pb    10 37 21.9 -0.6
T1243 Rocca Santa Ma  0.18 106         P    Pg    10 37 21.7 +0.4
T1243                                  S    Sg    10 37 24.9 +0.8
LNSS  Leonessa        0.19 221         P    Pg    10 37 21.7 +0.4
LNSS                                   S    Sg    10 37 25.5 +1.3
LNSS                                   AML  AML
      comp=E,48µm,1.4s
LNSS                                   AML  AML
      comp=N,50µm,1.6s
LNSS                                   AML  AML
      comp=N,50µm,1.6s
LNSS                                   AML  AML
      comp=E,48µm,1.4s
T1215 Vallo di Nera,  0.26 283         P    Pg    10 37 22.9 +0.4
ARRO  Arrone          0.37 243         S    Sb    10 37 31.0 -0.4
FOSV  Fossato di Vic  0.64 329         P    Pb    10 37 30.6 +0.2
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KRSZO 11 10:38:21.6±4.3, 45°.47N×17°.35E, h7km±13km, ML1.8/4,
Error ellipse: s-maj=34.2km s-min=7.4km az=1.0,
Northwestern Balkan Peninsula

```
Code  Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m  s   ISC
MOSL  Moslavina       0.44 289  ePg   Pg    10 38 30.5 +0.4
MOSL                            Sg    Sg    10 38 36.1 +0.2
KOVH  Kovagotottos    0.81  40  Pg    Pb    10 38 37.8 -0.3
      SNR=1.7
KOVH                            Lg    Lg    10 38 50.0
KOVH  Kovagotottos    0.81  40  P     Pb    10 38 37.8 -0.3
KOVH                            S     Sb    10 38 50.0 +0.7
KALN  Kalnik          0.91 317  ePg   Pb    10 38 39.6 -0.1
KALN                            Sg    Sg    10 38 50.4 -0.5
PTJ   Puntijarka      1.06 295  ePg   Pn    10 38 43.4 +0.4
PTJ                             Sg    Sb    10 38 56.5  0.0
PTJ   Puntijarka      1.06 295  Pg    Pn    10 38 43.3 +0.3
      comp=Z,0.1nm,SNR=1.7
PTJ                             Lg    Lg    10 38 57.5
BEHE  Becsehely       1.08 339  Pg    Pn    10 38 43.4 +0.2
      comp=Z,0.1nm,SNR=1.6
BEHE                            Sn    Sn    10 38 58.4 +0.1
BEHE  Becsehely       1.08 339  P     Pn    10 38 43.4 +0.2
BEHE                            S     Sn    10 38 58.4 +0.1
MORH  Mrgy, Hungar    1.18  50  Pg    Pn    10 38 45.1 +0.6
      SNR=1.7
MORH                            Sn    Sn    10 39 01.0 +0.2
MORH  Mrgy, Hungar    1.18  50  P     Pn    10 38 45.1 +0.6
MORH                            S     Sn    10 39 01.0 +0.2
```

INET 11 10:46:46.6±0.3, 12°.31N×87°.24W, h34km±8km, MW3.2
SNET 11 10:46:46.9±1.4, 12°.20N×87°.92W, h20km±14km, ML3.3
ISC 11 10:46:42.2±1.9, 12°.2N±0°.1×87°.40W±0°.07, h10km, n19,
σ0°.94/18, Near coast of Nicaragua

```
Code  Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m  s   ISC
CRIN  San Cristobal   0.64  32  eP    Pb    10 46 55.9 +0.3
TEL3  Telica 3        0.68  52  eP    Pg    10 46 56.1 +0.6
CNGN  Cerro Negro     0.77  63  i P   Pg    10 46 57.5 +0.4
COPN  Copaltepe       0.79  88  eP    Pg    10 46 58.3 +0.8
MOMN  Momotombo       0.88  73  eP    Pg    10 46 59.3 +0.1
CRUN  El Crucero      1.09  99  eP    Pg    10 47 00.5 -2.6
CNCH  Conchagua       1.20 339  eP    Pb    10 47 05.8 +0.6
CNCH                            eS    Sg    10 47 21.9 +1.1
CNCH                            IAML        10 47 27.2
      comp=Z,3µm,0.3s
HUEN                  1.21  81  eP    Pg    10 47 04.7 -0.9
LCND  La Caada        1.25 337  eP    Pb    10 47 05.8 -0.2
LCND                            eS    Sb    10 47 22.1  0.0
LCND                            IAML        10 47 25.3
      comp=Z,692nm,0.3s
PACA  Pacayal         1.59 326  eP    Pn    10 47 11.0 +0.4
PACA                            eS    Sn    10 47 29.1 -2.3
PACA                            IAML        10 47 33.0
      comp=Z,2µm,0.4s
PACA  Pacayal         1.59 326  i P   Pn    10 47 11.6 +1.0
MATN  Matagalpa       1.63  62  eP    Pn    10 47 10.6 -0.6
BOAB  BOACO BROADBAN  1.72  80  eP    Pn    10 47 11.2 -1.1
COEB  Comit de Eme    1.74 321  eP    Pn    10 47 11.6 -1.0
PQSS  Presa 15 de Se  1.85 322  eP    Pn    10 47 13.4 -0.6
PQSS                            IAML        10 47 37.2
      comp=Z,39nm,0.2s
SCLA  Alcaldia de Sa  2.02 320  eP    Pn    10 47 15.5 -0.9
COEG  Centro de Oper  2.06 315  eP    Pn    10 47 16.2 -0.7
COEG                            eS    Sn    10 47 37.0 -5.7
COEG                            IAML        10 47 43.8
      comp=Z,132nm,0.3s
ACON  Acoyapa         2.18  95  eP    Pn    10 47 19.7 +1.1
P5NO  Presa 5 de nov  2.25 324  eP    Pn    10 47 19.4 -0.3
```

IDC 11 10:46:39.2±0.7, 44°.84N×37°.88E, h0km, mb3.5/4,
mbtmp3.5/10, ML3.5/6, MS2.8/2, Error ellipse:
s-maj=12.1km s-min=7.2km az=10.0
MOS 11 10:46:43.6±0.0, 44°.84N×37°.96E, h42km±2km, MPVA4.2
CFUSG 11 10:46:43.2, 44°.92N×38°.06E, h33km, mb3.0/5, Krasnodar
region Magtype MSH 2.8 from 5 stations
SIGU 11 10:46:44.0, 44°.84N×37°.96E, h30km, MD2.8/5, msh2.8/5,
Lower Kuban region 5
ISC 11 10:46:43.1±0.9, 44°.94N±0°.04×37°.94E±0°.02, h33km±8km,
n79, σ1°.45/134, mb3.4/3, 9C-14D, Western Caucasus

```
Code  Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m  s   ISC
SPGR  Shapsug         0.22 154  i P   Pn    10 46 50.8 +0.6
SPGR                            i S   Sn    10 46 56.8 +2.1
SPGR  Shapsug         0.22 154  i Pg  Pn    10 46 50.8 +0.6
SPGR                            i Sg  Sn    10 46 56.8 +2.1
ANN   Anapa           0.39 248  c iP  Pn    10 46 54.4 +2.0
ANN                             i S   Sn    10 47 02.2 +3.6
ANN                             pmax  pmax
      comp=Z,277nm,0.2s
ANN                             smax  smax
      comp=Z,1µm,0.5s
ANN   Anapa           0.39 248  i Pg  Pn    10 46 54.5 +2.0
ANN                             i Sg  Sn    10 47 02.1 +3.4
GL1R  Gelendzhik      0.41 166  c iP  Pb    10 46 52.2 -0.1
GL1R                            i S   Sb    10 46 58.9 +0.4
GL1R  Gelendzhik      0.41 166  i Pg  Pb    10 46 52.2 -0.1
GL1R                            eSg   Sb    10 46 59.1 +0.6
KGUR  Krasnodar       0.78  84  i P   Pn    10 46 58.7 +0.8
KGUR                            i S   Sn    10 47 10.2 +1.8
KGUR  Krasnodar       0.78  84  i Pg  Pn    10 46 58.7 +0.8
KGUR                            i Sg  Sn    10 47 10.2 +1.8
GOYR  Goytkh          1.24 124  i P   Pn    10 47 04.9 +0.7
GOYR                            eS    Sn    10 47 19.8 -0.1
GOYR  Goytkh          1.24 124  i Pg  Pn    10 47 04.9 +0.7
GOYR                            eSg   Sn    10 47 19.8 -0.1
LZRR  Lazarevskoye    1.45 134  i P   Pn    10 47 07.3 +0.3
LZRR                            eS    Sn    10 47 22.9 -1.9
LZRR  Lazarevskoye    1.45 134  i Pg  Pn    10 47 07.3 +0.3
LZRR                            eSg   Sn    10 47 22.9 -1.9
FEO   Feodosiya       1.81 273  ⇑i Pn Pb    10 47 14.0 -1.6
FEO                             Pnm         10 47 14.4
      comp=Z,124nm,0.1s
FEO                             eSn   Sb    10 47 37.0 -0.8
FEO                             Snm         10 47 39.7
      comp=N,116nm,0.2s
FEO                             Snm         10 47 40.8
      comp=E,32nm,0.2s
FEO   Feodosiya       1.81 273  ⇑i Pn Pb    10 47 14.0 -1.6
FEO                             e           10 47 37.0
```

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FEO   Feodosiya       1.81 273  ePg   Pb    10 47 14.0 -1.6
FEO                             eSg   Sb    10 47 37.0 -0.8
FEO   Feodosiya       1.81 273  ⇑i Pn Pb    10 47 14.0 -1.6
FEO                             Pnm         10 47 14.4
      comp=Z,124nm,0.1s
FEO                             eSn   Sb    10 47 37.0 -0.8
FEO                             Snm         10 47 39.7
      comp=N,116nm,0.2s
FEO                             Snm         10 47 40.8
      comp=E,32nm,0.2s
GUZR  Guzeripl'       1.83 120  i P   Pn    10 47 12.6 +0.3
GUZR                            eS    Sn    10 47 35.2 +0.8
GUZR  Guzeripl'       1.83 120  i Pg  Pn    10 47 12.6 +0.3
GUZR                            eSg   Sn    10 47 35.2 +0.8
SOC   Sochi           1.87 136  eP    Pn    10 47 13.6 +0.8
SOC                             e           10 47 37.5
SOC                             pmax  pmax
      comp=Z,11nm,0.6s
SOC                             smax  smax
      comp=E,34nm,0.5s
SOC   Sochi           1.87 136  ePg   Pn    10 47 13.1 +0.3
SOC                             eSg   Sn    10 47 34.2 -1.1
ERBR  Yeremizino-Bor  1.96  66  eP    Pn    10 47 15.1 +1.1
ERBR                            eS    Sn    10 47 37.9 +0.4
ERBR  Yeremizino-Bor  1.96  66  ePg   Pn    10 47 15.1 +1.1
ERBR                            eSg   Sn    10 47 37.9 +0.4
LABN  Labinsk         2.01  98  eP    Pb    10 47 17.6 -1.4
LABN                            eS    Sb    10 47 41.7 -1.9
LABN  Labinsk         2.01  98  ePg   Pb    10 47 17.6 -1.4
LABN                            eSg   Sb    10 47 41.7 -1.9
VSLR  Vesyoloye       2.12 134  d iP  Pn    10 47 16.6 +0.4
VSLR  Vesyoloye       2.12 134  i Pg  Pn    10 47 16.6 +0.4
VSLR                            eSg   Sn    10 47 39.4 -2.0
AHMR  Akhmetovskaya   2.36 108  eP    Pn    10 47 20.2 +0.6
AHMR                            eS    Sn    10 47 49.2 +1.8
AHMR  Akhmetovskaya   2.36 108  ePn   Pn    10 47 20.2 +0.6
AHMR                            eSn   Sn    10 47 49.2 +1.8
ALU   Alushta         2.53 265  ⇓i Pn Pn    10 47 22.6 +0.7
ALU                             Pnm         10 47 23.7
      comp=Z,23nm,0.2s
ALU                             eSn   Sn    10 47 52.9 +1.4
ALU                             Snm         10 47 56.0
      comp=N,39nm,0.3s
ALU                             Snm         10 47 57.7
      comp=E,20nm,0.2s
ALU   Alushta         2.53 265  ⇓i P   Pn    10 47 22.6 +0.7
ALU                             e           10 47 52.9
ALU   Alushta         2.53 265  ePn   Pn    10 47 22.6 +0.7
ALU                             eSn   Sn    10 47 52.9 +1.4
ALU   Alushta         2.53 265  ⇓i Pn Pn    10 47 22.6 +0.7
ALU                             Pnm         10 47 23.7
      comp=Z,23nm,0.2s
ALU                             eSn   Sn    10 47 52.9 +1.4
ALU                             Snm         10 47 56.0
      comp=N,39nm,0.3s
ALU                             Snm         10 47 57.7
      comp=E,20nm,0.2s
SIM   Simferopol'     2.71 271  ⇓i Pn Pn    10 47 25.2 +0.8
SIM                             Pnm         10 47 26.5
      comp=Z,85nm,0.3s
SIM                             eSn   Sn    10 47 57.5 +1.4
SIM                             Snm         10 47 59.3
      comp=N,30nm,0.2s
SIM                             Snm         10 47 59.7
      comp=E,22nm,0.2s
SIM   Simferopol'     2.71 271  ⇓i P   Pn    10 47 25.2 +0.8
SIM                             e           10 47 57.5
SIM   Simferopol'     2.71 271  ePn   Pn    10 47 25.2 +0.8
SIM                             eSn   Sn    10 47 57.5 +1.4
SIM   Simferopol'     2.71 271  ⇓i Pn Pn    10 47 26.2 +1.8
SIM                             Pnm         10 47 26.5
      comp=Z,85nm,0.3s
SIM                             i Sn  Sn    10 47 58.5 +2.4
SIM                             Snm         10 47 59.3
      comp=N,30nm,0.2s
SIM                             Snm         10 47 59.7
      comp=E,22nm,0.2s
YAL   Yalta           2.73 262  ⇓i Pn Pn    10 47 26.0 +1.3
YAL                             Pnm         10 47 26.4
      comp=Z,32nm,0.1s
YAL                             eSn   Sn    10 47 58.0 +1.4
YAL                             Snm         10 47 59.9
      comp=E,41nm,0.2s
YAL                             Snm         10 48 00.0
      comp=N,58nm,0.3s
YAL   Yalta           2.73 262  ⇓i P   Pn    10 47 26.0 +1.3
YAL                             e           10 47 58.0
YAL   Yalta           2.73 262  ePn   Pn    10 47 26.0 +1.3
YAL                             eSn   Sn    10 47 58.0 +1.4
YAL   Yalta           2.73 262  ⇓i Pn Pn    10 47 26.1 +1.3
YAL                             Pnm         10 47 26.4
      comp=Z,52nm,0.1s
YAL                             eSn   Sn    10 47 58.0 +1.4
YAL                             Snm         10 47 59.9
      comp=E,41nm,0.2s
YAL                             Snm         10 48 00.0
      comp=N,58nm,0.3s
NVNR  Nevinnomyssk    2.89  95  eP    Pn    10 47 27.1 +0.3
NVNR                            eS    Sn    10 48 00.2 -0.3
NVNR  Nevinnomyssk    2.89  95  ePn   Pn    10 47 27.1 +0.3
NVNR                            eSn   Sn    10 48 00.2 -0.3
SEV   Sevastopol'     3.07 264  ⇓i Pn Pn    10 47 30.1 +0.8
SEV                             Pnm         10 47 30.9
      comp=Z,14nm,0.2s
SEV                             i Sn  Sn    10 48 06.1 +1.3
SEV                             Snm         10 48 08.8
      comp=N,8.0nm,0.2s
SEV                             Snm         10 48 09.3
      comp=E,8.0nm,0.2s
SEV   Sevastopol'     3.07 264  ⇓i P   Pn    10 47 29.2 -0.1
SEV                             i           10 48 05.2
SEV   Sevastopol'     3.07 264  ePn   Pn    10 47 29.2 -0.1
SEV                             eSn   Sn    10 48 05.2 +0.4
SEV   Sevastopol'     3.07 264  ⇓i Pn Pn    10 47 30.2 +0.9
SEV                             Pnm         10 47 31.0
      comp=Z,32nm,0.2s
SEV                             i Sn  Sn    10 48 06.2 +1.4
SEV                             Snm         10 48 07.9
      comp=N,27nm,0.2s
SEV                             Snm         10 48 08.5
      comp=E,23nm,0.2s
DOMR  Dombai          3.13 121  eP    Pn    10 47 31.4 +1.1
DOMR                            eS    Sn    10 48 08.0 +1.4
DOMR  Dombai          3.13 121  ePn   Pn    10 47 31.4 +1.1
DOMR                            eSn   Sn    10 48 08.0 +1.4
KIV   Kislovodsk      3.54 105  eP    Pn    10 47 37.3 +1.4
KIV                             eS    Sn    10 48 14.3 -2.4
KIV   Kislovodsk      3.54 105  ePn   Pn    10 47 37.3 +1.4
KIV                             eSn   Sn    10 48 14.3 -2.4
ALER  Alexandrovskoy  3.54  91  eP    Pn    10 47 37.3 +1.4
ALER                            eS    Sn    10 48 16.2 -0.5
ALER  Alexandrovskoy  3.54  91  ePn   Pn    10 47 37.4 +1.4
ALER                            eSn   Sn    10 48 16.2 -0.5
KVAR  Kislovodsk Arr  3.55 104  Pn    Pn    10 47 37.4 +1.3
      baz=276,slow=19
KVAR                            Sn    Sn    10 48 17.4 +0.4
      baz=57,slow=21
KVAR                            Lg    Lg    10 48 31.0
      baz=346,slow=9.9
      comp=E,2.4nm,0.3s
SHA1  Shidzhatmaz     3.60 108  eP    Pn    10 47 37.2 +0.4
SHA1                            eS    Sn    10 48 18.6 +0.4
SHA1  Shidzhatmaz     3.60 108  ePn   Pn    10 47 37.1 +0.4
SHA1                            eSn   Sn    10 48 18.6 +0.4
BEYR  Belyy Ugol+     3.62 103  eP    Pn    10 47 38.9 +2.0
BEYR                            eS    Sn    10 48 18.1 -0.4
BEYR  Belyy Ugol+     3.62 103  ePn   Pn    10 47 38.9 +2.0
BEYR                            eSn   Sn    10 48 18.1 -0.4
GOF   Gofitskoye      3.62  86  eP    Pn    10 47 37.9 +0.9
GOF                             eS    Sn    10 48 20.5 +1.8
GOF   Gofitskoye      3.62  86  ePn   Pn    10 47 37.9 +0.9
GOF                             eSn   Sn    10 48 20.5 +1.8
KBZ   Khabaz          3.76 107  Pn    Pn    10 47 40.5 +1.7
      comp=E,0.6nm,0.3s,baz=289,slow=8.2,SNR=13
KBZ                             Sn    Sn    10 48 23.4 +1.4
      comp=E,2.5nm,0.3s,baz=257,slow=2.8,SNR=5.9
KBZ                             Lg    Lg    10 48 36.5
      comp=E,5.3nm,0.3s,baz=1.4,slow=23,SNR=9.4
      comp=E,2.0nm,0.3s
NEY   Neytrino        3.84 114  eP    Pn    10 47 39.7 -0.5
NEY                             eS    Sn    10 48 21.7 -2.6
NEY   Neytrino        3.84 114  ePn   Pn    10 47 39.7 -0.5
NEY                             eSn   Sn    10 48 21.7 -2.6
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BRTR  Keskin Array B  6.11 213  Pn    Pn    10 48 11.6 +0.3
      comp=E,0.3nm,0.3s,baz=45,slow=12,SNR=5.9
BRTR                            Pg    Pb    10 48 21.6 -7.2
      comp=E,0.3nm,0.3s,baz=37,slow=13,SNR=4.4
BRTR                            Sn    Sn    10 49 17.6 -2.4
      comp=E,0.4nm,0.3s,baz=33,slow=24,SNR=6.1
      comp=E,0.4nm,0.3s
GNI   Garni           6.94 131  LR    LR    10 52 18.7
      comp=E,14nm,21.3s,baz=338,slow=49
HARR  Harsova         7.12 271  ⇑P    Pn    10 48 25.3 +0.3
VRI   Vrincioaia      7.94 281  ⇑P    Pn    10 48 37.0 +0.8
TESR  Tescani         8.05 285  ⇑P    Pn    10 48 37.2 -0.6
AKASG Malin Array Be  8.21 318  Pn    Pn    10 48 39.4 -0.5
      comp=E,1.1nm,0.3s,baz=113,slow=11,SNR=4.8
AKASG                           Sn    Sn    10 50 04.5 -7.0
      comp=E,1.7nm,0.3s,baz=126,slow=25,SNR=4.7
      comp=E,0.3nm,0.2s
MLR   Muntele Rosu    8.48 278  Pn    Pn    10 48 44.1 +0.3
      comp=E,0.9nm,0.3s,baz=66,slow=4.3,SNR=11
      comp=E,2.6nm,0.3s
VOIR                  9.12 278  ⇑P    Pn    10 48 52.9 +0.5
BURAR Bucovina Array  9.20 291  ⇓P    Pn    10 48 52.7 -1.0
ARU   Arti           17.32  41  i P   P     10 50 42.9 -0.5
ARU                             pmax  pmax
      comp=Z,2.0nm,1.1s
DAVOX Davos/Dischmat 19.59 285  P     P     10 51 07.1 -1.5
      comp=Z,0.5nm,0.3s,baz=110,slow=6.1,SNR=5.0
      comp=Z,2.1nm,0.4s
HFS   Hagfors        21.00 325  P     P     10 51 22.7 -0.8
      comp=Z,6.1nm,1.1s,baz=111,slow=12,SNR=1.1
      comp=Z,6.1nm,1.1s
NOA   NORSAR Array B 22.52 325  P     P     10 51 42.1 +2.2
      comp=Z,0.2nm,0.3s,baz=128,slow=10.0,SNR=1.5
      comp=Z,0.2nm,0.3s
ARCES ARCESS Array B 25.45 350  P     P     10 52 07.3 -0.4
      comp=Z,1.4nm,0.8s,baz=168,slow=8.9,SNR=1.3
      comp=Z,1.4nm,0.8s
AAK   Ala-Archa      26.35  82  i P   P     10 52 17.9 +1.6
TORD  Torodi Ar. Bea 44.19 236  P     P     10 54 48.9 -0.1
      comp=Z,0.3nm,0.5s,baz=29,slow=8.3,SNR=2.6
      comp=Z,0.3nm,0.5s
RES   Resolute Bay   56.61 347  LR    LR    11 20 30.9
      comp=Z,36nm,18.3s,baz=5.0,slow=36
```

HVO 11 10:52:49.6±1.0, 19°.32N±0°.09×155°.02W±0°.07, h35km±7km,
ML2.5/17, ML2.4/50(NEIC), Error ellipse: s-maj=14.4km
s-min=6.8km az=150.0
NEIC 11 10:52:48.4±0.7, 19°.30N±0°.02×155°.04W±0°.01, h38km±2km,
Error ellipse: s-maj=3.4km s-min=2.0km az=185.0,
Hawaiian Islands

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Code  Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m  s   ISC
JCUZ  Jacuzzi         0.10 326                    Pn    10 52 55.1 -6.2
JCUZ                                                Sn    10 52 59.1 -15
NPOC  North of Pu'u   0.11 325                    Pn    10 52 54.2 -6.5
NPOC  North of Pu'u   0.11 325                    Sn    10 52 59.1 -13
KNHH  Kane Nui o Ham  0.14 303                    Pn    10 52 55.3 -4.0
KNHH                                                Sn    10 52 57.5 -12
PUH   Pauahi          0.18 294                    Pn    10 52 55.6 -2.5
PUH   Pauahi          0.18 294                    Sn    10 52 59.9 -7.5
PUH   Pauahi          0.18 294  IAML        10 53 00.2
      comp=E,396nm,0.2s
PUH                             IAML        10 53 00.3
      comp=N,304nm,0.1s
KKO   Keanakako`i     0.23 295  IAML        10 53 01.6
      comp=N,973nm,0.7s
KKO                             IAML        10 53 01.7
      comp=E,562nm,0.4s
KKO   Keanakako`i     0.23 295                    Pn    10 52 56.1 -1.0
KKO                                                 Sn    10 53 00.9 -3.9
BYL   Byron's Ledge   0.23 299                    Sn    10 53 00.9 -3.9
BYL   Byron's Ledge   0.23 299                    Pn    10 52 56.1 -1.0
BYL   Byron's Ledge   0.23 299  IAML        10 53 01.3
      comp=N,1µm,0.3s
BYL                             IAML        10 53 01.3
      comp=E,684nm,0.3s
RIM   Rim             0.24 294                    Pn    10 52 56.1 -0.9
RIM                                                 Sn    10 53 01.0 -3.7
RIM   Rim             0.24 294  IAML        10 53 01.4
      comp=N,710nm,0.3s
RIM                             IAML        10 53 01.4
      comp=E,843nm,0.3s
HATHI Halema'uma'u T  0.24 301  IAML        10 53 01.2
      comp=E,562nm,1.0s
HATHI                           IAML        10 53 01.3
      comp=N,664nm,0.2s
HATHI Halema'uma'u T  0.24 301                    Pn    10 52 56.1 -0.9
HATHI                                               Sn    10 53 01.0 -3.7
SBLHI Steaming Bluff  0.25 301                    Pn    10 52 56.1 -0.8
SBLHI                                               Sn    10 53 00.9 -3.5
SBLHI Steaming Bluff  0.25 301  IAML        10 53 01.8
      comp=N,538nm,0.4s
SBLHI                           IAML        10 53 03.6
      comp=E,310nm,1.1s
HLP   Hilina Pali     0.25 269                    Pn    10 52 56.5 -0.4
HLP                                                 Sn    10 53 01.7 -2.7
HLP   Hilina Pali     0.25 269  IAML        10 53 02.0
      comp=N,870nm,0.2s
HLP                             IAML        10 53 02.0
      comp=E,899nm,0.3s
NPH   North Pit       0.25 296                    Sn    10 53 02.1 -2.4
NPH   North Pit       0.25 296  Pg    Pn    10 52 56.2 -0.6
NPH                             IAML        10 53 01.2
      comp=E,283nm,1.9s
NPH   North Pit       0.25 296  IAML        10 53 04.1
      comp=N,305nm,1.3s
SDHHI Sand Hill       0.26 291                    Pn    10 52 56.2 -0.6
SDHHI                           IAML        10 53 01.6
      comp=E,656nm,0.4s
SDHHI                           IAML        10 53 03.5
      comp=N,686nm,0.3s
SDHHI Sand Hill       0.26 291                    Sn    10 53 01.4 -3.0
UWB   Uwekahuna B     0.26 299                    Sn    10 53 01.1 -3.2
UWB   Uwekahuna B     0.26 299                    Pn    10 52 56.2 -0.7
UWB   Uwekahuna B     0.26 299  IAML        10 53 01.0
      comp=N,327nm,1.2s
UWB   Uwekahuna B     0.26 299  IAML        10 53 01.4
      comp=E,171nm,0.3s
OBL   Observatory Le  0.26 297                    Sn    10 53 01.7 -2.6
OBL   Observatory Le  0.26 297                    Pn    10 52 56.3 -0.5
OBL                             IAML        10 53 02.6
      comp=E,582nm,0.6s
OBL                             IAML        10 53 02.7
      comp=N,782nm,0.7s
UWE   Uwekahuna       0.27 297                    Pn    10 52 56.3 -0.5
UWE                                                 Sn    10 53 01.4 -2.8
WRMHI West Rim        0.27 294                    Pn    10 52 56.4 -0.5
WRMHI                           IAML        10 53 04.2
      comp=E,672nm,1.3s
RSD   Rainshed        0.28 306                    Pn    10 52 56.5 -0.3
RSD   Rainshed        0.28 306                    Sn    10 53 01.8 -2.3
HTC   Hot Caves       0.34 260                    Pn    10 52 57.5 +0.6
HTC                                                 Sn    10 53 04.5 +0.9
MLH   Mauna Loa       0.38 301  IAML        10 53 08.2
      comp=N,326nm,1.6s
MLH   Mauna Loa       0.38 301                    Pn    10 52 57.7 +0.2
MLH                                                 Sn    10 53 04.3 -0.2
AIN   Ainahou         0.40 281                    Pn    10 52 58.2 +0.5
AIN                                                 Sn    10 53 04.7  0.0
AIN   Ainahou         0.40 281  IAML        10 53 04.8
      comp=E,851nm,0.2s
AIN                             IAML        10 53 05.2
      comp=N,1µm,0.3s
HMH   Humu'ula Sheep  0.52 306                    Pn    10 52 59.5  0.0
HMH                                                 Sn    10 53 07.2 -0.1
HMH   Humu'ula Sheep  0.52 306  IAML        10 53 07.5
      comp=E,206nm,1.2s
HMH                             IAML        10 53 07.7
      comp=N,568nm,0.2s
HPO   Honuapo         0.53 247                    Sn    10 53 07.0 -0.2
KHU   Kahuku          0.55 265                    Pn    10 52 59.8 -0.2
KHU                             IAML        10 53 07.6
      comp=N,169nm,0.2s
KHU   Kahuku          0.55 265                    Sn    10 53 07.4 -0.6
MLOA  Mauna Loa Obse  0.56 295                    Pn    10 53 00.1 -0.2
MLOA                                                Sn    10 53 08.0 -0.5
MLOA  Mauna Loa Obse  0.56 295  IAML        10 53 08.4
      comp=E,739nm,0.3s
MLOA                            IAML        10 53 08.4
      comp=N,629nm,0.3s
MWH   Moku'aweowe     0.56 290                    Pn    10 53 00.0 -0.3
MWH                             IAML        10 53 08.8
      comp=E,277nm,1.1s
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MWH IAML 10 53 14.8
comp=N,235nm,2.0s
POHA Pohakuloa 0.65 315 Pn Pn 10 53 00.9 -0.5
POHA IAML 10 53 09.3
comp=N,265nm,0.2s
POHA IAML 10 53 18.7
comp=N,158nm,2.2s
HUH Hualalai 0.84 297 Pn 10 53 03.9 -0.1
KHLU Kahalu`u 0.85 290 Pn 10 53 03.6 -0.4
KHLU Sn 10 53 14.4 -1.0
KHLU IAML 10 53 28.4
comp=E,133nm,2.5s
HPAH Hawaii Prepara 0.95 320 Pn 10 53 04.5 -0.8
HPAH IAML 10 53 30.6
comp=E,106nm,3.6s
HPAH IAML 10 53 39.4
comp=N,97nm,5.0s
HON Honolulu 3.43 306 Pn Pn 10 53 38.6 -0.7

IDC 11 11:09:42.5±5.6, 1°78S×140°45E, h0km, mb3.7/2, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=146.1km s-min=69.7km az=130.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.01**	**198**	P	P	11 14 05.9	-0.2
	0.4nm,0.3s,baz=19,slow=12,SNR=42						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**22.66**	**196**	P	P	11 14 45.0	-0.5
	1.3nm,0.5s,baz=29,slow=11,SNR=36						
	1.3nm,0.5s						
VNDA	**Vanda**	**76.55**	**175**	P	P	11 21 34.6	+0.5
	0.5nm,0.6s,baz=327,slow=6.9,SNR=5.8						
	0.5nm,0.6s						

*IDC **11** 11:14:53.4±0.6, 30°.83N×142°.03E, h0km, mb4.1/16, mbtmp4.0/22, ML3.4/6, MS3.3/12, Error ellipse: s-maj=19.3km s-min=14.5km az=76.0*
*NIED **11** 11:14:54.4, 30°.86N×141°.93E, h21km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.58; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-0.69; $M_{r\theta}$2.31; $M_{\theta\phi}$-0.55; $M_{\phi r}$-1.45; Fault plane solution: $M_0$2.73000×10^{15} NP1:ϕ_s16.00000°, δ4.00000°, λ162.00000°. NP2:ϕ_s124.00000°, δ89.00000°, λ87.00000°.*
*JMA **11** 11:14:54.4±0.2, 30°.9N±0°.8×14°.2E±°, h21km, MV4.5/27, NEAR TORISHIMA IS*
*NEIC **11** 11:14:55.3±2.2, 30°.90N±0°.07×142°.1E±0°.1, h10km±1km, mb4.5/24, Error ellipse: s-maj=17.8km s-min=8.9km az=63.0*

ISC 11 11:14:57.1±0.5, 30°93N±0°05×142°06E±0°08, h24km, n82, σ1§38/88, mb4.3/26, MS3.4/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.88**	**319**	*eS*	**Sn**	**11 16 14.1**	**-1.2**
JHJ2	**Mitsune**	**2.89**	**319**	Pn	**Pn**	**11 15 42.6**	**+0.9**
JHJ2	**Mitsune**	**2.89**	**319**	*eP*	**Pn**	**11 15 40.2**	**-1.5**
JHJ	**Hachijo jima 2**	**2.92**	**319**	Pn	**Pn**	**11 15 39.7**	**-2.4**
	7.8nm,0.3s,baz=40,slow=13,SNR=2.1						
JHJ				Sn	**Sn**	**11 16 15.3**	**-1.0**
	72nm,0.3s,baz=9.7,slow=18,SNR=5.4						
JHJ				LR	LR	11 16 55.6	
	comp=Z,434nm,18.6s,baz=156,slow=41						
	333nm,1.1s						
JMKN	**Mikurajimanish**	**3.62**	**325**	*eP*	**Pn**	**11 15 51.2**	**-0.5**
JMKN				*eS*	**Sn**	**11 16 33.1**	**-0.6**
CBIJ	**Chichi jima**	**3.82**	**178**	P	**Pn**	**11 15 53.0**	**-1.5**
CBIJ				*eS*	**Sn**	**11 16 36.7**	**-2.0**
JCJ	**Chichijima**	**3.82**	**178**	Pn	**Pn**	**11 15 51.9**	**-2.6**
	15nm,0.3s,baz=280,slow=22,SNR=15						
JCJ				Sn	**Sn**	**11 16 36.2**	**-2.5**
	26nm,0.3s,baz=297,slow=22,SNR=4.0						
JCJ				LR	LR	11 17 36.7	
	comp=Z,193nm,19.8s,baz=18,slow=44						
	31nm,0.3s						
JCJ	**Chichijima**	**3.82**	**178**	Pn	**Pn**	**11 15 52.3**	**-2.2**
BSO1	**Boso 1**	**3.83**	**346**	P	**Pn**	**11 15 54.0**	**-0.1**
BSO1				*eS*	**Sn**	**11 16 39.2**	**+1.2**
BSO4	**Boso 4**	**4.30**	**341**	*eP*	**Pn**	**11 16 01.5**	**+0.5**
JOD2	**Odawara 2**	**4.99**	**331**	*eP*	**Pn**	**11 16 10.5**	**-0.1**
JHU	**Hanno**	**5.43**	**335**	*eP*	**Pn**	**11 16 17.3**	**+0.6**
JYT	**Yasato**	**5.51**	**344**		**Pn**	**11 16 16.9**	**-0.8**
JYT	**Yasato**	**5.51**	**344**	P	**Pn**	**11 16 18.8**	**+1.1**
JRY	**Ryogami san**	**5.72**	**333**	*eP*	**Pn**	**11 16 21.5**	**+0.9**
JRY				*eS*	**Sn**	**11 17 27.2**	**+1.7**
JHO	**Hitachi**	**5.80**	**348**	*eP*	**Pn**	**11 16 20.5**	**-1.2**
JHO				*eS*	**Sn**	**11 17 24.1**	**-3.3**
JAG	**Ashikaga**	**5.90**	**339**	*eP*	**Pn**	**11 16 22.9**	**-0.1**
JAG				*eS*	**Sn**	**11 17 29.9**	**0.0**
JGF	**Kuroka**	**6.10**	**321**	Pn	**Pn**	**11 16 26.4**	**+0.5**
INU	**Inuyama**	**6.11**	**317**	Pn	**Pn**	**11 16 24.0**	**-1.9**
MJAR	**Matsushiro Arr**	**6.45**	**331**	Pn	**Pn**	**11 16 30.7**	**0.0**
	1.0nm,0.3s,baz=149,slow=11,SNR=73						
MJAR				LR	LR	11 19 07.3	
	comp=Z,155nm,19.8s,baz=170,slow=39						
	21nm,0.7s						
MAJO	**Matsushiro**	**6.45**	**331**	Pn	**Pn**	**11 16 30.4**	**-0.3**
MJB9	**Matsu-Tunnel**	**6.46**	**331**	Pn	**Pn**	**11 16 30.6**	**-0.1**
JFK	**Kawauchi**	**6.50**	**352**	*eP*	**Pn**	**11 16 30.2**	**-1.1**
JMM	**Marumori**	**7.00**	**352**		**Pn**	**11 16 36.7**	**-1.4**
JSD	**Sado**	**7.75**	**337**	Pn	**Pn**	**11 16 48.1**	**-0.3**
JMK	**Ichinoseki**	**8.03**	**355**	*eP*	**Pn**	**11 16 50.8**	**-1.5**
JMK				*eS*	**Sn**	**11 18 15.9**	**-6.5**
ERM	**Erimo**	**11.10**	**4**	Pn	**Pn**	**11 17 31.3**	**-2.9**
JOW	**Kunigami**	**12.75**	**255**	LR	LR	11 22 26.7	
	comp=Z,83nm,19.5s,baz=12,slow=36						
KSRS	**Korea Array**	**13.39**	**303**	Pn	**Pn**	**11 18 06.5**	**+0.9**
	0.3nm,0.3s,baz=113,slow=13,SNR=2.9						
KSRS				LR	LR	11 23 19.7	
	comp=Z,95nm,18.6s,baz=115,slow=38						
	1.8nm,0.7s						
USA0B	**Ussuriysk Arra**	**15.45**	**332**	Pn	**Pn**	**11 18 32.7**	**-0.8**
USRK	**Ussuriysk Ar.**	**15.45**	**332**	Pn	**Pn**	**11 18 32.0**	**-1.4**
	0.2nm,0.3s,baz=152,slow=16,SNR=2.6						
USRK				LR	LR	11 24 28.1	
	comp=Z,83nm,20.2s,baz=137,slow=37						
	1.8nm,0.7s						
GUMO	**Guam**	**17.45**	**171**		**P**	**11 19 01.1**	**+1.0**
YHNB	**Yeheng**	**19.32**	**256**	P	**P**	**11 19 20.6**	**-0.1**
NACB	**Ninganchiao**	**19.34**	**255**	P	**P**	**11 19 20.5**	**-0.4**
NACB				IAmb	IAmb	11 19 34.3	
	comp=Z,26nm,0.8s						
KLR	**Kul'dur**	**19.88**	**340**	P	**P**	**11 19 26.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=136,slow=8.6,SNR=9.8						
	comp=Z,2.1nm,0.7s						
YULB	**Yu-li**	**19.93**	**253**	P	**P**	**11 19 27.7**	**+0.4**
YULB				IAmb	IAmb	11 19 28.2	
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**31.57**	**312**	P	**P**	**11 21 18.4**	**+0.6**
SONM	**Songino Array**	**31.97**	**312**	P	**P**	**11 21 21.6**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=120,slow=9.2,SNR=8.5						
	comp=Z,1.5nm,0.6s						
SEY	**Seymchan**	**32.70**	**9**	P	**P**	**11 21 27.6**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=126,slow=5.0,SNR=6.7						
	comp=Z,1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**40.86**	**263**	P	**P**	**11 22 35.5**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=63,slow=5.8,SNR=4.0						
CMAR				LR	LR	11 41 24.9	
	comp=Z,29nm,18.1s,baz=235,slow=39						
	comp=Z,0.5nm,0.4s						
COEN	**Coen**	**44.64**	**178**	P	**P**	**11 23 08.9**	**+1.0**
COEN				IAmb	IAmb	11 23 10.9	
	comp=Z,10nm,1.1s						
ZALV	**Zalesovo Beam**	**46.58**	**317**	P	**P**	**11 23 23.6**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=86,slow=4.6,SNR=5.0						
ZALV				LR	LR	11 43 52.9	
	comp=Z,37nm,18.8s,baz=92,slow=37						
	comp=Z,1.1nm,0.6s						
MK31	**Makanchi Array**	**48.02**	**307**	P	**P**	**11 23 34.7**	**+0.4**
MK31				IAmb	IAmb	11 23 36.5	
	comp=Z,3.3nm,0.8s						
MKAR	**Makanchi Array**	**48.02**	**307**	P	**P**	**11 23 34.6**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=91,slow=10.0,SNR=18						
MKAR				LR	LR	11 44 14.0	
	comp=Z,30nm,19.7s,baz=72,slow=37						
	comp=Z,2.8nm,0.7s						
MKAR	**Makanchi Array**	**48.02**	**307**	P	**P**	**11 23 34.5**	**+0.2**
KNRA	**Kununurra**	**48.07**	**197**	P	**P**	**11 23 34.3**	**-0.6**
KURBB	**Kurchatov Arra**	**50.34**	**312**	LR	LR	11 46 24.2	
	comp=Z,57nm,18.5s,baz=262,slow=38						
WB0	**Warramunga Arr**	**50.94**	**189**	P	**P**	**11 23 55.5**	**-1.2**
WB0				IAmb	IAmb	11 24 00.2	
	comp=Z,5.0nm,0.5s						
WR0	**Warramunga Arr**	**51.11**	**189**	P	**P**	**11 23 56.8**	**-1.2**
WR0				IAmb	IAmb	11 23 58.9	
	comp=Z,4.1nm,0.5s						
WB2	**Warramunga Arr**	**51.12**	**189**	P	**P**	**11 23 56.5**	**-1.5**
WB2				IAmb	IAmb	11 24 16.5	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**51.12**	**189**	P	**P**	**11 23 56.6**	**-1.5**
	comp=Z,2.3nm,0.4s,baz=4.9,slow=7.5,SNR=91						
	comp=Z,2.3nm,0.4s						
J20K	**Nowinta River**	**51.24**	**30**	P	**P**	**11 23 57.9**	**-0.7**
J20K				IAmb	IAmb	11 24 06.0	
	comp=Z,7.4nm,1.3s						
IMAR	**Indian Mountai**	**51.70**	**28**	P	**P**	**11 24 02.9**	**+1.0**
CAST	**Castle Rocks**	**52.05**	**31**	P	**P**	**11 24 06.8**	**+2.1**
CAST				IAmb	IAmb	11 24 18.6	
	comp=Z,10.0nm,1.3s						
I21K	**Tanana**	**52.31**	**29**	P	**P**	**11 24 07.1**	**+0.7**
MDM	**Murphy Dome**	**53.87**	**30**	P	**P**	**11 24 17.3**	**-0.7**
MDM				IAmb	IAmb	11 24 27.6	
	comp=Z,10.0nm,1.4s						
IL31		**54.43**	**30**	P	**P**	**11 24 22.8**	**+0.8**
ILAR	**Eielson Array**	**54.43**	**30**	P	**P**	**11 24 21.9**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=263,slow=6.1,SNR=12						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**54.43**	**30**	P	**P**	**11 24 22.3**	**+0.2**
AS31	**Alice Springs**	**54.84**	**189**	P	**P**	**11 24 25.0**	**-0.6**
ASAR	**Alice Springs**	**54.85**	**189**	P	**P**	**11 24 24.8**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=360,slow=5.0,SNR=37						
ASAR				LR	LR	11 46 54.8	
	comp=Z,30nm,19.6s,baz=10,slow=35						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**54.85**	**189**	P	**P**	**11 24 25.0**	**-0.5**
BVAR	**Borovoye Array**	**55.20**	**316**	LR	LR	11 48 18.8	
	comp=Z,36nm,18.9s,baz=109,slow=36						
BRVK	**Borovoye**	**55.25**	**316**	P	**P**	**11 24 27.1**	**-1.1**
BRVK				IAmb	IAmb	11 24 33.9	
	comp=Z,2.6nm,0.6s						
J26L	**Joseph Creek**	**55.86**	**30**	P	**P**	**11 24 32.3**	**-0.2**
L27K	**Beaver Creek,**	**56.68**	**32**	P	**P**	**11 24 38.8**	**+0.5**
L27K				IAmb	IAmb	11 24 53.6	
	comp=Z,7.0nm,1.4s						
BCAR	**Beaver Creek A**	**56.70**	**32**	P	**P**	**11 24 39.9**	**+1.4**
KK31	**Karatay Array**	**56.81**	**304**	P	**P**	**11 24 40.4**	**+0.8**
KKAR	**Karatay Array**	**56.81**	**304**	P	**P**	**11 24 40.3**	**+0.7**
EPYK	**Eagle Plains**	**58.60**	**28**	P	**P**	**11 24 53.3**	**+1.5**
ABKAR	**Akbulak array**	**62.38**	**313**	P	**P**	**11 25 17.7**	**-0.1**
FORT	**Forrest**	**62.80**	**194**	P	**P**	**11 25 20.2**	**-0.4**
FINES	**FINESS Array B**	**74.48**	**333**	P	**P**	**11 26 35.0**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=70,slow=2.8,SNR=5.0						
	comp=Z,0.9nm,0.5s						
KBZ	**Khabaz**	**75.34**	**312**	P	**P**	**11 26 40.5**	**+2.1**
	comp=Z,3.3nm,0.8s,baz=68,slow=4.2,SNR=9.3						
	comp=Z,3.3nm,0.8s						
NVAR	**Mina Array Bea**	**78.25**	**52**	P	**P**	**11 26 55.9**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=286,slow=5.3,SNR=10.0						
	comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Be**	**79.48**	**323**	P	**P**	**11 27 01.2**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=48,slow=6.0,SNR=8.3						
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**80.02**	**338**	P	**P**	**11 27 04.1**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=44,slow=4.9,SNR=2.5						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**81.58**	**45**	P	**P**	**11 27 13.6**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=257,slow=1.9,SNR=6.1						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**83.33**	**313**	P	**P**	**11 27 22.8**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=54,slow=11,SNR=2.0						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**93.39**	**53**	P	**P**	**11 28 11.8**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=308,slow=2.8,SNR=16						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**121.94**	**313**	PKP	**PKiKP**	**11 33 51.5**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=347,slow=2.8,SNR=1.6						
LPAZ	**La Paz**	**148.85**	**69**	PKPbc	**PKiKP**	**11 34 45.0**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=121,slow=1.9,SNR=4.6						

*IDC **11** 11:27:40.6±3.9, 58°.41N×156°.19W, h127km±22km, mb3.1/5, mbtmp3.5/9, Error ellipse: s-maj=44.9km s-min=17.6km az=70.0*
*NEIC **11** 11:27:41.3±2.0, 58°.12N±0°.07×156°.2W±0°.2, h153km±18km, Error ellipse: s-maj=14.6km s-min=9.7km az=103.0*
*AEIC **11** 11:27:43±1.8, 58°.13N±0°.06×156°.0W±0°.2, h147km±9km, ML3.0, ML3.4/58(NEIC), Error ellipse: s-maj=13.7km s-min=8.8km az=84.0*

ISC 11 11:27:41.6±0.9, 58°22N±0°.06×156°04W±0°.07, h134km, n106, σ1§71/110, mb3.2/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q19K	**Cape Douglas,**	**1.44**	**60**	Pn	**Pn**	**11 28 13.2**	**+3.9**
Q19K				IAML		11 28 45.1	
	comp=E,345nm,1.8s						
OHAK	**Old Harbor**	**1.79**	**123**		**Pn**	**11 28 14.0**	**+0.9**
OHAK				Sn	**Sn**	**11 28 37.5**	**+0.3**
OHAK				IAML		11 28 38.8	
	comp=N,277nm,0.4s						
OHAK	**Old Harbor**	**1.79**	**123**	P	**Pn**	**11 28 14.0**	**+0.9**
	baz=303						
KDAK	**Kodiak Island**	**1.89**	**102**	P	**Pn**	**11 28 15.5**	**+1.1**
	comp=N,43nm,0.3s,baz=320,slow=0.8,SNR=55						
KDAK				S	**Sn**	**11 28 40.6**	**+1.1**
	comp=N,56nm,0.4s,baz=221,slow=22,SNR=40						
KDAK	**Kodiak Island**	**1.89**	**102**		**Pn**	**11 28 15.5**	**+1.1**
KDAK				IAML		11 28 41.4	
	comp=N,264nm,0.4s						
SII	**Sitkinak Islan**	**1.95**	**148**	Pn	**Pn**	**11 28 15.8**	**+0.7**
SII				Sn	**Sn**	**11 28 41.1**	**+0.3**
SII				IAML		11 28 41.7	
	comp=N,354nm,0.7s						
SII				IAML		11 28 42.2	
	comp=E,308nm,0.4s						
P19K	**Oil Pt**	**2.04**	**44**	Pn	**Pn**	**11 28 18.9**	**+2.6**
CHIR	**Chirikof Islan**	**2.42**	**174**	Pn	**Pn**	**11 28 20.5**	**-0.4**
CHIR				IAML		11 28 43.8	
	comp=E,395nm,3.3s						
CHIR				IAML		11 29 10.9	
	comp=N,353nm,4.0s						
N18K	**Kilae Creek**	**2.47**	**2**	Pn	**Pn**	**11 28 24.2**	**+2.7**
N19K	**Bonanza Creek**	**2.72**	**16**		**Pn**	**11 28 26.7**	**+1.9**
N19K	**Bonanza Creek**	**2.72**	**16**	P	**Pn**	**11 28 27.5**	**+2.8**
	baz=197						
SVW2	**Sparrevohn**	**2.90**	**4**		**Pn**	**11 28 28.7**	**+1.8**
BRLK	**Bradley Lake**	**3.08**	**58**	Pn	**Pn**	**11 28 29.7**	**+0.4**
BRLK				IAML		11 29 08.4	
	comp=E,78nm,0.8s						
BRLK				IAML		11 29 09.6	
	comp=N,83nm,0.2s						
CAPN	**Captain Cook N**	**3.57**	**42**	Pn	**Pn**	**11 28 36.7**	**+1.1**
SPU	**Mount Spurr**	**3.59**	**33**	Pn	**Pn**	**11 28 37.9**	**+1.9**
M19K	**Big River Lodg**	**3.79**	**12**	Pn	**Pn**	**11 28 41.0**	**+2.5**
SEW	**Seward**	**3.88**	**58**	Pn	**Pn**	**11 28 41.6**	**+1.9**
SEW	**Seward**	**3.88**	**58**	P	**Pn**	**11 28 41.7**	**+2.0**
	baz=243						
O22K	**Cooper Landing**	**3.95**	**52**	Pn	**Pn**	**11 28 43.0**	**+2.4**
M20K	**Styx River**	**3.95**	**20**	Pn	**Pn**	**11 28 43.0**	**+2.2**
M20K				IAML		11 29 54.9	
	comp=N,32nm,4.1s						
M20K				IAML		11 31 17.9	
	comp=E,36nm,4.5s						
L19K	**White Mountain**	**4.02**	**8**		**Pn**	**11 28 44.0**	**+2.4**
L19K				IAML		11 31 05.6	
	comp=E,30nm,4.2s						
L19K	**White Mountain**	**4.02**	**8**	P	**Pn**	**11 28 44.0**	**+2.4**
	baz=189						
SUA	**Susitna One**	**4.21**	**37**	Pn	**Pn**	**11 28 46.5**	**+2.4**
SUA				IAML		11 30 02.1	
	comp=N,52nm,3.6s						
SUA				IAML		11 30 26.3	
	comp=E,57nm,2.9s						
RC01	**Rabbit Creek A**	**4.30**	**45**	Pn	**Pn**	**11 28 47.7**	**+2.4**
RC01				IAML		11 29 36.6	
	comp=N,55nm,0.3s						
RC01				IAML		11 29 36.6	
	comp=E,55nm,0.2s						
SKT	**Skwentna**	**4.39**	**29**	Pn	**Pn**	**11 28 49.4**	**+2.9**
SKT				IAML		11 29 44.7	
	comp=N,37nm,4.6s						
SKT				IAML		11 30 40.4	
	comp=E,28nm,4.8s						
SKT	**Skwentna**	**4.39**	**29**	P	**Pn**	**11 28 49.2**	**+2.7**
	baz=212						
TTA	**Tatalina**	**4.72**	**0**	Pn	**Pn**	**11 28 50.7**	**-0.3**
TTA				IAML		11 29 50.0	
	comp=E,25nm,4.4s						
TTA				IAML		11 30 11.6	
	comp=N,22nm,4.2s						
PWL	**Port Wells**	**4.73**	**53**	Pn	**Pn**	**11 28 51.9**	**+0.9**
PWL				IAML		11 29 48.1	
	comp=N,52nm,0.4s						
PWL				IAML		11 29 49.6	
	comp=E,50nm,1.6s						
PMR	**Palmer**	**4.85**	**43**	Pn	**Pn**	**11 28 54.2**	**+1.7**
PMR				IAML		11 29 53.1	
	comp=N,30nm,3.8s						
PMR				IAML		11 29 55.1	
	comp=E,25nm,2.4s						
KNK	**Knik Glacier**	**4.99**	**47**	Pn	**Pn**	**11 28 57.0**	**+2.5**
KNK				IAML		11 29 51.8	
	comp=E,36nm,0.4s						
KNK				IAML		11 31 43.5	
	comp=N,35nm,4.7s						
KNK	**Knik Glacier**	**4.99**	**47**	P	**Pn**	**11 28 56.1**	**+1.6**
	baz=233						
PPLA	**Purkeypile**	**5.06**	**20**	Pn	**Pn**	**11 28 59.9**	**+4.4**
CUT	**Chulitna**	**5.08**	**32**	Pn	**Pn**	**11 28 57.7**	**+2.0**
CUT	**Chulitna**	**5.08**	**32**	P	**Pn**	**11 28 57.3**	**+1.7**
	baz=216						
Q23K	**Middleton Isla**	**5.18**	**72**	Pn	**Pn**	**11 28 58.8**	**+1.8**
MID	**Middleton Isla**	**5.18**	**72**	Pn	**Pn**	**11 28 59.3**	**+2.3**
K20K	**Telida**	**5.24**	**10**		**Pn**	**11 29 00.2**	**+2.3**
K20K				IAML		11 31 09.3	
	comp=E,23nm,4.1s						
K20K				IAML		11 32 12.6	
	comp=N,23nm,4.5s						
K20K	**Telida**	**5.24**	**10**	P	**Pn**	**11 29 00.0**	**+2.2**
	baz=191						
GLI	**Glacier Island**	**5.27**	**56**	Pn	**Pn**	**11 28 59.6**	**+1.4**
GLI				IAML		11 32 36.5	
	comp=N,36nm,0.4s						
GLI	**Glacier Island**	**5.27**	**56**	P	**Pn**	**11 28 59.5**	**+1.3**
	baz=243						
SML	**Sawmill**	**5.28**	**44**	Pn	**Pn**	**11 28 58.4**	**0.0**
SML				IAML		11 32 33.8	
	comp=E,38nm,1.9s						
HIN	**Hinchinbrook I**	**5.35**	**62**	Pn	**Pn**	**11 29 00.8**	**+1.5**
FID	**Port Fidalgo**	**5.49**	**58**	Pn	**Pn**	**11 29 01.8**	**+0.6**
CAST	**Castle Rocks**	**5.56**	**19**	Pn	**Pn**	**11 29 03.7**	**+1.6**
SCM	**Sheep Creek Mo**	**5.67**	**47**	Pn	**Pn**	**11 29 04.4**	**+0.8**
KTH	**Kantishna Hill**	**5.90**	**23**	Pn	**Pn**	**11 29 08.2**	**+1.5**
DIV	**Divide**	**5.96**	**56**	Pn	**Pn**	**11 29 08.7**	**+1.2**
J20K	**Nowinta River**	**6.05**	**8**		**Pn**	**11 29 10.6**	**+2.0**
KLU	**Klutina**	**6.06**	**53**		**Pn**	**11 29 10.1**	**+1.2**
KAIM	**Kayak Island**	**6.23**	**69**	Pn	**Pn**	**11 29 12.4**	**+1.3**
RND	**Reindeer**	**6.28**	**31**	Pn	**Pn**	**11 29 12.0**	**+0.3**
M24K	**Tolsona, Glenn**	**6.28**	**47**	Pn	**Pn**	**11 29 12.5**	**+0.7**
BPAW	**Bear Paw Mtn.**	**6.38**	**20**	Pn	**Pn**	**11 29 14.1**	**+1.0**
HMT	**Hamilton**	**6.40**	**66**	Pn	**Pn**	**11 29 11.8**	**-1.6**
BMRM	**Bremner River**	**6.42**	**60**	Pn	**Pn**	**11 29 14.7**	**+1.0**
DHY	**Denali Highway**	**6.47**	**38**	Pn	**Pn**	**11 29 14.2**	**-0.1**
MCK	**McKinley**	**6.52**	**29**	Pn	**Pn**	**11 29 15.4**	**+0.5**
N25K	**Chitina, Valde**	**6.68**	**55**	Pn	**Pn**	**11 29 18.1**	**+1.0**
BERG	**Berg Lake**	**6.68**	**66**	Pn	**Pn**	**11 29 17.0**	**-0.1**
BWN	**Browne**	**6.76**	**25**	Pn	**Pn**	**11 29 18.5**	**+0.3**
VRDI	**Verde Repeater**	**7.04**	**59**	Pn	**Pn**	**11 29 22.1**	**0.0**
PAX	**Paxson**	**7.05**	**43**	Pn	**Pn**	**11 29 23.7**	**+1.6**
WAX	**Waxell Ridge**	**7.11**	**66**	Pn	**Pn**	**11 29 23.9**	**+1.0**
TGL	**Tana Glacier**	**7.19**	**64**	Pn	**Pn**	**11 29 25.7**	**+1.6**
MCARA	**McCarthy VSAT**	**7.29**	**59**	Pn	**Pn**	**11 29 27.4**	**+2.1**
UNV	**Unalaska Valle**	**7.32**	**238**	Pn	**Pn**	**11 29 25.0**	**-0.7**
ISLE	**Juniper Island**	**7.39**	**65**	Pn	**Pn**	**11 29 27.3**	**+0.6**
MESA	**MESA**	**7.50**	**69**	Pn	**Pn**	**11 29 29.5**	**+1.3**
CCB	**Clear Creek Bu**	**7.55**	**28**	Pn	**Pn**	**11 29 30.0**	**+1.2**
H21K	**Melozitna Rive**	**7.62**	**10**	Pn	**Pn**	**11 29 31.4**	**+1.8**
YAH	**Yahtse**	**7.63**	**68**	Pn	**Pn**	**11 29 31.8**	**+1.8**
MENT	**Mentasta**	**7.69**	**47**	Pn	**Pn**	**11 29 32.5**	**+1.8**
M26K	**Nabesna, AK**	**7.71**	**52**	Pn	**Pn**	**11 29 31.8**	**+0.9**
MDM	**Murphy Dome**	**7.71**	**26**	Pn	**Pn**	**11 29 30.8**	**-0.2**
BARN	**Barnard Glacie**	**7.82**	**63**	Pn	**Pn**	**11 29 34.3**	**+1.7**
IMAR	**Indian Mountai**	**7.86**	**7**	Pn	**Pn**	**11 29 35.0**	**+2.0**
L26K	**Log Cabin Wild**	**7.88**	**47**	Pn	**Pn**	**11 29 33.9**	**+0.7**
IL31		**7.89**	**30**	Pn	**Pn**	**11 29 32.7**	**-0.6**
ILAR	**Eielson Array**	**7.89**	**30**	P	**Pn**	**11 29 31.3**	**-2.0**
	comp=E,0.9nm,0.4s,baz=218,slow=14,SNR=13						
ILAR				S	**Sn**	**11 30 56.0**	**-4.9**
	comp=E,2.4nm,0.7s,baz=219,slow=22,SNR=16						
ILAR	**Eielson Array**	**7.89**	**30**	Pn	**Pn**	**11 29 32.5**	**-0.8**
TABL	**Table Mountain**	**7.94**	**67**	Pn	**Pn**	**11 29 35.3**	**+1.1**
CTGM	**Chitina Glacie**	**7.95**	**64**	Pn	**Pn**	**11 29 35.9**	**+1.6**
DOT	**Dot Lake**	**7.97**	**42**	Pn	**Pn**	**11 29 36.4**	**+2.0**
POKR	**Poker

PSA00	Pilbara Seismi	14.66	153	P	Pn	11 50 48.7	+0.4
KNRA	Kununurra	17.12	116	P	P	11 51 17.2	-1.0
KNRA	Kununurra	17.12	116	P	Pn	11 51 18.9	+0.3
MTN	Manton Dam	18.49	105	P	P	11 51 31.6	-1.5
WRKA	Warakurna	22.10	140	P	P	11 52 12.1	+0.2
WB0	Warramunga Arr	23.69	121	P	P	11 52 26.2	-0.7
WB0				IAmb	IAmb	11 52 36.7	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	23.71	121	P	P	11 52 28.1	+1.0
	comp=Z,1.6nm,1.0s,baz=297,slow=12,SNR=27						
	comp=Z,1.6nm,1.0s						
WRAB	Tennant Creek	23.72	121	P	P	11 52 24.9	-2.3
WRAB				IAmb	IAmb	11 52 45.0	
	comp=Z,8.4nm,1.4s						
WB2	Warramunga Arr	23.73	121	P	P	11 52 24.9	-2.3
WB2				IAmb	IAmb	11 52 45.0	
	comp=Z,7.8nm,1.4s						
WR0	Warramunga Arr	23.89	121	P	P	11 52 26.8	-1.9
WR0				IAmb	IAmb	11 52 39.7	
	comp=Z,7.9nm,1.4s						
ASAR	Alice Springs	25.19	129	P	P	11 52 41.3	+0.7
	comp=Z,2.2nm,0.4s,baz=303,slow=9.0,SNR=39						
	comp=Z,2.2nm,0.4s						
ASAR	Alice Springs	25.19	129	P	P	11 52 41.6	+1.0
AS31	Alice Springs	25.19	129	P	P	11 52 41.6	+1.0
AS31				IAmb	IAmb	11 52 43.6	
	comp=Z,1.5nm,0.5s						
AS01	Alice Springs	25.23	129	P	P	11 52 41.8	+0.9
OOD	Oodnadatta	28.89	135	P	P	11 53 14.6	+1.1
MULG	Mulgathing	29.40	140	P	P	11 53 19.2	+1.2
CMAR	Chiang Mai Arr	30.08	333	P	P	11 53 26.5	+2.4
	comp=Z,0.5nm,0.3s,baz=166,slow=6.9,SNR=5.4						
	comp=Z,0.5nm,0.3s						
STKA	Stephens Creek	35.43	135	P	P	11 54 12.3	+1.7
	comp=Z,4.5nm,0.7s,baz=305,slow=10,SNR=6.3						
	comp=Z,4.5nm,0.7s						
SONM	Songino Array	56.36	355	P	P	11 56 54.8	+0.4
	comp=Z,0.8nm,0.6s,baz=172,slow=9.1,SNR=2.9						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	61.39	337	P	P	11 57 29.4	+0.3
	comp=Z,0.7nm,0.5s,baz=153,slow=8.9,SNR=1.5						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	66.55	342	P	P	11 58 02.2	-0.3
	comp=Z,1.1nm,0.5s,baz=150,slow=12,SNR=1.6						
	comp=Z,1.1nm,0.5s						
MAW	Mawson	67.72	198	P	P	11 58 11.3	+1.5
	comp=Z,0.7nm,0.7s,baz=76,slow=8.3,SNR=1.1						
	comp=Z,0.7nm,0.7s						
VNDA	Vanda	73.49	170	P	P	11 58 45.7	+1.0
	comp=Z,0.2nm,0.4s,baz=298,slow=5.7,SNR=6.0						
	comp=Z,0.2nm,0.4s						
VNDA	Vanda	73.49	170	P	P	11 58 42.3	-2.3
ABKAR	Akbulak array	73.72	327	P	P	11 58 44.6	-1.8

MOS **11** *11:48:29.4±1.2,38°.35N×21°.86E,h12km,mb4.7/16,Error ellipse: s-maj=5.2km s-min=3.4km az=85.5*
IDC **11** *11:48:29.5±0.5,38°.48N×21°.80E,h0km,mb4.3/34, mbtmp4.3/44,ML3.9/11,MS3.5/44,Error ellipse: s-maj=11.6km s-min=10.6km az=21.0*
UPSL **11** *11:48:30.7,38°.40N×21°.80E,h12km,Mw4.3,Moment Tensor Solution. s5 Moment tensor: Mrr-1.96; Mθθ2.47; Mφφ-0.51; Mrθ-1.85; Mθφ0.69; Mφr0.67; Fault plane solution: NP1:φ233.00000°,δ32.00000°,λ-132.00000°. NP2:φs100.00000°,δ67.00000°,λ-67.00000°.*
MED_RC **11** *11:48:30.0±0.4,38°.40N×21°.81E,h10km,MW4.3/20, Moment Tensor Solution.Mantle waves: s20,c24; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-2.68±.28; Mθθ2.89±.15; Mφφ-0.21±.27; Mrθ-1.34±.56; Mθφ0.54±.25; Mφr0.91±.50; Best double couple: Ms3.27000×10^15 NP1:φs100.00000°,δ60.00000°, λ-68.00000°. NP2:φs241.00000°,δ37.00000°, λ-123.00000°. Principal axes: T 3.2300, Plg12.0000°, Azm174.0000°; N 0.0800, Plg19.0000°, Azm268.0000°; P -3.3100, Plg67.0000°, Azm54.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ATH **11** *11:48:30.7,38°.40N×21°.80E,h12km±1km,ML4.3/13 Error ellipse: s-maj=1.5km s-min=0.7km az=56.0*
NEIC **11** *11:48:30.6±2.1,38°.43N±0°.04×21°.83E±0°.07,h10km±1km, Error ellipse: s-maj=9.5km s-min=6.9km az=259.0*
PDG **11** *11:48:30.7±0.6,38°.41N×21°.82E,h9km,ML4.2/11,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
THE **11** *11:48:31.1,38°.40N×21°.81E,h10km±1km,ML4.2/10,Error ellipse: s-maj=1.5km s-min=0.6km az=120.0*

ISC 11 11:48:30.6±0.7,38°.41N±0°.02×21°.80E±0°.02,h11km±4km, n400,σ1§63/431,mb4.5/76,MS3.5/40,24C-11D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.08	75	P	Pg	11 48 33.0	-0.1
EFP				S	Sg	11 48 35.1	+0.1
	266μm,0.5s						
EFP	Efpalio	0.08	75	P	Pg	11 48 33.1	-0.1
EFP				S	Sg	11 48 35.0	+0.1
EFP				AML	AML	11 48 35.5	
EFP				AML	AML	11 48 35.8	
UPR	University Cam	0.12	186	P	Pg	11 48 33.8	+0.2
UPR				S	Sg	11 48 37.0	+1.2
SERG	Sergoula	0.20	88	P	Pg	11 48 34.9	0.0
SERG				S	Sg	11 48 38.9	+1.1
	75μm,0.3s						
SERG	Sergoula	0.20	88	P	Pg	11 48 34.9	0.0
SERG				S	Sg	11 48 37.7	-0.1
SERG				AML	AML	11 48 40.2	
SERG				AML	AML	11 48 41.6	
LAKA	Lakka	0.21	140	P	Pg	11 48 35.2	0.0
LAKA				S	Sg	11 48 38.5	+0.2
	553μm,0.4s						
LAKA	Lakka	0.21	140	P	Pg	11 48 35.0	-0.1
LAKA				S	Sg	11 48 38.6	+0.3
LAKA				AML	AML	11 48 40.0	
LAKA				AML	AML	11 48 40.4	
TRIZ	Trizonia	0.22	101	P	Pg	11 48 35.4	+0.3
TRIZ				S	Sg	11 48 39.2	+1.0
TRIZ	Trizonia	0.22	101	P	Pg	11 48 35.4	+0.3
TRIZ				S	Sg	11 48 38.7	+0.5
ALIK	Aliki, Aigiali	0.28	121	P	Pg	11 48 36.6	+0.2
PVO	Paravola	0.30	314	P	Pg	11 48 36.9	+0.1
PVO	Paravola	0.30	314	P	Pg	11 48 36.9	+0.1
PVO				S	Sg	11 48 41.5	+0.6
RLS	Riolos of Patr	0.44	217	P	Pg	11 48 39.5	+0.3
RLS				S	Sb	11 48 46.3	-0.6
	56μm,0.3s						
RLS	Riolos of Patr	0.44	217	P	Pg	11 48 39.5	+0.3
RLS				S	Sg	11 48 45.0	0.0
RLS				AML	AML	11 48 47.0	
RLS				AML	AML	11 48 48.5	
	comp=E,70702μm,0.3s						
KLV	Kalavryta, Ach	0.45	143	P	Pg	11 48 39.3	-0.3
KLV				S	Sg	11 48 45.4	-0.1
	comp=E,25μm,0.3s						
KLV	Kalavryta, Ach	0.45	143	P	Pg	11 48 39.2	-0.3
KLV				S	Sg	11 48 46.1	+0.6
KLV				AML	AML	11 48 47.3	
	comp=N,51073μm,0.3s						
KLV				AML	AML	11 48 47.8	
	comp=E,41275μm,0.2s						
DRO	Drossia	0.46	189	P	Pg	11 48 39.5	-0.1
DRO				S	Sb	11 48 47.0	-0.5
	comp=E,259μm,0.3s						
DRO	Drossia	0.46	189	P	Pg	11 48 39.6	-0.1
DRO				S	Sg	11 48 45.6	0.0
DRO				AML	AML	11 48 47.4	
DRO				AML	AML	11 48 47.5	
EVR	Evrytania	0.51	1	P	Pg	11 48 40.3	-0.3
EVR				S	Sb	11 48 49.0	-0.2
	comp=E,26μm,0.9s						
EVR	Evrytania	0.51	1	P	Pg	11 48 40.6	-0.1
EVR				S	Sg	11 48 48.1	+0.7
EVR				AML	AML	11 48 54.7	
	comp=E,53880μm,0.9s						
EVR				AML	AML	11 48 56.3	
	comp=N,49026μm,0.9s						
DLFA	Delphi	0.55	82	P	Pg	11 48 40.8	-0.5
DLFA				S	Sb	11 48 49.5	-0.7
MAKR	Makrakomi, Fth	0.66	23	P	Pg	11 48 43.4	0.0
MAKR				S	Sb	11 48 54.2	+0.8
	comp=N,32μm,0.4s						
MAKR	Makrakomi, Fth	0.66	23	P	Pg	11 48 43.2	-0.2
MAKR				S	Sb	11 48 52.7	-0.7
MAKR				AML	AML	11 48 56.5	
	comp=N,44370μm,0.3s						
MAKR				AML	AML	11 48 57.2	
	comp=E,83189μm,0.4s						
AXAR	Agios Charalam	0.76	62	P	Pg	11 48 44.8	-0.6
AXAR				AML	AML	11 49 04.5	
	comp=N,78020μm,0.8s						
AXAR				AML	AML	11 49 06.3	
	comp=E,51425μm,0.4s						
THAL	Thalero	0.77	118	P	Pg	11 48 44.9	-0.6
THAL	Thalero	0.77	118	P	Pg	11 48 45.3	-0.2
THAL				S	Sg	11 48 55.8	+0.2
THAL				AML	AML	11 49 02.8	
THAL				AML	AML	11 49 04.1	
	comp=N,81518μm,0.5s						
EVGI	Lefkada island	0.93	284	P	Pg	11 48 48.2	-0.3
LKD2	Lefkada island	0.97	293	P	Pg	11 48 48.8	-0.6
FSK	Fiskardo	0.98	274	P	Pg	11 48 49.2	-0.2
VLS	Valsamata	0.98	257	P	Pg	11 48 48.6	-0.9
VLS				S	Sn	11 49 04.8	+0.5
	comp=N,11μm,0.3s						
VLS	Valsamata	0.98	257	P	Pg	11 48 48.8	-0.7
VLS				S	Sn	11 49 04.8	+0.5
VLS	Valsamata	0.98	257	P	Pg	11 48 48.9	-0.7
TSLK	Tsoukalades, L	0.99	295	P	Pb	11 48 50.2	+0.4
PSDA	Pessada-Kefalo	1.00	253	P	Pg	11 48 49.0	-0.9
PSDA				S	Sn	11 49 05.3	+0.6
	comp=N,18μm,0.3s						
PSDA	Pessada-Kefalo	1.00	253	P	Pg	11 48 49.1	-0.9
LOUT	Loutraki	1.01	114	P	Pg	11 48 49.6	-0.5
KEF4	Livadi, Kephal	1.09	263	P	Pb	11 48 50.9	-0.6
KEF3	Kipouria, Keph	1.16	260	P	Pb	11 48 51.3	-1.4
VIL2	Platees	1.17	99	P	Pg	11 48 53.6	+0.5
ITM	Ithomi	1.23	175	Pn	Pn	11 48 52.9	-0.8
ITM	Ithomi	1.23	175	P	Pn	11 48 53.5	-0.3
ITM				AML	AML	11 49 16.7	
	comp=N,13565μm,0.4s						
ITM				AML	AML	11 49 19.0	
	comp=E,14013μm,0.4s						
EPID	Epidavros	1.31	127	P	Pn	11 48 55.0	+0.2
KRND	KRANIDI	1.48	133	P	Pn	11 48 57.3	+0.2
ATH	Athens Observa	1.57	105	P	Pn	11 48 59.0	+0.6
ATH				S	Sb	11 49 19.8	+0.3
ATH	Athens Observa	1.57	105	P	Pn	11 48 59.0	+0.6
ATH				S	Sb	11 49 19.8	+0.3
ATH	Athens Observa	1.57	105	P	Pn	11 48 58.9	+0.5
ATH				AML	AML	11 49 23.4	
	comp=N,12508μm,1.0s						
ATH				AML	AML	11 49 24.2	
	comp=E,20025μm,0.6s						
ATHU	Athens Univers	1.62	105	P	Pb	11 48 59.9	-0.7
DION	Dionisos Attik	1.71	100	P	Pn	11 49 00.6	+0.2
DION				AML	AML	11 49 31.4	
	comp=N,16252μm,0.8s						
DION				AML	AML	11 49 34.0	
	comp=E,15753μm,0.6s						
LIT	Litokhoron	1.77	17		Pn	11 49 00.1	-1.1
LIT	Litokhoron	1.77	17	P	Pn	11 49 00.2	-1.1
VLI	Veliai	1.91	152	P	Pn	11 49 04.0	+0.9
KEK	Kerkira	2.03	311		Pn	11 49 03.7	-1.1
KBN	Korca	2.35	341	Pn	Pn	11 49 09.5	+0.3
KBN	Korca	2.35	341	P	Pn	11 49 09.5	+0.3
THE	Thessaloniki	2.40	22	P	Pb	11 49 14.3	+0.5
GRG	Griva	2.59	10	P	Pn	11 49 14.5	+2.0
SOH	Sokhos	2.69	26	P	Pn	11 49 15.6	+1.7
VLO	Vlora	2.73	320		Pn	11 49 14.8	+0.5
VLO	Vlora	2.73	320	P	Pn	11 49 14.8	+0.5
OHR	Ohrid	2.81	344	P	Pb	11 49 19.9	-1.0
OHR	Ohrid	2.81	344	*i* Pn	Pb	11 49 19.3	-1.5
KNT	Kendrikon	2.88	17	P	Pn	11 49 17.3	+0.8
SRS	Serrai	3.04	26	P	Pn	11 49 19.6	+0.9
SCTE	Santa Cesarea	3.08	304	Pn	Pn	11 49 20.1	+0.9
APE	Apeiranthos	3.24	113	⇑P	Pn	11 49 22.0	+0.5
APE	Apeiranthos	3.24	113	P	Pn	11 49 22.0	+0.5
APE	Apeiranthos	3.24	113	*i* P	Pn	11 49 21.7	+0.2
STIP	Stip	3.30	5	*i* Pn	Pn	11 49 24.6	+2.4
IMMV	Iera Moni Meta	3.42	149	*e*P	Pn	11 49 26.4	+2.5
THT2	Imerovigli	3.49	123	*e*P	Pn	11 49 25.8	+1.0
MMB	Musomiste	3.51	24	*i* P	Pn	11 49 26.1	+1.0
SANT	Santorini	3.55	124	⇓P	Pn	11 49 26.5	+0.8
SANT	Santorini	3.55	124	*e*P	Pn	11 49 26.5	+0.8
SANT	Santorini	3.55	124	Pn	Pn	11 49 26.5	+0.8
SKO	Skopje	3.57	356	*i* Pn	Pb	11 49 30.9	-2.9
KKB	Krupnik	3.59	15	*i* P	Pn	11 49 27.3	+1.0
EZN	Ezine	3.79	67	P	Pn	11 49 30.5	+1.5
RZN	Rozhen	3.97	33	*i* P	Pn	11 49 32.3	+0.7
RDO	Rodhopi	3.97	45		Pn	11 49 31.3	-0.1
IDI	Anoyia	3.98	141	Pn	Pn	11 49 33.1	+1.5
	comp=E,7.0nm,0.3s,baz=314,slow=18,SNR=28						
IDI				Sn	Sn	11 50 20.1	+1.9
	comp=E,26nm,0.3s,baz=94,slow=19,SNR=6.0						
	comp=E,20nm,0.4s						
GVDS	Gavdos	4.00	152	*e*P	Pn	11 49 34.9	+3.0
GVD	Gavdhos	4.01	152	*e*P	Pn	11 49 35.1	+3.2
HRKL	Herakleio	4.07	138	*e*P	Pn	11 49 34.7	+2.0
ALN	Alexandroupoli	4.11	51	Pn	Pn	11 49 33.2	-0.2
ALN	Alexandroupoli	4.11	51	P	Pn	11 49 33.2	-0.2
KDZ	Kurdzhali	4.26	39	P	Pn	11 49 35.3	-0.2
DRME	Dracevica, Mon	4.27	333	*e*Pn	Pn	11 49 37.0	+1.4
DRME	Dracevica, Mon	4.27	333	⇑*i*Pn	Pn	11 49 37.4	+1.8
DRME				*i* Sn	Sn	11 50 27.8	+2.3
PLD	Plovdiv	4.31	30	P	Pn	11 49 39.7	+3.6
PLD	Plovdiv	4.31	30	*i* P	Pn	11 49 40.7	+4.6
GCAM	G?zelcaml?	4.34	98	*e*P	Pn	11 49 37.8	+1.3
VTS	Vitosha	4.35	14	⇑P	Pn	11 49 39.0	+2.2
VTS	Vitosha	4.35	14	Pn	Pn	11 49 37.2	+0.4
VTS	Vitosha	4.35	14	P	Pn	11 49 37.2	+0.4
VTS	Vitosha	4.35	14	*i* P	Pn	11 49 37.7	+0.9
PVY	Plav	4.41	342	⇓*i*Pn	Pn	11 49 39.3	+1.6
PVY				*i* Sn	Sn	11 50 31.0	+1.9
TTG	Podgorica	4.46	335	P	Pn	11 49 40.6	+2.4
TTG	Podgorica	4.46	335	*e*Pn	Pn	11 49 40.1	+1.9
TTG				*i* Sn	Sn	11 50 32.4	+2.3
BUM	Brajici-Budva	4.48	331	⇓*i*Pn	Pn	11 49 40.3	+1.8
BUM				*i* Sn	Sn	11 50 32.8	+2.1
DIM	Dimitrovgrad	4.63	37	*i* P	Pn	11 49 43.1	+2.7
NIS1	Nisyros Isl.	4.64	111	*e*P	Pn	11 49 41.9	+1.3
CEME	Cevo	4.69	333	⇓*i*Pn	Pn	11 49 43.1	+1.8
CEME				*i* Sn	Sn	11 50 37.7	+2.0
IVA	Berane	4.69	343	*e*Pn	Pn	11 49 43.1	+1.7
IVA				*i* Sn	Sn	11 50 37.8	+1.9
KOME	Kolasin	4.77	339	*e*Pn	Pn	11 49 44.2	+1.7
KOME				*i* Sn	Sn	11 50 39.7	+1.9
AYDB	Zeytinkoy-Aydi	4.82	94	*e*P	Pn	11 49 44.8	+1.6
ZKR	Zakros	4.83	131	*e*P	Pn	11 49 45.4	+2.1
NKME	Niksic	4.87	334	⇑*i*Pn	Pn	11 49 45.5	+1.7
NKME				*i* Sn	Sn	11 50 42.1	+2.0
BRY	Bratogost	5.13	332	*e*Pn	Pn	11 49 48.3	+0.8
BRY	Bratogost	5.13	332	P	Pn	11 49 48.6	+1.1
BRY				S	Sn	11 50 52.0	+5.2
BRY	Bratogost	5.13	332	*e*Pn	Pn	11 49 48.7	+1.2
BRY				*i* Sn	Sn	11 50 48.5	+1.7
KARP	Karpathos	5.15	122	*e*P	Pn	11 49 49.5	+1.8
KARP	Karpathos	5.15	122	Pn	Pn	11 49 47.3	-0.4
BOVS	Bovan	5.22	359	⇑P	Pn	11 49 50.2	+1.6
PLE	Pljevlja	5.25	340	P	Pn	11 49 51.3	+2.2
PLE	Pljevlja	5.25	340	*e*Pn	Pn	11 49 50.8	+1.7
PLE				*i* Sn	Sn	11 50 51.3	+1.6
BLKB	Belogradchik	5.25	7	⇑P	Pn	11 49 51.1	+2.0
UPM	Unac-Piva	5.27	336	*e*Pn	Pn	11 49 52.2	+2.7
UPM	Unac-Piva	5.27	336	⇓*i*Pn	Pn	11 49 51.3	+1.8
UPM				*i* Sn	Sn	11 50 51.9	+1.6
YER	Yerkesik	5.29	102	*e*P	Pn	11 49 51.2	+1.6
YER	Yerkesik	5.29	102	P	Pn	11 49 51.1	+1.5
MANT	Manisa	5.30	87	Pn	Pn	11 49 49.0	-0.9
TURN	Turunc	5.37	106	*e*P	Pn	11 49 52.2	+1.6
ARG	Arkhangelos	5.49	112	*e*P	Pn	11 49 53.9	+1.5
ARG	Arkhangelos	5.49	112	Pn	Pn	11 49 51.3	-1.1
ARG	Arkhangelos	5.49	112	P	Pn	11 49 51.3	-1.1
DALY	Dalyan (Mula)	5.67	104	*e*P	Pn	11 49 56.6	+1.9
SGRT	San Giovanni R	5.72	308	Pn	Pn	11 49 54.2	-1.4
BBLS	Lazići	5.75	342	*e*Pn	Pn	11 49 57.0	+1.1
DIVS	Divibare	5.85	347	Pn	Pn	11 49 57.7	+0.4
DIVS	Divibare	5.85	347	*e*Pn	Pn	11 49 58.5	+1.2
RAFF	Raffo Rosso	6.01	261	Pn	Pn	11 49 59.3	-0.1
FETY	Fethiye	6.05	105	*e*P	Pn	11 50 02.0	+1.9
HAPS	Han Pijesak,Bl	6.07	340	*e*Pn	Pn	11 50 01.2	+0.8
CAME	Cameli-Denizli	6.12	101	*e*P	Pn	11 50 03.3	+2.1
PAOL	Paolisi	6.16	297	Pn	Pn	11 50 02.1	+0.5
DJES	Djerdap	6.28	5	⇑P	Pn	11 50 06.5	+3.3
MDVR	Moldovita	6.37	359	⇑P	Pn	11 50 06.9	+2.4
TEKS	Tekeris	6.37	345	*e*Pn	Pn	11 50 02.8	-1.6
HERR	Herculane	6.49	4	⇑P	Pn	11 50 08.8	+2.8
AKAS	Kas	6.58	107	*e*P	Pn	11 50 09.6	+2.1
SRKY	Kupres RS	6.65	330	*e*Pn	Pn	11 50 09.2	+0.9
BORA	Eskisehir	6.88	75	Pn	Pn	11 50 12.3	+0.8
FRGS	Fruska Gora	6.91	348	⇑P	Pn	11 50 14.4	+2.6
FRGS	Fruska Gora	6.91	348	*e*Pn	Pn	11 50 13.3	+1.5
MGRS	Mrkonjic Grad	6.97	331	*e*Pn	Pn	11 50 09.8	-2.9
GZR	Gura Zlata	7.02	6	⇑P	Pn	11 50 15.5	+2.1
INTR	Introdacqua	7.04	303	Pn	Pn	11 50 12.4	-1.2
BZS	Buzias	7.21	359	⇑P	Pn	11 50 17.5	+1.6
BZS	Buzias	7.21	359	P	Pn	11 50 20.8	+4.9
BZS				pmax	pmax		
	comp=Z,13nm,0.9s						
BLY	Banja Luka	7.22	333	*e*Pn	Pn	11 50 16.3	+0.2
A050A	Klekovaca	7.25	329	*e*Pn	Pn	11 50 17.6	+1.1
VOIR		7.43	18	⇓P	Pn	11 50 21.3	+2.2
VOIR		7.43	18	P	Pn	11 50 21.2	+2.2
VOIR				pmax	pmax		
	comp=Z,29nm,0.8s						
A051A	Mrakovica	7.55	333	*e*Pn	Pn	11 50 19.9	-0.7
MDUB	Mudurnu	7.56	71	Pn	Pn	11 50 18.1	-2.7
ISR	Istrita	7.58	26	⇑P	Pn	11 50 24.5	+3.4
ISR	Istrita	7.58	26	P	Pn	11 50 25.8	+4.7
ISR				pmax	pmax		
	comp=Z,40nm,1.0s						
CAMP	Campotosto	7.61	305		Pn	11 50 23.1	+1.5
MLR	Muntele Rosu	7.72	22	⇓P	Pn	11 50 25.9	+2.9
MLR	Muntele Rosu	7.72	22	Pn	Pn	11 50 24.9	+1.9
	comp=Z,1.1nm,0.3s,baz=228,slow=4.1,SNR=12						
MLR				LR	LR	11 54 07.0	
	comp=Z,496nm,21.3s,baz=220,slow=44						
	comp=Z,16nm,1.0s						
MLR	Muntele Rosu	7.72	22		Pn	11 50 22.1	-1.0
SIRR	Siria	7.86	359	⇑P	Pn	11 50 27.3	+2.5
NRCA	Norcia	7.95	307	Pn	Pn	11 50 27.7	+1.6
BISRR	Bisoca	8.02	26	⇓P	Pn	11 50 30.9	+3.9
FDMO	Fiordimonte	8.07	308		Pn	11 50 27.5	-0.3
COVR	Voineasa-Covas	8.12	22	⇑P	Pn	11 50 31.3	+2.9
MORH	Mrgy, Hungar	8.15	344	⇑P	Pn	11 50 29.6	+0.9
MORH	Mrgy, Hungar	8.15	344	P	Pn	11 50 30.6	+1.8
KOVH	Kovagotottos	8.15	342	P	Pn	11 50 31.1	+2.2
CESX	Cesi	8.18	304	Pn	Pn	11 50 28.5	-0.8
CFR	Carcaliu	8.25	33	⇑P	Pn	11 50 33.1	+2.9
PLOR	Plostina	8.26	24	⇓P	Pn	11 50 34.1	+3.7
VRI	Vrincioaia	8.30	25	⇑P	Pn	11 50 34.2	+3.3
VRI	Vrincioaia	8.30	25	P	Pn	11 50 34.2	+3.3
MURB	Monte Urbino	8.54	308		Pn	11 50 34.5	+0.2
CEY	Cerknica	9.15	326	*e*Pn	Pn	11 50 42.2	-0.3
BR131	Keskin Array S	9.30	78		Pn	11 50 43.2	-1.5
BR131	Keskin Array S	9.30	78	P	Pn	11 50 43.2	-1.5
BRTR	Keskin Array B	9.30	78	Pn	Pn	11 50 46.0	+1.3
	comp=Z,1.1nm,0.3s,baz=257,slow=14,SNR=21						
	comp=Z,2.8nm,0.4s						
BRTR	Keskin Array B	9.30	78		Pn	11 50 43.9	-0.8
MPLH	Magyarpolny	9.30	342	P	Pn	11 50 46.9	+2.3
BURAR	Bucovina Array	9.54	14	⇑P	Pn	11 50 50.4	+2.4
BURAR	Bucovina Array	9.54	14	Pn	Pn	11 50 48.0	+0.1
BURAR	Bucovina Array	9.54	14	P	Pn	11 50 48.0	+0.1
BUR08	Bucovina Ar. S	9.56	14		Pn	11 50 47.9	-0.4
PSZ	Piszkesteto	9.61	352	⇑P	Pn	11 50 51.7	+2.8
PSZ	Piszkesteto	9.61	352		Pn	11 50 48.6	-0.3
PSZ	Piszkesteto	9.61	352	P	Pn	11 50 51.7	+2.8
PSZ				pmax	pmax		
	comp=Z,26nm,0.8s						
PSZ	Piszkesteto	9.61	352	P	Pn	11 50 51.5	+2.7
SOKA	Soboth	9.65	331	*i* Pn	Pn	11 50 50.3	+0.8
	comp=Z,5.9nm,0.4s						
SOKA				*e*Sn	Sn	11 52 34.6	-3.4
	comp=Z,5.6nm,0.6s						
OBKA	Obir	9.71	329	*e*Pn	Pn	11 50 49.0	-1.2
MILM	Milestii Mici	9.95	29	*e*P	Pn	11 50 55.0	+1.6
	comp=Z,35nm,1.0s						
MILM				*e*L	L	11 54 32.0	
MILM				LRM	MLR	11 56 08.0	
	comp=Z,600nm,10.0s						
MILM	Milestii Mici	9.95	29	*e*P	Pn	11 50 55.0	+1.6
MILM				pmax	pmax		
	comp=Z,35nm,1.0s						
MILM				MLR	MLR		
	comp=Z,900nm,10.0s						
KECS	Kecovo	10.12	355	*e*P	Pn	11 51 04.8	+9.0
TEOL	Teolo	10.26	316		Pn	11 50 57.4	-0.3
VYHS	Vyhne	10.31	349	*e*P	Pn	11 51 01.5	+3.1
VYHS				*e*		11 52 59.3	
STAL	STALIGIAL	10.33	322		Pn	11 50 58.7	-0.1
CLUD	Cludinico	10.40

comp=Z,11nm,1.0s
LOR Lormes 15.84 310 *e*P P 11 52 20.6 +3.4
LOR pmax pmax
comp=Z,14nm,1.1s
AVF Avril sur Loir 15.94 308 *e*P P 11 52 20.2 +1.9
AVF pmax pmax
comp=Z,19nm,1.1s
SSF Saint Saulge 15.96 309 *e*P P 11 52 18.1 -0.5
SSF pmax pmax
comp=Z,28nm,1.2s
BGF Bois d'Agland 16.16 306 *e*P P 11 52 25.5 +4.7
BGF pmax pmax
comp=Z,19nm,1.0s
RJF Les Rejaudoux 16.59 301 *e*P P 11 52 26.8 +1.2
RJF pmax pmax
comp=Z,24nm,1.5s
SHA1 Shidzhatmaz 16.59 65 *i*P Pn 11 52 23.8 +0.5
KIV Kislovodsk 16.66 64 Pn **Pn 11 52 22.0 -2.0**
KIV Kislovodsk 16.66 64 *e*P Pn 11 52 24.1 +0.1
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,23nm,13.0s
GEVA Gevas 16.67 84 Pn **Pn 11 52 21.1 -3.3**
KBZ Khabaz 16.76 65 Pn **P 11 52 29.0 +1.6**
comp=Z,0.1nm,0.3s,baz=239,slow=14,SNR=2.3
comp=Z,1.2nm,0.7s
NACGM Naroch 16.85 10⇓*e*P P 11 52 29.0 +0.7
baz=195
LFF La Frestale 17.01 299 *e*P P 11 52 32.2 +1.9
LFF pmax pmax
comp=Z,57nm,1.9s
PABE Paberze 17.17 4 Pn **Pn 11 52 28.7 -1.6**
PABE IAmb IAmb 11 52 38.2
comp=Z,52nm,1.2s
ETSF Etsaut 17.54 292 *e*P P 11 52 39.9 +3.7
ETSF pmax pmax
comp=Z,10.0nm,1.3s
VSR Storozhevoye 17.71 38 *e*P P 11 52 38.3 +0.4
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORR Voronezh 18.03 37 *e*P Pn 11 52 41.0 +0.1
VORR pmax pmax
comp=Z,70nm,0.5s
MFF Saint Martin d 18.10 304 *e*P P 11 52 44.3 +2.1
MFF pmax pmax
comp=Z,56nm,1.6s
LPSR Galich'ya Gora 18.52 34 *e*P Pn 11 52 47.6 +0.6
LPSR pmax pmax
comp=Z,20nm,0.8s
OBN Obninsk 19.47 26 P **Pn 11 52 58.0 -0.3**
comp=Z,2.6nm,0.3s,baz=224,slow=23,SNR=3.4
comp=Z,6.0nm,0.4s
OBN Obninsk 19.47 26⇑*e*P P 11 52 57.3 +0.2
OBN S **S 11 56 42.0 +5.1**
OBN pmax pmax
comp=Z,12nm,0.5s
OBN MLR MLR
comp=Z,64nm,13.0s
MAK Makhachkala 19.98 69 *e*P P 11 52 58.4 -4.5
MAK *e*S **S 11 56 40.9 -6.6**
MAK pmax pmax
comp=Z,31nm,0.3s
MAK MLR MLR
comp=Z,47nm,15.0s
ESDC Sonseca Array 20.04 282 P Pn 11 53 05.4 0.0
comp=Z,9.1nm,0.8s,baz=75,slow=11,SNR=33
comp=Z,9.1nm,0.8s
VSU Vasula 20.33 7 *i*P P 11 53 07.2 +0.7
VSU pmax pmax
comp=Z,78nm,0.6s
MOS Moscow 20.33 26 *e*P Pn 11 53 09.1 +0.5
PAB San Pablo 20.34 281 P Pn 11 53 08.7 -0.3
PAB San Pablo 20.34 281 P Pn 11 53 08.7 -0.3
PAB pmax pmax
comp=Z,11nm,0.8s
QUIF Quistinic 20.47 306 *e*P Pn 11 53 09.7 -0.6
QUIF pmax pmax
comp=Z,53nm,1.5s
ROSF Rostrenen 20.67 307 *e*P P 11 53 11.4 +1.0
ROSF pmax pmax
comp=Z,23nm,0.8s
PBRG Braganca 22.05 288 *e*P P 11 53 26.8 +1.5
MDT Midelt 22.15 263 P **P 11 53 27.9 +1.4**
comp=Z,4.7nm,0.9s,baz=85,slow=10,SNR=8.4
MDT LR LR 12 03 04.4
comp=Z,53nm,18.7s,baz=104,slow=40
comp=Z,4.7nm,0.9s
MVO Moncorvo 22.28 286 *e*P P 11 53 29.7 +1.8
comp=Z,22nm,1.7s
HFS Hagfors 22.35 349 P **P 11 53 28.0 -0.3**
comp=Z,2.6nm,0.4s,baz=146,slow=11,SNR=14
comp=Z,2.6nm,0.4s
HFS Hagfors 22.35 349 P **P 11 53 28.0 -0.3**
PBAR Barrancos 22.60 278 *e*P P 11 53 33.2 +2.0
comp=Z,13nm,1.3s
PMRV Marv??o 22.70 282 *e*P P 11 53 33.1 +0.8
comp=Z,20nm,1.8s
PCBR Castelo Branco 22.72 283 *e*P P 11 53 34.5 +2.1
MTE Manteigas 22.72 284 *e*P P 11 53 34.9 +2.4
comp=Z,26nm,1.8s
BELG Belogornoye 22.74 44 P **P 11 53 32.6 +0.1**
comp=Z,30nm,1.0s,baz=37,slow=1.5,SNR=7.4
BELG LR LR 12 03 21.9
comp=Z,60nm,18.4s,baz=115,slow=39
comp=Z,30nm,1.0s
BELG Belogornoye 22.74 44 *i*P P 11 53 33.8 +1.3
BELG pmax pmax
comp=Z,9.0nm,1.2s
PESTR Estremoz 22.93 280 *e*P P 11 53 37.9 +3.3
comp=Z,21nm,1.5s
PESTR Estremoz 22.93 280 P **P 11 53 34.0 -0.6**
PVIS Viseu 22.96 285 *e*P P 11 53 37.3 +2.2
FINES FINESS Array B 23.22 5 P **P 11 53 36.1 -1.3**
comp=Z,5.3nm,0.7s,baz=164,slow=9.1,SNR=9.0
FINES PcP **PcP 11 57 25.6 +0.7**
comp=Z,2.0nm,0.8s,baz=180,slow=2.9,SNR=4.3
FINES LR LR 12 03 37.6
comp=Z,166nm,18.4s,baz=184,slow=39
comp=Z,5.3nm,0.7s
FINES FINESS Array B 23.22 5 P **P 11 53 36.4 -1.0**
FINES FINESS Array B 23.22 5 P **P 11 53 36.4 -1.0**
FIA1 FINESS Array S 23.22 5 P **P 11 53 36.5 -0.9**
FIA1 IAmb IAmb 11 53 38.5
comp=Z,16nm,1.1s
NC602 NORSAR Array S 23.27 347 P **P 11 53 37.3 -0.6**
NC602 IAmb IAmb 11 53 40.9
comp=Z,34nm,1.1s
NORES NORESS Array B 23.27 347 P **P 11 53 38.9 +1.0**
NORES pmax pmax
comp=Z,1.0nm,0.6s
PBEJ Beja 23.27 278 *e*P P 11 53 39.8 +1.6
comp=Z,18nm,1.6s
PVAQ Vaqueiros 23.27 277 *e*P P 11 53 40.8 +2.6
comp=Z,24nm,1.6s
PVAQ Vaqueiros 23.27 277 P **P 11 53 37.3 -0.9**
EVO Evora 23.30 280 *e*P P 11 53 40.6 +2.1
comp=Z,16nm,1.6s
PMTG Montargil 23.39 281 *e*P P 11 53 40.9 +1.6
comp=Z,15nm,1.6s
PCAS Casmilo, Conde 23.48 284 *e*P P 11 53 42.8 +2.6
PCVE Castro Verde 23.48 277 *e*P P 11 53 42.8 +2.5
NAO01 NORSAR Array S 23.48 347 P **P 11 53 39.2 -0.9**
NAO01 IAmb IAmb 11 53 53.1
comp=Z,33nm,1.1s
MESJ Messejana 23.58 278 *e*P P 11 53 41.1 -0.1
MESJ IAmb IAmb 11 53 44.5
comp=Z,12nm,0.7s
MESJ *e*S **S 11 57 56.3 +0.9**
MESJ Messejana 23.58 278 *e*P P 11 53 41.7 +0.4
comp=Z,18nm,1.7s
MESJ Messejana 23.58 278 *e*P P 11 53 41.2 -0.1
MESJ *e*S **S 11 57 56.3 +0.9**
NC405 NORSAR Array S 23.59 348 P **P 11 53 40.1 -1.0**
NC405 IAmb IAmb 11 53 40.9
comp=Z,37nm,1.2s
NB201 NORSAR Array S 23.60 347 P **P 11 53 41.0 -0.3**
NB2 NORSAR Subarra 23.61 347 P **P 11 53 40.5 -0.8**
comp=Z,14nm,1.1s,baz=159,slow=9.3
NOA NORSAR Array B 23.61 347 P **P 11 53 40.0 -1.3**
comp=Z,3.3nm,0.8s,baz=172,slow=12,SNR=13
NOA LR LR 12 03 52.3
comp=Z,36nm,19.3s,baz=165,slow=39
comp=Z,3.3nm,0.8s
NBO00 NORSAR Array S 23.68 347 P **P 11 53 40.7 -1.3**
NC303 NORSAR Array S 23.75 347 P **P 11 53 42.5 -0.2**
NC303 IAmb IAmb 11 53 45.5
comp=Z,13nm,0.8s
PNCL Nicolau / Gran 23.77 279 *e*P P 11 53 45.8 +2.7
comp=Z,20nm,1.7s
EKA Eskdalemuir Ar 23.84 323 P **P 11 53 42.9 -0.6**
comp=Z,18nm,0.8s,baz=122,slow=11,SNR=17
EKA LR LR 12 04 46.5
comp=Z,102nm,20.5s,baz=178,slow=41
comp=Z,18nm,0.8s
ESK Eskdalemuir 23.85 323 P **P 11 53 43.6 0.0**
ESK Eskdalemuir 23.85 323 P **P 11 53 43.6 0.0**
ESK pmax pmax
comp=Z,45nm,1.3s
NC204 NORSAR Array S 23.91 347 P **P 11 53 44.5 +0.2**
RAYN Ar Rayn 25.06 119 P **P 11 53 52.6 -2.5**
RAYN Ar Rayn 25.06 119 P **P 11 53 52.6 -2.5**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
KLMR Klimovskoe 25.07 21 *e*P P 11 53 51.9 -2.8
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR MLR MLR
comp=Z,320nm,15.0s
KLMR Klimovskoe 25.07 21 *e*P P 11 53 51.9 -2.8
KLMR AMP 11 53 56.6
comp=Z,20nm,0.8s
KLMR LR LR 12 03 42.6
KLMR AMP 12 04 56.7
comp=Z,320nm,15.4s
KIRV Kirov 26.92 32 P **P 11 54 11.4 -0.1**
comp=Z,13nm,0.5s,baz=182,slow=11,SNR=5.0
KIRV LR LR 12 06 23.3
comp=Z,72nm,18.4s,baz=227,slow=40
comp=Z,13nm,0.5s
AKTO Aktyubinsk 28.24 53 P **P 11 54 23.8 +0.3**
comp=Z,1.1nm,0.6s,baz=247,slow=6.1,SNR=4.6
AKTO LR LR 12 07 55.7
comp=Z,30nm,18.2s,baz=277,slow=41
comp=Z,1.1nm,0.6s
ABKAR Akbulak array 29.28 56 P **P 11 54 31.7 -1.0**
ARU Arti 30.22 41 P **P 11 54 40.4 -0.6**
comp=Z,2.3nm,0.3s,baz=218,slow=6.7,SNR=3.9
ARU LR LR 12 07 42.8
comp=Z,82nm,18.7s,baz=321,slow=38
comp=Z,2.3nm,0.3s
ARU Arti 30.22 41*d i*P P 11 54 40.3 -0.6
ARU 11 55 37.4
ARU S **S 11 59 42.8 +2.7**
ARU SS **SnSn 12 01 15.1 +1.6**
ARU pmax pmax
comp=Z,8.0nm,1.3s
ARU MLR MLR
comp=Z,103nm,13.0s
TORD Torodi Ar. Bea 30.85 221 P **P 11 54 47.9 +1.0**
comp=Z,13nm,0.8s,baz=32,slow=9.2,SNR=46
comp=Z,13nm,0.8s
ARCES ARCESS Array B 31.25 3 P **P 11 54 48.5 -1.5**
comp=Z,2.4nm,0.7s,baz=192,slow=8.9,SNR=12
ARCES LR LR 12 07 44.3
comp=Z,45nm,21.4s,baz=98,slow=37
comp=Z,2.4nm,0.7s
KOWA Kowa 32.98 231 LR LR 12 09 37.1
comp=Z,83nm,19.2s,baz=16,slow=38
KOWA Kowa 32.98 231 P **P 11 55 05.1 -0.5**
KOWA IAmb IAmb 11 55 13.4
comp=Z,12nm,1.4s
BRVK Borovoye 36.14 50 *i*P P 11 55 31.3 -1.3
BRVK pmax pmax
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 36.20 50 P **P 11 55 33.9 +0.8**
comp=Z,1.4nm,0.7s,baz=253,slow=7.6,SNR=8.4
BVAR LR LR 12 10 35.4
comp=Z,25nm,19.6s,baz=274,slow=37
comp=Z,1.4nm,0.7s
JMIC Jan Mayen 36.22 344 LR LR 12 09 12.9
comp=Z,26nm,18.8s,baz=146,slow=34
BORG Borgarnes 36.41 330 LR LR 12 11 38.7
comp=Z,54nm,19.1s,baz=151,slow=38
CHGR Chuyangaron 36.72 74 P **P 11 55 37.7 -0.2**
CHGR Chuyangaron 36.72 74 P **P 11 55 37.7 -0.2**
CHGR pmax pmax
comp=Z,16nm,0.7s
KK31 Karatay Array 36.78 67 P **P 11 55 38.3 +0.1**
KK31 IAmb IAmb 11 55 45.3
comp=Z,5.7nm,0.6s
KK31 Karatay Array 36.78 67 P **P 11 55 38.3 +0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.6s
KKAR Karatay Array 36.78 67 P **P 11 55 37.2 -1.0**
KKAR Karatay Array 36.78 67 P **P 11 55 37.2 -1.0**
GAR Garm 37.51 73 P **P 11 55 43.8 -0.7**
GAR IAmb IAmb 11 55 48.6
comp=Z,14nm,1.0s
MBAR Mbarara 39.68 166 LR LR 12 14 28.9
comp=Z,85nm,18.4s,baz=86,slow=39
AAK Ala-Archa 39.74 67 P **P 11 56 04.6 +1.2**
comp=Z,1.4nm,0.3s,baz=284,slow=5.1,SNR=5.0
comp=Z,1.4nm,0.3s
AAK Ala-Archa 39.74 67 P **P 11 56 03.4 +0.1**
TIC Toumodi 39.86 224⇑*e*P P 11 56 04.0 -0.4
comp=Z,5.4nm,0.6s
KIC Kosan Boka 39.95 224⇑*e*P P 11 56 06.2 +1.1
comp=Z,8.2nm,0.7s
SPITS Spitsbergen Ar 39.95 358 P **P 11 56 04.9 +0.5**
comp=Z,13nm,1.0s,baz=131,slow=21,SNR=2.4
SPITS LR LR 12 13 55.5
comp=Z,74nm,20.4s,baz=138,slow=38
comp=Z,13nm,1.0s
LIC Lamto 40.21 224⇑*e*P P 11 56 03.4 -3.9
comp=Z,39nm,0.9s
BOOM Boomskoye usch 40.82 66 P **P 11 56 11.7 -0.6**
BOOM IAmb IAmb 11 56 19.7
comp=Z,4.8nm,0.6s
BOOM Boomskoye usch 40.82 66 P **P 11 56 11.7 -0.6**
BOOM pmax pmax
comp=Z,5.0nm,0.6s
BBTS Babate 41.23 246 LR LR 12 15 46.9
comp=Z,118nm,18.3s,baz=44,slow=40
KURBB Kurchatov Arra 41.28 54 P **P 11 56 16.4 +0.7**
comp=Z,5.6nm,0.9s,baz=283,slow=8.7,SNR=25
KURBB PcP **PcP 11 58 15.0 +0.8**
comp=Z,1.4nm,0.6s,baz=275,slow=4.1,SNR=5.6
comp=Z,5.6nm,0.9s
KURK Kurchatov 41.33 54 P **P 11 56 16.2 +0.1**
KURK IAmb IAmb 11 56 17.4
comp=Z,10nm,1.1s
KURK Kurchatov 41.33 54 *i*P P 11 56 16.5 +0.3
KURK pmax pmax
comp=Z,11nm,1.2s
TARG Taragay, Kyrgy 42.35 67 P **P 11 56 23.9 -1.2**
TARG Taragay, Kyrgy 42.35 67 P **P 11 56 23.9 -1.2**
TARG pmax pmax
comp=Z,9.0nm,1.4s
MAKZ Makanchi 44.11 59 P **P 11 56 38.6 -0.2**
MAKZ IAmb IAmb 11 56 40.2
comp=Z,6.7nm,1.0s
MAKZ Makanchi 44.11 59 P **P 11 56 38.6 -0.2**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 44.32 59 P **P 11 56 40.7 +0.2**
MK31 IAmb IAmb 11 56 41.8
comp=Z,6.2nm,0.8s
MK31 Makanchi Array 44.32 59 *e*P P 11 56 40.7 +0.2
MKAR Makanchi Array 44.32 59 P **P 11 56 41.1 +0.6**
comp=Z,5.9nm,0.4s,baz=282,slow=7.0,SNR=54
MKAR PcP **PcP 11 58 24.7 +0.1**
comp=Z,1.2nm,0.6s,baz=274,slow=4.4,SNR=3.8
MKAR LR LR 12 22 08.1
comp=Z,18nm,18.5s,baz=292,slow=46
comp=Z,5.9nm,0.4s
MKAR Makanchi Array 44.32 59 P **P 11 56 40.6 0.0**
MKAR Makanchi Array 44.32 59 *e*P P 11 56 40.6 0.0
ZALV Zalesovo Beam 44.79 48 P **P 11 56 44.3 +0.2**
comp=Z,6.6nm,0.6s,baz=277,slow=8.3,SNR=21
ZALV LR LR 12 17 05.8
comp=Z,28nm,18.6s,baz=280,slow=38
comp=Z,6.6nm,0.6s
NRIK Noril'sk 46.14 27 LR LR 12 18 13.8
comp=Z,66nm,19.4s,baz=90,slow=39
SFJD Kangerlussuaq 48.54 330 LR LR 12 19 06.9
comp=Z,42nm,18.1s,baz=90,slow=38
WMQ Urumqi 48.77 61 *e*P P 11 57 16.7 +1.2
WMQ sP sP 11 57 23.5 +2.9
FRB Frobisher Bay 56.50 328 P **P 11 58 13.3 +1.0**
comp=Z,10nm,0.8s,baz=330,slow=10,SNR=1.7
FRB LR LR 12 22 39.1
comp=Z,78nm,18.7s,baz=203,slow=36
comp=Z,10nm,0.8s
ZAK Zakamensk 56.65 49 *e*P P 11 58 08.8 -4.9
ZAK pmax pmax
comp=Z,3.0nm,1.2s
TSUM Tsumeb 57.44 185 LR LR 12 25 12.0
comp=Z,88nm,18.7s,baz=332,slow=38
GTA Gaotai 58.83 62 *e*P P 11 58 29.8 +0.5
GTA pP pP 11 58 33.7 +0.7
GTA sP sP 11 58 36.9 +2.6
SCHQ Schefferville 58.97 318 P **P 11 58 30.2 +0.3**
comp=Z,6.9nm,0.8s,baz=99,slow=5.1,SNR=7.1
SCHQ LR LR 12 25 30.7
comp=Z,39nm,18.5s,baz=129,slow=38
comp=Z,6.9nm,0.8s
SONM Songino Array 59.53 51 P **P 11 58 34.6 +0.6**
comp=Z,1.9nm,0.7s,baz=284,slow=7.3,SNR=8.7
comp=Z,1.9nm,0.7s
OPO Ambohidratompo 61.48 152 P **P 11 58 48.3 +0.7**
comp=Z,2.5nm,0.7s,baz=344,slow=20,SNR=2.4
comp=Z,2.5nm,0.7s
LBTB Lobatse 63.19 176 LR LR 12 28 13.7
comp=Z,37nm,18.3s,baz=4.5,slow=38
LZH Lanzhou 63.20 64 *e*P P 11 58 52.0 -7.1
LZH pP pP 11 58 58.5 -4.3
YAK Yakutsk 64.41 30 LR LR 12 29 52.7
comp=Z,30nm,18.4s,baz=269,slow=39
HHC Hu-ho-hao-te 66.07 56 *e*P P 11 59 17.0 -0.7
PZH PanZhiHua 66.57 74 P **P 11 59 21.4 +0.3**
BOSA Boshof 66.75 177 P **P 11 59 22.8 +0.8**
comp=Z,1.1nm,0.5s,baz=7.7,slow=5.8,SNR=1.0
BOSA LR LR 12 30 55.3
comp=Z,52nm,18.7s,baz=13,slow=38
comp=Z,1.1nm,0.5s
XLT XiLinHaoTe 67.35 51 *e*P P 11 59 21.5 -4.3
XLT pP pP 11 59 26.2 -3.3
XLT sP sP 11 59 28.5 -2.4
XAN Xi'an 67.82 64 P **P 11 59 31.4 +2.5**
XAN sP sP 11 59 40.6 +6.9
ZEA Zeya 68.08 38 *e*P P 11 59 21.5 -8.6
CMAR Chiang Mai Arr 68.86 83 P **P 11 59 34.8 -0.7**
comp=Z,0.3nm,0.4s,baz=311,slow=9.0,SNR=1.8
comp=Z,0.3nm,0.4s
SUR Sutherland 70.43 181 LR LR 12 34 17.6
comp=Z,47nm,20.2s,baz=342,slow=39
SEY Seymchan 71.56 21 P **P 11 59 51.3 0.0**
comp=Z,1.0nm,0.6s,baz=60,slow=20
comp=Z,1.0nm,0.6s
INK Inuvik 72.01 351 P **P 11 59 53.2 -0.7**
comp=Z,0.9nm,0.4s,baz=175,slow=2.7,SNR=6.3
INK LR LR 12 33 01.0
comp=Z,23nm,18.5s,baz=318,slow=37
comp=Z,0.9nm,0.4s
KLR Kul'dur 73.05 40 P **P 11 59 60.0 -0.5**
comp=Z,2.4nm,0.7s,baz=287,slow=7.1,SNR=6.5
KLR LR LR 12 33 27.8
comp=Z,34nm,18.2s,baz=18,slow=37
comp=Z,2.4nm,0.7s
KLR Kul'dur 73.05 40 P **P 12 00 00.0 -0.5**
YKA Yellowknife Ar 73.52 340 P **P 12 00 02.5 -0.4**
comp=Z,1.0nm,0.8s,baz=35,slow=5.3,SNR=1.7
YKA LR LR 12 36 14.5
comp=Z,29nm,18.4s,baz=238,slow=39
comp=Z,1.0nm,0.8s
MA2 Magadan 73.67 24 LR LR 12 37 21.9
comp=Z,42nm,18.7s,baz=293,slow=40
I29M Ogilvie Camp, 75.41 352 P **P 12 00 13.4 -0.6**
I29M IAmb IAmb 12 00 15.6
comp=Z,6.9nm,0.8s
ULM Lac du Bonnet 76.11 324 P **P 12 00 18.7 +0.5**
comp=Z,7.7nm,0.9s,baz=44,slow=6.5,SNR=5.6
comp=Z,7.7nm,0.9s
H21K Melozitna Rive 76.18 358 P **P 12 00 17.0 -1.4**
H21K IAmb IAmb 12 00 21.5
comp=Z,7.8nm,0.9s
Q52A Bidwell 76.20 309 P **P 12 00 16.8 -2.1**
USRK Ussuriysk Ar. 76.42 44 LR LR 12 37 32.2
comp=Z,50nm,18.5s,baz=178,slow=38
MDM Murphy Dome 76.67 356 P **P 12 00 22.0 +0.8**
MDM IAmb IAmb 12 00 23.0
comp=Z,4.2nm,0.8s
ILAR Eielson Array 76.77 355 P **P 12 00 21.9 +0.2**
comp=Z,1.1nm,0.8s,baz=343,slow=2.5,SNR=8.7
comp=Z,1.1nm,0.8s
ILAR Eielson Array 76.77 355 P **P 12 00 22.0 +0.2**
J26L Joseph Creek 76.78 354 P **P 12 00 22.4 +0.5**
J26L IAmb IAmb 12 00 23.9
comp=Z,5.2nm,0.8s
DAWY Dawson 76.78 352 P **P 12 00 22.5 +0.6**
DAWY IAmb IAmb 12 00 24.1
comp=Z,8.9nm,1.0s
HDA Harding Lake 77.14 355 P **P 12 00 24.8 +1.0**
HDA IAmb IAmb 12 00 27.8
comp=Z,8.1nm,1.0s
FARO Faro, Yukon 77.72 348 P **P 12 00 26.3 -0.8**
KSRS Korea Array 78.40 51 P **P 12 00 31.2 0.0**
comp=Z,1.5nm,0.6s,baz=315,slow=4.9,SNR=6.6
KSRS LR LR 12 40 03.7
comp=Z,20nm,18.1s,baz=85,slow=40
comp=Z,1.5nm,0.6s
DHY Denali Highway 78.49 355 P **P 12 00 30.7 -0.8**
WTLY Watson Lake, Y 78.89 345 P **P 12 00 34.6 +1.0**
WTLY IAmb IAmb 12 00 36.5
comp=Z,11nm,1.2s
HYT Haines Junctio 79.68 350 P **P 12 00 39.1 +1.1**
HYT IAmb IAmb 12 00 43.0
comp=Z,16nm,1.4s
DLBC Dease Lake 80.69 345 P **P 12 00 44.0 +0.6**
comp=Z,1.6nm,0.7s,baz=75,slow=5.9,SNR=5.2
comp=Z,1.6nm,0.7s
CCM Cathedral Cave 82.13 313 P **P 12 00 51.0 -0.3**
CCM IAmb IAmb 12 00 55.6
comp=Z,6.4nm,0.7s
CCM Cathedral Cave 82.13 313 P **P 12 00 51.1 -0.3**
CCM pmax pmax
comp=Z,6.0nm,0.7s
EGMT Eagleton 83.76 330 P **P 12 00 59.2 -0.6**
T35A Sooner Cattle 85.91 315 P **P 12 01 09.6 -1.1**
NEW Newport 86.30 334 LR LR 12 41 17.0
comp=Z,32nm,19.2s,baz=47,slow=37
OK044 Pawnee Station 86.46 315 P **P 12 01 13.3 -0.1**
PDAR Pinedale Array 87.92 326 P **P 12 01 20.9 +0.1**
comp=Z,1.0nm,0.8s,baz=64,slow=3.2,SNR=8.1
PDAR LR LR 12 40 33.0
comp=Z,38nm,21.5s,baz=54,slow=36
comp=Z,1.0nm,0.8s
ELK Elko 91.98 329 LR LR 12 44 16.4
comp=Z,65nm,18.2s,baz=46,slow=36
YBH Yreka Blue Hor 93.93 334 LR LR 12 47 27.1
comp=Z,38nm,20.9s,baz=322,slow=38
NVAR Mina Array Bea 95.19 330 LR LR 12 45 55.2
comp=Z,50nm,19.5s,baz=12,slow=36
TXAR Lajitas Array 95.54 314 P **P 12 01 58.2 +2.1**
comp=Z,1.0nm,0.9s,baz=62,slow=2.9,SNR=7.6
TXAR LR LR 12 44 03.1
comp=Z,24nm,20.5s,baz=58,slow=35
comp=Z,1.0nm,0.9s
ASAR Alice Springs 121.20 97 PKP **PKPdf 12 07 24.0 +0.1**
comp=Z,0.2nm,0.5s,baz=335,slow=1.3,SNR=1.8

INET ***11*** *11:52:45.6±0.3, 12°.17N×87°.59W, h15km±10km, MW2.6*
SNET ***11*** *11:52:49.5±0.5, 12°.28N×87°.72W, h15km±999km, ML3.9*
UCR ***11*** *11:52:49.5±0.3, 12°.32N×87°.48W, h53km±248km, ML3.9*
ISC 11 11:52:47.7±3.1, 12°.3N±0°.2×87°.4W±0°.1, h67km, n9,
σ0s34/16, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.56**	**37**	*e*P	**Pn**	**11 53 01.3**	**+0.4**
CRIN				*e*S	**Sn**	**11 53 11.0**	**+0.4**
CNGN	**Cerro Negro**	**0.72**	**70**	*e*P	**Pn**	**11 53 02.6**	**-0.1**
MOMN	**Momotombo**	**0.85**	**79**	*e*P	**Pn**	**11 53 04.1**	**-0.1**
CNCH	**Conchagua**	**1.10**	**337**	*e*P	**Pn**	**11 53 07.7**	**+0.2**
CNCH				*e*S	**Sn**	**11 53 21.9**	**-0.3**
CNCH				IAML		11 53 24.1	
comp=Z,343nm,0.1s							
CNCH	**Conchagua**	**1.10**	**337**	*e*P	**Pn**	**11 53 07.7**	**+0.2**
CNCH				*e*S	**Sn**	**11 53 21.9**	**-0.3**
CNCH				IAML		11 53 24.1	
comp=Z,343nm,0.1s							
LCND	**La Caada**	**1.16**	**335**	*e*P	**Pn**	**11 53 08.2**	**+0.1**
LCND				*e*S	**Sn**	**11 53 22.8**	**-0.5**
LCND	**La Caada**	**1.16**	**335**	*e*P	**Pn**	**11 53 08.2**	**+0.1**
LCND				*e*S	**Sn**	**11 53 22.8**	**-0.5**
PACA	**Pacayal**	**1.51**	**323**	*e*P	**Pn**	**11 53 13.2**	**+0.4**
PACA				*e*S	**Sn**	**11 53 31.5**	**-0.2**

PACA IAML 11 53 35.8
comp=Z,17μm,0.2s
PACA Pacayal 1.51 323 *e*P **Pn 11 53 13.2 +0.4**
PACA *e*S **Sn 11 53 31.5 -0.2**
PACA IAML 11 53 35.8
comp=Z,17μm,0.2s

*IDC **11** 11:59:16.2±1.1,20°.16N×147°.38E,h0km,mb3.7/10, mbtmp3.7/11,ML3.9/1,MS2.9/5,Error ellipse: s-maj=32.2km s-min=18.3km az=91.0*

ISC 11 11:59:21.4±1.0,20°.18N±0°.09×147°.4E±0°.2,h34km,n13, σ0°90/12,mb3.5/10,MS3.0/4,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.98**	**200**	Pn	**Pn**	**12 01 00.5**	**-0.8**
	2.4nm,0.3s,baz=65,slow=23,SNR=2.1						
GUMO				Sn	**Sn**	**12 02 21.0**	**+1.5**
	3.0nm,0.3s,baz=331,slow=16,SNR=1.4						
GUMO				LR	LR	12 03 32.7	
	comp=Z,42nm,19.3s,baz=54,slow=37 29nm,0.6s						
KSRS	**Korea Array**	**24.14**	**320**	P	**P**	**12 04 34.6**	**+0.3**
	1.1nm,0.8s,baz=142,slow=8.8,SNR=4.3 1.1nm,0.8s						
SIJI	**Sorong**	**26.20**	**219**	LR	LR	12 13 01.7	
	comp=Z,24nm,19.2s,baz=123,slow=32						
WRA	**Warramunga Arr**	**41.87**	**199**	P	**P**	**12 07 07.6**	**-1.0**
	0.3nm,0.5s,baz=18,slow=8.8,SNR=9.0 0.3nm,0.5s						
SONM	**Songino Array**	**43.01**	**320**	P	**P**	**12 07 17.2**	**-0.6**
	0.6nm,0.6s,baz=138,slow=6.6,SNR=4.5 0.6nm,0.6s						
ASAR	**Alice Springs**	**45.51**	**197**	P	**P**	**12 07 37.2**	**-0.7**
	0.2nm,0.5s,baz=15,slow=7.7,SNR=2.0 0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**45.61**	**276**	P	**P**	**12 07 39.6**	**+0.8**
	0.3nm,0.3s,baz=72,slow=6.0,SNR=1.6						
CMAR				LR	LR	12 24 23.9	
	comp=Z,5.5nm,21.3s,baz=160,slow=33 0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**57.83**	**322**	P	**P**	**12 09 09.2**	**-0.3**
	1.3nm,0.5s,baz=104,slow=6.3,SNR=7.0 1.3nm,0.5s						
MKAR	**Makanchi Array**	**58.60**	**313**	P	**P**	**12 09 14.9**	**-0.2**
	0.8nm,0.9s,baz=91,slow=11,SNR=4.6 0.8nm,0.9s						
ILAR	**Eielson Array**	**61.62**	**26**	P	**P**	**12 09 35.0**	**-0.5**
	0.3nm,0.7s,baz=238,slow=5.2,SNR=2.3						
ILAR				LR	LR	12 33 26.6	
	comp=Z,26nm,21.4s,baz=244,slow=33 0.3nm,0.7s						
BVAR	**Borovoye Array**	**66.36**	**320**	P	**P**	**12 10 06.8**	**+0.1**
	1.2nm,0.5s,baz=79,slow=7.9,SNR=7.4 1.2nm,0.5s						
DLBC	**Dease Lake**	**69.19**	**34**	LR	LR	12 40 54.2	
	comp=Z,25nm,18.5s,baz=332,slow=36						
NVAR	**Mina Array Bea**	**80.99**	**52**	P	**P**	**12 11 34.5**	**+1.3**
	0.4nm,0.8s,baz=262,slow=6.3,SNR=1.9 0.4nm,0.8s						

KRSC 11 12:02:38.7±0.4,49°.93N×156°.62E,h95km±5km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.82**	**337**	P	Pn	12 02 57.7	+0.9
SKR				S	Sn	12 03 11.7	+1.4
KDTR	**Khodutka, Kamc**	**2.10**	**26**	P	Pn	12 03 14.0	+1.8
KDTR				S	Sn	12 03 40.2	+2.3
MTVR	**Mutnovka**	**2.74**	**20**	S	Sn	12 03 55.5	+2.1
RUS	**Russkaya**	**2.78**	**25**	P	Pn	12 03 23.2	+2.0
RUS				S	Sn	12 03 56.0	+2.0
GRL	**Gorelyy**	**2.78**	**19**	P	Pn	12 03 23.9	+2.5
GRL				S	Sn	12 03 56.8	+2.5
KRMR	**Karymshinskiy**	**3.06**	**17**	S	Sn	12 04 02.8	+2.1
PET	**Petropavlovsk**	**3.35**	**21**	S	Sn	12 04 10.0	+2.3
AVH	**Avacha**	**3.59**	**21**	P	Pn	12 03 34.4	+2.1
AVH				S	Sn	12 04 15.7	+2.0
SMAR	**Somma**	**3.61**	**21**	P	Pn	12 03 34.8	+2.2
SMAR				S	Sn	12 04 16.4	+2.2
SDLR	**Sedlovina**	**3.64**	**22**	P	Pn	12 03 35.3	+2.4
SDLR				S	Sn	12 04 17.2	+2.3
KRX	**Arik**	**3.66**	**19**	P	Pn	12 03 35.8	+2.6
KRX				S	Sn	12 04 17.9	+2.4
SPN	**Mys Shipunski**	**3.82**	**32**	S	Sn	12 04 21.2	+2.1
GNL	**Ganaly**	**3.86**	**12**	P	Pn	12 03 37.9	+2.0
MKZ	**Mys Kozlova**	**5.60**	**32**	P	Pn	12 04 02.0	+2.7

*DJA **11** 12:17:26.0±1.4,10°.S±3°.×11°.2E±°,h19km±13km,M4.3/16, mb4.6/6,MLv4.1/16*
*NEIC **11** 12:17:32.7±1.3,9°.5S±0°.2×111°.92E±0°.05,h64km±11km, mb4.1/7,Error ellipse: s-maj=23.0km s-min=6.4km az=183.0*
*IDC **11** 12:17:35.6±2.9,9°.50S×111°.85E,h92km±26km,mb3.6/13, mbtmp4.0/15,MS3.2/3,Error ellipse: s-maj=34.6km s-min=13.7km az=45.0*

ISC 11 12:17:30.1±0.8,9°.72S±0°.09×111°.70E±0°.07,h50km,n51, σ1°28/46,mb4.1/17,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.60**	**341**	P	**Pn**	**12 17 52.9**	**-3.1**
PCJI				S	**Sn**	**12 18 16.8**	**+1.3**
PWJI	**Pagerwojo**	**1.69**	**4**	P	**Pn**	**12 17 55.3**	**-1.9**
PWJI				S	**Sn**	**12 18 20.6**	**+2.9**
KRKI	**Karangkates**	**1.72**	**26**	P	**Pn**	**12 17 56.8**	**-0.9**
UGM	**Wanagama**	**2.14**	**327**	Pn	**Pn**	**12 18 03.5**	**+0.1**
UGM	**Wanagama**	**2.14**	**327**	P	**Pn**	**12 18 02.5**	**-0.9**
UGM				S	**Sn**	**12 18 28.9**	**+0.1**
JAGI	**Jajag, Banyuwa**	**2.72**	**63**	Pn	**Pn**	**12 18 10.7**	**-0.7**
JAGI	**Jajag, Banyuwa**	**2.72**	**63**	P	**Pn**	**12 18 09.5**	**-1.9**
TBJI	**Tambak Boyo**	**2.89**	**3**	P	**Pn**	**12 18 13.9**	**+0.2**
SMRI	**Semarang**	**2.93**	**335**	Pn	**Pn**	**12 18 15.4**	**+1.1**
SMRI	**Semarang**	**2.93**	**335**	P	**Pn**	**12 18 13.3**	**-1.0**
BJII	**Banjamegara**	**3.08**	**320**	P	**Pn**	**12 18 15.8**	**-0.6**
SCJI	**Gunung Srandil**	**3.22**	**309**	P	**Pn**	**12 18 16.9**	**-1.3**
RTBI	**Rangdo, Negare**	**3.44**	**69**	P	**Pn**	**12 18 20.8**	**-0.4**
KMMI	**Kalianget**	**3.48**	**40**	P	**Pn**	**12 18 21.3**	**-0.4**
IGBI	**Denpasar**	**3.52**	**76**	P	**Pn**	**12 18 21.6**	**-0.7**
DNP	**Denpasar**	**3.62**	**74**	P	**Pn**	**12 18 21.7**	**-2.0**
SRBI	**Singaraja**	**3.83**	**65**	P	**Pn**	**12 18 25.8**	**-0.8**
KLNI	**Mataram**	**4.53**	**74**	P	**Pn**	**12 18 35.2**	**-1.0**
LEM	**Lembang**	**4.96**	**305**	P	Pn	12 18 48.1	+5.9
	19nm,0.6s,baz=139,slow=19,SNR=4.4						
LEM	**Lembang**	**4.96**	**305**	P	Pn	12 18 39.5	-2.7
CNJI	**Cibinong**	**5.11**	**298**	P	Pn	12 18 42.1	-2.1
	0.1nm23nm,1.3s						
TWSI	**Taliwang, Sumb**	**5.21**	**80**	P	**Pn**	**12 18 45.1**	**-0.4**
	0.2nm52nm,0.6s						
PLAI	**Plampang**	**6.07**	**82**	P	**Pn**	**12 18 56.3**	**-1.0**
	0.4nm112nm,0.7s						
KAPI	**Kappang**	**9.25**	**60**	P	**Pn**	**12 19 43.3**	**+2.3**
	5.3nm,0.6s,baz=266,slow=3.5,SNR=4.5						
KAPI				LR	LR	12 24 13.3	
	comp=Z,29nm,21.2s,baz=98,slow=44						
KNRA	**Kununurra**	**17.66**	**111**	P	**Pn**	**12 21 32.9**	**+0.2**
KNRA				IAmb	IAmb	12 21 45.5	
	comp=Z,20nm,1.4s						
FAKI	**Fak Fak**	**21.50**	**73**	P	**P**	**12 22 12.1**	**-2.9**
WB0	**Warramunga Arr**	**24.08**	**117**	P	**P**	**12 22 40.1**	**-1.1**
WB0				IAmb	IAmb	12 23 01.4	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**24.10**	**118**	P	**P**	**12 22 42.3**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=292,slow=11,SNR=36 comp=Z,0.8nm,0.5s						
WB2	**Warramunga Arr**	**24.11**	**117**	P	**P**	**12 22 40.5**	**-0.9**
WB2				IAmb	IAmb	12 23 10.2	
	comp=Z,9.7nm,1.4s						
WR0	**Warramunga Arr**	**24.28**	**117**	P	**P**	**12 22 44.4**	**+1.4**
WR0				IAmb	IAmb	12 23 11.2	
	comp=Z,8.3nm,1.3s						
AS31	**Alice Springs**	**25.34**	**126**	P	**P**	**12 22 52.4**	**-0.1**
ASAR	**Alice Springs**	**25.34**	**126**	P	**P**	**12 22 54.1**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=302,slow=9.1,SNR=20 comp=Z,0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.70**	**336**	P	**P**	**12 23 39.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=172,slow=8.9,SNR=1.6 comp=Z,0.4nm,0.3s						
PMG	**Port Moresby**	**34.96**	**93**	LR	LR	12 41 59.9	
	comp=Z,64nm,18.6s,baz=58,slow=42						
STKA	**Stephens Creek**	**35.39**	**133**	P	**P**	**12 24 23.4**	**+2.2**
	comp=Z,2.3nm,0.7s,baz=321,slow=14,SNR=3.1 comp=Z,2.3nm,0.7s						
H08S2	**Diego Garcia H**	**38.80**	**270**	T	T	13 05 54.6	
	baz=96,slow=75,SNR=15						
H08S3	**Diego Garcia H**	**38.81**	**270**	T	T	13 05 52.9	
	baz=96,slow=75,SNR=24						
H08S1	**Diego Garcia H**	**38.81**	**270**	T	T	13 05 54.1	
	baz=96,slow=75,SNR=10						
KSRS	**Korea Array**	**49.33**	**17**	P	**P**	**12 26 13.6**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=200,slow=8.6,SNR=12 comp=Z,3.6nm,0.8s						
SONM	**Songino Array**	**57.49**	**356**	P	**P**	**12 27 13.8**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=176,slow=8.4,SNR=6.9 comp=Z,1.8nm,0.8s						
MK31	**Makanchi Array**	**62.09**	**338**	P	**P**	**12 27 45.5**	**-0.2**
MK31				IAmb	IAmb	12 27 46.3	
	comp=Z,1.8nm,0.9s						
MKAR	**Makanchi Array**	**62.09**	**338**	P	**P**	**12 27 45.6**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=151,slow=7.5,SNR=22 comp=Z,1.5nm,0.4s						
AAK	**Ala-Archa**	**62.21**	**330**	P	**P**	**12 27 47.0**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=13,slow=1.5,SNR=3.8 comp=Z,2.3nm,0.9s						
KURBB	**Kurchatov Arra**	**66.65**	**338**	P	**P**	**12 28 15.3**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=141,slow=6.0,SNR=3.0 comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**67.39**	**343**	P	**P**	**12 28 19.3**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=134,slow=4.3,SNR=4.1 comp=Z,0.6nm,0.4s						
BVAR	**Borovoye Array**	**71.72**	**335**	P	**P**	**12 28 46.2**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=66,slow=3.5,SNR=2.0 comp=Z,0.4nm,0.5s						
ABKAR	**Akbulak array**	**74.15**	**328**	P	**P**	**12 29 01.9**	**+0.6**
AKTO	**Aktyubinsk**	**75.85**	**328**	P	**P**	**12 29 12.0**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=99,slow=6.1,SNR=4.7 comp=Z,1.3nm,0.6s						
KVAR	**Kislovodsk Arr**	**82.00**	**317**	LR	LR	13 11 05.7	
	comp=Z,27nm,19.4s,baz=360,slow=39						
BRTR	**Keskin Array B**	**87.10**	**311**	P	**P**	**12 30 11.7**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=75,slow=5.2,SNR=3.7 comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	**87.10**	**311**	P	**P**	**12 30 10.9**	**-0.1**

*IDC **11** 12:32:09.8±2.9,4°.01S×141°.54E,h110km±27km,mb3.4/8, mbtmp3.9/11,Error ellipse: s-maj=33.6km s-min=16.2km az=77.0*

ISC 11 12:32:09.1±0.8,4°.0S±0°.1×141°.5E±0°.1,h100km,n13, σ0°88/12,mb3.7/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.75**	**134**	P	**Pn**	**12 33 59.8**	**+0.6**
	10.0nm,0.5s,baz=65,slow=2.9,SNR=9.1						
SIJI	**Sorong**	**10.72**	**287**	P	**Pn**	**12 34 40.4**	**+0.7**
	4.8nm,0.3s,baz=186,slow=21,SNR=6.0						
WRA	**Warramunga Arr**	**17.33**	**203**	P	**P**	**12 36 03.4**	**-1.4**
	1.1nm,0.3s,baz=14,slow=13,SNR=40						
ASAR	**Alice Springs**	**20.90**	**200**	P	**P**	**12 36 44.3**	**+0.8**
	1.1nm,0.5s,baz=26,slow=11,SNR=36 1.1nm,0.5s						
KSRS	**Korea Array**	**43.14**	**344**	P	**P**	**12 39 59.8**	**+0.1**
	1.2nm,0.8s,baz=155,slow=9.5,SNR=4.2 1.2nm,0.8s						
KLR	**Kul'dur**	**53.69**	**352**	P	**P**	**12 41 20.2**	**-0.3**
	0.9nm,0.6s,baz=153,slow=2.3,SNR=3.9 0.9nm,0.6s						
SONM	**Songino Array**	**60.10**	**333**	P	**P**	**12 42 06.7**	**+0.7**
	0.3nm,0.3s,baz=134,slow=4.2,SNR=1.8 0.3nm,0.3s						
MKAR	**Makanchi Array**	**72.53**	**322**	P	**P**	**12 43 25.0**	**-0.3**
	0.9nm,0.7s,baz=104,slow=8.0,SNR=7.3 0.9nm,0.7s						
VNDA	**Vanda**	**74.27**	**176**	P	**P**	**12 43 34.4**	**-0.5**
	0.6nm,0.8s,baz=325,slow=7.5,SNR=8.7 0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**74.47**	**329**	P	**P**	**12 43 34.8**	**-1.6**
	0.3nm,0.4s,baz=141,slow=4.8,SNR=1.7 0.3nm,0.4s						
MAW	**Mawson**	**82.00**	**202**	P	**P**	**12 44 17.6**	**-0.1**
	1.1nm,0.7s,baz=90,slow=6.1,SNR=2.0 1.1nm,0.7s						
ILAR	**Eielson Array**	**85.84**	**24**	pP	pP	12 45 03.8	+0.3
	0.6nm,0.8s,baz=250,slow=4.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**139.32**	**285**	PKP	**PKPdf**	**12 51 26.2**	**+0.6**
	0.2nm,0.6s,baz=101,slow=2.2,SNR=1.7						

*NEIC **11** 12:52:05.6±2.6,28°.35S±0°.05×70°.7W±0°.1,h99km±8km, mb4.4/1,ML4.2(GUC),Error ellipse: s-maj=14.8km s-min=7.3km az=97.0*
*GUC **11** 12:52:06.4±0.7,28°.39S×70°.47W,h80km±3km,ML4.2*
*IDC **11** 12:52:11.1±6.8,28°.07S×70°.54W,h97km±48km,mb3.1/2, mbtmp3.6/6,Error ellipse: s-maj=62.6km s-min=32.5km az=48.0*

ISC 11 12:52:06.2±0.7,28°.34S±0°.04×70°.50W±0°.07,h88km±7km, n71,σ1°27/75,mb3.3/3,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.52**	**285**	Pn	**Pn**	**12 52 22.1**	**+1.2**
AC04	**Llanos de Chal**	**0.52**	**285**	*e*P	**Pn**	**12 52 22.1**	**+1.2**
AC04				*i* S	**Sn**	**12 52 32.9**	**+1.1**
AC04				IAML		12 52 33.7	
	comp=E,24μm,0.1s						
AC05	**El Transito**	**0.53**	**158**	Pn	**Pn**	**12 52 21.6**	**+0.4**
AC05	**El Transito**	**0.53**	**158**	*e*P	**Pn**	**12 52 21.5**	**+0.4**
AC05				*i* S	**Sn**	**12 52 32.0**	**-0.3**
AC05				IAML		12 52 32.8	
	comp=N,15μm,0.2s						
LCO	**Las Campanas**	**0.69**	**195**	Pn	**Pn**	**12 52 23.5**	**+0.7**
LCO	**Las Campanas**	**0.69**	**195**	*e*P	**Pn**	**12 52 23.1**	**+0.4**
LCO				*i* S	**Sn**	**12 52 35.3**	**+0.2**
AC06	**Mina Casimiro**	**0.99**	**8**	P	**Pn**	**12 52 27.1**	**+1.4**
AC06	**Mina Casimiro**	**0.99**	**8**	*e*P	**Pn**	**12 52 26.9**	**+1.2**
AC06				*i* S	**Sn**	**12 52 42.2**	**+1.9**
AC06				IAML		12 52 42.9	
	comp=E,6μm,0.2s						
CO01	**Juntas del Tor**	**1.67**	**168**		**Pn**	**12 52 35.4**	**+1.1**
CO01	**Juntas del Tor**	**1.67**	**168**	*e*P	**Pn**	**12 52 35.3**	**+1.1**
CO01				*i* S	**Sn**	**12 52 56.8**	**+1.3**
CO05	**La Serena**	**1.70**	**202**	Pn	**Pn**	**12 52 35.1**	**+0.7**
CO05	**La Serena**	**1.70**	**202**	*e*P	**Pn**	**12 52 34.8**	**+0.4**
CO05				*i* S	**Sn**	**12 52 56.4**	**+0.6**
CO05				IAML		12 52 59.0	
	comp=E,3μm,0.2s						
GO04	**Tololo Observa**	**1.84**	**188**	Pn	**Pn**	**12 52 37.3**	**+0.7**
GO04	**Tololo Observa**	**1.84**	**188**	*e*P	**Pn**	**12 52 37.3**	**+0.7**
AC02	**Maricunga**	**1.94**	**39**	Pn	**Pn**	**12 52 40.0**	**+2.0**
AC02	**Maricunga**	**1.94**	**39**	*e*P	**Pn**	**12 52 40.0**	**+2.0**
AC01	**Pan de Azucar**	**2.19**	**358**	Pn	**Pn**	**12 52 42.1**	**+1.2**
CO03	**El Pedregal**	**2.49**	**184**	Pn	**Pn**	**12 52 46.0**	**+0.9**
CO03	**El Pedregal**	**2.49**	**184**	*e*P	**Pn**	**12 52 45.9**	**+0.9**
CO03				*i* S	**Sn**	**12 53 14.9**	**+0.2**
CO03				IAML		12 53 21.6	
	comp=E,2μm,0.3s						
CO06	**Fray Jorge**	**2.52**	**203**		**Pn**	**12 52 45.5**	**+0.2**
CO06	**Fray Jorge**	**2.52**	**203**	*i* S	**Sn**	**12 53 16.6**	**+1.3**
CO02	**Combarbal**	**2.88**	**188**		**Pn**	**12 52 50.8**	**+0.5**
CO02	**Combarbal**	**2.88**	**188**	*e*P	**Pn**	**12 52 50.8**	**+0.5**
GO02	**Mina Guanaco**	**3.27**	**15**	Pn	**Pn**	**12 52 56.5**	**+0.8**
ZON	**Zonda**	**3.56**	**154**		**Pn**	**12 52 58.1**	**-1.3**
PB14	**IPOC Station P**	**3.70**	**1**	Pn	**Pn**	**12 53 01.3**	**-0.3**
VA06	**Catapilco**	**4.26**	**189**	Pn	**Pn**	**12 53 08.6**	**-0.2**
VA03	**San Esteban**	**4.41**	**181**		**Pn**	**12 53 11.6**	**+0.7**
ROC1	**El Roble**	**4.64**	**185**		**Pn**	**12 53 13.7**	**-0.4**
VA01	**Torpederas**	**4.77**	**192**		**Pn**	**12 53 14.3**	**-1.3**
PEL	**Peldehue**	**4.79**	**182**	Pn	**Pn**	**12 53 16.0**	**0.0**
PB10	**IPOC Station P**	**4.81**	**359**	Pn	**Pn**	**12 53 15.1**	**-1.2**
MT02	**Curacav**	**4.93**	**186**		**Pn**	**12 53 16.9**	**-1.0**
MT05	**Renca**	**5.04**	**182**	Pn	**Pn**	**12 53 17.6**	**-1.8**
MT03	**Universidad Ad**	**5.13**	**180**		**Pn**	**12 53 21.4**	**+0.7**
PB15	**IPOC Station P**	**5.20**	**11**		**Pn**	**12 53 21.6**	**-0.2**
VA05	**Santo Domingo**	**5.38**	**190**		**Pn**	**12 53 22.4**	**-1.6**
MT09	**Talagante**	**5.43**	**184**		**Pn**	**12 53 23.7**	**-1.1**
LMEL	**Las Melosas**	**5.49**	**177**		**Pn**	**12 53 25.1**	**-0.6**
MT01	**Popeta**	**5.54**	**186**	Pn	**Pn**	**12 53 25.0**	**-1.2**
BO04	**La Punta**	**5.63**	**181**		**Pn**	**12 53 26.5**	**-0.9**
PB06	**IPOC Station P**	**5.68**	**9**		**Pn**	**12 53 27.1**	**-1.2**
AF01	**San Pedro de A**	**5.76**	**22**		**Pn**	**12 53 29.7**	**+0.2**
LVC	**Limon Verde**	**5.89**	**15**	P	**Pn**	**12 53 30.8**	**-0.5**
	comp=E,4.3nm,0.3s,baz=169,slow=6.9,SNR=19						
LVC				S	**Sn**	**12 54 36.6**	**-1.0**
	comp=E,20nm,0.5s,baz=168,slow=16,SNR=1.8						
LVC	**Limon Verde**	**5.89**	**15**	Pn	**Pn**	**12 53 30.6**	**-0.7**
PB04	**IPOC Station P**	**5.99**	**3**	Pn	**Pn**	**12 53 30.4**	**-2.2**
BO01	**Tunca**	**6.05**	**185**	Pn	**Pn**	**12 53 30.9**	**-2.2**
BO02	**Sierra Bellavi**	**6.43**	**182**		**Pn**	**12 53 37.1**	**-1.4**
PB07	**IPOC Station P**	**6.61**	**5**	Pn	**Pn**	**12 53 39.7**	**-1.4**
PB09	**IPOC Station P**	**6.62**	**10**	Pn	**Pn**	**12 53 40.6**	**-0.5**
GO05	**Huala**	**6.76**	**190**	Pn	**Pn**	**12 53 40.4**	**-2.3**
PB02	**IPOC Station P**	**7.01**	**5**		**Pn**	**12 53 44.7**	**-1.8**
PB01	**IPOC Station P**	**7.33**	**7**		**Pn**	**12 53 48.7**	**-2.0**
PATCX	**Punta Patache**	**7.50**	**3**	Pn	**Pn**	**12 53 51.0**	**-2.0**
PB08	**IPOC Station P**	**8.26**	**9**	Pn	**Pn**	**12 54 01.8**	**-1.8**
GO01	**Chusmiza**	**8.72**	**8**	Pn	**Pn**	**12 54 08.5**	**-1.5**
H03N1	**Juan Fernandez**	**8.83**	**233**	T	T	13 02 24.9	
	baz=58,slow=72,SNR=261						
H03N2	**Juan Fernandez**	**8.84**	**233**	T	T	13 02 13.1	
	baz=58,slow=72,SNR=313						
H03N3	**Juan Fernandez**	**8.85**	**233**	T	T	13 02 12.9	
	baz=58,slow=72,SNR=227						
PB16	**IPOC Station P**	**10.00**	**5**	Pn	**Pn**	**12 54 25.9**	**-1.8**
CPUP	**Villa Florida**	**11.88**	**83**	P	Pn	12 54 58.2	+5.7
	comp=E,1.0nm,0.5s,baz=256,slow=14,SNR=3.7						
TRQA	**Tornquist**	**12.03**	**146**	Pn	**Pn**	**12 54 53.5**	**-0.9**
LPAZ	**La Paz**	**12.20**	**11**	P	**Pn**	**12 54 59.5**	**+2.1**
	comp=E,1.5nm,0.7s,baz=192,slow=6.6,SNR=6.2						
LPAZ	**La Paz**	**12.20**	**11**		**Pn**	**12 54 58.7**	**+1.3**
SIV	**San Ignacio**	**15.07**	**37**	P	**P**	**12 55 36.9**	**-0.8**
	comp=E,1.0nm,0.6s,baz=225,slow=16,SNR=2.3						
QSPA	**South Pole Qui**	**61.88**	**180**	P	**P**	**13 02 15.1**	**-1.1**
QSPA				IAmb	IAmb	13 02 24.9	
	comp=Z,5.2nm,1.4s						
TXAR	**Lajitas Array**	**65.54**	**328**	P	**P**	**13 02 43.8**	**+3.2**
	comp=Z,0.2nm,0.6s,baz=143,slow=7.9,SNR=2.5 comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.04**	**70**	P	P	13 04 16.0	+4.1
	comp=Z,0.3nm,0.6s,baz=233,slow=8.4,SNR=1.6 comp=Z,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**147.73**	**38**	PKPbc	**PKPab**	**13 11 42.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=297,slow=3.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**148.69**	**28**	PKPbc	**PKPab**	**13 11 45.4**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=303,slow=3.8,SNR=6.1						
ZALV				pPKPbc	**pPKPbc**	**13 12 07.2**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=318,slow=6.0,SNR=3.6						
MKAR	**Makanchi Array**	**151.86**	**42**	PKPbc	**PKiKP**	**13 11 52.5**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=304,slow=2.6,SNR=4.7						

IDC 11 12:53:09.0±891.0,62°.85N×26°.95E,h0km,Error ellipse: s-maj=493.3km s-min=157.1km az=128.0,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**8.03**	**135**	I		13 40 00.0	
	baz=326,slow=325,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**20.89**	**112**	I		14 59 40.0	
	baz=318,slow=329,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**30.58**	**80**	I		16 04 40.0	
	baz=313,slow=323,SNR=1.3						

*IDC **11** 12:57:14.4±1.1,57°.78S×7°.13W,h0km,mb4.0/5, mbtmp4.0/6,ML4.3/1,MS3.2/5,Error ellipse: s-maj=51.6km s-min=22.8km az=74.0*
*NEIC **11** 12:57:18.6±1.2,58°.0S±0°.1×8°.4W±0°.4,h10km±2km, mb4.5/9,Error ellipse: s-maj=39.4km s-min=9.0km az=54.0*

ISC 11 12:57:15.7±1.0,57°.8S±0°.1×7°.3W±0°.2,h10km,n23, σ0°99/21,mb4.2/8,MS3.2/4,East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.92**	**181**	P	**Pn**	**13 00 19.4**	**+0.3**
VNA1				S	Sn	13 02 30.1	-13
VNA2	**Neumayer--Watz**	**13.19**	**180**	P	**Pn**	**13 00 21.2**	**-1.6**
	baz=351,slow=17						
VNA2				S	Sn	13 02 32.7	-17
VNA3	**Neumayer Olymp**	**13.55**	**183**	P	**Pn**	**13 00 28.1**	**+0.4**
VNA3				S	Sn	13 02 42.3	-16
SNAA	**Sanae**	**14.06**	**174**	P	**Pn**	**13 00 33.3**	**-1.4**
SNAA				S	Sn	13 02 52.0	-19
SNAA	**Sanae**	**14.06**	**174**	Pn	**Pn**	**13 00 33.3**	**-1.4**
	1.4nm,0.3s,baz=350,slow=16,SNR=89						
SNAA				Sn	Sn	13 02 55.7	-15
	0.9nm,0.3s,baz=263,slow=13,SNR=9.7						
SNAA				LR	LR	13 04 37.4	
	comp=Z,84nm,19.6s,baz=8.0,slow=32 3.8nm,0.4s						
TROLL	**Troll, Antarti**	**14.83**	**168**	P	**Pn**	**13 00 44.6**	**-0.7**
TROLL				S	Sn	13 03 11.9	-18
BELA	**Belgrano 2**	**22.19**	**195**	P	**P**	**13 02 11.8**	**+0.3**
MAW	**Mawson**	**31.82**	**137**	LR	LR	13 15 45.0	
	comp=Z,38nm,18

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGRO				Sn	**Sn**	**13 04 57.6**	**-1.7**
PTEO	**Sao Teotonio**	**4.80**	**351**	*e*Pn	**Pn**	**13 04 04.8**	**-0.5**
PTEO				*e*Sn	**Sn**	**13 05 04.2**	**+3.2**
PCVE	**Castro Verde**	**4.83**	**357**	*e*Pn	**Pn**	**13 04 05.3**	**-0.4**
PCVE				*e*Sn	**Sn**	**13 05 03.0**	**+1.3**
PCVE				A	A	13 05 06.6	
	2.5nm,0.6s						
EMIN	**Mina Concepcio**	**5.04**	**10**	Pn	**Pn**	**13 04 06.8**	**-1.8**
EMIN				⇑*i*Vmb_V		13 04 08.9	
	86nm,SNR=1.8						
EMIN				Sn	**Sn**	**13 05 06.2**	**-0.6**
MESJ	**Messejana**	**5.04**	**356**	*e*P	**Pn**	**13 04 07.5**	**-1.2**
MESJ				*e*S	**Sn**	**13 05 06.0**	**-0.9**
MESJ				IAML		13 05 07.5	
	comp=E,0.8nm,0.1s						
MESJ	**Messejana**	**5.04**	**356**	*e*Pn	**Pn**	**13 04 08.4**	**-0.3**
MESJ				*e*Sn	**Sn**	**13 05 09.1**	**+2.1**
MESJ				A	A	13 05 11.1	
	comp=E,2.3nm,0.6s						
PBAR	**Barrancos**	**5.40**	**6**	*e*Pn	**Pn**	**13 04 12.8**	**-0.7**
PBAR				*e*Sn	**Sn**	**13 05 17.0**	**+1.3**
PBAR				A	A	13 05 19.4	
	comp=E,2.1nm,0.3s						
ECAB	**El Cabril**	**5.60**	**19**	Pn	**Pn**	**13 04 14.4**	**-2.0**
ECAB				⇑*i*Vmb_V		13 04 17.1	
	comp=E,69nm,SNR=1.6						
ECAB				Sn	**Sn**	**13 05 20.3**	**-0.6**
EADA	**Adamuz**	**5.96**	**25**	Pn	**Pn**	**13 04 19.7**	**-1.5**
EADA				⇑*i*Vmb_V		13 04 21.0	
	comp=E,70nm,SNR=1.4						
EADA				Sn	**Sn**	**13 05 29.8**	**+0.3**
EBAD	**Badajoz**	**5.98**	**6**	Pn	**Pn**	**13 04 19.7**	**-1.7**
EBAD				⇑*i*Vmb_V		13 04 20.9	
	comp=E,46nm,SNR=0.9						
EBAD				Sn	**Sn**	**13 05 26.9**	**-3.0**
PMTG	**Montargil**	**6.27**	**357**	*e*Pn	**Pn**	**13 04 24.6**	**-0.9**

TRN 11 13:05:42.4, 10°.23N×61°.24W, h41km, MD3.8, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.45**	**339**	⇑*i*P	Pn	13 05 52.5	0.0
TRN				*e*S	Sn	13 05 59.9	+0.3
TOSP	**Speyside**	**1.27**	**33**	*e*P	Pn	13 06 03.6	0.0
TOSP				*e*S	Sn	13 06 19.3	-0.2
GRFF	**Grenada Fort F**	**1.88**	**345**	*e*P	Pn	13 06 13.3	+1.3
GRFF				*e*S	Sn	13 06 34.7	+0.2
GRGR	**Grenville**	**1.94**	**348**	*e*P	Pn	13 06 13.6	+0.7
GRGR				*e*S	Sn	13 06 35.4	-0.5
GCMP	**Grenada, Carri**	**2.25**	**355**	*e*P	Pn	13 06 17.5	+0.4
GCMP				*e*S	Sn	13 06 43.0	-0.7
SVB	**Belmont**	**3.03**	**360**	*e*P	Pn	13 06 29.0	+1.2
SVB				*e*S	Sn	13 07 02.2	-0.6
MCLT	**Moule a Chique**	**3.47**	**5**	*e*P	Pn	13 06 34.8	+0.8
MCLT				*e*S	Sn	13 07 12.7	-1.2
SLB	**Belfond**	**3.58**	**3**	*e*S	Sn	13 07 15.7	-1.0
SLBI	**Saint Lucia, B**	**3.78**	**4**	*e*P	Pn	13 06 39.5	+1.3
SLBI				*e*S	Sn	13 07 20.1	-1.4
MPOM	**Morne Pois Mar**	**4.21**	**5**	*e*P	Pn	13 06 44.6	+0.6
MPOM				*e*S	Sn	13 07 29.6	-2.4
BIM	**Bigot**	**4.27**	**2**	*e*P	Pn	13 06 45.4	+0.5
BIM	**Bigot**	**4.27**	**2**	*e*S	Sn	13 07 32.8	-0.7
BAUV	**El Baul**	**6.83**	**260**	*e*P	Pn	13 07 20.9	+0.8
BAUV	**El Baul**	**6.83**	**260**	*e*S	Sn	13 08 32.9	-3.7

*SOME **11** 13:10:46.8, 41°.33N×83°.67E, h0km*
*NNC **11** 13:10:50.3±1.1, 41°.36N×83°.59E, h4km±3km, mb3.7, mpv3.3, Error ellipse: s-maj=8.5km s-min=5.8km az=159.0*
ISC 11 13:10:54.8±2.7, 41°.6N±0°.1×83°.50E±0°.08, h10km, n13, σ2s10/20, 9C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.38**	**299**	*e*P	**Pn**	**13 11 49.1**	**+1.4**
	6.6nm,0.2s						
SHLS				*e*S	**Sb**	**13 12 33.6**	**-2.5**
	200nm,0.3s						
PDGK	**Podgornoye**	**3.44**	**302**	⇑Pn	**Pn**	**13 11 47.1**	**-1.6**
	2.9nm,0.8s						
PDGK				⇑Pg	**Pb**	**13 11 55.9**	**-0.1**
	5.5nm,0.4s						
PDGK				⇑Sn	**Sn**	**13 12 31.9**	**+2.3**
	16nm,0.3s						
PDGK				⇑Lg	Lg	13 12 43.9	
	104nm,0.8s						
UZB	**Uzynbulak**	**3.67**	**297**	*e*P	**Pb**	**13 11 59.0**	**-0.8**
	2.3nm,0.2s						
UZB				*e*S	**Sg**	**13 12 51.1**	**-1.6**
	67nm,0.4s						
UZB	**Uzynbulak**	**3.67**	**297**	Pg	**Pg**	**13 12 06.7**	**+1.6**
	7.1nm,0.2s						
UZB				Lg	Lg	13 13 03.7	
	67nm,0.5s						
DJR	**Jarkent**	**3.87**	**317**	*e*P	**Pb**	**13 12 04.9**	**+1.6**
	6.5nm,0.6s						
DJR				*e*S	**Sg**	**13 13 00.6**	**+1.4**
	23nm,0.5s						
DJR	**Jarkent**	**3.87**	**317**	Pg	**Pb**	**13 12 04.9**	**+1.6**
	6.5nm,0.6s						
DJR				Lg	Lg	13 13 00.6	
	23nm,0.5s						
KPKS	**Kokpek**	**4.03**	**300**	*e*P	**Pb**	**13 12 06.3**	**+0.4**
	7.1nm,0.4s						
KPKS				*e*S	**Sg**	**13 13 03.1**	**-1.1**
	121nm,0.5s						
MK31	**Makanchi Array**	**5.29**	**351**	⇑Pn	**Pn**	**13 12 13.4**	**-0.5**
	0.2nm,0.2s,baz=176,slow=13,SNR=15						
MK31				⇑Pg	**Pb**	**13 12 30.7**	**+3.4**
	1.2nm,0.3s,baz=170,slow=15,SNR=8.0						
MK31				⇓Sn	**Sn**	**13 13 16.9**	**+2.0**
	4.5nm,0.5s,baz=186,slow=64,SNR=6.0						
MK31				⇑Lg	Lg	13 13 47.0	
	13nm,0.6s,baz=163,slow=27,SNR=4.8						
MAKZ	**Makanchi**	**5.34**	**349**	⇑Pn	**Pn**	**13 12 14.2**	**-0.5**
	0.8nm,0.6s						
MAKZ				⇓Pg	**Pg**	**13 12 32.6**	**-4.6**
	3.0nm,0.8s						
MAKZ				⇑Sn	**Sn**	**13 13 19.0**	**+2.7**
	11nm,0.8s						
MAKZ				⇓Lg	Lg	13 13 48.9	
	12nm,0.9s						
ZSN	**Zaisan**	**5.96**	**9**	Pg	**Pn**	**13 12 22.5**	**-0.5**
	2.7nm,0.4s						
ZSN				Lg	Lg	13 13 30.2	
	21nm,0.8s						
KURBB	**Kurchatov Arra**	**9.68**	**341**	⇓Lg	Lg	13 16 06.6	
	9.5nm,0.7s						
KURK	**Kurchatov**	**9.75**	**341**	⇓Lg	Lg	13 16 07.6	
	5.9nm,0.8s						
OTUK	**Ortayu**	**10.34**	**314**	⇓Lg	Lg	13 16 26.0	
	3.0nm,0.5s						

*ATH **11** 13:27:37.4, 34°.00N×28°.52E, h10km±31km, ML3.0/4, Error ellipse: s-maj=31.6km s-min=4.4km az=0.0*
*ISK **11** 13:27:46.8, 34°.70N×28°.34E, h12km, ML3.1/14*
*DDA **11** 13:27:48.9±0.0, 34°.93N×28°.36E, h10km±1km, ML2.5*
*NIC **11** 13:27:49.0±0.0, 34°.65N×28°.36E, h22km±1km, Ml3.9/6*
*THE **11** 13:27:51.1, 34°.68N×28°.36E, h28km±25km, ML2.8/3, Error ellipse: s-maj=25.8km s-min=1.2km az=144.0*
*GII **11** 13:27:52.6±0.0, 34°.29N×28°.64E, h10km, Mm3.1/3*
ISC 11 13:27:49.0±2.0, 34°.66N±0°.04×28°.36E±0°.03, h26km±19km, n59, σ1s22/89, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.32**	**313**	PN	**Pn**	**13 28 11.7**	**-0.1**
KARP				SN	**Sn**	**13 28 28.8**	**+0.1**
KARP	**Karpathos**	**1.32**	**313**	P	**Pn**	**13 28 12.3**	**+0.4**
KARP				S	**Sn**	**13 28 28.3**	**-0.4**
	348nm,0.8s						
KARP	**Karpathos**	**1.32**	**313**	P	**Pn**	**13 28 12.4**	**+0.4**
KARP				S	**Sb**	**13 28 30.5**	**+0.7**
KARP				AML	AML	13 28 41.3	
	0.6nm,1.0s						
KARP				AML	AML	13 28 41.3	
	0.6nm,1.0s						
KARP				AML	AML	13 28 43.2	
	0.8nm,0.7s						
KARP				AML	AML	13 28 43.2	
	0.8nm,0.7s						
KARP	**Karpathos**	**1.32**	**313**	P	**Pn**	**13 28 12.2**	**+0.4**
KARP				AML	AML	13 28 43.9	
	comp=N,811μm,0.7s						
KARP				AML	AML	13 28 46.2	
	comp=E,599μm,0.8s						
ARG	**Arkhangelos**	**1.57**	**353**	PN	**Pn**	**13 28 14.6**	**-0.6**
ARG				SN	**Sn**	**13 28 34.9**	**+0.3**
ARG	**Arkhangelos**	**1.57**	**353**	P	**Pn**	**13 28 15.1**	**-0.1**
ARG				S	**Sn**	**13 28 34.6**	**0.0**
	comp=E,240nm,1.0s						
ARG	**Arkhangelos**	**1.57**	**353**	P	**Pn**	**13 28 15.6**	**+0.4**
ARG				S	**Sb**	**13 28 36.5**	**-0.3**
ARG	**Arkhangelos**	**1.57**	**353**	P	**Pn**	**13 28 15.8**	**+0.6**
ARG				AML	AML	13 28 58.2	
	comp=N,592μm,1.0s						
ARG				AML	AML	13 29 05.2	
	comp=E,490μm,0.7s						
KSL	**Kastellorizon**	**1.80**	**34**	P	**Pn**	**13 28 18.4**	**+0.1**
KSL	**Kastellorizon**	**1.80**	**34**	P	**Pn**	**13 28 18.8**	**+0.5**
KSL				S	**Sb**	**13 28 41.8**	**-1.5**
KSL				AML	AML	13 29 11.1	
	comp=E,0.2nm,1.4s						
KSL				AML	AML	13 29 11.1	
	comp=E,0.2nm,1.4s						
KSL				AML	AML	13 29 12.6	
	comp=E,0.2nm,0.7s						
KSL				AML	AML	13 29 12.6	
	comp=E,0.2nm,0.7s						
KSL	**Kastellorizon**	**1.80**	**34**	P	**Pn**	**13 28 18.9**	**+0.6**
ZKR	**Zakros**	**1.82**	**285**	P	**Pn**	**13 28 19.0**	**+0.4**
ZKR				S	**Sn**	**13 28 41.3**	**+0.5**
	comp=E,108nm,0.7s						
ZKR	**Zakros**	**1.82**	**285**	P	**Pn**	**13 28 18.8**	**+0.2**
ZKR	**Zakros**	**1.82**	**285**	P	**Pn**	**13 28 17.7**	**-0.9**
ZKR				AML	AML	13 29 08.7	
	comp=E,305μm,0.9s						
ZKR				AML	AML	13 29 16.9	
	comp=N,107μm,0.8s						
AKAS	**Kas**	**1.87**	**33**	PN	**Pn**	**13 28 19.0**	**-0.5**
AKAS				SN	**Sn**	**13 28 42.9**	**+0.5**
AKAS	**Kas**	**1.87**	**33**	P	**Pn**	**13 28 19.0**	**-0.5**
AKAS				S	**Sn**	**13 28 42.9**	**+0.5**
AKAS				*i* AML	AML	13 28 44.0	
	comp=N,81nm,0.5s						
AKAS				*i* AML	AML	13 28 51.0	
	comp=N,111nm,0.4s						
FETY	**Fethiye**	**2.06**	**16**	PN	**Pn**	**13 28 20.9**	**-1.1**
TURN	**Turunc**	**2.12**	**358**	PN	**Pn**	**13 28 22.3**	**-0.4**
TURN				SN	**Sn**	**13 28 48.6**	**+0.5**
TURN	**Turunc**	**2.12**	**358**	P	**Pn**	**13 28 23.3**	**+0.6**
TURN				S	**Sn**	**13 28 48.8**	**+0.7**
TURN				*i* AML	AML	13 28 51.0	
	comp=N,48nm,0.2s						
TURN				*i* AML	AML	13 28 52.0	
	comp=N,41nm,0.2s						
NIS1	**Nisyros Isl.**	**2.17**	**334**	PN	**Pn**	**13 28 22.9**	**-0.5**
NIS1				SN	**Sn**	**13 28 49.6**	**+0.2**
DALY	**Dalyan (Mula)**	**2.17**	**6**	PN	**Pn**	**13 28 23.1**	**-0.3**
FRMA	**Ierapetra Chan**	**2.19**	**280**	P	**Pn**	**13 28 23.0**	**-0.7**
AKUM	**Antalya-Kumluc**	**2.32**	**44**	P	**Pn**	**13 28 27.1**	**+1.6**
AKUM				S	**Sn**	**13 28 53.8**	**+0.7**
AKUM				*i* AML	AML	13 28 59.0	
	comp=N,20nm,0.3s						
AKUM				*i* AML	AML	13 29 04.0	
	comp=N,20nm,0.7s						
CAME	**Cameli-Denizli**	**2.41**	**18**	PN	**Pn**	**13 28 27.0**	**+0.1**
CAME				SN	**Sn**	**13 28 55.8**	**+0.2**
ELL	**Elmali**	**2.44**	**31**	PN	**Pn**	**13 28 27.2**	**-0.1**
ELL				SN	**Sn**	**13 28 56.6**	**+0.3**
YER	**Yerkesik**	**2.48**	**359**	PN	**Pn**	**13 28 27.5**	**-0.2**
BODT	**Bodrum**	**2.55**	**341**	PN	**Pn**	**13 28 28.8**	**+0.2**
OSC1	**CSNet OBS 1**	**2.68**	**115**	P	**Pn**	**13 28 31.1**	**+0.7**
OSC1				S	**Sn**	**13 29 03.9**	**+1.9**
TAVA	**DENIZLI_Tavas**	**2.84**	**9**	P	**Pn**	**13 28 33.5**	**+0.7**
TAVA				S	**Sn**	**13 29 06.5**	**+0.3**
TAVA				*i* AML	AML	13 29 08.0	
	comp=N,22nm,0.3s						
TAVA				*i* AML	AML	13 29 10.0	
	comp=N,20nm,0.4s						
KORT	**Korkueli**	**2.84**	**34**	PN	**Pn**	**13 28 33.1**	**+0.3**
KORT	**Korkueli**	**2.84**	**34**	P	**Pn**	**13 28 34.6**	**+1.8**
APMY	**Acipayam-Deniz**	**2.91**	**15**	PN	**Pn**	**13 28 33.9**	**+0.2**
IDI	**Anoyia**	**2.92**	**283**	P	**Pn**	**13 28 34.8**	**+1.0**
IDI				S	**Sn**	**13 29 07.4**	**-0.6**
IDI	**Anoyia**	**2.92**	**283**	P	**Pn**	**13 28 34.0**	**+0.3**
IDI				AML	AML	13 29 11.3	
	comp=N,90μm,0.6s						
IDI				AML	AML	13 29 13.5	
	comp=E,94μm,0.7s						
SIVA	**Sivas**	**2.94**	**278**	P	**Pn**	**13 28 34.1**	**+0.1**
AYDN	**Tasoluk**	**3.02**	**353**	P	**Pn**	**13 28 36.0**	**+0.7**
AYDN				*i* AML	AML	13 29 13.0	
	comp=E,26nm,0.4s						
AYDN				*i* AML	AML	13 29 15.0	
	comp=E,29nm,0.5s						
AKMS	**Akamas**	**3.29**	**83**	P	**Pn**	**13 28 39.3**	**+0.5**
AKMS				AML	AML	13 29 19.2	
	comp=E,0.8nm,0.4s						
AKMS				AML	AML	13 29 21.3	
	comp=E,0.6nm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**3.31**	**354**	PN	**Pn**	**13 28 39.3**	**+0.1**
AYDB				SN	**Sn**	**13 29 17.7**	**0.0**
APE	**Apeiranthos**	**3.33**	**317**	PN	**Pn**	**13 28 39.2**	**-0.2**
BRDR	**BURDUR-Merkez**	**3.33**	**24**	P	**Pn**	**13 28 41.7**	**+2.2**
BRDR				S	**Sn**	**13 29 19.5**	**+1.2**
BRDR				*i* AML	AML	13 29 21.0	
	comp=E,21nm,0.4s						
BRDR				*i* AML	AML	13 29 24.0	
	comp=E,20nm,0.6s						
ALFC	**Alefka**	**3.52**	**81**	P	**Pn**	**13 28 42.1**	**+0.1**
ALFC				AML	AML	13 29 23.8	
	comp=E,0.9nm,0.4s						
ALFC				AML	AML	13 29 24.3	
	comp=E,0.8nm,0.3s						
GVD	**Gavdhos**	**3.52**	**274**	P	**Pn**	**13 28 42.5**	**+0.4**
OSC2	**CSNet OBS 4**	**3.61**	**115**	S	**Sn**	**13 29 26.7**	**+1.7**
IMMV	**Iera Moni Meta**	**3.68**	**284**	P	**Pn**	**13 28 45.8**	**+1.6**
SZAC	**Souni**	**3.73**	**87**	P	**Pn**	**13 28 45.8**	**+1.0**
SZAC				S	**Sn**	**13 29 30.6**	**+2.6**
SZAC				AML	AML	13 29 30.6	
	comp=E,0.5nm,0.3s						
SZAC				AML	AML	13 29 30.6	
	comp=E,0.5nm,0.3s						
SZAC				AML	AML	13 29 32.4	
	comp=E,0.4nm,0.3s						
SZAC				AML	AML	13 29 32.4	
	comp=E,0.4nm,0.3s						
ASGA	**Asgata**	**4.03**	**87**	P	**Pn**	**13 28 49.8**	**+0.8**
ASGA				AML	AML	13 29 39.9	
	comp=E,0.5nm,0.5s						
ASGA				AML	AML	13 29 40.3	
	comp=E,1.0nm,0.5s						
USAK	**Uak-Merkez**	**4.09**	**7**	P	**Pn**	**13 28 49.8**	**-0.1**
USAK				S	**Sn**	**13 29 34.4**	**-2.4**
USAK				*i* AML	AML	13 29 36.0	
	comp=E,32nm,1.3s						
USAK				*i* AML	AML	13 29 37.0	
	comp=E,66nm,1.0s						
CSS	**Mathiatis**	**4.10**	**84**	P	**Pn**	**13 28 51.2**	**+1.2**
MVOU	**Mavrovouni**	**4.35**	**84**	P	**Pn**	**13 28 54.6**	**+1.1**
GEM	**Giv'at Ha'Em**	**6.24**	**101**	Pn	**Pn**	**13 29 20.0**	**+0.6**
GEM				Sn	**Sn**	**13 30 29.2**	**-0.7**
SALP	**Salfit**	**6.27**	**112**	Sn	**Sn**	**13 30 29.4**	**-1.3**
KZIT	**Kziot**	**6.31**	**125**	Pn	**Pn**	**13 29 20.2**	**-0.2**
KZIT				Sn	**Sn**	**13 30 28.7**	**-2.9**
DSI	**Dead Sea**	**6.65**	**116**	Pn	**Pn**	**13 29 26.3**	**+1.3**
MDBI	**Mazsada**	**6.76**	**118**	Pn	**Pn**	**13 29 26.9**	**+0.4**
KRMI	**Paran Flat**	**7.03**	**128**	Pn	**Pn**	**13 29 31.4**	**+1.1**
KRMI				Sn	**Sn**	**13 30 46.2**	**-3.2**
ZFRI	**Zfri**	**7.06**	**124**	Pn	**Pn**	**13 29 30.9**	**+0.3**
ZFRI				Sn	**Sn**	**13 30 46.4**	**-3.6**
PRNI	**Paran**	**7.07**	**126**	Pn	**Pn**	**13 29 31.0**	**+0.3**
PRNI				Sn	**Sn**	**13 30 47.4**	**-2.8**
HRFI	**Mount Harif**	**7.29**	**127**	Pn	**Pn**	**13 29 34.2**	**+0.4**
HRFI				Sn	**Sn**	**13 30 52.4**	**-3.3**
EIL	**Elat**	**7.48**	**130**	Pn	**Pn**	**13 29 36.3**	**-0.1**
EIL				Sn	**Sn**	**13 30 56.2**	**-4.2**

*IDC **11** 13:31:45.6±2.1, 24°.40S×178°.71W, h0km, mb4.4/4, mbtmp4.4/4, Error ellipse: s-maj=54.6km s-min=33.8km az=31.0*
*NEIC **11** 13:32:39.3±1.1, 25°.5S±0°.2×180°.0W±0°.2, h460km±6km, mb4.1/14, Error ellipse: s-maj=30.1km s-min=25.8km az=199.0*
ISC 11 13:32:39.6±2.0, 25°.6S±0°.3×179°.9E±0°.2, h450km, n22, σ0s70/20, mb4.0/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**25.37**	**253**	P	**P**	**13 37 29.5**	**0.0**
ARMA				IAmb	IAmb	13 38 03.5	
	comp=Z,20nm,1.4s						
TOO	**Toolangi**	**31.46**	**239**	P	**P**	**13 38 23.2**	**+0.5**
STKA	**Stephens Creek**	**34.02**	**250**	P	**P**	**13 38 45.3**	**+0.7**
	comp=Z,2.5nm,0.4s,baz=99,slow=11,SNR=13						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**34.02**	**250**	P	**P**	**13 38 45.2**	**+0.7**
COEN	**Coen**	**36.32**	**282**	P	**P**	**13 39 04.7**	**+0.6**
COEN				IAmb	IAmb	13 39 15.9	
	comp=Z,12nm,1.2s						
BBOO	**Buckleboo**	**38.71**	**249**	P	**P**	**13 39 23.0**	**-0.5**
AS31	**Alice Springs**	**41.68**	**263**	P	**P**	**13 39 47.3**	**-0.4**
AS31				IAmb	IAmb	13 39 48.4	
	comp=Z,2.2nm,0.4s						
ASAR	**Alice Springs**	**41.68**	**263**	P	**P**	**13 39 47.6**	**0.0**
	comp=Z,2.3nm,0.4s,baz=92,slow=7.4,SNR=107						
	comp=Z,2.3nm,0.4s						
ASAR	**Alice Springs**	**41.68**	**263**	P	**P**	**13 39 46.7**	**-0.9**
WR0	**Warramunga Arr**	**42.03**	**268**	P	**P**	**13 39 49.6**	**-0.8**
WR0				IAmb	IAmb	13 39 50.4	
	comp=Z,3.3nm,0.5s						
WB2	**Warramunga Arr**	**42.21**	**268**	P	**P**	**13 39 51.1**	**-0.7**
WB2				IAmb	IAmb	13 39 51.8	
	comp=Z,6.8nm,0.4s						
WRA	**Warramunga Arr**	**42.22**	**268**	P	**P**	**13 39 51.5**	**-0.5**
	comp=Z,3.7nm,0.4s,baz=103,slow=7.6,SNR=129						
	comp=Z,3.7nm,0.4s						
WB0	**Warramunga Arr**	**42.22**	**268**	P	**P**	**13 39 51.3**	**-0.7**
WB0				IAmb	IAmb	13 39 51.9	
	comp=Z,5.2nm,0.7s						
KNRA	**Kununurra**	**48.60**	**271**	P	**P**	**13 40 40.9**	**-0.2**
CASY	**Casey**	**58.53**	**206**	P	**P**	**13 41 50.6**	**-0.6**
QSPA	**South Pole Qui**	**64.47**	**180**	P	**P**	**13 42 31.7**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=332,slow=0.2,SNR=20						
	comp=Z,2.1nm,0.6s						
QSPA	**South Pole Qui**	**64.47**	**180**	P	**P**	**13 42 31.3**	**+0.9**
QSPA				IAmb	IAmb	13 42 34.4	
	comp=Z,6.6nm,1.4s						
BELA	**Belgrano 2**	**74.75**	**173**	P	**P**	**13 43 31.6**	**-0.3**
SNAA	**Sanae**	**82.96**	**179**	P	**P**	**13 44 15.1**	**-0.9**
SNAA				IAmb	IAmb	13 44 53.1	
	comp=Z,4.5nm,1.5s						
NB2	**NORSAR Subarra**	**143.75**	**351**	PKP	PKPab	13 51 19.2	-1.4
	comp=Z,0.7nm,0.6s,baz=19,slow=3.7						
NOA	**NORSAR Array B**	**143.75**	**351**	PKP	PKPab	13 51 19.3	-1.3
	comp=Z,0.8nm,0.6s,baz=22,slow=3.8,SNR=5.1						
AKASG	**Malin Array Be**	**146.34**	**326**	PKPbc	**PKPdf**	**13 51 27.0**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=54,slow=2.6,SNR=1.6						

*SOME **11** 13:34:01.9, 41°.00N×78°.32E, h0km*
*NNC **11** 13:34:03.5±0.8, 40°.96N×78°.27E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=5.2km s-min=4.1km az=1.0*
ISC 11 13:34:05.7±2.6, 41°.1N±0°.1×78°.24E±0°.05, h10km, n29, σ0s83/44, 2C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**2.00**	**4**	*e*P	**Pb**	**13 34 42.2**	**-0.1**
	11nm,0.5s						
SATY				*e*S	**Sg**	**13 35 11.8**	**+1.8**
	42nm,0.5s						
SATY	**Saty**	**2.00**	**4**	Pg	**Pb**	**13 34 42.2**	**-0.1**
	11nm,0.5s						
SATY				Lg	Lg	13 35 11.8	
	42nm,0.5s						
ZHN	**Zhinishke**	**2.11**	**4**	*e*P	**Pb**	**13 34 44.1**	**0.0**
	18nm,0.2s						
ZHN				*e*S	**Sg**	**13 35 14.4**	**+0.9**
	60nm,0.3s						
ZHN	**Zhinishke**	**2.11**	**4**	Pg	**Pb**	**13 34 44.1**	**0.0**
	18nm,0.2s						
ZHN				Lg	Lg	13 35 14.4	
	60nm,0.3s						
UZB	**Uzynbulak**	**2.16**	**15**	*e*P	**Pb**	**13 34 44.6**	**-0.5**
	1.2nm,0.2s						
UZB				*e*S	**Sg**	**13 35 15.3**	**0.0**
	16nm,0.5s						
UZB	**Uzynbulak**	**2.16**	**15**	Pg	**Pb**	**13 34 44.6**	**-0.5**
	1.2nm,0.2s						
UZB				Lg	Lg	13 35 15.3	
	16nm,0.5s						
MDOK	**Medeo**	**2.28**	**338**	*e*P	**Pb**	**13 34 47.0**	**-0.1**
	12nm,0.2s						
MDOK				*e*S	**Sg**	**13 35 19.1**	**+0.3**
	27nm,0.7s						
MDOK	**Medeo**	**2.28**	**338**	Pg	**Pb**	**13 34 46.9**	**-0.1**
	6.1nm,0.4s						
MDOK				Pg	**Pb**	**13 34 47.0**	**-0.1**
	12nm,0.2s						
MDOK				Lg	Lg	13 35 19.1	
	27nm,0.7s						
MDOK				Lg	Lg	13 35 20.1	
	42nm,0.9s						
SHLS	**Shalkode**	**2.28**	**23**	*e*P	**Pg**	**13 34 48.2**	**-1.3**
	5.6nm,0.3s						
SHLS				*e*S	**Sg**	**13 35 21.5**	**+2.4**
	21nm,0.3s						
SHLS	**Shalkode**	**2.28**	**23**	Pg	**Pg**	**13 34 48.2**	**-1.3**
	5.6nm,0.3s						
SHLS				Lg	Lg	13 35 21.5	
	21nm,0.3s						
KOTS	**Kotyrbulak**	**2.32**	**339**	*e*P	**Pb**	**13 34 48.1**	**+0.2**
	22nm,0.3s						
KOTS				*e*S	**Sg**	**13 35 21.2**	**+0.8**
	39nm,0.2s						
KOTS	**Kotyrbulak**	**2.32**	**339**	Pg	**Pb**	**13 34 48.1**	**+0.2**
	22nm,0.3s						
KOTS				Lg	Lg	13 35 21.2	
	39nm,0.2s						
KURS	**Kuram**	**2.42**	**359**	*e*P	**Pb**	**13 34 49.7**	**+0.2**
	16nm,1.1s						
KURS				*e*S	**Sg**	**13 35 24.7**	**+1.1**
	18nm,0.7s						
KURS	**Kuram**	**2.42**	**359**	Pg	**Pb**	**13 34 49

KUU				Lg	Lg	13 35 46.1	
	17nm,0.8s						
KRBS	**Karabastau**	**3.24**	**325**	*eP*	**Pb**	**13 35 03.7**	**+0.3**
	1.6nm,0.2s						
KRBS				*eS*	**Sg**	**13 35 48.3**	**-1.6**
	8.2nm,0.4s						
KRBS	**Karabastau**	**3.24**	**325**	Pg	**Pb**	**13 35 03.7**	**+0.3**
	1.6nm,0.2s						
KRBS				Lg	Lg	13 35 48.3	
	8.2nm,0.4s						
DJR	**Jarkent**	**3.46**	**19**	*eP*	**Pb**	**13 35 07.8**	**+0.6**
	1.7nm,0.3s						
DJR				*eS*	**Sg**	**13 35 54.9**	**-2.0**
	15nm,0.4s						
DJR	**Jarkent**	**3.46**	**19**	Pg	**Pb**	**13 35 07.8**	**+0.6**
	1.7nm,0.3s						
DJR				Lg	Lg	13 35 54.9	
	15nm,0.4s						

NIED ***11*** *13:50:28.9, 38°.69N×142°.26E, h39km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.81; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.99; $M_{r\theta}$3.02; $M_{\theta\phi}$-1.17; $M_{\phi r}$3.21; Fault plane solution: $M_0$4.93000×10^{14} NP1: ϕ_s179.00000°, δ16.00000°, λ48.00000°. NP2: ϕ_s42.00000°, δ78.00000°, λ101.00000°.*
JMA ***11*** *13:50:28.9±0.1, 38°.7N±0°.2×142°.3E±0°.6, h39km±1km, MV3.6/40, E OFF MIYAGI PREF*
IDC ***11*** *13:50:44.1±3.3, 38°.65N×140°.84E, h114km±28km, mb3.2/5, mbtmp3.5/7, MS2.7/5, Error ellipse: s-maj=38.5km s-min=20.9km az=79.0*
ISC 11 13:50:29.9±1.7, 38°.75N±0°.04×142°.13E±0°.09, h22km±11km, n28, σ1§30/24, mb3.6/5, 14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.49**	**312**	⇓*iP*	**Pn**	**13 50 41.0**	**-0.5**
OFUJ				⇓S	**Sn**	**13 50 49.5**	**+0.2**
JKMT	**Kesennumamotoy**	**0.52**	**277**	⇓*iP*	**Pn**	**13 50 41.3**	**-0.6**
JKMT				⇓S	**Sn**	**13 50 49.8**	**-0.3**
JIO	**Ouri**	**0.68**	**244**	⇓P	**Pb**	**13 50 42.8**	**-0.3**
JIO				⇓S	**Sb**	**13 50 52.5**	**+0.3**
JIKH	**Ishinomakikobu**	**0.69**	**230**	⇓*iP*	**Pb**	**13 50 42.6**	**-0.6**
JIKH				⇓*iS*	**Sb**	**13 50 52.1**	**-0.1**
JMK	**Ichinoseki**	**0.74**	**286**	⇓*iP*	**Pb**	**13 50 44.6**	**+0.6**
JMK				⇓S	**Sn**	**13 50 55.8**	**+0.3**
JOM	**Ohasama**	**0.97**	**318**	⇓*iP*	**Pb**	**13 50 48.1**	**+0.1**
JOM				⇓S	**Sb**	**13 51 02.1**	**+1.6**
JTH	**Tanohata**	**1.20**	**350**	P	**Pn**	**13 50 50.4**	**-0.9**
JTH				*eS*	**Sb**	**13 51 07.0**	**-0.1**
JOU	**Okura**	**1.22**	**252**	*i* P	**Pn**	**13 50 51.2**	**-0.4**
JRG	**Rokugo**	**1.33**	**299**	⇓P	**Pb**	**13 50 53.4**	**-0.7**
JMM	**Marumori**	**1.38**	**230**	*i* P	**Pn**	**13 50 52.2**	**-1.5**
JMM				*eS*	**Sn**	**13 51 09.4**	**-1.8**
JYK	**Kaneyama**	**1.40**	**277**	⇓P	**Pn**	**13 50 54.0**	**+0.1**
MJAR	**Matsushiro Arr**	**3.82**	**236**	P	**Pn**	**13 51 29.1**	**+1.8**
	3.3nm,0.6s,baz=39,slow=12,SNR=12						
MJAR				LR	LR	13 53 05.4	
	comp=Z,64nm,19.8s,baz=40,slow=48						
USRK	**Ussuriysk Ar.**	**9.36**	**309**	P	Pn	13 52 47.6	+4.3
	4.6nm,0.8s,baz=123,slow=16,SNR=4.7						
KSRS	**Korea Array**	**11.28**	**268**	LR	LR	13 56 48.0	
	comp=Z,30nm,19.8s,baz=65,slow=35						
KLR	**Kul'dur**	**12.85**	**328**	LR	LR	13 58 26.6	
	comp=Z,51nm,18.0s,baz=134,slow=37						
GUMO	**Guam**	**25.18**	**174**	LR	LR	14 09 37.6	
	comp=Z,10nm,18.0s,baz=108,slow=45						
H11N2	**WAKE ISLAND Hy**	**28.59**	**124**	T	T	14 26 49.5	
	baz=318,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**28.60**	**125**	T	T	14 26 48.5	
	baz=318,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	**28.61**	**124**	T	T	14 26 49.1	
	baz=318,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	14 27 42.1	
	baz=318,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	14 27 45.9	
	baz=318,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	14 27 38.6	
	baz=318,slow=76,SNR=6.5						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**13 58 10.4**	**-2.1**
	1.2nm,0.5s,baz=92,slow=8.1,SNR=6.0						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**43.71**	**301**	P	**P**	**13 58 31.4**	**-1.7**
	0.5nm,0.6s,baz=87,slow=11,SNR=5.1						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**45.41**	**307**	LR	LR	14 17 58.1	
	comp=Z,34nm,18.6s,baz=192,slow=37						
ILAR	**Eielson Array**	**47.74**	**33**	P	P	13 59 13.7	+9.0
	0.3nm,0.6s,baz=264,slow=6.1,SNR=3.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**58.84**	**189**	P	**P**	**14 00 29.2**	**+2.5**
	0.4nm,0.8s,baz=9.9,slow=6.9,SNR=2.4						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**62.57**	**189**	P	**P**	**14 00 54.5**	**+2.4**
	0.5nm,1.1s,baz=12,slow=9.7,SNR=2.3						
	0.5nm,1.1s						

KRNET ***11*** *13:51:04.9±0.1, 41°.00N×78°.36E, mb2.2*
SOME ***11*** *13:51:05.6, 40°.88N×78°.25E, h10km*
NNC ***11*** *13:51:06.5±1.8, 40°.92N×78°.28E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=11.8km s-min=8.4km az=168.0*
ISC 11 13:51:04.7±2.8, 40°.9N±0°.1×78°.29E±0°.06, h9km±20km, n19, σ1§30/31, 3C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.88**	**336**	⇓*eP*	**Pg**	**13 51 21.0**	**-0.7**
	baz=30						
TARG				⇓*iS*	**Sg**	**13 51 32.8**	**-0.4**
	baz=30						
NRN	**Naryn**	**1.80**	**287**	⇑*iP*	**Pb**	**13 51 39.2**	**+1.2**
	baz=84						
NRN				⇑*eS*	**Sg**	**13 52 04.3**	**+1.8**
	baz=84						
ULHL	**Ulahol**	**2.02**	**311**	⇓*eP*	**Pb**	**13 51 42.1**	**+0.3**
	baz=9.0						
ULHL				⇓*eS*	**Sg**	**13 52 09.0**	**-0.7**
	baz=9.0						
SATY	**Saty**	**2.13**	**2**	*eP*	**Pg**	**13 51 46.7**	**+1.1**
	1.8nm,0.2s						
SATY				*eS*	**Sg**	**13 52 16.1**	**+2.8**
	5.4nm,0.3s						
SATY	**Saty**	**2.13**	**2**	Pg	**Pg**	**13 51 46.7**	**+1.1**
	1.8nm,0.2s						
SATY				Lg	Lg	13 52 16.1	
	5.4nm,0.3s						
UZB	**Uzynbulak**	**2.29**	**14**	*eP*	**Pg**	**13 51 48.8**	**+0.3**
	1.2nm,0.0s						
UZB				*eS*	**Sg**	**13 52 19.6**	**+1.5**
	3.5nm,0.8s						
UZB	**Uzynbulak**	**2.29**	**14**	Pg	**Pg**	**13 51 48.8**	**+0.3**
	1.2nm,0.0s						
UZB				Lg	Lg	13 52 19.6	
	3.5nm,0.8s						
BOOM	**Boomskoye usch**	**2.35**	**312**	⇓*iP*	**Pb**	**13 51 46.5**	**-0.8**
	baz=10.0						
BOOM				⇓*iS*	**Sb**	**13 52 16.7**	**+0.1**
	baz=10.0						
MDOK	**Medeo**	**2.42**	**338**	*eP*	**Pg**	**13 51 50.7**	**-0.3**
	1.9nm,0.3s						
MDOK				*eS*	**Sg**	**13 52 23.7**	**+1.3**
	3.9nm,0.6s						
MDOK	**Medeo**	**2.42**	**338**	Pg	**Pg**	**13 51 50.1**	**-1.0**
	1.0nm,0.4s						
MDOK				Pg	**Pg**	**13 51 50.7**	**-0.3**
	1.9nm,0.3s						
MDOK				⇓Lg	Lg	13 52 23.2	
	3.1nm,0.6s						
MDOK				Lg	Lg	13 52 23.7	
	3.9nm,0.6s						
KPKS	**Kokpek**	**2.56**	**7**	*eP*	**Pg**	**13 51 53.4**	**-0.2**
	1.5nm,0.1s						
KPKS				*eS*	**Sg**	**13 52 27.9**	**+1.1**
	9.6nm,0.4s						
KPKS	**Kokpek**	**2.56**	**7**	Pg	**Pg**	**13 51 53.4**	**-0.2**
	1.5nm,0.1s						
KPKS				Lg	Lg	13 52 27.9	
	9.6nm,0.4s						
PDGK	**Podgornoye**	**2.56**	**20**	⇑Pg	**Pg**	**13 51 52.7**	**-1.1**
	1.9nm,0.9s						
PDGK				⇓Lg	Lg	13 52 26.2	
	5.3nm,0.5s						
KST	**Kastek**	**2.73**	**321**	*eP*	**Pg**	**13 51 56.8**	**-0.2**
	1.0nm,0.3s						
KST				*eS*	**Sg**	**13 52 33.9**	**+1.4**
	4.6nm,0.4s						
KST	**Kastek**	**2.73**	**321**	Pg	**Pg**	**13 51 56.8**	**-0.2**
	1.0nm,0.3s						
KST				Lg	Lg	13 52 33.9	
	4.6nm,0.4s						
KRBS	**Karabastau**	**3.38**	**326**	*eP*	**Pg**	**13 52 07.4**	**-2.0**
	0.5nm,0.4s						
KRBS				*eS*	**Sg**	**13 52 51.9**	**-1.3**
	1.9nm,0.4s						
KRBS	**Karabastau**	**3.38**	**326**	Pg	**Pg**	**13 52 07.4**	**-2.0**
	0.5nm,0.4s						
KRBS				Lg	Lg	13 52 51.9	
	1.9nm,0.4s						
DJR	**Jarkent**	**3.58**	**18**	*eP*	**Pg**	**13 52 11.3**	**-2.0**
	0.7nm,0.1s						
DJR				*eS*	**Sg**	**13 52 58.4**	**-1.3**
	3.0nm,0.4s						
DJR	**Jarkent**	**3.58**	**18**	Pg	**Pg**	**13 52 11.3**	**-2.0**
	0.7nm,0.1s						
DJR				Lg	Lg	13 52 58.4	
	3.0nm,0.4s						

IDC ***11*** *13:54:25.3±10.0, 17°.66S×179°.97W, h568km±39km, mb3.4/5, mbtmp4.4/5, Error ellipse: s-maj=226.6km s-min=55.7km az=91.0*
NEIC ***11*** *13:54:26.9±1.3, 17°.9S±0°.3×179°.8E±0°.1, h562km±7km, mb4.4/16, Error ellipse: s-maj=37.3km s-min=16.2km az=176.0*
ISC 11 13:54:25.9±1.1, 17°.9S±0°.3×179°.8E±0°.2, h550km, n23, σ1§25/23, mb4.3/12, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.66**	**276**	P	**P**	**13 55 36.3**	**+2.0**
	20nm,0.7s,baz=122,slow=12,SNR=18						
MSVF	**Nonsavu**	**1.66**	**276**	P	**P**	**13 55 36.1**	**+1.8**
ARMA	**Armidale**	**28.45**	**239**	P	**P**	**13 59 38.0**	**+1.0**
ARMA				IAmb	IAmb	14 00 07.6	
	comp=Z,18nm,1.1s						
CTA	**Charters Tower**	**31.75**	**261**	P	**P**	**14 00 06.9**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=75,slow=12,SNR=1.6						
	comp=Z,1.0nm,0.5s						
CTAO	**Charters Tower**	**31.75**	**261**	P	**P**	**14 00 07.0**	**+1.5**
CTAO				IAmb	IAmb	14 00 34.7	
	comp=Z,6.5nm,1.2s						
COEN	**Coen**	**35.38**	**271**	P	**P**	**14 00 38.0**	**+1.9**
COEN				IAmb	IAmb	14 00 39.0	
	comp=Z,23nm,1.5s						
STKA	**Stephens Creek**	**37.12**	**241**	P	**P**	**14 00 51.2**	**+1.0**
	comp=Z,3.1nm,0.5s,baz=78,slow=9.3,SNR=11						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**37.12**	**241**	P	**P**	**14 00 51.1**	**+0.9**
BBOO	**Buckleboo**	**41.89**	**241**	P	**P**	**14 01 28.2**	**-0.4**
WR0	**Warramunga Arr**	**42.74**	**260**	P	**P**	**14 01 35.6**	**+0.1**
WR0				IAmb	IAmb	14 02 01.6	
	comp=Z,6.7nm,0.5s						
WB0	**Warramunga Arr**	**42.90**	**260**	P	**P**	**14 01 36.4**	**-0.3**
WB0				IAmb	IAmb	14 01 58.9	
	comp=Z,5.7nm,0.6s						
WB2	**Warramunga Arr**	**42.92**	**260**	P	**P**	**14 01 36.5**	**-0.4**
WB2				IAmb	IAmb	14 02 00.4	
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**42.94**	**260**	P	**P**	**14 01 36.6**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=91,slow=8.1,SNR=46						
	comp=Z,1.2nm,0.4s						
AS31	**Alice Springs**	**43.13**	**254**	P	**P**	**14 01 38.5**	**+0.1**
ASAR	**Alice Springs**	**43.13**	**254**	P	**P**	**14 01 38.6**	**+0.2**
	comp=Z,13nm,0.6s,baz=88,slow=7.9,SNR=336						
	comp=Z,13nm,0.6s						
FORT	**Forrest**	**48.44**	**245**	P	**P**	**14 02 17.1**	**-1.6**
SIJI	**Sorong**	**50.57**	**284**	P	**P**	**14 02 34.1**	**-0.5**
	comp=Z,4.7nm,0.5s,baz=103,slow=9.1,SNR=4.3						
	comp=Z,4.7nm,0.5s						
SOEI	**Soe**	**54.35**	**271**	P	**P**	**14 03 00.5**	**-1.2**
PSA00	**Pilbara Seismi**	**56.24**	**256**	P	**P**	**14 03 12.8**	**-1.9**
MBWA	**Marble Bar**	**56.40**	**256**	P	**P**	**14 03 14.0**	**-1.8**
MBWA				IAmb	IAmb	14 03 46.9	
	comp=Z,18nm,1.5s						
GIRL	**Giralia**	**61.24**	**254**	P	**P**	**14 03 46.9**	**-1.4**
319A	**Douglas**	**83.83**	**54**	P	**P**	**14 05 57.8**	**-0.5**
319A				IAmb	IAmb	14 05 59.2	
	comp=Z,7.2nm,0.7s						
PMSA	**Palmer Station**	**84.46**	**157**	P	**P**	**14 06 00.8**	**+0.3**

NEIC ***11*** *14:26:20.9±1.5, 19°.5S±0°.2×177°.6W±0°.2, h587km±20km, mb4.3/10, Error ellipse: s-maj=29.0km s-min=21.9km az=74.0*
IDC ***11*** *14:26:24.0±3.6, 19°.52S×178°.08W, h597km±25km, mb3.0/2, mbtmp3.9/3, Error ellipse: s-maj=126.2km s-min=28.2km az=156.0*
ISC 11 14:26:21.5±0.9, 19°.5S±0°.1×177°.7W±0°.1, h600km, n18, σ1§01/20, mb4.0/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**293**	P	**P**	**14 27 50.2**	**+0.2**
	9.2nm,0.6s,baz=281,slow=23,SNR=18						
MSVF	**Nonsavu**	**4.41**	**293**	P	**P**	**14 27 49.9**	**-0.1**
AFI	**Afiamalu**	**7.92**	**46**	P	**P**	**14 28 18.8**	**-1.4**
BKZ	**Black Stump Fm**	**20.25**	**193**	P	**P**	**14 30 16.4**	**-1.0**
BKZ				IAmb	IAmb	14 30 23.9	
	comp=Z,18nm,1.4s						
TARA	**Tarawa**	**22.67**	**335**	P	**P**	**14 30 39.8**	**+0.5**
CMWZ	**Cape Campbell**	**23.24**	**196**	P	**P**	**14 30 45.0**	**+1.0**
WHZ	**Wether Hill Ro**	**28.89**	**201**	P	**P**	**14 31 32.8**	**-0.6**
CTAO	**Charters Tower**	**33.91**	**263**	P	**P**	**14 32 16.5**	**+0.1**
CTAO				IAmb	IAmb	14 32 44.2	
	comp=Z,14nm,1.5s						
COEN	**Coen**	**37.83**	**272**	P	**P**	**14 32 49.7**	**+0.8**
COEN				IAmb	IAmb	14 33 31.6	
	comp=Z,17nm,1.5s						
WB0	**Warramunga Arr**	**45.02**	**261**	P	**P**	**14 33 44.6**	**-0.8**
WB0				IAmb	IAmb	14 34 27.7	
	comp=Z,7.4nm,1.4s						
WB2	**Warramunga Arr**	**45.04**	**261**	P	**P**	**14 33 45.0**	**-0.4**
WB2				IAmb	IAmb	14 33 45.1	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**45.05**	**261**	P	**P**	**14 33 44.8**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.6,SNR=38						
	comp=Z,0.6nm,0.3s						
AS31	**Alice Springs**	**45.05**	**256**	P	**P**	**14 33 45.2**	**-0.4**
ASAR	**Alice Springs**	**45.05**	**256**	P	**P**	**14 33 45.5**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=88,slow=8.2,SNR=55						
ASAR				PcP	**PcP**	**14 35 14.4**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=108,slow=3.6,SNR=5.3						
ASAR				S	**S**	**14 39 40.4**	**-1.7**
	comp=Z,0.6nm,0.9s,baz=95,slow=14,SNR=5.5						
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**45.05**	**256**	P	**P**	**14 33 44.7**	**-0.8**
MTN	**Manton Dam**	**49.47**	**270**	P	**P**	**14 34 18.2**	**-0.4**
MTN				IAmb	IAmb	14 34 57.4	
	comp=Z,31nm,1.5s						
CASY	**Casey**	**65.01**	**205**	P	**P**	**14 36 04.8**	**+1.6**
GERES	**GERESS Array B**	**149.30**	**345**	PKPbc	**PKiKP**	**14 45 06.0**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=73,slow=3.3,SNR=3.6						

IDC ***11*** *14:57:02.4±9.2, 21°.20S×68°.19W, h114km±69km, mb3.2/1, mbtmp3.4/2, Error ellipse: s-maj=137.5km s-min=70.8km az=83.0*
GUC ***11*** *14:57:02.8±0.7, 21°.11S×68°.62W, h129km±5km, ML3.6*
ISC 11 14:57:02.7±1.1, 21°.11S±0°.04×68°.73W±0°.10, h133km±10km, n16, σ0§41/30, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.71**	**275**	*eP*	**Pn**	**14 57 23.1**	**-0.5**
PB01				*i* S	**Sn**	**14 57 39.0**	**-0.3**
PB01				IAML		14 57 40.7	
	comp=N,2μm,0.2s						
PB09	**IPOC Station P**	**0.83**	**215**	*eP*	**Pn**	**14 57 24.8**	**+0.1**
PB09				*i* S	**Sn**	**14 57 42.0**	**+0.6**
PB09				IAML		14 57 45.2	
	comp=N,754nm,0.7s						
PB08	**IPOC Station P**	**1.04**	**338**	*eP*	**Pn**	**14 57 26.6**	**-0.2**
PB08				*i* S	**Sn**	**14 57 44.7**	**-0.1**
PB08				IAML		14 57 46.5	
	comp=E,734nm,0.2s						
PB02	**IPOC Station P**	**1.11**	**259**	*eP*	**Pn**	**14 57 27.3**	**+0.3**
PB02				*i* S	**Sn**	**14 57 45.8**	**+0.3**
PB07	**IPOC Station P**	**1.24**	**240**	*eP*	**Pn**	**14 57 28.6**	**+0.2**
PB07				*i* S	**Sn**	**14 57 48.4**	**+0.4**
PB07				IAML		14 57 51.0	
	comp=E,1μm,0.3s						
PATCX	**Punta Patache**	**1.36**	**282**	*eP*	**Pn**	**14 57 30.0**	**+0.4**
PATCX				*i* S	**Sn**	**14 57 50.5**	**+0.5**
PATCX				IAML		14 57 52.6	
	comp=N,1μm,0.2s						
HMBC	**Humberstone**	**1.36**	**307**	*eP*	**Pn**	**14 57 29.4**	**-0.3**
HMBC				*i* S	**Sn**	**14 57 50.2**	**+0.1**
TA01	**Diego Aracena**	**1.46**	**291**	*eP*	**Pn**	**14 57 30.6**	**0.0**
TA01				*i* S	**Sn**	**14 57 52.2**	**+0.4**
TA01				IAML		14 57 54.8	
	comp=N,738nm,0.3s						
GO01	**Chusmiza**	**1.50**	**343**	*eP*	**Pn**	**14 57 31.2**	**-0.3**
GO01				*i* S	**Sn**	**14 57 54.0**	**+0.6**
TA02	**Huaiquique**	**1.55**	**302**	*eP*	**Pn**	**14 57 31.1**	**-0.5**
TA02				*i* S	**Sn**	**14 57 53.5**	**-0.1**
TA02				IAML		14 57 56.1	
	comp=N,1μm,0.2s						
PB06	**IPOC Station P**	**1.77**	**206**	*eP*	**Pn**	**14 57 34.3**	**0.0**
PB06				*i* S	**Sn**	**14 57 58.5**	**0.0**
PB06				IAML		14 57 59.1	
	comp=E,448nm,0.4s						
PB04	**IPOC Station P**	**1.80**	**227**	*eP*	**Pn**	**14 57 34.9**	**+0.3**
PB04				*i* S	**Sn**	**14 57 59.1**	**+0.1**
PB04				IAML		14 58 08.4	
	comp=E,284nm,0.3s						
PB15	**IPOC Station P**	**2.20**	**198**	*eP*	**Pn**	**14 57 39.6**	**+0.1**
PB15				*i* S	**Sn**	**14 58 07.9**	**+0.1**
LPAZ	**La Paz**	**4.83**	**7**	P	**Pn**	**14 58 14.5**	**+0.4**
	comp=E,1.9nm,0.5s,baz=179,slow=6.0,SNR=8.0						
LPAZ				S	**Sn**	**14 59 10.7**	**+1.1**
	comp=E,1.2nm,0.4s,baz=241,slow=2.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**77.07**	**70**	P	**P**	**15 08 41.1**	**-0.7**
	comp=E,0.3nm,0.4s,baz=258,slow=5.6,SNR=2.1						
	comp=E,0.3nm,0.4s						
MKAR	**Makanchi Array**	**145.22**	**36**	PKPbc	**PKPab**	**15 16 24.9**	**+0.2**
	comp=E,0.3nm,0.5s,baz=316,slow=4.0,SNR=3.8						

NOU ***11*** *14:58:34.4, 37°.25S×179°.34E, h124km, MLv4.0/7, Off E. Coast of N. Island, N.Z.*
WEL ***11*** *14:58:36.0±1.4, 37°.5±5°.×17°.9E±°., h13km±6km, M3.3/24, ML3.5/28, MLv3.3/24, Error ellipse: s-maj=0.0km s-min=0.0km az=83.6*
ISC 11 14:58:33.1±2.8, 37°.15S±0°.07×179°.2E±0°.1, h7km±12km, n56, σ1§04/63, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.79**	**238**	P	**Pb**	**14 58 49.2**	**+0.1**
MXZ				S	**Sg**	**14 58 57.1**	**-1.4**
MXZ	**Matakaoa Point**	**0.79**	**238**	P	**Sg**	**14 58 56.2**	**-2.3**
WMGZ	**Waiomatatini S**	**0.89**	**221**	P	**Pn**	**14 58 53.2**	**+1.3**
WMGZ				S	**Sn**	**14 59 04.8**	**-0.3**
PKGZ	**Pakihiroa**	**1.13**	**229**	P	**Pn**	**14 58 55.5**	**+0.2**
PKGZ				S	**Sb**	**14 59 10.3**	**+0.5**
PUZ	**Puketiti**	**1.16**	**217**	P	**Pn**	**14 58 57.1**	**+1.4**
PUZ				S	**Sb**	**14 59 11.6**	**+0.9**
HAZ	**Te Kaha**	**1.25**	**241**	P	**Pn**	**14 58 56.1**	**-0.8**
HAZ				S	**Sg**	**14 59 13.5**	**+0.3**
TWGZ	**Tauwhareparae**	**1.38**	**222**	P	**Pg**	**14 59 00.6**	**+1.0**
TWGZ				S	**Sg**	**14 59 18.4**	**+0.8**
RUGZ	**Raukumara Rang**	**1.43**	**235**	P	**Pb**	**14 59 00.3**	**+0.3**
CNGZ	**Carnagh Statio**	**1.53**	**209**	P	**Pg**	**14 59 02.8**	**+0.4**
TKGZ	**Te Karaka**	**1.65**	**218**	P	**Pb**	**14 59 03.6**	**-0.2**
TKGZ				S	**Sn**	**14 59 23.1**	**-0.8**
MWZ	**Matawai**	**1.75**	**227**	P	**Pb**	**14 59 05.0**	**-0.5**
RIGZ	**Rimuhau**	**1.90**	**215**	P	**Pn**	**14 59 07.0**	**+1.1**
RAGZ	**Rawiri**	**1.92**	**225**	P	**Pb**	**14 59 07.7**	**-0.8**
URZ	**Urewera**	**1.96**	**235**	P	**Pn**	**14 59 07.7**	**+1.1**
URZ	**Urewera**	**1.96**	**235**	P	**Pb**	**14 59 08.0**	**-1.1**
SNGZ	**Shannon Statio**	**2.17**	**221**	P	**Pn**	**14 59 10.6**	**+1.0**
OPRZ	**Ohinepanea**	**2.18**	**251**	P	**Pn**	**14 59 10.2**	**+0.5**
KNZ	**Kokohu**	**2.20**	**212**	P	**Pn**	**14 59 10.1**	**+0.2**
MHGZ	**Mahia Peninsul**	**2.23**	**206**	P	**Pn**	**14 59 11.5**	**+1.1**
MUGZ	**Murupara**	**2.31**	**234**	P	**Pn**	**14 59 12.1**	**+0.7**
TGRZ	**Tauranga**	**2.37**	**255**	P	**Pn**	**14 59 13.1**	**+0.7**
RAHZ	**Arahi**	**2.40**	**222**	P	**Pn**	**14 59 13.8**	**+1.0**
RRRZ	**Republican Roa**	**2.41**	**240**	P	**Pn**	**14 59 14.0**	**+1.2**
WHHZ	**Waihua**	**2.45**	**218**	P	**Pn**	**14 59 14.3**	**+0.9**
MTHZ	**Maungataniwha**	**2.50**	**226**	P	**Pn**	**14 59 15.4**	**+1.4**
PRRZ	**Plateau Road**	**2.57**	**238**	P	**Pn**	**14 59 16.5**	**+1.5**
NMHZ	**Naumai**	**2.68**	**223**	P	**Pn**	**14 59 17.9**	**+1.2**
ARHZ	**Aropaoanui**	**2.71**	**218**	P	**Pn**	**14 59 17.6**	**+0.7**
KUZ	**Kuaotunu**	**2.78**	**277**	P	**Pn**	**14 59 17.0**	**-0.9**
BKZ	**Black Stump Fm**	**2.91**	**225**	P	**Pn**	**14 59 20.5**	**+0.8**
TOZ	**Tahuroa Road**	**2.96**	**258**	P	**Pn**	**14 59 20.3**	**-0.1**
MCHZ	**McNeill Hill**	**3.00**	**219**	P	**Pn**	**14 59 21.4**	**+0.5**
GRZ	**Great Barrier**	**3.10**	**286**	P	**Pn**	**14 59 22.4**	**0.0**
KWHZ	**Kaweka Forest**	**3.13**	**223**	P	**Pn**	**14 59 23.2**	**+0.4**
KAHZ	**Kahuranaki**	**3.19**	**213**	P	**Pn**	**14 59 23.3**	**-0.2**
MKAZ	**Moumakai**	**3.19**	**270**	P	**Pn**	**14 59 23.0**	**-0.5**
BHHZ	**Black Hill Sta**	**3.37**	**225**	P	**Pn**	**14 59 26.7**	**+0.6**
ETAZ	**East Tamaki Re**	**3.39**	**272**	P	**Pn**	**14 59 26.2**	**0.0**
PXZ	**Pawanui**	**3.39**	**211**	P	**Pn**	**14 59 25.3**	**-1.0**
OTVZ	**Oturere**	**3.41**	**233**	P	**Pn**	**14 59 27.9**	**+1.2**
MBAZ	**Motutapu North

SHLS *e*S **Sg** **15 09 07.4 +0.5**
25nm,0.5s
SHLS Shalkode **2.33 21** Pg **Pb** **15 08 33.1 -1.0**
3.2nm,0.2s
SHLS Lg Lg 15 09 07.4
25nm,0.5s
MDOK Medeo **2.38 337** *e*P **Pn** **15 08 32.2 +1.1**
14nm,0.3s
MDOK *e*S **Sb** **15 09 05.6 +1.3**
35nm,0.7s
MDOK Medeo **2.38 337** ⇓Pn **Pn** **15 08 31.2 +0.1**
5.9nm,0.4s
MDOK Pg **Pn** **15 08 32.2 +1.1**
14nm,0.3s
MDOK Lg Lg 15 09 05.6
35nm,0.7s
MDOK Lg Lg 15 09 06.4
34nm,0.6s
KNDC Almaty **2.45 336** ⇓Lg Lg 15 09 07.2
58nm,0.5s
KPKS Kokpek **2.50 6** *e*P **Pb** **15 08 34.2 -2.7**
13nm,0.3s
KPKS *e*S **Sb** **15 09 08.9 +1.1**
44nm,0.3s
KPKS Kokpek **2.50 6** Pg **Pb** **15 08 34.2 -2.7**
13nm,0.3s
KPKS Lg Lg 15 09 08.9
44nm,0.3s
PDGK Podgornoye **2.50 20** ⇑Pn **Pn** **15 08 32.2 -0.5**
8.9nm,0.7s
PDGK ⇑Lg Lg 15 09 09.4
43nm,0.5s
KURS Kuram **2.51 357** *e*P **Pb** **15 08 35.2 -1.9**
11nm,0.3s
KURS *e*S **Sg** **15 09 10.6 -1.9**
22nm,0.8s
KURS Kuram **2.51 357** Pg **Pb** **15 08 35.2 -1.9**
11nm,0.3s
KURS Lg Lg 15 09 10.6
22nm,0.8s
MTBS Maitube **2.57 327** *e*P **Pb** **15 08 35.5 -2.7**
5.2nm,0.3s
MTBS *e*S **Sb** **15 09 11.2 +1.4**
19nm,0.2s
MTBS Maitube **2.57 327** Pg **Pb** **15 08 35.4 -2.7**
5.2nm,0.3s
MTBS Lg Lg 15 09 11.2
19nm,0.2s
KST Kastek **2.71 320** *e*P **Pb** **15 08 38.5 -2.0**
7.9nm,0.4s
KST *e*S **Sb** **15 09 16.2 +2.3**
36nm,0.4s
KST Kastek **2.71 320** Pg **Pb** **15 08 38.5 -2.0**
7.9nm,0.4s
KST Lg Lg 15 09 16.2
36nm,0.4s
TKM2 Tokmak 2 **2.81 315** P **Pb** **15 08 40.8 -1.5**
SNR=8.9
TKM2 Tokmak 2 **2.81 315** ⇓*i*P **Pn** **15 08 37.8 +0.7**
baz=16
TKM2 ⇓*i*S **Sn** **15 09 13.6 +2.5**
baz=16
CHKK Chushkaly **3.04 341** *e*P **Pb** **15 08 44.6 -1.4**
8.6nm,0.2s
CHKK *e*S **Sg** **15 09 26.6 -2.7**
20nm,0.6s
CHKK Chushkaly **3.04 341** Pg **Pb** **15 08 44.6 -1.4**
8.6nm,0.2s
CHKK Lg Lg 15 09 26.6
20nm,0.6s
UCH Uchtor **3.12 295** P **Pb** **15 08 45.6 -2.0**
SNR=10
ARLS Aral **3.13 288** ⇓*i*P **Pn** **15 08 41.0 -0.5**
baz=89
ARLS ⇓*i*S **Sn** **15 09 19.5 +0.5**
baz=89
KUU Kurty **3.26 334** *e*P **Pb** **15 08 47.3 -2.6**
1.6nm,0.1s
KUU *e*S **Sb** **15 09 31.3 +1.8**
21nm,0.7s
KUU Kurty **3.26 334** Pg **Pb** **15 08 47.3 -2.6**
1.6nm,0.1s
KUU Lg Lg 15 09 31.3
21nm,0.7s
AAK Ala-Archa **3.31 301** P **Pb** **15 08 49.2 -1.5**
SNR=5.5
CHMS Chumysh **3.34 308** P **Sb** **15 09 35.9 +4.0**
SNR=5.9
KRBS Karabastau **3.35 325** *e*P **Pb** **15 08 49.1 -2.3**
1.2nm,0.2s
KRBS *e*S **Sb** **15 09 34.4 +2.2**
10nm,0.5s
KRBS Karabastau **3.35 325** Pg **Pb** **15 08 49.1 -2.3**
1.2nm,0.2s
KRBS Lg Lg 15 09 34.4
10nm,0.5s
DJR Jarkent **3.52 17** *e*P **Pb** **15 08 52.6 -1.7**
1.6nm,0.2s
DJR *e*S **Sb** **15 09 40.4 +3.2**
18nm,0.4s
DJR Jarkent **3.52 17** Pg **Pb** **15 08 52.6 -1.7**
1.6nm,0.2s
DJR Lg Lg 15 09 40.4
18nm,0.4s
EKS2 Erkin-Say **3.79 298** P **Pb** **15 08 58.5 -0.4**
SNR=6.7
KK31 Karatay Array **6.19 293** ⇓Pg **Pb** **15 09 41.6 +1.8**
0.9nm,0.8s,baz=100,slow=7.8,SNR=5.7
KK31 ⇑Lg Lg 15 11 04.8
0.6nm,0.5s,baz=105,slow=25,SNR=5.4
MK31 Makanchi Array **6.48 25** ⇑Lg Lg 15 11 15.9
1.4nm,0.7s

*KMA **11** 15:29:36.7±0.0,35°.76N×129°.17E,h14km,Error ellipse:*
s-maj=0.5km s-min=0.3km az=290.0
*JMA **11** 15:29:38.6±0.3,36°.N±1°.×12°.9E±°.,h42km,MV2.9/17,S*
KOREAN PENINSULA REG
*KEA **11** 15:29:38.0,35°.93N×129°.15E,h16km,ML3.3/1*
ISC 11 15:29:34.9±0.9,35°.73N±0°.02×129°.24E±0°.03,h10km,n56,
σ1°.16/59,South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	**Daegu** SNR=1245	**0.28**	**278**	P	**Pb**	**15 29 42.1**	**0.0**
YOCB	**Yeongcheon** SNR=221	**0.34**	**316**	P	**Pb**	**15 29 43.0**	**0.0**
KSPHA	**Pohang** SNR=219	**0.47**	**13**	P	**Pb**	**15 29 46.0**	**+0.7**
MIYA	**Miryang-si** SNR=34	**0.47**	**240**	P	**Pb**	**15 29 45.7**	**+0.4**
KSBUS	**Busan** SNR=166	**0.49**	**193**	P	**Pb**	**15 29 46.7**	**+1.1**
KSDAU	**Deagu-acc** SNR=296	**0.53**	**287**	P	**Pg**	**15 29 46.3**	**+1.1**
KSCHR	**CHANGNYEONG** SNR=92	**0.64**	**253**	P	**Pb**	**15 29 48.3**	**+0.1**
KSADO	**Andong** SNR=114	**0.72**	**341**	P	**Pb**	**15 29 49.6**	**+0.1**
EUSB	**Uiseong** SNR=119	**0.77**	**324**	P	**Pg**	**15 29 50.3**	**+0.6**
YODB	**Yeongdeok** SNR=99	**0.81**	**9**	P	**Pb**	**15 29 51.7**	**+0.6**
EURB	**Uiryeong-eup** SNR=20	**0.88**	**243**	P	**Pg**	**15 29 52.5**	**+0.7**
YEYB	**Yeongyang** SNR=147	**0.90**	**352**	P	**Pb**	**15 29 53.0**	**+0.4**
KSGUM	**GUMI** SNR=30	**0.92**	**303**	P	**Pg**	**15 29 53.3**	**+0.7**
ADOA	**Andong Acc Bor** SNR=24	**0.95**	**333**	P	**Pg**	**15 29 53.6**	**+0.5**
KSULJ	**Uljin** SNR=338	**0.98**	**8**	P	**Pb**	**15 29 54.5**	**+0.6**
HACA	**Hapcheon Acc B** SNR=42	**0.98**	**252**	P	**Pg**	**15 29 54.2**	**+0.5**
KSGIC	**Gimchen** SNR=110	**0.99**	**291**	P	**Pg**	**15 29 54.3**	**+0.4**
KUJA	**Jangpyeong** SNR=16	**0.99**	**212**	P	**Pn**	**15 29 55.0**	**+0.2**
KSSAJ	**Sangju** SNR=81	**1.11**	**308**	P	**Pb**	**15 29 56.4**	**+0.2**
DUSB	**Deogyusan** SNR=347	**1.21**	**278**	P	**Pn**	**15 29 58.1**	**+0.2**
JTU	**Tsushima**	**1.21**	**174**	P	**Pg**	**15 29 59.0**	**+0.8**
JTU				*e*S	**Sb**	**15 30 13.8**	**+0.2**
CHYB	**Chungyang** SNR=114	**1.24**	**348**	P	**Pb**	**15 29 58.7**	**+0.4**
HAMB	**Hamyang** SNR=60	**1.24**	**260**	P	**Pn**	**15 29 58.5**	**+0.3**
YOJB	**Youngju** SNR=242	**1.28**	**333**	P	**Pn**	**15 29 59.0**	**+0.2**
OKCB	**Cheongsan-myeo** SNR=79	**1.32**	**298**	P	**Pn**	**15 29 60.0**	**+0.6**
KSMGY	**Mungyeong** SNR=76	**1.33**	**314**	P	**Pn**	**15 29 59.9**	**+0.4**
YKDB	**Yokjido** SNR=132	**1.36**	**216**	P	**Pb**	**15 30 01.0**	**+0.6**
JTSM	**Tsushimamitsus**	**1.39**	**175**	P	**Pg**	**15 30 01.6**	**0.0**
JTSM				*e*S	**Sb**	**15 30 18.5**	**-0.3**
KSBON	**Boeun** SNR=111	**1.40**	**304**	P	**Pb**	**15 30 01.4**	**+0.4**
KSTBA	**Taebaek** SNR=231	**1.41**	**350**	P	**Pb**	**15 30 01.9**	**+0.6**
IMWB	**Imwonan-gil** SNR=96	**1.51**	**3**	P	**Pg**	**15 30 03.8**	**0.0**
KSCHJ	**Chungju** SNR=48	**1.53**	**318**	P	**Pn**	**15 30 03.0**	**+0.7**
NAWB	**Namwon** SNR=265	**1.54**	**259**	P	**Pn**	**15 30 03.4**	**+1.1**
KSJEO	**Jeonju** SNR=153	**1.60**	**278**	P	**Pn**	**15 30 04.0**	**+0.8**
JECH	**Jecheon** SNR=34	**1.66**	**330**	P	**Pn**	**15 30 04.5**	**+0.4**
SUCA	**Sunchang** SNR=30	**1.75**	**259**	P	**Pb**	**15 30 07.0**	**-0.1**
YNDB	**Yeoundo** SNR=31	**1.75**	**223**	P	**Pb**	**15 30 07.0**	**-0.1**
EMSB	**Eumseong** SNR=22	**1.80**	**314**	P	**Pb**	**15 30 08.0**	**0.0**
JHGM	**Hagimishima**	**1.82**	**121**	*e*P	**Pb**	**15 30 07.5**	**-0.7**
KSJEU	**Jeongeup** SNR=65	**1.90**	**263**	P	**Pn**	**15 30 08.5**	**+1.2**
BOSB	**Boseong-gun** SNR=97	**1.92**	**240**	P	**Pn**	**15 30 08.7**	**+1.1**
KSWJU	**Wonju** SNR=38	**1.93**	**330**	P	**Pn**	**15 30 08.3**	**+0.6**
KSKWJ	**Gwangju** SNR=94	**1.93**	**253**	P	**Pn**	**15 30 09.0**	**+1.3**
KSCEA	**Cheonan** SNR=17	**1.94**	**305**	P	**Pn**	**15 30 08.5**	**+0.7**
JII	**Iki**	**1.97**	**168**	*e*P	**Pb**	**15 30 10.2**	**-0.6**
JTY	**Toyota**	**2.09**	**134**	*e*P	**Pn**	**15 30 10.7**	**+0.8**
SMKB	**Mukjeong-gil** SNR=100	**2.19**	**270**	P	**Pn**	**15 30 12.0**	**+0.7**
HAWB	**Hwaseong-si** SNR=11	**2.41**	**305**	P	**Pn**	**15 30 15.0**	**+0.7**
KSSES	**Seosan** SNR=12	**2.49**	**296**	P	**Pn**	**15 30 16.2**	**+0.8**
ANMD	**Anmado** SNR=9.3	**2.65**	**263**	P	**Pn**	**15 30 18.8**	**+1.2**
BGDB	**Bigeumdo** SNR=6.6	**2.86**	**251**	P	**Pn**	**15 30 21.4**	**+0.9**
KSDEI	**Deokjeokdo** SNR=7.4	**2.95**	**302**	P	**Pn**	**15 30 22.8**	**+1.0**
HUK2	**Heuksan-myeon** SNR=6.6	**3.28**	**253**	P	**Pn**	**15 30 27.0**	**+0.8**
HJU	**Haeju**	**3.64**	**310**	Pg	**Pg**	**15 30 43.0**	**-1.6**
HJU				Sg	**Sg**	**15 31 28.5**	**-3.4**
HJU				AML	AML		
	comp=N,121nm,0.5s						
HJU				AML	AML		
	comp=E,73nm,0.4s						
HJU				AML	AML		
	comp=Z,110nm,0.8s						
WOSN	**Wonsan**	**3.72**	**338**	Sg	**Sb**	**15 31 29.8**	**+4.0**
PYS	**Pyongsong**	**4.43**	**324**	Sg	**Sg**	**15 31 52.4**	**-4.7**

MAN 11 15:35:50.1,9°.85N×124°.17E,h22km,mb3.8,ML2.6,MS2.1,
2C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.34**	**243**	⇓*e*P	Pb	15 35 57.2	-0.3
TBP				*i* S	Sb	15 36 02.6	0.0
LLP	**Lapu-Lapu**	**0.51**	**337**	⇓*i*P	Pb	15 35 59.3	-1.2
LLP				*i* S	Sb	15 36 06.5	-1.0
MSLP	**Maasin**	**0.74**	**67**	⇑*e*P	Pn	15 36 05.3	+0.1
MSLP				*e*S	Sn	15 36 16.9	+1.1
SNPH	**Sibulan**	**1.05**	**242**	⇓*i*P	Pn	15 36 07.6	-2.0
SNPH				*i* S	Sn	15 36 25.5	+1.9
GUIM	**Jordan**	**1.74**	**297**	⇑*e*P	Pn	15 36 18.9	-0.2
GUIM				*e*S	Sn	15 36 41.0	+0.5

*IDC **11** 15:48:11.0±0.7,14°.46N×116°.98E,h0km,mb4.1/11,*
mbtmp4.2/13,ML3.9/2,MS3.4/22,Error ellipse:
s-maj=33.1km s-min=14.2km az=72.0
*NEIC **11** 15:48:13.2±1.9,14°.47N±0°.07×116°.8E±0°.1,h14km±5km,*
mb4.5/13,Error ellipse: s-maj=14.7km s-min=9.7km
az=81.0
*MAN **11** 15:48:14.4,14°.38N×117°.09E,h95km,mb5.1,ML4.0,*
MS4.1
ISC 11 15:48:12.0±0.5,14°.40N±0°.04×116°.96E±0°.05,h10km,n70,
σ2°.06/68,mb4.3/18,MS3.5/19,4C-10D,South China Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**3.26**	**101**	⇓*e*P	**Pn**	**15 49 02.8**	**-0.5**
LUBP				*e*S	**Sn**	**15 49 36.1**	**-6.0**
BOLP	**Bolinao**	**3.46**	**55**	⇓*e*P	**Pn**	**15 49 05.7**	**-0.4**
BOLP				*e*S	**Sn**	**15 49 45.2**	**-2.0**
MACP	**Maragondon, Ca**	**3.65**	**92**	⇓*e*P	**Pn**	**15 49 08.9**	**+0.3**
MACP				*e*S	**Sn**	**15 49 45.3**	**-6.4**
TGY	**Tagaytay City**	**3.87**	**94**	*e*P	**Pb**	**15 49 18.5**	**-1.9**
TGY				*i* S	**Sn**	**15 50 00.6**	**+3.4**
BUSP	**Coron**	**3.96**	**127**	⇓*e*P	**Pn**	**15 49 13.3**	**+0.5**
BUSP				*e*S	**Sn**	**15 49 56.7**	**-2.6**
SMPP	**San Manuel, Pa**	**3.99**	**64**	⇑*e*P	**Pn**	**15 49 13.1**	**-0.2**
SMPP				*e*S	**Sn**	**15 49 57.3**	**-2.9**
PCPH	**Palayan**	**4.16**	**73**	⇓*e*P	**Pn**	**15 49 17.3**	**+1.6**
PCPH				*e*S	**Sn**	**15 50 03.1**	**-1.3**
LQP	**Lukban**	**4.45**	**93**	⇑*e*P	**Pn**	**15 49 22.0**	**+2.2**
LQP				*e*S	**Sn**	**15 50 17.8**	**+5.9**
SAMP	**Sagada Mountai**	**4.64**	**54**	⇓*e*P	**Pn**	**15 49 22.3**	**0.0**
SAMP				*e*S	**Sn**	**15 50 13.3**	**-2.8**
BALP	**Baler**	**4.66**	**73**	⇑*e*P	**Pn**	**15 49 24.3**	**+1.9**
BALP				*e*S	**Sn**	**15 50 14.3**	**-2.3**
CUYO	**Cuyo Island**	**5.31**	**131**	⇓*e*P	**Pn**	**15 49 31.2**	**-0.2**
CUYO				*e*S	**Sn**	**15 50 28.9**	**-3.7**
BATP	**Bataraza**	**5.63**	**171**	⇓*e*P	**Pn**	**15 49 35.9**	**+0.1**
BATP				*e*S	**Sn**	**15 50 35.6**	**-5.0**
RCP	**Roxas**	**6.31**	**116**	⇓*e*P	**Pn**	**15 49 47.5**	**+2.4**
GUIM	**Jordan**	**6.66**	**124**	⇑*e*P	**Pn**	**15 49 51.3**	**+1.3**
GUIM				*e*S	**Sn**	**15 51 03.0**	**-2.9**
CNOP	**Candoni, Negro**	**7.18**	**129**	⇓*e*P	**Pn**	**15 49 57.2**	**+0.1**
CNOP				*e*S	Sn	15 51 08.2	-11
QIZ	**Qiongzhong**	**8.22**	**305**	Pn	**Pn**	**15 50 08.6**	**-2.9**
HKPS	**Hong Kong Po S**	**8.28**	**342**	Pn	**Pn**	**15 50 10.2**	**-2.0**
KKM	**Kota Kinabalu**	**8.34**	**185**	Pn	**Pn**	**15 50 13.7**	**+0.6**
TWG	**Pinlang**	**9.24**	**24**		**Pn**	**15 50 25.1**	**-0.3**
MYLDM	**Lahad Datu**	**9.29**	**170**		**Pn**	**15 50 28.5**	**+2.4**
TPUB	**Ta-pu**	**9.51**	**21**	Pn	**Pn**	**15 50 28.2**	**-1.0**
SSLB	**Suanglung**	**10.07**	**21**	Pn	**Pn**	**15 50 37.4**	**+0.6**
YHNB	**Yeheng**	**11.03**	**21**	Pn	**Pn**	**15 50 51.7**	**+1.7**
DAV	**Davao City (W)**	**11.17**	**130**	LR	LR	15 54 55.6
	comp=Z,242nm,21.9s,baz=317,slow=36						
SBUM	**Sibu**	**12.76**	**202**		**Pn**	**15 51 15.2**	**+1.5**
KSM	**Kuching**	**14.43**	**208**		**Pn**	**15 51 38.5**	**+2.0**
JOW	**Kunigami**	**16.27**	**39**	LR	LR	15 57 42.4
	comp=Z,84nm,21.1s,baz=218,slow=35						
CM31	**Chiang Mai Arr**	**17.74**	**286**	P	**Pn**	**15 52 19.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**17.74**	**286**	P	**Pn**	**15 52 18.9**	**-0.5**
	baz=107,slow=12,SNR=29						
	3.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.74**	**286**	P	**Pn**	**15 52 19.4**	**0.0**
KAPI	**Kappang**	**19.49**	**172**	P	**Pn**	**15 52 41.8**	**+1.2**
	2.9nm,0.3s,baz=3.4,slow=12,SNR=4.5						
KAPI				LR	LR	16 01 39.2
	comp=Z,48nm,18.3s,baz=348,slow=41						
	8.9nm,0.3s						
SIJI	**Sorong**	**20.76**	**136**	LR	LR	16 00 04.8
	comp=Z,58nm,19.9s,baz=146,slow=34						
JAGI	**Jajag, Banyuwa**	**22.89**	**187**	P	**P**	**15 53 16.1**	**0.0**
JAGI				IAmb	IAmb	15 53 19.2
	comp=Z,59nm,1.2s						
LEM	**Lembang**	**23.04**	**204**	P	**P**	**15 53 20.4**	**+2.6**
	comp=Z,13nm,0.5s,baz=242,slow=11,SNR=4.1						
LEM				LR	LR	16 02 01.2
	comp=Z,35nm,20.5s,baz=44,slow=36						
	comp=Z,13nm,0.5s						
KSRS	**Korea Array**	**24.95**	**21**	P	**P**	**15 53 35.8**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=205,slow=9.6,SNR=3.2						
	comp=Z,1.0nm,0.8s						
JHJ	**Hachijo jima 2**	**27.89**	**44**	LR	LR	16 03 14.3
	comp=Z,24nm,19.9s,baz=282,slow=32						
MJAR	**Matsushiro Arr**	**29.10**	**37**	LR	LR	16 06 51.4
	comp=Z,29nm,18.2s,baz=198,slow=39						
SONM	**Songino Array**	**34.47**	**347**	P	**P**	**15 55 00.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=168,slow=12,SNR=4.7						
SONM				LR	LR	16 09 46.9
	comp=Z,80nm,18.4s,baz=159,slow=38						
	comp=Z,0.4nm,0.3s						
PSA00	**Pilbara Seismi**	**35.86**	**175**	P	**P**	**15 55 12.1**	**-0.2**
PSA00				IAmb	IAmb	15 55 12.8
	comp=Z,18nm,1.1s						
KLR	**Kul'dur**	**36.80**	**16**	LR	LR	16 10 39.3
	comp=Z,29nm,19.1s,baz=202,slow=37						
GIRL	**Giralia**	**36.91**	**184**	P	**P**	**15 55 21.4**	**+0.2**
WB0	**Warramunga Arr**	**38.04**	**153**	P	**P**	**15 55 30.9**	**+0.1**
WB0				IAmb	IAmb	15 55 33.1
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**38.17**	**153**	P	**P**	**15 55 31.9**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=334,slow=9.5,SNR=18						
	comp=Z,2.9nm,0.7s						
WB2	**Warramunga Arr**	**38.18**	**153**	P	**P**	**15 55 32.0**	**0.0**
WB2				IAmb	IAmb	15 55 32.8
	comp=Z,5.3nm,0.8s						
WR0	**Warramunga Arr**	**38.27**	**153**	P	**P**	**15 55 32.9**	**+0.1**
WR0				IAmb	IAmb	15 55 33.6
	comp=Z,3.6nm,0.8s						
AS31	**Alice Springs**	**41.30**	**156**	P	**P**	**15 55 59.0**	**+1.0**
ASAR	**Alice Springs**	**41.30**	**156**	P	**P**	**15 55 58.6**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=334,slow=6.6,SNR=34						
ASAR				PcP	**PcP**	**15 57 57.1**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=343,slow=3.0,SNR=8.2						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**41.30**	**156**	P	**P**	**15 55 59.2**	**+1.2**
MKAR	**Makanchi Array**	**43.35**	**325**	P	**P**	**15 56 14.7**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=127,slow=9.2,SNR=6.1						
MKAR				PcP	**PcP**	**15 58 03.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=132,slow=2.9,SNR=6.1						
MKAR				LR	LR	16 15 30.8
	comp=Z,145nm,18.2s,baz=122,slow=38						
	comp=Z,0.6nm,0.7s						
AAK	**Ala-Archa**	**46.03**	**316**	LR	LR	16 18 28.5
	comp=Z,39nm,18.1s,baz=100,slow=40						
FORT	**Forrest**	**46.17**	**167**	P	**P**	**15 56 37.5**	**+0.5**
ZALV	**Zalesovo Beam**	**46.82**	**334**	LR	LR	16 17 08.4
	comp=Z,58nm,18.6s,baz=110,slow=37						
NWAO	**Narrogin (SRO)**	**47.06**	**180**	P	**P**	**15 56 43.9**	**-0.1**
KURK	**Kurchatov**	**47.63**	**328**	P	**P**	**15 56 47.5**	**-0.7**
KURK				IAmb	IAmb	15 56 58.3
	comp=Z,4.4nm,0.9s						
YAK	**Yakutsk**	**48.43**	**8**	LR	LR	16 17 48.3
	comp=Z,44nm,18.7s,baz=315,slow=37						
HNR	**Honiara**	**48.77**	**117**	LR	LR	16 17 37.5
	comp=Z,105nm,18.1s,baz=226,slow=36						
STKA	**Stephens Creek**	**51.72**	**153**	P	**P**	**15 57 20.1**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=342,slow=4.6,SNR=8.1						
	comp=Z,5.6nm,0.8s						
STKA	**Stephens Creek**	**51.72**	**153**	P	**P**	**15 57 19.9**	**+0.2**
AKTO	**Aktyubinsk**	**59.36**	**320**	LR	LR	16 25 24.9
	comp=Z,44nm,19.9s,baz=97,slow=38						
DZM	**Mont Dzumac**	**60.56**	**126**	LR	LR	16 27 46.5
	comp=Z,25nm,18.2s,baz=28,slow=39						
ARU	**Arti**	**60.82**	**327**	LR	LR	16 25 55.4
	comp=Z,35nm,18.1s,baz=176,slow=37						
RAYN	**Ar Rayn**	**67.61**	**290**	P	**P**	**15 59 09.1**	**-0.5**
RAYN				IAmb	IAmb	15 59 10.5
	comp=Z,3.4nm,0.9s						
ARCES	**ARCESS Array B**	**77.13**	**339**	P	**P**	**16 00 06.6**	**+1.1**
	comp=Z,13nm,1.2s,baz=26,slow=6.1,SNR=4.5						
ARCES				LR	LR	16 37 20.6
	comp=Z,33nm,18.7s,baz=314,slow=38						
	comp=Z,13nm,1.2s						
AKASG	**Malin Array Be**	**77.58**	**319**	LR	LR	16 36 02.0
	comp=Z,41nm,20.2s,baz=16,slow=37						
FINES	**FINESS Array B**	**77.90**	**331**	P	**P**	**16 00 10.2**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=95,slow=6.1,SNR=2.0						
	comp=Z,2.3nm,0.9s						
ILAR	**Eielson Array**	**79.70**	**26**	P	**P**	**16 00 21.5**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=269,slow=3.6,SNR=2.2						
	comp=Z,0.6nm,0.9s						
NOA	**NORSAR Array B**	**84.96**	**332**	P	**P**	**16 00 46.3**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=72,slow=5.1,SNR=3.3						
NOA				LR	LR	16 41 07.9
	comp=Z,35nm,18.9s,baz=70,slow=37						
	comp=Z,1.4nm,0.9s						
VRAC	**Vranov**	**85.83**	**320**	LR	LR	16 41 27.2
	comp=Z,21nm,20.3s,baz=62,slow=37						
CLL	**Collm**	**87.38**	**322**	*e*(sP)	sP	16 01 05.0	+2.8
DAVOX	**Davos/Dischmat**	**90.92**	**319**	LR	LR	16 48 55.4
	comp=Z,16nm,19.0s,baz=85,slow=40						

*KRNET **11** 15:49:25.0±0.1,42°.83N×79°.88E,mb2.6*
*NNC **11** 15:49:26.2±0.4,43°.04N×79°.66E,h8km±2km,mb3.3,*
mpv3.1,Error ellipse: s-maj=3.5km s-min=2.3km az=173.0
*SOME **11** 15:49:26.4,43°.00N×79°.68E,h15km*
ISC 11 15:49:26.7±1.6,43°.03N±0°.05×79°.68E±0°.06,h15km±7km,
n31,σ1°.10/58,10C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.20**	**308**	*e*P	**Pg**	**15 49 31.5**	**0.0**
	51nm,0.1s						
SHLS				*e*S	**Sg**	**15 49 34.8**	**-0.1**
	556nm,0.2s						
SHLS	**Shalkode**	**0.20**	**308**	P	**Pg**	**15 49 31.5**	**0.0**
	51nm,0.1s						
SHLS				S	**Sg**	**15 49 34.8**	**-0.1**
	556nm,0.2s						
PDGK	**Podgornoye**	**0.33**	**334**	⇑P	**Pg**	**15 49 33.5**	**-0.1**
	0.8nm,0.1s						
PDGK				⇑S	**Sg**	**15 49 38.7**	**+0.4**
	116nm,0.6s						
UZB	**Uzynbulak**	**0.50**	**284**	*e*P	**Pg**	**15 49 36.3**	**-0.3**
	9.1nm,0.0s						
UZB				*e*S	**Sg**	**15 49 43.5**	**+0.1**
	130nm,0.1s						
UZB	**Uzynbulak**	**0.50**	**284**	P	**Pg**	**15 49 36.3**	**-0.3**
	9.1nm,0.0s						
UZB				S	**Sg**	**15 49 43.5**	**+0.1**
	130nm,0.1s						
KPKS	**Kokpek**	**0.85**	**301**	*e*P	**Pb**	**15 49 42.4**	**-0.8**
	25nm,0.1s						
KPKS				*e*S	**Sg**	**15 49 53.7**	**-0.8**
	67nm,0.2s						
KPKS	**Kokpek**	**0.85**	**301**	P	**Pb**	**15 49 42.4**	**-0.8**
	25nm,0.1s						
KPKS				S	**Sg**	**15 49 53.7**	**-0.8**
	67nm,0.2s						
ZHN	**Zhinishke**	**0.93**	**279**	*e*P	**Pb**	**15 49 43.6**	**-0.9**
	22nm,0.3s						
ZHN				*e*S	**Sb**	**15 49 56.0**	**-0.7**
	54nm,0.2s						
ZHN	**Zhinishke**	**0.93**	**279**	P	**Pb**	**15 49 43.6**	**-0.9**
	22nm,0.3s						
ZHN				S	**Sb**	**15 49 56.0**	**-0.7**
	54nm,0.2s						
SATY	**Saty**	**0.94**	**272**	*e*P	**Pb**	**15 49 44.5**	**-0.2**
	4.5nm,0.1s						
SATY				*e*S	**Sg**	**15 49 57.4**	**+0.2**
	47nm,0.1s						
SATY	**Saty**	**0.94**	**272**	P	**Pb**	**15 49 44.5**	**-0.2**
	4.5nm,0.1s						
SATY				S	**Sg**	**15 49 57.4**	**+0.2**
	47nm,0.1s						
KURS	**Kuram**	**1.20**	**293**	*e*P	**Pb**	**15 49 49.1**	**0.0**
	1.3nm,0.2s						
KURS				*e*S	**Sg**	**15 50 05.2**	**-0.2**
	4.3nm,0.4s						
KURS	**Kuram**	**1.20**	**293**	P	**Pb**	**15 49 49.1**	**0.0**
	1.3nm,0.2s						
KURS				S	**Sg**	**15 50 05.2**	**-0.2**
	4.3nm,0.4s						
DJR	**Jarkent**	**1.30**	**3**	*e*P	**Pn**	**15 49 50.4**	**0.0**
	2.9nm,0.2s						
DJR				*e*S	**Sb**	**15 50 07.3**	**-0.1**
	11nm,0.2s						
DJR	**Jarkent**	**1.30**	**3**	P	**Pn**	**15 49 50.4**	**0.0**
	2.9nm,0.2s						
DJR				S	**Sb**	**15 50 07.3**	**-0.1**
	11nm,0.2s						
ANVS	**Anan'yevo**	**1.50**	**261**	⇓*i*P	**Pb**	**15 49 54.6**	**+0.2**
	baz=69						
ANVS				⇓*i*S	**Sg**	**15 50 16.5**	**+1.3**
	baz=69						

TARG	**Taragay, Kyrgy**	**1.91**	**228**	⇓*i*P	**Pn**	**15 49 59.1**	**+0.1**
	baz=35						
TARG				⇓*i*S	**Sb**	**15 50 23.6**	**-1.6**
	baz=35						
MDOK	**Medeo**	**1.94**	**275**	*e*P	**Pb**	**15 50 01.4**	**-0.4**
	3.8nm,0.3s						
MDOK				*e*S	**Sb**	**15 50 26.9**	**+1.1**
	7.1nm,0.3s						
MDOK	**Medeo**	**1.94**	**275**	⇑Pg	**Pb**	**15 50 01.3**	**-0.4**
	1.5nm,0.3s						
MDOK				Pg	**Pb**	**15 50 01.4**	**-0.4**
	3.8nm,0.3s						
MDOK				Lg	Lg	15 50 26.9	
	7.1nm,0.3s						
MDOK				⇑Lg	Lg	15 50 28.2	
	8.7nm,0.5s						
CHKK	**Chushkaly**	**2.13**	**294**	*e*P	**Pb**	**15 50 04.5**	**-0.4**
	0.8nm,0.1s						
CHKK				*e*S	**Sb**	**15 50 31.6**	**+0.4**
	7.5nm,0.2s						
CHKK	**Chushkaly**	**2.13**	**294**	Pg	**Pb**	**15 50 04.5**	**-0.4**
	0.8nm,0.1s						
CHKK				Lg	Lg	15 50 31.6	
	7.5nm,0.2s						
MTBS	**Maitube**	**2.39**	**273**	*e*P	**Pg**	**15 50 11.4**	**-1.1**
	2.1nm,0.2s						
MTBS				*e*S	**Sg**	**15 50 43.3**	**-0.1**
	9.3nm,0.5s						
MTBS	**Maitube**	**2.39**	**273**	Pg	**Pg**	**15 50 11.4**	**-1.1**
	2.1nm,0.2s						
MTBS				Lg	Lg	15 50 43.3	
	9.3nm,0.5s						
ULHL	**Ulahol**	**2.66**	**254**	⇓*i*P	**Pn**	**15 50 10.7**	**+1.5**
	baz=59						
ULHL				⇓*i*S	**Sb**	**15 50 44.3**	**-2.3**
	baz=59						
KST	**Kastek**	**2.73**	**272**	*e*P	**Pb**	**15 50 15.1**	**-0.1**
	2.8nm,0.3s						
KST				*e*S	**Sb**	**15 50 50.2**	**+1.6**
	3.6nm,0.5s						
KST	**Kastek**	**2.73**	**272**	Pg	**Pb**	**15 50 15.1**	**-0.1**
	2.8nm,0.3s						
KST				Lg	Lg	15 50 50.2	
	3.6nm,0.5s						
BOOM	**Boomskoye usch**	**2.81**	**260**	⇑*i*P	**Pn**	**15 50 13.2**	**+2.0**
	baz=65						
BOOM				⇑*i*S	**Sb**	**15 50 48.4**	**-2.5**
	baz=65						
KRBS	**Karabastau**	**3.00**	**284**	*e*P	**Pb**	**15 50 21.1**	**+1.3**
	0.8nm,0.3s						
KRBS				*e*S	**Sg**	**15 50 60.0**	**-3.0**
	2.5nm,0.3s						
KRBS	**Karabastau**	**3.00**	**284**	Pg	**Pb**	**15 50 21.1**	**+1.3**
	0.8nm,0.3s						
KRBS				Lg	Lg	15 50 60.0	
	2.5nm,0.3s						
TKM2	**Tokmak 2**	**3.00**	**269**	⇑*i*P	**Pn**	**15 50 16.4**	**+2.5**
	baz=73						
TKM2				⇑*i*S	**Sb**	**15 50 53.6**	**-2.9**
	baz=73						
NRN	**Naryn**	**3.17**	**241**	⇑*i*P	**Pn**	**15 50 17.5**	**+1.2**
	baz=45						
NRN				⇑*i*S	**Sn**	**15 50 55.4**	**+1.5**
	baz=45						

TAP 11 15:50:03.4, 21°.77N×120°.40E, h30km±1km, ML2.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWKBT	**Hengchun**	**0.42**	**66**	P	Pb	15 50 12.6	-0.1
	baz=65						
SMST	**Manzhou Townsh**	**0.48**	**58**	P	Pb	15 50 13.7	+0.2
	baz=66						
SMST				S	Sn	15 50 22.2	+0.6
	baz=66						
SLIU	**Shizi**	**0.58**	**40**	*i* P	Pn	15 50 15.9	+0.2
	baz=39						
SLIU				*i* S	Sn	15 50 24.6	+0.4
	baz=39						
SCZT	**Fangliau**	**0.63**	**19**	P	Pn	15 50 16.8	+0.4
	baz=31						
SCZT				S	Sn	15 50 25.5	-0.1
	baz=31						
TAWH	**Dawu Township**	**0.73**	**38**	P	Pb	15 50 17.6	-0.1
	baz=49						
TAWH				*e*S	Sb	15 50 27.3	0.0
	baz=49						
EAST	**Anshuo**	**0.74**	**34**	*i* P	Pn	15 50 18.7	+0.8
	baz=47						
EAST				*e*S	Sn	15 50 29.5	+1.3
	baz=47						
MASBT	**Mashibuluo**	**0.87**	**14**	P	Pb	15 50 20.5	+0.5
	baz=22						
TSMG	**Majia**	**0.96**	**14**	*i* P	Pb	15 50 21.6	0.0
	baz=14						
SSD	**Sandimen**	**1.00**	**12**	*i* P	Pb	15 50 22.3	+0.1
	baz=13						
SCST	**Cishan**	**1.12**	**4**	P	Pb	15 50 23.8	-0.4
	baz=5.0						
TWGBT	**Beinan**	**1.22**	**31**	P	Pb	15 50 26.3	+0.4
	baz=44						
LONT	**Longtian**	**1.32**	**31**	*e*P	Pb	15 50 27.6	0.0
	baz=42						
CHN1	**Nanshi**	**1.42**	**5**	*i* P	Pn	15 50 28.1	+0.9
	baz=5.0						
EDH	**Donghe**	**1.46**	**35**	*e*P	Pb	15 50 29.4	-0.6
	baz=34						
WTP	**Ta-pu**	**1.48**	**8**	*i* P	Pb	15 50 29.3	-1.1
	baz=8.0						
TWK	**Hsinying**	**1.49**	**3**	*i* P	Pn	15 50 28.8	+0.5
	baz=4.0						
ELDTW	**Lidau**	**1.52**	**22**	*e*P	Pn	15 50 28.8	0.0
	baz=9.0						
TPUB	**Ta-pu**	**1.54**	**8**	*e*P	Pn	15 50 29.7	+0.8
	baz=8.0						
EHD	**Haiduan**	**1.56**	**28**	P	Pb	15 50 30.6	-1.1
	baz=15						
WCKO	**Fanlu**	**1.67**	**6**	P	Pn	15 50 30.9	+0.1
	baz=7.0						
ALS	**Alishan**	**1.77**	**12**	*i* P	Pn	15 50 33.4	+1.0
	baz=358						
EYUL	**Yuli**	**1.79**	**28**	P	Pn	15 50 33.8	+1.5
	baz=14						
YULB	**Yu-li**	**1.82**	**27**		Pb	15 50 35.1	-0.9
YULB	**Yu-li**	**1.82**	**27**	P	Pb	15 50 35.1	-1.0
	baz=12						
WHYT	**Xinyi Township**	**1.96**	**12**	P	Pn	15 50 35.4	+0.6
	baz=359						
SSLB	**Suanglung**	**2.07**	**14**	P	Pn	15 50 36.3	0.0
	baz=2.0						
VWDT	**VWDT**	**2.09**	**19**	P	Pb	15 50 38.9	-1.8
	baz=5.0						
WUSB	**Renai**	**2.31**	**16**	P	Pn	15 50 40.7	+1.1
	baz=4.0						
WCS	**Beigang Elemen**	**2.33**	**12**	*e*P	Pn	15 50 39.8	+0.1
	baz=12						
CHGB	**Renai**	**2.39**	**17**	P	Pn	15 50 42.4	+1.6
	baz=5.0						
WHF	**Hehuan Shan**	**2.50**	**18**	P	Pn	15 50 44.8	+2.4
	baz=6.0						
WHP	**Taichung City**	**2.55**	**11**	P	Pb	15 50 45.7	-2.8
FUSS	**Fushou**	**2.59**	**17**	P	Pn	15 50 46.0	+2.5
	baz=6.0						
LIOB	**Emei**	**2.92**	**11**	*e*P	Pn	15 50 49.5	+1.6
	baz=1.0						
NFF	**Wufeng Townshi**	**2.93**	**13**	*e*P	Pn	15 50 49.5	+1.5
	baz=2.0						
LATG	**Datong**	**2.94**	**20**	P	Pn	15 50 49.5	+1.2
	baz=20						
NDT	**Datong Townshi**	**3.00**	**20**	*e*P	Pn	15 50 51.1	+2.1
	baz=8.0						
YHNB	**Yeheng**	**3.02**	**17**	*e*P	Pn	15 50 52.8	+3.4
	baz=7.0						
FUSB	**Fushanzhiwuyua**	**3.17**	**20**	*e*P	Pn	15 50 55.0	+3.6
	baz=9.0						

*IDC **11** 15:53:31.4±10.0, 7°.75S×106°.04E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=181.8km s-min=31.3km az=120.0*
*DJA **11** 15:53:31.0±0.9, 8°.S±3°.×10°.6E±°., h18km±8km, M4.2/10, mb4.7/2, MLv3.9/10*
ISC 11 15:53:31.8±2.1, 7°.55S±0°.08×105°.94E±0°.06, h15km±12km, n14, σ0°84/19, mb3.6/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.81**	**49**	P	**Pg**	**15 53 48.1**	**+0.5**
SKJI				S	**Sb**	**15 53 58.8**	**+0.4**
CNJI	**Cibinong**	**1.20**	**79**	P	**Pn**	**15 53 53.2**	**-0.8**
CNJI				S	**Sb**	**15 54 09.1**	**-0.4**
SBJI	**Serang**	**1.43**	**7**	P	**Pn**	**15 53 56.9**	**-0.3**
SBJI				S	**Sn**	**15 54 15.9**	**+0.2**
LEM	**Lembang**	**1.81**	**67**	Pn	**Pb**	**15 54 04.4**	**-0.3**
	32nm,0.3s,baz=344,slow=1.7,SNR=29						
LEM				Sn	**Sg**	**15 54 29.9**	**-0.3**
	19nm,0.3s,baz=292,slow=8.4,SNR=5.2						
LEM	**Lembang**	**1.81**	**67**	P	**Pn**	**15 54 03.2**	**+0.7**
LEM				S	**Sn**	**15 54 25.3**	**0.0**
BLSI	**Bandar Lampung**	**2.27**	**342**	P	**Pn**	**15 54 08.0**	**-0.8**
KASI	**Kota Agung**	**2.47**	**324**	P	**Pn**	**15 54 11.7**	**+0.2**
LWLI	**Liwa**	**3.13**	**323**	P	**Pn**	**15 54 19.9**	**-0.8**
UGM	**Wanagama**	**4.55**	**95**	P	**Pn**	**15 54 37.8**	**-2.4**
PCJI	**Pacitan**	**5.22**	**97**	P	**Pn**	**15 54 49.1**	**-0.3**
	0.4nm66nm,2.4s						
UBSI	**University, Be**	**5.24**	**316**	P	**Pn**	**15 54 48.8**	**-0.8**
WRA	**Warramunga Arr**	**30.15**	**117**	P	**P**	**15 59 41.2**	**-0.2**
	0.5nm,0.9s,baz=290,slow=10,SNR=5.7						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**31.24**	**124**	P	**P**	**15 59 51.2**	**+0.1**
	0.6nm,0.7s,baz=302,slow=7.7,SNR=6.4						
	0.6nm,0.7s						
STKA	**Stephens Creek**	**41.06**	**131**	P	**P**	**16 01 15.8**	**+0.9**
	2.2nm,0.7s,baz=302,slow=6.9,SNR=4.5						
	2.2nm,0.7s						

*IDC **11** 15:58:09.8±0.8, 14°.30N×116°.78E, h0km, mb3.7/8, mbtmp3.7/9, ML3.7/1, MS3.1/3, Error ellipse: s-maj=45.7km s-min=17.7km az=65.0*
*MAN **11** 15:58:12.3, 14°.39N×116°.94E, h83km, mb4.9, ML3.8, MS3.8*
ISC 11 15:58:11.0±0.7, 14°.34N±0°.05×116°.92E±0°.06, h10km, n26, σ2°64/37, mb3.5/8, 7C-6D, South China Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**3.28**	**100**	⇓*e*P	**Pn**	**15 59 02.4**	**-0.1**
LUBP				*e*S	**Sn**	**15 59 37.0**	**-4.6**
BOLP	**Bolinao**	**3.52**	**55**	⇓*e*P	**Pn**	**15 59 05.0**	**-0.8**
BOLP				*e*S	**Sn**	**15 59 41.2**	**-6.4**
MACP	**Maragondon, Ca**	**3.68**	**91**	⇑*e*P	**Pn**	**15 59 08.6**	**+0.6**
MACP				*e*S	Sn	15 59 41.3	-10
TGY	**Tagaytay City**	**3.90**	**93**	*e*P	**Pn**	**15 59 15.3**	**+4.3**
TGY				*e*S	**Sn**	**16 00 00.0**	**+3.0**
BUSP	**Coron**	**3.95**	**126**	⇓*e*P	**Pn**	**15 59 13.1**	**+1.4**
BUSP				*e*S	**Sn**	**15 59 56.2**	**-1.9**
SMPP	**San Manuel, Pa**	**4.05**	**63**	⇑*e*P	**Pn**	**15 59 12.8**	**-0.2**
SMPP				*e*S	**Sn**	**15 59 56.7**	**-3.8**
PCPH	**Palayan**	**4.21**	**73**	⇓*e*P	**Pn**	**15 59 15.1**	**-0.2**
PCPH				*e*S	**Sn**	**16 00 03.5**	**-1.1**
LQP	**Lukban**	**4.48**	**92**	⇑*e*P	**Pn**	**15 59 20.7**	**+1.5**
LQP				*e*S	**Sn**	**16 00 12.9**	**+1.3**
SAMP	**Sagada Mountai**	**4.70**	**54**	⇑*e*P	**Pn**	**15 59 21.9**	**-0.1**
SAMP				*e*S	**Sn**	**16 00 12.9**	**-3.7**
BALP	**Baler**	**4.71**	**72**	⇓*e*P	**Pn**	**15 59 23.0**	**+0.9**
BALP				*e*S	**Sn**	**16 00 15.2**	**-1.6**
CUYO	**Cuyo Island**	**5.30**	**131**	⇑*e*P	**Pn**	**15 59 30.7**	**+0.5**
CUYO				*i* S	**Sn**	**16 00 25.7**	**-5.7**
BATP	**Bataraza**	**5.58**	**171**	⇑*e*P	**Pn**	**15 59 34.8**	**+0.7**
BATP				*e*S	**Sn**	**16 00 32.7**	**-5.6**
RCP	**Roxas**	**6.32**	**115**	⇓*e*P	**Pn**	**15 59 46.5**	**+2.3**
GUIM	**Jordan**	**6.66**	**123**	⇑*e*P	**Pn**	**15 59 51.0**	**+2.1**
GUIM				*e*S	**Sn**	**16 00 60.0**	**-4.8**
DAV	**Davao City (W)**	**11.16**	**129**	LR	LR	16 05 18.4	
	comp=Z,67nm,21.9s,baz=326,slow=38						
JOW	**Kunigami**	**16.34**	**39**	LR	LR	16 08 05.3	
	comp=Z,14nm,20.0s,baz=103,slow=36						
CMAR	**Chiang Mai Arr**	**17.72**	**286**	P	**Pn**	**16 02 18.4**	**+0.4**
	0.1nm,0.3s,baz=104,slow=11,SNR=9.0						
	1.5nm,0.9s						
KSRS	**Korea Array**	**25.01**	**21**	P	**P**	**16 03 37.0**	**+1.9**
	0.5nm,0.5s,baz=189,slow=10,SNR=2.9						
	0.5nm,0.5s						
SONM	**Songino Array**	**34.52**	**347**	P	**P**	**16 05 00.1**	**+0.6**
	0.3nm,0.5s,baz=141,slow=9.3,SNR=1.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**38.14**	**153**	P	**P**	**16 05 31.2**	**+0.6**
	0.6nm,0.6s,baz=332,slow=9.7,SNR=11						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**41.27**	**156**	P	**P**	**16 05 57.5**	**+0.9**
	0.6nm,0.7s,baz=331,slow=6.3,SNR=13						
ASAR				PcP	**PcP**	**16 07 55.3**	**-0.2**
	0.6nm,0.8s,baz=340,slow=3.2,SNR=7.3						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**43.38**	**325**	P	**P**	**16 06 13.9**	**+0.3**
	0.5nm,0.8s,baz=119,slow=10,SNR=3.1						
MKAR				PcP	**PcP**	**16 08 02.0**	**-0.1**
	0.4nm,0.7s,baz=131,slow=3.7,SNR=3.7						
	0.5nm,0.8s						
HNR	**Honiara**	**48.77**	**116**	LR	LR	16 30 13.7	
	comp=Z,101nm,18.2s,baz=209,slow=39						
ARCES	**ARCESS Array B**	**77.17**	**339**	P	**P**	**16 10 05.1**	**+0.5**
	3.0nm,0.9s,baz=63,slow=5.6,SNR=3.8						
	3.0nm,0.9s						
FINES	**FINESS Array B**	**77.93**	**331**	P	**P**	**16 10 09.4**	**+0.4**
	1.5nm,0.9s,baz=64,slow=4.4,SNR=3.3						
	1.5nm,0.9s						
NOA	**NORSAR Array B**	**84.99**	**332**	P	**P**	**16 10 45.5**	**-0.9**
	0.6nm,0.7s,baz=74,slow=4.6,SNR=3.6						
	0.6nm,0.7s						

*SNET **11** 16:07:18.8±0.7, 13°.57N×90°.92W, h14km±5km, ML3.1*
*GCG **11** 16:07:26.4±0.7, 14°.00N×90°.94W, h56km±13km, MD3.7*
ISC 11 16:07:19.6±2.9, 13°.4N±0°.2×90°.9W±0°.1, h29km, n12, σ0°71/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.04**	**18**	*e*P	**Pn**	**16 07 38.4**	**0.0**
FUG	**Fuego 3**	**1.05**	**5**	*e*P	**Pn**	**16 07 38.4**	**0.0**
NBG	**Las Nubes**	**1.31**	**26**	*e*P	**Pb**	**16 07 43.1**	**-0.7**
RTR	**El Retiro**	**1.35**	**68**	*e*P	**Pn**	**16 07 42.2**	**-0.5**
SBLS	**San Blas**	**1.35**	**71**	*e*P	**Pn**	**16 07 42.0**	**-0.7**
SNJE	**San Jose**	**1.38**	**70**	*e*P	**Pn**	**16 07 42.4**	**-0.7**
STG3	**Santiaguito 3,**	**1.44**	**335**	*e*P	**Pn**	**16 07 44.0**	**0.0**
MTO3	**Montecristo**	**1.83**	**57**	*e*P	**Pn**	**16 07 49.0**	**-0.3**
MTO3				*e*S	**Sn**	**16 08 12.2**	**+0.6**
LFRS	**El Faro**	**1.84**	**83**	*e*P	**Pn**	**16 07 49.4**	**+0.1**
MRL	**Marmol**	**2.07**	**36**	*e*P	**Pn**	**16 07 53.6**	**+1.1**
P5NO	**Presa 5 de nov**	**2.20**	**74**	*e*P	**Pn**	**16 07 53.3**	**-0.8**
P5NO				IAML		16 08 05.6	
	comp=Z,119nm,0.5s						
P5NO				*e*S	**Sn**	**16 08 21.2**	**+0.8**
PACA	**Pacayal**	**2.54**	**88**	*e*P	**Pn**	**16 08 00.1**	**+1.0**

*IDC **11** 16:12:21.8±3.0, 28°.41S×136°.43E, h0km, mbtmp2.5/3, ML2.3/3, Error ellipse: s-maj=53.1km s-min=16.7km az=53.0.*
*AUST **11** 16:12:23.7±0.9, 28°.41S×136°.49E, h10km, Error ellipse: s-maj=15.9km s-min=9.4km az=41.0*
ISC 11 16:12:22.6±0.9, 28°.41S±0°.06×136°.54E±0°.06, h10km, n13, σ2°07/19, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OOD	**Oodnadatta**	**0.97**	**309**	P	**Pb**	**16 12 42.2**	**+0.7**
	baz=0.9						
OOD				S	**Sg**	**16 12 54.1**	**+0.2**
	baz=0.9						
LCRK	**Leigh Creek**	**2.50**	**145**	P	**Pn**	**16 13 05.2**	**+1.9**
	baz=2.5						
MULG	**Mulgathing**	**2.86**	**229**	P	**Pn**	**16 13 09.2**	**+1.0**
	baz=2.8						
INKA	**Innaminka**	**3.78**	**81**	P	**Pn**	**16 13 22.5**	**+1.7**
	baz=3.8						
INKA				S	**Sn**	**16 14 04.6**	**-0.7**
	baz=3.8						
BBOO	**Buckleboo**	**4.40**	**185**	P	**Pn**	**16 13 30.7**	**+1.3**
	baz=4.4						
BBOO				S	**Sn**	**16 14 19.2**	**-1.7**
	baz=4.4						
ASAR	**Alice Springs**	**5.29**	**333**	Pn	**Pn**	**16 13 42.9**	**+1.3**
	baz=152,slow=13,SNR=2.1						
ASAR				Sn	**Sn**	**16 14 40.8**	**-1.9**
	0.1nm,0.3s,baz=155,slow=22,SNR=4.7						
ASAR				Lg	Lg	16 15 06.0	
	0.1nm,0.3s,baz=151,slow=25,SNR=1.7						
	0.4nm,1.0s						
ASPA	**Alice Springs**	**5.29**	**333**	P	**Pn**	**16 13 43.5**	**+1.9**
	baz=5.3						
STKA	**Stephens Creek**	**5.58**	**129**	Pn	**Pn**	**16 13 46.7**	**+1.1**
	0.1nm,0.3s,baz=311,slow=17,SNR=2.2						
STKA				Sn	**Sn**	**16 14 46.2**	**-3.5**
	0.3nm,0.3s,baz=306,slow=16,SNR=5.7						
STKA				Lg	Lg	16 15 20.5	
	0.1nm,0.3s,baz=162,slow=20,SNR=1.3						
	2.1nm,1.0s						
STKA	**Stephens Creek**	**5.58**	**129**	P	**Pn**	**16 13 46.5**	**+0.9**
	baz=5.6						
QLP	**Quilpie**	**7.07**	**77**	P	**Pn**	**16 14 07.3**	**+1.2**
	baz=7.1						
FORT	**Forrest**	**7.75**	**250**	P	**Pn**	**16 14 15.7**	**+0.2**
	baz=7.7						
WB2	**Warramunga Arr**	**8.66**	**346**	P	**Pn**	**16 14 29.6**	**+1.5**
	baz=8.7						
WRA	**Warramunga Arr**	**8.67**	**346**	Pn	**Pn**	**16 14 29.7**	**+1.6**
	baz=166,slow=14,SNR=1.1						
WRA				Sn	**Sn**	**16 16 00.8**	**-5.1**
	0.1nm,0.3s,baz=171,slow=22,SNR=1.9						
WRA				Lg	Lg	16 16 56.3	
	0.1nm,0.3s,baz=172,slow=28,SNR=1.3						
	0.1nm,0.3s						

*IDC **11** 16:15:17.2±2.0, 47°.85N×155°.55E, h0km, mb3.7/4, mbtmp3.6/6, ML2.1/2, Error ellipse: s-maj=46.7km s-min=27.4km az=161.0*
*KRSC **11** 16:15:21.2±1.3, 48°.09N×158°.10E, h7km±39km, ML4.1*
ISC 11 16:15:17.0±1.5, 47°.8N±0°.1×156°.0E±0°.1, h10km, n28, σ2°67/30, mb3.8/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.87**	**2**	P	**Pb**	**16 16 09.4**	**+1.2**
KDTR	**Khodutka, Kamc**	**4.21**	**18**	*e*P	**Pn**	**16 16 22.5**	**+1.2**
KDTR				*e*S	**Sn**	**16 17 07.1**	**-3.4**
ASAK	**Asacha**	**4.73**	**14**	*e*P	**Pn**	**16 16 30.8**	**+2.4**
ASAK				*e*S	**Sn**	**16 17 21.6**	**-1.7**
MTVR	**Mutnovka**	**4.88**	**16**	*e*P	**Pn**	**16 16 32.2**	**+1.7**
MTVR				*e*S	**Sn**	**16 17 24.4**	**-2.6**
RUS	**Russkaya**	**4.89**	**18**	P	**Pn**	**16 16 31.3**	**+0.7**
RUS				*e*S	**Sn**	**16 17 23.4**	**-3.8**
GRL	**Gorelyy**	**4.92**	**15**	*e*P	**Pn**	**16 16 33.2**	**+2.1**
GRL				*e*S	**Sn**	**16 17 26.3**	**-1.8**
KRMR	**Karymshinskiy**	**5.20**	**14**	S	**Sn**	**16 17 34.6**	**-0.1**
PETK	**Petropavlovsk-**	**5.41**	**11**	Pn	**Pn**	**16 16 39.8**	**+2.1**
	0.2nm,0.3s,baz=174,slow=15,SNR=12						
PETK				Sn	**Sn**	**16 17 43.4**	**+3.5**
	0.3nm,0.3s,baz=105,slow=20,SNR=1.6						
	0.8nm,0.5s						
AVH	**Avacha**	**5.72**	**17**	*e*P	**Pn**	**16 16 44.5**	**+2.4**
KOK	**Koryaka**	**5.73**	**16**	P	**Pn**	**16 16 44.7**	**+2.5**
SMAR	**Somma**	**5.74**	**17**	P	**Pn**	**16 16 44.8**	**+2.4**
KRER	**Koryakskii**	**5.76**	**17**	S	**Sn**	**16 17 45.9**	**-3.1**
KRX	**Arik**	**5.80**	**16**	*e*P	**Pn**	**16 16 45.6**	**+2.4**
KRX				S	**Sn**	**16 17 47.4**	**-2.3**
SPN	**Mys Shipunski**	**5.88**	**24**	P	**Pn**	**16 16 43.5**	**-0.6**
SPN				S	**Sn**	**16 17 45.1**	**-6.3**
GNL	**Ganaly**	**6.01**	**11**	P	**Pn**	**16 16 49.8**	**+3.7**
MKZ	**Mys Kozlova**	**7.64**	**26**	P	**Pn**	**16 17 07.9**	**-0.4**
MKZ				S	Sn	16 18 25.6	-9.3
KLR	**Kul'dur**	**16.11**	**284**	Pn	**P**	**16 19 05.0**	**-1.8**
	0.2nm,0.3s,baz=100,slow=12,SNR=2.4						
USRK	**Ussuriysk Ar.**	**17.05**	**267**	Pn	**P**	**16 19 13.9**	**-3.2**
	0.1nm,0.3s,baz=67,slow=11,SNR=2.3						
	0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**29.39**	**159**	T	T	16 53 38.4	
	baz=346						
H11N1	**WAKE ISLAND Hy**	**29.40**	**159**	T	T	16 53 26.9	
	baz=346						
H11N3	**WAKE ISLAND Hy**	**29.40**	**159**	T	T	16 53 47.6	
	baz=346						
H11S1	**WAKE ISLAND Hy**	**30.52**	**160**	T	T	16 54 48.5	
	baz=337,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.52**	**160**	T	T	16 54 43.0	
	baz=337,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.53**	**160**	T	T	16 54 45.7	
	baz=337,slow=76						
SONM	**Songino Array**	**32.84**	**289**	P	**P**	**16 21 49.2**	**-1.5**
	0.2nm,0.4s,baz=76,slow=7.6,SNR=1.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**48.19**	**298**	P	**P**	**16 23 56.9**	**-0.5**
	0.7nm,0.5s,baz=65,slow=8.0,SNR=12						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**63.89**	**336**	P	**P**	**16 25 50.3**	**+0.9**
	0.6nm,0.4s,baz=46,slow=11,SNR=4.7						
	0.6nm,0.4s						
TXAR	**Lajitas Array**	**75.25**	**63**	P	**P**	**16 27 03.5**	**+3.2**
	0.3nm,0.5s,baz=298,slow=3.9,SNR=5.4						
	0.3nm,0.5s						

IDC 11 16:36:00.1±1.3, 12°.14N×144°.17E, h0km, mb3.4/3, mbtmp3.4/3, MS3.3/1, Error ellipse: s-maj=57.9km s-min=18.3km az=108.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.59**	**25**	Pn	Pb	16 36 30.2	-0.2
	36nm,0.3s,baz=153,slow=9.0,SNR=49						
GUMO				Sn	Sn	16 36 50.5	-0.4
	61nm,0.3s,baz=186,slow=19,SNR=14						
WRA	**Warramunga Arr**	**33.32**	**197**	P	P	16 42 39.5	-0.5
	0.3nm,0.6s,baz=24,slow=9.6,SNR=4.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**36.98**	**196**	P	P	16 43 11.7	+0.2
	0.3nm,0.6s,baz=19,slow=9.7,SNR=9.3						
ASAR				LR	LR	16 59 42.8	
	comp=Z,38nm,18.8s,baz=102,slow=38						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**62.06**	**317**	P	P	16 46 22.6	-0.2
	0.2nm,0.5s,baz=88,slow=8.1,SNR=4.6						
	0.2nm,0.5s						

*NEIC **11** 16:44:04.5±1.2, 7°.9S±0°.2×156°.8E±0°.1, h10km±2km, mb4.6/6, Error ellipse: s-maj=47.2km s-min=4.2km az=31.0*
*IDC **11** 16:44:15.4±2.8, 7°.57S×156°.22E, h68km±27km, mb3.9/6, mbtmp4.3/8, MS3.2/6, Error ellipse: s-maj=28.2km s-min=26.9km az=69.0*
**ISC 11 16:44:04.9±0.7, 7°.7

comp=Z,0.2nm,0.5s,baz=61,slow=9.0,SNR=2.6
PETK Petropavlovsk- 60.59 1 LR LR 17 18 39.9
comp=Z,15nm,20.2s,baz=131,slow=34
CMAR Chiang Mai Arr 62.62 295 P **P 16 54 29.8 -0.2**
comp=Z,0.4nm,0.7s,baz=114,slow=5.8,SNR=5.1
comp=Z,0.4nm,0.7s
SONM Songino Array 70.85 327 P **P 16 55 23.2 +1.1**
comp=Z,1.7nm,0.8s,baz=138,slow=6.9,SNR=12
comp=Z,1.7nm,0.8s
MK31 Makanchi Array 85.06 318 P **P 16 56 41.4 +0.4**
MK31 IAmb IAmb 16 56 42.8
comp=Z,5.8nm,0.8s
MKAR Makanchi Array 85.06 318 P **P 16 56 42.1 +1.1**
comp=Z,6.6nm,0.7s,baz=103,slow=5.9,SNR=42
comp=Z,6.6nm,0.7s
MKAR Makanchi Array 85.06 318 P **P 16 56 41.4 +0.4**
MAKZ Makanchi 85.27 318 P **P 16 56 42.5 +0.4**
ZAA0 Zalesovo Array 85.72 326 P **P 16 56 43.7 -0.4**
ZAA0 IAmb IAmb 16 56 44.8
comp=Z,3.8nm,0.7s
ZALV Zalesovo Beam 85.72 326 P **P 16 56 44.3 +0.3**
comp=Z,3.5nm,0.6s,baz=107,slow=5.5,SNR=16
comp=Z,3.5nm,0.6s

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*TIR **11** 16:48:12.4, 40.°64N×20.°69E, h4km±4km, Md2.8, Ml2.7*
*THE **11** 16:48:13.5, 40.°62N×20.°66E, h2km±1km, ML2.2/7, Error ellipse: s-maj=2.2km s-min=1.0km az=172.0*
*ATH **11** 16:48:13.5, 40.°62N×20.°71E, h13km±2km, ML2.3/7, Error ellipse: s-maj=3.1km s-min=1.3km az=101.0*
*SKO **11** 16:48:15.7, 40.°60N×20.°88E, h0km*
ISC 11 16:48:13.6±1.1, 40.°60N±0.°02×20.°71E±0.°02, h2km±9km, n39, σ1§17/59, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.07**	**65**	P	**Pg**	**16 48 13.2**	**-1.8**
KBN	baz=105			S	**Sg**	**16 48 17.4**	**+1.4**
KBN	baz=105			AMP			
NEST	**Nestorio**	**0.32**	**124**	P	**Pg**	**16 48 20.4**	**+0.7**
NEST				S	**Sb**	**16 48 25.9**	**-1.7**
NEST	comp=N,488nm,0.3s						
NEST	**Nestorio**	**0.32**	**124**	P	**Pg**	**16 48 20.4**	**+0.7**
NEST				S	**Sg**	**16 48 24.1**	**+0.2**
NEST				AML	AML	16 48 27.4	
NEST	comp=E,1243μm,0.3s			AML	AML	16 48 27.6	
NEST	comp=N,1258μm,0.2s						
LSK	**Leskovik**	**0.45**	**190**	P	**Pg**	**16 48 22.9**	**+0.7**
LSK	baz=189			S	**Sg**	**16 48 29.0**	**+0.9**
LSK	baz=189						
PENT	**Pentalofos**	**0.52**	**140**	P	**Pg**	**16 48 23.6**	**0.0**
PENT				S	**Sb**	**16 48 32.6**	**-0.8**
PENT	**Pentalofos**	**0.52**	**140**	P	**Pg**	**16 48 23.5**	**0.0**
PENT				S	**Sg**	**16 48 31.7**	**+1.4**
OHR	**Ohrid**	**0.52**	**8**	*i* Pg	**Pb**	**16 48 24.5**	**-1.0**
OHR				*i* Sg	**Sb**	**16 48 31.8**	**-1.7**
OHR				*e*Lg	Lg	16 48 33.2	
OHR	comp=E,188nm,0.4s			*e*Lg	Lg	16 48 34.5	
OHR	comp=N,78nm,0.4s						
KPRO	**Kipourio**	**0.81**	**142**	P	**Pg**	**16 48 28.9**	**-0.3**
KPRO				S	**Sb**	**16 48 41.3**	**-0.6**
KPRO	comp=N,168nm,0.4s						
KZN	**Kozani**	**0.86**	**109**	P	**Pg**	**16 48 29.8**	**-0.3**
KZN				S	**Sn**	**16 48 44.6**	**-1.4**
KZN	comp=N,262nm,0.3s						
KZN	**Kozani**	**0.86**	**109**	P	**Pg**	**16 48 29.5**	**-0.6**
KZN				S	**Sb**	**16 48 42.5**	**-0.8**
KZN				AML	AML	16 48 47.6	
KZN	comp=N,442μm,0.3s			AML	AML	16 48 49.7	
KZN	comp=E,605μm,0.4s						
SRN	**Sarande**	**0.90**	**217**	P	**Pb**	**16 48 31.6**	**-0.2**
JAN	**Janina**	**0.94**	**173**	P	**Pg**	**16 48 31.1**	**-0.6**
JAN				AML	AML	16 48 57.3	
JAN	comp=N,236μm,0.5s			AML	AML	16 48 59.6	
TIR	**Tirane**	**0.98**	**320**	*i* Pg	**Pn**	**16 48 33.8**	**-0.7**
TIR				*i* Sg	**Sn**	**16 48 51.1**	**+2.2**
KASA	**Kassiopi**	**1.03**	**215**	P	**Pg**	**16 48 33.4**	**0.0**
IGT	**Igoumenitsa**	**1.10**	**195**	P	**Pg**	**16 48 34.6**	**-0.1**
IGT				S	**Sb**	**16 48 49.8**	**-0.2**
IGT	comp=E,120nm,0.6s						
IGT	**Igoumenitsa**	**1.10**	**195**	*i* Pg	**Pn**	**16 48 35.4**	**-0.5**
IGT	**Igoumenitsa**	**1.10**	**195**	P	**Pn**	**16 48 36.0**	**+0.1**
IGT	baz=195			S	**Sn**	**16 48 54.1**	**+2.4**
IGT	baz=195						
IGT	**Igoumenitsa**	**1.10**	**195**	P	**Pg**	**16 48 34.5**	**-0.1**
IGT				S	**Sb**	**16 48 49.8**	**-0.2**
IGT				AML	AML	16 48 57.1	
IGT	comp=N,258μm,0.5s			AML	AML	16 48 59.1	
IGT	comp=E,217μm,0.6s						
PHP	**Peshkopia**	**1.11**	**350**	P	**Pg**	**16 48 33.4**	**-1.5**
PHP	baz=350			S	**Sb**	**16 48 49.8**	**-0.6**
PHP	baz=350						
PHP				AMP			
PHP	comp=N,0.3nm,0.5s,baz=350						
KEK	**Kerkira**	**1.12**	**219**	P	**Pg**	**16 48 34.5**	**-0.6**
KEK				S	**Sn**	**16 48 51.4**	**-0.9**
KEK	comp=N,82nm,0.4s						
KEK	**Kerkira**	**1.12**	**219**	P	**Pg**	**16 48 35.0**	**-0.1**
KEK				AML	AML	16 48 57.1	
KEK	comp=N,167μm,0.3s			AML	AML	16 48 58.7	
KEK	comp=E,173μm,0.5s						
THL	**Klokotos Trika**	**1.44**	**135**	P	**Pn**	**16 48 40.2**	**-0.4**
THL				S	**Sn**	**16 49 01.5**	**+1.5**
THL	comp=E,45nm,0.5s						
THL	**Klokotos Trika**	**1.44**	**135**	P	**Pn**	**16 48 39.8**	**-0.8**
THL				S	**Sb**	**16 48 58.4**	**-1.3**
THL				AML	AML	16 49 08.4	
THL	comp=E,72μm,0.5s			AML	AML	16 49 09.4	
THL	comp=N,113μm,0.7s						
LIT	**Litokhoron**	**1.45**	**109**	*i* Pn	**Pg**	**16 48 41.4**	**0.0**
LIT	**Litokhoron**	**1.45**	**109**	P	**Pn**	**16 48 40.6**	**-0.3**
TYRN	**Tyrnavos**	**1.47**	**127**	P	**Pn**	**16 48 40.1**	**-0.9**
TYRN				S	**Sg**	**16 49 01.3**	**+0.6**
TYRN	comp=N,198nm,0.5s						
STIP	**Stip**	**1.57**	**45**	*i* Pn	**Pg**	**16 48 46.8**	**+3.2**
VAY	**Valandovo**	**1.59**	**62**	*i* Pn	**Pg**	**16 48 44.4**	**+0.3**
VAY				*i* Sn	**Sg**	**16 49 08.8**	**+4.2**
VAY				*e*Lg	Lg	16 49 13.5	
VAY	comp=E,12nm,0.5s			*e*Lg	Lg	16 49 13.6	
VAY	comp=N,13nm,0.4s						
KNT	**Kendrikon**	**1.76**	**70**	P	**Pn**	**16 48 44.8**	**-0.2**
KNT	**Kendrikon**	**1.76**	**70**	*i* Pn	**Pn**	**16 48 45.2**	**+0.2**
KNT	**Kendrikon**	**1.76**	**70**	P	**Pn**	**16 48 44.6**	**-0.5**
SCTE	**Santa Cesarea**	**1.79**	**254**	P	**Pn**	**16 48 45.0**	**-0.5**
LKD2	**Lefkada island**	**1.80**	**181**	P	**Pn**	**16 48 45.7**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.92**	**145**	P	**Pn**	**16 48 47.3**	**0.0**
MAKR				AML	AML	16 49 21.9	
MAKR	comp=E,261μm,0.3s			AML	AML	16 49 27.0	
MAKR	comp=N,218μm,0.4s						
EVGI	**Lefkada island**	**1.97**	**181**	P	**Pb**	**16 48 49.6**	**-0.6**
FSK	**Fiskardo**	**2.14**	**183**	P	**Pn**	**16 48 51.1**	**+0.9**
VLS	**Valsamata**	**2.42**	**182**	P	**Pn**	**16 48 55.2**	**+1.1**
LAKA	**Lakka**	**2.55**	**157**	P	**Pb**	**16 48 58.6**	**-1.5**
KLV	**Kalavryta, Ach**	**2.78**	**156**	P	**Pb**	**16 49 02.7**	**-1.3**

IDC 11 16:48:13.6±4.2, 19.°20N×144.°37E, h49km±37km, mb3.2/4, mbtmp3.5/5, ML3.7/1, MS2.5/1, Error ellipse: s-maj=135.9km s-min=22.7km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.60**	**175**	P	Pn	16 49 35.6	+1.2
GUMO	2.1nm,0.3s,baz=338,slow=16,SNR=1.4			S	Sn	16 50 37.1	-0.3
GUMO	36nm,1.0s,baz=17,slow=19,SNR=2.3			LR	LR	16 51 35.6	
	comp=Z,42nm,18.2s,baz=22,slow=36						

7.5nm,0.3s
H11S3 WAKE ISLAND Hy 21.13 88 T T 17 13 30.1
baz=275,slow=75,SNR=6.0
H11S1 WAKE ISLAND Hy 21.14 88 T T 17 13 30.8
baz=275,slow=75,SNR=4.3
H11S2 WAKE ISLAND Hy 21.15 88 T T 17 13 32.5
baz=275,slow=75,SNR=5.1
KSRS Korea Array 23.18 325 P P 16 53 16.0 0.0
0.8nm,0.8s,baz=148,slow=7.6,SNR=3.0
0.8nm,0.8s
WRA Warramunga Arr 40.13 195 P P 16 55 45.1 +0.2
0.3nm,0.7s,baz=15,slow=8.1,SNR=6.4
0.3nm,0.7s
ASAR Alice Springs 43.81 194 P P 16 56 14.8 -0.2
0.2nm,0.8s,baz=19,slow=6.6,SNR=7.2
0.2nm,0.8s
FINES FINESS Array B 85.90 335 P P 17 00 47.9 -0.2
0.7nm,0.5s,baz=52,slow=2.3,SNR=7.2
0.7nm,0.5s

IDC 11 16:51:38.0±999.0, 64.°15N×25.°23E, h0km, Error ellipse: s-maj=548.9km s-min=186.5km az=123.0, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**9.50**	**136**	I		17 45 30.0	
	baz=328,slow=320,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**22.11**	**113**	I		19 08 41.3	
	baz=321,slow=330,SNR=0.9						
I46RU	**ZALESOVO INFRA**	**31.11**	**81**	I		20 02 40.0	
	baz=314,slow=332,SNR=0.6						

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*NEIC **11** 16:56:01.3±0.5, 29.°2S±0.°1×61.°0E±0.°2, h10km±1km, mb4.1/4, Error ellipse: s-maj=33.2km s-min=18.1km az=62.0*
*IDC **11** 16:56:01.9±0.9, 29.°34S×61.°03E, h0km, mb3.7/8, mbtmp3.8/9, ML4.4/1, MS3.3/7, Error ellipse: s-maj=27.8km s-min=25.6km az=67.0*
ISC 11 16:56:02.4±0.7, 29.°2S±0.°1×60.°7E±0.°1, h10km, n25, σ2§27/17, mb3.9/8, MS3.3/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.21**	**330**	Pn	**Pn**	**16 58 15.0**	**-0.6**
VOI	**Vohitsoka**	**14.53**	**297**		**Pn**	**16 59 29.1**	**+0.8**
ABPO	**Ambohimpanom**	**15.96**	**307**		**Pn**	**16 59 49.9**	**+2.5**
OPO	**Ambohidratompo**	**16.29**	**308**	Pn	**P**	**16 59 54.9**	**+0.2**
OPO	0.1nm,0.3s,baz=112,slow=17,SNR=9.1			Sn	**Sn**	**17 02 47.0**	**-5.6**
OPO	baz=81,slow=21,SNR=2.4 2.5nm,0.3s						
MAW	**Mawson**	**38.43**	**179**	LR	LR	17 17 06.2	
	comp=Z,56nm,18.8s,baz=314,slow=33						
MBAR	**Mbarara**	**40.36**	**309**	LR	LR	17 18 57.2	
	comp=Z,30nm,19.1s,baz=70,slow=34						
ATD	**Arta Tunnel**	**44.05**	**334**	LR	LR	17 19 12.3	
	comp=Z,37nm,20.9s,baz=108,slow=31						
H01W2	**Cape Leeuwin H**	**45.17**	**111**	T	T	17 52 08.0	
	baz=262						
H01W3	**Cape Leeuwin H**	**45.17**	**111**	T	T	17 52 14.3	
	baz=262						
H01W1	**Cape Leeuwin H**	**45.18**	**111**	T	T	17 52 21.6	
	baz=262						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**17 05 29.1**	**+0.8**
	0.7nm,0.8s,baz=234,slow=6.5,SNR=2.2 0.7nm,0.8s						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**17 05 27.8**	**-0.6**
SNAA				IAmb	IAmb	17 06 05.2	
	comp=Z,2.3nm,1.2s						
CMAR	**Chiang Mai Arr**	**60.06**	**43**	P	**P**	**17 06 10.4**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=230,slow=7.0,SNR=1.9 comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**60.93**	**180**	P	**P**	**17 06 16.0**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=284,slow=1.1,SNR=5.0 comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**60.93**	**180**	P	**P**	**17 06 14.3**	**-1.1**
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**17 06 36.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=306,slow=5.0,SNR=2.1						
VNDA				LR	LR	17 31 35.8	
	comp=Z,22nm,21.2s,baz=265,slow=33 comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**17 06 33.5**	**-2.5**
VNDA				IAmb	IAmb	17 07 16.3	
	comp=Z,2.3nm,1.4s						
ASAR	**Alice Springs**	**64.79**	**104**	P	**P**	**17 06 40.8**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=242,slow=6.1,SNR=15 comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**64.79**	**104**	P	**P**	**17 06 38.5**	**-3.2**
WRA	**Warramunga Arr**	**66.62**	**101**	P	**P**	**17 06 52.5**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=244,slow=5.8,SNR=3.0 comp=Z,0.6nm,0.8s						
GNI	**Garni**	**70.61**	**347**	LR	LR	17 36 38.1	
	comp=Z,14nm,20.1s,baz=124,slow=34						
TORD	**Torodi Ar. Bea**	**70.84**	**298**	P	**P**	**17 07 22.5**	**+2.7**
	comp=Z,0.7nm,0.8s,baz=119,slow=4.6,SNR=3.7 comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**73.09**	**338**	LR	LR	17 36 29.6	
	comp=Z,18nm,21.2s,baz=118,slow=33						
KEST	**Kesra**	**80.71**	**320**	LR	LR	17 44 43.7	
	comp=Z,23nm,18.1s,baz=227,slow=36						
ZALV	**Zalesovo Beam**	**85.42**	**14**	P	**P**	**17 08 41.9**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=225,slow=5.9,SNR=2.0 comp=Z,0.4nm,0.4s						

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*KOLA **11** 17:01:43.8, 67.°20N×19.°97E, h0km, ML2.5*
*UPP **11** 17:01:44.4±0.1, 67.°08N×20.°93E, h0km, ML2.4, Explosion*
*IDC **11** 17:01:46.0±1.1, 67.°10N×21.°19E, h0km, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=18.9km s-min=8.9km az=109.0*
*HEL **11** 17:01:45.0±0.0, 67.°08N×20.°94E, h0km, ML2.3, ML2.4(UPP), Explosion*
*NAO **11** 17:01:46.2±0.8, 67.°12N×21.°21E, ML2.9*
*BER **11** 17:01:48.5±4.7, 67.°06N×20.°88E, h0km, ML1.9, ML2.9(NAO), Suspected explosion*
ISC 11 17:01:44.7±0.7, 67.°07N±0.°02×20.°96E±0.°02, h0km, n76, σ1§47/106, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**288**	P	**Pg**	**17 01 47.5**	**-0.3**
DUNU				S	**Sg**	**17 01 49.7**	**-0.1**
DUNU	**Dundret**	**0.16**	**288**	*i* P	**Pg**	**17 01 47.5**	**-0.3**
DUNU				*i* S	**Sg**	**17 01 49.7**	**-0.1**
MASU	**Masugnsbyn**	**0.56**	**46**	P	**Pg**	**17 01 55.2**	**-0.2**
MASU	**Masugnsbyn**	**0.56**	**46**	*i* P	**Pg**	**17 01 55.2**	**-0.2**
ERTU	**Ertsjaerv**	**0.71**	**136**	P	**Pg**	**17 01 58.0**	**-0.4**
ERTU	**Ertsjaerv**	**0.71**	**136**	*e*P	**Pg**	**17 01 57.7**	**-0.6**
ERTU				*e*S	**Sb**	**17 02 09.2**	**-1.1**
PAJU	**Pajala**	**0.85**	**92**	P	**Pg**	**17 02 00.4**	**-0.5**
PAJU	**Pajala**	**0.85**	**92**	*i* P	**Pg**	**17 02 00.4**	**-0.5**
HARU	**Harads**	**0.91**	**180**	P	**Pg**	**17 02 01.5**	**-0.6**
HARU	**Harads**	**0.91**	**180**	*e*P	**Pg**	**17 02 01.5**	**-0.6**
RATU	**Laukkuluspa**	**0.92**	**326**	P	**Pg**	**17 02 01.2**	**-1.1**
RATU				S	**Sg**	**17 02 14.2**	**0.0**
RATU	**Laukkuluspa**	**0.92**	**326**	*e*P	**Pg**	**17 02 01.2**	**-1.1**
RATU				*e*S	**Sg**	**17 02 14.2**	**0.0**
SALU	**Saltoluokta**	**1.00**	**289**	P	**Pg**	**17 02 02.8**	**-1.1**
SALU	**Saltoluokta**	**1.00**	**289**	*e*P	**Pg**	**17 02 02.8**	**-1.1**
LANU	**Lannavaara**	**1.06**	**21**	P	**Pg**	**17 02 03.8**	**-1.2**
LANU	**Lannavaara**	**1.06**	**21**	*e*P	**Pg**	**17 02 03.5**	**-1.4**
NIKU	**Nikkaluokta**	**1.09**	**318**	P	**Pg**	**17 02 04.3**	**-1.2**
NIKU	**Nikkaluokta**	**1.09**	**318**	*e*P	**Pg**	**17 02 04.3**	**-1.2**
KLF	**Kolari**	**1.19**	**81**	*e*P	**Pg**	**17 02 06.5**	**-0.9**
KLF				*e*SN	**Sn**	**17 02 26.6**	**+1.4**
KOVU	**Salmi**	**1.20**	**346**	P	**Pg**	**17 02 06.2**	**-1.3**
KOVU	**Salmi**	**1.20**	**346**	*e*P	**Pg**	**17 02 06.2**	**-1.3**
KALU	**Kalix**	**1.55**	**141**	P	**Pn**	**17 02 13.0**	**-0.5**
KALU	**Kalix**	**1.55**	**141**	*e*PG	**Pn**	**17 02 13.0**	**-0.5**
KALU	baz=326			*e*SN	**Sg**	**17 02 36.5**	**+2.0**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**17 02 13.6**	**-0.5**
SJUU	**Sjulsmark**	**1.59**	**170**	*e*P	**Pn**	**17 02 13.6**	**-0.5**
TOF	**Tornio**	**1.68**	**125**	*e*PG	**Pn**	**17 02 15.2**	**0.0**
TOF				MSG		17 02 35.3	
TOF	comp=Z,42nm,0.2s			*e*SN	**Sb**	**17 02 38.0**	**+0.1**
HEF	**Hetta**	**1.69**	**36**	Pn	**Pn**	**17 02 14.9**	**-0.5**
HEF				Sn	**Sb**	**17 02 38.4**	**0.0**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 02 15.1**	**-0.4**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 02 14.9**	**-0.5**
	baz=220						
HEF				MSG		17 02 34.8	
	comp=Z,17nm,0.2s						
KIF	**Kilpisjarvi**	**1.94**	**358**	Pn	**Pb**	**17 02 19.9**	**-1.0**
KIF				Sn	**Sg**	**17 02 47.3**	**+0.3**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*P	**Pb**	**17 02 20.0**	**-0.9**
KIF				*e*S	**Sg**	**17 02 47.3**	**+0.3**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*PB	**Pb**	**17 02 19.8**	**-1.0**
KIF				MSG		17 02 43.1	
	comp=Z,26nm,0.2s						
RNF	**Rovaniemi**	**2.05**	**101**	*e*PB	**Pn**	**17 02 21.2**	**+0.8**
KTK1	**Kautokeino**	**2.13**	**23**	*e*P	**Pn**	**17 02 22.3**	**+0.8**
KTK1				IAML		17 02 56.5	
	comp=Z,12nm,0.2s						
KTK1	**Kautokeino**	**2.13**	**23**	*e*PB	**Pn**	**17 02 22.4**	**+1.0**
SGF	**Sodankyl**	**2.19**	**78**	*e*PB	**Pn**	**17 02 23.3**	**+0.9**
FAUS	**Fauske**	**2.23**	**281**	*e*P	**Pb**	**17 02 24.1**	**-1.7**
FAUS				IAML		17 02 59.7	
	comp=Z,25nm,0.3s						
STEI	**Steigen**	**2.36**	**294**	*e*P	**Pn**	**17 02 25.6**	**+1.0**
STEI				IAML		17 03 04.9	
	comp=Z,6.7nm,0.2s						
JETT	**Jettan, Norway**	**2.50**	**356**	Pn	**Pb**	**17 02 29.3**	**-1.2**
JETT				Sn	**Sg**	**17 03 04.0**	**-1.0**
JETT	**Jettan, Norway**	**2.50**	**356**	Sn	**Sg**	**17 03 04.0**	**-1.0**
JETT				IAML		17 03 08.6	
	comp=Z,27nm,0.2s						
BURU	**Burvik**	**2.51**	**176**	*e*P	**Pn**	**17 02 27.5**	**+0.9**
	baz=359						
TRO	**Tromso**	**2.68**	**345**	*e*PG	**Pb**	**17 02 33.5**	**0.0**
OBF4	**Vikkela, Lumij**	**2.83**	**141**	*e*PB	**Pn**	**17 02 32.9**	**+1.8**
OUL	**Oulu**	**2.83**	**132**	*e*PB	**Pb**	**17 02 33.5**	**-2.6**
OUL				*e*SG	**Sb**	**17 03 12.0**	**+0.7**
OBF0	**Syolatti, Pyha**	**2.92**	**151**	*e*PB	**Pb**	**17 02 34.9**	**-2.6**
ARA0	**ARCESS Array S**	**2.99**	**32**	Pn	**Pn**	**17 02 33.3**	**-0.1**
ARA0	baz=209,slow=16			Sn	**Sn**	**17 03 10.6**	**+0.7**
	baz=213,slow=22						
ARA0	**ARCESS Array S**	**2.99**	**32**	Pn	**Pn**	**17 02 33.3**	**-0.1**
ARA0	baz=209,slow=16			Sn	**Sn**	**17 03 10.6**	**+0.7**
	baz=213,slow=22						
ARA0	**ARCESS Array S**	**2.99**	**32**	*e*P	**Pn**	**17 02 33.3**	**-0.1**
	baz=212						
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn	**Pn**	**17 02 33.3**	**0.0**
	comp=Z,0.5nm,0.3s,baz=211,slow=14,SNR=49						
ARCES				Sn	**Sn**	**17 03 11.8**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=212,slow=22,SNR=7.8 comp=Z,1.6nm,0.2s						
ARCES	**ARCESS Array B**	**2.99**	**32**	P	**Pn**	**17 02 34.1**	**+0.7**
ARCES				S	**Sn**	**17 03 10.7**	**+0.7**
OUF	**Merijarvi**	**3.13**	**148**	*e*PB	**Pb**	**17 02 38.1**	**-3.1**
	baz=328						
OUF				MSG		17 03 17.3	
	comp=Z,4.8nm,0.2s						
OUF				*e*SB	**Sb**	**17 03 19.4**	**-0.4**
UMAU	**Umeaa**	**3.21**	**182**	*e*P	**Pn**	**17 02 36.9**	**+0.7**
UMAU				*e*S	**Sn**	**17 03 17.4**	**+2.4**
VRF	**Varrio**	**3.41**	**75**	*e*P	**Pn**	**17 02 40.5**	**+1.5**
MSF	**Maaselka**	**3.44**	**106**	*e*P	**Pn**	**17 02 42.0**	**+2.5**
	baz=292						
MSF				*e*SG	**Sg**	**17 03 33.5**	**-1.7**
KEV	**Kevo**	**3.50**	**37**	*e*P	**Pn**	**17 02 40.3**	**0.0**
KEV				*e*SG	**Sb**	**17 03 32.4**	**+2.0**
KU6	**Riekki**	**3.72**	**102**	*e*P	**Pn**	**17 02 44.0**	**+0.7**
	baz=291						
KU6				*e*SB	**Sb**	**17 03 33.5**	**-3.3**
HUSU	**Husum**	**3.82**	**192**	*e*P	**Pn**	**17 02 45.6**	**+0.9**
VAF	**Ylistaro**	**4.11**	**169**	*e*P	**Pn**	**17 02 49.9**	**+1.2**
	baz=348						
HEMU	**Hemsoen**	**4.59**	**197**	*e*PB	**Pn**	**17 02 59.6**	**+4.4**
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 56.2**	**-0.3**
APA0				Sn	**Sn**	**17 03 52.9**	**+1.3**
	baz=282,slow=37						
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 56.2**	**-0.3**
APA0				Sn	**Sn**	**17 03 52.9**	**+1.3**
	baz=282,slow=37						
APA0	**Apatity Array**	**4.69**	**78**	P	**Pn**	**17 03 00.5**	**+4.0**
APA0				S	**Sn**	**17 03 53.0**	**+1.5**
RMF	**Romuvaara**	**4.69**	**123**	*e*P	**Pn**	**17 02 58.8**	**+2.2**
APA	**Apatity**	**4.84**	**78**	S	**Sn**	**17 03 58.8**	**+3.4**
PRVG	**Vayda Guba**	**4.94**	**52**	P	**Pn**	**17 03 03.0**	**+3.1**
PRVG				S	**Sn**	**17 04 01.1**	**+3.4**
TERR	**Teriberka**	**5.70**	**62**	S	**Sn**	**17 04 16.7**	**+0.3**
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 03 17.9**	**+2.3**
	baz=343,slow=14						
FIA0				Sn	**Sn**	**17 04 27.7**	**+2.0**
	baz=349,slow=28						
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 03 17.9**	**+2.3**
	baz=343,slow=14						
FIA0				Sn	**Sn**	**17 04 27.7**	**+2.0**
	baz=349,slow=28						
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**17 03 17.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=345,slow=12,SNR=12						
FINES				Sn	**Sn**	**17 04 27.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=348,slow=20,SNR=9.0 comp=Z,0.3nm,0.3s						
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 03 35.9**	**+2.0**
	baz=28,slow=16						
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 03 35.9**	**+2.0**
	baz=28,slow=16						
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**17 03 34.9**	**+1.0**
	baz=38,slow=10,SNR=1.5						
NOA				Sn	**Sn**	**17 04 57.5**	**-1.0**
	baz=48,slow=21,SNR=1.7 comp=Z,0.5nm,0.8s						
NRA0	**NORESS Array S**	**7.59**	**218**	Pn	**Pn**	**17 03 37.6**	**+1.2**
	baz=26,slow=12						
NRA0	**NORESS Array S**	**7.59**	**218**	Pn	**Pn**	**17 03 37.6**	**+1.2**
	baz=26,slow=12						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**17 03 38.4**	**+0.8**
	baz=21,slow=14						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**17 03 38.4**	**+0.8**
	baz=21,slow=14						

WEL 11 17:13:28.8±1.2, 37.°S±4.°×17.°9E±.°, h13km±5km, M3.2/20, ML3.5/25, MLv3.2/20, Error ellipse: s-maj=0.0km s-min=0.0km az=82.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.61**	**223**	P	Pg	17 13 40.7	+0.1
MXZ				S	Sg	17 13 48.5	-0.2
WMGZ	**Waiomatatini S**	**0.77**	**205**	P	Pn	17 13 45.1	-0.3
PKGZ	**Pakihiroa**	**0.97**	**218**	P	Pb	17 13 47.1	-0.5
PKGZ				S	S

TSZ	Takapari Road	3.69 217	P	Pn	17 14 24.2	-1.4
WCZ	Waipu Caves	3.80 287	P	Pn	17 14 27.5	+0.5
MRZ	Mangataiboka R	4.35 215	P	Pn	17 14 32.2	-2.4
OUZ	Omahuta	4.64 293	P	Pn	17 14 39.7	+1.1
WEL	Wellington	5.22 216	P	Pn	17 14 49.2	+2.7

IDC 11 17:15:14.5±7.5,3°33S×147°68E,h0km,mb2.8/2, mbtmp2.9/2,Error ellipse: s-maj=322.3km s-min=53.4km az=107.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.03	217	P	P	17 19 59.2	-0.9
	0.2nm,0.5s,baz=40,slow=12,SNR=6.9						
	0.2nm,0.5s						
ASAR	Alice Springs	24.21	212	P	P	17 20 34.0	+0.9
	0.3nm,1.0s,baz=52,slow=8.4,SNR=5.4						
	0.3nm,1.0s						
TORD	Torodi Ar. Bea	145.00	288	PKPbc	PKPab	17 34 53.1	-1.1
	0.3nm,0.8s,baz=80,slow=1.6,SNR=1.8						

IDC 11 17:23:20.2±999.0,62°26N×29°38E,h0km,Error ellipse: s-maj=450.5km s-min=140.1km az=132.0,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	6.83	141	I		18 05 00.0	
	baz=328,slow=322,SNR=1.0						
I31KZ	AKTYUBINSK INF	19.63	114	I		19 26 09.3	
	baz=319,slow=327,SNR=2.4						
I46RU	ZALESOVO INFRA	29.57	81	I		20 26 20.0	
	baz=311,slow=331,SNR=1.6						

*IDC **11** 17:40:57.0±0.7,24°85N×96°19E,h0km,mb4.1/17, mbtmp4.1/18,ML4.1/1,MS3.1/22,Error ellipse: s-maj=33.1km s-min=12.8km az=59.0*
*NEIC **11** 17:41:01.1±1.9,24°83N±0°07×96°27E±0°08,h27km±3km, mb4.6/50,Error ellipse: s-maj=11.2km s-min=8.3km az=48.0*
*BJI **11** 17:41:04.0±0.0,24°95N×96°16E,h46km,mb4.3/16, mB4.7/6,ML4.0/2,Ms3.9/4,Ms7 3.6/4*
*NDI **11** 17:41:12.1±3.3,25°22N×95°35E,h15km±66km,mb4.5, ML4.0,mb4.6(NEIC)*

ISC 11 17:40:59.3±0.5,24°87N±0°06×96°10E±0°05,h10km,n115, σ1°55/101,mb4.4/39,MS3.0/22,2C,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOKO	MOKOCHONG	2.04	316	eP	Pn	17 41 37.8	+4.0
MOKO				IAmb	IAmb	17 42 17.9	
	comp=N,2μm,0.5s						
MOKO				IAmb	IAmb	17 42 17.9	
	comp=E,2μm,0.9s						
JORH	JORHAT	2.50	319	eP	Pn	17 41 42.9	+2.8
SILR	SILCHAR	3.00	269	ex	Pg	17 41 55.0	-1.7
ZIRO	ZIRO	3.33	323	eP	Pn	17 41 53.4	+1.7
ZIRO				IAML		17 42 49.3	
	comp=N,1μm,0.4s						
ZIRO				IAML		17 42 49.3	
	comp=E,974nm,0.5s						
TEZP	TEZPUR	3.45	301	eP	Pn	17 41 55.1	+2.0
SHL	Shillong	3.88	281		Pn	17 42 02.7	+3.5
LSA	Lhasa	6.52	319	Pn	Pn	17 42 39.6	+3.7
LSA	Lhasa	6.52	319	P	Pn	17 42 40.4	+4.6
LSA				pmax	pmax		
	comp=E,12nm,0.7s						
CHTO	Chiang Mai	6.58	156		Pn	17 42 34.6	-1.6
CM31	Chiang Mai Arr	6.90	157		Pn	17 42 41.5	+0.8
CMAR	Chiang Mai Arr	6.90	157	Pn	Pn	17 42 39.9	-0.8
	comp=E,0.9nm,0.3s,baz=332,slow=13,SNR=23						
CMAR				Pg	Pb	17 43 02.8	+3.3
	comp=E,1.2nm,0.3s,baz=339,slow=17,SNR=17						
CMAR				Lg	Lg	17 44 36.4	
	comp=E,0.5nm,0.3s,baz=324,slow=28,SNR=4.3						
CMAR				LR	LR	17 45 39.0	
	comp=E,141nm,20.6s,baz=340,slow=41						
	comp=E,2.8nm,0.4s						
CMAR	Chiang Mai Arr	6.90	157		Pn	17 42 40.4	-0.3
GTK	Tadong	7.17	292	eP	Pn	17 42 47.0	+2.6
TAPN	Taplejung	7.94	290	eP	Pn	17 42 56.5	+1.4
	comp=E,36nm,0.5s						
RAMN	Ramite	8.80	286	eP	Pn	17 43 09.7	+2.8
	comp=E,49nm,0.4s						
JIRN	Jiri	9.32	290	eP	Pn	17 43 16.1	+2.0
	comp=E,36nm,0.3s						
JIRN				eS	Sn	17 45 02.1	+2.9
BOK	Bokaro	9.37	266	eP	Pn	17 43 17.4	+2.8
GUN	Gumba	9.65	291	eP	Pn	17 43 20.0	+1.3
	comp=E,58nm,0.5s						
PKI	Pulchoki	9.97	288	eP	Pn	17 43 23.5	+0.5
	comp=E,30nm,0.5s						
PKIN	Phulchoki	9.98	288	eP	Pn	17 43 23.6	+0.5
	comp=E,26nm,0.4s						
DMN	Daman	10.24	288	eP	Pn	17 43 28.0	+1.4
	comp=E,20nm,0.5s						
GKN	Gorkha	10.73	289	eP	Pn	17 43 34.1	+0.7
	comp=E,38nm,0.4s						
DANN	Dangsing	11.57	290	eP	Pn	17 43 45.4	+0.5
	comp=E,21nm,0.5s						
ENH	Enshi	13.04	63	Pn	Pn	17 44 04.2	-0.5
PBA	Port Blair	13.52	194	Pn	Pn	17 44 11.8	+0.5
XAN	Xi'an	14.42	48	⇑P	Pn	17 44 25.8	+2.1
XAN				pP	P	17 44 35.2	+4.6
XAN				S	Sn	17 47 08.7	+5.0
XAN				pmax	pmax		
	comp=E,7.0nm,0.9s						
XAN				LR	LR		
	comp=E,370nm,15.8s						
XAN				LR	LR		
	comp=E,200nm,12.4s						
XAN				LR	LR		
	comp=E,240nm,15.1s						
JBP	Jabalpur	14.82	267	eP	Pn	17 44 28.2	-0.9
JBP				IAmb	IAmb	17 44 28.2	
	comp=Z,6.6nm,0.5s						
JBP				eS	Sn	17 47 12.3	-1.2
GTA	Gaotai	14.84	11	eP	Pn	17 44 36.3	+6.9
GTA				pP	P	17 44 41.6	+6.3
GTA				sP		17 44 44.5	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,81nm,6.0s						
GTA				LR	LR		
	comp=Z,94nm,17.8s						
GTA				LR	LR		
	comp=Z,490nm,18.5s						
GTA				LR	LR		
	comp=Z,79nm,17.4s						
PTH	Pithoragarh	14.88	292	ex	Pn	17 44 28.9	-1.1
HYBB	Hyderabad (bro	17.95	249	eP	P	17 45 19.0	+9.2
HYBB				eS	S	17 48 54.4	+18
THN	Thein Dam	19.39	298	eP	P	17 45 28.0	+2.5
HNS	HongShan	20.20	47	⇑P	Pn	17 45 41.2	+5.0
HNS				S	S	17 49 19.9	-1.1
HNS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HNS				LR	LR		
	comp=Z,210nm,13.8s						
HNS				LR	LR		
	comp=Z,180nm,12.0s						
NIL	Nilore	21.73	299	P	P	17 45 51.0	+0.1
NIL				IAmb	IAmb	17 45 55.0	
	comp=Z,18nm,0.7s						
PSI	Prapat	22.11	172	LR	LR	17 55 06.2	
	comp=Z,60nm,19.4s,baz=16,slow=38						
KSH	Kashi	22.37	316	P	P	17 45 59.2	+1.4
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TARG	Taragay, Kyrgy	22.65	322	P	P	17 46 00.7	-0.5
PALK	Pallekele	22.87	223	LR	LR	17 57 59.0	
	comp=Z,33nm,18.1s,baz=140,slow=45						
NRN	Naryn	23.49	320	P	P	17 46 09.3	-0.4
BOOM	Boomskoye usch	24.20	322	P	P	17 46 15.7	-0.6
SONM	Songino Array	24.33	17	P	P	17 46 16.4	-1.0
	comp=Z,1.2nm,0.9s,baz=190,slow=7.5,SNR=5.7						
SONM				LR	LR	17 55 48.1	
	comp=Z,23nm,20.7s,baz=198,slow=37						
	comp=Z,1.2nm,0.9s						
MK31	Makanchi Array	24.51	337	P	P	17 46 19.3	+0.5
MK31				IAmb	IAmb	17 46 23.9	
	comp=Z,6.7nm,0.7s						
MKAR	Makanchi Array	24.51	337	P	P	17 46 19.1	+0.2
	comp=Z,8.7nm,0.7s,baz=149,slow=9.1,SNR=57						
MKAR				LR	LR	17 57 07.1	
	comp=Z,46nm,20.8s,baz=162,slow=40						
	comp=Z,8.7nm,0.7s						
MKAR	Makanchi Array	24.51	337	P	P	17 46 19.4	+0.5
ULN	Ulaanbaatar	24.54	18	P	P	17 46 18.4	-0.9
MAKZ	Makanchi	24.63	336	P	P	17 46 19.7	-0.3
DRK	Karamyk	25.10	311	P	P	17 46 25.1	+0.4
DRK				IAmb	IAmb	17 46 26.8	
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	25.12	320	P	P	17 46 24.9	+0.3
	comp=Z,4.0nm,0.7s,baz=141,slow=7.2,SNR=16						
AAK				LR	LR	17 57 10.6	
	comp=Z,29nm,21.9s,baz=150,slow=39						
	comp=Z,4.0nm,0.7s						
AAK	Ala-Archa	25.12	320	P	P	17 46 25.5	+0.9
KBL	Kabul	25.34	299	P	P	17 46 27.1	+0.4
KBL				IAmb	IAmb	17 46 28.7	
	comp=Z,8.3nm,0.6s						
GAR	Garm	25.91	309	P	P	17 46 32.0	+0.2
GAR				IAmb	IAmb	17 46 33.6	
	comp=Z,28nm,1.2s						
BTK	Batken	26.04	312	P	P	17 46 33.5	+0.6
BTK				IAmb	IAmb	17 46 35.0	
	comp=Z,9.9nm,0.7s						
CHGR	Chuyangaron	26.60	308	P	P	17 46 37.9	-0.1
CHGR				IAmb	IAmb	17 47 19.8	
	comp=Z,8.8nm,1.0s						
KK31	Karatay Array	27.78	317	P	P	17 46 48.4	0.0
KKAR	Karatay Array	27.78	317	P	P	17 46 48.3	-0.1
KKAR	Karatay Array	27.78	317	P	P	17 46 48.0	-0.4
JOW	Kunigami	28.98	79	LR	LR	17 59 22.0	
	comp=Z,66nm,18.9s,baz=251,slow=38						
KURBB	Kurchatov Arra	29.07	337	P	P	17 46 59.7	-0.1
	comp=Z,3.1nm,0.6s,baz=148,slow=9.1,SNR=21						
	comp=Z,3.1nm,0.6s						
KURK	Kurchatov	29.12	337	P	P	17 47 00.3	+0.1
KSRS	Korea Array	29.84	58	LR	LR	17 59 17.4	
	comp=Z,35nm,18.3s,baz=250,slow=37						
ZAA0	Zalesovo Array	30.25	347	P	P	17 47 10.7	+0.5
ZAA0				IAmb	IAmb	17 47 15.6	
	comp=Z,6.3nm,1.1s						
ZALV	Zalesovo Beam	30.25	347	P	P	17 47 10.7	+0.5
	comp=Z,2.7nm,0.6s,baz=166,slow=7.5,SNR=13						
ZALV				LR	LR	18 00 24.1	
	comp=Z,16nm,20.9s,baz=360,slow=38						
	comp=Z,2.7nm,0.6s						
DAV	Davao City (W)	33.28	117	LR	LR	18 02 44.9	
	comp=Z,25nm,18.3s,baz=334,slow=39						
LEM	Lembang	33.44	159	LR	LR	18 01 54.9	
	comp=Z,78nm,18.1s,baz=246,slow=38						
BRVK	Borovoye	34.21	332	P	P	17 47 44.6	-0.4
BRVK				IAmb	IAmb	17 47 50.3	
	comp=Z,4.5nm,0.8s						
GEYT	Alibeck	34.70	301	P	P	17 47 50.8	+1.3
	comp=Z,5.2nm,0.8s,baz=116,slow=6.8,SNR=12						
	comp=Z,5.2nm,0.8s						
GEYT	Alibeck	34.70	301	P	P	17 47 50.0	+0.5
GEYT				IAmb	IAmb	17 47 52.7	
	comp=Z,5.4nm,0.8s						
GYA0B	ALIBECK ARRAY	34.70	301	P	P	17 47 48.9	-0.6
GYA0B				IAmb	IAmb	17 47 52.7	
	comp=Z,4.8nm,0.8s						
KLR	Kul'dur	36.90	40	LR	LR	18 04 02.6	
	comp=Z,18nm,19.1s,baz=202,slow=38						
ABKAR	Akbulak array	37.21	320	P	P	17 48 11.4	+0.7
ABKAR				IAmb	IAmb	17 48 12.2	
	comp=Z,3.5nm,0.6s						
KAPI	Kappang	37.57	139	LR	LR	18 05 20.3	
	comp=Z,28nm,19.5s,baz=300,slow=39						
MJAR	Matsushiro Arr	37.76	62	LR	LR	18 03 21.4	
	comp=Z,28nm,19.5s,baz=208,slow=36						
AKTO	Aktyubinsk	38.85	321	LR	LR	18 05 39.6	
	comp=Z,27nm,21.5s,baz=97,slow=38						
ARU	Arti	41.59	329	P	P	17 48 47.4	+0.2
	comp=Z,2.1nm,0.4s,baz=152,slow=9.0,SNR=6.6						
ARU				LR	LR	18 07 36.2	
	comp=Z,24nm,21.4s,baz=86,slow=38						
	comp=Z,2.1nm,0.4s						
ARU	Arti	41.59	329	P	P	17 48 46.6	-0.6
NRIK	Noril'sk	44.78	356	P	P	17 49 12.9	0.0
	comp=Z,2.5nm,0.6s,baz=147,slow=6.9,SNR=3.9						
	comp=Z,2.5nm,0.6s						
GNI	Garni	45.30	303	LR	LR	18 10 17.4	
	comp=Z,21nm,20.1s,baz=100,slow=39						
RAYN	Ar Rayn	45.95	279	P	P	17 49 22.5	-0.4
RAYN				IAmb	IAmb	17 49 28.2	
	comp=Z,6.6nm,1.4s						
ONI	Oni	46.45	306	P	P	17 49 27.4	+0.8
ONI				IAmb	IAmb	17 49 29.9	
	comp=Z,6.4nm,1.3s						
KBZ	Khabaz	46.96	307	P	P	17 49 30.6	+0.3
	comp=Z,1.4nm,0.8s,baz=153,slow=6.8,SNR=3.2						
	comp=Z,1.4nm,0.8s						
KIV	Kislovodsk	47.13	308	P	P	17 49 32.6	+0.7
KIV				IAmb	IAmb	17 50 04.9	
	comp=Z,7.0nm,1.1s						
GURO	Guroymak-BITLI	47.35	300	P	P	17 49 34.5	+0.7
MARD	Mardin	48.36	299	P	P	17 49 41.3	-0.3
MARD				IAmb	IAmb	17 50 22.0	
	comp=Z,4.3nm,0.5s						
BR131	Keskin Array S	53.83	302	P	P	17 50 22.7	0.0
BR131				IAmb	IAmb	17 50 53.2	
	comp=Z,3.8nm,1.1s						
BRTR	Keskin Array B	53.83	302	P	P	17 50 22.1	-0.6
	comp=Z,0.8nm,0.6s,baz=99,slow=6.2,SNR=5.6						
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	53.83	302	P	P	17 50 22.4	-0.4
LVZ	Lovozero	56.54	337	P	P	17 50 40.7	-0.9
AKASG	Malin Array Be	56.66	316	P	P	17 50 41.5	-1.2
	comp=Z,1.3nm,0.3s,baz=76,slow=6.7,SNR=16						
AKASG				LR	LR	18 18 22.1	
	comp=Z,28nm,18.7s,baz=23,slow=40						
	comp=Z,1.3nm,0.3s						
AKASG	Malin Array Be	56.66	316	P	P	17 50 40.7	-2.0
AKBB	Malin Array Si	56.66	316	P	P	17 50 41.0	-1.7
AKBB				IAmb	IAmb	17 50 41.4	
	comp=Z,9.6nm,1.3s						
ELL	Elmali	57.07	299	P	P	17 50 44.8	-1.2
WRA	Warramunga Arr	58.03	137	P	P	17 50 51.5	-1.3
	comp=Z,0.4nm,0.9s,baz=320,slow=7.6,SNR=2.6						
	comp=Z,0.4nm,0.9s						
WB2	Warramunga Arr	58.04	137	P	P	17 50 53.0	+0.1
WB2				IAmb	IAmb	17 50 59.2	
	comp=Z,7.9nm,1.4s						
FIA1	FINESS Array S	58.94	328	P	P	17 50 56.5	-2.0
FINES	FINESS Array B	58.95	328	P	P	17 50 57.5	-1.1
	comp=Z,1.9nm,0.6s,baz=98,slow=8.2,SNR=12						
	comp=Z,1.9nm,0.6s						
FINES	FINESS Array B	58.95	328	P	P	17 50 57.2	-1.4
BUR08	Bucovina Ar. S	59.40	312	P	P	17 51 00.5	-1.6
BUR08				IAmb	IAmb	17 51 12.1	
	comp=Z,9.3nm,1.4s						
KARP	Karpathos	59.45	298	P	P	17 51 02.6	0.0
PABE	Paberze	59.84	321	P	P	17 51 04.3	-0.6
ARCES	ARCESS Array B	60.16	338	P	P	17 51 05.5	-1.4
	comp=Z,3.3nm,0.9s,baz=72,slow=5.4,SNR=3.9						
ARCES				LR	LR	18 20 25.3	
	comp=Z,26nm,18.8s,baz=39,slow=39						
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	60.59	140	P	P	17 51 08.9	-1.5
	comp=Z,0.6nm,0.7s,baz=322,slow=6.8,SNR=11						
	comp=Z,0.6nm,0.7s						
NC405	NORSAR Array S	65.88	328	P	P	17 51 44.7	-0.3
NC602	NORSAR Array S	66.01	328	P	P	17 51 45.2	-0.7
NC303	NORSAR Array S	66.03	328	P	P	17 51 44.8	-1.1
NB201	NORSAR Array S	66.09	328	P	P	17 51 44.8	-1.6
NB2	NORSAR Subarra	66.13	328	P	P	17 51 45.4	-1.3
	comp=Z,0.9nm,0.6s,baz=82,slow=6.5						
NOA	NORSAR Array B	66.13	328	P	P	17 51 45.6	-1.0
	comp=Z,1.2nm,0.6s,baz=83,slow=6.3,SNR=7.2						
NOA				LR	LR	18 21 28.6	
	comp=Z,13nm,21.3s,baz=100,slow=37						
	comp=Z,1.2nm,0.6s						
NC204	NORSAR Array S	66.31	328	P	P	17 51 47.0	-0.9
VOI	Vohitsoka	66.74	230	P	P	17 51 48.0	-3.2
VOI				IAmb	IAmb	17 51 56.7	
	comp=Z,10nm,1.2s						
CLL	Collm	66.79	317	P	P	17 51 49.8	-1.2
CLL				IAmb	IAmb	17 51 50.4	
	comp=Z,6.5nm,1.4s						
GERES	GERESS Array B	66.84	315	P	P	17 51 50.0	-1.5
	comp=Z,1.1nm,0.7s,baz=72,slow=8.6,SNR=5.3						
	comp=Z,1.1nm,0.7s						
GERES	GERESS Array B	66.84	315	P	P	17 51 50.7	-0.8
FALS	False Pass	75.78	36	P	P	17 52 42.4	-2.9
H21K	Melozitna Rive	75.82	24	P	P	17 52 44.2	-1.2
H21K				IAmb	IAmb	17 53 11.2	
	comp=Z,7.7nm,1.4s						
LBTB	Lobatse	84.30	239	LR	LR	18 30 15.1	
	comp=Z,16nm,19.6s,baz=124,slow=35						
TSUM	Tsumeb	88.04	248	LR	LR	18 32 38.0	
	comp=Z,18nm,18.9s,baz=152,slow=35						

*DDA **11** 17:50:59.3±0.0,41°77N×35°96E,h15km±3km,ML2.7*
*ISK **11** 17:51:00.2,41°72N×35°87E,h23km,ML2.8/10*

ISC 11 17:50:57.6±1.5,41°84N±0°04×35°97E±0°03,h11km±11km, n31,σ0°79/47,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAMS	Samsun-Alacam	0.50	161	P	Pb	17 51 09.1	+0.6
SAMS				S	Sg	17 51 14.6	+0.6
SAMS				i AML	AML	17 51 17.0	
	comp=N,1μm,0.3s						
SAMS				i AML	AML	17 51 17.0	
	comp=E,1μm,0.5s						
DIKM	Dikmen	0.57	251	PG	Pb	17 51 10.3	+0.7
DIKM				SG	Sb	17 51 17.5	-0.2
SINO	SINOP_Merkez	0.60	288	P	Pn	17 51 11.5	-0.6
SINO				P	Pb	17 51 11.6	+1.5
SINO				S	Sn	17 51 20.4	-1.5
SINO				S	Sb	17 51 20.6	+1.9
SINO				i AML	AML	17 51 22.0	
	comp=N,296nm,0.1s						
SINO				i AML	AML	17 51 22.0	
	comp=E,294nm,0.1s						
KVT	Kavak	0.76	176	PG	Pn	17 51 13.8	-0.5
KVT				SG	Sb	17 51 23.6	+0.4
HAVZ	Havza	0.79	194	P	Pb	17 51 13.4	+0.1
HAVZ				S	Sb	17 51 24.3	+0.3
HAVZ				i AML	AML	17 51 25.0	
	comp=N,1μm,0.2s						
HAVZ				i AML	AML	17 51 25.0	
	comp=E,1μm,0.3s						
YARM	Yarimca-Ladik(	0.92	187	PG	Pn	17 51 16.5	-0.1
YARM				SG	Sb	17 51 27.9	0.0
KIZO	Buyukkizoglu-L	0.94	182	PG	Pn	17 51 16.7	-0.1
KIZO				SG	Sb	17 51 28.9	+0.5
BOYA	Sinop/Boyabat-	1.01	253	P	Pb	17 51 17.0	-0.3
BOYA				S	Sb	17 51 30.7	+0.2
BOYA				i AML	AML	17 51 32.0	
	comp=N,133nm,0.4s						
AMSY	Amasya-Merkez	1.20	185	P	Pn	17 51 21.7	+1.2
AMSY				S	Sn	17 51 37.7	+0.8
AMSY				i AML	AML	17 51 42.0	
	comp=E,187nm,0.7s						
ERBA	Erbaa	1.30	153	P	Pn	17 51 22.0	+0.2
ERBA				S	Sb	17 51 39.0	+0.3
ERBA				i AML	AML	17 51 41.0	
	comp=E,211nm,0.3s						
KAGI	orum-Kargı	1.32	239	P	Pg	17 51 23.2	+0.2
KAGI				S	Sb	17 51 37.4	-2.0
KAGI				i AML	AML	17 51 44.0	
	comp=N,94nm,0.4s						
BZK	Bozkurt	1.48	275	PN	Pn	17 51 23.6	-0.5
TOKT	Tokat	1.58	164	PN	Pb	17 51 26.5	-0.3
ORDU	Ordu-Boztepe	1.65	120	P	Pb	17 51 27.9	-0.2
COAL	Corum-Alaca	1.75	206	P	Pb	17 51 29.6	-0.1
COAL				S	Sn	17 51 49.9	-0.4
RSDY	Resadiye-TOKAT	1.77	144	PN	Pb	17 51 29.7	-0.3
CKRK	Yozgat, Cekere	1.80	192	P	Pg	17 51 31.5	-0.6
ILGA	Ilgaz	1.87	246	P	Pb	17 51 31.5	-0.4
ILGA				S	Sb	17 51 55.3	0.0
ILGA				i AML	AML	17 52 00.0	
	comp=E,50nm,0.5s						
CORM	Corum	1.94	212	PN	Pn	17 51 30.7	0.0
PELI	Kastamonı-Ara	2.07	256	P	Pn	17 51 32.1	-0.3
SVSK	Karacayir	2.07	158	PN	Pn	17 51 33.1	+0.8
YOZ	Yozgat	2.25	193	PN	Pn	17 51 35.6	+0.7
ESPY	Espiye-Giresun	2.27	113	PN	Pb	17 51 37.7	-0.9
ELDT	Eldivan	2.35	236	P	Pb	17 51 40.2	+0.2
DELI	KIRIKKALE	2.41	221	P	Pb	17 51 41.4	+0.4
CUSAR	Sarkisla-SIVAS	2.42	175	P	Pb	17 51 42.6	+1.2
SIRC	Yozgat	2.58	194	P	Pg	17 51 46.0	-1.0
SIRC				S	Sb	17 52 15.1	-0.5
YAL	Yalta	2.96	334	i S	Sn	17 52 19.8	-0.3
YAL				Sm		17 52 19.9	
	comp=N,11nm,0.2s						
YAL				Sm		17 52 19.9	
	comp=E,3.0nm,0.2s						
KAMT	Kaman	3.01	216	PN	Pn	17 51 45.9	+0.6
SUDU	Sudak	3.13	347	eS	Sn	17 52 25.9	+1.6
SUDU				Sm		17 52 28.5	
	comp=E,8.0nm,0.3s						
SUDU				Sm		17 52 28.6	
	comp=N,2.0nm,0.3s						
SEV	Sevastopol'	3.19	329	i S	Sn	17 52 24.6	-1.1
SEV				Sm		17 52 24.8	
	comp=N,2.0nm,0.2s						
SEV				Sm		17 52 24.8	
	comp=E,1.0nm,0.2s						

*AUST **11** 17:50:58.4±0.9,31°43S×138°75E,h12km,Error ellipse: s-maj=12.6km s-min=8.8km az=72.0*
*IDC **11** 17:50:58.4±6.4,31°75S×138°70E,h0km,mbtmp2.6/3, ML2.4/3,Error ellipse: s-maj=110.7km s-min=19.1km az=24.0*

ISC 11 17:50:57.2±1.0,31°35S±0°05×138°78E±0°05,h10km,n12, σ2°37/17,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRK	Leigh Creek	1.02	332	P	Pn	17 51 19.4	+1.8
	baz=1.1						
LCRK				S	Sb	17 51 33.7	+3.3
	baz=1.1						
HTT	Hallett	2.08	177	P	Pn	17 51 33.7	+1.6
	baz=2.0						
HTT				S	Sn	17 51 57.1	-1.0
	baz=2.0						
STKA	Stephens Creek	2.46	103	Pn	Pn	17 51 38.1	+0.7
	0.1nm,0.3s,baz=276,slow=13,SNR=2.5						
STKA				Pg	Pg	17 51 45.1	+0.8
	0.8nm,0.3s,baz=285,slow=20,SNR=19						
STKA				Sn	Sn	17 52 05.5	-2.0
	0.9nm,0.3s,baz=278,slow=7.9,SNR=5.0						
STKA				Lg	Lg	17 52 16.6	
	4.2nm,0.3s,baz=243,slow=20,SNR=20						
	2.1nm,0.8s						
STKA	Stephens Creek	2.46	103	P	Pn	17 51 37.9	+0.6
	baz=2.5						
BBOO	Buckleboo	2.73	237	P	Pn	17 51 42.4	+1.4
	baz=2.7						
BBOO				S	Sn	17 52 13.0	-1.1
	baz=2.7						
INKA	Innaminka	3.98	26	P	Pn	17 52 00.3	+2.0
	baz=4.1						
MULG	Mulgathing	4.20	283	P	Pn	17 52 02.2	+0.9
	baz=4.2						
OOD	Oodnadatta	4.45	322	P	Pn	17 52 06.8	+2.1
	baz=4.5						
OOD				S	Sn	17 52 54.9	-1.6
	baz=4.5						
CMSA	C

WRA	**Warramunga Arr**	**48.38 258**	P	P	18 05 27.5	-0.4
	0.4nm,0.3s,baz=84,slow=7.3,SNR=18					
	0.4nm,0.3s					
ASAR	**Alice Springs**	**48.59 253**	P	P	18 05 29.8	+0.2
	3.9nm,0.4s,baz=89,slow=7.9,SNR=161					
	3.9nm,0.4s					

*IDC **11** 18:12:01.8±3.0, 10°.56S×75°.47W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=134.9km s-min=24.2km az=40.0*

ISC 11 18:12:06.7±1.9, 10°.3S±0°.2×75°.5W±0°.2, h25km, n9, σ2§44/8, mb3.8/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**9.31**	**130**	Pg	Pn	18 14 47.6	+28
	0.2nm,0.3s,baz=322,slow=14,SNR=2.4						
LPAZ				Lg	Lg	18 16 51.6	
	0.5nm,0.3s,baz=234,slow=13,SNR=8.9						
PTLC	**Puerto Leguiza**	**10.47**	**4**	*eP*	**Pn**	**18 14 32.3**	**-3.0**
PTGL	**Punta Galera**	**11.92**	**338**	*eP*	**Pn**	**18 14 52.6**	**-2.7**
BBAC	**Balboa, Cauca**	**12.40**	**352**	*eP*	**Pn**	**18 15 05.2**	**+3.3**
GARC	**Garzon, Huila**	**12.44**	**0**	*eP*	**Pn**	**18 15 03.9**	**+1.3**
TXAR	**Lajitas Array**	**47.88**	**326**	P	**P**	**18 20 43.3**	**+0.3**
	0.6nm,0.8s,baz=155,slow=9.7,SNR=3.8						
	0.6nm,0.8s						
NVAR	**Mina Array Bea**	**62.81**	**323**	P	**P**	**18 22 31.6**	**+0.9**
	0.5nm,0.7s,baz=152,slow=8.1,SNR=3.1						
	0.5nm,0.7s						
ULM	**Lac du Bonnet**	**62.90**	**345**	P	**P**	**18 22 30.4**	**-0.2**
	3.0nm,0.6s,baz=147,slow=6.0,SNR=4.1						
	3.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**80.11**	**75**	P	**P**	**18 24 14.9**	**-0.4**
	0.9nm,0.9s,baz=259,slow=5.6,SNR=3.8						
	0.9nm,0.9s						

*VAO **11** 18:18:14.0±0.3, 21°.56S×69°.35W, h10km, mb4.2*
*IDC **11** 18:18:30.6±1.9, 21°.97S×68°.51W, h138km±47km, mb3.7/2, mbtmp3.9/3, Error ellipse: s-maj=187.2km s-min=17.2km az=92.0*
*GUC **11** 18:18:31.3±0.8, 21°.81S×68°.45W, h131km±6km, ML3.9*

ISC 11 18:18:30.5±0.7, 21°.82S±0°.04×68°.51W±0°.08, h133km±8km, n40, σ1§54/54, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.68**	**272**	⇑*iP*	**Pn**	**18 18 52.0**	**+0.8**
PB09				*eS*	**Sn**	**18 19 07.6**	**+0.7**
LVC	**Limon Verde**	**0.87**	**205**	P	**Pn**	**18 18 53.1**	**+0.1**
	339nm,0.4s,baz=23,slow=7.7,SNR=174						
LVC				S	**Sn**	**18 19 10.1**	**0.0**
	230nm,0.3s,baz=249,slow=21,SNR=58						
LVC	**Limon Verde**	**0.87**	**205**	*eP*	**Pn**	**18 18 53.0**	**+0.1**
LVC				*eS*	**Sn**	**18 19 10.0**	**0.0**
PB01	**IPOC Station P**	**1.19**	**310**	*eP*	**Pn**	**18 18 56.0**	**+0.4**
PB01				*eS*	**Sn**	**18 19 15.2**	**+0.4**
PB01				IAML		18 19 17.3	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	**1.28**	**274**	*eP*	**Pn**	**18 18 57.4**	**+0.7**
PB07				*eS*	**Sn**	**18 19 17.2**	**+0.8**
PB07				IAML		18 19 18.6	
	comp=N,2μm,0.2s						
PB06	**IPOC Station P**	**1.32**	**228**	⇑*iP*	**Pn**	**18 18 57.8**	**+0.8**
PB06				*eS*	**Sn**	**18 19 18.5**	**+1.2**
PB06				IAML		18 19 19.7	
	comp=N,1μm,0.4s						
PB02	**IPOC Station P**	**1.38**	**291**	⇑*iP*	**Pn**	**18 18 58.2**	**+0.5**
PB02				*eS*	**Sn**	**18 19 18.8**	**+0.5**
PB02				IAML		18 19 23.9	
	comp=E,2μm,0.1s						
PB15	**IPOC Station P**	**1.64**	**213**	*eP*	**Pn**	**18 19 01.4**	**+0.7**
PB15				*eS*	**Sn**	**18 19 25.1**	**+1.4**
PB08	**IPOC Station P**	**1.77**	**340**	⇓*iP*	**Pn**	**18 19 03.2**	**+0.8**
PB08				*eS*	**Sn**	**18 19 28.2**	**+1.5**
PATCX	**Punta Patache**	**1.82**	**303**	*eP*	**Pn**	**18 19 03.0**	**+0.3**
PATCX				*eS*	**Sn**	**18 19 27.2**	**0.0**
PATCX				IAML		18 19 30.7	
	comp=N,910nm,0.2s						
TA01	**Diego Aracena**	**2.00**	**308**	*eP*	**Pn**	**18 19 04.7**	**+0.1**
TA01				*eS*	**Sn**	**18 19 30.5**	**-0.2**
TA01				IAML		18 19 32.1	
	comp=E,624nm,0.4s						
HMBC	**Humberstone**	**2.00**	**320**	*eP*	**Pn**	**18 19 05.0**	**+0.2**
HMBC				*eS*	**Sn**	**18 19 31.0**	**0.0**
HMBC				IAML		18 19 32.9	
	comp=E,896nm,0.2s						
GO01	**Chusmiza**	**2.23**	**343**	*eP*	**Pn**	**18 19 07.7**	**-0.4**
GO01				*eS*	**Sn**	**18 19 36.8**	**+0.1**
GO01				IAML		18 19 40.6	
	comp=E,707nm,0.1s						
PB10	**IPOC Station P**	**2.53**	**228**	*eP*	**Pn**	**18 19 12.0**	**+0.8**
PB10				*eS*	**Sn**	**18 19 41.2**	**-1.3**
LPAZ	**La Paz**	**5.51**	**4**	P	**Pn**	**18 19 52.4**	**+1.2**
	comp=E,1.7nm,0.4s,baz=183,slow=8.0,SNR=6.9						
LPAZ				S	**Sn**	**18 20 59.0**	**+5.1**
	comp=E,2.6nm,0.9s,baz=244,slow=22,SNR=1.7						
BBRB	**Robore, Bolivi**	**8.91**	**68**	*eP*	Pn	18 20 30.6	-5.6
PTLB	**Pontes e Lacer**	**10.91**	**56**	*eP*	**Pn**	**18 20 58.3**	**-4.8**
SALV	**Santo Antonio**	**13.48**	**66**	*eP*	**Pn**	**18 21 35.2**	**-1.4**
MCR1	**Marechal Candi**	**13.57**	**104**	*eP*	**Pn**	**18 21 37.5**	**-0.2**
RODS	**Rosario do Sul**	**14.66**	**128**	*eP*	**Pn**	**18 21 52.4**	**+0.9**
FRBT	**Francisco Belt**	**14.72**	**109**	*eP*	**P**	**18 21 54.8**	**-0.1**
TRCB	**Terra Rica**	**14.73**	**97**	*eP*	**Pn**	**18 21 53.1**	**+0.7**
PDRB	**Porto dos Gac**	**15.17**	**50**	*eP*	**Pn**	**18 21 53.9**	**-4.1**
PTGB	**Pitanga**	**15.39**	**104**	*eP*	**P**	**18 22 02.1**	**-0.2**
ALGR	**Alto Alegre (B**	**15.62**	**120**	*eP*	**P**	**18 22 05.5**	**+0.6**
ITAB	**Concordia**	**15.85**	**113**	*eP*	**P**	**18 22 08.6**	**+1.3**
CPSB	**Cacapava Do Su**	**16.00**	**125**	*eP*	**Pn**	**18 22 07.9**	**-0.2**
PCMB	**Pacaembu**	**16.03**	**92**	*eP*	**P**	**18 22 09.6**	**+0.1**
CLDB	**Colider**	**16.34**	**50**	*eP*	**Pn**	**18 22 10.6**	**-1.8**
FRTB	**Fartura**	**17.57**	**99**	*eP*	**Pn**	**18 22 29.6**	**+2.3**
TIJ01	**Guaruva-PR**	**18.22**	**105**	*eP*	**Pn**	**18 22 36.5**	**+1.4**
BB19B	**Bebedouro**	**18.62**	**91**	*eP*	**Pn**	**18 22 39.5**	**-0.3**
NPGB	**Novo Progresso**	**19.42**	**43**	*eP*	**P**	**18 22 44.3**	**-2.3**
ITTB	**Itaituba**	**21.32**	**37**	*eP*	**P**	**18 23 05.1**	**-2.0**
SMTB	**Santa Maria do**	**23.90**	**61**	*eP*	**P**	**18 23 31.5**	**-0.7**
MALB	**Monte Alegre**	**24.21**	**37**	*eP*	**P**	**18 23 33.8**	**-1.2**
CAM01	**Campos-RJ**	**24.92**	**95**	*eP*	**P**	**18 23 44.8**	**+3.4**
RCBR	**Riachuelo**	**35.31**	**68**	*eP*	**P**	**18 25 14.0**	**+0.8**
DBIC	**Dimbokro**	**68.47**	**73**	P	**P**	**18 29 18.6**	**-0.2**
	comp=E,1.0nm,0.4s,baz=250,slow=7.9,SNR=1.7						
	comp=E,1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**18 30 09.6**	**-0.2**
	comp=E,0.6nm,0.3s,baz=260,slow=6.0,SNR=20						
	comp=E,0.6nm,0.3s						

*IDC **11** 18:21:07.9±0.9, 55°.02S×31°.46W, h0km, mb3.7/6, mbtmp3.8/6, MS3.3/7, Error ellipse: s-maj=42.4km s-min=21.3km az=69.0*
*NEIC **11** 18:21:11.0±2.2, 55°.3S±0°.2×32°.1W±0°.2, h10km±2km, mb4.2/9, Error ellipse: s-maj=33.2km s-min=14.0km az=33.0*

ISC 11 18:21:09.3±0.7, 55°.1S±0°.1×31°.8W±0°.1, h10km, n29, σ0§92/21, mb4.0/7, MS3.2/6, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.84**	**285**	Pn	**Pn**	**18 21 54.8**	**+0.2**
HOPE				Sn	**Sn**	**18 22 27.1**	**-1.7**
PMSA	**Palmer Station**	**18.62**	**226**	LR	LR	18 31 50.5	
	comp=Z,65nm,18.9s,baz=102,slow=34						
SNAA	**Sanae**	**20.72**	**154**	P	**P**	**18 25 49.4**	**-0.1**
	1.3nm,0.8s,baz=302,slow=12,SNR=9.3						
	1.3nm,0.8s						
SNAA	**Sanae**	**20.72**	**154**	P	**P**	**18 25 48.0**	**-1.5**
SNAA				IAmb	IAmb	18 25 57.7	
	comp=Z,6.2nm,0.9s						
MG02	**Cerro Sombrero**	**21.98**	**260**	P	**P**	**18 26 03.0**	**-0.1**
BELA	**Belgrano 2**	**22.91**	**182**	P	**P**	**18 26 13.2**	**+0.4**
BELA				IAmb	IAmb	18 26 22.1	
	comp=Z,5.9nm,1.3s						
MG05	**Puerto Natales**	**24.27**	**261**	P	**P**	**18 26 24.9**	**-1.4**
TRQA	**Tornquist**	**26.54**	**297**	P	**P**	**18 26 46.5**	**-0.6**
TRQA				IAmb	IAmb	18 27 02.7	
	comp=Z,8.5nm,1.4s						
CPUP	**Villa Florida**	**34.26**	**317**	P	**P**	**18 27 55.5**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=142,slow=9.0,SNR=3.0						
	comp=Z,1.2nm,0.5s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**18 28 03.0**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=211,slow=11,SNR=1.8						
QSPA				LR	LR	18 41 17.7	
	comp=Z,36nm,18.8s,baz=246,slow=34						
	comp=Z,0.7nm,0.7s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**18 28 03.0**	**0.0**
QSPA				IAmb	IAmb	18 28 14.1	
	comp=Z,4.5nm,1.1s						
AC05	**El Transito**	**38.05**	**298**	P	**P**	**18 28 29.5**	**+1.6**
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**18 29 43.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=200,slow=4.4,SNR=4.4						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**18 29 43.5**	**+0.6**
LPAZ	**La Paz**	**47.71**	**310**	P	**P**	**18 29 47.9**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=130,slow=3.8,SNR=8.2						
	comp=Z,1.4nm,0.4s						
LPAZ	**La Paz**	**47.71**	**310**	P	**P**	**18 29 47.8**	**+0.9**
LPAZ				IAmb	IAmb	18 30 00.8	
	comp=Z,4.0nm,0.8s						
BOSA	**Boshof**	**48.34**	**81**	LR	LR	18 46 28.5	
	comp=Z,27nm,18.3s,baz=188,slow=32						
H10N1	**ASCENSION HYDR**	**49.10**	**23**	T	T	19 22 49.3	
	baz=190						
H10N3	**ASCENSION HYDR**	**49.10**	**23**	T	T	19 22 50.4	
	baz=190,slow=74,SNR=5.9						
H10N2	**ASCENSION HYDR**	**49.12**	**23**	T	T	19 22 54.2	
	baz=190,slow=74,SNR=6.4						
LBTB	**Lobatse**	**51.31**	**78**	LR	LR	18 46 57.6	
	comp=Z,16nm,20.1s,baz=186,slow=30						
TSUM	**Tsumeb**	**51.60**	**66**	LR	LR	18 48 33.2	
	comp=Z,19nm,19.2s,baz=156,slow=32						
KOWA	**Kowa**	**73.20**	**28**	LR	LR	18 59 14.0	
	comp=Z,32nm,19.8s,baz=310,slow=31						
TORD	**Torodi Ar. Bea**	**73.62**	**34**	P	**P**	**18 32 42.0**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=189,slow=4.7,SNR=2.3						
	comp=Z,0.7nm,0.9s						
MDT	**Midelt**	**90.61**	**23**	LR	LR	19 08 27.2	
	comp=Z,28nm,20.4s,baz=138,slow=31						
FINES	**FINESS Array B**	**124.80**	**30**	PKP	**PKPdf**	**18 40 07.4**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=187,slow=7.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**144.32**	**65**	PKP	**PKPdf**	**18 40 43.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=188,slow=10.0,SNR=3.9						
ILAR	**Eielson Array**	**147.53**	**314**	PKPbc	**PKPbc**	**18 40 52.4**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=116,slow=1.5,SNR=6.3						
SONM	**Songino Array**	**153.30**	**88**	PKPbc	**PKPbc**	**18 41 06.3**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=201,slow=2.4,SNR=4.3						

*IDC **11** 18:24:59.1±2.8, 5°.91S×147°.45E, h0km, mb3.9/2, mbtmp3.9/5, ML3.8/2, MS3.0/1, Error ellipse: s-maj=58.4km s-min=21.9km az=139.0*

ISC 11 18:24:58.9±1.4, 5°.73S±0°.10×147°.4E±0°.1, h10km, n16, σ1§21/17, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.66**	**184**	Pn	**Pn**	**18 25 55.3**	**-0.3**
	22nm,0.5s,baz=41,slow=8.5,SNR=22						
PMG				Sn	**Sn**	**18 26 37.2**	**-1.6**
	8.1nm,0.3s,baz=318,slow=6.7,SNR=4.6						
PMG	**Port Moresby**	**3.66**	**184**	P	**Pn**	**18 25 55.0**	**-0.6**
PMG	**Port Moresby**	**3.66**	**184**	P	**Pn**	**18 25 55.1**	**-0.6**
KRVT	**Keravat (AS076**	**4.79**	**73**	Pn	**Pn**	**18 26 13.3**	**+2.1**
	6.0nm,0.3s,baz=33,slow=1.4,SNR=15						
	36nm,0.6s						
GENI	**Genyem**	**7.88**	**293**	P	**Pb**	**18 27 15.0**	**-0.7**
COEN	**Coen**	**9.18**	**207**	P	**Pn**	**18 27 13.9**	**+2.4**
KDU	**Kakadu**	**16.29**	**244**	P	**P**	**18 28 52.4**	**+1.4**
WRAB	**Tennant Creek**	**19.00**	**221**	P	**Pn**	**18 29 20.9**	**-0.7**
WRA	**Warramunga Arr**	**19.01**	**221**	P	**Pn**	**18 29 21.1**	**-0.7**
	0.3nm,0.3s,baz=47,slow=11,SNR=11						
	1.9nm,0.9s						
AS01	**Alice Springs**	**22.05**	**215**	P	**P**	**18 29 54.3**	**+0.3**
ASAR	**Alice Springs**	**22.08**	**215**	P	**P**	**18 29 53.5**	**-0.9**
	2.6nm,0.6s,baz=53,slow=8.4,SNR=71						
ASAR				S	**S**	**18 33 59.3**	**+1.3**
	1.0nm,0.9s,baz=32,slow=19,SNR=5.5						
	2.6nm,0.6s						
OOD	**Oodnadatta**	**24.62**	**206**	P	**P**	**18 30 19.4**	**-0.1**
LCRK	**Leigh Creek**	**26.07**	**198**	P	**P**	**18 30 31.9**	**-0.8**
WRKA	**Warakurna**	**26.55**	**222**	P	**P**	**18 30 37.3**	**+0.1**
STKA	**Stephens Creek**	**26.58**	**191**	P	**P**	**18 30 38.0**	**+0.7**
	1.8nm,0.6s,baz=30,slow=8.1,SNR=3.4						
	1.8nm,0.6s						
KAPI	**Kappang**	**27.56**	**270**	LR	LR	18 43 29.8	
	comp=Z,27nm,18.3s,baz=64,slow=40						

*IDC **11** 18:40:31.4±5.6, 21°.93S×68°.50W, h0km, mb3.9/1, mbtmp3.6/2, ML3.2/1, Error ellipse: s-maj=164.0km s-min=56.1km az=70.0*
*GUC **11** 18:40:47.3±0.5, 20°.85S×68°.93W, h106km±3km, ML3.6*

ISC 11 18:40:45.7±1.1, 20°.84S±0°.05×68°.99W±0°.10, h119km±9km, n13, σ0§62/21, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.51**	**246**	*eP*	**Pn**	**18 41 03.4**	**-0.3**
PB01				*i* S	**Sn**	**18 41 16.2**	**-1.0**
PB01				IAML		18 41 18.5	
	comp=E,2μm,0.2s						
PB08	**IPOC Station P**	**0.71**	**347**	*eP*	**Pn**	**18 41 05.7**	**+0.3**
PB08				*i* S	**Sn**	**18 41 20.0**	**-0.3**
PB08				IAML		18 41 21.1	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**0.97**	**240**	*eP*	**Pn**	**18 41 07.8**	**+0.4**
PB02				*i* S	**Sn**	**18 41 23.8**	**-0.1**
PB02				IAML		18 41 24.6	
	comp=N,3μm,0.3s						
PB09	**IPOC Station P**	**0.98**	**194**	*eP*	**Pn**	**18 41 08.3**	**+0.6**
PB09				*i* S	**Sn**	**18 41 24.4**	**+0.1**
PATCX	**Punta Patache**	**1.09**	**271**	*eP*	**Pn**	**18 41 09.0**	**+0.4**
PATCX				*i* S	**Sn**	**18 41 25.9**	**0.0**
PATCX				IAML		18 41 29.0	
	comp=N,793nm,0.1s						
TA01	**Diego Aracena**	**1.15**	**283**	*eP*	**Pn**	**18 41 09.0**	**-0.1**
TA01				*i* S	**Sn**	**18 41 26.9**	**0.0**
TA01				IAML		18 41 29.0	
	comp=E,1μm,0.3s						
GO01	**Chusmiza**	**1.18**	**351**	*eP*	**Pn**	**18 41 10.6**	**+0.6**
GO01				*i* S	**Sn**	**18 41 28.7**	**+0.4**
GO01				IAML		18 41 30.8	
	comp=N,3μm,0.3s						
TA02	**Huaiquique**	**1.21**	**298**	*eP*	**Pn**	**18 41 10.2**	**+0.5**
TA02				*eS*	**Sn**	**18 41 28.5**	**+0.5**
TA02				IAML		18 41 29.5	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**1.22**	**223**	*eP*	**Pn**	**18 41 10.4**	**+0.4**
PB07				*i* S	**Sn**	**18 41 28.4**	**-0.2**
PB07				IAML		18 41 29.5	
	comp=N,1μm,0.2s						
PB04	**IPOC Station P**	**1.84**	**216**	*eP*	**Pn**	**18 41 18.2**	**+0.9**
LPAZ	**La Paz**	**4.60**	**10**	Pn	Pn	18 41 56.8	+3.0
	comp=N,0.4nm,0.3s,baz=186,slow=10,SNR=7.3						
	comp=N,0.9nm,0.3s						
TORD	**Torodi Ar. Bea**	**77.20**	**71**	P	**P**	**18 52 27.4**	**+0.4**
	comp=N,0.5nm,0.5s,baz=256,slow=5.1,SNR=8.4						
	comp=N,0.5nm,0.5s						
MKAR	**Makanchi Array**	**145.14**	**35**	PKPbc	**PKiKP**	**19 00 11.5**	**-1.6**
	comp=N,0.2nm,0.5s,baz=292,slow=4.5,SNR=1.7						

DJA 11 18:46:04.7±0.4, 1°.5±3.3°×131°.1E±°, h10km±2km, M3.5/12, mb3.5/1, MLv3.6/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**0.06**	**156**	P	Pg	18 46 07.9	+1.0
SIJI				S	Sg	18 46 09.9	+1.4
FAKI	**Fak Fak**	**2.33**	**154**	P	Pn	18 46 43.3	+0.2
RKPI	**Ransiki, Papua**	**3.02**	**103**	Pg	Pg	18 47 02.3	-0.3
MSAI	**Masohi**	**3.42**	**222**	P	Pn	18 46 57.7	-0.4
LBMI	**Labuha**	**3.74**	**273**	P	Pn	18 47 03.3	+0.7
KRAI	**Karang Ratu**	**3.78**	**229**	P	Pn	18 47 04.0	+0.9
BNDI	**Bandanaira**	**3.92**	**200**	P	Pn	18 47 04.5	-0.5
AAI	**Ambon**	**4.17**	**227**	P	Pn	18 47 08.8	-0.7
GAMI	**Galela, Maluku**	**4.34**	**307**	P	Pn	18 47 11.0	+0.2
NLAI	**Namlea**	**4.79**	**240**	P	Pn	18 47 16.2	-0.8
SANI	**Sanana**	**5.39**	**257**	P	Pn	18 47 25.1	-0.2

IDC 11 18:53:03.4±2.4, 7°.69S×127°.48E, h0km, mb3.2/1, mbtmp3.0/3, ML3.1/2, Error ellipse: s-maj=284.9km s-min=33.7km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.88**	**152**	Pn	Pn	18 56 20.9	-0.6
	0.1nm,0.3s,baz=329,slow=13,SNR=7.6						
WRA				Sn	Sn	18 58 43.9	-13
	0.2nm,0.3s,baz=333,slow=22,SNR=6.2						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.04**	**160**	P	Pn	18 57 03.9	+0.5
	baz=340,slow=9.9,SNR=6.5						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**67.46**	**328**	P	P	19 04 01.1	0.0
	0.1nm,0.5s,baz=117,slow=7.2,SNR=1.7						
	0.1nm,0.5s						

*GCG **11** 18:53:48.7±0.4, 13°.19N×90°.92W, h50km±105km, MD3.3*
*SNET **11** 18:53:50.3±0.7, 13°.30N×90°.83W, h19km±5km, ML2.6*

ISC 11 18:53:49.3±2.8, 13°.3N±0°.1×90°.90W±0°.09, h27km±18km, n10, σ1§10/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.15**	**14**	*eP*	**Pn**	**18 54 10.5**	**+0.6**
FUG	**Fuego 3**	**1.17**	**3**	*eP*	**Pn**	**18 54 10.4**	**+0.3**
FUG				*eS*	**Sn**	**18 54 23.7**	**-1.6**
NUBE	**Las Nubes**	**1.25**	**60**	*eP*	**Pn**	**18 54 11.5**	**+0.2**
NUBE				*eS*	**Sb**	**18 54 27.6**	**-0.7**
CEVE	**Cerro Verde**	**1.36**	**66**	*eP*	**Pb**	**18 54 13.4**	**-0.8**
CEVE				*eS*	**Sb**	**18 54 32.3**	**+1.1**
CEVE				IAML		18 54 33.9	
	comp=Z,314nm,0.2s						
SBLS	**San Blas**	**1.36**	**65**	*eP*	**Pb**	**18 54 13.4**	**-0.9**
SBLS				*eS*	**Sb**	**18 54 31.9**	**+0.4**
NBG	**Las Nubes**	**1.41**	**22**	*eP*	**Pb**	**18 54 15.7**	**+0.5**
NBG				*eS*	**Sb**	**18 54 34.2**	**+1.3**
STG3	**Santiaguito 3,**	**1.57**	**336**	*eP*	**Pn**	**18 54 15.9**	**+0.3**
STG3				*eS*	**Sb**	**18 54 37.2**	**-0.2**
LFRS	**El Faro**	**1.82**	**79**	*eP*	**Pn**	**18 54 20.0**	**+0.9**
LFRS				*eS*	**Sb**	**18 54 42.7**	**-1.7**
MTO3	**Montecristo**	**1.87**	**53**	*eP*	**Pn**	**18 54 20.9**	**+1.1**
MTO3				IAML		18 54 46.6	
	comp=Z,24nm,0.2s						
CNCH	**Conchagua**	**2.98**	**90**	*eP*	**Pn**	**18 54 36.5**	**+1.5**

*DDA **11** 18:57:59.3±0.0, 40°.61N×43°.72E, h7km±3km, ML2.5*
*ISK **11** 18:58:00.4, 40°.63N×43°.70E, h6km, ML2.3/7*
*TIF **11** 18:58:00.2, 40°.63N×43°.71E, h11km±1km*

ISC 11 18:58:00.2±0.9, 40°.64N±0°.02×43°.72E±0°.02, h8km±7km, n34, σ1§13/57, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAK	**Akyaka**	**0.10**	**297**	P	**Pg**	**18 58 02.9**	**+0.1**
EAK				S	**Sg**	**18 58 05.3**	**+0.8**
EAK				*i* AML	AML	18 58 06.0	
	comp=N,5μm,0.3s						
DIGO	**Kars**	**0.35**	**230**	P	**Pg**	**18 58 06.7**	**-0.4**
DIGO				S	**Sg**	**18 58 11.4**	**-0.4**
DIGO				*i* AML	AML	18 58 12.0	
	comp=N,705nm,0.3s						
DIGO				*i* AML	AML	18 58 21.0	
	comp=E,595nm,0.5s						
KARS	**Kars**	**0.49**	**269**	PG	**Pb**	**18 58 10.4**	**-0.8**
KARS				SG	**Sg**	**18 58 16.7**	**+0.5**
AZMN	**Azmana**	**0.75**	**334**	P	**Pg**	**18 58 13.2**	**-1.6**
AZMN				S	**Sg**	**18 58 23.7**	**-0.8**
TASB	**TASBURUN-IGDIR**	**0.77**	**149**	PG	**Pb**	**18 58 15.5**	**-0.3**
TASB				SG	**Sb**	**18 58 26.6**	**+0.2**
DMNI	**Dmanisi**	**0.77**	**27**	P	**Pg**	**18 58 15.7**	**+0.6**
DMNI				S	**Sb**	**18 58 26.8**	**+0.1**
AKH	**Akhalkalaki**	**0.79**	**347**	PG	**Pb**	**18 58 16.2**	**-0.1**
AKH	**Akhalkalaki**	**0.79**	**347**	P	**Pb**	**18 58 16.1**	**-0.2**
IGDI	**IGDIR**	**0.82**	**161**	P	**Pg**	**18 58 15.1**	**-0.9**
IGDI				S	**Sg**	**18 58 25.3**	**-1.3**
IGDI				*i* AML	AML	18 58 27.0	
	comp=N,134nm,0.3s						
IGDI				*i* AML	AML	18 58 27.0	
	comp=E,222nm,0.4s						
GNI	**Garni**	**0.92**	**122**	PG	**Pb**	**18 58 18.7**	**+0.2**
GNI				SG	**Sb**	**18 58 31.9**	**+1.0**
KOTA	**Agri, Merkez-K**	**0.93**	**206**	P	**Pn**	**18 58 19.5**	**-0.2**
BRNG	**Burnasheti**	**0.98**	**5**	P	**Pb**	**18 58 20.2**	**+0.6**
BRNG				S	**Sn**	**18 58 34.6**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.05**	**266**	PG	**Pg**	**18 58 20.2**	**-0.2**
SENK				SG	**Sb**	**18 58 35.4**	**+0.7**
DYDN	**Diyadin**	**1.10**	**181**	P	**Pg**	**18 58 20.9**	**-0.4**
BKRG	**Bakuriani**	**1.13**	**352**	P	**Pb**	**18 58 22.3**	**+0.2**
BKRG				S	**Sn**	**18 58 38.6**	**+0.4**
EPOS	**Posof**	**1.15**	**319**	P	**Pg**	**18 58 21.2**	**-1.0**
EPOS				S	**Sg**	**18 58 36.1**	**-0.9**
EPOS				*i* AML	AML	18 58 38.0	
	comp=N,103nm,0.4s						
AGRB	**Hanur-Agry**	**1.20**	**208**	PN	**Pn**	**18 58 25.7**	**+2.2**
EATA

ϕ_0=225.00000°, δ27.00000°, λ105.00000°. NP2: ϕ_0=28.00000°, δ64.00000°, λ82.00000°. Principal axes: T 3.0826, Plg70.0000°, Azm282.0000°; N 0.0846, Plg7.0000°, Azm32.0000°; P -3.1673, Plg18.0000°, Azm124.0000°;

ISC 11 19:02:25.8±0.3, 42°31N±0°.03×143°.09E±0°.03, h55^{km}±1^{km}, h55^{km}:pP-P, n1301, σ1941/1261, mb5.2/357, MS4.1/97, 106C-50D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTHR	**Tokachihiroo**	**0.16**	**95**	*i* P			**Pn**	**19 02 35.3**	**+0.9**
JTHR				*eS*			**Sn**	**19 02 41.9**	**+1.2**
JTHR	**Tokachihiroo**	**0.16**	**95**	A			A	19 02 35.3	
comp=E,52nm,1.1s,comp=E,54nm,0.5s									
JNBK	**Urakawa-nobuka**	**0.25**	**264**	⇓*i*P			**Pn**	**19 02 35.6**	**+0.6**
JNBK	**Urakawa-nobuka**	**0.25**	**264**	A			A	19 02 35.6	
comp=E,796nm,1.3s,comp=E,798nm,0.6s									
JEM	**Erimo**	**0.29**	**170**	*i* P			**Pn**	**19 02 36.6**	**+1.2**
JEM	**Erimo**	**0.29**	**170**	A			A	19 02 36.6	
comp=E,183nm,1.5s,comp=E,175nm,1.8s									
ERM	**Erimo**	**0.30**	**170**				**Pn**	**19 02 36.5**	**+1.1**
ERM					Sn		**Sn**	**19 02 42.6**	**+0.4**
ERM	**Erimo**	**0.30**	**170**	*ce*PN			**Pn**	**19 02 36.7**	**+1.3**
ERM	**Erimo**	**0.30**	**170**	P			**Pn**	**19 02 37.2**	**+1.8**
JCH	**Churui**	**0.37**	**33**	*i* P			**Pn**	**19 02 37.0**	**+1.0**
JCH				*eS*			**Sn**	**19 02 44.6**	**+1.3**
JCH	**Churui**	**0.37**	**33**	A			A	19 02 37.0	
comp=E,94nm,1.5s,comp=E,201nm,1.4s									
JSHD	**Hidakashinhida**	**0.47**	**283**	⇓*i*P			**Pn**	**19 02 38.0**	**+1.0**
JSHD	**Hidakashinhida**	**0.47**	**283**	A			A	19 02 38.0	
comp=E,652nm,2.0s,comp=E,448nm,0.8s									
JBT2	**Biratori 2**	**0.71**	**312**	⇓*i*P			**Pn**	**19 02 40.8**	**+0.9**
JBT2	**Biratori 2**	**0.71**	**312**	A			A	19 02 40.8	
comp=E,111nm,1.3s,comp=E,130nm,0.6s									
JOB	**Onbets**	**0.81**	**42**	*i* P			**Pn**	**19 02 43.1**	**+1.9**
JOB				*eS*			**Sn**	**19 02 55.3**	**+2.8**
JOB	**Onbets**	**0.81**	**42**	A			A	19 02 43.1	
comp=E,88nm,1.7s,comp=E,152nm,2.7s									
JIAM	**Iburiatsuma**	**0.92**	**290**	⇓*i*P			**Pn**	**19 02 44.6**	**+2.0**
JIAM	**Iburiatsuma**	**0.92**	**290**	A			A	19 02 44.6	
comp=E,279nm,0.8s,comp=E,283nm,0.5s									
JFR	**Furan**	**0.93**	**337**	⇓*i*P			**Pn**	**19 02 42.7**	**-0.1**
JFR	**Furan**	**0.93**	**337**	A			A	19 02 42.7	
comp=E,77nm,1.2s,comp=E,53nm,0.6s									
JAR	**Ashorobuto**	**1.11**	**27**	*i* P			**Pn**	**19 02 46.1**	**+1.0**
JAR				*eS*			**Sn**	**19 03 00.2**	**+0.8**
JAR	**Ashorobuto**	**1.11**	**27**	A			A	19 02 46.1	
comp=E,46nm,0.5s,comp=E,42nm,1.4s									
JEW	**Eniwo**	**1.32**	**294**	Pn			**Pn**	**19 02 48.6**	**+0.7**
JEW					Sn		**Sn**	**19 03 07.5**	**+3.0**
JEW	**Eniwo**	**1.32**	**294**	⇓*i*P			**Pn**	**19 02 49.3**	**+1.4**
JEW				⇓*eS*			**Sn**	**19 03 05.6**	**+1.1**
JEW	**Eniwo**	**1.32**	**294**	A			A	19 02 49.3	
comp=E,181nm,1.5s,comp=E,128nm,1.4s									
JAB	**Ashibetsu**	**1.36**	**332**	⇓*i*P			**Pn**	**19 02 50.1**	**+1.7**
JAB	**Ashibetsu**	**1.36**	**332**	A			A	19 02 50.1	
comp=E,73nm,2.2s,comp=E,59nm,3.2s									
JAK	**Akkeshi**	**1.37**	**59**	A			A	19 02 50.7	
comp=E,69nm,2.2s,comp=E,40nm,0.8s									
AKK	**Akkeshi**	**1.48**	**61**	*i* P			**Pn**	**19 02 51.0**	**+1.0**
AKK				*i* S			**Sn**	**19 03 09.3**	**+1.1**
JNB	**Noboribetsu**	**1.53**	**277**	A			A	19 02 52.2	
comp=E,24nm,1.5s,comp=E,18nm,1.0s									
JISS	**Ishikarishitsu**	**1.56**	**309**	A			A	19 02 52.6	
comp=E,93nm,1.0s,comp=E,84nm,0.9s									
JKB	**Kayabe**	**1.59**	**255**	A			A	19 02 53.1	
comp=E,84nm,1.0s,comp=E,73nm,0.9s									
JKK2	**Kamakawa 2**	**1.59**	**351**	A			A	19 02 53.2	
comp=E,21nm,4.0s,comp=E,21nm,0.6s									
JAHD	**Aomorihigashid**	**1.67**	**232**	A			A	19 02 54.5	
comp=E,162nm,0.4s,comp=E,159nm,0.6s									
JMP	**Maruseppu**	**1.71**	**7**	A			A	19 02 55.1	
comp=E,62nm,2.3s,comp=E,26nm,0.8s									
JKHN	**Kushirohamanak**	**1.71**	**62**	A			A	19 02 55.6	
comp=E,20nm,3.0s,comp=E,28nm,2.3s									
JHR	**Hokuryu**	**1.75**	**326**	A			A	19 02 55.4	
comp=E,147nm,1.1s,comp=E,122nm,1.1s									
JNK	**Nakash**	**1.75**	**43**	A			A	19 02 56.0	
comp=E,24nm,1.6s,comp=E,13nm,0.7s									
JTKR	**Abashiri--Toko**	**1.77**	**20**	A			A	19 02 56.0	
comp=E,33nm,1.4s,comp=E,18nm,1.8s									
JOT	**Ohata**	**1.78**	**239**	A			A	19 02 56.0	
comp=E,29nm,1.8s,comp=E,26nm,1.4s									
JARK	**Aomorirokkasho**	**1.83**	**225**	A			A	19 02 56.8	
comp=E,26nm,1.8s,comp=E,43nm,1.0s									
ASAJ	**Asahikawa**	**1.84**	**349**	A			A	19 02 56.9	
comp=E,23nm,5.4s,comp=E,15nm,2.5s									
JYM2	**Yakumo 2**	**2.03**	**266**	A			A	19 02 59.4	
comp=E,16nm,2.4s,comp=E,27nm,0.6s									
JNSB	**Nemuroshibetsu**	**2.03**	**43**	A			A	19 02 60.0	
comp=E,26nm,1.4s,comp=E,39nm,4.1s									
JSR	**Shiriuchi**	**2.14**	**250**	A			A	19 03 01.0	
comp=E,17nm,2.1s,comp=E,15nm,3.1s									
JTM	**Tenmabayashi**	**2.15**	**226**	Pn			**Pn**	**19 02 59.6**	**+0.5**
JTM					Sn		**Sn**	**19 03 25.1**	**+0.5**
JTM	**Tenmabayashi**	**2.15**	**226**	A			A	19 03 01.3	
comp=E,28nm,1.5s,comp=E,22nm,3.4s									
JSK	**Shakotan**	**2.19**	**299**	A			A	19 03 01.6	
comp=E,18nm,2.0s,comp=E,18nm,1.5s									
JRA	**Rausu**	**2.21**	**42**	A			A	19 03 02.5	
comp=E,23nm,1.8s,comp=E,15nm,2.7s									
NMR	**Nemuro--Hokkai**	**2.21**	**60**	⇑*i*PN			**Pn**	**19 03 00.2**	**+0.2**
NMR				*i* S			**Sn**	**19 03 25.4**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.21**	**60**	*i* P			**Pn**	**19 03 00.3**	**+0.2**
NMR				*i* S			**Sn**	**19 03 25.9**	**-0.3**
NEM2	**Nemuro 2**	**2.22**	**61**	A			A	19 03 02.8	
comp=E,10.0nm,3.5s,comp=E,7.0nm,3.3s									
JANG	**Nango**	**2.27**	**212**	A			A	19 03 03.1	
comp=E,13nm,0.9s,comp=E,14nm,2.9s									
JSH	**Shimam**	**2.28**	**280**	A			A	19 03 02.9	
comp=E,11nm,3.1s,comp=E,8.0nm,3.8s									
JSS	**Shosan**	**2.28**	**337**	A			A	19 03 03.0	
comp=E,23nm,2.5s,comp=E,21nm,3.0s									
JKEN	**Kujiedanarisaw**	**2.34**	**207**	A			A	19 03 04.3	
comp=E,35nm,0.4s,comp=E,41nm,0.8s									
JSI2	**Shiura 2**	**2.36**	**239**	A			A	19 03 04.3	
comp=E,53nm,1.5s,comp=E,38nm,1.2s									
JHST	**Hiyamasetana**	**2.38**	**274**	A			A	19 03 04.3	
comp=E,24nm,2.0s,comp=E,22nm,1.6s									
RUSJ	**Misakicho**	**2.39**	**41**	⇓*i*PN			**Pn**	**19 03 05.1**	**+2.6**
RUSJ				*eS*			**Sn**	**19 03 35.4**	**+4.8**
JOMM	**Oshimamatsumae**	**2.43**	**252**	A			A	19 03 05.1	
comp=E,8.0nm,3.5s,comp=E,8.0nm,1.9s									
JYG	**Yagishiri**	**2.44**	**331**	A			A	19 03 05.2	
comp=E,12nm,3.5s,comp=E,14nm,3.8s									
JHHS	**Hirosakihyakuz**	**2.63**	**232**	A			A	19 03 08.2	
comp=E,41nm,1.1s,comp=E,46nm,1.6s									
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*d i*PN			**Pn**	**19 03 08.2**	**+2.0**
YUK				*i* S			**Sn**	**19 03 39.3**	**+2.0**
YUK					pmax		pmax		
comp=Z,2μm,0.2s									
YUK					pmax		pmax		
comp=E,652nm,0.1s									
YUK					smax		smax		
comp=N,6μm,0.7s									
YUK					smax		smax		
comp=E,8μm,1.3s									
YUK					smax		smax		
comp=E,5μm,0.2s									
YUK					smax		smax		
comp=N,9μm,0.3s									
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*i* P			**Pn**	**19 03 08.3**	**+2.0**
YUK					AMB		AMB	19 03 10.4	
comp=N,2μm,0.2s									
YUK				*i* S			**Sn**	**19 03 39.3**	**+2.0**
YUK					A		A	19 03 40.5	
comp=N,6μm,1.0s									
YUK					A		A	19 03 40.5	
comp=N,8μm,1.0s									
YUK					A		A	19 03 48.3	
comp=N,9μm,0.4s									
YUK					A		A	19 03 48.3	
comp=N,5μm,0.4s									
JKZ	**Kuzumaki**	**2.67**	**210**	A			A	19 03 08.9	
comp=N,12nm,0.3s,comp=N,12nm,0.8s									
JOSM	**Okushiri--Mats**	**2.69**	**266**	A			A	19 03 08.8	
comp=N,9.0nm,4.4s,comp=N,9.0nm,3.1s									
JAH	**Hinai**	**2.81**	**222**	A			A	19 03 10.8	
comp=N,12nm,2.2s,comp=N,10.0nm,1.9s									
JIW	**Iwasaki**	**2.88**	**235**	A			A	19 03 11.7	
comp=N,12nm,3.1s,comp=N,10.0nm,0.9s									
JNTW	**Noshirotokiwa**	**3.00**	**228**	A			A	19 03 13.4	
comp=N,35nm,2.1s,comp=N,25nm,1.3s									
JSZI	**Iwateshizukuis**	**3.03**	**213**	A			A	19 03 14.0	
comp=N,18nm,2.1s,comp=N,18nm,3.4s									
JWK2	**Keihoku**	**3.13**	**344**	A			A	19 03 15.1	
comp=N,9.0nm,3.4s,comp=N,7.0nm,3.4s									
JOM	**Ohasama**	**3.14**	**206**	A			A	19 03 15.6	
comp=N,9.0nm,0.6s,comp=N,11nm,0.4s									
OFUJ	**Ofunato**	**3.40**	**199**	A			A	19 03 19.3	
comp=N,6.0nm,1.0s,comp=N,4.0nm,2.4s									
JRBN	**Rebuntou**	**3.44**	**336**	A			A	19 03 19.4	
comp=N,3.0nm,3.7s,comp=N,4.0nm,3.9s									
JRG	**Rokugo**	**3.45**	**213**	A			A	19 03 19.9	
comp=N,11nm,1.9s,comp=N,7.0nm,2.1s									
JOG3	**Oga3**	**3.85**	**233**	A			A	19 03 19.6	
comp=N,13nm,1.8s,comp=N,10.0nm,1.4s									
JYK	**Kaneyama**	**3.97**	**212**	A			A	19 03 27.2	
comp=N,5.0nm,1.6s,comp=N,5.0nm,1.7s									
JOFO	**Osakifurukawao**	**4.06**	**205**	A			A	19 03 28.5	
comp=N,20nm,2.1s,comp=N,22nm,1.8s									
JOU	**Okura**	**4.35**	**206**	A			A	19 03 32.6	
comp=N,5.0nm,0.6s,comp=N,6.0nm,3.2s									
JYA	**Atsumi**	**4.51**	**216**	A			A	19 03 34.8	
comp=N,7.0nm,3.0s,comp=N,9.0nm,1.1s									
KUR	**Kuril'sk**	**4.53**	**48**	⇓*e*PN			**Pn**	**19 03 34.6**	**+2.8**
KUR	**Kuril'sk**	**4.53**	**48**	*i* P			**Pn**	**19 03 34.6**	**+2.8**
KUR					AMB		AMB	19 03 37.8	
comp=N,500nm,0.5s									
KUR				*e*S			**Sn**	**19 04 25.4**	**+2.3**
KUR					A		A	19 04 30.7	
comp=N,6μm,4.0s									
KUR					A		A	19 04 30.7	
comp=N,5μm,4.0s									
KUR					A		A	19 04 34.8	
comp=N,470nm,0.4s									
KUR					A		A	19 04 34.8	
comp=N,600nm,0.4s									
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	Pn			**Pn**	**19 03 35.7**	**+2.3**
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	*oe*PN			**Pn**	**19 03 36.5**	**+3.0**
YSS				*e*S			**Sn**	**19 04 29.2**	**+3.1**
YSS					pmax		pmax		
comp=Z,600nm,3.1s									
YSS					pmax		pmax		
comp=Z,440nm,0.7s									
YSS					smax		smax		
comp=E,900nm,2.1s									
YSS					smax		smax		
comp=N,270nm,0.9s									
YSS					MLR		MLR		
comp=Z,2μm,15.0s									
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	P			**Pn**	**19 03 35.5**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	*e*P			**Pn**	**19 03 36.4**	**+3.0**
YSS					AMB		AMB	19 03 37.3	
comp=Z,600nm,3.0s									
YSS					AMB		AMB	19 03 39.0	
comp=Z,440nm,0.7s									
YSS				*e*S			**Sn**	**19 04 29.2**	**+3.1**
YSS					A		A	19 04 31.5	
comp=Z,900nm,2.0s									
YSS					A		A	19 04 35.9	
comp=Z,270nm,0.9s									
JYS	**Shirataka**	**4.69**	**211**	A			A	19 03 37.3	
comp=Z,8.0nm,1.5s,comp=Z,6.0nm,3.7s									
JMM	**Marumori**	**4.77**	**202**	Pn			**Pn**	**19 03 34.4**	**-0.7**
JYAR	**Yonezawaarcadi**	**4.94**	**208**	A			A	19 03 40.8	
comp=Z,7.0nm,1.0s,comp=Z,8.0nm,1.1s									
TEY	**Ternei**	**5.44**	**302**	*e*PN			**Pn**	**19 03 44.4**	**+0.2**
TEY					pmax		pmax		
comp=N,50nm,0.8s									
TEY					pmax		pmax		
comp=E,110nm,0.8s									
TEY	**Ternei**	**5.44**	**302**	*e*P			**Pn**	**19 03 45.3**	**+1.1**
TEY					AMB		AMB	19 03 46.7	
comp=E,110nm,0.8s									
TEY					AMB		AMB	19 03 46.7	
comp=E,80nm,0.8s									
TEY					AMB		AMB	19 03 46.7	
comp=E,110nm,0.8s									
JSD	**Sado**	**5.64**	**223**	Pn			**Pn**	**19 03 48.2**	**+1.2**
JYT	**Yasato**	**6.47**	**201**	Pn			**Pn**	**19 03 56.6**	**-1.8**
UGL	**Uglegorsk**	**6.81**	**354**	*e*PN			**Pn**	**19 04 05.6**	**+2.6**
UGL					pmax		pmax		
comp=Z,500nm,1.0s									
UGL					pmax		pmax		
comp=Z,349nm,0.8s									
UGL	**Uglegorsk**	**6.81**	**354**	*e*P			**Pn**	**19 04 06.6**	**+3.6**
UGL					AMB		AMB	19 04 08.0	
comp=Z,500nm,1.0s									
UGL					AMB		AMB	19 04 10.5	
comp=Z,350nm,0.8s									
UGL				*e*S			**Sn**	**19 05 21.7**	**+2.7**
UGL					A		A	19 05 29.0	
comp=Z,1μm,4.0s									
UGL					A		A	19 05 29.0	
comp=Z,700nm,4.0s									
MAJO	**Matsushiro**	**6.88**	**215**	Pn			**Pn**	**19 04 04.6**	**+0.5**
MAJO	**Matsushiro**	**6.88**	**215**	⇓*i*PN			**Pn**	**19 04 05.1**	**+1.0**
MAJO	**Matsushiro**	**6.88**	**215**	P			**Pn**	**19 04 06.3**	**+2.2**
MJAR	**Matsushiro Arr**	**6.88**	**215**	P			**Pn**	**19 04 04.7**	**+0.6**
comp=Z,1.5nm,0.3s,baz=33,slow=12,SNR=98									
comp=Z,33nm,0.6s									
JGF	**Kuroka**	**8.04**	**216**	Pn			**Pn**	**19 04 19.4**	**-0.7**
VLA	**Vladivostok**	**8.29**	**279**	⇓*e*PN			**Pn**	**19 04 25.2**	**+1.9**
VLA	**Vladivostok**	**8.29**	**279**	*e*P			**Pn**	**19 04 25.2**	**+1.9**
USA0B	**Ussuriysk Arra**	**8.32**	**287**	Pn			**Pn**	**19 04 24.9**	**+1.2**
USA0B	**Ussuriysk Arra**	**8.32**	**287**	PN			**Pn**	**19 04 24.9**	**+1.2**
USRK	**Ussuriysk Ar.**	**8.32**	**287**	P			**Pn**	**19 04 24.4**	**+0.7**
comp=Z,6.3nm,0.3s,baz=88,slow=15,SNR=54									
comp=Z,47nm,0.6s									
USRK	**Ussuriysk Ar.**	**8.32**	**287**	Pn			**Pn**	**19 04 24.9**	**+1.2**
USRK	**Ussuriysk Ar.**	**8.32**	**287**	PN			**Pn**	**19 04 24.9**	**+1.2**
INU	**Inuyama**	**8.41**	**216**	Pn			**Pn**	**19 04 24.6**	**-0.3**
INU	**Inuyama**	**8.41**	**216**	P			**Pn**	**19 04 26.9**	**+2.0**
TYV	**Tymovskoe**	**8.56**	**358**	*e*PN			**Pn**	**19 04 30.8**	**+3.8**
TYV				*e*S			**Sn**	**19 06 05.1**	**+3.0**
TYV					pmax		pmax		
comp=Z,400nm,2.8s									
TYV					pmax		pmax		
comp=Z,114nm,0.8s									
TYV					smax		smax		
comp=N,18nm,1.4s									
TYV					smax		smax		
comp=E,15nm,1.4s									
TYV					smax		smax		
comp=N,400nm,3.6s									
TYV					smax		smax		
comp=E,200nm,3.6s									
TYV	**Tymovskoe**	**8.56**	**358**	*e*P			**Pn**	**19 04 30.8**	**+3.8**
TYV					AMB		AMB	19 04 31.2	
comp=E,400nm,3.0s									
TYV					AMB		AMB	19 04 31.4	
comp=E,110nm,0.8s									
TYV				*e*S			**Sn**	**19 06 05.1**	**+3.0**
TYV					A		A	19 06 06.2	
comp=E,20nm,1.0s									
TYV					A		A	19 06 06.2	
comp=E,10.0nm,1.0s									
TYV					A		A	19 06 07.7	
comp=E,400nm,4.0s									
TYV					A		A	19 06 07.7	
comp=E,200nm,4.0s									
MSHR	**Mys Shultsa**	**8.83**	**276**	*ce*PN			**Pn**	**19 04 32.5**	**+1.9**
MSHR					pmax		pmax		
comp=Z,68nm,0.8s									
JHJ	**Hachijo jima 2**	**9.54**	**197**	P			**Pn**	**19 04 39.1**	**-1.2**
comp=Z,36nm,0.3s,baz=55,slow=14,SNR=9.9									
JHJ					S		**Sn**	**19 06 17.8**	**-8.2**
comp=Z,170nm,0.3s,baz=150,slow=22,SNR=6.8									
JHJ					LR		LR	19 09 15.0	
comp=Z,579nm,18.1s,baz=62,slow=43									
comp=Z,78nm,0.3s									
JHJ2	**Mitsune**	**9.54**	**197**	Pn			**Pn**	**19 04 38.8**	**-1.5**
GRNR	**Gornyy**	**9.63**	**334**	⇓*i*PN			**Pn**	**19 04 45.7**	**+4.2**
GRNR				*e*S			Sn	19 06 37.5	+9.4
GRNR					pmax		pmax		
comp=N,140nm,0.8s									
GRNR					pmax		pmax		
comp=E,110nm,0.8s									
GRNR					pmax		pmax		
comp=Z,130nm,0.8s									
GRNR					smax		smax		
comp=N,3.0nm,0.6s									
GRNR	**Gornyy**	**9.63**	**334**	*e*P			**Pn**	**19 04 45.7**	**+4.2**
GRNR					AMB		AMB	19 04 46.6	
comp=N,130nm,0.8s									
MDJ	**Mudanjiang**	**10.08**	**288**	Pn			**Pn**	**19 04 49.1**	**+1.4**
MDJ	**Mudanjiang**	**10.08**	**288**	P			**Pn**	**19 04 49.8**	**+2.0**
MDJ				sP				19 05 07.0	
MDJ					S		**Sn**	**19 06 44.0**	**+4.7**
MDJ					pmax		pmax		
comp=N,13nm,1.0s									
MDJ					pmax		pmax		
comp=N,310nm,3.7s									
MDJ					LR		LR		
comp=N,610nm,11.6s									
MDJ					LR		LR		
comp=N,1μm,19.2s									
MDJ					LR		LR		
comp=N,2μm,18.7s									
MDJ	**Mudanjiang**	**10.08**	**288**	P			**Pn**	**19 04 51.5**	**+3.7**
KLR	**Kul'dur**	**10.51**	**315**	P			**Pn**	**19 04 53.9**	**+0.3**
comp=N,0.6nm,0.3s,baz=124,slow=14,SNR=3.9									
KLR					LR		LR	19 09 13.5	
comp=N,963nm,20.6s,baz=136,slow=39									
comp=N,49nm,1.0s									
KLR	**Kul'dur**	**10.51**	**315**	*ce*PN			**Pn**	**19 04 55.4**	**+1.8**
KLR					pmax		pmax		
comp=Z,94nm,1.3s									
KLR	**Kul'dur**	**10.51**	**315**	*e*P			**Pn**	**19 04 55.4**	**+1.8**
JHS	**Saijyo**	**10.67**	**230**	Pn			**Pn**	**19 04 56.7**	**+0.8**
JMN	**Monobe**	**11.22**	**223**	Pn			**Pn**	**19 05 03.6**	**+0.2**
OKH	**Okha**	**11.25**	**360**	*e*P			**Pn**	**19 05 06.8**	**+3.2**
OKH					AMB		AMB	19 05 09.8	
comp=Z,170nm,0.6s									
BNX	**BinXian**	**11.80**	**292**	⇓P			**Pn**	**19 05 13.5**	**+2.3**
BNX					PP		**PnPn**	**19 05 25.2**	**+6.2**
BNX					sP			19 05 31.8	
BNX					S		**Sn**	**19 07 26.3**	**+5.0**
BNX					pmax		pmax		
comp=Z,49nm,0.8s									
BNX					pmax		pmax		
comp=Z,430nm,4.9s									
BNX					LR		LR		
comp=Z,630nm,12.8s									
BNX					LR		LR		
comp=Z,970nm,18.0s									
BNX					LR		LR		
comp=Z,1μm,21.4s									
SKR	**Severo-Kuril's**	**12.27**	**42**	*i* PN			**Pn**	**19 05 17.4**	**-0.1**
SKR	**Severo-Kuril's**	**12.27**	**42**	*e*P			**Pn**	**19 05 17.6**	**+0.1**
SKR					AMB		AMB	19 05 20.9	
comp=Z,40nm,0.5s									
KSRS	**Korea Array**	**12.61**	**252**	P			**Pn**	**19 05 23.9**	**+1.5**
comp=Z,1.2nm,0.3s,baz=65,slow=13,SNR=79									
KSRS					S		**Sn**	**19 07 49.3**	**+8.2**
comp=Z,16nm,0.8s,baz=68,slow=24,SNR=8.0									
KSRS					LR		LR	19 09 56.2	
comp=Z,465nm,21.2s,baz=60,slow=36									
KSRS					PcP		**PcP**	**19 10 57.6**	**+1.0**
comp=Z,3.7nm,0.9s,baz=320,slow=0.1,SNR=5.9									
comp=Z,48nm,0.9s									
KS19	**Wonju Array Si**	**12.63**	**253**				**Pn**	**19 05 23.4**	**+0.7**
KSAR	**Wonju Array Be**	**12.65**	**252**	Pn			**Pn**	**19 05 23.0**	**+0.2**
KSAR	**Wonju Array Be**	**12.65**	**252**	PN			**Pn**	**19 05 23.0**	**+0.2**
CN2	**Changchun**	**12.99**	**283**	*e*P			**Pn**	**19 05 26.4**	**-1.1**
CN2					PP		**P**	**19 05 38.2**	**+1.9**
CN2					S		**Sn**	**19 07 50.0**	**-0.3**
CN2					sS		S	19 08 04.7	-8.4
CN2					pmax		pmax		
comp=Z,60nm,0.8s									
CN2					pmax		pmax		
comp=Z,190nm,6.0s									
CN2					LR		LR		
comp=Z,580nm,15.0s									
CN2					LR		LR		
comp=Z,1μm,15.0s									
CN2					LR		LR		
comp=Z,1μm,15.0s									
JTU	**Tsushima**	**13.24**	**239**	Pn			**Pn**	**19 05 30.6**	**-0.3**
INCN	**Inchon**	**13.52**	**255**	Pn			**Pn**	**19 05 33.4**	**-1.3**
INCN	**Inchon**	**13.52**	**255**	PN			**Pn**	**19 05 33.4**	**-1.3**
TJN	**Taejon**	**13.53**	**249**	Pn			**Pn**	**19 05 34.9**	**0.0**
TJN	**Taejon**	**13.53**	**249**	*ce*PN			**Pn**	**19 05 36.4**	**+1.6**
TJN	**Taejon**	**13.53**	**249**	P			**Pn**	**19 05 37.6**	**+2.8**
SNY	**Shenyang**	**14.50**	**275**	⇓P			**Pn**	**19 05 48.3**	**+0.5**
SNY					pmax		pmax		
comp=Z,83nm,0.9s									
SNY					pmax		pmax		
comp=Z,240nm,3.7s									
SNY					LR		LR		
comp=Z,530nm,17.1s									
SNY					LR		LR		
comp=Z,740nm,20.1s									
SNY					LR		LR		
comp=Z,1μm,22.6s									
PEA0B	**Petropavlovsk-**	**14.58**	**37**	Pn			**Pn**	**19 05 48.9**	**+0.2**
PEA0B	**Petropavlovsk-**	**14.58**	**37**	*i* P			**Pn**	**19 05 48.2**	**-0.6**
PETK	**Petropavlovsk-**	**14.58**	**37**	P			**

XLT			S	S	19 10 31.1	+0.3
XLT			sS	Sn	19 10 40.8	+6.5
XLT			SS	SnSn	19 10 53.0	+4.0
XLT			pmax	pmax		
	comp=Z,70nm,0.8s					
XLT			LR	LR		
	comp=Z,770nm,16.4s					
XLT			LR	LR		
	comp=Z,930nm,15.6s					
BJI	**Beijing**	**20.36 273**	P	P	**19 06 55.9**	**-1.6**
BJI			pmax	pmax		
	comp=Z,60nm,0.9s					
BJI			pmax	pmax		
	comp=Z,170nm,3.6s					
BJI			LR	LR		
	comp=Z,84nm,15.6s					
BJI			LR	LR		
	comp=Z,470nm,20.0s					
BJI			LR	LR		
	comp=Z,820nm,22.1s					
BJT	**Baijiatuau**	**20.37 273**	P	P	**19 06 54.9**	**-2.8**
BJT			IAmb	IAmb	19 07 01.2	
	comp=Z,53nm,0.9s					
BJT	**Baijiatuau**	**20.37 273**	P	P	**19 06 54.9**	**-2.8**
BJT			pmax	pmax		
	comp=Z,53nm,0.9s					
TIA	**Tai'an**	**20.96 262**	⇑P	P	**19 07 01.3**	**-2.8**
TIA			pmax	pmax		
	comp=Z,120nm,0.6s					
TIA			LR	LR		
	comp=Z,160nm,9.0s					
TIA			LR	LR		
	comp=Z,340nm,14.3s					
TIA			LR	LR		
	comp=Z,380nm,14.7s					
YAK	**Yakutsk**	**21.31 342**	P	P	**19 07 04.9**	**-2.7**
	comp=Z,112nm,0.9s,baz=3.6,slow=2.7,SNR=62					
YAK			S	S	**19 10 52.9**	**-8.1**
	comp=Z,4.1nm,0.5s,baz=160,slow=22,SNR=8.8					
YAK			LR	LR	19 15 44.5	
	comp=Z,366nm,21.0s,baz=109,slow=38					
	comp=Z,112nm,0.9s					
YAK	**Yakutsk**	**21.31 342**	P	P	**19 07 04.3**	**-3.3**
YAK			IAmb	IAmb	19 07 07.7	
	comp=Z,166nm,0.8s					
YAK	**Yakutsk**	**21.31 342**	*e*P	P	**19 07 04.3**	**-3.3**
YAK			*e*		19 07 23.2	
YAK			*e*S	S	**19 10 54.3**	**-6.8**
YAK			*e**SS	Sn	19 11 12.5	+1.4
YAK			*e*SS	SnSn	**19 11 20.1**	**-6.7**
YAK			*e*SSS	SSS	19 11 32.7	
YAK			*e*		19 18 23.9	
YAK			pmax	pmax		
	comp=Z,172nm,0.9s					
YAK			pmax	pmax		
	comp=N,31nm,0.9s					
YAK			pmax	pmax		
	comp=E,10.0nm,0.7s					
YAK			smax	smax		
	comp=E,135nm,1.8s					
YAK			smax	smax		
	comp=N,75nm,1.2s					
YAK			MLR	MLR		
	comp=Z,332nm,20.0s					
YAK			MLR	MLR		
	comp=N,64nm,9.0s					
YAK			MLR	MLR		
	comp=E,50nm,10.0s					
SEY	**Seymchan**	**21.37 12**	P	P	**19 07 06.1**	**-2.2**
	comp=E,38nm,0.8s,baz=187,slow=8.1,SNR=92					
	comp=E,38nm,0.8s					
NJ2	**Nanjing**	**21.79 250**	⇑P	P	**19 07 10.4**	**-2.5**
NJ2			pP	pP	**19 07 21.1**	**-4.2**
NJ2			sP	sP	**19 07 28.9**	**-3.3**
NJ2			S	S	**19 11 09.1**	**-1.7**
NJ2			SS	SnSn	**19 11 44.9**	**+6.1**
NJ2			pmax	pmax		
	comp=E,22nm,0.5s					
NJ2			pmax	pmax		
	comp=E,280nm,4.3s					
NJ2			LR	LR		
	comp=E,940nm,16.6s					
NJ2			LR	LR		
	comp=E,680nm,18.9s					
NJ2			LR	LR		
	comp=E,500nm,19.9s					
HNS	**HongShan**	**22.28 267**	⇓P	P	**19 07 15.1**	**-3.1**
HNS			S	S	**19 11 10.0**	**-10**
HNS			pmax	pmax		
	comp=E,31nm,0.7s					
HNS			LR	LR		
	comp=E,270nm,12.1s					
HNS			LR	LR		
	comp=E,550nm,13.0s					
HNS			LR	LR		
	comp=E,530nm,15.6s					
HHC	**Hu-ho-hao-te**	**23.56 277**	*e*P	P	**19 07 31.9**	**+0.6**
HHC			sP	sP	19 07 52.7	+1.4
HHC			S	S	**19 11 44.0**	**+2.6**
HHC			pmax	pmax		
	comp=E,33nm,0.9s					
HHC			pmax	pmax		
	comp=E,180nm,6.0s					
HHC			LR	LR		
	comp=E,750nm,16.7s					
HHC			LR	LR		
	comp=E,1μm,21.0s					
HHC			LR	LR		
	comp=E,2μm,19.6s					
BOD	**Bodaibo**	**24.02 320**	*e*P	P	**19 07 32.7**	**-2.4**
BOD			pmax	pmax		
	comp=Z,34nm,0.8s					
YOJ	**Yonaguni jima**	**24.35 229**	P	P	**19 07 37.4**	**-1.0**
YOJ	**Yonaguni jima**	**24.35 229**	P	P	**19 07 37.4**	**-1.0**
YOJ			pmax	pmax		
	comp=Z,322nm,1.5s					
BTO	**Baotou**	**24.76 277**	*e*P	P	**19 07 42.4**	**+0.2**
BTO			S	S	**19 11 59.6**	**-1.0**
BTO			LR	LR		
	comp=Z,1μm,16.1s					
BTO			LR	LR		
	comp=Z,2μm,23.9s					
TATO	**Taipei**	**24.83 233**	P	P	**19 07 43.3**	**+0.4**
LYN	**LuoYang**	**25.11 262**	*e*P	P	**19 07 42.7**	**-2.6**
LYN			pP	pP	19 07 56.9	-2.2
LYN			PP	PnPn	**19 08 17.8**	**-3.5**
LYN			S	S	19 11 51.7	-14
LYN			pmax	pmax		
	comp=Z,30nm,1.3s					
LYN			pmax	pmax		
	comp=Z,110nm,3.7s					
LYN			LR	LR		
	comp=Z,310nm,20.6s					
LYN			LR	LR		
	comp=Z,360nm,24.7s					
YHNB	**Yeheng**	**25.13 232**	P	P	**19 07 44.1**	**-1.5**
YHNB			IAmb	IAmb	19 07 53.4	
	comp=Z,140nm,1.3s					
YHNB	**Yeheng**	**25.13 232**	P	P	**19 07 46.5**	**+0.8**
NACB	**Ninganchiao**	**25.38 231**	P	P	**19 07 45.9**	**-1.9**
WHN	**Wuhan**	**25.81 252**	⇓P	P	**19 07 49.3**	**-2.4**
WHN			S	S	**19 12 20.3**	**+3.1**
WHN			LR	LR		
	comp=Z,1μm,23.1s					
ULN	**Ulaanbaatar**	**25.88 295**	P	P	**19 07 52.1**	**-0.3**
ULN				P	**19 07 52.2**	**-0.2**
ULN			IAmb	IAmb	19 07 53.4	
	comp=Z,76nm,1.1s					
ULN	**Ulaanbaatar**	**25.88 295**	*ce*P	P	**19 07 51.5**	**-0.9**
ULN			pmax	pmax		
	comp=Z,63nm,0.8s					
ULN	**Ulaanbaatar**	**25.88 295**	P	P	**19 07 52.6**	**+0.3**
ULN	**Ulaanbaatar**	**25.88 295**	P	P	**19 07 51.9**	**-0.5**
	comp=Z,3μmcomp=Z,299nm,1.1s					
SSLB	**Suanglung**	**26.05 232**	P	P	**19 07 52.3**	**-1.6**
SSLB			IAmb	IAmb	19 08 16.9	
	comp=Z,132nm,1.8s					
YULB	**Yu-li**	**26.16 231**	P	P	**19 07 53.0**	**-1.9**
YULB			IAmb	IAmb	19 08 28.8	
	comp=Z,71nm,1.5s					
SONM	**Songino Array**	**26.32 295**	P	P	**19 07 56.2**	**-0.1**
	comp=Z,59nm,0.7s,baz=78,slow=8.6,SNR=330					
SONM			PcP	PcP	**19 11 21.9**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=149,slow=3.2,SNR=3.9					
SONM			LR	LR	19 19 14.3	
	comp=Z,721nm,19.2s,baz=86,slow=38					
	comp=Z,59nm,0.7s					
TPUB	**Ta-pu**	**26.61 232**	P	P	**19 07 58.0**	**-1.0**
TPUB	**Ta-pu**	**26.61 232**	P	P	**19 07 59.4**	**+0.4**
TWG	**Pinlang**	**26.73 230**	P	P	**19 08 00.9**	**+0.8**
TWG			IAmb	IAmb	19 08 15.8	
	comp=Z,38nm,0.6s					
IRK	**Irkutsk**	**27.84 304**	*e*P	P	**19 08 09.4**	**-0.4**
IRK			pmax	pmax		
	comp=Z,70nm,1.2s					
IRK	**Irkutsk**	**27.84 304**	*e*P	P	**19 08 09.4**	**-0.4**
XAN	**Xi'an**	**27.95 264**	⇑P	P	**19 08 10.6**	**-0.4**
XAN			pP	pP	19 08 24.6	-0.3
XAN			sP	sP	19 08 31.5	0.0
XAN			PcP	PcP	**19 11 26.0**	**+0.9**
XAN			S	S	**19 12 55.9**	**+4.8**
XAN			pmax	pmax		
	comp=Z,43nm,0.7s					
XAN			LR	LR		
	comp=Z,350nm,19.2s					
XAN			LR	LR		
	comp=Z,370nm,20.6s					
XAN			LR	LR		
	comp=Z,500nm,19.2s					
CNSH	**ChangSha**	**28.20 250**	⇓P	P	**19 08 13.6**	**+0.4**
CNSH			S	S	**19 12 56.8**	**+1.8**
CNSH			pmax	pmax		
	comp=Z,49nm,1.1s					
CNSH			LR	LR		
	comp=Z,560nm,18.8s					
CNSH			LR	LR		
	comp=Z,480nm,19.6s					
CNSH			LR	LR		
	comp=Z,480nm,25.2s					
ZAK	**Zakamensk**	**28.36 300**	*e*P	P	**19 08 13.9**	**-0.6**
ZAK			pmax	pmax		
	comp=Z,32nm,0.9s					
BILL	**Bilibino**	**28.61 18**	⇓*e*P	P	**19 08 17.2**	**+0.7**
BILL			*e**SP	sP	**19 08 39.7**	**+2.7**
BILL			*e*		19 11 27.7	
BILL			pmax	pmax		
	comp=Z,9.0nm,1.3s					
BILL			MLR	MLR		
	comp=Z,136nm,16.0s					
GUMO	**Guam**	**28.66 176**	LR	LR	19 18 17.2	
	comp=Z,142nm,21.2s,baz=3.0,slow=33					
ENH	**Enshi**	**29.44 257**	P	P	**19 08 22.4**	**-1.9**
ENH			IAmb	IAmb	19 08 25.3	
	comp=Z,61nm,0.7s					
MOY	**Mondy**	**29.83 303**	*e*P	P	**19 08 27.9**	**+0.3**
MOY			pmax	pmax		
	comp=Z,117nm,1.8s					
MOY	**Mondy**	**29.83 303**	*e*P	P	**19 08 27.9**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**30.19 131**	T	T	19 40 06.0	
	baz=324,slow=75,SNR=147					
H11N1	**WAKE ISLAND Hy**	**30.20 131**	T	T	19 40 06.1	
	baz=324,slow=75,SNR=2212					
H11N3	**WAKE ISLAND Hy**	**30.21 131**	T	T	19 40 07.3	
	baz=324,slow=75,SNR=989					
TIXI	**Tiksi**	**30.25 351**	P	P	**19 08 29.1**	**-1.8**
TIXI	**Tiksi**	**30.25 351**	*ce*P	P	**19 08 30.7**	**-0.2**
TIXI			pmax	pmax		
	comp=Z,7.0nm,1.0s					
WAKE	**Wake Island**	**30.41 132**	P	P	**19 08 29.2**	**-3.6**
LZH	**Lanzhou**	**30.84 272**	⇑P	P	**19 08 37.3**	**+0.6**
LZH			pP	pP	19 08 52.4	+1.8
LZH			sP	sP	19 09 01.0	+3.8
LZH			PcP	PcP	**19 11 33.6**	**+1.0**
LZH			S	S	**19 13 40.0**	**+3.4**
LZH			sS	sS	19 13 54.6	-5.9
LZH			pmax	pmax		
	comp=Z,86nm,1.0s					
LZH			pmax	pmax		
	comp=Z,280nm,4.5s					
LZH			LR	LR		
	comp=Z,370nm,14.4s					
LZH			LR	LR		
	comp=Z,360nm,15.8s					
LZH			LR	LR		
	comp=Z,540nm,15.8s					
H11S1	**WAKE ISLAND Hy**	**31.07 133**	T	T	19 41 06.8	
	baz=326,slow=76,SNR=1810					
H11S3	**WAKE ISLAND Hy**	**31.07 133**	T	T	19 41 20.7	
	baz=326,slow=76,SNR=1968					
H11S2	**WAKE ISLAND Hy**	**31.08 133**	T	T	19 41 15.4	
	baz=326,slow=76,SNR=2100					
GTA	**Gaotai**	**32.60 280**	⇓P	P	**19 08 52.4**	**+0.3**
GTA			pP	pP	19 09 02.7	-3.5
GTA			PcP	PcP	**19 11 38.6**	**+1.4**
GTA			S	S	**19 14 03.5**	**-0.4**
GTA			PcS	PcS	**19 15 23.3**	**+0.8**
GTA			ScS	ScS	**19 19 15.4**	**-0.6**
GTA			pmax	pmax		
	comp=Z,99nm,1.1s					
GTA			pmax	pmax		
	comp=Z,110nm,4.9s					
GTA			LR	LR		
	comp=Z,160nm,21.1s					
GTA			LR	LR		
	comp=Z,290nm,21.1s					
GTA			LR	LR		
	comp=Z,460nm,20.7s					
CD2	**Chengdu**	**33.28 263**	P	P	**19 08 57.3**	**-0.8**
CD2			pmax	pmax		
	comp=Z,30nm,0.9s					
GYA	**Guiyang**	**33.67 254**	⇑*i*P	P	**19 09 00.9**	**-0.6**
GYA			pP	pP	19 09 12.9	-2.6
GYA			PcP	PcP	**19 11 41.4**	**+1.0**
GYA			S	S	**19 14 21.7**	**+1.0**
GYA			pmax	pmax		
	comp=Z,37nm,0.8s					
GYA			LR	LR		
	comp=Z,380nm,20.1s					
TNA	**Tin City**	**35.67 33**	P	P	**19 09 18.4**	**+0.2**
QIZ	**Qiongzhong**	**36.46 241**	P	P	**19 09 26.9**	**+1.4**
QIZ			IAmb	IAmb	19 09 30.4	
	comp=Z,73nm,1.4s					
QIZ	**Qiongzhong**	**36.46 241**	P	P	**19 09 26.4**	**+0.9**
QIZ			S	S	**19 15 05.4**	**+1.9**
QIZ			LR	LR		
	comp=Z,460nm,16.7s					
QIZ			LR	LR		
	comp=Z,330nm,16.9s					
QIZ			LR	LR		
	comp=Z,270nm,13.7s					
PZH	**PanZhiHua**	**37.19 258**	P	P	**19 09 31.6**	**-0.1**
PZH			pP	pP	**19 09 45.6**	**-0.2**
PZH			sP	sP	**19 09 56.4**	**+4.1**
PZH			pmax	pmax		
	comp=Z,60nm,0.7s					
PZH			pmax	pmax		
	comp=Z,280nm,4.8s					
PZH			LR	LR		
	comp=Z,400nm,23.0s					
PZH			LR	LR		
	comp=Z,460nm,23.0s					
PZH			LR	LR		
	comp=Z,900nm,23.7s					
KMI	**Kunming**	**37.28 256**	⇑P	P	**19 09 33.1**	**+0.4**
KMI			pP	pP	19 09 47.8	+1.0
KMI			PP	PnPn	**19 11 03.6**	**+4.1**
KMI			S	S	**19 15 16.4**	**0.0**
KMI			pmax	pmax		
	comp=Z,91nm,0.8s					
KMI			LR	LR		
	comp=Z,200nm,13.5s					
KMI			LR	LR		
	comp=Z,200nm,15.5s					
KMI			LR	LR		
	comp=Z,230nm,20.2s					
GOMU	**GeErMu**	**37.47 277**	P	P	**19 09 34.9**	**+0.6**
GOMU			PcP	PcP	**19 11 53.4**	**+1.6**
GOMU			pmax	pmax		
	comp=Z,61nm,0.7s					
GOMU			LR	LR		
	comp=Z,380nm,19.2s					
GOMU			LR	LR		
	comp=Z,310nm,20.8s					
GOMU			LR	LR		
	comp=Z,470nm,19.9s					
SDPT	**Sand Point**	**38.30 50**	P	P	**19 09 38.9**	**-1.7**
DAV	**Davao City (W)**	**38.36 209**	LR	LR	19 24 01.3	
	comp=Z,150nm,22.0s,baz=36,slow=34					
DGZ	**Jazzator, Alta**	**38.58 301**	*i* P	P	**19 09 44.3**	**+1.0**
DGZ			pmax	pmax		
	comp=Z,130nm,1.0s					
CNBA	**Chernabura Isl**	**38.86 51**	P	P	**19 09 44.8**	**-0.5**
N16K	**Nishlik Lake**	**39.06 42**	P	P	**19 09 48.6**	**+1.6**
	baz=269					
NRIK	**Noril'sk**	**39.11 332**	P	P	**19 09 46.6**	**-0.6**
	comp=Z,8.5nm,0.5s,baz=105,slow=12,SNR=14					
NRIK			LR	LR	19 27 02.4	
	comp=Z,437nm,20.5s,baz=100,slow=38					
	comp=Z,8.5nm,0.5s					
NRIK	**Noril'sk**	**39.11 332**	P	P	**19 09 45.3**	**-1.9**
NRIK			IAmb	IAmb	19 09 47.0	
	comp=Z,25nm,1.2s					
NRIK	**Noril'sk**	**39.11 332**	*ce*P	P	**19 09 45.7**	**-1.5**
NRIK			pmax	pmax		
	comp=Z,26nm,1.3s					
ZAA0	**Zalesovo Array**	**39.51 308**	P	P	**19 09 50.3**	**-0.4**
ZALV	**Zalesovo Beam**	**39.51 308**	P	P	**19 09 50.7**	**0.0**
	comp=Z,115nm,0.8s,baz=88,slow=7.9,SNR=337					
ZALV			PcP	PcP	**19 11 58.2**	**+0.9**
	comp=Z,24nm,0.7s,baz=94,slow=3.0,SNR=12					
ZALV			ScP	ScP	**19 15 41.6**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=66,slow=3.6,SNR=4.7					
ZALV			LR	LR	19 27 21.2	
	comp=Z,383nm,18.8s,baz=82,slow=38					
	comp=Z,115nm,0.8s					
WMQ	**Urumqi**	**39.86 292**	*e*P	P	**19 09 54.5**	**+0.6**
WMQ			sP	sP	19 10 14.2	-0.6
WMQ			pmax	pmax		
	comp=Z,93nm,0.9s					
WMQ			pmax	pmax		
	comp=Z,260nm,6.5s					
WMQ			LR	LR		
	comp=Z,250nm,14.9s					
WMQ			LR	LR		
	comp=Z,600nm,19.3s					
WMQ			LR	LR		
	comp=Z,560nm,20.3s					
TTA	**Tatalina**	**40.41 38**	P	P	**19 09 59.5**	**+1.3**
	baz=269					
N18K	**Kilae Creek**	**40.48 42**	P	P	**19 10 00.3**	**+1.6**
	baz=272					
SVW2	**Sparrevohn**	**40.62 41**	P	P	**19 10 00.8**	**+0.9**
SVW2			IAmb	IAmb	19 11 15.9	
	comp=Z,131nm,1.9s					
ZSN	**Zaisan**	**40.74 298**	*c i*P	P	**19 10 01.2**	**+0.1**
ZSN			pmax	pmax		
	comp=Z,35nm,1.1s					
ZSN	**Zaisan**	**40.74 298**	⇑*i*P	P	**19 10 01.3**	**+0.1**
	comp=Z,35nm,1.1s,baz=298					
L19K	**White Mountain**	**40.95 39**	P	P	**19 10 03.6**	**+1.0**
N19K	**Bonanza Creek**	**41.16 41**	P	P	**19 10 06.2**	**+1.7**
	baz=272					
M19K	**Big River Lodg**	**41.17 40**	P	P	**19 10 05.3**	**+0.9**
M19K			IAmb	IAmb	19 10 23.5	
	comp=Z,26nm,1.3s					
M19K	**Big River Lodg**	**41.17 40**	P	P	**19 10 05.0**	**+0.6**
	baz=271					
J20K	**Nowinta River**	**41.27 36**	P	P	**19 10 05.9**	**+0.7**
J20K	**Nowinta River**	**41.27 36**	P	P	**19 10 06.8**	**+1.6**
	baz=269,SNR=9.4					
K20K	**Telida**	**41.30 37**	P	P	**19 10 06.7**	**+1.3**
K20K	**Telida**	**41.30 37**	P	P	**19 10 07.0**	**+1.5**
	baz=270					
L20K	**Farewell, AK**	**41.40 39**	P	P	**19 10 07.4**	**+1.2**
	baz=271					
IMAR	**Indian Mountai**	**41.50 33**	P	P	**19 10 08.1**	**+1.0**
SGSI	**Sangihe**	**41.53 207**	P	P	**19 10 07.8**	**0.0**
	comp=Z,48nm,0.5s					
G21K	**Allakaket**	**41.63 33**	P	P	**19 10 09.1**	**+1.0**
	baz=267,SNR=9.2					
F21K	**Alatna River**	**41.68 32**	P	P	**19 10 09.5**	**+1.0**
	baz=266					
SII	**Sitkinak Islan**	**41.70 48**	P	P	**19 10 09.9**	**+1.1**
	baz=278					
M20K	**Styx River**	**41.77 40**	P	P	**19 10 11.7**	**+2.3**
M20K	**Styx River**	**41.77 40**	P	P	**19 10 10.9**	**+1.5**
	baz=272					
H21K	**Melozitna Rive**	**41.88 34**	P	P	**19 10 10.5**	**+0.4**
H21K	**Melozitna Rive**	**41.88 34**	P	P	**19 10 11.2**	**+1.0**
	baz=268					
RSO	**Redoubt South**	**42.04 42**	P	P	**19 10 12.9**	**+1.2**
CHUM	**Lake Minchumin**	**42.08 37**	P	P	**19 10 12.8**	**+1.0**
	baz=271					
PPLA	**Purkeypile**	**42.16 38**	P	P	**19 10 12.2**	**-0.4**
PPLA			IAmb	IAmb	19 10 52.2	
	comp=Z,32nm,1.2s					
CAST	**Castle Rocks**	**42.19 37**	P	P	**19 10 13.7**	**+0.9**
CAST			IAmb	IAmb	19 10 34.4	
	comp=Z,27nm,1.2s					
CAST	**Castle Rocks**	**42.19 37**	P	P	**19 10 14.2**	**+1.4**
	baz=272,SNR=8.4					
F22K	**John River**	**42.20 31**	P	P	**19 10 13.4**	**+0.7**
	baz=267					
I21K	**Tanana**	**42.22 35**	P	P	**19 10 13.9**	**+1.0**
	baz=270					
N20K	**Mount Spurr**	**42.25 41**	P	P	**19 10 14.6**	**+1.3**
	baz=274					
SPU	**Mount Spurr**	**42.32 41**	P	P	**19 10 13.3**	**-0.6**
E22K	**Anaktuvuk Pass**	**42.37 30**	P	P	**19 10 14.2**	**0.0**
	baz=267					
KDAK	**Kodiak Island**	**42.40 46**	LR	LR	19 31 08.0	
	comp=Z,39nm,18.3s,baz=257,slow=41					
KDAK	**Kodiak Island**	**42.40 46**	P	P	**19 10 14.3**	**-0.2**
KDAK	**Kodiak Island**	**42.40 46**	P	P	**19 10 14.3**	**-0.2**
KDAK			pmax	pmax		
	comp=Z,310nm,1.8s					
G22K	**Bettles**	**42.44 32**	P	P	**19 10 15.0**	**+0.4**
	baz=268					
H22K	**Ishtalitna Cre**	**42.47 34**	P	P	**19 10 16.4**	**+1.5**
	baz=270					
SKT	**Skwentna**	**42.52 39**	P	P	**19 10 15.8**	**+0.4**
SKT			IAmb	IAmb	19 11 31.5	
	comp=Z,35nm,1.6s					
SKT	**Skwentna**	**42.52 39**	P	P	**19 10 17.2**	**+1.8**
	baz=274					
MK31	**Makanchi Array**	**42.61 298**	P	P	**19 10 16.0**	**-0.4**
MK31	**Makanchi Array**	**42.61 298**	*i* P	P	**19 10 16.3**	**-0.1**
MK31			pmax	pmax		
	comp=Z,69nm,0.6s					
MKAR	**Makanchi Array**	**42.61 298**	P	P	**19 10 16.4**	**0.0**
	comp=Z,56nm,0.6s,baz=82,slow=9.9,SNR=403					
MKAR			PcP	PcP	**19 12 08.2**	**+0.5**
	comp=Z,17nm,1.0s,baz=67,slow=3.2,SNR=4.3					
MKAR			LR	LR	19 29 41.8	
	comp=Z,199nm,18.3s,baz=94,slow=38					
	comp=Z,56nm,0.6s					
MKAR	**Makanchi Array**	**42.61 298**	P	P	**19 10 16.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**42.66 36**	P	P	**19 10 16.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**42.66 36**	P	P	**19 10 17.9**	**+1.4**
	baz=272					
KTH	**Kantishna Hill**	**42.71 37**	P	P	**19 10 17.5**	**+0.5**
KTH			IAmb	IAmb	19 10 33.2	
	comp=Z,26nm,0.8s					
MLY	**Manley**	**42.74 35**	P	P	**19 10 17.4**	**+0.2**
MLY	**Manley**	**42.74 35**	P	P	**19 10 18.8**	**+1.5**
	baz=271,SNR=5.3					
MAKZ	**Makanchi**	**42.82 298**	P	P	**19 10 17.8**	**-0.3**
MAKZ	**Makanchi**	**42.82 298**	P	P	**19 10 17.8**	**-0.3**
MAKZ			pmax	pmax		
	comp=Z,84nm,0.8s					
MAKZ	**Makanchi**	**42.82 298**	P	P	**19 10 15.4**	**-2.6**
MAKZ			pP	sP	**19 10 37.4**	**-1.6**
D23K	**Nanushuk River**	**42.83 29**	P	P	**19 10 18.9**	**+1.0**
	baz=267					
CNPM	**China Poot**	**42.89 43**	P	P	**19 10 19.0**	**+0.6**
C23K	**Itkillik River**	**42.91 28**	P	P	**19 10 19.4**	**+0.9**
	baz=266					
SUA	**Susitna One**	**42.93 40**	P	P	**19 10 20.0**	**+1.1**
SUA			IAmb	IAmb	19 10 55.8	
	comp=Z,70nm,1.6s					
SUA	**Susitna One**	**42.93 40**	P	P	**19 10 20.3**	**+1.4**
	baz=275					
SEM	**Semipalatinsk**	**42.94 303**	*c i*P	P	**19 10 18.4**	**-0.8**
SEM			pmax	pmax		
	comp=Z,38nm,0.8s					
SEM	**Semipalatinsk**	**42.94 303**	⇑*i*P	P	**19 10 18.4**	**-0.8**
	comp=Z,38nm,0.8s,baz=303					
MYLDM	**Lahad Datu**	**42.95 217**	P	P	**19 10 19.1**	**-0.2**
MYLDM			IAmb	IAmb	19 10 23.5	
	comp=Z,79nm,1.5s					
MYLDM	**Lahad Datu**	**42.95 217**	P	P	**19 10 20.9**	**+1.6**
	comp=Z,30nm,1.2s					
COLD	**Coldfoot**	**42.95 32**	P	P	**19 10 18.6**	**-0.3**
COLD	**Coldfoot**	**42.95 32**	P	P	**19 10 19.2**	**+0.3**
	baz=269					
TRF	**Thorofare Moun**	**43.00 37**	P	P	**19 10 20.3**	**+0.8**
TRF	**Thorofare Moun**	**43.00 37**	P	P	**19 10 21.0**	**+1.5**

baz=273
G23K Bananza Creek 43.02 32 P P 19 10 19.9 +0.4
baz=270
BRLK Bradley Lake 43.03 43 P P 19 10 21.7 +2.0
BRLK IAmb IAmb 19 11 20.4
comp=Z,106nm,1.6s
CUT Chulitna 43.08 39 P P 19 10 20.8 +1.0
CUT IAmb IAmb 19 10 38.5
comp=Z,52nm,1.3s
CUT Chulitna 43.08 39 P P 19 10 21.0 +1.1
baz=274
E23K Chandalar 43.19 30 P P 19 10 21.8 +1.0
baz=269
TOLK Toolik Lake Re 43.22 30 P P 19 10 21.1 0.0
TOLK Toolik Lake Re 43.22 30 P P 19 10 22.3 +1.3
baz=268
H23K Yukon River 43.23 34 P P 19 10 21.5 +0.4
H23K Yukon River 43.23 34 P P 19 10 22.2 +1.1
baz=271
LSA Lhasa 43.24 270 P P 19 10 22.2 +0.1
LSA IAmb IAmb 19 10 29.1
comp=Z,24nm,0.7s
LSA Lhasa 43.24 270 P P 19 10 23.5 +1.3
LSA pmax pmax
comp=Z,24nm,0.8s
LSA Lhasa 43.24 270 P P 19 10 22.3 +0.1
LSA pmax pmax
comp=Z,24nm,0.7s
LSA Lhasa 43.24 270 P P 19 10 23.9 +1.7
LSA Lhasa 43.24 270 P P 19 10 23.9 +1.7
LSA Lhasa 43.24 270 P P 19 10 22.2 +0.1
LSA pP pP 19 10 36.3 -0.3
LSA sP sP 19 10 43.1 +0.1
KKM Kota Kinabalu 43.26 221 P P 19 10 21.9 -0.1
KKM IAmb IAmb 19 10 24.6
comp=Z,27nm,1.1s
I23K Minto, Yukon-K 43.32 35 P P 19 10 22.2 +0.4
I23K Minto, Yukon-K 43.32 35 P P 19 10 23.0 +1.1
baz=272
BWN Browne 43.32 36 P P 19 10 23.0 +1.1
BWN IAmb IAmb 19 10 30.5
comp=Z,57nm,1.0s
RC01 Rabbit Creek A 43.45 41 P P 19 10 23.3 +0.3
RC01 IAmb IAmb 19 11 50.2
comp=Z,39nm,1.2s
RC01 Rabbit Creek A 43.45 41 P P 19 10 23.9 +1.0
baz=276
NEA2 Nenana 43.47 36 P P 19 10 24.0 +1.0
NEA2 IAmb IAmb 19 10 26.8
comp=Z,31nm,0.7s
NEA2 Nenana 43.47 36 P P 19 10 24.4 +1.4
baz=273,SNR=14
D24K Happy Valley 43.51 29 P P 19 10 22.7 -0.6
baz=268
O22K Cooper Landing 43.53 42 P P 19 10 26.0 +2.5
baz=277
C24K Franklin Bluff 43.57 28 P P 19 10 24.2 +0.4
baz=268
MCK McKinley 43.59 37 P P 19 10 24.9 +0.9
MCK McKinley 43.59 37 P P 19 10 24.9 +0.9
MCK pmax pmax
comp=Z,17nm,1.0s
MCK McKinley 43.59 37 P P 19 10 25.5 +1.5
baz=274,SNR=5.5
E24K Your Creek 43.62 30 P P 19 10 25.1 +0.8
baz=270,SNR=5.5
RND Reindeer 43.65 37 P P 19 10 24.8 +0.2
RND Reindeer 43.65 37 P P 19 10 24.8 +0.2
RND pmax pmax
comp=Z,11nm,0.8s
TNTI Ternate 43.70 203 P P 19 10 25.8 +0.4
SEW Seward 43.71 42 P P 19 10 25.4 +0.4
SEW Seward 43.71 42 P P 19 10 26.3 +1.3
baz=277
GHO Glory Hole Cre 43.77 40 P P 19 10 25.4 -0.2
GHO IAmb IAmb 19 10 50.4
comp=Z,21nm,0.7s
MDM Murphy Dome 43.81 35 P P 19 10 26.6 +0.8
MDM IAmb IAmb 19 10 29.5
comp=Z,18nm,0.9s
WAT1 Susitna Watana 43.83 38 P P 19 10 26.7 +0.6
baz=275
F24K Squaw Lake 43.85 31 P P 19 10 26.9 +0.7
baz=271,SNR=5.4
KURK Kurchatov 43.87 304 P P 19 10 26.3 -0.1
KURK Kurchatov 43.87 304 *i* P **P 19 10 26.5 +0.1**
KURK pmax pmax
comp=Z,182nm,0.9s
KURK Kurchatov 43.87 304 P P 19 10 26.8 +0.4
KURK Kurchatov 43.87 304 *e*P **P 19 10 26.5 +0.1**
KURK Kurchatov 43.87 304 P P 19 10 25.1 -1.3
KURK sP **sP 19 10 47.9 +0.4**
WRH Wood River Hil 43.90 36 P P 19 10 27.5 +1.0
H24K Noodor Dome 43.91 34 P P 19 10 27.0 +0.3
H24K Noodor Dome 43.91 34 P P 19 10 28.3 +1.6
baz=273,SNR=6.0
KURBB Kurchatov Arra 43.95 304 P P 19 10 27.1 +0.1
comp=Z,129nm,0.7s,baz=76,slow=8.8,SNR=354
KURBB PcP **PcP 19 12 12.4 +0.4**
comp=Z,10nm,0.8s,baz=74,slow=4.3,SNR=4.1
KURBB LR LR 19 29 48.2
comp=Z,202nm,18.5s,baz=50,slow=37
comp=Z,129nm,0.7s
TCOL CIGO, UAF Yank 43.97 35 P P 19 10 27.1 +0.1
COLA College 43.98 35 P P 19 10 26.9 -0.2
COLA College 43.98 35 *i* P **P 19 10 27.8 +0.7**
COLA pmax pmax
comp=Z,6.0nm,0.5s
CCB Clear Creek Bu 44.01 35 P P 19 10 26.6 -0.8
KNK Knik Glacier 44.03 40 P P 19 10 26.9 -0.7
KNK IAmb IAmb 19 10 32.5
comp=Z,29nm,0.9s
KNK Knik Glacier 44.03 40 P P 19 10 28.5 +0.9
baz=277
G24K Hadweenzic Riv 44.03 32 P P 19 10 28.9 +1.3
baz=272
SML Sawmill 44.04 39 P P 19 10 27.1 -0.6
SML IAmb IAmb 19 10 53.3
comp=Z,24nm,0.8s
SML Sawmill 44.04 39 P P 19 10 28.2 +0.5
SML pmax pmax
comp=Z,31nm,0.8s
SML Sawmill 44.04 39 P P 19 10 29.2 +1.4
baz=277
POKR Poker Plat Res 44.14 35 P P 19 10 29.0 +0.6
POKR IAmb IAmb 19 10 31.3
comp=Z,18nm,0.9s
POKR Poker Plat Res 44.14 35 P P 19 10 30.1 +1.7
baz=274,SNR=8.7
PWL Port Wells 44.16 41 P P 19 10 29.2 +0.6
PWL IAmb IAmb 19 10 58.8
comp=Z,70nm,1.4s
PWL Port Wells 44.16 41 P P 19 10 29.1 +0.4
baz=278
WAT6 Susitna Watana 44.23 38 P P 19 10 30.2 +0.8
baz=276
CM31 Chiang Mai Arr 44.25 251 P P 19 10 30.0 +0.2
CM31 IAmb IAmb 19 10 31.8
comp=Z,23nm,0.8s
CMAR Chiang Mai Arr 44.25 251 P P 19 10 30.6 +0.8
comp=Z,17nm,0.8s,baz=44,slow=7.3,SNR=147
CMAR PcP **PP 19 12 14.8 +1.0**
comp=Z,3.0nm,0.8s,baz=28,slow=3.4,SNR=5.0
CMAR LR LR 19 29 53.2
comp=Z,214nm,19.4s,baz=50,slow=37
comp=Z,17nm,0.8s
SMPI Sarmi 44.27 186 P P 19 10 30.7 +0.8
comp=Z,45nm,1.1s
SIJI Sorong 44.28 197 P P 19 10 31.0 +0.9
comp=Z,21nm,0.7s,baz=15,slow=8.1,SNR=26
SIJI LR LR 19 26 18.7
comp=Z,117nm,21.5s,baz=40,slow=32
comp=Z,21nm,0.7s
M23K Glacier View 44.33 39 P P 19 10 32.7 +2.7
baz=277
DHY Denali Highway 44.34 38 P P 19 10 30.9 +0.6
DHY IAmb IAmb 19 10 51.6
comp=Z,19nm,0.8s
DHY Denali Highway 44.34 38 P P 19 10 31.2 +0.9
baz=276,SNR=5.6
D25K Kavik River 44.38 29 P P 19 10 31.3 +1.0
baz=271
IL31 44.40 35 P P 19 10 30.5 +0.1
IL31 IAmb IAmb 19 10 32.8
comp=Z,20nm,0.8s
ILAR Eielson Array 44.40 35 P P 19 10 31.1 +0.6
comp=Z,18nm,0.9s,baz=265,slow=6.2,SNR=88
ILAR LR LR 19 30 52.2
comp=Z,45nm,18.6s,baz=254,slow=38
comp=Z,18nm,0.9s
ILAR Eielson Array 44.40 35 P P 19 10 30.5 0.0
HDA Harding Lake 44.40 36 P P 19 10 30.2 -0.3
HDA Harding Lake 44.40 36 P P 19 10 31.1 +0.6
baz=275,SNR=6.5
SCM Sheep Creek Mo 44.51 39 P P 19 10 32.4 +0.9
SCM IAmb IAmb 19 10 35.8
comp=Z,104nm,1.5s
SCM Sheep Creek Mo 44.51 39 P P 19 10 32.4 +0.9
SCM pmax pmax
comp=Z,104nm,1.5s
SCM Sheep Creek Mo 44.51 39 P P 19 10 32.5 +0.9
baz=277
G25K Bearman Lake 44.58 32 P P 19 10 32.1 +0.3
baz=273
F25K Christian Rive 44.71 31 P P 19 10 33.1 +0.1
baz=273
H25K Birch Creek 44.72 33 P P 19 10 34.1 +1.1
baz=274
GLI Glacier Island 44.76 41 P P 19 10 33.6 +0.3
baz=278
GENI Genyem 44.77 184 P P 19 10 35.4 +1.5
C26K Camden Bay 44.88 28 P P 19 10 35.3 +1.1
baz=271
PRP Porcupine Dome 44.91 34 P P 19 10 35.1 +0.5
PRP IAmb IAmb 19 10 38.5
comp=Z,23nm,0.8s
PRP Porcupine Dome 44.91 34 P P 19 10 35.9 +1.2
baz=275,SNR=33
FYU Fort Yukon 44.94 33 P P 19 10 34.8 +0.1
FYU IAmb IAmb 19 11 13.3
comp=Z,90nm,1.8s
SHL Shillong 44.96 265 P P 19 10 37.5 +1.8
K24K Donnelly Dome 44.98 36 P P 19 10 36.1 +1.0
baz=277,SNR=5.2
M24K Tolsona, Glenn 45.02 39 P P 19 10 35.5 0.0
M24K IAmb IAmb 19 11 24.6
comp=Z,53nm,1.2s
J25K Salcha River, 45.06 35 P P 19 10 34.8 -1.0
J25K Salcha River, 45.06 35 P P 19 10 35.6 -0.2
baz=276
FID Port Fidalgo 45.08 41 P P 19 10 36.5 +0.5
BMAR Burnt Mountain 45.13 31 P P 19 10 36.7 +0.4
PAX Paxson 45.22 38 P P 19 10 38.5 +1.4
PAX Paxson 45.22 38 P P 19 10 38.5 +1.4
PAX pmax pmax
comp=Z,10.0nm,1.2s
PAX Paxson 45.22 38 P P 19 10 37.9 +0.7
baz=278
KLU Klutina 45.22 40 IAmb IAmb 19 10 42.8
comp=Z,21nm,0.8s
KLU Klutina 45.22 40 P P 19 10 38.2 +1.0
baz=279
F26K Sheenjek River 45.27 31 P P 19 10 38.5 +1.1
baz=274
C27K Jago River 45.31 28 P P 19 10 38.3 +0.6
baz=273
DIV Divide 45.35 40 P P 19 10 38.5 +0.3
DIV IAmb IAmb 19 10 44.0
comp=Z,27nm,1.0s
HARP HAARP 45.44 38 P P 19 10 39.7 +0.8
baz=279
G26K Porcupine Rive 45.48 32 P P 19 10 40.0 +1.0
baz=275,SNR=7.9
PDGK Podgornoye 45.63 294 P P 19 10 40.2 -0.6
TOLI2 Tolitoli 45.65 212 P P 19 10 39.4 -1.5
TOLI2 IAmb IAmb 19 10 43.5
comp=Z,52nm,1.7s
TOLI2 Tolitoli 45.65 212 P P 19 10 42.0 +1.1
SHLS Shalkode 45.72 294 *e*P **P 19 10 37.9 -3.5**
SHLS *e*S **S 19 17 16.3 -4.3**
SHLS pmax pmax
comp=Z,13nm,0.6s
SHLS Shalkode 45.72 294 *e*P **P 19 10 38.0 -3.5**
comp=Z,13nm,0.6s,baz=294
SHLS *e*S **S 19 17 16.4 -4.2**
baz=294
SCRK Sand Creek 45.74 36 P P 19 10 41.4 +0.1
SCRK IAmb IAmb 19 10 43.0
comp=Z,20nm,0.8s
SCRK Sand Creek 45.74 36 P P 19 10 41.6 +0.3
baz=278,SNR=16
DOT Dot Lake 45.75 37 P P 19 10 40.4 -0.9
DOT IAmb IAmb 19 10 45.8
comp=Z,7.9nm,0.6s
TDK Taldyqorghan 45.76 296 *c i*P **P 19 10 41.9 +0.3**
TDK pmax pmax
comp=Z,72nm,0.7s
TDK Taldyqorghan 45.76 296⇑ *i*P **P 19 10 41.9 +0.3**
comp=Z,72nm,0.7s,baz=296
N25K Chitina, Valde 45.83 39 P P 19 10 42.8 +0.8
N25K IAmb IAmb 19 10 44.0
comp=Z,15nm,1.2s
N25K Chitina, Valde 45.83 39 P P 19 10 43.0 +1.0
baz=280
J26L Joseph Creek 45.85 35 P P 19 10 41.6 -0.5
J26L IAmb IAmb 19 11 01.6
comp=Z,29nm,1.9s
J26L Joseph Creek 45.85 35 P P 19 10 43.2 +1.1
baz=278
I26K Coal Creek Min 45.91 34 P P 19 10 41.2 -1.3
I26K Coal Creek Min 45.91 34 P P 19 10 42.0 -0.5
baz=277
BMRM Bremner River 45.94 40 P P 19 10 43.5 +0.7
BMRM IAmb IAmb 19 11 09.4
comp=Z,28nm,1.0s
BMRM Bremner River 45.94 40 P P 19 10 43.9 +1.1
baz=280
MENT Mentasta 46.02 37 P P 19 10 44.2 +0.9
MENT IAmb IAmb 19 11 07.1
comp=Z,9.2nm,0.6s
UZB Uzynbulak 46.02 294 *e*P **P 19 10 43.1 -0.7**
UZB Uzynbulak 46.02 294 *e*P **P 19 10 43.1 -0.7**
baz=294
FAKI Fak Fak 46.08 195 P P 19 10 44.7 +0.5
FAKI Fak Fak 46.08 195 P P 19 10 45.3 +1.0
KPKS Kokpek 46.13 294 *c i*P **P 19 10 44.0 -0.6**
KPKS pmax pmax
comp=Z,16nm,0.6s
KPKS Kokpek 46.13 294⇑ *i*P **P 19 10 44.1 -0.6**
comp=Z,16nm,0.6s,baz=294
L26K Log Cabin Wild 46.17 37 P P 19 10 45.1 +0.5
L26K IAmb IAmb 19 11 11.3
comp=Z,14nm,0.8s
L26K Log Cabin Wild 46.17 37 P P 19 10 45.7 +1.1
baz=280,SNR=9.0
E27K Coleen River 46.19 30 P P 19 10 46.4 +1.7
baz=276
GLB Gilahina Butte 46.23 40 P P 19 10 45.7 +0.6
G27K Doyon Strip 46.33 32 P P 19 10 47.1 +1.4
baz=277
ZHN Zhinishke 46.41 294 *e*P **P 19 10 45.9 -0.9**
ZHN Zhinishke 46.41 294 *e*P **P 19 10 45.9 -0.9**
baz=294
M26K Nabesna, AK 46.44 38 P P 19 10 47.4 +0.7
M26K IAmb IAmb 19 11 08.9
comp=Z,19nm,1.0s
M26K Nabesna, AK 46.44 38 P P 19 10 48.9 +2.2
baz=280,SNR=6.8
VRDI Verde Repeater 46.44 40 P P 19 10 47.9 +1.0
VRDI IAmb IAmb 19 11 09.1
comp=Z,17nm,1.1s
H27K Steamboat Moun 46.45 33 P P 19 10 48.9 +2.1
baz=278,SNR=9.6
SATY Saty 46.47 294 *c i*P **P 19 10 47.3 0.0**
SATY pmax pmax
comp=Z,10.0nm,0.5s
SATY Saty 46.47 294⇑ *i*P **P 19 10 47.3 0.0**
comp=Z,10nm,0.5s,baz=294
BERG Berg Lake 46.49 41 P P 19 10 48.5 +1.4
BERG IAmb IAmb 19 10 59.4
comp=Z,68nm,1.3s
I27K Kandik River 46.51 34 P P 19 10 49.2 +2.0
baz=278,SNR=7.0
K27K Chicken 46.56 36 P P 19 10 48.5 +1.0
K27K IAmb IAmb 19 11 09.7
comp=Z,41nm,1.3s
K27K Chicken 46.56 36 P P 19 10 49.0 +1.4
baz=280
MCARA McCarthy VSAT 46.62 40 P P 19 10 48.0 -0.1
MCARA IAmb IAmb 19 11 32.8
comp=Z,64nm,1.5s
MCARA McCarthy VSAT 46.62 40 P P 19 10 49.5 +1.4
baz=281
SANI Sanana 46.78 204 P P 19 10 49.8 0.0
EGAK Eagle 46.83 35 P P 19 10 49.2 -0.4
EGAK IAmb IAmb 19 10 51.6
comp=Z,16nm,0.9s
EGAK Eagle 46.83 35 P P 19 10 50.4 +0.7
baz=280,SNR=9.7
TGL Tana Glacier 46.84 40 P P 19 10 51.1 +1.2
TGL IAmb IAmb 19 11 01.5
comp=Z,29nm,1.2s
L27K Beaver Creek, 46.84 37 P P 19 10 51.0 +1.1
L27K IAmb IAmb 19 11 16.8
comp=Z,15nm,0.8s
L27K Beaver Creek, 46.84 37 P P 19 10 51.7 +1.8
baz=281,SNR=16
BCAR Beaver Creek A 46.86 37 P P 19 10 51.2 +1.2
LUWI Luwuk 46.89 208 P P 19 10 48.6 -2.1
LUWI IAmb IAmb 19 11 27.8
comp=Z,55nm,1.1s
WAX Waxell Ridge 46.89 41 P P 19 10 52.5 +2.2
WAX IAmb IAmb 19 11 50.4
comp=Z,45nm,1.1s
SRDT SRDT 46.95 247 P P 19 10 51.4 +0.2
comp=Z,528nmcomp=Z,18nm,1.3s
SNH Sunshine Point 46.95 41 P P 19 10 51.5 +0.8
ISLE Juniper Island 47.10 40 P P 19 10 54.3 +2.2
ISLE IAmb IAmb 19 11 30.2
comp=Z,22nm,1.0s
CHKK Chushkaly 47.12 296 *e*P **P 19 10 51.6 -0.7**
CHKK Chushkaly 47.12 296 *e*P **P 19 10 51.6 -0.7**
baz=296
BARN Barnard Glacie 47.33 40 P P 19 10 54.5 +0.6
BARN IAmb IAmb 19 11 00.9
comp=Z,11nm,0.8s
MDOK Medeo 47.35 295 *i* P **P 19 10 53.7 -0.5**
MDOK Medeo 47.35 295 *i* P **P 19 10 53.7 -0.5**
baz=295
KNDC Almaty 47.38 295 P P 19 10 54.7 +0.3
MESA MESA 47.39 41 P P 19 10 54.7 +0.4
MESA IAmb IAmb 19 11 21.6
comp=Z,30nm,0.8s
TARG Taragay, Kyrgy 47.40 293 P P 19 10 53.5 -1.5
TARG PcP **PcP 19 12 24.4 -0.4**
BVCY Beaver Creek 47.41 38 P P 19 10 55.7 +1.4
baz=282
AAA Alma-Ata 47.42 295 *c e*P **P 19 10 54.7 +0.1**
AAA Alma-Ata 47.42 295⇑ *e*P **P 19 10 54.7 +0.1**
baz=295
AAA Alma-Ata 47.42 295 *e*P **P 19 10 54.7 +0.1**
YAH Yahtse 47.44 41 P P 19 10 55.7 +0.9
YAH IAmb IAmb 19 12 04.5
comp=Z,71nm,1.5s
TNSS Tian-Shan 47.47 294 *i* P **P 19 10 55.6 +0.2**
TNSS Tian-Shan 47.47 294 *i* P **P 19 10 55.7 +0.2**
baz=294
CTG Chitna Glacier 47.50 40 P P 19 10 56.7 +1.6
baz=283
CTGM Chitina Glacie 47.51 40 P P 19 10 56.4 +1.3
CTGM IAmb IAmb 19 11 03.6
comp=Z,15nm,0.6s
KUU Kurty 47.54 296 *c i*P **P 19 10 54.7 -0.8**
KUU pmax pmax
comp=Z,33nm,0.6s
KUU Kurty 47.54 296⇑ *i*P **P 19 10 54.8 -0.8**
comp=Z,33nm,0.6s,baz=296
LOGN Logan Glacier 47.69 40 P P 19 10 59.2 +2.6
LOGN IAmb IAmb 19 11 46.9
comp=Z,25nm,1.3s
DAWY Dawson 47.72 35 P P 19 10 57.9 +1.2
baz=282
TABL Table Mountain 47.72 41 P P 19 10 58.5 +1.7
TABL IAmb IAmb 19 11 38.8
comp=Z,35nm,1.1s
BRZS Berezniki 47.72 305 *c i*P **P 19 10 56.7 -0.1**
BRZS pmax pmax
comp=Z,17nm,0.3s
BRZS Berezniki 47.72 305⇑ *i*P **P 19 10 56.7 -0.1**
comp=Z,17nm,0.3s,baz=305
YUK3 Moose Creek 47.73 39 P P 19 10 58.3 +1.3
baz=283
AAI Ambon 47.73 200 P P 19 10 59.0 +1.8
AAI pmax pmax
comp=Z,64nm,0.8s
I29M Ogilvie Camp, 47.91 34 P P 19 10 58.8 +0.7
I29M IAmb IAmb 19 11 00.8
comp=Z,20nm,0.8s
I29M Ogilvie Camp, 47.91 34 P P 19 10 59.3 +1.2
baz=282,SNR=20
JIRN Jiri 48.01 271 *e*P **P 19 11 00.3 +0.5**
comp=Z,56nm,0.4s
O28M Mount Upton 48.09 40 P P 19 11 01.0 +1.1
baz=284
RAMN Ramite 48.09 270 *e*P **P 19 11 00.5 +0.2**
comp=Z,207nm,0.7s
GUN Gumba 48.10 272 *e*P **P 19 11 01.2 +0.7**
comp=Z,406nm,0.4s
BVA0 Borovoye Array 48.11 309 *i* P **P 19 10 59.9 +0.1**
BVAR Borovoye Array 48.11 309 P P 19 10 60.0 +0.2
comp=Z,24nm,0.4s,baz=80,slow=8.9,SNR=8.1
BVAR PcP **PcP 19 12 27.6 +1.0**
comp=Z,17nm,0.6s,baz=77,slow=3.2,SNR=6.8
BVAR LR LR 19 32 38.6
comp=Z,323nm,19.5s,baz=75,slow=38
comp=Z,24nm,0.4s
BRVK Borovoye 48.16 309 P P 19 11 00.8 +0.6
BRVK Borovoye 48.16 309 *i* P **P 19 11 00.4 +0.3**
BRVK pmax pmax
comp=Z,88nm,1.1s
BRVK Borovoye 48.16 309 P P 19 11 00.8 +0.6
BRVK Borovoye 48.16 309 *e*P **P 19 11 00.4 +0.3**
BRVK Borovoye 48.16 309 P P 19 10 59.4 -0.7
BRVK pP **pP 19 11 16.1 +1.2**
BRVK pwP **sP 19 11 23.2 +1.8**
ULHL Ulahol 48.26 294 P P 19 11 01.6 +0.2
SNR=16
EPYK Eagle Plains 48.34 32 P P 19 11 02.6 +1.2
EPYK IAmb IAmb 19 11 03.7
comp=Z,26nm,0.9s
EPYK Eagle Plains 48.34 32 P P 19 11 03.0 +1.5
baz=282,SNR=11
SBUM Sibu 48.35 223 P P 19 11 02.6 +0.6
SBUM Sibu 48.35 223 P P 19 11 03.5 +1.5
comp=Z,6.6nm,1.0s
BOOM Boomskoye usch 48.36 294 P P 19 11 02.8 +0.7
BOOM Boomskoye usch 48.36 294 P P 19 11 02.8 +0.7
BOOM pmax pmax
comp=Z,82nm,0.7s
G30M tAoh Zraii Nji 48.41 31 P P 19 11 03.1 +1.1
baz=282
TKM2 Tokmak 2 48.42 295 P P 19 11 03.2 +0.6
SNR=145
L29M L29M 48.48 37 P P 19 11 04.4 +1.9
baz=284,SNR=7.9
M29M Somme Creek 48.49 37 P P 19 11 04.3 +1.6
baz=284
OTUK Ortayu 48.53 303 P P 19 11 02.5 -0.6
K29M Barlow Dome 48.57 36 P P 19 11 04.8 +1.5
baz=284,SNR=16
BTLS Baital 48.62 298 *c i*P **P 19 11 03.1 -0.7**
BTLS pmax pmax
comp=Z,5.0nm,0.4s
BTLS Baital 48.62 298⇑ *i*P **P 19 11 03.1 -0.7**
comp=Z,5.1nm,0.4s,baz=298
PKI Pulchoki 48.64 272 *e*P **P 19 11 04.3 -0.2**
comp=Z,64nm,0.5s
PKIN Phulchoki 48.64 272 *e*P **P 19 11 04.5 0.0**
comp=Z,51nm,0.5s
YUK4 Talbot Arm 48.68 39 P P 19 11 05.5 +1.2
baz=285
NRN Naryn 48.76 293 P P 19 11 05.1 -0.2
NRN IAmb IAmb 19 11 43.9
comp=Z,11nm,0.7s
NRN Naryn 48.76 293 P P 19 11 05.1 -0.2
NRN pmax pmax
comp=Z,11nm,0.7s
DMN Daman 48.84 272 *e*P **P 19 11 06.4 +0.4**
comp=Z,97nm,0.5s
SGDS Sogindy 48.86 296 *c i*P **P 19 11 05.4 -0.3**
SGDS pmax pmax
comp=Z,21nm,1.2s
SGDS Sogindy 48.86 296⇑ *i*P **P 19 11 05.5 -0.3**
comp=Z,21nm,1.2s,baz=296
YUK6 Outpost Mounta 48.91 39 P P 19 11 07.6 +1.4
baz=285
CHMS Chumysh 48.96 295 P P 19 11 06.5 +0.1
SNR=11

KBK	**Karagaybulak**	**48.97**	**295**	P	**P**	**19 11 07.2**	**+0.5**
	SNR=36						
GKN	**Gorkha**	**48.97**	**273**	*e*P	**P**	**19 11 07.2**	**+0.3**
	comp=Z,140nm,0.5s						
O29M	**Mount Kennedy**	**48.99**	**40**	P	**P**	**19 11 08.4**	**+1.9**
	baz=286						
USP	**Ospenovka**	**49.02**	**296**	P	**P**	**19 11 07.2**	**+0.3**
	SNR=42						
INK	**Inuvik**	**49.13**	**29**	P	**P**	**19 11 07.5**	**+0.1**
	comp=Z,6.9nm,0.5s,baz=306,slow=5.6,SNR=12						
INK				LR	LR	19 33 51.7	
	comp=Z,120nm,18.8s,baz=287,slow=38						
	comp=Z,6.9nm,0.5s						
INK	**Inuvik**	**49.13**	**29**	P	**P**	**19 11 07.5**	**+0.1**
INK				IAmb	IAmb	19 11 11.0	
	comp=Z,7.6nm,0.6s						
INK	**Inuvik**	**49.13**	**29**	P	**P**	**19 11 08.2**	**+0.9**
	baz=283,SNR=5.3						
F31M	**Tsiigehtchic**	**49.25**	**30**	P	**P**	**19 11 09.1**	**+0.8**
	baz=284						
AAK	**Ala-Archa**	**49.28**	**295**	P	**P**	**19 11 09.2**	**+0.1**
	SNR=33						
AAK	**Ala-Archa**	**49.28**	**295**	LR	LR	19 34 01.4	
	comp=Z,536nm,18.8s,baz=75,slow=38						
AAK	**Ala-Archa**	**49.28**	**295**	P	**P**	**19 11 09.4**	**+0.3**
AAK				IAmb	IAmb	19 11 09.7	
	comp=Z,20nm,0.7s						
AAK	**Ala-Archa**	**49.28**	**295**	*ce*P	**P**	**19 11 09.0**	**-0.1**
AAK				pmax	pmax		
	comp=Z,52nm,1.7s						
AAK	**Ala-Archa**	**49.28**	**295**	P	**P**	**19 11 09.5**	**+0.5**
AAK	**Ala-Archa**	**49.28**	**295**	*e*P	**P**	**19 11 09.0**	**-0.1**
AAK	**Ala-Archa**	**49.28**	**295**	*i* P	**P**	**19 11 09.4**	**+0.3**
	SNR=25						
AAK	**Ala-Archa**	**49.28**	**295**	P	**P**	**19 11 07.4**	**-1.7**
AAK				pP	**pP**	**19 11 26.4**	**+2.4**
HYT	**Haines Junctio**	**49.35**	**39**	P	**P**	**19 11 11.7**	**+2.4**
HYT	**Haines Junctio**	**49.35**	**39**	P	**P**	**19 11 11.8**	**+2.4**
	baz=286,SNR=24						
N30M	**Aishikik Lake**	**49.37**	**39**	P	**P**	**19 11 10.4**	**+1.0**
	baz=286						
DANN	**Dangsing**	**49.44**	**274**	*e*P	**P**	**19 11 11.4**	**+0.8**
	comp=Z,397nm,0.5s						
UCH	**Uchtor**	**49.44**	**294**	P	**P**	**19 11 10.6**	**-0.1**
	SNR=17						
P29M	**Windy Craggy**	**49.58**	**41**	P	**P**	**19 11 12.5**	**+1.6**
P29M	**Windy Craggy**	**49.58**	**41**	P	**P**	**19 11 12.5**	**+1.6**
	baz=287,SNR=13						
KSH	**Kashi**	**49.60**	**291**	P	**P**	**19 11 15.5**	**+4.0**
KSH				LR	LR		
	comp=Z,270nm,15.1s						
KSH				LR	LR		
	comp=Z,480nm,15.1s						
KSH				LR	LR		
	comp=Z,580nm,16.5s						
EKS2	**Erkin-Say**	**49.75**	**295**	P	**P**	**19 11 12.9**	**+0.2**
	SNR=37						
P30M	**Million Dollar**	**49.81**	**40**	P	**P**	**19 11 14.3**	**+1.5**
	baz=287						
N31M	**Braeburn, Yuko**	**49.97**	**38**	P	**P**	**19 11 15.3**	**+1.4**
N31M				IAmb	IAmb	19 11 17.9	
	comp=Z,15nm,0.8s						
N31M	**Braeburn, Yuko**	**49.97**	**38**	P	**P**	**19 11 14.9**	**+1.0**
	baz=287,SNR=8.6						
AML	**Almayashu**	**50.03**	**295**	P	**P**	**19 11 15.7**	**+0.6**
	SNR=17						
O30N	**Mendenhall**	**50.03**	**39**	P	**P**	**19 11 15.6**	**+1.2**
	baz=287						
PYUN	**Piuthan**	**50.14**	**274**	*e*P	**P**	**19 11 16.2**	**+0.3**
	comp=Z,119nm,0.6s						
KSM	**Kuching**	**50.16**	**225**	P	**P**	**19 11 16.5**	**+0.7**
KSM	**Kuching**	**50.16**	**225**	P	**P**	**19 11 17.2**	**+1.4**
	comp=Z,54nm,1.0s						
KSM	**Kuching**	**50.16**	**225**	P	**P**	**19 11 17.2**	**+1.4**
PLBC	**Pleasant Camp**	**50.30**	**41**	P	**P**	**19 11 17.7**	**+1.3**
	baz=288						
M31M	**Drury Creek, Y**	**50.38**	**37**	P	**P**	**19 11 18.1**	**+1.1**
M31M	**Drury Creek, Y**	**50.38**	**37**	P	**P**	**19 11 18.1**	**+1.1**
	baz=287,SNR=6.1						
WHY	**Whitehorse**	**50.63**	**39**	P	**P**	**19 11 20.1**	**+1.0**
WHY	**Whitehorse**	**50.63**	**39**	P	**P**	**19 11 20.3**	**+1.2**
	baz=288						
SKAG	**Skagway**	**50.80**	**41**	P	**P**	**19 11 21.9**	**+1.8**
SKAG				IAmb	IAmb	19 11 30.2	
	comp=Z,9.7nm,0.9s						
SKAG	**Skagway**	**50.80**	**41**	P	**P**	**19 11 22.1**	**+2.0**
	baz=289						
SRIT	**Nakonsritamara**	**50.82**	**241**	P	**P**	**19 11 21.2**	**+0.4**
FARO	**Faro, Yukon**	**50.84**	**37**	P	**P**	**19 11 22.1**	**+1.6**
FARO	**Faro, Yukon**	**50.84**	**37**	P	**P**	**19 11 22.1**	**+1.6**
	baz=288						
A36M	**Sachs Harbour**	**50.90**	**24**	P	**P**	**19 11 22.2**	**+1.5**
A36M				IAmb	IAmb	19 11 35.4	
	comp=Z,27nm,0.8s						
SAUI	**Saumlaki**	**51.19**	**195**	P	**P**	**19 11 24.4**	**+0.8**
SKLT	**Songkhla**	**51.24**	**239**	P	**P**	**19 11 26.0**	**+2.1**
	comp=Z,61nm,0.8s						
DZA	**Taraz**	**51.28**	**297**	*e*P	**P**	**19 11 23.4**	**-0.7**
DZA	**Taraz**	**51.28**	**297**	*e*P	**P**	**19 11 23.4**	**-0.7**
	baz=297						
N32M	**Quiet Lake**	**51.31**	**38**	P	**P**	**19 11 25.2**	**+1.2**
	baz=289						
P32M	**Atlin**	**51.53**	**40**	P	**P**	**19 11 27.6**	**+1.9**
	baz=290						
R32K	**Eaglecrest**	**51.59**	**42**	P	**P**	**19 11 27.7**	**+1.6**
	baz=290						
SIT	**Sitka**	**51.61**	**44**	P	**P**	**19 11 25.7**	**-0.5**
SIT				IAmb	IAmb	19 11 34.5	
	comp=Z,57nm,1.6s						
SIT	**Sitka**	**51.61**	**44**	P	**P**	**19 11 25.7**	**-0.5**
SIT				pmax	pmax		
	comp=Z,57nm,1.6s						
MMPY	**Sheldon Lake,**	**51.64**	**36**	P	**P**	**19 11 28.4**	**+1.9**
	baz=289						
KAPI	**Kappang**	**51.66**	**210**	LR	LR	19 33 39.3	
	comp=Z,18nm,20.0s,baz=29,slow=36						
KAPI	**Kappang**	**51.66**	**210**	P	**P**	**19 11 27.4**	**+0.4**
KAPI	**Kappang**	**51.66**	**210**	P	**P**	**19 11 27.4**	**+0.4**
KAPI				pmax	pmax		
	comp=Z,87nm,1.6s						
KK31	**Karatay Array**	**51.74**	**297**	P	**P**	**19 11 27.7**	**+0.3**
KK31				IAmb	IAmb	19 11 28.2	
	comp=Z,27nm,0.6s						
KK31	**Karatay Array**	**51.74**	**297**	*i* P	**P**	**19 11 26.8**	**-0.6**
KKAR	**Karatay Array**	**51.74**	**297**	P	**P**	**19 11 27.4**	**0.0**
KKAR				IAmb	IAmb	19 11 28.2	
	comp=Z,27nm,0.6s						
KKAR	**Karatay Array**	**51.74**	**297**	P	**P**	**19 11 27.3**	**-0.1**
KKAR				PcP	**PcP**	**19 12 40.4**	**+0.3**
KKAR	**Karatay Array**	**51.74**	**297**	P	**P**	**19 11 27.3**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,27nm,0.6s						
P33M	**Teslin, Yukon**	**51.75**	**39**	P	**P**	**19 11 28.5**	**+1.2**
P33M				IAmb	IAmb	19 11 30.2	
	comp=Z,16nm,1.1s						
P33M	**Teslin, Yukon**	**51.75**	**39**	P	**P**	**19 11 29.0**	**+1.7**
	baz=290,SNR=8.0						
SVE	**Sverdlovsk**	**52.14**	**316**	*de*P	**P**	**19 11 30.8**	**+0.6**
SVE				*e*S	**S**	**19 18 50.6**	**+0.5**
SVE				pmax	pmax		
	comp=Z,231nm,0.9s						
SVE	**Sverdlovsk**	**52.14**	**316**	*e*P	**P**	**19 11 30.8**	**+0.6**
Q32M	**Nakina River**	**52.45**	**41**	P	**P**	**19 11 34.2**	**+1.5**
	baz=291						
IUG	**Iuzhnay**	**52.48**	**296**	*c i* P	**P**	**19 11 33.1**	**+0.1**
IUG	**Iuzhnay**	**52.48**	**296**	⇑ *i* P	**P**	**19 11 33.1**	**+0.1**
	baz=296						
DRK	**Karamyk**	**52.49**	**292**	P	**P**	**19 11 33.2**	**-0.2**
KULM	**Kulim**	**52.66**	**238**	P	**P**	**19 11 35.7**	**+1.2**
KULM	**Kulim**	**52.66**	**238**	P	**P**	**19 11 36.3**	**+1.8**
	comp=Z,54nm,1.1s						
BTK	**Batken**	**52.90**	**294**	P	**P**	**19 11 35.4**	**-0.8**
BTK	**Batken**	**52.90**	**294**	P	**P**	**19 11 35.4**	**-0.8**
BTK				pmax	pmax		
	comp=Z,109nm,1.8s						
R33M	**Jennings River**	**52.91**	**40**	P	**P**	**19 11 37.9**	**+1.8**
	baz=292						
OPA	**Opana**	**52.93**	**94**	P	**P**	**19 11 36.9**	**+0.4**
OPA	**Opana**	**52.93**	**94**	P	**P**	**19 11 36.9**	**+0.4**
OPA				pmax	pmax		
	comp=Z,129nm,1.1s						
IPM	**Ipoh**	**53.05**	**237**	P	**P**	**19 11 37.5**	**0.0**
IPM				IAmb	IAmb	19 11 39.0	
	comp=Z,24nm,1.1s						
PBA	**Port Blair**	**53.25**	**250**	P	**P**	**19 11 38.4**	**-0.5**
PBA	**Port Blair**	**53.25**	**250**	P	**P**	**19 11 39.1**	**+0.3**
ARU	**Arti**	**53.35**	**316**	P	**P**	**19 11 39.1**	**-0.1**
	comp=Z,91nm,0.6s,baz=70,slow=4.6,SNR=256						
ARU				LR	LR	19 36 01.0	
	comp=Z,279nm,21.5s,baz=59,slow=38						
	comp=Z,91nm,0.6s						
ARU	**Arti**	**53.35**	**316**	P	**P**	**19 11 39.2**	**+0.1**
ARU				PcP	**PcP**	**19 12 45.1**	**-0.8**
ARU	**Arti**	**53.35**	**316**	*c i* P	**P**	**19 11 39.0**	**-0.1**
ARU				*PP	**pP**	**19 11 55.1**	**+1.0**
ARU						19 12 45.2	
ARU						19 13 36.1	
ARU				S	**S**	**19 19 08.5**	**+1.9**
ARU						19 21 19.4	
ARU				SS	**SS**	**19 22 45.8**	**-0.7**
ARU				pmax	pmax		
	comp=Z,153nm,0.8s						
ARU	**Arti**	**53.35**	**316**	P	**P**	**19 11 37.4**	**-1.7**
WRAK	**Wrangell Islan**	**53.37**	**44**	P	**P**	**19 11 41.6**	**+2.3**
	baz=293						
S34M	**Telegraph Cree**	**53.40**	**42**	P	**P**	**19 11 41.2**	**+1.8**
	baz=293						
MYKOM	**Kota Tinggi**	**53.48**	**232**	P	**P**	**19 11 41.4**	**+0.8**
MYKOM				IAmb	IAmb	19 11 43.0	
	comp=Z,37nm,1.2s						
WTLY	**Watson Lake, Y**	**53.65**	**38**	P	**P**	**19 11 42.5**	**+1.2**
WTLY				IAmb	IAmb	19 11 47.5	
	comp=Z,14nm,0.7s						
DLBC	**Dease Lake**	**53.73**	**41**	LR	LR	19 36 23.8	
	comp=Z,72nm,19.6s,baz=293,slow=38						
DLBC	**Dease Lake**	**53.73**	**41**	P	**P**	**19 11 42.5**	**+0.5**
DLBC				IAmb	IAmb	19 11 54.3	
	comp=Z,37nm,1.9s						
DLBC	**Dease Lake**	**53.73**	**41**	P	**P**	**19 11 44.2**	**+2.2**
	baz=293						
GAR	**Garm**	**53.73**	**293**	P	**P**	**19 11 41.7**	**-0.7**
HNR	**Honiara**	**53.75**	**159**	LR	LR	19 35 30.3	
	comp=Z,864nm,18.9s,baz=348,slow=37						
MMRI	**Maumere**	**54.17**	**206**	P	**P**	**19 11 45.1**	**-0.4**
T35M	**Bob Quinn**	**54.21**	**42**	P	**P**	**19 11 46.9**	**+1.4**
	baz=294						
NIL	**Nilore**	**54.33**	**285**	P	**P**	**19 11 46.5**	**-0.1**
NIL	**Nilore**	**54.33**	**285**	P	**P**	**19 11 46.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,82nm,0.8s						
NIL	**Nilore**	**54.33**	**285**	P	**P**	**19 11 47.4**	**+0.8**
NIL	**Nilore**	**54.33**	**285**	P	**P**	**19 11 45.7**	**-1.0**
NIL				pP	**pP**	**19 12 02.6**	**+1.0**
SOEI	**Soe**	**54.60**	**203**	P	**P**	**19 11 47.8**	**-1.0**
SOEI	**Soe**	**54.60**	**203**	P	**P**	**19 11 49.2**	**+0.4**
DIB	**Dawson Inlet,**	**54.62**	**47**	P	**P**	**19 11 50.1**	**+1.7**
DIB				IAmb	IAmb	19 12 06.8	
	comp=Z,46nm,1.5s						
CHGR	**Chuyangaron**	**54.69**	**293**	P	**P**	**19 11 49.0**	**-0.3**
CHGR	**Chuyangaron**	**54.69**	**293**	P	**P**	**19 11 49.0**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,226nm,0.6s						
ALE	**Alert**	**54.77**	**4**	P	**P**	**19 11 47.5**	**-1.7**
ALE				pP	**pP**	**19 12 05.1**	**+1.0**
EUNU	**Eureka**	**54.78**	**9**	P	**P**	**19 11 49.1**	**-0.2**
EUNU				IAmb	IAmb	19 11 50.0	
	comp=Z,29nm,1.3s						
SIMJ	**Simiganj**	**54.80**	**293**	P	**P**	**19 11 48.2**	**-1.9**
SIMJ				pP	**sP**	**19 12 10.3**	**-1.1**
KDU	**Kakadu**	**55.58**	**193**	P	**P**	**19 11 56.2**	**+0.5**
SPB2	**Spitsbergen Ar**	**55.62**	**348**	P	**P**	**19 11 55.2**	**-0.1**
SPB2				IAmb	IAmb	19 11 57.4	
	comp=Z,35nm,1.0s						
SPITS	**Spitsbergen Ar**	**55.62**	**348**	P	**P**	**19 11 55.0**	**-0.2**
	comp=Z,9.5nm,0.6s,baz=72,slow=11,SNR=20						
SPITS				LR	LR	19 39 10.3	
	comp=Z,118nm,18.2s,baz=10,slow=40						
	comp=Z,9.5nm,0.6s						
AB31	**Akbulak array**	**55.62**	**308**	*i* P	**P**	**19 11 55.7**	**0.0**
ABKAR	**Akbulak array**	**55.62**	**308**	P	**P**	**19 11 56.4**	**+0.6**
ABKAR	**Akbulak array**	**55.62**	**308**	P	**P**	**19 11 56.1**	**+0.4**
PSI	**Prapat**	**55.66**	**237**	LR	LR	19 36 43.1	
	comp=Z,56nm,19.0s,baz=26,slow=37						
PSI	**Prapat**	**55.66**	**237**	P	**P**	**19 11 55.6**	**-0.9**
PSI				pmax	pmax		
	comp=Z,26nm,0.8s						
PSI	**Prapat**	**55.66**	**237**	P	**P**	**19 11 57.4**	**+0.9**
	comp=Z,539nmcomp=Z,40nm,1.2s						
PSI	**Prapat**	**55.66**	**237**	P	**P**	**19 11 57.7**	**+1.2**
KBS	**Kingsbay**	**55.70**	**350**	P	**P**	**19 11 55.8**	**0.0**
KBS				IAmb	IAmb	19 11 56.9	
	comp=Z,35nm,0.8s						
KBS	**Kingsbay**	**55.70**	**350**	*ce*P	**P**	**19 11 56.6**	**+0.8**
KBS				pmax	pmax		
	comp=Z,28nm,0.8s						
KBS	**Kingsbay**	**55.70**	**350**	*i* P	**P**	**19 11 52.5**	**-3.3**
RPSI	**Rantau Prapat**	**55.74**	**237**	P	**P**	**19 11 55.6**	**-1.4**
RPSI				IAmb	IAmb	19 11 58.1	
	comp=Z,26nm,0.8s						
HUH	**Hualalai**	**55.76**	**94**	P	**P**	**19 11 55.7**	**-1.7**
NOR	**Nord**	**55.88**	**356**	*i* P	**P**	**19 11 53.5**	**-3.6**
NOR				IAmb	IAmb	19 11 57.2	
	comp=Z,23nm,0.9s						
MTN	**Manton Dam**	**55.97**	**194**	P	**P**	**19 11 57.9**	**-0.5**
MTN				IAmb	IAmb	19 11 59.8	
	comp=Z,26nm,0.8s						
MTN	**Manton Dam**	**55.97**	**194**	P	**P**	**19 11 59.1**	**+0.7**
COEN	**Coen**	**55.98**	**180**	P	**P**	**19 11 59.8**	**+1.2**
COEN				IAmb	IAmb	19 12 16.6	
	comp=Z,18nm,1.1s						
COEN	**Coen**	**55.98**	**180**	P	**P**	**19 11 59.9**	**+1.4**
AKTO	**Aktyubinsk**	**56.20**	**310**	P	**P**	**19 11 59.9**	**0.0**
	comp=Z,26nm,0.7s,baz=72,slow=8.4,SNR=67						
AKTO				LR	LR	19 38 04.5	
	comp=Z,257nm,18.3s,baz=67,slow=38						
	comp=Z,26nm,0.7s						
BKNI	**Bangkinang**	**56.31**	**234**	P	**P**	**19 12 00.4**	**-0.7**
BKNI	**Bangkinang**	**56.31**	**234**	P	**P**	**19 12 02.4**	**+1.4**
OBL	**Observatory Le**	**56.34**	**94**	P	**P**	**19 12 00.6**	**-0.7**
KBL	**Kabul**	**56.85**	**289**	P	**P**	**19 12 04.7**	**-0.3**
KBL	**Kabul**	**56.85**	**289**	P	**P**	**19 12 04.7**	**-0.3**
KBL				pmax	pmax		
	comp=Z,32nm,0.6s						
KIRV	**Kirov**	**56.88**	**321**	P	**P**	**19 12 04.4**	**-0.1**
	comp=Z,108nm,0.8s,baz=76,slow=3.1,SNR=46						
KIRV				LR	LR	19 39 04.2	
	comp=Z,209nm,18.2s,baz=64,slow=39						
	comp=Z,108nm,0.8s						
KIRV	**Kirov**	**56.88**	**321**	*ce*P	**P**	**19 12 04.2**	**-0.3**
JAGI	**Jajag, Banyuwa**	**57.04**	**215**	P	**P**	**19 12 04.8**	**-1.4**
PRGR	**Permogore**	**57.10**	**326**	⇑ *i* P	**P**	**19 12 05.6**	**-0.4**
PRGR				*e*		19 14 09.6	
PRGR				pmax	pmax		
	comp=Z,67nm,0.8s						
RES	**Resolute Bay**	**57.18**	**16**	P	**P**	**19 12 06.4**	**0.0**
	comp=Z,17nm,0.5s,baz=305,slow=6.8,SNR=42						
RES				LR	LR	19 40 40.3	
	comp=Z,77nm,18.2s,baz=340,slow=40						
	comp=Z,17nm,0.5s						
RES	**Resolute Bay**	**57.18**	**16**	P	**P**	**19 12 06.3**	**0.0**
RES				IAmb	IAmb	19 12 06.9	
	comp=Z,21nm,0.7s						
SMRI	**Semarang**	**57.44**	**219**	P	**P**	**19 12 07.5**	**-1.4**
SMRI	**Semarang**	**57.44**	**219**	P	**P**	**19 12 10.6**	**+1.6**
BBB	**Bella Bella**	**57.45**	**47**	LR	LR	19 37 00.4	
	comp=Z,26nm,18.0s,baz=274,slow=36						
BBB	**Bella Bella**	**57.45**	**47**	P	**P**	**19 12 10.3**	**+1.7**
GSI	**Gunungsitoli**	**57.67**	**238**	P	**P**	**19 12 11.5**	**+0.8**
GSI	**Gunungsitoli**	**57.67**	**238**	P	**P**	**19 12 11.7**	**+1.1**
LVZ	**Lovozero**	**57.86**	**335**	P	**P**	**19 12 10.8**	**-0.5**
LVZ	**Lovozero**	**57.86**	**335**	⇓ *i* P	**P**	**19 12 10.9**	**-0.5**
LVZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
UGM	**Wanagama**	**58.16**	**219**	P	**P**	**19 12 12.6**	**-1.5**
APA	**Apatity**	**58.44**	**335**	⇓ *i* P	**P**	**19 12 12.9**	**-2.4**
APA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YKA	**Yellowknife Ar**	**58.63**	**32**	P	**P**	**19 12 16.9**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=300,slow=6.6,SNR=7.7						
	comp=Z,4.6nm,0.8s						
KNRA	**Kununurra**	**59.19**	**196**	P	**P**	**19 12 21.8**	**+0.8**
KNRA				IAmb	IAmb	19 12 22.5	
	comp=Z,23nm,0.7s						
KNRA	**Kununurra**	**59.19**	**196**	P	**P**	**19 12 21.7**	**+0.7**
ARCES	**ARCESS Array B**	**59.54**	**339**	P	**P**	**19 12 23.0**	**+0.1**
	comp=Z,5.7nm,0.5s,baz=49,slow=8.1,SNR=10						
ARCES				LR	LR	19 42 35.0	
	comp=Z,106nm,19.8s,baz=76,slow=40						
	comp=Z,5.7nm,0.5s						
HYBB	**Hyderabad (bro**	**59.73**	**266**	*e*P	**P**	**19 12 25.0**	**-0.1**
HYBB				*es*P	**sP**	**19 12 47.6**	**+1.2**
HYBB				*e*PcP	**PcP**	**19 13 11.1**	**-0.4**
HYBB				*e*PcS	**PcS**	**19 17 13.5**	**-0.4**
HYBB				*e*S	**S**	**19 20 31.7**	**-0.4**
KLMR	**Klimovskoe**	**60.03**	**327**	*e*P	**P**	**19 12 23.9**	**-2.4**
KLMR				*e*		19 14 35.2	
KLMR				pmax	pmax		
	comp=Z,80nm,1.2s						
KLMR	**Klimovskoe**	**60.03**	**327**	*e*P	**P**	**19 12 24.0**	**-2.4**
KLMR				AMP		19 12 27.0	
	comp=Z,80nm,1.2s						
KLMR				*e*PP	**PP**	**19 14 35.2**	**-3.6**
NEEM	**North Greenlan**	**60.20**	**4**	*i* P	**P**	**19 12 26.4**	**-1.3**
NEEM				IAmb	IAmb	19 12 29.1	
	comp=Z,34nm,0.7s						
MANA	**Manning**	**60.35**	**39**	P	**P**	**19 12 30.7**	**+2.0**
MANA				IAmb	IAmb	19 12 31.7	
	comp=Z,33nm,1.1s						
WAPA	**Wapiti River**	**60.48**	**41**	P	**P**	**19 12 30.4**	**+0.7**
WAPA				IAmb	IAmb	19 12 31.6	
	comp=Z,20nm,0.8s						
DAG	**Danmarks Havn**	**60.64**	**355**	*i* P	**P**	**19 12 28.8**	**-1.5**
DAG				IAmb	IAmb	19 12 30.6	
	comp=Z,16nm,0.7s						
BELG	**Belogornoye**	**60.88**	**316**	P	**P**	**19 12 32.1**	**-0.2**
	comp=Z,124nm,0.8s,baz=342,slow=1.0,SNR=38						
BELG				LR	LR	19 41 49.5	
	comp=Z,354nm,18.8s,baz=75,slow=39						
	comp=Z,124nm,0.8s						
BELG	**Belogornoye**	**60.88**	**316**	⇑ *i* P	**P**	**19 12 32.5**	**+0.2**
BELG				pmax	pmax		
	comp=Z,27nm,0.9s						
C03A	**Quillayute Air**	**61.57**	**50**	P	**P**	**19 12 41.9**	**+4.8**
LLLB	**Lillooet**	**61.61**	**46**	P	**P**	**19 12 37.2**	**-0.2**
LLLB				IAmb	IAmb	19 12 39.8	
	comp=Z,12nm,1.1s						
BRLDA	**Berland Lookou**	**61.98**	**41**	P	**P**	**19 12 40.3**	**+0.4**
CTA	**Charters Tower**	**62.15**	**177**	LR	LR	19 38 27.2	
	comp=Z,30nm,21.3s,baz=46,slow=35						
WB0	**Warramunga Arr**	**62.28**	**189**	P	**P**	**19 12 41.5**	**-0.6**
WB0				IAmb	IAmb	19 12 42.8	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**62.45**	**189**	*ce*P	**P**	**19 12 43.2**	**0.0**
WRAB				pmax	pmax		
	comp=Z,15nm,2.5s						
WRAB	**Tennant Creek**	**62.45**	**189**	P	**P**	**19 12 43.8**	**+0.6**
WR0	**Warramunga Arr**	**62.45**	**189**	P	**P**	**19 12 42.7**	**-0.4**
WR0				IAmb	IAmb	19 13 31.9	
	comp=Z,12nm,0.6s						
WB2	**Warramunga Arr**	**62.46**	**189**	IAmb	IAmb	19 13 09.7	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**62.46**	**189**	P	**P**	**19 12 43.0**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=5.1,slow=6.9,SNR=47						
WRA				PKPPKP	P'P'df	19 41 54.0	+11
	comp=Z,1.1nm,1.0s,baz=189,slow=2.7,SNR=5.8						
	comp=Z,6.8nm,0.8s						
GEYT	**Alibeck**	**62.49**	**297**	P	**P**	**19 12 43.5**	**+0.1**
	comp=Z,52nm,0.6s,baz=29,slow=3.4,SNR=125						
GEYT				LR	LR	19 42 02.6	
	comp=Z,424nm,18.8s,baz=82,slow=38						
	comp=Z,52nm,0.6s						
GYA0	**ALIBECK ARRAY**	**62.49**	**297**	P	**P**	**19 12 42.8**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**62.49**	**297**	P	**P**	**19 12 43.1**	**-0.4**
POO	**Poona**	**62.53**	**271**	*e*P	**P**	19 12 39.0	-5.0
FAUS	**Fauske**	**63.73**	**340**	*e*P	**P**	**19 12 51.0**	**-0.1**
MOS	**Moscow**	**63.82**	**323**	*e*P	**P**	**19 12 49.8**	**-2.1**
MOS				*e*AP	**pP**	**19 13 06.0**	**-1.2**
MOS				*e*XP	**sP**	**19 13 12.7**	**-0.9**
MOS				*e*PP	**PP**	**19 15 10.7**	**-1.5**
MOS				pmax	pmax		
	comp=Z,96nm,1.3s						
LTY	**Liberty**	**64.15**	**49**	P	**P**	**19 12 54.7**	**+0.4**
PUL	**Pulkovo**	**64.33**	**329**	*ce*P	**P**	**19 12 55.0**	**-0.2**
PUL				pmax	pmax		
	comp=Z,90nm,0.6s						
PUL	**Pulkovo**	**64.33**	**329**	*e*P	**P**	**19 12 55.0**	**-0.2**
VRH	**Novokhopyorsk**	**64.58**	**317**	*e*P	**P**	**19 12 54.3**	**-2.6**
VRH				pmax	pmax		
	comp=Z,80nm,1.1s						
OBN	**Obninsk**	**64.68**	**322**	P	**P**	**19 12 57.1**	**-0.5**
	comp=Z,8.7nm,0.6s,baz=41,slow=18,SNR=17						
	comp=Z,8.7nm,0.6s						
OBN	**Obninsk**	**64.68**	**322**	P	**P**	**19 12 56.4**	**-1.1**
OBN	**Obninsk**	**64.68**	**322**	*c i* P	**P**	**19 12 57.0**	**-0.5**
OBN				*i* *SP	**sP**	**19 13 19.5**	**+0.3**
OBN				*e*S	**S**	**19 21 34.8**	**+1.6**
OBN				*i* *SS	sS	19 22 11.8	+13
OBN				*i* SS	**SS**	**19 25 51.5**	**+7.6**
OBN				pmax	pmax		
	comp=Z,127nm,1.7s						
OBN				MLR	MLR		
	comp=Z,204nm,18.0s						
OBN	**Obninsk**	**64.68**	**322**	*e*P	**P**	**19 12 57.3**	**-0.2**
HOOD	**Mount Hood Mea**	**64.70**	**51**	IAmb	IAmb	19 13 37.4	
	comp=Z,24nm,1.0s						
FIA1	**FINESS Array S**	**64.77**	**332**	P	**P**	**19 12 57.0**	**-1.0**
FINES	**FINESS Array B**	**64.77**	**332**	P	**P**	**19 12 57.6**	**-0.4**
	comp=Z,31nm,0.4s,baz=54,slow=6.7

MBWA Marble Bar 66.73 204 P **P** **19 13 11.5 +0.4**
GROC Groznyy 67.13 308 P **P** **19 13 11.1 -2.4**
GROC *e**PP **pP** **19 13 27.3 -1.7**
GROC *e* 19 13 39.8
GROC pmax pmax
comp=Z,28nm,0.7s
JTMT Jette 67.33 46 IAmb IAmb 19 13 18.4
comp=Z,12nm,0.9s
MTSE Matsula 67.50 330 *e*P **P** **19 13 15.7 +0.2**
SEKA Sheki 67.50 306 P **P** **19 13 15.8 -0.2**
GOF Gofitskoye 67.58 311⇑*e*P **P** **19 13 16.9 +0.6**
GOF pmax pmax
comp=Z,170nm,1.1s
ZKTA Zakatala 67.59 306 P **P** **19 13 16.7 +0.2**
DZM Mont Dzumac 67.59 157 *e*LR LR 19 33 42.3
comp=Z,224nm,25.9s
DZM Mont Dzumac 67.59 157 LR LR 19 38 56.3
comp=Z,81nm,21.7s,baz=23,slow=32
J08A Circle Bar Ran 67.70 51 P **P** **19 13 17.9 +0.6**
AAL Aland 67.77 333 *e*P **P** **19 13 16.7 -0.5**
MNGR Mingechevir, A 67.83 305 P **P** **19 13 18.2 +0.2**
MSVF Nonsavu 67.89 144 LR LR 19 38 52.5
comp=Z,111nm,18.8s,baz=327,slow=32
LKRN Lenkeran, Azer 68.03 303 P **P** **19 13 19.6 +0.3**
MSO Missoula 68.08 46 **P** **19 13 19.4 -0.3**
MSO Missoula 68.08 46 P **P** **19 13 20.9 +1.3**
baz=309
TBLU Trondheim 68.29 339 *e*P **P** **19 13 18.3 -2.2**
ILULI Ilulissat 68.30 5 P **P** **19 13 19.3 -1.1**
ILULI IAmb IAmb 19 13 21.3
comp=Z,30nm,0.8s
ILULI Ilulissat 68.30 5 P **P** **19 13 19.3 -1.1**
ILULI pmax pmax
comp=Z,30nm,0.8s
ILULI Ilulissat 68.30 5 *i* P **P** **19 13 18.2 -2.2**
GANJ Ganja 68.37 306 P **P** **19 13 20.8 -0.6**
WRKA Warakurna 68.39 194 P **P** **19 13 22.0 +0.5**
KIV Kislovodsk 68.46 310 ⇑P **P** **19 13 23.1 +1.1**
KIV Kislovodsk 68.46 310 P **P** **19 13 22.5 +0.5**
KIV Kislovodsk 68.46 310 *e*P **P** **19 13 22.4 +0.4**
KIV *e*S **S** **19 22 19.9 +0.3**
KIV pmax pmax
comp=Z,98nm,1.0s
KIV pmax pmax
comp=Z,26nm,4.9s
KIV Kislovodsk 68.46 310 P **P** **19 13 23.2 +1.2**
KIV Kislovodsk 68.46 310 *e*P **P** **19 13 22.4 +0.4**
KIV Kislovodsk 68.46 310 *i* P **P** **19 13 22.9 +0.9**
SNR=22
KIV Kislovodsk 68.46 310 P **P** **19 13 22.3 +0.3**
KIV sP **sP** **19 13 44.8 +0.9**
KBZ Khabaz 68.48 310 P **P** **19 13 22.7 +0.7**
comp=Z,34nm,0.8s,baz=44,slow=4.6,SNR=84
KBZ LR LR 19 47 26.1
comp=Z,168nm,20.1s,baz=47,slow=40
comp=Z,34nm,0.8s
KBZ Khabaz 68.48 310 *ce*P **P** **19 13 22.6 +0.6**
KBZ pmax pmax
comp=Z,9.0nm,0.6s
KBZ Khabaz 68.48 310 *e*P **P** **19 13 22.6 +0.6**
ZEI Tsey 68.49 309 *e*P **P** **19 13 19.9 -2.4**
ZEI pmax pmax
comp=Z,29nm,1.3s
FFC Flin Flon 68.60 34 P **P** **19 13 22.7 +0.1**
FFC IAmb IAmb 19 13 24.2
comp=Z,11nm,0.8s
FFC Flin Flon 68.60 34 P **P** **19 13 22.7 +0.1**
FFC pmax pmax
comp=Z,11nm,0.9s
SHA1 Shidzhatmaz 68.61 310⇑*i*P **P** **19 13 23.9 +0.8**
UPP Uppsala 68.79 334 *e*P **P** **19 13 23.2 -0.4**
ISAL Salakas 68.84 327 *e*P **P** **19 13 24.6 +0.5**
MNK Minsk 68.87 326 *i* P **P** **19 13 24.7 +0.6**
MNK *i* S **S** **19 22 26.6 +2.8**
MNK *i* *SS **sS** **19 22 49.7 -0.4**
MNK pmax pmax
comp=Z,81nm,0.9s
MNK pmax pmax
comp=E,7.0nm,1.1s
MNK pmax pmax
comp=N,46nm,0.8s
MNK MLR MLR
comp=E,69nm,24.0s
MNK MLR MLR
comp=N,995nm,18.0s
MNK Minsk 68.87 326 *i* P **P** **19 13 24.8 +0.6**
comp=E,7.0nm,1.1s
MNK *i* P **P** **19 13 24.8 +0.6**
comp=N,46nm,0.8s
MNK *i* P **P** **19 13 24.8 +0.6**
comp=Z,81nm,0.9s,baz=226
MNK *i* S **S** **19 22 26.7 +2.8**
MNK *i* sS **sS** **19 22 49.7 -0.4**
MNK *i* SSS SSS 19 29 32.9
MNK *i* LQ LQ 19 38 52.1
MNK *i* LR LR 19 42 47.4
MNK *i* LRM MLR 19 46 15.5
comp=E,69nm,24.5s
MNK *i* LRM MLR 19 46 15.5
comp=N,995nm,17.7s
ONI Oni 68.87 309 P **P** **19 13 25.0 +0.5**
ONI IAmb IAmb 19 13 26.8
comp=Z,39nm,1.1s
ONI Oni 68.87 309 P **P** **19 13 25.0 +0.5**
ONI pmax pmax
comp=Z,39nm,1.1s
ICESG Greenland Ices 68.91 1 *i* P **P** **19 13 24.0 -0.6**
ICESG IAmb IAmb 19 13 26.4
comp=Z,77nm,1.0s
IIGN Ignalina 68.96 327 *e*P **P** **19 13 25.4 +0.7**
NACGM Naroch 69.05 326⇑*e*P P 19 13 16.8 -8.5
baz=45
VSVD Vaisvydziai 69.42 328 *e*P **P** **19 13 27.4 -0.2**
EGMT Eagleton 69.50 43 P **P** **19 13 28.8 +0.4**
EGMT IAmb IAmb 19 13 30.4
comp=Z,18nm,0.9s
EGMT Eagleton 69.50 43 P **P** **19 13 29.7 +1.3**
baz=311
GNI Garni 69.62 306 LR LR 19 46 59.6
comp=Z,95nm,19.5s,baz=64,slow=38
GNI Garni 69.62 306 P **P** **19 13 29.6 +0.2**
GNI IAmb IAmb 19 13 57.4
comp=Z,21nm,0.9s
GNI Garni 69.62 306 *ce*P **P** **19 13 31.0 +1.7**
GNI pmax pmax
comp=Z,39nm,1.3s
GNI Garni 69.62 306 P **P** **19 13 31.0 +1.7**
GNI Garni 69.62 306 P **P** **19 13 31.1 +1.7**
GNI Garni 69.62 306 P **P** **19 13 29.5 +0.2**
PABE Paberze 69.75 328 P **P** **19 13 28.6 -1.0**
PABE Paberze 69.75 328 *e*P **P** **19 13 29.9 +0.3**
NAX Nakhchivan 69.78 305 P **P** **19 13 30.4 +0.2**
HFS Hagfors 69.82 336 P **P** **19 13 29.6 -0.4**
comp=Z,26nm,0.5s,baz=54,slow=7.5,SNR=190
HFS LR LR 19 46 58.6
comp=Z,127nm,21.6s,baz=34,slow=38
comp=Z,26nm,0.5s
NB2 NORSAR Subarra 69.83 337 P **P** **19 13 29.5 -0.6**
comp=Z,15nm,0.6s,baz=35,slow=6.5
NB2 NORSAR Subarra 69.83 337 P **P** **19 13 25.7 -4.4**
NB2 pmax pmax
comp=Z,4.0nm,0.6s
NB2 NORSAR Subarra 69.83 337 P **P** **19 13 29.5 -0.6**
baz=35,slow=6.5
NOA NORSAR Array B 69.83 337 P **P** **19 13 29.6 -0.4**
comp=Z,24nm,0.8s,baz=35,slow=6.2,SNR=103
NOA LR LR 19 47 42.4
comp=Z,124nm,20.1s,baz=40,slow=39
comp=Z,24nm,0.8s
HLID Hailey 69.89 49 P **P** **19 13 30.6 -0.3**
HLID Hailey 69.89 49 P **P** **19 13 31.8 +0.8**
baz=310
NORES NORESS Array B 69.98 337 P **P** **19 13 30.7 -0.3**
NAO01 NORSAR Array S 70.08 337 P **P** **19 13 30.3 -1.3**
NAO01 IAmb IAmb 19 13 32.2
comp=Z,44nm,1.1s
BOZ Bozeman (W) 70.11 46 IAmb IAmb 19 13 51.3
comp=Z,30nm,1.6s
BOZ Bozeman (W) 70.11 46 P **P** **19 13 33.4 +1.2**
baz=310
VIKU Vikbolandet 70.14 333 *e*P **P** **19 13 31.8 -0.2**
PBUR Paburge 70.16 329 *e*P **P** **19 13 32.1 0.0**
SFJD Kangerlussuaq 70.52 6 P **P** **19 13 33.8 -0.4**
comp=Z,16nm,0.8s,baz=7.6,slow=7.9,SNR=6.9
SFJD LR LR 19 45 41.2
comp=Z,51nm,20.6s,baz=346,slow=37
comp=Z,16nm,0.8s
SFJD Kangerlussuaq 70.52 6 P **P** **19 13 33.5 -0.7**
SFJD IAmb IAmb 19 13 35.2
comp=Z,24nm,1.0s
SFJD Kangerlussuaq 70.52 6 *i* P **P** **19 13 31.2 -2.9**
BANOM Banah 70.79 288 P **P** **19 13 37.0 +0.5**
BANOM Banah 70.79 288 *i* P **P** **19 13 37.2 +0.7**
SNR=8.6
WSAR Wadi Sarin 70.79 284 LR LR 19 50 23.2
comp=Z,103nm,18.4s,baz=56,slow=41
SHME Shamm 70.83 288 P **P** **19 13 36.9 +0.2**
SHME Shamm 70.83 288 *i* P **P** **19 13 37.0 +0.3**
SNR=8.2
ANN Anapa 70.83 313 *e*P **P** **19 13 35.0 -1.4**
ANN pmax pmax
comp=Z,119nm,1.7s
NVAR Mina Array Bea 70.86 55 P **P** **19 13 36.4 -0.7**
comp=Z,1.3nm,0.2s,baz=174,slow=28,SNR=46
NVAR LR LR 19 42 14.6
comp=Z,36nm,19.9s,baz=275,slow=34
comp=Z,1.3nm,0.2s
MDPB Devils Postpil 70.88 56 P **P** **19 13 38.1 +0.8**
MDPB IAmb IAmb 19 15 08.6
comp=Z,11nm,0.9s
AKASG Malin Array Be 70.93 322 P **P** **19 13 36.5 -0.5**
comp=Z,22nm,0.6s,baz=43,slow=6.5,SNR=112
AKASG LR LR 19 47 24.3
comp=Z,191nm,18.4s,baz=38,slow=38
comp=Z,22nm,0.6s
AKASG Malin Array Be 70.93 322 IAmb IAmb 19 13 37.6
comp=Z,40nm,0.8s
AKBB Malin Array Si 70.93 322 IAmb IAmb 19 13 37.5
comp=Z,46nm,0.8s
WBK Wadi Bani Khal 70.94 283 P **P** **19 13 38.7 +1.3**
SNR=5.3
BIDO Bidbid 70.98 285 P **P** **19 13 39.2 +1.6**
SNR=9.4
YHH Holmes Hill 71.05 46 P **P** **19 13 38.2 0.0**
HYA Hoyanger 71.10 340 *e*P **P** **19 13 37.8 +0.1**
ELK Elko 71.22 52 LR LR 19 45 37.3
comp=Z,22nm,18.6s,baz=278,slow=36
MASF Masafi 71.23 287 P **P** **19 13 39.9 +0.6**
MSFE Esma-Masafi 71.24 287 *i* P **P** **19 13 39.7 +0.4**
SNR=6.2
DY2G Dye2 71.31 4 *i* P **P** **19 13 38.2 -1.1**
DY2G IAmb IAmb 19 13 40.9
comp=Z,145nm,1.5s
SMDO Samad 71.32 284 P **P** **19 13 40.5 +0.6**
UOSS Minazif 71.47 287 P **P** **19 13 40.2 -0.4**
UOSS Minazif 71.47 287 P **P** **19 13 40.9 +0.3**
UOSS Minazif 71.47 287 *i* P **P** **19 13 40.8 +0.3**
SNR=13
UOSS Minazif 71.47 287 P **P** **19 13 39.6 -1.0**
UMQ Umm Al-Quwin 71.49 288 P **P** **19 13 40.7 0.0**
UMQ Umm Al-Quwin 71.49 288 P **P** **19 13 40.6 -0.1**
HOQ Hoqain 71.53 285 P **P** **19 13 41.6 +0.6**
SNR=9.0
SUE Sulen 71.56 340 *e*P **P** **19 13 40.9 +0.4**
HATD Hatta, Dubai 71.59 287 P **P** **19 13 42.1 +0.7**
SNR=7.0
HATD Hatta, Dubai 71.59 287 *i* P **P** **19 13 41.9 +0.6**
SNR=20
JMDO Jabal Madar 71.71 284 P **P** **19 13 42.8 +0.6**
ASHO Ashiyiah 71.73 287 P **P** **19 13 42.8 +0.6**
ASHO Ashiyiah 71.73 287 *i* P **P** **19 13 42.6 +0.3**
SNR=8.8
GEVA Gevas 71.80 305 IAmb IAmb 19 13 44.6
comp=Z,28nm,1.3s
NAZ Nazwa, Dubai 71.82 287 P **P** **19 13 43.2 +0.4**
NAZ Nazwa, Dubai 71.82 287 *i* P **P** **19 13 42.8 +0.1**
SNR=6.1
ASK Askoy 71.94 340 *e*P **P** **19 13 42.9 +0.2**
DGMT Dagmar 71.95 40 IAmb IAmb 19 13 45.3
comp=Z,18nm,0.9s
HVU Hansel Valley 71.96 50 P **P** **19 13 44.3 +0.7**
HVU Hansel Valley 71.96 50 P **P** **19 13 44.3 +0.7**
HVU pmax pmax
comp=Z,10.0nm,1.4s
BER Bergen 71.98 339 *e*P **P** **19 13 43.7 +0.6**
FAQ Al Faqa, Dubai 72.02 287 P **P** **19 13 44.0 +0.1**
FAQ Al Faqa, Dubai 72.02 287 *i* P **P** **19 13 43.9 -0.1**
SNR=9.2
ODD1 Odda 72.04 339 *e*P **P** **19 13 43.9 +0.4**
BSY Bisya 72.13 285 P **P** **19 13 45.1 +0.5**
SNR=6.9
PKM Mcpherson Peak 72.15 59 P **P** **19 13 46.3 +1.5**
baz=309
KOPT Kop Dagi 72.22 308 P **P** **19 13 45.9 +0.6**
KOPT IAmb IAmb 19 13 47.9
comp=Z,27nm,1.1s
ARQ Araqi 72.24 286 P **P** **19 13 46.0 +0.7**
SNR=6.7
CWC Cottonwood Cre 72.26 57 P **P** **19 13 46.2 +0.8**
baz=310
GURO Guroymak-BITLI 72.26 306 IAmb IAmb 19 13 47.6
comp=Z,35nm,0.7s
ASUD Al Ashush, Dub 72.28 287 P **P** **19 13 46.2 +0.7**
ASUD Al Ashush, Dub 72.28 287 *i* P **P** **19 13 45.6 +0.1**
SNR=10.0
ALNE Al Ain 72.34 287 P **P** **19 13 46.2 +0.3**
SNR=6.3
ALNE Al Ain 72.34 287 *i* P **P** **19 13 46.2 +0.3**
SNR=14
GRAC Grapevine Rang 72.34 56 P **P** **19 13 47.4 +1.6**
baz=310
SIM Simferopol' 72.49 315 *e*P **P** **19 13 46.7 +0.3**
SIM pmax pmax
comp=Z,51nm,0.7s
BLS5 Blasjo 72.50 338 *e*P **P** **19 13 46.6 +0.4**
ISA Isabella, Lake 72.51 58 P **P** **19 13 47.4 +0.6**
baz=310
R11A Troy Canyon, C 72.55 54 P **P** **19 13 47.2 +0.1**
R11A Troy Canyon, C 72.55 54 P **P** **19 13 47.3 +0.1**
baz=310
AJN Ajban 72.57 287 P **P** **19 13 47.0 -0.2**
MHTO MHTO 72.68 283 P **P** **19 13 48.7 +0.9**
SNR=12
MPMC Manual Prospec 72.87 57 P **P** **19 13 50.3 +1.2**
baz=310
S11A Rachel 72.91 55 IAmb IAmb 19 16 09.6
comp=Z,13nm,0.6s
DUG Dugway, Tooele 72.98 51 P **P** **19 13 50.1 +0.5**
DUG Dugway, Tooele 72.98 51 P **P** **19 13 50.1 +0.5**
DUG pmax pmax
comp=Z,15nm,1.6s
DUG Dugway, Tooele 72.98 51 P **P** **19 13 51.2 +1.6**
baz=311
KMY Karmoy 73.01 339 *e*P **P** **19 13 49.8 +0.6**
TPNV Topopah Spring 73.06 55 P **P** **19 13 51.4 +1.2**
baz=310
PDAR Pinedale Array 73.10 47 LR LR 19 48 55.8
comp=Z,23nm,18.0s,baz=318,slow=38
CCAC Calif City Air 73.12 58 P **P** **19 13 51.1 +0.7**
CCAC IAmb IAmb 19 13 53.1
comp=Z,9.9nm,0.8s
EDW2 Edwards Air Fo 73.31 58 P **P** **19 13 52.2 +0.7**
baz=310
PRN Pahroc Range 73.49 54 P **P** **19 13 53.1 +0.5**
UMZA Um Al Zommool 73.61 286 P **P** **19 13 52.7 -0.7**
DQM DQM 73.66 282 P **P** **19 13 53.7 0.0**
BEL Belsk 73.74 327 P **P** **19 13 54.9 +1.3**
GSC Goldstone, Bar 73.78 57 P **P** **19 13 55.2 +0.9**
baz=311
MILM Milestii Mici 73.79 319 ⇓P **P** **19 13 54.0 0.0**
MILM Milestii Mici 73.79 319 P **P** **19 13 53.9 0.0**
STKA Stephens Creek 73.83 181 LR LR 19 51 51.0
comp=Z,29nm,19.0s,baz=22,slow=40
MZWR Madinat Zayed 73.85 287 P **P** **19 13 54.4 -0.4**
LVV L'vov 73.89 324 *e*P **P** **19 13 54.4 -0.2**
LVV *e* 19 14 15.2
LVV *e* 19 16 41.8
LVV *e*S **S** **19 23 24.8 +2.9**
LVV pmax pmax
comp=Z,80nm,1.2s
LVV MLR MLR
comp=N,200nm,16.0s
LVV MLR MLR
comp=E,100nm,16.0s
LVV MLR MLR
comp=Z,200nm,16.0s
BFSC Mount Baldy Ra 73.93 58 P **P** **19 13 56.4 +1.1**
baz=310
GKP Gorka Klasztor 74.03 330 P **P** **19 13 55.8 +0.5**
GKP Gorka Klasztor 74.03 330 *e*P **P** **19 13 55.9 +0.6**
DIKM Dikmen 74.11 312 ⇑P **P** **19 13 56.7 +0.7**
TUQ Turquoise Moun 74.24 56 P **P** **19 13 58.5 +1.4**
baz=311
TOKA Tokat 74.33 310 IAmb IAmb 19 13 59.2
comp=Z,18nm,1.0s
HEC Hector,Ludlow 74.38 57 P **P** **19 13 59.3 +1.5**
baz=311
ULM Lac du Bonnet 74.42 35 P **P** **19 13 56.9 -0.7**
comp=Z,5.5nm,0.9s,baz=320,slow=8.4,SNR=4.0
ULM LR LR 19 50 22.4
comp=Z,45nm,18.1s,baz=356,slow=39
comp=Z,5.5nm,0.9s
GHWR Ruwais 74.44 288 P **P** **19 13 57.7 -0.5**
SHMA Al-Shehemyia 74.57 291 P **P** **19 13 58.6 -0.3**
RDMU Red Mountain 74.57 49 IAmb IAmb 19 14 01.4
comp=Z,11nm,0.8s
MZR Muzera 74.62 287 P **P** **19 13 59.3 0.0**
SNR=5.9
MZR Muzera 74.62 287 *i* P **P** **19 13 59.3 0.0**
SNR=17
BIR Birlad 74.83 320 ⇑P **P** **19 14 01.0 +0.9**
BIR Birlad 74.83 320 P **P** **19 14 01.0 +0.9**
GMRC Granite Mounta 74.83 57 P **P** **19 14 01.4 +0.9**
baz=311
P18A Preston Nutter 74.83 50 P **P** **19 14 01.0 +0.4**
VLDR Vladesti 74.91 319 ⇓P **P** **19 14 01.4 +0.9**
BUR08 Bucovina Ar. S 74.96 322 P **P** **19 14 01.1 +0.1**
BUR08 IAmb IAmb 19 14 02.3
comp=Z,24nm,0.8s
BUR01 Bucovina Ar. S 74.98 322 ⇑P **P** **19 14 01.6 +0.5**
SRU San Rafael Swe 75.02 51 IAmb IAmb 19 14 20.5
comp=Z,10nm,0.8s
TLCR 75.02 318 ⇓P **P** **19 14 00.9 -0.3**
TLCR 75.02 318 P **P** **19 14 00.9 -0.3**
BIZ Bicaz 75.06 321 ⇑P **P** **19 14 01.8 +0.4**
GHRR 75.08 320 ⇑P **P** **19 14 03.1 +1.6**
PFO Pinyon Flats O 75.10 58 LR LR 19 47 53.5
comp=Z,9.7nm,18.4s,baz=264,slow=36
PFO Pinyon Flats O 75.10 58 P **P** **19 14 03.3 +1.3**
baz=311
TPFO Pinon Flats 75.10 58 P **P** **19 14 02.0 -0.1**
baz=311
TESR Tescani 75.11 320 ⇑P **P** **19 14 02.1 +0.3**
BELC Belle Mtn. Jos 75.13 58 P **P** **19 14 03.2 +0.9**
baz=311
SLWR Sila 75.20 289 P **P** **19 14 02.5 -0.1**
KOLS Kolonicke sedl 75.31 324 *e*P **P** **19 14 03.3 +0.4**
KOLS pmax pmax
comp=Z,19nm,0.8s
PANC Panciu 75.34 320 ⇑P **P** **19 14 02.7 -0.3**
CFR Carcaliu 75.36 318 ⇑P **P** **19 14 03.2 0.0**
CFR Carcaliu 75.36 318 P **P** **19 14 03.1 0.0**
SMRA Abu-Samra 75.37 290 P **P** **19 14 03.1 -0.4**
OJC Ojcow 75.38 326 P **P** **19 14 01.7 -1.5**
OJC Ojcow 75.38 326 P **P** **19 14 01.7 -1.5**
OJC pmax pmax
comp=Z,54nm,0.9s
TPGR Topolog 75.45 318 ⇓P **P** **19 14 04.5 +0.8**
ODBI Odobesti 75.46 319 ⇑P **P** **19 14 05.3 +1.5**
UZH Uzhgorod 75.53 324⇓*i*P **P** **19 14 02.5 -1.6**
UZH *e* 19 14 22.0
VRI Vrincioaia 75.55 320 ⇑P **P** **19 14 05.4 +1.1**
VRI Vrincioaia 75.55 320 P **P** **19 14 05.4 +1.1**
IRM Iron Mountain 75.56 57 P **P** **19 14 05.6 +1.0**
baz=312
MONP2 Monument Peak 75.59 59 P **P** **19 14 05.6 +0.7**
baz=311
PLOR Plostina 75.59 320 ⇑P **P** **19 14 04.2 -0.4**
PLOR Plostina 75.59 320 P **P** **19 14 04.2 -0.4**
O20A White River Ci 75.61 49 P **P** **19 14 05.8 +0.8**
baz=314
BNN Bunyan 75.68 310 P **P** **19 14 05.0 -0.3**
CRVS Cervenica-Dubn 75.69 325 *e*P **P** **19 14 05.5 +0.5**
CRVS pmax pmax
comp=Z,18nm,0.8s
BC3 Big Chuckawall 75.70 58 P **P** **19 14 06.0 +0.5**
baz=312
ARCR ARCALIA 75.77 322 ⇑P **P** **19 14 06.8 +1.3**
NIE Niedzica 75.79 326 P **P** **19 14 06.4 +0.8**
TRPA Tarpa 75.80 323 ⇑P **P** **19 14 06.6 +1.0**
TRPA Tarpa 75.80 323 P **P** **19 14 06.1 +0.5**
COVR Voineasa-Covas 75.81 320 ⇑P **P** **19 14 06.7 +0.9**
HARR Harsova 75.81 318 ⇑P **P** **19 14 06.3 +0.5**
HARR Harsova 75.81 318 P **P** **19 14 06.2 +0.5**
OZUR 75.83 320 ⇓P **P** **19 14 07.4 +1.5**
TLBR Topalu 75.86 318 ⇑P **P** **19 14 06.5 +0.5**
AGMN Agassiz Nation 75.89 36 P **P** **19 14 05.9 -0.3**
baz=319
RUE Ruedersdorf 75.93 331 *e*P **P** **19 14 07.0 +0.8**
PDMCI Parker Dam,Lak 76.08 56 P **P** **19 14 08.6 +1.2**
baz=312
DOPR Dopca 76.11 320 ⇑P **P** **19 14 08.7 +1.2**
ISR Istrita 76.18 319 ⇑P **P** **19 14 08.8 +0.8**
ISR Istrita 76.18 319 P **P** **19 14 08.7 +0.8**
MLR Muntele Rosu 76.20 320 ⇑P **P** **19 14 08.4 +0.3**
MLR Muntele Rosu 76.20 320 P **P** **19 14 07.8 -0.3**
comp=Z,8.5nm,0.8s,baz=338,slow=13,SNR=10
MLR LR LR 19 50 25.9
comp=Z,191nm,21.5s,baz=21,slow=38
comp=Z,8.5nm,0.8s
MLR Muntele Rosu 76.20 320 IAmb IAmb 19 14 35.0
comp=Z,25nm,1.4s
SHAO Shalim 76.26 282 P **P** **19 14 09.0 +0.2**
SNR=6.9
SHAO Shalim 76.26 282 *i* P **P** **19 14 08.9 +0.2**
SNR=6.9
ICOR Ion Corvin 76.29 318 ⇑P **P** **19 14 09.3 +0.8**
KSP Ksiaz 76.30 328 P **P** **19 14 09.3 +0.9**
BR131 Keskin Array S 76.33 312 P **P** **19 14 09.3 +0.3**
BR131 IAmb IAmb 19 14 10.2
comp=Z,23nm,0.8s
BR131 Keskin Array S 76.33 312 P **P** **19 14 09.3 +0.3**
BR131 pmax pmax
comp=Z,23nm,0.8s
BRTR Keskin Array B 76.33 312 P **P** **19 14 09.3 +0.3**
comp=Z,12nm,0.7s,baz=79,slow=3.6,SNR=68
BRTR PP **PP** **19 16 58.9 -1.6**
comp=Z,3.1nm,0.8s,baz=60,slow=6.2,SNR=6.4
BRTR LR LR 19 54 34.7
comp=Z,105nm,19.2s,baz=50,slow=41
comp=Z,12nm,0.7s
PV23 Carpenter Ridg 76.33 50 IAmb IAmb 19 14 21.3
comp=Z,15nm,0.8s
OKC Ostrava-Krasne 76.35 327 *e*P **P** **19 14 08.8 +0.1**
OKC Ostrava-Krasne 76.35 327 *e*P **P** **19 14 08.8 +0.1**
MESR Meseseni 76.36 323 ⇑P **P** **19 14 10.2 +1.4**
CJR Cluj-Napoca 76.39 322 ⇑P **P** **19 14 09.7 +0.6**
CJR Cluj-Napoca 76.39 322 P **P** **19 14 09.7 +0.6**
OSTC Ostas 76.55 328 *e*P **P** **19 14 10.2 +0.3**
CHVC Chvalec 76.59 328 *e*P **P** **19 14 10.3 +0.2**
SULR 76.64 319 ⇓P **P** **19 14 11.5 +1.1**
MORC Moravsky Berou 76.64 327 ⇑P **P** **19 14 11.3 +0.8**
MORC Moravsky Berou 76.64 327 IAmb IAmb 19 14 12.1
comp=Z,27nm,0.8s
MORC Moravsky Berou 76.64 327 P **P** **19 14 11.2 +0.8**
MORC Moravsky Berou 76.64 327 *e*P **P** **19 14 11.1 +0.6**
PV13 Radium Mtn., P 76.64 50 IAmb IAmb 19 14 49.8
comp=Z,13nm,1.1s
VOIR 76.66 320 ⇑P **P** **19 14 11.4 +0.7**
VOIR 76.66 320 P **P** **19 14 11.4 +0.7**
UPC Upice 76.67 328 *e*P **P** **19 14 10.9 +0.4**
UPC Upice 76.67 328 *e*P **P** **19 14 10.9 +0.4**
DPC Dobruska-Polom 76.67 328 *e*P **P** **19 14 11.1 +0.5**
DPC Dobruska-Polom 76.67 328 *e*P **P** **19 14 11.1 +0.5**
ANTO Ankara 76.69 312 ⇑P **P** **19 14 11.7 +0.7**
ANTO Ankara 76.69 312 P **P** **19 14 11.5 +0.5**
ANTO Ankara 76.69 312 P **P** **19 14 11.5 +0.5**
ANTO pmax pmax
comp=Z,53nm,0.8s
ANTO Ankara 76.69 312 P **P** **19 14 12.2 +1.2**
KRLC Kraliky 76.71 328 *e*P **P** **19 14 11.1 +0.3**
KRLC Kraliky 76.71 328 *e*P **P** **19 14 11.1 +0.3**
DRGR 76.73 322 ⇑P **P** **19 14 10.7 -0.3**
DRGR 76.73 322 P **P** **19 14 10.7 -0.3**
B35A Bob, Littlefor 76.77 35 P **P** **19 14 10.3 -0.9**
B35A IAmb IAmb 19 14 12.1
comp=Z,13nm,0.7s
MAUC Maruska 76.85 327 *e*P **P** **19 14 12.1 +0.5**
ARR Arges 76.91 320 ⇓P **P** **19 14 13.8 +1.7**
DMTO DMTO 76.95 282 P **P** **19 14 12.3 -0.3**
SNR=8.8
WUAZ Wupatki 76.95 54 P **P** **19 14 13.9 +1.3**
baz=313
DOK Doka 76.96 283 P **P** **19 14 12.4 -0.3**
PSZ Piszkesteto 77.11 325 ⇓P **P** **19 14 13.9 +0.7**

PSZ Piszkesteto 77.11 325 IAmb IAmb 19 14 15.0
comp=Z,33nm,1.4s
PSZ Piszkesteto 77.11 325 P **P** **19 14 13.8 +0.7**
PSZ Piszkesteto 77.11 325 P **P** **19 14 13.6 +0.5**
VYHS Vyhne 77.11 326 *e*P **P** **19 14 13.8 +0.7**
VYHS pmax pmax
comp=Z,19nm,1.3s
MDUB Mudurnu 77.14 313 P **P** **19 14 12.9 -0.5**
CLL Collm 77.16 330⇑*i*P **P** **19 14 13.1 -0.2**
CLL pmax pmax
comp=Z,43nm,0.8s
CLL Collm 77.16 330⇑*i*P **P** **19 14 13.1 -0.2**
comp=Z,43nm,0.8s
CLL *i* PcP **PcP** **19 14 22.4 -1.5**
CLL *e*pP **pP** **19 14 30.0 +0.9**
CLL *i* sP **sP** **19 14 35.6 +0.3**
comp=Z,21nm,1.1s
CLL *e*x x 19 17 01.0
CLL *e*PP **PP** **19 17 07.0 +0.2**
CLL *e*S **S** **19 24 00.0 +2.0**
CLL LmV 19 50 00.0
comp=Z,200nm,20.5s
BRG Berggiesshubel 77.17 330 *i* P **P** **19 14 13.8 +0.5**
BRG Amp 19 14 14.6
comp=Z,12nm,0.8s
BRG *e*x x 19 14 36.0
BRG Amp 19 14 36.9
comp=Z,12nm,1.2s
BRG Amp 19 50 10.0
comp=Z,0.2nm,21.3s
BRG Amp 19 50 14.0
comp=E,0.1nm,16.8s
BRG Amp 19 50 29.0
comp=N,0.2nm,20.6s
BRG Berggiesshubel 77.17 330 *i* P **P** **19 14 13.8 +0.5**
BRG *e* 19 14 36.0
BRG pmax pmax
comp=Z,12nm,0.9s
BRG pmax pmax
comp=Z,12nm,1.2s
BRG MLR MLR
comp=Z,236nm,21.3s
BRG MLR MLR
comp=E,139nm,16.8s
BRG MLR MLR
comp=N,209nm,20.6s
PVCC Panska Ves 77.21 329 *e*P **P** **19 14 14.0 +0.5**
PVCC Panska Ves 77.21 329 *e*P **P** **19 14 14.0 +0.5**
LOT Lotru 77.25 321⇑P **P** **19 14 14.3 +0.2**
JAVC Velka Javorina 77.31 327 *e*P **P** **19 14 15.7 +1.5**
RAZG Razgrad 77.33 318⇓P **P** **19 14 14.9 +0.5**
HUMR Humele 77.37 320⇓P **P** **19 14 13.7 -0.9**
VRAC Vranov 77.39 327⇑P **P** **19 14 15.7 +1.1**
VRAC Vranov 77.39 327 P **P** **19 14 15.4 +0.8**
comp=N,17nm,0.7s,baz=33,slow=5.0,SNR=26
VRAC LR LR 19 52 04.8
comp=N,83nm,18.8s,baz=38,slow=38
comp=N,17nm,0.7s
VRAC Vranov 77.39 327 *e*P **P** **19 14 15.3 +0.7**
BSZH Besenyszg 77.43 324⇑P **P** **19 14 15.9 +1.1**
BSZH Besenyszg 77.43 324 P **P** **19 14 16.7 +1.9**
SIRR Siria 77.60 323⇓P **P** **19 14 16.2 +0.3**
GOPC GO Pecny, Ondr 77.62 329 *e*P **P** **19 14 16.4 +0.5**
GOPC GO Pecny, Ondr 77.62 329 *e*P **P** **19 14 16.4 +0.5**
RBK Rabkut 77.63 282 P **P** **19 14 16.0 -0.5**
PRU Pruhonice 77.65 329 *e*P **P** **19 14 16.5 +0.5**
PRU Pruhonice 77.65 329 *e*P **P** **19 14 16.5 +0.5**
KRUC Moravsky 77.67 327 *e*P **P** **19 14 16.6 +0.5**
WHFO Wadi Hawf 77.67 283 P **P** **19 14 16.1 -0.7**
SMOL Smolenice 77.68 326 *e*P **P** **19 14 17.5 +1.3**
SMOL pmax pmax
comp=Z,10.0nm,0.7s
GZR Gura Zlata 77.76 322⇑P **P** **19 14 17.1 +0.2**
GZR Gura Zlata 77.76 322 P **P** **19 14 17.0 +0.2**
ZIMR 77.83 319⇑P **P** **19 14 17.8 +0.7**
TREC Trest 77.84 328 *e*P **P** **19 14 17.6 +0.4**
TREC Trest 77.84 328 *e*P **P** **19 14 17.6 +0.4**
MODS Modra-Piesok 77.86 326 *e*P **P** **19 14 18.1 +0.9**
MODS pmax pmax
comp=Z,31nm,0.9s
SRO Srobarova 77.86 326 *e*P **P** **19 14 18.6 +1.4**
SRO pmax pmax
comp=Z,33nm,0.8s
BORA Eskisehir 77.96 313 P **P** **19 14 18.1 +0.1**
BORA IAmb IAmb 19 14 19.9
comp=Z,19nm,0.8s
EYMN Ely 78.03 34 IAmb IAmb 19 14 19.2
comp=Z,17nm,0.8s
EYMN Ely 78.03 34 P **P** **19 14 18.6 +0.4**
baz=322
VLAD Vladila 78.04 320⇓P **P** **19 14 18.6 +0.4**
S22A 4UR Ranch, Cre 78.06 50 P **P** **19 14 20.6 +1.7**
baz=315
ZST Bratislava 78.07 326 *e*P **P** **19 14 19.6 +1.2**
BZS Buzias 78.12 322⇓P **P** **19 14 18.3 -0.4**
BZS Buzias 78.12 322 P **P** **19 14 18.3 -0.4**
Q24A Divide 78.14 48 P **P** **19 14 20.7 +1.4**
baz=315
CSKK Cskako 78.24 325 P **P** **19 14 19.9 +0.5**
NKC Novy Kostel 78.24 330 *e*P **P** **19 14 19.7 +0.3**
HERR Herculane 78.31 321⇑P **P** **19 14 19.6 -0.1**
ABTO Aybut 78.38 283 P **P** **19 14 20.3 -0.4**
DJES Djerdap 78.43 321⇑P **P** **19 14 20.9 +0.4**
BAIL Bailesti 78.53 320⇑P **P** **19 14 22.2 +1.2**
PUNG Punghina 78.53 321⇑P **P** **19 14 21.4 +0.4**
EKA Eskdalemuir Ar 78.58 341 P **P** **19 14 21.1 0.0**
comp=Z,8.7nm,0.6s,baz=25,slow=5.1,SNR=33
EKA LR LR 19 52 50.8
comp=Z,46nm,21.2s,baz=0.5,slow=38
comp=Z,8.7nm,0.6s
EGYH Egyhazaskeszo 78.59 326 P **P** **19 14 22.6 +1.3**
CKRC Cesky Krumlov 78.69 328 *e*P **P** **19 14 22.1 +0.3**
MPLH Magyarpolny 78.69 326 P **P** **19 14 22.2 +0.4**
SOP Sopron 78.70 326 P **P** **19 14 23.2 +1.3**
SOP Sopron 78.70 326 P **P** **19 14 22.6 +0.8**
MDVR Moldovita 78.71 322⇓P **P** **19 14 22.2 +0.2**
KHC Kasperske Hory 78.72 329 IAmb IAmb 19 14 23.6
comp=Z,27nm,0.7s
KHC Kasperske Hory 78.72 329 *e*P **P** **19 14 22.3 +0.3**
KHC *e* 19 14 42.5
KHC Kasperske Hory 78.72 329 *e*P **P** **19 14 22.3 +0.3**
KHC *e*pP **sP** **19 14 42.5 -1.6**
CONA Conrad Observa 78.78 327 *i* P **P** **19 14 23.3 +0.9**
comp=Z,11nm,0.7s,SNR=6.2
RONA Rosalia, Austr 78.79 327 *i* P **P** **19 14 23.5 +1.1**
comp=Z,18nm,0.6s,SNR=7.6
SDCO Great Sand Dun 78.81 49 P **P** **19 14 24.0 +1.0**
baz=315
GERES GERESS Array B 78.90 329 P **P** **19 14 23.4 +0.3**
comp=Z,7.4nm,0.7s,baz=36,slow=7.0,SNR=24
comp=Z,7.4nm,0.7s
DIM Dimitrovgrad 78.94 318 *i* P **P** **19 14 24.6 +1.3**
MORH Mrgy, Hungar 78.97 324⇓P **P** **19 14 23.3 -0.1**
MORH Mrgy, Hungar 78.97 324 P **P** **19 14 22.8 -0.6**
ECSD EROS Data Cent 79.01 40 P **P** **19 14 23.9 +0.3**
ECSD IAmb IAmb 19 14 25.0
comp=Z,12nm,0.8s
ECSD EROS Data Cent 79.01 40 P **P** **19 14 24.0 +0.3**
baz=319
E38A The Farm, Brul 79.06 35 IAmb IAmb 19 14 24.7
comp=Z,20nm,0.9s
GRFO Grafenberg 79.14 330 P **P** **19 14 24.9 +0.6**
GRFO IAmb IAmb 19 14 25.9
comp=Z,41nm,0.8s
GRFO Grafenberg 79.14 330 P **P** **19 14 24.9 +0.6**
GRFO pmax pmax
comp=Z,41nm,0.8s
BLKB Belogradchik 79.14 320⇑P **P** **19 14 24.3 -0.2**
FRGS Fruska Gora 79.28 323⇑P **P** **19 14 25.4 +0.3**
FRGS Fruska Gora 79.28 323⇑*i*P **P** **19 14 25.1 -0.1**
KOVH Kovagotottos 79.31 325 P **P** **19 14 24.9 -0.3**
ARSA Arzberg 79.47 327 *e*P **P** **19 14 26.8 +0.7**
comp=Z,9.2nm,0.8s
MOA Molln 79.49 328 *e*P **P** **19 14 26.8 +0.5**
comp=Z,7.6nm,0.8s
ALN Alexandroupoli 79.53 317 IAmb IAmb 19 14 27.9
comp=Z,27nm,0.9s
BOVS Bovan 79.59 321⇑P **P** **19 14 26.1 -0.7**
SPMN Marine on St. 79.60 37 P **P** **19 14 27.4 +0.6**
baz=321
RDO Rodhopi 79.60 317 P **P** **19 14 27.7 +0.8**
RZN Rozhen 79.61 318 *i* P **P** **19 14 27.7 +0.5**
VTS Vitosha 79.64 319⇑P **P** **19 14 28.3 +0.9**
VTS Vitosha 79.64 319 IAmb IAmb 19 14 29.1
comp=Z,37nm,0.8s
VTS Vitosha 79.64 319 P **P** **19 14 28.2 +0.9**
VTS Vitosha 79.64 319 *i* P **P** **19 14 27.2 -0.1**
RAO Raoul Island 79.76 146 LR LR 19 45 51.7
comp=Z,114nm,19.3s,baz=330,slow=33
CSS Mathiatis 79.83 308 P **P** **19 14 27.7 -0.6**
CSS IAmb IAmb 19 14 29.5
comp=Z,24nm,0.8s
T25A Trinidad 79.85 49 IAmb IAmb 19 14 30.8
comp=Z,11nm,0.8s
T25A Trinidad 79.85 49 P **P** **19 14 29.7 +1.1**
baz=316
RAYN Ar Rayn 79.85 292 P **P** **19 14 28.2 -0.4**
RAYN IAmb IAmb 19 14 29.8
comp=Z,26nm,0.9s
RAYN Ar Rayn 79.85 292 P **P** **19 14 28.2 -0.4**
RAYN pmax pmax
comp=Z,26nm,0.9s
RAYN Ar Rayn 79.85 292 P **P** **19 14 28.9 +0.3**
RAYN Ar Rayn 79.85 292 *i* P **P** **19 14 28.8 +0.2**
SNR=37
BIOA Bad Ischl, Aus 79.86 328 *i* P **P** **19 14 28.8 +0.5**
comp=Z,12nm,0.6s,SNR=6.6
SCHQ Schefferville 79.92 17 P **P** **19 14 28.6 +0.2**
comp=Z,4.2nm,0.9s,baz=290,slow=12,SNR=2.3
comp=Z,4.2nm,0.9s
MMAI Mount Meron Ar 79.96 306 LR LR 19 53 41.7
comp=Z,128nm,21.7s,baz=259,slow=38
DIVS Divibare 80.03 322 IAmb IAmb 19 14 30.2
comp=Z,14nm,0.9s
DIVS Divibare 80.03 322⇑*i*P **P** **19 14 29.1 -0.2**
GROS Grobnik 80.11 326 *i* P **P** **19 14 29.6 -0.1**
SOKA Soboth 80.13 327 *i* P **P** **19 14 30.0 +0.2**
comp=Z,26nm,0.8s,SNR=12
BTNL Ternell 80.15 334 *d*P **P** **19 14 29.6 -0.2**
comp=Z,19nm,0.9s
MEM Membach 80.17 334 *d*P **P** **19 14 29.9 +0.1**
comp=Z,20nm,0.8s
MMB Musomiste 80.17 318 *i* P **P** **19 14 30.9 +0.8**
ANMO Albuquerque 80.25 51 LR LR 19 45 45.3
comp=Z,18nm,21.6s,baz=321,slow=32
ANMO Albuquerque 80.25 51 P **P** **19 14 32.1 +1.3**
ANMO Albuquerque 80.25 51 P **P** **19 14 32.1 +1.3**
ANMO pmax pmax
comp=Z,8.0nm,1.4s
ANMO Albuquerque 80.25 51 P **P** **19 14 32.0 +1.2**
baz=315
I37A Lemond, Waseca 80.28 38 IAmb IAmb 19 14 32.8
comp=Z,67nm,1.6s
KKB Krupnik 80.28 319 *i* P **P** **19 14 32.1 +1.5**
NVR Nevrokopi 80.29 318 P **P** **19 14 31.3 +0.6**
BSTI Sart Tilman 80.33 334 *d*P **P** **19 14 31.1 +0.4**
comp=Z,6.9nm,0.7s
BHOU Houvegnez 80.39 334 *d*P **P** **19 14 30.8 -0.3**
OBKA Obir 80.46 327 *e*P **P** **19 14 31.3 -0.3**
OBKA Obir 80.46 327 *i* P **P** **19 14 31.7 +0.1**
comp=Z,16nm,0.7s,SNR=5.7
BBLS Lazići 80.47 322⇑*i*P **P** **19 14 31.9 +0.2**
KBA Koelnbreinsper 80.48 328 *i* P **P** **19 14 32.9 +1.1**
comp=Z,27nm,1.1s,SNR=8.7
HAPS Han Pijesak,Bl 80.50 323⇑*i*P **P** **19 14 32.1 +0.2**
BCLA Clavier 80.56 334 *d*P **P** **19 14 31.4 -0.5**
comp=Z,15nm,0.7s
BGES Gesves 80.66 334 *d*P **P** **19 14 32.0 -0.5**
comp=Z,15nm,0.9s
A051A Mrakovica 80.67 325 *e*P **P** **19 14 32.2 -0.5**
RUDO Rudo 80.68 322⇑*i*P **P** **19 14 32.5 -0.2**
MYKA Terra Mystica 80.73 327 *e*P **P** **19 14 32.8 -0.1**
comp=Z,13nm,0.7s
BLY Banja Luka 80.76 324 *e*P **P** **19 14 33.1 0.0**
RCHB Rochefort 80.81 334 *d*P **P** **19 14 33.3 +0.1**
comp=Z,11nm,1.0s
BMRD Madsous 80.83 334 *d*P **P** **19 14 33.0 -0.4**
comp=Z,23nm,0.9s
STIP Stip 80.85 319 *i* P **P** **19 14 33.1 -0.5**
WLF Walferdange 80.93 333 *d*P **P** **19 14 34.5 +0.5**
VAY Valandovo 80.94 319 *i* P **P** **19 14 34.7 +0.6**
WATA Walderalm 80.95 329 *i* P **P** **19 14 34.7 +0.5**
comp=Z,15nm,0.6s,SNR=7.5
BOJS Bojanci 80.98 326 *i* P **P** **19 14 34.1 -0.1**
SKO Skopje 80.99 320 *i* P **P** **19 14 35.4 +1.0**
WTTA Wattenberg 80.99 329 *i* P **P** **19 14 35.0 +0.5**
comp=Z,25nm,0.7s,SNR=7.4
AKAS Kas 81.05 311 IAmb IAmb 19 14 35.4
comp=Z,33nm,0.9s
GHAJ Ghor Haditha 81.05 304 IAmb IAmb 19 14 36.7
comp=Z,32nm,0.9s
DOU Dourbes 81.07 334 *d*P **P** **19 14 34.0 -0.6**
comp=Z,6.8nm,0.9s
MGRS Mrkonjic Grad 81.07 324 *e*P **P** **19 14 35.9 +1.1**
ABTA Abfaltersbach 81.08 328 *e*P **P** **19 14 34.5 -0.4**
comp=Z,8.5nm,0.8s
MOTA Moosalm 81.13 329 *i* P **P** **19 14 35.5 +0.3**
comp=Z,51nm,0.9s,SNR=13
CEY Cerknica 81.13 326⇑*i*P **P** **19 14 34.7 -0.4**
CEY Cerknica 81.13 326 *i* P **P** **19 14 34.8 -0.4**
RETA Reutte 81.14 330 *i* P **P** **19 14 35.5 +0.4**
comp=Z,26nm,0.9s,SNR=8.0
121A Cookes Peak, D 81.16 54 P **P** **19 14 37.4 +1.7**
baz=315
CLUD Cludinico 81.17 328 P **P** **19 14 33.9 -1.4**
CLUD IAmb IAmb 19 14 35.8
comp=Z,23nm,0.9s
SQTA Sankt Quirin 81.19 329 *i* P **P** **19 14 36.0 +0.5**
comp=Z,23nm,0.7s,SNR=9.3
UPM Unac-Piva 81.22 322⇑*i*P **P** **19 14 35.2 -0.6**
BAIF Baives 81.22 335 *e*P **P** **19 14 34.8 -0.6**
BAIF pmax pmax
comp=Z,7.0nm,0.6s
A050A Klekovaca 81.26 324⇑*i*P **P** **19 14 35.4 -0.5**
BFO Black Forest 81.32 331 P **P** **19 14 35.6 -0.4**
BFO IAmb IAmb 19 14 37.1
comp=Z,11nm,0.9s
BFO Black Forest 81.32 331 P **P** **19 14 35.7 -0.4**
BFO pmax pmax
comp=Z,11nm,0.9s
FETA Feichten 81.54 329 *i* P **P** **19 14 37.8 +0.4**
comp=Z,20nm,0.8s,SNR=9.9
BRY Bratogost 81.62 322⇑*i*P **P** **19 14 37.2 -0.7**
CDF Champ du Feu 81.62 332 *e*P **P** **19 14 37.2 -0.5**
CDF pmax pmax
comp=Z,14nm,0.7s
DAVA Damuels 81.64 330 *i* P **P** **19 14 37.9 0.0**
comp=Z,23nm,0.7s,SNR=11
PHP Peshkopia 81.69 320 P **P** **19 14 38.5 +0.3**
ECH Echery 81.83 332 IAmb IAmb 19 14 39.6
comp=Z,14nm,0.8s
DRME Dracevica, Mon 81.89 321⇑*i*P **P** **19 14 39.2 +0.1**
LIT Litokhoron 81.92 318 P **P** **19 14 39.2 -0.1**
OHR Ohrid 81.96 320 *i* P **P** **19 14 40.4 +0.8**
CTI Castel Tesino 81.99 328 P **P** **19 14 38.7 -1.0**
CTI IAmb IAmb 19 14 39.7
comp=Z,23nm,0.7s
CTI Castel Tesino 81.99 328 P **P** **19 14 38.7 -1.0**
CTI pmax pmax
comp=Z,23nm,0.7s
HCY Herceg Novi 82.00 322 *e*P **P** **19 14 38.8 -0.9**
SCIA State Center 82.01 39 IAmb IAmb 19 14 42.0
comp=Z,34nm,1.1s
SCIA State Center 82.01 39 P **P** **19 14 40.7 +1.0**
baz=322
FUORN Ofenpass-Fuorn 82.05 329 IAmb IAmb 19 14 41.7
comp=Z,33nm,0.8s
DAVOX Davos/Dischmat 82.06 330 P **P** **19 14 40.8 +0.6**
comp=Z,12nm,0.5s,baz=70,slow=0.4,SNR=26
DAVOX LR LR 19 53 24.4
comp=Z,158nm,20.8s,baz=56,slow=37
comp=Z,12nm,0.5s
HINF Hinteralfeld 82.28 332 *e*P **P** **19 14 40.8 -0.3**
HINF pmax pmax
comp=Z,5.0nm,0.6s
RAR Rarotonga 82.28 128 LR LR 19 45 01.3
comp=Z,65nm,20.2s,baz=310,slow=31
HAU Haudompre 82.29 332 *e*P **P** **19 14 40.1 -1.1**
HAU pmax pmax
comp=Z,15nm,0.9s
TEOL Teolo 82.55 328 IAmb IAmb 19 14 43.6
comp=Z,31nm,0.7s
EIL Elat 82.57 303 LR LR 19 55 26.0
comp=Z,90nm,21.4s,baz=60,slow=38
VLDQ Val d'Or 83.11 26 P **P** **19 14 44.5 -0.8**
VLDQ IAmb IAmb 19 14 45.5
comp=Z,25nm,1.1s
SENIN Lac Senin/Sane 83.36 331 P **P** **19 14 46.8 -0.2**
SENIN IAmb IAmb 19 14 48.5
comp=Z,14nm,0.8s
P38A Dawn 83.64 40 IAmb IAmb 19 14 49.9
comp=Z,17nm,0.9s
LOR Lormes 83.77 333 *e*P **P** **19 14 48.2 -0.6**
LOR pmax pmax
comp=Z,26nm,0.8s
FLN La Foliniere 83.81 337 *e*P **P** **19 14 48.1 -0.8**
FLN pmax pmax
comp=Z,14nm,0.7s
LDF La Druitiere 83.85 336 *e*P **P** **19 14 48.3 -0.9**
LDF pmax pmax
comp=Z,8.0nm,0.6s
FDMO Fiordimonte 83.89 326 IAmb IAmb 19 14 50.9
comp=Z,36nm,0.9s
MURB Monte Urbino 83.94 326 P **P** **19 14 49.9 +0.1**
NRCA Norcia 84.05 325 P **P** **19 14 50.4 0.0**
SSF Saint Saulge 84.07 334 *e*P **P** **19 14 50.6 +0.3**
SSF pmax pmax
comp=Z,21nm,0.8s
CAMP Campotosto 84.17 325 IAmb IAmb 19 14 52.3
comp=Z,34nm,0.9s
OSSC Osservatorio P 84.25 327 IAmb IAmb 19 14 50.0
comp=Z,17nm,0.7s
GRR Gorron 84.25 337 *e*P **P** **19 14 51.5 +0.3**
GRR pmax pmax
comp=Z,24nm,0.7s
LPL La Plagne 84.29 331 *e*P **P** **19 14 50.8 -1.0**
LPL pmax pmax
comp=Z,13nm,0.8s
LPG La Plagne 84.30 331 *e*P **P** **19 14 51.0 -0.9**
LPG pmax pmax
comp=Z,12nm,0.5s
IDI Anoyia 84.32 314 LR LR 19 56 21.7
comp=Z,38nm,20.2s,baz=94,slow=38
SMF Signal de Mont 84.32 333 *e*P **P** **19 14 51.2 -0.4**
SMF pmax pmax
comp=Z,32nm,0.8s
AVF Avril sur Loir 84.36 333 *e*P **P** **19 14 51.2 -0.6**
AVF pmax pmax
comp=Z,47nm,0.8s
INTR Introdacqua 84.38 325 IAmb IAmb 19 14 53.3
comp=Z,24nm,0.9s
P40A Paris 84.42 40 P **P** **19 14 52.5 +0.2**
P40A IAmb IAmb 19 14 54.4
comp=Z,23nm,1.2s
ITM Ithomi 84.44 317 P **P** **19 14 51.6 -0.8**
ITM Ithomi 84.44 317 P **P** **19 14 51.8 -0.6**
CESX Cesi 84.45 326 IAmb IAmb 19 14 52.9
comp=Z,16nm,1.0s
WMOK Wichita Mounta 84.70 47 P **P** **19 14 54.4 +0.6**
baz=319
BGF Bois d'Agland 84.73 334 *e*P **P** **19 14 53.2 -0.5**
BGF pmax pmax
comp=Z,6.0nm,0.6s
PYL PYLOS 84.75 317 P **P** **19 14 52.2 -1.7**
HDIL Hopedale 84.87 37 P **P** **19 14 55.0 +0.5**
baz=324
ORIF Oris-en-Rattie 85.11 331 *e*P **P** **19 14 55.6 -0.1**
ORIF pmax pmax
comp=Z,17nm,0.9s
TCF Toulx Ste Croi 85.18 334 *e*P **P** **19 14 55.6 -0.3**
TCF pmax pmax
comp=Z,10.0nm,0.7s
SSB Saint Sauveur 85.28 332 IAmb IAmb 19 14 57.4
comp=Z,9.3nm,0.6s
R40A Maddies Statio 85.30 41 IAmb IAmb 19 14 57.8
comp=Z,9.3nm,0.8s
QUIF Quistinic 85.34 338 *e*P **P** **19 14 56.3 -0.3**
QUIF pmax pmax
comp=Z,21nm,0.8s
SADO Sadowa 85.44 29 LR LR 19 55 10.5
comp=Z,64nm,18.6s,baz=14,slow=37
VIVF Saint-Julien-I 85.60 332 *e*P **P** **19 14 58.0 -0.1**
VIVF pmax pmax
comp=Z,25nm,0.8s
TRQ Mont Tremblant 85.71 25 IAmb IAmb 19 14 59.8
comp=Z,20nm,1.1s
PPT Papeete 85.90 118 LR LR 19 45 11.8
comp=Z,119nm,21.7s,baz=315,slow=30
TX31 Lajitas Ar. Si 85.92 54 P **P** **19 15 00.7 +0.6**
TX31 IAmb IAmb 19 15 02.2
comp=Z,13nm,0.7s
PPT2 Papeete2 85.92 118 *e*LR LR 19 42 12.3
comp=Z,357nm,26.0s
TXAR Lajitas Array 85.92 54 P **P** **19 15 01.5 +1.5**
comp=Z,4.7nm,0.7s,baz=294,slow=3.6,SNR=39
TXAR PKKPbc **PKKPbc** **19 33 01.0 +2.6**
comp=Z,0.6nm,0.7s,baz=154,slow=3.7,SNR=5.2
TXAR LR LR 19 50 05.3
comp=Z,27nm,20.7s,baz=324,slow=33
comp=Z,4.7nm,0.7s
URZ Urewera 85.96 154 LR LR 19 49 30.0
comp=Z,42nm,19.1s,baz=66,slow=33
CCM Cathedral Cave 85.97 40 P **P** **19 14 60.0 0.0**
CCM IAmb IAmb 19 15 01.3
comp=Z,12nm,0.8s
CCM Cathedral Cave 85.97 40 P **P** **19 15 00.0 0.0**
CCM pmax pmax
comp=Z,12nm,0.8s
CCM Cathedral Cave 85.97 40 P **P** **19 15 00.4 +0.4**
baz=323
SFIN Lafayette 85.99 36 P **P** **19 14 59.7 -0.3**
baz=325
TIAR Tiarei 86.04 118 *e*T T 20 49 41.7
comp=Z,1.0nm,0.2s
TAOE Nuku Hiva Isla 86.26 105 *e*LR LR 19 42 22.0
comp=Z,296nm,22.9s
RJF Les Rejaudoux 86.27 334 *e*P **P** **19 15 01.4 0.0**
RJF pmax pmax
comp=Z,12nm,0.8s
CAF Calviac 86.43 333 *e*P **P** **19 15 02.7 +0.5**
CAF pmax pmax
comp=Z,40nm,0.8s
LFF La Frestale 86.85 334 *e*P **P** **19 15 04.6 +0.4**
LFF pmax pmax
comp=Z,40nm,0.9s
LONY Lake Ozonia 87.13 26 P **P** **19 15 05.1 -0.4**
baz=333
S44A Carbondale 87.20 39 P **P** **19 15 06.1 +0.1**
FCAR Ozark Folk Cen 87.26 42 IAmb IAmb 19 15 15.1
comp=Z,7.3nm,0.8s
MIAR Mount Ida 87.59 44 P **P** **19 15 07.8 -0.1**
MIAR IAmb IAmb 19 15 09.9
comp=Z,11nm,1.0s
MIAR Mount Ida 87.59 44 P **P** **19 15 07.8 -0.1**
MIAR pmax pmax
comp=Z,11nm,1.0s
MIAR Mount Ida 87.59 44 P **P** **19 15 08.7 +0.7**
baz=322
WHAR Wooly Hollow 87.66 42 IAmb IAmb 19 15 37.0
comp=Z,27nm,1.4s
P49A Miami Univ. Ec 87.72 35 IAmb IAmb 19 15 09.7
comp=Z,14nm,0.8s
P49A Miami Univ. Ec 87.72 35 P **P** **19 15 08.5 0.0**
baz=327
M53A WI Miller and 87.74 31 P **P** **19 15 09.2 +0.6**
baz=329
MTLF Montolieu 87.78 333 *e*P **P** **19 15 09.0 +0.3**
MTLF pmax pmax
comp=Z,15nm,0.8s
WCI Wyandotte Cave 88.11 37 P **P** **19 15 10.6 +0.3**
baz=326
H62A Milan 88.23 24 IAmb IAmb 19 15 13.1
comp=Z,29nm,1.0s
O52A Adamsville 88.42 33 IAmb IAmb 19 15 13.8
comp=Z,27nm,1.2s
O53A New Philadelph 88.55 32 IAmb IAmb 19 15 14.0
comp=Z,14nm,0.8s
O53A New Philadelph 88.55 32 P **P** **19 15 12.4 0.0**
baz=329
EPF Esparros 88.68 334 *e*P **P** **19 15 13.6 +0.6**
EPF pmax pmax
comp=Z,5.0nm,0.6s
P52A Corning 88.71 33 P **P** **19 15 13.3 +0.1**
baz=328
T47A Sharon Grove 88.77 38 P **P** **19 15 12.9 -0.5**
T47A IAmb IAmb 19 15 15.3
comp=Z,13nm,0.7s
ETSF Etsaut 89.09 334 *e*P **P** **19 15 15.3 +0.3**
ETSF pmax pmax
comp=Z,20nm,0.6s
SJPF Ste Jean 89.11 335 *e*P **P** **19 15 15.4 +0.4**
SJPF pmax pmax
comp=Z,13nm,1.1s
L59A Walton 89.14 27 IAmb IAmb 19 15 16.8
comp=Z,22nm,1.0s
WVT Waverly 89.14 39 P **P** **19 15 15.6 +0.3**
baz=325

RPZ	Rata Peaks	89.24	160	LR	LR	19 59 57.5	
	comp=Z,34nm,18.5s,baz=322,slow=39						
SSPA	Standing Stone	89.49	30	P	P	19 15 17.2	+0.4
SSPA				IAmb	IAmb	19 15 18.3	
	comp=Z,13nm,0.9s						
SSPA	Standing Stone	89.49	30	P	P	19 15 17.5	+0.7
	baz=331						
N58A	Sunbury	89.74	29	IAmb	IAmb	19 15 19.6	
	comp=Z,17nm,0.8s						
ATD	Arta Tunnel	89.78	285	LR	LR	20 01 47.1	
	comp=Z,84nm,19.0s,baz=28,slow=40						
HRV	Adam Dziewonsk	89.99	25	P	P	19 15 18.4	-0.7
	baz=335						
TBI	Tubuai	90.16	122	eLR	LR	19 44 10.5	
	comp=Z,226nm,34.0s						
TKL	Tuckaleechee C	91.37	36	LR	LR	19 59 38.3	
	comp=Z,83nm,18.3s,baz=337,slow=38						
KEST	Kesra	91.57	324	P	P	19 15 26.5	-0.2
	comp=Z,5.2nm,0.9s,baz=338,slow=8.4,SNR=5.1						
KEST				LR	LR	20 00 47.5	
	comp=Z,156nm,20.8s,baz=232,slow=38						
	comp=Z,5.2nm,0.9s						
ESDC	Sonseca Array	93.09	335	P	P	19 15 33.5	-0.2
	comp=Z,5.5nm,0.9s,baz=19,slow=3.8,SNR=27						
ESDC				LR	LR	20 01 53.8	
	comp=Z,54nm,18.7s,baz=18,slow=38						
	comp=Z,5.5nm,0.9s						
MDT	Midelt	99.57	333	LR	LR	20 06 55.3	
	comp=Z,53nm,19.0s,baz=12,slow=39						
TORD	Torodi Ar. Bea	114.40	318	PKP	PKiKP	19 20 58.9	-0.9
	comp=Z,1.9nm,0.8s,baz=18,slow=2.8,SNR=10.0						
TORD				PP	PP	19 21 53.0	-2.6
	comp=Z,9.8nm,1.0s,baz=29,slow=7.9,SNR=18						
VNDA	Vanda	120.12	175	PKP	PKiKP	19 21 08.9	0.0
	comp=Z,1.5nm,0.8s,baz=316,slow=3.9,SNR=10						
VNDA	Vanda	120.12	175	PKPdf	PKiKP	19 21 10.0	+1.1
DBIC	Dimbokro	123.17	321	PKP	PKPdf	19 21 16.4	-0.3
	comp=Z,4.9nm,0.7s,baz=49,slow=3.4,SNR=6.9						
MAW	Mawson	124.83	207	PKP	PKiKP	19 21 20.1	+1.7
	comp=Z,3.5nm,0.8s,baz=283,slow=4.1,SNR=8.6						
QSPA	South Pole Qui	132.04	180		PKiKP	19 21 32.9	-0.1
MACA	Manacapuru-AM	135.61	35	eP	PKiKP	19 21 43.6	+1.8
MCPB	Macapa, AP	136.07	22	eP	PKiKP	19 21 44.2	+1.4
MALB	Monte Alegre	136.82	26	eP	PKiKP	19 21 44.8	+0.5
ITTB	Itaituba	138.66	29	eP	PKiKP	19 21 49.5	+1.4
ROSB	Rosrio	140.24	11	eP	PKiKP	19 21 50.5	-0.8
NPGB	Novo Progresso	141.28	30	eP	PKPdf	19 21 52.0	+1.3
PRPB	Parauapebas	142.24	21	eP	PKiKP	19 21 55.3	-0.1
LPAZ	La Paz	142.77	55	PKP	PKPdf	19 21 52.4	-1.6
	comp=Z,1.7nm,0.8s,baz=27,slow=3.9,SNR=8.4						
LPAZ	La Paz	142.77	55	PKPdf	PKPdf	19 21 51.9	-2.0
TROLL	Troll, Antarti	144.63	200	PKPdf	PKPdf	19 21 54.6	-0.4
H03N2	Juan Fernandez	145.96	89	T	T	22 05 17.3	
	baz=300,slow=77,SNR=42						
H03N3	Juan Fernandez	145.97	89	T	T	22 05 15.7	
	baz=300,slow=77,SNR=29						
H03N1	Juan Fernandez	145.97	89	T	T	22 05 14.4	
	baz=300,slow=77,SNR=43						
SNAA	Sanae	146.16	199	PKPdf	PKPdf	19 21 57.5	0.0
SNAA	Sanae	146.16	199	PKPdf	PKPdf	19 21 58.0	+0.5
SNAA	Sanae	146.16	199	PKP2	PKPdf	19 21 58.0	+0.5
VNA2	Neumayer--Watz	147.73	198	PKPdf	PKPdf	19 22 00.7	+0.6
	baz=110,slow=2.0						
VNA1	Neumayer--Stat	148.13	198	PKPdf	PKPdf	19 22 00.7	+0.1
BDFB	Brasilia	151.76	23	PKPbc	PKiKP	19 22 14.9	-0.1
	comp=Z,15nm,0.8s,baz=339,slow=2.0,SNR=18						
BO02	Sierra Bellavi	152.60	85		PKPbc	19 22 14.5	-1.5
PMSA	Palmer Station	152.72	155	eP	PKPbc	19 22 13.0	-2.1
MC01	Montes Claros	153.78	15	eP	PKPdf	19 22 14.2	+3.1
IPMB	Ipameri, GO	153.91	25	eP	PKPdf	19 22 13.6	+2.3
DIAM	Diamantina, MG	155.38	16	eP	PKPdf	19 22 17.4	+4.0

*HEL **11** 19:10:25.4±0.1, 67°.81N×20°.19E, h0km, ML2.2, ML2.3(UPP), Explosion*
*IDC **11** 19:10:26.7±1.3, 67°.85N×20°.45E, h0km, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=28.5km s-min=8.0km az=125.0*
*KOLA **11** 19:10:26.2, 67°.80N×19°.95E, h0km, ML2.3*
*BER **11** 19:10:28.1±1.2, 67°.87N×20°.31E, h0km, ML2.4, Suspected explosion*

ISC 11 19:10:25.3±0.8, 67°.82N±0°.03×20°.22E±0°.03, h0km, n33, σ1°32/50, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.24	272		i P	Pg	19 10 29.4	-0.5
KOVU	Salmi	0.41	357		i P	Pg	19 10 32.8	-0.3
KOVU					i S	Sg	19 10 38.5	+0.1
NIKU	Nikkaluokta	0.45	277		i P	Pg	19 10 33.3	-0.6
LANU	Lannavaara	0.71	70		eP	Pg	19 10 37.5	-1.4
	baz=261							
LANU					eS	Sg	19 10 48.7	+0.6
DUNU	Dundret	0.71	169		i P	Pg	19 10 38.5	-0.5
MASU	Masugnsbyn	0.77	117		i P	Pg	19 10 39.4	-0.7
SALU	Saltoluokta	0.79	237		i P	Pg	19 10 39.3	-1.1
KIF	Kilpisjarvi	1.21	10		eP	Pb	19 10 48.7	-0.4
KIF					eS	Sb	19 11 05.2	-0.1
KIF	Kilpisjarvi	1.21	10		MSG		19 11 00.2	
	comp=Z,19nm,0.2s							
HEF	Hetta	1.42	64		eP	Pn	19 10 51.7	-0.6
HEF					eS	Sg	19 11 10.9	0.0
HEF	Hetta	1.42	64		eP	Pn	19 10 50.8	-1.6
	baz=246							
HEF					MSG		19 11 07.7	
	comp=Z,20nm,0.2s							
HEF					eSB	Sg	19 11 10.9	0.0
ERTU	Ertsjaerv	1.48	148		eP	Pn	19 10 51.9	-1.3
ERTU					eSN	Sn	19 11 14.1	+0.8
KLF	Kolari	1.56	110		eP	Pn	19 10 52.6	-1.6
	baz=298							
KLF					eSN	Sg	19 11 15.9	+0.7
HARU	Harads	1.69	169		eP	Pn	19 10 56.0	0.0
JETT	Jettan, Norway	1.75	2		eP	Pb	19 10 57.8	-0.5
JETT					IAML		19 11 25.0	
	comp=Z,70nm,0.4s							
FAUS	Fauske	1.94	259		eP	Pb	19 11 00.9	-0.5
KALU	Kalix	2.33	146		eP	Pn	19 11 04.6	-0.2
KALU					eSG	Sb	19 11 38.2	+1.0
TOF	Tornio	2.38	135		eP	Pn	19 11 05.8	+0.3
TOF					MSG		19 11 36.7	
	comp=Z,17nm,0.2s							
TOF					eSG	Sb	19 11 39.1	+0.3
SGF	Sodankyl	2.44	96		ePB	Pn	19 11 07.8	+1.4
SGF					eSG	Sb	19 11 41.7	+1.0
RNF	Rovaniemi	2.56	116		ePB	Pn	19 11 09.1	+1.1
RNF					eSG	Sb	19 11 44.4	+0.3
ARA0	ARCESS Array S	2.59	46		eP	Pn	19 11 08.9	+0.5
	baz=229							
ARA0					eS	Sn	19 11 38.3	-2.3
ARCES	ARCESS Array B	2.59	46		Pn	Pn	19 11 09.4	+1.0
	comp=Z,0.9nm,0.3s,baz=229,slow=15,SNR=71							
ARCES					Lg	Lg	19 11 45.1	
	comp=Z,4.2nm,0.3s,baz=228,slow=26,SNR=26							
	comp=Z,1.9nm,0.2s							
ARCES	ARCESS Array B	2.59	46		P	Pn	19 11 09.3	+1.0
ARCES					S	Sn	19 11 41.9	+1.3
KEV	Kevo	3.14	49		eP	Pn	19 11 17.0	+1.0
KEV					eS	Sn	19 11 55.8	+1.7
KEV					MSG		19 11 56.4	
	comp=Z,11nm,0.2s							
BURU	Burvik	3.28	171		ePB	Pn	19 11 20.2	+2.3
BURU					eSB	Sb	19 12 01.6	-3.1
VRF	Varrio	3.57	87		ePB	Pb	19 11 25.9	-3.3
VRF					eSG	Sb	19 12 15.5	+2.5
KU6	Riekki	4.21	111		ePG	Pb	19 11 41.8	+1.6
	baz=298							
KU6					eSB	Sb	19 12 30.0	-1.4
PRVG	Vayda Guba	4.76	61		S	Sn	19 12 36.1	+2.2
APA0	Apatity Array	4.87	87		P	Pn	19 11 40.6	+1.0
APA0					S	Sn	19 12 35.4	-1.3
LVZ	Lovozero	5.46	82		S	Sn	19 12 51.6	+0.3
FINES	FINESS Array B	6.87	156		Pn	Pn	19 12 09.1	+1.9
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=4.6							
	comp=Z,0.3nm,0.3s							
NOA	NORSAR Array B	7.83	214		Pn	Pn	19 12 21.2	+0.9
	baz=25,slow=12,SNR=1.4							
	comp=Z,0.1nm,0.3s							
HFS	Hagfors	8.22	203		Pn	Pn	19 12 25.3	-0.4
	baz=7.7,slow=12,SNR=1.1							
	comp=Z,0.4nm,0.3s							

*IDC **11** 19:30:42.5±1.4, 6°.71S×154°.33E, h0km, mb3.7/6, mbtmp3.8/8, ML1.3/1, Error ellipse: s-maj=34.7km s-min=25.3km az=115.0*

ISC 11 19:30:44.1±1.2, 6°.7S±0°.1×154°.3E±0°.1, h10km, n9, σ0°85/10, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.31	316		Pn	Pn	19 31 36.8	+0.8
	26nm,0.4s,baz=290,slow=0.7,SNR=12							
KRVT					Sn	Sn	19 32 14.9	-0.6
	10nm,0.3s,baz=306,slow=21,SNR=4.6							
PMG	Port Moresby	7.61	249		Pn	Pn	19 32 35.8	+0.7
	0.3nm,0.3s,baz=76,slow=8.3,SNR=1.7							
	10nm,0.7s							
WRA	Warramunga Arr	23.46	234		P	P	19 35 53.0	-1.0
	2.6nm,0.9s,baz=58,slow=9.9,SNR=11							
	2.6nm,0.9s							
ASAR	Alice Springs	25.89	227		P	P	19 36 15.9	-0.5
	0.7nm,0.8s,baz=58,slow=8.9,SNR=4.3							
	0.7nm,0.8s							
SONM	Songino Array	68.74	328		P	P	19 41 48.3	0.0
	0.4nm,0.8s,baz=125,slow=7.2,SNR=2.4							
	0.4nm,0.8s							
MKAR	Makanchi Array	82.75	319		P	P	19 43 08.6	+0.1
	0.4nm,0.6s,baz=92,slow=10,SNR=1.6							
	0.4nm,0.6s							
ZALV	Zalesovo Beam	83.57	326		P	P	19 43 11.3	-1.1
	0.4nm,0.4s,baz=120,slow=8.5,SNR=2.2							
	0.4nm,0.4s							
NVAR	Mina Array Bea	92.05	52		P	P	19 43 54.0	0.0
	0.2nm,0.3s,baz=252,slow=5.6,SNR=4.3							
	0.2nm,0.3s							
TORD	Torodi Ar. Bea	152.32	286		PKPbc	PKiKP	19 50 42.7	+1.0
	0.5nm,0.7s,baz=77,slow=3.6,SNR=2.8							

MAN 11 19:42:34.8, 11°.57N×122°.76E, h40km, mb4.3, ML3.2, MS2.9, 3C-6D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RCP	Roxas	0.01	230		eP	Pn	19 42 41.4	+0.2
RCP					eS	Sn	19 42 45.4	-0.2
GUIM	Jordan	0.95	190		eP	Pn	19 42 52.0	+0.3
GUIM					eS	Sn	19 43 05.5	+1.4
JAP	San Jose, Anti	1.14	224		eP	Pn	19 42 58.5	+4.2
MMPH	Masbate	1.16	47		iP	Pn	19 42 55.2	+0.7
MMPH					i S	Sn	19 43 10.0	+0.9
LLP	Lapu-Lapu	1.72	136		eP	Pn	19 43 00.9	-1.3
LLP					eS	Sn	19 43 24.5	+1.4
CNOP	Candoni, Negro	1.73	184		eP	Pn	19 43 01.4	-1.0
CNOP					eS	Sn	19 43 25.7	+2.3
CUYO	Cuyo Island	1.85	247		eP	Pn	19 43 07.1	+3.0
CUYO					eS	Sn	19 43 30.6	+4.4
BOAC	Boac	2.08	335		eP	Pn	19 43 05.9	-1.3
BOAC					eS	Sn	19 43 29.5	-2.3
TBP	Tagbilaran	2.16	150		eP	Pn	19 43 09.4	+1.1
TBP					eS	Sn	19 43 41.0	+7.2
SNPH	Sibulan	2.26	168		i P	Pn	19 43 12.1	+2.3
SNPH					i S	Sn	19 43 30.2	-6.3
BUSP	Coron	2.54	280		iP	Pn	19 43 17.1	+3.6
BUSP					i S	Sn	19 43 46.6	+3.3

MAN 11 19:44:00.2, 16°.24N×121°.55E, h28km, mb3.9, ML2.7, MS2.3, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.50	177		eP	Pn	19 44 11.1	-0.3
BALP					eS	Sn	19 44 20.6	+1.6
CAUP	Cauayan	0.75	211		eP	Pb	19 44 13.3	-1.3
CAUP					eS	Sb	19 44 24.9	+0.3
PCPH	Palayan	0.80	213		eP	Pn	19 44 17.1	+1.5
SMPP	San Manuel, Pa	0.84	264		iP	Pn	19 44 15.9	-0.2
SMPP					i S	Sn	19 44 28.1	+0.5
SAMP	Sagada Mountai	1.04	324		iP	Pn	19 44 18.7	-0.2
SAMP					i S	Sb	19 44 32.7	-0.1
PALP	Palanan	1.17	46		eP	Pn	19 44 20.2	-0.5
PALP					eS	Sb	19 44 36.3	-0.4

IDC 11 20:00:37.6±5.5, 21°.60N×143°.48E, h274km±61km, mb2.8/2, mbtmp3.7/4, Error ellipse: s-maj=284.0km s-min=42.7km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.60	348		P	Pn	20 02 01.6	+0.3
	36nm,0.5s,baz=262,slow=23,SNR=9.5							
JCJ					S	S	20 03 08.7	+0.1
	29nm,0.4s,baz=268,slow=23,SNR=2.3							
MJAR	Matsushiro Arr	15.58	344		P	P	20 04 02.3	-0.1
	0.9nm,0.4s,baz=171,slow=12,SNR=4.5							
WRA	Warramunga Arr	42.24	193		P	P	20 08 04.4	-0.2
	0.6nm,0.6s,baz=15,slow=8.7,SNR=9.8							
	0.6nm,0.6s							
ASAR	Alice Springs	45.95	192		P	P	20 08 33.6	-0.1
	0.2nm,0.6s,baz=16,slow=9.5,SNR=5.3							
	0.2nm,0.6s							

*IDC **11** 20:02:58.4±1.0, 58°.47S×25°.30W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=46.8km s-min=31.3km az=91.0*
*NEIC **11** 20:03:00.6±2.3, 58°.6S±0°.1×25°.3W±0°.3, h17km±5km, mb4.2/7, Error ellipse: s-maj=29.8km s-min=9.0km az=59.0*

ISC 11 20:03:01.9±0.7, 58°.6S±0°.1×25°.1W±0°.2, h28km, n24, σ0°87/19, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.01	156		P	Pn	20 06 17.5	-0.7
VNA3	Neumayer Olymp	14.21	159		P	Pn	20 06 20.3	-0.6
VNA2	Neumayer--Watz	14.40	156		P	Pn	20 06 22.3	-1.3
	baz=319,slow=14							
SNAA	Sanae	15.95	154		P	Pn	20 06 43.5	-0.5
SNAA	Sanae	15.95	154			Pn	20 06 43.0	-1.1
TROLL	Troll, Antarti	17.46	151		P	Pn	20 07 03.0	-0.1
BELA	Belgrano 2	19.64	186		P	P	20 07 27.8	0.0
BELA					IAmb	IAmb	20 07 43.7	
	comp=Z,3.4nm,1.2s							
VNDA	Vanda	44.07	182		P	P	20 11 08.8	+2.1
	comp=Z,1.0nm,0.9s,baz=187,slow=6.6,SNR=6.8							
	comp=Z,1.0nm,0.9s							
VNDA	Vanda	44.07	182		P	P	20 11 07.2	+0.5
VNDA					IAmb	IAmb	20 11 09.0	
	comp=Z,0.9nm,0.8s							
PB06	IPOC Station P	47.77	299		P	P	20 11 35.7	-0.9
H10S2	ASCENSION HYDR	50.17	14		T	T	21 06 15.0	
	baz=185							
H10S3	ASCENSION HYDR	50.17	13		T	T	21 06 14.7	
	baz=35,SNR=6.3							
H10N1	ASCENSION HYDR	51.29	14		T	T	21 07 42.7	
	baz=201,slow=75,SNR=4.0							
H10N3	ASCENSION HYDR	51.29	14		T	T	21 07 33.3	
	baz=201,slow=75,SNR=12							
H10N2	ASCENSION HYDR	51.30	14		T	T	21 07 40.8	
	baz=201,slow=75,SNR=9.3							
LPAZ	La Paz	52.76	305		P	P	20 12 14.3	-0.6
	comp=Z,0.7nm,0.5s,baz=146,slow=7.3,SNR=2.5							
	comp=Z,0.7nm,0.5s							
DBIC	Dimbokro	67.06	22		P	P	20 13 51.8	-0.6
DBIC					IAmb	IAmb	20 14 02.8	
	comp=Z,16nm,1.4s							
TOA0	Torodi Ar. Sit	74.77	27		P	P	20 14 39.7	+0.6
TOA0					IAmb	IAmb	20 15 02.5	
	comp=Z,5.7nm,1.4s							
TORD	Torodi Ar. Bea	74.77	27		P	P	20 14 40.1	+1.0
	comp=Z,1.3nm,0.5s,baz=200,slow=6.4,SNR=28							
	comp=Z,1.3nm,0.5s							
INK	Inuvik	148.47	318		PKPbc	PKPbc	20 22 44.3	+0.3
	comp=Z,1.9nm,0.6s,baz=111,slow=0.9,SNR=5.2							
SONM	Songino Array	149.70	89		PKPbc	PKPbc	20 22 47.6	-0.4
	comp=Z,0.7nm,0.5s,baz=220,slow=4.0,SNR=6.8							
K27K	Chicken	150.40	307			PKiKP	20 22 49.8	+0.1
I26K	Coal Creek Min	151.23	310			PKiKP	20 22 51.5	+0.1
ILAR	Eielson Array	152.61	308		PKPbc	PKPbc	20 22 54.4	+0.3
	comp=Z,1.1nm,0.6s,baz=135,slow=4.6,SNR=7.2							

*NOU **11** 20:08:46.2, 17°.08S×177°.10W, h394km, mb4.8/46, Fiji Islands Region*

*NEIC **11** 20:08:46.0±2.6, 17°.16S±0°.09×177°.08W±0°.08, h371km±5km, mb4.6/172, Error ellipse: s-maj=14.4km s-min=8.9km az=144.0*
*IDC **11** 20:08:47.9±1.2, 17°.30S×177°.33W, h390km±11km, mb4.0/27, mbtmp4.7/29, Error ellipse: s-maj=12.7km s-min=9.5km az=138.0*

ISC 11 20:08:47.3±0.3, 17°.18S±0°.07×177°.13W±0°.05, h400km, n547, σ1°80/528, mb4.5/105, 5C-35D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FUTU	Fugatoga	3.02	341		P	Pn	20 09 48.6	-2.1
MSVF	Nonsavu	4.63	263		P	Pn	20 10 05.0	-0.7
	612nm,0.7s,baz=91,slow=23,SNR=346							
MSVF					S	S	20 11 07.6	-1.7
	45nm,0.7s,baz=133,slow=19,SNR=11							
MSVF	Nonsavu	4.63	263		Pn	Pn	20 10 04.6	-1.1
MSVF	Nonsavu	4.63	263		P	Pn	20 10 05.0	-0.7
AFI	Afiamalu	6.10	58		P	Pn	20 10 18.3	-2.9
	192nm,0.7s,baz=67,slow=2.8,SNR=22							
AFI					S	S	20 11 31.2	-6.4
	59nm,0.3s,baz=42,slow=23,SNR=1.5							
AFI	Afiamalu	6.10	58		Pn	Pn	20 10 17.7	-3.4
AFI					Sn	S	20 11 29.1	-8.5
AFI	Afiamalu	6.10	58		P	Pn	20 10 18.8	-2.4
NIUE	Niue	7.10	106		Pn	Pn	20 10 30.1	-2.0
NIUE	Niue	7.10	106		P	P	20 10 31.1	-1.6
MARNC	Mare, Loyalty	14.64	251		P	P	20 11 53.1	-2.9
MARNC	Mare, Loyalty	14.64	251		P	P	20 11 55.2	-0.8
LIFNC	LIFOU	15.21	254			P	20 11 59.0	-3.1
OUENC	Ouen Island, N	15.96	248		P	P	20 12 07.6	-2.5
OUENC					IAmb	IAmb	20 12 26.4	
	comp=Z,25nm,0.7s							
OUENC	Ouen Island, N	15.96	248		P	P	20 12 09.7	-0.4
DZM	Mont Dzumac	16.22	250		P	P	20 12 11.1	-1.9
	comp=Z,23nm,0.6s,baz=292,slow=24,SNR=20							
DZM	Mont Dzumac	16.22	250		P	P	20 12 10.2	-2.8
DZM					IAmb	IAmb	20 12 19.2	
	comp=Z,27nm,0.7s							
DZM	Mont Dzumac	16.22	250		P	P	20 12 11.9	-1.2
ONTNC	Ouen Toro	16.27	249		P	P	20 12 12.2	-1.3
ONTNC	Ouen Toro	16.27	249		P	P	20 12 12.9	-0.6
NOUC	Port Laguerre	16.35	250		P	P	20 12 14.7	+0.3
RAR	Rarotonga	16.87	106		P	P	20 12 15.6	-4.3
RAR					IAmb	IAmb	20 12 35.6	
	comp=Z,46nm,1.3s							
KOUNC	Koumac, New Ca	17.90	256		P	P	20 12 29.9	-1.0
OUZ	Omahuta	19.78	203		P	P	20 12 48.6	-1.0
OUZ					IAmb	IAmb	20 12 52.1	
	comp=Z,27nm,0.7s							
MXZ	Matakaoa Point	20.70	190		P	P	20 12 57.5	-0.5
URZ	Urewera	21.60	192		P	P	20 13 04.2	-1.9
	comp=Z,22nm,0.3s,baz=355,slow=3.1,SNR=45							
	comp=Z,22nm,0.3s							
URZ	Urewera	21.60	192		P	P	20 13 03.5	-2.7
URZ					IAmb	IAmb	20 13 06.0	
	comp=Z,34nm,0.9s							
HIZ	Hauiti	22.38	197		P	P	20 13 14.2	+0.9
BKZ	Black Stump Fm	22.60	193		P	P	20 13 12.4	-2.9
BKZ					IAmb	IAmb	20 13 19.6	
	comp=Z,34nm,1.2s							
TUWZ	Tuamarina	25.36	196		P	P	20 13 37.4	-2.5
KHZ	Kahutara	26.38	196		P	P	20 13 46.7	-2.3
RPZ	Rata Peaks	28.28	198		P	P	20 14 05.3	-0.5
	comp=Z,7.5nm,0.6s,baz=332,slow=4.3,SNR=1.8							
	comp=Z,7.5nm,0.6s							
LBZ	Lake Benmore	29.15	199		P	P	20 14 11.4	-2.0
MLZ	Mavora Lakes	30.69	201		P	P	20 14 27.1	+0.1
MLZ					IAmb	IAmb	20 14 29.5	
	comp=Z,39nm,1.0s							
WHZ	Wether Hill Ro	31.21	200		P	P	20 14 31.4	0.0
ARMA	Armidale	31.36	239		P	P	20 14 32.2	-0.9
ARMA					IAmb	IAmb	20 14 34.1	
	comp=Z,20nm,0.6s							
KRVT	Keravat (AS076	32.83	289		P	P	20 14 44.8	-1.0
	comp=Z,27nm,0.5s,baz=16,slow=18,SNR=3.6							
	comp=Z,27nm,0.5s							
RMQ	Roma	32.91	248		P	P	20 14 46.1	-0.2
CTA	Charters Tower	34.77	259		P	P	20 15 00.7	-1.6
	comp=Z,7.8nm,0.7s,baz=92,slow=12,SNR=5.3							
	comp=Z,7.8nm,0.7s							
CTA	Charters Tower	34.77	259		P	P	20 15 01.2	-1.1
CTAO	Charters Tower	34.77	259		P	P	20 15 00.4	-1.9
CTAO	Charters Tower	34.77	259		P	P	20 15 01.4	-0.9
CNB	Canberra Magne	34.83	232		P	P	20 15 02.7	0.0
CAN	Canberra	35.11	232		P	P	20 15 04.6	-0.4
CAN					IAmb	IAmb	20 15 05.4	
	comp=Z,26nm,0.9s							
PMG	Port Moresby	35.56	278		P	P	20 15 09.9	+1.0
	comp=Z,17nm,0.7s,baz=106,slow=5.5,SNR=4.3							
	comp=Z,17nm,0.7s							
PMG	Port Moresby	35.56	278		P	P	20 15 07.1	-1.8
PMG					IAmb	IAmb	20 15 12.1	
	comp=Z,20nm,0.8s							
PMG	Port Moresby	35.56	278		P	P	20 15 07.8	-1.1
	comp=Z,27nm,1.0s							
CMSA	Cobar Meteorol	36.57	240		P	P	20 15 16.3	-0.9
MTSU	Mount Surprise	36.71	263		P	P	20 15 17.5	-1.0
QLP	Quilpie	36.93	249		P	P	20 15 19.2	-1.1
COEN	Coen	38.33	269		P	P	20 15 31.4	-0.6
TOO	Toolangi	38.57	231		P	P	20 15 33.3	-0.4
TOO	Toolangi	38.57	231		P	P	20 15 34.1	+0.4
CORO	Coronation Par	39.01	224		P	P	20 15 39.0	+1.8
	comp=Z,63nm,0.7s							
TAU	Tasmania Unive	39.59	222		P	P	20 15 41.4	-0.5
BRAT	Ballarat	39.72	231		P	P	20 15 44.0	+1.0

TNTI	Ternate	57.49	282	P	P	20 17 58.0 +1.1
TNTI				IAmb	IAmb	20 17 59.7
	comp=Z,17nm,0.9s					
SANI	Sanana	57.84	279	P	P	20 18 00.4 +1.1
	comp=Z,17nm,1.2s					
SANI	Sanana	57.84	279	P	P	20 17 59.6 +0.3
PSA00	Pilbara Seismi	59.27	255	P	P	20 18 08.3 -0.7
PSA00	Pilbara Seismi	59.27	255	P	P	20 18 07.9 -1.1
PSA00				IAmb	IAmb	20 18 20.8
	comp=Z,14nm,1.1s					
MBWA	Marble Bar	59.44	255	P	P	20 18 09.3 -0.7
MBWA				IAmb	IAmb	20 18 10.2
	comp=Z,22nm,1.1s					
MMRI	Maumere	59.52	270	P	P	20 18 11.9 +1.2
KLBR	Kellerberrin	60.24	243	P	P	20 18 14.9 -0.5
NWAO	Narrogin (SRO)	60.63	242	P	P	20 18 17.9 0.0
NWAO				IAmb	IAmb	20 18 35.4
	comp=Z,27nm,1.4s					
LUWI	Luwuk	61.20	278	P	P	20 18 21.5 -0.5
LUWI				IAmb	IAmb	20 18 56.7
	comp=Z,21nm,1.1s					
SBA	Scott Base	61.22	184	P	P	20 18 22.6 +1.6
VNDA	Vanda	61.27	185	P	P	20 18 22.8 +1.4
	comp=Z,1.4nm,0.5s,baz=1.9,slow=7.4,SNR=26					
	comp=Z,1.4nm,0.5s					
VNDA	Vanda	61.27	185	P	P	20 18 22.3 +1.0
MORW	Morawa	61.89	246	P	P	20 18 26.1 -0.2
MORW				IAmb	IAmb	20 18 28.5
	comp=Z,10nm,0.7s					
APSI	Ampana	62.31	278	P	P	20 18 32.2 +3.0
	comp=Z,39nm,0.9s					
TOLI2	Tolitoli	63.79	280	P	P	20 18 39.2 +0.3
GIRL	Giralia	64.27	253	P	P	20 18 41.8 0.0
MPSI	Mapaga	64.36	279	P	P	20 18 44.3 +1.7
JAGI	Jajag, Banyuwa	67.28	268	P	P	20 18 59.0 -2.1
CASY	Casey	67.30	205	P	P	20 18 59.9 -0.2
CASY				IAmb	IAmb	20 19 03.5
	comp=Z,11nm,1.1s					
MTKI	Muara Teweh, K	68.70	276	P	P	20 19 16.6 +6.9
ADK	Adak	68.77	0	P	P	20 19 09.8 +0.5
KKM	Kota Kinabalu	69.76	283	P	P	20 19 14.9 -1.3
KKM				IAmb	IAmb	20 19 18.9
	comp=Z,9.7nm,0.7s					
JHS	Saijyo	70.16	318	P	P	20 19 17.1 -1.0
JHS				IAmb	IAmb	20 19 40.8
	comp=Z,20nm,1.4s					
UGM	Wanagama	70.90	267	P	P	20 19 20.7 -2.3
UNV	Unalaska Valle	71.33	7	P	P	20 19 24.6 +0.1
QSPA	South Pole Qui	72.87	180	P	P	20 19 35.0 +1.2
QSPA				IAmb	IAmb	20 19 35.6
	comp=Z,6.2nm,0.7s					
PEA0B	Petropavlovsk-	73.30	344	P	P	20 19 36.5 +0.4
PETK	Petropavlovsk-	73.30	344	P	P	20 19 37.2 +1.0
	comp=Z,4.9nm,0.7s,baz=114,slow=6.6,SNR=6.5					
	comp=Z,4.9nm,0.7s					
PETK	Petropavlovsk-	73.30	344	P	P	20 19 36.5 +0.3
KSM	Kuching	73.81	277	P	P	20 19 40.5 +0.5
KSM				IAmb	IAmb	20 19 43.7
	comp=Z,12nm,0.8s					
SCI2	San Clemente I	74.94	48	P	P	20 19 48.5 +2.5
	baz=238					
KSRS	Korea Array	74.98	318	P	P	20 19 48.1 +2.0
	comp=Z,1.2nm,0.6s,baz=115,slow=5.8,SNR=2.6					
	comp=Z,1.2nm,0.6s					
PKM	Mcpherson Peak	75.10	46	P	P	20 19 49.8 +2.8
	baz=236					
PMPB	Monarch Peak	75.17	44	P	P	20 19 49.0 +1.6
PMPB				IAmb	IAmb	20 19 51.0
	comp=Z,7.8nm,0.8s					
SMMC	Simmler	75.21	45	P	P	20 19 50.6 +3.1
	baz=236					
CIS	Catalina Islan	75.26	48	P	P	20 19 50.1 +2.3
	baz=238					
FMP	Fort Macarthur	75.51	47	P	P	20 19 51.4 +2.3
	baz=238					
KMPM	Mount Pierce	75.55	39	P	P	20 19 51.0 +1.6
KMPM				IAmb	IAmb	20 19 53.7
	comp=Z,10.0nm,0.8s					
KMRM	Mail Ridge	75.68	39	P	P	20 19 51.4 +1.3
KRPM	Rodgers	76.06	38	P	P	20 19 54.8 +2.6
KRPM				IAmb	IAmb	20 20 33.5
	comp=Z,15nm,1.0s					
MURC	Murrieta	76.23	48	P	P	20 19 56.0 +2.7
	baz=238					
BFSC	Mount Baldy Ra	76.24	47	P	P	20 19 56.0 +2.6
	baz=238					
ESJX	Sierra Juarez	76.31	50	P	P	20 19 55.2 +1.3
EDW2	Edwards Air Fo	76.35	47	P	P	20 19 56.7 +2.8
	baz=238					
KRMB	Red Mountain	76.36	38	P	P	20 19 54.9 +1.0
KRMB				IAmb	IAmb	20 19 58.4
	comp=Z,13nm,1.2s					
MONP2	Monument Peak	76.42	49	P	P	20 19 57.6 +3.1
	baz=239,SNR=5.8					
ISA	Isabella, Lake	76.44	46	P	P	20 19 55.3 +0.9
ISA				IAmb	IAmb	20 19 58.4
	comp=Z,12nm,1.4s					
ISA	Isabella, Lake	76.44	46	P	P	20 19 56.9 +2.5
	baz=237					
CMB	Columbia Colle	76.48	43	P	P	20 19 56.4 +1.9
IKP	In-Ko-Pah, Jac	76.52	49	P	P	20 19 57.6 +2.6
	baz=239					
YUH	Yuha Desert	76.66	49	P	P	20 19 57.6 +2.0
PFO	Pinyon Flats O	76.76	48	P	P	20 19 58.9 +2.6
	comp=Z,4.0nm,0.9s,baz=309,slow=4.2,SNR=4.2					
	comp=Z,4.0nm,0.9s					
PFO	Pinyon Flats O	76.76	48	P	P	20 19 59.1 +2.7
	baz=239					
TPFO	Pinon Flats	76.76	48	P	P	20 19 59.0 +2.6
	baz=239					
LRMC	Laurel Mtn Rad	76.88	46	P	P	20 19 59.7 +2.7
	baz=238					
SWSC	Sam W. Stewart	76.90	49	P	P	20 19 59.7 +2.8
	baz=239					
CWC	Cottonwood Cre	77.13	45	P	P	20 20 01.2 +2.9
	baz=237					
SLBS	Sierra La Lagu	77.14	60	P	P	20 20 01.9 +3.3
SLBS				IAmb	IAmb	20 20 13.0
	comp=Z,11nm,1.2s					
OMMB	Old Mammoth Mi	77.15	44	P	P	20 19 58.8 +0.1
YBH	Yreka Blue Hor	77.20	39	P	P	20 20 01.7 +3.2
	comp=Z,1.7nm,0.4s,baz=167,slow=2.8,SNR=8.0					
	comp=Z,1.7nm,0.4s					
YBH	Yreka Blue Hor	77.20	39	P	P	20 20 00.1 +1.6
YBH				IAmb	IAmb	20 20 02.1
	comp=Z,9.2nm,1.3s					
BELC	Belle Mtn. Jos	77.29	48	P	P	20 20 02.6 +3.4
	baz=239,SNR=7.6					
MPMC	Manual Prospec	77.32	46	P	P	20 20 02.0 +2.6
	baz=238,SNR=5.7					
WAKR	Walker	77.36	43	P	P	20 20 01.0 +1.4
GSC	Goldstone, Bar	77.40	47	P	P	20 20 00.7 +1.0
GSC	Goldstone, Bar	77.40	47	P	P	20 20 02.5 +2.8
	baz=238					
MPK	Martis Peak	77.42	42	P	P	20 20 00.0 0.0
HEC	Hector,Ludlow	77.48	47	P	P	20 20 03.5 +3.3
	baz=239					
BC3	Big Chuckawall	77.50	49	P	P	20 20 03.5 +3.1
	baz=239,SNR=5.8					
BEKR	Beckworth	77.54	41	P	P	20 20 01.5 +1.0
BEKR				IAmb	IAmb	20 20 04.3
	comp=Z,9.4nm,1.4s					
HUMO	Hull Mountain	77.58	38	P	P	20 20 02.4 +2.0
PNTR	Pine Nut	77.58	42	P	P	20 20 02.3 +1.5
PNTR				IAmb	IAmb	20 20 04.7
	comp=Z,8.9nm,0.9s					
GLA	Glamis	77.66	50	P	P	20 20 02.3 +1.2
GLA				IAmb	IAmb	20 20 05.6
	comp=Z,11nm,0.8s					
GLA	Glamis	77.66	50	P	P	20 20 04.1 +2.9
	baz=240					
VCNR	Virginia City	77.67	42	P	P	20 20 02.7 +1.4
Q18K	Katmai Hardscr	77.72	12	P	P	20 20 04.4 +3.5
	baz=202					
YERR	Yerington	77.76	42	P	P	20 20 02.4 +0.7
YERR				IAmb	IAmb	20 20 05.0
	comp=Z,6.8nm,0.7s					
LHV	Little Huntoon	77.83	43	P	P	20 20 03.0 +1.1
LHV				IAmb	IAmb	20 20 06.2
	comp=Z,9.4nm,0.9s					
LCH	Last Change Ra	77.85	45	P	P	20 20 02.7 +0.5
GRAC	Grapevine Rang	77.91	45	P	P	20 20 03.9 +1.4
GRAC				IAmb	IAmb	20 20 06.2
	comp=Z,11nm,0.8s					
GRAC	Grapevine Rang	77.91	45	P	P	20 20 05.3 +2.9
	baz=238					
GMRC	Granite Mounta	77.93	48	P	P	20 20 05.7 +3.0
	baz=239					
GWY	Greenwater Val	77.95	46	P	P	20 20 03.9 +1.0
IRM	Iron Mountain	77.98	48	P	P	20 20 05.7 +2.8
	baz=240,SNR=7.7					
RYN	Ryan	78.03	43	P	P	20 20 04.6 +1.4
NVAR	Mina Array Bea	78.06	43	P	P	20 20 06.2 +2.8
	comp=Z,4.8nm,0.7s,baz=225,slow=9.0,SNR=37					
	comp=Z,4.8nm,0.7s					
NVAR	Mina Array Bea	78.06	43	P	P	20 20 05.3 +1.8
PAHR	Pah Rah Range	78.07	42	P	P	20 20 04.8 +1.4
GMN	Gold Mountain	78.14	45	P	P	20 20 05.8 +1.9
GMN				IAmb	IAmb	20 20 07.5
	comp=Z,6.3nm,0.9s					
NV11	Mina Array Sit	78.16	43	P	P	20 20 06.0 +2.1
BLYC	Blythe	78.22	49	P	P	20 20 06.8 +2.7
MZP	Montezuma Peak	78.27	44	P	P	20 20 06.7 +2.0
113A	Mohawk Valley,	78.29	50	P	P	20 20 07.2 +2.7
113A				IAmb	IAmb	20 20 08.7
	comp=Z,7.7nm,0.9s					
WCT	Wildcat Mounta	78.30	46	P	P	20 20 06.3 +1.6
KVN	Kaiserville	78.53	43	P	P	20 20 08.0 +2.0
KVN				IAmb	IAmb	20 20 09.5
	comp=Z,6.1nm,0.8s					
TPH	Tonopah	78.58	44	P	P	20 20 07.9 +1.6
214A	Organ Pipe Nat	78.61	51	P	P	20 20 08.8 +2.5
214A				IAmb	IAmb	20 20 11.4
	comp=Z,18nm,1.4s					
214A	Organ Pipe Nat	78.61	51	P	P	20 20 09.0 +2.7
	baz=241					
TPNV	Topopah Spring	78.64	46	P	P	20 20 08.8 +2.3
TPNV	Topopah Spring	78.64	46	P	P	20 20 09.8 +3.3
	baz=238,SNR=7.9					
HSIG		78.67	55	P	P	20 20 07.7 +1.0
HSIG				IAmb	IAmb	20 20 10.4
	comp=Z,6.0nm,0.8s					
PDMCI	Parker Dam,Lak	78.77	49	P	P	20 20 10.3 +3.2
	baz=240					
N16K	Nishlik Lake	78.80	9	P	P	20 20 10.6 +4.0
	baz=198					
V12A	Nelson	78.98	47	P	P	20 20 09.8 +1.5
P19K	Oil Pt	79.00	12	P	P	20 20 12.0 +4.2
	baz=203					
SHPR	Sheep Range	79.16	46	P	P	20 20 11.5 +2.2
H04A	Detroit Lake	79.28	36	P	P	20 20 10.5 +0.8
H04A				IAmb	IAmb	20 20 12.9
	comp=Z,8.7nm,1.2s					
O19K	Port Alsworth	79.29	11	P	P	20 20 10.2 +1.0
	baz=202					
Y14A	Wickenburg	79.42	50	P	P	20 20 13.2 +2.6
PINE	Pine Mountain	79.47	38	P	P	20 20 12.9 +2.0
PINE				IAmb	IAmb	20 20 15.0
	comp=Z,8.7nm,0.9s					
E03A	Lebam	79.67	34	P	P	20 20 12.4 +0.8
E03A				IAmb	IAmb	20 20 15.5
	comp=Z,15nm,1.0s					
PRN	Pahroc Range	79.70	46	P	P	20 20 14.0 +1.8
R11A	Troy Canyon, C	79.82	45	P	P	20 20 14.7 +1.8
R11A	Troy Canyon, C	79.82	45	P	P	20 20 15.8 +2.9
	baz=238,SNR=6.7					
N19K	Bonanza Creek	79.83	11	P	P	20 20 16.1 +3.8
	baz=202					
BMN	Battle Mountai	79.85	42	P	P	20 20 14.6 +1.6
BMN				IAmb	IAmb	20 20 16.7
	comp=Z,17nm,1.5s					
WVOR	Wild Horse Val	80.07	40	P	P	20 20 15.9 +1.9
SEW	Seward	80.22	14	P	P	20 20 18.2 +4.1
	baz=207					
TUC	Tucson	80.29	52	P	P	20 20 17.8 +2.4
TUC				IAmb	IAmb	20 20 20.1
	comp=Z,11nm,0.9s					
TUC	Tucson	80.29	52	P	P	20 20 18.7 +3.3
	baz=242					
I07A	Izee	80.48	38	P	P	20 20 18.2 +2.1
N20K	Mount Spurr	80.62	12	P	P	20 20 17.6 +1.2
	baz=204					
J08A	Circle Bar Ran	80.69	39	IAmb	IAmb	20 20 20.9
	comp=Z,6.2nm,0.9s					
M19K	Big River Lodg	80.87	11	P	P	20 20 18.8 +1.2
	baz=202					
RC01	Rabbit Creek A	81.04	13	P	P	20 20 20.1 +1.6
	baz=206					
L19K	White Mountain	81.05	10	P	P	20 20 20.5 +2.0
	baz=201					
BBB	Bella Bella	81.11	28	P	P	20 20 21.0 +2.0
	comp=Z,5.5nm,0.6s,baz=283,slow=6.3,SNR=4.1					
	comp=Z,5.5nm,0.6s					
PWL	Port Wells	81.14	14	P	P	20 20 19.8 +0.7
	baz=208					
SUA	Susitna One	81.16	12	P	P	20 20 20.5 +1.3
	baz=205					
KAIM	Kayak Island	81.29	16	P	P	20 20 21.6 +1.8
	baz=211					
ELK	Elko	81.30	43	P	P	20 20 23.1 +2.5
	comp=Z,2.2nm,0.8s,baz=252,slow=7.1,SNR=8.6					
	comp=Z,2.2nm,0.8s					
WUAZ	Wupatki	81.35	49	P	P	20 20 23.4 +2.5
	baz=242					
L20K	Farewell, AK	81.49	11	P	P	20 20 22.1 +1.3
	baz=202					
G08A	Pilot Rock	81.49	37	P	P	20 20 24.0 +2.6
G08A				IAmb	IAmb	20 20 25.1
	comp=Z,20nm,1.4s					
M22K	Willow	81.55	13	P	P	20 20 22.5 +1.4
	baz=206					
TTA	Tatalina	81.56	10	P	P	20 20 22.7 +1.5
	baz=200					
KNK	Knik Glacier	81.61	13	P	P	20 20 22.7 +1.3
	baz=208					
SIT	Sitka	81.75	22	P	P	20 20 24.1 +1.9
	baz=220					
U33K	Whale Pass	81.84	23	P	P	20 20 24.6 +1.9
	baz=222					
V35K	Ketchikan	81.85	24	P	P	20 20 25.1 +2.4
	baz=223					
MTPU	Mount Pierson	81.98	46	IAmb	IAmb	20 20 28.7
	comp=Z,8.6nm,1.0s					
SML	Sawmill	81.98	13	P	P	20 20 25.2 +1.7
	baz=208					
CUT	Chulitna	82.11	12	P	P	20 20 25.3 +1.3
	baz=206					
BMRM	Bremner River	82.14	15	P	P	20 20 26.2 +2.0
	baz=211					
MESA	MESA	82.17	17	P	P	20 20 26.8 +2.2
	baz=214					
PPLA	Purkeypile	82.18	11	P	P	20 20 26.0 +1.5
	baz=204					
MSU	Marysvale	82.22	46	P	P	20 20 27.4 +2.0
BMO	Blue Mountains	82.22	38	P	P	20 20 26.8 +1.7
BMO				IAmb	IAmb	20 20 28.6
	comp=Z,7.7nm,1.1s					
SCM	Sheep Creek Mo	82.23	14	P	P	20 20 26.5 +1.7
	baz=209					
KLU	Klutina	82.26	15	P	P	20 20 28.7 +3.8
	baz=210					
K20K	Telida	82.27	10	P	P	20 20 26.6 +1.8
	baz=202					
MFID	Camas Ranch	82.33	40	IAmb	IAmb	20 20 29.4
	comp=Z,8.4nm,1.0s					
W18A	Petrified Fore	82.35	50	P	P	20 20 29.0 +2.9
	baz=243					
WRAK	Wrangell Islan	82.36	23	P	P	20 20 27.2 +1.9
	baz=223					
D08A	Wollman Farm,	82.53	36	IAmb	IAmb	20 20 29.6
	comp=Z,7.7nm,1.0s					
DUG	Dugway, Tooele	82.61	44	P	P	20 20 29.2 +2.0
	baz=240					
E09A	Wood Farm, Sta	82.66	37	P	P	20 20 28.5 +1.4
E09A				IAmb	IAmb	20 20 30.6
	comp=Z,8.8nm,1.3s					
121A	Cookes Peak, D	82.66	53	IAmb	IAmb	20 20 32.5
	comp=Z,9.0nm,0.8s					
121A	Cookes Peak, D	82.66	53	P	P	20 20 29.8 +2.0
	baz=244					
CAST	Castle Rocks	82.68	11	IAmb	IAmb	20 20 28.7
	comp=Z,7.9nm,1.0s					
CAST	Castle Rocks	82.68	11	P	P	20 20 27.4 +0.5
	baz=204					
N25K	Chitina, Valde	82.69	15	P	P	20 20 28.6 +1.6
	baz=211					
BELA	Belgrano 2	82.72	173	P	P	20 20 27.0 -0.1
M24K	Tolsona, Glenn	82.74	14	P	P	20 20 29.1 +1.8
	baz=210					
WAT6	Susitna Watana	82.80	13	P	P	20 20 29.4 +1.7
	baz=208					
WAT1	Susitna Watana	82.85	13	P	P	20 20 29.2 +1.4
	baz=207					
F10A	Beach Ranch, E	82.88	37	P	P	20 20 29.8 +1.4
F10A				IAmb	IAmb	20 20 31.7
	comp=Z,16nm,1.1s					
MCARA	McCarthy VSAT	82.89	16	P	P	20 20 31.0 +3.0
	baz=213					
P29M	Windy Craggy	82.97	19	IAmb	IAmb	20 20 31.9
	comp=Z,11nm,0.8s					
P29M	Windy Craggy	82.97	19	P	P	20 20 30.4 +1.9
	baz=218					
R32K	Eaglecrest	82.97	21	P	P	20 20 30.7 +2.3
	baz=221					
BARN	Barnard Glacie	82.99	17	IAmb	IAmb	20 20 31.5
	comp=Z,9.6nm,0.8s					
CTG	Chitna Glacier	83.00	17	P	P	20 20 30.3 +1.6
	baz=214					
J20K	Nowinta River	83.02	10	P	P	20 20 30.6 +2.1
J20K				IAmb	IAmb	20 20 30.9
	comp=Z,8.9nm,0.7s					
J20K	Nowinta River	83.02	10	P	P	20 20 30.5 +2.0
	baz=202					
TRF	Thorofare Moun	83.05	12	P	P	20 20 29.8 +0.9
	baz=206,SNR=6.0					
CHUM	Lake Minchumin	83.07	11	P	P	20 20 30.1 +1.3
	baz=204					
Q16A	Castle Valley	83.10	46	P	P	20 20 30.2 +0.4
Q16A				IAmb	IAmb	20 20 43.7
	comp=Z,6.3nm,1.0s					
GCSA	Galena City Sc	83.14	9	P	P	20 20 30.4 +1.3
	baz=199					
O28M	Mount Upton	83.16	17	P	P	20 20 31.0 +1.3
	baz=215					
HARP	HAARP	83.23	14	P	P	20 20 32.0 +2.3
	baz=210					
O29M	Mount Kennedy	83.25	18	P	P	20 20 31.7 +1.8
	baz=217					
TMUT	Trail Mountain	83.26	46	P	P	20 20 32.8 +2.1
PLBC	Pleasant Camp	83.26	20	P	P	20 20 32.0 +2.1
	baz=219					
HLID	Hailey	83.29	41	IAmb	IAmb	20 20 34.6
	comp=Z,7.2nm,0.8s					
HLID	Hailey	83.29	41	P	P	20 20 33.8 +3.2
	baz=239,SNR=12					
RND	Reindeer	83.30	12	P	P	20 20 31.2 +1.1
DHY	Denali Highway	83.32	13	P	P	20 20 31.3 +1.0
	baz=208					
SPUT	South Promonto	83.40	43	P	P	20 20 33.0 +1.8
SPUT				IAmb	IAmb	20 20 35.0
	comp=Z,9.8nm,1.2s					
HVU	Hansel Valley	83.42	43	IAmb	IAmb	20 20 35.0
	comp=Z,7.0nm,0.8s					
BPAW	Bear Paw Mtn.	83.51	11	P	P	20 20 32.1 +1.0
	baz=205					
MCK	McKinley	83.57	12	P	P	20 20 32.6 +1.2
MCK	McKinley	83.57	12	P	P	20 20 33.0 +1.6
	baz=207,SNR=7.0					
P30M	Million Dollar	83.60	19	P	P	20 20 34.1 +2.5
	baz=218					
SKAG	Skagway	83.60	20	P	P	20 20 34.3 +2.7
	baz=220					
P17A	Butcher Ranch,	83.66	46	IAmb	IAmb	20 20 36.8
	comp=Z,11nm,1.2s					
YUK8	Steele Glacier	83.70	17	P	P	20 20 34.8 +2.4
	baz=216					
M26K	Nabesna, AK	83.76	15	P	P	20 20 34.1 +1.7
M26K	Nabesna, AK	83.76	15	P	P	20 20 34.0 +1.6
	baz=213,SNR=7.2					
YUK6	Outpost Mounta	83.82	18	P	P	20 20 35.1 +2.1
	baz=217					
YUK3	Moose Creek	83.91	17	P	P	20 20 35.6 +2.3
	baz=215,SNR=6.6					
S34M	Telegraph Cree	83.91	23	P	P	20 20 35.8 +2.7
	baz=224					
HYT	Haines Junctio	83.98	18	P	P	20 20 35.2 +1.6
HYT				IAmb	IAmb	20 20 36.9
	comp=Z,9.0nm,0.9s					
HYT	Haines Junctio	83.98	18	P	P	20 20 35.7 +2.0
	baz=218					
M27K	Edge Creek, AK	84.01	16	P	P	20 20 35.8 +2.0
	baz=214					
MENT	Mentasta	84.04	15	IAmb	IAmb	20 20 36.2
	comp=Z,6.6nm,0.7s					
YUK4	Talbot Arm	84.06	18	P	P	20 20 36.5 +2.4
	baz=217					
L26K	Log Cabin Wild	84.20	15	P	P	20 20 36.6 +2.1
	baz=212					
NEW	Newport	84.21	36	P	P	20 20 36.8 +1.9
	baz=236					
P32M	Atlin	84.23	21	P	P	20 20 37.1 +2.3
	baz=221					
Q32M	Nakina River	84.26	22	P	P	20 20 36.9 +1.8
	baz=223					
K24K	Donnelly Dome	84.31	13	P	P	20 20 36.6 +1.5
	baz=210,SNR=6.1					
I21K	Tanana	84.31	10	P	P	20 20 36.9 +1.9
	baz=204					
BVCY	Beaver Creek	84.32	16	P	P	20 20 37.1 +1.9
	baz=214,SNR=8.0					
O30N	Mendenhall	84.37	19	P	P	20 20 37.5 +2.1
	baz=219					
MLY	Manley	84.40	11	P	P	20 20 36.6 +1.1
	baz=205					
WRH	Wood River Hil	84.40	12	P	P	20 20 36.6 +1.1
TX32	Lajitas Array	84.58	57	P	P	20 20 40.4 +3.1
TXAR	Lajitas Array	84.58	57	P	P	20 20 41.3 +4.0
	comp=Z,9.3nm,0.8s,baz=221,slow=6.6,SNR=69					
	comp=Z,9.3nm,0.8s					
TXAR	Lajitas Array	84.58	57	P	P	20 20 40.4 +3.1
HDA	Harding Lake	84.58	13	P	P	20 20 37.4 +1.0
HDA	Harding Lake	84.58	13	P	P	20 20 37.5 +1.0
	baz=209,SNR=10					
L27K	Beaver Creek,	84.61	15	IAmb	IAmb	20 20 39.3
	comp=Z,5.0nm,0.8s					
L27K	Beaver Creek,	84.61	15	P	P	20 20 38.6 +2.0
	baz=214					
N30M	Aishikik Lake	84.61	18	P	P	20 20 38.5 +1.8
	baz=218					
H21K	Melozitna Rive	84.62	10	P	P	20 20 37.9 +1.3
H21K	Melozitna Rive	84.62	10	P	P	20 20 38.5 +1.9
	baz=203					
WHY	Whitehorse	84.67	19	P	P	20 20 38.5 +1.4
	baz=220					
DLBC	Dease Lake	84.69	23	P	P	20 20 39.9 +2.7
	comp=Z,4.3nm,0.6s,baz=184,slow=1.1,SNR=8.4					
	comp=Z,4.3nm,0.6s					
DLBC	Dease Lake	84.69	23	P	P	20 20 39.3 +2.1
	baz=225					
ANMO	Albuquerque	84.69	51	P	P	20 20 40.5 +2.6
	comp=Z,2.4nm,0.9s,baz=216,slow=3.8,SNR=6.3					
	comp=Z,2.4nm,0.9s					
ANMO	Albuquerque	84.69	51	P	P	20 20 39.4 +1.5
ANMO				IAmb	IAmb	20 20 42.0
	comp=Z,9.4nm,1.4s					
ANMO	Albuquerque	84.69	51	P	P	20 20 40.0 +2.2
	baz=245					
I23K	Minto, Yukon-K	84.76	11	P	P	20 20 39.3 +2.1
	baz=206					
TCOL	CIGO, UAF Yank	84.81	12	P	P	20 20 38.1 +0.7
TCOL	CIGO, UAF Yank	84.81	12	P	P	20 20 38.9 +1.4
	baz=208					
COLA	College	84.81	12	P	P	20 20 38.2 +0.8
COLA	College	84.81	12	P	P	20 20 38.7 +1.2
	baz=208					
MDM	Murphy Dome	84.81	12	IAmb	IAmb	20 20 39.3
	comp=Z,13nm,0.9s					
SCRK	Sand Creek	84.86	14	P	P	20 20 39.0 +1.0
SCRK				IAmb	IAmb	20 20 40.4
	comp=Z,7.4nm,0.8s					
SCRK	Sand Creek	84.86	14	P	P	20 20 38.9 +1.0
	baz=212,SNR=5.7					
MCMT	McKenzie Canyo	84.90	40	P	P	20 20 41.0 +2.3
ILAR	Eielson Array	84.92	13	P	P	20 20 39.3 +1.3
	comp=Z,5.7nm,0.6s,baz=227,slow=5.6,SNR=50					
	comp=Z,5.7nm,0.6s					
MAW	Mawson	84.95	199	P	P	20 20 39.6 +1.3
	comp=Z,1.8nm,0.4s,baz=187,slow=1.8,

baz=210,SNR=8.5
POKR **Poker Plat Res** 85.11 12 P P 20 20 40.5 +1.5
baz=208
G21K **Allakaket** 85.30 9 P P 20 20 42.0 +2.1
baz=202
H23K **Yukon River** 85.33 11 P P 20 20 41.6 +1.5
baz=206
K27K **Chicken** 85.36 15 P P 20 20 41.8 +1.6
K27K IAmb IAmb 20 20 43.0
comp=Z,12nm,1.3s
K27K **Chicken** 85.36 15 P P 20 20 42.6 +2.4
baz=213
J26L **Joseph Creek** 85.41 14 P P 20 20 42.4 +1.8
J26L IAmb IAmb 20 20 43.7
comp=Z,9.0nm,0.8s
J26L **Joseph Creek** 85.41 14 P P 20 20 42.6 +2.1
baz=212,SNR=8.6
S22A **4UR Ranch, Cre** 85.61 48 P P 20 20 45.1 +2.6
baz=244
N32M **Quiet Lake** 85.62 20 P P 20 20 43.9 +2.3
baz=222
L29M **L29M** 85.62 17 P P 20 20 43.6 +2.0
baz=217,SNR=8.4
PRP **Porcupine Dome** 85.85 13 IAmb IAmb 20 20 45.7
comp=Z,4.4nm,0.8s
PRP **Porcupine Dome** 85.85 13 P P 20 20 44.1 +1.3
baz=210,SNR=5.4
YHL **Hebgen Lake** 85.94 41 P P 20 20 47.1 +3.2
F21K **Alatna River** 85.96 9 P P 20 20 44.7 +1.6
baz=202
G22K **Bettles** 85.99 10 P P 20 20 45.2 +2.0
baz=204
PDAR **Pinedale Array** 85.99 43 P P 20 20 45.6 +1.5
comp=Z,1.4nm,0.7s,baz=222,slow=2.0,SNR=10
comp=Z,1.4nm,0.7s
BOZ **Bozeman (W)** 86.03 40 P P 20 20 46.5 +2.4
BOZ IAmb IAmb 20 20 47.9
comp=Z,11nm,1.1s
BOZ **Bozeman (W)** 86.03 40 P P 20 20 46.9 +2.8
baz=241,SNR=9.4
DAWY **Dawson** 86.06 16 P P 20 20 45.5 +1.9
DAWY IAmb IAmb 20 20 46.5
comp=Z,9.6nm,1.0s
DAWY **Dawson** 86.06 16 P P 20 20 46.0 +2.3
baz=216
YHH **Holmes Hill** 86.12 41 IAmb IAmb 20 20 49.9
comp=Z,7.3nm,1.3s
I26K **Coal Creek Min** 86.18 14 P P 20 20 46.3 +2.1
baz=212
EGAK **Eagle** 86.20 15 P P 20 20 46.0 +1.7
EGAK IAmb IAmb 20 20 47.0
comp=Z,5.5nm,0.8s
EGAK **Eagle** 86.20 15 P P 20 20 46.2 +1.9
baz=214
WTLY **Watson Lake, Y** 86.32 22 P P 20 20 47.4 +2.4
baz=226
FARO **Faro, Yukon** 86.34 19 P P 20 20 47.2 +2.1
baz=221
K29M **Barlow Dome** 86.38 16 P P 20 20 47.8 +2.5
baz=218,SNR=5.3
F22K **John River** 86.42 9 P P 20 20 47.1 +1.8
baz=204
WALA **Waterton Lakes** 86.43 36 P P 20 20 47.9 +2.0
WALA IAmb IAmb 20 20 48.8
comp=Z,6.6nm,0.9s
COLD **Coldfoot** 86.48 10 IAmb IAmb 20 20 48.4
comp=Z,6.9nm,0.8s
COLD **Coldfoot** 86.48 10 P P 20 20 47.6 +2.0
baz=206
SDCO **Great Sand Dun** 86.57 49 P P 20 20 46.7 -0.4
baz=245
I27K **Kandik River** 86.78 14 P P 20 20 49.0 +1.9
baz=214
XAN **Xi'an** 86.80 307 ⇑P P 20 20 50.1 +2.2
E22K **Anaktuvuk Pass** 87.05 9 P P 20 20 49.8 +1.5
baz=204
MSTX **Muleshoe** 87.08 53 IAmb IAmb 20 20 52.7
comp=Z,6.7nm,0.9s
MSTX **Muleshoe** 87.08 53 P P 20 20 51.6 +2.3
baz=247
F24K **Squaw Lake** 87.15 11 P P 20 20 49.8 +1.0
baz=208
RLMT **Red Lodge** 87.27 41 P P 20 20 51.5 +1.5
RLMT IAmb IAmb 20 20 54.1
comp=Z,12nm,1.1s
RLMT **Red Lodge** 87.27 41 P P 20 20 53.6 +3.5
baz=242,SNR=5.5
MMPY **Sheldon Lake,** 87.28 19 P P 20 20 52.0 +2.5
baz=223
Q24A **Divide** 87.33 48 P P 20 20 53.7 +3.0
baz=245
H27K **Steamboat Moun** 87.33 14 P P 20 20 51.9 +2.2
baz=214
E23K **Chandalar** 87.33 10 P P 20 20 51.3 +1.6
baz=206
I29M **Ogilvie Camp,** 87.39 15 P P 20 20 51.8 +1.9
baz=217
G26K **Porcupine Rive** 87.45 13 P P 20 20 51.7 +1.6
baz=212
TGTN **Hyland Airport** 87.50 21 P P 20 20 52.9 +2.4
baz=226
E24K **Your Creek** 87.54 10 P P 20 20 52.3 +1.7
baz=207
N23A **Red Feather La** 87.58 46 P P 20 20 54.4 +2.7
baz=245
F25K **Christian Rive** 87.63 12 P P 20 20 53.1 +2.0
baz=210
G27K **Doyon Strip** 87.78 13 P P 20 20 53.6 +1.9
baz=214
TOLK **Toolik Lake Re** 87.87 10 P P 20 20 54.1 +1.9
baz=206
D23K **Nanushuk River** 87.98 9 P P 20 20 54.9 +2.2
baz=205
E25K **Arctic Village** 88.11 11 P P 20 20 54.9 +1.6
baz=210
EGMT **Eagleton** 88.32 38 P P 20 20 57.5 +2.7
baz=242
D24K **Happy Valley** 88.45 10 P P 20 20 56.9 +2.1
baz=207
EPYK **Eagle Plains** 88.59 15 P P 20 20 57.2 +1.7
baz=218
C23K **Itkillik River** 88.79 9 P P 20 20 58.5 +2.2
baz=205
ABTX **Abilene, Hawle** 89.01 55 P P 20 21 00.4 +2.1
baz=249
G30M **tAoh Zraii Nji** 89.19 15 P P 20 21 00.1 +1.7
baz=219
C27K **Jago River** 89.75 11 P P 20 21 02.9 +2.0
baz=212
CMAR **Chiang Mai Arr** 89.80 289 P P 20 21 04.0 +1.7
comp=Z,1.0nm,0.4s,baz=90,slow=3.0,SNR=8.3
comp=Z,1.0nm,0.4s
LAO **LASA Array** 89.87 41 P P 20 21 05.4 +3.4
baz=244
F31M **Tsiigehtchic** 90.16 15 P P 20 21 05.1 +2.3
baz=221
RSSD **Black Hills** 90.20 44 P P 20 21 04.5 +0.7
RSSD IAmb IAmb 20 21 07.0
comp=Z,14nm,1.3s
RSSD **Black Hills** 90.20 44 P P 20 21 06.2 +2.4
baz=246
INK **Inuvik** 90.87 15 P P 20 21 07.4 +1.4
comp=Z,5.6nm,1.1s,baz=83,slow=6.9,SNR=3.9
comp=Z,5.6nm,1.1s
INK **Inuvik** 90.87 15 P P 20 21 08.0 +2.0
baz=221
PLCA **Paso Flores** 90.94 133 P P 20 21 10.1 +2.8
comp=Z,4.6nm,0.8s,baz=219,slow=4.4,SNR=9.0
comp=Z,4.6nm,0.8s
TROLL **Troll, Antarti** 91.03 180 P P 20 21 07.9 +0.8
SNAA **Sanae** 91.28 178 P P 20 21 08.5 +0.3
VNA3 **Neumayer Olymp** 91.38 176 P P 20 21 09.6 +1.0
VNA2 **Neumayer--Watz** 91.83 177 P P 20 21 11.7 +1.0
baz=191,slow=4.9
DGMT **Dagmar** 91.86 40 P P 20 21 13.7 +2.6
baz=246
VNA1 **Neumayer--Stat** 92.05 176 P P 20 21 13.6 +2.0
YKA **Yellowknife Ar** 93.17 24 P P 20 21 18.6 +1.8
comp=Z,1.8nm,0.7s,baz=262,slow=5.8,SNR=4.2
comp=Z,1.8nm,0.7s
ECSD **EROS Data Cent** 95.05 46 P P 20 21 27.2 +1.3
ECSD **EROS Data Cent** 95.05 46 P P 20 21 27.9 +2.1
baz=251
BLA **Blacksburg** 105.42 55 P PKiKP 20 26 25.7 +1.9
baz=260
M53A **WI Miller and** 105.92 51 P PKiKP 20 26 26.2 +1.7
baz=261
ZALV **Zalesovo Beam** 108.42 322 PKiKP PKiKP 20 26 29.1 +0.4
comp=Z,1.0nm,0.6s,baz=147,slow=1.9,SNR=5.7
MKAR **Makanchi Array** 109.51 314 PKiKP PKiKP 20 26 31.5 +0.5
comp=Z,0.8nm,0.6s,baz=179,slow=1.0,SNR=7.4
KURBB **Kurchatov Arra** 112.16 318 PKiKP PKiKP 20 26 36.1 +0.3
comp=Z,1.6nm,0.2s,baz=98,slow=1.8,SNR=6.5
BVAR **Borovoye Array** 117.05 321 PKP PKiKP 20 26 46.0 +0.8
comp=Z,1.9nm,0.4s,baz=117,slow=1.6,SNR=11
GAR **Garm** 118.02 305 PKiKP 20 26 47.9 +0.1
ARU **Arti** 122.92 327 PKP PKiKP 20 26 57.6 +1.0
comp=Z,6.4nm,0.6s,baz=50,slow=1.1,SNR=12
ARU **Arti** 122.92 327 PKiKP 20 26 57.1 +0.5
ABKAR **Akbulak array** 124.22 318 PKiKP 20 26 59.2 -0.2
ABKAR **Akbulak array** 124.22 318 PKiKP 20 26 59.5 +0.1
AKTO **Aktyubinsk** 125.11 320 PKP PKiKP 20 27 01.9 +0.7
comp=Z,2.1nm,0.8s,baz=21,slow=1.7,SNR=7.6
ARCES **ARCESS Array B** 125.82 350 PKP PKiKP 20 27 03.0 +0.9
comp=Z,5.1nm,0.7s,baz=5.6,slow=1.4,SNR=15
GEYT **Alibeck** 127.64 305 PKP PKiKP 20 27 07.7 +1.0
comp=Z,3.3nm,0.8s,baz=245,slow=2.5,SNR=9.9
BELG **Belogornoye** 130.39 325 PKP PKiKP 20 27 11.7 0.0
comp=Z,12nm,1.0s,baz=174,slow=0.8,SNR=5.8
FINES **FINESS Array B** 132.82 345 PKP PKiKP 20 27 17.2 +0.9
comp=Z,2.6nm,0.8s,baz=38,slow=2.3,SNR=5.2
NB2 **NORSAR Subarra** 135.79 354 PKP PKiKP 20 27 23.2 +0.7
comp=Z,0.8nm,0.7s,baz=16,slow=4.0
NOA **NORSAR Array B** 135.79 354 PKP PKiKP 20 27 22.6 +0.1
comp=Z,0.7nm,0.7s,baz=14,slow=4.1,SNR=3.4
RAYN **Ar Rayn** 139.65 286 PKPdf 20 27 27.9 -1.1
AKASG **Malin Array Be** 140.47 334 PKhKP PKPpre 20 27 27.9
comp=Z,0.4nm,0.4s,baz=39,slow=4.3,SNR=6.9
BNN **Bunyan** 144.06 314 PKPdf 20 27 35.3 -1.2
OJC **Ojcow** 144.34 341 *e*PKP PKPdf 20 27 35.6 -0.9
BUR08 **Bucovina Ar. S** 144.51 334 PKiKP 20 27 37.8 -3.1
BUR01 **Bucovina Ar. S** 144.53 334 ⇑P PKPdf 20 27 37.4 +0.4
TLCR 144.64 328 ⇓P PKiKP 20 27 38.2 -2.7
GHRR 144.71 330 ⇓P PKiKP 20 27 39.6 -1.5
TESR **Tescani** 144.74 331 ⇓P PKPab 20 27 37.1 -0.4
KSP **Ksiaz** 144.74 345 *e*PKP PKiKP 20 27 39.0 -2.1
NIE **Niedzica** 144.88 340 *e*PKP PKiKP 20 27 39.6 -1.8
PANC **Panciu** 144.97 330 ⇓P PKiKP 20 27 49.4 +7.8
CFR **Carcaliu** 144.99 328 ⇑P PKPdf 20 27 33.0 -4.7
CLL **Collm** 145.01 349 ⇓*i*PKPbc PKiKP 20 27 39.2 -2.3
comp=Z,36nm,1.0s
CLL *e*pPKPbc sPKPdf 20 29 34.0 -21
OSTC **Ostas** 145.03 345 *e*PKP PKiKP 20 27 40.0 -1.7
CHVC **Chvalec** 145.04 345 *e*PKP PKiKP 20 27 39.8 -1.9
TPGR **Topolog** 145.07 328 ⇓P PKiKP 20 27 39.5 -2.4
UPC **Upice** 145.12 345 *e*PKP PKiKP 20 27 40.0 -1.8
BR131 **Keskin Array S** 145.12 316 PKPab 20 27 38.9 -0.5
BRTR **Keskin Array B** 145.12 316 PKPbc PKiKP 20 27 40.0 -2.4
comp=Z,7.7nm,0.9s,baz=113,slow=3.1,SNR=33
BRTR **Keskin Array B** 145.12 316 PKPdf PKPab 20 27 39.5 +0.1
OKC **Ostrava-Krasne** 145.17 343 *e*PKP PKiKP 20 27 39.9 -2.0
VRI **Vrincioaia** 145.18 330 ⇓P PKPdf 20 27 36.4 -1.6
TRPA **Tarpa** 145.19 337 ⇓P PKiKP 20 27 39.6 -2.4
TRPA **Tarpa** 145.19 337 PKP PKiKP 20 27 39.8 -2.2
DPC **Dobruska-Polom** 145.19 345 *e*PKP PKiKP 20 27 40.0 -2.0
PLOR **Plostina** 145.23 330 ⇓P PKPab 20 27 38.8 -0.7
BRG **Berggiesshubel** 145.24 348 *i* P PKiKP 20 27 40.2 -1.8
BRG Amp 20 27 41.3
comp=Z,22nm,1.0s
KRLC **Kraliky** 145.33 344 *e*PKP PKiKP 20 27 39.9 -2.4
MORC **Moravsky Berou** 145.40 343 ⇓P PKiKP 20 27 40.1 -2.4
MORC **Moravsky Berou** 145.40 343 *e*PKP PKiKP 20 27 40.9 -1.6
HARR **Harsova** 145.43 328 ⇓P PKiKP 20 27 41.0 -1.6
PVCC **Panska Ves** 145.44 347 *e*PKP PKiKP 20 27 41.0 -1.5
COVR **Voineasa-Covas** 145.44 331 ⇓P PKiKP 20 27 40.3 -2.4
ANTO **Ankara** 145.60 317 PKPab 20 27 40.2 -0.9
MAUC **Maruska** 145.69 343 *e*PKP PKiKP 20 27 42.0 -1.1
DOPR **Dopca** 145.72 332 ⇓P PKiKP 20 27 42.5 -0.7
MLR **Muntele Rosu** 145.82 331 ⇓P PKiKP 20 27 42.7 -0.9
MLR **Muntele Rosu** 145.82 331 PKPab 20 27 41.2 -0.7
ASF **Jabal al Asfar** 145.84 302 PKPbc PKiKP 20 27 42.6 -1.4
comp=Z,6.5nm,0.8s,baz=39,slow=0.6,SNR=12
PRU **Pruhonice** 145.95 347 *e*PKP PKiKP 20 27 41.8 -1.7
GOPC **GO Pecny, Ondr** 145.96 346 *e*PKP PKiKP 20 27 42.4 -1.2
VRAC **Vranov** 146.08 344 ⇓P PKPab 20 27 41.8 -0.8
VRAC **Vranov** 146.08 344 *e*PKP PKiKP 20 27 42.8 -1.1
NKC **Novy Kostel** 146.14 349 *e*PKP PKiKP 20 27 43.1 -0.9
JAVC **Velka Javorina** 146.19 342 *e*PKP PKiKP 20 27 44.2 +0.1
DRGR 146.22 335 ⇓P PKPab 20 27 42.0 -1.3
VOIR 146.28 331 ⇓P PKiKP 20 27 43.3 -1.2
MDUB **Mudurnu** 146.28 319 PKPbc 20 27 41.3 -0.9
PSZ **Piszkesteto** 146.32 339 PKP PKiKP 20 27 45.9 +1.5
KRUC **Moravsky** 146.36 344 *e*PKP PKiKP 20 27 43.4 -1.0
ARR **Arges** 146.52 332 ⇓P PKPab 20 27 42.8 -1.8
MEM **Membach** 146.56 356 *d*PKP PKiKP 20 27 43.6 -1.2
BTNL **Ternell** 146.58 356 *d*PKP PKiKP 20 27 44.0 -0.9
BSTI **Sart Tilman** 146.61 357 *d*PKP PKiKP 20 27 44.3 -0.5
MMAI **Mount Meron Ar** 146.76 304 PKPbc PKPab 20 27 45.2 -0.7
comp=Z,13nm,0.7s,baz=74,slow=6.2,SNR=52
BCLA **Clavier** 146.79 357 *d*PKP PKPab 20 27 44.1 -1.2
BCLA *d*PKiKP PKiKP 20 27 46.5 +1.3
BHOU **Houvegnez** 146.81 356 *d*PKP PKiKP 20 27 43.8 -1.6
LOT **Lotru** 146.85 333 ⇓P PKiKP 20 27 44.5 -1.2
BMRD **Maredsous** 146.93 358 *d*PKP PKPab 20 27 44.8 -1.1
KHC **Kasperske Hory** 146.97 347 PKPdf PKPbc 20 27 42.0 -1.6
KHC PKPab 20 27 44.9 -1.4
KHC **Kasperske Hory** 146.97 347 *e*PKP PKPab 20 27 44.8 -1.4
SIRR **Siria** 147.06 336 ⇓P PKPbc 20 27 43.2 -0.8
BORA **Eskisehir** 147.09 319 PKiKP 20 27 45.1 -1.2
CKRC **Cesky Krumlov** 147.10 346 *e*PKP PKPbc 20 27 43.0 -1.0
DOU **Dourbes** 147.14 358 *d*PKP PKiKP 20 27 44.9 -1.0
GERES **GERESS Array B** 147.21 347 PKPbc PKPab 20 27 45.9 -1.3
comp=Z,4.4nm,0.7s,baz=34,slow=3.4,SNR=19
GZR **Gura Zlata** 147.32 334 ⇓P PKiKP 20 27 45.3 -1.3
CSKK **Cskako** 147.34 340 PKP PKPab 20 27 46.6 -1.1
MBAR **Mbarara** 147.35 240 PKiKP 20 27 45.9 -1.8
AMBH **Ambrzfalva** 147.36 337 PKP PKPab 20 27 47.8 0.0
WLF **Walferdange** 147.49 356 *d*PKP PKPab 20 27 46.9 -1.3
CONA **Conrad Observa** 147.54 344 *i* P PKPab 20 27 47.0 -1.5
comp=Z,12nm,0.7s,SNR=7.4
EGYH **Egyhazaskeszo** 147.58 342 PKP PKPab 20 27 47.6 -1.0
CSS **Mathiatis** 147.59 309 PKPdf PKPdf 20 27 42.2 -0.2
BZS **Buzias** 147.62 335 ⇑P PKiKP 20 27 46.5 -0.6
RONA **Rosalia, Austr** 147.63 343 *i* P PKPab 20 27 47.1 -1.7
comp=Z,9.3nm,0.8s
MPLH **Magyarpolny** 147.74 341 PKP PKPab 20 27 47.6 -1.7
HERR **Herculane** 147.88 333 ⇑P PKiKP 20 27 47.3 -0.3
MOA **Molln** 148.02 345 *e*P PKPab 20 27 48.1 -2.3
comp=Z,9.1nm,1.1s
MORH **Mrgy, Hungar** 148.22 339 ⇓P PKiKP 20 27 47.9 -0.4
MORH **Mrgy, Hungar** 148.22 339 PKP PKPab 20 27 48.5 -2.7
BIOA **Bad Ischl, Aus** 148.31 346 *e*P PKiKP 20 27 48.6 +0.1
comp=Z,8.9nm,0.7s
KOVH **Kovagotottos** 148.51 340 PKP PKiKP 20 27 49.3 +0.3
BFO **Black Forest** 148.62 353 PKPdf PKPdf 20 27 44.5 +0.8
BFO PKiKP 20 27 49.2 +0.1
FRGS **Fruska Gora** 148.71 337 ⇓P PKiKP 20 27 49.8 +0.4
BLKB **Belogradchik** 148.76 332 ⇓P PKiKP 20 27 49.7 +0.1
SOKA **Soboth** 148.91 344 *e*P PKiKP 20 27 49.8 -0.1
comp=Z,11nm,1.1s
KBA **Koelnbreinsper** 148.96 346 *e*P PKiKP 20 27 49.7 -0.4
comp=Z,6.1nm,0.6s
WATA **Walderalm** 149.09 348 *e*P PKiKP 20 27 50.3 0.0
comp=Z,5.7nm,0.6s
RETA **Reutte** 149.09 350 *i* P PKiKP 20 27 50.6 +0.4
comp=Z,16nm,1.3s
WTTA **Wattenberg** 149.14 348 *i* P PKiKP 20 27 51.1 +0.7
comp=Z,20nm,0.6s,SNR=8.4
MOTA **Moosalm** 149.17 349 *i* P PKiKP 20 27 50.9 +0.4
comp=Z,16nm,1.1s,SNR=5.1
BOVS **Bovan** 149.18 333 ⇓P PKiKP 20 27 50.1 -0.3
CLF **Chambon-Foret** 149.24 1 PKiKP 20 27 50.2 -0.1
SQTA **Sankt Quirin** 149.27 349 *i* P PKiKP 20 27 51.2 +0.5
comp=Z,11nm,0.7s
VTS **Vitosha** 149.27 330 ⇓P PKiKP 20 27 50.9 +0.1
MYKA **Terra Mystica** 149.31 345 *i* P PKiKP 20 27 50.6 -0.1
comp=Z,5.1nm,0.5s
DAVA **Damuels** 149.43 351 *e*P PKiKP 20 27 51.8 +0.8
comp=Z,23nm,1.0s
ABTA **Abfaltersbach** 149.46 347 *i* P PKiKP 20 27 51.0 0.0
comp=Z,13nm,0.6s,SNR=6.9
DIVS **Divibare** 149.52 335 PKPdf 20 27 46.3 +0.9
DIVS PKPbc PKiKP 20 27 51.8 +0.6
FETA **Feichten** 149.54 349 *i* P PKiKP 20 27 52.2 +0.9
comp=Z,21nm,0.9s,SNR=6.5
CLUD **Cludinico** 149.65 346 PKiKP 20 27 51.3 0.0
AKAS **Kas** 149.66 314 PKiKP 20 27 50.4 -1.4
CRNS **Crni Vrh** 149.67 344 *i* PKPbc PKiKP 20 27 52.6 +1.2
BOJS **Bojanci** 149.93 342 *i* PKPbc PKiKP 20 27 53.4 +1.5
FUORN **Ofenpass-Fuorn** 150.01 350 PKPdf PKPdf 20 27 46.7 +0.4
FUORN PKiKP 20 27 53.0 +0.6
TEOL **Teolo** 150.96 347 PKPdf PKPdf 20 27 47.9 +0.4
TEOL PKiKP 20 27 53.1 -0.9
DBIC **Dimbokro** 167.11 143 PKP PKPdf 20 28 07.5 +0.6
comp=Z,3.4nm,0.8s,baz=302,slow=3.1,SNR=3.8
TORD **Torodi Ar. Bea** 175.83 164 PKP PKPdf 20 28 11.6 +0.6
comp=Z,3.4nm,0.9s,baz=338,slow=1.1,SNR=16
TORD PKPab PKPab 20 29 53.3 +1.3
comp=Z,2.2nm,1.2s,baz=216,slow=3.4,SNR=6.0

IDC ***11*** *20:15:17.9±4.9, 36°.51N×71°.17E, h98km±34km, mb3.5/3, mbtmp3.7/9, MS3.0/2, Error ellipse: s-maj=60.0km s-min=23.1km az=141.0*
NNC ***11*** *20:15:20.6±6.2, 37°.02N×70°.42E, h0km, mb3.7, mpv3.9, Error ellipse: s-maj=71.6km s-min=55.6km az=91.0*
ISC 11 20:15:19.4±1.6, 36°.7N±0°.1×71°.1E±0°.1, h100km, n21, σ1 90/22, mb3.6/3, 2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	5.83	20	P	Pn	20 16 44.3	+0.7
SNR=21							
UCH	**Uchtor**	6.17	25	P	Pn	20 16 48.8	+0.5
SNR=15							
EKS2	**Erkin-Say**	6.35	18	P	Pn	20 16 51.3	+0.8
SNR=8.7							
KK31	**Karatay Array**	6.45	356	⇓P	Pn	20 16 52.4	+0.7
3.0nm,0.2s,baz=176,slow=12,SNR=248							
KK31				S	Sn	20 18 03.0	-0.8
11nm,0.3s,baz=186,slow=25,SNR=10							
AAK	**Ala-Archa**	6.53	23	P	Pn	20 16 53.6	+0.6
SNR=23							
AAK	**Ala-Archa**	6.53	23	P	Pn	20 16 54.0	+1.1
13nm,0.3s,baz=190,slow=17,SNR=55							
AAK				S	Sn	20 18 04.4	-1.6
6.4nm,0.5s,baz=345,slow=19,SNR=10							
CHMS	**Chumysh**	6.94	23	P	Pn	20 16 59.3	+0.9
SNR=13							
USP	**Ospenovka**	7.11	21	P	Pn	20 17 01.4	+0.7
SNR=7.0							
TKM2	**Tokmak 2**	7.16	28	P	Pn	20 17 01.9	+0.4
SNR=15							
GEYT	**Alibeck**	10.39	281	P	Pn	20 17 45.5	+0.1
0.4nm,0.3s,baz=113,slow=11,SNR=2.8							
MK31	**Makanchi Array**	13.13	36	P	P	20 18 27.9	-0.4
0.2nm,0.2s,baz=207,slow=7.5,SNR=6.1							
MKAR	**Makanchi Array**	13.13	36	P	Pn	20 18 23.2	+1.3
0.3nm,0.8s,baz=216,slow=13,SNR=1.2							
KURBB	**Kurchatov Arra**	14.95	19	P	P	20 18 47.1	-1.2
0.3nm,0.3s,baz=206,slow=10,SNR=2.7							
KURBB				LR	LR	20 24 39.8	
comp=Z,12nm,18.9s,baz=166,slow=37							
AB31	**Akbulak array**	14.97	331	⇓P	Pn	20 18 44.7	-0.8
0.2nm,0.3s,baz=119,slow=9.0,SNR=34							
AKTO	**Aktyubinsk**	16.66	330	P	P	20 19 09.1	+1.7
1.5nm,0.7s,baz=150,slow=8.4,SNR=5.9							
ZALV	**Zalesovo Beam**	19.75	25	P	P	20 19 41.0	0.0
1.6nm,0.3s,baz=201,slow=12,SNR=4.3							
ARCES	**ARCESS Array B**	41.01	338	P	P	20 22 52.9	+0.7
4.7nm,0.9s,baz=117,slow=9.5,SNR=2.2							
4.7nm,0.9s							
NB2	**NORSAR Subarra**	44.28	323	P	P	20 23 19.4	+0.6
comp=Z,0.6nm,0.5s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	44.28	323	P	P	20 23 19.2	+0.5
comp=Z,0.3nm,0.4s,baz=104,slow=7.3,SNR=3.7							
comp=Z,0.3nm,0.4s							
TORD	**Torodi Ar. Bea**	65.77	269	P	P	20 25 52.3	-1.7
comp=Z,0.4nm,0.5s,baz=49,slow=5.8,SNR=9.9							
comp=Z,0.4nm,0.5s							
LBTB	**Lobatse**	74.83	222	LR	LR	21 02 28.1	
comp=Z,31nm,18.4s,baz=181,slow=38							

DJA 11 20:20:38.1±0.8, 4°N±19°.×12°7E±°, h11km±22km, M3.8/7, mb4.2/1, MLv3.5/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	1.05	270	P	Pg	20 20 58.5	+0.2
SGSI				S	Sb	20 21 12.2	+0.1
GAMI	**Galela, Maluku**	2.19	147	P	Pn	20 21 14.4	-0.1
GAMI				S	Sn	20 21 42.7	+1.0
TNTI	**Ternate**	2.99	165	P	Pn	20 21 25.2	-0.3
KMSI	**Cibinong**	4.03	220	P	Pn	20 21 39.8	0.0
LBMI	**Labuha**	4.39	168	P	Pn	20 21 44.7	0.0
GTOI	**Gorontalo**	4.68	230	P	Pn	20 21 48.8	+0.1
MRSI	**Marisa**	5.62	236	P	Pn	20 22 02.7	+1.0

IDC ***11*** *20:23:33.4±1.2, 1°.41N×125°.97E, h0km, mb4.1/4, mbtmp4.1/5, ML3.3/1, MS3.0/2, Error ellipse: s-maj=64.8km s-min=21.7km az=60.0*
DJA ***11*** *20:23:37.8±1.2, 2°N±4°×12°7E±°, h23km±12km, M3.8/12, mb3.8/3, MLv3.7/12*
NEIC ***11*** *20:23:37.5±1.9, 1°.73N±0°.10×126°.59E±0°.07, h29km±7km, mb4.3/14, Error ellipse: s-maj=15.9km s-min=6.7km az=211.0*
ISC 11 20:23:39.0±1.2, 1°.65N±0°.06×126°.55E±0°.04, h44km±13km, n40, σ1 27/46, mb4.3/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.20	137		Pn	20 23 58.6	-0.7
TNTI				Sn	Sn	20 24 14.0	-0.4
TNTI	**Ternate**	1.20	137	P	Pn	20 23 59.0	-0.3
TNTI				S	Sn	20 24 15.7	+1.3
GAMI	**Galela, Maluku**	1.26	81	P	Pn	20 24 00.2	+0.1
GAMI				S	Sn	20 24 17.6	+1.7
LBMI	**Labuha**	2.46	157	P	Pn	20 24 16.7	0.0
LBMI				S	Sn	20 24 46.1	+0.5
KMSI	**Cibinong**	2.78	247	P	Pn	20 24 20.9	-0.1
KMSI				S	Sn	20 24 54.4	+1.1
GTOI	**Gorontalo**	3.67	254	P	Pn	20 24 34.8	+1.4
SANI	**Sanana**	3.71	189	P	Pn	20 24 33.4	-0.5
LUWI	**Luwuk**	4.62	235		Pn	20 24 46.3	0.0
LUWI				Sn	Sn	20 25 41.5	+2.7
LUWI	**Luwuk**	4.62	235	P	Pn	20 24 46.4	0.0
MRSI	**Marisa**	4.75	256	P	Pn	20 24 49.1	+1.0
NLAI	**Namlea**	4.88	173	P	Pn	20 24 49.7	-0.3
SIJI	**Sorong**	5.34	118	Pn	Pn	20 24 60.0	+3.7
0.9nm,0.3s,baz=312,slow=18,SNR=4.1							
2.0nm,0.3s							
SIJI	**Sorong**	5.34	118	P	Pn	20 24 54.8	-1.5
0.0nm3.6nm,1.4s							
TOLI2	**Tolitoli**	5.79	265	Pn	Pn	20 25 01.9	-0.5
TOLI2				Sn	Sn	20 26 05.5	-2.1
FAKI	**Fak Fak**	7.29	129	Pn	Pn	20 25 21.1	-1.8
FAKI	**Fak Fak**	7.29	129	P	Pn	20 25 20.3	-2.3
MYLDM	**Lahad Datu**	8.76	294	Pn	Pn	20 25 43.9	+0.7
KNRA	**Kununurra**	17.35	173		P	20 27 38.0	-1.1
COEN	**Coen**	22.63	134	P	P	20 28 36.4	0.0
COEN				IAmb	IAmb	20 29 11.3	
comp=Z,8.3nm,1.1s							
WB0	**Warramunga Arr**	22.63	160	P	P	20 28 35.2	-1.3
WB0				IAmb	IAmb	20 28 37.9	
comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	22.78	161	P	P	20 28 37.1	-0.9
comp=Z,9.1nm,0.6s,baz=337,slow=11,SNR=47							
comp=Z,9.1nm,0.6s							
WRA	**Warramunga Arr**	22.78	161	P	P	20 28 35.8	-2.1
WB2	**Warramunga Arr**	22.78	161	P	P	20 28 36.7	-1.3
WB2				IAmb	IAmb	20 28 39.5	
comp=Z,14nm,0.8s							
WR0	**Warramunga Arr**	22.86	160	P	P	20 28 37.9	-0.9
WR0				IAmb	IAmb	20 28 39.6	
comp=Z,17nm,1.4s							
AS31	**Alice Springs**	26.16	165	P	P	20 29 08.9	-0.6
ASAR	**Alice Springs**	26.16	165	P	P	20 29 09.4	-0.1
comp=Z,3.4nm,0.8s,baz=347,slow=12,SNR=24							
ASAR				PcP	PcP	20 32 37.1	+1.1
comp=Z,0.3nm,0.5s,baz=358,slow=2.0,SNR=4.4							
comp=Z,3.4nm,0.8s							
ASAR	**Alice Springs**	26.16	165	P	P	20 29 09.1	-0.4
MORW	**Morawa**	32.16	197	P	P	20 30 03.6	+0.9
FORT	**Forrest**	32.28	178	P	P	20 30 04.2	+0.5
BBOO	**Buckleboo**	35.43	166	P	P	20 30 31.3	+0.2
STKA	**Stephens Creek**	36.27	158	P	P	20 30 38.1	-0.2
comp=Z,2.7nm,0.8s,baz=338,slow=8.4,SNR=4.1							
comp=Z,2.7nm,0.8s							
STKA	**Stephens Creek**	36.27	158	P	P	20 30 37.8	-0.5
STKA				IAmb	IAmb	20 30 50.9	
comp=Z,2.2nm,1.4s							
KLR	**Kul'dur**	47.61	5	LR	LR	20 52 36.5	

comp=Z,16nm,19.8s,baz=6.0,slow=36
SONM Songino Array 49.21 342 LR LR 20 57 17.7
comp=Z,14nm,18.5s,baz=100,slow=41
MK31 Makanchi Array 59.16 326 P **P** **20 33 34.2 -1.3**
MK31 IAmb IAmb 20 33 41.8
comp=Z,3.2nm,1.1s
MKAR Makanchi Array 59.16 326 P **P** **20 33 35.1 -0.4**
comp=Z,0.5nm,0.4s,baz=121,slow=7.2,SNR=11
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 59.16 326 P **P** **20 33 33.4 -2.1**
KURK Kurchatov 63.39 328 P **P** **20 34 03.8 -0.2**
KURK IAmb IAmb 20 34 05.7
comp=Z,2.2nm,0.8s
ABKAR Akbulak array 73.64 321 P **P** **20 35 08.1 +0.1**
VNDA Vanda 81.40 173 P **P** **20 35 51.7 +0.9**
VNDA IAmb IAmb 20 35 52.6
comp=Z,2.4nm,1.4s

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*KNET **11** 20:24:21.3±0.4, 42.°42N×74.°03E, h16km±3km, ml1.6, Error ellipse: s-maj=3.3km s-min=2.1km az=35.0*
*SOME **11** 20:24:21.7, 42.°42N×73.°98E, h10km*
*KRNET **11** 20:24:21.7±0.1, 42.°41N×73.°99E, h18km, mb2.5*
*NNC **11** 20:24:23.9±0.7, 42.°56N×74.°02E, h0km, mb2.9, mpv3.0, Error ellipse: s-maj=9.0km s-min=3.7km az=171.0*
ISC 11 20:24:21.2±1.1, 42.°46N±0.°03×74.°00E±0.°02, h8km±10km, n43, σ0.9±86/77, 26C-17D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say** 14nm,0.1s,SNR=88	**0.26**	**321**	⇓P	**Pb**	**20 24 28.2**	**-0.1**
EKS2	18nm,0.1s			⇑S	**Sb**	**20 24 32.4**	**-0.5**
EKS2	**Erkin-Say** baz=28	**0.26**	**321**	⇓iP	**Pb**	**20 24 27.9**	**-0.4**
EKS2	baz=28			⇓iS	**Sb**	**20 24 32.3**	**-0.7**
AML	**Almayashu** 44nm,0.1s,SNR=52	**0.40**	**215**	⇑P	**Pg**	**20 24 29.4**	**+0.3**
AML	167nm,0.4s			⇑S	**Sg**	**20 24 34.5**	**+0.2**
AAK	**Ala-Archa** 3.5nm,0.1s,SNR=8.9	**0.41**	**64**	⇑P	**Pb**	**20 24 30.5**	**-0.3**
AAK	20nm,0.1s			⇑S	**Sb**	**20 24 36.2**	**-1.0**
AAK	**Ala-Archa** baz=58	**0.41**	**64**	⇑iP	**Pb**	**20 24 30.3**	**-0.5**
AAK	baz=58			⇑iS	**Sb**	**20 24 36.7**	**-0.6**
UCH	**Uchtor** 33nm,0.1s,SNR=34	**0.45**	**121**	⇓P	**Pg**	**20 24 30.4**	**+0.5**
UCH	20nm,0.1s			⇑S	**Sg**	**20 24 36.4**	**+0.5**
UCH	**Uchtor** baz=15	**0.45**	**121**	⇑iP	**Pg**	**20 24 30.2**	**+0.2**
UCH	baz=15			⇑iS	**Sg**	**20 24 36.5**	**+0.6**
FRU1	**Bishkek** baz=49	**0.58**	**53**	⇑iP	**Pb**	**20 24 33.6**	**-0.1**
FRU1	baz=49			⇑iS	**Sb**	**20 24 43.0**	**+0.8**
ARLS	**Aral** baz=55	**0.65**	**158**	⇑iP	**Pg**	**20 24 33.4**	**-0.2**
ARLS	baz=55			⇑iS	**Sg**	**20 24 41.7**	**-0.4**
KBK	**Karagaybulak** 7.1nm,0.1s	**0.73**	**74**	⇑P	**Pb**	**20 24 36.4**	**+0.1**
KBK	68nm,0.2s			⇓S	**Sb**	**20 24 46.4**	**-0.2**
KBK	**Karagaybulak** baz=70	**0.73**	**74**	⇓iP	**Pg**	**20 24 35.6**	**+0.4**
KBK	baz=70			⇓iS	**Sb**	**20 24 46.2**	**-0.3**
CHMS	**Chumysh** 3.9nm,0.1s,SNR=12	**0.77**	**46**	⇑P	**Pb**	**20 24 37.4**	**+0.4**
CHMS	31nm,0.2s			⇑S	**Sb**	**20 24 48.0**	**+0.4**
CHMS	**Chumysh** baz=43	**0.77**	**46**	⇑iP	**Pb**	**20 24 37.1**	**+0.1**
CHMS	baz=43			⇑iS	**Sb**	**20 24 48.2**	**+0.5**
USP	**Ospenovka** 18nm,0.2s,SNR=18	**0.89**	**24**	⇑P	**Pb**	**20 24 39.6**	**+0.6**
USP	24nm,0.1s			⇓S	**Sb**	**20 24 51.8**	**+0.9**
USP	**Ospenovka** baz=24	**0.89**	**24**	⇑iP	**Pb**	**20 24 39.5**	**+0.6**
USP	baz=24			⇑iS	**Sb**	**20 24 51.7**	**+0.7**
TKM2	**Tokmak 2** 2.4nm,0.1s,SNR=33	**1.27**	**68**	⇑P	**Pn**	**20 24 45.7**	**+0.2**
TKM2	13nm,0.1s			⇓S	**Sb**	**20 25 02.5**	**+0.5**
TKM2	**Tokmak 2** baz=66	**1.27**	**68**	⇓iP	**Pg**	**20 24 45.4**	**-0.1**
TKM2	baz=66			⇓iS	**Sn**	**20 25 03.2**	**+0.4**
BOOM	**Boomskoye usch** baz=86	**1.44**	**88**	⇑iP	**Pb**	**20 24 48.4**	**+0.1**
BOOM	baz=86			⇑iS	**Sn**	**20 25 07.6**	**+0.7**
KST	**Kastek** 2.0nm,0.2s	**1.56**	**67**	eP	**Pg**	**20 24 51.3**	**+0.2**
KST	20nm,0.3s			eS	**Sg**	**20 25 11.7**	**+0.3**
KST	**Kastek** 2.0nm,0.2s	**1.56**	**67**	P	**Pg**	**20 24 51.6**	**+0.5**
KST	20nm,0.3s			S	**Sg**	**20 25 12.0**	**+0.6**
ULHL	**Ulahol** 1.5nm,0.1s,SNR=12	**1.68**	**97**	⇓P	**Pb**	**20 24 52.4**	**-0.1**
KRBS	**Karabastau** 5.5nm,0.2s	**1.74**	**44**	eP	**Pg**	**20 24 54.7**	**+0.1**
KRBS	14nm,0.2s			eS	**Sg**	**20 25 17.7**	**+0.5**
KRBS	**Karabastau** 5.5nm,0.2s	**1.74**	**44**	P	**Pg**	**20 24 54.7**	**+0.1**
KRBS	14nm,0.2s			S	**Sg**	**20 25 17.4**	**+0.2**
NRN	**Naryn** baz=23	**1.81**	**124**	⇓iP	**Pb**	**20 24 54.3**	**-0.5**
NRN	baz=23			⇓iS	**Sb**	**20 25 18.0**	**+0.2**
MTBS	**Maitube** 2.5nm,0.2s	**1.91**	**69**	eP	**Pg**	**20 24 57.5**	**-0.4**
MTBS	8.7nm,0.2s			eS	**Sg**	**20 25 22.5**	**-0.1**
MTBS	**Maitube** 2.5nm,0.2s	**1.91**	**69**	P	**Pg**	**20 24 57.9**	**+0.1**
MTBS	8.7nm,0.2s			S	**Sg**	**20 25 22.7**	**+0.2**
KUU	**Kurty** 1.4nm,0.1s	**2.23**	**49**	eP	**Pg**	**20 25 03.0**	**-1.0**
KUU	6.8nm,0.4s			eS	**Sg**	**20 25 32.3**	**-0.6**
KUU	**Kurty** 1.4nm,0.1s	**2.23**	**49**	Pg	**Pg**	**20 25 03.5**	**-0.5**
KUU	6.8nm,0.4s			Lg	Lg	20 25 32.3	
MDOK	**Medeo** 2.1nm,0.3s	**2.35**	**72**	eP	**Pg**	**20 25 05.2**	**-1.1**
MDOK	10nm,0.6s			eS	**Sg**	**20 25 35.7**	**-1.0**
MDOK	**Medeo** 0.9nm,0.4s	**2.35**	**72**	⇑Pn	**Pb**	**20 25 04.1**	**+0.2**
MDOK	2.1nm,0.3s			Pg	**Pg**	**20 25 05.2**	**-1.1**
MDOK	10nm,0.6s			Lg	Lg	20 25 35.7	
MDOK	12nm,0.8s			⇓Lg	Lg	20 25 37.3	
KOTS	**Kotyrbulak** 1.9nm,0.2s	**2.42**	**70**	eP	**Pb**	**20 25 06.3**	**+1.2**
KOTS	19nm,0.5s			eS	**Sg**	**20 25 38.5**	**-0.4**
KOTS	**Kotyrbulak** 1.9nm,0.2s	**2.42**	**70**	Pg	**Pg**	**20 25 06.7**	**-0.8**
KOTS	19nm,0.5s			Lg	Lg	20 25 38.2	
BTLS	**Baital** 0.8nm,0.4s	**2.58**	**1**	eP	**Pb**	**20 25 07.9**	**+0.1**
BTLS	3.4nm,0.3s			eS	**Sb**	**20 25 40.7**	**+1.1**
BTLS	**Baital** 0.8nm,0.4s	**2.58**	**1**	Pg	**Pb**	**20 25 08.4**	**+0.6**
BTLS				Lg	Lg	20 25 40.7	

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*IDC **11** 20:42:54.5±1.4, 6.°49S×154.°08E, h0km, mb3.8/7, mbtmp3.8/8, ML3.9/1, MS3.4/6, Error ellipse: s-maj=42.5km s-min=23.0km az=105.0*
ISC 11 20:42:55.8±1.1, 6.°5S±0.°1×154.°1E±0.°2, h10km, n13, σ1.9±37/10, mb3.9/7, MS3.2/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 18nm,0.3s,baz=308,slow=4.2,SNR=4.4	**2.98**	**316**	Pn	**Pn**	**20 43 40.8**	**-2.3**
KRVT	8.2nm,0.3s,baz=323,slow=19,SNR=6.4			Sn	**Sb**	**20 44 26.6**	**+1.2**
HNR	**Honiara** comp=Z,1μm,18.9s,baz=258,slow=37	**6.50**	**117**	LR	LR	20 46 53.4	
PMG	**Port Moresby** 1.2nm,0.3s,baz=266,slow=17,SNR=3.1	**7.47**	**247**	Pn	Pn	20 44 49.5	+4.6
PMG	comp=Z,97nm,19.3s,baz=10.0,slow=37			LR	LR	20 47 29.6	
DZM	**Mont Dzumac** comp=Z,58nm,18.2s,baz=73,slow=36	**19.57**	**144**	LR	LR	20 54 33.3	
WRA	**Warramunga Arr** 3.2nm,0.9s,baz=58,slow=9.9,SNR=11	**23.40**	**233**	P	**P**	**20 48 04.8**	**-0.3**
WRA	comp=Z,65nm,18.1s,baz=147,slow=37			LR	LR	20 57 26.5	
ASAR	**Alice Springs** 1.0nm,1.0s,baz=62,slow=9.0,SNR=7.6	**25.87**	**227**	P	**P**	**20 48 27.6**	**-0.3**
ASAR	comp=Z,64nm,18.7s,baz=88,slow=38			LR	LR	20 59 07.0	
STKA	**Stephens Creek** 1.2nm,0.6s,baz=31,slow=14,SNR=4.3	**27.85**	**203**	P	**P**	**20 48 46.1**	**+0.5**
BRDH	**Bariadhala** comp=Z,36nm,18.3s,baz=38,slow=37	**67.57**	**298**	LR	LR	21 24 52.3	
SONM	**Songino Array** 0.2nm,0.4s,baz=140,slow=6.0,SNR=3.4	**68.42**	**328**	P	**P**	**20 53 59.7**	**+1.7**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=84,slow=7.8,SNR=6.5	**82.42**	**319**	P	**P**	**20 55 20.0**	**+1.6**
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=98,slow=9.1,SNR=3.6	**83.25**	**326**	P	**P**	**20 55 22.3**	**-0.2**
NVAR	**Mina Array Bea** 1.0nm,1.0s,baz=258,slow=7.4,SNR=3.5	**92.10**	**52**	P	**P**	**20 56 05.4**	**-0.5**
TORD	**Torodi Ar. Bea** 0.3nm,0.4s,baz=63,slow=1.4,SNR=8.3	**152.03**	**286**	PKPbc	**PKiKP**	**21 02 52.2**	**-0.6**

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*ISU **11** 20:44:48, 40.°79N×73.°90E, h25km*
KRNET 11 20:44:43.9±0.1, 39.°29N×73.°70E, mb2.5, 10C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=31	**1.42**	**331**	⇓iP	Pn	20 45 10.6	-0.4
OHH	baz=31			⇓iS	Sb	20 45 30.1	+0.2
DRK	**Karamyk** baz=78	**1.48**	**278**	⇓iP	Pn	20 45 12.2	+0.1
DRK	baz=78			⇓iS	Sn	20 45 32.6	+0.2
ANR	**Andizhan**	**1.79**	**325**	P	Sb	20 45 40.7	+0.2
FRG	**Fergana**	**1.83**	**307**	P	Pn	20 45 16.5	-0.1
FRG				S	Sn	20 45 39.1	-1.4
CHMI	**Chimion**	**1.94**	**301**	P	Pb	20 45 19.5	-0.7
CHMI				S	Sb	20 45 45.3	+0.4
BTK	**Batken** baz=90	**2.35**	**290**	⇑iP	Pb	20 45 26.1	-1.1
BTK	baz=90			⇑iS	Sb	20 45 56.5	-0.3
ARLS	**Aral** baz=10.0	**2.61**	**10**	⇓iP	Pb	20 45 29.9	-1.8
ARLS	baz=10.0			⇓iS	Sb	20 46 02.9	-1.5
GAR	**Garm** baz=65	**2.64**	**265**	⇑iP	Pn	20 45 30.1	+2.1
GAR	baz=65			⇑iS	Sb	20 46 03.6	-1.7
NRN	**Naryn** baz=39	**2.77**	**39**	⇑iP	Pn	20 45 31.2	+1.3
NRN	baz=39			⇑iS	Sn	20 46 05.8	+1.6
TRKS	**Terek-Say** baz=19	**2.97**	**320**	⇓iP	Pn	20 45 33.2	+0.8
TRKS	baz=19			⇓iS	Sn	20 46 09.6	+0.8
UCH	**Uchtor** baz=12	**3.00**	**12**	⇑iP	Pn	20 45 34.8	+1.7
UCH	baz=12			⇑iS	Sn	20 46 12.7	+2.7
KK31	**Karatay Array** 0.1nm,0.3s,baz=142,slow=14,SNR=4.4	**4.50**	**329**	⇑Pn	Pn	20 45 54.8	+1.4
KK31	0.3nm,0.3s,baz=141,slow=16,SNR=3.9			⇓Pg	Pb	20 46 06.5	+2.7
KK31	0.7nm,0.3s,baz=149,slow=31,SNR=4.9			⇑Lg	Lg	20 47 00.4	

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*ISK **11** 21:12:31.0, 35.°86N×28.°09E, h12km, ML2.8/15*
*NIC **11** 21:12:31.5±0.0, 35.°86N×28.°14E, h3km±2km, Ml3.0/4*
*DDA **11** 21:12:32.2±0.0, 35.°91N×28.°03E, h7km±3km, ML2.4*
*ATH **11** 21:12:34.0, 36.°05N×27.°86E, h13km±4km, ML2.5/2, Error ellipse: s-maj=5.0km s-min=1.1km az=125.0*
ISC 11 21:12:32.2±1.0, 35.°90N±0.°03×28.°06E±0.°03, h12km±9km, n40, σ0.8±65/54, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.32**	**9**	PG	**Pg**	**21 12 38.9**	**+0.2**
ARG				SG	**Sb**	**21 12 44.3**	**-0.6**
ARG	**Arkhangelos**	**0.32**	**9**	P	**Pg**	**21 12 38.9**	**+0.2**
ARG				S	**Sb**	**21 12 44.5**	**-0.4**
ARG	**Arkhangelos**	**0.32**	**9**	P	**Pb**	**21 12 39.3**	**-0.5**
ARG				S	**Sg**	**21 12 43.5**	**+0.5**
ARG	comp=E,2551μm,0.3s			AML	AML	21 12 46.5	
ARG	comp=N,1698μm,0.4s			AML	AML	21 12 47.2	
KARP	**Karpathos**	**0.81**	**244**	PG	**Pg**	**21 12 47.3**	**-0.7**
KARP				SG	**Sg**	**21 12 59.2**	**+0.5**
KARP	**Karpathos**	**0.81**	**244**	P	**Pg**	**21 12 47.8**	**-0.2**
KARP				S	**Sn**	**21 13 01.2**	**-0.3**
KARP				AML	AML	21 13 03.2	
KARP	comp=N,1.0nm,0.3s			AML	AML	21 13 03.2	
KARP	comp=N,1.0nm,0.3s			AML	AML	21 13 03.4	
KARP	comp=N,1.0nm,0.2s			AML	AML	21 13 03.4	
KARP	comp=N,1.0nm,0.2s						
KARP	**Karpathos**	**0.81**	**244**	P	**Pg**	**21 12 48.1**	**+0.2**
KARP				S	**Sg**	**21 12 58.9**	**+0.2**
KARP	comp=N,1080μm,0.3s			AML	AML	21 13 03.6	
KARP	comp=E,1008μm,0.2s			AML	AML	21 13 03.8	
TURN	**Turunc**	**0.88**	**9**	PG	**Pg**	**21 12 49.1**	**-0.2**
TURN	**Turunc**	**0.88**	**9**	P	**Pg**	**21 12 47.9**	**-1.4**
NIS1	**Nisyros Isl.**	**1.00**	**315**	PG	**Pg**	**21 12 51.5**	**0.0**
NIS1	**Nisyros Isl.**	**1.00**	**315**	P	**Pg**	**21 12 48.9**	**-2.6**
DALY	**Dalyan (Mula)**	**1.03**	**27**	PG	**Pb**	**21 12 51.7**	**-0.2**
FETY	**Fethiye**	**1.10**	**48**	PN	**Pb**	**21 12 52.4**	**-0.8**
YER	**Yerkesik**	**1.24**	**8**	PN	**Pn**	**21 12 55.3**	**-0.1**
KSL	**Kastellorizon**	**1.26**	**78**	P	**Pn**	**21 12 55.3**	**-0.2**
BDRM	**Kayabasi**	**1.26**	**337**	P	**Pn**	**21 12 55.6**	**-0.1**
BDRM				S	**Sg**	**21 13 13.4**	**+0.5**
BDRM	comp=E,130nm,0.4s			*i* AML	AML	21 13 16.0	
AKAS	**Kas**	**1.29**	**75**	PN	**Pn**	**21 12 55.7**	**-0.5**
AKAS	**Kas**	**1.29**	**75**	P	**Pg**	**21 12 56.4**	**-0.7**
BODT	**Bodrum**	**1.31**	**333**	PN	**Pn**	**21 12 55.8**	**-0.5**
MULA	**Mugla, Merkez-**	**1.37**	**9**	P	**Pb**	**21 12 57.9**	**+0.1**
MULA				S	**Sg**	**21 13 17.0**	**+0.7**
CAME	**Cameli-Denizli**	**1.44**	**44**	PN	**Pn**	**21 12 57.9**	**-0.3**
CAEL	**Denizli, Camel**	**1.58**	**39**	P	**Pg**	**21 13 02.8**	**+0.2**
ZKR	**Zakros**	**1.70**	**243**	PN	**Pn**	**21 13 01.6**	**-0.1**
ZKR	**Zakros**	**1.70**	**243**	P	**Pb**	**21 13 03.1**	**-0.3**
ZKR				S	**Sg**	**21 13 27.0**	**+0.1**
ZKR	**Zakros**	**1.70**	**243**	P	**Pb**	**21 13 03.6**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.70**	**23**	P	**Pg**	**21 13 04.3**	**-0.6**
TAVA				S	**Sg**	**21 13 27.4**	**+0.4**
TAVA	comp=E,40nm,0.5s			*i* AML	AML	21 13 34.0	
AYDN	**Tasoluk**	**1.76**	**355**	P	**Pb**	**21 13 04.2**	**-0.3**
AYDN				S	**Sn**	**21 13 25.5**	**+0.6**
AYDN	comp=E,36nm,0.3s			*i* AML	AML	21 13 36.0	
GOLH	**Golhisar**	**1.80**	**42**	P	**Pg**	**21 13 06.6**	**-0.1**
APMY	**Acipayam-Deniz**	**1.85**	**32**	PN	**Pn**	**21 13 04.3**	**+0.4**
GCAM	**G?zelcaml?**	**1.91**	**340**	PN	**Pn**	**21 13 05.1**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**2.04**	**356**	PN	**Pn**	**21 13 06.8**	**+0.3**
SMG	**Samos**	**2.05**	**332**	P	**Pn**	**21 13 07.0**	**+0.5**
THR3	**Thira Island,**	**2.21**	**284**	P	**Pn**	**21 13 09.7**	**+1.0**
APE	**Apeiranthos**	**2.35**	**300**	PN	**Pn**	**21 13 10.8**	**+0.2**
APE	**Apeiranthos**	**2.35**	**300**	P	**Pn**	**21 13 11.5**	**+0.8**
OSC1	**CSNet OBS 1**	**3.57**	**131**	P	**Pn**	**21 13 26.6**	**-0.8**
AKMS	**Akamas**	**3.60**	**103**	P	**Pn**	**21 13 27.8**	**0.0**
AKMS				AML	AML	21 14 10.7	
AKMS	comp=E,0.1nm,0.9s			AML	AML	21 14 10.7	
AKMS	comp=E,0.1nm,0.9s			S	**Sn**	**21 14 11.3**	**+1.2**
AKMS				AML	AML	21 14 13.2	
AKMS	comp=E,0.1nm,0.5s			AML	AML	21 14 13.2	
AKMS	comp=E,0.1nm,0.5s						
ALFC	**Alefka**	**3.77**	**100**	P	**Pn**	**21 13 29.9**	**-0.3**
ALFC				S	**Sn**	**21 14 15.3**	**+0.8**
ALFC	comp=E,0.1nm,0.6s			AML	AML	21 14 16.1	
ALFC	comp=E,0.1nm,0.6s			AML	AML	21 14 16.1	
ALFC	comp=E,0.1nm,0.8s			AML	AML	21 14 20.0	
ALFC	comp=E,0.1nm,0.8s			AML	AML	21 14 20.0	
NATA	**Nata**	**3.85**	**106**	P	**Pn**	**21 13 31.8**	**+0.5**
NATA	comp=E,0.1nm,1.1s			AML	AML	21 14 17.5	
NATA	comp=E,0.1nm,1.2s			AML	AML	21 14 24.3	
SZAC	**Souni**	**4.10**	**105**	P	**Pn**	**21 13 34.9**	**+0.1**
SZAC				S	**Sn**	**21 14 23.9**	**+1.2**
CSS	**Mathiatis**	**4.40**	**101**	P	**Pn**	**21 13 38.9**	**0.0**

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*SKHL **11** 21:38:00.3±0.5, 45.°60N×153.°90E, h55km±4km, mb4.6/3*
*IDC **11** 21:38:03.4±4.3, 46.°61N×153.°41E, h56km±37km, mb3.4/10, mbtmp3.7/12, ML2.7/2, MS3.0/6, Error ellipse: s-maj=28.7km s-min=20.6km az=141.0*
ISC 11 21:38:00.7±1.1, 46.°4N±0.°1×153.°5E±0.°1, h35km, n32, σ1.9±62/28, mb3.8/9, MS3.2/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.12**	**256**	eP	**Pn**	**21 39 03.2**	**+2.1**
KUR	40nm,0.4s			AMB	AMB	21 39 03.9	
KUR				eS	**Sn**	**21 39 50.5**	**+2.4**
KUR	80nm,0.5s			A	A	21 40 04.3	
KUR	110nm,0.5s			A	A	21 40 04.3	
YUK	**Yuzh-Kuril'sk**	**5.91**	**249**	eP	**Pn**	**21 39 26.3**	**+0.7**
YUK	50nm,0.5s			AMB	AMB	21 39 29.5	
YUK				eS	**Sn**	**21 40 31.2**	**-0.8**
YUK	90nm,0.5s			A	A	21 40 45.8	
YUK	70nm,0.5s			A	A	21 40 45.8	
NMR	**Nemuro--Hokkai**	**6.31**	**244**	eP	**Pn**	**21 39 30.1**	**-1.1**
NMR	20nm,0.5s			AMB	AMB	21 39 33.9	
NMR				eS	**Sn**	**21 40 37.8**	**-4.2**
NMR	40nm,0.5s			A	A	21 40 56.4	
NMR	30nm,0.5s			A	A	21 40 56.4	
AKK	**Akkeshi**	**7.05**	**244**	eP	**Pn**	**21 39 41.5**	**+0.2**
AKK				eS	**Sn**	**21 40 56.8**	**-3.3**
PETK	**Petropavlovsk-** 0.9nm,0.3s,baz=189,slow=16,SNR=2.1 1.7nm,0.4s	**7.24**	**20**	P	**Pn**	**21 39 43.8**	**-0.1**
KLR	**Kul'dur** comp=Z,66nm,18.1s,baz=89,slow=38	**14.89**	**289**	LR	LR	21 47 31.0	
USRK	**Ussuriysk Ar.** 0.2nm,0.3s,baz=81,slow=12,SNR=1.9 1.8nm,0.6s	**15.31**	**270**	P	**Pn**	**21 41 35.8**	**+1.8**
KSRS	**Korea Array** 2.2nm,1.0s,baz=50,slow=11,SNR=2.9	**20.97**	**254**	P	**P**	**21 42 42.0**	**+1.4**
KSRS	comp=Z,25nm,21.4s,baz=115,slow=32 2.2nm,1.0s			LR	LR	21 49 20.1	
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=4.3	**28.78**	**153**	T	T	22 15 46.6	
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=4.8	**28.79**	**153**	T	T	22 15 45.3	
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=4.8	**28.79**	**153**	T	T	22 15 59.9	
H11S1	**WAKE ISLAND Hy** baz=341,slow=76,SNR=5.4	**29.87**	**154**	T	T	22 17 02.6	
H11S3	**WAKE ISLAND Hy** baz=341,slow=76,SNR=3.8	**29.88**	**154**	T	T	22 17 08.7	
H11S2	**WAKE ISLAND Hy** baz=341,slow=76,SNR=3.9	**29.89**	**154**	T	T	22 17 00.1	
SONM	**Songino Array** 0.2nm,0.5s,baz=74,slow=9.7,SNR=1.6 0.2nm,0.5s	**31.72**	**290**	P	**P**	**21 44 20.4**	**-0.8**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=80,slow=8.1,SNR=2.0	**43.05**	**306**	P	**P**	**21 45 55.0**	**-1.7**
ZALV	comp=Z,28nm,19.8s,baz=79,slow=38 0.4nm,0.4s			LR	LR	22 04 56.1	
MKAR	**Makanchi Array** 0.9nm,0.8s,baz=67,slow=6.5,SNR=4.4	**47.35**	**298**	P	**P**	**21 46 30.0**	**-1.0**
MKAR	comp=Z,41nm,18.2s,baz=78,slow=38 0.9nm,0.8s			LR	LR	22 07 40.8	
BVAR	**Borovoye Array** comp=Z,26nm,19.6s,baz=29,slow=38	**51.30**	**310**	LR	LR	22 10 25.2	
CMAR	**Chiang Mai Arr** 0.9nm,0.7s,baz=35,slow=7.2,SNR=9.3	**52.56**	**257**	P	**P**	**21 47 11.1**	**+0.2**
CMAR	comp=Z,4.4nm,19.0s,baz=170,slow=36 0.9nm,0.7s			LR	LR	22 09 40.1	
TAPN	**Taplejung**	**54.40**	**274**	eP	**P**	**21 47 26.1**	**+1.5**

JIRN	Jiri	55.26	275	eP	P	21 47 32.2	+1.3
RAMN	Ramite	55.42	274	eP	P	21 47 32.2	+0.3
	7.2nm,0.7s						
PKIN	Phulchoki	55.86	276	eP	P	21 47 36.0	+0.9
	2.5nm,0.4s						
GKN	Gorkha	56.11	276	eP	P	21 47 38.1	+1.4
DANN	Dangsing	56.50	277	eP	P	21 47 41.2	+1.5
	9.2nm,0.6s						
PYUN	Piuthan	57.18	278	eP	P	21 47 45.4	+1.0
	26nm,1.3s						
FINES	FINESS Array B	64.48	335	P	P	21 48 32.1	-1.1
	1.2nm,0.5s,baz=37,slow=6.9,SNR=12						
	1.2nm,0.5s						
NB2	NORSAR Subarra	68.65	341	P	P	21 48 59.0	-0.9
	comp=Z,1.2nm,0.7s,baz=29,slow=6.2						
NOA	NORSAR Array B	68.65	341	P	P	21 48 59.0	-0.9
	comp=Z,0.5nm,0.6s,baz=28,slow=6.3,SNR=4.1						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	71.96	199	P	P	21 49 21.8	+1.2
	comp=Z,0.4nm,0.6s,baz=13,slow=5.3,SNR=5.1						
	comp=Z,0.4nm,0.6s						
AKASG	Malin Array Be	72.00	326	P	P	21 49 19.7	-0.8
	comp=Z,1.3nm,0.7s,baz=28,slow=6.0,SNR=4.1						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	77.42	61	P	P	21 49 52.6	+0.2
	comp=Z,0.4nm,0.6s,baz=302,slow=4.7,SNR=7.2						
	comp=Z,0.4nm,0.6s						

WEL 11 21:44:48.1±0.8, 31°S±13°×18°0E±3°5, h350km±18km, M4.5/8, mB4.6/4, MLv4.7/8, Mw(mB)3.8/4, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.73	44	P	Pn	21 45 41.6	-3.6
GLKZ				S	S	21 46 28.9	-2.1
MXZ	Matakaoa Point	6.43	192	P	Pn	21 46 25.8	+2.1
MXZ				S	S	21 47 44.9	+3.5
WMGZ	Waiomatatini S	6.66	190	P	P	21 46 29.7	+1.9
WMGZ				S	S	21 47 49.6	+3.3
HAZ	Te Kaha	6.72	195	P	P	21 46 28.7	+0.2
HAZ				S	S	21 47 51.6	+4.1
PKGZ	Pakihiroa	6.79	192	P	P	21 46 30.3	+0.9
PKGZ				S	S	21 47 50.0	+0.9
MWZ	Matawai	7.33	195	P	P	21 46 36.6	+1.0
MWZ				S	S	21 48 02.3	+1.6
CNGZ	Carnagh Statio	7.34	191	P	P	21 46 37.4	+1.6
URZ	Urewera	7.36	198	P	P	21 46 36.0	+0.1
URZ				S	S	21 48 01.0	-0.2
RIGZ	Rimuhau	7.64	193	P	P	21 46 39.9	+0.7
RIGZ				S	S	21 48 07.9	+0.5
MUGZ	Murupara	7.65	199	P	P	21 46 40.0	+0.7
KNZ	Kokohu	7.96	193	P	Pn	21 46 42.1	+0.5
KNZ				S	S	21 48 12.7	-1.6
MHGZ	Mahia Peninsul	8.05	191	P	P	21 46 45.2	-0.5
MHGZ				S	S	21 48 16.2	0.0
WHHZ	Waihua	8.11	195	P	P	21 46 45.0	-1.4
WHHZ				S	S	21 48 17.2	-0.2
ARHZ	Aropaoanui	8.34	196	P	Pn	21 46 46.8	+0.6
ARHZ				S	S	21 48 22.2	-0.3
HIZ	Hauiti	8.35	209	P	P	21 46 50.8	+1.7
BKZ	Black Stump Fm	8.37	199	P	Pn	21 46 46.3	-0.3
BKZ				S	S	21 48 22.8	-0.6
KWHZ	Kaweka Forest	8.63	198	P	Pn	21 46 49.1	-0.6
BHHZ	Black Hill Sta	8.80	200	P	Pn	21 46 50.3	-1.3
BHHZ				S	S	21 48 29.4	-3.2
KAHZ	Kahuranaki	8.87	195	P	Pn	21 46 52.3	-0.3
PNHZ	Pukenui	9.15	198	P	Pn	21 46 53.1	-2.8
PNHZ				S	S	21 48 38.1	-2.3
TSZ	Takapari Road	9.35	199	P	Pn	21 46 56.1	-2.2
TSZ				S	S	21 48 40.3	-4.5
PRHZ	Porangahau	9.38	196	P	Pn	21 46 58.1	-0.4
BFZ	Birch Farm	9.86	197	P	Pn	21 47 02.6	-1.7
BFZ				S	S	21 48 50.0	-5.9

*IDC **11** 22:07:13.6±0.8, 11°.49S×162°.00E, h0km, mb4.0/11, mbtmp4.1/14, ML4.3/3, MS3.3/12, Error ellipse: s-maj=23.3km s-min=17.9km az=87.0*
*NEIC **11** 22:07:15.6±1.4, 11°.49S±0°.07×162°.1E±0°.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=22.2km s-min=8.2km az=65.0*

ISC 11 22:07:15.1±0.5, 11°.49S±0°.08×162°.07E±0°.09, h10km, n53, σ0s77/47, mb4.3/20, MS3.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.92	314	P	Pn	22 08 02.3	+0.7
	289nm,0.3s,baz=247,slow=8.2,SNR=2.9						
HNR				Sn	Sn	22 08 36.4	-0.5
	587nm,0.3s,baz=218,slow=17,SNR=6.4						
HNR				LR	LR	22 08 58.9	
	comp=Z,799nm,18.3s,baz=107,slow=37						
	3μm,0.5s						
HNR	Honiara	2.92	314		Pn	22 08 01.7	0.0
LIFNC	LIFOU	10.48	152	Pn	Pn	22 09 44.1	-1.4
DZM	Mont Dzumac	11.32	159	Pn	Pn	22 09 58.2	+1.1
	0.5nm,0.3s,baz=3.5,slow=8.0,SNR=11						
DZM				LR	LR	22 13 35.9	
	comp=Z,109nm,19.3s,baz=30,slow=34						
	1.3nm,0.4s						
DZM	Mont Dzumac	11.32	159	Pn	Pn	22 09 56.4	-0.7
MARNC	Mare, Loyalty	11.46	151	Pn	Pn	22 09 58.3	-0.6
OUENC	Ouen Island, N	11.78	158	Pn	Pn	22 10 03.2	-0.2
PMG	Port Moresby	14.81	277	LR	LR	22 16 13.1	
	comp=Z,64nm,18.8s,baz=94,slow=37						
CTA	Charters Tower	17.44	239	P	Pn	22 11 19.0	+0.3
	0.5nm,0.3s,baz=68,slow=12,SNR=2.3						
CTA				LR	LR	22 17 03.0	
	comp=Z,95nm,19.4s,baz=78,slow=34						
	1.5nm,0.3s						
CTAO	Charters Tower	17.44	239		Pn	22 11 19.1	+0.4
PATS	Pohnpei	18.59	348	P	P	22 11 32.3	-0.3
COEN	Coen	18.59	260	P	Pn	22 11 34.3	+1.4
STKA	Stephens Creek	27.71	220	P	P	22 13 02.9	-0.9
	1.6nm,0.6s,baz=65,slow=12,SNR=3.5						
STKA				LR	LR	22 23 02.9	
	comp=Z,168nm,19.8s,baz=24,slow=34						
	1.6nm,0.6s						
STKA	Stephens Creek	27.71	220	P	P	22 13 04.3	+0.6
WB0	Warramunga Arr	27.86	249	P	P	22 13 04.2	-1.1
WB0				IAmb	IAmb	22 13 07.7	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	27.95	249	P	P	22 13 04.2	-1.8
	comp=Z,1.9nm,1.0s,baz=78,slow=9.6,SNR=5.4						
	comp=Z,1.9nm,1.0s						
AS31	Alice Springs	29.39	242	P	P	22 13 18.3	-0.5
ASAR	Alice Springs	29.39	242	P	P	22 13 17.6	-1.2
	comp=Z,1.9nm,0.9s,baz=74,slow=9.4,SNR=16						
ASAR				LR	LR	22 23 55.4	
	comp=Z,58nm,21.4s,baz=101,slow=34						
	comp=Z,1.9nm,0.9s						
ASAR	Alice Springs	29.39	242	P	P	22 13 18.0	-0.8
GUMO	Guam	30.20	325	LR	LR	22 26 15.8	
	comp=Z,24nm,18.3s,baz=134,slow=38						
BBOO	Buckleboo	31.94	224	P	P	22 13 40.2	-1.0
BBOO				IAmb	IAmb	22 13 53.2	
	comp=Z,27nm,1.3s						
KNRA	Kununurra	32.62	259	P	P	22 13 46.0	-1.3
KNRA				IAmb	IAmb	22 14 00.6	
	comp=Z,23nm,1.5s						
RPZ	Rata Peaks	33.03	168	LR	LR	22 25 24.4	
	comp=Z,99nm,18.5s,baz=271,slow=33						
FORT	Forrest	36.86	233	P	P	22 14 23.5	-0.3
FORT				IAmb	IAmb	22 14 35.2	
	comp=Z,20nm,1.1s						
TOLI2	Tolitoli	42.90	284	P	P	22 15 14.8	+0.5
TOLI2				IAmb	IAmb	22 15 27.2	
	comp=Z,20nm,1.4s						
MORW	Morawa	46.26	241	P	P	22 15 41.0	+0.1
UGM	Wanagama	50.88	269	P	P	22 16 16.3	-0.5
KSRS	Korea Array	58.28	328	P	P	22 17 10.6	+0.5
	comp=Z,2.8nm,1.0s,baz=135,slow=6.3,SNR=2.6						
KSRS				LR	LR	22 42 32.6	
	comp=Z,13nm,18.0s,baz=250,slow=36						
	comp=Z,2.8nm,1.0s						
USRK	Ussuriysk Ar.	61.80	336	P	P	22 17 34.4	+0.2
	comp=Z,2.7nm,0.9s,baz=134,slow=8.2,SNR=4.6						
	comp=Z,2.7nm,0.9s						
PETK	Petropavlovsk-	64.45	357	LR	LR	22 43 38.8	
	comp=Z,15nm,19.6s,baz=123,slow=34						

SHEM	Shemya Is, Ala	64.79	8	LR	LR	22 40 07.5	
	comp=Z,36nm,21.7s,baz=282,slow=30						
GSI	Gunungsitoli	65.32	277	P	P	22 17 58.0	-0.1
VNDA	Vanda	66.02	180	P	P	22 18 02.6	+1.2
	comp=Z,1.0nm,0.8s,baz=340,slow=6.6,SNR=9.0						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	66.02	180	P	P	22 18 02.2	+0.8
VNDA				IAmb	IAmb	22 18 30.2	
	comp=Z,1.5nm,0.9s						
CMAR	Chiang Mai Arr	69.01	295	P	P	22 18 22.1	+0.7
	comp=Z,1.6nm,0.3s,baz=114,slow=4.6,SNR=4.6						
	comp=Z,1.6nm,0.3s						
MA2	Magadan	71.41	354	LR	LR	22 44 26.3	
	comp=Z,7.6nm,21.9s,baz=204,slow=31						
SONM	Songino Array	76.93	325	P	P	22 19 08.2	+0.2
	comp=Z,0.5nm,0.8s,baz=134,slow=5.9,SNR=3.5						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	78.51	180	P	P	22 19 17.1	+0.7
QSPA				IAmb	IAmb	22 19 20.0	
	comp=Z,6.2nm,1.1s						
MAW	Mawson	82.95	202	P	P	22 19 40.9	+1.0
MAW				IAmb	IAmb	22 20 02.5	
	comp=Z,2.4nm,1.4s						
IMAR	Indian Mountai	83.85	17	P	P	22 19 44.9	+0.4
ILAR	Eielson Array	85.11	20	P	P	22 19 50.2	-0.8
	comp=Z,0.4nm,0.3s,baz=251,slow=4.5,SNR=6.9						
	comp=Z,0.4nm,0.3s						
M27K	Edge Creek, AK	85.40	23	P	P	22 19 53.3	+0.7
M27K				IAmb	IAmb	22 20 06.7	
	comp=Z,8.8nm,1.1s						
J25K	Salcha River,	85.51	20	P	P	22 19 53.4	+0.3
J25K				IAmb	IAmb	22 19 53.7	
	comp=Z,2.8nm,0.8s						
BCAR	Beaver Creek A	85.85	22	P	P	22 19 55.0	+0.2
NVAR	Mina Array Bea	89.08	51	P	P	22 20 11.1	0.0
	comp=Z,0.4nm,0.7s,baz=250,slow=9.0,SNR=3.8						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	91.39	317	P	P	22 20 20.6	-0.8
	comp=Z,0.3nm,0.5s,baz=90,slow=6.5,SNR=4.3						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	125.22	325	PKP	PKPdf	22 26 14.8	-1.2
	comp=Z,1.0nm,0.6s,baz=66,slow=2.6,SNR=4.7						
NB2	NORSAR Subarra	126.13	343	PKPdf	PKiKP	22 26 29.0	+11
	comp=Z,0.7nm,0.8s,baz=37,slow=1.9						
NOA	NORSAR Array B	126.13	343	PKP	PKPdf	22 26 16.9	-0.6
	comp=Z,1.0nm,1.0s,baz=43,slow=1.9,SNR=2.3						
CPUP	Villa Florida	126.33	135	PKP	PKPdf	22 26 18.9	-0.1
	comp=Z,0.8nm,0.4s,baz=258,slow=3.6,SNR=3.0						
CLL	Collm	132.99	334	ePKPdf	PKPdf	22 26 31.0	+0.2
KEST	Kesra	145.48	319	PKPbc	PKPdf	22 26 54.0	-0.1
	comp=Z,1.8nm,0.7s,baz=180,slow=1.0,SNR=4.5						
TORD	Torodi Ar. Bea	160.75	277	PKP	PKPdf	22 27 16.6	+0.1
	comp=Z,0.5nm,0.7s,baz=103,slow=3.1,SNR=3.0						

*IDC **11** 22:30:52.4±0.5, 5°.26N×75°.90E, h0km, mb4.3/23, mbtmp4.3/23, ML5.3/1, MS3.8/45, Error ellipse: s-maj=15.2km s-min=13.2km az=20.0*
*BJI **11** 22:30:54.0±0.0, 5°.40N×76°.00E, h5km, mb4.6/41, mB4.9/23, Ms4.5/25, Ms7 4.2/25*
*NEIC **11** 22:30:55.0±1.3, 5°.35N±0°.04×75°.94E±0°.07, h10km±1km, mb4.9/83, Error ellipse: s-maj=11.6km s-min=5.9km az=102.0*
*GCMT **11** 22:30:54.0±0.4, 5°.22N±0°.03×75°.81E±0°.02, h31km±1km, MW4.9/79, Moment Tensor Solution. s17,c19; s79,c107; Duration: 0 Moment tensor: Scale 1016Nm; Mrr 1.34±.21; Mθθ-2.84±.14; Mφφ 1.50±.13; Mrθ-1.01±.17; Mrφ-1.40±.13; Mθφ 0.32±.17; Best double couple: M0 2.87300×1016 NP1:φs 292.00000°, δ 74.00000°, λ 146.00000°. NP2: φs 32.00000°, δ 58.00000°, λ 19.00000°. Principal axes: T 2.3290, Plg35.0000°, Azm247.0000°; N 1.0880, Plg53.0000°, Azm89.0000°; P -3.4170, Plg11.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 22:30:54.1±0.3, 5°.36N±0°.05×75°.98E±0°.04, h10km, n256, σ1s48/225, mb4.7/93, MS3.9/53, 13C-2D, Laccadive Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRD	Trivandrum	3.28	17	eP	Pn	22 31 44.7	-0.9
TRD				i x	x	22 31 48.9	
TRD				eS	Sn	22 32 23.6	-1.1
TRD				IAML		22 32 31.4	
	comp=E,13μm,0.2s						
TRD				IAML		22 32 32.1	
	comp=N,10μm,0.1s						
MNCI	Minicoy	4.11	315	Pn	Pn	22 31 56.0	-1.1
MNCY	Minicoy	4.12	315	ex	x	22 31 56.2	
MNCY				eP	P	22 31 56.2	-1.0
MNCY				eS	Sn	22 32 40.8	-4.6
PALK	Pallekele	5.06	68	Pn	Pn	22 32 09.7	-0.5
	comp=N,119nm,0.3s,baz=360,slow=13,SNR=503						
PALK				Sn	Sn	22 33 02.0	-6.8
	comp=N,222nm,0.3s,baz=70,slow=24,SNR=11						
PALK				LR	LR	22 33 54.4	
	comp=N,1μm,21.9s,baz=295,slow=35						
PALK	Pallekele	5.06	68	P	Pn	22 32 09.1	-1.1
KOD	Kodaikanal	5.07	17	eP	Pn	22 32 10.3	-0.1
PCHI	Peechi	5.16	4	eP	Pn	22 32 11.4	0.0
PCHI				ex	x	22 33 01.2	
KAAM	Kaadhehdhoo	5.68	212	Pn	Pn	22 32 17.8	-0.8
KAAM	Kaadhehdhoo	5.68	212	P	Pn	22 32 18.0	-0.6
	comp=N,7.0nmcomp=N,6μmcomp=N,318nm,0.7s						
SALM	Salem	6.63	19	eP	Pn	22 32 31.9	+0.2
MNGI	Mangalore	7.62	351	eP	Pn	22 32 46.0	+0.6
MDRS	Chennai	8.74	28	eP	Pn	22 32 59.5	-1.2
MDRS				IAmb	IAmb	22 33 02.1	
	comp=Z,260nm,0.4s						
MDRS				eS	Sn	22 34 31.3	-8.2
VJD	Vijayawada	12.00	22	eP	Pn	22 33 44.5	-0.9
KAD	Karad	12.01	352	eP	Pn	22 33 46.4	+0.8
HYB	Hyderabad	12.25	12	eP	Pn	22 33 46.6	-2.2
HYB				IAmb	IAmb	22 33 48.7	
	comp=Z,26nm,0.8s						
HYBB	Hyderabad (bro	12.25	12	ePn	Pn	22 33 46.8	-2.0
HYBB				eSn	Sn	22 36 07.4	+1.8
HYBB				IVMs_BB	IVMs_BB	22 38 22.0	
	comp=Z,1μm,11.7s						
POO	Poona	13.26	351	eP	Pn	22 34 02.0	-0.7
POO				IAmb	IAmb	22 34 05.2	
	comp=Z,35nm,0.8s						
H08S3	Diego Garcia H	13.36	195	T	T	22 47 19.2	
	baz=14,SNR=13						
H08S2	Diego Garcia H	13.38	195	T	T	22 47 20.8	
	baz=14,SNR=34						
H08S1	Diego Carcia H	13.38	195	T	T	22 47 24.7	
	baz=14						
AKL	Akola	15.29	4	eP	Pn	22 34 27.6	-2.6
RAGD	RAYAGADA	15.61	27	eP	Pn	22 34 32.0	-2.4
NGP	Nagpur	15.98	10	eP	Pn	22 34 36.3	-3.0
BWNR	Bhubaneshwar	17.66	32	eP	Pn	22 34 56.9	-3.4
BLSP	Bilaspur	17.71	19	eP	Pn	22 34 58.9	-2.1
PBA	Port Blair	17.71	68		Pn	22 35 01.7	+0.6
PBA				IAmb	IAmb	22 35 09.2	
	comp=Z,52nm,1.0s						
BHPL	Bhopal	17.84	4	eP	Pn	22 35 01.7	-0.9
BHPL				IAmb	IAmb	22 35 05.9	
	comp=Z,41nm,0.9s						
JBP	Jabalpur	18.12	12	eP	P	22 35 06.6	+0.2
JBP				ex	x	22 38 17.1	
JHNI	Jhansi	20.15	7	eP	P	22 35 29.3	+0.7
MLSI	Meulaboh, Aceh	20.38	92	P	P	22 35 30.9	-0.4
	comp=Z,39nm,1.1s						
BOK	Bokaro	20.67	27	eP	Pn	22 35 36.0	-0.6
BOK				IAmb	IAmb	22 35 36.6	
	comp=Z,12nm,0.5s						
AJM	Ajmer	21.05	357	eP	P	22 35 40.1	+1.7
KCSI	Kotacane, Aceh	21.80	94	P	P	22 35 47.0	+0.4
	comp=Z,34nm,0.9s						
TSI	Tuntungan	22.59	94	P	P	22 35 53.7	-1.4
	comp=Z,121nm,0.5s						
BRDH	Bariadhala	22.92	40	LR	LR	22 47 00.3	
	comp=Z,764nm,18.8s,baz=166,slow=42						
PSI	Prapat	23.02	95	P	P	22 36 02.0	+2.3
	comp=Z,6.8nm,0.6s,baz=308,slow=6.3,SNR=6.0						
PSI				LR	LR	22 44 26.0	
	comp=Z,454nm,18.1s,baz=254,slow=35						
	comp=Z,6.8nm,0.6s						
PSI	Prapat	23.02	95	P	pP	22 36 00.0	-2.0
	comp=Z,22nm,1.3s,comp=Z,13nm,1.3s						
PSI				P	P	22 35 59.6	-0.2
	comp=Z,22nm,1.3s,comp=Z,13nm,1.3s						

RPSI	Rantau Prapat	23.03	96	P	P	22 35 59.4	-0.4
PYUN	Piuthan	23.58	16	eP	P	22 36 07.2	+1.8
	comp=Z,80nm,0.8s						
SRIT	Nakonsritamara	23.66	81	P	P	22 36 06.4	+0.3
RAMN	Ramite	23.74	24	eP	P	22 36 08.9	+1.9
DMN	Daman	23.77	20	eP	P	22 36 08.8	+1.5
	comp=Z,63nm,0.9s						
PKI	Pulchoki	23.85	21	eP	P	22 36 09.4	+1.3
	comp=Z,96nm,1.2s						
PKIN	Phulchoki	23.85	21	eP	P	22 36 09.2	+1.2
	comp=Z,115nm,1.3s						
GKN	Gorkha	23.98	19	eP	P	22 36 10.8	+1.7
	comp=Z,110nm,1.3s						
MNSI	Mandailing Nat	23.99	100	P	P	22 36 07.5	-1.7
	comp=Z,80nm,1.4s						
DANN	Dangsing	24.03	17	eP	P	22 36 11.3	+1.5
	comp=Z,51nm,0.9s						
JIRN	Jiri	24.22	23	eP	P	22 36 13.1	+1.5
LGTI	Lohaghat	24.30	9	eP	P	22 36 12.1	+0.2
GUN	Gumba	24.33	22	eP	P	22 36 14.5	+1.9
	comp=Z,75nm,1.0s						
PTH	Pithoragarh	24.40	9	eP	P	22 36 14.9	+1.8
WSAR	Wadi Sarin	24.42	318	P	P	22 36 13.1	0.0
	comp=Z,4.7nm,0.7s,baz=227,slow=8.6,SNR=5.4						
WSAR				LR	LR	22 45 15.1	
	comp=Z,161nm,18.0s,baz=144,slow=35						
	comp=Z,4.7nm,0.7s						
SRDT	SRDT	24.46	67	P	P	22 36 16.8	+3.2
	comp=Z,630nmcomp=Z,57nm,0.9s						
SKLT	Songkhla	24.55	84	P	P	22 36 13.4	-1.0
	comp=Z,44nm,1.1s						
KULM	Kulim	24.56	89	P	P	22 36 15.4	+1.0
KULM	Kulim	24.56	89	P	P	22 36 14.4	-0.1
	comp=Z,46nm,1.4s						
TAPN	Taplejung	24.56	26	eP	P	22 36 17.2	+2.5
	comp=Z,41nm,0.7s						
GTK	Tadong	24.93	27	eP	P	22 36 20.3	+2.5
GTK				eP	pP	22 36 20.6	+0.3
GTK				IAmb	IAmb	22 36 32.9	
	comp=Z,26nm,1.2s						
IPM	Ipoh	24.96	91	P	P	22 36 18.3	+0.1
	comp=Z,44nm,1.3s						
BKNI	Bangkinang	25.51	100	P	P	22 36 23.9	+0.8
SMLA	Simla	25.66	2	eP	P	22 36 25.7	+1.5
SMLA				IAmb	IAmb	22 36 28.1	
	comp=Z,4.7nm,0.5s						
CM31	Chiang Mai Arr	25.92	58	P	P	22 36 28.2	+1.4
CM31				IAmb	IAmb	22 36 42.3	
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	25.92	58	P	P	22 36 31.2	+4.4
	comp=Z,5.7nm,0.8s,baz=246,slow=12,SNR=26						
SDSI	Sungai Dareh	26.17	103	P	P	22 36 38.2	+9.1
TEZP	TEZPUR	26.55	35	eP	P	22 36 34.3	+2.0
TEZP				eP	P	22 36 34.3	+2.0
TEZP				IAmb	IAmb	22 36 46.5	
	comp=Z,36nm,1.6s						
THN	Thein Dam	26.94	360	eP	P	22 36 38.5	+2.7
MOKO	MOKOCHONG	27.36	38	eP	P	22 36 41.6	+1.8
MOKO				eP	pP	22 36 42.4	+0.2
MOKO				IAmb	IAmb	22 36 50.5	
	comp=Z,21nm,1.0s						
MOKO				IAmb	IAmb	22 36 53.3	
	comp=Z,27nm,0.8s						
LSA	Lhasa	28.14	29	P	P	22 36 48.0	+0.9
LSA				IAmb	IAmb	22 36 59.9	
	comp=Z,32nm,1.8s						
NIL	Nilore	28.27	355	P	P	22 36 48.9	+1.1
NIL				IAmb	IAmb	22 37 43.5	
	comp=Z,23nm,1.0s						
KBL	Kabul	29.75	348	P	P	22 37 02.2	+1.1
KBL				IAmb	IAmb	22 37 52.8	
	comp=Z,9.6nm,0.9s						
HRA	Herat	31.57	338	P	P	22 37 17.5	+0.3
PZH	PanZhiHua	32.36	47	P	P	22 37 27.2	+3.1
PZH				S	S	22 42 39.1	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
PZH				LR	LR		
	comp=Z,690nm,21.6s						
PZH				LR	LR		
	comp=Z,430nm,21.6s						
PZH				LR	LR		
	comp=Z,600nm,22.0s						
ATD	Arta Tunnel	33.33	283	LR	LR	22 48 42.3	
	comp=Z,81nm,18.7s,baz=66,slow=32						
CHGR	Chuyangaron	33.73	350	P	P	22 37 36.2	+0.3
LEM	Lembang	33.81	111	LR	LR	22 49 50.3	
	comp=Z,192nm,18.3s,baz=290,slow=34						
GAR	Garm	33.88	352	P	P	22 37 37.5	+0.2
GAR				IAmb	IAmb	22 37 38.5	
	comp=Z,18nm,0.9s						
KSH	Kashi	34.01	360	P	P	22 37 36.3	-2.1
KSH				sP	pwP	22 37 46.6	+2.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				LR	LR		
	comp=Z,1μm,12.4s						
KSH				LR	LR		
	comp=Z,320nm,14.4s						
KSH				LR	LR		
	comp=Z,1μm,13.1s						
DRK	Karamyk	34.18	354	P	P	22 37 39.0	-1.1
DRK				IAmb	IAmb	22 38 04.7	
	comp=Z,6.4nm,0.7s						
RAYN	Ar Rayn	34.47	305	P	P	22 37 42.5	0.0
BTK	Batken	34.86	353	P	P	22 37 46.2	+0.5
BTK				IAmb	IAmb	22 37 47.4	
	comp=Z,17nm,0.8s						
GOMU	GeErMu	35.24	27	P	P	22 37 51.4	+2.1
GOMU				pP	pwP	22 37 54.6	-0.1
GOMU				sP	sP	22 37 55.9	+3.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,70nm,4.7s						
GOMU				LR	LR		
	comp=Z,180nm,12.8s						
GOMU				LR	LR		
	comp=Z,160nm,13.9s						
GOMU				LR	LR		
	comp=Z,210nm,11.1s						
QIZ	Qiongzhong	35.68	65	P	P	22 37 52.8	-0.2
QIZ				S	S	22 43 30.8	+0.9
QIZ				LR	LR		
	comp=Z,340nm,24.5s						
QIZ				LR	LR		
	comp=Z,310

CHKK Chushkaly 38.35 1 *e*P **P 22 38 15.6 +0.2**
baz=1.1
KUU Kurty 38.38 0 *e*P **P 22 38 15.2 -0.5**
baz=0.3
KIBK Kibwezi 38.66 260 P **P 22 38 18.1 -0.4**
KIBK IAmb IAmb 22 38 19.7
comp=Z,14nm,0.9s
KMBO Kilima Mbogo 39.22 262 P **P 22 38 22.0 -1.3**
comp=Z,0.2nm,0.5s,baz=49,slow=23,SNR=9.1
KMBO Kilima Mbogo 39.22 262 P **P 22 38 22.6 -0.7**
VOI Vohitsoka 39.39 226 P **P 22 38 24.2 -0.3**
VOI IAmb IAmb 22 38 25.0
comp=Z,17nm,1.1s
TDK Taldyqorghan 39.55 3 *e*P **P 22 38 25.2 -0.2**
baz=2.6
BTLS Baital 39.57 358 *e*P **P 22 38 25.6 +0.1**
baz=358
WMQ Urumqi 39.68 13 *e*P **P 22 38 28.8 +2.3**
WMQ sP pwP 22 38 36.7 +4.9
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ LR LR
comp=Z,410nm,13.9s
WMQ LR LR
comp=Z,580nm,16.3s
WMQ LR LR
comp=Z,140nm,14.7s
LZH Lanzhou 39.88 36 *e*P **P 22 38 32.9 +4.5**
LZH pP pwP 22 38 37.5 +3.6
LZH pmax pmax
comp=Z,6.0nm,1.0s
LZH LR LR
comp=Z,220nm,12.5s
LZH LR LR
comp=Z,220nm,14.3s
LZH LR LR
comp=Z,250nm,16.5s
ENH Enshi 40.11 48 P **P 22 38 31.4 +1.1**
ENH IAmb IAmb 22 38 42.2
comp=Z,15nm,1.0s
GTA Gaotai 40.16 29 *e*P P 22 38 37.9 +7.2
GTA sP pwP 22 38 45.6 +9.5
GTA pmax pmax
comp=Z,3.0nm,1.3s
GTA pmax pmax
comp=Z,92nm,5.1s
GTA LR LR
comp=Z,140nm,17.8s
GTA LR LR
comp=Z,150nm,18.9s
GTA LR LR
comp=Z,150nm,18.2s
LODK Lodwar 40.54 269 P **P 22 38 34.9 +0.7**
LODK IAmb IAmb 22 38 36.6
comp=Z,16nm,0.9s
MAKZ Makanchi 41.62 6 P **P 22 38 43.1 +0.6**
MAKZ IAmb IAmb 22 39 16.8
comp=Z,30nm,1.9s
MK31 Makanchi Array 41.64 7 P **P 22 38 42.9 +0.3**
MKAR Makanchi Array 41.64 7 P **P 22 38 42.9 +0.3**
comp=Z,1.0nm,0.5s,baz=184,slow=9.8,SNR=8.8
MKAR LR LR 22 56 57.1
comp=Z,150nm,18.7s,baz=196,slow=38
comp=Z,1.0nm,0.5s
XAN Xi'an 41.79 43 ⇑P P 22 38 51.9 +7.8
XAN pP pwP 22 38 57.5 +8.0
ZSN Zaisan 42.63 9 *e*P **P 22 38 50.8 +0.1**
baz=8.8
LYN LuoYang 44.51 44 *e*P P 22 39 12.4 +6.3
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN LR LR
comp=Z,210nm,16.5s
LYN LR LR
comp=Z,200nm,21.6s
BRZS Berezniki 44.56 357 *e*P **P 22 39 05.7 -0.5**
baz=357
KAPI Kappang 44.91 103 LR LR 22 57 06.1
comp=Z,117nm,20.4s,baz=284,slow=35
TOLI2 Tolitoli 44.91 94 P **P 22 39 09.4 -0.1**
TOLI2 IAmb IAmb 22 39 18.0
comp=Z,24nm,0.9s
SEM Semipalatinsk 45.04 4 *e*P **P 22 39 10.1 -0.2**
baz=3.8
GURO Guroymak-BITLI 45.16 322 P **P 22 39 11.2 -0.1**
KURBB Kurchatov Arra 45.16 2 LR LR 22 58 24.1
comp=Z,109nm,20.0s,baz=167,slow=36
MARD Mardin 45.20 320 P **P 22 39 10.9 -0.8**
MARD IAmb IAmb 22 39 13.8
comp=Z,8.5nm,0.7s
KURK Kurchatov 45.26 2 P **P 22 39 11.9 +0.1**
KURK IAmb IAmb 22 39 13.3
comp=Z,7.2nm,0.8s
MBAR Mbarara 45.57 264 LR LR 22 56 40.0
comp=Z,149nm,18.7s,baz=72,slow=34
EIL Elat 45.62 307 LR LR 22 58 03.0
comp=Z,175nm,18.3s,baz=120,slow=36
ABKAR Akbulak array 45.81 345 P **P 22 39 16.5 +0.4**
ABKAR IAmb IAmb 22 39 27.1
comp=Z,7.3nm,0.8s
MMAI Mount Meron Ar 46.71 311 LR LR 22 59 40.8
comp=Z,130nm,18.2s,baz=40,slow=37
AKTO Aktyubinsk 47.39 344 LR LR 22 59 52.6
comp=Z,27nm,19.1s,baz=150,slow=37
HHC Hu-ho-hao-te 47.57 37 *e*P **P 22 39 30.5 +0.3**
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,140nm,6.6s
HNS HongShan 47.57 42 ⇑P P 22 39 37.3 +7.2
HNS pmax pmax
comp=Z,10.0nm,0.8s
BVAR Borovoye Array 47.74 355 LR LR 22 59 52.2
comp=Z,132nm,19.1s,baz=171,slow=36
KBZ Khabaz 48.04 328 P **P 22 39 34.8 +1.1**
comp=Z,10nm,0.9s,baz=126,slow=7.2,SNR=18
comp=Z,10nm,0.9s
NJ2 Nanjing 48.04 51 *e*P **P 22 39 35.3 +1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
KIV Kislovodsk 48.30 328 ⇑P **P 22 39 37.5 +1.6**
KIV Kislovodsk 48.30 328 P **P 22 39 36.6 +0.8**
KIV IAmb IAmb 22 39 48.0
comp=Z,20nm,1.0s
ZAA0 Zalesovo Array 48.98 7 P **P 22 39 40.8 +0.1**
ZAA0 IAmb IAmb 22 40 10.8
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 48.98 7 P **P 22 39 40.9 +0.1**
comp=Z,2.5nm,0.4s,baz=197,slow=8.3,SNR=18
ZALV LR LR 23 01 21.4
comp=Z,115nm,19.4s,baz=176,slow=37
comp=Z,2.5nm,0.4s
DAV Davao City (W) 49.32 85 LR LR 23 01 35.8
comp=Z,64nm,18.7s,baz=256,slow=37
TOKA Tokat 49.68 320 P **P 22 39 46.8 +0.4**
TOKA IAmb IAmb 22 39 59.5
comp=Z,11nm,0.9s
SONM Songino Array 49.68 27 P **P 22 39 48.1 +1.7**
comp=Z,4.2nm,0.6s,baz=216,slow=7.9,SNR=37
SONM LR LR 23 02 21.4
comp=Z,209nm,19.8s,baz=213,slow=38
comp=Z,4.2nm,0.6s
BJT Baijiatuau 49.94 40 P **P 22 39 48.8 +0.5**
BJT IAmb IAmb 22 39 58.8
comp=Z,7.4nm,1.1s
ULN Ulaanbaatar 50.00 27 P **P 22 39 49.1 +0.3**
BR131 Keskin Array S 51.20 318 P **P 22 39 58.1 +0.1**
BR131 IAmb IAmb 22 40 19.4
comp=Z,13nm,0.9s
BRTR Keskin Array B 51.20 318 P **P 22 39 58.5 +0.4**
comp=Z,3.9nm,0.7s,baz=125,slow=8.2,SNR=26
BRTR LR LR 23 02 57.8
comp=Z,80nm,18.7s,baz=127,slow=38
comp=Z,3.9nm,0.7s
LSZ Lusaka 51.59 246 LR LR 22 59 03.4
comp=Z,240nm,18.1s,baz=98,slow=33
LSZ Lusaka 51.59 246 P **P 22 40 00.9 -0.4**
ARU Arti 52.78 348 LR LR 23 02 58.5
comp=Z,112nm,20.9s,baz=152,slow=36
ARU Arti 52.78 348 P **P 22 40 09.1 -0.2**
ARU IAmb IAmb 22 40 20.0
comp=Z,9.5nm,0.8s
H01W3 Cape Leeuwin H 53.78 141 T T 23 38 13.0
baz=312,slow=75,SNR=239
H01W2 Cape Leeuwin H 53.79 141 T T 23 38 13.7
baz=312,slow=75,SNR=198
H01W1 Cape Leeuwin H 53.80 141 T T 23 38 14.3
baz=312,slow=75,SNR=264
JOW Kunigami 54.14 61 LR LR 23 03 50.5
comp=Z,84nm,21.6s,baz=296,slow=36
SIJI Sorong 55.55 95 LR LR 23 07 01.4
comp=Z,38nm,18.6s,baz=267,slow=39
KIRV Kirov 56.95 344 LR LR 23 07 43.8
comp=Z,35nm,19.0s,baz=145,slow=39
LBTB Lobatse 57.52 236 LR LR 23 02 51.1
comp=Z,114nm,18.2s,baz=58,slow=33
LBTB Lobatse 57.52 236 P **P 22 40 45.4 +1.2**
LBTB IAmb IAmb 22 42 34.7
comp=Z,36nm,1.7s
CN2 Changchun 57.83 41 *e*P **P 22 40 45.2 -0.8**
CN2 sP pwP 22 40 52.1 +0.6
CN2 S **S 22 48 42.2 -3.3**
CN2 LR LR
comp=Z,160nm,13.0s
CN2 LR LR
comp=Z,120nm,13.0s
CN2 LR LR
comp=Z,150nm,15.0s
ITM Ithomi 58.49 311 P **P 22 40 49.9 -0.9**
PLOR Plostina 58.68 322 ⇓P **P 22 40 50.9 -1.1**
MLR Muntele Rosu 58.95 321 ⇑P **P 22 40 53.8 -0.2**
MLR Muntele Rosu 58.95 321 P **P 22 40 53.2 -0.8**
MLR IAmb IAmb 22 41 14.1
comp=Z,7.9nm,0.9s
TESR Tescani 58.99 322 ⇓P **P 22 40 52.9 -1.2**
BOSA Boshof 59.34 232 P **P 22 40 55.9 -1.0**
comp=Z,10.0nm,0.9s,baz=58,slow=7.1,SNR=11
BOSA LR LR 23 03 45.8
comp=Z,139nm,18.1s,baz=26,slow=33
comp=Z,10.0nm,0.9s
BOSA Boshof 59.34 232 P **P 22 40 56.2 -0.6**
BOSA IAmb IAmb 22 40 57.6
comp=Z,14nm,0.9s
VTS Vitosha 59.51 317 ⇑P **P 22 40 56.3 -1.6**
VTS Vitosha 59.51 317 P **P 22 40 56.9 -1.0**
VTS IAmb IAmb 22 41 31.9
comp=Z,8.7nm,1.4s
AKASG Malin Array Be 59.65 328 P **P 22 40 57.6 -0.9**
comp=Z,2.1nm,0.6s,baz=120,slow=5.5,SNR=15
comp=Z,2.1nm,0.6s
AKBB Malin Array Si 59.65 328 P **P 22 40 58.1 -0.3**
AKBB IAmb IAmb 22 41 11.4
comp=Z,7.2nm,0.9s
BLKB Belogradchik 60.28 318 ⇑P **P 22 41 00.9 -2.1**
BURAR Bucovina Array 60.37 323 ⇑P **P 22 41 02.6 -1.1**
BUR08 Bucovina Ar. S 60.40 323 P **P 22 41 04.2 +0.3**
BUR08 IAmb IAmb 22 41 36.6
comp=Z,5.2nm,0.9s
SOE Somerset East 60.99 228 P **P 22 41 06.8 -1.3**
FORT Forrest 61.35 129 P **P 22 41 10.3 -0.2**
BZS Buzias 61.76 320 ⇑P **P 22 41 11.1 -1.9**
KLMR Klimovskoe 61.78 341 *e*P **P 22 41 15.8 +3.0**
KLMR AMP 22 41 25.1
comp=Z,14nm,1.3s
SCTE Santa Cesarea 61.98 313 P **P 22 41 14.5 -0.1**
TRPA Tarpa 62.22 323 ⇑P **P 22 41 13.8 -2.2**
DIVS Divibare 62.26 318 P **P 22 41 16.2 -0.3**
DIVS IAmb IAmb 22 41 54.0
comp=Z,7.0nm,1.2s
USRK Ussuriysk Ar. 62.30 42 P **P 22 41 16.9 +0.2**
comp=Z,0.6nm,0.7s,baz=228,slow=5.6,SNR=1.7
USRK LR LR 23 12 24.1
comp=Z,58nm,19.1s,baz=231,slow=40
comp=Z,0.6nm,0.7s
TSUM Tsumeb 62.44 245 LR LR 23 05 19.4
comp=Z,179nm,19.5s,baz=151,slow=33
WRA Warramunga Arr 62.61 116 P **P 22 41 19.0 -0.2**
comp=Z,2.9nm,0.7s,baz=292,slow=6.9,SNR=12
comp=Z,2.9nm,0.7s
WRA Warramunga Arr 62.61 116 **P 22 41 18.4 -0.8**
WB2 Warramunga Arr 62.62 116 P **P 22 41 19.0 -0.3**
WB2 IAmb IAmb 22 41 27.6
comp=Z,9.2nm,0.8s
WR0 Warramunga Arr 62.80 116 P **P 22 41 20.2 -0.2**
WR0 IAmb IAmb 22 41 28.4
comp=Z,11nm,0.8s
ASAR Alice Springs 63.39 120 P **P 22 41 24.1 -0.2**
comp=Z,1.3nm,0.6s,baz=284,slow=5.7,SNR=11
comp=Z,1.3nm,0.6s
ASAR Alice Springs 63.39 120 P **P 22 41 24.3 0.0**
AS31 Alice Springs 63.40 120 P **P 22 41 24.4 0.0**
NRIK Noril'sk 64.35 5 P **P 22 41 30.7 +0.9**
comp=Z,3.2nm,0.8s,baz=190,slow=8.3,SNR=5.6
comp=Z,3.2nm,0.8s
SUR Sutherland 64.42 230 LR LR 23 05 37.1
comp=Z,170nm,19.3s,baz=70,slow=32
SUR Sutherland 64.42 230 P **P 22 41 31.2 0.0**
MJAR Matsushiro Arr 64.62 52 LR LR 23 12 45.1
comp=Z,68nm,18.7s,baz=158,slow=39
PABE Paberze 64.86 330 P **P 22 41 33.1 -0.2**
ARSA Arzberg 66.28 320 *e*P **P 22 41 43.0 +0.2**
comp=Z,3.2nm,0.8s
CONA Conrad Observa 66.28 320 *e*P **P 22 41 44.8 +2.0**
comp=Z,2.6nm,0.9s
VRAC Vranov 66.30 322 LR LR 23 13 40.3
comp=Z,40nm,18.2s,baz=90,slow=39
CAMP Campotosto 66.33 314 P **P 22 41 43.3 0.0**
KRLC Kraliky 66.46 323 *e*P **P 22 41 42.6 -1.3**
DPC Dobruska-Polom 66.83 323 *e*P P 22 41 41.3 -5.0
FIA1 FINESS Array S 67.08 336 P **P 22 41 47.1 -0.4**
FINES FINESS Array B 67.08 336 P **P 22 41 47.0 -0.5**
comp=Z,1.7nm,0.6s,baz=131,slow=8.5,SNR=13
FINES LR LR 23 13 09.2
comp=Z,49nm,18.9s,baz=114,slow=38
comp=Z,1.7nm,0.6s
MOA Molln 67.28 320 *e*P **P 22 41 51.1 +2.0**
comp=Z,8.1nm,1.6s
KEST Kesra 67.97 306 P **P 22 41 53.1 -0.7**
comp=Z,3.3nm,0.7s,baz=355,slow=5.3,SNR=6.0
comp=Z,3.3nm,0.7s
ABTA Abfaltersbach 68.09 318 *e*P **P 22 41 53.0 -1.4**
comp=Z,3.5nm,1.0s
KHC Kasperske Hory 68.11 321 P **P 22 41 53.0 -1.4**
KHC IAmb IAmb 22 42 50.3
comp=Z,25nm,1.9s
KHC Kasperske Hory 68.11 321 *e*P **P 22 41 52.1 -2.3**
WATA Walderalm 68.87 319 *e*P **P 22 42 02.9 +3.7**
comp=Z,4.5nm,0.7s
SQTA Sankt Quirin 69.08 319 *e*P **P 22 41 59.1 -1.4**
comp=Z,4.0nm,0.8s
CLL Collm 69.14 323 P **P 22 42 00.4 -0.2**
CLL IAmb IAmb 22 42 01.6
comp=Z,6.7nm,0.7s
CLL Collm 69.14 323 ⇑*i*P **P 22 42 00.6 -0.1**
comp=Z,8.0nm,0.6s
MOTA Moosalm 69.18 319 *e*P **P 22 41 59.7 -1.6**
comp=Z,5.2nm,1.3s
FETA Feichten 69.34 318 *e*P **P 22 42 00.9 -1.4**
comp=Z,4.3nm,1.0s
FUORN Ofenpass-Fuorn 69.55 318 P **P 22 42 04.3 +0.6**
FUORN IAmb IAmb 22 44 06.0
comp=Z,21nm,1.9s
GRA1 Grafenberg Arr 69.74 321 P **P 22 42 04.5 0.0**
GRFO Grafenberg 69.75 321 P **P 22 42 04.5 0.0**
TAM Tamanrasset 69.94 292 P **P 22 42 05.6 -0.7**
DAVA Damuels 69.97 319 *e*P **P 22 42 05.0 -1.2**
comp=Z,5.2nm,0.6s
SENIN Lac Senin/Sane 71.49 317 P **P 22 42 14.6 -0.8**
HFS Hagfors 71.82 332 LR LR 23 15 33.3
comp=Z,72nm,21.4s,baz=100,slow=37
ARCES ARCESS Array B 71.96 343 P **P 22 42 18.2 +0.6**
comp=Z,2.1nm,0.5s,baz=131,slow=5.8,SNR=22
ARCES LR LR 23 15 06.4
comp=Z,30nm,21.7s,baz=136,slow=37
comp=Z,2.1nm,0.5s
STKA Stephens Creek 72.48 126 P **P 22 42 21.1 -0.2**
comp=Z,1.3nm,0.6s,baz=309,slow=19,SNR=1.6
comp=Z,1.3nm,0.6s
STKA Stephens Creek 72.48 126 P **P 22 42 21.3 0.0**
NC602 NORSAR Array S 73.03 332 P **P 22 42 23.0 -1.1**
NB2 NORSAR Subarra 73.29 333 P **P 22 42 24.4 -1.3**
comp=Z,2.1nm,0.9s,baz=110,slow=6.2
NOA NORSAR Array B 73.29 333 P **P 22 42 24.4 -1.3**
comp=Z,0.3nm,0.5s,baz=106,slow=6.1,SNR=3.8
NOA LR LR 23 16 14.8
comp=Z,54nm,20.6s,baz=95,slow=37
comp=Z,0.3nm,0.5s
MAW Mawson 73.38 185 LR LR 23 07 05.4
comp=Z,102nm,20.9s,baz=356,slow=30
CTAO Charters Tower 73.48 113 P **P 22 42 27.5 -0.1**
TOA0 Torodi Ar. Sit 73.53 282 P **P 22 42 27.0 -0.9**
TORD Torodi Ar. Bea 73.53 282 P **P 22 42 27.4 -0.5**
comp=Z,2.1nm,0.8s,baz=100,slow=5.7,SNR=12
TORD LR LR 23 13 37.6
comp=Z,60nm,18.8s,baz=221,slow=35
comp=Z,2.1nm,0.8s
TIXI Tiksi 73.84 15 P **P 22 42 28.5 -0.2**
TIXI IAmb IAmb 22 45 11.6
comp=Z,22nm,1.8s
SPITS Spitsbergen Ar 78.78 350 LR LR 23 24 21.9
comp=Z,54nm,18.1s,baz=98,slow=41
ESDC Sonseca Array 78.87 309 P **P 22 42 57.8 -0.2**
comp=Z,1.4nm,0.7s,baz=79,slow=4.7,SNR=18
ESDC LR LR 23 19 54.7
comp=Z,41nm,19.5s,baz=104,slow=37
comp=Z,1.4nm,0.7s
KOWA Kowa 79.02 284 LR LR 23 17 06.4
comp=Z,24nm,18.2s,baz=120,slow=35
KOWA Kowa 79.02 284 P **P 22 42 59.5 +0.4**
KOWA IAmb IAmb 22 43 00.7
comp=Z,13nm,1.1s
MDT Midelt 79.22 302 LR LR 23 18 23.0
comp=Z,119nm,19.7s,baz=112,slow=36
KIC Kosan Boka 80.23 276 ⇑*e*P **P 22 43 05.9 +0.1**
comp=Z,17nm,0.6s
DBIC Dimbokro 80.32 276 P **P 22 43 06.5 +0.3**
comp=Z,5.9nm,0.6s,baz=91,slow=6.1,SNR=12
DBIC LR LR 23 17 39.3
comp=Z,104nm,18.9s,baz=70,slow=35
comp=Z,5.9nm,0.6s
DBIC Dimbokro 80.32 276 P **P 22 43 06.0 -0.2**
DBIC IAmb IAmb 22 43 07.5
comp=Z,27nm,1.4s
ARMA Armidale 80.41 122 P **P 22 43 07.2 +0.6**
TIC Toumodi 80.48 276 ⇑*e*P **P 22 43 07.3 +0.1**
comp=Z,22nm,0.7s
LIC Lamto 80.52 275 ⇑*e*P **P 22 43 07.5 +0.1**
comp=Z,33nm,0.8s
JMIC Jan Mayen 83.17 341 LR LR 23 25 39.5
comp=Z,15nm,18.5s,baz=240,slow=40
TROLL Troll, Antarti 90.00 197 P **P 22 43 54.9 +1.2**
VNA2 Neumayer--Watz 92.85 199 P **P 22 44 06.9 +0.1**
baz=43,slow=2.5
VNA2 Neumayer--Watz 92.85 199 PP PP 22 47 50.1 +1.0
VNA1 Neumayer--Stat 93.10 199 P **P 22 44 06.9 -0.9**
VNA3 Neumayer Olymp 93.63 199 P **P 22 44 10.2 -0.1**
SFJD Kangerlussuaq 98.52 341 LR LR 23 30 39.3
comp=Z,26nm,18.4s,baz=66,slow=36
CPUP Villa Florida 130.83 240 PKP **PKPdf 22 50 06.4 -0.2**
comp=Z,0.7nm,0.4s,baz=135,slow=2.9,SNR=2.8
PDAR Pinedale Array 131.84 5 PKP **PKPdf 22 50 08.1 -0.4**
comp=Z,0.4nm,0.6s,baz=71,slow=3.6,SNR=5.0
TXAR Lajitas Array 145.51 359 PKPbc **PKPab 22 50 34.2 +0.5**
comp=Z,0.7nm,0.7s,baz=44,slow=2.2,SNR=7.8

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*JMA **11** 22:44:26.9±0.1,23°.7N±0°.7×122°.5E±0°.3,h57km,MV2.3/10,*
NEAR ISHIGAKIJIMA ISLAND
*TAP **11** 22:44:27.2,23°.69N×122°.50E,h43km±1km,ML3.2,D*
ISC 11 22:44:24.5±1.1,**23°.68N**±0°.02×**122°.50E**±0°.02,**h14**km±9km,
n96,σ0°**90**/167,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.84**	**283**	P	**Pn**	**22 44 42.3**	**+0.4**
TEYL	baz=284			S	**Sn**	**22 44 55.5**	**+1.4**
HWA	**Hwalien**	**0.87**	**290**	P	**Pn**	**22 44 42.6**	**+0.3**
JYNG	**Yonagunijimaku**	**0.87**	**28**	P	**Pn**	**22 44 43.0**	**+0.6**
JYNG	baz=281			*e*S	**Sn**	**22 44 54.7**	**-0.2**
YOJ	**Yonaguni jima**	**0.91**	**31**	*i* P	**Pn**	**22 44 43.6**	**+0.8**
YOJ	baz=31			*i* S	**Sn**	**22 44 55.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.91**	**31**	P	**Pn**	**22 44 43.7**	**+0.8**
YOJ	baz=31			*e*S	**Sn**	**22 44 55.7**	**-0.1**
TWD	**Chiawan**	**0.92**	**296**	*i* P	**Pn**	**22 44 43.0**	**+0.1**
ETL	**Fush Village**	**0.93**	**301**	P	**Pn**	**22 44 43.5**	**+0.3**
NACB	**Ninganchiao**	**0.96**	**301**	*i* P	**Pn**	**22 44 43.6**	**0.0**
NACB	baz=291			S	**Sg**	**22 44 55.7**	**0.0**
ETM	**Tongmen**	**0.96**	**288**	P	**Pn**	**22 44 43.6**	**+0.1**
EGFH	**Guangfu**	**0.98**	**270**	*e*P	**Pn**	**22 44 44.4**	**+0.6**
EGFH	baz=269			*e*S	**Sg**	**22 44 57.0**	**+0.8**
ESL	**Shilin**	**0.98**	**278**	*i* P	**Pg**	**22 44 43.8**	**+0.2**
ESL	baz=277			*e*S	**Sb**	**22 44 55.9**	**-0.3**
HGSD	**Ruisui**	**1.00**	**260**	P	**Pb**	**22 44 44.3**	**+0.7**
HGSD	baz=259			S	**Sb**	**22 44 56.2**	**-0.4**
EWUT	**Wuta**	**1.01**	**319**	*e*P	**Pn**	**22 44 44.4**	**+0.2**
EWUT	baz=328			*e*S	**Sn**	**22 44 57.7**	**-0.5**
ECBN	**Changbin**	**1.02**	**250**	*i* P	**Pb**	**22 44 43.9**	**-0.1**
ECBN	baz=239			S	**Sb**	**22 44 56.7**	**-0.6**
ETLH	**Xiulin Townshi**	**1.07**	**300**	*e*P	**Pn**	**22 44 45.4**	**+0.3**
ETLH	baz=299			*e*S	**Sg**	**22 44 58.9**	**-0.2**
EHY	**Hungye**	**1.09**	**261**	P	**Pg**	**22 44 46.0**	**+0.5**
EHY	baz=260			S	**Sb**	**22 44 59.4**	**+0.2**
TWC	**Suao**	**1.10**	**328**	*e*P	**Pg**	**22 44 46.9**	**+1.2**
TWC	baz=327			S	**Sg**	**22 44 59.3**	**-0.8**
EYUL	**Yuli**	**1.13**	**253**	P	**Pn**	**22 44 46.5**	**+0.6**
EYUL	baz=246			S	**Sb**	**22 44 59.0**	**-1.3**
YULB	**Yu-li**	**1.14**	**256**	*e*P	**Pb**	**22 44 46.5**	**+0.6**
YULB	baz=248			S	**Sb**	**22 45 00.9**	**+0.4**
TWF1	**Yuli**	**1.15**	**254**	*e*P	**Pn**	**22 44 46.7**	**+0.6**
TWF1	baz=246			*e*S	**Sb**	**22 45 01.7**	**+0.8**
FULB	**Fuli**	**1.20**	**247**	P	**Pn**	**22 44 47.2**	**+0.3**
FULB	baz=237			*e*S	**Sb**	**22 45 01.4**	**-1.1**
WHF	**Hehuan Shan**	**1.22**	**293**	*i* P	**Pb**	**22 44 47.9**	**+0.3**
WHF	baz=283			S	**Sb**	**22 45 03.3**	**-0.1**
LATG	**Datong**	**1.23**	**314**	P	**Pg**	**22 44 48.5**	**+0.3**
LATG	baz=305			*e*S	**Sg**	**22 45 03.3**	**-1.0**
OWD	**Renai**	**1.24**	**283**	P	**Pb**	**22 44 48.2**	**+0.4**
OWD	baz=282			S	**Sb**	**22 45 03.6**	**-0.1**
VWDT	**VWDT**	**1.25**	**274**	P	**Pg**	**22 44 48.5**	**+0.1**
VWDT	baz=273			S	**Sb**	**22 45 03.9**	**+0.3**
HATJ	**Hateruma jima**	**1.26**	**72**	P	**Pg**	**22 44 48.9**	**+0.2**
HATJ				S	**Sn**	**22 45 04.4**	**+0.1**
NNSB	**Datong**	**1.26**	**307**	*i* P	**Pg**	**22 44 48.8**	**0.0**
NNSB	baz=306			S	**Sn**	**22 45 04.1**	**-0.6**
CHGB	**Renai**	**1.27**	**288**	P	**Pg**	**22 44 48.8**	**-0.2**
CHGB	baz=281			*e*S	**Sg**	**22 45 05.2**	**-0.4**
NNS	**Nan Shan**	**1.28**	**307**	P	**Pb**	**22 44 48.2**	**-0.1**
NNS	baz=306			*e*S	**Sb**	**22 45 03.6**	**-1.1**
FUSS	**Fushou**	**1.28**	**297**	P	**Pg**	**22 44 49.2**	**0.0**
FUSS	baz=296			*e*S	**Sb**	**22 45 04.2**	**-0.7**

TWE	**Neicheng**	**1.29 324**	*i* P	**Pg**	**22 44 49.6**	**+0.4**
	baz=324					
TWE			S	**Sg**	**22 45 05.4**	**-0.6**
	baz=324					
NDT	**Datong Townshi**	**1.29 316**	*e*P	**Pn**	**22 44 47.8**	**-0.2**
	baz=315					
EHD	**Haiduan**	**1.30 246**	*e*P	**Pn**	**22 44 47.6**	**-0.6**
	baz=239					
EHD			*e*S	**Sb**	**22 45 03.0**	**-2.2**
	baz=239					
WUSB	**Renai**	**1.30 284**	*e*P	**Pg**	**22 44 49.4**	**-0.1**
	baz=283					
WUSB			*e*S	**Sb**	**22 45 05.4**	**0.0**
	baz=283					
EDH	**Donghe**	**1.30 238**	P	**Pn**	**22 44 48.3**	**0.0**
	baz=231					
EDH			*e*S	**Sb**	**22 45 03.3**	**-1.9**
	baz=231					
IRIF	**Iriomote-Funau**	**1.30 60**	P	**Pg**	**22 44 49.5**	**-0.1**
IRIF			*e*S	**Sn**	**22 45 05.8**	**+0.3**
TWT	**Tachien**	**1.34 296**	P	**Pg**	**22 44 50.3**	**0.0**
	baz=294					
TDCB	**Techi**	**1.35 295**	*e*P	**Pg**	**22 44 50.3**	**-0.2**
	baz=294					
FUSB	**Fushanzhiwuyua**	**1.36 323**	*e*P	**Pg**	**22 44 50.9**	**+0.2**
	baz=322					
FUSB			*e*S	**Sg**	**22 45 07.1**	**-1.3**
	baz=322					
LDUT	**Ludao**	**1.38 224**	*i* P	**Pn**	**22 44 49.3**	**+0.1**
	baz=223					
LDUT			S	**Sn**	**22 45 04.7**	**-2.5**
	baz=223					
SSLB	**Suanglung**	**1.42 275**	*e*P	**Pb**	**22 44 50.8**	**+0.1**
	baz=274					
SSLB			*e*S	**Sn**	**22 45 08.4**	**+0.1**
	baz=274					
YHNB	**Yeheng**	**1.42 314**	*i* P	**Pg**	**22 44 51.5**	**-0.3**
	baz=313					
YHNB			S	**Sb**	**22 45 08.4**	**-0.4**
	baz=313					
TIPB	**Shuangxi**	**1.43 335**	*e*P	**Pg**	**22 44 51.9**	**-0.1**
	baz=334					
TIPB			*e*S	**Sb**	**22 45 08.6**	**-0.3**
	baz=334					
YUS	**Yu-Shan**	**1.43 263**	*i* P	**Pb**	**22 44 51.7**	**+0.5**
	baz=262					
NSK	**Sanguang**	**1.44 314**	P	**Pb**	**22 44 50.7**	**-0.4**
	baz=313					
NSK			*e*S	**Sn**	**22 45 07.5**	**-1.5**
	baz=313					
ELDTW	**Lidau**	**1.44 251**	*e*P	**Pn**	**22 44 50.6**	**+0.3**
	baz=249					
ELDTW			*e*S	**Sn**	**22 45 07.5**	**-1.6**
	baz=249					
LONT	**Longtian**	**1.47 239**	*e*P	**Pn**	**22 44 51.3**	**+0.7**
	baz=232					
LONT			*e*S	**Sn**	**22 45 09.0**	**-0.6**
	baz=232					
SMLT	**Sun Moon Lake**	**1.48 278**	*e*P	**Pb**	**22 44 52.0**	**+0.3**
	baz=270					
JKRS	**Kuro-shima**	**1.49 68**	P	**Pb**	**22 44 52.3**	**+0.4**
JKRS			S	**Sb**	**22 45 10.8**	**0.0**
WCS	**Beigang Elemen**	**1.50 285**	*e*P	**Pn**	**22 44 51.6**	**+0.7**
	baz=274					
WHYT	**Xinyi Township**	**1.51 271**	*e*P	**Pb**	**22 44 52.8**	**+0.5**
	baz=270					
WHYT			*e*S	**Sb**	**22 45 11.3**	**+0.1**
	baz=270					
TYC	**Yuchr**	**1.52 279**	*e*P	**Pb**	**22 44 52.7**	**+0.3**
	baz=278					
SXI1	**Grass Mountain**	**1.52 338**	P	**Pb**	**22 44 52.5**	**0.0**
	baz=338					
SXI1			*e*S	**Sb**	**22 45 10.8**	**-0.8**
	baz=338					
WHP	**Taichung City**	**1.54 293**	*e*P	**Pg**	**22 44 53.7**	**-0.4**
	baz=292					
TWA	**Mucha**	**1.54 327**	*e*P	**Pb**	**22 44 52.1**	**-0.7**
	baz=327					
TWA			*e*S	**Sg**	**22 45 13.1**	**-1.1**
	baz=327					
NHDH	**Xindian Distri**	**1.56 325**	*e*S	**Sb**	**22 45 12.6**	**-0.1**
	baz=325					
TWGBT	**Beinan**	**1.56 237**	*e*P	**Pn**	**22 44 52.3**	**+0.5**
	baz=230					
TWGBT			*e*S	**Sn**	**22 45 10.7**	**-1.1**
	baz=230					
ALS	**Alishan**	**1.56 264**	P	**Pb**	**22 44 54.0**	**+0.7**
	baz=263					
ALS			*e*S	**Sn**	**22 45 12.9**	**+0.6**
	baz=263					
NFF	**Wufeng Townshi**	**1.58 307**	*e*P	**Pb**	**22 44 53.3**	**-0.2**
	baz=300					
NFF			*e*S	**Sb**	**22 45 12.3**	**-1.0**
	baz=300					
WJS	**Zhushan**	**1.63 275**	*e*P	**Pg**	**22 44 55.4**	**-0.3**
	baz=271					
JIJ	**Ishigaki jima**	**1.65 65**	P	**Pb**	**22 44 54.2**	**-0.5**
JIJ			S	**Sn**	**22 45 13.5**	**-0.6**
STYH	**Taoyuan**	**1.66 253**	*e*S	**Sn**	**22 45 13.4**	**-0.8**
	baz=245					
LIOB	**Emei**	**1.66 306**	P	**Pg**	**22 44 56.0**	**-0.4**
	baz=297					
LIOB			*e*S	**Sb**	**22 45 15.3**	**-0.3**
	baz=297					
NSTT	**Nanjuang**	**1.66 305**	P	**Pg**	**22 44 55.8**	**-0.6**
	baz=304					
NSTT			S	**Sb**	**22 45 15.6**	**-0.2**
	baz=304					
CHN5	**Tsauling**	**1.67 268**	*e*P	**Pb**	**22 44 54.7**	**-0.4**
	baz=274					
CHN5			*e*S	**Sb**	**22 45 16.1**	**+0.1**
	baz=274					
WNT	**Mingjian**	**1.67 277**	*e*P	**Pb**	**22 44 55.8**	**+0.8**
	baz=276					
ANP	**Anpu**	**1.75 330**	*e*S	**Sb**	**22 45 17.8**	**-0.4**
	baz=342					
NSY	**Sanyi**	**1.75 295**	*e*P	**Pg**	**22 44 57.4**	**-0.7**
	baz=294					
WCKO	**Fanlu**	**1.75 263**	*e*P	**Pb**	**22 44 56.6**	**+0.2**
	baz=261					
WCKO			*e*S	**Sb**	**22 45 18.5**	**+0.2**
	baz=261					
TPUB	**Ta-pu**	**1.75 258**	P	**Pb**	**22 44 57.4**	**+0.9**
	baz=257					
TPUB			*e*S	**Sb**	**22 45 18.7**	**+0.4**
	baz=257					
ECL	**Taimali**	**1.78 233**	*e*S	**Sn**	**22 45 15.7**	**-1.6**
	baz=242					
WTP	**Ta-pu**	**1.78 256**	*e*P	**Pb**	**22 44 57.7**	**+0.8**
	baz=255					
WTP			*e*S	**Sb**	**22 45 19.6**	**+0.4**
	baz=255					
WDLH	**Douliu**	**1.79 271**	*e*P	**Pg**	**22 44 58.5**	**-0.5**
	baz=270					
LAY	**Lan-yu**	**1.85 208**	P	**Pn**	**22 44 55.5**	**-0.3**
	baz=208					
LAY			*e*S	**Sn**	**22 45 16.2**	**-2.8**
	baz=208					
SGST	**Jiashian**	**1.85 252**	P	**Pb**	**22 44 59.2**	**+1.1**
	baz=243					
SGST			*e*S	**Sb**	**22 45 21.8**	**+0.5**
	baz=243					
LYUB	**Lan-yu**	**1.87 207**	P	**Pn**	**22 44 55.6**	**-0.4**
	baz=207					
LYUB			*e*S	**Sn**	**22 45 17.0**	**-2.4**
	baz=207					
CHN1	**Nanshi**	**1.87 255**	*e*P	**Pb**	**22 44 59.5**	**+1.0**
	baz=254					
CHN1			*e*S	**Sb**	**22 45 22.9**	**+1.1**
	baz=254					
JISG	**Ishigakijimahi**	**1.89 61**	P	**Pn**	**22 44 57.2**	**+0.9**
JISG			S	**Sn**	**22 45 19.7**	**-0.2**
TWK	**Hsinying**	**1.89 258**	*e*P	**Pb**	**22 44 59.4**	**+0.6**
	baz=257					
TWK			*e*S	**Sb**	**22 45 22.6**	**+0.3**
	baz=257					
SNST	**Tainan City**	**1.89 256**	*e*P	**Pg**	**22 45 01.1**	**+0.3**
	baz=255					
SNST			*e*S	**Sb**	**22 45 24.4**	**+2.2**
	baz=255					
WRL	**Guolierlin Hig**	**1.95 277**	*e*P	**Pb**	**22 44 59.2**	**-0.6**
	baz=276					
WRL			*e*S	**Sb**	**22 45 23.0**	**-1.1**
	baz=276					
TSMG	**Majia**	**1.96 241**	*e*P	**Pb**	**22 45 00.7**	**+0.8**
	baz=235					
EAST	**Anshuo**	**1.99 230**	*e*P	**Pn**	**22 44 58.9**	**+1.2**
	baz=237					
EAST			*e*S	**Sn**	**22 45 18.8**	**-3.8**
	baz=237					
TAWH	**Dawu Township**	**1.99 228**	*e*P	**Pn**	**22 44 57.8**	**+0.1**
	baz=236					
MASBT	**Mashibuluo**	**2.02 239**	*e*P	**Pn**	**22 44 59.5**	**+1.4**
	baz=232					
ICHU	**Yijhu**	**2.06 262**	*e*P	**Pb**	**22 45 01.6**	**-0.1**
	baz=260					
ICHU			*e*S	**Sb**	**22 45 27.0**	**-0.1**
	baz=260					
WSL	**Shuilin Townsh**	**2.09 266**	*e*P	**Pn**	**22 45 00.6**	**+1.6**
	baz=265					
WSL			*e*S	**Sn**	**22 45 26.6**	**+1.8**
	baz=265					
CHN8	**Yiju**	**2.12 262**	*e*P	**Pb**	**22 45 02.4**	**-0.4**
	baz=260					
CHN8			*e*S	**Sb**	**22 45 28.6**	**-0.3**
	baz=260					
SCZT	**Fangliau**	**2.16 233**	*e*P	**Pb**	**22 45 02.7**	**-0.7**
	baz=233					
JTJ	**Tarama**	**2.23 64**	P	**Pn**	**22 45 02.5**	**+1.5**
JTJ			S	**Sn**	**22 45 28.2**	**-0.1**
SMST	**Manzhou Townsh**	**2.25 223**	*e*P	**Pn**	**22 45 02.7**	**+1.4**
	baz=230					
SMST			*e*S	**Sn**	**22 45 28.8**	**0.0**
	baz=230					
TSCK	**Chigu Township**	**2.28 257**	*e*P	**Pn**	**22 45 03.5**	**+1.9**
	baz=256					
TSCK			*e*S	**Sn**	**22 45 31.0**	**+1.5**
	baz=256					
TWKBT	**Hengchun**	**2.32 222**	*e*P	**Pb**	**22 45 06.2**	**0.0**
	baz=222					
TWKBT			*e*S	**Sn**	**22 45 32.1**	**+1.4**
	baz=222					
TWK1	**Hengchun**	**2.33 222**	*e*P	**Pn**	**22 45 04.3**	**+1.9**
	baz=222					
TWK1			*e*S	**Sn**	**22 45 32.5**	**+1.7**
	baz=222					
PHUB	**P'eng-hu**	**2.69 267**	P	**Pn**	**22 45 09.6**	**+2.3**
	baz=266					
PHUB			S	**Sn**	**22 45 40.1**	**+0.5**
	baz=266					
VWUC	**VWUC**	**3.07 296**	*e*P	**Pn**	**22 45 13.9**	**+1.3**
	baz=295					

ECX ***11*** *22:53:56.9±0.5, 29°.56N×113°.81W, h3km±7km, ML3.4*
MEX ***11*** *22:54:00.7±0.5, 29°.35N×113°.78W, h4km±14km, MD4.1*
ISC 11 22:53:55.5±1.1, 29°.55N±0°.03×113°.82W±0°.03, h9km±12km, n27, σ1°13/38, 5C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGB	**San Luis Gonza**	**0.58**	**299**	⇑*i*P	**Pb**	**22 54 07.9**	**0.0**
SLGB				*e*S	**Sg**	**22 54 15.3**	**+1.0**
SLGB	**San Luis Gonza**	**0.58**	**299**	⇑*i*P	**Pb**	**22 54 07.9**	**0.0**
SLGB				*e*S	**Sg**	**22 54 15.3**	**+1.0**
BAHB	**Baha de los**	**0.64**	**159**	*e*P	**Pb**	**22 54 09.2**	**+0.2**
BAHB				*e*S	**Sg**	**22 54 15.4**	**-1.0**
BAHB	**Baha de los**	**0.64**	**159**	*e*P	**Pg**	**22 54 08.3**	**+0.3**
BAHB				*e*S	**Sb**	**22 54 17.7**	**-0.3**
BAHB				IAML		22 54 21.6	
	comp=N,2μm,0.6s						
BAHB	**Baha de los**	**0.64**	**159**	*e*P	**Pg**	**22 54 08.3**	**+0.3**
BAHB				*e*S	**Sb**	**22 54 17.7**	**-0.3**
BAHB				IAML		22 54 21.6	
	comp=N,2μm,0.6s						
PLIB	**Puerto Liberta**	**1.05**	**69**	*e*P	**Pb**	**22 54 14.6**	**-1.3**
PLIB				*e*S	**Sb**	**22 54 29.2**	**-0.5**
PLIB	**Puerto Liberta**	**1.05**	**69**	*e*P	**Pb**	**22 54 14.6**	**-1.3**
PLIB				*e*S	**Sb**	**22 54 29.2**	**-0.5**
SFQB	**San Francisqui**	**1.42**	**143**	*e*P	**Pn**	**22 54 21.1**	**-0.4**
SFQB	**San Francisqui**	**1.42**	**143**	*e*P	**Pn**	**22 54 21.1**	**-0.4**
LAPR	**La Primavera**	**1.61**	**54**	*e*P	**Pg**	**22 54 27.4**	**+0.9**
LAPR				*e*S	**Sg**	**22 54 49.1**	**+1.6**
LAPR	**La Primavera**	**1.61**	**54**	*e*P	**Pn**	**22 54 24.5**	**+0.3**
LAPR	**La Primavera**	**1.61**	**54**	*e*P	**Pn**	**22 54 24.5**	**+0.3**
SFX	**San Felipe**	**1.73**	**329**	*e*P	**Pb**	**22 54 27.3**	**-0.2**
SFX				*e*		22 55 00.9	
SFX				IAML		22 55 00.9	
	comp=E,298nm,0.7s						
SFX	**San Felipe**	**1.73**	**329**	*e*P	**Pb**	**22 54 27.3**	**-0.2**
SFX				*e*		22 55 00.9	
SFX				IAML		22 55 00.9	
	comp=E,298nm,0.7s						
PIX	**Pinacate**	**2.03**	**9**	*e*P	**Pb**	**22 54 31.9**	**-0.7**
PIX	**Pinacate**	**2.03**	**9**	*e*P	**Pb**	**22 54 31.9**	**-0.7**
SQX	**San Quintin**	**2.06**	**301**	*e*P	**Pb**	**22 54 32.1**	**-1.0**
SQX	**San Quintin**	**2.06**	**301**	*e*P	**Pb**	**22 54 32.1**	**-1.0**
SQX				IAML		22 55 02.3	
	comp=E,2μm,0.6s						
SQX				⇓*e*		22 55 02.3	
SQX				⇑*e*		22 55 03.2	
SQX				IAML		22 55 03.2	
	comp=N,3μm,0.5s						
SPIG	**San Pedro Mart**	**2.06**	**317**	*e*P	**Pg**	**22 54 35.7**	**+0.6**
SPIG				*e*S	**Sg**	**22 55 02.1**	**+0.2**
SPIG	**San Pedro Mart**	**2.06**	**317**	*e*P	**Pn**	**22 54 31.7**	**+1.0**
SPIG				*e*S	**Sb**	**22 55 00.3**	**+1.1**
SPIG	**San Pedro Mart**	**2.06**	**317**	*e*P	**Pn**	**22 54 31.7**	**+1.0**
SPIG				*e*S	**Sb**	**22 55 00.3**	**+1.1**
VTX	**Valle De La Tr**	**2.50**	**318**	IAML		22 55 26.7	
	comp=E,176nm,1.6s						
VTX				⇑*e*		22 55 26.7	
VTX	**Valle De La Tr**	**2.50**	**318**	⇑*e*		22 55 26.7	
VTX				IAML		22 55 26.7	
	comp=E,176nm,1.6s						
214A	**Organ Pipe Nat**	**2.56**	**20**	*e*P	**Pb**	**22 54 41.7**	**+0.1**
214A				*e*S	**Sg**	**22 55 16.8**	**-0.9**
CBX	**Cerro Bola**	**3.68**	**319**	*e*P	**Pg**	**22 55 04.0**	**-2.2**
CBX				*e*S	**Sg**	**22 55 50.4**	**-3.4**
NOVRB	**El Novillo Son**	**3.70**	**98**	*e*P	**Pn**	**22 54 54.8**	**+1.9**
NOVRB	**El Novillo Son**	**3.70**	**98**	*e*P	**Pn**	**22 54 54.8**	**+1.9**

IDC ***11*** *22:57:01.2±4.8, 36°.19N×71°.30E, h55km±34km, mb3.6/5, mbtmp3.8/11, ML3.6/6, Error ellipse: s-maj=49.3km s-min=20.3km az=148.0*
NNC ***11*** *22:57:09.8±3.4, 36°.94N×70°.04E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=36.2km s-min=22.7km az=113.0*
ISC 11 22:57:02.1±0.8, 36°.28N±0°.07×71°.20E±0°.07, h50km, n32, σ1°76/35, mb3.8/4, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.36**	**135**	*e*P	Pn	22 58 25.0	+5.6
THN				*e*S	**Sn**	**22 59 22.5**	**+2.7**
AML	**Almayashu**	**6.15**	**18**	P	**Pn**	**22 58 33.3**	**+2.6**
	SNR=21						
UCH	**Uchtor**	**6.47**	**22**	P	**Pn**	**22 58 37.3**	**+2.2**
	SNR=15						
EKS2	**Erkin-Say**	**6.67**	**17**	P	**Pn**	**22 58 40.2**	**+2.6**
	SNR=22						
KK31	**Karatay Array**	**6.83**	**356**	P	**Pn**	**22 58 41.9**	**+2.2**
	4.8nm,0.3s,baz=173,slow=11,SNR=127						
KK31				S	**Sn**	**22 59 54.9**	**-1.2**
	2.9nm,0.3s,baz=188,slow=24,SNR=6.6						
AAK	**Ala-Archa**	**6.84**	**21**	P	**Pn**	**22 58 42.5**	**+2.7**
	SNR=22						
AAK	**Ala-Archa**	**6.84**	**21**	P	**Pn**	**22 58 41.6**	**+1.7**
	6.7nm,0.3s,baz=170,slow=6.4,SNR=49						
AAK				S	**Sn**	**22 59 55.7**	**-0.7**
	4.7nm,0.4s,baz=117,slow=22,SNR=8.7						
	15nm,0.3s						
KBK	**Karagaybulak**	**6.99**	**23**	P	**Pn**	**22 58 44.6**	**+2.6**
	SNR=5.8						
CHMS	**Chumysh**	**7.24**	**21**	P	**Pn**	**22 58 47.5**	**+2.1**
	SNR=7.4						
USP	**Ospenovka**	**7.42**	**19**	P	**Pn**	**22 58 49.5**	**+1.7**
	SNR=15						
TKM2	**Tokmak 2**	**7.45**	**26**	P	**Pn**	**22 58 50.7**	**+2.4**
	SNR=29						
GEYT	**Alibeck**	**10.58**	**283**	P	**Pn**	**22 59 33.3**	**+2.3**
	0.3nm,0.3s,baz=97,slow=12,SNR=2.9						
GEYT				S	**Sn**	**23 01 27.2**	**-0.9**
	1.5nm,0.5s,baz=126,slow=20,SNR=3.4						
	0.6nm,0.3s						
PYUN	**Piuthan**	**12.88**	**126**	*e*P	**Pn**	**23 00 02.5**	**-0.2**
	6.2nm,0.2s						
DANN	**Dangsing**	**13.23**	**123**	*e*P	**Pn**	**23 00 05.8**	**-1.7**
	5.9nm,0.3s						
MKAR	**Makanchi Array**	**13.37**	**35**	P	**Pn**	**23 00 09.4**	**+0.3**
	0.1nm,0.3s,baz=225,slow=12,SNR=4.1						
	0.5nm,0.6s						
GKN	**Gorkha**	**14.05**	**122**	*e*P	**Pn**	**23 00 17.0**	**-1.5**
	11nm,0.4s						
DMN	**Daman**	**14.62**	**122**	*e*P	**Pn**	**23 00 24.5**	**-1.7**
	4.2nm,0.4s						
PKIN	**Phulchoki**	**14.84**	**122**	*e*P	**Pn**	**23 00 27.9**	**-1.2**
	5.3nm,0.4s						
PKI	**Pulchoki**	**14.85**	**122**	*e*P	**Pn**	**23 00 27.5**	**-1.8**
KURBB	**Kurchatov Arra**	**15.28**	**18**	P	**Pn**	**23 00 33.2**	**-1.1**
	0.1nm,0.3s,baz=208,slow=10,SNR=4.2						
	1.5nm,0.8s						
JIRN	**Jiri**	**15.34**	**120**	*e*P	**Pn**	**23 00 33.2**	**-2.4**
	5.3nm,0.3s						
AB31	**Akbulak array**	**15.35**	**331**	P	**Pn**	**23 00 33.9**	**-1.5**
	0.7nm,0.3s,baz=137,slow=12,SNR=69						
AB31				S	Sn	23 03 14.3	-10
	0.8nm,0.5s,baz=150,slow=24,SNR=4.8						
RAMN	**Ramite**	**16.06**	**121**	*e*P	**Pn**	**23 00 43.9**	**-0.9**
	2.9nm,0.4s						
BVAR	**Borovoye Array**	**16.75**	**358**	P	**Pn**	**23 00 52.1**	**-0.9**
	0.2nm,0.3s,baz=170,slow=11,SNR=5.1						
	0.7nm,0.6s						
AKTO	**Aktyubinsk**	**17.05**	**330**	P	**Pn**	**23 00 56.9**	**+0.1**
	0.7nm,0.3s,baz=130,slow=7.6,SNR=14						
	2.0nm,0.4s						
AKTO	**Aktyubinsk**	**17.05**	**330**	⇑P	**P**	**23 00 57.9**	**-0.1**
	1.4nm,0.4s						
ZALV	**Zalesovo Beam**	**20.05**	**24**	P	**P**	**23 01 29.2**	**-1.5**
	3.5nm,0.4s,baz=209,slow=10,SNR=21						
	3.5nm,0.4s						
FINES	**FINESS Array B**	**37.76**	**326**	P	**P**	**23 04 13.4**	**+0.6**
	0.7nm,0.4s,baz=124,slow=10,SNR=6.7						
	0.7nm,0.4s						
ARCES	**ARCESS Array B**	**41.41**	**338**	P	**P**	**23 04 43.3**	**+0.2**
	5.7nm,1.0s,baz=117,slow=9.4,SNR=2.1						
	5.7nm,1.0s						
NB2	**NORSAR Subarra**	**44.65**	**323**	P	**P**	**23 05 09.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**23 05 09.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=107,slow=7.1,SNR=5.0						
	comp=Z,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	**P**	**23 07 40.8**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=43,slow=6.6,SNR=7.0						
	comp=Z,0.3nm,0.6s						

SOME ***11*** *23:04:01.1, 40°.92N×78°.35E, h10km*
KRNET ***11*** *23:04:02.3±0.1, 40°.79N×78°.47E, mb2.8*
NNC ***11*** *23:04:03.5±1.0, 40°.94N×78°.30E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=6.9km s-min=5.7km az=5.0*
ISC 11 23:04:05.3±2.1, 40°.89N±0°.10×78°.36E±0°.05, h10km, n44, σ1°85/70, 16C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.93**	**334**	⇓*i*P	**Pg**	**23 04 22.5**	**-0.9**
TARG				⇓*i*S	**Sb**	**23 04 37.0**	**+0.5**
	baz=32						
NRN	**Naryn**	**1.86**	**288**	⇑*i*P	**Pb**	**23 04 38.0**	**-1.6**
NRN				⇑*i*S	**Sg**	**23 05 04.4**	**-0.8**
	baz=89						
ANVS	**Anan'yevo**	**1.96**	**345**	⇓*i*P	**Pb**	**23 04 39.5**	**-1.7**
ANVS				⇓*i*S	**Sb**	**23 05 06.7**	**+0.9**
	baz=43						
ULHL	**Ulahol**	**2.08**	**311**	⇑*i*P	**Pb**	**23 04 41.5**	**-1.9**
ULHL				⇑*i*S	**Sb**	**23 05 09.7**	**+0.3**
	baz=12						
SATY	**Saty**	**2.17**	**1**	*e*P	**Pb**	**23 04 42.5**	**-2.2**
SATY				*e*S	**Sb**	**23 05 12.4**	**+0.7**
	43nm,0.4s						
SATY	**Saty**	**2.17**	**1**	Pg	**Pb**	**23 04 42.5**	**-2.2**
SATY				Lg	Lg	23 05 12.4	
	43nm,0.4s						
ZHN	**Zhinishke**	**2.27**	**1**	*e*P	**Pb**	**23 04 44.1**	**-2.4**
ZHN				*e*S	**Sb**	**23 05 15.1**	**+0.3**
	64nm,0.5s						
ZHN	**Zhinishke**	**2.27**	**1**	Pg	**Pb**	**23 04 44.1**	**-2.4**
ZHN				Lg	Lg	23 05 15.1	
	64nm,0.5s						
UZB	**Uzynbulak**	**2.31**	**12**	*e*P	**Pn**	**23 04 44.4**	**+0.8**
UZB				*e*S	**Sb**	**23 05 15.5**	**-0.3**
	19nm,0.7s						
UZB	**Uzynbulak**	**2.31**	**12**	Pg	**Pn**	**23 04 44.4**	**+0.8**
UZB				Lg	Lg	23 05 15.5	
	19nm,0.7s						
SHLS	**Shalkode**	**2.41**	**20**	*e*P	**Pb**	**23 04 48.1**	**-0.7**
SHLS				*e*S	**Sg**	**23 05 21.9**	**-0.8**
	3.8nm,0.2s						
	20nm,0.4s						
SHLS	**Shalkode**	**2.41**	**20**	Pg	**Pb**	**23 04 48.1**	**-0.7**
SHLS				Lg	Lg	23 05 21.9	
	3.8nm,0.2s						
	20nm,0.4s						
BOOM	**Boomskoye usch**	**2.41**	**312**	⇑*i*P	**Pb**	**23 04 46.1**	**-2.9**
BOOM				⇑*i*S	**Sb**	**23 05 17.7**	**-1.1**
	baz=13						
MDOK	**Medeo**	**2.47**	**337**	*e*P	**Pb**	**23 04 47.3**	**-2.6**
MDOK				*e*S	**Sb**	**23 05 20.9**	**+0.5**
	11nm,0.3s						
	20nm,0.7s						
MDOK	**Medeo**	**2.47**	**337**	Pn	**Pn**	**23 04 45.8**	**0.0**
	6.8nm,0.4s						
MDOK				Pg	**Pb**	**23 04 47.3**	**-2.6**
	11nm,0.3s						
MDOK				⇑Lg	Lg	23 05 20.2	
	31nm,0.8s						
MDOK				Lg	Lg	23 05 20.9	
	20nm,0.7s						
KOTS	**Kotyrbulak**	**2.52**	**339**	*e*P	**Pb**	**23 04 48.7**	**-2.0**
	15nm,0.1s						
KOTS				*e*S	**Sb**	**23 05 23.3**	**+1.5**
	43nm,0.6s						
KOTS	**Kotyrbulak**	**2.52**	**339**	Pg	**Pb**	**23 04 48.7**	**-2.0**
	15nm,0.1s						
KOTS				Lg	Lg	23 05 23.3	
	43nm,0.6s						
KNDC	**Almaty**	**2.54**	**336**	⇓Lg	Lg	23 05 22.8	
	47nm,0.6s						
PDGK	**Podgornoye**	**2.58**	**19**	⇓Pn	**Pn**	**23 04 46.8**	**-0.4**
	7.4nm,0.7s						
PDGK				⇑Lg	Lg	23 05 24.2	
	30nm,0.5s						
KPKS	**Kokpek**	**2.58**	**5**	*e*P	**Pb**	**23 04 49.3**	**-2.5**
KPKS				*e*S	**Sb**	**23 05 23.7**	**+0.1**
	5.8nm,0.1s						
	69nm,0.4s						
KPKS	**Kokpek**	**2.58**	**5**	Pg	**Pb**	**23 04 49.3**	**-2.5**
	5.8nm,0.1s						
KPKS				Lg	Lg	23 05 23.7	
	69nm,0.4s						
KURS	**Kuram**	**2.60**	**357**	*e*P	**Pb**	**23 04 50.1**	**-1.9**
KURS				*e*S	**Sb**	**23 05 25.3**	**+1.3**
	11nm,0.5s						
	17nm,0.6s						
KURS	**Kuram**	**2.60**	**357**	Pg	**Pb**	**23 04 50.1**	**-1.9**
	11nm,0.5s						
KURS				Lg	Lg	23 05 25.3	
	17nm,0.6s						
MTBS	**Maitube**	**2.66**	**328**	*e*P	**Pb**	**23 04 50.5**	**-2.6**
MTBS				*e*S	**Sb**	**23 05 26.0**	**+0.2**
	3.9nm,0.2s						
	25nm,0

KTBS	**Karatobe**	**3.08 337**	*e*P	**Pb**	**23 04 58.1**	**-2.1**
	6.4nm,0.4s					
KTBS			*e*S	**Sb**	**23 05 39.5**	**+1.7**
	27nm,0.3s					
KTBS	**Karatobe**	**3.08 337**	Pg	**Pb**	**23 04 58.1**	**-2.1**
	6.4nm,0.4s					
KTBS			Lg	Lg	23 05 39.5	
	27nm,0.3s					
KBK	**Karagaybulak**	**3.10 306**	⇑*i*P	**Pn**	**23 04 55.7**	**+1.2**
	baz=6.0					
KBK			⇑*i*S	**Sn**	**23 05 34.2**	**+2.5**
	baz=6.0					
CHKK	**Chushkaly**	**3.13 342**	*e*P	**Pb**	**23 04 58.9**	**-2.2**
	7.3nm,0.4s					
CHKK			*e*S	**Sb**	**23 05 40.8**	**+1.6**
	17nm,0.3s					
CHKK	**Chushkaly**	**3.13 342**	Pg	**Pb**	**23 04 58.8**	**-2.2**
	7.3nm,0.4s					
CHKK			Lg	Lg	23 05 40.8	
	17nm,0.3s					
UCH	**Uchtor**	**3.18 296**	⇑*i*P	**Pn**	**23 04 56.6**	**+0.8**
	baz=97					
UCH			⇑*i*S	**Sn**	**23 05 36.2**	**+2.2**
	baz=97					
ARLS	**Aral**	**3.19 289**	⇑*i*P	**Pn**	**23 04 56.1**	**+0.4**
	baz=90					
ARLS			⇑*i*S	**Sn**	**23 05 36.0**	**+2.2**
	baz=90					
KUU	**Kurty**	**3.35 334**	*e*P	**Pb**	**23 05 02.1**	**-2.7**
	3.2nm,0.4s					
KUU			*e*S	**Sb**	**23 05 45.8**	**+0.2**
	14nm,0.7s					
KUU	**Kurty**	**3.35 334**	Pg	**Pb**	**23 05 02.1**	**-2.7**
	3.2nm,0.4s					
KUU			Lg	Lg	23 05 45.8	
	14nm,0.7s					
AAK	**Ala-Archa**	**3.38 302**	⇓*i*P	**Pn**	**23 04 59.1**	**+0.9**
	baz=3.0					
AAK			⇓*i*S	**Sn**	**23 05 40.9**	**+2.5**
	baz=3.0					
KRBS	**Karabastau**	**3.44 326**	*e*P	**Pb**	**23 05 04.1**	**-2.2**
	1.5nm,0.3s					
KRBS			*e*S	**Sb**	**23 05 49.2**	**+1.0**
	7.6nm,0.5s					
KRBS	**Karabastau**	**3.44 326**	Pg	**Pb**	**23 05 04.1**	**-2.2**
	1.5nm,0.3s					
KRBS			Lg	Lg	23 05 49.2	
	7.6nm,0.5s					
DJR	**Jarkent**	**3.60 17**	*e*P	**Pb**	**23 05 07.5**	**-1.5**
	1.4nm,0.2s					
DJR			*e*S	**Sb**	**23 05 55.0**	**+2.3**
	14nm,0.4s					
DJR	**Jarkent**	**3.60 17**	Pg	**Pb**	**23 05 07.5**	**-1.5**
	1.4nm,0.2s					
DJR			Lg	Lg	23 05 55.0	
	14nm,0.4s					
BTLS	**Baital**	**5.21 324**	*e*P	**Pb**	**23 05 35.6**	**-0.9**
	0.7nm,0.2s					
BTLS			*e*S	**Sb**	**23 06 43.3**	**+4.1**
	2.3nm,0.6s					
BTLS	**Baital**	**5.21 324**	Pg	**Pb**	**23 05 35.7**	**-0.9**
	0.7nm,0.2s					
BTLS			Lg	Lg	23 06 43.3	
	2.3nm,0.6s					

BJI ***11*** *23:05:29.8±0.0, 34°.36N×140°.25E, h65km, mb4.6/29, mB4.6/12, Ms4.1/3, Ms7 3.9/3*
MOS ***11*** *23:05:30.7±0.9, 34°.05N×140°.24E, h85km, mb4.6/19, Error ellipse: s-maj=12.0km s-min=6.0km az=117.2*
JMA ***11*** *23:05:32.0±0.2, 34°.2N±0°.6×140°.3E±0°.7, h63km±2km, MD4.4/34, MW4.4/34, FAR S OFF BOSO PENINSULA*
JMA Felt II J1 at FAR S OFF BOSO PENINSULA.
NIED ***11*** *23:05:32.0, 34°.23N×140°.31E, h63km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.89; Mθθ0.34; Mφφ-2.24; Mrθ0.69; Mθφ-1.11; Mφr-2.04; Fault plane solution: M₀3.19000×10¹⁵ NP1:φs48.00000°, δ34.00000°, λ139.00000°. NP2:φs174.00000°, δ69.00000°, λ63.00000°.*
NEIC ***11*** *23:05:32.6±1.4, 34°.20N±0°.05×140°.3E±0°.1, h77km±7km, mb4.8/77 Error ellipse: s-maj=12.4km s-min=6.4km az=100.0*
IDC ***11*** *23:05:32.6±0.5, 34°.12N×140°.23E, h83km±4km, mb4.0/26, mbtmp4.4/30, MS2.9/3, Error ellipse: s-maj=10.6km s-min=5.8km az=87.0*
ISC 11 23:05:30.8±0.4, 34°.18N±0°.03×140°.33E±0°.04, h64km±3km, h65km:pP-P, n407, σ1$49/407, mb4.7/93, 11C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.64**	**13**	*i*P	**Pn**	**23 05 45.7**	**+1.3**
JMYK	**Miyake Tsubota**	**0.66**	**260**	*i*P	**Pn**	**23 05 46.1**	**+1.3**
JMYK				*e*S	**Sn**	**23 05 57.0**	**+1.9**
JMYK	**Miyake Tsubota**	**0.66**	**260**	A	A	23 05 46.1	
	comp=E,55nm,0.5s,comp=E,53nm,0.2s						
JMKN	**Mikurajimanish**	**0.68**	**246**	*i*P	**Pn**	**23 05 46.2**	**+1.2**
JMKN				*e*S	**Sn**	**23 05 56.9**	**+1.4**
JMKN	**Mikurajimanish**	**0.68**	**246**	A	A	23 05 46.2	
	comp=E,50nm,0.4s,comp=E,44nm,0.3s						
BSO1	**Boso 1**	**0.72**	**48**	⇓*i*P	**Pn**	**23 05 46.2**	**+1.2**
BSO4	**Boso 4**	**0.81**	**0**	*i*P	**Pn**	**23 05 48.0**	**+1.4**
JNIO	**Niijimaoohara**	**0.89**	**282**	*i*P	**Pn**	**23 05 48.6**	**+1.0**
JNIO				*e*S	**Sn**	**23 06 00.7**	**+0.5**
JNIO	**Niijimaoohara**	**0.89**	**282**	A	A	23 05 48.6	
	comp=E,57nm,1.6s,comp=E,62nm,1.0s						
JIM2	**Oshima 3**	**0.92**	**306**	⇓*i*P	**Pn**	**23 05 48.6**	**+0.6**
JIM2	**Oshima 3**	**0.92**	**306**	A	A	23 05 48.6	
	comp=E,57nm,0.6s,comp=E,74nm,0.3s						
JTHY	**Toshimahigashi**	**0.93**	**292**	*i*P	**Pn**	**23 05 49.3**	**+1.1**
JTHY				*e*S	**Sn**	**23 06 01.9**	**+0.9**
JTHY	**Toshimahigashi**	**0.93**	**292**	A	A	23 05 49.3	
	comp=E,53nm,0.9s,comp=E,42nm,1.6s						
JSKK	**Shikinejimakit**	**0.94**	**280**	A	A	23 05 49.2	
	comp=E,48nm,0.4s,comp=E,34nm,0.8s						
JKUC	**kamogawauchiur**	**0.99**	**354**	A	A	23 05 49.4	
	comp=E,21nm,0.5s,comp=E,14nm,0.7s						
JKO	**Kozu shima**	**0.99**	**271**	*i*P	**Pn**	**23 05 50.0**	**+1.1**
JKO				*e*S	**Sn**	**23 06 03.4**	**+1.1**
JKO	**Kozu shima**	**0.99**	**271**	A	A	23 05 50.0	
	comp=E,54nm,0.8s,comp=E,38nm,1.2s						
JHJ2	**Mitsune**	**1.14**	**202**	Pn	**Pn**	**23 05 52.3**	**+1.4**
JHJ2				Sn	**Sn**	**23 06 07.8**	**+2.0**
JHJ2	**Mitsune**	**1.14**	**202**	*i*P	**Pn**	**23 05 52.3**	**+1.4**
JHJ2				S	**Sn**	**23 06 08.1**	**+2.3**
JHJ2	**Mitsune**	**1.14**	**202**	A	A	23 05 52.3	
	comp=E,15nm,0.7s,comp=E,14nm,0.3s						
JHJ	**Hachijo jima 2**	**1.15**	**204**	P	**Pn**	**23 05 52.3**	**+1.4**
	3μm,0.3s,baz=32,slow=2.3,SNR=345						
JHJ				S	**Sn**	**23 06 07.8**	**+1.9**
	5μm,0.3s,baz=255,slow=21,SNR=23						
JHJ				LR	LR	23 06 23.5	
	comp=Z,900nm,18.7s,baz=60,slow=48						
JYO	**Yokosk**	**1.18**	**333**	A	A	23 05 52.1	
	comp=E,51nm,0.3s,comp=E,22nm,0.3s						
KTJ3	**Kamata3**	**1.29**	**306**	⇓*i*P	**Pn**	**23 05 53.2**	**+0.5**
KTJ3				⇓S	**Sn**	**23 06 09.2**	**0.0**
JIZS	**Izushimoda**	**1.32**	**295**	⇓*i*P	**Pn**	**23 05 54.2**	**+1.0**
JIZS	**Izushimoda**	**1.32**	**295**	A	A	23 05 54.2	
	comp=E,17nm,0.8s,comp=E,9.0nm,1.4s						
JHTM	**Izuhatsuma**	**1.34**	**306**	A	A	23 05 54.4	
	comp=E,23nm,1.5s,comp=E,21nm,1.3s						
JOD2	**Odawara 2**	**1.49**	**317**	⇓*i*P	**Pn**	**23 05 56.1**	**+0.5**
JOD2				⇓S	**Sn**	**23 06 14.2**	**0.0**
JOD2	**Odawara 2**	**1.49**	**317**	A	A	23 05 56.1	
	comp=E,7.0nm,1.4s,comp=E,7.0nm,1.0s						
TOK	**Tokyo**	**1.58**	**343**	A	A	23 05 57.5	
	comp=E,40nm,0.5s,comp=E,31nm,0.3s						
JFNN	**Fujinakano**	**1.70**	**307**	⇓*i*P	**Pn**	**23 05 59.8**	**+1.6**
JFNN	**Fujinakano**	**1.70**	**307**	A	A	23 05 59.8	
	comp=E,11nm,2.6s,comp=E,11nm,1.2s						
JSGW	**Sagamiharawaka**	**1.70**	**327**	A	A	23 05 59.1	
	comp=E,6.0nm,0.9s,comp=E,6.0nm,0.6s						
JAOM	**Aogashimamukai**	**1.77**	**196**	*i*P	**Pn**	**23 06 01.4**	**+2.1**
JAOM				*e*S	**Sn**	**23 06 23.3**	**+2.5**
JHU	**Hanno**	**1.88**	**333**	A	A	23 06 01.8	
	comp=E,3.0nm,1.5s,comp=E,4.0nm,1.2s						
SHZ3	**Shizuoka 3**	**1.96**	**298**	A	A	23 06 03.1	
	comp=E,2.0nm,2.0s,comp=E,3.0nm,4.0s						
JYT	**Yasato**	**2.05**	**357**	Pn	**Pn**	**23 06 02.8**	**-0.2**
JYT				Sn	**Sn**	**23 06 27.0**	**-0.5**
JYT	**Yasato**	**2.05**	**357**	A	A	23 06 04.2	
	comp=E,5.0nm,0.4s,comp=E,4.0nm,0.3s						
JNY	**Yasuok**	**2.35**	**301**	A	A	23 06 08.6	
	comp=E,3.0nm,1.0s,comp=E,3.0nm,1.2s						
JGK	**Kuni**	**2.75**	**330**	A	A	23 06 14.0	
	comp=E,3.0nm,0.6s,comp=E,3.0nm,3.2s						
JGF	**Kuroka**	**2.83**	**301**	Pn	**Pn**	**23 06 16.4**	**+2.7**
MJAR	**Matsushiro Arr**	**2.93**	**324**	P	**Pn**	**23 06 17.1**	**+2.0**
	120nm,0.4s,baz=159,slow=13,SNR=386						
MJAR				S	**Sn**	**23 06 50.6**	**+1.5**
	161nm,0.4s,baz=123,slow=23,SNR=14						
MAJO	**Matsushiro**	**2.93**	**324**	Pn	**Pn**	**23 06 17.1**	**+2.1**
MAJO	**Matsushiro**	**2.93**	**324**	⇓*i*P	**Pn**	**23 06 17.3**	**+2.3**
MJB9	**Matsu-Tunnel**	**2.94**	**324**	Pn	**Pn**	**23 06 16.9**	**+1.8**
INU	**Inuyama**	**2.97**	**294**	Pn	**Pn**	**23 06 17.9**	**+2.3**
JMM	**Marumori**	**3.70**	**6**	Pn	**Pn**	**23 06 25.3**	**-0.3**
JSD	**Sado**	**4.20**	**337**	Pn	**Pn**	**23 06 33.1**	**+0.8**
JMN	**Monobe**	**5.38**	**267**	Pn	**Pn**	**23 06 50.6**	**+2.0**
JHS	**Saijyo**	**6.01**	**280**	Pn	**Pn**	**23 06 59.9**	**+2.8**
JTM	**Tenmabayashi**	**6.63**	**5**	Pn	**Pn**	**23 07 04.3**	**-1.2**
JCJ	**Chichijima**	**7.23**	**167**	P	**Pn**	**23 07 13.4**	**-0.5**
	35nm,0.4s,baz=214,slow=22,SNR=9.0						
JCJ				S	**Sn**	**23 08 28.4**	**-6.2**
	38nm,0.4s,baz=285,slow=20,SNR=2.1						
JCJ				LR	LR	23 09 41.6	
	comp=Z,47nm,20.0s,baz=336,slow=35						
JCJ	**Chichijima**	**7.23**	**167**	Pn	**Pn**	**23 07 12.0**	**-1.9**
ERM	**Erimo**	**8.14**	**15**	Pn	**Pn**	**23 07 23.3**	**-2.8**
ERM	**Erimo**	**8.14**	**15**	P	**Pn**	**23 07 24.7**	**-1.5**
JEW	**Eniwo**	**8.70**	**5**	Pn	**Pn**	**23 07 32.3**	**-1.5**
KSRS	**Korea Array**	**10.59**	**292**	P	**Pn**	**23 08 02.5**	**+2.8**
	13nm,0.9s,baz=108,slow=15,SNR=22						
USA0B	**Ussuriysk Arra**	**11.91**	**330**	Pn	**Pn**	**23 08 19.8**	**+2.1**
USA0B	**Ussuriysk Arra**	**11.91**	**330**	P	**Pn**	**23 08 19.8**	**+2.1**
USRK	**Ussuriysk Ar.**	**11.91**	**330**	P	**Pn**	**23 08 19.7**	**+2.0**
	2.2nm,0.6s,baz=114,slow=12,SNR=5.0						
JOW	**Kunigami**	**12.71**	**238**	LR	LR	23 12 17.9	
	comp=Z,52nm,20.6s,baz=280,slow=32						
YSS	**Yuzh-Sakhalins**	**12.90**	**7**	Pn	**Pn**	**23 08 28.7**	**-2.4**
YSS	**Yuzh-Sakhalins**	**12.90**	**7**	*e*P	**Pn**	**23 08 29.0**	**-2.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2	**Changchun**	**15.02**	**314**	*e*P	**Pn**	**23 08 58.7**	**-0.6**
CN2				sP	pwP	23 09 17.6	-1.3
CN2				S	**Sn**	**23 11 43.5**	**-1.0**
KLR	**Kul'dur**	**16.33**	**340**	P	**Pn**	**23 09 14.1**	**-1.8**
	comp=Z,3.7nm,0.5s,baz=170,slow=7.1,SNR=16						
KLR	**Kul'dur**	**16.33**	**340**	*i*P	**Pn**	**23 09 16.3**	**+0.4**
NJ2	**Nanjing**	**18.12**	**269**	*e*P	**P**	**23 09 36.3**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
ZEA	**Zeya**	**21.64**	**339**	*e*P	**P**	**23 10 14.9**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**23.71**	**295**	*e*P	**P**	**23 10 36.0**	**-0.9**
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
XAN	**Xi'an**	**25.96**	**279**	P	**P**	**23 10 53.9**	**-3.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MA2	**Magadan**	**26.33**	**12**	P	**P**	**23 11 00.9**	**+0.5**
	comp=Z,8.2nm,0.6s,baz=178,slow=5.0,SNR=5.5						
	comp=Z,8.2nm,0.6s						
MA2	**Magadan**	**26.33**	**12**	P	**P**	**23 11 00.9**	**+0.5**
MA2	**Magadan**	**26.33**	**12**	*i*P	**P**	**23 11 00.8**	**+0.4**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**27.60**	**115**	T	T	23 41 10.5	
	baz=308,slow=75,SNR=172						
H11N1	**WAKE ISLAND Hy**	**27.61**	**115**	T	T	23 41 12.3	
	baz=308,slow=75,SNR=210						
H11N3	**WAKE ISLAND Hy**	**27.62**	**115**	T	T	23 41 10.8	
	baz=308,slow=75,SNR=164						
H11S3	**WAKE ISLAND Hy**	**28.20**	**117**	T	T	23 41 58.3	
	baz=310,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy**	**28.20**	**117**	T	T	23 41 58.3	
	baz=310,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**28.22**	**117**	T	T	23 42 01.5	
	baz=310,slow=76,SNR=32						
ULN	**Ulaanbaatar**	**28.35**	**309**	P	**P**	**23 11 18.6**	**-0.2**
ULN	**Ulaanbaatar**	**28.35**	**309**	*ce*P	**P**	**23 11 19.2**	**+0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	**Yakutsk**	**28.69**	**350**	*i*P	**P**	**23 11 24.8**	**+3.4**
YAK				pmax	pmax		
	comp=Z,20nm,0.4s						
SONM	**Songino Array**	**28.76**	**309**	P	**P**	**23 11 22.1**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=108,slow=8.0,SNR=15						
SONM				ScP	**ScP**	**23 18 04.5**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=150,slow=3.3,SNR=3.7						
SONM				LR	LR	23 23 24.5	
	comp=Z,52nm,19.0s,baz=78,slow=37						
	comp=Z,2.1nm,0.7s						
LZH	**Lanzhou**	**29.80**	**284**	*e*P	**P**	**23 11 33.4**	**+1.6**
LZH				pP	pP	23 11 44.2	-2.7
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMI	**Kunming**	**33.74**	**265**	⇓P	**P**	**23 12 05.8**	**-0.7**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	**PanZhiHua**	**34.02**	**268**	P	**P**	**23 12 11.3**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BILL	**Bilibino**	**37.01**	**16**	⇑*e*P	**P**	**23 12 35.1**	**+1.3**
BILL						23 14 00.0	
BILL				S	**S**	**23 18 14.0**	**-0.5**
BILL				SS	**SnSn**	**23 20 48.0**	**-5.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,372nm,19.0s						
TIXI	**Tiksi**	**38.03**	**354**	P	**P**	**23 12 42.5**	**+0.1**
TIXI				IAmb	IAmb	23 14 06.1	
	comp=Z,15nm,1.5s						
TIXI	**Tiksi**	**38.03**	**354**	*i*P	**P**	**23 12 44.3**	**+2.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.7s						
CMAR	**Chiang Mai Arr**	**39.97**	**258**	P	**P**	**23 12 57.6**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=46,slow=7.6,SNR=4.7						
	comp=Z,0.5nm,0.4s						
SPIA	**Saint Paul Isl**	**40.30**	**40**	P	**P**	**23 13 02.7**	**+1.2**
	baz=257						
NIKH	**Nikolski High**	**40.35**	**46**	P	**P**	**23 13 03.3**	**+1.3**
	baz=263						
WMQ	**Urumqi**	**41.41**	**300**	*e*P	**P**	**23 13 13.7**	**+2.8**
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
DGZ	**Jazzator, Alta**	**41.41**	**308**	*i*P	**P**	**23 13 11.4**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**43.24**	**315**	P	**P**	**23 13 25.2**	**-0.3**
	comp=Z,3.2nm,0.3s,baz=108,slow=8.4,SNR=12						
ZALV				PcP	**PcP**	**23 15 13.2**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=108,slow=3.1,SNR=6.3						
ZALV				ScP	**ScP**	**23 18 57.3**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=101,slow=3.0,SNR=6.8						
	comp=Z,3.2nm,0.3s						
MK31	**Makanchi Array**	**44.95**	**304**	*i*P	**P**	**23 13 38.8**	**-0.6**
MKAR	**Makanchi Array**	**44.95**	**304**	P	**P**	**23 13 38.9**	**-0.4**
	comp=Z,6.4nm,0.7s,baz=84,slow=10,SNR=52						
	comp=Z,6.4nm,0.7s						
MAKZ	**Makanchi**	**45.16**	**304**	P	**P**	**23 13 40.4**	**-0.6**
MAKZ				IAmb	IAmb	23 13 44.9	
	comp=Z,9.6nm,1.0s						
MAKZ	**Makanchi**	**45.16**	**304**	P	**P**	**23 13 40.4**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAKZ	**Makanchi**	**45.16**	**304**	P	**P**	**23 13 40.2**	**-0.9**
NRIK	**Noril'sk**	**45.51**	**337**	P	**P**	**23 13 44.2**	**+0.7**
	comp=Z,4.7nm,0.5s,baz=269,slow=2.1,SNR=10						
	comp=Z,4.7nm,0.5s						
NRIK	**Noril'sk**	**45.51**	**337**	*ce*P	**P**	**23 13 46.5**	**+3.0**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAMN	**Ramite**	**46.38**	**276**	*e*P	**P**	**23 13 49.1**	**-2.1**
	comp=Z,8.9nm,0.6s						
JIRN	**Jiri**	**46.45**	**277**	*e*P	**P**	**23 13 50.0**	**-1.9**
	comp=Z,11nm,0.3s						
N16K	**Nishlik Lake**	**46.73**	**36**	P	**P**	**23 13 54.1**	**+0.9**
	baz=264						
KURK	**Kurchatov**	**47.05**	**310**	P	**P**	**23 13 54.9**	**-0.9**
KURK				IAmb	IAmb	23 13 58.7	
	comp=Z,13nm,0.7s						
KURK	**Kurchatov**	**47.05**	**310**	*ce*P	**P**	**23 13 54.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,13nm,0.7s						
KURK	**Kurchatov**	**47.05**	**310**	P	**P**	**23 13 54.1**	**-1.6**
KURK				sP	sP	23 14 23.7	+5.1
KURBB	**Kurchatov Arra**	**47.11**	**310**	P	**P**	**23 13 55.8**	**-0.5**
	comp=Z,5.3nm,0.5s,baz=87,slow=7.4,SNR=33						
	comp=Z,5.3nm,0.5s						
PKI	**Pulchoki**	**47.13**	**278**	*e*P	**P**	**23 13 54.3**	**-2.8**
	comp=Z,3.2nm,0.5s						
PKIN	**Phulchoki**	**47.13**	**278**	*e*P	**P**	**23 13 54.3**	**-2.8**
R16K	**Pilot Point**	**47.15**	**41**	P	**P**	**23 13 55.2**	**-1.2**
	baz=268						
DMN	**Daman**	**47.36**	**278**	*e*P	**P**	**23 13 56.7**	**-2.2**
	comp=Z,7.5nm,0.8s						
GKN	**Gorkha**	**47.60**	**278**	*e*P	**P**	**23 13 57.9**	**-2.7**
	comp=Z,6.5nm,0.5s						
N18K	**Kilae Creek**	**48.16**	**36**	P	**P**	**23 14 04.9**	**+0.6**
	baz=267						
DANN	**Dangsing**	**48.19**	**279**	*e*P	**P**	**23 14 03.8**	**-1.5**
	comp=Z,13nm,0.6s						
L19K	**White Mountain**	**48.75**	**34**	P	**P**	**23 14 09.2**	**+0.4**
L19K	**White Mountain**	**48.75**	**34**	P	**P**	**23 14 09.6**	**+0.8**
	baz=266						
N19K	**Bonanza Creek**	**48.86**	**36**	P	**P**	**23 14 10.2**	**+0.4**
	baz=268						
PYUN	**Piuthan**	**48.91**	**279**	*e*P	**P**	**23 14 09.2**	**-1.6**
	comp=Z,7.5nm,0.4s						
TARG	**Taragay, Kyrgy**	**48.92**	**298**	P	**P**	**23 14 08.7**	**-2.2**
TARG				IAmb	IAmb	23 14 09.8	
	comp=Z,7.0nm,0.7s						
TARG	**Taragay, Kyrgy**	**48.92**	**298**	P	**P**	**23 14 08.7**	**-2.2**
TARG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
K20K	**Telida**	**49.19**	**33**	P	**P**	**23 14 12.3**	**+0.1**
K20K				IAmb	IAmb	23 14 14.6	
	comp=Z,6.9nm,0.8s						
K20K	**Telida**	**49.19**	**33**	P	**P**	**23 14 13.6**	**+1.4**
	baz=266						
J20K	**Nowinta River**	**49.22**	**32**	P	**P**	**23 14 12.7**	**+0.3**
J20K				IAmb	IAmb	23 14 14.9	
	comp=Z,8.0nm,0.9s						
J20K	**Nowinta River**	**49.22**	**32**	P	**P**	**23 14 14.4**	**+2.0**
	baz=265						
L20K	**Farewell, AK**	**49.23**	**34**	P	**P**	**23 14 14.3**	**+1.9**
	baz=267						
OHAK	**Old Harbor**	**49.47**	**41**	P	**P**	**23 14 15.8**	**+1.5**
	baz=272						
M20K	**Styx River**	**49.55**	**35**	P	**P**	**23 14 16.8**	**+1.8**
	baz=268						
IMAR	**Indian Mountai**	**49.56**	**29**	P	**P**	**23 14 15.2**	**+0.2**
G21K	**Allakaket**	**49.72**	**29**	P	**P**	**23 14 17.2**	**+1.1**
	baz=264,SNR=5.2						
F21K	**Alatna River**	**49.81**	**28**	P	**P**	**23 14 18.5**	**+1.7**
	baz=263						
H21K	**Melozitna Rive**	**49.92**	**30**	P	**P**	**23 14 19.3**	**+1.6**
	baz=265,SNR=5.3						
N20K	**Mount Spurr**	**49.98**	**36**	P	**P**	**23 14 19.7**	**+1.5**
	baz=270						
CHUM	**Lake Minchumin**	**50.01**	**32**	P	**P**	**23 14 20.1**	**+1.8**
	baz=267						
PPLA	**Purkeypile**	**50.02**	**34**	P	**P**	**23 14 19.2**	**+0.6**
PPLA	**Purkeypile**	**50.02**	**34**	P	**P**	**23 14 20.2**	**+1.6**
	baz=268						
CAST	**Castle Rocks**	**50.09**	**33**	P	**P**	**23 14 18.7**	**-0.2**
CAST	**Castle Rocks**	**50.09**	**33**	P	**P**	**23 14 20.6**	**+1.6**
	baz=268						
BOOM	**Boomskoye usch**	**50.11**	**300**	P	**P**	**23 14 18.7**	**-0.9**
BOOM	**Boomskoye usch**	**50.11**	**300**	P	**P**	**23 14 18.7**	**-0.9**
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
I21K	**Tanana**	**50.23**	**31**	P	**P**	**23 14 21.6**	**+1.6**
	baz=266						
TKM2	**Tokmak 2**	**50.26**	**300**	P	**P**	**23 14 20.9**	**+0.1**
	SNR=16						
SKT	**Skwentna**	**50.31**	**35**	P	**P**	**23 14 21.2**	**+0.6**
	baz=269						
NRN	**Naryn**	**50.31**	**298**	P	**P**	**23 14 20.8**	**-0.5**
NRN				IAmb	IAmb	23 14 21.6	
	comp=Z,3.3nm,0.5s						
NRN	**Naryn**	**50.31**	**298**	P	**P**	**23 14 20.8**	**-0.5**
NRN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
F22K	**John River**	**50.34**	**27**	P	**P**	**23 14 22.7**	**+1.9**
	baz=264						
H22K	**Ishtalitna Cre**	**50.52**	**30**	P	**P**	**23 14 24.4**	**+2.2**
	baz=266,SNR=12						
E22K	**Anaktuvuk Pass**	**50.54**	**27**	P	**P**	**23 14 23.6**	**+1.2**
	baz=264						
G22K	**Bettles**	**50.55**	**28**	P	**P**	**23 14 23.2**	**+0.9**
	baz=265						
BPAW	**Bear Paw Mtn.**	**50.60**	**32**	P	**P**	**23 14 23.0**	**+0.2**
BPAW				IAmb	IAmb	23 15 56.3	
	comp=Z,30nm,2.0s						
BPAW	**Bear Paw Mtn.**	**50.60**	**32**	P	**P**	**23 14 23.7**	**+0.9**
	baz=268						
KTH	**Kantishna Hill**	**50.62**	**33**	P	**P**	**23 14 24.3**	**+1.3**
SUA	**Susitna One**	**50.68**	**35**	P	**P**	**23 14 22.9**	**-0.6**
MLY	**Manley**	**50.74**	**31**	P	**P**	**23 14 24.2**	**+0.3**
MLY				IAmb	IAmb	23 14 26.4	
	comp=Z,11nm,0.9s						
MLY	**Manley**	**50.74**	**

comp=Z,3.3nm,0.6s
BRVK Borovoye 51.94 314 *ce*P **P 23 14 33.2 +0.3**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
H24K Noodor Dome 51.96 30 P **P 23 14 33.2 +0.2**
H24K IAmb IAmb 23 14 35.8
comp=Z,12nm,0.9s
H24K Noodor Dome 51.96 30 P **P 23 14 34.5 +1.5**
baz=270,SNR=6.9
TCOL CIGO, UAF Yank 51.97 31 P **P 23 14 34.6 +1.7**
baz=270
COLA College 51.97 31 P **P 23 14 34.7 +1.8**
baz=270
F24K Squaw Lake 51.99 28 P **P 23 14 34.6 +1.5**
baz=268
CCB Clear Creek Bu 51.99 31 P **P 23 14 33.3 +0.1**
CCB IAmb IAmb 23 14 36.5
comp=Z,7.0nm,1.1s
WAT6 Susitna Watana 52.07 34 P **P 23 14 34.6 +0.6**
baz=272
G24K Hadweenzic Riv 52.13 29 P **P 23 14 36.0 +1.7**
baz=269
POKR Poker Plat Res 52.15 31 P **P 23 14 35.1 +0.8**
POKR Poker Plat Res 52.15 31 P **P 23 14 36.0 +1.7**
baz=271,SNR=8.0
DHY Denali Highway 52.22 33 P **P 23 14 36.0 +0.9**
baz=272
HDA Harding Lake 52.37 32 P **P 23 14 35.6 -0.4**
HDA IAmb IAmb 23 14 36.9
comp=Z,8.5nm,0.7s
HDA Harding Lake 52.37 32 P **P 23 14 36.2 +0.2**
baz=272
IL31 52.38 31 P **P 23 14 35.6 -0.4**
IL31 IAmb IAmb 23 14 37.2
comp=Z,9.3nm,0.7s
ILAR Eielson Array 52.38 31 P **P 23 14 36.5 +0.4**
comp=Z,7.0nm,0.7s,baz=268,slow=6.4,SNR=63
comp=Z,7.0nm,0.7s
ILAR Eielson Array 52.38 31 P **P 23 14 35.8 -0.3**
D25K Kavik River 52.60 25 P **P 23 14 38.7 +0.9**
baz=268
G25K Bearman Lake 52.68 29 P **P 23 14 40.1 +1.9**
baz=270
H25K Birch Creek 52.80 29 P **P 23 14 41.0 +1.9**
baz=271
M24K Tolsona, Glenn 52.83 34 P **P 23 14 40.1 +0.7**
baz=274
F25K Christian Rive 52.85 28 P **P 23 14 41.3 +1.7**
baz=270,SNR=6.3
E25K Arctic Village 52.88 27 P **P 23 14 41.6 +1.8**
baz=270
PRP Porcupine Dome 52.94 30 P **P 23 14 40.5 +0.1**
PRP IAmb IAmb 23 14 42.2
comp=Z,4.5nm,0.6s
PRP Porcupine Dome 52.94 30 P **P 23 14 41.3 +0.9**
baz=272
KLU Kluting 52.99 35 P **P 23 14 41.7 +1.0**
baz=275
J25K Salcha River, 53.04 31 P **P 23 14 42.5 +1.4**
baz=273
PAX Paxson 53.09 33 P **P 23 14 41.1 -0.4**
PAX IAmb IAmb 23 14 50.8
comp=Z,17nm,1.5s
PAX Paxson 53.09 33 P **P 23 14 41.1 -0.4**
PAX pmax pmax
comp=Z,17nm,1.5s
PAX Paxson 53.09 33 P **P 23 14 42.7 +1.2**
baz=274
EYAK Cordova Ski Ar 53.16 36 P **P 23 14 42.6 +0.7**
baz=276
BMAR Burnt Mountain 53.26 28 P **P 23 14 43.1 +0.5**
HARP HAARP 53.28 34 P **P 23 14 44.2 +1.4**
baz=275
F26K Sheenjek River 53.42 27 P **P 23 14 45.9 +2.2**
baz=272,SNR=6.9
C27K Jago River 53.55 25 P **P 23 14 45.8 +1.2**
baz=270
G26K Porcupine Rive 53.59 28 P **P 23 14 46.7 +1.8**
baz=272
N25K Chitina, Valde 53.61 35 P **P 23 14 46.5 +1.2**
baz=276
BMRM Bremner River 53.68 36 P **P 23 14 47.1 +1.3**
baz=276
DOT Dot Lake 53.68 32 P **P 23 14 45.4 -0.3**
DOT IAmb IAmb 23 15 07.5
comp=Z,19nm,1.2s
SCRK Sand Creek 53.68 32 P **P 23 14 46.1 +0.3**
SCRK IAmb IAmb 23 14 47.3
comp=Z,11nm,0.8s
SCRK Sand Creek 53.68 32 P **P 23 14 47.0 +1.1**
baz=274,SNR=7.1
J26L Joseph Creek 53.83 31 P **P 23 14 46.3 -0.6**
J26L IAmb IAmb 23 14 47.8
comp=Z,6.1nm,0.8s
J26L Joseph Creek 53.83 31 P **P 23 14 47.6 +0.8**
baz=274,SNR=5.3
WB0 Warramunga Arr 53.94 187 P **P 23 14 46.3 -1.6**
I26K Coal Creek Min 53.94 30 P **P 23 14 48.4 +0.9**
baz=274
L26K Log Cabin Wild 54.05 33 P **P 23 14 50.1 +1.7**
baz=276,SNR=5.0
WRAB Tennant Creek 54.11 187 *ce*P **P 23 14 48.5 -0.7**
WRAB pmax pmax
comp=Z,9.0nm,1.7s
WR0 Warramunga Arr 54.11 187 P **P 23 14 47.5 -1.8**
WR0 IAmb IAmb 23 15 04.9
comp=Z,32nm,1.8s
WB2 Warramunga Arr 54.12 187 P **P 23 14 47.9 -1.4**
WB2 IAmb IAmb 23 15 17.2
comp=Z,27nm,1.8s
WRA Warramunga Arr 54.12 187 P **P 23 14 48.4 -0.9**
comp=Z,4.1nm,0.6s,baz=4.7,slow=7.7,SNR=56
WRA ScP **ScP 23 19 43.6 -2.1**
comp=Z,0.4nm,0.7s,baz=358,slow=3.9,SNR=5.0
comp=Z,4.1nm,0.6s
WRA Warramunga Arr 54.12 187 P **P 23 14 47.9 -1.4**
BERG Berg Lake 54.19 36 P **P 23 14 49.5 +0.1**
VRDI Verde Repeater 54.20 35 P **P 23 14 49.9 +0.2**
VRDI IAmb IAmb 23 16 29.2
comp=Z,18nm,1.2s
M26K Nabesna, AK 54.28 34 P **P 23 14 50.5 +0.4**
M26K IAmb IAmb 23 14 52.6
comp=Z,20nm,1.5s
M26K Nabesna, AK 54.28 34 P **P 23 14 51.6 +1.4**
baz=276
E27K Coleen River 54.36 27 P **P 23 14 52.3 +1.7**
baz=274
MCARA McCarthy VSAT 54.39 35 P **P 23 14 51.5 +0.7**
MCARA McCarthy VSAT 54.39 35 P **P 23 14 52.3 +1.4**
baz=277
G27K Doyon Strip 54.44 28 P **P 23 14 52.3 +1.1**
baz=274
BTK Batken 54.47 298 P **P 23 14 51.5 -0.4**
BTK Batken 54.47 298 P **P 23 14 51.5 -0.4**
BTK pmax pmax
comp=Z,3.0nm,0.8s
K27K Chicken 54.52 32 P **P 23 14 51.6 -0.2**
K27K IAmb IAmb 23 14 54.0
comp=Z,6.5nm,0.8s
H27K Steamboat Moun 54.54 29 P **P 23 14 53.5 +1.6**
baz=275,SNR=9.9
I27K Kandik River 54.56 30 P **P 23 14 53.6 +1.6**
baz=275
WAX Waxell Ridge 54.60 36 P **P 23 14 52.8 +0.3**
NIL Nilore 54.71 290 P **P 23 14 52.8 -0.9**
L27K Beaver Creek, 54.74 33 P **P 23 14 52.9 -0.5**
L27K IAmb IAmb 23 14 55.8
comp=Z,10nm,1.2s
L27K Beaver Creek, 54.74 33 P **P 23 14 54.8 +1.4**
baz=277
BCAR Beaver Creek A 54.76 33 P **P 23 14 53.4 -0.1**
M27K Edge Creek, AK 54.80 34 P **P 23 14 54.8 +0.8**
baz=277
EGAK Eagle 54.83 31 P **P 23 14 53.2 -0.8**
EGAK Eagle 54.83 31 P **P 23 14 54.6 +0.6**
baz=276
BARN Barnard Glacie 55.09 35 P **P 23 14 56.0 -0.1**
CTG Chitina Glacier 55.26 36 P **P 23 14 58.7 +1.4**
baz=279
CTGM Chitina Glacie 55.26 36 P **P 23 14 56.2 -1.1**
YUK3 Moose Creek 55.55 34 P **P 23 15 00.6 +1.1**
baz=279
DAWY Dawson 55.69 32 P **P 23 15 01.8 +1.6**
baz=278
I29M Ogilvie Camp, 55.96 30 P **P 23 15 03.5 +1.4**
baz=278,SNR=9.6
CHGR Chuyangaron 56.13 297 P **P 23 15 02.9 -0.9**

CHGR Chuyangaron 56.13 297 P **P 23 15 02.9 -0.9**
CHGR pmax pmax
comp=Z,31nm,0.8s
SIMJ Simiganj 56.24 297 P **P 23 15 02.8 -1.9**
M29M Somme Creek 56.36 34 P **P 23 15 07.2 +2.1**
baz=280,SNR=7.3
L29M L29M 56.40 33 P **P 23 15 07.7 +2.4**
baz=280,SNR=11
EPYK Eagle Plains 56.45 29 P **P 23 15 07.5 +1.9**
baz=279,SNR=21
YUK4 Talbot Arm 56.48 35 P **P 23 15 07.8 +1.7**
baz=281
K29M Barlow Dome 56.54 32 P **P 23 15 08.2 +1.8**
baz=280,SNR=5.8
G30M tAoh Zraii Nji 56.54 28 P **P 23 15 07.7 +1.4**
baz=279,SNR=6.5
YUK6 Outpost Mounta 56.69 35 P **P 23 15 09.6 +2.0**
baz=281
O29M Mount Kennedy 56.72 36 P **P 23 15 09.9 +2.2**
baz=282
HYT Haines Junctio 57.13 35 P **P 23 15 11.0 +0.4**
HYT IAmb IAmb 23 16 02.5
comp=Z,8.1nm,0.9s
HYT Haines Junctio 57.13 35 P **P 23 15 13.0 +2.5**
baz=282
P29M Windy Craggy 57.27 37 P **P 23 15 13.3 +1.8**
baz=283
INK Inuvik 57.33 26 P **P 23 15 11.6 -0.1**
comp=Z,5.1nm,0.6s,baz=271,slow=5.2,SNR=13
comp=Z,5.1nm,0.6s
INK Inuvik 57.33 26 P **P 23 15 11.9 +0.2**
INK IAmb IAmb 23 15 13.3
comp=Z,5.1nm,0.8s
INK Inuvik 57.33 26 P **P 23 15 11.9 +0.2**
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 57.33 26 P **P 23 15 12.4 +0.7**
baz=281
F31M Tsiigehtchic 57.41 27 P **P 23 15 13.0 +0.7**
baz=281
P30M Million Dollar 57.54 36 P **P 23 15 15.0 +1.6**
baz=283
N31M Braeburn, Yuko 57.80 34 P **P 23 15 15.3 +0.1**
N31M IAmb IAmb 23 15 18.0
comp=Z,10nm,0.8s
N31M Braeburn, Yuko 57.80 34 P **P 23 15 17.1 +1.9**
baz=283
ASAR Alice Springs 57.84 187 P **P 23 15 14.3 -1.6**
comp=Z,0.8nm,0.7s,baz=22,slow=10,SNR=8.3
comp=Z,0.8nm,0.7s
ARU Arti 57.94 320 P **P 23 15 15.9 -0.3**
comp=Z,6.7nm,0.6s,baz=101,slow=5.7,SNR=15
comp=Z,6.7nm,0.6s
ARU Arti 57.94 320 P **P 23 15 15.2 -1.0**
ARU IAmb IAmb 23 15 19.4
comp=Z,6.6nm,0.6s
ARU Arti 57.94 320 *c iP* **23 15 15.8 -0.4**
ARU *SP **sP 23 15 40.3 +1.0**
ARU 23 16 06.8
ARU S **S 23 23 12.8 +1.5**
ARU SS **SS 23 26 56.6 -5.9**
ARU pmax pmax
comp=Z,6.0nm,0.6s
ARU Arti 57.94 320 P **P 23 15 14.1 -2.1**
ARU pP **pwP 23 15 35.5 +0.3**
PLBC Pleasant Camp 57.99 37 P **P 23 15 18.3 +1.8**
baz=284
M31M Drury Creek, Y 58.27 33 P **P 23 15 19.2 +0.7**
M31M IAmb IAmb 23 15 20.4
comp=Z,9.1nm,0.6s
M31M Drury Creek, Y 58.27 33 P **P 23 15 20.1 +1.6**
baz=284,SNR=7.6
WHY Whitehorse 58.42 35 P **P 23 15 20.3 +0.7**
WHY Whitehorse 58.42 35 P **P 23 15 21.5 +1.9**
baz=284,SNR=6.3
SKAG Skagway 58.50 37 P **P 23 15 21.7 +1.6**
baz=285
FARO Faro, Yukon 58.74 33 P **P 23 15 23.1 +1.3**
baz=285
ABKAR Akbulak array 59.13 311 P **P 23 15 24.0 -0.6**
ABKAR IAmb IAmb 23 15 28.1
comp=Z,5.8nm,0.8s
P32M Atlin 59.26 36 P **P 23 15 26.7 +1.3**
baz=286
S32K Killisnoo 59.41 39 P **P 23 15 27.7 +1.3**
baz=286
P33M Teslin, Yukon 59.52 35 P **P 23 15 27.9 +0.6**
P33M IAmb IAmb 23 15 29.8
comp=Z,8.9nm,1.1s
P33M Teslin, Yukon 59.52 35 P **P 23 15 28.9 +1.6**
baz=286
MMPY Sheldon Lake, 59.57 32 P **P 23 15 29.2 +1.7**
baz=286,SNR=6.2
C36M Paulatuk 60.39 24 P **P 23 15 32.7 -0.2**
C36M Paulatuk 60.39 24 P **P 23 15 33.7 +0.8**
baz=288
U33K Whale Pass 60.58 40 P **P 23 15 36.4 +1.9**
baz=288
R33M Jeenings River 60.66 36 P **P 23 15 36.8 +1.7**
baz=288
S34M Telegraph Cree 61.05 38 P **P 23 15 39.2 +1.6**
baz=289
TGTN Hyland Airport 61.24 33 P **P 23 15 40.7 +1.8**
baz=289,SNR=5.9
DLBC Dease Lake 61.43 37 P **P 23 15 41.7 +1.4**
baz=289
WTLY Watson Lake, Y 61.47 35 P **P 23 15 42.4 +2.0**
baz=289
T35M Bob Quinn 61.80 38 P **P 23 15 44.8 +2.0**
baz=290
KIRV Kirov 62.01 324 *ce*P **P 23 15 47.0 +3.0**
PRGR Permogore 62.69 328 *eP* **P 23 15 47.1 -1.4**
PRGR pmax pmax
comp=Z,10.0nm,1.0s
WRGLY Wrigley 62.75 30 P **P 23 15 50.7 +1.8**
baz=292
HRA Herat 62.88 295 P **P 23 15 49.8 -0.8**
EUNU Eureka 63.14 8 P **P 23 15 49.9 -1.5**
GEYT Alibeck 64.46 300 P **P 23 16 00.1 -0.7**
comp=Z,0.7nm,0.5s,baz=46,slow=4.2,SNR=2.7
comp=Z,0.7nm,0.5s
FORT Forrest 65.64 192 P **P 23 16 07.4 -0.7**
FORT IAmb IAmb 23 16 28.5
comp=Z,15nm,0.9s
KLMR Klimovskoe 65.71 328 *eP* **P 23 16 09.1 +0.8**
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 65.71 328 *eP* **P 23 16 09.1 +0.8**
KLMR AMP 23 16 11.3
comp=Z,12nm,1.2s
STKA Stephens Creek 65.71 179 P **P 23 16 07.8 -0.7**
comp=Z,2.3nm,0.8s,baz=317,slow=12,SNR=3.3
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 66.36 340 P **P 23 16 12.4 +0.1**
comp=Z,4.5nm,1.0s,baz=49,slow=6.9,SNR=15
comp=Z,4.5nm,1.0s
OBN Obninsk 69.86 324 *eP* **P 23 16 37.1 +2.6**
OBN 23 16 57.0
OBN PPP PPP 23 21 00.0
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,42nm,17.0s
LPSR Galich'ya Gora 69.93 320 *eP* **P 23 16 35.1 +0.1**
LPSR pmax pmax
comp=Z,5.0nm,0.4s
VORR Voronezh 70.25 320 *eP* **P 23 16 38.4 +1.5**
VORR pmax pmax
comp=Z,30nm,0.4s
VSR Storozhevoye 70.50 319 *eP* **P 23 16 37.0 -1.5**
VSR pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 70.93 332 P **P 23 16 40.6 -0.3**
comp=Z,3.7nm,0.6s,baz=68,slow=5.2,SNR=21
comp=Z,3.7nm,0.6s
KBZ Khabaz 72.10 311 P **P 23 16 48.0 -0.3**
comp=Z,2.9nm,0.8s,baz=100,slow=1.9,SNR=8.1
comp=Z,2.9nm,0.8s
KBZ Khabaz 72.10 311 *ceP* **P 23 16 48.7 +0.5**
KBZ pmax pmax
comp=Z,14nm,2.6s
KIV Kislovodsk 72.12 311 P **P 23 16 48.7 +0.2**
KIV IAmb IAmb 23 16 51.8
comp=Z,22nm,1.7s
KIV Kislovodsk 72.12 311 *eP* **P 23 16 48.2 -0.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s

NEW Newport 72.80 43 P **P 23 16 53.4 +1.0**
baz=302
PINE Pine Mountain 72.87 49 P **P 23 16 53.9 +0.8**
PINE IAmb IAmb 23 16 56.0
comp=Z,7.6nm,0.9s
K05A Summer Lake 73.45 49 P **P 23 16 57.3 +0.7**
K05A IAmb IAmb 23 16 59.4
comp=Z,8.4nm,0.9s
WALA Waterton Lakes 74.15 41 P **P 23 17 00.8 +0.3**
WALA IAmb IAmb 23 18 52.4
comp=Z,12nm,1.4s
AKASG Malin Array Be 76.02 322 P **P 23 17 10.3 -0.6**
comp=Z,0.8nm,0.4s,baz=49,slow=6.1,SNR=6.4
comp=Z,0.8nm,0.4s
CMB Columbia Colle 76.26 53 P **P 23 17 12.4 -0.2**
CMB Columbia Colle 76.26 53 P **P 23 17 12.5 -0.2**
CMB pmax pmax
comp=Z,7.0nm,1.2s
NB2 NORSAR Subarra 76.47 337 P **P 23 17 13.1 -0.4**
comp=Z,1.6nm,0.6s,baz=43,slow=5.9
NOA NORSAR Array B 76.47 337 P **P 23 17 13.1 -0.4**
comp=Z,2.2nm,0.7s,baz=41,slow=5.7,SNR=10
comp=Z,2.2nm,0.7s
YERR Yerington 76.50 52 P **P 23 17 14.1 -0.1**
NORES NORESS Array B 76.60 337 P **P 23 17 17.8 +3.7**
LRM Limekiln Ridge 76.82 43 P **P 23 17 15.9 0.0**
HLID Hailey 76.97 46 P **P 23 17 17.8 +1.0**
baz=305
EGMT Eagleton 77.01 40 P **P 23 17 16.3 -0.4**
EGMT IAmb IAmb 23 17 18.5
comp=Z,12nm,1.1s
EGMT Eagleton 77.01 40 P **P 23 17 17.9 +1.1**
baz=307
BMN Battle Mountai 77.01 50 P **P 23 17 17.1 +0.1**
BMN Battle Mountai 77.01 50 P **P 23 17 17.1 +0.1**
BMN pmax pmax
comp=Z,4.0nm,0.9s
RYN Ryan 77.17 52 P **P 23 17 18.6 +0.6**
KVN Kaiserville 77.21 51 P **P 23 17 18.8 +0.6**
KVN Kaiserville 77.21 51 P **P 23 17 18.8 +0.6**
KVN pmax pmax
comp=Z,6.0nm,1.0s
LHV Little Huntoon 77.39 52 P **P 23 17 20.3 +1.4**
BOZ Bozeman (W) 77.41 43 P **P 23 17 19.4 +0.2**
BOZ Bozeman (W) 77.41 43 P **P 23 17 19.4 +0.2**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 77.41 43 P **P 23 17 20.3 +1.1**
baz=306
NVAR Mina Array Bea 77.42 52 P **P 23 17 20.9 +1.5**
comp=Z,3.4nm,0.9s,baz=280,slow=5.6,SNR=18
NVAR pP **sP 23 17 41.8 -1.0**
comp=Z,1.3nm,0.7s,baz=291,slow=5.2,SNR=4.7
comp=Z,3.4nm,0.9s
NVAR Mina Array Bea 77.42 52 P **P 23 17 19.8 +0.4**
PKM Mcpherson Peak 78.36 56 P **P 23 17 25.5 +0.9**
baz=304
MZP Montezuma Peak 78.43 52 P **P 23 17 25.5 +0.4**
H17A Grant Village 78.73 44 P **P 23 17 28.7 +2.1**
baz=307
SCZ2 Santa Cruz Isl 78.98 56 P **P 23 17 29.6 +1.8**
baz=304
RLMT Red Lodge 79.03 43 P **P 23 17 29.3 +1.1**
baz=308
R11A Troy Canyon, C 79.23 51 P **P 23 17 30.7 +1.3**
baz=305
MPMC Manual Prospec 79.28 54 P **P 23 17 30.2 +0.5**
baz=305
TPNV Topopah Spring 79.60 52 P **P 23 17 32.0 +0.6**
baz=305
EDW2 Edwards Air Fo 79.61 55 P **P 23 17 31.7 +0.3**
baz=304
LAO LASA Array 79.72 40 P **P 23 17 32.7 +1.0**
baz=310
DUG Dugway, Tooele 79.90 48 P **P 23 17 34.4 +1.5**
baz=306
BRTR Keskin Array B 80.08 311 P **P 23 17 33.4 -0.5**
comp=Z,1.3nm,0.7s,baz=123,slow=5.0,SNR=6.3
BRTR pP **sP 23 17 55.4 -2.5**
comp=Z,1.1nm,0.9s,baz=120,slow=4.4,SNR=2.9
comp=Z,1.3nm,0.7s
GSC Goldstone, Bar 80.17 54 P **P 23 17 35.5 +1.1**
baz=305
BW06 Boulder Array 80.31 45 P **P 23 17 35.4 +0.2**
baz=308
PDAR Pinedale Array 80.31 45 P **P 23 17 34.5 -0.6**
comp=Z,1.2nm,0.8s,baz=280,slow=3.8,SNR=9.9
PDAR pP **sP 23 17 58.4 -0.3**
comp=Z,0.4nm,0.6s,baz=287,slow=4.9,SNR=2.9
comp=Z,1.2nm,0.8s
HEC Hector,Ludlow 80.76 54 P **P 23 17 38.5 +0.9**
baz=305
MURC Murrieta 80.88 56 P **P 23 17 39.1 +0.9**
baz=305
RAYN Ar Rayn 80.92 292 P **P 23 17 37.9 -0.6**
RAYN Ar Rayn 80.92 292 P **P 23 17 37.9 -0.6**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
GMRC Granite Mounta 81.24 54 P **P 23 17 41.5 +1.3**
baz=306
PFO Pinyon Flats O 81.37 55 P **P 23 17 40.5 -0.4**
comp=Z,2.4nm,0.6s,baz=290,slow=4.3,SNR=4.8
comp=Z,2.4nm,0.6s
PFO Pinyon Flats O 81.37 55 P **P 23 17 42.0 +1.1**
baz=305
TPFO Pinon Flats 81.38 55 P **P 23 17 41.9 +1.0**
baz=305
BELC Belle Mtn. Jos 81.46 55 P **P 23 17 42.5 +1.1**
baz=306
MONP2 Monument Peak 81.81 56 P **P 23 17 43.9 +0.6**
baz=306
BC3 Big Chuckawall 82.03 55 P **P 23 17 45.4 +1.0**
baz=306
KRLC Kraliky 82.39 327 *eP* **P 23 17 49.1 +3.3**
KRLC Kraliky 82.39 327 *eP* **P 23 17 49.1 +3.3**
DPC Dobruska-Polom 82.40 328 *eP* **P 23 17 49.7 +3.8**
DPC Dobruska-Polom 82.40 328 *eP* **P 23 17 49.7 +3.8**
VYHS Vyhne 82.57 325 *eP* **P 23 17 50.4 +3.7**
CLL Collm 83.13 330 *eP* **P 23 17 52.0 +2.5**
MODS Modra-Piesok 83.39 326 *eP* **P 23 17 52.0 +1.0**
N23A Red Feather La 83.58 44 P **P 23 17 53.8 +1.3**
baz=310
PV13 Radium Mtn., P 83.60 48 P **P 23 17 52.0 -0.6**
WUAZ Wupatki 83.62 51 P **P 23 17 54.0 +1.4**
baz=308
CKRC Cesky Krumlov 84.41 328 *eP* **P 23 17 58.0 +1.8**
KHC Kasperske Hory 84.51 328 *eP* **P 23 17 59.5 +2.8**
KHC Kasperske Hory 84.51 328 *eP* **P 23 17 59.5 +2.8**
GERES GERESS Array B 84.66 328 P **P 23 17 57.3 -0.3**
comp=Z,0.8nm,0.7s,baz=69,slow=8.7,SNR=4.7
comp=Z,0.8nm,0.7s
S22A 4UR Ranch, Cre 85.08 47 P **P 23 18 01.6 +1.4**
baz=310
Q24A Divide 85.30 45 P **P 23 18 02.4 +1.1**
baz=311
TXAR Lajitas Array 92.57 52 P **P 23 18 34.9 -0.7**
comp=Z,1.4nm,0.8s,baz=300,slow=3.2,SNR=13
comp=Z,1.4nm,0.8s
P52A Corning 96.72 32 P **P 23 18 55.3 +1.0**
baz=326
SSPA Standing Stone 97.64 28 P **P 23 18 58.9 +0.5**
baz=329
TORD Torodi Ar. Bea 118.67 313 PKP **PKPdf 23 24 10.5 -1.6**
comp=Z,0.2nm,0.5s,baz=44,slow=1.3,SNR=6.3
LPAZ La Paz 148.85 62 PKPbc **PKPbc 23 25 12.7 +0.3**
comp=Z,2.4nm,0.6s,baz=303,slow=4.0,SNR=12
LPAZ pPKPbc **sPKPbc 23 25 34.1 -2.6**
comp=Z,1.3nm,0.5s,baz=251,slow=3.8,SNR=3.1

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*IDC **11** 23:06:27.4±0.9, 33.°60N×75.°44E, h0km, mb3.8/10, mbtmp3.8/14, ML3.4/4, Error ellipse: s-maj=24.8km s-min=16.4km az=49.0*

ISC 11 23:06:29.8±0.6, **33.72N**±0.°05×**75.57E**±0.°08, **h10km, n27,** σ1§92/31, **mb3.8**/10, **Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
THN	**Thein Dam**	**1.29**	**175**	*e*PN	**Pg**		**23 06 55.5**	**+1.0**
THN				*e*SN	**Sn**		**23 07 16.0**	**+4.9**
PYUN	**Piuthan**	**8.48**	**129**	*eP*	**Pn**		**23 08 34.0**	**+1.1**
PYUN	11nm,0.2s			*eS*	**Sn**		**23 10 05.4**	**-3.5**
DANN	**Dangsing**	**8.83**	**125**	*eP*	**Pn**		**23 08 39.3**	**+1.5**
	9.8nm,0.2s							
AAK	**Ala-Archa**	**8.94**	**355**	Pn	**Pn**		**23 08 42.0**	**+2.9**
	0.7nm,0.3s,baz=160,slow=11,SNR=6.9							

AAK Sn **Sn** **23 10 24.7 +4.6**
0.3nm,0.3s,baz=315,slow=20,SNR=1.8
2.0nm,0.4s
GKN Gorkha 9.65 124 *e*P **Pn** **23 08 49.6 +0.7**
10nm,0.2s
DMN Daman 10.22 124 *e*P **Pn** **23 08 57.5 +0.7**
6.1nm,0.2s
PKIN Phulchoki 10.44 123 *e*P **Pn** **23 08 59.6 -0.2**
7.7nm,0.2s
PKI Pulchoki 10.45 123 *e*P **Pn** **23 08 59.9 -0.2**
6.1nm,0.2s
GUN Gumba 10.58 120 *e*P **Pn** **23 09 01.9 +0.1**
9.9nm,0.3s
JIRN Jiri 10.95 121 *e*P **Pn** **23 09 06.3 -0.6**
19nm,0.4s
RAMN Ramite 11.67 122 *e*P **Pn** **23 09 15.7 -0.9**
6.0nm,0.3s
TAPN Taplejung 12.23 118 *e*P **Pn** **23 09 23.8 -0.6**
6.3nm,0.3s
MKAR Makanchi Array 14.02 19 Pn **Pn** **23 09 50.8 +2.3**
0.1nm,0.3s,baz=194,slow=14,SNR=6.4
MKAR Sn **Sn** **23 12 24.6 +0.4**
0.1nm,0.3s,baz=196,slow=25,SNR=2.2
0.3nm,0.4s
GEYT Alibeck 14.77 291 Pn **Pn** **23 09 56.4 -2.4**
0.1nm,0.3s,baz=93,slow=18,SNR=2.7
0.5nm,0.6s
KURBB Kurchatov Arra 17.03 6 P **Pn** **23 10 26.8 -1.1**
0.1nm,0.3s,baz=196,slow=10,SNR=9.1
0.4nm,0.2s
BVAR Borovoye Array 19.65 351 P **P** **23 10 55.5 -3.0**
0.4nm,0.4s,baz=159,slow=12,SNR=2.5
AKTO Aktyubinsk 21.10 328 P **P** **23 11 12.8 -1.5**
2.9nm,0.7s,baz=131,slow=13,SNR=9.2
2.9nm,0.7s
ZALV Zalesovo Beam 21.26 15 P **P** **23 11 15.1 -0.9**
3.0nm,0.4s,baz=203,slow=9.3,SNR=13
3.0nm,0.4s
CMAR Chiang Mai Arr 25.83 120 P **P** **23 12 00.9 -0.5**
1.9nm,0.9s,baz=311,slow=9.8,SNR=10
1.9nm,0.9s
FINES FINESS Array B 41.87 327 P **P** **23 14 19.9 +0.1**
1.3nm,0.8s,baz=116,slow=9.5,SNR=6.5
1.3nm,0.8s
KLR Kul'dur 43.83 52 P **P** **23 14 37.0 +1.1**
1.3nm,0.7s,baz=268,slow=6.3,SNR=4.3
1.3nm,0.7s
ARCES ARCESS Array B 45.14 338 P **P** **23 14 46.5 +0.5**
3.9nm,0.9s,baz=103,slow=8.7,SNR=7.0
3.9nm,0.9s
NB2 NORSAR Subarra 48.83 324 P **P** **23 15 14.8 -0.3**
comp=Z,0.3nm,0.5s,baz=91,slow=7.9
NOA NORSAR Array B 48.83 324 P **P** **23 15 14.8 -0.3**
comp=Z,0.3nm,0.5s,baz=106,slow=6.5,SNR=4.2
comp=Z,0.3nm,0.5s
TORD Torodi Ar. Bea 69.49 272 P **P** **23 17 37.1 -1.8**
comp=Z,0.3nm,0.4s,baz=50,slow=5.9,SNR=13
comp=Z,0.3nm,0.4s
WRA Warramunga Arr 77.34 124 P **P** **23 18 23.9 -1.0**
comp=Z,0.5nm,0.5s,baz=323,slow=5.5,SNR=5.6
comp=Z,0.5nm,0.5s
ASAR Alice Springs 79.59 127 P **P** **23 18 36.9 -0.5**
comp=Z,0.3nm,0.6s,baz=322,slow=5.9,SNR=3.3
comp=Z,0.3nm,0.6s

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*IDC **11** 23:15:07.6±5.4,24.°19S×68.°01W,h0km,mb3.9/1,*
mbtmp3.8/2,ML3.9/1, Error ellipse: s-maj=158.1km
s-min=54.1km az=66.0
*VAO **11** 23:15:22.1±0.5,23.°51S×67.°83W,h108km,mb3.9*
*GUC **11** 23:15:25.6±0.7,23.°04S×68.°32W,h139km±5km,ML3.5*
ISC 11 23:15:23.2±0.7,23.°18S±0.°05×68.°01W±0.°08,
h127km±11km,n36,σ1$73/47,1C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.00**	**304**	*e*P	**Pn**	**23 15 47.8**	**+1.6**
LVC				*i* S	**Sn**	**23 16 04.4**	**+0.7**
LVC	**Limon Verde**	**1.00**	**304**	*e*P	**Pn**	**23 15 47.4**	**+1.1**
PB15	**IPOC Station P**	**1.34**	**268**	*e*P	**Pn**	**23 15 50.9**	**+1.3**
PB15				*i* S	**Sn**	**23 16 09.8**	**+0.3**
PB06	**IPOC Station P**	**1.51**	**288**	*e*P	**Pn**	**23 15 52.4**	**+1.0**
PB06				*i* S	**Sn**	**23 16 12.2**	**-0.6**
PB06				IAML		23 16 15.1	
	comp=N,1μm,0.2s						
PB09	**IPOC Station P**	**1.78**	**320**	*e*P	**Pn**	**23 15 55.9**	**+1.3**
PB09				*i* S	**Sn**	**23 16 17.9**	**-0.6**
PB09				IAML		23 16 19.9	
	comp=N,374nm,0.5s						
PB04	**IPOC Station P**	**2.14**	**293**	*e*P	**Pn**	**23 15 59.3**	**+0.3**
PB04				*i* S	**Sn**	**23 16 24.8**	**-1.5**
PB07	**IPOC Station P**	**2.25**	**309**	*e*P	**Pn**	**23 16 00.8**	**+0.5**
PB07				*i* S	**Sn**	**23 16 27.0**	**-1.8**
PB07				IAML		23 16 28.7	
	comp=N,511nm,0.2s						
PB10	**IPOC Station P**	**2.36**	**261**	*e*P	**Pn**	**23 16 01.7**	**+0.2**
PB10				*i* S	**Sn**	**23 16 28.0**	**-2.9**
PB10				IAML		23 16 31.2	
	comp=E,219nm,0.3s						
GO02	**Mina Guanaco**	**2.45**	**216**	*e*P	**Pn**	**23 16 05.0**	**+2.2**
GO02				*i* S	**Sn**	**23 16 35.0**	**+1.6**
PB01	**IPOC Station P**	**2.52**	**327**	*e*P	**Pn**	**23 16 04.3**	**+0.6**
PB01				*i* S	**Sn**	**23 16 33.9**	**-0.9**
PB01				IAML		23 16 36.2	
	comp=N,332nm,0.1s						
PB02	**IPOC Station P**	**2.54**	**316**	*e*P	**Pn**	**23 16 04.2**	**+0.2**
PB02				*i* S	**Sn**	**23 16 33.6**	**-1.6**
PB02				IAML		23 16 38.9	
	comp=N,321nm,0.2s						
PATCX	**Punta Patache**	**3.07**	**319**	*e*P	**Pn**	**23 16 10.5**	**-0.2**
PB08	**IPOC Station P**	**3.20**	**340⇑**	*e*P	**Pn**	**23 16 14.2**	**+1.4**
PB08				*i* S	**Sn**	**23 16 51.0**	**+1.1**
PB08				IAML		23 16 53.0	
	comp=E,78nm,0.2s						
GO01	**Chusmiza**	**3.66**	**342**	*e*P	**Pn**	**23 16 19.7**	**+0.8**
GO01				*i* S	**Sn**	**23 17 01.8**	**0.0**
LPAZ	**La Paz**	**6.85**	**359**	Pn	**Pn**	**23 17 03.9**	**+2.1**
	comp=E,0.8nm,0.3s,baz=178,slow=6.4,SNR=15						
	comp=E,1.8nm,0.3s						
BBRB	**Robore, Bolivi**	**9.09**	**59**	*e*P	**Pn**	**23 17 31.1**	**-0.3**
BBSD	**Serra de San D**	**9.15**	**51**	*e*P	**Pn**	**23 17 32.6**	**+0.3**
PTLB	**Pontes e Lacer**	**11.37**	**49**	*e*P	**Pn**	**23 18 03.2**	**+1.3**
VILB	**Vilhena**	**12.59**	**37**	*e*P	**Pn**	**23 18 18.3**	**+0.3**
ETMB	**Extrema**	**13.39**	**8**	*e*P	**P**	**23 18 32.8**	**-0.5**
RODS	**Rosario do Sul**	**13.49**	**125**	*e*P	**Pn**	**23 18 25.6**	**-4.0**
PTGB	**Pitanga**	**14.66**	**99**	*e*P	**Pn**	**23 18 42.0**	**-2.7**
CPSB	**Cacapava Do Su**	**14.86**	**122**	*e*P	Pn	23 18 42.0	-5.0
ITAB	**Concordia**	**14.93**	**109**	*e*P	**Pn**	**23 18 45.5**	**-2.4**
PLTB	**Pedras Altas**	**15.37**	**127**	*e*P	**Pn**	**23 18 48.4**	**-5.0**
PDRB	**Porto dos Gac**	**15.74**	**45**	*e*P	**P**	**23 18 59.6**	**+0.2**
CLDB	**Colider**	**16.90**	**46**	*e*P	**P**	**23 19 13.5**	**+1.4**
IPMB	**Ipameri, GO**	**19.24**	**78**	*e*P	**P**	**23 19 37.6**	**-0.2**
VAO	**Valinhos**	**19.36**	**94**	*e*P	**P**	**23 19 36.2**	**-3.0**
SNDB	**Serra Nova Dou**	**19.42**	**58**	*e*P	**P**	**23 19 40.8**	**+1.0**
NPGB	**Novo Progresso**	**20.13**	**39**	*e*P	**P**	**23 19 48.0**	**+0.5**
BDFB	**Brasilia**	**20.28**	**72**	*e*P	**P**	**23 19 48.6**	**-0.5**
ITTB	**Itaituba**	**22.14**	**34**	*e*P	**P**	**23 20 09.6**	**+0.7**
MALB	**Monte Alegre**	**25.04**	**34**	*e*P	**P**	**23 20 39.0**	**+3.2**
TORD	**Torodi Ar. Bea**	**77.15**	**70**	P	**P**	**23 27 05.7**	**+2.3**
	comp=E,0.6nm,0.5s,baz=254,slow=5.3,SNR=11						
	comp=E,0.6nm,0.5s						
MKAR	**Makanchi Array**	**146.47**	**38**	PKPbc	**PKPab**	**23 34 52.2**	**+1.5**
	comp=E,0.3nm,0.6s,baz=298,slow=3.1,SNR=1.9						

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*ECX **11** 23:28:32.3±0.5,29.°58N×113.°81W,h20km±13km,MD3.7,*
ML3.9
*MEX **11** 23:28:34.7±0.5,29.°49N×113.°71W,h5km,MD4.2*
ISC 11 23:28:31.9±1.0,29.°54N±0.°03×113.°78W±0.°03,
h17km±10km,n24,σ1$59/36,5C-5D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGB	**San Luis Gonza**	**0.62**	**298⇑**	*e*P	**Pg**	**23 28 42.9**	**-1.2**
SLGB				*e*S	**Sg**	**23 28 51.0**	**-1.3**
SLGB				IAML		23 28 53.5	
	comp=E,2μm,0.8s						
SLGB				⇓*e*		23 28 53.5	
SLGB				⇓*e*		23 29 03.6	
SLGB				IAML		23 29 03.6	
	comp=N,5μm,0.8s						
BAHB	**Baha de los**	**0.63**	**162**	*e*P	**Pg**	**23 28 44.6**	**+0.3**
BAHB				*i* S	**Sb**	**23 28 53.5**	**+0.6**
BAHB	**Baha de los**	**0.63**	**162⇓**	*e*P	**Pg**	**23 28 44.6**	**+0.3**
BAHB				*e*S	**Sb**	**23 28 53.6**	**+0.7**
BAHB				IAML		23 28 55.9	
	comp=N,17μm,0.6s						
BAHB				*e*		23 28 55.9	
BAHB				⇓*e*		23 28 56.0	
BAHB				IAML		23 28 56.0	
	comp=E,18μm,0.8s						
PLIB	**Puerto Liberta**	**1.01**	**68⇑**	*e*P	**Pb**	**23 28 49.5**	**-1.6**
PLIB				*e*S	**Sb**	**23 29 04.0**	**0.0**
PLIB				IAML		23 29 05.7	
	comp=E,2μm,0.4s						
PLIB				⇑*e*		23 29 05.7	
SFQB	**San Francisqui**	**1.39**	**145**	*e*P	**Pn**	**23 28 55.5**	**-1.0**
SFQB				*e*S	**Sb**	**23 29 15.2**	**+0.2**
LAPR	**La Primavera**	**1.58**	**53**	*e*P	**Pn**	**23 28 59.8**	**+0.6**
LAPR				*e*S	**Sn**	**23 29 18.6**	**-0.7**
LAPR	**La Primavera**	**1.58**	**53**	*e*P	**Pn**	**23 28 59.1**	**-0.1**
SFX	**San Felipe**	**1.75**	**328**	*e*P	**Pn**	**23 29 00.4**	**-1.2**
PIX	**Pinacate**	**2.03**	**8**	*e*P	**Pn**	**23 29 04.8**	**-0.6**
SQX	**San Quintin**	**2.09**	**300**	*e*P	**Pn**	**23 29 05.7**	**-0.5**
SQX				IAML		23 29 38.4	
	comp=E,626nm,0.6s						
SQX				⇑*e*		23 29 38.4	
SQX				⇑*e*		23 29 38.5	
SQX				IAML		23 29 38.5	
	comp=N,786nm,0.6s						
SPIG	**San Pedro Mart**	**2.09**	**316**	*e*P	**Pn**	**23 29 08.8**	**+2.3**
SPIG				*e*S	**Sg**	**23 29 41.8**	**+2.5**
SPIG	**San Pedro Mart**	**2.09**	**316**	*e*P	**Pn**	**23 29 05.4**	**-1.1**
HSIG		**2.52**	**101**	*e*P	**Pb**	**23 29 18.7**	**+1.9**
HSIG				*e*S	**Sn**	**23 29 41.0**	**-1.6**
VTX	**Valle De La Tr**	**2.53**	**317**	*e*P	**Pn**	**23 29 11.7**	**-0.6**
214A	**Organ Pipe Nat**	**2.54**	**19**	*i* P	**Pn**	**23 29 11.2**	**-1.3**
214A				*e*S	**Sg**	**23 29 58.2**	**+4.5**
SRIG	**Santa Rosalia**	**2.60**	**148**	*e*P	**Pg**	**23 29 21.0**	**-0.7**
SRIG				*e*S	**Sg**	**23 29 56.5**	**+1.1**
SRIG	**Santa Rosalia**	**2.60**	**148**	*e*P	**Pn**	**23 29 14.5**	**+1.3**
SRIG				⇓*e*		23 30 04.0	
SRIG				IAML		23 30 04.0	
	comp=E,256nm,0.7s						
GUYB	**Guaymas**	**3.03**	**122**	*e*P	**Pb**	**23 29 23.2**	**-2.2**
GUYB				*e*S	**Sg**	**23 30 08.8**	**-0.6**
GUYB	**Guaymas**	**3.03**	**122**	*e*P	**Pn**	**23 29 19.8**	**+0.7**
NOVRB	**El Novillo Son**	**3.66**	**98**	*e*P	**Pn**	**23 29 29.3**	**+1.5**
CBX	**Cerro Bola**	**3.71**	**319**	*e*P	**Pb**	**23 29 39.0**	**+1.9**
CBX				*e*S	**Sg**	**23 30 29.9**	**-1.2**
CGIG		**5.10**	**79**	*e*P	**Pb**	**23 29 58.8**	**-2.0**
CGIG				*e*S	**Sb**	**23 31 00.4**	**-1.5**
121A	**Cookes Peak, D**	**5.94**	**58**	*e*P	Pn	23 30 05.7	+6.3
121A				*e*S	**Sn**	**23 31 09.7**	**+2.6**
SLBS	**Sierra La Lagu**	**6.77**	**149**	*e*P	Pn	23 30 15.5	+4.9
SLBS				*e*		23 31 41.6	

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*IDC **11** 23:29:07.0±0.4,2.°25S×133.°80E,h0km,mb4.7/22,*
mbtmp4.8/28,ML5.0/5,MS4.8/56,Error ellipse:
s-maj=15.8km s-min=10.4km az=62.0
*DJA **11** 23:29:08.4±0.1,2.°S±2.°×13.°4E±.°,h10km,M5.2/67,*
mb5.3/67,mB5.6/48,MLv5.7/17,Mw(mB)5.1/48,
MwMwp5.1/23,Mwp5.4/23
*GCMT **11** 23:29:09.4±0.1,2.°24S±0.°01×133.°91E±0.°01,h15km,*
MW5.5/152,Moment Tensor Solution. s119,c193;
s152,c268; Duration: 1s3 Moment tensor: Scale 10^17
Nm; M_{rr}0.06±.02; M_{tt}-1.02±.02; M_{pp}0.96±.02;
M_{rt}0.07±.05; M_{rp}1.36±.02; M_{tp}0.81±.07; Best double
couple: $M_0$1.86300×10^17 NP1:ϕ_s341.00000°,δ82.00000°,
λ157.00000°. NP2:ϕ_s74.00000°,δ67.00000°,λ8.00000°.
Principal axes: T 1.9570, Plg22.0000°, Azm295.0000°; N
-0.1860, Plg65.0000°, Azm143.0000°; P -1.7680,
Plg10.0000°, Azm29.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*BJI **11** 23:29:09.3±0.0,2.°27S×133.°99E,h23km,mb4.9/70,*
mB5.2/55,Ms5.2/80,Ms7 4.9/76
*MOS **11** 23:29:09.5±1.0,2.°30S×133.°80E,h37km,mb5.4/34,*
MS5.0/8,Error ellipse: s-maj=8.6km s-min=4.9km
az=120.5
*KLM **11** 23:29:10,2.°29S×134.°23E,h36km,mb5.5*
*NEIC **11** 23:29:11.4±1.7,2.°30S±0.°07×133.°86E±0.°07,h39km±5km,*
mb5.3/93,Error ellipse: s-maj=9.9km s-min=9.1km
az=220.0
ISC 11 23:29:10.7±0.4,2.°32S±0.°03×133.°88E±0.°03,h28km±2km,
h28km:pP-P,n499,σ1$94/540,mb5.1/128,MS4.8/89,
17C-10D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.86**	**20**	P	**Pb**	**23 29 22.8**	**-4.2**
RKPI				S	**Sb**	**23 29 37.2**	**-0.9**
FAKI	**Fak Fak**	**1.74**	**250**	Pn	**Pn**	**23 29 38.7**	**-0.3**
FAKI				Sn	**Sn**	**23 29 58.8**	**-1.4**
FAKI	**Fak Fak**	**1.74**	**250**	P	**Pn**	**23 29 38.6**	**-0.3**
FAKI				S	**Sn**	**23 29 59.7**	**-0.5**
FAKI	**Fak Fak**	**1.74**	**250**	P	**Pn**	**23 29 39.6**	**+0.6**
SRPI	**Serui, Papua**	**2.40**	**79**	P	**Pn**	**23 29 46.0**	**-2.1**
SRPI				S	**Sn**	**23 30 17.5**	**+0.9**
SIJI	**Sorong**	**2.99**	**299**	Pn	**Pn**	**23 29 54.6**	**-1.6**
	206nm,0.3s,baz=93,slow=9.9,SNR=348						
SIJI				Sn	**Sn**	**23 30 33.6**	**+2.5**
	349nm,0.3s,baz=76,slow=13,SNR=3.8						
SIJI				LR	LR	23 31 28.0	
	comp=Z,54μm,19.7s,baz=96,slow=49						
	2μm,0.7s						
SIJI	**Sorong**	**2.99**	**299**	P	**Pn**	**23 29 54.0**	**-2.2**
SWI	**Sorong**	**3.00**	**299**	P	**Pn**	**23 29 54.7**	**-1.6**
SWI	**Sorong**	**3.00**	**299**	P	**Pn**	**23 29 54.3**	**-2.0**
SWI				S	**Sn**	**23 30 33.1**	**+1.8**
BNDI	**Bandanaira**	**4.53**	**241**	P	**Pn**	**23 30 17.3**	**-0.1**
BNDI				S	**Sn**	**23 31 09.1**	**-0.1**
BNDI	**Bandanaira**	**4.53**	**241**	P	**Pn**	**23 30 18.1**	**+0.7**
SMPI	**Sarmi**	**4.84**	**86**	P	**Pn**	**23 30 22.6**	**+1.0**
MSAI	**Masohi**	**5.05**	**258**	P	**Pn**	**23 30 26.2**	**+1.6**
	2.2nm3μm136nm,0.5s						
MSAI				S	**Sn**	**23 31 22.5**	**+0.4**
	2.2nm3μm136nm,0.5s						
KRAI	**Karang Ratu**	**5.57**	**260**	P	**Pn**	**23 30 32.6**	**+0.9**
	5.9nm8μm500nm,0.6s						
AAI	**Ambon**	**5.84**	**256**	P	**Pn**	**23 30 37.4**	**+2.0**
AAI				pmax	pmax		
	comp=Z,615nm,0.7s						
AAI	**Ambon**	**5.84**	**256**	P	**Pn**	**23 30 35.8**	**+0.4**
	comp=Z,4.4nmcomp=Z,9μmcomp=Z,8μmcomp=Z,611nm,0.5s						
AAI				S	**Sn**	**23 31 38.8**	**-2.7**
	comp=Z,4.4nmcomp=Z,9μmcomp=Z,8μmcomp=Z,611nm,0.5s						
SAUI	**Saumlaki**	**6.18**	**204**	Pn	**Pn**	**23 30 40.0**	**-0.2**
GENI	**Genyem**	**6.29**	**93**	P	**Pn**	**23 30 42.4**	**+0.8**
	comp=Z,4.3nmcomp=Z,13μmcomp=Z,13μmcomp=Z,1μm,1.1s						
GENI	**Genyem**	**6.29**	**93**	P	**Pn**	**23 30 45.6**	**+4.0**
LBMI	**Labuha**	**6.59**	**285**	P	**Pn**	**23 30 45.4**	**-0.4**
	comp=Z,5.6nmcomp=Z,15μmcomp=Z,1μm,0.9s						
NLAI	**Namlea**	**6.83**	**262**	P	**Pn**	**23 30 49.6**	**+0.5**
	comp=Z,2.2nmcomp=Z,9μmcomp=Z,219nm,0.5s						
TNTI	**Ternate**	**7.20**	**295**	Pn	**Pn**	**23 30 53.8**	**-0.4**
TNTI	**Ternate**	**7.20**	**295**	P	**Pn**	**23 30 53.9**	**-0.2**
	comp=Z,1.0nmcomp=Z,11μmcomp=Z,3μmcomp=Z,283nm,1.1s						
TNTI	**Ternate**	**7.20**	**295**	P	**Pn**	**23 30 55.9**	**+1.8**
GAMI	**Galela, Maluku**	**7.36**	**304**	P	**Pn**	**23 30 56.9**	**+0.6**
	comp=Z,1.2nmcomp=Z,20μmcomp=Z,5μmcomp=Z,365nm,1.0s						
SANI	**Sanana**	**7.89**	**272**	P	**Pn**	**23 31 02.0**	**-1.6**
	comp=Z,1.2nmcomp=Z,7μmcomp=Z,4μmcomp=Z,424nm,0.8s						
SANI	**Sanana**	**7.89**	**272**	P	**Pn**	**23 31 03.1**	**-0.5**
SGSI	**Sangihe**	**10.26**	**306**	P	**Pn**	**23 31 36.0**	**-0.2**
	comp=Z,7μmcomp=Z,200nm,0.8s						
KMSI	**Cibinong**	**10.31**	**286**	P	**Pn**	**23 31 36.7**	**-0.1**
	comp=Z,6μmcomp=Z,673nm,1.0s						
KDU	**Kakadu**	**10.39**	**188**	P	**Pn**	**23 31 36.7**	**-1.2**
	baz=10,SNR=53						
KDU	**Kakadu**	**10.39**	**188**	P	**Pn**	**23 31 37.3**	**-0.6**
MTN	**Manton Dam**	**10.80**	**194**	P	**Pn**	**23 31 42.0**	**-1.5**
	baz=11,SNR=165						
MTN	**Manton Dam**	**10.80**	**194**	Pn	**Pn**	**23 31 41.7**	**-1.9**
MTN	**Manton Dam**	**10.80**	**194**	P	**Pn**	**23 31 42.6**	**-1.0**
LUWI	**Luwuk**	**11.18**	**276**	Pn	**Pn**	**23 31 46.6**	**-2.1**
LUWI	**Luwuk**	**11.18**	**276**	P	**Pn**	**23 31 46.6**	**-2.1**
	comp=Z,5μmcomp=Z,11μmcomp=Z,345nm,1.5s						
LUWI	**Luwuk**	**11.18**	**276**	P	**Pn**	**23 31 47.8**	**-0.9**
GTOI	**Gorontalo**	**11.26**	**285**	P	**Pn**	**23 31 50.3**	**+0.5**
	comp=Z,1μmcomp=Z,77nm,0.8s						
BBSI	**Bau Bau**	**11.71**	**254**	P	**Pn**	**23 31 57.6**	**+1.5**
	comp=Z,188nm,1.1s						
SOEI	**Soe**	**12.08**	**232**	Pn	**Pn**	**23 32 00.6**	**-0.6**
SOEI	**Soe**	**12.08**	**232**	P	**Pn**	**23 32 01.5**	**+0.4**
	comp=Z,4μmcomp=Z,3μmcomp=Z,350nm,0.7s						
SOEI	**Soe**	**12.08**	**232**	P	**Pn**	**23 32 01.1**	**0.0**
MRSI	**Marisa**	**12.26**	**283**	P	**Pn**	**23 32 00.7**	**-2.8**
	comp=Z,4μmcomp=Z,2μmcomp=Z,180nm,1.1s						
APSI	**Ampana**	**12.31**	**276**	P	**Pn**	**23 32 02.6**	**-1.6**
	comp=Z,5μmcomp=Z,6μmcomp=Z,622nm,1.2s						
KKSI	**Kolaka, Sulawe**	**12.35**	**261**	P	**Pn**	**23 32 04.6**	**-0.1**
	comp=Z,53nm,1.2s						
DAV	**Davao City (W)**	**12.48**	**318**	Pn	**Pn**	**23 32 08.0**	**+1.5**
	comp=Z,26nm,0.3s,baz=135,slow=3.9,SNR=8.0						
MMRI	**Maumere**	**13.18**	**241**	Pn	**Pn**	**23 32 15.8**	**-0.3**
MMRI	**Maumere**	**13.18**	**241**	P	**Pn**	**23 32 15.4**	**-0.6**
	comp=Z,5μmcomp=Z,213nm,1.2s						
MMRI	**Maumere**	**13.18**	**241**	P	**Pn**	**23 32 16.5**	**+0.5**
MANU	**Manus Island**	**13.48**	**89**	Pn	**Pn**	**23 32 21.9**	**+1.8**
TOLI2	**Tolitoli**	**13.53**	**284**	Pn	**Pn**	**23 32 17.7**	**-3.2**
TOLI2	**Tolitoli**	**13.53**	**284**	P	**Pn**	**23 32 20.0**	**-0.9**
BSSI	**Bau Bau, Buton**	**13.88**	**254**	P	**Pn**	**23 32 25.9**	**+0.2**
	comp=Z,2μmcomp=Z,132nm,1.4s						
BNSI	**Bone**	**13.91**	**261**	P	**Pn**	**23 32 26.3**	**+0.3**
	comp=Z,1μmcomp=Z,1μmcomp=Z,76nm,1.4s						
BKSI	**Bulukumba**	**14.05**	**257**	P	**Pn**	**23 32 27.3**	**-0.6**
	comp=Z,2μmcomp=Z,86nm,1.0s						
TTSI	**Tana Toraja**	**14.07**	**267**	P	**Pn**	**23 32 28.5**	**+0.3**
	comp=Z,4μmcomp=Z,2μmcomp=Z,138nm,1.3s						
SPSI	**Sidrap Palu**	**14.19**	**263**	P	**Pn**	**23 32 30.1**	**+0.3**
	comp=Z,2μmcomp=Z,104nm,1.4s						
KNRA	**Kununurra**	**14.20**	**201**	P	**Pn**	**23 32 26.4**	**-3.6**
	baz=14,SNR=155						
KNRA	**Kununurra**	**14.20**	**201**	Pn	**Pn**	**23 32 25.6**	**-4.4**
KNRA	**Kununurra**	**14.20**	**201**	P	**Pn**	**23 32 26.4**	**-3.6**
MPSI	**Mapaga**	**14.23**	**281**	P	**Pn**	**23 32 29.1**	**-1.3**
	comp=Z,4μmcomp=Z,1μmcomp=Z,87nm,1.4s						
KAPI	**Kappang**	**14.35**	**259**	Pn	**Pn**	**23 32 32.7**	**+0.6**
	comp=Z,4.2nm,0.3s,baz=76,slow=6.7,SNR=16						
	comp=Z,85nm,0.6s						
KAPI	**Kappang**	**14.35**	**259**	Pn	**Pn**	**23 32 30.6**	**-1.5**
KAPI	**Kappang**	**14.35**	**259**	P	**Pn**	**23 32 31.3**	**-0.8**
	comp=Z,1μmcomp=Z,143nm,0.9s						
KAPI	**Kappang**	**14.35**	**259**	P	**Pn**	**23 32 34.6**	**+2.5**
COEN	**Coen**	**14.77**	**142**	P	**Pn**	**23 32 36.0**	**-1.7**
	baz=15,SNR=17						
COEN	**Coen**	**14.77**	**142**	Pn	**Pn**	**23 32 34.5**	**-3.2**
COEN	**Coen**	**14.77**	**142**	P	**Pn**	**23 32 36.3**	**-1.4**
PMG	**Port Moresby**	**14.96**	**119**	Pn	**Pn**	**23 32 40.8**	**+0.5**
	comp=Z,41nm,0.8s,baz=299,slow=13,SNR=6.5						
PMG				LR	LR	23 40 17.0	
	comp=Z,9μm,19.3s,baz=304,slow=44						
PMG	**Port Moresby**	**14.96**	**119**	Pn	**Pn**	**23 32 39.7**	**-0.6**
PMG	**Port Moresby**	**14.96**	**119**	*ce*P	**Pn**	**23 32 39.2**	**-1.1**
PMG				pmax	pmax		
	comp=Z,139nm,2.5s						
PMG	**Port Moresby**	**14.96**	**119**	P	**Pn**	**23 32 38.3**	**-2.0**
	comp=Z,5μmcomp=Z,2μmcomp=Z,119nm,1.3s						
PMG	**Port Moresby**	**14.96**	**119**	P	**P**	**23 32 43.2**	**-2.4**
PMSI	**Majene**	**14.99**	**265**	P	**Pn**	**23 32 41.3**	**+0.5**
	comp=Z,3μmcomp=Z,148nm,1.3s						
SGKI	**Sangatta, Kali**	**16.37**	**276**	P	**P**	**23 33 01.0**	**-0.3**
	comp=Z,4μmcomp=Z,8μmcomp=Z,208nm,1.2s						
SMKI	**Samarinda**	**16.77**	**276**	P	**Pn**	**23 33 04.3**	**+0.6**
	comp=Z,14μmcomp=Z,330nm,1.3s						
BKB	**Balikpapan**	**17.01**	**273**	Pn	**Pn**	**23 33 05.2**	**-1.6**
BKB				IAmb	IAmb	23 33 13.0	
	comp=Z,266nm,1.2s						
BKB	**Balikpapan**	**17.01**	**273**	P	**P**	**23 33 07.9**	**-0.5**
	comp=Z,4μmcomp=Z,3μmcomp=Z,196nm,1.8s						
BKB	**Balikpapan**	**17.01**	**273**	P	**P**	**23 33 08.4**	**0.0**
MYLDM	**Lahad Datu**	**17.08**	**296**		**Pn**	**23 33 07.6**	**0.0**
MYLDM				IAmb	IAmb	23 33 14.0	
	comp=Z,276nm,1.4s						
MYLDM	**Lahad Datu**	**17.08**	**296**	P	**P**	**23 33 08.8**	**-0.3**
	comp=Z,7μmcomp=Z,4μmcomp=Z,206nm,1.4s						
PLAI	**Plampang**	**17.28**	**247**	P	**Pn**	**23 33 07.8**	**-2.2**
	comp=Z,2μmcomp=Z,162nm,0.9s						
PLAI	**Plampang**	**17.28**	**247**	P	**Pn**	**23 33 09.4**	**-0.6**
WB0	**Warramunga Arr**	**17.35**	**178**	Pn	**Pn**	**23 33 08.7**	**-2.2**
WB0				IAmb	IAmb	23 33 19.9	
	comp=Z,163nm,1.1s						
WRAB	**Tennant Creek**	**17.51**	**179**	Pn	**Pn**	**23 33 11.5**	**-1.4**
WRAB				IAmb	IAmb	23 33 21.9	
	comp=Z,249nm,1.3s						
WRAB	**Tennant Creek**	**17.51**	**179**	*ce*P	**P

comp=Z,44nm,0.8s
CTA Charters Tower 21.40 146 P P 23 33 58.2 +1.9
CTAO Charters Tower 21.40 146 P P 23 33 55.7 -0.6
CTAO Charters Tower 21.40 146 P P 23 33 55.7 -0.6
CTAO pmax pmax
comp=Z,59nm,0.9s
CTAO Charters Tower 21.40 146 P P 23 33 58.3 +1.9
SBUM Sibu 22.17 282 P P 23 34 04.2 -0.5
SBUM Sibu 22.17 282 P P 23 34 05.2 +0.5
comp=Z,777nmcomp=Z,61nm,1.2s
SBUM Sibu 22.17 282 P P 23 34 07.0 +2.3
PBKI Pangkalan Bun 22.19 269 P P 23 34 05.9 +0.9
comp=Z,204nm,1.1s
STKI Sintang 22.52 276 P P 23 34 08.2 -0.3
comp=Z,82nm,1.2s
PWJI Pagerwojo 22.70 255 P P 23 34 08.6 -1.7
comp=Z,55nm,0.8s
WRKA Warakurna 23.22 193 P P 23 34 15.6 0.0
baz=23,SNR=93
WRKA Warakurna 23.22 193 P P 23 34 16.2 +0.6
MBWA Marble Bar 23.25 215 P P 23 34 15.7 -0.3
MBWA Marble Bar 23.25 215 P P 23 34 16.9 +0.9
PCJI Pacitan 23.34 255 P P 23 34 17.9 +1.0
comp=Z,105nm,1.3s
PSA00 Pilbara Seismi 23.51 214 P P 23 34 18.4 -0.2
PSA00 Pilbara Seismi 23.51 214 P P 23 34 18.1 -0.4
PSA00 IAmb IAmb 23 34 34.5
comp=Z,51nm,0.8s
PSA00 Pilbara Seismi 23.51 214 P P 23 34 19.5 +1.0
SMRI Semarang 23.82 258 P P 23 34 27.4 +5.8
KSM Kuching 23.87 279 P P 23 34 22.3 +0.3
KSM IAmb IAmb 23 34 40.0
comp=Z,159nm,1.2s
KSM Kuching 23.87 279 P P 23 34 21.4 -0.6
comp=Z,2µmcomp=Z,118nm,1.5s
KSM Kuching 23.87 279 P P 23 34 24.0 +2.0
KSM Kuching 23.87 279 P P 23 34 23.7 +1.7
OOD Oodnadatta 25.39 176 P P 23 34 36.0 +0.3
QLP Quilpie 26.09 159 P P 23 34 43.3 +1.2
baz=26,SNR=7.2
QLP Quilpie 26.09 159 P P 23 34 42.4 +0.3
INKA Innaminka 26.12 166 P P 23 34 44.3 +2.0
LEM Lembang 26.55 259 P P 23 34 49.3 +2.6
comp=Z,18nm,0.5s,baz=98,slow=12,SNR=4.3
LEM LR LR 23 47 22.9
comp=Z,4µm,19.0s,baz=76,slow=41
HNR Honiara 26.86 106 P P 23 34 51.5 +2.3
comp=Z,1µm,0.4s,baz=212,slow=5.5,SNR=4.5
HNR LR LR 23 46 02.3
comp=Z,35µm,19.4s,baz=282,slow=38
HNR Honiara 26.86 106 P P 23 34 48.3 -0.9
HNR Honiara 26.86 106 P P 23 34 50.7 +1.5
HNR pmax pmax
comp=Z,119nm,0.7s
CNJI Cibinong 27.11 259 P P 23 34 57.9 +6.5
PPBI Pangkal Pinang 27.73 270 P P 23 35 13.3 +16
MULG Mulgathing 27.81 180 P P 23 35 00.2 +2.7
MEEK Meekatharra 28.27 210 P P 23 35 01.7 0.0
baz=28,SNR=8.5
MEEK Meekatharra 28.27 210 P P 23 35 03.5 +1.7
LCRK Leigh Creek 28.27 172 P P 23 35 03.3 +1.6
EIDS Eidsvold 28.28 146 P P 23 35 02.4 +0.6
baz=28,SNR=7.4
EIDS Eidsvold 28.28 146 P P 23 35 01.2 -0.6
EIDS Eidsvold 28.28 146 P P 23 35 03.5 +1.7
FORT Forrest 28.84 190 P P 23 35 07.3 +0.6
baz=29,SNR=18
FORT Forrest 28.84 190 P P 23 35 05.9 -0.8
FORT IAmb IAmb 23 35 44.3
comp=Z,66nm,0.8s
FORT Forrest 28.84 190 P P 23 35 07.0 +0.3
SSLB Suanglung 28.84 335 P P 23 35 08.4 +1.6
comp=Z,33nm,1.3s
JOW Kunigami 29.48 350 LR LR 23 45 00.4
comp=Z,5µm,20.9s,baz=147,slow=32
STKA Stephens Creek 30.29 167 P P 23 35 19.0 -0.5
comp=Z,4.0nm,0.7s,baz=334,slow=9.3,SNR=7.5
STKA LR LR 23 50 23.5
comp=Z,4µm,18.7s,baz=339,slow=42
comp=Z,4.0nm,0.7s
STKA Stephens Creek 30.29 167 P P 23 35 20.1 +0.5
baz=30,SNR=4.4
STKA Stephens Creek 30.29 167 P P 23 35 21.3 +1.8
MYKOM Kota Tinggi 30.30 277 P P 23 35 19.0 -1.0
MYKOM IAmb IAmb 23 35 26.5
comp=Z,49nm,0.9s
MYKOM Kota Tinggi 30.30 277 P P 23 35 22.5 +2.6
comp=Z,3µmcomp=Z,52nm,1.0s
JCJ Chichijima 30.32 15 LR LR 23 45 45.2
comp=Z,1µm,20.0s,baz=193,slow=33
BBOO Buckleboo 30.40 176 P P 23 35 18.2 -2.3
BBOO IAmb IAmb 23 36 23.0
comp=Z,66nm,1.2s
CMSA Cobar Meteorol 31.12 160 P P 23 35 26.6 -0.3
baz=31,SNR=6.6
CMSA Cobar Meteorol 31.12 160 P P 23 35 26.5 -0.4
MASI Maura Aman, Be 31.62 268 P P 23 35 34.9 +3.3
QIZ Qiongzhong 31.76 313 P P 23 35 33.2 +0.5
QIZ S **S 23 40 43.1 +1.9**
QIZ LR LR
comp=Z,2µm,24.7s
QIZ LR LR
comp=Z,2µm,18.4s
QIZ LR LR
comp=Z,2µm,40.4s
JRMM Jerantut 31.99 281 P P 23 35 36.0 +1.2
SDSI Sungai Dareh 32.47 272 P P 23 35 40.0 +1.0
comp=Z,48nm,1.2s
BLDU Ballidu 32.50 208 P P 23 35 39.7 +0.6
baz=32,SNR=16
BLDU Ballidu 32.50 208 P P 23 35 39.9 +0.8
ARMA Armidale 32.61 151 P P 23 35 40.4 +0.2
baz=33,SNR=8.0
ARMA Armidale 32.61 151 P P 23 35 39.1 -1.1
ARMA IAmb IAmb 23 35 51.1
comp=Z,25nm,0.9s
ARMA Armidale 32.61 151 P P 23 35 40.0 -0.2
KLBR Kellerberrin 32.85 206 P P 23 35 43.0 +0.9
baz=33,SNR=11
KLBR Kellerberrin 32.85 206 P P 23 35 42.7 +0.6
BKNI Bangkinang 32.94 274 P P 23 35 43.1 -0.1
BKNI Bangkinang 32.94 274 P P 23 35 46.2 +3.1
comp=Z,106nm,1.1s
IPM Ipoh 33.52 282 P P 23 35 47.3 -0.9
IPM IAmb IAmb 23 36 04.5
comp=Z,73nm,1.4s
IPM Ipoh 33.52 282 P P 23 35 51.1 +2.9
IPM Ipoh 33.52 282 P P 23 35 50.0 +1.8
IPM Ipoh 33.52 282 P P 23 35 49.6 +1.4
KULM Kulim 34.05 283 P P 23 35 51.4 -1.4
KULM IAmb IAmb 23 36 08.8
comp=Z,71nm,1.6s
KULM Kulim 34.05 283 P P 23 35 54.0 +1.2
NWAO Narrogin (SRO) 34.22 205 P P 23 35 54.4 +0.3
comp=Z,14nm,1.0s,baz=264,slow=9.4,SNR=3.6
NWAO LR LR 23 51 26.1
comp=Z,4µm,18.8s,baz=252,slow=39
comp=Z,14nm,1.0s
NWAO Narrogin (SRO) 34.22 205 P P 23 35 55.1 +1.1
baz=34,SNR=3.8
NWAO P **P 23 35 55.1 +1.1**
baz=34,SNR=3.8
NWAO Narrogin (SRO) 34.22 205 P P 23 35 53.2 -0.9
NWAO Narrogin (SRO) 34.22 205 P P 23 35 55.5 +1.5
MNSI Mandailing Nat 34.43 275 P P 23 35 59.0 +2.8
KOUNC Koumac, New Ca 34.75 124 P P 23 35 58.4 -0.4
SISI Saibi 34.79 271 P P 23 35 59.9 +0.7
comp=Z,130nm,1.4s
ARPS Mount Arapiles 35.06 169 P P 23 36 02.0 +0.8
baz=35,SNR=12
ARPS Mount Arapiles 35.06 169 P P 23 36 05.1 +3.9
RPSI Rantau Prapat 35.30 278 P P 23 36 02.8 -0.8
RPSI Rantau Prapat 35.30 278 P P 23 36 01.4 -2.2
RPSI IAmb IAmb 23 36 19.3
comp=Z,32nm,1.1s
PSI Prapat 35.31 278 P P 23 36 02.8 -1.1
comp=Z,17nm,0.8s,baz=181,slow=1.8,SNR=7.4
PSI LR LR 23 52 10.5
comp=Z,2µm,21.8s,baz=135,slow=39
comp=Z,17nm,0.8s
PSI Prapat 35.31 278 P P 23 36 04.2 +0.3
comp=Z,19nm,1.6s,comp=Z,30nm,1.0s
PSI P **P 23 36 04.2 +0.3**
comp=Z,19nm,1.6s,comp=Z,30nm,1.0s
PSI Prapat 35.31 278 P P 23 36 03.8 -0.1

SSE Sheshan 35.36 341 P P 23 36 05.5 +1.6
SSE S **S 23 41 41.8 +5.1**
SSE pmax pmax
comp=Z,32nm,0.9s
SSE pmax pmax
comp=Z,190nm,3.6s
SSE LR LR
comp=Z,500nm,22.0s
SSE LR LR
comp=Z,1µm,22.7s
JHJ Hachijo jima 2 35.69 9 LR LR 23 47 39.4
comp=Z,2µm,19.9s,baz=176,slow=31
RKGY Rocky Gully 35.78 204 P P 23 36 08.0 +0.5
baz=36,SNR=5.1
RKGY Rocky Gully 35.78 204 P P 23 36 09.5 +2.0
SRIT Nakonsritamara 35.85 288 P P 23 36 05.6 -2.8
CNSH ChangSha 36.41 328 ⇑P **P 23 36 14.0 +1.1**
CNSH S **S 23 41 54.4 +1.6**
CNSH LR LR
comp=Z,1µm,20.8s
CNSH LR LR
comp=Z,2µm,19.7s
CNSH LR LR
comp=Z,1µm,19.8s
KCSI Kotacane, Aceh 36.56 279 P P 23 36 28.7 +14
NJ2 Nanjing 37.04 339 ⇑P **P 23 36 19.7 +1.5**
NJ2 pP **pP 23 36 22.2 -4.4**
NJ2 S **S 23 42 03.0 +0.7**
NJ2 sS **sS 23 42 17.7 +1.5**
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,300nm,3.8s
NJ2 LR LR
comp=Z,2µm,17.5s
NJ2 LR LR
comp=Z,3µm,17.1s
NJ2 LR LR
comp=Z,3µm,18.6s
JHS Saijyo 37.13 359 P **P 23 36 17.9 -1.1**
JHS IAmb IAmb 23 36 38.3
comp=Z,28nm,0.9s
DZM Mont Dzumac 37.23 124 *e*P **P 23 36 22.0 +1.8**
comp=Z,181nm,28.0s
DZM *e*S **S 23 42 06.0 +0.2**
comp=Z,1µm,31.6s
DZM *e*LR LR 23 46 27.5
comp=Z,4µm,22.8s
DZM Mont Dzumac 37.23 124 P **P 23 36 21.0 +0.9**
comp=Z,5.8nm,0.6s,baz=64,slow=12,SNR=4.0
comp=Z,5.8nm,0.6s
WHN Wuhan 37.62 332 ⇓P **P 23 36 23.9 +0.7**
WHN S **S 23 42 10.4 -0.8**
WHN LR LR
comp=Z,4µm,21.7s
WHN LR LR
comp=Z,3µm,14.9s
WHN LR LR
comp=Z,3µm,22.1s
MLSI Meulaboh, Aceh 38.02 280 P **P 23 36 26.6 -0.2**
comp=Z,92nm,1.0s
SRDT SRDT 38.22 297 P **P 23 36 28.9 +0.5**
comp=Z,789nmcomp=Z,29nm,1.0s
GYA Guiyang 38.86 319 ⇓*i*P P 23 36 38.5 +4.7
GYA pP sP 23 36 47.2 +1.5
GYA PP **PnPn 23 38 13.5 +7.9**
GYA S **S 23 42 30.1 -0.3**
GYA pmax pmax
comp=Z,16nm,1.1s
GYA pmax pmax
comp=Z,260nm,3.6s
GYA LR LR
comp=Z,1µm,19.4s
GYA LR LR
comp=Z,2µm,21.8s
GYA LR LR
comp=Z,3µm,23.5s
MJAR Matsushiro Arr 38.87 6 P **P 23 36 32.7 -0.9**
comp=Z,6.8nm,0.9s,baz=184,slow=8.3,SNR=3.2
MJAR LR LR 23 49 54.1
comp=Z,2µm,19.6s,baz=184,slow=32
comp=Z,6.8nm,0.9s
MAJO Matsushiro 38.87 6 P **P 23 36 32.6 -1.1**
MAJO Matsushiro 38.87 6 P **P 23 36 32.6 -1.1**
MAJO pmax pmax
comp=Z,13nm,1.0s
MAJO Matsushiro 38.87 6 P P 23 36 39.0 +5.3
comp=Z,14nm,1.8s
ENH Enshi 39.91 326 P **P 23 36 40.2 -2.3**
KSRS Korea Array 39.96 353 P **P 23 36 41.5 -1.2**
comp=Z,2.6nm,0.8s,baz=180,slow=12,SNR=3.4
KSRS LR LR 23 51 04.4
comp=Z,1µm,21.6s,baz=155,slow=33
comp=Z,2.6nm,0.8s
CM31 Chiang Mai Arr 40.11 302 P **P 23 36 43.7 -0.6**
CMAR Chiang Mai Arr 40.11 302 P **P 23 36 43.2 -1.0**
comp=Z,5.1nm,0.7s,baz=125,slow=6.6,SNR=36
CMAR LR LR 23 54 06.3
comp=Z,615nm,19.9s,baz=120,slow=38
comp=Z,5.1nm,0.7s
JMM Marumori 40.49 8 P **P 23 36 45.3 -1.8**
JMM IAmb IAmb 23 36 54.6
comp=Z,68nm,1.2s
KMI Kunming 40.69 314 ⇑P **P 23 36 49.8 +0.6**
KMI pP sP 23 36 59.1 -2.0
KMI S **S 23 42 58.1 0.0**
KMI SS **SS 23 45 56.3 -3.0**
KMI pmax pmax
comp=Z,32nm,1.1s
KMI pmax pmax
comp=Z,130nm,4.9s
KMI LR LR
comp=Z,2µm,19.6s
KMI LR LR
comp=Z,1µm,23.7s
KMI LR LR
comp=Z,2µm,25.8s
TIA Tai'an 41.40 339 ⇑P **P 23 36 54.8 +0.2**
TIA S **S 23 43 03.4 -4.5**
TIA pmax pmax
comp=Z,27nm,0.8s
TIA pmax pmax
comp=Z,230nm,5.0s
TIA LR LR
comp=Z,2µm,19.1s
TIA LR LR
comp=Z,1µm,17.2s
TIA LR LR
comp=Z,2µm,18.6s
LYN LuoYang 41.83 333 *e*P **P 23 36 58.0 -0.2**
LYN pP pP 23 37 02.6 -4.1
LYN S **S 23 43 16.0 +1.7**
LYN pmax pmax
comp=Z,20nm,1.1s
LYN pmax pmax
comp=Z,220nm,4.7s
LYN LR LR
comp=Z,780nm,21.1s
LYN LR LR
comp=Z,1µm,17.4s
LYN LR LR
comp=Z,880nm,26.0s
PZH PanZhiHua 42.24 315 P **P 23 37 05.0 +3.2**
PZH PP **PP 23 38 45.5 +5.5**
PZH S **S 23 43 24.6 +3.7**
PZH pmax pmax
comp=Z,30nm,1.2s
PZH pmax pmax
comp=Z,160nm,5.4s
PZH LR LR
comp=Z,1µm,21.0s
PZH LR LR
comp=Z,980nm,22.0s
PZH LR LR
comp=Z,2µm,25.0s
XAN Xi'an 43.13 329 ⇓P **P 23 37 08.4 -0.4**
XAN PP **PP 23 38 55.5 +6.1**
XAN PcP **PcP 23 39 02.6 +4.3**
XAN S **S 23 43 35.1 +1.5**
XAN SS **SS 23 46 45.1 -1.8**
XAN ScS **ScS 23 47 06.6 -1.1**
XAN pmax pmax
comp=Z,38nm,1.0s
XAN pmax pmax
comp=Z,280nm,3.9s
XAN LR LR

comp=Z,2µm,17.9s
XAN LR LR
comp=Z,560nm,17.2s
XAN LR LR
comp=Z,2µm,21.3s
HNS HongShan 43.34 338 ⇓P **P 23 37 10.6 +0.2**
HNS sP **sP 23 37 25.0 +2.7**
HNS S **S 23 43 34.4 -2.0**
HNS SS **SS 23 46 41.1 -10**
HNS pmax pmax
comp=Z,59nm,1.6s
HNS LR LR
comp=Z,750nm,17.1s
HNS LR LR
comp=Z,2µm,19.8s
HNS LR LR
comp=Z,2µm,19.0s
CD2 Chengdu 43.76 321 P **P 23 37 15.6 +1.6**
CD2 PP **PP 23 38 56.3 +0.1**
CD2 S **S 23 43 46.2 +3.3**
CD2 sS sS 23 44 02.5 +5.6
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,270nm,5.9s
CD2 LR LR
comp=Z,1µm,18.0s
CD2 LR LR
comp=Z,1µm,16.1s
CD2 LR LR
comp=Z,2µm,21.8s
TIY Taiyuan 44.52 336 P **P 23 37 24.2 +4.3**
TIY S **S 23 43 52.6 -1.2**
TIY LR LR
comp=Z,720nm,19.2s
TIY LR LR
comp=Z,2µm,22.7s
TIY LR LR
comp=Z,930nm,18.6s
SNY Shenyang 44.93 349 ⇑P **P 23 37 26.8 +3.8**
SNY pmax pmax
comp=Z,29nm,0.9s
SNY pmax pmax
comp=Z,190nm,4.7s
SNY LR LR
comp=Z,2µm,18.0s
SNY LR LR
comp=Z,1µm,15.9s
SNY LR LR
comp=Z,3µm,21.4s
BJT Baijiatuau 45.16 341 P **P 23 37 23.6 -1.3**
BJT Baijiatuau 45.16 341 P **P 23 37 23.6 -1.3**
BJT pmax pmax
comp=Z,99nm,1.2s
BJT Baijiatuau 45.16 341 P **P 23 37 24.4 -0.4**
BJI Beijing 45.17 341 P **P 23 37 24.7 -0.3**
BJI pP **pP 23 37 33.5 0.0**
BJI sP **sP 23 37 38.2 +1.3**
BJI PcP **PcP 23 39 04.3 -0.7**
BJI S **S 23 44 02.1 -0.9**
BJI ScS **ScS 23 47 22.6 +2.5**
BJI pmax pmax
comp=Z,53nm,1.2s
BJI LR LR
comp=Z,300nm,20.1s
BJI LR LR
comp=Z,2µm,22.7s
BJI LR LR
comp=Z,2µm,19.4s
MSVF Nonsavu 45.95 112 P **P 23 37 33.3 +1.7**
comp=Z,12nm,1.0s,baz=312,slow=13,SNR=5.8
MSVF LR LR 23 56 17.9
comp=Z,1µm,20.4s,baz=301,slow=35
comp=Z,12nm,1.0s
MSVF Nonsavu 45.95 112 P **P 23 37 30.7 -0.9**
MSVF IAmb IAmb 23 37 49.6
comp=Z,32nm,1.1s
MSVF Nonsavu 45.95 112 P **P 23 37 34.7 +3.0**
USRK Ussuriysk Ar. 46.34 358 P **P 23 37 33.5 -0.6**
comp=Z,20nm,1.1s,baz=176,slow=5.7,SNR=12
USRK LR LR 23 54 12.0
comp=Z,1µm,21.9s,baz=173,slow=32
comp=Z,20nm,1.1s
CN2 Changchun 46.53 352 *e*P **P 23 37 35.3 -0.4**
CN2 PP **PP 23 39 24.7 -0.8**
CN2 S **S 23 44 23.0 +0.5**
CN2 SS **SS 23 47 41.5 -7.4**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,90nm,4.0s
CN2 LR LR
comp=Z,930nm,16.0s
CN2 LR LR
comp=Z,2µm,16.0s
CN2 LR LR
comp=Z,1µm,18.0s
MDJ Mudanjiang 46.89 356 P **P 23 37 37.4 -1.0**
MDJ IAmb IAmb 23 37 48.7
comp=Z,40nm,0.9s
MDJ Mudanjiang 46.89 356 P **P 23 37 38.6 +0.1**
MDJ pP sP 23 37 53.4 +3.0
MDJ S **S 23 44 30.0 +2.5**
MDJ pmax pmax
comp=Z,20nm,1.4s
MDJ pmax pmax
comp=Z,180nm,4.8s
MDJ LR LR
comp=Z,780nm,18.2s
MDJ LR LR
comp=Z,1µm,21.4s
MDJ LR LR
comp=Z,450nm,17.2s
MDJ Mudanjiang 46.89 356 P **P 23 37 36.7 -1.8**
LZH Lanzhou 47.39 327 *e*P **P 23 37 43.0 +0.3**
LZH pP pP 23 37 51.0 -0.3
LZH sP sP 23 37 56.1 +1.4
LZH S **S 23 44 33.2 -2.1**
LZH sS sS 23 44 50.4 +1.0
LZH SS **SS 23 47 55.1 -8.2**
LZH pmax pmax
comp=Z,24nm,1.2s
LZH pmax pmax
comp=Z,290nm,4.6s
LZH LR LR
comp=Z,1µm,14.3s
LZH LR LR
comp=Z,2µm,15.8s
LZH LR LR
comp=Z,2µm,18.6s
HHC Hu-ho-hao-te 47.55 337 *e*P **P 23 37 45.2 +1.4**
HHC pP sP 23 37 55.8 0.0
HHC S **S 23 44 37.1 -0.2**
HHC pmax pmax
comp=Z,55nm,0.8s
HHC pmax pmax
comp=Z,500nm,6.5s
HHC LR LR
comp=Z,2µm,18.6s
HHC LR LR
comp=Z,1µm,15.5s
HHC LR LR
comp=Z,4µm,18.4s
BTO Baotou 47.96 336 *e*P **P 23 37 47.1 +0.1**
BTO S **S 23 44 44.5 +1.3**
BTO LR LR
comp=Z,4µm,22.6s
BTO LR LR
comp=Z,6µm,23.7s
BNX BinXian 48.20 354 ⇓P **P 23 37 47.5 -1.1**
BNX S **S 23 44 47.5 +1.4**
BNX pmax pmax
comp=Z,9.0nm,0.7s
BNX pmax pmax
comp=Z,160nm,3.5s
BNX LR LR
comp=Z,1µm,18.2s
BNX LR LR
comp=Z,1µm,15.9s
BNX LR LR
comp=Z,1µm,24.5s
XLT XiLinHaoTe 48.71 343 *e*P **P 23 37 50.8 -1.9**
XLT pP pP 23 37 59.9 -1.4
XLT sP sP 23 38 05.5 +0.8
XLT PcS **PcS 23 43 14.7 +1.0**
XLT S **S 23 44 46.5 -7.1**

XLT sS pS 23 45 04.2 +0.5
XLT pmax pmax
comp=Z,190nm,4.4s
XLT LR LR
comp=Z,3μm,20.6s
XLT LR LR
comp=Z,2μm,18.5s
YSS Yuzh-Sakhalins 49.69 8 *e*P **P 23 38 01.1 +1.1**
YSS *e**SP **sP 23 38 11.0 -1.0**
YSS *e*S **S 23 45 10.3 +3.3**
YSS pmax pmax
comp=Z,30nm,1.1s
KLR Kul'dur 51.38 358 *ce*P **P 23 38 12.3 -0.5**
KLR pmax pmax
comp=Z,25nm,1.1s
LSA Lhasa 51.78 311 P **P 23 38 14.3 -2.4**
LSA IAmb IAmb 23 39 04.8
comp=Z,39nm,1.3s
LSA Lhasa 51.78 311 P **P 23 38 16.6 -0.1**
LSA Lhasa 51.78 311 P **P 23 38 14.3 -2.4**
LSA pmax pmax
comp=Z,39nm,1.3s
LSA Lhasa 51.78 311 P **P 23 38 15.4 -1.3**
GTA Gaotai 51.99 327 ||P **P 23 38 18.6 +0.9**
GTA S **S 23 45 39.2 -0.3**
GTA sS pS 23 45 50.2 +0.4
GTA SS **SS 23 49 12.2 -4.8**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,150nm,5.6s
GTA LR LR
comp=Z,940nm,18.9s
GTA LR LR
comp=Z,660nm,21.1s
GTA LR LR
comp=Z,1μm,21.1s
LBZ Lake Benmore 52.74 148 P **P 23 38 21.6 -1.4**
RPZ Rata Peaks 52.77 147 LR LR 23 59 18.1
comp=Z,3μm,20.6s,baz=306,slow=34
GOMU GeErMu 52.85 320 P **P 23 38 27.0 +2.5**
GOMU pP pP 23 38 32.6 -0.5
GOMU sP sP 23 38 34.1 -2.4
GOMU S **S 23 45 55.3 +3.4**
GOMU sS sS 23 46 08.1 +1.9
GOMU pmax pmax
comp=Z,5.0nm,1.2s
GOMU pmax pmax
comp=Z,120nm,4.9s
GOMU LR LR
comp=Z,480nm,17.9s
GOMU LR LR
comp=Z,620nm,17.1s
GOMU LR LR
comp=Z,840nm,20.4s
RAO Raoul Island 53.02 125 LR LR 00 00 22.6
comp=Z,424nm,20.4s,baz=282,slow=35
URZ Urewera 53.28 138 LR LR 00 00 50.1
comp=Z,2μm,20.6s,baz=32,slow=36
URZ Urewera 53.28 138 P **P 23 38 29.9 +2.8**
TAPN Taplejung 53.34 307 *e*P **P 23 38 27.9 -0.2**
comp=Z,54nm,0.8s
KHZ Kahutara 53.37 144 P **P 23 38 27.5 -0.2**
PALK Pallekele 53.91 281 LR LR 00 03 21.8
comp=Z,986nm,20.6s,baz=215,slow=38
RAMN Ramite 54.06 306 *e*P **P 23 38 32.8 -0.5**
comp=Z,80nm,0.9s
JIRN Jiri 54.69 307 *e*P **P 23 38 37.4 -0.7**
comp=Z,64nm,1.0s
AFI Afiamalu 54.88 105 LR LR 00 01 03.9
comp=Z,845nm,20.2s,baz=275,slow=35
GUN Gumba 55.05 307 *e*P **P 23 38 40.1 -0.5**
comp=Z,63nm,0.8s
ULN Ulaanbaatar 55.20 338 P **P 23 38 40.4 -0.8**
ULN Ulaanbaatar 55.20 338 *ce*P **P 23 38 42.2 +1.0**
ULN pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 55.20 338 P **P 23 38 42.4 +1.2**
comp=Z,84nm,1.1s
ULN Ulaanbaatar 55.20 338 P **P 23 38 39.5 -1.7**
PKI Pulchoki 55.28 306 *e*P **P 23 38 41.0 -1.3**
comp=Z,22nm,0.9s
PKIN Phulchoki 55.30 306 *e*P **P 23 38 41.1 -1.2**
comp=Z,16nm,0.8s
SONM Songino Array 55.42 338 P **P 23 38 43.4 +0.7**
comp=Z,2.1nm,0.5s,baz=152,slow=6.8,SNR=17
SONM LR LR 00 03 03.7
comp=Z,1μm,19.7s,baz=150,slow=37
comp=Z,2.1nm,0.5s
DMN Daman 55.54 306 *e*P **P 23 38 43.3 -0.8**
comp=Z,47nm,0.9s
GKN Gorkha 56.08 306 *e*P **P 23 38 47.4 -0.4**
comp=Z,45nm,0.9s
ZEA Zeya 56.13 355 *e*P P 23 38 55.2 +7.7
ZEA pmax pmax
comp=Z,10.0nm,0.6s
DANN Dangsing 56.93 306 *e*P **P 23 38 53.3 -0.7**
comp=Z,78nm,0.9s
PYUN Piuthan 57.45 306 *e*P **P 23 38 57.2 -0.5**
comp=Z,120nm,0.8s
HYBB Hyderabad (bro 57.95 292 *e*P **P 23 39 00.2 -0.9**
HYBB *es*P **sP 23 39 15.8 +2.7**
HYBB *e*PP **PP 23 41 08.7 -1.0**
HYBB *e*S **S 23 46 56.9 -3.0**
HYBB *e*ScS **ScS 23 48 45.5 -3.9**
PCHI Peechi 58.66 284 *e*P **P 23 39 06.5 +0.5**
PCHI *e*S **S 23 47 17.3 +8.1**
ZAK Zakamensk 58.69 338 *e*P **P 23 39 05.0 -0.7**
ZAK pmax pmax
comp=Z,14nm,1.4s
PETK Petropavlovsk- 58.73 17 P **P 23 39 07.1 +1.2**
comp=Z,6.0nm,0.9s,baz=198,slow=14,SNR=4.3
PETK LR LR 00 03 53.8
comp=Z,397nm,20.1s,baz=210,slow=36
comp=Z,6.0nm,0.9s
IRK Irkutsk 59.84 339 *e*P **P 23 39 14.1 +0.6**
IRK pmax pmax
comp=Z,77nm,2.2s
MOY Mondy 60.59 337 *e*P **P 23 39 16.4 -2.4**
MOY pmax pmax
comp=Z,44nm,1.6s
WMQ Urumqi 61.77 324 *e*P **P 23 39 26.1 -0.9**
WMQ pP sP 23 39 38.2 -0.9
WMQ S **S 23 47 48.9 +0.4**
WMQ pmax pmax
comp=Z,48nm,0.7s
WMQ pmax pmax
comp=Z,220nm,4.1s
WMQ LR LR
comp=Z,1μm,21.1s
WMQ LR LR
comp=Z,780nm,19.5s
WMQ LR LR
comp=Z,1μm,22.7s
BOD Bodaibo 62.04 348 *e*P **P 23 39 28.1 -0.2**
BOD pmax pmax
comp=Z,38nm,1.4s
MA2 Magadan 63.13 10 LR LR 00 06 26.1
comp=Z,491nm,18.9s,baz=194,slow=36
YAK Yakutsk 64.26 358 P **P 23 39 40.3 -2.6**
YAK Yakutsk 64.26 358 *e*P **P 23 39 41.3 -1.6**
YAK *e**PP **pP 23 39 50.7 -1.1**
YAK *e* 23 40 15.4
YAK *e*S **S 23 48 19.3 +0.7**
YAK *e*SS **SS 23 52 29.1 +0.5**
YAK pmax pmax
comp=Z,36nm,0.9s
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK smax smax
comp=N,23nm,1.6s
YAK smax smax
comp=E,18nm,1.6s
YAK MLR MLR
comp=Z,578nm,18.0s
YAK MLR MLR
comp=N,568nm,19.0s
YAK MLR MLR
comp=E,125nm,17.0s
DRV Dumont d'Urvil 64.36 177 P **P 23 39 43.4 -0.2**
SHEM Shemya Is, Ala 64.40 26 LR LR 00 04 28.5
comp=E,569nm,20.7s,baz=252,slow=33
DGZ Jazzator, Alta 65.39 329 *i* P **P 23 39 50.7 -0.1**
DGZ pmax pmax
comp=Z,20nm,1.2s
ZSN Zaisan 65.47 326 *e*P **P 23 39 49.8 -1.4**
ZSN Zaisan 65.47 326 *e*P **P 23 39 49.9 -1.4**
baz=326
SHLS Shalkode 66.55 320 *e*P **P 23 39 55.2 -3.2**
SHLS Shalkode 66.55 320 *e*P **P 23 39 55.2 -3.2**
baz=320
SEY Seymchan 66.57 9 *ce*P **P 23 39 58.8 +0.9**
SEY pmax pmax
comp=Z,15nm,1.3s
MK31 Makanchi Array 66.59 324 P **P 23 39 57.4 -1.1**
MK31 IAmb IAmb 23 40 02.9
comp=Z,36nm,1.4s
MK31 Makanchi Array 66.59 324 *i* P **P 23 39 58.0 -0.5**
MK31 pmax pmax
comp=Z,21nm,0.8s
MKAR Makanchi Array 66.59 324 P **P 23 39 58.4 -0.1**
comp=Z,7.3nm,0.5s,baz=112,slow=7.7,SNR=47
MKAR LR LR 00 12 43.4
comp=Z,474nm,18.1s,baz=129,slow=39
comp=Z,7.3nm,0.5s
PDGK Podgornoye 66.61 320 *i* P **P 23 39 58.2 -0.6**
PDGK pmax pmax
comp=Z,34nm,1.0s
MAKZ Makanchi 66.78 324 P **P 23 39 58.5 -1.1**
MAKZ IAmb IAmb 23 40 05.2
comp=Z,25nm,0.8s
MAKZ Makanchi 66.78 324 P **P 23 39 58.6 -1.1**
MAKZ pmax pmax
comp=Z,25nm,0.8s
MAKZ Makanchi 66.78 324 P **P 23 39 55.5 -4.2**
UZB Uzynbulak 66.83 319 *e*P **P 23 39 58.7 -1.5**
UZB Uzynbulak 66.83 319 *e*P **P 23 39 58.8 -1.5**
baz=319
TARG Taragay, Kyrgy 67.00 318 P **P 23 40 00.2 -1.5**
TARG Taragay, Kyrgy 67.00 318 P **P 23 40 00.2 -1.5**
TARG pmax pmax
comp=Z,14nm,0.9s
RAR Rarotonga 67.14 112 LR LR 00 07 47.5
comp=Z,200nm,21.3s,baz=268,slow=34
SATY Saty 67.19 319 *e*P **P 23 40 00.5 -1.9**
SATY Saty 67.19 319 *e*P **P 23 40 00.6 -1.9**
baz=319
KPKS Kokpek 67.19 320 *e*P **P 23 40 01.0 -1.4**
KPKS Kokpek 67.19 320 *e*P **P 23 40 01.0 -1.4**
baz=320
NIL Nilore 67.26 308 P **P 23 40 01.8 -1.2**
NIL IAmb IAmb 23 40 22.1
comp=Z,35nm,1.1s
NIL Nilore 67.26 308 P **P 23 40 01.8 -1.2**
NIL pmax pmax
comp=Z,35nm,1.1s
NIL Nilore 67.26 308 P **P 23 40 02.4 -0.6**
KSH Kashi 67.35 315 P **P 23 40 05.1 +1.5**
KSH sP sP 23 40 19.9 +4.2
KSH S **S 23 49 00.8 +3.2**
KSH SS **SS 23 53 22.4 +4.5**
KSH pmax pmax
comp=Z,10.0nm,1.0s
KSH pmax pmax
comp=Z,220nm,3.5s
KSH LR LR
comp=Z,760nm,21.3s
KSH LR LR
comp=Z,310nm,19.2s
KSH LR LR
comp=Z,770nm,22.0s
TDK Taldyqorghan 68.07 321 *e*P **P 23 40 07.1 -0.8**
TDK Taldyqorghan 68.07 321 *e*P **P 23 40 07.2 -0.8**
baz=321
NRN Naryn 68.10 317 P **P 23 40 06.3 -2.2**
NRN Naryn 68.10 317 P **P 23 40 06.3 -2.2**
NRN pmax pmax
comp=Z,9.0nm,0.9s
MDOK Medeo 68.13 319 *e*P **P 23 40 07.6 -0.8**
MDOK Medeo 68.13 319 *e*P **P 23 40 07.7 -0.8**
baz=319
TNSS Tian-Shan 68.14 319 *e*P **P 23 40 08.8 0.0**
TNSS Tian-Shan 68.14 319 *e*P **P 23 40 08.9 0.0**
baz=319
AAA Alma-Ata 68.23 319 *e*P **P 23 40 08.8 -0.2**
AAA Alma-Ata 68.23 319 *e*P **P 23 40 08.9 -0.2**
baz=319
CHKK Chushkaly 68.47 319 *e*P **P 23 40 09.5 -0.9**
CHKK Chushkaly 68.47 319 *e*P **P 23 40 09.5 -0.9**
baz=319
BOOM Boomskoye usch 68.58 318 P **P 23 40 09.1 -2.2**
BOOM Boomskoye usch 68.58 318 P **P 23 40 09.1 -2.2**
BOOM pmax pmax
comp=Z,13nm,0.8s
KUU Kurty 68.91 319 *e*P **P 23 40 11.1 -2.0**
KUU Kurty 68.91 319 *e*P **P 23 40 11.1 -2.0**
baz=319
TKM2 Tokmak 2 68.99 318 P **P 23 40 15.0 +1.1**
SNR=20
ZALV Zalesovo Beam 69.23 331 P **P 23 40 13.5 -1.4**
comp=Z,9.3nm,0.8s,baz=129,slow=5.3,SNR=25
ZALV LR LR 00 11 06.2
comp=Z,341nm,21.9s,baz=128,slow=36
comp=Z,9.3nm,0.8s
UCH Uchtor 69.44 317 P **P 23 40 17.5 +0.5**
SNR=22
AAK Ala-Archa 69.62 317 P P 23 40 22.5 +4.8
SNR=8.1
AAK Ala-Archa 69.62 317 P **P 23 40 17.3 -0.4**
AAK Ala-Archa 69.62 317 *ce*P **P 23 40 18.9 +1.2**
AAK pmax pmax
comp=Z,19nm,1.3s
AAK Ala-Archa 69.62 317 P **P 23 40 18.2 +0.5**
SEM Semipalatinsk 69.62 327 *e*P **P 23 40 17.5 -0.1**
SEM Semipalatinsk 69.62 327 *e*P **P 23 40 17.6 -0.1**
baz=327
SGDS Sogindy 69.85 318 *e*P **P 23 40 17.6 -1.4**
SGDS Sogindy 69.85 318 *e*P **P 23 40 17.7 -1.4**
baz=318
USP Ospenovka 69.86 318 P **P 23 40 19.4 +0.3**
SNR=21
AML Almayashu 69.96 317 P **P 23 40 21.0 +0.9**
SNR=10
EKS2 Erkin-Say 70.11 317 P **P 23 40 20.6 -0.1**
SNR=21
DRK Karamyk 70.33 313 P **P 23 40 21.9 -0.5**
DRK IAmb IAmb 23 41 06.1
comp=Z,25nm,1.1s
KURK Kurchatov 70.68 326 P **P 23 40 22.9 -0.9**
KURK IAmb IAmb 23 40 44.4
comp=Z,58nm,1.4s
KURK Kurchatov 70.68 326 *i* P **P 23 40 22.8 -1.0**
KURK pmax pmax
comp=Z,48nm,1.3s
KURK Kurchatov 70.68 326 P **P 23 40 22.7 -1.0**
BTLS Baital 70.88 320 *e*P **P 23 40 23.7 -1.4**
BTLS Baital 70.88 320 *e*P **P 23 40 23.8 -1.4**
baz=320
BTK Batken 71.24 314 P **P 23 40 27.0 -0.6**
BTK IAmb IAmb 23 41 06.5
comp=Z,44nm,1.4s
BTK Batken 71.24 314 P **P 23 40 27.0 -0.6**
BTK pmax pmax
comp=Z,45nm,1.4s
GAR Garm 71.25 313 P **P 23 40 26.2 -1.6**
GAR IAmb IAmb 23 40 33.2
comp=Z,35nm,0.9s
DZA Taraz 71.87 317 *e*P **P 23 40 29.9 -1.3**
DZA Taraz 71.87 317 *e*P **P 23 40 30.0 -1.3**
baz=317
CHGR Chuyangaron 72.00 312 P **P 23 40 30.2 -2.0**
CHGR IAmb IAmb 23 40 37.6
comp=Z,19nm,0.8s
CHGR Chuyangaron 72.00 312 P **P 23 40 30.2 -2.0**
CHGR pmax pmax
comp=Z,19nm,0.8s
KKAR Karatay Array 72.50 317 P **P 23 40 34.2 -0.9**
KKAR Karatay Array 72.50 317 P **P 23 40 34.2 -0.9**
KKAR pmax pmax
comp=Z,14nm,0.8s
IUG Iuzhnay 72.51 316 *e*P **P 23 40 34.7 -0.5**
IUG Iuzhnay 72.51 316 *e*P **P 23 40 34.7 -0.5**
baz=316
TAS Tashkent 72.75 315 P **P 23 40 34.5 -2.1**
TAS IAmb IAmb 23 40 40.7
comp=Z,33nm,0.9s
TAS Tashkent 72.75 315 P **P 23 40 34.5 -2.1**
TAS pmax pmax
comp=Z,33nm,0.9s
OTUK Ortayu 73.24 322 *i* P **P 23 40 38.6 -0.7**
OTUK pmax pmax
comp=Z,27nm,1.1s
BILL Bilibino 73.73 12 ||*e*P **P 23 40 41.6 -0.2**
BILL *PP **pP 23 40 49.0 -1.7**
BILL *SP **sP 23 40 55.0 +1.0**
BILL *e* 23 43 26.5
BILL pmax pmax
comp=Z,4.0nm,0.7s
BILL MLR MLR
comp=Z,518nm,19.0s
BRZS Berezniki 73.74 324 *e*P **P 23 40 41.1 -1.1**
BRZS Berezniki 73.74 324 *e*P **P 23 40 41.1 -1.1**
baz=324
TIXI Tiksi 73.91 358 P **P 23 40 42.6 -0.1**
TIXI Tiksi 73.91 358 *ce*P **P 23 40 44.1 +1.4**
TIXI pmax pmax
comp=Z,14nm,1.3s
BVAR Borovoye Array 76.27 326 LR LR 00 18 34.5
comp=Z,314nm,18.3s,baz=110,slow=39
BRVK Borovoye 76.34 326 P **P 23 40 55.9 -1.3**
BRVK IAmb IAmb 23 41 12.4
comp=Z,44nm,1.5s
BRVK Borovoye 76.34 326 *i* P **P 23 40 56.8 -0.3**
BRVK pmax pmax
comp=Z,23nm,1.3s
PPT Papeete 76.47 107 LR LR 00 11 23.6
comp=Z,345nm,22.0s,baz=255,slow=33
PPT2 Papeete2 76.47 107 *e*S **S 23 50 41.8 -1.3**
comp=Z,292nm,27.5s
PPT2 *e*SS **SS 23 55 38.1 -0.3**
comp=Z,439nm,26.5s
PPT2 *e*LR LR 00 04 39.0
comp=Z,1μm,24.2s
VNDA Vanda 76.63 174 P **P 23 40 58.6 +0.3**
comp=Z,3.9nm,0.8s,baz=323,slow=6.2,SNR=18
VNDA LR LR 00 12 55.6
comp=Z,3μm,21.9s,baz=355,slow=34
comp=Z,3.9nm,0.8s
VNDA Vanda 76.63 174 P **P 23 40 58.1 -0.2**
TBI Tubuai 76.83 113 *e*SS SS 23 55 43.0 -0.5
comp=Z,316nm,32.0s
TBI *e*LR LR 00 04 48.4
comp=Z,921nm,36.5s
WSAR Wadi Sarin 77.40 294 LR LR 00 19 39.8
comp=Z,199nm,19.3s,baz=123,slow=39
NRIK Noril'sk 78.04 345 P **P 23 41 06.8 +0.5**
comp=Z,16nm,0.9s,baz=117,slow=6.0,SNR=9.6
NRIK LR LR 00 17 22.3
comp=Z,2μm,19.3s,baz=138,slow=37
comp=Z,16nm,0.9s
NRIK Noril'sk 78.04 345 *ce*P **P 23 41 06.3 0.0**
NRIK pmax pmax
comp=Z,23nm,1.0s
GEYT Alibeck 80.23 309 P **P 23 41 19.4 +0.3**
comp=Z,12nm,1.0s,baz=0.0,slow=1.5,SNR=20
GEYT LR LR 00 19 10.6
comp=Z,462nm,21.0s,baz=92,slow=38
comp=Z,12nm,1.0s
MAW Mawson 80.69 202 P **P 23 41 23.5 +2.7**
comp=Z,9.3nm,0.8s,baz=59,slow=6.9,SNR=11
MAW LR LR 00 16 59.5
comp=Z,708nm,18.2s,baz=77,slow=36
comp=Z,9.3nm,0.8s
MAW Mawson 80.69 202 P **P 23 41 22.8 +2.1**
baz=81,SNR=5.0
AB31 Akbulak array 81.33 320 ||*e*P **P 23 41 23.5 -1.1**
AB31 pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 81.33 320 P **P 23 41 23.1 -1.5**
AKTO Aktyubinsk 82.81 321 LR LR 00 22 14.5
comp=Z,394nm,18.3s,baz=106,slow=38
AKTO Aktyubinsk 82.81 321 *i* P **P 23 41 33.5 +1.1**
AKTO pmax pmax
comp=Z,20nm,1.4s
SVE Sverdlovsk 82.83 328 *e*P **P 23 41 32.8 +0.5**
SVE pmax pmax
comp=Z,41nm,1.2s
TTA Tatalina 83.12 26 P **P 23 41 33.3 -0.5**
TTA Tatalina 83.12 26 P **P 23 41 33.3 -0.5**
TTA pmax pmax
comp=Z,18nm,1.2s
KDAK Kodiak Island 83.24 31 LR LR 00 12 47.8
comp=Z,760nm,20.5s,baz=252,slow=32
L19K White Mountain 83.39 27 P **P 23 41 33.5 -1.6**
L19K IAmb IAmb 23 41 39.0
comp=Z,42nm,1.3s
ARU Arti 83.84 327 P **P 23 41 35.7 -1.9**
ARU IAmb IAmb 23 41 41.2
comp=Z,40nm,1.2s
ARU Arti 83.84 327 *d i*P **P 23 41 36.9 -0.6**
ARU 23 44 47.2
ARU PPP PPP 23 46 48.0
ARU S **S 23 51 56.6 -2.4**
ARU SS **SS 23 57 23.8 -3.1**
ARU pmax pmax
comp=Z,46nm,1.3s
ARU MLR MLR
comp=Z,547nm,23.0s
J20K Nowinta River 84.30 25 P **P 23 41 39.2 -0.5**
IMAR Indian Mountai 85.00 23 P **P 23 41 41.6 -1.5**
H21K Melozitna Rive 85.28 23 P **P 23 41 43.9 -0.8**
H21K IAmb IAmb 23 41 48.5
comp=Z,18nm,1.2s
I21K Tanana 85.48 24 P **P 23 41 43.4 -2.2**
I21K IAmb IAmb 23 42 12.8
comp=Z,41nm,1.4s
KTH Kantishna Hill 85.51 26 P **P 23 41 44.7 -1.1**
TAOE Nuku Hiva Isla 85.67 99 *e*LR LR 00 08 54.9
comp=Z,639nm,23.7s
MLY Manley 85.95 24 P **P 23 41 46.6 -1.4**
MLY IAmb IAmb 23 41 53.6
comp=Z,15nm,0.8s
KNK Knik Glacier 86.13 28 P **P 23 41 48.0 -1.0**
SML Sawmill 86.27 28 P **P 23 41 48.8 -0.9**
SML Sawmill 86.27 28 P **P 23 41 49.9 +0.2**
SML pmax pmax
comp=Z,51nm,1.1s
RND Reindeer 86.38 26 P **P 23 41 48.9 -1.3**
RND Reindeer 86.38 26 P **P 23 41 48.9 -1.3**
MCK McKinley 86.41 26 P **P 23 41 49.0 -1.2**
MCK McKinley 86.41 26 P **P 23 41 49.1 -1.2**
MCK pmax pmax
comp=Z,49nm,1.3s
I23K Minto, Yukon-K 86.55 24 P **P 23 41 48.6 -2.3**
CCB Clear Creek Bu 87.09 25 P **P 23 41 51.4 -2.1**
CCB IAmb IAmb 23 41 56.4
comp=Z,32nm,1.4s
ILAR Eielson Array 87.50 25 P **P 23 41 55.5 0.0**
comp=Z,3.6nm,0.7s,baz=262,slow=4.1,SNR=19
ILAR LR LR 00 15 38.4
comp=Z,430nm,21.8s,baz=249,slow=32
comp=Z,3.6nm,0.7s
ILAR Eielson Array 87.50 25 P **P 23 41 54.1 -1.4**
QSPA South Pole Qui 87.62 180 LR LR 00 21 29.1
comp=Z,3μm,19.3s,baz=11,slow=36
QSPA South Pole Qui 87.62 180 P **P 23 41 55.2 -1.1**
QSPA IAmb IAmb 23 42 17.0
comp=Z,24nm,1.4s
N25K Chitina, Valde 87.99 28 P **P 23 41 57.4 -0.6**
N25K IAmb IAmb 23 42 18.8
comp=Z,27nm,1.1s
BMAR Burnt Mountain 88.87 22 P **P 23 42 00.1 -2.0**
MAK Makhachkala 88.91 313 *e*P **P 23 41 59.9 -2.8**
MAK *e* 23 52 26.2
MAK pmax pmax
comp=Z,69nm,1.3s
KIRV Kirov 89.07 329 LR LR 00 27 18.2
comp=Z,463nm,18.6s,baz=90,slow=39
RAYN Ar Rayn 89.43 293 P **P 23 42 03.5 -2.1**
RAYN IAmb IAmb 23 42 17.1
comp=Z,17nm,1.3s
RAYN Ar Rayn 89.43 293 P **P 23 42 03.5 -2.1**
RAYN pmax pmax
comp=Z,17nm,1.3s
K27K Chicken 89.45 26 P **P 23 42 02.9 -1.9**
CTGM Chitina Glacie 89.47 29 P **P 23 42 05.1 -0.1**
BCAR Beaver Creek A 89.48 27 P **P 23 42 04.4 -0.6**
EGAK Eagle 89.93 25 P **P 23 42 06.5 -0.5**
DAWY Dawson 90.63 26 P **P 23 42 08.8 -1.5**
DAWY IAmb IAmb 23 42 18.4
comp=Z,11nm,0.9s
GNI Garni 90.82 310 LR LR 00 27 01.6
comp=Z,179nm,21.5s,baz=90,slow=38
I29M Ogilvie Camp, 91.18 25 P **P 23 42 11.4 -1.5**
I29M IAmb IAmb 23 42 15.8
comp=Z,24nm,1.4s

PRGR Permogore 91.19 331 *eP* **P 23 42 10.8 -2.1**
PRGR pmax pmax
comp=Z,14nm,1.4s
ATD Arta Tunnel 91.47 281 LR LR 00 24 49.0
comp=Z,166nm,18.6s,baz=72,slow=37
ZEI Tsey 91.55 313 *eP* **P 23 42 13.3 -2.0**
ZEI pmax pmax
comp=Z,7.0nm,1.3s
KBZ Khabaz 92.30 313 LR LR 00 28 13.4
comp=Z,322nm,19.9s,baz=74,slow=38
KIV Kislovodsk 92.46 314 *eP* **P 23 42 16.5 -2.8**
KIV pmax pmax
comp=Z,3.0nm,1.0s
GURO Guroymak-BITLI 92.88 308 P **P 23 42 19.9 -1.5**
INK Inuvik 93.10 22 LR LR 00 17 34.1
comp=Z,159nm,21.7s,baz=238,slow=31
VRH Novokhopyorsk 93.15 321 *eP* **P 23 42 26.5 +4.3**
VRH pmax pmax
comp=Z,4.0nm,0.5s
KLMR Klimovskoe 94.15 331 *eP* **P 23 42 23.5 -3.0**
KLMR pmax pmax
comp=Z,22nm,1.4s
KLMR MLR MLR
comp=Z,583nm,19.0s
KLMR Klimovskoe 94.15 331 *eP* **P 23 42 23.6 -3.0**
KLMR AMP 23 42 28.7
comp=Z,22nm,1.4s
KLMR LQ LQ 00 15 01.8
KLMR LQ LQ 00 15 01.8
KLMR LR LR 00 16 01.2
KLMR AMP 00 25 03.3
comp=Z,583nm,19.0s
VORR Voronezh 94.71 321 *eP* **P 23 42 29.4 0.0**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 94.76 321 *eP* **P 23 42 26.9 -2.7**
VSR pmax pmax
comp=Z,6.0nm,1.0s
LPSR Galich'ya Gora 94.85 322 *eP* **P 23 42 28.5 -1.5**
LPSR pmax pmax
comp=Z,7.0nm,0.8s
DLBC Dease Lake 95.16 32 LR LR 00 22 01.0
comp=Z,199nm,19.9s,baz=298,slow=33
OBN Obninsk 96.08 325 LR LR 00 28 12.1
comp=Z,118nm,21.9s,baz=75,slow=37
OBN Obninsk 96.08 325⇓*eP* **P 23 42 37.4 +1.9**
OBN *e*PS **PS 23 55 10.6 -4.7**
OBN *e*SS SS 00 00 23.7 -0.3
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,726nm,22.0s
APA Apatity 96.14 338⇓*iP* P 23 42 41.1 +5.6
APA pmax pmax
comp=Z,6.0nm,0.8s
APA MLR MLR
comp=Z,1μm,16.0s
BBB Bella Bella 96.74 38 LR LR 00 17 43.8
comp=Z,153nm,21.9s,baz=245,slow=30
ASF Jabal al Asfar 97.14 302 LR LR 00 33 57.1
comp=Z,192nm,18.9s,baz=104,slow=40
SPITS Spitsbergen Ar 97.73 349 LR LR 00 32 57.8
comp=Z,410nm,18.3s,baz=22,slow=39
NVL N'lazarevskaya 97.92 196 *eP* Pdif 23 42 43.8 +0.2
NVL *e*S **SKSac 23 53 22.2 +3.2**
NVL pmax pmax
comp=Z,4.0nm,0.4s
NVL MLR MLR
comp=Z,1μm,18.0s
MMAI Mount Meron Ar 98.37 303 LR LR 00 35 12.1
comp=Z,286nm,19.3s,baz=302,slow=40
ARCES ARCESS Array B 98.54 340 P **P 23 42 46.0 -0.3**
comp=Z,3.0nm,0.8s,baz=77,slow=6.4,SNR=7.4
ARCES LR LR 00 29 06.5
comp=Z,628nm,21.6s,baz=73,slow=37
comp=Z,2.3nm,0.8s
EIL Elat 98.91 300 LR LR 00 35 01.6
comp=Z,253nm,18.0s,baz=118,slow=40
BRTR Keskin Array B 99.36 310 P **Pdif 23 42 50.9 0.0**
comp=Z,0.4nm,0.7s,baz=41,slow=4.6,SNR=2.6
BRTR LR LR 00 32 19.7
comp=Z,153nm,21.0s,baz=84,slow=38
comp=Z,0.4nm,0.7s
FINES FINESS Array B 100.49 332 P **Pdif 23 42 56.6 +1.4**
comp=Z,2.4nm,0.8s,baz=95,slow=4.6,SNR=5.7
NACGM Naroch 101.68 326⇑*eP* **Pdif 23 43 00.0 -0.6**
baz=78
YKA Yellowknife Ar 101.87 26 P **Pdif 23 43 02.7 +1.4**
comp=Z,1.3nm,0.8s,baz=297,slow=4.1,SNR=2.2
NVAR Mina Array Bea 105.37 51 Pdiff **Pdif 23 43 22.6 +4.9**
comp=Z,1.8nm,1.1s,baz=227,slow=3.6,SNR=3.6
NVAR PP PP 23 47 53.1 +14
comp=Z,1.0nm,0.9s,baz=274,slow=9.8,SNR=4.0
CLL Collm 110.68 325 *e*SKSac **SKSac 23 54 12.0 -6.3**
CLL *e*SS SS 00 04 12.0 +27
CLL LmH 00 30 00.0
comp=N,1μm,20.2s
CLL LmH 00 30 00.0
comp=E,800nm,19.2s
CLL LmV 00 36 00.0
comp=Z,500nm,19.9s
TXAR Lajitas Array 119.19 58 PKP **PKiKP 23 48 00.1 +2.0**
comp=Z,1.0nm,1.0s,baz=175,slow=0.9,SNR=5.2
ESDC Sonseca Array 126.67 320 PKP **PKiKP 23 48 13.8 +1.4**
comp=Z,0.5nm,0.9s,baz=17,slow=3.3,SNR=1.9
TORD Torodi Ar. Bea 131.51 285 PKP **PKiKP 23 48 22.6 -0.1**
comp=Z,1.2nm,0.7s,baz=107,slow=0.8,SNR=5.8
TORD SKPbc **SKPab 23 51 50.5 +4.7**
comp=Z,2.3nm,1.0s,baz=81,slow=4.9,SNR=3.9
PLCA Paso Flores 131.69 155 PKP **PKiKP 23 48 23.6 +1.1**
comp=Z,1.2nm,0.7s,baz=224,slow=6.2,SNR=2.2
MCRA Macar, Loja 145.54 101 *eP* **PKiKP 23 48 50.6 -0.9**
GTBY Guantanamo Bay 146.71 56 *eP* **PKiKP 23 48 58.3 +4.7**
PIAT Ana Tenorio 147.69 96 *eP* **PKPab 23 48 58.3 +1.7**
PB08 IPOC Station P 148.23 136 PKPbc **PKPdf 23 48 53.0 +0.8**
GO01 Chusmiza 148.52 135 PKPbc **PKPdf 23 48 53.7 +0.9**
PB16 IPOC Station P 149.15 133 PKPbc **PKPbc 23 48 56.1 -2.0**
POPC Popayan, Colom 149.47 89 *eP* **PKPbc 23 48 58.3 -0.4**
CPUP Villa Florida 149.52 160 PKP **PKPbc 23 48 56.0 -2.1**
comp=Z,3.1nm,1.0s,baz=225,slow=2.9,SNR=2.4
CPUP PKPbc **PKiKP 23 49 00.8 +1.5**
comp=Z,5.7nm,1.0s,baz=219,slow=2.3,SNR=8.0
YOTC Yotoco, Valle 149.78 86 *eP* **PKPbc 23 48 59.3 -0.1**
CBOC Ciudad Bolivar 149.98 82⇑*eP* **PKPab 23 49 04.1 -1.5**
SJCC San Jacinto, C 150.16 74 *eP* **PKiKP 23 49 01.2 +0.2**
UREC San Jos de Ur 150.22 78 *eP* **PKiKP 23 49 02.2 +1.1**
SDDR Presa de Saban 150.31 54 *eP* **PKiKP 23 49 03.1 +2.0**
FLOC Florencia 150.47 91 *eP* **PKPbc 23 48 59.3 -1.6**
ZARC Zaragoza, Cauc 150.92 79 *eP* **PKPbc 23 49 00.2 -1.7**
PRAC Prado 151.24 87 *eP* **PKiKP 23 49 03.1 -0.1**
PTLC Puerto Leguiza 151.25 94⇑*eP* **PKPbc 23 49 02.2 -0.5**
LPAZ La Paz 151.45 131 PKP **PKPdf 23 49 00.3 +2.7**
comp=Z,4.4nm,0.8s,baz=351,slow=1.0,SNR=5.2
LPAZ PKPbc **PKiKP 23 49 04.0 -0.2**
comp=Z,5.6nm,0.9s,baz=24,slow=2.2,SNR=13
LPAZ La Paz 151.45 131 PKPbc **PKPdf 23 48 59.4 +1.7**
LPAZ La Paz 151.45 131 *eP* **PKiKP 23 49 05.0 +0.8**
LPAZ La Paz 151.45 131 PKIKP **PKPdf 23 48 59.4 +1.7**
ROSC El Rosal 151.75 84 PKPbc **PKPbc 23 49 03.9 -0.4**
comp=Z,11nm,0.5s,baz=129,slow=6.1,SNR=5.9
CHIC Chingaza 152.34 84 *eP* **PKiKP 23 49 07.0 +1.0**

NEIC ***11*** *23:33:54.4±0.8, 20°.5S±0°.2×177°.9W±0°.1, h485km±12km, mb4.2/18, Error ellipse: s-maj=26.6km s-min=16.0km az=207.0*
IDC ***11*** *23:33:55.5±3.6, 20°.61S×177°.86W, h506km±28km, mb3.4/7, mbtmp4.2/8, Error ellipse: s-maj=64.5km s-min=24.0km az=143.0*
ISC 11 23:33:54.5±0.6, 20°.5S±0°.1×177°.78W±0°.09, h500km, n40, σ0895/39, mb4.2/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.78**	**304**	P	**P**	**23 35 21.2**	**+1.6**
1.7nm,0.3s,baz=227,slow=23,SNR=6.0							
MSVF	**Nonsavu**	**4.78**	**304**	P	**P**	**23 35 20.4**	**+0.8**
NIUE	**Niue**	**7.52**	**81**	P	**P**	**23 35 43.9**	**-2.1**
MARNC	**Mare, Loyalty**	**13.29**	**263**	P	**P**	**23 36 45.4**	**-1.4**
OUENC	**Ouen Island, N**	**14.45**	**259**	P	**P**	**23 36 57.4**	**-1.5**
WHZ	**Wether Hill Ro**	**27.95**	**202**	P	**P**	**23 39 05.6**	**+1.9**
WHZ				IAmb	IAmb	23 39 29.4	
comp=Z,11nm,1.1s							
EIDS	**Eidsvold**	**29.06**	**254**	P	**P**	**23 39 14.1**	**+0.4**
EIDS				IAmb	IAmb	23 39 38.7	
comp=Z,11nm,1.1s							
ARMA	**Armidale**	**29.27**	**244**	P	**P**	**23 39 16.6**	**+0.9**
CTA	**Charters Tower**	**33.70**	**264**	P	**P**	**23 39 53.8**	**+0.2**
comp=Z,5.1nm,0.4s,baz=88,slow=11,SNR=10							
comp=Z,5.1nm,0.4s							
CTAO	**Charters Tower**	**33.70**	**264**	P	**P**	**23 39 53.4**	**-0.3**
TOO	**Toolangi**	**36.09**	**234**	P	**P**	**23 40 13.7**	**+0.3**
TOO				IAmb	IAmb	23 40 14.6	
comp=Z,9.8nm,0.9s							
COEN	**Coen**	**37.78**	**273**	P	**P**	**23 40 27.5**	**-0.2**
COEN				IAmb	IAmb	23 40 41.1	
comp=Z,8.5nm,1.1s							
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**23 40 28.4**	**-0.7**
comp=Z,1.9nm,0.6s,baz=80,slow=12,SNR=1.4							
comp=Z,1.9nm,0.6s							
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**23 40 28.7**	**-0.4**
BBOO	**Buckleboo**	**42.75**	**243**	P	**P**	**23 41 06.6**	**-0.6**
BBOO				IAmb	IAmb	23 41 28.7	
comp=Z,9.9nm,0.9s							
WR0	**Warramunga Arr**	**44.62**	**262**	P	**P**	**23 41 20.2**	**-1.8**
WR0				IAmb	IAmb	23 41 40.0	
comp=Z,7.3nm,0.9s							
AS31	**Alice Springs**	**44.73**	**257**	P	**P**	**23 41 22.3**	**-0.5**
AS31				IAmb	IAmb	23 41 42.0	
comp=Z,5.6nm,1.1s							
ASAR	**Alice Springs**	**44.73**	**257**	P	**P**	**23 41 22.9**	**0.0**
comp=Z,6.4nm,0.6s,baz=92,slow=7.8,SNR=14							
comp=Z,6.4nm,0.6s							
WB0	**Warramunga Arr**	**44.79**	**262**	P	**P**	**23 41 22.6**	**-0.7**
WB0				IAmb	IAmb	23 41 27.1	
comp=Z,18nm,1.1s							
WB2	**Warramunga Arr**	**44.80**	**262**	P	**P**	**23 41 22.3**	**-1.1**
WRA	**Warramunga Arr**	**44.81**	**262**	P	**P**	**23 41 22.6**	**-0.9**
20nm,0.3s,baz=96,slow=4.9,SNR=12							
comp=Z,1.7nm,0.5s							
FORT	**Forrest**	**49.50**	**247**	P	**P**	**23 41 57.8**	**-1.0**
KNRA	**Kununurra**	**50.87**	**266**	P	**P**	**23 42 08.3**	**-0.7**
PSA00	**Pilbara Seismi**	**57.88**	**257**	P	**P**	**23 42 57.9**	**-0.4**
PSA00				IAmb	IAmb	23 42 58.6	
comp=Z,8.2nm,1.1s							
MBWA	**Marble Bar**	**58.06**	**257**	P	**P**	**23 42 59.1**	**-0.5**
MBWA				IAmb	IAmb	23 42 59.8	
comp=Z,11nm,0.8s							
CASY	**Casey**	**64.09**	**205**	P	**P**	**23 43 38.6**	**+0.2**
QSPA	**South Pole Qui**	**69.61**	**180**	P	**P**	**23 44 14.0**	**+1.2**
USRK	**Ussuriysk Ar.**	**79.05**	**326**	P	**P**	**23 45 07.0**	**+0.8**
comp=Z,2.6nm,0.8s,baz=145,slow=6.4,SNR=4.5							
comp=Z,2.6nm,0.8s							
TXAR	**Lajitas Array**	**86.86**	**57**	P	**P**	**23 45 47.3**	**+1.4**
comp=Z,0.1nm,0.6s,baz=245,slow=1.9,SNR=2.4							
comp=Z,0.1nm,0.6s							
SNAA	**Sanae**	**88.05**	**178**	P	**P**	**23 45 50.2**	**-0.5**
VNA3	**Neumayer Olymp**	**88.17**	**176**	P	**P**	**23 45 51.1**	**-0.1**
VNA2	**Neumayer--Watz**	**88.61**	**177**	P	**P**	**23 45 53.3**	**0.0**
baz=162,slow=3.8							
CMAR	**Chiang Mai Arr**	**90.29**	**289**	P	**P**	**23 46 03.5**	**+1.4**
comp=Z,1.5nm,0.7s,baz=121,slow=2.6,SNR=8.4							
comp=Z,1.5nm,0.7s							
AKASG	**Malin Array Be**	**143.08**	**331**	PKhKP	PKPpre	23 52 27.4	
comp=Z,2.2nm,0.5s,baz=41,slow=4.4,SNR=15							
BR131	**Keskin Array S**	**146.96**	**312**	PKPbc	**PKPbc**	**23 52 40.6**	**-0.4**
BRTR	**Keskin Array B**	**146.96**	**312**	PKPbc	**PKPbc**	**23 52 40.3**	**-0.6**
comp=Z,0.9nm,0.6s,baz=143,slow=5.4,SNR=6.4							
BUR08	**Bucovina Ar. S**	**147.11**	**331**	PKPbc	**PKPbc**	**23 52 40.8**	**-0.3**
BURAR	**Bucovina Array**	**147.12**	**331**	PKPbc	**PKPbc**	**23 52 41.1**	**0.0**
CLL	**Collm**	**148.07**	**347**	*e*PKPbc	**PKPbc**	**23 52 43.0**	**-0.2**
RDO	**Rodhopi**	**151.41**	**321**	PKPbc	**PKPbc**	**23 52 50.8**	**-0.7**

NEIC ***11*** *23:37:02.3±1.9, 23°.6S±0°.1×179°.7W±0°.2, h509km±11km, mb4.4/31, Error ellipse: s-maj=22.8km s-min=17.8km az=72.0*
IDC ***11*** *23:37:03.4±1.5, 23°.64S×179°.83W, h507km±15km, mb3.6/12, mbtmp4.5/15, Error ellipse: s-maj=16.9km s-min=15.5km az=143.0*
ISC 11 23:37:02.2±0.5, 23°.67S±0°.07×179°.76W±0°.08, h500km, n75, σ1963/79, mb4.4/29, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.80**	**164**	P	**P**	**23 38 36.3**	**-0.2**
MSVF	**Nonsavu**	**6.25**	**340**	P	**P**	**23 38 44.1**	**+2.9**
10.0nm,0.7s,baz=245,slow=22,SNR=5.4							
MSVF	**Nonsavu**	**6.25**	**340**	P	**P**	**23 38 42.6**	**+1.4**
MARNC	**Mare, Loyalty**	**11.49**	**279**	P	**P**	**23 39 36.1**	**+0.8**
AFI	**Afiamalu**	**12.30**	**39**	P	**P**	**23 39 45.0**	**+0.9**
17nm,0.3s,baz=39,slow=17,SNR=3.9							
AFI				S	**S**	**23 41 54.9**	**-2.7**
20nm,0.3s,baz=47,slow=3.8,SNR=4.4							
OUENC	**Ouen Island, N**	**12.40**	**273**	P	**P**	**23 39 44.0**	**-1.0**
URZ	**Urewera**	**14.79**	**190**	P	**P**	**23 40 10.9**	**+0.9**
15nm,0.6s,baz=343,slow=2.2,SNR=11							
URZ				S	**S**	**23 42 44.3**	**-0.5**
16nm,0.6s,baz=119,slow=23,SNR=8.4							
URZ	**Urewera**	**14.79**	**190**	P	**P**	**23 40 10.0**	**+0.1**
KWHZ	**Kaweka Forest**	**16.04**	**191**	P	**P**	**23 40 22.9**	**-0.2**
VRZ	**Vera Road**	**16.10**	**196**	P	**P**	**23 40 25.6**	**+2.0**
BHHZ	**Black Hill Sta**	**16.16**	**192**	P	**P**	**23 40 23.6**	**-0.8**
MTVZ	**Mangateitei**	**16.18**	**193**	P	**P**	**23 40 31.0**	**+6.4**
KAHZ	**Kahuranaki**	**16.33**	**189**	P	**P**	**23 40 27.0**	**+0.9**
DVHZ	**Dannevirke**	**16.93**	**191**	P	**P**	**23 40 27.1**	**-5.3**
MRZ	**Mangatainoka R**	**17.39**	**192**	P	**P**	**23 40 30.7**	**-6.0**
OGWZ	**Otaki Gorge**	**17.62**	**193**	P	**P**	**23 40 38.1**	**-0.8**
TRWZ	**Traveller**	**18.09**	**191**	P	**P**	**23 40 42.2**	**-1.0**
TCW	**Tory Channel**	**18.19**	**195**	P	**P**	**23 40 40.0**	**-4.1**
QRZ	**Quartz Range**	**18.29**	**199**	P	**P**	**23 40 45.1**	**+0.1**
QRZ	**Quartz Range**	**18.29**	**199**	P	**P**	**23 40 45.7**	**+0.7**
THZ	**Tophouse**	**19.05**	**197**	P	**P**	**23 40 51.8**	**-0.3**
THZ	**Tophouse**	**19.05**	**197**	P	**P**	**23 40 52.3**	**+0.2**
KHZ	**Kahutara**	**19.51**	**195**	P	**P**	**23 40 55.5**	**-0.6**
RPZ	**Rata Peaks**	**21.38**	**199**	P	**P**	**23 41 14.2**	**+1.1**
7.0nm,0.6s,baz=5.2,slow=5.3,SNR=1.6							
7.0nm,0.6s							
MLZ	**Mavora Lakes**	**23.78**	**202**	P	**P**	**23 41 34.5**	**-0.1**
MLZ				IAmb	IAmb	23 41 44.2	
comp=Z,20nm,1.1s							
ARMA	**Armidale**	**26.31**	**249**	P	**P**	**23 41 58.3**	**+0.9**
ARMA				IAmb	IAmb	23 42 00.1	
comp=Z,11nm,0.8s							
EIDS	**Eidsvold**	**26.56**	**260**	P	**P**	**23 41 59.8**	**+0.3**
EIDS				IAmb	IAmb	23 42 01.2	
comp=Z,12nm,0.6s							
CAN	**Canberra**	**29.45**	**240**	P	**P**	**23 42 25.4**	**+0.7**
CAN				IAmb	IAmb	23 42 27.0	
comp=Z,11nm,0.7s							
CTA	**Charters Tower**	**31.70**	**270**	P	**P**	**23 42 45.4**	**+1.1**
comp=Z,22nm,0.3s,baz=95,slow=10,SNR=43							
comp=Z,22nm,0.3s							
CTAO	**Charters Tower**	**31.70**	**270**	P	**P**	**23 42 44.5**	**+0.2**
TOO	**Toolangi**	**32.76**	**237**	P	**P**	**23 42 53.9**	**+0.8**
TOO				IAmb	IAmb	23 42 54.9	
comp=Z,7.2nm,0.6s							
TAU	**Tasmania Unive**	**33.25**	**227**	P	**P**	**23 42 57.9**	**+0.7**
PMG	**Port Moresby**	**34.63**	**289**	P	**P**	**23 43 08.9**	**-0.3**
comp=Z,14nm,0.6s,baz=145,slow=3.0,SNR=5.3							
comp=Z,14nm,0.6s							
STKA	**Stephens Creek**	**35.01**	**248**	P	**P**	**23 43 11.8**	**-0.4**
comp=Z,6.3nm,0.7s,baz=90,slow=10,SNR=5.4							
comp=Z,6.3nm,0.7s							
STKA	**Stephens Creek**	**35.01**	**248**	P	**P**	**23 43 12.1**	**-0.2**
COEN	**Coen**	**36.30**	**279**	P	**P**	**23 43 24.2**	**+1.1**
COEN				IAmb	IAmb	23 43 28.1	
comp=Z,5.4nm,1.1s							
BBOO	**Buckleboo**	**39.74**	**247**	P	**P**	**23 43 50.5**	**-0.5**
BBOO				IAmb	IAmb	23 43 55.0	
comp=Z,19nm,1.1s							
AS31	**Alice Springs**	**42.29**	**260**	P	**P**	**23 44 10.3**	**-1.2**
AS31				IAmb	IAmb	23 44 12.7	
comp=Z,4.1nm,0.6s							
ASAR	**Alice Springs**	**42.29**	**260**	P	**P**	**23 44 11.6**	**0.0**
comp=Z,13nm,0.7s,baz=97,slow=8.0,SNR=35							
ASAR				ScP	**ScP**	**23 48 57.0**	**+0.3**
comp=Z,1.4nm,0.7s,baz=115,slow=3.7,SNR=7.4							
comp=Z,13nm,0.7s							
ASAR	**Alice Springs**	**42.29**	**260**	P	**P**	**23 44 10.2**	**-1.3**
WR0	**Warramunga Arr**	**42.45**	**266**	P	**P**	**23 44 11.3**	**-1.5**
WR0				IAmb	IAmb	23 44 17.0	
comp=Z,7.7nm,0.8s							
WB2	**Warramunga Arr**	**42.63**	**266**	P	**P**	**23 44 13.5**	**-0.7**
WB2				IAmb	IAmb	23 44 14.4	
comp=Z,20nm,0.7s							
WB0	**Warramunga Arr**	**42.63**	**266**	P	**P**	**23 44 12.9**	**-1.4**
WRA	**Warramunga Arr**	**42.64**	**266**	P	**P**	**23 44 14.0**	**-0.3**
comp=Z,14nm,0.6s,baz=90,slow=5.8,SNR=150							
WRA				ScP	**ScP**	**23 48 59.4**	**+1.1**
comp=Z,1.2nm,0.8s,baz=95,slow=3.9,SNR=4.7							
comp=Z,14nm,0.6s							
WRA	**Warramunga Arr**	**42.64**	**266**	P	**P**	**23 44 13.4**	**-1.0**
FORT	**Forrest**	**46.60**	**249**	P	**P**	**23 44 43.2**	**-1.5**
MTN	**Manton Dam**	**47.66**	**274**	P	**P**	**23 44 51.5**	**-1.4**
MTN				IAmb	IAmb	23 44 54.7	
comp=Z,7.6nm,0.8s							
KNRA	**Kununurra**	**48.91**	**269**	P	**P**	**23 45 01.1**	**-1.1**
KNRA				IAmb	IAmb	23 45 03.0	
comp=Z,23nm,0.9s							
SBA	**Scott Base**	**54.62**	**183**	P	**P**	**23 45 45.1**	**+2.6**
VNDA	**Vanda**	**54.63**	**185**	P	**P**	**23 45 43.9**	**+1.3**
comp=Z,1.3nm,0.7s,baz=360,slow=6.1,SNR=6.3							
comp=Z,1.3nm,0.7s							
VNDA	**Vanda**	**54.63**	**185**	P	**P**	**23 45 43.5**	**+1.0**
PSA00	**Pilbara Seismi**	**55.42**	**259**	P	**P**	**23 45 48.1**	**-1.0**
MBWA	**Marble Bar**	**55.63**	**260**	P	**P**	**23 45 49.5**	**-1.1**
MBWA				IAmb	IAmb	23 45 50.9	
comp=Z,13nm,1.1s							
MORW	**Morawa**	**57.16**	**250**	P	**P**	**23 46 00.3**	**-0.7**
MORW				IAmb	IAmb	23 46 01.4	
comp=Z,15nm,0.8s							
GIRL	**Giralia**	**60.18**	**257**	P	**P**	**23 46 21.5**	**0.0**
GIRL				IAmb	IAmb	23 46 35.4	
comp=Z,28nm,1.0s							
CASY	**Casey**	**60.41**	**206**	P	**P**	**23 46 20.8**	**-1.4**
CASY				IAmb	IAmb	23 46 22.4	
comp=Z,5.4nm,0.7s							
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**23 47 01.6**	**+0.6**
QSPA				IAmb	IAmb	23 47 03.0	
comp=Z,8.9nm,0.9s							
ADK	**Adak**	**75.27**	**2**	P	**P**	**23 47 52.1**	**-1.0**
MAW	**Mawson**	**78.04**	**200**	P	**P**	**23 48 09.6**	**+1.4**
comp=Z,8.8nm,0.9s,baz=100,slow=7.5,SNR=7.8							
comp=Z,8.8nm,0.9s							
MAW	**Mawson**	**78.04**	**200**	P	**P**	**23 48 09.2**	**+1.0**
NVAR	**Mina Array Bea**	**84.43**	**44**	P	**P**	**23 48 41.9**	**0.0**
comp=Z,0.5nm,0.7s,baz=232,slow=7.3,SNR=3.7							
comp=Z,0.5nm,0.7s							
TROLL	**Troll, Antarti**	**84.56**	**181**	P	**P**	**23 48 41.7**	**-0.3**
SNAA	**Sanae**	**84.89**	**179**	P	**P**	**23 48 42.7**	**-0.7**
SNAA	**Sanae**	**84.89**	**179**	P	**P**	**23 48 42.1**	**-1.3**
VNA3	**Neumayer Olymp**	**85.09**	**177**	P	**P**	**23 48 45.6**	**+1.2**
VNA2	**Neumayer--Watz**	**85.51**	**177**	P	**P**	**23 48 46.0**	**-0.4**
baz=180,slow=4.3							
VNA1	**Neumayer--Stat**	**85.75**	**177**	P	**P**	**23 48 47.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**89.65**	**290**	P	**P**	**23 49 07.3**	**+0.6**
comp=Z,0.5nm,0.3s,baz=149,slow=3.1,SNR=6.9							
comp=Z,0.5nm,0.3s							
TXAR	**Lajitas Array**	**90.12**	**58**	P	**P**	**23 49 09.8**	**+1.0**
comp=Z,0.4nm,0.7s,baz=220,slow=5.1,SNR=3.8							
comp=Z,0.4nm,0.7s							
PDAR	**Pinedale Array**	**92.37**	**44**	P	**P**	**23 49 19.8**	**+0.7**
comp=Z,0.3nm,0.7s,baz=323,slow=2.8,SNR=2.6							
comp=Z,0.3nm,0.7s							
FINES	**FINESS Array B**	**138.30**	**342**	SKPbc	**SKPbc**	**23 58 14.9**	**-1.8**
comp=Z,3.2nm,0.9s,baz=72,slow=4.5,SNR=5.5							
AKASG	**Malin Array Be**	**144.90**	**328**	PKP	**PKPdf**	**23 55 41.2**	**-0.4**
comp=Z,0.7nm,0.4s,baz=45,slow=4.4,SNR=7.9							
BRTR	**Keskin Array B**	**147.61**	**308**	PKPbc	**PKPbc**	**23 55 49.5**	**-0.8**
comp=Z,1.0nm,0.8s,baz=139,slow=5.5,SNR=5.2							
CLL	**Collm**	**150.70**	**344**	*i* PKPbc	**PKPbc**	**23 55 56.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**169.44**	**188**	PKPab	**PKPab**	**23 57 27.6**	**-1.2**
comp=Z,1.0nm,0.7s,baz=175,slow=4.2,SNR=6.2							

IDC 11 23:45:31.8±3.8, 0°.77S×136°.00E, h0km, mb3.3/2, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=171.1km s-min=29.4km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.12**	**185**	P	P	23 49 56.7	+0.1
0.1nm,0.3s,baz=7.0,slow=12,SNR=2.7							
0.5nm,0.7s							
ASAR	**Alice Springs**	**22.85**	**185**	P	P	23 50 36.9	0.0
0.5nm,0.5s,baz=6.7,slow=12,SNR=4.6							
0.5nm,0.5s							
MKAR	**Makanchi Array**	**66.61**	**323**	P	P	23 56 24.1	-0.1
0.2nm,0.4s,baz=107,slow=8.8,SNR=4.9							
0.2nm,0.4s							

ISU ***11*** *23:49:10, 39°.78N×70°.35E, h5km*
KRNET ***11*** *23:49:10.2±0.1, 39°.73N×70°.42E, h12km, mb3.0*
SOME ***11*** *23:49:15.2, 40°.00N×70°.28E, h10km*
NNC ***11*** *23:49:16.8±2.2, 40°.06N×70°.31E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=16.1km s-min=8.5km az=30.0*
ISC 11 23:49:10.4±1.2, 39°.74N±0°.03×70°.41E±0°.04, h5km±10km, n23, σ1932/38, 11C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.45**	**45**⇑*iP*		**Pg**	**23 49 18.8**	**-0.3**
baz=43							
BTK				⇑*iS*	**Sg**	**23 49 25.1**	**+0.1**
baz=43							
BTK	**Batken**	**0.45**	**45**	P	**Pg**	**23 49 18.4**	**-0.7**
BTK				S	**Sb**	**23 49 25.4**	**-2.5**
GAR	**Garm**	**0.74**	**185**⇑*iP*		Pg	23 49 24.4	-0.2
baz=86							
GAR				⇑*iS*	**Sg**	**23 49 34.0**	**-0.3**
baz=86							
MINT	**Mingtut**	**0.85**	**31**	P	**Pg**	**23 49 27.3**	**+0.6**
MINT				S	**Sn**	**23 49 39.7**	**-2.1**
CHMI	**Chimion**	**1.01**	**58**	P	**Pg**	**23 49 29.7**	**-0.1**
CHMI				S	**Sn**	**23 49 44.4**	**-1.4**
DRK	**Karamyk**	**1.11**	**103**⇑*iP*		**Pg**	**23 49 31.3**	**-0.4**
baz=2.0							
DRK				⇑*iS*	**Sg**	**23 49 46.2**	**+0.1**
baz=2.0							
FRG	**Fergana**	**1.23**	**59**	P	**Pn**	**23 49 35.7**	**+1.4**
FRG				S	**Sn**	**23 49 54.2**	**+2.8**
CHGR	**Chuyangaron**	**1.45**	**222**⇓*iP*		**Pn**	**23 49 37.3**	**-0.1**
baz=23							
CHGR				⇓*iS*	**Sn**	**23 49 57.0

KTBS Lg Lg 23 52 24.5
4.2nm,0.6s

*IDC **11** 23:52:51.5±4.2,24°.11N×109°.17W,h0km,mb3.4/1,*
mbtmp3.1/3,ML3.2/2,Error ellipse: s-maj=70.7km
s-min=17.2km az=153.0
*MEX **11** 23:52:57.0±0.6,24°.44N×109°.29W,h5km±14km,MD3.8*
ISC 11 23:52:53.8±0.9,24°.33N±0°.09×109°.19W±0°.06,h10km,n10,
σ1§90/15,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLBS	**Sierra La Lagu**	**0.94**	**228**	*eP*	**Pb**	**23 53 12.6**	**+0.4**
SLBS				*eS*	**Sn**	**23 53 26.2**	**-0.6**
LPIG	**La Paz**	**1.05**	**258**	Pn	**Pg**	**23 53 13.8**	**-0.1**
63nm,0.3s,baz=60,slow=8.1,SNR=16							
LPIG				Sn	**Sb**	**23 53 27.7**	**-0.1**
163nm,0.3s,baz=346,slow=21,SNR=7.8							
LPIG	**La Paz**	**1.05**	**258**	*eP*	**Pg**	**23 53 13.9**	**-0.1**
LPIG				*eS*	**Sg**	**23 53 25.6**	**-2.0**
TSIG	**Topolobambo**	**1.28**	**6**	*eP*	**Pn**	**23 53 16.5**	**-1.1**
SSIG	**Sanalona**	**1.93**	**75**	*eP*	**Pn**	**23 53 25.5**	**-1.2**
SSIG				*eS*	**Sn**	**23 53 46.1**	**-4.8**
PDIG	**Papasquiaro**	**3.52**	**78**	*eP*	**Pn**	**23 53 51.0**	**+2.2**
PDIG				*e*		23 54 32.3	
HPIG		**4.11**	**50**	*eP*	**Pn**	**23 53 58.1**	**+1.3**
HPIG				*eS*	**Sn**	**23 54 45.0**	**0.0**
TXAR	**Lajitas Array**	**7.01**	**43**	Pn	**Pn**	**23 54 38.1**	**+1.4**
0.1nm,0.3s,baz=221,slow=14,SNR=8.4							
TXAR				Lg	Lg	23 56 37.3	
0.2nm,0.3s,baz=221,slow=29,SNR=6.1							
0.2nm,0.4s							
NVAR	**Mina Array Bea**	**16.06**	**333**	Pn	**P**	**23 56 45.5**	**+2.1**
0.1nm,0.3s,baz=161,slow=14,SNR=4.7							
0.4nm,0.7s							
ILAR	**Eielson Array**	**47.20**	**339**	P	**P**	**00 01 26.9**	**+0.4**
0.5nm,0.9s,baz=151,slow=6.5,SNR=3.2							
0.5nm,0.9s							

IDC 11 23:58:21.2±100.0,53°.92S×123°.58E,h0km,mb4.0/3,
mbtmp4.0/3,Error ellipse: s-maj=1664.0km
s-min=137.3km az=21.0,South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**25.54**	**38**	P	P	00 03 50.1	-1.3
4.3nm,0.7s,baz=215,slow=8.8,SNR=5.2							
4.3nm,0.7s							
ASAR	**Alice Springs**	**31.20**	**19**	P	P	00 04 42.5	+0.6
1.8nm,0.6s,baz=194,slow=9.1,SNR=18							
1.8nm,0.6s							
WRA	**Warramunga Arr**	**34.91**	**18**	P	P	00 05 15.0	+0.6
0.3nm,0.5s,baz=191,slow=10,SNR=2.1							
0.3nm,0.5s							

IDC 12 00:13:49.4±6.0,26°.66N×140°.07E,h0km,mb3.8/2,
mbtmp3.8/3,ML3.1/1,Error ellipse: s-maj=142.7km
s-min=82.0km az=109.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**9.97**	**351**	Pn	Pn	00 16 13.8	-0.2
0.2nm,0.3s,baz=172,slow=10,SNR=4.9							
1.0nm,0.4s							
MKAR	**Makanchi Array**	**49.30**	**310**	P	P	00 22 40.1	-0.1
0.4nm,0.6s,baz=92,slow=9.4,SNR=5.1							
0.4nm,0.6s							
FINES	**FINESS Array B**	**77.49**	**333**	P	P	00 25 46.6	0.0
1.5nm,0.7s,baz=46,slow=8.0,SNR=7.5							
1.5nm,0.7s							

*UCR **12** 00:17:26.4±1.7,11°.23N×87°.01W,h36km±999km,ML3.7,*
MW4.3
*INET **12** 00:17:26.3±0.4,11°.19N×87°.01W,h25km,MW3.7*
*SNET **12** 00:17:28.4±1.5,11°.51N×87°.34W,h138km±61km,ML3.9*
ISC 12 00:17:26.3±1.4,11°.23N±0°.06×87°.04W±0°.07,h35km,n37,
σ1§21/39,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.04**	**25**	*eP*	**Pn**	**00 17 44.7**	**+0.2**
MGAN	**Managua**	**1.20**	**40**	*eP*	**Pn**	**00 17 46.5**	**-0.1**
WILN	**Americas 2**	**1.25**	**42**	*eP*	**Pn**	**00 17 47.3**	**+0.1**
MOMN	**Momotombo**	**1.27**	**23**	*eP*	**Pn**	**00 17 47.6**	**0.0**
CNGN	**Cerro Negro**	**1.31**	**15**	*eP*	**Pn**	**00 17 47.0**	**-1.2**
TEL3	**Telica 3**	**1.35**	**8**	*eP*	**Pn**	**00 17 49.0**	**+0.2**
HUEN		**1.39**	**37**	*eP*	**Pn**	**00 17 49.1**	**-0.2**
CRIN	**San Cristobal**	**1.46**	**360**	*eP*	**Pn**	**00 17 50.5**	**+0.2**
CRIN	**San Cristobal**	**1.46**	**360**	*eP*	**Pn**	**00 17 50.6**	**+0.2**
HZTE	**Horizontes, Gu**	**1.51**	**110**	*eP*	**Pn**	**00 17 50.4**	**-0.4**
HZTE	**Horizontes, Gu**	**1.51**	**110**	*eP*	**Pn**	**00 17 50.0**	**-0.9**
VRLE	**La Escondida,**	**1.70**	**105**	*eP*	**Pn**	**00 17 53.5**	**-0.1**
SAJU	**San Juanillo,**	**1.74**	**131**	*eP*	**Pn**	**00 17 52.1**	**-2.0**
ORTG	**Ortega, Santa**	**1.77**	**119**	*eP*	**Pn**	**00 17 57.2**	**+2.6**
HORNC	**Hornillas**	**1.90**	**106**	*eP*	**Pn**	**00 17 56.4**	**0.0**
GRZA	**Playa Garza**	**1.90**	**133**	*eP*	**Pn**	**00 17 53.9**	**-2.3**
CUI	**Cuipilapa**	**1.93**	**107**	*eP*	**Pn**	**00 17 56.2**	**-0.5**
VMAR	**Armenia, Volca**	**1.93**	**102**	*eP*	**Pn**	**00 17 56.9**	**+0.2**
ACON	**Acoyapa**	**1.97**	**68**	*eP*	**Pn**	**00 17 56.3**	**-0.9**
MATN	**Matagalpa**	**2.01**	**33**	*eP*	**Pn**	**00 17 57.7**	**-0.2**
CNCH	**Conchagua**	**2.18**	**339**	*eP*	**Pn**	**00 18 00.6**	**+0.4**
CNCH	**Conchagua**	**2.18**	**339**	*eP*	**Pn**	**00 18 00.6**	**+0.4**
LCND	**La Caada**	**2.23**	**338**	*eP*	**Pn**	**00 18 01.1**	**+0.3**
LCND				*eS*	**Sn**	**00 18 27.9**	**+0.8**
LCND				IAML		00 18 37.9	
comp=Z,384nm,0.3s							
LCND	**La Caada**	**2.23**	**338**	*eP*	**Pn**	**00 18 01.1**	**+0.3**
LCND				*eS*	**Sn**	**00 18 27.9**	**+0.8**
LCND				IAML		00 18 37.9	
comp=Z,384nm,0.3s							
JTS	**Las Juntas de**	**2.25**	**114**	*eP*	**Pn**	**00 18 04.0**	**+2.9**
PACA	**Pacayal**	**2.56**	**331**	*eP*	**Pn**	**00 18 06.0**	**+0.5**
PACA	**Pacayal**	**2.56**	**331**	*eP*	**Pn**	**00 18 06.0**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.82**	**355**	*eP*	**Pn**	**00 18 09.7**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.82**	**355**	*eP*	**Pn**	**00 18 09.7**	**+0.6**
SCLA	**Alcaldia de Sa**	**2.96**	**326**	*eP*	**Pn**	**00 18 11.7**	**+0.8**
SCLA				*eS*	**Sn**	**00 18 43.3**	**-2.0**
SCLA	**Alcaldia de Sa**	**2.96**	**326**	*eP*	**Pn**	**00 18 11.7**	**+0.8**
SCLA				*eS*	**Sn**	**00 18 43.3**	**-2.0**
LFRS	**El Faro**	**3.09**	**320**	IAML		00 18 50.9	
comp=Z,575nm,0.3s							
LFRS	**El Faro**	**3.09**	**320**	IAML		00 18 50.9	
comp=Z,575nm,0.3s							
HAYA	**Volcan Irazu**	**3.38**	**111**	*eP*	**Pn**	**00 18 19.8**	**+2.8**
RIMA	**Rio Macho**	**3.44**	**115**	*eP*	**Pn**	**00 18 17.2**	**-0.5**
CDM	**Cerro de Muert**	**3.62**	**117**	*eP*	**Pn**	**00 18 22.1**	**+1.6**
SRBA	**San Rafael, Bu**	**4.13**	**118**	*eP*	**Pn**	**00 18 28.1**	**+1.0**

*NOU **12** 00:27:26.9,37°.15S×179°.26E,h0km,MLv3.6/6,Off E.*
Coast of N. Island, N.Z.
*WEL **12** 00:27:30.9±0.9,37°.S±6°.×17°.9E±°.,h12km,M3.2/17,*
ML3.5/19,MLv3.2/17,Error ellipse: s-maj=0.0km
s-min=0.0km az=114.8
ISC 12 00:27:28.9±3.0,37°.22S±0°.07×179°.0E±0°.1,h4km±15km,
n32,σ0§70/38,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.68**	**240**	P	**Pb**	**00 27 43.4**	**0.0**
MXZ				S	**Sg**	**00 27 50.7**	**-0.1**
MXZ	**Matakaoa Point**	**0.68**	**240**	P	**Pb**	**00 27 43.4**	**0.0**
WMGZ	**Waiomatatini S**	**0.78**	**220**	P	**Pn**	**00 27 47.3**	**+0.5**
WMGZ				S	**Sn**	**00 27 58.0**	**-0.9**
PKGZ	**Pakihiroa**	**1.02**	**229**	P	**Pn**	**00 27 50.2**	**+0.1**
PUZ	**Puketiti**	**1.05**	**216**	P	**Pn**	**00 27 51.2**	**+0.6**
PUZ				S	**Sb**	**00 28 04.9**	**+0.9**
HAZ	**Te Kaha**	**1.14**	**242**	P	**Pg**	**00 27 50.4**	**-0.4**
HAZ				S	**Sb**	**00 28 06.0**	**-0.3**
TWGZ	**Tauwhareparae**	**1.27**	**221**	P	**Pn**	**00 27 54.5**	**+0.9**
TWGZ				S	**Sb**	**00 28 10.1**	**-0.3**
RUGZ	**Raukumara Rang**	**1.32**	**235**	P	**Pn**	**00 27 55.0**	**+0.7**
RUGZ				S	**Sb**	**00 28 11.3**	**-0.3**
CNGZ	**Carnagh Statio**	**1.43**	**207**	P	**Pb**	**00 27 56.9**	**+0.8**
MWZ	**Matawai**	**1.64**	**227**	P	**Pn**	**00 27 59.0**	**+0.4**
RAGZ	**Rawiri**	**1.81**	**225**	P	**Pn**	**00 28 01.9**	**+0.9**
URZ	**Urewera**	**1.85**	**235**	P	**Pn**	**00 28 02.1**	**+0.6**
URZ	**Urewera**	**1.85**	**235**	P	**Pn**	**00 28 02.1**	**+0.6**
SNGZ	**Shannon Statio**	**2.06**	**220**	P	**Pn**	**00 28 04.6**	**+0.2**
KNZ	**Kokohu**	**2.10**	**211**	P	**Pn**	**00 28 04.3**	**-0.6**
RTZ	**Ruatahuna**	**2.15**	**229**	P	**Pn**	**00 28 06.0**	**+0.4**
RAHZ	**Arahi**	**2.29**	**222**	P	**Pn**	**00 28 07.8**	**+0.3**
MTHZ	**Maungataniwha**	**2.38**	**226**	P	**Pn**	**00 28 09.5**	**+0.6**
NMHZ	**Naumai**	**2.57**	**223**	P	**Pn**	**00 28 12.1**	**+0.6**
ARHZ	**Aropaoanui**	**2.60**	**218**	P	**Pn**	**00 28 11.8**	**0.0**
KUZ	**Kuaotunu**	**2.70**	**279**	P	**Pn**	**00 28 13.0**	**-0.2**
BKZ	**Black Stump Fm**	**2.79**	**225**	P	**Pn**	**00 28 14.4**	**-0.1**
BKZ	**Black Stump Fm**	**2.79**	**225**	P	**Pn**	**00 28 14.9**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.88**	**212**	P	**Pn**	**00 28 14.8**	**-0.9**
MCHZ	**McNeill Hill**	**2.89**	**219**	P	**Pn**	**00 28 15.4**	**-0.3**
KWHZ	**Kaweka Forest**	**3.02**	**222**	P	**Pn**	**00 28 16.9**	**-0.7**
KAHZ	**Kahuranaki**	**3.08**	**213**	P	**Pn**	**00 28 17.5**	**-1.0**
MKAZ	**Moumakai**	**3.10**	**271**	P	**Pn**	**00 28 17.5**	**-1.2**
HIZ	**Hauiti**	**3.56**	**247**	P	**Pn**	**00 28 26.2**	**+1.3**
HIZ	**Hauiti**	**3.56**	**247**	P	**Pn**	**00 28 26.6**	**+1.7**
OUZ	**Omahuta**	**4.83**	**293**	P	**Pn**	**00 28 43.0**	**+0.5**
OUZ	**Omahuta**	**4.83**	**293**	P	**Pn**	**00 28 43.0**	**+0.5**

*INET **12** 00:28:15.8±0.7,11°.33N×86°.94W,h17km±8km,MW3.9*
*UCR **12** 00:28:19.2±2.0,11°.24N×86°.48W,h5km,MW4.3*
ISC 12 00:28:15.5±2.1,11°.29N±0°.07×87°.0W±0°.1,h35km,n41,
σ1§32/41,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.96**	**22**	*eP*	**Pn**	**00 28 32.7**	**+0.1**
MGAN	**Managua**	**1.10**	**39**	*eP*	**Pn**	**00 28 34.6**	**+0.1**
WILN	**Americas 2**	**1.15**	**41**	*eP*	**Pn**	**00 28 35.2**	**0.0**
MOMN	**Momotombo**	**1.19**	**20**	*eP*	**Pn**	**00 28 35.6**	**-0.1**
TEL3	**Telica 3**	**1.28**	**5**	*eP*	**Pn**	**00 28 37.0**	**-0.1**
HUEN		**1.30**	**36**	*eP*	**Pn**	**00 28 37.2**	**0.0**
CRIN	**San Cristobal**	**1.41**	**356**	*eP*	**Pn**	**00 28 38.6**	**-0.2**
HZTE	**Horizontes, Gu**	**1.45**	**113**	*eP*	**Pn**	**00 28 37.8**	**-1.6**
HZTE	**Horizontes, Gu**	**1.45**	**113**	*eP*	**Pn**	**00 28 37.9**	**-1.4**
GBS3	**Finca Las Img**	**1.56**	**109**	*eP*	**Pn**	**00 28 39.4**	**-1.4**
LAPC	**Finca la Perla**	**1.58**	**109**	*eP*	**Pn**	**00 28 39.3**	**-1.8**
BUEV	**Buena Vista**	**1.60**	**107**	*eP*	**Pn**	**00 28 40.3**	**-1.1**
GB1A	**Borinquen Arri**	**1.60**	**107**	*eP*	**Pn**	**00 28 40.3**	**-1.1**
VRLE	**La Escondida,**	**1.64**	**107**	*eP*	**Pn**	**00 28 41.2**	**-0.8**
BUAI	**Buenos Aires**	**1.65**	**104**	*eP*	**Pn**	**00 28 41.9**	**-0.1**
GPS3	**Bodega del ICE**	**1.65**	**108**	*eP*	**Pn**	**00 28 42.1**	**0.0**
GPS1	**Guardaparques**	**1.66**	**108**	*eP*	**Pn**	**00 28 41.9**	**-0.3**
GPS2	**Hotel Rincon d**	**1.66**	**108**	*eP*	**Pn**	**00 28 41.7**	**-0.5**
SAJU	**San Juanillo,**	**1.72**	**135**	*eP*	**Pn**	**00 28 44.9**	**+1.8**
ORTG	**Ortega, Santa**	**1.73**	**122**	*eP*	**Pn**	**00 28 40.9**	**-2.4**
ORTG	**Ortega, Santa**	**1.73**	**122**	*eP*	**Pn**	**00 28 44.8**	**+1.5**
GUAB	**Guayabo de Bag**	**1.79**	**109**	*eP*	**Pn**	**00 28 46.2**	**+2.2**
MESS	**Mesas**	**1.81**	**107**	*eP*	**Pn**	**00 28 44.0**	**-0.4**
COLC	**Colonia**	**1.83**	**110**	*eP*	**Pn**	**00 28 46.5**	**+1.9**
HORNC	**Hornillas**	**1.84**	**108**	*eP*	**Pn**	**00 28 44.2**	**-0.5**
VMAR	**Armenia, Volca**	**1.86**	**104**	*eP*	**Pn**	**00 28 43.9**	**-1.2**
CUI	**Cuipilapa**	**1.87**	**109**	*eP*	**Pn**	**00 28 44.2**	**-0.9**
ACON	**Acoyapa**	**1.88**	**69**	*eP*	**Pn**	**00 28 43.5**	**-1.6**
GRZA	**Playa Garza**	**1.88**	**136**	*eP*	**Pn**	**00 28 42.1**	**-3.1**
MATN	**Matagalpa**	**1.92**	**32**	*eP*	**Pn**	**00 28 45.6**	**-0.3**
ACAL	**Aguas Claras**	**2.00**	**109**	*eP*	**Pn**	**00 28 46.9**	**0.0**
PTEN	**Parque Tenorio**	**2.02**	**106**	*eP*	**Pn**	**00 28 47.5**	**+0.3**
VERA	**Finca Concepci**	**2.09**	**102**	*eP*	**Pn**	**00 28 47.1**	**-1.1**
JTS	**Las Juntas de**	**2.20**	**116**	*eP*	**Pn**	**00 28 50.9**	**+1.2**
CASO	**Castillo**	**2.34**	**111**	*eP*	**Pn**	**00 28 54.7**	**+3.1**
COVE	**Coope Vega, Sa**	**2.57**	**102**	*eP*	**Pn**	**00 28 56.0**	**+1.3**
LCR2	**La Lucha 2**	**3.28**	**118**	*eP*	**Pn**	**00 29 05.3**	**+0.6**
RIMA	**Rio Macho**	**3.40**	**116**	*eP*	**Pn**	**00 29 07.1**	**+0.9**
CDM	**Cerro de Muert**	**3.58**	**118**	*eP*	**Pn**	**00 29 09.5**	**+0.5**
MRVA	**Moravia de Chi**	**3.75**	**112**	*eP*	**Pn**	**00 29 12.6**	**+1.6**
SRBA	**San Rafael, Bu**	**4.09**	**120**	*eP*	**Pn**	**00 29 15.2**	**-0.4**

*SKHL **12** 00:38:46.4±0.5,45°.70N×154°.10E,h66km±3km,mb4.5/4*
*IDC **12** 00:38:51.3±3.2,46°.51N×153°.46E,h48km±31km,mb3.5/14,*
mbtmp3.7/16,ML3.2/3,Error ellipse: s-maj=22.9km
s-min=16.8km az=154.0
ISC 12 00:38:49.7±0.8,46°.3N±0°.1×153°.54E±0°.08,h35km,n28,
σ1§38/26,mb3.8/13,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.12**	**257**	*eP*	**Pn**	**00 39 51.2**	**+1.2**
KUR				AMB	AMB	00 39 52.1	
40nm,0.6s							
KUR				*eS*	**Sn**	**00 40 39.8**	**+2.9**
KUR				A	A	00 40 54.5	
80nm,0.7s							
KUR				A	A	00 40 54.5	
120nm,0.7s							
YUK	**Yuzh-Kuril'sk**	**5.89**	**250**	*eP*	**Pn**	**00 40 14.9**	**+0.5**
YUK				AMB	AMB	00 40 15.4	
30nm,0.4s							
YUK				*eS*	**Sn**	**00 41 20.9**	**+0.3**
YUK				A	A	00 41 29.1	
80nm,0.5s							
YUK				A	A	00 41 29.1	
10.0nm,0.5s							
NMR	**Nemuro--Hokkai**	**6.29**	**245**	*eP*	**Pn**	**00 40 18.5**	**-1.4**
NMR				AMB	AMB	00 40 22.6	
20nm,0.4s							
NMR				*eS*	**Sn**	**00 41 27.8**	**-2.7**
NMR				A	A	00 41 46.1	
20nm,0.6s							
NMR				A	A	00 41 46.1	
20nm,0.6s							
AKK	**Akkeshi**	**7.03**	**245**	*eP*	**Pn**	**00 40 29.4**	**-0.6**
AKK				*eS*	**Sn**	**00 41 46.6**	**-2.0**
PETK	**Petropavlovsk-**	**7.30**	**20**	P	**Pn**	**00 40 32.4**	**-1.3**
0.4nm,0.3s,baz=186,slow=13,SNR=4.3							
1.8nm,0.6s							
SHEM	**Shemya Is, Ala**	**14.78**	**57**	P	**Pn**	**00 42 17.1**	**+1.2**
0.9nm,0.3s,baz=271,slow=18,SNR=6.5							
KLR	**Kul'dur**	**14.92**	**289**	P	**Pn**	**00 42 19.4**	**+1.6**
0.1nm,0.3s,baz=83,slow=8.1,SNR=2.2							
1.6nm,0.9s							
KSRS	**Korea Array**	**20.96**	**254**	P	**P**	**00 43 29.7**	**+0.3**
1.5nm,0.6s,baz=54,slow=11,SNR=2.4							
1.5nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**28.72**	**153**	T	T	01 16 36.8	
baz=340,slow=75,SNR=6.0							
H11N1	**WAKE ISLAND Hy**	**28.73**	**153**	T	T	01 16 21.5	
baz=340,slow=75,SNR=10							
H11N3	**WAKE ISLAND Hy**	**28.73**	**153**	T	T	01 16 32.9	
baz=340,slow=75,SNR=5.9							
H11S1	**WAKE ISLAND Hy**	**29.81**	**154**	T	T	01 17 45.8	
baz=341,slow=76,SNR=4.9							
H11S3	**WAKE ISLAND Hy**	**29.81**	**154**	T	T	01 17 50.5	
baz=341,slow=76,SNR=3.2							
H11S2	**WAKE ISLAND Hy**	**29.82**	**154**	T	T	01 17 53.4	
baz=341,slow=76,SNR=5.2							
SONM	**Songino Array**	**31.75**	**290**	P	**P**	**00 45 10.3**	**-0.1**
0.2nm,0.3s,baz=80,slow=9.9,SNR=2.2							
0.2nm,0.3s							
MKAR	**Makanchi Array**	**47.39**	**298**	P	**P**	**00 47 18.6**	**-1.7**
0.9nm,0.7s,baz=72,slow=8.0,SNR=4.8							
0.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**52.56**	**257**	P	**P**	**00 48 01.1**	**+1.3**
0.6nm,0.3s,baz=33,slow=7.9,SNR=5.3							
0.6nm,0.3s							
ARCES	**ARCESS Array B**	**58.34**	**341**	P	**P**	**00 48 41.5**	**+0.8**
5.4nm,0.9s,baz=35,slow=11,SNR=2.4							
5.4nm,0.9s							
NVAR	**Mina Array Bea**	**62.37**	**62**	P	**P**	**00 49 09.9**	**+1.0**
0.2nm,0.6s,baz=289,slow=8.5,SNR=2.5							
0.2nm,0.6s							
FINES	**FINESS Array B**	**64.54**	**335**	P	**P**	**00 49 20.8**	**-1.8**
1.4nm,0.6s,baz=36,slow=7.2,SNR=20							
1.4nm,0.6s							
PDAR	**Pinedale Array**	**64.75**	**54**	P	**P**	**00 49 24.2**	**-0.4**
0.2nm,0.7s,baz=336,slow=6.4,SNR=2.3							
0.2nm,0.7s							
GEYT	**Alibeck**	**67.07**	**301**	P	**P**	**00 49 38.9**	**-0.5**
0.6nm,0.4s,baz=37,slow=7.4,SNR=2.4							
0.6nm,0.4s							
WRA	**Warramunga Arr**	**68.22**	**199**	P	**P**	**00 49 46.9**	**+0.3**
0.6nm,0.9s,baz=19,slow=6.6,SNR=1.7							
0.6nm,0.9s							
NB2	**NORSAR Subarra**	**68.72**	**341**	P	**P**	**00 49 48.5**	**-0.8**
comp=Z,0.3nm,0.5s,baz=29,slow=6.2							
NOA	**NORSAR Array B**	**68.72**	**341**	P	**P**	**00 49 48.0**	**-1.3**
comp=Z,0.6nm,0.7s,baz=29,slow=6.6,SNR=5.1							
comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**71.91**	**199**	P	**P**	**00 50 10.2**	**+1.1**
comp=Z,0.4nm,0.5s,baz=16,slow=5.4,SNR=4.6							
comp=Z,0.4nm,0.5s							
AKASG	**Malin Array Be**	**72.05**	**326**	P	**P**	**00 50 08.6**	**-1.2**
comp=Z,0.5nm,0.3s,baz=31,slow=6.5,SNR=3.0							
comp=Z,0.5nm,0.3s							
TXAR	**Lajitas Array**	**77.44**	**61**	P	**P**	**00 50 41.4**	**-0.1**
comp=Z,0.5nm,0.6s,baz=300,slow=4.0,SNR=8.9							
comp=Z,0.5nm,0.6s							

PRE 12 00:53:01.6±1.1,21°.49S×33°.30E,h10km,ML1.8,
Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.67**	**221**	*eP*	Pn	00 53 45.3	+0.5
MOPA				*eS*	Sn	00 54 17.0	-0.3
MOPA				IAML		00 54 27.8	
comp=Z,4.7nm,0.3s							
MMAL	**MMAL**	**4.93**	**202**	*eS*	Sn	00 55 14.1	+1.1
MMAL				IAML		00 55 36.2	
comp=Z,2.2nm,0.8s							
LEPH	**Lephalale, Lim**	**5.60**	**244**	*eP*	Pn	00 54 25.6	+0.5
LEPH				*eS*	Sn	00 55 27.0	-2.5
LEPH				IAML		00 56 04.1	
comp=Z,2.2nm,0.4s							

NOU 12 01:17:53.9,15°.97S×167°.78E,h1km,MLv3.5/5,Vanuatu
Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.20**	**192**	P	Pn	01 19 26.7	0.0
OUENC	**Ouen Island, N**	**6.47**	**188**	P	Pn	01 19 30.1	-0.3

*DJA **12** 01:39:22.8±0.6,14°.N±4°.×12°.1E±°.,h80km±9km,M4.7/21,*
mB5.3/19,mb4.9/21,Mw(mB)4.7/19,MwMwp5.0/1,
Mwp5.3/1
*MOS **12** 01:39:23.1±1.0,13°.58N×120°.83E,h129km,mb5.2/62,*
Error ellipse: s-maj=7.1km s-min=3.7km az=117.7
*NEIC **12** 01:39:25.0±2.1,13°.61N±0°.06×120°.80E±0°.08,*
h124km±4km,mb5.2/191,Error ellipse: s-maj=11.1km
s-min=9.1km az=86.0
*IDC **12** 01:39:24.0±0.3,13°.56N×120°.88E,h123km±2km,mb4.8/43,*
mbtmp5.2/44,MS3.8/40,Error ellipse: s-maj=9.8km
s-min=7.0km az=71.0
*GCMT **12** 01:39:24.0±0.1,13°.64N±0°.01×120°.79E±0°.01,*
h129km±1km,MW5.2/151,Moment Tensor Solution.
s108,c143; s151,c241; Duration: 19.0 Moment tensor:
Scale 10^{17}Nm; M_{rr}0.79±.01; $M_{\theta\theta}$-0.07±.02; $M_{\phi\phi}$-0.72±.02;
$M_{r\theta}$0.40±.01; $M_{\theta\phi}$0.23±.01; $M_{\phi r}$-0.28±.01; Best double
couple: $M_0$0.92800×10^{17} NP1:ϕ_s145.00000°,δ60.00000°,
λ72.00000°. NP2:ϕ_s357.00000°,δ34.00000°,λ118.00000°.
Principal axes: T 0.9660, Plg69.0000°, Azm18.0000°; N
-0.0760, Plg15.0000°, Azm154.0000°; P -0.8900,
Plg14.0000°, Azm248.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*MAN **12** 01:39:25.5,13°.53N×120°.72E,h96km,mb5.2,ML4.2,*
MS4.3
MAN INTENSITY III - ABRA DE ILOG OCCIDENTAL
MINDORO; BATANGAS CITY & CALAPAN ORIENTAL
MINDORO; INTENSITY II - CALATAGAN NASUGBU
LIAN AND CUENCA BATANGAS; PASAY CITY; MANILA
CITY PARANAQUE CITY; QUEZON CITY.
*BJI **12** 01:39:25.1±0.0,13°.60N×120°.99E,h152km,mb5.3/86,*
mB5.3/58
ISC 12 01:39:24.9±0.2,13°.54N±0°.02×120°.73E±0°.03,h130km±1km,
h130km:pP-P,n1009,σ1§41/1089,mb5.2/222,100C-28D,
Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.51**	**292**	↑*iP*	**Pn**	**01 39 42.0**	**-2.0**
LUBP				*i* S	**Sn**	**01 39 55.8**	**-2.6**
TGY	**Tagaytay City**	**0.59**	**19**	P	**Pn**	**01 39 43.4**	**-1.2**
baz=90,slow=4.7							
TGY				LR	LR	01 39 56.6	
comp=Z,32μm,21.0s,baz=110,slow=60							
TGY				S	**Sn**	**01 39 58.2**	**-1.4**
baz=90,slow=19							
TGY	**Tagaytay City**	**0.59**	**19**	↑*eP*	**Pn**	**01 39 43.6**	**-1.1**
TGY				*i* S	**Sn**	**01 39 59.0**	**-0.6**
GQP	**Guinayangan**	**1.70**	**77**	↓*iP*	**Pn**	**01 39 54.7**	**-0.6**
GQP				*i* S	**Sn**	**01 40 25.6**	**+7.0**
PCPH	**Palayan**	**2.04**	**10**	↓*eP*	**Pn**	**01 39 58.5**	**-0.8**
PCPH				*eS*	**Sn**	**01 40 24.6**

LUWI	Luwuk	14.63 172	Pn	Pn	01 42 46.3	+0.6
LUWI	Luwuk	14.63 172	P	P	01 42 49.1	+0.7
	10μm194nm,1.1s					
UBPT	Khong Chiam	14.89 279		P	01 42 51.6	+0.3
UBPT	Khong Chiam	14.89 279	P	P	01 42 52.2	+0.9
	2μm115nm,1.4s					
JOW	Kunigami	14.99 27	P	P	01 42 52.5	+0.1
	377nm,0.9s,baz=218,slow=8.5,SNR=28					
JOW			LR	LR	01 47 42.7	
	comp=Z,561nm,20.9s,baz=295,slow=33					
JOW	Kunigami	14.99 27		Pn	01 42 50.2	0.0
BKB	Balikpapan	15.19 195		Pn	01 42 52.8	+0.2
MTKI	Muara Teweh, K	15.51 202	P	P	01 43 01.3	+3.1
LBMI	Labuha	15.60 154	P	P	01 43 05.3	+6.0
KSM	Kuching	15.82 222		P	01 43 02.5	+0.9
KSM	Kuching	15.82 222	P	P	01 43 03.3	+1.7
	2μm122nm,1.3s					
STKI	Sintang	16.23 215	P	Pn	01 42 52.9	-13
CNSH	ChangSha	16.28 335	⇑P	Pn	01 43 06.2	+0.1
CNSH			S	Sn	01 46 00.2	-7.0
CNSH			pmax	pmax		
	comp=Z,52nm,0.7s					
CNSH			LR	LR		
	comp=N,640nm,10.6s					
CNSH			LR	LR		
	comp=E,700nm,13.7s					
CNSH			LR	LR		
	comp=Z,460nm,18.4s					
SANI	Sanana	16.34 161	P	Pn	01 43 06.4	-0.5
TTSI	Tana Toraja	16.50 183	P	P	01 43 10.7	+1.5
	2μm41nm,1.0s					
PMSI	Majene	17.02 186	P	Pn	01 43 19.5	+4.2
	4μm171nm,1.0s					
SPSI	Sidrap Palu	17.42 183	P	Pn	01 43 22.4	+2.4
	771nm76nm,1.0s					
SIJI	Sorong	17.72 143	P	Pn	01 43 24.5	+0.9
	9.4nm,0.5s,baz=352,slow=13,SNR=6.6					
SIJI	Sorong	17.72 143	P	Pn	01 43 24.5	+0.9
	2μm17nm,0.8s					
NLAI	Namlea	17.83 159	P	Pn	01 43 27.5	+2.6
	3μm22nm,1.1s					
BNSI	Bone	17.83 182	P	Pn	01 43 29.4	+4.4
	650nm30nm,1.2s					
BBKI	Banjar Baru	17.88 200	P	Pn	01 43 28.0	+2.5
	9μm244nm,0.9s					
WHN	Wuhan	17.92 342	⇑P	Pn	01 43 26.6	+0.7
WHN			S	Sn	01 46 47.6	+1.1
WHN			pmax	pmax		
	comp=Z,130nm,0.9s					
WHN			pmax	pmax		
	comp=Z,2μm,6.0s					
WHN			LR	LR		
	comp=Z,1μm,12.2s					
KRAI	Karang Ratu	18.39 155	P	Pn	01 43 32.4	+0.8
	2μm100nm,1.0s					
GYA	Guiyang	18.41 316	⇓iP	Pn	01 43 33.3	+1.4
GYA			PP	pwP	01 43 56.1	0.0
GYA			S	Sn	01 46 56.8	-1.9
GYA			pmax	pmax		
	comp=Z,120nm,1.4s					
KAPI	Kappang	18.46 183	P	P	01 43 31.5	+0.8
	43nm,0.6s,baz=345,slow=14,SNR=26					
KAPI	Kappang	18.46 183		P	01 43 31.0	+0.3
KAPI	Kappang	18.46 183	P	Pn	01 43 32.0	-0.4
KAPI	Kappang	18.46 183	P	Pn	01 43 33.3	+0.9
NJ2	Nanjing	18.51 355	⇑iP	Pn	01 43 32.5	-0.3
NJ2			sP	sP	01 44 11.1	+0.4
NJ2			S	S	01 46 57.4	+1.9
NJ2			pmax	pmax		
	comp=Z,100nm,1.3s					
NJ2			pmax	pmax		
	comp=Z,550nm,3.5s					
MSAI	Masohi	18.64 154	P	Pn	01 43 35.3	+0.7
	1μm32nm,0.9s					
BKSI	Bulukumba	18.75 182	P	Pn	01 43 36.6	+0.8
	552nm57nm,0.8s					
BBSI	Bau Bau	18.99 174	P	Pn	01 43 40.0	+1.4
	60nm,1.0s					
ENH	Enshi	19.63 330	P	P	01 43 44.0	+0.6
FAKI	Fak Fak	19.95 144	P	P	01 43 46.9	0.0
FAKI	Fak Fak	19.95 144	P	P	01 43 48.3	+1.4
FAKI	Fak Fak	19.95 144	P	P	01 43 47.7	+0.8
JSU	Suzuyama	19.99 25	P	P	01 43 45.3	-1.9
RKPI	Ransiki, Papua	20.03 137	P	Pn	01 43 54.9	+4.1
MYKOM	Kota Tinggi	20.38 236	P	P	01 43 52.5	+1.0
KMI	Kunming	20.49 307	⇑P	Pn	01 43 55.9	-0.5
KMI			S	S	01 47 31.7	-3.7
KMI			pmax	pmax		
	comp=Z,51nm,1.4s					
KMI			pmax	pmax		
	comp=Z,410nm,7.3s					
KMI			LR	LR		
	comp=N,310nm,14.0s					
KMI			LR	LR		
	comp=E,380nm,18.7s					
KMI			LR	LR		
	comp=Z,270nm,15.1s					
SRIT	Nakonsritamara	21.30 259	P	P	01 44 01.9	+0.4
KULM	Kulim	21.43 249	P	P	01 44 04.4	+1.6
IPM	Ipoh	21.43 247	P	P	01 44 02.8	0.0
IPM	Ipoh	21.43 247	P	P	01 44 05.8	+3.0
CM31	Chiang Mai Arr	21.50 286	P	P	01 44 05.7	+2.2
CMAR	Chiang Mai Arr	21.50 286	P	P	01 44 06.0	+2.4
	51nm,0.8s,baz=96,slow=7.8,SNR=58					
CMAR			PcP	PcP	01 48 02.9	+1.5
	7.6nm,0.7s,baz=80,slow=0.5,SNR=17					
CMAR			ScP	ScP	01 51 25.9	-0.7
	1.7nm,0.3s,baz=47,slow=4.2,SNR=5.5					
	51nm,0.8s					
CMAR	Chiang Mai Arr	21.50 286	P	P	01 44 05.2	+1.6
PZH	PanZhiHua	21.98 309	P	P	01 44 10.0	+1.4
PZH			pP	pwP	01 44 36.1	+0.8
PZH			PP	PnPn	01 44 42.0	+3.8
PZH			S	S	01 48 03.1	+0.3
PZH			pmax	pmax		
	comp=Z,160nm,1.1s					
PZH			pmax	pmax		
	comp=Z,600nm,3.7s					
PZH			LR	LR		
	comp=N,760nm,16.8s					
PZH			LR	LR		
	comp=E,560nm,15.6s					
PZH			LR	LR		
	comp=Z,850nm,17.6s					
MMRI	Maumere	22.08 176	P	P	01 44 09.3	-0.3
MMRI	Maumere	22.08 176	P	P	01 44 11.7	+2.1
LYN	LuoYang	22.22 342	⇑iP	P	01 44 10.2	-0.6
LYN			PP	PnPn	01 44 42.9	+1.6
LYN			sP	sP	01 44 53.3	+2.0
LYN			S	S	01 48 05.9	-0.5
LYN			SS	SnSn	01 48 50.8	+2.3
LYN			pmax	pmax		
	comp=Z,140nm,1.7s					
LYN			pmax	pmax		
	comp=Z,970nm,5.8s					
JTU	Tsushima	22.32 19	P	P	01 44 11.5	-0.3
PLAI	Plampang	22.41 188	P	P	01 44 14.6	+1.6
PMBI	Palembang	22.77 225	P	P	01 44 18.8	+2.3
TIA	Tai'an	22.81 352	⇑P	P	01 44 15.9	-0.7
TIA			S	S	01 48 09.8	-6.1
TIA			sS	sS	01 49 01.0	+0.8
TIA			pmax	pmax		
	comp=Z,55nm,1.5s					
TIA			pmax	pmax		
	comp=Z,590nm,3.8s					
TIA			LR	LR		
	comp=N,250nm,13.7s					
TIA			LR	LR		
	comp=E,250nm,12.4s					
TIA			LR	LR		
	comp=Z,340nm,13.2s					
JAGI	Jajag, Banyuwa	22.82 197	P	P	01 44 17.8	+0.9
JAGI	Jajag, Banyuwa	22.82 197	P	P	01 44 18.5	+1.6
SMRI	Semarang	22.87 207	P	P	01 44 18.6	+1.3
SMRI	Semarang	22.87 207	P	P	01 44 20.6	+3.3
XAN	Xi'an	23.05 334	⇑iP	P	01 44 18.4	-0.6
XAN			pP	pP	01 44 46.2	+2.1
XAN			sP	sP	01 45 02.4	+2.2
XAN			S	S	01 48 18.8	-1.2
XAN			pmax	pmax		
	comp=Z,190nm,1.0s					
XAN			pmax	pmax		
	comp=Z,630nm,3.5s					
XAN			LR	LR		
	comp=N,410nm,16.5s					
XAN			LR	LR		
	comp=E,290nm,15.8s					
XAN			LR	LR		
	comp=Z,600nm,15.8s					
CD2	Chengdu	23.31 321	P	P	01 44 22.1	+0.7
CD2			S	S	01 48 23.4	-0.7
CD2			sS	sS	01 49 17.4	+7.2
CD2			pmax	pmax		
	comp=Z,320nm,1.0s					
CD2			pmax	pmax		
	comp=Z,490nm,4.7s					
JMN	Monobe	23.39 29	P	P	01 44 22.2	+0.2
SOEI	Soe	23.41 171	P	P	01 44 21.3	-1.2
SOEI	Soe	23.41 171	P	P	01 44 23.2	+0.7
GUMO	Guam	23.46 87	P	P	01 44 22.9	+0.1
	214nm,1.0s,baz=202,slow=5.3,SNR=14					
GUMO			LR	LR	01 52 27.4	
	comp=Z,201nm,20.8s,baz=264,slow=34					
	214nm,1.0s					
GUMO	Guam	23.46 87	P	P	01 44 21.8	-1.1
GUMO	Guam	23.46 87	P	P	01 44 24.2	+1.3
TJN	Taejon	23.51 14	P	P	01 44 22.0	-1.1
TJN	Taejon	23.51 14	*ce*P	P	01 44 22.4	-0.6
TJN	Taejon	23.51 14	P	P	01 44 23.3	+0.3
BKNI	Bangkinang	23.51 238	P	P	01 44 24.8	+1.5
BKNI	Bangkinang	23.51 238	P	P	01 44 25.3	+2.0
PSI	Prapat	24.05 246	P	P	01 44 30.0	+1.6
	33nm,0.8s,baz=54,slow=9.3,SNR=10					
PSI			pP	pP	01 44 55.2	+1.2
	8.8nm,0.4s,baz=77,slow=5.8,SNR=2.9					
PSI			PcP	PcP	01 48 07.3	+0.5
	3.1nm,0.4s,baz=102,slow=2.3,SNR=5.8					
	33nm,0.8s					
PSI	Prapat	24.05 246	P	P	01 44 30.0	+1.6
RPSI	Rantau Prapat	24.10 245	P	P	01 44 29.1	+0.4
RPSI	Rantau Prapat	24.10 245	P	P	01 44 30.0	+1.4
RPSI				PcP	01 48 07.3	+0.6
JHS	Saijyo	24.12 26	P	P	01 44 28.4	-0.2
JCJ	Chichijima	24.17 53	P	P	01 44 28.1	-1.0
	76nm,0.8s,baz=255,slow=17,SNR=2.4					
JCJ			LR	LR	01 53 07.2	
	comp=Z,289nm,20.5s,baz=237,slow=34					
	76nm,0.8s					
HNS	HongShan	24.36 348	⇑P	P	01 44 30.9	+0.1
HNS			pP	pP	01 45 01.5	+3.5
HNS			S	S	01 48 40.2	-0.6
HNS			sS	sS	01 49 33.5	+4.4
HNS			pmax	pmax		
	comp=Z,59nm,1.3s					
HNS			LR	LR		
	comp=E,410nm,17.5s					
HNS			LR	LR		
	comp=Z,300nm,23.1s					
KSRS	Korea Array	24.67 14	P	P	01 44 32.5	-1.0
	40nm,1.0s,baz=191,slow=9.7,SNR=53					
KSRS			PcP	PcP	01 48 06.5	-1.0
	0.6nm,0.4s,baz=145,slow=1.5,SNR=4.9					
	40nm,1.0s					
KS19	Wonju Array Si	24.70 14	P	P	01 44 33.4	-0.5
KS19			IAmb	IAmb	01 44 35.4	
	comp=Z,66nm,1.1s					
KSI	Kapahiang	24.82 228	P	P	01 44 36.0	+0.8
TIY	Taiyuan	25.18 344	⇑P	P	01 44 38.4	0.0
TIY			pmax	pmax		
	comp=Z,250nm,5.4s					
TIY			LR	LR		
	comp=Z,320nm,15.1s					
TIY			LR	LR		
	comp=Z,260nm,11.7s					
TIY			LR	LR		
	comp=Z,180nm,15.1s					
DL2	Dalian	25.28 2	P	P	01 44 38.5	-0.6
DL2			pmax	pmax		
	comp=Z,57nm,1.0s					
GSI	Gunungsitoli	25.94 244	P	P	01 44 45.3	-0.1
GSI			IAmb	IAmb	01 44 49.3	
	comp=Z,70nm,1.1s					
GSI			PcP	PcP	01 48 11.8	+1.0
GSI	Gunungsitoli	25.94 244	P	P	01 44 46.4	+1.0
JHJ	Hachijo jima 2	26.11 39	LR	LR	01 52 55.7	
	comp=Z,338nm,21.4s,baz=222,slow=31					
INU	Inuyama	26.22 31	P	P	01 44 46.7	-0.9
INU			IAmb	IAmb	01 44 50.8	
	comp=Z,90nm,1.1s					
INU	Inuyama	26.22 31	P	P	01 44 47.6	0.0
JGF	Kuroka	26.59 31	P	P	01 44 49.8	-1.2
JGF			IAmb	IAmb	01 44 57.0	
	comp=Z,115nm,1.0s					
BJI	Beijing	26.70 352	P	P	01 44 51.8	-0.1
BJI			S	S	01 49 20.9	+3.2
BJI			pmax	pmax		
	comp=Z,19nm,1.6s					
LZH	Lanzhou	27.10 329	⇑iP	P	01 44 57.3	+1.6
LZH			pP	pP	01 45 30.3	+7.0
LZH			sP	sP	01 45 46.2	+7.9
LZH			PcP	PcP	01 48 14.5	+1.1
LZH			S	S	01 49 25.6	+1.1
LZH			SS	SnSn	01 50 49.4	+2.4
LZH			pmax	pmax		
	comp=Z,520nm,1.0s					
LZH			pmax	pmax		
	comp=Z,940nm,4.9s					
LZH			LR	LR		
	comp=Z,640nm,13.3s					
LZH			LR	LR		
	comp=Z,480nm,14.6s					
LZH			LR	LR		
	comp=Z,750nm,15.0s					
MAJO	Matsushiro	27.75 31	P	P	01 44 58.7	-2.6
MAJO	Matsushiro	27.75 31	P	P	01 44 58.7	-2.6
MAJO			pmax	pmax		
	comp=Z,21nm,0.8s					
MAJO	Matsushiro	27.75 31	P	P	01 45 00.2	-1.1
MJAR	Matsushiro Arr	27.75 31	P	P	01 44 59.7	-1.7
	comp=Z,28nm,1.1s,baz=208,slow=8.2,SNR=32					
MJAR			PcP	PcP	01 48 14.9	+0.1
	comp=Z,3.2nm,0.7s,baz=169,slow=1.9,SNR=4.9					
	comp=Z,28nm,1.1s					
SNY	Shenyang	28.29 4	⇑P	P	01 45 05.4	-0.6
SNY			S	S	01 49 47.4	+4.7
SNY			pmax	pmax		
	comp=Z,51nm,1.2s					
SNY			pmax	pmax		
	comp=Z,160nm,3.6s					
SNY			LR	LR		
	comp=Z,300nm,18.0s					
SNY			LR	LR		
	comp=Z,210nm,18.4s					
SNY			LR	LR		
	comp=Z,550nm,19.6s					
HHC	Hu-ho-hao-te	28.37 345	*e*P	P	01 45 07.2	+0.3
HHC			S	S	01 49 43.4	-0.8
HHC			pmax	pmax		
	comp=Z,70nm,1.7s					
HHC			pmax	pmax		
	comp=Z,300nm,6.2s					
HHC			LR	LR		
	comp=Z,490nm,15.3s					
HHC			LR	LR		
	comp=Z,510nm,17.1s					
HHC			LR	LR		
	comp=Z,550nm,15.1s					
BTO	Baotou	28.55 343	*e*P	P	01 45 09.6	+1.1
BTO			S	S	01 49 48.2	+1.1
BTO			LR	LR		
	comp=Z,910nm,13.6s					
BTO			LR	LR		
	comp=Z,1μm,19.5s					
JSD	Sado	28.95 29	P	P	01 45 09.8	-2.1
SHL	Shillong	29.63 298	P	P	01 45 18.7	+0.4
SHL	Shillong	29.63 298	P	P	01 45 18.7	+0.4
SHL			pmax	pmax		
	comp=Z,153nm,0.8s					
SHL	Shillong	29.63 298	P	P	01 45 19.4	+1.1
	SNR=6.6					
JMM	Marumori	30.09 33	P	P	01 45 20.1	-1.9
JMM			IAmb	IAmb	01 45 27.6	
	comp=Z,46nm,0.9s					
CN2	Changchun	30.43 7	*e*P	P	01 45 23.2	-1.7
CN2			*ep*P	pP	01 45 53.1	+0.1
CN2			*e*S	S	01 50 12.2	-4.0
CN2			LR	LR		
	comp=Z,240nm,14.0s					
CN2			LR	LR		
	comp=Z,250nm,14.0s					
CN2			LR	LR		
	comp=Z,420nm,15.0s					
XLT	XiLinHaoTe	30.52 353	⇑iP	P	01 45 25.6	-0.2
XLT			pP	pP	01 45 55.2	+1.2
XLT			sP	sP	01 46 11.4	+2.4
XLT			pmax	pmax		
	comp=Z,31nm,1.2s					
XLT			pmax	pmax		
	comp=Z,240nm,4.0s					
GTA	Gaotai	31.69 328	⇑P	P	01 45 37.6	+1.3
GTA			PcP	PcP	01 48 25.6	+0.5
GTA			S	S	01 50 36.7	+0.3
GTA			pmax	pmax		
	comp=Z,170nm,1.0s					
GTA			pmax	pmax		
	comp=Z,440nm,4.0s					
GTA			LR	LR		
	comp=Z,280nm,15.6s					
GTA			LR	LR		
	comp=Z,270nm,15.6s					
GTA			LR	LR		
	comp=Z,380nm,16.0s					
LSA	Lhasa	31.73 305	P	P	01 45 39.0	+1.9
LSA			pmax	pmax		
	comp=Z,110nm,0.8s					
LSA	Lhasa	31.73 305	P	P	01 45 39.2	+2.0
LSA	Lhasa	31.73 305	P	P	01 45 36.7	-0.5
LSA			pP	pP	01 46 00.8	-3.9
MDJ	Mudanjiang	31.88 12	P	P	01 45 37.9	+0.2
MDJ			pmax	pmax		
	comp=Z,29nm,0.9s					
MDJ			pmax	pmax		
	comp=Z,250nm,6.1s					
MDJ	Mudanjiang	31.88 12	P	P	01 45 38.6	+0.9
	comp=Z,26nm,1.0s					
USA0B	Ussuriysk Arra	32.04 15	P	P	01 45 38.4	-0.7
USA0B	Ussuriysk Arra	32.04 15	P	P	01 45 38.4	-0.7
USA0B			pmax	pmax		
	comp=Z,35nm,1.2s					
USRK	Ussuriysk Ar.	32.04 15	P	P	01 45 39.8	+0.7
	comp=Z,20nm,0.9s,baz=200,slow=9.0,SNR=24					
USRK			LR	LR	01 58 46.8	
	comp=Z,112nm,21.6s,baz=182,slow=36					
	comp=Z,20nm,0.9s					
GOMU	GeErMu	32.40 319	P	P	01 45 44.7	+1.9
GOMU			S	S	01 50 52.4	+4.5
GOMU			pmax	pmax		
	comp=Z,96nm,1.2s					
GOMU			LR	LR		
	comp=Z,230nm,14.7s					
GOMU			LR	LR		
	comp=Z,210nm,12.5s					
GOMU			LR	LR		
	comp=Z,260nm,13.7s					
BNX	BinXian	32.59 9	⇓P	P	01 45 43.9	0.0
BNX			pP	pP	01 46 14.0	+1.9
BNX			sP	sP	01 46 31.2	+4.1
BNX			pmax	pmax		
	comp=Z,54nm,1.3s					
BNX			pmax	pmax		
	comp=Z,240nm,4.3s					
BNX			LR	LR		
	comp=Z,160nm,12.4s					
BNX			LR	LR		
	comp=Z,290nm,15.7s					
BNX			LR	LR		
	comp=Z,200nm,18.8s					
TAPN	Taplejung	33.73 299	*e*P	P	01 45 55.8	+1.4
	comp=Z,395nm,1.1s					
TEY	Ternei	34.17 20	*e*P	P	01 45 57.9	+0.3
JEW	Eniwo	34.24 28	P	P	01 45 57.7	-0.5
ERM	Erimo	34.40 30	P	P	01 45 58.5	-1.1
ERM	Erimo	34.40 30	*ce*P	P	01 45 59.6	0.0
ERM			pmax	pmax		
	comp=Z,90nm,1.0s					
ERM	Erimo	34.40 30	P	P	01 46 00.8	+1.2
MBWA	Marble Bar	34.50 182	P	P	01 45 59.5	-1.1
MBWA			IAmb	IAmb	01 46 01.1	
	comp=Z,42nm,0.9s					
MBWA	Marble Bar	34.50 182	P	P	01 46 00.2	-0.4
MBWA	Marble Bar	34.50 182	P	P	01 46 00.4	-0.2
RAMN	Ramite	34.57 298	*e*P	P	01 46 02.9	+1.3
	comp=Z,491nm,0.8s					
PMG	Port Moresby	34.75 130	P	P	01 46 01.0	-2.0
PMG			IAmb	IAmb	01 46 32.7	
	comp=Z,46nm,1.4s					
PMG	Port Moresby	34.75 130	*ce*P	P	01 46 02.0	-1.0
PMG			pmax	pmax		
	comp=Z,13nm,0.8s					
PSA00	Pilbara Seismi	34.90 181	P	P	01 46 03.3	-0.8
PSA00			IAmb	IAmb	01 46 04.8	
	comp=Z,72nm,1.1s					
PSA00			PcP	PcP	01 48 33.6	-0.6
PSA00	Pilbara Seismi	34.90 181	P	P	01 46 04.1	0.0
JIRN	Jiri	35.12 299	*e*P	P	01 46 07.8	+1.4
	comp=Z,563nm,0.7s					
GUN	Gumba	35.45 299	*e*P	P	01 46 10.5	+1.2
	comp=Z,747nm,0.9s					
HIA	Hailar	35.63 359	P	P	01 46 08.4	-1.8
HIA	Hailar	35.63 359	P	P	01 46 08.4	-1.8
HIA			pmax	pmax		
	comp=Z,18nm,1.0s					
WB0	Warramunga Arr	35.72 158	P	P	01 46 09.1	-2.2
WB0			IAmb	IAmb	01 46 39.8	
	comp=Z,28nm,0.9s					
PKI	Pulchoki	35.76 299	*e*P	P	01 46 12.6	+0.7
	comp=Z,283nm,0.8s					
PKIN	Phulchoki	35.77 299	*e*P	P	01 46 12.5	+0.6
	comp=Z,297nm,0.8s					
WRAB	Tennant Creek	35.86 158	P	P	01 46 10.4	-2.0
WRAB			IAmb	IAmb	01 46 41.1	
	comp=Z,36nm,0.8s					
WRAB	Tennant Creek	35.86 158	*ce*P	P	01 46 10.6	-1.8
WRAB			pmax	pmax		
	comp=Z,17nm,1.0s					
WRAB	Tennant Creek	35.86 158	P	P	01 46 11.0	-1.4
WRAB	Tennant Creek	35.86 158	P	P	01 46 09.6	-2.8
WRAB			pP	pP	01 46 38.8	-2.3
WRA	Warramunga Arr	35.87 158	P	P	01 46 10.7	-1.8
	comp=Z,8.4nm,0.5s,baz=340,slow=8.4,SNR=89					
WRA			pP	pP	01 46 39.2	-1.9
	comp=Z,21nm,0.7s,baz=335,slow=9.6,SNR=8.6					
WRA			S	S	01 51 35.7	-5.1
	comp=Z,6.0nm,1.1s,baz=335,slow=16,SNR=8.8					
	comp=Z,8.4nm,0.5s					
WB2	Warramunga Arr	35.87 158	P	P	01 46 10.3	-2.2
WB2			IAmb	IAmb	01 46 41.1	
	comp=Z,42nm,1.0s					
WR0	Warramunga Arr	35.95 158	P	P	01 46 11.0	-2.2
WR0			IAmb	IAmb	01 46 41.9	
	comp=Z,38nm,1.1s					
DMN	Daman	36.02 298	*e*P	P	01 46 14.8	+0.7
	comp=Z,268nm,0.9s					
ULN	Ulaanbaatar	36.07 344	P	P	01 46 12.8	-1.3
ULN			IAmb	IAmb	01 46 15.7	
	comp=Z,91nm,1.6s					
ULN	Ulaanbaatar	36.07 344	*ce*P	P	01 46 14.3	+0.2
ULN			pmax	pmax		
	comp=Z,51nm,1.3s					
ULN	Ulaanbaatar	36.07 344	P	P	01 46 14.6	+0.5
ULN	Ulaanbaatar	36.07 344	P	P	01 46 10.2	-3.8
ULN			pP	pP	01 46 40.7	-1.9
ULN			sP	sP	01 46 55.7	-1.8
SONM	Songino Array	36.22 344	P	P	01 46 15.5	+0.2
	comp=Z,18nm,0.7s,baz=162,slow=10.0,SNR=101					
SONM			pP	pP	01 46 45.7	+1.8
	comp=Z,7.7nm,0.7s,baz=162,slow=9.1,SNR=3.5					
SONM			PcP	PcP	01 48 37.1	-0.8
	comp=Z,3.7nm,0.9s,baz=226,slow=0.7,SNR=3.8					
SONM			LR	LR	02 02 53.8	
	comp=Z,175nm,19.1s,baz=157,slow=39					
	comp=Z,18nm,0.7s					
SONM	Songino Array	36.22 344	P	P	01 46 15.2	-0.1
SONM			PcP	PcP	01 48 36.9	-1.0
SONM	Songino Array	36.22 344	P	P	01 46 15.2	-0.1
SONM					01 48 36.9	
SONM			pmax	pmax		
	comp=Z,151nm,1.8s					
GKN	Gorkha	36.53 299	*e*P	P	01 46 18.7	+0.4
	comp=Z,295nm,1.0s					
KLR	Kul'dur	36.73 12	LR	LR	02 01 38.8	
	comp=Z,219nm,21.5s,baz=230,slow=36					
KLR	Kul'dur	36.73 12	*ce*P	P	01 46 18.7	-0.7
KLR			pmax	pmax		
	comp=Z,91nm,1.3s					
DANN	Dangsing	37.37 299	*e*P	P	01 46 26.1	+0.6

comp=Z,486nm,0.8s
PATS Pohnpei 37.55 96 P **P 01 46 28.0 +1.2**
PYUN Piuthan 37.96 298 *eP* **P 01 46 31.4 +1.0**
comp=Z,586nm,0.9s
YSS Yuzh-Sakhalins 38.08 25 P **P 01 46 29.4 -1.5**
YSS IAmb IAmb 01 46 32.5
comp=Z,93nm,1.2s
YSS Yuzh-Sakhalins 38.08 25⇑ *eP* **P 01 46 29.8 -1.1**
YSS *e*SP* **sP 01 47 13.4 -1.1**
YSS *e* 01 48 08.5
YSS *eS* **S 01 52 14.8 +0.9**
YSS pmax pmax
comp=Z,400nm,5.7s
YSS pmax pmax
comp=Z,60nm,1.2s
YSS Yuzh-Sakhalins 38.08 25 P **P 01 46 31.9 +1.0**
QIS Mount Isa 38.63 151 P **P 01 46 35.1 -0.7**
WRKA Warakurna 39.05 169 P **P 01 46 38.4 -0.8**
MTSU Mount Surprise 39.14 143 P **P 01 46 39.2 -0.8**
AS31 Alice Springs 39.16 161 P **P 01 46 38.2 -2.0**
ASAR Alice Springs 39.16 161 P **P 01 46 39.0 -1.2**
comp=Z,6.3nm,0.5s,baz=335,slow=6.5,SNR=92
ASAR pP **pP 01 47 07.2 -2.0**
comp=Z,25nm,1.0s,baz=336,slow=7.3,SNR=10
ASAR PcP **PcP 01 48 47.0 -0.1**
comp=Z,5.7nm,0.9s,baz=342,slow=4.1,SNR=5.1
ASAR S **S 01 52 27.1 -3.5**
comp=Z,1.5nm,0.8s,baz=344,slow=16,SNR=6.2
comp=Z,6.3nm,0.5s
ASAR Alice Springs 39.16 161 P **P 01 46 38.6 -1.6**
AS01 Alice Springs 39.17 161 P **P 01 46 39.6 -0.7**
GRNR Gornyy 39.26 16⇓ *iP* **P 01 46 40.5 -0.2**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,40nm,1.0s
ZAK Zakamensk 39.40 342 *eP* **P 01 46 41.4 -0.6**
ZAK pmax pmax
comp=Z,16nm,1.4s
PALK Pallekele 39.82 265 LR LR 02 02 36.6
comp=Z,124nm,21.2s,baz=185,slow=35
MEEK Meekatharra 39.99 183 P **P 01 46 46.5 -0.5**
ZEA Zeya 40.43 6 *eP* **P 01 46 49.9 -0.4**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=Z,100nm,14.0s
HYBB Hyderabad (bro 40.77 281 *eP* **P 01 46 53.3 -0.4**
HYBB *epP* **pP 01 47 23.8 +2.0**
HYBB *ePP* **PP 01 48 30.9 +0.6**
HYBB ⇓*ePcP* **PcP 01 48 53.5 +0.9**
HYBB *eS* **S 01 52 58.7 +3.7**
MOY Mondy 41.23 341 *eP* **P 01 46 57.3 +0.3**
MOY pmax pmax
comp=Z,47nm,1.7s
TYV Tymovskoe 41.26 21 *eP* **P 01 46 57.7 +0.6**
TYV *eS* **S 01 53 04.7 +3.5**
TYV pmax pmax
comp=Z,28nm,1.9s
TYV pmax pmax
comp=Z,200nm,2.2s
TYV smax smax
comp=E,300nm,5.4s
WMQ Urumqi 41.35 323 *eP* **P 01 47 00.3 +2.2**
WMQ pP sP 01 47 35.4 -6.1
WMQ PP **PP 01 48 37.7 +1.5**
WMQ S **S 01 53 05.7 +2.7**
WMQ pmax pmax
comp=E,73nm,1.1s
WMQ pmax pmax
comp=E,310nm,4.7s
WMQ LR LR
comp=E,340nm,12.5s
WMQ LR LR
comp=E,270nm,18.7s
WMQ LR LR
comp=E,200nm,18.7s
CTA Charters Tower 41.80 143 P **P 01 47 01.9 +0.1**
CTAO Charters Tower 41.80 143 P **P 01 47 01.1 -0.8**
CTAO Charters Tower 41.80 143 P **P 01 47 01.1 -0.8**
CTAO pmax pmax
comp=Z,39nm,1.3s
CTAO Charters Tower 41.80 143 P **P 01 47 02.0 +0.1**
MORW Morawa 42.60 186 P **P 01 47 07.5 -0.7**
MORW IAmb IAmb 01 47 09.4
comp=Z,68nm,1.0s
MORW Morawa 42.60 186 P **P 01 47 08.1 -0.1**
PCHI Peechi 43.47 271⇑ *eP* **P 01 47 17.2 +1.7**
PCHI *eS* **S 01 53 30.3 -4.4**
OOD Oodnadatta 43.57 161 P **P 01 47 15.6 -0.4**
BLDU Ballidu 44.07 185 P **P 01 47 19.2 -0.8**
BOD Bodaibo 44.49 355 *eP* **P 01 47 22.9 -0.1**
BOD pmax pmax
comp=Z,39nm,1.6s
FORT Forrest 44.62 171 P **P 01 47 23.9 -0.5**
FORT IAmb IAmb 01 47 54.2
comp=Z,40nm,0.8s
FORT PcP **PcP 01 49 05.1 +0.1**
FORT Forrest 44.62 171 P **P 01 47 25.1 +0.7**
KLBR Kellerberrin 44.96 184 P **P 01 47 26.5 -0.6**
ZSN Zaisan 45.11 326 *eP* **P 01 47 26.9 -1.2**
ZSN Zaisan 45.11 326 *eP* **P 01 47 27.0 -1.2**
baz=326
DGZ Jazzator, Alta 45.19 330⇑ *iP* **P 01 47 30.2 +1.3**
DGZ pmax pmax
comp=Z,33nm,0.9s
POO Poona 45.24 283 *eP* **P 01 47 26.0 -3.6**
INKA Innaminka 45.39 155 P **P 01 47 30.6 +0.1**
MUN Mundaring 45.47 185 P **P 01 47 30.8 -0.2**
QLP Quilpie 45.96 150 P **P 01 47 34.6 -0.4**
SHLS Shalkode 46.09 318*c iP* **P 01 47 35.3 -0.8**
SHLS pmax pmax
comp=Z,34nm,0.7s
SHLS Shalkode 46.09 318⇑ *iP* **P 01 47 35.4 -0.8**
comp=Z,34nm,0.7s,baz=318
PDGK Podgornoye 46.16 318 P **P 01 47 37.4 +0.8**
MK31 Makanchi Array 46.18 324 P **P 01 47 37.2 +0.6**
MK31 IAmb IAmb 01 47 38.8
comp=Z,62nm,0.9s
MK31 Makanchi Array 46.18 324⇑ *eP* **P 01 47 37.7 +1.1**
MKAR Makanchi Array 46.18 324 P **P 01 47 38.0 +1.4**
comp=Z,42nm,0.7s,baz=130,slow=8.6,SNR=261
MKAR LR LR 02 09 26.9
comp=Z,118nm,18.1s,baz=67,slow=39
comp=Z,42nm,0.7s
MKAR Makanchi Array 46.18 324 P **P 01 47 37.4 +0.8**
NWAO Narrogin (SRO) 46.33 184 P **P 01 47 37.0 -0.7**
NWAO IAmb IAmb 01 48 08.5
comp=Z,83nm,1.0s
NWAO Narrogin (SRO) 46.33 184 P **P 01 47 37.0 -0.7**
NWAO pmax pmax
comp=Z,83nm,1.0s
NWAO Narrogin (SRO) 46.33 184 P **P 01 47 38.1 +0.3**
MAKZ Makanchi 46.37 324 P **P 01 47 38.2 +0.2**
MAKZ Makanchi 46.37 324 P **P 01 47 38.5 +0.4**
UZB Uzynbulak 46.38 318 *eP* **P 01 47 36.8 -1.5**
UZB Uzynbulak 46.38 318 *eP* **P 01 47 36.9 -1.5**
baz=318
TARG Taragay, Kyrgy 46.58 315 P **P 01 47 39.4 -0.9**
TARG Taragay, Kyrgy 46.58 315 P **P 01 47 39.4 -0.9**
TARG pmax pmax
comp=Z,30nm,0.9s
KPKS Kokpek 46.74 318*c iP* **P 01 47 42.0 +0.9**
KPKS pmax pmax
comp=Z,26nm,0.6s
KPKS Kokpek 46.74 318⇑ *iP* **P 01 47 42.0 +0.9**
comp=Z,26nm,0.6s,baz=318
SATY Saty 46.74 317*c iP* **P 01 47 42.0 +0.8**
SATY pmax pmax
comp=Z,25nm,0.7s
SATY Saty 46.74 317⇑ *iP* **P 01 47 42.1 +0.8**
comp=Z,25nm,0.7s,baz=317
RK1H Rockhampton Ha 46.85 141 P **P 01 47 41.5 -0.5**
SKR Severo-Kuril's 46.85 30*ceP* **P 01 47 42.2 +0.5**
KSH Kashi 47.03 312 P **P 01 47 45.9 +2.4**
KSH PcP **PcP 01 49 15.4 +1.8**
KSH PP **PP 01 49 40.0 +4.7**
KSH pmax pmax
comp=Z,61nm,1.0s
NIL Nilore 47.42 303 P **P 01 47 46.8 +0.3**
NIL pmax pmax
comp=Z,200nm,0.7s
NIL Nilore 47.42 303 P **P 01 47 45.2 -1.3**
NIL sP **sP 01 48 27.4 -3.0**
TDK Taldyqorghan 47.62 320*c iP* **P 01 47 48.8 +1.0**
TDK pmax pmax
comp=Z,72nm,0.5s
TDK Taldyqorghan 47.62 320⇑ *iP* **P 01 47 48.9 +1.1**
comp=Z,72nm,0.5s,baz=320
MDOK Medeo 47.69 317 *i* P **P 01 47 48.7 +0.2**
MDOK Medeo 47.69 317 *i* P **P 01 47 48.7 +0.2**
baz=317
NRN Naryn 47.71 314 P **P 01 47 49.3 +0.4**
NRN IAmb IAmb 01 47 51.4
comp=Z,73nm,0.9s
NRN Naryn 47.71 314 P **P 01 47 49.3 +0.4**
NRN pmax pmax
comp=Z,73nm,0.9s
AAA Alma-Ata 47.79 317 *eP* **P 01 47 49.2 0.0**
AAA Alma-Ata 47.79 317 *eP* **P 01 47 49.3 0.0**
baz=317
ULHL Ulahol 47.86 315 P **P 01 47 51.8 +1.9**
SNR=14
CHKK Chushkaly 48.02 318 *eP* **P 01 47 51.1 +0.2**
CHKK Chushkaly 48.02 318 *eP* **P 01 47 51.1 +0.2**
baz=318
BOOM Boomskoye usch 48.16 316 P **P 01 47 52.9 +0.7**
BOOM IAmb IAmb 01 47 54.7
comp=Z,57nm,1.3s
BOOM Boomskoye usch 48.16 316 P **P 01 47 52.9 +0.7**
BOOM pmax pmax
comp=Z,57nm,1.3s
RMQ Roma 48.22 146 P **P 01 47 53.1 +0.5**
KUU Kurty 48.46 317*c iP* **P 01 47 55.4 +1.2**
KUU Kurty 48.46 317⇑ *iP* **P 01 47 55.5 +1.2**
baz=318
TKM2 Tokmak 2 48.56 316 P **P 01 47 56.5 +1.2**
SNR=58
EIDS Eidsvold 48.69 143 P **P 01 47 54.2 -2.0**
EIDS IAmb IAmb 01 48 25.4
comp=Z,82nm,1.7s
YAK Yakutsk 48.84 6 P **P 01 47 55.9 -0.9**
YAK Yakutsk 48.84 6*c iP* **P 01 47 56.4 -0.4**
YAK *e*PP* **pP 01 48 21.7 -5.2**
YAK *e* 01 49 17.3
YAK *e* 01 49 48.7
YAK *e*PPP PPP 01 50 43.3
YAK *eS* **S 01 54 52.3 +2.2**
YAK *e* 01 57 37.2
YAK *e*SSS SSS 01 59 47.1
YAK pmax pmax
comp=Z,99nm,0.9s
YAK pmax pmax
comp=N,66nm,1.1s
YAK pmax pmax
comp=E,21nm,1.0s
YAK pmax pmax
comp=Z,64nm,2.2s
YAK pmax pmax
comp=N,46nm,1.9s
YAK pmax pmax
comp=E,26nm,2.1s
YAK smax smax
comp=N,28nm,2.1s
YAK smax smax
comp=E,52nm,2.3s
KBK Karagaybulak 48.90 315 P **P 01 47 59.6 +1.8**
SNR=7.4
KAAM Kaadhehdhoo 49.00 259 P **P 01 47 58.2 -0.6**
UCH Uchtor 49.04 315 P **P 01 48 01.1 +1.9**
SNR=113
PEA0B Petropavlovsk- 49.15 29 P **P 01 47 59.1 -0.3**
PEA0B Petropavlovsk- 49.15 29*ceP* **P 01 47 59.9 +0.5**
PETK Petropavlovsk- 49.15 29 P **P 01 47 59.6 +0.3**
comp=E,27nm,1.0s,baz=191,slow=1.5,SNR=14
PETK LR LR 02 11 11.0
comp=E,58nm,18.6s,baz=232,slow=39
comp=E,27nm,1.0s
PETK Petropavlovsk- 49.15 29 P **P 01 47 58.8 -0.5**
CHMS Chumysh 49.16 316 P **P 01 48 00.8 +1.1**
SNR=23
AAK Ala-Archa 49.20 315 P **P 01 48 01.5 +1.3**
SNR=26
AAK Ala-Archa 49.20 315 P **P 01 48 01.4 +1.2**
comp=E,16nm,0.8s,baz=118,slow=7.2,SNR=47
AAK pP **pP 01 48 29.8 -0.3**
comp=E,10nm,0.9s,baz=9.8,slow=14,SNR=2.2
AAK LR LR 02 10 35.7
comp=E,130nm,21.0s,baz=96,slow=38
comp=E,16nm,0.8s
AAK Ala-Archa 49.20 315 P **P 01 48 00.9 +0.8**
AAK IAmb IAmb 01 48 03.0
comp=Z,36nm,1.0s
AAK Ala-Archa 49.20 315⇑ *iP* **P 01 48 01.3 +1.2**
AAK pmax pmax
comp=Z,49nm,1.1s
AAK Ala-Archa 49.20 315 P **P 01 48 01.8 +1.7**
AAK Ala-Archa 49.20 315 *i* P **P 01 48 01.6 +1.5**
SNR=30
AAK Ala-Archa 49.20 315 P **P 01 47 59.2 -0.9**
AAK sP **sP 01 48 39.2 -5.4**
ZAA0 Zalesovo Array 49.21 333 P **P 01 47 59.0 -0.8**
ZAA0 IAmb IAmb 01 48 00.8
comp=Z,34nm,0.9s
ZALV Zalesovo Beam 49.21 333 P **P 01 47 59.8 0.0**
comp=Z,32nm,0.8s,baz=125,slow=6.4,SNR=98
ZALV PP **PP 01 49 53.7 -1.1**
comp=Z,5.6nm,0.9s,baz=130,slow=6.6,SNR=3.9
ZALV S **S 01 54 54.8 -0.8**
comp=Z,0.7nm,0.3s,baz=99,slow=13,SNR=3.8
ZALV LR LR 02 10 14.5
comp=Z,167nm,19.6s,baz=84,slow=38
comp=Z,32nm,0.8s
ZALV Zalesovo Beam 49.21 333 P **P 01 47 58.9 -0.9**
SEM Semipalatinsk 49.30 327 *eP* **P 01 47 59.9 -0.9**
SEM Semipalatinsk 49.30 327 *eP* **P 01 47 60.0 -0.9**
baz=327
STKA Stephens Creek 49.39 156 P **P 01 47 60.0 -1.5**
comp=Z,2.7nm,0.5s,baz=333,slow=6.8,SNR=7.6
STKA pP **pP 01 48 29.5 -2.2**
comp=Z,15nm,0.8s,baz=329,slow=9.4,SNR=13
comp=Z,2.7nm,0.5s
SGDS Sogindy 49.42 316*c iP* **P 01 48 01.6 0.0**
SGDS Sogindy 49.42 316⇑ *iP* **P 01 48 01.7 0.0**
baz=316
USP Ospenovka 49.44 316 P **P 01 48 02.8 +1.1**
SNR=41
PET Petropavlovsk 49.55 29 P **P 01 48 00.7 -1.6**
AML Almayashu 49.57 314 P **P 01 48 04.7 +1.5**
SNR=30
EKS2 Erkin-Say 49.70 315 P **P 01 48 05.4 +1.5**
SNR=56
DRK Karamyk 50.07 310 P **P 01 48 07.3 +0.3**
KURBB Kurchatov Arra 50.34 326 P **P 01 48 09.1 +0.7**
comp=Z,97nm,0.9s,baz=120,slow=8.4,SNR=12
comp=Z,97nm,0.9s
KURBB Kurchatov Arra 50.34 326 P **P 01 48 08.7 +0.3**
KURK Kurchatov 50.34 326 P **P 01 48 09.1 +0.7**
KURK Kurchatov 50.34 326*ceP* **P 01 48 09.3 +0.9**
KURK pmax pmax
comp=Z,300nm,0.9s
KURK Kurchatov 50.34 326 P **P 01 48 09.7 +1.4**
KURK Kurchatov 50.34 326 P **P 01 48 07.1 -1.3**
KURK sP **sP 01 48 47.1 -5.8**
BTLS Baital 50.43 318*c iP* **P 01 48 09.2 0.0**
BTLS pmax pmax
comp=Z,16nm,0.7s
BTLS Baital 50.43 318⇑ *iP* **P 01 48 09.2 0.0**
comp=Z,16nm,0.7s,baz=318
KBL Kabul 51.02 304 P **P 01 48 15.4 +1.4**
MA2 Magadan 51.04 19 LR LR 02 12 41.1
comp=Z,65nm,18.4s,baz=264,slow=39
MA2 Magadan 51.04 19 P **P 01 48 13.3 -0.2**
MA2 Magadan 51.04 19*ceP* **P 01 48 13.3 -0.2**
MA2 pmax pmax
comp=Z,102nm,1.2s
MA2 Magadan 51.04 19 P **P 01 48 14.4 +0.9**
GAR Garm 51.05 309 P **P 01 48 14.4 +0.4**
DZA Taraz 51.47 314 *eP* **P 01 48 17.1 0.0**
DZA Taraz 51.47 314 *eP* **P 01 48 17.1 0.0**
baz=314
CHGR Chuyangaron 51.83 309 P **P 01 48 20.4 +0.5**
CHGR Chuyangaron 51.83 309 P **P 01 48 20.4 +0.5**
CHGR pmax pmax
comp=Z,217nm,0.9s
SIMJ Simiganj 51.95 309 P **P 01 48 19.3 -1.5**
SIMJ sP **pP 01 48 57.0 +5.9**
KK31 Karatay Array 52.11 315 *i* P **P 01 48 22.3 +0.5**
KKAR Karatay Array 52.11 315 P **P 01 48 21.8 0.0**
KKAR Karatay Array 52.11 315 P **P 01 48 21.8 0.0**
KKAR pmax pmax
comp=Z,54nm,0.8s
IUG Iuzhnay 52.15 313*c iP* **P 01 48 23.1 +0.9**
IUG Iuzhnay 52.15 313⇑ *iP* **P 01 48 23.1 +0.9**
baz=313
TAS Tashkent 52.44 312 P **P 01 48 25.1 +0.9**
TAS Tashkent 52.44 312 P **P 01 48 25.1 +0.9**
TAS pmax pmax
comp=Z,106nm,0.9s
OTUK Ortayu 52.79 321 P **P 01 48 27.3 +0.6**
BRZS Berezniki 53.32 323*c iP* **P 01 48 30.9 +0.4**
BRZS pmax pmax
comp=Z,26nm,0.9s
BRZS Berezniki 53.32 323⇑ *iP* **P 01 48 30.9 +0.4**
comp=Z,26nm,0.9s,baz=323
SEY Seymchan 54.15 17*ceP* **P 01 48 37.4 +1.1**
SEY pmax pmax
comp=Z,46nm,0.9s
BVA0 Borovoye Array 55.92 326 *i* P **P 01 48 49.0 -0.3**
BVAR Borovoye Array 55.92 326 P **P 01 48 49.6 +0.3**
comp=Z,17nm,0.9s,baz=118,slow=9.1,SNR=96
BVAR pP **pP 01 49 19.1 -0.8**
comp=Z,4.4nm,0.6s,baz=106,slow=11,SNR=3.2
BVAR LR LR 02 15 00.7
comp=Z,130nm,18.8s,baz=111,slow=38
comp=Z,17nm,0.9s
BRVK Borovoye 55.99 326 P **P 01 48 50.0 +0.2**
BRVK Borovoye 55.99 326*ceP* **P 01 48 50.1 +0.3**
BRVK pmax pmax
comp=Z,109nm,1.2s
BRVK Borovoye 55.99 326 P **P 01 48 50.6 +0.8**
BRVK Borovoye 55.99 326 P **P 01 48 47.6 -2.1**
BRVK pP **pP 01 49 20.4 0.0**
HRA Herat 56.55 302 P **P 01 48 54.4 0.0**
SHEM Shemya Is, Ala 57.48 35 LR LR 02 13 06.6
comp=Z,36nm,19.6s,baz=342,slow=35
OUENC Ouen Island, N 57.61 128 P **P 01 49 01.7 +0.2**
TIXI Tiksi 58.29 3 LR LR 02 15 38.3
comp=Z,127nm,19.5s,baz=176,slow=37
TIXI Tiksi 58.29 3 P **P 01 49 04.4 -1.2**
TIXI Tiksi 58.29 3⇑ *iP* **P 01 49 04.8 -0.7**
TIXI pmax pmax
comp=Z,150nm,1.2s
WBK Wadi Bani Khal 59.06 288 P **P 01 49 12.4 +0.6**
SNR=6.0
WSAR Wadi Sarin 59.35 289 P **P 01 49 13.7 -0.1**
comp=Z,49nm,0.8s,baz=121,slow=7.1,SNR=38
comp=Z,49nm,0.8s
NRIK Noril'sk 59.58 347 P **P 01 49 14.3 -0.1**
comp=Z,31nm,0.8s,baz=135,slow=6.2,SNR=48
NRIK LR LR 02 15 59.6
comp=Z,159nm,20.9s,baz=161,slow=37
comp=Z,31nm,0.8s
NRIK Noril'sk 59.58 347*ceP* **P 01 49 14.1 -0.4**
NRIK pmax pmax
comp=Z,123nm,1.6s
BIDO Bidbid 59.80 289 P **P 01 49 17.5 +0.6**
SNR=16
JMDO Jabal Madar 59.87 288 P **P 01 49 17.4 0.0**
SNR=5.1
SMDO Samad 59.89 289 P **P 01 49 17.7 +0.1**
MHTO MHTO 60.08 287 P **P 01 49 18.7 -0.1**
MHTO P **P 01 49 18.7 -0.1**
SNR=8.3
GEYT Alibeck 60.26 306 P **P 01 49 21.4 +1.7**
comp=Z,84nm,0.9s,baz=132,slow=2.2,SNR=232
comp=Z,84nm,0.9s
GYA0 ALIBECK ARRAY 60.26 306 P **P 01 49 20.9 +1.1**
HOQ Hoqain 60.54 290 P **P 01 49 22.2 +0.3**
SNR=11
DQM DQM 60.56 285 P **P 01 49 22.4 +0.3**
SNR=5.1
BSY Bisya 60.69 289 P **P 01 49 23.2 +0.3**
SNR=7.6
AB31 Akbulak array 60.88 319 *i* P **P 01 49 23.6 -0.1**
ABKAR Akbulak array 60.88 319 P **P 01 49 23.7 0.0**
ARQ Araqi 61.28 289 P **P 01 49 27.2 +0.3**
SNR=5.8
BANOM Banah 61.37 292 P **P 01 49 28.7 +1.2**
BANOM Banah 61.37 292 *i* P **P 01 49 28.4 +0.9**
SNR=8.4
UOSS Minazif 61.49 291 P **P 01 49 28.0 -0.3**
SHME Shamm 61.51 292 P **P 01 49 29.6 +1.2**
MASF Masafi 61.52 292 P **P 01 49 30.3 +1.8**
MSFE Esma-Masafi 61.52 292 *i* P **P 01 49 29.3 +0.8**
SNR=6.8
HATD Hatta, Dubai 61.56 291 P **P 01 49 29.6 +0.8**
HATD Hatta, Dubai 61.56 291 *i* P **P 01 49 29.3 +0.5**
SNR=5.3
ASHO Ashiyiah 61.64 291 P **P 01 49 29.6 +0.3**
SNR=5.9
ASHO Ashiyiah 61.64 291 *i* P **P 01 49 28.9 -0.5**
SNR=8.0
BILL Bilibino 61.85 18 P **P 01 49 29.6 -0.3**
BILL Bilibino 61.85 18*de*P **P 01 49 30.0 +0.1**
BILL *e*PP* **pP 01 50 00.8 -0.5**
BILL *e* 01 50 08.8
BILL *e*SP* **sP 01 50 19.4 +3.9**
BILL *e* 01 51 48.1
BILL *e*PPP PPP 01 53 18.5
BILL *eS* **S 01 57 43.4 +0.4**
BILL *e*SS **SS 02 01 49.3 +2.3**
BILL pmax pmax
comp=Z,81nm,1.2s
ALNE Al Ain 61.95 290 P **P 01 49 32.2 +0.8**
SNR=7.3
ALNE Al Ain 61.95 290 *i* P **P 01 49 31.8 +0.4**
SNR=9.5
UMQ Umm Al-Quwin 61.96 292 P **P 01 49 32.1 +0.7**
NAZ Nazwa, Dubai 61.98 291 P **P 01 49 32.3 +0.7**
FAQ Al Faqa, Dubai 62.06 291 P **P 01 49 32.6 +0.5**
FAQ Al Faqa, Dubai 62.06 291 P **P 01 49 32.2 +0.1**
ASUD Al Ashush, Dub 62.30 291 P **P 01 49 33.6 -0.1**
ASUD Al Ashush, Dub 62.30 291 P **P 01 49 34.0 +0.3**
AKTO Aktyubinsk 62.36 320 P **P 01 49 33.7 +0.1**
comp=Z,25nm,0.9s,baz=102,slow=7.3,SNR=67
AKTO LR LR 02 18 08.9
comp=Z,90nm,19.2s,baz=107,slow=37
comp=Z,25nm,0.9s
SHAO Shalim 62.54 283 P **P 01 49 36.7 +1.2**
SHAO P **P 01 49 36.8 +1.4**
SHAO Shalim 62.54 283 *i* P **P 01 49 36.6 +1.2**
SNR=33
SVE Sverdlovsk 62.56 328 *eP* **P 01 49 34.8 0.0**
SVE pmax pmax
comp=Z,78nm,1.1s
UMZA Um Al Zommool 62.57 289 P **P 01 49 35.5 0.0**
AJN Ajban 62.62 291 P **P 01 49 36.2 +0.4**
DMTO DMTO 63.22 283 P **P 01 49 40.8 +1.0**
ARU Arti 63.53 327 P **P 01 49 40.7 -0.6**
comp=Z,25nm,0.7s,baz=92,slow=3.6,SNR=45
comp=Z,25nm,0.7s
ARU Arti 63.53 327 P **P 01 49 40.4 -0.9**
ARU IAmb IAmb 01 49 41.8
comp=Z,28nm,0.8s
ARU Arti 63.53 327*c iP* **P 01 49 40.3 -0.9**
ARU *PP **pP 01 50 10.5 -2.1**
ARU 01 50 17.9
ARU 01 51 58.7
ARU S **S 01 58 04.0 -0.3**
ARU SS **SS 02 02 12.0 -1.7**
ARU pmax pmax
comp=Z,30nm,0.8s
ARU Arti 63.53 327 P **P 01 49 38.5 -2.7**
ARU pP **pP 01 50 08.7 -3.9**
ARU sP **PcP 01 50 19.5 +2.8**
DOK Doka 63.89 284 P **P 01 49 44.7 +0.4**
RBK Rabkut 63.95 283 P **P 01 49 44.9 +0.2**
SNR=6.0
MZR Muzera 64.09 289 P **P 01 49 46.1 +0.5**
SNR=16
MZR Muzera 64.09 289 *i* P **P 01 49 46.9 +1.3**
SNR=8.6
WHFO Wadi Hawf 64.31 284 P **P 01 49 47.3 +0.3**
SNR=5.0
GHWR Ruwais 64.58 290 P **P 01 49 48.8 +0.2**
ABTO Aybut 64.83 283 P **P 01 49 51.2 +0.7**
SNR=7.9
SLWR Sila 65.65 290 P **P 01 49 56.4 +0.8**
SHMA Al-Shehemyia 66.17 292 P **P 01 49 59.6 +0.7**

SMRA	Abu-Samra	66.38 291	P	P	01 50 01.4	+1.1
NIKH	Nikolski High	67.51 38	P	P	01 50 07.3	+0.4
	baz=263					
LKRN	Lenkeran, Azer	67.63 306	P	P	01 50 08.6	+0.7
GAMB	Gambell	68.08 26	P	P	01 50 11.4	+1.2
	baz=256					
MAK	Makhachkala	68.65 311	eP	P	01 50 11.9	-2.3
MAK			e*PP	pP	01 50 46.4	+0.3
MAK			e*SP	sP	01 51 02.5	+2.3
MAK			e		01 52 47.8	
MAK			ePPP	PPP	01 54 28.6	
MAK			eS	S	01 59 03.3	-3.5
MAK			e*SS	ScS	02 00 05.6	+3.4
MAK			eSS	SS	02 03 31.7	-1.9
MAK			pmax	pmax		
	comp=Z,63nm,1.2s					
KIRV	Kirov	68.82 328	P	P	01 50 14.7	-0.2
	comp=Z,49nm,0.7s,baz=42,slow=1.4,SNR=19					
	comp=Z,49nm,0.7s					
SEKA	Sheki	68.86 309	P	P	01 50 15.9	+0.2
MNGR	Mingechevir, A	68.94 309	P	P	01 50 16.6	+0.5
UNV	Unalaska Valle	69.01 37	P	P	01 50 17.2	+1.0
	baz=264					
BELG	Belogornoye	69.08 321	P	P	01 50 16.6	-0.1
	comp=Z,75nm,0.8s,baz=348,slow=0.7,SNR=48					
	comp=Z,75nm,0.8s					
ZKTA	Zakatala	69.29 310	P	P	01 50 18.7	+0.4
GANJ	Ganja	69.52 309	P	P	01 50 19.8	+0.1
GROC	Groznyy	69.91 311	eP	P	01 50 19.8	-2.2
GROC			e		01 50 41.1	
GROC			e*PP	pP	01 50 54.8	+0.9
GROC			pmax	pmax		
	comp=Z,73nm,0.8s					
NAX	Nakhchivan	70.19 307	P	P	01 50 24.3	+0.4
GNI	Garni	70.74 308	P	P	01 50 28.8	+1.5
	comp=Z,31nm,1.1s,baz=177,slow=3.8,SNR=21					
	comp=Z,31nm,1.1s					
GNI	Garni	70.74 308	P	P	01 50 28.0	+0.7
GNI			IAmb	IAmb	01 50 35.3	
	comp=Z,41nm,0.9s					
GNI	Garni	70.74 308	⇑iP	P	01 50 28.4	+1.1
GNI			pmax	pmax		
	comp=Z,83nm,1.5s					
GNI	Garni	70.74 308	P	P	01 50 29.0	+1.7
GNI	Garni	70.74 308	P	P	01 50 29.2	+1.9
GNI	Garni	70.74 308	P	P	01 50 24.6	-2.7
GNI			pP	pP	01 50 57.6	-1.7
PRGR	Permogore	71.11 331	eP	P	01 50 26.7	-2.2
PRGR			e		01 53 07.7	
PRGR			pmax	pmax		
	comp=Z,26nm,0.8s					
ZEI	Tsey	71.30 311	eP	P	01 50 28.3	-2.4
ZEI			pmax	pmax		
	comp=Z,49nm,1.3s					
RAYN	Ar Rayn	71.34 290	P	P	01 50 31.1	0.0
RAYN	Ar Rayn	71.34 290	P	P	01 50 31.1	0.0
RAYN			pmax	pmax		
	comp=Z,136nm,0.9s					
RAYN	Ar Rayn	71.34 290	P	P	01 50 32.2	+1.1
RAYN	Ar Rayn	71.34 290	iP	P	01 50 31.8	+0.7
	SNR=264					
RAYN	Ar Rayn	71.34 290	P	P	01 50 29.3	-1.8
RAYN			pP	pP	01 51 03.0	+0.2
RAYN			sP	sP	01 51 17.2	+0.5
ONI	Oni	71.64 311	IAmb	IAmb	01 50 35.8	
	comp=Z,33nm,1.0s					
KBZ	Khabaz	72.01 312	P	P	01 50 35.3	+0.7
	comp=Z,29nm,1.0s,baz=172,slow=5.6,SNR=45					
KBZ			LR	LR	02 27 09.3	
	comp=Z,88nm,19.4s,baz=88,slow=40					
	comp=Z,29nm,1.0s					
KBZ	Khabaz	72.01 312	⇑iP	P	01 50 34.6	0.0
KBZ			pmax	pmax		
	comp=Z,48nm,1.1s					
GEVA	Gevas	72.12 306	IAmb	IAmb	01 50 37.9	
	comp=Z,67nm,0.9s					
KVAR	Kislovodsk Arr	72.15 312	P	P	01 50 36.7	+1.1
	comp=Z,9.6nm,0.8s,baz=270,slow=20,SNR=6.3					
	comp=Z,9.6nm,0.8s					
KIV	Kislovodsk	72.16 312	⇑P	P	01 50 36.1	+0.4
KIV	Kislovodsk	72.16 312	P	P	01 50 35.5	-0.2
KIV			IAmb	IAmb	01 50 37.2	
	comp=Z,50nm,0.9s					
KIV	Kislovodsk	72.16 312	eP	P	01 50 35.5	-0.2
KIV			e*PP	pP	01 51 10.5	+2.7
KIV			e		01 53 12.7	
KIV			eS	S	01 59 47.6	-0.1
KIV			pmax	pmax		
	comp=Z,61nm,1.0s					
KIV			MLR	MLR		
	comp=Z,45nm,18.0s					
KIV	Kislovodsk	72.16 312	P	P	01 50 36.3	+0.6
KIV	Kislovodsk	72.16 312	iP	P	01 50 36.5	+0.8
	SNR=7.4					
AFI	Afiamalu	72.18 110	LR	LR	02 16 31.6	
	comp=Z,42nm,20.6s,baz=263,slow=31					
SHA1	Shidzhatmaz	72.19 312	⇑iP	P	01 50 35.8	-0.2
VRH	Novokhopyorsk	72.69 320	eP	P	01 50 37.9	-0.6
VRH			pmax	pmax		
	comp=Z,170nm,1.9s					
GURO	Guroymak-BITLI	72.91 306	IAmb	IAmb	01 50 43.0	
	comp=Z,83nm,1.1s					
N16K	Nishlik Lake	73.64 31	P	P	01 50 44.8	+0.8
	baz=268,SNR=5.2					
O16K	Kokwok River B	73.97 32	P	P	01 50 46.4	+0.6
	baz=269					
MARD	Mardin	74.00 305	IAmb	IAmb	01 50 48.7	
	comp=Z,54nm,0.9s					
KLMR	Klimovskoe	74.00 330	eP	P	01 50 43.8	-2.2
KLMR			e*PP	pP	01 51 15.8	-2.4
KLMR			pmax	pmax		
	comp=Z,51nm,1.0s					
KLMR	Klimovskoe	74.00 330	eP	P	01 50 43.9	-2.1
KLMR			AMP		01 50 47.5	
	comp=Z,51nm,1.0s					
KLMR			epP	pP	01 51 15.8	-2.4
VORR	Voronezh	74.26 320	eP	P	01 50 47.7	0.0
VORR			pmax	pmax		
	comp=Z,59nm,1.8s					
VSR	Storozhevoye	74.30 320	eP	P	01 50 46.3	-1.7
VSR			pmax	pmax		
	comp=Z,90nm,1.8s					
SOC	Sochi	74.33 312	eP	P	01 50 45.5	-2.8
SOC			e*PP	pP	01 51 20.0	-0.6
SOC			e*SP	sP	01 51 35.2	+0.8
SOC			e		01 53 33.2	
SOC			ePPP	PPP	01 55 19.3	
SOC			eS	S	02 00 08.9	-3.1
SOC			e*SS	sS	02 01 06.2	-0.1
SOC			eSS	SS	02 04 56.5	-3.8
SOC			eSSS	SSS	02 08 15.4	
SOC			pmax	pmax		
	comp=Z,26nm,1.0s					
LPSR	Galich'ya Gora	74.40 321	eP	P	01 50 47.4	-1.1
LPSR			pmax	pmax		
	comp=Z,40nm,0.7s					
O17K	Koliganek Bris	74.47 31	P	P	01 50 49.4	+0.6
	baz=270					
GCSA	Galena City Sc	74.61 26	P	P	01 50 50.4	+1.0
	baz=269					
P17K	Kvichak River	74.81 32	P	P	01 50 51.5	+0.8
	baz=271					
TTA	Tatalina	74.98 28	IAmb	IAmb	01 50 53.1	
	comp=Z,41nm,1.3s					
TTA	Tatalina	74.98 28	P	P	01 50 52.4	+0.6
	baz=270,SNR=5.8					
MOS	Moscow	75.06 324	eP	P	01 50 49.9	-2.3
MOS			e*PP	pP	01 51 20.6	-3.9
MOS			e		01 53 41.2	
MOS			ePPP	PPP	01 55 25.2	
MOS			pmax	pmax		
	comp=Z,42nm,0.8s					
N18K	Kilae Creek	75.07 30	P	P	01 50 53.1	+0.8
	baz=271					
Q17K	Contact Creek	75.12 33	P	P	01 50 53.2	+0.5
	baz=272					
L19K	White Mountain	75.53 29	IAmb	IAmb	01 50 57.2	
	comp=Z,50nm,1.2s					
L19K	White Mountain	75.53 29	P	P	01 50 55.9	+1.0
	baz=272,SNR=9.1					
OBN	Obninsk	75.69 324	P	P	01 50 54.7	-1.1
	comp=Z,4.2nm,0.7s,baz=344,slow=7.1,SNR=8.1					
OBN	Obninsk	75.69 324c	iP	P	01 50 54.9	-0.9
OBN			e		01 51 08.3	
OBN			i		01 51 23.6	
OBN			e		01 53 47.0	
OBN			ePPP	PPP	01 55 33.7	
OBN			pmax	pmax		
	comp=Z,31nm,0.9s					
OBN			MLR	MLR		
	comp=Z,54nm,18.0s					
ATD	Arta Tunnel	75.75 279	P	P	01 50 58.7	+1.7
	comp=Z,41nm,0.9s,baz=63,slow=3.1,SNR=17					
	comp=Z,41nm,0.9s					
ATD	Arta Tunnel	75.75 279	P	P	01 50 57.5	+0.5
ATD			IAmb	IAmb	01 50 59.9	
	comp=Z,41nm,0.8s					
N19K	Bonanza Creek	75.75 30	IAmb	IAmb	01 50 58.5	
	comp=Z,77nm,1.3s					
N19K	Bonanza Creek	75.75 30	P	P	01 50 56.7	+0.5
	baz=272					
M19K	Big River Lodg	75.76 29	IAmb	IAmb	01 50 58.7	
	comp=Z,78nm,1.6s					
M19K	Big River Lodg	75.76 29	P	P	01 50 56.9	+0.7
	baz=272					
J20K	Nowinta River	75.80 27	P	P	01 50 56.1	-0.1
J20K			IAmb	IAmb	01 50 58.8	
	comp=Z,79nm,1.6s					
J20K	Nowinta River	75.80 27	P	P	01 50 57.5	+1.2
	baz=272,SNR=12					
K20K	Telida	75.86 28	IAmb	IAmb	01 50 59.3	
	comp=Z,72nm,1.4s					
K20K	Telida	75.86 28	P	P	01 50 57.8	+1.1
	baz=272,SNR=11					
O19K	Port Alsworth	75.86 31	P	P	01 50 57.0	+0.4
	baz=272					
ANN	Anapa	75.87 313	eP	P	01 50 54.3	-2.8
ANN			e		01 51 06.2	
ANN			e*PP	pP	01 51 29.5	+0.1
ANN			eS	S	02 00 25.7	-3.3
ANN			pmax	pmax		
	comp=Z,76nm,0.9s					
IMAR	Indian Mountai	75.92 25	P	P	01 50 56.9	0.0
L20K	Farewell, AK	75.97 29	P	P	01 50 58.6	+1.2
	baz=272					
G21K	Allakaket	76.00 24	P	P	01 50 58.2	+0.8
	baz=272,SNR=23					
H21K	Melozitna Rive	76.31 25	IAmb	IAmb	01 51 01.6	
	comp=Z,58nm,1.2s					
H21K	Melozitna Rive	76.31 25	P	P	01 51 00.2	+0.9
	baz=272,SNR=19					
M20K	Styx River	76.35 29	IAmb	IAmb	01 51 01.9	
	comp=Z,46nm,1.1s					
M20K	Styx River	76.35 29	P	P	01 51 00.2	+0.6
	baz=273					
F22K	John River	76.48 23	P	P	01 51 00.9	+0.8
	baz=272					
APA	Apatity	76.57 337	⇓iP	P	01 50 58.0	-2.6
APA			i *PP	PcP	01 51 15.2	+3.6
APA			pmax	pmax		
	comp=Z,13nm,0.8s					
E22K	Anaktuvuk Pass	76.59 23	P	P	01 51 01.4	+0.6
	baz=273					
CHUM	Lake Minchumin	76.61 27	P	P	01 51 01.5	+0.6
	baz=273					
I21K	Tanana	76.68 26	IAmb	IAmb	01 51 03.7	
	comp=Z,51nm,1.2s					
I21K	Tanana	76.68 26	P	P	01 51 02.1	+0.8
	baz=273,SNR=6.7					
PPLA	Purkeypile	76.73 28	P	P	01 51 02.5	+0.7
	baz=274					
CAST	Castle Rocks	76.75 27	IAmb	IAmb	01 51 03.6	
	comp=Z,55nm,1.0s					
CAST	Castle Rocks	76.75 27	P	P	01 51 02.2	+0.4
	baz=274,SNR=22					
G22K	Bettles	76.78 24	P	P	01 51 02.2	+0.5
	baz=273					
N20K	Mount Spurr	76.84 30	P	P	01 51 02.3	0.0
	baz=274					
SPCR	Spurr Chakacha	76.84 30	P	P	01 51 02.5	+0.1
	baz=274					
H22K	Ishtalitna Cre	76.89 25	P	P	01 51 03.6	+1.1
	baz=274					
KDAK	Kodiak Island	76.91 33	LR	LR	02 24 51.9	
	comp=Z,40nm,20.4s,baz=11,slow=36					
C23K	Itkillik River	76.93 21	P	P	01 51 03.0	+0.5
	baz=273					
D23K	Nanushuk River	76.96 22	P	P	01 51 03.6	+0.8
	baz=274,SNR=5.5					
SKT	Skwentna	77.10 29	P	P	01 51 03.1	-0.6
	baz=274,SNR=5.2					
BPAW	Bear Paw Mtn.	77.18 27	IAmb	IAmb	01 51 06.0	
	comp=Z,52nm,1.0s					
BPAW	Bear Paw Mtn.	77.18 27	P	P	01 51 04.7	+0.5
	baz=274,SNR=14					
MLY	Manley	77.22 26	P	P	01 51 04.7	+0.4
MLY	Manley	77.22 26	P	P	01 51 05.0	+0.6
	baz=274,SNR=16					
KTH	Kantishna Hill	77.26 27	IAmb	IAmb	01 51 37.8	
	comp=Z,67nm,1.8s					
COLD	Coldfoot	77.26 24	P	P	01 51 05.5	+1.0
	baz=274					
G23K	Bananza Creek	77.38 24	P	P	01 51 05.9	+0.7
	baz=275					
TOLK	Toolik Lake Re	77.39 22	P	P	01 51 05.8	+0.5
	baz=275					
E23K	Chandalar	77.42 23	P	P	01 51 06.3	+0.9
	baz=275,SNR=7.8					
SUA	Susitna One	77.52 29	P	P	01 51 06.0	-0.1
	baz=275					
TRF	Thorofare Moun	77.55 27	P	P	01 51 06.3	-0.1
	baz=275					
C24K	Franklin Bluff	77.60 21	P	P	01 51 06.6	+0.2
	baz=275					
D24K	Happy Valley	77.61 21	P	P	01 51 06.7	+0.3
	baz=275					
H23K	Yukon River	77.65 25	IAmb	IAmb	01 51 09.2	
	comp=Z,50nm,1.2s					
H23K	Yukon River	77.65 25	P	P	01 51 07.9	+1.2
	baz=275,SNR=14					
CUT	Chulitna	77.66 28	P	P	01 51 06.5	-0.2
	baz=275					
BRSE	Bradley Lake S	77.69 31	P	P	01 51 06.8	-0.3
	baz=276					
BNN	Bunyan	77.70 307	P	P	01 51 07.0	-0.7
ASF	Jabal al Asfar	77.77 300	P	P	01 51 09.8	+1.6
	comp=Z,41nm,0.9s,baz=103,slow=2.1,SNR=74					
ASF			pP	pP	01 51 39.5	-1.2
	comp=Z,7.1nm,0.9s,baz=148,slow=5.7,SNR=2.2					
	comp=Z,41nm,0.9s					
M22K	Willow	77.79 29	IAmb	IAmb	01 51 08.7	
	comp=Z,94nm,1.1s					
M22K	Willow	77.79 29	P	P	01 51 06.9	-0.6
	baz=276					
I23K	Minto, Yukon-K	77.79 26	P	P	01 51 07.6	+0.1
	baz=276,SNR=9.0					
E24K	Your Creek	77.84 23	P	P	01 51 08.1	+0.3
	baz=276					
NEA2	Nenana	77.97 26	P	P	01 51 08.8	+0.3
	baz=276,SNR=10					
MCK	McKinley	78.12 27	IAmb	IAmb	01 51 10.4	
	comp=Z,49nm,1.0s					
MCK	McKinley	78.12 27	P	P	01 51 09.4	0.0
	baz=276,SNR=17					
F24K	Squaw Lake	78.13 23	P	P	01 51 09.7	+0.4
	baz=276,SNR=9.7					
SIM	Simferopol'	78.20 314	eP	P	01 51 09.5	-0.6
SIM			e		01 54 05.2	
SIM			pmax	pmax		
	comp=Z,98nm,1.4s					
PMR	Palmer	78.28 29	P	P	01 51 09.7	-0.5
	baz=277					
SEW	Seward	78.29 31	P	P	01 51 11.3	+1.0
	baz=277					
H24K	Noodor Dome	78.33 25	IAmb	IAmb	01 51 12.7	
	comp=Z,41nm,1.3s					
H24K	Noodor Dome	78.33 25	P	P	01 51 11.0	+0.5
	baz=277,SNR=10					
G24K	Hadweenzic Riv	78.39 24	P	P	01 51 11.6	+0.8
	baz=277,SNR=12					
WAT1	Susitna Watana	78.40 28	P	P	01 51 10.4	-0.5
	baz=277					
WRH	Wood River Hil	78.41 26	IAmb	IAmb	01 51 12.9	
	comp=Z,77nm,1.8s					
TCOL	CIGO, UAF Yank	78.45 26	P	P	01 51 10.9	-0.2
	baz=277					
COLA	College	78.46 26	P	P	01 51 09.9	-1.2
COLA	College	78.46 26	P	P	01 51 09.9	-1.2
COLA			pmax	pmax		
	comp=Z,101nm,0.3s					
COLA	College	78.46 26	P	P	01 51 10.9	-0.2
	baz=277					
D25K	Kavik River	78.46 21	P	P	01 51 11.1	-0.1
	baz=278					
CCB	Clear Creek Bu	78.50 26	IAmb	IAmb	01 51 13.2	
	comp=Z,73nm,2.0s					
POKR	Poker Plat Res	78.60 26	P	P	01 51 11.5	-0.5
	baz=277					
KNK	Knik Glacier	78.62 29	P	P	01 51 12.0	-0.2
	baz=277					
SML	Sawmill	78.63 29	IAmb	IAmb	01 51 13.4	
	comp=Z,57nm,1.1s					
SML	Sawmill	78.63 29	P	P	01 51 11.9	-0.3
	baz=277,SNR=5.4					
PWL	Port Wells	78.75 30	IAmb	IAmb	01 51 13.9	
	comp=Z,51nm,1.0s					
PWL	Port Wells	78.75 30	P	P	01 51 12.3	-0.6
	baz=277					
WAT6	Susitna Watana	78.80 28	P	P	01 51 13.0	-0.3
	baz=278,SNR=11					
ILAR	Eielson Array	78.88 26	P	P	01 51 12.7	-0.8
	comp=Z,14nm,1.3s,baz=253,slow=4.0,SNR=13					
ILAR			PP	PP	01 54 16.3	+2.8
	comp=Z,3.1nm,1.0s,baz=277,slow=7.4,SNR=6.8					
ILAR			LR	LR	02 27 36.5	
	comp=Z,26nm,19.7s,baz=248,slow=37					
	comp=Z,14nm,1.3s					
MMAI	Mount Meron Ar	78.89 301	P	P	01 51 15.9	+1.6
	comp=Z,18nm,0.9s,baz=90,slow=9.2,SNR=44					
	comp=Z,18nm,0.9s					
DHY	Denali Highway	78.90 28	IAmb	IAmb	01 51 15.2	
	comp=Z,61nm,1.8s					
DHY	Denali Highway	78.90 28	P	P	01 51 13.2	-0.6
	baz=278					
HDA	Harding Lake	78.90 26	IAmb	IAmb	01 52 26.6	
	comp=Z,20nm,0.6s					
HDA	Harding Lake	78.90 26	P	P	01 51 12.6	-1.0
	baz=278,SNR=7.0					
M23K	Glacier View	78.92 29	P	P	01 51 13.4	-0.4
	baz=278					
G25K	Bearman Lake	78.92 24	P	P	01 51 14.2	+0.6
	baz=278,SNR=6.5					
E25K	Arctic Village	78.92 22	P	P	01 51 13.9	+0.2
	baz=278					
F25K	Christian Rive	78.97 23	P	P	01 51 14.8	+0.7
	baz=278,SNR=13					
SCM	Sheep Creek Mo	79.10 29	IAmb	IAmb	01 52 34.9	
	comp=Z,79nm,1.5s					
SCM	Sheep Creek Mo	79.10 29	P	P	01 51 14.9	+0.1
	baz=278					
H25K	Birch Creek	79.10 24	P	P	01 51 15.5	+0.8
	baz=279,SNR=8.6					
ARA0	ARCESS Array S	79.25 339	eP	P	01 51 15.7	+0.3
ARCES	ARCESS Array B	79.25 339	P	P	01 51 15.3	-0.1
	comp=Z,15nm,0.8s,baz=79,slow=6.6,SNR=17					
ARCES			pP	pP	01 51 46.1	-1.9
	comp=Z,3.7nm,0.6s,baz=76,slow=6.4,SNR=2.1					
ARCES			LR	LR	02 32 24.9	
	comp=Z,66nm,18.3s,baz=92,slow=40					
	comp=Z,15nm,0.8s					
ARCES	ARCESS Array B	79.25 339	IAmb	IAmb	01 51 57.4	
	comp=Z,48nm,1.4s					
BR131	Keskin Array S	79.27 308	P	P	01 51 15.5	-0.8
BR131	Keskin Array S	79.27 308	P	P	01 51 15.5	-0.8
BR131			pmax	pmax		
	comp=Z,16nm,1.1s					
BRTR	Keskin Array B	79.27 308	P	P	01 51 16.1	-0.2
	comp=Z,5.0nm,0.9s,baz=118,slow=5.0,SNR=27					
BRTR			PP	PP	01 54 15.3	-2.3
	comp=Z,1.4nm,1.0s,baz=111,slow=7.9,SNR=3.1					
	comp=Z,5.0nm,0.9s					
ABPO	Ambohimpanom	79.29 247	P	P	01 51 17.6	+0.9
ABPO			IAmb	IAmb	01 51 19.1	
	comp=Z,41nm,1.1s					
ABPO	Ambohimpanom	79.29 247	P	P	01 51 17.6	+0.9
ABPO			pmax	pmax		
	comp=Z,41nm,1.2s					
P23K	Montague Islan	79.33 31	P	P	01 51 16.3	+0.4
	baz=278					
PRP	Porcupine Dome	79.34 25	P	P	01 51 16.1	0.0
	baz=279,SNR=6.8					
C27K	Jago River	79.34 21	P	P	01 51 16.8	+0.9
	baz=280					
GLI	Glacier Island	79.35 30	P	P	01 51 16.4	+0.3
	baz=278					
BMAR	Burnt Mountain	79.40 23	P	P	01 51 17.0	+0.7
K24K	Donnelly Dome	79.50 27	P	P	01 51 18.0	+1.1
	baz=279,SNR=6.2					
F26K	Sheenjek River	79.52 23	P	P	01 51 17.7	+0.8
	baz=280,SNR=8.4					
J25K	Salcha River,	79.55 26	P	P	01 51 17.4	+0.2
	baz=279					
SPITS	Spitsbergen Ar	79.75 348	LR	LR	02 31 35.7	
	comp=Z,94nm,18.1s,baz=34,slow=39					
PAX	Paxson	79.78 28	IAmb	IAmb	01 51 20.1	
	comp=Z,91nm,1.9s					
PAX	Paxson	79.78 28	P	P	01 51 18.3	-0.2
	baz=280,SNR=7.6					
G26K	Porcupine Rive	79.79 23	P	P	01 51 18.7	+0.3
	baz=280,SNR=12					
EIL	Elat	79.81 298	P	P	01 51 20.4	+1.2
	comp=Z,101nm,1.0s,baz=22,slow=3.2,SNR=38					
EIL			LR	LR	02 32 54.8	
	comp=Z,63nm,18.1s,baz=304,slow=40					
	comp=Z,101nm,1.0s					
ANTO	Ankara	79.89 309	P	P	01 51 19.6	0.0
ANTO			IAmb	IAmb	01 51 20.9	
	comp=Z,74nm,1.6s					
ANTO	Ankara	79.89 309	P	P	01 51 19.6	0.0
ANTO			pmax	pmax		
	comp=Z,75nm,1.6s					
RIDG	Independent Ri	79.92 27	P	P	01 51 18.7	-0.5
RIDG			IAmb	IAmb	01 51 20.9	
	comp=Z,122nm,1.6s					
RIDG	Independent Ri	79.92 27	P	P	01 51 18.9	-0.3
	baz=280,SNR=6.2					
CASY	Casey	79.95 184	P	P	01 51 17.0	-2.0
HARP	HAARP	80.02 28	P	P	01 51 19.5	-0.2
	baz=280					
EYAK	Cordova Ski Ar	80.05 30	P	P	01 51 20.2	+0.4
	baz=280					
SCRK	Sand Creek	80.25 26	IAmb	IAmb	01 51 22.4	
	comp=Z,48nm,1.6s					
SCRK	Sand Creek	80.25 26	P	P	01 51 21.4	+0.3
	baz=281,SNR=7.2					
CSS	Mathiatis	80.28 304	IAmb	IAmb	01 51 23.6	
	comp=Z,92nm,1.2s					
J26L	Joseph Creek	80.34 26	P	P	01 51 21.4	-0.1
	baz=281					
I26K	Coal Creek Min	80.35 25	P	P	01 51 21.3	-0.1
	baz=281					
E27K	Coleen River	80.37 22	P	P	01 51 21.9	+0.4
	baz=282,SNR=9.5					
N25K	Chitina, Valde	80.42 29	P	P	01 51 22.5	+0.5
	baz=280					
FINES	FINESS Array B	80.44 331	P	P	01 51 21.6	-0.4
	comp=Z,10nm,1.0s,baz=63,slow=5.1,SNR=18					
FINES			pP	pP	01 51 53.2	-1.4
	comp=Z,3.1nm,0.7s,baz=93,slow=7.6,SNR=2.4					
FINES			LR	LR	02 27 43.1	
	comp=Z,62nm,20.9s,baz=80,slow=36					
	comp=Z,10nm,1.0s					
VOI	Vohitsoka	80.58 245	P	P	01 51 23.4	-0.2
VOI			IAmb	IAmb	01 51 27.9	
	comp=Z,38nm,1.1s					
VOI	Vohitsoka	80.58 245	P	P	01 51 24.9	+1.3
VOI	Vohitsoka	80.58 245	P	P	01 51 24.8	+1.2
AKASG	Malin Array Be	80.60 320	P	P	01 51 21.9	-1.1
	comp=Z,4.9nm,0.8s,baz=66,slow=5.8,SNR=20					
AKASG			pP	pP	01 51 53.5	-2.1
	comp=Z,1.1nm,0.5s,baz=66,slow=5.1,SNR=1.9					
AKASG			PP	PP	01 54 30.6	+2.5
	comp=Z,4.0nm,1.0s,baz=68,slow=8.5,SNR=5.2					
AKASG			LR	LR	02 29 42.0	
	comp=Z,65nm,19.4s,baz=59,slow=37					
	comp=Z,4.9nm,0.8s					
G27K	Doyon Strip	80.64 23	P	P	01 51 23.6	+0.6
	baz=282,SNR=14					
VSU	Vasula	80.66 328	P	P	01 51 22.9	-0.3
VSU	Vasula	80.66 328	eP	P	01 51 23.1	0.0
L26K	Log Cabin Wild	80.72 27	P	P	01 51 24.0	+0.6
	baz=281					
MNK	Minsk	80.75 324	iP	P	01 51 23.4	-0.3
MNK			i *PP	pP	01 51 58.6	+2.2
MNK			i		01 54 29.3	
MNK			iPPP	PPP	01 56 20.2	
MNK			iS	S	02 01 20.5	-0.2
MNK			i *SS	sS	02 02 22.0	+5.9
MNK			iSS	SS	02 06 38.3	+2.0
MNK			iSSS	SSS	02 10 05.9	
MNK			pmax	pmax		

comp=N,22nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=Z,21nm,0.9s
MNK MLR MLR
comp=Z,91nm,19.0s
MNK MLR MLR
comp=E,55nm,22.0s
MNK MLR MLR
comp=N,429nm,26.0s
MNK Minsk 80.75 324 *i* P **P 01 51 23.4 -0.3**
comp=E,3.0nm,0.9s
MNK *i* P **P 01 51 23.4 -0.3**
comp=N,22nm,0.9s
MNK *i* P **P 01 51 23.4 -0.3**
comp=Z,21nm,0.9s,baz=80
MNK *i* pP **pP 01 51 58.6 +2.2**
MNK *i* PP **PP 01 54 29.4 +0.2**
MNK *i* PPP PPP 01 56 20.3
MNK *i* S **S 02 01 20.6 -0.2**
MNK *i* sS **sS 02 02 22.0 +5.9**
MNK *i* SS **SS 02 06 38.4 +2.0**
MNK *i* SSS SSS 02 10 06.0
MNK *i* LRM MLR 02 29 30.6
comp=Z,91nm,19.0s
MNK *i* LRM MLR 02 30 09.3
comp=E,55nm,22.3s
MNK *i* LRM MLR 02 30 16.5
comp=N,429nm,25.6s
H27K Steamboat Moun 80.82 24 P **P 01 51 24.6 +0.7**
baz=282,SNR=14
I27K Kandik River 80.92 25 P **P 01 51 25.1 +0.6**
baz=282,SNR=18
JETT Jettan, Norway 80.99 340 *e*P **P 01 51 25.1 +0.3**
M26K Nabesna, AK 81.00 28 IAmb IAmb 01 51 27.6
comp=Z,50nm,1.6s
M26K Nabesna, AK 81.00 28 P **P 01 51 25.5 +0.5**
baz=282,SNR=6.4
K27K Chicken 81.07 26 P **P 01 51 26.2 +1.0**
baz=282
MCARA McCarthy VSAT 81.20 29 P **P 01 51 26.7 +0.7**
baz=282
EGAK Eagle 81.29 25 P **P 01 51 26.3 -0.1**
baz=283,SNR=10.0
NACGM Naroch 81.30 324⇓*e*P **P 01 51 26.6 0.0**
baz=78
L27K Beaver Creek, 81.39 27 P **P 01 51 27.6 +0.6**
baz=283,SNR=11
MEF Metsahovi 81.49 330 *e*P **P 01 51 27.0 -0.5**
M27K Edge Creek, AK 81.52 28 P **P 01 51 28.2 +0.4**
baz=283
IIGN Ignalina 81.53 325 *e*P **P 01 51 28.5 +0.7**
ISAL Salakas 81.54 325 *e*P **P 01 51 28.5 +0.6**
MILM Milestii Mici 81.54 316 ⇓P **P 01 51 27.1 -1.0**
MILM Milestii Mici 81.54 316 P **P 01 51 27.1 -1.0**
TLCR 81.87 314 ⇑P **P 01 51 29.8 -0.1**
TLCR 81.87 314 P **P 01 51 29.7 -0.1**
BVCY Beaver Creek 81.97 28 P **P 01 51 30.4 +0.3**
baz=284
MESA MESA 81.98 30 P **P 01 51 30.7 +0.3**
baz=283
CTG Chitna Glacier 82.09 29 P **P 01 51 31.7 +0.8**
baz=283,SNR=10
CTGM Chitina Glacie 82.09 29 P **P 01 51 31.7 +0.8**
CTGM IAmb IAmb 01 51 33.2
comp=Z,50nm,1.0s
DAWY Dawson 82.21 26 P **P 01 51 31.8 +0.5**
baz=285,SNR=9.7
VLDR Vladesti 82.25 315 ⇓P **P 01 51 32.2 +0.4**
YUK3 Moose Creek 82.31 28 P **P 01 51 32.6 +0.5**
baz=284,SNR=5.7
I29M Ogilvie Camp, 82.32 25 P **P 01 51 32.2 +0.4**
baz=286,SNR=13
CFR Carcaliu 82.34 315 ⇑P **P 01 51 31.5 -0.8**
CFR Carcaliu 82.34 315 P **P 01 51 31.4 -0.8**
RAF Rauma 82.57 331 *e*P **P 01 51 31.1 -2.0**
J29M Klondike Camp 82.60 25 IAmb IAmb 01 51 35.8
comp=Z,43nm,0.9s
J29M Klondike Camp 82.60 25 P **P 01 51 34.5 +1.1**
baz=286
PSN Preselentsi 82.60 313 *i* P **P 01 51 37.2 +3.5**
EPYK Eagle Plains 82.66 23 IAmb IAmb 01 51 34.8
comp=Z,31nm,0.9s
EPYK Eagle Plains 82.66 23 P **P 01 51 33.2 -0.5**
baz=287,SNR=10
G30M tAoh Zraii Nji 82.67 23 P **P 01 51 34.0 +0.4**
baz=287
O28M Mount Upton 82.68 29 P **P 01 51 34.7 +0.5**
baz=284
YUK8 Steele Glacier 82.75 29 P **P 01 51 35.3 +0.9**
baz=285,SNR=5.1
PABE Paberze 82.75 325 *e*P **P 01 51 33.9 -0.3**
PINM Pinnacle 82.82 30 P **P 01 51 35.3 +0.7**
baz=284
L29M L29M 83.01 27 P **P 01 51 36.3 +0.9**
baz=286,SNR=13
M29M Somme Creek 83.04 27 P **P 01 51 36.3 +0.6**
baz=286,SNR=12
K29M Barlow Dome 83.06 26 P **P 01 51 36.5 +0.7**
baz=286,SNR=9.3
TESR Tescani 83.08 316 ⇑P **P 01 51 35.2 -0.9**
VRI Vrincioaia 83.17 315 ⇑P **P 01 51 35.6 -1.1**
VRI Vrincioaia 83.17 315 P **P 01 51 35.5 -1.1**
PLOR Plostina 83.22 315 ⇑P **P 01 51 35.9 -1.0**
PLOR Plostina 83.22 315 P **P 01 51 35.9 -1.0**
INK Inuvik 83.23 21 P **P 01 51 36.8 +0.3**
comp=Z,20nm,1.0s,baz=277,slow=5.1,SNR=12
INK LR LR 02 34 27.9
comp=Z,27nm,18.1s,baz=238,slow=40
comp=Z,20nm,1.0s
INK Inuvik 83.23 21 IAmb IAmb 01 51 37.5
comp=Z,28nm,1.0s
INK Inuvik 83.23 21 P **P 01 51 36.4 0.0**
baz=290,SNR=13
STEI Steigen 83.27 338 *e*P **P 01 51 36.1 -0.5**
BIZ Bicaz 83.36 317 ⇑P **P 01 51 37.3 -0.2**
FAUS Fauske 83.43 338 *e*P **P 01 51 36.3 -1.1**
KIBK Kibwezi 83.44 266 IAmb IAmb 01 51 41.9
comp=Z,51nm,1.1s
KIBK Kibwezi 83.44 266 P **P 01 51 40.7 +2.0**
SNR=12
F31M Tsiigehtchic 83.44 22 P **P 01 51 37.6 +0.1**
baz=289,SNR=13
YUK6 Outpost Mounta 83.50 29 P **P 01 51 39.4 +1.1**
baz=286
COVR Voineasa-Covas 83.53 315 ⇑P **P 01 51 37.4 -1.1**
O29M Mount Kennedy 83.58 29 P **P 01 51 39.5 +1.0**
baz=286
AAL Aland 83.63 330 *e*P **P 01 51 37.7 -0.9**
PBUR Paburge 83.75 326 *e*P **P 01 51 39.3 0.0**
MLR Muntele Rosu 83.78 315 ⇑P **P 01 51 39.6 -0.3**
MLR Muntele Rosu 83.78 315 P **P 01 51 40.6 +0.7**
comp=Z,16nm,0.8s,baz=47,slow=1.8,SNR=22
comp=Z,16nm,0.8s
MLR Muntele Rosu 83.78 315 IAmb IAmb 01 51 41.2
comp=Z,28nm,0.9s
SECR 83.80 315 ⇑P **P 01 51 40.3 +0.5**
MAYO Mayo, Yukon 83.83 26 P **P 01 51 40.1 +0.5**
baz=288
KMBO Kilima Mbogo 83.92 267 P **P 01 51 43.4 +2.0**
comp=Z,1.0nm,1.0s,baz=51,slow=23,SNR=21
KMBO Kilima Mbogo 83.92 267 P **P 01 51 43.1 +1.8**
KMBO IAmb IAmb 01 51 44.6
comp=Z,51nm,1.1s
KMBO Kilima Mbogo 83.92 267 P **P 01 51 43.4 +2.0**
KMBO Kilima Mbogo 83.92 267 *i* P **P 01 51 43.4 +2.0**
SNR=41
HYT Haines Junctio 83.94 29 P **P 01 51 41.3 +0.9**
HYT IAmb IAmb 01 51 42.8
comp=Z,35nm,1.1s
HYT Haines Junctio 83.94 29 P **P 01 51 41.5 +1.1**
baz=287,SNR=10.0
N30M Aishikik Lake 83.94 28 P **P 01 51 41.7 +1.4**
baz=287,SNR=12
LVV L'vov 84.05 320 *e*P **P 01 51 40.0 -1.0**
SGRR Singureni 84.05 314 ⇑P **P 01 51 41.4 +0.4**
DOPR Dopca 84.06 316 ⇑P **P 01 51 41.2 0.0**
MOR8 Moi Rana 84.16 337 *e*P **P 01 51 39.8 -1.4**
P29M Windy Craggy 84.17 30 IAmb IAmb 01 51 44.0
comp=Z,58nm,1.1s
P29M Windy Craggy 84.17 30 P **P 01 51 42.6 +1.2**
baz=287,SNR=7.3
P30M Million Dollar 84.40 29 P **P 01 51 43.6 +0.9**
baz=287
VOIR 84.41 315 ⇑P **P 01 51 42.1 -1.0**
VOIR 84.41 315 P **P 01 51 42.0 -1.0**
ARCR ARCALIA 84.49 317 ⇑P **P 01 51 43.9 +0.6**
N31M Braeburn, Yuko 84.53 28 IAmb IAmb 01 51 45.7
comp=Z,50nm,1.1s
N31M Braeburn, Yuko 84.53 28 P **P 01 51 44.4 +1.1**
baz=288,SNR=10
O30N Mendenhall 84.61 29 P **P 01 51 44.6 +0.9**
baz=288,SNR=12
HUMR Humele 84.67 314 ⇑P **P 01 51 43.2 -1.0**
LODK Lodwar 84.71 272 IAmb IAmb 01 51 48.4
comp=Z,34nm,1.2s
LODK Lodwar 84.71 272 P **P 01 51 47.3 +2.2**
SNR=9.6
PVL Pavlikeni 84.73 313 *i* P **P 01 51 44.7 +0.2**
DIM Dimitrovgrad 84.86 312 *i* P **P 01 51 45.2 0.0**
UPP Uppsala 84.86 330 *e*P **P 01 51 43.6 -1.2**
PLBC Pleasant Camp 84.89 30 P **P 01 51 45.8 +0.8**
baz=288
BMR Baia Mare 84.91 318 ⇓P **P 01 51 45.9 +0.5**
BMR Baia Mare 84.91 318 P **P 01 51 45.9 +0.5**
M31M Drury Creek, Y 84.93 27 IAmb IAmb 01 51 47.0
comp=Z,26nm,1.0s
M31M Drury Creek, Y 84.93 27 P **P 01 51 45.8 +0.6**
baz=289,SNR=14
KDZ Kurdzhali 85.04 311 *i* P **P 01 51 45.9 -0.3**
RDO Rodhopi 85.07 311 IAmb IAmb 01 51 46.7
comp=Z,22nm,0.8s
CJR Cluj-Napoca 85.08 317 ⇑P **P 01 51 46.8 +0.5**
CJR Cluj-Napoca 85.08 317 P **P 01 51 46.8 +0.5**
CBBR Cluj-Babes-Bol 85.10 317 ⇑P **P 01 51 45.7 -0.6**
VLAD Vladila 85.20 314 ⇓P **P 01 51 46.8 -0.1**
WHY Whitehorse 85.21 29 IAmb IAmb 01 51 49.1
comp=Z,52nm,1.1s
WHY Whitehorse 85.21 29 P **P 01 51 47.3 +0.6**
baz=289,SNR=15
LOT Lotru 85.28 315 ⇑P **P 01 51 47.2 -0.2**
FARO Faro, Yukon 85.38 27 IAmb IAmb 01 51 49.5
comp=Z,68nm,1.0s
FARO Faro, Yukon 85.38 27 P **P 01 51 48.1 +0.6**
baz=290,SNR=37
KOLS Kolonicke sedl 85.38 319 *e*P **P 01 51 48.2 +0.5**
KOLS pmax pmax
comp=Z,12nm,0.9s
SKAG Skagway 85.39 30 IAmb IAmb 01 51 50.0
comp=Z,37nm,1.1s
SKAG Skagway 85.39 30 P **P 01 51 48.4 +1.0**
baz=289,SNR=6.6
TRPA Tarpa 85.42 318 ⇓P **P 01 51 47.9 +0.1**
TRPA Tarpa 85.42 318 P **P 01 51 47.7 -0.1**
PLD Plovdiv 85.45 312 *i* P **P 01 51 46.5 -1.6**
UZH Uzhgorod 85.45 319⇑*i*P **P 01 51 47.7 -0.3**
UZH *e* 01 52 18.7
EUNU Eureka 85.49 5 IAmb IAmb 01 51 53.5
comp=Z,118nm,1.9s
RZN Rozhen 85.54 312 *i* P **P 01 51 47.5 -1.4**
DRGR 85.65 317 ⇑P **P 01 51 49.2 -0.1**
DRGR 85.65 317 P **P 01 51 49.1 -0.1**
PGB Panagyurishte 85.72 313 *i* P **P 01 51 48.8 -0.8**
DEV Deva 85.76 316 ⇑P **P 01 51 50.0 +0.3**
DEV Deva 85.76 316 P **P 01 51 49.9 +0.3**
MPEP Malo Peshtene 85.83 313 *i* P **P 01 51 50.1 +0.1**
N32M Quiet Lake 85.87 28 P **P 01 51 50.6 +0.7**
baz=290
CRVS Cervenica-Dubn 85.91 319 *e*P **P 01 51 50.7 +0.4**
CRVS pmax pmax
comp=Z,93nm,1.0s
BESE Bessie Mountai 85.91 31 IAmb IAmb 01 51 52.6
comp=Z,42nm,1.3s
C36M Paulatuk 85.95 19 P **P 01 51 48.9 -1.1**
C36M IAmb IAmb 01 51 50.9
comp=Z,42nm,0.8s
C36M Paulatuk 85.95 19 P **P 01 51 49.5 -0.6**
baz=298
GZR Gura Zlata 85.97 316 ⇑P **P 01 51 50.2 -0.7**
GZR Gura Zlata 85.97 316 P **P 01 51 50.1 -0.7**
P32M Atlin 86.12 29 P **P 01 51 51.7 +0.5**
baz=290,SNR=6.2
MMPY Sheldon Lake, 86.14 26 P **P 01 51 52.1 +0.8**
baz=292,SNR=13
PUNG Punghina 86.16 314 ⇓P **P 01 51 52.1 +0.5**
SIT Sitka 86.17 32 P **P 01 51 51.6 +0.2**
baz=289
R32K Eaglecrest 86.18 31 P **P 01 51 51.6 +0.2**
baz=290
MMB Musomiste 86.28 312 *i* P **P 01 51 50.9 -1.4**
P33M Teslin, Yukon 86.33 29 IAmb IAmb 01 51 54.3
comp=Z,30nm,1.3s
P33M Teslin, Yukon 86.33 29 P **P 01 51 52.5 +0.3**
baz=291,SNR=9.1
HERR Herculane 86.35 315 ⇑P **P 01 51 52.5 -0.1**
VTS Vitosha 86.37 313 ⇑P **P 01 51 52.7 -0.2**
VTS Vitosha 86.37 313 P **P 01 51 52.7 -0.2**
VTS Vitosha 86.37 313 *i* P **P 01 51 52.9 0.0**
S32K Killisnoo 86.42 32 P **P 01 51 53.6 +1.0**
baz=290
NIE Niedzica 86.49 320 *e*P **P 01 51 53.4 +0.2**
NIE Niedzica 86.49 320 P **P 01 51 53.7 +0.5**
SIRR Siria 86.49 317 ⇑P **P 01 51 53.2 0.0**
BLKB Belogradchik 86.51 314 ⇑P **P 01 51 53.2 -0.2**
OJC Ojcow 86.57 321 *e*P **P 01 51 51.5 -2.1**
OJC Ojcow 86.57 321 IAmb IAmb 01 51 53.0
comp=Z,36nm,0.9s
OJC Ojcow 86.57 321 P **P 01 51 52.1 -1.4**
HFS Hagfors 86.63 331 LR LR 02 34 48.2
comp=Z,87nm,19.4s,baz=78,slow=38
KECS Kecovo 86.64 319 *e*P **P 01 51 54.6 +0.7**
KKB Krupnik 86.68 312 *i* P **P 01 51 52.6 -1.6**
BZS Buzias 86.70 316 ⇑P **P 01 51 53.8 -0.5**
BZS Buzias 86.70 316 P **P 01 51 53.7 -0.5**
DAG Danmarks Havn 86.77 351 *i* P **P 01 51 52.0 -2.0**
MDVR Moldovita 86.86 315 ⇑P **P 01 51 54.4 -0.7**
TBLU Trondheim 86.93 335 *e*P **P 01 51 52.7 -2.3**
IDI Anoyia 86.97 305 P **P 01 51 54.8 -1.1**
comp=Z,16nm,0.9s,baz=68,slow=6.0,SNR=4.5
comp=Z,16nm,0.9s
Q32M Nakina River 87.04 30 P **P 01 51 56.6 +0.7**
baz=291
BOVS Bovan 87.18 314 ⇑P **P 01 51 55.5 -1.1**
PSZ Piszkesteto 87.18 319 ⇑P **P 01 51 55.9 -0.7**
PSZ Piszkesteto 87.18 319 P **P 01 51 55.9 -0.7**
PSZ Piszkesteto 87.18 319 P **P 01 51 56.3 -0.3**
VAY Valandovo 87.19 312 *i* P **P 01 51 56.0 -0.7**
STIP Stip 87.37 312 *i* P **P 01 51 55.9 -1.7**
NB2 NORSAR Subarra 87.42 333 P **P 01 51 55.6 -1.8**
comp=Z,6.3nm,0.8s,baz=67,slow=4.6
NB2 NORSAR Subarra 87.42 333 P **P 01 51 55.6 -1.8**
baz=67,slow=4.6
NOA NORSAR Array B 87.42 333 P **P 01 51 55.8 -1.7**
comp=Z,9.3nm,0.8s,baz=68,slow=4.6,SNR=42
NOA pP **pP 01 52 28.2 -2.4**
comp=Z,6.7nm,0.8s,baz=68,slow=4.6,SNR=6.5
NOA LR LR 02 34 35.0
comp=Z,62nm,20.2s,baz=65,slow=38
comp=Z,9.3nm,0.8s
R33M Jennings River 87.50 29 P **P 01 51 58.8 +0.8**
baz=292
VYHS Vyhne 87.69 319 *e*P **P 01 51 59.2 +0.2**
VYHS pmax pmax
comp=Z,142nm,2.9s
OKC Ostrava-Krasne 87.70 321 *e*P **P 01 51 58.7 -0.3**
OKC Ostrava-Krasne 87.70 321 *e*P **P 01 51 58.7 -0.3**
SKO Skopje 87.83 313 *i* P **P 01 51 59.8 0.0**
TGTN Hyland Airport 87.87 27 P **P 01 52 00.3 +0.7**
baz=295
MAUC Maruska 88.05 320 *e*P **P 01 52 00.0 -0.7**
MORC Moravsky Berou 88.09 321 ⇑P **P 01 52 00.2 -0.7**
MORC Moravsky Berou 88.09 321 P **P 01 52 00.2 -0.7**
MORC Moravsky Berou 88.09 321 *e*P **P 01 52 00.4 -0.5**
WTLY Watson Lake, Y 88.22 28 P **P 01 52 02.2 +0.9**
baz=294
SRO Srobarova 88.23 319 *e*P **P 01 52 02.9 +1.4**
SRO pmax pmax
comp=Z,20nm,1.5s
JAVC Velka Javorina 88.31 320 *e*P **P 01 52 02.2 +0.3**
DLBC Dease Lake 88.32 30 P **P 01 52 03.0 +1.2**
baz=293
KRLC Kraliky 88.46 321 *e*P **P 01 52 02.2 -0.4**
KRLC Kraliky 88.46 321 *e*P **P 01 52 02.2 -0.4**
KSP Ksiaz 88.50 322 *e*P **P 01 52 03.0 +0.3**
MORH Mrgy, Hungar 88.51 317 ⇑P **P 01 52 02.1 -0.7**
OSTC Ostas 88.64 322 *e*P **P 01 52 03.5 +0.1**
DPC Dobruska-Polom 88.65 322 *e*P **P 01 52 02.8 -0.7**
DPC Dobruska-Polom 88.65 322 *e*P **P 01 52 02.8 -0.7**
CHVC Chvalec 88.73 322 *e*P **P 01 52 03.4 -0.4**
AKN Aaknes 88.75 335 *e*P **P 01 52 03.2 -0.5**
UPC Upice 88.78 322 *e*P **P 01 52 04.7 +0.6**
UPC Upice 88.78 322 *e*P **P 01 52 04.7 +0.6**
VRAC Vranov 88.83 321 ⇑P **P 01 52 04.5 +0.1**
VRAC Vranov 88.83 321 LR LR 02 34 39.5
comp=Z,49nm,18.8s,baz=91,slow=37
VRAC Vranov 88.83 321 P **P 01 52 04.4 +0.1**
VRAC Vranov 88.83 321 *e*P **P 01 52 04.5 +0.1**
KOVH Kovagotottos 88.91 317 P **P 01 52 05.0 +0.2**
MPLH Magyarpolny 88.93 318 P **P 01 52 04.9 0.0**
JMIC Jan Mayen 88.96 345 LR LR 02 36 37.5
comp=Z,57nm,18.6s,baz=48,slow=39
KRUC Moravsky 89.04 320 *e*P **P 01 52 05.1 -0.2**
WRGLY Wrigley 89.10 24 P **P 01 52 05.5 +0.3**
baz=299
RES Resolute Bay 89.19 9 LR LR 02 32 45.4
comp=Z,36nm,21.8s,baz=356,slow=36
RES Resolute Bay 89.19 9 IAmb IAmb 01 52 06.3
comp=Z,23nm,1.0s
RUE Ruedersdorf 89.39 324 *e*P **P 01 52 07.5 +0.6**
TREC Trest 89.52 321 *e*P **P 01 52 07.9 +0.3**
TREC Trest 89.52 321 *e*P **P 01 52 07.9 +0.3**
RONA Rosalia, Austr 89.56 319 *e*P **P 01 52 09.4 +1.6**
comp=Z,10.0nm,1.5s
PVCC Panska Ves 89.64 322 *e*P **P 01 52 08.7 +0.6**
PVCC Panska Ves 89.64 322 *e*P **P 01 52 08.7 +0.6**
CONA Conrad Observa 89.75 319 *e*P **P 01 52 08.7 -0.1**
comp=Z,4.6nm,1.0s
PRU Pruhonice 89.85 322 *e*P **P 01 52 08.4 -0.6**
PRU Pruhonice 89.85 322 *e*P **P 01 52 08.4 -0.6**
BRG Berggiesshubel 89.89 323 *i* P **P 01 52 09.5 +0.2**
BRG Amp 01 52 12.3
comp=Z,14nm,1.0s
BRG *ex* x 01 52 41.2
BRG Amp 01 52 43.1
comp=Z,6.4nm,0.9s
BRG Berggiesshubel 89.89 323 *i* P **P 01 52 09.4 +0.2**
BRG *e* 01 52 41.2
BRG pmax pmax
comp=Z,14nm,1.0s
BRG pmax pmax
comp=Z,6.0nm,0.9s
MBAR Mbarara 90.13 269 LR LR 02 31 43.3
comp=Z,44nm,19.2s,baz=60,slow=35
MBAR Mbarara 90.13 269 P **P 01 52 11.6 +0.3**
MBAR IAmb IAmb 01 52 13.7
comp=Z,20nm,0.9s
MBAR Mbarara 90.13 269 P **P 01 52 11.6 +0.3**
MBAR pmax pmax
comp=Z,20nm,0.9s
MBAR Mbarara 90.13 269 P **P 01 52 12.6 +1.3**
ARSA Arzberg 90.20 319 *e*P **P 01 52 10.4 -0.4**
comp=Z,4.0nm,0.7s
BLS5 Blasjo 90.26 332 *e*P **P 01 52 09.1 -1.7**
CLL Collm 90.28 323 P **P 01 52 09.5 -1.5**
CLL Collm 90.28 323 *i* P **P 01 52 10.8 -0.2**
CLL pmax pmax
comp=Z,14nm,1.2s
CLL Collm 90.28 323 *i* P **P 01 52 10.8 -0.2**
comp=Z,14nm,1.2s
CLL *e*pP **pP 01 52 42.0 -2.3**
CKRC Cesky Krumlov 90.41 321 *e*P **P 01 52 11.4 -0.3**
SOKA Soboth 90.72 318 *e*P **P 01 52 12.9 -0.3**
comp=Z,7.3nm,0.9s
KHC Kasperske Hory 90.75 321 P **P 01 52 11.4 -1.9**
KHC Kasperske Hory 90.75 321 *e*P **P 01 52 13.1 -0.2**
KHC *e* 01 55 50.0
KHC Kasperske Hory 90.75 321 *e*P **P 01 52 13.1 -0.2**
KHC *e*PP **PP 01 55 50.0 -0.1**
GERES GERESS Array B 90.78 321 P **P 01 52 12.0 -1.5**
comp=Z,4.8nm,0.9s,baz=84,slow=4.2,SNR=17
comp=Z,4.8nm,0.9s
MOA Molln 90.79 320 *i* P **P 01 52 13.4 -0.1**
comp=Z,21nm,0.9s,SNR=9.4
NKC Novy Kostel 91.01 322 *e*P **P 01 52 14.8 +0.3**
NKC Novy Kostel 91.01 322 *e*P **P 01 52 14.8 +0.3**
OBKA Obir 91.09 318 *e*P **P 01 52 15.3 +0.3**
comp=Z,9.8nm,1.0s
BIOA Bad Ischl, Aus 91.24 320 *e*P **P 01 52 15.2 -0.4**
comp=Z,8.6nm,0.9s
CLUD Cludinico 92.18 319 IAmb IAmb 01 52 19.8
comp=Z,13nm,0.9s
ABTA Abfaltersbach 92.31 319 *e*P **P 01 52 19.2 -1.4**
comp=Z,13nm,1.0s
WTTA Wattenberg 92.66 320 *i* P **P 01 52 21.8 -0.6**
comp=Z,26nm,0.9s,SNR=10
WATA Walderalm 92.67 320 *i* P **P 01 52 21.6 -0.7**
comp=Z,18nm,0.9s,SNR=8.0
YKA Yellowknife Ar 92.91 22 P **P 01 52 23.3 +0.3**
comp=Z,12nm,0.9s,baz=307,slow=4.5,SNR=18
YKA LR LR 02 38 55.7
comp=Z,22nm,18.1s,baz=346,slow=38
comp=Z,12nm,0.9s
SQTA Sankt Quirin 92.94 320 *i* P **P 01 52 23.0 -0.6**
comp=Z,24nm,1.0s,SNR=7.7
MOTA Moosalm 92.96 320 *i* P **P 01 52 22.9 -0.8**
comp=Z,21nm,0.9s,SNR=9.6
RETA Reutte 93.11 320 *e*P **P 01 52 23.5 -0.8**
comp=Z,7.6nm,1.1s
CTI Castel Tesino 93.12 319 IAmb IAmb 01 55 03.3
comp=Z,39nm,1.9s
FETA Feichten 93.32 320 *i* P **P 01 52 25.2 -0.3**
comp=Z,20nm,1.0s,SNR=7.6
PPT Papeete 93.72 107 LR LR 02 26 37.1
comp=Z,45nm,20.3s,baz=244,slow=30
PPT2 Papeete2 93.72 107 *e*LR LR 02 22 48.9
comp=Z,300nm,34.2s
DAVA Damuels 93.74 320 *e*P **P 01 52 27.6 +0.3**
comp=Z,10nm,1.1s
FUORN Ofenpass-Fuorn 93.78 320 IAmb IAmb 01 52 29.5
comp=Z,13nm,0.9s
VNDA Vanda 93.88 172 P **P 01 52 26.0 -1.0**
comp=Z,3.1nm,0.9s,baz=296,slow=5.4,SNR=16
VNDA pP **pP 01 52 59.4 -1.1**
comp=Z,1.9nm,1.0s,baz=195,slow=2.2,SNR=3.5
VNDA PKKP **PKKPdf 02 09 28.1 -3.8**
comp=Z,0.7nm,0.8s,baz=264,slow=2.3,SNR=5.2
VNDA LR LR 02 33 45.0
comp=Z,48nm,20.9s,baz=350,slow=35
comp=Z,3.1nm,0.9s
VNDA Vanda 93.88 172 P **P 01 52 25.5 -1.5**
SALO Salr 94.02 319 IAmb IAmb 01 52 28.7
comp=Z,26nm,1.1s
BTNL Ternell 94.52 324 *d*P **P 01 52 29.8 -0.9**
BSTI Sart Tilman 94.84 325 *d*P **P 01 52 32.5 +0.5**
BCLA Clavier 95.07 325 *d*P **P 01 52 33.2 +0.1**
WAPA Wapiti River 95.07 30 IAmb IAmb 01 52 34.5
comp=Z,19nm,1.1s
TBI Tubuai 95.09 113 *e*LR LR 02 23 26.7
comp=Z,294nm,38.2s
RCHB Rochefort 95.23 324 *d*P **P 01 52 33.2 -0.7**
comp=Z,5.1nm,1.0s
RCHB *d*pP **pP 01 53 03.9 -3.4**
BMRD Maredsous 95.43 325 *d*P **P 01 52 34.3 -0.5**
comp=Z,6.0nm,1.0s
DOU Dourbes 95.62 324 *d*P **P 01 52 35.5 -0.1**
LSZ Lusaka 95.89 256 LR LR 02 36 20.5
comp=Z,45nm,18.9s,baz=140,slow=36
BRLDA Berland Lookou 96.57 30 IAmb IAmb 01 52 41.9
comp=Z,17nm,1.3s
ESK Eskdalemuir 96.86 331 *i* P **P 01 52 40.2 -1.0**
B08A Colville Reser 98.65 36 P **P 01 52 47.6 -1.8**
B08A IAmb IAmb 01 52 51.1
comp=Z,6.0nm,1.1s
H04A Detroit Lake 98.79 40 P Pdif 01 52 50.3 +0.1
H04A IAmb IAmb 01 52 51.7
comp=Z,10nm,1.4s
SFJD Kangerlussuaq 99.44 357 LR LR 02 39 32.0
comp=Z,44nm,21.3s,baz=13,slow=36
YBH Yreka Blue Hor 99.86 43 LR LR 02 29 09.5
comp=Z,52nm,21.8s,baz=284,slow=30
NEW Newport 99.94 35 P **Pdif 01 52 55.8 +0.6**
baz=303
TAOE Nuku Hiva Isla 100.83 97 *e*LR LR 02 26 05.9
comp=Z,75nm,22.9s
MSO Missoula 102.53 35 P **Pdif 01 53 07.2 +0.3**
baz=306
NVAR Mina Array Bea 104.42 44 Pdiff **Pdif 01 53 16.8 +1.3**
comp=Z,0.6nm,0.8s,baz=280,slow=4.1,SNR=5.9
NVAR PP **PKiKP 01 57 31.0 -0.3**
comp=Z,1.8nm,1.0s,baz=265,slow=6.2,SNR=4.4
NVAR PKKPbc **PKKPbc 02 09 01.8 -0.6**
comp=Z,0.5nm,0.7s,baz=141,slow=2.9,SNR=4.2
ESDC Sonseca Array 106.22 319 PP **PP 01 57 48.1 -0.1**
comp=Z,2.1nm,1.1s,baz=54,slow=7.2,SNR=4.3
PDAR Pinedale Array 107.47 36 PP **PP 01 57 54.8 -2.7**

comp=Z,1.6nm,1.0s,baz=304,slow=2.7,SNR=5.2
PDAR PKKPbc **PKKPbc** **02 08 51.5 -1.8**
comp=Z,0.4nm,0.7s,baz=156,slow=4.6,SNR=3.6
PDAR PKKP **PKKPdf** **02 09 05.8 +0.3**
comp=Z,1.7nm,0.9s,baz=117,slow=5.5,SNR=9.2
PFO Pinyon Flats O **108.16 48** P **PKiKP** **01 57 39.0 +0.8**
baz=301
TPFO Pinon Flats **108.16 48** P **PKiKP** **01 57 39.1 +0.9**
baz=301
MONP2 Monument Peak **108.55 48** P **PKiKP** **01 57 39.6 +0.5**
baz=301
O20A White River Ci **109.88 38** P **PKiKP** **01 57 41.8 +0.5**
baz=309
TROLL Troll, Antarti **111.34 197** PKiKP **PKiKP** **01 57 42.9 -0.1**
EYMN Ely **112.39 23** P **PKiKP** **01 57 46.1 +0.4**
baz=326
SNAA Sanae **113.01 197** PKiKP **PKiKP** **01 57 46.0 -0.1**
ECSD EROS Data Cent **113.59 29** P **PKiKP** **01 57 47.9 -0.2**
baz=320
TORD Torodi Ar. Bea **114.03 291** PKP PKPdf 01 57 48.6 -1.0
comp=Z,2.4nm,0.7s,baz=32,slow=1.7,SNR=18
TORD PKKPab **PKKPab** **02 08 39.4 +0.7**
comp=Z,1.0nm,1.0s,baz=249,slow=1.3,SNR=3.6
T25A Trinidad **114.10 38** P PKPdf 01 57 49.4 -0.1
baz=311
ANMO Albuquerque **114.22 41** PKP **PKiKP** **01 57 49.9 +0.1**
comp=Z,1.4nm,0.7s,baz=189,slow=1.7,SNR=6.6
ANMO Albuquerque **114.22 41** P PKPdf 01 57 49.4 -0.4
baz=309
VNA2 Neumayer--Watz **114.65 197** PKPdf **PKiKP** **01 57 49.0 -0.2**
baz=139,slow=6.3
121A Cookes Peak, D **114.81 44** P PKPdf 01 57 51.2 +0.2
baz=307
VNA1 Neumayer--Stat **115.04 197** PKPdf **PKPdf** **01 57 49.9 0.0**
VNA3 Neumayer Olymp **115.09 196** PKPdf **PKiKP** **01 57 49.8 -0.3**
CBKS Cedar Bluff **115.64 34** P **PKiKP** **01 57 51.7 -0.5**
baz=316
JFWS Jewell Farm **117.05 25** P **PKPdf** **01 57 54.3 -0.4**
baz=326
L44A Lake County Fo **118.61 24** P **PKPdf** **01 57 57.2 -0.6**
baz=328
WMOK Wichita Mounta **119.08 37** P **PKPdf** **01 57 58.2 -0.7**
baz=315
TXAR Lajitas Array **119.56 45** PKP **PKiKP** **01 58 00.5 +0.4**
comp=Z,3.4nm,0.7s,baz=264,slow=0.6,SNR=47
TXAR PKKPbc **PKKPbc** **02 08 11.7 -0.3**
comp=Z,1.3nm,1.0s,baz=145,slow=4.6,SNR=8.3
TXAR PKKP **PKKPdf** **02 08 44.2 +1.6**
comp=Z,0.7nm,1.0s,baz=101,slow=2.6,SNR=3.9
TXAR Lajitas Array **119.56 45** PKPdf **PKiKP** **01 58 00.2 +0.1**
TUL1 Leonard **119.91 34** P **PKPdf** **01 57 59.7 -0.7**
baz=318
ABTX Abilene, Hawle **120.03 39** P **PKPdf** **01 58 00.3 -0.5**
baz=313
LONY Lake Ozonia **120.47 13** P **PKPdf** **01 58 01.2 -0.1**
baz=343
CCM Cathedral Cave **120.56 29** P **PKPdf** **01 58 00.9 -0.7**
baz=323
PKME Peaks-Kenny Pk **120.77 8** P **PKPdf** **01 58 01.6 -0.2**
baz=349
O48B Farmland **121.32 23** P **PKPdf** **01 58 02.4 -0.7**
baz=330
JCT Junction City **121.38 41** PKPdf **PKPdf** **01 58 03.3 -0.2**
JCT Junction City **121.38 41** PKIKP **PKPdf** **01 58 03.3 -0.2**
JCT Junction City **121.38 41** P **PKPdf** **01 58 02.9 -0.6**
baz=312
WHTX Lake Whitney, **121.80 38** P **PKPdf** **01 58 03.7 -0.5**
baz=315
FCAR Ozark Folk Cen **121.84 31** **PKPdf** **01 58 02.9 -1.3**
P49A Miami Univ. Ec **122.12 23** P **PKPdf** **01 58 04.2 -0.4**
baz=330
MIAR Mount Ida **122.13 33** P **PKPdf** **01 58 04.5 -0.2**
baz=320
ACSO Alum Creek Sta **122.14 21** P **PKPdf** **01 58 04.4 -0.2**
baz=332
DBIC Dimbokro **122.37 287** PKP **PKPdf** **01 58 05.5 -0.2**
comp=Z,8.0nm,0.8s,baz=24,slow=1.5,SNR=8.2
DBIC PP **PP** **01 59 41.2 -2.1**
comp=Z,4.0nm,0.7s,baz=76,slow=7.8,SNR=3.8
KIC Kosan Boka **122.37 287**⇑*e*PKIKP **PKPdf** **01 58 04.8 -0.9**
comp=Z,13nm,0.7s
BINY Binghamton **122.44 15** P **PKiKP** **01 58 05.3 -0.1**
baz=341
TIC Toumodi **122.53 287**⇑*e*PKIKP **PKPdf** **01 58 05.0 -1.0**
comp=Z,17nm,0.8s
WCI Wyandotte Cave **122.61 25** P **PKPdf** **01 58 05.0 -0.6**
baz=328
LIC Lamto **122.68 287**⇑*e*PKIKP **PKPdf** **01 58 05.3 -1.0**
comp=Z,40nm,0.8s
O53A New Philadelph **122.73 20** P **PKPdf** **01 58 05.0 -0.7**
baz=334
L61B Northampton **122.94 12** P **PKPdf** **01 58 06.0 -0.1**
baz=344
P52A Corning **122.97 21** P **PKPdf** **01 58 06.1 -0.2**
baz=333
833A Chaparral WMA, **123.08 43** P **PKPdf** **01 58 06.2 -0.6**
baz=312
HRV Adam Dziewonsk **123.10 11** P **PKPdf** **01 58 06.4 +0.1**
baz=346
SSPA Standing Stone **123.40 17** PKPdf **PKPdf** **01 58 06.4 -0.6**
SSPA Standing Stone **123.40 17** P **PKPdf** **01 58 06.9 -0.1**
baz=338
WVT Waverly **123.71 28** PKPdf **PKPdf** **01 58 06.0 -1.6**
WVT Waverly **123.71 28** PKIKP **PKPdf** **01 58 06.1 -1.6**
WVT Waverly **123.71 28** P **PKPdf** **01 58 07.5 -0.2**
baz=326
PAL Palisades **124.06 13** P **PKPdf** **01 58 08.1 -0.1**
baz=343
OXF Oxford **124.29 30** P **PKPdf** **01 58 08.4 -0.5**
baz=324
TZTN Tazewell **125.17 24** P **PKPdf** **01 58 10.1 -0.4**
baz=331
BLA Blacksburg **125.74 21** P **PKPdf** **01 58 11.1 -0.5**
baz=334
LRAL Lakeview Retre **126.65 29** P **PKPdf** **01 58 12.8 -0.7**
baz=326
KMSC Kings Mountain **127.26 23** P **PKPdf** **01 58 13.9 -0.6**
baz=333
GOGA Godfrey **127.92 26** P **PKPdf** **01 58 15.8 0.0**
baz=330
PMSA Palmer Station **128.72 177** *e*P **PKPdf** **01 58 14.7 -1.6**
JTS Las Juntas de **145.21 48** **PKPbc** **01 58 46.2 -1.9**
JTS Las Juntas de **145.21 48** PKP2 **PKPbc** **01 58 46.2 -1.9**
PLCA Paso Flores **151.16 162** PKP **PKPdf** **01 58 56.7 -0.5**
comp=Z,3.7nm,1.2s,baz=173,slow=8.5,SNR=3.1
PLCA PKPbc **PKPbc** **01 59 03.4 +0.2**
comp=Z,12nm,1.1s,baz=190,slow=5.4,SNR=9.9
PLCA Paso Flores **151.16 162** PKPdf **PKPdf** **01 58 56.7 -0.5**
PLCA **PKPbc** **01 59 02.7 -0.5**
PLCA Paso Flores **151.16 162** *e*P **PKPdf** **01 58 56.4 -0.8**
SDV Santo Domingo **155.03 27** PKPdf **PKPdf** **01 59 03.0 -0.7**
SDV 01 59 11.9
SDV PKPab **PKPab** **01 59 28.0 -0.4**
SDV Santo Domingo **155.03 27** *e*P **PKPdf** **01 59 03.6 -0.2**
RCBR Riachuelo **155.74 286** PKPab **PKPab** **01 59 31.1 -0.5**
comp=Z,20nm,0.9s,baz=249,slow=3.4,SNR=2.5
OTAV Otavalo **156.58 56** *e*P **PKPdf** **01 59 05.3 -0.8**
NBAN Anadia - AL **157.16 277** *e*P **PKPdf** **01 59 05.4 -0.8**
ATAH Atahualpa **160.15 73** PKPab **PKPab** **01 59 54.0 +2.9**
comp=Z,22nm,1.0s,baz=284,slow=5.9,SNR=14
CMC01 Camacan, BA **160.79 262** *e*P **PKPdf** **01 59 09.4 -1.1**
ALF01 Guarapari-ES **160.94 246** *e*P **PKPdf** **01 59 09.5 -1.0**
GUA01 Guaratinga, BA **160.97 258** *e*P **PKPdf** **01 59 09.4 -1.2**
RIB01 Linhares ES **161.01 250** *e*P **PKPdf** **01 59 09.2 -1.4**
NAN01 Guarapari, ES **161.08 254** *e*P **PKPdf** **01 59 10.1 -0.7**
PLTB Pedras Altas **161.13 195** *e*P **PKPdf** **01 59 09.8 -0.6**
ROSB Rosrio **161.68 304** *e*P **PKPdf** **01 59 10.8 -0.7**
SJMB Sao Joao De Ma **161.89 251** *e*P **PKPdf** **01 59 11.1 -0.4**
TER01 Tubaro-SC **162.35 211** *e*P **PKPdf** **01 59 11.3 -0.4**
RODS Rosario do Sul **162.85 192** *e*P **PKPdf** **01 59 12.5 +0.3**
ALGR Alto Alegre (B **163.75 200** *e*P **PKPdf** **01 59 13.8 +0.6**
ITQB Itaqui **163.76 188** *e*P **PKPdf** **01 59 12.6 -0.4**
BOAV Boa Vista **164.12 5** *e*P **PKPdf** **01 59 13.5 -0.3**
SGCB Sto Gabriel d **164.61 31** *e*P **PKPdf** **01 59 14.2 -0.1**
ITAB Concordia **164.83 205** *e*P **PKPdf** **01 59 14.2 +0.1**
VAO Valinhos **165.01 229** *e*P **PKPdf** **01 59 15.0 +0.6**
MCPB Macapa, AP **165.09 331** *e*P **PKPdf** **01 59 14.1 -0.6**
CRSM Crissiumal (Br **165.28 199** *e*P **PKPdf** **01 59 14.8 +0.3**
JANB Januaria **165.43 262** *e*P **PKPdf** **01 59 14.3 -0.6**
CZSB Cruzeiro do Su **165.59 68** *e*P **PKPdf** **01 59 15.3 +0.2**
SDBA SAO DESIDERIO **165.96 273** *e*P **PKPdf** **01 59 14.9 -0.5**
PTGB Pitanga **166.97 210** *e*P **PKPdf** **01 59 15.6 -0.4**
CPUP Villa Florida **167.15 188** PKP **PKPdf** **01 59 15.6 -0.3**
comp=Z,2.0nm,0.9s,baz=144,slow=4.2,SNR=3.5
CPUP PKPab **PKPab** **02 00 20.2 -0.4**
comp=Z,2.9nm,0.8s,baz=178,slow=3.4,SNR=7.2

SMTB Santa Maria do **167.64 291** *e*P **PKPdf** **01 59 16.4 -0.3**
MCR1 Marechal Candi **168.07 204** *e*P **PKPdf** **01 59 17.0 +0.3**
PRPB Parauapebas **168.16 307** *e*P **PKPdf** **01 59 16.2 -0.9**
BDFB Brasilia **168.91 258** PKP **PKPdf** **01 59 17.1 -0.4**
comp=Z,6.7nm,1.1s,baz=29,slow=5.1,SNR=6.3
BDFB PKPab **PKPab** **02 00 30.0 +0.8**
comp=Z,15nm,0.8s,baz=117,slow=4.8,SNR=15
LPAZ La Paz **171.01 109** PKP **PKPdf** **01 59 19.9 +0.5**
comp=Z,5.2nm,1.1s,baz=18,slow=3.6,SNR=9.3
LPAZ PKPab **PKPab** **02 00 41.0 +1.9**
comp=Z,2.2nm,1.0s,baz=259,slow=3.5,SNR=4.9
LPAZ La Paz **171.01 109** *e*P **PKPdf** **01 59 19.4 0.0**
MURT Porto Murtinho **171.77 191** *e*P **PKPdf** **01 59 18.0 -0.8**
SNDB Serra Nova Dou **172.07 280** *e*P **PKPdf** **01 59 18.3 -0.9**
ETMB Extrema **172.26 62** *e*P **PKPdf** **01 59 18.5 -0.8**
CLDB Colider **175.69 308** *e*P **PKPdf** **01 59 19.7 -0.8**
SALV Santo Antonio **175.82 235** *e*P **PKPdf** **01 59 19.2 -1.2**
PDRB Porto dos Gac **176.87 307** *e*P **PKPdf** **01 59 19.1 -1.7**
SIV San Ignacio **177.00 145** PKP **PKPdf** **01 59 20.3 -0.4**
comp=Z,5.0nm,0.9s,baz=144,slow=1.5,SNR=24
PTLB Pontes e Lacer **178.10 184** *e*P **PKPdf** **01 59 20.1 -0.7**
VILB Vilhena **178.92 57** *e*P **PKPdf** **01 59 21.2 +0.2**

WEL 12 01:40:12.0±1.3, 37°S±4°×17°9E±°, h12km±5km, M3.9/52, ML4.2/54, MLv3.9/52, Error ellipse: s-maj=0.0km s-min=0.0km az=79.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.69**	**240**	P	Pg	01 40 25.5	+0.1
MXZ				S	Sg	01 40 32.5	-1.9
WMGZ	**Waiomatatini S**	**0.79**	**221**	P	Pn	01 40 29.3	+0.4
WMGZ				S	Sn	01 40 39.8	-0.8
PKGZ	**Pakihiroa**	**1.02**	**229**	P	Pb	01 40 31.8	0.0
PKGZ				S	Sb	01 40 45.3	+0.1
PUZ	**Puketiti**	**1.06**	**217**	P	Pn	01 40 33.1	+0.4
PUZ				S	Sg	01 40 46.5	+0.2
HAZ	**Te Kaha**	**1.15**	**242**	P	Pb	01 40 32.4	-1.4
HAZ				S	Sb	01 40 48.8	+0.1
TWGZ	**Tauwhareparae**	**1.28**	**222**	P	Pg	01 40 36.4	-0.2
TWGZ				S	Sn	01 40 52.8	-0.2
RUGZ	**Raukumara Rang**	**1.32**	**236**	P	Pn	01 40 36.6	+0.1
RUGZ				S	Sb	01 40 53.3	-0.6
CNGZ	**Carnagh Statio**	**1.43**	**208**	P	Pb	01 40 38.8	+0.2
CNGZ				S	Sg	01 40 58.4	+0.4
WIZ	**White Island**	**1.52**	**258**	P	Pn	01 40 37.5	-1.5
TKGZ	**Te Karaka**	**1.55**	**218**	P	Pn	01 40 39.6	+0.2
MWZ	**Matawai**	**1.64**	**227**	P	Pn	01 40 41.0	+0.2
WHRZ	**Whale Island**	**1.77**	**249**	P	Pb	01 40 44.1	-0.4
RIGZ	**Rimuhau**	**1.80**	**214**	P	Pn	01 40 43.0	0.0
RAGZ	**Rawiri**	**1.82**	**225**	P	Pn	01 40 44.0	+0.1
URZ	**Urewera**	**1.86**	**236**	P	Pn	01 40 44.1	+0.4
EDRZ	**Edgecumbe**	**2.04**	**244**	P	Pn	01 40 47.0	+0.7
SNGZ	**Shannon Statio**	**2.06**	**221**	P	Pn	01 40 46.4	-0.1
OPRZ	**Ohinepanea**	**2.09**	**252**	P	Pn	01 40 46.5	-0.3
KNZ	**Kokohu**	**2.10**	**211**	P	Pn	01 40 46.2	-0.8
MHGZ	**Mahia Peninsul**	**2.13**	**205**	P	Pn	01 40 47.3	-0.2
RTZ	**Ruatahuna**	**2.15**	**229**	P	Pn	01 40 48.4	+0.6
MUGZ	**Murupara**	**2.20**	**235**	P	Pn	01 40 48.5	0.0
MYRZ	**Mayor Island**	**2.25**	**268**	P	Pn	01 40 49.3	+0.2
RAHZ	**Arahi**	**2.30**	**222**	P	Pn	01 40 50.0	+0.2
RRRZ	**Republican Roa**	**2.30**	**240**	P	Pn	01 40 50.6	+0.7
WHHZ	**Waihua**	**2.34**	**217**	P	Pn	01 40 50.2	-0.2
KARZ	**Kaharoa**	**2.37**	**250**	P	Pn	01 40 51.1	+0.3
HLRZ	**Highlands Stat**	**2.38**	**244**	P	Pn	01 40 52.2	+1.3
MTHZ	**Maungataniwha**	**2.39**	**226**	P	Pn	01 40 51.5	+0.4
ALRZ	**Allen Road**	**2.53**	**237**	P	Pn	01 40 53.1	+0.1
ARHZ	**Aropaoanui**	**2.60**	**218**	P	Pn	01 40 53.9	0.0
KUZ	**Kuaotunu**	**2.72**	**279**	P	Pn	01 40 53.8	-1.6
BKZ	**Black Stump Fm**	**2.80**	**225**	P	Pn	01 40 56.4	-0.3
TOZ	**Tahuroa Road**	**2.88**	**259**	P	Pn	01 40 56.9	-0.8
CKHZ	**Cape Kidnapper**	**2.89**	**212**	P	Pn	01 40 56.5	-1.3
MCHZ	**McNeill Hill**	**2.89**	**219**	P	Pn	01 40 57.6	-0.4
KWHZ	**Kaweka Forest**	**3.02**	**223**	P	Pn	01 40 59.0	-0.8
GRZ	**Great Barrier**	**3.05**	**287**	P	Pn	01 40 59.5	-0.6
RITZ	**Rihia Road**	**3.07**	**234**	P	Pn	01 41 00.9	+0.5
KAHZ	**Kahuranaki**	**3.09**	**213**	P	Pn	01 40 59.2	-1.4
MKAZ	**Moumakai**	**3.12**	**271**	P	Pn	01 40 59.9	-1.1
KATZ	**Kakaramea**	**3.18**	**236**	P	Pn	01 41 02.5	+0.5
ETVZ	**East Tongariro**	**3.26**	**233**	P	Pn	01 41 02.9	-0.2
NTVZ	**North Tongarir**	**3.26**	**234**	P	Pn	01 41 02.9	-0.1
BHHZ	**Black Hill Sta**	**3.27**	**225**	P	Pn	01 41 02.6	-0.5
KRVZ	**Karewarewa**	**3.28**	**234**	P	Pn	01 41 03.3	-0.1
PXZ	**Pawanui**	**3.29**	**211**	P	Pn	01 41 01.5	-1.9
OTVZ	**Oturere**	**3.30**	**233**	P	Pn	01 41 03.6	-0.1
ETAZ	**East Tamaki Re**	**3.31**	**273**	P	Pn	01 41 04.8	+1.0
NNVZ	**North Ngauruho**	**3.32**	**234**	P	Pn	01 41 03.9	0.0
WTVZ	**West Tongariro**	**3.32**	**234**	P	Pn	01 41 04.2	+0.2
SNVZ	**South Ngauruho**	**3.33**	**233**	P	Pn	01 41 03.9	-0.2
NGZ	**Ngauruhoe**	**3.35**	**233**	P	Pn	01 41 04.2	-0.2
MBAZ	**Motutapu North**	**3.36**	**277**	P	Pn	01 41 03.9	-0.4
MOVZ	**Moawhango**	**3.39**	**229**	P	Pn	01 41 03.9	-1.0
TWVZ	**Taurewa**	**3.40**	**236**	P	Pn	01 41 05.6	+0.6
WHVZ	**Whangaehu Hut**	**3.42**	**232**	P	Pn	01 41 05.2	-0.2
FWVZ	**Far West T-bar**	**3.43**	**233**	P	Pn	01 41 05.3	-0.2
WNVZ	**Wahianoa**	**3.44**	**231**	P	Pn	01 41 05.2	-0.4
ABAZ	**Army Bay**	**3.44**	**279**	P	Pn	01 41 04.3	-1.2
PNHZ	**Pukenui**	**3.50**	**219**	P	Pn	01 41 04.5	-1.8
WPHZ	**Waipukurau**	**3.50**	**215**	P	Pn	01 41 04.7	-1.6
AWAZ	**Awhitu Peninsu**	**3.53**	**271**	P	Pn	01 41 07.1	+0.4
HIZ	**Hauiti**	**3.57**	**248**	P	Pn	01 41 08.4	+1.2
PRHZ	**Porangahau**	**3.58**	**211**	P	Pn	01 41 05.1	-2.3
WTAZ	**Waiatarua**	**3.60**	**273**	P	Pn	01 41 09.7	+2.0
DVHZ	**Dannevirke**	**3.81**	**215**	P	Pn	01 41 08.5	-2.1
VRZ	**Vera Road**	**3.88**	**239**	P	Pn	01 41 12.2	+0.6
WCZ	**Waipu Caves**	**4.01**	**287**	P	Pn	01 41 13.0	-0.2
WAZ	**Wanganui**	**4.08**	**230**	P	Pn	01 41 14.4	+0.2
PRWZ	**Pori Road**	**4.11**	**215**	P	Pn	01 41 13.0	-1.7
KHEZ	**Kahui Hut**	**4.48**	**241**	P	Pn	01 41 22.0	+2.2
OUZ	**Omahuta**	**4.85**	**293**	P	Pn	01 41 25.5	+0.7
CTZ	**Chatham Island**	**7.29**	**154**	P	Pn	01 42 00.2	+1.9

ROM 12 01:49:18.2±0.1, 42°783N±0°.003×13°148E±0°.004, h6km±1km, ML1.2/1, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=141.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**334**	P	Pg	01 49 19.8	0.0
NRCA				S	Sg	01 49 21.0	+0.1
NRCA				AML	AML		
	comp=N,419μm,0.1s						
NRCA				AML	AML		
	comp=N,420μm,0.1s						
NRCA				AML	AML		
	comp=E,486μm,0.1s						
T1245	**Castelsantange**	**0.08**	**22**	P	Pg	01 49 20.3	+0.2
T1245				S	Sg	01 49 22.1	+0.5
T1245				AML	AML		
	comp=E,228μm,0.2s						
T1245				AML	AML		
	comp=N,358μm,0.7s						
T1202	**Accumoli, Fraz**	**0.10**	**144**	P	Pg	01 49 20.6	+0.2
T1202				S	Sg	01 49 22.6	+0.7
T1216	**Preci, Frazion**	**0.14**	**319**	P	Pg	01 49 21.9	+0.7
T1217	**Poggiodomo (PG**	**0.17**	**246**	P	Pg	01 49 22.3	+0.5
T1217				S	Sg	01 49 25.3	+1.2
MMO1	**Montemonaco**	**0.18**	**48**	P	Pg	01 49 22.1	+0.4
MMO1				S	Sg	01 49 25.3	+1.2
T1215	**Vallo di Nera,**	**0.21**	**275**	⇓P	Pg	01 49 22.6	+0.3
FDMO	**Fiordimonte**	**0.26**	**350**	⇑P	Pg	01 49 24.1	+0.8

ROM 12 01:49:55.7±0.2, 42°874N±0°.005×13°058E±0°.006, h7km±1km, ML0.8/1, 1C, Error ellipse: s-maj=0.6km s-min=0.1km az=355.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**301**	P	Pg	01 49 57.4	+0.2
T1216				S	Sg	01 49 58.3	0.0
NRCA	**Norcia**	**0.06**	**134**	P	Pg	01 49 57.5	0.0
NRCA				S	Sg	01 49 58.6	-0.2
NRCA				AML	AML		
	comp=N,312μm,0.1s						
NRCA				AML	AML		
	comp=E,472μm,0.1s						
T1245	**Castelsantange**	**0.10**	**100**	P	Pg	01 49 58.2	+0.1
T1245				S	Sg	01 50 00.7	+0.9
T1245				AML	AML		
	comp=E,81μm,1.5s						
T1245				AML	AML		
	comp=N,101μm,1.5s						
T1245				AML	AML		
	comp=E,82μm,1.5s						
T1245				AML	AML		
	comp=N,101μm,1.5s						
MC2	**Monte Cornacci**	**0.10**	**68**	P	Pg	01 49 58.5	+0.2
MC2				S	Sg	01 50 00.8	+0.8
T1215	**Vallo di Nera,**	**0.16**	**243**	P	Pg	01 49 59.7	+0.7
T1215				S	Sg	01 50 02.6	+1.4
FDMO	**Fiordimonte**	**0.16**	**8**	P	Pg	01 49 59.5	+0.4
FDMO				S	Sg	01 50 02.6	+1.1
MMO1	**Montemonaco**	**0.20**	**83**	⇑P	Pg	01 50 00.1	+0.4
T1202	**Accumoli, Fraz**	**0.21**	**144**	P	Pg	01 50 00.5	+0.5
T1204	**Amatrice, Fraz**	**0.28**	**136**	S	Sb	01 50 08.0	0.0

PRU ***12*** *01:55:06.3±0.0, 50°.07N×18°.43E, h0km*
ISC 12 01:55:05.6±0.9, 50°.11N±0°.04×18°.44E±0°.03, h0km, n17, σ0°976/27, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.33**	**215**	*e*PG	**Pg**	**01 55 12.2**	**+0.3**
OKC				*e*SG	**Sg**	**01 55 17.3**	**+1.1**
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**0.67**	**240**	*e*PG	**Pg**	**01 55 18.5**	**+0.1**
MORC				*e*SG	**Sg**	**01 55 27.5**	**+0.5**
MAUC	**Maruska**	**0.84**	**208**	*e*PG	**Pb**	**01 55 23.2**	**+0.1**
MAUC				*e*SG	**Sg**	**01 55 33.0**	**+0.3**
OJC	**Ojcow**	**0.88**	**82**	*e*Pg	**Pg**	**01 55 21.5**	**-0.9**
OJC				*e*Sg	**Sg**	**01 55 34.4**	**+0.6**
KRLC	**Kraliky**	**1.07**	**269**	*e*PG	**Pg**	**01 55 25.8**	**-0.2**
KRLC				*e*SG	**Sg**	**01 55 39.4**	**-0.5**
	comp=Z,5.8nm,0.4s						
KRLC	**Kraliky**	**1.07**	**269**	*e*	**Sg**	**01 55 39.4**	**-0.5**
JAVC	**Velka Javorina**	**1.35**	**202**	*e*PG	**Pg**	**01 55 30.6**	**-0.8**
DPC	**Dobruska-Polom**	**1.38**	**281**	*e*PG	**Pn**	**01 55 32.3**	**+0.2**
DPC				*e*SG	**Sn**	**01 55 51.3**	**+0.2**
	comp=Z,5.6nm,0.5s						
DPC	**Dobruska-Polom**	**1.38**	**281**	*e*	**Pn**	**01 55 32.3**	**+0.2**
NIE	**Niedzica**	**1.39**	**119**	*e*Pg	**Pn**	**01 55 32.4**	**+0.2**
NIE				*e*Sg	**Sn**	**01 55 51.7**	**+0.4**
VRAC	**Vranov**	**1.44**	**237**	*e*PG	**Pn**	**01 55 32.8**	**-0.1**
VRAC				*e*SG	**Sg**	**01 55 51.8**	**-0.1**
OSTC	**Ostas**	**1.50**	**288**	*e*SG	**Sn**	**01 55 54.7**	**+0.8**
CHVC	**Chvalec**	**1.60**	**288**	*e*PG	**Pg**	**01 55 36.5**	**+0.3**
CHVC				*e*SG	**Sg**	**01 55 58.1**	**+1.1**
KRUC	**Moravsky**	**1.69**	**233**	*e*PN	**Pn**	**01 55 36.6**	**+0.2**
KRUC				*e*SG	**Sn**	**01 55 58.9**	**+0.1**
PRU	**Pruhonice**	**2.52**	**269**	*e*SG	**Sg**	**01 56 25.4**	**-1.0**
CKRC	**Cesky Krumlov**	**2.99**	**246**	*e*SG	**Sg**	**01 56 39.9**	**-1.6**
KHC	**Kasperske Hory**	**3.31**	**255**	*e*SG	**Sg**	**01 56 49.9**	**-2.0**

SJA ***12*** *01:59:17.8±0.8, 30°.70S×71°.71W, h18km±3km, ML4.9, MW4.6*
NEIC ***12*** *01:59:21.9, 30°.71S×71°.52W, h49km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.18; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-1.29; $M_{r\theta}$0.06; $M_{\theta\phi}$0.15; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.26000×10^{16} NP1:ϕ_s169.62000°, δ40.82000°, λ83.42000°. NP2:ϕ_s358.29000°, δ49.50000°, λ95.65000°. Principal axes: T 1.1957, Plg84.0000°, Azm309.0000°; N 0.1278, Plg4.0000°, Azm175.0000°; P -1.3234, Plg4.0000°, Azm84.0000°;*
NEIC ***12*** *01:59:21.9±1.8, 30°.70S±0°.02×71°.53W±0°.06, h38km±4km, mb5.1/204, Mwr4.7/51, Mwr4.9(GUC) Error ellipse: s-maj=7.9km s-min=2.2km az=105.0*
GUC ***12*** *01:59:22.8±0.8, 30°.69S×71°.38W, h41km±2km, ML5.0*
IDC ***12*** *01:59:22.3±0.7, 30°.67S×71°.30W, h40km±5km, mb4.6/12, mbtmp4.7/17, ML4.4/5, MS3.8/26, Error ellipse: s-maj=17.7km s-min=12.8km az=83.0*
VAO ***12*** *01:59:23.7±0.3, 30°.80S×71°.34W, h60km, mb4.8*
ISC 12 01:59:21.8±0.3, 30°.69S±0°.03×71°.53W±0°.04, h43km±2km, h43km:pP-P, n519, σ1°57/462, mb5.1/111, MS3.9/24, 17C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.09**	**278**	**Pn**	**Pn**	**01 59 29.7**	**+1.0**
CO06				Sn	**Sn**	**01 59 33.3**	**-0.3**
CO06	**Fray Jorge**	**0.09**	**278**	⇑*i*P	**Pn**	**01 59 29.7**	**+1.0**
CO06				*i* S	**Sn**	**01 59 35.0**	**+1.4**
CO06				IAML		01 59 35.9	
	comp=E,88μm,0.3s						
CO02	**Combarbal**	**0.69**	**139**	Pn	**Pn**	**01 59 35.0**	**-0.4**
CO02				Sn	**Sn**	**01 59 43.8**	**-1.2**
CO02	**Combarbal**	**0.69**	**139**	⇓*i*P	**Pn**	**01 59 34.8**	**-0.5**
CO02				*i* S	**Sn**	**01 59 44.0**	**-1.0**
CO02				IAML		01 59 45.2	
	comp=E,303μm,0.2s						
CO02	**Combarbal**	**0.69**	**139**	*e*P	**Pn**	**01 59 34.0**	**-1.3**
CO02				*e*S	**Sn**	**01 59 44.4**	**-0.6**
CO02				IAML		01 59 45.1	
	comp=Z,165μm,0.5s						
CO03	**El Pedregal**	**0.74**	**102**	Pn	**Pn**	**01 59 35.4**	**-0.6**
CO03				Sn	**Sn**	**01 59 44.9**	**-1.4**
CO03	**El Pedregal**	**0.74**	**102**	⇓*i*P	**Pn**	**01 59 35.4**	**-0.6**
CO03				*i* S	**Sn**	**01 59 43.9**	**-2.3**
CO03				IAML		01 59 46.6	
	comp=E,70μm,0.4s						
CO05	**La Serena**	**0.81**	**19**	Pn	**Pn**	**01 59 37.5**	**+0.7**
CO05	**La Serena**	**0.81**	**19**	⇓*i*P	**Pn**	**01 59 37.5**	**+0.7**
CO05				*e*S	**Sn**	**01 59 47.7**	**+0.1**
CO05				IAML		01 59 55.2	

ROC1 eS Sn 02 00 27.4 +2.0
VA01 Torpederas 2.33 182 Pn 01 59 57.6 0.0
VA01 Torpederas 2.33 182 eP **Pn 01 59 57.7 0.0**
VA01 IAML 02 00 37.2
comp=E,4µm,0.6s
VA01 Torpederas 2.33 182 eP **Pn 01 59 57.8 +0.2**
VA01 eP **Pn 01 59 58.0 +0.4**
VA01 IAML 02 00 35.8
comp=Z,3µm,0.8s
AC04 Llanos de Chal 2.50 9 Pn Pn 02 00 01.0 +1.0
AC04 Llanos de Chal 2.50 9⇑iP **Pn 02 00 01.3 +1.3**
AC04 Llanos de Chal 2.50 9 eP **Pn 02 00 01.0 +1.0**
AC04 eS Sn 02 00 18.8 -11
AC04 IAML 02 00 46.2
comp=Z,4µm,0.7s
PEL Peldehue 2.56 164 Pn Pn 02 00 01.7 +1.0
PEL Peldehue 2.56 164⇑iP **Pn 02 00 01.8 +1.0**
PEL eS **Sn 02 00 32.4 +1.8**
PEL IAML 02 00 40.6
comp=E,8µm,0.4s
PEL Peldehue 2.56 164 eP **Pn 02 00 01.8 +1.0**
PEL eS **Sn 02 00 38.1 +7.4**
MT02 Curacav 2.59 173 Pn 02 00 01.3 +0.1
MT02 Curacav 2.59 173⇑iP **Pn 02 00 01.3 +0.1**
MT02 IAML 02 00 47.2
comp=E,6µm,0.4s
MT02 Curacav 2.59 173 eP **Pn 02 00 01.0 -0.2**
MT02 eP **Pn 02 00 01.4 +0.2**
MT02 eS **Sn 02 00 31.4 -0.1**
MT02 IAML 02 00 46.7
comp=Z,5µm,0.5s
ZON Zonda 2.59 110 Pn 02 00 03.7 +2.3
ZON Zonda 2.59 110 eP **Pn 02 00 03.9 +2.5**
ZON IAML 02 00 52.0
comp=Z,5µm,0.8s
RTLL Cerro Villicun 2.70 105 eP **Pn 02 00 04.8 +2.0**
RTLL eS **Sn 02 00 40.3 +5.9**
MT05 Renca 2.78 166 Pn Pn 02 00 04.7 +0.8
MT05 Renca 2.78 166⇑iP **Pn 02 00 04.9 +1.1**
MT05 IAML 02 00 52.8
comp=E,19µm,0.2s
MT05 Renca 2.78 166 eP **Pn 02 00 05.0 +1.1**
MT05 eS **Sn 02 00 38.4 +2.1**
MT05 IAML 02 00 53.1
comp=Z,5µm,0.4s
RTCV Cerro Valdivia 2.82 115 eP **Pn 02 00 07.0 +2.6**
RTCV eS Sn 02 00 24.9 -12
FCH Farellones 2.84 158⇑iP **Pn 02 00 06.5 +1.5**
FCH IAML 02 00 49.5
comp=N,4µm,0.3s
MT03 Universidad Ad 2.93 163 Pn Pn 02 00 06.9 +1.0
MT03 Universidad Ad 2.93 163⇑iP **Pn 02 00 07.2 +1.2**
MT03 IAML 02 00 52.7
comp=N,11µm,0.4s
MT03 Universidad Ad 2.93 163 eP **Pn 02 00 07.0 +1.0**
MT03 eS **Sn 02 00 42.6 +2.5**
MT03 IAML 02 00 57.1
comp=Z,5µm,0.5s
VA05 Santo Domingo 2.96 181 Pn Pn 02 00 06.0 -0.3
VA05 Santo Domingo 2.96 181 iP **Pn 02 00 06.2 -0.2**
VA05 IAML 02 00 50.7
comp=E,9µm,0.6s
ASAL Salagasta 2.98 130 eP **Pn 02 00 09.0 +2.3**
ASAL eS Sn 02 00 54.0 +13
ARCO CERRO ARCO 3.09 135 eP **Pn 02 00 11.0 +2.8**
ARCO eS **Sn 02 00 50.1 +6.1**
ARCO IAML 02 00 58.6
comp=Z,3µm,0.9s
MT09 Talagante 3.12 172 Pn Pn 02 00 09.4 +0.8
MT09 Talagante 3.12 172⇑iP **Pn 02 00 09.4 +0.8**
MT09 eS **Sn 02 00 46.9 +2.3**
MT01 Popeta 3.18 176⇑iP **Pn 02 00 09.6 +0.3**
MT01 IAML 02 00 57.8
comp=N,4µm,0.5s
MT01 Popeta 3.18 176 eP **Pn 02 00 09.0 -0.3**
MT01 eP **Pn 02 00 09.6 +0.3**
MT01 eS **Sn 02 00 48.1 +2.1**
MT01 IAML 02 00 54.0
comp=Z,3µm,0.7s
AAGR Agrelo 3.32 137 eP **Pn 02 00 14.0 +2.7**
AAGR eS Sn 02 01 03.6 +14
LMEL Las Melosas 3.35 161 Pn 02 00 13.6 +1.9
LMEL Las Melosas 3.35 161⇑iP **Pn 02 00 13.7 +1.9**
LMEL IAML 02 01 01.7
comp=N,4µm,0.3s
BO04 La Punta 3.39 167⇑iP **Pn 02 00 13.1 +0.9**
BO04 iS **Sn 02 00 53.0 +1.9**
BO04 IAML 02 01 06.7
comp=E,5µm,0.5s
AC06 Mina Casimiro 3.47 18 Pn Pn 02 00 14.4 +1.0
AC06 Mina Casimiro 3.47 18⇑iP **Pn 02 00 14.6 +1.2**
VCA Vinchina 3.49 57 eP **Pn 02 00 17.0 +3.3**
VCA eS Sn 02 01 05.7 +12
VCA IAML 02 01 14.7
comp=Z,5µm,0.7s
BO01 Tunca 3.71 174 iP **Pn 02 00 16.8 +0.1**
BO01 Tunca 3.71 174 eP **Pn 02 00 17.0 +0.3**
BO01 eP **Pn 02 00 17.1 +0.4**
BO01 eS **Sn 02 01 02.4 +3.2**
BO01 IAML 02 01 18.7
comp=Z,1µm,0.8s
BO02 Sierra Bellavi 4.14 171 eP **Pn 02 00 23.1 +0.5**
BO02 eS **Sn 02 01 12.9 +3.0**
BO02 IAML 02 01 31.7
comp=Z,2µm,0.7s
ACLC CERRO LA CRUZ 4.17 74 eP **Pn 02 00 25.2 +2.1**
ACLC eS **Sn 02 01 18.4 +7.8**
GO05 Huala 4.33 184 Pn Pn 02 00 24.1 -0.9
AC02 Maricunga 4.38 29 Pn Pn 02 00 28.1 +1.8
AC01 Pan de Azucar 4.59 11 Pn Pn 02 00 28.1 -0.7
RFA San Rafael 4.83 148 eP **Pn 02 00 27.4 -4.6**
H03N1 Juan Fernandez 6.84 244 T T 02 07 50.5
baz=74,slow=72,SNR=2664
H03N3 Juan Fernandez 6.85 244 T T 02 07 49.4
baz=74,slow=72,SNR=2334
VA04 Juan Fernndez 6.85 243 Pn Pn 02 00 58.9 -0.9
H03N2 Juan Fernandez 6.85 244 T T 02 07 50.9
baz=74,slow=72,SNR=3164
H03S3 Juan Fernandez 6.99 241 T T 02 08 04.6
baz=64,SNR=29
H03S1 Juan Fernandez 6.99 241 T T 02 08 00.7
baz=64,SNR=29
H03S2 Juan Fernandez 7.00 241 T T 02 08 05.1
baz=64,SNR=33
PB15 IPOC Station P 7.67 14 Pn Pn 02 01 09.9 -1.3
LVC Limon Verde 8.38 17 P **Pn 02 01 19.1 -2.0**
comp=Z,1.5nm,0.3s,baz=178,slow=7.7,SNR=16
LVC S Sn 02 03 10.2 +16
comp=Z,106nm,0.8s,baz=101,slow=1.1,SNR=4.3
LVC LR LR 02 05 00.9
comp=Z,416nm,21.2s,baz=203,slow=41
comp=Z,3.7nm,0.3s
LVC Limon Verde 8.38 17 Pn Pn 02 01 19.6 -1.4
LR03 Panguipulli 8.95 184 Pn Pn 02 01 27.2 -1.2
LR04 Corral 9.30 189 Pn Pn 02 01 31.2 -2.1
PLCA Paso Flores 10.06 176 P Pn 02 01 43.6 -0.1
comp=Z,1.1nm,0.3s,baz=344,slow=11,SNR=22
PLCA LR LR 02 06 08.9
comp=Z,359nm,21.1s,baz=344,slow=40
comp=Z,3.0nm,0.4s
PLCA Paso Flores 10.06 176 Pn Pn 02 01 43.3 -0.4
PLCA Paso Flores 10.06 176 eP **Pn 02 01 44.0 +0.2**
LL04 Puerto Octay 10.23 184 Pn Pn 02 01 43.9 -2.1
TRQA Tornquist 10.78 136 Pn Pn 02 01 52.8 -0.8
ITQB Itaqui 12.94 89 Pn Pn 02 02 19.9 -3.2
CPUP Villa Florida 13.22 74 P Pn 02 02 23.4 -3.5
comp=Z,0.5nm,0.3s,baz=241,slow=11,SNR=8.0
CPUP S S 02 05 05.8 -10
comp=Z,33nm,0.9s,baz=179,slow=13,SNR=3.2
CPUP LR LR 02 07 58.6
comp=Z,486nm,20.8s,baz=246,slow=40
comp=Z,2.4nm,0.4s
AZCA Azaras, Argent 13.81 83 eP **Pn 02 02 34.4 -0.5**
LPAZ La Paz 14.67 13 P **Pn 02 02 48.7 +1.6**
comp=Z,0.5nm,0.3s,baz=189,slow=7.2,SNR=33
comp=Z,11nm,0.8s
LPAZ La Paz 14.67 13 Pn Pn 02 02 47.4 +0.3
LPAZ La Paz 14.67 13 eP **Pn 02 02 49.6 +2.5**
COYC Coyhaique 14.87 181 Pn Pn 02 02 48.7 -0.4
PLTB Pedras Altas 15.38 99 Pn Pn 02 02 51.0 -4.8
MURT Porto Murtinho 15.38 58 eP **Pn 02 02 54.3 -1.6**
CPSB Cacapava Do Su 15.60 94 eP **Pn 02 02 56.6 -2.1**
CRSM Crissiumal (Br 15.62 83 eP **Pn 02 02 57.4 -1.6**
ALGR Alto Alegre (B 16.19 88 eP **Pn 02 03 04.4 -1.9**

BBRB Robore, Bolivi 16.31 43 eP **P 02 03 09.1 -1.1**
ANTJ Antonio Joao (16.38 62 eP **Pn 02 03 07.0 -1.7**
MCR1 Marechal Candi 16.70 72 eP **Pn 02 03 11.6 -1.1**
FRBT Francisco Belt 16.92 78 eP **Pn 02 03 14.3 -1.3**
ITAB Concordia 17.32 83 eP **Pn 02 03 17.9 -2.5**
SIV San Ignacio 17.48 36 P **Pn 02 03 21.6 -0.9**
comp=Z,0.2nm,0.3s,baz=204,slow=7.7,SNR=50
SIV LR LR 02 11 23.0
comp=Z,240nm,18.4s,baz=224,slow=42
comp=Z,13nm,0.7s
AQDB Aquidauana 17.51 58 Pn **Pn 02 03 19.7 -3.2**
CNLB Canela 17.97 91 eP **Pn 02 03 25.4 -3.1**
PTGB Pitanga 18.23 76 eP **P 02 03 30.3 -1.2**
TRCB Terra Rica 18.60 70 eP **P 02 03 35.5 -0.2**
PTLB Pontes e Lacer 18.95 40 eP **P 02 03 39.5 +0.1**
RPRD Ribas do Rio P 19.00 62 eP **P 02 03 39.4 -0.6**
NNA Nana 19.25 344 LR LR 02 09 42.5
comp=Z,132nm,20.4s,baz=158,slow=32
TER01 Tubaro-SC 19.60 89 eP **P 02 03 46.6 +0.1**
PP1B Ponte de Pedra 19.98 53 eP **P 02 03 50.5 -0.2**
PCMB Pacaembu 20.30 68 eP **P 02 03 53.8 -0.3**
VILB Vilhena 20.52 33 eP **P 02 03 56.1 -0.4**
SALV Santo Antonio 20.66 48 eP **P 02 03 58.0 0.0**
C2SB Chapadao do Su 20.68 59 eP **P 02 03 59.3 +1.0**
FRTB Fartura 20.88 75 eP **P 02 04 00.1 -0.3**
ETMB Extrema 21.35 15 eP **P 02 04 06.4 +1.0**
PET01 Itanhaem-SP 22.42 79 eP **P 02 04 16.2 -0.7**
BB19B Bebedouro 22.77 71 eP **P 02 04 19.3 -1.4**
CZSB Cruzeiro do Su 22.86 357 eP **P 02 04 23.2 +1.6**
RCLB Rio Claro- Sao 22.96 75 eP **P 02 04 22.4 -0.3**
VAO Valinhos 23.19 77 eP **P 02 04 23.6 -1.3**
EFI East Falkland 23.22 158 P **P 02 04 24.7 -0.2**
PDRB Porto dos Gac 23.42 39 eP **P 02 04 27.1 -0.1**
PARB Paraibuna 24.18 79 eP **P 02 04 35.8 +1.4**
USHA Ushuaia 24.24 176 P **P 02 04 35.2 +0.8**
comp=Z,50nm,0.7s,baz=160,slow=1.0,SNR=16
comp=Z,50nm,0.7s
ATAH Atahualpa 24.30 343 LR LR 02 13 24.2
comp=Z,90nm,19.2s,baz=214,slow=35
CLDB Colider 24.54 40 eP **P 02 04 37.0 -0.6**
IPMB Ipameri, GO 24.67 65 eP **P 02 04 37.8 -1.0**
PMNB Patos De Minas 25.76 68 eP **P 02 04 47.7 -1.0**
BDFB Brasilia 26.22 60 P **P 02 04 52.3 -0.7**
comp=Z,24nm,0.8s,baz=232,slow=8.8,SNR=24
comp=Z,24nm,0.8s
BDFB Brasilia 26.22 60 P **P 02 04 52.2 -0.7**
BDFB Brasilia 26.22 60 eP **P 02 04 52.4 -0.6**
TBTG Tabatinga, AM 26.40 4 eP **P 02 04 56.1 +1.7**
SNDB Serra Nova Dou 26.41 50 eP **P 02 04 54.2 -0.3**
VAS01 Vassouras-RJ 26.45 78 eP **P 02 04 54.2 -0.6**
DUB01 Friburgo-RJ 27.43 79 eP **P 02 05 03.5 -0.2**
CAM01 Campos-RJ 28.14 79 eP **P 02 05 09.5 -0.6**
BOSC San Juan Bosco 28.17 345 P **P 02 05 09.8 -0.6**
MC01 Montes Claros 28.75 67 eP **P 02 05 14.6 -0.9**
MACA Manacapuru-AM 29.23 23 eP **P 02 05 19.9 +0.2**
JANB Januaria 29.40 64 eP **P 02 05 21.0 -0.4**
ALF01 Guarapari-ES 29.44 77 eP **P 02 05 21.4 -0.2**
SJMB Sao Joao De Ma 29.95 74 eP **P 02 05 25.5 -0.6**
ITTB Itaituba 30.12 33 eP **P 02 05 26.7 -0.9**
RIB01 Linhares ES 30.31 75 eP **P 02 05 29.6 +0.3**
SDBA SAO DESIDERIO 30.60 59 eP **P 02 05 31.9 -0.1**
SMTB Santa Maria do 31.16 51 eP **P 02 05 36.8 +0.1**
NAN01 Guarapari, ES 31.24 73 eP **P 02 05 36.2 -1.3**
OTAV Otavalo 31.45 347 eP **P 02 05 42.5 +2.7**
PRPB Parauapebas 31.79 44 eP **P 02 05 41.8 -0.6**
GUA01 Guaratinga, BA 32.15 71 eP **P 02 05 44.7 -0.8**
PTGL Punta Galera 32.32 344 eP **P 02 05 44.3 -2.7**
BBAC Balboa, Cauca 32.98 349 eP **P 02 05 54.0 +1.0**
MALB Monte Alegre 33.02 33 eP **P 02 05 52.1 -1.0**
CMC0 Camacan, BA 33.03 70 eP **P 02 05 52.7 -0.5**
GDU01 Guandu, BA 33.90 67 eP **P 02 05 59.9 -0.9**
HOPE Hope Point 34.42 143 P **P 02 06 04.5 -0.4**
PMSA Palmer Station 34.43 174 LR LR 02 20 05.1
comp=Z,200nm,18.6s,baz=332,slow=36
PMSA Palmer Station 34.43 174 eP **P 02 06 02.5 -2.3**
BOAV Boa Vista 34.53 20 eP **P 02 06 06.6 +0.4**
VILC Villavicencio, 34.66 356 eP **P 02 06 10.0 +2.5**
PTGC Puerto Gaitan, 34.69 359 eP **P 02 06 08.8 +1.2**
YOTC Yotoco, Valle 34.78 352 eP **P 02 06 10.0 +1.5**
CHIC Chingaza 35.18 356 eP **P 02 06 13.9 +1.6**
MCPB Macapa, AP 35.38 35 eP **P 02 06 13.3 -0.3**
ROSC El Rosal 35.42 355 LR LR 02 22 15.7
comp=Z,120nm,18.6s,baz=236,slow=39
RUSC La Rusia 36.40 357 eP **P 02 06 24.9 +2.1**
CBOC Ciudad Bolivar 36.59 353 eP **P 02 06 26.8 +2.7**
ZARC Zaragoza, Cauc 38.09 355 eP **P 02 06 37.6 +1.0**
NBAN Anadia - AL 38.90 65 eP **P 02 06 42.6 -0.8**
SDV Santo Domingo 39.35 1 LR LR 02 24 45.2
comp=Z,71nm,18.6s,baz=216,slow=39
SDV Santo Domingo 39.35 1 P **P 02 06 46.6 -0.8**
BAUV El Baul 39.54 5 P **P 02 06 48.0 -0.7**
BAUV IAmb IAmb 02 06 50.1
comp=Z,37nm,0.8s
BAUV pP **pP 02 06 59.5 -1.1**
MDP Montagnes des 39.91 30 LR LR 02 25 34.5
comp=Z,181nm,18.3s,baz=196,slow=40
PCRV Puerto La Cruz 41.16 10 LR LR 02 25 57.4
comp=Z,220nm,19.6s,slow=39
RCBR Riachuelo 41.60 61 LR LR 02 25 54.1
comp=Z,211nm,18.2s,baz=350,slow=38
RCBR Riachuelo 41.60 61 eP **P 02 07 05.9 0.0**
MPOM Morne Pois Mar 46.03 14 P **P 02 07 39.5 -1.7**
FDF Fort de France 46.25 14 P **P 02 07 41.5 -1.5**
MLPR Magueyes Islan 48.57 6 P **P 02 08 00.5 -0.5**
CRPR Cabo Rojo, PR 48.60 6 P **P 02 08 01.0 -0.2**
SJG San Juan 48.79 7 LR LR 02 30 43.8
comp=Z,60nm,19.0s,baz=144,slow=39
SJG San Juan 48.79 7 P **P 02 08 02.1 -0.5**
SJG San Juan 48.79 7 P **P 02 07 59.4 -3.3**
SJG pP **pP 02 08 15.2 +0.4**
PRSN Puerto Rico Se 48.80 6 P **P 02 08 02.1 -0.6**
CBYP Canovanas 48.98 7 P **P 02 08 03.6 -0.6**
CBYP pP **pP 02 08 14.9 -1.4**
GCPR Guaynabo City 48.99 7 P **P 02 08 03.5 -0.8**
STVI Saint Thomas 49.16 8 P **P 02 08 04.3 -1.2**
BELA Belgrano 2 50.06 170 P **P 02 08 12.2 +0.4**
BELA pP **pP 02 08 23.4 -0.6**
VNA3 Neumayer Olymp 52.27 159 P **P 02 08 28.5 0.0**
VNA3 Neumayer Olymp 52.27 159 PcP **PcP 02 09 38.9 -0.4**
VNA1 Neumayer--Stat 52.56 158 P **P 02 08 31.0 +0.4**
VNA1 Neumayer--Stat 52.56 158 PcP **PcP 02 09 40.5 +0.2**
VNA2 Neumayer--Watz 52.91 158 P **P 02 08 33.1 -0.1**
baz=282,slow=8.0
VNA2 Neumayer--Watz 52.91 158 PcP **PcP 02 09 40.6 -1.1**
VNA2 S **S 02 15 57.7 -1.2**
TEIG Tepich 53.12 340 P **P 02 08 35.8 +0.6**
SNAA Sanae 54.50 159 P **P 02 08 44.8 -0.1**
SNAA Sanae 54.50 159 PcP **PcP 02 09 46.8 -0.9**
SNAA Sanae 54.50 159 P **P 02 08 44.9 +0.1**
comp=Z,11nm,0.6s,baz=308,slow=4.3,SNR=5.8
comp=Z,11nm,0.6s
SNAA Sanae 54.50 159 P **P 02 08 44.6 -0.2**
SNAA IAmb IAmb 02 08 45.3
comp=Z,13nm,0.7s
TROLL Troll, Antarti 56.21 159 P **P 02 08 57.2 0.0**
TROLL Troll, Antarti 56.21 159 PcP **PcP 02 09 54.9 +0.4**
RKT Rikitea 56.43 261 eT T 03 09 47.8
comp=Z,10nm,0.2s
QSPA South Pole Qui 59.54 180 LR LR 02 36 33.9
comp=Z,52nm,19.3s,baz=329,slow=38
QSPA South Pole Qui 59.54 180 P **P 02 09 20.9 +0.2**
QSPA IAmb IAmb 02 09 22.4
comp=Z,19nm,1.1s
QSPA South Pole Qui 59.54 180 P **P 02 09 20.2 -0.5**
QSPA pP **pP 02 09 35.5 +2.4**
QSPA sP **sP 02 09 40.2 +2.1**
152A Waverly Hall 64.24 348 P **P 02 09 52.1 -0.2**
152A IAmb IAmb 02 11 16.5
comp=Z,27nm,1.6s
833A Chaparral WMA, 64.42 333 P **P 02 09 55.2 +1.6**
833A Chaparral WMA, 64.42 333 P **P 02 09 55.5 +1.9**
baz=154
GOGA Godfrey 64.74 349 P **P 02 09 55.9 +0.3**
baz=169
LRAL Lakeview Retre 65.04 346 P **P 02 09 58.0 +0.4**
baz=165
VBMS Vicksburg 65.10 342 P **P 02 09 58.4 +0.4**
baz=162
NATX Nacogdoches 65.86 338 P **P 02 10 04.2 +1.3**
baz=158
HPIG 65.93 327 IAmb IAmb 02 10 06.7
comp=Z,9.8nm,0.7s
435B Jarrell 65.95 336 P **P 02 10 05.1 +1.6**
baz=156
KMSC Kings Mountain 66.12 351 P **P 02 10 05.8 +1.3**
baz=171
SBA Scott Base 66.40 191 P **P 02 10 06.9 +1.0**
SBA pP **pP 02 10 18.3 -0.2**
SBA sP **sP 02 10 24.9 +1.5**
X48A Hartselle 66.42 346 IAmb IAmb 02 10 08.2
comp=Z,21nm,1.1s
JCT Junction City 66.50 334 P **P 02 10 08.1 +1.0**
baz=154
W50A Signal Mountai 66.81 348 IAmb IAmb 02 10 10.8
comp=Z,28nm,1.2s
V53A Saluda 66.85 350 IAmb IAmb 02 10 10.8
comp=Z,16nm,0.9s
CPCT Cooper Cave 66.91 348 IAmb IAmb 02 10 11.3
comp=Z,17nm,0.9s
SWET Sewanee 66.94 347 P **P 02 10 10.3 +0.5**
SWET IAmb IAmb 02 10 11.5
comp=Z,27nm,1.2s
U59A Littleton 66.94 355 IAmb IAmb 02 10 12.0
comp=Z,19nm,1.1s
OXF Oxford 67.00 344 P **P 02 10 10.8 +0.6**
baz=163
WHTX Lake Whitney, 67.00 336 IAmb IAmb 02 10 12.7
comp=Z,19nm,0.8s
WHTX Lake Whitney, 67.00 336 P **P 02 10 11.5 +1.3**
baz=156
TXAR Lajitas Array 67.08 330 P **P 02 10 12.8 +1.9**
comp=Z,5.5nm,0.7s,baz=155,slow=8.5,SNR=74
comp=Z,5.5nm,0.7s
V52A Sevierville 67.14 349 IAmb IAmb 02 10 12.3
comp=Z,14nm,0.8s
PLAL Pickwick Lake 67.15 345 P **P 02 10 11.2 +0.1**
PLAL IAmb IAmb 02 10 13.2
comp=Z,17nm,1.3s
WLAR White Oak Lake 67.19 341 IAmb IAmb 02 10 14.6
comp=Z,29nm,1.3s
V51A Loudon 67.23 349 P **P 02 10 10.8 -0.7**
V51A IAmb IAmb 02 10 13.0
comp=Z,20nm,0.9s
VNDA Vanda 67.43 191 P **P 02 10 14.1 +1.7**
comp=Z,1.8nm,0.7s,baz=122,slow=6.5,SNR=11
comp=Z,1.8nm,0.7s
VNDA Vanda 67.43 191 P **P 02 10 12.7 +0.3**
VNDA Vanda 67.43 191 P **P 02 10 13.0 +0.6**
T59A Double "B" Far 67.54 355 IAmb IAmb 02 10 15.8
comp=Z,25nm,1.1s
U54A Nelsons Funny 67.55 351 IAmb IAmb 02 10 15.1
comp=Z,20nm,0.8s
V48A Smith Brothers 67.62 347 IAmb IAmb 02 10 16.5
comp=Z,22nm,1.1s
CLTN Cedars of Leba 67.86 347 IAmb IAmb 02 10 17.2
comp=Z,10nm,0.7s
BLA Blacksburg 68.05 352 P **P 02 10 17.7 +0.9**
baz=172
MIAR Mount Ida 68.13 340 P **P 02 10 18.1 +0.9**
baz=160
WVT Waverly 68.20 346 P **P 02 10 17.5 -0.2**
WVT Waverly 68.20 346 P **P 02 10 18.6 +0.9**
baz=165
WVT Waverly 68.20 346 P **P 02 10 16.7 -1.0**
WVT pP **pP 02 10 31.0 +0.8**
ABTX Abilene, Hawle 68.36 335 IAmb IAmb 02 10 21.3
comp=Z,19nm,0.9s
ABTX Abilene, Hawle 68.36 335 P **P 02 10 19.9 +1.1**
baz=154
TBI Tubuai 68.55 255 eLR LR 02 31 06.3
comp=Z,98nm,26.5s
TBI Tubuai 68.55 255 eT T 03 24 55.8
comp=Z,22nm,0.3s
X37A Clayton 68.71 339 IAmb IAmb 02 10 23.2
comp=Z,15nm,1.2s
T47A Sharon Grove 68.88 347 IAmb IAmb 02 10 24.1
comp=Z,23nm,1.0s
LCAR Lake Charles 68.91 343 IAmb IAmb 02 10 23.8
comp=Z,18nm,0.8s
FCAR Ozark Folk Cen 68.99 342 IAmb IAmb 02 10 23.8
comp=Z,37nm,1.8s
MEH Mehetia 69.76 261 eT T 03 26 33.0
comp=Z,50nm,0.2s
HHAR Hobbs 69.86 341 P **P 02 10 28.8 +0.8**
WCI Wyandotte Cave 69.93 348 P **P 02 10 28.4 0.0**
baz=166
WMOK Wichita Mounta 69.96 336 P **P 02 10 29.4 +0.7**
baz=155
Q52A Bidwell 70.01 351 IAmb IAmb 02 10 30.3
comp=Z,23nm,1.1s
S44A Carbondale 70.01 345 IAmb IAmb 02 10 30.5
comp=Z,23nm,0.8s
TUL1 Leonard 70.06 339 P **P 02 10 29.9 +0.7**
baz=158
Q51A Peebles 70.22 350 IAmb IAmb 02 10 31.6
comp=Z,16nm,0.9s
WUPA West Chester U 70.36 357 P **P 02 10 32.1 +1.2**
MCWV Mont Chateau 70.41 353 P **P 02 10 32.0 +0.7**
baz=172
OK031 S. Brethren Rd 70.42 338 IAmb IAmb 02 10 33.2
comp=Z,24nm,0.9s
OK034 N. Norfolk Rd. 70.44 339 IAmb IAmb 02 10 33.4
comp=Z,27nm,1.0s
OK029 Liberty Lake 70.48 338 IAmb IAmb 02 10 33.6
comp=Z,22nm,0.9s
P51A Williamsport 70.63 351 IAmb IAmb 02 10 33.5
comp=Z,17nm,0.7s
P52A Corning 70.65 351 P **P 02 10 33.7 +1.0**
baz=170
MSTX Muleshoe 70.75 333 P **P 02 10 34.7 +1.1**
baz=152
OK044 Pawnee Station 70.79 339 IAmb IAmb 02 10 35.8
comp=Z,24nm,1.0s
CCM Cathedral Cave 70.82 344 P **P 02 10 34.3 +0.5**
CCM Cathedral Cave 70.82 344 P **P 02 10 34.7 +0.8**
baz=162
CCM Cathedral Cave 70.82 344 P **P 02 10 33.2 -0.6**
CCM pP **pP 02 10 45.1 -1.3**
OK046 Pawnee Station 70.85 339 IAmb IAmb 02 10 36.1
comp=Z,20nm,0.9s
OK051 E0350 and S346 70.93 339 IAmb IAmb 02 10 36.6
comp=Z,23nm,0.9s
P49A Miami Univ. Ec 70.93 349 IAmb IAmb 02 10 34.9
comp=Z,12nm,0.8s
P49A Miami Univ. Ec 70.93 349 P **P 02 10 35.0 +0.6**
baz=168
P48A Milroy 70.97 349 IAmb IAmb 02 10 35.6
comp=Z,18nm,0.7s
OK049 E0420 Rd and N 70.99 338 P **P 02 10 34.8 -0.1**
OK049 IAmb IAmb 02 10 36.8
comp=Z,22nm,0.9s
TIAR Tiarei 70.99 261 eT T 03 28 03.2
comp=Z,4.8nm,0.3s
S39A Bolivar 71.01 342 IAmb IAmb 02 10 37.0
comp=Z,21nm,1.1s
AMTX Amarillo 71.14 334 IAmb IAmb 02 10 38.9
comp=Z,12nm,0.8s
AMTX Amarillo 71.14 334 P **P 02 10 37.3 +1.4**
baz=153
O53A New Philadelph 71.15 352 P **P 02 10 36.4 +0.6**
baz=171
PPT2 Papeete2 71.17 260 eLR LR 02 32 19.2
comp=Z,125nm,24.8s
SSPA Standing Stone 71.21 355 P **P 02 10 36.8 +0.8**
baz=174
SSPA Standing Stone 71.21 355 P **P 02 10 36.9 +0.8**
T35A Sooner Cattle 71.21 339 IAmb IAmb 02 10 39.0
comp=Z,18nm,0.9s
ACSO Alum Creek Sta 71.35 351 P **P 02 10 37.7 +0.7**
baz=170,SNR=5.9
319A Douglas 71.36 326 IAmb IAmb 02 10 40.8
comp=Z,14nm,1.0s
O49A Covington 71.51 350 IAmb IAmb 02 10 39.2
comp=Z,20nm,0.9s
U32A Winter Ranch, 71.52 337 IAmb IAmb 02 10 40.4
comp=Z,24nm,0.9s
121A Cookes Peak, D 71.63 328 IAmb IAmb 02 10 42.6
comp=Z,18nm,0.9s
121A Cookes Peak, D 71.63 328 P **P 02 10 41.3 +2.2**
baz=148
O48B Farmland 71.71 349 P **P 02 10 39.4 +0.3**
baz=168,SNR=5.8
P43A Skaggs, Pawnee 71.94 345 IAmb IAmb 02 10 42.0
comp=Z,24nm,0.9s
M55A Ridgway 72.11 354 P **P 02 10 41.9 +0.4**
M55A IAmb IAmb 02 10 43.0
comp=Z,14nm,0.8s
SFIN Lafayette 72.16 348 IAmb IAmb 02 10 42.5
comp=Z,39nm,1.5s
SFIN Lafayette 72.16 348 P **P 02 10 41.7 -0.1**
baz=166

M53A	**WI Miller and**	72.26	353	P	P	02 10 42.8 +0.4
	baz=172					
P40A	**Paris**	72.42	343	P	P	02 10 43.3 0.0
P40A				pP	pP	02 10 56.0 0.0
L59A	**Walton**	72.59	357	IAmb	IAmb	02 10 46.9
	comp=Z,17nm,0.9s					
BINY	**Binghamton**	72.64	357	P	P	02 10 46.3 +1.6
	baz=176					
L56A	**Greenwood**	72.67	355	IAmb	IAmb	02 10 47.1
	comp=Z,22nm,0.9s					
L61B	**Northampton**	72.78	359	IAmb	IAmb	02 10 47.9
	comp=Z,14nm,0.8s					
L61B	**Northampton**	72.78	359	P	P	02 10 47.2 +1.7
	baz=179					
HRV	**Adam Dziewonsk**	72.83	360	P	P	02 10 47.8 +2.0
	baz=180					
TUC	**Tucson**	72.85	326	P	P	02 10 48.0 +1.7
	baz=145					
ERPA	**Erie**	72.86	353	P	P	02 10 47.3 +1.3
	baz=172					
P38A	**Dawn**	72.88	342	IAmb	IAmb	02 10 47.8
	comp=Z,22nm,0.9s					
WVNY	**West Valley, N**	73.02	355	IAmb	IAmb	02 10 49.1
	comp=Z,22nm,0.8s					
ANMO	**Albuquerque**	73.10	331	LR	LR	02 38 30.7
	comp=Z,90nm,21.5s,baz=301,slow=32					
ANMO	**Albuquerque**	73.10	331	P	P	02 10 48.9 +1.1
ANMO	**Albuquerque**	73.10	331	P	P	02 10 49.9 +2.0
	baz=149					
L48A	**N Adams**	73.24	350	IAmb	IAmb	02 10 49.2
	comp=Z,20nm,0.8s					
KSU1	**Kansas State U**	73.25	340	IAmb	IAmb	02 10 49.9
	comp=Z,24nm,1.3s					
KSU1	**Kansas State U**	73.25	340	P	P	02 10 49.0 +0.6
	baz=158					
R32A	**Long Quarter,**	73.28	338	IAmb	IAmb	02 10 51.0
	comp=Z,13nm,0.8s					
MMNY	**Mt. Morris Dam**	73.29	355	IAmb	IAmb	02 10 50.0
	comp=Z,12nm,0.7s					
M44A	**Midewin, Midew**	73.32	347	IAmb	IAmb	02 10 50.3
	comp=Z,23nm,0.9s					
LIC	**Lamto**	73.34	72⇑	eP	P	02 10 49.2 -0.3
	comp=Z,23nm,0.5s					
214A	**Organ Pipe Nat**	73.57	324	P	P	02 10 51.7 +1.3
214A				IAmb	IAmb	02 10 53.9
	comp=Z,15nm,1.0s					
214A	**Organ Pipe Nat**	73.57	324	P	P	02 10 52.6 +2.1
	baz=144,SNR=8.9					
TIC	**Toumodi**	73.58	72⇑	eP	P	02 10 50.6 -0.3
	comp=Z,10nm,0.4s					
KIC	**Kosan Boka**	73.65	72⇑	eP	P	02 10 50.9 -0.4
	comp=Z,12nm,0.5s					
DBIC	**Dimbokro**	73.73	72	P	P	02 10 51.7 0.0
	comp=Z,22nm,0.6s,baz=232,slow=5.7,SNR=42					
DBIC				LR	LR	02 40 58.0
	comp=Z,82nm,19.2s,baz=234,slow=34					
	comp=Z,22nm,0.6s					
DBIC	**Dimbokro**	73.73	72	P	P	02 10 51.2 -0.6
CBKS	**Cedar Bluff**	73.97	337	IAmb	IAmb	02 10 55.1
	comp=Z,21nm,0.8s					
CBKS	**Cedar Bluff**	73.97	337	P	P	02 10 54.0 +1.3
	baz=155					
T25A	**Trinidad**	74.16	333	IAmb	IAmb	02 10 57.3
	comp=Z,22nm,1.0s					
T25A	**Trinidad**	74.16	333	P	P	02 10 56.1 +2.1
	baz=151					
LBNH	**Lisbon**	74.56	360	P	P	02 10 58.2 +2.2
	baz=180					
W18A	**Petrified Fore**	74.68	328	P	P	02 10 59.1 +2.1
	baz=147					
SCIA	**State Center**	74.95	343	IAmb	IAmb	02 11 00.7
	comp=Z,27nm,1.1s					
SCIA	**State Center**	74.95	343	P	P	02 10 59.1 +1.0
	baz=161					
LONY	**Lake Ozonia**	75.00	358	P	P	02 10 59.5 +1.1
	baz=177					
SDCO	**Great Sand Dun**	75.12	333	P	P	02 11 01.3 +1.7
	baz=150,SNR=10					
KSCO	**Kaye Shedlock'**	75.14	335	P	P	02 11 01.4 +1.8
	baz=153					
JFWS	**Jewell Farm**	75.23	346	P	P	02 11 00.4 +0.6
JFWS				IAmb	IAmb	02 11 01.6
	comp=Z,34nm,1.3s					
JFWS	**Jewell Farm**	75.23	346	P	P	02 11 00.4 +0.6
	baz=163					
SADO	**Sadowa**	75.41	354	IAmb	IAmb	02 11 02.3
	comp=Z,18nm,1.0s					
S22A	**4UR Ranch, Cre**	75.65	332	P	P	02 11 04.9 +2.2
	baz=149,SNR=7.0					
WUAZ	**Wupatki**	75.76	327	IAmb	IAmb	02 11 06.8
	comp=Z,15nm,1.0s					
WUAZ	**Wupatki**	75.76	327	P	P	02 11 05.8 +2.6
	baz=145,SNR=12					
IKP	**In-Ko-Pah, Jac**	75.82	322	P	P	02 11 05.8 +2.4
	baz=142					
BGNE	**Belgrade**	75.83	340	P	P	02 11 05.0 +1.7
	baz=157					
SWSC	**Sam W. Stewart**	75.88	323	P	P	02 11 06.2 +2.5
	baz=142					
MVCO	**Mesa Verde**	75.89	330	P	P	02 11 05.8 +1.8
	baz=148,SNR=9.9					
Q24A	**Divide**	76.04	334	P	P	02 11 06.8 +1.9
	baz=151,SNR=6.1					
PDMCI	**Parker Dam,Lak**	76.11	325	P	P	02 11 07.2 +2.2
	baz=143					
MONP2	**Monument Peak**	76.17	322	P	P	02 11 07.6 +2.0
	baz=141					
MAW	**Mawson**	76.23	164	P	P	02 11 06.3 +1.0
	comp=Z,7.2nm,0.5s,baz=203,slow=5.2,SNR=23					
MAW				LR	LR	02 47 24.1
	comp=Z,74nm,18.1s,baz=216,slow=38					
	comp=Z,7.2nm,0.5s					
MAW	**Mawson**	76.23	164	P	P	02 11 05.5 +0.2
I40A	**Norwalk**	76.24	346	IAmb	IAmb	02 11 07.1
	comp=Z,17nm,1.1s					
BC3	**Big Chuckawall**	76.26	323	P	P	02 11 07.9 +1.9
	baz=142,SNR=8.8					
IRM	**Iron Mountain**	76.50	324	P	P	02 11 09.7 +2.4
	baz=142,SNR=7.2					
TRQ	**Mont Tremblant**	76.60	358	IAmb	IAmb	02 11 09.2
	comp=Z,11nm,0.8s					
TPFO	**Pinon Flats**	76.74	323	P	P	02 11 11.5 +2.8
	baz=141					
PFO	**Pinyon Flats O**	76.75	323	P	P	02 11 10.4 +1.6
PFO	**Pinyon Flats O**	76.75	323	P	P	02 11 11.9 +3.1
	baz=141,SNR=5.6					
BELC	**Belle Mtn. Jos**	76.81	323	P	P	02 11 11.3 +2.1
	baz=142					
MURC	**Murrieta**	77.12	322	P	P	02 11 13.2 +2.4
	baz=141					
GMRC	**Granite Mounta**	77.25	324	P	P	02 11 14.2 +2.5
	baz=142,SNR=10					
D62A	**Allapoint, All**	77.44	2	P	P	02 11 12.6 +0.4
D62A				IAmb	IAmb	02 11 15.2
	comp=Z,28nm,1.2s					
ECSD	**EROS Data Cent**	77.54	342	P	P	02 11 13.7 +0.9
	baz=158,SNR=29					
V12A	**Nelson**	77.60	325	IAmb	IAmb	02 11 16.5
	comp=Z,12nm,0.9s					
HEC	**Hector,Ludlow**	77.63	324	P	P	02 11 15.9 +2.2
	baz=142,SNR=6.5					
BFSC	**Mount Baldy Ra**	77.86	322	P	P	02 11 16.9 +1.8
	baz=141,SNR=6.2					
TUQ	**Turquoise Moun**	77.90	324	P	P	02 11 16.9 +1.7
	baz=142,SNR=7.9					
SPMN	**Marine on St.**	77.99	345	IAmb	IAmb	02 11 16.5
	comp=Z,16nm,0.9s					
SPMN	**Marine on St.**	77.99	345	P	P	02 11 15.9 +0.6
	baz=161					
N23A	**Red Feather La**	78.02	334	P	P	02 11 18.0 +2.1
	baz=150,SNR=7.1					
RAR	**Rarotonga**	78.03	252	LR	LR	02 37 41.3
	comp=Z,25nm,19.4s,baz=142,slow=29					
GSC	**Goldstone, Bar**	78.24	324	P	P	02 11 19.1 +2.0
	baz=141,SNR=6.4					
O20A	**White River Ci**	78.26	332	P	P	02 11 19.0 +1.7
	baz=148,SNR=7.3					
SHPR	**Sheep Range**	78.37	325	P	P	02 11 19.5 +1.7
SHOC	**Shoshone, Teco**	78.44	324	P	P	02 11 20.1 +2.0
	baz=142					
EDW2	**Edwards Air Fo**	78.53	323	P	P	02 11 20.2 +1.6
	baz=141,SNR=5.7					
VLDQ	**Val d'Or**	78.62	356	IAmb	IAmb	02 11 33.2
	comp=Z,36nm,1.4s					
F36A	**Milaca**	78.76	345	IAmb	IAmb	02 11 20.8
	comp=Z,14nm,0.8s					
LRMC	**Laurel Mtn Rad**	78.83	323	P	P	02 11 22.2 +1.8
	baz=141					
KOWA	**Kowa**	78.89	66	LR	LR	02 46 24.3
	comp=Z,57nm,18.1s,baz=152,slow=36					
KOWA	**Kowa**	78.89	66	P	P	02 11 20.2 -0.7
KOWA				IAmb	IAmb	02 11 21.9
	comp=Z,12nm,0.7s					
PRN	**Pahroc Range**	79.03	326	IAmb	IAmb	02 11 25.1
	comp=Z,18nm,1.0s					
RDMU	**Red Mountain**	79.17	331	IAmb	IAmb	02 11 24.8
	comp=Z,13nm,0.9s					
MPMC	**Manual Prospec**	79.18	324	P	P	02 11 24.0 +1.7
	baz=141,SNR=6.4					
FURC	**Furnace Creek,**	79.18	324	P	P	02 11 24.6 +2.6
	baz=142					
RWWY	**Rawlins**	79.18	334	IAmb	IAmb	02 11 25.2
	comp=Z,22nm,1.1s					
TPNV	**Topopah Spring**	79.25	325	P	P	02 11 24.9 +2.2
	baz=142,SNR=10					
ISA	**Isabella, Lake**	79.38	323	P	P	02 11 25.7 +2.4
	baz=140,SNR=8.0					
PKM	**Mcpherson Peak**	79.50	321	P	P	02 11 26.3 +2.2
	baz=139					
TSUM	**Tsumeb**	79.72	106	LR	LR	02 41 50.8
	comp=Z,58nm,20.1s,baz=184,slow=32					
TSUM	**Tsumeb**	79.72	106	P	P	02 11 25.6 -0.1
NLU	**North Lily Min**	79.72	329	P	P	02 11 26.0 +0.8
K22A	**Casper**	79.75	335	P	P	02 11 26.3 +1.0
K22A				IAmb	IAmb	02 11 28.2
	comp=Z,20nm,1.1s					
K22A	**Casper**	79.75	335	P	P	02 11 27.1 +1.8
	baz=150					
CWC	**Cottonwood Cre**	79.78	324	P	P	02 11 27.6 +2.0
	baz=141					
VES	**Vestal, Richgr**	79.84	322	P	P	02 11 27.6 +1.9
	baz=140,SNR=6.4					
GRAC	**Grapevine Rang**	79.84	324	P	P	02 11 27.9 +2.1
	baz=141					
R11A	**Troy Canyon, C**	80.03	326	P	P	02 11 29.3 +2.4
	baz=143,SNR=10					
RSSD	**Black Hills**	80.16	337	P	P	02 11 28.1 +0.6
RSSD	**Black Hills**	80.16	337	P	P	02 11 28.9 +1.4
	baz=152					
DUG	**Dugway, Tooele**	80.24	329	IAmb	IAmb	02 11 44.2
	comp=Z,30nm,1.8s					
DUG	**Dugway, Tooele**	80.24	329	P	P	02 11 29.5 +1.6
	baz=145,SNR=6.6					
EYMN	**Ely**	80.30	347	P	P	02 11 28.3 +0.4
	baz=163,SNR=5.5					
HWUT	**Hardware Ranch**	80.86	331	IAmb	IAmb	02 11 33.6
	comp=Z,12nm,0.8s					
BGU	**Big Grassy Mou**	80.93	329		P	02 11 31.6 -0.1
BGU					pP	02 11 43.4 -1.1
BW06	**Boulder Array**	81.01	333	P	P	02 11 33.4 +1.2
	baz=148					
PDAR	**Pinedale Array**	81.01	333	P	P	02 11 32.8 +0.7
	comp=Z,1.3nm,0.6s,baz=138,slow=7.1,SNR=11					
	comp=Z,1.3nm,0.6s					
B35A	**Bob, Littlefor**	81.16	345	IAmb	IAmb	02 11 33.8
	comp=Z,16nm,0.7s					
BOSA	**Boshof**	81.24	118	P	P	02 11 34.1 +0.4
	comp=Z,13nm,0.9s,baz=237,slow=4.3,SNR=14					
BOSA				LR	LR	02 42 12.9
	comp=Z,43nm,21.2s,baz=220,slow=32					
	comp=Z,13nm,0.9s					
BOSA	**Boshof**	81.24	118	P	P	02 11 32.5 -1.2
E28A	**Huff**	81.30	340	IAmb	IAmb	02 11 35.0
	comp=Z,19nm,0.7s					
NVAR	**Mina Array Bea**	81.42	325	P	P	02 11 36.2 +1.8
	comp=Z,3.1nm,0.8s,baz=157,slow=6.5,SNR=22					
NVAR				pP	pP	02 11 48.8 +1.5
	comp=Z,2.4nm,0.8s,baz=154,slow=5.6,SNR=9.4					
	comp=Z,3.1nm,0.8s					
AGMN	**Agassiz Nation**	81.59	344	IAmb	IAmb	02 11 36.3
	comp=Z,13nm,0.7s					
AGMN	**Agassiz Nation**	81.59	344	P	P	02 11 35.6 +0.9
	baz=159,SNR=6.2					
WAKR	**Walker**	82.05	324	IAmb	IAmb	02 11 54.7
	comp=Z,31nm,1.8s					
MDND	**Maddock**	82.14	341	P	P	02 11 38.8 +1.1
	baz=156,SNR=8.3					
PNTR	**Pine Nut**	82.58	324	IAmb	IAmb	02 11 57.0
	comp=Z,12nm,0.8s					
TORD	**Torodi Ar. Bea**	82.68	70	P	P	02 11 41.4 +0.1
	comp=Z,8.0nm,0.7s,baz=278,slow=6.3,SNR=167					
TORD				pP	pP	02 11 53.0 -1.2
	comp=Z,9.6nm,0.9s,baz=249,slow=4.5,SNR=13					
	comp=Z,8.0nm,0.7s					
RLMT	**Red Lodge**	82.89	334	IAmb	IAmb	02 12 08.9
	comp=Z,23nm,1.9s					
RLMT	**Red Lodge**	82.89	334	P	P	02 11 42.6 +0.7
	baz=148					
LAO	**LASA Array**	83.15	337	IAmb	IAmb	02 11 45.1
	comp=Z,15nm,1.1s					
LAO	**LASA Array**	83.15	337	P	P	02 11 44.1 +1.1
	baz=150,SNR=5.9					
LBTB	**Lobatse**	83.31	115	LR	LR	02 44 33.2
	comp=Z,75nm,20.1s,baz=154,slow=33					
LBTB	**Lobatse**	83.31	115	P	P	02 11 43.5 -1.1
CASY	**Casey**	83.33	181	P	P	02 11 44.0 +0.2
CASY				IAmb	IAmb	02 11 45.6
	comp=Z,18nm,1.1s					
ULM	**Lac du Bonnet**	83.42	345	P	P	02 11 44.5 +0.2
	comp=Z,13nm,0.8s,baz=154,slow=6.8,SNR=13					
ULM				pP	pP	02 11 57.3 +0.1
	comp=Z,9.1nm,1.0s,baz=164,slow=3.3,SNR=4.0					
	comp=Z,13nm,0.8s					
ULM	**Lac du Bonnet**	83.42	345	IAmb	IAmb	02 11 45.5
	comp=Z,17nm,0.9s					
HLID	**Hailey**	83.67	330	P	P	02 11 47.1 +1.2
	baz=144,SNR=8.4					
DGMT	**Dagmar**	84.05	339	P	P	02 11 48.7 +1.1
	baz=152,SNR=14					
BOZ	**Bozeman (W)**	84.20	333	P	P	02 11 49.7 +1.2
	baz=146					
MOD	**Modoc Plateau**	85.07	326	IAmb	IAmb	02 11 55.9
	comp=Z,18nm,1.6s					
J08A	**Circle Bar Ran**	85.32	328	IAmb	IAmb	02 11 56.9
	comp=Z,18nm,1.2s					
K05A	**Summer Lake**	85.98	326	P	P	02 11 58.9 +1.3
K05A				IAmb	IAmb	02 12 13.5
	comp=Z,14nm,1.2s					
MSO	**Missoula**	86.12	332	P	P	02 11 59.0 +0.9
	baz=144					
YBH	**Yreka Blue Hor**	86.13	324	IAmb	IAmb	02 12 00.1
	comp=Z,17nm,1.8s					
I07A	**Izee**	86.35	328	IAmb	IAmb	02 12 14.8
	comp=Z,30nm,2.0s					
PINE	**Pine Mountain**	86.80	327	IAmb	IAmb	02 12 04.1
	comp=Z,7.0nm,0.7s					
JTMT	**Jette**	87.01	333	IAmb	IAmb	02 12 04.4
	comp=Z,5.9nm,0.6s					
G08A	**Pilot Rock**	87.03	329	IAmb	IAmb	02 12 05.0
	comp=Z,21nm,1.9s					
DBO	**Dodson Butte**	87.42	325	IAmb	IAmb	02 12 20.8
	comp=Z,20nm,1.6s					
H04A	**Detroit Lake**	88.06	326	P	P	02 12 07.6 +0.2
H04A				IAmb	IAmb	02 12 09.3
	comp=Z,7.4nm,0.8s					
NEW	**Newport**	88.56	331	LR	LR	02 48 49.9
	comp=Z,56nm,18.1s,baz=261,slow=34					
NEW	**Newport**	88.56	331	P	P	02 12 11.1 +1.4
	baz=142					
MDT	**Midelt**	89.40	51	LR	LR	02 53 35.6
	comp=Z,39nm,18.4s,baz=291,slow=36					
LSZ	**Lusaka**	90.43	108	LR	LR	02 48 30.6
	comp=Z,41nm,18.1s,baz=248,slow=33					
AFI	**Afiamalu**	91.57	253	LR	LR	02 43 37.5
	comp=Z,54nm,18.8s,baz=114,slow=29					
DZM	**Mont Dzumac**	103.53	234	eLR	LR	02 47 19.0
	comp=Z,113nm,24.9s					
YUK8	**Steele Glacier**	106.88	332	P	PKiKP	02 17 42.6 +0.3
	baz=123					
M29M	**Somme Creek**	107.01	333	P	PKiKP	02 17 43.4 +1.1
	baz=124					
MESA	**MESA**	107.19	330	P	PKiKP	02 17 43.8 +0.9
	baz=122					
F31M	**Tsiigehtchic**	108.27	339	P	PKiKP	02 17 45.8 +1.4
	baz=127					
J26L	**Joseph Creek**	110.04	334	P	PKiKP	02 17 48.9 +0.9
	baz=119					
Q20K	**Shuyak Island**	111.17	326	P	PKiKP	02 17 51.5 +1.5
	baz=114					
TRF	**Thorofare Moun**	112.22	332	P	PKiKP	02 17 52.9 +0.7
	baz=114					
C26K	**Camden Bay**	113.04	339	P	PKiKP	02 17 54.7 +1.3
	baz=116					
N18K	**Kilae Creek**	113.60	328	P	PKiKP	02 17 55.6 +0.9
	baz=111					
H22K	**Ishtalitna Cre**	113.61	334	P	PKiKP	02 17 55.4 +0.8
	baz=112					
J20K	**Nowinta River**	114.08	332	P	PKiKP	02 17 57.1 +1.6
	baz=111					
E22K	**Anaktuvuk Pass**	114.60	336	P	PKiKP	02 17 58.1 +1.6
	baz=111					
AKASG	**Malin Array Be**	119.61	46	PKP	PKPdf	02 18 05.2 -1.4
	comp=Z,0.3nm,0.3s,baz=263,slow=1.3,SNR=5.4					
WRA	**Warramunga Arr**	123.85	210	PKP	PKPdf	02 18 14.7 -1.1
	comp=Z,0.5nm,0.4s,baz=152,slow=1.8,SNR=13					
WRA				pPKP	pPKPdf	02 18 29.0 -0.2
	comp=Z,0.4nm,0.4s,baz=155,slow=1.8,SNR=3.6					
WRA				PKKPab	PKKPbc	02 28 01.3 -0.5
	comp=Z,0.3nm,0.9s,baz=336,slow=4.5,SNR=4.6					
H11S2	**WAKE ISLAND Hyl**	26.19	271	T	T	04 37 06.5
	baz=116,slow=75,SNR=85					
H11S1	**WAKE ISLAND Hyl**	26.20	271	T	T	04 37 08.1
	baz=116,slow=75,SNR=132					
H11S3	**WAKE ISLAND Hyl**	26.20	271	T	T	04 37 07.8
	baz=116,slow=75,SNR=35					
KLMR	**Klimovskoe**	126.46	35	ePKPdf	PKPdf	02 18 16.2 -3.1
KLMR				AMP		02 18 20.0
	comp=Z,8.0nm,1.0s					
KLMR				e		02 21 16.3
H11N3	**WAKE ISLAND Hyl**	26.52	273	T	T	04 37 32.8
	baz=117,slow=74,SNR=12					
H11N1	**WAKE ISLAND Hyl**	26.53	273	T	T	04 37 31.7
	baz=117,SNR=11					
H11N2	**WAKE ISLAND Hyl**	26.53	273	T	T	04 37 34.3
	baz=117,slow=74,SNR=17					
ABKAR	**Akbulak array**	139.24	49		PKPpre	02 18 35.3
BRVK	**Borovoye**	144.45	40	PKPdf	PKPbc	02 18 51.8 +0.3
LUWI	**Luwuk**	145.63	206	PKPdf	PKPdf	02 18 53.7 -2.5
YAK	**Yakutsk**	145.73	342	PKPdf	PKPbc	02 18 55.2 -0.1
CHGR	**Chuyangaron**	146.91	65		PKPdf	02 18 57.2 -0.5
KK31	**Karatay Array**	147.49	57		PKPdf	02 18 57.8 -0.7
KKAR	**Karatay Array**	147.49	57	PKPbc	PKPbc	02 19 00.6 -0.5
GAR	**Garm**	147.80	65	PKPbc	PKPdf	02 19 00.6 +1.3
TOLI2	**Tolitoli**	148.35	204	PKPbc	PKPdf	02 19 01.8 +1.0
HYBB	**Hyderabad (bro**	149.77	109	ePKiKP	PKPbc	02 19 08.1 +0.4
HYBB				epPKiKP	sPKPdf	02 19 21.2 +0.1
EKS2	**Erkin-Say**	149.93	57	P	PKiKP	02 19 08.4 0.0
	SNR=6.5					
KURK	**Kurchatov**	150.11	39	PKPbc	PKPbc	02 19 06.0 -1.4
USP	**Ospenovka**	150.31	55	P	PKPbc	02 19 08.7 +0.4
	SNR=6.7					
AAK	**Ala-Archa**	150.45	57	P	PKiKP	02 19 09.6 +0.1
	SNR=5.3					
AAK	**Ala-Archa**	150.45	57	PKPbc	PKiKP	02 19 09.2 -0.3
UCH	**Uchtor**	150.55	58	P	PKiKP	02 19 10.1 -0.1
	SNR=10					
RPSI	**Rantau Prapat**	150.73	160	PKPdf	PKPdf	02 19 04.6 +0.1
RPSI				PKPab	PKPab	02 19 15.4 -1.6
ZAA0	**Zalesovo Array**	151.17	29	PKPbc	PKPbc	02 19 09.3 -0.6
ZALV	**Zalesovo Beam**	151.17	29	PKP	PKPdf	02 19 04.0 +0.1
	comp=Z,30nm,0.6s,baz=341,slow=3.6,SNR=4.5					
ZALV				PKPbc	PKPbc	02 19 10.2 +0.3
	comp=Z,31nm,0.6s,baz=311,slow=3.3,SNR=60					
ZALV	**Zalesovo Beam**	151.17	29	PKPdf	PKPdf	02 19 03.9 0.0
ZALV				PKPbc	PKPbc	02 19 10.0 +0.2
TKM2	**Tokmak 2**	151.17	56	P	PKiKP	02 19 10.9 -0.1
	SNR=8.4					
NRN	**Naryn**	151.80	59	PKPdf	PKPdf	02 19 06.0 +0.3
NRN				PKPbc	PKPbc	02 19 11.9 -0.2
NRN				PKPab	PKPab	02 19 20.9 -0.4
KSH	**Kashi**	152.12	63	PKPbc	PKiKP	02 19 12.9 -0.1
KSH				pPKP	PKPab	02 19 21.8 -0.6
KSH				sPKP		02 19 33.1
MK31	**Makanchi Array**	154.18	44	PKPdf	PKPdf	02 19 08.1 -0.6
MKAR	**Makanchi Array**	154.18	44	PKPbc	PKPbc	02 19 16.6 -0.3
	comp=Z,2.7nm,0.8s,baz=290,slow=2.0,SNR=13					
MKAR				PKPab	PKPab	02 19 31.1 +0.4
	comp=Z,4.0nm,0.9s,baz=258,slow=2.4,SNR=9.3					
MKAR				pPKPab	pPKPab	02 19 44.3 +0.4
	comp=Z,3.3nm,0.8s,baz=289,slow=3.0,SNR=6.9					
MKAR	**Makanchi Array**	154.18	44	PKPdf	PKPdf	02 19 07.8 -0.8
MKAR					PKPbc	02 19 15.7 -1.2
MKAR				PKPab	pPKPbc	02 19 29.6 -0.6
MJAR	**Matsushiro Arr**	154.61	291	PKPab	PKPab	02 19 34.5 +1.5
	comp=Z,6.1nm,0.8s,baz=113,slow=2.3,SNR=11					
WMQ	**Urumqi**	158.97	46	eP	PKPdf	02 19 16.0 +1.0
SONM	**Songino Array**	162.80	5	PKPab	PKPab	02 20 08.8 +0.7
	comp=Z,0.8nm,0.7s,baz=316,slow=4.0,SNR=4.2					
SONM				PP	PP	02 23 52.9 +0.8
	comp=Z,0.9nm,0.9s,baz=357,slow=3.0,SNR=5.0					
CMAR	**Chiang Mai Arr**	165.07	142	PKPab	PKPab	02 20 17.9 -0.7
	comp=Z,2.8nm,0.8s,baz=232,slow=7.1,SNR=11					
CMAR	**Chiang Mai Arr**	165.07	142	PKPab	PKPab	02 20 16.6 -2.1
XLT	**XiLinHaoTe**	165.49	338	ePKP	PKPdf	02 19 22.0 +0.4
HHC	**Hu-ho-hao-te**	169.55	347	eP	PKPdf	02 19 24.6 0.0
NJ2	**Nanjing**	171.01	281	eP	PKPdf	02 19 24.9 -0.6
PZH	**PanZhiHua**	172.77	124	PKP	PKPdf	02 19 25.3 -1.4
LZH	**Lanzhou**	173.37	34	ePKP	PKPdf	02 19 22.5 -4.2
LZH				pPKP	pPKPdf	02 19 33.9 -6.4
LZH				PKP	PKPab	02 20 52.5 -2.7
CD2	**Chengdu**	175.94	86	PKP	PKPdf	02 19 26.8 -0.7

CNRM ***12*** *02:08:41.4,35.70N×4.93W,h57km,ml2.5*
MDD ***12*** *02:08:42.2±0.5,35.77N×4.70W,h90km±6km,Mb2.1/8,*
Error ellipse: s-maj=4.2km s-min=3.0km az=156.0
INMG ***12*** *02:08:43.5±0.8,35.85N×4.79W,h77km±3km,ML1.9,Error*
ellipse: s-maj=3.3km s-min=2.2km az=4.0

ISC 12 02:08:39.9±1.3,**35.75N**±0.03°×**4.71W**±0.04,**h103**km±11km,
n31,σ1°**52**/59,**8C,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.82**	**356**	P	**Pn**	**02 08 58.4**	**-0.3**
EMIJ				S	**Sn**	**02 09 10.4**	**-2.4**
PALE	**Palemas**	**0.82**	**130**	P	**Pn**	**02 09 00.3**	**+1.5**
PALE				S	**Sn**	**02 09 10.5**	**-2.4**
EJIF	**Jimena Fronter**	**0.93**	**319**	P	**Pn**	**02 09 02.4**	**+2.5**
EJIF				S	**Sn**	**02 09 15.3**	**+0.5**
ELGU	**Los Guajares,**	**1.42**	**38**	P	**Pn**	**02 09 05.3**	**-0.1**

MESJ				IAML		02 10 13.5	
	comp=N,3.1nm,0.2s						
MESJ	**Messejana**	**3.51**	**308**	*eP*	**Pn**	**02 09 33.6**	**+1.1**
MESJ				*eS*	**Sn**	**02 10 11.9**	**-1.2**
MESJ				A	A	02 10 14.2	
	comp=N,1.3nm,0.1s						
EBAD	**Badajoz**	**3.52**	**329**	P	**Pn**	**02 09 34.1**	**+1.5**
EBAD				⇑*i*Vmb_V		02 09 34.4	
	comp=N,116nm,SNR=14						
EBAD				S	**Sn**	**02 10 11.8**	**-1.6**
MORF	**Marmelete**	**3.54**	**297**	*eS*	**Sn**	**02 10 11.6**	**-2.3**
MORF				IAML		02 10 14.5	
	comp=N,6.6nm,0.2s						
PFVI	**Vila Bisbo**	**3.60**	**294**	*eS*	**Sn**	**02 10 14.2**	**-1.0**
PTEO	**Sao Teotonio**	**3.69**	**300**	*eP*	**Pn**	**02 09 36.7**	**+1.8**
PTEO				*eS*	**Sn**	**02 10 16.8**	**-0.8**
PAB	**San Pablo**	**3.80**	**4**	P	**Pn**	**02 09 37.5**	**+1.0**
PAB				⇑*i*Vmb_V		02 09 39.5	
	comp=N,9.2nm,SNR=5.5						
PAB				S	**Sn**	**02 10 17.7**	**-2.6**
EVO	**Evora**	**3.83**	**317**	*eP*	**Pn**	**02 09 38.4**	**+1.6**
EVO				*eS*	**Sn**	**02 10 19.5**	**-1.4**
EVO				A	A	02 10 21.8	
	comp=N,2.2nm,0.1s						
PNCL	**Nicolau / Gran**	**3.86**	**309**	*eP*	**Pn**	**02 09 38.5**	**+1.3**
PNCL				*eS*	**Sn**	**02 10 19.8**	**-1.9**
PNCL				A	A	02 10 21.0	
	comp=N,1.6nm,0.7s						
PESTR	**Estremoz**	**3.87**	**324**	*eP*	**Pn**	**02 09 39.0**	**+1.7**
PESTR				*eS*	**Sn**	**02 10 20.1**	**-1.7**
PMRV	**Marv??o**	**4.25**	**331**	*eP*	**Pn**	**02 09 43.9**	**+1.5**
PMRV				*eS*	**Sn**	**02 10 29.2**	**-1.8**
PMRV				A	A	02 10 33.5	
	comp=N,1.5nm,0.6s						
PMTG	**Montargil**	**4.34**	**321**	*eP*	**Pn**	**02 09 45.2**	**+1.6**
PMTG				*eS*	**Sn**	**02 10 31.2**	**-1.9**
ETOR	**Torete**	**5.48**	**22**	P	**Pn**	**02 10 00.7**	**+1.6**

*VAO **12** 02:14:30.6±0.5,0°.81S×78°.22W,h10km,mb4.4*
*IDC **12** 02:14:44.7±9.5,1°.28S×78°.00W,h130km±74km,mb3.7/6,*
mbtmp4.2/8,MS3.1/1,Error ellipse: s-maj=72.8km
s-min=39.5km az=122.0
*NEIC **12** 02:14:49.0±2.0,1°.64S±0°.05×78°.12W±0°.09,h168km±8km,*
mb4.3/17,Error ellipse: s-maj=13.7km s-min=7.9km
az=91.0
ISC 12 02:14:48.1±0.6,**1°.65S**±0°.04×**77°.99W**±0°.07,**h150**km,**n64,**
σ1ˢ97/69,**mb4.1**/**9,1C,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOR	**San Lorenzo -**	**1.04**	**331**	Pn	**Pn**	**02 15 15.8**	**+2.0**
COHC	**Cochancay**	**1.50**	**237**	Pn	**Pn**	**02 15 18.3**	**+0.6**
BOSC	**San Juan Bosco**	**1.57**	**199**	Pn	**Pn**	**02 15 20.4**	**+1.8**
PULU	**Pululahua**	**1.74**	**343**	Pn	**Pn**	**02 15 22.3**	**+1.6**
IMBA	**Imbabura, San**	**1.93**	**354**	Pn	**Pn**	**02 15 25.6**	**+2.7**
OTAV	**Otavalo**	**1.93**	**346**	Pn	**Pn**	**02 15 24.5**	**+1.6**
CUSE	**Cuicocha Este**	**1.99**	**348**	*eP*	**Pn**	**02 15 25.6**	**+2.0**
CUSE				*i*		02 16 17.9	
	comp=Z,216nm,0.3s						
TULM	**Tulcn-Chalpat**	**2.36**	**5**	Pn	**Pn**	**02 15 30.5**	**+2.4**
CMBC	**Cumbal**	**2.58**	**4**	*eP*	**Pn**	**02 15 33.6**	**+3.0**
ARNL	**Arenillas**	**2.80**	**228**	Pn	**Pn**	**02 15 31.1**	**-1.9**
GCUF	**Volcan Galeras**	**2.93**	**13**	*eP*	**Pn**	**02 15 37.9**	**+2.8**
GCUF				*eS*	**Sn**	**02 16 16.7**	**+5.4**
GCUF				*i*		02 16 28.6	
	comp=Z,7.2nm,0.5s						
MCRA	**Macar, Loja**	**3.33**	**216**	Pn	**Pn**	**02 15 38.1**	**-1.7**
TUMC	**Tumaco**	**3.53**	**348**	*eP*	**Pn**	**02 15 43.5**	**+1.2**
TUMC				*eS*	**Sn**	**02 16 24.5**	**+0.2**
PTLC	**Puerto Leguiza**	**3.67**	**60**	*eP*	**Pn**	**02 15 44.0**	**-0.1**
FLOC	**Florencia**	**3.98**	**36**	*eP*	**Pn**	**02 15 49.5**	**+1.4**
FLOC				*eS*	**Sn**	**02 16 36.2**	**+1.5**
FLOC				*i*		02 16 39.0	
	comp=Z,5.5nm,0.6s						
POPC	**Popayan, Colom**	**4.37**	**18**	*eP*	**Pn**	**02 15 55.7**	**+2.2**
POPC				*eS*	**Sn**	**02 16 46.9**	**+2.6**
POPC				*i*		02 16 58.6	
	comp=Z,6.5nm,0.4s						
GARC	**Garzon, Huila**	**4.56**	**33**	⇑*iP*	**Pn**	**02 15 58.1**	**+2.1**
GR1C	**Gorgona, Isla**	**4.63**	**358**	*eP*	**Pn**	**02 15 58.1**	**+1.5**
GR1C				*eS*	**Sn**	**02 16 46.4**	**-3.6**
GR1C				*i*		02 16 53.8	
	comp=Z,384nm,0.4s						
YOTC	**Yotoco, Valle**	**5.83**	**16**	*eP*	**Pn**	**02 16 11.7**	**-1.0**
YOTC				*eS*	**Sn**	**02 17 15.5**	**-3.5**
YOTC				*i*		02 17 24.4	
	comp=Z,8.4nm,0.3s						
PLMC	**San Jos del P**	**6.73**	**15**	*eP*	**Pn**	**02 16 23.3**	**-1.4**
PLMC				*eS*	**Sn**	**02 17 35.0**	**-5.4**
PLMC				*i*		02 17 48.2	
	comp=Z,11nm,0.2s						
CZSB	**Cruzeiro do Su**	**8.01**	**139**	*eP*	Pn	02 16 38.5	-3.3
NNA	**Nana**	**10.33**	**174**	P	**Pn**	**02 17 14.4**	**+1.8**
	comp=Z,5.8nm,0.3s,baz=304,slow=14						
NNA				S	Sn	02 18 58.2	-8.8
	comp=Z,4.3nm,0.3s,baz=258,slow=20,SNR=2.1						
NNA	**Nana**	**10.33**	**174**	Pn	**Pn**	**02 17 11.9**	**-0.7**
ETMB	**Extrema**	**14.25**	**125**	*eP*	**Pn**	**02 18 02.0**	**-1.2**
BAUV	**El Baul**	**14.46**	**43**	Pn	**Pn**	**02 18 05.0**	**-0.9**
MACA	**Manacapuru-AM**	**17.36**	**95**	*eP*	**P**	**02 18 38.1**	**-2.4**
LPAZ	**La Paz**	**17.49**	**147**	P	**P**	**02 18 44.4**	**+1.8**
	comp=Z,3.6nm,0.6s,baz=340,slow=4.3,SNR=20						
LPAZ	**La Paz**	**17.49**	**147**	P	**P**	**02 18 43.6**	**+1.1**
LPAZ	**La Paz**	**17.49**	**147**	*eP*	**P**	**02 18 44.5**	**+2.0**
PB16	**IPOC Station P**	**18.55**	**154**		**P**	**02 18 55.6**	**+1.5**
PB16				IAmb	IAmb	02 19 00.3	
	comp=Z,10nm,0.7s						
GO01	**Chusmiza**	**19.87**	**155**	P	**P**	**02 19 10.1**	**+1.9**
GO01				IAmb	IAmb	02 19 15.9	
	comp=Z,9.1nm,0.7s						
VILB	**Vilhena**	**20.89**	**123**	*eP*	**P**	**02 19 20.2**	**+1.5**
TOSP	**Speyside**	**21.61**	**53**	P	**P**	**02 19 26.6**	**+0.2**
SIV	**San Ignacio**	**21.93**	**131**	P	**P**	**02 19 31.0**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=295,slow=12,SNR=4.1						
	comp=Z,1.1nm,0.5s						
ITTB	**Itaituba**	**22.39**	**97**	*eP*	**P**	**02 19 34.0**	**-0.4**
LVC	**Limon Verde**	**22.63**	**158**	P	**P**	**02 19 38.0**	**+1.1**
	comp=Z,2.3nm,0.5s,baz=328,slow=9.5,SNR=1.8						
	comp=Z,2.3nm,0.5s						
NPGB	**Novo Progresso**	**23.19**	**104**	*eP*	**P**	**02 19 41.5**	**-0.3**
PDRB	**Porto dos Gac**	**23.30**	**116**	*eP*	**P**	**02 19 43.9**	**+1.0**
MALB	**Monte Alegre**	**23.72**	**91**	*eP*	**P**	**02 19 46.2**	**-0.4**
CLDB	**Colider**	**23.87**	**113**	*eP*	**P**	**02 19 48.6**	**+0.6**
MCPB	**Macapa, AP**	**25.96**	**87**	*eP*	**P**	**02 20 06.4**	**-0.6**
MURT	**Porto Murtinho**	**28.10**	**137**	*eP*	**P**	**02 20 30.6**	**+4.7**
SNDB	**Serra Nova Dou**	**28.39**	**112**	*eP*	**P**	**02 20 29.3**	**+0.7**
PRPB	**Parauapebas**	**28.46**	**100**	*eP*	**P**	**02 20 28.8**	**-0.5**
CPUP	**Villa Florida**	**31.57**	**143**	P	**P**	**02 20 56.2**	**-0.3**
CPUP				IAmb	IAmb	02 21 38.2	
	comp=Z,4.8nm,1.3s						
BDFB	**Brasilia**	**32.66**	**117**	P	**P**	**02 21 05.8**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=250,slow=12,SNR=3.1						
	comp=Z,1.2nm,0.3s						
BDFB	**Brasilia**	**32.66**	**117**	P	**P**	**02 21 05.6**	**-0.8**
BDFB				IAmb	IAmb	02 21 38.5	
	comp=Z,6.4nm,1.4s						
ROSB	**Rosrio**	**33.86**	**93**	*eP*	**P**	**02 21 16.2**	**-0.5**
JANB	**Januaria**	**35.81**	**114**	*eP*	**P**	**02 21 33.5**	**0.0**
TRQA	**Tornquist**	**39.10**	**160**	P	**P**	**02 22 00.5**	**-0.3**
TXAR	**Lajitas Array**	**39.40**	**323**	LR	LR	02 38 01.9	
	comp=Z,28nm,21.6s,baz=268,slow=36						
PLCA	**Paso Flores**	**39.48**	**171**	P	**P**	**02 22 05.5**	**+1.5**
	comp=Z,1.6nm,0.7s,baz=354,slow=9.2,SNR=5.3						
	comp=Z,1.6nm,0.7s						
PLCA	**Paso Flores**	**39.48**	**171**	P	**P**	**02 22 03.6**	**-0.4**
PLCA				IAmb	IAmb	02 22 39.8	
	comp=Z,8.8nm,1.4s						
SJMB	**Sao Joao De Ma**	**39.85**	**118**	*eP*	**P**	**02 22 09.3**	**+2.0**
RIB01	**Linhares ES**	**40.77**	**118**	*eP*	**P**	**02 22 18.8**	**+4.0**
NBAN	**Anadia - AL**	**42.23**	**103**	*eP*	**P**	**02 22 26.9**	**+0.1**
F64A	**Sherman**	**48.08**	**9**	P	**P**	**02 23 12.8**	**+0.4**
F64A				IAmb	IAmb	02 23 33.9	
	comp=Z,16nm,1.4s						
D62A	**Allapoint, All**	**49.16**	**8**	P	**P**	**02 23 20.7**	**+0.1**
BATG	**Bathurst New B**	**49.84**	**11**	P	**P**	**02 23 25.5**	**-0.3**
PD31	**Pinedale Array**	**52.57**	**331**	P	**P**	**02 23 45.0**	**-1.5**
DBIC	**Dimbokro**	**73.46**	**83**	P	**P**	**02 26 02.6**	**-2.2**
	comp=Z,4.1nm,0.7s,baz=289,slow=7.9,SNR=5.5						
	comp=Z,4.1nm,0.7s						
DBIC	**Dimbokro**	**73.46**	**83**	P	**P**	**02 26 02.8**	**-2.0**
DBIC				IAmb	IAmb	02 26 04.9	
	comp=Z,7.8nm,1.1s						
KOWA	**Kowa**	**74.92**	**75**	P	**P**	**02 26 12.4**	**-0.8**
KOWA				IAmb	IAmb	02 26 13.6	
	comp=Z,5.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.34**	**76**	P	**P**	**02 26 42.2**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=285,slow=5.9,SNR=53						
	comp=Z,1.2nm,0.4s						

*ISK **12** 02:53:00.4,35°.52N×36°.66E,h11km,ML3.2/28*
*GII **12** 02:53:01.4±0.0,35°.93N×36°.34E,h5km,MD2.9/3,Mm3.1/3*
*GRAL **12** 02:53:04.2±0.3,35°.71N×36°.33E,h0km±4km,MD3.5*
*DDA **12** 02:53:05.6±0.0,35°.75N×36°.46E,h31km±1km,ML3.0*
*NIC **12** 02:53:08.6±0.0,35°.08N×36°.48E,h32km±29km,Ml3.0/5*
ISC 12 02:53:04.7±1.4,**35°.73N**±0°.02×**36°.48E**±0°.03,**h14**km±11km,
n81,σ1ˢ29/106,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.43**	**316**	PG	**Pb**	**02 53 13.9**	**-0.3**
YAYL	**Yayladag**	**0.43**	**316**	P	**Pb**	**02 53 14.8**	**+0.5**
TAHT	**Tahtakopru-Hat**	**0.69**	**340**	PG	**Pn**	**02 53 19.9**	**-0.2**
TAHT				SG	**Sn**	**02 53 32.2**	**+1.5**
KUZU	**Kuzuini**	**1.15**	**25**	P	**Pn**	**02 53 27.6**	**+1.1**
KUZU				S	**Sn**	**02 53 42.6**	**+0.4**
KUZU				*i* AML	AML	02 53 45.0	
	comp=N,217nm,0.2s						
YURE	**YUREGIR**	**1.29**	**328**	P	**Pg**	**02 53 29.6**	**0.0**
YURE				S	**Sn**	**02 53 46.7**	**+1.1**
CEYT	**Ceyhan**	**1.41**	**335**	PN	**Pb**	**02 53 30.8**	**0.0**
KAMA	**Osmaniye**	**1.47**	**6**	P	**Pb**	**02 53 31.5**	**-0.3**
KAMA				S	**Sg**	**02 53 51.9**	**-0.1**
HWQ	**Hawqa**	**1.51**	**197**	*eP*	**Pn**	**02 53 30.0**	**-1.5**
HWQ				*eS*	**Sn**	**02 53 49.0**	**-2.0**
HCB	**Kahramanmara**	**1.65**	**12**	P	**Pb**	**02 53 34.5**	**-0.5**
HCB				S	**Sg**	**02 53 57.1**	**-0.8**
KMRS	**Kahramanmaras**	**1.81**	**11**	PN	**Pn**	**02 53 34.8**	**-0.7**
KMRS				SN	**Sb**	**02 54 00.2**	**0.0**
KOZT	**Kozan**	**1.83**	**343**	PN	**Pn**	**02 53 36.1**	**+0.3**
DED	**Mersin**	**1.83**	**313**	P	**Pn**	**02 53 37.1**	**+1.2**
DED				S	**Sb**	**02 54 01.8**	**+0.9**
DED				*i* AML	AML	02 54 04.0	
	comp=N,114nm,0.7s						
DED				*i* AML	AML	02 54 04.0	
	comp=E,136nm,0.7s						
KAHM	**Kahramanmaras,**	**1.83**	**13**	P	**Pb**	**02 53 38.0**	**-0.1**
KAHM				S	**Sn**	**02 53 58.7**	**-0.2**
GZT	**Gaziantep**	**1.84**	**28**	P	**Pb**	**02 53 38.0**	**-0.3**
GZT				S	**Sb**	**02 54 01.8**	**+0.4**
GZT				*i* AML	AML	02 54 08.0	
	comp=N,138nm,0.4s						
GZT				*i* AML	AML	02 54 15.0	
	comp=E,158nm,0.4s						
ANDN	**Andirin**	**1.85**	**357**	P	**Pn**	**02 53 37.0**	**+0.8**
ANDN				S	**Sn**	**02 53 59.9**	**+0.4**
EREN	**Erenkoy**	**1.89**	**265**	PN	**Pn**	**02 53 35.4**	**-1.2**
EREN				SN	**Sn**	**02 54 00.9**	**+0.6**
AKO	**Adana**	**1.92**	**335**	P	**Pb**	**02 53 39.5**	**-0.1**
ZAHL	**Zahle**	**1.93**	**195**	*eP*	**Pn**	**02 53 36.4**	**-0.9**
ZAHL				*eS*	**Sn**	**02 54 00.3**	**-1.0**
BHL	**Bhannes**	**1.94**	**201**	*eP*	**Pn**	**02 53 36.3**	**-1.1**
BHL				*eS*	**Sn**	**02 54 00.3**	**-1.4**
MERS	**Mersin**	**1.95**	**306**	PN	**Pn**	**02 53 37.8**	**+0.3**
MERS				SN	**Sb**	**02 54 04.9**	**+0.6**
KIZK	**Mersin**	**2.04**	**292**	PN	**Pn**	**02 53 38.9**	**+0.3**
KIZK	**Mersin**	**2.04**	**292**	P	**Pn**	**02 53 39.2**	**+0.6**
KIZK				S	**Sn**	**02 54 04.1**	**+0.2**
GULE	**Gulek**	**2.07**	**319**	P	**Pb**	**02 53 42.7**	**+0.5**
PARAL	**Paralimni**	**2.12**	**251**	P	**Pn**	**02 53 39.3**	**-0.5**
PARAL				S	**Sn**	**02 54 05.0**	**-1.0**
PARAL				AML	AML	02 54 05.2	
	0.3nm,0.7s						
PARAL				AML	AML	02 54 05.2	
	0.3nm,0.7s						
PARAL				AML	AML	02 54 10.6	
	0.2nm,0.4s						
PARAL				AML	AML	02 54 10.6	
	0.2nm,0.4s						
DQRL	**Deir Qamar**	**2.15**	**201**	*eP*	**Pn**	**02 53 39.2**	**-1.1**
SILI	**Silifke-Mersin**	**2.17**	**288**	PN	**Pn**	**02 53 40.4**	**0.0**
SAIM	**ADANA**	**2.27**	**352**	P	**Pn**	**02 53 43.5**	**+1.6**
CMRD	**Camardi-Nigde**	**2.27**	**329**	PN	**Pn**	**02 53 42.8**	**+0.8**
RCY	**Rachaya**	**2.29**	**194**	*eP*	**Pn**	**02 53 41.4**	**-0.8**
KARG	**Kargicak-Mersi**	**2.30**	**283**	PN	**Pn**	**02 53 42.0**	**-0.2**
TISA	**Tisan-Mersin**	**2.31**	**282**	PN	**Pn**	**02 53 42.4**	**0.0**
IKL	**Isikli**	**2.32**	**284**	PN	**Pn**	**02 53 42.2**	**-0.4**
YESI	**Yesilovacik-Me**	**2.35**	**282**	PN	**Pn**	**02 53 42.6**	**-0.3**
KEBE	**Keben-Mersin**	**2.35**	**289**	PN	**Pn**	**02 53 43.3**	**+0.3**
AKK2	**Akkuyu-Mersin**	**2.41**	**281**	PN	**Pn**	**02 53 43.7**	**-0.1**
AKKU	**Akkuyu-Mersin**	**2.42**	**281**	PN	**Pn**	**02 53 43.7**	**-0.1**
AKK1	**Akkuyu-Mersin**	**2.42**	**281**	PN	**Pn**	**02 53 43.7**	**-0.2**
MVOU	**Mavrovouni**	**2.43**	**254**	P	**Pn**	**02 53 45.4**	**+1.3**
MVOU				AML	AML	02 54 07.2	
	0.1nm,1.0s						
MVOU				AML	AML	02 54 16.5	
	0.1nm,0.6s						
LFK	**Lefkose**	**2.44**	**260**	PN	**Pn**	**02 53 43.2**	**-1.1**
NATI	**Neve Ativ**	**2.53**	**194**	P	**Pn**	**02 53 47.7**	**+2.3**
NATI	**Neve Ativ**	**2.53**	**194**	Pn	**Pn**	**02 53 45.9**	**+0.5**
NATI				Sn	**Sn**	**02 54 19.1**	**+3.0**
KERG	**Konya-Eregli**	**2.54**	**312**	P	**Pb**	**02 53 48.8**	**-1.3**
KERG				S	**Sb**	**02 54 21.2**	**0.0**
KERG				*i* AML	AML	02 54 24.0	
	comp=N,76nm,0.4s						
KERG				*i* AML	AML	02 54 24.0	
	comp=E,81nm,0.5s						
URFA	**Urfa**	**2.55**	**47**	PN	**Pn**	**02 53 42.6**	**-3.1**
TEVE	**Tevekalti-Mers**	**2.56**	**287**	PN	**Pn**	**02 53 45.9**	**0.0**
GEM	**Giv'at Ha'Em**	**2.60**	**195**	P	**Pn**	**02 53 48.1**	**+1.7**
GEM	**Giv'at Ha'Em**	**2.60**	**195**	Pn	**Pn**	**02 53 45.6**	**-0.8**
GEM				Sn	**Sb**	**02 54 21.1**	**-1.8**
NIDE	**Nigde/Merkez-G**	**2.65**	**329**	P	**Pb**	**02 53 50.9**	**-1.1**
SARI	**SarD1z-Kayseri**	**2.68**	**359**	PN	**Pn**	**02 53 47.4**	**-0.2**
CSS	**Mathiatis**	**2.68**	**254**	PN	**Pn**	**02 53 46.1**	**-1.5**
CSS	**Mathiatis**	**2.68**	**254**	P	**Pn**	**02 53 48.5**	**+0.9**
BERE	**Bereket-Mersin**	**2.71**	**284**	PN	**Pn**	**02 53 48.1**	**+0.1**
TEKE	**Tekeli-Mersin**	**2.76**	**280**	PN	**Pn**	**02 53 48.7**	**+0.1**
KSHT	**Keshet**	**2.79**	**192**	Pn	**Pn**	**02 53 49.5**	**+0.4**
ASGA	**Asgata**	**2.81**	**251**	P	**Pn**	**02 53 49.6**	**+0.4**
ASGA				AML	AML	02 54 23.2	
	0.1nm,0.4s						
ASGA				AML	AML	02 54 24.3	
	0.1nm,0.8s						
MMA0B	**Mount Meron ar**	**2.85**	**199**	Pn	**Pn**	**02 53 48.8**	**-1.1**
MMA0B				Sn	**Sn**	**02 54 25.6**	**+1.6**
HNTI	**Hanita**	**2.85**	**203**	P	**Pn**	**02 53 50.6**	**+0.8**
HNTI	**Hanita**	**2.85**	**203**	Pn	**Pn**	**02 53 50.0**	**+0.2**
HNTI				Sn	**Sn**	**02 54 26.6**	**+2.7**
DARE	**Darende-Malaty**	**2.95**	**15**	PN	**Pn**	**02 53 50.5**	**-0.8**
KRMN	**Karaman**	**2.97**	**300**	PN	**Pn**	**02 53 52.4**	**+0.9**
LEF	**Lefka**	**2.99**	**259**	PN	**Pn**	**02 53 51.1**	**-0.7**
SHMJ	**Saham**	**3.05**	**191**	P	**Pn**	**02 53 55.1**	**+2.5**
SZAC	**Souni**	**3.10**	**253**	P	**Pn**	**02 53 53.3**	**0.0**
SZAC				AML	AML	02 54 33.6	
	0.2nm,0.9s						
SZAC				AML	AML	02 54 38.5	
	0.2nm,0.2s						
BNN	**Bunyan**	**3.16**	**351**	PN	**Pn**	**02 53 54.8**	**+0.6**
GULA	**Gulagac**	**3.17**	**326**	PN	**Pn**	**02 53 55.5**	**+1.2**
BLGI	**Bet Lehem HaGe**	**3.17**	**200**	Pn	**Pn**	**02 53 54.4**	**+0.2**
ALFC	**Alefka**	**3.22**	**261**	P	**Pn**	**02 53 56.8**	**+1.9**
ALFC				S	**Sn**	**02 54 34.0**	**+0.9**
ALFC				AML	AML	02 54 39.8	
	0.1nm,0.5s						
ALFC				AML	AML	02 54 39.8	
	0.1nm,0.5s						
ALFC				AML	AML	02 54 45.8	
	0.2nm,0.4s						
ALFC				AML	AML	02 54 45.8	
	0.2nm,0.4s						
OFRI	**`Ofer**	**3.34**	**202**	Pn	**Pn**	**02 53 56.2**	**-0.3**
MMLI	**Mount Malkishu**	**3.40**	**195**	Pn	**Pn**	**02 53 57.9**	**+0.5**
GAZI	**Gazipasa**	**3.42**	**280**	PN	**Pn**	**02 53 57.6**	**0.0**
SULT	**Sultanhani-AKS**	**3.42**	**317**	PN	**Pn**	**02 53 59.0**	**+1.2**
HDMB	**Hadim**	**3.45**	**292**	PN	**Pn**	**02 53 59.0**	**+0.7**
AKMS	**Akamas**	**3.46**	**259**	P	**Pn**	**02 53 59.2**	**+1.0**
AKMS				S	**Sn**	**02 54 40.2**	**+1.1**
HMDT	**Nahal Hemdat**	**3.55**	**193**	P	**Pb**	**02 54 08.7**	**+1.3**
HMDT	**Nahal Hemdat**	**3.55**	**193**	Pn	**Pn**	**02 54 00.2**	**+0.7**
ASF	**Jabal al Asfar**	**3.56**	**174**	P	**Pb**	**02 54 09.8**	**+2.2**
SLTI	**Sal'it**	**3.68**	**199**	P	**Pb**	**02 54 11.4**	**+1.9**
SLTI	**Sal'it**	**3.68**	**199**	Pn	**Pn**	**02 54 00.5**	**-0.7**
SALP	**Salfit**	**3.80**	**197**	Pn	**Pn**	**02 54 03.7**	**+0.8**
OSC2	**CSNet OBS 4**	**4.37**	**234**	P	**Pn**	**02 54 08.8**	**-1.9**
OSC2				S	**Sn**	**02 54 55.2**	**-6.2**
GHAJ	**Ghor Haditha**	**4.48**	**190**	P	**Pb**	**02 54 24.2**	**+1.1**
OSC1	**CSNet OBS 1**	**4.83**	**244**	S	**Sn**	**02 55 09.1**	**-3.7**

*NEIC **12** 02:57:45.0±1.8,65°.68N±0°.03×145°.20W±0°.09,h15km±7km,*
Error ellipse: s-maj=5.6km s-min=4.2km az=65.0
*AEIC **12** 02:57:45±1.8,65°.68N±0°.03×145°.24W±0°.09,h18km±6km,*
ML3.8,ML4.0/136(NEIC),Error ellipse: s-maj=5.5km
s-min=4.4km az=65.0
ISC 12 02:57:44.8±1.0,**65°.70N**±0°.03×**145°.22W**±0°.03,**h16**km±8km,
n156,σ0ˢ95/162,**Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRP	**Porcupine Dome**	**0.22**	**215**		**Pg**	**02 57 50.1**	**+0.3**
PRP				Sg	**Sg**	**02 57 53.0**	**-0.3**
PRP	**Porcupine Dome**	**0.22**	**215**	P	**Pb**	**02 57 50.3**	**-0.3**
	baz=36						
PRP				S	**Sg**	**02 57 53.2**	**-0.1**
	baz=36						
FYU	**Fort Yukon**	**0.87**	**360**		**Pg**	**02 58 02.2**	**+0.5**
FYU				IAML		02 58 17.1	
	comp=E,4μm,0.3s						
I26K	**Coal Creek Min**	**0.95**	**114**	Pg	**Pb**	**02 58 02.3**	**-0.5**
I26K				IAML		02 58 20.1	
	comp=E,5μm,0.5s						
I26K				IAML		02 58 20.6	
	comp=N,3μm,0.4s						
I26K	**Coal Creek Min**	**0.95**	**114**	P	**Pb**	**02 58 02.1**	**-0.7**
	baz=294						
I26K				S	**Sb**	**02 58 14.5**	**-0.6**
	baz=294						
J25K	**Salcha River,**	**1.09**	**183**	Pn	**Pn**	**02 58 05.5**	**0.0**
J25K	**Salcha River,**	**1.09**	**183**	P	**Pg**	**02 58 05.6**	**-0.2**
	baz=3.0						
J25K				S	**Sb**	**02 58 18.3**	**-1.0**
	baz=3.0						
POKR	**Poker Plat Res**	**1.09**	**239**	Pn	**Pb**	**02 58 05.4**	**+0.1**
POKR				IAML		02 58 21.6	
	comp=N,3μm,0.3s						
POKR				IAML		02 58 22.1	
	comp=E,4μm,0.4s						
POKR	**Poker Plat Res**	**1.09**	**239**	P	**Pn**	**02 58 05.5**	**+0.1**
	baz=58						
POKR				S	**Sb**	**02 58 18.9**	**-0.4**
	baz=58						
H24K	**Noodor Dome**	**1.10**	**278**		**Pb**	**02 58 05.5**	**-0.1**
H24K				IAML		02 58 24.0	
	comp=E,3μm,0.7s						
H24K	**Noodor Dome**	**1.10**	**278**	P	**Pb**	**02 58 05.4**	**-0.1**
	baz=97						
H24K				S	**Sb**	**02 58 20.0**	**+0.3**
	baz=97						
IL31	**1.17 218**	Pn	**Pb**	**02 58 06.5**	**0.0**		
ILAR	**Eielson Array**	**1.17**	**218**	Pn	**Pn**	**02 58 06.4**	**0.0**
COLA	**College**	**1.38**	**234**	Pn	**Pn**	**02 58 09.6**	**+0.2**
COLA	**College**	**1.38**	**234**	IAML		02 58 29.5	
	comp=E,2μm,0.7s						
COLA				IAML		02 58 31.3	
	comp=E,3μm,0.5s						
TCOL	**CIGO, UAF Yank**	**1.39**	**234**	Pn	**Pn**	**02 58 09.5**	**+0.1**
TCOL	**CIGO, UAF Yank**	**1.39**	**234**	P	**Pn**	**02 58 09.4**	**0.0**
	baz=53						
J26L	**Joseph Creek**	**1.39**	**149**		**Pn**	**02 58 09.7**	**0.0**
J26L	**Joseph Creek**	**1.39**	**149**	P	**Pn**	**02 58 09.8**	**+0.2**
	baz=330						
J26L				S	**Sb**	**02 58 28.0**	**0.0**
	baz=330						
MDM	**Murphy Dome**	**1.46**	**241**		**Pn**	**02 58 10.7**	**+0.1**
MDM				IAML		02 58 33.2	
	comp=N,2μm,0.4s						
MDM				IAML		02 58 36.8	
	comp=E,2μm,0.5s						
HDA	**Harding Lake**	**1.49**	**210**		**Pn**	**02 58 11.1**	**+0

	comp=E,387nm,0.9s						
DAWY				IAML		02 59 26.9	
	comp=N,442nm,0.7s						
DAWY	**Dawson**	**2.98 121**		P	**Pn**	**02 58 31.2**	**-0.2**
	baz=306						
L27K	**Beaver Creek,**	**3.03 149**		Pn	**Pn**	**02 58 32.2**	**+0.1**
L27K				IAML		02 59 21.2	
	comp=N,327nm,0.9s						
L27K				IAML		02 59 23.9	
	comp=E,436nm,0.8s						
L27K	**Beaver Creek,**	**3.03 149**		P	**Pn**	**02 58 32.4**	**+0.3**
	baz=332						
BCAR	**Beaver Creek A**	**3.04 149**		Pn	**Pn**	**02 58 32.3**	**+0.2**
H21K	**Melozitna Rive**	**3.14 273**		Pn	**Pn**	**02 58 32.6**	**-0.9**
H21K				IAML		02 59 26.5	
	comp=E,444nm,0.5s						
H21K	**Melozitna Rive**	**3.14 273**		P	**Pn**	**02 58 32.7**	**-0.9**
	baz=86						
TRF	**Thorofare Moun**	**3.14 226**		Pn	**Pn**	**02 58 34.1**	**+0.4**
TRF				IAML		02 59 26.8	
	comp=E,458nm,0.4s						
TRF				IAML		02 59 27.1	
	comp=N,353nm,1.0s						
TRF	**Thorofare Moun**	**3.14 226**		P	**Pn**	**02 58 34.3**	**+0.5**
	baz=42						
J29M	**Klondike Camp**	**3.22 110**		Pn	**Pn**	**02 58 35.1**	**+0.4**
WAT1	**Susitna Watana**	**3.23 208**		P	**Pn**	**02 58 35.9**	**+1.1**
	baz=25						
KTH	**Kantishna Hill**	**3.27 231**		Pn	**Pn**	**02 58 35.1**	**-0.2**
KTH				IAML		02 59 34.7	
	comp=N,457nm,1.0s						
KTH				IAML		02 59 39.5	
	comp=E,319nm,0.9s						
HARP	**HAARP**	**3.31 179**		P	**Pn**	**02 58 37.3**	**+1.4**
	baz=359						
WAT6	**Susitna Watana**	**3.32 201**		P	**Pn**	**02 58 37.4**	**+1.2**
	baz=18						
TOLK	**Toolik Lake Re**	**3.41 332**		Pn	**Pn**	**02 58 39.6**	**+2.3**
TOLK				IAML		02 59 22.7	
	comp=N,252nm,0.7s						
TOLK				IAML		02 59 34.9	
	comp=E,284nm,1.1s						
TOLK	**Toolik Lake Re**	**3.41 332**		P	**Pn**	**02 58 39.6**	**+2.3**
	baz=148						
M26K	**Nabesna, AK**	**3.45 163**			**Pn**	**02 58 38.6**	**+0.7**
M26K				IAML		02 59 35.6	
	comp=E,243nm,0.7s						
M26K				IAML		02 59 38.4	
	comp=N,318nm,0.5s						
M26K	**Nabesna, AK**	**3.45 163**		P	**Pn**	**02 58 38.8**	**+0.9**
	baz=344						
IMAR	**Indian Mountai**	**3.52 279**		Pn	**Pn**	**02 58 37.6**	**-1.1**
EPYK	**Eagle Plains**	**3.54 75**		Pn	**Pn**	**02 58 38.9**	**-0.1**
EPYK				IAML		02 59 43.6	
	comp=N,312nm,0.6s						
EPYK				IAML		02 59 47.2	
	comp=E,324nm,0.7s						
EPYK	**Eagle Plains**	**3.54 75**		P	**Pn**	**02 58 39.4**	**+0.3**
	baz=263						
CHUM	**Lake Minchumin**	**3.54 242**		P	**Pn**	**02 58 38.6**	**-0.4**
	baz=56						
M24K	**Tolsona, Glenn**	**3.63 187**		Pn	**Pn**	**02 58 42.1**	**+1.8**
M24K				IAML		02 59 43.9	
	comp=N,271nm,1.4s						
M24K				IAML		02 59 44.5	
	comp=E,295nm,1.3s						
M24K	**Tolsona, Glenn**	**3.63 187**		P	**Pn**	**02 58 42.2**	**+1.8**
	baz=6.2						
M27K	**Edge Creek, AK**	**3.66 155**		Pn	**Pn**	**02 58 41.2**	**+0.3**
M27K	**Edge Creek, AK**	**3.66 155**		P	**Pn**	**02 58 41.4**	**+0.5**
	baz=338						
CAST	**Castle Rocks**	**3.74 235**		Pn	**Pn**	**02 58 41.0**	**-0.9**
CAST				IAML		02 59 52.4	
	comp=E,225nm,0.5s						
CAST	**Castle Rocks**	**3.74 235**		P	**Pn**	**02 58 41.2**	**-0.6**
	baz=49						
BVCY	**Beaver Creek**	**3.81 148**		P	**Pn**	**02 58 43.4**	**+0.5**
	baz=332						
CUT	**Chulitna**	**3.98 216**		Pn	**Pn**	**02 58 44.9**	**-0.2**
CUT	**Chulitna**	**3.98 216**		P	**Pn**	**02 58 46.4**	**+1.3**
	baz=32						
SCM	**Sheep Creek Mo**	**3.99 195**		Pn	**Pn**	**02 58 47.5**	**+2.2**
J20K	**Nowinta River**	**4.09 252**		Pn	**Pn**	**02 58 45.8**	**-0.8**
J20K	**Nowinta River**	**4.09 252**		P	**Pn**	**02 58 45.8**	**-0.8**
	baz=64						
N25K	**Chitina, Valde**	**4.12 176**		Pn	**Pn**	**02 58 47.5**	**+0.5**
N25K	**Chitina, Valde**	**4.12 176**		P	**Pn**	**02 58 47.8**	**+0.7**
	baz=356						
PPLA	**Purkeypile**	**4.14 230**		Pn	**Pn**	**02 58 47.0**	**-0.4**
PPLA	**Purkeypile**	**4.14 230**		P	**Pn**	**02 58 47.3**	**-0.1**
	baz=44						
SML	**Sawmill**	**4.14 201**		Pn	**Pn**	**02 58 48.1**	**+0.7**
SML	**Sawmill**	**4.14 201**		P	**Pn**	**02 58 49.6**	**+2.2**
	baz=18						
KLU	**Klutina**	**4.23 185**		Pn	**Pn**	**02 58 49.3**	**+0.6**
KLU	**Klutina**	**4.23 185**		P	**Pn**	**02 58 50.5**	**+1.9**
	baz=3.9						
GHO	**Glory Hole Cre**	**4.27 204**		Pn	**Pn**	**02 58 50.2**	**+1.1**
GHO				IAML		03 00 03.2	
	comp=N,156nm,0.7s						
GHO				IAML		03 00 04.4	
	comp=E,207nm,0.7s						
GLB	**Gilahina Butte**	**4.32 171**		Pn	**Pn**	**02 58 51.2**	**+1.3**
MCARA	**McCarthy VSAT**	**4.44 166**		Pn	**Pn**	**02 58 51.5**	**0.0**
MCARA	**McCarthy VSAT**	**4.44 166**		P	**Pn**	**02 58 53.2**	**+1.8**
	baz=348						
YUK3	**Moose Creek**	**4.47 150**		P	**Pn**	**02 58 52.9**	**+0.9**
	baz=334						
PMR	**Palmer**	**4.47 205**		Pn	**Pn**	**02 58 51.3**	**-0.6**
PMR				IAML		03 00 10.2	
	comp=E,137nm,1.1s						
K20K	**Telida**	**4.49 242**		Pn	**Pn**	**02 58 51.4**	**-0.6**
K20K				IAML		03 00 07.4	
	comp=N,169nm,0.7s						
K20K				IAML		03 00 11.9	
	comp=E,176nm,0.5s						
K20K	**Telida**	**4.49 242**		P	**Pn**	**02 58 51.6**	**-0.4**
	baz=55						
DIV	**Divide**	**4.59 183**		Pn	**Pn**	**02 58 54.6**	**+1.0**
SKT	**Skwentna**	**4.66 220**		Pn	**Pn**	**02 58 55.4**	**+1.0**
SKT				IAML		03 00 11.1	
	comp=E,131nm,0.7s						
SKT				IAML		03 00 11.3	
	comp=N,114nm,0.8s						
SKT	**Skwentna**	**4.66 220**		P	**Pn**	**02 58 55.6**	**+1.1**
	baz=34						
BMRM	**Bremner River**	**4.76 176**		Pn	**Pn**	**02 58 58.3**	**+2.4**
BMRM	**Bremner River**	**4.76 176**		P	**Pn**	**02 58 58.1**	**+2.2**
	baz=357						
GLI	**Glacier Island**	**4.91 191**		Pn	**Pn**	**02 58 57.0**	**-0.9**
GLI				IAML		03 00 28.4	
	comp=N,75nm,0.8s						
GLI				IAML		03 00 30.3	
	comp=E,97nm,0.7s						
SUA	**Susitna One**	**4.91 213**		Pn	**Pn**	**02 58 59.7**	**+1.7**
SUA				IAML		03 00 20.1	
	comp=N,113nm,1.0s						
SUA	**Susitna One**	**4.91 213**		P	**Pn**	**02 58 59.5**	**+1.5**
	baz=28						
BARN	**Barnard Glacie**	**4.92 159**		Pn	**Pn**	**02 58 58.3**	**0.0**
FID	**Port Fidalgo**	**5.00 187**		Pn	**Pn**	**02 59 00.7**	**+1.6**
FID				IAML		03 00 26.7	
	comp=E,82nm,1.3s						
FID				IAML		03 00 33.3	
	comp=N,75nm,1.3s						
RC01	**Rabbit Creek A**	**5.05 206**		Pn	**Pn**	**02 58 59.7**	**-0.1**
RC01				IAML		03 00 06.4	
	comp=E,105nm,0.5s						
RC01				IAML		03 00 31.4	
	comp=N,97nm,0.7s						
PWL	**Port Wells**	**5.06 198**		Pn	**Pn**	**02 59 00.6**	**+0.7**
PWL				IAML		03 00 23.9	
	comp=E,99nm,1.0s						
PWL				IAML		03 00 27.3	
	comp=N,89nm,1.1s						
CTG	**Chitna Glacier**	**5.06 158**		P	**Pn**	**02 59 01.6**	**+1.5**
	baz=341						
CTGM	**Chitina Glacie**	**5.06 158**		Pn	**Pn**	**02 59 00.6**	**+0.5**
TGL	**Tana Glacier**	**5.08 167**		Pn	**Pn**	**02 59 01.6**	**+1.4**
EYAK	**Cotovara Ski Ar**	**5.17 183**		Pn	**Pn**	**02 59 02.4**	**+0.9**
M20K	**Styx River**	**5.19 226**		Pn	**Pn**	**02 59 02.3**	**+0.5**
M20K				IAML		03 00 29.5	
	comp=E,70nm,0.7s						
M20K				IAML		03 00 31.4	
	comp=N,74nm,1.3s						
M20K	**Styx River**	**5.19 226**		P	**Pn**	**02 59 03.0**	**+1.2**
	baz=39						
LOGN	**Logan Glacier**	**5.25 157**		Pn	**Pn**	**02 59 03.4**	**+0.8**
LOGN				IAML		03 00 36.7	
	comp=E,70nm,1.0s						
YUK4	**Talbot Arm**	**5.27 143**		P	**Pn**	**02 59 03.2**	**+0.3**
	baz=328						
INK	**Inuvik**	**5.28 55**		Pn	**Pn**	**02 59 03.0**	**+0.2**
INK	**Inuvik**	**5.28 55**		P	**Pn**	**02 59 03.4**	**+0.5**
	baz=246						
RAGM	**Ragged Mountai**	**5.34 177**		Pn	**Pn**	**02 59 02.5**	**-1.2**
BERG	**Berg Lake**	**5.37 172**		Pn	**Pn**	**02 59 05.3**	**+1.1**
BERG				IAML		03 01 35.3	
	comp=N,81nm,2.7s						
WAX	**Waxell Ridge**	**5.38 167**		Pn	**Pn**	**02 59 07.1**	**+2.8**
WAX				IAML		02 59 46.0	
	comp=N,90nm,3.7s						
WAX				IAML		03 01 02.0	
	comp=E,65nm,2.7s						
TTA	**Tatalina**	**5.45 244**		Pn	**Pn**	**02 59 04.6**	**-0.8**
SPU	**Mount Spurr**	**5.47 217**		Pn	**Pn**	**02 59 05.8**	**+0.2**
L19K	**White Mountain**	**5.52 235**		Pn	**Pn**	**02 59 05.9**	**-0.3**
L19K	**White Mountain**	**5.52 235**		P	**Pn**	**02 59 05.7**	**-0.6**
	baz=46						
YAH	**Yahtse**	**5.58 162**		Pn	**Pn**	**02 59 09.3**	**+2.0**
TABL	**Table Mountain**	**5.59 159**		Pn	**Pn**	**02 59 08.1**	**+0.7**
YUK6	**Outpost Mounta**	**5.68 144**		P	**Pn**	**02 59 09.9**	**+1.2**
	baz=330						
KAIM	**Kayak Island**	**5.80 176**		Pn	**Pn**	**02 59 11.8**	**+1.7**
SEW	**Seward**	**5.94 201**		Pn	**Pn**	**02 59 12.4**	**+0.5**
HYT	**Haines Junctio**	**6.00 141**		Pn	**Pn**	**02 59 14.1**	**+1.1**
HYT	**Haines Junctio**	**6.00 141**		P	**Pn**	**02 59 14.1**	**+1.1**
	baz=328						
PCA	**Pinnacle**	**6.06 156**		Pn	**Pn**	**02 59 15.8**	**+2.0**
N19K	**Bonanza Creek**	**6.44 225**		Pn	**Pn**	**02 59 18.9**	**0.0**
BRLK	**Bradley Lake**	**6.50 206**		Pn	**Pn**	**02 59 20.9**	**+1.2**
SVW2	**Sparrevohn**	**6.55 230**		Pn	**Pn**	**02 59 19.9**	**-0.4**
CNPM	**China Poot**	**6.78 207**		Pn	**Pn**	**02 59 22.2**	**-1.4**
WHY	**Whitehorse**	**6.88 132**		Pn	**Pn**	**02 59 25.7**	**+0.7**
N18K	**Kilae Creek**	**6.97 229**		Pn	**Pn**	**02 59 26.0**	**-0.1**
P29M	**Windy Craggy**	**6.99 147**		Pn	**Pn**	**02 59 28.2**	**+1.7**
P33M	**Teslin, Yukon**	**7.88 129**		Pn	**Pn**	**02 59 39.1**	**+0.5**
C36M	**Paulatuk**	**8.86 56**		Pn	**Pn**	**02 59 51.1**	**-0.9**
JIS	**Juneau Island**	**9.01 141**		Pn	**Pn**	**02 59 53.5**	**-0.6**
DLBC	**Dease Lake**	**10.16 129**		Pn	**Pn**	**03 00 10.6**	**+0.6**

*LDG **12** 03:00:50.8±0.1, 42.°16N×7.°77W, h2km, MI2.7/12, Error ellipse: s-maj=2.7km s-min=2.5km az=94.0*
*SFS **12** 03:00:50.0, 42.°09N×7.°78W, ML3.1, VILAR DE SANTOS (ORENSE)*
*MDD **12** 03:00:51.3±0.3, 42.°13N×7.°79W, h10km, mb_Lg3.1/13, Error ellipse: s-maj=2.8km s-min=2.3km az=84.0*
*INMG **12** 03:00:51.3±1.5, 42.°13N×7.°79W, h13km±2km, MD2.4, ML2.6, Error ellipse: s-maj=2.0km s-min=1.9km az=89.0*

ISC 12 03:00:49.5±1.0, 42.°14N±0.°02×7.°74W±0.°02, h18km±3km, n65, σ1º64/134, 2C, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELOB	**Lobios**	**0.36**	**222**	Pg	**Pg**	**03 00 57.5**	**+0.3**
ELOB				Sg	**Sg**	**03 01 02.1**	**-0.3**
ELOB				*i* Vmb_Lg		03 01 02.2	
PGAV	**Gavieira, Arco**	**0.43**	**246**	⇑*i*Pg	**Pg**	**03 00 58.7**	**+0.2**
PGAV				*e*Sg	**Sg**	**03 01 04.2**	**-0.2**
PGAV				A	A	03 01 05.0	
	175nm,0.3s						
PCAB	**Cabril**	**0.48**	**207**	⇑*i*Pg	**Pg**	**03 00 59.6**	**+0.3**
PCAB				*e*Sg	**Sg**	**03 01 05.8**	**0.0**
PCAB				A	A	03 01 10.3	
	308nm,0.1s						
EZAM	**Zamans**	**0.71**	**271**	Pg	**Pg**	**03 01 04.1**	**+0.6**
EZAM				Sg	**Sg**	**03 01 13.4**	**+0.4**
EZAM				*i* Vmb_Lg		03 01 15.9	
EAGO	**Agolada(Pontev**	**0.71**	**339**	Pg	**Pn**	**03 01 04.6**	**-0.1**
EAGO				Sg	**Sn**	**03 01 14.0**	**-1.2**
EAGO				*i* Vmb_Lg		03 01 16.9	
POLO	**Lamas de Olo**	**0.77**	**183**	*e*Pg	**Pb**	**03 01 04.9**	**+0.6**
POLO				*e*Sg	**Sb**	**03 01 14.7**	**+0.3**
POLO				A	A	03 01 17.4	
	66nm,0.5s						
ECAL	**Calabor**	**0.77**	**104**	Pg	**Pn**	**03 01 05.8**	**+0.2**
ECAL				Sg	**Sn**	**03 01 16.7**	**0.0**
ECAL				*i* Vmb_Lg		03 01 19.0	
PBRG	**Braganca**	**0.82**	**114**	*e*P	**Pn**	**03 01 06.1**	**0.0**
PBRG				*e*S	**Sn**	**03 01 17.9**	**+0.1**
PBRG				A	A	03 01 18.9	
	89nm,0.1s						
PVRL	**Vila Real**	**0.86**	**179**	*e*P	**Pg**	**03 01 06.8**	**+0.4**
PVRL				*e*S	**Sb**	**03 01 18.1**	**+0.9**
PVRL				A	A	03 01 19.5	
	281nm,0.1s						
MVO	**Moncorvo**	**1.11**	**151**	*e*P	**Pg**	**03 01 11.4**	**+0.3**
MVO				*e*S	**Sg**	**03 01 26.3**	**+0.7**
MVO				A	A	03 01 27.3	
	191nm,0.3s						
PTO	**Porto**	**1.19**	**213**	*e*P	**Pb**	**03 01 12.0**	**+0.5**
PTO				*e*S	**Sb**	**03 01 27.4**	**+0.9**
PTO				A	A	03 01 30.4	
	172nm,0.1s						
EMAZ	**Mazaricos**	**1.22**	**312**	Pg	**Pg**	**03 01 12.6**	**-0.6**
EMAZ				Sg	**Sg**	**03 01 30.1**	**+1.0**
EMAZ				*i* Vmb_Lg		03 01 31.1	
EPON	**Pontenova**	**1.26**	**20**	Pg	**Pg**	**03 01 13.3**	**-0.7**
EPON				Sg	**Sg**	**03 01 31.8**	**+1.3**
EPON				*i* Vmb_Lg		03 01 33.9	
PVIS	**Viseu**	**1.43**	**185**	*e*P	**Pn**	**03 01 15.2**	**+0.7**
PVIS				*e*S	**Sb**	**03 01 34.2**	**+0.8**
PVIS				A	A	03 01 36.1	
	138nm,0.1s						
MTE	**Manteigas**	**1.74**	**175**	*e*Pn	**Pn**	**03 01 19.7**	**+0.8**
MTE	**Manteigas**	**1.74**	**175**	*e*Pg	**Pb**	**03 01 22.5**	**+1.5**
MTE				*e*Sn	**Sn**	**03 01 41.0**	**+0.3**
MTE				*e*Sg	**Sb**	**03 01 44.9**	**+2.3**
MTE				A	A	03 01 46.3	
	79nm,0.4s						
PCAS	**Casmilo, Conde**	**2.16**	**196**	*e*Pn	**Pn**	**03 01 25.5**	**+0.9**
PCAS	**Casmilo, Conde**	**2.16**	**196**	*e*Pg	**Pg**	**03 01 30.2**	**-0.8**
PCAS				*e*Sn	**Sn**	**03 01 53.3**	**+2.4**
PCAS				*e*Sg	**Sg**	**03 01 58.2**	**-0.9**
PCAS				A	A	03 02 02.3	
	28nm,0.6s						
EARI	**Arriondas**	**2.20**	**57**	Pn	**Pb**	**03 01 27.6**	**-1.1**
EARI				Sn	**Sb**	**03 01 55.2**	**-0.4**
EARI				Sg	**Sg**	**03 02 02.0**	**+1.7**
EARI				*i* Vmb_Lg		03 02 08.1	
PCBR	**Castelo Branco**	**2.31**	**175**	*e*Pn	**Pn**	**03 01 27.7**	**+1.1**
PCBR	**Castelo Branco**	**2.31**	**175**	*e*Pg	**Pg**	**03 01 33.6**	**-0.2**
PCBR				*e*Sn	**Sn**	**03 01 55.0**	**+0.6**
PCBR				*e*Sg	**Sg**	**03 02 02.6**	**-1.1**
PCBR				A	A	03 02 03.7	
	25nm,0.2s						
EPLA	**Plasencia**	**2.42**	**148**	Pn	**Pn**	**03 01 30.0**	**+1.7**
EPLA				Sn	**Sn**	**03 01 58.8**	**+1.4**
EPLA				Sg	**Sg**	**03 02 07.7**	**+0.3**
EPLA				*i* Vmb_Lg		03 02 08.9	
PMRV	**Marv??o**	**2.72**	**174**	*e*Pn	**Pn**	**03 01 33.3**	**+1.0**
PMRV				*e*Sn	**Sn**	**03 02 05.1**	**+0.4**
PMRV				*e*Sg	**Sg**	**03 02 16.3**	**-0.7**
PMRV				A	A	03 02 18.8	
	31nm,0.3s						
PSBE	**So Bento**	**2.74**	**197**	*e*Pn	**Pn**	**03 01 33.8**	**+1.2**
PSBE	**So Bento**	**2.74**	**197**	*e*Pg	**Pg**	**03 01 41.7**	**-0.4**
PSBE				*e*Sn	**Sn**	**03 02 04.9**	**-0.4**
PSBE				*e*Sg	**Sg**	**03 02 15.7**	**-2.0**
PSBE				A	A	03 02 23.6	
	27nm,0.5s						
GUD	**Guadarrama**	**3.08**	**118**	Pn	**Pn**	**03 01 38.7**	**+1.3**
GUD				Sn	**Sn**	**03 02 15.5**	**+1.6**
GUD				*i* Vmb_Lg		03 02 31.9	
PMTG	**Montargil**	**3.09**	**187**	*e*Pn	**Pn**	**03 01 38.2**	**+0.9**
PMTG				*e*Sn	**Sn**	**03 02 13.7**	**-0.1**
PMTG				*e*Sg	**Sg**	**03 02 26.5**	**-2.3**
PMTG				A	A	03 02 29.4	
	7.1nm,0.1s						
PESTR	**Estremoz**	**3.27**	**178**	*e*Pn	**Pn**	**03 01 40.8**	**+0.9**
PESTR	**Estremoz**	**3.27**	**178**	*e*Pg	**Pg**	**03 01 51.5**	**-0.7**
PESTR				*e*Sn	**Sn**	**03 02 18.6**	**+0.3**
PESTR				*e*Sg	**Sg**	**03 02 31.8**	**-2.8**
PESTR				A	A	03 02 34.9	
	11nm,0.5s						
ELAN	**Lanestosa**	**3.36**	**70**	Pn	**Pn**	**03 01 44.2**	**+3.1**
ELAN				Sn	**Sn**	**03 02 23.9**	**+3.5**
ELAN				Sg	**Sg**	**03 02 43.0**	**+5.6**
ELAN				*i* Vmb_Lg		03 02 45.2	
PMAFR	**Mafra**	**3.39**	**201**	*e*Pn	**Pn**	**03 01 42.6**	**+1.1**
PMAFR				*e*Sn	**Sn**	**03 02 21.2**	**0.0**
PMAFR				A	A	03 02 44.8	
	20nm,0.5s						
EBAD	**Badajoz**	**3.42**	**170**	Pn	**Pn**	**03 01 42.9**	**+1.0**
EBAD				Sn	**Sn**	**03 02 21.9**	**-0.2**
EBAD				*i* Vmb_Lg		03 02 42.2	
PACT	**Alcochete**	**3.47**	**194**	*e*Sn	**Sn**	**03 02 22.7**	**-0.4**
PACT				A	A	03 02 44.5	
	17nm,0.1s						
PMST	**Lisbon--Monsan**	**3.57**	**198**	*e*Pn	**Pn**	**03 01 43.5**	**-0.5**
PMST				*e*Sn	**Sn**	**03 02 25.5**	**-0.2**
EVO	**Evora**	**3.61**	**183**	*e*Pn	**Pn**	**03 01 45.7**	**+1.2**
EVO				*e*Sn	**Sn**	**03 02 25.9**	**-0.7**
EVO				A	A	03 02 47.5	
	13nm,0.4s						
PAB	**San Pablo**	**3.65**	**134**	Pn	**Pn**	**03 01 46.9**	**+1.8**
PAB				Sn	**Sn**	**03 02 28.9**	**+1.2**
PAB				*i* Vmb_Lg		03 02 48.7	
UCM	**Universidad Co**	**3.85**	**117**	P	**Pg**	**03 02 03.0**	**-0.3**
UCM				S	**Sg**	**03 02 51.5**	**-1.7**
PBAR	**Barrancos**	**4.00**	**172**	*e*Pn	**Pn**	**03 01 51.2**	**+1.4**
PBAR				*e*Sn	**Sn**	**03 02 36.0**	**-0.1**
PBAR				*e*Sg	**Sg**	**03 02 55.6**	**-2.2**
PBAR				A	A	03 02 59.8	
	8.3nm,0.6s						
PNCL	**Nicolau / Gran**	**4.07**	**189**	*e*Pn	**Pn**	**03 01 51.8**	**+1.0**
PNCL				*e*Sn	**Sn**	**03 02 36.3**	**-1.6**
PNCL				*e*Sg	**Sg**	**03 02 57.6**	**-2.5**
PNCL				A	A	03 03 03.9	
	5.3nm,0.7s						
PBEJ	**Beja**	**4.11**	**181**	*e*Pn	**Pn**	**03 01 52.6**	**+1.2**
PBEJ				*e*Sn	**Sn**	**03 02 37.5**	**-1.4**
PBEJ				A	A	03 03 02.8	
	3.5nm,0.5s						
MESJ	**Messejana**	**4.31**	**185**	*e*P	**Pn**	**03 01 55.2**	**+1.0**
MESJ				*e*S	**Sn**	**03 02 41.3**	**-2.6**
MESJ				IAML		03 02 43.4	
	comp=N,5.2nm,0.5s						
MESJ	**Messejana**	**4.31**	**185**	*e*Pn	**Pn**	**03 01 55.3**	**+1.2**
MESJ				A	A	03 03 10.9	
	comp=N,5.8nm,0.5s						
ECAB	**El Cabril**	**4.43**	**156**	Pn	**Pn**	**03 01 57.3**	**+1.5**
ECAB				Sn	**Sn**	**03 02 47.2**	**+0.3**
ECAB				*i* Vmb_Lg		03 03 14.3	
PCVE	**Castro Verde**	**4.51**	**183**	*e*Pn	**Pn**	**03 01 57.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**03 02 46.5**	**-2.3**
PCVE				A	A	03 03 16.8	
	comp=N,5.7nm,0.6s						
EADA	**Adamuz**	**4.65**	**148**	Pn	**Pn**	**03 02 00.1**	**+1.3**
EADA				Sn	**Sn**	**03 02 52.0**	**-0.3**
PTEO	**Sao Teotonio**	**4.65**	**190**	*e*Pn	**Pn**	**03 01 59.8**	**+1.0**
PTEO				*e*Sn	**Sn**	**03 02 50.8**	**-1.5**
PTEO				*e*Sg	**Sg**	**03 03 16.6**	**-2.2**
PTEO				A	A	03 03 26.1	
	comp=N,11nm,0.8s						
PVAQ	**Vaqueiros**	**4.73**	**180**	*e*Pn	**Pn**	**03 02 00.9**	**+1.0**
PVAQ				*e*Sn	**Sn**	**03 02 51.9**	**-2.3**
PVAQ				*e*Sg	**Sg**	**03 03 19.9**	**-1.4**
PVAQ				A	A	03 03 21.5	
	comp=N,7.0nm,0.6s						
MORF	**Marmelete**	**4.88**	**189**	*e*P	**Pn**	**03 02 02.7**	**+0.7**
MORF	**Marmelete**	**4.88**	**189**	*e*Pn	**Pn**	**03 02 02.9**	**+0.9**
MORF				*e*Sn	**Sn**	**03 02 57.7**	**-0.3**
MORF				A	A	03 03 31.0	
	comp=N,4.3nm,0.5s						
SJPF	**Ste Jean**	**4.90**	**76**	*e*Pn	**Pn**	**03 02 04.2**	**+1.9**
SJPF				*e*Sn	**Sn**	**03 02 58.8**	**+0.2**
SJPF				*e*Sg	**Sg**	**03 03 24.9**	**-2.0**
	comp=N,1.5nm,0.3s						
PFVI	**Vila Bisbo**	**5.07**	**190**	*e*Pn	**Pn**	**03 02 05.4**	**+0.8**
PFVI				*e*Sn	**Sn**	**03 02 02.2**	**-0.4**
ETSF	**Etsaut**	**5.36**	**79**	*e*Pn	**Pn**	**03 02 10.8**	**+2.2**
ETSF				*e*Sn	**Sn**	**03 03 09.4**	**-0.5**
ETSF				*e*Sg	**Sg**	**03 03 39.3**	**-2.2**
	comp=N,1.5nm,0.3s						
EPF	**Esparros**	**6.03**	**79**	*e*Pn	**Pn**	**03 02 19.8**	**+2.0**
EPF				*e*Sn	**Sn**	**03 03 26.0**	**-0.4**
	comp=N,1.5nm,0.3s						
EPF				*e*Sg	**Sg**	**03 04 01.4**	**-1.6**
	comp=N,0.5nm,0.3s						
QUIF	**Quistinic**	**6.62**	**28**	*e*Pn	**Pn**	**03 02 26.7**	**+0.9**
QUIF				*e*Sn	**Sn**	**03 03 36.6**	**-4.2**
	comp=N,1.6nm,0.2s						
LFF	**La Frestale**	**6.77**	**63**	*e*Pn	**Pn**	**03 02 29.8**	**+1.9**
LFF				*e*Sn	**Sn**	**03 03 40.6**	**-3.8**
ROSF	**Rostrenen**	**6.95**	**25**	*e*Pn	**Pn**	**03 02 30.1**	**-0.3**
ROSF				*e*Sn	**Sn**	**03 03 45.0**	**-3.9**
	comp=N,1.3nm,0.3s						
MFF	**Saint Martin d**	**7.04**	**48**	*e*Pn	**Pn**	**03 02 32.0**	**+0.5**
MFF				*e*Sn	**Sn**	**03 03 47.5**	**-3.5**
	comp=N,1.2nm,0.3s						
SGMF	**Saint Gilles**	**7.12**	**29**	*e*Pn	**Pn**	**03 02 33.5**	**+0.7**
RJF	**Les Rejaudoux**	**7.41**	**62**	*e*Pn	**Pn**	**03 02 37.4**	**+0.7**
RJF				*e*Sn	**Sn**	**03 03 57.0**	**-3.3**
	comp=N,1.6nm,0.4s						
CAF	**Calviac**	**7.65**	**65**	*e*Pn	**Pn**	**03 02 40.2**	**+0.2**
GRR	**Gorron**	**7.91**	**35**	*e*Pn	**Pn**	**03 02 44.9**	**+1.4**
GRR				*e*Sn	**Sn**	**03 04 07.3

LLP *i* S **Sn** 03 17 22.7 +4.7
SNPH Sibulan 2.85 290 *i* P **Pn** 03 16 44.8 -2.4
SNPH *i* S **Sn** 03 17 15.8 -4.5
RCP Roxas 4.48 316 || *e*P **Pn** 03 17 08.7 -0.8
SGSI Sangihe 4.66 185 P **Pn** 03 17 14.1 +2.0
GAMI Galela, Maluku 6.73 164 P **Pn** 03 17 44.4 +3.9
1.1nm7μm176nm,0.7s
LQP Lukban 7.17 323 || *e*P Pn 03 17 51.9 +5.2
TNTI Ternate 7.67 169 Pn **Pn** 03 17 54.4 +1.0
TNTI Ternate 7.67 169 P **Pn** 03 17 54.8 +1.4
0.4nm1μm133nm,0.9s
MYLDM Lahad Datu 8.04 247 Pn **Pn** 03 17 55.7 -2.7
GTOI Gorontalo 8.21 201 P **Pn** 03 17 57.9 -2.9
0.2nm546nm53nm,0.7s
I39PW PALAU INFRASON 8.56 95 I 04 09 00.0
baz=275,slow=304,SNR=1.1
MRSI Marisa 8.79 207 P **Pn** 03 18 06.0 -2.7
789nm67nm,1.0s
TOLI2 Tolitoli 8.85 216 Pn **Pn** 03 18 07.3 -2.2
LBMI Labuha 9.07 170 P **Pn** 03 18 15.7 +3.1
118nm,0.9s
LUWI Luwuk 9.86 199 Pn **Pn** 03 18 21.9 -1.5
KKM Kota Kinabalu 9.92 257 Pn **Pn** 03 18 21.0 -3.3
APSI Ampana 10.16 205 P **Pn** 03 18 30.1 +2.7
942nm85nm,0.8s
SANI Sanana 10.34 180 P **Pn** 03 18 30.1 +0.1
879nm94nm,0.7s
SWI Sorong 10.58 150 P **Pn** 03 18 33.8 +0.5
59nm,0.9s
SIJI Sorong 10.59 150 Pn **Pn** 03 18 33.0 -0.4
5.4nm,0.3s,baz=350,slow=12,SNR=10
SIJI Sn **Sn** 03 20 28.3 -2.4
1.6nm,0.3s,baz=166,slow=22,SNR=5.8
15nm,0.4s
SIJI Sorong 10.59 150 P **Pn** 03 18 33.3 -0.1
32nm,0.6s
NLAI Namlea 11.58 174 P **Pn** 03 18 44.6 -2.3
67nm,0.8s
KRAI Karang Ratu 11.86 168 P **Pn** 03 18 51.7 +1.0
4μm31nm,0.6s
MSAI Masohi 12.00 166 P **Pn** 03 18 54.3 +1.6
1μm10nm,0.8s
RKPI Ransiki, Papua 12.79 140 P **Pn** 03 19 06.3 +2.9
61nm,0.9s
FAKI Fak Fak 12.85 150 Pn **Pn** 03 19 04.5 +0.3
FAKI Fak Fak 12.85 150 P **Pn** 03 19 06.7 +2.5
43nm,1.0s
BKSI Bulukumba 14.78 203 P **Pn** 03 19 29.3 -1.0
407nm17nm,1.3s
SBUM Sibu 14.87 248 Pn **Pn** 03 19 31.9 +0.4
SBUM Sibu 14.87 248 P **P** 03 19 33.3 -3.0
15nm,1.0s
SOEI Soe 18.07 185 **P** 03 20 10.5 -1.5
SOEI Soe 18.07 185 P **Pn** 03 20 15.2 +3.2
84nm,0.9s
MTN Manton Dam 21.69 166 P **P** 03 20 51.0 -0.1
MTN IAmb IAmb 03 20 59.0
comp=Z,20nm,0.7s
KNRA Kununurra 24.04 173 P **P** 03 21 14.2 -0.7
KNRA IAmb IAmb 03 21 20.5
comp=Z,56nm,0.8s
COEN Coen 28.00 142 P **P** 03 21 50.0 -0.8
COEN IAmb IAmb 03 22 01.2
comp=Z,20nm,0.9s
CMAR Chiang Mai Arr 28.08 294 P **P** 03 21 51.4 -0.1
comp=Z,2.2nm,0.3s,baz=114,slow=7.2,SNR=6.9
comp=Z,2.2nm,0.3s
KSRS Korea Array 29.02 3 P **P** 03 21 59.0 -0.7
comp=Z,6.0nm,1.1s,baz=189,slow=12,SNR=7.0
comp=Z,6.0nm,1.1s
WB0 Warramunga Arr 29.16 164 P **P** 03 21 59.1 -2.0
WRA Warramunga Arr 29.31 164 P **P** 03 22 00.7 -1.8
comp=Z,1.2nm,0.5s,baz=346,slow=9.4,SNR=22
comp=Z,1.2nm,0.5s
WRA Warramunga Arr 29.31 164 P **P** 03 22 01.5 -1.0
WB2 Warramunga Arr 29.32 164 P **P** 03 22 00.9 -1.6
WR0 Warramunga Arr 29.39 163 P **P** 03 22 01.5 -1.6
XAN Xi'an 29.98 331 P **P** 03 22 11.3 +3.0
XAN pP pP 03 22 21.5 +0.7
XAN sP sP 03 22 25.5 -1.0
XAN pmax pmax
comp=Z,8.0nm,1.0s
MJAR Matsushiro Arr 30.19 20 P **P** 03 22 08.2 -1.9
comp=Z,3.5nm,0.9s,baz=190,slow=9.2,SNR=6.6
comp=Z,3.5nm,0.9s
AS31 Alice Springs 32.77 166 P **P** 03 22 31.6 -1.2
ASAR Alice Springs 32.77 166 P **P** 03 22 31.6 -1.3
comp=Z,2.0nm,0.5s,baz=338,slow=6.6,SNR=34
comp=Z,2.0nm,0.5s
ASAR Alice Springs 32.77 166 P **P** 03 22 32.2 -0.7
CTA Charters Tower 34.62 145 P **P** 03 22 48.9 -0.1
comp=Z,2.2nm,0.6s,baz=311,slow=9.7,SNR=5.0
comp=Z,2.2nm,0.6s
CTAO Charters Tower 34.62 145 P **P** 03 22 49.4 +0.4
CTAO IAmb IAmb 03 22 57.6
comp=Z,9.5nm,1.1s
CTAO Charters Tower 34.62 145 P **P** 03 22 48.3 -0.7
CTAO sP **sP** 03 23 11.4 +4.1
CN2 Changchun 35.31 359 *e*P **P** 03 22 52.6 -2.0
CN2 *e*PP **PnPn** 03 24 11.6 -2.4
CN2 *e*S **S** 03 28 24.6 -0.8
USRK Ussuriysk Ar. 36.09 7 P **P** 03 23 01.3 0.0
comp=Z,20nm,0.8s,baz=194,slow=8.2,SNR=39
comp=Z,20nm,0.8s
USRK Ussuriysk Ar. 36.09 7 P **P** 03 23 01.6 +0.3
MDJ Mudanjiang 36.26 4 P **P** 03 23 02.6 -0.1
MDJ IAmb IAmb 03 23 14.3
comp=Z,22nm,1.1s
HNR Honiara 38.20 117 P **P** 03 23 18.6 -1.1
HNR Honiara 38.20 117 P **P** 03 23 19.4 -0.2
HNR Honiara 38.20 117 P **P** 03 23 17.4 -2.2
HNR pP **pP** 03 23 30.3 -2.1
HNR sP **sP** 03 23 36.8 -1.2
GTA Gaotai 38.78 327 *e*P **P** 03 23 27.3 +2.9
GTA pP pP 03 23 32.0 -5.1
GTA sP sP 03 23 35.0 -7.8
GTA pmax pmax
comp=Z,5.0nm,1.3s
FORT Forrest 38.97 177 P **P** 03 23 25.8 0.0
GOMU GeErMu 39.64 319 P **P** 03 23 31.5 -0.4
GOMU pmax pmax
comp=Z,4.0nm,0.5s
GOMU pmax pmax
comp=Z,84nm,4.8s
TAPN Taplejung 40.77 303 *e*P **P** 03 23 42.0 +0.7
comp=Z,44nm,0.8s
KLR Kul'dur 41.03 6 P **P** 03 23 42.5 -0.1
comp=Z,3.5nm,0.7s,baz=199,slow=4.8,SNR=14
comp=Z,3.5nm,0.7s
RAMN Ramite 41.57 301 *e*P **P** 03 23 48.5 +0.7
comp=Z,27nm,0.8s
BBOO Buckleboo 42.06 167 P **P** 03 23 50.3 -1.1
JIRN Jiri 42.15 302 *e*P **P** 03 23 53.2 +0.6
comp=Z,25nm,0.5s
GUN Gumba 42.49 303 *e*P **P** 03 23 56.1 +0.7
comp=Z,43nm,0.8s
SONM Songino Array 42.70 341 P **P** 03 23 56.3 -0.3
comp=Z,1.1nm,1.0s,baz=161,slow=9.4,SNR=5.1
comp=Z,1.1nm,1.0s
STKA Stephens Creek 42.72 160 P **P** 03 23 56.2 -0.5
comp=Z,5.2nm,0.6s,baz=342,slow=8.2,SNR=13
comp=Z,5.2nm,0.6s
STKA Stephens Creek 42.72 160 P **P** 03 23 57.4 +0.7
PKI Pulchoki 42.77 302 *e*P **P** 03 23 57.7 0.0
comp=Z,22nm,0.8s
PKIN Phulchoki 42.78 302 *e*P **P** 03 23 57.5 -0.2
comp=Z,11nm,0.6s
DMN Daman 43.04 302 *e*P **P** 03 23 59.9 +0.1
comp=Z,13nm,0.7s
GKN Gorkha 43.56 302 *e*P **P** 03 24 04.3 +0.5
comp=Z,26nm,0.8s
DANN Dangsing 44.40 302 *e*P **P** 03 24 10.1 -0.7
comp=Z,37nm,0.6s
PYUN Piuthan 44.97 302 *e*P **P** 03 24 14.8 -0.4
comp=Z,85nm,1.0s
DZM Mont Dzumac 49.91 128 P **P** 03 24 53.9 +0.4
comp=Z,4.0nm,0.5s,baz=256,slow=9.1,SNR=11
comp=Z,4.0nm,0.5s
DZM Mont Dzumac 49.91 128 P **P** 03 24 52.4 -1.1
DZM pP **pP** 03 25 04.4 -2.2
MKAR Makanchi Array 53.36 324 P **P** 03 25 19.6 +0.8
comp=Z,2.2nm,0.7s,baz=124,slow=8.0,SNR=16
comp=Z,2.2nm,0.7s
MKAR Makanchi Array 53.36 324 P **P** 03 25 18.7 -0.1
TARG Taragay, Kyrgy 53.84 316 P **P** 03 25 21.1 -1.8
TARG IAmb IAmb 03 25 40.7
comp=Z,9.0nm,1.0s
KSH Kashi 54.28 313 P **P** 03 25 27.9 +2.1
KSH sP pP 03 25 36.2 -2.9
KSH pmax pmax
comp=Z,10.0nm,1.0s
NIL Nilore 54.55 305 P **P** 03 25 27.2 -0.6
NIL Nilore 54.55 305 P **P** 03 25 26.9 -1.0
NIL sP **sP** 03 25 46.6 0.0
NRN Naryn 54.97 315 P **P** 03 25 30.4 -0.6
NRN IAmb IAmb 03 25 32.6
comp=Z,6.1nm,0.9s
ZALV Zalesovo Beam 56.15 332 P **P** 03 25 38.1 -0.7
comp=Z,0.8nm,0.4s,baz=145,slow=10,SNR=3.6
comp=Z,0.8nm,0.4s
ZALV Zalesovo Beam 56.15 332 P **P** 03 25 38.4 -0.4
AAK Ala-Archa 56.46 316 P **P** 03 25 41.9 +0.4
AAK Ala-Archa 56.46 316 P **P** 03 25 41.7 +0.2
AAK sP **sP** 03 26 01.9 +1.5
KURK Kurchatov 57.46 326 P **P** 03 25 48.3 +0.1
KURK IAmb IAmb 03 25 58.5
comp=Z,9.0nm,0.8s
MSVF Nonsavu 57.62 117 P **P** 03 25 51.7 +1.7
comp=Z,12nm,0.8s,baz=293,slow=4.8,SNR=8.1
comp=Z,12nm,0.8s
MSVF Nonsavu 57.62 117 P **P** 03 25 50.7 +0.8
MSVF Nonsavu 57.62 117 P **P** 03 25 51.2 +1.2
MSVF pP **pP** 03 26 07.2 +3.8
SEY Seymchan 57.74 14 P **P** 03 25 51.5 +1.6
comp=Z,1.2nm,0.6s,baz=187,slow=22,SNR=4.4
comp=Z,1.2nm,0.6s
KBL Kabul 58.16 306 P **P** 03 25 52.8 -0.9
KBL IAmb IAmb 03 25 59.3
comp=Z,6.5nm,0.8s
BTK Batken 58.21 312 P **P** 03 25 53.3 -0.5
BTK IAmb IAmb 03 26 08.7
comp=Z,20nm,1.3s
GAR Garm 58.28 311 P **P** 03 25 53.5 -0.8
CHGR Chuyangaron 59.05 310 P **P** 03 25 58.8 -0.9
KKAR Karatay Array 59.37 315 P **P** 03 26 01.2 -0.5
KKAR IAmb IAmb 03 26 02.8
comp=Z,7.0nm,0.8s
BRVK Borovoye 63.12 326 P **P** 03 26 25.6 -1.2
BRVK IAmb IAmb 03 26 33.6
comp=Z,11nm,0.8s
BRVK Borovoye 63.12 326 P **P** 03 26 26.9 0.0
TIXI Tiksi 63.26 1 P **P** 03 26 26.9 -0.5
TIXI IAmb IAmb 03 26 35.4
comp=Z,8.4nm,1.0s
TIXI Tiksi 63.26 1 P **P** 03 26 26.2 -1.2
TIXI sP **sP** 03 26 46.8 +0.4
NRIK Noril'sk 65.78 346 P **P** 03 26 46.6 +2.7
comp=Z,5.8nm,0.6s,baz=136,slow=6.9,SNR=6.3
NRIK Noril'sk 65.78 346 P **P** 03 26 44.1 +0.1
NRIK IAmb IAmb 03 26 49.7
comp=Z,7.3nm,0.8s
RPZ Rata Peaks 65.99 146 P **P** 03 26 46.5 +0.8
comp=Z,11nm,0.5s,baz=308,slow=4.2,SNR=5.6
comp=Z,11nm,0.5s
GEYT Alibeck 67.44 308 P **P** 03 26 55.1 -0.1
ABKAR Akbulak array 68.11 320 P **P** 03 26 58.2 -0.9
ABKAR Akbulak array 68.11 320 P **P** 03 26 58.4 -0.8
ARU Arti 70.64 327 P **P** 03 27 13.8 -0.9
ARU IAmb IAmb 03 27 23.0
comp=Z,7.9nm,0.8s
CHGN Chignik 75.13 34 P **P** 03 27 42.6 +1.4
RAYN Ar Rayn 77.99 292 P **P** 03 27 56.2 -1.9
RAYN IAmb IAmb 03 28 13.8
comp=Z,8.4nm,1.1s
GURO Guroymak-BITLI 80.10 308 P **P** 03 28 08.8 -0.7
GURO IAmb IAmb 03 28 23.6
comp=Z,8.7nm,0.8s
I23K Minto, Yukon-K 80.24 25 P **P** 03 28 10.5 +1.0
MCK McKinley 80.40 27 P **P** 03 28 11.3 +0.8
KLMR Klimovskoe 81.02 330 *e* **P** 03 28 14.7 +1.0
KLMR AMP 03 28 23.4
comp=Z,19nm,1.5s
ILAR Eielson Array 81.29 26 P **P** 03 28 15.1 -0.1
comp=Z,0.9nm,0.8s,baz=230,slow=4.9,SNR=8.2
comp=Z,0.9nm,0.8s
K27K Chicken 83.42 26 P **P** 03 28 27.6 +1.4
K27K IAmb IAmb 03 28 34.6
comp=Z,7.7nm,0.9s
EGAK Eagle 83.74 26 P **P** 03 28 28.7 +0.8
EGAK IAmb IAmb 03 30 45.0
comp=Z,27nm,1.9s
CTGM Chitina Glacie 84.08 29 P **P** 03 28 31.0 +1.1
CTGM IAmb IAmb 03 28 39.8
comp=Z,17nm,1.1s
DAWY Dawson 84.59 26 P **P** 03 28 33.3 +1.0
DAWY IAmb IAmb 03 28 44.8
comp=Z,10nm,1.2s
ARCES ARCESS Array B 85.86 340 P **P** 03 28 38.4 -0.1
comp=Z,3.8nm,0.9s,baz=79,slow=5.6,SNR=1.5
comp=Z,3.8nm,0.9s
BRTR Keskin Array B 86.49 309 P **P** 03 28 42.5 0.0
comp=Z,0.5nm,0.6s,baz=67,slow=4.8,SNR=2.7
comp=Z,0.5nm,0.6s
FINES FINESS Array B 87.41 332 P **P** 03 28 45.7 -0.5
comp=Z,1.2nm,0.6s,baz=90,slow=4.0,SNR=11
comp=Z,1.2nm,0.6s
FARO Faro, Yukon 87.62 27 P **P** 03 28 48.4 +1.1
VNDA Vanda 88.09 173 P **P** 03 28 48.2 -0.8
comp=Z,0.9nm,0.6s,baz=317,slow=5.2,SNR=9.8
comp=Z,0.9nm,0.6s
VNDA Vanda 88.09 173 P **P** 03 28 49.5 +0.4
VNDA IAmb IAmb 03 28 57.1
comp=Z,6.6nm,1.2s
TORD Torodi Ar. Bea 120.65 291 PKP **PKPdf** 03 34 50.8 -1.0
comp=Z,1.2nm,0.8s,baz=61,slow=1.6,SNR=8.0
DBIC Dimbokro 128.73 285 PKP **PKiKP** 03 35 13.1 +5.0
comp=Z,4.5nm,1.0s,baz=129,slow=5.4,SNR=3.2
PLCA Paso Flores 144.58 158 PKP **PKPdf** 03 35 37.1 +1.2
comp=Z,2.3nm,0.9s,baz=201,slow=3.1,SNR=4.1

BJI ***12*** *03:21:21.3±0.0, 4°.93S×153°.87E, h6km, mb5.6/89, mB5.6/66, Ms5.5/92, Ms7 5.4/87*
IDC ***12*** *03:21:21.6±0.3, 5°.31S×153°.48E, h0km, mb5.4/35, mbtmp5.3/37, ML4.0/2, MS5.1/53, Error ellipse: s-maj=11.3km s-min=8.4km az=67.0*
NEIC ***12*** *03:21:23.7, 5°.35S×153°.49E, h13km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr1.32; Mθθ0.84; Mφφ-2.17; Mrθ0.65; Mθφ-1.37; Mφr-0.03; Fault plane solution: M0 2.43000×10^17^ NP1:φs56.41000°, δ63.01000°, λ143.69000°. NP2:φs164.85000°, δ58.15000°, λ32.30000°. Principal axes: T 1.9695, Plg44.0000°, Azm19.0000°; N 0.7394, Plg46.0000°, Azm205.0000°; P -2.7089, Plg3.0000°, Azm112.0000°;*
MOS ***12*** *03:21:23.8±1.2, 5°.32S×153°.46E, h21km, mb5.8/45, MS5.4/23 Error ellipse: s-maj=8.5km s-min=5.7km az=110.8*
NEIC ***12*** *03:21:24.4±1.8, 5°.42S±0°.06×153°.51E±0°.06, h11km±1km, mb5.6/210, Ms_20 5.4/280, Mwb5.5/39, Mww5.6, Error ellipse: s-maj=12.7km s-min=8.7km az=44.0*
DJA ***12*** *03:21:27.7±0.4, 5°S±2°×15°3E±°, h37km±3km, M5.6/81, mB6.0/63, mb5.7/81, MLv5.9/4, Mw(mB)5.6/63, MwMwp5.4/16, Mwp5.6/16*
GCMT ***12*** *03:21:28.4±0.1, 5°.54S±0°.01×153°.52E±0°.01, h20km, MW5.6/159, Moment Tensor Solution. s143,c261; s159,c310; Duration: 1s6 Moment tensor: Scale 10^17^ Nm; Mrr1.97±.04; Mθθ1.20±.03; Mφφ-3.16±.04; Mrθ1.35±.08; Mθφ-1.88±.03; Mφr-0.13±.07; Best double couple: M0 3.56700×10^17^ NP1:φs55.00000°, δ62.00000°, λ141.00000°. NP2:φs165.00000°, δ56.00000°, λ34.00000°. Principal axes: T 3.2540, Plg46.0000°, Azm17.0000°; N 0.6370, Plg44.0000°, Azm205.0000°; P -3.8810, Plg4.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***12*** *03:21:28, 5°.47S×153°.57E, h24km, Moment Tensor Solution. Duration: 5s6 Moment tensor: Scale 10^17^Nm; Mrr1.95; Mθθ1.27; Mφφ-3.22; Mrθ1.08; Mθφ-1.85; Mφr0.46; Fault plane solution: M0 3.56000×10^17^ NP1: φs163.00000°, δ52.00000°, λ32.00000°. NP2:φs53.00000°, δ65.00000°, λ138.00000°. Principal axes: T 2.8504, Plg47.0000°, Azm13.0000°; N 1.1424, Plg42.0000°, Azm208.0000°; P -3.9928, Plg8.0000°, Azm111.0000°;*
ISC 12 03:21:25.5±0.3, **5°.35S**±0°.03×**153°.50E**±0°.03, **h22**km±2km, **h23**km:**pP-P, n1180**, σ1s**53**/1123, **mb5.6**/239, **MS5.4**/246,

99C-16D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.76**	**311**		**Pn**	**03 21 55.2**	**+0.6**
RABL				Sn	**Sb**	**03 22 19.2**	**+0.4**
RABL	**Rabaul**	**1.76**	**311**	P	**Pb**	**03 21 57.1**	**0.0**
KRVT	**Keravat (AS076**	**1.79**	**305**	**Pn**	**Pn**	**03 21 56.3**	**+1.2**
	827nm,0.3s,baz=142,slow=1.9,SNR=231						
MANU	**Manus Island**	**6.94**	**298**	Pn	**Pn**	**03 23 07.2**	**+1.2**
MANU	**Manus Island**	**6.94**	**298**	P	**Pn**	**03 23 08.6**	**+2.6**
PMG	**Port Moresby**	**7.46**	**237**	**Pn**	**Pn**	**03 23 13.7**	**+0.6**
	34nm,0.3s,baz=35,slow=9.7,SNR=28						
PMG				Sn	**Sn**	**03 24 39.2**	**+2.1**
	18nm,0.3s,baz=58,slow=21,SNR=9.1						
PMG				LR	LR	03 25 44.0	
	comp=Z,13μm,21.3s,baz=24,slow=35						
	146nm,0.5s						
PMG	**Port Moresby**	**7.46**	**237**	Pn	**Pn**	**03 23 12.8**	**-0.3**
PMG	**Port Moresby**	**7.46**	**237**	*i* P	**Pn**	**03 23 13.6**	**+0.4**
PMG	**Port Moresby**	**7.46**	**237**	P	**Pn**	**03 23 13.5**	**+0.4**
	4.0nm6μm6μm583nm,0.6s						
PMG	**Port Moresby**	**7.46**	**237**	P	**Pn**	**03 23 15.5**	**+2.4**
PMG	**Port Moresby**	**7.46**	**237**	P	**Pn**	**03 23 15.8**	**+2.7**
HNR	**Honiara**	**7.57**	**123**	Pn	**Pn**	**03 23 16.8**	**+2.2**
	215nm,0.3s,baz=162,slow=11,SNR=9.8						
HNR				Sn	**Sn**	**03 24 42.2**	**+2.4**
	baz=265,slow=5.9						
HNR	**Honiara**	**7.57**	**123**	Pn	**Pn**	**03 23 14.3**	**-0.3**
HNR	**Honiara**	**7.57**	**123**	P	**Pn**	**03 23 14.3**	**-0.3**
PATS	**Pohnpei**	**13.03**	**22**	P	**Pn**	**03 24 29.1**	**-0.3**
	baz=13,SNR=35						
PATS	**Pohnpei**	**13.03**	**22**	Pn	**Pn**	**03 24 29.1**	**-0.3**
PATS	**Pohnpei**	**13.03**	**22**	P	**Pn**	**03 24 30.3**	**+0.9**
COEN	**Coen**	**13.28**	**229**	P	**Pn**	**03 24 36.5**	**+3.6**
	baz=13,SNR=5.3						
COEN	**Coen**	**13.28**	**229**	Pn	**Pn**	**03 24 31.2**	**-1.7**
COEN	**Coen**	**13.28**	**229**	P	**Pn**	**03 24 35.6**	**+2.7**
GENI	**Genyem**	**13.57**	**281**	P	**Pn**	**03 24 38.6**	**+1.8**
	17μm10μm490nm,1.4s						
GENI	**Genyem**	**13.57**	**281**	P	**Pn**	**03 24 38.3**	**+1.5**
SMPI	**Sarmi**	**15.13**	**282**	P	**Pn**	**03 25 00.2**	**+2.2**
	14μm48μm624nm,1.6s						
TV1H	**Townsville Har**	**15.29**	**205**	P	**P**	**03 25 02.7**	**-2.0**
MTSU	**Mount Surprise**	**15.55**	**214**	P	**Pn**	**03 25 04.7**	**+1.2**
	baz=16,SNR=36						
MTSU	**Mount Surprise**	**15.55**	**214**	P	**P**	**03 25 05.7**	**-2.0**
CTA	**Charters Tower**	**16.25**	**205**	Pn	**Pn**	**03 25 12.7**	**+0.2**
	1.4nm,0.3s,baz=22,slow=13,SNR=23						
CTA				Sn	**S**	**03 28 21.6**	**-3.2**
	0.4nm,0.3s,baz=34,slow=7.4,SNR=1.3						
CTA				LR	LR	03 30 57.7	
	comp=Z,11μm,20.0s,baz=22,slow=35						
CTA				ScP	**ScP**	**03 33 42.6**	**+2.7**
	4.9nm,0.9s,baz=257,slow=5.4,SNR=7.0						
	19nm,0.6s						
CTA	**Charters Tower**	**16.25**	**205**	P	**Pn**	**03 25 13.2**	**+0.6**
CTA				pmax	pmax		
	comp=Z,88nm,1.5s						
CTA	**Charters Tower**	**16.25**	**205**	P	**P**	**03 25 14.5**	**-1.0**
CTAO	**Charters Tower**	**16.25**	**205**	Pn	**Pn**	**03 25 11.4**	**-1.1**
CTAO	**Charters Tower**	**16.25**	**205**	P	**Pn**	**03 25 11.4**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,262nm,1.8s						
CTAO	**Charters Tower**	**16.25**	**205**	P	**P**	**03 25 14.5**	**-1.0**
SRPI	**Serui, Papua**	**17.56**	**281**	P	**Pn**	**03 25 28.3**	**-0.8**
	comp=Z,5μmcomp=Z,202nm,1.0s						
RK1H	**Rockhampton Ha**	**18.16**	**189**	P	**P**	**03 25 38.5**	**+1.9**
	comp=Z,57nm,1.0s						
KOUNC	**Koumac, New Ca**	**18.39**	**146**	P	**Pn**	**03 25 42.5**	**+3.3**
GD1S	**Gladstone Soft**	**18.52**	**187**	P	**Pn**	**03 25 43.8**	**+3.1**
DVP	**Devils Point**	**18.91**	**132**	P	**Pn**	**03 25 47.0**	**+1.5**
RTV	**Rentapao**	**19.13**	**131**	P	**Pn**	**03 25 49.6**	**+1.4**
RKPI	**Ransiki, Papua**	**19.65**	**281**	P	**P**	**03 25 53.7**	**+0.7**
	comp=Z,42μmcomp=Z,442nm,1.1s						
EIDS	**Eidsvold**	**20.04**	**186**	P	**P**	**03 25 57.4**	**+0.3**
	baz=20,SNR=22						
EIDS	**Eidsvold**	**20.04**	**186**	P	**P**	**03 25 57.2**	**+0.1**
EIDS	**Eidsvold**	**20.04**	**186**	P	Pn	03 25 58.3	-0.7
QIS	**Mount Isa**	**20.26**	**221**	P	**P**	**03 25 59.7**	**+0.1**
	baz=20,SNR=27						
QIS	**Mount Isa**	**20.26**	**221**	P	**P**	**03 25 59.8**	**+0.2**
LIFNC	**LIFOU**	**20.33**	**140**	P	**P**	**03 26 00.5**	**+0.2**
LIFNC	**LIFOU**	**20.33**	**140**	P	Pn	03 26 02.0	-0.4
TARA	**Tarawa**	**20.52**	**72**		Pn	03 26 03.8	-0.8
TARA	**Tarawa**	**20.52**	**72**	P	Pn	03 26 04.7	0.0
GUMO	**Guam**	**20.68**	**336**	P	**P**	**03 26 04.8**	**+0.7**
	comp=Z,473nm,0.9s,baz=163,slow=4.0,SNR=25						
GUMO				LR	LR	03 33 53.3	
	comp=Z,4μm,18.0s,baz=146,slow=36						
	comp=Z,473nm,0.9s						
GUMO	**Guam**	**20.68**	**336**	P	**P**	**03 26 05.2**	**+1.1**
GUMO	**Guam**	**20.68**	**336**	P	**P**	**03 26 05.2**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,1μm,1.1s						
GUMO	**Guam**	**20.68**	**336**	P	Pn	03 26 05.5	-1.0
NOUC	**Port Laguerre**	**20.76**	**145**	P	Pn	03 26 06.4	-1.0
DZM	**Mont Dzumac**	**20.82**	**144**	*e*P	**P**	**03 26 04.6**	**-1.1**
	comp=Z,1μm,1.3s						
DZM				*e*LR	LR	03 31 04.8	
	comp=Z,19μm,22.1s						
DZM	**Mont Dzumac**	**20.82**	**144**	P	**P**	**03 26 06.3**	**+0.6**
	comp=Z,191nm,0.5s,baz=292,slow=9.8,SNR=244						
DZM				S	**S**	**03 29 58.3**	**+1.1**
	comp=Z,12nm,1.0s,baz=106,slow=22,SNR=1.7						
DZM				LR	LR	03 33 25.5	
	comp=Z,18μm,19.0s,baz=316,slow=35						
DZM				ScP	**ScP**	**03 33 52.6**	**+2.7**
	comp=Z,18nm,1.0s,baz=96,slow=5.7,SNR=6.3						
	comp=Z,191nm,0.5s						
DZM	**Mont Dzumac**	**20.82**	**144**	P	**P**	**03 26 05.2**	**-0.5**
DZM	**Mont Dzumac**	**20.82**	**144**	P	Pn	03 26 07.0	-1.2
ONTNC	**Ouen Toro**	**21.00**	**145**	P	**P**	**03 26 07.0**	**-0.6**
ONTNC				IAmb	IAmb	03 26 23.1	
	comp=Z,277nm,0.9s						
ONTNC	**Ouen Toro**	**21.00**	**145**	P	**P**	**03 26 09.6**	**+2.0**
YATNC	**Mamie plateau,**	**21.07**	**143**	P	**P**	**03 26 10.6**	**+2.3**
OUENC	**Ouen Island, N**	**21.32**	**144**	P	**P**	**03 26 11.1**	**+0.2**
OUENC	**Ouen Island, N**	**21.32**	**144**	P	**P**	**03 26 12.4**	**+1.4**
FAKI	**Fak Fak**	**21.33**	**276**	P	**P**	**03 26 10.5**	**-0.7**
	comp=Z,8μmcomp=Z,4μmcomp=Z,159nm,1.0s						
FAKI	**Fak Fak**	**21.33**	**276**	P	**P**	**03 26 12.6**	**+1.4**
MARNC	**Mare, Loyalty**	**21.34**	**140**	P	**P**	**03 26 10.7**	**-0.6**
MARNC	**Mare, Loyalty**	**21.34**	**140**	P	**P**	**03 26 11.9**	**+0.6**
RMQ	**Roma**	**21.50**	**192**	P	**P**	**03 26 13.2**	**+0.3**
	baz=22,SNR=13						
RMQ	**Roma**	**21.50**	**192**	P	**P**	**03 26 14.6**	**+1.7**
KDU	**Kakadu**	**21.99**	**249**	P	**P**	**03 26 17.6**	**-0.7**
	baz=22,SNR=85						
KDU	**Kakadu**	**21.99**	**249**	P	**P**	**03 26 18.4**	**+0.1**
SAUI	**Saumlaki**	**22.20**	**262**	P	**P**	**03 26 18.4**	**-2.2**
SAUI	**Saumlaki**	**22.20**	**262**	P	**P**	**03 26 21.9**	**+1.4**
	comp=Z,12μmcomp=Z,817nm,1.0s						
SAUI	**Saumlaki**	**22.20**	**262**	P	**P**	**03 26 21.3**	**+0.8**
SIJI	**Sorong**	**22.63**	**281**	P	**P**	**03 26 24.2**	**-1.0**
	comp=Z,158nm,0.9s,baz=74,slow=7.6,SNR=51						
SIJI				S	**S**	**03 30 32.2**	**+0.1**
	comp=Z,5.0nm,0.4s,baz=233,slow=20,SNR=1.3						
SIJI				LR	LR	03 35 51.1	
	comp=Z,7μm,19.0s,baz=114,slow=38						
	comp=Z,158nm,0.9s						
SIJI	**Sorong**	**22.63**	**281**	P	**P**	**03 26 24.5**	**-0.7**
	comp=Z,7μmcomp=Z,3μmcomp=Z,124nm,1.0s						
SWI	**Sorong**	**22.64**	**281**	P	**P**	**03 26 25.0**	**-0.3**
SWI				pmax	pmax		
	comp=Z,342nm,1.2s						
SWI	**Sorong**	**22.64**	**281**	P	**P**	**03 26 24.9**	**-0.3**
	comp=Z,7μmcomp=Z,4μmcomp=Z,342nm,1.2s						
GC1S	**Gold Coast 1 S**	**22.69**	**180**	P	**P**	**03 26 27.4**	**+1.8**
	comp=Z,75nm,1.2s						
QLP	**Quilpie**	**22.89**	**202**	P	**P**	**03 26 27.1**	**-0.7**
	baz=23,SNR=19						
QLP	**Quilpie**	**22.89**	**202**	P	**P**	**03 26 28.4**	**+0.6**
MTN	**Manton Dam**	**23.29**	**250**	P	**P**	**03 26 30.8**	**-1.2**
	baz=23,SNR=16						
MTN	**Manton Dam**	**23.29**	**250**	P	**P**	**03 26 30.7**	**-1.2**
MTN	**Manton Dam**	**23.29**	**250**	P	**P**	**03 26 31.9**	**0.0**
WR0	**Warramunga Arr**	**23.47**	**230**	P	**P**	**03 26 32.5**	**-1.2**
WR0				IAmb	IAmb	03 26 56.1	
	comp=Z,135nm,1.1s						
WB0	**Warramunga Arr**	**23.47**	**231**	P	**P**	**03 26 32.4**	**-1.3**
WB0				IAmb	IAmb	03 26 55.5

WRAB Tennant Creek 23.60 230*c iP* **P 03 26 34.2 -0.8**
WRAB pmax pmax
comp=Z,118nm,1.2s
WRAB Tennant Creek 23.60 230 P **P 03 26 35.3 +0.3**
WB2 Warramunga Arr 23.61 230 P **P 03 26 34.0 -1.1**
baz=24
WB2 Warramunga Arr 23.61 230 P **P 03 26 33.7 -1.3**
WB2 IAmb IAmb 03 26 48.0
comp=Z,153nm,1.1s
WRA Warramunga Arr 23.61 230 P **P 03 26 33.9 -1.3**
comp=Z,64nm,0.8s,baz=54,slow=9.6,SNR=109
WRA PcP **PcP 03 30 20.8 +0.9**
comp=Z,11nm,0.7s,baz=61,slow=2.1,SNR=5.1
WRA S Sn 03 31 00.4 -9.4
comp=Z,12nm,1.0s,baz=39,slow=17,SNR=4.3
WRA ScP **ScP 03 33 59.7 +2.7**
comp=Z,14nm,1.0s,baz=51,slow=2.9,SNR=11
WRA LR LR 03 35 54.3
comp=Z,5μm,18.2s,baz=48,slow=37
comp=Z,64nm,0.8s
ARMA Armidale 25.00 184 P **P 03 26 48.1 +0.2**
baz=25,SNR=16
ARMA Armidale 25.00 184 P **P 03 26 48.5 +0.6**
ARMA IAmb IAmb 03 27 00.2
comp=Z,114nm,1.1s
ARMA Armidale 25.00 184 P **P 03 26 48.9 +1.0**
KRAI Karang Ratu 25.11 274 P **P 03 26 48.2 -0.8**
comp=Z,1μmcomp=Z,70nm,1.3s
AAI Ambon 25.27 273 P **P 03 26 51.5 +1.0**
AAI pmax pmax
comp=Z,191nm,0.8s
AAI Ambon 25.27 273 P **P 03 26 51.9 +1.4**
comp=Z,190nm,0.8s
INKA Innaminka 25.36 207 P **P 03 26 52.1 +1.1**
FUNA Funafuti 25.70 98 P **P 03 26 54.0 -0.3**
FUNA Funafuti 25.70 98 P **P 03 26 56.3 +2.0**
AS01 Alice Springs 26.19 224 P **P 03 26 58.3 -0.4**
comp=Z,85nm,0.9s
ASAR Alice Springs 26.23 224 P **P 03 26 58.1 -0.9**
comp=Z,66nm,0.9s,baz=57,slow=8.9,SNR=131
ASAR PcP **PcP 03 30 27.3 +1.6**
comp=Z,16nm,1.0s,baz=47,slow=3.2,SNR=4.7
ASAR ScP **ScP 03 34 07.6 +3.3**
comp=Z,8.5nm,0.9s,baz=48,slow=3.3,SNR=10
comp=Z,66nm,0.9s
ASAR Alice Springs 26.23 224 P **P 03 26 58.3 -0.7**
ASAR Alice Springs 26.23 224 P **P 03 26 58.3 -0.7**
KNRA Kununurra 26.36 245 P **P 03 26 59.6 -0.6**
baz=26,SNR=32
KNRA Kununurra 26.36 245 P **P 03 26 59.1 -1.1**
KNRA Kununurra 26.36 245 P **P 03 27 00.9 +0.6**
LBMI Labuha 26.37 279 P **P 03 27 01.2 +0.8**
comp=Z,5μmcomp=Z,281nm,0.9s
NLAI Namlea 26.40 273 P **P 03 27 00.2 -0.5**
comp=Z,3μmcomp=Z,52nm,1.0s
LHI Lord Howe Isla 26.55 169 P **P 03 27 00.4 -1.4**
LHI IAmb IAmb 03 27 04.9
comp=Z,324nm,1.6s
TNTI Ternate 26.80 282 P **P 03 27 04.5 +0.2**
TNTI Ternate 26.80 282 P **P 03 27 06.0 +1.8**
MSVF Nonsavu 26.98 119 P **P 03 27 07.3 +1.4**
comp=Z,5.4nm,0.7s,baz=285,slow=20,SNR=1.8
MSVF ScP **ScP 03 34 09.4 +2.7**
comp=Z,24nm,1.2s,baz=125,slow=1.5,SNR=4.8
MSVF LR LR 03 37 12.9
comp=Z,12μm,18.7s,baz=314,slow=35
comp=Z,5.4nm,0.7s
MSVF Nonsavu 26.98 119 IAMs_20 IAMs_20 03 36 53.3
comp=Z,12μm,19.0s
MSVF Nonsavu 26.98 119 P **P 03 27 07.6 +1.7**
H11S3 WAKE ISLAND Hy 27.03 28 T T 03 55 18.6
baz=208,slow=74,SNR=720
H11S2 WAKE ISLAND Hy 27.04 28 T T 03 55 30.9
baz=208,slow=74,SNR=633
H11S1 WAKE ISLAND Hy 27.05 28 T T 03 55 31.7
baz=208,slow=74,SNR=241
CMSA Cobar Meteorol 27.06 195 P **P 03 27 05.2 -1.2**
baz=27,SNR=14
CMSA Cobar Meteorol 27.06 195 P **P 03 27 06.3 -0.1**
NTLH Newcastle Hard 27.46 183 P **P 03 27 11.4 +1.4**
SANI Sanana 27.64 276 P **P 03 27 11.1 -0.8**
comp=Z,3μmcomp=Z,2μmcomp=Z,90nm,1.3s
SANI Sanana 27.64 276 P **P 03 27 11.8 -0.1**
MGCD Mangrove Creek 27.81 184 P **P 03 27 13.1 0.0**
baz=28,SNR=11
MGCD Mangrove Creek 27.81 184 P **P 03 27 14.9 +1.8**
OOD Oodnadatta 28.02 215 P **P 03 27 14.0 -1.0**
SYDH Sydney Hard Ro 28.38 185 P **P 03 27 18.9 +0.7**
RIV Riverview 28.42 184 P **P 03 27 19.6 +1.1**
STKA Stephens Creek 28.65 201 P **P 03 27 19.5 -1.1**
comp=Z,20nm,0.9s,baz=33,slow=13,SNR=14
STKA PcP **PcP 03 30 31.8 +0.5**
comp=Z,22nm,1.1s,baz=64,slow=1.2,SNR=3.6
STKA ScP **ScP 03 34 13.4 +1.9**
comp=Z,17nm,1.1s,baz=194,slow=1.2,SNR=6.2
STKA LR LR 03 38 57.6
comp=Z,6μm,18.8s,baz=18,slow=37
comp=Z,20nm,0.9s
STKA Stephens Creek 28.65 201 P **P 03 27 19.0 -1.6**
baz=29,SNR=11
STKA Stephens Creek 28.65 201 P **P 03 27 19.3 -1.3**
STKA Stephens Creek 28.65 201 *i* P **P 03 27 19.2 -1.4**
STKA Stephens Creek 28.65 201 P **P 03 27 20.1 -0.5**
LCRK Leigh Creek 28.82 208 P **P 03 27 22.6 +0.5**
SOEI Soe 29.29 260 P **P 03 27 27.0 +0.3**
SOEI Soe 29.29 260 P **P 03 27 27.4 +0.7**
comp=Z,3μmcomp=Z,246nm,1.1s
SOEI Soe 29.29 260 P **P 03 27 27.4 +0.7**
KMSI Cibinong 30.06 280 P **P 03 27 33.9 +0.5**
comp=Z,238nm,0.6s
CNB Canberra Magne 30.06 187 P **P 03 27 34.0 +0.8**
baz=30,SNR=13
CNB Canberra Magne 30.06 187 P **P 03 27 34.2 +1.0**
CAN Canberra 30.11 187 P **P 03 27 33.6 0.0**
CAN IAmb IAmb 03 27 36.1
comp=Z,49nm,0.9s
CAN IAMs_20 IAMs_20 03 39 31.0
comp=Z,7μm,18.0s
CAN Canberra 30.11 187 P **P 03 27 33.6 0.0**
CAN pmax pmax
comp=Z,49nm,0.9s
CAN MLR MLR
comp=Z,7μm,18.0s
CAN Canberra 30.11 187 P **P 03 27 34.3 +0.7**
DAV Davao City (W) 30.47 294 LR LR 03 39 28.0
comp=Z,7μm,18.4s,baz=106,slow=36
MULG Mulgathing 30.83 214 P **P 03 27 38.4 -1.6**
LUWI Luwuk 30.96 277 P **P 03 27 40.8 -0.6**
LUWI IAmb IAmb 03 28 20.8
comp=Z,107nm,0.9s
LUWI Luwuk 30.96 277 P **P 03 27 41.3 -0.1**
comp=Z,3μmcomp=Z,112nm,1.0s
LUWI Luwuk 30.96 277 P **P 03 27 42.4 +1.0**
GTOI Gorontalo 31.02 280 P **P 03 27 42.8 +0.9**
comp=Z,368nmcomp=Z,42nm,0.9s
HTT Hallett 31.06 204 P **P 03 27 41.0 -1.0**
baz=31,SNR=12
HTT Hallett 31.06 204 P **P 03 27 41.4 -0.6**
WRKA Warakurna 31.10 228 P **P 03 27 40.9 -1.6**
baz=31,SNR=36
WRKA Warakurna 31.10 228 P **P 03 27 42.2 -0.3**
MMRI Maumere 31.19 262 P **P 03 27 41.7 -1.6**
MMRI Maumere 31.19 262 P **P 03 27 43.2 -0.2**
comp=Z,4μmcomp=Z,388nm,1.0s
MMRI Maumere 31.19 262 P **P 03 27 43.5 +0.1**
WHYH Whyalla 31.29 206 P **P 03 27 46.0 +2.1**
BBOO Buckleboo 31.80 209 P **P 03 27 48.1 -0.3**
baz=32,SNR=7.6
BBOO Buckleboo 31.80 209 P **P 03 27 47.5 -0.9**
BBOO IAmb IAmb 03 28 00.7
comp=Z,105nm,1.5s
BBOO Buckleboo 31.80 209 P **P 03 27 47.9 -0.6**
MILA Mila 31.80 187 P **P 03 27 49.7 +1.2**
APSI Ampana 32.09 277 P **P 03 27 51.5 +0.2**
comp=Z,1μmcomp=Z,110nm,1.0s
BSSI Bau Bau, Buton 32.85 267 P **P 03 27 58.8 +0.9**
comp=Z,2μmcomp=Z,187nm,1.3s
ARPS Mount Arapiles 33.05 197 P **P 03 27 59.2 -0.2**
baz=33,SNR=14
ARPS Mount Arapiles 33.05 197 P **P 03 27 59.9 +0.5**
BKSI Bulukumba 33.23 268 P **P 03 28 01.3 +0.1**
comp=Z,562nmcomp=Z,49nm,0.9s
BNSI Bone 33.28 270 P **P 03 28 03.2 +1.5**
comp=Z,659nmcomp=Z,62nm,0.7s
TOLI2 Tolitoli 33.30 280 P **P 03 28 01.6 -0.3**
TOLI2 Tolitoli 33.30 280 P **P 03 28 00.0 -1.9**

KAPI Kappang 33.60 269 P **P 03 28 03.5 -1.1**
comp=Z,40nm,0.7s,baz=96,slow=5.6,SNR=27
KAPI LR LR 03 43 59.8
comp=Z,2μm,20.3s,baz=90,slow=40
comp=Z,40nm,0.7s
KAPI Kappang 33.60 269 P **P 03 28 03.8 -0.7**
KAPI IAmb IAmb 03 28 08.1
comp=Z,42nm,0.8s
KAPI Kappang 33.60 269 P **P 03 28 03.8 -0.7**
KAPI pmax pmax
comp=Z,42nm,0.8s
KAPI MLR MLR
comp=Z,2μm,21.0s
KAPI Kappang 33.60 269 P **P 03 28 05.1 +0.5**
comp=Z,720nmcomp=Z,48nm,0.7s
KAPI Kappang 33.60 269 P **P 03 28 06.3 +1.7**
SPSI Sidrap Palu 33.64 271 P **P 03 28 06.3 +1.4**
comp=Z,33nm,0.8s
JCJ Chichijima 34.06 342 P **P 03 28 05.7 -2.6**
comp=Z,68nm,0.7s,baz=270,slow=11,SNR=4.3
JCJ LR LR 03 39 32.7
comp=Z,2μm,22.0s,baz=160,slow=32
comp=Z,68nm,0.7s
FORT Forrest 34.81 220 P **P 03 28 13.6 -1.2**
baz=35,SNR=113
FORT Forrest 34.81 220 P **P 03 28 13.7 -1.1**
FORT Forrest 34.81 220 P **P 03 28 15.0 +0.2**
OUZ Omahuta 35.04 151 P **P 03 28 16.3 -0.3**
OUZ IAmb IAmb 03 28 20.5
comp=Z,241nm,2.0s
AFI Afiamalu 35.24 107 LR LR 03 40 37.7
comp=Z,4μm,20.2s,baz=282,slow=33
PLAI Plampang 35.60 262 P **P 03 28 19.7 -2.1**
comp=Z,2μmcomp=Z,294nm,0.9s
PLAI Plampang 35.60 262 P **P 03 28 20.7 -1.1**
RAO Raoul Island 35.99 135 IAMs_20 IAMs_20 03 41 10.5
comp=Z,7μm,20.0s
MBWA Marble Bar 36.31 241 P **P 03 28 26.5 -1.3**
MBWA Marble Bar 36.31 241 IAMs_20 IAMs_20 03 44 19.2
comp=Z,8μm,20.0s
MBWA Marble Bar 36.31 241 P **P 03 28 27.5 -0.3**
PSA00 Pilbara Seismi 36.35 240 P **P 03 28 27.2 -1.0**
PSA00 IAmb IAmb 03 28 43.5
comp=Z,225nm,1.4s
PSA00 Pilbara Seismi 36.35 240 P **P 03 28 27.5 -0.7**
PSA00 IAmb IAmb 03 28 43.6
comp=Z,132nm,1.5s
PSA00 Pilbara Seismi 36.35 240 P **P 03 28 27.2 -1.0**
CORO Coronation Par 36.39 188 P **P 03 28 29.9 +1.7**
MYLDM Lahad Datu 36.48 286 P **P 03 28 28.5 -0.8**
MYLDM IAmb IAmb 03 28 43.9
comp=Z,91nm,1.1s
MYLDM Lahad Datu 36.48 286 P **P 03 28 30.8 +1.5**
comp=Z,103nm,1.5s
TWSI Taliwang, Sumb 36.48 263 P **P 03 28 29.3 -0.1**
comp=Z,1μmcomp=Z,138nm,0.9s
KLNI Mataram 37.24 263 P **P 03 28 34.2 -1.7**
comp=Z,4μmcomp=Z,197nm,1.0s
KUZ Kuaotunu 37.29 150 P **P 03 28 37.2 +1.2**
MOO Moorlands 37.36 188 P **P 03 28 37.5 +1.0**
baz=38,SNR=4.2
MOO Moorlands 37.36 188 P **P 03 28 37.2 +0.8**
TAU Tasmania Unive 37.80 187 P **P 03 28 39.3 -0.8**
TAU IAmb IAmb 03 28 52.5
comp=Z,184nm,1.4s
TAU Tasmania Unive 37.80 187 P **P 03 28 39.3 -0.8**
TAU pmax pmax
comp=Z,184nm,1.4s
TAU MLR MLR
comp=Z,4μm,18.0s
TAU Tasmania Unive 37.80 187 P **P 03 28 41.5 +1.3**
SRBI Singaraja 38.11 264 P **P 03 28 43.3 +0.1**
IGBI Denpasar 38.20 263 P **P 03 28 44.5 +0.6**
comp=Z,3μmcomp=Z,150nm,1.1s
RTBI Rangdo, Negare 38.39 263 P **P 03 28 44.2 -1.4**
comp=Z,2μmcomp=Z,142nm,0.8s
BBKI Banjar Baru 38.58 271 P **P 03 28 48.8 +1.6**
comp=Z,15μmcomp=Z,152nm,0.8s
KKM Kota Kinabalu 38.90 286 P **P 03 28 48.7 -1.3**
KKM Kota Kinabalu 38.90 286 P **P 03 28 49.7 -0.3**
comp=Z,1μmcomp=Z,55nm,1.4s
KKM Kota Kinabalu 38.90 286 P **P 03 28 50.0 0.0**
comp=Z,55nm,1.4s
URZ Urewera 39.16 150 P **P 03 28 52.4 +0.7**
comp=Z,25nm,0.7s,baz=84,slow=2.4,SNR=12
URZ LR LR 03 44 05.6
comp=Z,6μm,18.3s,baz=53,slow=35
comp=Z,25nm,0.7s
URZ Urewera 39.16 150 P **P 03 28 52.3 +0.6**
URZ IAmb IAmb 03 29 21.8
comp=Z,71nm,0.9s
URZ IAMs_20 IAMs_20 03 43 53.7
comp=Z,7μm,19.0s
JAGI Jajag, Banyuwa 39.17 263 P **P 03 28 50.4 -1.7**
JAGI IAmb IAmb 03 28 51.2
comp=Z,178nm,0.9s
JAGI Jajag, Banyuwa 39.17 263 P **P 03 28 49.8 -2.3**
comp=Z,2μmcomp=Z,232nm,1.1s
JAGI Jajag, Banyuwa 39.17 263 P **P 03 28 51.9 -0.2**
QRZ Quartz Range 39.23 157 IAMs_20 IAMs_20 03 42 26.3
comp=Z,7μm,20.0s
MEEK Meekatharra 39.43 234 P **P 03 28 52.7 -1.5**
baz=40,SNR=18
MEEK Meekatharra 39.43 234 P **P 03 28 52.9 -1.3**
BKZ Black Stump Fm 39.57 152 P **P 03 28 55.7 +0.5**
BKZ IAMs_20 IAMs_20 03 43 12.5
comp=Z,5μm,19.0s
BKZ Black Stump Fm 39.57 152 P **P 03 28 56.3 +1.1**
NNZ Nelson 39.90 156 IAMs_20 IAMs_20 03 42 58.1
comp=Z,7μm,21.0s
THZ Tophouse 40.18 157 P **P 03 29 00.9 +0.7**
THZ IAmb IAmb 03 30 25.7
comp=Z,218nm,1.6s
THZ IAMs_20 IAMs_20 03 42 45.5
comp=Z,6μm,21.0s
JOW Kunigami 40.24 324 P **P 03 29 01.2 +0.4**
comp=Z,96nm,0.9s,baz=121,slow=3.1,SNR=9.1
JOW LR LR 03 42 07.2
comp=Z,3μm,21.2s,baz=150,slow=31
comp=Z,96nm,0.9s
JOW Kunigami 40.24 324 P **P 03 29 01.4 +0.6**
JOW Kunigami 40.24 324 P **P 03 29 02.7 +1.9**
JHJ Hachijo jima 2 40.41 342 LR LR 03 45 03.7
comp=Z,2μm,19.4s,baz=180,slow=35
SNZO South Karori 40.52 155 IAMs_20 IAMs_20 03 43 42.4
comp=Z,7μm,21.0s
BFZ Birch Farm 40.67 153 IAMs_20 IAMs_20 03 47 57.5
comp=Z,5μm,18.0s
LTZ Lake Taylor 40.82 159 P **P 03 29 05.7 +0.2**
LTZ IAmb IAmb 03 29 29.9
comp=Z,327nm,1.9s
JCZ Jackson Bay 40.84 163 P **P 03 29 06.8 +1.1**
OXZ Oxford 41.22 159 IAMs_20 IAMs_20 03 45 17.9
comp=Z,7μm,19.0s
RPZ Rata Peaks 41.22 161 P **P 03 29 09.4 +0.7**
comp=Z,18nm,0.5s,baz=336,slow=4.1,SNR=12
RPZ LR LR 03 45 16.0
comp=Z,12μm,18.6s,baz=326,slow=35
comp=Z,18nm,0.5s
RPZ Rata Peaks 41.22 161 P **P 03 29 09.1 +0.3**
RPZ IAmb IAmb 03 29 38.3
comp=Z,324nm,1.9s
PWJI Pagerwojo 41.48 264 P **P 03 29 09.9 -1.3**
comp=Z,187nm,1.0s
LBZ Lake Benmore 41.55 162 P **P 03 29 11.7 +0.3**
GIRL Giralia 41.61 242 P **P 03 29 12.7 +0.6**
baz=42,SNR=5.7
GIRL Giralia 41.61 242 P **P 03 29 12.8 +0.6**
GIRL IAmb IAmb 03 29 24.6
comp=Z,193nm,1.1s
GIRL Giralia 41.61 242 P **P 03 29 12.6 +0.4**
MQZ McQueen's Vall 41.77 159 IAMs_20 IAMs_20 03 44 30.5
comp=Z,6μm,21.0s
MLZ Mavora Lakes 41.85 165 P **P 03 29 13.5 -0.4**
MLZ IAmb IAmb 03 29 16.2
comp=Z,97nm,1.1s
MLZ IAMs_20 IAMs_20 03 44 57.7
comp=Z,5μm,20.0s
SBUM Sibu 41.95 280 P **P 03 29 14.4 -0.7**
SBUM Sibu 41.95 280 P **P 03 29 15.7 +0.6**
comp=Z,381nmcomp=Z,21nm,1.3s
PCJI Pacitan 42.10 264 P **P 03 29 15.8 -0.5**
comp=Z,5μmcomp=Z,458nm,0.7s
TWG Pinlang 42.29 313 IAMs_20 IAMs_20 03 46 06.8
comp=Z,5μm,19.0s
KLBR Kellerberrin 42.44 228 P **P 03 29 17.2 -1.7**
baz=42,SNR=7.6

KLBR Kellerberrin 42.44 228 P **P 03 29 17.4 -1.5**
YULB Yu-li 42.48 314 P **P 03 29 19.1 -0.1**
YULB IAmb IAmb 03 29 27.2
comp=Z,52nm,0.8s
MORW Morawa 42.55 232 P **P 03 29 18.6 -1.2**
baz=43,SNR=9.5
MORW Morawa 42.55 232 P **P 03 29 18.3 -1.5**
MORW Morawa 42.55 232 P **P 03 29 19.1 -0.7**
JSU Suzuyama 42.74 330 P **P 03 29 21.6 +0.3**
JSU IAmb IAmb 03 29 22.4
comp=Z,228nm,1.2s
BLDU Ballidu 42.74 230 P **P 03 29 19.8 -1.6**
baz=43,SNR=12
BLDU Ballidu 42.74 230 P **P 03 29 19.8 -1.6**
UGM Wanagama 42.75 264 P **P 03 29 21.9 +0.3**
UGM IAmb IAmb 03 29 29.9
comp=Z,163nm,0.8s
UGM Wanagama 42.75 264 P **P 03 29 20.4 -1.2**
comp=Z,243nm,1.0s
UGM Wanagama 42.75 264 P **P 03 29 21.9 +0.3**
NACB Ninganchiao 42.75 315 P **P 03 29 21.2 -0.2**
NACB IAmb IAmb 03 29 52.0
comp=Z,109nm,1.1s
SMRI Semarang 42.83 265 P **P 03 29 21.5 -0.8**
SMRI IAmb IAmb 03 29 25.3
comp=Z,122nm,0.8s
SMRI Semarang 42.83 265 P **P 03 29 22.7 +0.4**
comp=Z,158nm,1.0s
SMRI Semarang 42.83 265 P **P 03 29 22.9 +0.6**
comp=Z,159nm,0.9s
SSLB Suanglung 42.97 314 P **P 03 29 23.5 +0.2**
SSLB Suanglung 42.97 314 P **P 03 29 23.3 0.0**
JMN Monobe 43.08 336 P **P 03 29 24.0 0.0**
JMN IAmb IAmb 03 29 24.5
comp=Z,115nm,1.1s
JYT Yasato 43.20 344 P **P 03 29 23.4 -1.4**
JYT IAmb IAmb 03 29 25.0
comp=Z,127nm,1.2s
YHNB Yeheng 43.22 315 P **P 03 29 25.8 +0.5**
YHNB IAmb IAmb 03 29 30.9
comp=Z,191nm,1.2s
YHNB IAMs_20 IAMs_20 03 45 02.5
comp=Z,5μm,21.0s
YHNB Yeheng 43.22 315 P **P 03 29 26.1 +0.8**
TATO Taipei 43.33 315 IAMs_20 IAMs_20 03 44 34.3
comp=Z,6μm,20.0s
INU Inuyama 43.35 340 P **P 03 29 24.7 -1.4**
INU Inuyama 43.35 340 P **P 03 29 24.8 -1.4**
JGF Kuroka 43.47 341 P **P 03 29 26.2 -0.9**
NWAO Narrogin (SRO) 43.50 226 LR LR 03 48 20.2
comp=Z,10μm,18.0s,baz=277,slow=37
NWAO Narrogin (SRO) 43.50 226 P **P 03 29 26.3 -1.1**
baz=44,SNR=5.4
NWAO P **P 03 29 26.3 -1.1**
baz=44,SNR=5.4
NWAO Narrogin (SRO) 43.50 226 P **P 03 29 27.2 -0.2**
NWAO IAmb IAmb 03 29 39.4
comp=Z,111nm,1.6s
NWAO Narrogin (SRO) 43.50 226 P **P 03 29 27.2 -0.2**
NWAO pmax pmax
comp=Z,111nm,1.6s
NWAO MLR MLR
comp=Z,8μm,18.0s
NWAO Narrogin (SRO) 43.50 226 P **P 03 29 26.6 -0.9**
KSM Kuching 43.66 278 P **P 03 29 28.5 -0.5**
KSM IAmb IAmb 03 29 30.7
comp=Z,82nm,1.0s
KSM Kuching 43.66 278 P **P 03 29 29.2 +0.2**
comp=Z,1μmcomp=Z,81nm,1.1s
KSM Kuching 43.66 278 P **P 03 29 29.3 +0.2**
comp=Z,81nm,1.1s
MUN Mundaring 43.77 228 P **P 03 29 28.7 -1.0**
baz=44,SNR=15
MUN Mundaring 43.77 228 P **P 03 29 28.7 -1.0**
MJAR Matsushiro Arr 44.06 342 P **P 03 29 29.7 -2.1**
comp=Z,31nm,1.0s,baz=165,slow=9.1,SNR=40
MJAR PcP **PcP 03 31 16.8 -0.2**
comp=Z,14nm,0.9s,baz=169,slow=3.5,SNR=5.1
MJAR LR LR 03 46 06.4
comp=Z,3μm,21.4s,baz=172,slow=34
comp=Z,31nm,1.0s
MAJO Matsushiro 44.06 342 IAmb IAmb 03 29 31.2
comp=Z,61nm,1.1s
MAJO P **P 03 29 32.3 +0.4**
MAJO Matsushiro 44.06 342*c iP* **P 03 29 29.9 -2.0**
MAJO pmax pmax
comp=Z,66nm,1.2s
MAJO Matsushiro 44.06 342 P **P 03 29 30.1 -1.8**
SCJI Gunung Srandil 44.09 265 P **P 03 29 32.0 -0.4**
comp=Z,3μmcomp=Z,345nm,0.9s
JHS Saijyo 44.49 336 P **P 03 29 34.8 -0.5**
JHS IAmb IAmb 03 29 35.8
comp=Z,102nm,1.0s
RKGY Rocky Gully 44.57 224 P **P 03 29 35.6 -0.3**
baz=45,SNR=22
RKGY Rocky Gully 44.57 224 P **P 03 29 36.4 +0.4**
JMM Marumori 44.59 346 P **P 03 29 36.1 +0.1**
JMM IAmb IAmb 03 29 36.5
comp=Z,84nm,1.2s
JCJI Jatiwangi 44.99 266 P **P 03 29 40.0 +0.4**
comp=Z,10μmcomp=Z,470nm,0.8s
QZH Quanzhou 45.38 313 *e*P **P 03 29 44.6 +2.1**
QZH S **S 03 36 28.4 +5.9**
QZH LR LR
comp=Z,2μm,18.0s
QZH LR LR
comp=Z,2μm,17.1s
QZH LR LR
comp=Z,2μm,16.1s
JSD Sado 45.43 343 P **P 03 29 41.5 -1.2**
JSD IAmb IAmb 03 29 47.1
comp=Z,93nm,0.9s
LEM Lembang 45.63 266 P **P 03 29 45.1 +0.2**
comp=Z,312nm,0.8s,baz=50,slow=5.8,SNR=34
LEM LR LR 03 51 31.0
comp=Z,2μm,20.6s,baz=82,slow=40
comp=Z,312nm,0.8s
JTU Tsushima 45.72 332 P **P 03 29 45.3 +0.2**
TPI Tanjungpandan 45.79 271 P **P 03 29 46.3 +0.3**
comp=Z,1μmcomp=Z,92nm,0.8s
CNJI Cibinong 46.11 265 P **P 03 29 47.6 -0.9**
comp=Z,5μmcomp=Z,756nm,0.9s
CNJI pP **sP 03 29 56.3 0.0**
comp=Z,5μmcomp=Z,756nm,0.9s
CBJI Citeko 46.40 266 P **P 03 29 50.0 -0.8**
comp=Z,291nm,0.8s
CTZ Chatham Island 46.40 150 P **P 03 29 51.4 +1.1**
SKJI Sukabumi 46.68 265 P **P 03 29 52.8 -0.2**
comp=Z,3μmcomp=Z,342nm,0.7s
HKPS Hong Kong Po S 47.30 307 P **P 03 29 58.1 +0.4**
JTM Tenmabayashi 47.31 347 P **P 03 29 57.2 -0.3**
PPBI Pangkal Pinang 47.35 272 P **P 03 29 58.7 +0.4**
comp=Z,20μmcomp=Z,65nm,0.4s
XMIS Christmas Isla 47.62 261 P **P 03 29 59.8 -0.6**
XMIS Christmas Isla 47.62 261 P **P 03 30 02.1 +1.7**
comp=Z,265nm,0.8s
RAR Rarotonga 47.92 114 LR LR 03 47 23.2
comp=Z,2μm,21.1s,baz=294,slow=33
TJN Taejon 48.19 332 P **P 03 30 05.0 +0.7**
TJN Taejon 48.19 332*ce*P **P 03 30 04.0 -0.3**
TJN Taejon 48.19 332 P **P 03 30 05.0 +0.7**
KASI Kota Agung 48.77 267 P **P 03 30 07.2 -2.0**
comp=Z,2μmcomp=Z,314nm,1.0s
KSRS Korea Array 48.80 333 P **P 03 30 08.9 -0.1**
comp=Z,95nm,0.9s,baz=149,slow=8.9,SNR=116
KSRS ScP **ScP 03 35 28.7 +1.2**
comp=Z,2.5nm,0.9s,baz=123,slow=4.5,SNR=4.0
KSRS LR LR 03 50 39.1
comp=Z,2μm,18.3s,baz=140,slow=36
comp=Z,95nm,0.9s
KSAR Wonju Array Be 48.81 333 P **P 03 30 08.8 -0.3**
KSAR Wonju Array Be 48.81 333 P **P 03 30 08.8 -0.3**
DSRI Dabo 49.08 274 P **P 03 30 11.9 +0.3**
comp=Z,2μmcomp=Z,63nm,1.3s
LWLI Liwa 49.22 268 P **P 03 30 11.9 -1.0**
comp=Z,13μmcomp=Z,426nm,0.8s
QIZ Qiongzhong 49.34 301 P **P 03 30 14.8 +1.3**
QIZ S **S 03 37 21.1 +1.9**
QIZ pmax pmax
comp=Z,48nm,1.0s
QIZ pmax pmax
comp=Z,550nm,4.7s
QIZ LR LR
comp=Z,3μm,21.8s
QIZ LR LR
comp=Z,2μm,19.8s

QIZ				LR	LR	
	comp=Z,3μm,20.5s					
QIZ	**Qiongzhong**	**49.34 301**		P	**P**	**03 30 15.1 +1.6**
INCN	**Inchon**	**49.42 332**		P	**P**	**03 30 14.5 +0.7**
INCN	**Inchon**	**49.42 332**		P	**P**	**03 30 14.5 +0.7**
INCN				pmax	pmax	
	comp=Z,496nm,1.0s					
INCN	**Inchon**	**49.42 332**		P	**P**	**03 30 14.9 +1.1**
NJ2	**Nanjing**	**49.71 321**	⇑	P	**P**	**03 30 17.1 +1.0**
NJ2				pP	**pP**	**03 30 21.2 -0.5**
NJ2				PcP	**PcP**	**03 31 37.8 +0.7**
NJ2				S	**S**	**03 37 26.0 +2.1**
NJ2				pmax	pmax	
	comp=Z,61nm,2.0s					
NJ2				pmax	pmax	
	comp=Z,630nm,4.1s					
NJ2				LR	LR	
	comp=Z,3μm,16.1s					
NJ2				LR	LR	
	comp=Z,1μm,13.7s					
NJ2				LR	LR	
	comp=Z,3μm,17.7s					
MYKOM	**Kota Tinggi**	**50.09 277**		P	**P**	**03 30 21.3 +2.0**
	comp=Z,2μmcomp=Z,79nm,0.6s					
HJU	**Haeju**	**50.30 331**		P	**P**	**03 30 20.6 +0.1**
HJU				sP	**pwP**	**03 30 31.5 -0.3**
HJU				S	**S**	**03 37 32.7 +0.7**
HHU	**Hamhung**	**51.01 334**		P	**P**	**03 30 25.9 +0.1**
HHU				pP	**sP**	**03 30 35.5 +1.8**
HHU				S	**S**	**03 37 41.8 0.0**
MASI	**Maura Aman, Be**	**51.15 270**		P	**P**	**03 30 27.0 -0.4**
	comp=Z,134nm,0.8s					
CNSH	**ChangSha**	**51.38 313**	⇑	P	**P**	**03 30 29.9 +1.2**
CNSH				S	**S**	**03 37 48.2 +1.0**
CNSH				pmax	pmax	
	comp=Z,79nm,0.9s					
CNSH				LR	LR	
	comp=Z,2μm,18.2s					
CNSH				LR	LR	
	comp=Z,2μm,19.3s					
CNSH				LR	LR	
	comp=Z,3μm,17.8s					
WHN	**Wuhan**	**51.73 316**	⇑	P	**P**	**03 30 32.4 +1.1**
WHN				sP	**pwP**	**03 30 41.4 -1.5**
WHN				S	**S**	**03 38 00.2 +8.2**
WHN				pmax	pmax	
	comp=Z,170nm,1.2s					
WHN				pmax	pmax	
	comp=Z,1μm,2.7s					
WHN				LR	LR	
	comp=Z,3μm,13.6s					
WHN				LR	LR	
	comp=Z,3μm,13.8s					
WHN				LR	LR	
	comp=Z,5μm,17.4s					
VLA	**Vladivostok**	**52.07 340**	*c i*	P	**P**	**03 30 33.3 -0.3**
VLA				pmax	pmax	
	comp=Z,209nm,1.6s					
SDSI	**Sungai Dareh**	**52.16 273**		P	**P**	**03 30 33.8 -1.1**
	comp=Z,3μmcomp=Z,137nm,0.8s					
BKNI	**Bangkinang**	**52.68 274**		P	**P**	**03 30 40.4 +1.6**
	comp=Z,11μmcomp=Z,172nm,0.7s					
BKNI	**Bangkinang**	**52.68 274**		P	**P**	**03 30 40.3 +1.5**
	comp=Z,163nm,0.7s					
YSS	**Yuzh-Sakhalins**	**52.94 351**		*e*P	**P**	**03 30 36.3 -3.7**
YSS				*e**SP	**sP**	**03 30 49.6 +1.6**
YSS				*e*S	S	03 37 58.8 -9.2
YSS				*e*PS	PKiKP	03 38 08.9 -18
YSS				pmax	pmax	
	comp=Z,500nm,8.1s					
YSS				pmax	pmax	
	comp=Z,30nm,0.9s					
USA0B	**Ussuriysk Arra**	**52.99 341**		IAmb	IAmb	03 30 41.7
	comp=Z,140nm,1.2s					
USRK	**Ussuriysk Ar.**	**52.99 341**		P	**P**	**03 30 40.1 -0.3**
	comp=Z,69nm,1.1s,baz=161,slow=8.1,SNR=68					
USRK				LR	LR	03 53 18.9
	comp=Z,797nm,18.3s,baz=148,slow=36					
	comp=Z,69nm,1.1s					
DL2	**Dalian**	**53.00 329**		P	**P**	**03 30 40.6 0.0**
DL2				S	**S**	**03 38 14.5 +5.4**
DL2				pmax	pmax	
	comp=Z,130nm,1.1s					
DL2				pmax	pmax	
	comp=Z,520nm,5.8s					
DL2				LR	LR	
	comp=Z,1μm,22.4s					
DL2				LR	LR	
	comp=Z,1μm,17.5s					
DL2				LR	LR	
	comp=Z,2μm,17.2s					
IPM	**Ipoh**	**53.31 280**		P	**P**	**03 30 43.0 -0.4**
IPM				IAmb	IAmb	03 30 43.9
	comp=Z,39nm,0.9s					
IPM	**Ipoh**	**53.31 280**		P	**P**	**03 30 43.1 -0.3**
	comp=Z,45nm,1.4s					
IPM	**Ipoh**	**53.31 280**		P	**P**	**03 30 43.1 -0.3**
	comp=Z,45nm,1.4s					
TIA	**Tai'an**	**53.57 323**	⇑	P	**P**	**03 30 44.6 -0.3**
TIA				S	**S**	**03 38 24.3 +7.3**
TIA				ScS	**ScS**	**03 40 35.2 +1.9**
TIA				pmax	pmax	
	comp=Z,110nm,1.1s					
TIA				pmax	pmax	
	comp=Z,670nm,3.5s					
TIA				LR	LR	
	comp=Z,910nm,16.7s					
TIA				LR	LR	
	comp=Z,1μm,17.2s					
TIA				LR	LR	
	comp=Z,1μm,19.1s					
KULM	**Kulim**	**53.82 280**		P	**P**	**03 30 46.6 -0.6**
KULM				IAmb	IAmb	03 30 47.5
	comp=Z,50nm,1.0s					
KULM	**Kulim**	**53.82 280**		P	**P**	**03 30 46.8 -0.3**
	comp=Z,846nmcomp=Z,53nm,1.2s					
MDJ	**Mudanjiang**	**54.18 339**		P	**P**	**03 30 49.0 -0.2**
MDJ				sP	sP	03 30 58.8 +1.6
MDJ				S	**S**	**03 38 28.6 +3.6**
MDJ				pmax	pmax	
	comp=Z,130nm,1.1s					
MDJ				pmax	pmax	
	comp=Z,820nm,3.6s					
MDJ				LR	LR	
	comp=Z,1μm,24.9s					
MDJ				LR	LR	
	comp=Z,2μm,24.9s					
MDJ				LR	LR	
	comp=Z,2μm,25.0s					
MDJ	**Mudanjiang**	**54.18 339**		P	**P**	**03 30 50.0 +0.8**
MNSI	**Mandailing Nat**	**54.19 275**		P	**P**	**03 30 48.8 -1.0**
	comp=Z,92nm,0.9s					
SKLT	**Songkhla**	**54.21 283**		P	**P**	**03 30 50.5 +0.5**
	comp=Z,882nmcomp=Z,50nm,1.4s					
SNY	**Shenyang**	**54.31 333**	⇑	P	**P**	**03 30 49.9 -0.2**
SNY				S	**S**	**03 38 23.0 -3.8**
SNY				pmax	pmax	
	comp=Z,39nm,1.9s					
SNY				pmax	pmax	
	comp=Z,440nm,6.1s					
SNY				LR	LR	
	comp=Z,2μm,17.1s					
SNY				LR	LR	
	comp=Z,2μm,19.2s					
SNY				LR	LR	
	comp=Z,3μm,18.6s					
SISI	**Saibi**	**54.44 272**		P	**P**	**03 30 51.8 +0.1**
	comp=Z,206nm,1.1s					
ENH	**Enshi**	**55.03 313**		IAMs_20	IAMs_20	03 53 54.7
	comp=Z,3μm,19.0s					
CN2	**Changchun**	**55.08 335**		*e*P	**P**	**03 30 54.3 -1.5**
CN2				*e*PP	**PP**	**03 32 59.9 +0.6**
CN2				*e*S	**S**	**03 38 32.6 -4.6**
CN2				*e*SS	**SS**	**03 42 16.9 -4.6**
CN2				pmax	pmax	
	comp=Z,120nm,1.0s					
CN2				LR	LR	
	comp=Z,1μm,20.0s					
CN2				LR	LR	
	comp=Z,1μm,20.0s					
CN2				LR	LR	
	comp=Z,2μm,21.0s					
RPSI	**Rantau Prapat**	**55.09 277**		IAmb	IAmb	03 30 55.6
	comp=Z,47nm,1.2s					
PSI	**Prapat**	**55.11 277**		P	**P**	**03 30 54.7 -2.0**
	comp=Z,19nm,0.7s,baz=191,slow=5.6,SNR=9.1					
PSI				LR	LR	03 57 17.0
	comp=Z,1μm,21.7s,baz=118,slow=39					
	comp=Z,19nm,0.7s					
PSI	**Prapat**	**55.11 277**		P	**P**	**03 30 55.4 -1.2**
	comp=Z,766nmcomp=Z,32nm,1.6s,comp=Z,1μm,1.6s,					
	comp=Z,53nm,1.6s					
PSI				P	**P**	**03 30 55.4 -1.2**
	comp=Z,766nmcomp=Z,32nm,1.6s,comp=Z,1μm,1.6s,					
	comp=Z,53nm,1.6s					
PSI	**Prapat**	**55.11 277**		P	**P**	**03 30 55.5 -1.2**
	comp=Z,53nm,1.6s					
GYA	**Guiyang**	**55.28 307**	⇓	*i*P	**P**	**03 30 58.7 +1.0**
GYA				S	**S**	**03 38 41.9 +1.3**
GYA				pmax	pmax	
	comp=Z,42nm,1.5s					
GYA				pmax	pmax	
	comp=Z,650nm,5.4s					
GYA				LR	LR	
	comp=Z,2μm,17.7s					
GYA				LR	LR	
	comp=Z,2μm,20.4s					
GYA				LR	LR	
	comp=Z,5μm,18.0s					
LYN	**LuoYang**	**55.41 319**	⇑	*i*P	**P**	**03 30 57.1 -1.2**
LYN				pP	pwP	03 31 09.5 -0.3
LYN				PcP	**PcP**	**03 31 58.3 -0.2**
LYN				S	**S**	**03 38 42.7 +0.8**
LYN				pmax	pmax	
	comp=Z,50nm,2.1s					
LYN				pmax	pmax	
	comp=Z,510nm,9.0s					
LYN				LR	LR	
	comp=Z,2μm,19.0s					
LYN				LR	LR	
	comp=Z,2μm,18.6s					
LYN				LR	LR	
	comp=Z,3μm,18.3s					
SRIT	**Nakonsritamara**	**55.49 284**		IAmb	IAmb	03 31 00.1
	comp=Z,55nm,1.0s					
HNS	**HongShan**	**55.80 323**	⇑	P	**P**	**03 31 01.3 +0.3**
HNS				sP	**pwP**	**03 31 11.1 -1.4**
HNS				PP	**PP**	**03 33 07.1 +1.3**
HNS				ScP	**ScP**	**03 35 59.3 +1.4**
HNS				S	**S**	**03 38 46.2 -0.8**
HNS				sS	**sS**	**03 38 56.5 +0.3**
HNS				pmax	pmax	
	comp=Z,220nm,1.4s					
HNS				pmax	pmax	
	comp=Z,1μm,3.5s					
HNS				LR	LR	
	comp=Z,970nm,20.4s					
HNS				LR	LR	
	comp=Z,2μm,18.2s					
HNS				LR	LR	
	comp=Z,2μm,19.0s					
BNX	**BinXian**	**55.94 338**	⇑	P	**P**	**03 31 01.1 -0.8**
BNX				PP	**PP**	**03 33 07.0 +0.1**
BNX				S	**S**	**03 38 46.5 -2.0**
BNX				pmax	pmax	
	comp=Z,130nm,1.1s					
BNX				pmax	pmax	
	comp=Z,220nm,3.7s					
BNX				LR	LR	
	comp=Z,1μm,20.1s					
BNX				LR	LR	
	comp=Z,2μm,22.6s					
BNX				LR	LR	
	comp=Z,770nm,27.5s					
GSI	**Gunungsitoli**	**56.24 275**		P	**P**	**03 31 03.5 -1.2**
	comp=Z,142nm,1.1s					
GSI	**Gunungsitoli**	**56.24 275**		P	**P**	**03 31 05.6 +0.9**
KCSI	**Kotacane, Aceh**	**56.35 278**		P	**P**	**03 31 03.6 -1.9**
	comp=Z,1μmcomp=Z,47nm,0.7s					
BJT	**Baijiatuau**	**56.72 326**		IAmb	IAmb	03 31 25.2
	comp=Z,44nm,1.0s					
BJT	**Baijiatuau**	**56.72 326**		IAMs_20	IAMs_20	03 57 43.3
	comp=Z,2μm,18.0s					
BJI	**Beijing**	**56.73 326**		P	**P**	**03 31 07.1 -0.5**
BJI				PcP	**PcP**	**03 32 03.8 +0.3**
BJI				S	**S**	**03 38 57.9 -1.3**
BJI				SS	**SS**	**03 42 47.3 -0.3**
BJI				pmax	pmax	
	comp=Z,40nm,1.5s					
BJI				pmax	pmax	
	comp=Z,520nm,6.1s					
BJI				LR	LR	
	comp=Z,200nm,23.8s					
BJI				LR	LR	
	comp=Z,1μm,20.6s					
BJI				LR	LR	
	comp=Z,2μm,20.3s					
TYV	**Tymovskoe**	**56.77 352**		*e*P	**P**	**03 31 06.6 -1.0**
TYV				*e*S	**S**	**03 38 58.5 -0.8**
TYV				pmax	pmax	
	comp=Z,24nm,1.0s					
TYV				pmax	pmax	
	comp=Z,400nm,3.6s					
TYV				smax	smax	
	comp=N,300nm,6.4s					
TYV				smax	smax	
	comp=Z,700nm,6.4s					
PPT	**Papeete**	**56.90 107**		LR	LR	03 54 01.3
	comp=E,2μm,18.0s,baz=278,slow=34					
PPT2	**Papeete2**	**56.90 107**		*e*P	**P**	**03 31 12.0 +2.6**
	comp=E,309nm,26.0s					
PPT2				*e*S	**S**	**03 39 03.2 +0.8**
	comp=E,2μm,30.8s					
PPT2				*e*SS	**SS**	**03 42 53.1 +2.0**
	comp=E,2μm,28.2s					
PPT2				*e*LR	LR	03 47 48.8
	comp=E,2μm,23.5s					
SRDT	**SRDT**	**57.36 291**		P	**P**	**03 31 12.6 0.0**
	comp=E,1μmcomp=E,117nm,1.0s					
TIY	**Taiyuan**	**57.39 322**		P	**P**	**03 31 12.4 0.0**
TIY				pP	**pP**	**03 31 16.8 -1.3**
TIY				S	**S**	**03 39 09.8 +1.6**
TIY				pmax	pmax	
	comp=E,69nm,1.1s					
TIY				pmax	pmax	
	comp=E,540nm,5.3s					
TIY				LR	LR	
	comp=E,990nm,19.2s					
TIY				LR	LR	
	comp=E,2μm,19.2s					
TIY				LR	LR	
	comp=E,2μm,19.9s					
XAN	**Xi'an**	**57.50 316**	⇑	P	**P**	**03 31 13.3 0.0**
XAN				pP	sP	03 31 21.0 -0.2
XAN				sP	pwP	03 31 23.7 -1.1
XAN				PcP	**PcP**	**03 32 05.7 -1.0**
XAN				S	**S**	**03 39 06.0 -3.7**
XAN				sS	pS	03 39 17.7 +0.8
XAN				ScS	**ScS**	**03 41 00.7 -1.1**
XAN				pmax	pmax	
	comp=E,170nm,1.1s					
XAN				pmax	pmax	
	comp=E,910nm,3.8s					
XAN				LR	LR	
	comp=E,2μm,19.2s					
XAN				LR	LR	
	comp=E,3μm,19.2s					
XAN				LR	LR	
	comp=E,4μm,21.3s					
KLR	**Kul'dur**	**57.57 343**		P	**P**	**03 31 13.1 -0.3**
	comp=E,74nm,1.0s,baz=154,slow=5.2,SNR=114					
KLR				LR	LR	03 56 16.1
	comp=E,823nm,19.1s,baz=164,slow=36					
	comp=E,74nm,1.0s					
KLR	**Kul'dur**	**57.57 343**	*ce*	P	**P**	**03 31 12.8 -0.6**
KLR				pmax	pmax	
	comp=Z,173nm,1.2s					
TBI	**Tubuai**	**57.70 114**		*e*P	**P**	**03 31 17.5 +2.7**
	comp=Z,244nm,28.0s					
TBI				*e*S	**S**	**03 39 13.2 +0.5**
	comp=Z,1μm,34.2s					
TBI				*e*SS	**SS**	**03 43 05.3 +2.0**
	comp=Z,738nm,26.8s					
TBI				*e*LR	LR	03 48 09.2
	comp=Z,4μm,32.2s					
GRNR	**Gornyy**	**57.80 347**	⇓	*i*P	**P**	**03 31 15.4 +0.4**
GRNR				*e*S	**S**	**03 39 18.0 +5.0**
GRNR				pmax	pmax	
	comp=Z,7.0nm,1.1s					
GRNR				smax	smax	
	comp=E,9.0nm,0.8s					
MLSI	**Meulaboh, Aceh**	**57.82 278**		P	**P**	**03 31 14.0 -1.8**
	comp=E,180nm,0.8s					
KMI	**Kunming**	**57.87 304**	⇑	P	**P**	**03 31 17.4 +1.2**
KMI				pP	sP	03 31 26.0 +1.8
KMI				sP	pwP	03 31 29.7 +1.9
KMI				PcP	**PcP**	**03 32 09.7 +1.1**
KMI				PP	**PP**	**03 33 31.5 +6.8**
KMI				S	**S**	**03 39 15.8 +0.6**
KMI				SS	**SS**	**03 43 06.1 -0.3**
KMI				pmax	pmax	
	comp=E,76nm,1.3s					
KMI				pmax	pmax	
	comp=E,660nm,6.2s					
KMI				LR	LR	
	comp=E,2μm,20.0s					
KMI				LR	LR	
	comp=E,1μm,21.1s					
KMI				LR	LR	
	comp=E,2μm,21.8s					
PET	**Petropavlovsk**	**58.32 4**		*e*P	**P**	**03 31 20.9 +2.4**
PET				*e*S	**S**	**03 39 21.8 +2.2**
PET				*e*SS	**SS**	**03 43 19.1 +7.1**
PET				MLR	MLR	
	comp=Z,1μm,17.0s					
PEA0B	**Petropavlovsk-**	**58.35 3**		P	**P**	**03 31 18.3 -0.4**
PEA0B				IAmb	IAmb	03 32 13.6
	comp=Z,92nm,1.1s					
PEA0B	**Petropavlovsk-**	**58.35 3**	*ce*	P	**P**	**03 31 17.9 -0.9**
PETK	**Petropavlovsk-**	**58.35 3**		P	**P**	**03 31 18.2 -0.6**
	comp=Z,26nm,0.9s,baz=134,slow=5.1,SNR=14					
PETK				LR	LR	03 54 02.8
	comp=Z,919nm,20.8s,baz=182,slow=34					
	comp=Z,26nm,0.9s					
VAH	**Vaihoa**	**58.60 105**		*e*P	**P**	**03 31 23.3 +2.0**
	comp=Z,36nm,1.1s					
CMAR	**Chiang Mai Arr**	**58.74 295**		P	**P**	**03 31 23.0 +0.8**
	comp=Z,120nm,0.9s,baz=111,slow=5.2,SNR=208					
CMAR				LR	LR	03 55 44.6
	comp=Z,1μm,19.4s,baz=115,slow=35					
	comp=Z,120nm,0.9s					
PZH	**PanZhiHua**	**59.25 305**		P	**P**	**03 31 25.7 -0.1**
PZH				sP	**pwP**	**03 31 40.1 +2.8**
PZH				S	**S**	**03 39 32.0 -1.0**
PZH				ScS	**ScS**	**03 41 17.7 +2.5**
PZH				SS	**SS**	**03 43 34.6 +6.6**
PZH				pmax	pmax	
	comp=Z,30nm,1.1s					
PZH				pmax	pmax	
	comp=Z,500nm,6.5s					
PZH				LR	LR	
	comp=Z,1μm,20.1s					
PZH				LR	LR	
	comp=Z,2μm,18.6s					
PZH				LR	LR	
	comp=Z,2μm,19.6s					
XLT	**XiLinHaoTe**	**59.49 329**	⇑	*i*P	**P**	**03 31 27.2 +0.2**
XLT				pP	pP	03 31 33.4 +0.6
XLT				sP	sP	03 31 36.8 +1.7
XLT				S	**S**	**03 39 34.4 -1.0**
XLT				pmax	pmax	
	comp=Z,270nm,1.0s					
XLT				pmax	pmax	
	comp=Z,980nm,5.4s					
XLT				LR	LR	
	comp=Z,250nm,23.5s					
XLT				LR	LR	
	comp=Z,2μm,22.6s					
XLT				LR	LR	
	comp=Z,970nm,23.5s					
CD2	**Chengdu**	**59.62 311**		P	**P**	**03 31 28.8 +0.7**
CD2				S	**S**	**03 39 35.2 -2.3**
CD2				SS	**SS**	**03 43 32.0 -1.5**
CD2				pmax	pmax	
	comp=Z,190nm,0.9s					
CD2				pmax	pmax	
	comp=Z,730nm,7.1s					
CD2				LR	LR	
	comp=Z,2μm,20.8s					
CD2				LR	LR	
	comp=Z,2μm,18.0s					
CD2				LR	LR	
	comp=Z,3μm,18.0s					
HHC	**Hu-ho-hao-te**	**59.90 324**		*e*P	**P**	**03 31 30.3 +0.4**
HHC				sP	pwP	03 31 40.6 -0.8
HHC				S	**S**	**03 39 43.3 +2.5**
HHC				pmax	pmax	
	comp=Z,150nm,1.0s					
HHC				pmax	pmax	
	comp=Z,1μm,6.8s					
HHC				LR	LR	
	comp=Z,3μm,19.2s					
HHC				LR	LR	
	comp=Z,4μm,19.9s					
HHC				LR	LR	
	comp=Z,6μm,19.0s					
SHEM	**Shemya Is, Ala**	**60.45 14**		LR	LR	03 53 22.1
	comp=Z,3μm,21.8s,baz=182,slow=32					
BTO	**Baotou**	**60.66 323**		*e*P	**P**	**03 31 36.7 +1.6**
BTO				S	**S**	**03 39 44.1 -6.4**
BTO				LR	LR	
	comp=Z,4μm,17.3s					
BTO				LR	LR	
	comp=Z,5μm,17.7s					
LZH	**Lanzhou**	**62.10 316**	⇑	P	**P**	**03 31 46.3 +1.2**
LZH				sP	pwP	03 31 58.2 +1.6
LZH				PP	**PP**	**03 34 04.4 +2.4**
LZH				*e*S	**S**	**03 40 09.0 -0.3**
LZH				sS	sS	03 40 19.5 +0.9
LZH				SS	**SS**	**03 44 17.7 +5.2**
LZH				pmax	pmax	
	comp=Z,270nm,1.2s					
LZH				pmax	pmax	
	comp=Z,1μm,4.4s					
LZH				LR	LR	
	comp=Z,2μm,16.5s					
LZH				LR	LR	
	comp=Z,2μm,17.5s					
LZH				LR	LR	
	comp=Z,3μm,18.9s					
ZEA	**Zeya**	**62.87 343**		*e*P	**P**	**03 31 49.7 +0.1**
ZEA				*e*		03 40 52.9
ZEA				pmax	pmax	
	comp=N,50nm,1.0s					
ZEA				pmax	pmax	
	comp=E,20nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,90nm,1.2s					
ZEA				pmax	pmax	
	comp=E,200nm,8.7s					
ZEA				pmax	pmax	
	comp=N,200nm,13.3s					
ZEA				pmax	pmax	
	comp=Z,300nm,13.0s					
MA2	**Magadan**	**64.76 358**		P	**P**	**03 32 01.2 -0.8**
	comp=Z,30nm,0.7s,baz=172,slow=7.0,SNR=13					
MA2				LR	LR	03 56 47.7
	comp=Z,728nm,21.8s,baz=180,slow=33					
	comp=Z,30nm,0.7s					
MA2	**Magadan**	**64.76 358**		P	**P**	**03 32 01.1 -0.8**
MA2				IAmb	IAmb	03 32 06.5
	comp=Z,36nm,0.7s					
MA2	**Magadan**	**64.76 358**	*ce*	P	**P**	**03 32 00.9 -1.0**
MA2				pmax	pmax	
	comp=Z,70nm,1.3s					
TAOE	**Nuku Hiva Isla**	**65.87 97**		*e*P	**P**	**03 32 12.5 +2.3**
	comp=Z,204nm,26.0s					
TAOE				*e*S	**S**	**03 40 56.5 -0.1**
	comp=Z,335nm,30.0s					
TAOE				*e*SS	**SS**	**03 45 13.3 +1.5**
	comp=Z,969nm,30.7s					
TAOE				*e*LR	LR	03 51 57.7
	comp=Z,970nm,22.1s					
CIT	**Chita**	**66.49 334**		*e*P	**P**	**03 32 13.9 +0.5**
CIT				*e*		03 32 20.9
CIT				*e*		03 32 49.7
CIT				pmax	pmax	
	comp=Z,360nm,1.2s					
GTA	**Gaotai**	**66.53 317**	⇑	P	**P**	**03 32 15.1 +1.1**
GTA				pP	pwP	03 32 25.5 0.0
GTA				PP	**PP**	**03 34 42.2 +1.4**
GTA				S	**S**	**03 41 03.2 -0.6**
GTA				sS	sS	03 41 18.1 +4.9
GTA				pmax	pmax	
	comp=Z,140nm,1.2s					
GTA				pmax	pmax	
	comp=Z,970nm,5.6s					
GTA				LR	LR	
	comp=Z,1μm,18.5s					

GTA				LR	LR		
	comp=Z,1μm,18.5s						
GTA				LR	LR		
	comp=Z,2μm,19.3s						
ULN	**Ulaanbaatar**	**66.83**	**328**	P	**P**	**03 32 16.4**	**+0.6**
ULN	**Ulaanbaatar**	**66.83**	**328** *c*	*i*P	**P**	**03 32 16.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,165nm,1.1s						
ULN	**Ulaanbaatar**	**66.83**	**328**	P	**P**	**03 32 16.1**	**+0.4**
	comp=Z,9μmcomp=Z,7μmcomp=Z,542nm,1.0s						
SONM	**Songino Array**	**67.16**	**328**	P	**P**	**03 32 18.4**	**+0.6**
	comp=Z,78nm,1.0s,baz=133,slow=6.0,SNR=187						
SONM				PKP2bc		04 00 46.5	
	comp=Z,1.8nm,1.1s,baz=112,slow=1.6,SNR=3.2						
SONM				LR	LR	04 02 26.7	
	comp=Z,1μm,18.4s,baz=124,slow=37						
	comp=Z,78nm,1.0s						
CASY	**Casey**	**67.70**	**197**	P	**P**	**03 32 20.7**	**0.0**
CASY	**Casey**	**67.70**	**197**	IAms_20	IAms_20	03 58 56.7	
	comp=Z,3μm,19.0s						
UNV	**Unalaska Valle**	**67.83**	**24**	P	**P**	**03 32 22.0**	**+0.3**
	baz=224						
SEY	**Seymchan**	**68.10**	**359**	P	**P**	**03 32 22.6**	**-0.7**
	comp=Z,19nm,0.7s,baz=166,slow=5.6,SNR=20						
	comp=Z,19nm,0.7s						
SEY	**Seymchan**	**68.10**	**359** *ce*	P	**P**	**03 32 21.9**	**-1.3**
SEY				pmax	pmax		
	comp=Z,18nm,0.9s						
GOMU	**GeErMu**	**68.64**	**312⇑**	*e*P	**P**	**03 32 28.5**	**+0.8**
GOMU				pP	sP	03 32 35.6	-0.2
GOMU				sP	pwP	03 32 38.5	-0.7
GOMU				pmax	pmax		
	comp=Z,18nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,330nm,3.8s						
GOMU				LR	LR		
	comp=Z,890nm,17.9s						
GOMU				LR	LR		
	comp=Z,2μm,18.7s						
GOMU				LR	LR		
	comp=Z,1μm,17.7s						
LSA	**Lhasa**	**69.12**	**304**	IAmb	IAmb	03 32 33.3	
	comp=Z,67nm,1.0s						
LSA	**Lhasa**	**69.12**	**304**	P	**P**	**03 32 31.4**	**+0.5**
LSA				pmax	pmax		
	comp=Z,83nm,1.1s						
YAK	**Yakutsk**	**69.65**	**348**	P	**P**	**03 32 32.1**	**-0.8**
	comp=Z,30nm,0.7s,baz=123,slow=1.0,SNR=17						
YAK				LR	LR	04 03 13.6	
	comp=Z,781nm,18.8s,baz=122,slow=36						
	comp=Z,30nm,0.7s						
YAK	**Yakutsk**	**69.65**	**348**	P	**P**	**03 32 32.8**	**-0.1**
YAK	**Yakutsk**	**69.65**	**348** *c*	*i*P	**P**	**03 32 33.3**	**+0.4**
YAK				*e**PP	**pwP**	**03 32 44.0**	**-0.2**
YAK				*e*		03 32 54.8	
YAK				*e*		03 35 06.2	
YAK				*e*PPP	PPP	03 36 43.3	
YAK				*e*S	**S**	**03 41 39.1**	**-0.8**
YAK				*e**SS	sS	03 41 59.9	+10
YAK				*e*		03 42 29.4	
YAK				*e*SS	**SS**	**03 46 09.9**	**+1.5**
YAK				pmax	pmax		
	comp=Z,144nm,1.0s						
YAK				pmax	pmax		
	comp=N,48nm,1.2s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				pmax	pmax		
	comp=Z,34nm,1.3s						
YAK				pmax	pmax		
	comp=N,18nm,1.5s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				smax	smax		
	comp=N,64nm,1.9s						
YAK				smax	smax		
	comp=E,43nm,1.8s						
ZAK	**Zakamensk**	**70.32**	**329**	*e*P	**P**	**03 32 37.4**	**0.0**
ZAK				*e*		03 32 48.1	
ZAK				pmax	pmax		
	comp=Z,195nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,81nm,1.1s						
BOD	**Bodaibo**	**70.55**	**339**	*e*P	**P**	**03 32 38.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,159nm,1.1s						
IRK	**Irkutsk**	**70.93**	**330**	*e*P	**P**	**03 32 40.6**	**-0.4**
IRK				pmax	pmax		
	comp=Z,174nm,1.1s						
TAPN	**Taplejung**	**71.28**	**301**	*e*P	**P**	**03 32 44.5**	**+0.5**
	comp=Z,479nm,1.0s						
RAMN	**Ramite**	**72.12**	**300**	*e*P	**P**	**03 32 49.1**	**+0.1**
	comp=Z,189nm,0.9s						
MOY	**Mondy**	**72.24**	**329**	*e*P	**P**	**03 32 49.5**	**+0.4**
MOY				pmax	pmax		
	comp=Z,209nm,1.6s						
VNDA	**Vanda**	**72.26**	**178**	P	**P**	**03 32 49.1**	**+0.5**
	comp=Z,17nm,0.9s,baz=333,slow=6.6,SNR=48						
	comp=Z,17nm,0.9s						
VNDA	**Vanda**	**72.26**	**178**	P	**P**	**03 32 49.1**	**+0.5**
VNDA				IAmb	IAmb	03 33 01.1	
	comp=Z,34nm,0.9s						
VNDA	**Vanda**	**72.26**	**178**	P	**P**	**03 32 49.1**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,34nm,1.0s						
JIRN	**Jiri**	**72.66**	**301**	*e*P	**P**	**03 32 52.6**	**+0.2**
	comp=Z,262nm,0.9s						
SBA	**Scott Base**	**72.79**	**177**	P	**P**	**03 32 52.1**	**+0.3**
SBA				IAmb	IAmb	03 33 04.9	
	comp=Z,61nm,1.1s						
SBA	**Scott Base**	**72.79**	**177**	P	**P**	**03 32 52.1**	**+0.3**
SBA				pmax	pmax		
	comp=Z,61nm,1.2s						
GUN	**Gumba**	**73.00**	**301**	*e*P	**P**	**03 32 54.7**	**+0.3**
	comp=Z,774nm,0.9s						
PKI	**Pulchoki**	**73.31**	**301**	*e*P	**P**	**03 32 56.1**	**-0.1**
	comp=Z,422nm,1.1s						
PKIN	**Phulchoki**	**73.32**	**301**	*e*P	**P**	**03 32 56.2**	**0.0**
	comp=Z,334nm,1.0s						
DMN	**Daman**	**73.58**	**301**	*e*P	**P**	**03 32 58.1**	**+0.4**
	comp=Z,688nm,0.9s						
PALK	**Pallekele**	**73.71**	**279**	LR	LR	04 10 06.1	
	comp=Z,498nm,18.5s,baz=213,slow=40						
PALK	**Pallekele**	**73.71**	**279**	P	**P**	**03 32 57.8**	**-0.6**
PALK				IAmb	IAmb	03 32 59.9	
	comp=Z,65nm,1.1s						
PALK	**Pallekele**	**73.71**	**279**	P	**P**	**03 32 57.8**	**-0.6**
PALK				pmax	pmax		
	comp=Z,65nm,1.1s						
PALK				MLR	MLR		
	comp=Z,700nm,19.0s						
PALK	**Pallekele**	**73.71**	**279**	P	**P**	**03 32 59.2**	**+0.8**
	comp=Z,67nm,1.4s						
GAMB	**Gambell**	**73.72**	**15**	IAms_20	IAms_20	04 01 40.7	
	comp=Z,3μm,20.0s						
BILL	**Bilibino**	**73.78**	**5**	P	**P**	**03 32 57.1**	**-0.5**
BILL				IAmb	IAmb	03 33 02.3	
	comp=Z,68nm,0.9s						
BILL	**Bilibino**	**73.78**	**5**	*e*P	**P**	**03 32 56.7**	**-0.9**
BILL				*e*		03 33 12.8	
BILL				*e*		03 35 41.9	
BILL				*e*PPP	PPP	03 37 26.3	
BILL				pmax	pmax		
	comp=Z,69nm,0.9s						
BILL				MLR	MLR		
	comp=Z,511nm,20.0s						
GKN	**Gorkha**	**74.08**	**301**	*e*P	**P**	**03 33 00.5**	**0.0**
	comp=Z,636nm,1.1s						
DANN	**Dangsing**	**74.92**	**301**	*e*P	**P**	**03 33 05.3**	**-0.2**
	comp=Z,259nm,1.0s						
Q17K	**Contact Creek**	**75.21**	**25**	P	**P**	**03 33 06.5**	**+0.2**
	baz=233						
PYUN	**Piuthan**	**75.51**	**301**	*e*P	**P**	**03 33 08.5**	**-0.4**
	comp=Z,420nm,1.0s						
O17K	**Koliganek Bris**	**75.65**	**23**	P	**P**	**03 33 08.9**	**+0.3**
	baz=231						
Q18K	**Katmai Hardscr**	**75.81**	**25**	P	**P**	**03 33 09.1**	**-0.6**
	baz=233						
ANM	**Nome**	**76.09**	**17**	P	**P**	**03 33 11.0**	**-0.1**
	baz=222						
P18K	**Big Mountain,**	**76.17**	**24**	P	**P**	**03 33 14.0**	**+2.3**
	baz=233						
KDAK	**Kodiak Island**	**76.36**	**26**	LR	LR	04 02 15.1	
	comp=Z,1μm,20.8s,baz=256,slow=32						
WMQ	**Urumqi**	**76.61**	**317**	P	**P**	**03 33 15.5**	**+0.9**
WMQ				pP	sP	03 33 24.0	+1.2
WMQ				S	**S**	**03 43 00.0**	**+0.1**
WMQ				SS	**SS**	**03 47 55.4**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,130nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.7s						
WMQ				LR	LR		
	comp=Z,1μm,19.5s						
WMQ				LR	LR		
	comp=Z,580nm,19.5s						
WMQ				LR	LR		
	comp=Z,990nm,21.3s						
N18K	**Kilae Creek**	**76.68**	**23**	P	**P**	**03 33 15.0**	**+0.4**
	baz=232						
O19K	**Port Alsworth**	**77.01**	**24**	P	**P**	**03 33 17.4**	**+1.0**
	baz=234						
P19K	**Oil Pt**	**77.14**	**25**	P	**P**	**03 33 18.2**	**+1.0**
	baz=235						
N19K	**Bonanza Creek**	**77.32**	**23**	IAms_20	IAms_20	04 03 17.8	
	comp=Z,2μm,19.0s						
N19K	**Bonanza Creek**	**77.32**	**23**	P	**P**	**03 33 20.1**	**+1.9**
	baz=234						
HYBB	**Hyderabad (bro**	**77.33**	**289**	*e*P	**P**	**03 33 18.6**	**-0.6**
HYBB				IVmB_BB		03 33 19.1	
	comp=Z,634nm,2.5s						
HYBB				*e*pP	**pP**	**03 33 22.8**	**-2.3**
HYBB				*e*PcP	**PcP**	**03 33 29.4**	**-0.3**
HYBB				*e*PP	**PP**	**03 36 12.9**	**-0.7**
HYBB				*e*S	**S**	**03 43 10.1**	**+1.5**
HYBB				*e*SKSac	**SKSac**	**03 43 31.1**	**-0.3**
HYBB				*e*SS	**SS**	**03 48 07.8**	**+0.4**
O20K	**Slope Mountain**	**77.64**	**24**	P	**P**	**03 33 21.3**	**+1.3**
	baz=235						
L19K	**White Mountain**	**78.00**	**22**	IAmb	IAmb	03 33 44.9	
	comp=Z,38nm,0.9s						
L19K				IAms_20	IAms_20	04 04 51.7	
	comp=Z,2μm,20.0s						
L19K	**White Mountain**	**78.00**	**22**	P	**P**	**03 33 21.6**	**-0.3**
	baz=233						
M19K	**Big River Lodg**	**78.00**	**22**	IAms_20	IAms_20	04 05 38.9	
	comp=Z,2μm,19.0s						
M19K	**Big River Lodg**	**78.00**	**22**	P	**P**	**03 33 22.3**	**+0.4**
	baz=233						
TTA	**Tatalina**	**78.03**	**21**	P	**P**	**03 33 21.5**	**-0.7**
	baz=232						
BRSE	**Bradley Lake S**	**78.24**	**25**	P	**P**	**03 33 23.3**	**0.0**
	baz=237						
PCHI	**Peechi**	**78.41**	**282⇑**	*e*P	**P**	**03 33 25.7**	**+0.5**
PCHI				*e*S	**S**	**03 43 20.7**	**+0.4**
N20K	**Mount Spurr**	**78.44**	**24**	P	**P**	**03 33 22.8**	**-1.6**
	baz=236						
M20K	**Styx River**	**78.47**	**23**	IAmb	IAmb	03 33 54.5	
	comp=Z,62nm,1.4s						
M20K				IAms_20	IAms_20	04 02 32.4	
	comp=Z,2μm,20.0s						
M20K	**Styx River**	**78.47**	**23**	P	**P**	**03 33 23.9**	**-0.7**
	baz=235						
TIXI	**Tiksi**	**78.53**	**352** *c*	*i*P	**P**	**03 33 23.2**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,35nm,1.1s						
L20K	**Farewell, AK**	**78.54**	**22**	P	**P**	**03 33 24.7**	**-0.2**
	baz=234						
GCSA	**Galena City Sc**	**78.87**	**19**	P	**P**	**03 33 26.5**	**-0.1**
	baz=231						
DGZ	**Jazzator, Alta**	**78.94**	**323** *c*	*i*P	**P**	**03 33 27.8**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,202nm,1.1s						
SEW	**Seward**	**78.98**	**25**	P	**P**	**03 33 28.1**	**+0.8**
	baz=238						
K20K	**Telida**	**78.99**	**21**	P	**P**	**03 33 27.0**	**-0.4**
	baz=234						
SKT	**Skwentna**	**79.15**	**23**	P	**P**	**03 33 26.7**	**-1.6**
	baz=236						
SUA	**Susitna One**	**79.18**	**24**	P	**P**	**03 33 27.5**	**-1.0**
	baz=237						
RDOG	**Red Dog Mine**	**79.33**	**15**	IAms_20	IAms_20	04 13 31.8	
	comp=Z,2μm,20.0s						
PPLA	**Purkeypile**	**79.42**	**22**	P	**P**	**03 33 29.3**	**-0.6**
	baz=235						
J20K	**Nowinta River**	**79.45**	**21**	P	**P**	**03 33 29.9**	**0.0**
J20K				IAmb	IAmb	03 34 18.6	
	comp=Z,76nm,1.5s						
J20K				IAms_20	IAms_20	04 05 40.2	
	comp=Z,2μm,19.0s						
J20K	**Nowinta River**	**79.45**	**21**	P	**P**	**03 33 29.8**	**0.0**
	baz=233,SNR=11						
M22K	**Willow**	**79.59**	**24**	IAmb	IAmb	03 34 15.9	
	comp=Z,93nm,1.2s						
M22K	**Willow**	**79.59**	**24**	P	**P**	**03 33 29.1**	**-1.4**
	baz=237						
ZSN	**Zaisan**	**79.73**	**320**	*i*P	**P**	**03 33 31.9**	**+0.2**
ZSN				*e*S	**S**	**03 43 31.4**	**-1.9**
ZSN				pmax	pmax		
	comp=Z,176nm,2.5s						
ZSN				smax	smax		
	comp=E,99nm,4.3s						
ZSN	**Zaisan**	**79.73**	**320**	*i*P	**P**	**03 33 31.9**	**+0.2**
	comp=E,176nm,2.5s,baz=320						
ZSN				*e*S	**S**	**03 43 31.4**	**-1.9**
	comp=E,99nm,4.3s,baz=320						
CAST	**Castle Rocks**	**79.75**	**22**	IAms_20	IAms_20	04 06 37.2	
	comp=Z,2μm,20.0s						
CAST	**Castle Rocks**	**79.75**	**22**	P	**P**	**03 33 30.3**	**-1.2**
	baz=235						
PWL	**Port Wells**	**79.85**	**25**	IAmb	IAmb	03 34 02.7	
	comp=Z,58nm,1.0s						
PWL	**Port Wells**	**79.85**	**25**	P	**P**	**03 33 31.6**	**-0.5**
	baz=239						
CUT	**Chulitna**	**79.88**	**23**	P	**P**	**03 33 31.0**	**-1.2**
	baz=237						
PMR	**Palmer**	**79.90**	**24**	P	**P**	**03 33 31.1**	**-1.2**
	baz=238						
CHUM	**Lake Minchumin**	**79.93**	**21**	P	**P**	**03 33 31.9**	**-0.6**
	baz=235,SNR=17						
GHO	**Glory Hole Cre**	**80.08**	**24**	IAms_20	IAms_20	04 08 19.8	
	comp=Z,2μm,19.0s						
KNK	**Knik Glacier**	**80.08**	**24**	P	**P**	**03 33 32.8**	**-0.5**
	baz=239						
KTH	**Kantishna Hill**	**80.26**	**22**	IAms_20	IAms_20	04 06 50.6	
	comp=Z,2μm,20.0s						
SML	**Sawmill**	**80.34**	**24**	IAmb	IAmb	03 34 17.5	
	comp=Z,87nm,1.2s						
SML				IAms_20	IAms_20	04 05 26.7	
	comp=Z,2μm,20.0s						
SML	**Sawmill**	**80.34**	**24**	P	**P**	**03 33 34.3**	**-0.4**
	baz=239						
GLI	**Glacier Island**	**80.38**	**25**	P	**P**	**03 33 34.0**	**-1.0**
	baz=240						
HIN	**Hinchinbrook I**	**80.40**	**26**	IAms_20	IAms_20	04 06 22.4	
	comp=Z,2μm,20.0s						
TRF	**Thorofare Moun**	**80.44**	**22**	P	**P**	**03 33 33.9**	**-1.6**
	baz=237						
BPAW	**Bear Paw Mtn.**	**80.54**	**22**	P	**P**	**03 33 34.6**	**-1.2**
	baz=236						
M23K	**Glacier View**	**80.58**	**24**	P	**P**	**03 33 35.0**	**-1.0**
	baz=240						
FID	**Port Fidalgo**	**80.58**	**26**	IAms_20	IAms_20	04 12 40.6	
	comp=Z,2μm,20.0s						
SCM	**Sheep Creek Mo**	**80.76**	**24**	IAmb	IAmb	03 34 26.8	
	comp=Z,133nm,1.6s						
SCM	**Sheep Creek Mo**	**80.76**	**24**	P	**P**	**03 33 36.1**	**-1.0**
	baz=240						
WAT1	**Susitna Watana**	**80.78**	**23**	P	**P**	**03 33 36.1**	**-1.0**
	baz=239						
H21K	**Melozitna Rive**	**80.79**	**20**	IAms_20	IAms_20	04 16 32.6	
	comp=Z,2μm,19.0s						
H21K	**Melozitna Rive**	**80.79**	**20**	P	**P**	**03 33 36.3**	**-0.8**
	baz=234,SNR=7.9						
I21K	**Tanana**	**80.80**	**20**	IAmb	IAmb	03 33 39.0	
	comp=Z,33nm,0.9s						
I21K				IAms_20	IAms_20	04 07 59.7	
	comp=Z,2μm,18.0s						
I21K	**Tanana**	**80.80**	**20**	P	**P**	**03 33 36.4**	**-0.7**
	baz=235,SNR=9.7						
EYAK	**Cordova Ski Ar**	**80.80**	**26**	P	**P**	**03 33 36.0**	**-1.2**
	baz=242						
WAT6	**Susitna Watana**	**80.97**	**24**	P	**P**	**03 33 37.2**	**-1.1**
	baz=240						
G21K	**Allakaket**	**81.07**	**19**	P	**P**	**03 33 38.0**	**-0.5**
	baz=234,SNR=8.2						
MCK	**McKinley**	**81.11**	**22**	IAmb	IAmb	03 33 59.9	
	comp=Z,53nm,1.0s						
MCK				IAms_20	IAms_20	04 07 28.9	
	comp=Z,2μm,21.0s						
MCK	**McKinley**	**81.11**	**22**	P	**P**	**03 33 37.1**	**-1.6**
	baz=238,SNR=18						
MLY	**Manley**	**81.15**	**21**	P	**P**	**03 33 37.7**	**-1.3**
	baz=236,SNR=13						
KLU	**Klutina**	**81.18**	**25**	IAmb	IAmb	03 34 25.8	
	comp=Z,34nm,0.9s						
KLU	**Klutina**	**81.18**	**25**	P	**P**	**03 33 38.7**	**-0.6**
	baz=241						
MK31	**Makanchi Array**	**81.19**	**319** *c*	*i*P	**P**	**03 33 40.1**	**+0.5**
MKAR	**Makanchi Array**	**81.19**	**319**	P	**P**	**03 33 40.0**	**+0.4**
	comp=Z,102nm,0.9s,baz=103,slow=5.4,SNR=214						
MKAR				PKKPbc	**PKKPbc**	**03 52 16.6**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=270,slow=2.4,SNR=4.0						
MKAR				LR	LR	04 10 18.7	
	comp=Z,1μm,19.2s,baz=107,slow=36						
	comp=Z,102nm,0.9s						
DHY	**Denali Highway**	**81.37**	**23**	P	**P**	**03 33 39.8**	**-0.6**
	baz=240						
M24K	**Tolsona, Glenn**	**81.37**	**24**	P	**P**	**03 33 40.2**	**0.0**
	baz=241						
MAKZ	**Makanchi**	**81.40**	**319**	P	**P**	**03 33 41.3**	**+0.6**
MAKZ				IAms_20	IAms_20	04 10 04.3	
	comp=Z,2μm,19.0s						
MAKZ	**Makanchi**	**81.40**	**319**	P	**P**	**03 33 40.7**	**0.0**
H22K	**Ishtalitna Cre**	**81.41**	**20**	P	**P**	**03 33 39.9**	**-0.5**
	baz=236,SNR=9.6						
BMRM	**Bremner River**	**81.50**	**26**	P	**P**	**03 33 40.0**	**-1.0**
	baz=243						
F21K	**Alatna River**	**81.50**	**18**	P	**P**	**03 33 39.6**	**-1.2**
	baz=234						
NEA2	**Nenana**	**81.51**	**22**	P	**P**	**03 33 39.0**	**-1.9**
	baz=238,SNR=15						
BGLC	**Bering Glacier**	**81.70**	**27**	P	**P**	**03 33 40.3**	**-1.6**
	baz=244						
I23K	**Minto, Yukon-K**	**81.70**	**21**	IAmb	IAmb	03 36 47.8	
	comp=Z,64nm,1.9s						
I23K	**Minto, Yukon-K**	**81.70**	**21**	P	**P**	**03 33 40.9**	**-1.0**
	baz=238						
N25K	**Chitina, Valde**	**81.79**	**25**	P	**P**	**03 33 41.5**	**-1.0**
	baz=242						
WRH	**Wood River Hil**	**81.81**	**22**	IAmb	IAmb	03 34 14.2	
	comp=Z,59nm,1.5s						
POO	**Poona**	**81.92**	**289⇑**	*i*P	P	03 33 38.0	-6.1
	comp=Z,90nm,1.2s						
HARP	**HAARP**	**81.93**	**24**	P	**P**	**03 33 42.1**	**-1.0**
	baz=242						
G22K	**Bettles**	**81.95**	**19**	P	**P**	**03 33 42.5**	**-0.6**
	baz=235						
ZAA0	**Zalesovo Array**	**81.99**	**326**	IAmb	IAmb	03 33 44.2	
	comp=Z,78nm,0.9s						
ZALV	**Zalesovo Beam**	**81.99**	**326**	P	**P**	**03 33 42.9**	**-0.7**
	comp=Z,68nm,0.8s,baz=104,slow=6.3,SNR=161						
ZALV				PKPPKP	**P'P'df**	**04 00 22.3**	**+4.9**
	comp=Z,0.4nm,0.3s,baz=258,slow=7.4,SNR=3.7						
ZALV				LR	LR	04 08 46.8	
	comp=Z,1μm,21.9s,baz=108,slow=35						
	comp=Z,68nm,0.8s						
H23K	**Yukon River**	**82.00**	**20**	IAmb	IAmb	03 34 22.0	
	comp=Z,102nm,1.9s						
H23K				IAms_20	IAms_20	04 07 15.6	
	comp=Z,2μm,21.0s						
H23K	**Yukon River**	**82.00**	**20**	P	**P**	**03 33 42.8**	**-0.7**
	baz=237,SNR=7.5						
GLB	**Gilahina Butte**	**82.05**	**26**	IAmb	IAmb	03 34 18.1	
	comp=Z,24nm,0.8s						
GLB				IAms_20	IAms_20	04 06 34.1	
	comp=Z,2μm,21.0s						
F22K	**John River**	**82.07**	**18**	P	**P**	**03 33 43.6**	**-0.2**
	baz=235						
PAX	**Paxson**	**82.07**	**24**	P	**P**	**03 33 43.5**	**-0.6**
	baz=242						
TCOL	**CIGO, UAF Yank**	**82.10**	**22**	P	**P**	**03 33 42.1**	**-1.8**
	baz=239						
COLA	**College**	**82.10**	**22**	*i*P	**P**	**03 33 41.4**	**-2.6**
COLA				pmax	pmax		
	comp=Z,24nm,0.9s						
COLA	**College**	**82.10**	**22**	P	**P**	**03 33 42.2**	**-1.7**
	baz=239						
SHLS	**Shalkode**	**82.11**	**315** *c*	*i*P	**P**	**03 33 43.5**	**-1.2**
SHLS				*e*S	**S**	**03 43 54.2**	**-4.2**
SHLS				pmax	pmax		
	comp=Z,108nm,2.6s						
SHLS	**Shalkode**	**82.11**	**315⇑**	*i*P	**P**	**03 33 43.5**	**-1.2**
	comp=Z,108nm,2.6s,baz=315						
SHLS				*e*S	**S**	**03 43 54.3**	**-4.2**
	baz=315						
VRDI	**Verde Repeater**	**82.11**	**26**	IAmb	IAmb	03 34 18.1	
	comp=Z,27nm,1.0s						
PDGK	**Podgornoye**	**82.13**	**315**	P	**P**	**03 33 44.5**	**-0.3**
HDA	**Harding Lake**	**82.20**	**22**	IAmb	IAmb	03 34 18.6	
	comp=Z,82nm,1.8s						
HDA				IAms_20	IAms_20	04 07 27.0	
	comp=Z,2μm,19.0s						
HDA	**Harding Lake**	**82.20**	**22**	P	**P**	**03 33 42.6**	**-2.0**
	baz=240						
G23K	**Bananza Creek**	**82.32**	**20**	P	**P**	**03 33 44.3**	**-0.9**
	baz=237						
ISLE	**Juniper Island**	**82.33**	**27**	IAms_20	IAms_20	04 07 10.4	
	comp=Z,2μm,21.0s						
K24K	**Donnelly Dome**	**82.35**	**23**	P	**P**	**03 33 44.2**	**-1.2**
	baz=241						
MCARA	**McCarthy VSAT**	**82.37**	**26**	IAmb	IAmb	03 34 29.0	
	comp=Z,35nm,1.0s						
MCARA				IAms_20	IAms_20	04 06 35.4	
	comp=Z,2μm,21.0s						
MCARA	**McCarthy VSAT**	**82.37**	**26**	P	**P**	**03 33 44.5**	**-0.9**
	baz=244						
POKR	**Poker Plat Res**	**82.38**	**21**	P	**P**	**03 33 43.7**	**-1.8**
	baz=240						
ILAR	**Eielson Array**	**82.41**	**22**	P	**P**	**03 33 43.5**	**-2.1**
	comp=Z,17nm,1.1s,baz=255,slow=4.9,SNR=46						
ILAR				LR	LR	04 07 42.2	
	comp=Z,666nm,19.7s,baz=235,slow=34						
	comp=Z,17nm,1.1s						
UZB	**Uzynbulak**	**82.42**	**315**	*i*P	**P**	**03 33 46.0**	**-0.3**
UZB				*e*S	**S**	**03 43 59.2**	**-2.5**
UZB				pmax	pmax		
	comp=Z,44nm,2.3s						
UZB				smax	smax		
	comp=N,77nm,2.9s						
UZB	**Uzynbulak**	**82.42**	**315**	*i*P	**P**	**03 33 46.1**	**-0.3**
	comp=N,44nm,2.3s,baz=315						
UZB				*e*S	**S**	**03 43 59.2**	**-2.5**
	comp=N,77nm,2.9s,baz=315						
YAH	**Yahtse**	**82.49**	**27**	IAms_20	IAms_20	04 06 33.7	
	comp=Z,2μm,20.0s						
E22K	**Anaktuvuk Pass**	**82.55**	**18**	P	**P**	**03 33 45.7**	**-0.6**
	baz=235						
H24K	**Noodor Dome**	**82.59**	**21**	P	**P**	**03 33 45.3**	**-1.4**
	baz=239						
RIDG	**Independent Ri**	**82.69**	**23**	IAms_20	IAms_20	04 13 18.8	
	comp=Z,2μm,19.0s						
RIDG	**Independent Ri**	**82.69**	**23**	P	**P**	**03 33 46.0**	**-1.2**
	baz=242						
KPKS	**Kokpek**	**82.74**	**315** *c*	*i*P	**P**	**03 33 47.6**	**-0.3**
KPKS				*e*S	**S**	**03 44 03.4**	**-1.4**
KPKS				pmax	pmax		
	comp=Z,133nm,2.2s						
KPKS				smax	smax		
	comp=N,103nm,3.6s						
KPKS	**Kokpek**	**82.74**	**315⇑**	*i*P	**P**	**03 33 47.6**	**-0.3**
	comp=N,132nm,2.2s,baz=315						
KPKS				*e*S	**S**	**03 44 03.5**	**-1.4**
	comp=N,103nm,3.6s,baz=315						
MENT	**Mentasta**	**82.77**	**24**	IAmb	IAmb	03 35 50.5	
	comp=Z,20nm,0.6s						
TABL	**Table Mountain**	**82

baz=246
CTGM Chitina Glacie 82.93 26 IAmb IAmb 03 33 50.0
comp=Z,29nm,1.0s
TARG Taragay, Kyrgy 82.95 313 IAmb IAmb 03 34 02.8
comp=Z,59nm,1.1s
DOT Dot Lake 82.95 23 IAmb IAmb 03 34 22.5
comp=Z,30nm,0.9s
L26K Log Cabin Wild 82.96 24 P **P** **03 33 47.7 -0.8**
baz=244
PINM Pinnacle 83.06 28 P **P** **03 33 47.9 -1.3**
baz=247
SCRK Sand Creek 83.14 23 IAmb IAmb 03 34 23.1
comp=Z,24nm,1.1s
SCRK IAMs_20 IAMs_20 04 12 38.6
comp=Z,2μm,20.0s
SCRK Sand Creek 83.14 23 P **P** **03 33 48.5 -1.0**
baz=243,SNR=8.3
A21K Barrow 83.17 14 P **P** **03 33 48.9 -0.5**
baz=230
G24K Hadweenzic Riv 83.18 20 P **P** **03 33 49.2 -0.4**
baz=239,SNR=7.6
E23K Chandalar 83.19 18 P **P** **03 33 49.7 0.0**
baz=237,SNR=8.7
M27K Edge Creek, AK 83.28 25 IAmb IAmb 03 34 25.2
comp=Z,42nm,0.8s
M27K IAMs_20 IAMs_20 04 06 27.5
comp=Z,2μm,20.0s
M27K Edge Creek, AK 83.28 25 P **P** **03 33 50.4 0.0**
baz=245
PNL Peninsula 83.30 28 P **P** **03 33 50.2 -0.2**
baz=247
TDK Taldyqorghan 83.31 316 *e*P **P** **03 33 49.3 -1.4**
TDK *e*S **S** **03 44 07.4 -3.0**
TDK pmax pmax
comp=Z,124nm,1.4s
TDK Taldyqorghan 83.31 316 *e*P **P** **03 33 49.4 -1.4**
comp=Z,124nm,1.4s,baz=316
TDK *e*S **S** **03 44 07.4 -3.0**
baz=316
O28M Mount Upton 83.36 27 P **P** **03 33 50.4 -0.6**
baz=247
D23K Nanushuk River 83.36 18 P **P** **03 33 50.6 +0.1**
baz=236
F24K Squaw Lake 83.46 19 P **P** **03 33 51.0 -0.1**
baz=239,SNR=12
TOLK Toolik Lake Re 83.52 18 IAmb IAmb 03 34 23.8
comp=Z,18nm,0.8s
TOLK IAMs_20 IAMs_20 04 06 06.7
comp=Z,2μm,22.0s
TOLK Toolik Lake Re 83.52 18 P **P** **03 33 51.2 -0.2**
baz=237
H25K Birch Creek 83.53 21 P **P** **03 33 51.8 +0.4**
baz=241
J26L Joseph Creek 83.54 23 IAmb IAmb 03 34 24.7
comp=Z,57nm,1.7s
J26L IAMs_20 IAMs_20 04 13 58.3
comp=Z,2μm,19.0s
J26L Joseph Creek 83.54 23 P **P** **03 33 50.6 -1.0**
baz=243,SNR=5.5
SEM Semipalatinsk 83.54 322*c* *i*P **P** **03 33 50.5 -1.6**
SEM *e*S **S** **03 44 08.8 -4.1**
SEM pmax pmax
comp=Z,72nm,1.3s
SEM Semipalatinsk 83.54 322⇑ *i*P **P** **03 33 50.5 -1.6**
comp=Z,72nm,1.3s,baz=322
SEM *e*S **S** **03 44 08.8 -4.1**
baz=322
E24K Your Creek 83.56 19 P **P** **03 33 50.8 -0.8**
baz=238
L27K Beaver Creek, 83.60 24 IAMs_20 IAMs_20 04 05 25.9
comp=Z,2μm,22.0s
L27K Beaver Creek, 83.60 24 P **P** **03 33 51.5 -0.3**
baz=245,SNR=12
YUK3 Moose Creek 83.64 26 P **P** **03 33 52.0 -0.4**
baz=246
G25K Bearman Lake 83.68 20 P **P** **03 33 51.9 -0.3**
baz=241
BVCY Beaver Creek 83.73 25 P **P** **03 33 52.3 -0.2**
baz=246
YUK8 Steele Glacier 83.75 27 P **P** **03 33 52.4 -0.6**
baz=247
KSH Kashi 83.82 311 P **P** **03 33 56.1 +2.5**
KSH sP pwP 03 34 08.4 +3.3
KSH S **S** **03 44 17.5 +1.5**
KSH pmax pmax
comp=Z,66nm,1.5s
KSH pmax pmax
comp=Z,980nm,2.7s
KSH LR LR
comp=Z,1μm,19.9s
KSH LR LR
comp=Z,880nm,17.9s
KSH LR LR
comp=Z,1μm,22.7s
MDOK Medeo 83.82 314 *i*P **P** **03 33 53.8 +0.2**
MDOK *i*S **S** **03 44 11.3 -4.6**
MDOK Medeo 83.82 314 *i*P **P** **03 33 53.9 +0.2**
baz=314
MDOK *i*S **S** **03 44 11.4 -4.6**
baz=314
C23K Itkillik River 83.87 17 P **P** **03 33 52.8 -0.2**
baz=236
FYU Fort Yukon 83.89 21 IAmb IAmb 03 34 28.4
comp=Z,38nm,1.4s
FYU IAMs_20 IAMs_20 04 14 57.4
comp=Z,1μm,20.0s
K27K Chicken 83.91 24 IAmb IAmb 03 34 28.0
comp=Z,55nm,1.6s
K27K IAMs_20 IAMs_20 04 07 19.2
comp=Z,2μm,20.0s
K27K Chicken 83.91 24 P **P** **03 33 53.2 -0.1**
baz=245
O29M Mount Kennedy 83.92 28 P **P** **03 33 53.1 -0.5**
baz=248
AAA Alma-Ata 83.93 314 *e*P **P** **03 33 53.6 -0.4**
AAA *e*S **S** **03 44 14.1 -2.7**
AAA Alma-Ata 83.93 314 *e*P **P** **03 33 53.7 -0.4**
baz=314
AAA *e*S **S** **03 44 14.2 -2.7**
baz=314
CHKK Chushkaly 84.02 315 *e*P **P** **03 33 52.5 -1.9**
CHKK Chushkaly 84.02 315 *e*P **P** **03 33 52.6 -1.9**
baz=315
D24K Happy Valley 84.03 18 P **P** **03 33 53.8 0.0**
baz=238
I26K Coal Creek Min 84.06 22 IAmb IAmb 03 34 47.2
comp=Z,41nm,1.5s
I26K IAMs_20 IAMs_20 04 08 51.0
comp=Z,2μm,20.0s
I26K Coal Creek Min 84.06 22 P **P** **03 33 53.5 -0.6**
baz=244
P29M Windy Craggy 84.06 28 IAMs_20 IAMs_20 04 09 51.3
comp=Z,2μm,20.0s
P29M Windy Craggy 84.06 28 P **P** **03 33 54.1 -0.2**
baz=249
ULHL Ulahol 84.20 313 P **P** **03 33 56.7 +1.1**
SNR=34
NRN Naryn 84.20 312 IAmb IAmb 03 33 58.1
comp=Z,90nm,1.3s
F25K Christian Rive 84.24 20 P **P** **03 33 55.0 -0.1**
baz=241,SNR=7.2
YUK6 Outpost Mounta 84.25 27 P **P** **03 33 54.7 -0.8**
baz=248
YUK4 Talbot Arm 84.28 27 P **P** **03 33 55.9 +0.3**
baz=248
C24K Franklin Bluff 84.37 17 P **P** **03 33 55.3 -0.2**
baz=238
KUU Kurty 84.49 315*c* *i*P **P** **03 33 57.1 +0.3**
KUU *e*S **S** **03 44 17.1 -5.2**
KUU Kurty 84.49 315⇑ *i*P **P** **03 33 57.1 +0.3**
baz=315
KUU *e*S **S** **03 44 17.2 -5.2**
baz=315
E25K Arctic Village 84.53 19 P **P** **03 33 56.2 -0.2**
baz=241
G26K Porcupine Rive 84.58 21 P **P** **03 33 56.7 0.0**
baz=243,SNR=18
EGAK Eagle 84.59 23 IAmb IAmb 03 33 58.5
comp=Z,23nm,1.1s
EGAK IAMs_20 IAMs_20 04 12 02.1
comp=Z,2μm,20.0s
EGAK Eagle 84.59 23 P **P** **03 33 56.2 -0.6**
baz=245,SNR=10
HYT Haines Junctio 84.60 27 IAmb IAmb 03 34 31.8
comp=Z,37nm,0.8s
HYT Haines Junctio 84.60 27 P **P** **03 33 56.5 -0.7**
baz=249,SNR=6.9
P30M Million Dollar 84.61 28 P **P** **03 33 56.8 -0.2**
baz=250
QSPA South Pole Qui 84.61 180 P **P** **03 33 56.9 -0.3**
QSPA South Pole Qui 84.61 180 IAMs_20 IAMs_20 04 12 40.3
comp=Z,1μm,18.0s
KURK Kurchatov 84.63 322 P **P** **03 33 57.4 +0.1**
KURK Kurchatov 84.63 322*c* *i*P **P** **03 33 57.1 -0.2**
KURK pmax pmax
comp=Z,337nm,1.1s
KURBB Kurchatov Arra 84.66 322 PKKPbc PKKPbc 03 52 11.8 +2.2
comp=Z,0.4nm,0.6s,baz=291,slow=3.2,SNR=4.5
KURBB Kurchatov Arra 84.66 322 P **P** **03 33 57.0 -0.4**
PLBC Pleasant Camp 84.66 29 P **P** **03 33 57.2 -0.1**
baz=250
I27K Kandik River 84.77 22 P **P** **03 33 57.3 -0.4**
baz=245,SNR=6.1
M29M Somme Creek 84.77 26 P **P** **03 33 57.3 -0.6**
baz=248
H02S1 DAWSON INLET T 84.79 36 T T 05 07 29.9
SNR=5.5
F26K Sheenjek River 84.80 20 P **P** **03 33 57.8 0.0**
baz=242
TKM2 Tokmak 2 84.81 314 P **P** **03 33 59.3 +0.6**
SNR=126
NIL Nilore 84.86 304 P **P** **03 33 58.7 -0.2**
NIL Nilore 84.86 304 P **P** **03 33 58.7 -0.2**
NIL pmax pmax
comp=Z,109nm,1.1s
NIL MLR MLR
comp=Z,1μm,20.0s
D25K Kavik River 84.86 18 P **P** **03 33 58.1 0.0**
baz=240
S32K Killisnoo 84.90 31 P **P** **03 33 58.6 +0.2**
baz=252
DAWY Dawson 85.00 24 IAmb IAmb 03 35 00.9
comp=Z,48nm,1.6s
DAWY Dawson 85.00 24 P **P** **03 33 59.3 +0.3**
baz=247,SNR=9.6
N30M Aishikik Lake 85.02 27 P **P** **03 33 58.9 -0.2**
baz=249
H27K Steamboat Moun 85.07 22 P **P** **03 33 59.0 -0.3**
baz=245,SNR=7.9
L29M L29M 85.16 25 P **P** **03 33 59.7 -0.1**
baz=248,SNR=9.5
R32K Eaglecrest 85.18 30 P **P** **03 33 59.6 -0.4**
baz=252
KBK Karagaybulak 85.22 313 P **P** **03 34 01.5 +0.8**
SNR=37
O30N Mendenhall 85.23 28 P **P** **03 34 00.1 -0.1**
baz=250
G27K Doyon Strip 85.27 21 P **P** **03 33 59.5 -0.8**
baz=245
MAW Mawson 85.33 203 P **P** **03 34 00.9 +0.4**
comp=Z,27nm,0.7s,baz=104,slow=6.9,SNR=24
MAW LR LR 04 10 11.6
comp=Z,735nm,19.3s,baz=86,slow=34
comp=Z,27nm,0.7s
MAW Mawson 85.33 203 P **P** **03 34 00.8 +0.4**
baz=85,SNR=19
CHMS Chumysh 85.43 314 P **P** **03 34 02.1 +0.5**
SNR=36
UCH Uchtor 85.45 313 P **P** **03 34 03.2 +1.0**
SNR=135
AAK Ala-Archa 85.55 313 P **P** **03 34 03.1 +0.7**
SNR=54
AAK Ala-Archa 85.55 313 LR LR 04 14 23.4
comp=Z,1μm,18.2s,baz=112,slow=37
AAK Ala-Archa 85.55 313 P **P** **03 34 03.1 +0.7**
AAK Ala-Archa 85.55 313 IAMs_20 IAMs_20 04 16 13.2
comp=Z,1μm,19.0s
AAK Ala-Archa 85.55 313*ce*P **P** **03 34 03.0 +0.7**
AAK pmax pmax
comp=Z,125nm,1.1s
C26K Camden Bay 85.60 18 P **P** **03 34 01.4 -0.4**
baz=241
SGDS Sogindy 85.61 314*c* *i*P **P** **03 34 02.6 +0.1**
SGDS *e*S **SKSac** **03 44 23.9 -2.9**
SGDS pmax pmax
comp=Z,63nm,1.2s
SGDS Sogindy 85.61 314⇑ *i*P **P** **03 34 02.7 +0.1**
comp=Z,63nm,1.2s,baz=314
SGDS *e*S **SKSac** **03 44 24.0 -2.9**
baz=314
N31M Braeburn, Yuko 85.62 27 IAmb IAmb 03 34 06.9
comp=Z,33nm,1.0s
N31M IAMs_20 IAMs_20 04 15 10.3
comp=Z,1μm,18.0s
N31M Braeburn, Yuko 85.62 27 P **P** **03 34 01.4 -0.7**
baz=250,SNR=12
J29M Klondike Camp 85.63 24 IAMs_20 IAMs_20 04 06 52.5
comp=Z,2μm,21.0s
J29M Klondike Camp 85.63 24 P **P** **03 34 02.0 -0.1**
baz=248
USP Ospenovka 85.67 314 P **P** **03 34 03.4 +0.7**
SNR=107
K29M Barlow Dome 85.69 25 P **P** **03 34 02.3 -0.2**
baz=249,SNR=14
WRAK Wrangell Islan 85.75 32 IAMs_20 IAMs_20 04 08 14.2
comp=Z,1μm,19.0s
WRAK Wrangell Islan 85.75 32 P **P** **03 34 02.2 -0.6**
baz=254
WHY Whitehorse 85.76 28 P **P** **03 34 02.4 -0.5**
baz=251
C27K Jago River 85.83 18 P **P** **03 34 02.7 -0.2**
baz=243
V35K Ketchikan 85.85 34 P **P** **03 34 03.2 -0.1**
baz=254
E27K Coleen River 85.88 20 P **P** **03 34 03.0 -0.2**
baz=245
I29M Ogilvie Camp, 85.93 23 IAMs_20 IAMs_20 04 09 02.6
comp=Z,2μm,20.0s
I29M Ogilvie Camp, 85.93 23 P **P** **03 34 02.8 -0.8**
baz=248,SNR=11
P32M Atlin 85.98 29 P **P** **03 34 03.6 -0.3**
baz=252
AML Almayashu 86.03 313 P **P** **03 34 06.1 +1.0**
SNR=109
EKS2 Erkin-Say 86.07 313 P **P** **03 34 05.6 +0.7**
SNR=52
MAYO Mayo, Yukon 86.28 25 P **P** **03 34 05.2 -0.1**
baz=250
BTLS Baital 86.33 316*c* *i*P **P** **03 34 06.0 +0.1**
BTLS *e*S **SKSac** **03 44 27.0 -4.1**
BTLS pmax pmax
comp=Z,117nm,1.4s
BTLS smax smax
comp=E,55nm,3.4s
BTLS Baital 86.33 316⇑ *i*P **P** **03 34 06.1 +0.1**
comp=E,117nm,1.4s,baz=316
BTLS *e*S **SKSac** **03 44 27.1 -4.1**
comp=E,55nm,3.4s,baz=316
M31M Drury Creek, Y 86.47 27 IAMs_20 IAMs_20 04 09 24.0
comp=Z,2μm,20.0s
M31M Drury Creek, Y 86.47 27 P **P** **03 34 05.6 -0.7**
baz=252,SNR=9.8
Q32M Nakina River 86.51 30 P **P** **03 34 06.2 -0.5**
baz=254
P33M Teslin, Yukon 86.60 29 IAMs_20 IAMs_20 04 09 01.3
comp=Z,2μm,20.0s
P33M Teslin, Yukon 86.60 29 P **P** **03 34 06.2 -0.8**
baz=253
NRIK Noril'sk 86.71 341 P **P** **03 34 06.1 -1.1**
comp=Z,16nm,0.8s,baz=128,slow=3.6,SNR=17
NRIK LR LR 04 11 28.2
comp=Z,1μm,21.6s,baz=122,slow=35
comp=Z,16nm,0.8s
NRIK Noril'sk 86.71 341 IAmb IAmb 03 34 08.0
comp=Z,35nm,1.1s
NRIK Noril'sk 86.71 341*ce*P **P** **03 34 06.6 -0.6**
NRIK pmax pmax
comp=Z,36nm,1.1s
N32M Quiet Lake 86.75 28 P **P** **03 34 07.3 -0.4**
baz=253
S34M Telegraph Cree 86.80 31 P **P** **03 34 07.4 -0.5**
baz=255
EPYK Eagle Plains 86.91 22 IAmb IAmb 03 35 09.7
comp=Z,58nm,1.1s
EPYK Eagle Plains 86.91 22 P **P** **03 34 08.0 -0.4**
baz=249
FARO Faro, Yukon 86.95 27 IAmb IAmb 03 34 43.3
comp=Z,25nm,1.1s
FARO Faro, Yukon 86.95 27 P **P** **03 34 07.9 -0.7**
baz=253,SNR=16
T35M Bob Quinn 87.02 32 P **P** **03 34 08.8 -0.3**
baz=256
R33M Jennings River 87.27 30 P **P** **03 34 10.3 0.0**
baz=255,SNR=6.0
G30M tAoh Zraii Nji 87.31 22 P **P** **03 34 09.3 -1.0**
baz=250
DLBC Dease Lake 87.50 31 IAmb IAmb 03 34 52.3
comp=Z,26nm,1.2s
DLBC Dease Lake 87.50 31 P **P** **03 34 10.5 -0.9**
baz=256
DZA Taraz 87.88 313 *e*P **P** **03 34 12.1 -1.5**
DZA *e*S **SKSac** **03 44 37.1 -3.7**
DZA Taraz 87.88 313 *e*P **P** **03 34 12.1 -1.5**
baz=313
DZA *e*S **SKSac** **03 44 37.1 -3.7**
baz=313
MMPY Sheldon Lake, 87.99 27 P **P** **03 34 13.2 -0.5**
baz=254,SNR=8.7
GAR Garm 88.05 309 P **P** **03 34 14.5 -0.1**
OTUK Ortayu 88.09 319 P **P** **03 34 13.7 -0.7**
BRZS Berezniki 88.18 320*c* *i*P **P** **03 34 13.4 -1.3**
BRZS *e*S **SKSac** **03 44 38.5 -3.7**
BRZS pmax pmax
comp=Z,20nm,0.8s
BRZS Berezniki 88.18 320⇑ *i*P **P** **03 34 13.5 -1.3**
comp=Z,20nm,0.8s,baz=320
BRZS *e*S **SKSac** **03 44 38.6 -3.7**
baz=320
MCCM Marconi Confer 88.27 52 IAMs_20 IAMs_20 04 08 31.2
comp=Z,2μm,19.0s
F31M Tsiigehtchic 88.37 22 P **P** **03 34 14.3 -0.9**
baz=252
KBL Kabul 88.44 305 P **P** **03 34 15.2 -1.4**
KBL Kabul 88.44 305 P **P** **03 34 15.2 -1.4**
KBL pmax pmax
comp=Z,13nm,0.9s
KK31 Karatay Array 88.51 313 *i*P **P** **03 34 16.2 -0.3**
KKAR Karatay Array 88.51 313 IAmb IAmb 03 34 18.4
comp=Z,32nm,0.9s
WTLY Watson Lake, Y 88.51 29 IAmb IAmb 03 34 55.7
comp=Z,43nm,1.5s
WTLY Watson Lake, Y 88.51 29 P **P** **03 34 16.1 -0.1**
baz=257,SNR=7.0
INK Inuvik 88.72 21 P **P** **03 34 15.5 -1.3**
comp=Z,10nm,1.0s,baz=224,slow=5.0,SNR=9.2
INK PKKPbc **PKKPdf** **03 51 54.6 -0.6**
comp=Z,5.7nm,1.0s,baz=37,slow=1.6,SNR=5.1
INK LR LR 04 10 12.7
comp=Z,1μm,21.4s,baz=240,slow=33
comp=Z,10nm,1.0s
INK Inuvik 88.72 21 P **P** **03 34 15.6 -1.3**
INK IAmb IAmb 03 35 04.2
comp=Z,35nm,1.4s
INK Inuvik 88.72 21 P **P** **03 34 15.6 -1.3**
INK pmax pmax
comp=Z,35nm,1.5s
INK Inuvik 88.72 21 P **P** **03 34 16.2 -0.7**
baz=252
IUG Iuzhnay 88.72 312*c* *i*P **P** **03 34 17.6 0.0**
IUG *i*S **SKSac** **03 44 43.0 -3.0**
IUG Iuzhnay 88.72 312⇑ *i*P **P** **03 34 17.6 0.0**
baz=312
IUG *i*S **SKSac** **03 44 43.1 -3.0**
baz=312
YBH Yreka Blue Hor 88.90 48 LR LR 04 08 26.6
comp=Z,2μm,19.9s,baz=262,slow=32
NLWA Neilton Lookou 88.93 42 IAMs_20 IAMs_20 04 13 58.6
comp=Z,1μm,18.0s
TGTN Hyland Airport 89.08 28 P **P** **03 34 18.4 -0.4**
baz=257
SAO San Andreas Ge 89.22 53 IAMs_20 IAMs_20 04 09 29.3
comp=Z,2μm,21.0s
ORV Oroville 89.53 50 IAMs_20 IAMs_20 04 06 09.9
comp=Z,1μm,19.0s
BVAR Borovoye Array 90.09 323 LR LR 04 16 59.6
comp=Z,961nm,18.3s,baz=94,slow=37
BRVK Borovoye 90.16 323 IAMs_20 IAMs_20 04 16 48.8
comp=Z,1μm,19.0s
BRVK Borovoye 90.16 323*c* *i*P **P** **03 34 23.0 -1.0**
BRVK pmax pmax
comp=Z,204nm,1.1s
BRVK MLR MLR
comp=Z,1μm,19.0s
CMB Columbia Colle 90.21 52 IAMs_20 IAMs_20 04 06 18.0
comp=Z,2μm,21.0s
BEKR Beckworth 90.44 50 P **P** **03 34 25.9 +0.1**
PINE Pine Mountain 90.47 46 P **P** **03 34 24.6 -1.3**
PASC Pasadena Art C 91.58 56 IAMs_20 IAMs_20 04 08 21.1
comp=Z,1μm,21.0s
EDW2 Edwards Air Fo 91.80 55 P **P** **03 34 31.6 -0.5**
baz=265
CWC Cottonwood Cre 91.88 54 P **P** **03 34 32.0 -0.6**
baz=265
NVAR Mina Array Bea 91.88 52 P **P** **03 34 32.2 -0.5**
comp=Z,2.9nm,1.0s,baz=262,slow=6.0,SNR=12
NVAR PKKPbc **PKKPbc** **03 51 53.0 +1.5**
comp=Z,0.5nm,0.9s,baz=81,slow=4.7,SNR=3.7
NVAR LR LR 04 08 10.0
comp=Z,1μm,21.9s,baz=266,slow=30
comp=Z,2.9nm,1.0s
NV11 Mina Array Sit 92.00 52 IAmb IAmb 03 35 23.4
comp=Z,25nm,1.6s
BFSC Mount Baldy Ra 92.02 56 P **P** **03 34 33.0 -0.3**
baz=265
G08A Pilot Rock 92.03 45 P **P** **03 34 31.7 -1.4**
LRMC Laurel Mtn Rad 92.11 55 P **P** **03 34 33.3 -0.4**
baz=265
MPMC Manual Prospec 92.32 54 P **P** **03 34 33.9 -0.8**
baz=265
A36M Sachs Harbour 92.35 18 IAMs_20 IAMs_20 04 14 15.9
comp=Z,1μm,20.0s
E09A Wood Farm, Sta 92.71 44 IAmb IAmb 03 35 09.3
comp=Z,20nm,1.3s
WAPA Wapiti River 92.78 35 IAmb IAmb 03 34 41.4
comp=Z,18nm,0.9s
GSC Goldstone, Bar 92.81 55 P **P** **03 34 36.0 -0.8**
baz=265
FURC Furnace Creek, 92.86 54 P **P** **03 34 36.8 0.0**
baz=266
PFO Pinyon Flats O 92.96 57 LR LR 04 12 04.6
comp=Z,1μm,18.6s,baz=264,slow=33
PFO Pinyon Flats O 92.96 57 IAMs_20 IAMs_20 04 09 17.9
comp=Z,2μm,18.0s
BELC Belle Mtn. Jos 93.38 56 P **P** **03 34 39.9 +0.3**
baz=266
TPNV Topopah Spring 93.38 53 P **P** **03 34 39.8 +0.2**
baz=266
TUQ Turquoise Moun 93.54 55 P **P** **03 34 40.2 -0.1**
baz=266
NEW Newport 93.54 42 LR LR 04 12 55.3
comp=Z,812nm,18.9s,baz=269,slow=33
NEW Newport 93.54 42 IAMs_20 IAMs_20 04 12 52.6
comp=Z,1μm,19.0s
NEW Newport 93.54 42 P **P** **03 34 39.2 -0.7**
baz=266
GMRC Granite Mounta 93.71 56 P **P** **03 34 42.0 +0.9**
baz=266
BRLDA Berland Lookou 93.77 36 IAmb IAmb 03 35 14.8
comp=Z,48nm,1.5s
BC3 Big Chuckawall 93.80 57 P **P** **03 34 41.5 0.0**
baz=266
RPN Rapa Nui 93.94 118 LR LR 04 10 24.6
comp=Z,1μm,20.1s,baz=276,slow=31
R11A Troy Canyon, C 94.00 52 P **P** **03 34 41.4 -1.0**
baz=266
HRA Herat 94.02 304 IAmb IAmb 03 34 43.0
comp=Z,29nm,1.1s
PLID Pearl Lake 94.11 45 IAMs_20 IAMs_20 04 21 20.7
comp=Z,1μm,18.0s
MFID Camas Ranch 94.13 47 IAMs_20 IAMs_20 04 10 48.0
comp=Z,1μm,20.0s
ELK Elko 94.41 50 LR LR 04 11 54.0
comp=Z,1μm,20.0s,baz=270,slow=32
ELK Elko 94.41 50 IAMs_20 IAMs_20 04 11 11.7
comp=Z,2μm,20.0s
HLID Hailey 95.17 47 IAMs_20 IAMs_20 04 11 51.4
comp=Z,1μm,20.0s
YKA Yellowknife Ar 95.59 28 P **P** **03 34 47.1 -1.7**
comp=Z,6.7nm,1.1s,baz=265,slow=5.0,SNR=8.4
comp=Z,6.7nm,1.1s
MSO Missoula 95.62 44 IAMs_20 IAMs_20 04 14 08.7
comp=Z,1μm,20.0s
SVE Sverdlovsk 96.01 326 *e*P **P** **03 34 49.6 -1.3**
SVE *e*S **SKSac** **03 45 23.7 -2.2**
SVE pmax pmax
comp=Z,50nm,1.3s
SVE MLR MLR
comp=Z,1μm,19.0s
EDM Edmonton 96.14 37 IAmb IAmb 03 35 31.5
comp=Z,16nm,1.0s
DUG Dugway, Tooele 96.24 50 IAMs_20 IAMs_20 04 15 11.0
comp=Z,1μm,19.0s
AB31 Akbulak array 96.34 319 *i*P **P** **03 34 50.1 -2.4**

ABKAR	**Akbulak array**	**96.34**	**319**	IAmb	IAmb	03 34 51.9		
	comp=Z,32nm,1.1s							
WSAR	**Wadi Sarin**	**96.55**	**293**	LR	LR	04 23 09.4		
	comp=Z,243nm,18.7s,baz=132,slow=38							
BELA	**Belgrano 2**	**96.77**	**178**	IAmb	IAmb	03 34 54.7		
	comp=Z,18nm,1.3s							
ARU	**Arti**	**97.16**	**326**	LR	LR	04 19 30.3		
	comp=Z,1μm,21.2s,baz=92,slow=36							
ARU	**Arti**	**97.16**	**326**	P	**P**	**03 34 54.1**	**-2.0**	
ARU				IAms_20	IAms_20	04 19 26.6		
	comp=Z,1μm,21.0s							
ARU	**Arti**	**97.16**	**326**	*c iP*	**P**	**03 34 54.1**	**-2.0**	
ARU						03 38 50.0		
ARU				S	**SKSac**	**03 45 29.9**	**-2.0**	
ARU				SP	SP	03 47 37.8	-1.3	
ARU				SS	**SS**	**03 52 56.3**	**+0.9**	
ARU				pmax	pmax			
	comp=Z,82nm,1.1s							
ARU				MLR	MLR			
	comp=Z,1μm,21.0s							
BOZ	**Bozeman (W)**	**97.20**	**45**	P	Pdif	03 34 57.1	+0.2	
	baz=270							
HWUT	**Hardware Ranch**	**97.21**	**49**	IAms_20	IAms_20	04 15 36.7		
	comp=Z,1μm,20.0s							
GEYT	**Alibeck**	**97.50**	**307**	P	**P**	**03 34 57.1**	**-1.0**	
	comp=Z,9.9nm,1.1s,baz=164,slow=2.6,SNR=12							
GEYT				PP	**PP**	**03 38 55.8**	**+0.2**	
	comp=Z,6.7nm,1.0s,baz=66,slow=7.3,SNR=4.7							
GEYT				LR	LR	04 20 06.9		
	comp=Z,1μm,20.2s,baz=98,slow=36							
	comp=Z,9.9nm,1.1s							
GEYT	**Alibeck**	**97.50**	**307**	IAmb	IAmb	03 35 00.4		
	comp=Z,32nm,1.5s							
GYA0B	**ALIBECK ARRAY**	**97.50**	**307**	IAmb	IAmb	03 35 00.3		
	comp=Z,27nm,1.4s							
AKTO	**Aktyubinsk**	**97.59**	**320**	LR	LR	04 18 39.3		
	comp=Z,864nm,21.2s,baz=83,slow=35							
FXWY	**Fox Creek**	**97.63**	**47**	IAms_20	IAms_20	04 13 50.5		
	comp=Z,2μm,20.0s							
TUC	**Tucson**	**97.66**	**58**	P	Pdif	03 34 59.8	+0.7	
	baz=268							
LPIG	**La Paz**	**97.81**	**66**	LR	LR	04 16 31.5		
	comp=Z,1μm,18.0s,baz=270,slow=34							
MOOW	**Moose Ponds**	**97.83**	**47**	IAms_20	IAms_20	04 12 58.9		
	comp=Z,1μm,21.0s							
SLBS	**Sierra La Lagu**	**98.12**	**67**	IAms_20	IAms_20	04 26 31.0		
	comp=Z,1μm,19.0s							
BW06	**Boulder Array**	**98.71**	**48**	IAms_20	IAms_20	04 14 23.1		
	comp=Z,2μm,20.0s							
BW06	**Boulder Array**	**98.71**	**48**	P	Pdif	03 35 04.7	+0.9	
	baz=271							
PDAR	**Pinedale Array**	**98.71**	**48**	P	Pdif	03 35 05.0	+1.2	
	comp=Z,0.7nm,0.9s,baz=286,slow=1.7,SNR=4.8							
PDAR				PP	**PP**	**03 38 59.4**	**-5.6**	
	comp=Z,1.2nm,1.1s,baz=228,slow=1.8,SNR=3.9							
PDAR				LR	LR	04 14 54.0		
	comp=Z,1μm,19.5s,baz=270,slow=33							
	comp=Z,0.7nm,0.9s							
RLMT	**Red Lodge**	**98.87**	**45**	IAms_20	IAms_20	04 16 41.9		
	comp=Z,1μm,22.0s							
NVL	**N'lazarevskaya**	**99.87**	**192**	*e*P	**Pdif**	**03 35 06.6**	**-1.4**	
NVL				*e*S	**SKSac**	**03 45 44.3**	**-0.8**	
NVL				pmax	pmax			
	comp=Z,8.0nm,0.9s							
NVL				MLR	MLR			
	comp=Z,2μm,16.0s							
RWWY	**Rawlins**	**100.48**	**49**	IAms_20	IAms_20	04 23 43.1		
	comp=Z,1μm,19.0s							
TROLL	**Troll, Antarti**	**100.51**	**189**	Pdiff	**Pdif**	**03 35 10.3**	**-0.7**	
SMCO	**Snowmass**	**100.75**	**51**	IAms_20	IAms_20	04 18 12.4		
	comp=Z,2μm,19.0s							
Y22D	**IRIS PASSCAL I**	**100.91**	**56**	IAms_20	IAms_20	04 24 11.5		
	comp=Z,1μm,18.0s							
LAO	**LASA Array**	**100.93**	**44**	IAms_20	IAms_20	04 17 12.1		
	comp=Z,1μm,20.0s							
ANMO	**Albuquerque**	**101.28**	**56**	IAms_20	IAms_20	04 23 08.8		
	comp=Z,980nm,18.0s							
SNAA	**Sanae**	**101.58**	**187**	Pdiff	**Pdif**	**03 35 15.6**	**-0.1**	
KIRV	**Kirov**	**101.88**	**329**	*ce*P	**Pdif**	**03 35 15.7**	**-1.4**	
SDCO	**Great Sand Dun**	**101.95**	**53**	IAms_20	IAms_20	04 21 30.5		
	comp=Z,1μm,19.0s							
RSSD	**Black Hills**	**102.66**	**46**	IAms_20	IAms_20	04 14 29.5		
	comp=Z,1μm,21.0s							
BRIGG	**Briggsdale**	**102.72**	**50**	IAms_20	IAms_20	04 19 42.4		
	comp=Z,1μm,18.0s							
VNA2	**Neumayer-Watz**	**102.82**	**186**	Pdiff	**Pdif**	**03 35 21.0**	**-0.1**	
	baz=157,slow=3.9							
PRGR	**Permogore**	**103.14**	**332**	*e*P	**Pdif**	**03 35 18.5**	**-4.1**	
PRGR				*e*		03 39 32.9		
PRGR				pmax	pmax			
	comp=Z,40nm,1.1s							
ABPO	**Ambohimpanom**	**103.53**	**249**	IAms_20	IAms_20	04 20 31.6		
	comp=Z,1μm,19.0s							
TXAR	**Lajitas Array**	**103.79**	**61**	PP	**PKiKP**	**03 39 46.4**	**+1.9**	
	comp=Z,0.5nm,0.9s,baz=258,slow=3.4,SNR=2.8							
TXAR				PKKPbc	**PKKPbc**	**03 51 17.8**	**-0.4**	
	comp=Z,1.0nm,1.0s,baz=95,slow=3.6,SNR=6.0							
BELG	**Belogornoye**	**103.89**	**323**	Pdiff	**Pdif**	**03 35 24.7**	**-1.5**	
	baz=74,slow=1.6							
KBS	**Kingsbay**	**103.98**	**353**	IAms_20	IAms_20	04 32 28.0		
	comp=Z,1μm,20.0s							
OGNE	**Ogallala**	**104.42**	**49**	IAms_20	IAms_20	04 21 24.4		
	comp=Z,1μm,20.0s							
AMTX	**Amarillo**	**105.20**	**55**	IAms_20	IAms_20	04 24 10.6		
	comp=Z,1μm,19.0s							
MAK	**Makhachkala**	**105.32**	**313**	*i* P	**Pdif**	**03 35 24.1**	**-8.7**	
MAK				*e*		03 39 49.5		
MAK				*e*		03 46 07.1		
MAK				*e*		03 46 48.8		
MAK				*e*SS	SS	03 54 47.6	-1.8	
MAK				*e*SSS	SSS	03 58 42.8		
MAK				pmax	pmax			
	comp=Z,45nm,0.9s							
MAK				MLR	MLR			
	comp=Z,435nm,14.0s							
APA	**Apatity**	**106.09**	**340**	⇓*iP*	**Pdif**	**03 35 39.4**	**+3.8**	
APA				pmax	pmax			
	comp=Z,7.0nm,1.1s							
KLMR	**Klimovskoe**	**106.19**	**332**	*e*P	**Pdif**	**03 35 32.4**	**-3.8**	
KLMR				PS	PS	03 49 19.0	+0.7	
KLMR				pmax	pmax			
	comp=Z,31nm,1.2s							
KLMR	**Klimovskoe**	**106.19**	**332**	*e*Pdif	**Pdif**	**03 35 32.5**	**-3.8**	
KLMR				AMP		03 35 36.0		
	comp=Z,31nm,1.2s							
KLMR				*e*PKiKP	**PKiKP**	**03 39 46.6**	**-1.2**	
KLMR				*e*PP	PP	03 39 46.8	-13	
KLMR				PS	**PS**	**03 49 19.0**	**+0.7**	
KLMR				PS	**PS**	**03 49 19.0**	**+0.7**	
KLMR				SS	SS	03 55 40.0	+40	
KLMR				SS	SS	03 55 40.0	+40	
KLMR				LQ	LQ	04 10 59.8		
KLMR				LQ	LQ	04 10 59.8		
KLMR				LR	LR	04 14 37.8		
KLMR				AMP		04 28 51.3		
	comp=Z,1μm,17.9s							
CBKS	**Cedar Bluff**	**106.39**	**51**	IAms_20	IAms_20	04 19 40.9		
	comp=Z,1μm,20.0s							
KEV	**Kevo**	**107.03**	**343**	IAms_20	IAms_20	04 23 05.7		
	comp=Z,962nm,20.0s							
OK035	**E0210 Rd and N**	**107.44**	**53**	IAms_20	IAms_20	04 20 21.7		
	comp=Z,1μm,20.0s							
OK038	**West end E0370**	**107.44**	**54**	IAms_20	IAms_20	04 31 24.7		
	comp=Z,1μm,18.0s							
WMOK	**Wichita Mounta**	**107.59**	**55**	IAms_20	IAms_20	04 20 49.9		
	comp=Z,1μm,20.0s							
ARCES	**ARCESS Array B**	**107.59**	**343**	PKiKP	**PKiKP**	**03 39 50.6**	**+0.4**	
	comp=Z,4.7nm,0.9s,baz=52,slow=2.2,SNR=5.8							
AGMN	**Agassiz Nation**	**107.66**	**41**	IAms_20	IAms_20	04 30 09.1		
	comp=Z,1μm,19.0s							
VRH	**Novokhopyorsk**	**107.72**	**322**	*e*P	**Pdif**	**03 35 39.9**	**-3.4**	
VRH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
VRH				MLR	MLR			
	comp=Z,830nm,19.0s							
ZEI	**Tsey**	**107.97**	**313**	*e*P	**Pdif**	**03 35 41.5**	**-3.4**	
ZEI				pmax	pmax			
	comp=Z,6.0nm,0.9s							
ECSD	**EROS Data Cent**	**108.02**	**46**	IAms_20	IAms_20	04 20 14.5		
	comp=Z,1μm,20.0s							
UNM	**Universidad Na**	**108.09**	**72**	IAms_20	IAms_20	04 22 55.3		
	comp=Z,1μm,18.0s							
KBZ	**Khabaz**	**108.53**	**314**	Pdiff	**Pdif**	**03 35 47.3**	**+0.3**	
	comp=Z,2.4nm,0.9s,baz=38,slow=5.4,SNR=4.1							
OK049	**E0420 Rd and N**	**108.60**	**53**	IAms_20	IAms_20	04 20 51.4		
	comp=Z,1μm,20.0s							
OK025	**Westminster Rd**	**108.67**	**54**	IAms_20	IAms_20	04 26 11.5		
	comp=Z,1μm,19.0s							
MOS	**Moscow**	**108.79**	**327**	*e*P	**Pdif**	**03 35 44.3**	**-3.6**	
MOS				*e*		03 40 18.2		
MOS				MLR	MLR			
	comp=E,1μm,19.0s							
MOS				MLR	MLR			
	comp=Z,1μm,19.0s							
OK050	**Pawnee Station**	**108.86**	**53**	IAms_20	IAms_20	04 27 24.3		
	comp=Z,1μm,21.0s							
OK046	**Pawnee Station**	**108.92**	**53**	IAms_20	IAms_20	04 32 38.9		
	comp=Z,1μm,18.0s							
OK033	**Mehan**	**108.94**	**54**	IAms_20	IAms_20	04 32 51.5		
	comp=Z,1μm,18.0s							
OK044	**Pawnee Station**	**109.01**	**53**	IAms_20	IAms_20	04 28 30.3		
	comp=Z,1μm,19.0s							
LPSR	**Galich'ya Gora**	**109.02**	**324**	*e*P	**Pdif**	**03 35 46.2**	**-2.8**	
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.8s							
LPSR				MLR	MLR			
	comp=Z,600nm,22.0s							
OK031	**S. Brethren Rd**	**109.03**	**54**	IAms_20	IAms_20	04 28 28.9		
	comp=Z,1μm,18.0s							
VSR	**Storozhevoye**	**109.27**	**323**	*e*P	**Pdif**	**03 35 47.3**	**-2.9**	
VSR				pmax	pmax			
	comp=Z,10.0nm,1.6s							
VSR				MLR	MLR			
	comp=Z,1μm,22.0s							
TUL1	**Leonard**	**109.88**	**54**	IAms_20	IAms_20	04 29 03.7		
	comp=Z,1μm,19.0s							
EYMN	**Ely**	**110.58**	**41**	IAms_20	IAms_20	04 27 01.4		
	comp=Z,959nm,19.0s							
SOC	**Sochi**	**110.82**	**315**	*i* PKIKP	**PKiKP**	**03 39 53.5**	**-3.5**	
SOC				*e*		03 40 29.5		
SOC				*e*PPP	PPP	03 42 52.1		
SOC				*e*SS	SS	03 55 57.0	-6.6	
SOC				*e*SSS	SSS	04 00 15.7		
SOC				MLR	MLR			
	comp=Z,600nm,22.0s							
SCIA	**State Center**	**110.83**	**47**	IAms_20	IAms_20	04 30 30.3		
	comp=Z,1μm,20.0s							
NATX	**Nacogdoches**	**111.35**	**58**	IAms_20	IAms_20	04 25 40.8		
	comp=Z,1μm,20.0s							
FINES	**FINESS Array B**	**111.84**	**336**	Pdiff	**Pdif**	**03 36 00.2**	**-1.1**	
	comp=Z,1.6nm,0.8s,baz=36,slow=7.1,SNR=5.5							
FINES				PKiKP	**PKiKP**	**03 39 58.0**	**-0.3**	
	comp=Z,2.6nm,0.9s,baz=67,slow=2.6,SNR=10							
MIAR	**Mount Ida**	**111.87**	**55**	IAms_20	IAms_20	04 27 16.2		
	comp=Z,1μm,19.0s							
CCM	**Cathedral Cave**	**113.10**	**51**	IAms_20	IAms_20	04 21 03.3		
	comp=Z,1μm,22.0s							
HDIL	**Hopedale**	**114.01**	**48**	IAms_20	IAms_20	04 28 28.2		
	comp=Z,1μm,19.0s							
MNK	**Minsk**	**114.42**	**329**	*i* PKIKP	PKPdf	03 40 05.5	+2.0	
MNK				*i*		03 41 02.0		
MNK				*i* PPP	PPP	03 43 26.7		
MNK				*i*		03 47 16.1		
MNK				*i* SS	SS	03 56 56.4	+5.9	
MNK				*i* SSS	SSS	04 01 08.6		
MNK				pmax	pmax			
	comp=N,18nm,1.0s							
MNK				pmax	pmax			
	comp=E,3.0nm,1.1s							
MNK				pmax	pmax			
	comp=Z,9.0nm,0.9s							
MNK	**Minsk**	**114.42**	**329**	*i* PKP	PKPdf	03 40 05.6	+2.0	
	comp=E,3.0nm,1.1s							
MNK				*i* PKP	PKPdf	03 40 05.6	+2.0	
	comp=N,18nm,1.0s,baz=62							
MNK				*i* PKP	PKPdf	03 40 05.6	+2.0	
	comp=Z,9.0nm,0.9s							
MNK				*i* PP	**PP**	**03 41 02.0**	**+2.5**	
MNK				*i* PPP	PPP	03 43 26.8		
MNK				*i* SKS	**SKSdf**	**03 47 16.1**	**+1.8**	
MNK				*i* SS	**SS**	**03 56 56.4**	**+6.0**	
MNK				*i* SKKS	**SKKSdf**	**03 58 16.5**	**-2.4**	
MNK				*i* SSS	SSS	04 01 08.7		
MNK				*i* LQ	LQ	04 22 03.5		
MNK				*i* LR	LR	04 28 40.1		
MNK				*i* LRM	MLR	04 31 33.3		
	comp=N,893nm,19.2s							
MNK				*i* LRM	MLR	04 31 46.7		
	comp=Z,1μm,19.8s							
MNK				*i* LRM	MLR	04 32 00.8		
	comp=E,105nm,19.8s							
NACGM	**Naroch**	**114.80**	**329**	*e*PKP	PKPdf	03 40 04.5	+0.3	
	baz=62							
SCO	**Scoresbysund**	**114.89**	**358**	IAms_20	IAms_20	04 24 58.1		
	comp=Z,855nm,19.0s							
ASF	**Jabal al Asfar**	**115.29**	**303**	PKP	**PKiKP**	**03 40 05.1**	**-0.9**	
	comp=Z,5.7nm,0.8s,baz=106,slow=2.6,SNR=12							
AKASG	**Malin Array Be**	**115.34**	**324**	PKP	**PKiKP**	**03 40 04.5**	**-1.0**	
	comp=Z,7.6nm,0.5s,baz=59,slow=2.5,SNR=32							
AKASG				PP	**PP**	**03 41 06.5**	**+0.3**	
	comp=Z,7.2nm,0.9s,baz=56,slow=7.6,SNR=8.5							
KMBO	**Kilima Mbogo**	**116.00**	**266**		**PKPdf**	**03 40 07.4**	**-0.7**	
KMBO	**Kilima Mbogo**	**116.00**	**266**	PKIKP	**PKPdf**	**03 40 07.4**	**-0.7**	
BRTR	**Keskin Array B**	**116.18**	**312**	PKP	**PKPdf**	**03 40 06.8**	**-0.8**	
	comp=Z,7.7nm,0.9s,baz=131,slow=3.4,SNR=23							
BRTR				PP	**PP**	**03 41 16.0**	**+3.2**	
	comp=Z,3.7nm,0.9s,baz=87,slow=5.2,SNR=5.5							
PLAL	**Pickwick Lake**	**116.24**	**54**	IAms_20	IAms_20	04 26 33.8		
	comp=Z,1μm,21.0s							
MMAI	**Mount Meron Ar**	**116.37**	**304**	PKP	**PKiKP**	**03 40 08.2**	**+0.1**	
	comp=Z,13nm,1.0s,baz=78,slow=7.8,SNR=16							
ANTO	**Ankara**	**116.77**	**312**	⇓P	**PKPdf**	**03 40 08.6**	**0.0**	
ANTO	**Ankara**	**116.77**	**312**		**PKPdf**	**03 40 08.2**	**-0.5**	
ANTO	**Ankara**	**116.77**	**312**	PKIKP	**PKPdf**	**03 40 08.2**	**-0.5**	
MILM	**Milestii Mici**	**117.12**	**321**	⇑P	PKPpre	03 39 60.0		
MILM	**Milestii Mici**	**117.12**	**321**	⇑PKIKP	PKPpre	03 40 00.0		
EIL	**Elat**	**117.37**	**301**	PKP	**PKPdf**	**03 40 09.8**	**-0.1**	
	comp=Z,17nm,1.0s,baz=328,slow=4.8,SNR=8.5							
HFS	**Hagfors**	**117.44**	**339**	PKP	**PKiKP**	**03 40 09.8**	**+0.6**	
	comp=Z,2.5nm,0.7s,baz=48,slow=4.8,SNR=8.9							
LRAL	**Lakeview Retre**	**117.53**	**56**	P	**PKPdf**	**03 40 08.8**	**-1.4**	
	baz=282							
CSS	**Mathiatis**	**117.63**	**307**	PKPdf	**PKPdf**	**03 40 10.1**	**-0.3**	
NB2	**NORSAR Subarra**	**117.66**	**340**	PKPdf	**PKPdf**	**03 40 09.5**	**-0.2**	
	comp=Z,3.5nm,1.1s,baz=44,slow=1.9							
NOA	**NORSAR Array B**	**117.66**	**340**	PKP	**PKPdf**	**03 40 09.2**	**-0.5**	
	comp=Z,1.4nm,0.7s,baz=45,slow=1.9,SNR=11							
NOA				PKKPbc	**PKKPbc**	**03 50 32.0**	**-1.6**	
	comp=Z,0.6nm,0.7s,baz=232,slow=6.0,SNR=3.2							
MDUB	**Mudurnu**	**117.76**	**313**	PKPdf	**PKPdf**	**03 40 09.2**	**-1.4**	
TLCR		**117.78**	**319**	⇑P	**PKiKP**	**03 40 11.1**	**+0.8**	
TLCR		**117.78**	**319**	⇑PKIKP	**PKiKP**	**03 40 11.1**	**+0.8**	
TLBR	**Topalu**	**118.53**	**318**	⇑P	**PKPdf**	**03 40 11.6**	**-0.1**	
HARR	**Harsova**	**118.56**	**319**	⇑P	**PKPdf**	**03 40 10.1**	**-1.7**	
HARR	**Harsova**	**118.56**	**319**	⇑PKIKP	**PKPdf**	**03 40 10.1**	**-1.7**	
LVV	**L'vov**	**118.72**	**325**	*e*PKIKP	**PKPdf**	**03 40 11.6**	**-0.4**	
ACSO	**Alum Creek Sta**	**118.72**	**47**	IAms_20	IAms_20	04 28 39.8		
	comp=Z,1μm,20.0s							
BIZ	**Bicaz**	**118.80**	**322**	⇑P	**PKPdf**	**03 40 11.2**	**-1.0**	
ICOR	**Ion Corvin**	**118.86**	**318**	⇑P	**PKiKP**	**03 40 13.5**	**+1.1**	
PLCA	**Paso Flores**	**118.92**	**143**	PKP	**PKiKP**	**03 40 13.1**	**+0.2**	
	comp=Z,1.9nm,0.6s,baz=296,slow=1.4,SNR=7.6							
PLCA				PKKPbc	**PKKPbc**	**03 50 26.9**	**-1.8**	
	comp=Z,6.0nm,1.0s,baz=53,slow=7.3,SNR=8.3							
BURAR	**Bucovina Array**	**119.05**	**323**	⇑P	**PKiKP**	**03 40 13.5**	**+0.6**	
BURAR	**Bucovina Array**	**119.05**	**323**	⇑PKIKP	**PKiKP**	**03 40 13.5**	**+0.6**	
KONO	**Kongsberg**	**119.23**	**340**	IAms_20	IAms_20	04 39 07.2		
	comp=Z,852nm,19.0s							
ISR	**Istrita**	**119.29**	**320**	⇑P	**PKiKP**	**03 40 16.4**	**+3.0**	
ISR	**Istrita**	**119.29**	**320**	⇑PKIKP	**PKiKP**	**03 40 16.4**	**+3.0**	
MLR	**Muntele Rosu**	**119.52**	**320**	⇑P	**PKPdf**	**03 40 12.2**	**-1.6**	
MLR	**Muntele Rosu**	**119.52**	**320**	PKP	**PKPdf**	**03 40 12.0**	**-1.9**	
	comp=Z,8.2nm,0.8s,baz=355,slow=5.3,SNR=13							
MLR	**Muntele Rosu**	**119.52**	**320**	IAms_20	IAms_20	04 36 24.6		
	comp=Z,1μm,20.0s							
MLR	**Muntele Rosu**	**119.52**	**320**	⇑PKIKP	**PKPdf**	**03 40 12.2**	**-1.6**	
P52A	**Corning**	**119.54**	**47**	IAms_20	IAms_20	04 37 24.3		
	comp=Z,1μm,18.0s							
P52A	**Corning**	**119.54**	**47**	P	**PKiKP**	**03 40 14.1**	**+0.1**	
	baz=289							
SECR		**119.63**	**320**	⇓P	**PKPdf**	**03 40 12.3**	**-1.6**	
DOPR	**Dopca**	**119.67**	**321**	⇑P	**PKiKP**	**03 40 14.7**	**+0.7**	
BOSA	**Boshof**	**119.85**	**233**	PKP	**PKPdf**	**03 40 14.7**	**-0.3**	
	comp=Z,5.3nm,0.6s,baz=165,slow=1.9,SNR=13							
M53A	**WI Miller and**	**119.95**	**45**	P	**PKiKP**	**03 40 14.8**	**+0.1**	
	baz=291							
VOIR		**120.11**	**320**	⇑P	**PKiKP**	**03 40 15.9**	**+0.9**	
VOIR		**120.11**	**320**	⇑PKIKP	**PKiKP**	**03 40 15.9**	**+0.9**	
KOLS	**Kolonicke sedl**	**120.16**	**325**	*e*PKIKP	**PKiKP**	**03 40 15.6**	**+0.7**	
UZH	**Uzhgorod**	**120.29**	**325**	*e*PKIKP	**PKPdf**	**03 40 14.0**	**-1.0**	
UZH				*e*		03 40 23.5		
GOGA	**Godfrey**	**120.32**	**54**	IAms_20	IAms_20	04 32 46.9		
	comp=Z,1μm,19.0s							
TRPA	**Tarpa**	**120.40**	**324**	⇑P	**PKPdf**	**03 40 14.8**	**-0.4**	
TRPA	**Tarpa**	**120.40**	**324**	PKP	**PKPdf**	**03 40 15.1**	**-0.1**	
ARR	**Arges**	**120.41**	**320**	⇑P	**PKiKP**	**03 40 16.6**	**+1.0**	
CJR	**Cluj-Napoca**	**120.44**	**322**	⇑P	**PKPdf**	**03 40 12.5**	**-3.0**	
CJR	**Cluj-Napoca**	**120.44**	**322**	⇑PKIKP	**PKPdf**	**03 40 12.5**	**-3.0**	
SZH	**Strazhica**	**120.44**	**318**	P	**PKiKP**	**03 40 22.5**	**+6.9**	
SZH	**Strazhica**	**120.44**	**318**	P	**PKiKP**	**03 40 22.5**	**+6.9**	
HUMR	**Humele**	**120.55**	**319**	⇑P	**PKPdf**	**03 40 14.8**	**-0.8**	
CRVS	**Cervenica-Dubn**	**120.63**	**325**	*e*PKIKP	**PKiKP**	**03 40 16.4**	**+0.6**	
ZIMR		**120.66**	**318**	⇑P	**PKPdf**	**03 40 15.2**	**-0.7**	
ZIMR		**120.66**	**318**	⇑PKIKP	**PKPdf**	**03 40 15.2**	**-0.7**	
OJC	**Ojcow**	**120.86**	**327**	*e*PKP	**PKPdf**	**03 40 14.1**	**-2.0**	
OJC				*e*L	L	04 32 55.5		
	comp=Z,1μm,22.4s							
PVL	**Pavlikeni**	**120.86**	**318**	P	**PKPdf**	**03 40 16.3**	**0.0**	
PVL	**Pavlikeni**	**120.86**	**318**	P	**PKPdf**	**03 40 16.3**	**0.0**	
LOT	**Lotru**	**120.92**	**321**	⇑P	**PKPdf**	**03 40 15.5**	**-1.1**	
NIE	**Niedzica**	**121.01**	**326**	*e*PKP	**PKiKP**	**03 40 16.6**	**0.0**	
NIE				*e*L	L	04 32 35.4		
	comp=Z,742nm,22.5s							
DIM	**Dimitrovgrad**	**121.20**	**317**	P	**PKiKP**	**03 40 17.3**	**+0.2**	
DIM	**Dimitrovgrad**	**121.20**	**317**	P	**PKiKP**	**03 40 17.3**	**+0.2**	
KDZ	**Kurdzhali**	**121.44**	**316**	P	**PKPdf**	**03 40 16.8**	**-0.7**	
KDZ	**Kurdzhali**	**121.44**	**316**	P	**PKPdf**	**03 40 16.8**	**-0.7**	
GZR	**Gura Zlata**	**121.56**	**321**	⇑P	**PKPdf**	**03 40 16.9**	**-0.8**	
GZR	**Gura Zlata**	**121.56**	**321**	⇑PKIKP	**PKPdf**	**03 40 16.9**	**-0.8**	
BLA	**Blacksburg**	**121.60**	**49**	P	**PKPdf**	**03 40 18.0**	**0.0**	
	baz=289							
SIRR	**Siria**	**121.83**	**323**	⇑P	**PKPdf**	**03 40 17.9**	**-0.2**	
MPEP	**Malo Peshtene**	**121.86**	**319**	P	**PKPdf**	**03 40 17.8**	**-0.4**	
MPEP	**Malo Peshtene**	**121.86**	**319**	P	**PKPdf**	**03 40 17.8**	**-0.4**	
RZN	**Rozhen**	**121.90**	**317**	P	**PKPdf**	**03 40 17.6**	**-1.0**	
RZN	**Rozhen**	**121.90**	**317**	P	**PKPdf**	**03 40 17.6**	**-1.0**	
PGB	**Panagyurishte**	**121.92**	**318**	P	**PKiKP**	**03 40 20.9**	**+2.3**	
PGB	**Panagyurishte**	**121.92**	**318**	P	**PKiKP**	**03 40 20.9**	**+2.3**	
OKC	**Ostrava-Krasne**	**121.95**	**328**	*e*PKIKP	**PKiKP**	**03 40 18.6**	**+0.2**	
OKC				MLR	MLR			
	comp=Z,900nm,16.0s							
OKC	**Ostrava-Krasne**	**121.95**	**328**	*e*PKP	**PKiKP**	**03 40 18.6**	**+0.2**	
OKC				AMS	AMS	04 37 30.0		
	comp=Z,900nm,16.0s							
HERR	**Herculane**	**122.03**	**321**	⇑P	**PKPdf**	**03 40 17.5**	**-1.0**	
PSZ	**Piszkesteto**	**122.03**	**325**	⇑P	**PKPdf**	**03 40 18.4**	**-0.1**	
PSZ	**Piszkesteto**	**122.03**	**325**	PKPdf	**PKiKP**	**03 40 18.7**	**0.0**	
PSZ				IAMs_20	IAMs_20	04 35 51.7		
	comp=Z,1μm,22.0s							
PSZ	**Piszkesteto**	**122.03**	**325**	⇑PKIKP	**PKPdf**	**03 40 18.4**	**-0.1**	
PSZ	**Piszkesteto**	**122.03**	**325**	PKP	**PKiKP**	**03 40 19.1**	**+0.4**	
LSZ	**Lusaka**	**122.08**	**248**		**PKPdf**	**03 40 19.2**	**-0.4**	
LSZ	**Lusaka**	**122.08**	**248**	IAms_20	IAms_20	04 30 58.8		
	comp=Z,1μm,20.0s							
LSZ	**Lusaka**	**122.08**	**248**	PKIKP	**PKPdf**	**03 40 19.2**	**-0.4**	
LSZ				MLR	MLR			
	comp=Z,1μm,20.0s							
BZS	**Buzias**	**122.17**	**322**	⇑P	**PKPdf**	**03 40 17.9**	**-0.8**	
BZS	**Buzias**	**122.17**	**322**	⇑PKIKP	**PKPdf**	**03 40 17.9**	**-0.8**	
SSPA	**Standing Stone**	**122.21**	**45**	P	**PKPdf**	**03 40 18.4**	**-0.6**	
	baz=293							
BO02	**Sierra Bellavi**	**122.28**	**137**		**PKPdf**	**03 40 19.2**	**-0.2**	
MORC	**Moravsky Berou**	**122.31**	**328**	⇑P	**PKPdf**	**03 40 17.7**	**-1.3**	
MORC	**Moravsky Berou**	**122.31**	**328**	⇑PKIKP	**

CLL eSS SS 03 58 54.0 +4.4
CLL eSSS SSS 04 03 42.0
CLL LmV 04 37 00.0
comp=Z,1μm,19.4s
GOPC GO Pecny, Ondr 123.66 329 ePKIKP **PKiKP 03 40 22.2 +0.4**
GOPC MLR MLR
comp=Z,1μm,18.2s
GOPC GO Pecny, Ondr 123.66 329 ePKP **PKiKP 03 40 22.2 +0.4**
GOPC AMS AMS 04 32 50.0
comp=Z,1μm,18.2s
TREC Trest 123.68 328 ePKIKP **PKPdf 03 40 21.4 -0.2**
TREC MLR MLR
comp=Z,800nm,19.9s
TREC Trest 123.68 328 ePKP **PKPdf 03 40 21.4 -0.2**
TREC AMS AMS 04 35 40.0
comp=Z,800nm,19.9s
PRU Pruhonice 123.74 329 ePKIKP **PKPdf 03 40 21.0 -0.6**
PRU MLR MLR
comp=Z,1μm,24.3s
PRU Pruhonice 123.74 329 ePKP **PKPdf 03 40 21.0 -0.6**
PRU AMS AMS 04 32 50.0
comp=Z,1μm,24.3s
EGYH Egyhazaskeszo 123.76 326 PKP **PKiKP 03 40 23.2 +1.2**
MPLH Magyarpolny 123.78 325 PKP **PKiKP 03 40 22.0 -0.1**
SKO Skopje 123.99 318 *i* P **PKPdf 03 40 22.2 -0.2**
IDI Anoyia 124.16 309 PKP **PKPdf 03 40 23.1 +0.1**
comp=Z,37nm,0.9s,baz=312,slow=6.0,SNR=12
RONA Rosalia, Austr 124.18 326 *i* P **PKiKP 03 40 22.9 0.0**
comp=Z,28nm,1.2s,SNR=8.3
CONA Conrad Observa 124.29 327 *i* P **PKiKP 03 40 23.1 -0.1**
comp=Z,20nm,1.1s,SNR=9.4
LBNH Lisbon 124.52 38 P **PKPdf 03 40 23.4 +0.1**
baz=301
CO03 El Pedregal 124.53 133 PKPdf 03 40 23.5 -0.4
CKRC Cesky Krumlov 124.58 328 ePKP **PKPdf 03 40 23.4 +0.1**
NKC Novy Kostel 124.63 331 ePKIKP **PKPdf 03 40 22.9 -0.5**
NKC MLR MLR
comp=Z,800nm,18.1s
NKC Novy Kostel 124.63 331 ePKP **PKPdf 03 40 22.9 -0.5**
NKC AMS AMS 04 38 40.0
comp=Z,800nm,18.1s
KHC Kasperske Hory 124.77 329 ePKIKP **PKPdf 03 40 23.6 -0.1**
KHC MLR MLR
comp=Z,1μm,25.7s
KHC Kasperske Hory 124.77 329 ePKP **PKPdf 03 40 23.6 -0.1**
KHC AMS AMS 04 33 20.0
comp=Z,1μm,25.7s
PAL Palisades 124.79 43 P **PKPdf 03 40 23.3 -0.6**
baz=297
ARSA Arzberg 124.87 326 eP **PKPdf 03 40 23.8 -0.1**
comp=Z,9.4nm,1.1s
ARSA eP **PP 03 42 14.9 +3.3**
comp=Z,11nm,1.3s
GERES GERESS Array B 124.88 329 PKP **PKPdf 03 40 22.3 -1.7**
comp=Z,16nm,0.9s,baz=242,slow=7.4,SNR=37
KOGS Kog 124.92 325 ePKPdf **PKPdf 03 40 23.4 -0.7**
L61B Northampton 124.93 41 P **PKPdf 03 40 23.9 -0.3**
baz=299
MOA Molln 125.20 327 eP **PKPdf 03 40 24.1 -0.5**
comp=Z,12nm,1.1s
MOA eP **PP 03 42 15.1 +1.3**
comp=Z,5.8nm,1.1s
SOKA Soboth 125.47 326 eP **PKPdf 03 40 24.6 -0.6**
comp=Z,24nm,1.1s,SNR=5.4
PKME Peaks-Kenny Pk 125.57 36 P **PKPdf 03 40 25.0 -0.2**
baz=304
GRA1 Grafenberg Arr 125.58 331 IAMs_20 IAMs_20 04 39 14.0
comp=Z,888nm,19.0s
GRFO Grafenberg 125.58 331 PKiKP 03 40 26.1 +0.5
GRFO IAMs_20 IAMs_20 04 39 14.0
comp=Z,886nm,19.0s
GRFO Grafenberg 125.58 331 PKIKP **PKiKP 03 40 26.1 +0.5**
BIOA Bad Ischl, Aus 125.63 328 *i* P **PKiKP 03 40 25.6 -0.2**
comp=Z,16nm,1.2s,SNR=5.2
AC05 El Transito 125.90 131 PKPdf **PKPdf 03 40 26.1 -0.5**
LJU Ljubljana 126.13 326 ePKPdf **PKPdf 03 40 26.4 0.0**
LJU *i* 03 40 33.3
KBA Koelnbreinsper 126.16 327 eP **PKPdf 03 40 26.6 -0.1**
comp=Z,22nm,1.0s
GBAS Gorenja Brezov 126.24 325 *i* PKPdf **PKPdf 03 40 26.2 -0.4**
MYKA Terra Mystica 126.27 327 P **PKPdf 03 40 25.9 -0.8**
comp=Z,13nm,0.9s
EKA Eskdalemuir Ar 126.75 344 PKP **PKiKP 03 40 28.1 +0.4**
comp=Z,2.5nm,0.8s,baz=15,slow=3.6,SNR=4.7
ABTA Abfaltersbach 126.82 327 *i* P **PKPdf 03 40 27.3 -0.5**
comp=Z,30nm,0.9s,SNR=7.9
WATA Walderalm 126.94 328 *i* P **PKPdf 03 40 28.0 0.0**
comp=Z,32nm,1.2s,SNR=9.1
WTTA Wattenberg 126.95 328 *i* P **PKPdf 03 40 28.3 +0.2**
comp=Z,50nm,0.9s,SNR=11
BCIP Isla Barro Col 127.00 83 IAMs_20 IAMs_20 04 31 51.8
comp=Z,990nm,18.0s
MOTA Moosalm 127.18 329 *i* P **PKPdf 03 40 28.5 -0.1**
comp=Z,40nm,0.9s,SNR=14
STU Stuttgart 127.19 331 IAMs_20 IAMs_20 04 40 38.3
comp=Z,887nm,20.0s
SQTA Sankt Quirin 127.21 328 *i* P **PKPdf 03 40 28.7 +0.2**
comp=Z,33nm,0.9s,SNR=10
RETA Reutte 127.27 329 eP **PKPdf 03 40 28.7 +0.1**
comp=Z,17nm,1.1s
BTNL Ternell 127.29 334 dPKP **PKiKP 03 40 29.1 +0.1**
MEM Membach 127.33 334 dPKP **PKPdf 03 40 28.4 -0.1**
BHOU Houvegnez 127.52 334 dPKP **PKiKP 03 40 29.6 +0.1**
BSTI Sart Tilman 127.54 335 dPKP **PKiKP 03 40 29.3 -0.1**
FETA Feichten 127.58 329 *i* P **PKiKP 03 40 29.7 -0.2**
comp=Z,37nm,0.9s,SNR=14
BCLA Clavier 127.77 335 dPKP **PKPdf 03 40 29.4 +0.1**
DAVA Damuels 127.85 329 *i* P **PKiKP 03 40 30.2 -0.2**
comp=Z,18nm,0.9s,SNR=7.2
OTAV Otavalo 127.89 94 eP **PKPdf 03 40 29.8 -1.4**
BFO Black Forest 127.91 331 PKPdf **PKPdf 03 40 29.9 +0.2**
BFO Black Forest 127.91 331 PKIKP **PKPdf 03 40 29.9 +0.2**
WLF Walferdange 127.96 334 dPKP **PKiKP 03 40 30.3 0.0**
RCHB Rochefort 128.00 335 dPKP **PKiKP 03 40 30.2 -0.2**
BMRD Maredsous 128.09 335 dPKP **PKPdf 03 40 29.9 0.0**
FUORN Ofenpass-Fuorn 128.09 328 IAMs_20 IAMs_20 04 41 57.5
comp=Z,795nm,21.0s
DAVOX Davos/Dischmat 128.18 329 PKP **PKiKP 03 40 31.1 0.0**
comp=Z,12nm,0.5s,baz=162,slow=3.4,SNR=24
DOU Dourbes 128.31 335 dPKP **PKiKP 03 40 30.8 -0.2**
MTDJ Mount Denham 128.61 71 IAMs_20 IAMs_20 04 34 00.9
comp=Z,989nm,20.0s
SENIN Lac Senin/Sane 129.78 330 IAMs_20 IAMs_20 04 38 52.0
comp=Z,886nm,21.0s
LVC Limon Verde 130.09 125 eP **PKPdf 03 40 33.6 -1.5**
SSB Saint Sauveur 131.91 331 IAMs_20 IAMs_20 04 43 55.2
comp=Z,807nm,19.0s
CZSB Cruzeiro do Su 132.11 105 eP **PKPdf 03 40 37.7 -1.0**
ROSC El Rosal 132.38 88 SKPab **SKPab 03 44 08.1 +1.6**
comp=Z,8.7nm,0.7s,baz=204,slow=17,SNR=4.9
LPAZ La Paz 133.55 118 PKhKP PKPpre 03 40 37.5
comp=Z,3.5nm,0.9s,baz=235,slow=5.7,SNR=9.8
LPAZ PKP **PKPdf 03 40 42.1 +0.1**
comp=Z,3.5nm,0.9s,baz=253,slow=5.8,SNR=6.2
LPAZ SKPab **SKPbc 03 44 10.3 +0.9**
comp=Z,3.7nm,0.8s,baz=249,slow=1.4,SNR=7.5
LPAZ La Paz 133.55 118 eP **PKPdf 03 40 40.5 -1.5**
ITQB Itaqui 134.74 142 eP **PKPdf 03 40 42.4 -0.8**
PLTB Pedras Altas 134.95 147 eP **PKPdf 03 40 43.0 -0.5**
KEST Kesra 135.28 317 PKhKP PKPpre 03 40 34.3
comp=Z,4.7nm,0.9s,baz=266,slow=16,SNR=3.9
KEST PKP **PKPdf 03 40 44.5 +0.5**
comp=Z,16nm,1.0s,baz=276,slow=2.6,SNR=10.0
KEST SKPbc **SKPbc 03 44 12.7 -1.2**
comp=Z,14nm,1.0s,baz=318,slow=6.1,SNR=4.5
TBTG Tabatinga, AM 135.62 101 eP **PKPdf 03 40 44.9 -0.3**
CPSB Cacapava Do Su 136.08 146 eP **PKPdf 03 40 45.5 -0.1**
SDV Santo Domingo 136.09 83 eP **PKPdf 03 40 45.2 -1.1**
CPUP Villa Florida 136.59 138 PKP **PKPdf 03 40 45.5 -1.2**
comp=Z,5.6nm,0.9s,baz=252,slow=1.9,SNR=10
CPUP SKPbc **SKPbc 03 44 17.5 -0.6**
comp=Z,5.2nm,1.1s,baz=230,slow=7.5,SNR=5.4
ETMB Extrema 137.67 111 eP **PKPdf 03 40 48.4 -0.6**
CNLB Canela 138.34 147 eP **PKPdf 03 40 50.0 0.0**
BAUV El Baul 138.65 83 PKPdf **PKPdf 03 40 48.5 -2.3**
SGCB São Gabriel d 139.17 96 eP **PKPdf 03 40 50.9 -0.9**
TER01 Tubaro-SC 139.88 148 eP **PKPdf 03 40 51.9 -0.9**
ESDC Sonseca Array 140.23 332 PKhKP PKPpre 03 40 46.3
comp=Z,1.5nm,1.0s,baz=15,slow=3.0,SNR=4.9
ESDC PP **PP 03 43 48.8 -1.1**
comp=Z,5.0nm,0.9s,baz=25,slow=6.8,SNR=11
MVO Moncorvo 140.31 337 ePKPdf **PKPdf 03 40 46.8 -6.4**
MVO Moncorvo 140.31 337 eLR LR 04 37 36.0
comp=Z,597nm,22.0s
POLO Lamas de Olo 140.42 338 ePKPdf **PKPdf 03 40 50.2 -3.2**
PTGB Pitanga 141.11 141 eP **PKPdf 03 40 55.6 +0.5**
MTE Manteigas 141.16 337 ePKPdf **PKPdf 03 40 49.8 -5.0**
MTE Manteigas 141.16 337 eLQ LQ 04 21 00.4
MTE Manteigas 141.16 337 eLR LR 04 34 09.3
comp=Z,537nm,20.0s
AQDB Aquidauana 141.51 133 eP **PKPdf 03 40 56.0 +0.1**
PCBR Castelo Branco 141.62 336 ePKPdf **PKPdf 03 40 50.8 -4.7**
PTLB Pontes e Lacer 141.64 123 eP **PKPdf 03 40 55.0 -1.1**
VILB Vilhena 141.90 119 eP **PKPdf 03 40 56.0 -0.8**
PMRV Marv??o 141.93 336 ePKPdf **PKPdf 03 40 55.0 -1.1**
PMRV Marv??o 141.93 336 eLR LR 04 36 02.7
comp=Z,459nm,16.0s
TRCB Terra Rica 142.12 139 eP **PKPdf 03 40 56.0 -1.0**
PSBE So Bento 142.41 337 ePKPdf **PKPdf 03 40 53.6 -3.4**
TIJ01 Guaruva-PR 142.48 145 eP **PKPdf 03 40 56.6 -1.0**
PESTR Estremoz 142.49 335 ePKPdf **PKPdf 03 40 53.2 -3.9**
PMTG Montargil 142.57 336 ePKPdf **PKPdf 03 40 53.1 -4.1**
PBAR Barrancos 142.84 334 ePKPdf **PKPdf 03 40 55.7 -2.0**
EVO Evora 142.95 336 ePKPdf **PKPdf 03 40 55.3 -2.6**
TAF Taforalt 143.18 326 P PKPbc 03 40 57.0 +1.5
PBEJ Beja 143.31 335 ePKPdf PKPbc 03 40 56.4 +0.8
PNCL Nicolau / Gran 143.52 336 ePKPdf PKPbc 03 40 57.3 +1.2
MESJ Messejana 143.62 335 ePKPdf **PKPdf 03 40 59.0 -0.1**
MESJ IAMs_20 IAMs_20 04 54 56.4
comp=Z,718nm,22.6s
MESJ Messejana 143.62 335 ePKPdf **PKPdf 03 40 58.4 -0.7**
MESJ Messejana 143.62 335 ePKIKP **PKPdf 03 40 59.0 -0.1**
FRTB Fartura 143.66 143 eP PKPab 03 40 56.3 0.0
PALE Palemas 143.71 328 P PKPbc 03 40 57.0 +0.1
PCVE Castro Verde 143.72 335 ePKPdf PKPbc 03 40 57.7 +0.9
PVAQ Vaqueiros 143.78 334 ePKPdf **PKPdf 03 40 58.6 -0.8**
PVAQ Vaqueiros 143.78 334 eLQ LQ 04 24 21.0
PVAQ Vaqueiros 143.78 334 eLR LR 04 35 43.8
comp=Z,742nm,18.0s
PCMB Pacaembu 143.85 139 eP **PKPdf 03 40 59.1 -0.9**
PP1B Ponte de Pedra 143.88 130 eP **PKPdf 03 40 59.1 -1.0**
SALV Santo Antonio 144.21 127 eP PKPbc 03 40 59.4 +0.6
MORF Marmelete 144.26 335 ePKPdf **PKPdf 03 41 00.2 -0.1**
MORF IAMs_20 IAMs_20 04 55 15.8
comp=Z,970nm,21.2s
MORF Marmelete 144.26 335 ePKPdf **PKPdf 03 41 01.0 +0.7**
MORF Marmelete 144.26 335 ePKIKP **PKPdf 03 41 00.2 -0.1**
PET01 Itanhaem-SP 144.26 146 eP PKPbc 03 40 59.4 +0.6
FIGM Figuig 144.40 322 P **PKPab 03 40 59.0 0.0**
TAM Tamanrasset 144.56 302 PKPdf **PKPdf 03 41 00.8 -0.6**
TAM Tamanrasset 144.56 302 PKIKP **PKPdf 03 41 00.8 -0.6**
C2SB Chapadao do Su 144.68 133 eP **PKPab 03 40 57.8 -2.3**
FDF Fort de France 144.68 72 *e* PKPab 03 40 46.7 -14
BIM Bigot 144.80 72 *e* **PKPdf 03 41 02.3 +0.5**
MACA Manacapuru-AM 144.83 103 eP **PKPab 03 40 57.8 -3.0**
SVB Belmont 144.86 75 *e* **PKPab 03 41 00.8 -0.1**
ILAM Ilet Lapin Mar 144.94 72 *e* **PKPab 03 40 56.8 -4.4**
SLBI Saint Lucia, B 144.99 73 *e* **PKPdf 03 41 01.9 -0.1**
MPOM Morne Pois Mar 145.02 72 *e* **PKiKP 03 41 06.1 +0.2**
TRN Trinidad (W) 145.06 79 *e* **PKPab 03 41 01.9 +0.2**
VAO Valinhos 145.45 145 eP **PKPbc 03 41 01.9 -0.8**
PDRB Porto dos Gac 145.53 119 eP **PKPdf 03 41 02.2 -0.8**
RCLB Rio Claro- Sao 145.57 144 eP **PKPdf 03 41 02.6 -0.5**
TOSP Speyside 145.84 78 *e* **PKPdf 03 41 01.5 -2.0**
MDT Midelt 145.89 326 PKPbc **PKPab 03 41 04.5 +0.1**
comp=Z,111nm,1.1s,baz=67,slow=4.4,SNR=85
PARB Paraibuna 145.92 148 eP **PKPdf 03 41 02.6 -1.1**
BOAV Boa Vista 145.94 94 eP **PKPdf 03 41 02.6 -1.2**
BB19B Bebedouro 146.00 141 eP **PKPdf 03 41 03.8 +0.1**
CLDB Colider 146.68 119 eP **PKPdf 03 41 04.8 -0.3**
MAN01 Angra dos Reis 147.17 149 eP **PKPdf 03 41 05.4 -0.3**
SRHM Skhour des Reh 147.90 329 P **PKPbc 03 41 10.2 +0.5**
VAS01 Vassouras-RJ 147.92 149 eP **PKPdf 03 41 05.4 -1.5**
IPMB Ipameri, GO 148.43 138 eP **PKPdf 03 41 09.5 +1.6**
DUB01 Friburgo-RJ 148.62 151 eP **PKPdf 03 41 07.6 -0.5**
OUK Oukaimeden 148.89 328 P **PKiKP 03 41 14.0 0.0**
CAM01 Campos-RJ 149.18 152 eP **PKPdf 03 41 08.6 -0.4**
PMNB Patos De Minas 149.18 141 eP **PKPdf 03 41 08.6 -0.6**
ITTB Itaituba 149.25 108 eP **PKPdf 03 41 08.6 -0.7**
SNDB Serra Nova Dou 149.93 125 eP **PKPdf 03 41 08.9 -1.5**
BDFB Brasilia 150.19 135 PKPbc **PKPdf 03 41 13.2 +2.4**
comp=Z,18nm,0.6s,baz=227,slow=2.2,SNR=6.3
BDFB Brasilia 150.19 135 eP **PKPdf 03 41 09.5 -1.3**
ALF01 Guarapari-ES 150.66 152 eP **PKPdf 03 41 12.0 +0.7**
TOA0 Torodi Ar. Sit 151.13 288 PKPdf **PKPdf 03 41 11.4 -0.8**
TORD Torodi Ar. Bea 151.13 288 PKP **PKPdf 03 41 11.1 -1.1**
comp=Z,10nm,1.0s,baz=60,slow=1.5,SNR=29
TORD PKPbc **PKPbc 03 41 17.2 -0.9**
comp=Z,194nm,0.9s,baz=56,slow=2.4,SNR=142
TORD PP **PP 03 44 54.2 -2.1**
comp=Z,6.0nm,1.0s,baz=109,slow=5.2,SNR=4.0
PMAR Madeira 151.33 343 ePKPbc **PKiKP 03 41 19.7 +0.9**
MALB Monte Alegre 151.36 104 eP **PKPdf 03 41 12.0 -0.6**
RIB01 Linhares ES 151.93 151 eP **PKPdf 03 41 12.3 -1.0**
SJMB Sao Joao De Ma 152.06 149 eP **PKPdf 03 41 11.4 -2.1**
MC01 Montes Claros 152.11 142 eP **PKPdf 03 41 13.0 -0.7**
JANB Januaria 153.12 139 eP **PKPdf 03 41 15.2 0.0**
NAN01 Guarapari, ES 153.32 150 eP **PKPdf 03 41 14.5 -0.8**
MCPB Macapa, AP 153.86 102 eP **PKPdf 03 41 14.8 -1.4**
PRPB Parauapebas 154.07 116 eP **PKPdf 03 41 15.5 -1.1**
GUA01 Guaratinga, BA 154.54 149 eP **PKPdf 03 41 15.8 -1.3**
SDBA SAO DESIDERIO 154.59 134 eP **PKPdf 03 41 16.4 -0.9**
SMTB Santa Maria do 154.68 124 eP **PKPdf 03 41 16.1 -1.3**
CMC01 Camacan, BA 155.72 148 eP **PKPdf 03 41 17.7 -1.0**
KOWA Kowa 156.08 294 PKP **PKPdf 03 41 18.2 -1.0**
comp=Z,14nm,1.2s,baz=83,slow=2.6,SNR=8.3
KOWA PKPbc **sPKPdf 03 41 28.1 +0.4**
comp=Z,14nm,0.8s,baz=99,slow=1.9,SNR=13
KOWA PP **PP 03 45 22.8 -1.3**
comp=Z,9.7nm,0.9s,baz=359,slow=9.8,SNR=3.7
KOWA Kowa 156.08 294 PKPdf **PKPdf 03 41 18.6 -0.6**
GDU01 Guandu, BA 157.04 146 eP **PKPdf 03 41 19.6 -0.9**
TMAB Tom-Au,PA,Br 157.11 109 eP **PKPdf 03 41 19.6 -1.1**
KIC Kosan Boka 158.33 274‖ ePKIKP **PKPdf 03 41 21.1 -1.1**
comp=Z,9.2nm,0.9s
DBIC Dimbokro 158.43 275 PKP **PKPdf 03 41 21.4 -0.9**
comp=Z,9.4nm,1.0s,baz=66,slow=3.1,SNR=6.2
DBIC PKPab **PKPab 03 41 55.4 -1.5**
comp=Z,12nm,1.0s,baz=113,slow=6.0,SNR=5.4
DBIC Dimbokro 158.43 275 PKPdf **PKPdf 03 41 21.7 -0.6**
TIC Toumodi 158.59 275‖ ePKIKP **PKPdf 03 41 21.6 -0.9**
comp=Z,21nm,1.1s
LIC Lamto 158.62 273‖ ePKIKP **PKPdf 03 41 21.2 -1.3**
comp=Z,45nm,1.1s
ROSB Rosrio 160.59 115 eP **PKPdf 03 41 23.7 -1.1**
NBAN Anadia - AL 162.18 147 eP **PKPdf 03 41 25.9 -0.5**
BBTS Babate 166.52 314 PKPab **PKPab 03 42 32.9 +0.8**
comp=Z,71nm,0.9s,baz=301,slow=4.7,SNR=7.9

JMA 12 03:28:05.3±0.4, 40°N±1°×14°3E±°, h8km, MV2.3/15, FAR E OFF SANRIKU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.33**	**250**	eP	Pn	03 28 29.8	-0.4
JTH				eS	Sb	03 28 47.6	-0.1
JKEN	**Kujiedanarisaw**	**1.37**	**262**	eP	Pn	03 28 30.6	-0.2
JANG	**Nango**	**1.51**	**269**	eP	Pn	03 28 32.6	0.0
MIYJ	**Miyakonagasawa**	**1.53**	**237**	eP	Pn	03 28 33.1	+0.2

ROM 12 03:38:39.8±0.1, 42°937N±0°005×13°278E±0°006, h8km, ML1.2/1, 1D, Error ellipse: s-maj=0.6km s-min=0.3km az=215.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMO1	**Montemonaco**	**0.05**	**136**	P	Pg	03 38 41.9	+0.3
MMO1				S	Sg	03 38 43.0	0.0
MC2	**Monte Cornacci**	**0.07**	**250**	P	Pg	03 38 42.3	+0.4
MC2				S	Sg	03 38 43.6	+0.1
NRCA	**Norcia**	**0.16**	**230**	P	Pg	03 38 43.7	+0.5
NRCA				S	Sg	03 38 46.5	+1.0
NRCA				AML	AML		
	comp=N,116μm,0.1s						
NRCA				AML	AML		
	comp=E,178μm,1.4s						
NRCA				AML	AML		
	comp=N,117μm,0.1s						
FDMO	**Fiordimonte**	**0.17**	**306**	P	Pg	03 38 44.2	+0.8
FDMO				S	Sg	03 38 47.1	+1.2
T1216	**Preci, Frazion**	**0.20**	**257**	P	Pg	03 38 44.4	+0.6
T1216				S	Sg	03 38 47.8	+1.3
T1202	**Accumoli, Fraz**	**0.24**	**190**	P	Pg	03 38 44.9	+0.3
T1202				S	Sg	03 38 49.8	+1.9
T1204	**Amatrice, Fraz**	**0.26**	**174**	P	Pg	03 38 45.9	+0.8
T1204				AML	AML		
	comp=E,83μm,1.6s						
T1204				AML	AML		
	comp=N,116μm,1.6s						
T1215	**Vallo di Nera,**	**0.33**	**246**	‖P	Pg	03 38 47.0	+0.6
TERO	**Teramo**	**0.40**	**142**	P	Pb	03 38 48.6	-0.5
ASSB	**Assisi San Ben**	**0.47**	**283**	P	Pg	03 38 49.3	+0.4
ASSB				S	Sb	03 38 56.7	-0.7

*IDC **12** 03:45:33.9±3.3, 5°32S×153°47E, h50km±26km, mb3.7/9, mbtmp4.0/10, ML2.3/1, Error ellipse: s-maj=30.4km s-min=19.7km az=86.0*

ISC 12 03:45:32.1±1.1, 5°34S±0°09×153°6E±0°1, h35km, n12, σ1°50/14, mb3.9/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.89**	**303**	P	**Pn**	**03 46 01.4**	**-0.5**
	189nm,0.3s,baz=276,slow=2.3,SNR=25						
KRVT				S	**Sn**	**03 46 27.2**	**+2.6**
	375nm,0.5s,baz=176,slow=15,SNR=5.7						
PMG	**Port Moresby**	**7.57**	**237**	P	**Pn**	**03 47 21.1**	**+1.1**
	2.4nm,0.3s,baz=14,slow=1.4,SNR=4.3						
PMG				S	**Sn**	**03 48 43.5**	**-1.1**
	6.1nm,0.3s,baz=203,slow=23,SNR=3.6						
	9.3nm,0.4s						
DZM	**Mont Dzumac**	**20.75**	**144**	P	**P**	**03 50 12.2**	**+2.0**
	4.2nm,0.7s,baz=170,slow=22,SNR=5.0						
	4.2nm,0.7s						
WRA	**Warramunga Arr**	**23.71**	**231**	P	**P**	**03 50 39.2**	**-1.9**
	0.5nm,0.6s,baz=56,slow=10,SNR=6.2						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**26.31**	**224**	P	**P**	**03 51 05.5**	**+0.6**
	0.5nm,0.6s,baz=56,slow=8.7,SNR=6.7						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.84**	**295**	P	**P**	**03 55 28.4**	**+0.6**
	1.9nm,0.3s,baz=110,slow=4.9,SNR=4.4						
	1.9nm,0.3s						
SONM	**Songino Array**	**67.22**	**328**	P	**P**	**03 56 23.6**	**+0.6**
	0.5nm,0.4s,baz=154,slow=5.6,SNR=2.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**81.27**	**319**	P	**P**	**03 57 44.0**	**-0.8**
	0.5nm,0.5s,baz=100,slow=7.8,SNR=6.2						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**82.05**	**326**	P	**P**	**03 57 47.4**	**-1.3**
	0.8nm,0.4s,baz=92,slow=4.9,SNR=4.4						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**84.73**	**322**	P	**P**	**03 58 02.0**	**-0.6**
	0.8nm,0.8s,baz=112,slow=4.3,SNR=6.9						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**90.16**	**323**	P	**P**	**03 58 27.3**	**-1.5**
	1.2nm,0.7s,baz=90,slow=5.9,SNR=8.0						
	1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.25**	**288**	PKPbc	**PKPbc**	**04 05 22.0**	**-1.0**
	0.9nm,0.4s,baz=45,slow=2.3,SNR=19						

*IDC **12** 03:49:15.4±7.8, 19°07S×174°09W, h154km±60km, mb3.5/7, mbtmp4.0/9, MS4.3/1, Error ellipse: s-maj=114.4km s-min=19.5km az=150.0*

ISC 12 03:49:15.0±1.4, 19°1S±0°4×174°1W±0°2, h150km, n9, σ0°39/9, mb3.5/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.56**	**279**	P	**Pn**	**03 51 02.6**	**-0.1**
	6.2nm,0.8s,baz=90,slow=20,SNR=3.0						
DZM	**Mont Dzumac**	**18.45**	**257**	P	**Pn**	**03 53 21.6**	**+0.3**
	4.5nm,0.6s,baz=69,slow=22,SNR=6.1						
DZM				LR	LR	03 58 59.3	
	comp=Z,841nm,18.3s,baz=7.0,slow=32						
CTA	**Charters Tower**	**37.30**	**262**	P	**P**	**03 56 13.2**	**+0.3**
	4.5nm,0.5s,baz=95,slow=9.4,SNR=11						
	4.5nm,0.5s						
ASAR	**Alice Springs**	**48.42**	**255**	P	**P**	**03 57 42.2**	**-0.2**
	1.9nm,0.6s,baz=88,slow=8.6,SNR=21						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**48.44**	**260**	P	**P**	**03 57 42.0**	**-0.6**
	0.7nm,0.4s,baz=98,slow=7.7,SNR=14						
	0.7nm,0.4s						
NVAR	**Mina Array Bea**	**77.49**	**42**	P	**P**	**04 00 53.9**	**-0.4**
	0.7nm,0.8s,baz=227,slow=9.6,SNR=5.5						
	0.7nm,0.8s						
TXAR	**Lajitas Array**	**83.21**	**56**	P	**P**	**04 01 25.1**	**+0.1**
	0.7nm,1.0s,baz=219,slow=7.7,SNR=4.8						
	0.7nm,1.0s						
PDAR	**Pinedale Array**	**85.43**	**42**	P	**P**	**04 01 36.0**	**0.0**
	0.3nm,0.6s,baz=224,slow=7.6,SNR=2.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**86.15**	**11**	P	**P**	**04 01 39.1**	**+0.4**
	0.4nm,0.6s,baz=229,slow=7.1,SNR=5.3						
	0.4nm,0.6s						

*NOU **12** 03:57:14.4, 10°25S×164°68E, h20km, mb4.8/9, Santa Cruz Islands Region*
*IDC **12** 03:57:30.1±0.7, 11°67S×165°12E, h0km, mb4.4/18, mbtmp4.4/20, ML4.2/2, Error ellipse: s-maj=24.3km s-min=15.7km az=138.0*
*NEIC **12** 03:57:35.5±1.2, 11°7S±0°1×165°2E±0°2, h35km±3km, mb4.8/49, Error ellipse: s-maj=22.2km s-min=16.3km az=108.0*

ISC 12 03:57:35.2±0.5, 11°70S±0°06×165°13E±0°08, h34km, n87, σ0°95/92, mb4.7/40, 2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.57**	**293**	Sn	**Sn**	**03 59 56.4**	**-2.2**
	182nm,0.3s,baz=342,slow=20,SNR=1.1						
DVP	**Devils Point**	**6.68**	**154**	P	**Pn**	**03 59 12.2**	**+1.3**
KOUNC	**Koumac, New Ca**	**8.84**	**185**	P	**Pn**	**03 59 40.5**	**0.0**
DZM	**Mont Dzumac**	**10.39**	**173**	Pn	**Pn**	**04 00 02.1**	**+0.1**
	3.4nm,0.3s,baz=307,slow=11,SNR=51						
DZM				Sn	**Sn**	**04 01 53.5**	**-3.8**
	0.1nm,0.3s,baz=342,slow=19,SNR=0.6						
	7.6nm,0.4s						
DZM	**Mont Dzumac**	**10.39**	**173**	Pn	**Pn**	**04 00 01.6**	**-0.3**
DZM	**Mont Dzumac**	**10.39**	**173**	P	**Pn**	**04 00 02.3**	**+0.4**
NOUC	**Port Laguerre**	**10.40**	**174**	P	**Pn**	**04 00 02.8**	**+0.8**
YATNC	**Mamie plateau,**	**10.44**	**171**	P	**Pn**	**04 00 03.0**	**+0.5**
ONTNC	**Ouen Toro**	**10.62**	**173**	P	**Pn**	**04 00 07.0**	**+2.0**
OUENC	**Ouen Island, N**	**10.78**	**171**	P	**Pn**	**04 00 08.1**	**+0.9**
CTA	**Charters Tower**	**19.96**	**243**	P	**P**	**04 02 05.7**	**+1.1**
	0.4nm,0.3s,baz=71,slow=11,SNR=15						
	13nm,0.8s						
CTAO	**Charters Tower**	**19.96**	**243**	P	**P**	**04 02 05.3**	**+0.7**
COEN	**Coen**	**21.52**	**262**	P	**P**	**04 02 20.4**	**-1.1**
ARMA	**Armidale**	**22.44**	**212**	P	**P**	**04 02 30.9**	**-0.5**
STKA	**Stephens Creek**	**29.55**	**224**	P	**P**	**04 03 36.7**	**-0.1**
	2.4nm,0.8s,baz=7.1,slow=15,SNR=4.0						
	2.4nm,0.8s						
WR0	**Warramunga Arr**	**30.51**	**251**	P	**P**	**04 03 45.3**	**-0.1**
WB0	**Warramunga Arr**	**30.61**

comp=Z,2.9nm,0.9s,baz=117,slow=7.0,SNR=8.8
comp=Z,2.9nm,0.9s
XAN Xi'an 70.11 313 ⇓P **P 04 08 44.2 -0.2**
XAN pP pP 04 08 50.8 -2.6
CMAR Chiang Mai Arr 71.82 294 P **P 04 08 55.1 +0.1**
comp=Z,1.4nm,0.4s,baz=115,slow=3.5,SNR=5.8
comp=Z,1.4nm,0.4s
LZH Lanzhou 74.75 313 eP P 04 09 22.3 +10
LZH pP pwP 04 09 31.8 +4.3
QSPA South Pole Qui 78.31 180 P **P 04 09 32.8 +1.0**
QSPA IAmb IAmb 04 09 35.5
comp=Z,12nm,1.1s
ULN Ulaanbaatar 78.47 324 P **P 04 09 33.1 +0.1**
ULN IAmb IAmb 04 09 34.4
comp=Z,5.7nm,0.7s
SONM Songino Array 78.83 324 P **P 04 09 35.3 +0.4**
comp=Z,1.5nm,0.6s,baz=145,slow=6.9,SNR=7.2
comp=Z,1.5nm,0.6s
SONM Songino Array 78.83 324 P **P 04 09 35.4 +0.5**
SONM IAmb IAmb 04 09 36.2
comp=Z,17nm,2.0s
GTA Gaotai 79.08 314 ⇓P **P 04 09 37.3 +0.9**
GTA pP pP 04 09 47.2 +1.6
GTA sP pwP 04 09 52.2 +0.4
HDA Harding Lake 84.06 19 P **P 04 10 01.4 -0.6**
IL31 84.33 19 P **P 04 10 02.8 -0.5**
ILAR Eielson Array 84.33 19 P **P 04 10 03.0 -0.4**
comp=Z,2.2nm,0.7s,baz=236,slow=5.7,SNR=9.4
comp=Z,2.2nm,0.7s
L26K Log Cabin Wild 84.34 21 P **P 04 10 03.4 -0.2**
J25K Salcha River, 84.70 19 P **P 04 10 03.8 -1.6**
J25K IAmb IAmb 04 10 06.8
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 84.78 46 P **P 04 10 06.4 0.0**
comp=Z,2.2nm,0.8s,baz=261,slow=3.5,SNR=8.0
comp=Z,2.2nm,0.8s
AFDM Forest Hills D 85.09 49 P **P 04 10 06.8 -1.0**
AFDM IAmb IAmb 04 10 08.5
comp=Z,5.2nm,0.9s
BEKR Beckworth 85.84 48 P **P 04 10 10.8 -1.0**
BEKR IAmb IAmb 04 10 11.9
comp=Z,4.9nm,1.1s
I26K Coal Creek Min 85.87 19 P **P 04 10 10.8 -0.3**
MDPB Devils Postpil 86.08 50 P **P 04 10 12.7 -0.5**
MDPB IAmb IAmb 04 10 13.9
comp=Z,5.5nm,0.9s
WAKR Walker 86.08 50 P **P 04 10 13.3 +0.3**
WAKR IAmb IAmb 04 10 14.3
comp=Z,6.8nm,1.1s
OMMB Old Mammoth Mi 86.14 51 P **P 04 10 12.9 -0.6**
H04A Detroit Lake 86.18 43 P **P 04 10 13.4 +0.2**
H04A IAmb IAmb 04 10 15.4
comp=Z,13nm,1.5s
EGAK Eagle 86.20 20 P **P 04 10 12.7 0.0**
PAHR Pah Rah Range 86.50 48 P **P 04 10 15.0 0.0**
LHV Little Huntoon 86.71 50 P **P 04 10 15.0 -0.7**
LHV IAmb IAmb 04 10 17.1
comp=Z,5.0nm,1.0s
PINE Pine Mountain 86.71 44 P **P 04 10 15.9 -0.1**
PINE IAmb IAmb 04 11 07.7
comp=Z,15nm,1.8s
RYN Ryan 86.81 50 P **P 04 10 15.2 -1.4**
NVAR Mina Array Bea 86.91 50 P **P 04 10 17.5 +0.4**
comp=Z,2.8nm,0.8s,baz=232,slow=8.9,SNR=20
comp=Z,2.8nm,0.8s
NVAR Mina Array Bea 86.91 50 P **P 04 10 16.2 -0.9**
PFO Pinyon Flats O 86.96 55 P **P 04 10 17.1 -0.2**
comp=Z,1.7nm,0.5s,baz=274,slow=6.4,SNR=4.4
comp=Z,1.7nm,0.5s
GRAC Grapevine Rang 87.20 51 P **P 04 10 17.8 -0.5**
GRAC IAmb IAmb 04 10 19.6
comp=Z,5.0nm,0.9s
KVN Kaiserville 87.25 49 P **P 04 10 18.5 -0.2**
KVN IAmb IAmb 04 10 18.8
comp=Z,6.2nm,1.2s
I07A Izee 87.79 44 P **P 04 10 21.2 +0.1**
G08A Pilot Rock 88.54 43 P **P 04 10 23.9 -0.8**
G08A IAmb IAmb 04 10 25.6
comp=Z,6.0nm,1.4s
113A Mohawk Valley, 88.91 56 P **P 04 10 26.6 +0.1**
PRN Pahroc Range 89.09 52 P **P 04 10 26.9 -0.5**
PRN IAmb IAmb 04 10 28.9
comp=Z,6.0nm,1.0s
214A Organ Pipe Nat 89.50 57 P **P 04 10 28.8 -0.5**
ELK Elko 89.84 48 P **P 04 10 32.4 +1.4**
comp=Z,0.9nm,0.6s,baz=321,slow=6.7,SNR=3.9
comp=Z,0.9nm,0.6s
ELK Elko 89.84 48 P **P 04 10 29.2 -1.8**
LCMT Little Creek M 90.38 52 P **P 04 10 32.4 -1.1**
LCMT IAmb IAmb 04 10 34.9
comp=Z,4.4nm,1.0s
CCUT Cedar City 90.42 52 P **P 04 10 33.7 -0.1**
CCUT IAmb IAmb 04 10 35.4
comp=Z,6.3nm,1.1s
SZCU Shurtz Canyon 90.65 52 P **P 04 10 33.4 -1.4**
SZCU IAmb IAmb 04 10 36.2
comp=Z,5.6nm,1.1s
KNB Kanab 90.71 52 P **P 04 10 34.1 -1.0**
KNB IAmb IAmb 04 10 36.6
comp=Z,7.0nm,1.2s
U15A North Rim 90.98 53 P **P 04 10 34.5 -2.0**
U15A IAmb IAmb 04 10 38.0
comp=Z,6.3nm,0.9s
HLID Hailey 91.17 46 P **P 04 10 35.9 -1.1**
TUC Tucson 91.25 57 P **P 04 10 36.0 -1.5**
MTPU Mount Pierson 91.45 52 P **P 04 10 37.9 -0.8**
MTPU IAmb IAmb 04 10 40.8
comp=Z,6.1nm,1.0s
MVU Marysvale 91.54 51 P **P 04 10 39.1 +0.2**
MSU Marysvale 91.56 51 P **P 04 10 38.4 -0.6**
HVU Hansel Valley 91.89 48 P **P 04 10 40.0 -0.5**
MKAR Makanchi Array 93.58 317 P **P 04 10 48.0 0.0**
comp=Z,1.8nm,0.7s,baz=88,slow=5.5,SNR=7.3
comp=Z,1.8nm,0.7s
BOZ Bozeman (W) 93.59 44 P **P 04 10 46.9 -1.2**
ZALV Zalesovo Beam 93.73 324 P **P 04 10 47.9 -0.5**
comp=Z,1.4nm,0.7s,baz=98,slow=5.1,SNR=4.8
comp=Z,1.4nm,0.7s
PDAR Pinedale Array 94.44 47 P **P 04 10 52.2 0.0**
comp=Z,0.8nm,0.9s,baz=48,slow=2.2,SNR=4.8
comp=Z,0.8nm,0.9s
TXAR Lajitas Array 96.68 62 P **P 04 11 02.1 -0.4**
comp=Z,0.5nm,0.7s,baz=216,slow=5.8,SNR=7.5
comp=Z,0.5nm,0.7s
ARCES ARCESS Array B 116.81 345 PKP **PKPdf 04 16 14.8 -0.8**
comp=Z,8.1nm,1.2s,baz=333,slow=0.5,SNR=3.9
NOA NORSAR Array B 127.17 344 PKP **PKPdf 04 16 35.2 -0.5**
comp=Z,0.5nm,0.8s,baz=32,slow=2.0,SNR=3.5
KEST Kesra 147.56 322 PKPbc **PKPbc 04 17 17.2 +0.7**
comp=Z,6.7nm,0.8s,baz=351,slow=5.1,SNR=7.2
ESDC Sonseca Array 150.51 343 PKPbc **PKPbc 04 17 24.2 +0.4**
comp=Z,2.0nm,0.9s,baz=13,slow=1.9,SNR=8.0

*IDC **12** 04:01:22.1±0.6, 13°.26N×50°.91E, h0km, mb4.1/22, mbtmp4.1/23, ML4.6/1, MS4.2/3, Error ellipse: s-maj=17.3km s-min=13.7km az=125.0*
*NEIC **12** 04:01:23.9±1.4, 13°.4N±0°.1×50°.9E±0°.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=22.1km s-min=13.2km az=128.0*
*OMAN **12** 04:01:33.8±2.3, 14°.10N×51°.03E, h33km, mb4.9/1, ml4.1/4, Error ellipse: s-maj=43.7km s-min=25.9km az=236.0*
ISC 12 04:01:27.3±0.5, 13°.47N±0°.08×50°.88E±0°.07, h35km, n60,
σ1§51/59, mb4.3/26, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTO	**Aybut**	**4.51**	**31**	P	**Pn**	**04 02 32.0**	**-1.2**
ABTO	SNR=5.1			S	**Sn**	**04 03 17.2**	**-7.3**
RBK	**Rabkut**	**5.13**	**38**	P	**Pn**	**04 02 41.0**	**-0.8**
	SNR=7.7						
WHFO	**Wadi Hawf**	**5.23**	**32**	P	**Pn**	**04 02 41.5**	**-1.6**
	SNR=11						
DMTO	**DMTO**	**5.76**	**42**	P	**Pn**	**04 02 49.5**	**-0.8**
	SNR=27						
DOK	**Doka**	**6.00**	**31**	P	**Pn**	**04 02 52.0**	**-1.6**
	SNR=5.8						
SHAO	**Shalim**	**6.43**	**45**	P	**Pn**	**04 02 59.0**	**-0.6**
ATD	**Arta Tunnel**	**8.08**	**257**	Pn	**Pn**	**04 03 21.0**	**-1.2**
	8.1nm,0.3s,baz=297,slow=20,SNR=11						
ATD				LR	LR	04 05 42.7	
	comp=Z,620nm,19.6s,baz=123,slow=32						
	29nm,0.4s						
ATD	**Arta Tunnel**	**8.08**	**257**		**Pn**	**04 03 21.3**	**-0.9**
RAYN	**Ar Rayn**	**11.22**	**334**	Pn	**Pn**	**04 04 03.5**	**-1.8**
UOSS	**Minazif**	**12.47**	**23**	Pn	**Pn**	**04 04 23.1**	**+0.7**
LODK	**Lodwar**	**18.29**	**238**		**Pn**	**04 05 38.5**	**0.0**
KMBO	**Kilima Mbogo**	**19.82**	**224**	P	**Pn**	**04 05 54.5**	**-2.6**
KIBK	**Kibwezi**	**20.22**	**220**	P	**Pn**	04 05 58.1	-3.5
ASF	**Jabal al Asfar**	**22.60**	**328**	P	**P**	**04 06 27.0**	**+2.0**
	1.4nm,0.6s,baz=110,slow=12,SNR=3.9						
	1.4nm,0.6s						
GEYT	**Alibeck**	**25.20**	**14**	P	**P**	**04 06 51.8**	**+2.1**
	4.9nm,0.8s,baz=197,slow=4.6,SNR=8.1						
	4.9nm,0.8s						
GEYT	**Alibeck**	**25.20**	**14**	P	**P**	**04 06 49.5**	**-0.2**
GEYT				IAmb	IAmb	04 07 09.9	
	comp=Z,12nm,1.1s						
GEVA	**Gevas**	**25.70**	**346**	P	**P**	**04 06 55.1**	**+0.7**
GNI	**Garni**	**27.12**	**350**	P	**P**	**04 07 10.7**	**+3.5**
	comp=Z,8.1nm,0.8s,baz=258,slow=14,SNR=4.0						
GNI				LR	LR	04 20 05.4	
	comp=Z,314nm,20.6s,baz=86,slow=41						
	comp=Z,8.1nm,0.8s						
KBZ	**Khabaz**	**30.92**	**349**	P		04 07 43.2	+2.5
	comp=Z,2.6nm,0.8s,baz=167,slow=9.2,SNR=6.1						
	comp=Z,2.6nm,0.8s						
PYUN	**Piuthan**	**33.24**	**59**	eP	**P**	**04 08 02.8**	**+1.2**
	comp=Z,35nm,1.0s						
DANN	**Dangsing**	**33.96**	**59**	eP	**P**	**04 08 09.0**	**+1.1**
	comp=Z,42nm,0.9s						
GKN	**Gorkha**	**34.59**	**60**	eP	**P**	**04 08 13.9**	**+0.7**
DMN	**Daman**	**34.87**	**61**	eP	**P**	**04 08 16.7**	**+0.9**
PKIN	**Phulchoki**	**35.10**	**61**	eP	**P**	**04 08 18.4**	**+0.6**
PKI	**Pulchoki**	**35.11**	**61**	eP	**P**	**04 08 18.4**	**+0.4**
	comp=Z,27nm,1.2s						
AAK	**Ala-Archa**	**35.51**	**31**	P	**P**	**04 08 22.8**	**+1.8**
	comp=Z,1.0nm,0.4s,baz=216,slow=6.0,SNR=5.3						
	comp=Z,1.0nm,0.4s						
GUN	**Gumba**	**35.61**	**61**	eP	**P**	**04 08 23.1**	**+0.8**
	comp=Z,44nm,1.1s						
JIRN	**Jiri**	**35.80**	**61**	eP	**P**	**04 08 24.3**	**+0.3**
	comp=Z,30nm,1.2s						
RAMN	**Ramite**	**35.97**	**63**	eP	**P**	**04 08 25.5**	**+0.3**
ABKAR	**Akbulak array**	**36.46**	**10**	P	**P**	**04 08 28.0**	**-0.8**
ABKAR				IAmb	IAmb	04 08 31.3	
	comp=Z,6.3nm,1.1s						
ABKAR	**Akbulak array**	**36.46**	**10**	P	**P**	**04 08 29.2**	**+0.4**
TARG	**Taragay, Kyrgy**	**36.61**	**35**	P	**P**	**04 08 30.1**	**-0.6**
TARG				IAmb	IAmb	04 08 41.9	
	comp=Z,11nm,1.3s						
TAPN	**Taplejung**	**37.02**	**62**	eP	**P**	**04 08 34.4**	**+0.1**
	comp=Z,21nm,1.1s						
MATP	**Matopo**	**40.24**	**214**	P	**P**	**04 08 59.6**	**-1.4**
	comp=Z,2.4nm,0.9s,baz=25,slow=10,SNR=5.7						
	comp=Z,2.4nm,0.9s						
AKASG	**Malin Array Be**	**41.09**	**339**	P	**P**	**04 09 08.5**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=143,slow=7.8,SNR=9.2						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**42.38**	**32**	P	**P**	**04 09 19.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=219,slow=6.8,SNR=5.3						
	comp=Z,0.8nm,0.7s						
BVAR	**Borovoye Array**	**42.41**	**17**	P	**P**	**04 09 19.9**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=202,slow=7.7,SNR=5.2						
BVAR				PcP	**PcP**	**04 11 11.9**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=209,slow=2.7,SNR=5.6						
	comp=Z,0.7nm,0.6s						
TAM	**Tamanrasset**	**43.94**	**289**	P	**P**	**04 09 30.1**	**-1.3**
TAM				IAmb	IAmb	04 09 33.3	
	comp=Z,7.7nm,1.2s						
OSSC	**Osservatorio P**	**45.27**	**319**	P	**P**	**04 09 42.6**	**+1.1**
LBTB	**Lobatse**	**45.51**	**213**	P	**P**	**04 09 43.6**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=64,slow=5.2,SNR=3.7						
LBTB				LR	LR	04 30 46.1	
	comp=Z,1μm,18.2s,baz=116,slow=39						
	comp=Z,4.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.37**	**77**	P	**P**	**04 09 51.0**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=279,slow=8.5,SNR=14						
	comp=Z,2.3nm,0.5s						
GERES	**GERESS Array B**	**46.70**	**327**	P	**P**	**04 09 53.3**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=116,slow=4.5,SNR=2.8						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**47.80**	**276**	P	**P**	**04 10 01.9**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=88,slow=6.6,SNR=21						
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**48.41**	**26**	P	**P**	**04 10 05.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=226,slow=9.9,SNR=5.2						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**48.41**	**26**	P	**P**	**04 10 05.6**	**-0.3**
BOSA	**Boshof**	**48.63**	**210**	P	**P**	**04 10 06.0**	**-2.1**
	comp=Z,3.8nm,0.9s,baz=33,slow=6.7,SNR=6.2						
	comp=Z,3.8nm,0.9s						
FINES	**FINESS Array B**	**51.15**	**345**	P	**P**	**04 10 26.5**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=185,slow=14,SNR=4.6						
	comp=Z,1.7nm,0.8s						
KOWA	**Kowa**	**53.17**	**278**	P	**P**	**04 10 41.8**	**-0.6**
KOWA				IAmb	IAmb	04 10 43.1	
	comp=Z,7.2nm,1.1s						
ESDC	**Sonseca Array**	**54.58**	**309**	P	**P**	**04 10 53.3**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=99,slow=6.0,SNR=11						
	comp=Z,1.2nm,0.7s						
ESDC	**Sonseca Array**	**54.58**	**309**	P	**P**	**04 10 52.1**	**-0.3**
ESDC				IAmb	IAmb	04 10 55.0	
	comp=Z,10nm,1.5s						
XAN	**Xi'an**	**56.18**	**58**	P	P	04 11 09.3	+5.3
XAN				sP	sP	04 11 16.6	-1.1
SONM	**Songino Array**	**57.17**	**41**	P	**P**	**04 11 12.7**	**+1.8**
	comp=Z,1.5nm,1.0s,baz=258,slow=7.4,SNR=5.8						
	comp=Z,1.5nm,1.0s						
KLR	**Kul'dur**	**73.98**	**42**	P	**P**	**04 12 59.5**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=283,slow=11,SNR=5.9						
	comp=Z,2.7nm,0.8s						
SEY	**Seymchan**	**83.28**	**27**	P	**P**	**04 13 51.1**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=262,slow=6.9,SNR=4.4						
	comp=Z,1.6nm,0.7s						
FORT	**Forrest**	**86.11**	**123**		**P**	**04 14 04.1**	**-0.9**
WRA	**Warramunga Arr**	**88.52**	**111**	P	**P**	**04 14 15.8**	**-1.1**
	comp=Z,7.6nm,1.2s,baz=293,slow=4.6,SNR=6.1						
	comp=Z,7.6nm,1.2s						
ASAR	**Alice Springs**	**89.09**	**114**	P	**P**	**04 14 19.4**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=286,slow=4.8,SNR=6.6						
	comp=Z,3.5nm,0.9s						
PDAR	**Pinedale Array**	**121.23**	**343**	PKP	**PKiKP**	**04 20 17.4**	**0.0**
	comp=Z,0.4nm,0.8s,baz=60,slow=3.6,SNR=3.5						
NVAR	**Mina Array Bea**	**127.39**	**349**	PKP	**PKiKP**	**04 20 30.6**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=60,slow=0.9,SNR=12						
TXAR	**Lajitas Array**	**130.86**	**330**	PKP	**PKiKP**	**04 20 37.4**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=46,slow=3.0,SNR=3.5						

*IDC **12** 04:01:27.9±1.2, 2°.26S×134°.02E, h0km, mb4.0/5, mbtmp4.2/7, ML4.4/2, MS3.9/6, Error ellipse: s-maj=26.4km s-min=12.4km az=60.0*
*DJA **12** 04:01:30.2±0.3, 2°S±3°×13°4E±°, h10km, M4.7/12, mb4.8/10, mB5.3/4, MLv4.6/12, Mw(mB)4.7/4*
*NEIC **12** 04:01:33.3±1.5, 2°.39S±0°.06×133°.9E±0°.1, h39km±8km, mb4.1/7, Error ellipse: s-maj=17.8km s-min=8.9km az=80.0*
ISC 12 04:01:29.4±0.7, 2°29S±0°06×133°86E±0°07, h10km, n34,
σ1§19/32, mb4.1/6, MS4.1/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.84**	**22**	P	**Pg**	**04 01 45.3**	**-0.3**
FAKI	**Fak Fak**	**1.73**	**249**		**Pn**	**04 02 00.1**	**+0.7**
FAKI				Sn	**Sn**	**04 02 20.8**	**-0.8**
FAKI	**Fak Fak**	**1.73**	**249**	P	**Pn**	**04 01 59.9**	**+0.4**
SIJI	**Sorong**	**2.95**	**299**	Pn	**Pn**	**04 02 17.6**	**+1.3**
	46nm,0.3s,baz=206,slow=22,SNR=47						
SIJI				Pg	**Pg**	**04 02 25.7**	**-0.3**
	345nm,0.3s,baz=104,slow=12,SNR=90						
SIJI				Lg	Lg	04 03 05.0	
	36nm,0.3s,baz=12,slow=18,SNR=4.8						
SIJI				LR	LR	04 03 38.3	
	comp=Z,1μm,19.9s,baz=187,slow=42						
	121nm,0.3s						
SIJI	**Sorong**	**2.95**	**299**	P	**Pn**	**04 02 17.6**	**+1.3**
SWI	**Sorong**	**2.96**	**299**	P	**Pn**	**04 02 17.8**	**+1.3**
BNDI	**Bandanaira**	**4.53**	**241**	P	**Pn**	**04 02 39.3**	**+1.3**
MSAI	**Masohi**	**5.04**	**258**	P	**Pn**	**04 02 46.9**	**+1.9**
	0.1nm20nm,0.5s						
KRAI	**Karang Ratu**	**5.55**	**259**	P	**Pn**	**04 02 53.9**	**+1.8**
	0.3nm5μm59nm,0.6s						
AAI	**Ambon**	**5.83**	**256**	P	**Pn**	**04 02 57.4**	**+1.5**
	0.4nm78nm,0.7s						
NLAI	**Namlea**	**6.82**	**262**	P	**Pn**	**04 03 10.8**	**+1.3**
	0.2nm6μm40nm,0.5s						
SANI	**Sanana**	**7.87**	**272**	P	**Pn**	**04 03 23.4**	**-0.6**
	0.1nm984nm23nm,0.6s						
MTN	**Manton Dam**	**10.83**	**194**		**Pn**	**04 04 02.8**	**-1.7**
APSI	**Ampana**	**12.28**	**276**	P	**Pn**	**04 04 26.3**	**+1.8**
	41nm,0.5s						
DAV	**Davao City (W)**	**12.44**	**318**	LR	LR	04 08 12.6	
	comp=Z,469nm,20.0s,baz=177,slow=32						
KNRA	**Kununurra**	**14.22**	**200**		**Pn**	**04 04 48.8**	**-2.1**
KAPI	**Kappang**	**14.34**	**259**	LR	LR	04 12 43.0	
	comp=Z,240nm,19.4s,baz=103,slow=47						
WB0	**Warramunga Arr**	**17.38**	**178**	P	**Pn**	**04 05 31.6**	**-0.6**
WB0				IAmb	IAmb	04 05 40.0	
	comp=Z,18nm,1.1s						
WB2	**Warramunga Arr**	**17.55**	**178**	P	**Pn**	**04 05 33.9**	**-0.4**
WB2				IAmb	IAmb	04 05 44.8	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**17.55**	**179**	P	**Pn**	**04 05 33.5**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=358,slow=11,SNR=21						
	comp=Z,4.5nm,0.7s						
WRA	**Warramunga Arr**	**17.55**	**179**	P	**Pn**	**04 05 34.4**	**+0.1**
WR0	**Warramunga Arr**	**17.57**	**178**	P	**Pn**	**04 05 35.2**	**+0.6**
WR0				IAmb	IAmb	04 05 43.4	
	comp=Z,22nm,1.2s						
ASAR	**Alice Springs**	**21.25**	**180**	P	**P**	**04 06 16.9**	**+1.1**
	comp=Z,23nm,0.8s,baz=5.7,slow=12,SNR=125						
ASAR				S	**S**	**04 10 14.3**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=357,slow=24,SNR=4.7						
	comp=Z,23nm,0.8s						
ASAR	**Alice Springs**	**21.25**	**180**	P	**P**	**04 06 16.1**	**+0.3**
CTA	**Charters Tower**	**21.43**	**146**	P	**P**	**04 06 19.0**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=0.0,slow=9.1,SNR=1.5						
	comp=Z,1.5nm,0.6s						
CTAO	**Charters Tower**	**21.43**	**146**	P	**P**	**04 06 18.2**	**+0.3**
CTAO				IAmb	IAmb	04 07 01.9	
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**30.32**	**167**	P	**P**	**04 07 40.6**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=337,slow=15,SNR=2.0						
	comp=Z,1.8nm,0.9s						
DZM	**Mont Dzumac**	**37.27**	**124**	LR	LR	04 22 42.5	
	comp=Z,640nm,22.0s,baz=14,slow=34						
XAN	**Xi'an**	**43.09**	**329**	P	P	04 09 25.5	-4.4
XAN				pP	pP	04 09 30.6	-2.4
MKAR	**Makanchi Array**	**66.56**	**324**	P	**P**	**04 12 20.3**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=109,slow=8.3,SNR=13						
	comp=Z,1.7nm,0.5s						
ABKAR	**Akbulak array**	**81.30**	**320**	P	**P**	**04 13 45.8**	**-0.2**
ABKAR				IAmb	IAmb	04 14 01.1	
	comp=Z,3.8nm,1.4s						
ILAR	**Eielson Array**	**87.48**	**25**	P	**P**	**04 14 16.0**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=257,slow=4.4,SNR=2.0						
ILAR				LR	LR	04 49 04.1	
	comp=Z,79nm,19.3s,baz=267,slow=33						
	comp=Z,0.3nm,0.5s						
QSPA	**South Pole Qui**	**87.65**	**180**	P	**P**	**04 14 17.2**	**-0.8**
BBB	**Bella Bella**	**96.73**	**38**	LR	LR	05 03 30.2	
	comp=Z,43nm,18.9s,baz=278,slow=38						

*AEIC **12** 04:03:30±2.6, 51°.6N±0°.2×173°.3W±0°.1, h41km±6km, Error ellipse: s-maj=26.7km s-min=8.5km az=171.0*
*NEIC **12** 04:03:30.6±1.6, 51°.4N±0°.2×173°.17W±0°.07, h42km±13km, mb4.1/44, ML3.8(AEIC), Error ellipse: s-maj=28.8km s-min=4.2km az=170.0*
*IDC **12** 04:03:37.8±6.3, 51°.84N×173°.14W, h88km±52km, mb3.7/16, mbtmp4.1/18, ML4.1/2, MS4.0/1, Error ellipse: s-maj=43.3km s-min=14.7km az=16.0*
ISC 12 04:03:30.9±1.0, 51°.5N±0°.2×173°.23W±0°.06, h37km, n86,
σ1§07/78, mb4.1/19, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.86**	**290**	Pn	**Pn**	**04 04 01.0**	**+0.8**
ADK	**Adak**	**2.18**	**282**	Pn	**Pn**	**04 04 04.7**	**+0.1**
KIWB	**Kanaga Island**	**2.47**	**280**	Pn	**Pn**	**04 04 09.2**	**+0.7**
NIKH	**Nikolski High**	**3.08**	**59**	Pn	**Pn**	**04 04 17.1**	**+0.3**
AMKA	**Amchitka**	**4.67**	**272**	Pn	**Pn**	**04 04 38.8**	**0.0**
UNV	**Unalaska Valle**	**4.73**	**57**	Pn	**Pn**	**04 04 40.7**	**+1.2**
KDAK	**Kodiak Island**	**13.49**	**54**	P	**Pn**	**04 06 42.1**	**+2.7**
	0.5nm,0.3s,baz=315,slow=20,SNR=1.1						
	15nm,1.0s						
L19K	**White Mountain**	**14.63**	**36**	Pn	**Pn**	**04 06 56.5**	**+1.5**
CNPM	**China Poot**	**14.78**	**48**	Pn	**Pn**	**04 06 57.3**	**+0.3**
SEW	**Seward**	**15.83**	**48**	Pn	**Pn**	**04 07 10.6**	**-0.1**
PPLA	**Purkeypile**	**16.05**	**37**	Pn	**Pn**	**04 07 13.7**	**+0.1**
J20K	**Nowinta River**	**16.18**	**31**		**P**	**04 07 16.9**	**-1.1**
J20K				IAmb	IAmb	04 07 39.0	
	comp=Z,21nm,1.5s						
CAST	**Castle Rocks**	**16.40**	**35**		**Pn**	**04 07 19.0**	**+1.1**
CAST				IAmb	IAmb	04 07 27.7	
	comp=Z,12nm,1.2s						
PMR	**Palmer**	**16.60**	**43**	Pn	**Pn**	**04 07 20.4**	**0.0**
PMR				IAmb	IAmb	04 07 40.4	
	comp=Z,10nm,1.1s						
PWL	**Port Wells**	**16.64**	**46**	Pn	**Pn**	**04 07 19.5**	**-1.5**
PWL				IAmb	IAmb	04 07 23.5	
	comp=Z,8.1nm,0.8s						
GHO	**Glory Hole Cre**	**16.77**	**43**	Pn	**Pn**	**04 07 22.2**	**-0.5**
GHO				IAmb	IAmb	04 07 30.5	
	comp=Z,25nm,1.3s						
KNK	**Knik Glacier**	**16.81**	**44**	Pn	**Pn**	**04 07 22.3**	**-0.8**
KNK				IAmb	IAmb	04 07 36.1	
	comp=Z,18nm,1.0s						
KTH	**Kantishna Hill**	**16.90**	**36**	P	**P**	**04 07 25.5**	**-0.4**
KTH				IAmb	IAmb	04 07 46.0	
	comp=Z,23nm,1.3s						
TRF	**Thorofare Moun**	**17.07**	**37**	Pn	**Pn**	**04 07 25.0**	**-1.6**
FID	**Port Fidalgo**	**17.44**	**48**	Pn	**Pn**	**04 07 28.7**	**-2.3**
SCM	**Sheep Creek Mo**	**17.48**	**44**	Pn	**Pn**	**04 07 30.4**	**-1.1**
I21K	**Tanana**	**17.55**	**30**	P	**P**	**04 07 34.4**	**+1.4**
I21K				IAmb	IAmb	04 07 36.8	
	comp=Z,24nm,1.4s						
RND	**Reindeer**	**17.59**	**38**		**Pn**	**04 07 32.9**	**0.0**
H21K	**Melozitna Rive**	**17.62**	**29**	P	**P**	**04 07 34.0**	**+0.1**
BWN	**Browne**	**17.78**	**35**		**P**	**04 07 35.7**	**+0.1**
BWN				IAmb	IAmb	04 08 10.1	
	comp=Z,16nm,0.9s						
MLY	**Manley**	**17.86**	**32**		**Pn**	**04 07 36.0**	**-0.1**
MLY				IAmb	IAmb	04 07 38.3	
	comp=Z,18nm,1.4s						
DHY	**Denali

comp=Z,4.5nm,0.9s,baz=294,slow=12,SNR=7.0
comp=Z,4.5nm,0.9s
INK Inuvik 25.40 34 P **P 04 08 54.0 -0.3**
comp=Z,6.1nm,0.7s,baz=236,slow=6.7,SNR=16
comp=Z,6.1nm,0.7s
INK Inuvik 25.40 34 P **P 04 08 53.6 -0.8**
H11N2 WAKE ISLAND Hy 35.33 214 T T 04 48 31.3
baz=21,slow=75,SNR=6.9
H11N3 WAKE ISLAND Hy 35.34 214 T T 04 48 35.9
baz=21,slow=75,SNR=8.6
H11N1 WAKE ISLAND Hy 35.35 214 T T 04 48 31.6
baz=21,slow=75,SNR=7.5
NEW Newport 35.55 73 P **P 04 10 24.3 +0.1**
comp=Z,2.2nm,0.9s,baz=319,slow=10.0,SNR=4.1
comp=Z,2.2nm,0.9s
H11S1 WAKE ISLAND Hy 36.53 213 T T 04 49 50.2
baz=20,slow=76,SNR=41
H11S2 WAKE ISLAND Hy 36.55 213 T T 04 49 51.6
baz=20,slow=76,SNR=28
H11S3 WAKE ISLAND Hy 36.55 213 T T 04 49 51.8
baz=20,slow=76,SNR=15
F10A Beach Ranch, E 36.57 76 P **P 04 10 31.5 -1.6**
F10A IAmb IAmb 04 10 41.1
comp=Z,1.5nm,0.8s
NVAR Mina Array Bea 40.07 87 P **P 04 11 04.3 +1.6**
comp=Z,0.3nm,0.5s,baz=289,slow=6.6,SNR=2.0
comp=Z,0.3nm,0.5s
YHH Holmes Hill 41.03 74 P **P 04 11 11.7 +1.0**
YHH IAmb IAmb 04 11 27.8
comp=Z,2.5nm,0.8s
JCJ Chichijima 41.36 251 LR LR 04 25 21.0
comp=Z,198nm,20.6s,baz=124,slow=31
PDAR Pinedale Array 42.93 76 P **P 04 11 26.8 +0.7**
comp=Z,1.3nm,0.6s,baz=307,slow=4.4,SNR=14
comp=Z,1.3nm,0.6s
SONM Songino Array 49.67 299 P **P 04 12 19.9 +1.1**
comp=Z,1.0nm,0.4s,baz=65,slow=8.3,SNR=5.6
comp=Z,1.0nm,0.4s
SONM Songino Array 49.67 299 P **P 04 12 19.3 +0.5**
SONM IAmb IAmb 04 12 48.7
comp=Z,3.6nm,1.5s
TXAR Lajitas Array 55.18 85 P **P 04 12 59.9 +0.1**
comp=Z,0.7nm,0.6s,baz=308,slow=5.9,SNR=13
comp=Z,0.7nm,0.6s
ARCES ARCESS Array B 58.51 352 P **P 04 13 21.3 -1.5**
comp=Z,4.8nm,1.0s,baz=13,slow=8.3,SNR=1.4
comp=Z,4.8nm,1.0s
MKAR Makanchi Array 62.63 311 P **P 04 13 50.7 -0.6**
comp=Z,0.3nm,0.3s,baz=43,slow=6.0,SNR=7.8
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 62.99 323 P **P 04 13 53.4 0.0**
comp=Z,3.8nm,0.5s,baz=50,slow=6.7,SNR=26
comp=Z,3.8nm,0.5s
FINES FINESS Array B 66.37 350 P **P 04 14 13.1 -2.2**
comp=Z,1.0nm,0.6s,baz=46,slow=5.5,SNR=5.1
comp=Z,1.0nm,0.6s
ABKAR Akbulak array 69.88 326 P **P 04 14 37.4 -0.1**
GUN Gumba 75.00 296 *eP* **P 04 15 09.5 +0.7**
comp=Z,26nm,0.7s
JIRN Jiri 75.01 295 *eP* **P 04 15 09.9 +1.0**
comp=Z,16nm,0.5s
RAMN Ramite 75.33 295 *eP* **P 04 15 11.2 +0.6**
comp=Z,21nm,0.7s
PKI Pulchoki 75.52 296 *eP* **P 04 15 12.2 +0.4**
comp=Z,9.1nm,0.8s
PKIN Phulchoki 75.52 296 *eP* **P 04 15 12.1 +0.4**
comp=Z,7.0nm,0.6s
GKN Gorkha 75.62 297 *eP* **P 04 15 12.2 0.0**
comp=Z,11nm,0.6s
DANN Dangsing 75.84 298 *eP* **P 04 15 14.1 +0.5**
comp=Z,19nm,0.6s
AKASG Malin Array Be 76.42 346 P **P 04 15 15.1 -1.0**
comp=Z,1.6nm,0.4s,baz=17,slow=6.1,SNR=11
comp=Z,1.6nm,0.4s
GERES GERESS Array B 79.87 355 P **P 04 15 35.6 +0.2**
comp=Z,0.9nm,0.7s,baz=20,slow=3.1,SNR=5.5
comp=Z,0.9nm,0.7s
KBZ Khabaz 80.13 334 P **P 04 15 36.8 +0.1**
comp=Z,2.1nm,0.7s,baz=30,slow=0.8,SNR=5.8
comp=Z,2.1nm,0.7s
BRTR Keskin Array B 86.18 340 P **P 04 16 08.8 +0.6**
comp=Z,1.5nm,0.9s,baz=90,slow=1.9,SNR=6.9
comp=Z,1.5nm,0.9s

*IDC **12** 04:06:47.6±0.7, 5°.42S×153°.56E, h0km, mb4.3/12, mbtmp4.3/14, ML3.4/2, MS4.1/15, Error ellipse: s-maj=21.2km s-min=14.7km az=80.0*
*BJI **12** 04:06:49.9±0.0, 4°.98S×153°.57E, h8km, mb4.7/32, mB5.2/18, Ms4.8/7, Ms7 4.5/7*
*NEIC **12** 04:06:50.1±1.5, 5°.46S±0°.05×153°.52E±0°.08, h10km±1km, mb4.9/28, Error ellipse: s-maj=14.5km s-min=7.5km az=68.0*
*DJA **12** 04:06:51.6±0.5, 5°.5S±3°×15°.4E±°, h44km±4km, M5.2/13, mB5.4/4, mb4.7/13, MLv5.5/3, Mw(mB)4.8/4*
ISC 12 04:06:49.7±0.4, 5°.44S±0°.05×153°.55E±0°.06, h10km, n92, σ1°.35/87, mb4.8/33, MS4.0/15, 2C-2D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.86**	**312**		**Pn**	**04 07 21.6**	**-0.1**
RABL				Sn	**Sb**	**04 07 46.4**	**-0.8**
KRVT	**Keravat (AS076**	**1.89**	**306**	Pn	**Pn**	**04 07 22.4**	**+0.2**
147nm,0.3s,baz=134,slow=3.1,SNR=47							
KRVT				Sn	**Sb**	**04 07 48.2**	**+0.1**
273nm,0.3s,baz=172,slow=12,SNR=10							
MANU	**Manus Island**	**7.04**	**298**	Pn	**Pn**	**04 08 32.6**	**-0.3**
PMG	**Port Moresby**	**7.46**	**238**	Pn	**Pn**	**04 08 39.3**	**+0.5**
11nm,0.3s,baz=66,slow=8.6,SNR=9.6							
PMG				Sn	**Sn**	**04 10 05.2**	**+1.6**
5.6nm,0.3s,baz=357,slow=19,SNR=1.8							
44nm,0.5s							
PMG	**Port Moresby**	**7.46**	**238**		**Pn**	**04 08 38.0**	**-0.8**
PMG	**Port Moresby**	**7.46**	**238**	P	**Pn**	**04 08 37.7**	**-1.1**
0.6nm98nm,0.8s							
PMG				S	**Sn**	**04 10 04.7**	**+1.1**
0.6nm98nm,0.8s							
PATS	**Pohnpei**	**13.09**	**21**	Pn	**Pn**	**04 09 54.8**	**-1.0**
CTA	**Charters Tower**	**16.20**	**205**	Pn	**Pn**	**04 10 38.6**	**+1.0**
0.3nm,0.3s,baz=20,slow=9.6,SNR=6.0							
CTA				LR	LR	04 15 54.0	
comp=Z,909nm,19.9s,baz=354,slow=34							
4.4nm,0.7s							
CTAO	**Charters Tower**	**16.20**	**205**		**Pn**	**04 10 38.2**	**+0.6**
EIDS	**Eidsvold**	**19.96**	**187**	P	**P**	**04 11 22.2**	**+0.1**
EIDS				IAmb	IAmb	04 11 36.1	
comp=Z,73nm,1.9s							
LIFNC	**LIFOU**	**20.22**	**140**	P	**P**	**04 11 25.6**	**+0.6**
DZM	**Mont Dzumac**	**20.71**	**144**	P	**P**	**04 11 31.3**	**+0.8**
comp=Z,54nm,0.6s,baz=312,slow=11,SNR=78							
comp=Z,54nm,0.6s							
DZM	**Mont Dzumac**	**20.71**	**144**	P	**P**	**04 11 31.1**	**+0.7**
GUMO	**Guam**	**20.78**	**336**	LR	LR	04 18 53.6	
comp=Z,406nm,18.7s,baz=146,slow=35							
ONTNC	**Ouen Toro**	**20.90**	**145**	P	**P**	**04 11 33.1**	**+0.7**
ONTNC				IAmb	IAmb	04 11 35.2	
comp=Z,74nm,0.7s							
OUENC	**Ouen Island, N**	**21.21**	**144**	P	**P**	**04 11 36.4**	**+0.7**
OUENC				IAmb	IAmb	04 11 38.6	
comp=Z,50nm,0.7s							
MARNC	**Mare, Loyalty**	**21.24**	**140**	P	**P**	**04 11 35.4**	**-0.6**
FAKI	**Fak Fak**	**21.39**	**276**	P	**P**	**04 11 37.0**	**-0.8**
FAKI				IAmb	IAmb	04 11 50.0	
comp=Z,68nm,1.8s							
SIJI	**Sorong**	**22.71**	**281**	LR	LR	04 19 35.2	
comp=Z,549nm,21.6s,baz=64,slow=34							
MTN	**Manton Dam**	**23.31**	**250**	P	**P**	**04 11 56.7**	**-1.5**
MTN				IAmb	IAmb	04 12 10.2	
comp=Z,32nm,1.1s							
WR0	**Warramunga Arr**	**23.46**	**230**	P	**P**	**04 11 58.8**	**-0.8**
WR0				IAmb	IAmb	04 12 21.1	
comp=Z,22nm,1.1s							
WB0	**Warramunga Arr**	**23.46**	**231**	P	**P**	**04 11 58.2**	**-1.5**
WB0				IAmb	IAmb	04 12 23.6	
comp=Z,26nm,1.1s							
WRAB	**Tennant Creek**	**23.59**	**231**	P	**P**	**04 11 59.4**	**-1.5**
WB2	**Warramunga Arr**	**23.59**	**231**	P	**P**	**04 11 59.4**	**-1.5**
WRA	**Warramunga Arr**	**23.60**	**231**	P	**P**	**04 11 59.8**	**-1.3**
comp=Z,2.7nm,0.5s,baz=55,slow=10,SNR=18							
WRA				LR	LR	04 20 44.4	
comp=Z,392nm,18.8s,baz=68,slow=35							
comp=Z,2.7nm,0.5s							
WRA	**Warramunga Arr**	**23.60**	**231**	P	**P**	**04 11 58.8**	**-2.3**
ARMA	**Armidale**	**24.91**	**184**	P	**P**	**04 12 12.4**	**-0.8**
ARMA				IAmb	IAmb	04 12 22.9	
comp=Z,49nm,1.7s							
FUNA	**Funafuti**	**25.63**	**98**	P	**P**	**04 12 19.8**	**+0.1**
AS31	**Alice Springs**	**26.20**	**224**	P	**P**	**04 12 24.6**	**-0.3**
ASAR	**Alice Springs**	**26.20**	**224**	P	**P**	**04 12 23.9**	**-1.0**
comp=Z,5.4nm,0.9s,baz=59,slow=8.8,SNR=22							
ASAR				PcP	**PcP**	**04 15 52.1**	**+0.1**
comp=Z,1.3nm,0.7s,baz=54,slow=3.1,SNR=3.8							
comp=Z,5.4nm,0.9s							
ASAR	**Alice Springs**	**26.20**	**224**	P	**P**	**04 12 23.6**	**-1.3**
KNRA	**Kununurra**	**26.38**	**245**	P	**P**	**04 12 25.2**	**-1.2**
KNRA				IAmb	IAmb	04 12 44.4	
comp=Z,27nm,0.8s							
MSVF	**Nonsavu**	**26.88**	**119**	LR	LR	04 21 60.0	
comp=Z,538nm,21.3s,baz=318,slow=34							
STKA	**Stephens Creek**	**28.59**	**202**	P	**P**	**04 12 44.2**	**-1.9**
comp=Z,1.8nm,0.5s,baz=13,slow=14,SNR=2.8							
STKA				LR	LR	04 25 00.0	
comp=Z,356nm,18.0s,baz=3.7,slow=38							
comp=Z,1.8nm,0.5s							
STKA	**Stephens Creek**	**28.59**	**202**	P	**P**	**04 12 46.9**	**+0.7**
DAV	**Davao City (W)**	**30.56**	**294**	LR	LR	04 22 55.2	
comp=Z,327nm,21.5s,baz=85,slow=32							
FORT	**Forrest**	**34.78**	**220**	P	**P**	**04 13 39.1**	**-1.5**
PSA00	**Pilbara Seismi**	**36.36**	**241**	P	**P**	**04 13 52.9**	**-1.4**
PSA00				IAmb	IAmb	04 14 27.1	
comp=Z,12nm,0.9s							
MSWZ	**Moikau Station**	**40.73**	**155**	P	**P**	**04 14 31.0**	**+0.2**
LBZ	**Lake Benmore**	**41.44**	**162**	P	**P**	**04 14 37.0**	**+0.4**
MJAR	**Matsushiro Arr**	**44.16**	**342**	LR	LR	04 31 43.8	
comp=Z,237nm,20.8s,baz=175,slow=34							
KSRS	**Korea Array**	**48.91**	**333**	P	**P**	**04 15 35.1**	**-0.9**
comp=Z,2.0nm,0.8s,baz=151,slow=7.6,SNR=3.5							
KSRS				LR	LR	04 34 09.7	
comp=Z,49nm,20.8s,baz=75,slow=34							
comp=Z,2.0nm,0.8s							
CN2	**Changchun**	**55.19**	**335**	*eP*	**P**	**04 16 22.6**	**-0.1**
CN2				*es*P	pwP	04 16 29.6	-0.5
CN2				*e*S	**S**	**04 24 03.7**	**-2.3**
CN2				LR	LR		
comp=Z,180nm,15.0s							
CN2				LR	LR		
comp=Z,230nm,15.0s							
CN2				LR	LR		
comp=Z,290nm,17.0s							
GYA	**Guiyang**	**55.38**	**307**	⇓P	**P**	**04 16 26.2**	**+1.7**
GYA				pmax	pmax		
comp=Z,12nm,0.8s							
HNS	**HongShan**	**55.91**	**323**	⇓P	P	04 16 36.2	+8.3
BNX	**BinXian**	**56.04**	**338**	⇑P	**P**	**04 16 30.1**	**+1.4**
BNX				pmax	pmax		
comp=Z,7.0nm,1.1s							
BNX				pmax	pmax		
comp=Z,200nm,5.3s							
XAN	**Xi'an**	**57.60**	**316**	⇑P	**P**	**04 16 38.8**	**-1.3**
XAN				pmax	pmax		
comp=Z,8.0nm,1.0s							
XAN				pmax	pmax		
comp=Z,450nm,4.7s							
KLR	**Kul'dur**	**57.67**	**343**	P	**P**	**04 16 39.0**	**-1.2**
comp=Z,2.3nm,0.8s,baz=352,slow=0.7,SNR=5.8							
comp=Z,2.3nm,0.8s							
PETK	**Petropavlovsk-**	**58.43**	**3**	P	**P**	**04 16 46.1**	**+0.6**
CM31	**Chiang Mai Arr**	**58.83**	**295**	P	**P**	**04 16 48.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**58.83**	**295**	P	**P**	**04 16 49.5**	**+0.5**
comp=Z,3.1nm,0.3s,baz=112,slow=5.1,SNR=9.5							
CMAR				LR	LR	04 40 14.2	
comp=Z,72nm,21.9s,baz=115,slow=34							
comp=Z,3.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**58.83**	**295**	P	**P**	**04 16 48.1**	**-0.8**
PZH	**PanZhiHua**	**59.35**	**305**	P	**P**	**04 16 53.5**	**+0.9**
PZH				pmax	pmax		
comp=Z,10.0nm,0.8s							
PZH				pmax	pmax		
comp=Z,110nm,7.0s							
XLT	**XiLinHaoTe**	**59.60**	**329**	*e*P	**P**	**04 16 57.1**	**+3.2**
XLT				pP	pwP	04 17 02.9	+1.5
XLT				sP	sP	04 17 03.9	+7.4
XLT				pmax	pmax		
comp=Z,7.0nm,0.7s							
HHC	**Hu-ho-hao-te**	**60.00**	**324**	*e*P	**P**	**04 16 58.4**	**+1.6**
HHC				pmax	pmax		
comp=Z,21nm,0.8s							
HHC				pmax	pmax		
comp=Z,380nm,5.5s							
SHEM	**Shemya Is, Ala**	**60.52**	**14**	LR	LR	04 38 03.4	
comp=Z,129nm,20.7s,baz=338,slow=31							
LZH	**Lanzhou**	**62.21**	**316**	*e*P	**P**	**04 17 15.0**	**+3.0**
LZH				pP	pwP	04 17 21.5	+1.7
LZH				PcP	**PcP**	**04 17 56.4**	**+4.4**
LZH				pmax	pmax		
comp=Z,13nm,1.1s							
GTA	**Gaotai**	**66.63**	**317**	*e*P	**P**	**04 17 44.2**	**+3.4**
GTA				pP	pwP	04 17 50.2	+1.5
GTA				sP	sP	04 17 53.9	+11
GTA				pmax	pmax		
comp=Z,7.0nm,1.1s							
ULN	**Ulaanbaatar**	**66.93**	**328**	P	**P**	**04 17 42.2**	**-0.4**
comp=Z,45nm,1.0s							
SONM	**Songino Array**	**67.26**	**328**	P	**P**	**04 17 44.5**	**-0.1**
comp=Z,1.4nm,0.6s,baz=148,slow=6.9,SNR=6.1							
comp=Z,1.4nm,0.6s							
SONM	**Songino Array**	**67.26**	**328**	P	**P**	**04 17 44.5**	**-0.1**
SONM				IAmb	IAmb	04 18 11.3	
comp=Z,7.4nm,1.0s							
CASY	**Casey**	**67.63**	**197**	P	**P**	**04 17 46.4**	**-0.1**
CASY				IAmb	IAmb	04 18 39.2	
comp=Z,16nm,1.6s							
TAPN	**Taplejung**	**71.38**	**301**	*e*P	**P**	**04 18 12.9**	**+2.1**
comp=Z,25nm,0.8s							
VNDA	**Vanda**	**72.17**	**178**	P	**P**	**04 18 14.8**	**+0.5**
comp=Z,2.2nm,0.9s,baz=326,slow=5.8,SNR=14							
comp=Z,2.2nm,0.9s							
VNDA	**Vanda**	**72.17**	**178**	P	**P**	**04 18 14.6**	**+0.3**
RAMN	**Ramite**	**72.22**	**300**	*e*P	**P**	**04 18 18.9**	**+3.1**
JIRN	**Jiri**	**72.76**	**301**	*e*P	**P**	**04 18 21.2**	**+2.0**
comp=Z,16nm,0.8s							
GUN	**Gumba**	**73.09**	**301**	*e*P	**P**	**04 18 21.1**	**0.0**
comp=Z,36nm,0.8s							
PKI	**Pulchoki**	**73.40**	**301**	*e*P	**P**	**04 18 24.7**	**+1.8**
comp=Z,38nm,1.3s							
PKIN	**Phulchoki**	**73.42**	**301**	*e*P	**P**	**04 18 24.7**	**+1.8**
comp=Z,12nm,0.8s							
DMN	**Daman**	**73.67**	**301**	*e*P	**P**	**04 18 26.4**	**+2.0**
comp=Z,74nm,1.1s							
GKN	**Gorkha**	**74.18**	**301**	*e*P	**P**	**04 18 29.2**	**+1.9**
comp=Z,42nm,1.1s							
DANN	**Dangsing**	**75.01**	**301**	*e*P	**P**	**04 18 32.5**	**+0.2**
comp=Z,23nm,0.9s							
WMQ	**Urumqi**	**76.72**	**317**	*e*P	**P**	**04 18 41.5**	**+0.1**
WMQ				pP	pwP	04 18 47.6	-1.7
WMQ				sP	PcP	04 18 51.0	-1.8
WMQ				pmax	pmax		
comp=Z,23nm,0.7s							
IMAR	**Indian Mountai**	**80.73**	**19**	P	**P**	**04 19 02.9**	**-0.1**
MKAR	**Makanchi Array**	**81.30**	**319**	P	**P**	**04 19 05.6**	**-0.8**
comp=Z,1.2nm,0.7s,baz=91,slow=7.7,SNR=7.0							
comp=Z,1.2nm,0.7s							
MKAR	**Makanchi Array**	**81.30**	**319**	P	**P**	**04 19 06.5**	**+0.1**
ZALV	**Zalesovo Beam**	**82.10**	**326**	P	**P**	**04 19 08.8**	**-1.6**
comp=Z,1.4nm,0.4s,baz=105,slow=5.1,SNR=7.9							
comp=Z,1.4nm,0.4s							
ZALV	**Zalesovo Beam**	**82.10**	**326**	P	**P**	**04 19 10.7**	**+0.3**
ILAR	**Eielson Array**	**82.47**	**22**	P	**P**	**04 19 12.0**	**-0.1**
comp=Z,1.6nm,1.1s,baz=232,slow=7.4,SNR=4.2							
comp=Z,1.6nm,1.1s							
KSH	**Kashi**	**83.92**	**311**	P	P	04 19 25.7	+5.3
KSH				pmax	pmax		
comp=Z,4.0nm,0.7s							
QSPA	**South Pole Qui**	**84.52**	**180**	P	**P**	**04 19 22.7**	**-0.2**
QSPA				IAmb	IAmb	04 19 32.1	
comp=Z,10nm,0.8s							
BOOM	**Boomskoye usch**	**84.57**	**313**	P	**P**	**04 19 23.0**	**-0.7**
BOOM				IAmb	IAmb	04 19 49.9	
comp=Z,8.0nm,0.8s							
KURK	**Kurchatov**	**84.73**	**322**	P	**P**	**04 19 24.0**	**-0.1**
BBB	**Bella Bella**	**87.15**	**37**	LR	LR	04 54 20.9	
comp=Z,87nm,18.3s,baz=268,slow=33							
DLBC	**Dease Lake**	**87.54**	**31**	LR	LR	04 53 34.1	
comp=Z,206nm,19.2s,baz=312,slow=32							
YBH	**Yreka Blue Hor**	**88.92**	**48**	LR	LR	04 52 04.6	
comp=Z,209nm,21.1s,baz=290,slow=31							
NEW	**Newport**	**93.57**	**42**	LR	LR	04 56 17.0	
comp=Z,151nm,19.8s,baz=326,slow=32							
GERES	**GERESS Array B**	**124.99**	**329**	PKP	**PKPdf**	**04 25 50.0**	**-0.5**
comp=Z,0.8nm,0.6s,baz=29,slow=2.2,SNR=4.5							
TAM	**Tamanrasset**	**144.65**	**302**		**PKPab**	**04 26 26.8**	**+0.3**
BDFB	**Brasilia**	**150.08**	**135**	PKPbc	**PKPbc**	**04 26 40.4**	**-1.6**
comp=Z,2.2nm,0.7s,baz=332,slow=12,SNR=3.1							
TORD	**Torodi Ar. Bea**	**151.22**	**287**	PKPbc	**PKPbc**	**04 26 42.9**	**-1.7**
comp=Z,5.2nm,0.7s,baz=56,slow=2.1,SNR=28							

IDC 12 04:12:40.6±2.9, 5°.40S×153°.88E, h0km, mb3.4/2, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=55.3km s-min=34.7km az=59.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.14**	**300**	Pn	Pn	04 13 18.4	+0.7
5.7nm,0.3s,baz=337,slow=15,SNR=1.2							
KRVT				Sn	Sn	04 13 45.1	0.0
26nm,0.3s,baz=174,slow=19,SNR=2.0							
104nm,0.6s							
WRA	**Warramunga Arr**	**23.88**	**231**	P	P	04 17 56.3	+0.1
0.7nm,0.9s,baz=56,slow=9.8,SNR=1.6							
0.7nm,0.9s							
ASAR	**Alice Springs**	**26.45**	**225**	P	P	04 18 19.6	0.0
0.7nm,0.8s,baz=44,slow=8.3,SNR=2.8							
0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**151.51**	**288**	PKPbc	PKPbc	04 32 37.4	-0.5
0.3nm,0.6s,baz=67,slow=1.7,SNR=4.3							

*BJI **12** 04:16:22.5±0.0, 20°.45S×178°.18W, h575km, mb5.3/63, mB5.1/33*
*MOS **12** 04:16:23.8±0.9, 20°.80S×178°.66W, h582km, mb5.2/21, Error ellipse: s-maj=9.6km s-min=8.3km az=125.3*
*NOU **12** 04:16:23.8, 20°.90S×178°.51W, h577km, ML5.0/106, Fiji Islands Region*
*NEIC **12** 04:16:24.6±1.6, 20°.87S±0°.10×178°.60W±0°.09, h576km±6km, mb5.0/142, Mww5.4, Error ellipse: s-maj=14.1km s-min=12.6km az=159.0*
*IDC **12** 04:16:24.6±0.6, 20°.84S×178°.65W, h579km±5km, mb4.5/35, mbtmp5.4/38, Error ellipse: s-maj=8.5km s-min=7.9km az=138.0*
*GCMT **12** 04:16:25.6±0.3, 20°.70S±0°.03×178°.82W±0°.04, h591km±2km, MW5.4/78, Moment Tensor Solution. s78,c100; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr-0.99±.05; Mθθ0.95±.08; Mφφ0.03±.09; Mrθ-0.36±.08; Mθφ-0.45±.08; Mφr-1.17±.09; Best double couple: M0 1.50600×10^17 NP1:φs326.00000°, δ60.00000°, λ-49.00000°. NP2:φs86.00000°, δ49.00000°, λ-139.00000°. Principal axes: T 1.1490, Plg6.0000°, Azm28.0000°; N 0.7130, Plg35.0000°, Azm122.0000°; P -1.8630, Plg55.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*NEIC **12** 04:16:26, 20°.91S×178°.57W, h560km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^17Nm; Mrr-0.24; Mθθ0.20; Mφφ0.05; Mrθ-0.47; Mθφ-1.42; Mφr-0.80; Fault plane solution: M0 1.71000×10^17 NP1:φs93.00000°, δ63.00000°, λ-163.00000°. NP2:φs355.00000°, δ75.00000°, λ-27.00000°. Principal axes: T 1.5724, Plg8.0000°, Azm46.0000°; N 0.2478, Plg59.0000°, Azm149.0000°; P -1.8202, Plg30.0000°, Azm311.0000°;*
ISC 12 04:16:23.7±0.3, 20°.89S±0°.04×178°.58W±0°.04, h580km±3km, h581km:pP-P, n1174, σ1°.26/1256, mb5.1/187, 88C-72D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.47**	**314**	P	**P**	**04 17 52.9**	**+1.6**
193nm,0.6s,baz=143,slow=11,SNR=164							
MSVF	**Nonsavu**	**4.47**	**314**	P	**P**	**04 17 52.8**	**+1.4**
MSVF				S	**S**	**04 19 02.8**	**+0.1**
MSVF	**Nonsavu**	**4.47**	**314**	P	**P**	**04 17 52.8**	**+1.4**
MSVF				S	**S**	**04 19 02.8**	**+0.1**
MSVF	**Nonsavu**	**4.47**	**314**	P	**P**	**04 17 53.1**	**+1.7**
FUTU	**Fugatoga**	**6.56**	**4**	P	**P**	**04 18 10.3**	**+1.3**
NIUE	**Niue**	**8.34**	**79**	P	**P**	**04 18 26.3**	**+0.6**
baz=8.3,SNR=26							
NIUE	**Niue**	**8.34**	**79**	P	**P**	**04 18 26.2**	**+0.6**
NIUE	**Niue**	**8.34**	**79**	P	**P**	**04 18 26.4**	**+0.8**
RAO	**Raoul Island**	**8.35**	**176**	S	**S**	**04 20 03.9**	**-1.6**
988nm,0.5s,baz=100,slow=23,SNR=10.0							
GLKZ	**Green Lake**	**8.36**	**176**	P	**P**	**04 18 23.7**	**-1.9**
GLKZ				S	**S**	**04 20 03.7**	**-2.0**
AFI	**Afiamalu**	**9.51**	**44**	P	**P**	**04 18 35.5**	**-1.8**
590nm,0.5s,baz=15,slow=1.6,SNR=70							
AFI				S	**S**	**04 20 21.2**	**-5.7**
1μm,0.7s,baz=25,slow=24,SNR=12							
AFI	**Afiamalu**	**9.51**	**44**	P	**P**	**04 18 35.7**	**-1.6**
FUNA	**Funafuti**	**12.48**	**350**	P	**P**	**04 19 06.0**	**-1.4**
FUNA	**Funafuti**	**12.48**	**350**	P	**P**	**04 19 06.5**	**-0.9**
MARNC	**Mare, Loyalty**	**12.51**	**265**	P	**P**	**04 19 07.2**	**-0.3**
MARNC	**Mare, Loyalty**	**12.51**	**265**	P	**P**	**04 19 07.7**	**+0.2**
RTV	**Rentapao**	**12.65**	**282**	P	**P**	**04 19 10.0**	**+1.0**
DVP	**Devils Point**	**12.88**	**282**	P	**P**	**04 19 12.8**	**+1.3**
LIFNC	**LIFOU**	**13.26**	**268**	P	**P**	**04 19 13.6**	**-1.8**
LIFNC	**LIFOU**	**13.26**	**268**	P	**P**	**04 19 14.3**	**-1.0**
YATNC	**Mamie plateau,**	**13.58**	**262**	P	**P**	**04 19 19.8**	**+1.2**
OUENC	**Ouen Island, N**	**13.64**	**261**	P	**P**	**04 19 19.3**	**+0.1**
OUENC	**Ouen Island, N**	**13.64**	**261**	P	**P**	**04 19 20.6**	**+1.4**
DZM	**Mont Dzumac**	**13.99**	**262**	*e*P	**P**	**04 19 23.7**	**+0.8**
132nm,0.8s							
DZM				*e*S	**S**	**04 21 49.2**	**-0.6**
129nm,1.4s							
DZM	**Mont Dzumac**	**13.99**	**262**	P	**P**	**04 19 23.0**	**+0.1**
74nm,0.6s,baz=84,slow=16,SNR=80							
DZM	**Mont Dzumac**	**13.99**	**262**	P	**P**	**04 19 24.9**	**+2.0**
DZM	**Mont Dzumac**	**13.99**	**262**	P	**P**	**04 19 24.5**	**+1.6**
ONTNC	**Ouen Toro**	**13.99**	**262**	P	**P**	**04 19 24.5**	**+1.7**
NOUC	**Port Laguerre**	**14.12**	**262**	P	**P**	**04 19 25.0**	**+0.9**
OUZ	**Omahuta**	**15.85**	**204**	P	**P**	**04 19 42.0**	**+1.6**
KOUNC	**Koumac, New Ca**	**16.04**	**268**	P	**P**	**04 19 44.6**	**+2.2**
KUZ	**Kuaotunu**	**16.56**	**196**	P	**P**	**04 19 48.8**	**+1.9**
MXZ	**Matakaoa Point**	**16.83**	**189**	P	**P**	**04 19 49.6**	**+0.2**
MXZ				S	**S**	**04 22 34.8**	**-2.0**
MYRZ	**Mayor Island**	**16.94**	**194**	P	**P**	**04 19 53.1**	**+2.7**
WMGZ	**Waiomatatini S**	**17.07**	**188**	P	**P**	**04 19 52.5**	**+1.0**
WMGZ				S	**S**	**04 22 39.8**	**-0.9**
HAZ	**Te Kaha**	**17.10**	**190**	P	**

OXZ Oxford 23.71 197 P **P** **04 20 50.4 -0.9**
RPZ Rata Peaks 24.34 198 P **P** **04 20 57.2 +0.2**
comp=Z,39nm,0.5s,baz=320,slow=1.5,SNR=22
comp=Z,39nm,0.5s
RPZ Rata Peaks 24.34 198 P **P** **04 20 56.3 -0.7**
RPZ IAmb IAmb 04 21 10.0
comp=Z,44nm,0.8s
RPZ Rata Peaks 24.34 198 P **P** **04 20 57.5 +0.6**
FOZ Fox Glacier 24.57 201 P **P** **04 20 58.7 -0.1**
LBZ Lake Benmore 25.22 199 P **P** **04 21 03.3 -1.4**
LBZ IAmb IAmb 04 21 08.4
comp=Z,24nm,0.7s
JCZ Jackson Bay 25.39 202 P **P** **04 21 06.6 +0.3**
WKZ Wanaka 25.98 200 P **P** **04 21 10.5 -0.9**
WKZ IAmb IAmb 04 21 23.4
comp=Z,64nm,1.1s
MLZ Mavora Lakes 26.76 201 P **P** **04 21 18.7 +0.5**
DCZ Deep Cove 27.18 202 P **P** **04 21 21.9 +0.1**
WHZ Wether Hill Ro 27.28 201 P **P** **04 21 22.7 +0.1**
PAE Paea 27.55 88 *e*P **P** **04 21 26.0 +0.6**
comp=Z,20nm,1.0s
PAE *e*pP **pP** **04 22 55.1 -0.9**
comp=Z,31nm,1.4s
PAE Paea 27.55 88 *e*T T 04 48 11.2
comp=Z,1.7nm,0.3s
PPT2 Papeete2 27.56 88 *e*P **P** **04 21 26.7 +1.0**
comp=Z,134nm,1.1s
PPT2 *e*pP **pP** **04 22 53.9 -2.4**
comp=Z,94nm,1.4s
PPT Papeete 27.57 88 P **P** **04 21 26.2 +0.6**
comp=Z,122nm,0.8s,baz=94,slow=18,SNR=13
comp=Z,122nm,0.8s
PPTF Pamatai, Papee 27.57 88 P **P** **04 21 26.3 +0.5**
PPTF Pamatai, Papee 27.57 88 P **P** **04 21 27.2 +1.5**
TIAR Tiarei 27.78 88 *e*P **P** **04 21 27.4 -0.1**
comp=Z,17nm,0.8s
TIAR *e*pP **pP** **04 22 57.4 -0.9**
comp=Z,19nm,1.1s
TVO Taravao 27.83 89 *e*P **P** **04 21 28.3 +0.3**
comp=Z,28nm,0.7s
TVO *e*pP **pP** **04 22 56.8 -1.9**
comp=Z,25nm,1.0s
EIDS Eidsvold 28.22 255 P **P** **04 21 31.4 +0.2**
baz=28,SNR=9.9
EIDS Eidsvold 28.22 255 P **P** **04 21 31.5 +0.3**
EIDS IAmb IAmb 04 21 32.1
comp=Z,25nm,0.9s
EIDS Eidsvold 28.22 255 P **P** **04 21 31.7 +0.5**
ARMA Armidale 28.41 244 P **P** **04 21 34.3 +1.4**
baz=28,SNR=16
ARMA Armidale 28.41 244 P **P** **04 21 34.1 +1.2**
ARMA IAmb IAmb 04 21 34.8
comp=Z,20nm,0.7s
ARMA Armidale 28.41 244 P **P** **04 21 34.4 +1.4**
RK1H Rockhampton Ha 28.73 259 P **P** **04 21 36.7 +1.1**
MEH Mehetia 28.92 89 *e*P **P** **04 21 38.0 +0.6**
comp=Z,41nm,1.0s
VAH Vaihoa 29.93 84 *e*P **P** **04 21 46.6 +0.5**
comp=Z,120nm,1.0s
RMQ Roma 30.37 253 P **P** **04 21 51.0 +1.2**
baz=30,SNR=19
RMQ Roma 30.37 253 P **P** **04 21 51.3 +1.5**
CNB Canberra Magne 31.56 236 P **P** **04 22 01.2 +1.3**
baz=32,SNR=6.0
TV1H Townsville Har 32.53 267 P **P** **04 22 09.0 +0.8**
CTA Charters Tower 32.91 265 P **P** **04 22 11.4 -0.1**
comp=Z,36nm,0.4s,baz=95,slow=9.9,SNR=113
CTA PcP **PcP** **04 24 39.3 +0.9**
comp=Z,18nm,0.8s,baz=79,slow=1.7,SNR=6.4
comp=Z,36nm,0.4s
CTA Charters Tower 32.91 265 P **P** **04 22 12.0 +0.5**
CTAO Charters Tower 32.91 265 P **P** **04 22 12.1 +0.5**
CTAO Charters Tower 32.91 265 P **P** **04 22 12.1 +0.5**
CTAO pmax pmax
comp=Z,99nm,1.0s
CTAO Charters Tower 32.91 265 P **P** **04 22 12.0 +0.5**
CTAO Charters Tower 32.91 265 P **P** **04 22 09.5 -2.0**
CTAO pP **pP** **04 23 45.9 +0.1**
CTAO sP **PcP** **04 24 38.4 0.0**
KRVT Keravat (AS076 32.98 296 P **P** **04 22 12.1 -0.1**
comp=Z,188nm,0.6s,baz=64,slow=4.1,SNR=9.9
comp=Z,188nm,0.6s
CMSA Cobar Meteorol 33.63 244 P **P** **04 22 18.0 +0.7**
baz=34,SNR=36
CMSA Cobar Meteorol 33.63 244 P **P** **04 22 18.0 +0.7**
QLP Quilpie 34.42 253 P **P** **04 22 24.4 +0.3**
baz=34,SNR=15
QLP Quilpie 34.42 253 P **P** **04 22 24.5 +0.4**
PMG Port Moresby 34.91 284 P **P** **04 22 28.7 +0.5**
comp=Z,406nm,0.8s,baz=78,slow=5.8,SNR=107
PMG PcP **PcP** **04 24 45.1 +0.9**
comp=Z,24nm,0.8s,baz=11,slow=12,SNR=3.2
comp=Z,406nm,0.8s
PMG Port Moresby 34.91 284 P **P** **04 22 28.6 +0.3**
PMG Port Moresby 34.91 284 *d*iP **P** **04 22 28.5 +0.3**
PMG pmax pmax
comp=Z,434nm,0.8s
PMG Port Moresby 34.91 284 P **P** **04 22 28.1 -0.1**
comp=Z,4μmcomp=Z,544nm,0.9s
PMG Port Moresby 34.91 284 P **P** **04 22 28.7 +0.5**
PMG Port Moresby 34.91 284 P **P** **04 22 26.9 -1.3**
PMG pP **pP** **04 24 03.9 +0.2**
PMG sP **PcP** **04 24 44.1 -0.2**
MTSU Mount Surprise 35.03 268 P **P** **04 22 29.6 +0.4**
baz=35,SNR=70
MTSU Mount Surprise 35.03 268 P **P** **04 22 29.8 +0.6**
TOO Toolangi 35.23 234 P **P** **04 22 31.4 +0.8**
baz=35
PATS Pohnpei 35.70 318 P **P** **04 22 35.7 +1.0**
baz=36
COEN Coen 37.07 274 P **P** **04 22 46.7 +0.7**
baz=37,SNR=54
COEN Coen 37.07 274 P **P** **04 22 46.9 +0.9**
COEN Coen 37.07 274 P **P** **04 22 46.9 +0.9**
STKA Stephens Creek 37.13 245 P **P** **04 22 47.1 +0.8**
comp=Z,21nm,0.7s,baz=91,slow=10,SNR=46
STKA PcP **PcP** **04 24 52.2 +1.4**
comp=Z,16nm,1.0s,baz=82,slow=5.8,SNR=5.4
STKA ScP **ScP** **04 27 46.1 +2.8**
comp=Z,6.4nm,0.9s,baz=76,slow=6.4,SNR=4.4
comp=Z,21nm,0.7s
STKA Stephens Creek 37.13 245 P **P** **04 22 47.1 +0.8**
baz=37,SNR=28
STKA Stephens Creek 37.13 245 P **P** **04 22 47.3 +1.0**
STKA Stephens Creek 37.13 245 P **P** **04 22 47.3 +1.0**
STKA pmax pmax
comp=Z,5.0nm,0.7s
STKA Stephens Creek 37.13 245 P **P** **04 22 47.3 +1.0**
INKA Innaminka 37.56 251 P **P** **04 22 51.7 +1.9**
MCQ Macquarie Isla 37.63 201 P **P** **04 22 52.4 +2.5**
baz=38,SNR=3.3
ARPS Mount Arapiles 37.82 237 P **P** **04 22 52.6 +0.7**
baz=38
MANU Manus Island 38.12 295 P **P** **04 22 55.6 +1.0**
TAOE Nuku Hiva Isla 38.92 78 *e*P **P** **04 23 01.9 +0.8**
comp=Z,117nm,1.0s
TAOE Nuku Hiva Isla 38.92 78 P **P** **04 23 02.7 +1.6**
TAOE Nuku Hiva Isla 38.92 78 P **P** **04 23 02.7 +1.6**
comp=Z,253nm,0.8s
TAOE Nuku Hiva Isla 38.92 78 P **P** **04 23 01.1 0.0**
QIS Mount Isa 39.03 263 P **P** **04 23 01.3 -0.5**
baz=39,SNR=9.3
QIS Mount Isa 39.03 263 P **P** **04 23 01.9 0.0**
HTT Hallett 39.56 242 P **P** **04 23 06.6 +0.6**
baz=40,SNR=9.2
HTT Hallett 39.56 242 P **P** **04 23 06.8 +0.8**
LCRK Leigh Creek 39.88 247 P **P** **04 23 09.2 +0.6**
WHYH Whyalla 40.64 243 P **P** **04 23 15.2 +0.7**
BBOO Buckleboo 41.89 244 P **P** **04 23 24.6 +0.2**
baz=42,SNR=43
BBOO Buckleboo 41.89 244 P **P** **04 23 24.7 +0.3**
BBOO IAmb IAmb 04 23 25.1
comp=Z,43nm,0.7s
BBOO Buckleboo 41.89 244 P **P** **04 23 24.7 +0.3**
OOD Oodnadatta 42.04 251 P **P** **04 23 26.7 +1.0**
MULG Mulgathing 43.47 248 P **P** **04 23 36.9 +0.1**
AS01 Alice Springs 43.86 257 P **P** **04 23 40.0 +0.1**
ASAR Alice Springs 43.90 257 P **P** **04 23 40.6 +0.4**
comp=Z,89nm,0.7s,baz=89,slow=8.3,SNR=641
ASAR PcP **PcP** **04 25 13.9 +0.6**
comp=Z,31nm,0.7s,baz=101,slow=4.2,SNR=20
ASAR ScP **ScP** **04 28 12.9 +2.5**
comp=Z,6.8nm,0.8s,baz=105,slow=4.1,SNR=8.4
ASAR S **S** **04 29 27.6 -2.9**
comp=Z,12nm,0.8s,baz=94,slow=16,SNR=26
comp=Z,89nm,0.7s

ASAR Alice Springs 43.90 257 P **P** **04 23 40.5 +0.3**
ASAR ScP **ScP** **04 28 10.6 +0.2**
WB2 Warramunga Arr 44.00 263 P **P** **04 23 40.7 -0.4**
baz=44
WRAB Tennant Creek 44.00 263 P **P** **04 23 40.7 -0.4**
WRAB Tennant Creek 44.00 263 *ce*P **P** **04 23 40.4 -0.6**
WRAB pmax pmax
comp=Z,173nm,1.2s
WRAB Tennant Creek 44.00 263 P **P** **04 23 40.6 -0.4**
WRAB Tennant Creek 44.00 263 P **P** **04 23 37.7 -3.3**
WRAB pP **PcP** **04 25 14.0 +0.3**
WRA Warramunga Arr 44.01 263 P **P** **04 23 40.8 -0.3**
comp=Z,46nm,0.7s,baz=97,slow=5.0,SNR=196
WRA PcP **PcP** **04 25 14.5 +0.7**
comp=Z,16nm,0.9s,baz=98,slow=4.1,SNR=9.9
WRA S **S** **04 29 27.9 -4.2**
comp=Z,6.5nm,0.8s,baz=98,slow=13,SNR=8.7
WRA PKiKP **PKiKP** **04 32 11.4 -1.3**
comp=Z,0.9nm,0.7s,baz=108,slow=0.5,SNR=5.8
comp=Z,46nm,0.7s
GENI Genyem 44.09 289 P **P** **04 23 42.4 +0.6**
comp=Z,534nm,1.1s
GENI Genyem 44.09 289 P **P** **04 23 42.4 +0.6**
comp=Z,532nm,0.8s
SMPI Sarmi 45.66 289 P **P** **04 23 54.3 +0.5**
KDU Kakadu 47.42 272 P **P** **04 24 06.6 -0.4**
baz=47,SNR=44
KDU Kakadu 47.42 272 P **P** **04 24 06.9 -0.1**
MTN Manton Dam 48.62 271 P **P** **04 24 15.3 -0.7**
baz=49,SNR=49
MTN Manton Dam 48.62 271 P **P** **04 24 15.6 -0.4**
MTN Manton Dam 48.62 271 P **P** **04 24 15.4 -0.6**
FORT Forrest 48.64 247 P **P** **04 24 15.8 -0.1**
baz=49,SNR=18
FORT Forrest 48.64 247 P **P** **04 24 15.9 -0.1**
FORT Forrest 48.64 247 P **P** **04 24 15.8 -0.1**
WRKA Warakurna 48.84 255 P **P** **04 24 17.6 +0.1**
baz=49,SNR=122
WRKA Warakurna 48.84 255 P **P** **04 24 17.4 -0.1**
GUMO Guam 49.64 311 P **P** **04 24 24.0 +0.6**
comp=Z,206nm,0.8s,baz=173,slow=8.3,SNR=18
comp=Z,206nm,0.8s
GUMO Guam 49.64 311 P **P** **04 24 23.6 +0.2**
GUMO Guam 49.64 311 P **P** **04 24 24.0 +0.6**
GUMO Guam 49.64 311 P **P** **04 24 23.9 +0.6**
comp=Z,424nm,1.1s
GUMO Guam 49.64 311 P **P** **04 24 22.4 -0.9**
RKPI Ransiki, Papua 49.92 286 P **P** **04 24 25.4 -0.1**
comp=Z,8μmcomp=Z,94nm,1.5s
KNRA Kununurra 50.09 267 P **P** **04 24 26.7 0.0**
baz=50,SNR=23
KNRA Kununurra 50.09 267 P **P** **04 24 26.8 0.0**
KNRA Kununurra 50.09 267 P **P** **04 24 26.9 +0.2**
FAKI Fak Fak 51.06 284 P **P** **04 24 33.4 -0.4**
FAKI IAmb IAmb 04 24 34.2
comp=Z,103nm,1.1s
FAKI Fak Fak 51.06 284 P **P** **04 24 33.5 -0.4**
comp=Z,2μmcomp=Z,136nm,1.4s
FAKI Fak Fak 51.06 284 P **P** **04 24 34.4 +0.6**
BNDI Bandanaira 52.56 281 P **P** **04 24 45.5 +0.9**
comp=Z,17μmcomp=Z,498nm,1.2s
BNDI Bandanaira 52.56 281 P **P** **04 24 45.5 +0.9**
comp=Z,504nm,1.2s
DRV Dumont d'Urvil 52.80 199 P **P** **04 24 44.8 -0.6**
DRV x x 04 24 52.2
DRV pP **PP** **04 26 46.6 -6.6**
SIJI Sorong 52.82 286 P **P** **04 24 46.5 +0.1**
comp=Z,3μmcomp=Z,406nm,1.0s
SWI Sorong 52.82 286 P **P** **04 24 46.6 +0.2**
comp=Z,5μmcomp=Z,579nm,0.9s
MSAI Masohi 53.92 282 P **P** **04 24 58.5 +4.3**
KRAI Karang Ratu 54.42 281 P **P** **04 24 57.6 -0.1**
comp=Z,4μmcomp=Z,118nm,1.1s
AAI Ambon 54.46 281 P **P** **04 24 57.2 -0.8**
comp=Z,3μmcomp=Z,143nm,1.3s
NLAI Naniiea 55.64 281 P **P** **04 25 06.1 -0.1**
comp=Z,110nm,1.3s
SOEI Soe 55.97 272 P **P** **04 25 09.2 +0.6**
SOEI Soe 55.97 272 P **P** **04 25 09.7 +1.1**
comp=Z,4μmcomp=Z,486nm,1.0s
SOEI Soe 55.97 272 P **P** **04 25 10.6 +2.0**
LBMI Labuha 56.32 284 P **P** **04 25 11.7 +0.8**
comp=Z,2μmcomp=Z,204nm,1.0s
TNTI Ternate 57.04 285 P **P** **04 25 15.8 +0.1**
TNTI IAmb IAmb 04 25 17.0
comp=Z,190nm,1.0s
TNTI Ternate 57.04 285 P **P** **04 25 16.0 +0.2**
comp=Z,3μmcomp=Z,192nm,1.0s
TNTI Ternate 57.04 285 P **P** **04 25 17.1 +1.3**
PSA00 Pilbara Seismi 57.05 257 P **P** **04 25 15.7 0.0**
PSA00 IAmb IAmb 04 25 16.5
comp=Z,150nm,0.8s
PSA00 Pilbara Seismi 57.05 257 P **P** **04 25 15.8 0.0**
GAMI Galela, Maluku 57.12 287 P **P** **04 25 15.9 -0.5**
comp=Z,130nm,1.0s
SANI Sanana 57.13 282 P **P** **04 25 15.7 -0.7**
comp=Z,2μmcomp=Z,146nm,1.0s
SANI Sanana 57.13 282 P **P** **04 25 16.1 -0.3**
MBWA Marble Bar 57.24 258 P **P** **04 25 16.6 -0.5**
MBWA IAmb IAmb 04 25 17.7
comp=Z,116nm,0.8s
MBWA Marble Bar 57.24 258 P **P** **04 25 16.9 -0.2**
MBWA Marble Bar 57.24 258 P **P** **04 25 14.8 -2.3**
MEEK Meekatharra 57.28 251 P **P** **04 25 16.7 -0.6**
baz=57,SNR=33
MEEK Meekatharra 57.28 251 P **P** **04 25 16.9 -0.4**
KLBR Kellerberrin 57.40 245 P **P** **04 25 18.0 0.0**
baz=57,SNR=29
KLBR Kellerberrin 57.40 245 P **P** **04 25 18.0 0.0**
SBA Scott Base 57.45 184 P **P** **04 25 19.9 +2.4**
SBA IAmb IAmb 04 25 22.0
comp=Z,38nm,1.0s
SBA ScP **ScP** **04 29 08.9 +1.2**
SBA Scott Base 57.45 184 P **P** **04 25 18.2 +0.7**
SBA pP pP 04 27 17.9 +9.3
VNDA Vanda 57.47 185 P **P** **04 25 20.1 +2.5**
comp=Z,7.3nm,0.7s,baz=357,slow=8.2,SNR=68
VNDA ScP **ScP** **04 29 09.5 +1.7**
comp=Z,10nm,1.0s,baz=350,slow=4.3,SNR=11
comp=Z,7.3nm,0.7s
VNDA Vanda 57.47 185 P **P** **04 25 20.2 +2.5**
VNDA Vanda 57.47 185 P **P** **04 25 20.2 +2.5**
VNDA pmax pmax
comp=Z,9.0nm,0.8s
VNDA Vanda 57.47 185 P **P** **04 25 17.8 +0.1**
NWAO Narrogin (SRO) 57.71 244 P **P** **04 25 20.4 +0.3**
baz=58,SNR=14
NWAO P **P** **04 25 20.4 +0.3**
baz=58,SNR=14
NWAO Narrogin (SRO) 57.71 244 P **P** **04 25 20.6 +0.5**
NWAO Narrogin (SRO) 57.71 244 P **P** **04 25 18.9 -1.2**
RKGY Rocky Gully 57.78 242 P **P** **04 25 21.4 +0.8**
baz=58,SNR=8.1
RKGY Rocky Gully 57.78 242 P **P** **04 25 21.3 +0.8**
BLDU Ballidu 58.40 246 P **P** **04 25 24.6 -0.2**
baz=58,SNR=50
BLDU Ballidu 58.40 246 P **P** **04 25 24.6 -0.2**
MUN Mundaring 58.67 245 P **P** **04 25 26.9 +0.3**
baz=59,SNR=10.0
MUN Mundaring 58.67 245 P **P** **04 25 27.0 +0.4**
MORW Morawa 59.18 248 P **P** **04 25 29.8 -0.3**
baz=59,SNR=27
MORW Morawa 59.18 248 P **P** **04 25 30.1 +0.1**
MORW IAmb IAmb 04 25 30.5
comp=Z,50nm,0.8s
MORW Morawa 59.18 248 P **P** **04 25 29.9 -0.1**
H01W1 Cape Leeuwin H 60.07 241 P **P** **04 25 37.5 +1.9**
baz=107,slow=7.9,SNR=5.6
H01W2 Cape Leeuwin H 60.09 241 P **P** **04 25 37.8 +2.2**
baz=107,slow=7.9,SNR=3.1
H01W3 Cape Leeuwin H 60.09 241 P **P** **04 25 37.8 +2.1**
baz=107,slow=7.9,SNR=3.4
LUWI Luwuk 60.47 281 P **P** **04 25 39.4 +0.6**
LUWI IAmb IAmb 04 25 39.9
comp=Z,118nm,0.8s
LUWI Luwuk 60.47 281 P **P** **04 25 39.2 +0.4**
comp=Z,5μmcomp=Z,230nm,1.2s
LUWI Luwuk 60.47 281 P **P** **04 25 39.3 +0.4**
comp=Z,230nm,1.1s
GTOI Gorontalo 60.93 283 P **P** **04 25 42.5 +0.7**
comp=Z,770nmcomp=Z,68nm,0.8s
JCJ Chichijima 60.98 320 P **P** **04 25 41.5 -0.4**
comp=Z,86nm,0.8s,baz=288,slow=21,SNR=5.7
comp=Z,86nm,0.8s
BKSI Bulukumba 61.33 275 P **P** **04 25 43.8 -0.6**
comp=Z,676nmcomp=Z,45nm,0.8s

APSI Ampana 61.56 281 P **P** **04 25 46.7 +0.8**
comp=Z,2μmcomp=Z,211nm,1.1s
BNSI Bone 61.67 276 P **P** **04 25 46.9 +0.3**
comp=Z,876nmcomp=Z,65nm,1.4s
KAPI Kappang 61.78 276 P **P** **04 25 47.5 +0.1**
KAPI Kappang 61.78 276 P **P** **04 25 47.5 +0.1**
KAPI pmax pmax
comp=Z,22nm,0.8s
KAPI Kappang 61.78 276 P **P** **04 25 45.0 -2.4**
comp=Z,511nmcomp=Z,28nm,1.8s
KAPI Kappang 61.78 276 P **P** **04 25 47.7 +0.3**
comp=Z,31nm,1.8s
KAPI Kappang 61.78 276 P **P** **04 25 46.7 -0.7**
MRSI Marisa 61.84 282 P **P** **04 25 48.0 +0.2**
comp=Z,65nm,0.8s
GIRL Giralia 61.92 255 P **P** **04 25 49.2 +1.0**
baz=62,SNR=33
GIRL Giralia 61.92 255 P **P** **04 25 48.7 +0.6**
GIRL Giralia 61.92 255 P **P** **04 25 49.3 +1.1**
SPSI Sidrap Palu 62.14 277 P **P** **04 25 48.6 -1.1**
comp=Z,66nm,0.9s
PLAI Plampang 62.33 271 P **P** **04 25 50.5 -0.4**
comp=Z,3μmcomp=Z,267nm,0.9s
PLAI Plampang 62.33 271 P **P** **04 25 50.6 -0.4**
comp=Z,269nm,1.0s
TOLI2 Tolitoli 63.16 282 P **P** **04 25 56.4 +0.1**
TOLI2 IAmb IAmb 04 25 57.1
comp=Z,81nm,1.0s
TOLI2 Tolitoli 63.16 282 P **P** **04 25 56.1 -0.1**
TWSI Taliwang, Sumb 63.20 271 P **P** **04 25 56.1 -0.4**
comp=Z,2μmcomp=Z,216nm,1.0s
CASY Casey 63.38 205 P **P** **04 25 58.0 +1.2**
MPSI Mapaga 63.66 281 P **P** **04 25 59.5 +0.1**
comp=Z,2μmcomp=Z,144nm,1.1s
KLNI Mataram 64.04 271 P **P** **04 26 01.1 -0.8**
comp=Z,98nm,1.2s
IGBI Denpasar 64.80 270 P **P** **04 26 07.4 +0.8**
comp=Z,168nm,0.9s
SRBI Singaraja 64.97 271 P **P** **04 26 07.7 0.0**
comp=Z,20μmcomp=Z,3μmcomp=Z,136nm,1.0s
SMKI Samarinda 65.83 279 P **P** **04 26 14.9 +1.8**
comp=Z,17μmcomp=Z,155nm,0.4s
JAGI Jajag, Banyuwa 65.84 270 P **P** **04 26 12.3 -0.9**
JAGI IAmb IAmb 04 26 13.0
comp=Z,133nm,1.0s
JAGI Jajag, Banyuwa 65.84 270 P **P** **04 26 12.1 -1.1**
comp=Z,10μmcomp=Z,142nm,1.0s
JAGI Jajag, Banyuwa 65.84 270 P **P** **04 26 12.3 -0.9**
KMMI Kalianget 66.48 271 P **P** **04 26 17.0 -0.1**
comp=Z,120nm,1.1s
JHJ Hachijo jima 2 66.82 323 P **P** **04 26 18.9 +0.1**
comp=Z,111nm,0.4s,baz=64,slow=24,SNR=9.2
comp=Z,111nm,0.4s
BBKI Banjar Baru 66.91 275 P **P** **04 26 20.8 +1.0**
comp=Z,134nm,0.8s
MYLDM Lahad Datu 66.91 285 P **P** **04 26 20.1 +0.3**
MYLDM IAmb IAmb 04 26 32.8
comp=Z,44nm,0.7s
MYLDM Lahad Datu 66.91 285 P **P** **04 26 21.2 +1.4**
comp=Z,1μmcomp=Z,67nm,1.3s
MTKI Muara Teweh, K 67.78 278 P **P** **04 26 26.1 +1.0**
PWJI Pagerwojo 68.18 270 P **P** **04 26 27.2 -0.3**
comp=Z,92nm,1.0s
PCJI Pacitan 68.71 269 P **P** **04 26 30.8 +0.1**
comp=Z,3μmcomp=Z,402nm,0.8s
JYT Yasato 68.90 325 P **P** **04 26 32.0 +0.7**
JYT IAmb IAmb 04 26 32.9
comp=Z,105nm,1.1s
QSPA South Pole Qui 69.18 180 P **P** **04 26 34.5 +1.7**
comp=Z,17nm,0.9s,baz=14,slow=0.8,SNR=50
comp=Z,17nm,0.9s
QSPA South Pole Qui 69.18 180 P **P** **04 26 33.5 +0.7**
QSPA pP **pP** **04 28 32.2 +2.4**
KKM Kota Kinabalu 69.34 285 P **P** **04 26 34.9 +0.3**
KKM IAmb IAmb 04 26 35.6
comp=Z,65nm,0.7s
KKM Kota Kinabalu 69.34 285 P **P** **04 26 34.9 +0.3**
comp=Z,2μmcomp=Z,119nm,1.1s
KKM Kota Kinabalu 69.34 285 P **P** **04 26 35.3 +0.7**
UGM Wanagama 69.41 269 P **P** **04 26 34.3 -0.7**
UGM Wanagama 69.41 269 P **P** **04 26 35.2 +0.2**
JMM Marumori 69.82 327 P **P** **04 26 37.0 +0.2**
JMM IAmb IAmb 04 26 38.2
comp=Z,81nm,1.1s
JGF Kuroka 70.00 323 P **P** **04 26 38.1 +0.1**
JGF IAmb IAmb 04 26 38.9
comp=Z,34nm,0.8s
INU Inuyama 70.01 323 P **P** **04 26 38.1 +0.1**
INU IAmb IAmb 04 26 39.2
comp=Z,39nm,1.0s
INU Inuyama 70.01 323 P **P** **04 26 38.9 +0.9**
MJAR Matsushiro Arr 70.20 324 P **P** **04 26 39.4 +0.2**
comp=Z,27nm,0.7s,baz=157,slow=6.0,SNR=51
comp=Z,27nm,0.7s
MAJO Matsushiro 70.21 324 P **P** **04 26 39.4 +0.3**
MAJO IAmb IAmb 04 26 40.2
comp=Z,38nm,0.7s
MAJO Matsushiro 70.21 324 *d*iP **P** **04 26 39.1 -0.1**
MAJO pmax pmax
comp=Z,44nm,0.8s
MAJO Matsushiro 70.21 324 P **P** **04 26 39.1 -0.1**
JMN Monobe 70.72 319 P **P** **04 26 43.0 +0.7**
JMN IAmb IAmb 04 26 44.4
comp=Z,81nm,1.0s
JSU Suzuyama 71.42 316 P **P** **04 26 46.4 -0.1**
JSU IAmb IAmb 04 26 47.4
comp=Z,66nm,0.8s
SBUM Sibu 71.54 280 P **P** **04 26 47.5 +0.1**
SBUM IAmb IAmb 04 26 49.5
comp=Z,20nm,1.0s
SBUM Sibu 71.54 280 P **P** **04 26 48.2 +0.7**
comp=Z,391nmcomp=Z,28nm,1.2s
JHS Saijyo 72.05 320 P **P** **04 26 50.6 +0.6**
ADK Adak 72.48 1 P **P** **04 26 51.9 -0.1**
KSM Kuching 72.93 278 P **P** **04 26 55.9 +0.5**
KSM Kuching 72.93 278 P **P** **04 26 56.0 +0.5**
comp=Z,2μmcomp=Z,189nm,1.0s
KSM Kuching 72.93 278 P **P** **04 26 56.1 +0.6**
YULB Yu-li 73.26 304 P **P** **04 26 56.0 -1.2**
YULB IAmb IAmb 04 26 57.1
comp=Z,39nm,0.6s
JEW Eniwo 73.33 330 P **P** **04 26 58.4 +1.4**
SHEM Shemya Is, Ala 73.58 355 P **P** **04 26 58.5 +0.2**
comp=Z,108nm,0.8s,baz=248,slow=3.2,SNR=4.9
comp=Z,108nm,0.8s
TPUB Ta-pu 73.73 303 P **P** **04 26 58.3 -1.6**
TPUB Ta-pu 73.73 303 P **P** **04 26 58.9 -1.0**
SSLB Suanglung 73.74 304 P **P** **04 26 59.4 -0.5**
TPI Tanjungpandan 73.86 273 P **P** **04 27 01.0 +0.2**
comp=Z,525nmcomp=Z,45nm,1.1s
NIKH Nikolski High 74.04 6 P **P** **04 26 59.8 -1.0**
baz=189
UNV Unalaska Valle 75.15 7 P **P** **04 27 06.0 -1.1**
baz=192
PPBI Pangkal Pinang 75.48 273 P **P** **04 27 10.5 +0.6**
KASI Kota Agung 75.85 269 P **P** **04 27 11.4 -0.5**
comp=Z,161nm,1.1s
YSS Yuzh-Sakhalins 76.00 334 P **P** **04 27 13.4 +1.5**
YSS IAmb IAmb 04 27 14.3
comp=Z,79nm,1.1s
YSS Yuzh-Sakhalins 76.00 334 *e*P **P** **04 27 12.6 +0.7**
YSS pmax pmax
comp=Z,60nm,0.7s
YSS Yuzh-Sakhalins 76.00 334 P **P** **04 27 13.4 +1.5**
comp=Z,84nm,1.1s
QZH Quanzhou 76.18 304⇑ *i*P **P** **04 27 14.4 +1.0**
QZH pmax pmax
comp=Z,93nm,0.9s
PET Petropavlovsk 76.22 346 *e*P **P** **04 27 12.7 -0.2**
PET pmax pmax
comp=Z,77nm,0.8s
LWLI Liwa 76.43 270 P **P** **04 27 14.8 -0.4**
comp=Z,188nm,0.7s
TJN Taejon 76.49 318 *ce*P **P** **04 27 16.9 +2.0**
PEA0B Petropavlovsk- 76.51 346 *ce*P **P** **04 27 14.9 +0.3**
PETK Petropavlovsk- 76.51 346 P **P** **04 27 14.3 -0.3**
comp=Z,50nm,0.7s,baz=138,slow=7.6,SNR=58
comp=Z,50nm,0.7s
PETK Petropavlovsk- 76.51 346 P **P** **04 27 14.4 -0.2**
KSRS Korea Array 76.82 319 P **P** **04 27 17.9 +1.3**
comp=Z,15nm,0.8s,baz=133,slow=6.2,SNR=38
comp=Z,15nm,0.8s
KSAR Wonju Array Be 76.84 319 P **P** **04 27 16.8 +0.1**
KSAR Wonju Array Be 76.84 319 P **P** **04 27 16.8 +0.1**
CHNA Chernabura Isl 77.15 11 P **P** **04 27 17.3 -0.7**
baz=198

SDPT Sand Point 77.49 10 P P 04 27 19.9 +0.1
baz=197
DSRI Dabo 77.54 274 P P 04 27 22.0 +0.9
INCN Inchon 77.64 318 P P 04 27 23.7 +2.6
comp=Z,68nm,1.4s
UGL Uglegorsk 77.98 335 eP P 04 27 23.8 +1.2
UGL pmax pmax
comp=Z,130nm,1.0s
SCZ2 Santa Cruz Isl 78.26 47 P P 04 27 25.8 +1.2
baz=235
KSI Kapahiang 78.27 271 P P 04 27 24.5 -0.7
comp=Z,16µmcomp=Z,303nm,0.9s
MSHR Mys Shultsa 78.32 325 ceP P 04 27 25.7 +1.1
MSHR pmax pmax
comp=Z,42nm,0.8s
SCI2 San Clemente I 78.43 48 P P 04 27 26.9 +1.4
baz=236
SBC Santa Barbara 78.47 46 P P 04 27 26.4 +0.9
baz=235
PKM Mcpherson Peak 78.66 46 P P 04 27 28.4 +1.5
baz=234
SMMC Simmler 78.78 45 P P 04 27 28.7 +1.4
baz=234
MASI Maura Aman, Be 78.78 271 P P 04 27 27.6 -0.2
comp=Z,136nm,1.2s
BTDF Bukit Timah Da 78.95 276 P P 04 27 29.6 +0.9
comp=Z,859nmcomp=Z,98nm,1.1s
USA0B Ussuriysk Arra 78.98 326 P P 04 27 29.3 +1.2
USA0B IAmb IAmb 04 27 30.5
comp=Z,78nm,0.9s
USA0B Ussuriysk Arra 78.98 326 P P 04 27 29.3 +1.2
USA0B pmax pmax
comp=Z,79nm,1.0s
USRK Ussuriysk Ar. 78.98 326 P P 04 27 30.0 +1.9
comp=Z,63nm,0.9s,baz=132,slow=2.8,SNR=54
comp=Z,63nm,0.9s
USRK Ussuriysk Ar. 78.98 326 P P 04 27 29.2 +1.1
MYKOM Kota Tinggi 79.04 276 P P 04 27 29.6 +0.5
MYKOM IAmb IAmb 04 27 31.0
comp=Z,114nm,0.9s
MYKOM Kota Tinggi 79.04 276 P P 04 27 29.8 +0.7
comp=Z,2µmcomp=Z,164nm,1.2s
TYV Tymovskoe 79.18 336 eP P 04 27 29.7 +0.8
TYV eS S 04 36 35.6 -6.1
TYV pmax pmax
comp=Z,91nm,1.2s
TYV pmax pmax
comp=Z,300nm,3.4s
TYV smax smax
comp=N,400nm,6.1s
TYV smax smax
comp=E,200nm,6.1s
KMRM Mail Ridge 79.40 40 P P 04 27 32.3 +1.8
KMRM IAmb IAmb 04 27 34.4
comp=Z,20nm,0.8s
VES Vestal, Richgr 79.69 45 P P 04 27 33.8 +1.8
baz=235
NJ2 Nanjing 79.71 310 eP P 04 27 33.4 +1.2
NJ2 pmax pmax
comp=Z,60nm,1.1s
MURC Murrieta 79.72 48 P P 04 27 34.4 +2.1
baz=236
BFSC Mount Baldy Ra 79.75 47 P P 04 27 34.6 +2.0
baz=236
MONP2 Monument Peak 79.87 49 P P 04 27 34.5 +1.1
baz=237
EDW2 Edwards Air Fo 79.88 47 P P 04 27 35.0 +1.9
baz=236
IKP In-Ko-Pah, Jac 79.97 49 P P 04 27 35.6 +2.0
baz=237
ISA Isabella, Lake 80.00 46 P P 04 27 34.1 +0.3
ISA Isabella, Lake 80.00 46 P P 04 27 34.1 +0.3
ISA pmax pmax
comp=Z,4.0nm,0.9s
ISA Isabella, Lake 80.00 46 P P 04 27 36.1 +2.4
baz=235
R16K Pilot Point 80.11 11 P P 04 27 34.6 +1.0
baz=200
PFO Pinyon Flats O 80.24 48 P P 04 27 36.6 +1.5
baz=237
TPFO Pinon Flats 80.24 48 P P 04 27 36.8 +1.7
baz=237
SDSI Sungai Dareh 80.32 273 P P 04 27 34.6 -1.2
SWSC Sam W. Stewart 80.34 49 P P 04 27 36.9 +1.4
baz=237
MDJ Mudanjiang 80.53 325 P P 04 27 37.2 +1.0
MDJ pmax pmax
comp=Z,94nm,0.9s
MDJ pmax pmax
comp=Z,420nm,9.2s
MDJ Mudanjiang 80.53 325 P P 04 27 37.4 +1.2
comp=Z,95nm,1.0s
CWC Cottonwood Cre 80.70 45 P P 04 27 39.5 +2.0
baz=235
BELC Belle Mtn. Jos 80.77 48 P P 04 27 39.4 +1.4
baz=237
MPMC Manual Prospec 80.88 46 P P 04 27 40.2 +1.7
baz=236
GSC Goldstone, Bar 80.92 47 P P 04 27 38.5 -0.1
baz=236
YBH Yreka Blue Hor 80.93 39 P P 04 27 41.1 +2.6
comp=Z,11nm,0.7s,baz=202,slow=0.9,SNR=50
comp=Z,11nm,0.7s
YBH Yreka Blue Hor 80.93 39 P P 04 27 38.7 +0.2
BC3 Big Chuckawall 80.97 49 P P 04 27 40.6 +1.7
baz=238
HEC Hector,Ludlow 80.99 47 P P 04 27 41.0 +2.0
baz=237
WAKR Walker 81.00 43 P P 04 27 40.0 +1.0
MAW Mawson 81.01 200 P P 04 27 40.0 +1.6
comp=Z,9.0nm,0.8s,baz=177,slow=5.2,SNR=8.4
comp=Z,9.0nm,0.8s
MAW Mawson 81.01 200 P P 04 27 40.1 +1.8
baz=81,SNR=4.8
MAW Mawson 81.01 200 P P 04 27 39.8 +1.5
MAW Mawson 81.01 200 P P 04 27 40.0 +1.6
Q17K Contact Creek 81.08 12 P P 04 27 39.5 +0.6
baz=201
GLA Glamis 81.09 50 P P 04 27 41.7 +2.2
baz=238
BKNI Bangkinang 81.13 274 P P 04 27 43.1 +3.1
comp=Z,98nm,0.5s
PMSA Palmer Station 81.14 157 P P 04 27 39.4 +0.4
comp=Z,8.2nm,0.9s,baz=230,slow=7.9,SNR=2.1
comp=Z,8.2nm,0.9s
PNTR Pine Nut 81.23 42 P P 04 27 41.3 +1.0
KDAK Kodiak Island 81.32 14 P P 04 27 40.7 +0.8
comp=Z,29nm,0.9s,baz=240,slow=7.7,SNR=5.4
comp=Z,29nm,0.9s
KDAK Kodiak Island 81.32 14 P P 04 27 41.0 +1.1
baz=204
Q16K King Salmon 81.32 11 P P 04 27 40.6 +0.7
baz=201
HUMO Hull Mountain 81.33 38 P P 04 27 42.9 +2.4
P16K Nushagak River 81.42 11 P P 04 27 42.0 +1.7
baz=199
GMRC Granite Mounta 81.43 48 P P 04 27 42.8 +1.6
baz=237
IRM Iron Mountain 81.45 49 P P 04 27 43.3 +2.0
baz=238
GRAC Grapevine Rang 81.48 45 P P 04 27 43.6 +2.3
baz=236,SNR=7.7
DBO Dodson Butte 81.49 38 P P 04 27 42.6 +1.3
GWY Greenwater Val 81.50 46 P P 04 27 42.0 +0.4
FURC Furnace Creek, 81.53 46 P P 04 27 42.5 +1.1
baz=236
TUQ Turquoise Moun 81.60 47 P P 04 27 44.3 +2.2
baz=237,SNR=5.0
GRNR Gornyy 81.61 333 ⇓iP P 04 27 42.8 +1.2
GRNR pmax pmax
comp=Z,50nm,1.0s
Q18K Katmai Hardscr 81.61 12 P P 04 27 41.8 +0.2
baz=202
NVAR Mina Array Bea 81.68 44 P P 04 27 44.5 +1.9
comp=Z,4.3nm,0.5s,baz=225,slow=7.8,SNR=70
NVAR pP pwP 04 29 46.7 -1.4
comp=Z,2.3nm,0.9s,baz=232,slow=7.4,SNR=2.7
NVAR PKKPbc PKKPbc 04 46 11.4 +0.4
comp=Z,1.0nm,0.7s,baz=86,slow=2.7,SNR=11
NVAR PKPPKP P'P'df 04 54 21.9 +8.4
comp=Z,1.9nm,1.0s,baz=90,slow=2.3,SNR=9.3
comp=Z,4.3nm,0.5s
NVAR Mina Array Bea 81.68 44 P P 04 27 44.0 +1.4
113A Mohawk Valley, 81.70 50 P P 04 27 43.5 +1.1
P17K Kvichak River 81.85 11 P P 04 27 42.8 +0.2
baz=201
O16K Kokwok River B 81.93 10 P P 04 27 43.0 0.0
baz=199,SNR=6.7
Q20K Shuyak Island 82.12 13 P P 04 27 44.6 +0.6
baz=205
KVN Kaiserville 82.17 43 P P 04 27 46.0 +1.0
KVN Kaiserville 82.17 43 P P 04 27 46.0 +1.0
KVN pmax pmax
comp=Z,8.0nm,0.6s
TPNV Topopah Spring 82.20 46 P P 04 27 47.2 +2.0
baz=237,SNR=9.4
PDMCI Parker Dam,Lak 82.23 49 P P 04 27 46.8 +1.6
baz=238
WHN Wuhan 82.24 307 ⇓P P 04 27 46.2 +0.9
WHN pmax pmax
comp=Z,190nm,1.4s
O17K Koliganek Bris 82.28 11 P P 04 27 46.3 +1.6
baz=200
CN2 Changchun 82.28 323 eP P 04 27 44.3 -0.9
CN2 pmax pmax
comp=Z,70nm,1.1s
CN2 pmax pmax
comp=Z,290nm,3.5s
BUCK Buck Mountain 82.31 37 P P 04 27 47.3 +1.9
BUCK IAmb IAmb 04 27 48.6
comp=Z,21nm,1.0s
MOD Modoc Plateau 82.46 40 P P 04 27 48.2 +1.9
KLR Kul'dur 82.59 330 P P 04 27 48.0 +1.4
comp=Z,22nm,0.9s,baz=111,slow=4.9,SNR=52
comp=Z,22nm,0.9s
KLR Kul'dur 82.59 330 ceP P 04 27 47.7 +1.1
KLR pmax pmax
comp=Z,38nm,1.0s
K05A Summer Lake 82.61 39 P P 04 27 49.2 +2.1
K05A IAmb IAmb 04 27 50.2
comp=Z,32nm,1.0s
K05A pwP 04 29 56.9 +4.1
IPM Ipoh 82.64 278 P P 04 27 48.0 +0.2
IPM IAmb IAmb 04 27 49.6
comp=Z,104nm,0.8s
IPM Ipoh 82.64 278 P P 04 27 48.3 +0.6
comp=Z,1µmcomp=Z,162nm,1.0s
IPM Ipoh 82.64 278 P P 04 27 48.5 +0.8
MNSI Mandailing Nat 82.66 274 P P 04 27 47.1 -0.7
comp=Z,110nm,0.8s
N16K Nishlik Lake 82.66 10 P P 04 27 48.2 +1.5
baz=199,SNR=18
SHPR Sheep Range 82.70 47 P P 04 27 48.8 +1.1
P19K Oil Pt 82.90 13 P P 04 27 47.6 -0.4
baz=204
H04A Detroit Lake 83.06 37 P P 04 27 50.7 +1.5
H04A IAmb IAmb 04 27 51.1
comp=Z,14nm,0.6s
O19K Port Alsworth 83.18 12 P P 04 27 49.6 +0.4
baz=203,SNR=7.2
PINE Pine Mountain 83.23 38 P P 04 27 51.7 +1.5
PINE IAmb IAmb 04 27 53.4
comp=Z,29nm,0.8s
PRN Pahroc Range 83.25 46 P P 04 27 52.7 +2.3
KULM Kulim 83.29 278 P P 04 27 51.5 +0.6
KULM IAmb IAmb 04 27 53.0
comp=Z,97nm,1.1s
KULM Kulim 83.29 278 P P 04 27 51.9 +1.0
comp=Z,1µmcomp=Z,100nm,1.1s
N18K Kilae Creek 83.34 11 P P 04 27 50.2 +0.1
baz=201
R11A Troy Canyon, C 83.41 45 P P 04 27 52.7 +1.5
baz=237
E03A Lebam 83.48 35 P P 04 27 53.3 +2.2
E03A IAmb IAmb 04 27 54.0
comp=Z,26nm,1.0s
BRSE Bradley Lake S 83.51 14 P P 04 27 51.5 +0.5
baz=206
TUC Tucson 83.65 52 P P 04 27 54.7 +2.3
baz=240
N19K Bonanza Creek 83.72 12 P P 04 27 51.6 -0.5
baz=202,SNR=6.1
NLWA Neilton Lookou 83.86 34 P P 04 27 54.4 +1.4
NLWA IAmb IAmb 04 27 56.0
comp=Z,23nm,1.0s
RPSI Rantau Prapat 83.95 275 P P 04 27 54.0 -0.2
RPSI IAmb IAmb 04 27 55.1
comp=Z,73nm,0.9s
PSI Prapat 83.99 275 P P 04 27 54.0 -0.6
PSI pmax pmax
comp=Z,73nm,0.9s
PSI Prapat 83.99 275 P P 04 27 54.0 -0.6
comp=Z,94nm,1.1s
PSI P P 04 27 53.9 -0.6
comp=Z,94nm,1.1s
PSI Prapat 83.99 275 P P 04 27 54.9 +0.4
SKLT Songkhla 84.01 280 P P 04 27 56.1 +1.6
comp=Z,2µmcomp=Z,156nm,0.9s
MA2 Magadan 84.02 345 P P 04 27 53.5 +0.1
comp=Z,26nm,0.7s,baz=128,slow=5.4,SNR=15
comp=Z,26nm,0.7s
MA2 Magadan 84.02 345 P P 04 27 52.8 -0.6
MA2 IAmb IAmb 04 27 53.9
comp=Z,34nm,0.8s
MA2 Magadan 84.02 345 ceP P 04 27 53.1 -0.3
MA2 pmax pmax
comp=Z,42nm,0.8s
MA2 Magadan 84.02 345 P P 04 27 53.5 +0.1
comp=Z,63nm,1.1s
SEW Seward 84.13 14 P P 04 27 54.3 +0.4
baz=207
I07A Izee 84.23 38 P P 04 27 56.8 +1.8
319A Douglas 84.32 54 P P 04 27 57.0 +1.3
CCUT Cedar City 84.47 46 P P 04 27 58.9 +2.4
N20K Mount Spurr 84.52 12 P P 04 27 55.7 -0.3
baz=205,SNR=6.0
GAMB Gambell 84.56 3 P P 04 27 57.6 +1.6
baz=186
GSI Gungungsitoli 84.71 273 P P 04 27 58.9 +0.9
GSI Gunungsitoli 84.71 273 P P 04 27 59.1 +1.2
comp=Z,3µmcomp=Z,313nm,1.1s
GSI Gunungsitoli 84.71 273 P P 04 27 59.4 +1.5
M19K Big River Lodg 84.75 11 P P 04 27 58.0 +1.0
baz=203
WUAZ Wupatki 84.81 49 P P 04 27 59.2 +1.1
baz=240
PGC Sidney 84.88 33 P P 04 27 59.6 +1.7
PGC IAmb IAmb 04 28 00.4
comp=Z,14nm,0.8s
L19K White Mountain 84.92 11 P P 04 27 59.0 +1.2
L19K IAmb IAmb 04 27 59.6
comp=Z,40nm,1.0s
L19K White Mountain 84.92 11 P P 04 27 59.0 +1.2
baz=202,SNR=8.8
ELK Elko 84.94 43 P P 04 27 59.6 +0.9
ELK Elko 84.94 43 P P 04 27 59.6 +0.9
ELK pmax pmax
comp=Z,3.0nm,0.9s
RC01 Rabbit Creek A 84.94 14 P P 04 27 58.6 +0.7
baz=207
M20K Styx River 84.96 12 P P 04 27 58.0 -0.1
M20K Styx River 84.96 12 P P 04 27 58.1 -0.1
baz=204
BBB Bella Bella 85.00 28 P P 04 27 59.5 +1.1
comp=Z,3.9nm,0.6s,baz=194,slow=5.7,SNR=4.1
PWL Port Wells 85.05 14 P P 04 27 58.9 +0.4
baz=208,SNR=5.9
SUA Susitna One 85.06 13 P P 04 27 58.4 -0.3
SUA IAmb IAmb 04 27 59.6
comp=Z,45nm,0.7s
SUA Susitna One 85.06 13 P P 04 27 58.8 +0.1
baz=206,SNR=7.0
G08A Pilot Rock 85.26 38 P P 04 28 01.6 +1.6
G08A IAmb IAmb 04 28 02.6
comp=Z,14nm,0.8s
CRAG Craig 85.29 24 P P 04 28 01.2 +1.6
baz=222
KCSI Kotacane, Aceh 85.32 276 P P 04 28 01.6 +0.7
comp=Z,36nm,0.8s
GLI Glacier Island 85.36 15 P P 04 27 59.6 -0.3
baz=209,SNR=8.9
SKT Skwentna 85.37 12 P P 04 27 59.4 -0.6
baz=205
L20K Farewell, AK 85.37 11 P P 04 28 00.3 +0.2
baz=203
EYAK Cordova Ski Ar 85.41 16 P P 04 28 00.5 +0.4
baz=210
HNS HongShan 85.41 313 ⇓P P 04 28 01.9 +1.2
HNS pP pP 04 30 02.3 -2.0
HNS S S 04 37 48.7 +4.5
HNS sS sS 04 41 24.8 -0.3
HNS pmax pmax
comp=Z,57nm,1.1s
TTA Tatalina 85.42 10 P P 04 28 00.7 +0.4
TTA IAmb IAmb 04 28 02.8
comp=Z,26nm,1.0s
TTA Tatalina 85.42 10 P P 04 28 00.7 +0.4
TTA pmax pmax
comp=Z,26nm,1.0s
TTA Tatalina 85.42 10 P P 04 28 01.2 +0.9
baz=201
M22K Willow 85.45 13 P P 04 28 00.3 0.0
baz=206,SNR=8.6
SRIT Nakonsritamara 85.47 281 P P 04 28 03.5 +1.9
KNK Knik Glacier 85.52 14 P P 04 28 01.1 +0.4
baz=208,SNR=7.4
PMR Palmer 85.53 14 P P 04 28 01.1 +0.4
baz=207,SNR=5.7
LYN LuoYang 85.58 309 ⇓P P 04 28 01.6 0.0
LYN S S 04 37 42.1 -3.8
LYN pmax pmax
comp=Z,50nm,0.9s
MSU Marysvale 85.77 46 P P 04 28 03.5 +0.7
MSU Marysvale 85.77 46 P P 04 28 03.5 +0.7
V35K Ketchikan 85.77 25 P P 04 28 04.0 +2.1
baz=223,SNR=5.2
U33K Whale Pass 85.78 24 P P 04 28 03.7 +1.7
baz=222
BJI Beijing 85.79 316 P P 04 28 03.0 +0.5
BJI PP PP 04 31 30.4 -2.8
BJI pmax pmax
comp=Z,34nm,1.3s
SML Sawmill 85.89 14 P P 04 28 02.8 +0.3
baz=208
CUT Chulitna 86.01 13 P P 04 28 03.2 +0.2
baz=206,SNR=9.5
M23K Glacier View 86.02 14 P P 04 28 03.2 +0.2
baz=209
MFID Camas Ranch 86.03 40 P P 04 28 05.1 +1.3
BMRM Bremner River 86.06 16 P P 04 28 04.1 +0.8
BMRM IAmb IAmb 04 28 04.9
comp=Z,49nm,1.0s
BMRM Bremner River 86.06 16 P P 04 28 03.9 +0.6
baz=212,SNR=5.8
PPLA Purkeypile 86.07 12 P P 04 28 03.0 -0.4
baz=205
MESA MESA 86.10 17 P P 04 28 05.1 +1.3
baz=214
SCM Sheep Creek Mo 86.14 14 P P 04 28 04.2 +0.5
baz=209,SNR=13
K20K Telida 86.15 11 P P 04 28 03.6 -0.1
K20K IAmb IAmb 04 28 04.5
comp=Z,18nm,0.8s
K20K Telida 86.15 11 P P 04 28 03.9 +0.2
baz=203,SNR=6.5
KLU Klutina 86.18 15 P P 04 28 04.5 +0.6
baz=210
DUG Dugway, Tooele 86.21 44 P P 04 28 07.3 +2.6
baz=239
S32K Killisnoo 86.27 22 P P 04 28 05.8 +1.5
baz=220
WRAK Wrangell Islan 86.29 24 P P 04 28 06.1 +1.6
baz=222,SNR=5.3
D08A Wollman Farm, 86.32 36 P P 04 28 06.3 +1.4
D08A IAmb IAmb 04 28 07.6
comp=Z,25nm,1.0s
GYA Guiyang 86.37 300 ⇑iP P 04 28 07.1 +1.4
GYA pmax pmax
comp=Z,51nm,0.9s
PNL Peninsula 86.42 19 P P 04 28 06.0 +1.0
baz=216
PINM Pinnacle 86.52 18 P P 04 28 06.2 +0.6
baz=216
CAST Castle Rocks 86.57 12 P P 04 28 04.3 -1.4
CAST IAmb IAmb 04 28 05.7
comp=Z,42nm,0.8s
CAST Castle Rocks 86.57 12 P P 04 28 04.8 -0.9
baz=205,SNR=25
N25K Chitina, Valde 86.60 16 P P 04 28 06.7 +0.8
N25K IAmb IAmb 04 28 07.2
comp=Z,33nm,0.6s
N25K Chitina, Valde 86.60 16 P P 04 28 06.8 +0.9
baz=212,SNR=10
SEY Seymchan 86.63 347 P P 04 28 06.7 +0.8
comp=Z,52nm,0.8s,baz=145,slow=5.5,SNR=113
comp=Z,52nm,0.8s
SEY Seymchan 86.63 347 ceP P 04 28 06.2 +0.3
SEY pmax pmax
comp=Z,97nm,1.2s
F10A Beach Ranch, E 86.64 38 P P 04 28 07.4 +0.9
F10A IAmb IAmb 04 28 08.6
comp=Z,37nm,0.8s
M24K Tolsona, Glenn 86.65 15 P P 04 28 07.4 +1.2
M24K IAmb IAmb 04 28 08.2
comp=Z,42nm,0.8s
M24K Tolsona, Glenn 86.65 15 P P 04 28 06.9 +0.8
baz=210
WAT6 Susitna Watana 86.71 14 P P 04 28 06.9 +0.4
baz=209,SNR=17
WAT1 Susitna Watana 86.75 13 P P 04 28 06.7 +0.1
baz=208
MCARA McCarthy VSAT 86.82 16 P P 04 28 08.0 +1.2
baz=213,SNR=5.5
MLSI Meulaboh, Aceh 86.86 276 P P 04 28 09.2 +1.0
comp=Z,66nm,1.3s
B08A Colville Reser 86.86 35 P P 04 28 08.2 +0.8
B08A IAmb IAmb 04 28 09.3
comp=Z,20nm,0.7s
J20K Nowinta River 86.90 10 P P 04 28 07.7 +0.6
J20K IAmb IAmb 04 28 08.1
comp=Z,20nm,0.9s
J20K Nowinta River 86.90 10 P P 04 28 07.8 +0.6
baz=203,SNR=11
P29M Windy Craggy 86.90 19 P P 04 28 08.4 +1.1
baz=218
R32K Eaglecrest 86.90 22 P P 04 28 08.1 +0.8
baz=221
LLLB Lilloet 86.91 32 P P 04 28 09.0 +1.4
LLLB IAmb IAmb 04 28 09.9
comp=Z,18nm,1.0s
CTG Chitna Glacier 86.92 17 P P 04 28 08.4 +0.9
baz=214,SNR=6.5
TRF Thorofare Moun 86.94 12 P P 04 28 07.5 -0.1
TRF Thorofare Moun 86.94 12 P P 04 28 07.4 -0.2
baz=206,SNR=34
CHUM Lake Minchumin 86.95 11 P P 04 28 07.1 -0.3
baz=204,SNR=7.8
HLID Hailey 86.98 41 P P 04 28 09.5 +1.2
HLID Hailey 86.98 41 P P 04 28 10.3 +2.0
baz=237,SNR=13
GCSA Galena City Sc 86.99 9 P P 04 28 08.4 +0.8
baz=200,SNR=6.8
BESE Bessie Mountai 87.02 21 P P 04 28 09.2 +1.2
BESE IAmb IAmb 04 28 10.5
comp=Z,24nm,1.0s
O28M Mount Upton 87.09 18 P P 04 28 09.0 +0.6
baz=216,SNR=9.6
TIY Taiyuan 87.14 312 P P 04 28 10.2 +1.2
TIY pmax pmax
comp=Z,34nm,0.5s
TIY pmax pmax
comp=Z,250nm,5.1s
HARP HAARP 87.15 15 P P 04 28 09.0 +0.6
baz=211
O29M Mount Kennedy 87.18 19 P P 04 28 09.8 +1.1
baz=217
PLBC Pleasant Camp 87.20 20 P P 04 28 09.8 +1.1
baz=219,SNR=5.8
DHY Denali Highway 87.22 14 P P 04 28 08.7 -0.2
DHY IAmb IAmb 04 28 20.2
comp=Z,13nm,0.8s
DHY Denali Highway 87.22 14 P P 04 28 08.7 -0.2
baz=209,SNR=5.6
Y22A Socorro 87.24 52 P P 04 28 11.6 +1.9
baz=242
TROLL Troll, Antarti 87.34 180 P SKSac 04 37 40.0 -2.0
TROLL Troll, Antarti 87.34 180 P P 04 28 10.0 +0.5
MCK McKinley 87.47 13 P P 04 28 10.1 +0.2
MCK IAmb IAmb 04 28 11.8
comp=Z,49nm,0.8s
MCK McKinley 87.47 13 P P 04 28 10.1 +0.2
MCK pmax pmax
comp=Z,49nm,0.8s
MCK McKinley 87.47 13 P P 04 28 09.6 -0.3
baz=208,SNR=20
T35M Bob Quinn 87.50 24 P P 04 28 11.8 +1.6
baz=224
P30M Million Dollar 87.53 19 P P 04 28 12.1 +1.8
baz=218,SNR=9.2
SKAG Skagway 87.54 21 P P 04 28 12.2 +2.0

baz=220,SNR=5.3
PAX Paxson 87.56 14 P **P 04 28 10.2 -0.2**
baz=211
BNM Barren Site 87.58 52 P **P 04 28 13.2 +1.8**
YUK8 Steele Glacier 87.63 18 P **P 04 28 12.0 +1.0**
baz=216,SNR=21
SNAA Sanae 87.63 179 P **SKSac 04 37 41.4 -2.2**
SNAA Sanae 87.63 179 P **P 04 28 10.9 +0.1**
SNAA Sanae 87.63 179 P **P 04 28 10.9 +0.1**
SNAA Sanae 87.63 179 P **P 04 28 10.9 +0.1**
SNAA pmax pmax
comp=Z,3.0nm,1.0s
M26K Nabesna, AK 87.68 16 P **P 04 28 12.1 +1.1**
M26K IAmb IAmb 04 28 12.9
comp=Z,44nm,1.1s
M26K Nabesna, AK 87.68 16 P **P 04 28 11.7 +0.8**
baz=213,SNR=19
ZEA Zeya 87.71 331 *e*P **P 04 28 12.1 +0.9**
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.1s
TX31 Lajitas Ar. Si 87.72 58 P **P 04 28 12.3 +0.3**
baz=244
TXAR Lajitas Array 87.72 58 P **P 04 28 14.4 +2.4**
comp=Z,3.4nm,0.8s,baz=217,slow=6.2,SNR=45
TXAR pP **pwP 04 30 18.6 -0.8**
comp=Z,5.9nm,1.1s,baz=220,slow=6.9,SNR=4.1
TXAR PKKPbc **PKKPbc 04 45 57.0 +0.9**
comp=Z,1.6nm,0.8s,baz=167,slow=3.0,SNR=16
comp=Z,3.4nm,0.8s
TXAR Lajitas Array 87.72 58 P **P 04 28 13.4 +1.4**
HWUT Hardware Ranch 87.75 44 P **P 04 28 13.1 +1.1**
YUK6 Outpost Mounta 87.76 18 P **P 04 28 12.5 +0.9**
baz=217
VNA3 Neumayer Olymp 87.79 176 P **SKSac 04 37 42.6 -1.8**
VNA3 Neumayer Olymp 87.79 176 P **P 04 28 11.9 +0.4**
YUK3 Moose Creek 87.83 17 P **P 04 28 13.0 +1.1**
baz=215,SNR=30
S34M Telegraph Cree 87.84 23 P **P 04 28 13.2 +1.5**
baz=224,SNR=13
XLT XiLinHaoTe 87.88 319⇑ *i*P **P 04 28 12.8 +0.5**
XLT pmax pmax
comp=Z,27nm,0.8s
XLT pmax pmax
comp=Z,300nm,6.8s
HYT Haines Junctio 87.92 19 P **P 04 28 13.5 +1.3**
HYT IAmb IAmb 04 28 14.3
comp=Z,21nm,0.9s
HYT Haines Junctio 87.92 19 P **P 04 28 13.2 +1.1**
baz=218,SNR=8.2
M27K Edge Creek, AK 87.93 16 P **P 04 28 13.4 +1.2**
baz=214
XAN Xi'an 87.94 308⇓ *i*P **P 04 28 13.8 +1.0**
XAN S **S 04 38 08.8 +0.6**
XAN sS sS 04 41 53.3 +3.4
XAN pmax pmax
comp=Z,100nm,1.1s
YUK4 Talbot Arm 88.00 18 P **P 04 28 13.7 +1.1**
baz=217,SNR=8.3
NEW Newport 88.01 36 P **P 04 28 13.5 +0.7**
NEW Newport 88.01 36 P **P 04 28 13.5 +0.7**
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 88.01 36 P **P 04 28 13.8 +1.0**
baz=235,SNR=7.3
SRDT SRDT 88.04 286 P **P 04 28 14.5 +0.9**
comp=Z,699nmcomp=Z,62nm,1.1s
ANMO Albuquerque 88.07 51 P **P 04 28 14.6 +1.0**
ANMO Albuquerque 88.07 51 *i* P **P 04 28 13.3 -0.3**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 88.07 51 P **P 04 28 15.1 +1.5**
baz=243
ANMO Albuquerque 88.07 51 P **P 04 28 14.8 +1.2**
baz=243
L26K Log Cabin Wild 88.12 15 P **P 04 28 13.9 +0.9**
baz=213,SNR=11
P32M Atlin 88.17 21 P **P 04 28 14.6 +1.3**
baz=221,SNR=5.5
I21K Tanana 88.19 11 P **P 04 28 13.2 0.0**
baz=205,SNR=16
Q32M Nakina River 88.20 22 P **P 04 28 14.8 +1.2**
baz=222,SNR=7.2
NEA2 Nenana 88.21 12 P **P 04 28 12.8 -0.5**
baz=207,SNR=11
K24K Donnelly Dome 88.22 14 P **P 04 28 14.2 +0.8**
baz=210,SNR=14
VNA2 Neumayer--Watz 88.22 177 P **SKSac 04 37 46.1 -0.9**
VNA2 Neumayer--Watz 88.22 177 P **P 04 28 14.1 +0.7**
baz=175,slow=3.7
BVCY Beaver Creek 88.25 17 P **P 04 28 14.4 +0.9**
baz=215,SNR=12
MLY Manley 88.28 11 P **P 04 28 13.4 -0.3**
MLY IAmb IAmb 04 28 14.1
comp=Z,25nm,0.7s
MLY Manley 88.28 11 P **P 04 28 12.9 -0.8**
baz=206,SNR=22
NVL N'lazarevskaya 88.30 183⇑ *i*P **P 04 28 13.2 -0.6**
NVL pmax pmax
comp=Z,19nm,0.8s
O30N Mendenhall 88.31 19 P **P 04 28 15.3 +1.4**
baz=219,SNR=14
RIDG Independent Ri 88.37 14 P **P 04 28 14.2 +0.1**
baz=211
GDL2 Guadalupe Moun 88.42 55 P **P 04 28 16.1 +0.9**
VNA1 Neumayer--Stat 88.45 177 P **P 04 28 15.3 +0.8**
HDA Harding Lake 88.49 13 P **P 04 28 15.0 +0.4**
HDA Harding Lake 88.49 13 P **P 04 28 14.5 0.0**
baz=209,SNR=30
H21K Melozitna Rive 88.49 10 P **P 04 28 15.5 +0.9**
H21K IAmb IAmb 04 28 16.1
comp=Z,23nm,0.8s
H21K Melozitna Rive 88.49 10 P **P 04 28 15.0 +0.4**
baz=204,SNR=18
L27K Beaver Creek, 88.53 16 P **P 04 28 15.5 +0.7**
baz=214,SNR=11
N30M Aishikik Lake 88.54 19 P **P 04 28 15.8 +0.8**
baz=218,SNR=8.3
BCAR Beaver Creek A 88.55 16 P **P 04 28 16.0 +1.1**
MCMT McKenzie Canyo 88.60 40 P **P 04 28 17.0 +1.1**
WHY Whitehorse 88.60 20 P **P 04 28 16.8 +1.4**
WHY IAmb IAmb 04 28 17.6
comp=Z,18nm,0.8s
WHY Whitehorse 88.60 20 P **P 04 28 16.6 +1.3**
baz=220,SNR=8.9
DLBC Dease Lake 88.62 23 P **P 04 28 17.2 +1.8**
comp=Z,11nm,0.9s,baz=222,slow=5.7,SNR=17
comp=Z,11nm,0.9s
DLBC Dease Lake 88.62 23 P **P 04 28 16.9 +1.5**
DLBC IAmb IAmb 04 28 17.9
comp=Z,12nm,0.8s
DLBC Dease Lake 88.62 23 P **P 04 28 16.7 +1.3**
baz=224,SNR=7.3
I23K Minto, Yukon-K 88.65 12 P **P 04 28 15.6 +0.3**
baz=207,SNR=8.9
TCOL CIGO, UAF Yank 88.70 13 P **P 04 28 15.3 -0.2**
baz=208,SNR=11
COLA College 88.71 13 *i* P **P 04 28 15.2 -0.3**
COLA pmax pmax
comp=Z,50nm,0.7s
COLA College 88.71 13 P **P 04 28 15.4 -0.1**
baz=208
SCRK Sand Creek 88.78 15 P **P 04 28 16.7 +0.7**
SCRK IAmb IAmb 04 28 17.6
comp=Z,20nm,0.9s
SCRK Sand Creek 88.78 15 P **P 04 28 16.8 +0.7**
baz=212,SNR=15
ILAR Eielson Array 88.82 13 P **P 04 28 15.8 -0.3**
comp=Z,20nm,0.8s,baz=223,slow=5.4,SNR=101
ILAR PKiKP **PKiKP 04 33 10.8 -0.6**
comp=Z,0.6nm,0.5s,baz=266,slow=3.4,SNR=5.8
comp=Z,20nm,0.8s
M29M Somme Creek 88.93 17 P **P 04 28 17.6 +0.8**
baz=217,SNR=29
P33M Teslin, Yukon 88.94 21 P **P 04 28 18.0 +1.1**
P33M IAmb IAmb 04 28 18.8
comp=Z,13nm,1.1s
P33M Teslin, Yukon 88.94 21 P **P 04 28 17.8 +0.9**
baz=222,SNR=6.1
H22K Ishtalitna Cre 88.95 11 P **P 04 28 17.1 +0.4**
baz=205,SNR=33
N31M Braeburn, Yuko 88.96 19 P **P 04 28 17.9 +1.0**
baz=219,SNR=12
R33M Jennings River 88.97 22 P **P 04 28 18.6 +1.5**
baz=224,SNR=8.1
J25K Salcha River, 89.00 14 P **P 04 28 17.2 +0.1**
baz=211,SNR=18
POKR Poker Plat Res 89.00 13 P **P 04 28 16.7 -0.3**
baz=209,SNR=8.0
MSO Missoula 89.01 38 P **P 04 28 17.9 +0.3**
baz=238
KMI Kunming 89.04 297⇓ P **P 04 28 20.0 +1.6**
KMI pmax pmax
comp=Z,59nm,1.2s
KMI pmax pmax
comp=Z,180nm,3.5s
S22A 4UR Ranch, Cre 89.08 49 P **P 04 28 19.1 +0.7**
S22A 4UR Ranch, Cre 89.08 49 P **P 04 28 19.5 +1.1**
baz=242
G21K Allakaket 89.16 10 P **P 04 28 18.3 +0.6**
baz=203,SNR=28
H23K Yukon River 89.22 12 P **P 04 28 17.4 -0.6**
H23K IAmb IAmb 04 28 19.1
comp=Z,11nm,0.8s
H23K Yukon River 89.22 12 P **P 04 28 17.9 -0.1**
baz=207,SNR=6.4
O20A White River Ci 89.22 46 P **P 04 28 18.7 -0.1**
baz=242
HHC Hu-ho-hao-te 89.24 315 *e*P **P 04 28 19.6 +0.8**
HHC pmax pmax
comp=Z,66nm,1.2s
HHC pmax pmax
comp=Z,350nm,6.2s
K27K Chicken 89.28 15 P **P 04 28 18.8 +0.6**
baz=214
J26L Joseph Creek 89.32 14 P **P 04 28 19.3 +0.7**
baz=212,SNR=40
MOOW Moose Ponds 89.35 42 P **P 04 28 20.8 +1.4**
BILL Bilibino 89.37 354 *e*P **P 04 28 18.8 +0.2**
BILL *e**PP **pP 04 30 24.4 0.0**
BILL *e**SP **sP 04 31 21.9 -0.1**
BILL pmax pmax
comp=Z,25nm,1.1s
PLCA Paso Flores 89.40 134 PKKPbc PKKPbc 04 45 52.0 -0.3
comp=Z,3.6nm,1.1s,baz=56,slow=2.7,SNR=4.6
H24K Noodor Dome 89.55 12 P **P 04 28 18.4 -1.1**
H24K Noodor Dome 89.55 12 P **P 04 28 18.9 -0.6**
baz=208
N32M Quiet Lake 89.55 20 P **P 04 28 21.8 +2.1**
baz=222
L29M L29M 89.55 17 P **P 04 28 20.7 +1.1**
baz=217,SNR=27
BW06 Boulder Array 89.62 43 P **P 04 28 21.2 +0.6**
baz=241
PDAR Pinedale Array 89.62 43 P **P 04 28 21.9 +1.2**
comp=Z,7.1nm,0.6s,baz=216,slow=3.6,SNR=85
PDAR pP **pP 04 30 27.1 +1.2**
comp=Z,0.5nm,0.7s,baz=188,slow=0.6,SNR=2.0
PDAR PP **PP 04 32 03.0 -0.6**
comp=Z,0.6nm,0.9s,baz=232,slow=4.4,SNR=4.1
PDAR PKKPbc **PKKPbc 04 45 50.8 -1.5**
comp=Z,0.8nm,0.7s,baz=69,slow=3.8,SNR=8.6
comp=Z,7.1nm,0.6s
CMAR Chiang Mai Arr 89.73 290 P **P 04 28 23.2 +1.8**
comp=Z,44nm,0.9s,baz=124,slow=3.0,SNR=184
CMAR PP **PP 04 32 06.5 +1.8**
comp=Z,2.1nm,0.6s,baz=132,slow=5.9,SNR=7.6
comp=Z,44nm,0.9s
CMAR Chiang Mai Arr 89.73 290 P **P 04 28 21.8 +0.4**
BOZ Bozeman (W) 89.74 40 P **P 04 28 22.6 +1.6**
baz=239,SNR=8.3
PRP Porcupine Dome 89.75 13 P **P 04 28 20.8 +0.2**
baz=211,SNR=11
H17A Grant Village 89.78 42 P **P 04 28 24.4 +3.0**
baz=240
YHH Holmes Hill 89.80 41 P **P 04 28 22.6 +1.0**
F21K Alatna River 89.82 10 P **P 04 28 20.8 +0.1**
baz=203
G22K Bettles 89.86 10 P **P 04 28 21.3 +0.5**
baz=205
M31M Drury Creek, Y 89.93 19 P **P 04 28 21.9 +0.6**
baz=221
DAWY Dawson 89.98 16 P **P 04 28 22.1 +0.5**
baz=216,SNR=25
SDCO Great Sand Dun 90.02 49 P **P 04 28 23.9 +1.3**
SDCO Great Sand Dun 90.02 49 P **P 04 28 23.8 +1.0**
baz=243
SDCO Great Sand Dun 90.02 49 P **P 04 28 24.0 +1.3**
baz=243
I26K Coal Creek Min 90.09 14 P **P 04 28 22.4 +0.4**
baz=213
EGAK Eagle 90.12 15 P **P 04 28 22.9 +0.7**
baz=215,SNR=30
WTLY Watson Lake, Y 90.26 22 P **P 04 28 23.7 +0.8**
baz=226
FARO Faro, Yukon 90.28 19 P **P 04 28 23.4 +0.4**
baz=222
F22K John River 90.28 10 P **P 04 28 23.3 +0.4**
baz=204
K29M Barlow Dome 90.30 17 P **P 04 28 24.4 +1.2**
baz=218,SNR=19
H25K Birch Creek 90.34 13 P **P 04 28 23.5 +0.4**
baz=210
COLD Coldfoot 90.36 11 P **P 04 28 24.0 +0.8**
baz=206
MSTX Muleshoe 90.38 54 P **P 04 28 24.9 +0.6**
baz=245
G24K Hadweenzic Riv 90.39 12 P **P 04 28 23.2 -0.1**
baz=209
PZH PanZhiHua 90.41 298 P **P 04 28 25.4 +0.8**
PZH pmax pmax
comp=Z,50nm,1.0s
PZH pmax pmax
comp=Z,100nm,4.3s
T25A Trinidad 90.53 50 P **P 04 28 25.9 +0.9**
baz=244
CD2 Chengdu 90.54 303 P **P 04 28 26.0 +1.0**
CD2 pmax pmax
comp=Z,20nm,1.0s
MAYO Mayo, Yukon 90.56 18 P **P 04 28 26.3 +2.1**
baz=219,SNR=7.3
J29M Klondike Camp 90.60 16 P **P 04 28 25.5 +1.0**
baz=217
I27K Kandik River 90.70 14 P **P 04 28 25.1 +0.3**
baz=214,SNR=6.0
E22K Anaktuvuk Pass 90.92 10 P **P 04 28 26.2 +0.3**
baz=205
RLMT Red Lodge 90.95 41 P **P 04 28 28.4 +1.7**
baz=241
F24K Squaw Lake 91.03 11 P **P 04 28 27.1 +0.8**
baz=208
N23A Red Feather La 91.13 46 P **P 04 28 28.8 +1.1**
baz=243
E23K Chandalar 91.21 10 P **P 04 28 27.9 +0.7**
baz=207
MMPY Sheldon Lake, 91.22 20 P **P 04 28 28.7 +1.4**
baz=223,SNR=8.8
H27K Steamboat Moun 91.24 14 P **P 04 28 28.2 +0.8**
baz=214
I29M Ogilvie Camp, 91.31 16 P **P 04 28 28.1 +0.5**
baz=217
G26K Porcupine Rive 91.35 13 P **P 04 28 29.1 +1.3**
baz=212
E24K Your Creek 91.42 11 P **P 04 28 29.6 +1.5**
baz=208
TGTN Hyland Airport 91.43 22 P **P 04 28 30.0 +1.6**
baz=226,SNR=6.2
F25K Christian Rive 91.52 12 P **P 04 28 30.1 +1.5**
baz=210
K22A Casper 91.53 45 P **P 04 28 30.7 +1.3**
baz=243
K22A Casper 91.53 45 P **P 04 28 30.3 +0.9**
baz=243
BMAR Burnt Mountain 91.59 12 P **P 04 28 30.0 +1.1**
G27K Doyon Strip 91.69 14 P **P 04 28 30.1 +0.7**
baz=214
TOLK Toolik Lake Re 91.74 10 P **P 04 28 30.4 +0.8**
baz=207
D23K Nanushuk River 91.85 10 P **P 04 28 31.1 +1.1**
baz=206
E25K Arctic Village 91.99 12 P **P 04 28 31.7 +1.0**
baz=211
YAK Yakutsk 92.27 338 P **P 04 28 32.0 -0.1**
comp=Z,23nm,0.5s,baz=274,slow=0.5,SNR=9.3
comp=Z,23nm,0.5s
YAK Yakutsk 92.27 338 *e*P **P 04 28 31.2 -0.9**
YAK *e*S **SKSac 04 38 15.6 +6.0**
YAK *e* 04 38 51.0
YAK *e*SS **SS 04 45 11.9 -2.8**
YAK *e*SSS SSS 04 49 03.1
YAK pmax pmax
comp=Z,46nm,0.7s
YAK pmax pmax
comp=N,5.0nm,0.8s
YAK pmax pmax
comp=E,11nm,0.9s
YAK smax smax
comp=N,15nm,1.5s
YAK smax smax
comp=E,15nm,1.6s
D24K Happy Valley 92.32 10 P **P 04 28 32.8 +0.6**
baz=208
EPYK Eagle Plains 92.51 16 P **P 04 28 33.8 +0.7**
baz=219
LZH Lanzhou 92.58 308⇓ P **P 04 28 35.7 +1.3**
LZH pmax pmax
comp=E,53nm,1.1s
C23K Itkillik River 92.65 9 P **P 04 28 34.5 +0.9**
baz=206
EDM Edmonton 92.73 33 P **P 04 28 35.0 +0.5**
EDM IAmb IAmb 04 28 35.4
comp=Z,7.4nm,0.7s
EDM Edmonton 92.73 33 P **P 04 28 35.0 +0.5**
EDM pmax pmax
comp=Z,7.0nm,0.7s
C24K Franklin Bluff 92.84 10 P **P 04 28 35.4 +0.8**
baz=208
E27K Coleen River 92.85 13 P **P 04 28 35.6 +1.0**
baz=214
G30M tAoh Zraii Nji 93.11 15 P **P 04 28 35.7 -0.2**
baz=219
A21K Barrow 93.22 7 P **P 04 28 38.9 +2.7**
baz=200
LAO LASA Array 93.56 41 P **P 04 28 39.7 +1.2**
baz=243
LAO LASA Array 93.56 41 P **P 04 28 39.5 +1.0**
baz=243
C27K Jago River 93.64 12 P **P 04 28 39.3 +1.1**
baz=212
C26K Camden Bay 93.66 11 P **P 04 28 39.7 +1.5**
baz=211
RSSD Black Hills 93.81 44 P **P 04 28 40.3 +0.5**
baz=244
RSSD Black Hills 93.81 44 P **P 04 28 39.9 0.0**
baz=244
F31M Tsiigehtchic 94.08 16 P **P 04 28 40.6 +0.4**
baz=221
INK Inuvik 94.79 15 P **P 04 28 43.6 +0.2**
comp=Z,7.9nm,0.9s,baz=172,slow=6.1,SNR=8.4
comp=Z,7.9nm,0.9s
INK Inuvik 94.79 15 P **P 04 28 43.2 -0.2**
INK IAmb IAmb 04 28 44.4
comp=Z,12nm,1.1s
INK Inuvik 94.79 15 P **P 04 28 43.6 +0.2**
baz=222
ULN Ulaanbaatar 95.30 319 *i* P **P 04 28 46.1 -0.4**
ULN pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 95.30 319 P **P 04 28 46.6 +0.1**
DGMT Dagmar 95.57 40 P **P 04 28 48.9 +1.4**
baz=245
DGMT Dagmar 95.57 40 P **P 04 28 48.1 +0.6**
baz=245
SONM Songino Array 95.69 319 P **P 04 28 47.8 -0.4**
comp=Z,2.4nm,0.9s,baz=124,slow=1.8,SNR=9.8
SONM PP **PP 04 32 46.7 -3.4**
comp=Z,2.6nm,0.9s,baz=121,slow=7.6,SNR=7.5
comp=Z,2.4nm,0.9s
GTA Gaotai 96.80 309⇓ P **P 04 28 53.7 +0.3**
GTA PP **PP 04 33 03.9 +5.1**
GTA pmax pmax
comp=Z,12nm,1.5s
YKA Yellowknife Ar 97.09 25 P **P 04 28 54.4 +0.5**
comp=Z,2.4nm,0.7s,baz=240,slow=4.4,SNR=5.8
comp=Z,2.4nm,0.7s
ZAK Zakamensk 98.59 321 *e*P Pdif 04 29 01.0 0.0
ZAK pmax pmax
comp=Z,4.0nm,1.2s
ECSD EROS Data Cent 98.60 47 P **P 04 29 01.4 +0.2**
baz=249
TIXI Tiksi 98.99 345 *i* P Pdif 04 29 01.7 -0.4
TIXI pmax pmax
comp=Z,5.0nm,1.2s
LPAZ La Paz 102.41 113 PKKPbc PKKPbc 04 45 15.7 -2.1
comp=Z,1.4nm,0.7s,baz=79,slow=5.2,SNR=7.9
RAMN Ramite 103.29 294 *e*P **PKiKP 04 33 37.7 -0.6**
comp=Z,13nm,0.7s
JIRN Jiri 103.85 295 *e*P **PKiKP 04 33 38.6 -0.8**
comp=Z,20nm,0.8s
GUN Gumba 104.18 295 *e*P **PKiKP 04 33 39.4 -0.6**
PKI Pulchoki 104.49 294 *e*P **PKiKP 04 33 39.4 -1.2**
comp=Z,15nm,0.7s
PKIN Phulchoki 104.50 294 *e*P **PKiKP 04 33 39.4 -1.1**
comp=Z,14nm,0.7s
GOGA Godfrey 105.31 60 P **PKiKP 04 33 40.1 -1.4**
baz=255
DANN Dangsing 106.10 295 *e*P **PKiKP 04 33 42.4 -1.1**
comp=Z,28nm,0.7s
PYUN Piuthan 106.69 294 *e*P **PKiKP 04 33 43.3 -1.2**
comp=Z,7.6nm,0.7s
M53A WI Miller and 109.30 52 P **PKiKP 04 33 50.2 +1.5**
baz=259
ZSN Zaisan 109.44 314 *e*PKiKP **PKiKP 04 33 47.9 -0.9**
baz=314
ZALV Zalesovo Beam 110.46 321 PKiKP **PKiKP 04 33 49.6 -0.9**
comp=Z,8.3nm,0.6s,baz=163,slow=1.1,SNR=35
NRIK Noril'sk 110.72 338*c i*PKiKP **PKiKP 04 33 50.7 +0.2**
MKAR Makanchi Array 111.07 313 Pdiff **Pdif 04 29 59.8 +3.2**
comp=Z,1.2nm,0.7s,baz=129,slow=3.4,SNR=4.9
MKAR PKiKP **PKiKP 04 33 51.2 -0.7**
comp=Z,6.9nm,0.7s,baz=69,slow=2.1,SNR=32
MKAR PKKPbc **PKKPbc 04 44 51.3 0.0**
comp=Z,1.1nm,0.8s,baz=275,slow=5.6,SNR=4.5
UZB Uzynbulak 112.86 309 *i* PKiKP **PKiKP 04 33 54.1 -1.5**
UZB Uzynbulak 112.86 309 *e*PKiKP **PKiKP 04 33 54.2 -1.5**
baz=309
KPKS Kokpek 113.15 309 *i* PKiKP **PKiKP 04 33 54.7 -1.4**
KPKS Kokpek 113.15 309 *e*PKiKP **PKiKP 04 33 54.7 -1.4**
baz=310
SATY Saty 113.30 309 *i* PKiKP **PKiKP 04 33 55.2 -1.2**
SATY Saty 113.30 309 *e*PKiKP **PKiKP 04 33 55.2 -1.2**
baz=309
KURK Kurchatov 113.91 317*c i*PKiKP **PKiKP 04 33 56.4 -0.8**
KURK pmax pmax
comp=Z,24nm,1.3s
KURBB Kurchatov Arra 113.96 317 PKiKP **PKiKP 04 33 56.3 -1.0**
comp=Z,9.7nm,0.7s,baz=92,slow=1.9,SNR=89
KURBB PP **PP 04 34 57.4 -5.4**
comp=Z,3.1nm,1.1s,baz=106,slow=4.9,SNR=7.1
KURBB SKP **SKPdf 04 36 38.3 +0.1**
comp=Z,1.7nm,0.8s,baz=91,slow=2.1,SNR=5.6
MDOK Medeo 114.30 309 *i* PKiKP PKPdf 04 33 56.9 -1.5
MDOK Medeo 114.30 309 *e*PKiKP PKPdf 04 33 57.0 -1.4
baz=309
CHKK Chushkaly 114.42 310 *i* PKiKP PKPdf 04 33 57.1 -1.3
CHKK Chushkaly 114.42 310 *e*PKiKP PKPdf 04 33 57.1 -1.3
baz=310
NRN Naryn 114.88 307 **PKiKP 04 33 59.8 0.0**
NRN Naryn 114.88 307 PKiKP **PKiKP 04 33 59.8 0.0**
KUU Kurty 114.89 310 *i* PKiKP PKPdf 04 33 57.7 -1.6
KUU Kurty 114.89 310 *e*PKiKP PKPdf 04 33 57.7 -1.6
baz=310
BOOM Boomskoye usch 115.04 308 PKPdf **PKPdf 04 33 59.5 -0.4**
BOOM Boomskoye usch 115.04 308 PKiKP **PKPdf 04 33 59.5 -0.4**
L61B Northampton 115.34 52 P **PKPdf 04 33 60.0 -0.2**
baz=264
LBNH Lisbon 116.05 50 P **PKPdf 04 34 00.9 -0.6**
baz=266
SGDS Sogindy 116.08 309 *i* PKiKP **PKPdf 04 34 00.1 -1.6**
SGDS Sogindy 116.08 309 *e*PKiKP **PKPdf 04 34 00.2 -1.5**
baz=309
AAK Ala-Archa 116.11 308 PKP **PKPdf 04 34 01.1 -0.8**
comp=Z,3.8nm,0.7s,baz=247,slow=0.9,SNR=6.8
AAK Ala-Archa 116.11 308*c i*PKiKP **PKPdf 04 34 01.9 0.0**
AAK pmax pmax
comp=Z,7.0nm,1.7s
HRV Adam Dziewonsk 116.17 52 P **PKiKP 04 34 02.4 +0.6**
baz=265
BTLS Baital 116.61 311 *i* PKiKP **PKPdf 04 34 01.5 -1.0**
BTLS Baital 116.61 311 *e*PKiKP **PKPdf 04 34 01.6 -1.0**
baz=311
BRZS Berezniki 117.69 316 *i* PKiKP **PKPdf 04 34 03.1 -1.4**
BRZS Berezniki 117.69 316 *e*PKiKP **PKPdf 04 34 03.1 -1.4**
baz=316
PKME Peaks-Kenny Pk 117.98 49 P **PKiKP 04 34 05.8 +0.6**
baz=268
NEEM North Greenlan 118.07 11 *i* P **PKPdf 04 34 03.9 -1.0**
BTK Batken 118.67 305 PKPdf **PKPdf 04 34 06.0 -0.8**
BTK Batken 118.67 305 PKiKP **PKPdf 04 34 06.0 -0.8**
GAR Garm 118.98 304 PKPdf **PKPdf 04 34 07.5 0.0**
BVAR Borovoye Array 119.03 320 PKP **PKPdf 04 34 06.7 -0.3**

comp=Z,16nm,0.4s,baz=117,slow=1.1,SNR=107
BVAR SKP **SKPdf** **04 36 46.8 -1.1**
comp=Z,1.8nm,0.8s,baz=86,slow=1.9,SNR=3.9
KK31 Karatay Array 119.06 308 PKPdf **PKPdf** **04 34 06.7 -0.7**
KK31 Karatay Array 119.06 308 PKIKP **PKPdf** **04 34 06.7 -0.7**
KKAR Karatay Array 119.06 308 PKPdf **PKPdf** **04 34 06.6 -0.8**
KKAR Karatay Array 119.06 308 PKIKP **PKPdf** **04 34 06.6 -0.8**
BRVK Borovoye 119.09 320 PKPdf **PKPdf** **04 34 06.6 -0.5**
BRVK Borovoye 119.09 320 *c* PKIKP **PKPdf** **04 34 06.6 -0.5**
BRVK pmax pmax
comp=Z,31nm,1.0s
UPNV Upernavik 119.20 17 *i* P **PKPdf** **04 34 05.9 -0.8**
SCHQ Schefferville 119.31 38 PKP **PKPdf** **04 34 06.9 -0.6**
comp=Z,4.7nm,1.0s,baz=197,slow=6.6,SNR=4.5
IUG Iuzhnay 119.38 307 *i* PKIKP **PKPdf** **04 34 07.3 -0.8**
IUG Iuzhnay 119.38 307 *e* PKIKP **PKPdf** **04 34 07.4 -0.8**
baz=307
BDFB Brasilia 119.40 123 PKP **PKPdf** **04 34 08.8 -0.1**
comp=Z,2.4nm,0.6s,baz=71,slow=24,SNR=3.7
KBL Kabul 119.60 299 PKPdf **PKiKP** **04 34 09.2 +0.2**
KBL Kabul 119.60 299 PKIKP **PKiKP** **04 34 09.2 +0.2**
CHGR Chuyangaron 119.86 303 PKPdf **PKPdf** **04 34 09.1 -0.1**
CHGR Chuyangaron 119.86 303 PKIKP **PKPdf** **04 34 09.1 -0.1**
SPITS Spitsbergen Ar 122.22 356 PKP **PKPdf** **04 34 12.4 -0.1**
comp=Z,30nm,0.7s,baz=72,slow=5.4,SNR=21
ILULI Ilulissat 122.29 20 *i* P **PKPdf** **04 34 11.5 -1.2**
DAG Danmarks Havn 123.18 5 *i* P **PKPdf** **04 34 12.2 -2.0**
SFJD Kangerlussuaq 123.51 22 *i* P **PKPdf** **04 34 13.9 -1.2**
SVE Sverdlovsk 124.00 325 *e* PKIKP **PKiKP** **04 34 16.6 -0.1**
SVE pmax pmax
comp=Z,45nm,0.9s
NUUK Nuuk 124.35 25 *i* P **PKPdf** **04 34 16.2 -0.6**
ARU Arti 125.21 325 PKP **PKiKP** **04 34 18.9 -0.2**
comp=Z,42nm,0.5s,baz=106,slow=0.7,SNR=61
ARU Arti 125.21 325 *i* PKIKP **PKPdf** **04 34 18.6 -0.1**
ARU 04 36 16.1
ARU 04 40 35.1
DY2G Dye2 125.27 21 *i* P **PKPdf** **04 34 17.7 -1.2**
DBG Daneborg 125.29 7 *i* P **PKPdf** **04 34 17.1 -1.3**
BOSA Boshof 125.67 206 PKP **PKiKP** **04 34 21.6 +0.4**
comp=Z,9.4nm,0.8s,baz=139,slow=2.6,SNR=9.1
ICESG Greenland Ices 125.73 17 *i* P **PKPdf** **04 34 18.6 -1.2**
ABKAR Abkulak array 126.00 316 PKPdf **PKPdf** **04 34 20.2 -0.2**
AKTO Aktyubinsk 127.00 318 PKP **PKPdf** **04 34 22.3 0.0**
comp=Z,18nm,0.7s,baz=87,slow=3.4,SNR=50
IVI Ivigtut 127.13 28 *i* P **PKPdf** **04 34 20.6 -1.6**
SCO Scoresbysund 128.49 10 *i* P **PKiKP** **04 34 25.3 0.0**
GEYT Alibeck 128.53 302 PKhKP PKPpre 04 34 14.4
comp=Z,0.8nm,0.4s,baz=269,slow=5.9,SNR=4.2
GEYT PKP **PKPdf** **04 34 25.9 +0.2**
comp=Z,17nm,0.8s,baz=259,slow=1.5,SNR=24
GEYT Alibeck 128.53 302 PKPdf **PKPdf** **04 34 25.5 -0.2**
GEYT PP **PP** **04 36 38.4 -2.3**
GYA0B ALIBECK ARRAY 128.53 302 PKPdf **PKPdf** **04 34 25.5 -0.2**
KIRV Kirov 129.03 330 PKP **PKPdf** **04 34 26.1 +0.2**
comp=Z,54nm,0.7s,baz=87,slow=1.0,SNR=20
KIRV Kirov 129.03 330 *c* PKIKP **PKPdf** **04 34 25.9 0.0**
PRGR Permogore 129.17 335 *e* PKIKP **PKPdf** **04 34 21.2 -4.9**
PRGR *e* 04 36 43.9
PRGR pmax pmax
comp=Z,27nm,0.9s
APA Apatity 129.18 345 ↓*i* PKIKP **PKPdf** **04 34 25.8 -0.2**
APA *i* 04 36 53.0
APA pmax pmax
comp=Z,17nm,0.7s
ARCES ARCESS Array B 129.21 349 PKhKP PKPpre 04 34 13.1
comp=Z,5.4nm,0.9s,baz=5.7,slow=1.8,SNR=5.6
ARCES PKP **PKPdf** **04 34 26.3 +0.3**
comp=Z,16nm,0.6s,baz=11,slow=2.6,SNR=31
UOSS Minazif 129.66 286 PKPdf **PKPdf** **04 34 27.7 -0.5**
KLMR Klimovskoe 132.02 336 *e* PKIKP **PKPdf** **04 34 31.1 -0.4**
KLMR *e* 04 37 03.7
KLMR pmax pmax
comp=Z,51nm,1.4s
KLMR Klimovskoe 132.02 336 *e* PKPdf **PKPdf** **04 34 31.1 -0.4**
KLMR AMP 04 34 33.2
comp=Z,51nm,1.4s
KLMR *e* PP **PP** **04 37 03.7 +2.0**
MAK Makhachkala 135.79 311 *i* P **Pdif** **04 31 55.9 +9.4**
MAK *i* 04 34 39.5
MAK *e* 04 36 53.1
MAK *e* 04 37 25.2
MAK *e* PPP PPP 04 40 36.1
MAK *e* 04 40 55.3
MAK *e* SS SS 04 54 33.0 -6.8
MAK *e* SSS SSS 04 59 54.5
MAK pmax pmax
comp=Z,100nm,0.4s
MOS Moscow 135.98 331 *e* PKIKP **PKPdf** **04 34 37.7 -1.4**
MOS pmax pmax
comp=Z,52nm,0.8s
FINES FINESS Array B 135.99 343 PKhKP PKPpre 04 34 26.1
comp=Z,1.2nm,0.4s,baz=46,slow=5.5,SNR=10
FINES PKP **PKiKP** **04 34 40.7 0.0**
comp=Z,24nm,0.9s,baz=64,slow=3.8,SNR=18
FINES SKPbc **SKPbc** **04 37 17.4 +0.5**
comp=Z,10.0nm,0.9s,baz=77,slow=4.1,SNR=8.7
FINES FINESS Array B 135.99 343 PKPdf **PKPdf** **04 34 37.2 -1.7**
VRH Novokhopyorsk 136.40 324 *e* PKIKP **PKPdf** **04 34 40.2 +0.2**
VRH pmax pmax
comp=Z,50nm,0.8s
OBN Obninsk 136.84 331 *i* PKIKP **PKPdf** **04 34 39.8 -0.8**
OBN *e* 04 37 31.1
OBN pmax pmax
comp=Z,63nm,1.3s
LPSR Galich'ya Gora 137.17 327 *e* PKIKP **PKPdf** **04 34 40.6 -0.8**
LPSR pmax pmax
comp=Z,30nm,1.0s
RAF Rauma 137.44 346 *e* P **PKPdf** **04 34 37.8 -3.8**
VORR Voronezh 137.52 326 *e* PKHKP PKPpre 04 34 31.9
VORR pmax pmax
comp=Z,70nm,0.5s
VSR Storozhevoye 137.79 325 *e* PKIKP **PKPdf** **04 34 42.1 -0.4**
VSR pmax pmax
comp=Z,20nm,0.6s
ZEI Tsey 138.38 312 *i* PKHKP PKPpre 04 34 35.7
ZEI pmax pmax
comp=Z,9.0nm,1.0s
GNI Garni 138.51 307 *c* *i* PKIKP **PKiKP** **04 34 45.8 -1.0**
GNI pmax pmax
comp=Z,41nm,1.7s
KMBO Kilima Mbogo 138.68 242 PKPdf **PKPdf** **04 34 43.4 -2.3**
KMBO Kilima Mbogo 138.68 242 PKIKP **PKPdf** **04 34 43.4 -2.3**
KBZ Khabaz 138.77 313 PKhKP PKPpre 04 34 34.6
comp=Z,1.4nm,0.7s,baz=90,slow=5.3,SNR=2.5
KBZ PKP **PKPdf** **04 34 44.7 +0.1**
comp=Z,3.2nm,0.8s,baz=46,slow=6.7,SNR=4.8
KBZ Khabaz 138.77 313 *c* *i* PKIKP **PKPdf** **04 34 45.4 +0.8**
KIV Kislovodsk 138.83 314 *e* PKIKP **PKiKP** **04 34 46.1 -1.1**
KIV pmax pmax
comp=Z,13nm,1.1s
NB2 NORSAR Subarra 139.30 353 PKP PKPpre 04 34 36.5
comp=Z,2.5nm,0.6s,baz=10,slow=3.2
NOA NORSAR Array B 139.30 353 PKhKP PKPpre 04 34 36.8
comp=Z,7.3nm,0.7s,baz=10,slow=2.3,SNR=32
NOA PKP **PKPdf** **04 34 45.7 +0.6**
comp=Z,6.3nm,0.7s,baz=14,slow=4.0,SNR=9.9
NOA SKPbc **SKiKP** **04 37 28.3 -0.9**
comp=Z,4.8nm,0.9s,baz=14,slow=4.4,SNR=6.4
VIKU Vikbolandet 140.83 347 *e* P **PKPdf** **04 34 41.5 -6.3**
KONO Kongsberg 140.84 353 ⇑PKHKP PKPpre 04 34 42.2
IIGN Ignalina 140.88 338 *e* P **PKPdf** **04 34 44.1 -3.9**
MNK Minsk 140.91 336 *i* PKHKP PKPpre 04 34 44.2
MNK *i* 04 37 52.3
MNK *i* 04 40 59.6
MNK *i* SS SS 04 55 35.0 -2.8
MNK *i* SSS SSS 05 01 01.7
MNK pmax pmax
comp=N,25nm,0.8s
MNK pmax pmax
comp=Z,27nm,0.8s
MNK pmax pmax
comp=E,3.0nm,1.3s
MNK MLR MLR
comp=E,33nm,17.0s
MNK Minsk 140.91 336 *i* PKP **PKPdf** **04 34 44.3 -3.8**
comp=E,3.0nm,1.2s
MNK *i* PKP **PKPdf** **04 34 44.3 -3.8**
comp=N,25nm,0.8s
MNK *i* PKP **PKPdf** **04 34 44.3 -3.8**
comp=Z,27nm,0.8s,baz=41
MNK *i* pPKP **pPKPdf** **04 36 59.0 -3.3**
MNK *i* PP **PP** **04 37 52.3 -4.2**
MNK *i* SKS **SKSdf** **04 40 59.7 -3.9**
MNK *i* PPP PPP 04 41 05.1
MNK *i* SKKS **SKKSdf** **04 50 23.7 -5.8**
MNK *i* SS **SS** **04 55 35.0 -2.8**
MNK *i* SSS SSS 05 01 01.7
MNK *i* LRM MLR 05 40 41.6
comp=E,33nm,17.4s
MNK *i* LRM MLR 05 40 59.0
comp=N,302nm,20.6s
MNK *i* LRM MLR 05 41 02.9
comp=Z,86nm,14.8s
SOC Sochi 140.97 314 *e* PKIKP **PKPdf** **04 34 47.9 -0.7**
SOC *e* 04 37 01.8
SOC *e* 04 38 00.7
SOC *e* PPP PPP 04 41 08.0
NACGM Naroch 141.02 337 ↓*e* PKP **PKPdf** **04 34 44.4 -3.9**
baz=40
VSVD Vaisvydziai 141.15 340 *e* P **PKPdf** **04 34 44.5 -4.0**
PABE Paberze 141.52 339 *e* P **PKPdf** **04 34 45.7 -3.5**
PBUR Paburge 141.73 341 *e* P **PKPdf** **04 34 45.9 -3.6**
MARD Mardin 142.22 304 PKPdf **PKPdf** **04 34 48.1 -3.1**
LODK Lodwar 142.69 247 PKPdf **PKPdf** **04 34 51.3 -1.3**
AKASG Malin Array Be 143.09 330 PKP PKPab 04 34 49.9 -0.1
comp=Z,142nm,0.6s,baz=42,slow=4.5,SNR=617
AKASG SKPbc **SKiKP** **04 37 37.0 -0.2**
comp=Z,6.8nm,0.9s,baz=39,slow=2.8,SNR=8.7
KAC Achnashellach 143.11 6 *e* P PKPbc 04 34 50.1 -0.2
MCD Coleburn Disti 143.19 4 *e* P PKPab 04 34 49.8 -0.3
KPL Plockton 143.23 6 *e* P PKPab 04 34 50.2 0.0
MDO Dochfour 143.25 5 *e* P PKPab 04 34 50.2 -0.2
DEL Delary 143.29 348 *e* P PKPab 04 34 50.4 -0.1
GOET G??ttrup 143.45 353 *i* P PKPab 04 34 50.9 -0.2
SIM Simferopol' 143.94 319 *i* PKIKP PKPbc 04 34 52.7 -0.5
SIM pmax pmax
comp=Z,363nm,0.8s
MUD Monsted U'grnd 144.02 353 *i* P PKPbc 04 34 52.4 -0.7
MBAR Mbarara 144.25 237 *c* *i* PKIKP **PKPab** **04 34 56.4 +0.7**
MBAR pmax pmax
comp=Z,169nm,1.7s
INVG Invergeldie, C 144.28 5 *e* P PKPbc 04 34 53.6 -0.3
COP Copenhagen 144.29 349 *i* P PKPbc 04 34 52.9 -1.0
LAWE Loch Awe, Argy 144.32 7 *e* P PKPbc 04 34 53.8 -0.2
BSD Bornholm Skovb 144.35 347 *e* P **PKPdf** **04 34 54.1 0.0**
BSD Bornholm Skovb 144.35 347 *i* P PKPbc 04 34 53.9 -0.2
PGBU Glenifferbraes 144.85 6 *e* P **PKPdf** **04 34 55.0 +0.1**
ESY Stoneypath 144.90 4 *e* P PKPbc 04 34 55.5 -0.3
EBL Broad Law 145.01 4 *e* P **PKPbc** **04 34 56.0 -0.1**
ESK Eskdalemuir 145.45 5 *e* P **PKPdf** **04 34 56.6 +0.6**
ESK Eskdalemuir 145.45 5 PKPdf **PKPbc** **04 34 56.8 -0.6**
ESK Eskdalemuir 145.45 5 PKIKP **PKPbc** **04 34 56.8 -0.6**
BNN Bunyan 145.46 309 PKPdf **PKPdf** **04 34 56.2 -0.5**
BZK Bozkurt 145.47 315 ⇑P **PKPdf** **04 34 56.1 -0.4**
BZK Bozkurt 145.47 315 PKPdf **PKPdf** **04 34 56.9 +0.4**
GKP Gorka Klasztor 145.47 343 *e* PKP **PKPbc** **04 34 58.0 +0.4**
GKP Gorka Klasztor 145.47 343 *e* P **PKPdf** **04 34 54.9 -1.2**
NEWG New Galloway 145.56 6 *e* P **PKPbc** **04 34 57.0 -0.7**
BEL Belsk 145.63 339 *e* PKPbc **PKPbc** **04 34 58.6 +0.6**
BEL *e* PKPab **PKiKP** **04 35 00.6 -0.1**
KIS Kishinev 145.76 326 *e* PKP **PKPbc** **04 34 58.0 -0.6**
comp=Z,160nm,0.7s
KIS Kishinev 145.76 326 *e* PKIKP **PKPbc** **04 34 58.0 -0.6**
KIS pmax pmax
comp=Z,160nm,0.7s
GAL1 Galloway 145.76 6 *e* P **PKPbc** **04 34 58.4 +0.1**
MILM Milestii Mici 145.81 326 ↓*i* P **PKPbc** **04 34 58.5 -0.2**
MILM Milestii Mici 145.81 326 ↓*i* PKP **PKPbc** **04 34 58.0 -0.7**
comp=Z,300nm,1.0s
MILM Milestii Mici 145.81 326 *d* *i* PKIKP **PKPbc** **04 34 58.0 -0.7**
MILM pmax pmax
comp=Z,300nm,1.0s
EDMD Edmundbyers 146.02 4 *e* P **PKPdf** **04 34 57.8 +0.8**
LVV L'vov 146.02 334 *e* PKIKP **PKPbc** **04 34 58.7 -0.5**
KESW Keswick, Cumbr 146.18 5 *e* P **PKPbc** **04 34 59.6 +0.1**
GMM Mts of Mourne 146.24 8 *e* P **PKPbc** **04 35 00.2 +0.6**
IOMK Kirk Michael 146.38 6 *e* P **PKPbc** **04 34 59.9 -0.2**
LEOM Leova 146.40 326 ⇑P **PKPbc** **04 35 01.1 +0.8**
LEOM Leova 146.40 326 ⇑PKP2 **PKPbc** **04 35 01.1 +0.8**
WIM Isle of Man 146.48 6 *e* P **PKPbc** **04 35 00.2 -0.1**
GDLE Glaisdale, N Y 146.48 2 *e* P **PKPbc** **04 35 00.1 -0.3**
BRTR Keskin Array B 146.70 312 PKP **PKPdf** **04 34 58.2 -0.6**
comp=Z,38nm,0.7s,baz=90,slow=1.5,SNR=134
BRTR PKPbc **PKPbc** **04 35 01.8 +0.2**
comp=Z,39nm,0.7s,baz=135,slow=4.7,SNR=109
VLDR Vladesti 146.89 325 ⇑P **PKPbc** **04 35 02.4 +0.7**
TLCR 146.90 323 ⇑P **PKPbc** **04 35 00.6 -1.1**
TLCR 146.90 323 ⇑PKIKP **PKPbc** **04 35 00.6 -1.1**
HPK Haverah Park 146.91 3 *e* P **PKPbc** **04 35 01.6 +0.2**
SCTR Scanteiesti 147.05 325 ⇑P **PKiKP** **04 35 03.4 -0.5**
GIUM Giurgiulesti 147.05 324 ↓P **PKPbc** **04 35 02.6 +0.4**
GHRR 147.11 326 ↓P **PKiKP** **04 35 03.6 -0.4**
JURR Jurilovca 147.13 323 ⇑P **PKPbc** **04 35 03.0 +0.7**
BURAR Bucovina Array 147.13 330 ↓P **PKPbc** **04 35 03.2 +0.8**
BURAR Bucovina Array 147.13 330 PKPdf **PKPdf** **04 34 60.0 +0.7**
BURAR Bucovina Array 147.13 330 ↓PKP2 **PKPbc** **04 35 03.2 +0.8**
BIZ Bicaz 147.18 328 ⇑P **PKiKP** **04 35 03.4 -0.7**
TESR Tescani 147.20 327 ⇑P **PKPbc** **04 35 02.8 +0.7**
SLCR Slobozia Conac 147.22 325 ⇑P **PKiKP** **04 35 03.6 -0.6**
ANTO Ankara 147.22 312 ⇑P **PKPbc** **04 35 03.1 +0.2**
ANTO Ankara 147.22 312 ⇑PKP2 **PKPbc** **04 35 03.1 +0.2**
WPS Cemaes, Angles 147.23 7 *e* P **PKPbc** **04 35 02.0 -0.2**
IZVR Izvoarele 147.25 325 ⇑P **PKiKP** **04 35 03.8 -0.5**
WME Myndd Eilian 147.25 6 *e* P **PKPbc** **04 35 02.2 -0.2**
CFR Carcaliu 147.28 324 ⇑P **PKPbc** **04 35 03.0 +0.3**
CFR Carcaliu 147.28 324 ⇑PKP2 **PKPbc** **04 35 03.0 +0.3**
OJC Ojcow 147.32 338 *e* PKPab **PKPab** **04 35 05.5 -1.1**
OJC Ojcow 147.32 338 *e* PKPbc **PKPbc** **04 35 01.4 -1.3**
WLF1 Llynfaes 147.35 6 *e* P **PKPbc** **04 35 02.1 -0.5**
PANC Panciu 147.37 326 ↓P **PKiKP** **04 35 03.8 -0.7**
YRC Rhoscolyn 147.37 7 *e* P **PKPbc** **04 35 02.2 -0.5**
KOLS Kolonicke sedl 147.43 334 *e* PKIKP **PKPdf** **04 35 00.3 +0.7**
KOLS *e* 04 35 08.2
STHS Stebnicka Huta 147.45 336 *e* PKIKP **PKPbc** **04 35 02.5 -0.6**
STHS *e* 04 35 08.1
ODBI Odobesti 147.49 326 ⇑P **PKiKP** **04 35 04.7 -0.1**
VRI Vrincioaia 147.59 326 ↓P **PKPbc** **04 35 03.8 +0.3**
VRI Vrincioaia 147.59 326 ↓PKP2 **PKPbc** **04 35 03.8 +0.3**
PLOR Plostina 147.64 326 ↓P **PKPbc** **04 35 03.5 -0.2**
PLOR Plostina 147.64 326 ↓PKIKP **PKPbc** **04 35 03.5 -0.2**
UZH Uzhgorod 147.66 334 ↓*i* PKIKP **PKPdf** **04 35 01.3 +1.4**
UZH *e* 04 35 09.0
HARR Harsova 147.70 323 ⇑P **PKiKP** **04 35 04.8 -0.5**
HARR Harsova 147.70 323 ⇑PKP2 **PKiKP** **04 35 04.8 -0.5**
TLBR Topalu 147.73 323 ⇑P **PKiKP** **04 35 04.7 -0.6**
STNC Stoke 147.74 4 *e* P **PKPbc** **04 35 03.6 -0.1**
CRVS Cervenica-Dubn 147.78 335 *e* PKIKP **PKPdf** **04 35 00.1 -0.1**
CRVS *e* 04 35 09.4
NIE Niedzica 147.81 337 *e* PKPab **PKPab** **04 35 09.4 +0.8**
NIE Niedzica 147.81 337 *e* PKPbc **PKiKP** **04 35 05.0 -0.5**
FOEL Foel Wylfa 147.86 5 *e* P **PKPbc** **04 35 03.2 -0.8**
MANR Mangalia 147.86 322 ⇑P **PKiKP** **04 35 05.3 -0.3**
BMR Baia Mare 147.88 331 ⇑P **PKiKP** **04 35 05.0 -0.5**
BMR Baia Mare 147.88 331 ⇑PKP2 **PKiKP** **04 35 05.0 -0.5**
COVR Voineasa-Covas 147.88 327 ⇑P **PKPbc** **04 35 04.6 +0.3**
KSP Ksiaz 147.90 342 *e* PKPbc **PKiKP** **04 35 04.9 -0.6**
KSP *e* PKPab **PKPab** **04 35 09.9 +1.0**
ARCR ARCALIA 147.92 330 ⇑P **PKPbc** **04 35 04.7 +0.4**
OZUR 147.92 327 ↓P **PKiKP** **04 35 05.1 -0.6**
TRPA Tarpa 147.94 333 ↓P **PKPbc** **04 35 04.6 +0.3**
TRPA Tarpa 147.94 333 PKP **PKPbc** **04 35 04.2 -0.1**
MDUB Mudurnu 148.03 314 PKPdf **PKPdf** **04 35 01.6 +0.7**
OSTC Ostas 148.18 342 *e* PKPDF **PKPdf** **04 35 01.1 +0.3**
OSTC ⇑*e* PKP **PKPbc** **04 35 05.5 +0.6**
PSN Preselentsi 148.18 322 P **PKiKP** **04 35 06.4 +0.1**
ISR Istrita 148.19 325 ⇑P **PKPbc** **04 35 05.5 +0.4**
ISR Istrita 148.19 325 ⇑PKP2 **PKPbc** **04 35 05.5 +0.4**
CHVC Chvalec 148.20 342 ⇑*e* PKP **PKPbc** **04 35 05.5 +0.6**
OKC Ostrava-Krasne 148.21 339 *e* PKP2 **PKPbc** **04 35 05.3 +0.3**
OKC Ostrava-Krasne 148.21 339 ⇑*e* PKP **PKPbc** **04 35 05.3 +0.3**
OKC *e* PKPab **PKPab** **04 35 10.9 +0.7**
DOPR Dopca 148.21 327 ↓P **PKiKP** **04 35 06.1 -0.2**
WACR West Acre 148.22 1 *e* P **PKPbc** **04 35 04.5 -0.3**
MLR Muntele Rosu 148.25 326 ⇑P **PKPbc** **04 35 04.5 -0.9**
MLR Muntele Rosu 148.25 326 PKPdf **PKPdf** **04 35 01.1 -0.1**
MLR Muntele Rosu 148.25 326 ⇑PKHKP PKPpre 04 35 04.5
UPC Upice 148.28 342 *e* PKHKP PKPpre 04 35 05.2
UPC *e* 04 35 11.2
UPC Upice 148.28 342 ⇑*e* PKP **PKPbc** **04 35 05.2 +0.1**
UPC *e* PKPAB **PKPab** **04 35 11.2 +0.7**
CLL Collm 148.32 346 PKPdf **PKPdf** **04 35 01.1 +0.2**
CLL Collm 148.32 346 *i* PKIKP **PKPdf** **04 35 00.5 -0.4**
CLL *i* 04 35 10.5
CLL pmax pmax
comp=Z,18nm,1.1s
CLL pmax pmax
comp=Z,127nm,0.9s
CLL pmax pmax
comp=Z,67nm,0.8s
CLL Collm 148.32 346 *e* PKPdf **SKPdf** **04 37 41.0 +0.7**
CLL Collm 148.32 346 *i* PKPdf **PKPdf** **04 35 00.5 -0.4**
comp=Z,18nm,1.1s
CLL Collm 148.32 346 *i* PKPbc **PKPbc** **04 35 05.6 +0.4**
comp=Z,127nm,0.9s
CLL Collm 148.32 346 *i* PKPab **PKPab** **04 35 10.5 0.0**
comp=Z,67nm,0.8s
CLL Collm 148.32 346 *e* pPKPab pPKPab 04 37 20.0 +1.1
DPC Dobruska-Polom 148.33 342 *e* PKP2 **PKiKP** **04 35 05.9 -0.6**
DPC Dobruska-Polom 148.33 342 ⇑*e* PKP **PKiKP** **04 35 05.9 -0.6**
KRLC Kraliky 148.44 341 *e* PKHKP PKPpre 04 35 05.5
KRLC *e* 04 35 11.5
KRLC Kraliky 148.44 341 ⇑*e* PKP **PKPbc** **04 35 05.5 -0.1**
KRLC *e* PKPAB **PKPab** **04 35 11.5 +0.3**
LEHL Lehliu 148.46 324 ⇑P **PKiKP** **04 35 06.6 -0.2**
MORC Moravsky Berou 148.46 340 ⇑P **PKPdf** **04 35 01.1 -0.1**
MORC Moravsky Berou 148.46 340 PKPdf **PKPdf** **04 35 01.0 -0.3**
MORC Moravsky Berou 148.46 340 ⇑PKHKP PKPpre 04 35 01.1
MORC Moravsky Berou 148.46 340 *e* **PKPab** **04 35 11.9 +0.6**
MORC Moravsky Berou 148.46 340 *e* PKP **PKPbc** **04 35 06.0 +0.3**
SECR 148.49 326 ↓P **PKiKP** **04 35 06.5 -0.4**
BRG Berggiesshubel 148.50 345 PKP2 **PKiKP** **04 35 06.3 -0.4**
BRG pmax pmax
comp=Z,63nm,0.9s
BRG Berggiesshubel 148.50 345 ↓*e* PKPf **PKPdf** **04 35 01.8 +0.6**
BRG Berggiesshubel 148.50 345 Amp 04 35 03.4
comp=Z,22nm,1.4s
BRG Berggiesshubel 148.50 345 ⇑PKP **PKiKP** **04 35 06.3 -0.4**
BRG Berggiesshubel 148.50 345 Amp 04 35 07.4
comp=Z,63nm,0.9s
BRG Berggiesshubel 148.50 345 PKPab **PKPab** **04 35 11.9 +0.6**
BRG Berggiesshubel 148.50 345 Amp 04 35 12.5
comp=Z,41nm,0.8s
BRG Berggiesshubel 148.50 345 *ex* x 04 37 21.6
BRG Berggiesshubel 148.50 345 Amp 04 37 26.1
comp=Z,6.2nm,0.9s
BRG Berggiesshubel 148.50 345 Amp 04 41 46.0
comp=E,0.7nm,16.5s
BRG Berggiesshubel 148.50 345 Amp 04 41 46.0
comp=N,0.6nm,15.5s
BRG Berggiesshubel 148.50 345 Amp 04 41 50.0
comp=Z,1.1nm,16.5s
BRG Berggiesshubel 148.50 345 Sg **PKPab** **04 35 12.2 +0.9**
BRG Berggiesshubel 148.50 345 Amp 04 35 16.1
comp=Z,8.5nm,0.5s
KECS Kecovo 148.50 335 *e* PKP2 **PKiKP** **04 35 06.7 -0.1**
MESR Meseseni 148.51 331 ⇑P **PKiKP** **04 35 06.8 -0.1**
CBBR Cluj-Babes-Bol 148.53 330 ⇑P **PKiKP** **04 35 06.7 -0.2**
CJR Cluj-Napoca 148.54 330 ⇑P **PKiKP** **04 35 06.5 -0.5**
CJR Cluj-Napoca 148.54 330 ⇑PKP2 **PKiKP** **04 35 06.5 -0.5**
MDB Medias 148.59 329 ↓P **PKiKP** **04 35 07.2 +0.1**
MDB Medias 148.59 329 ↓PKP2 **PKiKP** **04 35 07.2 +0.1**
SUBR 148.63 325 ⇑P **PKPbc** **04 35 06.8 +0.5**
PVCC Panska Ves 148.66 344 *e* PKHKP PKPpre 04 35 06.3
PVCC Panska Ves 148.66 344 ⇑*e* PKP **PKPbc** **04 35 06.3 +0.3**
CSS Mathiatis 148.67 303 **PKPbc** **04 35 06.7 +0.1**
MAUC Maruska 148.72 339 ⇑*e* PKP **PKPbc** **04 35 06.4 +0.1**
VOIR 148.75 327 ↓P **PKPbc** **04 35 06.6 +0.1**
VOIR 148.75 327 ↓PKHKP PKPpre 04 35 06.6
MCH1 Michaelchurch 148.76 5 *e* P **PKPbc** **04 35 05.9 -0.3**
LTVH Ltavrtes, Hu 148.80 333 PKP **PKiKP** **04 35 08.2 +0.8**
DRGR 148.89 331 ↓P **PKPbc** **04 35 07.2 +0.3**
DRGR 148.89 331 ↓PKHKP PKPpre 04 35 07.2
PRD Provadia 148.92 322 P **PKiKP** **04 35 07.9 +0.1**
MONM Monmouth 148.94 5 *e* P **PKPbc** **04 35 06.4 -0.2**
ARR Arges 149.01 327 ⇑P **PKiKP** **04 35 08.7 +0.6**
STRD Stroud 149.05 4 *e* P **PKPbc** **04 35 06.9 -0.1**
VYHS Vyhne 149.11 337 *e* PKHKP PKPpre 04 35 07.7
VYHS *e* 04 35 15.1
PRU Pruhonice 149.16 343 *e* PKHKP PKPpre 04 35 07.4
PRU *e* 04 35 13.8
PRU Pruhonice 149.16 343 ⇑*e* PKP **PKPbc** **04 35 07.4 +0.1**
PRU *e* PKPAB **PKPab** **04 35 13.8 -0.3**
GOPC GO Pecny, Ondr 149.16 343 *e* PKHKP PKPpre 04 35 07.3
GOPC GO Pecny, Ondr 149.16 343 ⇑*e* PKP **PKPbc** **04 35 07.3 0.0**
VRAC Vranov 149.17 340 ⇑P **PKiKP** **04 35 08.4 +0.2**
VRAC Vranov 149.17 340 ⇑PKP2 **PKiKP** **04 35 08.4 +0.2**
VRAC Vranov 149.17 340 *e* **PKPab** **04 35 14.9 +0.7**
VRAC Vranov 149.17 340 *e* PKP **PKPbc** **04 35 07.7 +0.4**
PSZ Piszkesteto 149.19 335 ↓P **PKiKP** **04 35 08.1 -0.3**
PSZ Piszkesteto 149.19 335 **PKPbc** **04 35 07.8 +0.2**
PSZ Piszkesteto 149.19 335 PKHKP PKPpre 04 35 07.8
PSZ Piszkesteto 149.19 335 PKP **PKPbc** **04 35 07.7 +0.2**
RAZG Razgrad 149.21 323 ⇑P **PKPbc** **04 35 05.9 -1.7**
JAVC Velka Javorina 149.21 339 *e* PKP **PKiKP** **04 35 09.1 +0.7**
SWN1 Swindon 149.34 4 *e* P **PKPbc** **04 35 07.5 -0.1**
LOT Lotru 149.38 328 ⇑P **PKPbc** **04 35 08.0 -0.1**
HUMR Humele 149.41 326 ↓P **PKPbc** **04 35 07.8 -0.2**
NKC Novy Kostel 149.45 346 *e* PKHKP PKPpre 04 35 03.1
NKC Novy Kostel 149.45 346 *e* PKPDF **PKPdf** **04 35 03.1 +0.3**
NKC ⇑*e* PKP **PKiKP** **04 35 08.4 -0.3**
KRUC Moravsky 149.45 340 *e* **PKPab** **04 35 16.1 +0.8**
KRUC Moravsky 149.45 340 *e* PKP **PKiKP** **04 35 08.4 -0.4**
DEV Deva 149.48 330 ↓P **PKPbc** **04 35 08.5 +0.3**
DEV Deva 149.48 330 ↓PKHKP PKPpre 04 35 08.5
TREC Trest 149.52 342 *e* PKHKP PKPpre 04 35 08.3
TREC Trest 149.52 342 ⇑*e* PKP **PKPbc** **04 35 08.3 +0.1**
SMOL Smolenice 149.59 339 *e* PKHKP PKPpre 04 35 09.5
SMOL *e* 04 35 17.3
ISP Isparta 149.71 310 **PKPbc** **04 35 08.7 -0.5**
ISP Isparta 149.71 310 PKHKP PKPpre 04 35 08.7
SZH Strazhica 149.72 323 P **PKPbc** **04 35 06.9 -1.9**
MODS Modra-Piesok 149.76 339 *e* PKHKP PKPpre 04 35 09.9
SIRR Siria 149.76 332 ↓P **PKPdf** **04 35 03.9 +0.5**
ELSH Elham, Standar 149.80 0 *e* P **PKiKP** **04 35 09.1 -0.2**
JMB Yambol 149.85 321 P **PKPbc** **04 35 07.2 -1.9**
SRO Srobarova 149.88 337 *e* PKHKP PKPpre 04 35 09.6
SRO *e* 04 35 18.2
BUD Budapest 149.88 336 PKP **PKiKP** **04 35 09.7 +0.1**
GZR Gura Zlata 149.90 329 ↓P **PKPbc** **04 35 09.3 0.0**
GZR Gura Zlata 149.90 329 ↓PKIKP **PKPbc** **04 35 09.3 0.0**
ZST Bratislava 149.97 339 *e* PKHKP PKPpre 04 35 10.0
ZST *e* 04 35 18.1
VLAD Vladila 150.07 326 ⇑P **PKPbc** **04 35 09.1 -0.5**
PVL Pavlikeni 150.09 324 P **PKiKP** **04 35 10.5 +0.3**
MEM Membach 150.12 354 *d* PKPdf **PKPdf** **04 35 04.3 +0.5**
MEM *d* PKPbc **PKPbc** **04 35 09.7 +0.2**
BTNL Ternell 150.13 354 *d* PKPdf **PKPdf** **04 35 04.2 +0.4**
BTNL *d* PKPbc **PKPbc** **04 35 09.7 +0.1**
BTNL *d* PKPab **PKPab** **04 35 18.7 +0.5**
BSTI Sart Tilman 150.19 355 *d* PKPbc **PKiKP** **04 35 10.2 0.0**
BSTI *d* PKPab **PKPab** **04 35 18.6 +0.2**
KHC Kasperske Hory 150.19 344 PKPdf **PKPdf** **04 35 04.3 +0.3**
KHC Kasperske Hory 150.19 344 *e* PKIKP **PKPdf** **04 35 03.9 -0.1**
KHC *e* 04 35 19.2
KHC *e* 04 37 18.0
KHC Kasperske Hory 150.19 344 *e* PKPDF **PKPdf** **04 35 03.9 -0.1**
KHC ⇑*e* PKP **PKPbc** **04 35 10.0 +0.2**
KHC *e* PKPAB **PKPab** **04 35 19.2 +0.7**
KHC

ELL	**Elmali**	**150.61 309**	PKIKP	**PKPbc**	**04 35 11.3**	**0.0**	
CONA	**Conrad Observa**	**150.62 340**	*e*P	**PKPdf**	**04 35 04.8**	**+0.1**	
	comp=Z,9.5nm,1.3s						
CONA			*i* P	**PKiKP**	**04 35 11.5**	**+0.2**	
	comp=Z,50nm,0.7s,SNR=18						
CONA			*e*P	**PKPab**	**04 35 21.7**	**+1.3**	
	comp=Z,36nm,0.9s						
PUNG	**Punghina**	**150.63 328**	⇑P	**PKPbc**	**04 35 10.8**	**-0.1**	
RCHB	**Rochefort**	**150.64 355**	*d*PKPbc	**PKPbc**	**04 35 10.7**	**-0.1**	
RCHB			*d*PKPab	**PKPab**	**04 35 20.4**	**+0.2**	
RONA	**Rosalia, Austr**	**150.68 339**	*e*P	**PKPdf**	**04 35 05.5**	**+0.7**	
	comp=Z,5.1nm,1.1s						
RONA			*i* P	**PKiKP**	**04 35 11.5**	**+0.1**	
	comp=Z,68nm,0.5s,SNR=21						
RONA			*e*P	**PKPab**	**04 35 22.0**	**+1.4**	
	comp=Z,50nm,0.9s						
BANR	**Banloc**	**150.68 331**	⇑P	**PKiKP**	**04 35 11.8**	**+0.4**	
MPLH	**Magyarpolny**	**150.70 337**	PKP	**PKPbc**	**04 35 11.1**	**+0.1**	
DOU	**Dourbes**	**150.75 356**	*d*PKPbc	**PKPbc**	**04 35 10.9**	**-0.1**	
TIH	**Tihany**	**150.80 337**	PKP	**PKiKP**	**04 35 11.8**	**+0.2**	
MDVR	**Moldovita**	**150.86 330**	⇓P	**PKiKP**	**04 35 11.7**	**-0.2**	
KDZ	**Kurdzhali**	**151.03 321**	P	**PKPbc**	**04 35 11.8**	**-0.1**	
WLF	**Walferdange**	**151.04 354**		**PKiKP**	**04 35 12.7**	**+0.6**	
WLF	**Walferdange**	**151.04 354**	PKIKP	**PKiKP**	**04 35 12.7**	**+0.6**	
WLF	**Walferdange**	**151.04 354**	*d*PKPbc	**PKPbc**	**04 35 12.6**	**+0.6**	
WLF			*d*PKPab	**PKPab**	**04 35 22.3**	**+0.3**	
MORH	**Mrgy, Hungar**	**151.08 335**	⇑P	**PKPdf**	**04 35 05.5**	**+0.1**	
ALN	**Alexandroupoli**	**151.11 319**	P	**PKPbc**	**04 35 11.5**	**-0.6**	
PGB	**Panagyurishte**	**151.17 324**	P	**PKPbc**	**04 35 12.3**	**0.0**	
MOA	**Molln**	**151.17 342**	*e*P	**PKPdf**	**04 35 05.9**	**+0.3**	
	comp=Z,5.3nm,1.2s						
MOA			*i* P	**PKPbc**	**04 35 12.2**	**+0.1**	
	comp=Z,17nm,0.5s,SNR=7.5						
MOA			*e*P	**PKPab**	**04 35 24.1**	**+1.4**	
	comp=Z,23nm,1.1s						
BLKB	**Belogradchik**	**151.23 327**	⇑P	**PKPbc**	**04 35 12.2**	**-0.1**	
RDO	**Rodhopi**	**151.27 320**	P	**PKiKP**	**04 35 12.7**	**0.0**	
ARSA	**Arzberg**	**151.32 340**	*e*P	**PKPdf**	**04 35 06.1**	**+0.3**	
	comp=Z,6.3nm,1.2s						
ARSA			*i* P	**PKPbc**	**04 35 12.3**	**-0.2**	
	comp=Z,12nm,0.7s,SNR=5.1						
ARSA			*e*P	**PKPab**	**04 35 24.2**	**+0.9**	
	comp=Z,28nm,1.1s						
RZN	**Rozhen**	**151.42 322**	P	**PKPbc**	**04 35 12.8**	**-0.2**	
FRGS	**Fruska Gora**	**151.44 332**	⇑P	**PKiKP**	**04 35 12.9**	**-0.1**	
BIOA	**Bad Ischl, Aus**	**151.50 343**	*i* P	**PKPbc**	**04 35 12.7**	**-0.1**	
	comp=Z,29nm,0.9s,SNR=6.2						
BIOA			*e*P	**PKPab**	**04 35 25.2**	**+1.2**	
	comp=Z,69nm,1.1s						
EZN	**Ezine**	**151.56 317**	P	**PKiKP**	**04 35 13.4**	**0.0**	
VTS	**Vitosha**	**151.64 325**	⇑P	**PKiKP**	**04 35 14.1**	**+0.4**	
VTS	**Vitosha**	**151.64 325**	PKPdf	**PKPdf**	**04 35 06.7**	**+0.1**	
VTS	**Vitosha**	**151.64 325**	PKIKP	**PKPdf**	**04 35 06.7**	**+0.1**	
VTS	**Vitosha**	**151.64 325**	P	**PKPbc**	**04 35 13.4**	**0.0**	
BOVS	**Bovan**	**151.71 328**	⇓P	**PKPbc**	**04 35 12.8**	**-0.5**	
KAVA	**Kavala**	**151.97 321**	P	**PKPbc**	**04 35 13.4**	**-0.6**	
SOKA	**Soboth**	**151.99 340**	P	**PKPdf**	**04 35 06.9**	**+0.1**	
	comp=Z,7.8nm,1.4s						
SOKA			*i* P	**PKPbc**	**04 35 13.4**	**-0.6**	
	comp=Z,32nm,1.0s,SNR=8.8						
SOKA			*e*P	**PKPab**	**04 35 25.9**	**-0.3**	
	comp=Z,38nm,1.5s						
MMB	**Musomiste**	**152.05 323**	P	**PKPbc**	**04 35 13.5**	**-0.7**	
BFO	**Black Forest**	**152.07 350**		**PKiKP**	**04 35 14.2**	**0.0**	
BFO	**Black Forest**	**152.07 350**	PKIKP	**PKiKP**	**04 35 14.2**	**0.0**	
THAS	**Thassos island**	**152.09 320**	P	**PKPdf**	**04 35 10.4**	**+3.3**	
NVR	**Nevrokopi**	**152.13 322**	P	**PKiKP**	**04 35 14.6**	**0.0**	
KBA	**Koelnbreinsper**	**152.14 342**	*e*P	**PKPbc**	**04 35 14.1**	**-0.4**	
	comp=Z,34nm,1.0s						
DIVS	**Divibare**	**152.18 331**		**PKiKP**	**04 35 14.7**	**0.0**	
OBKA	**Obir**	**152.29 340**	*e*P	**PKPbc**	**04 35 14.0**	**-0.7**	
	comp=Z,13nm,0.7s						
WATA	**Walderalm**	**152.36 345**	*e*P	**PKPdf**	**04 35 07.2**	**-0.2**	
	comp=Z,7.9nm,0.9s						
WATA			*i* P	**PKPbc**	**04 35 14.9**	**0.0**	
	comp=Z,20nm,0.5s,SNR=6.9						
WATA			*e*P	**PKPab**	**04 35 28.4**	**+0.6**	
	comp=Z,32nm,0.8s						
RETA	**Reutte**	**152.41 346**	*e*P	**PKPdf**	**04 35 07.3**	**-0.1**	
	comp=Z,4.4nm,1.0s						
RETA			*i* P	**PKPbc**	**04 35 14.9**	**0.0**	
	comp=Z,14nm,0.7s,SNR=6.1						
RETA			*e*P	**PKPab**	**04 35 28.6**	**+0.6**	
	comp=Z,28nm,0.6s						
WTTA	**Wattenberg**	**152.42 345**	*e*P	**PKPdf**	**04 35 07.5**	**0.0**	
	comp=Z,11nm,1.0s						
WTTA			*i* P	**PKiKP**	**04 35 15.2**	**0.0**	
	comp=Z,33nm,0.5s,SNR=10.0						
WTTA			*e*P	**PKPab**	**04 35 28.9**	**+0.8**	
	comp=Z,44nm,0.6s						
SRS	**Serrai**	**152.43 322**	P	**PKPab**	**04 35 28.3**	**+0.1**	
MYKA	**Terra Mystica**	**152.46 342**	*e*P	**PKPdf**	**04 35 07.1**	**-0.4**	
	comp=Z,5.7nm,0.9s						
MYKA			*i* P	**PKPbc**	**04 35 14.4**	**-0.6**	
	comp=Z,21nm,0.6s,SNR=5.2						
MYKA			*e*P	**PKPab**	**04 35 28.1**	**0.0**	
	comp=Z,16nm,0.7s						
MOTA	**Moosalm**	**152.47 346**	*e*P	**PKPdf**	**04 35 07.5**	**-0.1**	
	comp=Z,16nm,1.2s						
MOTA			*i* P	**PKiKP**	**04 35 15.3**	**+0.1**	
	comp=Z,53nm,1.1s,SNR=7.4						
MOTA			*e*P	**PKPab**	**04 35 28.8**	**+0.5**	
	comp=Z,60nm,1.0s						
CHOS	**Chios island**	**152.52 315**	P	**PKPbc**	**04 35 14.8**	**-0.6**	
LEGS	**Legarje**	**152.53 339**	*i* PKPbc	**PKPbc**	**04 35 14.9**	**-0.2**	
SQTA	**Sankt Quirin**	**152.56 345**	*e*P	**PKPdf**	**04 35 07.0**	**-0.7**	
	comp=Z,7.3nm,0.8s						
SQTA			*i* P	**PKPbc**	**04 35 15.3**	**0.0**	
	comp=Z,35nm,0.8s,SNR=9.0						
SQTA			*e*P	**PKPab**	**04 35 29.3**	**+0.7**	
	comp=Z,30nm,0.8s						
ABTA	**Abfaltersbach**	**152.67 343**	*e*P	**PKPdf**	**04 35 07.3**	**-0.5**	
	comp=Z,14nm,0.9s						
ABTA			*e*P	**PKPbc**	**04 35 15.2**	**-0.3**	
	comp=Z,44nm,0.6s						
ABTA			*e*P	**PKPab**	**04 35 28.3**	**-0.7**	
	comp=Z,23nm,0.6s						
OUR	**Ouranopolis**	**152.70 320**	P	**PKPbc**	**04 35 14.7**	**-0.9**	
LJU	**Ljubljana**	**152.71 340**	*i* PKPbc	**PKPbc**	**04 35 15.4**	**0.0**	
LJU			*i* PKPab	**PKPab**	**04 35 29.3**	**+0.1**	
DAVA	**Damuels**	**152.79 347**	*e*P	**PKPdf**	**04 35 08.3**	**+0.2**	
	comp=Z,7.0nm,1.0s						
DAVA			*i* P	**PKiKP**	**04 35 16.4**	**+0.4**	
	comp=Z,40nm,1.1s,SNR=6.4						
DAVA			*e*P	**PKPab**	**04 35 30.4**	**+0.7**	
	comp=Z,38nm,1.0s						
KNT	**Kendrikon**	**152.80 323**	P	**PKPab**	**04 35 29.8**	**0.0**	
VISS	**Visnje**	**152.82 339**	*i* PKPbc	**PKPbc**	**04 35 15.7**	**0.0**	
VISS			*i* PKPab	**PKPab**	**04 35 29.7**	**0.0**	
STIP	**Stip**	**152.84 324**	*i* P	**PKPbc**	**04 35 14.9**	**-1.0**	
FETA	**Feichten**	**152.86 346**	*e*P	**PKPdf**	**04 35 08.3**	**+0.1**	
	comp=Z,19nm,1.0s						
FETA			*e*P	**PKiKP**	**04 35 16.5**	**+0.4**	
	comp=Z,29nm,0.8s						
FETA			*e*P	**PKPab**	**04 35 30.6**	**+0.6**	
	comp=Z,24nm,1.1s						
VAY	**Valandovo**	**152.88 323**	*i* P	**PKPab**	**04 35 30.7**	**+0.6**	
SKO	**Skopje**	**153.04 326**	*i* P	**PKiKP**	**04 35 16.6**	**+0.2**	
DAVOX	**Davos/Dischmat**	**153.27 347**	PKP	**PKPdf**	**04 35 09.1**	**+0.2**	
	baz=90,slow=3.0						
DAVOX			PKPbc	**PKiKP**	**04 35 17.6**	**+0.7**	
	comp=Z,35nm,0.6s,baz=234,slow=5.2,SNR=5.6						
DAVOX			PKPab	**PKPab**	**04 35 32.6**	**+0.8**	
	comp=Z,28nm,0.7s,baz=45,slow=4.3,SNR=4.8						
FUORN	**Ofenpass-Fuorn**	**153.34 346**	PKPdf	**PKPdf**	**04 35 09.4**	**+0.4**	
LIT	**Litokhoron**	**153.73 321**	P	**PKPab**	**04 35 33.6**	**-0.2**	
LRSO	**Larissa Observ**	**154.07 321**	P	PKPab	04 35 44.1	+8.9	
SENIN	**Lac Senin/Sane**	**154.14 351**	PKPdf	**PKPdf**	**04 35 10.7**	**+0.6**	
SENIN			PKPab	**PKPab**	**04 35 35.9**	**+0.3**	
TEOL	**Teolo**	**154.18 343**	PKPab	**PKPab**	**04 35 36.2**	**+0.7**	
SALO	**Salr**	**154.23 345**	PKPab	**PKPab**	**04 35 35.8**	**+0.1**	
FRMA	**Ierapetra Chan**	**154.41 309**	P	**PKiKP**	**04 35 18.7**	**-0.7**	
LSK	**Leskovik**	**154.77 324**	P	**PKPab**	**04 35 39.2**	**+0.9**	
LTHK	**Lithakia**	**156.25 319**	P	**PKPdf**	**04 35 09.4**	**-3.5**	
PBRG	**Braganca**	**158.04 16**	*e*PKPdf	**PKPdf**	**04 35 15.2**	**+0.1**	
PBRG	**Braganca**	**158.04 16**	*e*PKPab	**PKPab**	**04 35 53.1**	**+0.8**	
POLO	**Lamas de Olo**	**158.14 19**	*e*PKPab	**PKPab**	**04 35 53.6**	**+0.8**	
PVRL	**Vila Real**	**158.25 19**	*e*PKPab	**PKPab**	**04 35 53.9**	**+0.7**	
MVO	**Moncorvo**	**158.56 18**	*e*PKPdf	**PKPdf**	**04 35 16.9**	**+1.2**	
MVO	**Moncorvo**	**158.56 18**	*e*PKPab	**PKPab**	**04 35 55.6**	**+1.0**	
PVIS	**Viseu**	**158.71 20**	*e*PKPab	**PKPab**	**04 35 56.0**	**+0.7**	
PCAS	**Casmilo, Conde**	**159.10 22**	*e*PKPab	**PKPab**	**04 35 57.6**	**+0.6**	
MTE	**Manteigas**	**159.10 19**	*e*PKPdf	**PKPdf**	**04 35 17.8**	**+1.4**	
MTE	**Manteigas**	**159.10 19**	*e*PKPab	**PKPab**	**04 35 57.6**	**+0.6**	
PSBE	**So Bento**	**159.47 23**	*e*PKPab	**PKPab**	**04 35 59.3**	**+0.7**	
PCBR	**Castelo Branco**	**159.63 20**	*e*PKPdf	**PKPdf**	**04 35 17.0**	**+0.1**	
PCBR	**Castelo Branco**	**159.63 20**	*e*PKPab	**PKPab**	**04 35 59.8**	**+0.6**	
PMRV	**Marv??o**	**160.04 20**	*e*PKPdf	**PKPdf**	**04 35 18.2**	**+0.8**	
PMRV	**Marv??o**	**160.04 20**	*e*PKPab	**PKPab**	**04 36 01.5**	**+0.4**	
PESTR	**Estremoz**	**160.48 21**	*e*PKPdf	**PKPdf**	**04 35 18.6**	**+0.7**	
PESTR	**Estremoz**	**160.48 21**	*e*PKPab	**PKPab**	**04 36 03.5**	**+0.5**	
EVO	**Evora**	**160.63 23**	*e*PKPab	**PKPab**	**04 36 04.2**	**+0.6**	
ESDC	**Sonseca Array**	**160.72 13**	PKP	**PKPdf**	**04 35 16.9**	**-1.3**	
	comp=Z,2.5nm,1.0s,baz=14,slow=3.1,SNR=6.8						
ESDC			PKPab	**PKPab**	**04 36 04.8**	**+0.7**	
	comp=Z,13nm,1.0s,baz=343,slow=4.4,SNR=24						
PNCL	**Nicolau / Gran**	**160.80 24**	*e*PKPdf	**PKPdf**	**04 35 18.8**	**+0.6**	
PNCL	**Nicolau / Gran**	**160.80 24**	*e*PKPab	**PKPab**	**04 36 05.0**	**+0.6**	
MESJ	**Messejana**	**161.16 24**	*e*PKPdf	**PKPdf**	**04 35 20.0**	**+1.4**	
MESJ	**Messejana**	**161.16 24**	*e*PKPab	**PKPab**	**04 36 06.5**	**+0.5**	
PBAR	**Barrancos**	**161.29 21**	*e*PKPdf	**PKPdf**	**04 35 20.1**	**+1.4**	
PBAR	**Barrancos**	**161.29 21**	*e*PKPab	**PKPab**	**04 36 07.4**	**+0.9**	
MORF	**Marmelete**	**161.45 26**	*e*PKPdf	**PKPdf**	**04 35 20.9**	**+1.9**	
KEST	**Kesra**	**163.66 336**	PKP	**PKPdf**	**04 35 21.4**	**+0.2**	
	comp=Z,3.3nm,0.9s,baz=256,slow=23,SNR=3.6						
KEST			PKPab	**PKPab**	**04 36 17.1**	**0.0**	
	comp=Z,20nm,0.9s,baz=290,slow=3.1,SNR=17						
KEST	**Kesra**	**163.66 336**	PKPab	**PKPab**	**04 36 17.4**	**+0.2**	
LIC	**Lamto**	**164.14 156**	⇓*i*PKIKP	**PKPdf**	**04 35 21.7**	**-0.5**	
	comp=Z,81nm,1.0s						
KIC	**Kosan Boka**	**164.37 157**	⇓*e*PKIKP	**PKPdf**	**04 35 21.4**	**-1.0**	
	comp=Z,22nm,0.8s						
TIC	**Toumodi**	**164.52 155**	⇓*e*PKIKP	**PKPdf**	**04 35 22.0**	**-0.5**	
	comp=Z,52nm,0.9s						
DBIC	**Dimbokro**	**164.61 156**	PKP	**PKPdf**	**04 35 22.6**	**0.0**	
	comp=Z,15nm,0.9s,baz=140,slow=1.9,SNR=10						
TORD	**Torodi Ar. Bea**	**172.29 182**	PKP	**PKPdf**	**04 35 26.7**	**-0.8**	
	comp=Z,10nm,0.8s,baz=330,slow=0.6,SNR=54						
TORD			PKPab	**PKPab**	**04 36 56.1**	**+0.6**	
	comp=Z,3.1nm,0.9s,baz=160,slow=3.4,SNR=6.0						
TORD			pPKP	**pPKPdf**	**04 37 44.2**	**+0.9**	
	comp=Z,2.1nm,0.9s,baz=312,slow=1.5,SNR=2.3						
TORD			PP	**PP**	**04 40 49.2**	**+3.0**	
	comp=Z,1.9nm,1.0s,baz=198,slow=3.0,SNR=5.2						

*TIR **12** 04:33:01.8, 41°.93N×20°.12E, h3km±2km, Md2.5, Ml2.5*
*PDG **12** 04:33:02.1±0.0, 41°.92N×20°.13E, h15km, ML2.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*SKO **12** 04:33:03.2, 41°.95N×20°.10E, h19km*
*BEO **12** 04:33:03.0±0.5, 41°.94N×20°.17E, h6km±3km, ML2.2/7*

ISC 12 04:33:02.4±1.0, 41°.93N±0°.02×20°.09E±0°.02, h9km±9km, n38, σ0°.95/68, 5C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.36**	**132**	P	**Pg**	**04 33 09.2**	**-0.3**
	baz=134						
PHP				S	**Sg**	**04 33 15.0**	**+0.8**
	baz=134						
PHP				AMP			
	comp=N,3.3nm,0.3s,baz=134						
BCI	**Bajram Curri**	**0.44**	**358**	P	**Pg**	**04 33 11.3**	**+0.4**
	baz=356						
BCI				S	**Sb**	**04 33 18.1**	**-1.0**
	baz=356						
BCI				AMP			
	comp=N,2.4nm,0.4s,baz=356						
TIR	**Tirane**	**0.60**	**196**	*i* Pg	**Pb**	**04 33 15.0**	**0.0**
TIR				*i* Sg	**Sn**	**04 33 25.3**	**-1.7**
TIR	**Tirane**	**0.60**	**196**	P	**Pg**	**04 33 13.6**	**-0.4**
	baz=199						
TIR				S	**Sb**	**04 33 23.8**	**+0.1**
	baz=199						
TIR				AMP			
	comp=N,0.7nm,0.2s,baz=199						
ULC	**Ulcinj**	**0.63**	**274**	*i* Pg	**Pb**	**04 33 14.9**	**-0.7**
ULC	**Ulcinj**	**0.63**	**274**	⇑*i* Pg	**Pg**	**04 33 14.5**	**0.0**
ULC				*i* Sg	**Sb**	**04 33 25.1**	**+0.6**
PVY	**Plav**	**0.68**	**352**	⇑*i* Pg	**Pg**	**04 33 15.0**	**-0.4**
PVY				*i* Sg	**Sb**	**04 33 25.9**	**0.0**
DRME	**Dracevica, Mon**	**0.72**	**291**	⇓*i* Pg	**Pg**	**04 33 16.1**	**-0.2**
DRME				*i* Sg	**Sn**	**04 33 28.1**	**-1.9**
PDG	**Podgorica**	**0.80**	**309**	*i* Pg	**Pg**	**04 33 17.5**	**-0.3**
PDG				*i* Sg	**Sn**	**04 33 31.6**	**-0.3**
TTG	**Podgorica**	**0.80**	**309**	⇑*i* Pg	**Pg**	**04 33 17.4**	**-0.3**
TTG				*i* Sg	**Sn**	**04 33 30.5**	**-1.3**
BEY	**Berane**	**0.96**	**351**	*i* Pg	**Pg**	**04 33 20.6**	**-0.2**
IVA	**Berane**	**0.96**	**351**	⇑*i* Pg	**Pg**	**04 33 20.1**	**-0.7**
IVA				*i* Sg	**Sn**	**04 33 35.3**	**-0.6**
BUM	**Brajici-Budva**	**0.96**	**293**	*e*Pg	**Pg**	**04 33 20.6**	**-0.3**
BUM				*i* Sg	**Sn**	**04 33 36.3**	**+0.2**
OHR	**Ohrid**	**0.97**	**146**	*e*Pg	**Pg**	**04 33 20.5**	**-0.6**
OHR				*e*Sg	**Sg**	**04 33 32.7**	**-1.0**
OHR	**Ohrid**	**0.97**	**146**	*i* Pg	**Pg**	**04 33 21.0**	**-0.1**
OHR				*i* Sg	**Sn**	**04 33 36.2**	**-0.1**
OHR				*e*Lg	Lg	04 33 36.7	
	comp=N,72nm,0.6s						
OHR				*e*Lg	Lg	04 33 39.1	
	comp=E,86nm,0.5s						
SKO	**Skopje**	**1.01**	**87**	*e*Pg	**Pg**	**04 33 20.6**	**-1.2**
SKO				*e*Sg	**Sg**	**04 33 33.2**	**-1.7**
SKO	**Skopje**	**1.01**	**87**	*i* Pg	**Pb**	**04 33 22.3**	**+0.2**
SKO				*i* Sg	**Sg**	**04 33 34.7**	**-0.2**
SKO				*e*Lg	Lg	04 33 36.1	
	comp=E,6.3nm,0.3s						
SKO				*e*Lg	Lg	04 33 36.7	
	comp=N,16nm,0.4s						
KOME	**Kolasin**	**1.02**	**336**	⇑*i* Pg	**Pg**	**04 33 21.3**	**-0.6**
KOME				*i* Sg	**Sn**	**04 33 37.6**	**+0.2**
CEME	**Cevo**	**1.07**	**306**	*e*Pg	**Pg**	**04 33 22.2**	**-0.7**
CEME				*i* Sg	**Sn**	**04 33 39.7**	**+1.1**
NKME	**Niksic**	**1.19**	**315**	*e*Pg	**Pb**	**04 33 24.6**	**-0.5**
NKME				*i* Sg	**Sn**	**04 33 43.6**	**+2.0**
HCY	**Herceg Novi**	**1.29**	**294**	*e*Pg	**Pn**	**04 33 26.3**	**-0.3**
HCY				*i* Sg	**Sn**	**04 33 47.0**	**+2.9**
SJES	**Sjenica**	**1.34**	**356**	*e*Pg	**Pn**	**04 33 27.3**	**-0.1**
SJES				*e*Sg	**Sg**	**04 33 45.5**	**+0.1**
PLE	**Pljevlja**	**1.49**	**340**	*e*Pg	**Pn**	**04 33 29.6**	**+0.1**
PLE				*i* Sg	**Sg**	**04 33 51.4**	**+1.0**
SELS	**Selova**	**1.50**	**30**	*e*Pg	**Pn**	**04 33 29.0**	**-0.5**
SELS				*e*Sg	**Sn**	**04 33 49.3**	**0.0**
BRY	**Bratogost**	**1.50**	**311**	⇓*i* Pg	**Pb**	**04 33 29.9**	**-0.7**
BRY				*i* Sg	**Sg**	**04 33 52.0**	**+1.2**
UPM	**Unac-Piva**	**1.55**	**326**	⇓*i* Pg	**Pn**	**04 33 30.4**	**+0.1**
UPM				*i* Sg	**Sg**	**04 33 52.9**	**+0.8**
BARS	**Barje**	**1.56**	**55**	*e*Pn	**Pn**	**04 33 30.3**	**-0.1**
BARS	**Barje**	**1.56**	**55**	*i* Pg	**Pn**	**04 33 30.2**	**-0.1**
BARS				*i* Sg	**Sn**	**04 33 50.8**	**+0.1**
STIP	**Stip**	**1.59**	**98**	*i* Pn	**Pg**	**04 33 32.8**	**0.0**
STIP				*i* Sn	**Sg**	**04 33 57.0**	**+3.7**
STIP				*e*Lg	Lg	04 33 58.4	
	comp=N,5.7nm,0.3s						
STIP				*e*Lg	Lg	04 33 59.4	
	comp=E,6.6nm,0.3s						
IVAS	**Ivanjica**	**1.65**	**2**	*e*Pg	**Pn**	**04 33 31.7**	**+0.1**
IVAS				*e*Sg	**Sb**	**04 33 54.1**	**+0.2**
BOSS	**Bosilegrad**	**1.87**	**71**	*e*Pn	**Pn**	**04 33 34.3**	**-0.3**
VAY	**Valandovo**	**1.96**	**107**	*e*Pn	**Pn**	**04 33 36.8**	**+1.0**
VAY				*e*Sn	**Sn**	**04 33 59.8**	**-0.7**
VAY	**Valandovo**	**1.96**	**107**	*i* Pn	**Pb**	**04 33 37.5**	**-0.7**
VAY				*i* Sn	**Sb**	**04 34 04.0**	**+1.3**
VAY				*e*Lg	Lg	04 34 06.4	
	comp=E,18nm,0.5s						
VAY				*e*Lg	Lg	04 34 06.5	
	comp=N,17nm,0.5s						
GRG	**Griva**	**1.99**	**118**	*i* Pn	**Pb**	**04 33 38.6**	**-0.1**
BBLS	**Lazići**	**2.00**	**346**	*e*Pn	**Pb**	**04 33 37.7**	**-1.3**
BBLS				*e*Sn	**Sn**	**04 34 01.5**	**-0.2**
GRUS	**Gruza**	**2.02**	**13**	*e*Pn	**Pn**	**04 33 37.0**	**+0.4**
BOVS	**Bovan**	**2.08**	**34**	*e*Pn	**Pn**	**04 33 38.7**	**+1.2**
DIVS	**Divibare**	**2.17**	**358**	*e*Pn	**Pn**	**04 33 39.6**	**+0.8**

ROM 12 04:33:51.1±0.1, 43°.858N±0°.005×11°.911E±0°.009, h13km±1km, ML1.5/4, Error ellipse: s-maj=0.8km s-min=0.2km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.07**	**315**	P	Pg	04 33 53.9	+0.2
SFI				S	Sg	04 33 56.0	+0.4
ASQU	**Asqua**	**0.11**	**235**	P	Pg	04 33 54.5	+0.3
ASQU				S	Sg	04 33 57.0	+0.6
ASQU				AML	AML		
	comp=E,831μm,0.2s						
ASQU				AML	AML		
	comp=N,1140μm,0.2s						
CRE	**Caprese Michel**	**0.24**	**173**	P	Pg	04 33 56.4	+0.2
CRE				S	Sg	04 34 00.5	+0.8
CRE				AML	AML		
	comp=E,111μm,0.5s						
CRE				AML	AML		
	comp=N,215μm,0.2s						
CRE				AML	AML		
	comp=E,111μm,0.5s						
LMD	**Lutirano**	**0.27**	**326**	P	Pg	04 33 56.8	+0.2
LMD				S	Sg	04 34 01.3	+0.9
LMD				AML	AML		
	comp=N,152μm,0.6s						
LMD				AML	AML		
	comp=E,172μm,0.1s						
RUFI	**Rufina**	**0.29**	**267**	P	Pg	04 33 57.4	+0.3
RUFI				S	Sg	04 34 01.9	+0.8
CPGN	**Carpegna, Ital**	**0.30**	**101**	P	Pb	04 33 58.0	-0.5
SSP9	**Sansepolcro**	**0.33**	**151**	P	Pg	04 33 58.1	+0.3
SSP9				S	Sb	04 34 03.3	-0.6
BRIS	**BRISIGHELLA**	**0.41**	**315**	P	Pg	04 33 59.3	0.0
BRIS				S	Sb	04 34 06.0	-0.5
BRIS				AML	AML		
	comp=N,67μm,0.4s						
BADI	**Badiali**	**0.42**	**145**	P	Pb	04 34 00.3	-0.1
BADI				S	Sb	04 34 06.3	-0.5
CAFI	**Castiglion Fio**	**0.53**	**176**	P	Pg	04 34 01.4	0.0
CAFI				S	Sb	04 34 09.3	-0.6
ATPI	**Pietralunga -**	**0.54**	**139**	P	Pg	04 34 01.6	-0.1
ATPI				S	Sb	04 34 10.1	-0.1
PIEI	**Pieia**	**0.56**	**125**	P	Pg	04 34 01.6	-0.4
PIEI				S	Sb	04 34 10.3	-0.3
ATMI	**Monte Miggiano**	**0.58**	**154**	P	Pg	04 34 02.0	-0.5
ATMI				S	Sb	04 34 11.3	-0.1
CSNT	**Castellina Chi**	**0.59**	**230**	P	Pb	04 34 03.8	+0.4

PRU 12 04:34:21.6±0.0, 51°.57N×16°.18E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.99**	**185**	*e*PG	Pg	04 34 39.4	-1.1
CHVC				*e*SG	Sg	04 34 53.3	+0.1
OSTC	**Ostas**	**1.01**	**179**	*e*PG	Pg	04 34 41.0	0.0
OSTC				*e*SG	Sg	04 34 54.6	+0.4
UPC	**Upice**	**1.07**	**186**	*e*PG	Pg	04 34 40.9	-1.2
UPC				*e*SG	Sg	04 34 55.8	-0.1
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG	Pg	04 34 43.7	-1.3
DPC				*e*SG	Sg	04 35 00.3	-0.6
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG	Pn	04 34 49.1	-0.1
PVCC				*e*SG	Sg	04 35 07.6	-0.8
KRLC	**Kraliky**	**1.54**	**165**	*e*PG	Pn	04 34 49.9	-0.5
BRG	**Berggiesshubel**	**1.57**	**244**	Pg	Pg	04 34 53.0	+1.3

IDC 12 04:34:32.0±2.4, 5°.44S×153°.76E, h0km, mb3.2/2, mbtmp3.4/3, ML3.8/1, MS3.0/1, Error ellipse: s-maj=50.5km s-min=32.3km az=62.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.06**	**303**	Pn	Pn	04 35

ELK	**Elko**	**99.25**	**49**	LR	LR	05 42 27.7
	comp=Z,103nm,20.4s,baz=84,slow=32					

*IDC **12** 05:16:33.3±6.0, 36°.18N×71°.65E, h128km±39km, mb3.6/2, mbtmp3.9/6, Error ellipse: s-maj=74.2km s-min=27.8km az=143.0*
*NNC **12** 05:16:43.4±6.4, 37°.20N×70°.08E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=59.0km s-min=41.5km az=175.0*

ISC 12 05:16:38.9±0.9, 36°.76N±0°.08×71°.29E±0°.08, h150km, n17, σ1§60/21, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.37**	**355**	P	**Pn**	**05 18 12.8**	**+2.4**
	1.4nm,0.3s,baz=182,slow=14,SNR=17						
KK31				⇓S	**Sn**	**05 19 20.8**	**-1.3**
	4.6nm,0.5s,baz=184,slow=22,SNR=5.2						
AAK	**Ala-Archa**	**6.37**	**22**	P	**Pn**	**05 18 10.8**	**+0.2**
	3.0nm,0.3s,baz=195,slow=12,SNR=3.7						
AAK				S	**Sn**	**05 19 20.8**	**-1.6**
	7.2nm,0.5s,baz=1.4,slow=19,SNR=11						
GEYT	**Alibeck**	**10.55**	**280**	P	**Pn**	**05 19 06.7**	**+0.5**
	2.1nm,0.5s,baz=113,slow=11,SNR=5.2						
GEYT				S	**Sn**	**05 21 01.5**	**-1.4**
	1.0nm,0.3s,baz=45,slow=55,SNR=1.9						
DANN	**Dangsing**	**13.44**	**125**	*e*P	**Pn**	**05 19 42.8**	**-1.2**
	6.8nm,0.2s						
GKN	**Gorkha**	**14.25**	**124**	*e*P	**Pn**	**05 19 53.0**	**-1.1**
	12nm,0.3s						
DMN	**Daman**	**14.82**	**124**	*e*P	**Pn**	**05 20 01.2**	**-0.1**
	6.3nm,0.3s						
AB31	**Akbulak array**	**14.97**	**330**	⇑P	**P**	**05 20 05.3**	**+0.7**
	0.3nm,0.4s,baz=162,slow=12,SNR=18						
AB31				S	**Sn**	**05 22 44.9**	**-4.0**
	0.8nm,0.4s,baz=147,slow=24,SNR=4.1						
PKIN	**Phulchoki**	**15.04**	**123**	*e*P	**Pn**	**05 20 03.3**	**-0.7**
	13nm,0.5s						
PKI	**Pulchoki**	**15.05**	**123**	*e*P	**Pn**	**05 20 03.8**	**-0.4**
	8.3nm,0.3s						
GUN	**Gumba**	**15.15**	**121**	*e*P	**Pn**	**05 20 05.3**	**-0.2**
	6.1nm,0.3s						
JIRN	**Jiri**	**15.52**	**122**	*e*P	**Pn**	**05 20 09.5**	**-0.6**
	18nm,0.4s						
RAMN	**Ramite**	**16.25**	**123**	*e*P	**Pn**	**05 20 17.8**	**-1.2**
	5.5nm,0.3s						
AKTO	**Aktyubinsk**	**16.68**	**329**	P	**Pn**	**05 20 25.9**	**+2.3**
	1.3nm,0.5s,baz=136,slow=9.2,SNR=5.2						
AKTO	**Aktyubinsk**	**16.68**	**329**	⇑P	**Pn**	**05 20 24.8**	**+1.2**
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**19.58**	**24**	P	**P**	**05 20 55.5**	**+0.4**
	1.2nm,0.3s,baz=229,slow=12,SNR=3.8						
ARCES	**ARCESS Array B**	**41.00**	**337**	P	**P**	**05 24 08.4**	**+1.8**
	4.5nm,1.0s,baz=111,slow=6.8,SNR=2.7						
	4.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P	**P**	**05 27 07.8**	**-1.4**
	0.3nm,0.4s,baz=48,slow=5.3,SNR=6.6						
	0.3nm,0.4s						

*IDC **12** 05:22:19.8±2.8, 5°.39S×153°.45E, h48km±23km, mb4.1/12, mbtmp4.4/13, ML2.2/1, MS3.2/5, Error ellipse: s-maj=26.8km s-min=15.2km az=82.0*
*NEIC **12** 05:22:21.4±2.4, 5°.21S±0°.10×153°.5E±0°.1, h55km±13km, mb4.3/12, Error ellipse: s-maj=15.2km s-min=13.2km az=122.0*

ISC 12 05:22:19.8±0.6, 5°.31S±0°.06×153°.54E±0°.08, h43km, n39, σ1§78/34, mb4.3/17, MS3.0/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.77**	**309**	Pn	**Pn**	**05 22 48.6**	**+0.6**
KRVT	**Keravat (AS076**	**1.81**	**303**	P	**Pn**	**05 22 47.7**	**-0.8**
	1μm,0.8s,baz=140,slow=3.0,SNR=52						
KRVT				S	**Sn**	**05 23 15.7**	**+5.4**
	1μm,0.6s,baz=216,slow=23,SNR=9.6						
KRVT				LR	LR	05 23 44.3	
	comp=Z,2μm,18.3s,baz=272,slow=47						
PMG	**Port Moresby**	**7.52**	**237**	P	**Pn**	**05 24 06.8**	**-0.2**
	2.3nm,0.3s,baz=347,slow=5.5,SNR=4.9						
PMG				S	**Sn**	**05 25 28.8**	**-2.2**
	23nm,0.6s,baz=214,slow=22,SNR=5.9						
PMG				LR	LR	05 26 54.0	
	comp=Z,165nm,18.2s,baz=357,slow=37						
	14nm,0.5s						
PMG	**Port Moresby**	**7.52**	**237**		**Pn**	**05 24 08.5**	**+1.5**
PMG					**Sn**	**05 25 32.2**	**+1.2**
PATS	**Pohnpei**	**12.97**	**22**	Pn	**Pn**	**05 25 20.2**	**-1.4**
CTA	**Charters Tower**	**16.31**	**205**	LR	LR	05 31 26.4	
	comp=Z,129nm,19.9s,baz=56,slow=34						
EIDS	**Eidsvold**	**20.08**	**186**	P	Pn	05 26 51.0	-0.8
LIFNC	**LIFOU**	**20.33**	**140**	P	**P**	**05 26 53.8**	**+1.4**
GUMO	**Guam**	**20.66**	**335**	LR	LR	05 36 05.1	
	comp=Z,42nm,18.1s,baz=110,slow=40						
DZM	**Mont Dzumac**	**20.82**	**144**	P	**P**	**05 26 57.4**	**-0.4**
	20nm,1.0s,baz=208,slow=16,SNR=17						
	20nm,1.0s						
DZM	**Mont Dzumac**	**20.82**	**144**	P	**P**	**05 26 58.2**	**+0.3**
DZM				IAmb	IAmb	05 27 14.3	
	comp=Z,19nm,0.9s						
OUENC	**Ouen Island, N**	**21.32**	**144**	P	**P**	**05 27 02.9**	**-0.2**
OUENC				IAmb	IAmb	05 27 06.2	
	comp=Z,18nm,0.8s						
SIJI	**Sorong**	**22.67**	**280**	LR	LR	05 37 52.3	
	comp=Z,77nm,18.1s,baz=47,slow=41						
MTN	**Manton Dam**	**23.34**	**250**	P	**P**	**05 27 24.9**	**+0.3**
MTN				IAmb	IAmb	05 27 42.2	
	comp=Z,8.9nm,0.7s						
WR0	**Warramunga Arr**	**23.53**	**230**	P	**P**	**05 27 24.9**	**-1.4**
WR0				IAmb	IAmb	05 27 57.1	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**23.53**	**231**	P	**P**	**05 27 25.2**	**-1.1**
WB0				IAmb	IAmb	05 27 39.5	
	comp=Z,7.3nm,0.9s						
WB2	**Warramunga Arr**	**23.67**	**230**	P	**P**	**05 27 25.5**	**-2.1**
WB2				IAmb	IAmb	05 27 40.7	
	comp=Z,7.5nm,0.9s						
WRA	**Warramunga Arr**	**23.68**	**230**	P	**P**	**05 27 25.4**	**-2.2**
	comp=Z,2.1nm,0.8s,baz=56,slow=9.6,SNR=9.7						
	comp=Z,2.1nm,0.8s						
WRA	**Warramunga Arr**	**23.68**	**230**	P	**P**	**05 27 27.0**	**-0.7**
ASAR	**Alice Springs**	**26.29**	**224**	P	**P**	**05 27 49.1**	**-2.3**
	comp=Z,2.3nm,1.0s,baz=58,slow=9.3,SNR=17						
	comp=Z,2.3nm,1.0s						
KNRA	**Kununurra**	**26.42**	**245**	P	**P**	**05 27 52.5**	**-0.2**
MSVF	**Nonsavu**	**26.95**	**119**		**P**	**05 28 02.5**	**+4.9**
H11S3	**WAKE ISLAND Hy**	**26.98**	**28**	T	T	05 56 10.3	
	baz=208,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**26.98**	**28**	T	T	05 56 09.3	
	baz=208,slow=76,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**26.99**	**28**	T	T	05 56 10.3	
	baz=208,slow=76,SNR=7.3						
STKA	**Stephens Creek**	**28.70**	**202**	P	**P**	**05 28 14.6**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=330,slow=12,SNR=3.3						
STKA	**Stephens Creek**	**28.70**	**202**	P	**P**	**05 28 14.5**	**+1.6**
KAPI	**Kappang**	**33.65**	**269**	LR	LR	05 44 15.8	
	comp=Z,34nm,21.2s,baz=78,slow=39						
KSRS	**Korea Array**	**48.79**	**333**	P	**P**	**05 31 00.1**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=148,slow=8.5,SNR=7.8						
	comp=Z,4.1nm,0.9s						
KLR	**Kul'dur**	**57.55**	**343**	P	**P**	**05 32 04.2**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=140,slow=4.3,SNR=6.7						
	comp=Z,3.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.76**	**295**	P	**P**	**05 32 14.1**	**+0.1**
	comp=Z,3.3nm,0.3s,baz=112,slow=5.2,SNR=16						
	comp=Z,3.3nm,0.3s						
SONM	**Songino Array**	**67.15**	**328**	P	**P**	**05 33 09.6**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=149,slow=5.9,SNR=12						
	comp=Z,2.1nm,0.7s						
VNDA	**Vanda**	**72.30**	**178**	P	**P**	**05 33 40.0**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=311,slow=4.6,SNR=6.8						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**81.20**	**319**	P	**P**	**05 34 30.8**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=99,slow=7.4,SNR=12						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**81.99**	**326**	P	**P**	**05 34 33.9**	**-1.2**
	comp=Z,3.2nm,0.6s,baz=104,slow=6.6,SNR=15						
	comp=Z,3.2nm,0.6s						
AAK	**Ala-Archa**	**85.56**	**313**	P	**P**	**05 34 53.9**	**0.0**
	comp=Z,2.5nm,0.6s,baz=152,slow=2.8,SNR=6.2						
	comp=Z,2.5nm,0.6s						
BVAR	**Borovoye Array**	**90.09**	**323**	P	**P**	**05 35 13.3**	**-1.8**
	comp=Z,5.1nm,0.7s,baz=118,slow=5.4,SNR=22						
	comp=Z,5.1nm,0.7s						
GERES	**GERESS Array B**	**124.88**	**329**	PKP	**PKPdf**	**05 41 15.0**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=48,slow=2.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**151.17**	**288**	PKPbc	**PKPbc**	**05 42 08.1**	**-1.4**
	comp=Z,6.3nm,0.7s,baz=54,slow=2.4,SNR=43						

*IDC **12** 05:37:14.7±1.4, 22°.12S×179°.59W, h585km±13km, mb3.5/10, mbtmp4.5/12, Error ellipse: s-maj=21.2km s-min=14.8km az=123.0*
*NEIC **12** 05:37:15.0±0.7, 22°.2S±0°.1×179°.6W±0°.1, h592km±7km, mb4.3/26, Error ellipse: s-maj=23.2km s-min=8.4km az=53.0*

ISC 12 05:37:15.1±0.5, 22°.22S±0°.09×179°.69W±0°.09, h592km, n62, σ1§10/69, mb4.3/22, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.94**	**334**	P	**P**	**05 38 46.7**	**-0.6**
	62nm,0.5s,baz=187,slow=5.2,SNR=156						
MSVF				S	**S**	**05 40 00.8**	**-1.5**
	20nm,1.0s,baz=305,slow=18,SNR=5.9						
MSVF	**Nonsavu**	**4.94**	**334**	P	**P**	**05 38 46.5**	**-0.8**
MARNC	**Mare, Loyalty**	**11.43**	**271**	P	**P**	**05 39 48.2**	**+0.1**
DZM	**Mont Dzumac**	**12.85**	**268**	P	**P**	**05 40 04.9**	**+2.3**
	6.7nm,0.5s,baz=101,slow=22,SNR=15						
URZ	**Urewera**	**16.22**	**189**	S	**S**	**05 43 12.0**	**-5.2**
	5.2nm,0.5s,baz=104,slow=4.2,SNR=1.2						
EIDS	**Eidsvold**	**26.90**	**257**	P	**P**	**05 42 10.6**	**+0.1**
EIDS				IAmb	IAmb	05 42 32.2	
	comp=Z,14nm,1.4s						
CTAO	**Charters Tower**	**31.79**	**267**	P	**P**	**05 42 53.4**	**+0.6**
CTAO				IAmb	IAmb	05 42 54.2	
	comp=Z,9.6nm,0.8s						
PMG	**Port Moresby**	**34.25**	**287**	P	**P**	**05 43 12.6**	**-0.8**
STKA	**Stephens Creek**	**35.63**	**246**	P	**P**	**05 43 25.8**	**+1.0**
	comp=Z,5.3nm,0.5s,baz=94,slow=11,SNR=19						
	comp=Z,5.3nm,0.5s						
STKA	**Stephens Creek**	**35.63**	**246**	P	**P**	**05 43 25.6**	**+0.8**
COEN	**Coen**	**36.16**	**277**	P	**P**	**05 43 30.4**	**+1.1**
COEN				IAmb	IAmb	05 43 37.8	
	comp=Z,11nm,1.3s						
BBOO	**Buckleboo**	**40.38**	**245**	P	**P**	**05 44 03.3**	**+0.1**
AS31	**Alice Springs**	**42.61**	**259**	P	**P**	**05 44 20.9**	**0.0**
AS31				IAmb	IAmb	05 44 21.8	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**42.61**	**259**	P	**P**	**05 44 21.2**	**+0.3**
	comp=Z,15nm,0.8s,baz=94,slow=8.0,SNR=108						
ASAR				PcP	**PcP**	**05 45 59.5**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=106,slow=3.4,SNR=5.5						
ASAR				S	**S**	**05 50 02.1**	**-0.1**
	comp=Z,2.3nm,1.1s,baz=96,slow=16,SNR=11						
	comp=Z,15nm,0.8s						
WR0	**Warramunga Arr**	**42.64**	**264**	P	**P**	**05 44 20.9**	**-0.2**
WR0				IAmb	IAmb	05 44 21.4	
	comp=Z,8.4nm,1.1s						
WB0	**Warramunga Arr**	**42.81**	**264**	P	**P**	**05 44 22.5**	**0.0**
WB2	**Warramunga Arr**	**42.82**	**264**	P	**P**	**05 44 22.4**	**-0.1**
WB2				IAmb	IAmb	05 44 23.5	
	comp=Z,11nm,0.9s						
WRAB	**Tennant Creek**	**42.82**	**264**	P	**P**	**05 44 22.4**	**-0.1**
WRAB				IAmb	IAmb	05 44 22.9	
	comp=Z,9.1nm,0.9s						
WRA	**Warramunga Arr**	**42.83**	**264**	P	**P**	**05 44 22.4**	**-0.2**
	comp=Z,6.7nm,0.6s,baz=90,slow=5.7,SNR=151						
WRA				ScP	**ScP**	**05 48 58.7**	**+3.5**
	comp=Z,1.9nm,0.9s,baz=88,slow=4.7,SNR=6.5						
WRA				S	**S**	**05 50 03.3**	**-2.0**
	comp=Z,1.0nm,0.9s,baz=100,slow=18,SNR=4.5						
	comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**42.83**	**264**	P	**P**	**05 44 21.5**	**-1.1**
FORT	**Forrest**	**47.18**	**248**	P	**P**	**05 44 55.4**	**-0.2**
MTN	**Manton Dam**	**47.63**	**273**	P	**P**	**05 44 59.0**	**-0.2**
MTN				IAmb	IAmb	05 44 59.3	
	comp=Z,9.1nm,0.6s						
KNRA	**Kununurra**	**49.00**	**268**	P	**P**	**05 45 09.6**	**+0.3**
PSA00	**Pilbara Seismi**	**55.76**	**258**	P	**P**	**05 45 56.3**	**-1.1**
PSA00	**Pilbara Seismi**	**55.76**	**258**	P	**P**	**05 45 57.5**	**+0.1**
PSA00				IAmb	IAmb	05 45 57.9	
	comp=Z,14nm,1.0s						
MBWA	**Marble Bar**	**55.96**	**259**	P	**P**	**05 45 58.8**	**-0.1**
MBWA				IAmb	IAmb	05 45 59.3	
	comp=Z,17nm,0.8s						
VNDA	**Vanda**	**56.07**	**185**	P	**P**	**05 45 59.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=346,slow=5.8,SNR=5.9						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**56.07**	**185**	P	**P**	**05 45 59.3**	**+0.7**
MORW	**Morawa**	**57.73**	**249**	P	**P**	**05 46 10.1**	**-0.7**
MORW				IAmb	IAmb	05 46 27.3	
	comp=Z,15nm,1.4s						
QSPA	**South Pole Qui**	**67.85**	**180**	P	**P**	**05 47 15.5**	**+0.3**
UGM	**Wanagama**	**68.37**	**270**	P	**P**	**05 47 18.9**	**-0.2**
MJAR	**Matsushiro Arr**	**70.68**	**325**	P	**P**	**05 47 32.5**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=157,slow=6.1,SNR=7.4						
	comp=Z,3.6nm,0.7s						
JHS	**Saijyo**	**72.41**	**321**	P	**P**	**05 47 42.6**	**+0.2**
TPUB	**Ta-pu**	**73.61**	**304**	P	**P**	**05 47 49.0**	**-0.5**
SSLB	**Suanglung**	**73.63**	**305**	P	**P**	**05 47 48.2**	**-1.5**
PETK	**Petropavlovsk-**	**77.54**	**346**	P	**P**	**05 48 09.5**	**-1.0**
	comp=Z,5.3nm,0.7s,baz=151,slow=9.4,SNR=6.7						
	comp=Z,5.3nm,0.7s						
PETK	**Petropavlovsk-**	**77.54**	**346**	P	**P**	**05 48 10.1**	**-0.5**
SMAI	**San Martin Ant**	**77.57**	**159**	P	**P**	**05 48 10.6**	**0.0**
SMAI				IAmb	IAmb	05 48 11.7	
	comp=Z,7.3nm,0.9s						
SEY	**Seymchan**	**87.70**	**348**	P	**P**	**05 49 01.1**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=135,slow=5.3,SNR=5.8						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**89.21**	**290**	P	**P**	**05 49 11.6**	**+2.2**
	comp=Z,1.8nm,0.4s,baz=134,slow=3.3,SNR=16						
	comp=Z,1.8nm,0.4s						
PLCA	**Paso Flores**	**89.23**	**134**	P	**P**	**05 49 09.3**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=223,slow=7.2,SNR=3.7						
	comp=Z,2.2nm,0.8s						
TXAR	**Lajitas Array**	**89.31**	**58**	P	**P**	**05 49 09.9**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=200,slow=5.0,SNR=6.6						
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**111.22**	**313**	PKiKP	**PKiKP**	**05 54 41.5**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=112,slow=1.6,SNR=2.8						
BVAR	**Borovoye Array**	**119.36**	**319**	PKP	**PKPdf**	**05 54 56.0**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=99,slow=2.6,SNR=5.4						
HFS	**Hagfors**	**140.96**	**349**	PKhKP	PKPpre	05 55 32.2	
	comp=Z,1.8nm,0.4s,baz=72,slow=4.8,SNR=18						
AKASG	**Malin Array Be**	**143.70**	**329**	PKP	PKPbc	05 55 41.5	-1.0
	comp=Z,2.6nm,0.3s,baz=43,slow=4.2,SNR=30						
AKASG	**Malin Array Be**	**143.70**	**329**		PKPbc	05 55 41.7	-0.8
ASF	**Jabal al Asfar**	**146.12**	**295**	PKPbc	**PKPbc**	**05 55 49.4**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=63,slow=3.7,SNR=4.6						
BRTR	**Keskin Array B**	**146.76**	**309**	PKPbc	**PKPbc**	**05 55 51.4**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=122,slow=3.7,SNR=8.3						
EKA	**Eskdalemuir Ar**	**146.83**	**4**	PKPbc	**PKPdf**	**05 55 50.0**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=1.1,slow=2.6,SNR=3.7						
MMAI	**Mount Meron Ar**	**147.24**	**297**	PKPbc	**PKPbc**	**05 55 54.0**	**+0.7**
	comp=Z,3.1nm,0.4s,baz=78,slow=5.4,SNR=14						
EIL	**Elat**	**148.06**	**291**	PKPbc	**PKPbc**	**05 55 56.0**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=79,slow=5.2,SNR=2.6						
OSTC	**Ostas**	**149.09**	**340**	*e*PKP	**PKPbc**	**05 55 57.7**	**+0.4**
CHVC	**Chvalec**	**149.12**	**340**	*e*PKP	**PKPbc**	**05 55 57.1**	**-0.3**
DPC	**Dobruska-Polom**	**149.24**	**340**	*e*PKP	**PKPbc**	**05 55 57.9**	**+0.2**
KRLC	**Kraliky**	**149.32**	**339**	*e*PKP	**PKPbc**	**05 55 57.5**	**-0.4**
CLL	**Collm**	**149.33**	**344**	*e*PKPdf	**PKPdf**	**05 55 53.0**	**+0.3**
CLL				*i* PKPbc	**PKPbc**	**05 55 57.5**	**-0.3**
	comp=Z,9.0nm,0.6s						
CLL				*i* PKPab	**PKPab**	**05 56 04.5**	**-0.5**
	comp=Z,4.0nm,0.5s						
CLL				*e*pPKPab	**pPKPab**	**05 58 16.0**	**+1.1**
CLL				*ex*	x	05 59 02.0	
MAUC	**Maruska**	**149.56**	**337**	*e*PKP	**PKPbc**	**05 55 58.3**	**-0.2**
PRU	**Pruhonice**	**150.10**	**341**	*e*PKP	**PKPbc**	**05 55 59.7**	**0.0**
KHC	**Kasperske Hory**	**151.15**	**342**	*e*PKP	**PKPbc**	**05 56 01.9**	**-0.3**
KHC				*ex*	**PKPab**	**05 56 13.0**	**+0.2**
CKRC	**Cesky Krumlov**	**151.21**	**341**	*e*PKP	**PKPbc**	**05 56 02.3**	**0.0**
CKRC				*ex*	**PKPab**	**05 56 13.1**	**0.0**
GERES	**GERESS Array B**	**151.37**	**341**	PKPbc	**PKPbc**	**05 56 02.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=214,slow=0.5,SNR=4.3						

*IDC **12** 06:39:40.4±2.0, 4°.87S×150°.96E, h85km±29km, mb3.4/2, mbtmp3.9/4, MS3.2/2, Error ellipse: s-maj=85.9km s-min=19.1km az=133.0*

ISC 12 06:39:40.3±1.5, 4°.9S±0°.3×151°.1E±0°.3, h100km, n8, σ0§76/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.12**	**61**	P	**Pn**	**06 40 01.7**	**-0.3**
	281nm,0.3s,baz=159,slow=2.4,SNR=33						
KRVT				S	**Sn**	**06 40 18.8**	**+0.3**
	530nm,0.4s,baz=150,slow=1.8,SNR=5.4						
PMG	**Port Moresby**	**5.94**	**220**	P	**Pn**	**06 41 05.6**	**-0.2**
	31nm,0.3s,baz=39,slow=8.0,SNR=15						
CTA	**Charters Tower**	**15.84**	**197**	P	**Pn**	**06 43 17.4**	**-0.3**
	1.0nm,0.5s,baz=32,slow=13,SNR=2.3						
WRA	**Warramunga Arr**	**22.12**	**226**	P	**P**	**06 44 27.6**	**-0.2**
	1.7nm,0.5s,baz=49,slow=10.0,SNR=6.6						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**24.96**	**220**	P	**P**	**06 44 56.0**	**+1.4**
	0.8nm,0.5s,baz=56,slow=8.5,SNR=8.9						
	0.8nm,0.5s						
KAPI	**Kappang**	**31.18**	**268**	LR	LR	07 00 07.4	
	comp=Z,25nm,19.3s,baz=10.0,slow=40						
URZ	**Urewera**	**40.84**	**148**	LR	LR	07 01 18.2	
	comp=Z,50nm,19.0s,baz=339,slow=32						
TORD	**Torodi Ar. Bea**	**148.66**	**287**	PKPbc	**PKiKP**	**06 59 18.1**	**-0.2**
	0.3nm,0.3s,baz=92,slow=2.3,SNR=8.8						

*IDC **12** 06:40:39.1±1.5, 5°.63S×151°.00E, h85km±22km, mb3.6/5, mbtmp3.9/6, Error ellipse: s-maj=33.8km s-min=17.8km az=134.0*

ISC 12 06:40:39.0±1.1, 5°.5S±0°.2×150°.9E±0°.2, h100km, n8, σ1§61/10, mb3.7/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.64**	**44**	P	**Pn**	**06 41 05.7**	**-1.4**
	210nm,0.3s,baz=30,slow=20,SNR=0.9						
KRVT				S	**Sn**	**06 41 28.4**	**+0.1**
	560nm,0.5s,baz=181,slow=18,SNR=2.1						
PMG	**Port Moresby**	**5.36**	**223**	P	**Pn**	**06 41 56.4**	**-0.2**
	13nm,0.3s,baz=42,slow=12,SNR=4.1						
PMG				S	**Sn**	**06 42 54.2**	**-2.8**
	138nm,0.5s,baz=80,slow=16,SNR=18						
WRA	**Warramunga Arr**	**21.57**	**227**	P	**P**	**06 45 21.6**	**+1.0**
	1.7nm,0.6s,baz=52,slow=10,SNR=7.4						
	1.7nm,0.6s						
DZM	**Mont Dzumac**	**22.31**	**139**	P	**P**	**06 45 27.3**	**-1.2**
	4.5nm,0.7s,baz=352,slow=21,SNR=5.1						
	4.5nm,0.7s						
ASAR	**Alice Springs**	**24.36**	**220**	P	**P**	**06 45 49.6**	**+1.7**
	2.6nm,0.8s,baz=54,slow=8.7,SNR=13						
	2.6nm,0.8s						
STKA	**Stephens Creek**	**27.64**	**197**	P	**P**	**06 46 17.8**	**+0.4**
	1.8nm,0.7s,baz=21,slow=12,SNR=3.7						
	1.8nm,0.7s						
VNDA	**Vanda**	**72.20**	**178**	P	**P**	**06 51 54.3**	**+1.6**
	0.5nm,0.7s,baz=344,slow=8.5,SNR=3.9						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.70**	**286**	PKPbc	**PKiKP**	**07 00 16.9**	**-0.3**
	0.5nm,0.7s,baz=65,slow=2.2,SNR=2.5						

DJA 12 06:47:39.1±0.5, 2°.S±5°.×13°.4E±°, h10km, M4.0/6, mb4.2/2, mB5.2/1, MLv4.0/6, Mw(mB)4.6/1, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.80**	**26**	P	Pg	06 47 53.9	-0.7
FAKI	**Fak Fak**	**1.72**	**247**	P	Pn	06 48 08.8	-0.3
FAKI				S	Sn	06 48 30.0	-1.1
SIJI	**Sorong**	**2.90**	**298**	P	Pn	06 48 25.4	0.0
SWI	**Sorong**	**2.91**	**298**	P	Pn	06 48 26.1	+0.6
KRAI	**Karang Ratu**	**5.53**	**259**	P	Pn	06 49 02.6	+1.0
	2μm18nm,0.7s						

IDC 12 06:50:58.1±640.0, 63°.30N×28°.15E, h0km, Error ellipse: s-maj=386.9km s-min=153.0km az=134.0, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**8.01**	**141**	I		07 38 30.0	
	baz=330,slow=323,SNR=1.4						
I31KZ	**AKTYUBINSK INF**	**20.58**	**115**	I		08 58 10.0	
	baz=321,slow=328,SNR=1.2						
I46RU	**ZALESOVO INFRA**	**29.97**	**81**	I		09 55 50.0	
	baz=313,slow=329,SNR=1.6						

*THE **12** 06:52:23.7, 38°.12N×20°.41E, h18km, ML3.1/6, Error ellipse: s-maj=1.2km s-min=0.5km az=251.0*
*ATH **12** 06:52:23.3, 38°.08N×20°.32E, h12km±1km, ML2.9/4, Error ellipse: s-maj=2.8

NIED 12 06:56:11.4, 32.70N×130.65E, h11km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=3.88; Mθθ=4.60; Mφφ=-0.71; Mrθ=0.36; Mθφ=-1.10; Mφr=2.76; Fault plane solution: M0=5.19000×10^14 NP1: φs=254.00000°, δ=51.00000°, λ=-131.00000°. NP2: φs=129.00000°, δ=54.00000°, λ=-51.00000°.
IDC 12 06:56:17.8±6.2, 32.05N×131.40E, h128km±40km, mb3.4/3, mbtmp3.7/6, MS3.0/3 Error ellipse: s-maj=64.5km s-min=26.3km az=14.0
ISC 12 06:56:11.4±1.1, 32.63N±0.07×130.50E±0.09, h10km, n11, σ2°47/12, mb4.0/3, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.28**	**106**	*i* P	**Pg**	**06 56 15.8**	**-1.2**
JIU3				S	**Sg**	**06 56 19.0**	**-1.8**
JTA	**Tamana**	**0.34**	**5**	*i* P	**Pg**	**06 56 17.3**	**-0.8**
JTA				S	**Sg**	**06 56 21.2**	**-1.4**
JTZ	**Takazaki**	**0.88**	**145**	*i* P	**Pb**	**06 56 28.8**	**+0.1**
JTZ				S	**Sb**	**06 56 40.3**	**-0.3**
KSRS	**Korea Array**	**5.26**	**337**	P	**Pb**	**06 57 45.0**	**+1.6**
	1.9nm,0.5s,baz=152,slow=17,SNR=5.6						
KSRS				S	**Sg**	**06 58 54.7**	**-5.5**
	12nm,1.0s,baz=152,slow=31,SNR=6.0						
MJAR	**Matsushiro Arr**	**7.46**	**56**	P	**Pn**	**06 58 01.4**	**+1.1**
	1.3nm,0.4s,baz=236,slow=13,SNR=4.3						
KLR	**Kul'dur**	**16.61**	**3**	P	**P**	**07 00 10.2**	**+3.5**
	1.6nm,0.8s,baz=159,slow=8.6,SNR=4.9						
KLR				LR	LR	07 06 25.3	
	comp=Z,28nm,18.1s,baz=242,slow=35						
SONM	**Songino Array**	**23.72**	**317**	LR	LR	07 12 07.0	
	comp=Z,34nm,20.4s,baz=28,slow=38						
KURBB	**Kurchatov Arra**	**41.86**	**311**	P	**P**	**07 04 02.1**	**+0.7**
	0.6nm,0.2s,baz=99,slow=8.7,SNR=4.6						
	0.6nm,0.2s						
ILAR	**Eielson Array**	**57.91**	**30**	P	P	07 05 55.5	-7.8
	0.2nm,0.6s,baz=252,slow=7.5,SNR=2.9						
	0.2nm,0.6s						
GNI	**Garni**	**66.89**	**304**	LR	LR	07 42 22.7	
	comp=Z,13nm,19.2s,baz=176,slow=41						
FINES	**FINESS Array B**	**68.31**	**330**	P	**P**	**07 07 11.4**	**-1.0**
	1.2nm,0.7s,baz=121,slow=6.7,SNR=3.8						
	1.2nm,0.7s						

OSPL 12 06:59:48.4±4.7, 19.52N×69.14W, h0km±38km, ML3.3
ISC 12 06:59:43.2±1.5, 19.52N±0.07×69.14W±0.04, h14km±12km, n18, σ1°30/23, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONA1	**Toro Cenizo, N**	**0.70**	**258**	*i* P	**Pb**	**06 59 57.8**	**+0.7**
LONA1				*e*S	**Sb**	**07 00 07.8**	**+1.2**
LONA1				IAML		07 00 11.5	
	comp=Z,2μm,1.9s						
SDD	**Santo Domingo**	**1.28**	**215**	*i* P	**Pn**	**07 00 07.1**	**+0.3**
SDD				*e*S	**Sb**	**07 00 22.8**	**-0.8**
BANI	**BANI**	**1.61**	**226**	*i* P	Pn	06 59 58.6	-13
BANI				*e*S	Sn	07 00 18.6	-13
BANI				IAML		07 00 20.9	
	comp=Z,468nm,0.4s						
SDDR	**Presa de Saban**	**2.10**	**256**	*e*P	**Pb**	**07 00 21.6**	**+0.5**
SDDR				*e*S	**Sg**	**07 00 49.4**	**-1.3**
SDDR	**Presa de Saban**	**2.10**	**256**	*i* P	**Pb**	**07 00 21.7**	**+0.6**
SDDR				*e*S	**Sb**	**07 00 48.6**	**+1.5**
SDDR				IAML		07 00 53.7	
	comp=Z,182nm,0.8s						
AGPR	**Aguadilla, PR**	**2.19**	**118**	*i* P	**Pg**	**07 00 25.7**	**+0.5**
AGPR				IAML		07 01 07.1	
	comp=Z,203nm,0.6s						
LODA1	**ITESIL, Dajabo**	**2.42**	**271**	*e*S	**Sb**	**07 00 56.3**	**+0.1**
AOPR	**Arecibo Observ**	**2.54**	**117**	*e*P	**Pg**	**07 00 33.6**	**+1.5**
AOPR				*e*S	**Sg**	**07 01 03.5**	**-1.6**
GRTK	**Grand Turk**	**2.72**	**317**	*e*S	**Sb**	**07 01 03.9**	**-1.1**
LOPE2	**Hotel El Peder**	**2.88**	**239**	*i* P	**Pb**	**07 00 34.4**	**0.0**
PAPH	**Port-au-Prince**	**3.15**	**252**	*i* P	**Pb**	**07 00 36.8**	**-2.2**
PAPH				IAML		07 01 27.8	
	comp=Z,43nm,0.4s						
GTBY	**Guantanamo Bay**	**5.64**	**275**	*e*S	**Sn**	**07 02 11.6**	**+0.3**
RCC	**Rio Carpintero**	**6.19**	**275**	*e*P	**Pn**	**07 01 13.8**	**-0.5**
RCC				*e*S	**Sn**	**07 02 23.4**	**-1.6**
RCC				IAML		07 02 25.0	
	comp=E,2.6nm,0.4s						
RCC				IAML		07 02 25.4	
	comp=N,1.7nm,0.1s						
HLGC	**Holguin**	**6.64**	**283**	*e*P	**Pn**	**07 01 21.6**	**+1.2**
HLGC				*e*S	**Sn**	**07 02 38.5**	**+2.6**
LMGC	**Las Mercedes**	**7.42**	**275**	*e*P	**Pn**	**07 01 30.5**	**-0.7**
LMGC				*e*S	**Sn**	**07 02 53.7**	**-1.5**
LMGC				IAML		07 02 54.2	
	comp=N,0.7nm,0.1s						
LMGC				IAML		07 02 54.3	
	comp=E,1.1nm,0.2s						
ANBD	**Bethesda, Anti**	**7.43**	**108**	*e*P	Pn	07 01 37.0	+5.7
ANBD	**Bethesda, Anti**	**7.43**	**108**	*e*S	**Sn**	**07 02 55.1**	**-0.3**
CCCC	**Cccc**	**8.26**	**283**	*e*P	Pn	07 01 37.2	-5.5
CCCC				*e*S	Sn	07 03 04.0	-12

IDC 12 07:01:15.6±1.7, 23.63S×179.95W, h529km±25km, mb3.1/4, mbtmp4.2/7, Error ellipse: s-maj=28.1km s-min=21.5km az=62.0
ISC 12 07:01:15.3±0.8, 23.7S±0.1×179.9W±0.2, h532km, n13, σ0°65/13, mb3.6/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.23**	**341**	P	**P**	**07 02 55.3**	**-0.2**
	5.4nm,0.4s,baz=242,slow=16,SNR=24						
AFI	**Afiamalu**	**12.37**	**40**	P	**P**	**07 03 57.9**	**0.0**
	7.5nm,0.3s,baz=62,slow=11,SNR=6.0						
AFI				S	S	07 06 00.9	-11
	5.1nm,0.5s,baz=54,slow=19,SNR=1.5						
URZ	**Urewera**	**14.76**	**189**	P	**P**	**07 04 21.7**	**-0.7**
	14nm,0.7s,baz=8.9,slow=4.5,SNR=6.5						
RPZ	**Rata Peaks**	**21.33**	**198**	P	**P**	**07 05 24.8**	**+0.6**
	5.7nm,0.5s,baz=12,slow=6.1,SNR=5.2						
	5.7nm,0.5s						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**07 08 21.6**	**0.0**
	0.8nm,0.5s,baz=96,slow=8.2,SNR=12						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**42.54**	**266**	P	**P**	**07 08 24.2**	**-0.3**
	1.2nm,0.6s,baz=92,slow=8.3,SNR=9.3						
	1.2nm,0.6s						
VNDA	**Vanda**	**54.61**	**185**	P	**P**	**07 09 54.4**	**+1.3**
	1.0nm,0.8s,baz=7.9,slow=8.1,SNR=8.7						
	1.0nm,0.8s						
TROLL	**Troll, Antarti**	**84.55**	**181**	P	**P**	**07 12 51.9**	**-0.2**
SNAA	**Sanae**	**84.88**	**179**	P	**P**	**07 12 53.0**	**-0.6**
VNA2	**Neumayer--Wadz**	**85.51**	**178**	P	**P**	**07 12 56.2**	**-0.4**
	baz=188,slow=3.0						
AKASG	**Malin Array Be**	**144.85**	**328**	PKP	**PKPdf**	**07 19 52.0**	**+0.6**
	0.6nm,0.3s,baz=44,slow=4.6,SNR=6.6						
BRTR	**Keskin Array B**	**147.54**	**308**	PKPbc	**PKPab**	**07 20 04.4**	**+0.4**
	0.8nm,0.6s,baz=69,slow=4.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**169.42**	**188**	PKPab	**PKPab**	**07 21 38.0**	**-0.8**
	0.5nm,0.7s,baz=168,slow=3.8,SNR=4.6						

MOS 12 07:01:40.9±0.0, 42.44N×45.61E, h16km, MPVA3.6
NORS 12 07:01:41.3±0.0, 42.36N×45.60E, h5km, MPVA3.4
DRS 12 07:01:42.3±0.0, 42.42N×45.52E, h14km
ISC 12 07:01:42.5±1.1, 42.44N±0.03×45.58E±0.02, h7km±9km, n30, σ1°00/53, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHTL	**Shatili**	**0.38**	**305**	P	**Pg**	**07 01 49.0**	**-1.0**
SHTL				S	**Sg**	**07 01 53.9**	**-1.2**
BTLR	**Botlikh**	**0.53**	**64**	*e*Pg	**Pg**	**07 01 52.7**	**0.0**
BTLR				*e*Sg	**Sg**	**07 01 60.0**	**+0.4**
DVE	**Vedeno**	**0.66**	**38**	*e*Pg	**Pg**	**07 01 54.9**	**-0.2**
DVE				*e*Sg	**Sg**	**07 02 03.9**	**+0.1**
PNSH	**Pansheti**	**0.74**	**286**	P	**Pg**	**07 01 56.3**	**-0.4**
PNSH				S	**Sg**	**07 02 04.8**	**-1.4**
PNSH	**Pansheti**	**0.74**	**286**	*e*Pg	**Pg**	**07 01 56.3**	**-0.4**
GROC	**Groznyy**	**0.78**	**12**	*e*Pg	**Pg**	**07 01 58.2**	**+0.7**
GROC				*e*Sg	**Sb**	**07 02 09.9**	**+0.6**
XNZR	**Khunzakh**	**0.84**	**82**	*e*Pg	**Pb**	**07 01 58.9**	**-0.6**
XNZR				*e*Sg	**Sb**	**07 02 10.6**	**-0.4**
UNCR	**Uncukul**	**0.94**	**72**	*e*Pg	**Pb**	**07 02 00.6**	**-0.6**
UNCR				*e*Sg	**Sb**	**07 02 13.6**	**-0.2**
BTNK	**Botanikuri**	**0.95**	**218**	P	Pg	07 01 54.6	-6.1
DGRG	**David-gareji**	**0.99**	**189**	P	**Pn**	**07 02 03.0**	**+0.1**
DGRG				S	**Sn**	**07 02 18.9**	**+1.7**
DGRG	**David-gareji**	**0.99**	**189**	*e*Pg	**Pn**	**07 02 03.0**	**+0.1**
DLMR	**Dylym**	**1.00**	**50**	*e*Pg	**Pg**	**07 02 01.7**	**0.0**
DLMR				*e*Sg	**Sb**	**07 02 15.4**	**-0.1**
LACR	**Lac**	**1.02**	**293**	*e*Pg	**Pg**	**07 02 00.9**	**-1.2**
GNBR	**Gunib**	**1.03**	**92**	*e*Pg	**Pb**	**07 02 02.0**	**-0.6**
GNBR				*e*Sg	**Sn**	**07 02 16.5**	**-1.5**
KRNR	**Karanay**	**1.06**	**68**	*e*Pg	**Pg**	**07 02 02.3**	**-0.4**
KRNR				*e*Sg	**Sg**	**07 02 16.0**	**-0.4**
ARKR	**Arakani**	**1.06**	**80**	*e*Pg	**Pb**	**07 02 02.8**	**-0.4**
ARKR				*e*Sg	**Sn**	**07 02 17.3**	**-1.5**
DBC	**Dubki**	**1.09**	**57**	*e*Pg	**Pb**	**07 02 03.5**	**-0.3**
DBC				*e*Sg	**Sn**	**07 02 18.5**	**-1.1**
KMKR	**Kumukh**	**1.17**	**105**	*e*Pg	**Pb**	**07 02 04.2**	**-0.9**
KMKR				*e*Sg	**Sn**	**07 02 21.0**	**-0.8**
BUJR	**Buynaksk**	**1.20**	**70**	*e*Pg	**Pb**	**07 02 04.7**	**-0.7**
ZEI	**Tsey**	**1.29**	**286**	*e*Pg	**Pn**	**07 02 06.4**	**-0.6**
ZEI				*e*Sg	**Sb**	**07 02 24.8**	**+0.9**
KORR	**Kora**	**1.29**	**301**	*e*Pg	**Pb**	**07 02 07.4**	**+0.4**
KORR				*e*Sg	**Sg**	**07 02 25.4**	**+1.6**
STDR	**Stavd-Durt**	**1.45**	**310**	*e*Pg	**Pn**	**07 02 09.5**	**+0.4**
STDR				*e*Sg	**Sg**	**07 02 30.9**	**+1.8**
DMNI	**Dmanisi**	**1.52**	**224**	P	**Pb**	**07 02 10.4**	**-0.6**
DMNI				S	**Sg**	**07 02 31.2**	**0.0**
DMNI	**Dmanisi**	**1.52**	**224**	*e*Pg	**Pb**	**07 02 10.4**	**-0.6**
DMNI				*e*Sg	**Sg**	**07 02 31.2**	**0.0**
LSNR	**Lesken**	**1.54**	**304**	*e*Pg	**Pb**	**07 02 11.9**	**+0.6**
LSNR				*e*Sg	**Sg**	**07 02 33.8**	**+1.9**
DIGR	**Digorskoe uzhe**	**1.54**	**288**	*e*Pg	**Pn**	**07 02 11.1**	**+0.5**
DIGR				*e*Sg	**Sb**	**07 02 32.3**	**+0.9**
URKR	**Urkarakh**	**1.55**	**99**	*e*Pg	**Pg**	**07 02 14.0**	**+1.8**
URKR				*e*Sg	**Sg**	**07 02 35.3**	**+3.1**
KBZ	**Khabaz**	**2.35**	**304**	*e*Pn	**Pn**	**07 02 22.7**	**+1.3**
KBZ				*e*Sn	**Sb**	**07 02 53.9**	**-0.4**
GNI	**Garni**	**2.37**	**196**	*e*Pn	**Pn**	**07 02 21.4**	**-0.5**
SHA1	**Shidzhatmaz**	**2.50**	**302**	*e*Pn	**Pn**	**07 02 22.9**	**-1.0**
SHA1				*e*Sn	**Sn**	**07 02 55.2**	**+0.5**

IDC 12 07:01:55.7±3.4, 32.12S×178.66W, h0km, mb3.6/2, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=76.0km s-min=49.5km az=113.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.03**	**208**	Pn	Pn	07 03 39.4	-0.5
	0.7nm,0.3s,baz=8.1,slow=7.1,SNR=1.0						
URZ				Sn	Sn	07 04 55.6	-5.0
	baz=270,slow=20						
	6.8nm,0.8s						
ASAR	**Alice Springs**	**42.48**	**269**	P	P	07 09 51.8	-1.1
	0.4nm,0.5s,baz=108,slow=7.4,SNR=4.2						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**43.63**	**274**	P	P	07 10 03.0	+0.8
	0.4nm,0.3s,baz=113,slow=7.9,SNR=6.1						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**146.55**	**339**	PKPbc	PKPdf	07 21 37.5	+0.6
	7.0nm,1.2s,baz=132,slow=6.0,SNR=1.8						

SOME 12 07:16:58.9, 39.77N×74.33E, h0km
NNC 12 07:17:01.5±2.3, 39.79N×74.44E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=17.0km s-min=11.3km az=167.0
KRNET 12 07:17:05.6±0.1, 39.82N×74.20E, mb3.3
ISC 12 07:17:05.3±1.5, 39.82N±0.07×74.22E±0.03, h10km, n48, σ2°60/76, 9C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.30**	**303**	↑*i*P	**Pn**	**07 17 28.7**	**-0.9**
	baz=3.0						
OHH				↑*i*S	**Sb**	**07 17 46.1**	**-0.7**
	baz=3.0						
ARLS	**Aral**	**2.04**	**2**	↓*i*P	**Pn**	**07 17 39.7**	**-0.1**
	baz=3.0						
ARLS				↓*i*S	**Sn**	**07 18 04.5**	**-0.9**
	baz=3.0						
NRN	**Naryn**	**2.10**	**40**	↓*e*P	**Pn**	**07 17 40.2**	**-0.6**
	baz=40						
NRN				↓*i*S	**Sn**	**07 18 06.3**	**-0.9**
	baz=40						
AML	**Almayashu**	**2.34**	**350**	P	**Pb**	**07 17 46.9**	**-0.8**
	SNR=12						
UCH	**Uchtor**	**2.41**	**5**	P	**Pn**	**07 17 45.8**	**+0.6**
	SNR=93						
UCH	**Uchtor**	**2.41**	**5**	↓*e*P	**Pn**	**07 17 45.1**	**-0.1**
	baz=6.0						
UCH				↓*i*S	**Sn**	**07 18 14.1**	**-0.9**
	baz=6.0						
BTK	**Batken**	**2.63**	**276**	↑*e*P	**Pn**	**07 17 48.0**	**+0.2**
	baz=76						
BTK				↑*i*S	**Sn**	**07 18 18.0**	**-1.8**
	baz=76						
AAK	**Ala-Archa**	**2.82**	**4**	P	**Pn**	**07 17 51.9**	**+1.3**
	SNR=53						
AAK	**Ala-Archa**	**2.82**	**4**	↑*i*P	**Pn**	**07 17 50.4**	**-0.1**
	baz=4.0						
AAK				↑*i*S	**Sn**	**07 18 23.0**	**-1.7**
	baz=4.0						
EKS2	**Erkin-Say**	**2.85**	**353**	P	**Pb**	**07 17 55.8**	**-0.6**
	SNR=6.1						
ULHL	**Ulahol**	**2.86**	**32**	P	**Pn**	**07 17 54.2**	**+3.0**
	SNR=18						
ULHL	**Ulahol**	**2.86**	**32**	↑*e*P	**Pn**	**07 17 51.1**	**-0.1**
	baz=32						
ULHL				↑*i*S	**Sn**	**07 18 24.3**	**-1.5**
	baz=32						
KBK	**Karagaybulak**	**2.88**	**11**	P	**Pn**	**07 17 52.9**	**+1.5**
	SNR=14						
KBK	**Karagaybulak**	**2.88**	**11**	↓*i*P	**Pn**	**07 17 51.3**	**-0.1**
	baz=11						
KBK				↓*i*S	**Sn**	**07 18 24.9**	**-1.4**
	baz=11						
BOOM	**Boomskoye usch**	**2.96**	**25**	↓*i*P	**Pn**	**07 17 52.8**	**+0.3**
	baz=26						
BOOM				↓*i*S	**Sn**	**07 18 26.9**	**-1.3**
	baz=26						
TKM2	**Tokmak 2**	**3.26**	**18**	P	**Pn**	**07 17 57.2**	**+0.5**
	SNR=8.9						
USP	**Ospenovka**	**3.45**	**3**	P	**Pb**	**07 18 06.2**	**-0.2**
	SNR=8.1						
KST	**Kastek**	**3.47**	**22**	*e*P	**Pb**	**07 18 05.6**	**-1.3**
	14nm,0.7s						
KST				*e*S	**Sg**	**07 18 53.7**	**-3.1**
	42nm,0.6s						
KST	**Kastek**	**3.47**	**22**	Pg	**Pn**	**07 18 00.2**	**+0.7**
	13nm,0.5s						
KST				Lg	Lg	07 18 45.0	
	37nm,0.7s						
SGDS	**Sogindy**	**3.64**	**5**	*e*P	**Pb**	**07 18 08.0**	**-1.7**
	5.3nm,0.7s						
SGDS				*e*S	**Sb**	**07 18 57.8**	**+3.9**
	13nm,0.6s						
SGDS	**Sogindy**	**3.64**	**5**	Pg	**Pb**	**07 18 08.0**	**-1.7**
	5.3nm,0.7s						
SGDS				Lg	Lg	07 18 59.0	
	13nm,0.6s						
MTBS	**Maitube**	**3.70**	**26**	*e*P	**Pb**	**07 18 08.3**	**-2.4**
	18nm,0.9s						
MTBS				*e*S	**Sb**	**07 18 58.4**	**+2.8**
	20nm,0.6s						
MTBS	**Maitube**	**3.70**	**26**	Pg	**Pb**	**07 18 08.3**	**-2.4**
	18nm,0.9s						
MTBS				Lg	Lg	07 18 59.4	
	20nm,0.6s						
MDOK	**Medeo**	**3.95**	**32**	*e*P	**Pb**	**07 18 13.5**	**-1.6**
	12nm,0.8s						
MDOK				*e*S	**Sb**	**07 19 07.5**	**+4.4**
	15nm,0.9s						
MDOK	**Medeo**	**3.95**	**32**	↓Pg	**Pb**	**07 18 13.1**	**-2.1**
	9.8nm,0.6s						
MDOK				Pg	Pn	07 18 13.5	+7.4
	12nm,0.8s						
MDOK				Lg	Lg	07 19 06.8	
	28nm,0.8s						
MDOK				Lg	Lg	07 19 08.3	
	15nm,0.9s						
KRBS	**Karabastau**	**4.02**	**15**	*e*P	**Pb**	**07 18 14.8**	**-1.4**
	7.8nm,0.6s						
KRBS				*e*S	**Sb**	**07 19 09.7**	**+4.8**
	23nm,0.8s						
KRBS	**Karabastau**	**4.02**	**15**	Pg	**Pb**	**07 18 14.8**	**-1.4**
	7.8nm,0.6s						
KRBS				Lg	Lg	07 19 09.7	
	23nm,0.8s						
KTBS	**Karatobe**	**4.30**	**25**	*e*P	**Pb**	**07 18 19.7**	**-1.3**
	6.0nm,0.6s						
KTBS				*e*S	**Sb**	**07 19 18.0**	**+5.1**
	24nm,0.7s						
KTBS	**Karatobe**	**4.30**	**25**	Pg	**Pb**	**07 18 19.7**	**-1.3**
	6.0nm,0.6s						
KTBS				Lg	Lg	07 19 18.0	
	24nm,0.7s						
KK31	**Karatay Array**	**4.30**	**321**	Pn	**Pn**	**07 18 14.7**	**+3.9**
	0.4nm,0.3s,baz=133,slow=13,SNR=2.6						
KK31				Pg	**Pb**	**07 18 21.8**	**+0.8**
	4.0nm,0.7s,baz=150,slow=17,SNR=19						
KK31				⇑Sn	**Sn**	**07 19 05.2**	**+4.2**
	3.1nm,0.5s,baz=147,slow=23,SNR=3.5						
KK31				⇓Lg	Lg	07 19 22.3	
	3.4nm,0.5s,baz=134,slow=28,SNR=4.2						
KUU	**Kurty**	**4.36**	**21**	*e*P	**Pb**	**07 18 21.0**	**-1.0**
	2.9nm,0.4s						
KUU				*e*S	**Sb**	**07 19 20.3**	**+5.6**
	13nm,0.5s						
KUU	**Kurty**	**4.36**	**21**	Pg	**Pb**	**07 18 21.0**	**-1.0**
	2.9nm,0.4s						
KUU				Lg	Lg	07 19 20.3	
	13nm,0.5s						
SATY	**Saty**	**4.51**	**43**	*e*P	**Pb**	**07 18 22.4**	**-2.2**
	3.7nm,0.2s						
SATY				*e*S	**Sb**	**07 19 22.4**	**+3.3**
	11nm,0.6s						
SATY	**Saty**	**4.51**	**43**	Pg	**Pb**	**07 18 22.4**	**-2.2**
	3.7nm,0.2s						
SATY				Lg	Lg	07 19 23.1	
	11nm,0.6s						
CHKK	**Chushkaly**	**4.53**	**26**	*e*P	**Pb**	**07 18 24.8**	**0.0**
	2.8nm,0.5s						
CHKK				*e*S	**Sg**	**07 19 26.8**	**-3.8**
	9.9nm,0.3s						
CHKK	**Chushkaly**	**4.53**	**26**	Pg	**Pb**	**07 18 24.8**	**0.0**
	2.8nm,0.5s						
CHKK				Lg	Lg	07 19 26.8	
	9.9nm,0.3s						
ZHN	**Zhinishke**	**4.60**	**42**	*e*P	**Pb**	**07 18 24.0**	**-2.1**
	1.5nm,0.1s						
ZHN				*e*S	**Sb**	**07 19 24.9**	**+3.2**
	8.4nm,0.5s						
KURS	**Kuram**	**4.71**	**38**	*e*P	**Pb**	**07 18 26.6**	**-1.3**
	5.5nm,0.6s						
KURS				*e*S	**Sb**	**07 19 29.3**	**+4.7**
	6.0nm,0.5s						
UZB	**Uzynbulak**	**4.90**	**46**	*e*P	**Pb**	**07 18 29.5**	**-1.8**
	1.3nm,0.4s						
UZB				*e*S	**Sb**	**07 19 35.0**	**+4.6**
	7.8nm,0.5s						
UZB	**Uzynbulak**	**4.90**	**46**	Pg	**Pb**	**07 18 29.5**	**-1.8**
	1.3nm,0.4s						
UZB				Lg	Lg	07 19 35.4	
	7.8nm,0.5s						
KPKS	**Kokpek**	**4.94**	**41**	*e*P	**Pb**	**07 18 29.8**	**-2.2**
	2.8nm,0.3s						
KPKS				*e*S	**Sb**	**07 19 35.4**	**+4.0**
	16nm,0.7s						
KPKS	**Kokpek**	**4.94**	**41**	Pg	**Pb**	**07 18 29.8**	**-2.2**
	2.8nm,0.3s						
KPKS				Lg	Lg	07 19 35.4	
	16nm,0.7s						
SHLS	**Shalkode**	**5.16**	**48**	*e*P	**Pb**	**07 18 38.4**	**+2.8**
	2.5nm,0.3s						
SHLS				*e*S	**Sg**	**07 19 50.2**	**-0.5**
	6.4nm,0.7s						
SHLS	**Shalkode**	**5.16**	**48**	Pg	**Pb**	**07 18 38.4**	**+2.8**
SHLS				Lg	Lg	07 19 50.2	
BTLS	**Baital**	**5.21**	**359**	*e*P	**Pb**	**07 18 37.0**	**+0.5**
	2.4nm,0.7s						
BTLS				*e*S	**Sg**	**07 19 47.3**	**-5.3**
	7.5nm,0.7s						
KTMS	**Ketmen**	**5.85**	**50**	*e*P	**Pb**	**07 18 45.8**	**-1.6**
	0.6nm,0.4s						
KTMS				*e*S	**Sb**	**07 20 02.7**	**+5.2**
	3.3nm,0.5s						
KTMS	**Ketmen**	**5.85**	**50**	Pg	**Pb**	**07 18 45.8**	**-1.6**
KTMS				Lg	Lg	07 20 02.7	
DJR	**Jarkent**	**6.12**	**41**	*e*P	**Pb**	**07 18 52.7**	**+0.8**
	2.9nm,0.7s						
DJR				*e*S	**Sg**	**07 20 14.2**	**-7.5**
	2.2nm,0.3s						

IDC 12 07:21:13.2±4.4, 4.92S×152.70E, h0km, mb3.1/2, mbtmp3.1/2, Error ellipse: s-maj=215.5km s-min=50.4km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.29**	**229**	P	P	07 26 22.7	-0.2
	0.5nm,1.0s,baz=56,slow=11,SNR=2.6						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**25.99**	**222**	P	P	07 26 48.5	+0.5
	0.3nm,0.7s,baz=58,slow=8.8,SNR=4.6						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.24**	**288**	PKPbc	PKPbc	07 41 06.7	-0.7
	0.2nm,0.3s,baz=64,slow=2.6,SNR=4.5						

TUL 12 07:32:34.4±1.0, 36.48N±0.01×98.82W±0.02, h5km±1km, ML2.9, mb_Lg3.1/78(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=121.0
NEIC 12 07:32:34.6±1.6, 36.50N±0.01×98.82W±0.02, h12km±3km, Error ellipse: s-maj=2.2km s-min=1.6km az=102.0
ANF 12 07:32:35.2±0.5, 36.44N×98.81W, h6km±4km, ML3.7/11, Error ellipse: s-maj=4.1km s-min=2.5km az=93.0
ISC 12 07:32:34.7±0.9, 36.48N±0.03×98.81W±0.03, h7km±6km, n90, σ0°68/74, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.06**	**91**	Pg	**Pg**	**07 32 36.3**	**-0.1**
OK038				Sg	**Sg**	**07 32 37.7**	**+0.1**
U32A	**Winter Ranch,**	**0.18**	**237**	Pg	**Pg**	**07 32 38.3**	**-0.2**
U32A				Sg	**Sg**	**07 32 41.4**	**+0.4**
U32A	**Winter Ranch,**	**0.18**	**237**	P	**Pg**	**07 32 38.3**	**-0.2**
	baz=55						
U32A				S	**Sg**	**07 32 41.4**	**+0.

baz=258
R32A Long Quarter, 1.94 2 Pn 07 33 08.7 +0.6
R32A IAmb_Lg 07 33 38.4
comp=Z,123nm,0.8s
R32A Long Quarter, 1.94 2 P Pn 07 33 08.9 +0.7
baz=182
R32A S Sb 07 33 35.1 +0.2
baz=182
X34A Smith Ranch, M 2.04 157 Pn 07 33 10.0 +0.5
CBKS Cedar Bluff 2.44 343 Pn Pn 07 33 15.5 +0.4
CBKS Cedar Bluff 2.44 343 S Sb 07 33 49.6 +0.2
baz=162
TUL1 Leonard 2.51 102 Pn 07 33 15.9 +0.1
TUL1 Leonard 2.51 102 S Sn 07 33 47.9 +1.2
baz=284
AMTX Amarillo 2.83 237 Pn 07 33 18.8 -1.6
AMTX Amarillo 2.83 237 P Pn 07 33 20.2 -0.2
baz=55
KSU1 Kansas State U 3.15 33 Pn Pn 07 33 25.7 +1.0
KSU1 IAmb_Lg 07 34 14.6
comp=Z,48nm,1.1s
KSU1 Kansas State U 3.15 33 P Pn 07 33 25.8 +1.2
baz=214
KSU1 S Sn 07 34 03.6 +1.2
baz=214
X37A Clayton 3.38 123 Pn Pn 07 33 28.0 +0.1
X37A IAmb_Lg 07 34 28.2
comp=Z,56nm,0.8s
X37A Clayton 3.38 123 P Pn 07 33 27.9 +0.1
baz=305
Z35A Perchaven, San 3.39 157 Pn 07 33 28.7 +0.6
Z35A Perchaven, San 3.39 157 P Pn 07 33 28.9 +0.9
baz=338
U38A Gravette 3.57 89 Pn Pn 07 33 30.8 +0.3
U38A IAmb_Lg 07 34 30.7
comp=Z,33nm,0.8s
ABTX Abilene, Hawle 3.91 190 Pn Pn 07 33 35.1 0.0
ABTX IAmb_Lg 07 34 37.5
comp=Z,27nm,0.8s
ABTX Abilene, Hawle 3.91 190 P Pn 07 33 35.5 +0.3
baz=9.8
HHAR Hobbs 3.94 91 Pn Pn 07 33 35.4 -0.2
HHAR IAmb_Lg 07 34 43.0
comp=Z,28nm,0.8s
KSCO Kaye Shedlock' 3.94 311 Pn Pn 07 33 34.7 -1.0
MSTX Muleshoe 4.10 233 Pn Pn 07 33 37.4 -0.5
MSTX IAmb_Lg 07 34 49.6
comp=Z,50nm,0.8s
N33A J Bar K, Exete 4.38 14 Pn Pn 07 33 41.2 -0.6
N33A IAmb_Lg 07 35 05.4
comp=Z,45nm,0.8s
Z38A Mt. Pleasant 4.49 134 Pn Pn 07 33 43.5 +0.3
T25A Trinidad 4.54 280 Pn 07 33 44.3 +0.2
T25A IAmb_Lg 07 34 59.4
comp=Z,50nm,1.1s
S39A Bolivar 4.55 73 Pn Pn 07 33 42.6 -1.4
S39A IAmb_Lg 07 34 57.1
comp=Z,42nm,1.1s
WHTX Lake Whitney, 4.62 166 Pn Pn 07 33 44.0 -0.9
MIAR Mount Ida 4.68 113 Pn 07 33 46.1 +0.3
MIAR IAmb_Lg 07 35 14.9
comp=Z,43nm,1.1s
237A Washetta, Mont 5.11 150 IAmb_Lg 07 35 24.5
comp=Z,29nm,1.0s
OGNE Ogallala 5.12 332 Pn 07 33 53.5 +1.5
P38A Dawn 5.22 51 Pn Pn 07 33 52.1 -1.0
P38A IAmb_Lg 07 35 28.5
comp=Z,19nm,0.8s
MGMO Mountain Grove 5.29 81 Pn Pn 07 33 54.7 +0.5
WLAR White Oak Lake 5.44 119 IAmb_Lg 07 35 41.4
comp=Z,20nm,0.8s
FCAR Ozark Folk Cen 5.44 94 IAmb_Lg 07 35 33.0
comp=Z,23nm,0.7s
R40A Maddies Statio 5.51 69 IAmb_Lg 07 35 41.1
comp=Z,20nm,0.8s
UALR University of 5.54 106 IAmb_Lg 07 35 43.3
comp=Z,40nm,1.2s
Q24A Divide 5.60 298 IAmb_Lg 07 35 30.4
comp=Z,21nm,1.0s
435B Jarrell 5.77 169 IAmb_Lg 07 35 45.6
comp=Z,42nm,0.9s
BRIGG Briggsdale 5.95 315 IAmb_Lg 07 35 55.3
comp=Z,38nm,0.9s
P40A Paris 6.15 58 IAmb_Lg 07 35 53.2
comp=Z,40nm,1.1s
CCM Cathedral Cave 6.24 73 IAmb_Lg 07 35 50.7
comp=Z,23nm,0.8s
CCAR Cane Creek 6.30 112 IAmb_Lg 07 36 11.1
comp=Z,21nm,0.9s
SCIA State Center 6.95 37 IAmb_Lg 07 36 21.3
comp=Z,26nm,0.7s
PHWY Pilot Hill 7.07 315 IAmb_Lg 07 36 19.4
comp=Z,18nm,0.8s
N23A Red Feather La 7.11 310 IAmb_Lg 07 36 26.1
comp=Z,33nm,0.8s
SLM Saint Louis 7.14 70 IAmb_Lg 07 36 39.2
comp=Z,21nm,0.8s
PARMO Parma 7.29 86 IAmb_Lg 07 36 30.5
comp=Z,32nm,0.7s
N41A Harden Midland 7.52 53 IAmb_Lg 07 36 43.0
comp=Z,28nm,0.9s
S44A Carbondale 7.73 78 IAmb_Lg 07 36 39.5
comp=Z,22nm,0.8s
W45A Hickory Valley 7.93 97 IAmb_Lg 07 36 51.5
comp=Z,28nm,0.9s
SUSD Miller 7.96 359 IAmb_Lg 07 37 07.4
comp=Z,20nm,0.8s
Q44A Meyer Farm, Va 8.13 70 IAmb_Lg 07 37 06.5
comp=Z,27nm,0.8s
833A Chaparral WMA, 8.15 184 IAmb_Lg 07 36 59.6
comp=Z,16nm,1.0s
K22A Casper 8.57 318 IAmb_Lg 07 37 23.8
comp=Z,15nm,0.9s
RSSD Black Hills 8.61 334 IAmb_Lg 07 37 18.0
comp=Z,19nm,1.0s
JFWS Jewell Farm 9.21 43 IAmb_Lg 07 37 35.9
comp=Z,15nm,0.7s

NOU 12 07:37:02.2, 37°.90S×176°.24E, h207km, MLv3.7/13, North Island, New Zealand
WEL 12 07:37:05.7±0.7, 38°S±4°×17°6E±°, h167km±6km, M3.0/48, MLv3.0/48, Error ellipse: s-maj=0.0km s-min=0.0km az=34.7
ISC 12 07:36:59.8±1.8, 37°.83S±0°.06×176°.30E±0°.06, h215km±10km, n142, σ1§92/151, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.11	341	P	Pn	07 37 28.4	+0.6
KARZ	Kaharoa	0.20	194	P	Pn	07 37 28.7	+0.9
OPRZ	Ohinepanea	0.20	95	P	Pn	07 37 28.4	+0.6
OMRZ	Omania	0.28	169	P	Pn	07 37 29.0	+1.0
KMRZ	Kaimai	0.29	267	P	Pn	07 37 29.0	+1.0
MARZ	Manawahe	0.33	118	P	Pn	07 37 29.3	+1.2
RRRZ	Republican Roa	0.54	162	P	Pn	07 37 30.0	+1.3
HRRZ	Handcock Road	0.56	182	P	Pn	07 37 30.5	+1.7
TOZ	Tahuroa Road	0.64	278	P	Pn	07 37 30.3	+1.2
TOZ				S	Sn	07 37 50.2	-1.7
PRRZ	Plateau Road	0.67	174	P	Pn	07 37 31.0	+1.7
WPRZ	Whakapapatarin	0.70	189	P	Pn	07 37 31.1	+1.7
ALRZ	Allen Road	0.73	178	P	Pn	07 37 31.5	+1.9
MUGZ	Murupara	0.74	151	P	Pn	07 37 30.9	+1.3
MUGZ				S	Sn	07 37 51.6	-1.4
KUTZ	Kaahu Road	0.76	210	P	Pn	07 37 31.2	+1.5
URZ	Urewera	0.77	124	P	Pn	07 37 30.6	+0.9
URZ				S	Sn	07 37 50.6	-2.4
URZ	Urewera	0.77	124	P	Pn	07 37 31.0	+1.3
TLZ	Tolley Road	0.79	230	P	Pn	07 37 31.3	+1.5
RTZ	Ruatahuna	0.95	146	P	Pn	07 37 32.4	+1.6
RTZ				S	Sn	07 37 53.5	-1.5
WATZ	Wairara	0.99	207	P	Pn	07 37 33.2	+2.2
MWZ	Matawai	1.09	118	P	Pn	07 37 33.2	+1.6
MWZ				S	Sn	07 37 55.1	-1.5
RUGZ	Raukumara Rang	1.09	98	P	Pn	07 37 32.5	+0.7
RUGZ				S	Sn	07 37 53.9	-2.9
RAGZ	Rawiri	1.10	128	P	Pn	07 37 33.8	+2.1
MTHZ	Maungataniwha	1.11	158	P	Pn	07 37 33.6	+1.8
MTHZ				S	Sn	07 37 55.0	-1.8
RATZ	Rangitukua	1.12	202	P	Pn	07 37 33.7	+1.8
MKAZ	Moumakai	1.16	308	P	Pn	07 37 33.6	+1.5
HAZ	Te Kaha	1.17	87	P	Pn	07 37 33.3	+1.1
HAZ				S	Sn	07 37 55.0	-2.4
KUZ	Kuaotunu	1.18	337	P	Pn	07 37 33.4	+1.1
KUZ	Kuaotunu	1.18	337	P	Pn	07 37 33.4	+1.1
RAHZ	Arahi	1.25	151	P	Pn	07 37 35.1	+2.4
RAHZ				S	Sn	07 37 57.6	-1.0
SNGZ	Shannon Statio	1.25	140	P	Pn	07 37 35.1	+2.3
NMHZ	Naumai	1.33	163	P	Pn	07 37 36.3	+2.8
HIZ	Hauiti	1.33	239	P	Pn	07 37 35.3	+2.0
HIZ	Hauiti	1.33	239	P	Pn	07 37 35.4	+2.0
BKZ	Black Stump Fm	1.34	174	P	Pn	07 37 35.2	+1.7
BKZ	Black Stump Fm	1.34	174	P	Pn	07 37 35.3	+1.7
NTVZ	North Tongarir	1.36	201	P	Pn	07 37 36.3	+2.5
TKGZ	Te Karaka	1.36	117	P	Pn	07 37 36.0	+2.4
TWGZ	Tauwhareparae	1.37	105	P	Pn	07 37 36.2	+2.5
ETVZ	East Tongariro	1.39	199	P	Pn	07 37 36.1	+2.2
ETAZ	East Tamaki Re	1.40	308	P	Pn	07 37 35.6	+1.6
WTVZ	West Tongariro	1.40	203	P	Pn	07 37 36.2	+2.1
PKGZ	Pakihiroa	1.40	93	P	Pn	07 37 36.1	+2.0
NNVZ	North Ngauruho	1.41	202	P	Pn	07 37 36.5	+2.3
TWVZ	Taurewa	1.41	208	P	Pn	07 37 36.3	+2.1
OTVZ	Oturere	1.42	200	P	Pn	07 37 36.7	+2.4
RIGZ	Rimuhau	1.44	128	P	Pn	07 37 37.0	+2.6
WHHZ	Waihua	1.44	150	P	Pn	07 37 36.7	+2.5
SNVZ	South Ngauruho	1.45	201	P	Pn	07 37 37.0	+2.4
NGZ	Ngauruhoe	1.45	202	P	Pn	07 37 36.9	+2.4
TUVZ	Tukino	1.52	199	P	Pn	07 37 37.3	+2.2
AWAZ	Awhitu Peninsu	1.53	300	P	Pn	07 37 36.6	+1.6
ARHZ	Aropaoanui	1.53	159	P	Pn	07 37 37.6	+2.6
FWVZ	Far West T-bar	1.54	202	P	Pn	07 37 37.5	+2.2
MBAZ	Motutapu North	1.54	313	P	Pn	07 37 36.9	+1.8
WHVZ	Whangaehu Hut	1.56	201	P	Pn	07 37 37.6	+2.1
PUZ	Puketiti	1.56	100	P	Pn	07 37 37.5	+2.1
TRVZ	Turoa	1.58	202	P	Pn	07 37 37.8	+2.0
KWHZ	Kaweka Forest	1.59	177	P	Pn	07 37 38.0	+2.4
WNVZ	Wahianoa	1.59	200	P	Pn	07 37 37.8	+2.0
KNZ	Kokohu	1.60	138	P	Pn	07 37 38.0	+2.4
MXZ	Matakaoa Point	1.61	81	P	Pn	07 37 38.2	+2.4
MXZ	Matakaoa Point	1.61	81	P	Pn	07 37 38.7	+3.0
MOVZ	Moawhango	1.63	195	P	Pn	07 37 37.6	+1.7
CNGZ	Carnagh Statio	1.64	114	P	Pn	07 37 39.0	+3.1
PKVZ	Pokaka	1.64	207	P	Pn	07 37 38.4	+2.3
MCHZ	McNeill Hill	1.64	169	P	Pn	07 37 38.7	+2.7
WTAZ	Waiatarua	1.64	302	P	Pn	07 37 37.9	+1.8
BHHZ	Black Hill Sta	1.67	186	P	Pn	07 37 38.1	+1.8
WMGZ	Waiomatatini S	1.67	90	P	Pn	07 37 38.5	+2.2
MTVZ	Mangateitei	1.69	203	P	Pn	07 37 38.7	+2.2
ABAZ	Army Bay	1.70	316	P	Pn	07 37 38.7	+2.1
GRZ	Great Barrier	1.71	336	P	Pn	07 37 38.4	+1.6
RVAZ	Riverhead Bore	1.73	307	P	Pn	07 37 38.5	+1.6
VRZ	Vera Road	1.77	223	P	Pn	07 37 40.1	+2.9
MHGZ	Mahia Peninsul	1.82	137	P	Pn	07 37 40.5	+2.8
CKHZ	Cape Kidnapper	1.92	162	P	Pn	07 37 41.3	+2.7
KAHZ	Kahuranaki	2.01	167	P	Pn	07 37 42.1	+2.6
PNHZ	Pukenui	2.08	182	P	Pn	07 37 42.2	+2.0
DREZ	Durham Road	2.14	230	P	Pn	07 37 44.1	+3.4
WAZ	Wanganui	2.18	208	P	Pn	07 37 43.5	+2.4
LREZ	Lake Rotokare	2.21	222	P	Pn	07 37 44.8	+3.3
WPHZ	Waipukurau	2.23	177	P	Pn	07 37 44.0	+2.3
PXZ	Pawanui	2.24	169	P	Pn	07 37 44.1	+2.4
TSZ	Takapari Road	2.24	187	P	Pn	07 37 43.7	+1.9
NEZ	North Egmont	2.25	230	P	Pn	07 37 45.8	+3.8
PKE	Pukeiti	2.27	232	P	Pn	07 37 45.6	+3.4
KHEZ	Kahui Hut	2.32	230	P	Pn	07 37 46.0	+3.4
NBEZ	Newall Road No	2.39	232	P	Pn	07 37 46.8	+3.4
PRHZ	Porangahau	2.45	174	P	Pn	07 37 46.2	+2.2
WCZ	Waipu Caves	2.46	320	P	Pn	07 37 46.5	+2.4
NMEZ	Namu Road	2.47	229	P	Pn	07 37 47.7	+3.5
POWZ	Post Office Ro	2.59	189	P	Pn	07 37 47.3	+1.8
ANWZ	Angora Road	2.63	177	P	Pn	07 37 48.3	+2.4
PRWZ	Puri Road	2.73	185	P	Pn	07 37 49.2	+2.1
BFZ	Birch Farm	2.85	181	P	Pn	07 37 50.3	+1.9
BFZ	Birch Farm	2.85	181	P	Pn	07 37 50.4	+2.0
MRZ	Mangatainoka R	2.88	191	P	Pn	07 37 50.2	+1.5
TIWZ	Tintock	2.96	186	P	Pn	07 37 51.4	+1.7
CPWZ	Castlepoint	3.08	181	P	Pn	07 37 53.3	+2.3
OGWZ	Otaki Gorge	3.11	196	P	Pn	07 37 52.9	+1.5
HOWZ	Holdsworth Sta	3.12	191	P	Pn	07 37 52.8	+1.2
KIW	Kapiti Island	3.21	199	P	Pn	07 37 53.7	+1.1
TMWZ	Te Maipa	3.29	185	P	Pn	07 37 54.7	+1.2
MTW	Mount Morrison	3.38	190	P	Pn	07 37 55.5	+0.9
OUZ	Omahuta	3.40	319	P	Pn	07 37 57.7	+2.8
OUZ	Omahuta	3.40	319	P	Pn	07 37 57.9	+3.1
CAW	Cannon Point	3.41	196	P	Pn	07 37 56.0	+1.1
DUWZ	D'Urville Isla	3.50	211	P	Pn	07 37 56.9	+0.9
TRWZ	Traveller	3.60	187	P	Pn	07 37 58.4	+1.3
PAWZ	Paruwai Farm	3.61	191	P	Pn	07 37 58.2	+0.8
WEL	Wellington	3.65	199	P	Pn	07 37 58.8	+1.1
MSWZ	Moikau Station	3.67	192	P	Pn	07 37 58.9	+0.8
SNZO	South Karori	3.69	199	P	Pn	07 37 58.9	+0.7
TCW	Tory Channel	3.72	204	P	Pn	07 37 59.4	+0.8
PLWZ	Palliser	3.82	192	P	Pn	07 38 00.6	+0.7
TUWZ	Tuamarina	4.03	206	P	Pn	07 38 03.0	+0.6
NNZ	Nelson	4.07	213	P	Pn	07 38 03.4	+0.5
TKNZ	Takaka Hill	4.12	218	P	Pn	07 38 02.2	-1.3
QRZ	Quartz Range	4.19	223	P	Pn	07 38 04.9	+0.6
QRZ	Quartz Range	4.19	223	P	Pn	07 38 05.3	+1.0
CMWZ	Cape Campbell	4.23	202	P	Pn	07 38 06.5	+1.7
BSWZ	Blackbirch Sta	4.31	205	P	Pn	07 38 06.7	+0.9
MRNZ	Matariki Terra	4.50	216	P	Pn	07 38 08.4	+0.2
THZ	Tophouse	4.72	213	P	Pn	07 38 11.7	+0.7
KHZ	Kahutara	5.05	204	P	Pn	07 38 15.8	+0.9
KHZ	Kahutara	5.05	204	P	Pn	07 38 15.9	+0.9
DSZ	Denniston Nort	5.22	220	P	Pn	07 38 17.9	+0.5
GVZ	Greta Valley S	5.71	205	P	Pn	07 38 23.7	+0.3
LTZ	Lake Taylor	5.83	211	P	Pn	07 38 25.6	+0.6
OXZ	Oxford	6.38	209	P	Pn	07 38 31.6	-0.4
OKCZ	Okains Bay	6.38	202	P	Pn	07 38 32.3	+0.2
MQZ	McQueen's Vall	6.49	204	P	Pn	07 38 32.7	-0.7
AKCZ	Akaroa Harbour	6.56	202	P	Pn	07 38 34.2	-0.1
RACZ	Rakaia	6.69	207	P	Pn	07 38 35.5	-0.4
WACZ	Wakanui South	6.98	208	P	Pn	07 38 39.6	-0.2
RPZ	Rata Peaks	7.10	212	P	Pn	07 38 41.9	+0.6
RPZ	Rata Peaks	7.10	212	P	Pn	07 38 42.6	+1.3
ARCZ	Arundel	7.24	211	P	Pn	07 38 43.5	+0.3
TMZ	Timaru	7.67	210	P	Pn	07 38 48.2	-0.5
ODZ	Otahua Downs	8.37	209	P	Pn	07 38 58.2	+0.6
ODZ	Otahua Downs	8.37	209	P	Pn	07 38 58.5	+0.9
JCZ	Jackson Bay	8.44	220	P	Pn	07 39 00.3	+1.6

IDC 12 08:11:47.3±1.4, 11°.42N×85°.97W, h0km, mb3.7/5, mbtmp3.7/6, ML3.7/1, MS3.3/8, Error ellipse: s-maj=59.0km s-min=25.6km az=50.0
UCR 12 08:11:50.6±1.8, 11°.05N×86°.59W, h14km±4km, ML3.5, MW4.5
INET 12 08:11:51.8±1.1, 11°.10N×86°.55W, h20km±8km, MW4.0
SNET 12 08:11:55.4±1.3, 11°.42N×86°.67W, h142km±62km, ML3.7
ISC 12 08:11:53.1±1.1, 11°.12N±0°.05×86°.54W±0°.05, h46km±13km, n74, σ1§28/94, mb3.5/5, MS3.6/6, 4C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.05	357	eP	Pn	08 12 10.6	-0.9
GBS3	Finca Las Img	1.12	107	eP	Pn	08 12 11.2	-1.3
GBS3				eS	Sn	08 12 26.9	+0.1
APYN	Apoyeque	1.12	10	eP	Pn	08 12 11.5	-1.0
APYN				eS	Sn	08 12 26.9	+0.1
LAPC	Finca la Perla	1.15	108	eP	Pn	08 12 11.5	-1.3
LAPC				eS	Sn	08 12 26.9	-0.5
BUEV	Buena Vista	1.16	106	eP	Pn	08 12 11.9	-1.2
BUEV				eS	Sn	08 12 28.7	+0.9
GB1A	Borinquen Arri	1.16	105	eP	Pn	08 12 12.4	-0.7
VRLE	La Escondida,	1.20	106	eP	Pn	08 12 11.7	-2.0
VRLE				eS	Sn	08 12 29.0	+0.1
GPS3	Bodega del ICE	1.21	107	eP	Pn	08 12 13.0	-0.8
GPS3				eS	Sn	08 12 28.6	-0.4
BUAI	Buenos Aires	1.21	101	eP	Pn	08 12 12.8	-0.9
BUAI				eS	Sn	08 12 31.2	+2.2
GPS1	Guardaparques	1.22	106	iP	Pn	08 12 13.2	-0.7
GPS1				eS	Sn	08 12 29.1	-0.2
GPS2	Hotel Rincn d	1.23	107	eP	Pn	08 12 13.2	-0.7
GPS2				eS	Sn	08 12 29.1	-0.3
HUEN		1.26	17	eP	Pn	08 12 13.3	-1.1
HUEN				eS	Sn	08 12 31.1	+0.9
ORTG	Ortega, Santa	1.30	125	eP	Pn	08 12 14.7	-0.3
SAJU	San Juanillo,	1.33	142	eP	Pn	08 12 13.0	-2.2
LIM1	Limonal	1.34	108	eP	Pn	08 12 14.8	-0.7
LIM1				eS	Sn	08 12 31.7	-0.3
GUAB	Guayabo de Bag	1.35	107	eP	Pn	08 12 14.9	-0.8
GUAB				eS	Sn	08 12 33.7	+1.2
MESS	Mesas	1.38	106	eP	Pn	08 12 15.1	-1.0
CNGN	Cerro Negro	1.38	354	eP	Pn	08 12 14.2	-1.9
CNGN				eS	Sn	08 12 32.6	-0.6
COLC	Colonia	1.39	109	eP	Pn	08 12 15.6	-0.5
COLC				eS	Sn	08 12 34.9	+1.5
HORNC	Hornillas	1.40	107	eP	Pn	08 12 15.3	-1.0
HORNC				eS	Sn	08 12 35.2	+1.5
VMAR	Armenia, Volca	1.43	102	eP	Pn	08 12 15.7	-1.0
CUI	Cuipilapa	1.43	109	eP	Pn	08 12 15.7	-1.0
CUI				eS	Sn	08 12 34.6	+0.2
NICO	Nicoya	1.46	132	eP	Pn	08 12 16.3	-0.8
DUNO	Dulce Nombre,	1.46	135	eP	Pn	08 12 15.4	-1.7
DUNO	Dulce Nombre,	1.46	135	eP	Pn	08 12 15.5	-1.7
GRZA	Playa Garza	1.49	143	eP	Pn	08 12 15.4	-2.2
ACAL	Aguas Claras	1.56	108	eP	Pn	08 12 18.0	-0.5
ACAL				eS	Sn	08 12 38.8	+1.3
BOAB	BOACO BROADBAN	.58	33	eP	Pn	08 12 17.1	-1.6
PTEN	Parque Tenorio	1.58	105	iP	Pn	08 12 18.2	-0.6
PTEN				eS	Sn	08 12 40.6	+2.5
BRAN	Las Pilas	1.60	7	eP	Pn	08 12 10.7	-8.4
BRAN				eS	Sn	08 12 24.7	-14
INDI	Punta indio, G	1.61	140	eP	Pn	08 12 17.1	-2.1
POPE	POPE, Guanacas	1.64	130	eP	Pn	08 12 18.4	-1.2
CRIN	San Cristobal	1.65	343	eP	Pn	08 12 19.1	-0.6
CRIN	San Cristobal	1.65	343	eP	Pn	08 12 19.1	-0.6
CRIN				eS	Sn	08 12 39.3	-0.5
VERA	Finca Concepci	1.67	99	eP	Pn	08 12 18.7	-1.2
JTS	Las Juntas de	1.77	118	eP	Pn	08 12 20.4	-0.9
JTS	Las Juntas de	1.77	118	eP	Pn	08 12 20.5	-0.8
CASO	Castillo	1.90	111	eP	Pn	08 12 23.1	-0.1
CASO				eS	Sn	08 12 49.1	+3.0
CEDE	Laguna Cedeo	1.91	109	eP	Pn	08 12 23.9	+0.6
CEDE				eS	Sn	08 12 49.8	+3.4
VACR	Volcan Arenal	1.94	109	eP	Pn	08 12 23.2	-0.5
FORC	Fortuna	1.95	109	eP	Pn	08 12 23.7	-0.1
COVE	Coope Vega, Sa	2.14	100	eP	Pn	08 12 25.3	-1.1
LCND	La Caada	2.54	329	eS	Sn	08 13 02.3	+0.6
LCND				IAML		08 13 08.2	
comp=Z,553nm,0.4s							
LCND	La Caada	2.54	329	eS	Sn	08 13 02.3	+0.6
LCND				IAML		08 13 08.2	
comp=Z,553nm,0.4s							
PACA	Pacayal	2.91	324	eP	Pn	08 12 38.8	+1.7
PACA				eS	Sn	08 13 12.8	+1.8
PACA	Pacayal	2.91	324	eP	Pn	08 12 38.8	+1.7
PACA				eS	Sn	08 13 12.8	+1.8
RIMA	Rio Macho	2.96	117	eP	Pn	08 12 37.3	-0.5
TGUH	Tegucigalpa,Un	3.00	346	eP	Pn	08 12 38.6	+0.2
TGUH	Tegucigalpa,Un	3.00	346	eP	Pn	08 12 38.6	+0.2
COEB	Comit de Eme	3.06	321	eP	Pn	08 12 39.8	+0.6
COEB				IAML		08 13 27.8	
comp=Z,156nm,0.4s							
COEB	Comit de Eme	3.06	321	eP	Pn	08 12 39.8	+0.6
COEB				IAML		08 13 27.8	
comp=Z,156nm,0.4s							
PQSS	Presa 15 de Se	3.17	322	eP	Pn	08 12 41.9	+1.3
PQSS	Presa 15 de Se	3.17	322	eP	Pn	08 12 41.9	+1.3
SCLA	Alcaldia de Sa	3.34	320	eP	Pn	08 12 44.0	+1.1
SCLA				eS	Sn	08 13 22.4	+1.0
SCLA	Alcaldia de Sa	3.34	320	eP	Pn	08 12 44.0	+1.1
SCLA				eS	Sn	08 13 22.4	+1.0
SJTE	Alcalda de S	3.46	316	eP	Pn	08 12 45.0	+0.5
SJTE				eS	Sn	08 13 23.5	-0.8
SJTE	Alcalda de S	3.46	316	eP	Pn	08 12 45.0	+0.5
SJTE				eS	Sn	08 13 23.5	-0.8
P5NO	Presa 5 de nov	3.58	323	eP	Pn	08 12 47.0	+0.8
NUBE	Las Nubes	4.20	312	eS	Sn	08 13 41.7	-1.0
NUBE	Las Nubes	4.20	312	eS	Sn	08 13 41.7	-1.0
CMIG	Matias Romero	10.03	307	Pn	Pn	08 14 16.5	+1.8
comp=Z,0.6nm,0.3s,baz=127,slow=7.7,SNR=8.4							
comp=Z,1.2nm,0.4s							
ROSC	El Rosal	13.61	116	LR	LR	08 21 37.0	
comp=Z,46nm,20.1s,baz=248,slow=44							
ATAH	Atahualpa	19.86	156	LR	LR	08 23 06.5	
comp=Z,102nm,19.0s,baz=2.1,slow=34							
SJG	San Juan	20.91	68	LR	LR	08 23 39.0	
comp=Z,75nm,18.2s,baz=245,slow=35							
TXAR	Lajitas Array	24.16	321	P	P	08 17 06.0	+0.8
comp=Z,0.7nm,0.6s,baz=144,slow=9.6,SNR=17							
TXAR				LR	LR	08 27 03.8	
comp=Z,30nm,18.1s,baz=166,slow=38							
comp=Z,0.7nm,0.6s							
PDAR	Pinedale Array	37.36	332	P	P	08 19 01.6	0.0
comp=Z,0.4nm,0.6s,baz=119,slow=12,SNR=4.9							
comp=Z,0.4nm,0.6s							
NVAR	Mina Array Bea	39.28	319	P	P	08 19 20.6	+2.8
comp=Z,0.3nm,0.6s,baz=132,slow=8.2,SNR=4.3							
NVAR				PcP	PcP	08 21 27.5	+1.5
comp=Z,0.2nm,0.7s,baz=120,slow=3.6,SNR=4.7							
comp=Z,0.3nm,0.6s							
SCHQ	Schefferville	46.30	16	P	P	08 20 11.2	-3.0
comp=Z,2.1nm,0.8s,baz=212,slow=9.5,SNR=2.0							
comp=Z,2.1nm,0.8s							
CPUP	Villa Florida	46.83	143	P	P	08 20 18.3	-0.3
comp=Z,1.7nm,0.8s,baz=346,slow=12,SNR=3.1							
comp=Z,1.7nm,0.8s							
YKA	Yellowknife Ar	55.12	345	LR	LR	08 49 20.2	
comp=Z,70nm,18.2s,baz=238,slow=41							
SFJD	Kangerlussuaq	60.75	15	LR	LR	08 48 16.9	
comp=Z,43nm,18.3s,baz=246,slow=36							
MDT	Midelt	77.33	59	LR	LR	08 54 46.4	
comp=Z,23nm,19.2s,baz=339,slow=34							
FINES	FINESS Array B	90.77	26	LR	LR	09 05 08.4	
comp=Z,24nm,18.1s,baz=2.5,slow=36							
WRA	Warramunga Arr	139.73	252	PKP	PKiKP	08 31 17.7	-1.6
comp=Z,0.6nm,0.9s,baz=88,slow=2.7,SNR=3.0							

ISK 12 08:12:36.9, 39°.32N×32°.79E, h7km, ML2.0/3
DDA 12 08:12:40.9±0.0, 40°.22N×33°.25E, h7km±4km, ML1.3, Turkey

| Code | Station Name | Δ

ADK Adak 0.94 26 Pb 08 25 00.7 -0.2
ADK Adak 0.94 26 P **Pb 08 25 00.7 -0.2**
GSTR Great Sitkin T 1.33 37 Pb 08 25 06.7 -0.7
AMKA Amchitka 2.13 280 Pn **Pn 08 25 15.0 -1.4**
SHEM Shemya Is, Ala 5.56 291 P **Pn 08 26 06.5 +3.0**
38nm,0.6s,baz=86,slow=6.1,SNR=4.1
SMY Shemya 5.56 291 Pn **Pn 08 26 04.1 +0.7**
SMY Shemya 5.56 291 P **Pn 08 26 04.1 +0.7**
NIKH Nikolski High 5.59 66 Pn **Pn 08 26 06.5 +2.6**
N18K Kilae Creek 15.36 43 Pn **Pn 08 28 18.1 +0.8**
N18K IAmb IAmb 08 28 38.9
comp=Z,14nm,0.9s
PETK Petropavlovsk- 15.46 287 P **Pn 08 28 19.9 +1.4**
comp=Z,0.4nm,0.3s,baz=95,slow=18,SNR=3.9
PETK LR LR 08 34 17.1
comp=Z,115nm,21.3s,baz=87,slow=37
comp=Z,2.8nm,0.6s
PETK Petropavlovsk- 15.46 287 P **Pn 08 28 20.0 +1.4**
SVW2 Sparrevohn 15.70 42 Pn **Pn 08 28 18.8 -2.9**
SVW2 IAmb IAmb 08 28 28.9
comp=Z,25nm,1.2s
KDAK Kodiak Island 15.86 55 P **Pn 08 28 21.7 -1.9**
comp=Z,6.7nm,0.4s,baz=77,slow=9.2,SNR=2.1
KDAK Kodiak Island 15.86 55 Pn **Pn 08 28 21.3 -2.3**
KDAK Kodiak Island 15.86 55 P **Pn 08 28 21.3 -2.3**
KDAK pmax pmax
comp=Z,50nm,1.1s
N19K Bonanza Creek 16.04 44 Pn **Pn 08 28 23.4 -2.6**
N19K IAmb IAmb 08 28 33.6
comp=Z,48nm,1.4s
L19K White Mountain 16.56 39 **P 08 28 36.6 +1.8**
L19K IAmb IAmb 08 28 38.7
comp=Z,21nm,0.9s
CAPN Captain Cook N 17.50 46 P **Pn 08 28 44.9 +0.6**
K20K Telida 17.51 36 P **P 08 28 46.9 +1.6**
SKT Skwentna 17.83 42 P **P 08 28 49.8 +0.9**
SKT IAmb IAmb 08 29 07.2
comp=Z,18nm,0.8s
J20K Nowinta River 17.95 34 **P 08 28 52.2 +2.1**
CAST Castle Rocks 18.30 38 P **Pn 08 28 55.4 +1.3**
KTH Kantishna Hill 18.82 38 P **Pn 08 29 00.7 +0.3**
KTH IAmb IAmb 08 29 04.8
comp=Z,25nm,0.8s
BILL Bilibino 18.85 341 *e*P **Pn 08 29 00.1 -0.6**
BILL pmax pmax
comp=Z,4.0nm,0.9s
BPAW Bear Paw Mtn. 19.07 37 P **Pn 08 29 03.3 -0.1**
IMAR Indian Mountai 19.20 30 P **Pn 08 29 05.1 +0.1**
H21K Melozitna Rive 19.30 31 **Pn 08 29 07.0 +0.8**
RND Reindeer 19.57 40 P **P 08 29 08.1 +0.1**
RND IAmb IAmb 08 29 30.4
comp=Z,12nm,0.9s
RND Reindeer 19.57 40 P **P 08 29 08.1 +0.1**
RND pmax pmax
comp=Z,12nm,0.9s
MLY Manley 19.65 34 **P 08 29 09.3 +0.5**
MCK McKinley 19.68 39 P **P 08 29 10.1 +0.9**
MCK IAmb IAmb 08 29 46.4
comp=Z,14nm,1.1s
MCK McKinley 19.68 39 P **P 08 29 10.1 +0.9**
MCK pmax pmax
comp=Z,14nm,1.1s
MA2 Magadan 19.88 308 LR LR 08 37 50.8
comp=Z,55nm,18.1s,baz=123,slow=40
DHY Denali Highway 20.04 42 **P 08 29 13.5 +0.2**
DHY IAmb IAmb 08 29 16.8
comp=Z,13nm,0.7s
SEY Seymchan 20.11 318 P **P 08 29 12.8 -1.0**
comp=Z,2.9nm,0.7s,baz=115,slow=12,SNR=7.6
comp=Z,2.9nm,0.7s
SEY Seymchan 20.11 318⇓*e*P Pn 08 29 14.6 -1.2
SEY pmax pmax
comp=Z,6.0nm,0.9s
I23K Minto, Yukon-K 20.21 35 P **P 08 29 14.6 -0.2**
I23K IAmb IAmb 08 29 34.6
comp=Z,19nm,1.2s
M24K Tolsona, Glenn 20.21 45 P **P 08 29 15.2 +0.2**
H23K Yukon River 20.50 33 P **P 08 29 18.6 +0.5**
MDM Murphy Dome 20.53 36 P **P 08 29 18.2 -0.2**
MDM IAmb IAmb 08 29 42.3
comp=Z,14nm,1.2s
CCB Clear Creek Bu 20.54 37 P **P 08 29 17.5 -0.9**
BMRM Bremner River 20.61 49 P **P 08 29 18.1 -1.2**
BMRM IAmb IAmb 08 29 50.1
comp=Z,28nm,1.2s
COLA College 20.63 37⇑*e*P **P 08 29 20.2 +0.8**
HDA Harding Lake 20.77 38 P **P 08 29 21.6 +0.7**
N25K Chitina, Valde 20.78 47 P Pn 08 29 23.4 -0.3
N25K IAmb IAmb 08 29 47.2
comp=Z,19nm,1.1s
PAX Paxson 20.81 43 P **P 08 29 22.8 +1.3**
PAX Paxson 20.81 43 P **P 08 29 22.8 +1.3**
PAX pmax pmax
comp=Z,8.0nm,0.8s
ILAR Eielson Array 20.95 37 P **P 08 29 22.4 -0.5**
comp=Z,0.9nm,0.5s,baz=233,slow=8.9,SNR=9.8
comp=Z,0.9nm,0.5s
H24K Noodor Dome 21.09 34 **P 08 29 25.6 +1.1**
GLB Gilahina Butte 21.10 48 P **P 08 29 25.9 +1.4**
VRDI Verde Repeater 21.21 48 P **P 08 29 23.8 -2.2**
VRDI IAmb IAmb 08 30 02.6
comp=Z,34nm,1.4s
MCARA McCarthy VSAT 21.45 48 P **P 08 29 29.7 +1.4**
MCARA IAmb IAmb 08 29 47.5
comp=Z,19nm,1.0s
J25K Salcha River, 21.47 39 P **P 08 29 27.6 -0.9**
MENT Mentasta 21.56 44 P **P 08 29 31.4 +2.0**
DOT Dot Lake 21.64 42 P **P 08 29 28.4 -1.9**
L26K Log Cabin Wild 21.74 44 P **P 08 29 32.6 +1.2**
L26K IAmb IAmb 08 29 49.4
comp=Z,13nm,1.1s
SCRK Sand Creek 21.79 41 **P 08 29 30.9 -1.1**
SCRK IAmb IAmb 08 29 35.5
comp=Z,17nm,1.2s
PRP Porcupine Dome 21.80 36 P **P 08 29 32.7 +0.5**
TOLK Toolik Lake Re 22.15 27 P **P 08 29 33.8 -1.9**
TOLK IAmb IAmb 08 29 59.5
comp=Z,9.7nm,1.0s
J26L Joseph Creek 22.15 40 P **P 08 29 34.4 -1.4**
BCAR Beaver Creek A 22.44 44 P **P 08 29 40.3 +1.4**
EGAK Eagle 23.22 40 P **P 08 29 47.0 +0.1**
EGAK IAmb IAmb 08 29 59.5
comp=Z,15nm,1.4s
DAWY Dawson 23.74 42 P **P 08 29 51.8 -0.3**
DAWY IAmb IAmb 08 30 17.8
comp=Z,12nm,1.4s
I29M Ogilvie Camp, 24.55 39 P **P 08 29 58.2 -1.3**
I29M IAmb IAmb 08 29 59.9
comp=Z,7.6nm,0.7s
YSS Yuzh-Sakhalins 26.26 277⇓*e*P **P 08 30 14.7 -0.4**
YSS pmax pmax
comp=Z,36nm,2.0s
INK Inuvik 27.22 34 P **P 08 30 22.9 -0.5**
comp=Z,1.1nm,0.3s,baz=256,slow=6.3,SNR=9.6
comp=Z,1.1nm,0.3s
INK Inuvik 27.22 34 P **P 08 30 23.0 -0.5**
DLBC Dease Lake 27.79 56 P **P 08 30 27.7 -1.1**
comp=Z,2.4nm,1.0s,baz=206,slow=14,SNR=1.6
comp=Z,2.4nm,1.0s
BBB Bella Bella 30.13 68 LR LR 08 42 08.6
comp=Z,86nm,18.0s,baz=310,slow=35
YAK Yakutsk 30.33 312 LR LR 08 43 38.5
comp=Z,65nm,18.6s,baz=89,slow=38
TIXI Tiksi 31.38 331 LR LR 08 44 45.8
comp=Z,35nm,18.6s,baz=180,slow=38
KLR Kul'dur 32.15 287 P **P 08 31 06.7 -0.7**
baz=71,slow=8.5
KLR LR LR 08 45 01.9
comp=Z,67nm,19.1s,baz=46,slow=38
KLR Kul'dur 32.15 287*d i*P **P 08 31 07.1 -0.3**
KLR pmax pmax
comp=Z,13nm,0.6s
ZEA Zeya 33.20 297 *e*P **P 08 31 15.8 -0.7**
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=Z,20nm,1.2s
H11N2 WAKE ISLAND Hy 33.63 208 T T 09 07 54.8
baz=18,slow=76,SNR=137
H11N3 WAKE ISLAND Hy 33.64 207 T T 09 08 01.7
baz=18,slow=76,SNR=101
H11N1 WAKE ISLAND Hy 33.65 208 T T 09 08 04.4
baz=18,slow=76,SNR=103

USRK Ussuriysk Ar. 34.25 279 LR LR 08 44 23.8
comp=Z,35nm,20.7s,baz=33,slow=34
MJAR Matsushiro Arr 34.64 263 LR LR 08 43 01.3
comp=Z,39nm,20.0s,baz=91,slow=32
YKA Yellowknife Ar 34.81 46 P **P 08 31 30.2 -0.1**
comp=Z,1.1nm,0.5s,baz=279,slow=9.2,SNR=3.8
comp=Z,1.1nm,0.5s
H11S1 WAKE ISLAND Hy 34.84 207 T T 09 09 34.2
baz=18,slow=76,SNR=34
H11S2 WAKE ISLAND Hy 34.86 207 T T 09 09 30.9
baz=18,slow=76,SNR=25
H11S3 WAKE ISLAND Hy 34.86 207 T T 09 09 22.5
baz=18,slow=76,SNR=20
B08A Colville Reser 36.79 71 P **P 08 31 49.3 +1.8**
B08A IAmb IAmb 08 32 14.4
comp=Z,4.5nm,0.8s
HOOD Mount Hood Mea 36.81 77 P **P 08 31 50.7 +2.8**
NEW Newport 38.15 70 P **P 08 32 00.4 +1.3**
NEW Newport 38.15 70 P **P 08 32 00.4 +1.3**
NEW pmax pmax
comp=Z,5.0nm,0.8s
EDM Edmonton 38.18 61 P **P 08 32 00.2 +0.9**
EDM Edmonton 38.18 61 P **P 08 32 00.2 +0.9**
EDM pmax pmax
comp=Z,20nm,0.7s
CN2 Changchun 38.51 282 *e*P **P 08 31 59.9 -2.2**
CN2 *e*pP pP 08 32 12.1 +1.9
K05A Summer Lake 38.62 80 P **P 08 32 03.2 -0.1**
K05A IAmb IAmb 08 32 25.1
comp=Z,8.2nm,1.2s
I07A Izee 38.76 77 P **P 08 32 05.7 +1.3**
I07A IAmb IAmb 08 32 26.1
comp=Z,2.8nm,0.8s
HIA Hailar 39.26 293⇓*e*P **P 08 32 07.8 -0.6**
HIA pmax pmax
comp=Z,13nm,0.8s
RES Resolute Bay 39.68 24 LR LR 08 51 25.5
comp=Z,47nm,19.5s,baz=336,slow=40
PNTR Pine Nut 41.48 84 P **P 08 32 29.7 +2.6**
HRY Holter Researc 42.03 69 P **P 08 32 32.7 +1.3**
MCMT McKenzie Canyo 42.42 72 P **P 08 32 35.3 +0.6**
EGMT Eagleton 42.58 67 P **P 08 32 37.3 +1.5**
EGMT IAmb IAmb 08 33 17.9
comp=Z,6.2nm,0.9s
NVAR Mina Array Bea 42.69 83 P **P 08 32 37.8 +0.9**
comp=Z,0.2nm,0.5s,baz=267,slow=7.0,SNR=2.8
comp=Z,0.2nm,0.5s
YHH Holmes Hill 43.63 71 P **P 08 32 45.7 +1.1**
YHH IAmb IAmb 08 33 03.6
comp=Z,6.4nm,1.0s
YNR Norris Junctio 43.78 71 P **P 08 32 47.0 +1.3**
YNR IAmb IAmb 08 33 00.3
comp=Z,4.8nm,0.9s
RLMT Red Lodge 44.40 70 P **P 08 32 50.8 +0.2**
RLMT IAmb IAmb 08 33 10.0
comp=Z,5.8nm,0.8s
NRIK Noril'sk 45.16 330⇓*e*P **P 08 32 55.9 -0.2**
NRIK pmax pmax
comp=Z,8.0nm,1.5s
PRN Pahroc Range 45.35 82 P **P 08 32 58.8 +0.6**
PRN IAmb IAmb 08 33 20.9
comp=Z,5.1nm,0.9s
PDAR Pinedale Array 45.54 73 P **P 08 33 00.8 +1.1**
comp=Z,4.1nm,0.7s,baz=302,slow=3.8,SNR=46
PDAR pP **sP 08 33 12.3 +0.9**
comp=Z,4.2nm,0.6s,baz=318,slow=2.4,SNR=7.8
comp=Z,4.1nm,0.7s
RDMU Red Mountain 46.82 75 P **P 08 33 10.2 +0.4**
RDMU IAmb IAmb 08 33 30.7
comp=Z,4.9nm,0.8s
ULN Ulaanbaatar 47.23 297 P **P 08 33 11.4 -1.5**
ULN Ulaanbaatar 47.23 297⇑*e*P **P 08 33 13.0 +0.2**
ULN pmax pmax
comp=Z,6.0nm,1.0s
K22A Casper 47.43 71 P **P 08 33 15.0 +0.5**
K22A IAmb IAmb 08 33 15.8
comp=Z,5.3nm,0.9s
SONM Songino Array 47.61 298 P **P 08 33 16.2 +0.4**
comp=Z,4.4nm,0.6s,baz=54,slow=9.1,SNR=26
SONM LR LR 08 54 06.8
comp=Z,99nm,20.7s,baz=68,slow=37
comp=Z,4.4nm,0.6s
SONM Songino Array 47.61 298 P **P 08 33 16.1 +0.3**
SONM IAmb IAmb 08 33 17.0
comp=Z,5.5nm,1.0s
U15A North Rim 47.68 81 P **P 08 33 17.8 +1.1**
U15A IAmb IAmb 08 33 38.8
comp=Z,3.4nm,0.8s
O20A White River Ci 47.89 75 P **P 08 33 18.8 +0.7**
HHC Hu-ho-hao-te 48.66 287 *e*P **P 08 33 23.4 -0.5**
NJ2 Nanjing 49.74 273 *e*P **P 08 33 32.3 +0.2**
XAN Xi'an 54.62 282 P **P 08 34 10.6 +2.1**
XAN pP sP 08 34 20.4 +0.2
LZH Lanzhou 56.35 287 *e*P **P 08 34 18.4 -2.7**
LZH pP pP 08 34 22.7 -6.8
GTA Gaotai 56.54 293 ⇓P **P 08 34 22.9 +0.6**
GTA pP pP 08 34 28.8 -2.2
GTA sP sP 08 34 32.4 -1.6
TXAR Lajitas Array 57.80 82 P **P 08 34 31.7 +0.4**
comp=Z,0.4nm,0.6s,baz=302,slow=5.2,SNR=4.9
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 58.58 351 P **P 08 34 34.8 -1.3**
comp=Z,5.3nm,1.0s,baz=20,slow=6.9,SNR=7.0
comp=Z,5.3nm,1.0s
KURK Kurchatov 59.91 315 P **P 08 34 44.3 -1.2**
KURK Kurchatov 59.91 315 P **P 08 34 45.1 -0.4**
KURK 08 35 31.1
KURBB Kurchatov Arra 60.02 315 P **P 08 34 45.1 -1.1**
comp=Z,1.7nm,0.5s,baz=42,slow=6.6,SNR=8.4
KURBB PcP **PcP 08 35 31.1 -0.9**
comp=Z,1.0nm,0.2s,baz=46,slow=3.4,SNR=5.2
comp=Z,1.7nm,0.5s
WMQ Urumqi 60.29 304 *e*P **P 08 34 49.9 +1.6**
MKAR Makanchi Array 60.96 309 P **P 08 34 51.5 -1.3**
comp=Z,0.5nm,0.5s,baz=43,slow=6.6,SNR=5.7
comp=Z,0.5nm,0.5s
GOMU GeErMu 61.62 293 P **P 08 34 58.4 +0.6**
GOMU pP pP 08 35 01.6 -4.7
GOMU sP sP 08 35 03.0 -6.6
BVAR Borovoye Array 61.73 321 P **P 08 34 57.6 -0.3**
comp=Z,3.0nm,0.5s,baz=54,slow=6.0,SNR=18
BVAR PcP **PcP 08 35 38.4 -0.5**
comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=4.5
comp=Z,3.0nm,0.5s
BRVK Borovoye 61.75 321 P **P 08 34 57.8 -0.1**
BRVK Borovoye 61.75 321*ce*P **P 08 34 57.4 -0.6**
BRVK pmax pmax
comp=Z,7.0nm,1.7s
O52A Adamsville 63.18 59 P **P 08 35 08.2 +0.5**
ARU Arti 63.37 329*d i*P **P 08 35 08.8 +0.1**
ARU 08 35 43.3
ARU 08 37 23.4
ARU S **S 08 43 38.7 +0.1**
ARU SS **SS 08 47 43.2 -1.4**
ARU pmax pmax
comp=Z,7.0nm,0.6s
MMNY Mt. Morris Dam 63.38 54 P **P 08 35 09.9 +0.9**
DAV Davao City (W) 64.19 248 LR LR 09 11 57.2
comp=Z,7.1nm,18.1s,baz=24,slow=44
KIRV Kirov 64.27 335⇓*e*P **P 08 35 14.6 0.0**
PZH PanZhiHua 64.30 281 P **P 08 35 17.2 +1.7**
FINES FINESS Array B 66.31 348 P **P 08 35 28.5 +0.7**
comp=Z,1.6nm,0.8s,baz=31,slow=4.4,SNR=7.8
comp=Z,1.6nm,0.8s
AAK Ala-Archa 67.78 311 LR LR 09 07 37.1
comp=Z,40nm,19.4s,baz=33,slow=38
NB2 NORSAR Subarra 68.06 356 P **P 08 35 38.8 -0.1**
comp=Z,1.6nm,0.8s,baz=7.2,slow=6.5
NOA NORSAR Array B 68.06 356 P **P 08 35 38.6 -0.4**
comp=Z,1.1nm,0.7s,baz=4.2,slow=6.1,SNR=4.5
NOA LR LR 09 06 46.2
comp=Z,9.7nm,19.2s,baz=295,slow=37
comp=Z,1.1nm,0.7s
KK31 Karatay Array 69.28 314 P **P 08 35 46.3 -0.5**
KK31 IAmb IAmb 08 35 47.1
comp=Z,2.5nm,0.8s
KK31 Karatay Array 69.28 314 P **P 08 35 46.3 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 69.28 314 P **P 08 35 46.3 -0.5**
KKAR Karatay Array 69.28 314 P **P 08 35 46.3 -0.5**
KSH Kashi 69.43 308 P **P 08 35 48.5 +0.6**
BELG Belogornoye 70.18 333 LR LR 09 11 00.8
comp=Z,24nm,18.2s,baz=131,slow=40
BELG Belogornoye 70.18 333⇑*e*P **P 08 35 51.8 -0.3**
BELG pmax pmax

comp=Z,2.0nm,0.8s
OBN Obninsk 70.51 340 *e*P **P 08 35 53.7 -0.3**
OBN *e* 08 36 17.4
OBN *e* 08 38 28.2
OBN pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 71.96 277 P **P 08 36 03.5 +0.1**
comp=Z,1.0nm,0.4s,baz=29,slow=6.5,SNR=5.0
CMAR LR LR 09 12 22.6
comp=Z,13nm,18.3s,baz=80,slow=40
comp=Z,1.0nm,0.4s
GAR Garm 72.60 311 P **P 08 36 07.3 +0.2**
VORR Voronezh 73.08 337 *e*P P 08 36 14.8 +5.2
VORR pmax pmax
comp=Z,80nm,0.4s
CHGR Chuyangaron 73.42 311 P **P 08 36 12.1 +0.1**
CHGR Chuyangaron 73.42 311 P **P 08 36 12.1 +0.1**
CHGR pmax pmax
comp=Z,12nm,0.8s
RAR Rarotonga 73.58 163 LR LR 09 01 53.8
comp=Z,67nm,19.8s,baz=256,slow=30
AKASG Malin Array Be 76.15 343 P **P 08 36 26.9 -0.5**
comp=Z,1.8nm,0.5s,baz=20,slow=5.9,SNR=9.4
comp=Z,1.8nm,0.5s
AKBB Malin Array Si 76.15 343⇑*e*P **P 08 36 26.6 -0.8**
AKBB pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 76.76 309 P **P 08 36 29.6 -1.8**
KBL pmax pmax
comp=Z,6.0nm,1.1s
GEYT Alibeck 78.95 318 P **P 08 36 43.6 +0.2**
comp=Z,2.1nm,0.5s,baz=358,slow=4.6,SNR=4.5
GEYT LR LR 09 14 44.2
comp=Z,52nm,20.4s,baz=296,slow=38
comp=Z,2.1nm,0.5s
KBZ Khabaz 79.35 332 P **P 08 36 46.2 +0.9**
comp=Z,4.2nm,0.7s,baz=45,slow=5.7,SNR=11
comp=Z,4.2nm,0.7s
KBZ Khabaz 79.35 332*ce*P **P 08 36 45.7 +0.4**
KBZ pmax pmax
comp=Z,4.0nm,0.8s
NCK Nalchik 79.35 331⇓*e*P **P 08 36 45.3 -0.1**
NCK pmax pmax
comp=Z,3.0nm,0.8s
TRPA Tarpa 79.75 347 ⇑P **P 08 36 47.4 0.0**
BURAR Bucovina Array 79.83 345 ⇑P **P 08 36 48.4 +0.4**
BURAR Bucovina Array 79.83 345 ⇑P **P 08 36 48.4 +0.4**
ZEI Tsey 79.89 330 *e*P **P 08 36 48.0 -0.6**
ZEI pmax pmax
comp=Z,9.0nm,0.9s
GERES GERESS Array B 80.05 353 P **P 08 36 49.1 0.0**
comp=Z,0.6nm,0.6s,baz=23,slow=4.4,SNR=5.2
comp=Z,0.6nm,0.6s
BFO Black Forest 80.89 356 P **P 08 36 53.4 -0.2**
BFO pmax pmax
comp=Z,11nm,2.4s
VRI Vrincioaia 81.26 343 ⇑P **P 08 36 57.3 +1.7**
VRI Vrincioaia 81.26 343 ⇑P **P 08 36 57.3 +1.7**
PLOR Plostina 81.29 343 ⇑P **P 08 36 57.1 +1.3**
PLOR Plostina 81.29 343 ⇑P **P 08 36 57.1 +1.3**
COVR Voineasa-Covas 81.37 344 ⇑P **P 08 36 58.0 +1.8**
DOPR Dopca 81.40 344 ⇑P **P 08 36 58.1 +1.7**
BISRR Bisoca 81.57 343 ⇑P **P 08 37 00.1 +2.7**
MLR Muntele Rosu 81.76 344 ⇑P **P 08 37 00.1 +1.6**
MLR Muntele Rosu 81.76 344 ⇑P **P 08 37 00.1 +1.6**
KBA Koelnbreinsper 81.83 353 P **P 08 36 59.7 +0.9**
KBA pmax pmax
comp=Z,12nm,1.0s
VOIR 81.97 344 ⇑P **P 08 37 01.0 +1.5**
VOIR 81.97 344 ⇑P **P 08 37 01.0 +1.5**
GZR Gura Zlata 82.38 346 ⇑P **P 08 37 01.8 +0.2**
GZR Gura Zlata 82.38 346 ⇑P **P 08 37 01.8 +0.2**
WRA Warramunga Arr 82.41 225 P **P 08 37 00.2 -1.7**
comp=Z,0.3nm,0.7s,baz=32,slow=5.7,SNR=2.0
WRA pP **sP 08 37 14.0 +0.1**
comp=Z,0.5nm,1.0s,baz=34,slow=6.6,SNR=2.6
comp=Z,0.3nm,0.7s
BLKB Belogradchik 84.12 346 ⇑P **P 08 37 10.0 -0.6**
VTS Vitosha 85.02 345 ⇑P **P 08 37 15.2 0.0**
VTS Vitosha 85.02 345 ⇑P **P 08 37 15.2 0.0**
BR131 Keskin Array S 85.63 337⇑*i*P **P 08 37 18.8 +0.5**
BRTR Keskin Array B 85.63 337 P **P 08 37 18.6 +0.3**
comp=Z,3.5nm,0.8s,baz=46,slow=1.8,SNR=12
BRTR pP **sP 08 37 31.4 +1.0**
comp=Z,1.6nm,0.8s,baz=360,slow=4.2,SNR=3.3
comp=Z,3.5nm,0.8s
ASAR Alice Springs 85.86 224 P **P 08 37 19.2 -0.1**
comp=Z,0.5nm,0.8s,baz=25,slow=5.2,SNR=3.7
ASAR pP **pwP 08 37 33.1 -0.5**
comp=Z,0.6nm,0.8s,baz=32,slow=3.8,SNR=4.6
comp=Z,0.5nm,0.8s
KNT Kendrikon 86.49 345 P **P 08 37 22.7 +0.3**
KNT pmax pmax
comp=Z,6.0nm,0.8s
ESDC Sonseca Array 89.48 5 P **P 08 37 36.2 -0.6**
comp=Z,1.2nm,0.7s,baz=6.3,slow=3.7,SNR=7.1
comp=Z,1.2nm,0.7s
STKA Stephens Creek 90.14 214 P **P 08 37 39.6 0.0**
comp=Z,0.7nm,0.5s,baz=355,slow=6.7,SNR=3.3
comp=Z,0.7nm,0.5s
ASF Jabal al Asfar 91.81 331 P **P 08 37 47.7 -0.1**
comp=Z,1.5nm,0.5s,baz=221,slow=2.0,SNR=3.6
comp=Z,1.5nm,0.5s
TORD Torodi Ar. Bea 116.08 1 PKP **PKiKP 08 43 21.9 -1.1**
comp=Z,0.3nm,0.7s,baz=302,slow=3.5,SNR=1.8
BOSA Boshof 151.88 314 PKPbc **PKPbc 08 44 33.5 -1.0**
comp=Z,3.2nm,0.8s,baz=342,slow=9.4,SNR=3.3

IDC ***12*** *08:29:10.6±2.9,27°.36N×85°.63E,h0km,mb3.6/4, mbtmp3.5/5,ML3.6/1, Error ellipse: s-maj=103.4km s-min=25.6km az=74.0*
DMN ***12*** *08:29:11.8±0.1,27°.66N×85°.95E,h10km,Ml4.6/6, Error ellipse: s-maj=2.0km s-min=0.8km az=15.0*
ISC 12 08:29:11.3±1.3,27°.57N±0°.05×85°.91E±0°.03,h1km±10km, n19,σ1§15/31,mb3.6/4,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**0.26**	**70**	*e*Pg	**Pg**	**08 29 16.8**	**+0.5**
JIRN				*e*Sg	**Sg**	**08 29 19.8**	**+0.1**
	47μm,0.3s						
GUN	**Gumba**	**0.34**	**355**	*e*Pg	**Pg**	**08 29 17.7**	**-0.1**
GUN				*e*Sg	**Sg**	**08 29 20.7**	**-1.5**
	22μm,0.3s						
PKI	**Pulchoki**	**0.45**	**270**	*e*Pg	**Pb**	**08 29 21.8**	**-0.4**
PKI				*e*Sg	**Sb**	**08 29 28.3**	**-1.2**
PKIN	**Phulchoki**	**0.46**	**271**	*e*Pg	**Pb**	**08 29 21.7**	**-0.6**
PKIN				*e*Sg	**Sb**	**08 29 28.4**	**-1.3**
KKN	**Kakani**	**0.60**	**291**	*e*Pg	**Pg**	**08 29 23.7**	**+0.9**
KKN				*e*Sg	**Sg**	**08 29 31.2**	**+0.6**
	2μm,0.2s						
DMN	**Daman**	**0.72**	**273**	*e*Pg	**Pb**	**08 29 26.4**	**-0.3**
DMN				*e*Sg	**Sb**	**08 29 36.2**	**-1.0**
	2μm,0.4s						
RAMN	**Ramite**	**0.87**	**135**	*e*Pg	**Pb**	**08 29 28.8**	**-0.6**
RAMN				*e*Sg	**Sb**	**08 29 40.3**	**-1.3**
	1μm,0.3s						
GKN	**Gorkha**	**1.21**	**291**	*e*Pg	**Pg**	**08 29 34.7**	**+0.3**
GKN				*e*Sg	**Sg**	**08 29 50.4**	**+0.3**
	2μm,0.3s						
ODAN	**Odare**	**1.50**	**118**	*e*Pg	**Pb**	**08 29 39.8**	**-0.2**
ODAN				*e*Sg	**Sg**	**08 30 00.1**	**+0.7**
	1μm,0.3s						
TAPN	**Taplejung**	**1.61**	**97**	*e*Pg	**Pn**	**08 29 41.5**	**+0.3**
TAPN				*e*Sg	**Sn**	**08 30 02.8**	**0.0**
	1μm,0.5s						
DANN	**Dangsing**	**2.06**	**293**	*e*Pg	**Pb**	**08 29 50.0**	**+0.4**
DANN				*e*Sg	**Sb**	**08 30 16.2**	**+0.4**
	2μm,0.5s						
KOLN	**Koldanda**	**2.06**	**276**	*e*Pg	**Pb**	**08 29 50.4**	**+0.8**
KOLN				*e*Sg	**Sg**	**08 30 17.9**	**+0.4**
	2μm,0.5s						
THW	**Thamme Wali**	**13.31**	**296**	P	**Pn**	**08 32 19.5**	**-2.0**
CEP	**Cherat**	**13.56**	**301**	P	**Pn**	**08 32 23.2**	**-1.7**
MKAR	**Makanchi Array**	**19.40**	**352**	P	**P**	**08 33 38.3**	**-0.4**
	0.2nm,0.3s,baz=177,slow=11,SNR=5.8						
	0.5nm,0.5s						
SONM	**Songino Array**	**25.78**	**33**	P	**P**	**08 34 46.4**	**+2.6**
	0.8nm,0.5s,baz=224,slow=8.1,SNR=4.1						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**26.36**	**359**	P	**P**	**08 34 51.4**	**+2.6**
	0.5nm,0.3s,baz=185,slow=11,SNR=1.9						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**66.54**	**130**	P	**P**	**08 40 01.9**	**-1.4**
	0.2nm,0.6s,baz=323,slow=6.4,SNR=4.8						

0.2nm,0.6s
ASAR Alice Springs 68.84 133 P **P** **08 40 18.5 +0.8**
0.4nm,1.0s,baz=312,slow=7.3,SNR=2.5
0.4nm,1.0s

IDC 12 08:32:14.5±3.5, 54°23N×87°49E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=28.6km s-min=19.7km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.60**	**261**	I		08 42 20.0	
	baz=80,slow=337,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.60**	**261**	Pg	Pn	08 32 43.9	-0.2
	2.3nm,0.3s,baz=78,slow=19,SNR=26						
ZALV				Lg	Lg	08 33 04.4	
	0.7nm,0.3s,baz=79,slow=25,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	08 33 52.2	0.0
	0.1nm,0.3s,baz=50,slow=13,SNR=2.1						
KURBB				Lg	Lg	08 35 43.9	
	baz=59,slow=32,SNR=5.2						
	1.4nm,0.2s						
MKAR	**Makanchi Array**	**8.15**	**206**	Pn	Pn	08 34 15.4	+1.4
	0.1nm,0.3s,baz=24,slow=13,SNR=1.3						
MKAR				Lg	Lg	08 36 36.7	
	baz=29,slow=27,SNR=2.1						
	0.1nm,0.3s						

RSNC 12 08:37:22.4±0.9, 6°80N×73°15W, h143km±5km, ML1.9, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**190**	*e*P	Pn	08 37 41.8	-0.5
BARC				*e*S	Sn	08 37 56.8	-0.5
BARC				*i*		08 37 58.4	
	comp=Z,22nm,0.1s						
BRRC	**Barranca, Sant**	**0.64**	**299⇑**	*i*P	Pn	08 37 43.5	-0.3
BRRC				*e*S	Sn	08 38 00.2	+0.1
BRRC				*i*		08 38 01.1	
	comp=Z,12nm,0.1s						
PAMC	**Pamplona, Colo**	**0.69**	**40**	*e*P	Pn	08 37 44.6	-0.1
PAMC				*e*S	Sn	08 38 01.2	-0.5
PAMC				*i*		08 38 03.8	
	comp=Z,7.8nm,0.5s						
RUSC	**La Rusia**	**0.91**	**176**	*e*P	Pn	08 37 45.7	-0.6
RUSC				*e*S	Sn	08 38 04.4	-0.1
RUSC				*i*		08 38 05.8	
	comp=Z,5.3nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.33**	**259**	*e*P	Pn	08 37 48.5	-1.1
PTBC				*e*S	Sn	08 38 09.4	-1.1
PTBC				*i*		08 38 12.0	
	comp=Z,6.4nm,0.1s						
SPBC	**San Pablo de B**	**1.47**	**219**	*e*P	Pn	08 37 50.6	-0.6
SPBC				*e*S	Sn	08 38 13.0	-0.2
SPBC				*i*		08 38 17.1	
	comp=Z,12nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.83**	**292**	*e*P	Pn	08 37 54.8	-0.4
ZARC				*e*S	Sn	08 38 20.0	-0.3
ZARC				*i*		08 38 24.9	
	comp=Z,7.9nm,0.1s						
CHIC	**Chingaza**	**2.23**	**195**	*e*P	Pn	08 38 00.1	-0.3
CHIC				*e*S	Sn	08 38 29.4	-0.1
CHIC				*i*		08 38 33.0	
	comp=Z,3.9nm,0.4s						
ROSC	**El Rosal**	**2.27**	**211**	*e*P	Pn	08 37 59.8	-1.0
ROSC				*e*S	Sn	08 38 30.3	0.0
ROSC				*i*		08 38 36.2	
	comp=Z,10nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*e*P	Pn	08 38 06.8	+0.5
GUY2C				*e*S	Sn	08 38 44.0	+4.0
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P	Pn	08 38 15.9	-2.4
SJCC				*e*S	Sn	08 38 58.3	-3.3

IDC 12 08:40:19.5±15.0, 8°43S×121°13E, h0km, mb4.0/1, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=292.0km s-min=180.1km az=17.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.16**	**133**	P	Pn	08 44 19.7	-1.3
	0.1nm,0.3s,baz=309,slow=14,SNR=1.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**19.48**	**143**	P	P	08 44 48.5	+0.3
	0.1nm,0.3s,baz=318,slow=8.6,SNR=7.8						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**30.11**	**144**	P	P	08 46 31.2	+0.2
	1.8nm,1.0s,baz=318,slow=12,SNR=2.9						
	1.8nm,1.0s						

IDC 12 08:47:45.9±3.1, 54°32N×86°89E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=25.8km s-min=15.2km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**254**	I		08 56 30.0	
	baz=73,slow=335,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.27**	**254**	Pg	Pg	08 48 08.6	-1.6
	1.5nm,0.3s,baz=73,slow=17,SNR=24						
ZALV				Lg	Lg	08 48 26.7	
	2.3nm,0.3s,baz=74,slow=26,SNR=16						
KURBB	**Kurchatov Arra**	**6.30**	**237**	Pn	Pn	08 49 20.9	+0.9
	0.2nm,0.3s,baz=54,slow=14,SNR=6.0						
KURBB				Lg	Lg	08 51 07.7	
	0.2nm,0.3s,baz=55,slow=30,SNR=5.8						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**8.08**	**203**	Pn	Pn	08 49 45.8	+1.4
	0.1nm,0.3s,baz=23,slow=12,SNR=2.6						
MKAR				Sn	Sn	08 51 16.1	-0.3
	0.1nm,0.3s,baz=29,slow=30,SNR=3.8						
MKAR				Lg	Lg	08 52 02.6	
	0.1nm,0.3s,baz=29,slow=25,SNR=2.8						
	0.2nm,0.3s						

ISK 12 08:51:05.3, 37°44N×38°80E, h5km, ML2.3/6
DDA 12 08:51:07.2±0.0, 37°40N×38°75E, h7km±3km, ML2.5
ISC 12 08:51:07.0±0.8, 37°41N±0°03×38°76E±0°03, h10km, n16, σ1°08/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.06**	**59**	PG	**Pg**	**08 51 04.8**	**-4.4**
SANL	**SANLIURFA_Merk**	**0.30**	**143**	P	**Pg**	**08 51 13.7**	**+0.7**
SANL				S	**Sg**	**08 51 17.9**	**+0.9**
SANL				*i* AML	AML	08 51 21.0	
	comp=N,367nm,0.2s						
SANL				*i* AML	AML	08 51 22.0	
	comp=E,552nm,0.4s						
SURC	**SANLIURFA_SURC**	**0.55**	**193**	P	**Pb**	**08 51 18.2**	**-0.4**
SURC				S	**Sb**	**08 51 25.9**	**-0.6**
GZT	**Gaziantep**	**0.96**	**267**	P	**Pb**	**08 51 25.7**	**0.0**
GZT				S	**Sn**	**08 51 39.9**	**-0.4**
ELZG	**Elazig**	**1.10**	**9**	P	**Pn**	**08 51 29.1**	**+0.5**
ELZG				S	**Sb**	**08 51 43.7**	**+1.1**
DYBB	**Diyarbakir**	**1.22**	**63**	PN	**Pn**	**08 51 29.2**	**-1.0**
DYBB				SN	**Sg**	**08 51 46.7**	**+0.5**
MAZI	**Mazidag**	**1.34**	**88**	PN	**Pn**	**08 51 31.7**	**-0.2**
MAZI				SN	**Sg**	**08 51 50.9**	**+0.7**
KAHM	**Kahramanmaras,**	**1.42**	**275**	P	**Pn**	**08 51 33.2**	**+0.3**
KAHM				S	**Sn**	**08 51 50.7**	**-0.8**
HCB	**Kahramanmara**	**1.48**	**268**	P	**Pn**	**08 51 33.8**	**+0.1**
HCB				S	**Sg**	**08 51 54.5**	**0.0**
KMRS	**Kahramanmaras**	**1.48**	**274**	PN	**Pb**	**08 51 34.6**	**-0.1**
KUZU	**Kuzuini**	**1.49**	**245**	P	**Pb**	**08 51 35.2**	**+0.4**
KUZU				S	**Sg**	**08 51 55.3**	**+0.3**
KUZU				*i* AML	AML	08 51 58.0	
	comp=N,88nm,0.5s						
KUZU				*i* AML	AML	08 51 59.0	
	comp=E,99nm,0.6s						
DARE	**Darende-Malaty**	**1.54**	**319**	PN	**Pn**	**08 51 35.1**	**+0.6**
DARE				SN	**Sg**	**08 51 56.6**	**+0.2**
HEKM	**Malatya_Hekimh**	**1.59**	**337**	P	**Pg**	**08 51 37.9**	**+0.3**
HEKM				S	**Sg**	**08 51 59.5**	**+1.2**
MARD	**Mardin**	**1.61**	**93**	P	**Pg**	**08 51 38.4**	**+0.5**
MARD				S	**Sb**	**08 51 58.1**	**+0.8**
MARD				*i* AML	AML	08 52 03.0	
	comp=N,90nm,0.5s						
MARD				*i* AML	AML	08 52 06.0	
	comp=E,44nm,0.3s						
SVAN	**Silvan-Diyarba**	**2.07**	**68**	PN	**Pn**	**08 51 42.3**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.10**	**299**	PN	**Pn**	**08 51 43.2**	**+0.8**

IDC 12 09:43:32.6±4.8, 18°01N×103°16W, h0km, mb3.3/3, mbtmp3.2/4, ML3.4/1, MS2.9/2, Error ellipse: s-maj=131.1km s-min=47.0km az=98.0
MEX 12 09:43:37.7±0.3, 18°14N×103°40W, h11km±4km, MD4.4
ISC 12 09:43:37.0±1.0, 18°19N±0°04×103°40W±0°03, h12km±6km, n65, σ2°46/86, mb3.0/3, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.11**	**29**	*e*P	**Pg**	**09 43 40.9**	**+0.9**
MMIG				*e*S	**Sg**	**09 43 43.4**	**+1.2**
CDAR	**Ciudad de Arme**	**0.94**	**322**	*i* P	**Pg**	**09 43 53.5**	**-1.7**
CDAR				*e*S	**Sg**	**09 44 06.0**	**-1.5**
COIG	**Colima**	**1.02**	**345**	*i* P	**Pb**	**09 43 55.1**	**-1.6**
COIG				*e*S	**Sg**	**09 44 08.3**	**-1.8**
R15V		**1.12**	**331**	*e*P	**Pb**	**09 43 56.2**	**-2.1**
R15V				*e*S	**Sb**	**09 44 10.8**	**-2.1**
COMA	**Comala**	**1.18**	**343**	*e*P	**Pn**	**09 43 57.7**	**-1.6**
COMA				*i* S	**Sb**	**09 44 12.8**	**-1.8**
MNGA	**Volcan de Coli**	**1.29**	**351**	*e*P	**Pn**	**09 43 59.8**	**-1.2**
MNGA				*e*S	**Sb**	**09 44 17.8**	**0.0**
EZ5V		**1.30**	**352**	*e*P	**Pn**	**09 43 59.9**	**-1.2**
EZ5V				*e*S	**Sb**	**09 44 16.6**	**-1.5**
JUBC	**Volcan de Coli**	**1.33**	**353**	*e*P	**Pn**	**09 44 00.4**	**-1.2**
JUBC				*e*S	**Sb**	**09 44 18.1**	**-1.0**
INCO	**Volcan de Coli**	**1.34**	**352**	*e*P	**Pn**	**09 43 59.8**	**-2.1**
INCO				*e*S	**Sb**	**09 44 17.8**	**-1.8**
UON	**La Union**	**1.53**	**98**	*e*P	**Pn**	**09 44 04.4**	**+0.4**
UON				*e*S	**Sb**	**09 44 25.2**	**+0.7**
ZIIG	**Zihuatanejo**	**1.94**	**107**	*e*P	**Pb**	**09 44 12.0**	**-0.2**
ZIIG				*e*S	**Sg**	**09 44 38.1**	**-1.1**
CJM	**Chamela**	**2.03**	**310**	*e*P	**Pn**	**09 44 08.6**	**-2.4**
CJM				*e*P	**Pb**	**09 44 12.3**	**-1.5**
CJM				*e*S	**Sn**	**09 44 38.2**	**+2.0**
CJM				*e*S	**Sb**	**09 44 38.3**	**-0.6**
MOIG	**Morelia**	**2.57**	**54**	*e*P	**Pn**	**09 44 19.0**	**+0.4**
MOIG				*e*S	**Sn**	**09 44 52.7**	**+2.8**
ARIG	**Puente Sto Nin**	**2.91**	**88**	*e*P	**Pn**	**09 44 22.9**	**-0.2**
ARIG				*e*S	**Sb**	**09 45 04.5**	**+0.2**
PUVA	**Puert Vallarta**	**2.97**	**325**	*i* P	**Pn**	**09 44 27.7**	**+3.8**
PUVA				*e*S	**Sn**	**09 45 01.0**	**+1.5**
ANIG	**Ahuacatlan**	**3.04**	**340**	*e*P	**Pn**	**09 44 24.3**	**-0.7**
ANIG				*e*S	**Sb**	**09 45 08.5**	**+0.3**
TEJU	**Tejupilco**	**3.16**	**76**	*e*	**Pn**	**09 44 29.8**	**+3.1**
TEJU				*e*		09 45 08.3	
CAIG	**El Cayaco**	**3.20**	**110**	*e*P	**Pb**	**09 44 32.7**	**-1.1**
CAIG				*e*S	**Sg**	**09 45 17.2**	**-2.6**
MEIG	**Mezcala**	**3.61**	**94**	*e*P	**Pb**	**09 44 38.6**	**-2.2**
MEIG				*e*S	**Sb**	**09 45 24.9**	**+0.3**
TOVM	**TOLUCA**	**3.69**	**72**	*e*	**Pb**	**09 44 40.0**	**-2.4**
TOVM				*e*		09 45 25.1	
PLIG	**Platanillo**	**3.71**	**86**	*e*P	**Pb**	**09 44 40.5**	**-2.1**
PLIG				*e*S	**Sb**	**09 45 28.4**	**+0.8**
ATVM	**ATLACOMULCO**	**3.72**	**65**	*e*P	Pn	09 44 30.1	-4.3
ATVM				*e*S	**Sn**	**09 45 11.4**	**-7.0**
DAIG	**Los Arroyos**	**3.76**	**107**	*e*P	**Pb**	**09 44 42.7**	**-0.7**
DAIG				*e*S	**Sb**	**09 45 32.2**	**+3.3**
ACIG	**Acambay**	**3.78**	**61**	*e*	**Pb**	**09 44 45.2**	**+1.4**
ACIG				*e*		09 45 15.3	
MAVM	**Malinalco, Edo**	**3.79**	**78**	*e*P	**Pb**	**09 44 41.6**	**-2.3**
MAVM				*e*		09 45 33.6	
AAIG	**Aguscalientes**	**3.88**	**14**	*e*P	**Pn**	**09 44 37.3**	**+0.6**
AAIG				*e*S	**Sb**	**09 45 34.7**	**+2.2**
INVM	**La Marquesa**	**3.96**	**73**	*e*P	Pn	09 44 43.2	+5.2
INVM				*e*		09 45 32.3	
AOVM	**Tlapan**	**4.01**	**74**	*e*	**Pb**	**09 44 44.7**	**-3.2**
AOVM				*e*		09 45 27.9	
MCRU	**Las Cruces**	**4.09**	**73**	*e*P	**Pn**	**09 44 44.3**	**+4.6**
MCRU				*e*		09 45 34.5	
AZVM	**Cuida Lopez Ma**	**4.14**	**70**	*e*	**Sg**	**09 45 55.3**	**+5.3**
TLVM	**San Miguel Top**	**4.15**	**75**	*e*	**Sb**	**09 45 36.3**	**-4.3**
XCVM	**Xochimilco**	**4.20**	**75**	*e*	**Sb**	**09 45 47.0**	**+5.2**
SCT2	**Benito Juarez**	**4.21**	**73**	*e*	**Pn**	**09 44 39.7**	**-1.5**
SCT2				*e*		09 45 08.4	
PTVM	**Pico Tres Padr**	**4.29**	**70**	*e*	**Pb**	**09 44 52.5**	**-0.1**
PTVM				*e*		09 45 36.3	
CRIG	**Cruz Grande**	**4.33**	**109**	*e*P	**Pn**	**09 44 42.7**	**+0.1**
CRIG				*e*S	**Sg**	**09 45 51.7**	**-4.3**
THVM	**De Xico**	**4.34**	**74**	*e*	**Sb**	**09 45 46.5**	**+0.5**
PPM	**Popocatepetl**	**4.61**	**78**	*e*P	Pn	09 44 52.0	+5.0
PPM				*e*S	**Sb**	**09 45 51.5**	**-2.4**
MGIG	**Malinaltepec**	**4.64**	**101**	*e*P	**Pb**	**09 44 54.3**	**-4.2**
MGIG				*e*S	**Sb**	**09 45 55.3**	**+0.8**
TLIG	**Tlapa**	**4.65**	**97**	*e*P	**Pn**	**09 44 47.9**	**+0.8**
TLIG				*e*S	**Sn**	**09 45 41.3**	**+0.2**
VTVM	**Tizayuca**	**4.65**	**70**	*e*	**Pb**	**09 45 01.9**	**+3.1**
VTVM				*e*		09 45 58.6	
RPIG	**Rio Verde**	**4.88**	**41**	*e*	**Pb**	**09 44 59.3**	**-3.3**
RPIG				*e*		09 46 12.6	
FTIG	**Fresnillo de T**	**5.02**	**92**	*e*P	**Pn**	**09 44 52.8**	**+0.5**
FTIG				*e*S	**Sn**	**09 45 54.8**	**+4.4**
HLIG	**Huajuapan de L**	**5.34**	**93**	*e*P	**Pn**	**09 44 57.5**	**+0.8**
HLIG				*e*S	**Sb**	**09 46 08.4**	**-6.2**
PNIG	**Pinotepa**	**5.35**	**109**	*e*P	**Pn**	**09 44 56.6**	**0.0**
PNIG				*e*S	**Sb**	**09 46 12.3**	**-2.3**
TXIG	**Tlaxiaco**	**5.45**	**99**	*e*P	**Pn**	**09 45 00.1**	**+1.8**
TXIG				*e*S	**Sn**	**09 46 03.5**	**+2.4**
YOIG	**Yosondua**	**5.74**	**102**	*e*P	**Pn**	**09 45 03.4**	**+1.1**
YOIG				*e*S	**Sn**	**09 46 06.9**	**-1.5**
CXUV	**Coxquihui**	**5.84**	**69**	*e*P	**Pn**	**09 45 07.8**	**+4.4**
CXUV				*e*S	**Sn**	**09 46 10.6**	**+0.2**
TOIG	**Toxpalan**	**6.03**	**90**	*e*P	**Pn**	**09 45 06.1**	**0.0**
TOIG				*e*S	**Sn**	**09 46 13.6**	**-1.6**
GTIG	**Gomez Farias**	**6.27**	**39**	*e*	**Pn**	**09 45 08.3**	**-1.0**
JAUV	**Jalcomulco**	**6.36**	**78**	*e*		09 46 58.1	
PEIG	**Puerto Escondi**	**6.37**	**109**	*e*	**Sn**	**09 46 29.2**	**+5.8**
PDIG	**Papasquiaro**	**7.06**	**345**	*e*	Pn	09 45 27.8	+7.4
NEUV	**Arroyo Zacate**	**7.25**	**93**	*e*	Pn	09 45 27.8	+5.0
NEUV				*e*		09 46 52.4	
LNIG	**Linares**	**7.61**	**28**	*e*	Pb	09 45 56.1	+7.1
CMIG	**Matias Romero**	**8.20**	**96**	LR	LR	09 48 59.6	
	comp=Z,100nm,18.4s,baz=262,slow=41						
CMIG	**Matias Romero**	**8.20**	**96**	*e*		09 47 21.0	
LPIG	**La Paz**	**8.72**	**314**	LR	LR	09 48 32.9	
	comp=Z,60nm,18.8s,baz=51,slow=33						
LPIG	**La Paz**	**8.72**	**314**	*e*		09 44 10.5	
LPIG				*e*		09 44 40.2	
TXAR	**Lajitas Array**	**11.10**	**359**	Pn	**Pn**	**09 46 17.3**	**+1.7**
	0.1nm,0.3s,baz=177,slow=16,SNR=6.8						
TXAR				Lg	Lg	09 49 29.4	
	baz=176,slow=32,SNR=4.2						
	0.3nm,0.5s						
NVAR	**Mina Array Bea**	**23.99**	**330**	P	**P**	**09 48 51.5**	**-0.3**
	0.2nm,0.4s,baz=146,slow=11,SNR=5.3						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**25.05**	**349**	P	**P**	**09 49 00.5**	**-0.8**
	0.1nm,0.3s,baz=154,slow=11,SNR=1.4						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**54.83**	**339**	P	**P**	**09 53 06.3**	**-0.4**
	0.6nm,0.8s,baz=141,slow=6.2,SNR=5.3						
	0.6nm,0.8s						
H03N2	**Juan Fernandez**	**56.41**	**155**	T	T	10 54 11.7	
	baz=333,slow=77,SNR=140						
H03N1	**Juan Fernandez**	**56.41**	**155**	T	T	10 54 13.3	
	baz=333,slow=77,SNR=179						
H03N3	**Juan Fernandez**	**56.42**	**155**	T	T	10 54 12.0	
	baz=333,slow=77,SNR=180						

IDC 12 10:00:34.9±3.0, 53°54N×87°82E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.4km s-min=17.4km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**284**	I		10 12 40.0	
	baz=99,slow=331,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.83**	**284**	Pn	Pn	10 01 08.1	+0.5
	1.1nm,0.3s,baz=99,slow=12,SNR=8.4						
ZALV				Lg	Lg	10 01 32.5	
	2.2nm,0.3s,baz=105,slow=26,SNR=8.8						
KURBB	**Kurchatov Arra**	**6.43**	**247**	Pn	Pn	10 02 11.3	+0.6
	0.1nm,0.3s,baz=63,slow=14,SNR=3.4						
KURBB				Lg	Lg	10 03 59.3	
	0.3nm,0.3s,baz=61,slow=31,SNR=5.9						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.63**	**210**	Pn	Pn	10 02 28.4	+1.1
	0.2nm,0.3s,baz=20,slow=10,SNR=5.3						
MKAR				Lg	Lg	10 04 36.8	
	0.1nm,0.3s,baz=14,slow=32,SNR=2.9						
	0.3nm,0.4s						

NNC 12 10:20:13.0±0.7, 51°67N×75°38E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=8.1km s-min=4.0km az=9.0, Suspected Mining explosion.
IDC 12 10:20:18.1±6.1, 51°62N×75°99E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=78.9km s-min=36.1km az=82.0
ISC 12 10:20:14.6±6.1, 52°6N±0°2×77°3E±0°4, h0km, n8, σ0°55/5, 5C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.01**	**155**	⇑Pg	**Pg**	**10 20 53.8**	**+0.7**
	2.4nm,0.5s						
KURK				⇓Lg	Lg	10 21 24.6	
	4.0nm,0.5s						
KURBB	**Kurchatov Arra**	**2.08**	**158**	⇑Pg	**Pg**	**10 20 54.1**	**-0.2**
	2.8nm,0.3s						
KURBB				⇑Lg	Lg	10 21 24.8	
	10nm,0.4s						
BVA0	**Borovoye Array**	**4.23**	**279**	⇑Lg	Lg	10 21 59.7	
	2.2nm,0.5s,baz=122,slow=27,SNR=4.7						
I46RU	**ZALESOVO INFRA**	**4.72**	**70**	I		10 54 50.0	
	baz=250,slow=319,SNR=3.9						
ZALV	**Zalesovo Beam**	**4.72**	**70**	Pn	**Pg**	**10 21 45.2**	**+0.1**
	0.3nm,0.3s,baz=254,slow=15,SNR=3.2						
	0.7nm,0.4s						
OTUK	**Ortayu**	**5.35**	**218**	⇑Lg	Lg	10 22 18.7	
	1.3nm,0.5s						
MK31	**Makanchi Array**	**6.61**	**149**	⇓Lg	Lg	10 23 44.4	
	1.9nm,0.7s,baz=317,slow=33,SNR=4.2						
MKAR	**Makanchi Array**	**6.61**	**149**	Pn	**Pn**	**10 21 52.8**	**-0.1**
	0.1nm,0.3s,baz=294,slow=12,SNR=2.2						
MKAR				Sn	**Sn**	**10 23 08.6**	**-0.3**
	0.1nm,0.3s,baz=309,slow=26,SNR=1.8						
MKAR				Lg	Lg	10 23 38.9	
	0.2nm,0.3s,baz=315,slow=28,SNR=3.6						
	0.2nm,0.4s						

NEIC 12 10:34:04.0±1.6, 30°49S±0°04×178°0W±0°3, h56km±15km, mb4.0/14, Error ellipse: s-maj=31.2km s-min=5.1km az=94.0
IDC 12 10:34:04.2±5.0, 30°35S×177°96W, h67km±38km, mb3.7/4, mbtmp3.9/4, Error ellipse: s-maj=61.7km s-min=33.1km az=149.0
ISC 12 10:34:02.7±1.0, 30°48S±0°08×178°1W±0°2, h46km, n22, σ0°81/23, mb3.9/11, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.23**	**6**	P	**Pn**	**10 34 24.5**	**+0.9**
	399nm,0.3s,baz=170,slow=22,SNR=1.6						
RAO				S	**Sn**	**10 34 38.4**	**-0.7**
	1μm,0.3s,baz=99,slow=23,SNR=10						
CMWZ	**Cape Campbell**	**12.85**	**207**	Pn	**Pn**	**10 37 02.8**	**+0.1**
TOO	**Toolangi**	**30.87**	**247**	P	**P**	**10 40 14.7**	**-0.1**
CTA	**Charters Tower**	**33.75**	**279**	P	**P**	**10 40 40.7**	**+0.6**
	6.6nm,1.1s,baz=108,slow=10,SNR=2.5						
	6.6nm,1.1s						
CTAO	**Charters Tower**	**33.75**	**279**	P	**P**	**10 40 40.4**	**+0.3**
CTAO				IAmb	IAmb	10 40 43.4	
	comp=Z,4.2nm,0.9s						
STKA	**Stephens Creek**	**34.40**	**257**	P	**P**	**10 40 46.9**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=99,slow=12,SNR=6.1						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**34.40**	**257**	P	**P**	**10 40 46.1**	**+0.5**
BBOO	**Buckleboo**	**38.88**	**254**	P	**P**	**10 41 23.9**	**+0.1**
BBOO				IAmb	IAmb	10 41 37.7	
	comp=Z,3.6nm,1.0s						
AS31	**Alice Springs**	**43.04**	**267**	P	**P**	**10 41 57.9**	**-0.3**
ASAR	**Alice Springs**	**43.04**	**267**	P	**P**	**10 41 57.5**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=103,slow=7.4,SNR=9.3						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**43.04**	**267**	P	**P**	**10 41 56.6**	**-1.6**
WR0	**Warramunga Arr**	**43.86**	**272**	P	**P**	**10 42 04.6**	**-0.2**
WR0				IAmb	IAmb	10 42 20.2	
	comp=Z,2.8nm,1.1s						
WB2	**Warramunga Arr**	**44.03**	**272**	P	**P**	**10 42 05.2**	**-0.9**
WB2				IAmb	IAmb	10 42 27.0	
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	**44.04**	**272**	P	**P**	**10 42 05.6**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=111,slow=8.0,SNR=35						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**44.04**	**272**	P	**P**	**10 42 05.2**	**-1.1**
WB0	**Warramunga Arr**	**44.06**	**273**	P	**P**	**10 42 05.2**	**-1.2**
WB0				IAmb	IAmb	10 42 22.8	
	comp=Z,1.8nm,1.0s						
FORT	**Forrest**	**45.96**	**255**	P	**P**	**10 42 21.7**	**+0.3**
VNDA	**Vanda**	**48.01**	**186**	P	**P**	**10 42 36.6**	**-0.1**
VNDA				IAmb	IAmb	10 42 42.8	
	comp=Z,1.2nm,1.1s						
KNRA	**Kununurra**	**50.65**	**274**	P	**P**	**10 42 57.6**	**0.0**
CASY	**Casey**	**55.04**	**208**	P	**P**	**10 43 28.6**	**-0.7**
CASY				IAmb	IAmb	10 43 38.3	
	comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**59.63**	**180**	P	**P**	**10 44 02.4**	**+0.5**
QSPA				IAmb	IAmb	10 44 07.6	
	comp=Z,0.9nm,1.0s						
FINES	**FINESS Array B**	**145.20**	**340**	PKPbc	**PKPbc**	**10 53 32.9**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=54,slow=4.0,SNR=7.1						

IDC 12 10:39:11.8±0.4, 10°74N×144°84E, h0km, mb4.7/28, mbtmp4.7/31, ML4.4/3, MS3.8/49, Error ellipse: s-maj=18.5km s-min=8.8km az=77.0
*MOS 12 10:39:12.5±0.9, 10°71N×144°61E, h18km, mb5.1/44, Error ellipse: s-maj=11.8km s-min=5.7km az=110.

FAKI	**Fak Fak**	18.44 223	P	P	10 43 28.0 -1.5
FAKI	**Fak Fak**	18.44 223	P	Pn	10 43 30.0 +0.2
	671nm28nm,1.2s				
GAMI	**Galela, Maluku**	19.07 244	P	P	10 43 36.5 +0.1
	130nm,1.0s				
PMG	**Port Moresby**	20.14 173	P	P	10 43 48.1 +0.1
	36nm,1.0s,baz=359,slow=7.4,SNR=7.7				
PMG			LR	LR	10 50 22.3
	comp=Z,282nm,18.2s,baz=322,slow=33				
	36nm,1.0s				
PMG	**Port Moresby**	20.14 173	P	P	10 43 44.7 -3.4
PMG	**Port Moresby**	20.14 173 *c*	*i*P	P	10 43 47.8 -0.2
PMG			pmax	pmax	
	comp=Z,88nm,1.7s				
PMG	**Port Moresby**	20.14 173	P	P	10 43 48.4 +0.4
	comp=Z,54nm,1.2s				
LBMI	**Labuha**	20.58 238	P	P	10 43 52.6 -0.3
	comp=Z,2μmcomp=Z,104nm,1.0s				
MSAI	**Masohi**	21.10 229	P	P	10 43 59.2 +0.7
	comp=Z,5.8nm,0.9s				
KRAI	**Karang Ratu**	21.48 230	P	P	10 44 04.2 +1.6
	comp=Z,24nm,1.9s				
AAI	**Ambon**	21.88 230	P	P	10 44 08.9 +2.1
AAI			pmax	pmax	
	comp=Z,66nm,0.9s				
AAI	**Ambon**	21.88 230	P	P	10 44 05.3 -1.5
	comp=Z,2μmcomp=Z,57nm,0.8s				
JOW	**Kunigami**	22.35 318	P	P	10 44 12.0 +0.1
	comp=Z,49nm,0.8s,baz=128,slow=7.4,SNR=6.2				
	comp=Z,49nm,0.8s				
JOW	**Kunigami**	22.35 318	P	P	10 44 11.5 -0.3
JOW			IAmb	IAmb	10 44 14.9
	comp=Z,55nm,0.8s				
H11S3	**WAKE ISLAND Hy**	22.52 67	T	T	11 07 31.0
	baz=253,slow=74,SNR=112				
H11S1	**WAKE ISLAND Hy**	22.54 67	T	T	11 07 36.0
	baz=253,slow=74,SNR=150				
H11S2	**WAKE ISLAND Hy**	22.54 67	T	T	11 07 34.1
	baz=253,slow=74,SNR=180				
JHJ2	**Mitsune**	22.75 349	P	P	10 44 13.5 -2.5
JHJ	**Hachijo jima 2**	22.76 349	P	P	10 44 13.7 -2.5
	comp=Z,66nm,0.5s,baz=36,slow=23,SNR=4.5				
JHJ			LR	LR	10 52 33.8
	comp=Z,196nm,19.3s,baz=128,slow=35				
	comp=Z,66nm,0.5s				
H11N1	**WAKE ISLAND Hy**	23.08 65	T	T	11 08 28.5
	baz=249,slow=75,SNR=118				
H11N2	**WAKE ISLAND Hy**	23.09 65	T	T	11 08 30.4
	baz=249,slow=75,SNR=80				
H11N3	**WAKE ISLAND Hy**	23.10 65	T	T	11 08 20.1
	baz=249,slow=75,SNR=129				
GTOI	**Gorontalo**	23.87 247	P	P	10 44 24.6 -2.7
	comp=Z,282nmcomp=Z,21nm,1.2s				
COEN	**Coen**	24.58 184	P	P	10 44 33.1 -0.7
LUWI	**Luwuk**	24.84 243	P	P	10 44 34.1 -2.1
MRSI	**Marisa**	24.90 247	P	P	10 44 36.2 -0.5
	comp=Z,856nmcomp=Z,66nm,0.6s				
HNR	**Honiara**	25.06 143	LR	LR	10 53 32.4
	comp=Z,2μm,20.3s,baz=299,slow=34				
INU	**Inuyama**	25.51 345	P	P	10 44 40.6 -1.4
INU			IAmb	IAmb	10 44 51.5
	comp=Z,44nm,1.2s				
JGF	**Kuroka**	25.67 346	P	P	10 44 43.2 -0.3
JYT	**Yasato**	25.73 351	P	P	10 44 43.8 -0.1
NACB	**Ninganchiao**	25.81 304	P	P	10 44 44.0 -0.9
NACB			IAmb	IAmb	10 45 14.1
	comp=Z,47nm,1.2s				
MJAR	**Matsushiro Arr**	26.38 348	P	P	10 44 48.5 -1.4
	comp=Z,5.7nm,0.8s,baz=165,slow=9.2,SNR=11				
MJAR			PcP	PcP	10 48 16.7 +1.6
	comp=Z,2.4nm,0.7s,baz=152,slow=4.2,SNR=4.3				
MJAR			LR	LR	10 54 38.1
	comp=Z,274nm,18.6s,baz=152,slow=35				
	comp=Z,5.7nm,0.8s				
MAJO	**Matsushiro**	26.39 348	P	P	10 44 49.7 -0.3
MAJO			IAmb	IAmb	10 45 01.5
	comp=Z,39nm,0.8s				
MAJO	**Matsushiro**	26.39 348⇓	*e*P	P	10 44 48.9 -1.1
MAJO			pmax	pmax	
	comp=Z,42nm,0.9s				
MJB9	**Matsu-Tunnel**	26.39 348	P	P	10 44 49.7 -0.3
MJB9			IAmb	IAmb	10 45 01.5
	comp=Z,38nm,0.8s				
JHS	**Saijyo**	26.41 338	P	P	10 44 50.8 +0.7
MYLDM	**Lahad Datu**	26.62 260	P	P	10 44 51.6 -0.7
MYLDM			IAmb	IAmb	10 45 30.2
	comp=Z,65nm,1.4s				
MTN	**Manton Dam**	27.07 210	P	P	10 44 55.5 -0.8
JMM	**Marumori**	27.26 353	P	P	10 44 57.4 -0.4
JMM			IAmb	IAmb	10 45 14.3
	comp=Z,53nm,1.1s				
SOEI	**Soe**	28.83 226	P	P	10 45 11.0 -1.2
SOEI			IAmb	IAmb	10 45 33.6
	comp=Z,32nm,0.8s				
TJN	**Taejon**	30.02 331	P	P	10 45 21.9 -0.5
TJN	**Taejon**	30.02 331⇑	*e*P	P	10 45 23.4 +1.0
KSRS	**Korea Array**	30.64 333	P	P	10 45 28.5 +0.7
	comp=Z,6.2nm,0.9s,baz=142,slow=9.9,SNR=16				
	comp=Z,6.2nm,0.9s				
CTA	**Charters Tower**	30.66 177	P	P	10 45 28.2 +0.1
	comp=Z,13nm,0.8s,baz=351,slow=8.7,SNR=18				
CTA			LR	LR	10 57 21.6
	comp=Z,133nm,18.6s,baz=332,slow=36				
	comp=Z,13nm,0.8s				
CTAO	**Charters Tower**	30.66 177	P	P	10 45 27.2 -0.9
CTAO			IAmb	IAmb	10 45 29.3
	comp=Z,15nm,0.8s				
CTAO	**Charters Tower**	30.66 177	P	P	10 45 27.2 -0.9
CTAO			pmax	pmax	
	comp=Z,15nm,0.8s				
KNRA	**Kununurra**	30.67 211	P	P	10 45 28.2 -0.1
KNRA			IAmb	IAmb	10 45 41.9
	comp=Z,60nm,1.9s				
NJ2	**Nanjing**	32.00 315	*e*P	P	10 45 40.0 +0.1
NJ2			pmax	pmax	
	comp=Z,12nm,0.6s				
WRAB	**Tennant Creek**	32.16 199	P	P	10 45 41.2 -0.2
WRAB			IAmb	IAmb	10 45 41.9
	comp=Z,16nm,0.7s				
WRAB	**Tennant Creek**	32.16 199 *c*	*e*P	P	10 45 41.0 -0.4
WRAB			pmax	pmax	
	comp=Z,15nm,0.7s				
WRA	**Warramunga Arr**	32.17 199	P	P	10 45 41.1 -0.4
	comp=Z,9.3nm,0.7s,baz=21,slow=9.8,SNR=76				
WRA			PcP	PcP	10 48 31.2 +1.1
	comp=Z,3.9nm,0.9s,baz=16,slow=3.3,SNR=9.5				
WRA			LR	LR	10 57 57.8
	comp=Z,314nm,21.4s,baz=23,slow=35				
	comp=Z,9.3nm,0.7s				
USRK	**Ussuriysk Ar.**	35.14 344	P	P	10 46 08.1 +1.0
	comp=Z,4.6nm,0.7s,baz=160,slow=8.6,SNR=9.7				
USRK			LR	LR	11 00 25.8
	comp=Z,54nm,18.2s,baz=137,slow=36				
	comp=Z,4.6nm,0.7s				
USRK	**Ussuriysk Ar.**	35.14 344	P	P	10 46 07.0 -0.1
USRK	**Ussuriysk Ar.**	35.14 344	P	P	10 46 07.0 -0.1
IGBI	**Denpasar**	35.33 238	P	P	10 46 09.8 +0.8
	comp=Z,75nm,1.0s				
TIA	**Tai'an**	35.65 320	⇓P	P	10 46 12.6 +1.0
TIA			pmax	pmax	
	comp=Z,13nm,0.8s				
AS31	**Alice Springs**	35.81 197	P	P	10 46 12.0 -1.1
ASAR	**Alice Springs**	35.81 197	P	P	10 46 12.8 -0.3
	comp=Z,4.4nm,0.8s,baz=11,slow=8.7,SNR=56				
ASAR			PcP	PcP	10 48 41.4 +1.0
	comp=Z,3.2nm,0.9s,baz=21,slow=3.3,SNR=7.2				
ASAR			LR	LR	11 02 30.7
	comp=Z,232nm,19.2s,baz=20,slow=39				
	comp=Z,4.4nm,0.8s				
YSS	**Yuzh-Sakhalins**	36.15 358	*e*P	P	10 46 14.6 -1.0
YSS			*e*		10 46 21.2
YSS			*e*S	S	10 51 52.4 -0.6
YSS			*e*SS	SnSn	10 54 20.4 -0.1
YSS			pmax	pmax	
	comp=Z,20nm,1.1s				
MDJ	**Mudanjiang**	36.22 342	P	P	10 46 16.4 0.0
MDJ			IAmb	IAmb	10 46 24.3
	comp=Z,26nm,1.3s				
EIDS	**Eidsvold**	36.40 170	P	P	10 46 17.9 -0.2
EIDS			IAmb	IAmb	10 46 18.7
	comp=Z,19nm,0.7s				
KOUNC	**Koumac, New Ca**	36.51 148	P	P	10 46 18.9 -0.2
CN2	**Changchun**	36.98 336	*e*P	P	10 46 21.8 -1.0
CN2			*e*sP	pP	10 46 28.8 -3.2
CN2			*e*S	S	10 52 06.3 +0.5
CN2			*e*sS	sS	10 52 13.6 -7.1
CN2			*e*SS	SnSn	10 54 35.3 -5.3
CN2			LR	LR	
	comp=Z,160nm,16.0s				
CN2			LR	LR	
	comp=Z,170nm,16.0s				
CN2			LR	LR	
	comp=Z,190nm,18.0s				
LYN	**LuoYang**	37.84 314	*e*P	P	10 46 30.3 +0.1
LYN			LR	LR	
	comp=Z,170nm,16.3s				
HNS	**HongShan**	37.91 319	⇑P	P	10 46 31.9 +1.1
HNS			pmax	pmax	
	comp=Z,21nm,1.4s				
BNX	**BinXian**	37.93 340	⇓P	P	10 46 32.0 +1.2
BNX			pmax	pmax	
	comp=Z,9.0nm,0.8s				
BNX			pmax	pmax	
	comp=Z,190nm,3.7s				
ENH	**Enshi**	38.14 306	P	P	10 46 32.0 -0.9
ENH			IAmb	IAmb	10 46 46.8
	comp=Z,22nm,0.8s				
BJT	**Baijiatuau**	38.66 324	P	P	10 46 36.1 -1.0
BJT	**Baijiatuau**	38.66 324	P	P	10 46 36.1 -1.0
BJT			pmax	pmax	
	comp=Z,11nm,0.6s				
BJI	**Beijing**	38.67 324	P	P	10 46 37.3 +0.1
BJI			pP	pP	10 46 44.3 -2.2
BJI			pmax	pmax	
	comp=Z,12nm,0.8s				
DZM	**Mont Dzumac**	38.90 147	*e*P	P	10 46 39.2 -0.2
	comp=Z,37nm,1.0s				
DZM	**Mont Dzumac**	38.90 147	*e*LR	LR	10 57 16.7
	comp=Z,171nm,30.9s				
DZM	**Mont Dzumac**	38.90 147	P	P	10 46 40.3 +1.0
	comp=Z,14nm,0.9s,baz=351,slow=8.7,SNR=10.0				
	comp=Z,14nm,0.9s				
DZM	**Mont Dzumac**	38.90 147	P	P	10 46 38.8 -0.6
KLR	**Kul'dur**	39.89 347	P	P	10 46 47.5 +0.3
	comp=Z,5.0nm,0.8s,baz=155,slow=5.8,SNR=13				
KLR			LR	LR	11 03 57.5
	comp=Z,53nm,18.1s,baz=158,slow=37				
	comp=Z,5.0nm,0.8s				
KLR	**Kul'dur**	39.89 347 *c*	*i*P	P	10 46 47.3 +0.1
KLR			pmax	pmax	
	comp=Z,29nm,1.1s				
TYV	**Tymovskoe**	40.06 358	*e*P	P	10 46 54.8 +6.3
TYV			pmax	pmax	
	comp=Z,100nm,3.1s				
TYV			pmax	pmax	
	comp=Z,27nm,1.0s				
MBWA	**Marble Bar**	40.14 218	P	P	10 46 49.0 -0.6
XAN	**Xi'an**	40.16 311	⇑P	P	10 46 49.9 +0.1
XAN			pP	pP	10 46 58.7 -0.5
XAN			sP	sP	10 47 02.9 -0.2
XAN			pmax	pmax	
	comp=Z,7.0nm,1.0s				
PSA00	**Pilbara Seismi**	40.39 217	P	P	10 46 51.3 -0.4
PSA00			IAmb	IAmb	10 46 53.1
	comp=Z,52nm,1.0s				
GRNR	**Gornyy**	40.52 352	⇓*i*P	P	10 46 53.3 +0.9
GRNR			pmax	pmax	
	comp=Z,2.0nm,0.8s				
GRNR			MLR	MLR	
	comp=E,110nm,15.0s				
GRNR			MLR	MLR	
	comp=Z,110nm,11.0s				
LEM	**Lembang**	40.92 246	LR	LR	11 04 46.2
	comp=Z,84nm,18.6s,baz=52,slow=38				
XLT	**XiLinHaoTe**	41.34 328	*e*P	P	10 47 00.4 +1.0
XLT			pP	pP	10 47 05.9 -2.9
XLT			sP	pwP	10 47 09.8 -2.9
XLT			S	S	10 53 14.5 +2.8
XLT			pmax	pmax	
	comp=Z,18nm,1.2s				
XLT			pmax	pmax	
	comp=Z,76nm,3.7s				
ARMA	**Armidale**	41.43 171	P	P	10 47 00.3 +0.1
ARMA			IAmb	IAmb	10 47 01.5
	comp=Z,35nm,1.2s				
HHC	**Hu-ho-hao-te**	41.92 322	*e*P	P	10 47 06.6 +2.3
HHC			pmax	pmax	
	comp=Z,20nm,0.8s				
HHC			pmax	pmax	
	comp=Z,160nm,4.3s				
KMI	**Kunming**	42.32 296	⇑P	P	10 47 09.7 +1.9
KMI			pmax	pmax	
	comp=Z,13nm,1.0s				
KMI			pmax	pmax	
	comp=Z,99nm,3.6s				
STKA	**Stephens Creek**	42.47 184	P	P	10 47 07.9 -0.7
	comp=Z,5.9nm,0.7s,baz=348,slow=9.0,SNR=17				
STKA			LR	LR	11 05 12.3
	comp=Z,173nm,18.1s,baz=13,slow=37				
	comp=Z,5.9nm,0.7s				
STKA	**Stephens Creek**	42.47 184	P	P	10 47 07.7 -0.9
STKA	**Stephens Creek**	42.47 184	⇓*e*P	P	10 47 08.2 -0.4
CD2	**Chengdu**	42.98 304	P	P	10 47 13.3 +0.3
CD2			pmax	pmax	
	comp=Z,30nm,0.5s				
MSVF	**Nonsavu**	43.34 130	P	P	10 47 16.0 +0.1
MSVF			LR	LR	11 04 32.1
	comp=Z,165nm,19.2s,baz=314,slow=35				
MSVF	**Nonsavu**	43.34 130	P	P	10 47 17.0 +1.1
MSVF			IAmb	IAmb	10 47 17.8
	comp=Z,32nm,1.3s				
MSVF	**Nonsavu**	43.34 130	P	P	10 47 17.0 +1.1
MSVF			pmax	pmax	
	comp=Z,32nm,1.3s				
PZH	**PanZhiHua**	43.49 297	P	P	10 47 18.5 +1.3
PZH			S	S	10 53 43.0 -0.9
PZH			pmax	pmax	
	comp=Z,20nm,0.9s				
PZH			pmax	pmax	
	comp=Z,100nm,5.2s				
BBOO	**Buckleboo**	44.09 191	P	P	10 47 21.4 -0.3
BBOO			IAmb	IAmb	10 47 22.0
	comp=Z,24nm,0.8s				
FORT	**Forrest**	44.29 201	P	P	10 47 23.6 +0.3
LZH	**Lanzhou**	44.80 311	*e*P	P	10 47 29.2 +1.6
LZH			pP	pP	10 47 35.7 -1.1
LZH			sP	sP	10 47 39.4 -1.1
LZH			pmax	pmax	
	comp=Z,24nm,1.1s				
LZH			pmax	pmax	
	comp=Z,120nm,4.8s				
LZH			LR	LR	
	comp=Z,180nm,13.7s				
LZH			LR	LR	
	comp=Z,200nm,15.2s				
CM31	**Chiang Mai Arr**	44.94 285	P	P	10 47 27.8 -1.0
CM31			IAmb	IAmb	10 47 31.2
	comp=Z,13nm,0.8s				
CMAR	**Chiang Mai Arr**	44.94 285	P	P	10 47 30.6 +1.7
	comp=Z,7.8nm,0.7s,baz=86,slow=6.1,SNR=48				
CMAR			LR	LR	11 04 28.5
	comp=Z,50nm,21.6s,baz=100,slow=34				
	comp=Z,7.8nm,0.7s				
CMAR	**Chiang Mai Arr**	44.94 285	P	P	10 47 27.5 -1.3
CMAR	**Chiang Mai Arr**	44.94 285	P	P	10 47 27.5 -1.3
ZEA	**Zeya**	45.14 345	⇓*e*P	P	10 47 30.1 +0.3
CAN	**Canberra**	45.97 175	P	P	10 47 36.8 +0.2
CAN	**Canberra**	45.97 175	P	P	10 47 36.8 +0.2
CAN			pmax	pmax	
	comp=Z,81nm,1.7s				
PSI	**Prapat**	46.19 264	P	P	10 47 38.3 -0.5
PSI			pmax	pmax	
	comp=Z,91nm,1.1s				
TOO	**Toolangi**	48.05 179	P	P	10 47 53.0 +0.2
TOO	**Toolangi**	48.05 179	P	P	10 47 53.0 +0.2
TOO			pmax	pmax	
	comp=Z,40nm,0.9s				
SHEM	**Shemya Is, Ala**	48.08 24	LR	LR	11 05 53.8
	comp=Z,117nm,21.5s,baz=301,slow=33				
MORW	**Morawa**	48.34 214	P	P	10 47 54.6 -0.5
ULN	**Ulaanbaatar**	48.70 327	P	P	10 47 57.3 -0.7
ULN			IAmb	IAmb	10 48 00.0
	comp=Z,12nm,0.8s				
ULN	**Ulaanbaatar**	48.70 327 *c*	*i*P	P	10 47 58.9 +0.9
ULN			pmax	pmax	
	comp=Z,20nm,1.3s				
ULN	**Ulaanbaatar**	48.70 327	P	P	10 47 58.9 +0.9
	comp=Z,61nm,0.8s				
SONM	**Songino Array**	49.04 326	P	P	10 48 01.8 +1.2
	comp=Z,6.3nm,0.7s,baz=142,slow=9.0,SNR=33				
SONM			LR	LR	11 08 29.1
	comp=Z,89nm,19.2s,baz=122,slow=36				
	comp=Z,6.3nm,0.7s				
SONM	**Songino Array**	49.04 326	P	P	10 48 00.8 +0.2
SONM			IAmb	IAmb	10 48 02.6
	comp=Z,29nm,1.6s				
SONM	**Songino Array**	49.04 326	P	P	10 48 00.8 +0.2
SONM			pmax	pmax	
	comp=Z,29nm,1.6s				
GTA	**Gaotai**	49.05 314	*e*P	P	10 48 01.6 +0.8
GTA			pP	pP	10 48 08.1 -1.9
GTA			sP	sP	10 48 12.3 -1.4
GTA			pmax	pmax	
	comp=Z,12nm,1.3s				
GTA			pmax	pmax	
	comp=Z,49nm,5.5s				
GTA			LR	LR	
	comp=Z,79nm,20.0s				
GTA			LR	LR	
	comp=Z,120nm,20.0s				
GTA			LR	LR	
	comp=Z,150nm,18.2s				
AFI	**Afiamalu**	49.53 119	LR	LR	11 04 47.5
	comp=Z,118nm,19.3s,baz=294,slow=31				
NWAO	**Narrogin (SRO)**	50.76 210	LR	LR	11 10 46.6
	comp=Z,95nm,18.3s,baz=82,slow=37				
NWAO	**Narrogin (SRO)**	50.76 210	P	P	10 48 13.4 -0.1
NWAO			pmax	pmax	
	comp=Z,27nm,1.4s				
GOMU	**GeErMu**	51.70 308	P	P	10 48 22.3 +1.2
GOMU			pP	pP	10 48 27.1 -3.3
GOMU			sP	sP	10 48 29.8 -4.3
GOMU			pmax	pmax	
	comp=Z,7.0nm,0.6s				
GOMU			pmax	pmax	
	comp=Z,79nm,4.8s				
ZAK	**Zakamensk**	52.19 328	*e*P	P	10 48 24.4 +0.2
ZAK			pmax	pmax	
	comp=Z,19nm,1.1s				
YAK	**Yakutsk**	52.38 351	P	P	10 48 25.6 +0.4
	comp=Z,8.6nm,0.4s,baz=113,slow=0.2,SNR=6.9				
YAK			LR	LR	11 11 03.3
	comp=Z,79nm,18.3s,baz=92,slow=36				
	comp=Z,8.6nm,0.4s				
YAK	**Yakutsk**	52.38 351	*e*P	P	10 48 25.3 0.0
YAK			pmax	pmax	
	comp=Z,16nm,0.6s				
YAK			pmax	pmax	
	comp=E,2.0nm,0.6s				
YAK			pmax	pmax	
	comp=N,4.0nm,0.9s				
SEY	**Seymchan**	52.40 4	P	P	10 48 25.5 +0.1
	comp=N,7.2nm,0.8s,baz=189,slow=4.9,SNR=16				
	comp=N,7.2nm,0.8s				
SEY	**Seymchan**	52.40 4⇑	*e*P	P	10 48 26.2 +0.8
SEY			pmax	pmax	
	comp=Z,10.0nm,0.9s				
BOD	**Bodaibo**	52.56 340	*e*P	P	10 48 26.4 -0.2
BOD			pmax	pmax	
	comp=Z,13nm,1.5s				
MOY	**Mondy**	54.10 328	*e*P	P	10 48 39.2 +0.9
MOY			pmax	pmax	
	comp=Z,18nm,1.4s				
RAMN	**Ramite**	56.94 295	*e*P	P	10 48 59.6 +0.3
	comp=Z,74nm,1.4s				
URZ	**Urewera**	57.33 150	P	P	10 49 01.3 0.0
	baz=326,slow=3.6				
URZ			LR	LR	11 11 40.9
	comp=Z,90nm,19.0s,baz=42,slow=34				
GUN	**Gumba**	57.66 296	*e*P	P	10 49 04.9 +0.5
	comp=Z,92nm,0.9s				
PKI	**Pulchoki**	58.04 296	*e*P	P	10 49 06.9 -0.2
	comp=Z,30nm,1.1s				
PKIN	**Phulchoki**	58.05 296	*e*P	P	10 49 06.8 -0.4
	comp=Z,22nm,0.9s				
DMN	**Daman**	58.31 296	*e*P	P	10 49 09.2 +0.2
	comp=Z,42nm,0.9s				
GKN	**Gorkha**	58.76 296	*e*P	P	10 49 11.9 0.0
	comp=Z,54nm,1.1s				
BILL	**Bilibino**	58.98 9	*i*P	P	10 49 13.6 +1.1
BILL			*e*		10 49 18.8
BILL			*e*		10 49 22.7
BILL			*e*		10 50 00.7
BILL			pmax	pmax	
	comp=Z,15nm,1.0s				
BILL			MLR	MLR	
	comp=Z,48nm,16.0s				
WMQ	**Urumqi**	59.08 315	*e*P	P	10 49 20.6 +6.8
WMQ			sP	sP	10 49 25.5 -1.3
WMQ			pmax	pmax	
	comp=Z,27nm,1.1s				
WMQ			LR	LR	
	comp=Z,100nm,21.3s				
RPZ	**Rata Peaks**	59.22 158	P	P	10 49 14.4 -0.1
	comp=Z,10nm,0.8s,baz=75,slow=16,SNR=2.5				
RPZ			LR	LR	11 11 10.5
	comp=Z,146nm,21.6s,baz=298,slow=32				
	comp=Z,10nm,0.8s				
DANN	**Dangsing**	59.56 297	*e*P	P	10 49 17.7 +0.1
	comp=Z,56nm,0.7s				
DGZ	**Jazzator, Alta**	61.01 321	⇓*i*P	P	10 49 27.3 +0.3
DGZ			pmax	pmax	
	comp=Z,13nm,1.2s				
ZSN	**Zaisan**	61.97 318	*e*P	P	10 49 31.0 -2.3
ZSN	**Zaisan**	61.97 318	*e*P	P	10 49 31.1 -2.3
	baz=318				
RAR	**Rarotonga**	63.01 120	LR	LR	11 14 05.3
	comp=Z,15nm,18.8s,baz=286,slow=33				
PALK	**Pallekele**	63.32 273	LR	LR	11 17 41.1
	comp=Z,14nm,19.9s,baz=177,slow=36				
MK31	**Makanchi Array**	63.51 317 *c*	*i*P	P	10 49 44.1 +0.4
MKAR	**Makanchi Array**	63.51 317	P	P	10 49 44.2 +0.5
	comp=Z,3.2nm,0.8s,baz=93,slow=8.4,SNR=21				
MKAR			LR	LR	11 20 21.9
	comp=Z,55nm,18.1s,baz=110,slow=39				
	comp=Z,3.2nm,0.8s				
MKAR	**Makanchi Array**	63.51 317	P	P	10 49 43.4 -0.3
MKAR	**Makanchi Array**	63.51 317	P	P	10 49 43.4 -0.3
MAKZ	**Makanchi**	63.73 317	P	P	10 49 44.9 -0.2
MAKZ	**Makanchi**	63.73 317	P	P	10 49 44.9 -0.2
MAKZ			pmax	pmax	
	comp=Z,16nm,0.8s				
ZAA0	**Zalesovo Array**	63.91 325	P	P	10 49 45.0 -1.1
ZAA0			IAmb	IAmb	10 49 59.7
	comp=Z,6.9nm,0.7s				
ZALV	**Zalesovo Beam**	63.91 325	P	P	10 49 46.0 -0.1
	comp=Z,5.0nm,0.6s,baz=105,slow=6.8,SNR=18				
ZALV			LR	LR	11 17 29.7
	comp=Z,53nm,20.9s,baz=82,slow=36				
	comp=Z,5.0nm,0.6s				
ZALV	**Zalesovo Beam**	63.91 325	P	P	10 49 45.8 -0.3
ZALV	**Zalesovo Beam**	63.91 325	P	P	10 49 45.8 -0.3
HYBB	**Hyderabad (bro**	64.35 284	*e*P	P	10 49 49.6 -0.1
HYBB			*e*PP	PP	10 52 10.9 -0.6
HYBB			*e*S	S	10 58 28.1 +2.1
O16K	**Kokwok River B**	64.48 28	P	P	10 49 51.0 +1.3
	baz=246				
N16K	**Nishlik Lake**	64.54 27	P	P	10 49 51.8 +1.7
	baz=245				
O17K	**Koliganek Bris**	65.02 28	P	P	10 49 54.7 +1.4
	baz=247				
UZB	**Uzynbulak**	65.10 313	*e*P	P	10 49 52.5 -1.8
UZB	**Uzynbulak**	65.10 313	*e*P	P	10 49 52.5 -1.8
	baz=313				
KPKS	**Kokpek**	65.39 313	*e*P	P	10 49 55.2 -0.9
KPKS	**Kokpek**	65.39 313	*e*P	P	10 49 55.2 -0.9
	baz=313				
SATY	**Saty**	65.53 312	*e*P	P	10 49 56.0 -1.1
SATY	**Saty**	65.53 312	*e*P	P	10 49 56.0 -1.1
	baz=312				
TARG	**Taragay, Kyrgy**	65.79 311	P	P	10 49 57.8 -1.3
TARG	**Taragay, Kyrgy**	65.79 311	P	P	10 49 57.8 -1.3
TARG			pmax	pmax	
	comp=Z,6.0nm,1.1s				
KDAK	**Kodiak Island**	66.53 31	LR	LR	11 18 28.0
	comp=Z,106nm,19.6s,baz=116,slow=35				
MDOK	**Medeo**	66.53 312	*e*P	P	10 50 02.4 -1.1
MDOK	**Medeo**	66.53 312	*e*P	P	10 50 02.5 -1.1
	baz=312				
N19K	**Bonanza Creek**	66.62 28	P	P	10 50 04.2 +0.5
	baz=249				
CHKK	**Chushkaly**	66.67 313	*e*P	P	10 50 02.4 -1.8
CHKK	**Chushkaly**	66.67 313	*e*P	P	10 50 02.5 -1.8
	baz=313				
KURK	**Kurchatov**	66.73 321	P	P	10 50 04.1 -0.3
KURK	**Kurchatov**	66.73 321 *c*	*i*P	P	10 50 04.1 -0.3
KURK			pmax	pmax	
	comp=Z,21nm,1.3s				

KURBB	**Kurchatov Arra**	66.77	321	LR	LR	11 22 07.3	
	comp=Z,100nm,18.1s,baz=79,slow=39						
KSH	**Kashi**	66.94	308	P	P	10 50 09.4	+3.2
KSH				sP	pwP	10 50 20.6	-0.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
L19K	**White Mountain**	66.95	26	P	P	10 50 07.3	+1.6
	baz=248						
M19K	**Big River Lodg**	67.05	27	P	P	10 50 07.4	+1.1
	baz=249						
NRN	**Naryn**	67.10	310	P	P	10 50 06.7	-0.7
NRN	**Naryn**	67.10	310	P	P	10 50 06.7	-0.7
NRN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KUU	**Kurty**	67.14	313	*e*P	P	10 50 05.8	-1.4
KUU	**Kurty**	67.14	313	*e*P	P	10 50 05.9	-1.4
	baz=313						
GCSA	**Galena City Sc**	67.14	23	P	P	10 50 08.2	+1.5
	baz=245						
M20K	**Styx River**	67.61	27	P	P	10 50 11.4	+1.5
	baz=250						
K20K	**Telida**	67.73	25	P	P	10 50 12.2	+1.6
	baz=248						
CNPM	**China Poot**	67.73	30	P	P	10 50 11.3	+0.7
J20K	**Nowinta River**	68.00	24	P	P	10 50 13.7	+1.5
J20K	**Nowinta River**	68.00	24	P	P	10 50 14.0	+1.8
	baz=248,SNR=7.8						
SGDS	**Sogindy**	68.32	313	*e*P	P	10 50 12.4	-2.3
SGDS	**Sogindy**	68.32	313	*e*P	P	10 50 12.4	-2.3
	baz=312						
AAK	**Ala-Archa**	68.34	312	LR	LR	11 20 51.2	
	comp=Z,42nm,21.6s,baz=92,slow=37						
AAK	**Ala-Archa**	68.34	312	*de*P	P	10 50 16.0	+1.0
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SKT	**Skwentna**	68.35	27	P	P	10 50 15.6	+1.1
	baz=251						
PPLA	**Purkeypile**	68.36	26	P	P	10 50 15.8	+1.1
PPLA	**Purkeypile**	68.36	26	P	P	10 50 16.2	+1.5
	baz=250						
CAST	**Castle Rocks**	68.58	26	P	P	10 50 16.5	+0.6
CAST				IAmb	IAmb	10 50 18.0	
	comp=Z,18nm,1.0s						
CAST	**Castle Rocks**	68.58	26	P	P	10 50 17.0	+1.1
	baz=250,SNR=6.7						
CHUM	**Lake Minchumin**	68.65	25	P	P	10 50 17.9	+1.7
	baz=250						
SEW	**Seward**	68.76	29	P	P	10 50 18.3	+1.4
	baz=254						
NRIK	**Noril'sk**	68.80	341	P	P	10 50 17.4	+0.2
	comp=Z,14nm,0.8s,baz=115,slow=7.2,SNR=14						
NRIK				LR	LR	11 19 25.4	
	comp=Z,79nm,21.6s,baz=108,slow=35						
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	68.80	341	*c i*P	P	10 50 17.2	+0.1
NRIK				pmax	pmax		
	comp=Z,21nm,0.9s						
NIL	**Nilore**	68.81	302	P	P	10 50 16.9	-1.0
NIL	**Nilore**	68.81	302	P	P	10 50 16.9	-1.0
NIL				pmax	pmax		
	comp=Z,26nm,0.9s						
BTLS	**Baital**	68.90	314	*e*P	P	10 50 16.2	-2.0
BTLS	**Baital**	68.90	314	*e*P	P	10 50 16.2	-2.0
	baz=314						
RC01	**Rabbit Creek A**	68.90	28	P	P	10 50 18.7	+0.8
	baz=253						
M22K	**Willow**	68.92	28	P	P	10 50 18.3	+0.4
	baz=253						
CUT	**Chulitna**	69.05	27	P	P	10 50 18.9	+0.2
	baz=252						
H21K	**Melozitna Rive**	69.08	23	P	P	10 50 19.9	+0.9
H21K				IAmb	IAmb	10 50 21.4	
	comp=Z,12nm,1.1s						
H21K	**Melozitna Rive**	69.08	23	P	P	10 50 20.3	+1.4
	baz=249						
G21K	**Allakaket**	69.13	22	P	P	10 50 20.7	+1.4
	baz=248						
PMR	**Palmer**	69.32	28	P	P	10 50 21.4	+0.9
	baz=254						
TRF	**Thorofare Moun**	69.36	26	P	P	10 50 21.8	+0.9
	baz=252						
F21K	**Alatna River**	69.41	21	P	P	10 50 21.9	+0.9
	baz=248						
PWL	**Port Wells**	69.49	29	P	P	10 50 22.3	+0.8
PWL	**Port Wells**	69.49	29	P	P	10 50 22.4	+0.8
	baz=255						
KNK	**Knik Glacier**	69.58	28	P	P	10 50 22.4	+0.2
	baz=254						
MLY	**Manley**	69.68	24	P	P	10 50 23.9	+1.2
	baz=251,SNR=8.6						
H22K	**Ishtalitna Cre**	69.71	23	P	P	10 50 24.0	+1.1
	baz=250						
SML	**Sawmill**	69.75	28	P	P	10 50 24.0	+0.8
	baz=254,SNR=8.8						
WAT1	**Susitna Watana**	69.93	27	P	P	10 50 25.2	+0.9
	baz=254						
F22K	**John River**	69.98	21	P	P	10 50 25.9	+1.4
	baz=249,SNR=7.6						
G22K	**Bettles**	70.02	22	P	P	10 50 25.5	+0.9
	baz=250						
MCK	**McKinley**	70.02	26	P	P	10 50 25.9	+1.1
	baz=253						
M23K	**Glacier View**	70.02	28	P	P	10 50 25.6	+0.8
	baz=255						
SCM	**Sheep Creek Mo**	70.22	28	P	P	10 50 27.2	+1.1
	baz=255,SNR=6.2						
WAT6	**Susitna Watana**	70.22	27	P	P	10 50 27.4	+1.1
	baz=255						
I23K	**Minto, Yukon-K**	70.27	24	IAmb	IAmb	10 50 28.4	
	comp=Z,18nm,0.9s						
I23K	**Minto, Yukon-K**	70.27	24	P	P	10 50 27.4	+1.2
	baz=252,SNR=6.1						
E22K	**Anaktuvuk Pass**	70.34	21	P	P	10 50 27.7	+1.0
	baz=249						
BRZS	**Berezniki**	70.37	319	*e*P	P	10 50 24.3	-2.9
BRZS	**Berezniki**	70.37	319	*e*P	P	10 50 24.4	-2.9
	baz=319						
H23K	**Yukon River**	70.40	23	IAmb	IAmb	10 50 29.5	
	comp=Z,11nm,0.8s						
H23K	**Yukon River**	70.40	23	P	P	10 50 28.2	+1.1
	baz=252,SNR=7.9						
G23K	**Bananza Creek**	70.50	23	P	P	10 50 29.0	+1.3
	baz=251						
COLD	**Coldfoot**	70.61	22	IAmb	IAmb	10 50 31.4	
	comp=Z,22nm,1.1s						
COLD	**Coldfoot**	70.61	22	P	P	10 50 29.9	+1.6
	baz=251						
PPT2	**Papeete2**	70.64	113	*e*LR	LR	11 11 59.4	
	comp=Z,134nm,24.2s						
EYAK	**Cordova Ski Ar**	70.65	29	P	P	10 50 29.6	+1.0
	baz=257						
MDM	**Murphy Dome**	70.67	25	IAmb	IAmb	10 50 31.9	
	comp=Z,9.5nm,0.8s						
CCB	**Clear Creek Bu**	70.76	25	IAmb	IAmb	10 50 30.1	
	comp=Z,13nm,1.0s						
KLU	**Klutina**	70.78	28	P	P	10 50 30.9	+1.3
	baz=257						
TCOL	**CIGO, UAF Yank**	70.80	25	IAmb	IAmb	10 50 31.9	
	comp=Z,11nm,0.8s						
TCOL	**CIGO, UAF Yank**	70.80	25	P	P	10 50 30.1	+0.7
	baz=254						
COLA	**College**	70.80	25	P	P	10 50 29.6	+0.2
COLA				IAmb	IAmb	10 50 31.9	
	comp=Z,11nm,0.8s						
COLA	**College**	70.80	25	*de*P	P	10 50 29.5	0.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
COLA	**College**	70.80	25	P	P	10 50 31.1	+1.6
	baz=254						
M24K	**Tolsona, Glenn**	70.81	28	P	P	10 50 31.2	+1.5
	baz=256						
D23K	**Nanushuk River**	71.03	20	P	P	10 50 33.4	+2.5
	baz=250,SNR=5.3						
POKR	**Poker Plat Res**	71.04	24	P	P	10 50 31.1	+0.1
	baz=254						
HDA	**Harding Lake**	71.05	25	IAmb	IAmb	10 50 32.9	
	comp=Z,12nm,0.8s						
HDA	**Harding Lake**	71.05	25	P	P	10 50 31.4	+0.4
	baz=255,SNR=8.0						
H24K	**Noodor Dome**	71.06	24	P	P	10 50 32.4	+1.3
	baz=254,SNR=9.1						
E23K	**Chandalar**	71.09	21	P	P	10 50 33.1	+1.8
	baz=251,SNR=11						
ILAR	**Eielson Array**	71.17	25	P	P	10 50 31.1	-0.7
	comp=Z,11nm,0.6s,baz=250,slow=5.9,SNR=101						
ILAR				LR	LR	11 18 53.0	
	comp=Z,78nm,20.0s,baz=224,slow=34						
	comp=Z,11nm,0.6s						
ILAR	**Eielson Array**	71.17	25	P	P	10 50 31.4	-0.3
ILAR	**Eielson Array**	71.17	25	P	P	10 50 31.4	-0.3
KAIM	**Kayak Island**	71.17	30	P	P	10 50 32.6	+0.8
	baz=259						
BMRM	**Bremner River**	71.29	29	P	P	10 50 33.6	+0.9
	baz=258						
KK31	**Karatay Array**	71.29	312	P	P	10 50 33.0	0.0
KK31	**Karatay Array**	71.29	312	P	P	10 50 33.0	0.0
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	**Karatay Array**	71.29	312	P	P	10 50 32.4	-0.6
KKAR	**Karatay Array**	71.29	312	P	P	10 50 32.4	-0.6
GAR	**Garm**	71.30	308	IAmb	IAmb	10 50 52.6	
	comp=Z,16nm,0.9s						
TOLK	**Toolik Lake Re**	71.30	21	P	P	10 50 33.4	+0.9
	baz=251						
PAX	**Paxson**	71.33	27	IAmb	IAmb	10 50 34.2	
	comp=Z,9.5nm,0.7s						
PAX	**Paxson**	71.33	27	P	P	10 50 34.2	+1.3
	baz=257,SNR=5.6						
HARP	**HAARP**	71.34	28	P	P	10 50 33.9	+1.0
	baz=257						
C23K	**Itkillik River**	71.35	19	P	P	10 50 34.3	+1.6
	baz=250						
K24K	**Donnelly Dome**	71.39	26	P	P	10 50 34.3	+1.1
	baz=256,SNR=6.1						
G24K	**Hadweenzic Riv**	71.46	23	P	P	10 50 35.2	+1.6
	baz=254,SNR=6.0						
E24K	**Your Creek**	71.50	21	P	P	10 50 34.8	+1.1
	baz=252						
F24K	**Squaw Lake**	71.55	22	P	P	10 50 35.5	+1.4
	baz=253,SNR=7.0						
D24K	**Happy Valley**	71.72	20	P	P	10 50 36.8	+1.9
	baz=252,SNR=7.0						
J25K	**Salcha River,**	71.76	25	P	P	10 50 36.1	+0.6
	baz=256,SNR=5.1						
PRP	**Porcupine Dome**	71.92	24	P	P	10 50 36.9	+0.5
	baz=256						
C24K	**Franklin Bluff**	71.94	20	P	P	10 50 37.4	+1.1
	baz=251						
H25K	**Birch Creek**	71.99	23	P	P	10 50 37.7	+1.0
	baz=255,SNR=6.8						
G25K	**Bearman Lake**	72.01	23	P	P	10 50 37.4	+0.7
	baz=255						
MCARA	**McCarthy VSAT**	72.12	29	P	P	10 50 38.8	+1.2
	baz=259						
BVAR	**Borovoye Array**	72.13	322	LR	LR	11 22 42.8	
	comp=Z,124nm,20.9s,baz=95,slow=36						
CHGR	**Chuyangaron**	72.19	307	IAmb	IAmb	10 50 55.5	
	comp=Z,13nm,0.7s						
CHGR	**Chuyangaron**	72.19	307	P	P	10 50 38.9	+0.3
CHGR				pmax	pmax		
	comp=Z,19nm,0.9s						
BRVK	**Borovoye**	72.20	322	P	P	10 50 38.2	0.0
BRVK				IAmb	IAmb	10 50 50.5	
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	72.20	322	*c i*P	P	10 50 38.2	0.0
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SCRK	**Sand Creek**	72.20	26	IAmb	IAmb	10 50 39.8	
	comp=Z,8.6nm,0.8s						
SCRK	**Sand Creek**	72.20	26	P	P	10 50 38.7	+0.5
	baz=258						
L26K	**Log Cabin Wild**	72.29	27	IAmb	IAmb	10 50 40.7	
	comp=Z,12nm,0.7s						
L26K	**Log Cabin Wild**	72.29	27	P	P	10 50 39.8	+1.3
	baz=259,SNR=7.9						
M26K	**Nabesna, AK**	72.33	28	P	P	10 50 40.1	+1.3
	baz=259						
F25K	**Christian Rive**	72.40	22	P	P	10 50 41.1	+1.9
	baz=255,SNR=7.7						
J26L	**Joseph Creek**	72.50	26	IAmb	IAmb	10 50 42.4	
	comp=Z,9.2nm,0.7s						
J26L	**Joseph Creek**	72.50	26	P	P	10 50 40.7	+0.9
	baz=258,SNR=14						
E25K	**Arctic Village**	72.56	22	P	P	10 50 41.4	+1.3
	baz=255						
D25K	**Kavik River**	72.60	20	P	P	10 50 41.7	+1.3
	baz=254						
TBI	**Tubuai**	72.64	119	*e*LR	LR	11 12 54.9	
	comp=Z,220nm,31.0s						
M27K	**Edge Creek, AK**	72.83	28	IAmb	IAmb	10 50 44.3	
	comp=Z,14nm,0.9s						
M27K	**Edge Creek, AK**	72.83	28	P	P	10 50 43.1	+1.2
	baz=260						
I26K	**Coal Creek Min**	72.83	25	P	P	10 50 42.8	+1.1
	baz=258						
CTG	**Chitna Glacier**	72.86	29	P	P	10 50 43.6	+1.5
	baz=261,SNR=5.8						
CTGM	**Chitina Glacie**	72.86	29	P	P	10 50 42.6	+0.4
G26K	**Porcupine Rive**	72.94	23	P	P	10 50 44.2	+2.0
	baz=257,SNR=7.2						
F26K	**Sheenjek River**	72.98	22	P	P	10 50 44.4	+1.8
	baz=256,SNR=5.1						
L27K	**Beaver Creek,**	72.98	27	IAmb	IAmb	10 50 44.5	
	comp=Z,8.3nm,0.8s						
L27K	**Beaver Creek,**	72.98	27	P	P	10 50 43.7	+1.1
	baz=260,SNR=6.9						
BCAR	**Beaver Creek A**	73.00	27	P	P	10 50 43.1	+0.3
K27K	**Chicken**	73.04	26	IAmb	IAmb	10 50 45.7	
	comp=Z,12nm,0.9s						
K27K	**Chicken**	73.04	26	P	P	10 50 44.3	+1.4
	baz=260						
C26K	**Camden Bay**	73.26	20	P	P	10 50 46.0	+1.8
	baz=255						
PINM	**Pinnacle**	73.26	30	P	P	10 50 46.2	+1.8
	baz=262						
BVCY	**Beaver Creek**	73.31	28	P	P	10 50 46.6	+1.9
	baz=261,SNR=5.9						
O28M	**Mount Upton**	73.39	30	P	P	10 50 46.8	+1.4
	baz=262,SNR=7.1						
YUK3	**Moose Creek**	73.40	29	P	P	10 50 47.5	+2.1
	baz=262,SNR=5.6						
I27K	**Kandik River**	73.52	25	P	P	10 50 46.6	+0.7
	baz=259						
BCPM	**Bancas Point**	73.55	31	P	P	10 50 45.8	-0.3
EGAK	**Eagle**	73.57	25	IAmb	IAmb	10 50 48.9	
	comp=Z,12nm,0.8s						
EGAK	**Eagle**	73.57	25	P	P	10 50 47.5	+1.5
	baz=260,SNR=6.9						
C27K	**Jago River**	73.59	20	P	P	10 50 47.2	+1.1
	baz=256						
YUK8	**Steele Glacier**	73.66	29	P	P	10 50 48.6	+1.6
	baz=262						
H27K	**Steamboat Moun**	73.67	24	P	P	10 50 48.6	+1.8
	baz=259,SNR=15						
G27K	**Doyon Strip**	73.73	23	P	P	10 50 48.8	+1.8
	baz=259						
E27K	**Coleen River**	74.02	22	P	P	10 50 50.8	+2.0
	baz=259						
O29M	**Mount Kennedy**	74.12	30	P	P	10 50 51.3	+1.8
	baz=264						
YUK4	**Talbot Arm**	74.20	29	P	P	10 50 52.5	+2.4
	baz=263,SNR=6.1						
DAWY	**Dawson**	74.21	26	IAmb	IAmb	10 50 52.5	
	comp=Z,21nm,0.9s						
DAWY	**Dawson**	74.21	26	P	P	10 50 51.6	+1.7
	baz=262,SNR=13						
YUK6	**Outpost Mounta**	74.29	30	P	P	10 50 51.8	+1.1
	baz=264						
M29M	**Somme Creek**	74.42	28	P	P	10 50 53.2	+2.0
	baz=263,SNR=10.0						
P29M	**Windy Craggy**	74.47	31	P	P	10 50 53.6	+2.1
	baz=265						
L29M	**L29M**	74.65	27	P	P	10 50 54.7	+2.2
	baz=263,SNR=12						
HYT	**Haines Junctio**	74.70	30	P	P	10 50 54.1	+1.2
HYT	**Haines Junctio**	74.70	30	P	P	10 50 55.1	+2.1
	baz=264,SNR=11						
I29M	**Ogilvie Camp,**	74.85	25	IAmb	IAmb	10 51 01.7	
	comp=Z,15nm,1.0s						
I29M	**Ogilvie Camp,**	74.85	25	P	P	10 50 55.1	+1.6
	baz=263,SNR=6.8						
P30M	**Million Dollar**	74.91	31	P	P	10 50 55.9	+1.9
	baz=265						
N30M	**Aishikik Lake**	74.96	29	P	P	10 50 55.9	+1.6
	baz=265						
K29M	**Barlow Dome**	75.00	27	P	P	10 50 56.2	+1.6
	baz=264,SNR=25						
PLBC	**Pleasant Camp**	75.15	31	P	P	10 50 57.2	+1.8
	baz=266,SNR=7.3						
O30N	**Mendenhall**	75.39	30	P	P	10 50 58.5	+1.8
	baz=266						
N31M	**Braeburn, Yuko**	75.59	29	P	P	10 50 59.5	+1.6
	baz=266						
EPYK	**Eagle Plains**	75.62	24	P	P	10 50 59.6	+1.7
	baz=264,SNR=5.4						
SKAG	**Skagway**	75.68	31	P	P	10 50 58.3	-0.1
SKAG				IAmb	IAmb	10 51 01.4	
	comp=Z,20nm,1.0s						
SKAG	**Skagway**	75.68	31	P	P	10 51 00.1	+1.7
	baz=267						
MAYO	**Mayo, Yukon**	75.70	27	P	P	10 51 00.2	+1.7
	baz=265,SNR=5.4						
G30M	**tAoh Zraii Nji**	75.88	23	P	P	10 51 00.4	+1.0
	baz=264						
WHY	**Whitehorse**	75.97	30	P	P	10 51 00.9	+0.7
WHY	**Whitehorse**	75.97	30	P	P	10 51 01.9	+1.7
	baz=267,SNR=9.2						
R32K	**Eaglecrest**	76.05	32	P	P	10 51 01.9	+1.4
	baz=268						
M31M	**Drury Creek, Y**	76.29	28	IAmb	IAmb	10 51 10.2	
	comp=Z,12nm,0.9s						
M31M	**Drury Creek, Y**	76.29	28	P	P	10 51 02.9	+1.0
	baz=267,SNR=6.9						
P32M	**Atlin**	76.51	31	P	P	10 51 04.8	+1.6
	baz=268,SNR=5.6						
CRAG	**Craig**	76.75	35	P	P	10 51 05.4	+0.9
	baz=270						
FARO	**Faro, Yukon**	76.78	28	P	P	10 51 05.8	+1.1
	baz=268						
N32M	**Quiet Lake**	76.87	30	P	P	10 51 06.8	+1.6
	baz=268						
F31M	**Tsiigehtchic**	76.88	23	P	P	10 51 05.5	+0.5
	baz=266						
P33M	**Teslin, Yukon**	76.98	31	IAmb	IAmb	10 51 08.4	
	comp=Z,12nm,0.9s						
P33M	**Teslin, Yukon**	76.98	31	P	P	10 51 06.9	+1.0
	baz=269,SNR=7.4						
INK	**Inuvik**	77.02	22	IAmb	IAmb	10 51 07.6	
	comp=Z,15nm,0.9s						
INK	**Inuvik**	77.02	22	P	P	10 51 07.0	+1.2
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
INK	**Inuvik**	77.02	22	P	P	10 51 06.9	+1.1
	baz=266						
TAOE	**Nuku Hiva Isla**	77.15	102	*e*LR	LR	11 15 00.0	
	comp=Z,81nm,22.5s						
TAOE	**Nuku Hiva Isla**	77.15	102	*e*T	T	12 15 43.0	
	comp=Z,14nm,0.2s						
WRAK	**Wrangell Islan**	77.19	34	P	P	10 51 08.5	+1.5
	baz=270						
Q32M	**Nakina River**	77.24	32	P	P	10 51 08.9	+1.3
	baz=270						
MMPY	**Sheldon Lake,**	77.76	28	P	P	10 51 12.4	+2.2
	baz=270,SNR=5.1						
S34M	**Telegraph Cree**	77.84	33	P	P	10 51 12.2	+1.6
	baz=271						
R33M	**Jennings River**	77.91	31	P	P	10 51 12.6	+1.4
	baz=271						
T35M	**Bob Quinn**	78.34	34	P	P	10 51 15.1	+1.7
	baz=272						
DLBC	**Dease Lake**	78.41	32	P	P	10 51 14.4	+0.5
DLBC				IAmb	IAmb	10 51 16.9	
	comp=Z,19nm,1.1s						
DLBC	**Dease Lake**	78.41	32	P	P	10 51 15.4	+1.5
	baz=272						
ABKAR	**Akbulak array**	78.62	318	P	P	10 51 13.6	-1.5
WTLY	**Watson Lake, Y**	78.99	31	P	P	10 51 19.1	+2.1
	baz=272,SNR=11						
ARU	**Arti**	79.07	326	LR	LR	11 28 07.6	
	comp=Z,36nm,19.6s,baz=270,slow=37						
ARU	**Arti**	79.07	326	P	P	10 51 17.4	-0.1
ARU	**Arti**	79.07	326	*d i*P	P	10 51 17.7	+0.2
ARU						10 54 13.1	
ARU				S	S	11 01 18.0	+3.8
ARU				SS	SS	11 06 19.4	-0.7
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TGTN	**Hyland Airport**	79.19	29	P	P	10 51 19.6	+1.6
	baz=272,SNR=6.0						
AKTO	**Aktyubinsk**	79.78	320	LR	LR	11 28 35.1	
	comp=Z,24nm,19.7s,baz=75,slow=37						
BBB	**Bella Bella**	79.83	39	LR	LR	11 21 08.6	
	comp=Z,51nm,20.0s,baz=322,slow=32						
C36M	**Paulatuk**	80.44	21	P	P	10 51 25.3	+0.8
	baz=275						
CASY	**Casey**	80.83	193	P	P	10 51 26.5	-0.1
GEYT	**Alibeck**	80.90	307	P	P	10 51 27.9	+0.1
	comp=Z,0.9nm,0.4s,baz=132,slow=2.1,SNR=1.5						
	comp=Z,0.9nm,0.4s						
GEYT	**Alibeck**	80.90	307	P	P	10 51 27.8	0.0
WRGLY	**Wrigley**	81.29	27	P	P	10 51 30.6	+1.4
	baz=276						
E03A	**Lebam**	83.42	44	P	P	10 51 41.1	+0.4
BUCK	**Buck Mountain**	84.19	46	IAmb	IAmb	10 51 54.0	
	comp=Z,11nm,0.8s						
HUMO	**Hull Mountain**	84.47	48	IAmb	IAmb	10 51 49.2	
	comp=Z,7.2nm,0.9s						
YBH	**Yreka Blue Hor**	84.79	49	LR	LR	11 24 26.6	
	comp=Z,58nm,18.5s,baz=297,slow=32						
YBH	**Yreka Blue Hor**	84.79	49	P	P	10 51 48.8	+0.8
YBH	**Yreka Blue Hor**	84.79	49	P	P	10 51 48.8	+0.8
YBH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LTY	**Liberty**	85.26	43	IAmb	IAmb	10 51 58.3	
	comp=Z,18nm,1.8s						
YKA	**Yellowknife Ar**	85.42	27	P	P	10 51 51.6	+1.1
	comp=Z,3.3nm,0.8s,baz=281,slow=5.4,SNR=7.1						
YKA				LR	LR	11 30 41.5	
	comp=Z,54nm,18.6s,baz=298,slow=36						
	comp=Z,3.3nm,0.8s						
PINE	**Pine Mountain**	85.71	46	IAmb	IAmb	10 51 55.5	
	comp=Z,9.4nm,0.8s						
B08A	**Colville Reser**	85.94	42	IAmb	IAmb	10 51 55.7	
	comp=Z,18nm,1.2s						
BELG	**Belogornoye**	85.94	322	LR	LR	11 31 06.9	
	comp=Z,65nm,20.7s,baz=87,slow=36						
K05A	**Summer Lake**	85.94	47	IAmb	IAmb	10 52 02.8	
	comp=Z,8.1nm,0.9s						
D08A	**Wollman Farm,**	86.47	43	IAmb	IAmb	10 52 03.8	
	comp=Z,14nm,1.5s						
MOD	**Modoc Plateau**	86.53	48	IAmb	IAmb	10 51 59.2	
	comp=Z,9.3nm,1.2s						
G08A	**Pilot Rock**	86.81	45	P	P	10 51 58.0	0.0
SPITS	**Spitsbergen Ar**	86.85	351	LR	LR	11 31 07.2	
	comp=Z,60nm,21.9s,baz=30,slow=36						
E09A	**Wood Farm, Sta**	87.11	43	IAmb	IAmb	10 52 07.8	
	comp=Z,10.0nm,1.1s						
NEW	**Newport**	87.40	41	IAmb	IAmb	10 52 02.9	
	comp=Z,11nm,1.0s						
NEW	**Newport**	87.40	41	P	P	10 52 02.8	+2.1
	baz=283						
VCNR	**Virginia City**	87.54	51	IAmb	IAmb	10 52 17.5	
	comp=Z,16nm,2.0s						
J08A	**Circle Bar Ran**	87.56	46	IAmb	IAmb	10 52 04.2	
	comp=Z,6.2nm,1.0s						
PNTR	**Pine Nut**	87.62	51	IAmb	IAmb	10 52 21.9	
	comp=Z,6.0nm,1.0s						
WVOR	**Wild Horse Val**	87.64	47	IAmb	IAmb	10 52 04.6	
	comp=Z,8.4nm,1.1s						
WAKR	**Walker**	87.86	51	IAmb	IAmb	10 52 23.9	
	comp=Z,18nm,1.8s						
KLMR	**Klimovskoe**	88.03	332	*e*P	P	10 52 00.9	-2.4
KLMR				*e*		10 55 26.2	

comp=Z,4.8nm,0.8s,baz=266,slow=5.7,SNR=57
comp=Z,4.8nm,0.8s
KVN Kaiserville 88.77 51 IAmb IAmb 10 52 10.3
comp=Z,7.2nm,1.0s
NV11 Mina Array Sit 88.86 51 IAmb IAmb 10 52 10.8
comp=Z,6.7nm,1.0s
ISA Isabella, Lake 89.22 54 P **P** **10 52 10.9 +1.4**
baz=283
CWC Cottonwood Cre 89.36 53 P **P** **10 52 11.8 +1.5**
baz=283
MFID Camas Ranch 89.42 46 IAmb IAmb 10 52 13.1
comp=Z,10.0nm,0.9s
LCH Last Change Ra 89.52 52 IAmb IAmb 10 52 31.6
comp=Z,20nm,2.0s
EDW2 Edwards Air Fo 89.77 55 P **P** **10 52 14.0 +1.9**
baz=283
ARCES ARCESS Array B 89.77 342 P **P** **10 52 11.5 +0.2**
comp=Z,8.0nm,0.9s,baz=46,slow=10,SNR=5.0
ARCES LR LR 11 34 47.2
comp=Z,36nm,21.7s,baz=30,slow=37
comp=Z,8.0nm,0.9s
LRMC Laurel Mtn Rad 89.89 54 P **P** **10 52 14.6 +1.8**
baz=283
MPMC Manual Prospec 89.91 53 P **P** **10 52 14.9 +2.0**
baz=283
FURC Furnace Creek, 90.31 53 P **P** **10 52 16.5 +2.0**
baz=284
HLID Hailey 90.38 46 P **P** **10 52 16.8 +1.8**
baz=285
WCT Wildcat Mounta 90.42 53 IAmb IAmb 10 52 18.0
comp=Z,6.6nm,0.8s
ELK Elko 90.51 48 LR LR 11 29 08.2
comp=Z,54nm,18.1s,baz=284,slow=33
ELK Elko 90.51 48 IAmb IAmb 10 52 18.5
comp=Z,6.8nm,0.9s
GSC Goldstone, Bar 90.62 54 IAmb IAmb 10 54 25.6
comp=Z,20nm,1.9s
GSC Goldstone, Bar 90.62 54 P **P** **10 52 18.0 +1.8**
baz=284
TPNV Topopah Spring 90.67 52 IAmb IAmb 10 52 19.3
comp=Z,6.8nm,0.9s
TPNV Topopah Spring 90.67 52 P **P** **10 52 18.2 +1.7**
baz=284
GNI Garni 90.74 311 LR LR 11 38 42.2
comp=Z,25nm,18.0s,baz=138,slow=39
R11A Troy Canyon, C 90.84 51 P **P** **10 52 18.5 +1.2**
baz=284
SHOC Shoshone, Teco 90.90 53 P **P** **10 52 19.0 +1.7**
baz=284
HEC Hector,Ludlow 91.11 54 P **P** **10 52 19.8 +1.3**
baz=284
KIV Kislovodsk 91.21 315 *e*P **P** **10 52 19.1 +0.4**
KIV pmax pmax
comp=Z,9.0nm,1.1s
TUQ Turquoise Moun 91.29 54 P **P** **10 52 20.3 +1.0**
baz=284
PFO Pinyon Flats O 91.30 56⇑ *e*P **P** **10 52 20.7 +1.3**
PFO pmax pmax
comp=Z,19nm,3.6s
PFO Pinyon Flats O 91.30 56 P **P** **10 52 20.6 +1.3**
baz=284
TPFO Pinon Flats 91.30 56 P **P** **10 52 20.9 +1.5**
baz=284
OBN Obninsk 91.45 327 *e*P **P** **10 52 20.4 +1.0**
OBN *e* 10 55 59.6
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN MLR MLR
comp=Z,41nm,17.0s
PRN Pahroc Range 91.49 52 P **P** **10 52 20.2 0.0**
PRN IAmb IAmb 10 52 29.5
comp=Z,6.8nm,1.1s
MONP2 Monument Peak 91.50 56 P **P** **10 52 21.1 +0.6**
baz=284
BELC Belle Mtn. Jos 91.58 55 P **P** **10 52 21.9 +1.2**
baz=284
SHPR Sheep Range 91.63 53 P **P** **10 52 21.1 +0.2**
GMRC Granite Mounta 91.66 54 P **P** **10 52 22.2 +1.1**
baz=284
BOZ Bozeman (W) 91.73 43 P **P** **10 52 22.5 +1.3**
baz=287
V12A Nelson 92.07 53 IAmb IAmb 10 52 25.9
comp=Z,7.1nm,1.1s
PSUT Pine Spring 92.11 50 IAmb IAmb 10 52 25.9
comp=Z,7.4nm,1.0s
EGMT Eagleton 92.21 40 P **P** **10 52 24.2 +1.0**
baz=289
IRM Iron Mountain 92.23 55 P **P** **10 52 25.2 +1.6**
baz=284
YHL Hebgen Lake 92.25 44 IAmb IAmb 10 52 26.9
comp=Z,8.5nm,1.1s
DUG Dugway, Tooele 92.44 48 P **P** **10 52 26.1 +1.5**
baz=286
YMR Madison River 92.45 44 IAmb IAmb 10 52 28.3
comp=Z,4.0nm,0.8s
YNR Norris Junctio 92.63 44 P **P** **10 52 25.2 -0.3**
YNR IAmb IAmb 10 52 29.3
comp=Z,6.1nm,0.9s
CCUT Cedar City 92.75 51 IAmb IAmb 10 52 35.5
comp=Z,5.7nm,1.2s
YMP Mirror Lake Pl 92.98 44 P **P** **10 52 26.8 -0.4**
YMP IAmb IAmb 10 52 30.7
comp=Z,7.3nm,1.0s
PDMCI Parker Dam,Lak 92.99 54 P **P** **10 52 28.7 +1.6**
baz=285
NLU North Lily Min 93.05 49 IAmb IAmb 10 52 29.9
comp=Z,5.2nm,1.0s
KNB Kanab 93.31 52 P **P** **10 52 28.3 -0.4**
KNB IAmb IAmb 10 52 32.0
comp=Z,6.0nm,0.9s
KNB Kanab 93.31 52 P **P** **10 52 28.3 -0.4**
KNB pmax pmax
comp=Z,6.0nm,0.9s
RLMT Red Lodge 93.46 43 P **P** **10 52 30.9 +1.7**
baz=289
FINES FINESS Array B 93.72 335 P **P** **10 52 28.4 -1.4**
comp=Z,2.2nm,0.7s,baz=64,slow=6.6,SNR=4.9
FINES LR LR 11 36 30.9
comp=Z,31nm,21.6s,baz=44,slow=37
comp=Z,2.2nm,0.7s
PDAR Pinedale Array 94.01 45 P **P** **10 52 30.6 -1.3**
comp=Z,0.3nm,0.7s,baz=350,slow=3.8,SNR=2.7
PDAR LR LR 11 29 31.0
comp=Z,51nm,19.5s,baz=290,slow=32
comp=Z,0.3nm,0.7s
ANN Anapa 94.53 317 *e*P P 10 52 28.7 -5.1
ANN *e**PP **PcP** **10 52 36.8 +2.6**
ANN *e* 10 56 18.7
ANN *e*S **SKSac** **11 03 01.9 -4.8**
ANN *e*SSS SSS 11 13 48.4
ANN pmax pmax
comp=Z,80nm,1.6s
LAO LASA Array 94.92 41 P **P** **10 52 37.6 +1.8**
baz=291
DGMT Dagmar 95.53 39 P **P** **10 52 39.9 +1.5**
baz=293
PV23 Carpenter Ridg 95.77 49 IAmb IAmb 10 52 43.1
comp=Z,6.5nm,1.0s
O20A White River Ci 95.79 47 P **P** **10 52 41.4 +1.3**
baz=289
MNK Minsk 96.28 328 *i* P **P** **10 52 40.6 -1.0**
MNK *i* 10 56 33.9
MNK *i* PPP PPP 10 58 36.6
MNK *i* S **SKSac** **11 03 15.2 -0.3**
MNK *i* SS **SS** **11 10 33.4 +2.7**
MNK *i* SSS SSS 11 14 16.7
MNK pmax pmax
comp=N,12nm,0.7s
MNK pmax pmax
comp=E,2.0nm,0.7s
MNK pmax pmax
comp=Z,5.0nm,0.7s
MNK MLR MLR
comp=Z,103nm,17.0s
MNK MLR MLR
comp=N,275nm,16.0s
MNK MLR MLR
comp=E,26nm,19.0s
MNK Minsk 96.28 328 *i* P **P** **10 52 40.6 -1.0**
comp=E,2.0nm,0.7s
MNK *i* P **P** **10 52 40.6 -1.0**
comp=N,12nm,0.7s
MNK *i* P **P** **10 52 40.6 -1.0**
comp=Z,5.0nm,0.7s,baz=62
MNK *i* PP **PP** **10 56 34.0 -0.7**
MNK *i* PPP PPP 10 58 36.7
MNK *i* S **SKSac** **11 03 15.2 -0.3**
MNK *i* SS **SS** **11 10 33.4 +2.7**
MNK *i* SSS SSS 11 14 16.7
MNK *i* LQ LQ 11 30 12.8
MNK *i* LR LR 11 37 32.7
MNK *i* LRM MLR 11 39 25.9
comp=Z,103nm,17.2s
MNK *i* LRM MLR 11 39 30.3
comp=N,275nm,15.9s
MNK *i* LRM MLR 11 39 30.9
comp=E,26nm,19.1s
MVCO Mesa Verde 96.55 50 P **P** **10 52 45.1 +1.5**
baz=289
MAW Mawson 96.78 202 LR LR 11 31 16.3
comp=E,56nm,21.0s,baz=144,slow=32
AKASG Malin Array Be 97.30 325 LR LR 11 40 35.1
comp=E,55nm,18.1s,baz=66,slow=38
S22A 4UR Ranch, Cre 97.63 49 P Pdif 10 52 49.6 +1.0
baz=290
HFS Hagfors 99.40 338 LR LR 11 42 42.6
comp=E,27nm,18.0s,baz=50,slow=38
NOA NORSAR Array B 99.69 339 LR LR 11 41 48.8
comp=E,20nm,18.6s,baz=50,slow=38
KLNR Kaliningrad 100.03 331⇓ *e*P **Pdif** **10 52 58.1 -0.3**
TROLL Troll, Antarti 114.67 192 PKPdf PKPdf 10 57 53.5 +0.4
VNA2 Neumayer--Watz 117.42 190 PKPdf **PKiKP** **10 57 58.5 +0.3**
baz=125,slow=0.7
BOSA Boshof 120.95 243 PKP **PKPdf** **10 58 05.2 -1.2**
comp=E,1.5nm,0.8s,baz=86,slow=4.2,SNR=3.8
TORD Torodi Ar. Bea 136.38 302 PKP **PKPdf** **10 58 36.1 +0.2**
comp=E,1.8nm,1.0s,baz=327,slow=2.4,SNR=6.0
TORD PP PP 11 01 25.4 +8.8
comp=E,1.0nm,1.0s,baz=52,slow=4.8,SNR=3.7
PLCA Paso Flores 136.83 140 PKP **PKPdf** **10 58 36.5 +0.3**
comp=E,3.9nm,1.0s,baz=202,slow=2.5,SNR=3.5
PB14 IPOC Station P 143.84 117 PKPdf **PKPdf** **10 58 48.6 -1.0**
AC02 Maricunga 144.25 121 PKPdf PKPbc 10 58 48.8 +0.1
GO02 Mina Guanaco 144.40 118 PKPdf **PKPdf** **10 58 49.7 -0.8**
PB04 IPOC Station P 144.65 114 PKPdf PKPbc 10 58 50.2 +0.5
LPAZ La Paz 147.53 103 PKPbc **PKPab** **10 59 00.3 -0.8**
comp=E,12nm,0.9s,baz=314,slow=2.8,SNR=28

MAN 12 10:51:53.3, 6°.76N×126°.19E, h41km, mb3.9, ML2.7, MS2.2, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.20**	**20**⇓	*e*P	Pn	10 52 05.0	+4.3
MATI				*e*S	Sn	10 52 11.7	+5.9
DDMP	**Don Marcelino,**	**0.81**	**216**⇑	*e*P	Pn	10 52 13.6	+5.3
DDMP				*e*S	Sn	10 52 22.4	+3.3
BIPH	**Bislig**	**1.42**	**7**⇓	*e*P	Pn	10 52 17.5	+0.8
BIPH				*e*S	Sn	10 52 33.5	-0.7
BUKP	**Musuan**	**1.58**	**315**⇓	*e*P	Pn	10 52 13.0	-5.9
BUKP				*e*S	Sn	10 52 33.0	-5.0
CGP	**Cagayan de Oro**	**2.24**	**319**⇑	*e*P	Pn	10 52 28.8	+0.9
CGP				*e*S	Sn	10 52 55.7	+1.2

*IDC **12** 11:31:00.2±5.8, 51°.98N×177°.50W, h0km, mb3.6/5, mbtmp3.8/6, ML5.0/1, Error ellipse: s-maj=105.1km s-min=51.4km az=84.0*
*NEIC **12** 11:31:31.8±0.5, 52°.0N±0°.6×173°.8W±0°.3, h214km±15km, Error ellipse: s-maj=94.3km s-min=11.1km az=166.0*
*AEIC **12** 11:31:33±0.8, 52°.5N±0°.4×174°.1W±0°.2, h216km±9km, ML3.5, Error ellipse: s-maj=60.8km s-min=4.1km az=166.0*
ISC 12 11:31:33.1±1.6, 52°.4N±0°.3×174°.1W±0°.1, h200km, n15, σ1§06/12, mb3.3/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.28**	**255**	Pn	**Pn**	**11 32 05.8**	**+0.8**
ADK	**Adak**	**1.72**	**252**	Pn	**Pn**	**11 32 09.3**	**+0.6**
KIWB	**Kanaga Island**	**2.00**	**254**		**Pn**	**11 32 11.9**	**+0.3**
NIKH	**Nikolski High**	**3.20**	**78**	Pn	**Pn**	**11 32 23.7**	**-1.3**
AMKA	**Amchitka**	**4.25**	**258**	Pn	**Pn**	**11 32 37.9**	**0.0**
UNV	**Unalaska Valle**	**4.75**	**70**	Pn	**Pn**	**11 32 44.2**	**0.0**
FALS	**False Pass**	**6.77**	**65**	Pn	**Pn**	**11 33 10.1**	**0.0**
SMY	**Shemya**	**7.23**	**277**	Pn	**Pn**	**11 33 15.2**	**-1.0**
SDPT	**Sand Point**	**8.53**	**65**	Pn	**Pn**	**11 33 31.9**	**-1.1**
KDAK	**Kodiak Island**	**13.37**	**58**	Pn	**P**	**11 34 38.4**	**+0.8**
	6.3nm,0.3s,baz=234,slow=2.6,SNR=27						
	13nm,0.3s						
ILAR	**Eielson Array**	**18.58**	**38**	P	**Pn**	**11 35 36.5**	**-1.0**
	1.0nm,0.4s,baz=228,slow=9.3,SNR=50						
	1.0nm,0.4s						
INK	**Inuvik**	**24.90**	**35**	P	**P**	**11 36 39.0**	**+1.9**
	1.3nm,0.8s,baz=243,slow=6.8,SNR=4.6						
	1.3nm,0.8s						
NVAR	**Mina Array Bea**	**40.53**	**87**	P	P	11 38 58.6	+5.9
	0.4nm,0.6s,baz=302,slow=8.4,SNR=4.7						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**43.19**	**76**	P	P	11 39 20.1	+5.9
	0.6nm,0.5s,baz=310,slow=2.9,SNR=14						
	0.6nm,0.5s						
TXAR	**Lajitas Array**	**55.60**	**85**	P	P	11 40 53.0	+5.0
	0.2nm,0.6s,baz=302,slow=4.7,SNR=3.8						
	0.2nm,0.6s						

*NOU **12** 11:34:57.8, 37°.39S×179°.98W, h0km, MLv4.4/12, East of North Island, N.Z.*
*WEL **12** 11:35:10.1±1.1, 37°.5S±4°.×17°.9E±°, h18km±5km, M3.6/54, ML3.8/67, MLv3.6/54, Error ellipse: s-maj=0.0km s-min=0.0km az=82.2*
ISC 12 11:35:06.1±2.6, 37°.43S±0°.07×179°.3E±0°.1, h17km±10km, n101, σ1§49/110, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.81**	**260**	P	**Pg**	**11 35 21.7**	**-0.1**
MXZ				S	**Sg**	**11 35 28.9**	**-3.5**
MXZ	**Matakaoa Point**	**0.81**	**260**	P	**Pg**	**11 35 21.7**	**-0.1**
WMGZ	**Waiomatatini S**	**0.81**	**241**	P	**Pn**	**11 35 24.1**	**+1.4**
WMGZ				S	**Sg**	**11 35 33.3**	**+0.9**
PUZ	**Puketiti**	**1.05**	**232**	P	**Pg**	**11 35 27.8**	**+1.4**
PUZ				S	**Sb**	**11 35 40.2**	**+0.9**
PKGZ	**Pakihiroa**	**1.08**	**245**	P	**Pg**	**11 35 27.6**	**+0.7**
PKGZ				S	**Sb**	**11 35 38.7**	**-1.4**
HAZ	**Te Kaha**	**1.25**	**255**	P	**Pn**	**11 35 29.8**	**+1.0**
HAZ				S	**Sn**	**11 35 43.6**	**-1.7**
TWGZ	**Tauwhareparae**	**1.29**	**234**	P	**Pg**	**11 35 31.4**	**+0.5**
TWGZ				S	**Sn**	**11 35 46.7**	**+0.4**
CNGZ	**Carnagh Statio**	**1.36**	**219**	P	**Pg**	**11 35 33.7**	**+1.3**
RUGZ	**Raukumara Rang**	**1.40**	**247**	P	**Pn**	**11 35 32.4**	**+1.4**
TKGZ	**Te Karaka**	**1.53**	**228**	P	**Pb**	**11 35 34.5**	**+0.5**
TKGZ				S	**Sn**	**11 35 52.0**	**-0.1**
MWZ	**Matawai**	**1.67**	**237**	P	**Pn**	**11 35 36.0**	**+1.4**
RIGZ	**Rimuhau**	**1.76**	**223**	P	**Pb**	**11 35 37.9**	**-0.1**
RIGZ				S	**Sn**	**11 35 58.1**	**+0.1**
RAGZ	**Rawiri**	**1.83**	**234**	P	**Pn**	**11 35 38.7**	**+1.8**
WHRZ	**Whale Island**	**1.90**	**256**	P	**Pn**	**11 35 39.6**	**+1.8**
URZ	**Urewera**	**1.92**	**244**	P	**Pn**	**11 35 39.9**	**+1.8**
URZ				S	**Sn**	**11 36 00.1**	**-1.7**
URZ	**Urewera**	**1.92**	**244**	P	**Pn**	**11 35 39.9**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.04**	**212**	P	**Pb**	**11 35 42.2**	**-0.5**
KNZ	**Kokohu**	**2.04**	**218**	P	**Pn**	**11 35 41.2**	**+1.5**
SNGZ	**Shannon Statio**	**2.05**	**228**	P	**Pn**	**11 35 41.8**	**+1.9**
EDRZ	**Edgecumbe**	**2.14**	**251**	P	**Pn**	**11 35 42.8**	**+1.6**
MARZ	**Manawahe**	**2.16**	**254**	P	**Pn**	**11 35 42.5**	**+1.1**
RTZ	**Ruatahuna**	**2.18**	**237**	P	**Pn**	**11 35 43.7**	**+2.0**
OPRZ	**Ohinepanea**	**2.22**	**258**	P	**Pn**	**11 35 42.9**	**+0.8**
MUGZ	**Murupara**	**2.26**	**242**	P	**Pn**	**11 35 44.1**	**+1.4**
RAHZ	**Arahi**	**2.29**	**229**	P	**Pn**	**11 35 45.0**	**+1.8**
WHHZ	**Waihua**	**2.31**	**224**	P	**Pn**	**11 35 45.3**	**+1.8**
RRRZ	**Republican Roa**	**2.39**	**247**	P	**Pn**	**11 35 46.0**	**+1.6**
MTHZ	**Maungataniwha**	**2.41**	**233**	P	**Pn**	**11 35 46.7**	**+2.0**
OMRZ	**Omania**	**2.42**	**253**	P	**Pn**	**11 35 44.1**	**-0.8**
TGRZ	**Tauranga**	**2.44**	**262**	P	**Pn**	**11 35 45.9**	**+0.8**
HLRZ	**Highlands Stat**	**2.48**	**250**	P	**Pn**	**11 35 47.6**	**+1.9**
KARZ	**Kaharoa**	**2.50**	**255**	P	**Pn**	**11 35 47.2**	**+1.2**
PRRZ	**Plateau Road**	**2.54**	**244**	P	**Pn**	**11 35 47.8**	**+1.3**
NGRZ	**Ngongotaha**	**2.56**	**254**	P	**Pn**	**11 35 48.6**	**+1.7**
HRRZ	**Handcock Road**	**2.57**	**247**	P	**Pn**	**11 35 48.6**	**+1.5**
NMHZ	**Naumai**	**2.58**	**229**	P	**Pn**	**11 35 48.9**	**+1.8**
ARHZ	**Aropaoanui**	**2.58**	**224**	P	**Pn**	**11 35 48.8**	**+1.8**
ALRZ	**Allen Road**	**2.60**	**243**	P	**Pn**	**11 35 48.8**	**+1.4**
KMRZ	**Kaimai**	**2.70**	**260**	P	**Pn**	**11 35 49.6**	**+0.8**
WPRZ	**Whakapapatarin**	**2.71**	**245**	P	**Pn**	**11 35 50.7**	**+1.8**
BKZ	**Black Stump Fm**	**2.81**	**231**	P	**Pn**	**11 35 51.9**	**+1.6**
BKZ	**Black Stump Fm**	**2.81**	**231**	P	**Pn**	**11 35 51.9**	**+1.6**
CKHZ	**Cape Kidnapper**	**2.83**	**217**	P	**Pn**	**11 35 51.7**	**+1.2**
MCHZ	**McNeill Hill**	**2.87**	**225**	P	**Pn**	**11 35 52.6**	**+1.5**
KUTZ	**Kaahu Road**	**2.95**	**248**	P	**Pn**	**11 35 53.7**	**+1.5**
KUZ	**Kuaotunu**	**2.95**	**282**	P	**Pn**	**11 35 51.5**	**-0.7**
KUZ	**Kuaotunu**	**2.95**	**282**	P	**Pn**	**11 35 51.6**	**-0.5**
KWHZ	**Kaweka Forest**	**3.01**	**228**	P	**Pn**	**11 35 54.2**	**+1.1**
KAHZ	**Kahuranaki**	**3.03**	**218**	P	**Pn**	**11 35 54.5**	**+1.1**
TOZ	**Tahuroa Road**	**3.04**	**263**	P	**Pn**	**11 35 54.2**	**+0.8**
TLZ	**Tolley Road**	**3.11**	**252**	P	**Pn**	**11 35 55.7**	**+1.3**
RATZ	**Rangitukua**	**3.13**	**242**	P	**Pn**	**11 35 56.4**	**+1.7**
PXZ	**Pawanui**	**3.22**	**216**	P	**Pn**	**11 35 56.3**	**+0.4**
BHHZ	**Black Hill Sta**	**3.27**	**230**	P	**Pn**	**11 35 57.7**	**+1.1**
ETVZ	**East Tongariro**	**3.30**	**238**	P	**Pn**	**11 35 58.3**	**+1.2**
NTVZ	**North Tongarir**	**3.31**	**239**	P	**Pn**	**11 35 58.5**	**+1.3**
MKAZ	**Moumakai**	**3.32**	**274**	P	**Pn**	**11 35 57.4**	**+0.1**
OTVZ	**Oturere**	**3.34**	**238**	P	**Pn**	**11 35 59.2**	**+1.4**
NNVZ	**North Ngauruho**	**3.36**	**239**	P	**Pn**	**11 35 59.5**	**+1.5**
WTVZ	**West Tongariro**	**3.37**	**239**	P	**Pn**	**11 35 59.5**	**+1.4**
SNVZ	**South Ngauruho**	**3.37**	**238**	P	**Pn**	**11 35 58.1**	**-0.1**
NGZ	**Ngauruhoe**	**3.39**	**238**	P	**Pn**	**11 35 59.6**	**+1.1**
TUVZ	**Tukino**	**3.41**	**236**	P	**Pn**	**11 35 59.9**	**+1.3**
MOVZ	**Moawhango**	**3.42**	**234**	P	**Pn**	**11 35 59.5**	**+0.8**
WPHZ	**Waipukurau**	**3.45**	**220**	P	**Pn**	**11 35 59.5**	**+0.4**
TWVZ	**Taurewa**	**3.46**	**241**	P	**Pn**	**11 36 00.4**	**+1.1**
WHVZ	**Whangaehu Hut**	**3.46**	**237**	P	**Pn**	**11 36 00.5**	**+1.1**
FWVZ	**Far West T-bar**	**3.47**	**237**	P	**Pn**	**11 36 00.7**	**+1.2**
PNHZ	**Pukenui**	**3.47**	**223**	P	**Pn**	**11 35 59.4**	**0.0**
WNVZ	**Wahianoa**	**3.47**	**236**	P	**Pn**	**11 36 00.6**	**+1.1**
TRVZ	**Turoa**	**3.49**	**237**	P	**Pn**	**11 36 01.0**	**+1.2**
PRHZ	**Porangahau**	**3.52**	**216**	P	**Pn**	**11 36 00.2**	**+0.3**
ETAZ	**East Tamaki Re**	**3.53**	**276**	P	**Pn**	**11 36 01.7**	**+1.6**
MTVZ	**Mangateitei**	**3.59**	**236**	P	**Pn**	**11 36 02.1**	**+1.1**
PKVZ	**Pokaka**	**3.62**	**238**	P	**Pn**	**11 36 02.9**	**+1.4**
HIZ	**Hauiti**	**3.68**	**252**	P	**Pn**	**11 36 04.3**	**+2.1**
HIZ	**Hauiti**	**3.68**	**252**	P	**Pn**	**11 36 04.5**	**+2.3**
HBAZ	**Herne Bay Bore**	**3.70**	**278**	P	**Pn**	**11 36 04.9**	**+2.4**
TSZ	**Takapari Road**	**3.70**	**224**	P	**Pn**	**11 36 02.2**	**-0.4**
ANWZ	**Angora Road**	**3.74**	**215**	P	**Pn**	**11 36 02.9**	**-0.2**
DVHZ	**Dannevirke**	**3.77**	**220**	P	**Pn**	**11 36 03.2**	**-0.2**
RVAZ	**Riverhead Bore**	**3.83**	**278**	P	**Pn**	**11 36 05.2**	**+0.9**
VRZ	**Vera Road**	**3.96**	**243**	P	**Pn**	**11 36 07.8**	**+1.8**
BFZ	**Birch Farm**	**4.03**	**215**	P	**Pn**	**11 36 06.7**	**-0.3**
POWZ	**Post Office Ro**	**4.04**	**222**	P	**Pn**	**11 36 06.7**	**-0.5**
PRWZ	**Pori Road**	**4.06**	**219**	P	**Pn**	**11 36 07.5**	**+0.1**
WAZ	**Wanganui**	**4.10**	**234**	P	**Pn**	**11 36 09.5**	**+1.5**
MHEZ	**Mangahewa**	**4.25**	**246**	P	**Pn**	**11 36 13.8**	**+3.7**
WCZ	**Waipu Caves**	**4.26**	**289**	P	**Pn**	**11 36 11.0**	**+0.8**
TIWZ	**Tintock**	**4.27**	**217**	P	**Pn**	**11 36 10.1**	**-0.2**
LREZ	**Lake Rotokare**	**4.35**	**241**	P	**Pn**	**11 36 13.6**	**+2.1**
DREZ	**Durham Road**	**4.38**	**245**	P	**Pn**	**11 36 14.8**	**+2.9**
NEZ	**North Egmont**	**4.49**	**244**	P	**Pn**	**11 36 16.3**	**+2.9**
KHEZ	**Kahui Hut**	**4.55**	**244**	P	**Pn**	**11 36 17.4**	**+3.1**
KHEZ	**Kahui Hut**	**4.55**	**244**	P	**Pn**	**11 36 16.8**	**+2.5**
OUZ	**Omahuta**	**5.11**	**294**	P	**Pn**	**11 36 23.4**	**+1.5**
OUZ	**Omahuta**	**5.11**	**294**	P	**Pn**	**11 36 23.3**	**+1.5**
QRZ	**Quartz Range**	**6.26**	**235**	P	**Pn**	**11 36 37.6**	**-0.1**
KHZ	**Kahutara**	**6.66**	**220**	P	**Pn**	**11 36 41.9**	**-1.3**
RPZ	**Rata Peaks**	**8.87**	**222**	P	**Pn**	**11 37 11.6**	**-1.9**
ODZ	**Otahua Downs**	**10.01**	**218**	P	**Pn**	**11 37 27.1**	**-2.0**

*IDC **12** 11:39:16.3±10.0, 36°.81N×82°.69E, h0km, mb3.1/1, mbtmp3.4/5, ML3.1/4, MS2.7/2, Error ellipse: s-maj=139.2km s-min=32.2km az=23.0*
ISC 12 11:39:15.0±8.0, 36°.6N±0°.7×82°.5E±0°.4, h10km, n7, σ0§60/5, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**8.65**	**317**	Pg	Pg	11 41 52.3	-8.2
	0.4nm,0.3s,baz=142,slow=18,SNR=2.3						
AAK				Lg	Lg	11 43 47.7	
	0.3nm,0.3s,baz=330,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**10.19**	**359**	Pn	**Pn**	**11 41 41.0**	**-0.3**
	0.5nm,0.3s,baz=185,slow=13,SNR=14						
MKAR				LR	LR	11 46 31.1	
	comp=Z,16nm,19.4s,baz=120,slow=44						
	1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**14.31**	**350**	Pn	**Pn**	**11 42 37.8**	**+0.2**
	baz=174,slow=11,SNR=4.5						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**17.42**	**5**	P	**Pn**	**11 43 18.7**	**+0.7**
	0.2nm,0.3s,baz=192,slow=10,SNR=11						
	2.3nm,0.7s						
BVAR	**Borovoye Array**	**18.50**	**336**	P	**Pn**	**11 43 31.6**	**+0.3**
	0.1nm,0.3s,baz=133,slow=11,SNR=3.9						
	0.6nm,0.7s						
SONM	**Songino Array**	**20.85**	**50**	P	**P**	**11 43 56.8**	**-0.1**
	0.4nm,0.3s,baz=246,slow=12,SNR=4.0						
	0.4nm,0.3s						
AKTO	**Aktyubinsk**	**22.39**	**316**	LR	LR	11 54 19.6	
	comp=Z,42nm,21.4s,baz=81,slow=40						

*IDC **12** 11:44:07.3±2.0, 81°.63N×120°.21E, h0km, mb3.7/3, mbtmp3.8/4, ML3.7/1, MS3.1/13, Error ellipse: s-maj=85.6km s-min=31.0km az=163.0*
ISC 12 11:44:09.9±1.2, 81°.9N±0°.1×119°.3E±0°.1, h10km, n17, σ3§03/8, mb3.7/3, MS3.1/12, East of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI	**Zemlya Franca-**	**10.21**	**301**	P	**Pn**	**11 46 38.9**	**+2.7**
ZFI				*e*S	**Sn**	**11 48 27.7**	**-2.8**
OMEGA	**Omega**	**10.22**	**300**	P	**Pn**	**11 46 39.9**	**+3.6**
OMEGA				*e*S	**Sn**	**11 48 27.5**	**-3.1**
NRIK	**Noril'sk**	**14.45**	**228**	Pn	**Pn**	**11 47 33.6**	**-0.4**
	0.3nm,0.3s,baz=9.3,slow=13,SNR=2.2						
NRIK				LR	LR	11 53 27.2	
	comp=Z,84nm,18.2s,baz=6.5,slow=39						
	1.8nm,0.4s						
ILAR	**Eielson Array**	**27.10**	**70**	P	**P**	**11 49 49.7**	**-2.5**
	1.2nm,1.1s,baz=331,slow=7.7,SNR=5.4						
ILAR				LR	LR	11 59 41.5	
	comp=Z,39nm,21.6s,baz=240,slow=34						
	1.2nm,1.1s						
KIRV	**Kirov**	**29.67**	**263**	LR	LR	12 03 32.0	
	comp=Z,22nm,18.6s,baz=2.4,slow=39						
FINES	**FINESS Array B**	**30.20**	**288**	LR	LR	12 05 17.7	
	comp=Z,16nm,18.8s,baz=286,slow=42						
ARU	**Arti**	**30.49**	**253**	LR	LR	12 03 44.9	
	comp=Z,23nm,18.1s,baz=357,slow=38						
BVAR	**Borovoye Array**	**32.29**	**238**	LR	LR	12 06 04.6	
	comp=Z,43nm,18.3s,baz=15,slow=41						
SONM	**Songino Array**	**34.41**	**195**	LR	LR	12 05 21.4	
	comp=Z,8.0nm,21.4s,baz=61,slow=37						
BELG	**Belogornoye**	**35.94**	**262**	LR	LR	12 07 40.3	
	comp=Z,38nm,19.5s,baz=139,slow=39						
VRAC	**Vranov**	**43.29**	**291**	LR	LR	12 10 28.7	
	comp=Z,24nm,18.9s,baz=22,slow=36						
KBZ	**Khabaz**	**45.08**	**264**	LR	LR	12 13 43.8	
	comp=Z,22nm,18.6s,baz=32,slow=39						
GNI	**Garni**	**48.33**	**261**	LR	LR	12 16 27.5	
	comp=Z,29nm,18.3s,baz=164,slow=40						
PDAR	**Pinedale Array**	**53.09**	**44**	LR	LR	12 16 54.9	
	comp=Z,26nm,18.4s,baz=6.5,slow=37						
TXAR	**Lajitas Array**	**66.96**	**40**	P	**P**	**11 55 03.3**	**+1.0**
	0.5nm,0.8s,baz=15,slow=5.2,SNR=4.5			

TBP	Tagbilaran	2.35	57	eP	Pn	12 30 50.4	+0.5
CUYO	Cuyo Island	2.56	341⇊	eP	Pn	12 30 53.8	+1.0
CUYO				eS	Sn	12 31 21.6	-1.2
GHBP	Garcia Hernand	2.72	63⇈	iP	Pn	12 30 56.1	+1.2
GHBP				i S	Sn	12 31 27.5	+0.9
TABP	Talibon, Bohol	2.96	55⇈	iP	Pn	12 30 58.7	+0.5
TABP				i S	Sn	12 31 31.8	-0.7
SJMP	San Jose	4.09	350⇊	eP	Pn	12 31 14.6	+0.9
SJMP				eS	Sn	12 31 59.2	-1.3

MAN 12 12:42:22.8, 7°.04N×123°.88E, h17km, mb3.6, ML2.3, MS1.8, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.40	63⇈	iP	Pn	12 42 32.7	-1.1
CTBH				i S	Sn	12 42 41.4	+0.4
SKMP	Bagumbayan, Su	0.83	128⇊	eP	Pb	12 42 36.7	-2.1
SKMP				eS	Sb	12 42 48.1	-1.6
PAGZ	Pagadian	0.94	328⇈	eP	Pb	12 42 39.9	-0.8
PAGZ				eS	Sn	12 42 54.8	+0.4
BUKP	Musuan	1.44	54⇈	eP	Pn	12 42 47.3	-0.8
BUKP				eS	Sg	12 43 13.4	+4.2
DDMP	Don Marcelino,	2.04	117⇊	eP	Pn	12 42 57.2	+0.8
DDMP				eS	Sb	12 43 23.7	-0.8

*IDC **12** 12:50:31.5±1.9, 17°.75S×178°.04W, h628km±19km, mb2.8/6, mbtmp3.9/9, Error ellipse: s-maj=95.1km s-min=17.5km az=151.0*

ISC 12 12:50:30.4±1.5, 17°.8S±0°.5×178°.0W±0°.3, h600km, n9, σ1§94/9, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.78	271	P	P	12 51 57.9	+3.5
	3.2nm,0.7s,baz=155,slow=14,SNR=3.6						
AFI	Afiamalu	7.13	58	P	P	12 52 23.1	+1.4
	12nm,0.5s,baz=98,slow=0.7,SNR=7.0						
DZM	Mont Dzumac	15.24	251	P	P	12 53 41.2	+0.3
	1.4nm,0.5s,baz=71,slow=23,SNR=1.6						
CTA	Charters Tower	33.86	260	P	P	12 56 24.8	-0.2
	2.2nm,0.6s,baz=71,slow=9.7,SNR=2.3						
	2.2nm,0.6s						
STKA	Stephens Creek	39.02	241	P	P	12 57 06.6	-0.5
	1.4nm,0.8s,baz=94,slow=15,SNR=1.7						
	1.4nm,0.8s						
WRA	Warramunga Arr	45.04	259	P	P	12 57 53.1	-1.3
	1.0nm,0.4s,baz=96,slow=7.5,SNR=54						
	1.0nm,0.4s						
ASAR	Alice Springs	45.20	254	P	P	12 57 54.3	-1.3
	3.0nm,0.7s,baz=90,slow=8.0,SNR=77						
	3.0nm,0.7s						
NVAR	Mina Array Bea	79.08	44	P	P	13 01 33.6	-0.5
	0.2nm,0.5s,baz=213,slow=6.5,SNR=1.9						
	0.2nm,0.5s						
ILAR	Eielson Array	85.71	13	P	P	13 02 04.3	-2.2
	0.2nm,0.4s,baz=210,slow=4.8,SNR=2.4						
	0.2nm,0.4s						

*DJA **12** 13:02:13.7±0.3, 3°.5±5°.×13°.7E±°, h59km±8km, M4.5/8, mB5.2/4, mb4.5/8, MLv4.5/6, Mw(mB)4.6/4*
*NEIC **12** 13:02:14.6±2.4, 3°.19S±0°.04×136°.67E±0°.09, h39km±12km, mb4.3/14, Error ellipse: s-maj=12.5km s-min=6.2km az=100.0*
*IDC **12** 13:02:14.4±3.0, 3°.12S×136°.65E, h56km±27km, mb3.8/7, mbtmp4.2/11, ML4.1/3, MS3.3/16, Error ellipse: s-maj=31.6km s-min=13.1km az=52.0*

ISC 12 13:02:12.7±0.6, 3°.15S±0°.07×136°.68E±0°.06, h34km, n64, σ1§68/57, mb4.1/10, MS3.5/10, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.35	341	P	Pn	13 02 35.1	-0.1
SMPI	Sarmi	2.33	60	P	Pn	13 02 49.0	+0.3
RKPI	Ransiki, Papua	2.99	303	P	Pn	13 02 58.5	+0.7
GENI	Genyem	3.52	81	P	Pn	13 03 04.3	-0.8
GENI	Genyem	3.52	81	P	Pn	13 03 05.2	+0.1
FAKI	Fak Fak	4.43	273	Pn	Pn	13 03 18.6	+1.0
FAKI	Fak Fak	4.43	273	P	Pn	13 03 18.7	+1.0
FAKI				S	Sn	13 04 07.0	-1.2
SIJI	Sorong	5.87	293	P	Pn	13 03 39.0	+1.6
	11nm,0.3s,baz=180,slow=23,SNR=45						
SIJI				S	Sn	13 04 43.5	0.0
	15nm,0.4s,baz=331,slow=22,SNR=11						
SIJI				LR	LR	13 06 33.9	
	comp=Z,64nm,21.3s,baz=118,slow=45						
	28nm,0.3s						
SIJI	Sorong	5.87	293	P	Pn	13 03 38.3	+0.9
NLAI	Namlea	9.57	269	P	Pn	13 04 30.9	+2.7
	6µm9.0nm,0.5s						
KDU	Kakadu	10.35	204	P	Pn	13 04 39.2	+0.4
SANI	Sanana	10.74	276	P	Pn	13 04 45.6	+1.3
	13nm,0.6s						
MTN	Manton Dam	11.08	209	Pn	Pn	13 04 50.7	+1.8
MTN	Manton Dam	11.08	209	P	Pn	13 04 51.3	+2.4
PMG	Port Moresby	12.12	121	P	Pn	13 05 05.3	+2.1
	9.0nm,0.7s,baz=324,slow=3.5,SNR=3.9						
PMG				LR	LR	13 11 39.3	
	comp=Z,83nm,18.2s,baz=304,slow=46						
PMG	Port Moresby	12.12	121	Pn	Pn	13 05 07.1	+4.0
COEN	Coen	12.50	150	Pn	Pn	13 05 06.7	-1.7
COEN	Coen	12.50	150	P	Pn	13 05 06.4	-2.0
	23nm,0.9s						
KNRA	Kununurra	14.69	212	Pn	Pn	13 05 38.1	0.0
KNRA	Kununurra	14.69	212	P	Pn	13 05 38.4	+0.3
DAV	Davao City (W)	15.03	313	LR	LR	13 10 56.5	
	comp=Z,40nm,21.6s,baz=129,slow=35						
MTSU	Mount Surprise	16.66	154	P	Pn	13 06 01.8	-2.0
WR0	Warramunga Arr	16.83	187	Pn	Pn	13 06 05.6	-0.3
WR0				IAmb	IAmb	13 06 12.0	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	16.84	188	P	Pn	13 06 06.7	+0.6
	comp=Z,0.4nm,0.3s,baz=356,slow=13,SNR=20						
WRA				S	Sn	13 09 03.1	-9.2
	comp=Z,9.2nm,0.8s,baz=9.3,slow=22,SNR=7.6						
WRA				LR	LR	13 13 06.9	
	comp=Z,167nm,18.7s,baz=358,slow=39						
	comp=Z,6.0nm,0.6s						
WRA	Warramunga Arr	16.84	188		Pn	13 06 05.4	-0.7
QIS	Mount Isa	17.53	171	P	Pn	13 06 15.0	+0.4
GUMO	Guam	18.51	26	LR	LR	13 13 14.2	
	comp=Z,37nm,18.9s,baz=220,slow=36						
CTA	Charters Tower	19.25	152	P	P	13 06 34.8	+0.4
	comp=Z,0.9nm,0.3s,baz=331,slow=11,SNR=13						
CTA				LR	LR	13 14 35.8	
	comp=Z,96nm,18.2s,baz=332,slow=38						
	comp=Z,10nm,0.8s						
CTA	Charters Tower	19.25	152	P	P	13 06 35.4	+1.0
CTAO	Charters Tower	19.25	152	P	P	13 06 34.6	+0.2
CTAO				IAmb	IAmb	13 06 39.9	
	comp=Z,12nm,1.0s						
CTAO	Charters Tower	19.25	152	P	P	13 06 35.4	+1.0
AS01	Alice Springs	20.56	187	P	P	13 06 50.3	+1.6
AS31	Alice Springs	20.57	187	P	P	13 06 49.9	+1.1
AS31				IAmb	IAmb	13 06 51.3	
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	20.57	187	P	P	13 06 50.1	+1.3
	comp=Z,30nm,0.9s,baz=12,slow=11,SNR=307						
ASAR				S	S	13 10 29.3	-7.8
	comp=Z,1.7nm,0.7s,baz=7.6,slow=31,SNR=6.4						
ASAR				LR	LR	13 15 32.3	
	comp=Z,147nm,18.0s,baz=18,slow=39						
	comp=Z,30nm,0.9s						
ASAR	Alice Springs	20.57	187	P	P	13 06 49.4	+0.7
WRKA	Warakurna	23.21	200	P	P	13 07 16.5	-0.4
HNR	Honiara	23.94	106	LR	LR	13 17 39.5	
	comp=Z,523nm,18.6s,baz=250,slow=39						
QLP	Quilpie	24.39	163	P	P	13 07 27.4	-0.6
OOD	Oodnadatta	24.52	182	P	P	13 07 29.5	+0.3
PSA00	Pilbara Seismi	24.56	220	P	P	13 07 30.1	+0.5
PSA00				IAmb	IAmb	13 07 41.0	
	comp=Z,9.1nm,1.1s						
PSA00	Pilbara Seismi	24.56	220	P	P	13 07 31.3	+1.7
PSA00				IAmb	IAmb	13 07 41.1	
	comp=Z,3.7nm,1.1s						
INKA	Innaminka	24.76	171	P	P	13 07 33.2	+1.9
EIDS	Eidsvold	26.07	149	P	P	13 07 45.1	+1.8
EIDS				IAmb	IAmb	13 07 45.6	
	comp=Z,10nm,0.9s						
FORT	Forrest	28.66	196	P	P	13 08 06.2	-0.2
STKA	Stephens Creek	28.94	171	P	P	13 08 08.4	-0.5
	comp=Z,2.0nm,0.8s,baz=323,slow=20,SNR=3.9						
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	28.94	171	P	P	13 08 08.7	-0.2
ARMA	Armidale	30.58	154	P	P	13 08 24.4	+0.7
ARMA				IAmb	IAmb	13 08 28.6	
	comp=Z,8.1nm,0.9s						
XMIS	Christmas Isla	31.64	255	P	P	13 08 34.1	+1.0
JHJ	Hachijo jima 2	36.20	4	LR	LR	13 21 09.4	
	comp=Z,32nm,19.7s,baz=74,slow=31						
KSRS	Korea Array	41.21	349	LR	LR	13 24 36.0	
	comp=Z,11nm,20.5s,baz=165,slow=33						
CMAR	Chiang Mai Arr	42.92	301	P	P	13 10 07.1	-1.5
	comp=Z,1.2nm,0.9s,baz=132,slow=6.4,SNR=9.0						
	comp=Z,1.2nm,0.9s						
XAN	Xi'an	45.31	327	P	P	13 10 27.4	-0.2
XAN				pP	pP	13 10 36.3	-1.6
RPZ	Rata Peaks	50.56	148	LR	LR	13 31 14.5	
	comp=Z,56nm,18.6s,baz=316,slow=34						
URZ	Urewera	50.80	139	LR	LR	13 32 55.7	
	comp=Z,43nm,18.2s,baz=23,slow=36						
KLR	Kul'dur	52.35	356	LR	LR	13 31 09.9	
	comp=Z,16nm,19.1s,baz=290,slow=33						
SONM	Songino Array	57.28	336	LR	LR	13 35 35.6	
	comp=Z,25nm,21.3s,baz=104,slow=35						
MKAR	Makanchi Array	68.92	323	P	P	13 13 14.4	+0.1
	comp=Z,0.5nm,0.5s,baz=110,slow=8.7,SNR=8.1						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	71.31	331	P	P	13 13 27.8	-1.1
	comp=Z,0.9nm,0.4s,baz=124,slow=5.8,SNR=5.8						
	comp=Z,0.9nm,0.4s						
VNDA	Vanda	75.53	175	P	P	13 13 52.4	-0.9
	comp=Z,1.1nm,0.8s,baz=340,slow=6.8,SNR=8.5						
VNDA				LR	LR	13 46 07.2	
	comp=Z,39nm,19.3s,baz=322,slow=35						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	75.53	175	P	P	13 13 53.6	+0.3
VNDA				IAmb	IAmb	13 13 54.9	
	comp=Z,1.2nm,0.8s						
SBA	Scott Base	76.32	174	P	P	13 13 59.8	+2.0
SBA				IAmb	IAmb	13 14 05.1	
	comp=Z,5.3nm,1.4s						
QSPA	South Pole Qui	86.80	180	LR	LR	13 52 13.8	
	comp=Z,52nm,20.1s,baz=318,slow=34						
QSPA	South Pole Qui	86.80	180	P	P	13 14 52.9	-0.6
ILAR	Eielson Array	87.08	25	P	P	13 14 52.9	-1.8
	comp=Z,0.7nm,0.7s,baz=266,slow=4.3,SNR=6.9						
	comp=Z,0.7nm,0.7s						

*DDA **12** 13:02:39.0±0.0, 38°.25N×28°.80E, h4km±2km, ML2.0*
*ISK **12** 13:02:39.1, 38°.26N×28°.78E, h8km, ML2.7/8*

ISC 12 13:02:39.4±1.2, 38°.26N±0°.03×28°.77E±0°.02, h6km±11km, n17, σ1§40/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PASA	Karahalli, USA	0.57	81	P	Pg	13 02 50.5	+0.1
PASA				S	Sg	13 02 57.9	0.0
PASA				i AML	AML	13 02 59.0	
	comp=N,85nm,0.2s						
PASA				i AML	AML	13 02 59.0	
	comp=E,104nm,0.5s						
KHL	Karahalli	0.60	84	PG	Pg	13 02 51.1	+0.2
KHL				SG	Sb	13 02 59.8	-1.2
AYDB	Zeytinkoy-Aydi	0.76	246	PG	Pg	13 02 54.3	+0.3
AYDB				SG	Sb	13 03 05.4	-0.3
DEMI	Demirci	0.78	357	P	Pb	13 02 54.9	-0.5
DEMI				S	Sb	13 03 05.8	-0.5
DEMI				i AML	AML	13 03 07.0	
	comp=N,97nm,0.1s						
DEMI				i AML	AML	13 03 07.0	
	comp=E,148nm,0.4s						
GOMA	Golmarmara-Man	0.80	304	PG	Pb	13 02 55.1	-0.6
GOMA				SG	Sb	13 03 06.6	-0.2
APMY	Acipayam-Deniz	0.90	152	PG	Pb	13 02 56.5	-0.9
APMY				SG	Sb	13 03 09.3	-0.3
AYDN	Tasoluk	0.93	230	P	Pb	13 02 57.3	-0.5
AYDN				S	Sn	13 03 11.3	-1.2
AYDN				i AML	AML	13 03 12.0	
	comp=N,105nm,0.3s						
AYDN				i AML	AML	13 03 13.0	
	comp=E,104nm,0.2s						
GEDZ	Gediz	0.93	33	PG	Pb	13 02 57.4	-0.5
GEDZ				SG	Sb	13 03 10.8	+0.3
AKHS	Akhisar	0.97	310	P	Pg	13 02 57.9	0.0
AKHS				S	Sn	13 03 13.3	-0.3
GDZ	Gediz	0.99	34	P	Pg	13 02 57.4	-1.0
GDZ				S	Sg	13 03 11.1	-0.4
GDZ				i AML	AML	13 03 17.0	
	comp=E,45nm,0.6s						
BASM	Basmaki-Afyon	1.07	108	PG	Pg	13 02 59.5	-0.4
YER	Yerkesik	1.19	199	PN	Pn	13 03 02.3	-0.3
YER				SN	Sn	13 03 18.9	-0.2
GOLH	Golhisar	1.20	148	P	Pg	13 03 01.3	-1.1
GOLH				S	Sn	13 03 25.3	+5.8
TVSB	Tavsanli	1.30	24	PN	Pb	13 03 03.9	-0.4
DURS	Dursunbey	1.35	350	P	Pn	13 03 04.1	-0.8
DURS				S	Sg	13 03 26.0	+3.0
DURS				i AML	AML	13 03 27.0	
	comp=N,27nm,0.6s						
DURS				i AML	AML	13 03 29.0	
	comp=E,20nm,0.7s						
BLCB	Balcova	1.36	276	PN	Pg	13 03 05.4	-0.1
BLCB				SN	Sg	13 03 24.6	+1.4
BORA	Eskisehir	2.08	39	P	Pb	13 03 17.9	+0.4
BORA				i AML	AML	13 03 46.0	
	comp=E,12nm,1.0s						
BORA				S	Sg	13 03 46.9	+0.7

ROM 12 13:05:46.1±0.4, 42°.875N±0°.009×13°.068E±0°.010, h9km±2km, ML1.3/1, Error ellipse: s-maj=0.9km s-min=0.4km az=154.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.05	141	P	Pg	13 05 48.6	+0.6
NRCA				AML	AML		
	comp=E,390µm,0.7s						
NRCA				AML	AML		
	comp=N,374µm,0.7s						
FEMA	Monte Fema	0.09	351	P	Pg	13 05 49.2	+0.7
FEMA				S	Sg	13 05 50.4	+0.2
MC2	Monte Cornacci	0.10	67	P	Pg	13 05 48.4	-0.2
MC2				S	Sg	13 05 51.2	+0.7
FDMO	Fiordimonte	0.16	5	P	Pg	13 05 50.0	+0.5
FDMO				S	Sg	13 05 53.0	+1.0
T1215	Vallo di Nera,	0.16	244	P	Pg	13 05 49.9	+0.4
T1215				S	Sg	13 05 52.9	+1.0
MMO1	Montemonaco	0.19	83	P	Pg	13 05 50.4	+0.3
MMO1				S	Sg	13 05 53.6	+0.8
AM05	Amandola Campo	0.23	64	P	Pg	13 05 52.1	+1.3
T1247	Pizzolo (AQ)	0.47	159	P	Pb	13 05 57.0	+0.5

*IDC **12** 13:11:11.4±8.0, 12°.51S×166°.92E, h243km±87km, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=75.8km s-min=27.6km az=154.0*

ISC 12 13:11:09.4±1.2, 12°.4S±0°.1×166°.9E±0°.2, h220km, n8, σ1§00/8, mb3.6/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.66	182	P	Pn	13 13 24.5	+0.4
	3.8nm,0.9s,baz=97,slow=8.7,SNR=10						
STKA	Stephens Creek	30.29	226	P	P	13 17 00.2	0.0
	0.6nm,0.3s,baz=86,slow=16,SNR=2.3						
	0.6nm,0.3s						
WRA	Warramunga Arr	32.10	252	P	P	13 17 15.3	-0.9
	0.4nm,0.5s,baz=82,slow=8.6,SNR=4.9						
	0.4nm,0.5s						
ASAR	Alice Springs	33.22	246	P	P	13 17 25.1	-0.9
	0.5nm,0.6s,baz=72,slow=9.6,SNR=6.8						
	0.5nm,0.6s						
CMAR	Chiang Mai Arr	73.65	294	P	P	13 22 20.8	+1.4
	0.8nm,0.7s,baz=120,slow=3.6,SNR=4.3						
	0.8nm,0.7s						
ILAR	Eielson Array	84.41	18	P	P	13 23 16.1	-0.7
	1.1nm,0.6s,baz=234,slow=5.2,SNR=22						
	1.1nm,0.6s						
MKAR	Makanchi Array	95.23	317	P	P	13 24 08.7	+0.6
	0.5nm,0.5s,baz=88,slow=7.9,SNR=5.7						
	0.5nm,0.5s						
ARCES	ARCESS Array B	117.88	346	PKP	PKPdf	13 29 28.4	-0.7
	2.8nm,0.8s,baz=72,slow=2.9,SNR=3.7						

IDC 12 13:36:48.8±2.4, 16°.02N×148°.62E, h0km, mb3.4/3, mbtmp3.5/4, ML4.0/1, MS2.6/2, Error ellipse: s-maj=54.6km s-min=34.1km az=95.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.36	237	Pn	Pn	13 37 56.3	0.0
	7.7nm,0.3s,baz=105,slow=2.2,SNR=9.4						
GUMO				Sn	Sn	13 38 48.8	+1.0
	33nm,0.3s,baz=153,slow=20,SNR=9.4						
	21nm,0.4s						
DAV	Davao City (W)	24.24	251	LR	LR	13 50 33.2	
	comp=Z,9.3nm,21.3s,baz=42,slow=34						
USRK	Ussuriysk Ar.	31.43	337	LR	LR	13 55 25.7	
	comp=Z,19nm,19.9s,baz=211,slow=36						
WRA	Warramunga Arr	38.40	202	P	P	13 44 12.1	-0.1
	0.7nm,0.7s,baz=26,slow=9.3,SNR=9.5						
	0.7nm,0.7s						
ASAR	Alice Springs	41.98	200	P	P	13 44 41.9	-0.1
	0.1nm,0.3s,baz=25,slow=8.2,SNR=1.9						
	0.1nm,0.3s						
MKAR	Makanchi Array	62.31	315	P	P	13 47 13.0	-0.1
	0.3nm,0.5s,baz=89,slow=6.1,SNR=2.4						
	0.3nm,0.5s						

IDC 12 13:59:05.7±5.0, 6°.55S×130°.15E, h153km±67km, mb3.2/1, mbtmp3.5/4, Error ellipse: s-maj=128.2km s-min=19.5km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.75	11	P	Pn	14 00 30.4	+1.2
	9.3nm,0.3s,baz=268,slow=24,SNR=24						
SIJI				S	Sn	14 01 34.3	-0.3
	5.2nm,0.2s,baz=227,slow=22,SNR=8.2						
WRA	Warramunga Arr	13.92	163	P	Pn	14 02 14.6	-1.9
	0.4nm,0.8s,baz=347,slow=12,SNR=13						
WRA				S	Sn	14 04 42.1	-8.8
	0.5nm,0.6s,baz=350,slow=18,SNR=7.3						
ASAR	Alice Springs	17.40	168	P	Pn	14 02 59.5	+0.2
	0.6nm,0.6s,baz=333,slow=9.8,SNR=11						
MKAR	Makanchi Array	67.93	327	P	P	14 09 47.8	-0.1
	0.3nm,0.4s,baz=117,slow=8.3,SNR=5.3						
	0.3nm,0.4s						

*IDC **12** 14:08:41.5±2.1, 13°.69N×144°.67E, h126km±17km, mb3.3/4, mbtmp3.7/4, MS3.3/1, Error ellipse: s-maj=103.4km s-min=24.3km az=107.0*
*NEIC **12** 14:08:42.9±1.3, 13°.7N±0°.1×144°.51E±0°.09, h131km±8km, mb4.2/10, ML3.8/6, Error ellipse: s-maj=18.2km s-min=10.0km az=145.0*

ISC 12 14:08:41.8±1.0, 13°.7N±0°.2×144°.5E±0°.2, h129km, n25, σ0§69/19, mb3.9/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.36	107	LR	LR	14 08 30.5	
	comp=Z,25nm,21.8s,baz=50,slow=51						
GUMO				P	Pn	14 09 00.6	+0.6
	2µm,0.3s,baz=146,slow=2.1,SNR=696						
GUMO				S	Sn	14 09 13.2	-0.7
	2µm,0.3s,baz=146,slow=23,SNR=23						
GUMO	Guam	0.36	107		Pn	14 09 00.9	+0.8
GUMO				IAML		14 09 01.5	
	806nm,0.6s						
H11S3	WAKE ISLAND Hy	21.83	74	T	T	14 36 22.3	
	baz=264,SNR=6.7						
H11S1	WAKE ISLAND Hy	21.84	74	T	T	14 36 21.8	
	baz=264						
H11S2	WAKE ISLAND Hy	21.84	74	T	T	14 36 22.1	
	baz=264,SNR=4.7						
H11N1	WAKE ISLAND Hy	22.24	71	T	T	14 36 37.7	
	baz=257,slow=75,SNR=7.4						
H11N2	WAKE ISLAND Hy	22.25	71	T	T	14 36 39.8	
	baz=257,slow=75,SNR=6.0						
H11N3	WAKE ISLAND Hy	22.26	71	T	T	14 36 39.1	
	baz=257,slow=75,SNR=8.5						
KNRA	Kununurra	33.08	209	P	P	14 15 06.9	+1.4
KNRA				IAmb	IAmb	14 15 33.3	
	comp=Z,15nm,1.4s						
WB0	Warramunga Arr	34.71	197	P	P	14 15 19.9	+0.3
WB0				IAmb	IAmb	14 15 46.8	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	34.89	197	P	P	14 15 21.4	+0.3
	comp=Z,0.9nm,0.5s,baz=16,slow=8.9,SNR=7.7						
	comp=Z,0.9nm,0.5s						
WRA	Warramunga Arr	34.89	197	P	P	14 15 20.2	-1.0
AS31	Alice Springs	38.55	196	P	P	14 15 52.8	+0.6
AS31				IAmb	IAmb	14 15 54.4	
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	38.55	196	P	P	14 15 53.0	+0.8
	comp=Z,0.6nm,0.6s,baz=21,slow=11,SNR=17						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	38.55	196	P	P	14 15 51.3	-0.8
KOUNC	Koumac, New Ca	39.19	150	P	P	14 15 57.6	+0.2
DZM	Mont Dzumac	41.55	149	P	P	14 16 16.8	-0.1
DZM				IAmb	IAmb	14 16 41.4	
	comp=Z,5.3nm,1.1s						
MBWA	Marble Bar	42.33	216	P	P	14 16 23.2	-0.1
PSA00	Pilbara Seismi	42.60	215	P	P	14 16 24.8	-0.6
PSA00				IAmb	IAmb	14 16 34.4	
	comp=Z,3.0nm,1.2s						
STKA	Stephens Creek	45.40	183	P	P	14 16 47.2	-0.4
	comp=Z,1.7nm,0.7s,baz=353,slow=12,SNR=3.2						
	comp=Z,1.7nm,0.7s						
STKA	Stephens Creek	45.40	183	P	P	14 16 47.4	-0.1
GSTR	Great Sitkin T	49.59	31	P	P	14 17 20.0	+0.3
ZALV	Zalesovo Beam	61.34	324	LR	LR	14 45 25.7	
	comp=Z,24nm,20.4s,baz=66,slow=36						
ILAR	Eielson Array	68.62	25	P	P	14 19 30.8	+0.1
	comp=Z,0.2nm,0.4s,baz=274,slow=6.8,SNR=1.7						
	comp=Z,0.2nm,0.4s						
SKAG	Skagway	73.31	32	P	P	14 19 58.2	-0.8
SKAG				IAmb	IAmb	14 20 29.9	
	comp=Z,13nm,1.2s						

*AUST **12** 14:21:29.5±0.7, 24°.37S×136°.57E, h10km, Error ellipse: s-maj=9.8km s-min=6.7km az=71.0*
*IDC **12** 14:21:33.9±2.7, 24°.21S×136°.22E, h0km, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=20.6km s-min=18.9km az=70.0*

ISC 12 14:21:29.6±1.1, 24°.41S±0°.05×136°.54E±0°.06, h10km, n12, σ1§41/20, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	2.52	287	Pn	Pn	14 22 12.1	+1.5
	1.0nm,0.3s,baz=101,slow=17,SNR=45						
ASAR				Lg	Lg	14 22 45.0	
	3.0nm,0.3s,baz=105,slow=29,SNR=22						
	0.9nm,0.3s						
ASPA	Alice Springs	2.52	286	P	Pn	14 22 12.1	+1.5
	baz=2.5						
ASPA				S

LCRK S **Sn** **14 24 10.8 -1.3**
baz=6.3
MULG Mulgathing 6.25 200 P **Pn** **14 23 03.0 +1.1**
baz=6.3
MULG S **Sn** **14 24 12.6 -0.8**
baz=6.3
WRKA Warakurna 7.52 264 P **Pn** **14 23 19.1 -0.3**
baz=7.5
WRKA S **Sn** **14 24 40.7 -4.1**
baz=7.5
STKA Stephens Creek 8.68 150 Pn Pn 14 23 44.5 +9.3
0.1nm,0.3s,baz=322,slow=19,SNR=2.3
1.4nm,0.8s

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*IDC **12** 14:26:19.4±1.1,27°.83N×66°.28E,h0km,mb3.4/5,*
mbtmp3.5/6,ML3.7/1,MS2.8/3,Error ellipse: s-maj=35.1km
s-min=26.1km az=137.0
ISC 12 14:26:24.0±1.1,27°.7N±0°.2×66°.0E±0°.2,h35km,n7,σ2°76/7,
mb3.5/5,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.05**	**238**	Pn	**Pn**	**14 28 19.4**	**+0.9**
	0.9nm,0.3s,baz=46,slow=3.5,SNR=15						
WSAR				Sn	**Sn**	**14 29 45.0**	**-3.4**
	1.4nm,0.3s,baz=313,slow=13,SNR=7.6						
WSAR				LR	LR	14 32 12.3	
	comp=Z,26nm,18.1s,baz=134,slow=43						
	2.1nm,0.3s						
AAK	**Ala-Archa**	**16.38**	**23**	LR	LR	14 37 34.7	
	comp=Z,38nm,20.3s,baz=215,slow=42						
MKAR	**Makanchi Array**	**22.92**	**30**	P	**P**	**14 31 21.6**	**-3.4**
	0.3nm,0.5s,baz=217,slow=12,SNR=4.4						
MKAR				LR	LR	14 41 50.9	
	comp=Z,39nm,18.4s,baz=252,slow=41						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**24.75**	**19**	P	**P**	**14 31 42.2**	**0.0**
	0.4nm,0.3s,baz=211,slow=8.6,SNR=5.0						
	0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**61.41**	**270**	P	**P**	**14 36 39.7**	**+2.5**
	0.2nm,0.4s,baz=54,slow=7.3,SNR=2.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**81.30**	**118**	P	**P**	**14 38 36.8**	**-0.3**
	0.3nm,0.9s,baz=317,slow=4.9,SNR=2.0						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**83.03**	**121**	P	**P**	**14 38 46.8**	**+0.6**
	0.3nm,0.6s,baz=308,slow=5.4,SNR=15						
	0.3nm,0.6s						

MAN 12 14:36:13.5,6°.90N×123°.76E,h0km,mb4.1,ML3.0,MS2.6,
3C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.58**	**57**	⇓*i*P	Pb	14 36 26.5	-0.1
CTBH				*i* S	Sb	14 36 35.2	-0.2
SKMP	**Bagumbayan, Su**	**0.87**	**116**	⇑*e*P	Pg	14 36 30.4	+0.2
SKMP				*e*S	Sg	14 36 41.9	+0.4
PAGZ	**Pagadian**	**1.01**	**339**	⇑*e*P	Pb	14 36 33.8	-0.2
PAGZ				*e*S	Sn	14 36 49.3	-0.7
BUKP	**Musuan**	**1.62**	**53**	⇑*e*P	Pb	14 36 44.5	+0.1
BUKP				*e*S	Sb	14 37 05.4	-0.1
DDMP	**Don Marcelino,**	**2.10**	**112**	⇓*e*P	Pn	14 36 50.8	+0.9
DDMP				*e*S	Sn	14 37 16.8	0.0

IDC 12 14:44:20.0±61.0,20°.28S×176°.79W,h0km,mb3.8/3,
mbtmp3.8/3,Error ellipse: s-maj=1119.0km
s-min=172.9km az=83.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.91**	**244**	P	P	14 51 45.8	-1.8
	0.6nm,0.4s,baz=106,slow=13,SNR=3.2						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**45.67**	**256**	P	P	14 52 43.1	+0.2
	0.8nm,0.6s,baz=92,slow=7.1,SNR=26						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**45.76**	**262**	P	P	14 52 44.2	+0.6
	0.9nm,0.6s,baz=92,slow=8.3,SNR=56						
	0.9nm,0.6s						

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*NOU **12** 14:52:20.2,17°.66S×178°.81W,h529km,mb4.8/47,Fiji*
Islands Region
*NEIC **12** 14:52:20.5±2.0,17°.7S±0°.1×178°.9W±0°.1,h529km±9km,*
mb4.5/43,Error ellipse: s-maj=18.0km s-min=15.1km
az=132.0
*IDC **12** 14:52:22.9±0.8,17°.71S×179°.06W,h551km±7km,mb3.7/17,*
mbtmp4.6/19,Error ellipse: s-maj=14.8km s-min=10.9km
az=105.0
ISC 12 14:52:21.2±0.4,17°.65S±0°.07×178°.86W±0°.06,h539km,
n182,σ1°23/186,mb4.5/42,6C-2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.94**	**268**	P	**P**	**14 53 35.5**	**+0.4**
	43nm,0.6s,baz=96,slow=2.1,SNR=82						
MSVF				S	**S**	**14 54 38.2**	**+3.0**
	33nm,0.9s,baz=292,slow=21,SNR=14						
MSVF	**Nonsavu**	**2.94**	**268**	P	**P**	**14 53 35.3**	**+0.2**
MSVF	**Nonsavu**	**2.94**	**268**	P	**P**	**14 53 35.3**	**+0.2**
FUTU	**Fugatoga**	**3.39**	**12**	P	**P**	**14 53 37.1**	**-0.9**
AFI	**Afiamalu**	**7.77**	**62**	P	**P**	**14 54 13.2**	**-3.2**
	157nm,0.6s,baz=81,slow=1.1,SNR=28						
AFI				S	**S**	**14 55 43.9**	**-6.9**
	51nm,0.5s,baz=28,slow=16,SNR=7.4						
AFI	**Afiamalu**	**7.77**	**62**	P	**P**	**14 54 13.4**	**-3.0**
AFI	**Afiamalu**	**7.77**	**62**	P	**P**	**14 54 13.8**	**-2.6**
NIUE	**Niue**	**8.60**	**101**	P	**P**	**14 54 24.9**	**+0.2**
	baz=8.7,SNR=11						
NIUE	**Niue**	**8.60**	**101**	P	**P**	**14 54 24.4**	**-0.2**
NIUE	**Niue**	**8.60**	**101**	P	**P**	**14 54 24.6**	**-0.1**
DVP	**Devils Point**	**12.34**	**268**	P	**P**	**14 55 03.1**	**-0.2**
MARNC	**Mare, Loyalty**	**12.93**	**251**	P	**P**	**14 55 07.4**	**-2.0**
LIFNC	**LIFOU**	**13.49**	**254**	P	**P**	**14 55 12.6**	**-2.6**
OUENC	**Ouen Island, N**	**14.25**	**248**	P	**P**	**14 55 21.4**	**-1.6**
OUENC	**Ouen Island, N**	**14.25**	**248**	P	**P**	**14 55 21.9**	**-1.1**
DZM	**Mont Dzumac**	**14.51**	**250**	P	**P**	**14 55 23.9**	**-1.9**
	19nm,0.9s,baz=73,slow=19,SNR=16						
DZM	**Mont Dzumac**	**14.51**	**250**	P	**P**	**14 55 23.7**	**-2.2**
DZM	**Mont Dzumac**	**14.51**	**250**	P	**P**	**14 55 24.4**	**-1.4**
NOUC	**Port Laguerre**	**14.64**	**250**	P	**P**	**14 55 25.5**	**-1.6**
KOUNC	**Koumac, New Ca**	**16.19**	**257**	P	**P**	**14 55 41.5**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.19**	**257**	P	**P**	**14 55 42.1**	**-0.8**
URZ	**Urewera**	**20.84**	**189**	P	**P**	**14 56 23.4**	**-1.7**
	25nm,0.7s,baz=34,slow=10,SNR=10						
	25nm,0.7s						
URZ	**Urewera**	**20.84**	**189**	P	**P**	**14 56 23.0**	**-2.2**
BKZ	**Black Stump Fm**	**21.82**	**190**	P	**P**	**14 56 31.5**	**-2.6**
BKZ				IAmb	IAmb	14 57 07.6	
	comp=Z,28nm,1.4s						
QRZ	**Quartz Range**	**24.26**	**196**	P	**P**	**14 56 55.5**	**-0.3**
QRZ	**Quartz Range**	**24.26**	**196**	P	**P**	**14 56 55.9**	**+0.1**
KHZ	**Kahutara**	**25.53**	**193**	P	**P**	**14 57 05.2**	**-1.7**
LTZ	**Lake Taylor**	**26.17**	**195**	P	**P**	**14 57 10.9**	**-1.8**
LTZ				IAmb	IAmb	14 57 13.3	
	comp=Z,21nm,0.8s						
OXZ	**Oxford**	**26.74**	**195**	P	**P**	**14 57 15.5**	**-2.1**
RPZ	**Rata Peaks**	**27.35**	**196**	P	**P**	**14 57 22.2**	**-0.8**
	comp=Z,7.2nm,0.6s,baz=353,slow=2.7,SNR=8.5						
	comp=Z,7.2nm,0.6s						
LBZ	**Lake Benmore**	**28.21**	**197**	P	**P**	**14 57 28.8**	**-1.7**
LBZ				IAmb	IAmb	14 57 41.7	
	comp=Z,40nm,1.3s						
JCZ	**Jackson Bay**	**28.33**	**199**	P	**P**	**14 57 31.4**	**-0.3**
WKZ	**Wanaka**	**28.95**	**198**	P	**P**	**14 57 35.5**	**-1.5**
EIDS	**Eidsvold**	**28.95**	**249**	P	**P**	**14 57 36.6**	**-0.6**
	baz=29,SNR=4.6						
EIDS	**Eidsvold**	**28.95**	**249**	P	**P**	**14 57 35.2**	**-2.1**
EIDS				IAmb	IAmb	14 57 37.0	
	comp=Z,15nm,0.9s						
EIDS	**Eidsvold**	**28.95**	**249**	P	**P**	**14 57 35.6**	**-1.7**
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**14 57 44.3**	**+0.5**
	baz=30,SNR=18						
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**14 57 43.5**	**-0.3**
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**14 57 44.0**	**+0.2**
MLZ	**Mavora Lakes**	**29.70**	**199**	P	**P**	**14 57 43.4**	**-0.1**
RMQ	**Roma**	**31.20**	**248**	P	**P**	**14 57 56.8**	**+0.1**
	baz=31,SNR=30						
RMQ	**Roma**	**31.20**	**248**	P	**P**	**14 57 57.0**	**+0.3**
CTA	**Charters Tower**	**33.06**	**260**	P	**P**	**14 58 10.8**	**-1.8**
	comp=Z,8.6nm,0.7s,baz=94,slow=11,SNR=6.9						
	comp=Z,8.6nm,0.7s						
CTA	**Charters Tower**	**33.06**	**260**	P	**P**	**14 58 12.0**	**-0.6**
	comp=Z,15nm,0.8s						
CTAO	**Charters Tower**	**33.06**	**260**	P	**P**	**14 58 11.5**	**-1.1**
CTAO				IAmb	IAmb	14 58 12.7	
	comp=Z,8.6nm,0.7s						
CTAO	**Charters Tower**	**33.06**	**260**	P	**P**	**14 58 11.9**	**-0.6**
CNB	**Canberra Magne**	**33.25**	**232**	P	**P**	**14 58 14.4**	**+0.5**
	baz=33,SNR=28						
CNB	**Canberra Magne**	**33.25**	**232**	P	**P**	**14 58 14.5**	**+0.5**
CAN	**Canberra**	**33.52**	**232**	P	**P**	**14 58 16.6**	**+0.3**
CAN				IAmb	IAmb	14 58 17.4	
	comp=Z,22nm,0.9s						
CMSA	**Cobar Meteorol**	**34.91**	**240**	P	**P**	**14 58 27.6**	**-0.3**
	baz=35,SNR=63						
CMSA	**Cobar Meteorol**	**34.91**	**240**	P	**P**	**14 58 27.9**	**0.0**
MTSU	**Mount Surprise**	**35.01**	**263**	P	**P**	**14 58 28.4**	**-0.5**
	baz=35,SNR=7.4						
MTSU	**Mount Surprise**	**35.01**	**263**	P	**P**	**14 58 29.0**	**+0.1**
QLP	**Quilpie**	**35.22**	**249**	P	**P**	**14 58 30.1**	**-0.5**
	baz=35,SNR=19						
QLP	**Quilpie**	**35.22**	**249**	P	**P**	**14 58 30.3**	**-0.3**
MANU	**Manus Island**	**36.60**	**291**	P	**P**	**14 58 41.0**	**-1.2**
MANU				IAmb	IAmb	14 58 43.6	
	comp=Z,27nm,0.8s						
MANU	**Manus Island**	**36.60**	**291**	P	**P**	**14 58 43.4**	**+1.2**
	comp=Z,34nm,0.9s						
TOO	**Toolangi**	**37.00**	**230**	P	**P**	**14 58 45.8**	**+0.6**
	baz=37,SNR=16						
TOO	**Toolangi**	**37.00**	**230**	P	**P**	**14 58 44.9**	**-0.3**
TOO	**Toolangi**	**37.00**	**230**	P	**P**	**14 58 45.6**	**+0.4**
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**14 58 56.8**	**+0.3**
	comp=Z,26nm,0.7s,baz=90,slow=9.8,SNR=79						
	comp=Z,26nm,0.7s						
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**14 58 56.8**	**+0.3**
	baz=38,SNR=21						
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**14 58 56.3**	**-0.2**
STKA				IAmb	IAmb	14 58 57.7	
	comp=Z,8.1nm,1.0s						
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**14 58 56.7**	**+0.3**
INKA	**Innaminka**	**38.45**	**247**	P	**P**	**14 58 57.6**	**+0.6**
ARPS	**Mount Arapiles**	**39.46**	**233**	P	**P**	**14 59 05.1**	**0.0**
	baz=40,SNR=8.0						
ARPS	**Mount Arapiles**	**39.46**	**233**	P	**P**	**14 59 05.1**	**0.0**
HTT	**Hallett**	**40.91**	**239**	P	**P**	**14 59 17.0**	**+0.2**
	baz=41,SNR=22						
HTT	**Hallett**	**40.91**	**239**	P	**P**	**14 59 17.1**	**+0.3**
LCRK	**Leigh Creek**	**40.98**	**244**	P	**P**	**14 59 17.3**	**-0.1**
WHYH	**Whyalla**	**41.94**	**240**	P	**P**	**14 59 25.3**	**+0.4**
OOD	**Oodnadatta**	**42.91**	**248**	P	**P**	**14 59 32.9**	**+0.3**
	comp=Z,30nm,1.1s						
BBOO	**Buckleboo**	**43.16**	**241**	P	**P**	**14 59 34.2**	**-0.3**
	baz=43,SNR=39						
BBOO	**Buckleboo**	**43.16**	**241**	P	**P**	**14 59 34.4**	**-0.1**
WRAB	**Tennant Creek**	**44.24**	**259**	P	**P**	**14 59 42.3**	**-0.8**
WRA	**Warramunga Arr**	**44.26**	**259**	P	**P**	**14 59 41.7**	**-1.5**
	comp=Z,5.5nm,0.8s,baz=97,slow=6.8,SNR=53						
WRA				S	**S**	**15 05 34.2**	**-3.8**
	comp=Z,0.7nm,0.8s,baz=93,slow=14,SNR=4.3						
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**44.26**	**259**	P	**P**	**14 59 41.5**	**-1.7**
AS01	**Alice Springs**	**44.40**	**254**	P	**P**	**14 59 43.8**	**-0.5**
AS31	**Alice Springs**	**44.45**	**254**	P	**P**	**14 59 43.5**	**-1.1**
AS31				IAmb	IAmb	14 59 45.0	
	comp=Z,13nm,0.7s						
ASAR	**Alice Springs**	**44.45**	**254**	P	**P**	**14 59 43.9**	**-0.8**
	comp=Z,48nm,0.7s,baz=88,slow=8.2,SNR=1023						
ASAR				ScP	**ScP**	**15 04 18.3**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=102,slow=3.9,SNR=4.5						
ASAR				S	**S**	**15 05 36.4**	**-4.3**
	comp=Z,5.7nm,0.9s,baz=86,slow=16,SNR=33						
	comp=Z,48nm,0.7s						
MULG	**Mulgathing**	**44.53**	**245**	P	**P**	**14 59 44.7**	**-0.5**
KDU	**Kakadu**	**47.13**	**269**	P	**P**	**15 00 04.5**	**-0.6**
	baz=47,SNR=6.5						
GUMO	**Guam**	**47.37**	**309**	P	**P**	**15 00 06.7**	**-0.2**
	comp=Z,67nm,0.7s,baz=139,slow=12,SNR=7.5						
	comp=Z,67nm,0.7s						
MTN	**Manton Dam**	**48.37**	**268**	P	**P**	**15 00 13.6**	**-0.9**
	baz=48,SNR=4.7						
WRKA	**Warakurna**	**49.51**	**252**	P	**P**	**15 00 22.3**	**-0.5**
	baz=50,SNR=68						
WRKA	**Warakurna**	**49.51**	**252**	P	**P**	**15 00 22.2**	**-0.6**
	comp=Z,47nm,0.8s						
FORT	**Forrest**	**49.73**	**244**	P	**P**	**15 00 23.4**	**-0.8**
	baz=50,SNR=21						
FORT	**Forrest**	**49.73**	**244**	P	**P**	**15 00 22.7**	**-1.6**
FORT	**Forrest**	**49.73**	**244**	P	**P**	**15 00 23.5**	**-0.8**
KNRA	**Kununurra**	**50.09**	**264**	P	**P**	**15 00 26.2**	**-0.8**
	baz=50,SNR=12						
KNRA	**Kununurra**	**50.09**	**264**	P	**P**	**15 00 25.9**	**-1.2**
KNRA				IAmb	IAmb	15 00 27.0	
	comp=Z,13nm,0.7s						
KNRA	**Kununurra**	**50.09**	**264**	P	**P**	**15 00 26.6**	**-0.5**
SIJI	**Sorong**	**51.75**	**283**	P	**P**	**15 00 39.0**	**-0.3**
	comp=Z,14nm,0.7s						
SOEI	**Soe**	**55.64**	**270**	P	**P**	**15 01 08.0**	**+1.1**
	comp=Z,25nm,0.8s						
KLBR	**Kellerberrin**	**58.56**	**243**	P	**P**	**15 01 25.9**	**-0.5**
	baz=58,SNR=14						
KLBR	**Kellerberrin**	**58.56**	**243**	P	**P**	**15 01 25.9**	**-0.5**
GTOI	**Gorontalo**	**59.99**	**281**	P	**P**	**15 01 37.7**	**+1.4**
	comp=Z,9.2nm,1.0s						
MORW	**Morawa**	**60.19**	**246**	P	**P**	**15 01 36.5**	**-0.9**
	baz=60,SNR=4.4						
MORW	**Morawa**	**60.19**	**246**	P	**P**	**15 01 36.7**	**-0.7**
MORW				IAmb	IAmb	15 01 37.5	
	comp=Z,6.5nm,0.8s						
SBA	**Scott Base**	**60.65**	**183**	P	**P**	**15 01 42.0**	**+2.5**
SBA				IAmb	IAmb	15 01 43.2	
	comp=Z,9.0nm,1.0s						
VNDA	**Vanda**	**60.67**	**185**	P	**P**	**15 01 40.8**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=349,slow=7.6,SNR=22						
	comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**60.67**	**185**	P	**P**	**15 01 40.8**	**+1.1**
TWSI	**Taliwang, Sumb**	**62.94**	**269**	P	**P**	**15 01 54.8**	**-0.8**
JYT	**Yasato**	**66.10**	**325**	P	**P**	**15 02 14.7**	**-0.3**
CASY	**Casey**	**66.19**	**205**	P	**P**	**15 02 15.2**	**+0.1**
CASY				IAmb	IAmb	15 02 16.8	
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**67.44**	**324**	P	**P**	**15 02 23.1**	**-0.2**
	comp=Z,10nm,0.8s,baz=157,slow=6.3,SNR=18						
	comp=Z,10nm,0.8s						
MAJO	**Matsushiro**	**67.44**	**324**	P	**P**	**15 02 23.0**	**-0.4**
MAJO				IAmb	IAmb	15 02 24.0	
	comp=Z,14nm,0.8s						
MAJO	**Matsushiro**	**67.44**	**324**	P	**P**	**15 02 23.5**	**+0.1**
QSPA	**South Pole Qui**	**72.41**	**180**	P	**P**	**15 02 53.1**	**+0.5**
QSPA				IAmb	IAmb	15 02 54.7	
	comp=Z,14nm,0.8s						
PEA0B	**Petropavlovsk-**	**73.32**	**346**	P	**P**	**15 02 57.9**	**+0.1**
PEA0B				IAmb	IAmb	15 02 59.4	
	comp=Z,37nm,1.2s						
PETK	**Petropavlovsk-**	**73.32**	**346**	P	**P**	**15 02 58.0**	**+0.2**
	comp=Z,12nm,0.9s,baz=133,slow=7.5,SNR=13						
	comp=Z,12nm,0.9s						
PETK	**Petropavlovsk-**	**73.32**	**346**	P	**P**	**15 02 58.3**	**+0.6**
KSRS	**Korea Array**	**74.22**	**319**	P	**P**	**15 03 04.3**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=117,slow=6.4,SNR=5.5						
	comp=Z,1.4nm,0.7s						
MDJ	**Mudanjiang**	**77.72**	**325**	P	**P**	**15 03 24.1**	**+1.7**
HUMO	**Hull Mountain**	**78.97**	**39**	P	**P**	**15 03 30.5**	**+1.3**
BEKR	**Beckworth**	**78.98**	**42**	P	**P**	**15 03 30.3**	**+0.8**
PNTR	**Pine Nut**	**79.04**	**43**	P	**P**	**15 03 30.5**	**+0.6**
PNTR				IAmb	IAmb	15 03 32.3	
	comp=Z,8.9nm,0.8s						
DSP	**Deep Springs**	**79.20**	**45**	P	**P**	**15 03 32.0**	**+1.6**
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**15 03 34.1**	**+1.6**
	comp=Z,2.7nm,0.7s,baz=224,slow=9.2,SNR=22						
	comp=Z,2.7nm,0.7s						
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**15 03 33.5**	**+1.0**
GMN	**Gold Mountain**	**79.64**	**45**	P	**P**	**15 03 33.6**	**+0.5**
K05A	**Summer Lake**	**80.27**	**39**	P	**P**	**15 03 36.7**	**+0.5**
PINE	**Pine Mountain**	**80.85**	**38**	P	**P**	**15 03 40.4**	**+1.1**
BMN	**Battle Mountai**	**81.31**	**43**	P	**P**	**15 03 42.3**	**+0.7**
I07A	**Izee**	**81.87**	**39**	P	**P**	**15 03 45.7**	**+1.4**
BELA	**Belgrano 2**	**82.48**	**173**	P	**P**	**15 03 47.2**	**+0.4**
BELA				IAmb	IAmb	15 03 48.0	
	comp=Z,7.7nm,0.7s						
CAST	**Castle Rocks**	**83.46**	**12**	P	**P**	**15 03 50.5**	**-1.2**
CAST				IAmb	IAmb	15 03 51.8	
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	**83.85**	**12**	P	**P**	**15 03 53.2**	**-0.7**
TRF				IAmb	IAmb	15 03 54.5	
	comp=Z,11nm,0.7s						
MAW	**Mawson**	**83.96**	**200**	P	**P**	**15 03 54.9**	**+0.7**
	comp=Z,3.6nm,0.8s,baz=96,slow=10,SNR=3.8						
	comp=Z,3.6nm,0.8s						
RND	**Reindeer**	**84.11**	**13**	P	**P**	**15 03 54.8**	**-0.3**
RND				IAmb	IAmb	15 03 55.9	
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**15 04 02.3**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=226,slow=5.0,SNR=33						
	comp=Z,1.8nm,0.7s						
XAN	**Xi'an**	**85.76**	**308**	⇑P	**P**	**15 04 05.2**	**+1.5**
TXAR	**Lajitas Array**	**86.22**	**58**	P	**P**	**15 04 08.8**	**+2.7**
	comp=Z,1.9nm,0.8s,baz=218,slow=5.7,SNR=16						
	comp=Z,1.9nm,0.8s						
J26L	**Joseph Creek**	**86.26**	**15**	P	**P**	**15 04 06.1**	**+0.7**
J26L				IAmb	IAmb	15 04 06.5	
	comp=Z,5.1nm,0.8s						
COLD	**Coldfoot**	**87.24**	**11**	P	**P**	**15 04 10.2**	**+0.3**
COLD				IAmb	IAmb	15 04 11.6	
	comp=Z,8.4nm,1.0s						
PDAR	**Pinedale Array**	**87.46**	**44**	P	**P**	**15 04 12.8**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=205,slow=3.5,SNR=12						
	comp=Z,1.1nm,0.6s						
PDAR	**Pinedale Array**	**87.46**	**44**	P	**P**	**15 04 12.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**88.39**	**290**	P	**P**	**15 04 16.6**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=97,slow=2.8,SNR=7.1						
	comp=Z,1.1nm,0.9s						
TROLL	**Troll, Antarti**	**90.57**	**180**	P	**P**	**15 04 25.8**	**+0.1**
TROLL	**Troll, Antarti**	**90.57**	**180**	P	**P**	**15 04 26.8**	**+1.1**
VNA3	**Neumayer Olymp**	**91.03**	**177**	P	**P**	**15 04 28.2**	**+0.6**
VNA2	**Neumayer--Watz**	**91.46**	**177**	P	**P**	**15 04 30.4**	**+0.8**
	baz=166,slow=2.5						
MKAR	**Makanchi Array**	**108.64**	**314**	PKiKP	**PKiKP**	**15 09 48.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=220,slow=2.2,SNR=4.5						
AKASG	**Malin Array Be**	**140.13**	**332**	PKP	**PKPdf**	**15 10 49.7**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=39,slow=2.8,SNR=7.9						
VLDR	**Vladesti**	**144.06**	**327**	⇑P	**PKPdf**	**15 10 56.0**	**+0.5**
BURAR	**Bucovina Array**	**144.18**	**332**	⇓P	**PKPdf**	**15 10 56.6**	**+0.8**
GHRR		**144.25**	**328**	⇑P	**PKPab**	**15 10 57.1**	**+1.2**
BRTR	**Keskin Array B**	**144.29**	**315**	PKP	PKPbc	15 10 56.5	+0.4
	comp=Z,1.9nm,0.7s,baz=111,slow=4.2,SNR=9.0						
TESR	**Tescani**	**144.31**	**329**	⇓P	PKPbc	15 10 56.3	+0.5
TRPA	**Tarpa**	**144.93**	**335**	⇑P	PKPbc	15 10 58.2	+0.7
OSTC	**Ostas**	**145.02**	**343**	*e*PKP	**PKPbc**	**15 10 58.5**	**+0.7**
CHVC	**Chvalec**	**145.03**	**343**	*e*PKP	**PKPbc**	**15 10 58.0**	**+0.1**
CLL	**Collm**	**145.11**	**347**	*i* PKPdf	**PKPdf**	**15 10 57.4**	**+0.2**
	comp=Z,3.0nm,0.7s						
CLL				*i* PKPbc	**PKPbc**	**15 10 58.5**	**+0.5**
	comp=Z,41nm,1.6s						
CLL				*i* PKPab	**PKPab**	**15 11 00.4**	**+1.4**
	comp=Z,6.0nm,0.8s						
UPC	**Upice**	**145.12**	**343**	*e*PKP	**PKPbc**	**15 10 58.6**	**+0.5**
DPC	**Dobruska-Polom**	**145.17**	**343**	*e*PKP	**PKPbc**	**15 10 58.9**	**+0.6**
KRLC	**Kraliky**	**145.29**	**342**	*e*PKP	**PKPbc**	**15 10 58.7**	**0.0**
DOPR	**Dopca**	**145.31**	**330**	⇑P	**PKPab**	**15 11 01.0**	**+1.0**
MORC	**Moravsky Berou**	**145.32**	**341**	*e*PKP	**PKPbc**	**15 10 59.3**	**+0.5**
PVCC	**Panska Ves**	**145.47**	**345**	*e*PKP	**PKPbc**	**15 10 59.6**	**+0.5**
PRU	**Pruhonice**	**145.98**	**344**	*e*PKP	**PKPbc**	**15 11 01.1**	**+0.5**
VRAC	**Vranov**	**146.03**	**342**	*e*PKP	**PKPbc**	**15 11 01.3**	**+0.5**
JAVC	**Velka Javorina**	**146.09**	**340**	*e*PKP	**PKPab**	**15 11 02.5**	**-0.5**
KRUC	**Moravsky**	**146.31**	**342**	*e*PKP	**PKPbc**	**15 11 02.1**	**+0.6**
GZR	**Gura Zlata**	**146.96**	**332**	⇑P	**PKPbc**	**15 11 03.8**	**+0.2**
KHC	**Kasperske Hory**	**147.01**	**345**	*e*PKP	**PKPbc**	**15 11 04.0**	**+0.5**
CKRC	**Cesky Krumlov**	**147.11**	**344**	*e*PKP	**PKPbc**	**15 11 04.4**	**+0.7**
GERES	**GERESS Array B**	**147.25**	**345**	PKPbc	**PKPbc**	**15 11 04.6**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=38,slow=2.4,SNR=19						
CONA	**Conrad Observa**	**147.48**	**341**	*e*P	**PKPbc**	**15 11 06.0**	**+1.2**
	comp=Z,7.9nm,0.8s						
RONA	**Rosalia, Austr**	**147.55**	**341**	*e*P	**PKiKP**	**15 11 06.2**	**-0.3**
	comp=Z,8.3nm,0.8s						
BIOA	**Bad Ischl, Aus**	**148.33**	**344**	*e*P	**PKiKP**	**15 11 08.3**	**+0.3**
	comp=Z,6.5nm,0.6s						
SOKA	**Soboth**	**148.85**	**341**	*e*P	**PKPbc**	**15 11 08.3**	**0.0**
	comp=Z,5.2nm,1.1s						
KBA	**Koelnbreinsper**	**148.97**	**344**	*e*P	**PKPbc**	**15 11 08.4**	**-0.3**
	comp=Z,1.7nm,0.6s						

comp=N,156nm,0.3s
TA02 Huaiquique 2.85 292 P **Pn 14 58 58.6 +0.7**
PB10 IPOC Station P 3.70 234 *eP* **Pn 14 59 08.2 +0.1**
PB10 *i* S **Sn 14 59 50.7 -3.0**
GO02 Mina Guanaco 4.34 208⇑*iP* **Pn 14 59 16.6 +0.2**
GO02 *i* S **Sn 15 00 07.4 -1.2**
GO02 Mina Guanaco 4.34 208 P **Pn 14 59 16.8 +0.4**
BBOE La Paz, Chanca 4.55 352 P **Pn 14 59 21.8 +2.4**
BBOD La Paz, Gloria 4.84 345 P **Pn 14 59 25.5 +2.5**
LPAZ La Paz 5.09 351 P **Pn 14 59 27.5 +1.3**
comp=N,6.4nm,0.3s,baz=180,slow=8.1,SNR=57
LPAZ S **Sn 15 00 24.9 -1.4**
comp=N,7.8nm,0.7s,baz=4.2,slow=11,SNR=6.2
LPAZ La Paz 5.09 351 P **Pn 14 59 27.6 +1.3**
BBSD Serra de San D 7.56 58 *eP* **Pn 14 59 54.9 -2.8**
PTLB Pontes e Lacer 9.72 54 *eP* **Pn 15 00 24.8 -1.0**
CPUP Villa Florida 10.39 120 P **P 15 00 42.6 +0.8**
comp=N,0.8nm,0.4s,baz=304,slow=11,SNR=1.8
ANTJ Antonio Joao (10.53 96 *eP* **Pn 15 00 37.4 +1.1**
VILB Vilhena 10.76 40 *eP* **Pn 15 00 39.0 -0.3**
ETMB Extrema 11.51 5 *eP* **Pn 15 00 47.3 -1.6**
RPRD Ribas do Rio P 12.75 89 *eP* **Pn 15 01 05.1 +0.5**
CRSM Crissiumal (Br 13.54 119 *eP* **P 15 01 17.3 +0.5**
FRBT Francisco Belt 13.84 112 *eP* **P 15 01 19.7 -0.6**
PDRB Porto dos Gac 14.01 48 *eP* **Pn 15 01 18.4 -1.9**
RODS Rosario do Sul 14.11 132 *eP* **P 15 01 23.8 +0.7**
PTGB Pitanga 14.43 106 *eP* **P 15 01 28.4 +1.5**
ALGR Alto Alegre (B 14.91 123 *eP* **P 15 01 33.6 +1.5**
ITAB Concordia 15.03 116 *eP* **P 15 01 34.5 +1.2**
CLDB Colider 15.18 48 *eP* **Pn 15 01 34.1 -0.6**
FRTB Fartura 16.54 100 *eP* **Pn 15 01 51.0 0.0**
CNLB Canela 16.85 121 *eP* **P 15 01 54.2 +0.7**
BB19B Bebedouro 17.52 93 *eP* **P 15 02 00.9 +0.1**
SNDB Serra Nova Dou 17.93 61 *eP* **Pn 15 02 06.8 -0.7**
NPGB Novo Progresso 18.32 41 *eP* **P 15 02 08.8 -0.7**
RCLB Rio Claro- Sao 18.39 97 *eP* **P 15 02 10.5 +0.2**
BDFB Brasilia 19.15 76 P **Pn 15 02 20.9 -1.1**
comp=N,1.5nm,0.4s,baz=200,slow=2.4,SNR=3.3
BDFB Brasilia 19.15 76 *eP* **P 15 02 19.1 +0.4**
MACA Manacapuru-AM 19.19 21 *eP* **P 15 02 19.3 +0.4**
SGCB SÃo Gabriel d 21.09 1 *eP* **P 15 02 38.6 +0.7**
MALB Monte Alegre 23.17 35 *eP* **P 15 02 59.7 +0.5**
BOAV Boa Vista 24.51 17 *eP* **P 15 03 14.2 +2.8**
TORD Torodi Ar. Bea 75.90 70 P **P 15 09 34.8 -0.4**
comp=N,0.8nm,0.4s,baz=252,slow=6.1,SNR=10
comp=N,0.8nm,0.4s
ASAR Alice Springs 130.72 206 PKP **PKiKP 15 16 59.5 +0.4**
comp=N,0.1nm,0.4s,baz=143,slow=1.8,SNR=4.0
WRA Warramunga Arr 133.83 209 PKP **PKPdf 15 17 05.4 +1.3**
comp=N,0.2nm,0.6s,baz=153,slow=1.9,SNR=2.3
MKAR Makanchi Array 144.62 37 PKP **PKPdf 15 17 23.4 +0.5**
comp=N,0.6nm,0.6s,baz=304,slow=2.6,SNR=5.8

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*NOU **12** 15:00:00.1, 37.20S×179.60E, h0km, MLv3.9/7, Off E. Coast of N. Island, N.Z.*
*WEL **12** 15:00:08.3±1.3, 37.5S±5.×17.9E±.*, h15km±7km, M3.2/18, ML3.5/24, MLv3.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=96.0*
ISC 12 15:00:05.7±2.8, 37.25S±0.08×179.2E±0.1, h16km±12km, n44, σ0.96/51, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.74**	**245**	P	**Pb**	**15 00 20.4**	**+0.3**
MXZ				S	**Sb**	**15 00 28.7**	**-1.4**
MXZ	**Matakaoa Point**	**0.74**	**245**	P	**Pb**	**15 00 20.4**	**+0.3**
WMGZ	**Waiomatatini S**	**0.82**	**226**	P	**Pn**	**15 00 23.8**	**+1.3**
PKGZ	**Pakihiroa**	**1.07**	**233**	P	**Pg**	**15 00 27.0**	**+0.7**
PUZ	**Puketiti**	**1.08**	**221**	P	**Pg**	**15 00 27.6**	**+0.9**
PUZ				S	**Sn**	**15 00 41.6**	**+0.7**
HAZ	**Te Kaha**	**1.20**	**245**	P	**Pn**	**15 00 27.5**	**-0.2**
HAZ				S	**Sn**	**15 00 44.1**	**+0.4**
TWGZ	**Tauwhareparae**	**1.31**	**225**	P	**Pg**	**15 00 31.0**	**0.0**
TWGZ				S	**Sn**	**15 00 47.3**	**+0.8**
RUGZ	**Raukumara Rang**	**1.37**	**238**	P	**Pg**	**15 00 31.8**	**-0.3**
RUGZ				S	**Sn**	**15 00 48.4**	**+0.3**
CNGZ	**Carnagh Statio**	**1.44**	**211**	P	**Pg**	**15 00 33.3**	**-0.1**
TKGZ	**Te Karaka**	**1.57**	**221**	P	**Pb**	**15 00 34.1**	**-0.2**
TKGZ				S	**Sn**	**15 00 53.5**	**+0.6**
MWZ	**Matawai**	**1.68**	**229**	P	**Pb**	**15 00 35.5**	**-0.7**
MWZ				S	**Sn**	**15 00 54.6**	**-1.0**
RAGZ	**Rawiri**	**1.85**	**227**	P	**Pb**	**15 00 38.2**	**-1.0**
URZ	**Urewera**	**1.91**	**237**	P	**Pb**	**15 00 39.0**	**-1.0**
URZ	**Urewera**	**1.91**	**237**	P	**Pb**	**15 00 39.1**	**-0.9**
SNGZ	**Shannon Statio**	**2.10**	**223**	P	**Pn**	**15 00 41.0**	**+0.9**
OPRZ	**Ohinepanea**	**2.15**	**253**	P	**Pn**	**15 00 41.3**	**+0.6**
RTZ	**Ruatahuna**	**2.19**	**231**	P	**Pn**	**15 00 42.9**	**+1.4**
MUGZ	**Murupara**	**2.25**	**236**	P	**Pn**	**15 00 43.3**	**+1.2**
RAHZ	**Arahi**	**2.33**	**224**	P	**Pn**	**15 00 44.6**	**+1.3**
RRRZ	**Republican Roa**	**2.35**	**242**	P	**Pb**	**15 00 46.5**	**-1.2**
MTHZ	**Maungataniwha**	**2.43**	**228**	P	**Pn**	**15 00 46.1**	**+1.5**
ALRZ	**Allen Road**	**2.58**	**239**	P	**Pn**	**15 00 48.7**	**+2.0**
NMHZ	**Naumai**	**2.61**	**224**	P	**Pn**	**15 00 48.8**	**+1.6**
ARHZ	**Aropaoanui**	**2.63**	**219**	P	**Pn**	**15 00 48.4**	**+1.0**
KUZ	**Kuaotunu**	**2.79**	**279**	P	**Pn**	**15 00 48.9**	**-0.7**
KUZ	**Kuaotunu**	**2.79**	**279**	P	**Pn**	**15 00 49.0**	**-0.6**
BKZ	**Black Stump Fm**	**2.84**	**227**	P	**Pn**	**15 00 51.2**	**+0.9**
BKZ	**Black Stump Fm**	**2.84**	**227**	P	**Pn**	**15 00 51.3**	**+0.9**
MCHZ	**McNeill Hill**	**2.92**	**221**	P	**Pn**	**15 00 52.0**	**+0.6**
TOZ	**Tahuroa Road**	**2.94**	**259**	P	**Pn**	**15 00 51.9**	**+0.2**
KAHZ	**Kahuranaki**	**3.10**	**214**	P	**Pn**	**15 00 53.9**	**0.0**
MKAZ	**Moumahaki**	**3.19**	**271**	P	**Pn**	**15 00 54.9**	**-0.2**
BHHZ	**Black Hill Sta**	**3.30**	**226**	P	**Pn**	**15 00 57.2**	**+0.5**
ETVZ	**East Tongariro**	**3.30**	**234**	P	**Pn**	**15 00 57.6**	**+0.8**
ETAZ	**East Tamaki Re**	**3.39**	**274**	P	**Pn**	**15 00 58.2**	**+0.4**
MBAZ	**Motutapu North**	**3.44**	**277**	P	**Pn**	**15 00 59.1**	**+0.6**
WPHZ	**Waipukurau**	**3.52**	**216**	P	**Pn**	**15 00 59.4**	**-0.3**
PNHZ	**Pukenui**	**3.52**	**220**	P	**Pn**	**15 00 59.0**	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.61**	**272**	P	**Pn**	**15 01 01.2**	**+0.4**
HIZ	**Hauiti**	**3.62**	**248**	P	**Pn**	**15 01 03.2**	**+2.1**
RVAZ	**Riverhead Bore**	**3.69**	**276**	P	**Pn**	**15 01 02.7**	**+0.7**
TSZ	**Takapari Road**	**3.76**	**221**	P	**Pn**	**15 01 02.2**	**-0.7**
BFZ	**Birch Farm**	**4.11**	**213**	P	**Pn**	**15 01 06.5**	**-1.2**
OUZ	**Omahuta**	**4.93**	**293**	P	**Pn**	**15 01 20.5**	**+1.5**

IDC 12 15:12:45.5±10.0, 22.20S×170.59E, h80km±68km, mb3.1/3, mbtmp3.4/4, ML3.0/1, MS3.0/1, Error ellipse: s-maj=247.7km s-min=41.6km az=158.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.85**	**271**	P	Pn	15 13 42.4	-0.1
	1.0nm,0.3s,baz=119,slow=19,SNR=43						
DZM				S	Sn	15 14 32.7	+6.0
	3.6nm,0.4s,baz=109,slow=20,SNR=1.8						
	4.7nm,0.3s						
MSVF	**Nonsavu**	**8.30**	**59**	LR	LR	15 17 17.5	
	comp=Z,84nm,18.3s,baz=216,slow=33						
ASAR	**Alice Springs**	**33.77**	**260**	P	P	15 19 19.9	+0.1
	0.3nm,0.7s,baz=101,slow=9.6,SNR=5.2						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**33.86**	**267**	P	P	15 19 20.3	-0.3
	0.2nm,0.8s,baz=95,slow=8.3,SNR=2.1						
	0.2nm,0.8s						
NVAR	**Mina Array Bea**	**89.81**	**48**	P	P	15 25 35.6	0.0
	0.3nm,0.7s,baz=214,slow=6.4,SNR=2.1						
	0.3nm,0.7s						

MAN 12 15:14:27.1, 10.12N×126.52E, h8km, mb4.1, ML2.9, MS2.6, 6C-9D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.51**	**229**⇓	*eP*	Pg	15 14 37.4	+0.4
GLSP				*eS*	Sg	15 14 43.7	+0.1
SCPH	**Surigao**	**1.07**	**252**	⇓*iP*	Pg	15 14 46.2	-1.4
SCPH				*i S*	Sg	15 15 00.8	-0.6
BUTP	**Butuan**	**1.45**	**218**⇑	*eP*	Pn	15 14 52.0	-1.6
BUTP				*eS*	Sn	15 15 11.4	-1.3
BESP	**Borongan**	**1.82**	**324**⇓	*eP*	Pn	15 14 56.6	-2.1
BESP				*eS*	Sg	15 15 25.4	-0.1
BIPH	**Bislig**	**1.93**	**185**⇓	*eP*	Pn	15 14 58.3	-1.8
BIPH				*eS*	Sn	15 15 20.8	-3.9
GHBP	**Garcia Hernand**	**2.22**	**258**	⇓*iP*	Pn	15 15 05.1	+0.9
GHBP				*i S*	Sn	15 15 32.7	+0.9
CGP	**Cagayan de Oro**	**2.44**	**228**⇑	*eP*	Pn	15 15 07.1	-0.2
CGP				*eS*	Sn	15 15 34.7	-2.7
LLP	**Lapu-Lapu**	**2.52**	**275**⇑	*iP*	Pn	15 15 09.2	+0.8
LLP				*i S*	Sn	15 15 40.8	+1.5
BUKP	**Musuan**	**2.65**	**213**⇓	*eP*	Pn	15 15 11.2	+1.0
BUKP				*eS*	Sn	15 15 43.2	+0.7
TBP	**Tagbilaran**	**2.65**	**261**⇑	*eP*	Pn	15 15 10.6	+0.4
TBP				*i S*	Sg	15 16 31.5	+39
CNP	**Catarman**	**2.99**	**323**⇓	*eP*	Pn	15 15 15.0	+0.1
CNP				*eS*	Sn	15 15 47.1	-3.9
LSIP	**Lazi, Siquijor**	**3.01**	**251**⇑	*eP*	Pn	15 15 16.4	+1.3
LSIP				*i S*	Sn	15 15 53.4	+2.0
CTBH	**Cotabato--PC H**	**3.65**	**218**⇑	*eP*	Pn	15 15 26.0	+2.1
CNOP	**Candoni, Negro**	**3.83**	**266**⇓	*eP*	Pn	15 15 26.1	-0.3
CNOP				*eS*	Sn	15 16 11.4	-0.3
GUIM	**Jordan**	**3.90**	**278**⇓	*eP*	Pn	15 15 27.8	+0.5
GUIM				*eS*	Sn	15 16 08.8	-4.5

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*IDC **12** 15:15:44.4±1.7, 9.90N×125.96E, h0km, mb3.6/6, mbtmp3.6/6, MS2.7/1, Error ellipse: s-maj=217.4km s-min=20.6km az=68.0*
*MAN **12** 15:15:48.6, 10.05N×126.59E, h32km, mb4.8, ML3.7, MS3.7*
ISC 12 15:15:46.1±2.0, 10.09N±0.04×126.60E±0.06, h16km±12km, n28, σ1.43/39, mb3.5/6, 10C-8D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.56**	**237**⇓	*eP*	**Pb**	**15 15 56.9**	**-0.6**
GLSP				*eS*	**Sg**	**15 16 03.3**	**-1.3**
SCPH	**Surigao**	**1.14**	**255**⇑	*iP*	**Pb**	**15 16 05.4**	**-2.1**
SCPH				*i S*	**Sb**	**15 16 19.4**	**-2.6**
BUTP	**Butuan**	**1.47**	**221**⇓	*eP*	**Pb**	**15 16 13.0**	**-0.1**
BUTP				*eS*	**Sn**	**15 16 30.7**	**-0.3**
MSLP	**Maasin**	**1.72**	**272**⇓	*eP*	**Pn**	**15 16 15.6**	**+0.2**
MSLP				*eS*	**Sn**	**15 16 35.7**	**-1.4**
BESP	**Borongan**	**1.89**	**323**⇓	*eP*	**Pn**	**15 16 17.7**	**-0.1**
BESP				*eS*	**Sg**	**15 16 50.2**	**+3.2**
BIPH	**Bislig**	**1.91**	**187**⇑	*eP*	**Pn**	**15 16 18.7**	**+0.7**
BIPH				*eS*	**Sn**	**15 16 40.7**	**-1.0**
TABP	**Talibon, Bohol**	**2.24**	**270**⇑	*iP*	**Pn**	**15 16 23.1**	**+0.5**
TABP				*i S*	**Sn**	**15 16 51.9**	**+2.0**
GHBP	**Garcia Hernand**	**2.29**	**259**⇑	*iP*	**Pn**	**15 16 24.8**	**+1.4**
GHBP				*i S*	**Sn**	**15 16 52.1**	**+0.8**
CGP	**Cagayan de Oro**	**2.48**	**229**⇑	*eP*	**Pn**	**15 16 26.7**	**+0.7**
CGP				*eS*	**Sn**	**15 16 55.4**	**-0.6**
LLP	**Lapu-Lapu**	**2.61**	**275**⇑	*iP*	**Pn**	**15 16 28.7**	**+1.1**
LLP				*i S*	**Sn**	**15 16 59.8**	**+0.7**
BUKP	**Musuan**	**2.67**	**215**⇓	*eP*	**Pn**	**15 16 29.8**	**+1.2**
BUKP				*eS*	**Sb**	**15 17 05.5**	**-0.7**
CNP	**Catarman**	**3.07**	**322**⇓	*eP*	**Pn**	**15 16 31.9**	**-2.1**
CNP				*eS*	**Sn**	**15 17 09.6**	**-0.9**
LSIP	**Lazi, Siquijor**	**3.08**	**252**⇑	*eP*	**Pn**	**15 16 35.0**	**+0.8**
LSIP				*i S*	**Sn**	**15 17 11.9**	**+1.2**
DCPH	**Dipolog City**	**3.54**	**245**⇓	*eP*	**Pn**	**15 16 42.9**	**+2.4**
CNOP	**Candoni, Negro**	**3.91**	**267**⇑	*eP*	**Pn**	**15 16 45.1**	**-0.5**
CNOP				*eS*	**Sn**	**15 17 30.8**	**-0.5**
GUIM	**Jordan**	**3.99**	**278**⇓	*eP*	**Pn**	**15 16 46.5**	**-0.1**
GUIM				*eS*	**Sn**	**15 17 34.3**	**+1.2**
RCP	**Roxas**	**4.06**	**291**⇑	*eP*	**Pn**	**15 16 50.0**	**+2.3**
JAP	**San Jose, Anti**	**4.63**	**279**⇑	*eP*	**Pn**	**15 16 58.5**	**+3.0**
GUMO	**Guam**	**18.21**	**77**	LR	LR	15 26 12.1	
	comp=Z,23nm,20.4s,baz=208,slow=33						
WRA	**Warramunga Arr**	**30.80**	**166**	P	**P**	**15 22 01.4**	**+0.1**
	0.3nm,0.7s,baz=344,slow=9.5,SNR=2.0						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**34.30**	**168**	P	**P**	**15 22 32.5**	**+0.4**
	0.1nm,0.3s,baz=346,slow=6.9,SNR=5.3						
	0.1nm,0.3s						
H11N1	**WAKE ISLAND Hy**	**40.00**	**71**	T	T	16 06 39.9	
	baz=267,slow=75,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**40.01**	**71**	T	T	16 06 44.8	
	baz=267,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**40.02**	**71**	T	T	16 06 49.8	
	baz=267,slow=75,SNR=4.2						
SONM	**Songino Array**	**41.30**	**339**	P	**P**	**15 23 31.8**	**+0.7**
	0.5nm,0.8s,baz=153,slow=7.7,SNR=2.0						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**44.12**	**162**	P	**P**	**15 23 55.2**	**+1.2**
	0.8nm,0.5s,baz=340,slow=12,SNR=2.8						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**52.37**	**323**	P	**P**	**15 24 56.8**	**-0.8**
	0.8nm,0.7s,baz=121,slow=8.9,SNR=5.7						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**86.21**	**332**	P	**P**	**15 28 25.8**	**-0.9**
	1.9nm,1.0s,baz=122,slow=5.1,SNR=1.2						
	1.9nm,1.0s						

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*MAN **12** 15:20:39.0, 10.15N×126.57E, h11km, mb4.8, ML3.7, MS3.6*
*IDC **12** 15:20:38.9±3.4, 9.57N×125.21E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=291.0km s-min=28.8km az=65.0*
ISC 12 15:20:37.9±2.5, 10.06N±0.04×126.64E±0.08, h10km±15km, n21, σ2.04/25, mb3.2/3, 5C-7D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.58**	**242**⇓	*eP*	**Pb**	**15 20 50.3**	**+0.2**
GLSP				*eS*	**Sg**	**15 20 56.9**	**+0.2**
SCPH	**Surigao**	**1.17**	**256**⇑	*eP*	**Pn**	**15 20 58.9**	**-1.5**
SCPH				*i S*	**Sb**	**15 21 11.6**	**-3.8**
BUTP	**Butuan**	**1.48**	**223**⇑	*eP*	**Pb**	**15 21 05.2**	**-0.3**
BUTP				*eS*	**Sn**	**15 21 25.2**	**+1.2**
MSLP	**Maasin**	**1.76**	**273**⇓	*eP*	**Pn**	**15 21 08.5**	**+0.1**
MSLP				*eS*	**Sn**	**15 21 30.4**	**-0.5**
BESP	**Borongan**	**1.94**	**322**⇑	*eP*	**Pn**	**15 21 09.7**	**-1.2**
BESP				*eS*	**Sb**	**15 21 37.8**	**+0.3**
BUKP	**Musuan**	**2.67**	**216**⇓	*eP*	**Pb**	**15 21 24.9**	**-1.0**
BUKP				*eS*	**Sb**	**15 21 57.2**	**-1.5**
CNP	**Catarman**	**3.11**	**322**⇑	*eP*	**Pn**	**15 21 27.2**	**+0.1**
CNP				*eS*	**Sn**	**15 22 01.1**	**-3.3**
DCPH	**Dipolog City**	**3.56**	**246**⇓	*eP*	**Pn**	**15 21 32.5**	**-0.7**
DCPH				*eS*	**Sn**	**15 22 16.6**	**+1.2**
CNOP	**Candoni, Negro**	**3.95**	**267**⇑	*eP*	**Pn**	**15 21 39.9**	**+1.3**
CNOP				*eS*	**Sn**	**15 22 24.4**	**-0.6**
RCP	**Roxas**	**4.11**	**292**⇓	*eP*	**Pn**	**15 21 43.4**	**+2.6**
PVCP	**Virac**	**4.28**	**326**⇓	*eP*	**Pn**	**15 21 40.2**	**-2.9**
PVCP				*eS*	**Sb**	**15 22 48.9**	**+4.0**
JAP	**San Jose, Anti**	**4.67**	**279**⇓	*eP*	**Pn**	**15 21 52.1**	**+3.6**
WRA	**Warramunga Arr**	**30.76**	**166**	P	**P**	**15 26 55.6**	**+1.9**
	0.3nm,0.9s,baz=343,slow=9.1,SNR=2.0						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**34.26**	**168**	P	**P**	**15 27 25.4**	**+1.1**
	0.1nm,0.3s,baz=346,slow=7.3,SNR=4.9						
	0.1nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**39.63**	**73**	T	T	16 11 18.4	
	baz=260						
H11S1	**WAKE ISLAND Hy**	**39.65**	**73**	T	T	16 11 14.2	
	baz=260						
H11S2	**WAKE ISLAND Hy**	**39.65**	**73**	T	T	16 11 14.8	
	baz=260						
H11N1	**WAKE ISLAND Hy**	**39.98**	**71**	T	T	16 11 38.5	
	baz=264						
H11N2	**WAKE ISLAND Hy**	**39.98**	**71**	T	T	16 11 34.4	
	baz=264						
H11N3	**WAKE ISLAND Hy**	**39.99**	**71**	T	T	16 11 37.2	
	baz=264						
MKAR	**Makanchi Array**	**52.41**	**323**	P	**P**	**15 29 49.7**	**-0.9**
	0.6nm,0.8s,baz=125,slow=6.8,SNR=4.6						
	0.6nm,0.8s						

ROM 12 15:25:34.6±0.1, 44.091N±0.004×11.654E±0.007, h8km, ML1.1/1, 2C, Error ellipse: s-maj=0.5km s-min=0.3km az=278.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD	**Lutirano**	**0.04**	**109**	P	Pg	15 25 36.4	+0.2
LMD				S	Sg	15 25 37.5	+0.2
LMD				AML	AML		
	comp=E,1070μm,0.2s						
LMD				AML	AML		
	comp=N,616μm,0.2s						
LMD				AML	AML		
	comp=E,839μm,0.1s						
LMD				AML	AML		
	comp=N,616μm,0.2s						
LMD	**Lutirano**	**0.04**	**109**	⇑P	Pg	15 25 36.3	+0.2
LMD				AML	AML		
	comp=E,1070μm,0.2s						
LMD				AML	AML		
	comp=N,616μm,0.2s						
BRIS	**BRISIGHELLA**	**0.12**	**300**	P	Pg	15 25 38.2	+1.0
BRIS				S	Sg	15 25 41.4	+2.4
BRIS				AML	AML		
	comp=N,79μm,0.7s						
BRIS				AML	AML		
	comp=E,66μm,0.4s						
BRIS				AML	AML		
	comp=N,65μm,0.3s						
BRIS				AML	AML		
	comp=N,199μm,0.9s						
BRIS				AML	AML		
	comp=E,65μm,0.5s						
BRIS				AML	AML		
	comp=E,132μm,0.7s						
BRIS	**BRISIGHELLA**	**0.12**	**300**	⇑P	Pg	15 25 38.2	+1.0
BRIS				AML	AML		
	comp=E,66μm,0.4s						
BRIS				AML	AML		
	comp=N,79μm,0.7s						
SEI	**Scarperia**	**0.22**	**260**	P	Pg	15 25 40.0	+1.1
SEI				S	Sg	15 25 43.0	+1.1
SFI	**Santa Sofia**	**0.23**	**143**	P	Pg	15 25 39.9	+0.7
SFI				S	Sg	15 25 44.2	+1.8
SFI	**Santa Sofia**	**0.23**	**143**	S	Sg	15 25 40.0	-2.4
ASQU	**Asqua**	**0.31**	**162**	P	Pg	15 25 41.5	+0.8
ASQU				S	Sb	15 25 47.0	-0.8
BRSN	**Barisano**	**0.36**	**57**	P	Pg	15 25 41.3	-0.4
CRE	**Caprese Michel**	**0.52**	**155**	P	Pg	15 25 45.1	+0.5
GSCL	**Gusciola**	**0.81**	**289**	S	Sb	15 26 03.0	+0.9
GSCL	**Gusciola**	**0.81**	**289**	S	Sb	15 26 03.0	+0.9
VENL	**Venezia Lido**	**1.42**	**21**	S	Sb	15 26 16.0	-3.7
VENL	**Venezia Lido**	**1.42**	**21**	S	Sb	15 26 16.0	-3.7
VOBA	**Vobarno**	**1.75**	**333**	P	Pn	15 26 03.1	-2.2
VOBA				AML	AML		
	comp=E,1365μm,0.2s						
VOBA				AML	AML		
	comp=N,969μm,0.2s						
VOBA	**Vobarno**	**1.75**	**333**	P	Pn	15 26 03.1	-2.2
VOBA				AML	AML		
	comp=N,969μm,0.2s						
VOBA				AML	AML		
	comp=E,1365μm,0.2s						
QLNO	**Quiliano**	**2.39**	**277**	S	Sg	15 26 53.0	+1.6
QLNO	**Quiliano**	**2.39**	**277**	S	Sg	15 26 53.0	+1.6
RORO	**Rocca Rossa**	**2.58**	**272**	P	Pb	15 26 19.3	-1.9
RORO	**Rocca Rossa**	**2.58**	**272**	P	Pb	15 26 19.3	-1.9

ROM 12 15:25:50.4±0.1, 42.902N±0.003×13.242E±0.004, h8km, ML1.1/1, 2C-3D, Error ellipse: s-maj=0.4km s-min=0.1km az=214.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**286**	P	Pg	15 25 52.3	0.0
MC2	**Monte Cornacci**	**0.04**	**286**	P	Pg	15 25 52.3	0.0
MC2				S	Sg	15 25 53.4	-0.1
MMO1	**Montemonaco**	**0.06**	**93**	⇓P	Pg	15 25 52.4	+0.1
MMO1	**Montemonaco**	**0.06**	**93**	P	Pg	15 25 52.6	+0.3
MMO1				S	Sg	15 25 54.0	+0.3
NRCA	**Norcia**	**0.12**	**234**	⇑P	Pg	15 25 53.5	+0.4
NRCA				AML	AML		
	comp=E,156μm,0.5s						
NRCA				AML	AML		
	comp=N,138μm,1.2s						
NRCA	**Norcia**	**0.12**	**234**	P	Pg	15 25 53.4	+0.3
NRCA				S	Sg	15 25 55.6	+0.6
NRCA				AML	AML		
	comp=E,156μm,0.5s						
NRCA				AML	AML		
	comp=N,138μm,1.2s						
T1241	**Roccafluvione,**	**0.15**	**108**	⇓P	Pg	15 25 54.3	+0.7
T1241	**Roccafluvione,**	**0.15**	**108**	P	Pg	15 25 54.1	+0.5
T1241				S	Sg	15 25 56.8	+1.1
FDMO	**Fiordimonte**	**0.18**	**320**	P	Pg	15 25 54.7	+0.6
FDMO	**Fiordimonte**	**0.18**	**320**	P	Pg	15 25 54.7	+0.7
FDMO				S	Sg	15 25 57.7	+1.1
T1202	**Accumoli, Fraz**	**0.20**	**184**	⇓P	Pg	15 25 55.5	+1.0
T1202	**Accumoli, Fraz**	**0.20**	**184**	P	Pg	15 25 55.0	+0.5
T1202				S	Sg	15 25 58.9	+1.7
T1243	**Rocca Santa Ma**	**0.26**	**143**	⇑P	Pg	15 25 56.1	+0.6
T1243	**Rocca Santa Ma**	**0.26**	**143**	P	Pg	15 25 56.0	+0.5
T1243				S	Sg	15 26 00.4	+1.5
T1247	**Pizzolo (AQ)**	**0.46**	**175**	P	Pn	15 26 03.4	-0.1
T1247	**Pizzolo (AQ)**	**0.46**	**175**	P	Pn	15 26 03.4	-0.1
FIAM	**Fiamignano**	**0.64**	**188**	S	Sn	15 26 16.0	-0.3
FIAM	**Fiamignano**	**0.64**	**188**	S	Sn	15 26 16.0	-0.3

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*IDC **12** 15:30:15.0±0.8, 35.82N×82.26E, h0km, mb3.7/13, mbtmp3.8/18, ML3.8/4, MS3.6/51, Error ellipse: s-maj=21.7km s-min=13.8km az=52.0*
*BJI **12** 15:30:16.4±0.0, 36.02N×82.48E, h7km, mb4.2/9, mB4.3/4, ML4.2/7, Ms4.0/12, Ms7 3.8/11*
*MOS **12** 15:30:16.3±1.4, 36.03N×82.24E, h12km, mb4.3/10, Error ellipse: s-maj=9.7km s-min=4.9km az=111.8*
*NEIC **12** 15:30:18.3±1.1, 36.0N±0.

comp=Z,0.9nm,0.3s,baz=180,slow=20,SNR=2.2
AAK LR LR 15 36 21.2
comp=Z,370nm,18.3s,baz=140,slow=40
comp=Z,1.1nm,0.4s
AAK Ala-Archa 8.97 320 Pn **Pn 15 32 27.8 +0.4**
AAK Ala-Archa 8.97 320 ||*e*P **Pn 15 32 29.4 +2.0**
RAMN Ramite 9.74 157 *e*P **Pn 15 32 36.8 -1.2**
comp=Z,36nm,0.7s
TAPN Taplejung 9.78 151 *e*P **Pn 15 32 37.0 -1.6**
comp=Z,6.4nm,0.5s
BTK Batken 9.93 297 Pn **Pn 15 32 40.8 +0.3**
BTK Batken 9.93 297 P **Pn 15 32 40.8 +0.3**
GAR Garm 9.99 291 Pn **Pn 15 32 41.9 +0.5**
GOMU GeErMu 10.11 85 P **Pn 15 32 46.2 +3.0**
GOMU S **Sn 15 34 32.9 -4.0**
GOMU pmax pmax
comp=Z,5.0nm,0.4s
GOMU LR LR
comp=Z,370nm,8.9s
GOMU LR LR
comp=Z,710nm,7.4s
GOMU LR LR
comp=Z,500nm,7.1s
MK31 Makanchi Array 10.78 360 Pn **Pn 15 32 51.4 -0.6**
MK31 Makanchi Array 10.78 360*c i*P **Pn 15 32 51.8 -0.1**
MKAR Makanchi Array 10.78 360 Pn **Pn 15 32 51.9 -0.1**
comp=Z,1.6nm,0.3s,baz=180,slow=13,SNR=54
MKAR Sn **Sn 15 34 49.8 -2.8**
comp=Z,0.6nm,0.3s,baz=188,slow=23,SNR=2.6
MKAR Lg Lg 15 36 03.7
comp=Z,0.2nm,0.3s,baz=177,slow=32,SNR=1.7
MKAR LR LR 15 37 55.5
comp=Z,335nm,18.5s,baz=192,slow=42
comp=Z,6.8nm,0.6s
MKAR Makanchi Array 10.78 360 Pn **Pn 15 32 51.5 -0.4**
MAKZ Makanchi 10.79 359 Pn **Pn 15 32 51.9 -0.3**
MAKZ Makanchi 10.79 359 P **Pn 15 32 51.9 -0.3**
CHGR Chuyangaron 10.81 288 Pn **Pn 15 32 52.6 +0.1**
CHGR Chuyangaron 10.81 288 P **Pn 15 32 52.6 +0.1**
KBL Kabul 10.95 266 Pn **Pn 15 32 55.3 +0.7**
KBL Kabul 10.95 266 P **Pn 15 32 55.3 +0.7**
IUG Iuzhnay 11.34 306 *e*P **Pn 15 32 59.6 -0.2**
KK31 Karatay Array 11.54 311 Pn **Pn 15 33 02.0 -0.4**
KK31 Karatay Array 11.54 311 P **Pn 15 33 02.0 -0.4**
KKAR Karatay Array 11.54 311 Pn **Pn 15 33 02.2 -0.2**
KKAR Karatay Array 11.54 311 P **Pn 15 33 02.2 -0.2**
DGZ Jazzator, Alta 14.18 14*de*P **Pn 15 33 38.0 -0.6**
KURBB Kurchatov Arra 14.86 351 Pn **Pn 15 33 45.1 -2.6**
comp=Z,1.4nm,0.7s,baz=174,slow=12,SNR=15
KURBB Lg Lg 15 38 10.9
baz=170,slow=28,SNR=2.6
KURK Kurchatov 14.94 351 Pn **Pn 15 33 48.0 -0.8**
KURK Kurchatov 14.94 351 ||*e*P **Pn 15 33 46.4 -2.4**
HRA Herat 16.49 270 Pn **Pn 15 34 08.5 -0.8**
ZAA0 Zalesovo Array 18.02 5 Pn **Pn 15 34 24.7 -3.3**
ZAA0 IAmb IAmb 15 34 31.9
comp=Z,14nm,0.8s
ZALV Zalesovo Beam 18.02 5 P **Pn 15 34 25.1 -2.9**
comp=Z,3.3nm,0.7s,baz=187,slow=11,SNR=11
ZALV LR LR 15 42 18.4
comp=Z,191nm,19.1s,baz=194,slow=40
HYBB Hyderabad (bro 18.82 191 *e*P **P 15 34 37.4 -0.1**
HYBB *e*S **S 15 38 11.9 +0.3**
BVAR Borovoye Array 18.98 337 P **P 15 34 39.7 +0.7**
comp=Z,0.3nm,0.3s,baz=138,slow=11,SNR=25
BVAR Lg Lg 15 40 22.0
comp=Z,0.1nm,0.3s,baz=155,slow=35,SNR=1.3
BVAR LR LR 15 42 06.3
comp=Z,45nm,21.3s,baz=146,slow=37
comp=Z,2.8nm,0.7s
BRVK Borovoye 19.04 337 P **P 15 34 39.8 +0.1**
BRVK IAmb IAmb 15 34 43.5
comp=Z,11nm,0.9s
BRVK Borovoye 19.04 337*d i*P **Pn 15 34 42.3 +1.9**
GEYT Alibeck 19.43 283 P **P 15 34 43.0 -1.1**
comp=Z,0.3nm,0.3s,baz=91,slow=8.6,SNR=4.7
GEYT LR LR 15 44 04.2
comp=Z,208nm,19.1s,baz=109,slow=43
comp=Z,1.2nm,0.5s
GEYT Alibeck 19.43 283 P **P 15 34 44.6 +0.5**
GEYT IAmb IAmb 15 34 49.6
comp=Z,5.3nm,1.0s
GYA0B ALIBECK ARRAY 19.43 283 P **P 15 34 44.7 +0.6**
GYA0B IAmb IAmb 15 34 49.6
comp=Z,6.2nm,0.9s
ABKAR Akbulak array 21.03 316 P **P 15 35 01.1 -0.3**
ABKAR IAmb IAmb 15 35 06.9
comp=Z,4.0nm,1.0s
SONM Songino Array 21.36 49 P **P 15 35 06.2 +1.1**
comp=Z,2.9nm,0.7s,baz=242,slow=12,SNR=16
SONM LR LR 15 43 55.1
comp=Z,280nm,18.5s,baz=242,slow=38
comp=Z,2.9nm,0.7s
SONM Songino Array 21.36 49 P **P 15 35 04.9 -0.3**
SONM IAmb IAmb 15 35 12.8
comp=Z,4.9nm,1.0s
SONM Songino Array 21.36 49 *e*P **P 15 35 07.9 +2.7**
SONM pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 21.78 49 P **P 15 35 10.1 +0.4**
ULN Ulaanbaatar 21.78 49 P **P 15 35 10.1 +0.4**
ULN pmax pmax
comp=Z,17nm,1.5s
AKTO Aktyubinsk 22.70 317 P **P 15 35 20.2 +0.9**
comp=Z,0.6nm,0.3s,baz=105,slow=11,SNR=1.9
AKTO LR LR 15 45 15.7
comp=Z,218nm,19.2s,baz=125,slow=40
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 22.83 136 P **P 15 35 19.1 -1.8**
comp=Z,0.4nm,0.7s,baz=316,slow=9.0,SNR=1.6
comp=Z,0.4nm,0.7s
CMAR Chiang Mai Arr 22.83 136 *e*P **P 15 35 20.9 0.0**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
WSAR Wadi Sarin 24.14 245 LR LR 15 46 39.7
comp=Z,139nm,20.8s,baz=68,slow=41
HNS HongShan 25.94 77 ||P **P 15 35 56.9 +6.8**
HNS *e*S S 15 40 31.2 +11
PCHI Peechi 25.94 194 *e*P **P 15 35 49.9 -0.3**
ARU Arti 25.98 329 LR LR 15 47 04.5
comp=Z,87nm,22.0s,baz=125,slow=39
ARU Arti 25.98 329*d i*P **P 15 35 52.9 +2.7**
ARU 15 36 23.6
ARU S **S 15 40 25.7 +5.1**
ARU SS **SnSn 15 41 19.5 +2.1**
ARU pmax pmax
comp=Z,10.0nm,1.8s
MAK Makhachkala 27.61 295 *e*P **P 15 36 00.0 -5.1**
MAK *e*S **S 15 40 38.7 -7.9**
MAK pmax pmax
comp=Z,249nm,1.8s
MAK MLR MLR
comp=Z,136nm,13.0s
PALK Pallekele 28.64 183 LR LR 15 48 20.0
comp=Z,114nm,19.1s,baz=97,slow=38
BELG Belogornoye 29.42 315 LR LR 15 49 41.4
comp=Z,190nm,19.2s,baz=159,slow=40
BELG Belogornoye 29.42 315||*e*P **P 15 36 24.9 +3.9**
BELG pmax pmax
comp=Z,1.0nm,0.5s
KBZ Khabaz 30.99 297 LR LR 15 51 03.3
comp=Z,130nm,18.5s,baz=90,slow=40
KVAR Kislovodsk Arr 31.14 297 LR LR 15 50 37.6
comp=Z,169nm,20.0s,baz=254,slow=39
KIV Kislovodsk 31.15 297 *e*P **P 15 36 35.2 -1.4**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,75nm,15.0s
SOC Sochi 33.30 296 *e*P **P 15 36 52.1 -3.3**
SOC *e* 15 38 03.1
SOC *e*S **S 15 42 11.8 -4.0**
SOC *e*SS **SnSn 15 44 13.1 -2.9**
SOC *e*SSS SSS 15 44 32.2
SOC MLR MLR
comp=Z,107nm,18.0s
NRIK Noril'sk 33.51 3 LR LR 15 52 46.7
comp=Z,113nm,19.0s,baz=104,slow=40
KSRS Korea Array 36.30 74 LR LR 15 53 06.8
comp=Z,85nm,19.8s,baz=280,slow=38
PSI Prapat 36.44 151 LR LR 15 53 26.7
comp=Z,36nm,21.8s,baz=9.5,slow=38
OBN Obninsk 36.48 316 LR LR 15 53 41.4
comp=Z,40nm,20.7s,baz=160,slow=38
OBN Obninsk 36.48 316 *e*P **P 15 37 23.5 +0.9**
OBN *e* 15 38 45.9
comp=Z,4.0nm,0.8s
OBN pmax pmax
KLR Kul'dur 38.03 54 LR LR 15 53 46.7
comp=Z,91nm,21.1s,baz=264,slow=37
BRTR Keskin Array B 38.24 291 P **P 15 37 36.5 -1.5**
comp=Z,0.9nm,0.8s,baz=81,slow=10,SNR=2.3
BRTR LR LR 15 57 56.7
comp=Z,54nm,19.3s,baz=61,slow=43
comp=Z,0.9nm,0.8s
USRK Ussuriysk Ar. 38.36 62 LR LR 15 54 44.7
comp=Z,144nm,18.2s,baz=249,slow=38
YAK Yakutsk 39.18 33 LR LR 15 54 54.1
comp=Z,103nm,19.9s,baz=268,slow=38
YAK Yakutsk 39.18 33||*e*P **P 15 37 47.1 +1.7**
YAK pmax pmax
comp=Z,4.0nm,0.7s
JOW Kunigami 39.96 90 LR LR 15 55 47.4
comp=Z,148nm,20.7s,baz=102,slow=38
AKASG Malin Array Be 40.42 308 LR LR 15 57 38.6
comp=Z,162nm,19.1s,baz=64,slow=41
MLR Muntele Rosu 42.96 301 LR LR 15 59 32.7
comp=Z,268nm,19.8s,baz=68,slow=41
FINES FINESS Array B 43.13 324 P **P 15 38 17.4 -0.5**
comp=Z,1.3nm,0.7s,baz=103,slow=6.0,SNR=1.8
FINES LR LR 15 57 28.5
comp=Z,48nm,20.8s,baz=104,slow=38
comp=Z,1.3nm,0.7s
FINES FINESS Array B 43.13 324 P **P 15 38 17.0 -0.8**
ATD Arta Tunnel 43.14 246 LR LR 15 58 56.0
comp=Z,26nm,21.2s,baz=9.0,slow=40
MJAR Matsushiro Arr 44.51 72 LR LR 15 57 21.9
comp=Z,48nm,19.7s,baz=274,slow=36
ARCES ARCESS Array B 45.25 336 P **P 15 38 35.4 +0.6**
comp=Z,3.2nm,0.9s,baz=107,slow=8.7,SNR=1.7
ARCES LR LR 15 59 04.8
comp=Z,67nm,18.1s,baz=234,slow=38
comp=Z,3.2nm,0.9s
VRAC Vranov 48.65 307 LR LR 16 02 51.0
comp=Z,116nm,20.8s,baz=82,slow=40
LEM Lembang 48.79 146 LR LR 16 01 32.5
comp=Z,39nm,19.2s,baz=338,slow=39
DAV Davao City (W) 48.88 115 LR LR 16 02 08.8
comp=Z,70nm,19.4s,baz=346,slow=39
MA2 Magadan 49.05 39 LR LR 16 00 42.9
comp=Z,117nm,19.6s,baz=293,slow=37
HFS Hagfors 49.11 322 LR LR 16 02 18.7
comp=Z,64nm,18.1s,baz=84,slow=39
SEY Seymchan 49.69 34 P **P 15 39 10.1 +0.7**
comp=Z,2.2nm,0.9s,baz=251,slow=18,SNR=4.9
comp=Z,2.2nm,0.9s
SPITS Spitsbergen Ar 50.14 346 LR LR 16 06 03.4
comp=Z,37nm,18.2s,baz=91,slow=43
NB2 NORSAR Subarra 50.27 323 P **P 15 39 16.3 +2.4**
comp=Z,0.5nm,0.7s,baz=86,slow=7.4
NOA NORSAR Array B 50.27 323 P **P 15 39 13.1 -0.8**
comp=Z,0.9nm,0.7s,baz=86,slow=7.4,SNR=2.3
NOA LR LR 16 02 50.1
comp=Z,77nm,18.2s,baz=100,slow=39
comp=Z,0.9nm,0.7s
NOA NORSAR Array B 50.27 323 *e*P **P 15 39 16.7 +2.8**
NOA pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 50.60 307 P **P 15 39 16.1 -0.5**
comp=Z,0.1nm,0.3s,baz=69,slow=5.6,SNR=1.8
GERES LR LR 16 04 10.8
comp=Z,113nm,20.0s,baz=93,slow=40
comp=Z,0.1nm,0.3s
DAVOX Davos/Dischmat 53.61 306 LR LR 16 06 01.8
comp=Z,94nm,19.7s,baz=64,slow=40
KAPI Kappang 53.80 131 LR LR 16 07 45.8
comp=Z,19nm,19.0s,baz=305,slow=42
PETK Petropavlovsk- 53.81 46 LR LR 16 03 56.3
comp=Z,48nm,19.2s,baz=271,slow=37
BILL Bilibino 54.94 27 *e*P **P 15 39 50.0 +1.8**
BILL *e* 15 40 51.7
BILL *e* 15 41 53.4
BILL pmax pmax
comp=Z,1.0nm,0.9s
NOR Nord 55.92 350 *i*P **P 15 39 51.8 -3.4**
SIJI Sorong 58.42 118 LR LR 16 07 59.5
comp=Z,16nm,18.5s,baz=330,slow=39
EKA Eskdalemuir Ar 58.88 318 LR LR 16 09 12.9
comp=Z,75nm,18.4s,baz=170,slow=40
GUMO Guam 59.99 95 LR LR 16 07 24.0
comp=Z,16nm,19.8s,baz=321,slow=37
OPO Ambohidratompo 63.66 218 LR LR 16 05 24.5
comp=Z,43nm,19.2s,baz=64,slow=33
ESDC Sonseca Array 65.62 302 LR LR 16 14 54.1
comp=Z,50nm,18.2s,baz=50,slow=41
ILAR Eielson Array 72.43 20 P **P 15 41 44.1 +0.4**
comp=Z,0.5nm,0.8s,baz=324,slow=4.5,SNR=4.3
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 74.28 130 P **P 15 41 53.9 -1.4**
comp=Z,1.0nm,0.9s,baz=329,slow=5.7,SNR=6.8
WRA LR LR 16 19 25.1
comp=Z,23nm,21.8s,baz=178,slow=40
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 74.28 130 P **P 15 41 53.8 -1.4**
WRA Warramunga Arr 74.28 130 *e*P **P 15 41 55.5 +0.3**
WRA pmax pmax
comp=Z,1.0nm,0.9s
WB2 Warramunga Arr 74.29 130 P **P 15 41 54.1 -1.1**
TORD Torodi Ar. Bea 74.87 275 P **P 15 41 57.4 -1.5**
comp=Z,0.4nm,0.6s,baz=51,slow=7.8,SNR=2.4
comp=Z,0.4nm,0.6s
ASAR Alice Springs 76.80 132 P **P 15 42 07.7 -2.0**
comp=Z,1.1nm,1.0s,baz=318,slow=5.8,SNR=9.6
comp=Z,1.1nm,1.0s
ASAR Alice Springs 76.80 132 *e*P **P 15 42 08.6 -1.1**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
FRB Frobisher Bay 77.92 347 LR LR 16 20 52.5
comp=Z,34nm,18.4s,baz=354,slow=39
KOWA Kowa 78.71 280 LR LR 16 20 56.2
comp=Z,51nm,18.4s,baz=72,slow=39
DLBC Dease Lake 82.09 17 LR LR 16 24 00.5
comp=Z,55nm,18.0s,baz=325,slow=39
BBB Bella Bella 88.23 18 LR LR 16 30 52.8
comp=Z,39nm,18.7s,baz=335,slow=41
NEW Newport 94.32 13 LR LR 16 31 27.6
comp=Z,37nm,19.1s,baz=326,slow=39
YBH Yreka Blue Hor 99.31 19 LR LR 16 33 35.0
comp=Z,39nm,18.2s,baz=300,slow=38

*IDC **12** 15:34:13.4±1.0,35°.79N×82°.34E,h0km,mb3.5/6,*
mbtmp3.6/9,ML3.5/3,MS3.4/1,Error ellipse: s-maj=32.0km
s-min=19.3km az=44.0
ISC 12 15:34:15.2±0.9,36°.08N±0°.10×82°.5E±0°.1,h10km,n12,
σ2°.76/11,mb3.6/6,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**10.71**	**359**	Pn	**Pn**	**15 36 50.5**	**+1.9**
	0.6nm,0.3s,baz=188,slow=12,SNR=4.1						
MKAR				Sn	**Sn**	**15 38 43.7**	**-4.9**
	0.1nm,0.3s,baz=187,slow=24,SNR=2.3						
	1.8nm,0.4s						
KURBB	**Kurchatov Arra**	**14.82**	**350**	Pn	Pn	15 37 39.0	-5.7
	baz=184,slow=14,SNR=2.1						
ZALV	**Zalesovo Beam**	**17.95**	**4**	Pn	**Pn**	**15 38 22.7**	**-2.0**
	0.1nm,0.3s,baz=192,slow=13,SNR=9.5						
BVAR	**Borovoye Array**	**18.96**	**337**	P	**P**	**15 38 39.7**	**+3.3**
	0.2nm,0.3s,baz=137,slow=8.9,SNR=5.4						
	0.8nm,0.6s						
GEYT	**Alibeck**	**19.54**	**283**	P	**P**	**15 38 41.8**	**-1.1**
	0.1nm,0.3s,baz=76,slow=6.1,SNR=2.0						
	0.8nm,0.5s						
SONM	**Songino Array**	**21.22**	**49**	P	**P**	**15 39 04.9**	**+3.6**
	3.0nm,1.0s,baz=231,slow=9.1,SNR=9.4						
	3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**22.79**	**136**	P	**P**	**15 39 16.7**	**-1.4**
	0.2nm,0.3s,baz=306,slow=11,SNR=2.7						
	0.2nm,0.3s						
BRTR	**Keskin Array B**	**38.33**	**291**	P	**P**	**15 41 37.0**	**+0.7**
	0.6nm,0.9s,baz=64,slow=9.8,SNR=2.1						
	0.6nm,0.9s						
EIL	**Elat**	**40.11**	**275**	LR	LR	15 59 39.6	
	comp=Z,58nm,20.5s,baz=290,slow=38						
NOA	**NORSAR Array B**	**50.30**	**323**	P	**P**	**15 43 11.3**	**-0.4**
	1.1nm,1.0s,baz=78,slow=4.2,SNR=2.1						
	1.1nm,1.0s						
WRA	**Warramunga Arr**	**74.22**	**130**	P	**P**	**15 45 51.4**	**-1.1**
	0.6nm,0.9s,baz=333,slow=6.1,SNR=3.7						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**76.75**	**133**	P	**P**	**15 46 06.0**	**-0.9**
	0.4nm,0.8s,baz=302,slow=6.2,SNR=5.2						
	0.4nm,0.8s						

*IDC **12** 15:37:38.3±2.7,13°.83N×92°.62W,h0km,mb3.7/3,*
mbtmp3.5/5,ML3.3/2,MS3.3/2,Error ellipse: s-maj=53.6km
s-min=27.1km az=7.0
*GCG **12** 15:37:46.5±3.0,15°.53N×91°.92W,h18km±53km,MD3.9*
ISC 12 15:37:39.8±1.6,13°.9N±0°.2×92°.55W±0°.06,h10km,n14,
σ0°.98/16,mb3.7/3,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.26**	**49**	*e*P	**Pb**	**15 38 03.8**	**0.0**
FUG	**Fuego 3**	**1.75**	**71**	*e*P	Pn	15 38 01.5	-8.9
FUG				*e*S	**Sn**	**15 38 33.2**	**+0.3**
PCG	**Pacaya**	**1.95**	**75**	*e*P	**Pb**	**15 38 15.6**	**0.0**
PCG				*e*S	**Sn**	**15 38 38.0**	**+0.1**
NBG	**Las Nubes**	**2.25**	**72**	*e*P	**Pb**	**15 38 19.1**	**-1.6**
NBG				*e*S	**Sn**	**15 38 43.8**	**-1.5**
APG	**El Apazote**	**2.31**	**61**	Pn	**Pn**	**15 38 19.2**	**+1.1**
	332nm,0.3s,baz=270,slow=23,SNR=1.7						
APG				Sn	**Sb**	**15 38 49.9**	**-0.5**
	144nm,0.3s,baz=270,slow=23,SNR=1.3						
MRL	**Marmol**	**3.02**	**66**	*e*P	**Pn**	**15 38 29.8**	**+1.9**
MRL				*e*S	Sn	15 38 50.9	-13
CMIG	**Matias Romero**	**3.90**	**325**	Pn	**Pn**	**15 38 40.5**	**+0.7**
	1.2nm,0.3s,baz=152,slow=12,SNR=13						
CMIG				Sn	**Sn**	**15 39 25.6**	**-0.1**
	2.6nm,0.3s,baz=112,slow=13,SNR=3.9						
	2.6nm,0.3s						
TXAR	**Lajitas Array**	**18.50**	**328**	P	**Pn**	**15 41 56.0**	**-0.5**
	baz=146,slow=12,SNR=4.9						
	0.6nm,0.8s						
SADO	**Sadowa**	**32.83**	**18**	LR	LR	15 57 18.5	
	comp=Z,22nm,19.4s,baz=154,slow=36						
NVAR	**Mina Array Bea**	**33.43**	**322**	P	**P**	**15 44 18.9**	**-0.3**
	0.7nm,0.7s,baz=134,slow=9.1,SNR=5.5						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**51.02**	**347**	P	**P**	**15 46 42.0**	**+0.2**
	1.5nm,0.7s,baz=142,slow=8.3,SNR=3.6						
	1.5nm,0.7s						
INK	**Inuvik**	**60.40**	**344**	LR	LR	16 17 22.6	
	comp=Z,50nm,18.2s,baz=252,slow=40						
ILAR	**Eielson Array**	**62.74**	**337**	P	**P**	**15 48 05.5**	**+0.7**
	0.5nm,1.0s,baz=120,slow=5.3,SNR=3.2						
	0.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**145.93**	**340**	PKPbc	**PKPab**	**15 57 19.7**	**-1.2**
	0.6nm,0.3s,baz=345,slow=3.1,SNR=10.0						

IDC 12 15:55:20.4±8.2,26°.00S×28°.56E,h0km,mbtmp2.5/1,
ML2.2/1,Error ellipse: s-maj=83.7km s-min=56.2km
az=137.0,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**3.93**	**228**	Pn	Pn	15 56 23.4	+1.3
	0.1nm,0.3s,baz=67,slow=7.7,SNR=0.9						
BOSA				Pg	Pb	15 56 31.0	+0.3
	0.3nm,0.3s,baz=57,slow=12,SNR=1.8						
BOSA				Lg	Lg	15 57 24.5	
	0.7nm,0.3s,baz=140,slow=18,SNR=6.8						
	1.0nm,0.6s						
I47ZA	**BOSHOF INFRASO**	**3.94**	**228**	I		16 24 50.0	
	baz=50,slow=330,SNR=1.1						
I35NA	**TSUMEB INFRASO**	**12.20**	**302**	I		17 11 40.0	
	baz=123,slow=308,SNR=2.4						

MAN 12 16:00:37.5,8°.31N×126°.01E,h2km,mb4.6,ML3.4,MS3.3,
4C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.37**	**110**	||*i*P	Pn	16 00 48.8	-1.0
BIPH				*e*S	Sb	16 00 56.6	+3.7
BUTP	**Butuan**	**0.76**	**329**	||*e*P	Pg	16 00 52.5	+0.5
BUTP				*e*S	Sb	16 01 04.6	+0.4
CGP	**Cagayan de Oro**	**1.31**	**276**	||*e*P	Pg	16 00 58.4	-4.3
CGP				*e*S	Sg	16 01 17.2	-2.5
GLSP	**General Luna,**	**1.47**	**4**	||*e*P	Pn	16 01 02.5	-2.5
GLSP				*e*S	Sn	16 01 25.6	+0.8
SCPH	**Surigao**	**1.55**	**341**	*e*P	Pg	16 01 10.6	+3.4
SCPH				*i*S	Sg	16 01 33.9	+6.6
GHBP	**Garcia Hernand**	**2.12**	**308**	||*e*P	Pn	16 01 14.2	+0.3
GHBP				*i*S	Sn	16 01 41.6	+0.6
DDMP	**Don Marcelino,**	**2.21**	**188**	||*e*P	Pn	16 01 15.5	+0.3
DDMP				*e*S	Sn	16 01 44.1	+0.9
TABP	**Talibon, Bohol**	**2.42**	**317**	||*e*P	Pn	16 01 17.4	-0.7
TABP				*i*S	Sn	16 01 47.1	-1.3

*JMA **12** 16:09:53.9±0.3,31°.N±1°.×14°.2E±°,h57km,MV4.1/12,*
NEAR TORISHIMA IS
*NEIC **12** 16:09:53.5±1.4,30°.58N±0°.05×142°.13E±0°.07,h10km±1km,*
mb4.7/32,Error ellipse: s-maj=11.8km s-min=6.0km
az=307.0
*NIED **12** 16:09:53.9,30°.68N×142°.27E,h57km,MW4.1,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M_{rr}1.05; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.91; $M_{r\theta}$-0.32; $M_{\theta\phi}$0.15; $M_{\phi r}$1.37;
Fault plane solution: $M_0$1.72000×10^{15} NP1:
ϕ_s171.00000°,δ18.00000°,λ93.00000°. NP2:
ϕ_s347.00000°,δ72.00000°,λ89.00000°.
*IDC **12** 16:09:53.4±0.8,30°.43N×141°.56E,h0km,mb3.9/16,*
mbtmp3.9/20,ML3.1/4,MS3.1/5 Error ellipse:
s-maj=28.7km s-min=13.4km az=76.0
ISC 12 16:09:55.8±0.6,30°.56N±0°.05×141°.9E±0°.1,h23km,n74,
σ1°.29/78,mb4.4/26,MS3.1/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.09**	**325**	*e*P	**Pn**	**16 10 42.0**	**-1.1**
JHJ2	**Mitsune**	**3.11**	**325**	Pn	**Pn**	**16 10 41.8**	**-1.7**
JHJ2	**Mitsune**	**3.11**	**325**	P	**Pn**	**16 10 43.0**	**-0.5**
JHJ	**Hachijo jima 2**	**3.13**	**325**	Pn	**Pn**	**16 10 42.8**	**-1.0**
	12nm,0.3s,baz=91,slow=22,SNR=15						
JHJ				Sn	**Sn**	**16 11 16.1**	**-4.4**
	20nm,0.3s,baz=267,slow=21,SNR=2.4						
	75nm,0.6s						
CBIJ	**Chichi jima**	**3.46**	**176**	*e*P	**Pn**	**16 10 48.4**	**0.0**
CBIJ				*e*S	**Sn**	**16 11 27.6**	**-1.1**
JCJ	**Chichijima**	**3.46**	**176**	Pn	**Pn**	**16 10 47.5**	**-0.8**
	7.3nm,0.3s,baz=29,slow=20,SNR=11						
JCJ				Sn	**Sn**	**16 11 24.4**	**-4.3**
	12nm,0.3s,baz=269,slow=23,SNR=2.0						
	22nm,0.3s						
JCJ	**Chichijima**	**3.46**	**176**	Pn	**Pn**	**16 10 46.0**	**-2.4**
JMKN	**Mikurajimanish**	**3.86**	**330**	*e*P	**Pn**	**16 10 52.9**	**-0.9**
JMKN				*e*S	**Sn**	**16 11 37.5**	**-1.0**
BSO1	**Boso 1**	**4.16**	**349**	*e*P	**Pn**	**16 10 56.1**	**-1.3**
BSO1				*e*S	**Sn**	**16 11 43.0**	**-1.9**
JOD2	**Odawara 2**	**5.26**	**334**	*e*P	**Pn**	**16 11 12.4**	**-0.6**
JOD2				*e*S	**Sn**	**16 12 11.9**	**-1.0**
JYT	**Yasato**	**5.83**	**346**	Pn	**Pn**	**16 11 19.1**	**-1.8**
JRY	**Ryogami san**	**6.00**	**336**	P	**Pn**	**16 11 23.8**	**+0.5**
JRY				*e*S	**Sn**	**16 12 31.0**	**-0.2**
INU	**Inuyama**	**6.31**	**320**	Pn	**Pn**	**16 11 28.3**	**+0.9**
JGF	**Kuroka**	**6.32**	**324**	Pn	**Pn**	**16 11 27.0**	**-0.6**
MJAR	**Matsushiro Arr**	**6.72**	**334**	Pn	**Pn**	**16 11 33.6**	**+0.5**
	0.5nm,0.3s,baz=160,slow=11,SNR=46						
MJAR				Sn	**Sn**	**16 12 49.0**	**+0.1**
	0.2nm,0.3s,baz=140,slow=27,SNR=4.0						
MJAR				LR	LR	16 14 11.8	
	comp=Z,103nm,19.1s,baz=196,slow=38						
	4.4nm,0.5s						
MAJO	**Matsushiro**	**6.72**	**334**	Pn	**Pn**	**16 11 31.9**	**-1.2**
MJB9	**Matsu-Tunnel**	**6.73**	**334**	Pn	**Pn**	**16 11 31.5**	**-1.7**
JMM	**Marumori**	**7.34**	**353**	Pn	**Pn**	**16 11 39.0**	**-2.7**
KSRS	**Korea Array**	**13.49**	**304**	Pn	**Pn**	**16 13 08.7**	**+2.9**
	0.2nm,0.3s,baz=116,slow=14,SNR=5.2						
KSRS				LR	LR	16 18 19.5	
	comp=Z,37nm,18.1s,baz=110,slow=38						
USA0B	**Ussuriysk Arra**	**15.72**	**333**	P	**Pn**	**16 13 37.3**	**+1.6**
USRK	**Ussuriysk Ar.**	**15.72**	**333**	Pn	**Pn**	**16 13 34.3**	**-1.4**
	0.1nm,0.3s,baz=142,slow=12,SNR=2.3						
	0.9nm,0.7s						
TATO	**Taipei**	**18.91**	**258**	P	**P**	**16 14 15.0**	**0.0**
YHNB	**Yeheng**	**19.12**	**257**	P	**P**	**16 14 17.6**	**+0.3**
NACB	**Ninganchiao**	**19.13**	**256**	P	**P**	**16 14 17.1**	**-0.3**
NACB				IAmb	IAmb	16 14 27.1	
	comp=Z,26nm,1.0s						
YULB	**Yu-li**	**19.70**	**254**	P	**P**	**16 14 23.3**	**-0.4**
SSLB	**Suanglung**	**19.82**	**255**	P	**P**	**16 14 25.4**	**+0.4**
SSLB				IAmb	IAmb	16 14 26.5	
	comp=Z,58nm,1.4s						
KLR	**Kul'dur**	**20.18**	**340**	P	**P**	**16 14 28.7**	**+0.1**

comp=Z,1.2nm,0.5s,baz=148,slow=11,SNR=5.0
comp=Z,1.2nm,0.5s
TPUB Ta-pu 20.30 254 P P 16 14 31.0 +0.8
TPUB IAmb IAmb 16 14 48.8
comp=Z,50nm,1.3s
H11S3 WAKE ISLAND Hy 25.47 112 T T 16 42 07.5
baz=304
H11S1 WAKE ISLAND Hy 25.47 112 T T 16 42 03.5
baz=304
H11S2 WAKE ISLAND Hy 25.48 112 T T 16 42 14.6
baz=304
SONM Songino Array 32.13 313 P P 16 16 22.5 +0.9
comp=Z,1.2nm,0.6s,baz=119,slow=8.6,SNR=4.0
SONM LR LR 16 30 07.5
comp=Z,35nm,18.2s,baz=80,slow=38
comp=Z,1.2nm,0.6s
CMAR Chiang Mai Arr 40.70 263 P P 16 17 33.0 -1.9
comp=Z,0.5nm,0.3s,baz=62,slow=6.1,SNR=8.8
CMAR LR LR 16 35 24.1
comp=Z,25nm,19.2s,baz=80,slow=38
comp=Z,0.5nm,0.3s
MTN Manton Dam 44.39 195 P P 16 18 04.1 -0.6
MTN IAmb IAmb 16 18 05.4
comp=Z,22nm,1.3s
ZALV Zalesovo Beam 46.76 317 P P 16 18 23.9 +0.8
comp=Z,0.4nm,0.3s,baz=105,slow=8.5,SNR=2.5
ZALV PcP PcP 16 19 56.1 -0.1
comp=Z,0.8nm,0.5s,baz=111,slow=6.3,SNR=2.9
comp=Z,0.4nm,0.3s
KNRA Kununurra 47.69 197 P P 16 18 30.4 -0.3
KNRA IAmb IAmb 16 18 43.6
comp=Z,11nm,1.4s
MK31 Makanchi Array 48.15 307 P P 16 18 34.3 +0.2
MKAR Makanchi Array 48.15 307 P P 16 18 34.2 +0.1
comp=Z,1.7nm,0.6s,baz=86,slow=9.5,SNR=15
comp=Z,1.7nm,0.6s
MAKZ Makanchi 48.36 307 P P 16 18 35.7 0.0
KURK Kurchatov 50.44 313 P P 16 18 51.0 -0.5
KURK IAmb IAmb 16 18 52.8
comp=Z,8.7nm,1.4s
WB0 Warramunga Arr 50.56 189 P P 16 18 52.2 -0.5
WR0 Warramunga Arr 50.73 189 P P 16 18 53.4 -0.5
WR0 IAmb IAmb 16 18 54.3
comp=Z,5.2nm,0.7s
WB2 Warramunga Arr 50.74 189 P P 16 18 53.2 -0.8
WB2 IAmb IAmb 16 19 06.2
comp=Z,5.1nm,0.7s
WRA Warramunga Arr 50.74 189 P P 16 18 53.6 -0.4
comp=Z,4.8nm,0.5s,baz=6.2,slow=7.6,SNR=113
comp=Z,4.8nm,0.5s
WRA Warramunga Arr 50.74 189 P P 16 18 52.4 -1.6
BOOM Boomskoye usch 53.12 302 P P 16 19 12.2 +0.3
AS31 Alice Springs 54.46 189 P P 16 19 20.8 -0.8
ASAR Alice Springs 54.47 189 P P 16 19 21.0 -0.6
comp=Z,1.5nm,0.6s,baz=360,slow=4.7,SNR=66
comp=Z,1.5nm,0.6s
ASAR Alice Springs 54.47 189 P P 16 19 20.7 -0.9
ILAR Eielson Array 54.81 30 P P 16 19 27.9 +4.2
comp=Z,0.3nm,0.6s,baz=276,slow=6.4,SNR=4.2
comp=Z,0.3nm,0.6s
BERG Berg Lake 56.32 35 P P 16 19 33.3 -1.3
KK31 Karatay Array 56.92 304 P P 16 19 39.5 +0.4
KK31 IAmb IAmb 16 19 40.4
comp=Z,2.9nm,0.6s
KKAR Karatay Array 56.92 304 P P 16 19 39.6 +0.5
KKAR IAmb IAmb 16 19 40.4
comp=Z,2.9nm,0.6s
NIL Nilore 57.27 293 P P 16 19 42.3 +0.6
NIL IAmb IAmb 16 19 43.2
comp=Z,5.0nm,0.8s
GAR Garm 58.05 299 P P 16 19 47.4 +0.1
CHGR Chuyangaron 59.01 299 P P 16 19 54.5 +0.5
STKA Stephens Creek 62.10 180 P P 16 20 15.4 +0.6
comp=Z,0.9nm,0.4s,baz=341,slow=8.6,SNR=4.5
comp=Z,0.9nm,0.4s
STKA Stephens Creek 62.10 180 P P 16 20 15.1 +0.4
FORT Forrest 62.41 193 P P 16 20 16.6 -0.3
ABKAR Akbulak array 62.54 313 P P 16 20 17.5 -0.2
BBOO Buckleboo 63.27 186 P P 16 20 22.7 +0.1
MORW Morawa 64.23 205 P P 16 20 28.4 -0.5
MORW IAmb IAmb 16 20 31.2
comp=Z,7.8nm,1.4s
GEYT Alibeck 67.46 302 P P 16 20 51.6 +1.6
comp=Z,2.0nm,0.6s,baz=29,slow=6.6,SNR=6.1
comp=Z,2.0nm,0.6s
GEYT Alibeck 67.46 302 P P 16 20 50.2 +0.3
GEYT IAmb IAmb 16 20 52.8
comp=Z,2.9nm,0.8s
FINES FINESS Array B 74.75 333 P P 16 21 33.7 +0.1
comp=Z,0.7nm,0.4s,baz=66,slow=6.3,SNR=9.6
comp=Z,0.7nm,0.4s
KBZ Khabaz 75.50 312 P P 16 21 39.2 +1.0
comp=Z,2.9nm,0.9s,baz=90,slow=4.9,SNR=6.5
comp=Z,2.9nm,0.9s
AKASG Malin Array Be 79.70 323 P P 16 22 01.5 -0.1
comp=Z,0.2nm,0.3s,baz=48,slow=5.9,SNR=1.9
comp=Z,0.2nm,0.3s
NC204 NORSAR Array S 80.28 338 P P 16 22 04.6 0.0
NC204 IAmb IAmb 16 22 22.5
comp=Z,11nm,1.0s
NOA NORSAR Array B 80.32 338 P P 16 22 04.5 -0.3
comp=Z,0.3nm,0.5s,baz=41,slow=5.4,SNR=2.0
comp=Z,0.3nm,0.5s
BRTR Keskin Array B 83.49 313 P P 16 22 22.9 +0.9
comp=Z,0.6nm,0.6s,baz=89,slow=6.6,SNR=3.9
comp=Z,0.6nm,0.6s
RAYN Ar Rayn 83.56 293 P P 16 22 22.9 +0.4
RAYN IAmb IAmb 16 22 24.7
comp=Z,9.8nm,1.3s
ANMO Albuquerque 88.43 50 LR LR 16 57 10.0
comp=Z,27nm,21.0s,baz=158,slow=32
TXAR Lajitas Array 93.71 53 P P 16 23 15.1 +3.9
comp=Z,0.2nm,0.7s,baz=289,slow=2.8,SNR=1.7
comp=Z,0.2nm,0.7s
TORD Torodi Ar. Bea 122.10 313 PKP PKPdf 16 28 49.0 -0.3
comp=Z,0.3nm,0.5s,baz=50,slow=1.9,SNR=2.3

GCMT 12 16:17:18.0±0.4, 41°.42S±0°.02×84°.96W±0°.03, h20km±1km, MW4.9/91, Moment Tensor Solution. s22,c24; s91,c112; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.49±.13; $M_{\theta\theta}$0.75±.13; $M_{\phi\phi}$-0.26±.12; $M_{r\theta}$0.26±.21; $M_{\theta\phi}$-2.42±.09; $M_{\phi r}$0.16±.20; **Best double couple:** $M_0$2.49700×10^{16} **NP1:**ϕ_s264.00000°,δ85.00000°, λ-172.00000°. **NP2:**ϕ_s174.00000°,δ82.00000°, λ-5.00000°. **Principal axes:** T 2.7200, Plg2.0000°, Azm39.0000°; N -0.4470, Plg81.0000°, Azm298.0000°; P -2.2730, Plg9.0000°, Azm129.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function West Chile Rise**

*JMA **12** 16:18:05.3±0.1, 36°.5N±0°.2×140°.9E±0°.4, h19km±1km, MV3.7/40, E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .
*NIED **12** 16:18:05.3, 36°.53N×140°.94E, h19km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.21; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$0.98; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.44; $M_{\phi r}$1.22; Fault plane solution: $M_0$1.51000×10^{14} NP1:ϕ_s37.00000°, δ29.00000°, λ-16.00000°. NP2:ϕ_s141.00000°, δ83.00000°, λ-118.00000°.*
*IDC **12** 16:18:06.9±3.4, 35°.87N×140°.63E, h0km, mb3.1/1, mbtmp3.2/4, ML2.5/3, MS3.1/1 Error ellipse: s-maj=69.8km s-min=27.5km az=47.0*
ISC 12 16:18:04.5±1.8, 36°.55N±0°.04×140°.94E±0°.07, h15km±11km, n20, σ0°54/18, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.31**	**281**	*i* P	**Pb**	**16 18 11.8**	**+0.1**
JHO				*e*S	**Sb**	**16 18 16.4**	**-0.1**
JHYU	**Hitachinakayam**	**0.36**	**234**	*i* P	**Pb**	**16 18 12.4**	**0.0**
JHYU				S	**Sb**	**16 18 17.8**	**-0.1**
JFFD	**Fukushimafurud**	**0.62**	**331**	‖ *i* P	**Pb**	**16 18 17.4**	**+0.4**
JFFD				‖S	**Sb**	**16 18 25.9**	**+0.4**
JYT	**Yasato**	**0.69**	**242**	*i* P	**Pb**	**16 18 18.2**	**+0.1**
JYT				S	**Sg**	**16 18 27.3**	**+0.4**
JFK	**Kawauchi**	**0.81**	**356**	‖ *i* P	**Pb**	**16 18 19.9**	**-0.4**
JSB	**Shiboa**	**0.92**	**297**	P	**Pn**	**16 18 23.1**	**+0.2**
JSB				S	**Sn**	**16 18 36.0**	**+0.2**
JSMT	**Sammumatsuo**	**0.99**	**204**	P	**Pn**	**16 18 24.4**	**+0.6**
JOTO	**OTAMA OYAMA**	**1.12**	**334**	*i* P	**Pg**	**16 18 25.8**	**-0.3**
JOTO				S	**Sn**	**16 18 41.3**	**+0.5**
JAG	**Ashikaga**	**1.21**	**264**	*e*P	**Pn**	**16 18 26.0**	**-0.8**
MJAR	**Matsushiro Arr**	**2.20**	**271**	Pn	**Pn**	**16 18 41.4**	**+0.9**
1.7nm,0.3s,baz=110,slow=11,SNR=39							
MJAR				Sn	**Sb**	**16 19 10.0**	**-1.1**
1.6nm,0.3s,baz=221,slow=26,SNR=3.0							
5.7nm,0.4s							
USRK	**Ussuriysk Ar.**	**10.24**	**321**	Pn	Pn	16 20 40.7	+10
0.2nm,0.3s,baz=121,slow=17,SNR=1.8							
0.5nm,0.4s							
KSRS	**Korea Array**	**10.45**	**279**	Pn	Pn	16 20 38.8	+5.1
0.1nm,0.3s,baz=91,slow=14,SNR=2.0							
0.6nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.23**	**119**	T	T	16 53 32.2	
baz=312,slow=75,SNR=30							
H11N1	**WAKE ISLAND Hy**	**28.24**	**119**	T	T	16 53 32.8	
baz=312,slow=75,SNR=35							
H11N3	**WAKE ISLAND Hy**	**28.25**	**119**	T	T	16 53 33.5	
baz=312,slow=75,SNR=23							
H11S1	**WAKE ISLAND Hy**	**28.92**	**121**	T	T	16 54 22.8	
baz=314,slow=75,SNR=117							
H11S3	**WAKE ISLAND Hy**	**28.92**	**122**	T	T	16 54 22.8	
baz=314,slow=75,SNR=100							
H11S2	**WAKE ISLAND Hy**	**28.94**	**122**	T	T	16 54 18.1	
baz=314,slow=75,SNR=70							
NRIK	**Noril'sk**	**43.55**	**336**	LR	LR	16 44 52.3	
comp=Z,26nm,21.7s,baz=86,slow=36							
WRA	**Warramunga Arr**	**56.53**	**187**	P	**P**	**16 27 45.9**	**-0.4**
0.3nm,0.9s,baz=3.4,slow=7.1,SNR=1.4							
0.3nm,0.9s							

IDC 12 16:19:28.9±7.0, 26°.07S×25°.29E, h0km, mbtmp2.3/1, ML1.7/1, Error ellipse: s-maj=50.6km s-min=45.6km az=92.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**2.53**	**181**	Pn	Pn	16 20 11.3	-0.1
0.1nm,0.3s,baz=4.2,slow=18,SNR=1.8							
BOSA				Pg	Pb	16 20 15.8	+0.4
0.2nm,0.3s,baz=0.8,slow=15,SNR=2.5							
BOSA				Sn	Sn	16 20 42.1	-0.9
0.2nm,0.3s,baz=290,slow=4.2,SNR=1.5							
BOSA				Lg	Lg	16 20 49.6	
0.4nm,0.3s,baz=258,slow=16,SNR=5.4							
BOSA				Rg	Rg	16 20 57.2	
6.0nm,0.9s,baz=161,slow=15,SNR=6.2							
3.7nm,1.1s							
I47ZA	**BOSHOF INFRASO**	**2.54**	**181**	I		16 36 10.0	
0.3nm,0.7s,baz=0.8,slow=325,SNR=4.6							
I35NA	**TSUMEB INFRASO**	**9.88**	**312**	I		17 20 00.0	
baz=136,slow=309,SNR=1.2							

*DJA **12** 16:36:21.8±0.2, 2°S±3°×12°7E±°, h10km, M4.3/16, mb4.5/6, mB5.0/2, MLv4.2/16, Mw(mB)4.3/2*
*NEIC **12** 16:36:23.6±1.4, 2°.46S±0°.09×127°.37E±0°.04, h51km±9km, mb4.2/15, Error ellipse: s-maj=13.2km s-min=5.9km az=191.0*
*IDC **12** 16:36:26.2±2.2, 2°.54S×127°.56E, h80km±25km, mb3.6/3, mbtmp4.1/6, MS3.0/5, Error ellipse: s-maj=17.9km s-min=15.9km az=69.0*
ISC 12 16:36:23.6±0.6, 2°.52S±0°.05×127°.37E±0°.06, h50km, n65, σ1§17/64, mb4.2/7, MS3.5/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.77**	**200**	P	**Pn**	**16 36 36.3**	**-1.9**
KRAI	**Karang Ratu**	**1.30**	**128**	P	**Pn**	**16 36 46.7**	**+1.4**
AAI	**Ambon**	**1.43**	**145**	P	**Pn**	**16 36 48.1**	**+1.0**
MSAI	**Masohi**	**1.76**	**118**	P	**Pn**	**16 36 53.8**	**+2.1**
LBMI	**Labuha**	**1.87**	**4**	P	**Pn**	**16 36 54.3**	**+1.1**
BNDI	**Bandanaira**	**3.22**	**128**	P	**Pn**	**16 37 13.1**	**+1.4**
BNDI	**Bandanaira**	**3.22**	**128**	P	**Pn**	**16 37 13.6**	**+1.9**
TNTI	**Ternate**	**3.27**	**360**		**Pn**	**16 37 10.7**	**-1.6**
TNTI	**Ternate**	**3.27**	**360**	P	**Pn**	**16 37 11.9**	**-0.4**
SIJI	**Sorong**	**4.23**	**67**	P	**Pn**	**16 37 25.5**	**+0.1**
36nm,0.3s,baz=246,slow=20,SNR=132							
SIJI				S	**Sn**	**16 38 13.2**	**-0.5**
37nm,0.2s,baz=92,slow=21,SNR=17							
SIJI				LR	LR	16 39 42.9	
comp=Z,109nm,19.5s,baz=165,slow=48							
SIJI	**Sorong**	**4.23**	**67**	P	**Pn**	**16 37 25.6**	**+0.1**
FAKI	**Fak Fak**	**4.89**	**95**	Pn	**Pn**	**16 37 34.4**	**-0.3**
FAKI	**Fak Fak**	**4.89**	**95**	P	**Pn**	**16 37 34.3**	**-0.3**
FAKI	**Fak Fak**	**4.89**	**95**	P	**Pn**	**16 37 34.7**	**+0.1**
GTOI	**Gorontalo**	**5.37**	**306**	P	**Pn**	**16 37 42.8**	**+1.7**
0.1nm858nm23nm,0.4s							
APSI	**Ampana**	**5.94**	**285**	P	**Pn**	**16 37 48.9**	**0.0**
0.5nm2μm104nm,0.6s							
RKPI	**Ransiki, Papua**	**6.88**	**82**	P	**Pn**	**16 38 00.8**	**-1.1**
0.6nm22nm,0.5s							
BNSI	**Bone**	**7.49**	**255**	P	**Pn**	**16 38 12.0**	**+1.8**
0.1nm10nm,1.6s							
TOLI2	**Tolitoli**	**7.51**	**299**	Pn	**Pn**	**16 38 08.6**	**-1.9**
SPSI	**Sidrap Palu**	**7.72**	**259**	P	**Pn**	**16 38 16.4**	**+2.9**
0.1nm16nm,0.6s							
BSSI	**Bau Bau, Buton**	**7.75**	**242**	P	**Pn**	**16 38 15.6**	**+1.8**
BKSI	**Bulukumba**	**7.75**	**249**	P	**Pn**	**16 38 14.8**	**+1.0**
0.1nm15nm,0.6s							
KAPI	**Kappang**	**7.99**	**252**	P	**Pn**	**16 38 20.2**	**+3.0**
10nm,0.6s,baz=72,slow=12,SNR=4.7							
KAPI				LR	LR	16 41 14.2	
comp=Z,31nm,21.2s,baz=84,slow=35							
KAPI	**Kappang**	**7.99**	**252**	Pn	**Pn**	**16 38 18.6**	**+1.4**
MTN	**Manton Dam**	**10.92**	**160**		Pn	16 38 53.0	-4.2
KDU	**Kakadu**	**11.30**	**154**	P	**Pn**	**16 39 02.8**	**+0.4**
MYLDM	**Lahad Datu**	**11.70**	**311**	Pn	**Pn**	**16 39 07.1**	**-0.8**
KNRA	**Kununurra**	**13.15**	**174**	P	**Pn**	**16 39 28.0**	**+0.3**
UGM	**Wanagama**	**17.61**	**252**		**Pn**	**16 40 25.5**	**0.0**
WB0	**Warramunga Arr**	**18.47**	**159**	P	**P**	**16 40 34.7**	**-0.8**
WB0				IAmb	IAmb	16 40 36.4	
comp=Z,16nm,0.7s							
WRAB	**Tennant Creek**	**18.61**	**159**	P	**P**	**16 40 36.6**	**-0.4**
WRAB				IAmb	IAmb	16 40 38.7	
comp=Z,15nm,1.1s							
WRAB	**Tennant Creek**	**18.61**	**159**	P	**P**	**16 40 37.1**	**+0.2**
WRA	**Warramunga Arr**	**18.61**	**159**	P	**P**	**16 40 36.9**	**-0.1**
comp=Z,5.9nm,0.4s,baz=341,slow=12,SNR=120							
WRA				S	**Sn**	**16 44 03.6**	**-1.5**
comp=Z,0.3nm,0.5s,baz=346,slow=21,SNR=2.0							
WRA	**Warramunga Arr**	**18.61**	**159**	P	**P**	**16 40 35.5**	**-1.5**
WB2	**Warramunga Arr**	**18.61**	**159**	P	**P**	**16 40 37.0**	**-0.1**
WB2				IAmb	IAmb	16 40 38.7	
comp=Z,14nm,1.1s							
WB1	**Warramunga Ar.**	**18.63**	**159**	P	**P**	**16 40 37.3**	**+0.1**
WR0	**Warramunga Arr**	**18.70**	**159**	P	**P**	**16 40 37.5**	**-0.5**
WR0				IAmb	IAmb	16 40 38.9	
comp=Z,11nm,1.1s							
COEN	**Coen**	**19.32**	**127**	P	**P**	**16 40 45.3**	**+0.5**
COEN				IAmb	IAmb	16 40 46.8	
comp=Z,6.2nm,0.7s							
COEN	**Coen**	**19.32**	**127**	P	**P**	**16 40 45.7**	**+0.9**
QIS	**Mount Isa**	**21.54**	**147**	P	**P**	**16 41 10.1**	**+1.3**
AS31	**Alice Springs**	**21.95**	**164**	P	**P**	**16 41 13.1**	**-0.2**
ASAR	**Alice Springs**	**21.96**	**164**	P	**P**	**16 41 13.3**	**0.0**
comp=Z,3.9nm,0.4s,baz=346,slow=12,SNR=140							
ASAR				S	**S**	**16 45 10.2**	**-2.9**
comp=Z,2.2nm,1.0s,baz=348,slow=21,SNR=13							
comp=Z,3.9nm,0.4s							
ASAR	**Alice Springs**	**21.96**	**164**	P	**P**	**16 41 13.1**	**-0.1**
AS01	**Alice Springs**	**21.97**	**164**	P	**P**	**16 41 13.8**	**+0.4**
WRKA	**Warakurna**	**22.41**	**178**	P	**P**	**16 41 18.5**	**+0.4**
MTSU	**Mount Surprise**	**22.74**	**134**	P	**P**	**16 41 22.5**	**+0.8**
GUMO	**Guam**	**23.61**	**47**	LR	LR	16 49 59.7	
comp=Z,14nm,21.9s,baz=234,slow=35							
RABL	**Rabaul**	**24.81**	**95**	P	**P**	**16 41 40.3**	**-1.0**
OOD	**Oodnadatta**	**26.36**	**163**	P	**P**	**16 41 55.1**	**-0.1**
FORT	**Forrest**	**28.12**	**179**	P	**P**	**16 42 11.0**	**+0.1**
FORT				IAmb	IAmb	16 42 26.6	
comp=Z,16nm,1.1s							
FORT	**Forrest**	**28.12**	**179**	P	**P**	**16 42 11.0**	**+0.1**
MULG	**Mulgathing**	**28.33**	**168**	P	**P**	**16 42 13.8**	**+1.0**
LCRK	**Leigh Creek**	**29.62**	**161**	P	**P**	**16 42 24.6**	**+0.4**
BBOO	**Buckleboo**	**31.22**	**166**	P	**P**	**16 42 37.9**	**-0.4**
BBOO				IAmb	IAmb	16 42 44.5	
comp=Z,34nm,1.5s							
BBOO	**Buckleboo**	**31.22**	**166**	P	**P**	**16 42 38.5**	**+0.1**
STKA	**Stephens Creek**	**32.13**	**157**	P	**P**	**16 42 46.1**	**-0.2**
comp=Z,1.4nm,0.5s,baz=336,slow=7.6,SNR=5.9							
comp=Z,1.4nm,0.5s							
CAN	**Canberra**	**38.32**	**151**	P	**P**	**16 43 40.6**	**+1.0**
CAN	**Canberra**	**38.32**	**151**	P	**P**	**16 43 39.9**	**+0.3**
DZM	**Mont Dzumac**	**42.63**	**120**	LR	LR	17 01 49.0	
comp=Z,84nm,19.5s,baz=185,slow=36							
SONM	**Songino Array**	**53.40**	**343**	P	**P**	**16 45 37.6**	**-0.7**
BKZ	**Black Stump Fm**	**57.61**	**136**	P	**P**	**16 46 06.8**	**-1.9**
MKAR	**Makanchi Array**	**63.06**	**327**	P	**P**	**16 46 45.8**	**0.0**
comp=Z,0.2nm,0.6s,baz=123,slow=7.1,SNR=2.4							
comp=Z,0.2nm,0.6s							
VNDA	**Vanda**	**77.19**	**173**	P	**P**	**16 48 11.5**	**-0.2**
VNDA				IAmb	IAmb	16 48 40.2	
comp=Z,3.2nm,1.4s							
SBA	**Scott Base**	**78.10**	**172**	P	**P**	**16 48 17.9**	**+1.1**
SBA				IAmb	IAmb	16 48 29.6	
comp=Z,3.1nm,1.5s							
ATD	**Arta Tunnel**	**85.13**	**282**	LR	LR	17 28 04.9	
comp=Z,21nm,18.5s,baz=16,slow=36							

*NEIC **12** 16:50:50.8±1.7, 4°.79N±0°.07×95°.68E±0°.06, h91km±5km, mb4.7/67, Error ellipse: s-maj=9.6km s-min=8.6km az=186.0*
*BJI **12** 16:50:51.0±0.0, 4°.80N×95°.70E, h90km, mb4.5/35, mB4.7/15, Ms4.1/4, Ms7 3.8/3*
*DJA **12** 16:50:53.5±0.2, 5°N±3°×9°6E±°, h103km±2km, M4.7/42, mB5.1/12, mb4.7/42, MLv4.9/14, Mw(mB)4.5/12*
*IDC **12** 16:50:53.3±1.2, 4°.92N×95°.93E, h112km±10km, mb4.0/24, mbtmp4.4/28, MS3.0/5, Error ellipse: s-maj=17.6km s-min=7.7km az=46.0*
ISC 12 16:50:51.4±0.7, 4°.82N±0°.05×95°.70E±0°.05, h102km±6km, n245, σ1§41/256, mb4.5/71, 18C-4D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.90**	**128**	P	**Pn**	**16 51 11.6**	**+0.7**
MLSI				S	**Sn**	**16 51 24.8**	**-0.7**
LHMI	**Lhok Sumawe**	**1.31**	**72**		**Pn**	**16 51 15.8**	**+0.3**
LHMI	**Lhok Sumawe**	**1.31**	**72**	P	**Pn**	**16 51 16.1**	**+0.6**
LHMI				S	**Sn**	**16 51 33.0**	**-0.7**
LHMI	**Lhok Sumawe**	**1.31**	**72**	P	**Pn**	**16 51 16.2**	**+0.7**
LASI	**Langsa, Aceh**	**2.30**	**99**	P	**Pn**	**16 51 28.5**	**+0.6**
KCSI	**Kotacane, Aceh**	**2.44**	**122**	P	**Pn**	**16 51 30.2**	**+0.4**
TSI	**Tuntungan**	**3.15**	**115**	P	**Pn**	**16 51 39.7**	**+0.5**
PSI	**Prapat**	**3.80**	**122**	P	**Pn**	**16 51 49.0**	**+0.9**
387nm,0.5s,baz=333,slow=14,SNR=275							
PSI				S	**Sn**	**16 52 31.1**	**-0.8**
145nm,0.5s,baz=263,slow=11,SNR=2.5							
PSI				LR	LR	16 53 08.8	
comp=Z,247nm,20.6s,baz=319,slow=36							
PSI	**Prapat**	**3.80**	**122**	P	**Pn**	**16 51 49.1**	**+1.1**
PSI				P	**Pn**	**16 51 49.1**	**+1.1**
PSI	**Prapat**	**3.80**	**122**	P	**Pn**	**16 51 49.4**	**+1.4**
RPSI	**Rantau Prapat**	**3.85**	**123**	Pn	**Pn**	**16 51 49.0**	**+0.3**
RPSI	**Rantau Prapat**	**3.85**	**123**		**Pn**	**16 51 49.0**	**+0.3**
RPSI					**Sn**	**16 52 31.1**	**-1.9**
GSI	**Gunungsitoli**	**3.97**	**152**	Pn	**Pn**	**16 51 49.1**	**-1.1**
GSI	**Gunungsitoli**	**3.97**	**152**	P	**Pn**	**16 51 49.7**	**-0.6**
GSI	**Gunungsitoli**	**3.97**	**152**	P	**Pn**	**16 51 49.9**	**-0.3**
TRSI	**Tarutung**	**4.28**	**130**	P	**Pn**	**16 51 54.5**	**-0.1**
KULM	**Kulim**	**4.96**	**84**	Pn	**Pn**	**16 52 02.8**	**-0.8**
KULM	**Kulim**	**4.96**	**84**	P	**Pn**	**16 52 02.9**	**-0.7**
IPM	**Ipoh**	**5.32**	**93**	Pn	**Pn**	**16 52 07.6**	**-1.0**
IPM	**Ipoh**	**5.32**	**93**	P	**Pn**	**16 52 07.4**	**-1.2**
0.8nm3μm198nm,0.7s							
IPM	**Ipoh**	**5.32**	**93**	P	**Pn**	**16 52 08.5**	**-0.1**
SKLT	**Songkhla**	**5.42**	**64**	P	**Pn**	**16 52 09.8**	**-0.1**
0.3nm1μm52nm,0.7s							
PBSI	**Pulau Batu**	**5.49**	**152**	P	**Pn**	**16 52 10.7**	**-0.1**
3.9nm232nm,1.6s							
MNSI	**Mandailing Nat**	**5.57**	**136**	P	**Pn**	**16 52 11.5**	**-0.5**
BKNI	**Bangkinang**	**6.96**	**130**	Pn	**Pn**	**16 52 30.3**	**-0.5**
BKNI	**Bangkinang**	**6.96**	**130**	P	**Pn**	**16 52 30.5**	**-0.3**
1.0nm3μm282nm,0.6s							
BKNI	**Bangkinang**	**6.96**	**130**	P	**Pn**	**16 52 30.9**	**+0.1**
SISI	**Saibi**	**6.99**	**151**	P	**Pn**	**16 52 30.9**	**-0.3**
PBA	**Port Blair**	**7.39**	**337**	Pn	**Pn**	**16 52 35.4**	**-1.2**
SDSI	**Sungai Dareh**	**8.09**	**135**	P	**Pn**	**16 52 45.4**	**-0.8**
0.2nm670nm58nm,0.7s							
MYKOM	**Kota Tinggi**	**8.68**	**110**	Pn	**Pn**	**16 52 53.4**	**-0.9**
MYKOM	**Kota Tinggi**	**8.68**	**110**	P	**Pn**	**16 52 52.8**	**-1.4**
800nm91nm,0.8s							
PPSI	**Pulau Pagai**	**8.68**	**150**	P	**Pn**	**16 52 53.8**	**-0.4**
133nm,1.2s							
BTDF	**Bukit Timah Da**	**8.77**	**113**	P	**Pn**	**16 52 55.0**	**-0.4**
491nm54nm,1.0s							
TPRI	**Tanjung Pinang**	**9.63**	**113**	P	**Pn**	**16 53 06.6**	**-0.6**
51nm,0.5s							
JMBI	**JAMBI**	**10.21**	**129**	P	**Pn**	**16 53 15.2**	**+0.2**
MASI	**Maura Aman, Be**	**10.26**	**140**	P	**Pn**	**16 53 13.8**	**-2.0**
44nm,0.5s							
DSRI	**Dabo**	**10.32**	**120**	P	**Pn**	**16 53 15.5**	**-1.0**
640nm16nm,0.5s							
UBSI	**University, Be**	**10.76**	**142**	P	**Pn**	**16 53 21.2**	**-1.4**
316nm,1.8s							
MNAI	**Manna**	**11.65**	**141**	Pn	**Pn**	**16 53 31.7**	**-2.8**
MNAI	**Manna**	**11.65**	**141**	P	**Pn**	**16 53 31.8**	**-2.8**
329nm,1.5s							
MNAI	**Manna**	**11.65**	**141**	P	**Pn**	**16 53 33.3**	**-1.3**
PPBI	**Pangkal Pinang**	**12.53**	**123**	P	**Pn**	**16 53 45.5**	**-0.7**
20nm,1.6s							
LWLI	**Liwa**	**12.86**	**139**	P	**Pn**	**16 53 47.5**	**-3.1**
2μm87nm,0.7s							
KASI	**Kota Agung**	**13.52**	**139**	P	**Pn**	**16 53 55.4**	**-3.8**
39nm,0.9s							
CMAR	**Chiang Mai Arr**	**13.92**	**13**	P	**Pn**	**16 54 05.3**	**+1.0**
3.2nm,0.9s,baz=204,slow=11,SNR=40							
CMAR				LR	LR	16 59 32.6	
comp=Z,44nm,19.8s,baz=170,slow=38							
CMAR				ScP	**ScP**	**17 02 43.6**	**+0.1**
1.1nm,0.4s,baz=226,slow=2.4,SNR=6.6							
CMAR	**Chiang Mai Arr**	**13.92**	**13**		**P**	**16 54 06.9**	**-2.2**
UBPT	**Khong Chiam**	**14.15**	**42**	P	**P**	**16 54 11.9**	**+0.2**
KSM	**Kuching**	**14.96**	**102**	Pn	**Pn**	**16 54 17.7**	**-0.1**
KSM	**Kuching**	**14.96**	**102**	P

comp=Z,63nm,1.2s
RAMN Ramite 23.66 339 *eP* **P 16 55 55.1 +1.1**
comp=Z,8.4nm,0.4s
TAPN Taplejung 23.66 342 *eP* **P 16 55 55.2 +1.1**
comp=Z,5.4nm,0.5s
GYA Guiyang 23.93 25 ⇑P **P 16 55 57.1 +0.7**
GYA sP sP 16 56 30.1 -0.1
GYA pmax pmax
comp=Z,14nm,0.8s
KLNI Mataram 24.23 123 P **P 16 55 59.4 +0.4**
comp=Z,18nm,1.0s
JIRN Jiri 24.45 339 *eP* **P 16 56 02.1 +0.8**
comp=Z,22nm,0.6s
MPSI Mapaga 24.58 100 P **P 16 56 02.9 +0.7**
comp=Z,22nm,0.8s
PKI Pulchoki 24.65 338 *eP* **P 16 56 03.3 +0.2**
comp=Z,6.9nm,0.5s
PKIN Phulchoki 24.66 338 *eP* **P 16 56 03.5 +0.4**
comp=Z,6.0nm,0.4s
GUN Gumba 24.79 339 *eP* **P 16 56 05.2 +0.8**
comp=Z,28nm,0.6s
DMN Daman 24.80 337 *eP* **P 16 56 04.8 +0.4**
TWSI Taliwang, Sumb 25.05 122 P **P 16 56 06.8 +0.3**
comp=Z,21nm,0.8s
LSA Lhasa 25.11 351 P **P 16 56 07.2 -0.3**
TOLI2 Tolitoli 25.32 98 P **P 16 56 09.3 +0.4**
TOLI2 Tolitoli 25.32 98 P **P 16 56 11.8 +2.9**
TTSI Tana Toraja 25.34 108 P **P 16 56 12.0 +2.9**
comp=Z,8.9nm,0.6s
GKN Gorkha 25.34 337 *eP* **P 16 56 09.9 +0.7**
comp=Z,13nm,0.4s
SPSI Sidrap Palu 25.59 110 P **P 16 56 11.4 +0.1**
comp=Z,435nmcomp=Z,8.9nm,0.7s
KAPI Kappang 25.94 112 P **P 16 56 13.9 -0.7**
comp=Z,2.8nm,0.4s,baz=281,slow=13,SNR=4.1
comp=Z,2.8nm,0.4s
KAPI Kappang 25.94 112 P **P 16 56 13.3 -1.3**
KAPI IAmb IAmb 16 56 44.6
comp=Z,42nm,1.4s
KAPI Kappang 25.94 112 P **P 16 56 14.5 0.0**
comp=Z,12nm,1.7s
DANN Dangsing 26.00 335 *eP* **P 16 56 15.9 +0.6**
comp=Z,31nm,0.6s
PYUN Piuthan 26.11 334 *eP* **P 16 56 16.9 +0.7**
comp=Z,10nm,0.5s
H08S2 Diego Garcia H 26.25 242 T T 17 23 45.0
baz=61,slow=75,SNR=368
H08S3 Diego Garcia H 26.25 242 T T 17 23 38.8
baz=61,slow=75,SNR=366
H08S1 Diego Carcia H 26.27 242 T T 17 23 42.5
baz=61,slow=75,SNR=233
BKSI Bulukumba 26.39 112 P **P 16 56 18.9 +0.2**
comp=Z,21nm,0.5s
BBSI Bau Bau 28.73 111 P **P 16 56 40.3 +0.8**
comp=Z,15nm,0.7s
XAN Xi'an 31.56 21 P **P 16 57 03.6 -0.7**
XAN pmax pmax
comp=Z,14nm,0.9s
LZH Lanzhou 32.01 13 *eP* **P 16 57 09.1 +0.8**
LZH pP pP 16 57 29.0 -2.2
LZH sP sP 16 57 40.4 -2.5
LZH pmax pmax
comp=Z,21nm,1.0s
GIRL Giralia 32.77 147 P **P 16 57 14.8 -0.1**
LYN LuoYang 33.42 26 ⇑*i*P **P 16 57 21.4 +0.9**
GTA Gaotai 34.63 6 ⇓P **P 16 57 31.2 +0.1**
GTA pP pP 16 57 57.1 +3.0
GTA sP sP 16 58 09.9 +4.0
GTA PcP **PcP 17 00 05.1 +1.8**
GTA pmax pmax
comp=Z,4.0nm,1.2s
NJ2 Nanjing 34.70 36 *eP* **P 16 57 35.1 +3.5**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
PSA00 Pilbara Seismi 35.33 139 P **P 16 57 35.6 -1.5**
PSA00 IAmb IAmb 16 58 18.2
comp=Z,11nm,1.3s
NIL Nilore 35.48 327 P **P 16 57 38.8 +0.4**
HNS HongShan 36.79 26 ⇑P **P 16 57 50.7 +1.3**
HNS pmax pmax
comp=Z,19nm,0.6s
FAKI Fak Fak 37.32 101 P **P 16 57 53.0 -1.3**
FAKI Fak Fak 37.32 101 P **P 16 57 53.3 -1.0**
comp=Z,18nm,1.3s
FAKI Fak Fak 37.32 101 P **P 16 57 56.2 +1.9**
KNRA Kununurra 38.56 123 P **P 16 58 04.0 -0.6**
KNRA IAmb IAmb 16 58 13.8
comp=Z,20nm,1.5s
WMQ Urumqi 39.48 351 *eP* **P 16 58 13.9 +1.9**
DRK Karamyk 40.71 331 P **P 16 58 23.2 +0.7**
GAR Garm 41.07 329 P **P 16 58 24.9 -0.4**
CHGR Chuyangaron 41.41 328 P **P 16 58 27.2 -0.8**
CHGR IAmb IAmb 16 58 30.6
comp=Z,16nm,0.7s
BTK Batken 41.63 331 P **P 16 58 30.0 +0.2**
BTK IAmb IAmb 16 59 10.0
comp=Z,7.9nm,1.0s
AAK Ala-Archa 42.10 337 LR LR 17 17 49.5
comp=Z,20nm,20.4s,baz=192,slow=38
AAK Ala-Archa 42.10 337 P **P 16 58 33.2 -0.5**
TJN Taejon 42.80 39 P **P 16 58 39.5 +0.3**
MK31 Makanchi Array 43.39 347 P **P 16 58 43.7 -0.2**
MKAR Makanchi Array 43.39 347 P **P 16 58 43.6 -0.2**
comp=Z,4.3nm,0.6s,baz=160,slow=8.3,SNR=58
MKAR PcP **PcP 17 00 31.6 +1.0**
comp=Z,1.6nm,0.6s,baz=168,slow=2.7,SNR=4.7
comp=Z,4.3nm,0.6s
MKAR Makanchi Array 43.39 347 P **P 16 58 43.0 -0.9**
WRKA Warakurna 43.42 135 P **P 16 58 44.9 +0.5**
MAKZ Makanchi 43.48 346 P **P 16 58 43.7 -0.9**
MAKZ IAmb IAmb 16 58 45.1
comp=Z,6.4nm,0.5s
SONM Songino Array 43.83 10 P **P 16 58 47.6 +0.2**
comp=Z,6.8nm,0.6s,baz=188,slow=9.2,SNR=55
SONM PcP **PcP 17 00 32.9 +0.7**
comp=Z,4.1nm,0.5s,baz=194,slow=3.9,SNR=15
SONM ScP **ScP 17 04 13.3 -1.5**
comp=Z,0.9nm,0.8s,baz=185,slow=4.9,SNR=5.2
comp=Z,6.8nm,0.6s
SONM Songino Array 43.83 10 P **P 16 58 47.4 -0.1**
SONM IAmb IAmb 16 58 48.4
comp=Z,7.2nm,0.7s
KSRS Korea Array 43.83 38 P **P 16 58 46.3 -1.1**
comp=Z,1.4nm,0.4s,baz=226,slow=8.6,SNR=9.2
KSRS PcP **PcP 17 00 33.0 +0.8**
comp=Z,0.8nm,0.7s,baz=232,slow=2.7,SNR=2.4
comp=Z,1.4nm,0.4s
ULN Ulaanbaatar 43.98 11 P **P 16 58 47.6 -1.1**
ULN IAmb IAmb 16 58 49.5
comp=Z,5.7nm,0.6s
KKAR Karatay Array 44.16 333 P **P 16 58 49.2 -0.9**
WB0 Warramunga Arr 45.22 124 P **P 16 58 58.2 -0.7**
WB0 IAmb IAmb 16 59 34.9
comp=Z,5.3nm,0.7s
WRA Warramunga Arr 45.26 124 P **P 16 58 59.2 +0.1**
comp=Z,2.7nm,0.6s,baz=301,slow=9.3,SNR=54
WRA PcP **PcP 17 00 40.0 +2.4**
comp=Z,0.4nm,0.5s,baz=305,slow=3.1,SNR=1.5
WRA ScP **ScP 17 04 19.6 -1.5**
comp=Z,0.5nm,0.8s,baz=317,slow=3.3,SNR=2.8
comp=Z,2.7nm,0.6s
WRA Warramunga Arr 45.26 124 P **P 16 58 58.7 -0.5**
WRAB Tennant Creek 45.26 124 P **P 16 58 57.8 -1.4**
WRAB IAmb IAmb 16 59 36.2
comp=Z,11nm,1.2s
WRAB Tennant Creek 45.26 124 P **P 16 58 59.5 +0.3**
WB2 Warramunga Arr 45.27 124 P **P 16 58 57.5 -1.8**
WB2 IAmb IAmb 16 59 35.8
comp=Z,5.6nm,0.7s
WR0 Warramunga Arr 45.43 124 P **P 16 59 00.0 -0.5**
WR0 IAmb IAmb 16 59 37.2
comp=Z,7.0nm,0.6s
AS31 Alice Springs 46.80 129 P **P 16 59 10.3 -0.9**
ASAR Alice Springs 46.80 129 P **P 16 59 11.6 +0.4**
comp=Z,8.9nm,0.8s,baz=300,slow=7.3,SNR=191
ASAR ScP **ScP 17 04 25.5 -2.0**
comp=Z,0.6nm,0.9s,baz=305,slow=5.0,SNR=4.4
ASAR S **S 17 05 50.5 -3.6**
comp=Z,1.5nm,0.8s,baz=296,slow=14,SNR=20
comp=Z,8.9nm,0.8s
ASAR Alice Springs 46.80 129 P **P 16 59 10.4 -0.8**
AS01 Alice Springs 46.83 129 P **P 16 59 12.2 +0.7**
CN2 Changchun 46.84 30 *eP* **P 16 59 09.4 -1.8**
CN2 sP sP 16 59 48.1 +1.4
CN2 S **S 17 05 50.3 -3.8**
CN2 sS sS 17 06 35.5 0.0

FORT Forrest 47.01 141 P **P 16 59 12.3 -0.3**
FORT Forrest 47.01 141 P **P 16 59 14.6 +1.9**
GEYT Alibeck 47.50 319 P **P 16 59 18.3 +1.9**
comp=Z,4.2nm,0.6s,baz=148,slow=6.6,SNR=11
comp=Z,4.2nm,0.6s
GEYT Alibeck 47.50 319 P **P 16 59 18.0 +1.6**
GEYT IAmb IAmb 16 59 19.0
comp=Z,4.8nm,0.7s
GYA0B ALIBECK ARRAY 47.50 319 P **P 16 59 16.7 +0.3**
GYA0B IAmb IAmb 16 59 18.9
comp=Z,5.5nm,0.7s
KURK Kurchatov 47.93 345 P **P 16 59 18.3 -1.1**
ZAA0 Zalesovo Array 49.77 352 P **P 16 59 32.9 -0.6**
ZAA0 IAmb IAmb 16 59 34.3
comp=Z,6.0nm,0.9s
ZALV Zalesovo Beam 49.77 352 P **P 16 59 33.3 -0.2**
comp=Z,4.7nm,0.4s,baz=179,slow=6.6,SNR=24
ZALV PcP **PcP 17 00 52.9 0.0**
comp=Z,2.2nm,0.4s,baz=161,slow=4.1,SNR=4.9
ZALV ScP **ScP 17 04 38.2 -1.1**
comp=Z,1.3nm,0.8s,baz=174,slow=3.0,SNR=5.1
comp=Z,4.7nm,0.4s
ZALV Zalesovo Beam 49.77 352 P **P 16 59 33.1 -0.4**
QIS Mount Isa 49.94 122 P **P 16 59 36.1 +0.7**
MJAR Matsushiro Arr 50.13 45 P **P 16 59 35.9 -0.7**
comp=Z,1.9nm,0.7s,baz=238,slow=9.1,SNR=5.0
comp=Z,1.9nm,0.7s
OOD Oodnadatta 50.39 132 P **P 16 59 39.2 +0.6**
USRK Ussuriysk Ar. 50.53 33 P **P 16 59 39.1 -0.2**
comp=Z,3.4nm,0.7s,baz=232,slow=8.7,SNR=10
comp=Z,3.4nm,0.7s
USRK Ussuriysk Ar. 50.53 33 P **P 16 59 39.4 0.0**
MULG Mulgathing 50.66 136 P **P 16 59 41.4 +0.8**
BRVK Borovoye 52.42 341 P **P 16 59 52.9 -0.4**
BRVK IAmb IAmb 16 59 54.4
comp=Z,4.7nm,1.1s
JMM Marumori 52.57 45 P **P 16 59 54.5 -0.2**
ABKAR Akbulak array 53.63 332 P **P 17 00 02.4 +0.1**
LCRK Leigh Creek 53.69 134 P **P 17 00 04.4 +1.3**
INKA Innaminka 54.17 129 P **P 17 00 08.0 +1.4**
CTA Charters Tower 55.49 118 P **P 17 00 16.0 -0.3**
comp=Z,3.2nm,1.0s,baz=302,slow=7.9,SNR=2.5
comp=Z,3.2nm,1.0s
CTAO Charters Tower 55.49 118 P **P 17 00 15.4 -0.9**
CTAO IAmb IAmb 17 00 43.6
comp=Z,14nm,1.4s
STKA Stephens Creek 56.90 133 P **P 17 00 26.0 -0.1**
comp=Z,0.9nm,0.4s,baz=320,slow=8.1,SNR=6.2
comp=Z,0.9nm,0.4s
STKA Stephens Creek 56.90 133 P **P 17 00 26.4 +0.3**
YSS Yuzh-Sakhalins 58.27 36 P **P 17 00 35.9 +0.4**
ARU Arti 59.28 337 P **P 17 00 42.3 +0.1**
ARU IAmb IAmb 17 00 42.8
comp=Z,3.0nm,0.7s
ONI Oni 59.54 317 P **P 17 00 45.6 +1.1**
CMSA Cobar Meteorol 59.77 131 P **P 17 00 47.3 +1.2**
KBZ Khabaz 60.38 318 P **P 17 00 50.7 +0.7**
comp=Z,4.5nm,0.8s,baz=106,slow=6.9,SNR=11
comp=Z,4.5nm,0.8s
YAK Yakutsk 62.41 17 P **P 17 01 02.3 -1.0**
MMAI Mount Meron Ar 62.60 305 LR LR 17 30 43.9
comp=Z,12nm,19.9s,baz=188,slow=38
BNN Bunyan 63.70 311 P **P 17 01 12.0 -0.6**
CAN Canberra 63.97 133 P **P 17 01 14.5 +0.3**
NRIK Noril'sk 64.65 357 P **P 17 01 17.0 -0.9**
comp=Z,1.3nm,0.4s,baz=136,slow=4.7,SNR=3.6
comp=Z,1.3nm,0.4s
BRTR Keskin Array B 65.59 312 P **P 17 01 25.6 +0.8**
comp=Z,3.3nm,0.5s,baz=132,slow=7.3,SNR=25
comp=Z,3.3nm,0.5s
BRTR Keskin Array B 65.59 312 P **P 17 01 24.9 +0.1**
BR131 Keskin Array S 65.59 312 P **P 17 01 25.1 +0.3**
BR131 IAmb IAmb 17 01 26.5
comp=Z,6.9nm,0.7s
MA2 Magadan 68.76 27 P **P 17 01 44.6 +0.3**
KLMR Klimovskoe 69.86 334 *eP* **P 17 01 49.4 -1.6**
KLMR AMP 17 01 51.3
comp=Z,9.0nm,1.1s
PET Petropavlovsk 70.11 35 P **P 17 01 52.9 +0.2**
CFR Carcaliu 70.85 316 ⇑P **P 17 01 58.2 +0.9**
AK05 Malin Array Si 71.48 322 P **P 17 02 01.4 +0.4**
AK05 IAmb IAmb 17 02 01.9
comp=Z,16nm,1.2s
AKASG Malin Array Be 71.49 322 P **P 17 02 00.9 -0.2**
comp=Z,1.4nm,0.4s,baz=89,slow=5.1,SNR=11
comp=Z,1.4nm,0.4s
AKASG Malin Array Be 71.49 322 P **P 17 02 01.4 +0.2**
VRI Vrincioaia 71.96 317 ⇓P **P 17 02 06.1 +2.0**
PLOR Plostina 72.01 317 ⇑P **P 17 02 06.5 +2.1**
TESR Tescani 72.15 317 ⇓P **P 17 02 06.4 +1.2**
SECR 72.25 316 ⇑P **P 17 02 07.6 +1.8**
MLR Muntele Rosu 72.42 316 ⇑P **P 17 02 08.6 +1.6**
BURAR Bucovina Array 73.33 318 ⇑P **P 17 02 14.3 +2.0**
BURAR Bucovina Array 73.33 318 P **P 17 02 13.2 +0.9**
BUR08 Bucovina Ar. S 73.35 318 P **P 17 02 13.8 +1.4**
ITM Ithomi 74.17 307 P **P 17 02 16.7 -0.6**
BLKB Belogradchik 74.41 314 ⇑P **P 17 02 19.4 +0.8**
HERR Herculane 74.78 315 ⇑P **P 17 02 21.9 +1.3**
DRGR 74.87 317 ⇑P **P 17 02 22.9 +1.7**
LVZ Lovozero 74.94 340 P **P 17 02 20.8 -0.3**
BOVS Bovan 75.11 314 ⇑P **P 17 02 20.8 -1.8**
TRPA Tarpa 75.20 318 ⇑P **P 17 02 24.7 +1.8**
BOSA Boshof 75.31 239 P **P 17 02 28.1 +4.0**
comp=Z,6.5nm,1.1s,baz=67,slow=7.7,SNR=3.0
comp=Z,6.5nm,1.1s
BZS Buzias 75.44 316 ⇑P **P 17 02 25.7 +1.3**
SIRR Siria 75.50 316 ⇑P **P 17 02 26.6 +1.8**
FIA1 FINESS Array S 76.11 332 P **P 17 02 28.3 +0.4**
FIA1 IAmb IAmb 17 02 29.0
comp=Z,6.0nm,0.8s
FINES FINESS Array B 76.11 332 P **P 17 02 28.1 +0.3**
comp=Z,3.5nm,0.6s,baz=108,slow=6.0,SNR=24
comp=Z,3.5nm,0.6s
FINES FINESS Array B 76.11 332 P **P 17 02 28.2 +0.4**
PSZ Piszkesteto 76.92 318 ⇓P **P 17 02 34.5 +1.6**
PSZ Piszkesteto 76.92 318 P **P 17 02 33.9 +1.0**
PSZ IAmb IAmb 17 02 35.2
comp=Z,7.0nm,0.8s
OJC Ojcow 77.29 320 *eP* **P 17 02 34.3 -0.5**
OJC Ojcow 77.29 320 P **P 17 02 34.5 -0.3**
OJC IAmb IAmb 17 02 35.3
comp=Z,9.5nm,1.0s
MORH Mrgy, Hungar 77.58 316 ⇑P **P 17 02 37.9 +1.5**
ARCES ARCESS Array B 78.64 340 P **P 17 02 42.2 +0.3**
comp=Z,3.2nm,0.6s,baz=96,slow=5.3,SNR=23
comp=Z,3.2nm,0.6s
ARCES ARCESS Array B 78.64 340 P **P 17 02 42.2 +0.3**
ARCES IAmb IAmb 17 03 08.0
comp=Z,27nm,1.5s
MORC Moravsky Berou 78.68 320 ⇑P **P 17 02 44.1 +1.6**
CONA Conrad Observa 79.62 318 *eP* **P 17 02 49.1 +1.4**
comp=Z,2.4nm,1.2s
GEC2 GERESS Array S 81.12 319 P **P 17 02 57.1 +1.3**
GERES GERESS Array B 81.12 319 P **P 17 02 57.1 +1.3**
comp=Z,2.0nm,0.5s,baz=87,slow=5.9,SNR=19
comp=Z,2.0nm,0.5s
GERES GERESS Array B 81.12 319 P **P 17 02 56.6 +0.9**
KHC Kasperske Hory 81.21 319 P **P 17 02 57.0 +0.8**
CLUD Cludinico 81.57 316 P **P 17 02 58.7 +0.5**
CLUD IAmb IAmb 17 03 00.3
comp=Z,10nm,0.9s
CLL Collm 81.69 321 *eP*x Px 17 03 04.0
SQTA Sankt Quirin 82.74 317 *eP* **P 17 03 05.0 +0.6**
comp=Z,5.3nm,0.8s
MOTA Moosalm 82.81 317 *eP* **P 17 03 05.0 +0.2**
comp=Z,2.8nm,0.7s
NC405 NORSAR Array S 82.89 331 P **P 17 03 04.9 +0.3**
NC405 IAmb IAmb 17 03 12.0
comp=Z,19nm,1.2s
NC602 NORSAR Array S 82.96 330 P **P 17 03 05.0 0.0**
RETA Reutte 83.05 317 *eP* **P 17 03 07.0 +1.1**
comp=Z,2.3nm,0.6s
NC303 NORSAR Array S 83.06 331 P **P 17 03 05.7 +0.2**
NC303 IAmb IAmb 17 03 40.8
comp=Z,13nm,1.3s
FETA Feichten 83.06 317 *eP* **P 17 03 05.7 -0.4**
comp=Z,2.0nm,0.9s
NB2 NORSAR Subarra 83.13 331 P **P 17 03 06.1 +0.2**
comp=Z,5.3nm,1.1s,baz=93,slow=5.6
NOA NORSAR Array B 83.13 331 P **P 17 03 06.0 0.0**
comp=Z,1.9nm,0.8s,baz=95,slow=5.4,SNR=8.0
comp=Z,1.9nm,0.8s
NC204 NORSAR Array S 83.36 331 P **P 17 03 07.7 +0.5**
TORD Torodi Ar. Bea 92.80 283 P **P 17 03 55.7 +2.4**
comp=Z,0.7nm,0.7s,baz=69,slow=4.1,SNR=3.5

comp=Z,0.7nm,0.7s
ESDC Sonseca Array 94.35 310 P **P 17 04 00.7 +0.6**
comp=Z,0.5nm,0.7s,baz=79,slow=4.7,SNR=4.1
comp=Z,0.5nm,0.7s
ILAR Eielson Array 96.96 23 P **P 17 04 11.0 -0.4**
comp=Z,0.5nm,0.9s,baz=270,slow=3.6,SNR=1.8
comp=Z,0.5nm,0.9s
EGMT Eagleton 122.83 20 PKPdf **PKPdf 17 09 35.7 -0.2**
NVAR Mina Array Bea 126.67 33 PKP **PKiKP 17 09 45.4 +1.2**
comp=Z,0.7nm,0.7s,baz=299,slow=2.6,SNR=6.2
NVAR Mina Array Bea 126.67 33 PKPdf **PKiKP 17 09 44.4 +0.2**
EYMN Ely 127.08 6 PKPdf **PKiKP 17 09 44.5 0.0**
PDAR Pinedale Array 127.39 23 PKP **PKiKP 17 09 45.5 0.0**
comp=Z,0.5nm,0.5s,baz=113,slow=2.3,SNR=5.2
R11A Troy Canyon, C 128.17 31 PKPdf **PKPdf 17 09 46.6 +0.1**
ECSD EROS Data Cent 130.41 12 PKPdf **PKPdf 17 09 50.1 -0.3**
TXAR Lajitas Array 141.28 28 PKhKP PKPpre 17 10 05.2
comp=Z,0.3nm,0.4s,baz=354,slow=0.9,SNR=7.7

ROM 12 16:59:43.5±0.1, 42°.729N±0°.008×13°.174E±0°.009, h11km±1km, ML0.9/1, 1D, Error ellipse: s-maj=0.8km s-min=0.7km az=184.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**124**	P	Pg	16 59 45.8	0.0
T1202				S	Sg	16 59 47.2	-0.2
NRCA	**Norcia**	**0.11**	**337**	⇓P	Pg	16 59 46.5	0.0
NRCA				S	Sg	16 59 49.0	+0.4
NRCA				AML	AML		
comp=E,106μm,0.1s							
NRCA				AML	AML		
comp=E,106μm,0.1s							
NRCA				AML	AML		
comp=N,81μm,0.5s							
NRCA				AML	AML		
comp=E,106μm,0.1s							
NRCA				AML	AML		
comp=N,81μm,0.5s							
T1217	**Poggiodomo (PG**	**0.18**	**265**	P	Pb	16 59 48.8	-0.1
T1217				S	Sg	16 59 51.3	+1.1
MC2	**Monte Cornacci**	**0.18**	**4**	P	Pg	16 59 48.2	+0.6
MC2				S	Sg	16 59 51.9	+1.4
T1243	**Rocca Santa Ma**	**0.20**	**99**	P	Pg	16 59 48.6	+0.7
T1243				S	Sg	16 59 52.1	+1.2
T1215	**Vallo di Nera,**	**0.24**	**288**	P	Pg	16 59 49.0	+0.5
T1215				S	Sg	16 59 52.7	+0.9
GUMA	**Gualdo di Mace**	**0.35**	**20**	S	Sb	16 59 58.0	+0.4

*MAN **12** 17:01:16.1, 10°.02N×126°.46E, h12km, mb4.8, ML3.7, MS3.7*
*NEIC **12** 17:01:18.6±2.3, 10°.04N±0°.09×126°.1E±0°.3, h46km±14km, mb4.3/11, Error ellipse: s-maj=47.4km s-min=4.9km az=74.0*
*IDC **12** 17:01:24.5±4.3, 10°.04N×126°.37E, h107km±38km, mb3.5/11, mbtmp3.9/12, MS3.0/6, Error ellipse: s-maj=52.2km s-min=15.5km az=64.0*
ISC 12 17:01:13.2±2.0, 10°.11N±0°.03×126°.56E±0°.05, h12km±12km, n56, σ1°.76/68, mb4.1/17, MS2.9/3, 8C-12D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.53**	**233**	⇓*e*P	**Pb**	**17 01 25.0**	**+0.6**
GLSP				*e*S	**Sb**	**17 01 31.6**	**-0.5**
SCPH	**Surigao**	**1.10**	**253**	⇓*i*P	**Pb**	**17 01 34.0**	**-0.2**
SCPH				*i* S	**Sb**	**17 01 45.5**	**-3.0**
BUTP	**Butuan**	**1.46**	**219**	⇓*e*P	**Pb**	**17 01 39.8**	**-0.5**
BUTP				*e*S	**Sb**	**17 01 58.6**	**-0.2**
MSLP	**Maasin**	**1.67**	**271**	⇓*e*P	**Pn**	**17 01 42.8**	**+0.5**
MSLP				*e*S	**Sb**	**17 02 05.2**	**+0.2**
BESP	**Borongan**	**1.85**	**324**	⇓*e*P	**Pn**	**17 01 45.6**	**+0.9**
BESP				*e*S	**Sg**	**17 02 13.2**	**+0.5**
TABP	**Talibon, Bohol**	**2.19**	**270**	⇑*i*P	**Pb**	**17 01 51.4**	**-1.4**
TABP				*i* S	**Sb**	**17 02 19.1**	**-0.8**
GHBP	**Garcia Hernand**	**2.25**	**258**	⇑*e*P	**Pn**	**17 01 51.7**	**+1.4**
GHBP				*i* S	**Sb**	**17 02 21.4**	**-0.4**
CGP	**Cagayan de Oro**	**2.46**	**228**	⇑*e*P	**Pn**	**17 01 54.6**	**+1.4**
CGP				*e*S	**Sn**	**17 02 24.4**	**+1.1**
LLP	**Lapu-Lapu**	**2.56**	**275**	⇓*i*P	**Pb**	**17 01 57.2**	**-1.9**
LLP				*i* S	**Sn**	**17 02 27.9**	**+2.2**
BUKP	**Musuan**	**2.66**	**214**	⇑*e*P	**Pb**	**17 01 59.1**	**-1.7**
BUKP				*e*S	**Sn**	**17 02 26.6**	**-1.6**
BUKP	**Musuan**	**2.66**	**214**	⇑*i*P	**Pb**	**17 02 00.1**	**-0.7**
BUKP				*i* S	**Sg**	**17 02 37.6**	**-1.1**
TBP	**Tagbilaran**	**2.69**	**261**	*e*P	**Pn**	**17 01 58.4**	**+2.0**
TBP				*i* S	**Sn**	**17 02 30.1**	**+1.3**
CNP	**Catarman**	**3.03**	**322**	⇑*e*P	**Pn**	**17 02 01.6**	**+0.6**
CNP				*e*S	**Sn**	**17 02 32.3**	**-4.9**
LSIP	**Lazi, Siquijor**	**3.04**	**252**	⇓*e*P	**Pn**	**17 02 02.9**	**+1.7**
LSIP				*e*S	**Sn**	**17 02 41.0**	**+3.5**
DAV	**Davao City (W)**	**3.17**	**198**	P	**Pb**	**17 02 09.6**	**+0.2**
107nm,0.4s,baz=34,slow=3.6,SNR=1.8							
DAV				S	**Sb**	**17 02 48.4**	**+0.3**
136nm,0.4s,baz=93,slow=21,SNR=1.7							
DAV				LR	LR	17 03 22.0	
comp=Z,226nm,21.9s,baz=359,slow=38							
DAV	**Davao City (W)**	**3.17**	**198**	Pn	**Pn**	**17 02 03.3**	**+0.4**
SNPH	**Sibulan**	**3.36**	**257**	*e*P	**Pn**	**17 02 08.7**	**+3.0**
SNPH				*e*S	**Sb**	**17 02 51.4**	**-2.3**
DCPH	**Dipolog City**	**3.50**	**245**	⇓*e*P	**Pn**	**17 02 10.6**	**+3.1**
DCPH				*e*S	**Sn**	**17 02 51.5**	**+2.5**
CTBH	**Cotabato--PC H**	**3.66**	**219**	⇓*e*P	**Pn**	**17 02 11.7**	**+1.9**
PAGZ	**Pagadian**	**3.85**	**235**	⇓*e*P	**Pn**	**17 02 13.9**	**+1.5**
PAGZ				*e*S	**Sn**	**17 02 53.7**	**-4.0**
CNOP	**Candoni, Negro**	**3.87**	**266**	⇑*e*P	**Pn**	**17 02 14.8**	**+2.3**
CNOP				*e*S	**Sn**	**17 02 58.7**	**+0.7**
GUIM	**Jordan**	**3.94**	**278**	⇓*e*P	**Pn**	**17 02 15.2**	**+1.7**
GUIM				*e*S	Sn	17 02 49.5	-10
RCP	**Roxas**	**4.01**	**291**	⇓*e*P	**Pn**	**17 02 17.8**	**+3.2**
PVCP	**Virac**	**4.19**	**326**	⇓*e*P	**Pn**	**17 02 18.3**	**+1.3**
PVCP				*e*S	**Sb**	**17 03 22.4**	**+4.8**
TPUB	**Ta-pu**	**14.29**	**337**	P	**P**	**17 04 42.1**	**-0.7**
JOW	**Kunigami**	**16.72**	**5**	LR	LR	17 10 33.7	
comp=Z,107nm,19.7s,baz=311,slow=33							
GUMO	**Guam**	**18.25**	**77**	LR	LR	17 10 53.8	
comp=Z,67nm,20.3s,baz=210,slow=31							
MTN	**Manton Dam**	**23.25**	**169**	P	**P**	**17 06 22.5**	**+1.9**
KNRA	**Kununurra**	**25.71**	**175**	P	**P**	**17 06 43.1**	**-0.4**
KNRA				IAmb	IAmb	17 07 19.7	
comp=Z,21nm,1.5s							
KSRS	**Korea Array**	**27.26**	**2**	LR	LR	17 18 04.6	
comp=Z,14nm,20.7s,baz=155,slow=37							
CMAR	**Chiang Mai Arr**	**27.99**	**290**	P	**P**	**17 07 04.0**	**-0.1**
comp=Z,0.6nm,0.8s,baz=104,slow=7.1,SNR=6.0							
comp=Z,0.6nm,0.8s							
MJAR	**Matsushiro Arr**	**28.36**	**20**	LR	LR	17 19 37.2	
comp=Z,25nm,18.0s,baz=95,slow=38							
WB0	**Warramunga Arr**	**30.67**	**165**	P	**P**	**17 07 27.7**	**-0.2**
WB0				IAmb	IAmb	17 08 08.3	
comp=Z,12nm,1.5s							
WRA	**Warramunga Arr**	**30.83**	**166**	P	**P**	**17 07 29.8**	**+0.5**
comp=Z,0.3nm,0.9s,baz=345,slow=9.4,SNR=1.8							
comp=Z,0.3nm,0.9s							
WRA	**Warramunga Arr**	**30.83**	**166**	P	**P**	**17 07 29.1**	**-0.2**
WB2	**Warramunga Arr**	**30.83**	**166**	P	**P**	**17 07 29.6**	**+0.3**
WB2				IAmb	IAmb	17 08 12.2	
comp=Z,7.8nm,1.4s							
AS31	**Alice Springs**	**34.32**	**168**	P	**P**	**17 08 01.4**	**+1.5**
ASAR	**Alice Springs**	**34.32**	**168**	P	**P**	**17 08 00.6**	**+0.6**
comp=Z,0.2nm,0.3s,baz=353,slow=7.3,SNR=14							
comp=Z,0.2nm,0.3s							
H11N1	**WAKE ISLAND Hy**	**40.04**	**71**	T	T	17 52 15.5	
baz=264,slow=74,SNR=5.8							
H11N2	**WAKE ISLAND Hy**	**40.05**	**71**	T	T	17 52 10.9	
baz=264,slow=74,SNR=5.9							
H11N3	**WAKE ISLAND Hy**	**40.06**	**71**	T	T	17 52 11.5	
baz=264,slow=74,SNR=6.9							
MORW	**Morawa**	**40.24**	**194**	P	**P**	**17 08 49.9**	**-0.2**
MORW				IAmb	IAmb	17 09 26.3	
comp=Z,11nm,1.4s							
FORT	**Forrest**	**40.67**	**178**	P	**P**	**17 08 53.9**	**+0.3**
ULN	**Ulaanbaatar**	**41.07**	**340**	P	**P**	**17 08 57.0**	**0.0**
ULN				IAmb	IAmb	17 08 59.6	
comp=Z,3.2nm,0.8s							
SONM	**Songino Array**	**41.27**	**339**	P	**P**	**17 08 59.7**	**+1.2**
comp=Z,1.2nm,0.6s,baz=154,slow=7.6,SNR=7.5							
comp=Z,1.2nm,0.6s							
SONM	**Songino Array**	**41.27**	**339**	P	**P**	**17 08 59.4**	**+0.9**
SONM				IAmb	IAmb	17 09 01.0	
comp=Z,5.7nm,1.4s							

STKA	Stephens Creek	44.16	162	P	P	17 09 23.2	+1.3
	comp=Z,0.7nm,0.6s,baz=338,slow=19,SNR=2.9						
	comp=Z,0.7nm,0.6s						
YAK	Yakutsk	51.88	2	LR	LR	17 34 24.8	
	comp=Z,20nm,18.5s,baz=89,slow=38						
MKAR	Makanchi Array	52.33	323	P	P	17 10 25.0	0.0
	comp=Z,1.8nm,0.8s,baz=132,slow=8.3,SNR=14						
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	52.33	323	P	P	17 10 22.4	-2.6
ZALV	Zalesovo Beam	54.91	331	P	P	17 10 43.0	-0.7
	comp=Z,0.3nm,0.3s,baz=149,slow=6.7,SNR=2.1						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	56.36	325	P	P	17 10 53.4	-0.8
KURK				IAmb	IAmb	17 10 54.9	
	comp=Z,3.3nm,1.1s						
GEYT	Alibeck	66.87	307	P	P	17 12 04.2	-1.3
	comp=Z,0.6nm,0.3s,baz=106,slow=11,SNR=2.3						
	comp=Z,0.6nm,0.3s						
ARCES	ARCESS Array B	84.45	340	P	P	17 13 45.6	+0.1
	comp=Z,2.6nm,0.8s,baz=75,slow=6.4,SNR=4.1						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	85.85	309	P	P	17 13 52.3	-1.0
	comp=Z,0.3nm,0.5s,baz=76,slow=7.3,SNR=1.6						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	86.17	332	P	P	17 13 53.9	-0.3
	comp=Z,2.5nm,0.9s,baz=95,slow=4.6,SNR=4.1						
	comp=Z,2.5nm,0.9s						

NNC 12 17:04:05.2±16.0, 38°.32N×68°.04E, h0km, mb3.7, mpv3.2, 1C, Error ellipse: s-maj=149.4km s-min=93.5km az=162.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.14	21	Pn	Pn	17 05 20.4	-3.0
	1.1nm,0.3s,baz=206,slow=15,SNR=30						
KK31				Sn	Sn	17 06 25.3	+1.9
	8.3nm,0.3s,baz=204,slow=28,SNR=19						
AB31	Akbulak array	12.39	335	P	Pn	17 07 04.0	+1.2
	0.4nm,0.5s,baz=143,slow=13,SNR=21						
AKTO	Aktyubinsk	14.06	333	⇑P	P	17 07 30.2	-3.5
	1.5nm,0.8s						

MAN 12 17:04:52.0, 9°.22N×126°.56E, h13km, mb4.3, ML3.1, MS2.8, 8C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.96	255	⇑eP	Pb	17 05 09.2	-1.3
BUTP				eS	Sb	17 05 23.3	+0.3
BIPH	Bislig	1.04	191	⇓eP	Pb	17 05 10.7	-1.3
BIPH				eS	Sb	17 05 24.9	-0.7
SCPH	Surigao	1.20	298	⇑iP	Pn	17 05 13.0	-1.5
SCPH				iS	Sb	17 05 25.2	-4.8
MSLP	Maasin	1.91	299	⇓eP	Pn	17 05 24.0	-0.3
MSLP				eS	Sb	17 05 49.6	-0.8
BUKP	Musuan	1.99	228	⇑eP	Pb	17 05 27.1	-1.0
BUKP				eS	Sg	17 05 54.6	-1.4
CGP	Cagayan de Oro	1.99	248	⇑iP	Pn	17 05 25.4	0.0
CGP				iS	Sn	17 05 50.4	+0.2
GHBP	Garcia Hernand	2.25	281	⇓eP	Pn	17 05 30.4	+1.5
GHBP				iS	Sb	17 05 59.4	-0.8
MATI	Mati	2.27	188	⇓eP	Pn	17 05 28.0	-1.3
MATI				eS	Sn	17 05 58.2	+1.0
TABP	Talibon, Bohol	2.36	292	⇑eP	Pn	17 05 30.0	-0.5
TABP				iS	Sb	17 06 04.0	+0.5
TBP	Tagbilaran	2.70	280	eP	Pn	17 05 32.9	-2.3
TBP				iS	Sb	17 06 12.4	-0.9
LSIP	Lazi, Siquijor	2.89	269	⇑eP	Pn	17 05 38.9	+1.1
LSIP				iS	Sn	17 06 13.4	+1.0
CTBH	Cotabato--PC H	3.03	229	⇑iP	Pn	17 05 40.4	+0.8
DDMP	Don Marcelino,	3.20	195	⇑eP	Pn	17 05 38.7	-3.4
DDMP				eS	Sn	17 05 52.9	-27

*IDC **12** 17:06:09.6±4.2, 21°.48S×70°.11W, h0km, mb4.1/1, mbtmp3.8/2, ML3.4/1, MS2.7/1, Error ellipse: s-maj=138.6km s-min=62.9km az=93.0*
*GUC **12** 17:06:16.3±0.7, 20°.66S×70°.52W, h40km±1km, ML3.9*
ISC 12 17:06:09.3±1.6, 20°.59S±0°.03×70°.72W±0°.06, h2km±10km, n30, σ1°.17/35, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.51	87	⇓iP	Pn	17 06 24.0	+0.4
TA01				iS	Sb	17 06 29.8	+1.0
PATCX	Punta Patache	0.58	113	iP	Pn	17 06 24.6	-0.1
PATCX				iS	Sb	17 06 30.9	0.0
PATCX				IAML		17 06 31.3	
	comp=E,14μm,0.2s						
TA02	Huaiquique	0.64	60	⇓iP	Pn	17 06 26.6	+1.3
TA02				iS	Sb	17 06 34.4	+1.8
TA02				IAML		17 06 35.0	
	comp=N,10μm,0.1s						
PB02	IPOC Station P	1.06	133	⇓iP	Pn	17 06 31.8	+0.5
PB02				iS	Sb	17 06 44.0	-0.8
PB02				IAML		17 06 45.7	
	comp=E,13μm,0.2s						
PB01	IPOC Station P	1.24	112	⇓iP	Pn	17 06 34.1	+0.4
PB01				iS	Sg	17 06 47.6	-1.6
PB01				IAML		17 06 48.9	
	comp=N,4μm,0.6s						
PB07	IPOC Station P	1.37	146	eP	Pb	17 06 36.6	+0.8
PB07				iS	Sg	17 06 52.3	-1.2
PB07				IAML		17 06 55.0	
	comp=E,2μm,0.5s						
PB08	IPOC Station P	1.54	73	⇑iP	Pg	17 06 39.7	+0.8
PB08				iS	Sn	17 06 57.9	-0.9
PB08				IAML		17 06 59.2	
	comp=E,6μm,0.3s						
GO01	Chusmiza	1.70	58	eP	Pg	17 06 42.7	+0.7
GO01				iS	Sn	17 07 03.2	+0.1
GO01				IAML		17 07 06.2	
	comp=N,5μm,0.1s						
PB04	IPOC Station P	1.81	163	eP	Pb	17 06 43.0	-0.4
PB04				iS	Sb	17 07 05.5	-1.1
PB04				IAML		17 07 10.1	
	comp=E,1μm,0.6s						
PB09	IPOC Station P	1.83	131	eP	Pb	17 06 43.6	0.0
PB09				iS	Sn	17 07 04.3	-1.4
PB12	IPOC Station P	2.00	11	eP	Pg	17 06 47.9	+0.2
PB12				iS	Sb	17 07 12.8	+0.8
PB06	IPOC Station P	2.36	153	eP	Pn	17 06 50.1	+0.8
PB06				IAML		17 07 32.5	
	comp=N,557nm,0.5s						
PB16	IPOC Station P	2.52	27	⇑iP	Pb	17 06 56.7	+1.0
PB16				iS	Sb	17 07 27.0	-0.3
LVC	Limon Verde	2.62	140	eP	Pn	17 06 54.5	+1.5
LVC				iS	Sn	17 07 24.4	-1.2
PB15	IPOC Station P	2.85	156	eP	Pn	17 06 57.0	+1.0
PB15				eS	Sn	17 07 32.3	+1.3
PB10	IPOC Station P	2.91	177	eP	Pn	17 06 57.5	+0.8
AF01	San Pedro de A	3.33	135	eP	Pn	17 07 04.2	+1.5
AF01				iS	Sg	17 07 56.9	+0.4
LPAZ	La Paz	4.94	30	Pn	Pb	17 07 33.4	-3.5
	comp=N,0.6nm,0.3s,baz=224,slow=5.3,SNR=8.3						
LPAZ				Lg	Lg	17 08 53.6	
	comp=N,0.1nm,0.3s,baz=258,slow=19,SNR=3.6						
	comp=N,1.2nm,0.3s						
SIV	San Ignacio	10.24	65	LR	LR	17 13 12.7	
	comp=N,44nm,19.2s,baz=178,slow=42						
H03N1	Juan Fernandez	14.72	208	T	T	17 24 48.6	
	baz=34,slow=72,SNR=439						
H03N2	Juan Fernandez	14.73	208	T	T	17 24 49.7	
	baz=34,slow=72,SNR=239						
H03N3	Juan Fernandez	14.74	208	T	T	17 24 48.7	
	baz=34,slow=72,SNR=252						
TORD	Torodi Ar. Bea	78.66	71	P	P	17 18 12.8	-0.7
	comp=N,0.9nm,0.5s,baz=251,slow=6.9,SNR=6.5						
	comp=N,0.9nm,0.5s						
H11S2	WAKE ISLAND Hyl	26.08	278	T	T	19 44 36.7	
	baz=103,slow=75,SNR=34						
H11S1	WAKE ISLAND Hyl	26.09	278	T	T	19 44 35.9	
	baz=103,slow=75,SNR=23						
H11S3	WAKE ISLAND Hyl	26.10	278	T	T	19 44 24.4	
	baz=103,slow=75,SNR=19						
H11N3	WAKE ISLAND Hyl	26.14	280	T	T	19 44 28.9	
	baz=102,slow=75,SNR=42						
H11N2	WAKE ISLAND Hyl	26.16	280	T	T	19 44 30.5	
	baz=102,slow=75,SNR=33						
H11N1	WAKE ISLAND Hyl	26.16	280	T	T	19 44 30.7	
	baz=102,slow=75,SNR=29						
MKAR	Makanchi Array	145.86	34	PKPbc	PKPab	17 25 51.3	+0.6
	comp=N,0.6nm,0.7s,baz=313,slow=3.8,SNR=4.7						

MAN 12 17:19:28.4, 15°.29N×122°.45E, h1km, mb3.9, ML2.7, MS2.3, 6C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.96	298	⇑eP	Pb	17 19 47.6	-0.2
BALP				eS	Sb	17 20 01.7	+0.7
BALP	Baler	0.96	298	⇓eP	Pb	17 19 47.8	0.0
BALP				eS	Sb	17 20 01.6	+0.6
JCNP	Jose Panganiba	1.02	167	⇓iP	Pg	17 19 46.7	-1.3
JCNP				iS	Sg	17 19 59.6	-1.6
GQP	Guinayangan	1.38	180	⇓iP	Pn	17 19 53.1	-1.6
GQP				iS	Sg	17 20 11.1	-1.6
LQP	Lukban	1.47	217	⇑eP	Pn	17 19 55.8	-0.4
LQP				iS	Sn	17 20 19.5	+3.4
CAUP	Cauayan	1.75	340	⇑eP	Pn	17 19 59.2	-0.7
CAUP				eS	Sn	17 20 22.8	-0.2
BOAC	Boac	1.91	198	⇓eP	Pn	17 20 01.7	-0.4
BOAC				eS	Sn	17 20 27.3	+0.5
SMPP	San Manuel, Pa	1.91	297	⇓eP	Pn	17 20 01.7	-0.5
SMPP				eS	Sn	17 20 26.6	-0.3
MACP	Maragondon, Ca	1.96	239	⇑eP	Pn	17 20 03.5	+0.6
MACP				eS	Sn	17 20 28.4	+0.2
PVCP	Virac	2.35	135	⇑eP	Pn	17 20 00.1	-8.1
PVCP				eS	Sb	17 20 39.8	-1.4
PACPP	Pamplona Cagay	3.33	342	⇑eP	Pn	17 20 22.5	+0.9
PACPP				eS	Sn	17 21 01.1	-0.6

MAN 12 17:21:15.4, 9°.22N×126°.48E, h9km, mb4.2, ML3.1, MS2.8, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.66	328	⇑eP	Pb	17 21 29.4	+0.2
GLSP				eS	Sb	17 21 39.0	+0.5
BUTP	Butuan	0.88	254	⇑eP	Pg	17 21 31.8	-0.6
BUTP				eS	Sn	17 21 47.1	+0.2
BIPH	Bislig	1.03	186	⇑iP	Pg	17 21 34.7	-0.6
BIPH				iS	Sg	17 21 48.8	0.0
SCPH	Surigao	1.13	300	eP	Pg	17 21 36.3	-0.7
SCPH				iS	Sn	17 21 53.7	+0.8
BUKP	Musuan	1.93	227	⇓iP	Pb	17 21 51.3	+0.4
BUKP				iS	Sg	17 22 18.8	+1.2

IDC 12 17:33:40.2±2.2, 2°.38S×127°.36E, h0km, mb3.0/2, mbtmp3.0/3, ML3.0/1, Error ellipse: s-maj=156.0km s-min=28.9km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.75	159	P	Pn	17 38 01.3	+0.2
	0.1nm,0.3s,baz=338,slow=11,SNR=5.8						
	0.2nm,0.5s						
ASAR	Alice Springs	22.09	164	P	P	17 38 36.1	-1.0
	0.1nm,0.3s,baz=344,slow=11,SNR=4.4						
	0.1nm,0.3s						
MKAR	Makanchi Array	62.94	327	P	P	17 44 09.0	+0.4
	0.2nm,0.5s,baz=118,slow=7.3,SNR=2.2						
	0.2nm,0.5s						

*NOU **12** 17:37:04.3, 38°.13S×177°.62E, h34km, MLv3.8/11, North Island, New Zealand*
*WEL **12** 17:37:04.5±0.3, 38°.3S±3°×17°.8E±°, h38km±4km, M3.1/48, ML3.3/51, MLv3.1/48, Error ellipse: s-maj=0.0km s-min=0.0km az=102.1*
ISC 12 17:37:04.7±1.4, 38°.10S±0°.03×177°.60E±0°.03, h55km±8km, n99, σ0°.99/108, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.15	26	P	Pn	17 37 12.6	-0.9
RUGZ				S	Sn	17 37 19.2	-0.5
MWZ	Matawai	0.24	193	P	Pn	17 37 13.5	-0.4
MWZ				S	Sn	17 37 20.8	+0.3
TWGZ	Tauwhareparae	0.31	104	P	Pn	17 37 14.5	0.0
TWGZ				S	Sn	17 37 23.1	+1.6
HAZ	Te Kaha	0.37	23	P	Pn	17 37 14.2	-0.8
HAZ				S	Sn	17 37 21.3	-1.0
TKGZ	Te Karaka	0.39	150	P	Pn	17 37 14.9	-0.3
TKGZ				S	Sn	17 37 23.6	+0.9
URZ	Urewera	0.41	247	P	Pn	17 37 14.7	-0.6
URZ				S	Sn	17 37 23.2	+0.1
URZ	Urewera	0.41	247	P	Pn	17 37 14.7	-0.6
RAGZ	Rawiri	0.42	200	P	Pn	17 37 15.6	0.0
RAGZ				S	Sn	17 37 24.6	+1.2
PKGZ	Pakihiroa	0.43	61	P	Pn	17 37 15.6	0.0
PKGZ				S	Sn	17 37 25.0	+1.5
PUZ	Puketiti	0.52	87	P	Pn	17 37 16.2	-0.3
PUZ				S	Sn	17 37 25.9	+0.7
WHRZ	Whale Island	0.55	296	P	Pn	17 37 16.4	-0.5
CNGZ	Carnagh Statio	0.61	129	P	Pn	17 37 17.7	0.0
RIGZ	Rimuhau	0.62	168	P	Pn	17 37 17.4	-0.3
WIZ	White Island	0.66	330	P	Pn	17 37 17.1	-1.0
WSRZ	White Island S	0.67	330	P	Pn	17 37 18.0	-0.3
EDRZ	Edgecumbe	0.68	269	P	Pn	17 37 18.0	-0.4
WMGZ	Waiomatatini S	0.70	67	P	Pn	17 37 18.7	0.0
RTZ	Ruatahuna	0.71	223	P	Pn	17 37 18.4	-0.4
SNGZ	Shannon Statio	0.71	196	P	Pn	17 37 19.1	+0.2
MARZ	Manawahe	0.74	279	P	Pn	17 37 18.4	-0.7
MUGZ	Murupara	0.75	240	P	Pn	17 37 18.8	-0.5
MXZ	Matakaoa Point	0.78	47	P	Pn	17 37 20.0	+0.4
MXZ	Matakaoa Point	0.78	47	P	Pn	17 37 20.1	+0.4
OPRZ	Ohinepanea	0.86	287	P	Pn	17 37 19.8	-0.9
TARZ	Mount Tarawera	0.87	261	P	Pn	17 37 20.8	-0.2
RRRZ	Republican Roa	0.89	254	P	Pn	17 37 20.7	-0.4
RAHZ	Arahi	0.91	206	P	Pn	17 37 21.7	+0.3
KNZ	Kokohu	0.92	176	P	Pn	17 37 20.8	-0.8
MTHZ	Maungataniwha	0.96	218	P	Pn	17 37 22.0	-0.1
LIRZ	Lichensteins R	0.96	275	P	Pn	17 37 21.5	-0.5
OMRZ	Omania	0.97	269	P	Pn	17 37 21.7	-0.4
HLRZ	Highlands Stat	0.99	261	P	Pn	17 37 22.3	-0.2
WHHZ	Waihua	1.02	196	P	Pn	17 37 23.3	+0.5
PRRZ	Plateau Road	1.03	247	P	Pn	17 37 22.5	-0.5
KARZ	Kaharoa	1.07	274	P	Pn	17 37 22.9	-0.6
HRRZ	Handcock Road	1.07	254	P	Pn	17 37 23.2	-0.4
MHGZ	Mahia Peninsul	1.08	167	P	Pn	17 37 23.1	-0.5
HSRZ	Hossack Road	1.09	258	P	Pn	17 37 23.9	+0.2
ALRZ	Allen Road	1.09	244	P	Pn	17 37 23.4	-0.4
NGRZ	Ngongotaha	1.11	269	P	Pn	17 37 24.2	+0.1
TGRZ	Tauranga	1.12	289	P	Pn	17 37 23.1	-1.1
NMHZ	Naumai	1.17	212	P	Pn	17 37 26.1	+1.1
MRHZ	Matea Rd	1.18	231	P	Pn	17 37 24.8	-0.2
GRRZ	Galatos Road	1.20	257	P	Pn	17 37 25.2	0.0
WPRZ	Whakapapatarin	1.20	249	P	Pn	17 37 25.2	-0.1
ARHZ	Aropaoanui	1.25	202	P	Pn	17 37 26.3	+0.3
KMRZ	Kaimai	1.33	280	P	Pn	17 37 26.2	-0.9
MYRZ	Mayor Island	1.35	307	P	Pn	17 37 26.4	-0.9
BKZ	Black Stump Fm	1.37	219	P	Pn	17 37 27.7	+0.1
BKZ	Black Stump Fm	1.37	219	P	Pn	17 37 27.9	+0.3
KUTZ	Kaahu Road	1.45	254	P	Pn	17 37 28.4	-0.2
MCHZ	McNeill Hill	1.52	207	P	Pn	17 37 29.7	+0.2
CKHZ	Cape Kidnapper	1.61	194	P	Pn	17 37 29.7	-1.0
KWHZ	Kaweka Forest	1.61	214	P	Pn	17 37 31.1	+0.3
TLZ	Tolley Road	1.64	261	P	Pn	17 37 30.7	-0.5
TOZ	Tahuroa Road	1.70	282	P	Pn	17 37 31.3	-0.7
KAHZ	Kahuranaki	1.78	198	P	Pn	17 37 32.2	-1.0
ETVZ	East Tongariro	1.80	234	P	Pn	17 37 33.5	0.0
NTVZ	North Tongarir	1.81	236	P	Pn	17 37 33.6	0.0
BHHZ	Black Hill Sta	1.83	220	P	Pn	17 37 33.9	0.0
NNVZ	North Ngauruho	1.86	236	P	Pn	17 37 34.5	+0.1
SNVZ	South Ngauruho	1.88	234	P	Pn	17 37 34.5	-0.1
NGZ	Ngauruhoe	1.90	235	P	Pn	17 37 34.9	+0.1
TUVZ	Tukino	1.92	232	P	Pn	17 37 35.0	0.0
MOVZ	Moawhango	1.94	227	P	Pn	17 37 35.2	-0.2
TWVZ	Taurewa	1.95	240	P	Pn	17 37 36.7	+1.2
WNVZ	Wahianoa	1.99	231	P	Pn	17 37 36.3	+0.2
KUZ	Kuaotunu	2.01	312	P	Pn	17 37 35.0	-1.3
KUZ	Kuaotunu	2.01	312	P	Pn	17 37 35.1	-1.2
PNHZ	Pukenui	2.11	211	P	Pn	17 37 36.3	-1.4
PKVZ	Pokaka	2.12	235	P	Pn	17 37 38.6	+0.8
MKAZ	Moumakai	2.17	296	P	Pn	17 37 37.7	-0.7
HIZ	Hauiti	2.19	258	P	Pn	17 37 39.2	+0.4
HIZ	Hauiti	2.19	258	P	Pn	17 37 39.2	+0.4
PRHZ	Porangahau	2.29	199	P	Pn	17 37 38.0	-2.1
TSZ	Takapari Road	2.33	213	P	Pn	17 37 39.2	-1.5
ETAZ	East Tamaki Re	2.41	298	P	Pn	17 37 41.5	-0.2
VRZ	Vera Road	2.45	244	P	Pn	17 37 43.2	+1.0
ANWZ	Angora Road	2.51	200	P	Pn	17 37 41.4	-1.7
AWAZ	Awhitu Peninsu	2.56	293	P	Pn	17 37 43.7	0.0
WAZ	Wanganui	2.62	230	P	Pn	17 37 45.3	+0.6
ABAZ	Army Bay	2.66	303	P	Pn	17 37 45.3	+0.1
BFZ	Birch Farm	2.78	202	P	Pn	17 37 44.5	-2.3
BFZ	Birch Farm	2.78	202	P	Pn	17 37 44.8	-2.0
LREZ	Lake Rotokare	2.84	240	P	Pn	17 37 49.4	+1.8
NEZ	North Egmont	2.98	246	P	Pn	17 37 51.9	+2.4
MRZ	Mangatainoka R	3.00	211	P	Pn	17 37 47.3	-2.4
CPWZ	Castlepoint	3.01	201	P	Pn	17 37 47.4	-2.4
PKE	Puketi	3.03	248	P	Pn	17 37 53.0	+2.8
KHEZ	Kahui Hut	3.05	246	P	Pn	17 37 52.8	+2.4
KHEZ	Kahui Hut	3.05	246	P	Pn	17 37 50.9	+0.4
HOWZ	Holdsworth Sta	3.23	209	P	Pn	17 37 50.0	-2.8
WCZ	Waipu Caves	3.38	309	P	Pn	17 37 54.8	-0.2
OUZ	Omahuta	4.31	311	P	Pn	17 38 08.1	+0.3
BSWZ	Blackbirch Sta	4.61	217	P	Pn	17 38 09.9	-1.8
QRZ	Quartz Range	4.77	234	P	Pn	17 38 13.9	-0.2
KHZ	Kahutara	5.31	214	P	Pn	17 38 21.2	-0.2
CTZ	Chatham Island	7.13	144	P	Pn	17 38 45.7	-0.7
CTZ	Chatham Island	7.13	144	P	Pn	17 38 45.5	-0.9
	122nm,1.7s						

ROM 12 17:45:28.3±0.1, 42°.871N±0°.003×13°.065E±0°.004, h8km, ML1.3/2, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.04	301	P	Pg	17 45 29.9	0.0
T1216				S	Sg	17 45 31.0	-0.1
T1216	Preci, Frazion	0.04	301	P	Pg	17 45 30.0	+0.1
T1216				S	Sg	17 45 31.0	-0.1
NRCA	Norcia	0.05	135	P	Pg	17 45 30.1	0.0
NRCA				S	Sg	17 45 31.1	-0.2
NRCA				AML	AML		
	comp=E,3220μm,0.1s						
NRCA				AML	AML		
	comp=N,1740μm,0.1s						
NRCA	Norcia	0.05	135	P	Pg	17 45 30.2	+0.1
NRCA				S	Sg	17 45 31.2	-0.2
FEMA	Monte Fema	0.09	353	P	Pg	17 45 30.9	+0.3
FEMA				S	Sg	17 45 32.8	+0.5
MC2	Monte Cornacci	0.10	66	P	Pg	17 45 31.0	+0.2
MC2				S	Sg	17 45 33.2	+0.6
MC2	Monte Cornacci	0.10	66	P	Pg	17 45 31.2	+0.4
MC2				S	Sg	17 45 33.6	+0.9
T1215	Vallo di Nera,	0.16	245	P	Pg	17 45 32.3	+0.6
T1215				S	Sg	17 45 35.2	+1.2
FDMO	Fiordimonte	0.17	6	P	Pg	17 45 32.2	+0.5
FDMO				S	Sg	17 45 35.2	+1.0
FDMO	Fiordimonte	0.17	6	P	Pg	17 45 32.2	+0.5
FDMO				S	Sg	17 45 35.4	+1.2
CESI	CESI - Serrava	0.18	319	P	Pg	17 45 33.0	+1.0
CESI				S	Sg	17 45 35.8	+1.3
CESI	CESI - Serrava	0.18	319	P	Pg	17 45 32.6	+0.6
T1217	Poggiodomo (PG	0.19	212	P	Pg	17 45 32.8	+0.7
T1217				S	Sg	17 45 36.2	+1.4
T1217	Poggiodomo (PG	0.19	212	P	Pg	17 45 32.8	+0.7
T1217				S	Sg	17 45 36.2	+1.4
MMO1	Montemonaco	0.20	81	P	Pg	17 45 32.7	+0.4
MMO1				S	Sg	17 45 36.0	+1.0
MMO1	Montemonaco	0.20	81	P	Pg	17 45 32.6	+0.3
MMO1				S	Sg	17 45 36.0	+1.0
T1202	Accumoli, Fraz	0.20	145	P	Pg	17 45 33.1	+0.7
T1202				S	Sg	17 45 36.7	+1.5
T1202				AML	AML		
	comp=E,128μm,1.4s						
T1202				AML	AML		
	comp=N,146μm,0.3s						
T1202				AML	AML		
	comp=N,146μm,0.3s						
T1202				AML	AML		
	comp=E,125μm,1.4s						
T1202	Accumoli, Fraz	0.20	145	P	Pg	17 45 33.1	+0.7
T1202				S	Sg	17 45 36.9	+1.6
AM05	Amandola Campo	0.24	63	P	Pg	17 45 33.5	+0.4
AM05				S	Sg	17 45 37.7	+1.4
T1204	Amatrice, Fraz	0.27	136	P	Pg	17 45 34.4	+0.7
T1204				S	Sg	17 45 38.3	+1.0
T1241	Roccafluvione,	0.27	93	⇓P	Pg	17 45 34.0	+0.3
T1241				S	Sg	17 45 38.6	+1.3
T1241				AML	AML		
	comp=E,76μm,1.6s						
T1241				AML	AML		
	comp=N,99μm,0.7s						
T1241				AML	AML		
	comp=E,77μm,1.6s						
T1241				AML	AML		
	comp=N,99μm,0.7s						
GUMA	Gualdo di Mace	0.28	46	P	Pg	17 45 34.5	+0.7
GUMA				S	Sb	17 45 39.4	-1.0
GUMA				AML	AML		
	comp=E,126μm,0.6s						
GUMA				AML	AML		
	comp=N,136μm,1.2s						
GUMA				AML	AML		
	comp=E,126μm,0.6s						
GUMA				AML	AML		
	comp=N,136μm,1.2s						
T1243	Rocca Santa Ma	0.33	122	P	Pg	17 45 35.0	+0.2
T1243				S	Sg	17 45 40.5	+1.3
ASSB	Assisi San Ben	0.34	300	P	Pb	17 45 36.2	-0.5
ASSB				S	Sb	17 45 41.0	-1.4
T1211	Morro Reatino	0.37	205	P	Pb	17 45 37.0	-0.2
T1211				S	Sb	17 45 42.1	-1.1
RM33	Pellescritta (	0.38	163	P	Pg	17 45 35.9	+0.2
RM33				S	Sb	17 45

TGRZ	Tauranga	0.46 353	P	Pn	17 53 35.5	+0.3
MUGZ	Murupara	0.46 130	P	Pn	17 53 35.7	+0.5
MUGZ			S	Sn	17 53 52.7	-2.2
KUTZ	Kaahu Road	0.50 232	P	Pn	17 53 36.5	+1.1
WHTZ	Whakaora	0.56 211	P	Pn	17 53 37.1	+1.4
URZ	Urewera	0.62 97	P	Pn	17 53 36.2	+0.3
URZ			S	Sn	17 53 53.5	-2.5
URZ	Urewera	0.62 97	P	Pn	17 53 36.2	+0.3
TLZ	Tolley Road	0.64 256	P	Pn	17 53 37.2	+1.2
MRHZ	Matea Rd	0.66 174	P	Pn	17 53 37.1	+1.0
RTZ	Ruatahuna	0.67 130	P	Pn	17 53 37.1	+0.9
WATZ	Wairara	0.70 221	P	Pn	17 53 37.6	+1.3
HATZ	Hinemaiaia	0.73 195	P	Pn	17 53 37.5	+1.0
MTHZ	Maungataniwha	0.78 149	P	Pn	17 53 37.9	+1.2
MTHZ			S	Sn	17 53 56.6	-1.3
TOZ	Tahuroa Road	0.79 304	P	Pn	17 53 37.8	+1.0
TOZ			S	Sn	17 53 56.6	-1.1
RATZ	Rangitukua	0.81 212	P	Pn	17 53 38.2	+1.3
RAGZ	Rawiri	0.91 110	P	Pn	17 53 38.8	+1.2
KATZ	Kakaramea	0.94 212	P	Pn	17 53 39.1	+1.3
RAHZ	Arahi	0.94 141	P	Pn	17 53 39.5	+1.8
MWZ	Matawai	0.96 100	P	Pn	17 53 38.8	+0.9
NMHZ	Naumai	0.99 158	P	Pn	17 53 40.3	+2.2
BKZ	Black Stump Fm	0.99 173	P	Pn	17 53 39.4	+1.3
BKZ	Black Stump Fm	0.99 173	P	Pn	17 53 39.4	+1.3
SNGZ	Shannon Statio	0.99 127	P	Pn	17 53 39.8	+1.7
NTVZ	North Tongarir	1.05 209	P	Pn	17 53 40.0	+1.4
KRVZ	Karewarewa	1.06 210	P	Pn	17 53 40.1	+1.4
ETVZ	East Tongariro	1.07 207	P	Pn	17 53 40.2	+1.4
RUGZ	Raukumara Rang	1.09 79	P	Pn	17 53 38.8	-0.2
WTVZ	West Tongariro	1.10 212	P	Pn	17 53 40.3	+1.4
NNVZ	North Ngauruho	1.10 214	P	Pn	17 53 40.4	+1.4
OTVZ	Oturere	1.11 208	P	Pn	17 53 40.9	+1.7
TWVZ	Taurewa	1.13 218	P	Pn	17 53 40.6	+1.4
SNVZ	South Ngauruho	1.14 208	P	Pn	17 53 40.9	+1.5
WHHZ	Waihua	1.14 142	P	Pn	17 53 41.1	+1.9
NGZ	Ngauruhoe	1.14 210	P	Pn	17 53 40.9	+1.5
ARHZ	Aropaoanui	1.20 154	P	Pn	17 53 41.8	+2.1
HIZ	Hauiti	1.20 254	P	Pn	17 53 41.3	+1.7
HIZ	Hauiti	1.20 254	P	Pn	17 53 41.4	+1.7
TUVZ	Tukino	1.21 206	P	Pn	17 53 41.5	+1.6
HAZ	Te Kaha	1.23 70	P	Pn	17 53 40.0	+0.1
FWVZ	Far West T-bar	1.23 209	P	Pn	17 53 41.5	+1.3
WHVZ	Whangaehu Hut	1.24 207	P	Pn	17 53 41.6	+1.4
KWHZ	Kaweka Forest	1.24 177	P	Pn	17 53 41.8	+1.7
RIGZ	Rimuhau	1.24 115	P	Pn	17 53 41.7	+1.7
TRVZ	Turoa	1.27 208	P	Pn	17 53 42.3	+1.8
WNVZ	Wahianoa	1.28 206	P	Pn	17 53 42.0	+1.5
MCHZ	McNeill Hill	1.29 167	P	Pn	17 53 42.7	+2.3
TWGZ	Tauwhareparae	1.30 90	P	Pn	17 53 42.1	+1.5
MOVZ	Moawhango	1.30 200	P	Pn	17 53 41.8	+1.2
BHHZ	Black Hill Sta	1.32 189	P	Pn	17 53 42.2	+1.5
PKVZ	Pokaka	1.35 214	P	Pn	17 53 42.5	+1.5
KNZ	Kokohu	1.35 129	P	Pn	17 53 42.6	+1.7
MTVZ	Mangateitei	1.38 209	P	Pn	17 53 42.8	+1.6
PKGZ	Pakihiroa	1.41 79	P	Pn	17 53 42.6	+1.0
MKAZ	Moumakai	1.42 319	P	Pn	17 53 42.7	+1.1
CNGZ	Carnagh Statio	1.51 102	P	Pn	17 53 44.5	+2.2
KUZ	Kuaotunu	1.51 341	P	Pn	17 53 43.1	+0.8
KUZ	Kuaotunu	1.51 341	P	Pn	17 53 43.2	+0.8
VRZ	Vera Road	1.55 232	P	Pn	17 53 44.7	+2.1
MHGZ	Mahia Peninsul	1.57 129	P	Pn	17 53 45.1	+2.2
CKHZ	Cape Kidnapper	1.59 159	P	Pn	17 53 45.4	+2.3
ETAZ	East Tamaki Re	1.66 317	P	Pn	17 53 45.0	+1.2
KAHZ	Kahuranaki	1.67 165	P	Pn	17 53 46.2	+2.3
MXZ	Matakaoa Point	1.68 69	P	Pn	17 53 45.5	+1.5
MXZ	Matakaoa Point	1.68 69	P	Pn	17 53 45.7	+1.7
WMGZ	Waiomatatini S	1.69 78	P	Pn	17 53 45.2	+1.2
PNHZ	Pukenui	1.73 183	P	Pn	17 53 46.1	+1.6
AWAZ	Awhitu Peninsu	1.74 309	P	Pn	17 53 45.8	+1.2
MHEZ	Mangahewa	1.81 240	P	Pn	17 53 48.1	+2.9
MBAZ	Motutapu North	1.81 321	P	Pn	17 53 46.6	+1.3
WTAZ	Waiatarua	1.87 311	P	Pn	17 53 47.3	+1.4
WPHZ	Waipukurau	1.88 177	P	Pn	17 53 47.8	+1.8
WAZ	Wanganui	1.89 213	P	Pn	17 53 47.9	+1.8
PXZ	Pawanui	1.89 167	P	Pn	17 53 48.1	+2.0
TSZ	Takapari Road	1.90 189	P	Pn	17 53 47.8	+1.6
DREZ	Durham Road	1.94 238	P	Pn	17 53 49.2	+2.6
LREZ	Lake Rotokare	1.97 229	P	Pn	17 53 49.3	+2.4
ABAZ	Army Bay	1.98 323	P	Pn	17 53 48.6	+1.6
GRZ	Great Barrier	2.05 340	P	Pn	17 53 48.9	+1.1
PREZ	Palmer Road	2.05 235	P	Pn	17 53 50.5	+2.7
NEZ	North Egmont	2.06 237	P	Pn	17 53 50.5	+2.6
PKE	Pukeiti	2.09 240	P	Pn	17 53 50.7	+2.5
PRHZ	Porangahau	2.10 174	P	Pn	17 53 50.0	+1.8
DVHZ	Dannevirke	2.17 183	P	Pn	17 53 49.9	+1.4
KHEZ	Kahui Hut	2.12 238	P	Pn	17 53 51.1	+2.5
KHEZ	Kahui Hut	2.12 238	P	Pn	17 53 50.9	+2.3
OHWZ	Ohakea	2.17 201	P	Pn	17 53 51.0	+2.0
NBEZ	Newall Road No	2.21 240	P	Pn	17 53 52.0	+2.6
POWZ	Post Office Ro	2.25 191	P	Pn	17 53 51.4	+1.4
ANWZ	Angora Road	2.28 177	P	Pn	17 53 52.1	+1.9
PRWZ	Pori Road	2.39 187	P	Pn	17 53 53.1	+1.7
BFZ	Birch Farm	2.50 181	P	Pn	17 53 54.1	+1.4
BFZ	Birch Farm	2.50 181	P	Pn	17 53 54.2	+1.5
MRZ	Mangatainoka R	2.54 193	P	Pn	17 53 54.4	+1.1
TIWZ	Tintock	2.61 187	P	Pn	17 53 55.4	+1.3
CPWZ	Castlepoint	2.73 182	P	Pn	17 53 57.2	+1.8
OGWZ	Otaki Gorge	2.78 198	P	Pn	17 53 57.1	+1.1
HOWZ	Holdsworth Sta	2.78 193	P	Pn	17 53 56.9	+0.8
KIW	Kapiti Island	2.89 202	P	Pn	17 53 58.0	+0.7
TMWZ	Te Maipa	2.94 186	P	Pn	17 53 58.9	+1.0
MTW	Mount Morrison	3.04 192	P	Pn	17 53 59.7	+0.6
CAW	Cannon Point	3.08 198	P	Pn	17 54 00.3	+0.7
DUWZ	D'Urville Isla	3.21 215	P	Pn	17 54 01.6	+0.4
TRWZ	Traveller	3.25 189	P	Pn	17 54 02.4	+0.7
PAWZ	Paruwai Farm	3.27 192	P	Pn	17 54 02.4	+0.5
WEL	Wellington	3.32 201	P	Pn	17 54 03.2	+0.7
MSWZ	Moikau Station	3.34 194	P	Pn	17 54 03.0	+0.4
SNZO	South Karori	3.37 201	P	Pn	17 54 03.5	+0.5
TCW	Tory Channel	3.41 207	P	Pn	17 54 03.9	+0.3
PLWZ	Palliser	3.48 193	P	Pn	17 54 04.8	+0.2
OUZ	Omahuta	3.68 323	P	Pn	17 54 09.1	+2.1
OUZ	Omahuta	3.68 323	P	Pn	17 54 09.2	+2.1
TUWZ	Tuamarina	3.73 209	P	Pn	17 54 07.8	+0.3
NNZ	Nelson	3.79 216	P	Pn	17 54 08.6	+0.3
TKNZ	Takaka Hill	3.86 221	P	Pn	17 54 09.1	-0.1
CMWZ	Cape Campbell	3.92 204	P	Pn	17 54 10.9	+1.0
QRZ	Quartz Range	3.95 227	P	Pn	17 54 09.9	-0.4
QRZ	Quartz Range	3.95 227	P	Pn	17 54 10.3	0.0
BSWZ	Blackbirch Sta	4.00 207	P	Pn	17 54 11.3	+0.4
MRNZ	Matariki Terra	4.23 219	P	Pn	17 54 13.4	-0.4
THZ	Tophouse	4.44 215	P	Pn	17 54 16.7	+0.2
KHZ	Kahutara	4.74 206	P	Pn	17 54 20.4	+0.1
KHZ	Kahutara	4.74 206	P	Pn	17 54 20.8	+0.5
DSZ	Denniston Nort	4.97 223	P	Pn	17 54 22.3	-1.1
GVZ	Greta Valley S	5.40 207	P	Pn	17 54 28.8	0.0
LTZ	Lake Taylor	5.54 213	P	Pn	17 54 30.4	-0.3
AMCZ	Amberley	5.72 208	P	Pn	17 54 32.6	-0.3
INZ	Inchbonnie	5.87 218	P	Pn	17 54 33.4	-1.5
OKCZ	Okains Bay	6.06 203	P	Pn	17 54 37.0	-0.5
MQZ	McQueen's Vall	6.18 206	P	Pn	17 54 37.6	-1.3
AKCZ	Akaroa Harbour	6.24 203	P	Pn	17 54 39.2	-0.7
WACZ	Wakanui South	6.68 209	P	Pn	17 54 44.8	-0.7
RPZ	Rata Peaks	6.82 214	P	Pn	17 54 47.3	0.0
RPZ	Rata Peaks	6.82 214	P	Pn	17 54 47.6	+0.3
ARCZ	Arundel	6.95 212	P	Pn	17 54 48.7	-0.3
TMZ	Timaru	7.38 211	P	Pn	17 54 54.1	-0.6
ODZ	Otahua Downs	8.07 210	P	Pn	17 55 03.2	-0.5
ODZ	Otahua Downs	8.07 210	P	Pn	17 55 03.2	-0.5
RAO	Raoul Island	10.11 30	P	Pn	17 55 31.2	+0.7
RIZ	Raoul Island	10.11 30	P	Pn	17 55 31.0	+0.5
LHI	Lord Howe Isla	15.64 290	P	Pn	17 56 40.8	+0.6

*HVO **12** 17:55:01.4±1.4, 19°.15N±0°.01×155°.537W±0°.005, h5km±4km, ML2.7/22, ML2.8/40(NEIC), Error ellipse: s-maj=2.0km s-min=0.6km az=184.0*

NEIC 12 17:55:01.9±1.6, 19°.17N±0°.01×155°.532W±0°.008, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.4km az=183.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPO	Honuapo	0.08	195		Pg	17 55 03.5	-0.1
KHU	Kahuku	0.11	316		Pg	17 55 04.4	+0.1
KHU					Sg	17 55 06.9	+0.9
KHU	Kahuku	0.11	316	IAML		17 55 07.0	
	comp=N,4μm,0.2s						
HTC	Hot Caves	0.15	61		Pg	17 55 04.9	0.0
AIN	Ainahou	0.22	19		Pg	17 55 06.2	0.0
AIN					Sg	17 55 11.7	+2.6
AIN	Ainahou	0.22	19	IAML		17 55 11.9	
	comp=E,2μm,0.3s						
AIN				IAML		17 55 12.1	
	comp=N,3μm,0.3s						
HLP	Hilina Pali	0.25	58		Pg	17 55 07.1	+0.4
HLP					Sg	17 55 11.9	+1.9
HLP	Hilina Pali	0.25	58	IAML		17 55 13.6	
	comp=E,1μm,0.3s						
HLP				IAML		17 55 14.2	
	comp=N,2μm,0.3s						
SDHHI	Sand Hill	0.32	45	IAML		17 55 15.6	
	comp=N,1μm,0.2s						
SDHHI				IAML		17 55 16.4	
	comp=E,1μm,0.4s						
SDHHI	Sand Hill	0.32	45		Pg	17 55 08.0	-0.1
SDHHI					Sg	17 55 13.1	+0.8
MWH	Moku'aweowe	0.32	349		Pg	17 55 08.0	-0.3
MWH					Sg	17 55 13.9	+1.2
MWH	Moku'aweowe	0.32	349	IAML		17 55 13.9	
	comp=N,824nm,1.7s						
MWH				IAML		17 55 18.5	
	comp=E,744nm,0.6s						
WRMHI	West Rim	0.33	42		Pg	17 55 08.1	-0.1
WRMHI					Sg	17 55 13.3	+0.7
WRMHI	West Rim	0.33	42	IAML		17 55 14.0	
	comp=E,2μm,1.1s						
RIM	Rim	0.33	47		Sg	17 55 13.4	+0.5
RIM	Rim	0.33	47	Pg	Pg	17 55 05.8	-2.6
RIM	Rim	0.33	47	IAML		17 55 13.7	
	comp=E,725nm,0.8s						
RIM				IAML		17 55 13.8	
	comp=N,1μm,0.8s						
UWE	Uwekahuna	0.34	42		Sg	17 55 14.0	+1.0
UWE	Uwekahuna	0.34	42	Pg	Pg	17 55 08.0	-0.5
UWE	Uwekahuna	0.34	42	IAML		17 55 14.6	
	comp=N,1μm,1.2s						
UWE				IAML		17 55 18.1	
	comp=E,2μm,1.2s						
KKO	Keanakako`i	0.34	47	IAML		17 55 13.9	
	comp=E,873nm,0.5s						
KKO				IAML		17 55 18.0	
	comp=N,1μm,0.7s						
KKO	Keanakako`i	0.34	47		Pg	17 55 08.3	-0.2
KKO					Sg	17 55 13.6	+0.5
OBL	Observatory Le	0.34	43		Sg	17 55 14.0	+0.9
UWB	Uwekahuna B	0.35	43		Pg	17 55 08.3	-0.4
UWB					Sg	17 55 13.8	+0.4
UWB	Uwekahuna B	0.35	43	IAML		17 55 14.0	
	comp=E,342nm,0.9s						
UWB				IAML		17 55 15.7	
	comp=N,432nm,1.3s						
BYL	Byron's Ledge	0.35	46		Sg	17 55 14.4	+0.8
BYL	Byron's Ledge	0.35	46	Pg	Pg	17 55 08.2	-0.6
BYL	Byron's Ledge	0.35	46	IAML		17 55 14.7	
	comp=E,667nm,0.7s						
BYL				IAML		17 55 18.0	
	comp=N,735nm,0.7s						
MLH	Mauna Loa	0.35	23		Pg	17 55 08.6	-0.2
MLH					Sg	17 55 14.3	+0.7
MLH	Mauna Loa	0.35	23	IAML		17 55 14.7	
	comp=N,863nm,0.5s						
MLH				IAML		17 55 18.3	
	comp=E,665nm,0.3s						
SBLHI	Steaming Bluff	0.36	44		Pg	17 55 08.6	-0.3
SBLHI					Sg	17 55 13.8	+0.2
SBLHI	Steaming Bluff	0.36	44	IAML		17 55 14.2	
	comp=E,578nm,0.8s						
SBLHI				IAML		17 55 14.6	
	comp=N,1μm,0.7s						
HATHI	Halema'uma'u T	0.36	45	IAML		17 55 14.6	
	comp=N,955nm,0.5s						
HATHI				IAML		17 55 16.1	
	comp=E,1μm,0.8s						
HATHI	Halema'uma'u T	0.36	45		Pg	17 55 08.7	-0.2
HATHI					Sg	17 55 14.2	+0.5
PUH	Pauahi	0.36	55		Pg	17 55 07.4	-1.6
PUH					Sg	17 55 13.9	+0.1
MLOA	Mauna Loa Obse	0.37	354		Pg	17 55 08.8	-0.4
MLOA					Sg	17 55 14.8	+0.7
MLOA	Mauna Loa Obse	0.37	354	IAML		17 55 14.9	
	comp=E,807nm,1.2s						
RSD	Rainshed	0.38	39	Pg	Pg	17 55 08.7	-0.6
KNHH	Kane Nui o Ham	0.40	58		Pg	17 55 09.0	-0.7
HMH	Humu'ula Sheep	0.44	6		Pg	17 55 10.1	-0.4
HMH					Sg	17 55 16.9	+0.7
HMH	Humu'ula Sheep	0.44	6	IAML		17 55 17.4	
	comp=N,1μm,0.3s						
HMH				IAML		17 55 17.6	
	comp=E,890nm,0.4s						
CPH	Captain Cook	0.48	311		Pg	17 55 10.4	-0.9
CPH					Sg	17 55 17.8	+0.2
KHLU	Kahalu`u	0.54	321		Pg	17 55 11.1	-1.3
KHLU	Kahalu`u	0.54	321		Sg	17 55 19.6	+0.1
POHA	Pohakuloa	0.59	360		Pg	17 55 12.0	-1.2
POHA				IAML		17 55 23.7	
	comp=E,448nm,0.2s						
POHA				IAML		17 55 27.6	
	comp=E,622nm,0.3s						
HUH	Hualalai	0.59	331		Pg	17 55 12.3	-1.0

MAN 12 18:14:06.4, 6°.82N×123°.65E, h4km, mb3.9, ML2.7, MS2.3, 2C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.71	56	‖ *i*P	Pg	18 14 20.4	+0.3
SKMP	Bagumbayan, Su	0.93	109	‖ *i*P	Pg	18 14 24.4	0.0
SKMP				*i* S	Sg	18 14 35.7	-0.8
PAGZ	Pagadian	1.05	345	↑ *e*P	Pn	18 14 27.9	-0.1
PAGZ				*i* S	Sn	18 14 44.2	+1.0
BUKP	Musuan	1.75	53	‖ *e*P	Pn	18 14 37.5	-0.1
BUKP				*e*S	Sb	18 15 00.9	-0.5
CGP	Cagayan de Oro	1.92	32	↑ *e*P	Pn	18 14 40.1	+0.2
CGP				*e*S	Sn	18 15 02.1	-2.5
DDMP	Don Marcelino,	2.17	109	‖ *e*P	Pb	18 14 44.8	-1.4
DDMP				*e*S	Sn	18 15 11.0	+0.4

*AEIC **12** 18:23:55.9±1.6, 54°.54N±0°.06×164°.4W±0°.1, h5km±7km, Error ellipse: s-maj=11.1km s-min=6.4km az=132.0*

NEIC 12 18:23:55.9±1.6, 54°.6N±0°.1×164°.4W±0°.1, h7km±12km, ML3.8/8, ML3.4(AEIC), Error ellipse: s-maj=21.5km s-min=6.0km az=149.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	0.64	64		Pg	18 24 08.5	+0.2
AKUT	Akutan	0.91	241		Pg	18 24 13.0	-0.4
UNV	Unalaska Valle	1.43	240		Pn	18 24 21.7	-0.6
SDPT	Sand Point	2.40	70		Pn	18 24 35.8	+0.2
SDPT				IAML		18 25 11.8	
	comp=E,677nm,1.2s						
SDPT				IAML		18 25 14.5	
	comp=N,797nm,0.9s						
CNBA	Chernabura Isl	2.81	83	Pn	Pn	18 24 41.2	-0.1
CNBA				IAML		18 25 34.6	
	comp=N,246nm,4.5s						
CNBA				IAML		18 25 53.5	
	comp=E,196nm,4.7s						
NIKH	Nikolski High	3.09	240	Pn	Pn	18 24 45.5	+0.5
CHGN	Chignik	3.83	61	Pn	Pn	18 24 57.2	+2.0
N18K	Kilae Creek	7.63	33	Pn	Pn	18 25 46.1	-1.4
SVW2	Sparrevohn	8.05	32	Pn	Pn	18 25 52.5	-0.7
N19K	Bonanza Creek	8.20	36	Pn	Pn	18 25 56.1	+0.7
M19K	Big River Lodg	9.04	32	Pn	Pn	18 26 07.3	+0.6
L19K	White Mountain	9.12	29	Pn	Pn	18 26 07.3	-0.5
M20K	Styx River	9.42	34	Pn	Pn	18 26 10.7	-1.3
J20K	Nowinta River	10.94	24	Pn	Pn	18 26 32.5	-0.2
SCM	Sheep Creek Mo	11.55	44	Pn	Pn	18 26 42.6	+1.4

KRSC 12 18:23:56.6±1.7, 51°.22N×157°.59E, h133km±15km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.55	297	*e*P	Pn	18 24 17.1	+0.9
PAU				*e*S	Sn	18 24 30.9	-0.2
KDTR	Khodutka, Kamc	0.67	27	*e*P	Pn	18 24 19.4	+2.4
KDTR				*e*S	Sn	18 24 34.4	+1.9
SKR	Severo-Kuril's	1.07	240	*e*P	Pn	18 24 22.2	+1.8
SKR				*e*S	Sn	18 24 40.2	+1.7
MTVR	Mutnovka	1.32	16	*e*P	Pn	18 24 24.4	+1.4
MTVR				*e*S	Sn	18 24 44.7	+1.5
RUS	Russkaya	1.34	25	*e*P	Pn	18 24 24.8	+1.7
RUS				*e*S	Sn	18 24 44.6	+1.2
GRL	Gorelyy	1.37	13	*e*P	Pn	18 24 24.9	+1.4
GRL				*e*S	Sn	18 24 45.1	+1.0
KRMR	Karymshinskiy	1.65	12	*e*P	Pn	18 24 27.4	+0.9
KRMR				*e*S	Sn	18 24 49.1	-0.3
APC	Apacha	1.73	351	*e*P	Pn	18 24 26.4	-1.0
PET	Petropavlovsk	1.92	20	*e*P	Pn	18 24 30.9	+1.2
PET				*e*S	Sn	18 24 55.1	0.0
DALK	Dalny	1.95	21	*e*P	Pn	18 24 31.6	+1.6
DALK				*e*S	Sn	18 24 56.4	+0.7
UGLR	Uglovaya	2.13	20	*e*P	Pn	18 24 35.1	+2.7
UGLR				*e*S	Sn	18 25 02.3	+2.4
AVH	Avacha	2.17	19	*e*P	Pn	18 24 34.8	+2.0
AVH				*e*S	Sn	18 25 02.1	+1.5
KOK	Koryaka	2.17	17	*e*P	Pn	18 24 34.9	+2.0
KOK				*e*S	Sn	18 25 03.0	+2.2
SMAR	Somma	2.18	20	*e*P	Pn	18 24 35.4	+2.4
KRER	Koryakskii	2.21	18	*e*P	Pn	18 24 35.3	+1.9
KRER				*e*S	Sn	18 25 03.8	+2.2
SDLR	Sedlovina	2.21	21	*e*P	Pn	18 24 35.1	+1.8
SDLR				*e*S	Sn	18 25 03.0	+1.4
NLC	Nalytchevo	2.23	28	*e*P	Pn	18 24 35.1	+1.6
KRX	Arik	2.24	17	*e*P	Pn	18 24 35.3	+1.6
KRX				*e*S	Sn	18 25 03.9	+1.6
SPN	Mys Shipunski	2.41	38	*e*P	Pn	18 24 38.3	+2.7
SPN				*e*S	Sn	18 25 06.3	+0.6
GNL	Ganaly	2.49	5	*e*P	Pn	18 24 36.7	-0.1
MKZ	Mys Kozlova	4.18	35	*e*P	Pn	18 24 59.7	+1.1
MKZ				*e*S	Sn	18 25 46.2	-0.6
TUMR	Tumrok	4.35	20	*e*P	Pn	18 25 03.1	+2.1
SMKR	Semkarok	5.84	22	*e*P	Pn	18 25 24.1	+3.2
KBTR	Krutoberegovo	5.88	30	*e*P	Pn	18 25 22.5	+1.1
BKI	Bering	6.42	48	*e*P	Pn	18 25 31.1	+2.5
BKI				*e*S	Sn	18 26 37.5	-3.1

IDC 12 18:25:03.1±12.0, 34°.65N×80°.25E, h0km, mb3.3/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=488.8km s-min=41.2km az=81.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.23	7	Pn	Pn	18 27 59.1	+0.6
	0.1nm,0.3s,baz=186,slow=13,SNR=4.6						
	0.2nm,0.4s						
WRA	Warramunga Arr	74.75	128	P	P	18 36 45.7	+0.6
	0.4nm,0.9s,baz=323,slow=6.2,SNR=1.9						
	0.4nm,0.9s						
ASAR	Alice Springs	77.17	131	P	P	18 36 58.5	-0.4
	0.2nm,0.8s,baz=319,slow=5.3,SNR=4.7						
	0.2nm,0.8s						

*AUST **12** 18:25:40.6±1.9, 31°.85S×117°.44E, h14km±26km, Error ellipse: s-maj=27.6km s-min=13.9km az=121.0*

CUPWA 12 18:25:41.9±0.5, 31°.86S×117°.48E, h11km±6km, ML1.8, Region: WESTERN AUSTRALIA, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUAI	Quairading	0.17	205	P	Pg	18 25 45.5	-0.2
QUAI				S	Sg	18 25 48.0	-0.3
KLBR	Kellerberrin	0.36	41	P	Pg	18 25 48.5	-0.5
	baz=0.4						
KLBR				S	Sg	18 25 53.4	-0.4
	baz=0.4						
KLBR	Kellerberrin	0.36	41	P	Pg	18 25 48.5	-0.5
KLBR				S	Sg	18 25 53.4	-0.4
MECK	Meckering	0.46	299	P	Pg	18 25 50.5	-0.5
MECK	Meckering	0.46	299	*i* S	Sg	18 25 55.4	-1.7
PING	Pingelly	0.76	213	P	Pg	18 25 55.9	-0.8
NWAO	Narrogin (SRO)	1.08	191	P	Pb	18 26 01.0	-1.6
	baz=1.1						
NWAO				P	Pb	18 26 01.0	-1.6
	baz=1.1						
NWAO	Narrogin (SRO)	1.08	191	P	Pb	18 26 01.1	-1.6
MUN	Mundaring	1.09	263	P	Pb	18 26 00.9	-1.8
	baz=1.1						
MUN				S	Sb	18 26 15.0	-1.9
	baz=1.1						
MUN	Mundaring	1.09	263	P	Pb	18 26 00.9	-1.8
MUN	Mundaring	1.09	263	S	Sb	18 26 15.0	-1.9
BLDU	Ballidu	1.41	332	P	Pn	18 26 06.3	-1.1
	baz=1.4						
BLDU				S	Sn	18 26 24.2	-1.7
	baz=1.4						
BLDU	Ballidu	1.41	332	P	Pn	18 26 06.3	-1.1
BLDU	Ballidu	1.41	332	S	Sn	18 26 24.2	-1.7

*PRU **12** 19:03:38.3±0.0, 47°.39N×11°.83E, h0km*

VIE 12 19:03:38.5±1.1, 47°.42N×11°.80E, h10km, mb0.5/1, mlI.6/3, Error ellipse: s-maj=8.0km s-min=3.8km az=27.0 3 km ENE of Eben am Achensee, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATA	Walderalm	0.18	240	*e*Pg	Pg	19 03 39.5	-2.8
	0.7nm,0.1s						
WATA				*e*Sg	Sg	19 03 42.3	-2.7
	4.9nm,0.1s						
WATA	Walderalm	0.18	240	*e*Pg	Pg	19 03 42.6	+0.3
	8.5nm,0.2s

ISC 12 19:15:36.0±1.0, 1°.03N±0°.06×127°.91E±0°.06, h10km, n12, σ1§11/13, mb3.5/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.59	245	P	Pg	19 15 47.0	-0.5
GAMI	Galela, Maluku	0.81	352	P	Pg	19 15 51.4	-0.3
LBMI	Labuha	1.70	194	P	Pn	19 16 05.4	-0.4
SIJI	Sorong	3.85	119	Pn	Pn	19 16 36.1	+0.8
0.9nm,0.3s,baz=210,slow=23,SNR=21							
SIJI				Sn	Sn	19 17 19.9	-0.8
0.7nm,0.3s,baz=140,slow=22,SNR=6.2							
3.9nm,0.4s							
SIJI	Sorong	3.85	119	P	Pn	19 16 36.0	+0.6
NLAI	Namlea	4.31	191	P	Pn	19 16 42.1	+0.4
KRAI	Karang Ratu	4.34	174	P	Pn	19 16 43.1	+1.0
GTOI	Gorontalo	4.91	265	P	Pn	19 16 51.8	+1.9
FAKI	Fak Fak	5.85	132	P	Pn	19 17 02.9	+0.1
WRA	Warramunga Arr	21.77	163	P	P	19 20 27.8	-0.3
0.4nm,1.0s,baz=343,slow=12,SNR=6.5							
0.4nm,1.0s							
ASAR	Alice Springs	25.23	167	P	P	19 21 04.3	+2.0
0.7nm,0.6s,baz=345,slow=11,SNR=15							
0.7nm,0.6s							
MKAR	Makanchi Array	60.43	326	P	P	19 25 44.8	-1.0
0.2nm,0.3s,baz=113,slow=7.9,SNR=5.6							
0.2nm,0.3s							

*JMA **12** 19:43:22.7±0.2, 33°.N±2°.×13°.8E±°, h394km, MV2.6/20, FAR S OFF TOKAI DISTRICT*
*IDC **12** 19:43:26.1±1.5, 33°.12N×137°.30E, h349km±23km, mb2.9/3, mbtmp3.5/4, Error ellipse: s-maj=47.0km s-min=22.9km az=71.0*

ISC 12 19:43:26.4±1.0, 33°.1N±0°.1×137°.48E±0°.09, h350km, n17, σ1§19/20, mb2.7/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	1.48	334	P	Pn	19 44 15.8	+1.5
JTNC	Tanabenakahech	1.74	296	P	Pn	19 44 17.3	+1.4
JWY	Kouya	1.95	307	P	Pn	19 44 18.6	+1.1
JYTA	Yamagatataniai	2.60	346	P	Pn	19 44 23.1	+0.8
JAI	Aioi	2.64	287	P	Pn	19 44 23.2	+0.6
JWT	Wachi	2.81	323	P	Pn	19 44 24.5	+0.5
JMN	Monobe	3.09	283	P	Pn	19 44 27.3	+0.7
JRY	Ryogami san	3.17	21	eP	Pn	19 44 28.5	+1.2
JRY				eS	S	19 45 19.3	+2.9
BSO1	Boso 1	3.31	60	eP	Pn	19 44 27.9	-0.1
BSO1				eS	S	19 45 19.0	+1.3
MJAR	Matsushiro Arr	3.52	10	P	Pn	19 44 30.7	+0.1
3.7nm,0.6s,baz=181,slow=9.8,SNR=9.4							
MJAR				S	S	19 45 21.2	-1.2
1.3nm,0.7s,baz=32,slow=32,SNR=1.9							
MAT	Matsushiro	3.53	10	P	Pn	19 44 31.2	+0.6
JAG	Ashikaga	3.73	25	eP	Pn	19 44 31.9	-0.7
JTO	Tosashimizu	3.94	268	P	Pn	19 44 35.3	+0.5
MKAR	Makanchi Array	43.63	305	P	P	19 50 55.7	-1.7
0.2nm,0.4s,baz=86,slow=9.5,SNR=5.6							
0.2nm,0.4s							
WRA	Warramunga Arr	52.79	184	P	P	19 52 06.5	-0.5
1.7nm,0.3s,baz=0.5,slow=7.5,SNR=6.0							
1.7nm,0.3s							
ASAR	Alice Springs	56.51	184	P	P	19 52 33.6	+0.2
0.1nm,0.3s,baz=358,slow=4.5,SNR=8.6							
0.1nm,0.3s							
LPAZ	La Paz	151.47	60	PKPbc	PKPbc	20 02 40.4	-0.2
0.6nm,0.3s,baz=287,slow=5.0,SNR=2.1							

*IDC **12** 19:54:19.8±1.0, 5°.38S×150°.55E, h111km±11km, mb3.5/9, mbtmp3.9/11, MS2.9/2, Error ellipse: s-maj=24.1km s-min=9.0km az=127.0*
*NEIC **12** 19:54:21.0±1.3, 5°.4S±0°.1×150°.6E±0°.1, h108km±15km, mb4.1/11, Error ellipse: s-maj=24.4km s-min=8.2km az=133.0*

ISC 12 19:54:20.2±0.6, 5°.39S±0°.08×150°.51E±0°.09, h114km, n30, σ1§33/35, mb3.8/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.86	55	P	Pn	19 54 52.0	+0.4
134nm,0.5s,baz=57,slow=1.1,SNR=23							
KRVT				S	Sn	19 55 14.1	-1.4
132nm,0.7s,baz=278,slow=11,SNR=6.4							
RABL	Rabaul	2.04	54	Pn	Pn	19 54 53.3	-0.6
PMG	Port Moresby	5.19	220	P	Pn	19 55 35.9	+0.2
31nm,0.6s,baz=41,slow=8.6,SNR=10							
PMG				S	Sn	19 56 34.4	0.0
155nm,0.8s,baz=328,slow=7.9,SNR=17							
PMG	Port Moresby	5.19	220	Pn	Pn	19 55 36.3	+0.6
COEN	Coen	11.16	220	Pn	Pn	19 56 57.6	+1.1
PATS	Pohnpei	14.43	33	Pn	Pn	19 57 40.2	+1.1
CTA	Charters Tower	15.18	195	P	Pn	19 57 50.5	+1.8
2.4nm,0.7s,baz=18,slow=11,SNR=4.0							
CTA				LR	LR	20 03 27.9	
comp=Z,24nm,18.6s,baz=124,slow=36							
EIDS	Eidsvold	19.87	178	P	P	19 58 43.6	+1.0
EIDS				IAmb	IAmb	19 58 55.9	
comp=Z,17nm,1.3s							
MTN	Manton Dam	20.50	247	P	P	19 58 48.1	-1.3
MTN				IAmb	IAmb	19 59 18.5	
comp=Z,25nm,1.4s							
WB0	Warramunga Arr	21.22	226	P	P	19 58 56.7	-0.4
WB0				IAmb	IAmb	19 59 22.9	
comp=Z,9.8nm,1.2s							
WR0	Warramunga Arr	21.24	226	P	P	19 58 58.2	+0.9
WR0				IAmb	IAmb	19 59 21.3	
comp=Z,9.4nm,1.4s							
WB2	Warramunga Arr	21.36	226	P	P	19 58 58.5	-0.1
WB2				IAmb	IAmb	19 59 19.9	
comp=Z,7.5nm,1.4s							
WRA	Warramunga Arr	21.37	226	P	P	19 58 58.3	-0.3
comp=Z,0.7nm,0.4s,baz=49,slow=11,SNR=15							
WRA				S	S	20 02 45.9	-3.7
comp=Z,0.8nm,0.9s,baz=51,slow=19,SNR=3.3							
WRA				PcP	PcP	20 02 58.1	-0.2
comp=Z,0.2nm,0.5s,baz=46,slow=2.1,SNR=2.3							
comp=Z,0.7nm,0.4s							
WRA	Warramunga Arr	21.37	226	P	P	19 58 58.4	-0.3
DZM	Mont Dzumac	22.64	139	P	P	19 59 11.5	-0.5
comp=Z,1.9nm,0.5s,baz=282,slow=9.2,SNR=6.6							
comp=Z,1.9nm,0.5s							
DZM	Mont Dzumac	22.64	139	P	P	19 59 11.6	-0.4
DZM				IAmb	IAmb	19 59 15.1	
comp=Z,7.4nm,1.2s							
KNRA	Kununurra	23.67	243	P	P	19 59 22.6	+1.1
KNRA				IAmb	IAmb	19 59 52.0	
comp=Z,17nm,1.1s							
AS31	Alice Springs	24.20	220	P	P	19 59 27.4	+1.0
ASAR	Alice Springs	24.21	220	P	P	19 59 27.2	+0.8
comp=Z,0.3nm,0.4s,baz=53,slow=8.6,SNR=18							
ASAR				PcP	PcP	20 03 04.1	-0.1
comp=Z,0.5nm,0.9s,baz=49,slow=2.8,SNR=2.9							
ASAR				S	S	20 03 32.5	-4.3
comp=Z,0.5nm,0.9s,baz=45,slow=12,SNR=4.1							
comp=Z,0.3nm,0.4s							
ASAR	Alice Springs	24.21	220	P	P	19 59 27.5	+1.1
STKA	Stephens Creek	27.64	197	P	P	19 59 57.3	+0.1
comp=Z,0.8nm,0.4s,baz=12,slow=14,SNR=4.1							
comp=Z,0.8nm,0.4s							
JCJ	Chichijima	33.28	346	P	P	20 00 47.9	+0.9
MBWA	Marble Bar	33.70	239	P	P	20 00 51.4	+0.7
KLR	Kul'dur	56.80	345	LR	LR	20 27 02.5	
comp=Z,17nm,18.7s,baz=294,slow=34							
PETK	Petropavlovsk-	58.60	5	P	P	20 04 04.1	-0.9
comp=Z,1.3nm,0.5s,baz=126,slow=7.3,SNR=1.9							
comp=Z,1.3nm,0.5s							
SONM	Songino Array	65.63	329	P	P	20 04 53.5	+1.2
comp=Z,0.5nm,0.7s,baz=157,slow=5.5,SNR=3.4							
comp=Z,0.5nm,0.7s							
MKAR	Makanchi Array	79.28	320	P	P	20 06 14.0	+0.8
comp=Z,0.2nm,0.7s,baz=125,slow=7.2,SNR=2.1							
comp=Z,0.2nm,0.7s							
ZALV	Zalesovo Beam	80.39	327	P	P	20 06 18.7	-0.2
comp=Z,0.7nm,0.6s,baz=125,slow=6.4,SNR=2.5							
comp=Z,0.7nm,0.6s							
NRIK	Noril'sk	85.79	342	P	P	20 06 44.8	-1.6
comp=Z,3.4nm,0.6s,baz=100,slow=6.1,SNR=1.9							
comp=Z,3.4nm,0.6s							
TORD	Torodi Ar. Bea	148.30	286	PKPbc	PKPbc	20 13 53.3	-0.9
comp=Z,0.4nm,0.5s,baz=83,slow=2.7,SNR=7.8							

IDC 12 19:55:45.2±3.0, 30°.13S×177°.55W, h0km, mb3.2/2, mbtmp3.2/2, MS3.2/1, Error ellipse: s-maj=62.9km s-min=25.2km az=94.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.93	340	Pn	Pn	19 56 05.6	+0.1
baz=184,slow=19							
RAO				Sn	Sn	19 56 20.2	+0.7
155nm,0.3s,baz=53,slow=21,SNR=1.8							
CTA	Charters Tower	34.14	279	LR	LR	20 14 26.8	
comp=Z,38nm,21.3s,baz=68,slow=33							
ASAR	Alice Springs	43.51	266	P	P	20 03 50.3	-0.5
0.1nm,0.4s,baz=102,slow=7.4,SNR=4.7							
0.1nm,0.4s							
WRA	Warramunga Arr	44.48	272	P	P	20 03 58.6	+0.1
0.2nm,0.3s,baz=110,slow=8.2,SNR=11							
0.2nm,0.3s							
FINES	FINESS Array B	145.02	340	PKPbc	PKPbc	20 15 22.1	-0.9
1.9nm,0.9s,baz=33,slow=3.3,SNR=5.1							

NOU 12 20:05:14.1, 15°.56S×167°.12E, h6km, MLv4.3/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	2.38	155	P	Pn	20 05 53.6	-0.1
KOUNC	Koumac, New Ca	5.65	208	P	Pn	20 06 38.5	-0.1
YATNC	Mamie plateau,	6.47	182	P	Pn	20 06 48.9	-1.0
DZM	Mont Dzumac	6.51	186	P	Pn	20 06 50.2	-0.4
OUENC	Ouen Island, N	6.83	182	P	Pn	20 06 56.0	+1.2

*IDC **12** 20:05:21.3±1.1, 5°.16S×151°.39E, h76km±15km, mb3.4/3, mbtmp3.7/4, Error ellipse: s-maj=71.7km s-min=12.7km az=126.0*

ISC 12 20:05:21.0±2.1, 5°.2S±0°.3×151°.6E±0°.5, h100km, n6, σ1§87/8, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.01	24	P	Pn	20 05 39.8	-1.8
1μm,0.4s,baz=201,slow=10,SNR=248							
KRVT				S	Sn	20 05 56.0	-1.0
2μm,0.4s,baz=59,slow=23,SNR=12							
PMG	Port Moresby	6.05	227	P	Pn	20 06 46.2	-1.8
6.2nm,0.5s,baz=215,slow=2.5,SNR=3.1							
PMG				S	Sn	20 07 54.8	-1.2
9.6nm,0.5s,baz=82,slow=22,SNR=2.2							
WRA	Warramunga Arr	22.27	227	P	P	20 10 10.5	+0.4
1.7nm,0.7s,baz=52,slow=9.8,SNR=16							
1.7nm,0.7s							
ASAR	Alice Springs	25.04	221	P	P	20 10 38.4	+2.3
1.3nm,0.5s,baz=57,slow=8.6,SNR=37							
1.3nm,0.5s							
SONM	Songino Array	66.06	328	P	P	20 15 58.6	+1.3
0.5nm,0.6s,baz=127,slow=6.2,SNR=2.0							
0.5nm,0.6s							
TORD	Torodi Ar. Bea	149.30	287	PKPbc	PKiKP	20 25 01.6	+1.2
0.9nm,0.8s,baz=52,slow=3.0,SNR=5.1							

IDC 12 20:21:30.8±73.0, 16°.00S×167°.17E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1227.0km s-min=121.2km az=67.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.11	231	P	P	20 27 24.2	-0.3
0.8nm,0.4s,baz=53,slow=9.8,SNR=4.6							
0.8nm,0.4s							
WRA	Warramunga Arr	31.44	258	P	P	20 27 54.5	+0.2
0.3nm,0.5s,baz=89,slow=9.0,SNR=2.4							
0.3nm,0.5s							
ASAR	Alice Springs	32.15	251	P	P	20 28 00.5	0.0
0.5nm,0.5s,baz=77,slow=9.3,SNR=13							
0.5nm,0.5s							

*IDC **12** 20:32:51.6±0.8, 54°.34S×5°.91E, h0km, mb4.6/11, mbtmp4.7/12, ML4.3/1, MS4.3/45, Error ellipse: s-maj=27.7km s-min=16.9km az=56.0*
*NEIC **12** 20:32:53.8±1.4, 54°.4S±0°.1×5°.9E±0°.2, h10km±1km, mb5.1/41, Error ellipse: s-maj=19.0km s-min=16.9km az=101.0*
*GCMT **12** 20:32:57.8±0.2, 54°.47S±0°.01×6°.29E±0°.02, h16km, MW5.1/138, Moment Tensor Solution. s64,c87; s138,c205; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.70±.14; $M_{\theta\theta}$=6.41±.13; $M_{\phi\phi}$=-4.70±.11; $M_{r\theta}$=1.50±.33; $M_{\theta\phi}$=0.13±.11; $M_{\phi r}$=0.02±.36; Best double couple: M_0=5.69100×10^{16} NP1:ϕ_s=135.00000°, δ83.00000°, λ8.00000°. NP2:ϕ_s=44.00000°, δ82.00000°, λ173.00000°. Principal axes: T 6.6800, Plg10.0000°, Azm359.0000°; N -1.9680, Plg80.0000°, Azm175.0000°; P -4.7020, Plg1.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:32:53.1±0.5, 54°.40S±0°.08×5°.94E±0°.09, h10km, n108, σ1§64/62, mb5.0/27, MS4.3/47, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.49	196	P	Pn	20 36 55.9	-0.8
VNA1				S	Sn	20 39 55.6	-16
VNA2	Neumayer--Watz	17.60	195	P	Pn	20 36 56.2	-1.9
baz=20,slow=16							
VNA2				S	Sn	20 39 54.7	-19
TROLL	Troll, Antarti	17.74	183	P	Pn	20 36 59.4	-0.6
TROLL				S	Sn	20 40 00.1	-17
SNAA	Sanae	17.75	189	P	Pn	20 36 59.2	-0.9
SNAA				S	Sn	20 40 00.1	-18
SNAA	Sanae	17.75	189	P	Pn	20 36 59.2	-0.9
1.1nm,0.3s,baz=357,slow=10,SNR=87							
SNAA				S	Sn	20 40 01.6	-16
2.9nm,0.7s,baz=252,slow=12,SNR=2.3							
SNAA				LR	LR	20 42 20.5	
comp=Z,1μm,19.8s,baz=10,slow=32							
93nm,0.9s							
SNAA	Sanae	17.75	189	Pn	Pn	20 36 58.6	-1.5
SNAA				IAmb	IAmb	20 37 03.1	
comp=Z,91nm,0.9s							
VNA3	Neumayer Olymp	18.24	196	P	Pn	20 37 04.2	-1.8
SUR	Sutherland	24.42	32	LR	LR	20 45 21.9	
comp=Z,584nm,21.0s,baz=202,slow=31							
HOPE	Hope Point	24.47	253	P	P	20 38 12.8	+0.9
HOPE				IAmb	IAmb	20 38 14.4	
comp=Z,43nm,0.9s							
BELA	Belgrano 2	27.53	197	P	P	20 38 38.9	-0.5
BOSA	Boshof	29.34	36	LR	LR	20 48 06.2	
comp=Z,512nm,21.9s,baz=202,slow=31							
MAW	Mawson	29.36	139	P	P	20 38 55.0	-0.7
comp=Z,3.8nm,0.9s,baz=241,slow=10,SNR=3.0							
MAW				LR	LR	20 48 45.2	
comp=Z,274nm,20.8s,baz=276,slow=32							
comp=Z,3.8nm,0.9s							
LBTB	Lobatse	32.78	34	LR	LR	20 50 19.9	
comp=Z,344nm,21.3s,baz=197,slow=32							
LBTB	Lobatse	32.78	34	P	P	20 39 27.2	+0.9
LBTB				IAmb	IAmb	20 40 30.2	
comp=Z,27nm,1.4s							
PMSA	Palmer Station	35.05	225	LR	LR	20 52 03.8	
comp=Z,300nm,18.3s,baz=108,slow=33							
SMAI	San Martin Ant	35.31	218	P	P	20 39 48.6	+0.8
SMAI				IAmb	IAmb	20 40 06.2	
comp=Z,59nm,1.7s							
QSPA	South Pole Qui	35.84	180	P	P	20 39 53.2	+0.6
comp=Z,18nm,0.9s,baz=234,slow=3.7,SNR=51							
QSPA				LR	LR	20 53 48.9	
comp=Z,926nm,20.4s,baz=222,slow=35							
comp=Z,18nm,0.9s							
QSPA	South Pole Qui	35.84	180	P	P	20 39 53.4	+0.7
QSPA				IAmb	IAmb	20 39 54.4	
comp=Z,23nm,0.9s							
TSUM	Tsumeb	36.25	19	LR	LR	20 51 52.7	
comp=Z,760nm,21.4s,baz=198,slow=32							
TSUM	Tsumeb	36.25	19	P	P	20 39 57.1	+0.7
LSZ	Lusaka	42.71	33	LR	LR	20 56 19.0	
comp=Z,490nm,20.6s,baz=201,slow=33							
CASY	Casey	46.98	148	P	P	20 41 25.0	+1.3
PLTB	Pedras Altas	47.36	273	P	P	20 41 27.2	+0.1
PLTB				IAmb	IAmb	20 41 29.2	
comp=Z,14nm,1.0s							
SBA	Scott Base	47.48	175	P	P	20 41 29.2	+1.8
SBA				IAmb	IAmb	20 41 31.7	
comp=Z,21nm,1.1s							
VNDA	Vanda	47.50	173	P	P	20 41 28.9	+1.3
comp=Z,13nm,0.8s,baz=217,slow=7.4,SNR=72							
VNDA				LR	LR	21 01 00.2	
comp=Z,462nm,20.0s,baz=196,slow=36							
comp=Z,13nm,0.8s							
VNDA	Vanda	47.50	173	P	P	20 41 28.9	+1.3
VNDA				IAmb	IAmb	20 41 32.9	
comp=Z,15nm,0.8s							
TRQA	Tornquist	47.82	261	P	P	20 41 30.7	+0.1
TRQA				IAmb	IAmb	20 41 32.6	
comp=Z,21nm,1.1s							
AY01	Puyuhuapi	49.55	247	P	P	20 41 43.5	-0.3
LL02	Futaleuf	49.93	249	P	P	20 41 46.8	0.0
LL02				IAmb	IAmb	20 41 48.2	
comp=Z,18nm,0.9s							
ITQB	Itaqui	50.65	273	P	P	20 41 52.1	-0.2
ITQB				IAmb	IAmb	20 41 54.0	
comp=Z,26nm,1.2s							
PLCA	Paso Flores	50.87	252	P	P	20 41 53.1	-0.8
comp=Z,3.7nm,0.8s,baz=115,slow=11,SNR=6.9							
PLCA				LR	LR	21 02 59.3	
comp=Z,74nm,18.2s,baz=139,slow=36							
comp=Z,3.7nm,0.8s							
CPUP	Villa Florida	53.56	275	P	P	20 42 13.8	-0.2
comp=Z,23nm,1.0s,baz=130,slow=6.7,SNR=25							
CPUP				LR	LR	21 01 20.6	
comp=Z,86nm,21.8s,baz=193,slow=32							
comp=Z,23nm,1.0s							
CPUP	Villa Florida	53.56	275	P	P	20 42 14.2	+0.1
BO02	Sierra Bellavi	55.16	257	P	P	20 42 24.3	-1.3
BO02				IAmb	IAmb	20 42 26.9	
comp=Z,18nm,1.1s							
BO01	Tunca	55.62	258	P	P	20 42 29.2	+0.3
BO04	La Punta	55.64	258	P	P	20 42 29.1	0.0
MT09	Talagante	56.01	258	P	P	20 42 31.0	-0.9
MT09				IAmb	IAmb	20 42 35.3	
comp=Z,16nm,0.9s							
MT01	Popeta	56.10	258	P	P	20 42 30.9	-1.4
BDFB	Brasilia	56.71	291	P	P	20 42 36.9	-0.1
comp=Z,20nm,1.0s,baz=123,slow=5.8,SNR=15							
BDFB				LR	LR	21 02 03.4	
comp=Z,276nm,21.5s,baz=127,slow=31							
comp=Z,20nm,1.0s							
BDFB	Brasilia	56.71	291	P	P	20 42 37.5	+0.5
BDFB				IAmb	IAmb	20 42 39.6	
comp=Z,22nm,1.0s							
AQDB	Aquidauana	57.14	281	P	P	20 42 40.0	+0.1
AQDB				IAmb	IAmb	20 42 40.8	
comp=Z,11nm,1.0s							
MBAR	Mbarara	57.36	30	LR	LR	21 05 15.5	
comp=Z,442nm,20.5s,baz=177,slow=34							
CO01	Juntas del Tor	58.28	262	P	P	20 42 49.3	+1.2
RCBR	Riachuelo	58.99	309	LR	LR	21 02 55.3	
comp=Z,364nm,19.4s,baz=296,slow=31							
AC05	El Transito	59.24	263	P	P	20 42 54.3	-0.3
AC05				IAmb	IAmb	20 43 09.5	
comp=Z,16nm,1.0s							
AC02	Maricunga	60.08	265	P	P	20 43 01.5	+0.6
AC02				IAmb	IAmb	20 43 02.7	
comp=Z,16nm,1.1s							
AC06	Mina Casimiro	60.39	264	P	P	20 43 02.6	+0.1
DBIC	Dimbokro	61.51	348	P	P	20 43 08.8	-1.2
comp=Z,4.4nm,0.9s,baz=158,slow=5.4,SNR=2.5							
DBIC				LR	LR	21 03 22.9	
comp=Z,248nm,21.2s,baz=182,slow=30							
comp=Z,4.4nm,0.9s							
PB15	IPOC Station P	63.04	267	P	P	20 43 20.4	-0.2
LVC	Limon Verde	63.17	268	LR	LR	21 09 11.6	
comp=Z,147nm,19.9s,baz=166,slow=34							
LVC	Limon Verde	63.17	268	P	P	20 43 21.1	-0.5
LVC				IAmb	IAmb	20 43 35.6	
comp=Z,9.3nm,0.9s							
SIV	San Ignacio	63.78	279	LR	LR	21 08 19.7	
comp=Z,418nm,18.4s,baz=118,slow=33							
TORD	Torodi Ar. Bea	67.37	356	P	P	20 43 48.4	+0.1
comp=Z,1.3nm,0.8s,baz=186,slow=3.0,SNR=4.6							
TORD				LR	LR	21 07 59.0	
comp=Z,118nm,20.8s,baz=197,slow=31							
comp=Z,1.3nm,0.8s							
LPAZ	La Paz	67.65	273	P	P	20 43 51.5	+0.5
comp=Z,24nm,1.0s,baz=121,slow=6.0,SNR=54							
LPAZ				LR	LR	21 10 05.1	
comp=Z,138nm,21.0s,baz=102,slow=33							
comp=Z,24nm,1.0s							
LPAZ	La Paz	67.65	273	P	P	20 43 51.5	+0.5
KOWA	Kowa	69.14	350	LR	LR	21 08 40.2	
comp=Z,369nm,20.4s,baz=174,slow=31							
KOWA	Kowa	69.14	350	P	P	20 44 00.5	+1.1
KOWA				IAmb	IAmb	20 44 03.7	
comp=Z,13nm,1.4s							
DGAR	Diego Garcia	70.42	75	P	P	20 44 07.3	-0.1
BBTS	Babate	71.40	337	LR	LR	21 08 45.6	
comp=Z,289nm,20.1s,baz=164,slow=30							
H01W2	Cape Leeuwin H	71.83	125	T	T	22 04 01.1	
baz=216,slow=75,SNR=149							
H01W3	Cape Leeuwin H	71.84	125	T	T	22 03 50.0	
baz=216,slow=75,SNR=133							
H01W1	Cape Leeuwin H	71.84	125	T	T	22 03 50.2	
baz=216,slow=75,SNR=185							
ATD	Arta Tunnel	72.71	38	LR	LR	21 16 18.6	
comp=Z,134nm,18.2s,baz=154,slow=36							
NNA	Nana	76.16	269	LR	LR	21 16 01.8	
comp=Z,153nm,21.3s,baz=170,slow=34							
MDP	Montagnes des	76.59	299	LR	LR	21 14 32.9	
comp=Z,379nm,19.5s,baz=148,slow=33							
TAM	Tamanrasset	76.87	360	P	P	20 44 44.8	-0.4
ATAH	Atahualpa	80.94	270	LR	LR	21 20 20.3	
comp=Z,104nm,19.9s,baz=141,slow=35							
RPZ	Rata Peaks	81.44	169	LR	LR	21 19 20.8	
comp=Z,276nm,21.6s,baz=204,slow=34							
RPN	Rapa Nui	81.64	235	LR	LR	21 13 25.2	
comp=Z,52nm,19.9s,baz=129,slow=30							
COHC	Cochancay	85.20	272	P	P	20 45 30.3	+0.5
STKA	Stephens Creek	85.96	143	P	P	20 45 33.0	-0.4
comp=Z,2.3nm,0.8s,baz=203,slow=13,SNR=2.0							
comp=Z,2.3nm,0.8s							
OTAV	Otavalo	86.92	275	P	P	20 45 38.5	-0.3
OTAV				IAmb	IAmb	20 45 42.9	
comp=Z,14nm,1.2s							
PALK	Pallekele	87.11	73	LR	LR	21 15 04.7	
comp=Z,138nm,21.5s,baz=320,slow=29							
MDT	Midelt	87.33	351	LR	LR	21 20 25.1	
comp=Z,173nm,19.1s,baz=182,slow=33							
EIL	Elat	87.39	25	LR	LR	21 22 45.0	
comp=Z,452nm,21.1s,baz=238,slow=34							
URZ	Urewera	87.40	173	LR	LR	21 21 31.0	
comp=Z,136nm,21.8s,baz=267,slow=33

PZH	PanZhiHua	114.39	78	PKP	PKPdf	20 51 32.1	-0.8
WMQ	Urumqi	119.93	56	*e*P	PKiKP	20 51 45.1	+2.0
MOOW	Moose Ponds	138.53	282		PKPpre	20 52 08.6	
CN2	Changchun	140.18	80	*e*PKP	PKPdf	20 52 16.7	-4.4
CN2	Changchun	140.18	80	*e*PP	PP	20 55 18.4	-1.1
CN2	Changchun	140.18	80	SKS	SKSdf	20 59 21.4	-10
EDM	Edmonton	145.10	294		PKPbc	20 52 28.0	-1.2
D08A	Wollman Farm,	145.13	281		PKPbc	20 52 28.9	-0.5
C09A	Chrisman Ranch	145.16	283		PKPbc	20 52 29.7	+0.2
HOOD	Mount Hood Mea	145.75	277		PKPbc	20 52 32.1	+0.5
B08A	Colville Reser	146.06	283	PKPdf	PKPdf	20 52 32.2	+0.8
YKA	Yellowknife Ar	148.92	309	PKPbc	PKPbc	20 52 38.8	-0.8
	comp=Z,2.2nm,0.8s,baz=118,slow=3.5,SNR=3.6						

NEIC ***12*** *20:38:52.5±0.7, 25°.31S±0°.08×179°.2E±0°.3, h493km±27km, mb4.6/15, Error ellipse: s-maj=37.0km s-min=11.3km az=95.0*
IDC ***12*** *20:38:52.5±2.2, 25°.20S×179°.49E, h519km±26km, mb2.9/3, mbtmp4.0/6, Error ellipse: s-maj=29.3km s-min=23.9km az=116.0*
ISC 12 20:38:51.8±0.7, 25°.37S±0°.08×179°.4E±0°.1, h507km, n33, σ1§17/32, mb4.2/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.56	149	P	P	20 40 12.8	-2.4
MSVF	Nonsavu	7.70	351	P	P	20 40 44.7	-0.8
	8.1nm,0.6s,baz=107,slow=22,SNR=11						
MSVF	Nonsavu	7.70	351	P	P	20 40 44.6	-0.9
OUZ	Omahuta	11.00	206	P	P	20 41 21.1	+1.5
NIUE	Niue	11.73	60	P	P	20 41 29.8	+2.2
URZ	Urewera	12.99	188	P	P	20 41 43.3	+2.7
	10nm,0.7s,baz=70,slow=4.7,SNR=5.6						
URZ				S	S	20 43 59.2	-0.5
	3.5nm,0.3s,baz=246,slow=13,SNR=1.7						
BKZ	Black Stump Fm	13.96	189	P	P	20 41 50.6	-0.3
AFI	Afiamalu	14.12	38	P	P	20 41 53.2	+0.3
BFZ	Birch Farm	15.49	189	P	P	20 42 07.8	+1.1
BFZ				IAmb	IAmb	20 42 37.9	
	comp=Z,55nm,1.1s						
SNZO	South Karori	16.36	193	P	P	20 42 17.7	+2.0
MSWZ	Moikau Station	16.36	191	P	P	20 42 15.1	-0.8
QRZ	Quartz Range	16.43	199	P	P	20 42 17.8	+1.3
PLWZ	Palliser	16.51	191	P	P	20 42 18.4	+1.0
TUWZ	Tuamarina	16.63	194	P	P	20 42 18.3	-0.3
THZ	Tophouse	17.20	197	P	P	20 42 24.9	+0.7
KHZ	Kahutara	17.66	194	P	P	20 42 28.5	0.0
KHZ				IAmb	IAmb	20 42 53.3	
	comp=Z,22nm,1.3s						
LTZ	Lake Taylor	18.32	197	P	P	20 42 33.1	-1.4
LTZ				IAmb	IAmb	20 42 57.9	
	comp=Z,40nm,1.4s						
RPZ	Rata Peaks	19.52	198	P	P	20 42 46.7	+1.2
	comp=Z,12nm,1.1s,baz=32,slow=21,SNR=1.8						
RPZ	Rata Peaks	19.52	198	P	P	20 42 44.8	-0.6
RPZ				IAmb	IAmb	20 43 26.4	
	comp=Z,51nm,1.5s						
COEN	Coen	35.80	282	P	P	20 45 07.9	-0.2
COEN				IAmb	IAmb	20 45 09.2	
	comp=Z,25nm,1.3s						
BBOO	Buckleboo	38.35	249	P	P	20 45 28.8	-0.1
BBOO				IAmb	IAmb	20 45 50.4	
	comp=Z,15nm,1.3s						
AS31	Alice Springs	41.24	262	P	P	20 45 52.5	+0.2
ASAR	Alice Springs	41.24	262	P	P	20 45 53.6	+1.2
	comp=Z,0.3nm,0.3s,baz=101,slow=7.1,SNR=4.9						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	41.24	262	P	P	20 45 52.1	-0.3
WB2	Warramunga Arr	41.74	268	P	P	20 45 57.3	+1.1
WB0	Warramunga Arr	41.75	268	P	P	20 45 57.2	+0.8
WB0				IAmb	IAmb	20 46 37.6	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	41.75	268	P	P	20 45 57.1	+0.7
	comp=Z,0.8nm,0.4s,baz=100,slow=7.0,SNR=26						
	comp=Z,0.8nm,0.4s						
WRA	Warramunga Arr	41.75	268	P	P	20 45 57.1	+0.7
KNRA	Kununurra	48.12	271	P	P	20 46 45.6	+0.2
KNRA				IAmb	IAmb	20 46 51.3	
	comp=Z,12nm,1.2s						
FAKI	Fak Fak	50.47	288	P	P	20 47 02.7	-0.1
FAKI				IAmb	IAmb	20 47 29.7	
	comp=Z,30nm,1.3s						
TXAR	Lajitas Array	91.70	58	P	P	20 51 05.0	-0.1
	comp=Z,0.3nm,0.7s,baz=197,slow=4.7,SNR=3.5						
	comp=Z,0.3nm,0.7s						
NB2	NORSAR Subarra	143.43	350	PKP	PKPab	20 57 24.5	-1.5
	comp=Z,0.5nm,0.5s,baz=12,slow=3.1						
NOA	NORSAR Array B	143.43	350	PKP	PKPab	20 57 24.5	-1.4
	comp=Z,0.4nm,0.5s,baz=353,slow=2.6,SNR=5.4						

WEL ***12*** *20:45:48.9±0.3, 43°.5S±3°.×17°.1E±°., h5km, M3.0/18, ML3.2/22, MLv3.0/18, Error ellipse: s-maj=0.0km s-min=0.0km az=159.2*
NOU ***12*** *20:45:49.9, 43°.21S×171°.05E, h9km, MLv3.5/7, South Island, New Zealand*
ISC 12 20:45:49.1±1.0, 43°.16S±0°.03×170°.97E±0°.03, h8km±10km, n42, σ0§96/49, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.19	295	P	Pg	20 45 52.8	-0.1
WVZ				S	Sg	20 45 55.3	-0.3
GCSZ	Gaunt Creek Bo	0.50	251	P	Pg	20 45 58.6	-0.2
GCSZ				S	Sg	20 46 06.3	+1.1
INZ	Inchbonnie	0.55	39	P	Pg	20 45 58.6	-1.2
RPZ	Rata Peaks	0.56	174	P	Pg	20 46 00.2	+0.2
RPZ				S	Sg	20 46 07.7	+0.4
RPZ	Rata Peaks	0.56	174	P	Pg	20 46 00.3	+0.3
OXZ	Oxford	0.80	103	P	Pg	20 46 04.5	+0.1
OXZ				S	Sb	20 46 15.2	-1.1
ARCZ	Arundel	0.81	169	P	Pg	20 46 04.6	0.0
FOZ	Fox Glacier	0.92	246	P	Pg	20 46 06.4	-0.5
WACZ	Wakanui South	1.01	142	P	Pb	20 46 08.8	0.0
LTZ	Lake Taylor	1.02	69	P	Pg	20 46 08.4	-0.4
LTZ				S	Sg	20 46 22.0	-0.1
RACZ	Rakaia	1.02	124	P	Pb	20 46 09.1	0.0
TMZ	Timaru	1.23	179	P	Pg	20 46 12.4	-0.3
TMZ				S	Sb	20 46 28.2	-0.3
AMCZ	Amberley	1.23	92	P	Pn	20 46 13.3	+0.7
AMCZ				S	Sn	20 46 29.4	0.0
MQZ	McQueen's Vall	1.34	115	P	Pn	20 46 13.6	-0.5
LBZ	Lake Benmore	1.35	205	P	Pn	20 46 13.8	-0.5
GVZ	Greta Valley S	1.52	84	P	Pn	20 46 16.4	-0.3
DSZ	Denniston Nort	1.54	24	P	Pn	20 46 16.2	-0.7
AKCZ	Akaroa Harbour	1.58	118	P	Pn	20 46 16.9	-0.6
OKCZ	Okains Bay	1.62	111	P	Pn	20 46 18.3	+0.2
JCZ	Jackson Bay	1.83	239	P	Pn	20 46 21.7	+0.8
JCZ	Jackson Bay	1.83	239	P	Pn	20 46 22.3	+1.3
ODZ	Otahua Downs	1.90	187	P	Pn	20 46 21.9	+0.1
ODZ	Otahua Downs	1.90	187	P	Pn	20 46 21.9	+0.1
THZ	Tophouse	2.00	46	P	Pn	20 46 24.1	+0.9
KHZ	Kahutara	2.03	70	P	Pn	20 46 24.4	+0.9
KHZ	Kahutara	2.03	70	P	Pn	20 46 24.2	+0.6
WKZ	Wanaka	2.19	219	P	Pn	20 46 25.7	-0.1
MRNZ	Matariki Terra	2.20	38	P	Pn	20 46 26.7	+0.8
EAZ	Earnscleugh	2.39	209	P	Pn	20 46 27.6	-1.0
TKNZ	Takaka Hill	2.59	36	P	Pn	20 46 31.7	+0.4
QRZ	Quartz Range	2.60	27	P	Pn	20 46 31.3	-0.1
QRZ	Quartz Range	2.60	27	P	Pn	20 46 31.5	0.0
NNZ	Nelson	2.64	44	P	Pn	20 46 33.0	+1.1
TCW	Tory Channel	3.13	53	P	Pn	20 46 41.3	+2.6
DUWZ	D'Urville Isla	3.22	44	P	Pn	20 46 41.5	+1.5
SYZ	Scrubby Hill	3.62	200	P	Pn	20 46 44.8	-0.6
SYZ	Scrubby Hill	3.62	200	P	Pn	20 46 45.2	-0.3
HOWZ	Holdsworth Sta	4.07	58	P	Pn	20 46 54.1	+2.4
KHEZ	Kahui Hut	4.49	32	P	Pn	20 46 58.9	+1.4
KHEZ	Kahui Hut	4.49	32	P	Pn	20 46 59.0	+1.5
PKE	Pukeiti	4.57	31	P	Pn	20 46 60.0	+1.5
MHEZ	Mangahewa	4.80	33	P	Pn	20 46 59.1	-2.6

TEH 12 21:59:22.9, 35°.03N×58°.11E, h7km, ML3.7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBHD	Torbat heydari	1.00	67	*e*Pg	Pn	21 59 43.1	-0.4
TBHD				*e*Sg	Sn	21 59 57.8	-0.2
TBHD				*e*		21 59 59.2	
	comp=Z,35μm,0.3s						
SBZV	Sabzevar	1.41	343	*e*Pg	Pg	21 59 50.3	+0.3
IMOG	Moghan	1.47	43	*e*Pn	Pg	21 59 52.0	+0.9
IPAY	Payeh	1.59	27	*e*Pn	Pg	21 59 53.5	+0.1
IPAY				*e*		22 00 19.9	
	comp=Z,5μm,0.3s						
TABS	Tabas	1.61	211	*e*Pg	Pg	21 59 54.4	+0.7
TKDS	Koohdasht(Taba	1.64	210	*e*Pn	Pg	21 59 54.6	+0.3
TKDS				*e*Sg	Sg	22 00 17.6	+2.1
TKDS				*e*		22 00 24.4	
	comp=Z,10μm,0.3s						
TNSJ	Nastanj	1.64	230	*e*Pn	Pg	21 59 54.4	+0.1
TNSJ				*e*		22 00 22.4	
	comp=Z,21μm,0.4s						
IAKL	Akhelmad	1.65	18	*e*Pn	Pg	21 59 54.4	-0.2
IAKL				*e*		21 59 57.0	
	comp=Z,8μm,0.2s						
AFRZ	Afriz	1.77	155	*e*Pn	Pg	21 59 56.8	-0.1
AFRZ				*e*		22 00 25.5	
	comp=Z,7μm,0.3s						
TBJM	Torbat-e-JAM	1.83	82	*e*Pn	Pg	21 59 58.1	0.0
TBJM				*e*		22 00 31.2	
	comp=Z,13μm,0.3s						
SHRO	Shahrood	1.96	300	*e*Pn	Pb	21 59 59.1	+0.1
ISFR	Sfrayin	2.02	358	*e*Pn	Pg	22 00 00.9	-0.7
ISFR				*e*		22 00 03.1	
	comp=Z,6μm,0.4s						
IKRD	Kardeh	2.08	33	*e*		22 00 03.4	
	comp=Z,2μm,0.2s						
IKRD				*e*Pn	Pb	22 00 01.7	+0.6
IMYA	Miami	2.08	51	*e*Pn	Pb	22 00 01.8	+0.7
ITEG	Tejag	2.20	166	*e*Pn	Pb	22 00 03.4	+0.3
ITEG				*e*		22 00 44.6	
	comp=Z,5μm,0.3s						
IMON	Monand	2.25	144	*e*Pn	Pb	22 00 04.5	+0.5
IMON				*e*		22 00 44.4	
	comp=Z,5μm,0.2s						
SHRT	Shahrakht	2.27	127	*e*Pn	Pb	22 00 03.5	-0.9
TPRV	Parvadeh(Tabas	2.32	211	*e*Pn	Pb	22 00 04.5	-0.7
TPRV				*e*		22 00 44.8	
	comp=Z,10μm,0.3s						
IEMG	Emamgholi	2.42	10	*e*Pn	Pb	22 00 06.2	-0.7
BAGH	Bagheran - Bir	2.42	158	*e*Pn	Pb	22 00 05.5	-1.5
IKOO	Kooshah	2.71	164	*e*Pn	Pb	22 00 10.0	-1.9
IKOO				*e*		22 01 01.8	
	comp=Z,2μm,0.5s						
IDAH	Dahanechah	2.72	147	*e*		22 00 55.0	
	comp=Z,1μm,0.4s						
IDAH				*e*Pn	Pn	22 00 09.5	+2.3
BJRD	Bojnurd	2.72	348	*e*Pn	Pb	22 00 10.4	-1.6
MRVT	Maraveh tapeh	3.09	329	*e*Pn	Pb	22 00 15.2	-3.0
IMND	Minoodasht	3.12	316	*e*Pn	Pn	22 00 15.4	+2.9
BSRN	Basiran	3.18	164	*e*Pn	Pn	22 00 16.4	+2.9
IANJ	Anjilo	3.46	278	*e*Pn	Pn	22 00 20.8	+3.4
IANJ				*e*		22 00 34.8	
	comp=Z,682nm,0.5s						
IGLO	Ghaloghah	3.77	294	*e*Pn	Pn	22 00 25.4	+3.6
IGLO				*e*		22 00 28.9	
	comp=Z,1μm,0.4s						
YZKH	Yazd	3.94	229	*e*Pn	Pn	22 00 26.9	+2.9
NHDN	Nehbandan	3.98	155	*e*Pn	Pn	22 00 27.2	+2.7
ISHM	Shahmirzad	4.01	282	*e*Pn	Pn	22 00 28.0	+3.0
IBAF	Bafgh	4.04	212	*e*Pn	Pn	22 00 28.6	+3.2
ANAR	Anarak	4.07	244	*e*Pn	Pn	22 00 27.7	+1.9
ICHK	Chekchek	4.16	229	*e*Pn	Pn	22 00 30.1	+3.1
ICHK				*e*		22 01 54.8	
	comp=Z,934nm,0.4s						
ILAS	Lasjerd	4.23	276	*e*Pn	Pn	22 00 31.2	+3.1
IFIR	Firoozkooh	4.42	279	*e*Pn	Pn	22 00 34.2	+3.5
IMEH	Mehriz	4.67	220	*e*Pn	Pn	22 00 37.0	+2.9
IMEH				*e*		22 02 02.7	
	comp=Z,322nm,0.6s						
ISAD	Sadrabad	4.83	231	*e*Pn	Pn	22 00 39.6	+3.3
KHGB	Koh Gabri	4.84	197	*e*Pn	Pn	22 00 39.9	+3.4
KHGB				*e*		22 02 10.3	
	comp=Z,501nm,0.4s						
ISFB	Sefidab	4.88	264	*e*Pn	Pn	22 00 40.1	+3.2
NASN	Na'in	4.94	245	*e*Pn	Pn	22 00 39.7	+1.8
KRSH	Karshahi	5.05	260	*e*Pn	Pn	22 00 42.4	+3.2
DAMV	Damavand	5.05	279	*e*Pn	Pn	22 00 42.2	+2.8
KRBR	Kerman	5.16	193	*e*Pn	Pn	22 00 44.7	+3.8
CHMN	Cheshme madani	5.18	185	*e*Pn	Pn	22 00 44.0	+2.8
CHMN				*e*		22 02 17.5	
	comp=Z,380nm,0.7s						
IVRN	Varamin	5.24	271	*e*Pn	Pn	22 00 44.4	+2.7
IZEF	Zefreh	5.25	248	*e*Pn	Pn	22 00 45.1	+3.0
NGRK	Negar Kerman	5.50	193	*e*Pn	Pn	22 00 49.2	+3.6
CHTH	Charan	5.76	281	*e*Pn	Pn	22 00 52.4	+3.3
IRAM	Ramesheh	5.77	238	*e*Pn	Pn	22 00 51.9	+2.7
ZHSF	Zahedan	5.86	157	*e*Pn	Pn	22 00 53.2	+2.8
KBAM	BAM	5.89	177	*e*Pn	Pn	22 00 53.6	+2.9
ASAO	Ashtian	6.67	268	*e*Pn	Pn	22 01 04.6	+3.0
KHMZ	Khomeyn	6.86	261	*e*Pn	Pn	22 01 07.4	+3.2

MOS ***12*** *22:09:40.5±1.5, 48°.61N×155°.39E, h15km, mb3.9/1, Error ellipse: s-maj=38.5km s-min=5.3km az=75.2*
IDC ***12*** *22:09:40.8±2.3, 48°.66N×155°.13E, h0km, mb3.5/4, mbtmp3.5/5, ML2.6/1, MS3.3/3, Error ellipse: s-maj=51.4km s-min=35.7km az=158.0*
SKHL ***12*** *22:09:42.5±0.2, 48°.60N×156°.00E, h30km±4km, mb4.3/4*
KRSC ***12*** *22:09:47.7±2.6, 48°.95N×156°.99E, h17km±34km, ML4.2*
ISC 12 22:09:42.1±1.4, 48°.7N±0°.1×155°.7E±0°.1, h10km, n57, σ2§43/57, mb3.6/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.00	7	*e*PN	Pn	22 10 15.1	-0.8
SKR				*e*S	Sn	22 10 38.8	-2.1
SKR				pmax	pmax		
	comp=Z,93nm,0.5s						
SKR				smax	smax		
	comp=N,363nm,0.6s						
SKR				smax	smax		
	comp=E,269nm,0.5s						
SKR	Severo-Kuril's	2.00	7	*e*P	Pn	22 10 14.9	-1.0
SKR				AMB	AMB	22 10 18.0	
	comp=E,40nm,0.3s						
SKR				*e*S	Sn	22 10 39.1	-1.8
SKR				A	A	22 10 44.2	
	comp=E,160nm,0.3s						
SKR				A	A	22 10 44.2	
	comp=E,50nm,0.3s						
PAU	Pauzhetka	2.85	14	PN	Pn	22 10 28.4	+0.8
PAU	Pauzhetka	2.85	14	*e*P	Pn	22 10 28.4	+0.8
PAU				*e*S	Sn	22 11 00.3	-1.7
PAU	Pauzhetka	2.85	14	*e*P	Pn	22 10 27.6	0.0
PAU				AMB	AMB	22 10 30.0	
	comp=E,40nm,0.4s						
PAU				*e*S	Sn	22 11 01.4	-0.6
PAU				A	A	22 11 02.8	
	comp=E,30nm,0.3s						
PAU				A	A	22 11 02.8	
	comp=E,50nm,0.3s						
KDTR	Khodutka, Kamc	3.46	25	PN	Pn	22 10 36.5	+0.6
KDTR	Khodutka, Kamc	3.46	25	*e*P	Pn	22 10 36.5	+0.6
KDTR				*e*S	Sn	22 11 13.9	-2.9
MTVR	Mutnovka	4.09	21	PN	Pn	22 10 46.8	+2.0
MTVR	Mutnovka	4.09	21	*e*P	Pn	22 10 46.8	+2.0
MTVR				*e*S	Sn	22 11 30.7	-2.1
GRL	Gorelyy	4.13	20	PN	Pn	22 10 47.6	+2.3
GRL	Gorelyy	4.13	20	*e*P	Pn	22 10 47.6	+2.3
RUS	Russkaya	4.13	24	PN	Pn	22 10 46.0	+0.8
RUS	Russkaya	4.13	24	*e*P	Pn	22 10 46.0	+0.8
RUS				*e*S	Sn	22 11 30.2	-3.4
RUS	Russkaya	4.13	24	*e*P	Pn	22 10 46.0	+0.8
APC	Apacha	4.32	12	PN	Pn	22 10 52.0	+4.2
APC	Apacha	4.32	12	*e*P	Pn	22 10 52.0	+4.2
KRMR	Karymshinskiy	4.40	19	PN	Pn	22 10 51.6	+2.7
KRMR	Karymshinskiy	4.40	19	*e*P	Pn	22 10 51.6	+2.7
PETK	Petropavlovsk-	4.58	15	Pn	Pn	22 10 54.4	+2.9
	comp=E,1.2nm,0.3s,baz=178,slow=12,SNR=28						
PETK				Sn	Sn	22 11 51.1	+6.4
	baz=197,slow=28						
	comp=E,5.8nm,0.6s						
PET	Petropavlovsk	4.71	22	*e*P	Pn	22 10 54.2	+1.1
PET				*e*S	Sn	22 11 46.8	-0.8
UGLR	Uglovaya	4.92	22	PN	Pn	22 10 58.2	+2.1
UGLR	Uglovaya	4.92	22	*e*P	Pn	22 10 58.2	+2.1
AVH	Avacha	4.95	21	PN	Pn	22 10 59.8	+3.3
AVH	Avacha	4.95	21	*e*P	Pn	22 10 59.8	+3.3
KOK	Koryaka	4.95	21	PN	Pn	22 10 59.7	+3.2
KOK	Koryaka	4.95	21	*e*P	Pn	22 10 59.7	+3.2
SMAR	Somma	4.96	22	PN	Pn	22 10 59.1	+2.3
SMAR	Somma	4.96	22	*e*P	Pn	22 10 59.1	+2.3
KRER	Koryakskii	4.99	21	PN	Pn	22 11 00.1	+3.0
KRER	Koryakskii	4.99	21	*e*P	Pn	22 11 00.1	+3.0
SDLR	Sedlovina	5.00	22	PN	Pn	22 11 00.6	+3.4
SDLR	Sedlovina	5.00	22	*e*P	Pn	22 11 00.6	+3.4
KRX	Arik	5.01	20	PN	Pn	22 11 00.2	+2.8
KRX	Arik	5.01	20	*e*P	Pn	22 11 00.2	+2.8
SPN	Mys Shipunski	5.17	30	PN	Pn	22 11 00.7	+1.2
SPN	Mys Shipunski	5.17	30	*e*P	Pn	22 11 00.7	+1.2
SPN	Mys Shipunski	5.17	30	*e*P	Pn	22 11 00.7	+1.2
GNL	Ganaly	5.19	15	PN	Pn	22 11 02.9	+3.1
GNL	Ganaly	5.19	15	*e*P	Pn	22 11 02.9	+3.1
KUR	Kuril'sk	6.40	240	*e*P	Pn	22 11 19.2	+2.8
KUR				AMB	AMB	22 11 23.5	
	comp=E,20nm,0.6s						
MKZ	Mys Kozlova	6.95	30	PN	Pn	22 11 23.6	-0.2
MKZ	Mys Kozlova	6.95	30	*e*P	Pn	22 11 23.6	-0.2
KBTR	Krutoberegovo	8.67	27	PN	Pn	22 11 48.8	+1.4
KBTR	Krutoberegovo	8.67	27	*e*P	Pn	22 11 48.8	+1.4
KBG	Krutoberegovo	8.68	27	*e*P	Pn	22 11 48.3	+0.8
KBG				AMB	AMB	22 11 50.4	
	comp=E,10.0nm,0.6s						
MJAR	Matsushiro Arr	17.67	233	LR	LR	22 19 53.0	
	comp=E,47nm,21.4s,baz=6.0,slow=35						
JOW	Kunigami	30.50	234	LR	LR	22 28 07.5	
	comp=E,178nm,18.5s,baz=7.0,slow=37						
H11S1	WAKE ISLAND Hy	31.41	160	T	T	22 49 55.0	
	baz=346,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	31.42	160	T	T	22 50 02.9	
	baz=346,slow=76,SNR=42						
H11S2	WAKE ISLAND Hy	31.42	160	T	T	22 49 56.3	
	baz=346,slow=76,SNR=31						
MKAR	Makanchi Array	47.62	297	P	P	22 18 16.8	-1.3
	comp=E,0.3nm,0.6s,baz=64,slow=8.9,SNR=3.9						
MKAR				LR	LR	22 38 31.3	
	comp=E,23nm,18.6s,baz=36,slow=37						
	comp=E,0.3nm,0.6s						
FINES	FINESS Array B	63.01	335	P	P	22 20 06.7	-1.9
	comp=E,0.8nm,0.7s,baz=40,slow=7.4,SNR=5.7						
	comp=E,0.8nm,0.7s						
TXAR	Lajitas Array	75.01	63	P	P	22 21 26.6	+2.7
	comp=E,0.2nm,0.7s,baz=290,slow=5.3,SNR=2.3						
	comp=E,0.2nm,0.7s						
GERES	GERESS Array B	77.44	335	P	P	22 21 37.0	-0.3
	comp=E,0.3nm,0.6s,baz=27,slow=4.6,SNR=2.3						
	comp=E,0.3nm,0.6s						
H03N2	Juan Fernandez	136.99	90	T	T	01 01 37.9	
	baz=312						
H03N1	Juan Fernandez	137.00	90	T	T	01 01 37.4	
	baz=312						
H03N3	Juan Fernandez	137.01	90	T	T	01 01 38.0	
	baz=312						

TIR ***12*** *22:18:51.0, 39°.78N×19°.29E, h7km±2km, Md3.1, Ml3.0*
ATH ***12*** *22:18:51.5, 39°.92N×19°.36E, h17km±2km, ML2.5/4, Error ellipse: s-maj=6.1km s-min=1.3km az=27.0*
THE ***12*** *22:18:52.3, 39°.89N×19°.37E, h10km±1km, ML2.6/3, Error ellipse: s-maj=3.4km s-min=1.6km az=50.0*
ISC 12 22:18:52.3±1.1, 39°.83N±0°.03×19°.33E±0°.03, h13km±9km, n33, σ1§16/48, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	Kerkira	0.38	108	P	Pg	22 18 59.4	-0.5
KEK				S	Sg	22 19 05.2	+0.2
	985nm,0.4s						
KEK	Kerkira	0.38	108	P	Pg	22 18 59.4	-0.5
KEK				S	Sb	22 19 05.5	-1.2
KEK				AML	AML	22 19 06.3	
	comp=E,2173μm,0.4s						
KEK				AML	AML	22 19 06.5	
	comp=N,1758μm,0.5s						
KASA	Kassiopi	0.47	100	P	Pg	22 19 00.9	-0.7
KASA				S	Sb	22 19 07.9	-1.5
KASA				AML	AML	22 19 09.1	
	comp=N,1754μm,0.2s						
KASA				AML	AML	22 19 09.7	
	comp=E,1409μm,0.4s						
SRN	Sarande	0.52	84	P	Pg	22 19 01.5	-0.9
	baz=79						
SRN				S	Sb	22 19 09.4	-1.3
	baz=79						
SRN				AMP			
	comp=N,1.9nm,0.3s,baz=79						
VLO	Vlora	0.65	11	P	Pn	22 19 07.6	+0.3
	baz=12						
VLO				S	Sn	22 19 15.5	-1.9
	baz=12						
VLO				AMP			
	comp=E,3.2nm,0.1s,baz=12						
SCTE	Santa Cesarea	0.71	290	P	Pg	22 19 05.0	-1.0
	baz=296						
SCTE				S	Sb	22 19 15.2	-1.0
	baz=296						
SCTE	Santa Cesarea	0.71	290	P	Pg	22 19 04.9	-1.1
SCTE				AML	AML	22 19 19.8	
	comp=N,394μm,0.4s						
SCTE				AML	AML	22 19 20.8	
	comp=E,682μm,0.2s						
IGT	Igoumenitsa	0.83	111	P	Pg	22 19 07.2	-1.1
IGT				S	Sb	22 19 20.3	+0.7
	comp=E,345nm,0.6s						
IGT	Igoumenitsa	0.83	111	P	Pg	22 19 07.2	-1.1
	baz=106						
IGT				S	Sb	22 19 20.1	+0.5
	baz=106						
IGT	Igoumenitsa	0.83

KNET 12 22:20:58.5±0.5, 43.°26N×75.°04E, h16km±3km, ml1.5, Error ellipse: s-maj=4.0km s-min=2.1km az=12.0
NNC 12 22:20:58.5±0.5, 43.°30N×75.°08E, h0km, mb2.7, mpv2.9, Error ellipse: s-maj=4.5km s-min=2.2km az=16.0
SOME 12 22:20:58.4, 43.°30N×75.°05E, h15km
KRNET 12 22:20:58.4±0.1, 43.°29N×75.°05E, h17km, mb2.5

ISC 12 22:20:58.5±0.9, 43.°29N±0.°02×75.°05E±0.°02, h15km±8km, n55, σ0s70/105, 23C-15D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGDS	**Sogindy** 16nm,0.1s	**0.35**	**298**	*eP*	**Pg**	**22 21 05.4**	**-0.3**
SGDS	80nm,0.1s			*eS*	**Sg**	**22 21 10.1**	**-0.6**
SGDS	**Sogindy** 16nm,0.1s	**0.35**	**298**	P	**Pg**	**22 21 05.4**	**-0.3**
SGDS	80nm,0.1s			S	**Sg**	**22 21 10.1**	**-0.6**
CHMS	**Chumysh** 18nm,0.1s,SNR=18	**0.36**	**217**	⇑P	**Pg**	**22 21 05.9**	**0.0**
CHMS	83nm,0.2s			⇑S	**Sg**	**22 21 11.0**	**0.0**
CHMS	**Chumysh** baz=17	**0.36**	**217**	⇓*iP*	**Pg**	**22 21 05.8**	**-0.1**
CHMS	baz=17			⇓*iS*	**Sg**	**22 21 10.9**	**-0.1**
USP	**Ospenovka** 18nm,0.2s,SNR=69	**0.40**	**267**	⇑P	**Pg**	**22 21 06.5**	**-0.2**
USP	160nm,0.3s			⇑S	**Sg**	**22 21 11.8**	**-0.4**
USP	**Ospenovka** baz=67	**0.40**	**267**	⇓*iP*	**Pg**	**22 21 06.2**	**-0.4**
USP	baz=67			⇓*iS*	**Sg**	**22 21 11.8**	**-0.4**
TKM2	**Tokmak 2** 6.3nm,0.1s,SNR=36	**0.54**	**132**	⇓P	**Pg**	**22 21 09.0**	**-0.3**
TKM2				⇑S	**Sg**	**22 21 16.7**	**+0.1**
TKM2	**Tokmak 2** baz=32	**0.54**	**132**	⇑*iP*	**Pg**	**22 21 08.5**	**-0.8**
TKM2	baz=32			⇑*iS*	**Sg**	**22 21 16.2**	**-0.4**
FRU1	**Bishkek** baz=13	**0.57**	**213**	⇑*iP*	**Pg**	**22 21 09.0**	**-0.7**
FRU1	baz=13			⇑*iS*	**Sg**	**22 21 17.2**	**-0.1**
KRBS	**Karabastau** baz=48	**0.61**	**48**	*eP*	**Pg**	**22 21 10.4**	**-0.1**
KRBS	baz=48			*eS*	**Sg**	**22 21 18.5**	**-0.2**
KRBS	**Karabastau** 2.2nm,0.1s	**0.61**	**48**	*eP*	**Pg**	**22 21 10.4**	**-0.1**
KRBS	11nm,0.1s			*eS*	**Sg**	**22 21 18.5**	**-0.2**
KRBS	**Karabastau** 2.2nm,0.1s	**0.61**	**48**	P	**Pg**	**22 21 10.4**	**-0.1**
KRBS	11nm,0.1s			S	**Sg**	**22 21 18.5**	**-0.2**
KBK	**Karagaybulak** 6.6nm,0.1s,SNR=10	**0.64**	**187**	⇓P	**Pb**	**22 21 11.4**	**+0.1**
KBK	40nm,0.2s			⇑S	**Sb**	**22 21 20.4**	**+0.3**
KBK	**Karagaybulak** baz=87	**0.64**	**187**	⇑*eP*	**Pg**	**22 21 10.8**	**-0.2**
KBK	baz=87			⇑*iS*	**Sg**	**22 21 20.0**	**+0.6**
KST	**Kastek** baz=10.0	**0.71**	**110**	*eP*	**Pg**	**22 21 12.4**	**0.0**
KST	baz=10.0			*eS*	**Sg**	**22 21 22.0**	**+0.2**
KST	**Kastek** 2.4nm,0.2s	**0.71**	**110**	*eP*	**Pg**	**22 21 12.4**	**0.0**
KST	8.2nm,0.2s			*eS*	**Sg**	**22 21 22.0**	**+0.2**
KST	**Kastek** 2.4nm,0.2s	**0.71**	**110**	P	**Pg**	**22 21 12.4**	**0.0**
KST	8.2nm,0.2s			S	**Sg**	**22 21 22.0**	**+0.2**
AAK	**Ala-Archa** 3.0nm,0.1s,SNR=7.7	**0.77**	**212**	⇓P	**Pg**	**22 21 13.4**	**0.0**
AAK	7.4nm,0.2s			⇓S	**Sg**	**22 21 23.9**	**+0.3**
AAK	**Ala-Archa** baz=12	**0.77**	**212**	⇑*iP*	**Pg**	**22 21 13.0**	**-0.4**
AAK	baz=12			⇑*iS*	**Sg**	**22 21 23.6**	**0.0**
MTBS	**Maitube** baz=98	**1.02**	**98**	*eP*	**Pb**	**22 21 18.0**	**+0.2**
MTBS	baz=98			*eS*	**Sb**	**22 21 31.3**	**+0.2**
MTBS	**Maitube** 1.3nm,0.1s	**1.02**	**98**	*eP*	**Pb**	**22 21 18.0**	**+0.2**
MTBS	13nm,0.2s			*eS*	**Sb**	**22 21 31.3**	**+0.2**
MTBS	**Maitube** 1.3nm,0.1s	**1.02**	**98**	P	**Pb**	**22 21 18.0**	**+0.2**
MTBS	13nm,0.2s			S	**Sb**	**22 21 31.3**	**+0.2**
BOOM	**Boomskoye usch** baz=40	**1.03**	**140**	⇑*iP*	**Pb**	**22 21 17.4**	**-0.7**
BOOM	baz=40			⇑*iS*	**Sb**	**22 21 31.7**	**+0.2**
KUU	**Kurty** baz=57	**1.11**	**57**	*eP*	**Pn**	**22 21 19.5**	**0.0**
KUU	baz=57			*eS*	**Sb**	**22 21 33.9**	**+0.2**
KUU	**Kurty** 3.0nm,0.1s	**1.11**	**57**	*eP*	**Pn**	**22 21 19.5**	**0.0**
KUU	17nm,0.3s			*eS*	**Sb**	**22 21 33.9**	**+0.2**
KUU	**Kurty** 3.0nm,0.1s	**1.11**	**57**	P	**Pn**	**22 21 19.5**	**0.0**
KUU	17nm,0.3s			S	**Sb**	**22 21 33.9**	**+0.2**
EKS2	**Erkin-Say** 4.7nm,0.2s,SNR=23	**1.12**	**237**	⇑P	**Pn**	**22 21 19.9**	**+0.1**
EKS2	4.5nm,0.2s			⇓S	**Sn**	**22 21 35.0**	**+0.1**
EKS2	**Erkin-Say** baz=37	**1.12**	**237**	⇓*iP*	**Pb**	**22 21 19.3**	**-0.3**
EKS2	baz=37			⇓*iS*	**Sb**	**22 21 34.5**	**+0.4**
UCH	**Uchtor** 0.9nm,0.1s,SNR=10	**1.13**	**201**	⇑P	**Pb**	**22 21 20.0**	**+0.1**
KTBS	**Karatobe** baz=70	**1.26**	**70**	*eP*	**Pb**	**22 21 22.0**	**0.0**
KTBS	baz=70			*eS*	**Sg**	**22 21 38.6**	**-0.6**
KTBS	**Karatobe** 12nm,0.1s	**1.26**	**70**	*eP*	**Pb**	**22 21 22.0**	**0.0**
KTBS	35nm,0.2s			*eS*	**Sg**	**22 21 38.6**	**-0.6**
KTBS	**Karatobe** 12nm,0.1s	**1.26**	**70**	P	**Pb**	**22 21 22.0**	**0.0**
KTBS	35nm,0.2s			S	**Sg**	**22 21 38.6**	**-0.6**
ULHL	**Ulahol** baz=39	**1.36**	**139**	⇑*iP*	**Pn**	**22 21 22.9**	**-0.2**
ULHL	baz=39			⇑*iS*	**Sb**	**22 21 41.3**	**+0.3**
MDOK	**Medeo** baz=94	**1.47**	**94**	*eP*	**Pb**	**22 21 25.9**	**+0.4**
MDOK	baz=94			*eS*	**Sg**	**22 21 44.9**	**-0.8**
MDOK	**Medeo** 2.6nm,0.1s	**1.47**	**94**	*eP*	**Pb**	**22 21 25.9**	**+0.4**
MDOK	4.5nm,0.3s			*eS*	**Sg**	**22 21 45.0**	**-0.8**
MDOK	**Medeo** 2.6nm,0.1s	**1.47**	**94**	Pg	**Pb**	**22 21 25.9**	**+0.4**
MDOK	0.9nm,0.3s			⇑P	**Pg**	**22 21 26.3**	**-0.4**
MDOK	4.5nm,0.3s			Lg	Lg	22 21 45.0	
MDOK	3.0nm,0.4s			⇑S	**Sg**	**22 21 45.0**	**-0.7**
KOTS	**Kotyrbulak** baz=91	**1.51**	**91**	*eP*	**Pg**	**22 21 27.0**	**-0.5**
KOTS	baz=91			*eS*	**Sg**	**22 21 46.8**	**-0.3**
KOTS	**Kotyrbulak** 2.1nm,0.1s	**1.51**	**91**	*eP*	**Pg**	**22 21 27.0**	**-0.5**
KOTS	15nm,0.2s			*eS*	**Sg**	**22 21 46.8**	**-0.3**
KOTS	**Kotyrbulak** 2.1nm,0.1s	**1.51**	**91**	P	**Pg**	**22 21 27.0**	**-0.5**
KOTS				S	**Sg**	**22 21 46.8**	**-0.3**
CHKK	**Chushkaly** baz=68	**1.52**	**67**	*eP*	**Pb**	**22 21 26.4**	**+0.1**
CHKK	baz=68			*eS*	**Sg**	**22 21 46.3**	**-1.1**
CHKK	**Chushkaly** 1.6nm,0.1s	**1.52**	**67**	*eP*	**Pb**	**22 21 26.4**	**+0.1**
CHKK	28nm,0.2s			*eS*	**Sg**	**22 21 46.3**	**-1.1**
CHKK	**Chushkaly** 1.6nm,0.1s	**1.52**	**67**	P	**Pb**	**22 21 26.4**	**+0.1**
CHKK	28nm,0.2s			S	**Sg**	**22 21 46.3**	**-1.1**
ARLS	**Aral** baz=1.0	**1.52**	**201**	⇓*iP*	**Pb**	**22 21 26.4**	**-0.1**
ARLS	baz=1.0			⇓*iS*	**Sb**	**22 21 46.5**	**+0.9**
AML	**Almayashu** 1.6nm,0.2s,SNR=5.2	**1.53**	**221**	⇓P	**Pb**	**22 21 27.0**	**+0.4**
AML	7.4nm,0.2s			⇑S	**Sg**	**22 21 47.4**	**-0.4**
BTLS	**Baital** 1.1nm,0.1s	**1.90**	**338**	*eP*	**Pb**	**22 21 33.3**	**+0.6**
BTLS	4.3nm,0.2s			*eS*	**Sb**	**22 21 57.4**	**+1.2**
BTLS	**Baital** 1.1nm,0.1s	**1.90**	**338**	P	**Pb**	**22 21 33.3**	**+0.6**
BTLS	4.3nm,0.2s			S	**Sb**	**22 21 57.4**	**+1.2**
SATY	**Saty** 1.2nm,0.1s	**2.47**	**94**	*eP*	**Pb**	**22 21 43.1**	**+0.6**
SATY	5.7nm,0.2s			*eS*	**Sb**	**22 22 14.9**	**+2.2**
SATY	**Saty** 1.2nm,0.1s	**2.47**	**94**	Pg	**Pb**	**22 21 43.1**	**+0.6**
SATY	5.7nm,0.2s			Lg	Lg	22 22 14.9	
ZHN	**Zhinishke** 3.9nm,0.3s	**2.48**	**92**	*eP*	**Pb**	**22 21 44.0**	**+1.3**
ZHN	8.7nm,0.2s			*eS*	**Sg**	**22 22 16.1**	**-2.0**
ZHN	**Zhinishke** 3.9nm,0.3s	**2.48**	**92**	Pg	**Pb**	**22 21 43.9**	**+1.3**
ZHN	8.7nm,0.2s			Lg	Lg	22 22 16.1	
BLB	**Baldybastay** 1.0nm,0.3s	**2.62**	**71**	*eP*	**Pb**	**22 21 45.5**	**+0.4**
BLB	8.8nm,0.3s			*eS*	**Sb**	**22 22 18.6**	**+1.6**
BLB	**Baldybastay** 1.0nm,0.3s	**2.62**	**71**	Pg	**Pb**	**22 21 45.5**	**+0.4**
BLB	8.8nm,0.3s			Lg	Lg	22 22 18.6	
UZB	**Uzynbulak** 0.5nm,0.1s	**2.91**	**91**	*eP*	**Pb**	**22 21 51.3**	**+1.3**
UZB	5.3nm,0.5s			*eS*	**Sg**	**22 22 28.8**	**-3.1**
UZB	**Uzynbulak** 0.5nm,0.1s	**2.91**	**91**	Pg	**Pb**	**22 21 51.3**	**+1.3**
UZB	5.3nm,0.5s			Lg	Lg	22 22 28.7	
KK31	**Karatay Array** 0.2nm,0.3s,baz=85,slow=16,SNR=6.9	**3.32**	**268**	Pg	**Pg**	**22 22 00.2**	**-1.9**
KK31	0.2nm,0.2s,baz=91,slow=27,SNR=9.1			⇓Lg	Lg	22 22 40.9	

IDC 12 22:43:48.7±0.8, 0.°76S×133.°32E, h0km, mb4.1/8, mbtmp4.1/10, ML4.2/2, MS3.1/4, Error ellipse: s-maj=17.8km s-min=12.4km az=60.0
NEIC 12 22:43:49.8±1.8, 0.°75S±0.°06×133.°6E±0.°1, h10km±1km, mb4.3/23, Error ellipse: s-maj=19.7km s-min=7.0km az=114.0
DJA 12 22:43:53.6±0.5, 1.°S±6.°×13.°3E±.°, h54km±7km, M4.5/13, mb4.8/13, mB5.0/7, MLv4.5/13, Mw(mB)4.3/7, MwMwp7.3/1, Mwp7.0/1

ISC 12 22:43:49.6±0.5, 0.°72S±0.°06×133.°49E±0.°06, h10km, n80, σ1s33/73, mb4.3/17, MS3.1/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.05**	**139**	P	**Pn**	**22 44 13.6**	**+3.3**
SIJI	**Sorong** 179nm,0.3s,baz=72,slow=13,SNR=205	**2.23**	**266**	Pn	**Pn**	**22 44 26.4**	**-0.1**
SIJI	230nm,0.3s,baz=268,slow=23,SNR=13			Lg	Lg	22 44 53.2	
SIJI	**Sorong** 377nm,0.3s	**2.23**	**266**	P	**Pn**	**22 44 25.5**	**-1.1**
SWI	**Sorong**	**2.23**	**266**	P	**Pn**	**22 44 26.5**	**-0.1**
FAKI	**Fak Fak**	**2.51**	**209**		**Pn**	**22 44 30.8**	**+0.3**
FAKI	**Fak Fak**	**2.51**	**209**	P	**Pn**	**22 44 31.1**	**+0.6**
FAKI	**Fak Fak**	**2.51**	**209**	P	**Pn**	**22 44 31.2**	**+0.7**
SRPI	**Serui, Papua**	**2.98**	**113**	P	**Pb**	**22 44 39.6**	**-3.2**
BNDI	**Bandanaira** 1.5nm244nm,0.8s	**5.21**	**223**	P	**Pn**	**22 45 08.1**	**+0.6**
MSAI	**Masohi** 0.1nm807nm33nm,0.5s	**5.25**	**240**	P	**Pn**	**22 45 08.7**	**+0.5**
KRAI	**Karang Ratu** 0.5nm121nm,1.2s	**5.71**	**243**	P	**Pn**	**22 45 15.7**	**+1.2**
LBMI	**Labuha** 0.2nm968nm48nm,0.5s	**5.99**	**271**	P	**Pn**	**22 45 19.4**	**+1.1**
AAI	**Ambon** 0.6nm2μm113nm,0.6s	**6.05**	**241**	P	**Pn**	**22 45 19.7**	**+0.5**
GAMI	**Galela, Maluku** 0.4nm2μm115nm,0.8s	**6.24**	**294**	P	**Pn**	**22 45 21.8**	**0.0**
NLAI	**Namlea** 0.5nm28μm87nm,0.9s	**6.86**	**248**	P	**Pn**	**22 45 31.0**	**+0.8**
GENI	**Genyem**	**6.93**	**106**	P	**Pb**	**22 45 45.8**	**-4.4**
SANI	**Sanana** 0.1nm11nm,0.7s	**7.61**	**260**	P	**Pn**	**22 45 40.2**	**-0.4**
APSI	**Ampana** 46nm,0.5s	**11.84**	**269**	P	**Pn**	**22 46 39.2**	**+0.6**
MTN	**Manton Dam**	**12.27**	**191**	Pn	**Pn**	**22 46 44.0**	**-0.5**
MTN	**Manton Dam**	**12.27**	**191**	P	**Pn**	**22 46 44.2**	**-0.3**
SOEI	**Soe**	**12.84**	**225**	Pn	**Pn**	**22 46 51.4**	**-0.9**
BKSI	**Bulukumba** 397nm15nm,1.2s	**14.11**	**251**	P	**Pn**	**22 47 10.6**	**+1.0**
KAPI	**Kappang** comp=Z,34nm,18.5s,baz=72,slow=42	**14.36**	**252**	LR	LR	22 53 49.9	
KNRA	**Kununurra**	**15.58**	**197**	Pn	**Pn**	**22 47 27.2**	**-2.2**
KNRA	**Kununurra**	**15.58**	**197**	P	**Pn**	**22 47 27.9**	**-1.5**
MYLDM	**Lahad Datu**	**16.07**	**292**	Pn	**Pn**	**22 47 35.6**	**-0.2**
MYLDM	comp=Z,19nm,1.1s			IAmb	IAmb	22 48 04.6	
COEN	**Coen**	**16.28**	**144**	Pn	**Pn**	**22 47 34.6**	**-3.9**
COEN	comp=Z,43nm,1.4s			IAmb	IAmb	22 47 57.2	
PLAI	**Plampang**	**17.60**	**242**	P	**P**	**22 47 57.5**	**+1.4**
KLNI	**Mataram** comp=Z,17nm,0.6s	**18.94**	**246**	P	**P**	**22 48 09.1**	**-1.8**
WB0	**Warramunga Arr**	**18.95**	**177**	P	**P**	**22 48 10.4**	**-0.6**
WRAB	**Tennant Creek**	**19.12**	**178**	P	**Pn**	**22 48 15.7**	**+2.0**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.3s,baz=354,slow=11,SNR=23	**19.12**	**178**	P	**Pn**	**22 48 13.5**	**-0.3**
WRA	comp=Z,1.7nm,1.0s,baz=358,slow=18,SNR=2.2			S	Sn	22 51 34.3	-14
WRA	**Warramunga Arr** comp=Z,4.0nm,0.7s	**19.12**	**178**	P	**Pn**	**22 48 13.6**	**-0.3**
QIS	**Mount Isa**	**20.61**	**164**	P	Pn	22 48 32.1	+0.7
AS01	**Alice Springs**	**22.82**	**179**	P	**P**	**22 48 54.8**	**+2.0**
AS31	**Alice Springs**	**22.82**	**179**	P	**P**	**22 48 52.7**	**-0.2**
ASAR	**Alice Springs** comp=Z,12nm,0.6s,baz=1.1,slow=10,SNR=60	**22.82**	**179**	P	**P**	**22 48 53.6**	**+0.8**
ASAR	comp=Z,1.1nm,0.7s,baz=359,slow=26,SNR=5.7			S	**S**	**22 53 03.8**	**+1.5**
ASAR	comp=Z,43nm,18.3s,baz=347,slow=41 comp=Z,12nm,0.6s			LR	LR	22 59 12.6	
ASAR	**Alice Springs**	**22.82**	**179**	P	**P**	**22 48 53.0**	**+0.1**
CTA	**Charters Tower** comp=Z,1.8nm,0.5s,baz=322,slow=12,SNR=5.0	**22.95**	**148**	P	**P**	**22 48 56.9**	**+2.7**
CTA	comp=Z,68nm,19.2s,baz=296,slow=41 comp=Z,1.8nm,0.5s			LR	LR	22 59 29.3	
MBWA	**Marble Bar**	**24.35**	**213**	P	**P**	**22 49 07.9**	**0.0**
MBWA	comp=Z,6.8nm,0.9s			IAmb	IAmb	22 49 35.8	
PSA00	**Pilbara Seismi**	**24.63**	**212**	P	**P**	**22 49 10.8**	**+0.4**
PSA00	comp=Z,7.8nm,0.7s			IAmb	IAmb	22 49 13.4	
PSA00	**Pilbara Seismi**	**24.63**	**212**	P	**P**	**22 49 10.7**	**+0.3**
PSA00	comp=Z,4.2nm,1.0s			IAmb	IAmb	22 49 12.3	
PSA00	**Pilbara Seismi**	**24.63**	**212**	P	**P**	**22 49 12.2**	**+1.8**
WRKA	**Warakurna**	**24.69**	**191**	P	**P**	**22 49 12.6**	**+1.6**
OOD	**Oodnadatta**	**27.01**	**176**	P	**P**	**22 49 34.0**	**+2.2**
MULG	**Mulgathing**	**29.41**	**179**	P	**P**	**22 49 54.5**	**+1.2**
STKA	**Stephens Creek** comp=Z,1.4nm,0.4s,baz=349,slow=9.1,SNR=7.0	**31.93**	**167**	P	**P**	**22 50 15.1**	**-0.4**
STKA	comp=Z,52nm,18.4s,baz=19,slow=39 comp=Z,1.4nm,0.4s			LR	LR	23 04 44.6	
STKA	**Stephens Creek**	**31.93**	**167**	P	**P**	**22 50 14.6**	**-0.9**
BBOO	**Buckleboo**	**32.01**	**176**	P	**P**	**22 50 15.8**	**-0.5**
BBOO	**Buckleboo**	**32.01**	**176**	P	**P**	**22 50 17.2**	**+0.9**
BLDU	**Ballidu**	**33.73**	**207**	P	**P**	**22 50 31.9**	**+0.6**
H11S3	**WAKE ISLAND Hy** baz=246	**37.81**	**58**	T	T	23 31 26.7	
H11S2	**WAKE ISLAND Hy** baz=246	**37.82**	**58**	T	T	23 31 26.2	
H11S1	**WAKE ISLAND Hy** baz=246	**37.82**	**58**	T	T	23 31 27.6	
H11N1	**WAKE ISLAND Hy** baz=243,slow=75,SNR=264	**38.53**	**56**	T	T	23 32 15.4	
H11N2	**WAKE ISLAND Hy** baz=243,slow=75,SNR=197	**38.55**	**56**	T	T	23 32 16.3	
H11N3	**WAKE ISLAND Hy** baz=243,slow=75,SNR=155	**38.55**	**56**	T	T	23 32 16.8	
PZH	**PanZhiHua**	**40.85**	**314**	P	**P**	**22 51 34.5**	**+2.5**
USA0B	**Ussuriysk Arra**	**44.74**	**358**	P	**P**	**22 52 04.1**	**+1.0**
USA0B	comp=Z,4.0nm,1.0s			IAmb	IAmb	22 52 15.3	
HIA	**Hailar**	**51.18**	**348**	P	**P**	**22 52 54.2**	**+1.2**
WMQ	**Urumqi**	**60.26**	**323**	*eP*	**P**	**22 53 58.3**	**0.0**
WMQ				pP	sP	22 54 03.6	+0.8
MK31	**Makanchi Array**	**65.07**	**324**	P	**P**	**22 54 30.1**	**-0.3**
MK31	comp=Z,1.6nm,0.8s			IAmb	IAmb	22 54 36.7	
MKAR	**Makanchi Array** comp=Z,1.6nm,0.6s,baz=113,slow=8.1,SNR=25	**65.07**	**324**	P	**P**	**22 54 30.9**	**+0.5**
MKAR	**Makanchi Array** comp=Z,1.6nm,0.6s	**65.07**	**324**	P	**P**	**22 54 30.4**	**0.0**
MAKZ	**Makanchi**	**65.26**	**324**	P	**P**	**22 54 31.4**	**-0.2**
MAKZ	comp=Z,2.7nm,0.7s			IAmb	IAmb	22 54 32.9	
BOOM	**Boomskoye usch**	**67.14**	**317**	P	**P**	**22 54 44.0**	**+0.1**
BOOM	comp=Z,2.2nm,1.2s			IAmb	IAmb	22 54 47.1	
ZALV	**Zalesovo Beam**	**67.65**	**331**	P	**P**	**22 54 46.3**	**-0.4**
KURK	**Kurchatov**	**69.13**	**326**	P	**P**	**22 54 55.7**	**-0.3**
KURBB	**Kurchatov Arra** comp=Z,2.4nm,0.9s,baz=121,slow=5.8,SNR=13	**69.14**	**326**	P	**P**	**22 54 56.6**	**+0.6**
GAR	**Garm** comp=Z,2.4nm,0.9s	**69.89**	**312**	P	**P**	**22 55 01.0**	**-0.2**
KKAR	**Karatay Array**	**71.08**	**316**	P	**P**	**22 55 07.8**	**-0.4**
KKAR	comp=Z,2.9nm,0.9s			IAmb	IAmb	22 55 14.2	
BVAR	**Borovoye Array** comp=Z,0.4nm,0.5s,baz=126,slow=7.5,SNR=3.7	**74.73**	**326**	P	**P**	**22 55 29.5**	**-0.1**
BRVK	**Borovoye** comp=Z,0.4nm,0.5s	**74.80**	**326**	P	**P**	**22 55 30.3**	**+0.3**
BRVK	comp=Z,2.1nm,0.8s			IAmb	IAmb	22 55 36.3	
VNDA	**Vanda** comp=Z,0.7nm,0.8s,baz=310,slow=5.4,SNR=6.8	**78.26**	**174**	P	**P**	**22 55 50.0**	**+0.8**
VNDA	**Vanda** comp=Z,0.7nm,0.8s	**78.26**	**174**	P	**P**	**22 55 49.9**	**+0.8**
VNDA	comp=Z,2.1nm,1.1s			IAmb	IAmb	22 55 50.9	
ABKAR	**Akbulak array**	**79.85**	**320**	P	**P**	**22 55 57.8**	**-0.6**
ABKAR	**Akbulak array**	**79.85**	**320**	P	**P**	**22 55 57.8**	**-0.6**
ABKAR	comp=Z,1.7nm,0.9s			IAmb	IAmb	22 56 01.4	
ILAR	**Eielson Array** comp=Z,0.4nm,0.3s,baz=243,slow=6.9,SNR=1.5	**86.22**	**25**	P	**P**	**22 56 31.8**	**+0.8**
BMAR	**Burnt Mountain** comp=Z,0.4nm,0.3s	**87.55**	**22**	P	**P**	**22 56 36.9**	**-0.7**
QSPA	**South Pole Qui**	**89.22**	**180**	P	**P**	**22 56 45.1**	**-0.5**
QSPA	comp=Z,1.9nm,0.9s			IAmb	IAmb	22 56 48.9	

IDC 12 22:48:02.2±2.5, 5.°45N×124.°04E, h0km, mb3.8/4, mbtmp3.8/4, MS2.6/1, Error ellipse: s-maj=346.4km s-min=17.8km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=337,slow=9.3,SNR=7.5	**27.20**	**158**	P	P	22 53 48.0	+0.2
WRA	0.4nm,0.6s,baz=348,slow=20,SNR=1.6 0.6nm,0.3s			S	S	22 58 28.7	+0.9
CMAR	**Chiang Mai Arr** comp=Z,11nm,18.1s,baz=135,slow=40	**27.69**	**300**	LR	LR	23 06 21.3	
ASAR	**Alice Springs** 0.5nm,0.3s,baz=338,slow=6.6,SNR=1.6 0.5nm,0.3s	**30.50**	**162**	P	P	22 54 17.3	+0.1
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=116,slow=7.9,SNR=8.2 0.3nm,0.3s	**54.62**	**326**	P	P	22 57 33.3	+0.5
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=130,slow=6.2,SNR=3.1 0.2nm,0.4s	**58.86**	**328**	P	P	22 58 01.7	-1.0

KRSC 12 23:09:07.0±2.0, 48.°88N×157.°57E, h18km±39km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.64**	**350**	S	Sn	23 10 21.3	+1.2
KDTR	**Khodutka, Kamc**	**2.95**	**6**	P	Pn	23 09 55.3	+2.4
KDTR				S	Sb	23 10 31.3	-3.4
ASAK	**Asacha**	**3.51**	**3**	P	Pn	23 10 03.9	+3.1
RUS	**Russkaya**	**3.61**	**9**	P	Pn	23 10 05.0	+3.1
RUS				S	Sb	23 10 49.0	-4.6
MTVR	**Mutnovka**	**3.63**	**6**	P	Pn	23 10 05.4	+3.0
MTVR				S	Sn	23 10 48.9	+4.1
GRL	**Gorelyy**	**3.69**	**5**	P	Pn	23 10 06.5	+3.3
GRL				S	Sb	23 10 51.5	-4.6
UGLR	**Uglovaya**	**4.41**	**10**	P	Pn	23 10 17.8	+4.8
AVH	**Avacha**	**4.45**	**9**	P	Pn	23 10 18.3	+4.7
SMAR	**Somma**	**4.46**	**10**	P	Pn	23 10 19.2	+5.4
KOK	**Koryaka**	**4.47**	**8**	P	Pn	23 10 18.8	+4.9
KRER	**Koryakskii**	**4.49**	**9**	P	Pb	23 10 20.2	-5.2
KRX	**Arik**	**4.54**	**8**	P	Pn	23 10 19.1	+4.2
GNL	**Ganaly**	**4.83**	**3**	P	Pn	23 10 22.2	+3.4
MKZ	**Mys Kozlova**	**6.24**	**23**	P	Pn	23 10 42.5	+4.4

MAN 12 23:09:34.7, 12.°89N×125.°08E, h32km, mb4.7, ML3.5, MS3.4
IDC 12 23:09:35.9±3.7, 12.°05N×125.°32E, h0km, mb3.7/3, mbtmp3.7/3, MS2.6/1, Error ellipse: s-maj=296.2km s-min=28.3km az=65.0

ISC 12 23:09:33.4±1.5, 13.°03N±0.°05×125.°14E±0.°09, h45km±20km, n22, σ3s02/28, mb3.8/3, 5C-7D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.69**	**222**	⇑*eP*	**Pn**	**23 09 46.7**	**-0.2**
CNP				*eS*	**Sn**	**23 09 55.5**	**-1.1**
PVCP	**Virac**	**1.12**	**301**	⇓*eP*	**Pn**	**23 09 54.5**	**+1.9**
PVCP				*eS*	**Sn**	**23 10 08.7**	**+1.9**
BESP	**Borongan**	**1.45**	**168**	⇓*eP*	**Pn**	**23 09 58.4**	**+1.3**
BESP				*eS*	**Sn**	**23 10 11.4**	**-3.5**
JCNP	**Jose Panganiba**	**2.69**	**298**	⇓*iP*	**Pn**	**23 10 16.5**	**+2.3**
JCNP				*i* S	**Sn**	**23 10 47.4**	**+1.9**
RCP	**Roxas**	**2.76**	**238**	⇓*eP*	**Pn**	**23 10 16.6**	**+1.4**
RCP				*eS*	**Sn**	**23 10 47.1**	**-0.2**
GQP	**Guinayangan**	**2.77**	**289**	⇓*eP*	**Pn**	**23 10 16.2**	**+0.9**
GQP				*eS*	**Sn**	**23 10 42.1**	**-5.4**
MSLP	**Maasin**	**2.89**	**186**	⇓*eP*	Pn	23 10 07.1	-10
MSLP				*eS*	**Sn**	**23 10 56.9**	**+6.4**
LLP	**Lapu-Lapu**	**2.93**	**203**	*eP*	**Pn**	**23 10 18.0**	**+0.5**
LLP				*eS*	**Sn**	**23 10 47.1**	**-4.4**
TABP	**Talibon, Bohol**	**3.02**	**195**	⇑*eP*	**Pn**	**23 10 19.3**	**+0.5**
TABP				*i* S	**Sn**	**23 10 53.5**	**-0.3**
GLSP	**General Luna,**	**3.36**	**163**	*eS*	**Sn**	**23 10 58.4**	**-3.8**
GUIM	**Jordan**	**3.46**	**227**	⇓*eP*	**Pn**	**23 10 25.9**	**+1.1**
GUIM				*eS*	**Sn**	**23 11 04.2**	**-0.2**
GHBP	**Garcia Hernand**	**3.47**	**194**	⇑*eP*	**Pn**	**23 10 26.9**	**+2.0**
GHBP				*i* S	**Sn**	**23 11 04.0**	**-0.8**
TBP	**Tagbilaran**	**3.54**	**201**	*eP*	Pn	23 10 20.0	-6.0
BALP	**Baler**	**4.38**	**308**	⇑*eP*	**Pn**	**23 10 38.5**	**+1

comp=Z,60nm,19.4s,baz=346,slow=46
WRA Warramunga Arr 33.99 164 P **P 23 16 12.6 -0.4**
0.7nm,0.6s,baz=345,slow=9.3,SNR=6.9
0.7nm,0.6s
ASAR Alice Springs 37.46 167 P **P 23 16 43.2 +0.4**
0.4nm,0.3s,baz=346,slow=6.4,SNR=8.0
0.4nm,0.3s
H11N1 WAKE ISLAND Hy 40.52 75 T T 00 00 27.2
baz=266,slow=75,SNR=9.4
H11N2 WAKE ISLAND Hy 40.53 75 T T 00 00 29.2
baz=266,slow=75,SNR=6.4
H11N3 WAKE ISLAND Hy 40.54 75 T T 00 00 28.4
baz=266,slow=75,SNR=7.5
MKAR Makanchi Array 49.18 322 P P 23 18 32.4 +15
0.6nm,0.9s,baz=115,slow=6.8,SNR=4.1
0.6nm,0.9s

KRSC 12 23:18:54.7±1.7, 48°.76N×158°.56E, h16km±37km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.93**	**338**	S	Sn	23 20 16.2	+0.9
KDTR	**Khodutka, Kamc**	**3.06**	**354**	P	Pn	23 19 44.3	+2.0
KDTR				S	Sn	23 20 21.8	+3.2
ASAK	**Asacha**	**3.65**	**354**	P	Pn	23 19 53.4	+3.0
RUS	**Russkaya**	**3.67**	**360**	P	Pn	23 19 53.9	+3.2
RUS				S	Sn	23 20 38.2	+4.6
MTVR	**Mutnovka**	**3.73**	**356**	P	Pn	23 19 54.5	+2.9
MTVR				S	Sn	23 20 39.3	+4.0
GRL	**Gorelyy**	**3.81**	**356**	P	Pn	23 19 55.6	+3.0
GRL				S	Sn	23 20 41.5	+4.4
KRMR	**Karymshinskiy**	**4.08**	**356**	S	Sb	23 20 49.5	-5.6
AVH	**Avacha**	**4.51**	**1**	P	Pn	23 20 07.5	+5.2
SMAR	**Somma**	**4.51**	**2**	P	Pn	23 20 07.6	+5.2
KOK	**Koryaka**	**4.54**	**1**	P	Pn	23 20 07.2	+4.6
KRX	**Arik**	**4.60**	**1**	P	Pn	23 20 07.8	+4.2
GNL	**Ganaly**	**4.95**	**356**	P	Pn	23 20 12.6	+4.2
MKZ	**Mys Kozlova**	**6.13**	**18**	P	Pn	23 20 29.0	+4.7

ROM 12 23:31:13.7±0.1, 42°.856N±0°.004×13°.236E±0°.006, h8km±1km, ML1.1/4, 5C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=215.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.07**	**329**	P	Pg	23 31 15.6	-0.2
MC2				S	Sg	23 31 17.4	+0.1
MMO1	**Montemonaco**	**0.08**	**57**	⇑P	Pg	23 31 15.9	0.0
MMO1				S	Sg	23 31 17.4	0.0
NRCA	**Norcia**	**0.09**	**256**	⇓P	Pg	23 31 16.3	+0.3
NRCA				S	Sg	23 31 18.2	+0.5
NRCA				AML	AML		
	comp=N,1013μm,0.1s						
NRCA				AML	AML		
	comp=E,732μm,0.4s						
T1241	**Roccafluvione,**	**0.14**	**90**	⇑P	Pg	23 31 17.4	+0.6
T1241				AML	AML		
	comp=E,100μm,0.3s						
T1241				AML	AML		
	comp=N,94μm,0.5s						
T1241				AML	AML		
	comp=E,100μm,0.3s						
T1241				AML	AML		
	comp=N,94μm,0.5s						
AM05	**Amandola Campo**	**0.15**	**35**	⇑P	Pg	23 31 17.4	+0.5
AM05				AML	AML		
	comp=E,139μm,0.4s						
AM05				AML	AML		
	comp=N,115μm,0.3s						
T1202	**Accumoli, Fraz**	**0.15**	**183**	⇑P	Pg	23 31 17.7	+0.7
T1216	**Preci, Frazion**	**0.16**	**282**	P	Pg	23 31 17.6	+0.4
T1204	**Amatrice, Fraz**	**0.19**	**162**	P	Pg	23 31 18.4	+0.8
FDMO	**Fiordimonte**	**0.21**	**329**	P	Pg	23 31 18.3	+0.3
FDMO				AML	AML		
	comp=N,42μm,0.3s						
FDMO				AML	AML		
	comp=E,49μm,0.7s						
FDMO				AML	AML		
	comp=N,44μm,0.5s						
GUMA	**Gualdo di Mace**	**0.22**	**19**	⇓P	Pg	23 31 18.9	+0.8
GUMA				S	Sg	23 31 23.1	+1.9
GUMA				AML	AML		
	comp=E,196μm,0.5s						
GUMA				AML	AML		
	comp=N,180μm,0.6s						
T1243	**Rocca Santa Ma**	**0.22**	**136**	⇑P	Pg	23 31 18.9	+0.6
T1243				S	Sg	23 31 23.0	+1.7
TERO	**Teramo**	**0.36**	**131**	P	Pg	23 31 21.2	+0.4
ASSB	**Assisi San Ben**	**0.46**	**294**	P	Pb	23 31 23.6	-0.6

ROM 12 23:31:56.2±0.1, 45°.501N±0°.006×10°.973E±0°.008, h9km, ML1.4/14, 4C-3D, Error ellipse: s-maj=0.7km s-min=0.3km az=37.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TREG	**Tregnago**	**0.13**	**80**	P	Pg	23 31 59.8	+0.6
TREG				S	Sg	23 32 02.1	+0.9
ROVR	**Rover Verones**	**0.16**	**25**	P	Pg	23 32 00.4	+0.7
ROVR				S	Sg	23 32 03.2	+1.0
ROVR				AML	AML		
	comp=E,101μm,0.5s						
ROVR				AML	AML		
	comp=N,243μm,0.9s						
ROVR				AML	AML		
	comp=N,203μm,0.1s						
ROVR				AML	AML		
	comp=E,79μm,0.1s						
ROVR				AML	AML		
	comp=E,267μm,0.7s						
ROVR				AML	AML		
	comp=N,471μm,0.1s						
BALD	**Monte Baldo**	**0.21**	**329**	⇓*e*Pg	Pg	23 32 01.4	+0.8
BALD				*e*Sg	Sg	23 32 05.0	+1.3
MARN	**Marana (Italy)**	**0.22**	**50**	⇑*e*Pg	Pg	23 32 01.2	+0.6
MARN				*e*Sg	Sg	23 32 04.5	+0.9
ZEN8	**San Zeno di Mo**	**0.22**	**309**	P	Pg	23 32 01.2	+0.6
ZEN8				S	Sg	23 32 04.7	+1.0
OPPE	**Oppeano**	**0.24**	**144**	P	Pg	23 32 01.5	+0.6
OPPE				S	Sg	23 32 05.9	+1.7
OPPE				AML	AML		
	comp=E,247μm,0.1s						
OPPE				AML	AML		
	comp=N,153μm,0.2s						
GARGN	**Gargnano BS**	**0.29**	**311**	⇑*e*Pg	Pb	23 32 03.0	-0.6
GARGN				*e*Sg	Sb	23 32 07.5	-1.1
TRES	**Parco Tresine**	**0.32**	**267**	⇑*e*Pg	Pg	23 32 03.1	+0.7
VARA	**Varagna**	**0.33**	**351**	⇓*e*Pg	Pg	23 32 03.4	+0.6
VARA				*e*Sg	Sg	23 32 08.4	+1.2
VARA	**Varagna**	**0.33**	**351**	P	Pg	23 32 03.4	+0.6
VARA				S	Sg	23 32 08.3	+1.1
SALO	**Salr**	**0.34**	**291**	P	Pb	23 32 03.8	-0.6
SALO				S	Sb	23 32 09.6	-0.3
SALO				AML	AML		
	comp=E,74μm,0.7s						
SALO				AML	AML		
	comp=N,136μm,1.3s						
SALO				AML	AML		
	comp=N,136μm,1.3s						
SALO				AML	AML		
	comp=E,68μm,0.2s						
SALO				AML	AML		
	comp=N,89μm,0.2s						
SALO				AML	AML		
	comp=E,70μm,0.2s						
SALO				AML	AML		
	comp=N,90μm,0.3s						
VOBA	**Vobarno**	**0.36**	**294**	P	Pb	23 32 04.0	-0.7
VOBA				S	Sb	23 32 09.3	-1.2
ZOVE	**Zovencedo**	**0.36**	**97**	P	Pg	23 32 03.8	+0.4
MAGA	**Magasa**	**0.37**	**319**	P	Pg	23 32 03.9	+0.5
MAGA				S	Sb	23 32 09.7	-1.1
MAGA				AML	AML		
	comp=E,331μm,0.3s						
MAGA				AML	AML		
	comp=N,364μm,1.2s						
MAGA				AML	AML		
	comp=N,345μm,0.4s						
MAGA				AML	AML		
	comp=E,331μm,0.3s						
DOSS	**Dosso del Somm**	**0.41**	**22**	⇓*e*Pg	Pg	23 32 04.6	+0.4
DOSS				*e*Sg	Sg	23 32 10.2	+0.5
DOSS	**Dosso del Somm**	**0.41**	**22**	P	Pg	23 32 04.6	+0.3
DOSS				AML	AML		
	comp=E,94μm,0.5s						
DOSS				AML	AML		
	comp=E,94μm,0.5s						
DOSS				AML	AML		
	comp=N,88μm,0.1s						
DOSS				AML	AML		
	comp=E,63μm,0.1s						
DOSS				AML	AML		
	comp=N,64μm,0.3s						
DOSS				AML	AML		
	comp=N,88μm,0.1s						
DOSS				AML	AML		
	comp=E,88μm,0.1s						
SBPO	**S.Benedetto Po**	**0.45**	**185**	P	Pb	23 32 06.0	-0.2
LUSI	**Trento, Gardas**	**0.46**	**357**	P	Pg	23 32 05.5	+0.3
LUSI				S	Sb	23 32 12.7	-0.8
LUSI				AML	AML		
	comp=E,43μm,1.5s						
LUSI				AML	AML		
	comp=N,81μm,1.3s						
LUSI				AML	AML		
	comp=N,77μm,0.2s						
LUSI				AML	AML		
	comp=E,42μm,0.1s						
GRDM	**Monte Maddalen**	**0.49**	**275**	*e*Pg	Pb	23 32 06.4	-0.6
TEOL	**Teolo**	**0.51**	**106**	‖*e*Pg	Pg	23 32 06.4	+0.3
TEOL				*e*Sg	Sg	23 32 13.5	+0.7
TEOL	**Teolo**	**0.51**	**106**	P	Pg	23 32 06.4	+0.4
TEOL				S	Sg	23 32 13.6	+0.8
TEOL				AML	AML		
	comp=N,59μm,0.9s						
TEOL				AML	AML		
	comp=N,59μm,0.9s						
TEOL				AML	AML		
	comp=E,87μm,0.8s						
TEOL				AML	AML		
	comp=E,80μm,0.3s						
TEOL				AML	AML		
	comp=N,49μm,0.2s						
RONC	**Roncone**	**0.54**	**333**	*e*Pg	Pg	23 32 07.0	+0.3
RONC	**Roncone**	**0.54**	**333**	P	Pg	23 32 07.1	+0.5
GAGG	**Gaggia**	**0.58**	**359**	P	Pg	23 32 07.9	+0.4
GAGG				AML	AML		
	comp=E,82μm,0.8s						
GAGG				AML	AML		
	comp=N,78μm,0.8s						
GAGG				AML	AML		
	comp=N,13μm,0.1s						
GAGG				AML	AML		
	comp=E,16μm,0.1s						
MABI	**Malga Bissina**	**0.64**	**330**	P	Pg	23 32 08.6	0.0
MABI				AML	AML		
	comp=E,17μm,0.1s						
MABI				AML	AML		
	comp=N,14μm,0.1s						
ZONE	**Zone**	**0.66**	**294**	P	Pg	23 32 09.1	+0.2
ZONE				AML	AML		
	comp=E,36μm,1.6s						
ZONE				AML	AML		
	comp=N,44μm,0.3s						
ZONE				AML	AML		
	comp=N,435μm,0.5s						
ZONE				AML	AML		
	comp=E,102μm,1.0s						
ZONE				AML	AML		
	comp=E,35μm,0.2s						
ZONE				AML	AML		
	comp=N,44μm,0.3s						
CTI	**Castel Tesino**	**0.72**	**41**	P	Pg	23 32 10.4	+0.2
CTI				AML	AML		
	comp=N,62μm,0.1s						
CTI				AML	AML		
	comp=E,76μm,1.0s						
CTI				AML	AML		
	comp=N,63μm,0.1s						
CTI				AML	AML		
	comp=N,63μm,0.1s						
CTI				AML	AML		
	comp=E,72μm,0.1s						
ZIAN	**Ziano**	**0.88**	**28**	*e*Pg	Pb	23 32 13.4	-0.3
VARN	**Col Varnada, M**	**0.93**	**58**	P	Pg	23 32 13.9	-0.2
VARN				AML	AML		
	comp=N,33μm,0.8s						
VARN				AML	AML		
	comp=E,45μm,1.0s						
VARN				AML	AML		
	comp=N,47μm,0.9s						
VARN				AML	AML		
	comp=N,22μm,0.1s						
VARN				AML	AML		
	comp=E,41μm,0.2s						
VARN				AML	AML		
	comp=E,39μm,0.2s						
KOSI	**Kohlern**	**1.00**	**16**	P	Pb	23 32 16.1	+0.3
KOSI				AML	AML		
	comp=N,25μm,0.1s						
KOSI				AML	AML		
	comp=E,18μm,0.4s						
BRMO	**Bormio**	**1.06**	**337**	P	Pn	23 32 17.3	-0.1
BRMO				AML	AML		
	comp=E,7μm,0.2s						
BRMO				AML	AML		
	comp=N,7μm,0.2s						
MOSI	**Grossmontoni**	**1.15**	**345**	P	Pn	23 32 18.6	-0.1
CIMO	**Cimolais**	**1.31**	**51**	P	Pn	23 32 20.7	0.0
FETA	**Feichten**	**1.53**	**354**	*e*Pg	Pg	23 32 25.4	-0.1
	comp=N,0.1nm,0.1s						
FETA				*e*Sg	Sg	23 32 46.5	+1.1
	comp=N,0.1nm,0.1s						
ABTA	**Abfaltersbach**	**1.64**	**40**	*e*Pg	Pg	23 32 27.4	-0.3
	comp=N,0.1nm,0.1s						
ABTA				*e*Sg	Sg	23 32 49.4	+0.4
	comp=N,0.4nm,0.1s						
SQTA	**Sankt Quirin**	**1.73**	**5**	*e*Pg	Pg	23 32 29.3	0.0
	comp=N,0.1nm,0.1s						
SQTA				*e*Sg	Sb	23 32 50.8	+0.8
	comp=N,1.1nm,0.2s						
WTTA	**Wattenberg**	**1.82**	**14**	*e*Pg	Pb	23 32 30.5	+0.7
	comp=N,0.1nm,0.1s						
WTTA				*e*Sg	Sb	23 32 53.5	+0.7
	comp=N,1.0nm,0.2s						
MOTA	**Moosalm**	**1.85**	**3**	*e*Pg	Pg	23 32 31.6	0.0
	comp=N,0.2nm,0.1s						
MOTA				*e*Sg	Sg	23 32 55.1	-0.5
	comp=N,0.5nm,0.2s						
WATA	**Walderalm**	**1.88**	**13**	*e*Pg	Pb	23 32 31.5	+0.7
	comp=N,0.3nm,0.1s						
WATA				*e*Sg	Sg	23 32 56.2	-0.5
	comp=N,1.1nm,0.2s						

*DDA **12** 23:58:16.7±0.0, 38°.06N×25°.82E, h6km±5km, ML2.4*
*ATH **12** 23:58:17.8, 38°.01N×25°.85E, h30km±6km, ML2.6/5, Error ellipse: s-maj=6.7km s-min=1.3km az=78.0*
*THE **12** 23:58:18.4, 38°.00N×25°.91E, h17km±2km, ML2.6/4, Error ellipse: s-maj=2.0km s-min=1.1km az=23.0*
*ISK **12** 23:58:18.1, 38°.03N×25°.96E, h21km, ML2.6/7*
ISC 12 23:58:18.1±0.9, 38°.00N±0°.02×25°.90E±0.02, h22km±7km, n39, σ0s60/61, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.40**	**18**	PG	**Pb**	**23 58 26.3**	**-0.4**
CHOS	**Chios island**	**0.40**	**18**	P	**Pb**	**23 58 26.2**	**-0.4**
CHOS				S	**Sb**	**23 58 33.0**	**+0.6**
	935nm,0.2s						
CHOS	**Chios island**	**0.40**	**18**	P	**Pb**	**23 58 26.3**	**-0.4**
CHOS				S	**Sb**	**23 58 33.1**	**+0.7**
CHOS				AML	AML	23 58 34.8	
	comp=N,1359μm,0.2s						
CHOS				AML	AML	23 58 34.9	
	comp=E,2366μm,0.2s						
ZEYE	**Izmir, Urla-Ze**	**0.53**	**63**	P	**Pb**	**23 58 27.7**	**-1.1**
ZEYE				S	**Sb**	**23 58 35.8**	**-0.2**
ZEYE				*i* AML	AML	23 58 39.0	
	comp=E,294nm,0.6s						
ZEYE				*i* AML	AML	23 58 40.0	
	comp=E,197nm,0.3s						
URLA	**Izmir**	**0.66**	**57**	PG	**Pb**	**23 58 30.3**	**-0.6**
TNSA	**Tinos**	**0.74**	**232**	P	**Pb**	**23 58 32.0**	**-0.3**
TNSA				S	**Sb**	**23 58 41.9**	**-0.1**
SMG	**Samos**	**0.80**	**111**	P	**Pb**	**23 58 33.2**	**-0.1**
SMG				S	**Sb**	**23 58 44.0**	**+0.3**
	comp=E,395nm,0.3s						
SMG	**Samos**	**0.80**	**111**	P	**Pb**	**23 58 33.3**	**-0.1**
SMG				S	**Sb**	**23 58 44.4**	**+0.7**
SMG				AML	AML	23 58 45.8	
	comp=N,808μm,0.3s						
SMG				AML	AML	23 58 45.9	
	comp=E,772μm,0.5s						
FOCM	**Foa**	**0.97**	**42**	PG	**Pn**	**23 58 36.1**	**-0.2**
FOCM				SG	**Sn**	**23 58 50.1**	**+0.7**
APE	**Apeiranthos**	**0.98**	**198**	P	**Pb**	**23 58 36.0**	**-0.4**
APE	**Apeiranthos**	**0.98**	**198**	P	**Pb**	**23 58 36.0**	**-0.4**
APE				S	**Sb**	**23 58 48.2**	**-0.6**
APE				AML	AML	23 58 51.2	
	comp=E,383μm,0.4s						
APE				AML	AML	23 58 51.9	
	comp=N,281μm,0.2s						
BLCB	**Balcova**	**0.98**	**67**	PG	**Pn**	**23 58 36.2**	**-0.3**
BLCB				SG	**Sn**	**23 58 48.9**	**-0.8**
BLCB	**Balcova**	**0.98**	**67**	P	**Pn**	**23 58 36.3**	**-0.3**
BLCB				S	**Sn**	**23 58 49.0**	**-0.8**
GCAM	**G?zelcaml?**	**1.10**	**106**	PG	**Pb**	**23 58 38.4**	**0.0**
GCAM				SG	**Sn**	**23 58 52.7**	**0.0**
GCAM	**G?zelcaml?**	**1.10**	**106**	P	**Pn**	**23 58 38.1**	**-0.1**
GCAM				S	**Sb**	**23 58 52.0**	**-0.3**
DDIM	**Aydin, Didim**	**1.20**	**117**	P	**Pb**	**23 58 41.8**	**+1.8**
DDIM				S	**Sb**	**23 58 53.5**	**-1.6**
DDIM				*i* AML	AML	23 59 01.0	
	comp=N,45nm,0.5s						
SIGR	**SIGRI**	**1.21**	**358**	PN	**Pb**	**23 58 39.9**	**-0.4**
SIGR				SN	**Sn**	**23 58 55.9**	**+0.5**
SIGR	**SIGRI**	**1.21**	**358**	P	**Pb**	**23 58 39.7**	**-0.5**
SIGR				S	**Sn**	**23 58 55.5**	**+0.1**
	comp=N,210nm,0.2s						
SIGR	**SIGRI**	**1.21**	**358**	P	**Pb**	**23 58 39.8**	**-0.5**
PRK	**Paraskevi**	**1.28**	**13**	P	**Pb**	**23 58 41.6**	**+0.2**
PRK				S	**Sb**	**23 58 58.2**	**+0.8**
	comp=N,295nm,0.3s						
PRK	**Paraskevi**	**1.28**	**13**	P	**Pb**	**23 58 41.6**	**+0.2**
PRK				AML	AML	23 59 03.4	
	comp=N,663μm,0.2s						
PRK				AML	AML	23 59 03.5	
	comp=E,507μm,0.3s						
DKL	**Dikili**	**1.33**	**36**	PN	**Pb**	**23 58 41.5**	**-0.8**
ZEDA	**zmir-Bergama**	**1.33**	**44**	P	**Pb**	**23 58 41.8**	**-0.7**
ZEDA				S	**Sb**	**23 59 00.0**	**+0.9**
ZEDA				*i* AML	AML	23 59 04.0	
	comp=E,73nm,0.6s						
ZEDA				*i* AML	AML	23 59 05.0	
	comp=E,59nm,0.4s						
AYVA	**Ayvalik**	**1.44**	**25**	P	**Pb**	**23 58 44.2**	**-0.1**
AYVA				S	**Sb**	**23 59 03.4**	**+1.1**
AYVA				*i* AML	AML	23 59 07.0	
	comp=E,60nm,0.6s						
AYVA				*i* AML	AML	23 59 09.0	
	comp=E,85nm,0.3s						
BODT	**Bodrum**	**1.46**	**129**	P	**Pn**	**23 58 43.6**	**+0.4**
BODT				S	**Sn**	**23 59 02.2**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.51**	**7**	P	**Pn**	**23 58 43.3**	**-0.5**
KOCA				S	**Sb**	**23 59 03.7**	**-0.5**
KOCA				*i* AML	AML	23 59 09.0	
	comp=E,47nm,0.5s						
KOCA				*i* AML	AML	23 59 12.0	
	comp=E,65nm,0.5s						
BDRM	**Kayabasi**	**1.54**	**127**	P	**Pb**	**23 58 46.1**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.55**	**295**	P	**Pn**	**23 58 44.4**	**+0.1**
DION	**Dionisos Attik**	**1.55**	**273**	P	**Pn**	**23 58 44.5**	**0.0**
DION				S	**Sn**	**23 59 04.0**	**+0.1**
DION	**Dionisos Attik**	**1.55**	**273**	P	**Pn**	**23 58 44.6**	**+0.2**
DION				AML	AML	23 59 11.4	
	comp=N,254μm,0.4s						
DION				AML	AML	23 59 11.6	
	comp=E,342μm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.58**	**91**	PN	**Pn**	**23 58 45.1**	**+0.2**
AYDN	**Tasoluk**	**1.61**	**102**	P	**Pn**	**23 58 45.8**	**+0.6**
PTL	**Penteli**	**1.61**	**272**	P	**Pn**	**23 58 45.4**	**+0.2**
ATHU	**Athens Univers**	**1.67**	**269**	P	**Pn**	**23 58 46.2**	**+0.1**
VLY	**Voula,Athens**	**1.67**	**266**	P	**Pn**	**23 58 46.3**	**+0.2**
BUHA	**Balikesir, Bur**	**1.76**	**31**	P	**Pn**	**23 58 47.3**	**0.0**
BUHA				*i* AML	AML	23 59 19.0	
	comp=E,44nm,0.7s						
BAYC	**CANAKKALE_Bayr**	**1.81**	**16**	P	**Pn**	**23 58 48.0**	**+0.1**
BAYC				S	**Sn**	**23 59 10.3**	**+0.1**
BAYC				*i* AML	AML	23 59 23.0	
	comp=E,31nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.98**	**46**	P	**Pb**	**23 58 54.1**	**+0.6**
MANT	**Manisa**	**2.15**	**76**	P	**Pb**	**23 58 55.4**	**-1.1**

*KRNET **13** 00:02:15.5±0.1, 40°.83N×71°.07E, h14km, mb2.6*
*ISU **13** 00:02:17, 40°.77N×71°.08E, h7km*
ISC 13 00:02:14.8±1.3, 40°.84N±0°.03×71°.07E±0°.06, h8km±12km, n8, σ0s82/15, 12C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMI	**Chimion**	**0.66**	**149**	P	**Pn**	**00 02 30.4**	**-0.2**
TRKS	**Terek-Say**	**0.69**	**4**	⇑*i*P	**Pg**	**00 02 27.7**	**-0.5**
	baz=7.0						
TRKS				⇑*i*S	**Sg**	**00 02 36.5**	**-0.8**
	baz=7.0						
FRG	**Fergana**	**0.71**	**130**	P	**Pn**	**00 02 30.7**	**-0.5**
FRG				S	**Sn**	**00 02 40.9**	**-1.5**
ARK	**Arkit**	**1.17**	**35**	⇑*i*P	**Pb**	**00 02 37.9**	**+0.5**
	baz=35						
ARK				⇑*i*S	**Sn**	**00 02 54.2**	**+0.3**
	baz=35						
OHH	**Osh**	**1.34**	**103**	⇑*i*P	**Pb**	**00 02 40.6**	**+0.4**
	baz=3.0						
OHH				⇑*i*S	**Sg**	**00 02 59.0**	**+1.1**
	baz=3.0						
GAR	**Garm**	**1.93**	**198**	⇑*i*P	**Pb**	**00 02 50.9**	**+0.7**
	baz=98						
GAR				⇑*i*S	**Sg**	**00 03 16.8**	**+0.1**
	baz=98						
KK31	**Karatay Array**	**2.30**	**350**	⇑Pn	**Pb**	**00 02 57.6**	**+0.9**
	0.4nm,0.3s,baz=168,slow=17,SNR=17						
KK31				⇑Sn	**Sg**	**00 03 29.1**	**+0.3**
	3.7nm,0.3s,baz=164,slow=26,SNR=19						
KKAR	**Karatay Array**	**2.30**	**350**	⇑*e*P	**Pb**	**00 02 56.4**	**-0.2**
	baz=50						
KKAR				⇑*e*S	**Sb**	**00 03 26.1**	**+0.8**
	baz=50						

*IDC **13** 00:10:24.8±2.1, 22°.79S×179°.69W, h537km±21km, mb3.5/8, mbtmp4.4/9, Error ellipse: s-maj=31.9km s-min=22.1km az=156.0*
*NEIC **13** 00:10:25.2±1.2, 22°.7S±0°.2×179°.51W±0°.08, h559km±12km, mb4.4/20, Error ellipse: s-maj=27.2km s-min=9.9km az=175.0*
ISC 13 00:10:25.3±0.7, 22°.7S±0°.1×179°.6W±0°.1, h550km, n34, σ1s26/35, mb4.2/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.45**	**336**	P	**P**	**00 11 58.9**	**-0.3**
	16nm,0.5s,baz=148,slow=11,SNR=49						
NIUE	**Niue**	**9.73**	**70**	P	**P**	**00 12 39.9**	**-0.6**
DZM	**Mont Dzumac**	**12.94**	**270**	P	**P**	**00 13 17.1**	**+3.4**
	2.8nm,0.6s,baz=78,slow=16,SNR=2.7						
DZM	**Mont Dzumac**	**12.94**	**270**	P	**P**	**00 13 16.3**	**+2.6**
BKZ	**Black Stump Fm**	**16.72**	**191**	P	**P**	**00 13 52.4**	**+1.1**
BKZ				IAmb	IAmb	00 14 21.3	
	comp=Z,24nm,1.5s						
THZ	**Tophouse**	**19.99**	**197**	P	**P**	**00 14 20.4**	**-0.7**
ARMA	**Armidale**	**26.81**	**247**	P	**P**	**00 15 21.8**	**-0.2**
ARMA				IAmb	IAmb	00 15 37.6	
	comp=Z,17nm,1.2s						
EIDS	**Eidsvold**	**26.89**	**258**	P	**P**	**00 15 22.1**	**-0.7**
EIDS				IAmb	IAmb	00 15 48.5	
	comp=Z,14nm,1.4s						
CAN	**Canberra**	**30.07**	**238**	P	**P**	**00 15 50.2**	**-0.1**
CTA	**Charters Tower**	**31.88**	**268**	P	**P**	**00 16 05.8**	**-0.1**
	comp=Z,7.7nm,0.5s,baz=89,slow=8.9,SNR=14						
	comp=Z,7.7nm,0.5s						
CTAO	**Charters Tower**	**31.88**	**268**	P	**P**	**00 16 05.6**	**-0.4**
CTAO				IAmb	IAmb	00 16 06.3	
	comp=Z,9.2nm,0.5s						
TOO	**Toolangi**	**33.41**	**236**	P	**P**	**00 16 18.3**	**-0.5**
STKA	**Stephens Creek**	**35.52**	**247**	P	**P**	**00 16 36.3**	**-0.2**
	comp=Z,5.4nm,0.5s,baz=93,slow=9.5,SNR=18						
	comp=Z,5.4nm,0.5s						
STKA	**Stephens Creek**	**35.52**	**247**	P	**P**	**00 16 36.1**	**-0.4**
BBOO	**Buckleboo**	**40.26**	**246**	P	**P**	**00 17 13.8**	**-1.2**

BBOO			IAmb	IAmb	00 17 16.6	
	comp=Z,18nm,1.4s					
AS31	**Alice Springs**	**42.61 259**	P	**P**	**00 17 32.6**	**-1.1**
ASAR	**Alice Springs**	**42.62 259**	P	**P**	**00 17 33.1**	**-0.7**
	comp=Z,6.1nm,0.7s,baz=93,slow=8.0,SNR=59					
	comp=Z,6.1nm,0.7s					
ASAR	**Alice Springs**	**42.62 259**	P	**P**	**00 17 32.4**	**-1.3**
WR0	**Warramunga Arr**	**42.69 265**	P	**P**	**00 17 32.8**	**-1.5**
WR0			IAmb	IAmb	00 17 51.5	
	comp=Z,13nm,1.4s					
WB0	**Warramunga Arr**	**42.87 265**	P	**P**	**00 17 34.3**	**-1.4**
WB0			IAmb	IAmb	00 17 35.2	
	comp=Z,5.7nm,0.7s					
WRA	**Warramunga Arr**	**42.88 265**	P	**P**	**00 17 34.6**	**-1.3**
	comp=Z,5.1nm,0.7s,baz=102,slow=8.5,SNR=27					
WRA			ScP	**ScP**	**00 22 16.3**	**+3.1**
	comp=Z,0.6nm,0.7s,baz=98,slow=3.5,SNR=3.0					
	comp=Z,5.1nm,0.7s					
WRA	**Warramunga Arr**	**42.88 265**	P	**P**	**00 17 34.6**	**-1.3**
FORT	**Forrest**	**47.08 249**	P	**P**	**00 18 06.8**	**-1.1**
KNRA	**Kununurra**	**49.09 269**	P	**P**	**00 18 22.3**	**-0.7**
KNRA			IAmb	IAmb	00 18 38.3	
	comp=Z,23nm,1.2s					
SIJI	**Sorong**	**52.44 287**	P	**P**	**00 18 47.0**	**-0.5**
	comp=Z,4.8nm,0.4s,baz=32,slow=20,SNR=3.9					
	comp=Z,4.8nm,0.4s					
PSA00	**Pilbara Seismi**	**55.76 259**	P	**P**	**00 19 09.8**	**-0.9**
NWAO	**Narrogin (SRO)**	**56.07 245**	P	**P**	**00 19 11.8**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=146,slow=18,SNR=1.8					
	comp=Z,4.5nm,0.6s					
NWAO	**Narrogin (SRO)**	**56.07 245**	P	**P**	**00 19 12.0**	**-0.7**
NWAO			IAmb	IAmb	00 19 13.6	
	comp=Z,32nm,1.3s					
MORW	**Morawa**	**57.64 249**	P	**P**	**00 19 22.6**	**-0.9**
MORW			IAmb	IAmb	00 19 24.8	
	comp=Z,15nm,1.4s					
GIRL	**Giralia**	**60.56 256**	P	**P**	**00 19 43.1**	**0.0**
QSPA	**South Pole Qui**	**67.34 180**	P	**P**	**00 20 26.0**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=115,slow=7.3,SNR=1.9					
	comp=Z,0.7nm,0.4s					
QSPA	**South Pole Qui**	**67.34 180**	P	**P**	**00 20 26.6**	**+1.0**
TXAR	**Lajitas Array**	**89.49 58**	P	**P**	**00 22 25.4**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=212,slow=4.4,SNR=4.0					
	comp=Z,0.4nm,0.8s					
BRTR	**Keskin Array B**	**147.17 309**	PKPbc	**PKPbc**	**00 29 07.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=72,slow=3.0,SNR=2.5					

*UCR **13** 00:17:07.7±1.1, 5°.78N×82°.89W, h5km, MW3.9*
ISC 13 00:17:07.7±1.7, 5°.6N±0°.1×82°.8W±0°.1, h35km, n18, σ1§24/21, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDM	**Cerro de Muert**	**4.09**	**346**	*eP*	**Pn**	**00 18 07.2**	**-0.9**
CDM				*eS*	**Sn**	**00 18 56.2**	**+1.1**
MRVA	**Moravia de Chi**	**4.29**	**351**	*eP*	**Pn**	**00 18 10.4**	**-0.2**
MRVA				*eS*	**Sn**	**00 19 00.4**	**+0.9**
OCM	**Ochomogo**	**4.46**	**345**	*eP*	**Pn**	**00 18 13.1**	**0.0**
JACO	**JACO, Garabito**	**4.49**	**335**	*eP*	**Pn**	**00 18 12.5**	**-0.7**
JACO				*eS*	**Sn**	**00 19 03.2**	**-1.0**
HAYA	**Volcan Irazu**	**4.52**	**346**	*eP*	**Pn**	**00 18 14.6**	**+0.6**
INDI	**Punta indio, G**	**5.06**	**328**	*eP*	**Pn**	**00 18 21.0**	**-0.2**
POPE	**POPE, Guanacas**	**5.11**	**331**	*eP*	**Pn**	**00 18 21.6**	**-0.2**
JTS	**Las Juntas de**	**5.17**	**335**	*eP*	**Pn**	**00 18 23.0**	**+0.2**
PTAC	**Punta Ardita,**	**5.17**	**72**	*eP*	**Pn**	**00 18 22.7**	**0.0**
ORTG	**Ortega, Santa**	**5.46**	**331**	*eP*	**Pn**	**00 18 26.8**	**+0.1**
CUI	**Cuipilapa**	**5.59**	**335**	*eP*	**Pn**	**00 18 29.4**	**+0.9**
PLMC	**San Jos del P**	**6.49**	**95**	*eP*	**Pn**	**00 18 40.9**	**0.0**
BBAC	**Balboa, Cauca**	**6.53**	**122**	*eP*	**Pn**	**00 18 41.5**	**-0.1**
YOTC	**Yotoco, Valle**	**6.59**	**103**	*eP*	**Pn**	**00 18 42.0**	**-0.2**
POPC	**Popayan, Colom**	**6.78**	**116**	*eP*	**Pn**	**00 18 44.2**	**-0.8**
GCUF	**Volcan Galeras**	**6.92**	**128**	*eP*	**Pn**	**00 18 48.6**	**+1.5**
GUY2C	**Guyana, Caldas**	**7.38**	**92**	*eP*	**Pn**	**00 18 55.7**	**+2.2**
ANIL	**Santa Ana**	**7.41**	**98**	*eP*	**Pn**	**00 18 50.0**	**-3.7**

*JMA **13** 00:39:57.0±0.1, 25°.N±1°.×122°.4E±0°.5, h13km, MV2.4/7, TAIWAN REGION*
*TAP **13** 00:39:57.1, 24°.82N×122°.29E, h15km, ML2.8, C*
ISC 13 00:39:55.3±1.1, 24°.82N±0°.04×122°.38E±0°.03, h17km±9km, n46, σ0§63/72, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.40**	**299**	P	**Pb**	**00 40 04.3**	**+0.4**
	baz=305						
TWB1				*eS*	**Sb**	**00 40 09.2**	**-0.6**
	baz=305						
TWC	**Suao**	**0.52**	**247**	*eP*	**Pb**	**00 40 06.1**	**+0.1**
	baz=248						
TWC				*eS*	**Sg**	**00 40 12.2**	**-0.5**
	baz=248						
TIPB	**Shuangxi**	**0.52**	**287**	*eP*	**Pb**	**00 40 06.4**	**+0.3**
	baz=290						
TIPB				*eS*	**Sg**	**00 40 12.6**	**-0.3**
	baz=290						
SXI1	**Grass Mountain**	**0.53**	**302**	P	**Pn**	**00 40 07.2**	**-1.0**
	baz=306						
SXI1				S	**Sb**	**00 40 13.8**	**+0.2**
	baz=306						
ILA	**Ilan**	**0.57**	**265**	*eP*	**Pb**	**00 40 07.5**	**+0.7**
	baz=264						
NWF	**Wu-fen Shan**	**0.60**	**295**	*eP*	**Pn**	**00 40 08.6**	**-0.5**
	baz=298						
NWF				*eS*	**Sn**	**00 40 17.1**	**-1.3**
	baz=298						
JYNG	**Yonagunijimaku**	**0.63**	**125**	P	**Pn**	**00 40 09.0**	**-0.4**
JYNG				*eS*	**Sn**	**00 40 18.0**	**-1.0**
TWE	**Neicheng**	**0.65**	**262**	*eP*	**Pb**	**00 40 08.7**	**+0.5**
	baz=260						
TWE				*eS*	**Sb**	**00 40 18.0**	**+1.1**
	baz=260						
EWUT	**Wuta**	**0.66**	**236**	*eP*	**Pg**	**00 40 07.5**	**-0.7**
	baz=231						
EWUT				*eS*	**Sg**	**00 40 15.2**	**-1.7**
	baz=231						
YOJ	**Yonaguni jima**	**0.68**	**121**	*eP*	**Pn**	**00 40 09.7**	**-0.4**
	baz=118						
YOJ	**Yonaguni jima**	**0.68**	**121**	P	**Pn**	**00 40 09.7**	**-0.4**
YOJ				*eS*	**Sb**	**00 40 18.2**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.72**	**266**	*eP*	**Pn**	**00 40 10.4**	**-0.3**
	baz=265						
FUSB				*eS*	**Sb**	**00 40 19.6**	**+0.7**
	baz=265						
TWA	**Mucha**	**0.74**	**283**	*eP*	**Pn**	**00 40 10.6**	**-0.4**
	baz=284						
ENTT	**Nioudou**	**0.76**	**257**	*eP*	**Pb**	**00 40 10.0**	**0.0**
	baz=255						
ENTT				*eS*	**Sb**	**00 40 19.4**	**-0.7**
	baz=255						
YM01	**YM01**	**0.80**	**294**	P	**Pn**	**00 40 11.4**	**-0.4**
	baz=296						
YM01				*eS*	**Sn**	**00 40 22.8**	**-0.6**
	baz=296						
NDT	**Datong Townshi**	**0.81**	**255**	*eP*	**Pb**	**00 40 10.2**	**-0.7**
	baz=259						
NDT				*eS*	**Sg**	**00 40 22.2**	**+0.2**
	baz=259						
LATG	**Datong**	**0.82**	**250**	*eP*	**Pg**	**00 40 11.6**	**+0.2**
	baz=248						
LATG				*eS*	**Sb**	**00 40 22.1**	**+0.1**
	baz=248						
TWY	**Chenhua**	**0.84**	**303**	*eP*	**Pn**	**00 40 13.5**	**+1.2**
	baz=305						
TWY				*eS*	**Sn**	**00 40 24.2**	**0.0**
	baz=305						
YHNB	**Yeheng**	**0.92**	**261**	*eP*	**Pn**	**00 40 13.7**	**+0.2**
	baz=255						
YHNB				*eS*	**Sg**	**00 40 25.7**	**+0.3**
	baz=255						
NSK	**Sanguang**	**0.94**	**262**	*eP*	**Pb**	**00 40 13.1**	**0.0**
	baz=271						
ETL	**Fush Village**	**0.95**	**227**	*eP*	**Pn**	**00 40 13.8**	**-0.1**
	baz=223						
NACB	**Ninganchiao**	**0.96**	**228**	*eP*	**Pb**	**00 40 13.8**	**+0.4**
	baz=225						
NACB				*eS*	**Sb**	**00 40 25.4**	**-0.3**
	baz=225						
NNSB	**Datong**	**0.98**	**247**	*eP*	**Pb**	**00 40 14.1**	**+0.2**
	baz=235						
NNSB				*eS*	**Sn**	**00 40 28.4**	**+0.4**
	baz=235						
NNS	**Nan Shan**	**0.99**	**248**	*eP*	**Pb**	**00 40 14.0**	**0.0**
	baz=236						
NNS				*eS*	**Sb**	**00 40 26.2**	**-0.6**
	baz=236						
ETLH	**Xiulin Townshi**	**1.01**	**234**	*eP*	**Pb**	**00 40 14.5**	**+0.1**
	baz=231						
ETLH				*eS*	**Sb**	**00 40 27.4**	**-0.2**
	baz=231						
TWD	**Chiawan**	**1.02**	**224**	*eP*	**Pg**	**00 40 16.6**	**+1.5**
	baz=220						
NFF	**Wufeng Townshi**	**1.16**	**261**	*eP*	**Pb**	**00 40 16.8**	**-0.1**
	baz=261						
NFF				*eS*	**Sb**	**00 40 31.9**	**+0.3**
	baz=261						
FUSS	**Fushou**	**1.18**	**242**	*eP*	**Pg**	**00 40 18.4**	**+0.3**
	baz=240						
FUSS				*eS*	**Sb**	**00 40 33.0**	**+0.7**
	baz=240						
WHF	**Hehuan Shan**	**1.21**	**237**	P	**Pg**	**00 40 18.9**	**0.0**
	baz=235						
WHF				*eS*	**Sb**	**00 40 34.1**	**+0.6**
	baz=235						
TDCB	**Techi**	**1.24**	**244**	*eP*	**Pg**	**00 40 19.9**	**+0.5**
	baz=243						
LIOB	**Emei**	**1.25**	**263**	*eP*	**Pg**	**00 40 20.1**	**+0.7**
	baz=281						
IRIF	**Iriomote-Funau**	**1.32**	**111**	P	**Pg**	**00 40 21.7**	**+0.9**
CHGB	**Renai**	**1.33**	**236**	*eP*	**Pg**	**00 40 20.6**	**-0.3**
	baz=234						
CHGB				*eS*	**Sb**	**00 40 37.6**	**+0.9**
	baz=234						
OWD	**Renai**	**1.39**	**232**	*eP*	**Pg**	**00 40 22.3**	**+0.1**
	baz=231						
WHP	**Taichung City**	**1.41**	**248**	*eP*	**Pb**	**00 40 21.6**	**+0.4**
	baz=248						
WUSB	**Renai**	**1.41**	**235**	*eP*	**Pg**	**00 40 22.4**	**-0.1**
	baz=234						
WUSB				*eS*	**Sn**	**00 40 38.9**	**+0.4**
	baz=234						
HATJ	**Hateruma jima**	**1.50**	**120**	*eS*	**Sb**	**00 40 41.1**	**-0.4**
WCS	**Beigang Elemen**	**1.53**	**241**	*eP*	**Pg**	**00 40 25.3**	**+0.5**
	baz=227						
VWDT	**VWDT**	**1.54**	**227**	*eP*	**Pg**	**00 40 25.0**	**0.0**
	baz=231						
VWDT				*eS*	**Sb**	**00 40 44.1**	**+1.4**
	baz=231						
HGSD	**Ruisui**	**1.58**	**214**	*eP*	**Pg**	**00 40 25.6**	**-0.1**
	baz=196						
SMLT	**Sun Moon Lake**	**1.64**	**236**	*eP*	**Pg**	**00 40 26.4**	**-0.4**
	baz=222						
SSLB	**Suanglung**	**1.65**	**232**	*eP*	**Pb**	**00 40 25.7**	**+0.5**
	baz=232						
TYC	**Yuchr**	**1.66**	**237**	*eP*	**Pb**	**00 40 25.3**	**0.0**
	baz=237						
YULB	**Yu-li**	**1.73**	**215**	*eP*	**Pb**	**00 40 26.0**	**-0.5**
	baz=212						
WHYT	**Xinyi Township**	**1.78**	**232**	*eP*	**Pb**	**00 40 28.7**	**+1.2**
	baz=215						
YUS	**Yu-Shan**	**1.85**	**225**	*eP*	**Pb**	**00 40 29.6**	**+0.6**
	baz=223						

*IDC **13** 00:44:51.6±1.0, 20°.25N×147°.36E, h0km, mb3.8/7, mbtmp3.9/9, ML4.8/1, MS2.7/1, Error ellipse: s-maj=33.6km s-min=22.2km az=74.0*
ISC 13 00:44:52.9±1.0, 20°.3N±0°.2×147°.3E±0°.2, h10km, n14, σ1§16/10, mb3.7/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**18.05**	**336**	P	**Pn**	**00 49 02.4**	**-1.4**
	0.8nm,0.4s,baz=159,slow=10,SNR=1.7						
H11N1	**WAKE ISLAND Hy**	**18.40**	**88**	T	T	01 07 49.3	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**18.40**	**88**	T	T	01 07 47.7	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**18.41**	**88**	T	T	01 07 48.8	
	baz=274						
JOW	**Kunigami**	**18.63**	**294**	P	**Pn**	**00 49 10.3**	**-0.7**
	5.4nm,0.3s,baz=135,slow=26,SNR=2.6						
	20nm,0.4s						
DAV	**Davao City (W)**	**24.84**	**241**	LR	LR	01 02 02.6	
	comp=Z,17nm,18.1s,baz=344,slow=42						
WRA	**Warramunga Arr**	**41.96**	**198**	P	**P**	**00 52 43.6**	**-0.6**
	0.2nm,0.3s,baz=32,slow=8.9,SNR=5.6						
	0.2nm,0.3s						
SONM	**Songino Array**	**42.90**	**320**	P	**P**	**00 52 51.6**	**-0.2**
	0.5nm,0.4s,baz=131,slow=6.2,SNR=4.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**45.61**	**197**	P	**P**	**00 53 13.7**	**+0.2**
	0.2nm,0.4s,baz=31,slow=11,SNR=2.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**57.71**	**322**	P	**P**	**00 54 45.2**	**+1.6**
	1.8nm,0.6s,baz=105,slow=6.8,SNR=9.2						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**58.49**	**313**	P	**P**	**00 54 50.9**	**+1.6**
	0.8nm,0.8s,baz=88,slow=8.6,SNR=5.7						
	0.8nm,0.8s						
NVAR	**Mina Array Bea**	**80.95**	**52**	P	**P**	**00 57 08.4**	**+0.3**
	0.6nm,0.7s,baz=258,slow=8.4,SNR=5.9						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**86.08**	**336**	P	**P**	**00 57 33.8**	**+0.1**
	2.4nm,1.1s,baz=47,slow=6.1,SNR=2.0						
	2.4nm,1.1s						
LPAZ	**La Paz**	**146.14**	**89**	PKPbc	**PKPab**	**01 04 34.5**	**-1.1**
	1.7nm,1.0s,baz=270,slow=6.1,SNR=3.5						

*IDC **13** 00:45:53.0±3.4, 30°.41N×141°.20E, h0km, mb3.3/2, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=143.1km s-min=26.0km az=70.0*
*JMA **13** 00:45:56.4±0.6, 31°.N±3°.×14°.3E±°., h95km, MV3.4/15, FAR E OFF IZU ISLANDS*
ISC 13 00:45:52.9±2.0, 30°.74N±0°.09×142°.4E±0°.4, h35km, n10, σ2§07/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.64**	**183**	Pn	**Pn**	**00 46 47.9**	**+1.1**
	2.9nm,0.3s,baz=266,slow=23,SNR=1.1						
JCJ				Sn	**Sn**	**00 47 24.3**	**-4.1**
	3.5nm,0.3s,baz=316,slow=20,SNR=2.1						
	30nm,0.6s						
BSO1	**Boso 1**	**4.08**	**344**	*eP*	**Pn**	**00 46 52.6**	**+0.3**
BSO1				*eS*	**Sn**	**00 47 35.7**	**-2.8**
BSO4	**Boso 4**	**4.57**	**338**	*eP*	**Pn**	**00 47 00.2**	**+0.7**
JOD2	**Odawara 2**	**5.29**	**329**	P	**Pn**	**00 47 11.5**	**+2.0**
JHU	**Hanno**	**5.72**	**334**	*eP*	**Pn**	**00 47 15.7**	**+0.4**
JHU				*eS*	**Sn**	**00 48 16.8**	**-2.9**
JRY	**Ryogami san**	**6.01**	**332**	P	**Pn**	**00 47 20.3**	**+0.9**
JAG	**Ashikaga**	**6.17**	**337**	P	**Pn**	**00 47 21.5**	**0.0**
MJAR	**Matsushiro Arr**	**6.75**	**330**	Pn	**Pn**	**00 47 30.1**	**+0.6**
	0.2nm,0.3s,baz=160,slow=11,SNR=5.9						
	1.7nm,0.4s						
MKAR	**Makanchi Array**	**48.35**	**307**	P	**P**	**00 54 32.4**	**+1.2**
	0.2nm,0.6s,baz=81,slow=8.4,SNR=2.4						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**50.98**	**190**	P	**P**	**00 54 52.4**	**+1.1**
	0.2nm,0.3s,baz=5.2,slow=7.5,SNR=4.6						
	0.2nm,0.3s						

*IDC **13** 00:48:07.9±1.2, 31°.98N×94°.78E, h0km, mb3.6/5, mbtmp3.5/6, ML2.6/1, MS2.7/1, Error ellipse: s-maj=80.6km s-min=23.5km az=56.0*
ISC 13 00:48:09.5±1.2, 32°.0N±0°.3×94°.8E±0°.4, h10km, n7, σ0§92/6, mb3.8/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.60**	**331**	P	**Pn**	**00 52 13.5**	**-1.3**
	baz=140,slow=11,SNR=2.3						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**23.05**	**345**	P	**P**	**00 53 15.6**	**+0.8**
	0.2nm,0.3s,baz=153,slow=9.7,SNR=1.4						
	0.2nm,0.3s						
OBN	**Obninsk**	**46.45**	**318**	LR	LR	01 18 04.4	
	comp=Z,9.2nm,20.4s,baz=174,slow=39						
FINES	**FINESS Array B**	**52.34**	**326**	P	**P**	**00 57 21.5**	**+0.3**
	1.3nm,0.8s,baz=94,slow=11,SNR=1.8						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**64.07**	**138**	P	**P**	**00 58 43.6**	**-0.2**
	0.6nm,1.0s,baz=326,slow=8.3,SNR=2.5						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**66.82**	**141**	P	**P**	**00 59 01.3**	**-0.2**
	0.5nm,0.5s,baz=320,slow=6.2,SNR=3.8						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**85.72**	**283**	P	**P**	**01 00 49.5**	**+0.2**
	0.4nm,0.6s,baz=54,slow=6.1,SNR=4.6						
	0.4nm,0.6s						

*IDC **13** 01:31:30.6±2.6, 5°.59S×154°.54E, h159km±23km, mb3.4/8, mbtmp3.9/10, Error ellipse: s-maj=27.9km s-min=17.5km az=92.0*
ISC 13 01:31:29.8±0.9, 5°.6S±0°.1×154°.5E±0°.1, h150km, n11, σ1§18/12, mb3.6/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.78**	**296**	P	**Pn**	**01 32 15.4**	**+0.9**
	26nm,0.4s,baz=213,slow=1.5,SNR=6.0						
KRVT				S	**Sn**	**01 32 47.5**	**-1.4**
	92nm,0.5s,baz=160,slow=22,SNR=10						
CTA	**Charters Tower**	**16.55**	**208**	P	**Pn**	**01 35 14.5**	**+1.2**
	2.7nm,0.5s,baz=29,slow=12,SNR=7.2						
DZM	**Mont Dzumac**	**20.07**	**146**	P	**P**	**01 35 51.6**	**-0.1**
	2.2nm,0.5s,baz=342,slow=20,SNR=2.1						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**24.30**	**232**	P	**P**	**01 36 33.8**	**+0.2**
	3.6nm,0.5s,baz=58,slow=10,SNR=39						
	3.6nm,0.5s						
ASAR	**Alice Springs**	**26.82**	**226**	P	**P**	**01 36 55.6**	**-0.7**
	0.8nm,0.4s,baz=56,slow=9.1,SNR=17						
	0.8nm,0.4s						
SONM	**Songino Array**	**67.88**	**327**	P	**P**	**01 42 13.4**	**+1.2**
	0.4nm,0.4s,baz=133,slow=3.3,SNR=3.8						
	0.4nm,0.4s						
VNDA	**Vanda**	**72.03**	**178**	P	**P**	**01 42 36.4**	**-0.5**
	0.4nm,0.8s,baz=345,slow=5.6,SNR=2.1						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**82.02**	**319**	P	**P**	**01 43 33.6**	**+0.3**
	0.4nm,0.5s,baz=88,slow=10,SNR=5.9						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**82.20**	**22**	P	**P**	**01 43 33.9**	**+0.1**
	0.5nm,0.6s,baz=237,slow=4.9,SNR=7.2						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**82.73**	**326**	P	**P**	**01 43 36.5**	**-0.2**
	0.6nm,0.4s,baz=113,slow=3.3,SNR=2.2						
	0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**152.18**	**288**	PKPbc	**PKPbc**	**01 51 06.3**	**-2.4**
	0.2nm,0.3s,baz=75,slow=1.5,SNR=2.0						

IDC 13 02:03:32.8±2.1, 0°.11S×126°.84E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=184.7km s-min=26.7km az=66.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.03**	**160**	P	P	02 08 17.9	-0.6
	0.3nm,0.5s,baz=338,slow=10,SNR=8.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**24.40**	**164**	P	P	02 08 53.5	+0.4
	0.6nm,0.7s,baz=350,slow=10,SNR=7.0						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**60.78**	**326**	P	P	02 13 46.6	0.0
	0.3nm,0.4s,baz=113,slow=6.9,SNR=5.4						
	0.3nm,0.4s						

*IDC **13** 02:09:20.3±1.6, 14°.15S×66°.13E, h0km, mb3.8/5, mbtmp3.8/5, MS3.3/9, Error ellipse: s-maj=68.1km s-min=31.1km az=41.0*
ISC 13 02:09:22.2±1.7, 14°.2S±0°.4×66°.1E±0°.3, h15km, n22, σ0§66/7, mb3.8/5, MS3.2/9, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.06**	**45**	T	T	02 20 55.0	
	baz=224,slow=76,SNR=59						
H08S2	**Diego Garcia H**	**9.07**	**45**	T	T	02 20 56.1	
	baz=224,slow=76,SNR=87						
H08S3	**Diego Garcia H**	**9.08**	**45**	T	T	02 20 51.2	
	baz=224,slow=76,SNR=59						
PALK	**Pallekele**	**25.81**	**35**	LR	LR	02 22 32.5	
	comp=Z,82nm,21.9s,baz=303,slow=31						
LSZ	**Lusaka**	**36.61**	**263**	LR	LR	02 29 29.5	
	comp=Z,43nm,20.6s,baz=126,slow=33						
PSI	**Prapat**	**36.70**	**65**	LR	LR	02 28 35.7	
	comp=Z,65nm,19.4s,baz=198,slow=32						
MBAR	**Mbarara**	**37.45**	**288**	LR	LR	02 30 20.5	
	comp=Z,61nm,18.6s,baz=103,slow=34						
LBTB	**Lobatse**	**39.47**	**248**	LR	LR	02 30 53.1	
	comp=Z,52nm,20.1s,baz=106,slow=33						
BOSA	**Boshof**	**40.39**	**242**	LR	LR	02 30 28.8	
	comp=Z,34nm,19.6s,baz=40,slow=31						
SUR	**Sutherland**	**44.95**	**238**	LR	LR	02 33 06.6	
	comp=Z,68nm,18.2s,baz=136,slow=32						
CMAR	**Chiang Mai Arr**	**45.87**	**46**	LR	LR	02 34 58.2	
	comp=Z,14nm,20.2s,baz=225,slow=34						
H01W3	**Cape Leeuwin H**	**47.82**	**124**	T	T	03 09 00.3	
	baz=283,slow=75,SNR=42						
H01W2	**Cape Leeuwin H**	**47.82**	**124**	T	T	03 09 01.1	
	baz=283,slow=75,SNR=45						
H01W1	**Cape Leeuwin H**	**47.84**	**124**	T	T	03 09 01.5	
	baz=283,slow=75,SNR=39						
KAPI	**Kappang**	**53.62**	**86**	LR	LR	02 40 50.7	
	comp=Z,18nm,18.4s,baz=258,slow=35						
MKAR	**Makanchi Array**	**62.44**	**13**	P	**P**	**02 19 44.9**	**+0.2**
	0.3nm,0.6s,baz=200,slow=8.2,SNR=3.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**64.37**	**110**	P	**P**	**02 19 57.6**	**-0.5**
	0.5nm,0.7s,baz=277,slow=6.3,SNR=4.3						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**65.15**	**106**	P	**P**	**02 20 03.7**	**+0.5**
	5.8nm,1.4s,baz=267,slow=6.1,SNR=5.6						
	5.8nm,1.4s						
SONM	**Songino Array**	**71.46**	**27**	P	**P**	**02 20 41.7**	**-0.6**
	0.7nm,0.8s,baz=225,slow=5.6,SNR=3.2						
	0.7nm,0.8s						
ESDC	**Sonseca Array**	**84.22**	**313**	P	**P**	**02 21 53.1**	**-0.3**
	1.4nm,1.1s,baz=116,slow=5.9,SNR=4.4						
	1.4nm,1.1s						
NEW	**Newport**	**145.93**	**4**	PKPbc	**PKPab**	**02 29 02.6**	**+0.9**
	3.1nm,0.7s,baz=352,slow=5.8,SNR=5.1						
PDAR	**Pinedale Array**	**151.28**	**353**	PKPbc	**PKiKP**	**02 29 16.4**	**+0.2**
	1.5nm,0.6s,baz=87,slow=2.4,SNR=17						

IDC 13 02:43:59.8±8.8, 20°.22S×179°.15W, h594km±53km, mb2.6/2, mbtmp3.5/3, Error ellipse: s-maj=250.7km s-min=47.0km az=147.0, Fiji Islands region

| Code |

KAN10 Anthony SW Sta 0.39 28 Pg **Pg 02 48 49.3 +0.1**
KAN10 Sg **Sg 02 48 54.8 +0.4**
OK038 West end E0370 0.45 229 Pg **Pg 02 48 50.6 +0.2**
OK038 Sg **Sg 02 48 57.1 +0.7**
KAN16 Harper SW Stat 0.49 25 Pg **Pg 02 48 51.1 0.0**
KAN17 Caldwell West 0.52 59 Pg **Pg 02 48 51.8 +0.2**
KAN08 Anthony NE Sta 0.53 32 **Pg 02 48 52.0 +0.2**
KAN12 Harper NE Stat 0.58 26 Pg **Pg 02 48 52.9 +0.1**
KAN01 Argonia South 0.58 50 Pg **Pg 02 48 53.1 +0.2**
KAN06 Argonia West S 0.60 38 **Pg 02 48 53.2 +0.1**
KAN09 Caldwell North 0.67 57 Pg **Pg 02 48 54.5 +0.1**
U32A Winter Ranch, 0.68 234 Pg **Pg 02 48 54.6 0.0**
U32A Winter Ranch, 0.68 234 P **Pg 02 48 54.7 0.0**
baz=55,SNR=164
U32A S **Sg 02 49 04.1 +0.6**
baz=55
KAN13 South Haven SW 0.71 71 Pg **Pg 02 48 55.3 0.0**
KS21 Milan North St 0.73 46 Pg **Pg 02 48 55.6 0.0**
KS20 Mayfield South 0.76 53 Pg **Pg 02 48 56.2 +0.1**
OK049 E0420 Rd and N 0.90 114 Pg **Pg 02 48 58.8 0.0**
OK050 Pawnee Station 1.14 109 **Pg 02 49 03.1 -0.3**
OK048 Pawnee Station 1.17 108 **Pg 02 49 03.5 -0.3**
OK045 Pawnee Station 1.17 106 **Pg 02 49 03.7 -0.3**
OK046 Pawnee Station 1.20 108 **Pb 02 49 04.2 +0.1**
OK029 Liberty Lake 1.20 144 **Pb 02 49 04.1 -0.1**
OK051 E0350 and S346 1.22 102 **Pb 02 49 04.6 +0.1**
OK044 Pawnee Station 1.29 108 **Pn 02 49 05.8 +0.5**
OK033 Mehan 1.33 123 Pn **Pn 02 49 06.5 +0.6**
OK025 Westminster Rd 1.44 146 **Pn 02 49 08.0 +0.7**
OK031 S. Brethren Rd 1.45 124 **Pn 02 49 08.3 +0.8**
T35A Sooner Cattle 1.46 84 Pn **Pn 02 49 08.5 +0.9**
T35B Sooner Cattle 1.46 84 P **Pn 02 49 08.4 +0.8**
baz=265,SNR=736
T35B Sb **Sg 02 49 28.5 +0.2**
baz=265
OK034 N. Norfolk Rd. 1.51 120 **Pn 02 49 09.2 +1.0**
R32A Long Quarter, 1.67 349 **Pn 02 49 12.1 +1.5**
R32A Long Quarter, 1.67 349 P **Pn 02 49 12.1 +1.5**
baz=169,SNR=408
R32A S **Sb 02 49 34.2 +1.0**
baz=169
WMOK Wichita Mounta 2.07 191 Pn **Pn 02 49 17.1 +1.1**
WMOK Wichita Mounta 2.07 191 P **Pn 02 49 17.3 +1.3**
baz=10,SNR=791
WMOK Wichita Mounta 2.07 191 P **Pn 02 49 17.1 +1.1**
baz=10,SNR=84
WMOK Sb **Sb 02 49 45.8 +1.1**
baz=10
TUL1 Leonard 2.22 112 Pn **Pn 02 49 18.9 +0.9**
TUL1 IAmb_Lg 02 49 57.8
comp=Z,215nm,0.7s
TUL1 Leonard 2.22 112 P **Pn 02 49 19.1 +1.1**
baz=294,SNR=153
TUL1 Sb **Sb 02 49 50.8 +1.9**
baz=294
TUL1 Leonard 2.22 112 P **Pn 02 49 19.2 +1.1**
baz=294,SNR=109
TUL1 Sb **Sb 02 49 50.7 +1.9**
baz=294
CBKS Cedar Bluff 2.32 332 Pn **Pn 02 49 21.1 +1.5**
CBKS Cedar Bluff 2.32 332 P **Pn 02 49 21.1 +1.5**
baz=151,SNR=155
CBKS S **Sb 02 49 53.0 +1.1**
baz=151
CBKS Cedar Bluff 2.32 332 P **Pn 02 49 21.2 +1.6**
baz=151,SNR=56
CBKS Sb **Sb 02 49 53.4 +1.4**
baz=151
KSU1 Kansas State U 2.68 30 Pn **Pn 02 49 26.0 +1.5**
KSU1 IAmb_Lg 02 50 10.3
comp=Z,141nm,0.8s
KSU1 Kansas State U 2.68 30 P **Pn 02 49 26.4 +1.9**
baz=210,SNR=27
KSU1 Kansas State U 2.68 30 P **Pn 02 49 26.4 +1.9**
baz=210,SNR=52
U38A Gravette 3.18 95 Pn **Pn 02 49 32.3 +1.0**
U38A IAmb_Lg 02 50 29.5
comp=Z,187nm,0.9s
U38A Gravette 3.18 95 P **Pn 02 49 33.0 +1.7**
baz=277,SNR=44
X37A Clayton 3.25 131 Pn **Pn 02 49 32.7 +0.5**
X37A Clayton 3.25 131 P **Pn 02 49 33.7 +1.5**
baz=313,SNR=149
AMTX Amarillo 3.32 236 Pn **Pn 02 49 33.5 +0.2**
AMTX IAmb_Lg 02 50 36.0
comp=Z,168nm,0.7s
AMTX Amarillo 3.32 236 P **Pn 02 49 34.4 +1.1**
baz=54
Z35A Perchaven, San 3.55 165 **Pn 02 49 37.2 +0.8**
Z35A Perchaven, San 3.55 165 P **Pn 02 49 37.9 +1.6**
baz=346,SNR=24
N33B J Bar K, Exete 4.01 9 P **Pn 02 49 43.1 +0.4**
baz=190,SNR=57
N33B S **Sn 02 50 30.5 +0.8**
baz=190
N33A J Bar K, Exete 4.01 9 **Pn 02 49 43.1 +0.3**
N33A IAmb_Lg 02 50 51.5
comp=Z,107nm,0.8s
KSCO Kaye Shedlock' 4.07 304 **Pn 02 49 44.8 +1.2**
KSCO IAmb_Lg 02 50 58.5
comp=Z,141nm,0.7s
KSCO Kaye Shedlock' 4.07 304 P **Pn 02 49 44.7 +1.0**
baz=122
KSCO Kaye Shedlock' 4.07 304 P **Pn 02 49 44.6 +1.0**
baz=122
KSCO S **Sn 02 50 32.0 +0.7**
baz=122
S39A Bolivar 4.09 76 Pn **Pn 02 49 45.1 +1.3**
S39A IAmb_Lg 02 50 53.4
comp=Z,144nm,0.7s
S39A Bolivar 4.09 76 P **Pn 02 49 45.0 +1.2**
baz=258,SNR=19
ABTX Abilene, Hawle 4.29 195 **Pn 02 49 47.4 +0.9**
ABTX IAmb_Lg 02 51 00.1
comp=Z,133nm,1.2s
ABTX Abilene, Hawle 4.29 195 P **Pn 02 49 47.3 +0.8**
baz=14,SNR=6.7
ABTX Abilene, Hawle 4.29 195 P **Pn 02 49 47.2 +0.7**
baz=14
ABTX S **Sn 02 50 37.9 +1.4**
baz=14
Z38A Mt. Pleasant 4.45 141 Pn **Pn 02 49 50.0 +1.3**
Z38A IAmb_Lg 02 51 04.6
comp=Z,124nm,0.8s
Z38A Mt. Pleasant 4.45 141 P **Pn 02 49 50.1 +1.3**
baz=323
MIAR Mount Ida 4.46 119 **Pn 02 49 50.6 +1.7**
MIAR IAmb_Lg 02 51 05.8
comp=Z,140nm,0.9s
MIAR Mount Ida 4.46 119 P **Pn 02 49 50.1 +1.2**
baz=301,SNR=72
MIAR Mount Ida 4.46 119 P **Pn 02 49 50.4 +1.5**
baz=301,SNR=7.7
MIAR S **Sn 02 50 42.1 +1.4**
baz=301
N35A Tabor 4.58 26 **Pn 02 49 52.7 +2.1**
N35A Tabor 4.58 26 P **Pn 02 49 51.6 +1.1**
baz=208,SNR=13
MSTX Muleshoe 4.59 234 Pn **Pn 02 49 52.1 +1.3**
MSTX Muleshoe 4.59 234 P **Pn 02 49 51.1 +0.3**
baz=51
BGNE Belgrade 4.62 2 **Pn 02 49 52.4 +1.2**
BGNE IAmb_Lg 02 51 19.3
comp=Z,164nm,0.7s
BGNE Belgrade 4.62 2 P **Pn 02 49 52.3 +1.2**
baz=182,SNR=60
BGNE Belgrade 4.62 2 P **Pn 02 49 52.0 +0.9**
baz=182,SNR=19
BGNE S **Sn 02 50 45.9 +1.1**
baz=182
P38A Dawn 4.72 52 Pn **Pn 02 49 53.6 +1.1**
P38A IAmb_Lg 02 51 22.1
comp=Z,129nm,0.7s
P38A Dawn 4.72 52 P **Pn 02 49 53.6 +1.1**
baz=234,SNR=24
WHTX Lake Whitney, 4.83 171 **Pn 02 49 55.0 +1.0**
WHTX Lake Whitney, 4.83 171 P **Pn 02 49 54.8 +0.9**
baz=352,SNR=56
WHTX Lake Whitney, 4.83 171 P **Pn 02 49 54.9 +1.0**
baz=352,SNR=12
MGMO Mountain Grove 4.86 84 Pn **Pn 02 49 56.0 +1.6**
MGMO IAmb_Lg 02 51 21.8
comp=Z,115nm,0.9s
T25A Trinidad 4.89 276 Pn **Pn 02 49 56.4 +1.4**
T25A IAmb_Lg 02 51 16.8
comp=Z,166nm,0.8s

T25A Trinidad 4.89 276 P **Pn 02 49 55.2 +0.2**
baz=92,SNR=6.8
R40A Maddes Statio 5.04 71 **Pn 02 49 57.7 +0.9**
R40A IAmb_Lg 02 51 25.1
comp=Z,124nm,0.8s
R40A Maddes Statio 5.04 71 P **Pn 02 49 57.9 +1.1**
baz=254,SNR=22
OGNE Ogallala 5.07 326 Pn **Pn 02 49 59.3 +2.0**
OGNE Ogallala 5.07 326 P **Pn 02 49 59.9 +2.6**
baz=144,SNR=16
OGNE Ogallala 5.07 326 S **Sn 02 50 57.2 +1.3**
baz=144
FCAR Ozark Folk Cen 5.08 98 **Pn 02 49 58.2 +0.8**
FCAR IAmb_Lg 02 51 31.2
comp=Z,67nm,0.7s
WHAR Wooly Hollow 5.11 105 Pn **Pn 02 49 59.0 +1.2**
WHAR IAmb_Lg 02 51 32.0
comp=Z,154nm,1.1s
237A Washetta, Mont 5.20 156 **Pn 02 49 59.7 +0.7**
237A IAmb_Lg 02 51 39.4
comp=Z,124nm,0.9s
237A Washetta, Mont 5.20 156 P **Pn 02 49 59.4 +0.4**
baz=337,SNR=26
237A S **Sn 02 50 58.7 -0.2**
baz=337
UALR University of 5.25 111 Pn **Pn 02 50 01.3 +1.5**
UALR IAmb_Lg 02 51 32.8
comp=Z,95nm,0.7s
WLAR White Oak Lake 5.26 124 Pn **Pn 02 50 00.6 +0.8**
WLAR IAmb_Lg 02 51 44.2
comp=Z,97nm,0.8s
L34A Svendsen Farm, 5.39 16 IAmb_Lg 02 51 41.9
comp=Z,165nm,0.7s
N38A Joes South For 5.64 43 **Pn 02 50 05.9 +0.8**
N38A Joes South For 5.64 43 P **Pn 02 50 05.8 +0.7**
baz=226,SNR=15
CCM Cathedral Cave 5.77 75 Pn **Pn 02 50 07.2 +0.2**
CCM IAmb_Lg 02 51 50.7
comp=Z,124nm,1.0s
CCM Cathedral Cave 5.77 75 P **Pn 02 50 07.0 +0.1**
baz=259,SNR=15
CCM Cathedral Cave 5.77 75 P **Pn 02 50 07.0 +0.1**
baz=259
CCM S **Sn 02 51 13.7 +0.6**
baz=259
SDCO Great Sand Dun 5.81 282 Pn **Pn 02 50 08.3 +0.6**
SDCO Great Sand Dun 5.81 282 P **Pn 02 50 07.8 +0.1**
baz=98,SNR=7.1
LCAR Lake Charles 5.82 95 **Pn 02 50 08.5 +0.9**
LCAR Lake Charles 5.82 95 P **Pn 02 50 09.6 +2.0**
baz=279,SNR=11
Q24A Divide 5.83 294 Pn **Pn 02 50 07.7 -0.3**
Q24A IAmb_Lg 02 51 55.4
comp=Z,87nm,0.8s
K31A O'Neill 5.85 357 IAmb_Lg 02 51 54.4
comp=Z,115nm,0.8s
NATX Nacogdoches 5.85 148 P **Pn 02 50 08.8 +0.8**
baz=330
435B Jarrell 6.01 174 IAmb_Lg 02 51 58.7
comp=Z,94nm,0.8s
435B Jarrell 6.01 174 P **Pn 02 50 11.1 +0.9**
baz=354
BRIGG Briggsdale 6.04 311 IAmb_Lg 02 52 00.4
comp=Z,127nm,0.9s
CCAR Cane Creek 6.07 116 **Pn 02 50 10.9 0.0**
CCAR IAmb_Lg 02 52 10.6
comp=Z,104nm,0.8s
CCAR Cane Creek 6.07 116 P **Pn 02 50 12.1 +1.2**
baz=300,SNR=13
CLN7 Carlsbad 7 6.28 228 Pn **Pn 02 50 15.1 +1.1**
PBMO Poplar Bluff 6.33 88 IAmb_Lg 02 52 04.2
comp=Z,133nm,0.9s
FVM French Village 6.40 77 IAmb_Lg 02 52 08.5
comp=Z,70nm,0.7s
JCT Junction City 6.40 192 Pn **Pn 02 50 15.8 +0.2**
JCT Junction City 6.40 192 P **Pn 02 50 15.8 +0.2**
baz=11
CLNB Carlsbad 6.43 227 **Pn 02 50 15.5 -0.5**
SCIA State Center 6.47 36 IAmb_Lg 02 52 15.5
comp=Z,123nm,0.8s
ISCO Idaho Springs 6.48 300 Pn **Pn 02 50 16.9 0.0**
ISCO Idaho Springs 6.48 300 S **Sn 02 51 31.0 0.0**
baz=116
SLM Saint Louis 6.67 71 IAmb_Lg 02 52 12.6
comp=Z,106nm,0.8s
GNAR Gosnell 6.75 94 IAmb_Lg 02 52 26.2
comp=Z,98nm,0.8s
ANMO Albuquerque 6.86 257 Pn **Pn 02 50 24.0 +2.0**
comp=Z,0.3nm,0.3s,baz=75,slow=15,SNR=6.3
ANMO Lg Lg 02 52 13.0
comp=Z,1.1nm,0.3s,baz=79,slow=13,SNR=1.6
comp=Z,0.7nm,0.4s
143A Socs Landing, 7.00 124 IAmb_Lg 02 52 44.0
comp=Z,49nm,0.8s
ECSD EROS Data Cent 7.07 10 Pn **Pn 02 50 24.4 -0.3**
ECSD EROS Data Cent 7.07 10 P **Pn 02 50 24.4 -0.3**
baz=191,SNR=16
ECSD EROS Data Cent 7.07 10 P **Pn 02 50 24.1 -0.7**
baz=191,SNR=8.6
ECSD S **Sn 02 51 43.1 -1.9**
baz=191
PHWY Pilot Hill 7.16 311 IAmb_Lg 02 52 42.9
comp=Z,57nm,0.8s
N23A Red Feather La 7.23 307 Pn **Pn 02 50 26.9 -0.3**
N23A IAmb_Lg 02 52 34.8
comp=Z,99nm,0.9s
S44A Carbondale 7.29 80 **Pn 02 50 27.9 +0.2**
S44A IAmb_Lg 02 52 31.8
comp=Z,89nm,0.7s
S44A Carbondale 7.29 80 P **Pn 02 50 27.7 0.0**
baz=265,SNR=10
SIUC Southern Illin 7.32 80 **Pn 02 50 28.2 0.0**
SIUC IAmb_Lg 02 52 40.2
comp=Z,80nm,0.7s
441A DeRidder 7.37 143 S **Sn 02 51 52.8 +0.3**
baz=326
P43A Skaggs, Pawnee 7.49 65 P **Pn 02 50 30.6 +0.1**
baz=250,SNR=6.4
Y22D IRIS PASSCAL I 7.52 252 IAmb_Lg 02 52 51.7
comp=Z,81nm,0.7s
W45A Hickory Valley 7.58 100 IAmb_Lg 02 52 46.0
comp=Z,76nm,0.7s
OXF Oxford 7.60 105 **Pn 02 50 32.3 +0.3**
OXF IAmb_Lg 02 52 42.9
comp=Z,47nm,0.8s
OXF Oxford 7.60 105 P **Pn 02 50 31.9 -0.1**
baz=290
SUSD Miller 7.67 357 IAmb_Lg 02 53 05.5
comp=Z,47nm,0.7s
SUSD Miller 7.67 357 P **Pn 02 50 33.6 +0.6**
baz=176,SNR=7.6
SUSD Miller 7.67 357 P **Pn 02 50 33.4 +0.4**
baz=176
Y45A Yeager Farm, C 7.74 109 IAmb_Lg 02 53 01.8
comp=Z,68nm,1.1s
735A Kenedy 7.91 177 IAmb_Lg 02 53 02.4
comp=Z,48nm,0.8s
HDIL Hopedale 8.00 59 P **Pn 02 50 37.8 +0.3**
baz=245
I37A Lemond, Waseca 8.14 26 IAmb_Lg 02 53 06.2
comp=Z,54nm,0.8s
WVT Waverly 8.48 91 P **Pn 02 50 44.5 +0.5**
baz=277
WVT Waverly 8.48 91 P **Pn 02 50 44.5 +0.5**
baz=277
RSSD Black Hills 8.53 331 IAmb_Lg 02 53 26.3
comp=Z,46nm,0.7s
RSSD Black Hills 8.53 331 P **Pn 02 50 45.5 +0.6**
baz=147
K22A Casper 8.62 315 P **Pn 02 50 46.1 0.0**
baz=130
TX31 Lajitas Ar. Si 8.67 213 P **Pn 02 50 47.3 +0.5**
baz=30,SNR=13
TXAR Lajitas Array 8.67 213 Pn **Pn 02 50 47.0 +0.2**
comp=Z,0.6nm,0.3s,baz=33,slow=11,SNR=45
TXAR Lg Lg 02 53 08.6
comp=Z,1.1nm,0.3s,baz=33,slow=30,SNR=2.3
comp=Z,0.9nm,0.3s
JFWS Jewell Farm 8.72 43 P **Pn 02 50 47.8 +0.4**
baz=228,SNR=11
JFWS Jewell Farm 8.72 43 P **Pn 02 50 47.8 +0.4**
baz=228
F33A 5 Mile Ranch, 9.18 9 IAmb_Lg 02 53 43.3
comp=Z,32nm,1.1s
I40A Norwalk 9.22 37 IAmb_Lg 02 53 46.1
comp=Z,74nm,1.1s
I40A Norwalk 9.22 37 P **Pn 02 50 54.7 +0.5**

baz=222,SNR=5.8
SPMN Marine on St. 9.41 25 IAmb_Lg 02 53 39.4
comp=Z,41nm,0.9s
SPMN Marine on St. 9.41 25 P **Pn 02 50 56.7 -0.1**
baz=208
WCI Wyandotte Cave 9.67 78 P **Pn 02 51 00.5 +0.2**
baz=265
E28A Huff 9.95 350 IAmb_Lg 02 54 19.0
comp=Z,42nm,1.0s
E28A Huff 9.95 350 P **Pn 02 51 04.3 +0.1**
baz=169
LRAL Lakeview Retre 10.02 109 P **Pn 02 51 05.4 +0.2**
baz=295
PDAR Pinedale Array 10.51 308 Pn **Pn 02 51 12.1 -0.1**
comp=Z,0.2nm,0.3s,baz=124,slow=16,SNR=6.0
PDAR Lg Lg 02 54 02.8
comp=Z,0.6nm,0.3s,baz=125,slow=25,SNR=3.8
comp=Z,0.4nm,0.4s
TKL Tuckaleechee C 11.80 91 Pn **Pn 02 51 29.6 0.0**
comp=Z,1.1nm,0.3s,baz=242,slow=17,SNR=14
TKL Lg Lg 02 54 46.7
baz=260,slow=7.8
comp=Z,4.1nm,0.5s
ULM Lac du Bonnet 13.58 7 Pn Pn 02 51 48.0 -5.8
comp=Z,0.3nm,0.3s,baz=184,slow=12,SNR=1.5
ULM Sn Sn 02 54 10.2 -14
comp=Z,0.2nm,0.3s,baz=105,slow=12,SNR=2.0
ULM Lg Lg 02 55 37.1
comp=Z,0.4nm,0.3s,baz=234,slow=8.7,SNR=1.2
comp=Z,1.1nm,0.3s
ELK Elko 13.78 292 Pn **Pn 02 51 56.4 -0.5**
baz=182,slow=23,SNR=1.1
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 15.93 282 Pn **Pn 02 52 24.9 -0.6**
comp=Z,0.1nm,0.3s,baz=93,slow=12,SNR=1.3
comp=Z,0.1nm,0.3s
SADO Sadowa 16.55 55 Lg Lg 02 57 12.9
comp=Z,0.4nm,0.3s,baz=294,slow=6.1,SNR=2.6
YBH Yreka Blue Hor 19.50 292 P **P 02 53 05.5 -3.0**
comp=Z,3.9nm,0.4s,baz=119,slow=18,SNR=2.5
ILAR Eielson Array 39.98 330 P **P 02 56 14.9 -0.6**
comp=Z,0.2nm,0.8s,baz=97,slow=6.5,SNR=2.2
comp=Z,0.2nm,0.8s
TROLL Troll, Antarti 127.85 157 Pdiff **Pdif 03 04 29.4 -0.1**

DDA ***13*** *02:51:40.5±0.0,34°.87N×27°.25E,h6km±4km,ML2.5*
THE ***13*** *02:51:41.5,34°.80N×26°.46E,h22km±1km,ML2.2/3,Error ellipse: s-maj=2.9km s-min=1.0km az=339.0*
ATH ***13*** *02:51:41.9,35°.18N×26°.30E,h49km±4km,ML2.4/2,Error ellipse: s-maj=6.8km s-min=1.9km az=165.0*

ISC 13 02:51:36.9±2.1,34°.6N±0°.1×26°.55E±0°.04,h28km±13km, n21,σ1§67/32,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.57**	**331**	P	**Pb**	**02 51 49.5**	**+1.1**
ZKR				S	**Sb**	**02 51 55.6**	**-0.7**
725nm,0.6s							
ZKR	**Zakros**	**0.57**	**331**	P	**Pb**	**02 51 49.5**	**+1.1**
ZKR				S	**Sb**	**02 51 55.5**	**-0.8**
ZKR				AML	AML	02 52 05.1	
comp=N,802μm,0.5s							
ZKR				AML	AML	02 52 05.8	
comp=E,2096μm,0.6s							
FRMA	**Ierapetra Chan**	**0.78**	**301**	P	**Pb**	**02 51 52.1**	**+0.2**
FRMA				S	**Sb**	**02 52 00.2**	**-2.0**
comp=E,208nm,0.6s							
FRMA	**Ierapetra Chan**	**0.78**	**301**	P	**Pb**	**02 51 52.2**	**+0.2**
FRMA				S	**Sb**	**02 52 00.7**	**-1.5**
FRMA				AML	AML	02 52 11.3	
comp=N,1098μm,0.6s							
FRMA				AML	AML	02 52 11.9	
comp=E,1209μm,0.6s							
KARP	**Karpathos**	**1.06**	**28**	P	**Pn**	**02 51 57.9**	**+2.1**
KARP				S	**Sn**	**02 52 11.1**	**+1.5**
KARP	**Karpathos**	**1.06**	**28**	P	**Pn**	**02 51 57.9**	**+2.1**
KSTL	**Kastelli Herak**	**1.40**	**300**	P	**Pn**	**02 51 59.3**	**-1.2**
SIVA	**Sivas**	**1.49**	**286**	P	**Pn**	**02 52 04.4**	**+2.7**
IDI	**Anoyia**	**1.52**	**297**	P	**Pn**	**02 52 03.5**	**+1.2**
IDI				S	**Sn**	**02 52 21.8**	**+0.6**
comp=E,72nm,0.5s							
IDI	**Anoyia**	**1.52**	**297**	P	**Pn**	**02 52 03.5**	**+1.2**
THR8	**Santorini-Mono**	**1.99**	**334**	P	**Pn**	**02 52 09.0**	**+0.4**
THR8	**Santorini-Mono**	**1.99**	**334**	P	**Pn**	**02 52 07.5**	**-1.1**
TURN	**Turunc**	**2.56**	**32**	P	**Pn**	**02 52 18.0**	**+1.6**
TURN				S	**Sn**	**02 52 47.6**	**+1.0**
APE	**Apeiranthos**	**2.59**	**342**	P	**Pn**	**02 52 17.0**	**+0.1**
AKAS	**Kas**	**2.97**	**56**	P	**Pn**	**02 52 22.0**	**-0.2**
AKAS				S	**Sn**	**02 52 53.5**	**-3.4**
AKAS				*i* AML	AML	02 53 02.0	
comp=E,37nm,0.9s							
AKAS				*i* AML	AML	02 53 03.0	
comp=E,30nm,1.4s							
CAEL	**Denizli, Camel**	**3.36**	**41**	P	**Pn**	**02 52 30.0**	**+2.3**
CAEL				*i* AML	AML	02 53 20.0	
comp=E,36nm,1.8s							
CAEL				*i* AML	AML	02 53 21.0	
comp=E,20nm,1.1s							
TAVA	**DENIZLI_Tavas**	**3.43**	**33**	P	**Pn**	**02 52 29.3**	**+0.8**
TAVA				S	**Sn**	**02 53 06.8**	**-1.4**
AKUM	**Antalya-Kumluc**	**3.53**	**60**	P	**Pn**	**02 52 29.8**	**0.0**
AKUM				*i* AML	AML	02 53 15.0	
comp=E,14nm,1.2s							
GOLH	**Golhisar**	**3.58**	**42**	P	**Pn**	**02 52 32.2**	**+1.7**
GOLH				S	**Sn**	**02 53 09.0**	**-3.0**
GOLH				*i* AML	AML	02 53 23.0	
comp=E,12nm,1.2s							
GOLH				*i* AML	AML	02 53 23.0	
comp=E,10nm,1.0s							
KORT	**Korkueli**	**3.90**	**51**	P	**Pn**	**02 52 37.2**	**+2.2**
KORT				S	**Sn**	**02 53 17.9**	**-1.9**
SEDI	**Konya, Seydise**	**5.08**	**55**	P	**Pn**	**02 52 51.5**	**+0.3**
SEDI				*i* AML	AML	02 53 53.0	
comp=E,6.1nm,1.0s							
SEDI				*i* AML	AML	02 53 57.0	
comp=E,5.5nm,0.6s							

AUST 13 02:58:50.9±3.1,35°.11S×139°.00E,h6km±27km,Error ellipse: s-maj=33.8km s-min=17.7km az=36.0,Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**1.68**	**358**	P	Pn	02 59 21.4	+0.5
HTT				S	Sb	02 59 43.3	-0.3
baz=1.7							
ARPS	**Mount Arapiles**	**2.84**	**127**	P	Pn	02 59 36.4	-0.3
baz=2.8							
BBOO	**Buckleboo**	**3.35**	**312**	P	Pn	02 59 44.4	+0.6
BBOO				S	Sn	03 00 24.9	+0.9
baz=3.4							
LCRK	**Leigh Creek**	**4.70**	**352**	P	Pn	03 00 02.8	+0.5
baz=4.7							
MULG	**Mulgathing**	**6.37**	**318**	P	Pn	03 00 25.7	+0.4
baz=6.4							

IDC ***13*** *03:01:39.1±1.6,10°.08N×126°.05E,h0km,mb3.7/7, mbtmp3.7/7,MS2.6/3,Error ellipse: s-maj=201.1km s-min=18.8km az=68.0*
MAN ***13*** *03:01:41.1,10°.13N×126°.54E,h8km,mb4.6,ML3.4,MS3.3*

ISC 13 03:01:39.1±2.2,10°.09N±0°.06×126°.54E±0°.07,h1km±12km, n26,σ1§86/31,mb3.9/7,8C-5D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.08**	**253**	⇑*iP*	**Pg**	**03 02 00.6**	**+0.6**
SCPH				*i* S	**Sg**	**03 02 12.4**	**-1.6**
BIPH	**Bislig**	**1.91**	**185**	⇓*eP*	**Pn**	**03 02 13.5**	**+0.8**
BIPH				*i* S	**Sn**	**03 02 35.9**	**-1.4**
TABP	**Talibon, Bohol**	**2.18**	**270**	⇓*iP*	**Pn**	**03 02 17.4**	**+0.9**
TABP				*e*S	**Sn**	**03 02 41.5**	**-2.5**
GHBP	**Garcia Hernand**	**2.24**	**258**	⇑*eP*	**Pb**	**03 02 19.4**	**-1.0**
GHBP				*i* S	**Sn**	**03 02 45.4**	**-0.1**
CGP	**Cagayan de Oro**	**2.45**	**228**	⇑*eP*	**Pn**	**03 02 21.5**	**+1.4**
CGP				*e*S	**Sn**	**03 02 49.6**	**-1.1**
LLP	**Lapu-Lapu**	**2.55**	**275**	⇑*iP*	**Pn**	**03 02 23.7**	**+2.1**
LLP				*i* S	**Sn**	**03 02 54.1**	**+0.9**
BUKP	**Musuan**	**2.64**	**214**	⇑*iP*	**Pb**	**03 02 26.7**	**-0.6**
BUKP				*i* S	**Sb**	**03 03 01.1**	**+0.9**
TBP	**Tagbilaran**	**2.67**	**262**	⇓*eP*	**Pn**	**03 02 25.0**	**+1.7**

TBP					*i* S		**Sn**	**03 02 57.3 +1.0**
LSIP	**Lazi, Siquijor**	**3.03 252**			⇑*i*P		**Pn**	**03 02 30.8 +2.7**
LSIP					*e*S		**Sn**	**03 03 05.2 +0.2**
DAV	**Davao City (W)**	**3.15 198**		LR	LR			03 03 15.1
	comp=Z,50nm,19.7s,baz=357,slow=32							
KCP	**Kidapawan**	**3.38 205**		⇓*e*P			**Pn**	**03 02 34.8 +1.6**
KCP					*i* S		**Sn**	**03 03 16.4 +2.4**
DCPH	**Dipolog City**	**3.49 245**		⇓*e*P			**Pn**	**03 02 30.1 -4.4**
DCPH					*e*S		Sn	03 02 59.5 -17
CNOP	**Candoni, Negro**	**3.85 266**		⇑*e*P			**Pn**	**03 02 42.1 +2.6**
CNOP					*e*S		**Sn**	**03 03 27.1 +1.6**
RCP	**Roxas**	**4.01 292**		⇑*e*P			**Pn**	**03 02 44.7 +3.1**
KAPI	**Kappang**	**16.46 205**		LR	LR			03 13 09.6
	comp=Z,29nm,19.1s,baz=72,slow=42							
GUMO	**Guam**	**18.27 77**		LR	LR			03 13 00.2
	comp=Z,24nm,19.2s,baz=118,slow=36							
WRA	**Warramunga Arr**	**30.82 166**		P			**P**	**03 07 57.1 +0.4**
	0.1nm,0.5s,baz=343,slow=8.8,SNR=1.6							
	0.1nm,0.5s							
ASAR	**Alice Springs**	**34.32 168**		P			**P**	**03 08 28.6 +1.2**
	0.2nm,0.3s,baz=354,slow=8.0,SNR=4.6							
	0.2nm,0.3s							
H11N1	**WAKE ISLAND Hy 40.05**	**71**		T			T	03 52 32.5
	baz=265,slow=74,SNR=12							
H11N2	**WAKE ISLAND Hy 40.06**	**71**		T			T	03 52 37.4
	baz=265,slow=74,SNR=8.3							
H11N3	**WAKE ISLAND Hy 40.07**	**71**		T			T	03 52 38.6
	baz=265,slow=74,SNR=9.2							
SONM	**Songino Array**	**41.26 339**		P			**P**	**03 09 25.1 -1.0**
	1.0nm,0.8s,baz=153,slow=11,SNR=4.3							
	1.0nm,0.8s							
STKA	**Stephens Creek**	**44.15 162**		P			**P**	**03 09 51.2 +1.8**
	1.6nm,0.9s,baz=343,slow=14,SNR=3.5							
	1.6nm,0.9s							
MKAR	**Makanchi Array**	**52.33 323**		P			**P**	**03 10 50.8 -1.8**
	1.4nm,0.7s,baz=119,slow=8.7,SNR=11							
	1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**54.91 331**		P			**P**	**03 11 09.9 -1.4**
	0.7nm,0.4s,baz=138,slow=11,SNR=2.3							
	0.7nm,0.4s							
FINES	**FINESS Array B**	**86.17 332**		P			**P**	**03 14 20.4 -1.4**
	0.6nm,0.6s,baz=113,slow=4.4,SNR=3.6							
	0.6nm,0.6s							

*IDC **13** 03:11:05.3±1.9, 1˚.15N×96˚.95E, h0km, mb3.7/5, mbtmp3.7/7, ML4.8/1, MS2.6/2, Error ellipse: s-maj=52.8km s-min=22.9km az=60.0*
*NEIC **13** 03:11:09.2±1.6, 1˚.1N±0˚.1×96˚.98E±0˚.08, h26km±7km, mb4.2/5, Error ellipse: s-maj=17.7km s-min=11.6km az=167.0*
*DJA **13** 03:11:12.9±0.8, 1˚N±5˚×9˚7E±˚, h39km±8km, M3.3/7, MLv3.3/7*

ISC 13 03:11:08.7±0.9, 1˚.22N±0˚.06×97˚.13E±0˚.08, h25km, n30, σ1§70/27, mb3.9/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.45**	**79**		**Pn**	**03 11 21.3**	**+1.7**
GSI				Sg	**Sn**	**03 11 30.5**	**+3.6**
GSI	**Gunungsitoli**	**0.45**	**79**	P	**Pn**	**03 11 21.4**	**+1.8**
PBSI	**Pulau Batu**	**1.71**	**138**	P	**Pb**	**03 11 38.7**	**-0.7**
PBSI				S	**Sb**	**03 11 57.6**	**-2.9**
RPSI	**Rantau Prapat**	**2.31**	**51**		**Pn**	**03 11 46.1**	**+0.9**
KCSI	**Kotacane, Aceh**	**2.37**	**16**	P	**Pn**	**03 11 46.6**	**+0.5**
PSI	**Prapat**	**2.38**	**49**	Pn	**Pn**	**03 11 47.3**	**+1.1**
	6.7nm,0.5s,baz=268,slow=3.4,SNR=5.1						
PSI				LR	LR	03 12 35.4	
	comp=Z,99nm,18.6s,baz=328,slow=36						
PSI	**Prapat**	**2.38**	**49**	P	**Pn**	**03 11 46.0**	**-0.3**
PSI				P	**Pb**	**03 11 46.9**	**-4.1**
MNSI	**Mandailing Nat**	**2.48**	**100**	P	**Pn**	**03 11 46.9**	**-0.6**
MLSI	**Meulaboh, Aceh**	**3.11**	**347**	P	**Pb**	**03 12 01.0**	**-2.4**
KULM	**Kulim**	**5.36**	**41**	Pn	**Pn**	**03 12 28.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**17.22**	**6**	P	**P**	**03 15 09.8**	**+0.7**
	1.3nm,0.3s,baz=200,slow=10,SNR=4.2						
CMAR				LR	LR	03 22 53.0	
	comp=Z,25nm,19.4s,baz=120,slow=41						
	1.5nm,0.3s						
H08S2	**Diego Garcia H**	**26.11**	**250**	T	T	03 43 32.9	
	baz=71,slow=75,SNR=738						
H08S3	**Diego Garcia H**	**26.11**	**250**	T	T	03 43 34.0	
	baz=71,slow=75,SNR=1066						
H08S1	**Diego Carcia H**	**26.12**	**250**	T	T	03 43 37.0	
	baz=71,slow=75,SNR=503						
MORW	**Morawa**	**35.14**	**150**	P	**P**	**03 17 57.9**	**-2.6**
H01W3	**Cape Leeuwin H**	**39.29**	**158**	T	T	04 00 30.2	
	baz=333,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**39.30**	**158**	T	T	04 00 15.0	
	baz=333,slow=76,SNR=19						
H01W1	**Cape Leeuwin H**	**39.30**	**158**	T	T	04 00 28.5	
	baz=333,slow=76,SNR=13						
WB0	**Warramunga Arr**	**42.07**	**122**	P	**P**	**03 18 58.8**	**-0.1**
WB0				IAmb	IAmb	03 19 22.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**42.10**	**122**	P	**P**	**03 19 00.1**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=300,slow=9.1,SNR=5.5						
	comp=Z,0.8nm,0.9s						
WRA	**Warramunga Arr**	**42.10**	**122**	P	**P**	**03 18 59.7**	**+0.5**
WB2	**Warramunga Arr**	**42.11**	**122**	P	**P**	**03 19 00.2**	**+1.0**
WB2				IAmb	IAmb	03 19 42.8	
	comp=Z,9.5nm,1.5s						
ASAR	**Alice Springs**	**43.46**	**127**	P	**P**	**03 19 11.8**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=306,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**47.12**	**9**	P	**P**	**03 19 39.8**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=195,slow=11,SNR=4.4						
	comp=Z,0.8nm,0.7s						
MK31	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 19 39.9**	**+0.5**
MK31				IAmb	IAmb	03 19 40.6	
	comp=Z,2.4nm,1.4s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 19 40.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=160,slow=9.2,SNR=5.4						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 19 40.2**	**+0.8**
ZALV	**Zalesovo Beam**	**53.53**	**351**	P	**P**	**03 20 27.8**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=179,slow=5.7,SNR=6.4						
	comp=Z,1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**53.53**	**351**	P	**P**	**03 20 27.7**	**+0.6**
ABKAR	**Akbulak array**	**57.46**	**332**	P	**P**	**03 20 56.1**	**+0.6**

*NEIC **13** 03:20:02.9±1.3, 24˚.26S±0˚.07×67˚.4W±0˚.1, h205km±9km, mb4.3/4, Md3.8(SJA), ML4.4(GUC), Error ellipse: s-maj=14.6km s-min=10.5km az=92.0*
*GUC **13** 03:20:04.4±0.5, 24˚.12S×67˚.49W, h213km±4km, ML4.4*
*IDC **13** 03:20:05.4±1.2, 23˚.86S×67˚.14W, h193km±14km, mb3.8/1, mbtmp4.2/7, Error ellipse: s-maj=21.4km s-min=19.7km az=155.0*

ISC 13 03:20:03.5±0.7, 24˚.13S±0˚.06×67˚.39W±0˚.07, h208km±8km, n52, σ1§49/70, 6C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.38**	**328**		**Pn**	**03 20 37.2**	**0.0**
AF01				Sn	**S**	**03 21 02.8**	**-0.3**
AF01	**San Pedro de A**	**1.38**	**328**	*e*P	**Pn**	**03 20 37.5**	**+0.3**
AF01				*i* S	**S**	**03 21 03.0**	**-0.1**
LVC	**Limon Verde**	**2.06**	**317**	P	**Pn**	**03 20 44.1**	**+0.5**
	70nm,0.3s,baz=133,slow=8.1,SNR=420						
LVC				S	**S**	**03 21 14.3**	**0.0**
	262nm,0.4s,baz=12,slow=20,SNR=70						
LVC	**Limon Verde**	**2.06**	**317**	*e*P	**Pn**	**03 20 43.8**	**+0.2**
LVC				*i* S	**S**	**03 21 14.1**	**-0.2**
PB15	**IPOC Station P**	**2.12**	**295**		**Pn**	**03 20 44.5**	**+0.6**
PB15	**IPOC Station P**	**2.12**	**295**	⇑*i*P	**Pn**	**03 20 44.6**	**+0.6**
PB15				*i* S	**S**	**03 21 14.9**	**-0.2**
PB06	**IPOC Station P**	**2.45**	**305**		**Pn**	**03 20 47.7**	**+0.2**
PB06	**IPOC Station P**	**2.45**	**305**	⇑*i*P	**Pn**	**03 20 48.2**	**+0.7**
PB06				*e*S	**S**	**03 21 21.4**	**0.0**
PB06				IAML		03 21 24.4	
	comp=E,1μm,0.3s						
PB14	**IPOC Station P**	**2.79**	**259**	Pn	**Pn**	**03 20 50.6**	**-0.9**
PB09	**IPOC Station P**	**2.88**	**323**		**Pn**	**03 20 53.4**	**+1.0**
PB09	**IPOC Station P**	**2.88**	**323**	⇑*i*P	**Pn**	**03 20 53.6**	**+1.3**
PB09				*i* S	**S**	**03 21 30.8**	**+0.8**
PB09				IAML		03 21 32.3	
	comp=N,695nm,0.6s						
PB10	**IPOC Station P**	**2.96**	**281**	Pn	**Pn**	**03 20 53.4**	**+0.4**
PB10	**IPOC Station P**	**2.96**	**281**	*e*P	**Pn**	**03 20 53.5**	**+0.4**
PB10				*i* S	**S**	**03 21 30.4**	**-1.0**
PB10				IAML		03 21 37.0	
	comp=E,236nm,0.4s						
PB04	**IPOC Station P**	**3.10**	**305**	Pn	**Pn**	**03 20 55.1**	**+0.2**
PB04	**IPOC Station P**	**3.10**	**305**	⇑*i*P	**Pn**	**03 20 55.5**	**+0.5**
PB04				*i* S	**S**	**03 21 33.9**	**-0.7**
PB04				IAML		03 21 37.1	
	comp=N,575nm,0.2s						
AC02	**Maricunga**	**3.12**	**210**	Pn	**Pn**	**03 20 53.7**	**-1.8**
PB07	**IPOC Station P**	**3.32**	**316**	Pn	**Pn**	**03 20 57.8**	**+0.3**
PB07	**IPOC Station P**	**3.32**	**316**	⇑*i*P	**Pn**	**03 20 58.1**	**+0.6**
PB07				*i* S	**S**	**03 21 38.6**	**-0.7**
AC01	**Pan de Azucar**	**3.54**	**235**	Pn	**Pn**	**03 20 58.1**	**-1.8**
AC01	**Pan de Azucar**	**3.54**	**235**	⇑*i*P	**Pn**	**03 20 58.1**	**-1.8**
PB02	**IPOC Station P**	**3.63**	**320**		**Pn**	**03 21 01.2**	**+0.1**
PB02	**IPOC Station P**	**3.63**	**320**	*e*P	**Pn**	**03 21 01.5**	**+0.4**
PB02				*i* S	**S**	**03 21 45.4**	**-0.5**
PB01	**IPOC Station P**	**3.63**	**327**	Pn	**Pn**	**03 21 00.9**	**-0.3**
PB01	**IPOC Station P**	**3.63**	**327**	*e*P	**Pn**	**03 21 01.4**	**+0.3**
PB01				*i* S	**S**	**03 21 45.5**	**-0.4**
PATCX	**Punta Patache**	**4.17**	**322**		**Pn**	**03 21 08.1**	**+0.3**
PATCX	**Punta Patache**	**4.17**	**322**	*e*P	**Pn**	**03 21 07.9**	**+0.1**
PATCX				*i* S	**S**	**03 21 56.5**	**-1.3**
AC06	**Mina Casimiro**	**4.18**	**219**	Pn	**Pn**	**03 21 05.2**	**-2.6**
PB08	**IPOC Station P**	**4.29**	**337**		**Pn**	**03 21 10.5**	**+0.9**
PB08	**IPOC Station P**	**4.29**	**337**	⇓*i*P	**Pn**	**03 21 10.6**	**+0.9**
PB08				*i* S	**S**	**03 22 00.7**	**-0.4**
TA01	**Diego Aracena**	**4.38**	**323**	Pn	**Pn**	**03 21 10.7**	**+0.3**
TA01	**Diego Aracena**	**4.38**	**323**	*e*P	**Pn**	**03 21 09.6**	**-0.8**
TA01				*i* S	**S**	**03 22 02.0**	**-0.6**
HMBC	**Humberstone**	**4.47**	**328**	*e*P	**Pn**	**03 21 10.7**	**-0.9**
HMBC				*i* S	**S**	**03 22 01.9**	**-3.0**
TA02	**Huaiquique**	**4.60**	**326**	Pn	**Pn**	**03 21 13.4**	**+0.3**
AC04	**Llanos de Chal**	**5.24**	**218**	Pn	**Pn**	**03 21 18.2**	**-2.9**
AC05	**El Transito**	**5.36**	**208**	Pn	**Pn**	**03 21 19.7**	**-3.0**
PB16	**IPOC Station P**	**6.09**	**341**	Pn	**Pn**	**03 21 33.0**	**+0.3**
CO01	**Juntas del Tor**	**6.31**	**202**	Pn	**Pn**	**03 21 32.8**	**-2.2**
LPAZ	**La Paz**	**7.83**	**355**	P	**Pn**	**03 21 55.1**	**-0.1**
	comp=N,16nm,0.3s,baz=148,slow=5.4,SNR=154						
LPAZ				S	**S**	**03 23 23.8**	**-0.2**
	comp=N,1.9nm,0.7s,baz=320,slow=19,SNR=1.6						
LPAZ	**La Paz**	**7.83**	**355**	Pn	**Pn**	**03 21 56.2**	**+1.1**
VA03	**San Esteban**	**9.04**	**197**	Pn	**Pn**	**03 22 08.4**	**-1.9**
CPUP	**Villa Florida**	**9.37**	**106**	P	**Pn**	**03 22 16.5**	**+2.1**
	comp=N,2.1nm,0.7s,baz=280,slow=3.3,SNR=3.6						
SIV	**San Ignacio**	**10.03**	**37**	P	**Pn**	**03 22 20.5**	**-2.7**
	comp=N,2.1nm,0.4s,baz=231,slow=9.3,SNR=14						
TRCB	**Terra Rica**	**13.61**	**87**	Pn	**Pn**	**03 23 08.1**	**-0.3**
TRCB					**P**	**03 23 08.2**	**-2.4**
PLCA	**Paso Flores**	**16.77**	**188**	P	**Pn**	**03 23 53.3**	**+6.7**
	comp=N,2.5nm,0.6s,baz=2.1,slow=10,SNR=10						
BDFB	**Brasilia**	**20.06**	**69**	P	**P**	**03 24 20.4**	**-0.9**
	comp=N,21nm,0.9s,baz=235,slow=10,SNR=25						
BDFB	**Brasilia**	**20.06**	**69**	P	**P**	**03 24 20.2**	**-1.1**
BDFB				IAmb	IAmb	03 24 21.7	
	comp=Z,22nm,1.0s						
CRIN	**San Cristobal**	**41.34**	**330**	P	**P**	**03 27 27.5**	**-1.7**
SNAA	**Sanae**	**59.35**	**161**	P	**P**	**03 29 42.1**	**-1.3**
TOA0	**Torodi Ar. Sit**	**76.95**	**69**	P	**P**	**03 31 34.5**	**+1.0**
TOA0				IAmb	IAmb	03 31 35.7	
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.95**	**69**	P	**P**	**03 31 34.4**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=270,slow=6.6,SNR=16						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**131.35**	**208**	PKP	**PKiKP**	**03 38 55.6**	**+2.8**
	comp=Z,0.3nm,0.8s,baz=162,slow=2.6,SNR=1.5						
MKAR	**Makanchi Array**	**146.85**	**39**	PKPbc	**PKiKP**	**03 39 24.6**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=294,slow=4.4,SNR=4.1						

*DJA **13** 03:30:10.7±1.9, 1˚N±5˚×9˚7E±1˚0, h23km±12km, M4.1/9, mb4.2/1, MLv4.0/9*
*IDC **13** 03:30:11.4±1.6, 1˚.24N×97˚.05E, h0km, mb4.0/9, mbtmp4.0/11, ML3.9/2, MS2.6/2, Error ellipse: s-maj=43.3km s-min=18.4km az=65.0*
*NEIC **13** 03:30:14.8±1.7, 1˚.14N±0˚.09×96˚.97E±0˚.08, h25km±6km, mb4.2/12, Error ellipse: s-maj=12.8km s-min=11.1km az=150.0*

ISC 13 03:30:14.1±0.7, 1˚.16N±0˚.06×96˚.88E±0˚.07, h25km, n43, σ1§30/39, mb4.2/14, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.71**	**78**		**Pb**	**03 30 26.9**	**-0.9**
GSI				Sg	**Sb**	**03 30 36.4**	**-0.9**
GSI	**Gunungsitoli**	**0.71**	**78**	P	**Pb**	**03 30 26.9**	**-0.9**
PBSI	**Pulau Batu**	**1.85**	**131**	P	**Pn**	**03 30 42.4**	**-1.8**
TRSI	**Tarutung**	**2.25**	**67**	P	Pn	03 31 02.0	+12
TRSI				Pg	**Pb**	**03 30 57.6**	**+3.5**
KCSI	**Kotacane, Aceh**	**2.51**	**21**	P	**Pn**	**03 30 51.6**	**-1.8**
RPSI	**Rantau Prapat**	**2.55**	**53**		**Pn**	**03 30 53.1**	**-0.8**
PSI	**Prapat**	**2.61**	**51**	Pn	**Pn**	**03 30 52.3**	**-2.6**
	4.6nm,0.3s,baz=290,slow=6.9,SNR=13						
PSI				LR	LR	03 31 50.4	
	comp=Z,85nm,18.5s,baz=312,slow=42						
	11nm,0.3s						
PSI	**Prapat**	**2.61**	**51**	P	**Pn**	**03 30 53.0**	**-1.8**
PSI				P	**Pn**	**03 30 53.1**	**-1.8**
MNSI	**Mandailing Nat**	**2.72**	**98**	P	**Pn**	**03 30 55.8**	**-0.5**
MLSI	**Meulaboh, Aceh**	**3.12**	**351**	P	**Pn**	**03 30 59.0**	**-2.8**
SISI	**Saibi**	**3.31**	**138**	P	**Pn**	**03 31 02.2**	**-2.2**
KULM	**Kulim**	**5.57**	**42**	Pn	**Pn**	**03 31 34.4**	**-1.0**
KULM	**Kulim**	**5.57**	**42**	P	**Pn**	**03 31 34.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**17.31**	**7**	P	**Pn**	**03 34 13.8**	**-0.4**
	0.6nm,0.3s,baz=200,slow=10,SNR=6.1						
	1.1nm,0.3s						
H08S2	**Diego Garcia H**	**25.85**	**250**	T	T	04 02 42.0	
	baz=71,slow=75,SNR=1730						
H08S3	**Diego Garcia H**	**25.85**	**250**	T	T	04 02 39.8	
	baz=71,slow=75,SNR=2708						
H08S1	**Diego Carcia H**	**25.87**	**250**	T	T	04 02 46.2	
	baz=71,slow=75,SNR=1121						
H01W3	**Cape Leeuwin H**	**39.33**	**157**	T	T	04 19 31.4	
	baz=333,slow=76,SNR=19						
H01W2	**Cape Leeuwin H**	**39.34**	**157**	T	T	04 19 36.1	
	baz=333,slow=76,SNR=29						
H01W1	**Cape Leeuwin H**	**39.34**	**157**	T	T	04 19 33.5	
	baz=333,slow=76,SNR=23						
WRA	**Warramunga Arr**	**42.28**	**122**	P	**P**	**03 38 05.9**	**-0.1**
	0.7nm,0.6s,baz=301,slow=9.1,SNR=10.0						
	0.7nm,0.6s						
WB2	**Warramunga Arr**	**42.30**	**122**	P	**P**	**03 38 05.7**	**-0.4**
WB2				IAmb	IAmb	03 38 38.9	
	comp=Z,8.4nm,1.4s						
WR0	**Warramunga Arr**	**42.46**	**122**	P	**P**	**03 38 06.8**	**-0.7**
WR0				IAmb	IAmb	03 38 19.6	
	comp=Z,9.4nm,1.4s						
ASAR	**Alice Springs**	**43.63**	**127**	P	**P**	**03 38 17.4**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=298,slow=8.0,SNR=6.7						
	comp=Z,0.6nm,0.6s						
TARG	**Taragay, Kyrgy**	**43.90**	**339**	P	**P**	**03 38 18.6**	**-0.6**
DRK	**Karamyk**	**44.48**	**332**	P	**P**	**03 38 24.8**	**+1.1**
KSRS	**Korea Array**	**46.06**	**35**	P	**P**	**03 38 35.3**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=229,slow=10,SNR=5.3						
KSRS				LR	LR	03 58 08.9	
	comp=Z,8.9nm,18.1s,baz=70,slow=37						
	comp=Z,1.6nm,0.8s						
MK31	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 38 46.2**	**+1.3**
MK31				IAmb	IAmb	03 38 46.5	
	comp=Z,4.2nm,1.4s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 38 45.9**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=158,slow=9.4,SNR=12						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**03 38 45.3**	**+0.4**
SONM	**Songino Array**	**47.22**	**9**	P	**P**	**03 38 45.3**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=189,slow=9.2,SNR=6.7						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**47.22**	**9**	P	**P**	**03 38 45.1**	**0.0**
SONM				IAmb	IAmb	03 38 46.3	
	comp=Z,1.7nm,0.9s						
MAKZ	**Makanchi**	**47.29**	**346**	P	**P**	**03 38 44.4**	**-1.1**
MAKZ				IAmb	IAmb	03 38 49.7	
	comp=Z,1.5nm,0.6s						
KK31	**Karatay Array**	**47.95**	**334**	P	**P**	**03 38 50.3**	**-0.4**
KK31				IAmb	IAmb	03 38 56.5	
	comp=Z,1.0nm,0.6s						
KKAR	**Karatay Array**	**47.95**	**334**	P	**P**	**03 38 50.5**	**-0.2**
KURK	**Kurchatov**	**51.75**	**345**	P	**P**	**03 39 19.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.97**	**31**	P	**P**	**03 39 28.1**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=245,slow=7.8,SNR=4.5						
	comp=Z,2.9nm,0.8s						
ZAA0	**Zalesovo Array**	**53.55**	**351**	P	**P**	**03 39 33.3**	**+0.6**
ZALV	**Zalesovo Beam**	**53.55**	**351**	P	**P**	**03 39 33.3**	**+0.6**
	comp=Z,2.5nm,0.4s,baz=181,slow=5.7,SNR=8.9						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**53.57**	**132**	P	**P**	**03 39 33.8**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=337,slow=24,SNR=3.2						
	comp=Z,1.3nm,0.6s						
PAF	**Port-aux-Franc**	**55.31**	**201**	P	**P**	**03 39 46.1**	**+0.6**
KLR	**Kul'dur**	**56.43**	**27**	P	**P**	**03 39 53.4**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=272,slow=6.7,SNR=7.3						
	comp=Z,1.7nm,0.7s						
ABKAR	**Akbulak array**	**57.40**	**332**	P	**P**	**03 40 01.4**	**+0.9**

*IDC **13** 03:55:09.9±0.5, 25˚.44N×109˚.76W, h0km, mb4.5/24, mbtmp4.5/31, ML3.8/7, MS4.7/70, Error ellipse: s-maj=18.2km s-min=10.6km az=64.0*
*BJI **13** 03:55:10.0±0.0, 25˚.60N×109˚.69W, h9km, mb5.0/10, mB5.6/13, Ms5.1/8, Ms7 4.8/8*
*MEX **13** 03:55:11.2±0.6, 25˚.52N×109˚.80W, h10km, MD5.3*
*NEIC **13** 03:55:12.5±2.0, 25˚.48N±0˚.04×109˚.74W±0˚.06, h24km±4km, mb5.1/313, Mww5.3, Md5.3/62(MEX), Error ellipse: s-maj=7.9km s-min=5.4km az=116.0*
*MOS **13** 03:55:12.6±1.3, 25˚.74N×109˚.57W, h19km, mb5.3/28, MS5.0/5, Error ellipse: s-maj=7.8km s-min=4.5km az=96.9*
*GCMT **13** 03:55:12.5±0.1, 25˚.64N±0˚.01×109˚.79W±0˚.01, h16km, MW5.3/137, Moment Tension Solution. s99,c149; s137,c261; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.21±.02; $M_{\theta\theta}$=0.98±.01; $M_{\phi\phi}$1.19±.02; $M_{r\theta}$=0.11±.04; $M_{r\phi}$=0.32±.01; $M_{\theta\phi}$0.31±.04; Best double couple: $M_0$1.16800×10^{17} NP1:ϕ_s307.00000°, δ85.00000°, λ168.00000°. NP2:ϕ_s38.00000°, δ78.00000°, λ5.00000°. Principal axes: T 1.3020, Plg12.0000°, Azm262.0000°; N -0.2720, Plg77.0000°, Azm105.0000°; P -1.0350, Plg5.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **13** 03:55:16, 25˚.51N×109˚.80W, h18km, Moment Tensor Solution. Duration: 6§0 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.02; $M_{\theta\theta}$=0.99; $M_{\phi\phi}$1.00; $M_{r\theta}$0.03; $M_{\theta\phi}$=0.21; $M_{r\phi}$0.31; Fault plane solution: $M_0$1.06000×10^{17} NP1: ϕ_s308.00000°, δ77.00000°, λ172.00000°. NP2: ϕ_s40.00000°, δ82.00000°, λ13.00000°. Principal axes: T 1.1062, Plg15.0000°, Azm264.0000°; N -0.0938, Plg74.0000°, Azm70.0000°; P -1.0124, Plg4.0000°, Azm173.0000°;*

ISC 13 03:55:10.5±0.8, 25˚.44N±0˚.03×109˚.74W±0˚.03, h5km±4km, n977, σ1§96/920, mb5.2/152, MS4.9/89, 21C-22D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.65**	**75**		**Pg**	**03 55 22.9**	**-0.2**
TSIG					**Sg**	**03 55 32.3**	**+0.9**
TSIG	**Topolobambo**	**0.65**	**75**	⇑*i*P	**Pg**	**03 55 22.9**	**-0.2**
TSIG				*i* S	**Sg**	**03 55 32.3**	**+0.9**
LPIG	**La Paz**	**1.43**	**202**	Pn	**Pn**	**03 55 35.5**	**-1.5**
	30nm,0.3s,baz=4.5,slow=1.9,SNR=178						
LPIG				Sn	**Sb**	**03 55 53.6**	**-2.3**
	216nm,0.3s,baz=129,slow=14,SNR=11						
LPIG	**La Paz**	**1.43**	**202**		**Pn**	**03 55 35.2**	**-1.8**
LPIG					**Sb**	**03 55 53.1**	**-2.9**
LPIG	**La Paz**	**1.43**	**202**	⇓*i*P	**Pn**	**03 55 35.2**	**-1.8**
LPIG				*e*S	**Sb**	**03 55 53.1**	**-2.9**
SLBS	**Sierra La Lagu**	**1.75**	**186**	Pn	**Pn**	**03 55 40.5**	**-1.1**
SLBS	**Sierra La Lagu**	**1.75**	**186**	⇑*i*P	**Pn**	**03 55 39.0**	**-2.5**
CSIG	**Choix**	**1.85**	**41**		**Pn**	**03 55 39.1**	**-3.9**
CSIG					**Sn**	**03 56 02.2**	**-4.6**
CSIG	**Choix**	**1.85**	**41**	⇑*i*P	**Pn**	**03 55 39.1**	**-3.9**
CSIG				*i* S	**Sn**	**03 56 02.2**	**-4.6**
SSIG	**Sanalona**	**2.43**	**104**	⇑*e*P	**Pn**	**03 55 48.9**	**-2.0**
SSIG				*e*S	**Sn**	**03 56 18.8**	**-2.2**
GUYB	**Guaymas**	**2.66**	**338**	⇓*i*P	Pn	03 55 48.3	-5.6
SRIG	**Santa Rosalia**	**2.93**	**310**	*e*P	Pn	03 55

HTMS	Hat Mesa	8.81	36		Pn	03 57 16.7 -2.0
CRNM	Carthage	8.88	16		Pn	03 57 17.8 -1.8
Y14A	Wickenburg	8.94	342		Pn	03 57 18.9 -1.5
Y22D	IRIS PASSCAL I	8.95	15	P	Pn	03 57 20.9 +0.3
	baz=197					
Y22F	Passcal Instru	8.95	15	P	Pn	03 57 21.1 +0.5
	baz=197					
YUH	Yuha Desert	9.00	324		Pn	03 57 19.4 -1.7
LENM	Lemitar	9.03	15		Pn	03 57 18.4 -3.2
X18A	Snowflake	9.07	359		Pn	03 57 19.9 -2.3
BNM	Barren Site	9.10	17	Pn	Pn	03 57 21.0 -1.7
IKP	In-Ko-Pah, Jac	9.10	324	P	Pn	03 57 22.0 -0.5
	baz=141,SNR=9.5					
CBX	Cerro Bola	9.15	320		Pn	03 57 22.9 -0.5
CBX	Cerro Bola	9.15	320	eP	Pn	03 57 23.7 +0.4
SWSC	Sam W. Stewart	9.17	326	P	Pn	03 57 23.6 +0.2
	baz=143					
TJIG	Tijuana	9.25	321	eP	Pn	03 57 25.5 +1.0
TJIG				eS	Sn	03 59 09.8 +0.8
MMIG	Aquila	9.26	139	eS	Sn	03 59 10.6 +1.3
BLYC	Blythe	9.27	334	Pn	Pn	03 57 23.9 -1.0
TKX	Tecate	9.31	321		Pn	03 57 24.3 -1.1
LNIG	Linares	9.32	91	eP	Pn	03 57 27.5 +2.0
LNIG				eS	Sn	03 59 10.9 +0.1
BAR	Barrett	9.43	322	Pn	Pn	03 57 25.6 -1.4
MONP2	Monument Peak	9.45	323	P	Pn	03 57 28.4 +0.8
	baz=140,SNR=18					
BC3	Big Chuckawall	9.58	330	P	Pn	03 57 28.3 -0.9
	baz=147,SNR=27					
RPIG	Rio Verde	9.61	110		Pn	03 57 30.5 +0.8
RPIG	Rio Verde	9.61	110⇑	eP	Pn	03 57 30.5 +0.8
PDMCI	Parker Dam,Lak	9.63	338	P	Pn	03 57 29.1 -0.6
	baz=156					
W18A	Petrified Fore	9.65	0		Pn	03 57 28.4 -1.8
W18A	Petrified Fore	9.65	0	P	Pn	03 57 31.1 +0.9
	baz=180,SNR=46					
833A	Chaparral WMA,	9.67	70	Pn	Pn	03 57 29.1 -1.2
833A	Chaparral WMA,	9.67	70	P	Pn	03 57 29.8 -0.6
	baz=256,SNR=8.5					
833A	Chaparral WMA,	9.67	70	P	Pn	03 57 29.7 -0.6
	baz=256,SNR=8.5					
JRQG	Juriquilla Cam	9.76	117	eP	Pn	03 57 34.1 +2.2
JRQG				eS	Sn	03 59 17.3 -4.7
109C	Camp Elliot, M	9.83	321	Pn	Pn	03 57 31.5 -0.9
109C	Camp Elliot, M	9.83	321	P	Pn	03 57 31.2 -1.2
	baz=137,SNR=7.4					
IRM	Iron Mountain	9.88	333	P	Pn	03 57 32.5 -0.7
	baz=150,SNR=25					
ANMO	Albuquerque	9.89	16	Pn	Pn	03 57 34.4 +0.8
	0.2nm,0.3s,baz=200,slow=13,SNR=47					
ANMO				Lg	Lg	04 00 16.7
	2.0nm,0.3s,baz=99,slow=18,SNR=3.5					
ANMO				LR	LR	04 00 57.0
	comp=Z,9μm,18.1s,baz=192,slow=35					
	21nm,1.0s					
ANMO	Albuquerque	9.89	16	Pn	Pn	03 57 32.7 -0.9
ANMO	Albuquerque	9.89	16	d iP	Pn	03 57 33.9 +0.3
ANMO	Albuquerque	9.89	16	P	Pn	03 57 32.7 -0.9
	baz=198,SNR=39					
ANMO				S	Sn	03 59 29.0 +3.9
	baz=198					
ANMO	Albuquerque	9.89	16	P	Pn	03 57 34.3 +0.8
	baz=198					
GTIG	Gomez Farias	9.93	102⇑	eP	Pn	03 57 35.6 +1.7
TPFO	Pinon Flats	10.02	326	P	Pn	03 57 35.6 +0.3
	baz=143,SNR=10.0					
PFO	Pinyon Flats O	10.03	326	Pn	Pn	03 57 36.3 +1.0
	0.2nm,0.3s,baz=134,slow=12,SNR=16					
PFO				Lg	Lg	04 00 34.8
	0.1nm,0.3s,baz=265,slow=3.0,SNR=3.7					
PFO				LR	LR	04 00 40.9
	comp=Z,2μm,21.9s,baz=155,slow=33					
	15nm,1.0s					
PFO	Pinyon Flats O	10.03	326	Pn	Pn	03 57 34.6 -0.8
PFO	Pinyon Flats O	10.03	326	c iP	Pn	03 57 36.8 +1.4
PFO	Pinyon Flats O	10.03	326	P	Pn	03 57 36.0 +0.6
	baz=143,SNR=10					
JCT	Junction City	10.12	58	Pn	Pn	03 57 36.0 -0.5
JCT	Junction City	10.12	58	P	Pn	03 57 36.0 -0.5
JCT	Junction City	10.12	58	P	Pn	03 57 37.6 +1.1
	baz=243					
BELC	Belle Mtn. Jos	10.12	329	P	Pn	03 57 36.7 +0.1
	baz=146,SNR=18					
WUAZ	Wupatki	10.15	352	Pn	Pn	03 57 35.2 -1.8
WUAZ	Wupatki	10.15	352	P	Pn	03 57 38.2 +1.2
	baz=172,SNR=28					
NEE2	Needles Airpor	10.21	337	P	Pn	03 57 38.2 +0.4
	baz=154					
W13A	Hualapai Mount	10.28	341		Pn	03 57 37.6 -1.3
MURC	Murrieta	10.41	323	P	Pn	03 57 40.9 +0.4
	baz=140,SNR=13					
MSTX	Muleshoe	10.44	34	Pn	Pn	03 57 40.9 -0.1
MSTX	Muleshoe	10.44	34	P	Pn	03 57 41.6 +0.7
	baz=218,SNR=5.3					
MSTX	Muleshoe	10.44	34	P	Pn	03 57 41.7 +0.8
	baz=218,SNR=5.3					
ELS	Elsinore Mount	10.57	323	Pn	Pn	03 57 42.6 -0.1
GMRC	Granite Mounta	10.63	333	P	Pn	03 57 44.5 +0.8
	baz=150,SNR=7.7					
SCI2	San Clemente I	10.76	316	P	Pn	03 57 46.3 +1.1
	baz=132					
BBRC	Big Bear Solar	10.78	326	P	Pn	03 57 46.9 +1.2
	baz=143,SNR=16					
ZIIG	Zihuatanejo	10.95	134		Pn	03 57 49.2 +1.4
ZIIG					Sn	03 59 49.9 -0.8
ZIIG	Zihuatanejo	10.95	134	eP	Pn	03 57 49.2 +1.4
ZIIG				eS	Sn	03 59 49.9 -0.8
CIS	Catalina Islan	10.96	318	P	Pn	03 57 48.7 +0.6
	baz=134					
HEC	Hector,Ludlow	10.96	330	P	Pn	03 57 49.5 +1.4
	baz=147					
FMP	Fort Macarthur	11.11	320	P	Pn	03 57 51.5 +1.5
	baz=136					
BFSC	Mount Baldy Ra	11.14	324	P	Pn	03 57 51.7 +1.1
	baz=140,SNR=14					
V12A	Nelson	11.16	338	Pn	Pn	03 57 49.9 -0.9
U15A	North Rim	11.18	349		Pn	03 57 50.7 -0.5
TUQ	Turquoise Moun	11.30	333	P	Pn	03 57 53.5 +0.7
	baz=150,SNR=19					
RRX	Edison Barstow	11.31	328	P	Pn	03 57 54.3 +1.6
	baz=144					
ABTX	Abilene, Hawle	11.37	49	Pn	Pn	03 57 51.4 -2.2
ABTX	Abilene, Hawle	11.37	49	P	Pn	03 57 54.4 +0.8
	baz=234,SNR=11					
ABTX	Abilene, Hawle	11.37	49	P	Pn	03 57 54.0 +0.4
	baz=234,SNR=11					
PASC	Pasadena Art C	11.38	322		Pn	03 57 51.7 -2.1
DECC	Green Verdugo	11.52	322	P	Pn	03 57 55.7 0.0
	baz=138					
SNCC	San Nicolas Is	11.55	315		Pn	03 57 55.5 -0.6
SNCC	San Nicolas Is	11.55	315	P	Pn	03 57 56.1 0.0
	baz=130					
GSC	Goldstone, Bar	11.57	330		Pn	03 57 56.5 +0.1
GSC	Goldstone, Bar	11.57	330	P	Pn	03 57 56.5 +0.1
GSC	Goldstone, Bar	11.57	330	P	Pn	03 57 57.0 +0.6
	baz=146,SNR=17					
AMTX	Amarillo	11.71	35	Pn	Pn	03 57 57.2 -1.1
AMTX	Amarillo	11.71	35	P	Pn	03 57 58.6 +0.2
	baz=219					
AMTX	Amarillo	11.71	35	P	Pn	03 57 58.9 +0.6
	baz=219					
MVCO	Mesa Verde	11.79	5	Pn	Pn	03 57 58.7 -0.8
MVCO	Mesa Verde	11.79	5	P	Pn	03 57 59.9 +0.3
	baz=186,SNR=40					
EDW2	Edwards Air Fo	11.81	325	P	Pn	03 58 00.5 +0.8
	baz=141,SNR=17					
KNB	Kanab	11.84	348		Pn	03 57 59.9 -0.4
KNB	Kanab	11.84	348	P	Pn	03 57 59.9 -0.4
SHOC	Shoshone, Teco	11.85	333	P	Pn	03 58 01.0 +0.8
	baz=150,SNR=11					
435B	Jarrell	11.97	61	Pn	Pn	03 58 01.4 -0.5
435B	Jarrell	11.97	61	P	Pn	03 58 02.0 +0.1
	baz=247,SNR=7.4					
435B	Jarrell	11.97	61	P	Pn	03 58 01.7 -0.1
	baz=247					
SHPR	Sheep Range	11.97	338	Pn	Pn	03 58 00.9 -1.1
OSI	Ósito Audit: C	12.01	322	P	Pn	03 58 01.4 -1.0
	baz=137					
CCAC	Calif City Air	12.04	326		Pn	03 58 01.1 -1.6
SCZ2	Santa Cruz Isl	12.11	317	P	Pn	03 58 03.1 -0.6
	baz=132					
LRMC	Laurel Mtn Rad	12.13	328	P	Pn	03 58 06.1 +2.0
	baz=144,SNR=33					
PKCU	Pink Cliffs	12.17	350		Pn	03 58 02.6 -2.3
GWY	Greenwater Val	12.26	333	Pn	Pn	03 58 03.6 -2.2
CXUV	Coxquihui	12.36	113	eP	Pn	03 58 11.1 +3.8
ARVC	Arvin	12.45	323	P	Pn	03 58 09.0 +0.7
	baz=139,SNR=15					
SZCU	Shurtz Canyon	12.45	348		Pn	03 58 06.9 -1.7
SBC	Santa Barbara	12.46	318	P	Pn	03 58 08.5 0.0
	baz=134					
CCUT	Cedar City	12.47	347	Pn	Pn	03 58 07.8 -1.1
MPMC	Manual Prospec	12.51	330	P	Pn	03 58 11.2 +1.9
	baz=146,SNR=56					
S22A	4UR Ranch, Cre	12.52	11	Pn	Pn	03 58 11.1 +1.4
S22A	4UR Ranch, Cre	12.52	11	P	Pn	03 58 10.1 +0.5
	baz=192,SNR=11					
T25A	Trinidad	12.52	20	Pn	Pn	03 58 08.1 -1.4
T25A	Trinidad	12.52	20	P	Pn	03 58 10.3 +0.8
	baz=203,SNR=15					
FURC	Furnace Creek,	12.58	333	P	Pn	03 58 11.0 +0.9
	baz=149,SNR=30					
WHTX	Lake Whitney,	12.60	56	P	Pn	03 58 12.1 +1.7
	baz=242					
BCW	Bitter Crk WRg	12.63	321		Pn	03 58 10.1 -0.9
ISA	Isabella, Lake	12.67	326	Pn	Pn	03 58 12.3 +0.9
ISA	Isabella, Lake	12.67	326	P	Pn	03 58 12.3 +0.9
ISA	Isabella, Lake	12.67	326	P	Pn	03 58 12.8 +1.4
	baz=141,SNR=28					
PV13	Radium Mtn., P	12.71	3		Pn	03 58 11.4 -0.7
MTPU	Mount Pierson	12.74	351		Pn	03 58 14.5 +1.8
TPNV	Topopah Spring	12.76	336		Pn	03 58 13.8 +1.1
TPNV	Topopah Spring	12.76	336	P	Pn	03 58 13.8 +1.1
TPNV	Topopah Spring	12.76	336	P	Pn	03 58 14.7 +2.0
	baz=152,SNR=77					
WCT	Wildcat Mounta	12.76	334		Pn	03 58 12.4 -0.3
PRN	Pahroc Range	12.77	340	Pn	Pn	03 58 12.1 -0.7
SDCO	Great Sand Dun	12.79	15	Pn	Pn	03 58 12.7 -0.6
SDCO	Great Sand Dun	12.79	15	P	Pn	03 58 14.9 +1.6
	baz=198,SNR=33					
SDCO				S	Sn	04 00 41.3 +5.1
	baz=198					
SDCO	Great Sand Dun	12.79	15	P	Pn	03 58 14.2 +0.9
	baz=198,SNR=33					
PKM	Mcpherson Peak	12.83	320	P	Pn	03 58 14.3 +0.6
	baz=135,SNR=21					
PV15	Paradox Valley	12.91	4		Pn	03 58 14.0 -0.9
PV10	Paradox Valley	12.92	2		Pn	03 58 13.2 -1.8
PV23	Carpenter Ridg	12.99	3		Pn	03 58 14.7 -1.3
PV07	Paradox Valley	13.00	4		Pn	03 58 15.0 -1.1
TLIG	Tlapa	13.01	125		Pn	03 58 15.8 -0.4
CWC	Cottonwood Cre	13.09	329	P	Pn	03 58 18.6 +1.3
	baz=145					
HKT	Hockley	13.11	67		Pn	03 58 15.5 -1.8
HKT	Hockley	13.11	67	c iP	Pn	03 58 15.8 -1.6
HKT	Hockley	13.11	67	P	Pn	03 58 16.7 -0.7
	baz=254					
HKT				S	Sn	04 00 44.9 +1.4
	baz=254					
VES	Vestal, Richgr	13.12	324	P	Pn	03 58 18.8 +1.3
	baz=140,SNR=26					
MVU	Marysvale	13.20	351		Pn	03 58 17.8 -1.0
MSU	Marysvale	13.20	352	Pn	Pn	03 58 19.1 +0.3
MSU	Marysvale	13.20	352	P	Pn	03 58 19.1 +0.3
S11A	Rachel	13.20	339		Pn	03 58 19.5 +0.7
SMMC	Simmler	13.23	320	P	Pn	03 58 19.4 +0.3
	baz=135					
GRAC	Grapevine Rang	13.24	332		Pn	03 58 18.7 -0.5
GRAC	Grapevine Rang	13.24	332	P	Pn	03 58 20.6 +1.4
	baz=149,SNR=38					
WMOK	Wichita Mounta	13.25	43	S	Sn	04 00 54.1 +7.0
	baz=229					
WMOK	Wichita Mounta	13.25	43	P	Pn	03 58 19.5 +0.1
	baz=229					
TCRU	Three Creeks R	13.34	351		Pn	03 58 20.7 0.0
JAUV	Jalcomulco	13.39	114	eP	Pn	03 58 25.4 +4.0
GMN	Gold Mountain	13.45	333		Pn	03 58 22.7 +0.4
Q16A	Castle Valley	13.50	355		Pn	03 58 21.8 -1.1
PSUT	Pine Spring	13.52	346		Pn	03 58 22.2 -0.9
VOG	Valley Oaks Go	13.64	325	P	Pn	03 58 25.4 +0.8
	baz=140					
TIN	Tinemaha, Big	13.66	330	P	Pn	03 58 26.1 +1.0
	baz=146					
R11A	Troy Canyon, C	13.80	340		Pn	03 58 26.6 -0.4
R11A	Troy Canyon, C	13.80	340	P	Pn	03 58 28.0 +1.1
	baz=158,SNR=44					
MZP	Montezuma Peak	13.85	334		Pn	03 58 26.8 -0.9
237A	Washetta, Mont	13.86	59		Pn	03 58 24.1 -3.5
TMUT	Trail Mountain	13.88	355		Pn	03 58 25.8 -2.4
SMCO	Snowmass	13.90	9		Pn	03 58 26.6 -2.0
P17A	Butcher Ranch,	14.02	357		Pn	03 58 27.1 -2.9
Q24A	Divide	14.03	15		Pn	03 58 29.3 -1.0
Q24A	Divide	14.03	15	P	Pn	03 58 30.6 +0.3
	baz=198					
TPH	Tonopah	14.11	335	P	Pn	03 58 31.3 0.0
TPH	Tonopah	14.11	335	P	Pn	03 58 31.3 0.0
P18A	Preston Nutter	14.16	358		Pn	03 58 30.2 -1.8
U32A	Winter Ranch,	14.27	38		Pn	03 58 31.6 -1.6
PMPB	Monarch Peak	14.33	321	Pn	Pn	03 58 33.4 -0.8
MLAC	Mammoth, Mammo	14.41	330	P	Pn	03 58 37.1 +1.7
	baz=145					
OMMB	Old Mammoth Mi	14.47	329	Pn	Pn	03 58 34.2 -2.1
MDPB	Devils Postpil	14.53	329	Pn	Pn	03 58 35.2 -1.8
NLU	North Lily Min	14.61	353	Pn	Pn	03 58 37.4 -0.7
MPU	Maple Canyon	14.63	354	Pn	Pn	03 58 37.5 -0.8
NATX	Nacogdoches	14.66	61	Pn	Pn	03 58 37.3 -1.3
NATX	Nacogdoches	14.66	61	P	Pn	03 58 39.3 +0.7
	baz=249					
OK025	Westminster Rd	14.70	44	Pn	Pn	03 58 39.0 -0.1
O20A	White River Ci	14.71	5		Pn	03 58 38.1 -1.3
O20A	White River Ci	14.71	5	P	Pn	03 58 39.1 -0.4
	baz=186,SNR=16					
BBGB	Big Mountain B	14.73	322	Pn	Pn	03 58 38.6 -1.0
ISCO	Idaho Springs	14.74	13	Pn	Pn	03 58 38.8 -1.1
ISCO	Idaho Springs	14.74	13	P	Pn	03 58 38.8 -1.1
ISCO	Idaho Springs	14.74	13	P	Pn	03 58 40.9 +1.0
	baz=195					
ISCO				S	Sn	04 01 28.9 +5.2
	baz=195					
ISCO	Idaho Springs	14.74	13	P	Pn	03 58 40.0 +0.1
	baz=195					
Q09A	Carvers	14.76	337	Pn	Pn	03 58 39.3 -0.9
OK029	Liberty Lake	14.77	43		Pn	03 58 39.4 -0.7
LHV	Little Huntoon	14.78	332	Pn	Pn	03 58 39.1 -1.1
NV11	Mina Array Sit	14.79	333		Pn	03 58 39.0 -1.4
KSCO	Kaye Shedlock'	14.80	22	Pn	Pn	03 58 39.6 -1.1
KSCO	Kaye Shedlock'	14.80	22	P	Pn	03 58 40.1 -0.6
	baz=206					
NVAR	Mina Array Bea	14.85	333	Pn	Pn	03 58 42.5 +1.2
	0.1nm,0.3s,baz=151,slow=13,SNR=23					
NVAR				LR	LR	04 03 43.6
	comp=Z,2μm,18.6s,baz=150,slow=35					
	3.2nm,0.8s					
NVAR	Mina Array Bea	14.85	333	Pn	Pn	03 58 40.2 -1.1
DUG	Dugway, Tooele	14.94	351		Pn	03 58 42.0 -0.6
DUG	Dugway, Tooele	14.94	351	P	Pn	03 58 42.0 -0.6
DUG	Dugway, Tooele	14.94	351	P	Pn	03 58 43.2 +0.7
	baz=169,SNR=23					
OK032	Salt Plains WL	15.01	38	Pn	Pn	03 58 42.5 -0.8
Z38A	Mt. Pleasant	15.03	55	Pn	Pn	03 58 41.2 -2.4
SAO	San Andreas Ge	15.09	321	Pn	Pn	03 58 43.3 -1.1
SAO	San Andreas Ge	15.09	321	P	Pn	03 58 43.3 -1.1
SAO				pmax	pmax	
	comp=Z,11nm,1.0s					
RDMU	Red Mountain	15.10	0	Pn	Pn	03 58 41.6 -3.0
RYN	Ryan	15.11	333	Pn	Pn	03 58 44.2 -0.5
JLU	Jordanelle	15.19	355	Pn	Pn	03 58 45.1 -0.8
OK031	S. Brethren Rd	15.25	44		Pn	03 58 46.0 -0.5
OK031				IAmb	IAmb	03 58 53.5
	comp=Z,118nm,1.0s					
KVN	Kaiserville	15.30	335	Pn	Pn	03 58 46.3 -1.0
KVN	Kaiserville	15.30	335	P	Pn	03 58 46.3 -1.0
KVN				pmax	pmax	
	comp=Z,28nm,1.6s					
KAN10	Anthony SW Sta	15.31	38	Pn	Pn	03 58 46.2 -1.1
CTU	Camp Tracy	15.31	354		Pn	03 58 46.8 -0.6
OK034	N. Norfolk Rd.	15.36	44	Pn	Pn	03 58 47.8 -0.2
OK034				IAmb	IAmb	03 58 54.2
	comp=Z,76nm,0.9s					
WAKR	Walker	15.40	330	Pn	Pn	03 58 47.9 -0.7
X37A	Clayton	15.41	50		Pn	03 58 48.2 -0.5
X37A				IAmb	IAmb	03 58 55.1
	comp=Z,107nm,1.1s					
X37A	Clayton	15.41	50	P	Pn	03 58 47.5 -1.2
	baz=238					
CMB	Columbia Colle	15.47	327	Pn	Pn	03 58 48.9 -0.6
CMB	Columbia Colle	15.47	327	P	Pn	03 58 48.9 -0.6
CMB				pmax	pmax	
	comp=Z,57nm,1.4s					
KAN06	Argonia West S	15.53	38	Pn	Pn	03 58 49.4 -0.7
KAN09	Caldwell North	15.58	39	Pn	Pn	03 58 50.6 -0.3
KAN09				IAmb	IAmb	03 58 57.2
	comp=Z,156nm,1.6s					
KS20	Mayfield South	15.69	39	Pn	Pn	03 58 51.2 -1.0
BGU	Big Grassy Mou	15.69	351	Pn	Pn	03 58 51.6 -0.8
TCUT	Toone Canyon	15.70	355	P	Pn	03 58 51.9 -0.8
YERR	Yerington	15.71	332	Pn	Pn	03 58 51.0 -1.7
N23A	Red Feather La	15.74	11	Pn	Pn	03 58 51.9 -1.3
N23A	Red Feather La	15.74	11	P	Pn	03 58 53.3 +0.2
	baz=193					
BRIGG	Briggsdale	15.77	15	Pn	Pn	03 58 52.5 -0.9
CBKS	Cedar Bluff	15.79	30	Pn	Pn	03 58 53.3 -0.2
CBKS				IAmb	IAmb	03 59 00.7
	comp=Z,111nm,1.4s					
CBKS	Cedar Bluff	15.79	30	P	Pn	03 58 53.3 -0.2
CBKS				pmax	pmax	
	comp=Z,111nm,1.4s					
CBKS	Cedar Bluff	15.79	30	P	Pn	03 58 53.4 -0.1
	baz=215,SNR=30					
CBKS				S	S	04 02 03.8 0.0
	baz=215					
CBKS	Cedar Bluff	15.79	30	P	Pn	03 58 53.3 -0.2
	baz=215,SNR=30					
TUL1	Leonard	15.89	46	Pn	Pn	03 58 54.7 -0.2
TUL1	Leonard	15.89	46	P	Pn	03 58 55.4 +0.6
	baz=233,SNR=20					
TUL1	Leonard	15.89	46	P	Pn	03 58 54.8 0.0
	baz=233,SNR=20					
ELK	Elko	15.94	345	Pn	Pn	03 58 56.0 +0.2
	comp=Z,0.1nm,0.3s,baz=187,slow=11,SNR=20					
ELK				Lg	Lg	04 03 35.4
	baz=214,slow=16,SNR=2.5					
ELK				LR	LR	04 05 04.4
	comp=Z,6μm,18.1s,baz=170,slow=37					
	comp=Z,24nm,1.0s					
ELK	Elko	15.94	345	Pn	Pn	03 58 55.0 -0.8
ELK	Elko	15.94	345	P	Pn	03 58 55.0 -0.8
ELK				pmax	pmax	
	comp=Z,45nm,1.1s					
PNTR	Pine Nut	15.95	331	Pn	Pn	03 58 55.7 -0.2
PNTR				IAmb	IAmb	03 59 02.0
	comp=Z,200nm,1.2s					
R32A	Long Quarter,	15.96	33	Pn	Pn	03 58 55.3 -0.4
SPUT	South Promonto	15.99	353	Pn	Pn	03 58 55.9 -0.5
T35B	Sooner Cattle	16.08	41	P	Pn	03 58 59.0 +1.7
	baz=228					
T35B				S	Sn	04 02 02.1 +6.2
	baz=228					
EMB	Emerald Bay	16.08	330	Pn	Pn	03 58 55.7 -1.9
EMB				IAmb	IAmb	03 59 03.6
	comp=Z,111nm,1.2s					
CMIG	Matias Romero	16.13	118	Pn	P	03 59 00.1 -1.3
	comp=Z,0.6nm,0.3s,baz=309,slow=15,SNR=9.8					
CMIG				LR	LR	04 05 14.3
	comp=Z,5μm,20.3s,baz=282,slow=37					
	comp=Z,21nm,1.0s					
VCNR	Virginia City	16.14	331	Pn	Pn	03 58 58.0 -0.3
HWUT	Hardware Ranch	16.20	355		Pn	03 58 58.2 -0.9
BMN	Battle Mountai	16.21	339	P	Pn	03 58 57.6 -1.5
BMN	Battle Mountai	16.21	339	P	Pn	03 58 57.6 -1.5
BMN				pmax	pmax	
	comp=Z,71nm,1.2s					
PHWY	Pilot Hill	16.22	12	Pn	Pn	03 58 58.5 -0.9
MPK	Martis Peak	16.31	330	IAmb	IAmb	03 59 06.8
	comp=Z,237nm,1.4s					
PAHR	Pah Rah Range	16.37	333	P	P	03 59 02.8 -1.4
WLAR	White Oak Lake	16.62	56	IAmb	IAmb	03 59 12.0
	comp=Z,269nm,1.2s					
MIAR	Mount Ida	16.67	53		Pn	03 59 05.9 +1.0
MIAR	Mount Ida	16.67	53	P	Pn	03 59 05.9 +1.0
MIAR				pmax	pmax	
	comp=Z,38nm,1.0s					
MIAR	Mount Ida	16.67	53	P	P	03 59 07.2 -0.1
	baz=242,SNR=17					
MIAR				S	Sn	04 02 12.1 +1.8
	baz=242					
MIAR	Mount Ida	16.67	53	P	Pn	03 59 03.5 -1.3
	baz=242,SNR=17					
OGNE	Ogallala	16.75	21	P	Pn	03 59 06.2 +0.3
	baz=205,SNR=6.5					
OGNE	Ogallala	16.75	21	P	Pn	03 59 04.5 -1.4
	baz=205,SNR=6.5					
MCCM	Marconi Confer	16.87	322	Pn	Pn	03 59 05.7 -1.7
BEKR	Beckworth	16.92	331	Pn	Pn	03 59 07.3 -0.9
BEKR				IAmb	IAmb	03 59 16.2
	comp=Z,210nm,1.3s					
U38A	Gravette	17.11	46	P	Pn	03 59 09.5 -1.0
	baz=235,SNR=24					
U38A				S	Sn	04 02 20.3 -0.8
	baz=235					
BW06	Boulder Array	17.29	0	Pn	Pn	03 59 11.1 -1.7
BW06	Boulder Array	17.29	0	P	Pn	03 59 11.6 -1.3
	baz=181,SNR=35					
PDAR	Pinedale Array	17.29	0	P	Pn	03 59 11.6 -1.3
	comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=62					
PDAR				Lg	Lg	04 04 16.1
	comp=Z,0.1nm,0.3s,baz=173,slow=26,SNR=3.5					
PDAR				LR	LR	04 06 08.5
	comp=Z,6μm,19.7s,baz=186,slow=38					
	comp=Z,18nm,0.9s					
GDXM	Geysers	17.30	324	Pn	Pn	03 59 11.7 -1.2
AHID	Auburn Hatcher	17.32	357	Pn	Pn	03 59 11.9 -1.4
K22A	Casper	17.38	8	IAmb	IAmb	03 59 21.8
	comp=Z,201nm,1.9s					
K22A	Casper	17.38	8	P	Pn	03 59 13.5 -0.4
	baz=190,SNR=13					
K22A				S	Sn	04 02 24.3 -3.3
	baz=190					
K22A	Casper	17.38	8	P	Pn	03 59 12.7 -1.1
	baz=190,SNR=13					
KSU1	Kansas State U	17.55	36		Pn	03 59 14.8 -1.0
KSU

BGNE	Belgrade	18.61	28	IAmb	IAmb	03 59 38.5	
	comp=Z,124nm,1.1s						
BGNE	Belgrade	18.61	28	P	Pn	03 59 29.7	+0.8
	baz=215						
BGNE				S	S	04 03 01.9	+0.7
	baz=215						
BGNE	Belgrade	18.61	28	P	Pn	03 59 29.5	+0.6
	baz=215						
MFID	Camas Ranch	18.62	346	P	P	03 59 28.6	-0.2
MFID				IAmb	IAmb	03 59 36.8	
	comp=Z,219nm,1.7s						
346A	Big Creek Wild	18.78	67	P	P	03 59 30.4	-0.2
346A	Big Creek Wild	18.78	67	P	P	03 59 30.7	+0.1
	baz=257						
KMRM	Mail Ridge	18.81	325		P	03 59 29.0	-2.0
KMRM				IAmb	IAmb	03 59 39.7	
	comp=Z,156nm,1.2s						
H17A	Grant Village	18.93	358	P	P	03 59 32.5	0.0
	baz=178						
YFT	Old Faithful	18.99	358	IAmb	IAmb	03 59 42.7	
	comp=Z,136nm,1.7s						
BCYI	Bear Canyon	19.07	352	P	P	03 59 32.9	-1.1
LCAR	Lake Charles	19.14	52	IAmb	IAmb	03 59 41.8	
	comp=Z,232nm,1.6s						
RSSD	Black Hills	19.21	13	P	P	03 59 35.2	-0.3
RSSD	Black Hills	19.21	13	P	P	03 59 35.2	-0.3
RSSD				pmax	pmax		
	comp=Z,18nm,1.1s						
RSSD	Black Hills	19.21	13	P	P	03 59 35.5	0.0
	baz=196						
RSSD				S	Sn	04 03 11.3	-0.8
	baz=196						
RSSD	Black Hills	19.21	13	P	Pn	03 59 36.5	+0.1
	baz=196						
YNR	Norris Junctio	19.25	358	P	P	03 59 35.8	-0.2
J08A	Circle Bar Ran	19.26	340	IAmb	IAmb	03 59 45.4	
	comp=Z,69nm,1.0s						
HBAR	Harrisburg	19.26	54	P	P	03 59 35.7	-0.1
HBAR				IAmb	IAmb	03 59 42.4	
	comp=Z,223nm,1.1s						
YMP	Mirror Lake Pl	19.27	359	IAmb	IAmb	03 59 46.6	
	comp=Z,246nm,1.7s						
KHMM	Horse Mountain	19.31	326	IAmb	IAmb	03 59 45.8	
	comp=Z,182nm,2.0s						
YHB	Horse Butte	19.31	357	P	P	03 59 35.8	-0.8
YHH	Holmes Hill	19.33	358	P	P	03 59 36.5	-0.4
N35A	Tabor	19.35	34	IAmb	IAmb	03 59 41.9	
	comp=Z,62nm,0.9s						
N35A	Tabor	19.35	34	P	P	03 59 36.8	0.0
	baz=222						
N35A				S	S	04 03 18.0	+1.9
	baz=222						
K31A	O'Neill	19.38	25	IAmb	IAmb	03 59 43.9	
	comp=Z,110nm,1.1s						
YHL	Hebgen Lake	19.41	357	P	P	03 59 37.2	-0.5
JCC	Jacoby Creek,	19.42	326	P	P	03 59 35.1	-2.4
JCC				IAmb	IAmb	03 59 45.8	
	comp=Z,171nm,1.4s						
Y45A	Yeager Farm, C	19.43	60	P	P	03 59 34.5	-3.3
Y45A				IAmb	IAmb	03 59 47.7	
	comp=Z,142nm,1.1s						
Y45A	Yeager Farm, C	19.43	60	P	P	03 59 38.3	+0.5
	baz=250,SNR=14						
146A	Union	19.44	64	IAmb	IAmb	03 59 50.9	
	comp=Z,119nm,1.1s						
146A	Union	19.44	64	P	P	03 59 37.9	+0.1
	baz=254						
YBH	Yreka Blue Hor	19.48	330	P	P	03 59 38.6	+0.3
	comp=Z,0.2nm,0.3s,baz=108,slow=9.3,SNR=3.1						
YBH				LR	LR	04 06 34.0	
	comp=Z,1μm,18.1s,baz=180,slow=35						
	comp=Z,1.0nm,0.3s						
K05A	Summer Lake	19.54	335	P	P	03 59 38.2	-0.8
K05A				IAmb	IAmb	03 59 51.2	
	comp=Z,288nm,1.7s						
R40A	Maddies Statio	19.56	45	IAmb	IAmb	03 59 48.3	
	comp=Z,196nm,1.2s						
R40A	Maddies Statio	19.56	45	P	P	03 59 38.9	-0.3
	baz=234,SNR=44						
P38A	Dawn	19.62	40	P	P	03 59 38.3	-1.5
P38A				IAmb	IAmb	03 59 51.6	
	comp=Z,119nm,1.4s						
P38A	Dawn	19.62	40	P	P	03 59 39.0	-0.8
	baz=229,SNR=12						
P38A				S	S	04 03 19.3	-2.3
	baz=229						
RLMT	Red Lodge	19.65	1	P	P	03 59 38.3	-2.0
RLMT	Red Lodge	19.65	1	P	P	03 59 39.3	-1.0
	baz=181						
KRPM	Rodgers	19.67	326	IAmb	IAmb	03 59 51.9	
	comp=Z,331nm,1.7s						
OXF	Oxford	19.77	58	IAmb	IAmb	03 59 50.2	
	comp=Z,86nm,1.1s						
OXF	Oxford	19.77	58	P	P	03 59 40.1	-1.3
	baz=248						
L34A	Svendsen Farm,	19.84	31	S	Sn	04 03 28.0	+0.9
	baz=218						
CCM	Cathedral Cave	20.09	47	P	P	03 59 44.6	-0.3
CCM	Cathedral Cave	20.09	47	P	P	03 59 44.7	-0.3
CCM				pmax	pmax		
	comp=Z,404nm,1.7s						
CCM	Cathedral Cave	20.09	47	P	P	03 59 45.4	+0.5
	baz=237,SNR=43						
CCM				S	S	04 03 31.2	+0.1
	baz=237						
CCM	Cathedral Cave	20.09	47	P	P	03 59 44.6	-0.3
	baz=237						
BOZ	Bozeman (W)	20.18	356	P	P	03 59 45.1	-0.9
BOZ				IAmb	IAmb	03 59 53.5	
	comp=Z,133nm,1.6s						
BOZ	Bozeman (W)	20.18	356	P	P	03 59 45.1	-0.9
BOZ				pmax	pmax		
	comp=Z,133nm,1.7s						
BOZ	Bozeman (W)	20.18	356	P	P	03 59 46.3	+0.4
	baz=175,SNR=23						
W45A	Hickory Valley	20.18	56	IAmb	IAmb	03 59 54.4	
	comp=Z,196nm,1.2s						
W45A	Hickory Valley	20.18	56	P	Pn	03 59 47.2	-0.7
	baz=247						
I07A	Izee	20.23	339	IAmb	IAmb	03 59 56.6	
	comp=Z,118nm,1.2s						
PLID	Pearl Lake	20.25	347	IAmb	IAmb	03 59 58.6	
	comp=Z,98nm,1.6s						
GCMT	Greycliff	20.31	0	P	P	03 59 46.4	-1.0
BMO	Blue Mountains	20.32	344	P	P	03 59 46.6	-0.9
BMO				IAmb	IAmb	03 59 57.8	
	comp=Z,130nm,1.2s						
BMO	Blue Mountains	20.32	344	P	P	03 59 46.6	-0.9
BMO				pmax	pmax		
	comp=Z,130nm,1.3s						
LNXT	Lenox	20.35	54	P	P	03 59 47.3	-0.4
HALT	Halls	20.38	54	IAmb	IAmb	03 59 58.6	
	comp=Z,138nm,1.1s						
Z47A	Carrollton	20.39	63	P	P	03 59 48.8	+0.6
	baz=254,SNR=31						
Z47A				S	Sn	04 03 47.2	+6.8
	baz=254						
PARMO	Parma	20.41	52	IAmb	IAmb	03 59 52.4	
	comp=Z,72nm,0.9s						
P40A	Paris	20.45	42	P	P	03 59 47.9	-0.8
P40A	Paris	20.45	42	P	P	03 59 48.8	0.0
	baz=232,SNR=50						
P40A				S	S	04 03 35.5	-2.6
	baz=232						
PINE	Pine Mountain	20.47	336	P	P	03 59 47.4	-1.8
N38A	Joes South For	20.58	38	IAmb	IAmb	03 59 57.8	
	comp=Z,62nm,1.1s						
BRAL	Brewton	20.76	69	P	P	03 59 53.2	+0.9
	baz=260,SNR=9.9						
BRAL	Brewton	20.76	69	P	P	03 59 53.1	+0.9
	baz=260,SNR=9.9						
APG	El Apazote	20.82	116	P	Pn	03 59 54.6	-1.0
	comp=Z,17nm,0.9s,baz=308,slow=11,SNR=22						
	comp=Z,17nm,0.9s						
SUSD	Miller	20.89	22	P	P	03 59 51.2	-2.3
SUSD	Miller	20.89	22	S	Sn	04 03 51.0	-1.1
	baz=208						
SUSD	Miller	20.89	22	P	P	03 59 53.2	-0.3
	baz=208						
PLAL	Pickwick Lake	20.96	58	IAmb	IAmb	04 00 04.5	
	comp=Z,205nm,1.6s						
SLM	Saint Louis	21.07	47	P	P	03 59 56.3	+0.8
	baz=237						
SLM				S	S	04 03 50.7	+0.1
	baz=237						
KEBM	Edson Butte	21.12	329	IAmb	IAmb	04 00 06.6	
	comp=Z,148nm,1.3s						
ECSD	EROS Data Cent	21.16	27	P	P	03 59 54.3	-2.3
ECSD				IAmb	IAmb	04 00 03.4	
	comp=Z,209nm,1.6s						
ECSD	EROS Data Cent	21.16	27	P	P	03 59 56.2	-0.3
	baz=215,SNR=43						
ECSD				S	S	04 03 52.3	0.0
	baz=215						
ECSD	EROS Data Cent	21.16	27	P	P	03 59 55.5	-1.0
	baz=215,SNR=43						
G08A	Pilot Rock	21.16	342	P	P	03 59 54.5	-2.1
LRAL	Lakeview Retre	21.21	64	P	P	03 59 53.4	-3.8
LRAL				IAmb	IAmb	04 00 05.5	
	comp=Z,72nm,1.1s						
LRAL	Lakeview Retre	21.21	64	P	P	03 59 57.4	+0.3
	baz=255,SNR=14						
LRAL				S	S	04 03 53.7	+0.3
	baz=255						
LRAL	Lakeview Retre	21.21	64	P	P	03 59 57.0	-0.2
	baz=255,SNR=14						
S44A	Carbondale	21.25	50	P	P	03 59 52.7	-4.8
S44A	Carbondale	21.25	50	P	P	03 59 56.9	-0.6
	baz=241,SNR=14						
S44A				S	Sn	04 03 58.9	-2.1
	baz=241						
F10A	Beach Ranch, E	21.36	346	IAmb	IAmb	04 00 08.9	
	comp=Z,75nm,1.1s						
SCIA	State Center	21.36	36	IAmb	IAmb	04 00 06.0	
	comp=Z,95nm,1.2s						
SCIA	State Center	21.36	36	S	S	04 03 56.3	+0.1
	baz=225						
SCIA	State Center	21.36	36	P	P	03 59 58.3	-0.3
	baz=225						
T45B	Paducah	21.36	52	S	Sn	04 04 02.3	-1.4
	baz=243						
LAO	LASA Array	21.39	7	IAmb	IAmb	04 00 17.4	
	comp=Z,175nm,1.4s						
LAO	LASA Array	21.39	7	P	P	03 59 58.5	-0.6
	baz=189,SNR=24						
LAO	LASA Array	21.39	7	P	P	03 59 57.5	-1.6
	baz=189,SNR=24						
250A	Grady	21.57	67	IAmb	IAmb	04 00 12.0	
	comp=Z,183nm,1.2s						
250A	Grady	21.57	67	P	P	04 00 01.9	+0.9
	baz=259,SNR=12						
X48A	Hartselle	21.58	60	IAmb	IAmb	04 00 08.4	
	comp=Z,51nm,0.8s						
X48A	Hartselle	21.58	60	P	P	04 00 01.2	+0.2
	baz=252,SNR=29						
X48A				S	Sn	04 04 05.1	-3.8
	baz=252						
WVT	Waverly	21.58	55	P	P	03 59 59.5	-1.6
WVT				IAmb	IAmb	04 00 14.2	
	comp=Z,75nm,1.1s						
WVT	Waverly	21.58	55	P	P	03 59 59.5	-1.6
WVT				pmax	pmax		
	comp=Z,75nm,1.1s						
WVT	Waverly	21.58	55	P	P	04 00 01.4	+0.4
	baz=247,SNR=19						
WVT				S	S	04 04 00.4	-0.2
	baz=247						
WVT	Waverly	21.58	55	P	P	03 59 59.7	-1.3
	baz=247						
BUCK	Buck Mountain	21.60	333	P	P	03 59 59.0	-2.3
BUCK				IAmb	IAmb	04 00 15.8	
	comp=Z,66nm,1.2s						
MSO	Missoula	21.61	352	P	P	03 59 59.2	-2.3
MSO	Missoula	21.61	352	P	P	04 00 00.2	-1.2
	baz=170,SNR=28						
H04A	Detroit Lake	21.69	335	P	P	03 59 58.7	-3.6
H04A				IAmb	IAmb	04 00 10.7	
	comp=Z,83nm,1.4s						
451A	Vernon	21.78	71	P	P	04 00 03.8	+0.6
	baz=262						
N41A	Harden Midland	21.89	41	P	P	04 00 03.1	-1.2
N41A	Harden Midland	21.89	41	P	P	04 00 05.4	+1.0
	baz=232						
Y49A	Blount Mountai	21.91	62	S	S	04 04 08.5	+1.4
	baz=254						
F07A	Phinny Hill Vi	22.00	341	P	P	04 00 03.0	-2.4
Q44A	Meyer Farm, Va	22.02	47	P	P	04 00 06.2	+0.4
	baz=239						
Q44A				S	S	04 04 09.7	+0.5
	baz=239						
COR	Corvallis	22.05	333	P	P	04 00 00.9	-5.1
COR				IAmb	IAmb	04 00 18.6	
	comp=Z,83nm,1.1s						
COR	Corvallis	22.05	333	P	P	04 00 00.9	-5.1
COR				pmax	pmax		
	comp=Z,83nm,1.1s						
HOOD	Mount Hood Mea	22.05	337	IAmb	IAmb	04 00 16.7	
	comp=Z,90nm,1.0s						
P43A	Skaggs, Pawnee	22.09	45	P	P	04 00 06.4	-0.1
P43A				IAmb	IAmb	04 00 15.2	
	comp=Z,86nm,1.1s						
P43A	Skaggs, Pawnee	22.09	45	P	P	04 00 06.2	-0.3
	baz=236						
P43A				S	S	04 04 09.6	-0.9
	baz=236						
K38A	Parkersburg	22.12	35	P	P	04 00 02.1	-4.7
V48A	Smith Brothers	22.19	57	IAmb	IAmb	04 00 16.2	
	comp=Z,117nm,1.8s						
E28A	Huff	22.30	17	P	P	04 00 07.8	-0.9
	baz=202,SNR=14						
T47A	Sharon Grove	22.46	54	P	P	04 00 07.8	-2.8
T47A				IAmb	IAmb	04 00 31.4	
	comp=Z,49nm,0.9s						
T47A	Sharon Grove	22.46	54	P	P	04 00 10.7	+0.2
	baz=246,SNR=13						
T47A				S	S	04 04 18.6	+1.0
	baz=246						
USIN	University of	22.49	51	P	P	04 00 09.6	-1.2
USIN				IAmb	IAmb	04 00 21.6	
	comp=Z,96nm,1.2s						
EGMT	Eagleton	22.55	360	IAmb	IAmb	04 00 29.1	
	comp=Z,111nm,1.1s						
EGMT	Eagleton	22.55	360	P	P	04 00 09.8	-1.6
	baz=180,SNR=35						
L40A	Anamosa	22.55	38	P	P	04 00 07.0	-4.4
L40A				IAmb	IAmb	04 00 31.4	
	comp=Z,90nm,1.2s						
L40A	Anamosa	22.55	38	P	P	04 00 11.5	+0.1
	baz=229						
L40A				S	S	04 04 24.9	+5.8
	baz=229						
OLIL	Olney	22.55	49	IAmb	IAmb	04 00 25.4	
	comp=Z,114nm,0.9s						
OLIL	Olney	22.55	49	P	P	04 00 11.8	+0.3
	baz=240,SNR=12						
OLIL				S	S	04 04 24.2	+5.0
	baz=240						
352A	Blakely	22.60	69	P	P	04 00 14.4	+2.4
	baz=261						
CLTN	Cedars of Leba	22.69	57	P	P	04 00 09.5	-3.4
CLTN				IAmb	IAmb	04 00 29.3	
	comp=Z,91nm,1.4s						
SWET	Sewanee	22.69	59	P	P	04 00 09.2	-3.9
SWET				IAmb	IAmb	04 00 24.6	
	comp=Z,193nm,1.7s						
HDIL	Hopedale	22.75	43	IAmb	IAmb	04 00 21.6	
	comp=Z,124nm,1.0s						
HDIL	Hopedale	22.75	43	P	P	04 00 13.9	+0.3
	baz=235,SNR=7.9						
HDIL	Hopedale	22.75	43	P	P	04 00 12.3	-1.3
	baz=235,SNR=7.9						
Z51A	Franklin	22.76	64	IAmb	IAmb	04 00 23.2	
	comp=Z,195nm,1.6s						
Z51A	Franklin	22.76	64	P	P	04 00 13.4	-0.3
	baz=256,SNR=11						
Z51A				S	S	04 04 25.2	+2.1
	baz=256						
I37B	Waseca	22.81	32	P	P	04 00 14.3	+0.1
	baz=221						
I37B				S	S	04 04 29.4	+5.6
	baz=221						
152A	Waverly Hall	22.99	66	P	P	04 00 14.2	-2.0
152A	Waverly Hall	22.99	66	P	P	04 00 16.0	-0.1
	baz=256,SNR=22						
152A				S	S	04 04 27.9	+0.6
	baz=258						
F33A	5 Mile Ranch,	23.05	25	P	P	04 00 13.4	-3.1
F33A				IAmb	IAmb	04 00 21.3	
	comp=Z,51nm,1.2s						
F33A	5 Mile Ranch,	23.05	25	P	P	04 00 15.4	-1.1
	baz=213,SNR=9.3						
F33A				S	S	04 04 26.1	-1.8
	baz=213						
O44A	Mansfield	23.05	45	IAmb	IAmb	04 00 40.5	
	comp=Z,74nm,1.1s						
O44A	Mansfield	23.05	45	S	S	04 04 31.0	+2.9
	baz=237						
W50A	Signal Mountai	23.17	59	IAmb	IAmb	04 00 26.6	
	comp=Z,111nm,1.1s						
W50A	Signal Mountai	23.17	59	P	P	04 00 17.4	-0.6
	baz=252,SNR=22						
W50A				S	S	04 04 33.6	+3.3
	baz=252						
U49A	Red Boiling Sp	23.26	56	IAmb	IAmb	04 00 37.6	
	comp=Z,91nm,1.6s						
U49A	Red Boiling Sp	23.26	56	P	P	04 00 17.8	-1.1
	baz=248						
U49A				S	S	04 04 33.5	+1.9
	baz=248						
X51A	Calhoun	23.34	61	IAmb	IAmb	04 00 25.9	
	comp=Z,110nm,1.0s						
X51A	Calhoun	23.34	61	P	P	04 00 19.5	-0.2
	baz=254,SNR=18						
X51A				P	P	04 00 19.5	-0.2
	baz=254,SNR=18						
X51A				S	S	04 04 35.5	+2.5
	baz=254						
X51A				S	S	04 04 35.5	+2.5
	baz=254						
L42A	Oliver, Polo	23.40	40	P	P	04 00 18.9	-1.3
DGMT	Dagmar	23.40	9	P	P	04 00 20.5	+0.3
	baz=193,SNR=6.3						
DGMT	Dagmar	23.40	9	P	P	04 00 19.4	-0.9
	baz=193,SNR=6.3						
LTY	Liberty	23.45	341	P	P	04 00 18.6	-2.1
LTY				IAmb	IAmb	04 00 37.8	
	comp=Z,69nm,1.9s						
NEW	Newport	23.52	348	P	P	04 00 21.5	+0.1
	comp=Z,9.1nm,0.8s,baz=141,slow=11,SNR=14						
NEW				LR	LR	04 09 46.3	
	comp=Z,3μm,20.0s,baz=170,slow=37						
	comp=Z,9.1nm,0.8s						
NEW	Newport	23.52	348	P	P	04 00 20.5	-0.9
NEW				pmax	pmax		
	comp=Z,79nm,2.2s						
NEW	Newport	23.52	348	P	P	04 00 20.2	-1.1
	baz=163,SNR=31						
WCI	Wyandotte Cave	23.57	52	P	P	04 00 19.7	-2.3
WCI				IAmb	IAmb	04 00 29.4	
	comp=Z,46nm,1.1s						
WCI	Wyandotte Cave	23.57	52	P	P	04 00 19.7	-2.3
WCI				pmax	pmax		
	comp=Z,46nm,1.2s						
WCI	Wyandotte Cave	23.57	52	P	P	04 00 22.7	+0.7
	baz=244						
P46A	Rosedale	23.60	48	P	P	04 00 23.2	+1.0
	baz=240,SNR=5.6						
JFWS	Jewell Farm	23.65	38	IAmb	IAmb	04 00 32.6	
	comp=Z,37nm,0.9s						
JFWS	Jewell Farm	23.65	38	P	P	04 00 21.5	-1.3
	baz=229						
TIGA	Tifton	23.73	69	P	P	04 00 20.8	-2.7
TIGA	Tifton	23.73	69	P	P	04 00 22.5	-1.1
	baz=262						
MDND	Maddock	23.76	17	IAmb	IAmb	04 00 42.0	
	comp=Z,68nm,1.0s						
MDND	Maddock	23.76	17	P	P	04 00 22.6	-1.2
	baz=203						
MDND	Maddock	23.76	17	P	P	04 00 23.5	-0.3
	baz=203						
E03A	Lebam	23.78	336	P	P	04 00 22.6	-1.3
E03A				IAmb	IAmb	04 00 42.1	
	comp=Z,131nm,1.1s						
Y52A	Lilburn	23.80	63	P	P	04 00 24.1	-0.1
	baz=256,SNR=8.7						
Y52A				P	P	04 00 24.1	-0.1
	baz=256,SNR=8.7						
Y52A				S	S	04 04 42.2	+1.9
	baz=256						
Y52A				S	S	04 04 42.2	+1.9
	baz=256						
WALA	Waterton Lakes	23.81	353	IAmb	IAmb	04 00 29.9	
	comp=Z,81nm,1.3s						
CPCT	Cooper Cave	23.86	59	IAmb	IAmb	04 00 31.9	
	comp=Z,150nm,1.5s						
D32B	Dogwood Acres,	23.90	22	S	S	04 04 45.0	+3.3
	baz=210						
SPMN	Marine on St.	24.01	30	P	P	04 00 31.0	+4.9
	baz=220,SNR=6.3						
SPMN	Marine on St.	24.01	30	P	P	04 00 25.3	-0.8
	baz=220,SNR=6.3						
SFIN	Lafayette	24.06	46	IAmb	IAmb	04 00 42.6	
	comp=Z,125nm,1.2s						
SFIN	Lafayette	24.06	46	P	P	04 00 26.1	-0.5
	baz=239						
B08A	Colville Reser	24.09	344	P	P	04 00 23.4	-3.5
V51A	Loudon	24.10	59	IAmb	IAmb	04 00 35.2	
	comp=Z,173nm,1.6s						
V51A	Loudon	24.10	59	P	P	04 00 26.2	-0.9
	baz=252,SNR=14						
V51A				S	S	04 04 48.0	+2.8
	baz=252						
I40A	Norwalk	24.11	35	P	P	04 00 23.8	-3.3
I40A				IAmb	IAmb	04 00 46.7	
	comp=Z,47nm,1.1s						
T50A	Nancy	24.15	55	P	P	04 00 27.3	-0.2
	baz=249						
T50A				P	P	04 00 27.3	-0.2
	baz=249						
T50A				S	S	04 04 46.4	+0.4
	baz=249						
T50A				S	S	04 04 46.4	+0.4
	baz=249						
GOGA	Godfrey	24.18	65	IAmb	IAmb	04 00 35.9	
	comp=Z,122nm,1.4s						
GOGA	Godfrey	24.18	65	P	P	04 00 27.7	-0.1
GOGA				pmax	pmax		
	comp=Z,68nm,0.4s						
GOGA	Godfrey	24.18	65	P	P	04 00 26.1	-1.7
	baz=258,SNR=7.6						
GOGA				S	S	04 04 50.6	+4.2
	baz=258						
GOGA	Godfrey	24.18	65	P	P	04 00 27.2	-0.6
	baz=258,SNR=7.6						
F36A	Milaca	24.18	28	P	P	04 00 26.0	-1.8
F36A	Milaca	24.18	28	P	P	04 00 27.8	0.0
	baz=218,SNR=12						
F36A				S	S	04 04 51.8	+5.5
	baz=218						
W52A	Murphy	24.22	60	IAmb	IAmb	04 00 35.5	
	comp=Z,54nm,1.1s						
W52A	Murphy	24.22	60	P	P	04 00 27.8	-0.4
	baz=254,SNR=10						
W52A				S	S	04 04 45.5	-1.7
	baz=254						
154A	Montrose	24.32	67	P	P	04 00 28.2	-0.9
154A	Montrose	24.32	67	P	P	04 00 29.0	-0.2
	baz=260,SNR=8.7						
R49A	Shelbyville	24.40	52	S	S	04 04 59.0	+9.0
	baz=246						
R49A				S	S	04 04 59.0	+9.0
	baz=246						
TKL	Tuckaleechee C	24.51	59	P	P	04 00 30.7	-0.1
	comp=Z,25nm,1.0s,baz=204,slow=11,SNR=15						
TKL				LR	LR	04 10 55.3	
	comp=Z,5μm,18.6s,baz=254,slow=39						
	comp=Z,25nm,1.0s						
TKL	Tuckaleechee C	24.51	59	P	P	04 00 28.5	-2.3
TKL				IAmb	IAmb	04 00 54.5	
	comp=Z,44nm,0.9s						
TKL	Tuckaleechee C	24.51	59	P	P	04 00 28.5	-2.3
TKL				pmax	pmax		
	comp=Z,44nm,1.0s						
TKL	Tuckaleechee C	24.51	59	P	P	04 00 30.3	-0.5
	baz=253,SNR=7.5						
TKL				S	S	04 04 52.5	+0.7
	baz=253						
SOR	Soroa	24.52	91	P	P	04 00 32.0	+0.9
SOR				pmax	pmax		
	comp=Z,58nm,1.4s						
L44A	Lake County Fo	24.54	42	P	P	04 00 30.2	-0.8
	baz=234						
V52A	Sevierville	24.70	59	IAmb	IAmb	04 00 39.1	
	comp=Z,53nm,1.0s						
V52A	Sevierville	24.70	59	P	P	04 00 32.6	+0.1
	baz=253,SNR=11						
V52A				S	S	04 04 56.6	+1.7
	baz=253						
P48A	Milroy	24.73	50	IAmb	IAmb	04 00 49.0	
	comp=Z,36nm,0.9s						
B06A	Marblemount	24.82	341	IAmb	IAmb	04 00 42.9	
	comp=Z,31nm,0.8s						

TZTN	Tazewell	24.95	57	IAmb	IAmb	04 00 42.0	
	comp=Z,107nm,1.5s						
TZTN	Tazewell	24.95	57	S	S	04 05 07.5	+8.5
	baz=251						
TZTN	Tazewell	24.95	57	P	P	04 00 34.8	-0.1
	baz=251						
BG3	Lake Jocassee	24.98	61	P	P	04 00 34.2	-0.9
CASEE	Lake Jocassee	24.98	61	P	P	04 00 35.8	+0.7
	baz=255,SNR=17						
R50A	Paris	25.00	53	IAmb	IAmb	04 00 55.7	
	comp=Z,57nm,1.2s						
R50A	Paris	25.00	53	S	S	04 05 00.9	+1.2
	baz=247						
R50A				S	S	04 05 00.9	+1.2
	baz=247						
I42A	Draeger Farm,	25.03	37	S	S	04 05 06.5	+6.6
	baz=230						
P49A	Miami Univ. Ec	25.25	50	P	P	04 00 38.0	+0.5
	baz=244						
V53A	Saluda	25.26	60	IAmb	IAmb	04 00 47.1	
	comp=Z,110nm,1.2s						
V53A	Saluda	25.26	60	P	P	04 00 37.7	0.0
	baz=254,SNR=33						
V53A				P	P	04 00 37.7	0.0
	baz=254,SNR=33						
V53A				S	S	04 05 10.9	+6.9
	baz=254						
V53A				S	S	04 05 10.9	+6.9
	baz=254						
O48B	Farmland	25.29	48	P	P	04 00 37.6	-0.2
	baz=242						
G40A	Rib Lake	25.29	34	IAmb	IAmb	04 00 55.2	
	comp=Z,39nm,1.1s						
AGMN	Agassiz Nation	25.30	22	IAmb	IAmb	04 00 44.4	
	comp=Z,39nm,1.1s						
AGMN	Agassiz Nation	25.30	22	P	P	04 00 38.4	+0.6
	baz=211,SNR=7.4						
AGMN				S	S	04 05 09.9	+5.7
	baz=211						
AGMN	Agassiz Nation	25.30	22	P	P	04 00 36.4	-1.4
	baz=211,SNR=7.4						
S51A	Beattyville	25.30	55	P	P	04 00 34.8	-3.2
S51A				IAmb	IAmb	04 00 47.1	
	comp=Z,31nm,0.8s						
S51A	Beattyville	25.30	55	S	S	04 05 07.3	+2.9
	baz=249						
S51A				S	S	04 05 07.3	+2.9
	baz=249						
HODGE	Hodges	25.34	63	IAmb	IAmb	04 00 45.9	
	comp=Z,88nm,1.2s						
HODGE	Hodges	25.34	63	P	P	04 00 38.3	0.0
	baz=257,SNR=11						
HAW	Hawthorne Fire	25.69	66	P	P	04 00 41.9	+0.4
	baz=260,SNR=7.6						
HAW				S	S	04 05 16.8	+6.2
	baz=260						
PAULI	Pauline	25.83	62	IAmb	IAmb	04 01 00.3	
	comp=Z,35nm,0.9s						
PAULI	Pauline	25.83	62	S	S	04 05 16.0	+3.2
	baz=256						
Q51A	Peebles	26.00	52	IAmb	IAmb	04 00 59.9	
	comp=Z,37nm,0.8s						
Q51A	Peebles	26.00	52	S	S	04 05 24.5	+8.9
	baz=247						
Q51A				S	S	04 05 24.5	+8.9
	baz=247						
U54A	Nelsons Funny	26.27	58	IAmb	IAmb	04 00 59.6	
	comp=Z,152nm,1.6s						
U54A	Nelsons Funny	26.27	58	S	S	04 05 16.5	-3.5
	baz=253						
U54A				S	S	04 05 16.5	-3.5
	baz=253						
KMSC	Kings Mountain	26.29	62	P	P	04 00 43.4	-3.6
KMSC				IAmb	IAmb	04 00 56.9	
	comp=Z,66nm,1.1s						
KMSC	Kings Mountain	26.29	62	P	P	04 00 46.9	-0.1
	baz=256,SNR=5.2						
V55A	Taylorsville	26.56	60	IAmb	IAmb	04 00 59.0	
	comp=Z,44nm,0.9s						
V55A	Taylorsville	26.56	60	S	S	04 05 25.0	+0.5
	baz=255						
V55A				S	S	04 05 25.0	+0.5
	baz=255						
EYMN	Ely	26.68	28	S	S	04 05 44.0	+18
	baz=219						
EYMN	Ely	26.68	28	P	P	04 00 50.7	+0.3
	baz=219						
ACSO	Alum Creek Sta	26.76	50	P	P	04 00 52.4	+1.2
	baz=245						
Y57A	Sumter	26.81	64	IAmb	IAmb	04 01 00.0	
	comp=Z,49nm,1.0s						
LLLB	Lillooet	26.82	343	IAmb	IAmb	04 01 00.8	
	comp=Z,74nm,2.0s						
NHSC	New Hope	26.83	67	P	P	04 00 52.8	+0.9
	baz=261						
ULM	Lac du Bonnet	26.99	20	P	P	04 00 53.9	+0.7
	comp=Z,9.8nm,0.8s,baz=203,slow=10.0,SNR=6.0						
	comp=Z,9.8nm,0.8s						
S54A	Dingess, Beckl	27.05	56	S	S	04 05 33.6	+1.4
	baz=251						
S54A				S	S	04 05 33.6	+1.4
	baz=251						
P52A	Corning	27.11	52	P	P	04 00 55.5	+1.2
	baz=247						
AAM	Ann Arbor	27.26	45	P	P	04 00 57.1	+1.4
	baz=240						
BLA	Blacksburg	27.55	58	P	P	04 00 58.7	+0.3
	baz=253						
EDM	Edmonton	27.88	355	IAmb	IAmb	04 01 07.0	
	comp=Z,37nm,1.2s						
O53A	New Philadelph	28.00	51	P	P	04 01 02.6	+0.3
	baz=247						
GLMI	Grayling	28.03	40	P	P	04 01 03.0	+0.4
	baz=235						
T57A	Hurt	28.38	59	P	P	04 01 02.1	-3.6
T57A				IAmb	IAmb	04 01 27.2	
	comp=Z,82nm,1.9s						
CNNC	Cliffs of the	29.06	63	P	P	04 01 12.7	+0.9
	baz=259						
FFC	Flin Flon	29.82	9	P	P	04 01 16.5	-1.7
FFC				IAmb	IAmb	04 01 23.2	
	comp=Z,25nm,1.2s						
FFC	Flin Flon	29.82	9	P	P	04 01 16.5	-1.7
FFC				pmax	pmax		
	comp=Z,25nm,1.2s						
BBB	Bella Bella	30.13	337	LR	LR	04 12 57.3	
	comp=Z,2µm,19.8s,baz=162,slow=35						
SSPA	Standing Stone	30.50	52	P	P	04 01 25.2	+0.6
	baz=250						
WAPA	Wapiti River	30.53	349	IAmb	IAmb	04 01 30.2	
	comp=Z,42nm,1.1s						
SADO	Sadowa	31.33	44	LR	LR	04 14 46.2	
	comp=Z,2µm,20.5s,baz=226,slow=38						
GTBY	Guantanamo Bay	32.35	93	P	P	04 01 39.1	-1.9
GTBY				IAmb	IAmb	04 01 49.3	
	comp=Z,54nm,1.1s						
BINY	Binghamton	32.38	50	P	P	04 01 42.5	+1.4
	baz=250						
PAL	Palisades	33.49	53	P	P	04 01 50.8	+0.1
	baz=254						
V35K	Ketchikan	33.90	338	P	P	04 01 53.7	-0.4
	baz=143						
LONY	Lake Ozonia	34.21	47	P	P	04 01 57.2	+0.2
	baz=248						
CRAG	Craig	34.54	337	P	P	04 02 00.1	+0.5
	baz=141						
L61B	Northampton	34.78	51	P	P	04 02 03.7	+1.8
	baz=253						
T35M	Bob Quinn	34.81	340	P	P	04 02 02.5	+0.5
	baz=146						
TRQ	Mont Tremblant	34.87	44	P	P	04 02 00.8	-1.9
TRQ				IAmb	IAmb	04 02 15.6	
	comp=Z,20nm,1.1s						
QUA2	Belchertown	34.97	52	IAmb	IAmb	04 02 28.4	
	comp=Z,22nm,1.2s						
WRAK	Wrangell Islan	35.02	338	P	P	04 02 04.8	+1.0
	baz=143						
DLBC	Dease Lake	35.97	342	LR	LR	04 16 14.8	
	comp=Z,2µm,18.4s,baz=150,slow=35						
DLBC	Dease Lake	35.97	342	IAmb	IAmb	04 02 19.1	
	comp=Z,38nm,1.1s						
DLBC	Dease Lake	35.97	342	P	P	04 02 12.7	+0.7
	baz=148						
SDDR	Presa de Saban	36.08	92	P	P	04 02 13.2	-0.2
SDDR	Presa de Saban	36.08	92	eP	P	04 02 15.4	+1.9
SC01	Santiago de lo	36.46	91	P	P	04 02 16.4	-0.2
UREC	San Jos de Ur	37.03	112	eP	P	04 02 24.0	+2.5
R33M	Jennings River	37.04	342	P	P	04 02 22.0	+0.8
	baz=147,SNR=15						
Q32M	Nakina River	37.05	341	P	P	04 02 22.0	+0.5
	baz=145						
YKA	Yellowknife Ar	37.19	356	P	P	04 02 20.4	-1.9
	comp=Z,4.8nm,0.9s,baz=174,slow=8.5,SNR=9.2						
	comp=Z,4.8nm,0.9s						
YKA	Yellowknife Ar	37.19	356	P	P	04 02 20.2	-2.1
YKA	Yellowknife Ar	37.19	356	P	P	04 02 20.2	-2.1
R32K	Eaglecrest	37.21	339	P	P	04 02 23.3	+0.8
	baz=141						
PTGL	Punta Galera	37.71	126	eP	P	04 02 23.0	-4.3
DR12	Loma Pena Alta	37.86	92	P	P	04 02 26.3	-2.3
HELC	Santa Helena	37.89	114	eP	P	04 02 33.6	+4.4
TUMC	Tumaco	37.99	123	eP	P	04 02 37.9	+8.3
P32M	Atlin	38.00	340	P	P	04 02 28.8	-0.5
	baz=143						
URIC	Uribia, Colomb	38.15	104	eP	P	04 02 37.5	+6.5
TGTN	Hyland Airport	38.21	346	P	P	04 02 31.6	+0.6
	baz=152						
SKAG	Skagway	38.40	339	P	P	04 02 30.6	-2.0
	baz=141						
YOTC	Yotoco, Valle	38.50	118	eP	P	04 02 33.6	-0.5
PTBC	PUERTO BERRIO,	38.58	113	eP	P	04 02 39.3	+4.7
PLBC	Pleasant Camp	38.74	339	P	P	04 02 35.1	-0.3
	baz=140						
NORC	Norcasia	38.78	115	eP	P	04 02 36.5	+0.1
WRGLY	Wrigley	38.87	350	P	P	04 02 36.3	-0.1
	baz=160						
BRRC	Barranca, Sant	38.90	112	eP	P	04 02 40.3	+3.0
BBAC	Balboa, Cauca	39.00	121	eP	P	04 02 43.2	+4.9
N32M	Quiet Lake	39.09	342	P	P	04 02 38.3	-0.1
	baz=146						
POPC	Popayan, Colom	39.12	120	eP	P	04 02 40.1	+0.7
WHY	Whitehorse	39.21	341	P	P	04 02 40.1	+0.6
	baz=143						
OTAV	Otavalo	39.24	125	P	P	04 02 38.0	-2.7
OTAV				IAmb	IAmb	04 02 51.4	
	comp=Z,64nm,1.8s						
OTAV	Otavalo	39.24	125	P	P	04 02 38.0	-2.7
OTAV				pmax	pmax		
	comp=Z,64nm,1.8s						
P29M	Windy Craggy	39.33	338	P	P	04 02 40.8	+0.3
	baz=138						
PULU	Pululahua	39.35	125	P	P	04 02 38.9	-2.7
TULM	Tulcn-Chalpat	39.42	124	eP	P	04 02 47.1	+4.8
GCUF	Volcan Galeras	39.43	123	eP	P	04 02 44.2	+1.9
BARC	Barichara	39.62	112	eP	P	04 02 43.2	-0.4
PAMC	Pamplona, Colo	39.63	111	eP	P	04 02 45.1	+1.1
ROSC	El Rosal	39.64	115	P	P	04 02 44.4	+0.5
	comp=Z,3.1nm,0.4s,baz=0.8,slow=23,SNR=2.1						
ROSC				LR	LR	04 21 20.3	
	comp=Z,1µm,18.9s,baz=335,slow=40						
	comp=Z,3.1nm,0.4s						
O30N	Mendenhall	39.66	340	P	P	04 02 43.2	0.0
	baz=141						
BONI	La Bonita	39.79	124	eP	P	04 02 51.9	+6.8
MMPY	Sheldon Lake,	39.86	345	P	P	04 02 45.3	+0.5
	baz=149						
FARO	Faro, Yukon	40.05	343	P	P	04 02 46.6	+0.2
	baz=146						
O29M	Mount Kennedy	40.11	338	P	P	04 02 47.2	+0.2
	baz=138						
N31M	Braebum, Yuko	40.13	341	P	P	04 02 46.2	-0.9
	baz=142						
HYT	Haines Junctio	40.15	339	P	P	04 02 48.0	+0.6
	baz=139						
CRPR	Cabo Rojo, PR	40.15	92	P	P	04 02 47.2	-0.5
PIAT	Ana Tenorio	40.21	126	eP	P	04 02 51.1	+2.4
M31M	Drury Creek, Y	40.31	342	P	P	04 02 48.6	0.0
	baz=144						
N30M	Aishikik Lake	40.51	340	P	P	04 02 50.3	+0.1
	baz=140						
FLOC	Florencia	40.51	120	eP	P	04 02 53.8	+3.0
COHC	Cochancay	40.51	129	eP	P	04 02 52.8	+2.1
SDV	Santo Domingo	40.63	107	LR	LR	04 21 08.7	
	comp=Z,1µm,19.8s,baz=297,slow=38						
SDV	Santo Domingo	40.63	107	P	P	04 02 50.7	-1.2
SDV				IAmb	IAmb	04 03 13.0	
	comp=Z,24nm,1.0s						
TAMC	Tame, Arauca	40.87	111	eP	P	04 02 53.8	0.0
YUK4	Talbot Arm	40.91	339	P	P	04 02 54.0	+0.3
	baz=138						
SJG	San Juan	40.99	91	LR	LR	04 23 20.3	
	comp=Z,602nm,18.5s,baz=289,slow=41						
SJG	San Juan	40.99	91	P	P	04 02 54.0	-0.6
SJG	San Juan	40.99	91	P	P	04 02 54.0	-0.6
SJG				pmax	pmax		
	comp=Z,181nm,1.2s						
O28M	Mount Upton	41.00	338	P	P	04 02 55.5	+0.9
	baz=136						
CBYP	Canovanas	41.20	91	P	P	04 02 53.0	-3.5
CBYP				IAmb	IAmb	04 03 03.6	
	comp=Z,90nm,1.4s						
MESA	MESA	41.21	336	P	P	04 02 58.4	+2.2
	baz=133						
YUK8	Steele Glacier	41.23	338	P	P	04 02 57.2	+0.8
	baz=137						
BOSC	San Juan Bosco	41.53	129	P	P	04 02 58.7	-0.6
BOSC				IAmb	IAmb	04 03 10.4	
	comp=Z,104nm,1.4s						
CTG	Chitna Glacier	41.54	337	P	P	04 02 58.0	-0.8
	baz=134						
M29M	Somme Creek	41.68	340	P	P	04 02 59.9	0.0
	baz=139						
CUPR	Culebra, Puert	41.71	91	P	P	04 02 58.6	-2.0
CUPR				IAmb	IAmb	04 03 08.1	
	comp=Z,60nm,1.1s						
YUK3	Moose Creek	41.82	339	P	P	04 03 01.9	+0.7
	baz=136						
STVI	Saint Thomas	41.99	90	P	P	04 03 01.0	-1.9
STVI				IAmb	IAmb	04 03 11.2	
	comp=Z,76nm,1.3s						
L29M	L29M	42.09	341	P	P	04 03 03.1	-0.1
	baz=140						
BVCY	Beaver Creek	42.41	339	P	P	04 03 06.2	+0.4
	baz=136						
K29M	Barlow Dome	42.49	342	P	P	04 03 05.9	-0.6
	baz=142,SNR=6.2						
SCHQ	Schefferville	42.98	35	P	P	04 03 11.7	+1.2
	comp=Z,17nm,1.2s,baz=262,slow=10,SNR=4.7						
SCHQ				LR	LR	04 21 49.2	
	comp=Z,2µm,18.3s,baz=248,slow=37						
	comp=Z,17nm,1.2s						
M26K	Nabesna, AK	43.10	338	P	P	04 03 12.6	+1.1
	baz=134						
N25K	Chitina, Valde	43.13	336	P	P	04 03 12.9	+1.2
	baz=131						
L27K	Beaver Creek,	43.19	339	P	P	04 03 12.4	+0.4
	baz=136,SNR=6.0						
DAWY	Dawson	43.19	341	P	P	04 03 09.3	-2.8
DAWY				IAmb	IAmb	04 03 19.7	
	comp=Z,37nm,1.1s						
DAWY	Dawson	43.19	341	P	P	04 03 12.3	+0.2
	baz=139,SNR=7.6						
KLU	Klutina	43.54	336	P	P	04 03 14.9	-0.2
	baz=129						
GLI	Glacier Island	43.61	335	P	P	04 03 16.0	+0.5
	baz=127						
I29M	Ogilvie Camp,	43.89	343	P	P	04 03 17.0	-0.7
I29M				IAmb	IAmb	04 03 24.8	
	comp=Z,36nm,1.3s						
I29M	Ogilvie Camp,	43.89	343	P	P	04 03 18.0	+0.3
	baz=142						
K27K	Chicken	43.96	340	IAmb	IAmb	04 03 25.7	
	comp=Z,27nm,1.1s						
K27K	Chicken	43.96	340	P	P	04 03 18.5	+0.2
	baz=136						
M24K	Tolsona, Glenn	44.02	336	P	P	04 03 18.8	-0.1
	baz=130						
SEW	Seward	44.10	333	P	P	04 03 19.3	-0.1
	baz=124						
EGAK	Eagle	44.23	341	P	P	04 03 20.4	0.0
	baz=138,SNR=8.5						
SCM	Sheep Creek Mo	44.28	336	P	P	04 03 21.2	+0.2
	baz=128						
KDAK	Kodiak Island	44.29	329	LR	LR	04 19 52.8	
	comp=Z,526nm,18.8s,baz=148,slow=34						
EPYK	Eagle Plains	44.30	345	IAmb	IAmb	04 03 28.2	
	comp=Z,75nm,1.4s						
EPYK	Eagle Plains	44.30	345	P	P	04 03 21.1	+0.1
	baz=144						
DOT	Dot Lake	44.32	339	IAmb	IAmb	04 03 27.9	
	comp=Z,81nm,1.9s						
KNK	Knik Glacier	44.46	335	P	P	04 03 21.9	-0.4
	baz=126						
ATAH	Atahualpa	44.47	133	LR	LR	04 20 24.1	
	comp=Z,588nm,18.3s,baz=326,slow=34						
F31M	Tsiigehtchic	44.54	347	P	P	04 03 21.6	-1.2
	baz=148						
G30M	tAoh Zraii Nji	44.69	346	P	P	04 03 24.1	0.0
	baz=145						
J26L	Joseph Creek	44.75	340	IAmb	IAmb	04 03 32.9	
	comp=Z,50nm,1.4s						
J26L	Joseph Creek	44.75	340	P	P	04 03 25.3	+0.6
	baz=134,SNR=7.5						
C36M	Paulatuk	44.75	353	P	P	04 03 24.4	0.0
	baz=162						
I27K	Kandik River	44.97	342	P	P	04 03 25.0	-1.4
	baz=138						
K24K	Donnelly Dome	44.99	338	P	P	04 03 26.4	-0.2
	baz=131						
TAOE	Nuku Hiva Isla	45.15	225	eS	S	04 10 09.6	+0.9
	comp=Z,156nm,25.1s						
TAOE				eLQ	LQ	04 14 13.2	
	comp=Z,2µm,26.2s						
TAOE				eLR	LR	04 16 07.4	
	comp=Z,1µm,24.0s						
CAPN	Captain Cook N	45.17	333	P	P	04 03 25.7	-2.3
	baz=123						
I26K	Coal Creek Min	45.20	341	P	P	04 03 25.0	-3.1
I26K				IAmb	IAmb	04 03 35.8	
	comp=Z,33nm,1.3s						
I26K	Coal Creek Min	45.20	341	P	P	04 03 28.8	+0.7
	baz=136						
INK	Inuvik	45.24	348	LR	LR	04 24 15.2	
	comp=Z,2µm,18.4s,baz=148,slow=39						
INK	Inuvik	45.24	348	P	P	04 03 27.6	-0.8
INK				IAmb	IAmb	04 03 34.6	
	comp=Z,30nm,1.2s						
INK	Inuvik	45.24	348	P	P	04 03 27.6	-0.8
INK				pmax	pmax		
	comp=Z,30nm,1.3s						
INK	Inuvik	45.24	348	P	P	04 03 28.3	-0.1
	baz=149						
M22K	Willow	45.30	334	P	P	04 03 29.1	+0.2
	baz=125						
PCRV	Puerto La Cruz	45.31	101	LR	LR	04 23 55.8	
	comp=Z,636nm,22.0s,slow=38						
Q19K	Cape Douglas,	45.33	330	P	P	04 03 29.3	+0.1
	baz=118						
SUA	Susitna One	45.39	334	P	P	04 03 29.2	-0.7
	baz=124						
J25K	Salcha River,	45.40	339	P	P	04 03 26.4	-3.3
J25K				IAmb	IAmb	04 03 37.6	
	comp=Z,55nm,1.4s						
J25K	Salcha River,	45.40	339	P	P	04 03 28.6	-1.2
	baz=132,SNR=6.2						
H27K	Steamboat Moun	45.41	343	P	P	04 03 29.9	0.0
	baz=138						
O20K	Slope Mountain	45.44	331	P	P	04 03 29.6	-0.6
	baz=120						
P19K	Oil Pt	45.49	331	P	P	04 03 30.9	+0.4
	baz=119						
CUT	Chulitna	45.73	335	P	P	04 03 31.6	-0.7
	baz=125						
HDA	Harding Lake	45.77	338	P	P	04 03 32.9	+0.2
	baz=130						
N20K	Mount Spurr	45.84	333	P	P	04 03 35.3	+1.9
	baz=122						
SPCR	Spurr Chakacha	45.84	333	P	P	04 03 35.0	+1.6
	baz=122						
G27K	Doyon Strip	45.88	343	P	P	04 03 33.6	0.0
	baz=135						
SKT	Skwentna	45.98	334	P	P	04 03 34.0	-0.4
	baz=123						
ILAR	Eielson Array	45.99	339	P	P	04 03 34.5	+0.1
	comp=Z,4.4nm,1.0s,baz=149,slow=7.3,SNR=16						
ILAR				LR	LR	04 22 36.7	
	comp=Z,337nm,19.7s,baz=120,slow=36						
	comp=Z,4.4nm,1.0s						
ILAR	Eielson Array	45.99	339	P	P	04 03 32.6	-1.8
ILAR	Eielson Array	45.99	339	P	P	04 03 32.6	-1.8
MCK	McKinley	46.03	337	P	P	04 03 34.7	-0.1
	baz=128						
PRP	Porcupine Dome	46.06	340	P	P	04 03 34.8	-0.3
	baz=133						
Q17K	Contact Creek	46.08	328	P	P	04 03 35.2	-0.1
	baz=115						
O19K	Port Alsworth	46.23	331	P	P	04 03 36.3	-0.1
	baz=118						
P18K	Big Mountain,	46.27	330	P	P	04 03 37.4	+0.7
	baz=117						
TRF	Thorofare Moun	46.35	336	P	P	04 03 36.4	-1.0
	baz=126						
COLA	College	46.37	339‖	eP	P	04 03 39.1	+1.7
COLA				pmax	pmax		
	comp=Z,40nm,1.8s						
COLA	College	46.37	339	P	P	04 03 38.0	+0.6
	baz=130						
TCOL	CIGO, UAF Yank	46.38	339	P	P	04 03 37.0	-0.4
	baz=130						
POKR	Poker Plat Res	46.39	339	P	P	04 03 35.1	-2.5
	baz=130						
G26K	Porcupine Rive	46.56	342	P	P	04 03 39.1	+0.3
	baz=136						
M20K	Styx River	46.57	333	IAmb	IAmb	04 03 45.5	
	comp=Z,26nm,1.1s						
M20K	Styx River	46.57	333	P	P	04 03 38.8	-0.4
	baz=121						
N19K	Bonanza Creek	46.60	332	P	P	04 03 37.6	-1.8
N19K				IAmb	IAmb	04 03 44.3	
	comp=Z,37nm,1.1s						
N19K	Bonanza Creek	46.60	332	P	P	04 03 38.5	-0.9
	baz=119						
NEA2	Nenana	46.60	338	IAmb	IAmb	04 03 45.5	
	comp=Z,51nm,1.4s						
NEA2	Nenana	46.60	338	P	P	04 03 39.4	+0.1
	baz=128						
FDF	Fort de France	46.63	94	P	P	04 03 38.5	-1.7
FDF	Fort de France	46.63	94	P	P	04 03 38.5	-1.7
FDF				pmax	pmax		
	comp=Z,92nm,1.0s						
KTH	Kantishna Hill	46.64	336	IAmb	IAmb	04 03 45.7	
	comp=Z,39nm,1.2s						
H25K	Birch Creek	46.66	341	P	P	04 03 39.8	+0.2
	baz=133						
P17K	Kvichak River	46.74	329	P	P	04 03 39.5	-0.8
	baz=115						
PPLA	Purkeypile	46.74	335	P	P	04 03 40.4	-0.1
	baz=123						
FRB	Frobisher Bay	46.75	24	LR	LR	04 22 58.7	
	comp=Z,2µm,18.1s,baz=234,slow=36						
E27K	Coleen River	46.91	344	P	P	04 03 42.1	+0.5
	baz=139,SNR=6.2						
BPAW	Bear Paw Mtn.	46.98	337	P	P	04 03 41.8	-0.4
	baz=125						
CAST	Castle Rocks	46.99	336	P	P	04 03 41.6	-0.7
	baz=124						
H24K	Noodor Dome	47.00	340	P	P	04 03 42.7	+0.3
	baz=130,SNR=6.6						
I23K	Minto, Yukon-K	47.04	338	P	P	04 03 43.5	+0.8
	baz=128,SNR=5.4						
G25K	Bearman Lake	47.08	341	P	P	04 03 44.8	+1.9
	baz=133						
M19K	Big River Lodg	47.10	333	P	P	04 03 43.2	0.0
	baz=120						
BMAR	Burnt Mountain	47.12	342	P	P	04 03 43.0	-0.3
N18K	Kilae Creek	47.15	331	P	P	04 03 42.4	-1.2
N18K	Kilae Creek	47.15	331	P	P	04 03 43.1	-0.5
	baz=117						
L20K	Farewell, AK	47.18	334	P	P	04 03 44.0	+0.2
	baz=121						
F26K	Sheenjek River	47.19	343	P	P	04 03 43.5	-0.3
	baz=136						
SVW2	Sparrevohn	47.21	332	P	P	04 03 43.4	-0.6
SVW2				IAmb	IAmb	04 03 50.4	
	comp=Z,33nm,1.2s						
O17K	Koliganek Bris	47.29	330	P	P	04 03 44.7	+0.1
	baz=115						
A36M	Sachs Harbour	47.39	354	P	P	04 03 44.8	-0.4
	baz=161						
P16K	Nushagak River	47.40	328	P	P	04 03 43.3	-2.1
	baz=114						
L19K	White Mountain	47.43	333	IAmb	IAmb	04 03 52.1	
	comp=Z,33nm,1.1s						
L19K	White Mountain	47.43	333	P	P	04 03 45.7	0.0
	baz=120						
MLY	Manley	47.44	338	P	P	04 03 44.6	-1.2
MLY	Manley	47.44	338	P	P	04 03 46.2	+0.4
	baz=126						
H23K	Yukon River	47.52	339	P	P	04 03 43.6

O16K **Kokwok River B** 47.67 329 P **P** 04 03 47.1 -0.5
baz=114
K20K **Telida** 47.71 335 P **P** 04 03 47.8 -0.1
baz=121
E25K **Arctic Village** 47.88 343 P **P** 04 03 48.5 -0.6
baz=134
I21K **Tanana** 47.95 338 P **P** 04 03 50.8 +1.1
baz=125
F24K **Squaw Lake** 48.11 341 P **P** 04 03 51.6 +0.6
baz=131
H22K **Ishtalitna Cre** 48.17 339 P **P** 04 03 52.1 +0.7
baz=126
J20K **Nowinta River** 48.17 336 P **P** 04 03 49.6 -1.8
J20K **Nowinta River** 48.17 336 P **P** 04 03 51.1 -0.4
baz=122,SNR=5.4
H21K **Melozitna Rive** 48.51 338 P **P** 04 03 52.3 -1.7
H21K **Melozitna Rive** 48.51 338 P **P** 04 03 53.8 -0.2
baz=124,SNR=6.5
COLD **Coldfoot** 48.61 340 P **P** 04 03 55.1 +0.3
baz=129
E24K **Your Creek** 48.65 342 P **P** 04 03 54.3 -0.9
baz=131
G22K **Bettles** 48.82 340 P **P** 04 03 55.6 -0.8
baz=127
E23K **Chandalar** 48.96 341 P **P** 04 03 57.8 +0.2
baz=130,SNR=6.3
NNA **Nana** 49.10 135 LR LR 04 20 33.5
comp=Z,306nm,20.2s,baz=338,slow=31
G21K **Allakaket** 49.23 339 P **P** 04 04 00.3 +0.7
baz=124
TOLK **Toolik Lake Re** 49.32 342 P **P** 04 04 00.2 -0.1
baz=130
F22K **John River** 49.38 340 P **P** 04 04 00.5 -0.2
baz=127
GCSA **Galena City Sc** 49.48 336 P **P** 04 04 02.5 +1.1
baz=119
F21K **Alatna River** 49.63 339 P **P** 04 04 04.0 +1.3
baz=125
E22K **Anaktuvuk Pass** 49.65 341 P **P** 04 04 02.9 +0.1
baz=127
C24K **Franklin Bluff** 49.80 343 P **P** 04 04 03.5 -0.3
baz=132
D23K **Nanushuk River** 49.84 342 P **P** 04 04 03.7 -0.5
baz=129
RES **Resolute Bay** 49.91 5 LR LR 04 23 54.8
comp=Z,456nm,19.9s,baz=210,slow=35
RPN **Rapa Nui** 52.26 180 LR LR 04 21 24.4
comp=Z,583nm,20.2s,baz=8.5,slow=30
SFJD **Kangerlussuaq** 54.89 24 LR LR 04 27 42.7
comp=Z,2μm,19.6s,baz=246,slow=36
PPT **Papeete** 57.71 226 LR LR 04 23 50.7
comp=Z,405nm,20.4s,baz=18,slow=30
PPT2 **Papeete2** 57.73 226 *e*S **S** 04 13 02.4 +0.1
comp=Z,282nm,26.5s
PPT2 *e*SS **SS** 04 16 54.5 +1.4
comp=Z,126nm,26.2s
PPT2 *e*LQ LQ 04 19 30.9
comp=Z,618nm,22.5s
PPT2 *e*LR LR 04 21 57.0
comp=Z,1μm,25.2s
LPAZ **La Paz** 57.98 131 P **P** 04 05 04.1 -1.0
comp=Z,1.0nm,0.7s,baz=342,slow=9.6,SNR=5.4
LPAZ LR LR 04 27 37.4
comp=Z,408nm,21.4s,baz=326,slow=34
comp=Z,1.0nm,0.7s
LPAZ **La Paz** 57.98 131 P **P** 04 05 03.0 -2.1
LPAZ IAmb IAmb 04 05 12.0
comp=Z,30nm,1.8s
LPAZ **La Paz** 57.98 131 P **P** 04 05 03.0 -2.1
LPAZ pmax pmax
comp=Z,30nm,1.8s
MDP **Montagnes des** 58.20 100 LR LR 04 31 07.0
comp=Z,585nm,22.0s,baz=290,slow=37
PB16 **IPOC Station P** 58.52 134 P **P** 04 05 07.9 -0.9
NEEM **North Greenlan** 58.69 13 *i*P **P** 04 05 11.4 +2.5
PB01 **IPOC Station P** 60.52 136 IAmb IAmb 04 05 31.0
comp=Z,27nm,1.2s
PB07 **IPOC Station P** 60.77 137 P **P** 04 05 22.8 -1.1
PB06 **IPOC Station P** 61.70 137 P **P** 04 05 27.7 -2.3
TBI **Tubuai** 61.91 222 *e*LQ LQ 04 21 16.6
comp=Z,992nm,37.2s
TBI *e*LR LR 04 23 53.1
comp=Z,623nm,28.0s
LVC **Limon Verde** 62.03 137 LR LR 04 29 10.6
comp=Z,184nm,20.1s,baz=316,slow=33
SIV **San Ignacio** 62.78 126 LR LR 04 30 19.3
comp=Z,351nm,21.0s,baz=321,slow=34
BILL **Bilibino** 64.45 336⇓*e*P **P** 04 05 50.2 +2.7
BILL *e* 04 06 23.7
BILL *e* 04 08 09.2
BILL *e*PPP PPP 04 09 38.0
BILL pmax pmax
comp=Z,20nm,1.2s
BILL MLR MLR
comp=Z,768nm,17.0s
H03N2 **Juan Fernandez** 65.47 152 T T 05 17 19.1
baz=331,slow=77,SNR=585
H03N1 **Juan Fernandez** 65.48 152 T T 05 17 22.3
baz=331,slow=77,SNR=519
H03N3 **Juan Fernandez** 65.49 152 T T 05 17 19.4
baz=331,slow=77,SNR=718
DAG **Danmarks Havn** 65.69 15 *i*P **P** 04 05 54.0 -1.4
AC05 **El Transito** 65.95 142 P **P** 04 05 57.0 -0.9
BORG **Borgarnes** 66.63 28 LR LR 04 33 53.3
comp=Z,268nm,21.3s,baz=279,slow=35
CO03 **El Pedregal** 67.29 144 IAmb IAmb 04 06 14.3
comp=Z,23nm,1.1s
VA03 **San Esteban** 68.87 145 P **P** 04 06 15.1 -1.2
ZON **Zonda** 68.92 143 P **P** 04 06 14.1 -2.5
ZON IAmb IAmb 04 06 25.1
comp=Z,32nm,1.3s
ZON **Zonda** 68.92 143 P **P** 04 06 14.1 -2.5
ZON pmax pmax
comp=Z,33nm,1.3s
MT09 **Talagante** 69.45 146 P **P** 04 06 18.9 -1.1
MT09 IAmb IAmb 04 06 27.7
comp=Z,26nm,1.2s
AQDB **Aquidauana** 69.55 126 P **P** 04 06 19.0 -1.7
JMIC **Jan Mayen** 69.77 20 LR LR 04 35 36.8
comp=Z,566nm,18.5s,baz=252,slow=35
BO01 **Tunca** 69.89 147 IAmb IAmb 04 06 29.8
comp=Z,13nm,0.9s
PET **Petropavlovsk** 71.03 320 *e*P P 04 06 34.7 +5.4
PET *e*S **S** 04 15 45.6 -0.3
PET *e*SS **SS** 04 20 20.3 +2.0
PET pmax pmax
comp=Z,15nm,0.8s
SEY **Seymchan** 71.15 331⇑*e*P **P** 04 06 33.3 +3.5
SEY pmax pmax
comp=Z,25nm,1.6s
PEA0B **Petropavlovsk-** 71.56 321⇑*e*P **P** 04 06 34.9 +2.4
PETK **Petropavlovsk-** 71.56 321 P **P** 04 06 31.7 -0.8
comp=Z,1.1nm,0.5s,baz=81,slow=9.1,SNR=1.4
PETK LR LR 04 36 29.0
comp=Z,76nm,18.6s,baz=68,slow=35
comp=Z,1.1nm,0.5s
AFI **Afiamalu** 71.96 244 LR LR 04 29 57.7
comp=Z,511nm,21.1s,baz=70,slow=29
SPITS **Spitsbergen Ar** 72.06 10 LR LR 04 39 00.3
comp=Z,2μm,19.4s,baz=280,slow=36
CPUP **Villa Florida** 72.15 132 P **P** 04 06 36.1 -0.3
comp=Z,6.9nm,0.7s,baz=318,slow=6.8,SNR=15
CPUP LR LR 04 36 56.2
comp=Z,226nm,20.7s,baz=353,slow=35
comp=Z,6.9nm,0.7s
CPUP **Villa Florida** 72.15 132 IAmb IAmb 04 06 43.4
comp=Z,34nm,1.1s
BDFB **Brasilia** 72.65 117 P **P** 04 06 39.1 -0.6
comp=Z,9.1nm,1.0s,baz=195,slow=3.7,SNR=6.3
BDFB LR LR 04 41 31.2
comp=Z,489nm,18.7s,baz=308,slow=38
comp=Z,9.1nm,1.0s
BDFB **Brasilia** 72.65 117 P **P** 04 06 39.3 -0.4
BDFB IAmb IAmb 04 06 47.1
comp=Z,34nm,1.3s
BDFB **Brasilia** 72.65 117 P **P** 04 06 39.3 -0.4
BDFB pmax pmax
comp=Z,34nm,1.3s
PLCA **Paso Flores** 75.23 150 P **P** 04 06 54.7 +0.4
comp=Z,3.9nm,0.7s,baz=314,slow=7.0,SNR=9.7
PLCA LR LR 04 33 30.3
comp=Z,361nm,18.8s,baz=341,slow=31
comp=Z,3.9nm,0.7s
ITAB **Concordia** 76.30 129 P **P** 04 06 59.2 -1.4
RCBR **Riachuelo** 78.03 102 LR LR 04 42 27.0
comp=Z,583nm,21.8s,baz=83,slow=36
PLTB **Pedras Altas** 78.14 134 IAmb IAmb 04 07 17.9
comp=Z,40nm,1.3s
EKA **Eskdalemuir Ar** 78.28 34 P **P** 04 07 11.0 -0.3
comp=Z,6.5nm,1.1s,baz=289,slow=5.1,SNR=4.8
EKA LR LR 04 40 10.1
comp=Z,475nm,18.3s,baz=302,slow=34
comp=Z,6.5nm,1.1s
EKA **Eskdalemuir Ar** 78.28 34 P **P** 04 07 11.0 -0.3
ARCES **ARCESS Array B** 79.98 15 P **P** 04 07 21.6 +1.2
comp=Z,4.1nm,1.0s,baz=354,slow=9.0,SNR=4.7
ARCES LR LR 04 44 47.4
comp=Z,504nm,19.4s,baz=320,slow=37
comp=Z,4.1nm,1.0s
YAK **Yakutsk** 80.81 336 LR LR 04 45 20.2
comp=Z,164nm,18.1s,baz=88,slow=37
YAK **Yakutsk** 80.81 336⇑*e*P **P** 04 07 27.2 +2.3
YAK pmax pmax
comp=Z,43nm,1.1s
PGAV **Gavieira, Arco** 81.34 48 *e*LQ LQ 04 34 00.5
PGAV *e*LR LR 04 35 07.9
comp=Z,828nm,20.0s
NB2 **NORSAR Subarra** 81.56 25 P **P** 04 07 29.5 +0.5
comp=Z,36nm,1.4s,baz=308,slow=5.3
NB2 **NORSAR Subarra** 81.56 25 P P 04 07 34.1 +5.1
NB2 pmax pmax
comp=Z,476nm,3.1s
NB2 **NORSAR Subarra** 81.56 25 P **P** 04 07 29.5 +0.5
baz=308,slow=5.3
NOA **NORSAR Array B** 81.56 25 P **P** 04 07 29.7 +0.6
comp=Z,4.3nm,1.0s,baz=310,slow=5.0,SNR=11
NOA LR LR 04 43 33.1
comp=Z,267nm,18.1s,baz=285,slow=36
comp=Z,4.3nm,1.0s
PVRL **Vila Real** 82.02 48 *e*P **P** 04 07 32.8 +0.9
comp=Z,42nm,1.9s
PCAS **Casmilo, Conde** 82.04 49 *e*P **P** 04 07 34.6 +2.7
comp=Z,77nm,1.6s
PSBE **So Bento** 82.07 50 *e*P **P** 04 07 33.3 +1.1
comp=Z,77nm,1.7s
PVIS **Viseu** 82.15 49 *e*P **P** 04 07 33.7 +1.1
comp=Z,41nm,1.8s
MSVF **Nonsavu** 82.30 246 LR LR 04 37 39.1
comp=Z,988nm,18.2s,baz=29,slow=31
MTE **Manteigas** 82.53 49 *e*P **P** 04 07 36.4 +1.8
comp=Z,44nm,1.3s
MTE **Manteigas** 82.53 49 *e*LQ LQ 04 33 16.9
MTE *e*LR LR 04 36 14.3
comp=Z,718nm,20.0s
MTE **Manteigas** 82.53 49 P **P** 04 07 33.7 -1.0
MTE IAmb IAmb 04 07 38.3
comp=Z,30nm,1.1s
MVO **Moncorvo** 82.53 48 *e*P **P** 04 07 36.6 +2.0
comp=Z,54nm,1.7s
MVO **Moncorvo** 82.53 48 *e*LQ LQ 04 33 08.1
MVO *e*LR LR 04 36 04.8
comp=Z,694nm,20.0s
PMTG **Montargil** 82.67 50 *e*P **P** 04 07 36.7 +1.5
comp=Z,32nm,1.2s
PCBR **Castelo Branco** 82.83 49 *e*P **P** 04 07 38.6 +2.5
comp=Z,33nm,2.3s
PTEO **Sao Teotonio** 83.00 52 *e*P **P** 04 07 38.6 +1.6
comp=Z,150nm,1.6s
EVO **Evora** 83.06 51 *e*P **P** 04 07 37.3 0.0
comp=Z,50nm,2.0s
PMRV **Marv??o** 83.08 50 *e*LR LR 04 35 56.6
comp=Z,700nm,20.0s
HFS **Hagfors** 83.08 25 P **P** 04 07 36.7 -0.3
comp=Z,8.8nm,0.9s,baz=253,slow=1.5,SNR=11
HFS LR LR 04 43 41.7
comp=Z,433nm,20.8s,baz=300,slow=35
comp=Z,8.8nm,0.9s
APA **Apatity** 83.29 13⇓*i*P **P** 04 07 36.8 -1.1
APA *i* 04 07 45.3
APA pmax pmax
comp=Z,8.0nm,1.0s
PCVE **Castro Verde** 83.44 51 *e*P **P** 04 07 43.3 +4.0
comp=Z,65nm,1.7s
PVAQ **Vaqueiros** 83.78 52 *e*LQ LQ 04 29 59.8
PVAQ *e*LR LR 04 35 20.8
comp=Z,1μm,18.0s
PBAR **Barrancos** 83.90 51 *e*P **P** 04 07 45.7 +4.1
comp=Z,47nm,1.9s
NRIK **Noril'sk** 84.67 354 P **P** 04 07 45.1 +0.2
comp=Z,12nm,0.9s,baz=24,slow=5.0,SNR=7.8
NRIK LR LR 04 45 58.7
comp=Z,510nm,21.9s,baz=26,slow=36
comp=Z,12nm,0.9s
NRIK **Noril'sk** 84.67 354 P **P** 04 07 42.4 -2.5
NRIK **Noril'sk** 84.67 354*ce*P **P** 04 07 45.1 +0.2
NRIK pmax pmax
comp=Z,38nm,1.1s
BMRD **Maredsous** 84.99 36 *d*P **P** 04 07 45.6 -1.3
comp=Z,16nm,0.9s
DOU **Dourbes** 85.02 36 *d*P **P** 04 07 47.8 +0.8
comp=Z,10nm,1.1s
RAO **Raoul Island** 85.07 235 LR LR 04 40 11.7
comp=Z,312nm,18.5s,baz=166,slow=32
BGES **Gesves** 85.12 36 *d*P **P** 04 07 48.9 +1.3
BCLA **Clavier** 85.21 36 *d*P **P** 04 07 48.8 +0.8
comp=Z,11nm,1.0s
BCLA *d*pP **pwP** 04 07 55.2 +3.1
BSTI **Sart Tilman** 85.25 35 *d*P **P** 04 07 49.9 +1.7
ESDC **Sonseca Array** 85.30 48 P **P** 04 07 49.6 +0.9
comp=Z,2.1nm,1.0s,baz=313,slow=4.2,SNR=6.4
ESDC LR LR 04 43 55.6
comp=Z,504nm,18.3s,baz=294,slow=34
comp=Z,2.1nm,1.0s
ESDC **Sonseca Array** 85.30 48 P **P** 04 07 46.7 -2.1
ESDC IAmb IAmb 04 07 56.1
comp=Z,30nm,1.6s
ESBB **Sonseca Array** 85.30 48 P **P** 04 07 45.8 -3.0
ESBB IAmb IAmb 04 07 56.0
comp=Z,21nm,1.4s
RCHB **Rochefort** 85.32 36 *d*P **P** 04 07 49.1 +0.6
comp=Z,10nm,1.0s
MEM **Membach** 85.47 35 *d*P **P** 04 07 50.0 +0.7
BTNL **Ternell** 85.55 35 *d*P **P** 04 07 49.6 -0.1
comp=Z,7.6nm,1.0s
FIA1 **FINESS Array S** 86.39 20 P **P** 04 07 51.5 -2.1
FINES **FINESS Array B** 86.39 20 P **P** 04 07 54.5 +0.9
comp=Z,4.7nm,0.8s,baz=347,slow=5.9,SNR=9.7
FINES LR LR 04 46 49.4
comp=Z,577nm,18.4s,baz=326,slow=36
comp=Z,4.7nm,0.8s
FINES **FINESS Array B** 86.39 20 P **P** 04 07 50.9 -2.7
FINES **FINESS Array B** 86.39 20 P **P** 04 07 50.9 -2.7
BBTS **Babate** 86.64 75 LR LR 04 43 40.7
comp=Z,716nm,20.9s,baz=258,slow=34
ZEA **Zeya** 87.08 330 *e*P **P** 04 07 59.7 +2.5
ZEA pmax pmax
comp=Z,20nm,1.6s
KLR **Kul'dur** 87.73 325⇓*e*P **P** 04 08 01.9 +1.5
KLR pmax pmax
comp=Z,8.0nm,1.6s
MDT **Midelt** 88.19 54 LR LR 04 46 45.3
comp=Z,510nm,19.1s,baz=345,slow=35
CLL **Collm** 88.53 32 *e*P **P** 04 08 07.0 +2.8
CLL *e*S **S** 04 18 47.0 -3.8
CLL MLR MLR
comp=Z,1μm,19.2s
CLL **Collm** 88.53 32 *e*P **P** 04 08 05.0 +0.8
CLL *e*S **S** 04 18 47.0 -3.8
CLL *e*SS **SS** 04 24 36.0 -4.0
CLL *e*SSSS 04 31 24.0
CLL LmH 04 46 00.0
comp=Z,1μm,19.2s
CLL LmV 06 31 00.0
comp=Z,100nm,18.4s
NKC **Novy Kostel** 88.96 33 AMS AMS 04 48 40.0
comp=Z,900nm,14.9s
BOD **Bodaibo** 89.36 338 *e*P **P** 04 08 09.2 +1.3
BOD pmax pmax
comp=Z,24nm,1.7s
PVCC **Panska Ves** 89.80 32 AMS AMS 04 47 20.0
comp=Z,1μm,19.9s
PRU **Pruhonice** 90.14 32 AMS AMS 04 49 30.0
comp=Z,1μm,13.9s
KHC **Kasperske Hory** 90.24 33 AMS AMS 04 48 50.0
comp=Z,1μm,16.7s
GOPC **GO Pecny, Ondr** 90.31 32 AMS AMS 04 49 30.0
comp=Z,1μm,14.3s
CHVC **Chvalec** 90.46 31 AMS AMS 04 49 50.0
comp=Z,1μm,14.9s
KLMR **Klimovskoe** 90.46 14 *e*P **P** 04 08 11.4 -1.5
KLMR *e* 04 11 46.9
KLMR pmax pmax
comp=Z,25nm,1.9s
KLMR MLR MLR
comp=Z,321nm,14.0s
KLMR **Klimovskoe** 90.46 14 *e*P **P** 04 08 11.5 -1.5
KLMR AMP 04 08 18.6
comp=Z,25nm,1.9s
KLMR *e*PP **PP** 04 11 46.9 +0.4
KLMR LR LR 04 43 54.8
KLMR AMP 04 51 24.1
comp=Z,321nm,14.0s
GERES **GERESS Array B** 90.48 33 P **P** 04 08 13.4 -0.1
comp=Z,0.8nm,0.9s,baz=308,slow=2.4,SNR=3.3
GERES LR LR 04 47 31.3
comp=Z,720nm,20.5s,baz=308,slow=35
comp=Z,0.8nm,0.9s
UPC **Upice** 90.49 31 AMS AMS 04 49 50.0
comp=Z,1μm,15.9s
OSTC **Ostas** 90.55 31 AMS AMS 04 49 50.0
comp=Z,1μm,22.5s
USRK **Ussuriysk Ar.** 90.65 321 P **P** 04 08 13.6 -0.7
comp=Z,4.6nm,0.8s,baz=37,slow=4.5,SNR=6.3
comp=Z,4.6nm,0.8s
USRK **Ussuriysk Ar.** 90.65 321 P **P** 04 08 11.1 -3.1
USRK **Ussuriysk Ar.** 90.65 321 P **P** 04 08 11.1 -3.1
DPC **Dobruska-Polom** 90.74 31 AMS AMS 04 47 40.0
comp=Z,1μm,16.5s
PRGR **Permogore** 90.98 11 *e*P **P** 04 08 14.6 -0.8
PRGR pmax pmax
comp=Z,14nm,0.7s
TREC **Trest** 91.06 32 AMS AMS 04 49 30.0
comp=Z,800nm,15.5s
KRLC **Kraliky** 91.15 31 AMS AMS 04 50 20.0
comp=Z,1μm,15.6s
MJAR **Matsushiro Arr** 91.16 312 P **P** 04 08 18.0 +1.2
comp=Z,2.8nm,1.0s,baz=49,slow=1.9,SNR=6.8
MJAR LR LR 04 43 50.9
comp=Z,322nm,19.6s,baz=64,slow=32
comp=Z,2.8nm,1.0s
VRAC **Vranov** 91.58 32 LR LR 04 49 47.9
comp=Z,839nm,18.1s,baz=308,slow=36
JHJ **Hachijo jima 2** 91.90 308 LR LR 04 42 09.2
comp=Z,118nm,20.7s,baz=87,slow=31
OKC **Ostrava-Krasne** 91.95 31 AMS AMS 04 47 30.0
comp=Z,700nm,21.9s
MAUC **Maruska** 92.13 31 AMS AMS 04 50 50.0
comp=Z,3μm,16.1s
BNX **BinXian** 92.22 324 ⇑P **P** 04 08 23.9 +2.4
BNX pmax pmax
comp=Z,15nm,1.7s
BNX pmax pmax
comp=Z,140nm,6.1s
MNK **Minsk** 92.44 23 *i*P **P** 04 08 22.6 +0.3
MNK *i* 04 12 02.7
MNK *i*PPP PPP 04 14 01.8
MNK *i*S **SKSac** 04 18 55.5 -0.9
MNK *i* 04 19 27.7
MNK *i*PS **PS** 04 20 30.2 -7.0
MNK *i*SS **SS** 04 25 37.2 +1.2
MNK *i*SSS SSS 04 29 16.1
MNK pmax pmax
comp=N,31nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.6s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK MLR MLR
comp=E,77nm,16.0s
MNK MLR MLR
comp=Z,481nm,15.0s
MNK MLR MLR
comp=N,395nm,17.0s
MNK **Minsk** 92.44 23 *i*P **P** 04 08 22.6 +0.3
comp=E,1.0nm,0.6s
MNK *i*P **P** 04 08 22.6 +0.3
comp=N,31nm,0.8s
MNK *i*P **P** 04 08 22.6 +0.3
comp=Z,10.0nm,0.7s,baz=142
MNK *i*PP **PP** 04 12 02.8 +0.4
MNK *i*PPP PPP 04 14 01.8
MNK *i*S **SKSac** 04 18 55.5 -0.9
MNK *i*PS **PS** 04 20 30.2 -7.0
MNK *i*SS **SS** 04 25 37.2 +1.2
MNK *i*SSS SSS 04 29 16.1
MNK *i*LQ LQ 04 44 28.6
MNK *i*LRM MLR 04 50 46.8
comp=E,77nm,16.0s
MNK *i*LRM MLR 04 50 52.6
comp=Z,481nm,14.7s
MNK *i*LRM MLR 04 51 02.8
comp=N,395nm,17.2s
VYHS **Vyhne** 93.22 31 *e*P **P** 04 08 25.9 -0.1
JCJ **Chichijima** 93.25 302 LR LR 04 41 51.7
comp=N,252nm,21.9s,baz=77,slow=30
URZ **Urewera** 93.27 229 LR LR 04 41 36.6
comp=N,469nm,21.0s,baz=149,slow=30
DZM **Mont Dzumac** 93.97 248 *e*LR LR 04 38 44.3
comp=N,1μm,24.2s
DZM **Mont Dzumac** 93.97 248 LR LR 04 42 38.6
comp=N,505nm,20.1s,baz=33,slow=30
HNR **Honiara** 94.27 262 LR LR 04 41 48.9
comp=N,10μm,21.7s,baz=60,slow=30
KIRV **Kirov** 94.52 11 LR LR 04 52 35.2
comp=N,626nm,21.8s,baz=346,slow=36
KIRV **Kirov** 94.52 11⇑*e*P **P** 04 08 32.3 +0.6
CN2 **Changchun** 94.54 323 *e*P **P** 04 08 32.6 +0.4
CN2 *es*P pwP 04 08 39.0 +2.7
CN2 S **S** 04 19 40.3 -5.2
CN2 pmax pmax
comp=N,10.0nm,0.5s
CN2 pmax pmax
comp=N,60nm,4.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=N,300nm,18.0s
OBN **Obninsk** 94.74 19 LR LR 04 51 48.4
comp=N,114nm,19.1s,baz=326,slow=36
AKASG **Malin Array Be** 95.97 25 P **P** 04 08 37.5 -1.1
comp=N,1.4nm,0.8s,baz=326,slow=3.4,SNR=3.8
AKASG LR LR 04 51 31.0
comp=N,471nm,21.2s,baz=320,slow=35
comp=N,1.4nm,0.8s
KEST **Kesra** 96.27 46 LR LR 04 50 05.1
comp=N,557nm,21.1s,baz=274,slow=34
PMSA **Palmer Station** 96.62 162 LR LR 04 43 01.1
comp=N,160nm,19.9s,baz=328,slow=30
KSRS **Korea Array** 97.25 317 LR LR 04 46 11.3
comp=N,112nm,21.6s,baz=35,slow=32
KOWA **Kowa** 97.53 70 LR LR 04 52 52.3
comp=N,267nm,18.6s,baz=319,slow=36
GUMO **Guam** 97.68 289 LR LR 04 43 13.9
comp=N,490nm,21.9s,baz=72,slow=30
ARU **Arti** 97.86 7*c*i*P* Pdif 04 08 47.4 +0.4
ARU 04 12 45.2
ARU S **SKSac** 04 19 24.9 -0.3
ARU SS **SS** 04 26 54.6 +2.0
ARU pmax pmax
comp=Z,8.0nm,1.8s
ARU MLR MLR
comp=Z,830nm,20.0s
XLT **XiLinHaoTe** 99.23 328 *e*P **Pdif** 04 08 53.9 +0.3
XLT pP pwP 04 08 58.8 +1.2
XLT sP sP 04 09 01.0 +6.1
XLT S S 04 20 14.3 -12
XLT sS sS 04 20 32.4 +4.8
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax
comp=Z,70nm,4.2s
XLT LR LR
comp=Z,210nm,23.9s
XLT LR LR
comp=Z,230nm,20.8s
KRVT **Keravat (AS076** 99.27 270 LR LR 04 45 39.5
comp=Z,812nm,21.1s,baz=188,slow=30
RPZ **Rata Peaks** 99.87 226 LR LR 04 47 11.8
comp=Z,297nm,18.9s,baz=70,slow=31
ZALV **Zalesovo Beam** 99.95 351 LR LR 05 00 44.2
comp=Z,324nm,18.4s,baz=6.0,slow=39
BELG **Belogornoye** 100.01 14⇑*e*P **Pdif** 04 08 56.8 +0.1
BELG pmax pmax
comp=Z,2.0nm,0.7s
SONM **Songino Array** 100.16 336 P **Pdif** 04 08 59.3 +1.7
comp=Z,0.8nm,0.8s,baz=29,slow=3.3,SNR=3.7
BVAR **Borovoye Array** 101.87 360 P **Pdif** 04 09 06.0 +1.0
comp=Z,0.4nm,0.8s,baz=242,slow=9.2,SNR=3.5
KURBB **Kurchatov Arra** 103.93 355 PP **PKiKP** 04 13 37.5 +5.8

comp=Z,0.3nm,0.7s,baz=13,slow=6.8,SNR=5.0
MKAR Makanchi Array 107.29 351 PKKPbc **PKKPab 04 25 09.7 -2.2**
comp=Z,1.3nm,1.1s,baz=199,slow=5.9,SNR=4.4
MAK Makhachkala 108.79 17 *i* P **Pdif 04 09 32.7 -3.2**
MAK *e* 04 14 03.9
MAK *e* 04 20 07.1
MAK pmax pmax
comp=Z,220nm,1.1s
WMQ Urumqi 109.25 347 Pdif **Pdif 04 09 39.5 +1.4**
WMQ AMB AMB
comp=Z,83nm,4.5s
WMQ LR LR
comp=Z,590nm,19.1s
WMQ LR LR
comp=Z,420nm,19.1s
WMQ LR LR
comp=Z,310nm,22.3s
LZH Lanzhou 111.08 331 *e*PKP **PKiKP 04 13 49.8 +4.1**
LZH sPKP 04 14 03.8
PZH PanZhiHua 120.09 327 PKP **PKPdf 04 14 01.3 -1.9**
PZH PP **PP 04 15 27.3 +0.6**
PZH AMB AMB
comp=Z,100nm,4.5s
PZH LR LR
comp=Z,390nm,17.1s
PZH LR LR
comp=Z,430nm,17.6s
PZH LR LR
comp=Z,890nm,17.2s
WRA Warramunga Arr 121.11 261 PKP **PKiKP 04 14 06.6 +1.5**
comp=Z,0.7nm,0.8s,baz=75,slow=2.5,SNR=5.7
ASAR Alice Springs 122.59 257 PKP **PKiKP 04 14 09.2 +1.2**
comp=Z,0.4nm,0.4s,baz=71,slow=1.7,SNR=4.6
ASAR PKKPbc **PKKPab 04 24 05.0 +3.7**
comp=Z,1.7nm,0.9s,baz=251,slow=2.9,SNR=8.0
ASAR SKKPbc SKKPbc 04 27 59.4 +7.8
comp=Z,0.7nm,0.9s,baz=245,slow=2.6,SNR=4.4
CMAR Chiang Mai Arr 128.21 325 PKP **PKiKP 04 14 20.6 +1.3**
comp=Z,1.1nm,0.3s,baz=358,slow=1.6,SNR=5.4

*FUNV **13** 04:00:56.0, 10.°19N×70.°87W, h5km, MW3.0*
ISC 13 04:00:56.6±1.2, 10.°22N±0.°05×70.°83W±0.°04, h10km±11km, n16, σ1°98/23, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**0.73**	**15**	*e*P	**Pg**	**04 01 09.4**	**-1.2**
DABV				*e*S	**Sg**	**04 01 21.4**	**+1.2**
CURV	**Curarigua**	**0.88**	**103**	*e*P	**Pb**	**04 01 14.0**	**+0.1**
CURV				*e*S	**Sg**	**04 01 24.8**	**-0.2**
SIQV	**Siquisique**	**1.09**	**67**	*e*P	**Pg**	**04 01 16.4**	**-1.2**
SIQV				*e*S	**Sb**	**04 01 33.2**	**+1.3**
SOCV	**Socops**	**1.92**	**181**	*e*P	**Pn**	**04 01 29.3**	**0.0**
SOCV				*e*S	**Sn**	**04 01 52.8**	**-0.8**
MAPV	**Macapo**	**2.37**	**99**	*e*P	**Pn**	**04 01 35.8**	**+0.4**
MAPV				*e*S	**Sn**	**04 02 04.1**	**-0.4**
CAPV	**Capacho**	**2.76**	**212**	*e*P	**Pn**	**04 01 38.4**	**-2.6**
CAPV				*e*S	**Sn**	**04 02 12.8**	**-1.7**
BAUV	**El Baul**	**3.02**	**114**	*e*P	**Pn**	**04 01 44.8**	**+0.3**
BAUV				*e*S	**Sn**	**04 02 19.1**	**-1.7**
BENV	**Beln**	**3.19**	**94**	*e*P	**Pn**	**04 01 46.8**	**0.0**
BENV				*e*S	**Sn**	**04 02 24.5**	**-0.5**
SJCC	**San Jacinto, C**	**4.30**	**266**	*e*P	**Pg**	**04 02 17.3**	**-1.6**
ZARC	**Zaragoza, Cauc**	**4.81**	**236**	*e*P	Pg	04 02 32.2	+3.3
SPBC	**San Pablo de B**	**5.56**	**216**	*e*P	**Pg**	**04 02 45.1**	**+2.1**
CHIC	**Chingaza**	**6.25**	**208**	*e*P	**Pg**	**04 02 52.8**	**-3.6**
ROSC	**El Rosal**	**6.36**	**213**	*e*P	**Pb**	**04 02 51.1**	**+3.4**
GUY2C	**Guyana, Caldas**	**6.69**	**223**	*e*P	**Pn**	**04 02 39.4**	**+4.0**
CBOC	**Ciudad Bolivar**	**6.71**	**230**	*e*P	**Pn**	**04 02 32.6**	**-2.7**
PRAC	**Prado**	**7.61**	**212**	*e*P	**Pn**	**04 02 48.0**	**+0.4**

*KRNET **13** 04:06:17.2±0.1, 40.°52N×77.°07E, h20km, mb3.0*
*NNC **13** 04:06:20.9±1.4, 40.°63N×76.°99E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.1km s-min=8.2km az=7.0*
*SOME **13** 04:06:20.3, 40.°63N×77.°00E, h10km*
ISC 13 04:06:19.7±2.9, 40.°6N±0.1×77.°02E±0.°04, h5km±15km, n31, σ1°37/48, 6C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.11**	**316**	⇑*e*P	**Pg**	**04 06 40.6**	**-0.4**
NRN	baz=18			⇑*e*S	**Sn**	**04 06 57.4**	**-0.7**
TARG	**Taragay, Kyrgy**	**1.25**	**28**	⇓*e*P	**Pn**	**04 06 42.1**	**-2.1**
TARG	baz=24			⇓*i*S	**Sg**	**04 07 00.7**	**+0.9**
ULHL	**Ulahol**	**1.71**	**340**	⇑*e*P	**Pb**	**04 06 51.2**	**-0.6**
ULHL	baz=40			⇑*e*S	**Sg**	**04 07 15.9**	**+1.2**
BOOM	**Boomskoye usch**	**2.02**	**337**	⇓*e*P	**Pb**	**04 06 56.0**	**-1.1**
BOOM	baz=37			⇓*e*S	**Sg**	**04 07 24.2**	**-0.5**
TNSS	**Tian-Shan**	**2.40**	**359**	*e*P	**Pb**	**04 07 04.5**	**+0.9**
TNSS	17nm,0.1s			*e*S	**Sg**	**04 07 36.6**	**-0.2**
TNSS	**Tian-Shan**	**2.40**	**359**	Pg	**Pb**	**04 07 04.5**	**+0.9**
TNSS	16nm,0.3s			Lg	Lg	04 07 36.6	
IZV	**Izvestkoviy**	**2.42**	**353**	*e*P	**Pg**	**04 07 05.4**	**-0.6**
IZV	9.6nm,0.0s			*e*S	**Sg**	**04 07 37.9**	**+0.6**
IZV	**Izvestkoviy**	**2.42**	**353**	Pg	**Pg**	**04 07 05.4**	**-0.6**
IZV	9.3nm,0.4s			Lg	Lg	04 07 37.9	
MDOK	**Medeo**	**2.53**	**1**	*e*P	**Pb**	**04 07 07.2**	**+1.5**
MDOK	5.9nm,0.2s			*e*S	**Sg**	**04 07 40.8**	**-0.1**
MDOK	**Medeo**	**2.53**	**1**	Pg	**Pb**	**04 07 07.2**	**+1.5**
MDOK	5.7nm,0.4s			Pg	Pg	04 07 19.6	+12
KST	**Kastek**	**2.53**	**342**	*e*P	**Pb**	**04 07 07.2**	**+1.5**
KST	9.1nm,0.1s			*e*S	**Sg**	**04 07 40.7**	**-0.3**
KST	**Kastek**	**2.53**	**342**	Pg	**Pb**	**04 07 07.2**	**+1.5**
KST	9.2nm,0.6s			Lg	Lg	04 07 40.7	
KBK	**Karagaybulak**	**2.54**	**323**	⇑*e*P	**Pn**	**04 07 03.2**	**+1.4**
KBK	baz=24			⇑*e*S	**Sb**	**04 07 36.9**	**-0.8**
KNDC	**Almaty**	**2.58**	**359**	⇓Lg	Lg	04 07 46.5	
KOTS	50nm,0.5s			*e*P	**Pg**	**04 07 08.7**	**-0.8**
KOTS	6.5nm,0.0s			*e*S	**Sg**	**04 07 43.5**	**+0.4**
KOTS	**Kotyrbulak**	**2.60**	**2**	Pg	**Pg**	**04 07 08.7**	**-0.8**
KOTS	63nm,0.2s			Lg	Lg	04 07 43.5	
SATY	**Saty**	**2.64**	**23**	*e*P	**Pg**	**04 07 09.8**	**-0.4**
SATY	5.8nm,0.1s			*e*S	**Sg**	**04 07 45.6**	**+1.2**
SATY	**Saty**	**2.64**	**23**	Pg	**Pg**	**04 07 10.0**	**-0.2**
SATY	5.8nm,0.1s			Lg	Lg	04 07 45.6	
UZB	**Uzynbulak**	**2.92**	**30**	*e*P	**Pb**	**04 07 13.6**	**+1.1**
UZB	1.3nm,0.0s			*e*S	**Sg**	**04 07 51.8**	**-1.8**
UZB	**Uzynbulak**	**2.92**	**30**	Pg	**Pb**	**04 07 13.6**	**+1.1**
UZB	1.3nm,0.4s			Lg	Lg	04 07 51.8	
KURS	**Kuram**	**2.98**	**16**	*e*P	**Pg**	**04 07 16.3**	**-0.5**
KURS	4.3nm,0.3s			*e*S	**Sg**	**04 07 56.6**	**+1.3**
KURS	**Kuram**	**2.98**	**16**	Pg	**Pg**	**04 07 16.3**	**-0.5**
KURS	4.3nm,0.8s			Lg	Lg	04 07 56.6	
KPKS	**Kokpek**	**3.09**	**23**	*e*P	**Pb**	**04 07 17.1**	**+1.9**
KPKS	3.5nm,0.2s			*e*S	**Sg**	**04 07 57.6**	**-1.3**
CHKK	**Chushkaly**	**3.22**	**360**	*e*P	**Pb**	**04 07 19.6**	**+2.3**
CHKK	4.1nm,0.0s			*e*S	**Sg**	**04 08 02.4**	**-0.6**
CHKK	**Chushkaly**	**3.22**	**360**	Pg	**Pb**	**04 07 19.6**	**+2.3**
CHKK	4.0nm,0.5s			Lg	Lg	04 08 02.4	
PDGK	**Podgornoye**	**3.26**	**34**	⇓Pg	**Pb**	**04 07 19.9**	**+1.7**
PDGK	2.2nm,0.4s			⇓Lg	Lg	04 08 06.1	
SGDS	**Sogindy**	**3.33**	**329**	*e*P	**Pb**	**04 07 21.2**	**+1.9**
SGDS	1.3nm,0.1s			*e*S	**Sg**	**04 08 05.1**	**-1.5**
SGDS	**Sogindy**	**3.33**	**329**	Pg	**Pb**	**04 07 21.2**	**+1.9**
SGDS	1.3nm,0.3s			Lg	Lg	04 08 05.1	
BLB	**Baldybastay**	**3.63**	**17**	*e*P	**Pb**	**04 07 27.1**	**+2.8**
BLB	6.7nm,0.0s			*e*S	**Sg**	**04 08 15.3**	**-0.9**
BLB	**Baldybastay**	**3.63**	**17**	Pg	**Pb**	**04 07 27.1**	**+2.8**
BLB	6.7nm,0.6s			Lg	Lg	04 08 15.3	
KTMS	**Ketmen**	**3.75**	**40**	*e*P	**Pg**	**04 07 30.0**	**-1.6**
KTMS	1.4nm,0.2s			*e*S	**Sg**	**04 08 20.4**	**+0.3**
	2.6nm,0.2s						

*IDC **13** 04:13:19.6±2.4, 9.°05S×114.°99E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=134.7km s-min=27.6km az=49.0*
*DJA **13** 04:13:25.4±0.7, 9.°5±3.°×114.°3E±.°, h16km±6km, M4.2/13, mb4.6/2, MLv4.0/13*
ISC 13 04:13:23.1±1.7, 9.°23S±0.°08×113.°02E±0.°03, h14km±11km, n19, σ1°68/26, mb3.7/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.20**	**332**	P	**Pg**	**04 13 47.5**	**+1.3**
KRKI				S	**Sn**	**04 14 03.5**	**+2.0**
JAGI	**Jajag, Banyuwa**	**1.35**	**56**	P	**Pg**	**04 13 49.4**	**+0.3**
JAGI				S	**Sb**	**04 14 05.7**	**+0.4**
BYJI	**Banyuwangi**	**1.66**	**53**	P	**Pg**	**04 13 54.3**	**-0.7**
BYJI				S	**Sg**	**04 14 16.1**	**-0.5**
PWJI	**Pagerwojo**	**1.69**	**315**	P	**Pb**	**04 13 54.5**	**+0.5**
PWJI				Pg	**Pg**	**04 13 56.1**	**+0.4**
PWJI				S	**Sb**	**04 14 14.8**	**-0.4**
RTBI	**Rangdo, Negare**	**2.05**	**68**	P	**Pb**	**04 13 59.9**	**-0.2**
RTBI				S	**Sb**	**04 14 24.8**	**-0.6**
PCJI	**Pacitan**	**2.09**	**299**	P	**Pb**	**04 14 00.0**	**-0.7**
PCJI				S	**Sb**	**04 14 24.6**	**-2.0**
IGBI	**Denpasar**	**2.14**	**79**	P	**Pb**	**04 14 00.7**	**-0.9**
KMMI	**Kalianget**	**2.36**	**24**	P	**Pb**	**04 14 03.3**	**-2.0**
SRBI	**Singaraja**	**2.45**	**63**	P	**Pb**	**04 14 05.2**	**-1.7**
TBJI	**Tambak Boyo**	**2.66**	**334**	P	**Pn**	**04 14 06.8**	**+1.3**
UGM	**Wanagama**	**2.79**	**298**	P	**Pb**	**04 14 10.2**	**-2.6**
KLNI	**Mataram**	**3.14**	**76**	P	**Pn**	**04 14 14.8**	**+2.6**
SMRI	**Semarang**	**3.34**	**310**	P	**Pn**	**04 14 17.9**	**+2.9**
TWSI	**Taliwang, Sumb**	**3.85**	**83**	P	**Pn**	**04 14 24.3**	**+2.4**
PLAI	**Plampang**	**4.72**	**86**	P	**Pn**	**04 14 36.5**	**+2.7**
WRA	**Warramunga Arr**	**23.19**	**120**	P	**P**	**04 18 29.5**	**-0.2**
	1.2nm,0.8s,baz=295,slow=12,SNR=12						
ASAR	**Alice Springs**	**24.59**	**128**	P	**P**	**04 18 42.9**	**-0.2**
	1.2nm,0.8s						
STKA	**Stephens Creek**	**34.78**	**134**	P	**P**	**04 20 13.2**	**-0.1**
	1.3nm,0.7s,baz=304,slow=8.8,SNR=13						
	0.7nm,0.4s,baz=306,slow=10,SNR=3.6						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**62.14**	**337**	P	**P**	**04 23 41.4**	**-2.3**
	0.7nm,0.4s,baz=306,slow=10,SNR=3.6						
	0.7nm,0.4s						
	0.2nm,0.4s,baz=138,slow=8.9,SNR=2.1						
	0.2nm,0.4s						

*FUNV **13** 04:25:05.5, 9.°84N×62.°38W, h15km, MW4.0*
*TRN **13** 04:25:05.1, 9.°86N×62.°33W, h55km, MD4.3*
ISC 13 04:25:05.5±1.4, 9.°91N±0.°07×62.°37W±0.°05, h50km, n31, σ1°48/44, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**1.14**	**312**	*e*P	**Pn**	**04 25 25.6**	**+0.5**
CRUV				*e*S	**Sn**	**04 25 41.0**	**+1.2**
TRN	**Trinidad (W)**	**1.20**	**52**	*e*P	**Pn**	**04 25 25.7**	**-0.2**
TRN				*e*S	**Sn**	**04 25 41.3**	**+0.3**
COAV	**Cumanacoa**	**1.46**	**280**	*e*P	**Pn**	**04 25 31.4**	**+1.8**
CUMV	**Cumana_UDO**	**1.87**	**286**	*e*P	**Pn**	**04 25 35.9**	**+0.8**
CUMV				*e*S	**Sn**	**04 25 59.7**	**+2.2**
GRFF	**Grenada Fort F**	**2.21**	**16**	*e*P	**Pn**	**04 25 41.0**	**+1.2**
GRFF				*e*S	**Sn**	**04 26 06.0**	**+0.1**
PCRV	**Puerto La Cruz**	**2.25**	**277**	*e*P	**Pn**	**04 25 41.4**	**+1.0**
PCRV				*e*S	**Sn**	**04 26 07.4**	**+0.4**
TOSP	**Speyside**	**2.27**	**52**	*e*P	**Pn**	**04 25 40.6**	**+0.1**
TOSP				*e*S	**Sn**	**04 26 06.5**	**-0.8**
GRGR	**Grenville**	**2.31**	**17**	*e*P	**Pn**	**04 25 41.4**	**+0.2**
GRGR				*e*S	**Sn**	**04 26 08.7**	**+0.2**
PRGV	**PARIAGUAN**	**2.53**	**243**	*e*P	**Pn**	**04 25 45.6**	**+1.5**
PRGV				*e*S	**Sn**	**04 26 14.1**	**+0.4**
GCMP	**Grenada, Carri**	**2.72**	**20**	*e*P	**Pn**	**04 25 46.9**	**+0.2**
GCMP				*e*S	**Sn**	**04 26 17.6**	**-0.8**
SVB	**Belmont**	**3.51**	**18**	*e*P	**Pn**	**04 25 59.0**	**+1.4**
SVB				*e*S	**Sn**	**04 26 37.9**	**-0.1**
MERV	**Las Mercedes**	**3.93**	**261**	*e*P	**Pn**	**04 26 03.3**	**-0.1**
MERV				*e*S	**Sn**	**04 26 47.6**	**-0.8**
MCLT	**Moule a Chique**	**4.02**	**20**	*e*P	**Pn**	**04 26 05.4**	**+0.8**
MCLT				*e*S	**Sn**	**04 26 49.2**	**-1.3**
BBGH	**Gun Hill**	**4.23**	**40**	*e*	**Pn**	**04 26 11.8**	**+4.3**
SLBI	**Saint Lucia, B**	**4.30**	**18**	*e*P	**Pn**	**04 26 08.6**	**+0.1**
SLBI	**Saint Lucia, B**	**4.30**	**18**	*e*S	**Sn**	**04 26 57.0**	**-0.4**
MPOM	**Morne Pois Mar**	**4.74**	**18**	*e*P	**Pn**	**04 26 15.1**	**+0.6**
MPOM	**Morne Pois Mar**	**4.74**	**18**	*e*S	**Sn**	**04 27 07.5**	**-0.6**
CACV	**CAICARA DEL OR**	**4.74**	**241**	*e*P	Pn	04 26 08.6	-5.9
CACV				*e*S	Sn	04 26 54.6	-14
BIM	**Bigot**	**4.75**	**15**	*e*P	**Pn**	**04 26 15.0**	**+0.4**
BIM	**Bigot**	**4.75**	**15**	*e*S	**Sn**	**04 27 06.7**	**-1.7**
FDF	**Fort de France**	**4.94**	**14**	*e*P	**Pn**	**04 26 17.9**	**+0.6**
FDF	**Fort de France**	**4.94**	**14**	*e*S	**Sn**	**04 27 10.6**	**-2.4**
BENV	**Beln**	**5.16**	**271**	*e*P	**Pn**	**04 26 20.7**	**+0.5**
BENV				*e*S	**Sn**	**04 27 16.3**	**-2.3**
DSLB	**Salisbury**	**5.57**	**9**	*e*P	**Pn**	**04 26 26.7**	**+0.9**
BAUV	**El Baul**	**5.68**	**261**	*e*P	**Pn**	**04 26 28.8**	**+1.3**
BAUV	**El Baul**	**5.68**	**261**	*e*S	**Sn**	**04 27 28.6**	**-2.8**
BAUV	**El Baul**	**5.68**	**261**	*e*P	**Pn**	**04 26 27.2**	**-0.3**
BAUV				*e*S	**Sn**	**04 27 27.0**	**-4.4**
MAGL	**Barre de l'ile**	**6.09**	**10**	*e*P	**Pn**	**04 26 33.2**	**+0.2**
CBE	**Ff, Capester**	**6.16**	**7**	*e*P	**Pn**	**04 26 35.6**	**+1.6**
ANBD	**Bethesda, Anti**	**7.12**	**5**	*e*P	**Pn**	**04 26 48.2**	**+1.1**

IDC 13 05:49:25.6±3.7, 7.°00S×154.°49E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=130.5km s-min=38.3km az=117.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.41**	**235**	P	P	05 54 35.5	-0.9
	1.2nm,0.8s,baz=57,slow=9.2,SNR=7.3						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**25.80**	**228**	P	P	05 54 59.0	+0.3
	0.3nm,0.4s,baz=61,slow=9.6,SNR=4.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**83.08**	**319**	P	P	06 01 54.0	+0.8
	0.5nm,0.3s,baz=108,slow=4.7,SNR=4.7						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**152.54**	**285**	PKPbc	PKPbc	06 09 24.6	-0.5
	0.6nm,0.7s,baz=75,slow=3.0,SNR=4.1						

AUST 13 05:55:26.8±0.0, 32.°48S×122.°40E, h0km, Error ellipse: s-maj=0.1km s-min=0.1km az=348.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBL	**Kambalda**	**1.20**	**338**	P	Pg	05 55 49.4	-0.2
KMBL	baz=1.3			S	Sb	05 56 06.0	-0.3
KLBR	**Kellerberrin**	**4.05**	**281**	P	Pn	05 56 27.3	-2.7
NWAO	**Narrogin (SRO)**	**4.38**	**263**	P	Pn	05 56 32.3	-2.2
NWAO	baz=4.3			P	Pn	05 56 32.3	-2.2
NWAO	baz=4.3			S	Sn	05 57 23.3	-3.1
RKGY	**Rocky Gully**	**5.00**	**243**	P	Pn	05 56 40.9	-2.2
RKGY	baz=4.9			S	Sn	05 57 36.8	-4.8
FORT	**Forrest**	**5.11**	**72**	P	Pn	05 56 43.2	-1.5
FORT	baz=5.2			S	Sn	05 57 39.8	-4.5
BLDU	**Ballidu**	**5.20**	**289**	P	Pn	05 56 43.1	-2.8
BLDU	baz=5.2			S	Sn	05 57 40.1	-6.6
MORW	**Morawa**	**6.45**	**300**	P	Pn	05 57 00.4	-2.5
MORW	baz=6.4			S	Sn	05 58 10.1	-7.1
WRKA	**Warakurna**	**9.04**	**36**	P	Pn	05 57 34.7	-3.9
WRKA	baz=9.2			S	Sn	05 59 16.5	-4.7
MULG	**Mulgathing**	**10.20**	**81**	P	Pn	05 57 51.3	-3.2
MULG	baz=10			S	Sn	05 59 41.3	-8.3
BBOO	**Buckleboo**	**11.52**	**95**	P	Pn	05 58 08.2	-4.3
GIRL	**Giralia**	**12.18**	**322**	P	Pn	05 58 19.2	-2.4
OOD	**Oodnadatta**	**12.41**	**71**	P	Pn	05 58 20.1	-4.5
ASPA	**Alice Springs**	**13.41**	**52**	P	Pn	05 58 36.0	-2.4
LCRK	**Leigh Creek**	**13.65**	**86**	P	Pn	05 58 39.9	-1.7
WC3	**Warramunga Arr**	**16.44**	**44**	P	Pn	05 59 13.7	-5.2
WB2	**Warramunga Arr**	**16.44**	**43**	P	Pn	05 59 13.7	-5.2

*IDC **13** 06:02:12.3±1.8, 2.°97N×125.°50E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=151.5km s-min=22.6km az=66.0*
*DJA **13** 06:02:18.3±1.4, 3.°N±5.°×12.°6E±.°, h17km±15km, M4.5/12, mb4.7/6, mB5.2/5, MLv4.3/12, Mw(mB)4.5/5, MwMwp6.1/1, Mwp6.1/1*
*MAN **13** 06:02:21.0, 3.°43N×126.°24E, h85km, mb4.9, ML3.9, MS3.9*
ISC 13 06:02:16.4±0.8, 3.°19N±0.°05×126.°26E±0.°06, h10km, n19, σ1°41/24, mb3.8/4, 2C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.88**	**304**	P	**Pb**	**06 02 34.9**	**+1.1**
SGSI				S	**Sg**	**06 02 46.0**	**+1.2**
GAMI	**Galela, Maluku**	**2.04**	**131**	P	**Pn**	**06 02 52.4**	**+1.6**
GAMI				S	**Sn**	**06 03 17.7**	**+1.4**
TNTI	**Ternate**	**2.65**	**155**	P	**Pn**	**06 03 00.2**	**+1.0**
TNTI				S	**Sn**	**06 03 33.3**	**+1.9**
GSPH	**General Santos**	**3.16**	**336**	⇑*i*P	**Pn**	**06 03 08.6**	**+2.3**
GSPH				*i* S	**Sn**	**06 03 43.8**	**-0.3**
KMSI	**Cibinong**	**3.46**	**221**	P	**Pn**	**06 03 10.2**	**-0.2**
KCP	**Kidapawan**	**3.96**	**343**	⇓*e*P	**Pb**	**06 03 27.0**	**+0.5**
KCP				*i* S	**Sn**	**06 04 03.9**	**-0.1**
GTOI	**Gorontalo**	**4.12**	**232**	P	**Pn**	**06 03 20.7**	**+1.2**
MRSI	**Marisa**	**5.09**	**238**	P	**Pn**	**06 03 34.3**	**+1.5**
	0.9nm3μm165nm,0.5s						
PAGZ	**Pagadian**	**5.44**	**328**	⇑*i*P	**Pn**	**06 03 38.2**	**+0.6**
CGP	**Cagayan de Oro**	**5.45**	**343**	*e*P	**Pn**	**06 03 36.2**	**-1.6**
LUWI	**Luwuk**	**5.46**	**220**	P	**Pn**	**06 03 38.9**	**+0.9**
	0.5nm139μm70nm,0.7s						
APSI	**Ampana**	**6.15**	**229**	P	**Pn**	**06 03 48.3**	**+0.9**
	0.4nm1μm94nm,1.1s						
NLAI	**Namlea**	**6.45**	**173**	P	**Pn**	**06 03 51.6**	**+0.2**
	0.3nm3μm44nm,0.6s						
KRAI	**Karang Ratu**	**6.81**	**162**	P	**Pn**	**06 03 57.5**	**+1.0**
MPSI	**Mapaga**	**6.96**	**246**	P	**Pn**	**06 03 58.4**	**-0.2**
WRA	**Warramunga Arr**	**24.32**	**161**	P	**P**	**06 07 31.6**	**-2.9**
	1.3nm,0.6s,baz=338,slow=10,SNR=17						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**27.72**	**165**	P	**P**	**06 08 03.0**	**-2.2**
	0.4nm,0.5s,baz=345,slow=7.2,SNR=6.8						
ASAR				S	**S**	**06 12 47.2**	**-0.5**
	0.1nm,0.3s,baz=344,slow=20,SNR=1.8						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**37.80**	**158**	P	**P**	**06 09 31.9**	**-1.1**
	1.3nm,0.6s,baz=355,slow=8.1,SNR=4.7						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**57.73**	**326**	P	P	06 12 03.0	-4.5
	0.7nm,0.4s,baz=124,slow=7.9,SNR=3.3						
	0.7nm,0.4s						

*IDC **13** 06:03:48.6±0.9, 36.°21N×68.°31E, h0km, mb4.0/16, mbtmp4.1/22, ML4.0/6, MS3.6/42, Error ellipse: s-maj=17.9km s-min=14.1km az=172.0*
*NNC **13** 06:03:49.7±4.8, 36.°51N×68.°00E, h0km, mb4.7, Error ellipse: s-maj=55.4km s-min=38.4km az=89.0*
*MOS **13** 06:03:50.3±1.3, 36.°46N×68.°18E, h17km, mb4.5/13, Error ellipse: s-maj=7.1km s-min=3.9km az=71.5*
*NEIC **13** 06:03:52.7±2.0, 36.°41N±0.°04×68.°23E±0.°06, h18km±6km, mb4.5/13, Error ellipse: s-maj=8.1km s-min=5.7km az=55.0*
ISC 13 06:03:50.5±0.4, 36.°47N±0.°04×68.°10E±0.°04, h10km, n194, σ2°29/194, mb4.3/29, MS3.6/41, 12C-9D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.08**	**158**		**Pn**	**06 04 25.9**	**+0.3**
KBL	**Kabul**	**2.08**	**158**	PN	**Pn**	**06 04 25.9**	**+0.3**
CHGR	**Chuyangaron**	**2.33**	**21**		**Pb**	**06 04 32.2**	**-0.6**
CHGR	**Chuyangaron**	**2.33**	**21**	PN	**Pb**	**06 04 32.2**	**-0.6**
GAR	**Garm**	**3.07**	**34**	Pn	**Pn**	**06 04 41.4**	**+2.1**
CEP	**Cherat**	**4.09**	**129**	P	**Pn**	**06 04 56.5**	**+3.3**
CEP				S	**Sn**	**06 05 45.0**	**+3.8**
BTK	**Batken**	**4.17**	**30**		**Pn**	**06 04 55.6**	**+1.4**
BTK	**Batken**	**4.17**	**30**	PN	**Pn**	**06 04 55.7**	**+1.4**
DRK	**Karamyk**	**4.19**	**43**		**Pn**	**06 04 55.6**	**+0.8**
THW	**Thamme Wali**	**4.74**	**140**	P	**Pn**	**06 05 04.9**	**+2.8**
TAS	**Tashkent**	**4.93**	**11**	Pn	**Pn**	**06 05 06.8**	**+2.1**
TAS	**Tashkent**	**4.93**	**11**	PN	**Pn**	**06 05 06.8**	**+2.1**
NIL	**Nilore**	**5.08**	**122**		**Pn**	**06 05 07.7**	**+1.0**
NIL	**Nilore**	**5.08**	**122**	PN	**Pn**	**06 05 07.7**	**+1.0**
CHCP	**Chirah Chowk**	**5.08**	**122**	P	**Pn**	**06 05 08.9**	**+2.1**
HRA	**Herat**	**5.22**	**248**		**Pn**	**06 05 11.4**	**+2.6**
JMU	**Jammu**	**6.74**	**122**	*e*S	**Sn**	**06 06 45.6**	**-0.8**
DZA	**Taraz**	**6.88**	**20**	*e*PN	**Pn**	**06 05 34.3**	**+2.9**
DZA				*e*S	**Sn**	**06 06 51.1**	**+1.4**
DZA	**Taraz**	**6.88**	**20**	*e*P	**Pn**	**06 05 34.4**	**+2.9**
	baz=19						
DZA				*e*S	**Sn**	**06 06 51.1**	**+1.4**
	baz=19						
KK31	**Karatay Array**	**6.88**	**15**	PN	**Pn**	**06 05 34.1**	**+2.7**
KK31	**Karatay Array**	**6.88**	**15**	⇑Sn	**Sn**	**06 06 48.3**	**-1.3**
	26nm,0.4s,baz=201,slow=24,SNR=3.8						
KK31				⇑Lg	Lg	06 07 33.1	
	53nm,0.7s						
KKAR	**Karatay Array**	**6.88**	**15**		**Pn**	**06 05 34.0**	**+2.6**
KKAR	**Karatay Array**	**6.88**	**15**	PN	**Pn**	**06 05 34.0**	**+2.6**
KSH	**Kashi**	**6.92**	**62**	Pn	**Pn**	**06 05 29.6**	**-2.5**
KSH				Sn	**Sn**	**06 06 43.3**	**-7.6**
KSH				smax	smax		
	comp=N,320nm,0.5s	

SNR=15
THN Thein Dam 7.47 120 *e*P **Pn 06 05 41.4 +1.9**
THN *e*P Pn 06 05 45.0 +5.5
THN *e*S **Sn 06 07 04.8 +0.5**
THN *e*S **Sn 06 07 05.0 +0.7**
EKS2 Erkin-Say 7.57 34 P **Pn 06 05 45.5 +4.4**
SNR=10
UCH Uchtor 7.59 39 P **Pn 06 05 44.3 +2.6**
SNR=48
AAK Ala-Archa 7.89 37 P **Pn 06 05 48.5 +3.0**
SNR=15
AAK Ala-Archa 7.89 37 Pn **Pn 06 05 47.7 +2.3**
4.7nm,0.3s,baz=218,slow=11,SNR=25
AAK Sn **Sn 06 07 19.7 +4.8**
5.1nm,0.3s,baz=356,slow=21,SNR=1.6
AAK Lg Lg 06 08 08.6
1.4nm,0.3s,baz=231,slow=15,SNR=5.5
AAK LR LR 06 09 05.6
comp=Z,337nm,20.1s,baz=231,slow=40
13nm,0.3s
AAK Ala-Archa 7.89 37 Pn **Pn 06 05 47.8 +2.4**
AAK Ala-Archa 7.89 37 *ce*P **Pn 06 05 48.2 +2.8**
NRN Naryn 7.90 49 **Pn 06 05 47.2 +1.5**
NRN Naryn 7.90 49 P **Pn 06 05 47.2 +1.5**
GEYT Alibeck 8.10 283 Pn **Pn 06 05 49.8 +1.6**
7.3nm,0.3s,baz=125,slow=7.8,SNR=13
GEYT Sn **Sn 06 07 19.9 0.0**
6.1nm,0.3s,baz=120,slow=8.8,SNR=1.5
GEYT LR LR 06 10 10.4
comp=Z,271nm,20.5s,baz=106,slow=46
11nm,0.4s
GEYT Alibeck 8.10 283 **Pn 06 05 49.5 +1.3**
GYA0B ALIBECK ARRAY 8.10 283 **Pn 06 05 49.2 +1.0**
KBK Karagaybulak 8.13 38 P **Pn 06 05 52.0 +3.3**
SNR=16
USP Ospenovka 8.38 34 P **Pn 06 05 54.0 +2.0**
SNR=7.0
BOOM Boomskoye usch 8.53 43 Pn **Pn 06 05 55.6 +1.4**
BOOM Boomskoye usch 8.53 43 P **Pn 06 05 55.6 +1.4**
BHK Bhakra 8.55 124 *e*P **Pn 06 05 58.4 +4.0**
BHK *e*S **Sn 06 07 28.5 -2.5**
SGDS Sogindy 8.58 34 *e*P **Pn 06 05 56.7 +1.9**
SGDS *e*S **Sn 06 07 31.6 -0.1**
SGDS Sogindy 8.58 34 *e*P **Pn 06 05 56.7 +1.9**
baz=33
SGDS *e*S **Sn 06 07 31.6 -0.1**
baz=33
TKM2 Tokmak 2 8.65 40 P **Pn 06 05 58.0 +2.1**
SNR=19
SMLA Simla 9.23 123 *e*P **Pn 06 06 04.7 +1.0**
SMLA *e*S **Sn 06 07 43.8 -3.9**
SMLA IAML 06 07 47.5
comp=N,173nm,0.3s
SMLA IAML 06 07 53.0
comp=E,189nm,0.6s
SMLA *i* x x 06 08 41.5
TNSS Tian-Shan 9.45 43 *e*P **Pn 06 06 08.6 +1.6**
TNSS Tian-Shan 9.45 43 *e*P **Pn 06 06 08.7 +1.6**
baz=43
MDOK Medeo 9.59 43 *e*P **Pn 06 06 10.5 +1.8**
MDOK Medeo 9.59 43 *e*P **Pn 06 06 10.6 +1.8**
baz=43
MDOK Medeo 9.59 43 Pn **Pn 06 06 11.0 +2.3**
comp=E,24nm,0.7s
MDOK ⇑Lg Lg 06 08 53.8
comp=E,142nm,1.6s
BTLS Baital 9.67 26 *e*P **Pn 06 06 12.9 +3.2**
BTLS *e*S **Sn 06 07 57.9 -0.4**
BTLS Baital 9.67 26 *e*P **Pn 06 06 12.9 +3.2**
baz=26
BTLS *e*S **Sn 06 07 57.9 -0.4**
baz=26
KUU Kurty 9.72 38 *e*P **Pn 06 06 09.7 -0.7**
KUU Kurty 9.72 38 *e*P **Pn 06 06 09.7 -0.7**
baz=38
SATY Saty 10.30 47 *e*P **Pn 06 06 19.1 +0.7**
SATY Saty 10.30 47 *e*P **Pn 06 06 19.2 +0.8**
baz=47
DDI Dehra Dun 10.33 124 *e*S **Sn 06 08 11.6 -3.2**
DDI *i* x x 06 09 15.4
DDI IAMs_20 IAMs_20 06 09 31.1
comp=Z,3μm,3.1s
KPKS Kokpek 10.70 46 *e*P **Pn 06 06 24.9 +1.0**
KPKS Kokpek 10.70 46 *e*P **Pn 06 06 24.9 +1.0**
baz=46
UZB Uzynbulak 10.72 48 *e*P **Pn 06 06 24.9 +0.7**
UZB Uzynbulak 10.72 48 *e*P **Pn 06 06 24.9 +0.7**
baz=48
SHLS Shalkode 10.99 49 *e*P **Pn 06 06 32.1 +4.3**
SHLS Shalkode 10.99 49 *e*P **Pn 06 06 32.1 +4.3**
baz=50
PDGK Podgornoye 11.10 48 P **Pn 06 06 29.9 +0.5**
PDGK Podgornoye 11.10 48 ⇑Pn **Pn 06 06 29.9 +0.5**
comp=Z,13nm,0.7s
PDGK ⇑Lg Lg 06 09 45.6
comp=Z,66nm,1.4s
OTUK Ortayu 12.17 14 P **Pn 06 06 44.4 +0.5**
OTUK Ortayu 12.17 14 ⇑Pn **Pn 06 06 44.4 +0.5**
comp=Z,8.3nm,0.6s
BRZS Berezniki 13.90 12 *e*P **Pn 06 07 07.5 0.0**
BRZS pmax pmax
comp=Z,3.0nm,0.7s
BRZS Berezniki 13.90 12 *e*P **Pn 06 07 07.5 0.0**
comp=Z,3.2nm,0.7s,baz=12
AB31 Akbulak array 14.09 338 P **Pn 06 07 09.3 -0.8**
ABKAR Akbulak array 14.09 338 **Pn 06 07 09.5 -0.6**
MAKZ Makanchi 14.61 41 **Pn 06 07 16.9 -0.4**
MAKZ Makanchi 14.61 41 P **Pn 06 07 16.9 -0.4**
MAKZ Makanchi 14.61 41 ⇑Pn **Pn 06 07 16.5 -0.8**
comp=Z,12nm,1.2s
MK31 Makanchi Array 14.77 41 Pn **Pn 06 07 19.1 -0.3**
MK31 Makanchi Array 14.77 41 *d*P **Pn 06 07 18.9 -0.5**
MK31 Makanchi Array 14.77 41 ⇑Pn **Pn 06 07 18.9 -0.5**
comp=Z,8.0nm,0.7s,baz=230,slow=13,SNR=74
MKAR Makanchi Array 14.77 41 Pn **Pn 06 07 19.0 -0.4**
comp=Z,0.3nm,0.3s,baz=230,slow=14,SNR=32
MKAR LR LR 06 13 21.4
comp=Z,288nm,19.4s,baz=228,slow=38
comp=Z,5.2nm,0.7s
MKAR Makanchi Array 14.77 41 Pn **Pn 06 07 19.7 +0.3**
MKAR Makanchi Array 14.77 41 P **Pn 06 07 19.7 +0.3**
BHPL Bhopal 15.46 146 *e*P **Pn 06 07 30.8 +2.1**
BHPL *e*S **Sn 06 10 11.9 -8.1**
DANN Dangsing 15.49 117 *e*P **Pn 06 07 26.9 -2.5**
comp=Z,35nm,0.4s
WSAR Wadi Sarin 15.53 214 LR LR 06 14 36.3
comp=Z,232nm,19.6s,baz=72,slow=42
AKTO Aktyubinsk 15.74 336 Pn **Pn 06 07 32.3 +0.1**
comp=Z,0.3nm,0.3s,baz=152,slow=13,SNR=12
AKTO Sn **Sn 06 10 23.3 -3.2**
comp=Z,0.4nm,0.3s,baz=250,slow=21,SNR=2.0
AKTO LR LR 06 15 04.3
comp=Z,58nm,20.7s,baz=150,slow=42
comp=Z,10nm,1.1s
AKTO Aktyubinsk 15.74 336 *i* P **Pn 06 07 31.7 -0.5**
AKTO pmax pmax
comp=Z,12nm,0.8s
KURBB Kurchatov Arra 16.01 25 Pn **Pn 06 07 34.9 -0.8**
comp=Z,0.1nm,0.3s,baz=218,slow=12,SNR=10
KURBB Lg Lg 06 12 26.8
baz=219,slow=29,SNR=2.0
KURBB LR LR 06 14 02.1
comp=Z,62nm,20.4s,baz=192,slow=38
comp=Z,1.8nm,0.7s
KURBB Kurchatov Arra 16.01 25 P **Pn 06 07 34.5 -1.2**
KURBB Kurchatov Arra 16.01 25 ⇑Pn **Pn 06 07 34.5 -1.2**
comp=Z,9.3nm,0.6s
KURK Kurchatov 16.12 25 **Pn 06 07 38.4 +1.3**
KURK IAmb IAmb 06 08 06.1
comp=Z,13nm,0.9s
KURK Kurchatov 16.12 25 ⇑*e*P **P 06 07 41.2 +0.8**
KURK pmax pmax
comp=Z,9.0nm,1.3s
KURK Kurchatov 16.12 25 ⇓Pn **P 06 07 40.6 +0.2**
comp=Z,18nm,1.4s
GKN Gorkha 16.32 116 *e*P **Pn 06 07 38.1 -1.9**
comp=Z,76nm,0.7s
GKN *e*S Sn 06 10 28.4 -13
BVA0 Borovoye Array 16.63 5 *i* P **Pn 06 07 42.4 -1.2**
BVAR Borovoye Array 16.63 5 Pn **Pn 06 07 41.7 -1.8**
comp=Z,1.1nm,0.3s,baz=170,slow=9.0,SNR=15
BVAR Sn **Sn 06 10 42.3 -5.8**
comp=Z,0.4nm,0.3s,baz=183,slow=23,SNR=2.8
BVAR LR LR 06 14 49.3
comp=Z,310nm,18.9s,baz=186,slow=39
comp=Z,3.5nm,0.6s

BRVK Borovoye 16.65 5 **Pn 06 07 43.7 -0.1**
BRVK IAmb IAmb 06 07 54.0
comp=Z,23nm,0.8s
BRVK Borovoye 16.65 5 *de*P **Pn 06 07 45.2 +1.3**
WMQ Urumqi 16.66 58 *e*P **P 06 07 47.4 +0.9**
WMQ pP sP 06 07 51.9 +1.0
WMQ pmax pmax
comp=Z,25nm,0.9s
WMQ pmax pmax
comp=Z,180nm,5.7s
WMQ LR LR
comp=Z,440nm,15.9s
WMQ LR LR
comp=Z,410nm,17.9s
WMQ LR LR
comp=Z,330nm,19.9s
DMN Daman 16.89 117 *e*P **Pn 06 07 45.2 -2.1**
comp=Z,38nm,0.6s
SEKA Sheki 16.95 293 P **Pn 06 07 48.2 +0.4**
MAK Makhachkala 17.10 299 *e*P **Pn 06 07 44.5 -5.1**
MAK *e*S **Sn 06 10 52.1 -7.6**
MAK pmax pmax
comp=Z,234nm,1.0s
MAK MLR MLR
comp=Z,176nm,11.0s
PKIN Phulchoki 17.12 116 *e*P **Pn 06 07 48.3 -1.9**
comp=Z,43nm,0.6s
PKI Pulchoki 17.13 116 *e*P **Pn 06 07 48.1 -2.3**
GUN Gumba 17.28 115 *e*P **Pn 06 07 50.6 -1.7**
comp=Z,104nm,0.9s
GANJ Ganja 17.53 290 P **Pn 06 07 56.3 +1.3**
JIRN Jiri 17.65 115 *e*P **Pn 06 07 55.3 -1.6**
comp=Z,82nm,0.5s
RAMN Ramite 18.35 116 *e*P **Pn 06 08 02.9 -2.6**
comp=Z,41nm,0.7s
GNI Garni 18.68 288 LR LR 06 17 11.3
comp=Z,127nm,18.6s,baz=100,slow=42
GNI Garni 18.68 288 P **P 06 08 10.0 +1.0**
GNI IAmb IAmb 06 08 37.7
comp=Z,36nm,1.1s
GNI Garni 18.68 288 P **P 06 08 10.0 +1.0**
GNI pmax pmax
comp=Z,36nm,1.2s
TAPN Taplejung 18.94 113 *e*P **P 06 08 12.4 +0.4**
comp=Z,42nm,0.6s
DGZ Jazzator, Alta 19.27 41 ⇓*e*P **P 06 08 16.0 +0.7**
ZEI Tsey 19.64 296 *e*P **Pn 06 08 26.4 +5.5**
ZEI pmax pmax
comp=Z,8.0nm,1.2s
LSA Lhasa 20.43 103 P **P 06 08 27.0 -1.5**
LSA IAmb IAmb 06 08 40.7
comp=Z,24nm,0.6s
LSA Lhasa 20.43 103 P **P 06 08 30.3 +1.8**
LSA pmax pmax
comp=Z,19nm,1.0s
LSA Lhasa 20.43 103 P **P 06 08 27.0 -1.5**
LSA pmax pmax
comp=Z,24nm,0.6s
KBZ Khabaz 20.55 298 P Pn 06 08 33.1 +1.8
comp=Z,1.1nm,0.6s,baz=94,slow=11,SNR=2.4
KBZ LR LR 06 18 36.2
comp=Z,125nm,19.6s,baz=104,slow=43
comp=Z,1.1nm,0.6s
KVAR Kislovodsk Arr 20.74 299 LR LR 06 17 59.1
comp=Z,271nm,20.4s,baz=50,slow=40
KIV Kislovodsk 20.75 299 *e*P **P 06 08 30.0 -1.4**
KIV *e*S **S 06 12 22.2 -0.8**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,106nm,14.0s
GURO Guroymak-BITLI 20.77 284 P **P 06 08 33.0 +1.3**
SVE Sverdlovsk 20.97 348 *e*P Pn 06 08 38.9 +2.8
ZAA0 Zalesovo Array 20.98 28 P **P 06 08 34.2 +0.5**
ZAA0 IAmb IAmb 06 08 55.0
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 20.98 28 P **P 06 08 34.8 +1.1**
comp=Z,4.5nm,0.4s,baz=226,slow=10,SNR=22
ZALV LR LR 06 18 09.7
comp=Z,103nm,19.5s,baz=238,slow=41
comp=Z,4.5nm,0.4s
BELG Belogornoye 21.50 324 P **P 06 08 40.4 +1.1**
comp=Z,42nm,0.8s,baz=98,slow=1.9,SNR=7.0
BELG LR LR 06 19 05.7
comp=Z,99nm,18.9s,baz=149,slow=42
comp=Z,42nm,0.8s
BELG Belogornoye 21.50 324 *d*P **P 06 08 40.3 +1.1**
BELG pmax pmax
comp=Z,9.0nm,1.2s
GOMU GeErMu 21.50 83 P **P 06 08 40.6 +0.7**
GOMU pP pP 06 08 43.8 +0.7
GOMU S **S 06 12 38.8 +0.3**
GOMU sS sS 06 12 44.0 +0.4
GOMU pmax pmax
comp=Z,8.0nm,1.2s
GOMU pmax pmax
comp=Z,90nm,5.2s
GOMU LR LR
comp=Z,130nm,9.6s
GOMU LR LR
comp=Z,130nm,10.4s
GOMU LR LR
comp=Z,190nm,10.3s
SOC Sochi 22.79 297 *e*P **P 06 08 51.4 -1.8**
SOC *e* 06 09 15.7
SOC *e*S **S 06 13 00.6 -1.6**
SOC *e*SSS SSS 06 13 44.9
SOC MLR MLR
comp=Z,141nm,19.0s
RAYN Ar Rayn 23.38 243 P **P 06 09 00.6 +1.2**
RAYN IAmb IAmb 06 09 06.3
comp=Z,14nm,1.2s
RAYN Ar Rayn 23.38 243 P **P 06 09 00.6 +1.2**
RAYN pmax pmax
comp=Z,14nm,1.3s
VRH Novokhopyorsk 23.89 316 *e*P **P 06 09 10.9 +6.8**
VRH pmax pmax
comp=Z,10.0nm,0.6s
GTA Gaotai 25.11 74 ⇓P **P 06 09 17.0 +1.4**
GTA pP sP 06 09 24.0 +3.6
GTA sP pP 06 09 27.3 +8.3
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,38nm,3.5s
GTA LR LR
comp=Z,240nm,16.4s
GTA LR LR
comp=Z,250nm,16.0s
GTA LR LR
comp=Z,300nm,15.3s
VSR Storozhevoye 25.34 315 *e*P **P 06 09 18.2 +0.9**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VORR Voronezh 25.50 316 *e*P **P 06 09 20.5 +1.6**
VORR pmax pmax
comp=Z,50nm,0.4s
LPSR Galich'ya Gora 26.07 317 *e*P **P 06 09 24.8 +0.8**
LPSR pmax pmax
comp=Z,10.0nm,1.2s
MMAI Mount Meron Ar 27.02 272 LR LR 06 23 30.7
comp=Z,86nm,19.2s,baz=148,slow=44
BRTR Keskin Array B 27.21 287 P **P 06 09 37.6 +2.9**
comp=Z,2.4nm,0.8s,baz=90,slow=9.0,SNR=7.5
BRTR LR LR 06 24 23.7
comp=Z,65nm,18.2s,baz=98,slow=45
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 27.21 287 P **P 06 09 36.5 +1.8**
BRTR Keskin Array B 27.21 287 P **P 06 09 36.5 +1.8**
OBN Obninsk 28.46 321 LR LR 06 22 37.0
comp=Z,30nm,20.1s,baz=105,slow=39
LZH Lanzhou 28.72 80 *e*P P 06 09 42.0 -6.1
LZH pP pP 06 09 46.9 -4.6
LZH sP sP 06 09 50.0 -2.9
LZH S S 06 14 28.4 -9.0
PZH PanZhiHua 30.23 100 P **P 06 10 02.9 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,120nm,3.5s
SONM Songino Array 30.28 56 P **P 06 10 01.2 -0.6**
comp=Z,1.6nm,0.8s,baz=256,slow=9.9,SNR=9.9
SONM LR LR 06 23 35.8
comp=Z,228nm,20.6s,baz=257,slow=39
comp=Z,1.6nm,0.8s
SONM Songino Array 30.28 56 P **P 06 10 02.9 +1.1**

SONM Songino Array 30.28 56 P **P 06 10 02.9 +1.1**
SONM pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 30.72 56 ⇓*e*P **P 06 10 07.7 +1.9**
ULN pmax pmax
comp=Z,3.0nm,1.0s
AKASG Malin Array Be 31.15 310 P **P 06 10 12.7 +3.4**
comp=Z,0.5nm,0.4s,baz=91,slow=7.4,SNR=6.8
AKASG LR LR 06 25 15.1
comp=Z,146nm,18.8s,baz=93,slow=41
comp=Z,0.5nm,0.4s
PALK Pallekele 31.26 155 LR LR 06 22 19.0
comp=Z,87nm,19.8s,baz=96,slow=36
CMAR Chiang Mai Arr 32.53 115 P **P 06 10 20.0 -1.7**
comp=Z,1.0nm,0.4s,baz=297,slow=8.1,SNR=8.3
CMAR LR LR 06 24 53.7
comp=Z,76nm,19.4s,baz=305,slow=39
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 32.53 115 P **P 06 10 20.6 -1.1**
CMAR Chiang Mai Arr 32.53 115 P **P 06 10 20.6 -1.1**
MNK Minsk 32.89 316 *i* P **P 06 10 20.9 -3.6**
MNK *i* PPP PPP 06 11 39.8
MNK *i* 06 13 05.1
MNK *i* S **S 06 15 39.3 -2.6**
MNK *i* SS **SnSn 06 17 37.3 -1.1**
MNK pmax pmax
comp=Z,12nm,0.7s
MNK pmax pmax
comp=N,25nm,0.9s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=E,28nm,17.0s
MNK MLR MLR
comp=Z,159nm,14.0s
MNK MLR MLR
comp=N,353nm,17.0s
MNK Minsk 32.89 316 *i* P **P 06 10 20.9 -3.6**
comp=E,5.0nm,0.9s
MNK *i* P **P 06 10 20.9 -3.6**
comp=N,25nm,0.9s
MNK *i* P **P 06 10 20.9 -3.6**
comp=Z,12nm,0.7s,baz=287
MNK *i* PP **PnPn 06 11 29.6 -3.5**
MNK *i* PPP PPP 06 11 39.9
MNK *i* PcP **PcP 06 13 05.2 -3.6**
MNK *i* S **S 06 15 39.4 -2.6**
MNK *i* SS **SnSn 06 17 37.3 -1.1**
MNK *i* SSS SSS 06 17 52.9
MNK *i* LR LR 06 23 22.8
MNK *i* LRM MLR 06 25 00.5
comp=E,28nm,16.6s
MNK *i* LRM MLR 06 25 00.5
comp=Z,159nm,14.1s
MNK *i* LRM MLR 06 25 19.7
comp=N,353nm,17.2s
ATD Arta Tunnel 33.69 229 LR LR 06 25 51.7
comp=N,104nm,20.3s,baz=84,slow=39
HHC Hu-ho-hao-te 33.96 69 *e*P **P 06 10 36.9 +2.7**
HHC pmax pmax
comp=N,38nm,1.2s
HHC pmax pmax
comp=N,150nm,5.3s
HHC LR LR
comp=N,290nm,13.3s
HHC LR LR
comp=N,350nm,13.3s
HHC LR LR
comp=N,380nm,14.0s
NRIK Noril'sk 34.60 12 P **P 06 10 39.8 +0.5**
comp=N,2.6nm,0.5s,baz=170,slow=3.8,SNR=4.3
comp=N,2.6nm,0.5s
NRIK Noril'sk 34.60 12 ⇑*e*P **P 06 10 41.9 +2.6**
NRIK pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 36.22 327 P **P 06 10 54.7 +1.5**
comp=Z,0.9nm,0.6s,baz=96,slow=8.6,SNR=3.3
comp=Z,0.9nm,0.6s
BOD Bodaibo 36.85 40 *e*P **P 06 10 59.9 +1.2**
BOD pmax pmax
comp=Z,9.0nm,1.3s
XLT XiLinHaoTe 36.96 63 *e*P **P 06 11 00.6 +0.6**
XLT pP sP 06 11 06.0 +1.2
XLT sP pP 06 11 09.8 +6.4
XLT S **S 06 16 40.8 -4.4**
XLT pmax pmax
comp=Z,7.0nm,0.5s
XLT LR LR
comp=Z,270nm,14.7s
XLT LR LR
comp=Z,210nm,14.7s
VRAC Vranov 39.12 306 LR LR 06 29 04.6
comp=Z,45nm,19.0s,baz=92,slow=38
ARCES ARCESS Array B 40.29 338 P **P 06 11 29.9 +2.5**
comp=Z,4.0nm,1.0s,baz=121,slow=9.7,SNR=2.4
ARCES LR LR 06 29 59.6
comp=Z,84nm,19.7s,baz=84,slow=39
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 40.29 338 P **P 06 11 30.0 +2.5**
HFS Hagfors 41.65 322 LR LR 06 31 41.8
comp=Z,122nm,18.0s,baz=96,slow=40
NJ2 Nanjing 41.79 81 *e*P **P 06 11 38.3 -1.9**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
VAE Valguarnera 42.41 288 LR LR 06 35 46.5
comp=Z,61nm,20.0s,baz=152,slow=45
NB2 NORSAR Subarra 43.00 323 P **P 06 11 50.3 +0.5**
comp=Z,0.6nm,0.4s,baz=101,slow=8.6
NOA NORSAR Array B 43.00 323 P **P 06 11 50.6 +0.9**
comp=Z,0.5nm,0.6s,baz=99,slow=8.1,SNR=3.3
NOA LR LR 06 33 06.3
comp=Z,99nm,18.0s,baz=110,slow=41
comp=Z,0.5nm,0.6s
DAVOX Davos/Dischmat 43.81 302 LR LR 06 33 38.1
comp=Z,98nm,20.2s,baz=84,slow=41
ZEA Zeya 43.81 47 ⇓*e*P **P 06 11 59.1 +2.8**
PSI Prapat 43.94 132 LR LR 06 30 05.9
comp=Z,119nm,21.5s,baz=308,slow=36
YAK Yakutsk 45.34 36 LR LR 06 31 47.9
comp=Z,78nm,18.9s,baz=268,slow=37
YAK Yakutsk 45.34 36 *de*P **P 06 12 09.7 +1.2**
YAK pmax pmax
comp=Z,13nm,0.6s
KLR Kul'dur 47.04 53 LR LR 06 32 45.4
comp=Z,80nm,21.3s,baz=240,slow=37
KSRS Korea Array 47.09 70 LR LR 06 34 46.0
comp=Z,75nm,18.1s,baz=285,slow=40
USRK Ussuriysk Ar. 48.21 60 LR LR 06 34 32.7
comp=Z,77nm,21.6s,baz=294,slow=38
MBAR Mbarara 50.62 232 LR LR 06 36 08.9
comp=Z,100nm,18.9s,baz=30,slow=38
EKA Eskdalemuir Ar 50.68 316 LR LR 06 37 28.7
comp=Z,124nm,18.3s,baz=1.5,slow=40
JMIC Jan Mayen 51.66 336 LR LR 06 37 32.3
comp=Z,54nm,18.2s,baz=239,slow=39
DAG Danmarks Havn 54.09 344 *i* P **P 06 13 13.0 -1.9**
MJAR Matsushiro Arr 55.13 67 LR LR 06 38 28.9
comp=Z,55nm,18.2s,baz=295,slow=38
MA2 Magadan 55.82 38 LR LR 06 38 13.7
comp=Z,60nm,18.4s,baz=285,slow=37
BORG Borgarnes 57.45 329 LR LR 06 42 21.6
comp=Z,52nm,18.4s,baz=103,slow=40
JHJ Hachijo jima 2 57.69 70 LR LR 06 41 14.0
comp=Z,49nm,18.7s,baz=177,slow=39
JCJ Chichijima 62.27 76 LR LR 06 42 51.6
comp=Z,24nm,20.5s,baz=218,slow=38
TORD Torodi Ar. Bea 63.38 267 P **P 06 14 20.3 -0.1**
comp=Z,2.1nm,0.7s,baz=44,slow=5.3,SNR=6.0
comp=Z,2.1nm,0.7s
TSUM Tsumeb 73.09 230 LR LR 06 50 35.0
comp=Z,79nm,18.9s,baz=148,slow=38
LBTB Lobatse 73.13 220 LR LR 06 48 54.9
comp=Z,21nm,18.9s,baz=116,slow=37
INK Inuvik 74.28 8 P **P 06 15 28.5 +1.1**
comp=Z,1.8nm,0.8s,baz=356,slow=7.5,SNR=5.3
comp=Z,1.8nm,0.8s
ILAR Eielson Array 75.42 15 P **P 06 15 35.0 +0.9**
comp=Z,0.5nm,0.9s,baz=324,slow=5.7,SNR=2.3
comp=Z,0.5nm,0.9s
ILAR Eielson Array 75.42 15 P **P 06 15 35.0 +0.9**
YKA Yellowknife Ar 81.35 1 P **P 06 16 08.2 +1.3**
comp=Z,1.0nm,0.7s,baz=352,slow=4.8,SNR=2.9
comp=Z,1.0nm,0.7s
ASAR Alice Springs 86.18 123 P **P 06 16 29.5 -2.7**
comp=Z,0.8nm,0.5s,baz=313,slow=4.8,SNR=7.7
comp=Z,0.8nm,0.5s
NEW Newport 95.51 4 LR LR 07 06 22.3

comp=Z,142nm,18.1s,baz=302,slow=39
PLCA Paso Flores 147.62 250 PKPbc **PKPbc 06 23 35.5 +0.3**
comp=Z,3.8nm,1.1s,baz=173,slow=5.7,SNR=2.9

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*IDC **13** 06:09:17.4±2.1,23°.54S×179°.37E,h535km±20km,mb3.5/8, mbtmp4.5/10,Error ellipse: s-maj=25.1km s-min=17.5km az=137.0*
*NOU **13** 06:09:18.5,23°.28S×179°.60E,h651km,mb4.1/14,South of Fiji Islands*
*NEIC **13** 06:09:19.2±1.7,23°.5S±0°.1×179°.5E±0°.1,h568km±12km, mb4.2/24,Error ellipse: s-maj=19.8km s-min=18.5km az=163.0*
ISC 13 06:09:18.3±0.5,23°.47S±0°.08×179°.49E±0°.08,h550km,n98, σ1§58/91,mb4.1/20,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.87**	**346**	P	**P**	**06 10 55.1**	**-0.8**
	1.3nm,0.4s,baz=317,slow=23,SNR=7.9						
MSVF	**Nonsavu**	**5.87**	**346**	P	**P**	**06 10 58.3**	**+2.4**
RAO	**Raoul Island**	**6.21**	**159**	P	P	06 11 07.4	+8.7
RAO	**Raoul Island**	**6.21**	**159**	P	P	06 11 07.0	+8.4
MARNC	**Mare, Loyalty**	**10.78**	**278**	P	**P**	**06 11 44.0**	**-0.2**
NIUE	**Niue**	**10.79**	**68**	P	**P**	**06 11 44.8**	**+0.4**
NIUE	**Niue**	**10.79**	**68**	P	**P**	**06 11 44.5**	**+0.1**
OUENC	**Ouen Island, N**	**11.70**	**273**	P	**P**	**06 11 53.4**	**-0.4**
YATNC	**Mamie plateau,**	**11.71**	**274**	P	**P**	**06 11 55.6**	**+1.8**
DZM	**Mont Dzumac**	**12.12**	**274**	P	**P**	**06 11 57.3**	**-0.9**
	4.1nm,0.6s,baz=70,slow=22,SNR=7.7						
DZM	**Mont Dzumac**	**12.12**	**274**	P	**P**	**06 12 01.3**	**+3.1**
DZM	**Mont Dzumac**	**12.12**	**274**	P	**P**	**06 12 01.1**	**+3.0**
AFI	**Afiamalu**	**12.60**	**43**	P	**P**	**06 12 00.4**	**-2.8**
	26nm,0.5s,baz=89,slow=2.8,SNR=7.6						
AFI	**Afiamalu**	**12.60**	**43**	P	**P**	**06 12 00.8**	**-2.4**
OUZ	**Omahuta**	**12.78**	**202**	P	**P**	**06 12 05.8**	**+1.2**
OUZ	**Omahuta**	**12.78**	**202**	P	**P**	**06 12 05.6**	**+0.9**
KUZ	**Kuaotunu**	**13.62**	**193**	P	**P**	**06 12 13.6**	**+0.3**
KUZ	**Kuaotunu**	**13.62**	**193**	P	**P**	**06 12 13.8**	**+0.5**
MKAZ	**Moumakai**	**14.09**	**194**	P	**P**	**06 12 18.7**	**+0.6**
HAZ	**Te Kaha**	**14.31**	**185**	P	**P**	**06 12 17.6**	**-2.8**
RUGZ	**Raukumara Rang**	**14.53**	**186**	P	**P**	**06 12 21.1**	**-1.7**
PUZ	**Puketiti**	**14.59**	**184**	P	**P**	**06 12 27.5**	**+4.1**
TOZ	**Tahuroa Road**	**14.62**	**193**	P	**P**	**06 12 24.1**	**+0.5**
URZ	**Urewera**	**14.88**	**187**	P	**P**	**06 12 22.9**	**-3.3**
	22nm,0.5s,baz=28,slow=1.6,SNR=19						
URZ				S	S	06 14 53.3	-7.8
	6.4nm,0.5s,baz=149,slow=21,SNR=14						
URZ	**Urewera**	**14.88**	**187**	P	**P**	**06 12 23.1**	**-3.1**
URZ	**Urewera**	**14.88**	**187**	P	**P**	**06 12 22.9**	**-3.3**
URZ	**Urewera**	**14.88**	**187**	P	**P**	**06 12 24.2**	**-2.1**
MWZ	**Matawai**	**14.91**	**186**	P	**P**	**06 12 24.1**	**-2.6**
RIGZ	**Rimuhau**	**15.26**	**185**	P	**P**	**06 12 28.3**	**-1.9**
BKZ	**Black Stump Fm**	**15.85**	**189**	P	**P**	**06 12 33.6**	**-2.6**
TMVZ	**Te Maari**	**15.92**	**191**	P	**P**	**06 12 35.2**	**-1.8**
ETVZ	**East Tongariro**	**15.94**	**191**	P	**P**	**06 12 35.2**	**-2.0**
QRZ	**Quartz Range**	**18.27**	**197**	P	**P**	**06 12 58.8**	**+0.4**
KHZ	**Kahutara**	**19.53**	**193**	P	**P**	**06 13 10.6**	**+0.8**
CTAO	**Charters Tower**	**31.01**	**270**	P	**P**	**06 14 51.9**	**+0.3**
TOO	**Toolangi**	**32.29**	**236**	P	**P**	**06 15 04.1**	**+1.8**
TOO				IAmb	IAmb	06 15 42.3	
	comp=Z,8.8nm,1.1s						
PMG	**Port Moresby**	**33.91**	**289**	P	**P**	**06 15 16.0**	**-0.1**
	comp=Z,20nm,0.6s,baz=106,slow=5.3,SNR=6.3						
	comp=Z,20nm,0.6s						
PMG	**Port Moresby**	**33.91**	**289**	P	**P**	**06 15 16.6**	**+0.4**
STKA	**Stephens Creek**	**34.45**	**247**	P	**P**	**06 15 18.9**	**-1.6**
	comp=Z,2.0nm,0.5s,baz=83,slow=10,SNR=6.3						
STKA				PcP	**PcP**	**06 17 40.6**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=84,slow=2.7,SNR=4.1						
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**34.45**	**247**	P	**P**	**06 15 20.7**	**+0.2**
COEN	**Coen**	**35.58**	**279**	P	**P**	**06 15 30.6**	**+0.4**
COEN				IAmb	IAmb	06 15 31.3	
	comp=Z,2.7nm,0.6s						
BBOO	**Buckleboo**	**39.18**	**246**	P	**P**	**06 15 58.4**	**-1.0**
BBOO				IAmb	IAmb	06 16 16.1	
	comp=Z,19nm,1.5s						
AS31	**Alice Springs**	**41.64**	**260**	P	**P**	**06 16 18.8**	**-0.3**
ASAR	**Alice Springs**	**41.64**	**260**	P	**P**	**06 16 18.5**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=95,slow=7.8,SNR=39						
ASAR				PcP	**pwP**	**06 18 02.7**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=106,slow=3.3,SNR=5.3						
ASAR				S	**S**	**06 21 53.6**	**-2.8**
	comp=Z,0.7nm,0.8s,baz=98,slow=15,SNR=7.1						
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**41.64**	**260**	P	**P**	**06 16 19.1**	**0.0**
WR0	**Warramunga Arr**	**41.78**	**266**	IAmb	IAmb	06 16 19.4	
	comp=Z,3.7nm,0.6s						
WR0	**Warramunga Arr**	**41.78**	**266**	P	**P**	**06 16 19.2**	**-1.0**
WR0				IAmb	IAmb	06 16 19.4	
	comp=Z,3.7nm,0.6s						
WR0	**Warramunga Arr**	**41.78**	**266**	P	**P**	**06 16 19.2**	**-1.0**
WB2	**Warramunga Arr**	**41.96**	**266**	IAmb	IAmb	06 16 20.8	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**41.96**	**266**	P	**P**	**06 16 19.0**	**-2.6**
WB2				IAmb	IAmb	06 16 20.8	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**41.96**	**266**	P	**P**	**06 16 19.0**	**-2.6**
WB0	**Warramunga Arr**	**41.96**	**266**	IAmb	IAmb	06 16 21.1	
	comp=Z,7.8nm,0.7s						
WB0	**Warramunga Arr**	**41.96**	**266**	P	**P**	**06 16 20.7**	**-0.9**
WB0				IAmb	IAmb	06 16 21.1	
	comp=Z,7.8nm,0.7s						
WB0	**Warramunga Arr**	**41.96**	**266**	P	**P**	**06 16 20.7**	**-0.9**
WRAB	**Tennant Creek**	**41.96**	**266**	IAmb	IAmb	06 16 21.2	
	comp=Z,9.6nm,1.2s						
WRAB	**Tennant Creek**	**41.96**	**266**	P	**P**	**06 16 20.7**	**-0.9**
WRAB				IAmb	IAmb	06 16 21.2	
	comp=Z,9.6nm,1.2s						
WRAB	**Tennant Creek**	**41.96**	**266**	*ce*P	**P**	**06 16 21.6**	**0.0**
WRAB	**Tennant Creek**	**41.96**	**266**	pmax	pmax		
	comp=Z,8.0nm,1.7s						
WRAB	**Tennant Creek**	**41.96**	**266**	P	**P**	**06 16 20.7**	**-0.9**
WRA	**Warramunga Arr**	**41.97**	**266**	P	**P**	**06 16 20.3**	**-1.4**
	comp=Z,4.8nm,0.6s,baz=102,slow=7.9,SNR=29						
WRA				PcP	**pwP**	**06 18 04.6**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=109,slow=3.4,SNR=4.6						
	comp=Z,4.8nm,0.6s						
WRA	**Warramunga Arr**	**41.97**	**266**	IAmb	IAmb	06 16 21.2	
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**41.97**	**266**	P	**P**	**06 16 19.2**	**-2.5**
WRA	**Warramunga Arr**	**41.97**	**266**	P	**P**	**06 16 19.2**	**-2.5**
WRA	**Warramunga Arr**	**41.97**	**266**	P	**P**	**06 16 19.2**	**-2.5**
FORT	**Forrest**	**46.02**	**249**	P	**P**	**06 16 51.6**	**-1.3**
MTN	**Manton Dam**	**46.95**	**274**	P	**P**	**06 16 59.3**	**-0.8**
KNRA	**Kununurra**	**48.22**	**270**	P	**P**	**06 17 08.9**	**-0.6**
VNDA	**Vanda**	**54.76**	**185**	P	**P**	**06 17 55.2**	**-0.6**
PSA00	**Pilbara Seismi**	**54.78**	**259**	P	**P**	**06 17 55.6**	**-1.3**
PSA00	**Pilbara Seismi**	**54.78**	**259**	P	**P**	**06 17 55.8**	**-1.1**
PSA00				IAmb	IAmb	06 18 17.8	
	comp=Z,5.2nm,1.1s						
MBWA	**Marble Bar**	**54.98**	**260**	P	**P**	**06 17 57.1**	**-1.2**
MBWA				IAmb	IAmb	06 17 58.3	
	comp=Z,14nm,1.4s						
MORW	**Morawa**	**56.58**	**250**	P	**P**	**06 18 08.5**	**-0.8**
MORW				IAmb	IAmb	06 18 17.3	
	comp=Z,18nm,1.4s						
GIRL	**Giralia**	**59.55**	**257**	P	**P**	**06 18 29.8**	**+0.3**
CASY	**Casey**	**60.29**	**206**	P	**P**	**06 18 33.0**	**-0.5**
CASY				IAmb	IAmb	06 18 33.5	
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**66.61**	**180**	P	**P**	**06 19 15.2**	**+1.1**
QSPA				IAmb	IAmb	06 19 15.5	
	comp=Z,3.7nm,0.7s						
MJAR	**Matsushiro Arr**	**71.28**	**326**	P	**P**	**06 19 41.7**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=179,slow=5.3,SNR=4.9						
	comp=Z,1.9nm,0.7s						
PETK	**Petropavlovsk-**	**78.58**	**347**	P	**P**	**06 20 22.8**	**0.0**
	comp=Z,3.1nm,0.7s,baz=111,slow=8.4,SNR=4.4						
	comp=Z,3.1nm,0.7s						
TROLL	**Troll, Antarti**	**84.75**	**181**	P	**P**	**06 20 54.5**	**+0.1**
SNAA	**Sanae**	**85.10**	**179**	P	**P**	**06 20 55.4**	**-0.6**
SNAA	**Sanae**	**85.10**	**179**	P	**P**	**06 20 55.4**	**-0.6**
SNAA				IAmb	IAmb	06 20 55.6	
	comp=Z,5.8nm,1.5s						
VNA3	**Neumayer Olymp**	**85.32**	**177**	P	**P**	**06 20 56.5**	**-0.5**
VNA2	**Neumayer--Watz**	**85.74**	**178**	P	**P**	**06 20 58.7**	**-0.2**
	baz=184,slow=4.3						
VNA1	**Neumayer--Stat**	**85.98**	**177**	P	**P**	**06 20 59.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**88.94**	**291**	P	**P**	**06 21 16.4**	**+1.5**
	comp=Z,1.5nm,0.4s,baz=155,slow=1.8,SNR=4.4						
	comp=Z,1.5nm,0.4s						
TXAR	**Lajitas Array**	**90.61**	**58**	P	**P**	**06 21 24.5**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=206,slow=5.5,SNR=6.2						
	comp=Z,0.4nm,0.7s						
GEYT	**Alibeck**	**128.35**	**301**	PKP	**PKPdf**	**06 27 24.1**	**+1.3**
	comp=Z,2.0nm,0.4s,baz=36,slow=5.4,SNR=3.6						
ARCES	**ARCESS Array B**	**131.38**	**348**	PKP	**PKPdf**	**06 27 25.7**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=48,slow=2.0,SNR=6.9						
FINES	**FINESS Array B**	**137.89**	**341**	PKhKP	PKPpre	06 27 31.9	
	comp=Z,0.4nm,0.4s,baz=46,slow=5.5,SNR=3.4						
FINES				PKP	**PKPdf**	**06 27 39.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=104,slow=2.4,SNR=4.6						
NB2	**NORSAR Subarra**	**141.59**	**351**	PKP	PKPpre	06 27 42.8	
	comp=Z,0.9nm,0.7s,baz=18,slow=3.1						
NOA	**NORSAR Array B**	**141.59**	**351**	PKhKP	PKPpre	06 27 42.9	
	comp=Z,1.0nm,0.7s,baz=16,slow=4.6,SNR=4.5						
HFS	**Hagfors**	**142.04**	**348**	PKhKP	PKPpre	06 27 43.7	
	comp=Z,5.4nm,0.4s,baz=64,slow=3.4,SNR=48						
AKASG	**Malin Array Be**	**144.36**	**327**	PKP	PKPbc	06 27 51.4	-0.2
	comp=Z,3.0nm,0.5s,baz=46,slow=4.4,SNR=22						
BRTR	**Keskin Array B**	**146.95**	**307**	PKPbc	**PKPbc**	**06 27 59.9**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=134,slow=4.4,SNR=4.5						
EKA	**Eskdalemuir Ar**	**148.12**	**3**	PKPbc	**PKPbc**	**06 28 01.9**	**0.0**
	comp=Z,0.5nm,0.4s,baz=345,slow=3.0,SNR=6.1						
CLL	**Collm**	**150.31**	**343**	PKPbc	**PKPbc**	**06 28 08.3**	**+1.0**
CLL	**Collm**	**150.31**	**343**	*i* PKPbc	**PKPbc**	**06 28 08.2**	**+0.8**
	comp=Z,10.0nm,0.8s						
GERES	**GERESS Array B**	**152.29**	**340**	PKPbc	**PKPbc**	**06 28 12.2**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=65,slow=7.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**169.52**	**192**	PKP	**PKPdf**	**06 28 23.2**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=245,slow=3.5,SNR=3.7						
TORD				PKPab	**PKPab**	**06 29 40.6**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=168,slow=4.0,SNR=8.3						

NDI 13 06:14:27.0±2.0,27°.01N×92°.02E,h10km,ML3.2,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**0.80**	**119**	*i* Pg	Pg	06 14 41.9	-0.5
TEZP				*e*Pg	Pg	06 14 41.9	-0.5
TEZP				*i* Sg	Sb	06 14 53.4	-0.3
SHL	**Shillong**	**1.44**	**185**	*e*P	Pb	06 14 54.0	-0.1
SHL				*e*S	Sg	06 15 14.1	+0.7
SHL				IAML		06 15 15.4	
	comp=E,87nm,0.2s						
ITAN	**ITANAGAR**	**1.52**	**84**	*e*P	Pn	06 14 53.2	-1.1
ITAN				*e*S	Sg	06 15 16.8	+0.8
JORH	**JORHAT**	**2.01**	**97**	*e*S	Sn	06 15 26.8	+0.6
JORH				IAML		06 15 32.6	
	comp=N,432nm,0.3s						
JORH				IAML		06 15 33.0	
	comp=E,479nm,0.3s						
KOHI	**KOHIMA**	**2.27**	**124**	*e*S	Sn	06 15 32.3	-0.6

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*JMA **13** 06:22:46.5±0.2,24°.9N±0°.6×122°.0E±0°.4,h101km±1km, MV2.8/11,TAIWAN REGION*
*TAP **13** 06:22:47.3,24°.81N×122°.02E,h96km,ML3.7,B*
ISC 13 06:22:47.1±1.3,24°.85N±0°.03×121°.98E±0°.03,h100km±6km, n103,σ0§60/158,18C-2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.16**	**4**	⇑*i*P	**Pn**	**06 23 01.2**	**-0.1**
	baz=353						
TWB1				*i* S	**Sn**	**06 23 10.8**	**-1.0**
	baz=353						
TIPB	**Shuangxi**	**0.19**	**313**	⇑*i*P	**Pn**	**06 23 01.2**	**-0.1**
	baz=312						
TIPB				S	**Sn**	**06 23 11.0**	**-1.0**
	baz=312						
ILA	**Ilan**	**0.22**	**249**	P	**Pn**	**06 23 01.4**	**0.0**
	baz=265						
ILA				S	**Sn**	**06 23 12.1**	**0.0**
	baz=265						
SXI1	**Grass Mountain**	**0.26**	**340**	⇑P	**Pn**	**06 23 01.4**	**-0.3**
	baz=325						
SXI1				S	**Sn**	**06 23 12.2**	**-0.4**
	baz=325						
WFSB	**Wu-fen Shan**	**0.29**	**322**	⇑P	**Pn**	**06 23 01.7**	**0.0**
	baz=313						
WFSB				*e*S	**Sn**	**06 23 12.0**	**-0.6**
	baz=313						
TNOU	**National Taiwa**	**0.35**	**329**	⇑*i*P	**Pn**	**06 23 01.8**	**-0.2**
	baz=320						
TNOU				*e*S	**Sn**	**06 23 14.7**	**+1.5**
	baz=320						
FUSB	**Fushanzhiwuyua**	**0.36**	**257**	⇑*i*P	**Pn**	**06 23 02.3**	**+0.1**
	baz=267						
FUSB				*i* S	**Sn**	**06 23 13.7**	**+0.3**
	baz=267						
NHY	**Taipei**	**0.42**	**298**	*e*P	**Pn**	**06 23 03.8**	**+1.4**
	baz=302						
ENTT	**Nioudou**	**0.43**	**241**	⇑*e*P	**Pn**	**06 23 02.0**	**-0.5**
	baz=248						
ENTT				*e*S	**Sn**	**06 23 13.8**	**-0.2**
	baz=248						
NHDH	**Xindian Distri**	**0.43**	**286**	⇑P	**Pn**	**06 23 02.5**	**+0.1**
	baz=292						
NHDH				*e*S	**Sn**	**06 23 14.1**	**+0.2**
	baz=292						
EWUT	**Wuta**	**0.44**	**204**	⇑*i*P	**Pn**	**06 23 02.0**	**-0.5**
	baz=206						
EWUT				*e*S	**Sn**	**06 23 13.5**	**-0.6**
	baz=206						
TATO	**Taipei**	**0.46**	**286**	P	**Pn**	**06 23 02.5**	**-0.2**
	baz=292						
TATO				*e*S	**Sn**	**06 23 14.1**	**-0.2**
	baz=292						
TAP	**Taipei**	**0.47**	**294**	*e*P	**Pn**	**06 23 02.9**	**+0.2**
	baz=301						
TAP				*e*S	**Sn**	**06 23 15.0**	**+0.6**
	baz=301						
YM01	**YM01**	**0.47**	**309**	P	**Pn**	**06 23 02.6**	**-0.2**
	baz=306						
YM01				*e*S	**Sn**	**06 23 15.6**	**+1.0**
	baz=306						
NDT	**Datong Townshi**	**0.49**	**240**	⇑*e*P	**Pn**	**06 23 02.3**	**-0.5**
	baz=255						
NDT				*e*S	**Sn**	**06 23 13.9**	**-0.7**
	baz=255						
BACT	**New Taipei Cit**	**0.51**	**287**	*e*P	**Pn**	**06 23 03.2**	**+0.2**
	baz=292						
LATG	**Datong**	**0.51**	**233**	⇑*i*P	**Pn**	**06 23 03.9**	**+0.7**
	baz=248						
LATG				S	**Sn**	**06 23 15.8**	**+0.6**
	baz=248						
ANP	**Anpu**	**0.54**	**309**	*e*P	**Pn**	**06 23 03.2**	**-0.1**
	baz=305						
ANP				*e*S	**Sn**	**06 23 16.6**	**+1.1**
	baz=305						
TWY	**Chenhua**	**0.55**	**322**	⇑P	**Pn**	**06 23 03.2**	**-0.1**
	baz=320						
TWY				*e*S	**Sn**	**06 23 15.1**	**-0.4**
	baz=320						
TWS1	**Kuangyinshan**	**0.57**	**297**	P	**Pn**	**06 23 03.9**	**+0.5**
	baz=300						
TWS1				S	**Sn**	**06 23 17.0**	**+1.3**
	baz=300						
NTST	**Danshui**	**0.57**	**304**	*e*P	**Pn**	**06 23 03.8**	**+0.3**
	baz=306						
NTST				*e*S	**Sn**	**06 23 17.0**	**+1.2**
	baz=306						
YHNB	**Yeheng**	**0.57**	**252**	⇑*i*P	**Pn**	**06 23 03.8**	**+0.2**
	baz=257						
YHNB				*i* S	**Sn**	**06 23 15.5**	**-0.4**
	baz=257						
NSK	**Sanguang**	**0.59**	**253**	⇑*e*P	**Pn**	**06 23 02.8**	**-0.8**
	baz=258						
NSK				*e*S	**Sn**	**06 23 14.6**	**-1.5**
	baz=258						
NTY	**Taoyuan**	**0.64**	**284**	*e*P	**Pn**	**06 23 04.5**	**+0.5**
	baz=286						
NNSB	**Datong**	**0.68**	**233**	P	**Pn**	**06 23 05.0**	**+0.4**
	baz=243						
NNSB				S	**Sn**	**06 23 17.6**	**0.0**
	baz=243						
NCUH	**Zhongli**	**0.73**	**280**	P	**Pn**	**06 23 05.3**	**+0.5**
	baz=282						
NCUH				S	**Sn**	**06 23 19.1**	**+1.0**
	baz=282						
NACB	**Ninganchiao**	**0.75**	**208**	P	**Pn**	**06 23 05.1**	**0.0**
	baz=213						
NACB				S	**Sn**	**06 23 18.1**	**-0.5**
	baz=213						
ETL	**Fush Village**	**0.76**	**205**	*e*P	**Pn**	**06 23 04.8**	**-0.3**
	baz=209						
ETLH	**Xiulin Townshi**	**0.78**	**215**	*e*P	**Pn**	**06 23 05.5**	**+0.1**
	baz=228						
ETLH				*e*S	**Sn**	**06 23 19.0**	**-0.1**
	baz=228						
PCYT	**Pengchaiyu**	**0.79**	**6**	P	**Pn**	**06 23 05.6**	**+0.2**
	baz=8.0						
PCYT				*e*S	**Sn**	**06 23 19.6**	**+0.6**
	baz=8.0						
NFF	**Wufeng Townshi**	**0.81**	**255**	⇑*e*P	**Pn**	**06 23 04.8**	**-0.9**
	baz=258						
NFF				*e*S	**Sn**	**06 23 18.3**	**-1.3**
	baz=258						
NJD	**Zhudong**	**0.81**	**262**	*e*P	**Pn**	**06 23 06.1**	**+0.5**
	baz=257						
HSN1	**Hsinchu**	**0.87**	**266**	*e*P	**Pn**	**06 23 06.6**	**+0.4**
	baz=268						
FUSS	**Fushou**	**0.89**	**228**	P	**Pn**	**06 23 07.5**	**+0.8**
	baz=226						
FUSS				*e*S	**Sn**	**06 23 21.5**	**+0.1**
	baz=226						
LIOB	**Emei**	**0.90**	**257**	⇑*i*P	**Pn**	**06 23 06.8**	**+0.3**
	baz=253						
LIOB				S	**Sn**	**06 23 21.2**	**+0.2**
	baz=253						
SBCB	**Hsinchu**	**0.90**	**267**	*e*P	**Pn**	**06 23 07.0**	**+0.5**
	baz=261						
SBCB				*e*S	**Sn**	**06 23 20.1**	**-1.0**
	baz=261						
HSN	**Hsinchu**	**0.92**	**268**	*e*P	**Pn**	**06 23 06.8**	**+0.1**
	baz=263						
HSN				*e*S	**Sn**	**06 23 21.0**	**-0.4**
	baz=263						
HWA	**Hwalien**	**0.93**	**201**	*e*P	**Pn**	**06 23 06.9**	**+0.1**
	baz=196						
HWA				*e*S	**Sn**	**06 23 21.9**	**+0.3**
	baz=196						
TWT	**Tachien**	**0.94**	**231**	*e*P	**Pn**	**06 23 08.2**	**+1.1**
	baz=229						
TWT				*e*S	**Sn**	**06 23 22.4**	**+0.3**
	baz=229						
TDCB	**Techi**	**0.95**	**232**	P	**Pn**	**06 23 08.0**	**+0.8**
	baz=230						
TDCB				*i* S	**Sn**	**06 23 22.7**	**+0.4**
	baz=230						
JYNG	**Yonagunijimaku**	**0.96**	**114**	P	**Pn**	**06 23 07.2**	**0.0**
JYNG				S	**Sn**	**06 23 22.4**	**+0.1**
ETM	**Tongmen**	**0.98**	**207**	*e*P	**Pn**	**06 23 06.8**	**-0.6**
	baz=211						
ETM				*e*S	**Sn**	**06 23 21.6**	**-1.0**
	baz=211						
YOJ	**Yonaguni jima**	**1.02**	**112**	⇓P	**Pn**	**06 23 07.7**	**0.0**
	baz=115						
YOJ				*e*S	**Sn**	**06 23 23.1**	**-0.2**
	baz=115						
YOJ	**Yonaguni jima**	**1.02**	**112**	P	**Pn**	**06 23 07.7**	**0.0**
YOJ				S	**Sn**	**06 23 23.4**	**+0.1**
CHGB	**Renai**	**1.07**	**223**	⇑*i*P	**Pn**	**06 23 09.5**	**+0.9**
	baz=227						
CHGB				S	**Sn**	**06 23 24.9**	**+0.2**
	baz=227						
WHP	**Taichung City**	**1.09**	**239**	⇑P	**Pn**	**06 23 09.5**	**+0.8**
	baz=242						
WHP				*e*S	**Sn**	**06 23 25.0**	**0.0**
	baz=242						
NMLH	**Miaoli**	**1.12**	**254**	*e*P	**Pn**	**06 23 09.4**	**+0.5**
	baz=256						
OWD	**Renai**	**1.15**	**220**	*e*P	**Pn**	**06 23 09.9**	**+0.5**
	baz=218						
WUSB	**Renai**	**1.16**	**223**	P	**Pn**	**06 23 10.2**	**+0.8**
	baz=227						
WUSB				*e*S	**Sn**	**06 23 26.6**	**+0.3**
	baz=227						
NSY	**Sanyi**	**1.19**	**249**	⇓*i*P	**Pn**	**06 23 10.3**	**+0.7**
	baz=252						
NSY				S	**Sn**	**06 23 27.2**	**+0.5**
	baz=252						
WCS	**Beigang Elemen**	**1.25**	**231**	*e*P	**Pn**	**06 23 10.2**	**-0.2**
	baz=242						
WCS				*e*S	**Sn**	**06 23 27.5**	**-0.4**
	baz=242						
DPDB	**Guoxing**	**1.25**	**230**	*e*P	**Pn**	**06 23 10.8**	**+0.3**
	baz=241						
EGFH	**Guangfu**	**1.27**	**203**	*e*P	**Pn**	**06 23 10.7**	**0.0**
	baz=198						
WDJ	**Dajia District**	**1.31**	**248**	*e*P	**Pn**	**06 23 11.8**	**+0.7**
	baz=250						
VWDT	**VWDT**	**1.33**	**215**	*e*P	**Pn**	**06 23 12.0**	**+0.7**
	baz=213						
VWDT				*e*S	**Sn**	**06 23 29.6**	**+0.1**
	baz=213						
TYC	**Yuchr**	**1.39**	**228**	*e*P	**Pn**	**06 23 12.6**	**+0.6**
	baz=237						
TYC				*e*S	**Sn**	**06 23 31.2**	**+0.4**
	baz=237						
SSLB	**Suanglung**	**1.41**	**222**	*e*P	**Pn**	**06 23 12.9**	**+0.6**
	baz=225						
SSLB				*e*S	**Sn**	**06 23 31.5**	**+0.1**
	baz=225						
WWF	**Wufeng**	**1.41**	**236**	*e*P	**Pn**	**06 23 11.7**	**-0.6**
	baz=246						
WWF				*e*S	**Sn**	**06 23 31.0**	**-0.4**
	baz=246						
HGSD	**Ruisui**	**1.44**	**201**	*e*P	**Pn**	**06 23 13.2**	**+0.6**
	baz=203						
EHY	**Hungye**	**1.46**	**204**	*e*P	**Pn**	**06 23 12.7**	**-0.3**
	baz=200						
WCHH	**Zhanghua**	**1.50**	**240**	*e*P	**Pn**	**06 23 13.5**	**+0.1**
	baz=250						
WJS	**Zhushan**	**1.53**	**228**	*e*P	**Pn**	**06 23 14.1**	**+0.3**
	baz=239						
WHYT	**Xinyi Township**	**1.54**	**222**	*e*P	**Pn**	**06 23 15

baz=305
VWUC VWUC 2.30 274 *e*P **Pn 06 23 23.1 -0.5**
baz=274
JTJ Tarama 2.49 94 S **Sn 06 23 55.2 -0.7**
MASBT Mashibuluo 2.54 209 *e*P **Pn 06 23 27.6 +0.8**
baz=212
MASBT *e*S **Sn 06 23 58.0 +0.7**
baz=212
PNG Penghu 2.55 241 *e*P **Pn 06 23 26.4 -0.5**
baz=241
PHUB P'eng-hu 2.56 239 *e*P **Pn 06 23 26.6 -0.5**
baz=240
PTMZ Houxiangcun 2.60 275 *e*P **Pn 06 23 27.3 -0.2**
baz=275
LYJJ Jianjiangzhen 2.62 311 *e*P **Pn 06 23 27.4 -0.5**
baz=310
XPSS Dashiqiu 2.63 323 *e*P **Pn 06 23 27.1 -0.8**
baz=321
VCHM Qimei 2.84 236 *e*P **Pn 06 23 30.5 -0.2**
baz=236
MHZQ Yeshan 2.94 296 *e*P **Pn 06 23 31.7 -0.4**
baz=295
JMJ Miyako jima 2 3.01 90 *e*P **Pn 06 23 34.6 +1.5**
baz=90
JMJ2 Miyako jima3 3.05 91 *e*S **Sn 06 24 09.5 +0.2**
KNMB Chin-men Tao 3.29 264 *e*P **Pn 06 23 36.2 -0.5**
baz=264
AXDP Jialang 3.64 272 *e*P **Pn 06 23 41.6 +0.2**
baz=271

IDC 13 06:26:15.9±2.7, 53°.92N×86°.42E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=19.7km s-min=12.1km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**272**	I		06 31 50.0	
	baz=90,slow=332,SNR=4.0						
ZALV	**Zalesovo Beam**	**0.94**	**272**	Pg	Pg	06 26 33.1	-0.9
	baz=95,slow=16						
ZALV				Lg	Lg	06 26 47.2	
	2.3nm,0.3s,baz=93,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**5.86**	**239**	Pn	Pn	06 27 45.2	+1.3
	0.1nm,0.3s,baz=57,slow=14,SNR=2.8						
KURBB				Lg	Lg	06 29 23.9	
	baz=52,slow=26,SNR=1.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.61**	**202**	Pn	Pn	06 28 08.6	+0.6
	0.1nm,0.3s,baz=25,slow=13,SNR=2.2						
MKAR				Lg	Lg	06 30 19.3	
	0.1nm,0.3s,baz=16,slow=32,SNR=5.2						
	0.1nm,0.3s						

IDC 13 06:36:10.8±2.7, 54°.16N×86°.31E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=19.9km s-min=11.7km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**257**	I		06 41 32.4	
	0.1nm,0.8s,baz=74,slow=329,SNR=21						
ZALV	**Zalesovo Beam**	**0.91**	**257**	Pg	Pg	06 36 26.9	-1.3
	0.9nm,0.3s,baz=74,slow=18,SNR=7.6						
ZALV				Lg	Lg	06 36 41.4	
	3.4nm,0.3s,baz=78,slow=31,SNR=20						
KURBB	**Kurchatov Arra**	**5.94**	**236**	Pn	Pn	06 37 40.5	+0.6
	baz=53,slow=14,SNR=5.6						
KURBB				Lg	Lg	06 39 20.4	
	baz=57,slow=31,SNR=2.9						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	06 38 07.2	+1.6
	0.1nm,0.3s,baz=20,slow=13,SNR=2.7						
MKAR				Lg	Lg	06 40 18.3	
	baz=20,slow=30,SNR=3.3						
	0.1nm,0.3s						

*NEIC **13** 06:40:25.7±2.0, 31°.19N±0°.05×115°.40W±0°.03, h16km±7km, Error ellipse: s-maj=7.9km s-min=3.7km az=175.0*
*PAS **13** 06:40:25.9±1.9, 31°.24N±0°.05×115°.37W±0°.03, h6km±2km, Error ellipse: s-maj=8.2km s-min=4.8km az=177.0*
*MEX **13** 06:40:26.7±0.5, 31°.00N×115°.34W, h24km±6km, MD3.3*
ECX 13 06:40:26.1±0.4, 31°.25N×115°.36W, h4km±2km, MD2.9, ML3.2, 11C-10D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.22**	**206**	*i* P	Pg	06 40 30.5	+0.1
SPIG				*i* S	Sg	06 40 33.9	+0.5
SPIG	**San Pedro Mart**	**0.22**	**206**	⇑*i*P	Pg	06 40 30.6	+0.1
SPIG				*e*S	Sg	06 40 34.0	+0.6
SPIG				IAML		06 40 34.3	
	comp=N,6μm,0.2s						
SPIG				⇓*e*		06 40 34.3	
SPIG				⇑*e*		06 40 34.3	
SPIG				IAML		06 40 34.3	
	comp=E,9μm,0.3s						
ECBX	**El Chinero**	**0.34**	**49**	⇑*i*P	Pg	06 40 32.4	-0.4
ECBX				*e*S	Sg	06 40 37.2	-0.1
ECBX				IAML		06 40 37.4	
	comp=N,2μm,0.2s						
ECBX				⇑*e*		06 40 37.5	
ECBX				IAML		06 40 37.5	
	comp=E,4μm,0.3s						
VTX	**Valle De La Tr**	**0.40**	**292**	⇓*i*P	Pg	06 40 33.4	-0.3
VTX				*e*S	Sg	06 40 38.8	-0.2
VTX				⇓*e*		06 40 39.1	
VTX				IAML		06 40 39.1	
	comp=N,2μm,0.1s						
VTX				⇓*e*		06 40 39.2	
VTX				IAML		06 40 39.2	
	comp=E,4μm,0.1s						
SFX	**San Felipe**	**0.48**	**115**		Pg	06 40 35.0	-0.3
SFX					Sg	06 40 41.8	+0.2
SFX	**San Felipe**	**0.48**	**115**	IAML		06 40 44.1	
	comp=N,2μm,0.4s						
SFX				IAML		06 40 44.5	
	comp=E,942nm,0.3s						
SFX	**San Felipe**	**0.48**	**115**	*e*P	Pg	06 40 34.2	-1.1
SFX				*i* S	Sg	06 40 41.3	-0.2
SFX	**San Felipe**	**0.48**	**115**	⇓*i*P	Pg	06 40 35.0	-0.3
SFX				*e*S	Sg	06 40 41.5	-0.1
SFX				⇑*e*		06 40 42.3	
SFX				IAML		06 40 42.3	
	comp=E,1μm,0.5s						
SFX				IAML		06 40 44.2	
	comp=N,2μm,0.3s						
SJX	**San Joaquin**	**0.73**	**315**	⇓*e*P	Pn	06 40 42.4	-0.8
SJX				*e*S	Sn	06 40 54.6	-0.1
SJX				IAML		06 40 56.9	
	comp=E,522nm,0.2s						
SJX				⇑*e*		06 40 56.9	
SJX				⇓*e*		06 40 57.0	
SJX				IAML		06 40 57.0	
	comp=N,559nm,0.1s						
SQX	**San Quintin**	**0.80**	**214**	⇑*i*P	Pg	06 40 40.3	-1.2
SQX				*e*S	Sg	06 40 51.2	-0.7
SQX				IAML		06 40 51.6	
	comp=N,761nm,0.3s						
SQX				⇑*e*		06 40 51.6	
SQX				IAML		06 40 53.4	
	comp=E,907nm,0.2s						
SQX				*e*		06 40 53.4	
RHX	**Rio Hardy**	**0.89**	**4**	⇑*e*P	Pg	06 40 41.7	-1.4
RHX				*e*S	Sg	06 40 53.4	-1.3
ESJX	**Sierra Juarez**	**0.91**	**326**		Pg	06 40 42.4	-1.2
ESJX					Sg	06 40 54.6	-0.8
ESJX	**Sierra Juarez**	**0.91**	**326**	IAML		06 40 56.5	
	comp=E,422nm,0.3s						
ESJX				IAML		06 40 57.0	
	comp=N,406nm,0.2s						
GUVIX	**Guadalupe Vict**	**1.08**	**13**		Pg	06 40 46.6	-0.2
GUVIX					Sb	06 41 02.0	+0.2
MBIG	**Mexicali**	**1.17**	**7**	*e*P	Pg	06 40 47.9	-0.6
MBIG				*e*P	Pb	06 40 48.4	-0.4
MBIG				*e*S	Sb	06 41 04.0	-0.2
MBIG				*i* S	Sn	06 41 05.4	-0.2
CPBX	**Cerro Prieto**	**1.17**	**2**		Pg	06 40 48.1	-0.5
CPBX					Sb	06 41 04.7	+0.3
CPBX	**Cerro Prieto**	**1.17**	**2**	*e*P	Pg	06 40 46.3	-2.3
CPBX				*e*S	Sg	06 41 02.7	-1.1
CCX	**Cicese**	**1.28**	**299**		Pg	06 40 48.7	-1.9
CCX					Sg	06 41 05.4	-1.8
CCX	**Cicese**	**1.28**	**299**	IAML		06 41 05.8	
	comp=E,286nm,0.5s						
CCX				IAML		06 41 07.9	
	comp=N,293nm,0.4s						
CCX	**Cicese**	**1.28**	**299**	*e*P	Pg	06 40 48.6	-2.0
CCX				IAML		06 41 05.9	
	comp=E,369nm,0.5s						
CCX				⇓*e*		06 41 05.9	
CCX				IAML		06 41 08.0	
	comp=N,377nm,0.4s						
CCX				⇓*e*		06 41 08.0	
UABX	**UABC, Campus M**	**1.39**	**357**		Pn	06 40 50.8	-1.4
UABX					Sn	06 41 11.1	+0.2
SGL	**Mount Signal**	**1.44**	**347**		Pn	06 40 52.0	-0.8
SGL					Sb	06 41 10.2	-1.8
YUH2	**Yuha Desert**	**1.48**	**341**	*e*P	Pn	06 40 51.5	-2.0
YUH2				*e*S	Sn	06 41 11.6	-1.7
YUH	**Yuha Desert**	**1.48**	**341**		Pn	06 40 50.7	-2.8
YUH				IAML		06 41 13.3	
	comp=E,253nm,0.6s						
YUH				IAML		06 41 13.5	
	comp=N,146nm,0.7s						
YUH	**Yuha Desert**	**1.48**	**341**		Sn	06 41 11.8	-1.4
YUH	**Yuha Desert**	**1.48**	**341**		Pn	06 40 52.7	-0.8
RMX	**La Rumorosa**	**1.49**	**336**		Pn	06 40 51.6	-2.1
RMX	**La Rumorosa**	**1.49**	**336**	*e*P	Pn	06 40 50.7	-3.0
RMX				*e*S	Sb	06 41 09.9	-3.8
RMX				IAML		06 41 10.6	
	comp=N,344nm,0.4s						
RMX				IAML		06 41 11.1	
	comp=E,436nm,0.4s						
RMX				⇑*e*		06 41 11.1	
CBX	**Cerro Bola**	**1.54**	**314**		Pn	06 40 53.2	-1.2
CBX				IAML		06 41 18.8	
	comp=E,106nm,0.8s						
CBX				IAML		06 41 21.0	
	comp=N,159nm,0.5s						
CBX	**Cerro Bola**	**1.54**	**314**	*e*P	Pn	06 40 53.0	-1.5
CBX				*e*S	Sn	06 41 10.9	-4.1
CBX	**Cerro Bola**	**1.54**	**314**	*e*P	Pn	06 40 53.1	-1.3
CBX				*e*S	Sn	06 41 13.9	-1.1
IKP	**In-Ko-Pah, Jac**	**1.54**	**336**	*e*P	Pn	06 40 53.0	-1.5
SLGB	**San Luis Gonza**	**1.63**	**150**	*e*P	Pn	06 40 54.4	-1.2
TJIG	**Tijuana**	**1.63**	**317**	*e*P	Pn	06 40 54.7	-0.9
TJIG				*e*S	Sn	06 41 15.3	-1.8
TJIG	**Tijuana**	**1.63**	**317**	*e*P	Pn	06 40 54.7	-0.9
TJIG				*e*S	Sn	06 41 16.6	-0.5
PIX	**Pinacate**	**1.65**	**79**	Pn	Pn	06 40 53.6	-2.2
TKX	**Tecate**	**1.70**	**321**		Pn	06 40 55.6	-0.9
TKX				IAML		06 41 20.1	
	comp=N,193nm,0.2s						
TKX				IAML		06 41 20.4	
	comp=E,247nm,0.2s						
BAR	**Barrett**	**1.82**	**322**	Pn	Pn	06 40 56.9	-1.3
BAR				IAML		06 41 23.3	
	comp=E,154nm,0.2s						
BAR				IAML		06 41 25.1	
	comp=N,156nm,0.2s						
BAR	**Barrett**	**1.82**	**322**	*e*P	Pn	06 40 57.8	-0.3
BAR				*e*S	Sn	06 41 21.0	-0.6
BAR				IAML		06 41 22.7	
	comp=N,145nm,0.2s						
BAR				⇑*e*		06 41 22.7	
BAR				⇓*e*		06 41 23.4	
BAR				IAML		06 41 23.4	
	comp=E,151nm,0.2s						
GLA	**Glamis**	**1.86**	**14**		Pn	06 40 56.2	-2.5
GLA				IAML		06 41 33.0	
	comp=N,123nm,0.4s						
TJX	**Tijuana**	**1.92**	**312**	Pn	Pn	06 40 58.0	-1.5
113A	**Mohawk Valley,**	**2.03**	**41**	Pn	Pn	06 40 58.5	-2.6
109C	**Camp Elliot, M**	**2.21**	**318**	Pn	Pn	06 41 02.6	-1.0
109C				IAML		06 41 34.8	
	comp=E,125nm,0.4s						
109C				IAML		06 41 36.5	
	comp=N,111nm,0.2s						
CPE	**Camp Elliot**	**2.21**	**318**		Pn	06 41 04.3	+0.7
214A	**Organ Pipe Nat**	**2.28**	**71**	Pn	Pn	06 41 01.3	-3.3
214A				IAML		06 41 51.2	
	comp=N,45nm,0.6s						
PFO	**Pinyon Flats O**	**2.54**	**339**		Pn	06 41 07.6	-0.6
PFO				IAML		06 41 47.4	
	comp=N,43nm,1.0s						
BLYC	**Blythe**	**2.59**	**15**		Pn	06 41 07.1	-1.8
BLYC				IAML		06 41 51.3	
	comp=E,33nm,0.5s						
ELS	**Elsinore Mount**	**2.97**	**324**	Pn	Pn	06 41 14.0	0.0
ELS				IAML		06 42 02.7	
	comp=E,50nm,0.7s						
ELS				IAML		06 42 04.0	
	comp=N,44nm,0.8s						
Y14A	**Wickenburg**	**3.34**	**36**		Pn	06 41 17.3	-1.8
Y14A				IAML		06 42 23.7	
	comp=E,18nm,0.7s						
TUC	**Tucson**	**4.03**	**74**		Pn	06 41 26.7	-2.0
GSC	**Goldstone, Bar**	**4.22**	**344**		Pn	06 41 30.4	-0.9
GSC				IAML		06 42 45.0	
	comp=E,14nm,3.0s						
GSC				IAML		06 43 05.0	
	comp=N,10.0nm,3.6s						
SRIG	**Santa Rosalia**	**4.76**	**144**	Pn	Pn	06 41 37.4	-1.3
SRIG				IAML		06 43 50.9	
	comp=E,18nm,0.2s						
SHPR	**Sheep Range**	**5.25**	**2**	Pn	Pn	06 41 43.8	-1.7
U15A	**North Rim**	**5.76**	**25**		Pn	06 41 53.2	+0.6
LCMT	**Little Creek M**	**6.01**	**16**		Pn	06 41 55.9	0.0
W18A	**Petrified Fore**	**6.09**	**49**	Pn	Pn	06 41 56.5	-0.6
KNB	**Kanab**	**6.13**	**19**	Pn	Pn	06 41 57.5	-0.1
CCUT	**Cedar City**	**6.50**	**14**	Pn	Pn	06 42 03.4	+0.7
SZCU	**Shurtz Canyon**	**6.61**	**16**	Pn	Pn	06 42 03.6	-0.5

IDC 13 07:29:27.9±4.4, 2°.96S×147°.36E, h0km, mb3.7/2, mbtmp3.8/2, MS3.0/4, Error ellipse: s-maj=228.8km s-min=61.9km az=114.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.63**	**351**	LR	LR	07 39 06.7	
	comp=Z,35nm,20.7s,baz=166,slow=35						
WRA	**Warramunga Arr**	**21.13**	**216**	P	P	07 34 14.6	0.0
	3.2nm,0.9s,baz=42,slow=9.8,SNR=12						
	3.2nm,0.9s						
ASAR	**Alice Springs**	**24.36**	**211**	P	P	07 34 48.1	+0.3
	1.8nm,0.8s,baz=41,slow=8.3,SNR=19						
	1.8nm,0.8s						
STKA	**Stephens Creek**	**29.27**	**190**	LR	LR	07 48 59.7	
	comp=Z,45nm,20.0s,baz=26,slow=40						
PETK	**Petropavlovsk-**	**56.54**	**7**	LR	LR	07 58 29.4	
	comp=Z,16nm,21.6s,baz=131,slow=31						
MA2	**Magadan**	**62.41**	**2**	LR	LR	08 07 56.2	
	comp=Z,11nm,18.0s,baz=74,slow=37						
TORD	**Torodi Ar. Bea**	**144.58**	**289**	PKP	PKPbc	07 49 06.4	+0.1
	0.5nm,0.7s,baz=85,slow=2.6,SNR=3.0						

*INET **13** 07:36:05.8±0.7, 11°.84N×89°.40W, h15km, MW3.4*
*SNET **13** 07:36:12.5±1.2, 12°.18N×89°.02W, h15km±6km, ML3.1*
ISC 13 07:36:06.9±2.9, 12°.1N±0°.1×89°.15W±0°.08, h5km±15km, n21, σ0°.57/26, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**1.56**	**23**	*e*P	**Pg**	**07 36 37.1**	**+0.1**
SJTE	**Alcalda de S**	**1.57**	**5**	*e*P	**Pg**	**07 36 37.5**	**+0.6**
LFRS	**El Faro**	**1.57**	**3**	*e*P	**Pg**	**07 36 38.0**	**+0.9**
COEG	**Centro de Oper**	**1.59**	**9**	*e*P	**Pg**	**07 36 37.7**	**+0.3**
PACA	**Pacayal**	**1.63**	**30**	*e*P	**Pg**	**07 36 38.4**	**+0.2**
SNET	**Serv Nac Est T**	**1.63**	**357**	*e*P	**Pg**	**07 36 38.9**	**+0.7**
SNET				*e*S	**Sg**	**07 36 59.1**	**-0.4**
UEES	**Universidad Ev**	**1.66**	**357**	*e*P	**Pg**	**07 36 39.4**	**+0.6**
PAVA	**Las Pavas**	**1.67**	**7**	*e*P	**Pg**	**07 36 39.1**	**+0.1**
PQSS	**Presa 15 de Se**	**1.67**	**20**	*e*P	**Pg**	**07 36 38.8**	**-0.2**
LCND	**La Caada**	**1.76**	**44**	*e*P	**Pb**	**07 36 39.0**	**-0.7**
CEDA	**San Andres**	**1.76**	**352**	*e*P	**Pg**	**07 36 41.1**	**+0.3**
CEDA				IAML		07 37 09.6	
	comp=Z,395nm,0.4s						
CNCH	**Conchagua**	**1.77**	**46**	*e*P	**Pb**	**07 36 39.6**	**-0.5**
CEVE	**Cerro Verde**	**1.83**	**345**	*e*P	**Pg**	**07 36 42.5**	**+0.4**
CEVE				IAML		07 37 07.3	
	comp=Z,548nm,0.3s						
SBLS	**San Blas**	**1.84**	**346**	*e*P	**Pg**	**07 36 42.9**	**+0.6**
NUBE	**Las Nubes**	**1.95**	**342**	*e*P	**Pg**	**07 36 43.8**	**-0.5**
NUBE				*e*S	**Sb**	**07 37 07.1**	**-0.5**
NUBE				IAML		07 37 09.8	
	comp=Z,147nm,0.5s						
P5NO	**Presa 5 de nov**	**1.97**	**11**	*e*P	**Pb**	**07 36 43.8**	**+0.5**
P5NO				*e*S	**Sb**	**07 37 07.4**	**-0.7**
SLOZ	**Alcaldia de Sa**	**2.06**	**343**	*e*P	**Pg**	**07 36 46.1**	**-0.4**
SLOZ				*e*S	**Sb**	**07 37 11.1**	**+0.1**
SLOZ				IAML		07 37 19.3	
	comp=Z,83nm,0.6s						
CRIN	**San Cristobal**	**2.15**	**72**	*e*P	**Pn**	**07 36 43.7**	**+0.1**
CRIN				*e*S	**Sn**	**07 37 10.9**	**+0.2**
ESQI	**Esquipulas**	**2.51**	**356**	*e*P	**Pb**	**07 36 52.0**	**-0.6**
ESQI				IAML		07 37 25.1	
	comp=Z,58nm,0.5s						
RCON	**San Juan de Ri**	**3.25**	**64**	*e*P	**Pn**	**07 37 00.1**	**+1.2**
BOAB	**BOACO BROADBAN**	**3.43**	**83**	*e*P	**Pn**	**07 37 01.0**	**-0.1**

IDC 13 07:37:37.7±3.5, 11°.23S×120°.11E, h0km, mb3.4/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=261.5km s-min=33.3km az=48.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.20**	**124**	Pn	Pn	07 41 25.7	-1.3
	0.1nm,0.3s,baz=296,slow=14,SNR=5.4						
WRA				Sn	Sn	07 44 13.2	-14
	0.1nm,0.3s,baz=296,slow=21,SNR=2.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**18.04**	**135**	P	P	07 41 51.0	+0.4
	0.1nm,0.3s,baz=314,slow=13,SNR=5.8						
ASAR				S	Sn	07 45 01.2	-11
	0.4nm,0.7s,baz=308,slow=21,SNR=3.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.93**	**333**	P	P	07 48 32.0	0.0
	0.2nm,0.5s,baz=150,slow=6.3,SNR=2.6						
	0.2nm,0.5s						

*SOME **13** 07:57:24.2, 39°.62N×75°.12E, h5km*
*NNC **13** 07:57:25.5±1.9, 39°.63N×75°.11E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=18.6km s-min=12.6km az=105.0*
*KRNET **13** 07:57:31.8±0.1, 39°.39N×75°.93E, mb3.0*
ISC 13 07:57:34.6±2.6, 39°.9N±0°.1×75°.47E±0°.06, h2km±19km, n18, σ1°.92/32, 6C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.57**	**15**	⇓*e*P	**Pg**	**07 58 04.7**	**0.0**
NRN	baz=1.0						
				⇓*e*S	**Sg**	**07 58 28.8**	**+3.7**
	baz=1.0						
OHH	**Osh**	**2.14**	**287**	⇑*e*P	**Pb**	**07 58 13.6**	**-0.6**
OHH	baz=96						
				⇑*e*S	**Sg**	**07 58 44.1**	**+0.7**
	baz=96						
UCH	**Uchtor**	**2.42**	**343**	⇑*e*P	**Pb**	**07 58 18.9**	**-0.3**
UCH	baz=40						
				⇑*e*S	**Sg**	**07 58 53.1**	**+0.7**
	baz=40						
BOOM	**Boomskoye usch**	**2.60**	**8**	⇓*e*P	**Pb**	**07 58 19.6**	**-2.4**
BOOM	baz=0.0						
				⇓*e*S	**Sb**	**07 58 54.4**	**0.0**
	baz=0.0						
AAK	**Ala-Archa**	**2.82**	**345**	⇑*e*P	**Pb**	**07 58 24.0**	**-1.7**
AAK	baz=42						
				⇑*e*S	**Sb**	**07 59 02.4**	**+1.7**
	baz=42						
KST	**Kastek**	**3.15**	**7**	*e*P	**Pb**	**07 58 28.9**	**-2.5**
KST	3.0nm,0.1s						
				*e*S	**Sg**	**07 59 15.6**	**-0.2**
	4.3nm,0.7s						
KST	**Kastek**	**3.15**	**7**	Pg	**Pb**	**07 58 28.9**	**-2.5**
KST	2.9nm,0.5s						
				Lg	Lg	07 59 15.6	
	4.3nm,0.7s						
TNSS	**Tian-Shan**	**3.31**	**19**	*e*P	**Pb**	**07 58 32.9**	**-1.4**
TNSS	6.7nm,0.1s						
				*e*S	**Sg**	**07 59 22.6**	**+1.5**
	2.8nm,0.2s						
TNSS	**Tian-Shan**	**3.31**	**19**	Pg	**Pb**	**07 58 32.9**	**-1.4**
TNSS	6.5nm,0.7s						
				Lg	Lg	07 59 22.6	
	1.5nm,1.0s						
MDOK	**Medeo**	**3.46**	**20**	*e*P	**Pb**	**07 58 34.7**	**-2.0**
MDOK	3.8nm,0.0s						
				*e*S	**Sg**	**07 59 25.4**	**-0.2**
	4.6nm,0.1s						
MDOK	**Medeo**	**3.46**	**20**	Pg	**Pb**	**07 58 34.6**	**-2.0**
MDOK	3.4nm,0.6s						
				Pg	**Pb**	**07 58 34.7**	**-2.0**
	4.0nm,1.1s						
MDOK				Lg	Lg	07 59 25.4	
	4.6nm,0.8s						
MDOK				Lg	Lg	07 59 28.7	
	4.5nm,0.9s						
SGDS	**Sogindy**	**3.59**	**350**	*e*P	**Pb**	**07 58 35.3**	**-3.5**
SGDS	1.7nm,0.2s						
				*e*S	**Sb**	**07 59 26.3**	**+3.4**
	2.3nm,0.3s						
SGDS	**Sogindy**	**3.59**	**350**	Pg	**Pb**	**07 58 35.3**	**-3.5**
SGDS	2.6nm,2.6s						
				Lg	Lg	07 59 26.3	
	1.0nm,0.9s						
KRBS	**Karabastau**	**3.78**	**2**	*e*P	**Pb**	**07 58 40.8**	**-1.3**
KRBS	0.6nm,0.0s						
				*e*S	**Sg**	**07 59 36.0**	**0.0**
	2.1nm,0.3s						
KRBS	**Karabastau**	**3.78**	**2**	Pg	**Pb**	**07 58 40.8**	**-1.3**
KRBS	2.5nm,0.6s						
				Lg	Lg	07 59 36.0	
	1.0nm,0.7s						
KUU	**Kurty**	**4.03**	**9**	*e*P	**Pb**	**07 58 44.5**	**-1.8**
KUU	0.7nm,0.1s						
				*e*S	**Sg**	**07 59 42.5**	**-1.5**
	4.3nm,0.4s						
CHKK	**Chushkaly**	**4.10**	**16**	*e*P	**Pb**	**07 58 47.1**	**-0.3**
CHKK	1.0nm,0.0s						
				*e*S	**Sg**	**07 59 46.7**	**+0.5**
	2.9nm,0.1s						
KPKS	**Kokpek**	**4.29**	**33**	*e*P	**Pb**	**07 58 50.9**	**+0.1**
KPKS	0.7nm,0.0s						
				*e*S	**Sg**	**07 59 53.2**	**+0.9**
	7.9nm,0.1s						

*IDC **13** 08:00:50.7±1.8, 52°.94S×21°.73E, h0km, mb3.8/3, mbtmp3.8/3, MS3.4/9, Error ellipse: s-maj=58.8km s-min=41.2km az=92.0*
ISC 13 08:00:52.0±1.7, 52°.9S±0°.3×21°.7E±0°.4, h10km, n17, σ0°.81/9, mb3.7/3, MS3.4/9, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.52**	**358**	LR	LR	08 11 43.6	
	comp=Z,77nm,20.4s,baz=151,slow=32						
TROLL	**Troll, Antarti**	**20.92**	**197**	P	**P**	**08 05 33.9**	**-0.4**
SNAA	**Sanae**	**21.69**	**201**	P	**P**	**08 05 42.3**	**-0.3**
SNAA	**Sanae**	**21.69**	**201**	P	**P**	**08 05 42.6**	**0.0**
	3.2nm,1.0s,baz=53,slow=12,SNR=21						
SNAA				LR	LR	08 12 22.5	
	comp=Z,80nm,18.8s,baz=19,slow=32						
	3.2nm,1.0s						
VNA2	**Neumayer--Watz**	**22.26**	**205**	P	**P**	**08 05 48.0**	**-0.6**
	baz=35,slow=11						
VNA1	**Neumayer--Stat**	**22.31**	**206**	P	**P**	**08 05 50.8**	**+1.6**
BOSA	**Boshof**	**24.41**	**8**	LR	LR	08 14 06.5	
	comp=Z,93nm,19.3s,baz=192,slow=33						
LBTB	**Lobatse**	**28.01**	**8**	LR	LR	08 16 06.0	
	comp=Z,81nm,20.0s,baz=165,slow=33						
TSUM	**Tsumeb**	**33.79**	**353**	LR	LR	08 18 12.0	
	comp=Z,77nm,21.7s,baz=92,slow=31						
QSPA	**South Pole Qui**	**37.32**	**180**	P	**P**	**08 08 04.0**	**-0.1**
	3.0nm,0.6s,baz=248,slow=1.6,S

NVAR	Mina Array Bea 0.4nm,0.8s,baz=152,slow=4.1,SNR=2.9	148.96	258	PKPbc	PKiKP	08 20 40.3	-0.7

IDC 13 08:25:14.6±569.0, 53°.88N×1°.31E, h0km, Error ellipse: s-maj=318.5km s-min=169.0km az=109.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.24	118	I		09 21 10.0	
	baz=309,slow=334,SNR=2.3						
I43RU	DUBNA INFRASON	20.49	67	I		10 31 00.0	
	baz=278,slow=320,SNR=0.8						
I31KZ	AKTYUBINSK INF	34.19	72	I		11 56 20.0	
	baz=299,slow=324,SNR=1.4						
I46RU	ZALESOVO INFRA	46.40	54	I		13 11 00.0	
	baz=302,slow=331,SNR=1.8						

IDC 13 08:32:58.1±1.0, 50°.29S×112°.50E, h0km, mb4.3/6, mbtmp4.3/6, MS3.6/25, Error ellipse: s-maj=48.2km s-min=18.1km az=105.0
NEIC 13 08:33:00.9±1.3, 50°.54S±0°.09×112°.0E±0°.2, h10km±1km, mb4.6/19, Error ellipse: s-maj=21.5km s-min=14.3km az=291.0

ISC 13 08:33:00.2±0.6, 50°.44S±0°.08×112°.1E±0°.1, h10km, n59, σ1°.33/31, mb4.6/14, MS3.7/25, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.60	6	T	T	08 52 25.5	
	baz=183,slow=74,SNR=410						
H01W1	Cape Leeuwin H	15.61	6	T	T	08 52 26.9	
	baz=183,slow=74,SNR=528						
H01W3	Cape Leeuwin H	15.62	6	T	T	08 52 29.0	
	baz=183,slow=74,SNR=448						
CASY	Casey	15.91	182		Pn	08 36 42.9	-1.0
NWAO	Narrogin (SRO)	17.91	14	LR	LR	08 42 22.2	
	comp=Z,456nm,21.9s,baz=238,slow=32						
NWAO	Narrogin (SRO)	17.91	14	Pn	P	08 37 09.5	-0.4
MORW	Morawa	21.56	10	P	P	08 37 47.8	-1.9
MORW				IAmb	IAmb	08 37 48.6	
	comp=Z,27nm,1.0s						
BBOO	Buckleboo	24.97	54	P	P	08 38 25.2	+1.4
BBOO				IAmb	IAmb	08 38 53.5	
	comp=Z,18nm,1.4s						
TAU	Tasmania Unive	25.16	86	P	P	08 38 26.4	+1.0
PAF	Port-aux-Franc	26.72	256	P	P	08 38 39.5	+0.1
STKA	Stephens Creek	28.68	61	LR	LR	08 49 07.6	
	comp=Z,49nm,18.1s,baz=205,slow=34						
ASAR	Alice Springs	31.67	41	P	P	08 39 20.4	-3.3
	comp=Z,0.9nm,0.8s,baz=210,slow=8.0,SNR=9.8						
	comp=Z,0.9nm,0.8s						
AS31	Alice Springs	31.67	41	P	P	08 39 23.2	-0.6
VNDA	Vanda	32.84	162	P	P	08 39 33.4	0.0
	comp=Z,5.4nm,0.8s,baz=289,slow=8.7,SNR=34						
VNDA				LR	LR	08 52 02.0	
	comp=Z,248nm,19.6s,baz=302,slow=35						
	comp=Z,5.4nm,0.8s						
VNDA	Vanda	32.84	162	P	P	08 39 32.6	-0.8
VNDA				IAmb	IAmb	08 39 35.5	
	comp=Z,6.5nm,0.8s						
SBA	Scott Base	33.94	162	P	P	08 39 43.1	+0.1
SBA				IAmb	IAmb	08 39 53.5	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	35.18	38	P	P	08 39 51.2	-3.1
	comp=Z,1.8nm,0.8s,baz=206,slow=8.8,SNR=9.0						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	35.18	38	P	P	08 39 55.1	+0.8
LBZ	Lake Benmore	38.92	104	P	P	08 40 26.6	+0.7
LBZ				IAmb	IAmb	08 40 41.9	
	comp=Z,19nm,1.1s						
EIDS	Eidsvold	39.01	65	P	P	08 40 27.6	+0.8
EIDS				IAmb	IAmb	08 40 35.6	
	comp=Z,13nm,1.3s						
QSPA	South Pole Qui	39.69	180	P	P	08 40 32.7	+0.4
	comp=Z,6.8nm,0.9s,baz=310,slow=1.5,SNR=35						
QSPA				LR	LR	08 56 08.2	
	comp=Z,164nm,20.1s,baz=315,slow=35						
	comp=Z,6.8nm,0.9s						
QSPA	South Pole Qui	39.69	180	P	P	08 40 32.1	-0.2
QSPA				IAmb	IAmb	08 40 34.5	
	comp=Z,6.0nm,0.8s						
RPZ	Rata Peaks	39.80	104	LR	LR	08 53 02.3	
	comp=Z,99nm,18.7s,baz=252,slow=30						
COCO	West Island	40.13	337	P	P	08 40 38.0	+1.9
CTA	Charters Tower	40.57	54	LR	LR	08 56 12.1	
	comp=Z,52nm,19.2s,baz=262,slow=35						
MTN	Manton Dam	40.60	29	P	P	08 40 42.3	+2.2
MTN				IAmb	IAmb	08 41 05.8	
	comp=Z,21nm,1.4s						
LTZ	Lake Taylor	41.05	103	P	P	08 40 43.9	+0.3
LTZ				IAmb	IAmb	08 41 15.1	
	comp=Z,22nm,1.2s						
LEM	Lembang	43.62	354	LR	LR	08 55 11.0	
	comp=Z,180nm,21.4s,baz=160,slow=31						
KAPI	Kappang	45.73	11	LR	LR	09 00 39.1	
	comp=Z,82nm,18.4s,baz=192,slow=36						
TROLL	Troll, Antarti	48.37	203	P	P	08 41 42.4	+0.7
SNAA	Sanae	49.90	202	P	P	08 41 54.2	+0.8
SNAA	Sanae	49.90	202	P	P	08 41 54.5	+1.2
	comp=Z,5.1nm,0.9s,baz=148,slow=8.2,SNR=21						
SNAA				LR	LR	09 02 10.5	
	comp=Z,70nm,18.1s,baz=176,slow=35						
	comp=Z,5.1nm,0.9s						
SNAA	Sanae	49.90	202	P	P	08 41 53.8	+0.4
SNAA				IAmb	IAmb	08 41 56.6	
	comp=Z,6.4nm,0.9s						
BELA	Belgrano 2	50.32	189	P	P	08 41 56.1	-0.3
BELA				IAmb	IAmb	08 41 58.8	
	comp=Z,6.6nm,1.0s						
DZM	Mont Dzumac	50.76	77	LR	LR	09 00 30.2	
	comp=Z,61nm,18.1s,baz=24,slow=33						
VNA3	Neumayer Olymp	51.78	201	P	P	08 42 07.9	+0.4
VNA1	Neumayer-Stat	51.88	201	P	P	08 42 09.3	+1.1
SIJI	Sorong	52.02	25	LR	LR	09 04 13.4	
	comp=Z,20nm,18.7s,baz=160,slow=36						
H08S2	Diego Garcia H	53.82	309	T	T	09 40 21.7	
	baz=149,slow=76,SNR=5.7						
H08S1	Diego Garcia H	53.83	309	T	T	09 40 22.4	
	baz=149,slow=76,SNR=5.2						
H08S3	Diego Garcia H	53.84	309	T	T	09 40 23.2	
	baz=149,slow=76,SNR=5.6						
PSI	Prapat	54.22	344	LR	LR	09 00 56.3	
	comp=Z,132nm,21.5s,baz=218,slow=31						
HNR	Honiara	56.76	61	LR	LR	09 06 21.0	
	comp=Z,644nm,18.1s,baz=165,slow=36						
DAV	Davao City (W)	58.46	16	LR	LR	09 07 07.1	
	comp=Z,32nm,21.4s,baz=164,slow=35						
PALK	Pallekele	63.57	325	LR	LR	09 05 00.0	
	comp=Z,75nm,19.8s,baz=245,slow=30						
PMSA	Palmer Station	65.09	182	LR	LR	09 11 31.2	
	comp=Z,81nm,19.6s,baz=175,slow=36						
BOSA	Boshof	66.56	253	LR	LR	09 06 31.8	
	comp=Z,33nm,19.4s,baz=187,slow=30						
LBTB	Lobatse	68.95	256	LR	LR	09 07 57.9	
	comp=Z,49nm,19.3s,baz=132,slow=30						
CMAR	Chiang Mai Arr	69.56	347	P	P	08 44 08.2	-0.9
	comp=Z,2.8nm,0.4s,baz=195,slow=5.6,SNR=4.7						
CMAR				LR	LR	09 10 27.8	
	comp=Z,39nm,20.6s,baz=185,slow=32						
	comp=Z,2.8nm,0.4s						
GUMO	Guam	69.94	34	LR	LR	09 14 28.5	
	comp=Z,18nm,18.8s,baz=154,slow=36						
JCJ	Chichijima	81.68	27	LR	LR	09 17 55.2	
	comp=Z,16nm,22.0s,baz=108,slow=33						
WSAR	Wadi Sarin	87.20	312	LR	LR	09 18 18.3	
	comp=Z,26nm,19.2s,baz=172,slow=31						
PLCA	Paso Flores	89.18	178	LR	LR	09 26 23.8	
	comp=Z,52nm,18.7s,baz=180,slow=36						
RPN	Rapa Nui	94.53	144	LR	LR	09 20 02.8	
	comp=Z,26nm,21.5s,baz=8.0,slow=30						
SONM	Songino Array	98.01	356	LR	LR	09 34 04.9	
	comp=Z,25nm,18.7s,baz=128,slow=38						
AAK	Ala-Archa	98.33	333	LR	LR	09 26 33.3	
	comp=Z,44nm,20.1s,baz=172,slow=33						
NVAR	Mina Array Bea	142.78	89	PKP	PKPdf	08 52 33.5	0.0
	comp=Z,0.3nm,0.7s,baz=230,slow=6.5,SNR=2.6						
TXAR	Lajitas Array	145.90	115	PKPbc	PKPdf	08 52 38.0	-1.0
	comp=Z,1.5nm,1.0s,baz=199,slow=2.7,SNR=4.3						
PDAR	Pinedale Array	150.72	89	PKPbc	PKPbc	08 52 50.4	-1.9
	comp=Z,0.7nm,0.8s,baz=272,slow=3.9,SNR=5.0						

IDC 13 08:33:50.9±3.3, 10°.39N×87°.08W, h0km, mb3.8/4, mbtmp3.9/6, ML3.6/2, MS3.3/4, Error ellipse: s-maj=86.6km s-min=28.7km az=17.0
SNET 13 08:33:53.0±0.7, 10°.60N×87°.07W, h7km±66km, ML4.4
UCR 13 08:33:54.6±2.4, 10°.61N×87°.02W, h10km, ML3.7, MW3.6
INET 13 08:33:55.3±0.8, 10°.55N×87°.10W, h15km±7km, MW4.0

ISC 13 08:33:55.0±0.9, 10°.58N±0°.05×87°.06W±0°.05, h23km, n86, σ0°.90/95, mb3.9/5, MS3.5/3, 11C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	San Juanillo,	1.42	111⇑	eP	Pn	08 34 17.9	-1.5
SAJU				eS	Sn	08 34 35.1	-2.4
GRZA	Playa Garza	1.55	115⇑	iP	Pn	08 34 19.6	-1.5
GRZA				eS	Sn	08 34 38.6	-2.0
CRUN	El Crucero	1.59	28	eP	Pn	08 34 20.5	-1.3
ORTG	Ortega, Santa	1.59	98⇑	eP	Pn	08 34 21.0	-0.8
GBS3	Finca Las Img	1.59	82⇑	eP	Pn	08 34 21.5	-0.3
LAPC	Finca la Perla	1.61	83⇑	iP	Pn	08 34 21.7	-0.4
DUNO	Dulce Nombre,	1.62	108⇑	eP	Pn	08 34 21.0	-1.2
DUNO	Dulce Nombre,	1.62	108	eP	Pn	08 34 21.0	-1.2
DUNO				eS	Sn	08 34 40.2	-2.2
BUEV	Buena Vista	1.64	82⇑	eP	Pn	08 34 22.4	-0.1
BUEV				eS	Sb	08 34 44.2	-0.8
NICO	Nicoya	1.65	105⇑	eP	Pn	08 34 22.5	-0.1
GB1A	Borinquen Arri	1.65	81	eP	Pn	08 34 22.8	+0.1
GB1A				eS	Sb	08 34 45.2	-0.1
COPN	Copaltepe	1.66	16	eP	Pn	08 34 23.1	+0.3
GPS3	Bodega del ICE	1.68	84	eP	Pn	08 34 23.0	0.0
VRLE	La Escondida,	1.68	83⇑	eP	Pn	08 34 22.8	-0.3
INDI	Punta indio, G	1.69	115	eP	Pn	08 34 21.7	-1.4
GPS1	Guardaparques	1.70	83	eP	Pn	08 34 23.1	-0.2
GPS1				eS	Sb	08 34 45.9	-0.7
BUAI	Buenos Aires	1.73	80⇑	iP	Pn	08 34 24.2	+0.6
MGAN	Managua	1.75	27	eP	Pn	08 34 24.3	+0.3
LIM1	Limonal	1.78	86	eP	Pn	08 34 24.3	-0.2
APYN	Apoyeque	1.79	23	eP	Pn	08 34 24.7	+0.2
APYN				eS	Sb	08 34 47.6	-1.6
WILN	Americas 2	1.79	29	eP	Pn	08 34 24.8	+0.2
COLC	Colonia	1.83	87	eP	Pn	08 34 24.9	-0.2
HORNC	Hornillas	1.86	86	eP	Pn	08 34 25.3	-0.2
CUI	Cuipilapa	1.87	87⇑	eP	Pn	08 34 25.6	0.0
MOMN	Momotombo	1.89	16	eP	Pn	08 34 25.9	0.0
VMAR	Armenia, Volca	1.92	83	eP	Pn	08 34 27.0	+0.6
CNGN	Cerro Negro	1.94	11	eP	Pn	08 34 25.7	-1.0
HUEN		1.96	26	eP	Pn	08 34 26.8	0.0
ACAL	Aguas Claras	2.00	88	eP	Pn	08 34 27.6	+0.3
TEL3	Telica 3	2.00	6	eP	Pn	08 34 27.6	+0.2
PTEN	Parque Tenorio	2.04	86	eP	Pn	08 34 28.8	+0.7
JTS	Las Juntas de	2.10	98	eP	Pn	08 34 28.4	-0.3
JTS	Las Juntas de	2.10	98	eP	Pn	08 34 28.5	-0.3
CRIN	San Cristobal	2.11	0	eP	Pn	08 34 29.1	+0.1
VERA	Finca Concepci	2.17	83	eP	Pn	08 34 30.8	+1.0
CASO	Castillo	2.29	93	eP	Pn	08 34 31.8	+0.3
ACON	Acoyapa	2.31	53	eP	Pn	08 34 32.0	+0.4
CEDE	Laguna Cedeo	2.32	92	eP	Pn	08 34 33.3	+1.4
JACO	JACO, Garabito	2.54	111	eP	Pn	08 34 35.2	+0.5
JACO	JACO, Garabito	2.54	111	eP	Pn	08 34 35.4	+0.7
MATN	Matagalpa	2.59	25	eP	Pn	08 34 35.6	0.0
MATN				eS	Sn	08 35 06.2	-0.3
COVE	Coope Vega, Sa	2.62	87	eP	Pn	08 34 36.4	+0.5
LCND	La Caada	2.83	343⇓	eP	Pn	08 34 38.6	-0.3
LCND				IAML		08 35 14.4	
	comp=Z,921nm,0.3s						
LCND	La Caada	2.83	343⇓	eP	Pn	08 34 38.6	-0.3
LCND				eS	Sn	08 35 10.8	-1.6
LCND				IAML		08 35 14.4	
	comp=Z,921nm,0.3s						
HDC	Heredia	2.96	101	eP	Pn	08 34 42.2	+1.6
HDC3	Heredia 3	2.96	101	eP	Pn	08 34 41.9	+1.2
HDC3	Heredia 3	2.96	101	eP	Pn	08 34 42.4	+1.7
RIFO	Rio Frio, Sara	3.10	94	eP	Pn	08 34 43.8	+1.3
LCR2	La Lucha 2	3.12	105	eP	Pn	08 34 44.2	+1.1
OCM	Ochomogo	3.13	102⇓	eP	Pn	08 34 45.0	+1.9
PACA	Pacayal	3.13	337	eP	Pn	08 34 43.0	-0.1
COEB	Comit de Eme	3.24	334	eP	Pn	08 34 44.0	-0.5
COEB				IAML		08 35 27.2	
	comp=Z,403nm,0.5s						
COEB	Comit de Eme	3.24	334	eP	Pn	08 34 44.0	-0.5
COEB				eS	Sn	08 35 22.1	-0.4
COEB				IAML		08 35 27.2	
	comp=Z,403nm,0.5s						
PQSS	Presa 15 de Se	3.37	334	eP	Pn	08 34 46.3	+0.1
PQSS	Presa 15 de Se	3.37	334	eP	Pn	08 34 46.3	+0.1
CDM	Cerro de Muert	3.40	107	eP	Pn	08 34 48.2	+1.1
CDM	Cerro de Muert	3.40	107	eP	Pn	08 34 48.2	+1.1
TGUH	Tegucigalpa,Un	3.47	357	eP	Pn	08 34 48.4	+0.7
SCLA	Alcaldia de Sa	3.51	333	eP	Pn	08 34 48.2	0.0
SCLA				IAML		08 35 30.1	
	comp=Z,102nm,0.4s						
SCLA	Alcaldia de Sa	3.51	333	eP	Pn	08 34 48.2	0.0
SCLA				IAML		08 35 30.1	
	comp=Z,102nm,0.4s						
COEG	Centro de Oper	3.51	330	eP	Pn	08 34 47.9	-0.4
COEG				IAML		08 35 31.0	
	comp=Z,354nm,0.5s						
COEG	Centro de Oper	3.51	330	eP	Pn	08 34 47.9	-0.4
COEG				eS	Sn	08 35 28.0	-1.1
COEG				IAML		08 35 31.0	
	comp=Z,354nm,0.5s						
PEZE	Perez Zeledon,	3.54	109	eP	Pn	08 34 49.4	+0.8
SJTE	Alcalda de S	3.57	328	eP	Pn	08 34 48.5	-0.6
SJTE	Alcalda de S	3.57	328	eP	Pn	08 34 48.5	-0.6
PAVA	Las Pavas	3.62	330	eP	Pn	08 34 49.8	0.0
PAVA	Las Pavas	3.62	330	eP	Pn	08 34 49.8	0.0
MRVA	Moravia de Chi	3.64	102	eP	Pn	08 34 51.4	+1.3
SRBA	San Rafael, Bu	3.88	110	eP	Pn	08 34 54.2	+0.8
EDBA	Buenos Aires	3.99	110	eP	Pn	08 34 55.0	+0.2
POTG	Potrero Grande	4.17	111	eP	Pn	08 34 58.5	+1.1
NUBE	Las Nubes	4.24	322	eP	Pn	08 34 58.1	-0.3
NUBE	Las Nubes	4.24	322	eP	Pn	08 34 58.1	-0.3
SLOZ	Alcaldia de Sa	4.34	322	eP	Pn	08 34 59.9	+0.3
EDSV	San Vito	4.39	113	eP	Pn	08 35 01.8	+1.4
CCOL	Caracol de Cor	4.57	118	eP	Pn	08 35 04.8	+2.0
APG	El Apazote	5.51	323	Pn	Pn	08 35 15.6	-0.3
	comp=Z,1.2nm,0.3s,baz=137,slow=8.3,SNR=8.6						
APG				LR	LR	08 37 34.6	
	comp=Z,85nm,18.2s,baz=77,slow=40						
	comp=Z,3.7nm,0.4s						
CMIG	Matias Romero	9.98	311	Pn	Pn	08 36 17.6	+0.6
	comp=Z,0.8nm,0.3s,baz=108,slow=9.9,SNR=9.8						
	comp=Z,4.0nm,0.5s						
SJG	San Juan	21.59	67	P	P	08 38 44.0	+0.7
	comp=Z,25nm,0.2s,baz=339,slow=17,SNR=7.9						
TXAR	Lajitas Array	24.27	323	P	P	08 39 11.6	+0.9
	comp=Z,1.4nm,0.8s,baz=134,slow=9.5,SNR=13						
	comp=Z,1.4nm,0.8s						
TKL	Tuckaleechee C	25.15	6	LR	LR	08 47 43.1	
	comp=Z,42nm,21.9s,baz=328,slow=33						
PDAR	Pinedale Array	37.60	332	P	P	08 41 07.8	-0.3
	comp=Z,0.7nm,0.8s,baz=131,slow=8.4,SNR=5.4						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	39.36	320	P	P	08 41 24.8	+1.7
	comp=Z,2.3nm,1.0s,baz=138,slow=6.9,SNR=14						
NVAR				PcP	PcP	08 43 30.5	-0.8
	comp=Z,0.4nm,0.6s,baz=140,slow=4.7,SNR=4.6						
	comp=Z,2.3nm,1.0s						
SCHQ	Schefferville	46.96	16	LR	LR	09 04 00.3	
	comp=Z,44nm,18.3s,baz=109,slow=38						
YKA	Yellowknife Ar	55.51	345	LR	LR	09 08 52.7	
	comp=Z,108nm,18.3s,baz=80,slow=38						
ILAR	Eielson Array	67.88	336	P	P	08 44 51.8	+0.4
	comp=Z,2.6nm,1.1s,baz=115,slow=4.0,SNR=8.9						
	comp=Z,2.6nm,1.1s						

IDC 13 08:37:04.9±3.9, 5°.63S×154°.05E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=145.3km s-min=38.9km az=115.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.87	232	P	P	08 42 19.4	-0.9
	0.5nm,0.6s,baz=56,slow=9.7,SNR=4.9						
	0.5nm,0.6s						
ASAR	Alice Springs	26.41	225	P	P	08 42 44.5	+1.0
	0.2nm,0.5s,baz=60,slow=8.9,SNR=4.4						
	0.2nm,0.5s						
MKAR	Makanchi Array	81.76	319	P	P	08 49 26.2	+0.5
	0.4nm,0.5s,baz=104,slow=4.6,SNR=2.6						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	151.74	287	PKPbc	PKPbc	08 57 01.9	-0.7
	1.0nm,0.7s,baz=69,slow=1.4,SNR=6.3						

IDC 13 08:59:06.6±2.6, 54°.24N×86°.19E, h0km, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=20.2km s-min=12.5km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.86	250	I		09 03 47.4	
	baz=69,slow=330,SNR=8.0						
ZALV	Zalesovo Beam	0.86	250	Pg	Pg	08 59 21.2	-1.9
	1.8nm,0.3s,baz=71,slow=17,SNR=11						
ZALV				Lg	Lg	08 59 36.0	
	5.3nm,0.3s,baz=71,slow=29,SNR=17						
KURBB	Kurchatov Arra	5.92	235	Pn	Pn	09 00 36.6	+1.1
	0.2nm,0.3s,baz=52,slow=13,SNR=4.0						
	0.8nm,0.3s						
MKAR	Makanchi Array	7.86	200	Pn	Pn	09 01 03.4	+1.2
	0.3nm,0.3s,baz=24,slow=13,SNR=7.8						
	0.3nm,0.3s						

IDC 13 09:09:59.4±2.0, 48°.99S×109°.25E, h0km, mb3.9/4, mbtmp3.9/4, MS3.6/9, Error ellipse: s-maj=85.5km s-min=22.6km az=115.0

ISC 13 09:10:00.2±1.9, 49°.0S±0°.3×109°.2E±0°.5, h10km, n16, σ0°.56/6, mb4.0/4, MS3.7/10, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.53	16	T	T	09 28 24.7	
	baz=194,slow=74,SNR=924						
H01W1	Cape Leeuwin H	14.54	16	T	T	09 28 25.4	
	baz=194,slow=74,SNR=612						
H01W3	Cape Leeuwin H	14.55	16	T	T	09 28 26.1	
	baz=194,slow=74,SNR=544						
STKA	Stephens Creek	29.70	67	LR	LR	09 26 01.3	
	comp=Z,70nm,20.6s,baz=206,slow=32						
ASAR	Alice Springs	31.89	47	P	P	09 16 25.8	+0.2
	1.7nm,0.7s,baz=208,slow=7.8,SNR=15						
ASAR				LR	LR	09 27 45.5	
	comp=Z,74nm,21.6s,baz=222,slow=34						
	1.7nm,0.7s						
VNDA	Vanda	34.80	162	P	P	09 16 50.6	+0.3
	1.5nm,0.7s,baz=298,slow=9.0,SNR=11						
VNDA				LR	LR	09 30 07.6	
	comp=Z,59nm,18.1s,baz=272,slow=35						
	1.5nm,0.7s						
WRA	Warramunga Arr	35.30	44	P	P	09 16 55.5	+0.2
	2.2nm,1.0s,baz=204,slow=10,SNR=8.7						
WRA				LR	LR	09 29 52.0	
	comp=Z,47nm,18.6s,baz=195,slow=34						
	2.2nm,1.0s						
CTA	Charters Tower	41.32	59	LR	LR	09 34 40.2	
	comp=Z,77nm,18.3s,baz=261,slow=36						
SNAA	Sanae	50.55	202	P	P	09 18 58.3	+0.1
	0.9nm,0.8s,baz=151,slow=19,SNR=5.5						
	0.9nm,0.8s						
DZM	Mont Dzumac	52.29	80	LR	LR	09 37 36.5	
	comp=Z,71nm,19.6s,baz=27,slow=32						
HNR	Honiara	57.74	65	LR	LR	09 43 10.9	
	comp=Z,601nm,18.1s,baz=187,slow=34						
BOSA	Boshof	65.20	254	LR	LR	09 44 39.8	
	comp=Z,57nm,18.9s,baz=186,slow=32						
LBTB	Lobatse	67.48	257	LR	LR	09 44 38.9	
	comp=Z,57nm,19.0s,baz=137,slow=31						
TSUM	Tsumeb	76.80	256	LR	LR	09 50 27.5	
	comp=Z,43nm,18.1s,baz=148,slow=32						
NVAR	Mina Array Bea	144.61	89	PKP	PKPdf	09 29 36.7	0.0
	0.1nm,0.3s,baz=231,slow=5.2,SNR=1.9						
TXAR	Lajitas Array	148.20	116	PKPbc	PKPab	09 29 48.3	-0.9
	0.3nm,0.8s,baz=206,slow=4.9,SNR=4.1						

DJA 13 09:14:50.3±1.0, 4°.S±4°.×12°.7E±°, h13km±8km, M4.0/13, mb4.4/6, mB4.8/1, MLv3.8/13, Mw(mB)4.1/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.03	351	P	Pb	09 15 09.3	-0.7
NLAI				S	Sg	09 15 24.1	+0.5
AAI	Ambon	1.09	59	P	Pb	09 15 11.1	0.0
AAI				S	Sb	09 15 25.3	0.0
KRAI	Karang Ratu	1.47	50	P	Pn	09 15 16.6	+0.1
MSAI	Masohi	1.90	61	P	Pn	09 15 22.0	-0.4
SANI	Sanana	2.54	330	P	Pn	09 15 30.5	-0.7
SIJI	Sorong	5.23	50	P	Pn	09 16 08.6	+0.3
	0.1nm1μm11nm,0.4s						
SWI	Sorong	5.23	50	P	Pn	09 16 08.2	-0.1
	0.2nm23nm,0.7s						
SAUI	Saumlaki	5.46	133	P	Pn	09 16 11.3	-0.1
	1.1nm209nm,0.7s						
GTOI	Gorontalo	6.46	319	P	Pn	09 16 27.8	+2.7
	0.0nm5.1nm,1.1s						
APSI	Ampana	6.52	301	P	Pn	09 16 24.2	-1.8
	0.2nm54nm,0.7s						
BKSI	Bulukumba	7.19	261	P	Pn	09 16 35.4	+0.2
	0.1nm14nm,0.6s						
KAPI	Kappang	7.52	264	P	Pn	09 16 39.9	+0.1

IDC 13 09:22:29.1±2.2, 54°.53N×83°.66E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=18.2km s-min=10.9km az=164.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.89	130	I		09 27 50.0	
	baz=310,slow=325,SNR=2.8						
ZALV	Zalesovo Beam	0.89	130	Pg	Pg	09 22 46.0	-0.2
	4.6nm,0.3s,baz=311,slow=14,SNR=16						
ZALV				Lg	Lg	09 22 59

DZM	Mont Dzumac	42.20	64	LR	LR	10 12 32.8
	comp=Z,101nm,18.4s,baz=216,slow=35					
PMG	Port Moresby	43.87	31	LR	LR	10 16 52.4
	comp=Z,49nm,18.0s,baz=38,slow=40					
KAPI	Kappang	44.68	352	LR	LR	10 13 14.3
	comp=Z,20nm,21.6s,baz=26,slow=34					
LEM	Lembang	45.22	334	LR	LR	10 13 58.0
	comp=Z,24nm,21.4s,baz=230,slow=34					
RAO	Raoul Island	46.88	86	LR	LR	10 12 05.4
	comp=Z,61nm,20.2s,baz=194,slow=31					
TROLL	Troll, Antarti	52.34	199	P	P	09 57 09.6 +0.1
MSVF	Nonsavu	52.53	72	LR	LR	10 15 25.0
	comp=Z,52nm,20.1s,baz=218,slow=31					
SNAA	Sanae	53.71	198	P	P	09 57 20.0 +0.4
SNAA	Sanae	53.71	198	P	P	09 57 19.8 +0.2
	3.3nm,0.9s,baz=137,slow=7.4,SNR=13					
SNAA				LR	LR	10 19 03.6
	comp=Z,72nm,20.0s,baz=146,slow=35					
	3.3nm,0.9s					
CMAR	Chiang Mai Arr	71.75	333	P	P	09 59 20.9 +0.6
	0.6nm,0.3s,baz=177,slow=4.8,SNR=4.3					
CMAR				LR	LR	10 31 25.0
	comp=Z,15nm,18.6s,baz=125,slow=36					
	0.6nm,0.3s					
SUR	Sutherland	74.72	238	LR	LR	10 27 28.3
	comp=Z,49nm,19.1s,baz=135,slow=32					

*IDC **13** 09:51:55.7±2.8, 19°.54S×177°.42W, h559km±24km, mb2.9/3, mbtmp3.9/5, Error ellipse: s-maj=42.2km s-min=29.7km az=65.0*

ISC 13 09:51:54.7±2.5, 19°.6S±0°.3×177°.3W±0°.3, h550km, n6, σ0$94/6, mb3.6/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.79	292	P	P	09 53 23.5	+0.6
	1.4nm,0.3s,baz=227,slow=21,SNR=6.9						
URZ	Urewera	19.25	193	P	P	09 55 43.9	+0.1
	2.6nm,0.3s,baz=84,slow=18,SNR=6.8						
STKA	Stephens Creek	38.80	243	P	P	09 58 33.3	+0.6
	0.7nm,0.6s,baz=68,slow=11,SNR=1.5						
	0.7nm,0.6s						
ASAR	Alice Springs	45.40	256	P	P	09 59 24.2	-0.5
	1.1nm,0.4s,baz=87,slow=7.6,SNR=34						
	1.1nm,0.4s						
WRA	Warramunga Arr	45.41	261	P	P	09 59 23.5	-1.3
	0.6nm,0.3s,baz=97,slow=7.6,SNR=44						
	0.6nm,0.3s						
ARCES	ARCESS Array B	128.12	350	PKP	PKPdf	10 09 57.8	-0.1
	2.7nm,0.9s,baz=24,slow=3.3,SNR=4.0						

*HEL **13** 10:00:06.4±0.3, 64°.71N×30°.76E, h0km, ML2.0, Explosion*
*IDC **13** 10:00:06.6±3.1, 64°.54N×31°.39E, h0km, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=43.1km s-min=10.2km az=106.0*
*UPP **13** 10:00:07.0±2.9, 64°.50N×30°.71E, h0km, ML1.7, Suspected explosion*

ISC 13 10:00:06.6±1.2, 64°.71N±0°.03×30°.83E±0°.07, h0km, n40, σ1$46/46, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	Romuvaara	0.63	219	PG	Pg	10 00 17.6	-1.0
RMF				SG	Sg	10 00 25.5	-1.1
KU6	Riekki	1.38	344	PN	Pg	10 00 32.3	-0.7
KU6				MSG		10 00 47.6	
	comp=Z,14nm,0.2s						
KU6				SN	Sg	10 00 51.6	+0.7
MSF	Maaselka	1.43	329	PN	Pn	10 00 32.5	-1.2
	baz=149						
MSF				SN	Sg	10 00 52.1	-0.2
OLKF	Oulanka, Finla	1.73	340	PG	Pn	10 00 38.3	+0.4
JOF	Joensuu	1.81	173	PG	Pn	10 00 39.3	+0.4
	baz=351						
OUL	Oulu	2.14	282	PG	Pn	10 00 44.6	+1.2
OBF4	Vikkela, Lumij	2.46	275	PG	Pn	10 00 49.0	+1.2
OUF	Merijarvi	2.66	265	PB	Pn	10 00 52.1	+1.5
OUF				MSG		10 01 23.9	
	comp=Z,10nm,0.2s						
OUF				SG	Sn	10 01 26.1	+2.6
RNF	Rovaniemi	2.76	316	PB	Pn	10 00 53.7	+1.7
	baz=133						
OBF0	Syolatti, Pyha	2.85	269	PB	Pn	10 00 55.2	+2.0
	baz=84						
TOF	Tornio	3.05	300	PB	Pn	10 00 58.0	+2.0
TOF				MSG		10 01 35.0	
	comp=Z,4.8nm,0.2s						
VRF	Varrio	3.10	351	PB	Pn	10 00 58.8	+2.2
VRF				MSG		10 01 37.1	
	comp=Z,2.4nm,0.2s						
OBF8	Ulkokalla	3.22	267	PB	Pn	10 01 00.2	+2.0
KAF	Kangasniemi	3.31	220	PG	Pb	10 01 04.5	-1.5
	baz=38						
KAF				SG	Sb	10 01 48.4	+1.8
KALU	Kalix	3.35	294	P	Pn	10 01 00.5	+0.5
KALU				S	Sn	10 01 41.2	+0.8
KALU	Kalix	3.35	294	PB	Pn	10 01 01.2	+1.1
KALU				SG	Sb	10 01 45.9	-2.0
LVZ	Lovozero	3.56	24	SB	Sb	10 01 52.5	-1.4
KEF	Keuruu	3.70	229	PB	Pn	10 01 06.9	+2.0
KLF	Kolari	3.79	315	PB	Pn	10 01 08.4	+2.3
FIA0	FINESS Array S	3.92	216	PB	Pn	10 01 10.4	+2.4
FINES	FINESS Array B	3.92	216	Pn	Pn	10 01 07.7	-0.3
	comp=Z,0.2nm,0.3s,baz=38,slow=16,SNR=1.5						
FINES				Lg	Lg	10 02 08.0	
	comp=Z,1.0nm,0.3s,baz=39,slow=27,SNR=5.3						
	comp=Z,0.4nm,0.3s						
PAJU	Pajala	3.93	310	P	Pn	10 01 09.1	+1.0
VAF	Ylistaro	3.98	249	PB	Pn	10 01 12.0	+3.3
	baz=62						
SJUU	Sjulsmark	3.98	286	P	Pn	10 01 09.1	+0.4
ERTU	Ertsjaerv	4.03	301	P	Pn	10 01 10.6	+1.1
ERTU	Ertsjaerv	4.03	301	PB	Pn	10 01 11.9	+2.5
BURU	Burvik	4.07	273	P	Pn	10 01 09.0	-0.9
BURU	Burvik	4.07	273	PN	Pn	10 01 10.9	+1.0
HARU	Harads	4.37	294	P	Pn	10 01 14.8	+0.8
ODEU	Stanfors	4.38	271	P	Pn	10 01 13.6	-0.6
VJF	Virojoki	4.45	201	PB	Pn	10 01 21.2	+6.0
UMAU	Umeaa	4.50	264	PN	Pn	10 01 16.1	+0.2
HEF	Hetta	4.69	326	PB	Pn	10 01 23.3	+4.8
LILU	Lilltraesk	4.70	282	P	Pn	10 01 19.1	+0.5
LANU	Lannavaara	4.89	317	P	Pn	10 01 22.0	+0.8
ARCES	ARCESS Array B	5.28	339	Pn	Pn	10 01 26.9	+0.4
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=17						
ARCES				Sn	Sn	10 02 28.2	+0.3
	comp=Z,0.2nm,0.3s,baz=158,slow=24,SNR=5.8						
ARCES				Lg	Lg	10 02 49.0	
	comp=Z,0.5nm,0.3s,baz=155,slow=32,SNR=9.4						
	comp=Z,0.3nm,0.3s						
SALU	Saltoluokta	5.69	304	P	Pn	10 01 33.4	+1.1
NIKU	Nikkaluokta	5.72	309	P	Pn	10 01 33.7	+1.1
HFS	Hagfors	9.16	248	Pn	Pn	10 02 19.0	-0.8
	comp=Z,0.1nm,0.3s,baz=55,slow=16,SNR=2.1						
HFS				Lg	Lg	10 04 47.8	
	comp=Z,0.2nm,0.3s,baz=53,slow=29,SNR=2.9						
	comp=Z,2.1nm,0.9s						
NOA	NORSAR Array B	9.67	257	Pn	Pn	10 02 26.7	-0.1
	baz=53,slow=21,SNR=1.3						
	comp=Z,0.5nm,0.7s						

*HVO **13** 10:10:23.3±0.6, 19°.388N±0°.008×155°.278W±0°.007, h3km±1km, ML2.9/25, ML2.2/44(NEIC), Error ellipse: s-maj=1.2km s-min=0.9km az=189.0*

NEIC 13 10:10:23.9±0.5, 19°.398N±0°.008×155°.267W±0°.008, h2km±1km, Error ellipse: s-maj=1.2km s-min=0.9km az=201.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKO	Keanakako`i	0.00	104		Pg	10 10 24.5	-0.1
RIM	Rim	0.01	249		Pg	10 10 24.3	-0.3
BYL	Byron's Ledge	0.01	25		Pg	10 10 24.7	+0.1
BYL				IAML		10 10 25.0	
	comp=N,3μm,0.1s						
BYL				IAML		10 10 25.1	
	comp=E,7μm,0.2s						
NPH	North Pit	0.02	316		Pg	10 10 24.5	-0.2
NPH				IAML		10 10 24.8	
	comp=E,5μm,0.2s						
HATHI	Halema'uma'u T	0.03	12		Pg	10 10 24.8	+0.1
HATHI	Halema'uma'u T	0.03	12	IAML		10 10 25.0	
	comp=N,736nm,0.2s						
HATHI				IAML		10 10 25.5	
	comp=E,5μm,0.4s						
OBL	Observatory Le	0.03	320	Pg	Pg	10 10 24.8	+0.1
SDHHI	Sand Hill	0.03	252		Pg	10 10 24.4	-0.3
SBLHI	Steaming Bluff	0.03	358		Pg	10 10 24.8	+0.1
SBLHI	Steaming Bluff	0.03	358	IAML		10 10 25.7	
	comp=N,6μm,0.4s						
SBLHI				IAML		10 10 25.7	
	comp=E,3μm,0.4s						
UWB	Uwekahuna B	0.03	338	Pg	Pg	10 10 24.7	-0.1
UWB				IAML		10 10 25.1	
	comp=E,911nm,0.1s						
UWB				IAML		10 10 25.1	
	comp=N,2μm,0.5s						
WRMHI	West Rim	0.03	285	Pg	Pg	10 10 24.6	-0.2
WRMHI				IAML		10 10 24.8	
	comp=N,4μm,0.1s						
WRMHI				IAML		10 10 24.9	
	comp=E,6μm,0.1s						
UWE	Uwekahuna	0.03	313	Pg	Pg	10 10 24.8	0.0
PUH	Pauahi	0.05	116	Pg	Pg	10 10 25.2	+0.1
PUH				IAML		10 10 26.1	
	comp=E,1000nm,0.6s						
PUH				IAML		10 10 26.6	
	comp=N,1μm,0.3s						
RSD	Rainshed	0.07	351	Pg	Pg	10 10 25.6	+0.2
KNHH	Kane Nui o Ham	0.09	101		Pg	10 10 26.2	+0.3
HLP	Hilina Pali	0.11	201	Pg	Pg	10 10 26.1	0.0
HLP				IAML		10 10 28.4	
	comp=E,2μm,0.3s						
MLH	Mauna Loa	0.15	310		Pg	10 10 27.2	+0.3
MLH					Sg	10 10 30.3	+1.4
MLH	Mauna Loa	0.15	310	IAML		10 10 30.5	
	comp=E,2μm,0.4s						
NPOC	North of Pu'u	0.15	92		Pg	10 10 26.8	-0.1
NPOC				IAML		10 10 31.3	
	comp=E,907nm,0.9s						
JCUZ	Jacuzzi	0.16	95	Pg	Pg	10 10 27.3	+0.3
JCUZ				IAML		10 10 30.0	
	comp=E,839nm,0.8s						
AIN	Ainahou	0.18	262		Pg	10 10 27.6	+0.1
AIN					Sg	10 10 30.9	+0.9
AIN	Ainahou	0.18	262	IAML		10 10 31.3	
	comp=N,3μm,0.4s						
HTC	Hot Caves	0.20	218		Pg	10 10 27.7	-0.1
HMH	Humu'ula Sheep	0.29	315		Pg	10 10 29.6	0.0
HMH					Sg	10 10 34.2	+0.8
HMH	Humu'ula Sheep	0.29	315	IAML		10 10 38.6	
	comp=N,466nm,0.6s						
MLOA	Mauna Loa Obse	0.32	295		Pg	10 10 30.0	-0.2
MLOA	Mauna Loa Obse	0.32	295	IAML		10 10 39.3	
	comp=N,480nm,1.3s						
MLOA				IAML		10 10 40.5	
	comp=E,429nm,0.5s						
MWH	Moku'aweowe	0.32	286		Pg	10 10 30.1	-0.2
MWH					Sg	10 10 34.7	+0.1
MWH	Moku'aweowe	0.32	286	IAML		10 10 37.1	
	comp=E,1μm,0.4s						
MWH				IAML		10 10 39.8	
	comp=N,965nm,1.0s						
KHU	Kahuku	0.36	245		Pg	10 10 31.1	+0.2
KHU					Sg	10 10 37.0	+1.3
KHU	Kahuku	0.36	245	IAML		10 10 37.3	
	comp=N,347nm,0.8s						
KHU				IAML		10 10 37.3	
	comp=E,452nm,1.8s						
POHA	Pohakuloa	0.44	325	Pg	Pg	10 10 32.3	-0.1
POHA				IAML		10 10 39.7	
	comp=E,252nm,0.5s						
POHA				IAML		10 10 47.0	
	comp=E,241nm,0.6s						
HUH	Hualalai	0.61	298		Pg	10 10 35.5	-0.1
KHLU	Kahalu`u	0.62	288		Pg	10 10 34.8	-1.1
HPAH	Hawaii Prepara	0.75	327	Pg	Pg	10 10 38.0	-0.3

DDA 13 10:25:07.1±0.0, 41°.24N×41°.57E, h7km±1km, ML1.0, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBOC	Borcka	0.13	33	P	Pg	10 25 10.2	+0.3
DBOC				S	Sg	10 25 12.1	+0.3
DBOC				*i* AML	AML	10 25 14.0	
	comp=E,49nm,0.7s						
DBAD	Bademkaya	0.24	157	P	Pg	10 25 12.1	+0.3
DBAD				S	Sg	10 25 15.9	+1.0
DBAD				*i* AML	AML	10 25 19.0	
	comp=N,22nm,0.9s						
DAGI	Agillar	0.30	121	P	Pg	10 25 13.5	+0.4
DAGI				S	Sg	10 25 18.0	+1.0
DDEM	Demirkent	0.37	159	P	Pg	10 25 14.3	0.0
DDEM				S	Sg	10 25 20.5	+1.4
DDEM				*i* AML	AML	10 25 27.0	
	comp=N,34nm,0.5s						

*IDC **13** 10:27:50.7±3.0, 20°.71N×144°.92E, h128km±27km, mb3.8/18, mbtmp4.2/20, MS3.1/2, Error ellipse: s-maj=20.6km s-min=11.8km az=91.0*
*NEIC **13** 10:27:51.7±1.0, 20°.9N±0°.1×144°.9E±0°.2, h127km±9km, mb4.5/77, Error ellipse: s-maj=28.9km s-min=14.6km az=65.0*

ISC 13 10:27:48.7±0.6, 20°.81N±0°.08×145°.0E±0°.1, h100km, n117, σ0$98/106, mb4.5/54, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	6.78	338	P	Pn	10 29 29.2	+3.5
	17nm,0.3s,baz=263,slow=21,SNR=1.2						
JCJ				S	Sn	10 30 42.6	+1.2
	42nm,0.5s,baz=281,slow=22,SNR=1.8						
JCJ	Chichijima	6.78	338	Pn	Pn	10 29 27.8	+2.1
GUMO	Guam	7.18	181	LR	LR	10 31 34.8	
	comp=Z,29nm,18.3s,baz=312,slow=32						
GUMO	Guam	7.18	181	Pn	Pn	10 29 34.9	+3.8
JGF	Kuroka	16.21	337		Pn	10 31 31.5	+0.9
JGF				IAmb	IAmb	10 32 05.4	
	comp=Z,38nm,1.4s						
JMN	Monobe	16.23	325	Pn	Pn	10 31 29.9	-1.1
JMN				IAmb	IAmb	10 32 01.9	
	comp=Z,63nm,1.5s						
MJAR	Matsushiro Arr	16.77	341	P	P	10 31 40.2	+2.1
	comp=Z,0.5nm,0.3s,baz=153,slow=11,SNR=2.1						
MAJO	Matsushiro	16.78	341		Pn	10 31 36.7	-0.9
JMM	Marumori	17.39	349	P	P	10 31 45.3	+0.4
JHS	Saijyo	17.61	326	P	P	10 31 46.9	-0.5
JHS				IAmb	IAmb	10 31 49.8	
	comp=Z,28nm,1.4s						
H11S3	WAKE ISLAND Hy	20.51	93	T	T	10 53 33.5	
	baz=276,slow=74,SNR=6.3						
H11S1	WAKE ISLAND Hy	20.52	93	T	T	10 53 50.1	
	baz=276,slow=74,SNR=4.1						
H11N1	WAKE ISLAND Hy	20.53	89	T	T	10 53 29.9	
	baz=274,slow=74,SNR=5.1						
H11N2	WAKE ISLAND Hy	20.53	89	T	T	10 53 41.4	
	baz=274,slow=74,SNR=5.0						
H11S2	WAKE ISLAND Hy	20.53	93	T	T	10 53 37.2	
	baz=276,slow=74,SNR=7.2						
H11N3	WAKE ISLAND Hy	20.55	89	T	T	10 53 35.6	
	baz=274,slow=74,SNR=4.8						
KSRS	Korea Array	22.27	322	P	P	10 32 38.0	+0.4
	comp=Z,5.3nm,0.7s,baz=151,slow=8.7,SNR=37						
	comp=Z,5.3nm,0.7s						
KSAR	Wonju Array Be	22.29	322	P	P	10 32 36.9	-0.9
KS19	Wonju Array Si	22.34	322	P	P	10 32 37.4	-1.0
USRK	Ussuriysk Ar.	25.73	338	P	P	10 33 10.6	+0.8
	comp=Z,1.0nm,0.5s,baz=143,slow=8.5,SNR=4.9						
	comp=Z,1.0nm,0.5s						
KLR	Kul'dur	30.28	343	P	P	10 33 50.6	+0.3
	comp=Z,8.3nm,0.5s,baz=160,slow=9.0,SNR=23						
	comp=Z,8.3nm,0.5s						
WRA	Warramunga Arr	41.83	195	P	P	10 35 27.2	-1.7
	comp=Z,0.9nm,0.4s,baz=8.5,slow=8.1,SNR=32						
	comp=Z,0.9nm,0.4s						
SEY	Seymchan	42.40	5	P	P	10 35 33.8	+0.8
	comp=Z,1.4nm,0.3s,baz=188,slow=7.8,SNR=9.2						
	comp=Z,1.4nm,0.3s						
ASAR	Alice Springs	45.52	194	P	P	10 35 56.4	-2.1
	comp=Z,0.4nm,0.4s,baz=12,slow=8.0,SNR=8.6						
	comp=Z,0.4nm,0.4s						
TIXI	Tiksi	51.72	354	P	P	10 36 44.8	-0.5
	comp=Z,1.5nm,0.6s,baz=89,slow=23,SNR=5.7						
	comp=Z,1.5nm,0.6s						
STKA	Stephens Creek	52.49	184	P	P	10 36 49.1	-2.4
	comp=Z,0.4nm,0.3s,baz=8.1,slow=14,SNR=5.3						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	55.98	322	P	P	10 37 15.4	-1.3
	comp=Z,1.2nm,0.4s,baz=106,slow=7.9,SNR=3.6						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	56.57	313	P	P	10 37 19.8	-1.2
	comp=Z,0.4nm,0.5s,baz=96,slow=7.3,SNR=6.3						
	comp=Z,0.4nm,0.5s						
KURBB	Kurchatov Arra	59.35	317	P	P	10 37 38.8	-1.5
	comp=Z,1.5nm,0.5s,baz=94,slow=7.8,SNR=8.7						
	comp=Z,1.5nm,0.5s						
CAST	Castle Rocks	59.52	28	P	P	10 37 42.0	+0.7
IMAR	Indian Mountai	59.56	25	P	P	10 37 42.0	+0.5
H21K	Melozitna Rive	59.83	25	P	P	10 37 44.0	+0.6
H21K				IAmb	IAmb	10 37 45.2	
	comp=Z,7.8nm,1.0s						
TRF	Thorofare Moun	60.31	28	P	P	10 37 46.7	-0.2
PMR	Palmer	60.44	30	P	P	10 37 46.8	-0.7
GHO	Glory Hole Cre	60.57	30	P	P	10 37 48.7	+0.1
GHO				IAmb	IAmb	10 37 49.0	
	comp=Z,6.0nm,0.6s						
PWL	Port Wells	60.68	31	P	P	10 37 49.4	+0.1
KNK	Knik Glacier	60.72	30	P	P	10 37 49.9	+0.3
SML	Sawmill	60.85	30	P	P	10 37 50.3	-0.2
BOOM	Boomskoye usch	61.02	308	P	P	10 37 50.6	-1.5
BOOM				IAmb	IAmb	10 38 00.4	
	comp=Z,4.4nm,1.1s						
I23K	Minto, Yukon-K	61.09	26	P	P	10 37 52.9	+0.9
H23K	Yukon River	61.18	25	P	P	10 37 52.9	+0.3
H23K				IAmb	IAmb	10 37 54.1	
	comp=Z,4.0nm,0.9s						
GLI	Glacier Island	61.28	31	P	P	10 37 53.2	-0.1
SCM	Sheep Creek Mo	61.33	30	P	P	10 37 53.8	+0.1
MDM	Murphy Dome	61.52	26	P	P	10 37 54.6	-0.2
MDM				IAmb	IAmb	10 38 39.2	
	comp=Z,9.1nm,1.4s						
FID	Port Fidalgo	61.56	31	P	P	10 37 54.6	-0.7
CCB	Clear Creek Bu	61.63	27	P	P	10 37 55.3	-0.3
TOLK	Toolik Lake Re	61.88	22	P	P	10 37 58.3	+1.0
M24K	Tolsona, Glenn	61.91	30	P	P	10 37 59.5	+1.9
KLU	Klutina	61.94	31	P	P	10 37 58.3	+0.5
HDA	Harding Lake	61.95	27	P	P	10 37 57.1	-0.6
HDA				IAmb	IAmb	10 37 57.5	
	comp=Z,6.9nm,1.0s						
IL31		62.04	27	P	P	10 37 57.3	-1.0
IL31				IAmb	IAmb	10 37 58.0	
	comp=Z,4.8nm,0.8s						
ILAR	Eielson Array	62.04	27	P	P	10 37 57.0	-1.4
	comp=Z,4.2nm,0.8s,baz=255,slow=5.5,SNR=26						
	comp=Z,4.2nm,0.8s						
ILAR	Eielson Array	62.04	27	P	P	10 37 57.5	-0.9
PAX	Paxson	62.36	29	P	P	10 38 01.0	+0.4
PAX				IAmb	IAmb	10 38 01.3	
	comp=Z,5.5nm,0.8s						
BMRM	Bremner River	62.50	31	P	P	10 38 02.2	+0.6
N25K	Chitina, Valde	62.58	30	P	P	10 38 02.2	+0.1
N25K				IAmb	IAmb	10 38 03.6	
	comp=Z,5.3nm,0.9s						
J25K	Salcha River,	62.66	27	P	P	10 38 01.2	-1.4
J25K				IAmb	IAmb	10 38 34.3	
	comp=Z,8.2nm,1.4s						
GLB	Gilahina Butte	62.94	31	P	P	10 38 03.7	-0.7
GLB				IAmb	IAmb	10 38 06.1	
	comp=Z,8.9nm,1.0s						
DOT	Dot Lake	63.09	28	P	P	10 38 04.9	-0.4
DOT				IAmb	IAmb	10 38 05.5	
	comp=Z,6.1nm,0.8s						
VRDI	Verde Repeater	63.09	31	P	P	10 38 05.0	-0.6
VRDI				IAmb	IAmb	10 38 28.0	
	comp=Z,16nm,1.4s						
L26K	Log Cabin Wild	63.33	29	P	P	10 38 07.4	+0.4
TGL	Tana Glacier	63.34	32	P	P	10 38 07.0	-0.2
J26L	Joseph Creek	63.41	27	P	P	10 38 07.7	+0.1
J26L				IAmb	IAmb	10 38 08.0	
	comp=Z,9.4nm,0.8s						
M26K	Nabesna, AK	63.42	30	P	P	10 38 08.3	+0.7
M26K				IAmb	IAmb	10 38 48.1	
	comp=Z,9.9nm,1.5s						
BMAR	Burnt Mountain	63.45	24	P	P	10 38 08.8	+1.1
ISLE	Juniper Island	63.57	32	P	P	10 38 08.7	0.0
M27K	Edge Creek, AK	63.94	30	P	P	10 38 10.2	-1.0
K27K	Chicken	64.00	28	P	P	10 38 11.6	+0.2
K27K				IAmb	IAmb	10 38 16.9	
	comp=Z,7.0nm,1.2s						
TABL	Table Mountain	64.15	32	P	P	10 38 12.7	0.0
BVAR	Borovoye Array	64.47	320	P	P	10 38 13.3	-1.3
	comp=Z,2.1nm,0.6s,baz=90,slow=8.9,SNR=16						
	comp=Z,2.1nm,0.6s						
DAWY	Dawson	65.18	28	P	P	10 38 19.2	+0.1
DAWY				IAmb	IAmb	10 38 20.3	
	comp=Z,4.3nm,0.8s						
I29M	Ogilvie Camp,	65.72	27	P	P	10 38 22.7	+0.2
I29M				IAmb	IAmb	10 38 23.2	
	comp=Z,9.0nm,1.2s						
HYT	Haines Junctio	65.96	32	P	P	10 38 24.9	+0.7
HYT				IAmb	IAmb	10 38 26.0	
	comp=Z,9.5nm,0.9s						
EPYK	Eagle Plains	66.42	26	P	P	10 38 27.3	+0.3
EPYK				IAmb	IAmb	10 38 27.9	
	comp=Z,9.3nm,0.9s						
YKA	Yellowknife Ar	76.43	28	P	P	10 39 26.5	-0.6
	comp=Z,8.4nm,0.6s,baz=288,slow=5.6,SNR=23						
	comp=Z,8.4nm,0.6s						
E09A	Wood Farm, Sta	79.70	44	P	P	10 39 45.9	+0.3
E09A				IAmb	IAmb	10 39 46.5	
	comp=Z,7.8nm,0.8s						
NEW	Newport	79.78	42	P	P	10 39 45.5	-0.5
ARCES	ARCESS Array B	80.31	342	P	P	10 39 47.2	-1.2
	comp=Z,1.6nm,0.7s,baz=67,slow=9.3,SNR=7.0						
	comp=Z,1.6nm,0.7s						
BEKR	Beckworth	80.34	51	P	P	10 39 48.7	-0.7
BMO	Blue Mountains	80.82	46	P	P	10 39 51.1	-0.6
BMO				IAmb	IAmb	10 39 52.5	
	comp=Z,6.5nm,0.9s						
CMB	Columbia Colle	80.92	53	P	P	10 39 52.3	0.0
PNTR	Pine Nut	81.16	52	P	P	10 39 53.7	-0.1
PNTR				IAmb	IAmb	10 39 54.9	
	comp=Z,7.6nm,0.8s						
LHV	Little Huntoon	82.25	52	P	P	10 39 59.2	+0.1
KVN	Kaiserville	82.27	51	P	P	10 39 59.0	-0.6
NVAR	Mina Array Bea	82.33	52	P	P	10 40 00.0	0.0
	comp=Z,4.7nm,0.8s,baz=267,slow=5.8,SNR=51						
NVAR				LR	LR	11 12 47.4	
	comp=Z,44nm,19.2s,baz=320,slow=33						
	comp=Z,4.7nm,0.8s						
NVAR	Mina Array Bea	82.33	52	P	P	10 39 59.8	-0.2
LCH	Last Change Ra	83.24	53	P	P	10 40 03.4	-1.2
MZP	Montezuma Peak

MPU Maple Canyon 86.53 48 P P 10 40 20.6 -0.5
MVU Marysvale 86.73 50 P P 10 40 21.7 -0.5
MSU Marysvale 86.75 50 P P 10 40 22.1 -0.2
PDAR Pinedale Array 86.79 45 P P 10 40 21.4 -0.9
comp=Z,1.4nm,0.9s,baz=235,slow=1.8,SNR=9.1
comp=Z,1.4nm,0.9s
W13A Hualapai Mount 86.86 54 P P 10 40 22.0 -0.8
KNB Kanab 86.89 52 P P 10 40 23.0 +0.1
Y14A Wickenburg 87.99 54 P P 10 40 27.4 -0.6
PV13 Radium Mtn., P 89.30 49 P P 10 40 33.6 -0.7
PV13 IAmb IAmb 10 40 34.5
comp=Z,3.2nm,0.8s
SMCO Snowmass 90.13 48 P P 10 40 37.7 -0.8
SMCO IAmb IAmb 10 40 39.0
comp=Z,3.3nm,0.8s
TXAR Lajitas Array 97.15 55 P P 10 41 10.3 -0.2
comp=Z,0.2nm,0.5s,baz=265,slow=3.0,SNR=5.7
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 130.64 310 PKP PKPdf 10 46 46.7 -2.2
comp=Z,0.2nm,0.4s,baz=39,slow=2.3,SNR=1.8
PLCA Paso Flores 143.87 131 PKP PKPab 10 47 09.1 -0.8
comp=Z,1.5nm,0.7s,baz=201,slow=4.5,SNR=3.8
LPAZ La Paz 148.27 87 PKPbc PKPdf 10 47 23.7 +2.3
comp=Z,2.3nm,0.6s,baz=279,slow=2.0,SNR=12

*NORS **13** 10:28:49.9±0.0, 42.28°N×46.44°E, h10km, MPVA3.8*
*MOS **13** 10:28:49.1±0.0, 42.26°N×46.42°E, h7km, MPVA3.9*
*DRS **13** 10:28:49.8±0.0, 42.23°N×46.32°E, h13km*
*TIF **13** 10:28:51.5, 42.19°N×46.15°E, h15km±3km*
ISC 13 10:28:50.7±1.0, 42.28°N±0.02×46.38°E±0.02, h14km±9km, n38, σ2.9±2.12/71, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XNZR	**Khunzakh**	**0.36**	**42**	*e*Pg	**Pb**	**10 28 58.3**	**-0.6**
XNZR				*e*Sg	**Sb**	**10 29 04.5**	**0.0**
BTLR	**Botlikh**	**0.40**	**343**	*e*Pg	**Pb**	**10 28 59.0**	**-0.7**
BTLR				*e*Sg	**Sb**	**10 29 05.3**	**-0.4**
GNBR	**Gunib**	**0.45**	**75**	*e*Pg	**Pb**	**10 28 59.4**	**-1.0**
GNBR				*e*Sg	**Sb**	**10 29 06.2**	**-0.7**
LGD	**Lagodekhi**	**0.45**	**193**	P	**Pb**	**10 28 59.4**	**-1.1**
LGD				S	**Sg**	**10 29 05.0**	**-0.8**
LGD	**Lagodekhi**	**0.45**	**193**	*e*Pg	**Pb**	**10 28 59.4**	**-1.1**
LGD				*e*Sg	**Sg**	**10 29 05.0**	**-0.8**
UNCR	**Uncukul**	**0.53**	**35**	*e*Pg	**Pb**	**10 29 01.5**	**-0.3**
UNCR				*e*Sg	**Sb**	**10 29 10.0**	**+0.6**
KMKR	**Kumukh**	**0.56**	**105**	*e*Pg	**Pb**	**10 29 01.2**	**-1.1**
KMKR				*e*Sg	**Sb**	**10 29 09.4**	**-0.7**
ARKR	**Arakani**	**0.56**	**54**	*e*Pg	**Pb**	**10 29 01.8**	**-0.5**
ARKR				*e*Sg	**Sb**	**10 29 10.3**	**+0.1**
KRNR	**Karanay**	**0.67**	**35**	*e*Pg	**Pb**	**10 29 03.9**	**-0.4**
KRNR				*e*Sg	**Sb**	**10 29 13.9**	**+0.5**
DVE	**Vedeno**	**0.70**	**345**	*i* Pg	**Pb**	**10 29 05.1**	**+0.3**
DVE				*e*Sg	**Sn**	**10 29 17.1**	**+0.1**
BUJR	**Buynaksk**	**0.77**	**44**	*e*Pg	**Pn**	**10 29 05.8**	**-1.3**
BUJR				*e*Sg	**Sn**	**10 29 17.3**	**-1.2**
DBC	**Dubki**	**0.81**	**24**	*e*Pg	**Pn**	**10 29 06.7**	**-1.1**
DBC				*e*Sg	**Sn**	**10 29 19.1**	**-0.6**
DLMR	**Dylym**	**0.81**	**13**	*e*Pg	**Pn**	**10 29 07.0**	**-0.7**
DLMR				*e*Sg	**Sn**	**10 29 19.4**	**-0.2**
DDFL	**Dedoflistskaro**	**0.85**	**193**	P	**Pn**	**10 29 10.0**	**+1.7**
DDFL				S	**Sn**	**10 29 27.8**	**+7.2**
DDFL	**Dedoflistskaro**	**0.85**	**193**	*e*Pg	**Pn**	**10 29 10.0**	**+1.7**
DDFL				*e*Sg	**Sn**	**10 29 27.8**	**+7.2**
URKR	**Urkarakh**	**0.94**	**96**	*e*Pg	**Pn**	**10 29 08.6**	**-0.9**
URKR				*e*Sg	**Sn**	**10 29 22.1**	**-0.7**
SGKR	**Sergokala**	**0.97**	**79**	*e*Pg	**Pn**	**10 29 09.1**	**-0.7**
SGKR				*e*Sg	**Sn**	**10 29 23.2**	**-0.1**
SHTL	**Shatili**	**0.98**	**293**	P	**Pb**	**10 29 08.1**	**-1.4**
SHTL				S	**Sb**	**10 29 21.8**	**-0.6**
SHTL	**Shatili**	**0.98**	**293**	*e*Pg	**Pb**	**10 29 08.1**	**-1.4**
SHTL				*e*Sg	**Sb**	**10 29 21.8**	**-0.6**
GROC	**Groznyy**	**1.02**	**335**	*e*Pg	**Pn**	**10 29 12.5**	**+2.0**
GROC				*e*Sg	**Sn**	**10 29 27.1**	**+2.5**
BTNK	**Botanikuri**	**1.32**	**244**	P	Pn	10 29 08.3	-6.3
BTNK				S	**Sb**	**10 29 24.3**	**-7.7**
PNSH	**Pansheti**	**1.35**	**286**	P	**Pn**	**10 29 15.3**	**0.0**
PNSH				S	**Sn**	**10 29 31.2**	**-1.9**
PNSH	**Pansheti**	**1.35**	**286**	*e*Pg	**Pn**	**10 29 15.3**	**0.0**
KMGR	**Komgaron**	**1.36**	**305**	*e*Pg	**Pg**	**10 29 17.7**	**+0.9**
KMGR				*e*Sg	**Sg**	**10 29 39.0**	**+4.4**
DRN	**Derbent**	**1.47**	**99**	*e*Pg	**Pg**	**10 29 18.8**	**-0.2**
DRN				*e*Sg	**Sg**	**10 29 40.5**	**+2.4**
LACR	**Lac**	**1.63**	**290**	*e*Pg	**Pb**	**10 29 20.5**	**-0.1**
LACR				*e*Sg	**Sg**	**10 29 44.7**	**+1.4**
BTKR	**Batakoyurt**	**1.74**	**310**	*e*Pg	**Pg**	**10 29 24.7**	**+0.6**
BTKR				*e*Sg	**Sg**	**10 29 50.0**	**+3.4**
KORR	**Kora**	**1.89**	**296**	*e*Pg	**Pg**	**10 29 26.5**	**-0.4**
KORR				*e*Sg	**Sg**	**10 29 52.5**	**+1.1**
DMNI	**Dmanisi**	**1.89**	**241**	P	**Pb**	**10 29 24.4**	**-0.6**
DMNI				S	**Sn**	**10 29 46.0**	**-0.3**
DMNI	**Dmanisi**	**1.89**	**241**	*e*Pg	**Pb**	**10 29 24.4**	**-0.6**
ZEI	**Tsey**	**1.90**	**286**	*e*Pg	**Pg**	**10 29 26.6**	**-0.6**
ZEI				*e*Sg	**Sg**	**10 29 52.8**	**+0.9**
ALIG	**Mtskhetisjvari**	**2.04**	**266**	P	**Pb**	**10 29 27.2**	**-0.3**
ALIG				S	**Sb**	**10 29 51.7**	**-0.9**
ALIG	**Mtskhetisjvari**	**2.04**	**266**	*e*Pg	**Pb**	**10 29 27.2**	**-0.3**
DIGR	**Digorskoe uzhe**	**2.16**	**288**	*e*Pg	**Pb**	**10 29 30.3**	**+0.6**
DIGR				*e*Sg	**Sg**	**10 30 00.2**	**+0.1**
GNI	**Garni**	**2.46**	**211**	*e*Pn	**Pb**	**10 29 32.5**	**-2.2**
KBZ	**Khabaz**	**2.94**	**301**	*e*Pn	**Pb**	**10 29 39.8**	**-3.0**
KBZ				*e*Sn	**Sb**	**10 30 15.1**	**+3.2**
SHA1	**Shidzhatmaz**	**3.10**	**299**	*e*Pn	**Pb**	**10 29 42.8**	**-2.8**
SHA1				*e*Sn	**Sb**	**10 30 20.7**	**-2.6**
KIV	**Kislovodsk**	**3.18**	**303**	*e*Pn	**Pb**	**10 29 43.7**	**-3.3**
KIV				*e*Sn	**Sb**	**10 30 23.4**	**-2.2**

IDC 13 10:31:51.4±372.0, 50.69°N×112.68°E, h0km, Error ellipse: s-maj=143.3km s-min=107.2km az=55.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	**5.02**	**237**	I		11 04 00.0	
baz=52,slow=327,SNR=0.4							
I45RU	**USSURIYSK INFR**	**14.56**	**109**	I		12 00 00.0	
baz=302,slow=317,SNR=0.9							
I44RU	**PETROPAVLOVSK**	**27.55**	**67**	I		13 20 50.0	
baz=285,slow=327,SNR=1.6							

*IDC **13** 10:32:25.9±0.9, 10.79°S×164.28°E, h0km, mb4.1/13, mbtmp4.2/15, ML5.2/3, MS3.5/28, Error ellipse: s-maj=25.2km s-min=17.2km az=106.0*
*NOU **13** 10:32:29.6, 10.68°S×164.55°E, h43km, mb4.9/27, Santa Cruz Islands Region*
*NEIC **13** 10:32:31.6±1.5, 10.88°S±0.03×164.41°E±0.10, h41km±7km, mb4.6/29, Error ellipse: s-maj=14.3km s-min=4.4km az=95.0*
ISC 13 10:32:30.0±0.5, 10.87°S±0.07×164.39°E±0.07, h29km, n100, σ1.9±05/74, mb4.5/26, MS3.4/22, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.60**	**288**	Pn	**Pn**	**10 33 37.0**	**-0.7**
1μm,0.3s,baz=4.3,slow=5.5,SNR=20							
HNR				Sn	**Sn**	**10 34 33.5**	**+3.2**
1μm,0.3s,baz=45,slow=19,SNR=8.6							
HNR				LR	LR	10 34 55.3	
comp=Z,1μm,20.5s,baz=140,slow=33							
HNR	**Honiara**	**4.60**	**288**	Pn	**Pn**	**10 33 38.3**	**+0.6**
HNR	**Honiara**	**4.60**	**288**	P	**Pn**	**10 33 38.6**	**+0.9**
DVP	**Devils Point**	**7.75**	**152**	P	**Pn**	**10 34 21.0**	**+0.1**
RTV	**Rentapao**	**7.92**	**151**	P	**Pn**	**10 34 24.6**	**+1.4**
KOUNC	**Koumac, New Ca**	**9.63**	**181**	Pn	**Pn**	**10 34 47.9**	**+1.2**
KOUNC	**Koumac, New Ca**	**9.63**	**181**	P	**Pn**	**10 34 48.3**	**+1.6**
LIFNC	**LIFOU**	**10.23**	**165**	Pn	**Pn**	**10 34 53.8**	**-1.1**
LIFNC	**LIFOU**	**10.23**	**165**	P	**Pn**	**10 34 55.3**	**+0.4**
MARNC	**Mare, Loyalty**	**11.12**	**162**		**Pn**	**10 35 06.5**	**-0.5**
MARNC	**Mare, Loyalty**	**11.12**	**162**	P	**Pn**	**10 35 07.3**	**+0.2**
DZM	**Mont Dzumac**	**11.31**	**170**	Pn	**Pn**	**10 35 10.2**	**+0.3**
9.5nm,0.3s,baz=336,slow=8.9,SNR=201							
DZM				LR	LR	10 38 57.6	
comp=Z,533nm,19.7s,baz=30,slow=34							
21nm,0.3s							
DZM	**Mont Dzumac**	**11.31**	**170**	P	**Pn**	**10 35 10.3**	**+0.4**
NOUC	**Port Laguerre**	**11.32**	**171**	P	**Pn**	**10 35 10.9**	**+1.0**
YATNC	**Mamie plateau,**	**11.38**	**168**	P	**Pn**	**10 35 11.1**	**+0.3**
ONTNC	**Ouen Toro**	**11.55**	**170**		**Pn**	**10 35 13.1**	**+0.1**
ONTNC	**Ouen Toro**	**11.55**	**170**	P	**Pn**	**10 35 14.6**	**+1.6**
OUENC	**Ouen Island, N**	**11.72**	**169**	Pn	**Pn**	**10 35 15.7**	**+0.3**
OUENC	**Ouen Island, N**	**11.72**	**169**	P	**Pn**	**10 35 16.5**	**+1.1**
KRVT	**Keravat (AS076**	**13.88**	**297**	LR	LR	10 41 11.0	
comp=Z,247nm,20.5s,baz=263,slow=38							
TARA	**Tarawa**	**14.81**	**35**	Pn	**Pn**	**10 35 57.8**	**+0.2**
MSVF	**Nonsavu**	**14.88**	**119**	LR	LR	10 40 47.0	
comp=Z,218nm,19.4s,baz=283,slow=33							
PMG	**Port Moresby**	**17.03**	**273**	LR	LR	10 42 40.9	
comp=Z,123nm,18.1s,baz=110,slow=36							
PATS	**Pohnpei**	**18.60**	**341**	P	**P**	**10 36 44.9**	**-0.2**
EIDS	**Eidsvold**	**19.16**	**219**	Pn	**Pn**	**10 36 53.0**	**+0.7**
CTA	**Charters Tower**	**19.72**	**240**	P	**P**	**10 36 57.6**	**+0.1**
1.4nm,0.3s,baz=65,slow=11,SNR=36							
CTA				LR	LR	10 44 10.2	
comp=Z,76nm,18.4s,baz=76,slow=36							
18nm,0.8s							
CTA	**Charters Tower**	**19.72**	**240**	P	**Pn**	**10 36 58.5**	**-0.6**
CTAO	**Charters Tower**	**19.72**	**240**	P	**Pn**	**10 36 58.4**	**-0.6**
CTAO				IAmb	IAmb	10 37 00.7	
comp=Z,18nm,0.7s							
CTAO	**Charters Tower**	**19.72**	**240**	P	**Pn**	**10 36 58.4**	**-0.6**
MTSU	**Mount Surprise**	**20.72**	**247**	P	**P**	**10 37 08.5**	**+0.1**
COEN	**Coen**	**20.95**	**259**	P	**P**	**10 37 10.6**	**-0.2**
COEN				IAmb	IAmb	10 37 31.3	
comp=Z,21nm,1.1s							
COEN	**Coen**	**20.95**	**259**	P	**P**	**10 37 10.6**	**-0.2**
ARMA	**Armidale**	**22.79**	**210**	P	**P**	**10 37 31.4**	**+0.9**
ARMA				IAmb	IAmb	10 37 44.8	
comp=Z,27nm,1.3s							
AFI	**Afiamalu**	**23.47**	**100**	LR	LR	10 44 22.8	
comp=Z,88nm,20.2s,baz=151,slow=30							
RAO	**Raoul Island**	**24.65**	**140**	LR	LR	10 45 51.6	
comp=Z,94nm,20.2s,baz=42,slow=32							
QIS	**Mount Isa**	**25.70**	**245**	P	**P**	**10 37 58.6**	**+0.6**
H11S2	**WAKE ISLAND Hy**	**29.26**	**4**	T	T	11 09 00.6	
baz=184,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	**29.26**	**4**	T	T	11 09 03.7	
baz=184,slow=76,SNR=8.4							
H11S1	**WAKE ISLAND Hy**	**29.28**	**4**	T	T	11 08 58.6	
baz=184,slow=76,SNR=13							
STKA	**Stephens Creek**	**29.67**	**222**	P	**P**	**10 38 34.9**	**+1.5**
comp=Z,1.5nm,0.6s,baz=60,slow=11,SNR=6.0							
STKA				LR	LR	10 48 52.0	
comp=Z,171nm,21.2s,baz=26,slow=33							
comp=Z,1.5nm,0.6s							
STKA	**Stephens Creek**	**29.67**	**222**	P	**P**	**10 38 33.7**	**+0.3**
WR0	**Warramunga Arr**	**30.12**	**249**	P	**P**	**10 38 36.0**	**-1.6**
BKZ	**Black Stump Fm**	**30.18**	**161**	P	**P**	**10 38 37.6**	**-0.2**
WB0	**Warramunga Arr**	**30.21**	**249**	P	**P**	**10 38 36.5**	**-1.8**
WB0				IAmb	IAmb	10 39 18.9	
comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	**30.29**	**249**	P	**P**	**10 38 39.0**	**0.0**
WB2	**Warramunga Arr**	**30.29**	**249**	P	**P**	**10 38 37.1**	**-2.0**
WB2				IAmb	IAmb	10 39 05.0	
comp=Z,8.8nm,1.2s							
WRA	**Warramunga Arr**	**30.30**	**249**	P	**P**	**10 38 37.6**	**-1.6**
comp=Z,1.4nm,0.5s,baz=78,slow=9.1,SNR=19							
comp=Z,1.4nm,0.5s							
WRA	**Warramunga Arr**	**30.30**	**249**	P	**P**	**10 38 38.1**	**-1.0**
H11N1	**WAKE ISLAND Hy**	**30.49**	**5**	T	T	11 10 32.0	
baz=184,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**30.49**	**5**	T	T	11 10 42.3	
baz=184,slow=76,SNR=7.5							
H11N2	**WAKE ISLAND Hy**	**30.50**	**5**	T	T	11 10 30.8	
baz=184,slow=76,SNR=8.0							
GUMO	**Guam**	**31.07**	**321**	LR	LR	10 49 42.1	
comp=Z,150nm,21.7s,baz=142,slow=34							
LCRK	**Leigh Creek**	**31.16**	**227**	P	**P**	**10 38 47.7**	**+1.2**
TOO	**Toolangi**	**31.55**	**209**	P	**P**	**10 38 49.9**	**-0.1**
TOO				IAmb	IAmb	10 39 00.2	
comp=Z,16nm,1.3s							
ASAR	**Alice Springs**	**31.69**	**242**	P	**P**	**10 38 49.4**	**-2.0**
comp=Z,0.7nm,0.4s,baz=62,slow=10,SNR=23							
comp=Z,0.7nm,0.4s							
HTT	**Hallett**	**32.40**	**222**	P	**P**	**10 38 58.6**	**+1.1**
MTN	**Manton Dam**	**32.60**	**263**	P	**P**	**10 38 57.0**	**-2.4**
MTN				IAmb	IAmb	10 39 11.2	
comp=Z,16nm,1.2s							
RPZ	**Rata Peaks**	**33.23**	**171**	LR	LR	10 51 58.7	
comp=Z,179nm,18.2s,baz=7.5,slow=35							
RPZ	**Rata Peaks**	**33.23**	**171**	P	**P**	**10 39 04.2**	**-0.4**
BBOO	**Buckleboo**	**33.99**	**226**	P	**P**	**10 39 10.8**	**-0.6**
BBOO				IAmb	IAmb	10 39 18.2	
comp=Z,12nm,0.9s							
BBOO	**Buckleboo**	**33.99**	**226**	P	**P**	**10 39 11.8**	**+0.5**
MULG	**Mulgathing**	**34.17**	**231**	P	**P**	**10 39 12.9**	**0.0**
SIJI	**Sorong**	**34.38**	**285**	LR	LR	10 55 46.0	
comp=Z,66nm,18.4s,baz=108,slow=41							
KNRA	**Kununurra**	**34.98**	**258**	P	**P**	**10 39 18.1**	**-1.9**
KNRA				IAmb	IAmb	10 39 29.6	
comp=Z,8.6nm,0.7s							
KNRA	**Kununurra**	**34.98**	**258**	P	**P**	**10 39 18.0**	**-2.0**
WRKA	**Warakurna**	**36.98**	**243**	P	**P**	**10 39 35.9**	**-1.3**
DAV	**Davao City (W)**	**42.55**	**293**	LR	LR	10 55 56.6	
comp=Z,17nm,21.3s,baz=124,slow=33							
JCJ	**Chichijima**	**43.46**	**331**	LR	LR	10 54 47.1	
comp=Z,37nm,20.6s,baz=153,slow=31							
PSA00	**Pilbara Seismi**	**43.94**	**250**	P	**P**	**10 40 32.9**	**-1.8**
KAPI	**Kappang**	**44.56**	**274**	LR	LR	10 59 12.4	
comp=Z,19nm,20.3s,baz=48,slow=36							
PPT	**Papeete**	**45.03**	**104**	LR	LR	10 56 34.5	
comp=Z,37nm,21.3s,baz=337,slow=32							
MORW	**Morawa**	**48.55**	**241**	P	**P**	**10 41 10.6**	**-0.4**
JHJ	**Hachijo jima 2**	**49.64**	**333**	LR	LR	10 59 11.8	
comp=Z,18nm,21.3s,baz=88,slow=32							
MJAR	**Matsushiro Arr**	**53.21**	**334**	LR	LR	11 04 38.0	
comp=Z,20nm,19.1s,baz=146,slow=36							
KSRS	**Korea Array**	**58.99**	**327**	P	**P**	**10 42 27.2**	**+0.1**
comp=Z,1.5nm,0.8s,baz=134,slow=6.7,SNR=5.4							
KSRS				LR	LR	11 05 55.5	
comp=Z,24nm,19.7s,baz=10.0,slow=34							
comp=Z,1.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**62.20**	**334**	P	**P**	**10 42 48.4**	**-0.5**
comp=Z,1.2nm,0.6s,baz=91,slow=8.8,SNR=2.4							
comp=Z,1.2nm,0.6s							
SHEM	**Shemya Is, Ala**	**63.89**	**7**	LR	LR	11 05 45.4	
comp=Z,54nm,19.8s,baz=127,slow=31							
PETK	**Petropavlovsk-**	**63.98**	**356**	LR	LR	11 06 07.8	
comp=Z,49nm,20.3s,baz=143,slow=32							
CASY	**Casey**	**66.07**	**201**	P	**P**	**10 43 12.9**	**-1.0**
CASY				IAmb	IAmb	10 43 39.1	
comp=Z,6.7nm,1.4s							
KLR	**Kul'dur**	**66.37**	**337**	P	**P**	**10 43 15.6**	**-0.6**
comp=Z,3.8nm,1.0s,baz=159,slow=4.2,SNR=6.3							
KLR				LR	LR	11 07 20.8	
comp=Z,21nm,21.7s,baz=124,slow=32							
comp=Z,3.8nm,1.0s							
VNDA	**Vanda**	**66.65**	**181**	P	**P**	**10 43 18.7**	**+1.1**
comp=Z,2.0nm,0.9s,baz=356,slow=5.6,SNR=10							
comp=Z,2.0nm,0.9s							
VNDA	**Vanda**	**66.65**	**181**	P	**P**	**10 43 17.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**70.83**	**294**	P	**P**	**10 43 44.4**	**-0.1**
comp=Z,0.9nm,0.2s,baz=121,slow=4.3,SNR=1.7							
CMAR				LR	LR	11 14 41.1	
comp=Z,11nm,19.5s,baz=115,slow=36							
comp=Z,0.9nm,0.2s							
MA2	**Magadan**	**71.06**	**353**	LR	LR	11 08 48.3	
comp=Z,46nm,20.8s,baz=143,slow=31							
ULN	**Ulaanbaatar**	**77.38**	**324**	P	**P**	**10 44 22.7**	**+0.3**
ULN				IAmb	IAmb	10 44 24.4	
comp=Z,6.0nm,1.1s							
YAK	**Yakutsk**	**77.56**	**344**	LR	LR	11 19 59.5	
comp=Z,33nm,18.2s,baz=89,slow=37							
SONM	**Songino Array**	**77.74**	**324**	P	**P**	**10 44 25.0**	**+0.6**
comp=Z,1.8nm,1.0s,baz=130,slow=5.5,SNR=6.3							
SONM				LR	LR	11 18 08.8	
comp=Z,35nm,19.6s,baz=76,slow=35							
comp=Z,1.8nm,1.0s							
SONM	**Songino Array**	**77.74**	**324**	P	**P**	**10 44 25.0**	**+0.6**
QSPA	**South Pole Qui**	**79.14**	**180**	P	**P**	**10 44 33.0**	**+1.1**
QSPA				IAmb	IAmb	10 44 37.2	
comp=Z,6.2nm,1.0s							
M19K	**Big River Lodg**	**79.35**	**19**	P	**P**	**10 44 32.5**	**-0.3**
L19K	**White Mountain**	**79.42**	**18**	P	**P**	**10 44 34.2**	**+1.0**
L19K				IAmb	IAmb	10 44 35.6	
comp=Z,8.0nm,0.9s							
HDA	**Harding Lake**	**83.51**	**19**	IAmb	IAmb	10 44 56.3	
comp=Z,8.8nm,1.0s							
ILAR	**Eielson Array**	**83.77**	**19**	P	**P**	**10 44 56.1**	**0.0**
comp=Z,2.3nm,0.9s,baz=228,slow=5.5,SNR=14							
comp=Z,2.3nm,0.9s							
J25K	**Salcha River,**	**84.16**	**19**	P	**P**	**10 44 58.4**	**+0.2**
J25K				IAmb	IAmb	10 45 02.9	
comp=Z,6.6nm,0.8s							
NVAR	**Mina Array Bea**	**86.93**	**50**	P	**P**	**10 45 14.0**	**+1.2**
comp=Z,0.3nm,0.8s,baz=229,slow=8.2,SNR=2.6							
comp=Z,0.3nm,0.8s							
BELA	**Belgrano 2**	**90.76**	**176**	P	**P**	**10 45 29.9**	**0.0**
MKAR	**Makanchi Array**	**92.49**	**317**	P	**P**	**10 45 37.9**	**-0.6**
comp=Z,0.7nm,0.6s,baz=102,slow=5.7,SNR=6.5							
comp=Z,0.7nm,0.6s							
ZALV	**Zalesovo Beam**	**92.64**	**324**	P	**P**	**10 45 37.9**	**-1.1**
comp=Z,0.5nm,0.3s,baz=80,slow=3.4,SNR=1.7							
comp=Z,0.5nm,0.3s							
YKA	**Yellowknife Ar**	**95.43**	**27**	LR	LR	11 24 48.6	
comp=Z,73nm,18.1s,baz=304,slow=33							
KURBB	**Kurchatov Arra**	**95.70**	**320**	LR	LR	11 28 22.8	
comp=Z,32nm,20.8s,baz=61,slow=35							

*IDC **13** 10:39:31.6±1.8, 63.05°N×28.06°E, h0km, mbtmp2.7/2, ML2.2/1, Error ellipse: s-maj=28.0km s-min=7.6km az=105.0*
*UPP **13** 10:39:37.4±2.5, 63.18°N×27.01°E, h0km, ML1.9, Suspected explosion*
ISC 13 10:39:33.8±2.0, 63.12°N±0.07×27.6°E±0.1, h10km, n12, σ1.9±53/14, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**1.84**	**204**	Pn	**Pn**	**10 40 06.1**	**+0.8**
0.6nm,0.3s,baz=24,slow=15,SNR=15							
FINES				Lg	Lg	10 40 30.2	
1.3nm,0.3s,baz=25,slow=30,SNR=18							
BURU	**Burvik**	**3.14**	**301**	P	**Pn**	**10 40 24.5**	**+1.3**
UMAU	**Umeaa**	**3.21**	**287**	P	**Pn**	**10 40 24.4**	**+0.1**
UMAU				S	**Sn**	**10 41 01.8**	**-0.7**
KALU	**Kalix**	**3.32**	**328**	P	**Pn**	**10 40 27.6**	**+1.9**
ODEU	**Stanfors**	**3.34**	**296**	P	**Pn**	**10 40 26.9**	**+0.9**
SJUU	**Sjulsmark**	**3.56**	**315**	P	**Pn**	**10 40 31.1**	**+2.1**
HUSU	**Husum**	**3.82**	**277**	P	**Pn**	**10 40 33.7**	**+1.2**
LILU	**Lilltraesk**	**4.04**	**306**	P	**Pn**	**10 40 36.1**	**+0.5**
HARU	**Harads**	**4.19**	**320**	P	**Pn**	**10 40 39.0**	**+1.4**
HEMU	**Hemsoen**	**4.42**	**268**	P	**Pn**	**10 40 41.5**	**+0.7**
ARCES	**ARCESS Array B**	**6.50**	**353**	Pn	**Pn**	**10 41 09.5**	**+0.2**
0.1nm,0.3s,baz=166,slow=13,SNR=2.0							
ARCES				Sn	**Sn**	**10 42 20.3**	**-3.2**
0.1nm,0.3s,baz=170,slow=21,SNR=1.3							
1.3nm,0.8s							
NOA	**NORSAR Array B**	**7.99**	**262**	Pn	**Pn**	**10 41 29.5**	**-0.3**
0.1nm,0.3s,baz=65,slow=11,SNR=1.3							

PGC 13 11:11:17.2±0.5, 48.81N×129.38W, h10km, MLSn2.9/19, Mw3.5/19, 253km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NCHR	**NEPTUNE Canada**	**0.86**	**167**	P	Pg	11 11 32.7	-1.0
NCHR				S	Sg	11 11 42.9	-1.9
KEMF	**NEPTUNE Canada**	**0.88**	**168**	P	Pg	11 11 33.0	-1.1
KEMF				S	Sg	11 11 43.6	-1.9
BPBC	**Brooks Peninsu**	**1.71**	**37**	Pn	Pn	11 11 44.8	-2.3
EDB	**Eliza Dome**	**1.82**	**53**	Pn	Pn	11 11 46.7	-1.9
EDB				Sn	Sn	11 12 07.9	-3.8
PACB	**Port Alice, BC**	**2.04**	**36**	Pn	Pn	11 11 49.9	-1.6
PACB				Sn	Sn	11 12 12.1	-4.9
MAYB	**Maynard**	**2.15**	**41**	Pn	Pn	11 11 51.6	-1.5
WOSB	**Woss**	**2.28**	**52**	Pn	Pn	11 11 53.8	-1.2
WOSB				Sn	Sn	11 12 20.2	-2.9
GDR	**Gold River**	**2.40**	**65**	Pn	Pn	11 11 55.0	-1.4
OZB	**Mount Ozzard**	**2.57**	**85**	Pn	Pn	11 11 57.4	-1.5
OZB				Sn	Sn	11 12 26.3	-3.9
BTB	**Buttle Lake**	**2.62**	**74**	Pn	Pn	11 11 58.7	-1.0
BTB				Sn	Sn	11 12 28.8	-2.8
NCRB	**Newcastle Ridg**	**2.69**	**52**	Pn	Pn	11 12 00.0	-0.6
BFSB	**Bamfield**	**2.80**	**88**	Pn	Pn	11 12 00.8	-1.3
B927	**Port Alberni**	**3.03**	**81**	Pn	Pn	11 12 04.0	-1.2
MGB	**Mount Grey**	**3.10**	**85**	Pn	Pn	11 12 05.0

WRA	Warramunga Arr	52.04 257	P	P	11 29 08.9	-0.5
	0.5nm,0.5s,baz=96,slow=6.8,SNR=27					
	0.5nm,0.5s					
ASAR	Alice Springs	52.23 252	P	P	11 29 11.0	+0.1
	6.8nm,0.6s,baz=90,slow=7.8,SNR=193					
	6.8nm,0.6s					

*NOU **13** 11:34:50.8, 35°.30S×177°.33W, h20km, mb5.2/13, East of North Island, N.Z.*
*WEL **13** 11:35:00, 36°.07S×179°.84E, h36km, ML5.1, Mw4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16} Nm; M_{rr}0.07; $M_{\theta\theta}$0.46; $M_{\phi\phi}$-0.54; $M_{r\theta}$1.04; $M_{\theta\phi}$0.08; $M_{\phi r}$0.26; Fault plane solution: $M_0$1.10000×10^{16} NP1: ϕ_s145.00000°, δ16.00000°, λ-12.00000°. NP2: ϕ_s247.00000°, δ87.00000°, λ-106.00000°. Principal axes: T 1350.5200, Plg40.0000°, Azm351.0000°; N -856.8700, Plg16.0000°, Azm247.0000°; P -493.6400, Plg46.0000°, Azm141.0000°;*
*NEIC **13** 11:35:13.6±2.4, 36°.20S±0°.04×179°.4W±0°.1, h10km±2km, mb4.7/19, ML5.0(WEL) Error ellipse: s-maj=19.1km s-min=6.0km az=90.0*
*WEL **13** 11:35:23.9±0.8, 36°.5S±5°.×18°.0E±°, h20km, M5.0/36, ML5.2/37, MLv5.0/36, Error ellipse: s-maj=0.0km s-min=0.0km az=92.8*
*IDC **13** 11:35:25.4±1.8, 35°.89S×179°.49E, h41km±15km, mb4.1/11, mbtmp4.3/13, ML5.2/2, MS3.6/16, Error ellipse: s-maj=16.3km s-min=12.8km az=145.0*
ISC 13 11:35:23.7±0.7,**36°.08S**±0°.06×**179°.80E**±0°.07,**h40**km±6km, **n271**,σ2**°21**/263,**mb4.5**/20,**MS3.6**/19,**1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.91**	**219**			Pn	**Pn**	**11 35 53.7**	**0.0**
MXZ	**Matakaoa Point**	**1.91**	**219**			P	**Pn**	**11 35 53.6**	**0.0**
MXZ	**Matakaoa Point**	**1.91**	**219**			P	**Pn**	**11 35 53.9**	**+0.3**
WMGZ	**Waiomatatini S**	**2.06**	**212**			P	**Pn**	**11 35 57.6**	**+1.8**
PKGZ	**Pakihiroa**	**2.27**	**217**			P	**Pn**	**11 36 00.2**	**+1.4**
PKGZ						S	**Sn**	**11 36 27.8**	**+2.2**
HAZ	**Te Kaha**	**2.33**	**223**			P	**Pn**	**11 35 59.3**	**-0.2**
PUZ	**Puketiti**	**2.34**	**211**			P	**Pn**	**11 36 00.9**	**+1.2**
RUGZ	**Raukumara Rang**	**2.54**	**221**			P	**Pn**	**11 36 03.9**	**+1.4**
WIZ	**White Island**	**2.55**	**235**			P	**Pn**	**11 36 03.0**	**+0.6**
WIZ						S	**Sn**	**11 36 32.7**	**+0.5**
WSRZ	**White Island S**	**2.55**	**235**			P	**Pn**	**11 36 05.1**	**+2.6**
TWGZ	**Tauwhareparae**	**2.55**	**214**			P	**Pn**	**11 36 04.0**	**+1.4**
TWGZ						S	**Sn**	**11 36 35.1**	**+2.7**
CNGZ	**Carnagh Statio**	**2.72**	**207**			P	**Pn**	**11 36 06.1**	**+1.3**
CNGZ						S	**Sn**	**11 36 38.5**	**+2.1**
TKGZ	**Te Karaka**	**2.83**	**213**			P	**Pn**	**11 36 06.9**	**+0.7**
TKGZ						S	**Sn**	**11 36 40.0**	**+1.0**
WHRZ	**Whale Island**	**2.88**	**231**			P	**Pn**	**11 36 08.5**	**+1.5**
MWZ	**Matawai**	**2.89**	**218**			P	**Pn**	**11 36 08.2**	**+0.9**
MWZ						S	**Sn**	**11 36 41.7**	**+0.9**
URZ	**Urewera**	**3.06**	**224**			P	**Pn**	**11 36 10.4**	**+0.9**
	332nm,0.3s,baz=110,slow=2.7,SNR=1883								
URZ						S	**Sn**	**11 36 45.5**	**+0.7**
	505nm,0.5s,baz=297,slow=21,SNR=3.7								
URZ	**Urewera**	**3.06**	**224**			Pn	**Pn**	**11 36 09.9**	**+0.4**
URZ	**Urewera**	**3.06**	**224**			P	**Pn**	**11 36 09.9**	**+0.4**
URZ	**Urewera**	**3.06**	**224**			P	**Pn**	**11 36 10.3**	**+0.8**
RAGZ	**Rawiri**	**3.07**	**218**			P	**Pn**	**11 36 10.5**	**+0.7**
RAGZ						S	**Sn**	**11 36 46.5**	**+1.2**
RIGZ	**Rimuhau**	**3.08**	**211**			P	**Pn**	**11 36 10.1**	**+0.2**
RIGZ						S	**Sn**	**11 36 46.8**	**+1.2**
MYRZ	**Mayor Island**	**3.10**	**246**			P	**Pn**	**11 36 10.5**	**+0.4**
MYRZ						S	**Sn**	**11 36 47.5**	**+1.5**
OPRZ	**Ohinepanea**	**3.14**	**235**			P	**Pn**	**11 36 11.5**	**+0.8**
MARZ	**Manawahe**	**3.14**	**232**			P	**Pn**	**11 36 11.6**	**+0.9**
EDRZ	**Edgecumbe**	**3.18**	**230**			P	**Pn**	**11 36 12.2**	**+1.0**
TGRZ	**Tauranga**	**3.28**	**239**			P	**Pn**	**11 36 13.3**	**+0.7**
SNGZ	**Shannon Statio**	**3.33**	**215**			P	**Pn**	**11 36 13.8**	**+0.5**
SNGZ						S	**Sn**	**11 36 53.4**	**+1.7**
KUZ	**Kuaotunu**	**3.36**	**257**			P	**Pn**	**11 36 13.8**	**+0.2**
KUZ	**Kuaotunu**	**3.36**	**257**			P	**Pn**	**11 36 14.7**	**+1.1**
MKRZ	**Makatiti**	**3.37**	**231**			P	**Pn**	**11 36 15.6**	**+1.8**
RTZ	**Ruatahuna**	**3.39**	**221**			P	**Pn**	**11 36 14.4**	**+0.4**
KNZ	**Kokohu**	**3.39**	**209**			P	**Pn**	**11 36 13.4**	**-0.6**
TARZ	**Mount Tarawera**	**3.40**	**230**			P	**Pn**	**11 36 15.9**	**+1.6**
MUGZ	**Murupara**	**3.40**	**224**			P	**Pn**	**11 36 14.5**	**+0.2**
OMRZ	**Omania**	**3.41**	**233**			P	**Pn**	**11 36 15.7**	**+1.4**
MHGZ	**Mahia Peninsul**	**3.42**	**206**			P	**Pn**	**11 36 14.4**	**0.0**
MHGZ						S	**Sn**	**11 36 56.5**	**+2.8**
RRRZ	**Republican Roa**	**3.46**	**228**			P	**Pn**	**11 36 15.9**	**+0.9**
HLRZ	**Highlands Stat**	**3.51**	**231**			P	**Pn**	**11 36 17.1**	**+1.4**
GRZ	**Great Barrier**	**3.52**	**266**			P	**Pn**	**11 36 17.1**	**+1.2**
NGRZ	**Ngongotaha**	**3.53**	**234**			P	**Pn**	**11 36 18.2**	**+2.2**
KMRZ	**Kaimai**	**3.56**	**239**			P	**Pn**	**11 36 17.1**	**+0.6**
RAHZ	**Arahi**	**3.56**	**217**			P	**Pn**	**11 36 16.9**	**+0.5**
UTU	**Utuhina**	**3.56**	**233**			P	**Pn**	**11 36 19.9**	**+3.4**
HSRZ	**Hossack Road**	**3.61**	**231**			P	**Pn**	**11 36 18.6**	**+1.5**
WHHZ	**Waihua**	**3.62**	**214**			P	**Pn**	**11 36 17.2**	**0.0**
HRRZ	**Handcock Road**	**3.63**	**230**			P	**Pn**	**11 36 18.5**	**+1.1**
MTHZ	**Maungataniwha**	**3.63**	**220**			P	**Pn**	**11 36 17.6**	**+0.1**
PRRZ	**Plateau Road**	**3.64**	**227**			P	**Pn**	**11 36 17.8**	**+0.4**
ALRZ	**Allen Road**	**3.71**	**227**			P	**Pn**	**11 36 18.9**	**+0.5**
GRRZ	**Galatos Road**	**3.72**	**231**			P	**Pn**	**11 36 20.0**	**+1.4**
WPRZ	**Whakapapatarin**	**3.79**	**229**			P	**Pn**	**11 36 20.8**	**+1.3**
TOZ	**Tahuroa Road**	**3.82**	**243**			P	**Pn**	**11 36 20.6**	**+0.7**
WIAZ	**Waiheke Island**	**3.83**	**258**			P	**Pn**	**11 36 21.2**	**+1.1**
NMHZ	**Naumai**	**3.84**	**217**			P	**Pn**	**11 36 20.4**	**+0.1**
MRHZ	**Matea Rd**	**3.85**	**223**			P	**Pn**	**11 36 20.3**	**-0.1**
MKAZ	**Moumakai**	**3.87**	**253**			P	**Pn**	**11 36 21.7**	**+1.1**
ARHZ	**Aropaonui**	**3.88**	**214**			P	**Pn**	**11 36 20.7**	**-0.1**
KUTZ	**Kaahu Road**	**3.98**	**232**			P	**Pn**	**11 36 23.4**	**+1.2**
WHTZ	**Whakaora**	**4.01**	**229**			P	**Pn**	**11 36 24.0**	**+1.4**
MBAZ	**Motutapu North**	**4.02**	**259**			P	**Pn**	**11 36 24.4**	**+1.8**
ETAZ	**East Tamaki Re**	**4.02**	**256**			P	**Pn**	**11 36 24.4**	**+1.7**
ABAZ	**Army Bay**	**4.05**	**261**			P	**Pn**	**11 36 24.7**	**+1.7**
BKZ	**Black Stump Fm**	**4.05**	**219**			Pn	**Pn**	**11 36 22.5**	**-0.6**
BKZ	**Black Stump Fm**	**4.05**	**219**			P	**Pn**	**11 36 22.7**	**-0.5**
BKZ	**Black Stump Fm**	**4.05**	**219**			P	**Pn**	**11 36 22.3**	**-0.9**
HATZ	**Hinemaiaia**	**4.07**	**225**			P	**Pn**	**11 36 23.9**	**+0.4**
TLZ	**Tolley Road**	**4.08**	**235**			P	**Pn**	**11 36 26.0**	**+2.5**
EPAZ	**Eden Park BICE**	**4.16**	**257**			P	**Pn**	**11 36 26.7**	**+2.2**
HBAZ	**Herne Bay Bore**	**4.16**	**258**			P	**Pn**	**11 36 27.0**	**+2.4**
MCHZ	**McNeill Hill**	**4.16**	**215**			P	**Pn**	**11 36 24.3**	**-0.4**
WATZ	**Wairara**	**4.17**	**230**			P	**Pn**	**11 36 25.8**	**+1.0**
CKHZ	**Cape Kidnapper**	**4.17**	**210**			P	**Pn**	**11 36 23.6**	**-1.2**
RATZ	**Rangitukua**	**4.25**	**228**			P	**Pn**	**11 36 26.7**	**+0.8**
AWAZ	**Awhitu Peninsu**	**4.27**	**255**			P	**Pn**	**11 36 28.1**	**+2.0**
RVAZ	**Riverhead Bore**	**4.27**	**259**			P	**Pn**	**11 36 28.3**	**+2.2**
KWHZ	**Kaweka Forest**	**4.28**	**218**			P	**Pn**	**11 36 25.4**	**-1.0**
WTAZ	**Waiatarua**	**4.30**	**257**			P	**Pn**	**11 36 28.8**	**+2.2**
KATZ	**Kakaramea**	**4.36**	**227**			P	**Pn**	**11 36 28.5**	**+1.0**
KAHZ	**Kahuranaki**	**4.37**	**211**			P	**Pn**	**11 36 26.2**	**-1.4**
WCZ	**Waipu Caves**	**4.43**	**270**			P	**Pn**	**11 36 30.0**	**+1.7**
TMVZ	**Te Maari**	**4.45**	**226**			P	**Pn**	**11 36 28.7**	**0.0**
NTVZ	**North Tongariro**	**4.45**	**226**			P	**Pn**	**11 36 28.6**	**-0.1**
ETVZ	**East Tongariro**	**4.46**	**226**			P	**Pn**	**11 36 28.7**	**-0.1**
KRVZ	**Karewarewa**	**4.47**	**226**			P	**Pn**	**11 36 29.2**	**+0.2**
OTVZ	**Oturere**	**4.50**	**226**			P	**Pn**	**11 36 29.5**	**0.0**
NNVZ	**North Ngauruho**	**4.51**	**226**			P	**Pn**	**11 36 29.7**	**+0.1**
BHHZ	**Black Hill Sta**	**4.51**	**220**			P	**Pn**	**11 36 28.8**	**-0.7**
WTVZ	**West Tongariro**	**4.51**	**227**			P	**Pn**	**11 36 29.8**	**+0.2**
SNVZ	**South Ngauruho**	**4.53**	**226**			P	**Pn**	**11 36 29.3**	**-0.6**
NGZ	**Ngauruhoe**	**4.55**	**226**			P	**Pn**	**11 36 30.1**	**0.0**
TWVZ	**Taurewa**	**4.58**	**228**			P	**Pn**	**11 36 30.8**	**+0.4**
PXZ	**Pawanui**	**4.58**	**210**			P	**Pn**	**11 36 28.0**	**-2.3**
TUVZ	**Tukino**	**4.58**	**225**			P	**Pn**	**11 36 30.8**	**+0.3**
MOVZ	**Moawhango**	**4.62**	**223**			P	**Pn**	**11 36 29.8**	**-1.2**
WHVZ	**Whangaehu Hut**	**4.63**	**225**			P	**Pn**	**11 36 30.8**	**-0.4**
FWVZ	**Far West T-bar**	**4.63**	**226**			P	**Pn**	**11 36 31.0**	**-0.2**
HIZ	**Hauiti**	**4.63**	**237**				**Pn**	**11 36 31.9**	**+0.8**
HIZ	**Hauiti**	**4.63**	**237**			P	**Pn**	**11 36 32.6**	**+1.4**
HIZ	**Hauiti**	**4.63**	**237**			P	**Pn**	**11 36 32.2**	**+1.1**
DRZ	**Dome Shelter**	**4.63**	**225**			P	**Pn**	**11 36 32.5**	**+1.1**
WNVZ	**Wahianoa**	**4.65**	**225**			P	**Pn**	**11 36 30.8**	**-0.8**
TRVZ	**Turoa**	**4.66**	**225**			P	**Pn**	**11 36 31.9**	**+0.2**
MTVZ	**Mangateitei**	**4.76**	**225**			P	**Pn**	**11 36 33.4**	**+0.4**
PNHZ	**Pukenui**	**4.77**	**216**			P	**Pn**	**11 36 30.9**	**-2.1**
PKVZ	**Pokaka**	**4.77**	**226**			P	**Pn**	**11 36 33.5**	**+0.4**
WPHZ	**Waipukurau**	**4.78**	**213**			P	**Pn**	**11 36 31.5**	**-1.7**
PRHZ	**Porangahau**	**4.87**	**210**			P	**Pn**	**11 36 31.7**	**-2.6**
TSZ	**Takapari Road**	**5.00**	**216**			P	**Pn**	**11 36 34.7**	**-1.4**
VRZ	**Vera Road**	**5.03**	**231**			P	**Pn**	**11 36 37.3**	**+0.8**
DVHZ	**Dannevirke**	**5.09**	**213**			P	**Pn**	**11 36 35.5**	**-1.9**
ANWZ	**Angora Road**	**5.10**	**210**			P	**Pn**	**11 36 35.1**	**-2.4**
OUZ	**Omahuta**	**5.13**	**278**			Pn	**Pn**	**11 36 38.3**	**+0.4**
OUZ	**Omahuta**	**5.13**	**278**			P	**Pn**	**11 36 38.8**	**+0.9**
OUZ	**Omahuta**	**5.13**	**278**			P	**Pn**	**11 36 38.5**	**+0.6**
MHEZ	**Mangahewa**	**5.28**	**234**			P	**Pn**	**11 36 42.8**	**+2.8**
WAZ	**Wanganui**	**5.29**	**225**			P	**Pn**	**11 36 40.1**	**-0.1**
POWZ	**Post Office Ro**	**5.35**	**215**			P	**Pn**	**11 36 39.3**	**-1.7**
BFZ	**Birch Farm**	**5.38**	**210**			Pn	**Pn**	**11 36 38.0**	**-3.3**
BFZ	**Birch Farm**	**5.38**	**210**			P	**Pn**	**11 36 38.1**	**-3.3**
BFZ	**Birch Farm**	**5.38**	**210**			P	**Pn**	**11 36 38.1**	**-3.3**
PRWZ	**Pori Road**	**5.39**	**213**			P	**Pn**	**11 36 39.4**	**-2.1**
DREZ	**Durham Road**	**5.42**	**233**			P	**Pn**	**11 36 44.8**	**+2.9**
OHWZ	**Ohakea**	**5.43**	**219**			P	**Pn**	**11 36 41.7**	**-0.3**
LREZ	**Lake Rotokare**	**5.45**	**230**			P	**Pn**	**11 36 43.3**	**+1.0**
PREZ	**Palmer Road**	**5.53**	**232**			P	**Pn**	**11 36 45.6**	**+2.0**
NEZ	**North Egmont**	**5.54**	**233**			P	**Pn**	**11 36 45.9**	**+2.3**
PKE	**Pukeiti**	**5.56**	**234**			P	**Pn**	**11 36 46.0**	**+2.1**
CPWZ	**Castlepoint**	**5.59**	**209**			P	**Pn**	**11 36 41.8**	**-2.4**
KHEZ	**Kahui Hut**	**5.60**	**233**			P	**Pn**	**11 36 46.9**	**+2.5**
KHEZ	**Kahui Hut**	**5.60**	**233**			P	**Pn**	**11 36 46.8**	**+2.3**
TIWZ	**Tintock**	**5.61**	**212**			P	**Pn**	**11 36 42.5**	**-2.0**
MRZ	**Mangatainoka R**	**5.65**	**215**			P	**Pn**	**11 36 42.2**	**-2.9**
NBEZ	**Newall Road No**	**5.68**	**234**			P	**Pn**	**11 36 48.5**	**+3.0**
NMEZ	**Namu Road**	**5.75**	**233**			P	Pn	11 36 50.4	+3.9
HOWZ	**Holdsworth Sta**	**5.87**	**214**			P	**Pn**	**11 36 45.5**	**-2.6**
TMWZ	**Te Maipa**	**5.88**	**210**			P	**Pn**	**11 36 44.6**	**-3.7**
OGWZ	**Otaki Gorge**	**5.96**	**216**			P	**Pn**	**11 36 46.7**	**-2.7**
MTW	**Mount Morrison**	**6.09**	**212**			P	**Pn**	**11 36 47.4**	**-3.6**
KIW	**Kapiti Island**	**6.12**	**217**			P	**Pn**	**11 36 49.1**	**-2.5**
CAW	**Cannon Point**	**6.24**	**215**			P	**Pn**	**11 36 49.8**	**-3.4**
PAWZ	**Paruwai Farm**	**6.30**	**212**			P	**Pn**	**11 36 50.6**	**-3.5**
MSWZ	**Moikau Station**	**6.41**	**212**				**Pn**	**11 36 51.7**	**-3.7**
MSWZ	**Moikau Station**	**6.41**	**212**			P	**Pn**	**11 36 51.0**	**-4.4**
WEL	**Wellington**	**6.52**	**216**			P	**Pn**	**11 36 54.0**	**-3.0**
PLWZ	**Palliser**	**6.53**	**212**				**Pn**	**11 36 52.8**	**-4.4**
PLWZ	**Palliser**	**6.53**	**212**			P	**Pn**	**11 36 53.0**	**-4.2**
SNZO	**South Karori**	**6.57**	**216**				**Pn**	**11 36 53.9**	**-3.8**
DUWZ	**D'Urville Isla**	**6.60**	**223**			P	**Pn**	**11 36 54.5**	**-3.6**
TCW	**Tory Channel**	**6.70**	**219**			P	**Pn**	**11 36 56.1**	**-3.5**
TUWZ	**Tuamarina**	**7.04**	**219**				**Pn**	**11 37 00.7**	**-3.4**
TUWZ	**Tuamarina**	**7.04**	**219**			P	**Pn**	**11 37 00.3**	**-3.8**
CMWZ	**Cape Campbell**	**7.14**	**216**			Pn	**Pn**	**11 37 03.5**	**-2.1**
NNZ	**Nelson**	**7.18**	**222**			Pn	**Pn**	**11 37 05.1**	**-0.9**
NNZ	**Nelson**	**7.18**	**222**			P	**Pn**	**11 37 02.5**	**-3.5**
BSWZ	**Blackbirch Sta**	**7.28**	**218**			Pn	**Pn**	**11 37 04.7**	**-2.7**
BSWZ	**Blackbirch Sta**	**7.28**	**218**			P	**Pn**	**11 37 04.3**	**-3.2**
TKNZ	**Takaka Hill**	**7.29**	**225**			P	**Pn**	**11 37 06.1**	**-1.5**
QRZ	**Quartz Range**	**7.42**	**228**			Pn	**Pn**	**11 37 06.9**	**-2.4**
QRZ	**Quartz Range**	**7.42**	**228**			P	**Pn**	**11 37 06.1**	**-3.2**
QRZ	**Quartz Range**	**7.42**	**228**			P	**Pn**	**11 37 08.6**	**-0.7**
MRNZ	**Matariki Terra**	**7.65**	**224**			P	**Pn**	**11 37 08.1**	**-4.4**
THZ	**Tophouse**	**7.81**	**221**			Pn	**Pn**	**11 37 10.8**	**-4.0**
THZ	**Tophouse**	**7.81**	**221**			P	**Pn**	**11 37 10.6**	**-4.2**
KHZ	**Kahutara**	**7.98**	**216**			Pn	**Pn**	**11 37 14.2**	**-2.8**
KHZ	**Kahutara**	**7.98**	**216**			P	**Pn**	**11 37 12.6**	**-4.4**
KHZ	**Kahutara**	**7.98**	**216**			P	**Pn**	**11 37 14.0**	**-3.0**
CTZ	**Chatham Island**	**8.12**	**161**			P	**Pn**	**11 37 19.8**	**+0.8**
GVZ	**Greta Valley S**	**8.64**	**215**			P	**Pn**	**11 37 21.7**	**-4.3**
LTZ	**Lake Taylor**	**8.87**	**219**			Pn	**Pn**	**11 37 25.6**	**-3.7**
LTZ	**Lake Taylor**	**8.87**	**219**			P	**Pn**	**11 37 24.5**	**-4.7**
AMCZ	**Amberley**	**8.98**	**216**			P	**Pn**	**11 37 27.5**	**-3.2**
OKCZ	**Okains Bay**	**9.22**	**212**			P	**Pn**	**11 37 30.3**	**-3.8**
INZ	**Inchbonnie**	**9.26**	**222**			P	**Pn**	**11 37 31.7**	**-2.9**
OXZ	**Oxford**	**9.39**	**217**				**Pn**	**11 37 32.2**	**-4.1**
OXZ	**Oxford**	**9.39**	**217**			P	**Pn**	**11 37 32.1**	**-4.2**
MQZ	**McQueen's Vall**	**9.39**	**214**			Pn	**Pn**	**11 37 31.6**	**-4.7**
AKCZ	**Akaroa Harbour**	**9.41**	**212**			P	Pn	11 37 31.8	-4.8
RACZ	**Rakaia**	**9.64**	**215**			P	**Pn**	**11 37 35.7**	**-4.0**
WVZ	**Waitaha Valley**	**9.88**	**222**			P	**Pn**	**11 37 41.6**	**-1.5**
WACZ	**Wakanui South**	**9.94**	**215**			P	**Pn**	**11 37 39.7**	**-4.3**
RPZ	**Rata Peaks**	**10.16**	**219**			P	Pn	11 37 42.1	-4.8
	18nm,0.3s,baz=71,slow=4.3,SNR=19								
RPZ						S	Sn	11 39 28.3	-11
	58nm,0.8s,baz=316,slow=16,SNR=7.8								
RPZ	**Rata Peaks**	**10.16**	**219**				**Pn**	**11 37 42.4**	**-4.5**
RPZ	**Rata Peaks**	**10.16**	**219**			P	**Pn**	**11 37 43.4**	**-3.5**
RPZ	**Rata Peaks**	**10.16**	**219**			P	**Pn**	**11 37 43.8**	**-3.1**
ARCZ	**Arundel**	**10.27**	**217**			P	**Pn**	**11 37 44.0**	**-4.4**
GCSZ	**Gaunt Creek Bo**	**10.27**	**222**			P	**Pn**	**11 37 46.7**	**-1.7**
TMZ	**Timaru**	**10.67**	**216**			P	Pn	11 37 48.4	-5.5
FOZ	**Fox Glacier**	**10.69**	**223**			Pn	**Pn**	**11 37 52.3**	**-1.8**
FOZ	**Fox Glacier**	**10.69**	**223**			P	**Pn**	**11 37 51.8**	**-2.3**
LBZ	**Lake Benmore**	**11.08**	**219**			Pn	**Pn**	**11 37 55.5**	**-3.9**
LBZ	**Lake Benmore**	**11.08**	**219**			P	**Pn**	**11 37 55.2**	**-4.2**
ODZ	**Otahua Downs**	**11.34**	**215**			Pn	**Pn**	**11 37 58.5**	**-4.5**
ODZ	**Otahua Downs**	**11.34**	**215**			P	Pn	11 37 57.7	-5.3
ODZ	**Otahua Downs**	**11.34**	**215**			P	**Pn**	**11 37 59.0**	**-4.0**
WKZ	**Wanaka**	**11.98**	**220**			Pn	**Pn**	**11 38 08.1**	**-3.7**
EAZ	**Earnscleugh**	**12.12**	**218**			P	Pn	11 38 08.8	-4.8
MLZ	**Mavora Lakes**	**12.82**	**220**			Pn	**Pn**	**11 38 19.0**	**-4.2**
SYZ	**Scrubby Hill**	**13.15**	**214**			P	**Pn**	**11 38 23.9**	**-3.9**
SYZ	**Scrubby Hill**	**13.15**	**214**			P	**Pn**	**11 38 24.0**	**-3.8**
WHZ	**Wether Hill Ro**	**13.26**	**219**			P	**Pn**	**11 38 26.5**	**-2.8**
DZM	**Mont Dzumac**	**18.17**	**317**	*e*	LR		LR	11 43 45.3	
	comp=Z,367nm,24.1s								
DZM	**Mont Dzumac**	**18.17**	**317**		P		**Pn**	**11 39 30.2**	**-2.8**
	3.4nm,0.8s,baz=335,slow=11,SNR=2.1								
DZM					LR		LR	11 45 15.6	
	comp=Z,304nm,19.0s,baz=198,slow=33								
DZM	**Mont Dzumac**	**18.17**	**317**				**Pn**	**11 39 31.1**	**-1.9**
MSVF	**Nonsavu**	**18.34**	**355**		P		**Pn**	**11 39 35.3**	**+0.2**
	0.3nm,0.3s,baz=40,slow=10,SNR=2.0								
	1.4nm,0.4s								
TOO	**Toolangi**	**27.42**	**257**		P		**P**	**11 41 05.5**	**0.0**
TOO					IAmb		IAmb	11 41 40.1	
	comp=Z,7.9nm,1.1s								
TBI	**Tubuai**	**29.42**	**73**	*e*	LR		LR	11 49 01.9	
	comp=Z,102nm,25.0s								
STKA	**Stephens Creek**	**31.82**	**266**		P		**P**	**11 41 45.5**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=106,slow=9.6,SNR=7.0								
STKA					PcP		**PcP**	**11 44 36.6**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=95,slow=4.8,SNR=3.6								
STKA					LR		LR	11 54 22.4	
	comp=Z,110nm,19.0s,baz=62,slow=36								
	comp=Z,2.9nm,0.7s								
HNR	**Honiara**	**32.09**	**321**		LR		LR	11 52 29.7	
	comp=Z,1μm,18.2s,baz=168,slow=32								
PPT2	**Papeete2**	**32.75**	**64**	*e*	LR		LR	11 50 35.2	
	comp=Z,115nm,25.0s								
PPT	**Papeete**	**32.76**	**64**		LR		LR	11 51 57.9	
	comp=Z,67nm,21.6s,baz=234,slow=30								
CTA	**Charters Tower**	**33.41**	**289**		P		**P**	**11 41 58.1**	**-0.5**
	comp=Z,10nm,0.7s,baz=120,slow=11,SNR=15								
CTA					LR		LR	11 54 57.1	
	comp=Z,47nm,18.3s,baz=90,slow=35								
	comp=Z,10nm,0.7s								
CTAO	**Charters Tower**	**33.41**	**289**		P		**P**	**11 41 57.9**	**-0.7**
CTAO					IAmb		IAmb	11 42 01.3	
	comp=Z,11nm,0.8s								
BBOO	**Buckleboo**	**36.00**	**262**		P		**P**	**11 42 19.6**	**-1.3**
BBOO					IAmb		IAmb	11 42 34.0	
	comp=Z,23nm,1.5s								
COEN	**Coen**	**39.49**	**294**		P		**P**	**11 42 51.1**	**+0.6**
COEN					IAmb		IAmb	11 43 21.5	
	comp=Z,40nm,1.5s								
PMG	**Port Moresby**	**39.80**	**304**		LR		LR	11 57 36.9	
	comp=Z,93nm,18.4s,baz=100,slow=34								
RABL	**Rabaul**	**40.69**	**315**		P		**P**	**11 43 00.5**	**+0.1**
AS31	**Alice Springs**	**41.33**	**274**		P		**P**	**11 43 03.3**	**-2.3**
ASAR	**Alice Springs**	**41.33**	**274**		P		**P**	**11 43 04.3**	**-1.4**
	comp=Z,7.6nm,0.6s,baz=119,slow=8.0,SNR=93								
ASAR					PcP		**PcP**	**11 45 04.1**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=123,slow=4.6,SNR=1.3								
ASAR					ScP		**ScP**	**11 48 47.6**	**-2.7**
	comp=Z,0.6nm,0.7s,baz=118,slow=3.9,SNR=5.4								
ASAR					S		**S**	**11 49 17.5**	**0.0**
	comp=Z,1.1nm,0.7s,baz=119,slow=14,SNR=10								
ASAR					LR		LR	12 00 32.6	
	comp=Z,120nm,18.5s,baz=124,slow=37								
	comp=Z,7.6nm,0.6s								
WR0	**Warramunga Arr**	**42.67**	**280**		P		**P**	**11 43 15.7**	**-0.9**
WR0					IAmb		IAmb	11 43 21.8	
	comp=Z,4.6nm,0.8s								
WB2	**Warramunga Arr**	**42.83**	**280**		P		**P**	**11 43 16.1**	**-1.8**
WB2					IAmb		IAmb	11 43 18.1	
	comp=Z,11nm,0.6s								
WRAB	**Tennant Creek**	**42.83**	**280**		P		**P**	**11 43 14.9**	**-3.0**
WRAB					IAmb		IAmb	11 43 18.0	
	comp=Z,9.6nm,0.6s								
WRA	**Warramunga Arr**	**42.84**	**279**		P		**P**	**11 43 16.1**	**-1.9**
	comp=Z,5.8nm,0.5s,baz=119,slow=7.8,SNR=134								
WRA					PcP		**PcP**	**11 45 09.8**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=119,slow=3.0,SNR=0.9								
WRA					S		**S**	**11 49 36.1**	**-3.6**
	comp=Z,0.4nm,1.0s,baz=121,slow=14,SNR=1.6								
WRA					LR		LR	12 00 22.8	
	comp=Z,196nm,20.1s,baz=128,slow=35								
	comp=Z,5.8nm,0.5s								
WB0	**Warramunga Arr**	**42.89**	**280**		IAmb		IAmb	11 43 23.5	
	comp=Z,6.8nm,0.6s								
FORT

*WEL **13** 11:58:40.8±0.9,37°S±5°×17°9E± °,h20km,M3.2/19, ML3.7/22,MLv3.2/19,Error ellipse: s-maj=0.0km s-min=0.0km az=99.1*

ISC 13 11:58:37.5±2.8,37.00S±0.08×179.2E±0.1,h2km±12km, n52,σ0°85/61,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ				S	Sg	11 59 07.7	+0.6
MXZ	**Matakaoa Point**	**0.92**	**232**	P	**Pn**	**11 58 57.0**	**-0.5**
WMGZ	**Waiomatatini S**	**1.04**	**218**	P	**Pn**	**11 59 00.5**	**+1.4**
WMGZ				S	**Sn**	**11 59 15.1**	**+0.9**
PKGZ	**Pakihiroa**	**1.27**	**225**	P	**Pb**	**11 59 02.5**	**+0.4**
PKGZ				S	**Sn**	**11 59 20.4**	**+0.4**
PUZ	**Puketiti**	**1.31**	**215**	P	**Pb**	**11 59 03.9**	**+0.9**
PUZ				S	**Sn**	**11 59 21.7**	**+0.6**
HAZ	**Te Kaha**	**1.37**	**236**	P	**Pg**	**11 59 03.7**	**0.0**
HAZ				S	**Sn**	**11 59 23.7**	**+1.3**
TWGZ	**Tauwhareparae**	**1.53**	**220**	P	**Pg**	**11 59 07.4**	**+0.5**
RUGZ	**Raukumara Rang**	**1.56**	**231**	P	**Pg**	**11 59 07.6**	**+0.3**
CNGZ	**Carnagh Statio**	**1.68**	**208**	P	**Pg**	**11 59 09.7**	**0.0**
TKGZ	**Te Karaka**	**1.80**	**217**	P	**Pb**	**11 59 10.5**	**-0.7**
MWZ	**Matawai**	**1.89**	**225**	P	**Pb**	**11 59 12.0**	**-0.8**
MWZ				S	**Sn**	**11 59 35.1**	**-0.3**
RIGZ	**Rimuhau**	**2.06**	**214**	P	**Pb**	**11 59 13.8**	**-1.8**
RIGZ				S	**Sn**	**11 59 38.6**	**-0.8**
RAGZ	**Rawiri**	**2.07**	**223**	P	**Pb**	**11 59 14.5**	**-1.3**
URZ	**Urewera**	**2.09**	**233**	P	**Pb**	**11 59 14.6**	**-1.6**
URZ				S	**Sn**	**11 59 39.7**	**-0.6**
URZ	**Urewera**	**2.09**	**233**	P	**Pb**	**11 59 14.8**	**-1.4**
EDRZ	**Edgecumbe**	**2.26**	**240**	P	**Pb**	**11 59 17.8**	**-1.3**
OPRZ	**Ohinepanea**	**2.28**	**248**	P	**Pn**	**11 59 16.9**	**+0.7**
SNGZ	**Shannon Statio**	**2.32**	**219**	P	**Pn**	**11 59 17.4**	**+0.6**
SNGZ				S	**Sn**	**11 59 45.8**	**-0.1**
KNZ	**Kokohu**	**2.36**	**211**	P	**Pn**	**11 59 17.1**	**-0.1**
MHGZ	**Mahia Peninsul**	**2.38**	**205**	P	**Pn**	**11 59 18.3**	**+0.7**
RTZ	**Ruatahuna**	**2.40**	**227**	P	**Pn**	**11 59 18.7**	**+0.9**
MUGZ	**Murupara**	**2.44**	**232**	P	**Pn**	**11 59 18.9**	**+0.6**
TARZ	**Mount Tarawera**	**2.48**	**239**	P	**Pn**	**11 59 17.5**	**-1.6**
WHHZ	**Waihua**	**2.60**	**217**	P	**Pn**	**11 59 21.1**	**+0.6**
MTHZ	**Maungataniwha**	**2.64**	**225**	P	**Pn**	**11 59 22.5**	**+1.3**
KUZ	**Kuaotunu**	**2.82**	**274**	P	**Pn**	**11 59 22.5**	**-1.1**
KUZ	**Kuaotunu**	**2.82**	**274**	P	**Pn**	**11 59 23.9**	**+0.3**
NMHZ	**Naumai**	**2.83**	**222**	P	**Pn**	**11 59 24.8**	**+0.9**
ARHZ	**Aropaoanui**	**2.86**	**217**	P	**Pn**	**11 59 24.9**	**+0.8**
MRHZ	**Matea Rd**	**2.88**	**230**	P	**Pn**	**11 59 25.0**	**+0.6**
BKZ	**Black Stump Fm**	**3.05**	**224**	P	**Pn**	**11 59 27.1**	**+0.3**
BKZ	**Black Stump Fm**	**3.05**	**224**	P	**Pn**	**11 59 27.1**	**+0.3**
TOZ	**Tahuroa Road**	**3.05**	**255**	P	**Pn**	**11 59 27.4**	**+0.6**
MCHZ	**McNeill Hill**	**3.15**	**218**	P	**Pn**	**11 59 28.4**	**+0.3**
MKAZ	**Moumakai**	**3.25**	**267**	P	**Pn**	**11 59 29.1**	**-0.4**
KWHZ	**Kaweka Forest**	**3.27**	**221**	P	**Pn**	**11 59 29.9**	**0.0**
WIAZ	**Waiheke Island**	**3.28**	**272**	P	**Pn**	**11 59 30.4**	**+0.5**
KAHZ	**Kahuranaki**	**3.34**	**213**	P	**Pn**	**11 59 30.0**	**-0.8**
ETAZ	**East Tamaki Re**	**3.44**	**270**	P	**Pn**	**11 59 32.9**	**+0.8**
TMVZ	**Te Maari**	**3.49**	**232**	P	**Pn**	**11 59 33.0**	**+0.1**
ETVZ	**East Tongariro**	**3.50**	**231**	P	**Pn**	**11 59 33.2**	**+0.2**
BHHZ	**Black Hill Sta**	**3.52**	**224**	P	**Pn**	**11 59 33.7**	**+0.4**
ABAZ	**Army Bay**	**3.55**	**275**	P	**Pn**	**11 59 33.7**	**+0.1**
NNVZ	**North Ngauruho**	**3.55**	**232**	P	**Pn**	**11 59 35.5**	**+1.7**
SNVZ	**South Ngauruho**	**3.57**	**231**	P	**Pn**	**11 59 34.8**	**+0.7**
NGZ	**Ngauruhoe**	**3.59**	**232**	P	**Pn**	**11 59 34.8**	**+0.5**
RVAZ	**Riverhead Bore**	**3.73**	**272**	P	**Pn**	**11 59 36.7**	**+0.6**
TSZ	**Takapari Road**	**3.98**	**219**	P	**Pn**	**11 59 38.9**	**-0.7**
WCZ	**Waipu Caves**	**4.07**	**284**	P	**Pn**	**11 59 41.5**	**+0.7**
BFZ	**Birch Farm**	**4.35**	**211**	P	**Pn**	**11 59 43.9**	**-0.7**
OUZ	**Omahuta**	**4.89**	**290**	P	**Pn**	**11 59 52.8**	**+0.7**
OUZ	**Omahuta**	**4.89**	**290**	P	**Pn**	**11 59 52.7**	**+0.7**

*IDC **13** 11:59:35.7±2.1,35°.83S×179°.69E,h0km,mb3.9/2, mbtmp4.0/4,ML4.1/2,Error ellipse: s-maj=45.9km s-min=36.9km az=105.0*

*WEL **13** 11:59:42.2±1.2,36°S±7°×18°0E±1°3,h20km,M4.0/12, ML4.2/12,MLv4.0/12,Error ellipse: s-maj=0.0km s-min=0.0km az=105.2*

ISC 13 11:59:40.1±1.5,36.08S±0.09×179.9E±0.1,h35km,n76, σ1°85/89,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.98**	**221**	P	**Pn**	**12 00 11.6**	**+0.5**
WMGZ	**Waiomatatini S**	**2.13**	**215**	P	**Pn**	**12 00 15.0**	**+1.9**
PKGZ	**Pakihiroa**	**2.35**	**219**	P	**Pn**	**12 00 17.7**	**+1.6**
PKGZ				S	**Sn**	**12 00 45.8**	**+2.0**
PUZ	**Puketiti**	**2.41**	**214**	P	**Pn**	**12 00 18.4**	**+1.4**
PUZ				S	**Sn**	**12 00 45.5**	**+0.3**
HAZ	**Te Kaha**	**2.41**	**225**	P	**Pn**	**12 00 17.9**	**+0.9**
RUGZ	**Raukumara Rang**	**2.62**	**223**	P	**Pn**	**12 00 21.6**	**+1.6**
TWGZ	**Tauwhareparae**	**2.62**	**216**	P	**Pn**	**12 00 21.5**	**+1.6**
TWGZ				S	**Sn**	**12 00 52.2**	**+1.8**
CNGZ	**Carnagh Statio**	**2.77**	**209**	P	**Pn**	**12 00 23.8**	**+1.9**
CNGZ				S	**Sn**	**12 00 56.1**	**+1.8**
TKGZ	**Te Karaka**	**2.89**	**215**	P	**Pn**	**12 00 24.5**	**+0.9**
TKGZ				S	**Sn**	**12 00 57.8**	**+0.7**
MWZ	**Matawai**	**2.97**	**220**	P	**Pn**	**12 00 25.9**	**+1.2**
MWZ				S	**Sn**	**12 00 59.6**	**+0.6**
URZ	**Urewera**	**3.14**	**225**	Pn	**Pn**	**12 00 27.8**	**+0.8**
URZ	35nm,0.3s,baz=132,slow=4.2,SNR=15			Sn	**Sn**	**12 01 02.1**	**-1.1**
	16nm,0.3s,baz=345,slow=23,SNR=7.9 76nm,0.3s						
URZ	**Urewera**	**3.14**	**225**	P	**Pn**	**12 00 27.9**	**+0.8**
URZ				S	**Sn**	**12 01 03.8**	**+0.5**
RAGZ	**Rawiri**	**3.15**	**219**	P	**Pn**	**12 00 28.2**	**+1.0**
RAGZ				S	**Sn**	**12 01 03.8**	**+0.3**
RIGZ	**Rimuhau**	**3.15**	**213**	P	**Pn**	**12 00 28.0**	**+0.9**
RIGZ				S	**Sn**	**12 01 04.6**	**+1.1**
MARZ	**Manawahe**	**3.23**	**233**	P	**Pn**	**12 00 31.3**	**+3.0**
OPRZ	**Ohinepanea**	**3.24**	**236**	P	**Pn**	**12 00 29.6**	**+1.3**
SNGZ	**Shannon Statio**	**3.40**	**217**	P	**Pn**	**12 00 31.4**	**+0.7**
SNGZ				S	**Sn**	**12 01 10.4**	**+0.5**
KNZ	**Kokohu**	**3.45**	**211**	P	**Pn**	**12 00 31.3**	**0.0**
KNZ				S	**Sn**	**12 01 09.2**	**-1.7**
RTZ	**Ruatahuna**	**3.46**	**222**	P	**Pn**	**12 00 32.9**	**+1.3**
MHGZ	**Mahia Peninsul**	**3.47**	**207**	P	**Pn**	**12 00 30.9**	**-0.6**
KUZ	**Kuaotunu**	**3.47**	**258**	P	**Pn**	**12 00 31.4**	**-0.1**
KUZ				S	**Sn**	**12 01 07.7**	**-3.7**
MUGZ	**Murupara**	**3.48**	**226**	P	**Pn**	**12 00 32.8**	**+1.0**
MUGZ				S	**Sn**	**12 01 10.6**	**-1.3**
TARZ	**Mount Tarawera**	**3.49**	**231**	P	**Pn**	**12 00 34.3**	**+2.4**
OMRZ	**Omania**	**3.50**	**234**	P	**Pn**	**12 00 35.6**	**+3.5**
KARZ	**Kaharoa**	**3.54**	**236**	P	**Pn**	**12 00 34.6**	**+2.1**
RRRZ	**Republican Roa**	**3.55**	**229**	P	**Pn**	**12 00 33.8**	**+1.1**
RAHZ	**Arahi**	**3.63**	**218**	P	**Pn**	**12 00 35.1**	**+1.2**
WHHZ	**Waihua**	**3.69**	**215**	P	**Pn**	**12 00 36.1**	**+1.5**
HSRZ	**Hossack Road**	**3.70**	**232**	P	**Pn**	**12 00 37.2**	**+2.4**
MTHZ	**Maungataniwha**	**3.71**	**221**	P	**Pn**	**12 00 36.6**	**+1.7**
PRRZ	**Plateau Road**	**3.72**	**228**	P	**Pn**	**12 00 36.8**	**+1.7**
ALRZ	**Allen Road**	**3.79**	**228**	P	**Pn**	**12 00 38.0**	**+2.0**
GRRZ	**Galatos Road**	**3.81**	**232**	P	**Pn**	**12 00 40.1**	**+3.8**
NMHZ	**Naumai**	**3.91**	**219**	P	**Pn**	**12 00 38.8**	**+1.1**
MRHZ	**Matea Rd**	**3.93**	**224**	P	**Pn**	**12 00 38.9**	**+0.9**
ARHZ	**Aropaoanui**	**3.95**	**215**	P	**Pn**	**12 00 39.0**	**+0.8**
KUTZ	**Kaahu Road**	**4.07**	**233**	P	**Pn**	**12 00 42.5**	**+2.6**
BKZ	**Black Stump Fm**	**4.12**	**221**	P	**Pn**	**12 00 41.9**	**+1.3**
MCHZ	**McNeill Hill**	**4.23**	**216**	P	**Pn**	**12 00 42.7**	**+0.6**
CKHZ	**Cape Kidnapper**	**4.23**	**212**	P	**Pn**	**12 00 41.9**	**-0.1**
RATZ	**Rangitukua**	**4.33**	**229**	P	**Pn**	**12 00 44.4**	**+1.0**
KWHZ	**Kaweka Forest**	**4.35**	**219**	P	**Pn**	**12 00 44.4**	**+0.6**
KAHZ	**Kahuranaki**	**4.43**	**212**	P	**Pn**	**12 00 43.9**	**-0.9**
KATZ	**Kakaramea**	**4.45**	**228**	P	Pn	12 00 50.7	+5.6
TMVZ	**Te Maari**	**4.53**	**227**	P	**Pn**	**12 00 47.0**	**+0.7**
NTVZ	**North Tongariro**	**4.54**	**227**	P	**Pn**	**12 00 48.7**	**+2.4**
ETVZ	**East Tongariro**	**4.54**	**226**	P	**Pn**	**12 00 46.9**	**+0.5**
WCZ	**Waipu Caves**	**4.54**	**270**	P	**Pn**	**12 00 47.6**	**+1.3**
KRVZ	**Karewarewa**	**4.55**	**227**	P	**Pn**	**12 00 48.8**	**+2.2**
OTVZ	**Oturere**	**4.58**	**227**	P	**Pn**	**12 00 47.7**	**+0.6**
BHHZ	**Black Hill Sta**	**4.59**	**221**	P	**Pn**	**12 00 48.1**	**+1.1**
NNVZ	**North Ngauruho**	**4.59**	**227**	P	**Pn**	**12 00 49.4**	**+2.2**
WTVZ	**West Tongariro**	**4.60**	**227**	P	**Pn**	**12 00 49.2**	**+2.0**
SNVZ	**South Ngauruho**	**4.62**	**226**	P	**Pn**	**12 00 48.0**	**+0.5**
NGZ	**Ngauruhoe**	**4.63**	**227**	P	**Pn**	**12 00 49.5**	**+1.9**
PXZ	**Pawanui**	**4.64**	**211**	P	**Pn**	**12 00 46.8**	**-0.8**
TWVZ	**Taurewa**	**4.66**	**229**	P	**Pn**	**12 00 49.8**	**+1.8**
MOVZ	**Moawhango**	**4.70**	**224**	P	**Pn**	**12 00 48.3**	**-0.2**
WHVZ	**Whangaehu Hut**	**4.71**	**226**	P	**Pn**	**12 00 51.5**	**+2.7**
FWVZ	**Far West T-bar**	**4.71**	**226**	P	**Pn**	**12 00 51.6**	**+2.7**
HIZ	**Hauiti**	**4.73**	**238**	P	**Pn**	**12 00 50.9**	**+2.1**
WNVZ	**Wahianoa**	**4.73**	**225**	P	**Pn**	**12 00 50.4**	**+1.3**
PNHZ	**Pukenui**	**4.84**	**217**	P	**Pn**	**12 00 50.3**	**-0.1**
VRZ	**Vera Road**	**5.12**	**232**	P	**Pn**	**12 00 55.7**	**+1.5**
DVHZ	**Dannevirke**	**5.16**	**214**	P	**Pn**	**12 00 54.8**	**0.0**
WAZ	**Wanganui**	**5.37**	**225**	P	**Pn**	**12 01 00.2**	**+2.5**
POWZ	**Post Office Ro**	**5.42**	**216**	P	**Pn**	**12 00 59.3**	**+1.0**
NEZ	**North Egmont**	**5.63**	**234**	P	Pn	12 01 06.7	+5.4
KHEZ	**Kahui Hut**	**5.69**	**234**	P	**Pn**	**12 01 06.7**	**+4.5**
MRZ	**Mangatainoka R**	**5.72**	**216**	P	**Pn**	**12 01 01.0**	**-1.4**
MRZ				S	**Sn**	**12 02 00.1**	**-6.7**
CTZ	**Chatham Island**	**8.09**	**162**	P	**Pn**	**12 01 38.9**	**+3.9**
RPZ	**Rata Peaks**	**10.23**	**219**	Pn	**Pn**	**12 02 03.0**	**-1.4**
	0.9nm,0.3s,baz=73,slow=19,SNR=2.4						
RPZ				Sn	Sn	12 03 44.1	-14
	0.9nm,0.3s,baz=258,slow=23,SNR=2.4 4.1nm,0.4s						
ASAR	**Alice Springs**	**41.44**	**274**	P	**P**	**12 07 22.9**	**-0.6**
	1.0nm,0.6s,baz=116,slow=7.7,SNR=14 1.0nm,0.6s						
WRA	**Warramunga Arr**	**42.95**	**279**	P	**P**	**12 07 33.9**	**-1.9**
	0.8nm,0.5s,baz=120,slow=7.8,SNR=22 0.8nm,0.5s						
FINES	**FINESS Array B**	**149.73**	**335**	PKPbc	**PKiKP**	**12 19 25.6**	**-0.6**
	1.0nm,0.5s,baz=43,slow=6.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**157.12**	**184**	PKPab	**PKPab**	**12 20 04.5**	**+1.6**
	0.5nm,0.6s,baz=167,slow=3.8,SNR=3.2						

ROM 13 12:13:05.9±0.1,42.764N±0.004×13.192E±0.006, h11km,ML0.8/2,2D,Error ellipse: s-maj=0.6km s-min=0.2km az=226.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**158**	P	Pg	12 13 08.7	+0.4
T1202				S	Sg	12 13 10.6	+0.6
NRCA	**Norcia**	**0.09**	**321**	P	Pg	12 13 08.8	+0.2
NRCA				S	Sg	12 13 10.4	-0.1
T1245	**Castelsantange**	**0.09**	**358**	P	Pg	12 13 08.9	+0.3
T1245				S	Sg	12 13 10.8	+0.2
T1204	**Amatrice, Fraz**	**0.13**	**134**	P	Pg	12 13 09.7	+0.6
T1204				S	Sg	12 13 12.0	+0.7
T1204	comp=E,65μm,1.0s			AML	AML		
T1204	comp=N,70μm,1.6s			AML	AML		
MC2	**Monte Cornacci**	**0.15**	**359**	P	Pb	12 13 10.5	-0.4
MC2				S	Sg	12 13 12.9	+0.9
SMA1	**SAN MARTINO**	**0.17**	**142**	P	Pg	12 13 10.3	+0.6
SMA1				S	Sg	12 13 13.7	+1.4
T1217	**Poggiodomo (PG**	**0.20**	**255**	P	Pg	12 13 10.8	+0.7
T1217				S	Sg	12 13 14.0	+0.9
T1241	**Roccafluvione,**	**0.20**	**62**	↓P	Pg	12 13 10.7	+0.6
T1241				S	Sg	12 13 14.1	+1.0
T1243	**Rocca Santa Ma**	**0.20**	**110**	P	Pg	12 13 10.8	+0.6
T1243				S	Sg	12 13 13.9	+0.7
TERO	**Teramo**	**0.34**	**115**	↓P	Pg	12 13 13.0	+0.4
TERO				S	Sg	12 13 18.1	+1.0

*DJA **13** 12:21:14.3±0.2,7°S±3°×12°9E± °,h173km±6km,M4.3/11, mB4.7/5,mb4.3/11,MLv4.4/10,Mw(mB)3.9/5*

*NEIC **13** 12:21:14.3±3.0,7.12S±0.09×129.20E±0.09,h161km±15km, mb4.4/9,Error ellipse: s-maj=14.6km s-min=10.8km az=139.0*

*IDC **13** 12:21:16.7±4.0,7.05S×129.41E,h199km±46km,mb3.4/5, mbtmp4.1/7,MS3.2/2,Error ellipse: s-maj=70.2km s-min=17.4km az=69.0*

ISC 13 12:21:14.6±0.6,7.17S±0.05×129.28E±0.06,h200km,n39, σ2°57/39,mb3.9/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.15**	**112**	Pn	**Pn**	**12 21 53.4**	**-1.4**
SAUI	**Saumlaki**	**2.15**	**112**	P	**Pn**	**12 21 53.4**	**-1.4**
SAUI				S	**Sn**	**12 22 23.1**	**-2.9**
KRAI	**Karang Ratu**	**3.93**	**347**	P	**Pn**	**12 22 15.4**	**-0.2**
FAKI	**Fak Fak**	**5.15**	**35**	Pn	**Pn**	**12 22 29.8**	**-1.3**
FAKI	**Fak Fak**	**5.15**	**35**	P	**Pn**	**12 22 29.8**	**-1.3**
	0.3nm56nm,1.4s						
SOEI	**Soe**	**5.59**	**242**	Pn	**Pn**	**12 22 35.6**	**-1.1**
SOEI				Sn	**Sn**	**12 23 36.3**	**-5.3**
SOEI	**Soe**	**5.59**	**242**	P	**Pn**	**12 22 34.8**	**-1.9**
	0.7nm906nm49nm,0.7s						
MTN	**Manton Dam**	**5.92**	**162**	Pn	**Pn**	**12 22 40.9**	**-0.1**
SANI	**Sanana**	**6.06**	**327**	P	**Pn**	**12 22 42.8**	**+0.1**
	0.1nm20nm,1.2s						
SIJI	**Sorong**	**6.56**	**18**	P	**Pn**	**12 22 49.4**	**+0.1**
	3.3nm,0.4s,baz=138,slow=20,SNR=12						
SIJI				S	**Sn**	**12 23 57.9**	**-6.5**
	11nm,0.5s,baz=71,slow=23,SNR=7.0						
SIJI	**Sorong**	**6.56**	**18**	P	**Pn**	**12 22 50.3**	**+1.0**
	0.1nm708nm4.7nm,0.6s						
LBMI	**Labuha**	**6.73**	**345**	P	**Pn**	**12 22 52.2**	**+0.8**
	0.2nm1μm54nm,0.7s						
RKPI	**Ransiki, Papua**	**7.44**	**41**	P	**Pn**	**12 23 00.8**	**+0.1**
	0.7nm44nm,0.6s						
KNRA	**Kununurra**	**8.47**	**183**		**Pn**	**12 23 12.8**	**-1.2**
WB0	**Warramunga Arr**	**13.47**	**159**		**Pn**	**12 24 16.8**	**-1.2**
WRAB	**Tennant Creek**	**13.61**	**159**	Pn	**P**	**12 24 20.0**	**-2.1**
WRA	**Warramunga Arr**	**13.61**	**159**	P	**Pn**	**12 24 17.9**	**-1.9**
	3.7nm,0.4s,baz=334,slow=13,SNR=57						
WRA				S	**S**	**12 26 45.5**	**-6.0**
	6.4nm,0.6s,baz=325,slow=24,SNR=10						
WB2	**Warramunga Arr**	**13.61**	**159**		**Pn**	**12 24 18.1**	**-1.7**
WR0	**Warramunga Arr**	**13.70**	**159**		**Pn**	**12 24 19.3**	**-1.6**
COEN	**Coen**	**15.22**	**117**		**P**	**12 24 42.5**	**+2.4**
COEN				IAmb	IAmb	12 24 44.3	
	comp=Z,30nm,1.4s						
PSA00	**Pilbara Seismi**	**16.97**	**212**	P	**Pn**	**12 25 01.5**	**+0.8**
AS31	**Alice Springs**	**16.99**	**165**	P	**Pn**	**12 25 02.8**	**+2.0**
AS31				IAmb	IAmb	12 25 03.7	
	comp=Z,9.6nm,0.5s						
ASAR	**Alice Springs**	**16.99**	**165**	P	**Pn**	**12 25 02.6**	**+1.8**
	comp=Z,14nm,0.3s,baz=339,slow=9.6,SNR=709						
ASAR				S	**S**	**12 28 04.1**	**-2.4**
	comp=Z,2.0nm,0.6s,baz=354,slow=25,SNR=8.4						
ASAR	**Alice Springs**	**16.99**	**165**	P	**Pn**	**12 25 02.8**	**+1.9**
PMG	**Port Moresby**	**17.83**	**98**	LR	LR	12 32 39.2	
	comp=Z,60nm,21.3s,baz=12,slow=38						
FORT	**Forrest**	**23.51**	**183**	P	**P**	**12 26 10.0**	**+3.4**
BLSI	**Bandar Lampung**	**23.96**	**273**	P	**P**	**12 26 08.1**	**-2.9**
MORW	**Morawa**	**25.11**	**208**	P	**P**	**12 26 25.1**	**+3.9**
MORW				IAmb	IAmb	12 26 58.4	
	comp=Z,11nm,1.4s						
BBOO	**Buckleboo**	**26.28**	**167**	P	**P**	**12 26 33.5**	**+1.9**
BBOO				IAmb	IAmb	12 27 12.1	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**27.13**	**157**	P	**P**	**12 26 42.0**	**+2.8**
	comp=Z,1.2nm,0.5s,baz=339,slow=11,SNR=5.0 comp=Z,1.2nm,0.5s						
STKA	**Stephens Creek**	**27.13**	**157**	P	**P**	**12 26 42.1**	**+2.8**
SDSI	**Sungai Dareh**	**28.46**	**281**	P	P	12 26 37.3	-14
ARMA	**Armidale**	**31.21**	**141**	P	P	12 27 20.3	+4.8
TOO	**Toolangi**	**33.65**	**156**	P	P	12 27 41.0	+4.5
TOO				IAmb	IAmb	12 28 06.5	
	comp=Z,15nm,1.4s						
CMAR	**Chiang Mai Arr**	**39.30**	**311**	P	**P**	**12 28 26.6**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=138,slow=8.5,SNR=5.5 comp=Z,0.4nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.19**	**2**	LR	LR	12 52 13.2	
	comp=Z,33nm,20.4s,baz=125,slow=36						
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**12 31 54.5**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=128,slow=7.6,SNR=5.5 comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**71.42**	**334**	P	**P**	**12 32 14.5**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=135,slow=4.1,SNR=1.9 comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**72.29**	**329**	P	**P**	**12 32 20.1**	**+1.9**
	comp=Z,0.6nm,0.2s,baz=136,slow=5.7,SNR=2.0 comp=Z,0.6nm,0.2s						

*NORS **13** 12:24:44.6±0.0,42.54N×46.34E,h40km,MPVA3.7*

*MOS **13** 12:24:45.5±0.0,42.84N×46.43E,h64km±1km,MPVA3.7*

*DRS **13** 12:24:46.1±0.0,42.71N×46.31E,h6km*

ISC 13 12:24:47.8±1.3,42.87N±0.04×46.43E±0.03,h60km±6km, n41,σ1°24/78,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.24**	**291**	*e*Pg	**Pn**	**12 24 57.1**	**-0.4**
DVE				*e*Sg	**Sn**	**12 25 05.2**	**+0.6**
DLMR	**Dylym**	**0.25**	**36**	*e*Pg	**Pn**	**12 24 57.1**	**-0.4**
DLMR				*e*Sg	**Sn**	**12 25 05.4**	**+0.8**
BTLR	**Botlikh**	**0.26**	**216**	*e*Pg	**Pn**	**12 24 56.9**	**-0.8**
BTLR				*e*Sg	**Sn**	**12 25 04.9**	**+0.1**
UNCR	**Uncukul**	**0.31**	**120**	*e*Pg	**Pn**	**12 24 57.0**	**-1.0**
UNCR				*e*Sg	**Sn**	**12 25 05.6**	**+0.1**
DBC	**Dubki**	**0.33**	**63**	*e*Pg	**Pn**	**12 24 57.6**	**-0.6**
DBC				*e*Sg	**Sn**	**12 25 06.5**	**+0.8**
KRNR	**Karanay**	**0.35**	**97**	*e*Pg	**Pn**	**12 24 57.4**	**-1.0**
KRNR				*e*Sg	**Sn**	**12 25 06.0**	**-0.2**
XNZR	**Khunzakh**	**0.39**	**148**	*e*Pg	**Pn**	**12 24 58.0**	**-0.8**
XNZR				*e*Sg	**Sn**	**12 25 07.1**	**+0.3**
ARKR	**Arakani**	**0.49**	**123**	*e*Pg	**Pn**	**12 24 59.0**	**-0.8**
ARKR				*e*Sg	**Sn**	**12 25 08.5**	**+0.1**
BUJR	**Buynaksk**	**0.50**	**95**	*e*Pg	**Pn**	**12 24 59.6**	**-0.2**
BUJR				*e*Sg	**Sn**	**12 25 10.1**	**+1.6**
GROC	**Groznyy**	**0.57**	**306**	*e*Pg	**Pn**	**12 25 01.0**	**+0.5**
GROC				*e*Sg	**Sn**	**12 25 12.3**	**+2.6**
GNBR	**Gunib**	**0.62**	**141**	*e*Pg	**Pn**	**12 25 00.4**	**-0.8**
GNBR				*e*Sg	**Sn**	**12 25 11.2**	**+0.2**
MAK	**Makhachkala**	**0.80**	**83**	*e*Pg	**Pn**	**12 25 01.5**	**-1.6**
MAK				*e*Sg	**Sn**	**12 25 16.3**	**+1.8**
KMKR	**Kumukh**	**0.89**	**146**	*e*Pg	**Pn**	**12 25 03.8**	**-0.8**
KMKR				*e*Sg	**Sn**	**12 25 17.0**	**0.0**
SHTL	**Shatili**	**0.96**	**258**	P	**Pn**	**12 25 04.4**	**-1.1**
SHTL				S	**Sn**	**12 25 18.9**	**+0.4**
SHTL	**Shatili**	**0.96**	**258**	*e*Pg	**Pn**	**12 25 04.4**	**-1.1**
SHTL				*e*Sg	**Sn**	**12 25 18.9**	**+0.4**
SGKR	**Sergokala**	**0.99**	**114**	*e*Pg	**Pn**	**12 25 05.0**	**-0.7**
SGKR				*e*Sg	**Sn**	**12 25 20.0**	**+0.9**
LGD	**Lagodekhi**	**1.04**	**188**	P	**Pn**	**12 25 05.5**	**-0.9**
LGD				S	**Sn**	**12 25 20.7**	**+0.5**
LGD	**Lagodekhi**	**1.04**	**188**	*e*Pg	**Pn**	**12 25 05.5**	**-0.9**
LGD				*e*Sg	**Sn**	**12 25 20.7**	**+0.5**
URKR	**Urkarakh**	**1.14**	**128**	*e*Pg	**Pn**	**12 25 07.3**	**-0.4**
URKR				*e*Sg	**Sn**	**12 25 23.8**	**+1.3**
KMGR	**Komgaron**	**1.16**	**280**	*e*Pg	**Pn**	**12 25 08.2**	**+0.3**
KMGR				*e*Sg	**Sn**	**12 25 25.7**	**+2.7**
PNSH	**Pansheti**	**1.36**	**261**	P	**Pn**	**12 25 10.2**	**-0.5**
PNSH				S	**Sn**	**12 25 27.5**	**-0.4**
PNSH	**Pansheti**	**1.36**	**261**	*e*Pg	**Pn**	**12 25 10.2**	**-0.5**
PNSH				*e*Sg	**Sn**	**12 25 27.5**	**-0.4**
DDFL	**Dedoflistskaro**	**1.44**	**189**	P	**Pn**	**12 25 13.2**	**+1.4**
DDFL				S	**Sn**	**12 25 34.9**	**+5.1**
DDFL	**Dedoflistskaro**	**1.44**	**189**	*e*Pg	**Pn**	**12 25 13.2**	**+1.4**
BTKR	**Batakoyurt**	**1.47**	**291**	*e*Pg	**Pn**	**12 25 12.2**	**+0.2**
BTKR				*e*Sg	**Sn**	**12 25 32.9**	**+2.5**
TRKR	**Terskaya**	**1.50**	**305**	*e*Pg	**Pn**	**12 25 13.0**	**+0.5**
TRKR

baz=151,slow=76,SNR=6.5
STKA Stephens Creek 42.34 241 P P 12 49 31.4 +0.3
1.1nm,0.4s,baz=342,slow=8.1,SNR=4.3
STKA LR LR 13 04 51.4
comp=Z,27nm,19.3s,baz=25,slow=33
1.1nm,0.4s
WRA Warramunga Arr 48.44 258 P P 12 50 19.1 -0.6
0.5nm,1.1s,baz=100,slow=8.4,SNR=2.8
WRA LR LR 13 09 31.8
comp=Z,86nm,20.4s,baz=86,slow=35
0.5nm,1.1s
ASAR Alice Springs 48.61 253 P P 12 50 21.4 +0.4
6.6nm,0.8s,baz=85,slow=8.6,SNR=59
ASAR PcP PcP 12 51 47.6 +1.0
0.5nm,0.9s,baz=104,slow=3.9,SNR=1.7
ASAR LR LR 13 09 54.9
comp=Z,191nm,19.3s,baz=94,slow=35
6.6nm,0.8s
SIJI Sorong 55.63 281 LR LR 13 13 51.5
comp=Z,73nm,21.3s,baz=142,slow=35
JCJ Chichijima 60.62 315 LR LR 13 13 35.9
comp=Z,48nm,20.7s,baz=82,slow=32
KAPI Kappang 65.32 272 LR LR 13 18 47.8
comp=Z,16nm,20.0s,baz=97,slow=34
SHEM Shemya Is, Ala 70.03 353 LR LR 13 16 41.8
comp=Z,24nm,21.2s,baz=164,slow=30
PFO Pinyon Flats O 74.74 47 LR LR 13 17 27.0
comp=Z,108nm,21.4s,baz=329,slow=29
LPIG La Paz 74.76 59 LR LR 13 17 50.6
comp=Z,72nm,19.9s,baz=261,slow=29
YBH Yreka Blue Hor 75.45 37 LR LR 13 17 13.2
comp=Z,93nm,20.2s,baz=342,slow=28
NVAR Mina Array Bea 76.17 42 LR LR 13 19 27.4
comp=Z,102nm,21.1s,baz=298,slow=30
ELK Elko 79.43 42 LR LR 13 21 05.2
comp=Z,70nm,20.6s,baz=316,slow=30
KLR Kul'dur 81.18 328 LR LR 13 28 25.7
comp=Z,15nm,18.0s,baz=105,slow=35
TXAR Lajitas Array 82.36 56 LR LR 13 22 17.0
comp=Z,56nm,20.4s,baz=304,slow=30
ANMO Albuquerque 82.61 50 LR LR 13 24 57.0
comp=Z,44nm,18.5s,baz=284,slow=32
PDAR Pinedale Array 84.11 42 P P 12 54 09.1 +0.8
0.1nm,0.3s,baz=132,slow=2.2,SNR=3.8
PDAR LR LR 13 24 26.8
comp=Z,70nm,19.9s,baz=299,slow=31
0.1nm,0.3s
ILAR Eielson Array 84.13 12 P P 12 54 06.4 -1.1
1.2nm,1.0s,baz=231,slow=7.9,SNR=4.7
1.2nm,1.0s
CMIG Matias Romero 85.42 71 LR LR 13 24 03.5
comp=Z,51nm,20.7s,baz=240,slow=30
APG El Apazote 88.79 74 LR LR 13 25 07.6
comp=Z,39nm,20.7s,baz=273,slow=29
CMAR Chiang Mai Arr 92.04 289 LR LR 13 31 35.6
comp=Z,19nm,21.8s,baz=140,slow=33
NNA Nana 93.78 104 LR LR 13 29 08.9
comp=Z,35nm,19.6s,baz=284,slow=30
ATAH Atahualpa 93.79 99 LR LR 13 28 08.2
comp=Z,46nm,19.1s,baz=235,slow=30
LVC Limon Verde 97.35 116 LR LR 13 28 12.0
comp=Z,29nm,19.1s,baz=234,slow=29
VRAC Vranov 146.43 347 PKPbc PKPbc 13 01 17.9 0.0
1.6nm,0.3s,baz=228,slow=1.7,SNR=4.6
BRTR Keskin Array B 146.59 319 PKPbc PKPbc 13 01 18.8 -0.1
1.7nm,1.0s,baz=160,slow=3.9,SNR=4.8
MLR Muntele Rosu 146.74 333 PKPbc PKPbc 13 01 18.9 -0.3
2.7nm,0.7s,baz=179,slow=8.7,SNR=2.4
GERES GERESS Array B 147.44 350 PKPbc PKPbc 13 01 21.1 +0.1
0.9nm,0.9s,baz=359,slow=5.3,SNR=3.4

IDC 13 12:49:59.6±13.0, 16°76S×174°68W, h0km, mb4.1/2, mbtmp4.1/2, MS3.3/6, Error ellipse: s-maj=616.6km s-min=43.1km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.98**	**45**	Pn	Pn	12 50 55.6	-6.4
	1.9nm,0.3s,baz=213,slow=16,SNR=1.9						
AFI				LR	LR	12 51 50.9	
	comp=Z,80nm,20.4s,baz=213,slow=28						
MSVF	**Nonsavu**	**7.01**	**261**	LR	LR	12 54 09.9	
	comp=Z,788nm,19.5s,baz=70,slow=36						
DZM	**Mont Dzumac**	**18.57**	**250**	*e*LR	LR	12 59 02.4	
	comp=Z,493nm,26.6s						
DZM	**Mont Dzumac**	**18.57**	**250**	LR	LR	13 00 21.2	
	comp=Z,222nm,20.6s,baz=42,slow=34						
PPT2	**Papeete2**	**24.00**	**96**	*e*LR	LR	13 00 44.6	
	comp=Z,284nm,27.0s						
PPT	**Papeete**	**24.00**	**96**	LR	LR	13 03 35.7	
	comp=Z,36nm,18.7s,baz=254,slow=34						
TBI	**Tubuai**	**24.56**	**110**	*e*LR	LR	13 01 05.5	
	comp=Z,347nm,29.2s						
HNR	**Honiara**	**25.74**	**283**	LR	LR	13 04 04.9	
	comp=Z,4μm,19.7s,baz=108,slow=33						
TAOE	**Nuku Hiva Isla**	**34.53**	**81**	*e*LR	LR	13 05 32.5	
	comp=Z,254nm,31.6s						
CTA	**Charters Tower**	**37.16**	**259**	LR	LR	13 10 46.8	
	comp=Z,53nm,18.0s,baz=78,slow=34						
H11N3	**WAKE ISLAND Hy**	**40.51**	**333**	T	T	13 40 49.7	
	baz=153						
H11N1	**WAKE ISLAND Hy**	**40.52**	**333**	T	T	13 40 48.7	
	baz=153						
H11N2	**WAKE ISLAND Hy**	**40.53**	**333**	T	T	13 40 48.1	
	baz=153						
STKA	**Stephens Creek**	**42.30**	**241**	LR	LR	13 14 52.5	
	comp=Z,40nm,18.1s,baz=25,slow=35						
ASAR	**Alice Springs**	**48.53**	**253**	P	P	12 58 44.5	-0.4
	3.7nm,0.8s,baz=88,slow=8.4,SNR=37						
	3.7nm,0.8s						
ILAR	**Eielson Array**	**84.01**	**12**	P	P	13 02 30.6	-0.9
	1.0nm,1.1s,baz=216,slow=4.5,SNR=2.3						
	1.0nm,1.1s						
BRTR	**Keskin Array B**	**146.40**	**319**	PKPbc	PKPbc	13 09 43.4	+0.4
	2.6nm,1.0s,baz=42,slow=4.5,SNR=5.7						

*IDC **13** 13:12:42.8±4.9, 19°87S×148°72E, h0km, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=40.8km s-min=30.5km az=40.0*
*AUST **13** 13:12:42.4±1.4, 19°85S×148°77E, h0km, Error ellipse: s-maj=19.5km s-min=8.5km az=35.0*
ISC 13 13:12:43.6±1.5, 19°83S±0°09×148°69E±0°09, h10km, n14, σ2°57/21, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUAYR	**Ayr State High**	**1.23**	**281**	P	**Pn**	**13 13 07.5**	**+0.7**
	baz=1.3						
AUAYR				S	**Sg**	**13 13 25.6**	**+2.4**
	baz=1.3						
CTA	**Charters Tower**	**2.30**	**263**	Pn	**Pn**	**13 13 22.9**	**+1.3**
	48nm,0.3s,baz=87,slow=16,SNR=200						
CTA				Pg	**Pb**	**13 13 25.9**	**+0.7**
	54nm,0.3s,baz=81,slow=17,SNR=99						
CTA				Sn	**Sn**	**13 13 53.3**	**+3.2**
	189nm,0.3s,baz=244,slow=23,SNR=18						
CTA				Lg	Lg	13 13 57.0	
	576nm,0.3s,baz=358,slow=17,SNR=39						
	108nm,0.3s						
AUNRC	**North Rockhamp**	**3.90**	**154**	P	**Pn**	**13 13 43.0**	**-0.5**
	baz=3.9						
MTSU	**Mount Surprise**	**4.47**	**291**	P	**Pn**	**13 13 52.7**	**+1.3**
	baz=4.5,SNR=122						
MTSU				S	**Sn**	**13 14 43.6**	**+0.1**
	baz=4.5						
EIDS	**Eidsvold**	**5.94**	**159**	P	**Pn**	**13 14 11.6**	**0.0**
	baz=5.9,SNR=57						
COEN	**Coen**	**7.87**	**317**	P	**Pn**	**13 14 39.4**	**+1.2**
	baz=8.0,SNR=9.0						
QLP	**Quilpie**	**7.87**	**211**	P	**Pn**	**13 14 39.7**	**+1.5**
	baz=7.9,SNR=4.3						
QIS	**Mount Isa**	**8.56**	**264**	P	**Pn**	**13 14 49.2**	**+1.5**
	baz=8.6,SNR=5.4						
CMSA	**Cobar Meteorol**	**11.97**	**192**	P	**Pn**	**13 15 34.2**	**-0.1**
	baz=12						
WB2	**Warramunga Arr**	**13.49**	**267**	P	**Pn**	**13 15 55.6**	**+0.5**
	baz=14						
WRA	**Warramunga Arr**	**13.50**	**267**	Pn	**Pn**	**13 15 55.2**	**-0.1**
	0.1nm,0.3s,baz=90,slow=12,SNR=8.7						
WRA				Sn	**Sn**	**13 18 17.9**	**-7.6**
	0.3nm,0.3s,baz=95,slow=23,SNR=2.6						
WRA				Lg	Lg	13 19 41.8	
	0.6nm,0.3s,baz=90,slow=26,SNR=5.3						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**13.58**	**207**	Pn	**Pn**	**13 15 56.7**	**+0.3**
	0.3nm,0.3s,baz=25,slow=14,SNR=4.3						
STKA				Sn	**Sn**	**13 18 29.8**	**+2.4**
	0.2nm,0.3s,baz=336,slow=13,SNR=1.3						
STKA				Lg	Lg	13 19 52.4	
	0.3nm,0.3s,baz=325,slow=19,SNR=1.3						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**14.26**	**252**	Pn	**Pn**	**13 16 05.8**	**+0.1**
	0.1nm,0.3s,baz=79,slow=14,SNR=8.5						
ASAR				Sn	**Sn**	**13 18 38.6**	**-5.3**
	0.2nm,0.3s,baz=72,slow=24,SNR=1.6						
ASAR				Lg	Lg	13 20 07.7	
	0.6nm,0.3s,baz=72,slow=34,SNR=5.1						
	0.7nm,0.8s						
OOD	**Oodnadatta**	**14.29**	**234**	P	**Pn**	**13 16 05.5**	**-0.5**
	baz=14						

*IDC **13** 13:21:04.4±1.7, 20°75S×178°81W, h589km±21km, mb3.4/5, mbtmp4.3/7, Error ellipse: s-maj=36.9km s-min=21.9km az=26.0*
ISC 13 13:21:04.0±1.6, 20°9S±0°1×178°7W±0°2, h600km, n9, σ1°50/12, mb4.1/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**315**	P	**P**	**13 22 30.5**	**-2.0**
	7.9nm,0.4s,baz=140,slow=13,SNR=22						
DZM	**Mont Dzumac**	**13.87**	**263**	P	**P**	**13 24 01.1**	**-0.7**
	5.2nm,0.5s,baz=84,slow=19,SNR=14						
URZ	**Urewera**	**17.66**	**191**	P	**P**	**13 24 34.7**	**-1.6**
	6.8nm,0.6s,baz=161,slow=1.8,SNR=7.3						
URZ				S	**S**	**13 27 26.6**	**-2.2**
	7.4nm,1.0s,baz=222,slow=18,SNR=2.1						
ASAR	**Alice Springs**	**43.78**	**257**	P	**P**	**13 28 19.2**	**+0.9**
	6.6nm,0.7s,baz=90,slow=7.7,SNR=117						
ASAR				PcP	**PcP**	**13 29 51.2**	**-0.2**
	0.4nm,0.8s,baz=104,slow=3.1,SNR=2.6						
ASAR				S	**S**	**13 34 07.8**	**+1.0**
	0.8nm,0.8s,baz=94,slow=16,SNR=7.3						
	6.6nm,0.7s						
WRA	**Warramunga Arr**	**43.89**	**263**	P	**P**	**13 28 19.5**	**+0.3**
	2.3nm,0.4s,baz=97,slow=7.6,SNR=125						
WRA				S	**S**	**13 34 08.8**	**+0.5**
	0.2nm,0.7s,baz=97,slow=14,SNR=1.8						
	2.3nm,0.4s						
SIJI	**Sorong**	**52.71**	**286**	P	**P**	**13 29 24.6**	**0.0**
	8.1nm,0.5s,baz=124,slow=11,SNR=5.1						
	8.1nm,0.5s						
VNDA	**Vanda**	**57.44**	**185**	P	**P**	**13 29 58.3**	**+2.0**
	0.5nm,0.7s,baz=19,slow=8.3,SNR=6.8						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**13 33 00.8**	**+1.3**
	0.7nm,0.3s,baz=106,slow=3.3,SNR=4.9						
	0.7nm,0.3s						
AKASG	**Malin Array Be**	**143.05**	**330**	PKhKP	PKPpre	13 39 25.9	
	1.9nm,0.5s,baz=45,slow=4.5,SNR=12						

*IDC **13** 13:23:55.0±1.6, 32°45S×71°41W, h0km, mb3.6/2, mbtmp3.5/3, ML3.5/1, MS3.4/1, Error ellipse: s-maj=69.9km s-min=39.5km az=73.0*
*GUC **13** 13:23:58.3±0.7, 32°63S×71°50W, h28km±2km, ML3.8*
ISC 13 13:23:58.3±1.1, 32°61S±0°03×71°57W±0°06, h27km±8km, n34, σ1°00/36, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.24**	**78**	*e*P	**Pb**	**13 24 04.6**	**0.0**
VA06				*e*S	**Sb**	**13 24 08.9**	**0.0**
MT02	**Curacav**	**0.74**	**151**	⇓*i*P	**Pn**	**13 24 12.6**	**-0.5**
MT02				*e*S	**Sn**	**13 24 22.7**	**-0.8**
VA03	**San Esteban**	**0.87**	**100**	⇓*i*P	**Pn**	**13 24 14.4**	**-0.5**
VA03				*e*S	**Sn**	**13 24 26.6**	**-0.3**
VA03				IAML		13 24 27.5	
	comp=N,6μm,0.1s						
PEL	**Peldehue**	**0.92**	**126**	*e*P	**Pb**	**13 24 14.9**	**-0.8**
PEL				*i*S	**Sn**	**13 24 27.7**	**-0.1**
PEL				IAML		13 24 29.0	
	comp=E,16μm,0.2s						
VA05	**Santo Domingo**	**1.04**	**182**	*e*P	**Pb**	**13 24 17.4**	**-0.4**
VA05				*e*S	**Sb**	**13 24 31.6**	**+0.5**
VA05				IAML		13 24 34.4	
	comp=E,3μm,0.3s						
MT05	**Renca**	**1.05**	**138**	⇓*i*P	**Pb**	**13 24 17.6**	**-0.3**
MT05				*i*S	**Sb**	**13 24 32.0**	**+0.8**
MT05				IAML		13 24 33.8	
	comp=E,7μm,0.3s						
MT03	**Universidad Ad**	**1.25**	**135**	*i*P	**Pb**	**13 24 20.7**	**-0.7**
MT03				*i*S	**Sb**	**13 24 37.3**	**+0.1**
MT03				IAML		13 24 39.0	
	comp=E,6μm,0.1s						
MT09	**Talagante**	**1.26**	**157**	*e*P	**Pb**	**13 24 21.0**	**-0.6**
MT09				*e*S	**Sb**	**13 24 37.5**	**0.0**
MT09				IAML		13 24 43.2	
	comp=E,2μm,0.3s						
MT01	**Popeta**	**1.28**	**168**	*e*P	**Pb**	**13 24 21.0**	**-0.8**
MT01				IAML		13 24 43.2	
	comp=E,2μm,0.1s						
FCH	**Farellones**	**1.29**	**124**	⇓*i*P	**Pb**	**13 24 21.3**	**-0.9**
FCH				*e*S	**Sb**	**13 24 38.6**	**+0.1**
FCH				IAML		13 24 39.5	
	comp=N,3μm,0.2s						
CO02	**Combarbal**	**1.48**	**19**	⇑*e*P	**Pn**	**13 24 23.3**	**-0.1**
CO02				*e*S	**Sn**	**13 24 42.1**	**+0.1**
CO02				IAML		13 24 46.0	
	comp=E,4μm,0.5s						
LMEL	**Las Melosas**	**1.68**	**137**	*e*P	**Pb**	**13 24 27.3**	**-1.5**
LMEL				IAML		13 24 56.1	
	comp=N,3μm,0.2s						
BO01	**Tunca**	**1.82**	**167**	*e*P	**Pb**	**13 24 29.7**	**-1.4**
BO03	**Pichilemu**	**1.91**	**190**	*e*P	**Pn**	**13 24 29.3**	**+0.2**
CO03	**El Pedregal**	**1.92**	**23**	*e*P	**Pn**	**13 24 30.4**	**+1.0**
CO03				*e*S	**Sb**	**13 24 54.3**	**-2.0**
CO03				IAML		13 25 02.9	
	comp=E,583nm,0.6s						
CO06	**Fray Jorge**	**1.93**	**358**	*e*P	**Pn**	**13 24 29.1**	**-0.3**
BO02	**Sierra Bellavi**	**2.27**	**163**	*e*P	**Pb**	**13 24 36.5**	**-2.2**
BO02				*i*S	**Sb**	**13 25 06.0**	**-0.5**
BO02				IAML		13 25 10.4	
	comp=N,1μm,0.4s						
GO05	**Huala**	**2.41**	**187**	*e*P	**Pn**	**13 24 36.3**	**+0.3**
GO04	**Tololo Observa**	**2.52**	**15**	*e*P	**Pn**	**13 24 38.9**	**+1.2**
CO01	**Juntas del Tor**	**2.91**	**26**	*e*P	**Pn**	**13 24 46.0**	**+2.8**
CO01				IAML		13 25 29.2	
	comp=E,160nm,0.4s						
H03N1	**Juan Fernandez**	**6.22**	**260**	T	T	13 31 50.3	
	baz=88,slow=73,SNR=424						
H03N3	**Juan Fernandez**	**6.23**	**260**	T	T	13 31 54.0	
	baz=88,slow=73,SNR=745						
H03N2	**Juan Fernandez**	**6.24**	**260**	T	T	13 31 50.6	
	baz=88,slow=73,SNR=578						
H03S1	**Juan Fernandez**	**6.27**	**257**	T	T	13 31 47.8	
	baz=79						
H03S3	**Juan Fernandez**	**6.27**	**257**	T	T	13 31 49.1	
	baz=79						
H03S2	**Juan Fernandez**	**6.28**	**257**	T	T	13 31 50.9	
	baz=79						
PLCA	**Paso Flores**	**8.15**	**175**	Pn	**Pn**	**13 25 56.7**	**+1.8**
	comp=E,0.1nm,0.3s,baz=350,slow=12,SNR=1.3						
	comp=E,0.6nm,0.4s						
RCBR	**Riachuelo**	**42.59**	**59**	LR	LR	13 48 35.5	
	comp=E,54nm,20.8s,baz=348,slow=35						
TXAR	**Lajitas Array**	**68.72**	**330**	P	**P**	**13 35 00.4**	**+0.6**
	comp=E,0.3nm,0.6s,baz=147,slow=8.2,SNR=3.6						
	comp=E,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**83.37**	**70**	P	**P**	**13 36 23.6**	**+0.2**
	comp=E,0.7nm,0.9s,baz=234,slow=5.0,SNR=3.3						
	comp=E,0.7nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**26.17**	**270**	T	T	16 01 53.1	
	baz=118,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**26.19**	**270**	T	T	16 01 56.6	
	baz=118,slow=75,SNR=26						
H11S3	**WAKE ISLAND Hy**	**26.19**	**270**	T	T	16 01 54.5	
	baz=118,slow=75,SNR=20						
ZALV	**Zalesovo Beam**	**152.84**	**31**	PKPbc	**PKiKP**	**13 43 52.7**	**+0.2**
	comp=E,0.3nm,0.3s,baz=329,slow=2.5,SNR=4.0						

*IDC **13** 13:32:48.1±4.8, 7°07S×106°67E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=249.3km s-min=30.9km az=49.0*
*DJA **13** 13:32:53.0±1.5, 8°S±9°×10°6E±°, h14km±9km, M3.4/6, MLv3.4/6*
ISC 13 13:32:51.8±1.6, 7°7S±0°1×106°1E±0°1, h35km, n13, σ1°43/9, mb3.1/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.82**	**32**	P	**Pn**	**13 33 06.9**	**-0.1**
SKJI				S	**Sn**	**13 33 17.1**	**-0.8**
CNJI	**Cibinong**	**1.08**	**68**	P	**Pn**	**13 33 10.7**	**+0.3**
CNJI				S	**Sn**	**13 33 23.7**	**-0.5**
SBJI	**Serang**	**1.58**	**0**	P	**Pn**	**13 33 19.3**	**+1.9**
LEM	**Lembang**	**1.73**	**59**	P	**Pn**	**13 33 21.9**	**+2.4**
H01W3	**Cape Leeuwin H**	**28.03**	**166**	T	T	14 08 19.1	
	baz=344,slow=76,SNR=13						
H01W1	**Cape Leeuwin H**	**28.04**	**166**	T	T	14 08 22.8	
	baz=344,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**28.04**	**166**	T	T	14 08 23.4	
	baz=344,slow=76,SNR=16						
WRA	**Warramunga Arr**	**29.92**	**117**	P	**P**	**13 38 56.9**	**+0.2**
	0.3nm,0.8s,baz=290,slow=8.4,SNR=1.2						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**31.00**	**124**	P	**P**	**13 39 06.4**	**+0.1**
	0.1nm,0.4s,baz=299,slow=8.1,SNR=1.7						
	0.1nm,0.4s						
H08S2	**Diego Garcia H**	**33.32**	**268**	T	T	14 14 48.6	
	baz=92,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**33.33**	**268**	T	T	14 14 52.5	
	baz=92,slow=76,SNR=19						
H08S1	**Diego Carcia H**	**33.34**	**268**	T	T	14 14 49.9	
	baz=92,slow=76,SNR=8.9						
MKAR	**Makanchi Array**	**58.26**	**341**	P	**P**	**13 42 41.5**	**-1.4**
	0.4nm,0.6s,baz=157,slow=8.0,SNR=4.2						
	0.4nm,0.6s						

WEL 13 13:38:35.1±0.2, 38°S±2°×17°8E±°, h37km±3km, M3.7/120, ML4.0/60, MLv3.7/120, Error ellipse: s-maj=0.0km s-min=0.0km az=111.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.09**	**175**	P	Pn	13 38 42.4	+0.9
MWZ				Sn	Sn	13 38 48.2	+2.4
RAGZ	**Rawiri**	**0.27**	**197**	P	Pn	13 38 43.9	+0.4
RAGZ				S	Sn	13 38 50.9	-0.1
RUGZ	**Raukumara Rang**	**0.30**	**25**	P	Pn	13 38 44.5	+1.1
RUGZ				S	Sn	13 38 52.3	+1.7
URZ	**Urewera**	**0.32**	**266**	P	Pn	13 38 44.2	+0.9
URZ				S	Sn	13 38 51.5	+1.3
TKGZ	**Te Karaka**	**0.33**	**127**	P	Pn	13 38 44.3	+1.0
TKGZ				S	Sn	13 38 52.4	+2.1
TWGZ	**Tauwhareparae**	**0.37**	**80**	P	Pn	13 38 45.2	+1.5
TWGZ				S	Sn	13 38 54.4	+3.8
RIGZ	**Rimuhau**	**0.50**	**158**	P	Pn	13 38 46.5	+0.7
RIGZ				S	Sn	13 38 56.4	+3.1
HAZ	**Te Kaha**	**0.53**	**23**	P	Pn	13 38 46.8	+0.7
HAZ				S	Sn	13 38 56.4	+2.6
SNGZ	**Shannon Statio**	**0.56**	**194**	P	Pn	13 38 47.3	+0.7
PKGZ	**Pakihiroa**	**0.56**	**52**	P	Pn	13 38 47.7	+0.9
PKGZ				S	Sn	13 38 57.9	+3.0
RTZ	**Ruatahuna**	**0.56**	**228**	P	Pn	13 38 47.0	+0.2
WHRZ	**Whale Island**	**0.57**	**312**	P	Pn	13 38 47.4	+0.4
CNGZ	**Carnagh Statio**	**0.59**	**114**	P	Pn	13 38 47.6	+0.5
PUZ	**Puketiti**	**0.61**	**74**	P	Pn	13 38 47.7	+0.4
PUZ				S	Sn	13 38 58.1	+2.2
EDRZ	**Edgecumbe**	**0.63**	**282**	P	Pn	13 38 48.0	+0.3
MUGZ	**Murupara**	**0.63**	**248**	P	Pn	13 38 47.8	+0.1
MARZ	**Manawahe**	**0.71**	**291**	P	Pn	13 38 48.9	+0.2
RAHZ	**Arahi**	**0.76**	**206**	P	Pn	13 38 49.8	+0.6
WIZ	**White Island**	**0.76**	**340**	P	Pn	13 38 49.2	0.0
WSRZ	**White Island S**	**0.77**	**339**	P	Pn	13 38 49.5	+0.1
KNZ	**Kokohu**	**0.79**	**171**	P	Pn	13 38 49.7	0.0
KNZ				S	Sn	13 39 01.5	+1.3
RRRZ	**Republican Roa**	**0.80**	**263**	P	Pn	13 38 50.4	+0.6
TARZ	**Mount Tarawera**	**0.80**	**270**	P	Pn	13 38 50.5	+0.6
MTHZ	**Maungataniwha**	**0.81**	**221**	P	Pn	13 38 50.3	+0.3
WMGZ	**Waiomatatini S**	**0.82**	**60**	P	Pn	13 38 50.8	+0.7
MKRZ	**Makatiti**	**0.83**	**277**	P	Pn	13 38 51.3	+1.0
OPRZ	**Ohinepanea**	**0.86**	**297**	P	Pn	13 38 50.4	-0.2
WHHZ	**Waihua**	**0.86**	**195**	P	Pn	13 38 51.1	+0.4
OMRZ	**Omania**	**0.91**	**278**	P	Pn	13 38 51.7	+0.2
HLRZ	**Highlands Stat**	**0.92**	**269**	P	Pn	13 38 52.1	+0.6
MXZ	**Matakaoa Point**	**0.92**	**43**	P	Pn	13 38 52.4	+1.0
PRRZ	**Plateau Road**	**0.92**	**253**	P	Pn	13 38 51.7	+0.2
LIRZ	**Lichensteins R**	**0.93**	**284**	P	Pn	13 38 51.8	+0.3
MHGZ	**Mahia Peninsul**	**0.96**	**162**	P	Pn	13 38 51.8	-0.2
ALRZ	**Allen Road**	**0.98**	**250**	P	Pn	13 38 52.6	+0.3
HRRZ	**Handcock Road**	**0.98**	**261**	P	Pn	13 38 52.8	+0.4
HSRZ	**Hossack Road**	**1.00**	**266**	P	Pn	13 38 53.4	+0.8
NMHZ	**Naumai**	**1.02**	**213**	P	Pn	13 38 53.7	+0.7
KARZ	**Kaharoa**	**1.03**	**282**	P	Pn	13 38 53.0	+0.1
UTU	**Utuhina**	**1.04**	**273**	P	Pn	13 38 54.1	+1.0
MRHZ	**Matea Rd**	**1.05**	**235**	P	Pn	13 38 53.4	+0.2
NGRZ	**Ngongotaha**	**1.06**	**277**	P	Pn	13 38 54.1	+0.8
ARHZ	**Aropaoanui**	**1.10**	**202**	P	Pn	13 38 54.1	+0.2
WPRZ	**Whakapapatarin**	**1.10**	**255**	P	Pn	13 38 54.6	+0.6
GRRZ	**Galatos Road**	**1.11**	**264**	P	Pn	13 38 54.9	+0.8
TGRZ	**Tauranga**	**1.12**	**297**	P	Pn	13 38 53.8	-0.3
BKZ	**Black Stump Fm**	**1.22**	**221**	P	Pn	13 38 55.8	+0.2
HATZ	**Hinemaiaia**	**1.29**	**239**	P	Pn	13 38 56.7	+0.1
WHTZ	**Whakaora**	**1.30**	**250**	P	Pn	13 38 57.5	+0.8
KMRZ	**Kaimai**	**1.30**	**287**	P	Pn	13 38 56.6	-0.2
KUTZ	**Kaahu Road**	**1.35**	**259**	P	Pn	13 38 57.9	+0.4
MCHZ	**McNeill Hill**	**1.36**	**208**	P	Pn	13 38 57.5	0.0
MYRZ	**Mayor Island**	**1.39**	**313**	P	Pn	13 38 57.8	-0.2
CKHZ	**Cape Kidnapper**	**1.46**	**193**	P	Pn	13 38 57.8	-1.0
KWHZ	**Kaweka Forest**	**1.46**	**216**	P	Pn	13 38 58.7	-0.3
WATZ	**Wairara**	**1.48**	**251**	P	Pn	13 38 59.5	+0.3
RATZ	**Rangitukua**	**1.50**	**245**	P	Pn	13 39 00.0	+0.5
TLZ	**Tolley Road**	**1.56**	**266**	P	Pn	13 39 00.3	0.0
KATZ	**Kakaramea**	**1.61**	**242**	P	Pn	13 39 01.5	+0.5
KAHZ	**Kahuranaki**	**1.63**	**198**	P	Pn	13 39 00.2	-1.1
TMVZ	**Te Maari**	**1.67**	**238**	P	Pn	13 39 02.0	+0.1
TOZ	**Tahuroa Road**	**1.67**	**287**	P	Pn	13 39 01.7	-0.1
ETVZ	**East Tongariro**	**1.67**	**237**	P	Pn	13 39 02.0	+0.1
NTVZ	**North Tongarir**	**1.68**	**239**	P	Pn	13 39 02.2	+0.2
BHHZ	**Black Hill S

KHEZ	Kahui Hut	2.93	248	P	Pn	13 39 21.3	+2.1
NBEZ	Newall Road No	3.03	249	P	Pn	13 39 23.5	+3.0
NMEZ	Namu Road	3.08	246	P	Pn	13 39 23.0	+2.0
WCZ	Waipu Caves	3.42	311	P	Pn	13 39 26.2	+0.4
DUWZ	D'Urville Isla	3.78	226	P	Pn	13 39 28.2	-2.6
OUZ	Omahuta	4.36	313	P	Pn	13 39 39.7	+0.9
CTZ	Chatham Island	7.06	143	P	Pn	13 40 14.4	-1.3
WVZ	Waitaha Valley	7.06	225	P	Pn	13 40 13.4	-2.4

*IDC **13** 13:51:00.1±2.8, 41.°20S×75.°12W, h0km, mb3.6/2, mbtmp3.5/3, ML3.5/1, MS3.1/2, Error ellipse: s-maj=118.4km s-min=33.2km az=10.0*
*GUC **13** 13:51:02.9±0.6, 40.°94S×74.°97W, h18km±10km, ML3.5*
ISC 13 13:51:03.0±1.1, 41.°00S±0.°06×75.°00W±0.°08, h16km, n19, σ1§20/21, 3D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL05	**Los Muermos**	**1.22**	**110**	*e*P	**Pn**	**13 51 23.6**	**-1.8**
LL05				*i* S	**Sb**	**13 51 40.5**	**-0.7**
LL05				IAML		13 51 42.5	
	comp=N,1μm,0.3s						
LR04	**Corral**	**1.64**	**48**	*e*P	**Pn**	**13 51 30.2**	**-1.0**
LR04				*i* S	**Sn**	**13 51 50.4**	**-1.6**
LR04				IAML		13 51 52.4	
	comp=E,3μm,0.2s						
LL04	**Puerto Octay**	**1.97**	**88**	↓*i*P	**Pn**	**13 51 35.0**	**-0.7**
LL04				*i* S	**Sn**	**13 52 00.5**	**+0.5**
LL04				IAML		13 52 06.5	
	comp=N,1μm,0.1s						
LL03	**Petrohue**	**1.97**	**95**	↓*i*P	**Pn**	**13 51 35.0**	**-0.7**
LL03				*i* S	**Sn**	**13 52 00.7**	**+0.6**
LL03				IAML		13 52 07.5	
	comp=E,1μm,0.5s						
GO07	**Milladeo Hill,**	**2.33**	**155**	*e*P	**Pn**	**13 51 40.4**	**-0.3**
GO07				IAML		13 52 14.4	
	comp=E,363nm,0.5s						
LL01	**San Ignacio de**	**2.38**	**126**	*e*P	**Pn**	**13 51 42.1**	**+0.8**
LL01				*i* S	**Sn**	**13 52 07.8**	**-2.3**
LL01				IAML		13 52 11.8	
	comp=E,222nm,0.2s						
GO06	**Curarrehue**	**3.05**	**63**	↓*i*P	**Pn**	**13 51 51.0**	**+0.4**
GO06				IAML		13 52 31.8	
	comp=N,52nm,0.6s						
PLCA	**Paso Flores**	**3.39**	**87**	Pn	**Pn**	**13 51 55.9**	**+0.7**
	comp=N,1.0nm,0.3s,baz=264,slow=18,SNR=32						
PLCA				Sn	**Sn**	**13 52 38.2**	**+3.1**
	comp=N,1.9nm,0.3s,baz=256,slow=12,SNR=4.3						
PLCA				LR	LR	13 53 25.3	
	comp=N,327nm,19.1s,baz=279,slow=42						
	comp=N,3.7nm,0.3s						
H03S1	**Juan Fernandez**	**7.79**	**335**	T	T	14 00 56.8	
	baz=158						
H03S2	**Juan Fernandez**	**7.80**	**335**	T	T	14 01 00.2	
	baz=158						
H03S3	**Juan Fernandez**	**7.81**	**335**	T	T	14 00 57.3	
	baz=158						
CPUP	**Villa Florida**	**20.69**	**50**	LR	LR	14 03 30.9	
	comp=N,45nm,18.6s,baz=209,slow=36						
VNA2	**Neumayer--Watz**	**44.60**	**154**	P	**P**	**13 59 14.4**	**+0.4**
	baz=273,slow=8.8						
SNAA	**Sanae**	**46.11**	**155**	P	**P**	**13 59 26.3**	**+0.3**
TROLL	**Troll, Antarti**	**47.78**	**156**	P	**P**	**13 59 39.7**	**+0.6**
TXAR	**Lajitas Array**	**74.85**	**334**	P	**P**	**14 02 43.1**	**+0.4**
	comp=N,0.3nm,0.6s,baz=158,slow=9.7,SNR=2.8						
	comp=N,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**88.74**	**71**	P	**P**	**14 03 55.6**	**-0.4**
	comp=N,0.3nm,0.7s,baz=225,slow=4.8,SNR=2.2						
	comp=N,0.3nm,0.7s						
GEYT	**Alibeck**	**144.01**	**79**	PKP	**PKPab**	**14 10 35.1**	**+0.1**
	comp=N,4.1nm,0.7s,baz=256,slow=5.8,SNR=7.4						
AKTO	**Aktyubinsk**	**146.37**	**58**	PKPbc	**PKPab**	**14 10 43.4**	**+0.1**
	comp=N,1.3nm,0.7s,baz=201,slow=3.2,SNR=6.0						

*JMA **13** 14:05:45.9±0.7, 34.°N±2.°×14.°2E±.°, h11km±3km, MV2.8/14, FAR SE OFF BOSO PEN*
*IDC **13** 14:05:52.4±5.1, 34.°02N×140.°90E, h0km, mb3.1/2, mbtmp3.0/3, ML1.5/1, MS2.3/1, Error ellipse: s-maj=175.2km s-min=27.9km az=64.0*
ISC 13 14:05:50.0±1.8, 34.°5N±0.°2×141.°7E±0.°1, h10km, n12, σ0§72/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.60**	**287**	P	**Pg**	**14 06 01.8**	**+0.2**
BSO2	**Boso 2**	**0.81**	**290**	S	**Sn**	**14 06 19.2**	**+0.1**
BSO3	**Boso 3**	**1.01**	**289**	*e*P	**Pg**	**14 06 08.6**	**-0.9**
CHOJ	**Chosi**	**1.39**	**331**	*e*P	**Pn**	**14 06 15.3**	**-0.1**
JKUC	**kamogawauchiur**	**1.39**	**299**	*e*P	**Pn**	**14 06 15.2**	**-0.3**
MJAR	**Matsushiro Arr**	**3.50**	**307**	Pn	**Pn**	**14 06 45.9**	**+1.4**
	0.1nm,0.3s,baz=135,slow=12,SNR=2.4						
MJAR				Sn	**Sn**	**14 07 25.8**	**-0.1**
	0.1nm,0.3s,baz=150,slow=13,SNR=4.2						
	0.9nm,0.5s						
KSRS	**Korea Array**	**11.53**	**289**	LR	LR	14 13 28.9	
	comp=Z,14nm,18.1s,baz=40,slow=41						
H11N2	**WAKE ISLAND Hy**	**26.73**	**117**	T	T	14 39 36.0	
	baz=309						
H11N1	**WAKE ISLAND Hy**	**26.74**	**117**	T	T	14 39 43.0	
	baz=309						
H11N3	**WAKE ISLAND Hy**	**26.75**	**117**	T	T	14 39 37.9	
	baz=309						
WRA	**Warramunga Arr**	**54.57**	**188**	P	**P**	**14 15 18.3**	**-0.2**
	0.2nm,0.7s,baz=3.3,slow=7.6,SNR=5.0						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**58.30**	**188**	P	**P**	**14 15 45.1**	**+0.1**
	0.3nm,0.9s,baz=7.1,slow=7.1,SNR=2.1						
	0.3nm,0.9s						

*VAO **13** 14:18:59.1±0.3, 21.°73S×69.°89W, h10km, mb4.2*
*GUC **13** 14:19:19.9±0.8, 21.°07S×68.°91W, h112km±4km, ML3.9*
ISC 13 14:19:17.8±0.7, 21.°06S±0.°03×68.°91W±0.°07, h118km±8km, n52, σ1§76/65, 7C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.55**	**272**	↑*i*P	**Pn**	**14 19 36.4**	**+0.4**
PB01				*i* S	**Sn**	**14 19 49.2**	**-0.5**
PB01				IAML		14 19 49.7	
	comp=N,8μm,0.3s						
PB09	**IPOC Station P**	**0.79**	**203**	↑*i*P	**Pn**	**14 19 39.0**	**+1.0**
PB09				*e*S	**Sn**	**14 19 54.7**	**+1.4**
PB08	**IPOC Station P**	**0.95**	**346**	↓*i*P	**Pn**	**14 19 40.9**	**+1.2**
PB08				*e*S	**Sn**	**14 19 56.8**	**+0.7**
PB08				IAML		14 19 58.7	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**0.96**	**254**	↑*i*P	**Pn**	**14 19 40.3**	**+0.9**
PB02				*i* S	**Sn**	**14 19 56.1**	**+0.3**
PB02				IAML		14 19 58.8	
	comp=E,4μm,0.1s						
PB07	**IPOC Station P**	**1.13**	**234**	↑*i*P	**Pn**	**14 19 42.0**	**+0.7**
PB07				*e*S	**Sn**	**14 19 59.0**	**+0.1**
PB07				IAML		14 20 02.6	
	comp=E,1μm,0.1s						
PATCX	**Punta Patache**	**1.19**	**281**	↑*i*P	**Pn**	**14 19 42.7**	**+0.9**
PATCX				*e*S	**Sn**	**14 20 00.4**	**+0.5**
PATCX				IAML		14 20 03.7	
	comp=N,3μm,0.1s						
HMBC	**Humberstone**	**1.21**	**310**	↑*i*P	**Pn**	**14 19 42.7**	**+0.7**
HMBC				*e*S	**Sn**	**14 20 00.3**	**0.0**
HMBC				IAML		14 20 01.7	
	comp=N,3μm,0.4s						
TA01	**Diego Aracena**	**1.29**	**292**	↑*i*P	**Pn**	**14 19 43.5**	**+0.7**
TA01				*e*S	**Sn**	**14 20 01.8**	**+0.1**
TA01				IAML		14 20 02.5	
	comp=E,2μm,0.3s						
TA02	**Huaiquique**	**1.39**	**304**	*e*P	**Pn**	**14 19 44.6**	**+0.7**
TA02				*i* S	**Sn**	**14 20 03.9**	**+0.1**
GO01	**Chusmiza**	**1.41**	**349**	*e*P	**Pn**	**14 19 45.9**	**+1.2**
GO01				*e*S	**Sn**	**14 20 06.5**	**+1.5**
GO01				IAML		14 20 09.0	
	comp=N,5μm,0.1s						
LVC	**Limon Verde**	**1.54**	**180**	*e*P	**Pn**	**14 19 47.7**	**+1.7**
LVC				*e*S	**Sn**	**14 20 09.0**	**+1.6**
PB04	**IPOC Station P**	**1.71**	**222**	*e*P	**Pn**	**14 19 48.7**	**+0.8**
PB04				*e*S	**Sn**	**14 20 10.6**	**-0.1**
PB04				IAML		14 20 17.2	
	comp=N,834nm,0.4s						
PB06	**IPOC Station P**	**1.75**	**201**	*e*P	**Pn**	**14 19 49.6**	**+1.3**
PB06				*e*S	**Sn**	**14 20 12.5**	**+1.0**
PB06				IAML		14 20 14.4	
	comp=E,803nm,0.4s						
PB15	**IPOC Station P**	**2.20**	**194**	*e*P	**Pn**	**14 19 55.4**	**+1.5**
PB15				*e*S	**Sn**	**14 20 23.1**	**+1.6**
PB16	**IPOC Station P**	**2.77**	**348**	*e*P	**Pn**	**14 20 04.0**	**+2.3**
PB12	**IPOC Station P**	**2.78**	**331**	*e*P	**Pn**	**14 20 01.4**	**0.0**
PB12				IAML		14 20 44.8	
	comp=E,268nm,0.4s						
PB10	**IPOC Station P**	**2.88**	**212**	*e*P	**Pn**	**14 20 03.0**	**+0.6**
PB10				*e*S	**Sn**	**14 20 34.1**	**-2.8**
GO02	**Mina Guanaco**	**4.13**	**189**	*e*P	**Pn**	**14 20 20.8**	**+1.5**
LPAZ	**La Paz**	**4.81**	**9**	*e*P	Pn	14 20 24.2	-4.6
BBSD	**Serra de San D**	**8.74**	**65**	*e*P	**Pn**	**14 21 19.3**	**-2.1**
BBRB	**Robore, Bolivi**	**9.01**	**74**	*e*P	**Pn**	**14 21 22.5**	**-2.5**
MURT	**Porto Murtinho**	**10.54**	**95**	*e*P	**Pn**	**14 21 43.3**	**-2.4**
PTLB	**Pontes e Lacer**	**10.83**	**61**	*e*P	**Pn**	**14 21 49.0**	**-0.6**
ETMB	**Extrema**	**11.48**	**13**	*e*P	**Pn**	**14 21 56.5**	**-1.8**
VILB	**Vilhena**	**11.59**	**47**	*e*P	**Pn**	**14 22 01.2**	**+1.4**
ANTJ	**Antonio Joao (**	**12.04**	**97**	*e*P	**Pn**	**14 22 03.6**	**-2.1**
CZSB	**Cruzeiro do Su**	**13.76**	**344**	*e*P	Pn	14 22 21.2	-6.8
CLDB	**Colider**	**16.16**	**53**	*e*P	**P**	**14 22 59.2**	**0.0**
ALGR	**Alto Alegre (B**	**16.32**	**121**	*e*P	**Pn**	**14 22 53.3**	**-6.9**
FRTB	**Fartura**	**18.05**	**101**	*e*P	**P**	**14 23 19.2**	**-0.9**
CNLB	**Canela**	**18.27**	**120**	*e*P	**P**	**14 23 17.6**	**-4.9**
BB19B	**Bebedouro**	**19.02**	**94**	*e*P	**Pn**	**14 23 32.1**	**-0.6**
NPGB	**Novo Progresso**	**19.13**	**45**	*e*P	**Pn**	**14 23 33.5**	**-0.5**
MACA	**Manacapuru-AM**	**19.51**	**25**	*e*P	**P**	**14 23 36.7**	**+0.8**
IPMB	**Ipameri, GO**	**19.74**	**85**	*e*P	**Pn**	**14 23 40.3**	**-0.9**
RCLB	**Rio Claro- Sao**	**19.90**	**98**	*e*P	**Pn**	**14 23 41.6**	**-1.3**
VAO	**Valinhos**	**20.43**	**99**	*e*P	**P**	**14 23 46.6**	**+0.6**
PMNB	**Patos De Minas**	**21.29**	**87**	*e*P	**P**	**14 23 55.7**	**+0.5**
PARB	**Paraibuna**	**21.67**	**100**	*e*P	**P**	**14 23 59.8**	**+0.6**
VAS01	**Vassouras-RJ**	**23.69**	**98**	*e*P	**P**	**14 24 19.1**	**+0.2**
MALB	**Monte Alegre**	**23.84**	**39**	*e*P	**P**	**14 24 21.9**	**+1.6**
SMTB	**Santa Maria do**	**23.86**	**63**	*e*P	**P**	**14 24 23.5**	**+3.0**
DIAM	**Diamantina, MG**	**23.91**	**88**	*e*P	**P**	**14 24 22.2**	**+1.1**
MC01	**Montes Claros**	**24.00**	**84**	*e*P	**P**	**14 24 22.9**	**+1.0**
JANB	**Januaria**	**24.12**	**80**	*e*P	**P**	**14 24 24.3**	**+1.4**
SDBA	**SAO DESIDERIO**	**24.52**	**73**	*e*P	**P**	**14 24 28.6**	**+2.1**
BOAV	**Boa Vista**	**24.72**	**20**	*e*P	**P**	**14 24 29.1**	**+0.8**
SJMB	**Sao Joao De Ma**	**26.16**	**90**	*e*P	**P**	**14 24 42.1**	**+0.8**
MCPB	**Macapa, AP**	**26.35**	**41**	*e*P	**P**	**14 24 46.0**	**+3.0**
NAN01	**Guarapari, ES**	**27.31**	**88**	*e*P	**P**	**14 24 52.8**	**+1.2**
GUA01	**Guaratinga, BA**	**27.88**	**86**	*e*P	**P**	**14 24 58.5**	**+1.7**
ROSB	**Rosrio**	**30.13**	**56**	*e*P	**P**	**14 25 19.8**	**+3.1**

*IDC **13** 14:38:34.9±0.6, 62.°26S×165.°43E, h0km, mb4.6/12, mbtmp4.6/14, ML4.3/2, MS4.4/40, Error ellipse: s-maj=25.6km s-min=13.7km az=81.0*
*BJI **13** 14:38:35.6±0.0, 62.°06S×165.°68E, h17km, mb5.3/4, mB5.7/2, Ms5.0/2, Ms7 4.7/2*
*NEIC **13** 14:38:35.1±2.1, 62.°18S±0.°09×165.°4E±0.°3, h10km±1km, mb4.8/30, Error ellipse: s-maj=25.8km s-min=14.9km az=88.0*
*GCMT **13** 14:38:39.1±0.2, 62.°21S±0.°01×165.°44E±0.°03, h16km±1km, MW5.2/108, Moment Tensor Solution. s59,c76; s108,c174; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.12±.02; $M_{\theta\theta}$=0.76±.02; $M_{\phi\phi}$=-0.63±.02; $M_{r\theta}$=0.43±.06; $M_{\theta\phi}$=-0.21±.01; $M_{\phi r}$=0.00±.05; Best double couple: M_0=0.81700×10^{17} NP1:ϕ_s=233.00000°, δ81.00000°, λ159.00000°. NP2:ϕ_s=326.00000°, δ69.00000°, λ10.00000°. Principal axes: T 0.9550, Plg22.0000°, Azm188.0000°; N -0.2770, Plg67.0000°, Azm30.0000°; P -0.6780, Plg8.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 14:38:36.1±0.4, 62.°25S±0.°06×165.°4E±0.°1, h10km, n136, σ1§47/86, mb4.7/22, MS4.5/42, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.38**	**183**	Pn	**Pn**	**14 42 11.8**	**-1.1**
	3.1nm,0.3s,baz=358,slow=13,SNR=190						
VNDA				LR	LR	14 47 14.3	
	comp=Z,5μm,18.1s,baz=8.0,slow=34						
	11nm,0.4s						
VNDA	**Vanda**	**15.38**	**183**	Pn	**Pn**	**14 42 11.7**	**-1.1**
VNDA				IAmb	IAmb	14 42 23.9	
	comp=Z,55nm,1.1s						
SBA	**Scott Base**	**15.68**	**179**	Pn	**Pn**	**14 42 17.0**	**+0.3**
DCZ	**Deep Cove**	**16.86**	**4**	Pn	**Pn**	**14 42 26.6**	**-5.3**
DCZ				IAmb	IAmb	14 42 50.1	
	comp=Z,55nm,1.1s						
MLZ	**Mavora Lakes**	**17.00**	**7**		**Pn**	**14 42 32.8**	**-1.0**
RPZ	**Rata Peaks**	**18.87**	**13**	P	**P**	**14 42 56.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=90,slow=14,SNR=2.5						
RPZ				LR	LR	14 49 08.5	
	comp=Z,4μm,20.4s,baz=232,slow=34						
	comp=Z,12nm,0.9s						
RPZ	**Rata Peaks**	**18.87**	**13**		**P**	**14 42 52.4**	**-3.8**
RPZ				IAmb	IAmb	14 43 02.5	
	comp=Z,28nm,0.9s						
THZ	**Tophouse**	**21.01**	**16**	P	**P**	**14 43 18.9**	**-0.7**
THZ				IAmb	IAmb	14 43 28.5	
	comp=Z,58nm,1.0s						
BSWZ	**Blackbirch Sta**	**21.19**	**18**	P	**P**	**14 43 20.7**	**-0.8**
CASY	**Casey**	**23.47**	**236**	P	**P**	**14 43 43.5**	**-1.8**
URZ	**Urewera**	**25.09**	**22**	P	**P**	**14 44 01.4**	**+0.9**
	comp=Z,31nm,1.1s,baz=286,slow=4.9,SNR=6.7						
URZ				LR	LR	14 53 43.7	
	comp=Z,3μm,18.7s,baz=276,slow=36						
	comp=Z,31nm,1.1s						
URZ	**Urewera**	**25.09**	**22**	P	**P**	**14 43 59.3**	**-1.2**
URZ				IAmb	IAmb	14 44 02.5	
	comp=Z,38nm,1.1s						
TOO	**Toolangi**	**27.59**	**324**	P	**P**	**14 44 24.2**	**+0.9**
	baz=28						
QSPA	**South Pole Qui**	**27.84**	**180**	P	**P**	**14 44 26.0**	**+0.6**
	comp=Z,11nm,1.0s,baz=9.5,slow=3.7,SNR=20						
QSPA				LR	LR	14 53 59.5	
	comp=Z,1μm,19.0s,baz=29,slow=33						
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**27.84**	**180**	P	**P**	**14 44 24.9**	**-0.5**
QSPA				IAmb	IAmb	14 44 35.0	
	comp=Z,21nm,1.1s						
CNB	**Canberra Magne**	**28.78**	**332**	P	**P**	**14 44 35.0**	**+1.1**
	baz=29						
CMSA	**Cobar Meteorol**	**33.25**	**328**	P	**P**	**14 45 14.5**	**+1.3**
	baz=33						
HTT	**Hallett**	**33.38**	**317**	P	**P**	**14 45 16.0**	**+1.6**
	baz=33,SNR=5.0						
STKA	**Stephens Creek**	**34.02**	**322**	P	**P**	**14 45 21.1**	**+1.2**
	comp=Z,4.8nm,0.7s,baz=160,slow=10.0,SNR=9.7						
STKA				LR	LR	14 56 54.8	
	comp=Z,722nm,19.4s,baz=156,slow=32						
	comp=Z,4.8nm,0.7s						
STKA	**Stephens Creek**	**34.02**	**322**	P	**P**	**14 45 21.2**	**+1.3**
	baz=34,SNR=6.3						
STKA	**Stephens Creek**	**34.02**	**322**	P	**P**	**14 45 18.8**	**-1.2**
RAO	**Raoul Island**	**34.78**	**26**	LR	LR	14 58 53.4	
	comp=Z,371nm,18.4s,baz=154,slow=35						
BBOO	**Buckleboo**	**34.89**	**314**	P	**P**	**14 45 28.8**	**+1.3**
	baz=35						
BBOO	**Buckleboo**	**34.89**	**314**	P	**P**	**14 45 27.9**	**+0.4**
BBOO				IAmb	IAmb	14 45 35.7	
	comp=Z,24nm,1.1s						
RMQ	**Roma**	**37.44**	**335**	P	**P**	**14 45 50.8**	**+1.5**
	baz=37,SNR=5.4						
EIDS	**Eidsvold**	**38.11**	**339**	P	**P**	**14 45 53.0**	**-2.0**
EIDS				IAmb	IAmb	14 45 56.5	
	comp=Z,11nm,1.1s						
MAW	**Mawson**	**38.97**	**217**	P	**P**	**14 46 02.9**	**+1.2**
	comp=Z,4.9nm,0.9s,baz=134,slow=9.8,SNR=8.7						
MAW				LR	LR	15 02 00.0	
	comp=Z,1μm,21.4s,baz=124,slow=36						
	comp=Z,4.9nm,0.9s						
MAW	**Mawson**	**38.97**	**217**	P	**P**	**14 46 03.1**	**+1.4**
	baz=39,SNR=5.1						
MAW	**Mawson**	**38.97**	**217**	P	**P**	**14 46 01.4**	**-0.3**
BELA	**Belgrano 2**	**39.58**	**173**	P	**P**	**14 46 05.4**	**-1.4**
FORT	**Forrest**	**39.61**	**305**	P	**P**	**14 46 09.3**	**+1.8**
	baz=40						
FORT	**Forrest**	**39.61**	**305**	P	P	14 46 04.0	-3.5
ONTNC	**Ouen Toro**	**39.93**	**2**	P	**P**	**14 46 07.6**	**-2.6**
ONTNC				IAmb	IAmb	14 46 14.3	
	comp=Z,25nm,1.1s						
DZM	**Mont Dzumac**	**40.16**	**2**	*e*P	**P**	**14 46 12.9**	**+0.6**
	comp=Z,57nm,1.5s						
DZM				*e*S	**S**	**14 52 20.6**	**+1.8**
	comp=Z,75nm,26.8s						
DZM				*e*LR	LR	14 57 12.5	
	comp=Z,499nm,25.5s						
DZM	**Mont Dzumac**	**40.16**	**2**	P	**P**	**14 46 13.2**	**+1.0**
	comp=Z,14nm,1.0s,baz=208,slow=3.8,SNR=7.5						
DZM				LR	LR	15 01 33.2	
	comp=Z,456nm,18.9s,baz=185,slow=34						
	comp=Z,14nm,1.0s						
H01W1	**Cape Leeuwin H**	**41.90**	**286**	T	T	15 31 10.4	
	baz=146,slow=76,SNR=2090						
H01W2	**Cape Leeuwin H**	**41.91**	**286**	T	T	15 31 10.7	
	baz=146,slow=76,SNR=2044						
H01W3	**Cape Leeuwin H**	**41.92**	**286**	T	T	15 31 11.6	
	baz=146,slow=76,SNR=1765						
NWAO	**Narrogin (SRO)**	**42.20**	**291**	LR	LR	14 59 41.7	
	comp=Z,790nm,20.8s,baz=47,slow=30						
ASAR	**Alice Springs**	**44.05**	**317**	P	**P**	**14 46 43.7**	**-0.2**
	comp=Z,11nm,0.8s,baz=162,slow=7.9,SNR=92						
ASAR				PcP	**PP**	**14 48 29.3**	**+2.9**
	comp=Z,2.5nm,1.0s,baz=178,slow=4.6,SNR=2.8						
ASAR				LR	LR	15 03 55.4	
	comp=Z,297nm,18.5s,baz=166,slow=34						
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**44.05**	**317**	P	**P**	**14 46 42.9**	**-1.0**
AS31	**Alice Springs**	**44.05**	**317**	P	**P**	**14 46 42.0**	**-1.9**
AS31				IAmb	IAmb	14 46 50.7	
	comp=Z,8.0nm,0.8s						
CTA	**Charters Tower**	**44.16**	**334**	LR	LR	15 03 01.8	
	comp=Z,665nm,18.6s,baz=160,slow=33						
CTAO	**Charters Tower**	**44.16**	**334**	P	**P**	**14 46 42.3**	**-2.5**
CTAO				IAmb	IAmb	14 47 05.0	
	comp=Z,9.1nm,0.9s						
BLDU	**Ballidu**	**44.41**	**292**	P	**P**	**14 46 45.7**	**-1.0**
	baz=44						
WRKA	**Warakurna**	**44.71**	**309**	P	**P**	**14 46 48.8**	**-0.3**
	baz=45,SNR=18						
QIS	**Mount Isa**	**45.29**	**325**	P	**P**	**14 46 53.7**	**-0.1**
	baz=45,SNR=6.5						
MSVF	**Nonsavu**	**45.36**	**17**	LR	LR	15 03 48.8	
	comp=Z,1μm,19.0s,baz=218,slow=33						
TROLL	**Troll, Antarti**	**45.49**	**187**	P	**P**	**14 46 55.0**	**0.0**
MORW	**Morawa**	**46.04**	**293**	P	**P**	**14 46 58.9**	**-0.7**
	baz=46,SNR=3.3						
MORW	**Morawa**	**46.04**	**293**	P	**P**	**14 46 58.4**	**-1.3**
MORW				IAmb	IAmb	14 47 08.3	
	comp=Z,15nm,1.1s						
SNAA	**Sanae**	**46.10**	**185**	P	**P**	**14 46 59.9**	**+0.2**
SNAA	**Sanae**	**46.10**	**185**	P	**P**	**14 46 59.8**	**0.0**
	comp=Z,10nm,0.9s,baz=170,slow=8.6,SNR=37						
SNAA				LR	LR	15 05 34.4	
	comp=Z,1μm,19.2s,baz=181,slow=35						
	comp=Z,10nm,0.9s						
SNAA	**Sanae**	**46.10**	**185**	P	**P**	**14 46 59.8**	**0.0**
MTSU	**Mount Surprise**	**46.47**	**332**	P	**P**	**14 47 03.7**	**+0.5**
	baz=46,SNR=4.6						
VNA3	**Neumayer Olymp**	**46.73**	**182**	P	**P**	**14 47 04.5**	**-0.2**
VNA2	**Neumayer--Watz**	**47.00**	**183**	P	**P**	**14 47 06.5**	**-0.2**
	baz=167,slow=6.9						
VNA1	**Neumayer--Stat**	**47.30**	**183**	P	**P**	**14 47 09.2**	**+0.2**
WR0	**Warramunga Arr**	**47.32**	**319**	P	**P**	**14 47 08.2**	**-1.5**
WB2	**Warramunga Arr**	**47.39**	**319**	P	**P**	**14 47 10.1**	**-0.2**
	baz=47						
WB2	**Warramunga Arr**	**47.39**	**319**	P	**P**	**14 47 09.7**	**-0.6**
WB2				IAmb	IAmb	14 47 16.9	
	comp=Z,19nm,1.1s						
WRA	**Warramunga Arr**	**47.40**	**319**	P	**P**	**14 47 09.5**	**-0.8**
	comp=Z,5.2nm,1.1s,baz=160,slow=6.7,SNR=17						
WRA				PcP	**PcP**	**14 48 39.7**	**-1.1**
	comp=Z,1.5nm,1.0s,baz=152,slow=3.4,SNR=2.9						
WRA				LR	LR	15 05 30.2	
	comp=Z,317nm,19.5s,baz=156,slow=34						
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**47.40**	**319**	P	**P**	**14 47 10.6**	**+0.2**
WRAB	**Tennant Creek**	**47.40**	**319**	P	**P**	**14 47 09.1**	**-1.3**
WB0	**Warramunga Arr**	**47.54**	**319**	P	P	14 47 07.3	-4.2
PMSA	**Palmer Station**	**48.09**	**154**	LR	LR	15 04 06.9	
	comp=Z,267nm,20.6s,baz=223,slow=32						
TBI	**Tubuai**	**49.35**	**59**	*e*LR	LR	15 01 30.6	
	comp=Z,584nm,23.2s						
TBI				*e*LR	LR	15 01 30.6	
	comp=Z,11μm,23.0s						
TBI	**Tubuai**	**49.35**	**59**	*e*T	T	15 40 18.6	
	comp=Z,158nm,0.3s						
COEN	**Coen**	**50.76**	**332**	P	**P**	**14 47 37.1**	**+0.9**
	baz=51						
AFI	**Afiamalu**	**50.96**	**29**	LR	LR	15 07 21.9	
	comp=Z,144nm,21.6s,baz=196,slow=34						
PSA00	**Pilbara Seismi**	**51.08**	**301**	P	P	14 47 35.4	-3.1
PSA00				IAmb	IAmb	14 47 46.4	
	comp=Z,24nm,1.4s						
MBWA	**Marble Bar**	**51.49**	**302**	P	P	14 47 36.5	-5.1
MBWA				IAmb	IAmb	14 47 50.3	
	comp=Z,14nm,1.1s						
HNR	**Honiara**	**52.87**	**353**	LR

JCJ	**Chichijima**	**90.96**	**339**	LR	LR	15 25 56.1
	comp=Z,51nm,21.1s,baz=110,slow=31					
LPAZ	**La Paz**	**91.21**	**129**	P	**P**	**14 51 42.3 +0.2**
	comp=Z,2.4nm,1.0s,baz=59,slow=1.4,SNR=7.3					
LPAZ				LR	LR	15 23 25.4
	comp=Z,153nm,21.8s,baz=150,slow=30					
	comp=Z,2.4nm,1.0s					
NNA	**Nana**	**91.79**	**120**	LR	LR	15 23 43.9
	comp=Z,247nm,20.1s,baz=198,slow=30					
PALK	**Pallekele**	**93.89**	**278**	LR	LR	15 27 45.6
	comp=Z,163nm,18.4s,baz=254,slow=31					
TSUM	**Tsumeb**	**94.89**	**210**	LR	LR	15 31 57.2
	comp=Z,653nm,21.7s,baz=150,slow=34					
ATAH	**Atahualpa**	**95.53**	**117**	LR	LR	15 25 16.7
	comp=Z,224nm,21.2s,baz=227,slow=29					
LSZ	**Lusaka**	**95.73**	**221**	LR	LR	15 33 31.7
	comp=Z,128nm,19.6s,baz=164,slow=34					
CMAR	**Chiang Mai Arr**	**95.76**	**299**	P	**P**	**14 52 02.1 0.0**
	comp=Z,0.8nm,1.0s,baz=191,slow=3.9,SNR=7.6					
CMAR				LR	LR	15 33 14.6
	comp=Z,115nm,19.1s,baz=180,slow=34					
	comp=Z,0.8nm,1.0s					
JHJ	**Hachijo jima 2**	**97.26**	**339**	LR	LR	15 34 04.3
	comp=Z,84nm,20.0s,baz=244,slow=34					
BDFB	**Brasilia**	**98.03**	**148**	LR	LR	15 35 51.1
	comp=Z,130nm,18.2s,baz=93,slow=35					
NJ2	**Nanjing**	**101.14**	**321**	*e*P	**Pdif**	**14 52 28.6 +2.8**
NJ2				pmax	pmax	
	comp=Z,6.0nm,0.5s					
PZH	**PanZhiHua**	**101.88**	**305**	P	**Pdif**	**14 52 31.5 +2.0**
PZH				pmax	pmax	
	comp=Z,60nm,4.6s					
H06S1	**SOCORRO T**	**103.49**	**76**	T	T	16 48 18.7
	SNR=57					
HHC	**Hu-ho-hao-te**	**111.47**	**319**	*e*PKP	**PKiKP**	**14 57 10.3 +0.7**
WMQ	**Urumqi**	**122.51**	**303**	*e*PKP	**PKPdf**	**14 57 31.8 +1.1**
PDAR	**Pinedale Array**	**124.64**	**63**	PKP	**PKPdf**	**14 57 35.9 +0.9**
	comp=Z,0.4nm,0.8s,baz=157,slow=4.2,SNR=3.8					
MKAR	**Makanchi Array**	**127.11**	**301**	PKP	**PKPdf**	**14 57 37.5 -1.8**
	comp=Z,0.5nm,0.9s,baz=88,slow=2.1,SNR=1.9					
TORD	**Torodi Ar. Bea**	**129.59**	**201**	PKP	**PKPdf**	**14 57 43.2 -1.8**
	comp=Z,0.2nm,0.3s,baz=292,slow=26,SNR=2.6					
ILAR	**Eielson Array**	**131.57**	**25**	PKP	**PKPdf**	**14 57 48.7 +1.5**
	comp=Z,0.9nm,0.8s,baz=237,slow=2.7,SNR=4.9					
TIXI	**Tiksi**	**135.98**	**344**	PKP	**PKPdf**	**14 57 55.0 -0.2**
	comp=Z,1.2nm,0.9s,baz=90,slow=23,SNR=1.5					
BRTR	**Keskin Array B**	**143.39**	**255**	PKP	**PKPdf**	**14 58 11.7 +1.7**
	comp=Z,0.4nm,0.4s,baz=268,slow=30,SNR=2.1					
AKASG	**Malin Array Be**	**153.71**	**264**	PKP	**PKPdf**	**14 58 27.6 +1.6**
	comp=Z,0.3nm,0.3s,baz=50,slow=1.4,SNR=2.4					
AKASG				PKPbc	**PKiKP**	**14 58 36.3 +2.3**
	comp=Z,0.2nm,0.3s,baz=82,slow=2.3,SNR=5.4					
KLMR	**Klimovskoe**	**154.79**	**291**	*e*PKPdf	**PKPbc**	**14 58 34.0 -1.8**
KLMR				AMP		14 58 52.0
	comp=Z,17nm,1.6s					
ESDC	**Sonseca Array**	**156.47**	**201**	PKPab	**PKPab**	**14 58 59.4 +0.4**
	comp=Z,1.9nm,1.1s,baz=190,slow=1.6,SNR=4.3					
GERES	**GERESS Array B**	**159.32**	**243**	PKPab	**PKPab**	**14 59 12.3 +1.1**
	comp=Z,1.4nm,0.8s,baz=141,slow=6.3,SNR=5.1					
CLL	**Collm**	**161.47**	**246**	*e*PKPdf	**PKPdf**	**14 58 37.0 +1.3**
CLL				*e*PKPab	**PKPab**	**14 59 19.0 -1.4**
CLL				*e*(sPKPab)		14 59 28.0
	comp=Z,7.0nm,1.0s					

*MOS **13** 15:13:06.9±0.0, 43°.07N×44°.02E, h5km, MPVA3.4*
*TIF **13** 15:13:07.0, 43°.11N×44°.11E, h7km±2km*
*NORS **13** 15:13:07.0±0.0, 43°.07N×44°.07E, h10km, MPVA3.5*
*DRS **13** 15:13:16.5±0.0, 43°.40N×44°.07E, h25km*
ISC 13 15:13:08.2±0.8, 43°.09N±0°.02×44°.07E±0°.01, h6km±5km, n48, σ1§00/93, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORR	**Kora**	**0.00**	**303**	*e*Pg	**Pg**	**15 13 09.3**	**0.0**
KORR				*e*Sg	**Sg**	15 13 10.2	+0.2
ARNR	**Ardon**	**0.18**	**59**	*i* Pg	**Pg**	15 13 11.4	-0.4
ARNR				*e*Sg	**Sg**	15 13 14.8	+0.5
LSNR	**Lesken**	**0.26**	**317**	*i* Pg	**Pg**	15 13 14.1	+0.7
LSNR				*e*Sg	**Sb**	15 13 19.4	-0.9
STDR	**Stavd-Durt**	**0.28**	**359**	*e*Pg	**Pg**	15 13 14.4	+0.7
STDR				*e*Sg	**Sb**	15 13 20.1	-0.7
LACR	**Lac**	**0.31**	**147**	*e*Pg	**Pg**	15 13 13.8	-0.4
LACR				*e*Sg	**Sg**	15 13 19.0	+0.7
ZEI	**Tsey**	**0.32**	**203**	*i* Pg	**Pg**	15 13 14.6	+0.1
ZEI				*e*Sg	**Sg**	15 13 19.6	+0.8
DIGR	**Digorskoe uzhe**	**0.40**	**243**	*i* Pg	**Pg**	15 13 16.2	+0.2
DIGR				*e*Sg	**Sg**	15 13 21.9	+0.5
VLKR	**Vladikavkaz**	**0.45**	**95**	*e*Pg	**Pb**	15 13 19.0	+0.4
VLKR				*e*Sg	**Sb**	15 13 25.9	+0.4
KMGR	**Komgaron**	**0.58**	**92**	*e*Pg	**Pn**	15 13 23.2	0.0
KMGR				*e*Sg	**Sn**	15 13 32.3	-0.8
PNSH	**Pansheti**	**0.60**	**138**	P	**Pg**	15 13 18.9	-0.9
PNSH				S	**Sg**	15 13 27.6	-0.1
PNSH	**Pansheti**	**0.60**	**138**	*e*Pg	**Pg**	15 13 18.9	-0.9
PNSH				*e*Sg	**Sg**	15 13 27.6	-0.1
ONI	**Oni**	**0.67**	**223**	P	**Pg**	15 13 21.5	+0.4
ONI				S	**Sb**	15 13 31.9	-0.1
ONI	**Oni**	**0.67**	**223**	*e*Pg	**Pg**	15 13 21.5	+0.4
ONI				*e*Sg	**Sb**	15 13 31.9	-0.1
GUDG	**Gudauri**	**0.69**	**154**	P	**Pg**	15 13 21.6	+0.1
GUDG				S	**Sg**	15 13 31.6	+1.2
GUDG	**Gudauri**	**0.69**	**154**	*e*Pg	**Pg**	15 13 21.6	+0.1
GUDG				*e*Sg	**Sg**	15 13 31.6	+1.2
TRKR	**Terskaya**	**0.80**	**37**	*e*Pg	**Pn**	15 13 25.3	-0.8
TRKR				*e*Sg	**Sn**	15 13 39.1	+0.8
KBTC	**Kuba-Taba**	**0.88**	**327**	*i* Pg	**Pn**	15 13 26.9	-0.3
KBTC				*e*Sg	**Sn**	15 13 40.2	-0.1
SHTL	**Shatili**	**0.91**	**118**	P	**Pb**	15 13 24.7	-1.7
SHTL				S	**Sb**	15 13 38.0	-0.8
SHTL	**Shatili**	**0.91**	**118**	*e*Pg	**Pb**	15 13 24.7	-1.7
SHTL				*e*Sg	**Sb**	15 13 38.0	-0.8
NEY	**Neytrino**	**1.00**	**280**	*i* Pg	**Pb**	15 13 26.9	-1.2
NEY				*i* Sg	**Sb**	15 13 40.7	-0.9
ALIG	**Mtskhetisjvari**	**1.03**	**198**	P	**Pb**	15 13 28.1	-0.4
ALIG				S	**Sn**	15 13 43.3	-0.7
ALIG	**Mtskhetisjvari**	**1.03**	**198**	*e*Pg	**Pb**	15 13 28.1	-0.4
ALIG				*e*Sg	**Sn**	15 13 43.3	-0.7
KBZ	**Khabaz**	**1.07**	**307**	*e*Pg	**Pb**	15 13 28.4	-0.7
KBZ				*e*Sg	**Sn**	15 13 44.2	-0.8
TKB	**Tkibuli**	**1.08**	**228**	P	**Pb**	15 13 29.4	+0.1
TKB				S	**Sn**	15 13 45.0	-0.3
TKB	**Tkibuli**	**1.08**	**228**	*e*Pg	**Pb**	15 13 29.4	+0.1
TKB				*e*Sg	**Sn**	15 13 45.0	-0.3
SHA1	**Shidzhatmaz**	**1.22**	**303**	*i* Pg	**Pb**	15 13 31.6	-0.2
SHA1				*e*Sg	**Sg**	15 13 48.8	+1.4
GROC	**Groznyy**	**1.27**	**84**	*e*Pg	**Pg**	15 13 35.2	+2.6
GROC				*e*Sg	**Sg**	15 13 51.2	+2.2
BEYR	**Belyy Ugol+**	**1.30**	**316**	*e*Pg	**Pb**	15 13 33.1	0.0
BEYR				*i* Sg	**Sg**	15 13 51.6	+1.7
KIV0	**Kislovodsk Arr**	**1.32**	**312**	*e*Pg	**Pb**	15 13 33.4	-0.2
KIV0				*i* Sg	**Sg**	15 13 52.5	+1.7
KIV	**Kislovodsk**	**1.33**	**311**	*i* Pg	**Pb**	15 13 33.2	-0.5
KIV				*e*Sg	**Sg**	15 13 51.9	+0.9
DVE	**Vedeno**	**1.51**	**94**	*e*Pg	**Pb**	15 13 36.6	-0.2
ABS	**Abastumani**	**1.62**	**215**	P	**Pb**	15 13 38.8	+0.2
ABS				S	**Sg**	15 14 01.7	+1.4
ABS	**Abastumani**	**1.62**	**215**	*e*Pg	**Pb**	15 13 38.8	+0.2
ABS				*e*Sg	**Sg**	15 14 01.7	+1.4
BTLR	**Botlikh**	**1.64**	**104**	*e*Pg	**Pg**	15 13 40.0	+0.4
BTLR				*e*Sg	**Sg**	15 14 02.3	+1.5
GHRG	**Ghorjomi**	**1.86**	**224**	*e*Pg	**Pn**	15 13 41.6	+0.7
GHRG				*e*Sg	**Sg**	15 14 08.1	+0.2
ALER	**Alexandrovskoy**	**1.87**	**334**	*e*Pg	**Pb**	15 13 42.0	-0.9
ALER				*e*Sg	**Sg**	15 14 07.5	-0.9
DLMR	**Dylym**	**1.88**	**90**	*e*Pg	**Pb**	15 13 41.7	-1.2
DLMR				*e*Sg	**Sb**	15 14 07.0	+0.4
XNZR	**Khunzakh**	**2.01**	**105**	*e*Pg	**Pg**	15 13 46.9	+0.1
XNZR				*e*Sg	**Sg**	15 14 11.9	-1.0
DBC	**Dubki**	**2.02**	**91**	*e*Pg	**Pb**	15 13 45.1	-0.4
DBC				*e*Sg	**Sb**	15 14 11.5	+0.6
LGD	**Lagodekhi**	**2.04**	**127**	P	**Pb**	15 13 45.6	-0.1
LGD				S	**Sg**	15 14 13.2	-0.5
LGD	**Lagodekhi**	**2.04**	**127**	*e*Pg	**Pb**	15 13 45.6	-0.1
LGD				*e*Sg	**Sg**	15 14 13.2	-0.5
UNCR	**Uncukul**	**2.04**	**100**	*e*Pg	**Pg**	15 13 47.1	-0.2
UNCR				*e*Sg	**Sb**	15 14 12.2	+1.0
KRNR	**Karanay**	**2.10**	**96**	*e*Pg	**Pn**	15 13 44.9	+0.8
KRNR				*e*Sg	**Sb**	15 14 12.9	-0.2
ARKR	**Arakani**	**2.21**	**102**	*e*Pg	**Pb**	15 13 48.7	+0.2
ARKR				*e*Sg	**Sb**	15 14 16.6	+0.4
DDFL	**Dedoflistskaro**	**2.24**	**136**	P	**Pg**	15 13 51.0	0.0
DDFL				S	**Sg**	15 14 24.5	+4.5
GNBR	**Gunib**	**2.24**	**107**	*e*Pn	**Pg**	15 13 50.9	-0.3
GNBR				*e*Sn	**Sg**	15 14 18.9	-1.3
KMKR	**Kumukh**	**2.43**	**112**	*e*Sn	**Sb**	15 14 22.1	-0.6
VSLR	**Vesyoloye**	**2.97**	**279**	*e*Pn	**Pb**	15 13 58.8	-2.8

*IDC **13** 16:02:01.6±1.9, 7°.72S×127°.44E, h0km, mb3.7/1, mbtmp3.5/4, ML3.4/3, MS4.7/1, Error ellipse: s-maj=61.7km s-min=31.2km az=76.0*
ISC 13 16:02:15.9±1.1, 7°.57S±0°.07×128°.8E±0°.2, h150km, n12, σ3§88/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.72**	**156**	P	**Pn**	**16 03 38.3**	**-0.7**
KDU	**Kakadu**	**6.24**	**145**	P	**Pn**	16 03 45.8	-0.1
SIJI	**Sorong**	**7.10**	**20**	Pn	**Pn**	16 03 56.3	-1.1
	1.1nm,0.3s,baz=168,slow=22,SNR=23						
SIJI				Sn	**Sn**	16 05 15.4	-1.6
	0.4nm,0.3s,baz=237,slow=23,SNR=1.6						
	3.2nm,0.4s						
KNRA	**Kununurra**	**8.05**	**180**	P	**Pn**	16 04 08.2	-1.9
WRA	**Warramunga Arr**	**13.42**	**157**	Pn	**Pn**	16 05 18.6	-2.1
	0.2nm,0.3s,baz=326,slow=14,SNR=2.4						
WRA				Sn	Sn	16 07 38.1	-11
	0.6nm,0.3s,baz=338,slow=22,SNR=6.1						
	0.2nm,0.3s						
COEN	**Coen**	**15.49**	**115**	P	**P**	16 05 49.1	+1.4
	9.7nm,1.9s						
ASAR	**Alice Springs**	**16.74**	**164**	Pn	**Pn**	16 06 02.2	+0.4
	0.1nm,0.3s,baz=337,slow=11,SNR=14						
ASAR				Sn	**S**	16 08 59.5	-8.4
	0.2nm,0.3s,baz=332,slow=18,SNR=4.3						
	0.5nm,0.7s						
AS01	**Alice Springs**	**16.75**	**163**	P	**Pn**	16 06 06.3	+4.4
WRKA	**Warakurna**	**17.37**	**181**	P	**Pn**	16 06 10.9	+1.5
OOD	**Oodnadatta**	**21.15**	**163**	P	**P**	16 06 55.8	+6.6
URZ	**Urewera**	**53.15**	**133**	LR	LR	16 35 07.1	
	comp=Z,634nm,19.4s,baz=106,slow=37						
MKAR	**Makanchi Array**	**68.05**	**328**	P	**P**	16 12 59.4	+0.1
	0.5nm,0.5s,baz=114,slow=7.5,SNR=3.8						
	0.5nm,0.5s						

*IDC **13** 16:10:24.0±0.9, 55°.88S×26°.89W, h0km, mb4.3/6, mbtmp4.3/6, Error ellipse: s-maj=38.5km s-min=23.0km az=64.0*
*NEIC **13** 16:10:35±2.1, 56°.1S±0°.1×27°.3W±0°.2, h87km±2km, mb4.5/18, Error ellipse: s-maj=21.0km s-min=13.5km az=204.0*
ISC 13 16:10:32.0±0.6, 56°.00S±0°.10×27°.14W±0°.09, h63km, n35, σ1§06/36, mb4.5/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.63**	**284**	Pn	**Pn**	**16 11 55.5**	**+2.5**
HOPE				Sn	**Sn**	16 12 53.4	-2.9
VNA1	**Neumayer--Stat**	**16.83**	**158**	P	**P**	16 14 24.5	+0.3
VNA3	**Neumayer Olymp**	**17.02**	**161**	P	**Pn**	16 14 26.1	+0.7
VNA2	**Neumayer--Watz**	**17.22**	**158**	P	**Pn**	16 14 28.7	+0.8
	baz=315,slow=13						
VNA2				S	Sn	16 17 22.4	-16
SNAA	**Sanae**	**18.77**	**156**	P	**P**	16 14 45.0	-0.6
SNAA				S	S	16 18 03.4	-12
SNAA	**Sanae**	**18.77**	**156**	P	**P**	16 14 45.2	-0.5
PMSA	**Palmer Station**	**19.95**	**229**	P	**P**	16 15 00.0	+1.6
PMSA				IAmb	IAmb	16 15 10.9	
	comp=Z,59nm,1.5s						
TROLL	**Troll, Antarti**	**20.27**	**154**	P	**P**	16 15 02.0	-0.1
SMAI	**San Martin Ant**	**21.82**	**220**	P	**P**	16 15 19.7	+1.2
BELA	**Belgrano 2**	**22.12**	**184**	P	**P**	16 15 19.7	-2.0
PLTB	**Pedras Altas**	**30.49**	**312**	P	**P**	16 16 39.3	+0.6
PLTB				IAmb	IAmb	16 17 20.9	
	comp=Z,20nm,1.5s						
QSPA	**South Pole Qui**	**34.25**	**180**	P	**P**	16 17 10.8	-0.7
QSPA				IAmb	IAmb	16 17 12.7	
	comp=Z,2.9nm,0.5s						
MT02	**Curacav**	**37.80**	**288**	P	**P**	16 17 40.8	-1.2
MT02				IAmb	IAmb	16 17 49.7	
	comp=Z,13nm,1.3s						
MAW	**Mawson**	**40.17**	**144**	P	**P**	16 18 01.5	+0.2
	comp=Z,0.7nm,0.3s,baz=214,slow=6.9,SNR=2.1						
	comp=Z,0.7nm,0.3s						
LVC	**Limon Verde**	**45.30**	**300**	P	**P**	16 18 44.1	+0.3
	comp=Z,3.9nm,0.4s,baz=166,slow=4.2,SNR=3.6						
	comp=Z,3.9nm,0.4s						
SBA	**Scott Base**	**46.13**	**184**	P	**P**	16 18 49.1	-0.1
PB09	**IPOC Station P**	**46.15**	**300**	P	**P**	16 18 50.9	+0.6
PB07	**IPOC Station P**	**46.53**	**300**	P	**P**	16 18 52.1	-1.2
VNDA	**Vanda**	**46.62**	**183**	P	**P**	16 18 54.4	+1.2
	comp=Z,3.6nm,0.7s,baz=188,slow=7.1,SNR=30						
	comp=Z,3.6nm,0.7s						
VNDA	**Vanda**	**46.62**	**183**		**P**	16 18 53.1	0.0
VNDA				IAmb	IAmb	16 18 55.1	
	comp=Z,3.4nm,0.7s						
VNDA				PcP	**PcP**	16 20 25.0	-0.9
PB02	**IPOC Station P**	**46.88**	**300**	P	**P**	16 18 56.5	+0.6
PB01	**IPOC Station P**	**46.91**	**300**	P	**P**	16 18 56.6	+0.4
PB01				IAmb	IAmb	16 18 57.4	
	comp=Z,7.0nm,0.7s						
PB01				PcP	**PcP**	16 20 28.0	+0.1
PB08	**IPOC Station P**	**47.52**	**301**	P	**P**	16 19 02.2	+0.9
PB08				IAmb	IAmb	16 19 42.7	
	comp=Z,6.3nm,1.0s						
PB08				PcP	**PcP**	16 20 29.1	-1.4
GO01	**Chusmiza**	**47.95**	**302**	P	**P**	16 19 05.4	+0.7
GO01				IAmb	IAmb	16 19 40.5	
	comp=Z,7.2nm,1.1s						
LBTB	**Lobatse**	**48.97**	**73**	P	**P**	16 19 12.3	+0.3
LBTB				IAmb	IAmb	16 19 14.7	
	comp=Z,7.9nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.06**	**17**	T	T	17 12 39.0	
	baz=187						
H10N3	**ASCENSION HYDR**	**49.07**	**17**	T	T	17 13 06.1	
	baz=187						
H10N2	**ASCENSION HYDR**	**49.08**	**17**	T	T	17 12 57.5	
	baz=187						
LPAZ	**La Paz**	**50.37**	**305**	P	**P**	16 19 24.1	+0.8
	comp=Z,2.0nm,0.4s,baz=130,slow=2.4,SNR=4.8						
	comp=Z,2.0nm,0.4s						
LPAZ	**La Paz**	**50.37**	**305**	P	**P**	16 19 23.3	0.0
LPAZ				IAmb	IAmb	16 19 24.7	
	comp=Z,3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.00**	**29**	P	**P**	16 21 54.4	-0.3
	comp=Z,0.7nm,0.4s,baz=195,slow=6.3,SNR=8.9						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**99.03**	**162**	P	**Pdif**	16 24 06.3	+0.5
	comp=Z,0.4nm,0.7s,baz=184,slow=5.0,SNR=11						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**102.74**	**162**	P	**Pdif**	16 24 22.9	+0.5
	comp=Z,0.4nm,0.9s,baz=198,slow=4.5,SNR=1.9						
ZALV	**Zalesovo Beam**	**142.32**	**64**	PKP	**PKiKP**	16 29 58.2	-0.8
	comp=Z,0.5nm,0.4s,baz=242,slow=3.1,SNR=1.7						
ILAR	**Eielson Array**	**150.11**	**312**	PKPbc	**PKPbc**	16 30 14.0	+0.1
	comp=Z,1.5nm,0.7s,baz=107,slow=0.9,SNR=12						

*TAP **13** 16:11:06.7, 24°.87N×122°.49E, h19km±1km, ML2.8, D*
*JMA **13** 16:11:07.0±0.2, 25°.N±1°.×122°.5E±0°.6, h6km, MV2.7/7, NW OFF ISHIGAKIJIMA IS*
ISC 13 16:11:06.9±1.1, 24°.85N±0°.04×122°.49E±0°.03, h11km±11km, n59, σ0§39/65, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48**	**290**	*i* P	**Pg**	**16 11 16.4**	**+0.1**
	baz=287						
TWB1				S	**Sg**	16 11 23.0	+0.3
	baz=287						
JYNG	**Yonagunijimaku**	**0.57**	**133**	P	**Pg**	16 11 18.2	+0.1
JYNG				S	**Sg**	16 11 26.0	+0.3
SXI1	**Grass Mountain**	**0.61**	**294**	*i* P	**Pb**	16 11 19.1	-0.5
	baz=292						
TIPB	**Shuangxi**	**0.61**	**282**	P	**Pb**	16 11 19.2	-0.4
	baz=280						
TIPB				*e*S	**Sb**	16 11 28.8	+0.5
	baz=280						
YOJ	**Yonaguni jima**	**0.61**	**129**	*i* P	**Pg**	16 11 18.8	0.0
	baz=123						
YOJ				*i* S	**Sg**	16 11 27.0	+0.2
	baz=123						
YOJ	**Yonaguni jima**	**0.61**	**129**	P	**Pg**	16 11 18.6	-0.1
YOJ				S	**Sg**	16 11 26.4	-0.4
TWC	**Suao**	**0.63**	**248**	*e*P	**Pg**	16 11 19.1	+0.1
	baz=252						
TWC				*e*S	**Sg**	16 11 27.2	-0.1
	baz=252						
NWF	**Wu-fen Shan**	**0.68**	**289**	P	**Pb**	16 11 20.6	-0.2
	baz=288						
WFSB	**Wu-fen Shan**	**0.68**	**289**	P	**Pb**	16 11 20.5	-0.3
	baz=287						
TNOU	**National Taiwa**	**0.71**	**295**	*e*P	**Pb**	16 11 21.1	-0.3
	baz=293						
TWE	**Neicheng**	**0.76**	**261**	*e*P	**Pg**	16 11 21.6	+0.2
	baz=258						
EWUT	**Wuta**	**0.76**	**238**	*e*P	**Pg**	16 11 20.7	-0.8
	baz=237						
FUSB	**Fushanzhiwuyua**	**0.82**	**264**	P	**Pb**	16 11 23.0	-0.3
	baz=262						
TWA	**Mucha**	**0.83**	**279**	P	**Pg**	16 11 23.0	+0.1
	baz=278						
ENTT	**Nioudou**	**0.86**	**256**	*e*P	**Pg**	16 11 23.0	-0.5
	baz=254						
YM08	**YM08**	**0.88**	**293**	*e*P	**Pb**	16 11 24.1	-0.2
	baz=291						
YM01	**YM01**	**0.88**	**290**	*e*P	**Pb**	16 11 24.0	-0.3
	baz=288						
TWY	**Chenhua**	**0.91**	**298**	*e*P	**Pn**	16 11 25.1	-0.6
	baz=297						
TATO	**Taipei**	**0.92**	**278**	*e*P	**Pg**	16 11 24.5	0.0
	baz=277						
LATG	**Datong**	**0.93**	**251**	P	**Pg**	16 11 24.8	+0.1
	baz=249						
ANP	**Anpu**	**0.94**	**291**	*e*P	**Pb**	16 11 25.1	-0.2
	baz=290						
NTST	**Danshui**	**0.99**	**289**	*e*P	**Pg**	16 11 26.0	0.0
	baz=287						
TWS1	**Kuangyinshan**	**1.00**	**285**	*e*P	**Pn**	16 11 27.6	+0.7
	baz=284						
YHNB	**Yeheng**	**1.02**	**260**	*e*P	**Pg**	16 11 26.8	+0.2
	baz=269						
NSK	**Sanguang**	**1.04**	**261**	*e*P	**Pb**	16 11 25.7	-1.3
	baz=268						
ETL	**Fush Village**	**1.04**	**229**	*e*P	**Pb**	16 11 26.9	-0.1
	baz=228						
NACB	**Ninganchiao**	**1.05**	**231**	*e*P	**Pb**	16 11 26.9	-0.2
	baz=229						
NNSB	**Datong**	**1.09**	**248**	*e*P	**Pg**	16 11 27.8	0.0
	baz=246						
NNS	**Nan Shan**	**1.09**	**248**	*e*P	**Pb**	16 11 27.4	-0.5
	baz=247						
TWD	**Chiawan**	**1.11**	**227**	*e*P	**Pb**	16 11 28.1	-0.1
	baz=235						
ETLH	**Xiulin Townshi**	**1.11**	**235**	*e*P	**Pb**	16 11 28.1	-0.1
	baz=234						
IRIF	**Iriomote-Funau**	**1.24**	**114**	*e*P	**Pb**	16 11 30.5	+0.1
ETM	**Tongmen**	**1.26**	**226**	*e*P	**Pg**	16 11 31.2	+0.1
	baz=209						
FUSS	**Fushou**	**1.28**	**242**	*e*P	**Pg**	16 11 31.9	+0.4
	baz=241						
WHF	**Hehuan Shan**	**1.31**	**238**	P	**Pb**	16 11 31.8	0.0
	baz=249						
TWT	**Tachien**	**1.33**	**244**	*e*P	**Pg**	16 11 33.3	+0.8
	baz=243						
LIOB	**Emei**	**1.35**	**262**	*e*P	**Pg**	16 11 33.7	+0.9
	baz=261						
NSTT	**Nanjuang**	**1.37**	**261**	*e*P	**Pg**	16 11 33.4	+0.3
	baz=260						
ESL	**Shilin**	**1.41**	**223**	*e*P	**Pb**	16 11 33.0	-0.3
	baz=222						
CHGB	**Renai**	**1.43**	**237**	*e*P	**Pb**	16 11 33.6	-0.1
	baz=220						
OWD	**Renai**	**1.49**	**234**	*e*P	**Pb**	16 11 34.7	0.0
	baz=216						
WUSB	**Renai**	**1.51**	**236**	*e*P	**Pb**	16 11 35.0	-0.1
	baz=218						
JKRS	**Kuro-shima**	**1.51**	**113**	*e*P	**Pb**	16 11 34.8	-0.2
EGFH	**Guangfu**	**1.52**	**220**	*e*P	**Pb**	16 11 35.2	0.0
	baz=204						
JIJ	**Ishigaki jima**	**1.58**	**107**	S	**Sb**	16 11 56.0	-0.2
WPL	**Puli Township**	**1.62**	**239**	*e*P	**Pg**	16 11 38.0	-0.1
	baz=224						
NSY	**Sanyi**	**1.63**	**255**	*e*P	**Pg**	16 11 37.7	-0.4
	baz=269						
DPDB	**Guoxing**	**1.64**	**241**	*e*P	**Pg**	16 11 38.0	-0.3
	baz=240						
WCS	**Beigang Elemen**	**1.64**	**242**	*e*P	**Pb**	16 11 36.7	-0.4
	baz=241						
VWDT	**V

RAO Raoul Island 12.88 203 Pn Pn 16 22 04.5 -5.0
GLKZ Green Lake 12.89 203 P **Pn** **16 22 08.4 -1.2**
RTV Rentapao 18.52 266 P **Pn** **16 23 24.9 +1.8**
DVP Devils Point 18.75 266 P **Pn** **16 23 25.9 0.0**
MARNC **Mare, Loyalty 19.11 255** **P** **16 23 25.7 -3.7**
MARNC **Mare, Loyalty 19.11 255** P **Pn** **16 23 31.4 +1.1**
LIFNC LIFOU 19.75 257 P **P** **16 23 33.7 -2.8**
OUENC **Ouen Island, N 20.36 253** P **P** **16 23 41.0 -2.1**
OUENC **Ouen Island, N 20.36 253** P Pn 16 23 45.1 0.0
DZM Mont Dzumac 20.66 254 *e*Pn **P** **16 23 43.4 -3.0**
125nm,1.7s
DZM *e*LR LR 16 28 41.0
comp=Z,2μm,25.3s
DZM Mont Dzumac 20.66 254 P **P** **16 23 44.7 -1.8**
11nm,0.9s,baz=86,slow=18,SNR=6.4
DZM LR LR 16 30 50.2
comp=Z,2μm,18.1s,baz=86,slow=34
11nm,0.9s
DZM Mont Dzumac 20.66 254 P **P** **16 23 43.8 -2.6**
DZM Mont Dzumac 20.66 254 P Pn 16 23 47.8 -1.0
ONTNC **Ouen Toro 20.69 253** P **P** **16 23 45.6 -1.1**
ONTNC **Ouen Toro 20.69 253** P Pn 16 23 49.7 +0.7
NOUC Port Laguerre 20.80 254 P **P** **16 23 48.8 +1.0**
PAE Paea 21.52 94 *e*P **P** **16 24 00.0 +4.4**
29nm,1.3s
PPT2 Papeete2 21.52 94 *e*P **P** **16 23 58.0 +2.3**
137nm,1.3s
PPT2 *e*S **S** **16 27 53.9 -0.5**
901nm,17.2s
PPT2 *e*LQ LQ 16 28 13.2
3μm,26.8s
PPT2 *e*LR LR 16 29 08.0
comp=Z,2μm,25.8s
PPT2 *e*LR LR 16 29 08.1
comp=Z,2μm,23.5s
PPT Papeete 21.52 94 P **P** **16 23 58.8 +3.1**
99nm,1.1s,baz=274,slow=14,SNR=7.2
PPT LR LR 16 30 53.2
comp=Z,868nm,18.6s,baz=258,slow=33
99nm,1.1s
PPTF Pamatai, Papee 21.53 94 P **P** **16 23 55.5 -0.4**
PPTF IAmb IAmb 16 24 02.9
comp=Z,159nm,1.2s
MXZ Matakaoa Point 21.72 201 P **P** **16 23 57.6 0.0**
MXZ IAmb IAmb 16 24 18.2
comp=Z,194nm,1.7s
MXZ Matakaoa Point 21.72 201 P **P** **16 24 03.2 +5.6**
TVO Taravao 21.82 94 *e*P **P** **16 24 03.2 +4.3**
comp=Z,12nm,1.0s
WMGZ Waiomatatini S 21.92 200 P **P** **16 24 03.2 +3.5**
KUZ Kuaotunu 22.01 207 P **P** **16 24 04.8 +4.1**
TBI Tubuai 22.04 109 *e*LQ LQ 16 28 27.0
comp=Z,1μm,38.5s
TBI *e*LR LR 16 29 23.0
comp=Z,40μm,24.2s
TBI *e*LR LR 16 29 23.2
comp=Z,2μm,23.0s
HAZ Te Kaha 22.08 202 P **P** **16 24 03.6 +2.2**
PKGZ Pakihiroa 22.09 201 P **P** **16 24 03.9 +2.2**
RUGZ Raukumara Rang 22.30 202 P **P** **16 24 08.5 +4.5**
TWGZ Tauwhareparae 22.39 201 P P 16 24 12.5 +7.7
TWGZ S **S** **16 28 06.6 -4.1**
KOUNC **Koumac, New Ca 22.49 258** P **P** **16 24 09.2 +3.2**
CNGZ Carnagh Statio 22.59 200 P **P** **16 24 11.0 +4.0**
CNGZ S **S** **16 28 12.9 -1.4**
OPRZ Ohinepanea 22.61 204 P **P** **16 24 14.2 +7.0**
TKGZ Te Karaka 22.67 201 P P 16 24 15.5 +7.7
MWZ Matawai 22.68 201 P **P** **16 24 10.7 +2.8**
MWZ S **S** **16 28 11.4 -4.7**
URZ Urewera 22.77 202 P **P** **16 24 10.7 +1.9**
comp=Z,214nm,0.7s,baz=58,slow=3.2,SNR=30
URZ S **S** **16 28 16.8 -0.6**
comp=Z,18nm,0.7s,baz=308,slow=23,SNR=6.0
comp=Z,214nm,0.7s
URZ Urewera 22.77 202 P **P** **16 24 09.0 +0.2**
URZ **S** **16 28 13.9 -3.5**
URZ Urewera 22.77 202 P **P** **16 24 12.0 +3.3**
URZ S **S** **16 28 12.3 -5.2**
URZ Urewera 22.77 202 P **P** **16 24 12.1 +3.3**
RAGZ Rawiri 22.87 201 P **P** **16 24 16.4 +6.5**
OMRZ Omania 22.91 204 P **P** **16 24 17.3 +7.0**
RIGZ Rimuhau 22.94 201 P **P** **16 24 16.3 +5.7**
RIGZ S **S** **16 28 19.9 -0.6**
TARZ Mount Tarawera 22.97 203 P **P** **16 24 17.8 +6.7**
UTU Utuhina 23.04 204 P P 16 24 19.5 +7.8
HLRZ Highlands Stat 23.04 204 P **P** **16 24 18.6 +6.9**
RRRZ Republican Roa 23.06 203 P **P** **16 24 18.7 +6.9**
MUGZ Murupara 23.08 203 P **P** **16 24 17.4 +5.3**
MUGZ S **S** **16 28 21.9 -1.1**
RTZ Ruatahuna 23.13 202 P **P** **16 24 18.6 +6.0**
SNGZ Shannon Statio 23.15 201 P P 16 24 20.6 +7.8
GRRZ Galatos Road 23.22 204 P **P** **16 24 20.3 +6.8**
PRRZ Plateau Road 23.24 203 P **P** **16 24 19.4 +5.7**
KNZ Kokohu 23.25 200 P **P** **16 24 17.8 +4.1**
KNZ S **S** **16 28 25.2 -0.5**
MHGZ Mahia Peninsul 23.30 200 P **P** **16 24 19.1 +4.9**
ALRZ Allen Road 23.32 203 P **P** **16 24 20.8 +6.4**
RAHZ Arahi 23.36 202 P **P** **16 24 18.8 +3.9**
MTHZ Maungataniwha 23.39 202 P **P** **16 24 20.9 +5.7**
PMOR Pomariorio Ree 23.41 88 *e*P **P** **16 24 17.2 +1.6**
comp=Z,126nm,1.4s
MRHZ Matea Rd 23.53 203 P **P** **16 24 22.3 +5.7**
TARA Tarawa 23.79 320 P **P** **16 24 18.0 -1.3**
BKZ Black Stump Fm 23.79 202 P **P** **16 24 19.5 +0.3**
BKZ IAmb IAmb 16 24 31.9
comp=Z,63nm,0.8s
BKZ Black Stump Fm 23.79 202 P **P** **16 24 22.2 +3.1**
BKZ Black Stump Fm 23.79 202 P **P** **16 24 22.3 +3.1**
HIZ Hauiti 23.86 206 P **P** **16 24 21.8 +2.0**
HIZ Hauiti 23.86 206 P **P** **16 24 25.2 +5.4**
BFZ Birch Farm 25.23 201 P **P** **16 24 34.0 +1.8**
BFZ IAmb IAmb 16 24 37.8
comp=Z,61nm,0.9s
BFZ Birch Farm 25.23 201 P **P** **16 24 34.9 +2.7**
PLWZ Palliser 26.36 202 P **P** **16 24 42.7 +0.2**
TUWZ Tuamarina 26.72 204 P **P** **16 24 45.7 -0.1**
NNZ Nelson 26.76 205 P **P** **16 24 45.8 -0.3**
NNZ IAmb IAmb 16 25 10.8
comp=Z,79nm,1.3s
KHZ Kahutara 27.72 203 P **P** **16 25 00.6 +5.9**
HNR Honiara 28.26 283 LR LR 16 34 22.1
comp=Z,19μm,20.4s,baz=119,slow=33
OXZ Oxford 29.07 204 P **P** **16 25 07.4 +0.6**
RPZ Rata Peaks 29.79 205 P **P** **16 25 15.7 +2.5**
comp=Z,8.9nm,0.9s,baz=24,slow=12,SNR=2.7
comp=Z,8.9nm,0.9s
FOZ Fox Glacier 30.15 207 P **P** **16 25 19.2 +2.9**
TAOE Nuku Hiva Isla 32.27 79 *e*S **S** **16 30 51.0 +2.0**
comp=Z,153nm,27.0s
TAOE *e*LR LR 16 34 05.0
comp=Z,1μm,23.5s
EIDS Eidsvold 35.04 251 P **P** **16 25 58.0 -1.4**
baz=35,SNR=4.4
EIDS Eidsvold 35.04 251 P **P** **16 25 57.0 -2.5**
EIDS IAmb IAmb 16 25 58.8
comp=Z,29nm,1.1s
EIDS Eidsvold 35.04 251 P **P** **16 26 00.3 +0.9**
ARMA Armidale 35.38 242 P **P** **16 26 02.3 -0.1**
baz=35,SNR=5.4
ARMA Armidale 35.38 242 P **P** **16 26 01.0 -1.4**
ARMA IAmb IAmb 16 27 12.4
comp=Z,68nm,1.7s
RMQ Roma 37.23 249 P **P** **16 26 17.9 -0.3**
baz=37,SNR=5.5
RMQ Roma 37.23 249 P **P** **16 26 17.7 -0.5**
RABL Rabaul 37.36 286 P **P** **16 26 15.1 -4.2**
RABL IAmb IAmb 16 26 19.1
comp=Z,65nm,1.2s
RABL Rabaul 37.36 286 P **P** **16 26 21.0 +1.6**
KRVT Keravat (AS076 37.44 286 P **P** **16 26 20.4 +0.4**
comp=Z,112nm,1.1s,baz=107,slow=22,SNR=4.7
KRVT LR LR 16 40 52.7
comp=Z,400nm,18.3s,baz=262,slow=35
comp=Z,112nm,1.1s
CNB Canberra Magne 38.51 235 P **P** **16 26 28.9 0.0**
baz=38,SNR=8.5
CAN Canberra 38.79 235 P **P** **16 26 30.6 -0.7**
CAN IAmb IAmb 16 26 34.3
comp=Z,88nm,1.8s
CAN Canberra 38.79 235 P **P** **16 26 30.6 -0.7**
CAN pmax pmax
comp=Z,88nm,1.8s
CTA Charters Tower 39.41 259 P **P** **16 26 34.7 -1.9**
comp=Z,15nm,0.7s,baz=96,slow=10.0,SNR=21
CTA LR LR 16 40 19.0
comp=Z,520nm,22.0s,baz=89,slow=32
comp=Z,15nm,0.7s
CTA Charters Tower 39.41 259 P **P** **16 26 34.9 -1.7**
CTAO Charters Tower 39.41 259 P **P** **16 26 34.0 -2.6**
CTAO Charters Tower 39.41 259 P **P** **16 26 34.0 -2.6**
CTAO pmax pmax
comp=Z,17nm,0.8s
CTAO Charters Tower 39.41 259 P **P** **16 26 34.9 -1.7**
PMG Port Moresby 40.31 276 P **P** **16 26 43.5 -0.7**
comp=Z,20nm,0.9s,baz=90,slow=11,SNR=4.9
PMG LR LR 16 41 39.3
comp=Z,348nm,19.3s,baz=86,slow=34
comp=Z,20nm,0.9s
PMG Port Moresby 40.31 276 P **P** **16 26 40.7 -3.5**
PMG Port Moresby 40.31 276 *i* P **P** **16 26 41.8 -2.3**
PMG pmax pmax
comp=Z,20nm,1.0s
POHA Pohakuloa 40.42 25 P **P** **16 26 41.3 -3.8**
CMSA Cobar Meteorol 40.60 242 P **P** **16 26 45.9 -0.4**
baz=40,SNR=18
CMSA Cobar Meteorol 40.60 242 P **P** **16 26 45.9 -0.4**
KEKH Kekaha 41.04 18 P **P** **16 26 47.2 -2.7**
QLP Quilpie 41.28 249 P **P** **16 26 51.1 -1.0**
baz=41,SNR=17
QLP Quilpie 41.28 249 P **P** **16 26 51.3 -0.7**
MTSU Mount Surprise 41.39 262 P **P** **16 26 51.2 -1.8**
baz=41,SNR=17
MTSU Mount Surprise 41.39 262 P **P** **16 26 51.2 -1.8**
TOO Toolangi 42.15 233 P **P** **16 26 59.7 +0.7**
baz=42,SNR=10
TOO Toolangi 42.15 233 P **P** **16 26 59.0 0.0**
TOO IAmb IAmb 16 27 02.3
comp=Z,54nm,1.1s
TOO Toolangi 42.15 233 P **P** **16 26 59.0 0.0**
TOO pmax pmax
comp=Z,54nm,1.1s
TOO Toolangi 42.15 233 P **P** **16 27 00.2 +1.2**
MANU Manus Island 42.60 287 P **P** **16 27 02.3 -0.7**
MANU IAmb IAmb 16 27 09.1
comp=Z,40nm,1.1s
MANU Manus Island 42.60 287 P **P** **16 27 06.8 +3.8**
comp=Z,40nm,1.1s
TAU Tasmania Unive 42.67 225 P **P** **16 27 02.6 -0.6**
TAU Tasmania Unive 42.67 225 P **P** **16 27 02.6 -0.6**
TAU pmax pmax
comp=Z,222nm,2.0s
COEN Coen 43.08 268 P **P** **16 27 06.4 -0.5**
baz=43,SNR=8.0
COEN Coen 43.08 268 P **P** **16 27 05.3 -1.5**
COEN Coen 43.08 268 P **P** **16 27 06.4 -0.5**
STKA Stephens Creek 44.10 242 P **P** **16 27 14.8 0.0**
comp=Z,34nm,1.1s,baz=94,slow=9.4,SNR=31
STKA LR LR 16 42 41.1
comp=Z,655nm,21.4s,baz=76,slow=32
comp=Z,34nm,1.1s
STKA Stephens Creek 44.10 242 P **P** **16 27 14.8 0.0**
baz=44,SNR=19
STKA Stephens Creek 44.10 242 P **P** **16 27 13.8 -1.1**
STKA Stephens Creek 44.10 242 *i* P **P** **16 27 13.7 -1.1**
STKA Stephens Creek 44.10 242 P **P** **16 27 14.8 0.0**
INKA Innaminka 44.45 248 P **P** **16 27 18.3 +0.6**
ARPS Mount Arapiles 44.77 235 P **P** **16 27 20.8 +0.6**
baz=44,SNR=9.5
ARPS Mount Arapiles 44.77 235 P **P** **16 27 21.5 +1.4**
QIS Mount Isa 45.60 258 P **P** **16 27 27.0 0.0**
baz=45,SNR=3.9
QIS Mount Isa 45.60 258 P **P** **16 27 29.5 +2.5**
HTT Hallett 46.54 240 P **P** **16 27 34.2 -0.1**
baz=46,SNR=13
HTT Hallett 46.54 240 P **P** **16 27 34.4 +0.1**
LCRK Leigh Creek 46.83 244 P **P** **16 27 36.8 +0.3**
BBOO Buckleboo 48.86 241 P **P** **16 27 52.2 0.0**
baz=49,SNR=43
BBOO Buckleboo 48.86 241 P **P** **16 27 51.7 -0.5**
BBOO Buckleboo 48.86 241 P **P** **16 27 52.4 +0.2**
OOD Oodnadatta 48.93 248 P **P** **16 27 53.5 +0.7**
GENI Genyem 49.06 282 P **P** **16 27 55.3 +1.3**
WR0 Warramunga Arr 50.39 258 P **P** **16 28 02.4 -1.7**
MULG Mulgathing 50.41 245 P **P** **16 28 03.9 -0.2**
WB0 Warramunga Arr 50.55 259 P **P** **16 28 03.7 -1.6**
WB0 IAmb IAmb 16 28 06.9
comp=Z,17nm,0.8s
WB2 Warramunga Arr 50.57 258 P **P** **16 28 03.5 -1.9**
WB2 IAmb IAmb 16 28 05.3
comp=Z,57nm,1.4s
WRAB Tennant Creek 50.57 258 P **P** **16 28 03.4 -2.1**
WRAB IAmb IAmb 16 28 05.3
comp=Z,52nm,1.4s
WRAB Tennant Creek 50.57 258 *ce*P **P** **16 28 03.7 -1.7**
WRAB pmax pmax
comp=Z,47nm,1.7s
WRAB Tennant Creek 50.57 258 P **P** **16 28 04.5 -0.9**
WB1 Warramunga Ar. 50.57 258 P **P** **16 28 04.2 -1.3**
WRA Warramunga Arr 50.58 258 P **P** **16 28 03.9 -1.6**
comp=Z,7.3nm,0.5s,baz=97,slow=6.8,SNR=276
WRA PcP **PcP** **16 29 25.1 +1.8**
comp=Z,4.4nm,0.8s,baz=98,slow=3.3,SNR=3.1
WRA S **S** **16 35 19.4 -0.7**
comp=Z,1.4nm,1.0s,baz=99,slow=13,SNR=5.9
WRA LR LR 16 47 40.3
comp=Z,474nm,20.1s,baz=93,slow=34
comp=Z,7.3nm,0.5s
WRA Warramunga Arr 50.58 258 P **P** **16 28 02.7 -2.9**
WRA PcP **PcP** **16 29 24.9 +1.6**
AS01 Alice Springs 50.61 253 P **P** **16 28 05.3 -0.4**
AS31 Alice Springs 50.65 253 P **P** **16 28 05.0 -1.1**
AS31 IAmb IAmb 16 28 09.4
comp=Z,25nm,0.8s
AS31 PcP **PcP** **16 29 23.7 +0.2**
ASAR Alice Springs 50.65 253 P **P** **16 28 05.5 -0.6**
comp=Z,102nm,0.9s,baz=89,slow=8.8,SNR=693
ASAR PcP **PcP** **16 29 25.1 +1.6**
comp=Z,6.2nm,0.7s,baz=102,slow=3.9,SNR=1.3
ASAR S **S** **16 35 15.3 -5.7**
comp=Z,2.5nm,0.9s,baz=92,slow=14,SNR=12
ASAR LR LR 16 48 40.7
comp=Z,550nm,18.2s,baz=88,slow=35
comp=Z,102nm,0.9s
ASAR Alice Springs 50.65 253 P **P** **16 28 04.5 -1.6**
ASAR PcP **PcP** **16 29 24.0 +0.4**
GUMO Guam 52.46 303 LR LR 16 47 41.5
comp=Z,125nm,19.9s,baz=115,slow=33
KDU Kakadu 53.54 267 P **P** **16 28 26.8 -0.8**
baz=53,SNR=4.2
MTN Manton Dam 54.78 266 P **P** **16 28 35.6 -1.1**
baz=54,SNR=7.6
MTN Manton Dam 54.78 266 P **P** **16 28 35.1 -1.6**
RKPI Ransiki, Papua 55.04 281 P P 16 28 50.8 +12
FORT Forrest 55.59 244 P **P** **16 28 42.4 +0.1**
baz=55,SNR=7.1
FORT Forrest 55.59 244 P **P** **16 28 41.2 -1.1**
FORT IAmb IAmb 16 28 43.0
comp=Z,28nm,0.8s
WRKA Warakurna 55.66 251 P **P** **16 28 42.8 -0.1**
baz=55,SNR=28
WRKA Warakurna 55.66 251 P **P** **16 28 43.0 +0.1**
FAKI Fak Fak 56.39 278 P **P** **16 28 48.3 0.0**
FAKI IAmb IAmb 16 29 02.1
comp=Z,36nm,1.1s
KNRA Kununurra 56.47 262 P **P** **16 28 48.2 -0.6**
baz=56,SNR=14
KNRA Kununurra 56.47 262 P **P** **16 28 47.8 -1.0**
KNRA IAmb IAmb 16 28 57.8
comp=Z,21nm,0.9s
KNRA Kununurra 56.47 262 P **P** **16 28 48.4 -0.4**
SIJI Sorong 57.99 280 LR LR 16 52 39.3
comp=Z,333nm,20.7s,baz=84,slow=35
RPN Rapa Nui 58.41 111 LR LR 16 47 26.7
comp=Z,183nm,20.3s,baz=210,slow=29
KRAI Karang Ratu 59.91 276 P **P** **16 29 15.9 +3.0**
comp=Z,9μm,comp=Z,56nm,0.4s
NLAI Namlea 61.16 276 P **P** **16 29 25.0 +3.5**
comp=Z,34nm,0.5s
SBA Scott Base 61.32 185 P **P** **16 29 23.1 +1.6**
SBA IAmb IAmb 16 29 26.3
comp=Z,22nm,0.9s
SBA Scott Base 61.32 185 P **P** **16 29 23.1 +1.6**
SBA pmax pmax
comp=Z,22nm,1.0s
VNDA Vanda 61.47 186 P **P** **16 29 25.8 +3.2**
comp=Z,9.7nm,1.0s,baz=7.4,slow=6.4,SNR=46
VNDA LR LR 16 53 34.7
comp=Z,167nm,18.5s,baz=7.0,slow=34
comp=Z,9.7nm,1.0s
VNDA Vanda 61.47 186 P **P** **16 29 24.4 +1.8**
VNDA IAmb IAmb 16 29 27.1
comp=Z,18nm,1.1s
LBMI Labuha 61.61 279 P **P** **16 29 28.6 +4.0**
comp=Z,1μmcomp=Z,57nm,1.2s
SOEI Soe 62.05 268 P **P** **16 29 26.8 -0.9**
SOEI Soe 62.05 268 P **P** **16 29 29.4 +1.8**
comp=Z,1μmcomp=Z,103nm,1.1s
SOEI Soe 62.05 268 P **P** **16 29 30.2 +2.6**
TNTI Ternate 62.21 280 P **P** **16 29 26.7 -1.9**
TNTI IAmb IAmb 16 29 33.0
comp=Z,24nm,0.9s
SANI Sanana 62.59 277 P **P** **16 29 34.5 +3.4**
comp=Z,698nmcomp=Z,49nm,1.0s
SANI Sanana 62.59 277 P **P** **16 29 34.5 +3.4**
comp=Z,49nm,1.0s
JCJ Chichijima 62.64 314 LR LR 16 52 30.5
comp=Z,238nm,20.0s,baz=108,slow=32
PSA00 Pilbara Seismi 63.79 254 P **P** **16 29 39.0 0.0**
PSA00 Pilbara Seismi 63.79 254 P **P** **16 29 38.4 -0.6**
PSA00 IAmb IAmb 16 29 40.8
comp=Z,94nm,1.9s
PSA00 Pilbara Seismi 63.79 254 P **P** **16 29 39.9 +0.9**
MBWA Marble Bar 63.96 255 P **P** **16 29 39.6 -0.5**
MBWA Marble Bar 63.96 255 P **P** **16 29 40.9 +0.8**
MMRI Maumere 64.27 269 P **P** **16 29 40.9 -1.3**
MMRI Maumere 64.27 269 P P 16 29 46.8 +4.6
comp=Z,38nm,0.9s
MMRI Maumere 64.27 269 P P 16 29 46.9 +4.7
comp=Z,53nm,1.0s
NWAO Narrogin (SRO) 64.68 241 LR LR 16 54 47.3
comp=Z,279nm,22.0s,baz=299,slow=33
NWAO Narrogin (SRO) 64.68 241 P **P** **16 29 46.1 +1.5**
baz=64,SNR=9.4
NWAO P **P** **16 29 46.1 +1.5**
baz=64,SNR=9.4
NWAO Narrogin (SRO) 64.68 241 P **P** **16 29 43.9 -0.8**
NWAO Narrogin (SRO) 64.68 241 P **P** **16 29 43.9 -0.8**
NWAO pmax pmax
comp=Z,151nm,1.2s
NWAO Narrogin (SRO) 64.68 241 P **P** **16 29 46.2 +1.5**
RKGY Rocky Gully 64.76 239 P **P** **16 29 47.0 +1.9**
baz=64,SNR=4.8
RKGY Rocky Gully 64.76 239 P **P** **16 29 47.0 +1.9**
BLDU Ballidu 65.36 244 P **P** **16 29 49.8 +0.7**
baz=65,SNR=21
BLDU Ballidu 65.36 244 P **P** **16 29 50.3 +1.2**
LUWI Luwuk 65.95 277 P **P** **16 29 52.6 -0.6**
LUWI Luwuk 65.95 277 P P 16 29 57.7 +4.5
comp=Z,1μmcomp=Z,97nm,1.1s
LUWI Luwuk 65.95 277 P P 16 29 57.8 +4.6
comp=Z,98nm,1.2s
MORW Morawa 66.12 245 P **P** **16 29 55.0 +1.0**
baz=66,SNR=19
MORW Morawa 66.12 245 P **P** **16 29 54.0 0.0**
MORW Morawa 66.12 245 P **P** **16 29 55.4 +1.4**
DAV Davao City (W) 66.15 286 LR LR 16 57 38.1
comp=Z,326nm,18.1s,baz=105,slow=35
GTOI Gorontalo 66.27 279 P P 16 30 02.9 +7.7
comp=Z,12nm,1.3s
APSI Ampana 67.06 277 P P 16 30 07.6 +7.3
comp=Z,1μmcomp=Z,93nm,1.4s
MRSI Marisa 67.23 278 P **P** **16 30 05.2 +3.9**
BNSI Bone 67.47 272 P **P** **16 30 04.6 +1.7**
comp=Z,583nmcomp=Z,33nm,1.2s
KAPI Kappang 67.63 272 LR LR 17 00 20.8
comp=Z,69nm,18.2s,baz=94,slow=37
KAPI Kappang 67.63 272 P **P** **16 30 03.1 -0.8**
KAPI IAmb IAmb 16 30 17.3
comp=Z,20nm,1.0s
KAPI Kappang 67.63 272 *i* P **P** **16 30 02.1 -1.8**
KAPI pmax pmax
comp=Z,23nm,1.0s
KAPI Kappang 67.63 272 P P 16 30 09.1 +5.2
comp=Z,26nm,1.1s
SPSI Sidrap Palu 67.92 273 P **P** **16 30 08.2 +2.5**
comp=Z,419nmcomp=Z,28nm,1.3s
PLAI Plampang 68.48 267 P **P** **16 30 10.3 +1.1**
comp=Z,1μmcomp=Z,115nm,1.1s
PLAI Plampang 68.48 267 P **P** **16 30 11.1 +1.9**
TOLI2 Tolitoli 68.53 278 P **P** **16 30 08.8 -0.7**
TOLI2 Tolitoli 68.53 278 P **P** **16 30 10.8 +1.3**
GIRL Giralia 68.73 252 P **P** **16 30 13.3 +2.6**
baz=68,SNR=3.2
GIRL Giralia 68.73 252 P **P** **16 30 10.1 -0.6**
GIRL Giralia 68.73 252 P **P** **16 30 13.7 +3.0**
CASY Casey 69.06 205 P **P** **16 30 12.5 +0.6**
CASY IAmb IAmb 16 30 15.1
comp=Z,22nm,1.1s
MPSI Mapaga 69.11 277 P **P** **16 30 14.8 +1.6**
comp=Z,566nmcomp=Z,22nm,0.8s
TWSI Taliwang, Sumb 69.35 267 P **P** **16 30 15.4 +0.7**
comp=Z,1μmcomp=Z,114nm,1.0s
SHEM Shemya Is, Ala 70.90 351 LR LR 16 57 13.9
comp=Z,326nm,18.9s,baz=118,slow=32
IGBI Denpasar 70.99 266 P **P** **16 30 26.7 +2.0**
comp=Z,1μmcomp=Z,116nm,1.2s
UNV Unalaska Valle 71.17 4 P **P** **16 30 24.5 -0.4**
UNV Unalaska Valle 71.17 4 P **P** **16 30 24.4 -0.4**
baz=186
MJAR Matsushiro Arr 71.27 320 P **P** **16 30 26.5 +0.5**
comp=Z,7.0nm,1.0s,baz=154,slow=5.9,SNR=7.0
MJAR LR LR 16 57 53.4
comp=Z,76nm,19.2s,baz=118,slow=33
comp=Z,7.0nm,1.0s
MAJO Matsushiro 71.28 320 P **P** **16 30 26.1 +0.1**
MAJO Matsushiro 71.28 320 P **P** **16 30 26.1 +0.1**
MAJO pmax pmax
comp=Z,13nm,1.1s
MJB9 Matsu-Tunnel 71.28 320 P **P** **16 30 25.9 -0.1**
JAGI Jajag, Banyuwa 72.03 267 P **P** **16 30 30.2 -0.7**
JAGI Jajag, Banyuwa 72.03 267 P **P** **16 30 31.3 +0.3**
JAGI Jajag, Banyuwa 72.03 267 P **P** **16 30 31.5 +0.5**
MYLDM **Lahad Datu 72.03 282** P **P** **16 30 30.7 -0.3**
SAO San Andreas Ge 72.07 41 P **P** **16 30 29.8 -0.9**
SAO IAmb IAmb 16 30 37.1
comp=Z,18nm,1.2s
SAO San Andreas Ge 72.07 41 P **P** **16 30 29.8 -0.9**
SAO pmax pmax
comp=Z,17nm,1.2s
BBGB Big Mountain B 72.21 41 P **P** **16 30 29.2 -2.5**
FALS False Pass 72.40 5 P **P** **16 30 31.0 -1.2**
baz=189
QSPA South Pole Qui 72.60 180 LR LR 17 00 41.8
comp=Z,246nm,18.0s,baz=45,slow=34
QSPA South Pole Qui 72.60 180 P **P** **16 30 35.7 +2.0**
QSPA IAmb IAmb 16 30 37.4
comp=Z,45nm,1.1s
JOW Kunigami 72.66 306 LR LR 17 00 39.6
comp=Z,57nm,18.1s,baz=121,slow=34
BAR Barrett 72.78 47 P **P** **16 30 32.0 -3.1**
BAR IAmb IAmb 16 30 41.1
comp=Z,47nm,1.9s
ELS Elsinore Mount 72.81 45 P **P** **16 30 33.8 -1.5**
ESJX Sierra Juarez 72.91 48 P **P** **16 30 36.9 +0.9**
ESJX IAmb IAmb 16 30 42.5
comp=Z,20nm,1.2s
MURC Murrieta 72.94 46 P **P** **16 30 35.6 -0.5**
baz=235
BFSC Mount Baldy Ra 73.00 45 P **P** **16 30 36.8 +0.3**
baz=234
MONP2 **Monument Peak 73.07 47** P **P** **16 30 36.9 -0.2**
baz=236
LPIG La Paz 73.10 57 LR LR 16 56 23.7
comp=Z,406nm,18.7s,baz=230,slow=31
RMX La Rumorosa 73.15 47 P **P** **16 30 36.6 -0.9**
RMX IAmb IAmb 16 30 43.6
comp=Z,17nm,1.1s
EDW2 Edwards Air Fo 73.15 44 P **P** **16 30 37.1 -0.1**
baz=234,SNR=10
IKP In-Ko-Pah, Jac 73.15 47 P **P** **16 30 37.2 -0.1**
baz=236
SFX San Felipe 73.16 49 P **P** **16 30 36.0 -1.3**
SFX IAmb IAmb 16 30 43.0
comp=Z,12nm,0.9s
SDPT Sand Point 73.19 7 P **P** **16 30 38.4 +1.5**
baz=192
YUH Yuha Desert 73.28 47 P **P** **16 30 37.2 -0.8**
YUH IAmb IAmb 16 30 44.1
comp=Z,21nm,1.3s
CCAC Calif City Air 73.29 44 P **P** **16 30 37.4 -0.7**
ISA Isabella, Lake 73.29 43 P **P** **16 30 37.5 -0.6**
ISA IAmb IAmb 16 30 44.5
comp=Z,44nm,1.6s
ISA Isabella, Lake 73.29 43 P **P** **16 30 37.5 -0.6**
ISA pmax pmax
comp=Z,44nm,1.7s

ISA	Isabella, Lake	73.29	43	P	P	16 30 37.9	-0.2
	baz=233						
SKR	Severo-Kuril's	73.36	340	eP	P	16 30 32.2	-5.8
SKR				pmax	pmax		
	comp=Z,59nm,1.2s						
SKR				MLR	MLR		
	comp=Z,200nm,19.0s						
PFO	Pinyon Flats O	73.45	46	P	P	16 30 40.1	+0.9
	comp=Z,6.6nm,1.0s,baz=229,slow=6.8,SNR=8.6						
PFO				LR	LR	16 58 27.8	
	comp=Z,594nm,18.4s,baz=254,slow=32						
	comp=Z,6.6nm,1.0s						
PFO	Pinyon Flats O	73.45	46	P	P	16 30 39.0	-0.1
PFO				IAmb	IAmb	16 30 45.3	
	comp=Z,17nm,1.1s						
PFO	Pinyon Flats O	73.45	46	P	P	16 30 39.8	+0.6
	baz=235						
TPFO	Pinon Flats	73.45	46	P	P	16 30 40.0	+0.9
	baz=235						
CMB	Columbia Colle	73.52	40	P	P	16 30 38.7	-0.7
CMB	Columbia Colle	73.52	40	P	P	16 30 38.7	-0.7
CMB				pmax	pmax		
	comp=Z,11nm,1.4s						
SWSC	Sam W. Stewart	73.53	47	P	P	16 30 39.5	0.0
	baz=236						
JHS	Saijyo	73.61	316	P	P	16 30 39.0	-0.9
JHS				IAmb	IAmb	16 30 46.5	
	comp=Z,28nm,1.1s						
LRMC	Laurel Mtn Rad	73.71	44	P	P	16 30 41.6	+1.0
	baz=234						
AFDM	Forest Hills D	73.74	39	P	P	16 30 39.4	-1.2
ORV	Oroville	73.81	38	P	P	16 30 39.8	-1.2
ORV	Oroville	73.81	38	P	P	16 30 39.8	-1.2
ORV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BELC	Belle Mtn. Jos	73.99	46	P	P	16 30 43.1	+0.8
	baz=236,SNR=6.1						
CWC	Cottonwood Cre	74.01	43	P	P	16 30 42.2	-0.2
	baz=234						
MDPB	Devils Postpil	74.09	41	P	P	16 30 41.6	-1.4
OMMB	Old Mammoth Mi	74.13	41	P	P	16 30 41.5	-1.8
BC3	Big Chuckawall	74.17	46	P	P	16 30 44.0	+0.7
	baz=236,SNR=7.2						
MPMC	Manual Prospec	74.17	43	P	P	16 30 44.1	+0.7
	baz=234,SNR=14						
GSC	Goldstone, Bar	74.19	44	P	P	16 30 41.4	-2.0
GSC				IAmb	IAmb	16 30 49.4	
	comp=Z,28nm,1.5s						
GSC	Goldstone, Bar	74.19	44	P	P	16 30 41.4	-2.0
GSC				pmax	pmax		
	comp=Z,28nm,1.5s						
GSC	Goldstone, Bar	74.19	44	P	P	16 30 44.1	+0.7
	baz=235						
HEC	Hector,Ludlow	74.23	45	P	P	16 30 44.8	+1.2
	baz=235						
GLA	Glamis	74.27	47	P	P	16 30 44.0	+0.2
GLA				IAmb	IAmb	16 30 50.4	
	comp=Z,32nm,1.2s						
GLA	Glamis	74.27	47	P	P	16 30 44.1	+0.2
GLA				pmax	pmax		
	comp=Z,32nm,1.3s						
GLA	Glamis	74.27	47	P	P	16 30 44.8	+0.9
	baz=237						
CHIR	Chirikof Islan	74.31	10	P	P	16 30 43.2	-0.3
	baz=196						
SPIA	Saint Paul Isl	74.36	1	P	P	16 30 43.9	+0.1
	baz=182						
CHGN	Chignik	74.37	8	P	P	16 30 43.8	0.0
	baz=194						
WAKR	Walker	74.40	40	P	P	16 30 44.6	-0.1
WAKR				IAmb	IAmb	16 30 59.7	
	comp=Z,35nm,1.9s						
KKM	Kota Kinabalu	74.46	282	P	P	16 30 44.5	-1.0
KKM	Kota Kinabalu	74.46	282	P	P	16 30 47.1	+1.6
YBH	Yreka Blue Hor	74.52	36	P	P	16 30 46.8	+1.7
	comp=Z,3.7nm,0.9s,baz=266,slow=16,SNR=4.2						
YBH				LR	LR	17 00 13.4	
	comp=Z,550nm,18.1s,baz=248,slow=33						
	comp=Z,3.7nm,0.9s						
GMRC	Granite Mounta	74.66	45	P	P	16 30 47.3	+1.1
	baz=236,SNR=6.5						
IRM	Iron Mountain	74.66	46	P	P	16 30 46.3	+0.2
	baz=236,SNR=15						
BEKR	Beckworth	74.68	39	P	P	16 30 44.7	-1.6
LCH	Last Change Ra	74.76	42	P	P	16 30 45.2	-1.5
GRAC	Grapevine Rang	74.80	43	P	P	16 30 46.9	0.0
	baz=234						
YERR	Yerington	74.82	40	P	P	16 30 45.6	-1.5
LHV	Little Huntoon	74.83	41	P	P	16 30 45.9	-0.9
TUQ	Turquoise Moun	74.85	45	P	P	16 30 48.0	+0.7
	baz=235						
SHOC	Shoshone, Teco	74.88	44	P	P	16 30 47.9	+0.6
	baz=235						
PEA0B	Petropavlovsk-	74.94	342	ceP	P	16 30 45.7	-1.6
PETK	Petropavlovsk-	74.94	342	P	P	16 30 47.7	+0.4
	comp=Z,7.0nm,0.8s,baz=123,slow=8.6,SNR=9.2						
PETK				LR	LR	16 59 03.7	
	comp=Z,78nm,20.8s,baz=153,slow=32						
	comp=Z,7.0nm,0.8s						
NVAR	Mina Array Bea	75.06	41	P	P	16 30 49.6	+1.0
	comp=Z,2.9nm,0.8s,baz=227,slow=10,SNR=22						
NVAR				LR	LR	16 59 21.8	
	comp=Z,545nm,18.1s,baz=262,slow=32						
	comp=Z,2.9nm,0.8s						
NVAR	Mina Array Bea	75.06	41	P	P	16 30 48.1	-0.4
214A	Organ Pipe Nat	75.12	49	P	P	16 30 48.8	0.0
	baz=238						
NV11	Mina Array Sit	75.15	41	P	P	16 30 48.7	-0.3
SII	Sitkinak Islan	75.26	10	P	P	16 30 49.9	+0.9
	baz=198						
PDMCI	Parker Dam,Lak	75.44	46	P	P	16 30 51.3	+0.8
	baz=237						
TPNV	Topopah Spring	75.50	43	IAmb	IAmb	16 30 57.5	
	comp=Z,39nm,1.9s						
TPNV	Topopah Spring	75.50	43	P	P	16 30 52.0	+1.0
	baz=235						
KVN	Kaiserville	75.56	41	P	P	16 30 49.6	-1.8
KVN				IAmb	IAmb	16 30 58.7	
	comp=Z,31nm,1.8s						
KVN	Kaiserville	75.56	41	P	P	16 30 49.6	-1.8
KVN				pmax	pmax		
	comp=Z,31nm,1.8s						
R16K	Pilot Point	75.72	8	P	P	16 30 52.4	+0.9
	baz=194						
YSS	Yuzh-Sakhalins	75.85	330	P	P	16 30 52.9	+0.3
YSS				IAmb	IAmb	16 31 10.6	
	comp=Z,29nm,1.0s						
YSS	Yuzh-Sakhalins	75.85	330	eP	P	16 30 53.4	+0.8
YSS				e		16 31 09.4	
YSS				eS	S	16 40 33.5	-1.2
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				pmax	pmax		
	comp=Z,400nm,3.6s						
YSS				smax	smax		
	comp=E,200nm,3.8s						
SHPR	Sheep Range	75.97	44	P	P	16 30 54.1	+0.4
SHPR				IAmb	IAmb	16 31 00.2	
	comp=Z,34nm,2.0s						
Y14A	Wickenburg	76.03	47	P	P	16 30 53.1	-1.0
OHAK	Old Harbor	76.04	10	P	P	16 30 54.2	+0.8
	baz=199						
Q17K	Contact Creek	76.63	9	P	P	16 30 57.4	+0.5
	baz=196						
KDAK	Kodiak Island	76.70	11	P	P	16 30 57.6	+0.5
	comp=Z,14nm,0.8s,baz=170,slow=6.3,SNR=4.3						
KDAK				LR	LR	17 04 08.1	
	comp=Z,281nm,18.6s,baz=210,slow=35						
	comp=Z,14nm,0.8s						
KDAK	Kodiak Island	76.70	11	P	P	16 30 57.6	+0.5
	baz=199						
NACB	Ninganchiao	76.73	301	P	P	16 30 57.2	-0.8
R11A	Troy Canyon, C	76.74	42	P	P	16 30 58.1	0.0
	baz=235						
TUC	Tucson	76.77	50	P	P	16 30 57.6	-0.6
TUC				IAmb	IAmb	16 31 05.0	
	comp=Z,23nm,1.2s						
TUC	Tucson	76.77	50	P	P	16 30 57.7	-0.6
TUC				pmax	pmax		
	comp=Z,23nm,1.2s						
TUC	Tucson	76.77	50	P	P	16 30 59.0	+0.7
	baz=239						
Q16K	King Salmon	76.92	8	P	P	16 30 58.3	0.0
	baz=195						
P16K	Nushagak River	77.09	7	P	P	16 30 58.6	-0.7
	baz=194						
Q18K	Katmai Hardscr	77.13	9	P	P	16 30 58.7	-1.0
	baz=197						
TPUB	Ta-pu	77.14	300	P	P	16 31 01.5	+1.0
WVOR	Wild Horse Val	77.30	38	P	P	16 31 00.1	-0.9
WVOR				IAmb	IAmb	16 31 10.4	
	comp=Z,29nm,1.8s						
WVOR	Wild Horse Val	77.30	38	P	P	16 31 00.2	-0.9
WVOR				pmax	pmax		
	comp=Z,29nm,1.8s						
P17K	Kvichak River	77.45	8	P	P	16 31 00.8	-0.5
	baz=195						
O16K	Kokwok River B	77.62	7	P	P	16 31 01.9	-0.4
	baz=194						
P18K	Big Mountain,	77.81	9	P	P	16 31 02.3	-1.2
P18K				IAmb	IAmb	16 31 04.2	
	comp=Z,21nm,0.8s						
P18K	Big Mountain,	77.81	9	P	P	16 31 02.7	-0.7
	baz=196						
I07A	Izee	77.83	36	IAmb	IAmb	16 31 05.8	
	comp=Z,21nm,1.6s						
O17K	Koliganek Bris	77.92	8	P	P	16 31 03.1	-0.9
	baz=195						
SZCU	Shurtz Canyon	77.95	44	P	P	16 31 02.9	-2.1
SZCU				IAmb	IAmb	16 31 12.7	
	comp=Z,38nm,1.9s						
J08A	Circle Bar Ran	77.96	37	IAmb	IAmb	16 31 12.0	
	comp=Z,30nm,1.6s						
WUAZ	Wupatki	78.00	47	P	P	16 31 04.2	-1.0
	baz=238						
O18K	Koth Hills	78.26	9	P	P	16 31 05.9	0.0
	baz=196						
ELK	Elko	78.34	41	LR	LR	17 02 18.6	
	comp=Z,615nm,18.1s,baz=259,slow=33						
P19K	Oil Pt	78.36	10	P	P	16 31 06.5	0.0
	baz=198						
N16K	Nishlik Lake	78.40	7	P	P	16 31 06.9	+0.2
	baz=193						
KSRS	Korea Array	78.46	315	P	P	16 31 09.7	+2.3
	comp=Z,7.1nm,1.0s,baz=130,slow=6.0,SNR=25						
KSRS				LR	LR	17 01 47.9	
	comp=Z,78nm,19.9s,baz=145,slow=33						
	comp=Z,7.1nm,1.0s						
KSM	Kuching	78.57	275	P	P	16 31 09.3	+0.6
KSM	Kuching	78.57	275	P	P	16 31 10.7	+2.0
HOM	Homer	78.63	10	P	P	16 31 07.5	-0.4
	baz=200						
LEM	Lembang	78.70	266	LR	LR	17 06 02.4	
	comp=Z,158nm,20.1s,baz=124,slow=36						
MTPU	Mount Pierson	78.79	44	P	P	16 31 09.8	0.0
N18K	Kilae Creek	78.96	8	P	P	16 31 09.1	-0.6
	baz=196						
121A	Cookes Peak, D	79.08	51	P	P	16 31 12.7	+1.4
	baz=241						
121A	Cookes Peak, D	79.08	51	P	P	16 31 11.2	-0.1
	baz=241						
BBB	Bella Bella	79.19	26	LR	LR	17 03 00.6	
	comp=Z,236nm,18.2s,baz=252,slow=33						
N19K	Bonanza Creek	79.28	9	P	P	16 31 09.6	-2.0
N19K				IAmb	IAmb	16 31 12.0	
	comp=Z,14nm,0.8s						
N19K	Bonanza Creek	79.28	9	P	P	16 31 11.1	-0.5
	baz=197,SNR=5.2						
SMAI	San Martin Ant	79.42	158	P	P	16 31 12.4	+0.1
Q23K	Middleton Isla	79.45	13	P	P	16 31 13.8	+1.4
	baz=205						
DUG	Dugway, Tooele	79.56	42	P	P	16 31 14.4	+0.7
	baz=237						
USRK	Ussuriysk Ar.	79.74	323	P	P	16 31 15.8	+1.5
	comp=Z,2.2nm,0.8s,baz=112,slow=1.0,SNR=6.3						
USRK				LR	LR	16 58 38.7	
	comp=Z,67nm,21.0s,baz=117,slow=30						
	comp=Z,2.2nm,0.8s						
V35K	Ketchikan	80.21	22	P	P	16 31 15.9	-0.7
	baz=219						
RC01	Rabbit Creek A	80.31	11	P	P	16 31 17.0	0.0
	baz=202						
M19K	Big River Lodg	80.34	8	IAmb	IAmb	16 31 17.6	
	comp=Z,90nm,1.9s						
M19K	Big River Lodg	80.34	8	P	P	16 31 16.6	-0.6
	baz=197						
PWL	Port Wells	80.36	12	P	P	16 31 17.0	-0.3
	baz=203						
HLID	Hailey	80.46	39	P	P	16 31 18.1	-0.4
	baz=235,SNR=10.0						
SUA	Susitna One	80.49	10	P	P	16 31 17.1	-1.1
SUA				IAmb	IAmb	16 31 18.6	
	comp=Z,22nm,1.1s						
SUA	Susitna One	80.49	10	P	P	16 31 17.8	-0.3
	baz=201						
M20K	Styx River	80.50	9	P	P	16 31 17.1	-1.1
	baz=198						
L19K	White Mountain	80.54	8	P	P	16 31 18.5	+0.2
	baz=197						
GLI	Glacier Island	80.62	12	P	P	16 31 18.7	0.0
	baz=204						
BNM	Barren Site	80.71	50	P	P	16 31 18.4	-1.7
TX31	Lajitas Ar. Si	80.77	55	P	P	16 31 21.8	+1.4
	baz=244						
TXAR	Lajitas Array	80.77	55	P	P	16 31 22.6	+2.3
	comp=Z,6.8nm,1.1s,baz=223,slow=6.8,SNR=17						
TXAR				LR	LR	17 03 28.0	
	comp=Z,254nm,18.0s,baz=262,slow=33						
	comp=Z,6.8nm,1.1s						
SKT	Skwentna	80.84	10	P	P	16 31 19.4	-0.5
	baz=200						
KNK	Knik Glacier	80.85	11	P	P	16 31 19.2	-0.8
	baz=203						
PMR	Palmer	80.89	11	P	P	16 31 19.7	-0.4
	baz=202						
L20K	Farewell, AK	80.96	8	P	P	16 31 19.9	-0.6
	baz=198,SNR=5.4						
TTA	Tatalina	81.12	7	IAmb	IAmb	16 31 26.2	
	comp=Z,67nm,1.9s						
TTA	Tatalina	81.12	7	P	P	16 31 22.0	+0.6
	baz=196						
ANMO	Albuquerque	81.21	49	LR	LR	17 02 11.9	
	comp=Z,381nm,18.1s,baz=254,slow=32						
ANMO	Albuquerque	81.21	49	P	P	16 31 20.2	-2.5
ANMO	Albuquerque	81.21	49	ceP	P	16 31 22.8	+0.1
ANMO				pmax	pmax		
	comp=Z,22nm,2.5s						
ANMO	Albuquerque	81.21	49	P	P	16 31 24.7	+2.0
	baz=242						
ANMO	Albuquerque	81.21	49	P	P	16 31 23.6	+0.9
	baz=242						
BMRM	Bremner River	81.22	13	P	P	16 31 21.5	-0.5
	baz=207						
PNL	Peninsula	81.34	16	P	P	16 31 22.8	+0.2
	baz=212						
MDJ	Mudanjiang	81.38	322	P	P	16 31 24.9	+1.8
MDJ				S	S	16 41 39.4	+5.4
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,250nm,5.0s						
KLU	Klutina	81.42	12	P	P	16 31 23.8	+0.7
	baz=205						
SCM	Sheep Creek Mo	81.45	12	P	P	16 31 22.9	-0.3
	baz=204						
PINM	Pinnacle	81.48	16	P	P	16 31 23.0	-0.4
	baz=211						
PPLA	Purkeypile	81.61	9	P	P	16 31 24.1	0.0
	baz=199						
NEW	Newport	81.73	34	LR	LR	17 03 51.9	
	comp=Z,736nm,18.3s,baz=232,slow=33						
P29M	Windy Craggy	81.75	17	P	P	16 31 25.0	+0.2
	baz=213						
K20K	Telida	81.78	8	P	P	16 31 25.5	+0.6
	baz=197						
N25K	Chitina, Valde	81.80	13	P	P	16 31 24.8	-0.2
	baz=206						
BELA	Belgrano 2	81.81	172	IAmb	IAmb	16 31 27.7	
	comp=Z,26nm,1.1s						
GLB	Gilahina Butte	81.82	13	IAmb	IAmb	16 31 26.9	
	comp=Z,56nm,1.8s						
PMSA	Palmer Station	81.82	156	LR	LR	17 00 28.8	
	comp=Z,300nm,19.0s,baz=252,slow=30						
CTG	Chitna Glacier	81.97	15	P	P	16 31 26.3	+0.2
	baz=210						
BARN	Barnard Glacie	81.97	14	IAmb	IAmb	16 31 47.6	
	comp=Z,70nm,1.8s						
PLBC	Pleasant Camp	82.00	18	P	P	16 31 26.9	+0.9
	baz=214						
WAT6	Susitna Watana	82.06	11	P	P	16 31 26.3	-0.2
	baz=204						
O28M	Mount Upton	82.08	15	P	P	16 31 26.4	-0.4
	baz=211						
O29M	Mount Kennedy	82.10	16	P	P	16 31 27.7	+1.0
	baz=212						
CAST	Castle Rocks	82.12	9	P	P	16 31 25.4	-1.2
	baz=199,SNR=5.4						
WAT1	Susitna Watana	82.14	11	P	P	16 31 26.7	-0.1
	baz=203						
S22A	4UR Ranch, Cre	82.28	47	P	P	16 31 29.6	+1.2
	baz=241						
SKAG	Skagway	82.30	18	P	P	16 31 26.7	-0.9
	baz=215						
NJ2	Nanjing	82.36	307	eP	P	16 31 27.3	-1.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
S34M	Telegraph Cree	82.39	21	P	P	16 31 28.0	-0.2
	baz=219						
KTH	Kantishna Hill	82.42	9	P	P	16 31 26.1	-2.2
KTH				IAmb	IAmb	16 31 32.1	
	comp=Z,42nm,1.7s						
TRF	Thorofare Moun	82.42	10	IAmb	IAmb	16 31 38.0	
	comp=Z,14nm,1.0s						
TRF	Thorofare Moun	82.42	10	P	P	16 31 28.3	-0.2
	baz=201						
MA2	Magadan	82.48	342	LR	LR	17 04 01.7	
	comp=Z,102nm,19.2s,baz=143,slow=33						
TPAW	Teton Pass	82.51	40	IAmb	IAmb	16 31 56.5	
	comp=Z,25nm,1.6s						
CHUM	Lake Minchumin	82.52	9	P	P	16 31 27.9	-0.8
	baz=199						
J20K	Nowinta River	82.55	8	P	P	16 31 29.3	+0.4
	baz=197,SNR=8.5						
DHY	Denali Highway	82.58	11	P	P	16 31 28.7	-0.5
	baz=204						
YUK8	Steele Glacier	82.63	15	P	P	16 31 29.7	0.0
	baz=211						
YUK6	Outpost Mounta	82.70	16	P	P	16 31 29.9	-0.1
	baz=212						
IMW	Indian Meadow	82.74	40	IAmb	IAmb	16 31 59.3	
	comp=Z,17nm,1.4s						
LOHW	Long Hollow	82.79	40	P	P	16 31 29.6	-1.3
HYT	Haines Junctio	82.82	16	IAmb	IAmb	16 31 32.8	
	comp=Z,25nm,1.3s						
HYT	Haines Junctio	82.82	16	P	P	16 31 30.6	+0.1
	baz=213						
Q32M	Nakina River	82.84	20	P	P	16 31 30.6	-0.1
	baz=218						
PAX	Paxson	82.85	12	P	P	16 31 30.3	-0.3
	baz=206						
M26K	Nabesna, AK	82.85	13	IAmb	IAmb	16 31 32.2	
	comp=Z,39nm,1.6s						
M26K	Nabesna, AK	82.85	13	P	P	16 31 30.5	-0.1
	baz=208						
SMCO	Snowmass	82.88	45	IAmb	IAmb	16 31 38.0	
	comp=Z,24nm,1.4s						
YUK3	Moose Creek	82.88	15	P	P	16 31 31.4	+0.5
	baz=210						
KLR	Kul'dur	82.89	327	LR	LR	17 04 30.7	
	comp=Z,77nm,19.7s,baz=122,slow=33						
KLR	Kul'dur	82.89	327	ceP	P	16 31 31.4	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MCK	McKinley	82.91	10	IAmb	IAmb	16 31 31.4	
	comp=Z,15nm,0.8s						
MCK	McKinley	82.91	10	P	P	16 31 30.9	+0.1
	baz=202,SNR=6.9						
YUK4	Talbot Arm	82.96	16	P	P	16 31 31.8	+0.5
	baz=212						
BW06	Boulder Array	83.00	41	IAmb	IAmb	16 31 37.3	
	comp=Z,14nm,1.4s						
BW06	Boulder Array	83.00	41	P	P	16 31 32.1	+0.1
	baz=239						
PDAR	Pinedale Array	83.00	41	P	P	16 31 32.6	+0.7
	comp=Z,3.6nm,1.0s,baz=220,slow=4.0,SNR=13						
PDAR				LR	LR	17 03 38.4	
	comp=Z,302nm,18.6s,baz=272,slow=32						
	comp=Z,3.6nm,1.0s						
PDAR	Pinedale Array	83.00	41	P	P	16 31 31.0	-1.0
M27K	Edge Creek, AK	83.06	14	IAmb	IAmb	16 32 04.1	
	comp=Z,26nm,1.3s						
M27K	Edge Creek, AK	83.06	14	P	P	16 31 32.5	+0.7
	baz=209,SNR=5.9						
H03S2	Juan Fernandez	83.07	123	T	T	18 04 31.1	
	baz=242						
H03S1	Juan Fernandez	83.09	123	T	T	18 04 44.8	
	baz=242						
H03S3	Juan Fernandez	83.09	123	T	T	18 04 34.4	
	baz=242						
O30N	Mendenhall	83.16	17	P	P	16 31 32.4	+0.3
	baz=214						
DLBC	Dease Lake	83.17	21	LR	LR	17 05 18.8	
	comp=Z,177nm,18.8s,baz=230,slow=33						
H03N2	Juan Fernandez	83.18	123	T	T	18 04 51.2	
	baz=267						
H03N3	Juan Fernandez	83.18	123	T	T	18 05 03.9	
	baz=267						
H03N1	Juan Fernandez	83.19	123	T	T	18 05 08.5	
	baz=267						
SDCO	Great Sand Dun	83.21	47	P	P	16 31 34.8	+1.5
	baz=242						
SDCO	Great Sand Dun	83.21	47	P	P	16 31 33.9	+0.6
	baz=242						
BOZ	Bozeman (W)	83.25	38	IAmb	IAmb	16 31 38.9	
	comp=Z,11nm,1.1s						
BOZ	Bozeman (W)	83.25	38	P	P	16 31 33.7	+0.5
	baz=237,SNR=8.8						
BNX	BinXian	83.29	322	eP	P	16 31 33.9	+0.8
BNX				pmax	pmax		
	comp=Z,18nm,0.7s						
BNX				pmax	pmax		
	comp=Z,190nm,7.5s						
L26K	Log Cabin Wild	83.33	13	IAmb	IAmb	16 31 35.2	
	comp=Z,35nm,1.8s						
L26K	Log Cabin Wild	83.33	13	P	P	16 31 32.8	-0.2
	baz=208						
BVCY	Beaver Creek	83.34	14	P	P	16 31 33.5	+0.4
	baz=210						
WHY	Whitehorse	83.41	17	P	P	16 31 34.2	+0.6
	baz=216						
CN2	Changchun	83.42	320	eP	P	16 31 34.4	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMIG	Matias Romero	83.44	70	LR	LR	17 01 37.8	
	comp=Z,647nm,18.4s,baz=228,slow=30						
N30M	Aishikik Lake	83.47	16	P	P	16 31 33.7	0.0
	baz=214						
MSTX	Muleshoe	83.47	52	P	P	16 31 36.1	+1.6
	baz=244						
MSTX	Muleshoe	83.47	52	P	P	16 31 34.9	+0.4
	baz=244						
K24K	Donnelly Dome	83.54	11	P	P	16 31 34.6	+0.5
	baz=205						
R33M	Jennings River	83.60	20	P	P	16 31 34.5	-0.1
	baz=219						
P33M	Teslin, Yukon	83.66	19	P	P	16 31 34.7	-0.1
	baz=218						
L27K	Beaver Creek,	83.69	13	P	P	16 31 35.5	+0.6
	baz=209						
NEA2	Nenana	83.69	10	P	P	16 31 35.1	+0.4
	baz=202						
T25A	Trinidad	83.70	48	P	P	16 31 35.1	-0.6
	baz=243						
BCAR	Beaver Creek A	83.70	13	P	P	16 31 34.1	-0.8
MLY	Manley	83.84	9	P	P	16 31 35.2	-0.3
MLY				IAmb	IAmb	16 31 36.4	
	comp=Z,39nm,1.7s						
MLY	Manley	83.84	9	P	P	16 31 35.4	-0.2
	baz=201,SNR=6.1						
N31M	Braeburn, Yuko	83.84	17	P	P	16 31 34.5	-1.2
	baz=215						
HDA	Harding Lake	83.88	11	IAmb	IAmb	16 31 36.5	
	comp=Z,11nm,0.8s						
HDA	Harding Lake	83.88	11	P	P	16 31 35.6	-0.1
	baz=204,SNR=8.2						
M29M	Somme Creek	83.94	15	P	P	16 31 36.8	+0.5
	baz=212						
Q24A	Divide	84.02	46	P	P	16 31 38.0	+0.6
	baz=242						
SCRK	Sand Creek	84.05	12	IAmb	IAmb	16 31 41.6	
	comp=Z,23nm,1.6s						
SCRK	Sand Creek	84.05	12	P	P	16 31 36.8	+0.1
	baz=207						
H21K	Melozitna Rive	84.14	8	IAmb	IAmb	16 31 39.2	
	comp=Z,28nm,1.4s						
H21K	Melozitna Rive	84.14	8	P	P	16 31 37.8	+0.8
	baz=199,SNR=6.5				

I23K	Minto, Yukon-K	84.16	9	IAmb	IAmb	16 31 41.0
	comp=Z,20nm,1.1s					
I23K	Minto, Yukon-K	84.16	9	P	P	16 31 37.5 +0.4
	baz=202					
IL31		84.22	11	P	P	16 31 37.5 +0.1
ILAR	Eielson Array	84.22	11	P	P	16 31 37.4 -0.1
	comp=Z,6.6nm,0.9s,baz=226,slow=6.1,SNR=58					
ILAR				LR	LR	17 03 30.0
	comp=Z,183nm,19.7s,baz=158,slow=32					
	comp=Z,6.6nm,0.9s					
J25K	Salcha River,	84.35	11	IAmb	IAmb	16 31 40.0
	comp=Z,47nm,1.6s					
J25K	Salcha River,	84.35	11	P	P	16 31 38.4 +0.2
	baz=206,SNR=6.0					
N23A	Red Feather La	84.40	44	P	P	16 31 40.1 +0.8
	baz=241					
RLMT	Red Lodge	84.40	39	IAmb	IAmb	16 31 45.0
	comp=Z,13nm,1.1s					
RLMT	Red Lodge	84.40	39	P	P	16 31 40.6 +1.5
	baz=239					
POKR	Poker Plat Res	84.45	10	P	P	16 31 37.0 -1.6
POKR	Poker Plat Res	84.45	10	P	P	16 31 38.7 +0.1
	baz=204,SNR=6.7					
K27K	Chicken	84.49	13	IAmb	IAmb	16 31 44.6
	comp=Z,34nm,1.6s					
K27K	Chicken	84.49	13	P	P	16 31 39.3 +0.5
	baz=209					
H22K	Ishtalitna Cre	84.56	8	P	P	16 31 39.8 +0.6
	baz=200					
L29M	L29M	84.59	15	P	P	16 31 40.2 +0.7
	baz=212,SNR=13					
J26L	Joseph Creek	84.60	12	P	P	16 31 39.1 -0.4
J26L				IAmb	IAmb	16 31 41.8
	comp=Z,18nm,1.0s					
J26L	Joseph Creek	84.60	12	P	P	16 31 40.5 +1.0
	baz=207,SNR=12					
AMTX	Amarillo	84.68	51	IAmb	IAmb	16 31 46.5
	comp=Z,14nm,1.0s					
AMTX	Amarillo	84.68	51	P	P	16 31 42.1 +1.5
	baz=245					
AMTX	Amarillo	84.68	51	P	P	16 31 42.1 +1.5
	baz=245					
H23K	Yukon River	84.76	9	P	P	16 31 40.3 +0.1
	baz=202					
SEY	Seymchan	84.81	345	*ce*P	P	16 31 38.3 -2.1
SEY				pmax	pmax	
	comp=Z,18nm,2.5s					
M31M	Drury Creek, Y	84.81	17	P	P	16 31 40.1 -0.5
	baz=216					
G21K	Allakaket	84.87	7	P	P	16 31 41.7 +1.0
	baz=198,SNR=11					
H24K	Noodor Dome	85.04	10	P	P	16 31 41.4 -0.3
	baz=203					
DAWY	Dawson	85.11	14	IAmb	IAmb	16 31 44.0
	comp=Z,15nm,0.8s					
DAWY	Dawson	85.11	14	P	P	16 31 42.8 +0.8
	baz=211,SNR=9.6					
FARO	Faro, Yukon	85.12	17	P	P	16 31 42.5 +0.4
	baz=217					
PRP	Porcupine Dome	85.14	11	P	P	16 31 42.5 +0.2
PRP	Porcupine Dome	85.14	11	P	P	16 31 43.1 +0.8
	baz=206,SNR=8.6					
BRLDA	Berland Lookou	85.20	29	IAmb	IAmb	16 31 48.4
	comp=Z,34nm,1.3s					
ABTX	Abilene, Hawle	85.28	54	P	P	16 31 44.9 +1.3
	baz=246					
EGAK	Eagle	85.34	13	IAmb	IAmb	16 31 44.5
	comp=Z,9.4nm,0.9s					
EGAK	Eagle	85.34	13	P	P	16 31 43.5 +0.4
	baz=210,SNR=5.7					
K29M	Barlow Dome	85.36	15	P	P	16 31 44.5 +1.1
	baz=213,SNR=8.8					
I26K	Coal Creek Min	85.40	12	P	P	16 31 43.5 +0.1
I26K	Coal Creek Min	85.40	12	P	P	16 31 44.2 +0.9
	baz=208					
TIA	Tai'an	85.44	310	P	P	16 31 46.1 +1.8
TIA				pmax	pmax	
	comp=Z,7.0nm,0.5s					
G22K	Bettles	85.52	8	P	P	16 31 45.2 +1.3
	baz=200					
G23K	Bananza Creek	85.52	9	P	P	16 31 44.9 +0.8
	baz=201					
F21K	Alatna River	85.55	7	P	P	16 31 44.8 +0.6
	baz=198,SNR=6.1					
J29M	Klondike Camp	85.71	14	IAmb	IAmb	16 31 47.5
	comp=Z,21nm,0.7s					
J29M	Klondike Camp	85.71	14	P	P	16 31 45.8 +0.8
	baz=212					
I27K	Kandik River	85.97	12	P	P	16 31 47.3 +1.0
	baz=209					
COLD	Coldfoot	85.98	8	P	P	16 31 47.1 +0.9
	baz=201					
F22K	John River	85.98	8	P	P	16 31 46.3 +0.1
	baz=199					
MMPY	Sheldon Lake,	86.02	18	P	P	16 31 47.6 +1.0
	baz=219					
TGTN	Hyland Airport	86.09	19	P	P	16 31 47.5 +0.5
	baz=222					
MAW	Mawson	86.24	198	P	P	16 31 50.2 +2.6
	comp=Z,13nm,0.9s,baz=119,slow=6.2,SNR=17					
MAW				LR	LR	17 11 21.0
	comp=Z,86nm,19.4s,baz=102,slow=36					
	comp=Z,13nm,0.9s					
MAW	Mawson	86.24	198	P	P	16 31 50.4 +2.7
	baz=86,SNR=9.0					
I29M	Ogilvie Camp,	86.46	14	P	P	16 31 48.1 -0.5
I29M				IAmb	IAmb	16 31 50.2
	comp=Z,23nm,1.4s					
I29M	Ogilvie Camp,	86.46	14	P	P	16 31 49.4 +0.8
	baz=212,SNR=8.7					
H27K	Steamboat Moun	86.53	12	P	P	16 31 50.1 +1.0
	baz=209,SNR=7.9					
F24K	Squaw Lake	86.59	9	P	P	16 31 50.0 +0.7
	baz=203					
E22K	Anaktuvuk Pass	86.62	7	P	P	16 31 50.3 +0.9
	baz=199					
BILL	Biiibino	86.69	352	P	P	16 31 48.3 -1.4
BILL				IAmb	IAmb	16 31 51.2
	comp=Z,38nm,1.5s					
BILL	Biiibino	86.69	352	*ce*P	P	16 31 49.7 0.0
BILL				*e*		16 35 08.6
BILL				pmax	pmax	
	comp=Z,23nm,1.3s					
G26K	Porcupine Rive	86.75	11	P	P	16 31 51.1 +1.2
	baz=207,SNR=6.4					
E23K	Chandalar	86.84	8	P	P	16 31 51.4 +0.8
	baz=202					
F25K	Christian Rive	87.01	10	P	P	16 31 52.1 +0.7
	baz=205					
E24K	Your Creek	87.02	9	P	P	16 31 51.0 -0.3
	baz=203					
G27K	Doyon Strip	87.02	12	P	P	16 31 51.8 +0.5
	baz=209					
RSSD	Black Hills	87.16	42	P	P	16 31 52.9 +0.1
	baz=242					
PLCA	Paso Flores	87.25	132	P	P	16 31 56.1 +2.7
	comp=Z,3.7nm,0.9s,baz=231,slow=9.6,SNR=2.9					
PLCA				LR	LR	17 04 04.5
	comp=Z,254nm,18.6s,baz=252,slow=31					
	comp=Z,3.7nm,0.9s					
F26K	Sheenjek River	87.35	10	P	P	16 31 54.0 +1.0
	baz=207					
TOLK	Toolik Lake Re	87.39	8	P	P	16 31 53.8 +0.6
	baz=202					
E25K	Arctic Village	87.50	10	P	P	16 31 54.5 +0.8
	baz=205					
D23K	Nanushuk River	87.55	8	P	P	16 31 54.6 +0.8
	baz=200					
EPYK	Eagle Plains	87.67	14	P	P	16 31 54.9 +0.4
	baz=214					
HNS	HongShan	87.70	310	⇑P	P	16 31 58.0 +2.7
HNS				S	S	16 42 42.8 +5.4
HNS				pmax	pmax	
	comp=Z,13nm,1.0s					
HNS				pmax	pmax	
	comp=Z,210nm,6.3s					
HNS				LR	LR	
	comp=Z,180nm,15.6s					
HNS				LR	LR	
	comp=Z,180nm,22.3s					
ZEA	Zeya	87.79	329	*e*P	P	16 31 55.9 +0.6
ZEA				pmax	pmax	
	comp=Z,10.0nm,1.2s					
E27K	Coleen River	88.24	11	P	P	16 31 58.4 +1.2
	baz=209					
G30M	tAoh Zraii Nji	88.29	13	P	P	16 31 58.0 +0.5
	baz=214,SNR=9.8					
C23K	Itkillik River	88.38	7	P	P	16 31 56.7 -1.1
	baz=201					
F31M	Tsiigehtchic	89.22	14	P	P	16 32 02.4 +0.6
	baz=216					
XLT	XiLinHaoTe	89.44	317	*e*P	P	16 32 04.6 +1.1
XLT				pP	pwP	16 32 09.3 -4.5
XLT				sP	PcP	16 32 12.0 +7.1
XLT				S	S	16 42 51.3 -2.4
XLT				sS	ScS	16 43 00.4 +2.0
XLT				pmax	pmax	
	comp=Z,10.0nm,0.9s					
XLT				pmax	pmax	
	comp=Z,140nm,6.7s					
TIY	Taiyuan	89.49	310	P	P	16 32 05.6 +1.8
TIY				pmax	pmax	
	comp=Z,160nm,6.9s					
TIY				LR	LR	
	comp=Z,170nm,12.4s					
TIY				LR	LR	
	comp=Z,170nm,17.2s					
TIY				LR	LR	
	comp=Z,140nm,16.5s					
RPSI	Rantau Prapat	89.78	273	IAmb	IAmb	16 32 13.7
	comp=Z,23nm,1.0s					
PSI	Prapat	89.81	273	LR	LR	17 15 00.7
	comp=Z,101nm,18.2s,baz=124,slow=37					
INK	Inuvik	89.97	13	P	P	16 32 05.5 +0.3
	comp=Z,8.1nm,0.8s,baz=197,slow=3.4,SNR=9.0					
INK				LR	LR	17 11 16.5
	comp=Z,257nm,18.2s,baz=228,slow=35					
	comp=Z,8.1nm,0.8s					
INK	Inuvik	89.97	13	P	P	16 32 05.7 +0.5
	baz=217					
GYA	Guiyang	90.06	298	⇑*i*P	P	16 32 09.8 +3.0
GYA				pmax	pmax	
	comp=Z,23nm,1.1s					
TROLL	Troll, Antarti	90.69	178	P	P	16 32 10.6 +1.6
VNA3	Neumayer Olymp	90.71	174	P	P	16 32 10.4 +1.5
XAN	Xi'an	90.80	305	P	P	16 32 12.1 +2.1
XAN				pP	pwP	16 32 16.9 -4.9
XAN				S	S	16 43 09.3 +2.6
XAN				pmax	pmax	
	comp=Z,11nm,1.7s					
SNAA	Sanae	90.80	177	P	P	16 32 10.9 +1.5
SNAA	Sanae	90.80	177	LR	LR	17 09 03.7
	comp=Z,180nm,19.7s,baz=195,slow=33					
SNAA	Sanae	90.80	177	P	P	16 32 10.0 +0.6
SNAA				IAmb	IAmb	16 32 11.6
	comp=Z,10nm,0.9s					
SNAA	Sanae	90.80	177	*ce*P	P	16 32 10.6 +1.2
SNAA				pmax	pmax	
	comp=Z,14nm,1.0s					
VNA2	Neumayer--Watz	91.22	175	P	P	16 32 13.3 +2.0
	baz=185,slow=3.2					
HHC	Hu-ho-hao-te	91.30	313	*e*P	P	16 32 10.9 -1.4
HHC				S	S	16 43 16.1 +5.0
HHC				pmax	pmax	
	comp=Z,23nm,0.9s					
HHC				pmax	pmax	
	comp=Z,200nm,5.0s					
HHC				LR	LR	
	comp=Z,180nm,12.1s					
HHC				LR	LR	
	comp=Z,210nm,13.3s					
VNA1	Neumayer--Stat	91.41	175	P	P	16 32 14.3 +2.1
NNA	Nana	91.42	103	LR	LR	17 04 58.5
	comp=Z,175nm,19.5s,baz=218,slow=30					
ATAH	Atahualpa	91.44	98	LR	LR	17 04 05.9
	comp=Z,267nm,19.5s,baz=256,slow=30					
YAK	Yakutsk	91.47	336	*ce*P	P	16 32 10.2 -2.1
YAK				pmax	pmax	
	comp=Z,5.0nm,1.0s					
YKA	Yellowknife Ar	91.50	23	P	P	16 32 13.7 +1.2
	comp=Z,1.8nm,0.9s,baz=241,slow=4.6,SNR=4.2					
YKA				LR	LR	17 09 02.4
	comp=Z,156nm,18.0s,baz=254,slow=33					
	comp=Z,1.8nm,0.9s					
NVL	N'lazarevskaya	91.97	181	*e*P	P	16 32 15.1 +0.4
NVL				pmax	pmax	
	comp=Z,12nm,1.0s					
BTO	Baotou	92.30	312	*e*P	P	16 32 19.0 +2.1
MGMO	Mountain Grove	92.59	52	P	P	16 32 16.7 -1.5
MGMO				IAmb	IAmb	16 32 24.0
	comp=Z,18nm,1.4s					
KMI	Kunming	92.99	295	⇓P	P	16 32 23.5 +2.9
KMI				pP	pwP	16 32 27.8 -4.5
KMI				pmax	pmax	
	comp=Z,17nm,1.1s					
KMI				pmax	pmax	
	comp=Z,180nm,7.0s					
PZH	PanZhiHua	94.26	296	P	P	16 32 26.3 0.0
PZH				S	S	16 43 35.8 -2.3
PZH				pmax	pmax	
	comp=Z,10.0nm,0.7s					
PZH				pmax	pmax	
	comp=Z,180nm,4.3s					
PZH				LR	LR	
	comp=Z,250nm,29.0s					
PZH				LR	LR	
	comp=Z,300nm,31.4s					
PZH				LR	LR	
	comp=Z,1μm,30.4s					
CMAR	Chiang Mai Arr	94.39	288	P	P	16 32 29.1 +2.2
	comp=Z,1.7nm,0.9s,baz=101,slow=2.8,SNR=14					
CMAR				LR	LR	17 09 38.2
	comp=Z,55nm,21.9s,baz=105,slow=32					
	comp=Z,1.7nm,0.9s					
A36M	Sachs Harbour	94.61	13	P	P	16 32 26.9 +0.2
	baz=224					
ULM	Lac du Bonnet	94.77	39	LR	LR	17 12 17.1
	comp=Z,586nm,18.3s,baz=252,slow=34					
LVC	Limon Verde	95.05	115	LR	LR	17 06 23.2
	comp=Z,328nm,20.2s,baz=226,slow=30					
LZH	Lanzhou	95.40	306	*e*P	P	16 32 27.0 -4.4
LZH				pP	sP	16 32 32.8 -1.3
SONM	Songino Array	97.17	318	P	Pdif	16 32 39.2 0.0
	comp=Z,0.3nm,0.5s,baz=134,slow=6.2,SNR=2.0					
SONM				LR	LR	17 14 37.5
	comp=Z,41nm,19.0s,baz=100,slow=34					
	comp=Z,0.3nm,0.5s					
TIXI	Tiksi	97.30	344	LR	LR	17 09 50.5
	comp=Z,79nm,21.6s,baz=2.5,slow=31					
LPAZ	La Paz	97.98	110	LR	LR	17 07 28.1
	comp=Z,136nm,21.6s,baz=256,slow=30					
TKL	Tuckaleechee C	98.68	55	LR	LR	17 12 29.0
	comp=Z,165nm,18.4s,baz=234,slow=32					
ROSC	El Rosal	98.89	88	LR	LR	17 09 51.2
	comp=Z,94nm,18.2s,baz=266,slow=31					
GTA	Gaotai	99.39	308	*e*P	Pdif	16 32 50.8 +1.5
GTA				sP	pwP	16 32 58.3 -1.3
GTA				pmax	pmax	
	comp=Z,1.0nm,1.1s					
GTA				pmax	pmax	
	comp=Z,68nm,4.7s					
GTA				LR	LR	
	comp=Z,62nm,19.3s					
GTA				LR	LR	
	comp=Z,77nm,20.4s					
GTA				LR	LR	
	comp=Z,160nm,20.7s					
PCHI	Peechi	113.47	274	*e*P	PKiKP	16 37 31.7 -14
PCHI				*ex*	x	16 49 17.1
BRVK	Borovoye	120.29	322	*c i*PKIKP	PKiKP	16 37 58.3 +0.8
BRVK				pmax	pmax	
	comp=Z,3.0nm,1.0s					
ARU	Arti	125.71	328	*i* PKIKP	PKiKP	16 38 07.9 -0.2
ARU						16 39 58.9
ARU						16 45 19.2
ARU				SP	SP	16 49 57.5 -1.6
ARU				PS	PS	16 50 07.1 +5.3
ARCES	ARCESS Array B	126.80	352	PKP	PKiKP	16 38 10.2 +0.2
	comp=Z,2.6nm,0.8s,baz=28,slow=2.1,SNR=5.6					
KIRV	Kirov	128.91	333	*c i*PKIKP	PKiKP	16 38 15.2 +0.8
KLMR	Klimovskoe	131.12	340	*e*PKIKP	PKPdf	16 38 15.0 -2.9
KLMR				pmax	pmax	
	comp=Z,13nm,1.6s					
KLMR	Klimovskoe	131.12	340	*e*PKPdf	PKPdf	16 38 15.0 -2.9
KLMR				AMP		16 38 20.3
	comp=Z,13nm,1.6s					
BOSA	Boshof	131.21	200	PKP	PKiKP	16 38 21.6 +1.3
	comp=Z,3.1nm,1.0s,baz=165,slow=12,SNR=3.9					
GEYT	Alibeck	131.68	305	PKP	PKiKP	16 38 20.8 0.0
	comp=Z,2.8nm,0.8s,baz=82,slow=3.1,SNR=5.6					
FINES	FINESS Array B	134.19	348	PKP	PKPdf	16 38 23.8 +0.1
	comp=Z,2.9nm,0.8s,baz=25,slow=3.7,SNR=7.8					
OBN	Obninsk	136.47	336	⇑*e*PKIKP	PKPdf	16 38 27.7 -0.4
OBN				*e*		16 41 14.9
OBN				*e*PPP	PPP	16 44 08.1
OBN				*e*SS	SS	16 59 39.9 +30
OBN				pmax	pmax	
	comp=Z,5.0nm,0.9s					
OBN				MLR	MLR	
	comp=Z,101nm,20.0s					
VSU	Vasula	136.75	346	*i* PKIKP	PKPdf	16 38 27.8 -0.7
VSU				pmax	pmax	
	comp=Z,20nm,1.0s					
KONO	Kongsberg	137.84	359	*c i*PKIKP	PKPdf	16 38 30.6 +0.1
KONO				pmax	pmax	
	comp=Z,27nm,1.3s					
MAK	Makhachkala	137.90	316	*i* P	Pdif	16 35 33.1 -7.1
MAK				*i*		16 38 27.4
MAK				pmax	pmax	
	comp=Z,499nm,1.2s					
MNK	Minsk	139.93	342	*i* PKIKP	PKPdf	16 38 34.2 -0.2
MNK				*i*		16 41 29.8
MNK				*i* PPP	PPP	16 44 32.9
MNK				*i*		16 45 44.6
MNK				*i* SS	SS	16 59 51.3 +0.3
MNK				*i* SSS	SSS	17 05 03.2
MNK				pmax	pmax	
	comp=N,34nm,0.8s					
MNK				pmax	pmax	
	comp=E,1.0nm,0.9s					
MNK				pmax	pmax	
	comp=Z,7.0nm,0.7s					
MNK				MLR	MLR	
	comp=Z,62nm,18.0s					
MNK				MLR	MLR	
	comp=E,7.0nm,17.0s					
MNK				MLR	MLR	
	comp=N,243nm,23.0s					
MNK	Minsk	139.93	342	*i* PKP	PKPdf	16 38 34.3 -0.2
	comp=E,1.0nm,0.8s					
MNK				*i* PKP	PKPdf	16 38 34.3 -0.2
	comp=N,34nm,0.8s					
MNK				*i* PKP	PKPdf	16 38 34.3 -0.2
	comp=Z,7.0nm,0.7s,baz=211					
MNK				*i* PP	PP	16 41 29.9 -0.4
MNK				*i* PPP	PPP	16 44 33.0
MNK				*i* SKS	SKSdf	16 45 44.7 +0.1
MNK				*i* SS	SS	16 59 51.4 +0.3
MNK				*i* SSS	SSS	17 05 03.3
MNK				*i* LR	LR	17 35 07.1
MNK				*i* LRM	MLR	17 40 02.3
	comp=Z,62nm,17.9s					
MNK				*i* LRM	MLR	17 40 05.5
	comp=E,7.0nm,16.6s					
MNK				*i* LRM	MLR	17 40 45.1
	comp=N,243nm,23.0s					
KIV	Kislovodsk	140.54	320	*i* PKIKP	PKiKP	16 38 39.5 +0.8
KIV				pmax	pmax	
	comp=Z,6.0nm,1.0s					
AKASG	Malin Array Be	142.69	338	PKhKP	PKPpre	16 38 35.6
	comp=Z,1.9nm,0.7s,baz=35,slow=4.5,SNR=6.5					
RAYN	Ar Rayn	144.29	286	⇓PKIKP	PKPdf	16 38 43.5 +0.2
LVV	L'vov	145.18	342	*e*PKIKP	PKPdf	16 38 44.0 0.0
KMBO	Kilima Mbogo	145.65	240	PKPbc	PKPab	16 38 48.6 +1.8
	comp=Z,1.5nm,1.1s,baz=156,slow=23,SNR=30					
OJC	Ojcow	145.93	346	*e*PKP	PKPdf	16 38 45.2 -0.1
CLL	Collm	145.97	354	*i* PKP2	PKPab	16 38 46.5 0.0
CLL				pmax	pmax	
	comp=Z,26nm,0.9s					
CLL				MLR	MLR	
	comp=Z,200nm,18.9s					
CLL	Collm	145.97	354	*i* PKPbc	PKPab	16 38 46.5 0.0
	comp=Z,26nm,0.9s					
CLL				*i* PKiKP	PKiKP	16 38 50.4 +0.9
CLL				Lm	MLR	17 47 00.0
	comp=Z,200nm,18.9s					
CHVC	Chvalec	146.30	351	*e*PKP	PKPab	16 38 48.3 +0.5
OSTC	Ostas	146.30	350	*e*PKP	PKPab	16 38 47.6 -0.2
UPC	Upice	146.38	351	*e*PKP2	PKPab	16 38 48.4 +0.3
UPC	Upice	146.38	351	*e*PKP	PKPab	16 38 48.4 +0.3
KOLS	Kolonicke sedl	146.48	343	*e*PKP2	PKPab	16 38 48.7 +0.1
PVCC	Panska Ves	146.57	352	*e*PKP2	PKPab	16 38 49.0 +0.2
PVCC	Panska Ves	146.57	352	*e*PKP	PKPab	16 38 49.0 +0.2
OKC	Ostrava-Krasne	146.64	348	*e*PKP2	PKPab	16 38 48.6 -0.5
OKC	Ostrava-Krasne	146.64	348	*e*PKP	PKPab	16 38 48.6 -0.5
KRLC	Kraliky	146.67	350	*e*PKP2	PKPab	16 38 49.3 0.0
KRLC	Kraliky	146.67	350	*e*PKP	PKPab	16 38 49.3 0.0
BURAR	Bucovina Array	146.71	338	⇓P	PKiKP	16 38 50.8 -0.4
BURAR	Bucovina Array	146.71	338	⇓PKP2	PKiKP	16 38 50.8 -0.4
CRVS	Cervenica-Dubn	146.74	344	*e*PKP2	PKPab	16 38 49.8 +0.3
UZH	Uzhgorod	146.75	342	⇑*i*PKP2	PKPab	16 38 49.0 -0.6
MORC	Moravsky Berou	146.82	349	⇓P	PKPab	16 38 49.7 -0.2
MORC	Moravsky Berou	146.82	349	⇓PKP2	PKPab	16 38 49.7 -0.2
MORC	Moravsky Berou	146.82	349	*e*PKP	PKPab	16 38 49.7 -0.2
MEM	Membach	146.89	2	*d*PKP	PKPab	16 38 49.6 -0.4
BSTI	Sart Tilman	146.90	3	*d*PKP	PKPab	16 38 50.1 +0.1
BTNL	Ternell	146.92	2	*d*PKPdf	PKPdf	16 38 45.0 -2.0
BTNL				*d*PKP	pPKPab	16 38 50.2 -2.0
BIZ	Bicaz	146.96	337	⇑P	PKiKP	16 38 50.8 -0.8
BCLA	Clavier	147.05	3	*d*PKP	PKiKP	16 38 51.3 -0.4
NKC	Novy Kostel	147.09	355	*e*PKP2	PKPab	16 38 50.3 -0.6
NKC	Novy Kostel	147.09	355	*e*PKP	PKPab	16 38 50.3 -0.6
PRU	Pruhonice	147.10	352	*e*PKP2	PKPab	16 38 49.7 -1.2
PRU	Pruhonice	147.10	352	*e*PKP	PKPab	16 38 49.7 -1.2
TESR	Tescani	147.10	336	⇓P	PKPab	16 38 50.4 -0.6
TRPA	Tarpa	147.13	342	⇓P	PKPab	16 38 50.5 -0.6
TRPA	Tarpa	147.13	342	PKP	PKPab	16 38 50.5 -0.6
BMRD	Maredsous	147.14	4	*d*PKP	PKiKP	16 38 51.8 -0.1
GOPC	GO Pecny, Ondr	147.14	352	*e*PKP2	PKPab	16 38 50.5 -0.6
GOPC	GO Pecny, Ondr	147.14	352	*e*PKP	PKPab	16 38 50.5 -0.6
BHOU	Houvegnez	147.15	2	*d*PKP	PKPab	16 38 51.1 0.0
MAUC	Maruska	147.16	348	*e*PKP	PKPab	16 38 50.1 -1.1
GHRR		147.17	335	⇑P	PKiKP	16 38 51.5 -0.6
TLCR		147.26	332	⇑P	PKPab	16 38 51.4 -0.2
TLCR		147.26	332	⇑PKP2	PKPab	16 38 51.4 -0.2
RCHB	Rochefort	147.31	3	*d*PKP	PKPbc	16 38 49.5 -0.4
DOU	Dourbes	147.33	4	*d*PKP	PKPab	16 38 51.3 -0.5
ABAH	Abaujker	147.35	343	PKP	PKPab	16 38 51.6 -0.3
PANC	Panciu	147.43	335	⇓P	PKiKP	16 38 52.4 -0.2
IZVR	Izvoarele	147.44	334	⇓P	PKiKP	16 38 52.8 +0.1
VRAC	Vranov	147.44	349	⇓P	PKPab	16 38 51.7 -0.6
VRAC	Vranov	147.44	349	⇓PKP2	PKPab	16 38 51.7 -0.6
VRAC	Vranov	147.44	349	*e*PKP	PKPab	16 38 51.6 -0.6
ARCR	ARCALIA	147.47	339	⇑P	PKiKP	16 38 52.2 -0.5
CFR	Carcaliu	147.56	333	⇑P	PKPab	16 38 52.2 -0.6
CFR	Carcaliu	147.56	333	⇑PKP2	PKPab	16 38 52.2 -0.6
VRI	Vrincioaia	147.60	335	⇑P	PKPab	16 38 52.2 -0.9
VRI	Vrincioaia	147.60	335	⇑PKP2	PKPab	16 38 52.2 -0.9
PLOR	Plostina	147.65	335	⇓P	PKPab	16 38 52.0 -1.2
PLOR	Plostina	147.65	335	⇓PKP2	PKPab	16 38 52.0 -1.2
JAVC	Velka Javorina	147.67	348	*e*PKP	PKiKP	16 38 53.3 +0.2
TPGR	Topolog	147.69	332	⇓P	PKPab	16 38 52.6 -0.9
KRUC	Moravsky	147.72	349	*e*PKP	PKPab	16 38 52.2 -1.2
VYHS	Vyhne	147.77	346	*e*PKP2	PKiKP	16 38 52.9 -0.4
OZUR		147.78	336	⇓P	PKPab	16 38 53.4 -0.4
COVR	Voineasa-Covas	147.83	336	⇑P	PKiKP	16 38 52.7 -0.8
WLF	Walferdange	147.84	2	*d*PKP	PKPbc	16 38 52.0 +0.6
LTVH	Ltavrtes, Hu	147.99	342	⇓P	PKiKP	16 38 53.5 -0.2
TIRR	Tirgusor	148.00	332	⇑P	PKiKP	16 38 53.6 -0.3
TIRR	Tirgusor	148.00	332	⇑PKP2	PKiKP	16 38 53.6 -0.3
HARR	Harsova	148.04	332	⇓P	PKiKP	16 38 53.6 -0.3
HARR	Harsova	148.04	332	⇓PKP2	PKiKP	16 38 53.6 -0.3
DOPR	Dopca	148.04	337	⇓P	PKPab	16 38 54.2 -0.6
CJR	Cluj-Napoca	148.05	339	⇑P	PKiKP	16 38 53.9 -0.1
CJR	Cluj-Napoca	148.05	339	⇑PKP2	PKiKP

ZST	Bratislava	148.42	348	*e*PKP2		PKiKP	16 38 54.7	+0.1
BR131	Keskin Array S	148.50	320			PKPbc	16 38 53.4	-0.3
BR131	Keskin Array S	148.50	320	PKP2		PKPbc	16 38 53.4	-0.3
BRTR	Keskin Array B	148.50	320	PKPbc		PKiKP	16 38 55.0	-0.3
	comp=Z,9.1nm,1.0s,baz=74,slow=2.1,SNR=18							
BRTR	Keskin Array B	148.50	320	PKPdf		PKPdf	16 38 47.3	-2.8
BRTR				PKPab		pPKPbc	16 38 54.2	-1.5
BRTR	Keskin Array B	148.50	320	PKP2		PKiKP	16 38 55.0	-0.3
SECR		148.55	335	⇓P		PKiKP	16 38 55.3	+0.3
VOIR		148.62	336	⇑P		PKiKP	16 38 55.4	+0.2
VOIR		148.62	336	⇑PKP2		PKiKP	16 38 55.4	+0.2
ARR	Arges	148.83	337	⇓P		PKPab	16 38 56.5	-1.6
CONA	Conrad Observa	148.91	350	*i* P		PKiKP	16 38 55.9	+0.2
	comp=Z,25nm,1.0s,SNR=12							
ANTO	Ankara	148.92	321	PKPdf		PKPdf	16 38 46.7	-4.0
ANTO						PKPbc	16 38 54.7	+0.1
ANTO	Ankara	148.92	321	PKHKP		PKPpre	16 38 46.7	
DEV	Deva	149.00	339	⇑P		PKiKP	16 38 56.3	+0.4
DEV	Deva	149.00	339	⇑PKP2		PKiKP	16 38 56.3	+0.4
RONA	Rosalia, Austr	149.05	349	*i* P		PKiKP	16 38 56.2	+0.2
	comp=Z,24nm,1.0s,SNR=7.4							
SIRR	Siria	149.06	341	⇑P		PKiKP	16 38 56.3	+0.3
EGYH	Egyhazaskeszo	149.12	347	PKP		PKPab	16 38 57.1	-1.9
CLF	Chambon-Foret	149.17	7			PKPbc	16 38 55.0	+0.1
BFO	Black Forest	149.20	359			PKiKP	16 38 55.5	-0.7
BFO	Black Forest	149.20	359	PKP2		PKiKP	16 38 55.5	-0.7
MOA	Molln	149.23	352	*e*P		PKiKP	16 38 56.5	+0.1
	comp=Z,13nm,1.2s							
MPLH	Magyarpolny	149.31	347	PKP		PKiKP	16 38 56.9	+0.4
ECH	Echery	149.31	1	PKPdf		PKPdf	16 38 48.4	-2.6
ECH						PKPbc	16 38 55.2	-0.1
ECH	Echery	149.31	1	PKIKP		PKPbc	16 38 55.2	-0.1
BIOA	Bad Ischl, Aus	149.47	352	*e*P		PKiKP	16 38 56.1	-0.7
	comp=Z,14nm,0.8s							
GZR	Gura Zlata	149.48	339	⇑P		PKiKP	16 38 56.9	0.0
GZR	Gura Zlata	149.48	339	⇑PKHKP		PKPpre	16 38 56.9	
ARSA	Arzberg	149.62	350	*e*P		PKiKP	16 38 57.6	+0.4
	comp=Z,14nm,1.5s							
LODK	Lodwar	149.63	246	PKPdf		PKPdf	16 38 49.3	-3.3
LODK				PKPab		sPKPbc	16 38 58.5	-1.4
BZS	Buzias	149.66	341	⇓P		PKiKP	16 38 57.4	+0.2
BZS	Buzias	149.66	341	⇓PKP2		PKiKP	16 38 57.4	+0.2
MORH	Mrgy, Hungar	149.95	345	⇑P		PKiKP	16 38 57.9	+0.1
MORH	Mrgy, Hungar	149.95	345	PKP		PKiKP	16 38 57.7	-0.1
RETA	Reutte	149.95	356	*e*P		PKiKP	16 38 58.1	+0.2
	comp=Z,28nm,1.5s							
WATA	Walderalm	150.04	355	*e*P		PKiKP	16 38 58.2	0.0
	comp=Z,32nm,1.4s							
HERR	Herculane	150.05	339	⇓P		PKiKP	16 38 58.2	+0.1
MOTA	Moosalm	150.07	356	*i* P		PKiKP	16 38 58.4	+0.1
	comp=Z,34nm,1.4s,SNR=8.7							
WTTA	Wattenberg	150.11	355	*i* P		PKiKP	16 38 58.8	+0.4
	comp=Z,21nm,0.6s,SNR=8.7							
KBA	Koelnbreinsper	150.11	352	*e*P		PKPbc	16 38 57.4	-0.1
	comp=Z,11nm,1.0s							
SQTA	Sankt Quirin	150.19	355	*i* P		PKiKP	16 38 58.7	+0.3
	comp=Z,17nm,0.9s,SNR=6.3							
DAVA	Damuels	150.20	357	*i* P		PKiKP	16 38 59.0	+0.4
	comp=Z,17nm,0.9s,SNR=5.3							
KOVH	Kovagotottos	150.20	346	PKP		PKiKP	16 38 58.4	0.0
SOKA	Soboth	150.26	350	*i* P		PKiKP	16 38 57.9	-0.7
	comp=Z,20nm,1.6s,SNR=6.2							
MDVR	Moldovita	150.37	340	⇑P		PKiKP	16 38 59.3	+0.5
FETA	Feichten	150.42	356	*i* P		PKiKP	16 38 59.6	+0.6
	comp=Z,20nm,1.1s,SNR=5.9							
MYKA	Terra Mystica	150.51	352	*e*P		PKiKP	16 38 58.8	-0.2
	comp=Z,7.4nm,0.7s							
ABTA	Abfaltersbach	150.53	353	*i* P		PKiKP	16 38 59.0	-0.1
	comp=Z,25nm,0.7s,SNR=5.7							
FRGS	Fruska Gora	150.62	343	⇓P		PKiKP	16 38 59.6	+0.4
BLKB	Belogradchik	151.05	337	⇓P		PKiKP	16 39 00.3	+0.1
BOVS	Bovan	151.39	339	⇓P		PKiKP	16 39 00.8	-0.1
VTS	Vitosha	151.70	336	⇓P		PKiKP	16 39 02.7	+0.9
PGAV	Gavieira, Arco	151.94	26	*e*PKPdf		PKPdf	16 38 57.4	+2.0
PGAV	Gavieira, Arco	151.94	26	*e*LR		LR	17 37 42.2	
	comp=Z,348nm,18.0s							
PMOZ	Porto Moniz, M	152.74	51	*e*LR		LR	17 36 30.2	
	comp=Z,152nm,18.0s							
MVO	Moncorvo	153.12	25	*e*PKPbc		PKiKP	16 39 06.0	+1.4
MVO	Moncorvo	153.12	25	*e*LR		LR	17 39 04.5	
	comp=Z,180nm,18.0s							
MTE	Manteigas	153.54	27	*e*PKPbc		PKiKP	16 39 06.9	+1.4
MTE	Manteigas	153.54	27	*e*LR		LR	17 38 20.4	
	comp=Z,119nm,20.0s							
ESDC	Sonseca Array	155.59	22	PKPbc		PKPdf	16 39 10.4	+10
	comp=Z,0.9nm,0.7s,baz=340,slow=4.2,SNR=6.2							
PVAQ	Vaqueiros	155.86	32	*e*LR		LR	17 37 05.3	
	comp=Z,119nm,18.0s							
TORD	Torodi Ar. Bea	172.68	125	PKP		PKPdf	16 39 16.5	0.0
	comp=Z,3.8nm,0.9s,baz=45,slow=0.1,SNR=18							
TORD				PKPab		sPKPab	16 40 43.7	-1.0
	comp=Z,4.9nm,1.2s,baz=259,slow=4.5,SNR=5.4							

IDC 13 16:28:53.6±2.6, 6°.20S×129°.82E, h0km, mb3.6/1, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=171.2km s-min=33.7km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.35	163	Pn	Pn	16 32 17.1	-1.1
	baz=345,slow=13,SNR=1.1						
WRA				Sn	Sn	16 34 46.4	-12
	0.2nm,0.3s,baz=333,slow=22,SNR=1.3						
	0.1nm,0.4s						
ASAR	Alice Springs	17.80	168	P	P	16 33 03.7	-0.2
	0.1nm,0.3s,baz=350,slow=10,SNR=5.2						
ASAR				S	Sn	16 36 12.2	-10
	0.3nm,0.9s,baz=350,slow=20,SNR=1.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	67.46	327	P	P	16 39 51.4	0.0
	0.4nm,0.5s,baz=123,slow=8.0,SNR=2.7						
	0.4nm,0.5s						

IDC 13 17:07:21.4±1.1, 4°.51S×101°.68E, h0km, mb3.8/10, mbtmp3.9/11, ML4.0/1, Error ellipse: s-maj=52.0km s-min=16.9km az=47.0
DJA 13 17:07:25.7±1.0, 4°.5±4°.×10°.2E±°, h13km±6km, M4.3/8, mb4.8/1, MLv4.1/8
NEIC 13 17:07:28.9±0.7, 4°.2S±0°.2×101°.95E±0°.09, h44km±10km, mb4.2/9, Error ellipse: s-maj=27.5km s-min=6.3km az=206.0

ISC 13 17:07:26.9±0.7, 4°.47S±0°.07×101°.84E±0°.08, h37km, n48, σ0°93/47, mb4.1/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UBSI	University, Be	0.83	32	P	Pn	17 07 41.5	-0.6
UBSI				S	Sn	17 07 52.3	-0.8
KSI	Kapahiang	1.11	43	P	Pn	17 07 45.1	-0.9
KSI				S	Sn	17 08 01.1	+1.0
MNAI	Manna	1.12	84		Pn	17 07 46.8	+0.7
MNAI	Manna	1.12	84	P	Pn	17 07 45.2	-0.9
MASI	Maura Aman, Be	1.38	17	P	Pn	17 07 50.1	+0.4
MASI				S	Sn	17 08 09.7	+3.0
LWLI	Liwa	2.28	104	P	Pn	17 08 02.5	+0.4
KASI	Kota Agung	2.85	112	P	Pn	17 08 10.5	+0.7
KASI				S	Sn	17 08 43.1	+0.2
SDSI	Sungai Dareh	3.54	353	P	Pn	17 08 19.8	+0.5
DSRI	Dabo	4.82	35	P	Pn	17 08 37.7	+0.7
LEM	Lembang	6.21	112	Pn	Pn	17 08 58.1	+1.9
	3.3nm,0.3s,baz=300,slow=20,SNR=2.4						
	6.7nm,0.4s						
MYKOM	Kota Tinggi	6.54	18	Pn	Pn	17 09 01.7	+1.1
GSI	Gunungsitoli	7.15	323	Pn	Pn	17 09 08.8	-0.1
RPSI	Rantau Prapat	7.69	338	Pn	Pn	17 09 15.4	-1.0
CMAR	Chiang Mai Arr	22.96	353	P	P	17 12 28.4	+0.1
	0.3nm,0.5s,baz=181,slow=9.1,SNR=2.4						
	0.3nm,0.5s						
H08S2	Diego Garcia H	29.34	262	T	T	17 43 42.2	
	baz=85,slow=75,SNR=51						
H08S3	Diego Garcia H	29.35	262	T	T	17 43 44.6	
	baz=85,slow=75,SNR=54						
H08S1	Diego Carcia H	29.36	262	T	T	17 43 45.0	
	baz=85,slow=75,SNR=33						
H01W3	Cape Leeuwin H	32.33	161	T	T	17 47 54.6	
	baz=338,slow=76,SNR=7.7						
H01W2	Cape Leeuwin H	32.35	161	T	T	17 47 55.5	
	baz=338,slow=76,SNR=8.8						
H01W1	Cape Leeuwin H	32.35	161	T	T	17 47 56.8	
	baz=338,slow=76,SNR=7.9						
WB0	Warramunga Arr	35.17	118	P	P	17 14 18.8	+1.2
WB0				IAmb	IAmb	17 14 35.9	
	comp=Z,5.1nm,1.2s						
WRA	Warramunga Arr	35.19	119	P	P	17 14 18.5	+0.8
	comp=Z,0.5nm,0.9s,baz=301,slow=11,SNR=14						
WRA				PcP	PcP	17 16 48.9	+0.4
	comp=Z,0.2nm,0.6s,baz=308,slow=1.7,SNR=1.9						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	35.19	119	P	P	17 14 18.0	+0.3
WB2	Warramunga Arr	35.20	119	P	P	17 14 17.9	+0.1
WB2				IAmb	IAmb	17 14 47.4	
	comp=Z,4.7nm,1.2s						
WR0	Warramunga Arr	35.37	119	P	P	17 14 19.3	0.0
PKIN	Phulchoki	35.60	334	*e*P	P	17 14 21.2	-0.2
GUN	Gumba	35.69	335	*e*P	P	17 14 22.3	+0.1
	comp=Z,5.2nm,0.4s						
GKN	Gorkha	36.30	334	*e*P	P	17 14 28.1	+0.8
	comp=Z,2.4nm,0.3s						
AS31	Alice Springs	36.33	125	P	P	17 14 28.9	+1.3
AS31				IAmb	IAmb	17 14 38.6	
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	36.33	125	P	P	17 14 27.8	+0.2
	comp=Z,0.2nm,0.6s,baz=303,slow=8.3,SNR=7.2						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	36.33	125	P	P	17 14 28.3	+0.8
DANN	Dangsing	36.99	333	*e*P	P	17 14 34.6	+1.3
	comp=Z,9.3nm,0.5s						
JMZ	Minamidaito 2	41.46	42	P	P	17 15 08.5	-1.8
SONM	Songino Array	52.24	4	P	P	17 16 34.6	+0.2
	comp=Z,0.8nm,0.5s,baz=188,slow=8.6,SNR=6.9						
	comp=Z,0.8nm,0.5s						
MK31	Makanchi Array	53.90	343	P	P	17 16 46.0	-0.6
MK31				IAmb	IAmb	17 17 05.7	
	comp=Z,3.9nm,1.4s						
MKAR	Makanchi Array	53.90	343	P	P	17 16 46.5	-0.1
	comp=Z,1.9nm,0.5s,baz=149,slow=9.4,SNR=30						
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	53.90	343	P	P	17 16 45.9	-0.6
KKAR	Karatay Array	55.18	332	P	P	17 16 55.8	-0.1
ZAA0	Zalesovo Array	59.93	348	P	P	17 28.1	-1.0
ZALV	Zalesovo Beam	59.93	348	P	P	17 17 28.6	-0.6
	comp=Z,2.7nm,0.6s,baz=180,slow=5.4,SNR=13						
	comp=Z,2.7nm,0.6s						
ZALV	Zalesovo Beam	59.93	348	P	P	17 17 28.3	-0.8
ABKAR	Akbulak array	64.68	331	P	P	17 18 00.6	-0.3
KBZ	Khabaz	71.36	319	P	P	17 18 43.6	+0.6
	comp=Z,1.8nm,0.7s,baz=139,slow=9.3,SNR=2.5						
	comp=Z,1.8nm,0.7s						
BRTR	Keskin Array B	76.33	313	P	P	17 19 12.1	-0.4
	comp=Z,1.0nm,0.8s,baz=134,slow=6.2,SNR=4.6						
	comp=Z,1.0nm,0.8s						
TIXI	Tiksi	78.01	8	P	P	17 19 19.4	-1.7
TIXI				IAmb	IAmb	17 19 31.8	
	comp=Z,5.5nm,1.5s						
FINES	FINESS Array B	87.14	332	P	P	17 20 09.0	+0.2
	comp=Z,1.1nm,0.8s,baz=117,slow=5.3,SNR=3.7						
	comp=Z,1.1nm,0.8s						
GERES	GERESS Array B	92.11	319	P	P	17 20 33.2	+0.7
	comp=Z,0.6nm,0.7s,baz=131,slow=2.7,SNR=2.8						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	145.44	42	PKPbc	PKPab	17 27 02.0	0.0
	comp=Z,1.3nm,0.5s,baz=321,slow=2.3,SNR=15						

NEIC 13 17:26:53.7±0.9, 21°.55S±0°.06×68°.4W±0°.1, h140km±13km, Error ellipse: s-maj=18.0km s-min=8.6km az=95.0
GUC 13 17:26:54.2±0.7, 21°.55S×68°.35W, h133km±4km, ML4.2

ISC 13 17:26:53.8±0.9, 21°.54S±0°.04×68°.45W±0°.08, h141km±9km, n44, σ0°71/60, 13C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.78	251		Pn	17 27 16.2	0.0
PB09	IPOC Station P	0.78	251	⇑*i*P	Pn	17 27 16.4	+0.3
PB09				*i* S	Sn	17 27 33.2	+0.1
PB01	IPOC Station P	1.09	297		Pn	17 27 18.2	-0.4
PB01	IPOC Station P	1.09	297	⇑*i*P	Pn	17 27 18.4	-0.2
PB01				*i* S	Sn	17 27 37.5	0.0
PB01				IAML		17 27 39.1	
	comp=E,5μm,0.2s						
LVC	Limon Verde	1.15	202		Pn	17 27 19.3	-0.2
LVC	Limon Verde	1.15	202	⇑*i*P	Pn	17 27 19.3	-0.2
LVC				*i* S	Sn	17 27 38.2	-0.9
PB07	IPOC Station P	1.35	262		Pn	17 27 21.4	+0.1
PB07	IPOC Station P	1.35	262	⇑*i*P	Pn	17 27 21.6	+0.3
PB07				*i* S	Sn	17 27 42.3	+0.1
PB07				IAML		17 27 43.3	
	comp=E,3μm,0.2s						
PB02	IPOC Station P	1.36	279		Pn	17 27 21.3	-0.1
PB02	IPOC Station P	1.36	279	⇑*i*P	Pn	17 27 21.4	+0.1
PB02				*i* S	Sn	17 27 42.6	+0.2
PB02				IAML		17 27 43.9	
	comp=E,6μm,0.2s						
PB08	IPOC Station P	1.54	335		Pn	17 27 23.4	-0.2
PB08	IPOC Station P	1.54	335	⇑*i*P	Pn	17 27 23.8	+0.2
PB08				*i* S	Sn	17 27 46.1	-0.2
PB06	IPOC Station P	1.56	222		Pn	17 27 23.7	+0.2
PB06	IPOC Station P	1.56	222	⇑*i*P	Pn	17 27 23.8	+0.2
PB06				*i* S	Sn	17 27 46.3	+0.1
PATCX	Punta Patache	1.74	294		Pn	17 27 25.9	+0.3
PATCX	Punta Patache	1.74	294	⇑*i*P	Pn	17 27 25.8	+0.3
PATCX				*i* S	Sn	17 27 50.1	+0.4
PATCX				IAML		17 27 51.9	
	comp=E,3μm,0.3s						
PB04	IPOC Station P	1.76	243		Pn	17 27 25.8	0.0
PB04	IPOC Station P	1.76	243	⇑*i*P	Pn	17 27 25.9	+0.1
PB04				*i* S	Sn	17 27 49.8	-0.5
PB04				IAML		17 27 54.6	
	comp=N,915nm,0.3s						
HMBC	Humberstone	1.84	313	⇑*i*P	Pn	17 27 26.2	-0.5
HMBC				*i* S	Sn	17 27 51.0	-0.8
HMBC				IAML		17 27 52.7	
	comp=E,2μm,0.7s						
TA01	Diego Aracena	1.88	301		Pn	17 27 26.6	-0.5
TA01	Diego Aracena	1.88	301	⇓*i*P	Pn	17 27 27.1	0.0
TA01				*i* S	Sn	17 27 52.1	-0.4
TA01				IAML		17 27 53.3	
	comp=E,2μm,0.2s						
PB15	IPOC Station P	1.91	209		Pn	17 27 27.6	+0.1
PB15	IPOC Station P	1.91	209	*e*P	Pn	17 27 28.1	+0.5
PB15				*i* S	Sn	17 27 54.3	+0.9
GO01	Chusmiza	1.99	339		Pn	17 27 28.6	-0.2
GO01	Chusmiza	1.99	339	⇑*i*P	Pn	17 27 28.7	-0.2
GO01				*i* S	Sn	17 27 55.2	-0.3
GO01				IAML		17 27 58.8	
	comp=N,765nm,0.1s						
TA02	Huaiquique	2.02	309		Pn	17 27 28.4	-0.2
TA02	Huaiquique	2.02	309	*e*P	Pn	17 27 28.7	0.0
TA02				*i* S	Sn	17 27 54.7	-0.6
PB10	IPOC Station P	2.76	224	Pn	Pn	17 27 37.8	-0.1
PB10	IPOC Station P	2.76	224	⇑*i*P	Pn	17 27 37.6	-0.2
PB10				*e*S	Sn	17 28 09.3	-2.5
PB16	IPOC Station P	3.34	343		Pn	17 27 45.9	+0.1
PB12	IPOC Station P	3.40	328		Pn	17 27 45.1	-1.1
PB14	IPOC Station P	3.56	210		Pn	17 27 47.7	-0.6
GO02	Mina Guanaco	3.75	196		Pn	17 27 50.6	-0.3
GO02	Mina Guanaco	3.75	196	⇑*i*P	Pn	17 27 50.6	-0.3
GO02				*i* S	Sn	17 28 34.3	-0.8
AC01	Pan de Azucar	4.99	203	Pn	Pn	17 28 05.1	-1.9
LPAZ	La Paz	5.23	3		Pn	17 28 10.2	-0.7
AC02	Maricunga	5.31	187	Pn	Pn	17 28 11.0	-0.6
CO02	Combarbal	9.89	193	Pn	Pn	17 29 13.2	+0.6
ITAB	Concordia	15.91	114		Pn	17 30 29.4	-0.5
ITAB				IAmb	IAmb	17 31 06.2	
	comp=Z,37nm,1.4s						
PLTB	Pedras Altas	16.71	131		P	17 30 38.4	-1.2
PLTB				IAmb	IAmb	17 30 44.1	
	comp=Z,23nm,1.4s						
TRQA	Tornquist	17.38	163	P	P	17 30 46.8	-0.1
TRQA				IAmb	IAmb	17 30 48.5	
	comp=Z,7.4nm,1.0s						
VNA3	Neumayer Olymp	59.90	161	P	P	17 36 46.4	+1.9
VNA2	Neumayer–Watz	60.47	161	P	P	17 36 48.8	+0.5
	baz=249,slow=1.4						
TROLL	Troll, Antarti	63.82	161	P	P	17 37 12.8	+2.0

IDC 13 17:40:10.7±2.5, 18°.42N×144°.55E, h209km±27km, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=58.8km s-min=18.3km az=95.0

ISC 13 17:40:09.9±1.1, 18°.45N±0°.10×144°.4E±0°.4, h200km, n6, σ1°22/8, mb3.5/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.86	175	P	Pn	17 41 22.8	+0.2
	49nm,0.9s,baz=45,slow=17,SNR=2.0						
GUMO				S	Sn	17 42 20.0	+0.2
	49nm,0.8s,baz=0.0,slow=20,SNR=1.7						
PETK	Petropavlovsk-	36.10	14	P	P	17 46 52.9	+0.4
	0.9nm,0.4s,baz=176,slow=3.2,SNR=4.2						
	0.9nm,0.4s						
WRA	Warramunga Arr	39.42	195	P	P	17 47 21.0	+0.4
	0.4nm,0.3s,baz=18,slow=8.7,SNR=7.0						
WRA				PcP	PcP	17 49 22.1	-2.6
	0.2nm,0.4s,baz=24,slow=3.6,SNR=2.1						
	0.4nm,0.3s						
ASAR	Alice Springs	43.10	194	P	P	17 47 51.0	+0.4
	0.2nm,0.4s,baz=18,slow=8.7,SNR=4.4						
	0.2nm,0.4s						
BVAR	Borovoye Array	65.89	320	P	P	17 50 34.7	+0.5
	0.4nm,0.5s,baz=95,slow=7.2,SNR=3.9						
	0.4nm,0.5s						
GEYT	Alibeck	76.06	306	P	P	17 51 35.5	-0.2
	0.7nm,0.5s,baz=76,slow=6.1,SNR=2.4						
	0.7nm,0.5s						

NOU 13 17:48:34.5, 37°.13S×179°.55E, h1km, MLv3.5/6, Off E. Coast of N. Island, N.Z.
WEL 13 17:48:43.3±1.3, 37°.5±6°.×17°.9E±°, h16km±6km, M2.7/8, ML3.1/13, MLv2.7/8, Error ellipse: s-maj=0.0km s-min=0.0km az=85.6

ISC 13 17:48:41.9±3.1, 37°.15S±0°.08×178°.9E±0°.1, h19km±5km, n23, σ1°08/30, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.62	229	P	Pb	17 48 54.4	+0.3
MXZ				S	Sg	17 49 02.1	-0.5
MXZ	Matakaoa Point	0.62	229	P	Pn	17 48 55.0	-0.8
WMGZ	Waiomatatini S	0.77	210	P	Pn	17 48 58.3	+0.6
WMGZ				S	Sn	17 49 09.8	+1.0
PKGZ	Pakihiroa	0.98	221	P	Pg	17 49 01.3	+0.3
PKGZ				S	Sg	17 49 14.8	+0.9
HAZ	Te Kaha	1.07	235	P	Pn	17 49 01.3	-0.6
TWGZ	Tauwhareparae	1.25	215	P	Pg	17 49 05.5	-0.7
TWGZ				S	Sn	17 49 22.4	+1.5
RUGZ	Raukumara Rang	1.26	230	P	Pb	17 49 05.6	+0.4
CNGZ	Carnagh Statio	1.44	202	P	Pb	17 49 08.0	-0.1
MWZ	Matawai	1.60	222	P	Pn	17 49 09.9	+0.7
URZ	Urewera	1.80	231	P	Pn	17 49 12.7	+0.8
URZ				S	Sn	17 49 34.2	0.0
URZ	Urewera	1.80	231	P	Pn	17 49 12.9	+1.0
RTZ	Ruatahuna	2.10	225	P	Pn	17 49 16.7	+0.5
MUGZ	Murupara	2.14	231	P	Pn	17 49 17.1	+0.4
MTHZ	Maungataniwha	2.35	223	P	Pn	17 49 20.2	+0.6
MTHZ				S	Sn	17 49 47.8	-0.2
KUZ	Kuaotunu	2.58	278	P	Pn	17 49 22.3	-0.3
KUZ				S	Sn	17 49 49.9	-3.5
KUZ	Kuaotunu	2.58	278	P	Pn	17 49 23.5	+0.9
BKZ	Black Stump Fm	2.76	223	P	Pn	17 49 25.4	+0.2
BKZ	Black Stump Fm	2.76	223	P	Pn	17 49 25.6	+0.4
MKAZ	Moumakai	2.98	270	P	Pn	17 49 28.4	+0.2
KAHZ	Kahuranaki	3.08	210	P	Pn	17 49 28.1	-1.4
ETVZ	East Tongariro	3.20	231	P	Pn	17 49 31.4	+0.1
BFZ	Birch Farm	4.09	210	P	Pn	17 49 41.7	-1.7
OUZ	Omahuta	4.70	293	P	Pn	17 49 53.5	+1.7

IDC 13 18:04:42.4±1.1, 43°.95N×105°.56W, h0km, mb3.9/2, mbtmp3.5/6, ML3.9/3, MS2.9/2, Error ellipse: s-maj=25.7km s-min=9.8km az=151.0
NEIC 13 18:04:43.3±1.4, 43°.75N±0°.03×105°.29W±0°.06, h0km±2km, ML3.4/80, Error ellipse: s-maj=9.4km s-min=3.1km az=55.0

ISC 13 18:04:40.8±0.8, 43°.82N±0°.05×105°.11W±0°.05, h0km, n80, σ1°36/78, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.83	69	Pg	Pn	18 05 02.0	+1.9
K22A	Casper	1.56	222		Pn	18 05 09.1	-0.9
K22A				IAML		18 05 34.1	
	comp=E,679nm,0.3s						
K22A				IAML		18 05 35.0	
	comp=N,669nm,0.3s						
PHWY	Pilot Hill	2.53	186		Pn	18 05 25.3	+1.8
RWWY	Rawlins	2.63	217		Pn	18 05 26.9	+2.0
RWWY				IAML		18 06 04.0	
	comp=N,257nm,1.0s						
LAO	LASA Array	2.97	345		Pn	18 05 31.7	+2.4
N23A	Red Feather La	2.99	192	Pn	Pn	18 05 31.7	+2.0
N23A				IAML		18 06 16.4	
	comp=N,108nm,0.4s						
N23A				IAML		18 06 27.3	
	comp=E,128nm,0.9s						
RLMT	Red Lodge	3.25	295	Pn	Pn	18 05 34.4	+1.2
RLMT				IAML		18 06 22.2	
	comp=E,91nm,

AHID IAML 18 07 17.3
comp=E,51nm,1.1s
ECR Eagle Creek 4.62 263 Pn 18 05 52.9 +0.8
RDMU Red Mountain 4.64 227 Pn 18 05 52.5 +0.1
RDMU IAML 18 07 10.8
comp=N,46nm,1.0s
QLMT Earthquake Lak 4.64 285 Pn 18 05 53.0 +0.6
DGMT Dagmar 4.69 7 Pn **Pn 18 05 55.1 +2.2**
K31A O'Neill 4.80 102 Pn **Pn 18 05 56.3 +1.9**
SMCO Snowmass 4.85 197 Pn 18 05 55.0 -0.3
SMCO IAML 18 07 17.8
comp=N,33nm,0.8s
SMCO IAML 18 07 21.4
comp=N,38nm,1.0s
Q24A Divide 4.85 180 Pn 18 05 55.4 0.0
Q24A IAML 18 07 16.5
comp=N,22nm,0.3s
Q24A IAML 18 07 23.4
comp=E,41nm,0.7s
BOZ Bozeman (W) 4.97 293 Pn 18 05 56.4 -0.5
BOZ IAML 18 07 21.0
comp=E,25nm,0.7s
BOZ IAML 18 07 26.5
comp=E,27nm,1.0s
HWUT Hardware Ranch 5.24 247 Pn **Pn 18 06 01.0 +0.4**
EGMT Eagleton 5.30 324 Pn **Pn 18 06 02.5 +1.2**
TCUT Toone Canyon 5.38 242 Pn 18 06 02.8 +0.2
MDND Maddock 5.57 42 Pg 18 06 25.3 -2.2
LRM Limekiln Ridge 5.59 294 Pn 18 06 05.1 -0.3
MCMT McKenzie Canyo 5.64 283 Pn 18 06 06.7 +0.5
P18A Preston Nutter 5.68 224 Pn 18 06 08.2 +1.4
JLU Jordanelle 5.70 238 Pn 18 06 07.0 0.0
CTU Camp Tracy 5.83 240 Pn **Pn 18 06 08.6 -0.2**
SPUT South Promonto 5.97 248 Pn 18 06 12.4 +1.8
HVU Hansel Valley 5.99 253 Pn 18 06 11.8 +0.8
PV07 Paradox Valley 6.00 208 Pn 18 06 12.4 +1.3
PV15 Paradox Valley 6.04 206 Pn **Pn 18 06 10.7 -0.9**
P17A Butcher Ranch, 6.05 226 Pn **Pn 18 06 10.2 -1.5**
SDCO Great Sand Dun 6.08 183 Pn **Pn 18 06 13.0 +0.8**
PV23 Carpenter Ridg 6.12 210 Pn 18 06 12.5 -0.2
ECSD EROS Data Cent 6.15 88 Pn 18 06 15.9 +2.9
PV10 Paradox Valley 6.20 210 Pn **Pn 18 06 14.5 +0.7**
S22A 4UR Ranch, Cre 6.21 193 Pg **Pb 18 06 30.9 +0.9**
SRU San Rafael Swe 6.22 223 Pn **Pn 18 06 13.5 -0.5**
PV13 Radium Mtn., P 6.31 208 Pn 18 06 17.3 +1.9
TMUT Trail Mountain 6.43 227 Pn 18 06 18.3 +1.3
CBKS Cedar Bluff 6.43 139 Pg **Pg 18 06 43.4 -0.7**
NLU North Lily Min 6.47 236 Pn **Pn 18 06 17.6 +0.1**
BGU Big Grassy Mou 6.54 246 Pn 18 06 19.5 +1.1
Q16A Castle Valley 6.69 225 Pn 18 06 20.9 +0.4
DUG Dugway, Tooele 6.78 240 Pn 18 06 21.2 -0.6
MTPU Mount Pierson 7.87 225 Pn **Pn 18 06 34.5 -2.4**
ELK Elko 8.11 251 Lg Lg 18 08 52.0
comp=E,0.1nm,0.3s,baz=338,slow=22,SNR=1.5
ELK Elko 8.11 251 Pn **Pn 18 06 38.9 -1.2**
PSUT Pine Spring 8.45 234 Pn **Pn 18 06 45.4 +0.8**
ULM Lac du Bonnet 9.00 41 Pn **Pn 18 06 53.2 +1.3**
comp=E,2.9nm,0.5s,baz=228,slow=13,SNR=2.3
ULM Lg Lg 18 09 20.4
comp=E,0.3nm,0.3s,baz=173,slow=21,SNR=1.0
U15A North Rim 9.20 219 Pn **Pn 18 06 56.3 +1.2**
NEW Newport 9.46 302 Lg Lg 18 09 25.3
comp=E,0.2nm,0.3s,baz=161,slow=23,SNR=1.3
NVAR Mina Array Bea 11.31 246 Pn **Pn 18 07 25.8 +2.0**
comp=E,0.1nm,0.3s,baz=48,slow=12,SNR=6.3
comp=E,0.8nm,0.6s
TXAR Lajitas Array 14.51 175 Pn **P 18 08 12.2 -2.1**
comp=E,0.1nm,0.3s,baz=42,slow=11,SNR=4.7
TXAR Pg Pg 18 09 06.3
comp=E,0.1nm,0.3s,baz=284,slow=15,SNR=4.7
TXAR Lg Lg 18 12 10.8
comp=E,0.1nm,0.3s,baz=339,slow=36,SNR=1.9
comp=E,0.1nm,0.4s
NNA Nana 61.23 148 LR LR 18 43 32.8
comp=E,20nm,18.4s,baz=352,slow=38
ZALV Zalesovo Beam 82.23 354 P **P 18 17 04.0 +0.5**
comp=E,0.3nm,0.4s,baz=19,slow=6.1,SNR=1.7
comp=E,0.3nm,0.4s
MKAR Makanchi Array 89.53 355 P **P 18 17 40.9 +1.0**
comp=E,0.5nm,0.7s,baz=7.6,slow=6.4,SNR=2.5
comp=E,0.5nm,0.7s

*IDC **13** 18:06:36.1±0.8, 67°.11N×20°.93E, h0km, mbtmp3.1/5, ML1.9/4, Error ellipse: s-maj=14.3km s-min=7.4km az=110.0*
*HEL **13** 18:06:36.9±0.1, 67°.06N×20°.96E, h0km, ML2.2, ML2.3(UPP), Explosion*
*UPP **13** 18:06:36.1±0.1, 67°.04N×20°.96E, h0km, ML2.3, Explosion*
*KOLA **13** 18:06:37.4, 67°.22N×20°.14E, h0km, ML2.4*
ISC 13 18:06:36.3±0.7, 67°.07N±0°.02×20°.90E±0°.02, h0km, n54, σ1§40/76, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.14**	**292**	**P**		**Pg**		**18 06 39.7**	**+0.7**
DUNU	**Dundret**	**0.14**	**292**	***i* P**		**Pg**		**18 06 39.7**	**+0.7**
MASU	**Masugnsbyn**	**0.58**	**47**	**P**		**Pg**		**18 06 47.1**	**-0.3**
MASU	**Masugnsbyn**	**0.58**	**47**	***i* P**		**Pg**		**18 06 47.1**	**-0.3**
PAJU	**Pajala**	**0.87**	**92**	**P**		**Pg**		**18 06 51.8**	**-1.1**
PAJU	**Pajala**	**0.87**	**92**	***i* P**		**Pg**		**18 06 51.8**	**-1.1**
RATU	**Laukkuluspa**	**0.91**	**327**	**P**		**Pg**		**18 06 53.5**	**-0.2**
RATU				S		**Sb**		**18 07 06.7**	**-1.0**
RATU	**Laukkuluspa**	**0.91**	**327**	***e*P**		**Pg**		**18 06 53.5**	**-0.2**
RATU				***e*S**		**Sb**		**18 07 06.7**	**-1.0**
HARU	**Harads**	**0.91**	**178**	**P**		**Pg**		**18 06 52.7**	**-1.1**
HARU	**Harads**	**0.91**	**178**	***i* P**		**Pg**		**18 06 52.7**	**-1.1**
SALU	**Saltoluokta**	**0.98**	**290**	**P**		**Pg**		**18 06 55.0**	**-0.1**
SALU	**Saltoluokta**	**0.98**	**290**	***e*P**		**Pg**		**18 06 55.0**	**-0.1**
LANU	**Lannavaara**	**1.07**	**23**	***e*P**		**Pg**		**18 06 55.8**	**-1.0**
LANU				***e*S**		**Sg**		**18 07 09.4**	**-1.2**
KLF	**Kolari**	**1.21**	**81**	***e*P**		**Pg**		**18 06 58.1**	**-1.4**
KLF				***e*SN**		**Sn**		**18 07 17.0**	**-0.6**
KALU	**Kalix**	**1.57**	**140**	**P**		**Pn**		**18 07 04.0**	**-1.3**
KALU	**Kalix**	**1.57**	**140**	***e*P**		**Pn**		**18 07 04.0**	**-1.3**
KALU				***e*SN**		**Sg**		**18 07 27.0**	**+0.4**
SJUU	**Sjulsmark**	**1.60**	**169**	**P**		**Pn**		**18 07 04.8**	**-0.9**
SJUU	**Sjulsmark**	**1.60**	**169**	***e*P**		**Pn**		**18 07 04.8**	**-0.9**
TOF	**Tornio**	**1.69**	**124**	***e*P**		**Pn**		**18 07 06.2**	**-0.9**
TOF				MSG				18 07 26.1	
comp=Z,28nm,0.2s
TOF ***e*SN** **Sn** **18 07 29.6 +0.1**
HEF Hetta 1.71 37 ***e*P** **Pn** **18 07 07.1 -0.2**
HEF Hetta 1.71 37 ***e*P** **Pn** **18 07 07.1 -0.2**
baz=219
HEF MSG 18 07 27.1
comp=Z,15nm,0.2s
HEF ***e*SN** **Sg** **18 07 31.8 +0.7**
LILU Lilltraesk 1.84 194 P **Pn 18 07 08.9 -0.3**
LILU Lilltraesk 1.84 194 ***e*P** **Pn** **18 07 08.9 -0.3**
KIF Kilpisjarvi 1.94 359 ***e*P** **Pb** **18 07 12.2 -0.3**
KIF Kilpisjarvi 1.94 359 ***e*PG** **Pb** **18 07 12.4 -0.1**
KIF MSG 18 07 36.2
comp=Z,35nm,0.2s
KIF ***e*SG** **Sg** **18 07 39.4 +0.8**
RNF Rovaniemi 2.08 101 ***e*PB** **Pn** **18 07 12.8 +0.4**
RNF ***e*SG** **Sb** **18 07 41.9 +0.8**
KTK1 Kautokeino 2.14 23 ***e*PG** **Pb** **18 07 14.8 -1.1**
SGF Sodankyl 2.22 78 ***e*PB** **Pn** **18 07 15.1 +0.8**
baz=261
TRO Tromso 2.68 345 ***e*PB** **Pb** **18 07 24.2 -0.9**
TRO ***e*SB** **Sb** **18 07 58.0 -0.3**
OBF4 Vikkela, Lumij 2.85 141 ***e*P** **Pn** **18 07 23.7 +0.7**
baz=330
OUL Oulu 2.85 132 ***e*P** **Pn** **18 07 23.8 +0.8**
OUL ***e*SG** **Sb** **18 08 05.5 +2.2**
OBF0 Syolatti, Pyha 2.93 150 ***e*P** **Pn** **18 07 24.5 +0.4**
OBF8 Ulkokalla 2.95 158 ***e*P** **Pn** **18 07 24.8 +0.5**
ARA0 ARCESS Array S 3.01 33 ***e*P** **Pn** **18 07 25.5 +0.3**
baz=212
ARA0 ***e*S** **Sn** **18 08 00.4 -1.5**
ARCES ARCESS Array B 3.01 33 Pn **Pn 18 07 25.5 +0.3**
comp=Z,0.2nm,0.3s,baz=213,slow=13,SNR=54
ARCES Sn **Sn** **18 08 01.5 -0.5**
comp=Z,0.3nm,0.3s,baz=216,slow=21,SNR=1.6
comp=Z,1.0nm,0.2s
ARCES ARCESS Array B 3.01 33 P **Pn** **18 07 25.8 +0.6**
ARCES S **Sn** **18 08 03.1 +1.2**
OUF Merijarvi 3.14 148 ***e*P** **Pn** **18 07 27.7 +0.7**
OUF MSG 18 08 08.3
comp=Z,3.0nm,0.2s
UMAU Umeaa 3.20 182 ***e*P** **Pn** **18 07 28.4 +0.6**
UMAU ***e*SB** **Sn** **18 08 09.5 +2.9**
VRF Varrio 3.43 75 ***e*P** **Pn** **18 07 32.3 +1.4**
baz=264
VRF ***e*SG** **Sb** **18 08 20.1 0.0**
OLKF Oulanka, Finla 3.46 99 ***e*P** **Pn** **18 07 32.0 +0.6**
OLKF ***e*SB** **Sn** **18 08 17.0 +3.9**
MSF Maaselka 3.46 106 ***e*P** **Pn** **18 07 31.8 +0.3**
baz=291
KEV Kevo 3.52 37 ***e*P** **Pn** **18 07 33.3 +1.2**
baz=223
KU6 Riekki 3.75 102 ***e*P** **Pn** **18 07 35.5 +0.2**
baz=288
HUSU Husum 3.81 191 ***e*P** **Pn** **18 07 36.7 +0.6**
baz=8.0
HUSU ***e*S** **Sn** **18 08 22.9 +1.2**
VAF Ylistaro 4.12 169 ***e*P** **Pn** **18 07 41.0 +0.7**
baz=353
HEMU Hemsoen 4.58 197 ***e*P** **Pn** **18 07 47.0 +0.3**
HEMU ***e*S** **Sn** **18 08 41.4 +0.9**
APA0 Apatity Array 4.71 78 S **Sn** **18 08 43.9 +0.1**
RMF Romuvaara 4.71 123 ***e*P** **Pn** **18 07 50.1 +1.5**
APA Apatity 4.87 78 S **Sn** **18 08 52.8 +5.1**
PRVG Vayda Guba 4.96 52 P **Pn** **18 07 55.5 +3.6**
PRVG S **Sn** **18 08 52.9 +3.1**
FINES FINESS Array B 6.08 156 Pn **Pn** **18 08 07.6 +0.2**
comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=12
FINES Sn **Sn** **18 09 17.0 -0.5**
comp=Z,0.1nm,0.3s,baz=345,slow=27,SNR=1.8
FINES Lg Lg 18 09 49.1
comp=Z,0.1nm,0.3s,baz=336,slow=23,SNR=1.4
comp=Z,0.6nm,0.6s
NOA NORSAR Array B 7.39 220 Pn **Pn** **18 08 25.1 -0.2**
baz=30,slow=17,SNR=1.0
NOA Sn **Sn** **18 09 46.0 -3.8**
baz=35,slow=17,SNR=1.5
NOA Lg Lg 18 10 29.9
baz=31,slow=14,SNR=1.4
comp=Z,0.1nm,0.5s
HFS Hagfors 7.66 208 Pn **Pn** **18 08 27.0 -2.0**
baz=26,slow=12,SNR=6.1
HFS Sn **Sn** **18 09 53.7 -2.7**
comp=Z,0.1nm,0.3s,baz=28,slow=28,SNR=1.4
comp=Z,0.5nm,0.3s
SPITS Spitsbergen Ar 11.24 355 Pn Pn 18 09 12.9 -5.1
comp=Z,3.9nm,0.9s,baz=166,slow=19,SNR=1.7

*IDC **13** 18:07:26.0±0.8, 36°.72N×142°.95E, h0km, mb3.9/18, mbtmp3.9/23, ML3.5/4, MS3.4/17, Error ellipse: s-maj=18.0km s-min=16.0km az=102.0*
*NEIC **13** 18:07:28.0±2.0, 36°.74N±0°.07×142°.91E±0°.08, h10km±1km, mb4.5/15, Error ellipse: s-maj=14.1km s-min=5.6km az=137.0*
*NIED **13** 18:07:29.2, 36°.77N×142°.87E, h63km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.85; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.78; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.75; $M_{\phi r}$0.48; Fault plane solution: $M_0$2.01000×10^{15} NP1: ϕ_s206.00000°, δ39.00000°, λ98.00000°. NP2:ϕ_s15.00000°, δ52.00000°, λ83.00000°.*
*JMA **13** 18:07:29.2±0.2, 36°.8N±0°.6×14°.3E±°, h63km, MV3.9/35, FAR E OFF FUKUSHIMA PREF*
ISC 13 18:07:27.8±4.3, 36°.73N±0°.04×142°.89E±0°.06, h12km±27km, n87, σ1§17/86, mb4.1/25, MS3.4/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.73**	**292**	**P**		**Pn**		**18 07 57.1**	**-0.7**
JFK				***e*S**		**Sn**		**18 08 18.4**	**-1.4**
JHO	**Hitachi**	**1.87**	**267**	***i* P**		**Pn**		**18 07 59.4**	**-0.2**
JHO				***e*S**		**Sn**		**18 08 22.4**	**-0.8**
JMST	**Minamisoumatoc**	**1.88**	**303**	**P**		**Pn**		**18 07 59.2**	**-0.6**
JMST				S		**Sn**		**18 08 21.4**	**-2.0**
JFFD	**Fukushimafurud**	**1.90**	**282**	**P**		**Pn**		**18 07 59.5**	**-0.6**
JFFD				***e*S**		**Sn**		**18 08 22.0**	**-1.9**
JMM	**Marumori**	**2.02**	**305**			**Pn**		**18 08 01.3**	**-0.4**
JOTO	**OTAMA OYAMA**	**2.20**	**293**	P		**Pn**		**18 08 04.6**	**+0.4**
JOTO				***e*S**		**Sn**		**18 08 30.8**	**-0.6**
JYT	**Yasato**	**2.23**	**258**			**Pn**		**18 08 04.0**	**-0.5**
JMK	**Ichinoseki**	**2.58**	**330**	P		**Pn**		**18 08 09.2**	**-0.3**
JMK				***e*S**		**Sn**		**18 08 38.9**	**-1.9**
BSO1	**Boso 1**	**2.59**	**217**	P		**Pn**		**18 08 09.7**	**+0.7**
BSO1				***e*S**		**Sn**		**18 08 40.5**	**+0.4**
JAG	**Ashikaga**	**2.78**	**265**	P		**Pn**		**18 08 12.5**	**+0.3**
JAG				***e*S**		**Sn**		**18 08 43.6**	**-2.0**
JYK	**Kaneyama**	**2.96**	**318**	P		**Pn**		**18 08 14.8**	**0.0**
JOM	**Ohasama**	**3.02**	**336**	P		**Pn**		**18 08 15.3**	**-0.1**
JOM				***e*S**		**Sn**		**18 08 50.2**	**-1.3**
JRY	**Ryogami san**	**3.29**	**259**	P		**Pn**		**18 08 19.3**	**0.0**
JRY				***e*S**		**Sn**		**18 08 57.3**	**-1.1**
JOD2	**Odawara 2**	**3.41**	**246**	***e*P**		**Pn**		**18 08 21.2**	**+0.3**
JOD2				***e*S**		**Sn**		**18 09 00.2**	**-1.0**
JYN	**Shimob**	**3.72**	**252**	P		**Pn**		**18 08 26.2**	**+1.0**
JYN				***e*S**		**Sn**		**18 09 09.7**	**+0.7**
JFNN	**Fujinakano**	**3.73**	**247**	***e*S**		**Sn**		**18 09 08.6**	**-0.7**
MJAR	**Matsushiro Arr**	**3.77**	**269**	Pn		**Pn**		**18 08 26.5**	**+0.8**
2.4nm,0.3s,baz=99,slow=12,SNR=122
MJAR **Sn** **Sn** **18 09 10.2 +0.2**
0.5nm,0.3s,baz=86,slow=16,SNR=6.3
MJAR LR LR 18 10 12.3
comp=Z,333nm,19.7s,baz=38,slow=44
28nm,0.5s
MAJO Matsushiro 3.77 269 **Pn** **18 08 27.3 +1.5**
MAT Matsushiro 3.77 269 P **Pn** **18 08 27.3 +1.6**
MJB9 Matsu-Tunnel 3.77 269 **Pn** **18 08 27.2 +1.4**
JANG Nango 3.80 344 P **Pn** **18 08 26.2 0.0**
JSD Sado 3.91 291 **Pn** **18 08 27.5 -0.2**
JSD Sado 3.91 291 ***e*P** **Pn** **18 08 27.4 -0.3**
JTM Tenmabayashi 4.30 341 Pn **Pn** **18 08 33.8 +0.8**
JHJ Hachijo jima 2 4.41 216 Pn **Pn** **18 08 35.0 +0.5**
26nm,0.3s,baz=78,slow=12,SNR=1.8
JHJ **Sn** **Sn** **18 09 21.1 -4.7**
48nm,0.3s,baz=63,slow=24,SNR=6.5
158nm,0.5s
JGF Kuroka 4.61 258 **Pn** **18 08 39.8 +2.4**
INU Inuyama 4.95 256 **Pn** **18 08 43.4 +1.3**
ERM Erimo 5.29 2 Pn **Pn** **18 08 45.6 -1.0**
JEW Eniwo 6.21 350 Pn **Pn** **18 08 59.9 +0.7**
JMN Monobe 7.95 251 Pn **Pn** **18 09 23.3 0.0**
JHS Saijyo 8.12 261 **Pn** **18 09 27.7 +2.2**
JCJ Chichijima 9.62 184 Pn **Pn** **18 09 42.9 -3.2**
2.7nm,0.3s,baz=15,slow=20,SNR=1.4
JCJ **Sn** Sn 18 11 23.2 -11
13nm,0.3s,baz=286,slow=23,SNR=5.9
YSS Yuzh-Sakhalins 10.22 359 Pn **Pn** **18 09 53.5 -0.8**
USRK Ussuriysk Ar. 11.16 315 Pn **Pn** **18 10 08.0 +0.9**
0.9nm,0.5s,baz=108,slow=14,SNR=1.0
KSRS Korea Array 11.97 278 Pn **Pn** **18 10 20.0 +1.7**
0.1nm,0.3s,baz=89,slow=13,SNR=10
KSRS LR LR 18 14 16.4
comp=Z,98nm,18.4s,baz=85,slow=34
2.1nm,0.6s
KLR Kul'dur 14.90 330 Pn **Pn** **18 10 56.5 -1.7**
0.2nm,0.3s,baz=117,slow=13,SNR=3.9
0.7nm,0.5s
TPUB Ta-pu 23.39 241 P **P** **18 12 35.7 -0.9**
MA2 Magadan 23.43 10 LR LR 18 22 50.2
comp=Z,96nm,19.0s,baz=190,slow=39
YAK Yakutsk 26.64 346 LR LR 18 23 55.0
comp=Z,112nm,20.9s,baz=92,slow=37
SEY Seymchan 26.88 10 P **P** **18 13 08.8 +0.6**
2.7nm,0.8s,baz=182,slow=17,SNR=3.8
2.7nm,0.8s
H11N2 WAKE ISLAND Hy 26.98 122 T T 18 41 26.0
baz=314,slow=74,SNR=7.7
H11N1 WAKE ISLAND Hy 26.99 122 T T 18 41 26.6
baz=314,slow=74,SNR=7.6
H11N3 WAKE ISLAND Hy 27.00 122 T T 18 41 27.3
baz=314,slow=74,SNR=8.0
H11S1 WAKE ISLAND Hy 27.71 125 T T 18 42 30.1
baz=315,slow=76,SNR=5.7
H11S3 WAKE ISLAND Hy 27.71 125 T T 18 42 27.4
baz=315,slow=76,SNR=5.0
H11S2 WAKE ISLAND Hy 27.72 125 T T 18 42 24.8
baz=315,slow=76,SNR=5.6
ULN Ulaanbaatar 28.50 304 P **P** **18 13 23.6 +0.5**
ULN IAmb IAmb 18 13 26.2
comp=Z,6.4nm,1.1s
SONM Songino Array 28.93 304 P **P** **18 13 28.6 +1.7**
comp=Z,2.9nm,0.9s,baz=105,slow=8.6,SNR=12
SONM LR LR 18 23 47.8
comp=Z,37nm,21.9s,baz=85,slow=34
comp=Z,2.9nm,0.9s
SONM Songino Array 28.93 304 P **P** **18 13 27.6 +0.7**
SONM IAmb IAmb 18 13 29.3
comp=Z,4.0nm,1.1s
TIXI Tiksi 35.74 352 P **P** **18 14 26.9 +0.9**
comp=Z,0.5nm,0.6s,baz=90,slow=23,SNR=1.0
comp=Z,0.5nm,0.6s
SIJI Sorong 38.93 199 LR LR 18 28 19.6
comp=Z,24nm,19.5s,baz=176,slow=32
CMAR Chiang Mai Arr 42.57 257 P **P** **18 15 24.6 +0.9**
comp=Z,0.5nm,0.3s,baz=41,slow=5.9,SNR=5.8
CMAR LR LR 18 34 08.9
comp=Z,25nm,18.6s,baz=145,slow=38
comp=Z,0.5nm,0.3s
ZAA0 Zalesovo Array 42.99 313 P **P** **18 15 26.4 -0.4**
ZALV Zalesovo Beam 42.99 313 P **P** **18 15 25.8 -0.9**
comp=Z,1.2nm,0.6s,baz=173,slow=6.3,SNR=4.6
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 42.99 313 P **P** **18 15 26.3 -0.5**
MK31 Makanchi Array 45.28 303 P **P** **18 15 45.5 +0.3**
MK31 IAmb IAmb 18 15 47.1
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 45.28 303 P **P** **18 15 45.9 +0.6**
comp=Z,1.7nm,0.7s,baz=86,slow=10,SNR=14
MKAR LR LR 18 35 11.3
comp=Z,36nm,18.2s,baz=236,slow=37
comp=Z,1.7nm,0.7s
MKAR Makanchi Array 45.28 303 P **P** **18 15 45.2 -0.1**
I21K Tanana 46.97 32 P **P** **18 15 58.4 +0.1**
I21K IAmb IAmb 18 16 24.8
comp=Z,7.9nm,1.1s
KURK Kurchatov 47.05 309 P **P** **18 15 59.8 +0.7**
KURK IAmb IAmb 18 16 05.3
comp=Z,4.4nm,0.8s
NEA2 Nenana 48.18 32 P **P** **18 16 06.8 -0.9**
NEA2 IAmb IAmb 18 16 16.6
comp=Z,4.9nm,1.2s
ILAR Eielson Array 49.12 32 P **P** **18 16 13.4 -1.5**
comp=Z,0.3nm,0.3s,baz=264,slow=6.6,SNR=6.6
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 51.65 313 P **P** **18 16 32.8 -1.4**
comp=Z,0.3nm,0.5s,baz=50,slow=4.5,SNR=3.9
BVAR LR LR 18 38 00.9
comp=Z,43nm,18.2s,baz=10,slow=36
comp=Z,0.3nm,0.5s
KK31 Karatay Array 54.30 301 P **P** **18 16 52.8 -1.1**
KK31 IAmb IAmb 18 16 55.5
comp=Z,4.1nm,1.3s
KKAR Karatay Array 54.30 301 P **P** **18 16 53.0 -1.0**
CHGR Chuyangaron 56.86 296 P **P** **18 17 13.1 +0.5**
CHGR IAmb IAmb 18 17 21.0
comp=Z,8.2nm,0.8s
WRA Warramunga Arr 56.94 190 P **P** **18 17 12.7 -0.3**
comp=Z,1.1nm,0.7s,baz=8.3,slow=7.4,SNR=9.6
comp=Z,1.1nm,0.7s
WRA Warramunga Arr 56.94 190 P **P** **18 17 12.8 -0.2**
ARU Arti 57.37 319 P **P** **18 17 14.9 -0.8**
comp=Z,0.7nm,0.3s,baz=91,slow=7.1,SNR=3.5
ARU LR LR 18 45 41.0
comp=Z,58nm,18.2s,baz=34,slow=40
comp=Z,0.7nm,0.3s
ABKAR Akbulak array 59.04 311 P **P** **18 17 27.3 -0.2**
AKTO Aktyubinsk 59.76 312 P **P** **18 17 32.7 +0.2**
comp=Z,1.2nm,0.5s,baz=148,slow=5.9,SNR=1.6
comp=Z,1.2nm,0.5s
ASAR Alice Springs 60.66 189 P **P** **18 17 38.7 -0.2**
comp=Z,0.9nm,0.6s,baz=2.5,slow=6.8,SNR=12
comp=Z,0.9nm,0.6s
ASAR Alice Springs 60.66 189 P **P** **18 17 38.9 0.0**
HILA High Level 64.33 35 P **P** **18 18 03.2 +0.2**
ARCES ARCESS Array B 64.70 340 LR LR 18 49 07.4
comp=Z,14nm,19.6s,baz=314,slow=39
BELG Belogornoye 64.83 318 LR LR 18 50 32.2
comp=Z,59nm,18.3s,baz=156,slow=40
GEYT Alibeck 65.02 300 P **P** **18 18 07.4 -0.5**
comp=Z,0.9nm,0.5s,baz=95,slow=3.0,SNR=2.1
comp=Z,0.9nm,0.5s
AFI Afiamalu 66.03 131 LR LR 18 43 05.6
comp=Z,19nm,21.6s,baz=325,slow=32
FINES FINESS Array B 69.63 333 P **P** **18 18 38.3 +1.7**
comp=Z,1.2nm,0.7s,baz=83,slow=6.0,SNR=3.8
comp=Z,1.2nm,0.7s
NVAR Mina Array Bea 74.22 54 P **P** **18 19 06.4 +1.4**
comp=Z,0.4nm,0.7s,baz=299,slow=4.6,SNR=3.8
comp=Z,0.4nm,0.7s
NOA NORSAR Array B 74.92 338 P **P** **18 19 09.3 +1.0**
comp=Z,0.3nm,0.7s,baz=32,slow=10,SNR=1.7
NOA LR LR 18 56 47.8
comp=Z,58nm,18.9s,baz=45,slow=40
comp=Z,0.3nm,0.7s
AKASG Malin Array Be 75.26 323 P **P** **18 19 10.0 -0.4**
comp=Z,1.1nm,0.6s,baz=46,slow=6.4,SNR=6.4
comp=Z,1.1nm,0.6s
FRB Frobisher Bay 76.80 14 LR LR 18 57 59.4
comp=Z,49nm,18.1s,baz=322,slow=40
BURAR Bucovina Array 79.28 322 P **P** **18 19 34.0 +0.8**
VRAC Vranov 82.02 328 LR LR 18 59 03.5
comp=Z,60nm,18.5s,baz=29,slow=38
TXAR Lajitas Array 89.37 53 P **P** **18 20 24.1 -0.6**
comp=Z,0.1nm,0.6s,baz=267,slow=3.2,SNR=1.6
comp=Z,0.1nm,0.6s
ESDC Sonseca Array 98.08 335 LR LR 19 09 26.7
comp=Z,48nm,18.3s,baz=328,slow=38

*IDC **13** 18:10:03.6±1.6, 4°.42S×102°.01E, h0km, mb3.9/11, mbtmp3.9/11, MS2.3/1, Error ellipse: s-maj=55.4km s-min=16.1km az=54.0*
*NEIC **13** 18:10:12.2±1.1, 4°.34S±0°.08×102°.20E±0°.07, h49km±9km, mb4.2/13, Error ellipse: s-maj=12.1km s-min=8.7km az=210.0*
ISC 13 18:10:10.4±0.6, 4°.30S±0°.08×102°.16E±0°.08, h37km, n48, σ1§02/41, mb4.1/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.80**	**94**			**Pn**		**18 10 26.6**	**+1.4**
LEM	**Lembang**	**5.99**	**115**	LR		LR		18 14 09.8	
comp=Z,29nm,20.8s,baz=342,slow=40
MYKOM Kota Tinggi 6.28 16 Pn **Pn** **18 11 43.0 +2.4**
GSI Gunungsitoli 7.21 320 Pn **Pn** **18 11 55.4 +2.2**
RPSI Rantau Prapat 7.66 335 Pn **Pn** **18 11 57.7 -1.9**
COCO West Island 9.44 214 Pn **Pn** **18 12 24.4 +0.6**
JAGI Jajag, Banyuwa 12.62 110 Pn **Pn** **18 13 07.2 -0.3**
CMAR Chiang Mai Arr 22.84 352 P **P** **18 15 10.6 +0.1**
1.4nm,0.9s,baz=179,slow=8.2,SNR=10
1.4nm,0.9s
CMAR Chiang Mai Arr 22.84 352 P **P** **18 15 09.8 -0.7**
KNRA Kununurra 28.49 115 P **P** **18 16 01.6 -0.8**
KNRA IAmb IAmb 18 16 02.9
comp=Z,13nm,1.2s
SIJI Sorong 29.28 84 P **P** **18 16 09.2 -0.3**
comp=Z,3.7nm,0.8s,baz=288,slow=20,SNR=3.8
comp=Z,3.7nm,0.8s
H08S2 Diego Garcia H 29.68 262 T T 18 46 49.2
baz=86,slow=75,SNR=10
H08S3 Diego Garcia H 29.69 262 T T 18 46 57.3
baz=86,slow=75,SNR=16
H08S1 Diego Garcia H 29.70 262 T T 18 46 45.9
baz=86,slow=75,SNR=8.8
MTN Manton Dam 29.86 108 P **P** **18 16 13.9 -0.7**
MTN IAmb IAmb 18 16 31.2
comp=Z,10nm,1.2s
H01W3 Cape Leeuwin H 32.39 161 T T 18 50 28.3
baz=338,slow=76,SNR=5.8
H01W2 Cape Leeuwin H 32.41 161 T T 18 50 31.7
baz=338,slow=76,SNR=6.9
H01W1 Cape Leeuwin H 32.41 161 T T 18 50 32.4
baz=338,slow=76,SNR=8.5
WB0 Warramunga Arr 34.97 119 P **P** **18 16 58.6 -0.7**
WB0 IAmb IAmb 18 17 41.9
comp=Z,7.4nm,1.3s
WRA Warramunga Arr 34.99 119 P **P** **18 16 58.4 -1.2**
comp=Z,0.4nm,0.4s,baz=303,slow=8.7,SNR=9.5
comp=Z,0.4nm,0.4s
WRA Warramunga Arr 34.99 119 P **P** **18 16 59.2 -0.3**
WB2 Warramunga Arr 35.00 119 P **P** **18 16 58.8 -0.8**
WB2 IAmb IAmb 18 17 35.6
comp=Z,3.8nm,1.1s
WR0 Warramunga Arr 35.17 119 P **P** **18 17 00.8 -0.3**
JIRN Jiri 35.31 335 ***e*P** **P** **18 17 03.8 +1.2**
PKI Pulchoki 35.57 334 ***e*P** **P** **18 17 05.3 +0.6**
GUN Gumba 35.66 335 ***e*P** **P** **18 17 06.9 +1.3**
comp=Z,14nm,0.4s
ASAR Alice Springs 36.17 125 P **P** **18 17 08.1 -1.6**
comp=Z,0.3nm,0.6s,baz=293,slow=6.8,SNR=11
comp=Z,0.3nm,0.6s
ASAR Alice Springs 36.17 125 P **P** **18 17 09.8 +0.2**
AS31 Alice Springs 36.17 125 P **P** **18 17 09.0 -0.7**

GKN	**Gorkha**	**36.29**	**333**	*e*P	**P**	**18 17 11.5**	**+0.8**
	comp=Z,4.7nm,0.5s						
DANN	**Dangsing**	**36.98**	**332**	*e*P	**P**	**18 17 17.8**	**+1.0**
	comp=Z,14nm,0.6s						
PYUN	**Piuthan**	**37.13**	**331**	*e*P	**P**	**18 17 19.1**	**+1.2**
	comp=Z,2.3nm,0.2s						
STKA	**Stephens Creek**	**46.02**	**131**	P	**P**	**18 18 30.4**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=318,slow=14,SNR=3.7						
	comp=Z,1.3nm,0.6s						
KSRS	**Korea Array**	**47.97**	**28**	P	**P**	**18 18 45.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=218,slow=7.9,SNR=3.3						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**52.05**	**4**	P	**P**	**18 19 16.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=183,slow=9.0,SNR=9.3						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**52.05**	**4**	P	**P**	**18 19 17.5**	**+0.9**
SONM				IAmb	IAmb	18 19 18.1	
	comp=Z,1.3nm,0.9s						
MK31	**Makanchi Array**	**53.83**	**343**	P	**P**	**18 19 29.9**	**+0.4**
MK31				IAmb	IAmb	18 20 12.2	
	comp=Z,3.8nm,1.4s						
MKAR	**Makanchi Array**	**53.83**	**343**	P	**P**	**18 19 29.0**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=150,slow=8.5,SNR=14						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**53.83**	**343**	P	**P**	**18 19 29.6**	**+0.1**
KKAR	**Karatay Array**	**55.18**	**332**	P	**P**	**18 19 39.3**	**-0.1**
KKAR				IAmb	IAmb	18 19 51.6	
	comp=Z,1.1nm,1.1s						
KLR	**Kul'dur**	**59.19**	**22**	P	**P**	**18 20 06.4**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=223,slow=6.4,SNR=4.0						
	comp=Z,1.0nm,0.6s						
ZAA0	**Zalesovo Array**	**59.83**	**348**	P	**P**	**18 20 11.5**	**-0.4**
ZALV	**Zalesovo Beam**	**59.83**	**348**	P	**P**	**18 20 11.0**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=165,slow=5.6,SNR=11						
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	**59.83**	**348**	P	**P**	**18 20 11.4**	**-0.5**
BVAR	**Borovoye Array**	**63.08**	**339**	P	**P**	**18 20 31.8**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=141,slow=9.6,SNR=6.3						
	comp=Z,0.6nm,0.5s						
ABKAR	**Akbulak array**	**64.68**	**331**	P	**P**	**18 20 44.6**	**+0.1**
MAW	**Mawson**	**68.62**	**195**	P	**P**	**18 21 09.7**	**+0.4**
TXAR	**Lajitas Array**	**145.10**	**42**	PKPbc	**PKPbc**	**18 29 44.0**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=255,slow=0.9,SNR=18						

*IDC **13** 18:13:36.4±4.6, 19°.10N×144°.81E, h159km±56km, mb3.4/3, mbtmp4.0/4, Error ellipse: s-maj=285.7km s-min=33.8km az=92.0*
*NEIC **13** 18:13:48.4±1.6, 18°.2N±0°.1×144°.9E±0°.2, h188km±11km, mb4.3/13, Error ellipse: s-maj=24.8km s-min=16.7km az=73.0*

ISC 13 18:13:36.2±1.3, 19°.1N±0°.1×144°.7E±0°.2, h150km, n22, σ1§92/20, mb4.3/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.51**	**178**	P	**Pn**	**18 14 58.0**	**+1.5**
	51nm,0.8s,baz=0.0,slow=20,SNR=6.1						
GUMO				S	**Sn**	**18 15 57.4**	**-1.8**
	44nm,0.7s,baz=343,slow=19,SNR=1.8						
GUMO	**Guam**	**5.51**	**178**	Pn	**Pn**	**18 14 57.4**	**+0.9**
PATS	**Pohnpei**	**18.05**	**131**	Pn	**Pn**	**18 17 38.8**	**+1.1**
H11S3	**WAKE ISLAND Hy**	**20.86**	**88**	T	T	18 39 22.0	
	baz=275						
H11S1	**WAKE ISLAND Hy**	**20.87**	**88**	T	T	18 39 17.7	
	baz=275						
H11S2	**WAKE ISLAND Hy**	**20.88**	**88**	T	T	18 39 10.6	
	baz=275						
SAUI	**Saumlaki**	**29.99**	**207**	P	**P**	**18 19 26.6**	**-4.2**
COEN	**Coen**	**32.91**	**183**	P	**P**	**18 19 56.0**	**-0.4**
MTN	**Manton Dam**	**34.46**	**204**	P	**P**	**18 20 11.7**	**+2.0**
MTN				IAmb	IAmb	18 20 24.4	
	comp=Z,11nm,1.1s						
KNRA	**Kununurra**	**37.96**	**205**	P	**P**	**18 20 42.1**	**+2.6**
KNRA				IAmb	IAmb	18 20 54.7	
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**39.01**	**178**	P	**P**	**18 20 45.6**	**-2.6**
CTAO				IAmb	IAmb	18 21 20.0	
	comp=Z,8.9nm,1.2s						
WB0	**Warramunga Arr**	**39.95**	**195**	P	**P**	**18 20 56.7**	**+0.7**
WB0				IAmb	IAmb	18 20 57.1	
	comp=Z,6.1nm,1.2s						
WR0	**Warramunga Arr**	**40.10**	**195**	P	**P**	**18 20 57.9**	**+0.6**
WR0				IAmb	IAmb	18 21 11.2	
	comp=Z,9.8nm,1.5s						
WRAB	**Tennant Creek**	**40.12**	**195**	P	**P**	**18 20 58.6**	**+1.2**
WRAB				IAmb	IAmb	18 20 59.2	
	comp=Z,8.2nm,1.2s						
WB2	**Warramunga Arr**	**40.13**	**195**	P	**P**	**18 20 57.6**	**+0.1**
WRA	**Warramunga Arr**	**40.13**	**195**	P	**P**	**18 20 57.1**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=20,slow=9.2,SNR=24						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**40.13**	**195**	P	**P**	**18 20 57.1**	**-0.5**
AS31	**Alice Springs**	**43.81**	**194**	P	**P**	**18 21 28.0**	**+0.6**
ASAR	**Alice Springs**	**43.81**	**194**	P	**P**	**18 21 26.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=10,slow=6.1,SNR=13						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**43.81**	**194**	P	**P**	**18 21 28.1**	**+0.7**
MBWA	**Marble Bar**	**46.89**	**213**	P	**P**	**18 21 55.5**	**+3.8**
MBWA				IAmb	IAmb	18 22 15.2	
	comp=Z,8.9nm,1.1s						
FINES	**FINESS Array B**	**86.08**	**335**	P	**P**	**18 25 58.8**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=62,slow=3.6,SNR=1.7						
	comp=Z,0.7nm,0.7s						

IDC 13 18:15:33.2±2.5, 2°.25N×100°.00E, h168km±78km, mb2.9/4, mbtmp3.4/4, Error ellipse: s-maj=285.1km s-min=21.2km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.21**	**297**	P	Pn	18 16 01.4	-0.1
	21nm,0.3s,baz=162,slow=6.4,SNR=14						
PSI				S	Sn	18 16 22.6	-0.7
	11nm,0.6s,baz=49,slow=19,SNR=8.4						
WRA	**Warramunga Arr**	**40.27**	**125**	P	P	18 22 54.0	-0.1
	0.3nm,0.4s,baz=302,slow=9.0,SNR=5.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**41.85**	**130**	P	P	18 23 06.8	-0.3
	0.2nm,0.8s,baz=315,slow=6.8,SNR=1.6						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**46.97**	**343**	P	P	18 23 47.7	+0.4
	0.1nm,0.3s,baz=152,slow=8.1,SNR=1.9						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**53.02**	**349**	P	P	18 24 32.1	-0.6
	0.3nm,0.3s,baz=178,slow=8.7,SNR=1.8						
	0.3nm,0.3s						

RSNC 13 18:27:43.1±1.1, 6°.89N×76°.75W, h4km±7km, ML1.8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.56**	**76**	*e*S	Sg	18 28 00.1	-0.9
PTAC	**Punta Ardita,**	**1.08**	**284**	*e*P	Pg	18 28 01.7	-2.1
PTAC				*e*S	Sg	18 28 16.3	-1.5
CBOC	**Ciudad Bolivar**	**1.25**	**144**	*e*P	Pg	18 28 05.0	-2.2
CBOC				*e*S	Sg	18 28 20.2	-3.3
CBOC				*i*		18 28 25.3	
	comp=N,14nm,0.2s						
CBOC				*i*		18 28 26.8	
	comp=Z,7.0nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.97**	**72**	*e*P	Pn	18 28 16.3	-1.1
ZARC				*e*S	Sn	18 28 42.0	-0.6
ZARC				*i*		18 28 44.5	
	comp=Z,16nm,0.7s						
GUY2C	**Guyana, Caldas**	**2.15**	**140**	*e*P	Pn	18 28 19.4	-0.8
GUY2C				*e*S	Sn	18 28 46.7	-0.9
GUY2C				*i*		18 28 50.0	
	comp=Z,2.9nm,0.6s						
NORC	**Norcasia**	**2.29**	**125**	*e*P	Pn	18 28 22.5	+0.8
NORC				*e*S	Sb	18 28 52.4	-1.3
NORC				*i*		18 28 55.0	
	comp=Z,5.3nm,0.7s						
PTBC	**PUERTO BERRIO,**	**2.31**	**98**	*e*P	Pn	18 28 22.5	+0.5
PTBC				*e*S	Sb	18 28 53.3	-0.9
PTBC				*i*		18 28 55.9	
	comp=Z,6.9nm,0.6s						

*IDC **13** 18:27:49.7±3.4, 0°.85S×78°.79W, h0km, mb4.0/2, mbtmp4.0/3, ML4.4/1, Error ellipse: s-maj=98.5km s-min=41.8km az=101.0*

ISC 13 18:28:16.3±1.2, 1°.43S±0°.08×77°.8W±0°.2, h200km, n13, σ1§72/13, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCUF	**Volcan Galeras**	**2.68**	**10**	*e*P	**Pn**	**18 29 02.3**	**-0.5**
PTLC	**Puerto Leguiza**	**3.41**	**62**	*e*P	**Pn**	**18 29 08.9**	**-1.9**
BBAC	**Balboa, Cauca**	**3.47**	**9**	*i*		18 30 05.4	
	comp=Z,32nm,0.4s						
BBAC	**Balboa, Cauca**	**3.47**	**9**	*e*P	**Pn**	**18 29 12.6**	**+0.7**
BBAC	**Balboa, Cauca**	**3.47**	**9**	*e*S	**Sn**	**18 29 54.6**	**-0.8**
FLOC	**Florencia**	**3.69**	**36**	*e*P	**Pn**	**18 29 14.1**	**-0.2**
POPC	**Popayan, Colom**	**4.10**	**16**	*e*P	**Pn**	**18 29 19.4**	**-0.2**
POPC				*e*S	**Sn**	**18 30 10.2**	**+0.8**
GARC	**Garzon, Huila**	**4.27**	**33**	*e*P	**Pn**	**18 29 22.6**	**+0.9**
YOTC	**Yotoco, Valle**	**5.57**	**15**	*e*P	**Pn**	**18 29 36.5**	**-1.7**
LPAZ	**La Paz**	**17.58**	**148**	P	**P**	**18 32 08.4**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=342,slow=9.7,SNR=16						
	comp=Z,3.5nm,0.6s						
PLCA	**Paso Flores**	**39.67**	**171**	P	**P**	**18 35 30.0**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=350,slow=8.1,SNR=3.2						
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.11**	**76**	P	**P**	**18 40 06.9**	**+2.2**
	comp=Z,0.8nm,0.4s,baz=281,slow=5.9,SNR=20						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**141.99**	**234**	PKP	**PKPdf**	**18 47 21.6**	**-3.8**
	comp=Z,0.3nm,1.0s,baz=110,slow=2.3,SNR=1.9						

*IDC **13** 18:46:24.4±0.6, 4°.92S×151°.18E, h197km±6km, mb3.4/7, mbtmp3.9/8, Error ellipse: s-maj=18.9km s-min=13.0km az=129.0*
*NEIC **13** 18:46:24.2±1.7, 5°.3S±0°.2×151°.1E±0°.1, h176km±18km, mb4.2/12, Error ellipse: s-maj=27.3km s-min=12.9km az=150.0*

ISC 13 18:46:23.8±0.6, 4°.99S±0°.09×151°.23E±0°.09, h200km, n26, σ1§57/34, mb4.1/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.05**	**50**	P	**Pn**	**18 46 54.6**	**+0.7**
	185nm,0.4s,baz=242,slow=1.2,SNR=60						
KRVT				S	**Sn**	**18 47 17.0**	**-0.2**
	121nm,0.5s,baz=270,slow=20,SNR=3.7						
RABL	**Rabaul**	**1.23**	**50**	Pn	**Pn**	**18 46 55.1**	**-0.2**
RABL				Sn	**Sn**	**18 47 15.8**	**-3.8**
PMG	**Port Moresby**	**5.96**	**222**	P	**Pn**	**18 47 51.7**	**+1.0**
	6.1nm,0.5s,baz=27,slow=4.5,SNR=3.3						
PMG				S	**Sn**	**18 49 01.4**	**+2.1**
	30nm,0.6s,baz=342,slow=20,SNR=9.5						
PMG	**Port Moresby**	**5.96**	**222**	Pn	**Pn**	**18 47 46.9**	**-3.7**
FAKI	**Fak Fak**	**19.04**	**275**	P	**P**	**18 50 31.6**	**+0.5**
SIJI	**Sorong**	**20.35**	**281**	P	**P**	**18 50 45.6**	**+0.4**
	4.5nm,0.4s,baz=140,slow=6.6,SNR=9.7						
	4.5nm,0.4s						
MTN	**Manton Dam**	**21.32**	**247**	P	**P**	**18 50 53.5**	**-1.8**
MTN				IAmb	IAmb	18 51 08.4	
	comp=Z,21nm,1.4s						
WB0	**Warramunga Arr**	**22.01**	**227**	P	**P**	**18 51 00.7**	**-1.6**
WB0				IAmb	IAmb	18 51 02.7	
	comp=Z,9.5nm,1.5s						
WR0	**Warramunga Arr**	**22.03**	**226**	P	**P**	**18 51 01.3**	**-1.1**
WRAB	**Tennant Creek**	**22.15**	**226**	P	**P**	**18 51 00.7**	**-2.9**
WRAB				IAmb	IAmb	18 51 06.1	
	comp=Z,5.3nm,0.8s						
WB2	**Warramunga Arr**	**22.15**	**226**	P	**P**	**18 51 03.9**	**+0.2**
WB2				IAmb	IAmb	18 51 06.7	
	comp=Z,9.9nm,1.2s						
WRA	**Warramunga Arr**	**22.16**	**226**	P	**P**	**18 51 04.1**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=50,slow=9.9,SNR=48						
WRA				S	**S**	**18 54 51.0**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=44,slow=17,SNR=2.1						
WRA				ScP	**ScP**	**18 58 12.0**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=48,slow=2.8,SNR=9.1						
	comp=Z,2.2nm,0.3s						
WRA	**Warramunga Arr**	**22.16**	**226**	P	**P**	**18 51 03.1**	**-0.7**
DZM	**Mont Dzumac**	**22.48**	**140**	P	**P**	**18 51 08.2**	**+1.5**
	comp=Z,3.3nm,0.5s,baz=266,slow=8.9,SNR=16						
	comp=Z,3.3nm,0.5s						
DZM	**Mont Dzumac**	**22.48**	**140**	P	**P**	**18 51 08.0**	**+1.3**
DZM				IAmb	IAmb	18 51 09.8	
	comp=Z,14nm,1.4s						
KNRA	**Kununurra**	**24.49**	**243**	P	**P**	**18 51 26.0**	**+1.1**
AS31	**Alice Springs**	**24.97**	**220**	P	**P**	**18 51 29.2**	**-0.1**
ASAR	**Alice Springs**	**24.97**	**220**	P	**P**	**18 51 30.0**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=50,slow=8.6,SNR=26						
ASAR				PcP	**PcP**	**18 55 01.6**	**+2.5**
	comp=Z,0.3nm,0.9s,baz=37,slow=0.5,SNR=2.5						
ASAR				S	**S**	**18 55 36.6**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=43,slow=15,SNR=2.2						
ASAR				ScP	**ScP**	**18 58 20.8**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=42,slow=3.7,SNR=9.7						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**24.97**	**220**	P	**P**	**18 51 28.9**	**-0.4**
MORW	**Morawa**	**41.01**	**230**	P	**P**	**18 53 47.9**	**+0.2**
MORW				IAmb	IAmb	18 53 53.5	
	comp=Z,11nm,1.2s						
TUWZ	**Tuamarina**	**41.58**	**154**	P	**P**	**18 53 50.7**	**-1.4**
BFZ	**Birch Farm**	**42.04**	**151**	P	**P**	**18 53 55.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**56.54**	**296**	P	**P**	**18 55 46.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=117,slow=6.3,SNR=2.4						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**65.66**	**329**	P	**P**	**18 56 48.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=2.1						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**80.44**	**327**	P	**P**	**18 58 12.1**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=127,slow=6.3,SNR=3.6						
	comp=Z,0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**148.87**	**287**	PKPbc	**PKPbc**	**19 05 48.9**	**0.0**
	comp=Z,0.3nm,0.4s,baz=97,slow=2.1,SNR=3.1						

*IDC **13** 18:55:06.6±0.4, 25°.10N×143°.10E, h0km, mb4.5/28, mbtmp4.5/31, ML3.9/3, MS3.7/49, Error ellipse: s-maj=16.7km s-min=10.5km az=71.0*
*BJI **13** 18:55:07.6±0.0, 25°.24N×142°.96E, h7km, mb4.7/63, mB4.8/40, Ms4.2/36, Ms7 4.0/39*
*MOS **13** 18:55:07.1±1.1, 25°.11N×143°.05E, h11km, mb5.0/27, Error ellipse: s-maj=8.0km s-min=4.7km az=102.8*
*NEIC **13** 18:55:09.7±1.6, 25°.11N±0°.08×143°.1E±0°.1, h10km±1km, mb5.0/246, Error ellipse: s-maj=16.3km s-min=12.4km az=74.0*
*JMA **13** 18:55:09.4±0.2, 25°.2N±0°.4×14°.3E±°, h119km, MD4.8/16, MV5.0/16, IOTO ISLANDS REGION*

ISC 13 18:55:08.7±0.3, 25°.14N±0°.04×143°.15E±0°.05, h10km, n665, σ1§13/648, mb5.0/194, MS3.8/65, 16C-9D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.73**	**330**	P	**Pn**	**18 55 40.4**	**+1.6**
JHH2				S	**Sb**	**18 56 04.4**	**+2.1**
JHH2	**Haha-jima-NKT2**	**1.73**	**330**	A	A	18 55 40.4	
	comp=E,35nm,2.7s,comp=E,29nm,1.1s						
CBIJ	**Chichi jima**	**2.13**	**336**	P	**Pn**	**18 55 45.5**	**+1.1**
CBIJ				S	**Sn**	**18 56 12.7**	**+1.7**
CBIJ	**Chichi jima**	**2.13**	**336**	A	A	18 55 45.5	
	comp=E,15nm,1.0s,comp=E,11nm,1.8s						
JCJ	**Chichijima**	**2.13**	**336**	Pn	**Pn**	**18 55 45.2**	**+0.9**
	117nm,0.3s,baz=107,slow=21,SNR=47						
JCJ				Sn	**Sn**	**18 56 11.2**	**+0.3**
	710nm,0.3s,baz=221,slow=19,SNR=14						
	706nm,0.4s						
JCJ	**Chichijima**	**2.13**	**336**		**Pn**	**18 55 45.4**	**+1.0**
JYT	**Yasato**	**11.34**	**348**	Pn	**Pn**	**18 57 49.2**	**-1.6**
INU	**Inuyama**	**11.47**	**334**	Pn	**Pn**	**18 57 53.3**	**+0.8**
JGF	**Kuroka**	**11.56**	**336**		**Pn**	**18 57 53.2**	**-0.7**
JHO	**Hitachi**	**11.65**	**350**	S	Sn	18 59 56.5	-8.6
JAG	**Ashikaga**	**11.69**	**345**	S	**Sn**	**18 59 59.0**	**-7.2**
MJAR	**Matsushiro Arr**	**12.13**	**341**	Pn	**Pn**	**18 58 01.1**	**-0.5**
	0.1nm,0.3s,baz=166,slow=12,SNR=4.0						
MJAR				Sn	**Sn**	**19 00 10.5**	**-6.4**
	0.1nm,0.3s,baz=163,slow=24,SNR=1.6						
MJAR				LR	LR	19 02 39.4	
	comp=Z,232nm,18.3s,baz=140,slow=37						
	2.7nm,0.7s						
MAJO	**Matsushiro**	**12.13**	**341**	Pn	**Pn**	**18 58 02.5**	**+0.8**
MAJO	**Matsushiro**	**12.13**	**341**	*i* P	**Pn**	**18 58 02.0**	**+0.4**
MJB9	**Matsu-Tunnel**	**12.14**	**341**	Pn	**Pn**	**18 58 02.5**	**+0.8**
JMM	**Marumori**	**12.85**	**352**	Pn	**Pn**	**18 58 10.3**	**-1.1**
JOW	**Kunigami**	**13.48**	**280**	LR	LR	19 03 20.9	
	comp=Z,353nm,19.4s,baz=108,slow=37						
JSD	**Sado**	**13.52**	**343**	Pn	**Pn**	**18 58 21.2**	**+0.7**
JTU	**Tsushima**	**15.15**	**311**	Pn	**Pn**	**18 58 44.0**	**+1.3**
JTM	**Tenmabayashi**	**15.70**	**354**	Pn	**Pn**	**18 58 49.8**	**-0.2**
JTM				IAmb	IAmb	18 58 50.4	
	comp=Z,230nm,2.0s						
ERM	**Erimo**	**16.84**	**0**	Pn	**Pn**	**18 59 02.4**	**-2.0**
ERM	**Erimo**	**16.84**	**0**	*i* P	**Pn**	**18 59 03.8**	**-0.6**
TJN	**Taejon**	**17.57**	**313**		**Pn**	**18 59 14.4**	**+0.7**
TJN				IAmb	IAmb	18 59 17.7	
	comp=Z,146nm,1.4s						
TJN	**Taejon**	**17.57**	**313**	*ce*P	**Pn**	**18 59 14.0**	**+0.4**
JEW	**Eniwo**	**17.71**	**356**	Pn	**Pn**	**18 59 15.6**	**+0.2**
JEW				IAmb	IAmb	18 59 17.9	
	comp=Z,196nm,1.6s						
KSRS	**Korea Array**	**17.86**	**317**	P	**Pn**	**18 59 17.9**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=132,slow=11,SNR=16						
KSRS				LR	LR	19 06 11.3	
	comp=Z,140nm,18.0s,baz=130,slow=37						
	comp=Z,6.6nm,0.8s						
KSAR	**Wonju Array Be**	**17.88**	**317**	P	**Pn**	**18 59 17.8**	**+0.3**
KSAR	**Wonju Array Be**	**17.88**	**317**	P	**Pn**	**18 59 17.8**	**+0.3**
KS19	**Wonju Array Si**	**17.92**	**317**		**P**	**18 59 19.7**	**+1.0**
NACB	**Ninganchiao**	**19.61**	**272**	P	**P**	**18 59 38.7**	**+1.4**
NACB				IAmb	IAmb	18 59 41.8	
	comp=Z,156nm,2.0s						
YHNB	**Yeheng**	**19.75**	**273**	P	**P**	**18 59 39.4**	**+0.4**
YHNB				IAmb	IAmb	18 59 50.5	
	comp=Z,192nm,1.8s						
YULB	**Yu-li**	**19.99**	**270**	P	**P**	**18 59 42.4**	**+0.9**
YULB				IAmb	IAmb	18 59 55.3	
	comp=Z,149nm,1.8s						
SSLB	**Suanglung**	**20.24**	**271**	P	**P**	**18 59 44.9**	**+0.6**
SSLB				IAmb	IAmb	18 59 55.9	
	comp=Z,76nm,1.2s						
TWG	**Pinlang**	**20.30**	**268**	P	**P**	**18 59 44.9**	**+0.1**
TWG				IAmb	IAmb	18 59 49.2	
	comp=Z,167nm,1.9s						
TEY	**Ternei**	**20.55**	**347**	*e*P	Pn	18 59 53.2	+3.7
TEY				*e*		19 03 30.1	
TPUB	**Ta-pu**	**20.61**	**270**	P	**P**	**18 59 49.1**	**+0.8**
USRK	**Ussuriysk Ar.**	**21.08**	**337**	P	**P**	**18 59 52.8**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=146,slow=16,SNR=6.2						
	comp=Z,3.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**21.08**	**337**		**P**	**18 59 54.7**	**+1.6**
USRK	**Ussuriysk Ar.**	**21.08**	**337**	P	**P**	**18 59 54.7**	**+1.6**
YSS	**Yuzh-Sakhalins**	**21.78**	**359**	*e*P	**P**	**19 00 03.0**	**+2.5**
YSS				*e*		19 04 03.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
MDJ	**Mudanjiang**	**22.33**	**334**	P	**P**	**19 00 08.3**	**+1.7**
MDJ				PP	**PnPn**	**19 00 31.3**	**+2.0**
MDJ				S	**S**	**19 04 08.5**	**-3.5**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,88nm,4.1s						
MDJ				LR	LR		
	comp=Z,290nm,13.6s						
MDJ				LR	LR		
	comp=Z,300nm,12.0s						
MDJ				LR	LR		
	comp=Z,500nm,17.1s						
NJ2	**Nanjing**	**22.39**	**293**	*e*P	**P**	**19 00 04.9**	**-2.3**
NJ2				sP	**pP**	**19 00 09.4**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**22.59**	**99**	T	T	19 23 11.2	
	baz=290,slow=75,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**22.59**	**99**	T	T	19 23 09.8	
	baz=290,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**22.61**	**99**	T	T	19 23 11.1	
	baz=290,slow=75,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	**22.82**	**102**	T	T	19 23 28.3	
	baz=293,slow=75,SNR=9.2						
H11S1	**WAKE ISLAND Hy**	**22.82**	**102**	T	T	19 23 36.3	
	baz=293,slow=75,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	**22.83**	**102**	T	T	19 23 39.3	
	baz=293,slow=75,SNR=7.2						
SNY	**Shenyang**	**23.23**	**321**	⇑P	**P**	**19 00 16.1**	**+0.2**
SNY				S	**S**	**19 04 21.4**	**-6.5**
SNY				pmax	pmax		
	comp=Z,24nm,0.5s						
SNY				pmax	pmax		
	comp=Z,94nm,4.1s						
SNY				LR	LR		
	comp=Z,230nm,12.2s						
SNY				LR	LR		
	comp=Z,130nm,4.4s						
SNY				LR	LR		
	comp=Z,220nm,17.4s						
PATS	**Pohnpei**	**23.27**	**139**	P	**P**	**19 00 16.5**	**-0.1**
CN2	**Changchun**	**23.57**	**327**	*e*P	**P**	**19 00 19.1**	**-0.2**
CN2				sP	pwP	19 00 26.0	-1.0
CN2				S	**S**	**19 04 28.8**	**-4.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
BNX	**BinXian**	**24.15**	**332**	⇓P	**P**	**19 00 26.0**	**+1.2**
BNX				pP	**sP**	**19 00 30.5**	**+3.3**
BNX				sP	**pwP**	**19 00 32.6**	**+0.1**
BNX				PP	**PnPn**	**19 00 53.3**	**-0.8**
BNX				S	**S**	**19 04 43.8**	**+1.1**
BNX				sS	**sS**	**19 04

comp=Z,8.0nm,1.0s
XLT pmax pmax
comp=Z,110nm,5.2s
XLT LR LR
comp=Z,130nm,11.3s
XLT LR LR
comp=Z,130nm,12.0s
PETK Petropavlovsk- 30.01 18 P **P** **19 01 18.6 +1.1**
comp=Z,4.3nm,1.1s,baz=194,slow=12,SNR=2.1
PETK LR LR 19 14 44.3
comp=Z,28nm,19.3s,baz=165,slow=39
comp=Z,4.3nm,1.1s
ENH Enshi 30.17 287 P **P** **19 01 19.6 +0.5**
HHC Hu-ho-hao-te 30.57 309 *eP* **P** **19 01 24.8 +2.1**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,100nm,5.6s
HHC LR LR
comp=Z,320nm,12.1s
HHC LR LR
comp=Z,400nm,12.7s
HHC LR LR
comp=Z,410nm,12.4s
XAN Xi'an 30.94 295 ⇓P **P** **19 01 25.0 -1.0**
XAN pP sP 19 01 29.1 +1.0
XAN pmax pmax
comp=Z,19nm,0.9s
XAN LR LR
comp=Z,200nm,15.8s
XAN LR LR
comp=Z,230nm,15.8s
ZEA Zeya 30.94 342 *eP* **P** **19 01 26.4 +0.7**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA MLR MLR
comp=N,200nm,15.0s
ZEA MLR MLR
comp=Z,100nm,15.0s
GYA Guiyang 32.80 280 ⇑P **P** **19 01 45.9 +3.4**
GYA pmax pmax
comp=Z,15nm,0.6s
PMG Port Moresby 34.55 173 P **P** **19 01 55.5 -2.0**
PMG IAmb IAmb 19 02 08.9
comp=Z,24nm,0.9s
PMG Port Moresby 34.55 173 *ceP* **P** **19 01 56.9 -0.7**
PMG pmax pmax
comp=Z,12nm,0.8s
MA2 Magadan 34.83 7 LR LR 19 16 54.9
comp=Z,35nm,20.3s,baz=182,slow=38
CD2 Chengdu 35.11 289 P **P** **19 02 02.3 -0.2**
CD2 pmax pmax
comp=Z,40nm,0.5s
LZH Lanzhou 35.33 297 *eP* **P** **19 02 03.8 -0.6**
LZH pP pP 19 02 07.1 +1.2
LZH pmax pmax
comp=Z,24nm,1.4s
LZH pmax pmax
comp=Z,130nm,4.7s
LZH LR LR
comp=Z,170nm,15.6s
LZH LR LR
comp=Z,250nm,15.5s
LZH LR LR
comp=Z,210nm,17.4s
SHEM Shemya Is, Ala 36.09 32 LR LR 19 15 01.2
comp=Z,70nm,21.8s,baz=252,slow=33
ULN Ulaanbaatar 36.34 318 P **P** **19 02 12.2 -0.8**
ULN Ulaanbaatar 36.34 318 *ceP* **P** **19 02 11.8 -1.1**
ULN pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 36.34 318 P **P** **19 02 12.6 -0.3**
comp=Z,27nm,0.7s
KMI Kunming 36.48 279 ⇓P **P** **19 02 14.5 0.0**
KMI pP sP 19 02 18.3 +1.7
KMI sP pP 19 02 19.8 +3.8
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI LR LR
comp=Z,200nm,3.8s
KMI LR LR
comp=Z,250nm,4.5s
KMI LR LR
comp=Z,290nm,22.8s
SONM Songino Array 36.73 318 P **P** **19 02 14.4 -1.8**
comp=Z,2.8nm,0.6s,baz=133,slow=8.4,SNR=14
SONM PcP **PcP** **19 04 38.0 -0.6**
comp=Z,1.0nm,0.4s,baz=122,slow=5.2,SNR=1.9
SONM LR LR 19 18 05.6
comp=Z,96nm,18.9s,baz=114,slow=38
comp=Z,2.8nm,0.6s
SONM Songino Array 36.73 318 P **P** **19 02 15.1 -1.1**
SONM Songino Array 36.73 318 P **P** **19 02 15.1 -1.1**
SONM pmax pmax
comp=Z,5.0nm,1.1s
PZH PanZhiHua 37.18 281 P **P** **19 02 20.0 -0.3**
PZH S **S** **19 08 08.3 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.0s
PZH LR LR
comp=Z,200nm,15.9s
PZH LR LR
comp=Z,500nm,17.1s
PZH LR LR
comp=Z,720nm,23.5s
YAK Yakutsk 37.99 350 P **P** **19 02 27.5 +1.0**
YAK Yakutsk 37.99 350 *eP* **P** **19 02 24.5 -2.0**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
HNR Honiara 38.06 152 LR LR 19 17 33.6
comp=N,833nm,19.6s,baz=326,slow=35
SEY Seymchan 38.29 7 P **P** **19 02 29.4 +0.3**
comp=N,10nm,0.8s,baz=179,slow=6.5,SNR=16
comp=N,10nm,0.8s
SEY Seymchan 38.29 7 *ceP* **P** **19 02 29.6 +0.6**
SEY pmax pmax
comp=Z,18nm,2.5s
BOD Bodaibo 38.69 335 *eP* **P** **19 02 32.3 -0.2**
BOD pmax pmax
comp=Z,12nm,1.9s
COEN Coen 38.86 180 P **P** **19 02 35.1 +0.8**
GTA Gaotai 38.93 302 ⇓P **P** **19 02 33.8 -1.1**
GTA pP pP 19 02 37.8 +1.3
GTA sP sP 19 02 40.6 +3.5
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,68nm,4.9s
GTA LR LR
comp=Z,79nm,15.6s
GTA LR LR
comp=Z,140nm,16.0s
GTA LR LR
comp=Z,130nm,16.0s
SOEI Soe 39.26 210 P **P** **19 02 38.6 +0.8**
MTN Manton Dam 39.52 199 P **P** **19 02 38.9 -0.9**
MTN IAmb IAmb 19 02 50.3
comp=Z,16nm,0.6s
ZAK Zakamensk 39.65 320 *eP* **P** **19 02 40.7 -0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
CM31 Chiang Mai Arr 41.44 270 P **P** **19 02 55.5 -0.3**
CMAR Chiang Mai Arr 41.44 270 P **P** **19 02 55.6 -0.2**
comp=Z,3.5nm,0.5s,baz=62,slow=7.3,SNR=27
CMAR LR LR 19 20 02.2
comp=Z,126nm,19.7s,baz=85,slow=36
comp=Z,3.5nm,0.5s
CMAR Chiang Mai Arr 41.44 270 P **P** **19 02 56.0 +0.2**
CMAR Chiang Mai Arr 41.44 270 P **P** **19 02 56.0 +0.2**
GOMU GeErMu 42.62 297 P **P** **19 03 06.0 +0.2**
GOMU pP sP 19 03 09.4 +1.5
GOMU sP pwP 19 03 12.1 -1.9
GOMU pmax pmax
comp=Z,11nm,0.8s
GOMU pmax pmax
comp=Z,62nm,4.5s
KNRA Kununurra 42.92 201 P **P** **19 03 06.8 -0.9**
JAGI Jajag, Banyuwa 43.74 224 P **P** **19 03 13.4 -1.1**
JAGI IAmb IAmb 19 03 52.8
comp=Z,31nm,1.2s
CTA Charters Tower 45.05 176 P **P** **19 03 25.5 +0.6**
CTA pmax pmax
comp=Z,18nm,0.9s
CTAO Charters Tower 45.05 176 P **P** **19 03 24.7 -0.2**
CTAO Charters Tower 45.05 176 P **P** **19 03 24.7 -0.2**
CTAO pmax pmax
comp=Z,12nm,0.9s
BILL Bilibino 45.17 12 P **P** **19 03 26.7 +1.3**
BILL Bilibino 45.17 12 *eP* **P** **19 03 24.9 -0.4**
BILL *e* 19 05 13.0
BILL pmax pmax
comp=Z,43nm,1.7s
BILL MLR MLR
comp=Z,1μm,18.0s
KULM Kulim 45.23 251 P **P** **19 03 27.7 +1.1**
WB0 Warramunga Arr 45.44 192 P **P** **19 03 27.3 -0.6**
WR0 Warramunga Arr 45.60 191 P **P** **19 03 28.0 -1.2**
WRAB Tennant Creek 45.61 192 P **P** **19 03 28.9 -0.4**
WRAB Tennant Creek 45.61 192 *ceP* **P** **19 03 28.6 -0.7**
WRAB pmax pmax
comp=Z,18nm,1.3s
WB2 Warramunga Arr 45.62 192 P **P** **19 03 28.8 -0.6**
WB2 IAmb IAmb 19 03 42.0
comp=Z,28nm,1.1s
WRA Warramunga Arr 45.62 192 P **P** **19 03 28.4 -0.9**
comp=Z,5.3nm,0.6s,baz=12,slow=8.6,SNR=82
WRA LR LR 19 22 10.7
comp=Z,48nm,20.4s,baz=212,slow=36
comp=Z,5.3nm,0.6s
WRA Warramunga Arr 45.62 192 P **P** **19 03 28.5 -0.9**
WRA Warramunga Arr 45.62 192 P **P** **19 03 28.5 -0.9**
WRA pmax pmax
comp=Z,1.0nm,0.8s
LEM Lembang 46.95 232 LR LR 19 21 26.3
comp=Z,26nm,21.9s,baz=348,slow=34
TIXI Tiksi 47.24 354 P **P** **19 03 41.6 +0.1**
TIXI Tiksi 47.24 354 *ceP* **P** **19 03 41.6 +0.1**
TIXI pmax pmax
comp=Z,6.0nm,1.3s
AKUT Akutan 47.42 38 P **P** **19 03 42.8 -0.3**
PSI Prapat 47.99 250 LR LR 19 22 00.5
comp=Z,65nm,21.8s,baz=70,slow=34
WMQ Urumqi 48.43 307 *eP* **P** **19 03 55.1 +3.8**
WMQ pmax pmax
comp=Z,26nm,0.7s
WMQ LR LR
comp=Z,140nm,23.1s
GAMB Gambell 48.51 25 P **P** **19 03 51.1 -0.4**
baz=239
AS31 Alice Springs 49.33 191 P **P** **19 03 57.9 -0.3**
ASAR Alice Springs 49.33 191 P **P** **19 03 56.8 -1.4**
comp=Z,1.5nm,0.6s,baz=3.2,slow=5.0,SNR=37
ASAR PcP **PcP** **19 05 21.0 +0.1**
comp=Z,1.9nm,0.8s,baz=23,slow=3.6,SNR=4.4
comp=Z,1.5nm,0.6s
ASAR Alice Springs 49.33 191 P **P** **19 03 57.3 -1.0**
ASAR Alice Springs 49.33 191 P **P** **19 03 57.3 -1.0**
PBA Port Blair 49.40 264 P **P** **19 03 58.0 -0.9**
TAPN Taplejung 49.42 285 *eP* **P** **19 04 00.9 +1.5**
comp=Z,16nm,0.6s
RAMN Ramite 50.47 285 *eP* **P** **19 04 06.5 -0.8**
comp=Z,14nm,0.8s
JIRN Jiri 50.69 286 *eP* **P** **19 04 09.0 -0.1**
comp=Z,58nm,0.7s
SDPT Sand Point 50.70 38 P **P** **19 04 07.5 -0.8**
SDPT Sand Point 50.70 38 P **P** **19 04 07.9 -0.4**
baz=257
GUN Gumba 50.92 286 *eP* **P** **19 04 11.5 +0.7**
comp=Z,30nm,0.7s
ANM Nome 51.33 26 P **P** **19 04 14.3 +1.4**
ANM Nome 51.33 26 P **P** **19 04 14.3 +1.4**
ANM pmax pmax
comp=Z,124nm,1.7s
MBWA Marble Bar 51.34 208 P **P** **19 04 12.7 -0.7**
MBWA IAmb IAmb 19 04 56.3
comp=Z,22nm,1.4s
PKI Pulchoki 51.39 286 *eP* **P** **19 04 13.5 -0.8**
comp=Z,10nm,0.7s
PKIN Phulchoki 51.40 286 *eP* **P** **19 04 13.4 -0.9**
comp=Z,13nm,0.8s
ZAA0 Zalesovo Array 51.53 320 P **P** **19 04 15.6 +1.0**
ZALV Zalesovo Beam 51.53 320 P **P** **19 04 12.9 -1.7**
comp=Z,2.6nm,0.6s,baz=107,slow=6.7,SNR=11
ZALV PcP **PcP** **19 05 28.1 -0.5**
comp=Z,2.0nm,0.7s,baz=115,slow=4.3,SNR=3.8
ZALV LR LR 19 26 50.8
comp=Z,72nm,18.4s,baz=68,slow=37
comp=Z,2.6nm,0.6s
ZALV Zalesovo Beam 51.53 320 P **P** **19 04 14.5 -0.1**
ZALV Zalesovo Beam 51.53 320 P **P** **19 04 14.5 -0.1**
DMN Daman 51.65 286 *eP* **P** **19 04 15.6 -0.6**
comp=Z,17nm,0.8s
GKN Gorkha 51.98 287 *eP* **P** **19 04 18.1 -0.4**
comp=Z,50nm,1.2s
DZM Mont Dzumac 52.09 152 P **P** **19 04 17.7 -1.5**
comp=Z,4.3nm,0.8s,baz=0.4,slow=10,SNR=5.1
DZM LR LR 19 23 43.0
comp=Z,56nm,20.6s,baz=24,slow=33
comp=Z,4.3nm,0.8s
MK31 Makanchi Array 52.39 311 P **P** **19 04 19.9 -1.3**
MK31 Makanchi Array 52.39 311 P **P** **19 04 19.9 -1.3**
MK31 pmax pmax
comp=Z,5.0nm,1.0s
MKAR Makanchi Array 52.39 311 P **P** **19 04 20.3 -0.9**
comp=Z,3.8nm,0.8s,baz=90,slow=7.5,SNR=14
MKAR PcP **PcP** **19 05 32.0 0.0**
comp=Z,1.2nm,0.7s,baz=67,slow=3.2,SNR=1.3
MKAR LR LR 19 28 43.9
comp=Z,71nm,18.1s,baz=110,slow=38
comp=Z,3.8nm,0.8s
MKAR Makanchi Array 52.39 311 P **P** **19 04 19.8 -1.4**
DANN Dangsing 52.67 287 *eP* **P** **19 04 23.6 -0.2**
comp=Z,88nm,0.8s
N16K Nishlik Lake 52.82 32 P **P** **19 04 25.6 +1.5**
baz=255
O16K Kokwok River B 52.93 33 P **P** **19 04 25.9 +1.1**
baz=256
O17K Koliganek Bris 53.46 33 P **P** **19 04 29.7 +1.0**
baz=257
CHIR Chirikof Islan 53.49 38 P **P** **19 04 30.1 +1.1**
P17K Kvichak River 53.67 34 P **P** **19 04 30.5 +0.3**
baz=258
N18K Kilae Creek 54.25 32 P **P** **19 04 35.8 +1.2**
N18K Kilae Creek 54.25 32 P **P** **19 04 36.0 +1.4**
baz=258
Q18K Katmai Hardscr 54.29 35 P **P** **19 04 34.8 -0.2**
baz=260
SII Sitkinak Islan 54.40 37 P **P** **19 04 36.0 +0.3**
O18K Koktuh Hills 54.41 33 P **P** **19 04 36.9 +1.1**
O18K Koktuh Hills 54.41 33 P **P** **19 04 37.3 +1.6**
baz=259
SVW2 Sparrevohn 54.49 32 P **P** **19 04 37.5 +1.2**
SVW2 IAmb IAmb 19 04 38.4
comp=Z,25nm,1.3s
MSVF Nonsavu 54.51 138 P **P** **19 04 37.0 0.0**
comp=Z,6.1nm,0.8s,baz=333,slow=14,SNR=4.4
MSVF LR LR 19 25 32.3
comp=Z,37nm,19.2s,baz=208,slow=34
comp=Z,6.1nm,0.8s
MSVF Nonsavu 54.51 138 P **P** **19 04 37.0 0.0**
TTA Tatalina 54.71 29 P **P** **19 04 38.8 +0.8**
TTA IAmb IAmb 19 04 54.3
comp=Z,33nm,1.8s
TTA Tatalina 54.71 29 P **P** **19 04 38.8 +0.8**
TTA pmax pmax
comp=Z,33nm,1.8s
TTA Tatalina 54.71 29 P **P** **19 04 38.6 +0.6**
baz=256
NRIK Noril'sk 54.78 339 P **P** **19 04 38.2 -0.1**
comp=Z,7.3nm,0.6s,baz=114,slow=10.0,SNR=7.5
comp=Z,7.3nm,0.6s
NRIK Noril'sk 54.78 339 P **P** **19 04 38.8 +0.5**
NRIK IAmb IAmb 19 04 55.3
comp=Z,11nm,0.9s
NRIK Noril'sk 54.78 339 *ceP* **P** **19 04 38.3 0.0**
NRIK pmax pmax
comp=Z,18nm,1.5s
O19K Port Alsworth 54.92 33 P **P** **19 04 41.0 +1.6**
O19K IAmb IAmb 19 04 41.2
comp=Z,12nm,0.7s
O19K Port Alsworth 54.92 33 P **P** **19 04 40.1 +0.7**
baz=259
N19K Bonanza Creek 54.95 32 P **P** **19 04 41.0 +1.3**
N19K Bonanza Creek 54.95 32 P **P** **19 04 40.6 +0.8**
baz=259
OHAK Old Harbor 54.97 36 P **P** **19 04 40.0 +0.2**
OHAK Old Harbor 54.97 36 P **P** **19 04 40.3 +0.5**
baz=262
KURK Kurchatov 54.98 316 P **P** **19 04 39.4 -0.5**
KURK IAmb IAmb 19 04 43.8
comp=Z,31nm,1.2s
KURK Kurchatov 54.98 316 *ceP* **P** **19 04 39.1 -0.9**
KURK pmax pmax
comp=Z,27nm,1.3s
Q19K Cape Douglas, 55.04 34 P **P** **19 04 41.2 +0.9**
L19K White Mountain 55.06 30 P **P** **19 04 40.7 +0.3**
L19K White Mountain 55.06 30 P **P** **19 04 41.3 +0.8**
baz=257
M19K Big River Lodg 55.22 31 P **P** **19 04 42.3 +0.7**
baz=258
P19K Oil Pt 55.36 34 P **P** **19 04 43.0 +0.3**
P19K Oil Pt 55.36 34 P **P** **19 04 42.9 +0.3**
baz=261
KDAK Kodiak Island 55.42 36 LR LR 19 27 49.4
comp=Z,102nm,19.9s,baz=248,slow=35
KDAK Kodiak Island 55.42 36 P **P** **19 04 43.3 +0.2**
KDAK Kodiak Island 55.42 36 P **P** **19 04 43.3 +0.2**
KDAK pmax pmax
comp=Z,276nm,2.0s
L20K Farewell, AK 55.57 30 P **P** **19 04 45.3 +1.2**
baz=258
K20K Telida 55.67 29 P **P** **19 04 45.4 +0.6**
K20K IAmb IAmb 19 04 47.3
comp=Z,15nm,0.8s
K20K Telida 55.67 29 P **P** **19 04 46.1 +1.3**
baz=257
RSO Redoubt South 55.73 33 P **P** **19 04 46.2 +0.7**
M20K Styx River 55.80 31 P **P** **19 04 46.7 +0.8**
M20K IAmb IAmb 19 05 38.6
comp=Z,34nm,1.6s
M20K Styx River 55.80 31 P **P** **19 04 46.8 +0.9**
baz=259
J20K Nowinta River 55.82 28 P **P** **19 04 47.2 +1.4**
J20K IAmb IAmb 19 04 48.4
comp=Z,20nm,0.9s
J20K Nowinta River 55.82 28 P **P** **19 04 47.2 +1.4**
baz=257,SNR=14
N20K Mount Spurr 56.11 32 P **P** **19 04 48.9 +0.8**
baz=261
CNPM China Poot 56.35 34 P **P** **19 04 49.2 -0.6**
IMAR Indian Mountai 56.41 26 P **P** **19 04 51.2 +1.1**
PPLA Purkeypile 56.42 30 P **P** **19 04 51.3 +1.0**
PPLA Purkeypile 56.42 30 P **P** **19 04 50.8 +0.4**
baz=260
CHUM Lake Minchumin 56.55 29 P **P** **19 04 52.2 +1.1**
baz=259
BRLK Bradley Lake 56.55 34 P **P** **19 04 50.6 -0.6**
CAST Castle Rocks 56.56 29 P **P** **19 04 52.2 +1.0**
CAST IAmb IAmb 19 04 53.2
comp=Z,14nm,0.8s
CAST Castle Rocks 56.56 29 P **P** **19 04 52.1 +1.0**
baz=259,SNR=10
SKT Skwentna 56.56 31 P **P** **19 04 51.5 +0.2**
SKT IAmb IAmb 19 04 52.2
comp=Z,21nm,1.2s
SKT Skwentna 56.56 31 P **P** **19 04 51.4 +0.2**
baz=261
BRSE Bradley Lake S 56.62 34 P **P** **19 04 51.3 -0.4**
baz=263
G21K Allakaket 56.64 25 P **P** **19 04 52.4 +0.7**
baz=256
STKA Stephens Creek 56.71 182 P **P** **19 04 51.4 -1.1**
comp=Z,8.1nm,0.8s,baz=345,slow=8.4,SNR=20
comp=Z,8.1nm,0.8s
STKA Stephens Creek 56.71 182 P **P** **19 04 52.1 -0.4**
STKA Stephens Creek 56.71 182 *i* P **P** **19 04 51.5 -1.0**
H21K Melozitna Rive 56.71 26 P **P** **19 04 53.5 +1.3**
H21K Melozitna Rive 56.71 26 P **P** **19 04 53.6 +1.3**
baz=257,SNR=5.5
F21K Alatna River 56.82 25 P **P** **19 04 53.9 +1.0**
baz=255
SUA Susitna One 56.85 32 P **P** **19 04 54.2 +0.8**
baz=262
I21K Tanana 56.95 27 P **P** **19 04 55.1 +1.3**
baz=258
BOOM Boomskoye usch 57.04 306 P **P** **19 04 53.9 -1.3**
BOOM Boomskoye usch 57.04 306 P **P** **19 04 53.9 -1.3**
BOOM pmax pmax
comp=Z,9.0nm,0.9s
KTH Kantishna Hill 57.10 29 P **P** **19 04 55.4 +0.4**
NRN Naryn 57.10 304 P **P** **19 04 54.8 -1.0**
NRN Naryn 57.10 304 P **P** **19 04 54.8 -1.0**
NRN pmax pmax
comp=Z,11nm,1.4s
BPAW Bear Paw Mtn. 57.16 28 P **P** **19 04 54.5 -1.0**
baz=260
M22K Willow 57.19 31 P **P** **19 04 56.1 +0.5**
baz=262
RC01 Rabbit Creek A 57.28 32 P **P** **19 04 56.5 +0.2**
baz=263
KSH Kashi 57.34 302 P **P** **19 05 00.4 +3.2**
KSH pP pwP 19 05 03.8 -1.7
KSH pmax pmax
comp=Z,5.0nm,0.6s
H22K Ishtalitna Cre 57.34 26 P **P** **19 04 57.9 +1.3**
baz=258
TRF Thorofare Moun 57.36 29 P **P** **19 04 56.8 -0.2**
TRF Thorofare Moun 57.36 29 P **P** **19 04 57.7 +0.6**
baz=261,SNR=6.0
F22K John River 57.38 24 P **P** **19 04 57.8 +0.9**
baz=257
MLY Manley 57.44 27 P **P** **19 04 57.2 -0.2**
MLY Manley 57.44 27 P **P** **19 04 58.4 +1.1**
baz=260
FORT Forrest 57.45 195 P **P** **19 04 58.6 +0.9**
G22K Bettles 57.50 25 P **P** **19 04 58.7 +1.0**
baz=258
PMR Palmer 57.63 32 **P** **19 04 57.7 -1.0**
PMR IAmb IAmb 19 04 59.9
comp=Z,13nm,0.7s
PMR Palmer 57.63 32 P **P** **19 04 57.7 -1.0**
PMR pmax pmax
comp=Z,13nm,0.7s
PMR Palmer 57.63 32 P **P** **19 04 59.5 +0.7**
baz=263
KNK Knik Glacier 57.94 32 P **P** **19 05 00.9 0.0**
KNK IAmb IAmb 19 05 02.0
comp=Z,24nm,1.0s
KNK Knik Glacier 57.94 32 P **P** **19 05 01.2 +0.3**
baz=264
PWL Port Wells 57.94 33 P **P** **19 05 01.4 +0.4**
baz=264
RND Reindeer 57.99 29 P **P** **19 05 01.2 -0.2**
RND Reindeer 57.99 29 P **P** **19 05 01.2 -0.2**
RND pmax pmax
comp=Z,8.0nm,0.8s
MCK McKinley 58.00 29 P **P** **19 05 01.4 +0.1**
MCK IAmb IAmb 19 05 02.9
comp=Z,17nm,1.0s
MCK McKinley 58.00 29 P **P** **19 05 01.4 +0.1**
MCK pmax pmax
comp=Z,17nm,1.0s
MCK McKinley 58.00 29 P **P** **19 05 01.8 +0.5**
baz=262,SNR=7.4
I23K Minto, Yukon-K 58.03 27 P **P** **19 05 02.6 +1.2**
I23K Minto, Yukon-K 58.03 27 P **P** **19 05 02.4 +0.9**
baz=261
G23K Bananza Creek 58.03 26 P **P** **19 05 02.8 +1.2**
baz=259
SML Sawmill 58.04 31 P **P** **19 05 02.0 +0.3**
SML IAmb IAmb 19 05 03.3
comp=Z,18nm,0.9s
SML Sawmill 58.04 31 P **P** **19 05 01.0 -0.7**
SML pmax pmax
comp=Z,18nm,0.9s
SML Sawmill 58.04 31 P **P** **19 05 02.2 +0.5**
baz=264
WAT1 Susitna Watana 58.05 30 P **P** **19 05 02.0 +0.2**
baz=263
COLD Coldfoot 58.07 25 P **P** **19 05 02.9 +1.2**
baz=259
NEA2 Nenana 58.07 28 P **P** **19 05 02.2 +0.4**
NEA2 IAmb IAmb 19 05 03.8
comp=Z,15nm,1.1s
NEA2 Nenana 58.07 28 P **P** **19 05 02.8 +1.0**
baz=261,SNR=7.2
H23K Yukon River 58.07 27 P **P** **19 05 03.2 +1.5**
baz=260
AAK Ala-Archa 58.09 306 LR LR 19 32 41.4
comp=Z,53nm,18.9s,baz=80,slow=39
AAK Ala-Archa 58.09 306 P **P** **19 05 03.1 +0.6**
AAK Ala-Archa 58.09 306 P **P** **19 05 03.1 +0.6**
AAK pmax pmax
comp=Z,3.0nm,0.6s

D23K Nanushuk River 58.26 23 P **P 19 05 05.0 +1.9**
baz=257
M23K Glacier View 58.32 31 P **P 19 05 04.4 +0.7**
baz=264
WAT6 Susitna Watana 58.40 31 P **P 19 05 04.9 +0.6**
baz=264,SNR=6.9
E23K Chandalar 58.45 24 P **P 19 05 06.0 +1.4**
baz=259
MDM Murphy Dome 58.48 28 P **P 19 05 05.3 +0.7**
C23K Itkillik River 58.48 22 P **P 19 05 06.3 +1.8**
baz=257
SCM Sheep Creek Mo 58.52 31 P **P 19 05 05.4 +0.4**
SCM Sheep Creek Mo 58.52 31 P **P 19 05 05.4 +0.4**
SCM pmax pmax
comp=Z,36nm,1.0s
SCM Sheep Creek Mo 58.52 31 P **P 19 05 05.8 +0.8**
baz=265,SNR=5.2
GLI Glacier Island 58.55 33 P **P 19 05 05.1 -0.1**
GLI IAmb IAmb 19 05 06.3
comp=Z,15nm,0.7s
GLI Glacier Island 58.55 33 P **P 19 05 05.8 +0.6**
baz=266
TOLK Toolik Lake Re 58.58 23 P **P 19 05 07.1 +1.8**
TOLK Toolik Lake Re 58.58 23 P **P 19 05 06.9 +1.5**
baz=258
DHY Denali Highway 58.62 30 P **P 19 05 06.0 +0.2**
DHY IAmb IAmb 19 05 33.1
comp=Z,32nm,1.8s
DHY Denali Highway 58.62 30 P **P 19 05 06.5 +0.6**
baz=264
AFI Afiamalu 58.63 126 P **P 19 05 05.8 -0.6**
comp=Z,22nm,0.7s,baz=247,slow=7.7,SNR=2.5
AFI LR LR 19 27 03.4
comp=Z,46nm,18.4s,baz=310,slow=33
comp=Z,22nm,0.7s
AFI Afiamalu 58.63 126 P **P 19 05 06.4 0.0**
AFI Afiamalu 58.63 126 P **P 19 05 06.4 0.0**
AFI pmax pmax
comp=Z,70nm,1.4s
H24K Noodor Dome 58.75 27 P **P 19 05 07.9 +1.3**
baz=262
POKR Poker Plat Res 58.83 28 P **P 19 05 06.6 -0.6**
POKR Poker Plat Res 58.83 28 P **P 19 05 07.8 +0.6**
baz=263
E24K Your Creek 58.87 24 P **P 19 05 09.0 +1.6**
baz=260
D24K Happy Valley 58.95 23 P **P 19 05 08.9 +1.0**
baz=259
HDA Harding Lake 58.95 28 P **P 19 05 06.7 -1.3**
HDA IAmb IAmb 19 06 22.0
comp=Z,7.4nm,0.8s
HDA Harding Lake 58.95 28 P **P 19 05 07.9 -0.1**
baz=264
F24K Squaw Lake 59.00 25 P **P 19 05 09.3 +1.0**
baz=261
IL31 59.02 28 P **P 19 05 08.2 -0.2**
IL31 IAmb IAmb 19 05 08.9
comp=Z,10.0nm,0.8s
ILAR Eielson Array 59.02 28 P **P 19 05 07.2 -1.2**
comp=Z,7.6nm,0.8s,baz=259,slow=5.9,SNR=50
comp=Z,7.6nm,0.8s
ILAR Eielson Array 59.02 28 P **P 19 05 07.3 -1.1**
G24K Hadweenzic Riv 59.03 26 P **P 19 05 09.1 +0.6**
baz=262
C24K Franklin Bluff 59.10 22 P **P 19 05 09.5 +0.6**
baz=259
KLU Klutina 59.16 32 P **P 19 05 10.3 +0.8**
KLU IAmb IAmb 19 05 11.1
comp=Z,19nm,1.1s
KLU Klutina 59.16 32 P **P 19 05 10.2 +0.7**
baz=266
DIV Divide 59.21 32 P **P 19 05 10.6 +0.8**
DIV IAmb IAmb 19 06 29.6
comp=Z,20nm,1.1s
PAX Paxson 59.47 30 P **P 19 05 12.2 +0.5**
PAX IAmb IAmb 19 05 13.3
comp=Z,26nm,1.5s
PAX Paxson 59.47 30 P **P 19 05 12.2 +0.5**
PAX pmax pmax
comp=Z,26nm,1.5s
PAX Paxson 59.47 30 P **P 19 05 12.0 +0.3**
baz=266
HARP HAARP 59.58 31 P **P 19 05 12.9 +0.5**
baz=266
H25K Birch Creek 59.63 26 P **P 19 05 14.3 +1.7**
baz=263
J25K Salcha River, 59.65 28 P **P 19 05 12.1 -0.8**
J25K IAmb IAmb 19 06 08.9
comp=Z,24nm,2.0s
J25K Salcha River, 59.65 28 P **P 19 05 13.0 +0.1**
baz=265
RAGM Ragged Mountai 59.71 33 P **P 19 05 12.6 -0.7**
BMRM Bremner River 59.76 33 P **P 19 05 14.2 +0.5**
BMRM Bremner River 59.76 33 P **P 19 05 13.8 +0.1**
baz=268
N25K Chitina, Valde 59.80 32 P **P 19 05 14.9 +0.9**
N25K Chitina, Valde 59.80 32 P **P 19 05 14.6 +0.6**
baz=267
RIDG Independent Ri 59.81 29 P **P 19 05 13.9 -0.1**
RIDG IAmb IAmb 19 05 15.1
comp=Z,18nm,1.0s
RIDG Independent Ri 59.81 29 P **P 19 05 14.1 +0.2**
baz=266
KAIM Kayak Island 59.82 34 P **P 19 05 14.8 +0.8**
baz=268
D25K Kavik River 59.84 23 P **P 19 05 15.3 +1.3**
baz=261
F25K Christian Rive 59.86 25 P **P 19 05 16.0 +1.8**
baz=263
E25K Arctic Village 59.96 24 P **P 19 05 16.7 +1.8**
baz=263
BVAR Borovoye Array 60.07 318 LR LR 19 32 10.1
comp=Z,70nm,18.7s,baz=69,slow=37
BRVK Borovoye 60.13 318 P **P 19 05 15.7 -0.5**
BRVK IAmb IAmb 19 05 20.2
comp=Z,15nm,1.1s
BRVK Borovoye 60.13 318 *ce*P **P 19 05 16.2 -0.1**
BRVK pmax pmax
comp=Z,15nm,1.0s
DOT Dot Lake 60.15 29 P **P 19 05 16.4 +0.1**
DOT IAmb IAmb 19 05 17.4
comp=Z,11nm,0.9s
HYBB Hyderabad (bro 60.20 276 *e*P **P 19 05 17.4 +0.1**
SCRK Sand Creek 60.21 29 P **P 19 05 17.3 +0.5**
SCRK IAmb IAmb 19 05 17.9
comp=Z,17nm,0.9s
SCRK Sand Creek 60.21 29 P **P 19 05 17.4 +0.6**
baz=266,SNR=12
BMAR Burnt Mountain 60.25 25 P **P 19 05 18.8 +1.9**
J26L Joseph Creek 60.42 28 P **P 19 05 18.4 +0.2**
J26L IAmb IAmb 19 05 19.2
comp=Z,16nm,0.9s
J26L Joseph Creek 60.42 28 P **P 19 05 18.4 +0.2**
baz=266,SNR=13
L26K Log Cabin Wild 60.44 30 P **P 19 05 19.2 +0.9**
L26K Log Cabin Wild 60.44 30 P **P 19 05 19.1 +0.9**
baz=268
F26K Sheenjek River 60.44 25 P **P 19 05 19.7 +1.5**
baz=264
NIL Nilore 60.47 296 P **P 19 05 19.9 +1.0**
NIL Nilore 60.47 296 P **P 19 05 19.9 +1.0**
NIL pmax pmax
comp=Z,16nm,0.7s
G26K Porcupine Rive 60.51 26 P **P 19 05 20.0 +1.4**
baz=265
DRK Karamyk 60.53 303 P **P 19 05 18.0 -1.6**
DRK IAmb IAmb 19 05 23.1
comp=Z,19nm,1.4s
MCARA McCarthy VSAT 60.54 32 P **P 19 05 19.7 +0.7**
baz=269
M26K Nabesna, AK 60.58 31 P **P 19 05 18.9 -0.4**
M26K IAmb IAmb 19 06 46.5
comp=Z,18nm,1.4s
M26K Nabesna, AK 60.58 31 P **P 19 05 20.1 +0.8**
baz=268
C27K Jago River 60.81 23 P **P 19 05 21.8 +1.2**
baz=264
KK31 Karatay Array 60.94 307 P **P 19 05 21.7 -0.3**
KK31 IAmb IAmb 19 05 25.8
comp=Z,11nm,1.1s
KK31 Karatay Array 60.94 307 P **P 19 05 21.7 -0.3**
KK31 pmax pmax
comp=Z,11nm,1.1s
KKAR Karatay Array 60.94 307 P **P 19 05 21.0 -1.0**
KKAR Karatay Array 60.94 307 P **P 19 05 21.4 -0.5**
KKAR IAmb IAmb 19 05 25.8
comp=Z,11nm,1.1s
KKAR Karatay Array 60.94 307 P **P 19 05 21.5 -0.5**
KKAR pmax pmax
comp=Z,11nm,1.1s
K27K Chicken 61.05 29 P **P 19 05 23.0 +0.7**
baz=268
MESA MESA 61.06 33 P **P 19 05 23.1 +0.3**
baz=270
M27K Edge Creek, AK 61.10 31 P **P 19 05 23.4 +0.5**
M27K Edge Creek, AK 61.10 31 P **P 19 05 23.3 +0.3**
baz=269
L27K Beaver Creek, 61.14 30 P **P 19 05 23.5 +0.5**
L27K IAmb IAmb 19 06 08.5
comp=Z,16nm,1.4s
L27K Beaver Creek, 61.14 30 P **P 19 05 23.6 +0.6**
baz=269
BCAR Beaver Creek A 61.16 30 P **P 19 05 22.5 -0.7**
BTK Batken 61.19 303 P **P 19 05 24.9 +1.1**
BTK IAmb IAmb 19 05 34.3
comp=Z,20nm,1.8s
BTK Batken 61.19 303 P **P 19 05 24.9 +1.1**
BTK pmax pmax
comp=Z,20nm,1.8s
I27K Kandik River 61.30 27 P **P 19 05 24.1 0.0**
baz=268
CTG Chitna Glacier 61.36 33 P **P 19 05 24.3 -0.4**
baz=270
H27K Steamboat Moun 61.37 27 P **P 19 05 25.7 +1.1**
baz=267,SNR=7.8
GAR Garm 61.75 302 P **P 19 05 27.4 -0.3**
YUK3 Moose Creek 61.77 32 P **P 19 05 27.4 -0.1**
baz=271
PINM Pinnacle 61.91 34 P **P 19 05 28.9 +0.6**
baz=272
O28M Mount Upton 61.92 33 P **P 19 05 28.9 +0.2**
baz=272
PALK Pallekele 62.02 265 LR LR 19 33 38.9
comp=Z,41nm,18.0s,baz=169,slow=37
YUK8 Steele Glacier 62.12 32 P **P 19 05 30.6 +0.7**
baz=272
DAWY Dawson 62.23 29 P **P 19 05 31.4 +1.1**
DAWY IAmb IAmb 19 05 32.3
comp=Z,8.0nm,1.0s
DAWY Dawson 62.23 29 P **P 19 05 31.3 +1.0**
baz=271
PNL Peninsula 62.36 34 P **P 19 05 32.3 +0.9**
baz=273
YUK4 Talbot Arm 62.65 32 P **P 19 05 35.1 +1.6**
baz=273,SNR=7.9
I29M Ogilvie Camp, 62.68 28 P **P 19 05 34.2 +0.8**
I29M IAmb IAmb 19 06 50.7
comp=Z,18nm,1.1s
I29M Ogilvie Camp, 62.68 28 P **P 19 05 34.1 +0.8**
baz=271
M29M Somme Creek 62.69 31 P **P 19 05 34.6 +1.0**
baz=272,SNR=7.0
CHGR Chuyangaron 62.71 302 P **P 19 05 33.7 -0.4**
CHGR Chuyangaron 62.71 302 P **P 19 05 33.7 -0.4**
CHGR pmax pmax
comp=Z,47nm,0.6s
O29M Mount Kennedy 62.74 33 P **P 19 05 35.3 +1.3**
baz=273
YUK6 Outpost Mounta 62.81 33 P **P 19 05 35.4 +0.8**
baz=273
L29M L29M 62.82 30 P **P 19 05 35.5 +1.1**
baz=272,SNR=6.9
K29M Barlow Dome 63.06 29 P **P 19 05 36.9 +0.8**
baz=272
P29M Windy Craggy 63.20 34 P **P 19 05 38.5 +1.5**
P29M IAmb IAmb 19 05 39.8
comp=Z,16nm,0.9s
P29M Windy Craggy 63.20 34 P **P 19 05 38.3 +1.4**
baz=274
HYT Haines Junctio 63.24 33 P **P 19 05 38.7 +1.4**
HYT IAmb IAmb 19 05 39.6
comp=Z,12nm,1.0s
HYT Haines Junctio 63.24 33 P **P 19 05 38.6 +1.3**
baz=274,SNR=5.9
EPYK Eagle Plains 63.31 26 P **P 19 05 38.5 +1.0**
EPYK IAmb IAmb 19 05 39.5
comp=Z,14nm,0.9s
EPYK Eagle Plains 63.31 26 P **P 19 05 38.5 +1.0**
baz=272
N30M Aishikik Lake 63.39 32 P **P 19 05 39.0 +0.8**
baz=274
G30M tAoh Zraii Nji 63.49 26 P **P 19 05 40.0 +1.3**
baz=272
P30M Million Dollar 63.56 33 P **P 19 05 40.3 +1.0**
baz=275
KBL Kabul 63.68 298 P **P 19 05 40.0 -0.8**
KBL Kabul 63.68 298 P **P 19 05 40.0 -0.8**
KBL pmax pmax
comp=Z,21nm,1.1s
PLBC Pleasant Camp 63.92 34 P **P 19 05 42.7 +1.1**
baz=276
O30N Mendenhall 63.93 33 P **P 19 05 42.5 +0.7**
baz=275
N31M Braeburn, Yuko 64.02 32 P **P 19 05 42.9 +0.6**
baz=275
F31M Tsiigehtchic 64.43 25 P **P 19 05 44.7 -0.1**
baz=274
SKAG Skagway 64.44 34 P **P 19 05 43.8 -1.3**
baz=276
INK Inuvik 64.45 24 P **P 19 05 45.0 +0.1**
INK IAmb IAmb 19 05 46.2
comp=Z,7.6nm,0.8s
INK Inuvik 64.45 24 P **P 19 05 45.0 +0.1**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 64.45 24 P **P 19 05 45.4 +0.5**
baz=274
WHY Whitehorse 64.53 33 P **P 19 05 46.8 +1.1**
WHY Whitehorse 64.53 33 P **P 19 05 46.9 +1.1**
baz=276
M31M Drury Creek, Y 64.61 31 P **P 19 05 47.0 +0.9**
M31M Drury Creek, Y 64.61 31 P **P 19 05 46.7 +0.6**
baz=276
SVE Sverdlovsk 65.30 323 *e*P **P 19 05 54.8 +4.1**
SVE pmax pmax
comp=Z,11nm,1.2s
P33M Teslin, Yukon 65.61 33 P **P 19 05 53.5 +0.8**
baz=278
Q32M Nakina River 66.07 34 P **P 19 05 57.2 +1.3**
baz=279
CRAG Craig 66.20 38 P **P 19 05 58.2 +1.8**
baz=280
ARU Arti 66.50 323 LR LR 19 37 56.7
comp=Z,80nm,18.3s,baz=106,slow=39
ARU Arti 66.50 323 P **P 19 05 59.1 +0.7**
ARU IAmb IAmb 19 06 09.4
comp=Z,11nm,0.8s
ARU Arti 66.50 323 *c i*P **P 19 05 58.4 0.0**
ARU 19 06 23.3
ARU 19 08 22.8
ARU S **S 19 14 52.0 +3.1**
ARU SS **SS 19 19 02.1 -3.2**
ARU pmax pmax
comp=Z,9.0nm,0.7s
ARU MLR MLR
comp=Z,82nm,16.0s
R33M Jennings River 66.66 34 P **P 19 05 59.9 +0.3**
baz=280
A36M Sachs Harbour 66.82 20 P **P 19 06 00.2 0.0**
baz=280
S34M Telegraph Cree 66.84 35 P **P 19 06 02.0 +1.5**
baz=281
V35K Ketchikan 67.07 38 P **P 19 06 02.1 +0.1**
baz=281
ABKAR Akbulak array 67.08 315 P **P 19 06 01.2 -1.1**
ABKAR Akbulak array 67.08 315 P **P 19 06 01.5 -0.8**
ABKAR IAmb IAmb 19 06 05.9
comp=Z,5.7nm,0.7s
T35M Bob Quinn 67.49 36 P **P 19 06 05.5 +0.7**
baz=282
TGTN Hyland Airport 67.57 31 P **P 19 06 06.3 +1.0**
baz=281
C36M Paulatuk 67.71 23 P **P 19 06 06.3 +0.5**
baz=282
AKTO Aktyubinsk 68.04 317 LR LR 19 36 57.6
comp=Z,67nm,20.6s,baz=71,slow=37
HRA Herat 69.14 299 P **P 19 06 14.8 -1.0**
WRGLY Wrigley 69.37 29 P **P 19 06 17.3 +1.0**
baz=285
URZ Urewera 70.65 152 LR LR 19 36 15.8
comp=Z,37nm,18.2s,baz=48,slow=35
KIRV Kirov 70.79 326 LR LR 19 40 07.3
comp=Z,116nm,18.2s,baz=71,slow=38
GEYT Alibeck 71.30 304 P **P 19 06 28.9 +0.3**
comp=Z,2.1nm,0.9s,baz=57,slow=5.3,SNR=4.6
GEYT LR LR 19 41 27.1
comp=Z,35nm,19.8s,baz=140,slow=39
comp=Z,2.1nm,0.9s
EUNU Eureka 71.71 8 P **P 19 06 31.1 +0.6**
EUNU IAmb IAmb 19 06 31.5
comp=Z,9.7nm,0.7s
PLWZ Palliser 72.73 155 P **P 19 06 35.9 -1.0**
YKA Yellowknife Ar 73.45 28 P **P 19 06 40.5 -0.5**
comp=Z,5.4nm,0.7s,baz=291,slow=6.0,SNR=14
comp=Z,5.4nm,0.7s
BELG Belogornoye 73.72 321 LR LR 19 42 29.8
comp=Z,47nm,18.1s,baz=142,slow=39
RES Resolute Bay 73.75 14 P **P 19 06 42.9 +0.3**
RES Resolute Bay 73.75 14 P **P 19 06 42.9 +0.3**
RES pmax pmax
comp=Z,9.0nm,0.8s
KLMR Klimovskoe 74.70 330 *e*P **P 19 06 47.9 -0.4**
KLMR pmax pmax
comp=Z,14nm,1.5s
KLMR Klimovskoe 74.70 330 *e*P **P 19 06 48.0 -0.4**
KLMR AMP 19 06 51.9
comp=Z,14nm,1.5s
ARCES ARCESS Array B 75.67 341 P **P 19 06 53.9 +0.1**
comp=Z,8.0nm,1.1s,baz=73,slow=7.6,SNR=15
ARCES LR LR 19 45 19.9
comp=Z,57nm,18.1s,baz=70,slow=40
comp=Z,8.0nm,1.1s
H04A Detroit Lake 75.91 47 P **P 19 06 56.8 +1.1**
HOOD Mount Hood Mea 76.03 46 P **P 19 06 57.4 +0.9**
B08A Colville Reser 76.37 43 P **P 19 06 59.0 +0.8**
B08A IAmb IAmb 19 06 59.8
comp=Z,9.7nm,0.8s
YBH Yreka Blue Hor 76.64 50 P **P 19 07 01.3 +1.4**
YBH IAmb IAmb 19 07 02.2
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 76.64 50 P **P 19 07 01.3 +1.4**
YBH pmax pmax
comp=Z,12nm,0.9s
PINE Pine Mountain 77.08 48 P **P 19 07 04.0 +1.4**
D08A Wollman Farm, 77.13 44 P **P 19 07 03.3 +0.8**
D08A IAmb IAmb 19 07 04.3
comp=Z,13nm,1.1s
C09A Chrisman Ranch 77.24 43 P **P 19 07 03.8 +0.7**
C09A IAmb IAmb 19 07 04.3
comp=Z,12nm,1.1s
K05A Summer Lake 77.51 49 P **P 19 07 06.4 +1.4**
VRH Novokhopyorsk 77.56 321 *e*P **P 19 07 07.0 +2.2**
VRH pmax pmax
comp=Z,20nm,1.5s
DAG Danmarks Havn 77.72 356 *i*P **P 19 07 04.6 -0.6**
NEW Newport 77.77 42 P **P 19 07 06.6 +0.5**
NEW IAmb IAmb 19 07 07.8
comp=Z,10nm,0.9s
NEW Newport 77.77 42 P **P 19 07 06.6 +0.5**
NEW pmax pmax
comp=Z,10.0nm,0.9s
NEW Newport 77.77 42 P **P 19 07 07.0 +0.9**
baz=294
G08A Pilot Rock 77.80 46 P **P 19 07 07.6 +1.2**
E09A Wood Farm, Sta 77.83 44 P **P 19 07 07.4 +1.0**
E09A IAmb IAmb 19 07 08.4
comp=Z,16nm,1.0s
EDM Edmonton 77.86 37 P **P 19 07 07.2 +0.7**
EDM IAmb IAmb 19 07 08.8
comp=Z,29nm,1.4s
EDM Edmonton 77.86 37 P **P 19 07 07.2 +0.7**
EDM pmax pmax
comp=Z,29nm,1.4s
PPT Papeete 78.04 116 LR LR 19 35 07.2
comp=Z,54nm,18.8s,baz=316,slow=31
MOD Modoc Plateau 78.24 49 P **P 19 07 09.9 +0.9**
ORV Oroville 78.31 52 P **P 19 07 09.9 +0.6**
ORV IAmb IAmb 19 07 10.7
comp=Z,15nm,1.0s
ORV Oroville 78.31 52 P **P 19 07 09.9 +0.6**
ORV pmax pmax
comp=Z,15nm,1.0s
LPSR Galich'ya Gora 78.52 323 *e*P **P 19 07 09.4 -0.7**
LPSR pmax pmax
comp=Z,7.0nm,0.8s
OBN Obninsk 78.63 326⇑ *e*P **P 19 07 10.0 -0.6**
OBN *e* 19 10 07.8
OBN pmax pmax
comp=Z,5.0nm,1.0s
OBN MLR MLR
comp=Z,206nm,16.0s
VORR Voronezh 78.78 322 *e*P P 19 07 17.7 +6.2
VORR pmax pmax
comp=Z,10.0nm,0.3s
J08A Circle Bar Ran 78.89 47 P **P 19 07 13.8 +1.3**
J08A IAmb IAmb 19 07 14.5
comp=Z,12nm,0.9s
AFDM Forest Hills D 78.93 52 P **P 19 07 13.4 +0.7**
AFDM IAmb IAmb 19 07 15.1
comp=Z,20nm,1.5s
BEKR Beckworth 79.00 51 P **P 19 07 14.1 +0.8**
BEKR IAmb IAmb 19 07 14.8
comp=Z,19nm,0.8s
VSR Storozhevoye 79.00 322 *e*P **P 19 07 14.2 +1.4**
VSR pmax pmax
comp=Z,10.0nm,1.0s
BMO Blue Mountains 79.05 46 P **P 19 07 13.7 +0.4**
BMO IAmb IAmb 19 07 15.1
comp=Z,15nm,1.1s
BMO Blue Mountains 79.05 46 P **P 19 07 13.7 +0.4**
BMO pmax pmax
comp=Z,15nm,1.1s
WVOR Wild Horse Val 79.16 48 P **P 19 07 15.0 +1.0**
WVOR Wild Horse Val 79.16 48 P **P 19 07 15.0 +1.0**
WVOR pmax pmax
comp=Z,11nm,1.0s
WALA Waterton Lakes 79.36 41 P **P 19 07 15.3 +0.3**
WALA IAmb IAmb 19 07 17.1
comp=Z,14nm,0.8s
JTMT Jette 79.71 42 P **P 19 07 17.9 +1.0**
JTMT IAmb IAmb 19 07 18.8
comp=Z,15nm,0.8s
CMB Columbia Colle 79.71 53 P **P 19 07 17.7 +0.7**
CMB IAmb IAmb 19 07 18.8
comp=Z,18nm,0.8s
CMB Columbia Colle 79.71 53 P **P 19 07 17.7 +0.7**
CMB pmax pmax
comp=Z,18nm,0.8s
VCNR Virginia City 79.73 51 P **P 19 07 17.5 +0.2**
PAHR Pah Rah Range 79.75 51 P **P 19 07 18.3 +1.0**
PAHR IAmb IAmb 19 07 19.0
comp=Z,13nm,1.0s
PLID Pearl Lake 79.79 45 P **P 19 07 17.6 +0.1**
PNTR Pine Nut 79.85 52 P **P 19 07 18.7 +0.7**
PNTR IAmb IAmb 19 07 19.9
comp=Z,16nm,0.8s
KBZ Khabaz 79.97 314 P **P 19 07 19.7 +1.5**
comp=Z,2.9nm,0.6s,baz=58,slow=6.1,SNR=8.7
KBZ LR LR 19 45 47.1
comp=Z,58nm,20.2s,baz=64,slow=38
comp=Z,2.9nm,0.6s
KVAR Kislovodsk Arr 80.01 314 LR LR 19 46 16.8
comp=Z,53nm,19.4s,baz=266,slow=38
KIV Kislovodsk 80.02 314 *e*P **P 19 07 18.7 +0.1**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,40nm,19.0s
FIA1 FINESS Array S 80.08 334 P **P 19 07 18.1 -0.3**
FIA1 IAmb IAmb 19 07 31.2
comp=Z,17nm,1.1s
FINES FINESS Array B 80.08 334 P **P 19 07 17.3 -1.1**
comp=Z,4.8nm,0.5s,baz=69,slow=5.4,SNR=42
comp=Z,4.8nm,0.5s
FINES FINESS Array B 80.08 334 P **P 19 07 17.9 -0.5**
FINES FINESS Array B 80.08 334 P **P 19 07 17.9 -0.5**
YERR Yerington 80.15 52 P **P 19 07 20.6 +1.1**
YERR IAmb IAmb 19 07 21.3
comp=Z,11nm,0.7s
WAKR Walker 80.21 52 P **P 19 07 20.9 +1.0**
GNI Garni 80.22 310 LR LR 19 45 49.1
comp=Z,19nm,18.0s,baz=79,slow=38
MSO Missoula 80.33 43 P **P 19 07 20.5 +0.2**
baz=296
RYN Ryan 80.81 52 P **P 19 07 23.9 +0.8**
RYN IAmb IAmb 19 07 24.8
comp=Z,13nm,1.0s
OMMB Old Mammoth Mi 80.89 53 P **P 19 07 24.6 +0.9**
KVN Kaiserville 80.93 51 P **P 19 07 24.4 +0.7**

KVN IAmb IAmb 19 07 25.4
comp=Z,10nm,0.9s
KVN Kaiserville 80.93 51 P P 19 07 24.4 +0.7
KVN pmax pmax
comp=Z,10.0nm,0.9s
BMN Battle Mountai 80.96 50 P P 19 07 24.4 +0.6
BMN IAmb IAmb 19 07 25.7
comp=Z,18nm,1.5s
BMN Battle Mountai 80.96 50 P P 19 07 24.4 +0.6
BMN pmax pmax
comp=Z,18nm,1.5s
LHV Little Huntoon 80.98 52 P P 19 07 25.2 +1.5
NVAR Mina Array Bea 81.05 52 P P 19 07 25.1 +0.7
comp=Z,8.7nm,0.8s,baz=279,slow=5.7,SNR=51
comp=Z,8.7nm,0.8s
NVAR Mina Array Bea 81.05 52 P P 19 07 25.3 +0.9
NV11 Mina Array Sit 81.15 52 P P 19 07 25.7 +0.8
PKM Mcpherson Peak 81.42 56 P P 19 07 27.3 +0.9
baz=295,SNR=6.0
HLID Hailey 81.48 46 P P 19 07 27.4 +0.8
HLID Hailey 81.48 46 P P 19 07 27.8 +1.2
baz=297,SNR=7.1
VSU Vasula 81.52 332 *i* P **P 19 07 25.0 -1.2**
VSU pmax pmax
comp=Z,17nm,1.0s
VES Vestal, Richgr 81.56 54 P P 19 07 27.4 +0.5
baz=295
HRY Holter Researc 81.67 42 P P 19 07 27.6 +0.1
BCW Bitter Crk WRg 81.70 55 P P 19 07 29.0 +1.2
BCW IAmb IAmb 19 07 30.1
comp=Z,17nm,0.9s
LRM Limekiln Ridge 81.70 43 P P 19 07 28.6 +0.8
BCYI Bear Canyon 81.80 45 P P 19 07 29.2 +0.9
TPH Tonopah 81.97 52 P P 19 07 29.7 +0.5
TPH Tonopah 81.97 52 P P 19 07 29.7 +0.5
TPH pmax pmax
comp=Z,50nm,1.2s
LCH Last Change Ra 82.03 53 P P 19 07 30.3 +0.8
CWC Cottonwood Cre 82.05 54 P P 19 07 30.3 +0.6
baz=295
ISA Isabella, Lake 82.09 54 P P 19 07 29.8 0.0
ISA Isabella, Lake 82.09 54 P P 19 07 29.8 0.0
ISA pmax pmax
comp=Z,6.0nm,1.0s
ISA Isabella, Lake 82.09 54 P P 19 07 30.2 +0.4
baz=295,SNR=5.1
ELK Elko 82.18 49 P P 19 07 30.9 +0.5
ELK IAmb IAmb 19 07 32.2
comp=Z,13nm,1.1s
ELK Elko 82.18 49 P P 19 07 30.9 +0.5
ELK pmax pmax
comp=Z,13nm,1.1s
GMN Gold Mountain 82.28 53 P P 19 07 31.6 +0.7
EGMT Eagleton 82.29 40 P P 19 07 30.1 -0.5
EGMT Eagleton 82.29 40 P P 19 07 30.7 +0.1
baz=299
BOZ Bozeman (W) 82.32 43 P P 19 07 31.4 +0.5
BOZ Bozeman (W) 82.32 43 P P 19 07 31.4 +0.5
BOZ pmax pmax
comp=Z,5.0nm,0.7s
BOZ Bozeman (W) 82.32 43 P P 19 07 31.4 +0.5
baz=298,SNR=5.3
GRAC Grapevine Rang 82.33 53 P P 19 07 31.5 +0.5
baz=296
MPMC Manual Prospec 82.64 54 P P 19 07 33.6 +0.8
baz=296,SNR=7.3
LRMC Laurel Mtn Rad 82.75 54 P P 19 07 34.0 +0.6
baz=296,SNR=7.9
EDW2 Edwards Air Fo 82.78 55 P P 19 07 34.3 +1.0
baz=296
FURC Furnace Creek, 82.92 53 P P 19 07 34.8 +0.9
baz=296
YHL Hebgen Lake 82.95 44 P P 19 07 35.9 +1.5
YHL IAmb IAmb 19 07 37.1
comp=Z,13nm,0.9s
YHB Horse Butte 82.99 44 P P 19 07 36.1 +1.6
YHB IAmb IAmb 19 07 36.8
comp=Z,15nm,0.9s
R11A Troy Canyon, C 83.01 51 P P 19 07 35.6 +0.9
R11A IAmb IAmb 19 07 36.4
comp=Z,7.3nm,0.9s
R11A Troy Canyon, C 83.01 51 P P 19 07 35.1 +0.5
baz=296,SNR=13
CIS Catalina Islan 83.10 56 P P 19 07 34.9 -0.1
baz=296
TPNV Topopah Spring 83.15 52 P P 19 07 36.2 +0.7
TPNV IAmb IAmb 19 07 36.9
comp=Z,13nm,0.9s
TPNV Topopah Spring 83.15 52 P P 19 07 36.2 +0.7
TPNV pmax pmax
comp=Z,13nm,1.0s
TPNV Topopah Spring 83.15 52 P P 19 07 36.1 +0.7
baz=296,SNR=12
YMR Madison River 83.17 44 P P 19 07 37.4 +1.9
GWY Greenwater Val 83.19 53 P P 19 07 36.4 +0.8
GWY IAmb IAmb 19 07 37.1
comp=Z,14nm,0.8s
YHH Holmes Hill 83.19 44 P P 19 07 36.9 +1.3
BFSC Mount Baldy Ra 83.31 55 P P 19 07 36.4 +0.2
baz=296
YNR Norris Junctio 83.33 44 P P 19 07 38.2 +1.9
YNR IAmb IAmb 19 07 39.4
comp=Z,11nm,1.0s
HVU Hansel Valley 83.37 47 P P 19 07 37.6 +1.2
HVU Hansel Valley 83.37 47 P P 19 07 37.6 +1.2
HVU pmax pmax
comp=Z,33nm,1.7s
GSC Goldstone, Bar 83.47 54 P P 19 07 37.9 +0.9
GSC IAmb IAmb 19 07 38.8
comp=Z,9.3nm,0.9s
GSC Goldstone, Bar 83.47 54 P P 19 07 37.9 +0.9
GSC pmax pmax
comp=Z,9.0nm,1.0s
GSC Goldstone, Bar 83.47 54 P P 19 07 37.7 +0.7
baz=296
NACGM Naroch 83.55 329 *e*P **P 19 07 36.3 -0.5**
baz=55
SHOC Shoshone, Teco 83.60 53 P P 19 07 38.1 +0.6
baz=296
FXWY Fox Creek 83.63 45 P P 19 07 39.1 +1.3
MOOW Moose Ponds 83.75 44 P P 19 07 39.8 +1.3
MOOW IAmb IAmb 19 07 40.8
comp=Z,16nm,1.5s
SPUT South Promonto 83.81 47 P P 19 07 39.6 +0.9
SPUT IAmb IAmb 19 07 40.7
comp=Z,15nm,1.3s
PRN Pahroc Range 83.81 52 P P 19 07 39.0 +0.3
PRN IAmb IAmb 19 07 40.5
comp=Z,7.4nm,1.0s
LOHW Long Hollow 83.91 45 P P 19 07 40.4 +1.2
LOHW IAmb IAmb 19 07 41.3
comp=Z,12nm,1.4s
MURC Murrieta 83.93 56 P P 19 07 40.1 +0.7
baz=296
RLMT Red Lodge 84.00 43 P P 19 07 41.1 +1.4
RLMT Red Lodge 84.00 43 P P 19 07 40.8 +1.1
baz=300,SNR=7.8
HEC Hector,Ludlow 84.03 54 P P 19 07 40.7 +0.8
baz=296,SNR=5.6
TUQ Turquoise Moun 84.06 54 P P 19 07 40.7 +0.6
baz=297
DUG Dugway, Tooele 84.08 48 P P 19 07 41.0 +0.9
DUG IAmb IAmb 19 07 41.8
comp=Z,12nm,0.9s
DUG Dugway, Tooele 84.08 48 P P 19 07 41.0 +0.9
DUG pmax pmax
comp=Z,12nm,1.0s
DUG Dugway, Tooele 84.08 48 P P 19 07 41.0 +0.9
baz=296
SHPR Sheep Range 84.14 52 P P 19 07 41.5 +1.1
PSUT Pine Spring 84.14 50 P P 19 07 41.3 +0.8
PSUT IAmb IAmb 19 07 42.0
comp=Z,7.8nm,0.9s
HWUT Hardware Ranch 84.25 47 P P 19 07 41.9 +0.9
HWUT IAmb IAmb 19 07 42.8
comp=Z,13nm,1.1s
PFO Pinyon Flats O 84.48 56 LR LR 19 39 43.2
comp=Z,81nm,18.8s,baz=308,slow=32
PFO Pinyon Flats O 84.48 56 P P 19 07 43.0 +0.8
PFO IAmb IAmb 19 07 43.6
comp=Z,7.4nm,0.9s
PFO Pinyon Flats O 84.48 56 P P 19 07 43.0 +0.8
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 84.48 56 P P 19 07 42.5 +0.3
baz=296

TPFO Pinon Flats 84.48 56 P P 19 07 42.9 +0.7
baz=296,SNR=5.1
GMRC Granite Mounta 84.55 54 P P 19 07 43.2 +0.6
baz=297,SNR=9.4
CTU Camp Tracy 84.56 48 P P 19 07 43.5 +0.9
CTU IAmb IAmb 19 07 44.1
comp=Z,12nm,1.1s
BELC Belle Mtn. Jos 84.65 55 P P 19 07 43.4 +0.3
baz=297,SNR=7.0
AKASG Malin Array Be 84.70 324 P P 19 07 41.3 -1.5
comp=Z,2.4nm,0.5s,baz=48,slow=5.3,SNR=13
AKASG LR LR 19 48 26.0
comp=Z,67nm,19.1s,baz=32,slow=38
comp=Z,2.4nm,0.5s
AKBB Malin Array Si 84.70 324 P P 19 07 42.2 -0.6
AKBB IAmb IAmb 19 07 54.8
comp=Z,9.1nm,0.7s
AKBB Malin Array Si 84.70 324 P P 19 07 42.2 -0.6
AKBB pmax pmax
comp=Z,9.0nm,0.7s
V12A Nelson 84.71 53 P P 19 07 44.4 +1.1
V12A IAmb IAmb 19 07 45.1
comp=Z,11nm,0.7s
JLU Jordanelle 84.81 47 P P 19 07 44.8 +0.9
JLU IAmb IAmb 19 07 45.6
comp=Z,8.3nm,0.7s
MONP2 Monument Peak 84.82 56 P P 19 07 44.6 +0.5
baz=297,SNR=6.1
CCUT Cedar City 84.94 51 P P 19 07 45.6 +1.0
MPU Maple Canyon 84.96 48 P P 19 07 45.1 +0.4
MPU IAmb IAmb 19 07 46.2
comp=Z,6.9nm,0.8s
BW06 Boulder Array 84.99 45 P P 19 07 45.0 +0.2
baz=300
PDAR Pinedale Array 84.99 45 P P 19 07 44.6 -0.2
comp=Z,2.7nm,0.7s,baz=289,slow=4.5,SNR=12
PDAR LR LR 19 37 56.3
comp=Z,78nm,20.6s,baz=304,slow=30
comp=Z,2.7nm,0.7s
PDAR Pinedale Array 84.99 45 P P 19 07 44.9 +0.2
LAO LASA Array 85.03 40 P P 19 07 45.9 +1.2
LAO LASA Array 85.03 40 P P 19 07 46.0 +1.3
baz=302
LAO LASA Array 85.03 40 P P 19 07 45.5 +0.8
baz=302
IKP In-Ko-Pah, Jac 85.17 56 P P 19 07 46.3 +0.7
baz=297
BC3 Big Chuckawall 85.21 55 P P 19 07 46.4 +0.5
baz=297,SNR=7.4
IRM Iron Mountain 85.21 55 P P 19 07 46.3 +0.5
baz=297,SNR=5.9
DGMT Dagmar 85.24 38 P P 19 07 45.5 -0.1
baz=303
SWSC Sam W. Stewart 85.27 56 P P 19 07 46.1 +0.1
baz=297
LCMT Little Creek M 85.27 51 P P 19 07 47.3 +1.1
LCMT IAmb IAmb 19 07 48.0
comp=Z,10nm,0.8s
MVU Marysvale 85.29 50 P P 19 07 47.4 +1.0
YUH Yuha Desert 85.31 56 P P 19 07 46.2 -0.1
YUH IAmb IAmb 19 07 47.6
comp=Z,10nm,1.2s
MSU Marysvale 85.31 50 P P 19 07 47.3 +0.9
MSU Marysvale 85.31 50 P P 19 07 47.3 +0.9
NC405 NORSAR Array S 85.52 339 P P 19 07 45.9 -0.9
MTPU Mount Pierson 85.53 50 P P 19 07 48.8 +1.1
HFS Hagfors 85.56 337 LR LR 19 47 42.9
comp=Z,33nm,19.6s,baz=56,slow=37
KNB Kanab 85.56 51 P P 19 07 49.2 +1.5
KNB Kanab 85.56 51 P P 19 07 49.2 +1.5
KNB pmax pmax
comp=Z,26nm,0.8s
TMUT Trail Mountain 85.60 49 P P 19 07 48.6 +0.7
W13A Hualapai Mount 85.70 53 P P 19 07 49.1 +0.7
NB201 NORSAR Array S 85.71 339 P P 19 07 48.0 +0.3
NC204 NORSAR Array S 85.72 339 P P 19 07 46.8 -1.0
NB2 NORSAR Subarra 85.74 339 P P 19 07 46.8 -1.1
comp=Z,1.8nm,0.5s,baz=52,slow=5.3
NOA NORSAR Array B 85.74 339 P P 19 07 46.7 -1.2
comp=Z,4.9nm,0.8s,baz=46,slow=4.7,SNR=16
NOA LR LR 19 51 00.1
comp=Z,21nm,18.5s,baz=60,slow=39
comp=Z,4.9nm,0.8s
Q16A Castle Valley 85.81 49 P P 19 07 49.9 +1.0
PDMCI Parker Dam,Lak 85.88 54 P P 19 07 49.4 +0.4
baz=298
GLA Glamis 85.95 55 P P 19 07 49.9 +0.4
baz=297
RDMU Red Mountain 86.07 47 P P 19 07 50.5 +0.3
RDMU IAmb IAmb 19 07 51.7
comp=Z,13nm,0.8s
P18A Preston Nutter 86.09 48 P P 19 07 51.1 +0.7
P18A IAmb IAmb 19 07 52.5
comp=Z,11nm,0.6s
SRU San Rafael Swe 86.15 48 P P 19 07 51.0 +0.4
SRU San Rafael Swe 86.15 48 P P 19 07 51.0 +0.4
SRU pmax pmax
comp=Z,17nm,0.7s
U15A North Rim 86.22 51 P P 19 07 52.1 +1.1
U15A IAmb IAmb 19 07 52.9
comp=Z,11nm,0.8s
RAYN Ar Rayn 86.73 294 P P 19 07 54.5 +1.0
RAYN Ar Rayn 86.73 294 P P 19 07 54.5 +1.0
RAYN pmax pmax
comp=Z,5.0nm,0.8s
Y14A Wickenburg 86.88 54 P P 19 07 55.0 +0.9
Y14A IAmb IAmb 19 07 55.8
comp=Z,8.2nm,0.6s
O20A White River Ci 87.17 47 P P 19 07 55.6 +0.1
O20A IAmb IAmb 19 07 56.7
comp=Z,8.7nm,0.8s
O20A White River Ci 87.17 47 P P 19 07 55.9 +0.3
baz=301
WUAZ Wupatki 87.31 52 P P 19 07 57.2 +0.9
WUAZ IAmb IAmb 19 07 58.2
comp=Z,12nm,0.9s
WUAZ Wupatki 87.31 52 P P 19 07 57.3 +1.0
baz=299,SNR=8.3
PV23 Carpenter Ridg 87.50 48 P P 19 07 58.0 +0.7
SFJD Kangerlussuaq 87.57 5 LR LR 19 53 54.7
comp=Z,21nm,18.0s,baz=15,slow=40
PV13 Radium Mtn., P 87.78 49 P P 19 07 58.9 +0.3
PV13 IAmb IAmb 19 07 59.8
comp=Z,8.9nm,0.7s
214A Organ Pipe Nat 87.96 56 P P 19 08 00.3 +1.0
214A Organ Pipe Nat 87.96 56 P P 19 08 00.5 +1.2
baz=298
BRTR Keskin Array B 87.97 313 P P 19 07 58.8 -0.5
comp=Z,1.1nm,0.8s,baz=86,slow=5.4,SNR=2.6
BRTR LR LR 19 52 21.9
comp=Z,29nm,18.0s,baz=36,slow=39
comp=Z,1.1nm,0.8s
FRB Frobisher Bay 87.97 14 LR LR 19 55 26.2
comp=Z,15nm,18.2s,baz=265,slow=41
N23A Red Feather La 88.27 45 P P 19 08 02.0 +1.2
baz=302
TUC Tucson 89.30 54 P P 19 08 06.8 +1.1
TUC Tucson 89.30 54 P P 19 08 06.8 +1.1
TUC pmax pmax
comp=Z,3.0nm,0.8s
TUC Tucson 89.30 54 P P 19 08 06.2 +0.5
baz=300
S22A 4UR Ranch, Cre 89.34 48 P P 19 08 06.5 +0.4
baz=302
CRVS Cervenica-Dubn 89.81 326 *e*P **P 19 08 08.3 +0.7**
Q24A Divide 89.81 46 P P 19 08 09.0 +0.7
baz=303
AGMN Agassiz Nation 89.84 35 P P 19 08 08.4 +0.7
baz=309
SDCO Great Sand Dun 90.24 48 P P 19 08 10.9 +0.7
SDCO Great Sand Dun 90.24 48 P P 19 08 10.3 +0.1
baz=302
ANMO Albuquerque 91.07 50 LR LR 19 46 27.7
comp=Z,32nm,20.4s,baz=308,slow=34
ANMO Albuquerque 91.07 50 P P 19 08 15.0 +1.0
ANMO IAmb IAmb 19 08 15.9
comp=Z,7.5nm,0.8s
ANMO Albuquerque 91.07 50 *i* P **P 19 08 13.9 -0.1**
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 91.07 50 P P 19 08 15.7 +1.7
baz=302
ANMO Albuquerque 91.07 50 P P 19 08 14.9 +0.8
baz=302
LENM Lemitar 91.11 51 P P 19 08 15.4 +1.2
T25A Trinidad 91.29 48 P P 19 08 16.0 +0.9
baz=303
KRLC Kraliky 91.33 329 *e*P **P 19 08 16.6 +1.9**
KRLC Kraliky 91.33 329 *e*P **P 19 08 16.6 +1.9**
DPC Dobruska-Polom 91.36 329 *e*P **P 19 08 14.0 -0.8**
DPC Dobruska-Polom 91.36 329 *e*P **P 19 08 14.0 -0.8**
BNM Barren Site 91.37 51 P P 19 08 16.3 +0.8
121A Cookes Peak, D 91.38 53 P P 19 08 17.0 +1.5
121A IAmb IAmb 19 08 17.9
comp=Z,7.0nm,0.9s
121A Cookes Peak, D 91.38 53 P P 19 08 16.9 +1.4
baz=301
121A Cookes Peak, D 91.38 53 P P 19 08 16.4 +1.0
baz=301
VYHS Vyhne 91.40 327 *e*P **P 19 08 14.7 -0.3**
VRAC Vranov 91.94 328 LR LR 19 52 58.9
comp=Z,44nm,18.8s,baz=32,slow=38
EIL Elat 92.19 304 LR LR 19 56 13.7
comp=Z,18nm,18.2s,baz=64,slow=40
ECSD EROS Data Cent 92.29 39 P P 19 08 19.5 +0.3
ECSD IAmb IAmb 19 08 19.9
comp=Z,9.2nm,1.1s
ECSD EROS Data Cent 92.29 39 P P 19 08 19.3 +0.1
baz=308
ECSD EROS Data Cent 92.29 39 P P 19 08 19.3 +0.1
baz=308
CKRC Cesky Krumlov 93.36 329 *e*P **P 19 08 27.4 +3.3**
KHC Kasperske Hory 93.48 330 *e*P **P 19 08 23.7 -1.0**
KHC Kasperske Hory 93.48 330 *e*P **P 19 08 23.7 -1.0**
GERES GERESS Array B 93.63 329 P P 19 08 24.5 -1.0
comp=Z,0.5nm,0.7s,baz=67,slow=11,SNR=2.0
comp=Z,0.5nm,0.7s
LPIG La Paz 93.69 61 LR LR 19 44 43.7
comp=Z,57nm,18.9s,baz=256,slow=32
MSTX Muleshoe 94.15 50 P P 19 08 29.3 +1.1
MSTX IAmb IAmb 19 08 39.3
comp=Z,7.9nm,1.1s
ATD Arta Tunnel 94.30 285 LR LR 19 53 16.9
comp=Z,25nm,18.0s,baz=60,slow=37
AMTX Amarillo 94.39 48 P P 19 08 29.1 -0.1
baz=305
KSU1 Kansas State U 95.16 42 P P 19 08 32.4 -0.1
baz=308
TX31 Lajitas Ar. Si 96.07 54 P P 19 08 37.9 +0.9
TX32 Lajitas Array 96.07 54 P P 19 08 37.9 +0.9
TX32 IAmb IAmb 19 11 00.5
comp=Z,16nm,2.0s
TXAR Lajitas Array 96.07 54 P P 19 08 37.0 0.0
comp=Z,1.0nm,0.6s,baz=338,slow=3.0,SNR=15
TXAR LR LR 19 48 41.9
comp=Z,40nm,19.3s,baz=313,slow=33
comp=Z,1.0nm,0.6s
WMOK Wichita Mounta 96.41 47 P P 19 08 38.1 -0.3
baz=306
DAVOX Davos/Dischmat 96.89 330 LR LR 19 56 12.5
comp=Z,37nm,18.2s,baz=83,slow=38
TORD Torodi Ar. Bea 126.52 311 PKP **PKPdf 19 14 12.2 -0.7**
comp=Z,0.6nm,0.7s,baz=344,slow=2.0,SNR=3.2
VNA2 Neumayer--Watz 131.18 192 PKPdf **PKPdf 19 14 20.5 +0.4**
baz=118,slow=1.1
PLCA Paso Flores 147.96 127 PKPbc **PKPbc 19 14 54.5 +0.1**
comp=Z,4.3nm,0.6s,baz=245,slow=2.9,SNR=17
PLCA Paso Flores 147.96 127 PKPbc 19 14 55.2 +0.7
LPAZ La Paz 149.51 79 PKPbc **PKPbc 19 14 59.6 -0.2**
comp=Z,11nm,0.8s,baz=330,slow=3.5,SNR=4.3

NEIC ***13*** *19:07:29.3±1.3,24°.05S±0°.1×180°.0W±0°.1,h502km±7km, mb4.4/39,Error ellipse: s-maj=18.9km s-min=15.5km az=66.0*
IDC ***13*** *19:07:29.2±1.0,23°.95S×179°.99E,h509km±9km,mb3.6/15, mbtmp4.5/19,Error ellipse: s-maj=13.7km s-min=10.8km az=53.0*

ISC 13 19:07:30.5±0.4,24°.05S±0°.06×179°.91E±0°.08,h526km, n129,σ1$40/137,mb4.3/32,10C-7D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.53**	**160**	P		**P**		**19 09 01.8**	**-1.7**
	192nm,0.3s,baz=58,slow=18,SNR=5.1								
RAO				S		**S**		**19 10 16.8**	**-2.8**
	119nm,0.3s,baz=288,slow=20,SNR=2.3								
RAO	**Raoul Island**	**5.53**	**160**	P		**P**		**19 09 00.5**	**-3.0**
MSVF	**Nonsavu**	**6.52**	**344**	P		**P**		**19 09 11.8**	**-1.3**
	19nm,0.6s,baz=229,slow=19,SNR=34								
MSVF	**Nonsavu**	**6.52**	**344**	P		**P**		**19 09 10.3**	**-2.9**
MARNC	**Mare, Loyalty**	**11.25**	**281**	P		**P**		**19 10 00.9**	**-0.3**
OUENC	**Ouen Island, N**	**12.12**	**275**	P		**P**		**19 10 07.2**	**-3.1**
DZM	**Mont Dzumac**	**12.55**	**276**	P		**P**		**19 10 15.1**	**+0.2**
	3.1nm,0.6s,baz=110,slow=13,SNR=8.7								
MXZ	**Matakaoa Point**	**13.54**	**185**	P		**P**		**19 10 24.8**	**0.0**
URZ	**Urewera**	**14.36**	**189**	P		**P**		**19 10 32.3**	**-1.1**
	18nm,0.4s,baz=43,slow=1.7,SNR=18								
URZ				S		**S**		**19 13 01.9**	**-2.4**
	14nm,0.5s,baz=276,slow=22,SNR=19								
URZ	**Urewera**	**14.36**	**189**	P		**P**		**19 10 33.7**	**+0.2**
BKZ	**Black Stump Fm**	**15.34**	**190**	P		**P**		**19 10 43.3**	**-0.4**
BKZ				IAmb		IAmb		19 10 49.2	
	comp=Z,13nm,0.7s								
BKZ	**Black Stump Fm**	**15.34**	**190**	P		**S**		**19 13 19.9**	**-3.0**
KWHZ	**Kaweka Forest**	**15.61**	**190**	P		**S**		**19 13 26.1**	**-1.6**
MOVZ	**Moawhango**	**15.71**	**192**	P		**S**		**19 13 30.8**	**+1.3**
BHHZ	**Black Hill Sta**	**15.73**	**191**	P		**S**		**19 13 28.5**	**-1.4**
KAHZ	**Kahuranaki**	**15.90**	**189**	P		**S**		**19 13 33.8**	**+0.9**
PNHZ	**Pukenui**	**16.12**	**190**	P		**S**		**19 13 33.6**	**-3.0**
PXZ	**Pawanui**	**16.14**	**188**	P		**S**		**19 13 35.7**	**-1.1**
ANWZ	**Angora Road**	**16.61**	**189**	P		**S**		**19 13 45.3**	**+0.4**
BFZ	**Birch Farm**	**16.86**	**190**	P		**P**		**19 10 57.2**	**-1.6**
BFZ				IAmb		IAmb		19 10 58.1	
	comp=Z,9.6nm,0.7s								
BFZ	**Birch Farm**	**16.86**	**190**	P		**S**		**19 13 47.1**	**-2.0**
MRZ	**Mangataiinoka R**	**16.95**	**191**	P		**S**		**19 13 49.3**	**-1.3**
CPWZ	**Castlepoint**	**17.09**	**190**	P		**S**		**19 13 47.9**	**-5.0**
HOWZ	**Holdsworth Sta**	**17.20**	**191**	P		**S**		**19 13 51.9**	**-2.7**
QRZ	**Quartz Range**	**17.83**	**199**	P		**P**		**19 11 08.3**	**+0.5**
NNZ	**Nelson**	**17.97**	**196**	P		**P**		**19 11 09.1**	**+0.1**
TUWZ	**Tuamarina**	**18.03**	**195**	P		**P**		**19 11 09.1**	**-0.5**
THZ	**Tophouse**	**18.60**	**197**	P		**P**		**19 11 15.3**	**+0.5**
LTZ	**Lake Taylor**	**19.72**	**197**	P		**P**		**19 11 25.8**	**+0.8**
RPZ	**Rata Peaks**	**20.92**	**198**	P		**P**		**19 11 35.6**	**-0.3**
	comp=Z,4.4nm,0.5s,baz=35,slow=5.0,SNR=1.1								
	comp=Z,4.4nm,0.5s								
RPZ	**Rata Peaks**	**20.92**	**198**	P		**P**		**19 11 36.5**	**+0.6**
HNR	**Honiara**	**23.97**	**304**	P		**P**		**19 12 04.3**	**+0.8**
	comp=Z,374nm,0.3s,baz=177,slow=18,SNR=2.4								
CTA	**Charters Tower**	**31.39**	**271**	P		**P**		**19 13 09.1**	**+0.7**
	comp=Z,9.8nm,0.5s,baz=92,slow=10.0,SNR=34								
	comp=Z,9.8nm,0.5s								
CTAO	**Charters Tower**	**31.39**	**271**	P		**P**		**19 13 09.9**	**+1.5**
CTAO				IAmb		IAmb		19 13 10.7	
	comp=Z,11nm,0.6s								
TOO	**Toolangi**	**32.29**	**237**	P		**P**		**19 13 17.4**	**+1.5**
TOO				IAmb		IAmb		19 13 57.1	
	comp=Z,16nm,1.4s								
KRVT	**Keravat (AS076**	**33.27**	**302**	P		**P**		**19 13 23.4**	**-1.1**
	comp=Z,18nm,0.9s,baz=89,slow=3.2,SNR=4.0								
	comp=Z,18nm,0.9s								
PMG	**Port Moresby**	**34.46**	**289**	P		**P**		**19 13 34.6**	**+0.2**
	comp=Z,22nm,0.8s,baz=84,slow=5.2,SNR=8.3								
	comp=Z,22nm,0.8s								
PMG	**Port Moresby**	**34.46**	**289**	P		**P**		**19 13 35.3**	**+0.9**
STKA	**Stephens Creek**	**34.59**	**248**	P		**P**		**19 13 36.3**	**+1.0**
	comp=Z,1.9nm,1.1s,baz=93,slow=18,SNR=1.9								
	comp=Z,1.9nm,1.1s								
BBOO	**Buckleboo**	**39.31**	**247**	P		**P**		**19 14 14.6**	**+0.5**
BBOO				IAmb		IAmb		19 14 58.6	
	comp=Z,28nm,1.5s								
AS31	**Alice Springs**	**41.92**	**261**	P		**P**		**19 14 35.5**	**+0.4**
ASAR	**Alice Springs**	**41.93**	**261**	P		**P**		**19 14 35.4**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=97,slow=7.2,SNR=31								
ASAR				ScP		**ScP**		**19 19 21.6**	**+2.8**
	comp=Z,2.6nm,0.8s,baz=107,slow=4.4,SNR=14								
ASAR				S		**S**		**19 20 14.3**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=91,slow=16,SNR=4.8								
	comp=Z,0.8nm,0.4s								
ASAR	**Alice Springs**	**41.93**	**261**	P		**P**		**19 14 36.0**	**+0.9**
WB2	**Warramunga Arr**	**42.30**	**266**	P		**P**		**19 14 38.5**	**+0.4**
WB0	**Warramunga Arr**	**42.30**	**267**	P		**P**		**19 14 38.5**	**+0.3**
WB0				IAmb		IAmb		19 14 39.2	
	comp=Z,5.5nm,0.7s								
WRA	**Warramunga Arr**	**42.31**	**266**	P		**P**		**19 14 38.3**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=97,slow=8.3,SNR=42								
WRA				ScP		**ScP**		**19 19 23.3**	**+3.0**
	comp=Z,2.6nm,0.9s,baz=100,slow=3.8,SNR=12								
WRA				S		**S**		**19 20 16.9**	**-4.3**
	comp=Z,0.9nm,1.0s,baz=125,slow=18,SNR=6.1								

comp=Z,4.1nm,0.7s
WRA Warramunga Arr 42.31 266 P **P** **19 14 38.5 +0.3**
MTN Manton Dam 47.38 275 P **P** **19 15 17.0 -0.3**
MTN IAmb IAmb 19 15 45.4
comp=Z,15nm,1.3s
KNRA Kununurra 48.60 270 P **P** **19 15 27.1 +0.8**
KNRA IAmb IAmb 19 15 33.5
comp=Z,14nm,1.2s
SIJI Sorong 52.40 289 P **P** **19 15 54.4 +0.2**
comp=Z,9.6nm,0.6s,baz=88,slow=5.1,SNR=11
comp=Z,9.6nm,0.6s
SBA Scott Base 54.22 183 P **P** **19 16 08.5 +2.5**
VNDA Vanda 54.22 185 P **P** **19 16 06.7 +0.7**
comp=Z,0.6nm,0.7s,baz=4.6,slow=11,SNR=3.9
comp=Z,0.6nm,0.7s
VNDA Vanda 54.22 185 P **P** **19 16 08.1 +2.1**
MORW Morawa 56.74 250 P **P** **19 16 24.8 +0.4**
MORW IAmb IAmb 19 16 35.0
comp=Z,24nm,1.4s
CASY Casey 59.94 206 P **P** **19 16 45.8 +0.5**
QSPA South Pole Qui 66.03 180 P **P** **19 17 26.3 +1.6**
comp=Z,7.4nm,0.7s,baz=350,slow=0.3,SNR=24
comp=Z,7.4nm,0.7s
QSPA South Pole Qui 66.03 180 P **P** **19 17 26.4 +1.6**
QSPA IAmb IAmb 19 17 27.2
comp=Z,7.9nm,0.8s
TPUB Ta-pu 74.34 305 P **P** **19 18 14.8 +0.3**
SMAI San Martin Ant 75.99 159 P **P** **19 18 24.6 +1.6**
SMAI IAmb IAmb 19 18 25.4
comp=Z,9.3nm,0.9s
BELA Belgrano 2 76.29 173 P **P** **19 18 24.8 +0.3**
BELA IAmb IAmb 19 18 25.4
comp=Z,5.1nm,0.6s
MAW Mawson 77.58 200 P **P** **19 18 33.4 +1.7**
comp=Z,3.1nm,0.5s,baz=122,slow=5.7,SNR=13
comp=Z,3.1nm,0.5s
MAW Mawson 77.58 200 P **P** **19 18 33.6 +2.0**
PMSA Palmer Station 78.80 157 P **P** **19 18 38.8 +0.5**
RPV Rancho Palos V 82.11 48 P **P** **19 18 55.0 -1.0**
CHFC Chilao Flat St 82.71 47 P **P** **19 19 00.5 +1.2**
CHNC Chino 82.75 48 P **P** **19 18 58.7 -0.6**
ISA Isabella, Lake 83.19 46 P **P** **19 19 01.7 +0.2**
ISA IAmb IAmb 19 19 03.3
comp=Z,5.3nm,0.9s
CMB Columbia Colle 83.37 43 P **P** **19 19 02.6 +0.3**
CMB IAmb IAmb 19 19 03.9
comp=Z,5.7nm,1.0s
AFDM Forest Hills D 83.56 42 P **P** **19 19 03.8 +0.6**
TROLL Troll, Antarti 84.18 181 P **P** **19 19 06.2 +0.3**
SNAA Sanae 84.52 179 P **P** **19 19 06.9 -0.6**
SNAA Sanae 84.52 179 P **P** **19 19 07.4 -0.2**
VNA3 Neumayer Olymp 84.73 177 P **P** **19 19 07.8 -0.7**
NVAR Mina Array Bea 84.92 44 P **P** **19 19 10.5 +0.3**
comp=Z,1.1nm,0.7s,baz=225,slow=8.3,SNR=4.8
comp=Z,1.1nm,0.7s
VNA2 Neumayer--Watz 85.14 178 P **P** **19 19 10.5 0.0**
baz=182,slow=4.5
VNA1 Neumayer--Stat 85.38 177 P **P** **19 19 11.7 +0.1**
LCMT Little Creek M 87.44 47 P **P** **19 19 21.1 -1.0**
LCMT IAmb IAmb 19 19 25.5
comp=Z,11nm,1.0s
I07A Izee 87.56 39 P **P** **19 19 23.1 +0.6**
I07A IAmb IAmb 19 19 24.6
comp=Z,8.7nm,1.0s
J08A Circle Bar Ran 87.73 40 P **P** **19 19 24.3 +1.0**
J08A IAmb IAmb 19 19 25.2
comp=Z,13nm,1.3s
G08A Pilot Rock 88.60 38 P **P** **19 19 27.6 +0.4**
G08A IAmb IAmb 19 19 29.9
comp=Z,9.8nm,1.2s
SPUT South Promonto 90.26 44 P **P** **19 19 35.1 0.0**
SPUT IAmb IAmb 19 19 36.9
comp=Z,5.0nm,1.0s
HVU Hansel Valley 90.31 44 P **P** **19 19 35.7 +0.4**
HVU IAmb IAmb 19 19 37.0
comp=Z,3.2nm,0.7s
TX31 Lajitas Ar. Si 90.58 58 P **P** **19 19 37.5 +0.7**
TX32 Lajitas Array 90.58 58 P **P** **19 19 38.0 +1.1**
TX32 IAmb IAmb 19 19 38.5
comp=Z,3.3nm,0.9s
TXAR Lajitas Array 90.58 58 P **P** **19 19 37.5 +0.7**
comp=Z,2.2nm,0.7s,baz=214,slow=6.1,SNR=29
comp=Z,2.2nm,0.7s
ILAR Eielson Array 92.20 14 P **P** **19 19 43.1 -0.2**
comp=Z,0.5nm,0.2s,baz=229,slow=6.8,SNR=3.9
comp=Z,0.5nm,0.2s
PDAR Pinedale Array 92.86 44 P **P** **19 19 47.1 0.0**
comp=Z,0.7nm,0.7s,baz=222,slow=2.0,SNR=4.1
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 112.19 313 PKiKP **PKiKP** **19 25 05.7 -0.5**
comp=Z,0.7nm,0.7s,baz=121,slow=0.3,SNR=4.6
GEYT Alibeck 128.97 300 PKP **PKPdf** **19 25 38.4 -0.2**
comp=Z,0.8nm,0.5s,baz=32,slow=3.8,SNR=3.1
ARCES ARCESS Array B 132.02 348 PKP **PKPdf** **19 25 42.7 -0.7**
comp=Z,1.3nm,0.6s,baz=48,slow=1.8,SNR=8.3
FINES FINESS Array B 138.56 341 PKhKP PKPpre 19 25 50.8
comp=Z,1.1nm,0.8s,baz=46,slow=6.0,SNR=4.2
FINES PKP **PKPdf** **19 25 56.6 +1.0**
comp=Z,1.0nm,0.6s,baz=40,slow=2.4,SNR=5.3
FINES SKPbc **SKPbc** **19 28 41.2 +0.4**
comp=Z,1.1nm,0.8s,baz=352,slow=3.1,SNR=3.8
NB2 NORSAR Subarra 142.22 351 PKP **PKPdf** **19 25 58.3 -4.1**
comp=Z,0.7nm,0.7s,baz=12,slow=3.1
NOA NORSAR Array B 142.22 351 PKP **PKPdf** **19 25 60.0 -2.4**
comp=Z,0.9nm,0.7s,baz=16,slow=4.9,SNR=4.8
PABE Paberze 143.92 337 PKPbc 19 26 04.9 +0.3
AKASG Malin Array Be 145.05 327 PKPbc **PKPdf** **19 26 07.3 -0.3**
comp=Z,3.5nm,0.6s,baz=43,slow=4.1,SNR=17
AKASG SKPbc **SKPbc** **19 28 58.0 +0.7**
comp=Z,1.6nm,0.7s,baz=44,slow=2.7,SNR=5.0
BNN Bunyan 146.22 304 **PKPbc** **19 26 12.0 -0.3**
BRTR Keskin Array B 147.60 307 PKPbc **PKPbc** **19 26 15.5 -0.4**
comp=Z,1.1nm,0.6s,baz=143,slow=5.3,SNR=7.5
GHRR 148.82 322 ⇑P **PKiKP** **19 26 19.9 +0.3**
CFR Carcaliu 148.89 320 ⇑P **PKPbc** **19 26 18.4 -0.3**
TPGR Topolog 148.90 319 ⇑P **PKPbc** **19 26 19.1 +0.3**
BIZ Bicaz 149.01 324 ⇓P **PKiKP** **19 26 20.1 +0.2**
BURAR Bucovina Array 149.05 326 ⇓P **PKPbc** **19 26 19.5 +0.2**
BURAR Bucovina Array 149.05 326 **PKiKP** **19 26 20.6 +0.5**
OJC Ojcow 149.64 334 **PKPdf** **19 26 18.1 +2.9**
OZUR 149.70 323 ⇑P **PKPdf** **19 26 11.4 -4.0**
BORA Eskisehir 149.85 309 **PKPbc** **19 26 21.5 +0.1**
DOPR Dopca 150.00 323 ⇓P **PKiKP** **19 26 22.7 +0.7**
TRPA Tarpa 150.02 329 ⇑P **PKPbc** **19 26 21.9 +0.6**
VOIR 150.51 323 ⇓P **PKiKP** **19 26 23.8 +0.6**
OSTC Ostas 150.67 339 *e*PKP **PKPbc** **19 26 22.8 0.0**
CHVC Chvalec 150.69 339 *e*PKP **PKPbc** **19 26 23.2 +0.3**
UPC Upice 150.78 339 *e*PKP **PKPbc** **19 26 23.3 +0.2**
DPC Dobruska-Polom 150.81 338 *e*PKP **PKPbc** **19 26 23.6 +0.4**
DRGR 150.87 327 ⇑P **PKPbc** **19 26 22.4 -1.1**
KRLC Kraliky 150.88 337 *e*PKP **PKPbc** **19 26 23.7 +0.3**
CLL Collm 150.98 343 **PKPbc** **19 26 23.6 +0.2**
MAUC Maruska 151.09 335 *e*PKP **PKPbc** **19 26 24.4 +0.6**
HUMR Humele 151.10 321 ⇑P **PKPbc** **19 26 23.9 -0.1**
LOT Lotru 151.21 324 ⇓P **PKPbc** **19 26 24.2 -0.2**
SIRR Siria 151.76 327 ⇑P **PKiKP** **19 26 26.1 +0.4**
GZR Gura Zlata 151.78 325 ⇓P **PKPbc** **19 26 24.4 -1.1**
BZS Buzias 152.23 326 ⇑P **PKPbc** **19 26 26.7 +0.3**
KHC Kasperske Hory 152.76 340 *e*PKP **PKiKP** **19 26 28.2 +0.5**
CKRC Cesky Krumlov 152.80 339 *e*PKP **PKiKP** **19 26 28.2 +0.5**
GERES GERESS Array B 152.97 340 PKPbc **PKPbc** **19 26 26.5 -1.6**
comp=Z,0.9nm,0.7s,baz=343,slow=4.2,SNR=5.4
BLKB Belogradchik 152.97 322 ⇓P **PKPbc** **19 26 28.6 +0.4**
MORH Mrgy, Hungar 153.23 330 ⇑P **PKPbc** **19 26 28.7 +0.1**
ESDC Sonseca Array 164.09 11 PKPab **PKPab** **19 27 29.1 -1.4**
comp=Z,0.5nm,0.4s,baz=277,slow=10,SNR=3.6
TORD Torodi Ar. Bea 169.02 189 PKP **PKPdf** **19 26 37.0 -0.9**
comp=Z,1.9nm,1.1s,baz=201,slow=1.4,SNR=5.3
TORD PKPab **PKPab** **19 27 52.6 -0.2**
comp=Z,1.3nm,0.7s,baz=175,slow=3.3,SNR=7.0

IDC 13 19:20:23.2±49.0, 16°.23S×177°.30W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=906.0km s-min=168.1km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.38**	**240**	P	P	19 28 03.0	0.0
	2.2nm,0.8s,baz=74,slow=7.4,SNR=3.8						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**46.00**	**258**	P	P	19 28 48.7	0.0
	0.1nm,0.3s,baz=92,slow=7.9,SNR=7.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**46.28**	**253**	P	P	19 28 50.6	-0.3
	2.6nm,0.6s,baz=89,slow=8.0,SNR=46						
	2.6nm,0.6s						

NIED ***13*** *19:49:22.7, 38°.34N×142°.14E, h38km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr-0.07; Mθθ0.22; Mφφ-0.15; Mrθ0.40; Mθφ-0.04; Mφr2.10; Fault plane solution: M0.2.13000×10^14^ NP1: φs139.00000°, δ1.00000°, λ38.00000°. NP2:φs11.00000°, δ89.00000°, λ91.00000°.*

JMA 13 19:49:22.7±0.1, 38°.3N±0°.4×142°.1E±0°.8, h38km±1km, MV3.5/40, 21D, E OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.53**	**268**	⇓P	Pn	19 49 33.7	-0.2
JIKH				⇓S	Sn	19 49 41.1	-0.6
JIO	**Ouri**	**0.64**	**281**	⇓P	Pn	19 49 35.3	0.0
JIO				⇓S	Sn	19 49 43.9	-0.3
JKMT	**Kesennumamotoy**	**0.71**	**312**	⇓P	Pn	19 49 36.4	+0.2
JKMT				⇓S	Sn	19 49 45.9	0.0
OFUJ	**Ofunato**	**0.83**	**334**	⇓*i*P	Pn	19 49 38.0	+0.1
OFUJ				⇓S	Sn	19 49 48.7	-0.3
JMK	**Ichinoseki**	**0.95**	**311**	⇓*i*P	Pn	19 49 39.9	+0.4
JMK				⇓S	Sn	19 49 51.9	0.0
JMM	**Marumori**	**1.16**	**247**	⇓*i*P	Pn	19 49 42.3	-0.2
JMM				⇓*e*S	Sn	19 49 57.1	0.0
JOU	**Okura**	**1.16**	**272**	⇓*i*P	Pn	19 49 43.2	+0.7
JOU				⇓S	Sn	19 49 58.0	+0.8
JOM	**Ohasama**	**1.32**	**330**	⇓*i*P	Pn	19 49 45.4	+0.8
JOM				⇓S	Sn	19 50 02.2	+1.3
JFK	**Kawauchi**	**1.40**	**227**	⇓*i*P	Pn	19 49 45.0	-0.6
JFK				⇓S	Sn	19 50 01.2	-1.7
JYK	**Kaneyama**	**1.52**	**293**	⇓P	Pn	19 49 48.3	+1.0
JRG	**Rokugo**	**1.59**	**312**	P	Pn	19 49 49.5	+1.2
JOTO	**OTAMA OYAMA**	**1.63**	**242**	*i* P	Pn	19 49 49.6	+0.8
JOTO				S	Sn	19 50 09.7	+1.1
JYS	**Shirataka**	**1.64**	**267**	⇓*i*P	Pn	19 49 49.8	+0.8
JYS				⇓*e*S	Sn	19 50 10.3	+1.4

SJA ***13*** *20:13:38.4±0.8, 31°.22S×69°.10W, h130km±2km, ML4.2, MW4.0*
VAO ***13*** *20:13:39.0±0.3, 31°.35S×69°.01W, h99km, mb4.2*
NEIC ***13*** *20:13:40.3±1.8, 31°.24S±0°.05×69°.14W±0°.08, h113km±7km, mb4.3/5, Md4.3(SJA), Error ellipse: s-maj=10.5km s-min=7.3km az=72.0*
IDC ***13*** *20:13:40.2±0.8, 31°.42S×69°.12W, h115km±6km, mb3.7/4, mbtmp4.2/6, Error ellipse: s-maj=30.9km s-min=21.6km az=89.0*

ISC 13 20:13:39.5±0.5, 31°.19S±0°.03×69°.10W±0°.03, h119km±5km, n128, σ1§95/188, mb4.1/5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.51**	**134**	Pn	Pn	**20 13 57.8**	**+0.3**
ZON				Sn	**Sn**	**20 14 10.0**	**-1.1**
RTLL	**Cerro Villicun**	**0.56**	**105**	*e*P	Pn	20 13 52.4	-5.4
RTLL				*e*P	**Pn**	**20 13 58.3**	**+0.5**
RTLL				*e*S	**Sn**	**20 14 13.1**	**+1.5**
ACCO	**Cerro Coronel**	**0.60**	**3**	*e*P	**Pn**	**20 13 59.0**	**+0.5**
ACCO				*e*P	**Pn**	**20 13 59.6**	**+1.2**
RTLS	**Leoncito**	**0.63**	**195**	*e*P	**Pn**	**20 13 59.0**	**+0.4**
RTLS				IAML		20 14 15.6	
comp=Z,3μm,0.3s							
RTCV	**Cerro Valdivia**	**0.83**	**144**	*e*P	**Pn**	**20 14 00.0**	**+0.1**
RTCV				*e*S	**Sn**	**20 14 16.2**	**+0.9**
ACDV	**Cuesta del Vie**	**1.01**	**359**	*e*P	**Pn**	**20 14 03.0**	**+1.2**
ACDV				*e*S	**Sn**	**20 14 20.8**	**+2.1**
ACDV				IAML		20 14 21.6	
comp=Z,4μm,0.4s							
CO03	**El Pedregal**	**1.41**	**284**		**Pn**	**20 14 07.0**	**+1.1**
CO03				Sn	**Sn**	**20 14 26.5**	**+0.6**
CO03	**El Pedregal**	**1.41**	**284**	*e*P	**Pn**	**20 14 07.0**	**+1.1**
CO03				*e*S	**Sn**	**20 14 27.6**	**+1.7**
CO03				IAML		20 14 28.2	
comp=Z,4μm,0.5s							
ASAL	**Salagasta**	**1.42**	**171**	*e*P	**Pn**	**20 14 06.9**	**+0.9**
ASAL				*e*P	**Pn**	**20 14 07.0**	**+0.9**
ASAL				*e*S	**Sn**	**20 14 29.2**	**+3.1**
CO01	**Juntas del Tor**	**1.48**	**325**		**Pn**	**20 14 09.3**	**+2.3**
CO01				Sn	**Sn**	**20 14 30.1**	**+2.4**
CO01	**Juntas del Tor**	**1.48**	**325**	*e*P	**Pn**	**20 14 03.9**	**-3.0**
CO01				*e*P	**Pn**	**20 14 07.0**	**0.0**
CO01				*e*S	**Sn**	**20 14 30.8**	**+3.1**
CO01				IAML		20 14 33.0	
comp=Z,1μm,0.5s							
CO02	**Combarbal**	**1.62**	**269**		**Pn**	**20 14 09.1**	**+0.6**
CO02				Sn	**Sn**	**20 14 31.4**	**+0.9**
CO02	**Combarbal**	**1.62**	**269**	*e*P	**Pn**	**20 14 09.0**	**+0.6**
CO02				*e*S	**Sn**	**20 14 31.7**	**+1.2**
CO02				IAML		20 14 33.0	
comp=Z,2μm,0.1s							
ARCO	**CERRO ARCO**	**1.65**	**175**	*e*P	**Pn**	**20 14 09.8**	**+0.9**
ARCO				*e*S	**Sn**	**20 14 33.5**	**+2.2**
ARCO				IAML		20 14 33.7	
comp=Z,2μm,0.4s							
GO04	**Tololo Observa**	**1.78**	**304**		**Pn**	**20 14 11.3**	**+0.8**
GO04				Sn	**Sn**	**20 14 33.9**	**-0.1**
GO04	**Tololo Observa**	**1.78**	**304**	*e*P	**Pn**	**20 14 11.2**	**+0.8**
GO04				*e*S	**Sn**	**20 14 35.4**	**+1.4**
AAGR	**Agrelo**	**1.91**	**173**	*e*P	**Pn**	**20 14 12.0**	**+0.1**
AAGR				*e*S	**Sn**	**20 14 38.0**	**+1.4**
VA03	**San Esteban**	**1.99**	**218**		**Pn**	**20 14 13.7**	**+0.7**
VA03	**San Esteban**	**1.99**	**218**	*e*P	**Pn**	**20 14 12.6**	**-0.4**
VA03				*e*S	**Sn**	**20 14 40.6**	**+2.1**
VA03				IAML		20 14 42.5	
comp=Z,1μm,0.2s							
CO05	**La Serena**	**2.23**	**304**		**Pn**	**20 14 16.3**	**+0.4**
CO05				Sn	**Sn**	**20 14 41.8**	**-1.9**
CO06	**Fray Jorge**	**2.23**	**283**		**Pn**	**20 14 15.3**	**-0.6**
VA06	**Catapilco**	**2.31**	**233**	Pn	**Pn**	**20 14 16.1**	**-0.8**
APLL	**PUNTA DE LOS L**	**2.35**	**71**	*e*P	**Pn**	**20 14 18.0**	**+0.5**
APLL				*e*S	**Sn**	**20 14 47.2**	**+0.7**
PEL	**Peldehue**	**2.37**	**214**	*e*P	**Pn**	**20 14 17.8**	**+0.2**
PEL				*e*P	**Pn**	**20 14 18.0**	**+0.4**
PEL				*e*S	**Sn**	**20 14 47.7**	**+0.9**
ROC1	**El Roble**	**2.41**	**222**		**Pn**	**20 14 18.1**	**-0.2**
ROC1				Sn	**Sn**	**20 14 47.2**	**-1.0**
ROC1	**El Roble**	**2.41**	**222**	*e*P	**Pn**	**20 14 18.0**	**-0.4**
ROC1				*e*P	**Pn**	**20 14 18.2**	**-0.2**
ROC1				*e*S	**Sn**	**20 14 48.4**	**+0.2**
AC05	**El Transito**	**2.56**	**336**	Pn	**Pn**	**20 14 22.2**	**+2.0**
AC05	**El Transito**	**2.56**	**336**	*e*P	**Pn**	**20 14 20.9**	**+0.8**
AC05				*e*S	**Sn**	**20 14 54.1**	**+2.8**
AC05				IAML		20 14 54.3	
comp=Z,1μm,0.3s							
ACLC	**CERRO LA CRUZ**	**2.56**	**47**	*e*P	**Pn**	**20 14 20.9**	**+0.7**
ACLC				*e*S	**Sn**	**20 14 52.8**	**+1.3**
ACLC				IAML		20 14 56.3	
comp=Z,770nm,0.3s							
VCA	**Vinchina**	**2.57**	**18**	*e*P	**Pn**	**20 14 21.4**	**+1.1**
VCA				*e*S	**Sn**	**20 14 54.9**	**+3.3**
VCA				*e*S	**Sn**	**20 14 55.1**	**+3.5**
VCA				IAML		20 15 00.2	
comp=Z,954nm,0.8s							
LCO	**Las Campanas**	**2.57**	**327**	Pn	**Pn**	**20 14 21.2**	**+0.7**
LCO				Sn	**Sn**	**20 14 52.0**	**0.0**
LCO	**Las Campanas**	**2.57**	**327**	*e*P	**Pn**	**20 14 21.0**	**+0.5**
MT03	**Universidad Ad**	**2.59**	**207**		**Pn**	**20 14 21.3**	**+0.8**
MT03	**Universidad Ad**	**2.59**	**207**	*e*P	**Pn**	**20 14 21.0**	**+0.5**
MT03				*e*S	**Sn**	**20 14 54.3**	**+2.3**
MT03				*e*S	**Sn**	**20 14 55.1**	**+3.1**
MT03				IAML		20 14 55.7	
comp=Z,2μm,0.2s							
MT05	**Renca**	**2.60**	**212**	Pn	**Pn**	**20 14 21.1**	**+0.5**
MT05	**Renca**	**2.60**	**212**	*e*P	**Pn**	**20 14 21.0**	**-0.5**
MT05				*e*P	**Pn**	**20 14 21.3**	**+0.7**
MT05				*e*S	**Sn**	**20 14 53.4**	**+1.2**
MT05				IAML		20 14 55.2	
comp=Z,1μm,0.6s							
MT02	**Curacav**	**2.69**	**219**	Pn	**Pn**	**20 14 21.1**	**-0.7**
MT02	**Curacav**	**2.69**	**219**	*e*P	**Pn**	**20 14 21.0**	**-0.7**
MT02				*e*P	**Pn**	**20 14 21.3**	**-0.4**
MT02				*e*S	**Sn**	**20 14 47.9**	**-6.3**
MT02				*e*S	**Sn**	**20 14 53.5**	**-0.7**
MT02				IAML		20 15 00.2	
comp=Z,423nm,0.4s							
LMEL	**Las Melosas**	**2.81**	**199**		**Pn**	**20 14 24.1**	**+0.7**
VA01	**Torpederas**	**2.83**	**229**		**Pn**	**20 14 22.3**	**-1.2**
VA01	**Torpederas**	**2.83**	**229**	*e*P	**Pn**	**20 14 23.0**	**-0.5**
VA01				*e*S	Sn	20 14 47.9	-9.5
VA01				*e*S	**Sn**	**20 14 56.6**	**-0.7**
MT09	**Talagante**	**3.03**	**211**	Pn	**Pn**	**20 14 25.6**	**-0.7**
BO04	**La Punta**	**3.07**	**204**		**Pn**	**20 14 26.8**	**+0.1**
MRA	**San Martin**	**3.13**	**114**	*e*P	Pn	20 14 09.0	-19
MRA				*e*P	**Pn**	**20 14 28.0**	**+0.4**
MRA				*e*S	Sn	20 14 52.4	-12
MRA				*e*S	**Sn**	**20 14 58.9**	**-5.9**
MRA				*e*S	**Sn**	**20 15 03.9**	**-0.9**
MRA				IAML		20 15 39.5	
comp=Z,772nm,0.5s							
MT01	**Popeta**	**3.23**	**214**		**Pn**	**20 14 27.3**	**-1.4**
MT01	**Popeta**	**3.23**	**214**	*e*P	**Pn**	**20 14 27.6**	**-1.1**
MT01				*e*P	**Pn**	**20 14 28.4**	**-0.4**
MT01				*e*S	**Sn**	**20 15 05.6**	**-1.2**
MT01				IAML		20 15 08.4	
comp=Z,388nm,0.2s							
VA05	**Santo Domingo**	**3.25**	**220**		**Pn**	**20 14 27.6**	**-1.5**
AC04	**Llanos de Chal**	**3.43**	**330**	Pn	**Pn**	**20 14 31.9**	**+0.3**
AC04	**Llanos de Chal**	**3.43**	**330**	*e*P	**Pn**	**20 14 32.1**	**+0.6**
AC04				*e*S	Sn	20 14 58.9	-13
AC04				IAML		20 15 17.4	
comp=Z,287nm,0.7s							
BO01	**Tunca**	**3.60**	**207**	Pn	**Pn**	**20 14 32.5**	**-1.3**
BO01	**Tunca**	**3.60**	**207**	*e*P	**Pn**	**20 14 33.5**	**-0.3**
BO01				*e*S	**Sn**	**20 15 14.2**	**-1.5**
BO01				IAML		20 15 15.6	
comp=Z,280nm,0.3s							
RFA	**San Rafael**	**3.61**	**172**	*e*P	**Pn**	**20 14 33.5**	**-0.5**
RFA				*e*P	**Pn**	**20 14 33.6**	**-0.3**
RFA				*e*S	**Sn**	**20 15 14.8**	**-1.2**
RFA				IAML		20 15 16.2	
comp=Z,284nm,0.4s							
BO02	**Sierra Bellavi**	**3.86**	**201**		**Pn**	**20 14 36.8**	**-0.4**
BO02	**Sierra Bellavi**	**3.86**	**201**	*e*P	**Pn**	**20 14 37.1**	**-0.1**
BO02				*e*S	**Sn**	**20 15 22.1**	**+0.2**
BO02				IAML		20 15 27.3	
comp=Z,622nm,0.1s							
TCA	**Tanti**	**3.86**	**93**	*e*P	**Pn**	**20 14 37.6**	**+0.3**
TCA				*e*S	**Sn**	**20 15 21.0**	**-1.0**
TCA				*e*S	**Sn**	**20 15 21.1**	**-1.0**
TCA				IAML		20 15 22.4	
comp=Z,189nm,0.7s							
CYA	**Choya**	**3.97**	**47**	*e*P	**Pn**	**20 14 38.0**	**-0.7**
CYA				*e*P	**Pn**	**20 14 38.9**	**+0.3**
CYA				*e*S	**Sn**	**20 15 23.8**	**-0.7**
CYA				IAML		20 15 25.3	
comp=Z,162nm,0.7s							
AC06	**Mina Casimiro**	**3.97**	**344**	Pn	**Pn**	**20 14 39.3**	**+0.6**
AC02	**Maricunga**	**4.34**	**360**	Pn	**Pn**	**20 14 45.8**	**+1.7**
GO05	**Huala**	**4.49**	**211**		**Pn**	**20 14 43.1**	**-2.5**
EDS3	**Malargue**	**4.58**	**183**	*e*P	**Pn**	**20 14 47.0**	**+0.1**
EDS3				*e*S	**Sn**	**20 15 47.9**	**+8.7**
ML02	**Panimavida**	**4.95**	**202**	Pn	**Pn**	**20 14 49.5**	**-2.3**
AC01	**Pan de Azucar**	**5.19**	**345**	Pn	**Pn**	**20 14 54.9**	**-0.2**
AC01	**Pan de Azucar**	**5.19**	**345**	*e*P	**Pn**	**20 14 54.9**	**-0.2**
AC01				*e*P	**Pn**	**20 14 55.1**	**0.0**
AC01				*e*S	**Sn**	**20 15 52.4**	**-1.5**
AC01				IAML		20 16 05.5	
comp=Z,105nm,0.8s							
GO02	**Mina Guanaco**	**6.02**	**356**	Pn	**Pn**	**20 15 06.4**	**-0.2**
BI05	**Punta Hualpn**	**6.50**	**210**	Pn	**Pn**	**20 15 08.1**	**-4.6**
PB14	**IPOC Station P**	**6.64**	**350**		**Pn**	**20 15 13.0**	**-1.9**
PB10	**IPOC Station P**	**7.75**	**350**	Pn	**Pn**	**20 15 27.6**	**-2.2**
PB15	**IPOC Station P**	**7.96**	**358**	Pn	**Pn**	**20 15 31.1**	**-1.6**
PB06	**IPOC Station P**	**8.46**	**357**	Pn	**Pn**	**20 15 38.6**	**-0.8**
LVC	**Limon Verde**	**8.55**	**1**	P	**Pn**	**20 15 38.9**	**-1.8**
comp=Z,11nm,0.3s,baz=156,slow=11,SNR=25							
LVC				S	**Sn**	**20 17 11.6**	**-4.1**
comp=Z,5.0nm,0.4s,baz=184,slow=21,SNR=1.5							
GO06	**Curarrehue**	**8.60**	**192**	Pn	**Pn**	**20 15 37.8**	**-3.3**
PB04	**IPOC Station P**	**8.87**	**354**	Pn	**Pn**	**20 15 41.0**	**-4.0**
TRQA	**Tornquist**	**9.02**	**141**	Pn	**Pn**	**20 15 46.0**	**-0.8**
PB03	**IPOC Station P**	**9.12**	**356**	Pn	**Pn**	**20 15 45.1**	**-3.3**
PB09	**IPOC Station P**	**9.36**	**359**		**Pn**	**20 15 49.8**	**-1.8**
LR04	**Corral**	**9.36**	**201**	Pn	**Pn**	**20 15 46.5**	**-4.7**
PB07	**IPOC Station P**	**9.45**	**356**	Pn	**Pn**	**20 15 49.5**	**-3.4**
PLCA	**Paso Flores**	**9.60**	**187**	P	**Pn**	**20 15 52.1**	**-2.5**
comp=Z,1.9nm,0.4s,baz=355,slow=11,SNR=18							
PLCA	**Paso Flores**	**9.60**	**187**	Pn	**Pn**	**20 15 51.9**	**-2.6**
PLCA	**Paso Flores**	**9.60**	**187**	*e*P	**Pn**	**20 15 52.8**	**-1.7**
PB02	**IPOC Station P**	**9.86**	**356**		**Pn**	**20 15 54.4**	**-3.8**
PB01	**IPOC Station P**	**10.11**	**358**		**Pn**	**20 15 58.2**	**-3.4**
ITQB	**Itaqui**	**10.88**	**85**		**Pn**	**20 16 11.7**	**-0.1**
ITQB	**Itaqui**	**10.88**	**85**	*e*P	**Pn**	**20 16 10.5**	**-1.4**
PB08	**IPOC Station P**	**11.00**	**360**	Pn	**Pn**	**20 16 10.4**	**-3.5**
CPUP	**Villa Florida**	**11.41**	**68**	P	**Pn**	**20 16 17.0**	**-1.9**
comp=Z,2.6nm,0.7s,baz=247,slow=12,SNR=5.3							
CPUP				S	**Sn**	**20 18 16.7**	**-7.8**
comp=Z,2.6nm,0.5s,baz=194,slow=17,SNR=1.7							
GO01	**Chusmiza**	**11.47**	**360**		**Pn**	**20 16 19.1**	**-1.2**
AZCA	**Azaras, Argent**	**11.83**	**78**	*e*P	**Pn**	**20 16 23.0**	**-1.5**
RODS	**Rosario do Sul**	**11.99**	**90**	*e*P	**Pn**	**20 16 24.3**	**-2.4**
UNIS	**Unistalda (Bra**	**12.33**	**84**	*e*P	**Pn**	**20 16 29.7**	**-1.4**
PB12	**IPOC Station P**	**12.57**	**355**		**Pn**	**20 16 31.7**	**-2.7**
PB16	**IPOC Station P**	**12.80**	**358**	Pn	**Pn**	**20 16 36.9**	**-1.0**
PLTB	**Pedras Altas**	**13.24**	**97**	Pn	**Pn

MOS ***13*** *20:18:41.6±1.2,4″.25N×126″.31E,h66km,mb5.1/32, MS4.0/7,Error ellipse: s-maj=10.6km s-min=5.0km az=104.6*

GCMT ***13*** *20:18:44.6±0.3,4″.38N±0″.02×126″.27E±0″.03,h88km±3km, MW5.1/56,Moment Tensor Solution. s46,c52; s56,c65; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.99±.19; Mθθ2.81±.19; Mφφ-3.80±.23; Mrθ-0.91±.19; Mθφ4.31±.20; Mφr0.09±.24; Best double couple: M0=5.52300×10^16 NP1:φs289.00000°,δ85.00000°,λ11.00000°. NP2: φs198.00000°,δ80.00000°,λ175.00000°. Principal axes: T 5.0850, Plg11.0000°, Azm154.0000°; N 0.8720, Plg78.0000°, Azm314.0000°; P -5.9600, Plg4.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***13*** *20:18:44.6±1.6,4″.29N±0″.06×126″.38E±0″.09,h74km±6km, mb5.0/93 Error ellipse: s-maj=14.0km s-min=8.9km az=74.0*

IDC ***13*** *20:18:44.0±1.7,4″.29N×126″.29E,h67km±15km,mb4.4/26, mbtmp4.7/27,MS3.7/25,Error ellipse: s-maj=18.0km s-min=8.7km az=77.0*

BJI ***13*** *20:18:44.0±0.0,4″.41N×126″.48E,h72km,mb4.7/54, mB4.9/39,Ms4.4/32,Ms7 4.1/34*

DJA ***13*** *20:18:45.8±0.2,4″N±2″×12″6E±″,h47km±4km,M5.1/36, mb5.4/36,mB5.5/30,MLv5.5/17,Mw(mB)5.0/30, MwMwp4.5/7,Mwp4.9/7*

ISC 13 20:18:44.5±0.3,4°21N±0°03×126°30E±0°04,h76km±2km, h76km:pP-P,n530,σ1§94/559,mb4.9/124,29C-17D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.93**	**236**	P	**Pn**	**20 19 02.7**	**+0.2**
SGSI				S	**Sn**	**20 19 16.4**	**+0.5**
DDMP	**Don Marcelino,**	**1.97**	**343**	⇑*e*P	**Pn**	**20 19 14.9**	**-1.0**
DDMP				*e*S	**Sn**	**20 19 38.2**	**-1.6**
GSPH	**General Santos**	**2.30**	**324**	⇑*i*P	**Pn**	**20 19 20.6**	**+0.1**
GSPH				*i*S	**Sn**	**20 19 50.2**	**+2.3**
MATI	**Mati**	**2.72**	**359**	⇓*e*P	**Pn**	**20 19 24.7**	**-1.2**
MATI				*e*S	**Sn**	**20 20 01.3**	**+3.5**
GAMI	**Galela, Maluku**	**2.79**	**148**	P	**Pn**	**20 19 24.9**	**-2.0**
GAMI				S	**Sn**	**20 19 57.0**	**-2.5**
SKMP	**Bagumbayan, Su**	**2.89**	**323**	⇓*e*P	**Pn**	**20 19 29.8**	**+1.6**
SKMP				*e*S	**Sn**	**20 20 04.1**	**+2.2**
DAV	**Davao City (W)**	**2.93**	**346**	P	**Pn**	**20 19 29.2**	**+0.4**
	277nm,0.3s,baz=118,slow=4.6,SNR=27						
DAV				S	**Sn**	**20 19 56.4**	**-6.7**
	2μm,0.8s,baz=288,slow=19,SNR=7.0						
DAV	**Davao City (W)**	**2.93**	**346**	P	**Pn**	**20 19 28.8**	**-0.1**
DAV				S	**Sn**	**20 20 09.1**	**+6.1**
DAV	**Davao City (W)**	**2.93**	**346**	P	**Pn**	**20 19 30.5**	**+1.6**
KCP	**Kidapawan**	**3.03**	**337**	⇓*i*P	**Pn**	**20 19 31.0**	**+0.8**
KCP				*i*S	**Sn**	**20 20 08.5**	**+3.0**
TNTI	**Ternate**	**3.58**	**163**	Pn	**Pn**	**20 19 37.0**	**-0.6**
TNTI	**Ternate**	**3.58**	**163**	P	**Pn**	**20 19 36.8**	**-0.8**
TNTI	**Ternate**	**3.58**	**163**	P	**Pn**	**20 19 37.4**	**-0.2**
CTBH	**Cotabato--PC H**	**3.62**	**326**	⇓*i*P	**Pn**	**20 19 39.5**	**+1.2**
CTBH				*i*S	**Sn**	**20 20 22.5**	**+2.6**
BUKP	**Musuan**	**3.85**	**341**	⇑*e*P	**Pn**	**20 19 42.9**	**+1.5**
BUKP				*e*S	**Sn**	**20 20 27.4**	**+2.0**
BIPH	**Bislig**	**3.95**	**1**	⇑*i*P	**Pn**	**20 19 42.7**	**0.0**
BIPH				*i*S	**Sn**	**20 20 33.4**	**+5.5**
KMSI	**Cibinong**	**4.29**	**213**	P	**Pn**	**20 19 48.1**	**+0.8**
KMSI				S	**Sn**	**20 20 35.1**	**-1.1**
CGP	**Cagayan de Oro**	**4.51**	**339**	⇓*i*P	**Pn**	**20 19 53.0**	**+2.7**
CGP				*i*S	Sn	20 20 51.7	+10
PAGZ	**Pagadian**	**4.64**	**321**	⇓*e*P	**Pn**	**20 19 52.8**	**+0.7**
PAGZ				*e*S	**Sn**	**20 20 47.3**	**+2.7**
BUTP	**Butuan**	**4.78**	**352**	⇑*e*P	**Pn**	**20 19 55.8**	**+1.8**
BUTP				*e*S	Sn	20 21 09.1	+21
GTOI	**Gorontalo**	**4.84**	**223**	P	**Pn**	**20 19 56.2**	**+1.4**
GTOI				S	**Sn**	**20 20 48.5**	**-1.1**
LBMI	**Labuha**	**4.96**	**166**	P	**Pn**	**20 19 56.3**	**-0.2**
ZCP	**Zamboanga City**	**5.00**	**303**	⇓*i*P	**Pn**	**20 19 58.0**	**+1.0**
ZCP				*i*S	**Sn**	**20 20 53.0**	**-0.5**
DCPH	**Dipolog City**	**5.24**	**326**	⇑*e*P	Pn	20 20 06.7	+6.4
GLSP	**General Luna,**	**5.54**	**358**	⇓*e*P	**Pn**	**20 20 05.8**	**+1.3**
GLSP				*e*S	**Sn**	**20 21 10.2**	**+3.4**
LSIP	**Lazi, Siquijor**	**5.56**	**332**	⇑*i*P	**Pn**	**20 20 06.5**	**+1.8**
LSIP				*i*S	Sn	20 21 30.2	+23
MRSI	**Marisa**	**5.72**	**230**	P	**Pn**	**20 20 08.5**	**+1.6**
	5.7nm2μm17μm1μm,0.6s						
MRSI				S	**Sn**	**20 21 11.7**	**+0.5**
	5.7nm2μm17μm1μm,0.6s						
GHBP	**Garcia Hernand**	**5.73**	**340**	⇑*i*P	**Pn**	**20 20 08.3**	**+1.3**
GHBP				*i*S	**Sn**	**20 21 15.4**	**+3.9**
SNPH	**Sibulan**	**5.94**	**329**	⇑*e*P	**Pn**	**20 20 09.6**	**-0.3**
SNPH				*e*S	Sn	20 21 05.5	-11
TBP	**Tagbilaran**	**5.96**	**336**	⇓*e*P	**Pn**	**20 20 10.2**	**+0.1**
MSLP	**Maasin**	**6.06**	**346**	⇑*e*P	**Pn**	**20 20 11.6**	**+0.1**
MSLP				*e*S	**Sn**	**20 21 27.5**	**+8.1**
TABP	**Talibon, Bohol**	**6.16**	**342**	⇓*i*P	**Pn**	**20 20 13.8**	**+0.9**
TABP				*i*S	**Sn**	**20 21 30.6**	**+8.6**
SANI	**Sanana**	**6.22**	**183**	P	**Pn**	**20 20 11.4**	**-2.4**
SANI				S	**Sn**	**20 21 14.8**	**-8.8**
SANI	**Sanana**	**6.22**	**183**	P	**Pn**	**20 20 11.7**	**-2.1**
LUWI	**Luwuk**	**6.30**	**214**	Pn	**Pn**	**20 20 17.7**	**+2.9**
LUWI	**Luwuk**	**6.30**	**214**	P	**Pn**	**20 20 17.0**	**+2.2**
	7.4nm2μm16μm1μm,1.1s						
LUWI	**Luwuk**	**6.30**	**214**	P	Pn	20 20 20.6	+5.8
TOLI2	**Tolitoli**	**6.31**	**241**	Pn	**Pn**	**20 20 15.5**	**+0.6**
TOLI2	**Tolitoli**	**6.31**	**241**	P	**Pn**	**20 20 16.3**	**+1.3**
LLP	**Lapu-Lapu**	**6.50**	**339**	⇓*i*P	**Pn**	**20 20 19.6**	**+2.1**
LLP				*i*S	Sn	20 21 18.6	-12
CNOP	**Candoni, Negro**	**6.66**	**327**	⇑*e*P	**Pn**	**20 20 20.7**	**+1.0**
CNOP				*e*S	**Sn**	**20 21 42.1**	**+7.9**
APSI	**Ampana**	**6.89**	**223**	P	**Pn**	**20 20 24.3**	**+1.4**
	4.5nm12μm1μm,1.3s						
SIJI	**Sorong**	**7.08**	**135**	P	**Pn**	**20 20 25.1**	**-0.3**
	157nm,0.3s,baz=331,slow=14,SNR=318						
SIJI				S	**Sn**	**20 21 40.9**	**-3.5**
	181nm,0.5s,baz=45,slow=23,SNR=13						
SIJI	**Sorong**	**7.08**	**135**	P	**Pn**	**20 20 24.9**	**-0.5**
	1.6nm5μm353nm,0.9s						
SIJI				S	**Sn**	**20 21 41.4**	**-3.0**
	1.6nm5μm353nm,0.9s						
BESP	**Borongan**	**7.39**	**353**	⇑*e*P	**Pn**	**20 20 31.4**	**+1.7**
BESP				*e*S	**Sn**	**20 21 59.9**	**+7.8**
MPSI	**Mapaga**	**7.46**	**239**	P	**Pn**	**20 20 31.9**	**+1.2**
	1.0nm2μm3μm141nm,0.9s						
KRAI	**Karang Ratu**	**7.76**	**164**	P	**Pn**	**20 20 34.6**	**-0.2**
	2.0nm10μm288nm,0.9s						
JAP	**San Jose, Anti**	**7.80**	**327**	⇓*e*P	**Pn**	**20 20 39.0**	**+3.7**
MYLDM	**Lahad Datu**	**7.83**	**277**		**Pn**	**20 20 39.2**	**+3.5**
MYLDM	**Lahad Datu**	**7.83**	**277**	P	**Pn**	**20 20 39.6**	**+3.8**
	1.0nm2μm4μm305nm,1.6s						
MSAI	**Masohi**	**7.95**	**161**	P	**Pn**	**20 20 36.8**	**-0.6**
	0.2nm713nm67nm,0.8s						
AAI	**Ambon**	**8.07**	**166**	P	**Pn**	**20 20 38.6**	**-0.4**
AAI				pmax	pmax		
	comp=Z,256nm,0.8s						
AAI	**Ambon**	**8.07**	**166**	P	**Pn**	**20 20 38.6**	**-0.4**
	comp=Z,1.4nmcomp=Z,6μmcomp=Z,239nm,0.4s						
RCP	**Roxas**	**8.11**	**334**	⇑*e*P	**Pn**	**20 20 41.6**	**+2.1**
FAKI	**Fak Fak**	**9.24**	**140**	Pn	**Pn**	**20 20 54.5**	**-0.6**
FAKI	**Fak Fak**	**9.24**	**140**	P	**Pn**	**20 20 54.4**	**-0.6**
	comp=Z,3μmcomp=Z,360nm,1.0s						
FAKI	**Fak Fak**	**9.24**	**140**	P	**Pn**	**20 20 55.1**	**0.0**
BNDI	**Bandanaira**	**9.39**	**157**	P	**Pn**	**20 20 57.0**	**0.0**
	comp=Z,2μmcomp=Z,6μmcomp=Z,551nm,1.4s						
BNDI	**Bandanaira**	**9.39**	**157**	P	**Pn**	**20 20 57.2**	**+0.2**
KKSI	**Kolaka, Sulawe**	**9.53**	**209**	P	**Pn**	**20 20 59.9**	**+0.9**
	comp=Z,1μmcomp=Z,74nm,0.8s						
TTSI	**Tana Toraja**	**9.69**	**222**	P	**Pn**	**20 21 02.9**	**+1.8**
	comp=Z,3μmcomp=Z,340nm,1.0s						
RKPI	**Ransiki, Papua**	**9.71**	**126**	P	**Pn**	**20 21 01.2**	**-0.2**
	comp=Z,317nm,0.9s						
SMKI	**Samarinda**	**10.19**	**243**	P	**Pn**	**20 21 10.4**	**+2.4**
	comp=Z,346nm,0.8s						
KKM	**Kota Kinabalu**	**10.21**	**281**	Pn	**Pn**	**20 21 11.8**	**+3.4**
KKM	**Kota Kinabalu**	**10.21**	**281**	P	**Pn**	**20 21 11.2**	**+2.9**
	comp=Z,2μmcomp=Z,70nm,1.6s						
KKM	**Kota Kinabalu**	**10.21**	**281**	P	Pn	20 21 13.2	+4.9
SPSI	**Sidrap Palu**	**10.42**	**219**	P	**Pn**	**20 21 12.8**	**+1.8**
	comp=Z,1μmcomp=Z,111nm,0.7s						
BNSI	**Bone**	**10.56**	**216**	P	**Pn**	**20 21 14.8**	**+1.9**
	comp=Z,680nmcomp=Z,688nmcomp=Z,62nm,0.9s						
BKB	**Balikpapan**	**10.86**	**240**		**Pn**	**20 21 20.3**	**+3.3**
BKB	**Balikpapan**	**10.86**	**240**	P	**Pn**	**20 21 18.7**	**+1.7**
	comp=Z,3μmcomp=Z,323nm,0.7s						
BKB	**Balikpapan**	**10.86**	**240**	P	**Pn**	**20 21 20.4**	**+3.3**
LUBP	**Lubang**	**11.19**	**328**	⇓*i*P	**Pn**	**20 21 25.7**	**+4.1**
KAPI	**Kappang**	**11.26**	**216**	P	**Pn**	**20 21 25.9**	**+3.4**
	comp=Z,16nm,0.4s,baz=22,slow=8.0,SNR=9.8						
KAPI				LR	LR	20 25 51.3	
	comp=Z,638nm,19.8s,baz=46,slow=38						
KAPI	**Kappang**	**11.26**	**216**	Pn	**Pn**	**20 21 24.6**	**+2.1**
KAPI	**Kappang**	**11.26**	**216**	*d*iP	**Pn**	**20 21 24.9**	**+2.4**
KAPI	**Kappang**	**11.26**	**216**	P	**Pn**	**20 21 24.4**	**+1.9**
	comp=Z,641nmcomp=Z,59nm,1.0s						
KAPI	**Kappang**	**11.26**	**216**	P	Pn	20 21 27.7	+5.2
	comp=Z,66nm,1.0s						
BKSI	**Bulukumba**	**11.30**	**213**	P	**Pn**	**20 21 24.8**	**+1.7**
	comp=Z,552nmcomp=Z,34nm,1.0s						
SRPI	**Serui, Papua**	**11.62**	**121**	P	**Pn**	**20 21 27.2**	**-0.3**
	comp=Z,2μmcomp=Z,104nm,0.8s						
BSSI	**Bau Bau, Buton**	**11.81**	**209**	P	**Pn**	**20 21 31.9**	**+1.9**
	comp=Z,112nm,0.8s						
PCPH	**Palayan**	**12.39**	**336**	⇓*e*P	**P**	**20 21 43.3**	**-3.6**
MTKI	**Muara Teweh, K**	**12.49**	**246**	P	**Pn**	**20 21 41.7**	**+2.3**
	comp=Z,5μmcomp=Z,233nm,0.9s						
SAUI	**Saumlaki**	**13.10**	**158**		**Pn**	**20 21 43.7**	**-3.8**
SAUI	**Saumlaki**	**13.10**	**158**	P	**Pn**	**20 21 45.4**	**-2.1**
	comp=Z,4μmcomp=Z,461nm,0.9s						
SAUI	**Saumlaki**	**13.10**	**158**	P	**Pn**	**20 21 44.4**	**-3.1**
MMRI	**Maumere**	**13.39**	**198**	P	**Pn**	**20 21 51.3**	**-0.1**
	comp=Z,2μmcomp=Z,78nm,0.7s						
BBKI	**Banjar Baru**	**13.76**	**237**	P	**Pn**	**20 21 59.0**	**+2.8**
	comp=Z,5μmcomp=Z,317nm,1.9s						
SMPI	**Sarmi**	**13.85**	**116**	P	**Pn**	**20 21 57.0**	**-0.4**
	comp=Z,1μmcomp=Z,123nm,1.3s						
SOEI	**Soe**	**14.02**	**188**		**Pn**	**20 22 01.6**	**+1.8**
SOEI	**Soe**	**14.02**	**188**	P	**Pn**	**20 22 00.8**	**+1.0**
	comp=Z,2μmcomp=Z,230nm,0.9s						
SOEI	**Soe**	**14.02**	**188**	P	**Pn**	**20 22 02.1**	**+2.3**
SBUM	**Sibu**	**14.16**	**263**	Pn	**P**	**20 22 04.8**	**-1.9**
SBUM	**Sibu**	**14.16**	**263**	P	**P**	**20 22 04.5**	**-2.2**
	comp=Z,1μmcomp=Z,66nm,1.4s						
STKI	**Sintang**	**15.37**	**255**	P	**P**	**20 22 20.5**	**+0.3**
	comp=Z,59nm,1.2s						
GENI	**Genyem**	**15.42**	**116**	P	**Pn**	**20 22 17.6**	**-0.1**
	comp=Z,2μmcomp=Z,227nm,1.0s						
PLAI	**Plampang**	**15.49**	**213**	P	**Pn**	**20 22 20.1**	**+1.5**
	comp=Z,2μmcomp=Z,147nm,0.8s						
PLAI	**Plampang**	**15.49**	**213**	P	**P**	**20 22 20.6**	**-0.9**
TWSI	**Taliwang, Sumb**	**15.93**	**216**	P	**P**	**20 22 26.8**	**+0.5**
	comp=Z,1μmcomp=Z,108nm,0.7s						
PBKI	**Pangkalan Bun**	**16.15**	**245**	P	**P**	**20 22 30.4**	**+1.5**
	comp=Z,152nm,1.0s						
KLNI	**Mataram**	**16.16**	**219**	P	**P**	**20 22 29.3**	**+0.4**
	comp=Z,1μmcomp=Z,89nm,0.7s						
KSM	**Kuching**	**16.20**	**261**		**P**	**20 22 31.4**	**+2.0**
KSM	**Kuching**	**16.20**	**261**	P	**P**	**20 22 33.4**	**+4.0**
KMMI	**Kalianget**	**16.63**	**228**	P	**P**	**20 22 35.6**	**+1.5**
	comp=Z,64nm,1.1s						
RTBI	**Rangdo, Negare**	**16.93**	**222**	P	**P**	**20 22 38.2**	**+0.7**
	comp=Z,2μmcomp=Z,70nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.48**	**224**	P	**P**	**20 22 46.2**	**+2.7**
JAGI	**Jajag, Banyuwa**	**17.48**	**224**	P	**P**	**20 22 46.3**	**+2.8**
JAGI	**Jajag, Banyuwa**	**17.48**	**224**	P	**P**	**20 22 47.1**	**+3.6**
MTN	**Manton Dam**	**17.61**	**164**	P	**P**	**20 22 42.0**	**-2.9**
	baz=18,SNR=168						
MTN	**Manton Dam**	**17.61**	**164**		**P**	**20 22 41.8**	**-3.1**
MTN	**Manton Dam**	**17.61**	**164**	P	**P**	**20 22 42.4**	**-2.5**
KDU	**Kakadu**	**17.87**	**160**	P	**P**	**20 22 44.9**	**-2.8**
	baz=18,SNR=56						
KDU	**Kakadu**	**17.87**	**160**	P	**P**	**20 22 46.0**	**-1.8**
PWJI	**Pagerwojo**	**18.89**	**230**	P	**P**	**20 22 59.3**	**+0.3**
	comp=Z,53nm,0.8s						
TWG	**Pinlang**	**19.18**	**345**	P	**P**	**20 22 59.2**	**-2.9**
SMRI	**Semarang**	**19.38**	**235**	P	**Pn**	**20 23 09.4**	**+3.2**
YULB	**Yu-li**	**19.67**	**346**	P	**P**	**20 23 04.1**	**-3.4**
TPUB	**Ta-pu**	**19.75**	**344**	P	**P**	**20 23 06.1**	**-2.3**
UGM	**Wanagama**	**19.82**	**233**	P	**P**	**20 23 10.1**	**+0.9**
KNRA	**Kununurra**	**19.91**	**173**	P	**P**	**20 23 09.9**	**-0.1**
	baz=20,SNR=138						
KNRA	**Kununurra**	**19.91**	**173**	P	**P**	**20 23 09.9**	**-0.1**
KNRA	**Kununurra**	**19.91**	**173**	P	**P**	**20 23 10.6**	**+0.5**
SSLB	**Suanglung**	**20.14**	**346**	P	**P**	**20 23 08.6**	**-3.9**
NACB	**Ninganchiao**	**20.36**	**348**	P	**P**	**20 23 10.6**	**-4.4**
YOJ	**Yonaguni jima**	**20.38**	**351**	P	**P**	**20 23 12.6**	**-2.6**
YOJ	**Yonaguni jima**	**20.38**	**351**	P	**P**	**20 23 12.6**	**-2.6**
GUMO	**Guam**	**20.56**	**62**	LR	LR	20 30 42.2	
	comp=Z,124nm,18.9s,baz=250,slow=35						
YHNB	**Yeheng**	**20.89**	**347**	P	**P**	**20 23 18.7**	**-2.0**
YHNB				IAmb	IAmb	20 23 25.0	
	comp=Z,99nm,1.3s						
KNMB	**Chin-men Tao**	**21.53**	**340**	P	**P**	**20 23 26.0**	**-1.4**
KNMB				IAmb	IAmb	20 23 44.9	
	comp=Z,60nm,0.8s						
LEM	**Lembang**	**21.63**	**240**	P	**P**	**20 23 31.3**	**+2.5**
	comp=Z,18nm,0.5s,baz=159,slow=23,SNR=3.9						
LEM				LR	LR	20 33 11.6	
	comp=Z,308nm,20.7s,baz=48,slow=40						
	comp=Z,18nm,0.5s						
LEM	**Lembang**	**21.63**	**240**	P	**P**	**20 23 31.9**	**+3.1**
LEM				pmax	pmax		
	comp=Z,57nm,0.9s						
QIZ	**Qiongzhong**	**21.80**	**314**	P	**P**	**20 23 30.3**	**-0.1**
QIZ				sP	**sP**	**20 23 54.6**	**-0.9**
QIZ				S	**S**	**20 27 30.4**	**+2.9**
QIZ				LR	LR		
	comp=Z,1μm,23.3s						
QIZ				LR	LR		
	comp=Z,970nm,15.9s						
QIZ				LR	LR		
	comp=Z,860nm,22.1s						
JOW	**Kunigami**	**22.57**	**5**	P	**P**	**20 23 38.5**	**-0.1**
	comp=Z,45nm,0.9s,baz=204,slow=8.8,SNR=3.6						
JOW				LR	LR	20 32 40.4	
	comp=Z,184nm,19.9s,baz=106,slow=37						
	comp=Z,45nm,0.9s						
UBPT	**Khong Chiam**	**23.26**	**300**	P	**P**	**20 23 45.1**	**-0.6**
UBPT				IAmb	IAmb	20 23 51.2	
	comp=Z,90nm,1.5s						
COEN	**Coen**	**24.62**	**137**	P	**P**	**20 23 58.3**	**+0.4**
	baz=24,SNR=7.2						
COEN	**Coen**	**24.62**	**137**	P	**P**	**20 23 57.2**	**-0.7**
COEN				IAmb	IAmb	20 23 59.2	
	comp=Z,59nm,0.8s						
COEN	**Coen**	**24.62**	**137**	P	**P**	**20 23 58.5**	**+0.6**
PMG	**Port Moresby**	**24.80**	**123**	P	**P**	**20 24 01.9**	**+2.4**
	comp=Z,11nm,0.8s,baz=310,slow=2.1,SNR=2.9						
	comp=Z,11nm,0.8s						
PMG	**Port Moresby**	**24.80**	**123**	*i*P	**P**	**20 23 57.8**	**-1.8**
PMG				pmax	pmax		
	comp=Z,22nm,1.2s						
WB0	**Warramunga Arr**	**25.12**	**162**	P	**P**	**20 24 02.3**	**-0.2**
IPM	**Ipoh**	**25.20**	**272**	P	P	20 24 15.6	+12
	comp=Z,30nm,0.9s						
WRAB	**Tennant Creek**	**25.26**	**162**	P	**P**	**20 24 03.5**	**-0.2**
WRAB	**Tennant Creek**	**25.26**	**162**	*ce*P	**P**	**20 24 03.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,193nm,0.9s						
WRAB	**Tennant Creek**	**25.26**	**162**	P	**P**	**20 24 04.1**	**+0.4**
WRA	**Warramunga Arr**	**25.27**	**162**	P	**P**	**20 24 03.6**	**-0.2**
	comp=Z,152nm,0.8s,baz=342,slow=10,SNR=260						
WRA				S	**S**	**20 28 21.7**	**-2.5**
	comp=Z,2.5nm,0.9s,baz=338,slow=17,SNR=2.4						
WRA	**Warramunga Arr**	**25.27**	**162**	P	**P**	**20 24 03.6**	**-0.2**
WRA	**Warramunga Arr**	**25.27**	**162**	P	**P**	**20 24 03.6**	**-0.2**
WRA				pmax	pmax		
	comp=Z,18nm,0.8s						
WB2	**Warramunga Arr**	**25.27**	**162**	P	**P**	**20 24 03.8**	**-0.1**
WR0	**Warramunga Arr**	**25.35**	**162**	P	**P**	**20 24 04.4**	**-0.1**
BKNI	**Bangkinang**	**25.53**	**262**	P	P	20 24 18.4	+12
	comp=Z,137nm,1.2s						
KULM	**Kulim**	**25.59**	**273**	P	**P**	**20 24 09.1**	**+2.3**
MBWA	**Marble Bar**	**26.02**	**194**	P	**P**	**20 24 11.4**	**+0.9**
MBWA				IAmb	IAmb	20 24 33.7	
	comp=Z,57nm,1.1s						
MBWA	**Marble Bar**	**26.02**	**194**	P	**P**	**20 24 11.2**	**+0.6**
PSA00	**Pilbara Seismi**	**26.39**	**194**	P	**P**	**20 24 14.8**	**+0.9**
PSA00				IAmb	IAmb	20 24 43.5	
	comp=Z,34nm,0.8s						
PSA00	**Pilbara Seismi**	**26.39**	**194**	P	**P**	**20 24 14.2**	**+0.3**
PSA00				IAmb	IAmb	20 24 43.9	
	comp=Z,15nm,0.8s						
PSA00	**Pilbara Seismi**	**26.39**	**194**	P	**P**	**20 24 14.8**	**+0.9**
KRVT	**Keravat (AS076**	**27.06**	**108**	LR	LR	20 33 49.3	
	comp=Z,126nm,21.7s,baz=46,slow=33						
JCJ	**Chichijima**	**27.35**	**32**	P	**P**	**20 24 18.9**	**-3.6**
	comp=Z,56nm,0.5s,baz=284,slow=14,SNR=6.1						
JCJ	**Chichijima**	**27.35**	**32**	P	**P**	**20 24 19.2**	**-3.3**
PSI	**Prapat**	**27.36**	**268**	LR	LR	20 37 06.8	
	comp=Z,179nm,18.7s,baz=88,slow=40						
QIS	**Mount Isa**	**27.86**	**153**	P	**P**	**20 24 27.8**	**+0.7**
	baz=28,SNR=41						
QIS	**Mount Isa**	**27.86**	**153**	P	**P**	**20 24 27.9**	**+0.7**
MTSU	**Mount Surprise**	**28.43**	**142**	P	**P**	**20 24 33.9**	**+1.7**
	baz=28,SNR=30						
MTSU	**Mount Surprise**	**28.43**	**142**	P	**P**	**20 24 34.1**	**+1.8**
NJ2	**Nanjing**	**28.57**	**347**	*e*P	P	20 24 39.5	+6.3
AS31	**Alice Springs**	**28.68**	**165**	P	**P**	**20 24 34.6**	**+0.2**
ASAR	**Alice Springs**	**28.68**	**165**	P	**P**	**20 24 34.7**	**+0.3**
	comp=Z,8.9nm,0.6s,baz=343,slow=7.0,SNR=140						
ASAR				S	**S**	**20 29 18.9**	**+0.9**
	comp=Z,1.6nm,1.0s,baz=354,slow=17,SNR=1.6						
	comp=Z,8.9nm,0.6s						
ASAR	**Alice Springs**	**28.68**	**165**	P	**P**	**20 24 34.6**	**+0.2**
AS01	**Alice Springs**	**28.69**	**165**	P	**P**	**20 24 35.4**	**+0.9**
GSI	**Gunungsitoli**	**28.83**	**265**	P	**P**	**20 24 38.5**	**+2.6**
GSI				IAmb	IAmb	20 24 58.9	
	comp=Z,62nm,1.3s						
WRKA	**Warakurna**	**29.14**	**176**	P	**P**	**20 24 39.1**	**+0.7**
	baz=29,SNR=24						
WRKA	**Warakurna**	**29.14**	**176**	P	**P**	**20 24 39.2**	**+0.7**
CM31	**Chiang Mai Arr**	**30.26**	**300**	P	**P**	**20 24 50.4**	**+1.9**
CMAR	**Chiang Mai Arr**	**30.26**	**300**	P	**P**	**20 24 49.5**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=119,slow=6.6,SNR=17						
CMAR				ScP	**ScP**	**20 31 26.1**	**+2.7**
	comp=Z,2.0nm,0.8s,baz=134,slow=1.5,SNR=6.5						
CMAR				LR	LR	20 39 45.4	
	comp=Z,159nm,19.0s,baz=100,slow=42						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.26**	**300**	P	**P**	**20 24 49.7**	**+1.2**
CMAR	**Chiang Mai Arr**	**30.26**	**300**	P	**P**	**20 24 49.7**	**+1.2**
CHTO	**Chiang Mai**	**30.41**	**301**	P	**P**	**20 24 48.8**	**-1.0**
CHTO	**Chiang Mai**	**30.41**	**301**	P	**P**	**20 24 48.8**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,3.0nm,2.0s						
CTA	**Charters Tower**	**31.10**	**142**	P	**P**	**20 24 57.2**	**+1.4**
	comp=Z,10nm,0.7s,baz=324,slow=10.0,SNR=22						
CTA				LR	LR	20 39 04.5	
	comp=Z,84nm,18.8s,baz=336,slow=39						
	comp=Z,10nm,0.7s						
CTA	**Charters Tower**	**31.10**	**142**	P	**P**	**20 24 57.4**	**+1.6**
CTAO	**Charters Tower**	**31.10**	**142**	P	**P**	**20 24 55.8**	**0.0**
CTAO				IAmb	IAmb	20 24 58.9	
	comp=Z,21nm,0.9s						
CTAO	**Charters Tower**	**31.10**	**142**	P	**P**	**20 24 55.8**	**0.0**
CTAO				pmax	pmax		
	comp=Z,21nm,1.0s						
CTAO	**Charters Tower**	**31.10**	**142**	P	**P**	**20 24 57.5**	**+1.6**
JHS	**Saijyo**	**31.28**	**11**	P	**P**	**20 24 57.8**	**+0.5**
JHS				IAmb	IAmb	20 25 01.9	
	comp=Z,15nm,0.7s						
TJN	**Taejon**	**32.03**	**2**	P	**P**	**20 25 01.6**	**-2.1**
TJN	**Taejon**	**32.03**	**2**	*i*P	**P**	**20 25 02.7**	**-1.0**
TJN	**Taejon**	**32.03**	**2**	P	**P**	**20 25 06.6**	**+2.9**
PZH	**PanZhiHua**	**32.30**	**316**	P	**P**	**20 25 08.4**	**+1.9**
PZH				S	**S**	**20 30 15.1**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pm

comp=Z,10nm,0.4s,baz=288,slow=10,SNR=30
comp=Z,10nm,0.4s
NWAO Narrogin (SRO) 37.92 192 P **P 20 25 55.5 +1.0**
baz=38,SNR=21
NWAO P **P 20 25 55.5 +1.0**
baz=38,SNR=21
NWAO Narrogin (SRO) 37.92 192 P **P 20 25 53.9 -0.6**
NWAO IAmb IAmb 20 26 20.6
comp=Z,41nm,1.2s
NWAO Narrogin (SRO) 37.92 192 P **P 20 25 53.9 -0.6**
NWAO pmax pmax
comp=Z,41nm,1.2s
BBOO Buckleboo 37.96 167 P **P 20 25 55.7 +0.8**
baz=38,SNR=66
BBOO Buckleboo 37.96 167 P **P 20 25 54.9 0.0**
BBOO Buckleboo 37.96 167 P **P 20 25 55.8 +0.9**
EIDS Eidsvold 37.99 142 P **P 20 25 57.0 +1.8**
baz=38,SNR=8.1
EIDS Eidsvold 37.99 142 P **P 20 25 54.6 -0.6**
EIDS Eidsvold 37.99 142 P **P 20 25 56.2 +1.0**
MSHR Mys Shultsa 38.45 6 *i* P **P 20 25 57.7 -1.1**
MSHR pmax pmax
comp=Z,19nm,1.2s
STKA Stephens Creek 38.73 159 P **P 20 26 02.2 +0.9**
comp=Z,43nm,0.8s,baz=333,slow=8.3,SNR=62
STKA S **S 20 31 51.2 -1.8**
comp=Z,5.5nm,1.2s,baz=90,slow=18,SNR=2.5
STKA LR LR 20 43 36.3
comp=Z,104nm,20.0s,baz=0.2,slow=38
comp=Z,43nm,0.8s
STKA Stephens Creek 38.73 159 P **P 20 26 02.2 +0.9**
baz=39,SNR=97
STKA Stephens Creek 38.73 159 P **P 20 26 01.2 -0.1**
STKA Stephens Creek 38.73 159 *i* P **P 20 26 01.0 -0.3**
STKA Stephens Creek 38.73 159 P **P 20 26 02.6 +1.3**
HHC Hu-ho-hao-te 38.81 342 *eP* P 20 26 07.3 +5.2
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,210nm,4.6s
HHC LR LR
comp=Z,260nm,15.2s
HHC LR LR
comp=Z,270nm,14.6s
HHC LR LR
comp=Z,280nm,14.6s
VLA Vladivostok 39.06 6 *i* P **P 20 26 03.5 -0.4**
VLA pmax pmax
comp=Z,39nm,1.3s
HTT Hallett 39.30 163 P **P 20 26 07.6 +1.5**
baz=39,SNR=11
HTT Hallett 39.30 163 P **P 20 26 07.5 +1.5**
CN2 Changchun 39.44 359 *eP* **P 20 26 09.8 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
RKGY Rocky Gully 39.60 192 P **P 20 26 10.5 +2.0**
baz=40,SNR=8.0
CMSA Cobar Meteorol 40.06 154 P **P 20 26 13.5 +1.1**
baz=40,SNR=24
CMSA Cobar Meteorol 40.06 154 P **P 20 26 14.0 +1.6**
USA0B Ussuriysk Arra 40.14 6 P **P 20 26 14.6 +1.7**
USA0B IAmb IAmb 20 26 20.4
comp=Z,20nm,0.8s
USA0B Ussuriysk Arra 40.14 6 *i* P **P 20 26 13.1 +0.2**
USRK Ussuriysk Ar. 40.14 6 P **P 20 26 12.6 -0.3**
comp=Z,16nm,0.8s,baz=176,slow=6.0,SNR=20
comp=Z,16nm,0.8s
USRK Ussuriysk Ar. 40.14 6 P **P 20 26 12.3 -0.6**
USRK Ussuriysk Ar. 40.14 6 P **P 20 26 12.3 -0.6**
MDJ Mudanjiang 40.35 4 P **P 20 26 15.5 +0.9**
MDJ S **S 20 32 19.3 +2.4**
MDJ pmax pmax
comp=Z,17nm,0.8s
MDJ pmax pmax
comp=Z,110nm,3.5s
MDJ LR LR
comp=Z,190nm,6.4s
MDJ LR LR
comp=Z,240nm,8.3s
MDJ LR LR
comp=Z,200nm,16.7s
MDJ Mudanjiang 40.35 4 P **P 20 26 16.0 +1.4**
MDJ Mudanjiang 40.35 4 P **P 20 26 15.2 +0.6**
MDJ pP **pwP 20 26 36.8 0.0**
XLT XiLinHaoTe 40.55 349 *eP* **P 20 26 18.0 +1.6**
XLT pmax pmax
comp=Z,15nm,0.8s
BNX BinXian 41.38 1 ⇑P **P 20 26 24.3 +1.3**
BNX pmax pmax
comp=Z,9.0nm,1.1s
BNX pmax pmax
comp=Z,52nm,3.9s
TEY Ternei 41.66 11 *eP* **P 20 26 27.0 +1.7**
LSA Lhasa 41.80 311 P **P 20 26 29.1 +1.7**
LSA pP **pP 20 26 45.3 -0.2**
LSA sP **sP 20 26 52.9 -1.2**
ARMA Armidale 42.10 147 P **P 20 26 30.9 +1.5**
baz=42,SNR=30
ARMA Armidale 42.10 147 P **P 20 26 30.5 +1.2**
ARMA IAmb IAmb 20 26 51.6
comp=Z,41nm,0.9s
ARMA Armidale 42.10 147 P **P 20 26 30.8 +1.5**
GTA Gaotai 42.47 329 *eP* **P 20 26 31.1 -1.1**
GTA pP pP 20 26 46.3 -3.9
GTA ScS ScS 20 36 26.8 +0.1
GTA pmax pmax
comp=Z,110nm,5.5s
GTA LR LR
comp=Z,270nm,19.3s
GTA LR LR
comp=Z,230nm,18.9s
GTA LR LR
comp=Z,140nm,20.7s
GOMU GeErMu 43.05 322 P P 20 26 43.4 +6.1
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,37nm,5.4s
GOMU LR LR
comp=Z,170nm,19.4s
GOMU LR LR
comp=Z,90nm,14.5s
GOMU LR LR
comp=Z,81nm,15.3s
ARPS Mount Arapiles 43.27 162 P **P 20 26 40.2 +1.6**
baz=43,SNR=28
ARPS Mount Arapiles 43.27 162 P **P 20 26 40.0 +1.4**
TAPN Taplejung 43.39 306 *eP* **P 20 26 39.6 -0.5**
comp=Z,9.5nm,0.5s
RAMN Ramite 44.12 305 *eP* **P 20 26 48.1 +2.2**
comp=Z,13nm,0.5s
CAN Canberra 44.73 153 P **P 20 26 51.9 +1.6**
CAN IAmb IAmb 20 26 55.2
comp=Z,31nm,0.9s
CAN Canberra 44.73 153 P **P 20 26 51.9 +1.6**
CAN pmax pmax
comp=Z,31nm,0.9s
CAN Canberra 44.73 153 P **P 20 26 52.1 +1.8**
CAN Canberra 44.73 153 P **P 20 26 51.6 +1.3**
CAN pP **pP 20 27 06.4 -1.7**
JIRN Jiri 44.75 306 *eP* **P 20 26 50.9 -0.1**
comp=Z,12nm,0.4s
CNB Canberra Magne 44.89 153 P **P 20 26 53.4 +1.8**
YSS Yuzh-Sakhalins 44.90 16 P **P 20 26 50.4 -1.0**
YSS Yuzh-Sakhalins 44.90 16 *eP* **P 20 26 51.8 +0.4**
YSS pmax pmax
comp=Z,30nm,0.6s
YSS MLR MLR
comp=Z,200nm,14.0s
YSS Yuzh-Sakhalins 44.90 16 P **P 20 26 52.3 +0.9**
KLR Kul'dur 45.10 5 P **P 20 26 53.4 +0.4**
comp=Z,14nm,0.6s,baz=199,slow=5.5,SNR=33
comp=Z,14nm,0.6s
KLR Kul'dur 45.10 5 *ceP* **P 20 26 53.3 +0.3**
KLR pmax pmax
comp=Z,26nm,1.0s
GUN Gumba 45.10 306 *eP* **P 20 26 53.7 -0.1**
comp=Z,17nm,0.5s
TOO Toolangi 45.24 158 P **P 20 26 55.4 +1.1**
baz=45,SNR=7.9
TOO Toolangi 45.24 158 P **P 20 26 54.1 -0.2**
TOO IAmb IAmb 20 26 57.7
comp=Z,58nm,1.4s
TOO Toolangi 45.24 158 P **P 20 26 54.1 -0.2**
TOO pmax pmax
comp=Z,58nm,1.5s
TOO Toolangi 45.24 158 P **P 20 26 56.7 +2.4**
HIA Hailar 45.24 354 P **P 20 26 53.4 -0.8**
HIA sP **sP 20 27 21.4 +1.4**
PKI Pulchoki 45.34 305 *eP* **P 20 26 56.0 +0.3**
PKIN Phulchoki 45.36 305 *eP* **P 20 26 56.3 +0.6**
comp=Z,2.9nm,0.3s
PALK Pallekele 45.46 276 LR LR 20 48 49.0
comp=Z,43nm,18.3s,baz=190,slow=40
DMN Daman 45.61 305 *eP* **P 20 26 58.7 +1.0**
comp=Z,2.7nm,0.2s
GKN Gorkha 46.14 305 *eP* **P 20 27 02.6 +0.8**
comp=Z,4,1nm,0.4s
ULN Ulaanbaatar 46.53 342 P **P 20 27 03.6 -0.9**
ULN IAmb IAmb 20 27 43.5
comp=Z,15nm,1.0s
ULN Ulaanbaatar 46.53 342 *ceP* **P 20 27 04.2 -0.3**
ULN pmax pmax
comp=Z,13nm,1.7s
ULN Ulaanbaatar 46.53 342 P **P 20 27 01.1 -3.5**
ULN sP **sP 20 27 29.1 -1.4**
UGL Uglegorsk 46.68 14 *eP* **P 20 27 07.5 +2.1**
UGL pmax pmax
comp=Z,90nm,0.8s
SONM Songino Array 46.71 342 P **P 20 27 05.2 -0.6**
comp=Z,2.3nm,0.5s,baz=159,slow=10,SNR=14
SONM LR LR 20 48 35.1
comp=Z,116nm,20.0s,baz=148,slow=38
comp=Z,2.3nm,0.5s
SONM Songino Array 46.71 342 P **P 20 27 05.3 -0.6**
SONM Songino Array 46.71 342 P **P 20 27 05.3 -0.6**
SONM pmax pmax
comp=Z,8.0nm,1.1s
DANN Dangsing 46.99 305 *eP* **P 20 27 07.9 -0.7**
comp=Z,13nm,0.3s
NOUC Port Laguerre 47.06 125 P **P 20 27 09.8 +1.0**
NOUC Port Laguerre 47.06 125 P **P 20 27 10.4 +1.6**
NOUC pP **pP 20 27 30.6 +3.2**
NOUC sP **sP 20 27 38.4 +2.5**
DZM Mont Dzumac 47.16 125 P **P 20 27 10.6 +0.9**
DZM IAmb IAmb 20 27 16.7
comp=Z,23nm,0.9s
DZM Mont Dzumac 47.16 125 P **P 20 27 11.5 +1.8**
DZM Mont Dzumac 47.16 125 P **P 20 27 10.8 +1.1**
DZM pP **pP 20 27 27.8 -0.5**
GRNR Gornyy 47.17 9⇑ *iP* **P 20 27 10.2 +0.9**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,90nm,14.0s
GRNR MLR MLR
comp=N,60nm,16.0s
LIFNC LIFOU 47.21 123 P **P 20 27 10.8 +0.8**
LIFNC LIFOU 47.21 123 P P 20 27 16.4 +6.4
comp=N,134nm,1.0s
YATNC Mamie plateau, 47.52 125 P **P 20 27 14.5 +2.1**
OUENC Ouen Island, N 47.65 126 P **P 20 27 10.6 -2.8**
OUENC IAmb IAmb 20 27 19.6
comp=Z,17nm,1.0s
TYV Tymovskoe 48.48 14 *eP* **P 20 27 20.7 +1.4**
TYV pmax pmax
comp=Z,10.0nm,1.1s
TYV pmax pmax
comp=Z,100nm,4.0s
HYBB Hyderabad (bro 48.55 289 *eP* **P 20 27 21.2 +0.7**
ZEA Zeya 49.38 1 *eP* **P 20 27 26.6 +0.4**
ZEA *e* 20 27 44.6
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
PCHI Peechi 49.89 280 *eP* **P 20 27 30.3 -0.4**
PCHI *e*S S 20 34 23.9 -12
ZAK Zakamensk 49.93 341 *eP* **P 20 27 32.0 +1.4**
MOY Mondy 51.79 340 *eP* **P 20 27 44.7 +0.2**
MOY pmax pmax
comp=Z,16nm,2.2s
WMQ Urumqi 52.09 325 *eP* **P 20 27 48.6 +1.8**
WMQ LR LR
comp=Z,140nm,20.9s
BOD Bodaibo 54.33 352 *eP* **P 20 28 03.2 +0.3**
BOD pmax pmax
comp=Z,31nm,1.6s
PEA0B Petropavlovsk- 55.15 23 P **P 20 28 08.4 -0.6**
PEA0B Petropavlovsk- 55.15 23 *ceP* **P 20 28 07.0 -2.0**
PETK Petropavlovsk- 55.15 23 P **P 20 28 09.3 +0.3**
comp=Z,9.9nm,0.6s,baz=184,slow=3.0,SNR=34
PETK LR LR 20 52 29.3
comp=Z,29nm,19.4s,baz=215,slow=37
comp=Z,9.9nm,0.6s
PETK Petropavlovsk- 55.15 23 P **P 20 28 07.6 -1.4**
PETK Petropavlovsk- 55.15 23 P **P 20 28 07.6 -1.4**
PET Petropavlovsk 55.46 23 P **P 20 28 09.5 -1.6**
PET Petropavlovsk 55.46 23 *ceP* **P 20 28 11.5 +0.4**
PET pmax pmax
comp=Z,41nm,1.0s
MSVF Nonsavu 55.50 115 P **P 20 28 13.9 +1.8**
MSVF IAmb IAmb 20 28 39.9
comp=Z,19nm,0.9s
MSVF Nonsavu 55.50 115 P **P 20 28 13.9 +1.8**
MSVF pmax pmax
comp=Z,19nm,1.0s
MSVF Nonsavu 55.50 115 P P 20 28 07.1 -5.0
MSVF sP pP 20 28 33.1 +1.8
DGZ Jazzator, Alta 55.97 331 *i* P **P 20 28 15.3 +0.2**
DGZ pmax pmax
comp=Z,6.0nm,1.1s
MK31 Makanchi Array 56.92 325 P **P 20 28 21.2 -0.6**
MK31 IAmb IAmb 20 28 56.3
comp=Z,9.7nm,0.8s
MK31 Makanchi Array 56.92 325 *i* P **P 20 28 22.2 +0.4**
MKAR Makanchi Array 56.92 325 P **P 20 28 21.0 -0.7**
comp=Z,3.7nm,0.4s,baz=122,slow=5.5,SNR=33
MKAR ScP **ScP 20 33 10.9 +1.5**
comp=Z,2.7nm,0.7s,baz=127,slow=4.9,SNR=5.8
MKAR LR LR 20 54 20.9
comp=Z,140nm,19.7s,baz=78,slow=38
comp=Z,3.7nm,0.4s
MKAR Makanchi Array 56.92 325 P **P 20 28 20.5 -1.3**
MKAR Makanchi Array 56.92 325 P **P 20 28 20.5 -1.3**
MAKZ Makanchi 57.11 325 P **P 20 28 25.2 +2.1**
MAKZ IAmb IAmb 20 28 50.9
comp=Z,12nm,0.8s
MAKZ Makanchi 57.11 325 P **P 20 28 25.2 +2.1**
MAKZ pmax pmax
comp=Z,12nm,0.9s
KSH Kashi 57.40 315 P **P 20 28 26.8 +1.4**
KSH pP pP 20 28 44.4 +0.2
KSH pmax pmax
comp=Z,3.0nm,0.9s
YAK Yakutsk 57.74 2 LR LR 20 56 19.1
comp=Z,61nm,18.0s,baz=106,slow=39
YAK Yakutsk 57.74 2 P **P 20 28 27.3 +0.1**
YAK Yakutsk 57.74 2 *eP* **P 20 28 27.8 +0.6**
YAK *e**PP **pwP 20 28 47.8 -2.5**
YAK *e* 20 29 24.7
YAK *e* 20 30 43.0
YAK *e*PPP PPP 20 31 54.2
YAK *e*S **S 20 36 21.5 +1.4**
YAK *e* 20 38 07.1
YAK *e*SSS SSS 20 42 39.4
YAK pmax pmax
comp=Z,33nm,0.9s
YAK pmax pmax
comp=N,13nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=Z,43nm,2.8s
YAK pmax pmax
comp=N,34nm,2.3s
YAK pmax pmax
comp=E,55nm,2.7s
YAK smax smax
comp=E,68nm,3.0s
YAK smax smax
comp=N,79nm,3.0s
YAK Yakutsk 57.74 2 P **P 20 28 27.0 -0.2**
YAK pP **pP 20 28 47.2 +1.7**
MA2 Magadan 58.35 14 LR LR 20 56 07.9
comp=N,34nm,18.5s,baz=194,slow=38
MA2 Magadan 58.35 14 *i* P **P 20 28 31.3 -0.2**
MA2 pmax pmax
comp=Z,16nm,1.1s
AAK Ala-Archa 59.72 318 P **P 20 28 41.3 -0.2**
AAK Ala-Archa 59.72 318 *i* P **P 20 28 41.6 +0.1**
AAK pmax pmax
comp=Z,2.0nm,1.0s
ZAA0 Zalesovo Array 59.97 333 P **P 20 28 41.9 -0.9**
ZAA0 IAmb IAmb 20 28 59.6
comp=Z,7.8nm,0.8s
ZALV Zalesovo Beam 59.97 333 P **P 20 28 42.0 -0.8**
comp=Z,2.4nm,0.3s,baz=130,slow=6.8,SNR=18
ZALV LR LR 20 56 01.3
comp=Z,61nm,18.4s,baz=110,slow=37
comp=Z,2.4nm,0.3s
ZALV Zalesovo Beam 59.97 333 P **P 20 28 42.0 -0.8**
ZALV Zalesovo Beam 59.97 333 P **P 20 28 42.0 -0.8**
DRK Karamyk 60.37 314 P **P 20 28 46.0 -0.3**
DRK IAmb IAmb 20 29 18.7
comp=Z,13nm,0.8s
KBL Kabul 60.89 307 P **P 20 28 49.2 -0.5**
KBL IAmb IAmb 20 29 18.9
comp=Z,8.4nm,1.0s
KBL Kabul 60.89 307 P **P 20 28 49.2 -0.5**
KBL pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 61.11 328 P **P 20 28 49.8 -0.8**
KURK Kurchatov 61.11 328 *ceP* **P 20 28 50.5 -0.1**
KURK pmax pmax
comp=Z,6.0nm,0.6s
BTK Batken 61.28 314 P **P 20 28 52.0 -0.1**
BTK IAmb IAmb 20 29 39.5
comp=Z,14nm,1.1s
BTK Batken 61.28 314 P **P 20 28 52.0 -0.1**
BTK pmax pmax
comp=Z,14nm,1.1s
GAR Garm 61.29 313 P **P 20 28 50.5 -1.7**
SEY Seymchan 61.66 13 *ceP* **P 20 28 55.1 +1.0**
SEY pmax pmax
comp=Z,32nm,1.7s
CHGR Chuyangaron 62.03 312 P **P 20 28 56.6 -0.6**
CHGR Chuyangaron 62.03 312 P **P 20 28 56.6 -0.6**
CHGR pmax pmax
comp=Z,26nm,1.0s
SHEM Shemya Is, Ala 62.27 31 LR LR 20 52 10.7
comp=Z,55nm,20.7s,baz=124,slow=32
RPZ Rata Peaks 62.40 145 P **P 20 29 03.2 +3.9**
comp=Z,7.6nm,0.5s,baz=349,slow=5.7,SNR=6.6
KK31 Karatay Array 62.59 317 P **P 20 28 59.1 -1.7**
KK31 Karatay Array 62.59 317 P **P 20 28 59.1 -1.7**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 62.59 317 P **P 20 28 59.5 -1.2**
KKAR Karatay Array 62.59 317 P **P 20 28 59.2 -1.5**
KKAR IAmb IAmb 20 30 02.6
comp=Z,5.5nm,0.8s
KKAR Karatay Array 62.59 317 P **P 20 28 59.3 -1.5**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
BKZ Black Stump Fm 63.22 138 P **P 20 29 05.2 +0.2**
BVAR Borovoye Array 66.69 327 LR LR 20 59 31.7
comp=Z,54nm,20.8s,baz=112,slow=37
BRVK Borovoye 66.76 327 P **P 20 29 26.6 -1.0**
BRVK IAmb IAmb 20 29 44.9
comp=Z,22nm,0.8s
BRVK Borovoye 66.76 327 *ceP* **P 20 29 27.7 0.0**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 66.76 327 P **P 20 29 26.9 -0.8**
BRVK pP **pP 20 29 43.8 -2.9**
NIUE Niue 66.85 113 P **P 20 29 28.6 -0.2**
baz=67,SNR=5.3
TIXI Tiksi 67.37 1 P **P 20 29 30.7 -0.5**
TIXI IAmb IAmb 20 29 56.6
comp=Z,32nm,1.3s
TIXI Tiksi 67.37 1 *ceP* **P 20 29 31.1 -0.1**
TIXI pmax pmax
comp=Z,34nm,1.7s
TIXI Tiksi 67.37 1 P **P 20 29 30.6 -0.5**
TIXI pP **pwP 20 29 53.7 -1.1**
TIXI sP **PcP 20 30 00.4 +2.2**
BILL Bilibino 69.20 15⇓ *eP* **P 20 29 43.7 +1.0**
BILL *e* 20 30 09.6
BILL *e* 20 32 17.9
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,198nm,21.0s
NRIK Noril'sk 69.86 346 P **P 20 29 46.6 -0.1**
comp=Z,8.1nm,0.5s,baz=139,slow=6.4,SNR=9.8
comp=Z,8.1nm,0.5s
NRIK Noril'sk 69.86 346 P **P 20 29 46.7 0.0**
NRIK IAmb IAmb 20 29 54.4
comp=Z,19nm,0.8s
NRIK Noril'sk 69.86 346 *ceP* **P 20 29 46.7 0.0**
NRIK pmax pmax
comp=Z,14nm,0.7s
GEYT Alibeck 70.26 309 P **P 20 29 51.0 +1.2**
comp=Z,1.2nm,0.6s,baz=141,slow=4.8,SNR=2.6
GEYT LR LR 21 03 43.9
comp=Z,53nm,21.8s,baz=109,slow=38
comp=Z,1.2nm,0.6s
GEYT Alibeck 70.26 309 P **P 20 29 49.3 -0.6**
GYA0B ALIBECK ARRAY 70.26 309 P **P 20 29 49.2 -0.7**
CASY Casey 71.24 187 P **P 20 29 56.4 +1.3**
CASY Casey 71.24 187 P **P 20 29 56.1 +1.0**
CASY pP **sP 20 30 20.6 -1.3**
DRV Dumont d'Urvil 71.39 174 P **P 20 29 55.6 -0.4**
DRV pP **sP 20 30 25.0 +2.3**
ABKAR Akbulak array 71.51 321 P **P 20 29 56.3 -0.8**
ABKAR IAmb IAmb 20 30 34.5
comp=Z,11nm,0.9s
UNV Unalaska Valle 73.27 35 P **P 20 30 08.5 +1.0**
baz=254
SVE Sverdlovsk 73.33 328 *eP* P 20 30 24.0 +16
SVE pmax pmax
comp=Z,16nm,0.9s
ARU Arti 74.31 328 P **P 20 30 12.4 -1.1**
ARU IAmb IAmb 20 30 52.5
comp=Z,13nm,1.0s
ARU Arti 74.31 328 *d iP* **P 20 30 12.8 -0.7**
ARU *PP **PcP 20 30 29.3 +1.3**
ARU 20 32 54.6
ARU S **S 20 39 42.3 +0.8**
ARU pmax pmax
comp=Z,6.0nm,1.2s
N16K Nishlik Lake 78.94 29 P **P 20 30 39.8 +0.2**
baz=259
MAK Makhachkala 78.94 313 *eP* **P 20 30 37.4 -2.5**
MAK *e**PP **pP 20 30 58.7 -0.7**
MAK *e**SP **sP 20 31 07.3 -0.1**
MAK *e* 20 33 36.5
MAK *e*S **S 20 40 29.7 -2.9**
MAK *e*SS **SS 20 45 43.3 +4.0**
MAK *e*SSS SSS 20 49 03.7
MAK MLR MLR
comp=Z,130nm,17.0s
O16K Kokwok River B 79.11 30 P **P 20 30 42.3 +1.8**
baz=260
KIRV Kirov 79.59 329 *ceP* **P 20 30 43.1 0.0**
O17K Koliganek Bris 79.64 30 P **P 20 30 44.7 +1.3**
baz=260
BELG Belogornoye 79.77 322 *i* P **P 20 30 43.3 -0.9**
BELG pmax pmax
comp=Z,2.0nm,0.9s
RAYN Ar Rayn 79.90 293 P **P 20 30 43.9 -1.7**
RAYN Ar Rayn 79.90 293 P **P 20 30 43.9 -1.7**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
Q17K Contact Creek 80.03 32 P **P 20 30 45.7 0.0**
baz=262
O18K Koktuh Hills 80.60 30 P **P 20 30 49.1 +0.5**
baz=262
TTA Tatalina 80.67 27 P **P 20 30 50.0 +1.1**
baz=261
N19K Bonanza Creek 81.08 29 P **P 20 30 50.8 -0.4**
baz=263
L19K White Mountain 81.09 28 P **P 20 30 51.1 -0.1**
L19K IAmb IAmb 20 31 22.9
comp=Z,25nm,1.2s
L19K White Mountain 81.09 28 P **P 20 30 51.6 +0.4**
baz=262
M19K Big River Lodg 81.27 28 P **P 20 30 53.1 +1.0**
baz=262
L20K Farewell, AK 81.58 28 P **P 20 30 52.9 -0.9**
baz=263
K20K Telida 81.60 27 P **P 20 30 53.3 -0.6**
baz=263
J20K Nowinta River 81.68 26 P **P 20 30 54.4 +0.2**
J20K Nowinta River 81.68 26 P **P 20 30 55.0 +0.8**

	baz=262							
M20K	**Styx River**	**81.86**	**28**	P		**P**	**20 30 56.2**	**+0.8**
	baz=264							
PRGR	**Permogore**	**81.88**	**332**	*e*P		P	20 31 01.4	+6.1
PRGR				pmax		pmax		
	comp=Z,15nm,0.6s							
H21K	**Melozitna Rive**	**82.43**	**24**	P		**P**	**20 31 01.1**	**+3.0**
H21K	**Melozitna Rive**	**82.43**	**24**	P		**P**	**20 30 58.9**	**+0.8**
	baz=263							
CAST	**Castle Rocks**	**82.50**	**27**	P		**P**	**20 30 59.7**	**+1.1**
CAST				IAmb		IAmb	20 31 21.8	
	comp=Z,13nm,0.9s							
CAST	**Castle Rocks**	**82.50**	**27**	P		**P**	**20 30 58.7**	**+0.2**
	baz=264							
KIV	**Kislovodsk**	**82.50**	**314**	*e*P		**P**	**20 30 57.8**	**-1.3**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,27nm,19.0s							
SHA1	**Shidzhatmaz**	**82.52**	**313**	*i* P		**P**	**20 30 59.7**	**+0.4**
SKT	**Skwentna**	**82.62**	**28**	P		**P**	**20 31 01.5**	**+2.3**
SKT				IAmb		IAmb	20 31 21.5	
	comp=Z,12nm,1.0s							
SKT	**Skwentna**	**82.62**	**28**	P		**P**	**20 30 59.6**	**+0.4**
	baz=265							
I21K	**Tanana**	**82.72**	**25**	P		**P**	**20 31 01.9**	**+2.3**
I21K				IAmb		IAmb	20 31 24.1	
	comp=Z,21nm,1.1s							
I21K	**Tanana**	**82.72**	**25**	P		**P**	**20 31 01.2**	**+1.6**
	baz=264							
GURO	**Guroymak-BITLI**	**82.92**	**308**	P		**P**	**20 31 02.4**	**+1.0**
SUA	**Susitna One**	**82.95**	**29**	P		**P**	**20 31 03.2**	**+2.2**
SUA				IAmb		IAmb	20 31 19.6	
	comp=Z,41nm,1.4s							
SUA	**Susitna One**	**82.95**	**29**	P		**P**	**20 31 01.3**	**+0.3**
	baz=266							
H22K	**Ishtalitna Cre**	**83.04**	**24**	P		**P**	**20 31 01.8**	**+0.5**
	baz=265							
E22K	**Anaktuvuk Pass**	**83.09**	**22**	P		**P**	**20 31 02.6**	**+1.0**
	baz=264							
MLY	**Manley**	**83.23**	**25**	P		**P**	**20 31 03.7**	**+1.4**
MLY				IAmb		IAmb	20 31 25.9	
	comp=Z,15nm,1.1s							
MLY	**Manley**	**83.23**	**25**	P		**P**	**20 31 02.7**	**+0.4**
	baz=265							
M22K	**Willow**	**83.27**	**28**	P		**P**	**20 31 02.6**	**+0.2**
M22K	**Willow**	**83.27**	**28**	P		**P**	**20 31 03.2**	**+0.7**
	baz=266							
TRF	**Thorofare Moun**	**83.31**	**27**	P		**P**	**20 31 03.4**	**+0.5**
	baz=266							
VRH	**Novokhopyorsk**	**83.34**	**321**	*e*P		**P**	**20 31 00.9**	**-2.2**
VRH				pmax		pmax		
	comp=Z,9.0nm,0.7s							
RC01	**Rabbit Creek A**	**83.41**	**29**	P		**P**	**20 31 03.9**	**+0.6**
	baz=267							
D23K	**Nanushuk River**	**83.58**	**21**	P		**P**	**20 31 06.2**	**+2.1**
	baz=265							
COLD	**Coldfoot**	**83.62**	**23**	P		**P**	**20 31 04.7**	**+0.5**
	baz=266							
G23K	**Bananza Creek**	**83.65**	**23**	P		**P**	**20 31 06.0**	**+1.5**
	baz=266							
C23K	**Itkillik River**	**83.68**	**20**	P		**P**	**20 31 04.0**	**-0.5**
	baz=265							
H23K	**Yukon River**	**83.78**	**24**	P		**P**	**20 31 05.3**	**+0.2**
H23K				IAmb		IAmb	20 31 43.4	
	comp=Z,10nm,0.9s							
H23K	**Yukon River**	**83.78**	**24**	P		**P**	**20 31 05.6**	**+0.4**
	baz=266							
I23K	**Minto, Yukon-K**	**83.82**	**25**	P		**P**	**20 31 06.5**	**+1.2**
I23K				IAmb		IAmb	20 31 16.9	
	comp=Z,15nm,1.0s							
I23K	**Minto, Yukon-K**	**83.82**	**25**	P		**P**	**20 31 06.3**	**+1.0**
	baz=267							
E23K	**Chandalar**	**83.90**	**22**	P		**P**	**20 31 07.5**	**+1.7**
	baz=266							
NEA2	**Nenana**	**83.91**	**26**	P		**P**	**20 31 07.2**	**+1.5**
NEA2				IAmb		IAmb	20 31 30.4	
	comp=Z,13nm,1.0s							
NEA2	**Nenana**	**83.91**	**26**	P		**P**	**20 31 06.8**	**+1.0**
	baz=267							
MCK	**McKinley**	**83.93**	**26**	P		**P**	**20 31 06.6**	**+0.7**
MCK				IAmb		IAmb	20 31 36.6	
	comp=Z,35nm,1.2s							
MCK	**McKinley**	**83.93**	**26**	P		**P**	**20 31 06.6**	**+0.7**
MCK				pmax		pmax		
	comp=Z,35nm,1.2s							
MCK	**McKinley**	**83.93**	**26**	P		**P**	**20 31 05.5**	**-0.4**
	baz=267							
VNDA	**Vanda**	**83.95**	**173**	P		**P**	**20 31 06.5**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=317,slow=7.1,SNR=20							
	comp=Z,1.9nm,0.6s							
VNDA	**Vanda**	**83.95**	**173**	P		**P**	**20 31 06.0**	**+0.3**
VNDA	**Vanda**	**83.95**	**173**	P		**P**	**20 31 06.0**	**+0.3**
VNDA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
TOLK	**Toolik Lake Re**	**83.96**	**21**	P		**P**	**20 31 05.2**	**-0.8**
	baz=266							
KNK	**Knik Glacier**	**84.05**	**29**	P		**P**	**20 31 06.6**	**+0.1**
	baz=268							
MAW	**Mawson**	**84.05**	**200**	P		**P**	**20 31 09.1**	**+2.8**
	comp=Z,3.0nm,0.8s,baz=30,slow=6.2,SNR=6.4							
	comp=Z,3.0nm,0.8s							
PWL	**Port Wells**	**84.09**	**29**	P		**P**	**20 31 06.8**	**+0.1**
PWL	**Port Wells**	**84.09**	**29**	P		**P**	**20 31 07.4**	**+0.6**
	baz=268							
SML	**Sawmill**	**84.12**	**28**	P		**P**	**20 31 08.4**	**+1.4**
SML	**Sawmill**	**84.12**	**28**	P		**P**	**20 31 08.4**	**+1.4**
SML				pmax		pmax		
	comp=Z,27nm,1.0s							
SML	**Sawmill**	**84.12**	**28**	P		**P**	**20 31 07.0**	**0.0**
	baz=268							
WRH	**Wood River Hil**	**84.33**	**26**	P		**P**	**20 31 07.5**	**-0.3**
WRH				IAmb		IAmb	20 31 38.6	
	comp=Z,18nm,1.2s							
M23K	**Glacier View**	**84.41**	**28**	P		**P**	**20 31 08.2**	**-0.2**
	baz=268							
WAT6	**Susitna Watana**	**84.42**	**28**	P		**P**	**20 31 09.3**	**+0.7**
	baz=268							
CCB	**Clear Creek Bu**	**84.46**	**26**	P		**P**	**20 31 09.2**	**+0.7**
CCB				IAmb		IAmb	20 31 37.3	
	comp=Z,13nm,1.2s							
H24K	**Noodor Dome**	**84.47**	**24**	P		**P**	**20 31 07.7**	**-0.9**
	baz=268							
F24K	**Squaw Lake**	**84.53**	**23**	P		**P**	**20 31 07.5**	**-1.4**
	baz=268							
G24K	**Hadweenzic Riv**	**84.66**	**23**	P		**P**	**20 31 11.1**	**+1.5**
	baz=268							
KLMR	**Klimovskoe**	**84.78**	**331**	*e*P		**P**	**20 31 08.3**	**-1.9**
KLMR				*e*			20 34 24.0	
KLMR				pmax		pmax		
	comp=Z,31nm,1.4s							
KLMR	**Klimovskoe**	**84.78**	**331**	*e*P		**P**	**20 31 08.3**	**-1.9**
KLMR				AMP			20 31 26.6	
	comp=Z,31nm,1.4s							
KLMR				*e*PP		**PP**	**20 34 24.1**	**-3.0**
ILAR	**Eielson Array**	**84.86**	**25**	P		**P**	**20 31 11.6**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=258,slow=5.7,SNR=8.9							
	comp=Z,1.9nm,0.9s							
SBA	**Scott Base**	**84.87**	**172**	P		**P**	**20 31 12.9**	**+2.7**
SBA	**Scott Base**	**84.87**	**172**	P		**P**	**20 31 12.0**	**+1.7**
SBA				pmax		pmax		
	comp=Z,11nm,1.2s							
VORR	**Voronezh**	**84.92**	**321**	*e*P		**P**	**20 31 13.1**	**+2.0**
VORR				pmax		pmax		
	comp=Z,30nm,0.4s							
VSR	**Storozhevoye**	**84.95**	**321**	*e*P		**P**	**20 31 10.0**	**-1.3**
VSR				pmax		pmax		
	comp=Z,10.0nm,1.4s							
LPSR	**Galich'ya Gora**	**85.09**	**322**	*e*P		P	20 31 17.2	+5.3
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
M24K	**Tolsona, Glenn**	**85.15**	**28**	P		**P**	**20 31 12.7**	**+0.5**
	baz=270							
H25K	**Birch Creek**	**85.32**	**24**	P		**P**	**20 31 12.5**	**-0.3**
	baz=270							
E25K	**Arctic Village**	**85.42**	**22**	P		**P**	**20 31 14.9**	**+1.5**
	baz=270							
PAX	**Paxson**	**85.47**	**27**	P		**P**	**20 31 15.3**	**+1.6**
	baz=270							
J25K	**Salcha River,**	**85.51**	**26**	P		**P**	**20 31 14.5**	**+0.6**
	baz=270							
BMAR	**Burnt Mountain**	**85.80**	**23**	P		**P**	**20 31 15.1**	**-0.2**
MOS	**Moscow**	**85.80**	**325**	*e*P		**P**	**20 31 16.2**	**+0.8**
N25K	**Chitina, Valde**	**85.90**	**29**	P		**P**	**20 31 16.4**	**+0.5**
	baz=271							
G26K	**Porcupine Rive**	**86.12**	**23**	P		**P**	**20 31 17.8**	**+1.0**
	baz=272							
J26L	**Joseph Creek**	**86.29**	**26**	P		**P**	**20 31 18.6**	**+0.8**
	baz=272							
OBN	**Obninsk**	**86.42**	**325**	LR		LR	21 13 48.3	
	comp=Z,16nm,18.2s,baz=35,slow=38							
OBN	**Obninsk**	**86.42**	**325⇑**	*e*P		**P**	**20 31 18.5**	**0.0**
OBN				*e*			20 34 39.8	
OBN				*e*S		**SKSac**	**20 41 40.8**	**+2.7**
OBN				pmax		pmax		
	comp=Z,4.0nm,0.7s							
OBN				MLR		MLR		
	comp=Z,73nm,19.0s							
I26K	**Coal Creek Min**	**86.44**	**25**	P		**P**	**20 31 18.2**	**-0.1**
	baz=272							
K27K	**Chicken**	**86.96**	**26**	P		**P**	**20 31 21.8**	**+0.9**
	baz=273							
H27K	**Steamboat Moun**	**87.06**	**24**	P		**P**	**20 31 21.0**	**-0.5**
	baz=274							
I27K	**Kandik River**	**87.06**	**25**	P		**P**	**20 31 22.1**	**+0.6**
	baz=274							
CTG	**Chitna Glacier**	**87.50**	**29**	P		**P**	**20 31 25.2**	**+1.4**
	baz=274							
L29M	**L29M**	**88.80**	**27**	P		**P**	**20 31 29.5**	**-0.3**
	baz=277							
EPYK	**Eagle Plains**	**88.98**	**24**	P		**P**	**20 31 30.3**	**-0.2**
	baz=278							
BRTR	**Keskin Array B**	**89.39**	**310**	P		**P**	**20 31 31.9**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=117,slow=4.4,SNR=5.7							
	comp=Z,0.7nm,0.7s							
ARA0	**ARCESS Array S**	**89.85**	**340**	*e*P		**P**	**20 31 34.6**	**+0.1**
ARCES	**ARCESS Array B**	**89.85**	**340**	P		**P**	**20 31 34.3**	**-0.3**
	comp=Z,7.5nm,0.8s,baz=81,slow=6.0,SNR=17							
	comp=Z,7.5nm,0.8s							
INK	**Inuvik**	**89.87**	**21**	P		**P**	**20 31 33.7**	**-0.9**
	baz=281							
HAMF	**Hammerfest**	**90.22**	**341**	*e*P		**P**	**20 31 36.0**	**-0.2**
KTK1	**Kautokeino**	**90.76**	**339**	*e*P		**P**	**20 31 38.4**	**-0.4**
FARO	**Faro, Yukon**	**91.12**	**27**	P		**P**	**20 31 42.3**	**+1.7**
FARO				IAmb		IAmb	20 32 10.3	
	comp=Z,8.2nm,0.9s							
FINES	**FINESS Array B**	**91.21**	**332**	P		**P**	**20 31 40.4**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=61,slow=4.3,SNR=13							
	comp=Z,1.3nm,0.6s							
AKASG	**Malin Array Be**	**91.25**	**321**	P		**P**	**20 31 40.2**	**-1.2**
	comp=Z,0.2nm,0.2s,baz=68,slow=4.5,SNR=1.7							
AKASG				LR		LR	21 17 26.7	
	comp=Z,43nm,18.4s,baz=14,slow=39							
	comp=Z,0.2nm,0.2s							
VSU	**Vasula**	**91.44**	**329**	*i* P		**P**	**20 31 42.7**	**+0.6**
VSU				pmax		pmax		
	comp=Z,23nm,1.1s							
MNK	**Minsk**	**91.49**	**325**	*i* P		P	20 31 33.2	-9.2
MNK				*i* *PP		pP	20 31 50.2	-12
MNK				*i* S		**SKSac**	**20 41 59.8**	**-8.3**
MNK				*i*		**S**	**20 42 30.4**	**-5.4**
MNK				*i* PS		**PS**	**20 43 45.4**	**-9.1**
MNK				*i* SS		**SS**	**20 48 36.5**	**-6.5**
MNK				*i* SSS		SSS	20 52 14.8	
MNK				pmax		pmax		
	comp=Z,12nm,0.6s							
MNK				pmax		pmax		
	comp=E,2.0nm,1.0s							
MNK				pmax		pmax		
	comp=N,22nm,0.9s							
MNK				MLR		MLR		
	comp=N,288nm,21.0s							
MNK				MLR		MLR		
	comp=Z,48nm,19.0s							
MNK				MLR		MLR		
	comp=E,12nm,19.0s							
MNK	**Minsk**	**91.49**	**325**	*i* LRM		MLR	21 14 28.2	
	comp=E,12nm,19.2s							
MNK	**Minsk**	**91.49**	**325**	*i* P		P	20 31 33.3	-9.1
	comp=E,2.0nm,1.0s							
MNK	**Minsk**	**91.49**	**325**	*i* P		P	20 31 33.3	-9.1
	comp=N,22nm,0.9s							
MNK	**Minsk**	**91.49**	**325**	*i* P		P	20 31 33.3	-9.1
	comp=Z,12nm,0.7s,baz=260							
MNK	**Minsk**	**91.49**	**325**	*i* pP		pP	20 31 50.3	-12
MNK	**Minsk**	**91.49**	**325**	*i* PP		PP	20 35 11.6	-9.4
MNK	**Minsk**	**91.49**	**325**	*i* PPP		PPP	20 37 10.2	
MNK	**Minsk**	**91.49**	**325**	*i* S		**SKSac**	**20 41 59.9**	**-8.3**
MNK	**Minsk**	**91.49**	**325**	*i* sS		**S**	**20 42 30.3**	**-5.4**
MNK	**Minsk**	**91.49**	**325**	*i* PS		PS	20 43 45.5	-9.0
MNK	**Minsk**	**91.49**	**325**	*i* SS		SS	20 48 36.5	-6.5
MNK	**Minsk**	**91.49**	**325**	*i* SSS		SSS	20 52 14.8	
MNK	**Minsk**	**91.49**	**325**	*i* LR		LR	21 12 08.9	
MNK	**Minsk**	**91.49**	**325**	*i* LRM		MLR	21 13 52.4	
	comp=N,288nm,21.1s							
MNK	**Minsk**	**91.49**	**325**	*i* LRM		MLR	21 14 09.0	
	comp=Z,48nm,18.5s							
JETT	**Jettan, Norway**	**91.59**	**340**	*e*P		**P**	**20 31 42.6**	**0.0**
TRO	**Tromso**	**92.06**	**340**	*e*P		**P**	**20 31 44.3**	**-0.4**
STEI	**Steigen**	**93.89**	**339**	*e*P		**P**	**20 31 52.9**	**-0.3**
FAUS	**Fauske**	**94.08**	**339**	*e*P		**P**	**20 31 53.6**	**-0.5**
BUR08	**Bucovina Ar. S**	**94.37**	**318**	P		**P**	**20 31 55.5**	**-0.5**
BUR08				IAmb		IAmb	20 32 04.2	
	comp=Z,6.8nm,1.1s							
LOF	**Lofoten**	**94.41**	**340**	*e*P		**P**	**20 31 55.1**	**-0.5**
NSS	**Namsos**	**96.43**	**337**	*e*P		**P**	**20 32 04.2**	**-0.7**
CRVS	**Cervenica-Dubn**	**96.53**	**320**	*i* P		P	20 32 11.0	+5.3
NB2	**NORSAR Subarra**	**98.17**	**334**	P		**P**	**20 32 11.5**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=67,slow=5.1							
NOA	**NORSAR Array B**	**98.17**	**334**	P		**P**	**20 32 11.3**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=66,slow=4.5,SNR=7.0							
NOA				LR		LR	21 19 56.1	
	comp=Z,63nm,20.5s,baz=250,slow=37							
	comp=Z,1.7nm,0.8s							
CLL	**Collm**	**101.00**	**324**	*e*P		**Pdif**	**20 32 27.0**	**+1.3**
PDAR	**Pinedale Array**	**111.28**	**41**	PKKP		**PKKPdf**	**20 48 26.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=134,slow=3.9,SNR=4.6							
TXAR	**Lajitas Array**	**121.64**	**52**	PKP		**PKiKP**	**20 37 32.4**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=202,slow=1.3,SNR=4.2							
TORD	**Torodi Ar. Bea**	**122.36**	**288**	PKP		**PKiKP**	**20 37 32.2**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=47,slow=1.7,SNR=6.7							
OK050	**Pawnee Station**	**122.87**	**41**			**PKPdf**	**20 37 30.0**	**-2.4**
L42A	**Oliver, Polo**	**123.57**	**32**			**PKPdf**	**20 37 31.2**	**-2.3**
PLCA	**Paso Flores**	**140.60**	**160**	PKP		**PKiKP**	**20 38 08.0**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=164,slow=0.3,SNR=3.5							

*KRSZO **13** 20:29:02.9±1.1, 47.°31N×23.°89E, h5km±8km, ML2.1/9, Error ellipse: s-maj=3.9km s-min=3.0km az=27.0*
*SIGU **13** 20:29:03.4, 47.°39N×24.°06E, h5km, mb1.8*
*BUC **13** 20:29:03.6±0.2, 47.°33N×23.°94E, h3km, ml2.0/12, Error ellipse: s-maj=1.7km s-min=1.2km az=30.0*

ISC 13 20:29:03.9±1.0, 47.°32N±0.°02×23.°93E±0.°02, h6km±9km, n51, σ0.63/85, 32C-30D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCR	**ARCALIA**	**0.37**	**129**	⇓P	**Pg**	**20 29 11.2**	**+0.1**
ARCR				⇑S	**Sg**	**20 29 16.7**	**+0.7**
ARCR	**ARCALIA**	**0.37**	**129**	⇓P	**Pg**	**20 29 11.2**	**+0.1**
ARCR				⇑S	**Sg**	**20 29 16.7**	**+0.7**
ARCR	**ARCALIA**	**0.37**	**129**	Pg	**Pg**	**20 29 11.2**	**+0.1**
	comp=Z,0.5nm,SNR=17						
ARCR				Lg	Lg	20 29 16.8	
BMR	**Baia Mare**	**0.46**	**320**	⇑P	**Pg**	**20 29 12.7**	**0.0**
BMR				⇑S	**Sg**	**20 29 18.6**	**-0.2**
BMR	**Baia Mare**	**0.46**	**320**	⇑P	**Pg**	**20 29 12.7**	**0.0**
BMR				⇑S	**Sg**	**20 29 18.6**	**-0.2**
BMR	**Baia Mare**	**0.46**	**320**	Pg	**Pg**	**20 29 12.7**	**0.0**
	comp=Z,0.4nm,SNR=15						
CJR	**Cluj-Napoca**	**0.65**	**201**	⇓P	**Pg**	**20 29 16.2**	**-0.2**
CJR				⇑S	**Sg**	**20 29 25.1**	**+0.3**
CJR	**Cluj-Napoca**	**0.65**	**201**	⇓P	**Pg**	**20 29 16.2**	**-0.2**
CJR				⇑S	**Sg**	**20 29 25.1**	**+0.3**
CJR	**Cluj-Napoca**	**0.65**	**201**	Pg	**Pg**	**20 29 16.2**	**-0.2**
	comp=Z,0.2nm,SNR=3.8						
CJR				Lg	Lg	20 29 25.0	
MESR	**Meseseni**	**0.69**	**256**	⇓P	**Pg**	**20 29 17.5**	**+0.4**
MESR				⇑S	**Sg**	**20 29 27.0**	**+0.9**
MESR	**Meseseni**	**0.69**	**256**	⇓P	**Pg**	**20 29 17.5**	**+0.4**
MESR				⇑S	**Sg**	**20 29 27.0**	**+0.9**
BURAR	**Bucovina Array**	**0.92**	**71**	⇑P	**Pg**	**20 29 21.0**	**-0.5**
BURAR				⇑S	**Sg**	**20 29 33.5**	**0.0**
BURAR	**Bucovina Array**	**0.92**	**71**	⇑P	**Pg**	**20 29 21.0**	**-0.5**
BURAR				⇑S	**Sg**	**20 29 33.5**	**0.0**
BURAR	**Bucovina Array**	**0.92**	**71**	Pg	**Pg**	**20 29 21.1**	**-0.5**
NSLU	**Nyzhne Selyshc**	**0.95**	**22**	*e*Pg	**Pg**	**20 29 21.9**	**-0.1**
NSLU				Pm		20 29 22.7	
NSLU				*e*Sg	**Sg**	**20 29 34.7**	**+0.4**
NSLU				Sm		20 29 38.2	
NSLU				m		20 29 38.4	
DRGR		**0.99**	**238**	⇑P	**Pg**	**20 29 22.0**	**-0.9**
DRGR				⇓S	**Sg**	**20 29 35.8**	**+0.2**
DRGR		**0.99**	**238**	⇑P	**Pg**	**20 29 22.0**	**-0.9**
DRGR				⇓S	**Sg**	**20 29 35.8**	**+0.2**
DRGR		**0.99**	**238**	Pg	**Pg**	**20 29 21.9**	**-0.9**
	comp=Z,0.1nm,SNR=5.4						
DRGR				Lg	Lg	20 29 34.4	
KORU	**Korolevo**	**0.99**	**328**	*e*Pg	**Pg**	**20 29 23.2**	**+0.3**
KORU				Pm		20 29 23.7	
KORU				*e*Sg	**Sb**	**20 29 37.9**	**+1.1**
KORU				Sm		20 29 39.4	
KORU				m		20 29 43.5	
TRSU	**Trosnyk**	**1.01**	**320**	*e*Pg	**Pg**	**20 29 23.7**	**+0.4**
TRSU				Pm		20 29 24.4	
TRSU				m		20 29 25.1	
TRSU				*e*Sg	**Sn**	**20 29 39.1**	**0.0**
TRSU				Sm		20 29 39.9	
BRIU	**Brid**	**1.19**	**329**	*e*Pg	**Pg**	**20 29 26.7**	**+0.1**
BRIU				m		20 29 27.0	
BRIU				Pm		20 29 27.6	
BRIU				*e*Sg	**Sn**	**20 29 44.0**	**+0.6**
BRIU				Sm		20 29 44.8	
MDB	**Medias**	**1.22**	**165**	⇑P	**Pg**	**20 29 26.5**	**-0.8**
MDB				⇓S	**Sb**	**20 29 44.0**	**+0.7**
MDB	**Medias**	**1.22**	**165**	⇑P	**Pg**	**20 29 26.5**	**-0.8**
MDB				⇓S	**Sb**	**20 29 44.0**	**+0.7**
TRPA	**Tarpa**	**1.24**	**311**	⇓P	**Pg**	**20 29 26.9**	**-0.7**
TRPA				⇓S	**Sg**	**20 29 43.7**	**0.0**
TRPA	**Tarpa**	**1.24**	**311**	⇓P	**Pg**	**20 29 26.9**	**-0.7**
TRPA				⇓S	**Sg**	**20 29 43.7**	**0.0**
TRPA	**Tarpa**	**1.24**	**311**	Pg	**Pg**	**20 29 26.9**	**-0.7**
	comp=Z,0.1nm,SNR=2.5						
TRPA				Sn	**Sg**	**20 29 43.3**	**-0.4**
TRPA	**Tarpa**	**1.24**	**311**	P	**Pg**	**20 29 26.9**	**-0.7**
TRPA				S	**Sg**	**20 29 43.3**	**-0.4**
BORR	**Bors**	**1.48**	**262**	⇑P	**Pb**	**20 29 31.8**	**0.0**
BORR				⇑S	**Sg**	**20 29 52.6**	**+1.2**
BORR	**Bors**	**1.48**	**262**	⇑P	**Pb**	**20 29 31.8**	**0.0**
BORR				⇑S	**Sg**	**20 29 52.6**	**+1.2**
DOPR	**Dopca**	**1.69**	**143**	⇓P	**Pn**	**20 29 34.1**	**+0.2**
DOPR				⇑S	**Sg**	**20 29 57.7**	**-0.3**
DOPR	**Dopca**	**1.69**	**143**	⇓P	**Pn**	**20 29 34.1**	**+0.2**
DOPR				⇑S	**Sg**	**20 29 57.7**	**-0.3**
OZUR		**1.77**	**133**	⇓P	**Pn**	**20 29 35.1**	**+0.1**
OZUR				⇓S	**Sn**	**20 29 58.9**	**+1.0**
OZUR		**1.77**	**133**	⇓P	**Pn**	**20 29 35.1**	**+0.1**
OZUR				⇓S	**Sn**	**20 29 58.9**	**+1.0**
LOT	**Lotru**	**1.88**	**183**	⇓P	**Pn**	**20 29 37.6**	**+1.1**
LOT				⇓S	**Sb**	**20 30 01.9**	**-0.4**
LOT	**Lotru**	**1.88**	**183**	⇓P	**Pn**	**20 29 37.6**	**+1.1**
LOT				⇓S	**Sb**	**20 30 01.9**	**-0.4**
LOT	**Lotru**	**1.88**	**183**	Lg	Lg	20 30 01.2	
SIRR	**Siria**	**1.88**	**237**	⇑P	**Pn**	**20 29 37.7**	**+1.2**
SIRR				⇓S	**Sb**	**20 30 02.5**	**+0.1**
SIRR	**Siria**	**1.88**	**237**	⇑P	**Pn**	**20 29 37.7**	**+1.2**
SIRR				⇓S	**Sb**	**20 30 02.5**	**+0.1**
SIRR	**Siria**	**1.88**	**237**	Pn	**Pn**	**20 29 36.7**	**+0.2**
	SNR=2.4						
SIRR				Sn	**Sb**	**20 30 02.2**	**-0.1**
ARR	**Arges**	**2.02**	**166**	⇓P	**Pn**	**20 29 38.4**	**+0.1**
ARR	**Arges**	**2.02**	**166**	⇓P	**Pn**	**20 29 38.4**	**+0.1**
VOIR		**2.04**	**157**	⇑P	**Pn**	**20 29 39.4**	**+0.7**
VOIR				⇓S	**Sb**	**20 30 06.2**	**-0.7**
VOIR		**2.04**	**157**	⇑P	**Pn**	**20 29 39.4**	**+0.7**
VOIR				⇓S	**Sb**	**20 30 06.2**	**-0.7**
ABAH	**Abaujker**	**2.06**	**299**	Pn	**Pn**	**20 29 38.1**	**-0.8**
	SNR=1.7						
ABAH	**Abaujker**	**2.06**	**299**	P	**Pn**	**20 29 38.1**	**-0.8**
GZR	**Gura Zlata**	**2.09**	**203**	⇑S	**Sb**	**20 30 07.6**	**-0.7**
GZR	**Gura Zlata**	**2.09**	**203**	⇑S	**Sb**	**20 30 07.6**	**-0.7**
GZR	**Gura Zlata**	**2.09**	**203**	Pn	**Pb**	**20 29 41.0**	**-1.1**
	SNR=2.0						
BZS	**Buzias**	**2.34**	**224**	⇑P	**Pn**	**20 29 41.9**	**-0.9**
BZS	**Buzias**	**2.34**	**224**	⇑P	**Pn**	**20 29 41.9**	**-0.9**
BZS	**Buzias**	**2.34**	**224**	Pn	**Pn**	**20 29 41.7**	**-1.0**
	SNR=1.7						

IDC 13 20:30:11.1±2.1, 6.°46S×128.°78E, h0km, mb3.7/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=112.0km s-min=32.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.45**	**159**	Pn	Pn	20 33 36.2	-0.8
	0.2nm,0.3s,baz=337,slow=13,SNR=12						
WRA				Sn	Sn	20 36 05.1	-13
	0.3nm,0.3s,baz=341,slow=22,SNR=7.1						
	0.3nm,0.4s						
**ASA

baz=312
H11S2 WAKE ISLAND Hy 27.38 119 T T 21 11 58.5
baz=312
SONM Songino Array 29.46 308 P **P** **20 43 15.1 +0.8**
0.6nm,0.6s,baz=104,slow=9.0,SNR=4.6
0.6nm,0.6s
TIXI Tiksi 37.88 353 P **P** **20 44 27.6 +0.7**
TIXI IAmb IAmb 20 44 47.4
comp=Z,4.1nm,1.4s
ZALV Zalesovo Beam 43.83 314 P **P** **20 45 16.8 +0.6**
comp=Z,0.3nm,0.3s,baz=111,slow=7.9,SNR=2.6
ZALV PcP **PcP** **20 47 02.8 +0.5**
comp=Z,0.6nm,0.5s,baz=69,slow=3.0,SNR=3.6
comp=Z,0.3nm,0.3s
MKAR Makanchi Array 45.70 304 P **P** **20 45 32.0 +0.8**
comp=Z,0.6nm,0.5s,baz=80,slow=8.7,SNR=2.2
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 45.70 304 P **P** **20 45 32.1 +0.8**
KURK Kurchatov 47.71 310 P **P** **20 45 46.7 -0.2**
KURK IAmb IAmb 20 46 09.3
comp=Z,3.1nm,0.8s
IL31 51.60 31 P **P** **20 46 15.1 -1.1**
IL31 IAmb IAmb 20 46 50.9
comp=Z,9.2nm,1.5s
ILAR Eielson Array 51.60 31 P **P** **20 46 17.9 +1.6**
comp=Z,1.5nm,0.7s,baz=263,slow=6.4,SNR=14
comp=Z,1.5nm,0.7s
ILAR Eielson Array 51.60 31 P **P** **20 46 14.9 -1.3**
GLI Glacier Island 51.62 36 P **P** **20 46 14.8 -1.7**
BCAR Beaver Creek A 53.94 33 P **P** **20 46 34.4 +0.7**
WRA Warramunga Arr 54.52 188 P **P** **20 46 38.6 +0.3**
comp=Z,1.0nm,0.7s,baz=3.7,slow=7.6,SNR=16
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 54.52 188 P **P** **20 46 38.8 +0.5**
KK31 Karatay Array 54.62 302 P **P** **20 46 39.2 +0.3**
KK31 IAmb IAmb 20 46 43.0
comp=Z,2.8nm,1.2s
KKAR Karatay Array 54.62 302 P **P** **20 46 38.8 -0.1**
INK Inuvik 56.62 26 P **P** **20 46 54.7 +2.0**
comp=Z,2.4nm,0.5s,baz=264,slow=5.7,SNR=4.0
comp=Z,2.4nm,0.5s
CHGR Chuyangaron 56.98 297 P **P** **20 46 55.8 -0.1**
AS31 Alice Springs 58.25 188 P **P** **20 47 04.9 +0.1**
ASAR Alice Springs 58.25 188 P **P** **20 47 05.9 +1.1**
comp=Z,0.3nm,0.4s,baz=9.2,slow=8.3,SNR=7.6
comp=Z,0.3nm,0.4s
ARU Arti 58.44 320 P **P** **20 47 05.2 -0.6**
ARU IAmb IAmb 20 47 08.1
comp=Z,2.7nm,0.7s
ABKAR Akbulak array 59.77 311 P **P** **20 47 15.1 -0.1**
FINES FINESS Array B 71.20 333 P **P** **20 48 28.5 -0.3**
comp=Z,1.1nm,0.7s,baz=64,slow=6.3,SNR=5.0
comp=Z,1.1nm,0.7s
FINES FINESS Array B 71.20 333 P **P** **20 48 28.3 -0.5**
NVAR Mina Array Bea 76.40 53 P **P** **20 49 02.7 +2.7**
comp=Z,0.9nm,0.7s,baz=278,slow=5.2,SNR=6.5
comp=Z,0.9nm,0.7s
AKASG Malin Array Be 76.47 323 P **P** **20 49 00.1 +0.3**
comp=Z,0.4nm,0.4s,baz=46,slow=6.0,SNR=4.4
comp=Z,0.4nm,0.4s
NOA NORSAR Array B 76.65 338 P **P** **20 49 01.4 +0.7**
comp=Z,0.5nm,0.6s,baz=39,slow=5.8,SNR=3.5
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 91.55 53 P **P** **20 50 19.3 +1.9**
comp=Z,0.2nm,0.6s,baz=290,slow=2.7,SNR=3.6
comp=Z,0.2nm,0.6s
LPAZ La Paz 147.76 63 PKPbc **PKPab** **20 56 58.0 -0.6**
comp=Z,1.5nm,0.6s,baz=296,slow=7.1,SNR=5.8

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*IDC **13** 20:40:45.1±0.7,35°.54S×104°.48W,h0km,mb4.4/12, mbtmp4.4/12,MS4.7/45,Error ellipse: s-maj=21.2km s-min=19.6km az=28.0*

*NEIC **13** 20:40:51.0±2.2,35°.50S±0°.06×104°.0W±0°.1,h10km±1km, mb5.0/200,Ms_20 5.0/72,Mwb5.5/16,Error ellipse: s-maj=19.7km s-min=9.3km az=286.0*

*GCMT **13** 20:40:51.0±0.1,35°.61S±0°.01×104°.27W±0°.01,h19km, MW5.5/157,Moment Tensor Solution. s136,c226; s157,c299; Duration: 1±3 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.21±.02; $M_{\theta\theta}$=0.43±.02; $M_{\phi\phi}$0.63±.02; $M_{r\theta}$0.07±.04; $M_{\theta\phi}$=-1.69±.02; $M_{\phi r}$=0.62±.05; Best double couple: M_0=1.87000×10^{17} NP1:ϕ_s=189.00000°,δ89.00000°, λ18.00000°. NP2:ϕ_s98.00000°,δ72.00000°,λ179.00000°. Principal axes: T 2.0070, Plg14.0000°, Azm55.0000°; N -0.2740, Plg72.0000°, Azm192.0000°; P -1.7340, Plg12.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 20:40:51,35°.48S×104°.01W,h20km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.65; $M_{\theta\theta}$=0.30; $M_{\phi\phi}$0.95; $M_{r\theta}$0.26; $M_{\theta\phi}$=-2.25; $M_{\phi r}$=0.51; Fault plane solution: $M_0$2.47000×10^{17} NP1:ϕ_s97.31000°, δ80.23000°,λ176.59000°. NP2:ϕ_s187.89000°,δ86.64000°, λ9.78000°. Principal axes: T 2.7567, Plg9.0000°, Azm53.0000°; N -0.7372, Plg80.0000°, Azm207.0000°; P -2.0195, Plg5.0000°, Azm322.0000°;*

*BJI **13** 20:40:52.5±0.0,35°.50S×104°.00W,h15km,mB5.0/3, Ms5.2/5,Ms7 4.9/6*

ISC 13 20:40:50.1±0.4,**35°.52S**±0°.07×**103°.92W**±0°.06,**h10**km, **n376,**σ1**57**/304,**mb5.0**/98,**MS4.9**/81,**1D,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.56**	**330**	LR	LR	20 45 46.8	
comp=Z,6μm,20.9s,baz=104,slow=32							
RPN	**Rapa Nui**	**9.56**	**330**	Pn	**Pn**	**20 43 07.7**	**0.0**
VA02	**Isla de Pascua**	**9.57**	**329**	Pn	**Pn**	**20 43 07.0**	**-0.9**
H03S2	**Juan Fernandez**	**20.61**	**93**	T	T	21 07 04.0	
baz=258,SNR=25							
H03S1	**Juan Fernandez**	**20.63**	**93**	T	T	21 07 11.3	
baz=258,SNR=25							
H03S3	**Juan Fernandez**	**20.63**	**93**	T	T	21 07 14.6	
baz=258,SNR=19							
LR04	**Corral**	**24.46**	**109**	P	**P**	**20 46 09.0**	**-0.2**
LR04				IAmb	IAmb	20 46 14.2	
comp=Z,74nm,1.1s							
LL05	**Los Muermos**	**24.48**	**113**	P	**P**	**20 46 12.1**	**+2.7**
LL04	**Puerto Octay**	**25.26**	**112**		**P**	**20 46 17.1**	**+0.7**
LL04				IAmb	IAmb	20 46 21.6	
comp=Z,41nm,1.2s							
LL03	**Petrohue**	**25.27**	**112**	P	**P**	**20 46 18.8**	**+2.4**
LR03	**Panguipulli**	**25.29**	**109**	P	**P**	**20 46 17.6**	**+1.0**
LR03				IAmb	IAmb	20 46 22.4	
comp=Z,48nm,1.0s							
LL02	**Futaleuf**	**25.84**	**117**	P	**P**	**20 46 23.5**	**+1.8**
LL02				IAmb	IAmb	20 46 57.2	
comp=Z,42nm,1.4s							
GO06	**Curarrehue**	**25.97**	**109**		**P**	**20 46 25.0**	**+2.0**
GO05	**Huala**	**26.07**	**98**		**P**	**20 46 24.8**	**+0.9**
GO05				IAmb	IAmb	20 46 29.3	
comp=Z,50nm,1.1s							
ML02	**Panimavida**	**26.36**	**100**	P	**P**	**20 46 26.7**	**+0.3**
VA05	**Santo Domingo**	**26.60**	**95**	P	**P**	**20 46 28.6**	**0.0**
VA05				IAmb	IAmb	20 46 31.5	
comp=Z,59nm,1.1s							
PLCA	**Paso Flores**	**26.66**	**111**	P	**P**	**20 46 30.5**	**+1.3**
comp=Z,9.5nm,1.1s,baz=268,slow=6.8,SNR=7.1							
PLCA				LR	LR	20 54 21.7	
comp=Z,1μm,18.8s,baz=270,slow=30							
comp=Z,9.5nm,1.1s							
PLCA	**Paso Flores**	**26.66**	**111**	P	**P**	**20 46 31.3**	**+2.1**
PLCA	**Paso Flores**	**26.66**	**111**	*eP*	**P**	**20 46 32.1**	**+2.9**
MT01	**Popeta**	**26.85**	**96**	P	**P**	**20 46 30.3**	**-0.6**
MT01				IAmb	IAmb	20 46 48.9	
comp=Z,32nm,1.4s							
BO01	**Tunca**	**26.87**	**97**	P	**P**	**20 46 30.9**	**-0.1**
BO01				IAmb	IAmb	20 46 40.3	
comp=Z,30nm,1.1s							
BO02	**Sierra Bellavi**	**27.04**	**98**	P	**P**	**20 46 33.9**	**+1.3**
BO02				IAmb	IAmb	20 46 42.4	
comp=Z,39nm,1.2s							
MT09	**Talagante**	**27.08**	**96**	P	**P**	**20 46 33.8**	**+0.7**
VA06	**Catapilco**	**27.13**	**93**	P	**P**	**20 46 34.3**	**+0.9**
VA06				IAmb	IAmb	20 46 35.8	
comp=Z,56nm,1.2s							
ROC1	**El Roble**	**27.25**	**94**	P	**P**	**20 46 34.8**	**0.0**
BO04	**La Punta**	**27.34**	**97**	P	**P**	**20 46 35.7**	**+0.4**
BO04				IAmb	IAmb	20 46 38.8	
comp=Z,27nm,1.1s							
MT05	**Renca**	**27.38**	**95**	P	**P**	**20 46 35.2**	**-0.5**
MT03	**Universidad Ad**	**27.54**	**96**	P	**P**	**20 46 37.1**	**-0.1**
MT03				IAmb	IAmb	20 46 45.3	
comp=Z,40nm,1.1s							
VA03	**San Esteban**	**27.68**	**94**	P	**P**	**20 46 38.2**	**-0.3**
VA03				IAmb	IAmb	20 46 41.5	
comp=Z,37nm,0.9s							
LMEL	**Las Melosas**	**27.70**	**96**	P	**P**	**20 46 38.9**	**+0.2**
CO02	**Combarbal**	**27.76**	**91**	P	**P**	**20 46 41.6**	**+2.4**
CO02				IAmb	IAmb	20 46 42.7	
comp=Z,30nm,1.1s							
CO03	**El Pedregal**	**28.13**	**90**	P	**P**	**20 46 43.0**	**+0.6**
GO04	**Tololo Observa**	**28.25**	**89**	P	**P**	**20 46 44.0**	**+0.2**
LCO	**Las Campanas**	**28.74**	**86**	IAMs_20	IAMs_20	20 54 41.8	
comp=Z,3μm,22.0s							
CO01	**Juntas del Tor**	**28.89**	**89**	P	**P**	**20 46 51.1**	**+1.6**
ZON	**Zonda**	**29.55**	**92**	P	**P**	**20 46 56.5**	**+1.5**
ZON				IAmb	IAmb	20 46 58.6	
comp=Z,40nm,1.0s							
AC02	**Maricunga**	**30.88**	**84**	P	**P**	**20 47 08.1**	**+0.8**
USHA	**Ushuaia**	**31.13**	**139**	LR	LR	20 56 50.3	
comp=Z,4μm,20.4s,baz=282,slow=31							
GO02	**Mina Guanaco**	**31.24**	**80**	P	**P**	**20 47 10.6**	**+0.3**
GO02				IAmb	IAmb	20 47 15.5	
comp=Z,34nm,1.2s							
PB15	**IPOC Station P**	**32.27**	**77**	P	**P**	**20 47 21.0**	**+1.7**
PB15				IAmb	IAmb	20 47 22.6	
comp=Z,36nm,1.1s							
PB06	**IPOC Station P**	**32.45**	**76**	P	**P**	**20 47 21.1**	**+0.4**
PB06				IAmb	IAmb	20 47 26.1	
comp=Z,20nm,1.0s							
PB03	**IPOC Station P**	**32.64**	**75**	P	**P**	**20 47 23.3**	**+0.8**
LVC	**Limon Verde**	**33.02**	**77**	P	**P**	**20 47 27.6**	**+1.6**
comp=Z,15nm,1.0s,baz=227,slow=7.2,SNR=11							
LVC				LR	LR	20 57 37.1	
comp=Z,919nm,19.2s,baz=247,slow=30							
comp=Z,15nm,1.0s							
LVC	**Limon Verde**	**33.02**	**77**	P	**P**	**20 47 27.7**	**+1.7**
LVC				IAmb	IAmb	20 47 30.4	
comp=Z,15nm,0.9s							
LVC	**Limon Verde**	**33.02**	**77**	*eP*	**P**	**20 47 27.4**	**+1.4**
TA01	**Diego Aracena**	**33.11**	**72**	P	**P**	**20 47 28.1**	**+1.8**
PB09	**IPOC Station P**	**33.18**	**75**	P	**P**	**20 47 30.0**	**+2.8**
TA02	**Huaiquique**	**33.31**	**72**	P	**P**	**20 47 29.7**	**+1.6**
PB01	**IPOC Station P**	**33.39**	**74**	P	**P**	**20 47 30.9**	**+1.9**
PB01				IAmb	IAmb	20 47 36.0	
comp=Z,37nm,1.4s							
NNA	**Nana**	**33.90**	**53**	LR	LR	20 58 05.8	
comp=Z,5μm,19.3s,baz=232,slow=30							
PB12	**IPOC Station P**	**34.12**	**69**	P	**P**	**20 47 36.9**	**+1.7**
PB08	**IPOC Station P**	**34.15**	**73**	P	**P**	**20 47 36.9**	**+1.0**
PB08				IAmb	IAmb	20 47 42.0	
comp=Z,30nm,1.1s							
GO01	**Chusmiza**	**34.38**	**72**	P	**P**	**20 47 37.9**	**-0.1**
GO01				IAmb	IAmb	20 47 49.1	
comp=Z,17nm,1.1s							
ATAH	**Atahualpa**	**36.69**	**46**	P	**P**	**20 47 57.3**	**-0.5**
comp=Z,6.8nm,0.7s,baz=225,slow=9.0,SNR=6.3							
ATAH				LR	LR	20 59 19.6	
comp=Z,2μm,19.9s,baz=231,slow=30							
comp=Z,6.8nm,0.7s							
LPAZ	**La Paz**	**37.19**	**68**	P	**P**	**20 48 02.4**	**+0.2**
comp=Z,7.4nm,0.8s,baz=233,slow=5.4,SNR=21							
LPAZ				LR	LR	21 00 31.1	
comp=Z,996nm,19.1s,baz=246,slow=32							
comp=Z,7.4nm,0.8s							
LPAZ	**La Paz**	**37.19**	**68**	P	**P**	**20 48 03.4**	**+1.2**
LPAZ	**La Paz**	**37.19**	**68**	*eP*	**P**	**20 48 04.1**	**+1.9**
PMSA	**Palmer Station**	**37.73**	**153**	LR	LR	20 59 31.5	
comp=Z,2μm,19.9s,baz=302,slow=30							
PMSA	**Palmer Station**	**37.73**	**153**	IAMs_20	IAMs_20	20 59 08.8	
comp=Z,2μm,20.0s							
BOSC	**San Juan Bosco**	**39.89**	**42**	P	**P**	**20 48 23.6**	**-0.9**
BOSC				IAmb	IAmb	20 48 26.8	
comp=Z,31nm,0.6s							
ITQB	**Itaqui**	**39.97**	**95**	P	**P**	**20 48 23.4**	**-1.5**
ITQB				IAmb	IAmb	20 48 51.2	
comp=Z,58nm,1.2s							
ITQB	**Itaqui**	**39.97**	**95**	*eP*	**P**	**20 48 26.6**	**+1.7**
COHC	**Cochancay**	**40.06**	**40**	P	**P**	**20 48 25.3**	**-0.4**
CPUP	**Villa Florida**	**40.69**	**90**	P	**P**	**20 48 29.9**	**-1.0**
comp=Z,6.8nm,0.9s,baz=279,slow=5.7,SNR=7.0							
CPUP				LR	LR	21 03 10.5	
comp=Z,877nm,18.1s,baz=251,slow=33							
comp=Z,6.8nm,0.9s							
CPUP	**Villa Florida**	**40.69**	**90**	*eP*	**P**	**20 48 32.7**	**+1.8**
RODS	**Rosario do Sul**	**40.89**	**97**	*eP*	**P**	**20 48 33.3**	**+0.8**
AZCA	**Azaras, Argent**	**41.09**	**93**	*eP*	**P**	**20 48 33.3**	**-0.8**
TBI	**Tubuai**	**41.14**	**274**	*eLR*	LR	20 59 52.7	
comp=Z,1μm,25.0s							
UNIS	**Unistalda (Bra**	**41.45**	**95**	*eP*	**P**	**20 48 38.5**	**+1.4**
PLTB	**Pedras Altas**	**41.70**	**100**	P	**P**	**20 48 38.8**	**-0.4**
PLTB				IAmb	IAmb	20 48 41.2	
comp=Z,55nm,1.3s							
PLTB	**Pedras Altas**	**41.70**	**100**	*eP*	**P**	**20 48 40.3**	**+1.2**
PIAT	**Ana Tenorio**	**41.82**	**40**	*eP*	**P**	**20 48 44.3**	**+3.6**
SLOR	**San Lorenzo -**	**41.92**	**40**	P	**P**	**20 48 40.8**	**-0.8**
CPSB	**Cacapava Do Su**	**42.29**	**98**	*eP*	**P**	**20 48 45.2**	**+1.2**
TAOE	**Nuku Hiva Isla**	**42.37**	**300**	*eS*	**S**	**20 55 07.0**	**+0.7**
comp=Z,376nm,25.6s							
TAOE				*e*LR	LR	21 00 26.7	
comp=Z,2μm,24.9s							
BBSD	**Serra de San D**	**42.50**	**76**	*eP*	**P**	**20 48 44.9**	**-0.9**
BBRB	**Robore, Bolivi**	**42.54**	**78**	*eP*	**P**	**20 48 46.4**	**+0.3**
MURT	**Porto Murtinho**	**42.58**	**84**	*eP*	**P**	**20 48 47.0**	**+0.6**
ETMB	**Extrema**	**42.78**	**63**	*eP*	**P**	**20 48 48.4**	**+0.4**
SIV	**San Ignacio**	**42.81**	**74**	P	**P**	**20 48 47.4**	**-1.0**
comp=Z,8.7nm,0.8s,baz=233,slow=6.6,SNR=22							
SIV				LR	LR	21 03 44.1	
comp=Z,689nm,21.7s,baz=264,slow=32							
comp=Z,8.7nm,0.8s							
CRSM	**Crissiumal (Br**	**42.90**	**94**	*eP*	**P**	**20 48 49.3**	**+0.4**
ALGR	**Alto Alegre (B**	**43.22**	**96**	*eP*	**P**	**20 48 51.6**	**+0.1**
TULM	**Tulcn-Chalpat**	**43.52**	**40**	P	**P**	**20 48 54.5**	**0.0**
TULM				IAmb	IAmb	20 48 58.2	
comp=Z,17nm,0.9s							
ANTJ	**Antonio Joao (**	**43.72**	**85**	*eP*	**P**	**20 48 56.9**	**+1.3**
PPT2	**Papeete2**	**44.14**	**282**	*eS*	**S**	**20 55 32.8**	**+0.6**
PPT2				*e*SS	**SS**	**20 58 50.9**	**+1.1**
comp=Z,3μm,34.2s							
PPT2				*e*LR	LR	21 01 15.7	
comp=Z,353nm,21.8s							
FRBT	**Francisco Belt**	**44.32**	**92**	*eP*	**P**	**20 49 00.7**	**+0.2**
ITAB	**Concordia**	**44.56**	**94**	*eP*	**P**	**20 49 03.3**	**+1.0**
PTLB	**Pontes e Lacer**	**44.65**	**75**	*eP*	**P**	**20 49 03.3**	**+0.2**
AQDB	**Aquidauana**	**44.71**	**84**	P	**P**	**20 49 01.4**	**-2.2**
AQDB	**Aquidauana**	**44.71**	**84**	*eP*	**P**	**20 49 04.8**	**+1.2**
VILB	**Vilhena**	**45.29**	**71**	*eP*	**P**	**20 49 09.9**	**+1.6**
POPC	**Popayan, Colom**	**45.65**	**40**	*eP*	**P**	**20 49 10.3**	**-1.0**
TRCB	**Terra Rica**	**46.08**	**88**	P	**P**	**20 49 13.7**	**-0.8**
TRCB	**Terra Rica**	**46.08**	**88**	*eP*	**P**	**20 49 15.8**	**+1.3**
YOTC	**Yotoco, Valle**	**47.04**	**39**	*eP*	**P**	**20 49 20.4**	**-1.7**
SALV	**Santo Antonio**	**47.13**	**78**	*eP*	**P**	**20 49 22.2**	**-0.4**
PCMB	**Pacaembu**	**47.77**	**88**	*eP*	**P**	**20 49 28.4**	**+0.7**
RIOS	**Rincon, Osa**	**48.01**	**28**	P	**P**	**20 49 30.6**	**+1.2**
FRTB	**Fartura**	**48.34**	**91**	*eP*	**P**	**20 49 33.6**	**+1.5**
BRU2	**Volcan**	**48.41**	**29**	P	**P**	**20 49 33.7**	**+1.0**
BRU2				IAmb	IAmb	20 49 57.5	
comp=Z,19nm,0.8s							
PDRB	**Porto dos Gac**	**48.79**	**73**	*eP*	**P**	**20 49 36.5**	**+0.9**
CBOC	**Ciudad Bolivar**	**48.82**	**38**	*eP*	**P**	**20 49 37.1**	**+1.2**
ROSC	**El Rosal**	**48.83**	**41**	P	**P**	**20 49 38.1**	**+1.9**
comp=Z,23nm,0.8s,baz=161,slow=6.1,SNR=10							
ROSC				LR	LR	21 06 39.1	
comp=Z,2μm,20.9s,baz=226,slow=32							
ROSC	**El Rosal**	**48.83**	**41**	P	**P**	**20 49 37.7**	**+1.5**
JTS	**Las Juntas de**	**48.96**	**25**	IAMs_20	IAMs_20	21 05 17.2	
comp=Z,1μm,19.0s							
CHIC	**Chingaza**	**48.97**	**42**	*eP*	**P**	**20 49 38.1**	**+0.8**
HDC	**Heredia**	**48.99**	**26**	IAMs_20	IAMs_20	21 04 52.0	
comp=Z,2μm,22.0s							
NORC	**Norcasia**	**49.15**	**40**	*eP*	**P**	**20 49 38.4**	**+0.1**
SGCB	**S£o Gabriel d**	**49.18**	**52**	*eP*	**P**	**20 49 37.7**	**-0.9**
BCIP	**Isla Barro Col**	**49.92**	**32**	IAMs_20	IAMs_20	21 05 19.9	
comp=Z,2μm,20.0s							
CLDB	**Colider**	**49.97**	**73**	*eP*	**P**	**20 49 44.1**	**-0.5**
PTBC	**PUERTO BERRIO,**	**50.19**	**40**	*eP*	**P**	**20 49 45.0**	**-1.2**
BB19B	**Bebedouro**	**50.26**	**89**	*eP*	**P**	**20 49 49.0**	**+2.3**
RUSC	**La Rusia**	**50.37**	**41**	*eP*	**P**	**20 49 45.8**	**-2.3**
VAO	**Valinhos**	**50.61**	**92**	*eP*	**P**	**20 49 49.9**	**+0.4**
BELA	**Belgrano 2**	**51.23**	**165**	P	**P**	**20 49 53.0**	**-0.3**
MACA	**Manacapuru-AM**	**51.31**	**61**	*eP*	**P**	**20 49 54.7**	**0.0**
MTO3	**Montecristo**	**51.52**	**18**	P	**P**	**20 49 57.3**	**+0.9**
MTO3				IAmb	IAmb	20 50 09.5	
comp=Z,39nm,1.9s							
PAMC	**Pamplona, Colo**	**51.79**	**41**	*eP*	**P**	**20 49 56.5**	**-2.3**
APG	**El Apazote**	**51.84**	**17**	LR	LR	21 06 35.0	
comp=Z,1μm,20.5s,baz=189,slow=30							
IPMB	**Ipameri, GO**	**52.06**	**86**	*eP*	**P**	**20 50 00.7**	**+0.3**
NPGB	**Novo Progresso**	**52.68**	**69**	*eP*	**P**	**20 50 04.9**	**0.0**
SJCC	**San Jacinto, C**	**52.70**	**37**	*eP*	**P**	**20 50 03.0**	**-2.1**
SNDB	**Serra Nova Dou**	**52.86**	**77**	*eP*	**P**	**20 50 06.8**	**+0.5**
CMIG	**Matias Romero**	**53.02**	**11**	LR	LR	21 07 06.2	
comp=Z,536nm,18.6s,baz=186,slow=30							
TLIG	**Tlapa**	**53.03**	**6**	P	**P**	**20 50 08.5**	**+1.0**
MAN01	**Angra dos Reis**	**53.12**	**93**	*eP*	**P**	**20 50 09.8**	**+1.6**
PMNB	**Patos De Minas**	**53.22**	**87**	*eP*	**P**	**20 50 09.9**	**+0.9**
BDFB	**Brasilia**	**53.45**	**83**	P	**P**	**20 50 10.0**	**-0.8**
comp=Z,9.2nm,0.7s,baz=242,slow=7.4,SNR=9.7							
BDFB				LR	LR	21 11 46.3	
comp=Z,1μm,18.2s,baz=236,slow=34							
comp=Z,9.2nm,0.7s							
BDFB	**Brasilia**	**53.45**	**83**	P	**P**	**20 50 10.4**	**-0.4**
BDFB				IAmb	IAmb	20 50 12.9	
comp=Z,14nm,0.9s							
BDFB	**Brasilia**	**53.45**	**83**	*eP*	**P**	**20 50 12.1**	**+1.3**
VAS01	**Vassouras-RJ**	**53.82**	**93**	*eP*	**P**	**20 50 14.6**	**+1.3**
ITB	**Itaituba**	**54.12**	**67**	*eP*	**P**	**20 50 15.0**	**-0.5**
SDV	**Santo Domingo**	**54.19**	**42**	LR	LR	21 10 20.6	
comp=Z,597nm,21.0s,baz=219,slow=33							
SDV	**Santo Domingo**	**54.19**	**42**	P	**P**	**20 50 13.4**	**-2.7**
SDV				IAmb	IAmb	20 50 16.2	
comp=Z,12nm,0.8s							
SDV	**Santo Domingo**	**54.19**	**42**	*eP*	**P**	**20 50 15.3**	**-0.9**
QSPA	**South Pole Qui**	**54.69**	**180**	P	**P**	**20 50 15.8**	**-3.4**
comp=Z,3.3nm,0.9s,baz=126,slow=2.5,SNR=7.9							
comp=Z,3.3nm,0.9s							
BOAV	**Boa Vista**	**55.38**	**57**	*eP*	**P**	**20 50 23.9**	**-0.6**
SBA	**Scott Base**	**55.44**	**195**	P	**P**	**20 50 27.1**	**+2.9**
DIAM	**Diamantina, MG**	**55.59**	**89**	*eP*	**P**	**20 50 27.9**	**+1.5**
BAUV	**El Baul**	**55.69**	**45**	P	**P**	**20 50 25.5**	**-1.3**
VNDA	**Vanda**	**56.53**	**195**	LR	LR	21 10 11.6	
comp=Z,465nm,18.1s,baz=97,slow=31							
JANB	**Januaria**	**56.77**	**85**	*eP*	**P**	**20 50 36.0**	**+1.4**
ALF01	**Guarapari-ES**	**56.84**	**93**	*eP*	**P**	**20 50 35.2**	**+0.2**
MALB	**Monte Alegre**	**56.88**	**65**	*eP*	**P**	**20 50 36.0**	**+0.7**
SJMB	**Sao Joao De Ma**	**57.42**	**91**	*eP*	**P**	**20 50 39.8**	**+0.7**
SMTB	**Santa Maria do**	**57.63**	**77**	*eP*	**P**	**20 50 41.5**	**+0.8**
SDBA	**SAO DESIDERIO**	**57.74**	**82**	*eP*	**P**	**20 50 42.2**	**+0.7**
RIB01	**Linhares ES**	**57.75**	**92**	*eP*	**P**	**20 50 42.7**	**+1.1**
HATO	**Hato, Curacao**	**57.83**	**41**	IAMs_20	IAMs_20	21 12 30.8	
comp=Z,943nm,22.0s							
ZAIG	**Zacatecas**	**57.98**	**1**	P	**P**	**20 50 43.2**	**0.0**
ZAIG				IAmb	IAmb	20 51 07.0	
comp=Z,15nm,1.4s							
VNA3	**Neumayer Olymp**	**58.15**	**158**	P	**P**	**20 50 40.7**	**-2.9**
PCRV	**Puerto La Cruz**	**58.66**	**47**	LR	LR	21 13 53.1	
comp=Z,2μm,19.7s,slow=34							
VNA1	**Neumayer--Stat**	**58.77**	**157**	P	**P**	**20 50 47.8**	**0.0**
VNA2	**Neumayer--Watz**	**58.96**	**158**	P	**P**	**20 50 49.6**	**+0.4**
MTDJ	**Mount Denham**	**59.02**	**30**	IAMs_20	IAMs_20	21 10 12.9	
comp=Z,872nm,22.0s							
MCPB	**Macapa, AP**	**59.51**	**66**	*eP*	**P**	**20 50 54.4**	**+0.6**
GUA01	**Guaratinga, BA**	**59.63**	**89**	*eP*	**P**	**20 50 55.9**	**+1.3**
SNAA	**Sanae**	**60.06**	**159**	P	**P**	**20 50 56.8**	**-0.1**
SNAA	**Sanae**	**60.06**	**159**	LR	LR	21 14 05.2	
comp=Z,606nm,18.1s,baz=252,slow=33							
SNAA	**Sanae**	**60.06**	**159**	P	**P**	**20 50 54.8**	**-2.1**
SNAA				IAmb	IAmb	20 51 13.8	
comp=Z,24nm,1.6s							
SNAA				IAMs_20	IAMs_20	21 15 28.7	
comp=Z,844nm,18.0s							
URZ	**Urewera**	**61.34**	**242**	LR	LR	21 10 47.5	
comp=Z,861nm,22.0s,baz=198,slow=30							
GDU01	**Guandu, BA**	**61.35**	**87**	*eP*	**P**	**20 51 07.6**	**+1.2**
BKZ	**Black Stump Fm**	**61.41**	**241**	IAMs_20	IAMs_20	21 10 52.4	
comp=Z,1μm,19.0s							
TROLL	**Troll, Antarti**	**61.45**	**160**	P	**P**	**20 51 08.4**	**+1.9**
RAO	**Raoul Island**	**61.46**	**253**	LR	LR	21 10 30.5	
comp=Z,308nm,21.8s,baz=140,slow=29							
SDDR	**Presa de Saban**	**62.41**	**35**	P	**P**	**20 51 14.6**	**+1.2**
MDP	**Montagnes des**	**62.80**	**61**	LR	LR	21 15 51.9	
comp=Z,2μm,19.7s,baz=220,slow=33							
RPZ	**Rata Peaks**	**63.28**	**234**	LR	LR	21 11 29.8	
comp=Z,667nm,21.2s,baz=76,slow=29							
ROSB	**Rosario**	**63.97**	**74**	*eP*	**P**	**20 51 24.8**	**+0.9**
AFI	**Af

GSC IAmb IAmb 20 53 20.2
comp=Z,16nm,1.7s
BCW Bitter Crk WRg 71.57 347 P **P 20 52 11.1 -0.3**
U32A Winter Ranch, 71.68 4 P **P 20 52 11.8 -0.1**
U32A IAmb IAmb 20 52 25.2
comp=Z,30nm,1.3s
PLAL Pickwick Lake 71.68 14 P **P 20 52 12.8 +0.8**
PLAL IAmb IAmb 20 52 26.3
comp=Z,13nm,1.2s
OK038 West end E0370 71.79 4 P **P 20 52 13.4 +0.8**
OK038 IAmb IAmb 20 52 45.7
comp=Z,17nm,0.8s
OK049 E0420 Rd and N 71.82 6 P **P 20 52 14.1 +1.3**
OK044 Pawnee Station 71.83 6 P **P 20 52 13.7 +0.9**
OK044 IAmb IAmb 20 52 26.2
comp=Z,14nm,1.1s
OK050 Pawnee Station 71.84 6 P **P 20 52 12.4 -0.4**
OK050 IAmb IAmb 20 52 23.8
comp=Z,24nm,1.3s
OK046 Pawnee Station 71.85 6 P **P 20 52 12.4 -0.5**
OK046 IAmb IAmb 20 52 25.7
comp=Z,9.5nm,0.9s
FCAR Ozark Folk Cen 71.89 10 P **P 20 52 14.2 +1.0**
FCAR IAmb IAmb 20 52 25.0
comp=Z,24nm,1.8s
OK045 Pawnee Station 71.89 6 P **P 20 52 13.1 -0.1**
OK045 IAmb IAmb 20 52 26.6
comp=Z,28nm,1.3s
OK051 E0350 and S346 71.96 6 P **P 20 52 17.2 +3.7**
OK051 IAmb IAmb 20 52 19.1
comp=Z,16nm,1.1s
U15A North Rim 72.00 353 P **P 20 52 15.0 +0.8**
OK035 E0210 Rd and N 72.02 4 **P 20 52 14.8 +0.8**
OK035 IAmb IAmb 20 52 27.8
comp=Z,18nm,0.8s
HHAR Hobbs 72.04 8 P **P 20 52 14.8 +0.7**
HHAR IAmb IAmb 20 52 27.4
comp=Z,9.3nm,0.9s
ISA Isabella, Lake 72.10 348 P **P 20 52 15.2 +0.6**
ISA IAmb IAmb 20 53 11.9
comp=Z,27nm,1.9s
U38A Gravette 72.14 8 P **P 20 52 15.8 +1.1**
U38A IAmb IAmb 20 52 28.1
comp=Z,14nm,1.1s
OK032 Salt Plains WL 72.15 5 P **P 20 52 15.6 +0.9**
LCAR Lake Charles 72.21 11 P **P 20 52 16.1 +1.0**
GWY Greenwater Val 72.32 349 P **P 20 52 16.9 +0.9**
KAN14 Manchester OK 72.32 5 P **P 20 52 17.0 +1.3**
KAN14 IAmb IAmb 20 53 27.7
comp=Z,12nm,0.6s
SWET Sewanee 72.35 15 P **P 20 52 18.0 +2.0**
T35A Sooner Cattle 72.39 6 pP 20 52 19.0 +0.6
KAN13 South Haven SW 72.41 5 P **P 20 52 17.8 +1.6**
KAN13 IAmb IAmb 20 52 30.1
comp=Z,18nm,1.1s
SHPR Sheep Range 72.42 351 P **P 20 52 17.4 +0.9**
MVCO Mesa Verde 72.48 356 P **P 20 52 17.7 +0.7**
MVCO IAmb IAmb 20 52 38.0
comp=Z,25nm,1.4s
KAN01 Argonia South 72.53 5 P **P 20 52 18.7 +1.7**
KAN16 Harper SW Stat 72.58 5 P **P 20 52 19.1 +1.8**
KAN08 Anthony NE Sta 72.59 5 P **P 20 52 19.2 +1.8**
JSC Jenkinsville 72.60 20 P **P 20 52 18.8 +1.3**
JSC IAmb IAmb 20 52 29.5
comp=Z,38nm,1.6s
KAN06 Argonia West S 72.62 5 P **P 20 52 19.2 +1.7**
KS20 Mayfield South 72.62 5 P **P 20 52 17.8 +0.3**
V48A Smith Brothers 72.66 15 P **P 20 52 19.9 +2.1**
V48A IAmb IAmb 20 52 35.5
comp=Z,30nm,1.4s
BG3 Lake Jocassee 72.83 18 P **P 20 52 18.6 -0.2**
BG3 IAmb IAmb 20 52 32.7
comp=Z,18nm,1.2s
SDCO Great Sand Dun 72.91 359 P **P 20 52 20.1 +0.5**
S22A 4UR Ranch, Cre 72.94 358 P **P 20 52 20.6 +0.8**
S22A IAmb IAmb 20 52 42.1
comp=Z,24nm,1.7s
TPNV Topopah Spring 73.00 350 P **P 20 52 20.7 +0.7**
TPNV IAmb IAmb 20 52 60.0
comp=Z,20nm,1.7s
CCUT Cedar City 73.23 352 P **P 20 52 22.3 +0.9**
CCUT IAmb IAmb 20 52 37.5
comp=Z,30nm,1.8s
TKL Tuckaleechee C 73.26 17 LR LR 21 21 05.3
comp=Z,276nm,20.2s,baz=198,slow=33
PV13 Radium Mtn., P 73.45 356 P **P 20 52 22.3 -0.4**
PV13 IAmb IAmb 20 53 09.4
comp=Z,17nm,1.5s
GMN Gold Mountain 73.50 349 P **P 20 52 23.4 +0.4**
S39A Bolivar 73.50 9 P **P 20 52 23.6 +0.9**
S39A IAmb IAmb 20 52 34.5
comp=Z,32nm,1.9s
PV15 Paradox Valley 73.61 356 P **P 20 52 23.2 -0.5**
PV15 IAmb IAmb 20 52 44.6
comp=Z,17nm,1.3s
U49A Red Boiling Sp 73.63 15 P **P 20 52 26.0 +2.5**
U49A IAmb IAmb 20 52 27.6
comp=Z,9.2nm,0.7s
PV07 Paradox Valley 73.72 356 P **P 20 52 24.5 +0.3**
PV07 IAmb IAmb 20 52 46.0
comp=Z,24nm,1.9s
PV23 Carpenter Ridg 73.75 356 P **P 20 52 24.8 +0.3**
T47A Sharon Grove 73.81 14 P **P 20 52 25.1 +0.6**
PV22 Blue Mesa, Par 73.82 356 P **P 20 52 23.3 -1.5**
PV21 Cone Mtn., Par 73.86 356 P **P 20 52 24.8 -0.3**
MVU Marysvale 74.05 353 P **P 20 52 25.9 -0.4**
MSU Marysvale 74.06 353 P **P 20 52 26.1 -0.1**
CBKS Cedar Bluff 74.06 3 P **P 20 52 25.1 -1.0**
CBKS IAmb IAmb 20 52 53.2
comp=Z,12nm,0.8s
S44A Carbondale 74.10 12 P **P 20 52 26.0 -0.2**
S44A IAmb IAmb 20 52 41.1
comp=Z,19nm,1.1s
CCM Cathedral Cave 74.14 10 P **P 20 52 27.8 +1.3**
CCM IAmb IAmb 20 52 45.0
comp=Z,13nm,1.1s
PSUT Pine Spring 74.25 352 P **P 20 52 27.6 +0.2**
TPH Tonopah 74.25 349 P **P 20 52 27.6 +0.2**
R11A Troy Canyon, C 74.29 350 P **P 20 52 27.8 +0.3**
LHV Little Huntoon 74.63 348 P **P 20 52 30.3 +1.1**
TMUT Trail Mountain 74.75 354 P **P 20 52 29.1 -1.3**
NV11 Mina Array Sit 74.75 348 P **P 20 52 29.2 -1.0**
CMB Columbia Colle 74.76 347 P **P 20 52 30.4 +0.2**
CMB IAmb IAmb 20 52 50.4
comp=Z,36nm,2.0s
NVAR Mina Array Bea 74.77 348 P **P 20 52 27.6 -2.8**
comp=Z,2.3nm,0.8s,baz=172,slow=7.3,SNR=13
NVAR LR LR 21 18 15.6
comp=Z,355nm,19.8s,baz=168,slow=30
comp=Z,2.3nm,0.8s
NVAR Mina Array Bea 74.77 348 P **P 20 52 28.1 -2.3**
P18A Preston Nutter 75.00 355 P **P 20 52 33.5 +1.7**
RYN Ryan 75.00 348 P **P 20 52 32.1 +0.4**
RYN IAmb IAmb 20 54 26.9
comp=Z,27nm,1.9s
OLIL Olney 75.32 13 P **P 20 52 35.4 +2.2**
OLIL IAmb IAmb 20 52 47.8
comp=Z,25nm,0.9s
Q44A Meyer Farm, Va 75.32 12 P **P 20 52 34.0 +0.8**
KVN Kaiserville 75.35 349 P **P 20 52 33.8 +0.1**
P38A Dawn 75.38 8 P **P 20 52 35.8 +2.2**
YERR Yerington 75.47 348 P **P 20 52 34.2 -0.2**
NLU North Lily Min 75.48 354 P **P 20 52 34.7 +0.3**
NLU IAmb IAmb 20 53 03.8
comp=Z,14nm,1.2s
AFDM Forest Hills D 75.75 346 P **P 20 52 35.6 -0.1**
DUG Dugway, Tooele 75.78 353 P **P 20 52 36.2 +0.1**
P43A Skaggs, Pawnee 75.96 11 P **P 20 52 38.5 +1.6**
P43A IAmb IAmb 20 52 52.0
comp=Z,19nm,0.9s
N23A Red Feather La 76.06 358 P **P 20 52 38.3 +0.5**
JLU Jordanelle 76.06 354 P **P 20 52 37.5 -0.3**
JLU IAmb IAmb 20 53 18.0
comp=Z,29nm,1.8s
BGU Big Grassy Mou 76.53 353 P **P 20 52 39.4 -0.9**
BGU IAmb IAmb 20 53 19.4
comp=Z,16nm,1.6s
BMN Battle Mountai 76.56 350 P **P 20 52 41.0 +0.4**
BMN IAmb IAmb 20 52 56.8
comp=Z,16nm,1.5s
ELK Elko 76.60 351 LR LR 21 20 57.5
comp=Z,214nm,18.2s,baz=172,slow=32
MAW Mawson 76.71 175 P **P 20 52 39.4 -1.5**
comp=Z,1.2nm,0.8s,baz=207,slow=6.0,SNR=1.8
MAW LR LR 21 22 28.8
comp=Z,252nm,21.8s,baz=184,slow=33
comp=Z,1.2nm,0.8s
MAW Mawson 76.71 175 P **P 20 52 45.1 +4.1**
SPUT South Promonto 76.85 353 P **P 20 52 44.0 +1.8**
DZM Mont Dzumac 77.24 252 *e*S **S 21 02 35.2 +0.3**
comp=Z,306nm,26.1s
DZM Mont Dzumac 77.24 252 *e*LR LR 21 16 36.7
comp=Z,1μm,28.2s
DZM Mont Dzumac 77.24 252 LR LR 21 18 05.5
comp=Z,473nm,21.7s,baz=194,slow=29
PDAR Pinedale Array 78.08 356 P **P 20 52 45.0 -4.0**
comp=Z,1.9nm,0.7s,baz=158,slow=6.9,SNR=12
comp=Z,1.9nm,0.7s
O54A Avella 78.39 18 P **P 20 52 49.9 -0.6**
MOD Modoc Plateau 78.50 348 P **P 20 52 50.8 -0.5**
MOD IAmb IAmb 20 53 31.0
comp=Z,18nm,1.4s
WVOR Wild Horse Val 78.74 349 P **P 20 52 53.1 +0.5**
WVOR IAmb IAmb 20 53 12.8
comp=Z,21nm,1.6s
REDW Red Top Meadow 78.76 355 P **P 20 52 52.4 -0.4**
YBH Yreka Blue Hor 78.78 346 LR LR 21 19 45.0
comp=Z,377nm,21.1s,baz=172,slow=30
N53A Lisbon 78.86 18 P **P 20 52 53.1 -0.1**
TPAW Teton Pass 78.89 355 P **P 20 52 53.9 +0.2**
TPAW IAmb IAmb 20 53 03.0
comp=Z,17nm,1.0s
M50A Fremont 78.91 16 P **P 20 52 53.1 -0.3**
LOHW Long Hollow 78.99 355 P **P 20 52 53.0 -1.1**
LOHW IAmb IAmb 20 53 03.3
comp=Z,26nm,1.8s
FXWY Fox Creek 79.05 355 P **P 20 52 52.9 -1.5**
ECSD EROS Data Cent 79.16 5 P **P 20 52 55.6 +0.9**
RSSD Black Hills 79.26 360 P **P 20 52 55.6 +0.1**
HLID Hailey 79.28 352 P **P 20 52 54.9 -0.8**
HLID IAmb IAmb 20 53 25.0
comp=Z,13nm,1.1s
IMW Indian Meadow 79.30 355 P **P 20 52 56.2 +0.4**
IMW IAmb IAmb 20 53 04.1
comp=Z,9.2nm,0.7s
J08A Circle Bar Ran 79.61 349 P **P 20 52 58.3 +1.0**
I07A Izee 80.48 349 P **P 20 53 02.4 +0.4**
F36A Milaca 81.55 7 P **P 20 53 07.8 +0.3**
F36A IAmb IAmb 20 53 28.6
comp=Z,28nm,1.6s
SADO Sadowa 83.01 18 LR LR 21 26 31.8
comp=Z,320nm,19.5s,baz=184,slow=33
HRV Adam Dziewonsk 83.10 23 IAMs_20 IAMs_20 21 25 49.3
comp=Z,649nm,20.0s
NEW Newport 84.24 351 LR LR 21 27 30.2
comp=Z,190nm,18.4s,baz=184,slow=33
STKA Stephens Creek 89.06 231 LR LR 21 25 18.3
comp=Z,519nm,21.7s,baz=161,slow=30
HNR Honiara 89.53 259 LR LR 21 24 59.1
comp=Z,2μm,21.9s,baz=136,slow=30
CTA Charters Tower 93.58 242 LR LR 21 29 32.9
comp=Z,326nm,20.7s,baz=99,slow=31
BBTS Babate 96.29 77 LR LR 21 34 03.9
comp=Z,432nm,19.8s,baz=238,slow=33
YKA Yellowknife Ar 98.05 355 LR LR 21 32 43.2
comp=Z,252nm,20.2s,baz=194,slow=32
KRVT Kevrat (AS076 98.88 258 LR LR 21 33 19.4
comp=Z,52nm,19.0s,baz=269,slow=32
PMG Port Moresby 99.62 251 LR LR 21 34 24.8
comp=Z,112nm,19.2s,baz=112,slow=32
ASAR Alice Springs 99.64 232 LR LR 21 32 50.5
comp=Z,543nm,20.3s,baz=156,slow=32
H01W1 Cape Leeuwin H 101.45 211 T T 22 48 34.5
baz=148,slow=76,SNR=11
H01W2 Cape Leeuwin H 101.45 211 T T 22 48 43.4
baz=148,slow=76,SNR=11
H01W3 Cape Leeuwin H 101.47 211 T T 22 48 23.0
baz=148,slow=76,SNR=11
KOWA Kowa 106.25 84 IAMs_20 IAMs_20 21 40 16.7
comp=Z,474nm,19.0s
TORD Torodi Ar. Bea 110.16 88 PP **PP 20 59 53.7 -2.9**
comp=Z,2.3nm,1.1s,baz=258,slow=7.1,SNR=6.3
MMRI Maumere 118.19 234 IAMs_20 IAMs_20 21 45 33.9
comp=Z,244nm,20.0s
TAM Tamanrasset 118.26 81 IAMs_20 IAMs_20 21 49 24.9
comp=Z,367nm,20.0s
CART Cartagena 119.75 63 IAMs_20 IAMs_20 21 38 31.6
comp=Z,318nm,22.0s
LUWI Luwuk 123.30 241 IAMs_20 IAMs_20 21 47 40.6
comp=Z,236nm,21.0s
KIBK Kibwezi 128.21 128 IAMs_20 IAMs_20 21 48 55.6
comp=Z,297nm,20.0s
LODK Lodwar 130.66 121 IAMs_20 IAMs_20 21 56 51.6
comp=Z,240nm,18.0s
MYLDM Lahad Datu 130.66 242 IAMs_20 IAMs_20 21 45 11.0
comp=Z,262nm,22.0s
CLL Collm 133.01 50 *e*PKSbc **PKSab 21 03 30.0 -5.8**
CLL *e*PKSdf **PKSbc 21 03 28.0 -6.0**
CLL *e*PSKS 21 12 37.0
CLL *e*PPS PPS 21 14 30.0
CLL *e*SSS SSS 21 25 07.0
TIXI Tiksi 134.82 339 **PKPdf 21 00 07.8 -0.2**
FURI Furi 136.82 119 IAMs_20 IAMs_20 22 00 56.2
comp=Z,284nm,18.0s
FINES FINESS Array B 139.39 34 PKP **PKPdf 21 00 11.6 -5.1**
comp=Z,1.2nm,0.9s,baz=329,slow=7.1,SNR=2.2
MLR Muntele Rosu 141.16 59 IAMs_20 IAMs_20 21 57 04.0
comp=Z,266nm,21.0s
CN2 Changchun 141.59 298 *e*PKP **PKPdf 21 00 17.3 -4.0**
ATD Arta Tunnel 141.60 120 IAMs_20 IAMs_20 22 00 45.6
comp=Z,248nm,19.0s
MNK Minsk 141.90 45 *i* PKP **PKPdf 21 00 22.2 +0.8**
comp=E,2.0nm,0.8s
MNK *i* PKP **PKPdf 21 00 22.2 +0.8**
comp=N,15nm,0.7s
MNK *i* PKP **PKPdf 21 00 22.2 +0.8**
comp=Z,10.0nm,0.7s,baz=100
MNK *i* PP **PP 21 03 27.5 +0.6**
MNK *i* PPP PPP 21 06 34.4
MNK *i* SKS **SKSdf 21 07 32.2 +1.0**
MNK *i* SS **SS 21 22 01.5 +1.9**
MNK *i* SSS SSS 21 27 19.2
MNK *i* LR LR 21 59 58.0
MNK *i* LRM MLR 22 02 15.9
comp=E,36nm,20.6s
MNK *i* LRM MLR 22 02 15.9
comp=Z,297nm,18.7s
MNK *i* LRM MLR 22 02 23.7
comp=N,274nm,22.6s
KULM Kulim 142.35 223 IAMs_20 IAMs_20 21 56 56.4
comp=Z,270nm,22.0s
AKASG Malin Array Be 143.24 51 PKP PKPab 21 00 19.7 0.0
comp=Z,0.5nm,0.5s,baz=285,slow=3.0,SNR=1.9
NJ2 Nanjing 144.48 277 *e*PKP **PKPab 21 00 22.4 -2.7**
NRIK Noril'sk 145.53 353 PKPbc **PKPdf 21 00 24.0 -3.4**
comp=Z,2.0nm,0.5s,baz=1.7,slow=2.1,SNR=2.3
NRIK Noril'sk 145.53 353 **PKPdf 21 00 26.7 -0.7**
KLMR Klimovskoe 145.60 31 *e*PKPdf **PKPdf 21 00 27.2 -0.6**
KLMR AMP 21 00 40.6
comp=Z,106nm,1.6s
GHAJ Ghor Haditha 146.09 85 IAMs_20 IAMs_20 22 03 35.1
comp=Z,312nm,22.0s
BR131 Keskin Array S 146.35 70 **PKPdf 21 00 27.8 -2.2**
BRTR Keskin Array B 146.35 70 PKPbc **PKPdf 21 00 28.8 -1.2**
comp=Z,8.9nm,1.1s,baz=242,slow=2.7,SNR=20
BRTR Keskin Array B 146.35 70 **PKPdf 21 00 27.8 -2.2**
OBN Obninsk 146.62 42 **PKPbc 21 00 31.4 +0.1**
OBN Obninsk 146.62 42 IAMs_20 IAMs_20 22 03 40.3
comp=Z,300nm,21.0s
TIA Tai'an 146.90 283 PKPbc **PKPab 21 00 34.4 +0.3**
BNN Bunyan 147.96 72 **PKPdf 21 00 32.8 +0.1**
XLT XiLinHaoTe 148.36 298 *e*PKPbc **PKPbc 21 00 35.3 -1.3**
HNS HongShan 149.01 285 ⇓P **PKPab 21 00 43.3 +0.8**
LYN LuoYang 150.29 279 *e*PKPbc **PKPdf 21 00 33.5 -2.9**
RAYN Ar Rayn 150.95 106 **PKPdf 21 00 37.1 -0.6**
RAYN Ar Rayn 150.95 106 IAMs_20 IAMs_20 22 01 58.5
comp=Z,296nm,22.0s
HHC Hu-ho-hao-te 151.73 292 *e*PKPbc **PKPdf 21 00 35.3 -3.2**
XAN Xi'an 153.05 276 P **PKPab 21 01 06.5 +7.1**
XAN pP sPKPab 21 01 18.1 +16
CMAR Chiang Mai Arr 153.57 236 PKPbc **PKPdf 21 00 43.1 +1.3**
comp=Z,0.5nm,0.9s,baz=94,slow=3.6,SNR=4.5
SONM Songino Array 154.40 308 PKPbc **PKPdf 21 00 45.0 +2.8**
comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=4.6
PZH PanZhiHua 156.29 255 PKP **PKPdf 21 00 45.6 +0.2**
ZALV Zalesovo Beam 160.58 344 PKP **PKPdf 21 00 46.0 -3.5**
comp=Z,0.2nm,0.3s,baz=111,slow=2.0,SNR=1.4
GTA Gaotai 160.77 289 *e*PKP **PKPdf 21 00 55.4 +5.0**
GTA AMB AMB
comp=Z,96nm,6.5s
GTA LR LR
comp=Z,89nm,17.8s
GTA LR LR
comp=Z,92nm,19.3s
GTA LR LR
comp=Z,110nm,18.9s
WMQ Urumqi 167.81 316 *e*PKP **PKPdf 21 00 57.3 +0.8**
WMQ LR LR
comp=Z,220nm,19.1s
WMQ LR LR
comp=Z,71nm,19.9s
WMQ LR LR
comp=Z,260nm,23.9s

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*IDC **13** 20:45:31.4±1.6, 23°.75N×121°.68E, h0km, mb3.5/3, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=46.0km s-min=30.3km az=66.0*
*JMA **13** 20:45:37.7±0.1, 23°.7N±0°.7×121°.8E±0°.6, h37km±1km, MV3.6/14, TAIWAN REGION*
*TAP **13** 20:45:38.2, 23°.79N×121°.84E, h46km, ML4.1, C*
*NEIC **13** 20:45:38.0±1.1, 23°.75N±0°.04×121°.84E±0°.05, h37km±46km, Error ellipse: s-maj=7.0km s-min=5.4km az=97.0*
ISC 13 20:45:36.8±1.0, **23°.76N**±0°.02×**121°.89E**±0°.02, **h29**km±9km, **n156**, σ1.9**06**/254, **mb3.5**/3, **10C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
TEYL	**Yanliau Villag** baz=302	**0.29**	**292**	⇑*i*P		**Pn**	**20 45 46.6**	**+1.5**
TEYL				*i* S		**Sn**	**20 45 53.0**	**+2.5**
TEGC	**Jichi Village** baz=248	**0.33**	**261**	P		**Pn**	**20 45 47.1**	**+1.5**
TEGC				S		**Sn**	**20 45 53.8**	**+2.4**
HWA	**Hwalien** baz=306	**0.34**	**310**	⇑*i*P		**Pn**	**20 45 47.0**	**+1.2**
HWA				*i* S		**Sn**	**20 45 53.5**	**+1.8**
TWD	**Chiawan** baz=319	**0.42**	**320**	⇑*i*P		**Pn**	**20 45 47.5**	**+0.6**
TWD				*i* S		**Sn**	**20 45 54.1**	**+0.5**
ETM	**Tongmen** baz=298	**0.42**	**299**	P		**Pn**	**20 45 47.4**	**+0.5**
ESL	**Shilin** baz=273	**0.42**	**277**	⇓*i*P		**Pn**	**20 45 47.6**	**+0.6**
ESL				S		**Sn**	**20 45 54.3**	**+0.5**
EGFH	**Guangfu** baz=260	**0.43**	**258**	⇓*i*P		**Pn**	**20 45 48.1**	**+1.0**
EGFH				S		**Sn**	**20 45 55.4**	**+1.4**
ETL	**Fush Village** baz=331	**0.47**	**328**	⇑*i*P		**Pn**	**20 45 48.1**	**+0.5**
ETL				S		**Sn**	**20 45 55.2**	**+0.2**
NACB	**Ninganchiao**	**0.49**	**327**	Pn		**Pn**	**20 45 48.1**	**+0.2**
NACB	**Ninganchiao** baz=329	**0.49**	**327**	⇑*i*P		**Pn**	**20 45 48.3**	**+0.3**
NACB				*i* S		**Sn**	**20 45 55.6**	**0.0**
HGSD	**Ruisui** baz=232	**0.50**	**238**	⇓*i*P		**Pn**	**20 45 49.1**	**+1.0**
HGSD				S		**Sn**	**20 45 57.2**	**+1.4**
EHY	**Hungye** baz=250	**0.58**	**244**	⇓*i*P		**Pn**	**20 45 49.7**	**+0.6**
EHY				S		**Sn**	**20 45 57.9**	**+0.2**
ETLH	**Xiulin Townshi** baz=321	**0.58**	**320**	P		**Pn**	**20 45 49.6**	**+0.4**
ETLH				S		**Sn**	**20 45 57.5**	**-0.3**
ECBN	**Changbin** baz=210	**0.60**	**222**	P		**Pn**	**20 45 49.6**	**+0.2**
ECBN				S		**Sn**	**20 45 58.6**	**+0.5**
YULB	**Yu-li**	**0.66**	**236**	Pn		**Pn**	**20 45 50.1**	**-0.1**
YULB	**Yu-li** baz=242	**0.66**	**236**	⇓*i*P		**Pn**	**20 45 50.9**	**+0.7**
YULB				S		**Sn**	**20 45 59.9**	**+0.3**
EYUL	**Yuli** baz=239	**0.67**	**232**	P		**Pn**	**20 45 51.4**	**+1.1**
EYUL				*e*S		**Sn**	**20 46 01.0**	**+1.2**
TWF1	**Yuli** baz=239	**0.68**	**233**	⇓*i*P		**Pn**	**20 45 51.3**	**+0.8**
TWF1				*i* S		**Sn**	**20 46 00.8**	**+0.7**
OWD	**Renai** baz=285	**0.68**	**287**	⇓*i*P		**Pn**	**20 45 51.2**	**+0.6**
OWD				S		**Sn**	**20 46 00.0**	**-0.4**
VWDT	**VWDT** baz=267	**0.69**	**270**	⇓*i*P		**Pn**	**20 45 51.5**	**+0.9**
VWDT				S		**Sn**	**20 46 00.1**	**-0.2**
WHF	**Hehuan Shan** baz=304	**0.69**	**304**	⇓*i*P		**Pn**	**20 45 51.2**	**+0.2**
WHF				S		**Sb**	**20 46 00.2**	**+0.3**
EWUT	**Wuta** baz=346	**0.69**	**352**	⇑*i*P		**Pn**	**20 45 50.4**	**-0.2**
EWUT				S		**Sb**	**20 45 59.6**	**+0.1**
CHGB	**Renai** baz=293	**0.72**	**295**	⇓*i*P		**Pn**	**20 45 51.9**	**+0.7**
CHGB				S		**Sn**	**20 46 01.2**	**-0.3**
WUSB	**Renai** baz=286	**0.74**	**288**	⇓*i*P		**Pn**	**20 45 52.2**	**+0.7**
WUSB				S		**Sn**	**20 46 01.6**	**-0.3**
FULB	**Fuli** baz=213	**0.78**	**224**	P		**Pn**	**20 45 53.0**	**+1.1**
FULB				S		**Sn**	**20 46 04.0**	**+1.3**
NNSB	**Datong** baz=319	**0.81**	**325**	P		**Pn**	**20 45 53.0**	**+0.5**
NNSB				S		**Sb**	**20 46 03.2**	**+0.2**
TWT	**Tachien** baz=312	**0.82**	**307**	P		**Pn**	**20 45 53.4**	**+0.9**
TWT				*e*S		**Sb**	**20 46 03.5**	**+0.2**
NNS	**Nan Shan** baz=319	**0.82**	**325**	⇓P		**Pb**	**20 45 52.2**	**-0.5**
NNS				S		**Sb**	**20 46 02.7**	**-0.8**
TDCB	**Techi** baz=312	**0.83**	**306**	P		**Pn**	**20 45 53.5**	**+0.8**
TDCB				S		**Sb**	**20 46 03.5**	**-0.2**
LATG	**Datong** baz=338	**0.84**	**337**	P		**Pn**	**20 45 53.3**	**+0.5**
LATG				*e*S		**Sn**	**20 46 04.3**	**0.0**
TWC	**Suao** baz=9.0	**0.84**	**357**	⇑*i*P		**Pn**	**20 45 53.9**	**+1.1**
TWC				*i* S		**Sn**	**20 46 05.1**	**+0.9**
SSLB	**Suanglung**	**0.86**	**272**	Pn		**Pn**	**20 45 53.4**	**+0.4**
SSLB	**Suanglung**	**0.86**	**272**	P		**Pn**	**20 45 53.9**	**+0.9**
SSLB	**Suanglung** baz=264	**0.86**	**272**	P		**Pn**	**20 45 53.5**	**+0.6**
SSLB				*e*S		**Sn**	**20 46 05.7**	**+1.0**
EHD	**Haiduan** baz=221	**0.88**	**226**	*e*P		**Pb**	**20 45 51.5**	**-1.9**
YUS	**Yu-Shan** baz=249	**0.90**	**253**	⇓*i*P		**Pn**	**20 45 55.1**	**+1.1**
YUS				*i* S		**Sn**	**20 46 06.0**	**-0.3**
NDT	**Datong Townshi** baz=339	**0.91**	**338**	*e*P		**Pb**	**20 45 53.7**	**-0.3**
NDT				*e*S		**Sb**	**20 46 04.5**	**-1.1**
SMLT	**Sun Moon Lake** baz=279	**0.92**	**278**	⇓*i*P		**Pn**	**20 45 54.7**	**+0.9**
SMLT				*i* S		**Sn**	**20 46 05.9**	**-0.2**
ENTT	**Nioudou** baz=343	**0.92**	**341**	*e*P		**Pb**	**20 45 53.8**	**-0.5**

ENTT eS Sb 20 46 05.4 -0.8
baz=343
WCS Beigang Elemen 0.94 288 P Pb 20 45 54.0 -0.5
baz=280
EDH Donghe 0.95 215 eP Pn 20 45 54.8 +0.6
baz=203
EDH eS Sn 20 46 06.8 -0.1
baz=203
WHYT Xinyi Township 0.95 266 eP Pn 20 45 55.7 +1.4
baz=259
WHYT eS Sn 20 46 07.1 +0.1
baz=259
TYC Yuchr 0.96 279⇓ i P Pn 20 45 55.2 +0.9
baz=282
TYC eS Sn 20 46 06.9 -0.1
baz=282
ELDTW Lidau 0.98 235⇓ i P Pn 20 45 55.4 +0.6
baz=225
ELDTW eS Sn 20 46 08.1 +0.3
baz=225
WHP Taichung City 1.00 301 eP Pn 20 45 56.3 +1.3
baz=305
ILA Ilan 1.01 353 eP Pn 20 45 56.2 +1.2
baz=355
ILA eS Sn 20 46 09.5 +1.2
baz=355
YHNB Yeheng 1.02 333 Pn Pn 20 45 55.7 +0.5
YHNB Sn Sb 20 46 07.3 -1.6
YHNB Yeheng 1.02 333 P Pn 20 45 56.5 +1.2
YHNB Yeheng 1.02 333⇓ i P Pn 20 45 56.2 +1.0
baz=334
YHNB S Sb 20 46 08.2 -0.8
baz=334
ALS Alishan 1.03 256⇓ i P Pn 20 45 56.9 +1.4
baz=259
ALS S Sn 20 46 09.7 +0.6
baz=259
FUSB Fushanzhiwuyua 1.03 345 P Pn 20 45 56.8 +1.3
baz=336
FUSB S Sb 20 46 08.7 -0.6
baz=336
NSK Sanguang 1.03 332⇓ i P Pb 20 45 55.4 -0.7
baz=333
NSK i S Sb 20 46 07.7 -1.6
baz=333
WJS Zhushan 1.07 274 eP Pn 20 45 57.6 +1.7
baz=271
WJS eS Sn 20 46 11.1 +1.4
baz=271
LONT Longtian 1.10 220 eP Pb 20 45 56.9 -0.3
baz=216
LONT eS Sn 20 46 11.3 +0.7
baz=216
WNT Mingjian 1.11 276 P Pb 20 45 58.4 +1.0
baz=274
WNT eS Sn 20 46 12.8 +2.1
baz=274
NFF Wufeng Townshi 1.12 321 eP Pn 20 45 56.8 +0.2
baz=321
NFF eS Sb 20 46 10.1 -1.7
baz=321
CHN5 Tsauling 1.12 262 P Pb 20 45 57.5 -0.1
baz=259
CHN5 eS Sn 20 46 12.2 +0.9
baz=259
LDUT Ludao 1.15 200 eP Pb 20 45 57.4 -0.6
baz=189
LDUT eS Sb 20 46 11.1 -1.5
baz=189
TCU Taichung 1.18 289 eP Pb 20 45 59.4 +0.9
baz=288
TCU eS Sn 20 46 15.1 +2.7
baz=288
TWQ1 Liyutan 1.18 300 P Pb 20 45 59.2 +0.7
baz=299
TWQ1 eS Sn 20 46 14.1 +1.6
baz=299
STYH Taoyuan 1.18 240 P Pb 20 45 58.1 -0.5
baz=237
STYH S Sb 20 46 12.2 -1.2
baz=237
JYNG Yonagunijimaku 1.18 54 P Pb 20 45 59.4 +0.8
JYNG S Sn 20 46 14.9 +2.3
NSTT Nanjuang 1.19 317⇓ i P Pb 20 45 59.4 +0.7
baz=303
NSTT i S Sn 20 46 13.8 +1.1
baz=303
LIOB Emei 1.19 318 eP Pb 20 45 59.6 +0.8
baz=318
LIOB eS Sn 20 46 14.2 +1.4
baz=318
TWGBT Beinan 1.20 219 P Pb 20 45 58.0 -0.9
baz=215
TWGBT eS Sb 20 46 12.0 -2.0
baz=215
TWG Pinlang 1.20 219 Pn Pn 20 45 57.5 -0.1
TIPB Shuangxi 1.21 357 P Pb 20 45 59.7 +0.6
baz=10.0
TIPB S Sn 20 46 14.3 +1.1
baz=10.0
NSY Sanyi 1.22 303⇓ i P Pb 20 45 59.8 +0.5
baz=302
NSY S Sn 20 46 15.6 +2.0
baz=302
WCKO Fanlu 1.22 255 P Pb 20 45 59.3 0.0
baz=252
WCKO S Sn 20 46 15.2 +1.6
baz=252
YOJ Yonaguni jima 1.24 56 Pn Pb 20 45 59.8 +0.2
YOJ Yonaguni jima 1.24 56 eP Pb 20 46 00.3 +0.7
baz=58
YOJ eS Sb 20 46 16.2 +1.0
baz=58
YOJ Yonaguni jima 1.24 56 P Pb 20 46 00.1 +0.6
YOJ eS Sb 20 46 16.3 +1.1
WDLH Douliu 1.24 267 P Pb 20 46 00.4 +0.8
baz=264
WDLH S Sn 20 46 16.9 +2.9
baz=264
NHDH Xindian Distri 1.24 345 eS Sn 20 46 14.6 +0.5
baz=336
TPUB Ta-pu 1.24 249 Pn Pb 20 46 00.1 +0.4
TPUB Ta-pu 1.24 249 P Pb 20 46 00.7 +1.0
TPUB Ta-pu 1.24 249 P Pb 20 46 00.5 +0.8
baz=246
TPUB S Sn 20 46 16.4 +2.2
baz=246
TWB1 Santiao Chiao 1.25 4 eP Pb 20 45 59.9 +0.3
baz=6.0
TWB1 eS Sn 20 46 14.8 +0.7
baz=6.0
TWA Mucha 1.25 347 P Pb 20 46 00.2 +0.5
baz=338
TWA S Sb 20 46 15.4 0.0
baz=338
WCHH Zhanghua 1.26 285 eP Pb 20 46 00.4 +0.5
baz=283
WCHH eS Sb 20 46 17.3 +1.6
baz=283
TATO Taipei 1.26 343 Pn Pb 20 45 59.8 -0.2
NMLH Miaoli 1.27 308 eP Pb 20 46 00.2 +0.2
baz=307
NMLH eS Sb 20 46 16.5 +0.5
baz=307
WTP Ta-pu 1.28 247⇓ P Pb 20 46 00.9 +0.7
baz=244
WTP S Sb 20 46 17.3 +1.0
baz=244
WDJ Dajia District 1.28 297 eP Pb 20 46 00.6 +0.3
baz=296
WDJ eS Sb 20 46 16.6 +0.2
baz=296
NWF Wu-fen Shan 1.31 356 P Pb 20 46 01.3 +0.5
baz=357
NWF S Sb 20 46 17.3 0.0
baz=357
CHN2 Minshiung 1.32 260 eP Pb 20 46 01.8 +0.9
baz=258
CHN2 eS Sb 20 46 19.1 +1.7
baz=258
SBCB Hsinchu 1.32 321 eP Pb 20 46 01.1 +0.2
baz=336
TAP Taipei 1.32 345 eP Pb 20 46 01.2 +0.2
baz=345
TAP eS Sb 20 46 17.3 -0.1
baz=345
SXI1 Grass Mountain 1.33 359 eP Pb 20 46 01.3 +0.2
baz=14
SXI1 eS Sb 20 46 17.8 +0.1
baz=14
HSN Hsinchu 1.33 321 eP Pb 20 46 01.9 +0.7
baz=336
HSN eS Sb 20 46 19.0 +1.1
baz=336
NCUH Zhongli 1.36 332 eP Pb 20 46 01.6 0.0
baz=333
NCU National Centr 1.36 332 eP Pb 20 46 01.6 -0.1
baz=332
NCU eS Sb 20 46 19.0 +0.2
baz=332
CHY Chiayi 1.37 259 eP Pb 20 46 02.2 +0.4
baz=257
CHY eS Sb 20 46 19.2 +0.4
baz=257
CHN1 Nanshi 1.38 246⇑ i P Pb 20 46 02.4 +0.5
baz=243
CHN1 i S Sb 20 46 20.3 +1.2
baz=243
SGST Jiashian 1.38 241⇑ i P Pb 20 46 01.9 -0.1
baz=238
SGST S Sb 20 46 19.7 +0.6
baz=238
TWK Hsinying 1.38 249 P Pb 20 46 02.0 +0.1
baz=246
TWK S Sb 20 46 20.2 +1.0
baz=246
SNST Tainan City 1.39 247 P Pb 20 46 03.9 +1.9
baz=245
SNST S Sb 20 46 21.6 +2.2
baz=245
WRL Guolierlin Hig 1.39 276 P Pb 20 46 01.2 -0.9
baz=274
WRL eS Sb 20 46 19.5 0.0
baz=274
TWS1 Kuangyinshan 1.40 342 eP Pb 20 46 01.9 -0.4
baz=343
TWS1 eS Sb 20 46 19.7 -0.1
baz=343
YM01 YM01 1.41 348 P Pb 20 46 01.7 -0.8
baz=336
YM01 eS Sn 20 46 19.0 +0.7
baz=336
ECL Taimali 1.44 217 eP Pn 20 46 01.3 +0.3
baz=212
NTST Danshui 1.45 344 eP Pb 20 46 02.8 -0.4
baz=346
ANP Anpu 1.46 347 eP Pb 20 46 02.5 -0.8
baz=349
WTCT Ta-ch'eng 1.48 274 eP Pb 20 46 03.6 0.0
baz=272
WTCT eS Sb 20 46 22.5 +0.6
baz=272
ICHU Yijhu 1.53 255 eP Pb 20 46 04.2 -0.3
baz=253
ICHU eS Sb 20 46 23.2 -0.3
baz=253
TWY Chenhua 1.53 350 eP Pb 20 46 04.2 -0.3
baz=339
WSF Szhu 1.53 266 eP Pb 20 46 04.2 -0.4
baz=263
WSF eS Sb 20 46 23.9 +0.4
baz=263
SSD Sandimen 1.54 229 P Pb 20 46 04.8 +0.2
baz=226
SSD S Sb 20 46 24.3 +0.6
baz=226
SCST Cishan 1.55 236 eP Pb 20 46 06.0 +1.2
baz=245
SCST eS Sb 20 46 26.4 +2.3
baz=245
TSMG Majia 1.55 228 eP Pb 20 46 05.6 +0.7
baz=225
TSMG eS Sb 20 46 24.5 +0.3
baz=225
CHN3 Shinhua 1.56 244 eP Pb 20 46 06.1 +1.1
baz=242
CHN3 eS Sb 20 46 26.5 +2.2
baz=242
CHN8 Yiju 1.59 255 P Pb 20 46 05.1 -0.5
baz=253
CHN8 S Sb 20 46 24.9 -0.5
baz=253
SHHT Tainan City 1.60 243 eP Pb 20 46 06.0 +0.4
baz=239
MASBT Mashibuluo 1.63 226 eP Pb 20 46 05.6 -0.6
baz=223
MASBT eS Sb 20 46 26.5 +0.3
baz=223
TWM1 Shoushan 1.64 236 eP Pb 20 46 08.1 +1.7
baz=244
TWM1 eS Sb 20 46 30.0 +3.3
baz=244
SCLT Jiali 1.66 250 eP Pb 20 46 06.3 -0.4
baz=247
SCLT eS Sb 20 46 27.2 0.0
baz=247
EAST Anshuo 1.67 215 eP Pn 20 46 05.1 +0.8
baz=203
TAWH Dawu Township 1.69 213 eP Pn 20 46 04.8 +0.4
baz=209
TSCK Chigu Township 1.77 250 eP Pn 20 46 06.3 +0.9
baz=247
LYUB Lan-yu 1.77 189 eP Pn 20 46 05.4 -0.1
baz=187
LYUB eS Sn 20 46 25.3 -1.8
baz=187
HATJ Hateruma jima 1.78 80 P Pb 20 46 08.0 -0.7
HATJ S Sb 20 46 29.9 -0.7
IRIF Iriomote-Funau 1.78 71 P Pb 20 46 07.9 -0.8
SCZT Fangliau 1.81 220 eP Pb 20 46 09.0 -0.3
baz=228
SCZT eS Sb 20 46 31.9 +0.4
baz=228
SLIU Shizi 1.84 213 eP Pb 20 46 09.2 -0.6
baz=202
JKRS Kuro-shima 2.00 76 P Pb 20 46 11.4 -1.0
JKRS S Sb 20 46 35.6 -1.2
PHUB P'eng-hu 2.14 264 eP Pn 20 46 11.8 +1.2
baz=274
JIJ Ishigaki jima 2.15 73 i P Pn 20 46 12.6 +2.0
JIJ S Sn 20 46 37.3 +0.9
PNG Penghu 2.15 265 eP Pn 20 46 11.9 +1.2
baz=263
PNG eS Sn 20 46 36.4 0.0
baz=263
VCHM Qimei 2.33 257 eP Pn 20 46 14.1 +1.0
baz=254
VWUC VWUC 2.54 299 eP Pn 20 46 16.2 +0.1
baz=298
JTJ Tarama 2.71 71 P Pn 20 46 20.7 +2.2
JTJ eS Sn 20 46 51.3 +1.0
PTMZ Houxiangcun 2.83 297 eP Pn 20 46 20.1 +0.1
baz=296
JIRB Irabujima 3.18 70 P Pn 20 46 26.8 +2.0
KNM Kinmen 3.23 282 eP Pn 20 46 27.6 +2.1
baz=280
KNM eS Sn 20 47 03.8 +0.8
baz=280
JIKM Ikemajima 3.27 69 eP Pn 20 46 28.9 +2.7
JIKM eS Sn 20 47 05.3 +1.1
KNMB Chin-men Tao 3.27 283 Pn Pn 20 46 26.1 -0.1
KNMB Chin-men Tao 3.27 283 eP Pn 20 46 26.5 +0.3
baz=282
JMJ2 Miyako jima3 3.29 72 P Pn 20 46 29.1 +2.8
JMJ2 S Sn 20 47 06.7 +2.2
JOGS Gusukube 3.36 72 P Pn 20 46 29.8 +2.5
MHZQ Yeshan 3.49 312 eP Pn 20 46 28.8 -0.3
baz=301
XPSS Dashiqiu 3.51 334 eP Pn 20 46 29.1 -0.3
baz=333
AXDP Jialang 3.75 288 eP Pn 20 46 33.1 +0.4
baz=287
ZPLA Ao Xicun 3.79 273 eP Pn 20 46 33.8 +0.5
baz=282
DSXP Dongshan 4.09 270 eP Pn 20 46 38.1 +0.7
baz=269
PACPP Pamplona Cagay 5.30 186⇑ eP Pn 20 46 56.4 +2.4
JOW Kunigami 6.54 61 Pn Pn 20 47 11.3 +0.2
2.3nm,0.3s,baz=255,slow=20,SNR=1.6
9.0nm,0.4s
JOW Kunigami 6.54 61 Pn Pn 20 47 11.2 +0.1
MKAR Makanchi Array 39.09 316 P P 20 52 59.1 -2.4
0.4nm,0.7s,baz=105,slow=7.2,SNR=2.1
0.4nm,0.7s
H11N1 WAKE ISLAND Hy 41.87 87 T T 21 38 43.0
baz=282
H11N2 WAKE ISLAND Hy 41.87 87 T T 21 38 43.2
baz=282
H11N3 WAKE ISLAND Hy 41.88 87 T T 21 38 39.6
baz=282
H11S3 WAKE ISLAND Hy 41.98 88 T T 21 38 47.5
baz=285,slow=75,SNR=5.2
H11S1 WAKE ISLAND Hy 41.99 88 T T 21 38 47.4
baz=285,slow=75,SNR=5.7
H11S2 WAKE ISLAND Hy 42.00 88 T T 21 38 50.1
baz=285,slow=75,SNR=5.0
WRA Warramunga Arr 45.10 163 P P 20 53 49.1 -1.6
0.4nm,0.3s,baz=345,slow=8.6,SNR=4.0
0.4nm,0.3s
ASAR Alice Springs 48.57 165 P P 20 54 17.5 -0.3
0.2nm,0.4s,baz=347,slow=7.6,SNR=4.6
0.2nm,0.4s

MAN 13 21:08:13.8, 8°.21N×123°.09E, h13km, mb4.1, ML2.9, MS2.6, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.46**	**35**	⇓ i P	Pb	21 08 23.5	-0.3
DCPH				i S	Sb	21 08 31.0	+0.6
PAGZ	**Pagadian**	**0.46**	**141**	⇑ i P	Pg	21 08 21.6	-1.4
PAGZ				i S	Sg	21 08 27.7	-1.4
LSIP	**Lazi, Siquijor**	**1.06**	**30**	⇑ eP	Pb	21 08 32.9	-1.2
LSIP				i S	Sb	21 08 47.2	-0.7
SNPH	**Sibulan**	**1.14**	**7**	⇑ i P	Pb	21 08 34.9	-0.6
SNPH				i S	Sg	21 08 50.7	0.0
CGP	**Cagayan de Oro**	**1.61**	**81**	eP	Pg	21 08 48.0	+3.3
CGP				eS	Sn	21 08 60.0	-2.6

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*IDC **13** 21:12:22.5±1.1, 5°.46S×153°.46E, h0km, mb3.7/8, mbtmp3.8/8, MS4.1/3, Error ellipse: s-maj=34.6km s-min=18.8km az=60.0*
*NEIC **13** 21:12:28.1±2.3, 5°.44S±0°.08×153°.71E±0°.06, h24km±8km, mb4.3/12, Error ellipse: s-maj=12.0km s-min=7.3km az=203.0*

ISC 13 21:12:28.5±0.7, 5°.37S±0°.06×153°.61E±0°.08, h43km, n34, σ1§67/32, mb3.9/12, MS4.2/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.86**	**309**	Pn	**Pn**	**21 12 57.6**	**-0.2**
RABL				Sn	**Sn**	**21 13 23.3**	**+3.1**
KRVT	**Keravat (AS076**	**1.90**	**304**	Pn	**Pn**	**21 12 56.9**	**-1.5**
46nm,0.3s,baz=167,slow=3.0,SNR=31							
KRVT				Sn	**Sn**	**21 13 20.1**	**-1.1**
78nm,0.3s,baz=128,slow=22,SNR=8.6							
MANU	**Manus Island**	**7.05**	**298**		Pn	21 14 14.1	+4.9
PMG	**Port Moresby**	**7.55**	**238**	Pn	**Pn**	**21 14 15.5**	**-0.5**
3.6nm,0.3s,baz=42,slow=14,SNR=6.1							
PMG				Sn	**Sn**	**21 15 36.6**	**-3.8**
1.1nm,0.3s,baz=9.0,slow=19,SNR=3.3							
PMG	**Port Moresby**	**7.55**	**238**	Pn	**Pn**	**21 14 16.3**	**+0.3**
PMG					**Sn**	**21 15 40.8**	**+0.5**
PATS	**Pohnpei**	**13.01**	**21**	Pn	**Pn**	**21 15 29.0**	**-1.8**
KOUNC	**Koumac, New Ca**	**18.31**	**146**		**P**	**21 16 39.5**	**+0.4**
EIDS	**Eidsvold**	**20.03**	**187**	P	**P**	**21 16 57.7**	**-0.2**
LIFNC	**LIFOU**	**20.24**	**140**	P	**P**	**21 17 00.4**	**+0.2**
DZM	**Mont Dzumac**	**20.73**	**144**	P	**P**	**21 17 06.1**	**+0.5**
12nm,0.5s,baz=294,slow=9.4,SNR=34							
12nm,0.5s							
DZM	**Mont Dzumac**	**20.73**	**144**		**P**	**21 17 07.2**	**+1.6**
DZM				IAmb	IAmb	21 17 07.9	
comp=Z,13nm,0.5s							
ONTNC	**Ouen Toro**	**20.92**	**145**	P	**P**	**21 17 08.3**	**+0.8**
OUENC	**Ouen Island, N**	**21.23**	**144**	P	**P**	**21 17 11.9**	**+1.0**
OUENC				IAmb	IAmb	21 17 12.9	
comp=Z,9.7nm,0.8s							
MARNC	**Mare, Loyalty**	**21.25**	**140**	P	**P**	**21 17 11.3**	**+0.2**
MTN	**Manton Dam**	**23.39**	**250**	P	**P**	**21 17 35.3**	**+1.7**
MTN				IAmb	IAmb	21 17 40.6	
comp=Z,13nm,1.1s							
WB0	**Warramunga Arr**	**23.55**	**231**	P	**P**	**21 17 34.6**	**-0.6**
WB0				IAmb	IAmb	21 17 48.6	
comp=Z,4.2nm,0.9s							
WB2	**Warramunga Arr**	**23.68**	**231**	P	**P**	**21 17 40.8**	**+4.4**
WRA	**Warramunga Arr**	**23.69**	**231**	P	**P**	**21 17 33.8**	**-2.7**
comp=Z,0.6nm,0.6s,baz=54,slow=9.8,SNR=8.1							
comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**26.29**	**224**	P	**P**	**21 17 58.5**	**-1.7**
comp=Z,0.6nm,0.7s,baz=56,slow=8.6,SNR=6.2							
ASAR				PcP	**PcP**	**21 21 26.6**	**+0.7**
comp=Z,0.2nm,0.6s,baz=50,slow=2.7,SNR=2.1							
comp=Z,0.6nm,0.7s							
KNRA	**Kununurra**	**26.45**	**245**	P	**P**	**21 18 03.2**	**+1.5**
KNRA				IAmb	IAmb	21 18 18.7	
comp=Z,9.5nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**27.00**	**28**	T	T	21 46 22.2	
baz=208,slow=74,SNR=5.1							
H11S2	**WAKE ISLAND Hy**	**27.00**	**28**	T	T	21 46 23.7	
baz=208,slow=74,SNR=4.5							
H11S1	**WAKE ISLAND Hy**	**27.02**	**28**	T	T	21 46 27.5	
baz=208,slow=74,SNR=3.5							
SOEI	**Soe**	**29.40**	**260**	P	**P**	**21 18 31.0**	**+2.8**
BKZ	**Black Stump Fm**	**39.50**	**152**	P	**P**	**21 19 55.2**	**+0.1**
BKZ				IAmb	IAmb	21 20 00.2	
comp=Z,8.5nm,1.2s							
PETK	**Petropavlovsk-**	**58.36**	**3**	LR	LR	21 41 24.0	
comp=Z,251nm,21.6s,baz=106,slow=30							
CMAR	**Chiang Mai Arr**	**58.85**	**295**	P	**P**	**21 22 23.3**	**0.0**
comp=Z,0.3nm,0.3s,baz=101,slow=4.8,SNR=1.4							
comp=Z,0.3nm,0.3s							
SONM	**Songino Array**	**67.24**	**328**	P	**P**	**21 23 18.9**	**+0.3**
comp=Z,0.4nm,0.6s,baz=142,slow=7.2,SNR=3.1							
comp=Z,0.4nm,0.6s							
YAK	**Yakutsk**	**69.69**	**348**	LR	LR	21 50 02.1	
comp=Z,95nm,21.7s,baz=89,slow=32							
VNDA	**Vanda**	**72.23**	**178**	P	**P**	**21 23 48.8**	**+0.1**
comp=Z,0.4nm,0.9s,baz=0.0,slow=6.1,SNR=2.0							
comp=Z,0.4nm,0.9s							
MKAR	**Makanchi Array**	**81.28**	**319**	P	**P**	**21 24 40.9**	**+0.6**
comp=Z,0.8nm,0.9s,baz=123,slow=5.3,SNR=2.3							
comp=Z,0.8nm,0.9s							
ZALV	**Zalesovo Beam**	**82.07**	**326**	P	**P**	**21 24 43.2**	**-1.1**
comp=Z,0.3nm,0.3s,baz=101,slow=7.5,SNR=2.3							
comp=Z,0.3nm,0.3s							
WSAR	**Wadi Sarin**	**96.66**	**293**	LR	LR	22 13 58.1	
comp=Z,82nm,18.2s,baz=248,slow=38							
TORD	**Torodi Ar. Bea**	**151.25**	**288**	PKPbc	**PKPbc**	**21 32 17.9**	**-0.5**
comp=Z,0.7nm,0.4s,baz=95,slow=1.9,SNR=9.2							

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*IDC **13** 21:13:04.4±0.8, 62°.74N×125°.08W, h0km, mb3.5/4, mbtmp3.6/8, ML3.5/4, MS3.8/5, Error ellipse: s-maj=14.7km s-min=9.8km az=6.0*
*NEIC **13** 21:13:04±2.4, 62°.75N±0°.06×124°.99W±0°.06, h10km±2km, Error ellipse: s-maj=11.5km s-min=3.0km az=336.0*
*ANF **13** 21:13:05.5±0.2, 62°.80N×125°.29W, h10km, ML4.3/9, Error ellipse: s-maj=2.5km s-min=2.0km az=108.0*
*PGC **13** 21:13:05.8±0.0, 62°.76N×125°.30W, h5km, mb4.1, ML4.1/10, 236km Wnw of Fort Simpson, Nt Nw Territories - Nunavut, Canada*

ISC 13 21:13:03.7±0.5, 62°.81N±0°.03×125°.25W±0°.03, h10km, n221, σ2§41/252, mb3.9/3, MS4.1/4, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRGLY	**Wrigley**	**0.92**	**62**	P	**Pn**	**21 13 23.0**	**+0.4**
baz=242,SNR=106							
WRGLY				S	**Sn**	**21 13 36.9**	**+1.0**
baz=242							
TGTN	**Hyland Airport**	**1.92**	**229**	Pn	**Pn**	**21 13 37.5**	**+1.1**
TGTN				Sn	**Sn**	**21 14 02.9**	**+2.4**
TGTN	**Hyland Airport**	**1.92**	**229**	P	**Pn**	**21 13 37.2**	**+0.8**
baz=47,SNR=247							
FLDN	**Fort Liard**	**2.72**	**161**	Pn	**Pn**	**21 13 49.1**	**+1.7**
FLDN				Sn	**Sn**	**21 14 22.1**	**+1.9**
FLDN	**Fort Liard**	**2.72**	**161**	P	**Pn**	**21 13 49.5**	**+2.2**
baz=342							
FLDN				S	**Sn**	**21 14 22.1**	**+1.9**
baz=342							
MMPY	**Sheldon Lake,**	**2.78**	**269**	Pn	**Pn**	**21 13 49.5**	**+1.3**
MMPY	**Sheldon Lake,**	**2.78**	**269**	P	**Pn**	**21 13 49.4**	**+1.3**
baz=84,SNR=14							
WTLY	**Watson Lake, Y**	**3.20**	**214**	Pn	**Pn**	**21 13 54.0**	**+0.1**
WTLY	**Watson Lake, Y**	**3.20**	**214**	Sb	**Sb**	**21 14 42.9**	**+3.4**
baz=31							
NBC1	**NorthernBC 1**	**3.24**	**167**	Sn	**Sn**	**21 14 34.7**	**+1.6**
NBC2	**NorthernBC 2**	**3.32**	**155**	Pn	**Pn**	**21 13 57.7**	**+2.1**
FARO	**Faro, Yukon**	**3.80**	**265**	Pn	**Pn**	**21 14 02.3**	**+0.1**

FARO Faro, Yukon 3.80 265 P **Pn** **21 14 03.7 +1.5**
baz=78
N32M Quiet Lake 4.05 249 P **Pn** **21 14 07.2 +1.5**
baz=63
FNBB Fort Nelson 4.08 163 Pn **Pn** **21 14 06.7 +0.6**
FNBB Sn **Sn** **21 14 53.5 -0.5**
M31M Drury Creek, Y 4.28 266 Pn **Pn** **21 14 09.9 +1.1**
M31M Drury Creek, Y 4.28 266 Pn **Pn** **21 14 09.8 +0.9**
M31M Sn **Sn** **21 14 58.2 -0.6**
M31M Drury Creek, Y 4.28 266 P **Pn** **21 14 10.2 +1.4**
baz=78,SNR=15
R33M Jennings River 4.41 222 Pn **Pn** **21 14 12.2 +1.5**
R33M Sn **Sn** **21 15 00.2 -1.9**
R33M Sg **Sb** **21 15 21.1 +6.7**
R33M Jennings River 4.41 222 P **Pn** **21 14 12.3 +1.6**
baz=37,SNR=18
P33M Teslin, Yukon 4.46 238 Pn **Pn** **21 14 12.5 +1.1**
P33M Teslin, Yukon 4.46 238 Pn **Pn** **21 14 12.6 +1.2**
P33M Sn **Sn** **21 15 03.2 -0.2**
P33M Teslin, Yukon 4.46 238 P **Pn** **21 14 12.6 +1.2**
baz=51,SNR=40
NBC6 NorthernBC 6 4.66 154 Pn **Pn** **21 14 14.8 +0.8**
NBC6 Sn **Sn** **21 15 07.1 -0.9**
MAYO Mayo, Yukon 4.88 284 Pn **Pn** **21 14 18.0 +1.0**
YKA Yellowknife Ar 4.92 89 Pn **Pn** **21 14 18.4 +0.8**
0.3nm,0.3s,baz=273,slow=13,SNR=26
YKA Sn **Sn** **21 15 13.2 -1.2**
5.1nm,0.3s,baz=272,slow=22,SNR=5.1
YKA Lg Lg 21 15 33.1
9.6nm,0.3s,baz=276,slow=30,SNR=12
1.9nm,0.4s
YKA Yellowknife Ar 4.92 89 Pn **Pn** **21 14 15.6 -2.0**
DLBC Dease Lake 4.98 210 Pn **Pn** **21 14 19.8 +1.3**
2.4nm,0.3s,baz=26,slow=8.5,SNR=7.0
DLBC Lg Lg 21 15 37.7
8.0nm,0.3s,baz=156,slow=20,SNR=7.6
DLBC LR LR 21 16 27.6
comp=Z,233nm,19.7s,baz=86,slow=41
5.8nm,0.4s
DLBC Dease Lake 4.98 210 Pn **Pn** **21 14 17.4 -1.0**
DLBC Dease Lake 4.98 210 Sg **Sb** **21 15 37.5 +6.8**
DLBC Dease Lake 4.98 210 P **Pn** **21 14 19.8 +1.3**
baz=26
WHY Whitehorse 5.06 249 Pn **Pn** **21 14 19.6 0.0**
WHY Whitehorse 5.06 249 Pn **Pn** **21 14 20.8 +1.2**
WHY Sg **Sb** **21 15 41.3 +8.2**
WHY Whitehorse 5.06 249 P **Pn** **21 14 20.8 +1.2**
baz=61,SNR=15
N31M Braeburn, Yuko 5.11 260 Pn **Pn** **21 14 20.4 +0.1**
N31M Braeburn, Yuko 5.11 260 P **Pn** **21 14 21.8 +1.5**
baz=71
Q32M Nakina River 5.16 225 P **Pn** **21 14 22.3 +1.2**
baz=39
P32M Atlin 5.21 235 Pn **Pn** **21 14 23.0 +1.4**
P32M Sn **Sn** **21 15 19.7 -2.1**
P32M Atlin 5.21 235 P **Pn** **21 14 23.1 +1.4**
baz=48,SNR=14
NBC5 NorthernBC 5 5.46 165 Pn **Pn** **21 14 25.2 +0.1**
NBC5 Sn **Sn** **21 15 26.0 -1.9**
O30N Mendenhall 5.54 253 P **Pn** **21 14 27.3 +1.2**
baz=64,SNR=16
K29M Barlow Dome 5.62 286 Pn **Pn** **21 14 28.7 +1.4**
K29M Barlow Dome 5.62 286 P **Pn** **21 14 28.7 +1.4**
baz=96
S34M Telegraph Cree 5.71 213 Pn **Pn** **21 14 29.9 +1.4**
S34M Sg **Sg** **21 16 01.1 -5.7**
S34M Telegraph Cree 5.71 213 P **Pn** **21 14 29.7 +1.3**
baz=28
N30M Aishikik Lake 5.72 262 Pn **Pn** **21 14 30.2 +1.6**
N30M Sn **Sn** **21 15 32.5 -1.7**
N30M Aishikik Lake 5.72 262 P **Pn** **21 14 30.3 +1.6**
baz=72,SNR=32
HILA High Level 5.88 133 Pn **Pn** **21 14 31.8 +1.1**
L29M L29M 5.88 279 P **Pn** **21 14 31.8 +0.9**
baz=88
SKAG Skagway 5.92 240 Pn **Pn** **21 14 31.7 +0.3**
SKAG Skagway 5.92 240 P **Pn** **21 14 32.2 +0.9**
baz=51,SNR=8.7
J29M Klondike Camp 6.01 292 Pn **Pn** **21 14 34.7 +2.2**
J29M Klondike Camp 6.01 292 P **Pn** **21 14 34.6 +2.0**
baz=101,SNR=6.1
EPYK Eagle Plains 6.09 311 Pn **Pn** **21 14 35.3 +1.7**
EPYK Eagle Plains 6.09 311 Pn **Pn** **21 14 35.8 +2.2**
EPYK Eagle Plains 6.09 311 P **Pn** **21 14 35.7 +2.0**
baz=121
EPYK S **Sn** **21 15 44.2 +0.9**
baz=121
M29M Somme Creek 6.11 272 Pn **Pn** **21 14 35.3 +1.4**
M29M Sg **Sg** **21 16 14.7 -4.8**
M29M Somme Creek 6.11 272 P **Pn** **21 14 34.8 +0.8**
baz=81
HYT Haines Junctio 6.14 257 Pn **Pn** **21 14 35.6 +1.2**
HYT Haines Junctio 6.14 257 Pn **Pn** **21 14 36.0 +1.6**
HYT Sg Sb 21 16 15.1 +11
HYT Haines Junctio 6.14 257 P **Pn** **21 14 36.0 +1.6**
baz=66,SNR=18
YUK5 Granite Creek 6.18 260 Pn **Pn** **21 14 36.4 +1.4**
P30M Million Dollar 6.22 250 P **Pn** **21 14 36.7 +1.1**
baz=60
G30M tAoh Zraii Nji 6.26 317 P **Pn** **21 14 37.8 +1.8**
baz=127
G30M S **Sn** **21 15 47.7 +0.2**
baz=127
I29M Ogilvie Camp, 6.27 300 Pn **Pn** **21 14 38.1 +2.0**
I29M Ogilvie Camp, 6.27 300 P **Pn** **21 14 37.4 +1.4**
baz=109
BESE Bessie Mountai 6.34 232 Pn **Pn** **21 14 38.7 +1.6**
BESE Sg **Sg** **21 16 21.3 -5.7**
PLBC Pleasant Camp 6.34 243 Pn **Pn** **21 14 38.2 +1.1**
PLBC Sn **Sn** **21 15 46.6 -2.9**
PLBC Pleasant Camp 6.34 243 P **Pn** **21 14 38.2 +1.1**
baz=54,SNR=7.7
T35M Bob Quinn 6.37 205 Pn **Pn** **21 14 38.9 +1.4**
T35M Bob Quinn 6.37 205 P **Pn** **21 14 38.2 +0.8**
baz=21
YUK4 Talbot Arm 6.46 263 Pn **Pn** **21 14 39.3 +0.4**
YUK4 Sn **Sn** **21 15 48.9 -3.9**
YUK4 Talbot Arm 6.46 263 P **Pn** **21 14 39.1 +0.2**
baz=72,SNR=8.1
DAWY Dawson 6.47 287 Pn **Pn** **21 14 40.7 +1.9**
DAWY Dawson 6.47 287 P **Pn** **21 14 39.6 +0.7**
baz=95
YUK6 Outpost Mounta 6.48 259 Pn **Pn** **21 14 40.5 +1.3**
YUK6 Sg **Sg** **21 16 25.7 -5.7**
YUK6 Outpost Mounta 6.48 259 P **Pn** **21 14 40.4 +1.3**
baz=68,SNR=6.0
INK Inuvik 6.49 332 Pn **Pn** **21 14 41.1 +2.0**
1.9nm,0.3s,baz=151,slow=9.7,SNR=18
INK Sn **Sn** **21 15 50.6 -2.4**
4.7nm,0.3s,baz=238,slow=30,SNR=6.9
INK Lg Lg 21 16 31.1
3.5nm,0.3s,baz=214,slow=30,SNR=5.5
6.0nm,0.3s
INK Inuvik 6.49 332 Pn **Pn** **21 14 40.8 +1.7**
INK Inuvik 6.49 332 Pn **Pn** **21 14 41.0 +2.0**
INK Sn **Sn** **21 15 51.8 -1.3**
INK Inuvik 6.49 332 P **Pn** **21 14 41.1 +2.0**
baz=145,SNR=10
YUK7 Dusty Glacier 6.55 255 Pn **Pn** **21 14 42.1 +2.0**
YUK7 Sg **Sg** **21 16 28.1 -5.5**
C36M Paulatuk 6.58 4 Pn **Pn** **21 14 41.7 +1.3**
C36M Paulatuk 6.58 4 Pn **Pn** **21 14 41.6 +1.3**
C36M Sn **Sn** **21 15 53.5 -1.8**
C36M Paulatuk 6.58 4 P **Pn** **21 14 41.5 +1.2**
baz=185
P29M Windy Craggy 6.82 248 Pn **Pn** **21 14 44.7 +1.1**
P29M Windy Craggy 6.82 248 Pn **Pn** **21 14 45.2 +1.6**
P29M Windy Craggy 6.82 248 P **Pn** **21 14 45.4 +1.7**
baz=57,SNR=5.6
O29M Mount Kennedy 6.84 254 Pn **Pn** **21 14 46.0 +2.0**
O29M Sg **Sg** **21 16 37.6 -5.4**
O29M Mount Kennedy 6.84 254 P **Pn** **21 14 45.9 +1.8**
baz=63,SNR=8.6
YUK8 Steele Glacier 6.99 264 Pn **Pn** **21 14 47.5 +1.3**
YUK8 Sg **Sg** **21 16 42.7 -5.2**
YUK8 Steele Glacier 6.99 264 P **Pn** **21 14 47.3 +1.0**
baz=71
MANA Manning 7.10 144 Pn Pn 21 14 42.5 -5.0
YUK3 Moose Creek 7.17 268 Pn **Pn** **21 14 49.5 +0.9**
YUK3 Sg Sg 21 16 46.9 -6.6
YUK3 Moose Creek 7.17 268 P **Pn** **21 14 49.6 +1.0**
baz=75
BVCY Beaver Creek 7.21 274 Pn **Pn** **21 14 50.0 +1.0**
BVCY Beaver Creek 7.21 274 P **Pn** **21 14 49.9 +0.8**
baz=80

EGAK Eagle 7.31 293 Pn **Pn** **21 14 52.2 +1.9**
EGAK Eagle 7.31 293 P **Pn** **21 14 52.7 +2.3**
baz=99
YUK2 White River 7.34 269 Pn **Pn** **21 14 51.8 +1.0**
YUK2 Sg **Sg** **21 16 53.3 -5.6**
WRAK Wrangell Islan 7.35 212 Pn **Pn** **21 14 52.1 +1.2**
O28M Mount Upton 7.37 261 Pn **Pn** **21 14 53.3 +1.9**
O28M Sg Sb 21 16 52.2 +13
O28M Mount Upton 7.37 261 P **Pn** **21 14 53.4 +2.0**
baz=68
BCPM Bancas Point 7.47 254 Pn **Pn** **21 14 54.3 +1.6**
PNL Peninsula 7.51 252 Pn **Pn** **21 14 54.7 +1.5**
PNL Sg **Sg** **21 16 58.9 -5.6**
PNL Peninsula 7.51 252 P **Pn** **21 14 55.1 +1.9**
baz=59
NBC4 NorthernBC 4 7.52 160 Pn **Pn** **21 14 52.8 -0.5**
NBC4 Sn **Sn** **21 16 13.5 -5.0**
BCAR Beaver Creek A 7.55 279 Pn **Pn** **21 14 54.8 +1.1**
L27K Beaver Creek, 7.56 279 Pn **Pn** **21 14 55.2 +1.2**
L27K Beaver Creek, 7.56 279 Pn **Pn** **21 14 55.1 +1.2**
L27K Sg Sg 21 17 00.1 -6.0
L27K Beaver Creek, 7.56 279 P **Pn** **21 14 55.0 +1.2**
baz=85
K27K Chicken 7.64 287 P **Pn** **21 14 56.5 +1.6**
baz=92
I27K Kandik River 7.66 299 Pn **Pn** **21 14 57.6 +2.4**
I27K Kandik River 7.66 299 P **Pn** **21 14 57.4 +2.2**
baz=104
PCA Pinnacle 7.68 256 Pn **Pn** **21 14 58.8 +3.3**
M27K Edge Creek, AK 7.69 274 Pn **Pn** **21 14 57.4 +1.8**
M27K Edge Creek, AK 7.69 274 Pn **Pn** **21 14 57.4 +1.8**
M27K Sg **Sg** **21 17 06.3 -3.8**
M27K Edge Creek, AK 7.69 274 P **Pn** **21 14 57.5 +1.8**
baz=80
LOGN Logan Glacier 7.72 262 Pn **Pn** **21 14 58.3 +2.3**
LOGN Logan Glacier 7.72 262 Pn **Pn** **21 14 58.4 +2.3**
WTMTA White Mountain 7.77 154 Sn **Sn** **21 16 20.7 -4.1**
H27K Steamboat Moun 7.80 303 Pn **Pn** **21 14 59.0 +1.9**
H27K Sn **Sn** **21 16 23.8 -1.6**
H27K Steamboat Moun 7.80 303 P **Pn** **21 14 59.1 +1.9**
baz=109
CTGM Chitina Glacie 7.82 264 Pn **Pn** **21 14 59.6 +2.2**
CTGM Chitina Glacie 7.82 264 Pn **Pn** **21 14 59.6 +2.2**
CTG Chitna Glacier 7.82 264 P **Pn** **21 14 59.3 +1.8**
baz=70
TABL Table Mountain 7.93 260 Pn **Pn** **21 15 01.8 +2.7**
TABL Table Mountain 7.93 260 Pn **Pn** **21 15 00.5 +1.4**
BARN Barnard Glacie 7.93 265 Pn **Pn** **21 15 01.0 +2.0**
G27K Doyon Strip 8.05 307 Pn **Pn** **21 15 02.7 +2.2**
G27K Sn **Sn** **21 16 27.7 -3.8**
G27K Doyon Strip 8.05 307 P **Pn** **21 15 03.0 +2.5**
baz=113,SNR=11
M26K Nabesna, AK 8.19 275 Pn **Pn** **21 15 04.3 +1.8**
M26K Nabesna, AK 8.19 275 P **Pn** **21 15 04.0 +1.5**
baz=80
I26K Coal Creek Min 8.23 296 Pn **Pn** **21 15 05.0 +2.0**
I26K Coal Creek Min 8.23 296 P **Pn** **21 15 05.2 +2.2**
baz=100
YAH Yahtse 8.24 260 Pn **Pn** **21 15 06.5 +3.3**
WAPA Wapiti River 8.25 155 Pn **Pn** **21 15 03.3 0.0**
BALM Baldy 8.26 265 Pn **Pn** **21 15 05.6 +2.2**
L26K Log Cabin Wild 8.26 280 P **Pn** **21 15 04.8 +1.4**
baz=84
PTPK Patty Peak 8.26 266 Pn **Pn** **21 15 07.2 +3.7**
KIAG Kiagna River 8.30 264 Pn **Pn** **21 15 07.4 +3.3**
J26L Joseph Creek 8.31 290 Pn **Pn** **21 15 04.1 -0.1**
J26L Joseph Creek 8.31 290 P **Pn** **21 15 05.5 +1.3**
baz=94
ISLE Juniper Island 8.41 262 Pn **Pn** **21 15 08.2 +2.6**
MCARA McCarthy VSAT 8.45 268 Pn **Pn** **21 15 08.6 +2.5**
DOT Dot Lake 8.53 284 Pn **Pn** **21 15 08.1 +1.0**
DOT Dot Lake 8.53 284 Pn **Pn** **21 15 08.5 +1.4**
TGL Tana Glacier 8.58 264 Pn **Pn** **21 15 10.8 +3.0**
STPRA Salt Prairie L 8.64 142 Sn **Sn** **21 16 41.4 -4.6**
E27K Coleen River 8.65 316 P **Pn** **21 15 11.5 +2.8**
baz=121
BDMTA Bald Mountain 8.66 155 Pn **Pn** **21 15 08.2 -0.8**
BDMTA Sn **Sn** **21 16 41.3 -5.4**
VRDI Verde Repeater 8.70 268 Pn **Pn** **21 15 13.1 +3.5**
WAX Waxell Ridge 8.70 262 Pn **Pn** **21 15 12.9 +3.4**
GLB Gilahina Butte 8.80 269 Pn **Pn** **21 15 15.3 +4.5**
G26K Porcupine Rive 8.89 306 P **Pn** **21 15 13.5 +1.5**
baz=110
SWHSA Sweathouse Loo 9.07 147 Pn **Pn** **21 15 14.5 0.0**
SWHSA Sn **Sn** **21 16 49.8 -6.8**
J25K Salcha River, 9.10 290 Pn **Pn** **21 15 17.4 +2.5**
BERG Berg Lake 9.11 263 Pn **Pn** **21 15 18.1 +3.0**
N25K Chitina, Valde 9.11 271 Pn **Pn** **21 15 17.4 +2.2**
A36M Sachs Harbour 9.22 0 Pn **Pn** **21 15 18.4 +2.0**
A36M Sachs Harbour 9.22 0 Pn **Pn** **21 15 17.7 +1.3**
A36M Sachs Harbour 9.22 0 P **Pn** **21 15 19.0 +2.6**
baz=180
PAX Paxson 9.23 280 Pn **Pn** **21 15 18.3 +1.6**
PAX Paxson 9.23 280 P **Pn** **21 15 18.3 +1.6**
baz=82
FYU Fort Yukon 9.33 303 Pn **Pn** **21 15 19.2 +1.3**
BMAR Burnt Mountain 9.34 308 Pn **Pn** **21 15 19.5 +1.2**
HMT Hamilton 9.39 263 Pn **Pn** **21 15 20.5 +1.6**
RAGM Ragged Mountai 9.56 264 Pn **Pn** **21 15 24.0 +2.8**
BRLDA Berland Lookou 9.65 151 Sn **Sn** **21 17 04.6 -6.4**
KLU Klutina 9.75 271 Pn **Pn** **21 15 27.9 +3.9**
KLU Klutina 9.75 271 P **Pn** **21 15 27.7 +3.8**
baz=74
ILAR Eielson Array 9.76 291 Pn **Pn** **21 15 26.1 +2.2**
0.5nm,0.3s,baz=97,slow=11,SNR=8.3
ILAR Lg Lg 21 18 10.3
0.6nm,0.3s,baz=93,slow=32,SNR=4.5
0.8nm,0.3s
F25K Christian Rive 9.79 308 P **Pn** **21 15 25.4 +1.1**
baz=110
E25K Arctic Village 9.95 311 P **Pn** **21 15 28.0 +1.5**
baz=113
C27K Jago River 10.07 321 P **Pn** **21 15 31.2 +3.1**
baz=124
DHY Denali Highway 10.07 281 Pn **Pn** **21 15 30.1 +1.7**
DHY Denali Highway 10.07 281 P **Pn** **21 15 30.0 +1.7**
baz=82
CCB Clear Creek Bu 10.15 290 Pn **Pn** **21 15 30.9 +1.7**
FID Port Fidalgo 10.25 268 Pn **Pn** **21 15 34.2 +3.5**
WRH Wood River Hil 10.27 289 Pn **Pn** **21 15 33.3 +2.4**
F24K Squaw Lake 10.58 306 P **Pn** **21 15 37.6 +2.4**
baz=106
WAT1 Susitna Watana 10.64 280 P **Pn** **21 15 38.4 +2.4**
baz=80
E24K Your Creek 10.96 309 P **Pn** **21 15 42.6 +2.2**
baz=108
MNB Mounoet Dainar 11.26 158 Pn **Pn** **21 15 44.0 -0.6**
TRF Thorofare Moun 11.32 284 Pn **Pn** **21 15 48.0 +2.6**
E23K Chandalar 11.36 308 P **Pn** **21 15 46.8 +0.9**
baz=106
EDM Edmonton 11.48 141 Pn **Pn** **21 15 46.8 -0.7**
EDM Edmonton 11.48 141 Pn **Pn** **21 15 46.7 -0.7**
CUT Chulitna 11.51 279 P **Pn** **21 15 46.6 -1.1**
baz=77
TOLK Toolik Lake Re 11.52 311 Pn **Pn** **21 15 49.3 +1.3**
KTH Kantishna Hill 11.59 285 Pn **Pn** **21 15 50.1 +1.2**
SKT Skwentna 12.19 278 Pn **Pn** **21 16 00.5 +3.4**
PPLA Purkeypile 12.27 282 Pn **Pn** **21 16 01.3 +3.0**
SLEB Sale Mountain 12.29 159 Pn **Pn** **21 15 56.0 -2.8**
LLLB Lillooet 12.37 170 Pn **Pn** **21 16 01.2 +1.5**
LLLB Lillooet 12.37 170 Pn **Pn** **21 16 00.5 +0.8**
IMAR Indian Mountai 12.66 297 Pn **Pn** **21 16 06.4 +2.9**
J20K Nowinta River 12.92 289 Pn **Pn** **21 16 11.3 +4.2**
M20K Styx River 12.94 278 Pn **Pn** **21 16 09.5 +2.1**
OZB Mount Ozzard 13.89 181 Pn **Pn** **21 16 21.3 +1.0**
SVW2 Sparrevohn 14.30 277 Pn **Pn** **21 16 27.9 +2.0**
FFC Flin Flon 14.46 113 Pn **Pn** **21 16 24.3 -3.9**
RES Resolute Bay 15.92 29 Pn **Pn** **21 16 45.4 -1.9**
1.1nm,0.3s,baz=230,slow=14,SNR=20
RES Sn Sn 21 19 30.8 -13
0.6nm,0.3s,baz=323,slow=20,SNR=4.0
RES Lg Lg 21 21 22.3
0.3nm,0.3s,baz=108,slow=20,SNR=4.7
RES Resolute Bay 15.92 29 Pn **Pn** **21 16 45.8 -1.6**
RES Resolute Bay 15.92 29 Pn **Pn** **21 16 41.7 -5.7**
EGMT Eagleton 17.15 143 Pn **Pn** **21 17 01.5 -1.8**
EGMT IAmb IAmb 21 17 09.1
comp=Z,11nm,0.7s
EGMT Eagleton 17.15 143 P **Pn** **21 17 01.4 -1.9**
baz=335,SNR=6.0
LAO LASA Array 19.40 137 **Pn** **21 17 30.5 -0.3**
BCYI Bear Canyon 19.76 154 **Pn** **21 17 36.3 +1.0**
ULM Lac du Bonnet 20.28 115 P **P** **21 17 39.1 0.0**
comp=Z,2.1nm,0.5s,baz=312,slow=12,SNR=2.0
ULM S S 21 21 11.3 -15
comp=Z,1.6nm,0.4s,baz=180,slow=20,SNR=2.1
ULM Lg Lg 21 23 34.0
comp=Z,0.3nm,0.3s,baz=47,slow=21,SNR=1.8
comp=Z,2.1nm,0.5s
EUNU Eureka 20.46 18 P Pn 21 17 44.3 +1.3
EUNU IAmb IAmb 21 18 25.1
comp=Z,14nm,1.5s
PDAR Pinedale Array 22.09 148 P **P** **21 17 59.8 +0.9**
comp=Z,0.4nm,0.6s,baz=341,slow=7.6,SNR=6.1
comp=Z,0.4nm,0.6s
EKA Eskdalemuir Ar 53.88 37 LR LR 21 47 27.7
comp=Z,166nm,19.0s,baz=224,slow=38
FINES FINESS Array B 54.17 17 P **P** **21 22 29.1 +0.6**
comp=Z,0.7nm,0.6s,baz=359,slow=7.1,SNR=4.4
comp=Z,0.7nm,0.6s
KSRS Korea Array 64.40 302 LR LR 21 51 58.2
comp=Z,61nm,19.8s,baz=80,slow=36
ESDC Sonseca Array 67.62 46 P **P** **21 24 02.9 +2.6**
comp=Z,0.5nm,0.6s,baz=329,slow=6.3,SNR=4.2
comp=Z,0.5nm,0.6s
MLR Muntele Rosu 69.62 21 LR LR 21 57 01.6
comp=Z,195nm,21.6s,baz=259,slow=38
WMQ Urumqi 70.50 335 eP **P** **21 24 20.5 +2.4**
BRTR Keskin Array B 76.41 17 LR LR 22 01 57.4
comp=Z,80nm,19.4s,baz=245,slow=38
PZH PanZhiHua 83.48 319 P **P** **21 25 32.0 +0.5**
VNDA Vanda 146.89 202 PKPbc **PKiKP** **21 32 46.9 +0.1**
comp=Z,0.6nm,0.9s,baz=10,slow=4.2,SNR=3.7

IDC 13 21:34:31.1±9.0, 0°.18S×89°.75W, h0km, mb3.8/3, mbtmp3.8/3, MS3.4/3, Error ellipse: s-maj=428.7km s-min=168.0km az=57.0, Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**17.89**	**344**	LR	LR	21 43 08.8	
	comp=Z,55nm,18.9s,baz=176,slow=29						
TXAR	**Lajitas Array**	**32.22**	**337**	P	P	21 41 01.3	+0.1
	0.3nm,0.8s,baz=150,slow=9.4,SNR=3.5						
	0.3nm,0.8s						
ANMO	**Albuquerque**	**38.28**	**338**	LR	LR	21 55 33.3	
	comp=Z,72nm,20.1s,baz=88,slow=33						
NVAR	**Mina Array Bea**	**46.53**	**329**	P	P	21 43 00.5	-0.3
	2.0nm,1.1s,baz=148,slow=8.6,SNR=1.9						
	2.0nm,1.1s						
PMSA	**Palmer Station**	**67.11**	**168**	LR	LR	22 05 49.7	
	comp=Z,46nm,21.6s,baz=336,slow=28						
ILAR	**Eielson Array**	**76.72**	**338**	P	P	21 46 24.1	+0.1
	0.7nm,0.2s,baz=134,slow=3.9,SNR=1.8						
	0.7nm,0.2s						
H11N3	**WAKE ISLAND Hyl**	**02.62**	**290**	T	T	23 42 17.3	
	baz=85,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hyl**	**02.63**	**290**	T	T	23 42 17.1	
	baz=85,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hyl**	**02.64**	**290**	T	T	23 42 19.0	
	baz=85,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hyl**	**02.90**	**289**	T	T	23 42 38.9	
	baz=86,slow=74,SNR=6.9						
H11S1	**WAKE ISLAND Hyl**	**02.91**	**289**	T	T	23 42 36.8	
	baz=86,slow=74,SNR=7.3						
H11S3	**WAKE ISLAND Hyl**	**02.92**	**289**	T	T	23 42 41.6	
	baz=86,slow=74,SNR=4.6						

MAN 13 21:51:40.1, 7°.74N×124°.00E, h17km, mb3.9, ML2.7, MS2.2, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57**	**154**	⇑*i*P	Pb	21 51 52.4	+0.7
CTBH				*i* S	Sn	21 52 01.1	-1.4
PAGZ	**Pagadian**	**0.62**	**280**	⇑*e*P	Pg	21 51 52.0	-0.4
PAGZ				*e*S	Sn	21 52 04.6	+0.9
CGP	**Cagayan de Oro**	**0.99**	**44**	⇑*e*P	Pb	21 51 56.2	-2.7
CGP				*e*S	Sb	21 52 05.5	-6.1
SKMP	**Bagumbayan, Su**	**1.33**	**156**	⇑*e*P	Pn	21 52 03.6	-0.3
SKMP				*e*S	Sb	21 52 21.4	+0.1
LSIP	**Lazi, Siquijor**	**1.43**	**345**	⇑*i*P	Pn	21 52 04.8	-0.5
LSIP				*i* S	Sb	21 52 24.3	0.0

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*IDC **13** 21:56:04.5±3.0, 16°.80S×167°.60E, h0km, mb4.2/5, mbtmp4.2/6, ML4.0/1, MS3.5/8, Error ellipse: s-maj=69.4km s-min=33.7km az=101.0*
*NOU **13** 21:56:06.2, 16°.87S×167°.71E, h2km, MLv4.5/15, Vanuatu Islands*
*NEIC **13** 21:56:08.2±2.7, 16°.7S±0°.1×167°.7E±0°.1, h35km±10km, mb4.6/11, Error ellipse: s-maj=17.5km s-min=15.4km az=104.0*

ISC 13 21:56:08.3±0.8, 16°.80S±0°.08×167°.76E±0°.09, h35km, n40, σ1°.95/39, mb4.5/12, MS3.3/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.00**	**156**	P	**Pn**	**21 56 24.9**	**-1.1**
RTV	**Rentapao**	**1.17**	**147**	P	**Pn**	**21 56 27.6**	**-0.7**
LIFNC	**LIFOU**	**3.98**	**187**	Pn	**Pn**	**21 57 08.0**	**+1.0**
LIFNC	**LIFOU**	**3.98**	**187**	P	**Pn**	**21 57 06.5**	**-0.5**
MARNC	**Mare, Loyalty**	**4.66**	**177**		**Pn**	**21 57 17.5**	**+1.3**
MARNC	**Mare, Loyalty**	**4.66**	**177**	P	**Pn**	**21 57 16.8**	**+0.5**
KOUNC	**Koumac, New Ca**	**4.97**	**221**		**Pn**	**21 57 20.7**	**+0.1**
KOUNC				Sn	**Sn**	**21 58 15.5**	**-1.4**
KOUNC	**Koumac, New Ca**	**4.97**	**221**	P	**Pn**	**21 57 20.4**	**-0.2**
YATNC	**Mamie plateau,**	**5.29**	**189**	P	**Pn**	**21 57 24.6**	**-0.4**
DZM	**Mont Dzumac**	**5.39**	**193**	Pn	**Pn**	**21 57 25.9**	**-0.5**
	4.6nm,0.3s,baz=8.1,slow=14,SNR=32						
DZM				Sn	**Sn**	**21 58 24.1**	**-3.1**
	5.2nm,0.3s,baz=139,slow=21,SNR=1.9						
DZM				LR	LR	21 59 08.7	
	comp=Z,248nm,19.7s,baz=38,slow=34						
	10nm,0.3s						
DZM	**Mont Dzumac**	**5.39**	**193**		**Pn**	**21 57 26.4**	**+0.1**
DZM				Sn	**Sn**	**21 58 27.5**	**+0.3**
DZM	**Mont Dzumac**	**5.39**	**193**	P	**Pn**	**21 57 26.5**	**+0.1**
NOUC	**Port Laguerre**	**5.45**	**194**	P	**Pn**	**21 57 27.7**	**+0.6**
ONTNC	**Ouen Toro**	**5.61**	**192**		**Pn**	**21 57 29.4**	**0.0**
ONTNC	**Ouen Toro**	**5.61**	**192**	P	**Pn**	**21 57 30.8**	**+1.4**
OUENC	**Ouen Island, N**	**5.65**	**189**		**Pn**	**21 57 30.8**	**+0.9**
OUENC				Sn	**Sn**	**21 58 33.0**	**-0.6**
OUENC	**Ouen Island, N**	**5.65**	**189**	P	**Pn**	**21 57 30.0**	**+0.1**
HNR	**Honiara**	**10.56**	**313**	LR	LR	22 01 40.5	
	comp=Z,1μm,19.9s,baz=154,slow=32						
RAO	**Raoul Island**	**18.07**	**136**	LR	LR	22 05 52.1	
	comp=Z,128nm,18.8s,baz=182,slow=32						
CTA	**Charters Tower**	**20.66**	**258**	LR	LR	22 07 19.8	
	comp=Z,113nm,21.0s,baz=84,slow=33						
STKA	**Stephens Creek**	**28.07**	**233**	P	**P**	**22 01 57.3**	**+0.6**
	3.4nm,0.8s,baz=58,slow=7.2,SNR=6.0						
STKA				LR	LR	22 12 03.2	
	comp=Z,60nm,20.0s,baz=67,slow=34						
	3.4nm,0.8s						
WB0	**Warramunga Arr**	**31.79**	**259**	P	**P**	**22 02 29.2**	**-0.6**
WB2	**Warramunga Arr**	**31.83**	**259**	P	**P**	**22 02 29.1**	**-1.0**
WB2				IAmb	IAmb	22 02 52.6	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**31.84**	**259**	P	**P**	**22 02 29.6**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=89,slow=8.4,SNR=8.2						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**31.84**	**259**	P	**P**	**22 02 29.9**	**-0.3**
AS31	**Alice Springs**	**32.44**	**252**	P	**P**	**22 02 35.5**	**+0.1**
AS31				IAmb	IAmb	22 02 36.2	
	comp=Z,4.8nm,0.7s						
ASAR	**Alice Springs**	**32.44**	**252**	P	**P**	**22 02 35.5**	**0.0**
	comp=Z,13nm,0.6s,baz=79,slow=8.7,SNR=144						
ASAR				LR	LR	22 15 05.5	
	comp=Z,91nm,18.5s,baz=108,slow=35						
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	**32.44**	**252**	P	**P**	**22 02 35.7**	**+0.3**
BBOO	**Buckleboo**	**32.73**	**235**	P	**P**	**22 02 38.1**	**+0.2**
BBOO				IAmb	IAmb	22 03 03.2	
	comp=Z,18nm,1.4s						
KNRA	**Kununurra**	**37.42**	**266**	P	**P**	**22 03 18.0**	**-0.4**
KNRA				IAmb	IAmb	22 03 41.5	
	comp=Z,23nm,1.5s						
FAKI	**Fak Fak**	**37.51**	**288**	P	**P**	**22 03 17.3**	**-2.0**
FAKI				IAmb	IAmb	22 03 44.2	
	comp=Z,7.4nm,0.9s						
GUMO	**Guam**	**37.73**	**322**	LR	LR	22 17 53.6	
	comp=Z,50nm,20.7s,baz=132,slow=35						
SIJI	**Sorong**	**39.26**	**290**	LR	LR	22 19 05.8	
	comp=Z,66nm,21.0s,baz=34,slow=35						
SBA	**Scott Base**	**61.08**	**180**	P	**P**	**22 06 20.4**	**+2.1**
QSPA	**South

QSPA IAmb IAmb 22 07 40.5
comp=Z,6.5nm,0.9s
CMAR Chiang Mai Arr 76.22 294 P **P** **22 07 54.9 +1.1**
comp=Z,1.0nm,0.3s,baz=134,slow=4.6,SNR=4.3
comp=Z,1.0nm,0.3s
SONM Songino Array 84.44 324 P **P** **22 08 38.9 +1.5**
comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=4.3
comp=Z,0.7nm,0.9s
BELA Belgrano 2 84.63 175 P **P** **22 08 37.7 -0.1**
BELA IAmb IAmb 22 08 39.5
comp=Z,3.6nm,0.8s
PASC Pasadena Art C 86.70 53 P **P** **22 08 47.1 -1.8**
TORD Torodi Ar. Bea 166.06 257 PKPab **PKPab** **22 17 10.6 -0.5**
comp=Z,0.6nm,0.8s,baz=108,slow=2.6,SNR=3.0

*MEX **13** 21:56:41.2±0.6, 31.°67N×114.°08W, h10km, MD3.3*
*ECX **13** 21:56:42.2±0.8, 30.°58N×114.°22W, h10km±14km, MD3.4, ML3.5*
ISC 13 21:56:41.1±1.2, 30.°58N±0.°04×114.°23W±0.°03, h7km±11km, n17, σ1°41/27, 2C-6D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.70**	**311**	*e*P	**Pg**	**21 56 54.9**	**+0.3**
SFX				*e*S	**Sg**	**21 57 04.7**	**+1.0**
SFX	**San Felipe**	**0.70**	**311**	*e*P	**Pg**	**21 56 54.9**	**+0.3**
SFX				*e*S	**Sg**	**21 57 04.8**	**+1.0**
SFX				IAML		21 57 07.4	
	comp=N,2μm,0.5s						
SLGB	**San Luis Gonza**	**0.76**	**192⇓**	*e*P	**Pg**	**21 56 55.6**	**-0.1**
SLGB				*e*S	**Sg**	**21 57 06.3**	**+0.7**
ECBX	**El Chinero**	**1.14**	**322⇓**	*e*P	**Pb**	**21 57 00.8**	**-2.3**
ECBX				*e*S	**Sb**	**21 57 17.2**	**-0.9**
SPIG	**San Pedro Mart**	**1.16**	**294**	*e*P	**Pb**	**21 57 02.4**	**-1.3**
SPIG				*e*S	**Sg**	**21 57 17.7**	**-0.9**
SPIG	**San Pedro Mart**	**1.16**	**294**	*e*P	**Pb**	**21 57 02.4**	**-1.3**
SPIG				*e*S	**Sg**	**21 57 18.6**	**0.0**
PIX	**Pinacate**	**1.18**	**34⇓**	*e*P	**Pb**	**21 57 01.7**	**-2.1**
PIX				*e*S	**Sb**	**21 57 18.9**	**-0.4**
SQX	**San Quintin**	**1.42**	**270⇑**	*e*P	**Pn**	**21 57 06.7**	**-0.7**
SQX				IAML		21 57 37.2	
	comp=N,808nm,0.4s						
SQX				⇓*e*		21 57 37.2	
SQX				⇓*e*		21 57 37.9	
SQX				IAML		21 57 37.9	
	comp=E,929nm,0.3s						
PLIB	**Puerto Liberta**	**1.48**	**116**	*e*P	**Pn**	**21 57 06.9**	**-1.3**
VTX	**Valle De La Tr**	**1.56**	**302⇑**	*e*	**Sg**	**21 57 32.6**	**+1.3**
VTX				IAML		21 57 32.6	
	comp=E,472nm,0.3s						
LAPR	**La Primavera**	**1.65**	**92**	*e*P	**Pn**	**21 57 10.4**	**0.0**
LAPR				*i* S	**Sn**	**21 57 32.3**	**+0.3**
LAPR	**La Primavera**	**1.65**	**92**	*e*P	**Pn**	**21 57 10.5**	**0.0**
LAPR				*e*S	**Sn**	**21 57 32.2**	**+0.3**
214A	**Organ Pipe Nat**	**1.83**	**41**	*e*	**Pn**	**21 57 11.1**	**-2.0**
214A				*e*		21 57 33.0	
CPBX	**Cerro Prieto**	**2.05**	**334**	IAML		21 58 26.3	
	comp=N,549nm,0.8s						
CPBX				⇓*e*		21 58 26.3	
CBX	**Cerro Bola**	**2.71**	**310**	*e*P	**Pb**	**21 57 31.0**	**+1.0**
CBX				*e*S	**Sn**	**21 58 00.3**	**+2.0**
TJIG	**Tijuana**	**2.79**	**312**	*e*P	**Pn**	**21 57 25.6**	**-0.6**
TJIG				*e*S	**Sn**	**21 58 03.3**	**+3.1**
TUC	**Tucson**	**3.41**	**59**	*e*	**Pb**	**21 57 44.2**	**+2.3**
TUC				*e*		21 58 25.9	

*IDC **13** 22:08:39.2±1.1, 27.°86N×66.°12E, h0km, mb3.4/7, mbtmp3.5/8, ML3.7/1, MS3.7/2, Error ellipse: s-maj=29.5km s-min=24.3km az=118.0*
ISC 13 22:08:40.5±1.1, 27.°7N±0.°2×65.°9E±0.°2, h10km, n10, σ2°02/9, mb3.4/7, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**7.98**	**237**	Pn	**Pn**	**22 10 37.5**	**+1.0**
	1.1nm,0.3s,baz=55,slow=8.8,SNR=24						
WSAR				Sn	**Sn**	**22 12 03.7**	**-3.2**
	1.8nm,0.3s,baz=294,slow=20,SNR=9.7						
	2.2nm,0.3s						
MKAR	**Makanchi Array**	**22.96**	**30**	P	**P**	**22 13 43.2**	**-1.8**
	0.7nm,0.8s,baz=214,slow=11,SNR=4.8						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**24.78**	**19**	P	**P**	**22 14 00.2**	**-2.1**
	0.5nm,0.6s,baz=210,slow=8.9,SNR=6.0						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**25.47**	**6**	P	**P**	**22 14 07.5**	**-1.1**
	0.3nm,0.6s,baz=190,slow=7.3,SNR=2.5						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**42.86**	**333**	P	**P**	**22 16 39.5**	**+0.9**
	1.8nm,1.0s,baz=130,slow=4.3,SNR=1.6						
	1.8nm,1.0s						
JMIC	**Jan Mayen**	**58.98**	**338**	LR	LR	22 45 08.9	
	comp=Z,52nm,18.1s,baz=212,slow=37						
TORD	**Torodi Ar. Bea**	**61.32**	**270**	P	**P**	**22 18 58.6**	**+1.9**
	0.2nm,0.5s,baz=53,slow=5.8,SNR=1.9						
	0.2nm,0.5s						
JCJ	**Chichijima**	**66.57**	**71**	LR	LR	22 53 16.9	
	comp=Z,52nm,19.2s,baz=121,slow=40						
WRA	**Warramunga Arr**	**81.38**	**118**	P	**P**	**22 20 57.8**	**-0.1**
	0.3nm,0.8s,baz=306,slow=7.1,SNR=2.3						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**83.11**	**121**	P	**P**	**22 21 07.2**	**+0.4**
	0.5nm,0.6s,baz=305,slow=5.8,SNR=7.4						
	0.5nm,0.6s						

*IDC **13** 22:37:59.0±2.2, 35.°15N×141.°23E, h0km, mb3.7/3, mbtmp3.7/4, ML2.8/2, MS3.9/1, Error ellipse: s-maj=51.5km s-min=24.9km az=69.0*
*JMA **13** 22:38:00.8±0.4, 35.°2N±0.°5×14°1E±°, h29km±4km, MV2.7/30, E OFF BOSO PENINSULA*
ISC 13 22:38:01.7±1.4, 35.°18N±0.°05×141.°3E±0.°1, h27km, n19, σ1°09/13, mb3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.60**	**209**	P	**Pb**	**22 38 12.7**	**-0.7**
CHOJ	**Chosi**	**0.65**	**323**	P	**Pb**	**22 38 13.9**	**-0.6**
BSO3	**Boso 3**	**0.78**	**241**	P	**Pb**	**22 38 16.1**	**-0.3**
BSO4	**Boso 4**	**0.84**	**257**	P	**Pb**	**22 38 17.7**	**+0.1**
JKUC	**kamogawauchiur**	**0.93**	**269**	P	**Pn**	**22 38 18.4**	**-0.6**
JHO	**Hitachi**	**1.55**	**337**	P	**Pn**	**22 38 27.0**	**-0.6**
JIM2	**Oshima 3**	**1.63**	**254**	P	**Pn**	**22 38 28.1**	**-0.5**
JHJ	**Hachijo jima 2**	**2.43**	**212**	Pn	**Pn**	**22 38 39.2**	**-0.4**
	21nm,0.3s,baz=90,slow=20,SNR=1.4						
JHJ				Sn	**Sn**	**22 39 08.2**	**-0.1**
	38nm,0.3s,baz=287,slow=20,SNR=1.9						
	112nm,0.5s						
MJAR	**Matsushiro Arr**	**2.88**	**299**	Pn	**Pn**	**22 38 46.8**	**+1.1**
	0.3nm,0.3s,baz=104,slow=14,SNR=13						
H11N2	**WAKE ISLAND Hy**	**27.30**	**118**	T	T	23 12 27.8	
	baz=310,slow=75,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**27.31**	**118**	T	T	23 12 25.8	
	baz=310,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**27.32**	**118**	T	T	23 12 27.3	
	baz=310,slow=75,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**27.95**	**120**	T	T	23 13 06.5	
	baz=312,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**27.95**	**120**	T	T	23 13 09.1	
	baz=312,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**27.97**	**120**	T	T	23 13 08.4	
	baz=312,slow=76,SNR=10						
MKAR	**Makanchi Array**	**45.07**	**304**	P	**P**	**22 46 14.5**	**-0.7**
	0.5nm,0.7s,baz=90,slow=8.8,SNR=2.2						
	0.5nm,0.7s						
KDAK	**Kodiak Island**	**48.53**	**41**	LR	LR	23 05 36.7	
	comp=Z,137nm,19.5s,baz=96,slow=34						
WRA	**Warramunga Arr**	**55.22**	**188**	P	**P**	**22 47 31.9**	**-0.4**
	0.7nm,0.4s,baz=3.3,slow=7.7,SNR=14						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**58.95**	**188**	P	**P**	**22 48 01.5**	**+2.8**
	0.4nm,0.5s,baz=17,slow=13,SNR=9.5						
	0.4nm,0.5s						

ISC 13 22:43:09.1±1.3, 45.°27N±0.°04×14.°67E±0.°04, h12km±10km, n10, σ0°52/15, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIY	**Rijeka**	**0.15**	**294**	*e*Pg	**Pg**	**22 43 12.4**	**-0.3**
RIY				Sg	**Sg**	**22 43 15.2**	**0.0**
A250A	**Rusevo Krmpots**	**0.25**	**137**	*e*Pg	**Pg**	**22 43 13.9**	**-0.5**
A250A				Sg	**Sg**	**22 43 17.9**	**+0.1**
GBRS	**Gornja Briga**	**0.28**	**20⇓**	*i*Pg	**Pg**	**22 43 15.1**	**+0.1**
GBRS				IAML		22 43 21.6	
	comp=Z,4.2nm,0.1s						
KNDS	**Knezji Dol**	**0.33**	**322**	*e*Pg	**Pg**	**22 43 15.8**	**-0.1**
KNDS				*e*Sg	**Sg**	**22 43 21.3**	**+0.8**
SMRN	**Sveta Marina**	**0.43**	**238**	*e*Pg	**Pg**	**22 43 17.9**	**+0.2**
SMRN				Sg	**Sg**	**22 43 24.3**	**+0.9**
CEY	**Cerknica**	**0.50**	**340**	*i* Pg	**Pg**	**22 43 18.9**	**-0.1**
CEY				IAML		22 43 28.1	
	comp=Z,2.8nm,0.1s						
SKDS	**Skadanscina**	**0.54**	**301**	*i* Pg	**Pg**	**22 43 19.1**	**-0.7**
SKDS				IAML		22 43 28.6	
	comp=Z,0.6nm,0.0s						
VISS	**Visnje**	**0.55**	**12**	*e*Pg	**Pg**	**22 43 19.5**	**-0.4**
VISS				IAML		22 43 29.3	
	comp=Z,1.4nm,0.1s						
A253A	**Karojba, Istri**	**0.61**	**273**	*e*Pg	**Pg**	**22 43 20.2**	**-0.7**
A253A				Sg	**Sb**	**22 43 29.9**	**-0.2**
NVLJ	**Novalja**	**0.72**	**169**	Sg	**Sb**	**22 43 33.5**	**+0.3**

*MAN **13** 23:10:18.9, 5.°08N×127.°63E, h43km, mb5.0, ML3.9, MS3.9*
*IDC **13** 23:10:23.6±1.9, 4.°96N×127.°24E, h99km±16km, mb3.5/5, mbtmp3.9/7, MS2.5/1, Error ellipse: s-maj=67.5km s-min=12.5km az=59.0*
*NEIC **13** 23:10:24.9±1.0, 5.°08N±0.°10×127.°36E±0.°09, h99km±5km, mb4.4/16, Error ellipse: s-maj=15.4km s-min=11.3km az=217.0*
ISC 13 23:10:23.6±0.6, 5.°22N±0.°05×127.°49E±0.°07, h108km, n49, σ2°51/62, mb4.2/12, 7C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.98**	**297⇑**	*e*P	**Pn**	**23 10 53.6**	**-2.6**
DDMP				*e*S	**Sn**	**23 11 17.6**	**-3.5**
DAV	**Davao City (W)**	**2.64**	**314**	P	**Pn**	**23 11 04.7**	**-0.1**
	149nm,0.3s,baz=130,slow=6.9,SNR=3.6						
DAV				S	**Sn**	**23 11 37.3**	**+0.7**
	316nm,0.5s,baz=92,slow=20,SNR=7.3						
DAV				LR	LR	23 11 52.2	
	comp=Z,93nm,20.5s,baz=157,slow=33						
GSPH	**General Santos**	**2.67**	**289⇑**	*i*P	Pn	23 11 00.1	-5.2
GSPH				*i* S	**Sn**	**23 11 32.8**	**-4.6**
KCP	**Kidapawan**	**2.98**	**307⇑**	*e*P	**Pn**	**23 11 07.2**	**-2.1**
KCP				*i* S	**Sn**	**23 11 42.9**	**-1.7**
BIPH	**Bislig**	**3.15**	**339⇓**	*i*P	**Pn**	**23 11 09.9**	**-1.7**
BIPH				*i* S	**Sn**	**23 11 42.0**	**-6.7**
SKMP	**Bagumbayan, Su**	**3.20**	**294⇓**	*e*P	**Pn**	**23 11 10.8**	**-1.5**
SKMP				*e*S	**Sn**	**23 11 50.3**	**+0.5**
BUKP	**Musuan**	**3.58**	**318⇓**	*e*P	**Pn**	**23 11 16.9**	**-0.4**
BUKP				*e*S	**Sn**	**23 11 59.3**	**+0.4**
CTBH	**Cotabato--PC H**	**3.79**	**302⇑**	*e*P	**Pn**	**23 11 18.9**	**-1.2**
BUTP	**Butuan**	**4.16**	**334⇓**	*e*P	Pn	23 11 41.6	+16
BUTP				*e*S	**Sn**	**23 12 07.5**	**-5.4**
CGP	**Cagayan de Oro**	**4.25**	**319⇓**	*e*P	**Pn**	**23 11 29.9**	**+3.6**
CGP				*e*S	**Sn**	**23 12 12.6**	**-2.3**
GLSP	**General Luna,**	**4.73**	**344⇑**	*e*P	**Pn**	**23 11 31.5**	**-1.3**
GLSP				*e*S	**Sn**	**23 12 19.9**	**-6.8**
SCPH	**Surigao**	**4.95**	**337**	*e*P	**Pn**	**23 11 36.1**	**+0.4**
SCPH				*i* S	**Sn**	**23 12 29.5**	**-2.4**
GHBP	**Garcia Hernand**	**5.39**	**325⇑**	*e*P	**Pn**	**23 11 42.4**	**+0.6**
GHBP				*i* S	**Sn**	**23 12 40.3**	**-2.3**
TABP	**Talibon, Bohol**	**5.76**	**327⇑**	*e*P	**Pn**	**23 11 46.2**	**-0.6**
TABP				*i* S	**Sn**	**23 12 46.9**	**-4.7**
SIJI	**Sorong**	**7.13**	**148**	P	**Pn**	**23 12 04.8**	**-0.5**
	7.1nm,0.3s,baz=322,slow=15,SNR=6.0						
SIJI				S	**Sn**	**23 13 20.2**	**-4.6**
	5.2nm,0.3s,baz=174,slow=22,SNR=5.9						
TOLI2	**Tolitoli**	**7.84**	**239**	Pn	**Pn**	**23 12 13.5**	**-1.4**
TOLI2				Sn	**Sn**	**23 13 35.3**	**-6.8**
MYLDM	**Lahad Datu**	**8.95**	**270**	Pn	**Pn**	**23 12 31.8**	**+1.7**
FAKI	**Fak Fak**	**9.38**	**149**	Pn	**Pn**	**23 12 36.2**	**+0.4**
FAKI				Sn	**Sn**	**23 14 15.5**	**-4.0**
SBUM	**Sibu**	**15.48**	**260**	P	**P**	**23 13 58.0**	**-0.2**
KNRA	**Kununurra**	**20.80**	**177**	P	**P**	**23 14 57.3**	**+0.9**
KNRA				IAmb	IAmb	23 15 29.6	
	comp=Z,30nm,1.4s						
WB0	**Warramunga Arr**	**25.74**	**165**	P	**P**	**23 15 46.4**	**+2.1**
WB0				IAmb	IAmb	23 15 50.5	
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**25.89**	**165**	P	**P**	**23 15 44.7**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=343,slow=10,SNR=23						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**25.89**	**165**	P	**P**	**23 15 47.8**	**+2.2**
WB2	**Warramunga Arr**	**25.90**	**165**	P	**P**	**23 15 48.0**	**+2.3**
WR0	**Warramunga Arr**	**25.96**	**165**	P	**P**	**23 15 46.4**	**+0.2**
WR0				IAmb	IAmb	23 15 59.8	
	comp=Z,13nm,1.5s						
ASAR	**Alice Springs**	**29.38**	**168**	P	**P**	**23 16 15.8**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=360,slow=8.6,SNR=5.3						
	comp=Z,0.3nm,0.6s						
JHJ2	**Mitsune**	**30.04**	**21**	P	P	23 16 30.0	+7.6
CMAR	**Chiang Mai Arr**	**30.81**	**298**	P	**P**	**23 16 30.1**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=98,slow=6.6,SNR=1.8						
	comp=Z,0.5nm,0.4s						
MORW	**Morawa**	**35.82**	**197**	P	**P**	**23 17 12.8**	**0.0**
BBOO	**Buckleboo**	**38.68**	**168**	P	**P**	**23 17 36.8**	**-0.2**
NWAO	**Narrogin (SRO)**	**39.16**	**194**	P	**P**	**23 17 42.0**	**+1.1**
RAMN	**Ramite**	**44.54**	**304**	*e*P	**P**	**23 18 24.3**	**-0.9**
	comp=Z,5.0nm,0.7s						
JIRN	**Jiri**	**45.14**	**304**	*e*P	**P**	**23 18 30.2**	**+0.1**
	comp=Z,9.7nm,0.5s						
GUN	**Gumba**	**45.49**	**305**	*e*P	**P**	**23 18 33.0**	**+0.2**
	comp=Z,11nm,0.4s						
PKI	**Pulchoki**	**45.75**	**304**	*e*P	**P**	**23 18 34.4**	**-0.5**
PKIN	**Phulchoki**	**45.76**	**304**	*e*P	**P**	**23 18 34.4**	**-0.5**
	comp=Z,3.3nm,0.5s						
DMN	**Daman**	**46.02**	**304**	*e*P	**P**	**23 18 36.2**	**-0.7**
	comp=Z,3.9nm,0.4s						
GKN	**Gorkha**	**46.55**	**304**	*e*P	**P**	**23 18 40.4**	**-0.5**
	comp=Z,4.6nm,0.6s						
DANN	**Dangsing**	**47.39**	**304**	*e*P	**P**	**23 18 47.6**	**0.0**
	comp=Z,17nm,0.5s						
PYUN	**Piuthan**	**47.94**	**303**	*e*P	**P**	**23 18 52.0**	**+0.2**
	comp=Z,6.0nm,0.4s						
MK31	**Makanchi Array**	**56.78**	**324**	P	**P**	**23 19 58.4**	**+1.8**
MK31				IAmb	IAmb	23 20 25.0	
	comp=Z,5.0nm,1.2s						
MKAR	**Makanchi Array**	**56.78**	**324**	P	**P**	**23 19 58.1**	**+1.5**
	comp=Z,2.6nm,0.6s,baz=117,slow=7.6,SNR=22						
	comp=Z,2.6nm,0.6s						
MKAR	**Makanchi Array**	**56.78**	**324**	P	**P**	**23 19 58.3**	**+1.7**
ZALV	**Zalesovo Beam**	**59.62**	**332**	P	**P**	**23 20 17.3**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=122,slow=7.5,SNR=4.4						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**60.91**	**327**	P	**P**	**23 20 27.1**	**+2.1**
KURK				IAmb	IAmb	23 20 27.2	
	comp=Z,9.1nm,1.4s						
GAR	**Garm**	**61.49**	**312**	P	**P**	**23 20 30.6**	**+1.2**
GAR				IAmb	IAmb	23 20 31.5	
	comp=Z,7.9nm,1.1s						
KK31	**Karatay Array**	**62.68**	**316**	P	**P**	**23 20 38.6**	**+1.6**
KK31				IAmb	IAmb	23 20 38.8	
	comp=Z,2.1nm,0.7s						
KKAR	**Karatay Array**	**62.68**	**316**	P	**P**	**23 20 38.6**	**+1.6**
KKAR				IAmb	IAmb	23 20 38.8	
	comp=Z,2.1nm,0.7s						
H23K	**Yukon River**	**82.39**	**24**	P	**P**	**23 22 36.5**	**+3.1**

*IDC **13** 23:13:03.2±0.9, 22.°61S×172.°68E, h0km, mb4.3/12, mbtmp4.3/13, ML3.9/1, MS4.0/41, Error ellipse: s-maj=24.5km s-min=21.3km az=138.0*
*NEIC **13** 23:13:05.7±1.4, 22.°76S±0.°10×172.°66E±0.°09, h10km±1km, mb4.9/36, Error ellipse: s-maj=17.0km s-min=13.6km az=172.0*
*GCMT **13** 23:13:07.7±0.4, 22.°57S±0.°03×172.°77E±0.°03, h28km±1km, MW5.0/64, Moment Tensor Solution. s31,c34; s64,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.58±.34; $M_{\theta\theta}$-2.81±.21; $M_{\phi\phi}$-0.76±.21; $M_{r\theta}$-1.39±.29; $M_{\theta\phi}$2.20±.13; $M_{\phi r}$0.45±.33; Best double couple: $M_0$4.16700×10^{16} NP1:φs296.00000°, δ55.00000°, λ82.00000°. NP2: φs130.00000°, δ35.00000°, λ101.00000°. Principal axes: T 3.8690, Plg78.0000°, Azm179.0000°; N 0.5960, Plg6.0000°, Azm301.0000°; P -4.4640, Plg10.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **13** 23:13:39.7, 21.°96S×169.°93E, h193km, MLv4.1/7,*

Southeast of Loyalty Islands
ISC 13 23:13:08.9±0.5, 22.°74S±0.°07×172.°62E±0.°07, h35km, n109, σ1°07/73, mb4.7/25, MS4.1/39, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.43**	**286**	Pn	**Pn**	**23 14 12.0**	**-1.7**
MARNC	**Mare, Loyalty**	**4.43**	**286**	P	**Pn**	**23 14 16.2**	**+2.5**
YATNC	**Mamie plateau,**	**5.34**	**276**	P	**Pn**	**23 14 26.8**	**+0.6**
OUENC	**Ouen Island, N**	**5.35**	**272**	Pn	**Pn**	**23 14 26.3**	**+0.1**
OUENC	**Ouen Island, N**	**5.35**	**272**	P	**Pn**	**23 14 27.9**	**+1.7**
LIFNC	**LIFOU**	**5.37**	**290**	Pn	**Pn**	**23 14 26.6**	**+0.1**
ONTNC	**Ouen Toro**	**5.72**	**273**	Pn	**Pn**	**23 14 31.2**	**0.0**
DZM	**Mont Dzumac**	**5.75**	**275**	*e*Pn	Pn	23 14 28.0	-3.9
DZM				*e*LR	LR	23 15 46.3	
	comp=Z,1μm,24.1s						
DZM	**Mont Dzumac**	**5.75**	**275**	Pn	**Pn**	**23 14 30.9**	**-1.0**
	3.1nm,0.3s,baz=121,slow=13,SNR=27						
DZM				Sn	**Sn**	**23 15 35.9**	**-0.8**
	2.8nm,0.3s,baz=82,slow=23,SNR=3.1						
DZM				LR	LR	23 16 33.6	
	comp=Z,920nm,20.3s,baz=146,slow=36						
	6.7nm,0.3s						
DZM	**Mont Dzumac**	**5.75**	**275**	Pn	**Pn**	**23 14 31.0**	**-0.8**
DZM	**Mont Dzumac**	**5.75**	**275**	P	**Pn**	**23 14 31.7**	**-0.2**
NOUC	**Port Laguerre**	**5.88**	**275**	P	**Pn**	**23 14 33.9**	**+0.4**
RTV	**Rentapao**	**6.30**	**321**	P	Pn	23 14 46.3	+7.0
DVP	**Devils Point**	**6.50**	**319**	P	Pn	23 14 47.8	+5.8
MSVF	**Nonsavu**	**7.13**	**47**	Pn	**Pn**	**23 14 51.5**	**+0.8**
	1.4nm,0.3s,baz=204,slow=9.5,SNR=22						
MSVF				LR	LR	23 16 59.2	
	comp=Z,4μm,18.2s,baz=185,slow=34						
MSVF	**Nonsavu**	**7.13**	**47**	Pn	**Pn**	**23 14 50.0**	**-0.8**
KOUNC	**Koumac, New Ca**	**8.05**	**284**	Pn	**Pn**	**23 15 03.5**	**+0.1**
URZ	**Urewera**	**15.94**	**167**	LR	LR	23 21 30.2	
	comp=Z,425nm,19.8s,baz=70,slow=32						
URZ	**Urewera**	**15.94**	**167**		**Pn**	**23 16 52.7**	**+2.2**
AFI	**Afiamalu**	**17.21**	**62**	LR	LR	23 22 17.1	
	comp=Z,576nm,21.0s,baz=226,slow=32						
HNR	**Honiara**	**17.96**	**315**	LR	LR	23 23 46.9	
	comp=Z,3μm,18.3s,baz=143,slow=36						
HNR	**Honiara**	**17.96**	**315**		**Pn**	**23 17 16.2**	**+0.3**
HNR				IAmb	IAmb	23 17 26.3	
	comp=Z,163nm,1.3s						
BFZ	**Birch Farm**	**18.15**	**171**	P	**P**	**23 17 17.1**	**-1.1**
EIDS	**Eidsvold**	**19.84**	**258**	P	**P**	**23 17 37.3**	**+0.5**
EIDS				IAmb	IAmb	23 17 40.9	
	comp=Z,44nm,1.0s						
LTZ	**Lake Taylor**	**19.99**	**181**	P	**P**	**23 17 38.0**	**-0.3**
LTZ				IAmb	IAmb	23 17 49.0	
	comp=Z,46nm,1.0s						
ARMA	**Armidale**	**20.25**	**243**	P	**P**	**23 17 42.1**	**+0.7**
OXZ	**Oxford**	**20.54**	**181**	P	**P**	**23 17 44.8**	**+0.6**
OXZ				IAmb	IAmb	23 17 52.5	
	comp=Z,144nm,1.6s						
RPZ	**Rata Peaks**	**20.96**	**183**	LR	LR	23 25 19.5	
	comp=Z,928nm,18.6s,baz=346,slow=35						
CAN	**Canberra**	**24.09**	**233**	P	**P**	**23 18 21.5**	**+0.2**
CTA	**Charters Tower**	**24.68**	**271**	P	**P**	**23 18 27.6**	**+0.9**
	comp=Z,4.4nm,0.6s,baz=97,slow=9.7,SNR=8.5						
CTA				LR	LR	23 27 51.6	
	comp=Z,427nm,18.5s,baz=91,slow=36						
	comp=Z,4.4nm,0.6s						
CTAO	**Charters Tower**	**24.68**	**271**	P	**P**	**23 18 27.2**	**+0.5**
CTAO				IAmb	IAmb	23 18 49.9	
	comp=Z,24nm,1.5s						
TOO	**Toolangi**	**27.60**	**231**	P	**P**	**23 18 53.2**	**+0.3**
TOO				IAmb	IAmb	23 19 15.8	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**28.95**	**245**	P	**P**	**23 19 05.8**	**+0.8**
	comp=Z,7.0nm,0.6s,baz=80,slow=9.6,SNR=14						
STKA				LR	LR	23 30 05.2	
	comp=Z,464nm,18.3s,baz=65,slow=35						
	comp=Z,7.0nm,0.6s						
STKA	**Stephens Creek**	**28.95**	**245**	P	**P**	**23 19 05.7**	**+0.7**
BBOO	**Buckleboo**	**33.72**	**245**	P	**P**	**23 19 47.6**	**+0.5**
TBI	**Tubuai**	**34.84**	**99**	*e*LR	LR	23 29 11.8	
	comp=Z,85nm,42.5s						
WR0	**Warramunga Arr**	**35.51**	**267**	P	**P**	**23 20 01.3**	**-1.3**
AS31	**Alice Springs**	**35.52**	**261**	P	**P**	**23 20 02.4**	**-0.3**
ASAR	**Alice Springs**	**35.52**	**261**	P	**P**	**23 20 02.8**	**0.0**
	comp=Z,12nm,0.8s,baz=89,slow=9.4,SNR=101						
ASAR				LR	LR	23 33 53.4	
	comp=Z,300nm,21.0s,baz=110,slow=35						
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**35.69**	**267**	P	**P**	**23 20 03.0**	**-1.1**
WB2				IAmb	IAmb	23 20 30.3	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**35.70**	**267**	P	**P**	**23 20 02.3**	**-1.9**
	comp=Z,3.0nm,0.7s,baz=96,slow=8.3,SNR=20						
WRA				LR	LR	23 34 26.6	
	comp=Z,386nm,19.2s,baz=94,slow=36						
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**35.70

comp=Z,0.7nm,0.4s
IPM Ipoh 74.88 282 P **P** **23 24 46.5 -0.2**
IPM IAmb IAmb 23 24 47.5
comp=Z,12nm,0.7s
SHEM Shemya Is, Ala 75.16 1 LR LR 23 52 58.6
comp=Z,53nm,19.3s,baz=324,slow=32
KULM Kulim 75.56 282 P **P** **23 24 49.9 -0.6**
MAW Mawson 76.38 202 P **P** **23 24 55.2 +1.0**
comp=Z,4.7nm,0.7s,baz=130,slow=7.8,SNR=12
MAW LR LR 23 55 48.1
comp=Z,72nm,18.1s,baz=90,slow=34
comp=Z,4.7nm,0.7s
MAW Mawson 76.38 202 P **P** **23 24 54.5 +0.3**
PETK Petropavlovsk- 76.63 351 P **P** **23 24 56.0 +0.3**
comp=Z,5.6nm,0.9s,baz=153,slow=9.7,SNR=5.5
PETK LR LR 23 55 44.5
comp=Z,60nm,19.0s,baz=143,slow=34
comp=Z,5.6nm,0.9s
PETK Petropavlovsk- 76.63 351 P **P** **23 24 55.4 -0.3**
BELA Belgrano 2 78.34 174 P **P** **23 25 03.7 -1.4**
KLR Kul'dur 80.36 334 LR LR 23 57 26.1
comp=Z,41nm,20.2s,baz=114,slow=33
PMSA Palmer Station 82.54 159 LR LR 23 58 15.5
comp=Z,24nm,18.2s,baz=178,slow=33
CMAR Chiang Mai Arr 82.80 293 P **P** **23 25 31.8 +1.8**
comp=Z,1.3nm,0.7s,baz=138,slow=5.6,SNR=2.5
CMAR LR LR 00 04 57.6
comp=Z,16nm,19.5s,baz=125,slow=38
comp=Z,1.3nm,0.7s
MA2 Magadan 83.96 349 LR LR 23 56 59.4
comp=Z,70nm,19.8s,baz=145,slow=31
PZH PanZhiHua 84.23 302 P **P** **23 25 39.3 +2.0**
TROLL Troll, Antarti 85.26 183 P **P** **23 25 40.3 -1.4**
KDAK Kodiak Island 85.32 18 LR LR 23 56 25.2
comp=Z,187nm,21.6s,baz=216,slow=30
SNAA Sanae 85.79 181 P **P** **23 25 42.6 -1.7**
SNAA Sanae 85.79 181 P **P** **23 25 43.1 -1.2**
SNAA IAmb IAmb 23 25 44.0
comp=Z,13nm,1.5s
VNA3 Neumayer Olymp 86.26 179 P **P** **23 25 45.5 -1.1**
VNA2 Neumayer--Watz 86.59 180 P **P** **23 25 46.6 -1.6**
VNA1 Neumayer--Stat 86.87 180 P **P** **23 25 48.3 -1.2**
LZH Lanzhou 87.40 311 *eP* **P** **23 25 53.5 +0.7**
LZH pP pP 23 26 00.1 -2.9
LZH sP sP 23 26 03.9 -2.7
YBH Yreka Blue Hor 87.66 43 LR LR 23 56 23.2
comp=Z,132nm,21.6s,baz=269,slow=30
PFO Pinyon Flats O 87.70 52 LR LR 23 58 15.7
comp=Z,122nm,18.7s,baz=302,slow=31
LPIG La Paz 88.13 63 LR LR 23 57 23.8
comp=Z,87nm,18.9s,baz=258,slow=30
NVAR Mina Array Bea 88.79 47 P **P** **23 25 59.2 -0.2**
comp=Z,0.2nm,0.3s,baz=224,slow=3.8,SNR=3.8
NVAR LR LR 00 00 14.8
comp=Z,140nm,18.4s,baz=267,slow=32
comp=Z,0.2nm,0.3s
BBB Bella Bella 90.71 32 LR LR 00 00 33.2
comp=Z,140nm,19.3s,baz=238,slow=32
ELK Elko 91.99 46 LR LR 00 00 04.0
comp=Z,177nm,20.6s,baz=273,slow=31
ILAR Eielson Array 92.66 16 P **P** **23 26 14.3 -2.2**
comp=Z,0.7nm,0.7s,baz=229,slow=5.0,SNR=5.0
ILAR LR LR 00 01 17.5
comp=Z,139nm,20.8s,baz=222,slow=31
comp=Z,0.7nm,0.7s
DLBC Dease Lake 93.72 26 LR LR 00 02 09.4
comp=Z,125nm,18.4s,baz=304,slow=32
NEW Newport 94.45 39 LR LR 00 03 23.1
comp=Z,125nm,18.2s,baz=244,slow=32
PALK Pallekele 94.53 276 LR LR 00 08 04.4
comp=Z,80nm,21.7s,baz=234,slow=35
TXAR Lajitas Array 95.68 61 LR LR 00 01 08.7
comp=Z,77nm,20.3s,baz=282,slow=30
ANMO Albuquerque 95.71 55 LR LR 00 02 50.7
comp=Z,82nm,18.8s,baz=278,slow=31
PDAR Pinedale Array 96.70 46 LR LR 00 02 35.6
comp=Z,90nm,20.9s,baz=280,slow=31
INK Inuvik 98.88 18 LR LR 00 04 21.3
comp=Z,104nm,20.3s,baz=234,slow=31
GERES GERESS Array B 149.04 332 PKPbc **PKPdf** **23 32 50.9 +1.7**
comp=Z,0.4nm,0.6s,baz=45,slow=2.9,SNR=3.1
TORD Torodi Ar. Bea 167.14 224 PKPab **PKPab** **23 34 15.8 -0.2**
comp=Z,1.0nm,0.7s,baz=114,slow=4.1,SNR=6.6

IDC 13 23:14:11.7±2.8, 1°.38N×127°.10E, h0km, mb3.5/3, mbtmp3.6/3, MS3.5/1, Error ellipse: s-maj=263.9km s-min=25.7km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.35**	**162**	P	P	23 19 10.4	-1.1
	0.5nm,0.4s,baz=340,slow=11,SNR=8.1						
	0.5nm,0.4s						
PMG	**Port Moresby**	**22.68**	**119**	LR	LR	23 30 23.3	
	comp=Z,121nm,18.5s,baz=97,slow=43						
ASAR	**Alice Springs**	**25.76**	**166**	P	P	23 19 45.2	+0.8
	1.0nm,0.8s,baz=343,slow=11,SNR=6.9						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**59.69**	**326**	P	P	23 24 18.0	-0.1
	0.6nm,0.5s,baz=118,slow=8.1,SNR=6.2						
	0.6nm,0.5s						

*KMA **13** 23:20:58.8±0.0, 35°.76N×129°.19E, h17km, Error ellipse: s-maj=0.6km s-min=0.6km az=315.0*
*JMA **13** 23:20:58.4±0.2, 35°.8N±0°.9×13°.0E±°, h6km±2km, MV2.5/8, S KOREAN PENINSULA REG*
ISC 13 23:20:57.2±0.9, 35°.78N±0°.03×129°.29E±0°.05, h10km, n19, σ0§65/21, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	**Daegu**	**0.32**	**269**	P	**Pg**	23 21 04.3	+0.7
	SNR=114						
YOCB	**Yeongcheon**	**0.34**	**306**	P	**Pb**	23 21 05.1	-0.3
	SNR=19						
KSPHA	**Pohang**	**0.42**	**9**	P	**Pn**	23 21 08.0	-1.3
	SNR=25						
KSBUS	**Busan**	**0.55**	**196**	P	**Pb**	23 21 09.0	+0.2
	SNR=32						
KSDAU	**Deagu-acc**	**0.56**	**282**	P	**Pg**	23 21 08.5	+0.5
	SNR=30						
KSADO	**Andong**	**0.69**	**337**	P	**Pb**	23 21 11.7	+0.3
	SNR=56						
YEYB	**Yeongyang**	**0.86**	**349**	P	**Pn**	23 21 15.2	-0.2
	SNR=5.4						
ADOA	**Andong Acc Bor**	**0.93**	**329**	P	**Pn**	23 21 16.0	-0.3
	SNR=5.8						
KSULJ	**Uljin**	**0.93**	**6**	P	**Pn**	23 21 16.7	+0.4
	SNR=16						
KSGIC	**Gimchen**	**1.01**	**288**	P	**Pg**	23 21 16.4	-0.2
	SNR=17						
HACA	**Hapcheon Acc B**	**1.03**	**250**	P	**Pg**	23 21 17.0	-0.1
	SNR=9.8						
KSSAJ	**Sangju**	**1.11**	**305**	P	**Pg**	23 21 18.7	+0.1
	SNR=6.2						
CHYB	**Chungyang**	**1.21**	**346**	P	**Pg**	23 21 21.0	+0.7
	SNR=6.2						
DUSB	**Deogyusan**	**1.24**	**276**	P	**Pn**	23 21 20.3	-0.3
	SNR=11						
JTU	**Tsushima**	**1.25**	**176**	*eP*	**Pg**	23 21 21.7	+0.5
JTU				*eS*	**Sn**	23 21 38.1	+0.6
KSTBA	**Taebaek**	**1.37**	**349**	P	**Pg**	23 21 24.0	+0.5
	SNR=14						
JTSM	**Tsushimamitsus**	**1.44**	**177**	*eP*	**Pg**	23 21 24.8	+0.1
JTSM				*eS*	**Sg**	23 21 44.0	+0.7
JTY	**Toyota**	**2.10**	**136**	*eS*	**Sn**	23 21 57.0	-1.5
MNYD	**Munyeodo**	**2.33**	**272**	P	**Pn**	23 21 35.0	-0.6
	SNR=32						

*TIR **13** 23:40:39.9, 41°.65N×20°.29E, h2km, Md3.1*
*SKO **13** 23:40:40.5, 41°.57N×20°.34E, h15km*
*THE **13** 23:40:40.5, 41°.67N×20°.31E, h6km, ML1.9/4, Error ellipse: s-maj=1.8km s-min=0.8km az=335.0*
*BEO **13** 23:40:41.7±0.4, 41°.65N×20°.47E, h7km±3km, ML2.0/7*
*PDG **13** 23:40:41.8±0.1, 41°.64N×20°.21E, h0km±11km, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
ISC 13 23:40:40.6±0.9, 41°.64N±0°.02×20°.32E±0°.02, h5km±7km, n43, σ1§10/79, 7C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.10**	**65**	P	**Pg**	23 40 42.5	-0.3
PHP				S	**Sg**	23 40 44.6	+0.4
PHP	**Peshkopia**	**0.10**	**65**	P	**Pg**	23 40 42.5	-0.3
	baz=72						
PHP				S	**Sg**	23 40 44.7	+0.5
	baz=72						
TIR	**Tirane**	**0.45**	**229**	P	**Pg**	23 40 49.0	-0.3
TIR				S	**Sb**	23 40 56.6	-1.5
	110nm,0.5s						
TIR	**Tirane**	**0.45**	**229**	*i* Pg	**Pg**	23 40 48.6	-0.7
TIR				*i* Sg	**Sg**	23 40 56.3	+1.2
TIR	**Tirane**	**0.45**	**229**	P	**Pg**	23 40 48.7	-0.6
	baz=228						
TIR				S	**Sb**	23 40 56.6	-1.5
	baz=228						
OHR	**Ohrid**	**0.64**	**146**	*e*Pg	**Pg**	23 40 51.6	-1.3
OHR				*e*Sg	**Sg**	23 41 01.7	+0.5
OHR	**Ohrid**	**0.64**	**146**	*i* Pg*	**Pg**	23 40 51.8	-1.1
OHR				*i* Sg	**Sg**	23 41 01.3	+0.1
OHR				*e*Lg	Lg	23 41 02.5	
	comp=N,47nm,0.4s						
OHR				*e*Lg	Lg	23 41 04.0	
	comp=E,40nm,0.5s						
BCI	**Bajram Curri**	**0.75**	**345**	P	**Pb**	23 40 55.5	-0.7
	baz=347						
BCI				S	**Sb**	23 41 07.0	+0.3
	baz=347						
ULC	**Ulcinj**	**0.87**	**292**	*i* Pg	**Pg**	23 40 56.3	-1.0
ULC	**Ulcinj**	**0.87**	**292**	⇑*i*Pg	**Pg**	23 40 56.3	-1.0
ULC				*i* Sg	**Sg**	23 41 08.6	+0.1
PVY	**Plav**	**0.99**	**344**	*e*Pg	**Pg**	23 40 59.6	0.0
PVY				*i* Sg	**Sn**	23 41 14.7	-1.0
DRME	**Dracevica, Mon**	**1.01**	**303**	⇑*i*Pg	**Pg**	23 40 58.9	-1.1
DRME				*i* Sg	**Sb**	23 41 13.6	-0.5
KBN	**Korca**	**1.08**	**161**	P	**Pg**	23 41 01.3	0.0
KBN				S	**Sn**	23 41 17.2	-0.6
	comp=E,78nm,0.9s						
KBN	**Korca**	**1.08**	**161**	P	**Pb**	23 41 01.8	0.0
	baz=159						
KBN				S	**Sn**	23 41 18.6	+0.8
	baz=159						
PDG	**Podgorica**	**1.12**	**315**	*i* Pg	**Pg**	23 41 01.3	-0.8
PDG				*i* Sg	**Sn**	23 41 19.9	+1.2
TTG	**Podgorica**	**1.12**	**315**	⇓*i*Pg	**Pg**	23 41 01.3	-0.8
TTG				*i* Sg	**Sn**	23 41 17.9	-0.8
BUM	**Brajici-Budva**	**1.25**	**302**	⇓*i*Pg	**Pg**	23 41 03.5	-1.1
BUM				*i* Sg	**Sn**	23 41 22.0	-0.1
IVA	**Berane**	**1.27**	**346**	⇓*i*Pg	**Pn**	23 41 04.8	-0.3
IVA				*i* Sg	**Sn**	23 41 24.4	+1.8
NEST	**Nestorio**	**1.34**	**156**	P	**Pn**	23 41 04.7	-1.4
NEST				S	**Sn**	23 41 24.5	+0.1
	comp=E,38nm,0.4s						
KOME	**Kolasin**	**1.35**	**334**	⇑*i*Pg	**Pn**	23 41 05.9	-0.3
KOME				*i* Sg	**Sn**	23 41 26.5	+2.0
CEME	**Cevo**	**1.38**	**311**	⇑*i*Pg	**Pn**	23 41 06.0	-0.6
CEME				*i* Sg	**Sn**	23 41 26.6	+1.3
STIP	**Stip**	**1.40**	**87**	*i* Pn	**Pg**	23 41 08.4	+1.0
LSK	**Leskovik**	**1.51**	**172**	P	**Pn**	23 41 08.1	-0.2
LSK				S	**Sg**	23 41 29.3	+0.3
	comp=E,65nm,0.7s						
LSK	**Leskovik**	**1.51**	**172**	P	**Pg**	23 41 10.0	+0.6
	baz=171						
LSK				S	**Sg**	23 41 32.3	+3.3
	baz=171						
NKME	**Niksic**	**1.52**	**318**	⇑*i*Pg	**Pb**	23 41 08.7	-0.6
NKME				*i* Sg	**Sg**	23 41 31.5	+2.2
HCY	**Herceg Novi**	**1.58**	**301**	*e*Pg	**Pb**	23 41 09.5	-0.8
HCY				*i* Sg	**Sg**	23 41 33.2	+1.8
BARS	**Barje**	**1.61**	**43**	*e*Pg	**Pb**	23 41 10.6	-0.3
BARS				*e*Sg	**Sn**	23 41 30.9	-0.1
SJES	**Sjenica**	**1.64**	**351**	*e*Pg	**Pb**	23 41 11.3	-0.1
SJES				*e*Sg	**Sg**	23 41 34.2	+0.9
SELS	**Selova**	**1.68**	**20**	*e*Pg	**Pb**	23 41 11.3	-0.8
SELS				*e*Sg	**Sn**	23 41 32.3	-0.4
GRG	**Griva**	**1.71**	**113**	P	**Pn**	23 41 10.5	-0.6
GRG				S	**Sb**	23 41 34.5	-0.1
GRG	**Griva**	**1.71**	**113**	*i* Pn	**Pn**	23 41 10.6	-0.5
VAY	**Valandovo**	**1.72**	**100**	*e*Pg	**Pn**	23 41 11.0	-0.2
VAY				*e*Sg	**Sn**	23 41 32.9	-0.6
VAY	**Valandovo**	**1.72**	**100**	*i* Pn	**Pn**	23 41 11.1	-0.2
SRN	**Sarande**	**1.78**	**188**	P	**Pg**	23 41 14.8	+0.1
	baz=188						
SRN				S	**Sg**	23 41 41.5	+3.8
	baz=188						
PLE	**Pljevlja**	**1.82**	**338**	⇑*i*Pn	**Pg**	23 41 14.9	-0.7
PLE				*i* Sn	**Sg**	23 41 41.6	+2.4
BRY	**Bratogost**	**1.83**	**314**	⇓*i*Pn	**Pb**	23 41 14.3	-0.3
BRY				*i* Sn	**Sg**	23 41 41.1	+1.8
UPM	**Unac-Piva**	**1.88**	**327**	⇑*i*Pn	**Pb**	23 41 15.6	+0.1
UPM				*i* Sn	**Sg**	23 41 42.7	+1.7
IVAS	**Ivanjica**	**1.94**	**356**	*e*Pn	**Pn**	23 41 13.8	-0.5
IVAS				*e*Sn	**Sb**	23 41 39.7	-1.2
KNT	**Kendrikon**	**2.00**	**103**	*i* Pn	**Pn**	23 41 14.2	-0.9
IGT	**Igoumenitsa**	**2.11**	**180**	*i* Pn	**Pn**	23 41 17.5	+0.9
BBLS	**Lazići**	**2.32**	**343**	*e*Pn	**Pb**	23 41 21.9	-1.1
BBLS				*e*Sn	**Sn**	23 41 49.6	+1.0
DIVS	**Divibare**	**2.47**	**354**	*e*Pn	**Pn**	23 41 22.6	+1.0
DIVS				*e*Sn	**Sn**	23 41 52.6	+0.5
SRS	**Serrai**	**2.52**	**101**	*i* Pn	**Pb**	23 41 25.8	-0.5

*LDG **13** 23:46:28.2±0.1, 43°.40N×0°.62W, h2km, Md2.4/3, Ml2.6/15, Error ellipse: s-maj=1.7km s-min=1.3km az=122.0*
*MDD **13** 23:46:29.0±0.3, 43°.37N×0°.58W, h0km, mb_Lg2.0/9, Error ellipse: s-maj=2.2km s-min=2.0km az=4.0*
*STR **13** 23:46:29.1±0.5, 43°N±5°×±°, h5km, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=32.5, preliminary*
ISC 13 23:46:27.0±1.0, 43°.41N±0°.02×0°.60W±0°.02, h10km±9km, n35, σ1§03/63, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TERF	**Tercis-les-Bai**	**0.46**	**305**	Pg	**Pb**	23 46 38.5	+1.3
TERF				Sg	**Sb**	23 46 46.2	+2.1
OSSF	**Osses**	**0.51**	**252**	Pg	**Pg**	23 46 37.3	+0.3
OSSF				Sg	**Sg**	23 46 42.6	-1.1
PYLO	**Lourdes**	**0.51**	**128**	⇑Pg	**Pb**	23 46 38.3	+0.3
PYLO				Sg	**Sb**	23 46 46.3	+0.8
ETSF	**Etsaut**	**0.52**	**177**	*e*Pg	**Pg**	23 46 37.1	0.0
ETSF				*e*Sg	**Sg**	23 46 44.4	+0.5
	36nm,0.4s						
SJPF	**Ste Jean**	**0.55**	**237**	*e*Pg	**Pg**	23 46 38.0	+0.3
SJPF				*e*Sg	**Sg**	23 46 45.2	+0.3
	40nm,0.5s						
CANF	**Canfranc**	**0.65**	**175**	Pg	**Pg**	23 46 39.7	0.0
CANF				Sg	**Sg**	23 46 46.6	-1.6
EALK	**Alkurruntz**	**0.69**	**254**	Pg	**Pg**	23 46 40.5	+0.1
EALK				Sg	**Sb**	23 46 50.7	-0.1
EALK				*i* Vmb_Lg		23 46 55.1	
EALK	**Alkurruntz**	**0.69**	**254**	Pg	**Pg**	23 46 40.5	+0.1
VIEF	**Viey**	**0.70**	**139**	Pg	**Pb**	23 46 41.2	-0.1
VIEF				Sg	**Sb**	23 46 51.0	0.0
EORO	**Oroz-Betelu**	**0.74**	**225**	Pg	**Pb**	23 46 42.4	+0.4
EORO				Sg	**Sb**	23 46 51.6	-0.5
EORO				*i* Vmb_Lg		23 46 53.0	
EPF	**Esparros**	**0.78**	**119**	*e*Pg	**Pb**	23 46 43.3	+0.6
EPF				*e*Sg	**Sb**	23 46 54.1	+0.7
	39nm,0.3s						
ECHI	**Chisagues Biel**	**0.95**	**142**	Pg	**Pb**	23 46 45.6	0.0
ECHI				Sg	**Sb**	23 46 58.2	0.0
ECHI	**Chisagues Biel**	**0.95**	**142**	Pg	**Pb**	23 46 45.6	0.0
ECHI				Sg	**Sb**	23 46 58.7	+0.5
EARA	**Aranguren**	**0.96**	**229**	Pg	**Pn**	23 46 47.0	+0.4
EARA				Sg	**Sb**	23 46 59.3	+0.8
EARA				*i* Vmb_Lg		23 47 04.3	
ESAC	**San Caprasio**	**1.69**	**177**	Pg	**Pg**	23 47 00.1	+0.6
ESAC				Sg	**Sg**	23 47 22.0	+0.6
ESAC				*i* Vmb_Lg		23 47 25.2	
LFF	**La Frestale**	**1.80**	**32**	*e*Pn	**Pn**	23 46 58.9	+0.8
LFF	**La Frestale**	**1.80**	**32**	*e*Pg	**Pg**	23 47 02.9	+1.3
LFF				*e*Sg	**Sg**	23 47 25.7	+0.7
	13nm,0.3s						
MTLF	**Montolieu**	**2.05**	**91**	*e*Pn	**Pn**	23 47 02.3	+0.8
MTLF	**Montolieu**	**2.05**	**91**	*e*Pg	**Pg**	23 47 06.8	+0.4
MTLF				*e*Sg	**Sg**	23 47 33.8	+0.8
	8.8nm,0.4s						
ELAN	**Lanestosa**	**2.08**	**266**	Pn	**Pb**	23 47 04.5	-0.3
ELAN				Sn	**Sb**	23 47 30.2	-0.5
ELAN				*i* Vmb_Lg		23 47 40.3	
EPOB	**Poblet**	**2.40**	**148**	Sn	**Sn**	23 47 37.6	+1.6
EPOB				Sg	**Sg**	23 47 42.3	-2.0
EPOB				*i* Vmb_Lg		23 47 46.9	
RJF	**Les Rejaudoux**	**2.42**	**38**	*e*Pg	**Pg**	23 47 13.6	+0.1
RJF				*e*Sn	**Sn**	23 47 35.9	-0.4
RJF				*e*Sg	**Sg**	23 47 45.4	+0.5
	7.4nm,0.3s						
CAF	**Calviac**	**2.44**	**51**	*e*Pn	**Pn**	23 47 07.7	+0.8
CAF	**Calviac**	**2.44**	**51**	*e*Pg	**Pg**	23 47 14.3	+0.5
CAF				*e*Sn	**Sn**	23 47 36.1	-0.7
CAF				*e*Sg	**Sg**	23 47 46.8	+1.4
	7.3nm,0.3s						
ERTA	**Horta de San J**	**2.55**	**164**	Pg	**Pg**	23 47 14.6	-1.2
ERTA				Sg	**Sg**	23 47 47.9	-1.0
ERTA				*i* Vmb_Lg		23 47 55.1	
MFF	**Saint Martin d**	**3.21**	**6**	*e*Pn	**Pn**	23 47 17.8	+0.4
MFF	**Saint Martin d**	**3.21**	**6**	*e*Pg	**Pg**	23 47 27.4	-1.0
MFF				*e*Sn	**Sn**	23 47 54.2	-1.4
MFF				*e*Sg	**Sg**	23 48 08.0	-1.9
	2.9nm,0.4s						
LASF	**Ste Croix**	**3.29**	**77**	*e*Pn	**Pn**	23 47 18.8	+0.2
LASF				*e*Sn	**Sn**	23 47 56.3	-1.5
LASF				*e*Sg	**Sg**	23 48 12.4	-0.4
	4.6nm,0.4s						
TCF	**Toulx Ste Croi**	**3.50**	**34**	*e*Sn	**Sn**	23 48 01.9	-1.0
TCF				*e*Sg	**Sg**	23 48 18.8	-0.6
	2.6nm,0.3s						
BGF	**Bois d'Agland**	**3.98**	**37**	*e*Sg	**Sg**	23 48 33.6	-1.2
	12nm,0.5s						
VIVF	**Saint-Julien-l**	**4.06**	**67**	*e*Sg	**Sg**	23 48 36.4	-0.9
	2.1nm,0.4s						
AVF	**Avril sur Loir**	**4.38**	**38**	*e*Sg	**Sg**	23 48 46.6	-1.1
	4.3nm,0.5s						
SMF	**Signal de Mont**	**4.51**	**43**	*e*Sg	**Sg**	23 48 50.2	-1.6
	1.3nm,0.4s						
SSF	**Saint Saulge**	**4.66**	**37**	*e*Sg	**Sg**	23 48 55.0	-1.5
	5.5nm,0.8s						
LOR	**Lormes**	**4.97**	**38**	*e*Sg	**Sg**	23 49 03.2	-3.4
	2.1nm,0.4s						

IDC 13 23:51:12.7±4.9, 30°.54N×141°.49E, h0km, mb3.4/2, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=188.2km s-min=31.1km az=73.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.58**	**336**	Pn	Pn	23 52 49.6	-1.3
	0.1nm,0.3s,baz=151,slow=11,SNR=6.1						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**47.86**	**307**	P	P	23 59 52.9	+0.5
	0.4nm,0.7s,baz=81,slow=9.5,SNR=2.3						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**50.66**	**189**	P	P	00 00 13.6	-0.3
	0.2nm,0.5s,baz=4.1,slow=7.5,SNR=5.5						
	0.2nm,0.5s						

*AUST **14** 00:09:24.3±2.2, 30°.59S×117°.17E, h8km±13km, Error ellipse: s-maj=19.1km s-min=10.0km az=49.0*
CUPWA 14 00:09:25.9±193.0, 30°.61S×117°.12E, h2km±999km, Region: WESTERN AUSTRALIA, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLDU	**Ballidu**	**0.36**	**269**	P	Pg	00 09 32.3	-0.5
	baz=0.4						
BLDU				S	Sg	00 09 37.2	-0.2
	baz=0.4						
BLDU	**Ballidu**	**0.36**	**269**	P	Pg	00 09 32.3	-0.5
BLDU				S	Sg	00 09 37.2	-0.2
KLBR	**Kellerberrin**	**1.12**	**151**	P	Pg	00 09 46.1	-1.3
	baz=1.1						
KLBR				S	Sg	00 10 00.5	-1.3
	baz=1.1						
KLBR	**Kellerberrin**	**1.12**	**151**	P	Pg	00 09 46.0	-1.3
KLBR				S	Sg	00 10 00.5	-1.3
MUN	**Mundaring**	**1.57**	**210**	P	Pn	00 09 54.3	-0.6
	baz=1.6						
MUN				S	Sn	00 10 14.6	-1.2
	baz=1.6						
MUN	**Mundaring**	**1.57**	**210**	P	Pn	00 09 54.2	-0.6
MORW	**Morawa**	**1.80**	**328**	P	Pn	00 09 56.7	-1.3
	baz=1.8						
MORW				S	Sn	00 10 18.8	-2.7
	baz=1.8						
MORW	**Morawa**	**1.80**	**328**	P	Pn	00 09 56.7	-1.3
MORW	**Morawa**	**1.80**	**328**	S	Sn	00 10 18.8	-2.7
NWAO	**Narrogin (SRO)**	**2.31**	**178**	P	Pn	00 10 02.6	-2.4
	baz=2.3						
NWAO				P	Pn	00 10 02.6	-2.4
	baz=2.3						
NWAO	**Narrogin (SRO)**	**2.31**	**178**	P	Pn	00 10 02.6	-2.4

*WEL **14** 00:30:00, 37°.25S×178°.97E, h24km, ML4.5, Mw4.6, Moment Tensor Solution. s4 Moment tensor: Scale 10^{16} Nm; M_{rr}~1.20; $M_{\theta\theta}$0.18; $M_{\phi\phi}$1.02; $M_{r\theta}$0.02; $M_{\theta\phi}$0.29; $M_{\phi r}$~0.12; Fault plane solution: $M_0$1.16000×10^{16} NP1: ϕ_s200.00000°, δ42.00000°, λ-86.00000°. NP2:ϕ_s15.00000°, δ48.00000°, λ-94.00000°. Principal axes: T 1119.2100, Plg3.0000°, Azm107.0000°; N 90.4600, Plg2.0000°, Azm17.0000°; P -1209.6700, Plg86.0000°, Azm248.0000°;*
*NOU **14** 00:30:36.2, 37°.23S×179°.97E, h0km, MLv5.0/12, Off E. Coast of N. Island, N.Z.*
*NEIC **14** 00:30:46.0±2.7, 37°.44S±0°.07×179°.09E±0°.05, h10km±1km, mb4.8/24, Error ellipse: s-maj=12.9km s-min=5.9km az=345.0*
*WEL **14** 00:30:48.0±1.0, 37°S±4°×17°9E±°, h15km±4km, M4.5/57, ML4.8/57, MLv4.5/57, Error ellipse: s-maj=0.0km s-min=0.0km az=92.8*
*IDC **14** 00:30:55.0±3.4, 37°.41S×178°.72E, h68km±24km, mb4.2/7, mbtmp4.4/8, MS3.8/10, Error ellipse: s-maj=29.6km s-min=22.6km az=86.0*
ISC 14 00:30:46.3±1.7, 37°.40S±0°.04×179°.01E±0°.06, h10km±9km, n210, σ1§85/226, mb4.7/18, MS3.8/9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.58**	**253**		**Pn**	00 30 59.8	-0.9
MXZ				Sg	**Sg**	00 31 06.9	+1.7
MXZ	**Matakaoa Point**	**0.58**	**253**	P	**Pn**	00 30 59.9	-0.7
MXZ				S	**Sg**	00 31 06.8	+1.6
MXZ	**Matakaoa Point**	**0.58**	**253**	P	**Pn**	00 31 00.2	-0.4
WMGZ	**Waiomatatini S**	**0.63**	**228**	P	**Pn**	00 31 04.0	+2.7
WMGZ				S	**Sn**	00 31 13.9	+2.4
PKGZ	**Pakihiroa**	**0.89**	**236**	P	**Pn**	00 31 06.5	+1.6
PKGZ				S	**Sn**	00 31 19.6	+1.7
PUZ	**Puketiti**	**0.90**	**221**	P	**Pn**	00 31 07.6	+2.6
PUZ				S	**Sn**	00 31 20.4	+2.4
HAZ	**Te Kaha**	**1.04**	**249**

RAHZ	Arahi	2.14	224	P		Pb	00 31 24.5 -0.7
MKRZ	Makatiti	2.14	249	P		Pb	00 31 24.6 -0.6
TARZ	Mount Tarawera	2.15	246	P		Pb	00 31 24.8 -0.6
LIRZ	Lichensteins R	2.17	253	P		Pb	00 31 24.6 -1.0
WHHZ	Waihua	2.18	219	P		Pb	00 31 24.5 -1.4
RRRZ	Republican Roa	2.19	244	P		Pb	00 31 25.0 -0.9
OMRZ	Omania	2.21	250	P		Pb	00 31 25.1 -1.2
MYRZ	Mayor Island	2.21	272	P		Pn	00 31 23.2 +0.2
TGRZ	Tauranga	2.21	261	P		Pn	00 31 23.9 +0.9
MTHZ	Maungataniwha	2.24	229	P		Pb	00 31 26.0 -0.9
HLRZ	Highlands Stat	2.27	247	P		Pb	00 31 26.2 -1.2
KARZ	Kaharoa	2.28	253	P		Pb	00 31 25.4 -2.1
PRRZ	Plateau Road	2.34	241	P		Pb	00 31 26.6 -2.0
NGRZ	Ngongotaha	2.34	252	P		Pb	00 31 27.1 -1.6
UTU	Utuhina	2.36	250	P		Pb	00 31 27.0 -1.3
HSRZ	Hossack Road	2.37	247	P		Pb	00 31 27.7 -1.4
HRRZ	Handcock Road	2.37	244	P		Pb	00 31 27.4 -1.8
ALRZ	Allen Road	2.40	240	P		Pb	00 31 27.7 -2.0
ARHZ	Aropaoanui	2.44	220	P		Pb	00 31 28.6 -1.7
KMRZ	Kaimai	2.47	259	P		Pn	00 31 28.1 +1.4
GRRZ	Galatos Road	2.48	247	P		Pb	00 31 28.9 -2.1
MRHZ	Matea Rd	2.50	234	P		Pb	00 31 29.2 -2.0
WPRZ	Whakapapatarin	2.51	243	P		Pb	00 31 29.8 -1.7
BKZ	Black Stump Fm	2.65	227	Pn		Pn	00 31 30.4 +1.3
BKZ				Sn		Sn	00 32 03.4 +2.0
BKZ	Black Stump Fm	2.65	227	P		Pb	00 31 31.0 -2.9
BKZ	Black Stump Fm	2.65	227	P		Pb	00 31 31.5 -2.4
KUZ	Kuaotunu	2.71	283	P		Pn	00 31 28.6 -1.3
KUZ	Kuaotunu	2.71	283	P		Pn	00 31 29.0 -0.9
CKHZ	Cape Kidnapper	2.72	213	P		Pn	00 31 31.0 +1.0
WHTZ	Whakaora	2.72	241	P		Pb	00 31 33.7 -1.4
MCHZ	McNeill Hill	2.73	221	P		Pb	00 31 32.2 -3.1
KUTZ	Kaahu Road	2.74	246	P		Pb	00 31 32.7 -2.8
TOZ	Tahuroa Road	2.81	262	P		Pn	00 31 31.4 +0.2
KWHZ	Kaweka Forest	2.87	224	P		Pn	00 31 33.5 +1.4
TLZ	Tolley Road	2.90	250	P		Pn	00 31 34.6 +2.0
KAHZ	Kahuranaki	2.92	214	P		Pn	00 31 33.8 +1.0
RITZ	Rihia Road	2.94	237	P		Pn	00 31 35.3 +2.2
RATZ	Rangitukua	2.94	239	P		Pb	00 31 35.6 -3.3
KATZ	Kakaramea	3.05	238	P		Pn	00 31 36.8 +2.1
TMVZ	Te Maari	3.11	236	P		Pn	00 31 37.1 +1.5
BHHZ	Black Hill Sta	3.12	227	P		Pn	00 31 37.0 +1.5
PXZ	Pawanui	3.12	212	P		Pn	00 31 36.0 +0.5
ETVZ	East Tongariro	3.12	235	P		Pn	00 31 37.0 +1.3
NTVZ	North Tongarir	3.12	236	P		Pn	00 31 37.3 +1.6
KRVZ	Karewarewa	3.15	236	P		Pn	00 31 37.6 +1.6
OTVZ	Oturere	3.17	235	P		Pn	00 31 37.9 +1.5
NNVZ	North Ngauruho	3.18	236	P		Pn	00 31 38.3 +1.7
WTVZ	West Tongariro	3.19	236	P		Pn	00 31 38.5 +1.8
SNVZ	South Ngauruho	3.19	235	P		Pn	00 31 38.0 +1.3
TUVZ	Tukino	3.23	234	P		Pn	00 31 39.1 +1.9
WPHZ	Waipukurau	3.33	216	P		Pn	00 31 39.4 +0.9
PRHZ	Porangahau	3.41	212	P		Pn	00 31 39.6 +0.1
PRHZ				S		Sn	00 32 18.5 -1.6
HIZ	Hauiti	3.46	250	Pn		Pn	00 31 42.4 +2.1
HIZ	Hauiti	3.46	250	P		Pn	00 31 43.3 +3.0
DVHZ	Dannevirke	3.65	217	P		Pn	00 31 43.2 +0.3
DVHZ				S		Sn	00 32 24.1 -1.8
POWZ	Post Office Ro	3.91	219	P		Pn	00 31 46.6 +0.2
POWZ				S		Sn	00 32 31.1 -1.4
BFZ	Birch Farm	3.92	212	Pn		Pn	00 31 46.5 -0.1
BFZ	Birch Farm	3.92	212	P		Pn	00 31 46.0 -0.5
BFZ				S		Sn	00 32 31.0 -1.7
BFZ	Birch Farm	3.92	212	P		Pn	00 31 46.7 +0.1
WCZ	Waipu Caves	4.02	290	P		Pn	00 31 48.0 0.0
CPWZ	Castlepoint	4.13	211	P		Pn	00 31 49.7 +0.3
CPWZ				S		Sn	00 32 36.3 -1.5
TIWZ	Tintock	4.16	215	P		Pn	00 31 49.9 +0.1
TIWZ				S		Sn	00 32 36.7 -1.8
MRZ	Mangatainoka R	4.21	218	P		Pn	00 31 49.8 -0.8
MRZ				S		Sn	00 32 36.7 -3.1
KHEZ	Kahui Hut	4.36	243	P		Pn	00 31 55.9 +3.3
TMWZ	Te Maipa	4.42	212	P		Pn	00 31 52.6 -0.9
TMWZ				S		Sn	00 32 41.0 -4.0
HOWZ	Holdsworth Sta	4.42	217	P		Pn	00 31 52.5 -1.0
HOWZ				S		Sn	00 32 41.5 -3.6
OGWZ	Otaki Gorge	4.53	220	P		Pn	00 31 54.0 -1.0
MTW	Mount Morrison	4.64	215	P		Pn	00 31 55.0 -1.4
MTW				S		Sn	00 32 46.8 -3.5
KIW	Kapiti Island	4.70	221	P		Pn	00 31 56.3 -1.0
TRWZ	Traveller	4.75	212	P		Pn	00 31 56.1 -1.9
TRWZ				S		Sn	00 32 49.2 -3.9
CAW	Cannon Point	4.80	218	P		Pn	00 31 57.0 -1.7
PAWZ	Paruwai Farm	4.85	214	P		Pn	00 31 58.1 -1.3
PAWZ				S		Sn	00 32 50.8 -4.8
OUZ	Omahuta	4.88	295	Pn		Pn	00 31 50.7 +0.2
OUZ	Omahuta	4.88	295	P		Pn	00 32 00.4 +0.7
MSWZ	Moikau Station	4.96	215	Pn		Pn	00 31 58.4 -2.4
MSWZ	Moikau Station	4.96	215	P		Pn	00 31 59.2 -1.6
MSWZ				S		Sn	00 32 53.7 -4.5
PLWZ	Palliser	5.08	214	Pn		Pn	00 31 59.7 -2.8
PLWZ	Palliser	5.08	214	P		Pn	00 32 00.7 -1.8
PLWZ				S		Sn	00 32 56.3 -4.9
SNZO	South Karori	5.14	219	Pn		Pn	00 32 01.1 -2.1
SNZO	South Karori	5.14	219	P		Pn	00 32 02.9 -0.3
	120nm,0.9s						
DUWZ	D'Urville Isla	5.21	228	P		Pn	00 32 03.7 -0.7
TCW	Tory Channel	5.29	222	P		Pn	00 32 03.8 -1.5
TCW				S		Sn	00 33 01.9 -4.4
TUWZ	Tuamarina	5.62	223	Pn		Pn	00 32 08.5 -1.4
TUWZ	Tuamarina	5.62	223	P		Pn	00 32 08.6 -1.3
NNZ	Nelson	5.79	227	Pn		Pn	00 32 11.9 -0.4
NNZ	Nelson	5.79	227	P		Pn	00 32 11.0 -1.2
BSWZ	Blackbirch Sta	5.86	221	Pn		Pn	00 32 11.7 -1.4
BSWZ	Blackbirch Sta	5.86	221	P		Pn	00 32 11.2 -2.0
TKNZ	Takaka Hill	5.93	230	P		Pn	00 32 13.2 -1.0
QRZ	Quartz Range	6.09	234	Pn		Pn	00 32 15.0 -1.3
QRZ	Quartz Range	6.09	234	P		Pn	00 32 15.2 -1.2
QRZ	Quartz Range	6.09	234	P		Pn	00 32 15.3 -1.1
MRNZ	Matariki Terra	6.28	229	P		Pn	00 32 17.3 -1.6
THZ	Tophouse	6.42	225	Pn		Pn	00 32 19.0 -1.9
THZ	Tophouse	6.42	225	P		Pn	00 32 19.2 -1.7
KHZ	Kahutara	6.54	218	Pn		Pn	00 32 20.8 -1.7
KHZ	Kahutara	6.54	218	P		Pn	00 32 20.4 -2.1
KHZ	Kahutara	6.54	218	P		Pn	00 32 20.8 -1.7
DSZ	Denniston Nort	7.05	230	P		Pn	00 32 27.5 -2.1
GVZ	Greta Valley S	7.20	218	P		Pn	00 32 30.3 -1.3
LTZ	Lake Taylor	7.45	222	Pn		Pn	00 32 33.6 -1.5
LTZ	Lake Taylor	7.45	222	P		Pn	00 32 32.6 -3.2
OKCZ	Okains Bay	7.77	214	P		Pn	00 32 36.4 -3.0
MQZ	McQueen's Vall	7.94	216	Pn		Pn	00 32 39.1 -2.7
MQZ	McQueen's Vall	7.94	216	P		Pn	00 32 38.8 -3.0
OXZ	Oxford	7.96	220	Pn		Pn	00 32 40.6 -1.4
RAO	Raoul Island	8.52	18	LR		LR	00 35 39.8
	comp=Z,96nm,20.4s,baz=190,slow=33						
RPZ	Rata Peaks	8.74	221	P		Pn	00 32 50.9 -1.8
	9.1nm,0.3s,baz=97,slow=7.8,SNR=20						
RPZ				S		Sn	00 34 22.1 -9.2
	16nm,0.5s,baz=310,slow=23,SNR=13						
RPZ				LR		LR	00 37 04.7
	comp=Z,2μm,21.4s,baz=45,slow=43						
RPZ	Rata Peaks	8.74	221	Pn		Pn	00 32 51.1 -1.7
RPZ	Rata Peaks	8.74	221	P		Pn	00 32 50.9 -1.8
LBZ	Lake Benmore	9.66	221	Pn		Pn	00 33 02.8 -2.5
ODZ	Otahua Downs	9.90	217	Pn		Pn	00 33 07.2 -1.4
WKZ	Wanaka	10.57	222	Pn		Pn	00 33 16.3 -1.5
MLZ	Mavora Lakes	11.40	222	Pn		Pn	00 33 29.1 -0.2
WHZ	Wether Hill Ro	11.84	221	Pn		Pn	00 33 35.6 +0.4
DCZ	Deep Cove	11.99	224	Pn		Pn	00 33 36.6 -0.6
OUENC	Ouen Island, N	18.25	321	Pn		Pn	00 34 56.4 -3.3
DZM	Mont Dzumac	18.74	321	*e*Pn		Pn	00 35 06.2 +0.4
	22nm,0.9s						
DZM				*e*LR		LR	00 39 24.9
	comp=Z,613nm,23.4s						
DZM	Mont Dzumac	18.74	321	LR		LR	00 40 54.4
	comp=Z,384nm,21.4s,baz=186,slow=32						
MSVF	Nonsavu	19.61	357	P		Pn	00 35 18.5 +2.3
	3.6nm,0.7s,baz=168,slow=20,SNR=2.6						
TAU	Tasmania Unive	24.75	247	P		P	00 36 08.8 +0.9
TAU				IAmb		IAmb	00 36 25.1
	comp=Z,46nm,1.4s						
TOO	Toolangi	26.52	259	P		P	00 36 24.9 +0.8
TOO				IAmb		IAmb	00 37 03.0
	comp=Z,28nm,1.6s						
EIDS	Eidsvold	26.58	289	P		P	00 36 26.0 +1.3
EIDS				IAmb		IAmb	00 36 46.7
	comp=Z,33nm,1.4s						
TBI	Tubuai	30.43	72	*e*S		S	00 42 01.9 +1.9
	comp=Z,44nm,27.2s						
TBI				*e*LR		LR	00 44 58.4
	comp=Z,257nm,24.0s						
TBI	Tubuai	30.43	72	*e*T		T	01 09 04.7
	comp=Z,22nm,0.3s						
STKA	Stephens Creek	31.13	269	P		P	00 37 05.9 +0.8
	comp=Z,7.7nm,0.8s,baz=102,slow=12,SNR=14						
STKA				LR		LR	00 48 54.5
	comp=Z,230nm,19.4s,baz=62,slow=35						
	comp=Z,7.7nm,0.8s						
STKA	Stephens Creek	31.13	269	P		P	00 37 05.9 +0.8
CTA	Charters Tower	33.28	292	P		P	00 37 25.1 +1.0
	comp=Z,3.1nm,0.5s,baz=126,slow=12,SNR=5.2						
CTA				LR		LR	00 49 25.0
	comp=Z,178nm,21.1s,baz=86,slow=34						
	comp=Z,3.1nm,0.5s						
CTAO	Charters Tower	33.28	292	P		P	00 37 24.8 +0.7
CTAO				IAmb		IAmb	00 37 56.1
	comp=Z,14nm,1.2s						
PPT2	Papeete2	33.91	63	*e*S		S	00 42 55.9 +1.5
	comp=Z,58nm,26.0s						
PPT2				*e*LR		LR	00 46 34.3
	comp=Z,281nm,24.5s						
BBOO	Buckleboo	35.21	264	P		P	00 37 40.0 -0.7
COEN	Coen	39.48	297	P		P	00 38 17.6 +0.5
COEN				IAmb		IAmb	00 38 18.9
	comp=Z,19nm,0.8s						
AS31	Alice Springs	40.82	276	P		P	00 38 27.7 -0.4
ASAR	Alice Springs	40.82	276	P		P	00 38 27.4 -0.8
	comp=Z,10nm,0.8s,baz=117,slow=7.3,SNR=74						
ASAR				PcP		PcP	00 40 27.5 -1.6
	comp=Z,0.3nm,0.5s,baz=102,slow=3.9,SNR=1.5						
ASAR				LR		LR	00 55 28.0
	comp=Z,120nm,18.2s,baz=154,slow=36						
	comp=Z,10nm,0.8s						
VNDA	Vanda	40.90	186	LR		LR	00 51 42.2
	comp=Z,94nm,21.7s,baz=26,slow=30						
WR0	Warramunga Arr	42.28	282	P		P	00 38 39.3 -0.9
WR0				IAmb		IAmb	00 38 41.0
	comp=Z,20nm,1.1s						
FORT	Forrest	42.29	263	P		P	00 38 39.4 -0.7
FORT				IAmb		IAmb	00 38 42.0
	comp=Z,27nm,1.1s						
WB2	Warramunga Arr	42.44	282	P		P	00 38 40.8 -0.7
WB2				IAmb		IAmb	00 38 41.7
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	42.44	282	P		P	00 38 40.5 -1.0
WRAB				IAmb		IAmb	00 38 41.7
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	42.45	282	P		P	00 38 40.5 -1.0
	comp=Z,4.9nm,0.4s,baz=127,slow=6.8,SNR=112						
WRA				PcP		PcP	00 40 35.1 +0.6
	comp=Z,0.5nm,0.6s,baz=140,slow=3.3,SNR=2.2						
	comp=Z,4.9nm,0.4s						
WRA	Warramunga Arr	42.45	282	P		P	00 38 40.6 -0.9
WB0	Warramunga Arr	42.50	282	P		P	00 38 41.2 -0.8
WB0				IAmb		IAmb	00 38 42.1
	comp=Z,14nm,0.8s						
CASY	Casey	47.83	211	P		P	00 39 25.9 +2.2
MTN	Manton Dam	49.11	287	P		P	00 39 33.7 -0.5
KNRA	Kununurra	49.23	282	P		P	00 39 34.9 -0.2
MORW	Morawa	52.47	260	P		P	00 39 58.8 -0.7
QSPA	South Pole Qui	52.73	180	LR		LR	01 00 33.2
	comp=Z,64nm,18.2s,baz=40,slow=34						
QSPA	South Pole Qui	52.73	180	P		P	00 40 05.3 +4.3
MBWA	Marble Bar	53.36	270	P		P	00 40 05.0 -1.0
FAKI	Fak Fak	54.87	297	P		P	00 40 15.7 -1.5
FAKI				IAmb		IAmb	00 41 40.1
	comp=Z,16nm,1.1s						
SOEI	Soe	56.29	285	P		P	00 40 29.2 +1.7
MAW	Mawson	64.90	202	P		P	00 41 25.0 -0.3
	comp=Z,2.3nm,0.9s,baz=141,slow=5.4,SNR=4.6						
MAW				LR		LR	01 11 03.9
	comp=Z,127nm,18.0s,baz=118,slow=37						
	comp=Z,2.3nm,0.9s						
TROLL	Troll, Antarti	70.86	181	P		P	00 42 06.2 +3.2
LEM	Lembang	71.11	276	LR		LR	01 13 57.3
	comp=Z,74nm,20.3s,baz=55,slow=36						
SNAA	Sanae	71.22	179	P		P	00 42 08.3 +3.2
SNAA	Sanae	71.22	179	P		P	00 42 08.1 +2.9
SNAA				IAmb		IAmb	00 42 41.0
	comp=Z,8.7nm,1.3s						
VNA3	Neumayer Olymp	71.48	177	P		P	00 42 09.3 +2.7
VNA2	Neumayer--Watz	71.88	178	P		P	00 42 12.0 +3.0
	baz=177,slow=5.8						
VNA1	Neumayer--Stat	72.13	177	P		P	00 42 13.6 +3.1
H03S2	Juan Fernandez	78.66	124	T		T	02 09 22.4
	baz=230						
H03S1	Juan Fernandez	78.67	124	T		T	02 09 27.7
	baz=230						
H03S3	Juan Fernandez	78.68	124	T		T	02 09 22.4
	baz=230						
KSRS	Korea Array	88.17	322	P		P	00 43 38.9 +1.7
	comp=Z,1.0nm,0.6s,baz=145,slow=5.8,SNR=4.9						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	93.43	291	P		P	00 44 01.9 -0.3
	comp=Z,1.2nm,0.5s,baz=145,slow=3.3,SNR=1.4						
	comp=Z,1.2nm,0.5s						
PZH	PanZhiHua	96.38	298	P		P	00 44 16.9 +1.2
XAN	Xi'an	96.41	308	P		P	00 44 21.1 +5.5
XAN				pP		sP	00 44 29.5 +10
HHC	Hu-ho-hao-te	99.34	315	*e*P		Pdif	00 44 35.6 +7.0
WMQ	Urumqi	115.50	307	*e*P		PKiKP	00 49 29.8 +1.6
ARCES	ARCESS Array B	144.77	344	PKP		PKPdf	00 50 21.7 -0.6
	comp=Z,2.1nm,0.7s,baz=31,slow=2.1,SNR=14						
ARCES	ARCESS Array B	144.77	344	PKPdf		PKPdf	00 50 21.9 -0.4
KLMR	Klimovskoe	145.46	326	*e*		PKPbc	00 50 21.7 -2.0
KLMR				AMP			00 50 25.2
	comp=Z,16nm,1.3s						
GURO	Guroymak-BITLI	146.29	285	PKPbc		PKiKP	00 50 27.5 -2.8
KBZ	Khabaz	146.37	295	PKPbc		PKPab	00 50 27.1 -0.9
	comp=Z,2.6nm,0.8s,baz=76,slow=4.2,SNR=4.1						
DBIC	Dimbokro	149.21	172	PKPbc		PKPab	00 50 38.0 -1.9
	comp=Z,2.9nm,0.8s,baz=163,slow=3.5,SNR=6.1						
DBIC	Dimbokro	149.21	172			PKPab	00 50 38.2 -1.8
FIA1	FINESS Array S	150.59	334	PKPbc		PKiKP	00 50 36.5 -1.7
FINES	FINESS Array B	150.59	334	PKPbc		PKiKP	00 50 36.7 -1.5
	comp=Z,2.2nm,0.5s,baz=35,slow=5.1,SNR=29						
FINES	FINESS Array B	150.59	334	PKPbc		PKiKP	00 50 36.6 -1.6
BRTR	Keskin Array B	152.92	286	PKPbc		PKiKP	00 50 42.5 -1.5
	comp=Z,0.9nm,0.5s,baz=93,slow=2.9,SNR=8.7						
BRTR	Keskin Array B	152.92	286	PKPbc		PKiKP	00 50 42.4 -1.6
TORD	Torodi Ar. Bea	155.73	186	PKPab		PKPab	00 51 07.8 +0.6
	comp=Z,1.9nm,0.9s,baz=174,slow=3.2,SNR=6.7						

PRE **14** *00:32:39.0±3.8, 14°.46S×12°.28E, h10km, mb4.6*
IDC **14** *00:32:45.5±0.9, 15°.32S×12°.01E, h0km, mb3.9/8, mbtmp4.0/14, MLL3.6/4, MS3.3/5, Error ellipse: s-maj=26.3km s-min=14.4km az=60.0*
NEIC **14** *00:32:48.5±1.5, 15°.43S±0°.04×12°.0E±0°.1, h10km±1km, mb4.4/20, Error ellipse: s-maj=20.2km s-min=7.3km az=270.0*
ISC 14 00:32:47.8±0.5, 15°.35S±0°.06×12°.04E±0°.07, h10km, n84, σ2s72/88, mb4.3/15, **Angola**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMUT	Andoni	5.34	125	*i* P	Pn	00 34 11.5	+3.8
OMUT				*i* S	Sg	00 35 44.0	+4.5
TSUM	Tsumeb	6.53	127	Pn	Pn	00 34 25.0	+0.9
	7.1nm,0.2s,baz=317,slow=12,SNR=15						
TSUM				Sn	Sn	00 35 33.3	-5.5
	16nm,0.3s,baz=328,slow=13,SNR=3.4						
TSUM				Lg	Lg	00 36 15.1	
	79nm,0.3s,baz=39,slow=21,SNR=8.1						
TSUM	Tsumeb	6.53	127		Pn	00 34 24.9	+0.8
TSUM	Tsumeb	6.53	127	*e*P	Pn	00 34 25.1	+1.0
TSUM				*e*S	Sn	00 35 35.4	-3.4
WP01	e3381	6.78	152	*i* P	Pb	00 34 40.7	-5.2
WP01				*i* S	Sg	00 36 37.1	+12
WEWE	WEWE	7.38	143	*i* P	Pn	00 34 42.9	+7.2
WEWE				*i* S	Sb	00 36 26.9	+2.7
OKAM	Okamatapati	7.73	131	*i* P	Pb	00 34 52.6	-9.5
OKAM				*i* S	Sg	00 36 54.3	-1.9
KANON	KANO	8.03	119	*i* P	Pn	00 34 48.9	+4.2
KANON				*i* S	Sb	00 36 52.6	+10
HOCHN	Hochfeld	8.22	139	*i* P	Pb	00 35 01.2	-9.3
HOCHN				*i* S	Sg	00 37 13.1	+1.2
GAMM	Gam	9.68	121	*i* P	Pn	00 35 14.7	+7.4
GAMM				*i* S	Sn	00 37 37.1	+41
LSZ	Lusaka	15.58	92	Pn	Pn	00 36 25.8	-1.9
	1.2nm,0.3s,baz=274,slow=12,SNR=1.7						
LSZ				Sn	Sn	00 39 18.0	-2.5
	0.8nm,0.3s,baz=232,slow=18,SNR=2.4						
LSZ				Lg	Lg	00 40 45.9	
	0.6nm,0.3s,baz=223,slow=19,SNR=3.1						
LSZ				LR	LR	00 42 54.1	
	comp=Z,166nm,18.1s,baz=256,slow=39						
LSZ	Lusaka	15.58	92	Pn	P	00 36 30.1	-2.0
KEIM	Keimoes	15.64	150	*e*P	Pn	00 36 29.0	+0.5
KEIM				IAmb	IAmb	00 36 39.6	
	comp=Z,59nm,2.0s						
LBTB	Lobatse	15.93	129	Pn	Pn	00 36 31.2	-1.0
	comp=Z,0.2nm,0.3s,baz=320,slow=16,SNR=1.7						
LBTB				Sn	Sn	00 39 33.4	+4.2
	comp=Z,0.6nm,0.3s,baz=308,slow=18,SNR=4.2						
LBTB				Lg	Lg	00 41 05.0	
	comp=Z,1.0nm,0.3s,baz=21,slow=18,SNR=4.2						
LBTB				LR	LR	00 42 47.8	
	comp=Z,141nm,18.0s,baz=300,slow=38						
	comp=Z,2.7nm,0.5s						
LBTB	Lobatse	15.93	129	P	Pn	00 36 32.9	+0.6
LBTB	Lobatse	15.93	129	*e*P	Pn	00 36 34.0	+1.7
LBTB				IAmb	IAmb	00 36 39.4	
	comp=Z,4.8nm,0.6s						
LBTB				*e*S	Sn	00 39 21.7	-7.5
LBTB	Lobatse	15.93	129	*i* P	P	00 36 37.5	+1.6
LBTB				*i* S	Sn	00 39 32.5	+3.4
LBTB	Lobatse	15.93	129	*i* P	P	00 36 37.5	+1.6
LBTB				*i* S	Sn	00 39 32.5	+3.4
MATP	Matopo	16.45	110	Pn	Pn	00 36 36.5	-2.5
	comp=Z,0.3nm,0.3s,baz=297,slow=14,SNR=4.7						
MATP				Sn	Sn	00 39 40.5	-1.3
	comp=Z,0.6nm,0.3s,baz=270,slow=11,SNR=3.2						
MATP				Lg	Lg	00 41 17.4	
	comp=Z,0.5nm,0.3s,baz=315,slow=8.6,SNR=2.0						
	comp=Z,2.8nm,0.5s						
MATP	Matopo	16.45	110	*i* S	Sn	00 39 41.7	-0.1
MATP	Matopo	16.45	110	*i* S	Sn	00 39 41.7	-0.1
LEPH	Lephalale, Lim	17.07	122	*e*P	Pn	00 36 47.5	+0.7
LEPH				IAmb	IAmb	00 36 55.1	
	comp=Z,21nm,1.2s						
KSR	Koster	17.37	129	IAmb	IAmb	00 36 54.6	
	comp=Z,16nm,1.5s						
KSR				*e*P	P	00 36 55.1	+3.2
CVNA	Calvinia	17.54	158	*e*P	P	00 36 57.1	+3.5
CVNA				IAmb	IAmb	00 37 07.9	
	comp=Z,337nm,2.9s						
BOSA	Boshof	17.98	139	Pn	Pn	00 36 58.3	+0.1
	comp=Z,0.2nm,0.3s,baz=354,slow=21,SNR=2.2						
BOSA				Sn	Sn	00 40 21.2	+2.3
	comp=Z,0.1nm,0.3s,baz=357,slow=17,SNR=1.5						
BOSA				Lg	Lg	00 42 07.8	
	comp=Z,0.4nm,0.3s,baz=320,slow=6.8,SNR=4.9						
BOSA				LR	LR	00 44 38.8	
	comp=Z,24nm,19.6s,baz=326,slow=40						
	comp=Z,1.7nm,0.8s						
BOSA	Boshof	17.98	139	P	P	00 36 58.8	+0.1
BOSA	Boshof	17.98	139	*e*P	P	00 36 59.5	+0.9
BOSA	Boshof	17.98	139	*i* P	P	00 37 01.5	+2.8
BOSA				*i* S	Sn	00 40 12.0	-6.9
BOSA	Boshof	17.98	139	*i* P	P	00 37 01.5	+2.8
BOSA				*i* S	Sn	00 40 12.0	-6.9
MUSN	Musina, Limpop	18.21	115	*e*P	P	00 37 02.4	+1.3
MUSN	Musina, Limpop	18.21	115	*i* P	P	00 37 03.4	+2.2
MUSN				*i* S	Sn	00 40 17.7	-6.7
MUSN	Musina, Limpop	18.21	115	*i* P	P	00 37 03.4	+2.2
MUSN				*i* S	Sn	00 40 17.7	-6.7
PRYS	Parys	18.33	131	*e*P	P	00 37 07.8	+5.4
PRYS				IAmb	IAmb	00 37 20.1	
	comp=Z,309nm,3.5s						
SLR	Silverton	18.36	127	*e*P	P	00 37 07.3	+4.4
SLR				IAmb	IAmb	00 37 13.4	
	comp=Z,18nm,1.2s						
FRAZ	Fraserburg	18.58	154	*e*P	Pn	00 37 09.3	+3.9
FRAZ				IAmb	IAmb	00 37 20.2	
	comp=Z,363nm,2.7s						
SUR	Sutherland	18.73	156	Pn	Pn	00 37 07.8	+0.5
	comp=Z,0.2nm,0.3s,baz=100,slow=15,SNR=1.3						
SUR				Lg	Lg	00 42 33.6	
	comp=Z,0.6nm,0.3s,baz=263,slow=18

comp=Z,2.2nm,0.7s
GEYT Alibeck 68.40 38 P **P 00 43 50.9 +1.1**
GYA0B ALIBECK ARRAY 68.40 38 P **P 00 43 50.8 +0.9**
QSPA South Pole Qui 74.79 180 P **P 00 44 27.5 -0.7**
comp=Z,1.3nm,0.5s,baz=252,slow=4.8,SNR=13
comp=Z,1.3nm,0.5s
QSPA South Pole Qui 74.79 180 P **P 00 44 28.0 -0.1**
CO01 Juntas del Tor 75.80 242 P **P 00 44 34.9 +0.1**
ABKAR Akbulak array 77.00 30 P **P 00 44 40.6 -0.1**
ABKAR IAmb IAmb 00 44 48.6
comp=Z,1.7nm,0.7s
H05S1 Guadeloupe/Mar 77.88 289 T T 02 10 12.2
SNR=66
H05N1 Guadeloupe/Mar 78.71 290 T T 02 11 16.0
SNR=32
KKAR Karatay Array 79.03 39 P **P 00 44 53.3 +1.1**
VNDA Vanda 85.67 174 P **P 00 45 26.2 -0.2**
comp=Z,0.1nm,0.5s,baz=217,slow=16,SNR=1.4
comp=Z,0.1nm,0.5s
CMAR Chiang Mai Arr 91.91 72 P **P 00 45 55.3 -1.7**
comp=Z,1.4nm,0.3s,baz=257,slow=8.2,SNR=2.4

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*NEIC **14** 00:44:40.5±0.8, 15°.30S±0°.04×171°.30W±0°.09, h10km±1km, mb4.2/5, Error ellipse: s-maj=14.5km s-min=6.8km az=96.0*
*IDC **14** 00:44:44.2±0.9, 14°.98S×172°.22W, h0km, mb4.0/7, mbtmp4.0/8, ML4.7/1, Error ellipse: s-maj=41.4km s-min=14.9km az=127.0*
ISC 14 00:44:46.6±0.8, 15°.05±0°.1×172°.1W±0°.2, h18km, n37, σ1§07/32, mb4.2/10, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.13**	**17**	Pn	**Pn**	**00 45 06.9**	**-0.8**
	159nm,0.3s,baz=211,slow=2.2,SNR=97						
AFI				Sn	**Sg**	**00 45 23.3**	**-0.1**
	1μm,0.3s,baz=235,slow=17,SNR=28						
AFI	**Afiamalu**	**1.13**	**17**		**Pn**	**00 45 06.6**	**-1.1**
AFI				Sn	**Sg**	**00 45 23.9**	**+0.5**
NIUE	**Niue**	**4.57**	**153**		Pn	00 45 41.6	-13
NIUE				Sn	Sn	00 46 26.6	-21
MSVF	**Nonsavu**	**9.81**	**253**	Pn	**Pn**	**00 47 05.9**	**-1.1**
	0.2nm,0.3s,baz=120,slow=20,SNR=1.7						
	2.7nm,0.8s						
MSVF	**Nonsavu**	**9.81**	**253**		**Pn**	**00 47 09.9**	**+2.9**
URZ	**Urewera**	**25.05**	**200**	P	**P**	**00 50 10.2**	**+0.4**
	4.8nm,0.4s,baz=18,slow=6.4,SNR=3.2						
	4.8nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**39.27**	**327**	T	T	01 34 18.5	
	baz=145,slow=74,SNR=22						
H11S3	**WAKE ISLAND Hy**	**39.29**	**327**	T	T	01 34 20.8	
	baz=145,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hy**	**39.29**	**327**	T	T	01 34 21.1	
	baz=145,SNR=16						
H11N3	**WAKE ISLAND Hy**	**40.19**	**329**	T	T	01 35 29.8	
	baz=145,slow=76						
H11N1	**WAKE ISLAND Hy**	**40.20**	**328**	T	T	01 35 30.6	
	baz=145,slow=76						
H11N2	**WAKE ISLAND Hy**	**40.21**	**329**	T	T	01 35 27.5	
	baz=145,slow=76						
WB0	**Warramunga Arr**	**51.09**	**257**	P	**P**	**00 53 47.3**	**-1.2**
WB0				IAmb	IAmb	00 53 50.0	
	comp=Z,5.6nm,1.3s						
WB2	**Warramunga Arr**	**51.12**	**256**	P	**P**	**00 53 48.1**	**-0.6**
WB2				IAmb	IAmb	00 54 26.4	
	comp=Z,5.2nm,1.2s						
WRA	**Warramunga Arr**	**51.13**	**256**	P	**P**	**00 53 48.2**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=92,slow=6.8,SNR=15						
	comp=Z,1.7nm,0.9s						
WRA	**Warramunga Arr**	**51.13**	**256**	P	**P**	**00 53 48.4**	**-0.5**
AS31	**Alice Springs**	**51.41**	**252**	P	**P**	**00 53 50.3**	**-0.6**
AS31				IAmb	IAmb	00 53 54.9	
	comp=Z,2.1nm,1.1s						
ASAR	**Alice Springs**	**51.41**	**252**	P	**P**	**00 53 50.1**	**-0.8**
	comp=Z,6.4nm,1.0s,baz=89,slow=8.0,SNR=22						
	comp=Z,6.4nm,1.0s						
ASAR	**Alice Springs**	**51.41**	**252**	P	**P**	**00 53 49.9**	**-1.0**
MTN	**Manton Dam**	**54.99**	**265**	P	**P**	**00 54 16.9**	**-0.5**
NVAR	**Mina Array Bea**	**73.21**	**41**	P	**P**	**00 56 18.5**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=227,slow=9.3,SNR=5.4						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**81.15**	**41**	P	**P**	**00 57 01.6**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=256,slow=3.6,SNR=2.1						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**81.82**	**11**	P	**P**	**00 57 05.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=219,slow=6.4,SNR=3.3						
	comp=Z,0.4nm,0.7s						
MAW	**Mawson**	**88.56**	**198**	P	**P**	**00 57 37.0**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=125,slow=8.2,SNR=4.9						
	comp=Z,1.8nm,0.6s						
DPC	**Dobruska-Polom**	**144.08**	**351**	*e*PKP	**PKPab**	**01 04 17.8**	**-0.9**
MORC	**Moravsky Berou**	**144.43**	**349**	*e*PKP	**PKPab**	**01 04 18.1**	**-2.0**
PRU	**Pruhonice**	**144.68**	**353**	*e*PKP	**PKPdf**	**01 04 23.5**	**+1.2**
MAUC	**Maruska**	**144.77**	**349**	*e*PKP	**PKPdf**	**01 04 23.8**	**+1.3**
KHC	**Kasperske Hory**	**145.64**	**353**	*e*PKP	**PKPab**	**01 04 24.3**	**-0.2**
CKRC	**Cesky Krumlov**	**145.86**	**352**	*e*PKP	**PKiKP**	**01 04 26.9**	**-1.6**
GERES	**GERESS Array B**	**145.91**	**353**	PKPbc	**PKPab**	**01 04 26.4**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=60,slow=4.7,SNR=5.5						
CONA	**Conrad Observa**	**146.50**	**350**	*e*P	**PKiKP**	**01 04 29.2**	**-0.7**
	comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**146.61**	**322**	PKPbc	**PKPab**	**01 04 28.8**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=70,slow=1.5,SNR=5.7						
KBA	**Koelnbreinsper**	**147.69**	**353**	*i* P	**PKPab**	**01 04 32.9**	**+0.2**
	comp=Z,6.5nm,1.5s						
DAVA	**Damuels**	**147.76**	**357**	*e*P	**PKiKP**	**01 04 32.3**	**-0.4**
	comp=Z,2.3nm,0.7s						
FETA	**Feichten**	**147.98**	**356**	*e*P	**PKiKP**	**01 04 32.7**	**-0.4**
	comp=Z,1.2nm,0.5s						
ABTA	**Abfaltersbach**	**148.11**	**354**	*e*P	**PKiKP**	**01 04 32.6**	**-0.6**
	comp=Z,1.9nm,0.8s						

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*IDC **14** 00:47:23.7±1.1, 16°.30S×175°.12W, h0km, mb3.9/5, mbtmp3.9/5, MS3.9/26, Error ellipse: s-maj=47.9km s-min=29.0km az=134.0*
*GCMT **14** 00:47:26.0±0.3, 16°.65S±0°.04×174°.38W±0°.02, h18km±1km, MW4.9/76, Moment Tensor Solution. s23,c24; s76,c97; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.42±.18; Mθθ=0.22±.12; Mφφ=2.20±.12; Mrθ=0.75±.36; Mφθ=0.22±.08; Mφr=0.34±.24; Best double couple: M0=2.44900×10^16 NP1:φs=200.00000°, δ52.00000°, λ=-72.00000°. NP2: φs=353.00000°, δ41.00000°, λ=-111.00000°. Principal axes: T 2.2640, Plg=5.0000°, Azm=278.0000°; N 0.3710, Plg=14.0000°, Azm=9.0000°; P -2.6350, Plg=75.0000°, Azm=167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 14 00:47:24.3±1.0, 16°.2S±0°.3×175°.2W±0°.3, h10km, n42, σ0§84/7, mb4.1/5, MS4.0/27, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.70**	**255**	LR	LR	00 51 31.0	
	comp=Z,4μm,18.2s,baz=128,slow=37						
DZM	**Mont Dzumac**	**18.36**	**248**	*e*LR	LR	00 56 00.0	
	comp=Z,2μm,25.4s						
DZM	**Mont Dzumac**	**18.36**	**248**	LR	LR	00 57 41.4	
	comp=Z,965nm,19.4s,baz=50,slow=34						
PPT2	**Papeete2**	**24.51**	**97**	*e*LR	LR	00 57 58.2	
	comp=Z,970nm,26.2s						
PPT	**Papeete**	**24.51**	**97**	LR	LR	00 59 35.0	
	comp=Z,215nm,21.4s,baz=188,slow=30						
TBI	**Tubuai**	**25.19**	**111**	*e*LR	LR	00 58 26.0	
	comp=Z,991nm,28.0s						
RPZ	**Rata Peaks**	**29.87**	**200**	LR	LR	01 04 42.3	
	comp=Z,184nm,19.1s,baz=42,slow=35						
TAOE	**Nuku Hiva Isla**	**34.89**	**82**	*e*LR	LR	01 02 38.5	
	comp=Z,545nm,27.9s						
PMG	**Port Moresby**	**37.32**	**276**	LR	LR	01 08 53.8	
	comp=Z,192nm,18.2s,baz=86,slow=34						
H11N3	**WAKE ISLAND Hy**	**39.77**	**333**	T	T	01 38 09.5	
	baz=151						
H11N1	**WAKE ISLAND Hy**	**39.78**	**333**	T	T	01 38 13.4	
	baz=151						
H11N2	**WAKE ISLAND Hy**	**39.79**	**333**	T	T	01 38 13.4	
	baz=151						
WRA	**Warramunga Arr**	**48.04**	**258**	P	**P**	**00 56 04.4**	**+0.2**
	0.5nm,1.0s,baz=99,slow=9.7,SNR=3.8						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**48.28**	**253**	P	**P**	**00 56 06.1**	**0.0**
	6.6nm,0.9s,baz=86,slow=8.6,SNR=19						
	6.6nm,0.9s						
GUMO	**Guam**	**49.35**	**305**	LR	LR	01 15 06.8	
	comp=Z,74nm,21.1s,baz=108,slow=34						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**59.69**	**316**	LR	LR	01 19 22.3	
	comp=Z,128nm,20.7s,baz=112,slow=32						
RPN	**Rapa Nui**	**61.55**	**112**	LR	LR	01 19 15.9	
	comp=Z,33nm,19.8s,baz=304,slow=31						
VNDA	**Vanda**	**62.46**	**186**	P	**P**	**00 57 47.6**	**+0.2**
	1.6nm,1.1s,baz=23,slow=4.5,SNR=4.8						
	1.6nm,1.1s						
MJAR	**Matsushiro Arr**	**68.44**	**321**	LR	LR	01 23 08.4	
	comp=Z,63nm,21.2s,baz=134,slow=31						
SHEM	**Shemya Is, Ala**	**69.23**	**353**	LR	LR	01 25 46.0	
	comp=Z,58nm,18.4s,baz=282,slow=33						
JOW	**Kunigami**	**69.58**	**307**	LR	LR	01 23 49.3	
	comp=Z,128nm,19.1s,baz=146,slow=31						
PETK	**Petropavlovsk-**	**72.85**	**343**	LR	LR	01 25 02.6	
	comp=Z,48nm,21.8s,baz=130,slow=31						
PFO	**Pinyon Flats O**	**74.67**	**48**	LR	LR	01 25 20.0	
	comp=Z,140nm,20.1s,baz=294,slow=30						
LPIG	**La Paz**	**74.86**	**59**	LR	LR	01 23 13.8	
	comp=Z,118nm,19.9s,baz=249,slow=29						
YBH	**Yreka Blue Hor**	**75.22**	**38**	LR	LR	01 23 38.4	
	comp=Z,114nm,21.3s,baz=301,slow=29						
NVAR	**Mina Array Bea**	**76.02**	**43**	LR	LR	01 24 49.7	
	comp=Z,126nm,21.2s,baz=265,slow=30						
ELK	**Elko**	**79.26**	**42**	LR	LR	01 26 18.9	
	comp=Z,101nm,20.6s,baz=270,slow=29						
KLR	**Kul'dur**	**80.25**	**328**	LR	LR	01 30 19.2	
	comp=Z,38nm,21.5s,baz=116,slow=32						
TXAR	**Lajitas Array**	**82.43**	**57**	LR	LR	01 28 55.0	
	comp=Z,69nm,18.6s,baz=276,slow=30						
ANMO	**Albuquerque**	**82.58**	**51**	LR	LR	01 30 55.3	
	comp=Z,70nm,18.2s,baz=260,slow=32						
ILAR	**Eielson Array**	**83.52**	**12**	P	**P**	**00 59 52.9**	**+0.8**
	1.5nm,1.1s,baz=207,slow=5.7,SNR=2.2						
	1.5nm,1.1s						
PDAR	**Pinedale Array**	**83.95**	**42**	P	**P**	**00 59 54.9**	**-0.2**
	0.4nm,0.7s,baz=237,slow=4.2,SNR=1.6						
PDAR				LR	LR	01 29 41.2	
	comp=Z,91nm,20.3s,baz=279,slow=30						
	0.4nm,0.7s						
PMSA	**Palmer Station**	**84.17**	**156**	LR	LR	01 28 30.3	
	comp=Z,45nm,21.4s,baz=272,slow=29						
CMIG	**Matias Romero**	**85.72**	**71**	LR	LR	01 30 00.1	
	comp=Z,96nm,19.1s,baz=244,slow=30						
H03S2	**Juan Fernandez**	**86.18**	**124**	T	T	02 34 22.9	
	baz=250						
H03S1	**Juan Fernandez**	**86.20**	**124**	T	T	02 34 24.1	
	baz=250						
H03S3	**Juan Fernandez**	**86.20**	**124**	T	T	02 34 22.5	
	baz=250						
APG	**El Apazote**	**89.14**	**74**	LR	LR	01 31 23.6	
	comp=Z,48nm,21.9s,baz=81,slow=30						
CMAR	**Chiang Mai Arr**	**91.26**	**289**	LR	LR	01 37 43.0	
	comp=Z,51nm,21.1s,baz=105,slow=33						
LVC	**Limon Verde**	**98.20**	**116**	LR	LR	01 34 10.4	
	comp=Z,79nm,21.9s,baz=204,slow=29						
BRTR	**Keskin Array B**	**145.65**	**319**	PKPbc	**PKiKP**	**01 07 06.2**	**-1.4**
	0.4nm,0.8s,baz=49,slow=4.8,SNR=1.8						
GERES	**GERESS Array B**	**146.60**	**349**	PKPbc	**PKiKP**	**01 07 09.0**	**-0.2**
	0.9nm,0.9s,baz=87,slow=4.1,SNR=4.8						

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*IDC **14** 00:55:37.4±0.8, 2°.04S×12°.67W, h0km, mb4.0/11, mbtmp4.1/13, ML3.4/2, MS3.6/25, Error ellipse: s-maj=33.6km s-min=18.4km az=137.0*
*NEIC **14** 00:55:39.2±1.2, 2°.30S±0°.09×12°.50W±0°.05, h10km±1km, mb4.9/44, Error ellipse: s-maj=16.3km s-min=7.9km az=166.0*
ISC 14 00:55:38.6±0.4, 2°.22S±0°.09×12°.6W±0°.1, h10km, n86, σ0§89/66, mb4.8/29, MS3.6/23, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**5.88**	**199**	T	T	01 03 08.4	
	baz=19,slow=74,SNR=225						
H10N1	**ASCENSION HYDR**	**5.90**	**199**	T	T	01 03 07.1	
	baz=19,slow=74,SNR=271						
H10N3	**ASCENSION HYDR**	**5.90**	**199**	T	T	01 03 10.3	
	baz=19,slow=74,SNR=148						
ASCN	**Ascension**	**5.94**	**197**	Pn	**Pn**	**00 57 04.5**	**-2.2**
DBIC	**Dimbokro**	**11.73**	**41**	Pn	**Pn**	**00 58 24.4**	**-1.8**
	0.2nm,0.3s,baz=229,slow=9.4,SNR=4.8						
DBIC				Sn	Sn	01 00 23.9	-13
	0.1nm,0.3s,baz=299,slow=19,SNR=2.2						
DBIC				LR	LR	01 01 59.0	
	comp=Z,550nm,21.9s,baz=186,slow=33						
	6.0nm,0.8s						
DBIC	**Dimbokro**	**11.73**	**41**	Pn	**Pn**	**00 58 27.1**	**+0.9**
KOWA	**Kowa**	**18.66**	**27**	P	**P**	**00 59 53.7**	**-3.2**
	0.1nm,0.3s,baz=211,slow=11,SNR=7.3						
KOWA				LR	LR	01 06 33.3	
	comp=Z,261nm,18.9s,baz=179,slow=35						
	10.0nm,1.1s						
KOWA	**Kowa**	**18.66**	**27**	P	**P**	**00 59 56.4**	**-0.5**
TOA0	**Torodi Ar. Sit**	**20.84**	**43**	P	**P**	**01 00 20.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**20.84**	**43**	P	**P**	**01 00 18.3**	**-2.4**
	4.0nm,0.8s,baz=231,slow=11,SNR=14						
TORD				S	S	01 03 59.0	-14
	0.7nm,0.7s,baz=228,slow=24,SNR=2.3						
TORD				LR	LR	01 07 43.0	
	comp=Z,284nm,18.1s,baz=225,slow=35						
	4.0nm,0.8s						
RCBR	**Riachuelo**	**23.52**	**261**	LR	LR	01 07 36.7	
	comp=Z,172nm,20.9s,baz=218,slow=31						
TSUM	**Tsumeb**	**34.01**	**122**	LR	LR	01 13 44.1	
	comp=Z,45nm,18.4s,baz=334,slow=32						
MDT	**Midelt**	**35.65**	**12**	LR	LR	01 16 50.8	
	comp=Z,74nm,19.4s,baz=157,slow=36						
BDFB	**Brasilia**	**37.36**	**247**	LR	LR	01 16 32.4	
	comp=Z,112nm,21.4s,baz=162,slow=34						
MDP	**Montagnes des**	**40.66**	**280**	LR	LR	01 16 25.3	
	comp=Z,70nm,20.0s,baz=118,slow=31						
ESDC	**Sonseca Array**	**42.44**	**10**	LR	LR	01 21 32.8	
	comp=Z,43nm,18.9s,baz=161,slow=37						
KEST	**Kesra**	**42.97**	**26**	LR	LR	01 22 10.6	
	comp=Z,93nm,18.3s,baz=336,slow=37						
LBTB	**Lobatse**	**43.22**	**125**	LR	LR	01 19 08.4	
	comp=Z,72nm,19.9s,baz=269,slow=32						
MBAR	**Mbarara**	**43.35**	**89**	P	**P**	**01 03 42.5**	**+0.8**
	1.5nm,0.2s,baz=271,slow=11,SNR=6.6						
MBAR				LR	LR	01 19 57.3	
	comp=Z,192nm,20.0s,baz=251,slow=34						
	1.5nm,0.2s						
PLTB	**Pedras Altas**	**48.51**	**228**	P	**P**	**01 04 23.5**	**+1.4**
PLTB				IAmb	IAmb	01 04 47.5	
	comp=Z,12nm,1.4s						
SIV	**San Ignacio**	**49.64**	**251**	P	**P**	**01 04 31.5**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=85,slow=12,SNR=5.5						
SIV				LR	LR	01 24 56.8	
	comp=Z,81nm,18.1s,baz=98,slow=36						
	comp=Z,0.9nm,0.6s						
IDI	**Anoyia**	**51.20**	**40**	LR	LR	01 29 09.0	
	comp=Z,35nm,18.1s,baz=179,slow=39						
DAVOX	**Davos/Dischmat**	**52.65**	**19**	LR	LR	01 28 02.6	
	comp=Z,84nm,19.4s,baz=265,slow=37						
EIL	**Elat**	**55.38**	**51**	LR	LR	01 30 13.0	
	comp=Z,100nm,18.3s,baz=237,slow=38						
GEC2	**GERESS Array S**	**55.74**	**21**	P	**P**	**01 05 15.7**	**0.0**
GEC2				IAmb	IAmb	01 05 23.0	
	comp=Z,10nm,1.4s						
GERES	**GERESS Array B**	**55.74**	**21**	P	**P**	**01 05 15.4**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=185,slow=5.7,SNR=7.5						
	comp=Z,1.6nm,0.9s						
GERES	**GERESS Array B**	**55.74**	**21**	P	**P**	**01 05 15.8**	**+0.2**
LPAZ	**La Paz**	**56.38**	**252**	P	**P**	**01 05 20.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=62,slow=3.8,SNR=4.3						
LPAZ				LR	LR	01 27 27.2	
	comp=Z,80nm,22.0s,baz=107,slow=34						
	comp=Z,0.8nm,0.7s						
VRAC	**Vranov**	**57.19**	**22**	LR	LR	01 30 09.5	
	comp=Z,38nm,19.9s,baz=224,slow=36						
MLPR	**Magueyes Islan**	**57.24**	**293**	P	**P**	**01 05 26.4**	**-0.3**
MLPR				IAmb	IAmb	01 05 28.2	
	comp=Z,25nm,1.2s						
MMAI	**Mount Meron Ar**	**57.25**	**48**	LR	LR	01 31 36.0	
	comp=Z,38nm,19.3s,baz=148,slow=38						
MDUB	**Mudurnu**	**58.30**	**38**	P	**P**	**01 05 35.7**	**+1.7**
MLR	**Muntele Rosu**	**58.50**	**31**	LR	LR	01 31 58.1	
	comp=Z,105nm,20.4s,baz=242,slow=37						
BR131	**Keskin Array S**	**59.43**	**40**	P	**P**	**01 05 42.0**	**+0.2**
BR131				IAmb	IAmb	01 05 51.8	
	comp=Z,11nm,1.3s						
BRTR	**Keskin Array B**	**59.43**	**40**	P	**P**	**01 05 43.0**	**+1.2**
	comp=Z,1.7nm,1.0s,baz=211,slow=5.9,SNR=5.5						
BRTR				PcP	**PcP**	**01 06 30.4**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=221,slow=6.7,SNR=1.5						
BRTR				LR	LR	01 33 42.0	
	comp=Z,52nm,20.2s,baz=256,slow=38						
	comp=Z,1.7nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**59.43**	**40**	P	**P**	**01 05 42.2**	**+0.4**
AKASG	**Malin Array Be**	**63.65**	**28**	P	**P**	**01 06 09.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=230,slow=8.3,SNR=5.9						
AKASG				LR	LR	01 36 17.7	
	comp=Z,36nm,18.0s,baz=218,slow=38						
	comp=Z,0.2nm,0.3s						
NNA	**Nana**	**64.36**	**258**	LR	LR	01 32 30.9	
	comp=Z,79nm,20.9s,baz=166,slow=34						
NOA	**NORSAR Array B**	**65.71**	**12**	LR	LR	01 35 12.2	
	comp=Z,12nm,18.7s,baz=350,slow=36						
LL02	**Futaleuf**	**66.43**	**223**	P	**P**	**01 06 27.7**	**-0.5**
LL02				IAmb	IAmb	01 06 29.2	
	comp=Z,11nm,0.9s						
COHC	**Cochancay**	**66.60**	**268**	P	**P**	**01 06 29.9**	**0.0**
VNA1	**Neumayer--Stat**	**68.38**	**178**	P	**P**	**01 06 40.9**	**+0.8**
VNA2	**Neumayer--Watz**	**68.69**	**178**	P	**P**	**01 06 42.2**	**+0.2**
	baz=348,slow=7.1						
VNA3	**Neumayer Olymp**	**68.95**	**179**	P	**P**	**01 06 43.5**	**-0.1**
SNAA	**Sanae**	**69.63**	**177**	P	**P**	**01 06 48.1**	**+0.2**
SNAA	**Sanae**	**69.63**	**177**	P	**P**	**01 06 47.7**	**-0.2**
FINES	**FINESS Array B**	**70.05**	**19**	P	**P**	**01 06 48.8**	**-1.7**
	comp=Z,2.2nm,1.0s,baz=227,slow=5.5,SNR=2.7						
	comp=Z,2.2nm,1.0s						
FINES	**FINESS Array B**	**70.05**	**19**	P	**P**	**01 06 51.7**	**+1.2**
FIA1	**FINESS Array S**	**70.06**	**19**	P	**P**	**01 06 52.3**	**+1.7**
FIA1				IAmb	IAmb	01 06 59.6	
	comp=Z,20nm,1.4s						
TROLL	**Troll, Antarti**	**70.35**	**175**	P	**P**	**01 06 52.7**	**+0.3**
NCB	**Newcomb**	**71.57**	**318**	P	**P**	**01 07 00.2**	**0.0**
NCB				IAmb	IAmb	01 07 14.3	
	comp=Z,12nm,1.4s						
UOSS	**Minazif**	**71.82**	**63**	P	**P**	**01 07 01.5**	**-0.6**
P52A	**Corning**	**75.80**	**312**	P	**P**	**01 07 25.2**	**0.0**
P52A				IAmb	IAmb	01 07 27.6	
	comp=Z,15nm,1.1s						
ARCES	**ARCESS Array B**	**76.08**	**13**	P	**P**	**01 07 26.4**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=26,slow=8.6,SNR=2.9						
	comp=Z,4.0nm,1.0s						
GEYT	**Alibeck**	**76.26**	**50**	P	**P**	**01 07 28.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=278,slow=4.1,SNR=1.9						
	comp=Z,0.6nm,0.5s						
N51A	**Ashland**	**76.31**	**313**	P	**P**	**01 07 28.5**	**+0.5**
BELA	**Belgrano 2**	**76.50**	**185**	P	**P**	**01 07 28.6**	**+0.2**
BELA				IAmb	IAmb	01 07 29.8	
	comp=Z,9.4nm,1.0s						
V51A	**Loudon**	**76.59**	**307**	P	**P**	**01 07 30.2**	**+0.5**
V51A				IAmb	IAmb	01 07 32.1	
	comp=Z,24nm,1.4s						
T50A	**Nancy**	**77.24**	**309**	P	**P**	**01 07 34.2**	**+0.8**
T50A				IAmb	IAmb	01 07 35.1	
	comp=Z,7.3nm,0.9s						
P48A	**Milroy**	**78.23**	**311**	P	**P**	**01 07 38.5**	**-0.3**
HRA	**Herat**	**78.78**	**54**	P	**P**	**01 07 42.2**	**-0.1**
T47A	**Sharon Grove**	**79.01**	**308**	P	**P**	**01 07 43.7**	**+0.5**
T47A				IAmb	IAmb	01 07 49.5	
	comp=Z,11nm,1.3s						
Z47A	**Carrollton**	**79.10**	**304**	P	**P**	**01 07 43.7**	**0.0**
Z47A				IAmb	IAmb	01 07 44.8	
	comp=Z,13nm,1.0s						
ABKAR	**Akbulak array**	**80.36**	**39**	P	**P**	**01 07 50.5**	**+0.2**
ARU	**Arti**	**81.53**	**32**	P	**P**	**01 07 56.1**	**-0.1**
ARU				IAmb	IAmb	01 08 03.6	
	comp=Z,7.5nm,1.1s						
143A	**Socs Landing,**	**81.79**	**303**	P	**P**	**01 07 58.1**	**-0.1**
MAW	**Mawson**	**82.44**	**158**	P	**P**	**01 08 01.8**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=294,slow=8.2,SNR=6.0						
	comp=Z,2.5nm,0.8s						
MAW	**Mawson**	**82.44**	**158**	P	**P**	**01 08 01.2**	**+0.3**
CCM	**Cathedral Cave**	**82.44**	**309**	P	**P**	**01 08 01.5**	**0.0**
CCM				IAmb	IAmb	01 08 07.8	
	comp=Z,6.8nm,1.0s						
UALR	**University of**	**82.85**	**305**	P	**P**	**01 08 03.3**	**-0.4**
UALR				IAmb	IAmb	01 08 04.9	
	comp=Z,12nm,1.1s						
MGMO	**Mountain Grove**	**83.11**	**308**	P	**P**	**01 08 05.0**	**-0.1**
MGMO				IAmb	IAmb	01 08 06.8	
	comp=Z,9.6nm,1.2s						
S39A	**Bolivar**	**84.01**	**308**	P	**P**	**01 08 09.2**	**-0.5**
S39A				IAmb	IAmb	01 08 24.3	
	comp=Z,6.8nm,1.2s						
NATX	**Nacogdoches**	**84.42**	**302**	P	**P**	**01 08 11.9**	**+0.1**
NATX				IAmb	IAmb	01 08 15.1	
	comp=Z,11nm,0.9s						
P38A	**Dawn**	**84.43**	**310**	P	**P**	**01 08 11.3**	**-0.4**
P38A				IAmb	IAmb	01 08 12.1	
	comp=Z,6.0nm,0.9s						
OK034	**N. Norfolk Rd.**	**86.53**	**306**	P	**P**	**01 08 22.7**	**+0.4**
OK031	**S. Brethren Rd**	**86.63**	**306**	P	**P**	**01 08 23.1**	**+0.3**
OK046	**Pawnee Station**	**86.72**	**306**	P	**P**	**01 08

LSP	Las Mesas	0.91 257	⇑	eP	Pn	01 24 47.9	+0.5
LSP	Las Mesas	0.91 257		eS	Sn	01 25 04.8	+0.3
AGPR	Aguadilla, PR	0.91 275	⇑	eP	Pn	01 24 47.8	+0.3
AGPR	Aguadilla, PR	0.91 275		Pn	Pn	01 24 47.7	+0.3
AGPR	Aguadilla, PR	0.91 275		i P	Pn	01 24 47.7	+0.3
AGPR				eS	Sn	01 25 04.3	-0.2
AGPR				IAML		01 25 04.9	
	comp=Z,3μm,0.2s						
MLPR	Magueyes Islan	0.94 244	⇑	eP	Pn	01 24 47.8	+0.1
MLPR	Magueyes Islan	0.94 244		eS	Sn	01 25 04.9	0.0
MLPR	Magueyes Islan	0.94 244			Pn	01 24 47.8	+0.1
MLPR					Sn	01 25 04.9	0.0
MLPR	Magueyes Islan	0.94 244		IAML		01 25 05.9	
	comp=E,4μm,0.5s						
MLPR				IAML		01 25 06.8	
	comp=N,3μm,0.3s						
PRSN	Puerto Rico Se	0.95 260	⇓	eP	Pn	01 24 48.3	+0.5
PRSN	Puerto Rico Se	0.95 260		eS	Sn	01 25 05.6	+0.5
PRSN	Puerto Rico Se	0.95 260			Pn	01 24 48.1	+0.3
PRSN	Puerto Rico Se	0.95 260			Sn	01 25 05.6	+0.5
CRPR	Cabo Rojo, PR	0.98 248	⇑	eP	Pn	01 24 48.2	+0.2
CRPR	Cabo Rojo, PR	0.98 248		Pn	Pn	01 24 48.2	+0.2
CRPR	Cabo Rojo, PR	0.98 248		i P	Pn	01 24 48.2	+0.2
CRPR				eS	Sn	01 25 05.5	-0.1
CRPR				IAML		01 25 08.4	
	comp=Z,4μm,0.2s						
STVI	Saint Thomas	1.14 91	⇑	eP	Pn	01 24 50.1	+0.5
STVI	Saint Thomas	1.14 91		eS	Sn	01 25 09.3	+1.0
STVI	Saint Thomas	1.14 91			Pn	01 24 50.3	+0.7
STVI	Saint Thomas	1.14 91			Sn	01 25 09.3	+1.0
STVI	Saint Thomas	1.14 91		IAML		01 25 11.5	
	comp=N,6μm,0.4s						
IDE	Isla Desecheo	1.25 270	⇓	eP	Pn	01 24 51.2	+0.5
IDE	Isla Desecheo	1.25 270		eS	Sn	01 25 10.8	+0.5
SJVI	Gifft Hill Sch	1.32 92	⇑	eP	Pn	01 24 51.9	+0.5
SJVI	Gifft Hill Sch	1.32 92		eS	Sn	01 25 12.1	+0.6
SJVI	Gifft Hill Sch	1.32 92			Pn	01 24 51.9	+0.5
SJVI					Sn	01 25 12.1	+0.6
PCDR	Punta Cana, DR	2.12 274	⇑	eP	Pn	01 25 01.4	+0.8
PCDR	Punta Cana, DR	2.12 274		eS	Sn	01 25 28.6	+0.8
PCDR	Punta Cana, DR	2.12 274			Sn	01 25 28.6	+0.8
SMRT	St. Maarten	2.95 96		Pn	Pn	01 25 11.0	-0.1
SMRT	St. Maarten	2.95 96		eP	Pn	01 25 10.9	-0.1
SMRT				eS	Sn	01 25 44.5	-2.1
DR12	Loma Pena Alta	3.08 278	⇑	eP	Pn	01 25 09.6	-3.3
DR12	Loma Pena Alta	3.08 278			Pn	01 25 09.3	-3.6
SDD	Santo Domingo	3.57 272		i P	Pn	01 25 19.9	+0.8
SDD				eS	Sn	01 25 59.5	-1.5
LONA1	Toro Cenizo, N	3.65 286		i P	Pn	01 25 20.6	+0.4
LONA1				eS	Sn	01 26 01.6	-1.4
LONA1				IAML		01 26 05.8	
	comp=Z,727nm,0.3s						
BANI	BANI	3.99 271			Pn	01 25 21.9	-2.9
BANI	BANI	3.99 271		i P	Pn	01 25 22.1	-2.7
BANI				eS	Sn	01 26 08.3	-3.0
BANI				IAML		01 26 12.9	
	comp=Z,368nm,0.8s						
MBFL	Flemmings, Mon	4.10 113		eP	Pn	01 25 26.2	0.0
MBFL	Flemmings, Mon	4.10 113		eS	Sn	01 26 12.0	-1.6
ANWB	Willy Bob	4.22 99		Pn	Pn	01 25 26.2	-1.6
ANWB				IAML		01 26 18.1	
	comp=Z,384nm,0.9s						
ANWB				IAML		01 26 21.1	
	comp=Z,333nm,0.9s						
ANWB	Willy Bob	4.22 99		eP	Pn	01 25 24.7	-3.0
ANWB	Willy Bob	4.22 99		eP	Pn	01 25 25.4	-2.3
ANWB	Willy Bob	4.22 99		eS	Sn	01 26 12.7	-3.7
ANDO	Antigua, Disas	4.31 106		eP	Pn	01 25 27.9	-1.1
ANDO	Antigua, Disas	4.31 106		eS	Sn	01 26 14.9	-3.8
ANBD	Bethesda, Anti	4.39 107		eP	Pn	01 25 28.8	-1.2
ANBD	Bethesda, Anti	4.39 107		eS	Sn	01 26 15.9	-4.6
SC01	Santiago de Io	4.45 284		Pn	Pn	01 25 31.1	+0.3
SC01	Santiago de Io	4.45 284		i P	Pn	01 25 31.8	+0.9
SC01				eS	Sn	01 26 22.1	+0.1
SC01				IAML		01 26 26.0	
	comp=Z,523nm,0.2s						
GDHS	Morne Mazeau,	4.69 116			Pn	01 25 33.8	-0.3
GDHS				IAML		01 26 35.6	
	comp=E,640nm,0.6s						
GDHS				IAML		01 26 41.7	
	comp=N,591nm,0.4s						
ABD	La Joyeuse, An	4.84 112		Pn	Pn	01 25 35.3	-0.8
ABD				IAML		01 26 32.2	
	comp=N,187nm,0.6s						
ABD				IAML		01 26 33.4	
	comp=E,203nm,0.5s						
ABD	La Joyeuse, An	4.84 112		eP	Pn	01 25 36.1	0.0
ABD	La Joyeuse, An	4.84 112		eS	Sn	01 26 31.1	-0.2
SDDR	Presa de Saban	4.90 278		Pn	Pn	01 25 37.1	+0.2
SDDR				IAML		01 26 41.0	
	comp=E,393nm,0.7s						
SDDR	Presa de Saban	4.90 278		eP	Pn	01 25 37.4	+0.5
SDDR	Presa de Saban	4.90 278		eP	Pn	01 25 37.5	+0.7
SDDR	Presa de Saban	4.90 278		i P	Pn	01 25 37.7	+0.9
SDDR				eS	Sn	01 26 32.1	-0.7
SDDR				IAML		01 26 37.0	
	comp=Z,410nm,0.5s						
CBE	Ff, Capester	4.92 117			Pn	01 25 37.2	+0.1
CBE	Ff, Capester	4.92 117		eP	Pn	01 25 37.2	+0.1
CBE	Ff, Capester	4.92 117		eS	Sn	01 26 36.6	+3.4
TBG	Guadaloupe-3	4.99 120		eP	Pn	01 25 37.7	-0.3
TBG	Guadaloupe-3	4.99 120		eS	Sn	01 26 42.3	+7.3
TDBA	Terre de Bas,	5.00 120		Pn	Pn	01 25 37.5	-0.7
TDBA				IAML		01 26 44.9	
	comp=E,170nm,0.8s						
TDBA				IAML		01 26 47.1	
	comp=N,221nm,0.5s						
TDBA	Terre de Bas,	5.00 120		eP	Pn	01 25 38.0	-0.2
TDBA	Terre de Bas,	5.00 120		eS	Sn	01 26 42.1	+6.8
MAGL	Barre de l'ile	5.25 117		Pn	Pn	01 25 41.2	-0.3
MAGL				IAML		01 26 44.0	
	comp=E,289nm,0.6s						
MAGL				IAML		01 26 48.2	
	comp=N,230nm,0.3s						
MAGL	Barre de l'ile	5.25 117		eP	Pn	01 25 42.0	+0.4
MAGL	Barre de l'ile	5.25 117		eS	Sn	01 26 42.1	+0.9
MDCT	Cottage Hill,	5.27 121		eP	Pn	01 25 40.4	-1.3
MDCT	Cottage Hill,	5.27 121		eS	Sn	01 26 44.5	+3.0
GDSD	La Dsirade Is	5.28 112		Pn	Pn	01 25 40.7	-1.2
GDSD				IAML		01 26 42.3	
	comp=E,122nm,0.3s						
GDSD				IAML		01 26 43.2	
	comp=N,115nm,0.3s						
MDVC	Dominica, Viel	5.31 121		eP	Pn	01 25 41.0	-1.4
LOPE2	Hotel El Peder	5.32 267		i P	Pn	01 25 43.4	+0.9
LOPE2				eS	Sn	01 26 41.1	-1.8
LOPE2				IAML		01 26 48.3	
	comp=Z,92nm,0.6s						
LODA1	ITESIL, Dajabo	5.38 283		i P	Pn	01 25 42.3	-0.8
LODA1				eS	Sn	01 26 39.6	-4.6
LODA1				IAML		01 26 43.2	
	comp=Z,645nm,0.3s						
DSLB	Salisbury	5.40 122		eP	Pn	01 25 42.8	-0.7
MDN	Morne-Daniel	5.49 123		eP	Pn	01 25 44.3	-0.3
GRTK	Grand Turk	5.62 304		i P	Pn	01 25 44.7	-1.7
GRTK				eS	Sn	01 26 44.9	-5.1
GRTK				IAML		01 26 55.7	
	comp=Z,200nm,0.6s						
PAPH	Port-au-Prince	5.83 272		i P	Pn	01 25 49.9	+0.6
PAPH				IAML		01 27 00.5	
	comp=Z,60nm,0.5s						
FDF	Fort de France	6.02 126			Pn	01 25 50.8	-1.1
ILAM	Ilet Lapin Mar	6.21 125		eP	Pn	01 25 53.8	-0.5
ILAM	Ilet Lapin Mar	6.21 125		eS	Sn	01 27 04.0	-0.1
BIM	Bigot	6.21 127			Pn	01 25 53.2	-1.2
BIM	Bigot	6.21 127		eP	Pn	01 25 53.7	-0.7
BIM	Bigot	6.21 127		eS	Sn	01 27 02.2	-2.1
MPOM	Morne Pois Mar	6.42 127		Pn	Pn	01 25 56.2	-1.0
MPOM	Morne Pois Mar	6.42 127		eP	Pn	01 25 57.6	+0.4
MPOM	Morne Pois Mar	6.42 127		eS	Sn	01 27 08.1	-1.1
SLBI	Saint Lucia, B	6.60 130		eP	Pn	01 25 58.3	-1.4
SLBI	Saint Lucia, B	6.60 130		eP	Pn	01 25 58.5	-1.1
SLBI	Saint Lucia, B	6.60 130		eS	Sn	01 27 08.0	-5.7
SLB	Belfond	6.68 132		eP	Pn	01 25 59.8	-1.0
SVB	Belmont	6.94 136		eP	Pn	01 26 02.8	-1.4
SVB	Belmont	6.94 136		eS	Sn	01 27 20.0	-1.8
PCRV	Puerto La Cruz	8.29 170		P	Pn	01 26 24.6	+2.2
	comp=Z,10nm,0.5s,baz=2.7,slow=2.1,SNR=6.1						
GTBY	Guantanamo Bay	8.60 282		Pn	Pn	01 26 24.7	-1.9
GTBY	Guantanamo Bay	8.60 282		i P	Pn	01 26 23.2	-3.4
GTBY				eS	Sn	01 27 53.0	-9.0
GTBY				IAML		01 27 59.5	
	comp=Z,8.6nm,0.3s						
TOSP	Speyside	8.89 142		eP	Pn	01 26 32.8	+2.3
TRN	Trinidad (W)	8.96 148		eP	Pn	01 26 33.5	+2.1
BAUV	El Baul	9.56 191		Pn	Pn	01 26 39.2	-0.3
HLGC	Holguin	9.66 287		eP	Pn	01 26 37.2	-3.5
HLGC				eS	Sn	01 28 18.9	-8.8
CRJC	Cerrejon, Guaj	9.79 223		eP	Pn	01 26 41.1	-1.5
LMGC	Las Mercedes	10.38 281		eP	Pn	01 26 46.0	-4.5
LMGC				eS	Sn	01 28 35.1	-10
SDV	Santo Domingo	10.39 205		P	Pn	01 26 52.7	+1.9
	comp=Z,7.5nm,0.6s,baz=52,slow=8.7,SNR=8.5						
SDV	Santo Domingo	10.39 205		Pn	Pn	01 26 50.0	-0.7
SOCV	Socops	11.03 205		eP	Pn	01 26 56.8	-2.3
CCCC	Cccc	11.28 286		eP	Pn	01 26 52.5	-10
CCCC				eS	Sn	01 28 44.3	-23
CCCC				IVMs_BB	IVMs_BB	01 28 60.0	
	comp=N,183nm,5.2s						
CCCC				IVMs_BB	IVMs_BB	01 29 10.5	
	comp=E,430nm,3.8s						
SJCC	San Jacinto, C	12.15 227		eP	Pn	01 27 12.9	-1.0
ZARC	Zaragoza, Cauc	13.74 219		eP	Pn	01 27 35.8	+1.4
RUSC	La Rusia	14.14 209		eP	Pn	01 27 40.5	+0.7
PTBC	PUERTO BERRIO,	14.29 216		eP	Pn	01 27 38.1	-3.2
SPBC	San Pablo de B	14.83 212		eP	Pn	01 27 50.5	-0.1
HELC	Santa Helena	15.18 218		eP	Pn	01 27 53.3	+0.4
NORC	Norcasia	15.32 215		eP	Pn	01 27 53.3	-1.0
CHIC	Chinagaza	15.55 209		eP	Pn	01 27 55.6	-1.9
ROSC	El Rosal	15.65 212		P	P	01 28 00.7	+0.7
	comp=E,12nm,0.3s,baz=284,slow=1.1,SNR=8.2						
ROSC	El Rosal	15.65 212			Pn	01 27 58.3	-0.3
CBOC	Ciudad Bolivar	15.73 219		eP	Pn	01 27 57.6	-1.9
GUY2C	Guyana, Caldas	15.87 216		eP	Pn	01 28 00.7	-0.9
PRAC	Prado	16.90 211		eP	P	01 28 12.3	-1.2
MDP	Montagnes des	18.67 133		P	P	01 28 33.6	+0.8
	comp=E,4.1nm,0.6s,baz=307,slow=10,SNR=2.0						
BBAC	Balboa, Cauca	19.56 215		eP	P	01 28 41.2	-1.5
TULM	Tulcn-Chalpat	20.95 214		P	P	01 28 57.8	-0.1
TULM				IAmb	IAmb	01 29 13.8	
	comp=Z,12nm,0.9s						
HODGE	Hodges	21.34 321		P	P	01 29 02.4	+0.9
HODGE				IAmb	IAmb	01 29 21.2	
	comp=Z,8.1nm,0.6s						
BG3	Lake Jocassee	22.27 321		P	P	01 29 10.5	-0.6
BG3				IAmb	IAmb	01 29 10.6	
	comp=Z,10.0nm,1.2s						
BLA	Blacksburg	22.55 329		P	P	01 29 15.9	+1.9
BLA				IAmb	IAmb	01 29 28.9	
	comp=Z,16nm,1.4s						
MTO3	Montecristo	22.61 263		P	P	01 29 15.9	+1.0
MTO3				IAmb	IAmb	01 29 20.6	
	comp=Z,7.5nm,0.8s						
TKL	Tuckaleechee C	23.22 321		LR	LR	01 40 11.2	
	comp=Z,61nm,19.3s,baz=245,slow=41						
R55A	Marlinton	23.27 331		P	P	01 29 22.7	+2.0
R55A				IAmb	IAmb	01 29 35.4	
	comp=Z,11nm,1.2s						
CPCT	Cooper Cave	23.54 320		P	P	01 29 23.7	+0.6
PAGS	Pennsylvania G	23.60 339		P	P	01 29 24.4	+0.8
P52A	Corning	25.29 330		P	P	01 29 41.3	+2.3
P52A				IAmb	IAmb	01 29 59.9	
	comp=Z,12nm,1.3s						
Q51A	Peebles	25.42 328		P	P	01 29 40.8	+0.7
Q51A				IAmb	IAmb	01 30 00.4	
	comp=Z,7.3nm,1.1s						
N53A	Lisbon	25.66 334		P	P	01 29 44.0	+1.6
JCT	Junction City	32.79 298		P	P	01 30 45.5	-0.1
ABTX	Abilene, Hawle	33.23 302		P	P	01 30 50.4	+1.0
ABTX				IAmb	IAmb	01 30 51.5	
	comp=Z,5.8nm,1.0s						
WMOK	Wichita Mounta	33.23 306		P	P	01 30 50.2	+0.8
WMOK				IAmb	IAmb	01 30 51.2	
	comp=Z,2.1nm,0.6s						
LPAZ	La Paz	34.51 183		P	P	01 31 00.9	-0.3
	comp=Z,0.6nm,0.4s,baz=347,slow=11,SNR=4.2						
	comp=Z,0.6nm,0.4s						
TXAR	Lajitas Array	35.85 295		P	P	01 31 14.1	+2.0
	comp=Z,0.8nm,0.5s,baz=115,slow=11,SNR=8.8						
	comp=Z,0.8nm,0.5s						
TX31	Lajitas Ar. Si	35.85 295		P	P	01 31 13.2	+1.1
TX32	Lajitas Array	35.85 295		P	P	01 31 13.2	+1.1
BDFB	Brasilia	38.24 151		LR	LR	01 48 43.8	
	comp=Z,83nm,19.5s,baz=301,slow=38						
SDCO	Great Sand Dun	39.35 308		P	P	01 31 43.0	+1.3
SDCO				IAmb	IAmb	01 31 44.5	
	comp=Z,2.8nm,0.7s						
WUAZ	Wupatki	43.37 303		P	P	01 32 16.2	+1.9
WUAZ				IAmb	IAmb	01 32 18.3	
	comp=Z,6.0nm,1.0s						
PDAR	Pinedale Array	43.93 313		PcP	PcP	01 34 03.0	+0.5
	comp=Z,0.3nm,0.4s,baz=119,slow=5.2,SNR=3.9						
PSUT	Pine Spring	45.92 306		P	P	01 32 35.7	+1.1
GWY	Greenwater Val	47.72 302		P	P	01 32 49.8	+1.2
GWY				IAmb	IAmb	01 32 51.8	
	comp=Z,2.8nm,0.7s						
BMN	Battle Mountai	48.85 308		P	P	01 32 57.9	+0.8
NVAR	Mina Array Bea	49.33 305		P	P	01 33 02.9	+1.9
	comp=Z,0.5nm,0.6s,baz=97,slow=7.3,SNR=4.0						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	65.19 84		P	P	01 34 52.5	+0.1
	comp=Z,0.8nm,0.7s,baz=290,slow=5.8,SNR=5.3						
TORD				PcP	pP	01 35 24.6	-0.2
	comp=Z,0.4nm,0.7s,baz=286,slow=5.1,SNR=2.4						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	69.59 333		P	P	01 35 19.9	+0.6
	comp=Z,0.4nm,0.8s,baz=110,slow=4.2,SNR=5.1						
	comp=Z,0.4nm,0.8s						

*SSNC **14** 01:32:11.0±3.9, 21°.02N×70°.45W, h13km±713km, MS3.1*
*OSPL **14** 01:32:15.9±3.2, 20°.12N×70°.25W, h2km±12km, ML2.7*
ISC 14 01:32:15.3±1.3, 20°.07N±0°.05×70°.33W±0°.06, h10km, n12,
σ1§45/16, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.74	210	i P	Pg	01 32 30.5	+0.8
SC01				eS	Sb	01 32 41.7	+1.2
SC01				IAML		01 32 43.5	
	comp=Z,295nm,0.3s						
LONA1	Toro Cenizo, N	0.82	147	eS	Sg	01 32 41.5	-0.2
LODA1	ITESIL, Dajabo	1.40	248	eS	Sb	01 33 00.1	+0.8
LODA1				IAML		01 33 01.5	
	comp=Z,941nm,0.5s						
SDDR	Presa de Saban	1.41	220	i P	Pn	01 32 41.0	-0.1
SDDR				eS	Sb	01 33 00.2	+0.4
SDDR				IAML		01 33 02.1	
	comp=Z,76nm,0.2s						
GRTK	Grand Turk	1.62	333	i P	Pn	01 32 43.7	-0.2
GRTK				eS	Sn	01 33 05.1	+0.3
GRTK				IAML		01 33 05.6	
	comp=Z,209nm,0.5s						
SDD	Santo Domingo	1.65	166	i P	Pn	01 32 43.9	-0.5
SDD				eS	Sn	01 33 05.2	-0.5
BANI	BANI	1.67	181	i P	Pn	01 32 40.8	-4.0
BANI				eS	Sn	01 33 04.1	-2.2
BANI				IAML		01 33 05.1	
	comp=Z,110nm,0.4s						
LOPE2	Hotel El Peder	2.43	214	i P	Pn	01 32 56.1	+1.0
CRPR	Cabo Rojo, PR	3.67	123	i P	Pn	01 33 12.3	+0.1
CRPR				IAML		01 33 59.7	
	comp=Z,18nm,3.6s						
GTBY	Guantanamo Bay	4.50	269	eP	Pn	01 33 19.2	-4.3
GTBY				eS	Sn	01 34 12.3	-3.6
HLGC	Holguin	5.43	280	eP	Pn	01 33 35.2	-1.3
HLGC				ePg	Pb	01 33 38.0	-12
HLGC				eS	Sn	01 34 40.8	+1.7
CCCC	Cccc	7.05	280	eP	Pn	01 33 47.7	-11
CCCC				eS	Sn	01 35 00.9	-18
CCCC				IVMs_BB	IVMs_BB	01 35 12.3	
	comp=E,173nm,4.7s						
CCCC				IVMs_BB	IVMs_BB	01 35 14.7	
	comp=N,159nm,3.7s						

*BJI **14** 01:32:40.0±0.0, 4°.30S×154°.00E, h50km, mb4.7/18, mB4.9/12, Ms4.7/5, Ms7 4.3/5*
*IDC **14** 01:32:40.5±1.3, 4°.20S×154°.15E, h50km±12km, mb4.1/16, mbtmp4.5/19, ML3.9/3, MS3.5/29, Error ellipse: s-maj=10.9km s-min=10.5km az=174.0*
*DJA **14** 01:32:41.0±0.8, 4°.5S±6°.×15°.4E±°, h71km±6km, M5.0/18, mb5.0/18, mB5.4/12, MLv5.4/4, Mw(mB)4.9/12, MwMwp5.1/1, Mwp5.3/1*
*NEIC **14** 01:32:42.8±1.7, 4°.23S±0°.10×154°.04E±0°.08, h70km±7km, mb4.7/40, Error ellipse: s-maj=14.7km s-min=10.8km az=196.0*
ISC 14 01:32:40.5±0.4, 4°.20S±0°.05×154°.13E±0°.06, h50km, n156,
σ1§33/137, mb4.6/39, MS3.6/30, 1C,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.96	270	Pn	Pn	01 33 11.2	-0.2
RABL	Rabaul	1.96	270	P	Pn	01 33 11.7	+0.3
KRVT	Keravat (AS076	2.10	267	P	Pn	01 33 14.2	+0.9
	275nm,0.3s,baz=205,slow=1.2,SNR=144						
KRVT				S	Sn	01 33 39.2	+1.0
	2μm,0.4s,baz=114,slow=20,SNR=6.2						
KRVT				LR	LR	01 34 22.9	
	comp=Z,1μm,20.9s,baz=239,slow=48						
	793nm,0.4s						
MANU	Manus Island	7.08	287	Pn	Pn	01 34 20.9	-0.8
HNR	Honiara	7.77	132	P	Pn	01 34 32.5	+1.4
	8μm,0.7s,baz=262,slow=3.7,SNR=36						
HNR				S	Sn	01 35 57.8	0.0
	5μm,0.9s,baz=343,slow=19,SNR=1.5						
HNR				LR	LR	01 38 04.9	
	comp=Z,7μm,18.9s,baz=328,slow=42						
PMG	Port Moresby	8.64	233	P	Pn	01 34 44.8	+1.8
	7.7nm,0.3s,baz=18,slow=5.2,SNR=19						
PMG				S	Sn	01 36 20.6	+1.5
	56nm,0.8s,baz=162,slow=23,SNR=8.7						
	59nm,0.6s						
PMG	Port Moresby	8.64	233	Pn	Pn	01 34 44.2	+1.2
PMG	Port Moresby	8.64	233	P	Pn	01 34 46.3	+3.3
	0.3nm855nm94nm,0.7s						
PMG	Port Moresby	8.64	233	P	Pn	01 34 46.9	+3.9
COEN	Coen	14.52	227	P	Pn	01 36 04.7	+1.5
	baz=15,SNR=5.6						
COEN	Coen	14.52	227	Pn	Pn	01 36 01.6	-1.6
SMPI	Sarmi	15.55	278	P	P	01 36 24.0	+3.9
MTSU	Mount Surprise	16.85	214	P	P	01 36 35.2	+0.6
	baz=17,SNR=15						
CTA	Charters Tower	17.56	205	P	P	01 36 43.4	+1.0
	0.6nm,0.3s,baz=36,slow=12,SNR=9.8						
CTA				LR	LR	01 42 54.7	
	comp=Z,183nm,21.2s,baz=60,slow=35						
	24nm,1.1s						
CTA	Charters Tower	17.56	205	P	P	01 36 43.3	+0.9
	baz=18						
CTAO	Charters Tower	17.56	205		Pn	01 36 41.4	-0.5
CTAO				IAmb	IAmb	01 36 46.7	
	comp=Z,40nm,1.2s						
GUMO	Guam	19.92	333	LR	LR	01 43 38.2	
	comp=Z,47nm,19.6s,baz=154,slow=33						
EIDS	Eidsvold	21.25	188	P	P	01 37 23.3	+0.7
	baz=22,SNR=6.2						
EIDS	Eidsvold	21.25	188	P	P	01 37 22.7	+0.1
EIDS				IAmb	IAmb	01 37 25.8	
	comp=Z,20nm,0.7s						
EIDS	Eidsvold	21.25	188	P	P	01 37 23.3	+0.7
DZM	Mont Dzumac	21.41	147	eP	P	01 37 26.0	+1.6
	comp=Z,156nm,25.2s						
DZM				eS	S	01 41 16.8	-2.6
DZM				eLR	LR	01 42 36.6	
	comp=Z,518nm,24.9s						
DZM	Mont Dzumac	21.41	147	P	P	01 37 24.8	+0.4
	comp=Z,2.2nm,0.5s,baz=185,slow=15,SNR=6.5						
DZM				LR	LR	01 43 60.0	
	comp=Z,242nm,21.9s,baz=232,slow=32						
	comp=Z,2.2nm,0.5s						
DZM	Mont Dzumac	21.41	147	P	P	01 37 25.2	+0.9
QIS	Mount Isa	21.55	220	P	P	01 37 25.7	-0.1
	baz=22,SNR=71						
QIS	Mount Isa	21.55	220	P	P	01 37 26.3	+0.5
FAKI	Fak Fak	21.88	273	P	P	01 37 28.5	-0.9
FAKI				IAmb	IAmb	01 37 29.1	
	comp=Z,27nm,0.8s						
FAKI	Fak Fak	21.88	273	P	P	01 37 28.8	-0.6
	comp=Z,1μmcomp=Z,40nm,1.0s						
QUENC	Quen Island, N	21.90	147	P	P	01 37 30.5	+1.0
RMQ	Roma	22.75	193	P	P	01 37 38.9	+0.2
	baz=23,SNR=34						
RMQ	Roma	22.75	193	P	P	01 37 39.3	+0.6
KDU	Kakadu	23.00	247	P	P	01 37 39.7	-1.6
	baz=23,SNR=36						
KDU	Kakadu	23.00	247	P	P	01 37 40.2	-1.1
SIJI	Sorong	23.08	278	P	P	01 37 41.4	-0.8
	comp=Z,20nm,0.4s,baz=94,slow=11,SNR=12						
	comp=Z,20nm,0.4s						
SIJI	Sorong	23.08	278	P	P	01 37 42.8	+0.7
	comp=Z,26μmcomp=Z,37nm,1.1s						
QLP	Quilpie	24.19	202	P	P	01 37 52.2	-0.2
	baz=24,SNR=3.3						
MTN	Manton Dam	24.29	248	P	P	01 37 52.0	-1.5
	baz=24,SNR=18						
MTN	Manton Dam	24.29	248	P	P	01 37 52.4	-1.1
MTN	Manton Dam	24.29	248	P	P	01 37 52.6	-0.9
WRAB	Tennant Creek	24.82	229	P	P	01 37 58.0	-0.3
WB2	Warramunga Arr	24.83	229	P	P	01 37 58.2	-0.1
	baz=25						
WRA	Warramunga Arr	24.84	229	P	P	01 37 58.2	-0.2
	comp=Z,103nm,0.8s,baz=53,slow=9.9,SNR=155						
WRA				S	S	01 42 20.8	+2.8
	comp=Z,4.9nm,0.8s,baz=45,slow=15,SNR=9.4						
WRA				LR	LR	01 47 41.7	
	comp=Z,93nm,20.8s,baz=60,slow=36						
WRA	Warramunga Arr	24.84	229	P	P	01 37 57.1	-1.3
H11S3

baz=35,SNR=12
ARPS Mount Arapiles 34.33 198 P P 01 39 22.4 -0.1
MPSI Mapaga 34.50 277 P P 01 39 22.7 -1.5
comp=Z,499nmcomp=Z,17nm,0.8s
AFI Afiamalu 34.98 108 LR LR 01 53 03.6
comp=Z,68nm,18.0s,baz=280,slow=35
FORT Forrest 36.09 220 P P 01 39 36.6 -1.1
baz=36,SNR=14
FORT Forrest 36.09 220 P P 01 39 36.6 -1.1
PLAI Plampang 36.40 261 P P 01 39 37.5 -3.0
MBWA Marble Bar 37.42 240 P P 01 39 47.1 -2.0
MBWA Marble Bar 37.42 240 P P 01 39 47.9 -1.2
PSA00 Pilbara Seismi 37.48 240 P P 01 39 47.5 -2.1
PSA00 IAmb IAmb 01 39 48.7
comp=Z,15nm,0.9s
PSA00 Pilbara Seismi 37.48 240 P P 01 39 48.2 -1.4
MOO Moorlands 38.58 188 P P 01 39 59.1 +0.5
baz=39,SNR=4.6
URZ Urewera 39.85 151 LR LR 01 54 35.3
comp=Z,84nm,20.5s,baz=62,slow=33
RPZ Rata Peaks 42.10 162 LR LR 01 55 07.3
comp=Z,94nm,20.8s,baz=348,slow=32
GIRL Giralia 42.72 241 P P 01 40 32.1 -0.9
baz=43,SNR=3.6
MJAR Matsushiro Arr 43.17 341 P P 01 40 34.6 -1.9
comp=Z,2.2nm,0.8s,baz=171,slow=8.3,SNR=4.8
MJAR LR LR 01 55 44.9
comp=Z,60nm,20.2s,baz=178,slow=32
comp=Z,2.2nm,0.8s
KLBR Kellerberrin 43.68 227 P P 01 40 38.8 -1.9
baz=44
MORW Morawa 43.75 231 P P 01 40 39.5 -1.9
baz=44,SNR=6.9
BLDU Ballidu 43.97 229 P P 01 40 41.2 -1.9
baz=44,SNR=10
NWAO Narrogin (SRO) 44.75 226 LR LR 02 00 09.1
comp=Z,100nm,18.3s,baz=260,slow=37
RKGY Rocky Gully 45.83 224 P P 01 40 56.5 -1.3
baz=46,SNR=5.3
LEM Lembang 46.36 265 LR LR 02 04 08.8
comp=Z,28nm,20.6s,baz=40,slow=41
KSRS Korea Array 48.08 332 P P 01 41 15.6 +0.3
comp=Z,4.9nm,0.8s,baz=149,slow=8.5,SNR=17
KSRS LR LR 02 02 03.6
comp=Z,19nm,18.1s,baz=165,slow=37
comp=Z,4.9nm,0.8s
KSAR Wonju Array Be 48.09 332 P P 01 41 13.9 -1.4
KSI Kapahiang 51.41 269 P P 01 41 42.8 +1.7
comp=Z,11μmcomp=Z,136nm,0.7s
USA0B Ussuriysk Arra 52.13 340 P P 01 41 46.2 +0.4
USRK Ussuriysk Ar. 52.13 340 P P 01 41 46.2 +0.5
comp=Z,6.9nm,0.8s,baz=195,slow=9.6,SNR=12
comp=Z,6.9nm,0.8s
USRK Ussuriysk Ar. 52.13 340 P P 01 41 45.1 -0.6
SDSI Sungai Dareh 52.74 272 P P 01 41 49.1 -1.8
BNX BinXian 55.11 337 ⇑P **P 01 42 07.8 +0.2**
BNX pmax pmax
comp=Z,21nm,0.8s
PPT2 Papeete2 56.65 108 *e*LR LR 01 58 56.2
comp=Z,68nm,27.5s
PETK Petropavlovsk- 57.17 3 P P 01 42 22.7 +0.5
comp=Z,11nm,0.8s,baz=187,slow=10,SNR=14
PETK LR LR 02 03 13.2
comp=Z,38nm,21.7s,baz=169,slow=32
comp=Z,11nm,0.8s
PETK Petropavlovsk- 57.17 3 P P 01 42 22.2 0.0
TBI Tubuai 57.60 115 *e*LR LR 01 59 23.3
comp=Z,100nm,29.5s
CMAR Chiang Mai Arr 58.83 294 P P 01 42 34.8 +0.3
comp=Z,1.1nm,0.3s,baz=110,slow=4.8,SNR=7.8
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 58.83 294 P P 01 42 34.1 -0.4
PZH PanZhiHua 59.12 304 P P 01 42 39.3 +2.8
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,80nm,4.6s
SHEM Shemya Is, Ala 59.18 14 LR LR 02 03 01.1
comp=Z,58nm,22.0s,baz=108,slow=31
HIA Hailar 61.04 335 P P 01 42 49.0 -0.1
MA2 Magadan 63.63 358 LR LR 02 05 26.1
comp=Z,21nm,21.7s,baz=244,slow=31
GTA Gaotai 66.13 317 *e*P **P 01 43 27.0 +4.0**
GTA pP sP 01 43 40.8 -1.2
GTA sP pwP 01 43 44.6 +5.8
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,62nm,3.6s
GTA LR LR
comp=Z,120nm,16.7s
GTA LR LR
comp=Z,180nm,17.8s
GTA LR LR
comp=Z,200nm,17.8s
ULN Ulaanbaatar 66.20 327 P P 01 43 23.4 +0.1
ULN IAmb IAmb 01 43 42.5
comp=Z,9.4nm,0.8s
SONM Songino Array 66.53 327 P P 01 43 26.4 +1.0
comp=Z,0.9nm,0.6s,baz=147,slow=5.5,SNR=5.7
comp=Z,0.9nm,0.6s
SONM Songino Array 66.53 327 P P 01 43 26.1 +0.7
SONM IAmb IAmb 01 43 45.6
comp=Z,6.5nm,0.8s
VNDA Vanda 73.38 178 P P 01 44 06.6 -0.1
comp=Z,1.2nm,0.7s,baz=335,slow=6.6,SNR=3.5
VNDA LR LR 02 10 52.0
comp=Z,39nm,21.1s,baz=332,slow=31
comp=Z,1.2nm,0.7s
KDAK Kodiak Island 75.05 26 LR LR 02 20 37.9
comp=Z,19nm,18.2s,baz=240,slow=38
WMQ Urumqi 76.20 317 *e*P **P 01 44 25.6 +1.8**
WMQ LR LR
comp=Z,190nm,17.1s
WMQ LR LR
comp=Z,330nm,15.7s
WMQ LR LR
comp=Z,210nm,21.9s
M19K Big River Lodg 76.70 22 P P 01 44 27.6 +1.5
M19K IAmb IAmb 01 44 39.9
comp=Z,6.0nm,1.0s
TIXI Tiksi 77.48 352 P P 01 44 30.7 +0.4
TIXI IAmb IAmb 01 44 49.2
comp=Z,5.5nm,0.9s
J20K Nowinta River 78.16 21 P P 01 44 35.3 +1.1
J20K IAmb IAmb 01 44 53.0
comp=Z,8.4nm,1.1s
CAST Castle Rocks 78.45 22 IAmb IAmb 01 44 53.2
comp=Z,5.9nm,0.8s
PWL Port Wells 78.54 25 P P 01 44 36.4 0.0
IMAR Indian Mountai 79.38 19 P P 01 44 42.0 +1.1
I21K Tanana 79.50 20 P P 01 44 42.9 +1.4
I21K IAmb IAmb 01 44 59.0
comp=Z,8.1nm,0.9s
MCK McKinley 79.81 22 P P 01 44 43.3 0.0
MCK IAmb IAmb 01 45 00.4
comp=Z,12nm,1.0s
CCB Clear Creek Bu 80.71 22 P P 01 44 47.3 -0.7
CCB IAmb IAmb 01 45 04.5
comp=Z,10nm,1.4s
GLB Gilahina Butte 80.75 25 IAmb IAmb 01 45 07.0
comp=Z,9.7nm,0.9s
IL31 81.11 22 P P 01 44 49.5 -0.7
ILAR Eielson Array 81.11 22 P P 01 44 49.5 -0.7
comp=Z,2.6nm,0.9s,baz=251,slow=5.5,SNR=17
ILAR LR LR 02 16 58.2
comp=Z,61nm,19.3s,baz=200,slow=33
comp=Z,2.6nm,0.9s
ILAR Eielson Array 81.11 22 P P 01 44 49.8 -0.5
ZALV Zalesovo Beam 81.39 326 P P 01 44 51.4 -0.5
J25K Salcha River, 81.60 22 IAmb IAmb 01 45 10.2
comp=Z,6.4nm,0.7s
BCAR Beaver Creek A 82.31 24 P P 01 44 56.9 +0.2
HYT Haines Junctio 83.29 27 P P 01 45 02.8 +0.9
DAWY Dawson 83.70 24 P P 01 45 04.1 +0.3
KURBB Kurchatov Arra 84.15 322 P P 01 45 06.0 -0.3
comp=Z,1.2nm,0.2s,baz=85,slow=4.0,SNR=4.2
comp=Z,1.2nm,0.2s
NRIK Noril'sk 85.83 341 P P 01 45 13.6 -0.7
NRIK IAmb IAmb 01 45 33.5
comp=Z,4.0nm,0.8s
MAW Mawson 86.63 203 P P 01 45 16.5 -1.8
comp=Z,2.4nm,0.8s,baz=37,slow=3.1,SNR=7.2
comp=Z,2.4nm,0.8s
MAW Mawson 86.63 203 P P 01 45 16.3 -2.1
YBH Yreka Blue Hor 87.67 48 LR LR 02 20 40.9
comp=Z,115nm,18.6s,baz=329,slow=33

KKAR Karatay Array 88.18 313 P P 01 45 25.2 -1.2
BVAR Borovoye Array 89.56 323 P P 01 45 32.9 +0.3
comp=Z,0.6nm,0.6s,baz=107,slow=4.8,SNR=6.2
BVAR LR LR 02 27 31.9
comp=Z,18nm,18.0s,baz=99,slow=37
comp=Z,0.6nm,0.6s
BRVK Borovoye 89.62 323 P P 01 45 32.0 -0.9
NVAR Mina Array Bea 90.67 52 P P 01 45 40.3 +1.9
comp=Z,0.5nm,0.8s,baz=269,slow=8.6,SNR=3.5
comp=Z,0.5nm,0.8s
WVOR Wild Horse Val 90.76 48 P P 01 45 38.1 -0.5
PFO Pinyon Flats O 91.81 57 LR LR 02 22 09.8
comp=Z,56nm,18.3s,baz=315,slow=32
ELK Elko 93.19 50 LR LR 02 21 23.9
comp=Z,71nm,19.5s,baz=304,slow=31
ABKAR Akbulak array 95.89 319 P P 01 46 01.0 -0.9
ABKAR IAmb IAmb 01 46 19.1
comp=Z,1.7nm,0.9s
ARU Arti 96.56 326 LR LR 02 30 17.7
comp=Z,28nm,20.6s,baz=12,slow=36
PDAR Pinedale Array 97.47 48 LR LR 02 26 37.4
comp=Z,55nm,18.1s,baz=296,slow=33
BDFB Brasilia 150.52 132 PKPbc **PKPbc 01 52 27.6 -0.4**
comp=Z,5.7nm,0.7s,baz=248,slow=0.6,SNR=8.4

BJI **14** *01:43:47.0±0.0, 31°.00N×50°.00E, h10km, mb4.8/44, mB4.9/25, Ms4.5/22, Ms7 4.3/22*
GII **14** *01:43:48.5±0.0, 31°.06N×50°.04E, h10km*
MOS **14** *01:43:48.2±1.1, 31°.02N×50°.06E, h18km, mb5.0/69, Error ellipse: s-maj=5.2km s-min=2.9km az=118.3*
SGS **14** *01:43:49.8, 31°.35N×50°.11E, h17km, Ml5.0*
DSN **14** *01:43:50.3±4.2, 30°.95N×49°.98E, h15km, ML4.3/10, Error ellipse: s-maj=50.0km s-min=11.2km az=167.0*
NEIC **14** *01:43:50.8±2.0, 31°.02N±0°.06×49°.97E±0°.07, h20km±1km, mb4.8/95, mb_Lg4.7(TEH), ML4.6(THR), Error ellipse: s-maj=10.3km s-min=9.7km az=97.0*
THR **14** *01:43:50.4±1.4, 31°.09N×50°.09E, h15km, ML4.6*
TEH **14** *01:43:51.0, 31°.09N×50°.07E, h18km, ML4.7*
IDC **14** *01:43:53.8±2.0, 31°.19N×49°.96E, h39km±17km, mb4.3/33, mbtmp4.5/41, ML3.9/7, MS3.9/45, Error ellipse: s-maj=13.6km s-min=9.8km az=156.0*
OMAN **14** *01:43:57.9±0.3, 30°.77N×50°.30E, h113km±11km, mb5.4/30, Error ellipse: s-maj=7.2km s-min=5.4km az=33.0*
ISC 14 01:43:51.7±0.3, 31°.04N±0°.03×50°.07E±0°.03, h30km, n745, σ1**9**50/741**, mb4.8**/186**, MS3.9**/49**, 46C-31D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.47**	**161**	*e*Pg	**Pb**	**01 44 01.5**	**-0.1**
ABEH				*e*Sg	**Sn**	**01 44 10.3**	**+0.7**
AMIS	**Naft Sefid**	**0.92**	**313**	*e*Pg	**Pn**	**01 44 07.7**	**-0.9**
AHWZ	**Ahwaz**	**1.26**	**284**	*e*Pg	**Pb**	**01 44 15.0**	**+0.2**
AHWZ				*e*		01 44 39.1	
comp=Z,19μm,0.2s							
KLNJ	**Kolanjah**	**1.30**	**91**	*e*Pg	**Pn**	**01 44 14.8**	**+0.6**
KLNJ				*e*		01 44 42.8	
comp=Z,86μm,0.7s							
SHK1	**Shahrekord**	**1.46**	**28**	*e*Pn	**Pn**	**01 44 16.6**	**+0.4**
SHK1				*e*		01 44 42.3	
comp=Z,52μm,0.6s							
IPIR	**Pirpir**	**1.78**	**23**	*e*Pn	**Pb**	**01 44 23.0**	**-0.8**
IPIR				*e*		01 44 58.3	
comp=Z,79μm,0.6s							
KAZ1	**Kazerun**	**1.96**	**136**	*e*Pn	**Pb**	**01 44 25.8**	**-0.9**
KAZ1				*e*		01 45 18.2	
comp=Z,37μm,0.8s							
IRAM	**Ramesheh**	**2.12**	**68**	*e*Pn	**Pb**	**01 44 27.8**	**-1.7**
IGAR	**Gharneh**	**2.16**	**51**	*e*Pn	**Pb**	**01 44 28.2**	**-2.0**
IGAR				*e*		01 45 05.5	
comp=Z,31μm,0.6s							
AHBU	**AHRAM**	**2.42**	**154**	*e*Pn	**Pb**	**01 44 32.1**	**-2.4**
AHBU				*e*		01 45 43.1	
comp=Z,99nm,0.8s							
SHI	**Shiraz**	**2.53**	**123**	*e*Pn	**Pb**	**01 44 34.1**	**-2.4**
IKLH	**Kolahrood**	**2.60**	**29**	*e*Pn	**Pn**	**01 44 34.2**	**+2.2**
IZEF	**Zefreh**	**2.66**	**45**	*e*Pn	**Pn**	**01 44 34.8**	**+2.0**
KHMZ	**Khomeyn**	**2.69**	**358**	Pn	**Pn**	**01 44 35.0**	**+1.8**
KHMZ	**Khomeyn**	**2.69**	**358**	*e*Pn	**Pn**	**01 44 35.9**	**+2.7**
KHMZ	**Khomeyn**	**2.69**	**358**	*e*Pn	**Pn**	**01 44 35.9**	**+2.7**
KHMZ				IAML		01 45 16.9	
comp=N,2μm,0.5s							
KHMZ				IAML		01 45 22.5	
comp=E,2μm,0.7s							
IKMR	**Kamar-syah**	**2.85**	**330**	*e*Pn	**Pn**	**01 44 36.7**	**+1.5**
DHL1	**Dehloran**	**2.88**	**305**	*e*Pn	**Pn**	**01 44 37.6**	**+2.0**
QAMS	**Qamsar**	**2.91**	**22**	Pn	**Pn**	**01 44 38.9**	**+2.7**
QAMS	**Qamsar**	**2.91**	**22**	*e*Pn	**Pn**	**01 44 38.9**	**+2.7**
QAMS				*e*		01 45 26.2	
comp=Z,47μm,0.4s							
NASN	**Na'in**	**2.91**	**52**	Pn	**Pn**	**01 44 38.0**	**+1.7**
NASN	**Na'in**	**2.91**	**52**	*e*Pn	**Pn**	**01 44 38.6**	**+2.3**
NASN	**Na'in**	**2.91**	**52**	*e*Pn	**Pn**	**01 44 38.6**	**+2.3**
IKFM	**Kafar-mosalman**	**3.11**	**323**	*e*Pn	**Pn**	**01 44 40.2**	**+1.5**
IDOB	**Doab**	**3.17**	**330**	*e*Pn	**Pn**	**01 44 40.7**	**+0.9**
ISAD	**Sadrabad**	**3.21**	**73**	*e*Pn	**Pn**	**01 44 43.2**	**+2.9**
ISAD				*e*		01 44 50.8	
comp=Z,11μm,0.3s							
HSAM	**Samen**	**3.40**	**339**	*e*Pn	**Pn**	**01 44 44.0**	**+1.1**
HSAM				*e*		01 45 33.6	
comp=Z,16μm,0.4s							
KRSH	**Karshahi**	**3.40**	**30**	*e*Pn	**Pn**	**01 44 44.9**	**+2.1**
KRSH				*e*		01 45 32.6	
comp=Z,18μm,0.4s							
ASAO	**Ashtian**	**3.50**	**359**	Pn	**Pn**	**01 44 46.0**	**+1.7**
ASAO	**Ashtian**	**3.50**	**359**	*e*Pn	**Pn**	**01 44 46.9**	**+2.6**
ASAO	**Ashtian**	**3.50**	**359**	*e*Pn	**Pn**	**01 44 46.9**	**+2.6**
ASAO				IAML		01 45 44.4	
comp=E,984nm,0.6s							
ASAO				IAML		01 45 52.1	
comp=N,985nm,0.7s							
GHVR	**GHOM**	**3.58**	**16**	Pn	**Pn**	**01 44 44.0**	**-1.2**
GHVR	**GHOM**	**3.58**	**16**	*e*Pn	**Pn**	**01 44 44.6**	**-0.6**
GHVR	**GHOM**	**3.58**	**16**	*e*Pn	**Pn**	**01 44 44.6**	**-0.6**
QIR1	**Qir**	**3.63**	**134**	*e*Pn	**Pn**	**01 44 48.7**	**+2.7**
ANAR	**Anarak**	**3.77**	**54**	Pn	**Pn**	**01 44 49.9**	**+2.0**
ANAR	**Anarak**	**3.77**	**54**	*e*Pn	**Pn**	**01 44 49.9**	**+2.0**
ISFB	**Sefidab**	**3.77**	**28**	*e*Pn	**Pn**	**01 44 50.0**	**+2.1**
ISFB				*e*		01 46 02.2	
comp=Z,8μm,0.6s							
IKOM	**Komasi**	**3.80**	**326**	*e*Pn	**Pn**	**01 44 50.1**	**+1.8**
IKOM				*e*		01 46 14.6	
comp=Z,26μm,0.7s							
HAGD	**Aghdareh**	**3.85**	**348**	*e*Pn	**Pn**	**01 44 50.7**	**+1.6**
HAGD				*e*		01 46 01.8	
comp=Z,19μm,0.5s							
IQOM	**Qom**	**3.88**	**12**	*e*Pn	**Pn**	**01 44 51.3**	**+1.7**
ICHK	**Chekchek**	**3.88**	**71**	*e*Pn	**Pn**	**01 44 51.8**	**+2.2**
ICHK				*e*		01 45 41.9	
comp=Z,5μm,0.6s							
IBZA	**Bozab**	**3.89**	**332**	*e*Pn	**Pn**	**01 44 50.9**	**+1.2**
IMEH	**Mehriz**	**3.90**	**84**	*e*Pn	**Pn**	**01 44 52.2**	**+2.3**
IMEH				*e*		01 46 11.0	
comp=Z,7μm,1.4s							
JHRM	**Jahrom**	**3.96**	**129**	Pn	**Pn**	**01 44 52.9**	**+2.4**
JHRM	**Jahrom**	**3.96**	**129**	*e*Pn	**Pn**	**01 44 52.9**	**+2.4**
JHRM				*e*		01 45 51.5	
comp=Z,9μm,0.3s							
YZKH	**Yazd**	**4.08**	**70**	*e*Pn	**Pn**	**01 44 54.5**	**+2.4**
YZKH	**Yazd**	**4.08**	**70**	*e*Pn	**Pn**	**01 44 54.5**	**+2.4**
KCHF	**Cheshme Sefid,**	**4.12**	**322**	*e*Pn	**Pn**	**01 44 53.9**	**+1.2**
KCHF				*e*		01 46 13.0	
comp=Z,19μm,0.4s							
KER	**Kermanshah**	**4.15**	**324**	*e*Pn	**Pn**	**01 44 54.1**	**+0.9**
IVRN	**Varamin**	**4.18**	**19**	*e*Pn	**Pn**	**01 44 55.3**	**+1.8**
IRAZ	**Razeghan**	**4.35**	**358**	*e*Pn	**Pn**	**01 44 57.6**	**+1.6**
IGHG	**Ghaleghazi**	**4.41**	**319**	*e*Pn	**Pn**	**01 44 58.3**	**+1.5**
IGHG				*e*		01 46 38.8	
comp=Z,13μm,0.8s							
IHSB	**Hasanabad**	**4.50**	**13**	*e*Pn	**Pn**	**01 44 59.3**	**+1.4**
IHSB				*e*		01 46 27.3	
comp=Z,9μm,0.8s							
SNGE	**Sanandaj**	**4.64**	**331**	*e*Pn	**Pn**	**01 45 01.0**	**+1.0**
SNGE	**Sanandaj**	**4.64**	**331**	*e*Pn	**Pn**	**01 45 01.0**	**+1.0**
SNGE				IAML		01 46 21.4	
comp=N,576nm,0.4s							
SNGE				IAML		01 46 23.7	
comp=E,483nm,0.6s							
IMHD	**Mahdasht**	**4.66**	**6**	*e*Pn	**Pn**	**01 45 01.6**	**+1.5**
IMHD				*e*		01 46 26.8	
comp=Z,6μm,0.7s							

ILIN Lien 4.67 327 *e*Pn **Pn 01 45 01.1 +0.8**
ILIN *e* 01 46 07.5
comp=Z,9μm,0.8s
QABG Abgarm-Qazvin 4.67 355 *e*Pn **Pn 01 45 00.7 +0.3**
IBAF Bafgh 4.73 82 *e*Pn **Pn 01 45 03.3 +2.1**
IDHR Dehrash 4.79 321 *e*Pn **Pn 01 45 03.1 +1.1**
TEH Tehran 4.81 13 *e*Pn **Pn 01 45 03.3 +1.1**
IDMV Damavand 4.81 19 *e*Pn **Pn 01 45 04.1 +1.7**
TEHA Amirabad Tehra 4.82 13 *e*Pn **Pn 01 45 02.8 +0.5**
DAMV Damavand 4.84 19 Pn **Pn 01 45 04.0 +1.2**
DAMV Damavand 4.84 19 *e*Pn **Pn 01 45 04.5 +1.7**
DAMV Damavand 4.84 19 *e*Pn **Pn 01 45 04.5 +1.7**
CHTH Charan 4.93 10 *e*Pn **Pn 01 45 05.6 +1.6**
CHTH Charan 4.93 10 *e*Pn **Pn 01 45 05.6 +1.6**
CHTH IAML 01 46 32.7
comp=N,224nm,0.9s
CHTH IAML 01 46 33.7
comp=E,123nm,0.6s
ILAS Lasjerd 4.96 28 *e*Pn **Pn 01 45 05.7 +1.4**
LAR1 LAR 5.04 131 *e*Pn **Pn 01 45 08.3 +3.0**
LAR1 *e* 01 46 24.9
comp=Z,6μm,0.6s
SAKB Bahrain 5.06 175 *e*Pn **Pn 01 45 08.4 +2.8**
SAKB Bahrain 5.06 175 P **Pn 01 45 08.0 +2.5**
SAKB S **Sn 01 46 04.5 +1.5**
IFIR Firoozkooh 5.11 25 *e*Pn **Pn 01 45 08.0 +1.6**
RQBS RQBS 5.15 225 P **Pn 01 45 07.8 +1.0**
SMAN Sihmah 5.16 201 P **Pn 01 45 08.1 +1.2**
SHMA Al-Shehemyia 5.23 171 P **Pn 01 45 09.8 +2.0**
SHMA S **Sn 01 46 09.5 +2.5**
QCNT Qazvin 5.23 359 *e*Pn Pn 01 45 14.5 +6.5
IGZV Ghazvin 5.33 1 *e*Pn **Pn 01 45 10.8 +1.3**
IGZV *e* 01 47 01.3
comp=Z,4μm,0.8s
QALM Alamut, Qazvin 5.40 5 *e*Pn **Pn 01 45 11.5 +1.1**
IANJ Anjilo 5.46 35 *e*Pn **Pn 01 45 12.2 +1.0**
ISHM Shahmirzad 5.46 29 *e*Pn **Pn 01 45 12.5 +1.2**
IPRN Peran 5.52 19 *e*Pn **Pn 01 45 14.5 +2.6**
KHGB Koh Gabri 5.55 95 *e*Pn **Pn 01 45 14.2 +1.7**
JIR1 Jirandeh 5.66 358 *e*Pn **Pn 01 45 15.0 +1.2**
ZNJK Zanjan 5.73 349 *e*Pn **Pn 01 45 16.7 +1.7**
ZNJK Zanjan 5.73 349 *e*Pn **Pn 01 45 16.7 +1.7**
KRBR Kerman 5.87 99 Pn **Pn 01 45 18.0 +1.1**
KRBR Kerman 5.87 99 *e*Pn **Pn 01 45 19.0 +2.1**
KRBR Kerman 5.87 99 *e*Pn **Pn 01 45 19.0 +2.1**
TVBK TV Kerman 5.87 99 *e*Pn **Pn 01 45 19.4 +2.5**
GIDE GILAN DEYLAMAN 5.87 359 *e*Pn **Pn 01 45 18.9 +2.1**
GIDE GILAN DEYLAMAN 5.87 359 *e*Pn **Pn 01 45 18.9 +2.1**
NGRK Negar Kerman 5.92 102 *e*Pn **Pn 01 45 20.0 +2.3**
TPRV Parvadeh(Tabas 5.95 69 *e*Pn **Pn 01 45 19.8 +1.9**
LHJ2 Lahijan - Gila 6.11 360 *e*Pn **Pn 01 45 21.4 +1.5**
TNSJ Nastanj 6.24 60 *e*Pn **Pn 01 45 23.3 +1.4**
IGLO Ghaloghah 6.28 29 *e*Pn **Pn 01 45 24.7 +2.2**
SMRA Abu-Samra 6.31 174 P **Pn 01 45 24.5 +1.8**
SMRA S **Sn 01 46 34.1 +0.4**
RMAH Rumah 6.33 207 P **Pn 01 45 23.8 +0.7**
NHRD Haradh 6.37 189 S **Sn 01 46 35.9 +0.7**
NHRD Haradh 6.37 189 P **Pn 01 45 24.6 +1.1**
GENO Geno 6.45 123 Pn **Pn 01 45 25.0 +0.3**
GENO Geno 6.45 123 *e*Pn **Pn 01 45 25.1 +0.3**
TKDS Koohdasht(Taba 6.49 65 *e*Pn **Pn 01 45 26.9 +1.6**
TABS Tabas 6.50 65 *e*Pn **Pn 01 45 27.4 +1.9**
TABS Tabas 6.50 65 *e*Pn **Pn 01 45 27.4 +1.9**
CHMN Cheshme madani 6.55 98 Pn **Pn 01 45 27.2 +0.8**
CHMN Cheshme madani 6.55 98 *e*Pn **Pn 01 45 27.2 +0.8**
IHSH Hashtrud 6.67 340 *e*Pn **Pn 01 45 28.5 +0.6**
IBND Bandar-abas 6.69 121 *e*Pn **Pn 01 45 29.7 +1.8**
MAHB Mahabad 6.76 329 *e*Pn **Pn 01 45 29.7 +0.6**
SHRO Shahrood 6.99 44 *e*Pn **Pn 01 45 34.4 +2.2**
SHRO Shahrood 6.99 44 *e*Pn **Pn 01 45 34.4 +2.2**
ISRB Sarab 7.05 344 *e*Pn **Pn 01 45 34.0 +0.9**
SLWR Sila 7.09 168 *e*Pn **Pn 01 45 35.0 +1.5**
SLWR Sila 7.09 168 P **Pn 01 45 34.7 +1.3**
IBST Bostanabad 7.14 339 *e*Pn **Pn 01 45 34.4 +0.1**
SHME Shamm 7.29 132 *e*Pn **Pn 01 45 37.9 +1.7**
SHME Shamm 7.29 132 P **Pn 01 45 37.4 +1.1**
SNR=7.8
SHME Shamm 7.29 132 *i* P **Pn 01 45 36.7 +0.4**
SNR=10
IAZR Azarshahr 7.43 344 *e*Pn **Pn 01 45 38.6 +0.3**
GHWR Ruwais 7.48 160 P **Pn 01 45 40.1 +1.4**
GHWR S **Sn 01 47 00.2 -2.4**
BANOM Banah 7.48 131 *e*Pn **Pn 01 45 39.3 +0.4**
BANOM Banah 7.48 131 P **Pn 01 45 39.0 +0.1**
SNR=32
BANOM S **Sn 01 46 60.0 -2.8**
BANOM Banah 7.48 131 *i* P **Pn 01 45 38.5 -0.4**
SNR=32
KBAM BAM 7.50 103 *e*Pn **Pn 01 45 40.7 +1.5**
ITEG Tejag 7.60 74 *e*Pn **Pn 01 45 41.8 +1.2**
IMND Minoodasht 7.61 34 *e*Pn **Pn 01 45 42.4 +1.9**
IHRS Heris 7.67 342 *e*Pn **Pn 01 45 43.3 +1.7**
LKRN Lenkeran, Azer 7.72 352 P **Pn 01 45 42.8 +0.8**
IKOO Kooshah 7.73 77 *e*Pn **Pn 01 45 42.9 +0.5**
AJN Ajban 7.78 145 *e*Pn **Pn 01 45 44.7 +1.8**
AJN Ajban 7.78 145 P **Pn 01 45 44.6 +1.6**
BSRN Basiran 7.78 81 *e*Pn **Pn 01 45 44.8 +1.7**
BSRN Basiran 7.78 81 *e*Pn **Pn 01 45 44.8 +1.7**
MASF Masafi 7.79 135 P **Pn 01 45 44.0 +0.8**
SNR=8.7
MASF S **Sn 01 47 06.0 -4.4**
NAZ Nazwa, Dubai 7.79 139 *e*Pn **Pn 01 45 44.5 +1.4**
NAZ Nazwa, Dubai 7.79 139 P **Pn 01 45 44.8 +1.7**
SNR=18
NAZ S **Sn 01 47 10.8 +0.5**
NAZ Nazwa, Dubai 7.79 139 *i* P **Pn 01 45 43.1 0.0**
SNR=18
MSFE Esma-Masafi 7.80 135 *e*Pn **Pn 01 45 44.1 +0.9**
MSFE Esma-Masafi 7.80 135 *i* P **Pn 01 45 42.9 -0.3**
SNR=8.4
ITBZ Tabriz 7.87 337 *e*Pn **Pn 01 45 44.7 +0.5**
ASUD Al Ashush, Dub 7.90 143 *e*Pn **Pn 01 45 45.9 +1.3**
ASUD Al Ashush, Dub 7.90 143 P **Pn 01 45 46.0 +1.3**
SNR=56
ASUD S **Sn 01 47 12.0 -1.1**
ASUD Al Ashush, Dub 7.90 143 *i* P **Pn 01 45 45.3 +0.7**
SNR=55
AFRZ Afriz 7.94 70 *e*Pn **Pn 01 45 46.6 +1.4**
FAQ Al Faqa, Dubai 7.95 141 *e*Pn **Pn 01 45 47.2 +2.0**
FAQ Al Faqa, Dubai 7.95 141 P **Pn 01 45 47.9 +2.7**
SNR=10
FAQ S **Sn 01 47 12.1 -2.1**
FAQ Al Faqa, Dubai 7.95 141 *i* P **Pn 01 45 46.4 +1.2**
SNR=10
GRMI Germi 7.95 348 *e*Pn **Pn 01 45 47.3 +2.0**
GRMI Germi 7.95 348 *e*Pn **Pn 01 45 47.5 +2.1**
TVRZ Varzaqan 7.95 340 *e*Pn **Pn 01 45 46.3 +0.9**
MZWR Madinat Zayed 8.00 154 *e*Pn **Pn 01 45 47.3 +1.4**
MZWR Madinat Zayed 8.00 154 P **Pn 01 45 47.1 +1.2**
MZWR S **Sn 01 47 13.0 -2.5**
ISHB Shabestar 8.10 334 *e*Pn **Pn 01 45 46.2 -1.3**
UOSS Minazif 8.14 137 Pn **Pn 01 45 47.0 -0.8**
UOSS Minazif 8.14 137 *e*Pn **Pn 01 45 49.0 +1.2**
UOSS Minazif 8.14 137 P **Pn 01 45 48.0 +0.2**
UOSS S **Sn 01 47 14.4 -4.5**
UOSS Minazif 8.14 137 *i* P **Pn 01 45 47.0 -0.8**
SNR=7.9
HATD Hatta, Dubai 8.19 138 *e*Pn **Pn 01 45 50.0 +1.5**
HATD Hatta, Dubai 8.19 138 P **Pn 01 45 49.7 +1.2**
SNR=12
HATD S **Sn 01 47 17.8 -2.3**
HATD Hatta, Dubai 8.19 138 *i* P **Pn 01 45 48.9 +0.3**
SNR=11
SBZV Sabzevar 8.23 48 *e*Pn **Pn 01 45 50.9 +1.6**
ASHO Ashiyiah 8.26 139 *e*Pn **Pn 01 45 49.8 +0.3**
ASHO Ashiyiah 8.26 139 P **Pn 01 45 50.0 +0.5**
SNR=35
ASHO S **Sn 01 47 18.3 -3.5**
ASHO Ashiyiah 8.26 139 *i* P **Pn 01 45 50.0 +0.5**
SNR=37
MRVT Maraveh tapeh 8.26 35 *e*Pn **Pn 01 45 51.1 +1.6**
MRVT *e*Pn Pb 01 45 51.2 -23
MRVT Maraveh tapeh 8.26 35 *e*Pn **Pn 01 45 51.1 +1.6**
IMRD Marand 8.45 336 *e*Pn **Pn 01 45 55.0 +2.8**
RAYN Ar Rayn 8.52 210 Pn **Pn 01 45 51.8 -1.3**
RAYN Ar Rayn 8.52 210 P **Pn 01 45 51.8 -1.3**
RAYN Ar Rayn 8.52 210 *i* P **Pn 01 45 51.9 -1.2**
SNR=85
NHDN Nehbandan 8.55 85 *e*Pn **Pn 01 45 52.7 -0.9**
MZR Muzera 8.56 158 *e*Pn **Pn 01 45 54.7 +1.0**
**MZR Mu

MZR P **Pn** **01 45 55.0 +1.3**
SNR=35
MZR S **Sn** **01 47 27.4 -1.9**
MZR Muzera 8.56 158 *i* P **Pn** **01 45 54.4 +0.7**
SNR=35
JASK Jask - Hormozg 8.58 125 *e*Pn **Pn** **01 45 54.1 +0.2**
ALNE Al Ain 8.59 143 *e*Pn **Pn** **01 45 55.0 +1.0**
ALNE Al Ain 8.59 143 P **Pn** **01 45 55.1 +1.0**
SNR=16
ALNE S **Sn** **01 47 28.5 -1.5**
TBHD Torbat heydari 8.82 58 *e*Pn **Pn** **01 45 57.6 +0.2**
ISFR Sfrayin 8.90 46 *e*Pn **Pn** **01 46 00.7 +2.3**
NAX Nakhchivan 8.94 336 P **Pn** **01 45 59.6 +0.8**
BJRD Bojnurd 8.99 40 *e*Pn **Pn** **01 46 01.8 +2.2**
BJRD Bojnurd 8.99 40 *e*Pn **Pn** **01 46 01.8 +2.2**
SHRT Shahrakht 9.03 71 Pn **Pn** **01 46 02.0 +2.0**
SHRT Shahrakht 9.03 71 *e*Pn **Pn** **01 46 02.6 +2.6**
SHRT Shahrakht 9.03 71 *e*Pn **Pn** **01 46 02.6 +2.6**
IAKL Akhelmad 9.10 50 *e*Pn **Pn** **01 46 03.2 +1.9**
IPAY Payeh 9.18 52 *e*Pn **Pn** **01 46 03.4 +1.1**
IMOG Moghan 9.23 54 *e*Pn **Pn** **01 46 04.4 +1.3**
GEVA Gevas 9.27 323 Pn **Pn** **01 46 03.9 +0.5**
ZHSF Zahedan 9.36 96 *e*Pn **Pn** **01 46 07.7 +3.0**
ZHSF Zahedan 9.36 96 *e*Pn **Pn** **01 46 07.7 +3.0**
MAKU Maku 9.39 333 *e*Pn **Pn** **01 46 07.3 +2.2**
MAKU Maku 9.39 333 *e*Pn **Pn** **01 46 07.7 +2.6**
ZHDN Zahedan 9.43 97 *e*Pn **Pn** **01 46 08.2 +2.5**
UMZA Um Al Zommool 9.46 150 *e*Pn **Pn** **01 46 06.6 +0.7**
UMZA Um Al Zommool 9.46 150 P **Pn** **01 46 06.5 +0.7**
UMZA S **Sn** **01 47 45.7 -5.4**
IEMG Emamgholi 9.53 46 *e*Pn **Pn** **01 46 03.9 -3.2**
GEYT Alibeck 9.55 42 Pn **Pn** **01 46 09.0 +1.9**
comp=Z,3.4nm,0.3s,baz=240,slow=12,SNR=110
comp=Z,63nm,0.9s
GEYT Alibeck 9.55 42 **Pn** **01 46 08.8 +1.7**
GYA0B ALIBECK ARRAY 9.55 42 **Pn** **01 46 09.1 +1.9**
TBJM Torbat-e-JAM 9.57 61 *e*Pn **Pn** **01 46 09.6 +2.0**
ARQ Araqi 9.58 142 P **Pn** **01 46 09.0 +1.3**
SNR=20
ARQ S **Sn** **01 47 51.7 -2.7**
IKRD Kardeh 9.71 51 *e*Pn **Pn** **01 46 11.8 +2.3**
HOQ Hoqain 9.83 137 P **Pn** **01 46 12.7 +1.7**
HOQ S **Sn** **01 47 55.7 -4.6**
JRKH Jarkhoshk 9.86 58 *e*Pn **Pn** **01 46 13.5 +2.0**
IMYA Miami 9.88 55 *e*Pn **Pn** **01 46 14.7 +2.8**
MARD Mardin 9.92 312 Pn **Pn** **01 46 11.6 -0.7**
GURO Guroymak-BITLI 9.99 321 Pn **Pn** **01 46 12.4 -0.8**
MNGR Mingechevir, A 10.01 347 P **Pn** **01 46 14.2 +0.8**
GANJ Ganja 10.05 343 P **Pn** **01 46 14.7 +0.7**
GNI Garni 10.07 336 Pn **Pn** **01 46 16.1 +1.7**
comp=Z,6.5nm,0.8s,baz=13,slow=7.6,SNR=7.1
GNI LR LR 01 50 50.9
comp=Z,431nm,21.0s,baz=156,slow=42
GNI Garni 10.07 336 **Pn** **01 46 14.7 +0.4**
GNI Garni 10.07 336 *ce*P **Pn** **01 46 15.7 +1.3**
GNI pmax pmax
comp=Z,10.0nm,0.8s
BIDO Bidbid 10.36 134 P **Pn** **01 46 20.0 +1.7**
BIDO S **Sn** **01 48 08.9 -4.5**
SEKA Sheki 10.41 348 P **Pn** **01 46 19.5 +0.6**
BSY Bisya 10.43 141 P **Pn** **01 46 21.0 +1.8**
SNR=33
BSY S **Sn** **01 48 10.1 -4.9**
CHBR Chabahar 10.65 118 Pn **Pn** **01 46 21.5 -0.7**
CHBR Chabahar 10.65 118 *e*Pn **Pn** **01 46 21.6 -0.7**
CHBR Chabahar 10.65 118 *e*Pn **Pn** **01 46 22.0 -0.3**
SMDO Samad 10.66 136 P **Pn** **01 46 25.0 +2.5**
SNR=17
SMDO S **Sn** **01 48 18.0 -3.0**
HRA Herat 10.78 69 **Pn** **01 46 25.3 +1.1**
WSAR Wadi Sarin 10.88 134 Pn **Pn** **01 46 23.8 -1.6**
comp=Z,1.1nm,0.3s,baz=318,slow=8.7,SNR=20
WSAR Sn **Sn** **01 48 23.5 -2.7**
comp=Z,1.2nm,0.3s,baz=162,slow=20,SNR=1.4
WSAR LR LR 01 50 58.4
comp=Z,190nm,18.7s,baz=339,slow=38
ZKTA Zakatala 10.93 346 P **Pn** **01 46 27.5 +1.4**
JMDO Jabal Madar 11.23 138 P **Pn** **01 46 31.0 +0.8**
SNR=11
JMDO S **Sn** **01 48 31.0 -3.7**
NGCH Negor - Chabah 11.28 117 *e*Pn **Pn** **01 46 29.7 -1.1**
ASF Jabal al Asfar 11.29 279 Pn **Pn** **01 46 28.9 -2.2**
comp=Z,3.1nm,0.3s,baz=121,slow=10,SNR=29
ASF Sn **Sn** **01 48 30.2 -6.1**
comp=Z,1.2nm,0.3s,baz=282,slow=18,SNR=1.9
ASF LR LR 01 52 15.1
comp=Z,576nm,18.1s,baz=93,slow=45
comp=Z,6.9nm,0.3s
WBK Wadi Bani Khal 11.55 134 P **Pn** **01 46 34.0 -0.7**
SNR=21
WBK S **Sn** **01 48 37.0 -5.7**
MAK Makhachkala 12.07 351 *e*P **Pn** **01 46 36.8 -4.8**
MAK *e*S **Sn** **01 48 50.3 -4.8**
MAK pmax pmax
comp=Z,489nm,1.2s
MAK MLR MLR
comp=Z,324nm,9.0s
MHTO MHTO 12.27 143 P **Pn** **01 46 44.8 +0.4**
SNR=38
MHTO S **Sn** **01 48 55.2 -5.0**
NATI Neve Ativ 12.35 284 Pn **Pn** **01 46 43.8 -1.7**
GEM Giv'at Ha'Em 12.41 284 Pn **Pn** **01 46 45.0 -1.2**
GHAJ Ghor Haditha 12.43 275 **Pn** **01 46 45.5 -1.0**
GHAJ Ghor Haditha 12.43 275 Pn **Pn** **01 46 45.3 -1.2**
HMDT Nahal Hemdat 12.46 279 Pn **Pn** **01 46 45.6 -1.3**
MMLI Mount Malkishu 12.55 280 Pn **Pn** **01 46 47.7 -0.6**
MMA0 Mount Meron ar 12.60 283 Pn **Pn** **01 46 47.7 -1.3**
MMAI Mount Meron Ar 12.60 283 Pn **Pn** **01 46 48.7 -0.3**
comp=Z,1.0nm,0.3s,baz=101,slow=17,SNR=7.6
MMAI LR LR 01 52 58.7
comp=Z,288nm,21.1s,baz=347,slow=44
comp=Z,1.0nm,0.4s
GROC Groznyy 12.61 346 P **Pn** **01 46 50.2 +1.3**
ONI Oni 12.68 337 **Pn** **01 46 51.0 +1.0**
ONI Oni 12.68 337 P **Pn** **01 46 51.0 +1.0**
ZEI Tsey 12.71 339 *e*P **Pn** **01 46 52.9 +2.3**
ZEI pmax pmax
comp=Z,26nm,1.5s
ZFRI Zfri 12.82 272 Pn **Pn** **01 46 50.7 -1.1**
SLTI Sal'it 12.87 279 Pn **Pn** **01 46 51.4 -1.2**
DOK Doka 12.90 163 P **Pn** **01 46 53.4 +0.3**
SNR=34
OFRI `Ofer 12.93 281 Pn **Pn** **01 46 52.8 -0.6**
AMAZ Amatzia 12.98 276 Pn **Pn** **01 46 52.0 -2.1**
PRNI Paran 12.99 271 Pn **Pn** **01 46 53.1 -1.1**
HRFI Mount Harif 13.00 269 Pn **Pn** **01 46 53.0 -1.4**
EIL Elat 13.13 268 Pn **Pn** **01 46 54.5 -1.7**
comp=Z,0.7nm,0.3s,baz=99,slow=5.0,SNR=7.7
EIL LR LR 01 53 12.8
comp=Z,615nm,19.2s,baz=72,slow=43
comp=Z,3.1nm,0.5s
EIL Elat 13.13 268 Pn **Pn** **01 46 54.1 -2.1**
MBRI Mt Berech 13.14 268 Pn **Pn** **01 46 54.5 -1.9**
KZIT Kziot 13.45 273 Pn **Pn** **01 46 58.5 -2.1**
WHFO Wadi Hawf 13.49 165 P **Pn** **01 47 00.0 -1.1**
SNR=14
KBZ Khabaz 13.88 338 Pn **Pn** **01 47 09.8 +3.5**
comp=Z,0.1nm,0.3s,baz=144,slow=11,SNR=6.9
KBZ LR LR 01 52 59.6
comp=Z,508nm,20.7s,baz=146,slow=40
comp=Z,6.3nm,0.9s
KBZ Khabaz 13.88 338 *ce*P **Pn** **01 47 07.2 +0.9**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
SHAO Shalim 13.91 157 P **Pn** **01 47 07.9 +1.1**
SNR=23
SHAO Shalim 13.91 157 *i* P **Pn** **01 47 04.6 -2.2**
SNR=23
SHA1 Shidzhatmaz 13.97 337 *i* P **Pn** **01 47 09.5 +1.8**
DMTO DMTO 13.99 160 P **Pn** **01 47 07.3 -0.6**
SNR=57
BNN Bunyan 14.02 308 Pn **Pn** **01 47 08.9 +0.5**
KVAR Kislovodsk Arr 14.15 338 Pn **P** **01 47 14.2 -3.1**
baz=73,slow=20
comp=Z,9.1nm,1.0s
KIV Kislovodsk 14.15 338 Pn **Pn** **01 47 12.2 +2.1**
KIV Kislovodsk 14.15 338 *e*P **Pn** **01 47 09.6 -0.5**
KIV *e*S **Sn** **01 49 47.9 +1.8**
KIV pmax pmax
comp=Z,52nm,1.1s
KIV MLR MLR
comp=Z,201nm,13.0s
TOKA Tokat 14.40 314 Pn **Pn** **01 47 14.2 +0.7**
CSS Mathiatis 14.58 290 Pn **Pn** **01 47 16.2 +0.2**

SOC Sochi 14.97 330 *e*P **Pn** **01 47 19.3 -1.8**
SOC *e* 01 50 06.6
SOC pmax pmax
comp=Z,58nm,0.9s
SOC MLR MLR
comp=Z,191nm,14.0s
BR131 Keskin Array S 15.94 307 **Pn** **01 47 33.9 0.0**
BR131 Keskin Array S 15.94 307 *i* P **Pn** **01 47 34.5 +0.6**
BRTR Keskin Array B 15.94 307 Pn **Pn** **01 47 34.2 +0.3**
comp=Z,0.3nm,0.3s,baz=130,slow=12,SNR=16
BRTR LR LR 01 54 14.2
comp=Z,169nm,18.1s,baz=123,slow=39
comp=Z,9.1nm,0.9s
BRTR Keskin Array B 15.94 307 Pn **Pn** **01 47 32.6 -1.4**
KBL Kabul 16.33 73 Pn **Pn** **01 47 38.5 -0.5**
KBL Kabul 16.33 73 P **Pn** **01 47 38.5 -0.5**
KBL pmax pmax
comp=Z,38nm,1.3s
KBL Kabul 16.33 73 P **P** **01 47 44.4 +2.7**
SNR=6.9
ILGA Ilgaz 16.55 312 **Pn** **01 47 42.3 +0.5**
ILGA IAmb IAmb 01 47 49.4
comp=Z,92nm,1.3s
ANTO Ankara 16.59 307 **Pn** **01 47 42.1 0.0**
ANTO Ankara 16.59 307 P **Pn** **01 47 42.1 0.0**
ANTO pmax pmax
comp=Z,37nm,1.3s
CHGR Chuyangaron 17.39 59 IAmb IAmb 01 47 55.7
comp=Z,72nm,0.9s
CHGR Chuyangaron 17.39 59 P **P** **01 47 54.2 +0.9**
ISP Isparta 17.48 298 *i* P **P** **01 47 54.2 0.0**
ELL Elmali 17.67 294 IAmb IAmb 01 48 22.6
comp=Z,58nm,0.9s
BORA Eskisehir 18.23 304 Pn **Pn** **01 47 59.4 -3.0**
GAR Garm 18.36 59 IAmb IAmb 01 48 06.0
comp=Z,50nm,1.0s
TAS Tashkent 18.56 51 P **Pn** **01 48 06.5 0.0**
TAS IAmb IAmb 01 48 10.7
comp=Z,86nm,1.0s
TAS Tashkent 18.56 51 P **Pn** **01 48 06.5 0.0**
TAS pmax pmax
comp=Z,87nm,1.0s
AB31 Akbulak array 19.66 19 *i* P **P** **01 48 17.9 -0.1**
ABKAR Akbulak array 19.66 19 P **P** **01 48 17.7 -0.3**
KK31 Karatay Array 20.21 48 IAmb IAmb 01 48 28.6
comp=Z,53nm,1.1s
KK31 Karatay Array 20.21 48 *i* P **P** **01 48 24.7 +0.6**
KKAR Karatay Array 20.21 48 P **P** **01 48 24.6 +0.5**
KKAR Karatay Array 20.21 48 P **P** **01 48 24.6 +0.5**
AKTO Aktyubinsk 20.26 15 P **P** **01 48 24.5 -0.1**
comp=Z,20nm,0.8s,baz=200,slow=10,SNR=23
AKTO LR LR 01 58 21.8
comp=Z,324nm,19.3s,baz=175,slow=43
comp=Z,20nm,0.8s
ATD Arta Tunnel 20.54 201 P Pn 01 48 30.4 +0.2
comp=Z,2.1nm,0.3s,baz=6.2,slow=6.9,SNR=5.7
ATD LR LR 01 56 59.3
comp=Z,400nm,19.6s,baz=20,slow=38
comp=Z,2.1nm,0.3s
ATD Arta Tunnel 20.54 201 P **P** **01 48 28.7 +0.9**
ATD IAmb IAmb 01 48 41.1
comp=Z,46nm,1.2s
ARK Arkit 20.57 52 P Pn 01 48 29.8 -0.7
OHH Osh 20.66 57 P Pn 01 48 30.7 -0.8
CHOS Chios island 21.02 297 P **P** **01 48 34.3 +1.3**
PRK Paraskevi 21.07 299 P **P** **01 48 35.1 +1.7**
VRH Novokhopyorsk 21.07 345 *e*P **P** **01 48 32.8 -0.5**
VRH pmax pmax
comp=Z,140nm,0.6s
THR8 Santorini-Mono 21.12 291 P **P** **01 48 35.0 +1.0**
SANT Santorini 21.13 291 ⇑P **P** **01 48 35.2 +1.1**
SANT Santorini 21.13 291 IAmb IAmb 01 48 51.2
comp=Z,47nm,0.8s
APE Apeiranthos 21.18 293 ⇑P **P** **01 48 35.3 +0.7**
APE Apeiranthos 21.18 293 P **P** **01 48 35.3 +0.7**
THR6 Thira Island, 21.18 291 P **P** **01 48 36.4 +1.8**
THR3 Thira Island, 21.18 291 P **P** **01 48 35.5 +0.9**
THR5 Thira Island, 21.23 291 P **P** **01 48 36.4 +1.3**
BELG Belogornoye 21.41 356 P **P** **01 48 36.1 -0.8**
comp=Z,66nm,0.6s,baz=340,slow=1.3,SNR=27
BELG LR LR 02 00 26.3
comp=Z,267nm,18.0s,baz=120,slow=47
comp=Z,66nm,0.6s
BELG Belogornoye 21.41 356 *i* P **P** **01 48 36.0 -0.8**
BELG pmax pmax
comp=Z,10.0nm,0.9s
IDI Anoyia 21.48 288 P **P** **01 48 38.9 +1.0**
comp=Z,32nm,0.6s,baz=352,slow=3.3,SNR=29
comp=Z,32nm,0.6s
IDI Anoyia 21.48 288 P **P** **01 48 39.1 +1.2**
TIRR Tirgusor 21.66 314 ⇑P **P** **01 48 40.1 +0.4**
VSR Storozhevoye 21.72 341 *e*P **P** **01 48 38.7 -1.5**
VSR pmax pmax
comp=Z,20nm,0.5s
ALN Alexandroupoli 21.73 304 IAmb IAmb 01 48 43.0
comp=Z,22nm,0.8s
ALN Alexandroupoli 21.73 304 P **P** **01 48 40.7 +0.2**
ALN Alexandroupoli 21.73 304 P **P** **01 48 41.5 +1.0**
ALN pmax pmax
comp=Z,31nm,0.8s
TLCR 21.80 316 ⇓P **P** **01 48 41.4 +0.2**
TLCR 21.80 316 P **P** **01 48 41.3 +0.2**
TPGR Topolog 21.86 315 ⇑P **P** **01 48 42.8 +0.9**
TLBR Topalu 21.93 314 ⇑P **P** **01 48 43.7 +1.2**
MHLO Agia Marina, M 22.02 292 P **P** **01 48 44.0 +0.4**
HARR Harsova 22.07 314 ⇑P **P** **01 48 45.7 +1.6**
HARR Harsova 22.07 314 P **P** **01 48 45.7 +1.6**
VORR Voronezh 22.12 342 *e*P **P** **01 48 43.6 -0.9**
VORR *e*S **S** **01 52 44.7 -1.8**
VORR pmax pmax
comp=Z,81nm,1.5s
RDO Rodhopi 22.18 304 IAmb IAmb 01 48 48.7
comp=Z,36nm,0.9s
RDO Rodhopi 22.18 304 P **P** **01 48 45.5 +0.2**
CFR Carcaliu 22.20 316 ⇓P **P** **01 48 45.2 -0.3**
CFR Carcaliu 22.20 316 P **P** **01 48 45.1 -0.4**
CFR pmax pmax
comp=Z,28nm,1.0s
IMMV Iera Moni Meta 22.24 288 P **P** **01 48 47.8 +1.8**
KDZ Kurdzhali 22.43 305 P **P** **01 48 48.2 +0.2**
RAZG Razgrad 22.44 310 ⇓P **P** **01 48 48.7 +0.5**
DIM Dimitrovgrad 22.49 306 P **P** **01 48 48.7 +0.1**
KYMI Kymi, Euboea I 22.57 297 P **P** **01 48 50.5 +0.9**
DION Dionisos Attik 22.60 295 P **P** **01 48 50.9 +1.1**
AAK Ala-Archa 22.63 52 P **P** **01 48 53.2 +2.9**
comp=Z,7.8nm,1.0s,baz=222,slow=15,SNR=16
AAK LR LR 01 59 13.4
comp=Z,450nm,18.5s,baz=260,slow=41
comp=Z,7.8nm,1.0s
AAK Ala-Archa 22.63 52 P **P** **01 48 52.7 +2.4**
AAK IAmb IAmb 01 48 59.2
comp=Z,28nm,1.1s
AAK Ala-Archa 22.63 52 P **P** **01 48 52.7 +2.4**
AAK pmax pmax
comp=Z,28nm,1.1s
VLY Voula,Athens 22.67 295 P **P** **01 48 50.6 0.0**
SZH Strazhica 22.69 309 P **P** **01 48 51.3 +0.5**
KSH Kashi 22.71 61 P **P** **01 48 48.6 -2.6**
KSH sP pP 01 48 54.8 -5.1
KSH PP **PnPn** **01 49 17.6 +2.1**
KSH S **S** **01 52 55.8 -2.1**
KSH pmax pmax
comp=Z,15nm,1.2s
KSH LR LR
comp=Z,370nm,13.1s
KSH LR LR
comp=Z,960nm,15.8s
KSH LR LR
comp=Z,930nm,17.9s
ATH Athens Observa 22.75 295 P P 01 48 37.2 -14
MILM Milestii Mici 22.79 320 ⇑P **P** **01 48 51.6 -0.2**
MILM Milestii Mici 22.79 320 P **P** **01 48 51.5 -0.2**
LPSR Galich'ya Gora 23.03 342 *e*P **P** **01 48 52.7 -1.5**
LPSR pmax pmax
comp=Z,50nm,0.8s
PLD Plovdiv 23.09 306 P **P** **01 48 55.4 +0.5**
PLD pmax pmax
comp=Z,106nm,1.0s
PLD Plovdiv 23.09 306 P **P** **01 48 57.3 +2.4**
KRND KRANIDI 23.10 293 P **P** **01 48 54.2 -0.8**
VLI Veliai 23.19 291 P **P** **01 48 54.6 -1.3**
NRN Naryn 23.26 56 IAmb IAmb 01 49 01.2
comp=Z,30nm,0.9s
SECR 23.40 313 ⇓P **P** **01 48 58.9 +1.0**

VRI Vrincioaia 23.41 316 ⇓P **P** **01 48 58.4 +0.4**
VRI Vrincioaia 23.41 316 P **P** **01 48 58.1 +0.1**
VRI pmax pmax
comp=Z,17nm,1.1s
NVR Nevrokopi 23.44 303 P **P** **01 48 58.1 -0.3**
PLOR Plostina 23.44 316 ⇓P **P** **01 48 59.0 +0.6**
PLOR Plostina 23.44 316 P **P** **01 48 59.0 +0.6**
COPA Copaceanca 23.53 311 ⇑P **P** **01 48 59.8 +0.6**
SRS Serrai 23.57 303 P **P** **01 48 59.6 0.0**
SRS Serrai 23.57 303 P **P** **01 49 00.4 +0.8**
SRS pmax pmax
comp=Z,13nm,1.2s
MMB Musomiste 23.61 304 P **P** **01 49 00.4 +0.3**
PGB Panagyurishte 23.62 306 P **P** **01 49 01.1 +0.9**
IAS Iasi 23.65 319 P **P** **01 49 03.4 +3.1**
SOH Sokhos 23.66 302 P **P** **01 49 00.9 +0.4**
SOH Sokhos 23.66 302 P **P** **01 49 01.4 +0.9**
SOH pmax pmax
comp=Z,13nm,1.3s
MLR Muntele Rosu 23.69 314 P **P** **01 49 01.3 +0.4**
comp=Z,21nm,0.9s,baz=28,slow=4.1,SNR=19
comp=Z,21nm,0.9s
MLR Muntele Rosu 23.69 314 P **P** **01 49 02.2 +1.3**
MLR IAmb IAmb 01 49 05.6
comp=Z,36nm,1.1s
COVR Voineasa-Covas 23.71 315 ⇓P **P** **01 49 02.1 +1.1**
TESR Tescani 23.79 317 ⇑P **P** **01 49 01.5 -0.2**
HUMR Humele 23.85 311 ⇓P **P** **01 49 03.5 +1.2**
THE Thessaloniki 23.89 301 P **P** **01 49 03.2 +0.5**
THE pmax pmax
comp=Z,19nm,0.7s
KLV Kalavryta, Ach 23.98 295 P **P** **01 49 04.3 +0.7**
ITM Ithomi 24.05 292 IAmb IAmb 01 49 07.5
comp=Z,19nm,0.7s
ITM Ithomi 24.05 292 P **P** **01 49 03.6 -0.6**
KNT Kendrikon 24.08 302 P **P** **01 49 04.2 -0.2**
KNT Kendrikon 24.08 302 P **P** **01 49 04.3 -0.2**
KNT pmax pmax
comp=Z,12nm,1.1s
OZUR 24.09 315 ⇑P **P** **01 49 05.4 +0.9**
LIT Litokhoron 24.11 300 IAmb IAmb 01 49 06.2
comp=Z,16nm,0.7s
LIT Litokhoron 24.11 300 P **P** **01 49 05.2 +0.4**
LIT Litokhoron 24.11 300 P **P** **01 49 05.8 +1.0**
MTUR Matau 24.11 313 ⇑P **P** **01 49 06.2 +1.3**
GIRR Girov 24.11 318 ⇓P **P** **01 49 05.8 +1.1**
OTUK Ortayu 24.13 38 P **P** **01 49 05.0 +0.1**
MPEP Malo Peshtene 24.20 308 P **P** **01 49 06.8 +1.2**
TYRN Tyrnavos 24.22 299 P **P** **01 49 06.3 +0.6**
VOIR 24.22 313 ⇓P **P** **01 49 07.1 +1.2**
VOIR 24.22 313 P **P** **01 49 07.0 +1.2**
DOPR Dopca 24.26 315 ⇑P **P** **01 49 07.2 +1.1**
VTS Vitosha 24.29 306 ⇓P **P** **01 49 07.6 +1.0**
VTS Vitosha 24.29 306 P **P** **01 49 07.5 +1.0**
VTS Vitosha 24.29 306 P **P** **01 49 07.7 +1.2**
THL Klokotos Trika 24.35 298 P **P** **01 49 07.0 0.0**
VAY Valandovo 24.36 303 P **P** **01 49 08.8 +1.8**
VAY pmax pmax
comp=Z,22nm,0.9s
VAY Valandovo 24.36 303 *i* P **P** **01 49 07.1 +0.1**
EVR Evrytania 24.39 297 P **P** **01 49 07.4 0.0**
GRG Griva 24.39 302 P **P** **01 49 08.3 +1.0**
GRG Griva 24.39 302 P **P** **01 49 08.1 +0.8**
GRG pmax pmax
comp=Z,34nm,0.9s
ARR Arges 24.45 313 ⇓P **P** **01 49 08.8 +1.0**
RLS Riolos of Patr 24.52 294 P **P** **01 49 09.1 +0.6**
KZN Kozani 24.70 300 P **P** **01 49 10.3 +0.1**
STIP Stip 24.74 303 *i* P **P** **01 49 09.5 -1.0**
KPRO Kipourio 24.92 299 P **P** **01 49 13.7 +1.5**
MDB Medias 24.96 314 ⇑P **P** **01 49 14.0 +1.6**
MDB Medias 24.96 314 P **P** **01 49 14.0 +1.6**
BLKB Belogradchik 25.02 308 ⇑P **P** **01 49 13.9 +0.9**
LOT Lotru 25.03 312 ⇑P **P** **01 49 13.8 +0.6**
AKASG Malin Array Be 25.03 328 P **P** **01 49 12.1 -0.8**
comp=Z,6.4nm,0.5s,baz=131,slow=8.9,SNR=57
AKASG LR LR 02 00 54.0
comp=Z,176nm,19.1s,baz=139,slow=41
comp=Z,6.4nm,0.5s
AKBB Malin Array Si 25.03 328 P **P** **01 49 12.3 -0.6**
AKBB IAmb IAmb 01 49 13.4
comp=Z,21nm,0.6s
AKBB Malin Array Si 25.03 328 *ce*P **P** **01 49 12.1 -0.9**
SRE Strehaia 25.06 310 ⇑P **P** **01 49 15.2 +1.9**
SRE Strehaia 25.06 310 P **P** **01 49 15.2 +1.9**
PUNG Punghina 25.09 309 ⇓P **P** **01 49 14.9 +1.3**
BURAR Bucovina Array 25.21 318 ⇑P **P** **01 49 15.4 +0.6**
BURAR Bucovina Array 25.21 318 IAmb IAmb 01 49 17.5
comp=Z,15nm,0.8s
BURAR Bucovina Array 25.21 318 P **P** **01 49 15.3 +0.6**
VLS Valsamata 25.22 294 P **P** **01 49 14.7 -0.2**
BUR08 Bucovina Ar. S 25.23 318 P **P** **01 49 14.6 -0.4**
LKD2 Lefkada island 25.25 296 P **P** **01 49 15.0 -0.2**
NEST Nestorio 25.26 300 P **P** **01 49 15.6 +0.3**
SKO Skopje 25.36 303 *i* P **P** **01 49 17.0 +1.0**
KEF4 Livadi, Kephal 25.36 295 P **P** **01 49 15.9 -0.2**
ARCR ARCALIA 25.44 316 ⇑P **P** **01 49 17.8 +1.1**
KBN Korca 25.50 300 P **P** **01 49 18.5 +1.1**
DJES Djerdap 25.51 310 ⇑P **P** **01 49 18.8 +1.4**
OHR Ohrid 25.60 301 P **P** **01 49 19.5 +1.2**
OHR pmax pmax
comp=Z,68nm,0.8s
OHR Ohrid 25.60 301 *i* P **P** **01 49 19.8 +1.5**
IGT Igoumenitsa 25.62 297 P **P** **01 49 17.8 -0.7**
IGT Igoumenitsa 25.62 297 P **P** **01 49 18.2 -0.3**
IGT pmax pmax
comp=Z,26nm,0.6s
GZR Gura Zlata 25.64 312 ⇑P **P** **01 49 18.8 +0.1**
HERR Herculane 25.66 310 ⇓P **P** **01 49 19.7 +0.9**
CJR Cluj-Napoca 25.71 315 ⇓P **P** **01 49 20.7 +1.4**
CJR Cluj-Napoca 25.71 315 P **P** **01 49 20.7 +1.4**
DEV Deva 25.77 313 ⇑P **P** **01 49 20.7 +1.0**
DEV Deva 25.77 313 P **P** **01 49 20.7 +1.0**
CBBR Cluj-Babes-Bol 25.77 315 ⇑P **P** **01 49 20.8 +1.1**
OBN Obninsk 25.91 342 P **P** **01 49 19.4 -1.4**
comp=Z,7.1nm,0.6s,baz=151,slow=6.8,SNR=17
OBN LR LR 02 01 13.6
comp=Z,67nm,19.9s,baz=180,slow=40
comp=Z,7.1nm,0.6s
OBN Obninsk 25.91 342 P **P** **01 49 20.5 -0.4**
OBN Obninsk 25.91 342 *ce*P **P** **01 49 19.6 -1.3**
OBN *i* 01 49 23.1
OBN *e* 01 49 56.7
OBN pmax pmax
comp=Z,113nm,1.7s
OBN MLR MLR
comp=Z,232nm,19.0s
KEK Kerkira 26.06 298 P **P** **01 49 22.1 -0.4**
ARU Arti 26.07 11 P **P** **01 49 22.5 +0.1**
comp=Z,13nm,1.0s,baz=180,slow=7.5,SNR=15
ARU LR LR 02 02 10.8
comp=Z,368nm,19.2s,baz=177,slow=42
comp=Z,13nm,1.0s
ARU Arti 26.07 11 P **P** **01 49 22.5 +0.1**
ARU IAmb IAmb 01 49 42.9
comp=Z,21nm,1.0s
ARU Arti 26.07 11 *c i* P **P** **01 49 22.4 +0.1**
ARU 01 49 59.8
ARU 01 52 46.0
ARU S **S** **01 53 55.2 +3.8**
ARU SS **SnSn** **01 54 52.5 +2.0**
ARU pmax pmax
comp=Z,25nm,1.4s
ARU MLR MLR
comp=Z,311nm,17.0s
MDVR Moldovita 26.09 310 ⇑P **P** **01 49 23.9 +1.2**
MOS Moscow 26.21 344 *e*P **P** **01 49 22.6 -1.0**
MOS *e* 01 50 01.5
MOS pmax pmax
comp=Z,98nm,1.6s
BMR Baia Mare 26.24 317 ⇑P **P** **01 49 24.8 +0.9**
BMR Baia Mare 26.24 317 P **P** **01 49 25.2 +1.2**
BMR pmax pmax
comp=Z,35nm,0.9s
DRGR 26.29 315 ⇑P **P** **01 49 25.5 +1.0**
DRGR 26.29 315 P **P** **01 49 25.3 +0.8**
DRGR pmax pmax
comp=Z,19nm,1.6s
MESR Meseseni 26.31 315 ⇑P **P** **01 49 26.0 +1.4**
VLO Vlora 26.43 299 P **P** **01 49 29.0 +3.3**
BRVK Borovoye 26.45 28 P **P** **01 49 26.8 +1.0**
BRVK IAmb IAmb 01 49 30.7
comp=Z,26nm,1.2s

BRVK Borovoye 26.45 28⇑eP P 01 49 26.9 +1.0
BRVK pmax pmax
comp=Z,26nm,1.2s
BVAR Borovoye Array 26.47 28 P P 01 49 27.2 +1.2
comp=Z,6.2nm,0.7s,baz=225,slow=7.3,SNR=45
BVAR LR LR 02 01 39.9
comp=Z,283nm,20.7s,baz=207,slow=40
comp=Z,6.2nm,0.7s
BZS Buzias 26.47 311 ⇑P P 01 49 26.8 +0.7
BZS Buzias 26.47 311 P P 01 49 26.5 +0.4
BZS pmax pmax
comp=Z,26nm,0.9s
BANR Banloc 26.69 311 ⇑P P 01 49 29.8 +1.7
SIRR Siria 26.71 313 ⇑P P 01 49 29.7 +1.4
SVE Sverdlovsk 26.81 13 eP P 01 49 29.9 +0.9
SVE pmax pmax
comp=Z,24nm,1.5s
TRPA Tarpa 27.02 317 ⇑P P 01 49 32.1 +1.1
TRPA Tarpa 27.02 317 P P 01 49 31.6 +0.5
LVV L'vov 27.07 321 eP P 01 49 33.1 +1.6
KIRV Kirov 27.54 359 LR LR 02 03 25.6
comp=Z,326nm,19.1s,baz=152,slow=43
KIRV Kirov 27.54 359 ceP P 01 49 36.0 +0.5
KOLS Kolonicke sedl 27.57 318 eP P 01 49 37.1 +1.1
KOLS pmax pmax
comp=Z,19nm,1.1s
ABAH Abaujker 27.86 316 P P 01 49 39.5 +0.9
CRVS Cervenica-Dubn 28.02 318 eP P 01 49 41.1 +1.1
CRVS pmax pmax
comp=Z,89nm,2.5s
MNK Minsk 28.32 332 i P P 01 49 40.8 -1.7
MNK i PPP PPP 01 50 37.5
MNK i 01 52 53.2
MNK i S **S** **01 54 28.3 +1.4**
MNK i SS **SnSn** **01 55 46.8 +1.5**
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=N,23nm,0.8s
MNK MLR MLR
comp=E,16nm,17.0s
MNK MLR MLR
comp=Z,189nm,17.0s
MNK MLR MLR
comp=N,270nm,17.0s
MNK Minsk 28.32 332 i P P 01 49 40.9 -1.7
comp=E,2.0nm,0.8s
MNK i P **P** **01 49 40.9 -1.7**
comp=N,23nm,0.8s
MNK i P **P** **01 49 40.9 -1.7**
comp=Z,5.0nm,0.8s,baz=137
MNK i PP **PnPn** **01 50 29.4 -2.3**
MNK i PPP PPP 01 50 37.6
MNK i PcP **PcP** **01 52 53.3 -1.5**
MNK i S **S** **01 54 28.3 +1.4**
MNK i SS **SnSn** **01 55 46.9 +1.5**
MNK i SSS SSS 01 56 01.2
MNK i LQ LQ 01 58 46.8
MNK i LR LR 02 00 56.2
MNK i LRM MLR 02 02 05.7
comp=E,16nm,17.1s
MNK i LRM MLR 02 02 12.4
comp=Z,189nm,17.1s
MNK i LRM MLR 02 02 17.5
comp=N,270nm,17.1s
MORH Mrgy, Hungar 28.62 311 ⇓P P 01 49 46.3 +1.0
MORH Mrgy, Hungar 28.62 311 P P 01 49 45.6 +0.2
PYUN Piuthan 28.72 87 eP P 01 49 47.7 +1.0
KURBB Kurchatov Arra 28.81 39 P P 01 49 48.3 +1.3
comp=N,12nm,1.1s,baz=241,slow=9.4,SNR=22
KURBB ScP **ScP** **01 56 35.3 -0.1**
comp=N,0.4nm,0.3s,baz=242,slow=3.7,SNR=5.0
KURBB LR LR 02 03 15.5
comp=N,239nm,18.6s,baz=197,slow=40
comp=N,12nm,1.1s
KURK Kurchatov 28.91 39 P P 01 49 48.0 +0.2
KURK IAmb IAmb 01 49 51.0
comp=Z,13nm,0.8s
KURK Kurchatov 28.91 39 ceP P 01 49 48.6 +0.8
KURK pmax pmax
comp=Z,23nm,1.3s
NACGM Naroch 29.05 332⇓eP P 01 49 48.0 -1.1
baz=136
DANN Dangsing 29.32 87 eP P 01 49 53.1 +1.0
MK31 Makanchi Array 29.34 48 P P 01 49 52.3 +0.6
MK31 Makanchi Array 29.34 48 P P 01 49 52.3 +0.6
MK31 pmax pmax
comp=Z,7.0nm,1.2s
MKAR Makanchi Array 29.34 48 P P 01 49 53.1 +1.4
comp=Z,3.9nm,0.8s,baz=255,slow=8.0,SNR=23
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 29.34 48 P P 01 49 51.8 +0.1
MKAR Makanchi Array 29.34 48 P P 01 49 51.8 +0.1
VYHS Vyhne 29.39 315 eP P 01 49 52.5 +0.3
VYHS pmax pmax
comp=Z,6.0nm,0.9s
SRO Srobarova 29.43 314 eP P 01 49 53.6 +1.1
SRO pmax pmax
comp=Z,19nm,0.9s
IIGN Ignalina 29.59 332 eP P 01 49 54.4 +0.5
OJC Ojcow 29.61 319 eP P 01 49 52.4 -1.7
MPLH Magyarpolny 29.67 312 P P 01 49 55.4 +0.8
ISAL Salakas 29.79 332 eP P 01 49 55.9 +0.4
EGYH Egyhazaskeszo 29.90 313 P P 01 49 57.4 +0.8
JAVC Velka Javorina 30.24 315 eP P 01 50 00.9 +1.1
SMOL Smolenice 30.25 315 eP P 01 50 00.3 +0.5
SMOL pmax pmax
comp=Z,4.0nm,1.1s
KOGS Kog 30.26 310 i P P 01 50 00.6 +0.7
MODS Modra-Piesok 30.29 314 eP P 01 50 00.3 +0.2
ZST Bratislava 30.33 314 eP P 01 50 00.9 +0.4
MAUC Maruska 30.36 316 eP P 01 50 00.5 -0.3
KLMR Klimovskoe 30.63 350 eP P 01 50 00.7 -2.2
KLMR e 01 50 57.9
KLMR e 01 52 56.4
KLMR pmax pmax
comp=Z,19nm,0.9s
KLMR MLR MLR
comp=Z,198nm,17.0s
KLMR Klimovskoe 30.63 350 eP P 01 50 00.8 -2.2
KLMR AMP 01 50 02.9
comp=Z,19nm,0.9s
KLMR ePP **PnPn** **01 50 57.9 -4.9**
KLMR ePcP **PcP** **01 52 56.4 -4.2**
KLMR LR LR 02 03 59.8
KLMR AMP 02 04 10.3
comp=Z,198nm,17.3s
RONA Rosalia, Austr 30.65 313 eP P 01 50 03.8 +0.4
comp=Z,3.8nm,0.4s
DMN Daman 30.66 87 eP P 01 50 04.2 +0.3
comp=Z,14nm,0.8s
MORC Moravsky Berou 30.70 317 ⇓P P 01 50 04.1 +0.3
MORC Moravsky Berou 30.70 317 P P 01 50 04.1 +0.3
MORC Moravsky Berou 30.70 317 eP P 01 50 03.4 -0.4
PRGR Permogore 30.74 356 eP P 01 50 01.8 -2.1
PRGR pmax pmax
comp=Z,12nm,0.6s
PKIN Phulchoki 30.91 87 eP P 01 50 06.7 +0.5
comp=Z,6.3nm,0.5s
PKI Pulchoki 30.93 87 eP P 01 50 06.8 +0.4
ARSA Arzberg 30.99 311 i P P 01 50 07.0 +0.6
comp=Z,8.0nm,0.9s,SNR=5.8
CONA Conrad Observa 31.01 313 eP P 01 50 06.9 +0.3
comp=Z,5.3nm,0.8s
VRAC Vranov 31.07 316 P P 01 50 07.4 +0.4
comp=Z,3.9nm,0.9s,baz=121,slow=14,SNR=3.2
comp=Z,3.9nm,0.9s
VRAC Vranov 31.07 316 eP P 01 50 07.2 +0.2
KRUC Moravsky 31.09 315 P P 01 50 07.5 +0.3
KRUC Moravsky 31.09 315 eP P 01 50 07.2 0.0
GUN Gumba 31.25 87 eP P 01 50 11.0 +1.8
KRLC Kraliky 31.27 317 eP P 01 50 08.3 -0.6
KRLC Kraliky 31.27 317 eP P 01 50 08.3 -0.6
CAMP Campotosto 31.30 302 IAmb IAmb 01 50 12.6
comp=Z,20nm,1.0s
GBAS Gorenja Brezov 31.31 309 eP P 01 50 09.9 +0.7
JIRN Jiri 31.57 87 eP P 01 50 12.7 +0.6
FDMO Fiordimonte 31.61 303 IAmb IAmb 01 50 16.2
comp=Z,17nm,0.8s
DPC Dobruska-Polom 31.66 317 eP P 01 50 11.7 -0.5
DPC Dobruska-Polom 31.66 317 eP P 01 50 11.7 -0.5
VSU Vasula 31.70 337 i P P 01 50 12.5 +0.1
VSU pmax pmax
comp=Z,46nm,0.8s
VSU Vasula 31.70 337 eP P 01 50 12.2 -0.2
OSTC Ostas 31.81 318 eP P 01 50 13.6 +0.1
CHVC Chvalec 31.91 318 eP P 01 50 13.9 -0.5
MOA Molln 31.99 312 i P P 01 50 15.5 +0.3
comp=Z,17nm,0.7s,SNR=23
RAMN Ramite 32.12 88 eP P 01 50 15.9 -0.8
comp=Z,10nm,0.7s
WMQ Urumqi 32.21 56 eP P 01 50 19.0 +1.9
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,180nm,18.3s
WMQ LR LR
comp=Z,330nm,16.9s
WMQ LR LR
comp=Z,210nm,19.3s
CKRC Cesky Krumlov 32.29 314 eP P 01 50 17.4 -0.3
BIOA Bad Ischl, Aus 32.34 311 i P P 01 50 18.6 +0.4
comp=Z,14nm,0.4s,SNR=16
KBA Koelnbreinsper 32.36 310 P P 01 50 19.1 +0.5
KBA Koelnbreinsper 32.36 310 i P P 01 50 19.0 +0.5
comp=Z,25nm,0.8s,SNR=8.9
PRU Pruhonice 32.57 316 eP P 01 50 22.0 +1.9
PRU MLR MLR
comp=Z,200nm,14.4s
PRU Pruhonice 32.57 316 eP P 01 50 22.0 +1.9
PRU AMS AMS 02 06 40.0
comp=Z,200nm,14.4s
GERES GERESS Array B 32.67 313 P P 01 50 20.8 -0.4
comp=Z,2.3nm,0.6s,baz=114,slow=8.5,SNR=24
comp=Z,2.3nm,0.6s
GERES GERESS Array B 32.67 313 P P 01 50 20.6 -0.6
ABTA Abfaltersbach 32.81 309 i P P 01 50 23.2 +0.7
comp=Z,8.9nm,0.9s,SNR=7.5
KHC Kasperske Hory 32.84 314 IAmb IAmb 01 50 23.6
comp=Z,9.3nm,0.9s
KHC Kasperske Hory 32.84 314 eP P 01 50 21.6 -1.0
KHC Kasperske Hory 32.84 314 eP P 01 50 21.6 -1.0
MTSE Matsula 32.92 335 eP P 01 50 23.0 0.0
WET Wettzell 33.28 314 P P 01 50 26.3 -0.2
WTTA Wattenberg 33.53 310 P P 01 50 28.7 -0.1
WTTA Wattenberg 33.53 310 i P P 01 50 28.6 -0.1
comp=Z,21nm,0.5s,SNR=9.1
WTTA eS **S** **01 55 47.8 -1.2**
comp=Z,3.7nm,0.7s
DGZ Jazzator, Alta 33.57 45 i P P 01 50 30.1 +1.0
DGZ pmax pmax
comp=Z,6.0nm,1.1s
WATA Walderalm 33.59 310 i P P 01 50 28.9 -0.3
comp=Z,16nm,0.5s,SNR=5.6
SQTA Sankt Quirin 33.80 310 i P P 01 50 30.8 -0.3
comp=Z,31nm,0.4s,SNR=13
SQTA eS **S** **01 55 51.2 -1.9**
comp=Z,1.7nm,0.5s
MEF Metsahovi 33.82 337 eP P 01 50 30.8 -0.1
ZALV Zalesovo Beam 33.82 37 P P 01 50 31.4 +0.4
comp=Z,2.8nm,0.4s,baz=244,slow=8.0,SNR=16
ZALV LR LR 02 06 16.0
comp=Z,206nm,18.7s,baz=222,slow=40
comp=Z,2.8nm,0.4s
ZALV Zalesovo Beam 33.82 37 P P 01 50 31.1 +0.1
MOTA Moosalm 33.90 310 i P P 01 50 31.3 -0.7
comp=Z,10.0nm,0.3s,SNR=9.0
MOTA eS **S** **01 55 52.2 -2.5**
comp=Z,2.0nm,0.5s
CLL Collm 33.97 317 eP P 01 50 32.0 -0.4
CLL Collm 33.97 317 eP P 01 50 32.0 -0.4
FUR Furstenfeldbru 34.00 311 P P 01 50 32.7 0.0
FETA Feichten 34.07 309 i P P 01 50 33.3 -0.2
comp=Z,11nm,0.5s,SNR=7.9
FETA eS **S** **01 55 56.3 -1.0**
comp=Z,2.6nm,0.7s
RETA Reutte 34.16 310 eP P 01 50 33.4 -0.7
comp=Z,10nm,0.3s
RETA eS **S** **01 55 57.8 -0.7**
comp=Z,2.3nm,0.7s
FINES FINESS Array B 34.23 340 P P 01 50 33.8 -0.6
comp=Z,11nm,0.5s,baz=146,slow=9.3,SNR=134
FINES LR LR 02 06 13.4
comp=Z,186nm,20.4s,baz=158,slow=39
comp=Z,11nm,0.5s
FUORN Ofenpass-Fuorn 34.29 308 P P 01 50 35.0 -0.5
GRF Grafenberg Arr 34.48 314 P P 01 50 37.1 +0.2
GRFO Grafenberg 34.48 314 P P 01 50 36.7 -0.1
GRFO Grafenberg 34.48 314 P P 01 50 36.7 -0.1
GRFO pmax pmax
comp=Z,23nm,0.7s
DAVOX Davos/Dischmat 34.58 309 P P 01 50 37.5 -0.5
comp=Z,8.5nm,0.6s,baz=102,slow=4.5,SNR=22
comp=Z,8.5nm,0.6s
BSD Bornholm Skovb 34.60 324 IAmb IAmb 01 50 36.3
comp=Z,33nm,0.8s
BSD i P **P** **01 50 36.6 -1.2**
DAVA Damuels 34.69 309 i P P 01 50 38.5 -0.4
comp=Z,45nm,0.5s,SNR=11
BLEU Blekinge 34.77 327 i P P 01 50 37.9 -1.3
RAF Rauma 35.30 336 eP P 01 50 43.0 -0.7
AAL Aland 35.35 334 eP P 01 50 43.3 -0.8
LUNU Lund 35.58 324 i P P 01 50 45.4 -0.8
SLE Schleitheim 35.72 310 P P 01 50 46.3 -1.2
DEL Delary 35.78 326 i P P 01 50 46.8 -1.2
BJUU Bjuv 36.00 325 i P P 01 50 49.6 -0.2
SENIN Lac Senin/Sane 36.25 307 IAmb IAmb 01 50 52.6
comp=Z,9.0nm,0.6s
MBDF Montbardon 36.38 304 eP P 01 50 52.5 -0.9
MBDF pmax pmax
comp=Z,18nm,0.8s
MBAR Mbarara 36.44 214 P P 01 50 56.4 +2.3
comp=Z,2.0nm,0.3s,baz=13,slow=7.1,SNR=3.9
MBAR LR LR 02 07 06.6
comp=Z,128nm,20.2s,baz=47,slow=38
comp=Z,2.0nm,0.3s
MBAR Mbarara 36.44 214 P P 01 50 54.5 +0.4
MBAR Mbarara 36.44 214 P P 01 50 54.5 +0.4
MBAR pmax pmax
comp=Z,9.0nm,1.1s
LPG La Plagne 36.49 306 eP P 01 50 54.3 -0.2
LPG pmax pmax
comp=Z,12nm,0.6s
LPL La Plagne 36.51 306 eP P 01 50 53.6 -0.9
LPL pmax pmax
comp=Z,16nm,0.8s
CDF Champ du Feu 36.65 311 eP P 01 50 53.7 -1.9
CDF pmax pmax
comp=Z,6.0nm,0.8s
ECH Echery 36.69 310 IAmb IAmb 01 50 56.3
comp=Z,17nm,1.0s
ECH Echery 36.69 310 eP P 01 50 55.1 -0.7
HINF Hinteralfeld 36.81 310 eP P 01 50 55.5 -1.4
HINF pmax pmax
comp=Z,8.0nm,0.8s
BORU Boraas 36.89 327 i P P 01 50 56.9 -0.4
CABF La Chapelle 37.11 307 eP P 01 50 58.9 -0.6
CABF pmax pmax
comp=Z,38nm,0.7s
ONAU Onsala 37.17 326 i P P 01 50 59.3 -0.4
HAU Haudompre 37.18 310 eP P 01 50 58.4 -1.6
HAU pmax pmax
comp=Z,13nm,0.7s
MSF Maaselka 37.18 346 P P 01 50 59.1 -0.6
OUL Oulu 37.20 343 P P 01 50 59.2 -0.7
GOMU GeErMu 37.36 70 P P 01 51 00.1 -2.0
GOMU pmax pmax
comp=Z,2.0nm,0.4s
GOMU pmax pmax
comp=Z,43nm,8.3s
GOMU LR LR
comp=Z,100nm,17.5s
GOMU LR LR
comp=Z,97nm,15.5s
GOMU LR LR
comp=Z,110nm,18.0s
TJOU Tjoern 37.62 327 i P P 01 51 02.4 -1.1
WLF Walferdange 37.65 312 IAmb IAmb 01 51 04.3
comp=Z,13nm,0.7s
WLF Walferdange 37.65 312 dP P 01 51 03.1 -0.8
comp=Z,12nm,0.7s
HFS Hagfors 37.80 331 LR LR 02 07 49.3
comp=Z,150nm,21.4s,baz=107,slow=38
APA Apatity 37.87 350⇑iP P 01 50 59.5 -6.0
VIVF Saint-Julien-l 37.88 304 eP P 01 51 04.7 -1.2
VIVF pmax pmax
comp=Z,14nm,1.1s
BTNL Ternell 37.88 314 dP P 01 51 07.3 +1.4
BHOU Houvegnez 37.90 314 dP P 01 51 06.5 +0.4
comp=Z,8.1nm,0.9s
MEM Membach 37.96 314 dP P 01 51 07.2 +0.7
comp=Z,5.5nm,0.7s
LVZ Lovozero 37.99 351 ceP P 01 51 07.4 +0.8
LVZ pmax pmax
comp=Z,25nm,1.3s
STRU Stroemstad 38.31 328 i P P 01 51 08.4 -0.9
RCHB Rochefort 38.34 313 dP P 01 51 09.8 +0.1
comp=Z,8.2nm,1.0s
BCLA Clavier 38.35 313 dP P 01 51 10.2 +0.3
comp=Z,7.4nm,0.8s
BGES Gesves 38.48 313 dP P 01 51 10.7 -0.3
GIVF Givet 38.58 313 eP P 01 51 11.2 -0.6
GIVF pmax pmax
comp=Z,10.0nm,0.7s
SMF Signal de Mont 38.65 307 eP P 01 51 11.2 -1.2
SMF pmax pmax
comp=Z,24nm,0.6s
BMRD Maredsous 38.66 313 dP P 01 51 13.1 +0.7
LOR Lormes 38.72 308 eP P 01 51 11.5 -1.5
LOR pmax pmax
comp=Z,10.0nm,0.6s
DOU Dourbes 38.73 313 dP P 01 51 13.3 +0.3
comp=Z,14nm,0.9s
SSF Saint Saulge 38.93 308 eP P 01 51 13.5 -1.2
SSF pmax pmax
comp=Z,16nm,0.8s
BAIF Baives 38.96 313 eP P 01 51 14.5 -0.4
BAIF pmax pmax
comp=Z,12nm,0.6s
OSL Oslo 38.97 329 eP P 01 51 14.3 -0.6
AVF Avril sur Loir 39.00 307 eP P 01 51 12.5 -2.8
AVF pmax pmax
comp=Z,10.0nm,0.8s
NC602 NORSAR Array S 39.03 331 eP P 01 51 15.2 -0.1
NORES NORESS Array B 39.03 331 P P 01 51 15.6 +0.2
KONO Kongsberg 39.32 329 eP P 01 51 16.3 -1.5
BGF Bois d'Agland 39.32 307 eP P 01 51 16.8 -1.2
NB2 NORSAR Subarra 39.33 331 P P 01 51 16.4 -1.5
comp=Z,8.7nm,0.8s,baz=122,slow=8.6
NOA NORSAR Array B 39.33 331 P P 01 51 16.4 -1.5
comp=Z,6.3nm,0.7s,baz=122,slow=8.3,SNR=33
NOA PP **PP** **01 52 45.2 -3.0**
comp=Z,3.6nm,0.8s,baz=127,slow=11,SNR=6.9
NOA LR LR 02 08 57.0
comp=Z,177nm,21.0s,baz=120,slow=38
comp=Z,6.3nm,0.7s
TCF Toulx Ste Croi 39.73 306 eP P 01 51 20.5 -1.0
TCF pmax pmax
comp=Z,11nm,1.0s
RJF Les Rejaudoux 40.14 305 eP P 01 51 23.5 -1.4
RJF pmax pmax
comp=Z,61nm,2.1s
TAM Tamanrasset 40.35 269 P P 01 51 27.2 +0.2
TAM Tamanrasset 40.35 269 P P 01 51 27.2 +0.2
TAM pmax pmax
comp=Z,19nm,2.0s
SKAR Skarslia 40.38 330 eP P 01 51 26.6 -0.1
SKAR IAmb IAmb 01 51 27.1
comp=Z,16nm,0.9s
LFF La Frestale 40.67 304 eP P 01 51 28.5 -0.7
LFF pmax pmax
comp=Z,5.0nm,0.6s
ODD1 Odda 40.78 328 eP P 01 51 30.5 +0.6
ARA0 ARCESS Array S 40.98 347 eP P 01 51 30.7 -0.8
ARA0 IAmb IAmb 01 51 34.8
comp=Z,29nm,1.1s
ARCES ARCESS Array B 40.98 347 P P 01 51 30.8 -0.7
comp=Z,3.9nm,0.7s,baz=141,slow=5.9,SNR=18
ARCES LR LR 02 09 50.2
comp=Z,93nm,18.8s,baz=158,slow=38
comp=Z,3.9nm,0.7s
NSS Namsos 41.00 336 eP P 01 51 31.0 -0.6
NSS IAmb IAmb 01 51 37.6
comp=Z,12nm,0.9s
KTK1 Kautokeino 41.01 346 eP P 01 51 31.1 -0.6
KTK1 IAmb IAmb 01 51 31.9
comp=Z,9.4nm,0.7s
GTA Gaotai 41.05 64 ⇓P P 01 51 34.8 +2.2
GTA pP pP 01 51 39.3 -2.8
GTA sP sP 01 51 41.9 -4.1
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,73nm,4.9s
GTA LR LR
comp=Z,120nm,17.1s
GTA LR LR
comp=Z,180nm,18.9s
GTA LR LR
comp=Z,210nm,18.2s
MOR8 Moi Rana 41.21 339 eP P 01 51 32.7 -0.7
MFF Saint Martin d 41.38 307 eP P 01 51 33.7 -1.4
MFF pmax pmax
comp=Z,8.0nm,0.8s
LDF La Druitiere 41.54 310 eP P 01 51 34.8 -1.5
LDF pmax pmax
comp=Z,12nm,0.6s
AKN Aaknes 41.64 331 eP P 01 51 37.5 +0.5
STOK Stokkvaagen 41.76 339 eP P 01 51 37.2 -0.6
FAUS Fauske 41.77 341 eP P 01 51 36.9 -1.0
FAUS IAmb IAmb 01 51 38.1
comp=Z,7.4nm,0.8s
FLN La Foliniere 41.79 310 eP P 01 51 36.8 -1.6
FLN pmax pmax
comp=Z,13nm,0.5s
KONS Konsvik 41.83 339 eP P 01 51 38.0 -0.4
KONS IAmb IAmb 01 51 38.4
comp=Z,7.7nm,0.7s
GRR Gorron 42.01 309 eP P 01 51 38.8 -1.3
GRR pmax pmax
comp=Z,22nm,0.7s
JETT Jettan, Norway 42.06 345 eP P 01 51 40.1 -0.2
JETT IAmb IAmb 01 51 40.4
comp=Z,27nm,0.7s
SJPF Ste Jean 42.06 301 eP P 01 51 40.9 +0.2
SJPF pmax pmax
comp=Z,7.0nm,0.8s
STEI Steigen 42.16 341 eP P 01 51 40.2 -0.8
STEI IAmb IAmb 01 51 40.9
comp=Z,6.1nm,0.6s
HAMF Hammerfest 42.26 347 eP P 01 51 41.6 -0.2
TRO Tromso 42.45 344 eP P 01 51 42.6 -0.8
TRO IAmb IAmb 01 51 44.0
comp=Z,48nm,1.5s
LOF Lofoten 42.77 341 eP P 01 51 45.5 -0.5
SGMF Saint Gilles 43.12 309 eP P 01 51 47.9 -1.3
SGMF pmax pmax
comp=Z,14nm,0.6s
QUIF Quistinic 43.51 308 eP P 01 51 50.8 -1.5
QUIF pmax pmax
comp=Z,14nm,0.5s
ROSF Rostrenen 43.61 309 eP P 01 51 51.8 -1.3
ROSF pmax pmax
comp=Z,30nm,0.9s
ZAK Zakamensk 43.67 48 eP P 01 51 54.6 +0.8
ZAK pmax pmax
comp=Z,5.0nm,1.1s
NRIK Noril'sk 43.83 18 P P 01 51 55.0 +0.5
comp=Z,4.7nm,0.9s,baz=248,slow=3.6,SNR=5.6
NRIK LR LR 02 14 01.1
comp=Z,172nm,18.6s,baz=213,slow=41
comp=Z,4.7nm,0.9s
NRIK Noril'sk 43.83 18 P P 01 51 55.4 +0.9
NRIK Noril'sk 43.83 18 ceP P 01 51 55.6 +1.0
NRIK pmax pmax
comp=Z,12nm,1.1s
ESDC Sonseca Array 44.33 297 P P 01 51 59.5 +0.4
comp=Z,2.9nm,0.7s,baz=78,slow=8.2,SNR=24
comp=Z,2.9nm,0.7s
ESDC Sonseca Array 44.33 297 P P 01 51 59.2 +0.1
EKA Eskdalemuir Ar 44.38 319 P P 01 51 57.7 -1.5
PZH PanZhiHua 45.19 82 P P 01 52 07.5 +1.3
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,5.5s
SONM Songino Array 45.58 52 P P 01 52 10.3 +1.2
comp=Z,3.4nm,0.8s,baz=271,slow=9.3,SNR=20
comp=Z,3.4nm,0.8s
SONM Songino Array 45.58 52 P P 01 52 10.1 +1.0
SONM Songino Array 45.58 52 P P 01 52 10.1 +1.0
SONM pmax pmax
comp=Z,6.0nm,1.1s
CMAR Chiang Mai Arr 45.78 94 P P 01 52 11.4 +0.5

comp=Z,1.3nm,0.3s,baz=298,slow=8.7,SNR=9.7
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 45.78 94 P **P 01 52 10.3 -0.5**
ULN Ulaanbaatar 46.03 52 P **P 01 52 12.5 -0.1**
ULN IAmb IAmb 01 52 14.8
comp=Z,15nm,1.1s
ULN Ulaanbaatar 46.03 52 *ce*P **P 01 52 13.7 +1.1**
ULN pmax pmax
comp=Z,15nm,1.0s
PBRG Braganca 46.21 300 *e*P **P 01 52 14.9 +0.9**
comp=Z,26nm,1.9s
KMI Kunming 46.49 84 ⇓P **P 01 52 17.5 +0.9**
KMI pmax pmax
comp=Z,18nm,0.9s
MVO Moncorvo 46.49 299 *e*P **P 01 52 17.1 +0.8**
comp=Z,29nm,1.1s
PBAR Barrancos 46.91 295 *e*P **P 01 52 19.9 +0.4**
comp=Z,20nm,1.3s
PMRV Marv??o 46.99 297 *e*P **P 01 52 21.1 +1.0**
comp=Z,23nm,1.6s
PVRL Vila Real 47.00 299 *e*P **P 01 52 21.3 +1.1**
comp=Z,31nm,1.1s
PCBR Castelo Branco 47.00 297 *e*P **P 01 52 21.5 +1.4**
comp=Z,26nm,2.1s
POLO Lamas de Olo 47.04 299 *e*P **P 01 52 21.7 +1.1**
comp=Z,15nm,1.9s
PVIS Viseu 47.20 299 *e*P **P 01 52 23.1 +1.3**
comp=Z,38nm,1.4s
PESTR Estremoz 47.23 296 *e*P **P 01 52 22.8 +0.8**
comp=Z,31nm,1.7s
PGAV Gavieira, Arco 47.33 300 *e*P **P 01 52 24.1 +1.3**
comp=Z,51nm,1.1s
PBEJ Beja 47.58 295 *e*P **P 01 52 25.5 +0.8**
comp=Z,33nm,1.8s
TOA0 Torodi Ar. Sit 47.83 259 P **P 01 52 25.7 -1.2**
TOA0 IAmb IAmb 01 52 29.2
comp=Z,10nm,0.9s
TORD Torodi Ar. Bea 47.83 259 P **P 01 52 27.4 +0.5**
comp=Z,6.4nm,0.6s,baz=58,slow=8.1,SNR=67
comp=Z,6.4nm,0.6s
XAN Xi'an 49.11 70 ⇑P **P 01 52 37.3 +0.7**
XAN pP pP 01 52 48.1 +1.8
XAN pmax pmax
comp=Z,18nm,0.8s
XAN LR LR
comp=Z,190nm,12.4s
XAN LR LR
comp=Z,230nm,17.2s
OPO Ambohidratompo 49.41 184 LR LR 02 13 58.6
comp=Z,64nm,19.3s,baz=184,slow=36
HHC Hu-ho-hao-te 49.83 61 *e*P **P 01 52 44.3 +2.2**
HHC pmax pmax
comp=Z,38nm,0.8s
HHC pmax pmax
comp=Z,130nm,6.5s
BOD Bodaibo 50.55 38 *e*P **P 01 52 47.4 +0.2**
BOD pmax pmax
comp=Z,16nm,1.2s
LSZ Lusaka 50.63 208 LR LR 02 15 29.2
comp=Z,196nm,18.1s,baz=36,slow=37
LYN LuoYang 51.83 68 ⇓*i*P **P 01 52 57.8 +0.7**
LYN S **S 02 00 24.0 +6.4**
LYN pmax pmax
comp=Z,10.0nm,0.4s
LYN pmax pmax
comp=Z,100nm,3.7s
LYN LR LR
comp=Z,250nm,14.2s
LYN LR LR
comp=Z,140nm,15.4s
LYN LR LR
comp=Z,180nm,17.7s
KOWA Kowa 52.03 264 LR LR 02 17 44.5
comp=Z,106nm,19.5s,baz=134,slow=39
KOWA Kowa 52.03 264 P **P 01 52 58.6 -0.2**
KOWA IAmb IAmb 01 53 00.2
comp=Z,8.3nm,0.7s
HIA Hailar 54.33 49 P **P 01 53 16.5 +1.1**
HIA IAmb IAmb 01 53 17.5
comp=Z,8.5nm,0.9s
HIA Hailar 54.33 49 P **P 01 53 16.5 +1.1**
HIA pmax pmax
comp=Z,9.0nm,0.9s
TIA Tai'an 55.08 65 *e*P **P 01 53 20.3 -0.6**
TIA pmax pmax
comp=Z,12nm,1.4s
DBIC Dimbokro 56.70 257 P **P 01 53 33.4 +0.6**
comp=Z,4.3nm,0.5s,baz=35,slow=5.4,SNR=5.0
DBIC LR LR 02 20 03.5
comp=Z,353nm,18.7s,baz=35,slow=38
comp=Z,4.3nm,0.5s
TIXI Tiksi 57.35 22 LR LR 02 22 37.4
comp=Z,172nm,19.4s,baz=182,slow=41
TIXI Tiksi 57.35 22 P **P 01 53 36.0 -0.5**
TIXI Tiksi 57.35 22 *ce*P **P 01 53 35.8 -0.7**
TIXI pmax pmax
comp=Z,8.0nm,1.7s
NJ2 Nanjing 57.67 70 *e*P **P 01 53 40.3 +0.9**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ZEA Zeya 58.27 43 *e*P **P 01 53 45.1 +1.8**
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=Z,100nm,16.0s
YAK Yakutsk 58.30 33 LR LR 02 20 54.3
comp=Z,83nm,18.1s,baz=268,slow=38
TSUM Tsumeb 58.91 216 LR LR 02 21 07.4
comp=Z,64nm,19.4s,baz=338,slow=38
CN2 Changchun 59.28 55 *e*P **P 01 53 50.6 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,6.0s
CN2 LR LR
comp=Z,100nm,14.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,300nm,14.4s
LBTB Lobatse 60.47 206 LR LR 02 20 59.4
comp=Z,149nm,21.9s,baz=35,slow=37
KLR Kul'dur 62.03 47 LR LR 02 22 23.2
comp=Z,89nm,19.4s,baz=269,slow=37
KLR Kul'dur 62.03 47 *ce*P **P 01 54 09.5 +0.3**
KLR pmax pmax
comp=Z,9.0nm,1.7s
BBTS Babate 62.69 271 LR LR 02 24 26.2
comp=Z,97nm,19.4s,baz=62,slow=39
KSAR Wonju Array Be 62.94 61 P **P 01 54 15.4 0.0**
KSAR Wonju Array Be 62.94 61 P **P 01 54 15.4 0.0**
KSRS Korea Array 62.97 61 P **P 01 54 15.7 +0.1**
comp=Z,5.3nm,0.7s,baz=281,slow=7.0,SNR=16
KSRS LR LR 02 25 30.9
comp=Z,136nm,18.2s,baz=290,slow=40
comp=Z,5.3nm,0.7s
USRK Ussuriysk Ar. 63.68 53 P **P 01 54 19.4 -0.8**
comp=Z,4.2nm,0.9s,baz=270,slow=7.4,SNR=4.8
USRK LR LR 02 25 06.8
comp=Z,120nm,18.8s,baz=274,slow=39
comp=Z,4.2nm,0.9s
USRK Ussuriysk Ar. 63.68 53 P **P 01 54 19.8 -0.4**
USRK Ussuriysk Ar. 63.68 53 P **P 01 54 19.8 -0.4**
BOSA Boshof 63.87 204 P **P 01 54 23.3 +1.7**
comp=Z,4.0nm,1.0s,baz=10.0,slow=9.3,SNR=4.7
BOSA LR LR 02 21 45.0
comp=Z,125nm,18.4s,baz=16,slow=36
comp=Z,4.0nm,1.0s
EUNU Eureka 66.60 353 P **P 01 54 39.5 +0.9**
EUNU IAmb IAmb 01 54 40.2
comp=Z,7.3nm,0.8s
SEY Seymchan 68.12 29 *ce*P **P 01 54 49.4 +0.9**
SEY pmax pmax
comp=Z,8.0nm,0.7s
MA2 Magadan 68.86 32 LR LR 02 29 17.3
comp=Z,46nm,20.3s,baz=0.0,slow=40
SUR Sutherland 68.89 206 LR LR 02 26 29.6
comp=Z,178nm,20.3s,baz=30,slow=37
BILL Bilibino 70.55 21 P **P 01 55 04.1 +0.7**
BILL Bilibino 70.55 21 *di* **P 01 55 03.5 +0.1**
BILL *i* 01 55 18.1
BILL pmax pmax
comp=Z,15nm,1.1s
MJAR Matsushiro Arr 70.93 58 LR LR 02 29 14.3
comp=Z,113nm,18.4s,baz=316,slow=38
JHJ Hachijo jima 2 73.58 61 LR LR 02 32 38.5
comp=Z,85nm,18.2s,baz=288,slow=40

PETK Petropavlovsk- 75.36 36 LR LR 02 31 59.3
comp=Z,102nm,18.9s,baz=289,slow=38
SCHQ Schefferville 78.83 328 P **P 01 55 51.6 0.0**
comp=Z,5.4nm,0.7s,baz=42,slow=6.5,SNR=8.6
comp=Z,5.4nm,0.7s
TOLK Toolik Lake Re 79.55 7 IAmb IAmb 01 55 57.3
comp=Z,13nm,0.8s
COLD Coldfoot 80.84 8 IAmb IAmb 01 56 04.0
comp=Z,7.5nm,0.9s
INK Inuvik 80.92 1 P **P 01 56 02.3 -0.3**
comp=Z,2.7nm,0.8s,baz=36,slow=6.0,SNR=5.5
comp=Z,2.7nm,0.8s
BMAR Burnt Mountain 81.21 6 P **P 01 56 06.0 +1.6**
H21K Melozitna Rive 82.00 9 IAmb IAmb 01 56 10.3
comp=Z,15nm,1.1s
H23K Yukon River 82.26 8 P **P 01 56 10.4 +0.6**
H23K IAmb IAmb 01 56 12.2
comp=Z,9.6nm,0.8s
MLY Manley 82.87 9 IAmb IAmb 01 56 14.8
comp=Z,6.8nm,1.1s
J20K Nowinta River 83.20 10 IAmb IAmb 01 56 16.3
comp=Z,6.9nm,0.8s
MDM Murphy Dome 83.25 8 IAmb IAmb 01 56 16.5
comp=Z,7.8nm,0.9s
SHEM Shemya Is, Ala 83.38 30 LR LR 02 37 21.8
comp=Z,88nm,18.9s,baz=146,slow=38
ILAR Eielson Array 83.58 7 P **P 01 56 16.4 -0.3**
comp=Z,1.8nm,0.7s,baz=324,slow=4.1,SNR=21
comp=Z,1.8nm,0.7s
ILAR Eielson Array 83.58 7 P **P 01 56 15.9 -0.7**
K20K Telida 83.98 11 IAmb IAmb 01 56 20.3
comp=Z,8.5nm,1.1s
J26L Joseph Creek 84.17 6 IAmb IAmb 01 56 21.1
comp=Z,4.3nm,0.8s
KTH Kantishna Hill 84.26 9 P **P 01 56 20.3 +0.1**
KTH IAmb IAmb 01 56 23.0
comp=Z,7.5nm,1.0s
MCK McKinley 84.35 8 P **P 01 56 20.9 +0.3**
MCK IAmb IAmb 01 56 21.5
comp=Z,9.4nm,1.0s
MCK McKinley 84.35 8 P **P 01 56 20.9 +0.3**
MCK pmax pmax
comp=Z,9.0nm,1.0s
K27K Chicken 84.76 5 IAmb IAmb 01 56 24.6
comp=Z,12nm,1.2s
DAWY Dawson 84.92 4 IAmb IAmb 01 56 24.9
comp=Z,12nm,1.4s
DHY Denali Highway 85.17 8 IAmb IAmb 01 56 25.7
comp=Z,5.0nm,0.9s
L27K Beaver Creek, 85.74 5 IAmb IAmb 01 56 29.8
comp=Z,7.6nm,1.0s
YKA Yellowknife Ar 85.98 353 P **P 01 56 29.0 +0.2**
comp=Z,6.0nm,0.9s,baz=11,slow=4.8,SNR=7.6
comp=Z,6.0nm,0.9s
YKA Yellowknife Ar 85.98 353 P **P 01 56 29.0 +0.2**
N18K Kilae Creek 86.17 12 IAmb IAmb 01 56 31.3
comp=Z,1.1nm,1.1s
M26K Nabesna, AK 86.29 6 IAmb IAmb 01 56 55.3
comp=Z,12nm,1.4s
HILA High Level 90.09 353 P **P 01 56 49.0 +0.5**
SADO Sadowa 91.51 326 LR LR 02 40 47.7
comp=Z,44nm,18.9s,baz=342,slow=37
WRA Warramunga Arr 95.35 110 PKKP 02 14 07.2
comp=Z,0.4nm,0.5s,baz=122,slow=2.5,SNR=7.9
MAW Mawson 98.81 175 LR LR 02 41 14.1
comp=Z,52nm,18.1s,baz=5.0,slow=35

*NOU **14** 02:03:13.7,37.°11S×179.°31E, h7km, MLv3.6/6, Off E. Coast of N. Island, N.Z.*
*WEL **14** 02:03:15.9±0.7,37°S±5.°×17°9E±.°, h20km, M3.5/30, ML3.9/38, MLv3.5/30, Error ellipse: s-maj=0.0km s-min=0.0km az=110.6*
ISC 14 02:03:15.3±2.7,37.°19S±0.°09×179.°2E±0.°1, h12km±11km, n56, σ0.°85/67, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.83**	**243**	P	**Pg**	**02 03 31.4**	**+0.1**
MXZ				S	**Sg**	**02 03 41.6**	**-0.5**
MXZ	**Matakaoa Point**	**0.83**	**243**	P	**Pg**	**02 03 31.3**	**0.0**
WMGZ	**Waiomatatini S**	**0.91**	**226**	P	**Pn**	**02 03 34.7**	**+0.9**
WMGZ				S	**Sn**	**02 03 48.2**	**+1.3**
PKGZ	**Pakihiroa**	**1.16**	**233**	P	**Pb**	**02 03 37.6**	**+0.3**
PKGZ				S	**Sb**	**02 03 52.9**	**+0.7**
PUZ	**Puketiti**	**1.17**	**221**	P	**Pb**	**02 03 38.0**	**+0.5**
PUZ				S	**Sn**	**02 03 54.3**	**+0.8**
HAZ	**Te Kaha**	**1.29**	**244**	P	**Pn**	**02 03 38.4**	**-0.7**
HAZ				S	**Sn**	**02 03 56.8**	**+0.5**
TWGZ	**Tauwhareparae**	**1.40**	**225**	P	**Pb**	**02 03 41.5**	**+0.1**
TWGZ				S	**Sb**	**02 04 00.3**	**+1.0**
RUGZ	**Raukumara Rang**	**1.46**	**238**	P	**Pb**	**02 03 42.4**	**-0.1**
RUGZ				S	**Sn**	**02 04 00.9**	**+0.1**
CNGZ	**Carnagh Statio**	**1.53**	**212**	P	**Pb**	**02 03 43.8**	**+0.2**
TKGZ	**Te Karaka**	**1.66**	**221**	P	**Pn**	**02 03 44.8**	**+0.6**
MWZ	**Matawai**	**1.77**	**229**	P	**Pn**	**02 03 46.2**	**+0.4**
MWZ				S	**Sn**	**02 04 06.9**	**-1.5**
RIGZ	**Rimuhau**	**1.91**	**217**	P	**Pn**	**02 03 48.1**	**+0.4**
RAGZ	**Rawiri**	**1.94**	**227**	P	**Pn**	**02 03 48.7**	**+0.5**
RAGZ				S	**Sn**	**02 04 11.7**	**-1.0**
URZ	**Urewera**	**2.00**	**237**	P	**Pn**	**02 03 49.2**	**+0.4**
URZ				S	**Sn**	**02 04 12.8**	**-1.0**
URZ	**Urewera**	**2.00**	**237**	P	**Pn**	**02 03 49.4**	**+0.5**
SNGZ	**Shannon Statio**	**2.18**	**223**	P	**Pn**	**02 03 51.7**	**+0.2**
KNZ	**Kokohu**	**2.21**	**214**	P	**Pn**	**02 03 51.2**	**-0.5**
KNZ				S	**Sn**	**02 04 17.5**	**-1.4**
MHGZ	**Mahia Peninsul**	**2.22**	**208**	P	**Pn**	**02 03 52.3**	**+0.3**
RTZ	**Ruatahuna**	**2.28**	**231**	P	**Pn**	**02 03 53.6**	**+0.7**
MUGZ	**Murupara**	**2.34**	**236**	P	**Pn**	**02 03 53.5**	**-0.1**
TARZ	**Mount Tarawera**	**2.40**	**243**	P	**Pn**	**02 03 55.1**	**+0.5**
RAHZ	**Arahi**	**2.42**	**224**	P	**Pn**	**02 03 55.1**	**+0.4**
WHHZ	**Waihua**	**2.46**	**219**	P	**Pn**	**02 03 55.4**	**+0.2**
MTHZ	**Maungataniwha**	**2.52**	**228**	P	**Pn**	**02 03 56.5**	**+0.4**
NMHZ	**Naumai**	**2.70**	**224**	P	**Pn**	**02 03 58.7**	**0.0**
ARHZ	**Aropaoanui**	**2.72**	**220**	P	**Pn**	**02 03 58.6**	**-0.2**
KUZ	**Kuaotunu**	**2.85**	**278**	P	**Pn**	**02 03 58.8**	**-1.8**
KUZ	**Kuaotunu**	**2.85**	**278**	P	**Pn**	**02 03 58.8**	**-1.8**
BKZ	**Black Stump Fm**	**2.93**	**227**	P	**Pn**	**02 04 01.4**	**-0.4**
BKZ	**Black Stump Fm**	**2.93**	**227**	P	**Pn**	**02 04 01.3**	**-0.4**
CKHZ	**Cape Kidnapper**	**2.99**	**214**	P	**Pn**	**02 04 01.5**	**-1.1**
MCHZ	**McNeill Hill**	**3.01**	**221**	P	**Pn**	**02 04 02.4**	**-0.4**
TOZ	**Tahuroa Road**	**3.02**	**259**	P	**Pn**	**02 04 01.9**	**-1.0**
KWHZ	**Kaweka Forest**	**3.14**	**224**	P	**Pn**	**02 04 03.9**	**-0.8**
GRZ	**Great Barrier**	**3.18**	**286**	P	**Pn**	**02 04 04.6**	**-0.6**
KAHZ	**Kahuranaki**	**3.19**	**215**	P	**Pn**	**02 04 04.1**	**-1.2**
MKAZ	**Moumakai**	**3.26**	**270**	P	**Pn**	**02 04 04.9**	**-1.3**
TMVZ	**Te Maari**	**3.38**	**234**	P	**Pn**	**02 04 07.4**	**-0.7**
BHHZ	**Black Hill Sta**	**3.39**	**226**	P	**Pn**	**02 04 07.8**	**-0.4**
PXZ	**Pawanui**	**3.39**	**213**	P	**Pn**	**02 04 06.2**	**-1.8**
NTVZ	**North Tongarir**	**3.39**	**235**	P	**Pn**	**02 04 07.6**	**-0.6**
KRVZ	**Karewarewa**	**3.41**	**235**	P	**Pn**	**02 04 07.9**	**-0.6**
OTVZ	**Oturere**	**3.44**	**234**	P	**Pn**	**02 04 08.1**	**-0.7**
NNVZ	**North Ngauruho**	**3.45**	**235**	P	**Pn**	**02 04 09.3**	**+0.3**
WTVZ	**West Tongariro**	**3.46**	**235**	P	**Pn**	**02 04 09.2**	**+0.1**
SNVZ	**South Ngauruho**	**3.46**	**234**	P	**Pn**	**02 04 08.6**	**-0.6**
NGZ	**Ngauruhoe**	**3.48**	**234**	P	**Pn**	**02 04 09.4**	**-0.1**
PNHZ	**Pukenui**	**3.61**	**220**	P	**Pn**	**02 04 09.5**	**-1.6**
PRHZ	**Porangahau**	**3.68**	**213**	P	**Pn**	**02 04 10.3**	**-1.8**
HIZ	**Hauiti**	**3.71**	**248**	P	**Pn**	**02 04 13.4**	**+0.9**
HIZ	**Hauiti**	**3.71**	**248**	P	**Pn**	**02 04 13.4**	**+0.9**
WCZ	**Waipu Caves**	**4.13**	**286**	P	**Pn**	**02 04 17.9**	**-0.4**
PRWZ	**Porí Road**	**4.22**	**216**	P	**Pn**	**02 04 18.0**	**-1.4**
OUZ	**Omahuta**	**4.97**	**292**	P	**Pn**	**02 04 29.6**	**-0.2**
OUZ	**Omahuta**	**4.97**	**292**	P	**Pn**	**02 04 29.7**	**0.0**
CTZ	**Chatham Island**	**7.26**	**156**	P	**Pn**	**02 05 02.4**	**+1.3**

*IDC **14** 02:14:59.1±1.5, 12.°51S×166.°30E, h0km, mb4.1/7, mbtmp4.1/8, ML3.8/1, MS3.4/19, Error ellipse: s-maj=43.6km s-min=26.5km az=116.0*
*NEIC **14** 02:15:04.4±1.0, 12.°56S±0.°05×166.°3E±0.°2, h34km±8km, mb4.4/4, Error ellipse: s-maj=25.6km s-min=7.3km az=83.0*
ISC 14 02:15:06.3±0.8, 12.°75±0.°1×166.°3E±0.°1, h59km, n37, σ1.°19/21, mb4.3/9, MS3.4/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.00**	**297**	Sn	**Sn**	**02 18 06.5**	**+1.9**
	256nm,0.3s,baz=54,slow=23,SNR=7.1						
HNR	**Honiara**	**7.00**	**297**	Pn	**Pn**	**02 16 43.3**	**-3.0**
KOUNC	**Koumac, New Ca**	**8.07**	**193**	Pn	**Pn**	**02 16 59.9**	**-1.0**
LIFNC	**LIFOU**	**8.12**	**174**	Pn	**Pn**	**02 17 00.8**	**-0.8**
DZM	**Mont Dzumac**	**9.36**	**179**	*e*Pn	Pn	02 17 23.7	+5.1
DZM				*e*Sn	Sn	02 19 13.5	+11
DZM				*e*LR	LR	02 19 46.0	
	comp=Z,362nm,23.9s						
DZM	**Mont Dzumac**	**9.36**	**179**	Pn	**Pn**	**02 17 19.3**	**+0.7**
	0.9nm,0.3s,baz=313,slow=14,SNR=11						
DZM				Sn	Sn	02 19 14.3	+12
	0.9nm,0.3s,baz=336,slow=20,SNR=1.9						
DZM				LR	LR	02 20 46.0	
	comp=Z,322nm,18.5s,baz=16,slow=36						
	2.0nm,0.3s						
DZM	**Mont Dzumac**	**9.36**	**179**		**Pn**	**02 17 18.2**	**-0.4**
ONTNC	**Ouen Toro**	**9.59**	**179**	Pn	**Pn**	**02 17 21.4**	**-0.3**
MSVF	**Nonsavu**	**12.42**	**115**	LR	LR	02 21 52.9	
	comp=Z,232nm,18.7s,baz=342,slow=33						
PMG	**Port Moresby**	**19.05**	**278**	LR	LR	02 25 56.4	
	comp=Z,94nm,21.6s,baz=102,slow=34						
CTA	**Charters Tower**	**20.57**	**246**	LR	LR	02 27 08.2	
	comp=Z,152nm,19.0s,baz=78,slow=35						
AFI	**Afiamalu**	**21.38**	**96**	LR	LR	02 26 37.9	
	comp=Z,63nm,18.5s,baz=250,slow=33						
STKA	**Stephens Creek**	**29.67**	**226**	LR	LR	02 32 15.6	
	comp=Z,105nm,20.1s,baz=27,slow=35						
RPZ	**Rata Peaks**	**31.21**	**173**	LR	LR	02 32 34.8	
	comp=Z,94nm,18.6s,baz=344,slow=34						
WRA	**Warramunga Arr**	**31.46**	**252**	P	**P**	**02 21 22.7**	**+0.1**
	0.3nm,0.5s,baz=83,slow=8.7,SNR=6.0						
WRA				LR	LR	02 33 23.3	
	comp=Z,74nm,18.5s,baz=96,slow=35						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**32.58**	**246**	P	**P**	**02 21 32.2**	**-0.1**
	0.7nm,0.6s,baz=76,slow=9.3,SNR=7.8						
ASAR				LR	LR	02 34 17.9	
	comp=Z,89nm,19.5s,baz=124,slow=36						
	0.7nm,0.6s						
GUMO	**Guam**	**33.63**	**320**	LR	LR	02 33 31.7	
	comp=Z,114nm,21.9s,baz=110,slow=33						
BBOO	**Buckleboo**	**34.14**	**229**	P	**P**	**02 21 46.9**	**+1.1**
PPT2	**Papeete2**	**42.82**	**102**	*e*LR	LR	02 35 03.3	
	comp=Z,93nm,28.5s						
TBI	**Tubuai**	**43.25**	**111**	*e*LR	LR	02 35 18.2	
	comp=Z,72nm,38.8s						
KSRS	**Korea Array**	**61.51**	**326**	P	**P**	**02 25 17.0**	**-0.1**
	2.1nm,0.8s,baz=141,slow=7.1,SNR=8.1						
KSRS				LR	LR	02 48 30.3	
	comp=Z,8.5nm,21.4s,baz=190,slow=33						
	2.1nm,0.8s						
SHEM	**Shemya Is, Ala**	**65.47**	**5**	LR	LR	02 49 31.3	
	comp=Z,17nm,20.0s,baz=210,slow=32						
PETK	**Petropavlovsk-**	**65.92**	**354**	LR	LR	02 49 16.7	
	comp=Z,22nm,19.4s,baz=84,slow=31						
KLR	**Kul'dur**	**68.75**	**336**	LR	LR	02 52 05.5	
	comp=Z,31nm,21.1s,baz=42,slow=32						
MA2	**Magadan**	**73.08**	**352**	LR	LR	02 57 41.8	
	comp=Z,10nm,19.2s,baz=151,slow=35						
CMAR	**Chiang Mai Arr**	**73.25**	**294**	P	**P**	**02 26 33.5**	**+1.8**
	2.2nm,0.4s,baz=121,slow=5.1,SNR=9.2						
CMAR				LR	LR	02 58 12.0	
	comp=Z,5.7nm,20.8s,baz=45,slow=35						
	2.2nm,0.4s						
QSPA	**South Pole Qui**	**77.35**	**180**	P	**P**	**02 26 54.8**	**+0.1**
QSPA				IAmb	IAmb	02 27 04.3	
	comp=Z,4.5nm,0.9s						
KDAK	**Kodiak Island**	**77.89**	**21**	LR	LR	02 55 50.9	
	comp=Z,108nm,18.8s,baz=176,slow=32						
ULN	**Ulaanbaatar**	**79.92**	**324**	P	**P**	**02 27 08.6**	**-0.5**
ULN				IAmb	IAmb	02 27 11.0	
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**80.28**	**324**	P	**P**	**02 27 11.6**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=141,slow=6.7,SNR=6.1						
	comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	**80.28**	**324**	P	**P**	**02 27 11.1**	**+0.1**
SONM				IAmb	IAmb	02 27 15.0	
	comp=Z,1.7nm,0.9s						
ILAR	**Eielson Array**	**84.87**	**18**	P	**P**	**02 27 34.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=242,slow=4.9,SNR=6.5						
	comp=Z,0.4nm,0.6s						
ANMO	**Albuquerque**	**94.92**	**55**	LR	LR	03 06 34.9	
	comp=Z,46nm,18.2s,baz=330,slow=33						
MKAR	**Makanchi Array**	**95.06**	**317**	P	**P**	**02 28 23.4**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=94,slow=6.6,SNR=10						
MKAR				LR	LR	03 10 16.1	
	comp=Z,11nm,21.1s,baz=136,slow=35						
	comp=Z,2.5nm,0.8s						
ARCES	**ARCESS Array B**	**118.03**	**345**	PKP	**PKPdf**	**02 33 44.6**	**-1.4**
	comp=Z,2.8nm,1.0s,baz=28,slow=4.1,SNR=3.8						
WDD	**Wied Dalam**	**145.65**	**317**		**PKPdf**	**02 34 37.0**	**-1.5**
TORD	**Torodi Ar. Bea**	**164.97**	**274**	PKPab	**PKPab**	**02 36 02.6**	**+1.0**
	comp=Z,2.6nm,0.9s,baz=77,slow=5.2,SNR=10						

IDC 14 02:18:34.0±1.3, 29.°28S×178.°80W, h0km, mb3.4/2, mbtmp3.6/3, ML4.0/1, Error ellipse: s-maj=53.8km s-min=15.7km az=176.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.77**	**88**	Pn	Pn	02 18 52.1	+0.1
	58nm,0.3s,baz=191,slow=23,SNR=5.8						
RAO				Sn	Sn	02 19 05.3	+1.1
	175nm,0.3s,baz=114,slow=20,SNR=7.4						
URZ	**Urewera**	**9.59**	**200**	Pn	Pn	02 20 53.2	0.0
	1.5nm,0.3s,baz=318,slow=5.3,SNR=6.2						
URZ				Sn	Sn	02 22 30.1	-11
	2.4nm,0.3s,baz=106,slow=22,SNR=7.8						
	2.9nm,0.3s						
ASAR	**Alice Springs**	**42.49**	**266**	P	P	02 26 31.5	+0.3
	0.2nm,0.6s,baz=106,slow=6.9,SNR=2.1						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**43.37**	**271**	P	P	02 26 38.1	-0.3
	0.3nm,0.4s,baz=110,slow=8.1,SNR=6.3						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**143.85**	**340**	PKP	PKPbc	02 38 09.0	+0.8
	0.4nm,0.4s,baz=62,slow=3.3,SNR=7.4						

IDC 14 02:18:59.3±5.8, 28.°14S×178.°67W, h58km±68km, mb3.2/2, mbtmp3.5/2, Error ellipse: s-maj=92.3km s-min=51.9km az=50.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.29**	**149**	P	Pn	02 19 20.3	-0.8
	1μm,0.2s,baz=80,slow=10,SNR=15						
RAO				S	Sn	02 19 37.5	+0.1
	2μm,0.3s,baz=81,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**42.68**	**265**	P	P	02 26 50.2	-0.5
	0.3nm,0.5s,baz=104,slow=7.7,SNR=2.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.46**	**270**	P	P	02 26 57.3	+0.3
	0.3nm,0.2s,baz=112,slow=7.8,SNR=7.8						
	0.3nm,0.2s						
FINES	**FINESS Array B**	**142.83**	**341**	PKP	PKPdf	02 38 24.3	-1.2
	2.2nm,0.7s,baz=55,slow=4.2,SNR=12						

*NOU **14** 03:06:17.2,37.°26S×179.°42E, h0km, MLv4.1/8, Off E. Coast of N. Island, N.Z.*
*WEL **14** 03:06:23.4±0.9,37°S±4.°×17°9E±.°, h16km±5km, M3.4/36, ML3.6/48, MLv3.4/36, Error ellipse: s-maj=0.0km s-min=0.0km az=91.6*
ISC 14 03:06:23.4±2.8, 37.°25S±0.°08×179.°0E±0.°1, h24km±15km, n71, σ1.°01/83, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.61**	**239**	P	**Pn**	**03 06 34.5**	**-2.1**
MXZ				S	**Sb**	**03 06 40.3**	**-3.4**
MXZ	**Matakaoa Point**	**0.61**	**239**	P	**Pn**	**03 06 34.5**	**-2.1**
WMGZ	**Waiomatatini S**	**0.72**	**217**	P	**Pb**	**03 06 38.4**	**+1.1**
WMGZ				S	**Sb**	**03 06 47.9**	**+1.1**
PKGZ	**Pakihiroa**	**0.95**	**227**	P	**Pn**	**03 06 40.9**	**-0.4**
PKGZ				S	**Sb**	**03 06 54.4**	**+0.8**
PUZ	**Puketiti**	**1.00**	**214**	P	**Pb**	**03 06 42.4**	**+0.3**
PUZ				S	**Sb**	**03 06 55.3**	**+0.5**
HAZ	**Te Kaha**	**1.07**	**241**	P	**Pn**	**03 06 41.5**	**-1.3**
HAZ				S	**Sb**	**03 06 56.9**	**+0.1**
TWGZ	**Tauwhareparae**	**1.22**	**220**	P	**Pb**	**03 06 45.6**	**-0.1**
TWGZ				S	**Sb**	**03 07 01.4**	**+0.3**
RUGZ	**Raukumara Rang**	**1.25**	**235**	P	**Pn**	**03 06 45.7**	**+0.2**
RUGZ				S	**Sb**	**03 07 02.0**	**-0.1**
CNGZ	**Carnagh Statio**	**1.37**	**206**	P	**Pb**	**03 06 48.0**	**-0.4**
CNG

RIGZ	Rimuhau	1.74 213	P	Pn	03 06 52.1	0.0
RIGZ			S	Sn	03 07 13.5	-0.1
RAGZ	Rawiri	1.75 224	P	Pn	03 06 53.1	+0.7
URZ	Urewera	1.79 235	P	Pn	03 06 53.3	+0.6
URZ			S	Sn	03 07 15.2	+0.6
URZ	Urewera	1.79 235	P	Pn	03 06 53.5	+0.8
EDRZ	Edgecumbe	1.96 243	P	Pn	03 06 56.1	+0.9
SNGZ	Shannon Statio	2.00 219	P	Pn	03 06 55.7	-0.1
OPRZ	Ohinepanea	2.01 252	P	Pn	03 06 55.8	0.0
OPRZ			S	Sn	03 07 19.2	-0.9
KNZ	Kokohu	2.04 209	P	Pn	03 06 55.4	-0.9
MHGZ	Mahia Peninsul	2.08 203	P	Pn	03 06 56.9	+0.2
RTZ	Ruatahuna	2.08 228	P	Pn	03 06 57.5	+0.7
MUGZ	Murupara	2.13 234	P	Pn	03 06 58.0	+0.5
TARZ	Mount Tarawera	2.19 242	P	Pn	03 06 59.4	+1.1
RRRZ	Republican Roa	2.23 240	P	Pn	03 06 59.7	+0.9
RAHZ	Arahi	2.23 221	P	Pn	03 06 59.1	+0.2
WHHZ	Waihua	2.28 216	P	Pn	03 06 59.4	-0.1
MTHZ	Maungataniwha	2.32 226	P	Pn	03 07 00.7	+0.5
NMHZ	Naumai	2.51 222	P	Pn	03 07 03.4	+0.6
ARHZ	Aropaoanui	2.54 217	P	Pn	03 07 03.2	0.0
KUZ	Kuaotunu	2.65 280	P	Pn	03 07 03.1	-1.4
BKZ	Black Stump Fm	2.73 225	P	Pn	03 07 05.8	0.0
BKZ	Black Stump Fm	2.73 225	P	Pn	03 07 05.8	0.0
TOZ	Tahuroa Road	2.80 259	P	Pn	03 07 05.9	-0.7
CKHZ	Cape Kidnapper	2.83 211	P	Pn	03 07 05.8	-1.3
MCHZ	McNeill Hill	2.83 218	P	Pn	03 07 06.8	-0.2
KWHZ	Kaweka Forest	2.96 222	P	Pn	03 07 08.3	-0.5
GRZ	Great Barrier	2.99 288	P	Pn	03 07 08.8	-0.5
KAHZ	Kahuranaki	3.03 212	P	Pn	03 07 08.4	-1.4
MKAZ	Moumakai	3.04 272	P	Pn	03 07 09.1	-0.9
WIAZ	Waiheke Island	3.10 277	P	Pn	03 07 10.0	-0.8
KATZ	Kakaramea	3.10 235	P	Pn	03 07 11.6	+0.6
TMVZ	Te Maari	3.18 233	P	Pn	03 07 12.0	0.0
ETVZ	East Tongariro	3.18 233	P	Pn	03 07 12.1	+0.1
NTVZ	North Tongarir	3.19 233	P	Pn	03 07 12.2	+0.1
KRVZ	Karewarewa	3.21 234	P	Pn	03 07 12.6	+0.2
OTVZ	Oturere	3.23 233	P	Pn	03 07 12.7	-0.1
PXZ	Pawanui	3.23 210	P	Pn	03 07 10.7	-1.9
ETAZ	East Tamaki Re	3.24 274	P	Pn	03 07 12.7	0.0
NNVZ	North Ngauruho	3.24 233	P	Pn	03 07 13.4	+0.4
WTVZ	West Tongariro	3.25 234	P	Pn	03 07 13.4	+0.4
SNVZ	South Ngauruho	3.26 232	P	Pn	03 07 13.2	0.0
MOVZ	Moawhango	3.32 229	P	Pn	03 07 13.7	-0.2
TWVZ	Taurewa	3.33 236	P	Pn	03 07 14.7	+0.7
WHVZ	Whangaehu Hut	3.35 232	P	Pn	03 07 14.3	-0.1
FWVZ	Far West T-bar	3.35 232	P	Pn	03 07 14.4	-0.1
PNHZ	Pukenui	3.43 218	P	Pn	03 07 13.7	-1.8
HIZ	Hauiti	3.49 247	P	Pn	03 07 17.7	+1.5
HIZ	Hauiti	3.49 247	P	Pn	03 07 17.4	+1.2
VRZ	Vera Road	3.81 239	P	Pn	03 07 21.1	+0.5
WCZ	Waipu Caves	3.94 288	P	Pn	03 07 22.5	+0.2
WAZ	Wanganui	4.00 230	P	Pn	03 07 23.5	+0.3
BFZ	Birch Farm	4.03 211	P	Pn	03 07 21.2	-2.4
OHWZ	Ohakea	4.11 223	P	Pn	03 07 24.1	-0.6
NEZ	North Egmont	4.33 241	P	Pn	03 07 29.8	+2.0
KHEZ	Kahui Hut	4.40 241	P	Pn	03 07 30.9	+2.1
KHEZ	Kahui Hut	4.40 241	P	Pn	03 07 30.8	+2.1
OUZ	Omahuta	4.79 293	P	Pn	03 07 34.8	+0.8
OUZ	Omahuta	4.79 293	P	Pn	03 07 34.8	+0.8
KHZ	Kahutara	6.64 217	P	Pn	03 07 59.5	+0.1
	69nm,2.3s					
CTZ	Chatham Island	7.30 154	P	Pn	03 08 10.6	+2.1

*GUC **14** 03:32:10.2±0.7,24°.10S×67°.45W,h210km±6km,ML3.9*
*IDC **14** 03:32:12.6±1.3,23°.70S×67°.16W,h193km±17km,mb3.2/1,*
mbtmp3.8/5,Error ellipse: s-maj=27.9km s-min=22.6km
az=180.0

ISC 14 03:32:11.5±0.9,23°.95S±0'.09×67°.40W±0'.09,
h204km±10km,n20,σ1§18/31,6C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.22 324		eP	Pn	03 32 43.1	-0.6
AF01				eS	S	03 33 07.9	-0.4
AF01				IAML		03 33 10.6	
	comp=E,327nm,0.5s						
LVC	Limon Verde	1.93 313		P	Pn	03 32 49.7	-0.3
	comp=E,86nm,0.3s,baz=130,slow=6.3,SNR=305						
LVC				S	S	03 33 19.8	+0.5
	comp=E,62nm,0.4s,baz=130,slow=5.8,SNR=4.8						
LVC	Limon Verde	1.93 313	⇑	eP	Pn	03 32 49.6	-0.3
LVC				eS	S	03 33 19.8	+0.5
PB15	IPOC Station P	2.04 291	⇑	iP	Pn	03 32 50.2	-0.8
PB15				eS	S	03 33 21.1	0.0
PB06	IPOC Station P	2.35 301	⇑	iP	Pn	03 32 53.9	-0.3
PB06				eS	S	03 33 26.6	-0.2
PB06				IAML		03 33 31.1	
	comp=N,358nm,0.1s						
PB09	IPOC Station P	2.73 321	⇑	eP	Pn	03 32 59.3	+0.8
PB09				eS	S	03 33 36.3	+1.7
PB09				IAML		03 33 38.3	
	comp=N,168nm,0.2s						
PB03	IPOC Station P	2.88 311	⇑	eP	Pn	03 33 00.1	-0.1
PB03				eS	S	03 33 37.3	-0.2
PB03				IAML		03 33 39.2	
	comp=E,378nm,0.1s						
PB10	IPOC Station P	2.93 278		eP	Pn	03 32 59.2	-1.3
PB10				eS	S	03 33 36.3	-1.8
PB10				IAML		03 33 41.5	
	comp=E,78nm,0.3s						
PB04	IPOC Station P	3.00 302		eP	Pn	03 33 01.0	-0.5
PB04				eS	S	03 33 40.1	+0.1
PB04				IAML		03 33 49.5	
	comp=N,222nm,0.4s						
PB07	IPOC Station P	3.19 313	⇑	eP	Pn	03 33 03.8	+0.1
PB07				eS	S	03 33 44.2	+0.2
PB01	IPOC Station P	3.48 326		eP	Pn	03 33 07.1	0.0
PB01				eS	S	03 33 51.1	+0.9
PB02	IPOC Station P	3.49 318		eP	Pn	03 33 07.2	-0.1
PB02				eS	S	03 33 51.1	+0.7
AC01	Pan de Azucar	3.64 232		eP	Pn	03 33 03.6	-5.4
LPAZ	La Paz	7.65 355		P	Pn	03 34 02.8	+1.9
	comp=N,2.1nm,0.4s,baz=155,slow=6.4,SNR=22						
CPUP	Villa Florida	9.43 107		P	Pn	03 34 23.9	+0.7
	comp=N,1.2nm,0.5s,baz=277,slow=14,SNR=6.0						
SIV	San Ignacio	9.90 38		P	Pn	03 34 26.3	-3.2
	comp=N,1.3nm,0.4s,baz=225,slow=14,SNR=9.2						
PLCA	Paso Flores	16.95 188		P	Pn	03 35 59.8	+2.8
	comp=N,1.3nm,0.6s,baz=348,slow=12,SNR=7.7						
BDFB	Brasilia	20.00 69		P	P	03 36 27.2	-1.7
	comp=N,2.2nm,0.4s,baz=273,slow=10,SNR=5.4						
TORD	Torodi Ar. Bea	76.89 69		P	P	03 43 41.4	-0.2
	comp=N,0.3nm,0.5s,baz=260,slow=6.0,SNR=4.1						
	comp=N,0.3nm,0.5s						
MKAR	Makanchi Array	146.71 39		PKPbc	PKiKP	03 51 31.6	-0.2
	comp=N,0.4nm,0.6s,baz=302,slow=3.2,SNR=2.2						

*OSPL **14** 03:45:15.2±3.7,20°.13N×70°.22W,h5km±13km,ML2.5*
*SSNC **14** 03:45:17.6±3.1,21°.17N×70°.50W,h33km±47km,MD3.9*

ISC 14 03:45:14.0±1.3,20°.10N±0'.05×70°.30W±0'.06,h10km,n13,
σ1§91/16,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.78 211		iP	Pg	03 45 29.6	+0.6
SC01				eS	Sb	03 45 41.8	+1.5
SC01				IAML		03 45 45.4	
	comp=Z,146nm,0.4s						
LONA1	Toro Cenizo, N	0.82 150		eS	Sg	03 45 40.5	0.0
LODA1	ITESIL, Dajabo	1.44 248		eS	Sn	03 45 59.5	+0.6
SDDR	Presa de Saban	1.45 220		iP	Pn	03 45 40.2	-0.1
SDDR				IAML		03 46 03.6	
	comp=Z,48nm,0.3s						
GRTK	Grand Turk	1.61 331		iP	Pn	03 45 42.8	+0.3
GRTK				eS	Sn	03 46 04.4	+1.1
GRTK				IAML		03 46 04.8	
	comp=Z,200nm,0.5s						
SDD	Santo Domingo	1.67 167		iP	Pn	03 45 42.8	-0.5
SDD				eS	Sn	03 46 04.1	-0.7
BANI	BANI	1.70 182		iP	Pn	03 45 39.6	-4.2
BANI				eS	Sn	03 46 03.0	-2.6
BANI				IAML		03 46 05.9	
	comp=Z,98nm,0.3s						
PAPH	Port-au-Prince	2.46 231		iP	Pn	03 45 56.5	+2.4
LOPE2	Hotel El Peder	2.47 214		iP	Pn	03 45 56.0	+1.7
CRPR	Cabo Rojo, PR	3.66 124		iP	Pn	03 46 10.9	+0.2
CRPR				IAML		03 46 54.8	
	comp=Z,24nm,1.5s						
GTBY	Guantanamo Bay	4.53 269		eP	Pn	03 46 21.9	-0.7
GTBY				eS	Sn	03 47 11.4	-4.0
GTBY	Guantanamo Bay	4.53 269		eS	Sn	03 47 12.1	-3.3
GTBY				IAML		03 47 22.7	
	comp=Z,4.2nm,0.8s						
CCCC	Cccc	7.08 280		eP	Pn	03 46 50.8	-6.9
CCCC				eS	Sn	03 48 03.5	-15
CCCC				IAML		03 48 06.6	
	comp=N,1.4nm,0.5s						
CCCC				IAML		03 48 07.7	
	comp=E,1.3nm,0.3s						

*IDC **14** 03:50:27.1±1.0,19°.51N×62°.76W,h0km,mb3.8/8,*
mbtmp3.9/11,ML3.4/3,MS3.2/25,Error ellipse:
s-maj=26.5km s-min=20.1km az=77.0
*TRN **14** 03:50:28.8,19°.56N×62°.73W,h38km,MD4.7*
*NEIC **14** 03:50:30.7±1.2,19°.54N±0'.10×62°.79W±0'.06,h33km±10km,*
mb4.4/7,Error ellipse: s-maj=14.6km s-min=7.3km
az=194.0

ISC 14 03:50:30.7±2.2,19°.46N±0'.07×62°.83W±0'.06,h28km±15km,
n122,σ1§19/112,mb3.9/10,MS3.3/21,2C,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	St. Maarten	1.42 189			Pb	03 50 55.8	-0.8
SMRT	St. Maarten	1.42 189	⇑	iP	Pb	03 50 55.7	-0.8
SMRT				eS	Sb	03 51 14.9	+0.7
ANWB	Willy Bob	2.04 151		Pn	Pn	03 51 02.4	-0.8
ANWB	Willy Bob	2.04 151		eP	Pn	03 51 02.1	-1.1
ANWB				eS	Sn	03 51 26.5	-1.2
STVI	Saint Thomas	2.29 242			Pn	03 51 07.6	+0.9
ANDO	Antigua, Disas	2.52 158		eP	Pn	03 51 09.8	0.0
ANDO				eS	Sn	03 51 39.4	-0.2
CUPR	Culebra, Puert	2.59 244		Pn	Pn	03 51 11.6	+0.8
ANBD	Bethesda, Anti	2.60 157		eP	Pn	03 51 10.4	-0.5
ANBD				eS	Sn	03 51 41.8	+0.1
MBFL	Flemmings, Mon	2.76 168	⇑	iP	Pn	03 51 14.0	+0.9
MBFL				eS	Sn	03 51 47.1	+1.6
CBYP	Canovanas	3.10 248			Pn	03 51 18.5	+0.6
ABD	La Joyeuse, An	3.23 156			Pn	03 51 19.8	+0.3
ABD	La Joyeuse, An	3.23 156		eP	Pn	03 51 19.9	+0.3
GCPR	Guaynabo City	3.29 250			Pn	03 51 19.8	-0.6
GDHS	Morne Mazeau,	3.33 162			Pn	03 51 21.3	+0.3
SJG	San Juan	3.42 248		Pn	Pn	03 51 22.5	+0.4
	16nm,0.3s,baz=72,slow=12,SNR=42						
SJG				Sn	Sn	03 52 02.1	+0.3
	36nm,0.3s,baz=324,slow=11,SNR=11						
SJG				LR	LR	03 52 44.4	
	comp=Z,131nm,20.7s,baz=236,slow=39						
	55nm,0.4s						
SJG	San Juan	3.42 248			Pn	03 51 22.2	0.0
SJG	San Juan	3.42 248		eP	Pn	03 51 22.7	+0.5
GDSD	La Dsirade Is	3.55 151		Pn	Pn	03 51 23.0	-1.0
CBE	Ff, Capester	3.56 161			Pn	03 51 24.7	+0.5
CBE	Ff, Capester	3.56 161		eP	Pn	03 51 24.4	+0.1
CBE				eS	Sn	03 52 06.0	+0.5
EMPR	Esperanza - Ma	3.63 255			Pn	03 51 25.1	-0.1
TBG	Guadaloupe-3	3.76 162		eP	Pn	03 51 28.1	+1.2
TBG				eS	Sn	03 52 10.8	+0.5
TDBA	Terre de Bas,	3.76 162			Pn	03 51 27.8	+0.9
TDBA	Terre de Bas,	3.76 162		eP	Pn	03 51 27.7	+0.7
TDBA				eS	Sn	03 52 09.6	-0.8
MAGL	Barre de l'ile	3.79 157		eP	Pn	03 51 27.6	+0.3
MAGL				eS	Sn	03 52 09.9	-1.0
CELP	Cerrillos	3.81 249		Pn	Pn	03 51 28.0	+0.4
AOPR	Arecibo Observ	3.88 254			Pn	03 51 28.4	-0.2
AOPR	Arecibo Observ	3.88 254		eP	Pn	03 51 28.3	-0.2
MDCT	Cottage Hill,	4.04 161		eP	Pn	03 51 31.6	+0.9
MDCT	Cottage Hill,	4.04 161		eS	Sn	03 52 17.4	+0.4
MDVC	Dominica, Viel	4.06 160		eP	Pn	03 51 32.1	+1.2
MDVC	Dominica, Viel	4.06 160		eS	Sn	03 52 17.4	-0.2
AGPR	Aguadilla, PR	4.17 257			Pn	03 51 31.4	-1.1
DSLB	Salisbury	4.22 161		eP	Pn	03 51 34.0	+0.8
DSLB	Salisbury	4.22 161		eS	Sn	03 52 21.7	+0.1
MLPR	Magueyes Islan	4.26 250		Pn	Pn	03 51 34.0	+0.2
PRSN	Puerto Rico Se	4.27 254			Pn	03 51 33.3	-0.5
CRPR	Cabo Rojo, PR	4.30 251		Pn	Pn	03 51 34.5	+0.2
MDN	Morne-Daniel	4.34 161		eP	Pn	03 51 35.3	+0.5
SVN	Savane Anatole	4.86 161		eP	Pn	03 51 42.2	+0.2
PCM	Pelee Case Pet	4.87 161		eP	Pn	03 51 42.6	+0.4
CXM	Morne La Croix	4.88 161		eP	Pn	03 51 42.8	+0.2
BAMF	Morne Balai	4.89 161		eP	Pn	03 51 43.1	+0.6
GBMF	Grand Be	4.90 161		eP	Pn	03 51 43.7	+1.1
PML	Morne Lenard	4.91 161		eP	Pn	03 51 43.5	+0.7
FDF	Fort de France	4.96 161		Pn	Pn	03 51 42.6	-1.0
FDF	Fort de France	4.96 161		eP	Pn	03 51 43.8	+0.3
FDF	Fort de France	4.96 161		eS	Sn	03 52 38.3	-1.7
ILAM	Ilet Lapin Mar	5.02 158		eP	Pn	03 51 44.1	-0.1
ILAM	Ilet Lapin Mar	5.02 158		eS	Sn	03 52 39.6	-1.7
ZAM	Aeronautique	5.15 160		eP	Pn	03 51 46.5	+0.4
LPMF	Morne Lapointe	5.17 160		eP	Pn	03 51 45.3	-1.1
TRMF	Trois Ilets	5.18 161		eP	Pn	03 51 47.0	+0.6
BIM	Bigot	5.19 161		eP	Pn	03 51 47.0	+0.4
BIM	Bigot	5.19 161		eS	Sn	03 52 44.1	-1.6
MVM	Montagne Vaucl	5.21 159		eP	Pn	03 51 47.0	0.0
MPOM	Morne Pois Mar	5.33 159		eP	Pn	03 51 48.4	-0.1
MPOM	Morne Pois Mar	5.33 159		eS	Sn	03 52 47.5	-1.5
PCDR	Punta Cana, DR	5.34 261		Pn	Pn	03 51 46.8	-1.8
SLBI	Saint Lucia, B	5.69 162		eP	Pn	03 51 53.8	+0.4
SLBI	Saint Lucia, B	5.69 162		eS	Sn	03 52 56.3	-1.6
MCLT	Moule a Chique	5.99 162		eP	Pn	03 51 58.7	+1.1
MCLT	Moule a Chique	5.99 162		eS	Sn	03 53 03.2	-2.3
SVB	Belmont	6.33 166		eP	Pn	03 52 03.8	+1.5
SVB	Belmont	6.33 166		eS	Sn	03 53 11.2	-2.6
BBGH	Gun Hill	7.02 153		eP	Pn	03 52 12.4	+0.7
GRGR	Grenville	7.37 171		eP	Pn	03 52 17.2	+0.6
SC01	Santiago de lo	7.45 271			Pn	03 52 15.6	-2.1
SDDR	Presa de Saban	8.01 268			Pn	03 52 24.1	-1.3
SDDR	Presa de Saban	8.01 268		eP	Pn	03 52 25.2	-0.1
SDDR	Presa de Saban	8.01 268		eP	Pn	03 52 25.8	+0.5
TOSP	Speyside	8.41 164		eP	Pn	03 52 33.0	+2.2
TRN	Trinidad (W)	8.87 171		eP	Pn	03 52 37.7	+0.6
BAUV	El Baul	11.61 206			Pn	03 53 15.3	+0.6
BAUV	El Baul	11.61 206		eP	Pn	03 53 15.3	+0.6
BAUV	El Baul	11.61 206		eS	Sn	03 55 17.7	-5.7
SDV	Santo Domingo	12.94 217		Pn	Pn	03 53 35.2	+2.1
	0.9nm,0.3s,baz=24,slow=12,SNR=6.3						
SDV				LR	LR	03 59 50.5	
	comp=Z,68nm,18.0s,baz=54,slow=43						
	3.5nm,0.3s						
OCAC	Ocana	15.09 224		eP	P	03 54 07.7	+0.4
SJCC	San Jacinto, C	15.26 233		eP	P	03 54 08.2	-0.9
ZARC	Zaragoza, Cauc	16.67 226		eP	P	03 54 25.9	+1.3
RUSC	La Rusia	16.77 218		eP	P	03 54 27.6	+1.3
PTBC	PUERTO BERRIO,	17.11 223		eP	Pn	03 54 26.7	-1.3
MDP	Montagnes des	17.38 144		LR	LR	04 00 44.5	
	comp=Z,59nm,21.6s,baz=352,slow=36						
SPBC	San Pablo de B	17.55 220		eP	P	03 54 35.2	+0.7
HELC	Santa Helena	18.07 225		eP	P	03 54 42.0	+1.5
NORC	Norcasia	18.11 222		eP	P	03 54 41.7	+1.0
ROSC	El Rosal	18.34 219		P	Pn	03 54 43.9	+0.3
	1.2nm,0.3s,baz=112,slow=19,SNR=2.9						
ROSC				LR	LR	04 02 45.7	
	comp=Z,81nm,19.6s,baz=44,slow=40						
	4.7nm,0.4s						
ROSC	El Rosal	18.34 219		P	Pn	03 54 42.4	-1.3
ROSC				IAmb	IAmb	03 54 50.0	
	comp=Z,11nm,0.5s						
GUY2C	Guyana, Caldas	18.69 222		eP	P	03 54 43.7	-3.7
YOTC	Yotoco, Valle	20.26 222		eP	Pn	03 55 04.2	-2.2
TKL	Tuckaleechee C	24.52 315		LR	LR	04 06 50.8	
	comp=Z,45nm,18.7s,baz=70,slow=40						
APG	El Apazote	26.75 265		LR	LR	04 08 42.1	
	comp=Z,38nm,20.0s,baz=72,slow=41						
ACSO	Alum Creek Sta	26.98 324		P	P	03 56 08.3	-1.8
CMIG	Matias Romero	30.51 271		LR	LR	04 09 37.5	
	comp=Z,27nm,21.7s,baz=142,slow=38						
NNA	Nana	34.16 205		LR	LR	04 12 01.7	
	comp=Z,35nm,19.7s,baz=346,slow=38						
SIV	San Ignacio	35.27 177		LR	LR	04 11 56.6	
	comp=Z,52nm,19.2s,baz=300,slow=36						
SCHQ	Schefferville	35.45 356		LR	LR	04 09 34.1	
	comp=Z,46nm,19.2s,baz=154,slow=32						
LPAZ	La Paz	35.90 189		P	P	03 57 29.2	-0.2
	comp=Z,1.1nm,0.8s,baz=312,slow=7.5,SNR=5.5						
LPAZ				LR	LR	04 12 53.6	
	comp=Z,61nm,19.6s,baz=356,slow=37						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	38.30 293		P	P	03 57 50.3	+1.0
	comp=Z,0.4nm,0.8s,baz=95,slow=11,SNR=3.4						
	comp=Z,0.4nm,0.8s						
LVC	Limon Verde	42.23 188		LR	LR	04 17 40.1	
	comp=Z,51nm,18.9s,baz=346,slow=39						
FRB	Frobisher Bay	44.43 356		LR	LR	04 14 48.0	
	comp=Z,49nm,19.8s,baz=236,slow=33						
PD31	Pinedale Array	45.55 311		P	P	03 58 47.4	-1.1
PDAR	Pinedale Array	45.55 311		P	P	03 58 49.0	+0.5
	comp=Z,1.3nm,0.7s,baz=99,slow=9.2,SNR=8.7						
PDAR				PcP	PcP	04 00 27.3	+0.5
	comp=Z,0.2nm,0.5s,baz=152,slow=4.1,SNR=2.1						
	comp=Z,1.3nm,0.7s						
CPUP	Villa Florida	45.83 173		LR	LR	04 18 40.6	
	comp=Z,15nm,22.0s,baz=33,slow=37						
HWUT	Hardware Ranch	46.71 309		P	P	03 58 57.4	-0.2
HWUT				IAmb	IAmb	03 58 59.3	
	comp=Z,3.4nm,0.8s						
BGU	Big Grassy Mou	47.64 308		P	P	03 59 02.6	-2.2
BGU				IAmb	IAmb	03 59 07.1	
	comp=Z,2.6nm,1.0s						
SFJD	Kangerlussuaq	48.17 6		LR	LR	04 17 42.3	
	comp=Z,32nm,19.9s,baz=186,slow=34						
HRY	Holter Researc	48.22 316		P	P	03 59 07.8	-1.3
PFO	Pinyon Flats O	49.50 298		LR	LR	04 21 13.8	
	comp=Z,30nm,20.0s,baz=310,slow=37						
NVAR	Mina Array Bea	51.32 304		P	P	03 59 34.1	+1.2
	comp=Z,0.8nm,0.8s,baz=116,slow=8.1,SNR=1.4						
	comp=Z,0.8nm,0.8s						
NEW	Newport	52.10 317		P	P	03 59 38.8	+0.4
	comp=Z,2.7nm,0.7s,baz=91,slow=9.0,SNR=5.5						
	comp=Z,2.7nm,0.7s						
BORG	Borgarnes	52.97 21		LR	LR	04 19 02.0	
	comp=Z,13nm,20.3s,baz=265,slow=32						
RES	Resolute Bay	57.88 350		LR	LR	04 24 10.7	
	comp=Z,63nm,18.6s,baz=38,slow=35						
PLCA	Paso Flores	60.31 187		P	P	04 00 38.8	+1.8
	comp=Z,1.8nm,0.8s,baz=334,slow=3.4,SNR=4.4						
PLCA				LR	LR	04 30 01.7	
	comp=Z,70nm,20.2s,baz=294,slow=39						
	comp=Z,1.8nm,0.8s						
TORD	Torodi Ar. Bea	61.95 85		P	P	04 00 49.1	+0.5
	comp=Z,1.0nm,1.0s,baz=289,slow=8.8,SNR=3.6						
	comp=Z,1.0nm,1.0s						
NOA	NORSAR Array B	65.45 31		LR	LR	04 24 33.3	
	comp=Z,16nm,21.7s,baz=270,slow=31						
HFS	Hagfors	66.63 32		LR	LR	04 26 20.5	
	comp=Z,22nm,20.1s,baz=258,slow=32						
ILAR	Eielson Array	70.06 333		P	P	04 01 40.1	+0.2
	comp=Z,0.6nm,0.8s,baz=100,slow=5.0,SNR=5.7						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	72.60 30		LR	LR	04 32 43.1	
	comp=Z,16nm,18.1s,baz=314,slow=35						
AKASG	Malin Array Be	76.47 41		LR	LR	04 35 16.9	
	comp=Z,14nm,18.3s,baz=352,slow=35						
ARU	Arti	89.87 28		LR	LR	04 39 53.3	
	comp=Z,13nm,20.2s,baz=312,slow=33						
MBAR	Mbarara	93.56 89		LR	LR	04 42 10.6	
	comp=Z,10nm,20.2s,baz=224,slow=33						

*IDC **14** 04:04:44.1±1.2,5°.90N×126°.79E,h0km,mb3.8/4,*
mbtmp3.8/4,MS2.6/2,Error ellipse: s-maj=110.4km
s-min=26.1km az=65.0
*DJA **14** 04:04:58.0±0.7,5°.7N±5°.×12°.6E±°,h127km±8km,M4.2/8,*
mb4.3/7,mB4.6/3,MLv4.2/8,Mw(mB)3.7/3

ISC 14 04:04:57.1±0.8,5°.19N±0'.07×126°.08E±0'.09,h100km,n20,
σ2§23/20,mb3.9/4,2C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	1.44 308	⇓	iP	Pn	04 05 21.4	-1.4
GSPH				i S	Sn	04 05 40.9	-1.3
SGSI	Sangihe	1.59 200		P	Pn	04 05 26.1	+1.5
DAV	Davao City (W)	1.93 345		P	Pn	04 05 32.1	+3.2
KCP	Kidapawan	2.06 331	⇑	eP	Pn	04 05 31.5	+0.9
KCP				i S	Sn	04 05 55.5	-0.6
CTBH	Cotabato--PC H	2.72 318	⇑	eP	Pn	04 05 47.4	+8.2
BIPH	Bislig	2.99 5	⇓	eP	Pn	04 05 43.1	+0.3
BIPH				eS	Sn	04 06 23.1	+5.3
GAMI	Galela, Maluku	3.74 153		P	Pn	04 05 52.6	-0.3
GTOI	Gorontalo	5.47 214		P	Pn	04 06 18.5	+2.3
	0.1nm24nm,0.8s						
LBMI	Labuha	5.96 166		P	Pn	04 06 23.8	+0.8
	0.3nm80nm,0.7s						
MRSI	Marisa	6.25 222		P	Pn	04 06 29.6	+2.8
	0.2nm707nm66nm,0.6s						
SANI	Sanana	7.19 181		P	Pn	04 06 40.4	+0.7
	0.1nm650nm17nm,1.0s						
NLAI	Namlea	8.44 173		P	Pn	04 06 56.7	+0.1
GUMO	Guam	20.31 64		LR	LR	04 16 11.2	
	comp=Z,16nm,18.2s,baz

TERO				AML	AML	
	comp=N,57850µm,0.1s					
TERO				AML	AML	
	comp=E,41450µm,0.4s					
T1241	**Roccafluvione,**	**0.23**	**21**	⇓P	**Pg**	**04 09 25.4 -0.1**
T1241				S	**Sg**	**04 09 29.1 +0.3**
T1241				AML	AML	
	comp=N,23550µm,0.2s					
T1241				AML	AML	
	comp=E,39300µm,0.2s					
T1241				AML	AML	
	comp=E,70µm,0.8s					
T1241				AML	AML	
	comp=N,69µm,0.9s					
T1241				AML	AML	
	comp=E,70µm,0.8s					
T1245	**Castelsantange**	**0.23**	**335**	P	**Pg**	**04 09 25.6 0.0**
T1245				S	**Sg**	**04 09 29.7 +0.6**
T1245				AML	AML	
	comp=E,18450µm,0.5s					
T1245				AML	AML	
	comp=N,24150µm,0.3s					
T1245				AML	AML	
	comp=N,22350µm,0.3s					
T1245				AML	AML	
	comp=E,18400µm,0.5s					
T1245				AML	AML	
	comp=N,24200µm,0.3s					
T1245				AML	AML	
	comp=E,17750µm,0.5s					
T1245				AML	AML	
	comp=E,18400µm,0.4s					
NRCA	**Norcia**	**0.24**	**321**	⇑P	**Pg**	**04 09 26.8 +1.0**
MMO1	**Montemonaco**	**0.25**	**1**	P	**Pg**	**04 09 26.0 0.0**
MMO1				S	**Sg**	**04 09 30.1 +0.5**
GIGS	**Gran Sasso**	**0.27**	**137**	⇑P	**Pg**	**04 09 25.8 -0.5**
GIGS				S	**Sg**	**04 09 29.9 -0.1**
GIGS				AML	AML	
	comp=E,2420µm,1.5s					
GIGS				AML	AML	
	comp=E,2425µm,1.5s					
GIGS				AML	AML	
	comp=N,3670µm,0.4s					
MC2	**Monte Cornacci**	**0.28**	**340**	⇑P	**Pg**	**04 09 26.6 0.0**
MC2				S	**Sg**	**04 09 31.7 +1.2**
T1217	**Poggiodomo (PG**	**0.29**	**283**	P	**Pg**	**04 09 26.5 -0.2**
T1217				S	**Sg**	**04 09 31.3 +0.6**
T1217				AML	AML	
	comp=E,11650µm,0.5s					
T1217				AML	AML	
	comp=N,17900µm,0.3s					
T1217				AML	AML	
	comp=N,17700µm,0.2s					
T1217				AML	AML	
	comp=E,11700µm,0.5s					
T1217				AML	AML	
	comp=E,11500µm,0.3s					
T1217				AML	AML	
	comp=N,17850µm,0.3s					
T1217				AML	AML	
	comp=N,17750µm,0.2s					
AQU	**L'Aquila**	**0.30**	**168**	⇑P	**Pg**	**04 09 26.5 -0.3**
AQU				S	**Sg**	**04 09 31.1 +0.3**
AQU				AML	AML	
	comp=N,5200µm,0.6s					
AQU				AML	AML	
	comp=E,5485µm,0.4s					
AQU				AML	AML	
	comp=N,5205µm,0.6s					
AQU				AML	AML	
	comp=E,5430µm,1.1s					
AQU				AML	AML	
	comp=N,5060µm,0.6s					
T1216	**Preci, Frazion**	**0.33**	**318**	⇑P	**Pg**	**04 09 27.2 -0.2**
T1216				S	**Sg**	**04 09 32.7 +0.9**
T1216				AML	AML	
	comp=E,11950µm,0.4s					
T1216				AML	AML	
	comp=N,11550µm,0.3s					
T1216				AML	AML	
	comp=E,11925µm,0.4s					
T1216				AML	AML	
	comp=N,11550µm,0.3s					
T1211	**Morro Reatino**	**0.36**	**252**	⇑P	**Pg**	**04 09 27.6 -0.3**
T1211				AML	AML	
	comp=E,7940µm,0.4s					
T1211				AML	AML	
	comp=E,8035µm,0.4s					
T1211				AML	AML	
	comp=N,13490µm,0.2s					
T1211				AML	AML	
	comp=E,7940µm,0.4s					
T1211				AML	AML	
	comp=E,8035µm,0.4s					
T1211				AML	AML	
	comp=N,13460µm,0.2s					
T1211				AML	AML	
	comp=N,13500µm,0.2s					
T1215	**Vallo di Nera,**	**0.37**	**295**	P	**Pg**	**04 09 27.7 -0.3**
T1215				S	**Sg**	**04 09 34.0 +1.1**
T1215				AML	AML	
	comp=E,4265µm,0.8s					
T1215				AML	AML	
	comp=N,4720µm,0.2s					
T1215				AML	AML	
	comp=E,4295µm,0.8s					
T1215				AML	AML	
	comp=N,4640µm,0.2s					
T1215				AML	AML	
	comp=N,4715µm,0.2s					
T1215				AML	AML	
	comp=N,4720µm,0.2s					
T1215				AML	AML	
	comp=N,4640µm,0.2s					
T1215				AML	AML	
	comp=E,4265µm,0.8s					
T1215				AML	AML	
	comp=E,4300µm,0.8s					
FEMA	**Monte Fema**	**0.37**	**328**	⇑P	**Pg**	**04 09 28.6 +0.5**
FEMA				AML	AML	
	comp=N,6815µm,1.1s					
FEMA				AML	AML	
	comp=N,6820µm,1.2s					
FEMA				AML	AML	
	comp=E,8670µm,0.8s					
OFFI	**Offida**	**0.39**	**43**	⇑P	**Pb**	**04 09 29.1 -0.5**
OFFI				AML	AML	
	comp=E,19100µm,0.3s					
OFFI				AML	AML	
	comp=N,28500µm,0.6s					
FIAM	**Fiamignano**	**0.41**	**202**	⇑P	**Pg**	**04 09 28.3 -0.5**
FIAM				AML	AML	
	comp=E,7290µm,0.6s					
FIAM				AML	AML	
	comp=N,4650µm,0.7s					
ARRO	**Arrone**	**0.41**	**261**	⇑P	**Pg**	**04 09 28.5 -0.3**
ARRO				AML	AML	
	comp=N,5950µm,0.7s					
ARRO				AML	AML	
	comp=E,5140µm,0.2s					
GUMA	**Gualdo di Mace**	**0.42**	**2**	⇑P	**Pb**	**04 09 29.1 -0.9**
GUMA				AML	AML	
	comp=E,23250µm,0.3s					
GUMA				AML	AML	
	comp=N,22000µm,0.5s					
GUMA				AML	AML	
	comp=E,27950µm,0.3s					
GUMA				AML	AML	
	comp=N,26600µm,0.5s					
GUMA				AML	AML	
	comp=E,23250µm,0.3s					
GUMA				AML	AML	
	comp=N,22050µm,0.5s					
FDMO	**Fiordimonte**	**0.42**	**336**	⇑P	**Pg**	**04 09 28.8 -0.3**
FDMO				S	**Sb**	**04 09 35.9 -0.7**
FDMO				AML	AML	
	comp=E,4720µm,0.2s					
FDMO				AML	AML	
	comp=N,3650µm,0.3s					
FAGN	**Fagnano**	**0.43**	**153**	⇓P	**Pg**	**04 09 28.4 -0.8**
FAGN				AML	AML	
	comp=N,8730µm,0.3s					
FAGN				AML	AML	
	comp=E,9900µm,0.4s					
VCEL	**Villa Celiera**	**0.46**	**123**	⇑P	**Pg**	**04 09 29.7 -0.1**
VCEL				S	**Sb**	**04 09 37.4 -0.2**
VCEL				AML	AML	
	comp=E,11500µm,0.7s					
VCEL				AML	AML	
	comp=N,10730µm,0.3s					
VCEL				AML	AML	
	comp=N,10710µm,0.3s					
TRTR	**Tortoreto Alta**	**0.47**	**70**	⇑P	**Pb**	**04 09 30.7 -0.1**
TRTR				AML	AML	
	comp=E,12425µm,0.5s					
TRTR				AML	AML	
	comp=N,10750µm,0.5s					
CESI	**CESI - Serrava**	**0.47**	**320**	P	**Pg**	**04 09 29.8 -0.1**
CESI				AML	AML	
	comp=N,5885µm,0.2s					
CESI				AML	AML	
	comp=E,4265µm,0.3s					
MNTP	**Montappone**	**0.50**	**13**	P	**Pb**	**04 09 30.8 -0.6**
MNTP				AML	AML	
	comp=E,19400µm,0.6s					
MNTP				AML	AML	
	comp=N,18550µm,0.3s					
MNTP				AML	AML	
	comp=E,19400µm,0.6s					
T0110	**Collepietro**	**0.54**	**141**	P	**Pg**	**04 09 30.5 -0.7**
T0110				AML	AML	
	comp=E,6265µm,0.5s					
T0110				AML	AML	
	comp=N,6330µm,1.5s					
CESX	**Cesi**	**0.55**	**266**	P	**Pg**	**04 09 30.6 -0.7**
CESX				AML	AML	
	comp=E,4010µm,0.3s					
CESX				AML	AML	
	comp=N,3800µm,0.5s					
SEF1	**Sefro**	**0.57**	**331**	⇓P	**Pg**	**04 09 31.7 -0.1**
SEF1				AML	AML	
	comp=E,6360µm,0.3s					
SEF1				AML	AML	
	comp=N,4810µm,0.2s					
SEF1				AML	AML	
	comp=E,6355µm,0.3s					
ASSB	**Assisi San Ben**	**0.63**	**309**	P	**Pg**	**04 09 32.2 -0.6**
ASSB				S	**Sg**	**04 09 42.3 +1.2**
ASSB				AML	AML	
	comp=N,2725µm,1.4s					
ASSB				AML	AML	
	comp=E,2945µm,0.2s					
PTQR	**Pietraquaria**	**0.63**	**174**	P	**Pg**	**04 09 31.9 -1.0**
PTQR				AML	AML	
	comp=E,913µm,0.5s					
PTQR				AML	AML	
	comp=N,923µm,0.5s					
SNTG	**Esanatoglia**	**0.67**	**336**	P	**Pg**	**04 09 33.0 -0.7**
SNTG				AML	AML	
	comp=E,1345µm,0.5s					
SNTG				AML	AML	
	comp=E,1340µm,0.5s					
SNTG				AML	AML	
	comp=N,1555µm,0.6s					
SNTG				AML	AML	
	comp=N,1535µm,0.6s					
SNTG				AML	AML	
	comp=E,1345µm,0.5s					
EL6	**Elcito**	**0.70**	**347**	⇑P	**Pg**	**04 09 33.7 -0.5**
EL6				AML	AML	
	comp=E,3525µm,0.2s					
EL6				AML	AML	
	comp=E,3520µm,0.2s					
EL6				AML	AML	
	comp=N,5025µm,0.4s					
SRES	**S.Oreste - Sor**	**0.73**	**236**	⇓P	**Pg**	**04 09 34.1 -0.6**
SRES				AML	AML	
	comp=N,2610µm,0.4s					
SRES				AML	AML	
	comp=E,2685µm,0.3s					
ATCC	**AVT- Casa Cast**	**0.73**	**317**	⇓P	**Pg**	**04 09 34.5 -0.4**
ATCC				AML	AML	
	comp=E,2600µm,0.9s					
ATCC				AML	AML	
	comp=N,3020µm,0.7s					
ATCC				AML	AML	
	comp=E,2595µm,0.9s					
CING	**Cingoli**	**0.73**	**353**	⇑P	**Pb**	**04 09 34.3 -1.1**
CING				AML	AML	
	comp=E,4450µm,0.5s					
CING				AML	AML	
	comp=N,2700µm,1.6s					
CERT	**Cerreto**	**0.74**	**200**	⇑P	**Pg**	**04 09 33.8 -1.2**
CERT				AML	AML	
	comp=N,2190µm,1.1s					
CERT				AML	AML	
	comp=E,2305µm,0.4s					
MTCE	**Montecelio**	**0.76**	**215**	⇑P	**Pg**	**04 09 34.0 -1.2**
MTCE				AML	AML	
	comp=N,2275µm,0.4s					
MTCE				AML	AML	
	comp=E,3240µm,0.6s					
PP3	**Marolino**	**0.76**	**16**	⇑P	**Pn**	**04 09 35.6 -1.5**
PP3				AML	AML	
	comp=E,11820µm,0.6s					
PP3				AML	AML	
	comp=N,5805µm,0.4s					
PP3				AML	AML	
	comp=E,11830µm,0.6s					
PP3				AML	AML	
	comp=E,11810µm,0.6s					
PP3				AML	AML	
	comp=N,5805µm,0.4s					
PP3				AML	AML	
	comp=N,6070µm,0.4s					
FOSV	**Fossato di Vic**	**0.77**	**328**	⇓P	**Pg**	**04 09 34.9 -0.6**
FOSV				AML	AML	
	comp=N,2120µm,0.5s					
FOSV				AML	AML	
	comp=E,1800µm,0.3s					
FOSV				AML	AML	
	comp=N,2125µm,0.5s					
INTR	**Introdacqua**	**0.77**	**145**	⇑P	**Pg**	**04 09 34.4 -1.1**
INTR				AML	AML	
	comp=E,2µm,0.8s					
INTR				AML	AML	
	comp=N,1µm,1.1s					
INTR				AML	AML	
	comp=E,1575µm,0.8s					
INTR				AML	AML	
	comp=N,2255µm,1.1s					
INTR				AML	AML	
	comp=N,1µm,1.1s					
VVLD	**Villa Vallelon**	**0.81**	**164**	⇑P	**Pg**	**04 09 35.8 -0.4**
VVLD				AML	AML	
	comp=E,1046µm,1.1s					
VVLD				AML	AML	
	comp=N,998µm,0.9s					
RCAV	**Rocca di Cave**	**0.85**	**199**	⇑P	**Pg**	**04 09 38.7 +1.7**
RCAV				AML	AML	
	comp=E,3555µm,0.5s					
RCAV				AML	AML	
	comp=N,2370µm,1.1s					
MURB	**Monte Urbino**	**0.85**	**317**	⇑P	**Pg**	**04 09 36.7 -0.3**
MURB				AML	AML	
	comp=N,4395µm,0.4s					
MURB				AML	AML	
	comp=E,4255µm,0.3s					
MURB				AML	AML	
	comp=N,4425µm,0.4s					
MURB				AML	AML	
	comp=E,4685µm,0.8s					
LPEL	**Lama dei Pelig**	**0.88**	**133**	⇓P	**Pg**	**04 09 36.2 -1.4**
LPEL				AML	AML	
	comp=N,1520µm,0.8s					
LPEL				AML	AML	
	comp=E,1315µm,0.5s					
ARVD	**Arcevia**	**0.90**	**342**	⇑P	**Pg**	**04 09 37.1 -0.8**
ARVD				AML	AML	
	comp=E,1230µm,0.3s					
ARVD				AML	AML	
	comp=N,759µm,1.0s					
ARVD				AML	AML	
	comp=N,758µm,1.0s					
ATFO	**Monte Foce - G**	**0.91**	**323**	⇓P	**Pg**	**04 09 37.8 -0.4**
ATFO				AML	AML	
	comp=N,1315µm,0.5s					
ATFO				AML	AML	
	comp=E,1380µm,0.9s					
AOI	**Ancona**	**0.93**	**13**	⇓P	**Pb**	**04 09 38.1 -0.5**
AOI				S	**Sn**	**04 09 53.4 +0.6**
AOI				AML	AML	
	comp=E,2445µm,0.3s					
AOI				AML	AML	
	comp=N,1870µm,1.3s					
FRON	**Frontone**	**0.97**	**334**	⇑P	**Pg**	**04 09 38.7 -0.7**
FRON				AML	AML	
	comp=N,2265µm,0.4s					
FRON				AML	AML	
	comp=E,1365µm,0.3s					
ATVO	**AVT- Monte Val**	**0.99**	**318**	⇑P	**Pg**	**04 09 39.2 -0.6**
ATVO				AML	AML	
	comp=E,1080µm,1.3s					
ATVO				AML	AML	
	comp=N,859µm,0.6s					
COR1	**Corinaldo**	**1.01**	**347**	⇑P	**Pb**	**04 09 40.3 +0.2**
COR1				AML	AML	
	comp=E,1491µm,0.6s					
COR1				AML	AML	
	comp=N,3001µm,1.1s					
LRP	**Arpino**	**1.02**	**169**	P	**Pg**	**04 09 42.0 +1.7**
LRP				AML	AML	
	comp=E,451µm,0.7s					
LRP				AML	AML	
	comp=N,700µm,0.8s					
ATMI	**Monte Miggiano**	**1.03**	**312**	⇑P	**Pn**	**04 09 42.7 +1.7**
ATMI				AML	AML	
	comp=N,2915µm,0.9s					
ATMI				AML	AML	
	comp=E,2890µm,0.5s					
ATPI	**Pietralunga -**	**1.05**	**320**	⇓P	**Pg**	**04 09 40.6 -0.3**
ATPI				AML	AML	
	comp=N,763µm,0.4s					
ATPI				AML	AML	
	comp=E,1200µm,0.8s					
PIEI	**Pieia**	**1.06**	**327**	⇑P	**Pg**	**04 09 40.4 -0.7**
PIEI				AML	AML	
	comp=E,930µm,0.3s					
PIEI				AML	AML	
	comp=N,825µm,0.9s					
SACS	**San Casciano d**	**1.06**	**281**	P	**Pg**	**04 09 41.9 +0.8**
SACS				AML	AML	
	comp=N,1235µm,1.2s					
SACS				AML	AML	
	comp=E,1250µm,0.5s					
SACS				AML	AML	
	comp=E,1325µm,0.5s					
SACS				AML	AML	
	comp=N,1205µm,1.2s					
MPAG	**Monte Paganucc**	**1.06**	**338**	⇑P	**Pb**	**04 09 41.1 +0.1**
MPAG				AML	AML	
	comp=N,1178µm,0.8s					
MPAG				AML	AML	
	comp=E,1500µm,0.7s					
GIUL	**Giuliano Di Ro**	**1.09**	**183**	⇑P	**Pg**	**04 09 41.0 -0.6**
GIUL				AML	AML	
	comp=E,795µm,0.9s					
GIUL				AML	AML	
	comp=N,826µm,0.6s					
NARO	**Abbazia di Nar**	**1.10**	**331**	⇑P	**Pg**	**04 09 41.1 -0.8**
NARO				AML	AML	
	comp=E,854µm,0.8s					
NARO				AML	AML	
	comp=N,690µm,1.2s					
FSSB	**Fossombrone**	**1.12**	**339**	P	**Pb**	**04 09 41.8 -0.1**
FSSB				AML	AML	
	comp=E,3425µm,1.4s					
FSSB				AML	AML	
	comp=N,3680µm,0.3s					
LATE	**Laterza**	**1.12**	**269**	⇓P	**Pg**	**04 09 41.9 -0.3**
TOLF	**Tolfa**	**1.14**	**240**	P	**Pg**	**04 09 41.4 -1.1**
TOLF				AML	AML	
	comp=E,1330µm,0.7s					
TOLF				AML	AML	
	comp=N,1185µm,1.2s					
BADI	**Badiali**	**1.17**	**318**	⇓P	**Pg**	**04 09 43.2 +0.1**
CAFI	**Castiglion Fio**	**1.21**	**305**	⇓P	**Pg**	**04 09 42.9 -0.9**
CAFI				AML	AML	
	comp=N,637µm,1.2s					
CAFI				AML	AML	
	comp=N,680µm,1.2s					
CAFI				AML	AML	
	comp=E,752µm,0.5s					
CAFI				AML	AML	
	comp=E,782µm,0.5s					
PE3	**Peglio**	**1.21**	**330**	⇓P	**Pg**	**04 09 42.0 -1.9**
MCIV	**Monte Civitell**	**1.22**	**277**	⇑P	**Pg**	**04 09 43.5 -0.6**
MCIV				AML	AML	
	comp=E,502µm,0.9s					
MCIV				AML	AML	
	comp=N,396µm,0.9s					
SF01	**Poggio Pratacc**	**1.30**	**278**	⇑P	**Pn**	**04 09 45.7 +0.9**
CRE	**Caprese Michel**	**1.40**	**315**	⇓P	**Pn**	**04 09 46.8 +0.7**
CRE				AML	AML	
	comp=N,482µm,0.4s					
CRE				AML	AML	
	comp=E,404µm,0.3s					
CIGN	**Sant'Elia a Pi**	**1.54**	**130**	P	**Pn**	**04 09 49.2 +1.3**
CIGN				AML	AML	
	comp=N,288µm,1.4s					
CIGN				AML	AML	
	comp=E,255µm,1.3s					
MAON	**Monte Argentar**	**1.63**	**263**	P	**Pn**	**04 09 49.0 -0.1**
MELA	**Melanico ??? S**	**1.64**	**124**	⇓P	**Pb**	**04 09 51.0 +0.3**
MELA				AML	AML	
	comp=E,778µm,0.5s					
MELA				AML	AML	
	comp=N,776µm,0.7s					
MELA				AML	AML	
	comp=E,822µm,0.7s					
MELA				AML	AML	
	comp=N,940µm,0.6s					
RUFI	**Rufina**	**1.78**	**313**	P	**Pn**	**04 09 52.1 +0.9**
RUFI	**Rufina**	**1.78**	**313**	⇓P	**Pn**	**04 09 51.7 +0.5**
LMD	**Lutirano**	**1.85**	**321**	S	Sn	04 09 53.6 -22
APRC	**Apricena**	**1.88**	**118**	⇓P	**Pb**	**04 09 55.0 +0.2**
BRIS	**BRISIGHELLA**	**2.00**	**319**	P	**Pb**	**04 09 57.8 +0.9**
MTCR	**Monte La Croce**	**2.18**	**310**	P	**Pn**	**04 09 57.8 +0.9**
MTCR	**Monte La Croce**	**2.18**	**310**	P	**Pn**	**04 09 57.8 +0.9**
MTRZ	**Monterenzio**	**2.19**	**323**	S	Sn	04 10 02.5 -21
CELB	**S.Piero in Cam**	**2.29**	**274**	S	**Sg**	**04 10 36.0 +1.6**
A050A	**Klekovaca**	**2.97**	**51**	*e*Pn	**Pb**	**04 10 10.5 -3.0**
AMUR	**Altamura**	**3.01**	**124**	P	**Pn**	**04 10 08.0 -0.2**
AMUR				AML	AML	
	comp=E,158µm,0.7s					
AMUR				AML	AML	
	comp=N,128µm,0.5s					
SRKY	**Kupres RS**	**3.14**	**62**	*e*Pn	**Pn**	**04 10 11.7 +1.6**
PGF	**Pioggiola**	**3.19**	**270**	*e*P	**Pn**	**04 10 11.7 +1.0**
PGF				*e*Sn	**Sn**	**04 10 44.6 -4.1**
	comp=N,2.5nm,0.3s					
CEY	**Cerknica**	**3.19**	**14**	*e*Pn	**Pn**	**04 10 12.1 +1.4**
MGRS	**Mrkonjic Grad**	**3.26**	**56**	*e*Pn	**Pb**	**04 10 14.1 -4.3**
ROVR	**Rover Verones**	**3.41**	**332**	P	**Pn**	**04 10 15.3 +1.6**
ROVR				AML	AML	
	comp=N,68µm,0.7s					
ROVR				AML	AML	
	comp=E,36µm,1.6s					
CGRP	**Cima Grappa**	**3.41**	**342**	⇑P	**Pn**	**04 10 15.4 +1.6**
CGRP				AML	AML	
	comp=E,184µm,0.5s					
CGRP				AML	AML	
	comp=N,154µm,1.2s					
VARN	**Col Varnada, M**	**3.46**	**346**	⇑P	**Pn**	**04 10 16.7 +2.4**
BLY	**Banja Luka**	**3.50**	**52**	*e*Pn	**Pb**	**04 10 19.8 -2.7**
A051A	**Mrakovica**	**3.51**	**46**	*e*Pn	**Pn**	**04 10 17.0 +1.9**
DOSS	**Dosso del Somm**	**3.58**	**335**	⇓P	**Pn**	**04 10 17.5 +1.4**
DOSS				AML	AML	
	comp=E,94µm,0.3s					
DOSS				AML	AML	
	comp=N,137µm,0.7s					
SALO	**Salr**	**3.59**	**327**	P	**Pn**	**04 10 17.8 +1.7**
SALO	**Salr**	**3.59**	**327**	⇓P	**Pn**	**04 10 18.2 +2.1**
ROBS	**Robic**	**3.60**	**2**	*i* Pn	**Pn**	**04 10 16.0 -0.2**
CTI	**Castel Tesino**	**3.60**	**341**	P	**Pn**	**04 10 17.5 +1.1**
CTI				AML	AML	
	comp=N,182µm,0.4s					
CTI				AML	AML	
	comp=E,178µm,0.4s					
LEOD	**Capriano del C**	**3.63**	**322**	⇑P	**Pb**	**04 10 26.7 +1.9**
STAL	**STALIGIAL**	**3.64**	**353**	⇑P	**Pn**	**04 10 17.5 +0.7**
STAL				AML	AML	
	comp=E,202µm,1.5s					
STAL				AML	AML	
	comp=N,144µm,1.4s					
MAGA	**Magasa**	**3.68**	**329**	P	**Pn**	**04 10 17.9 +0.5**
MAGA				S	**Sn**	**04 11 02.0 +1.3**
MAGA				AML	AML	
	comp=E,326µm,1.4s					

MAGA AML AML
comp=N,274μm,1.5s
CIMO Cimolais 3.72 351 ⇓P **Pn 04 10 18.4 +0.6**
CIMO S **Sn 04 11 02.0 +0.4**
CIMO AML AML
comp=N,43μm,1.4s
CIMO AML AML
comp=E,38μm,0.4s
LUSI Trento, Gardas 3.73 334 ⇑P **Pn 04 10 19.4 +1.4**
LUSI AML AML
comp=E,105μm,0.9s
LUSI AML AML
comp=N,168μm,0.2s
PTCC Patocco-Chiusa 3.76 0 ⇓P **Pn 04 10 20.1 +1.6**
PTCC S **Sn 04 11 04.0 +1.4**
HCY Herceg Novi 3.83 91 *e*Pn **Pn 04 10 19.9 +0.5**
GAGG Gaggia 3.83 335 ⇓P **Pn 04 10 21.4 +1.8**
BRY Bratogost 3.85 84 *e*Pn **Pn 04 10 20.4 +0.6**
ZONE Zone 3.87 325 S **Sn 04 11 09.0 +3.5**
ACOM Acomizza, Ital 3.90 2 ⇑P **Pn 04 10 23.6 +3.0**
MABI Malga Bissina 3.96 330 ⇑P **Pn 04 10 23.1 +1.8**
MABI S **Sn 04 11 09.0 +1.3**
MABI AML AML
comp=E,52μm,1.5s
MABI AML AML
comp=N,56μm,0.4s
OBKA Obir 3.96 12 *e*Pn **Pn 04 10 23.1 +1.8**
OBKA Obir 3.96 12 *e*Pn **Pn 04 10 22.4 +1.1**
comp=N,1.2nm,0.2s
MYKA Terra Mystica 3.99 3 *e*Pn **Pn 04 10 22.8 +1.2**
comp=N,1.5nm,0.2s
KOSI Kohlern 4.06 341 ⇑P **Pn 04 10 24.4 +1.7**
MDI Monti di Nese 4.06 322 ⇓P **Pn 04 10 24.7 +2.0**
APPI Appiano 4.11 339 P **Pn 04 10 25.2 +1.8**
UPM Unac-Piva 4.14 80 *e*Pn **Pn 04 10 24.9 +1.1**
ABTA Abfaltersbach 4.14 352 *i* Pn **Pn 04 10 25.0 +1.2**
comp=N,18nm,0.5s,SNR=25
ABTA Sn **Sn 04 11 12.2 +0.1**
comp=N,8.4nm,0.3s
IMI Imperia 4.16 290 ⇑P **Pg 04 10 40.5 +0.3**
IFIL Filicudi I Eol 4.19 166 S **Sn 04 11 15.0 +1.9**
SOKA Soboth 4.21 16 *e*Pn **Pn 04 10 26.6 +1.9**
comp=N,2.0nm,0.2s
HAPS Han Pijesak,BI 4.35 69 *e*Pn **Pn 04 10 27.8 +1.2**
DRME Dracevica, Mon 4.37 94 *e*Pn **Pn 04 10 28.0 +1.2**
RISI Rein 4.39 349 ⇓P **Pn 04 10 29.2 +1.9**
KBA Koelnbreinsper 4.43 0 *e*Pn **Pn 04 10 28.1 +0.3**
comp=N,1.2nm,0.1s
SBF Sospel 4.47 288 *e*P **Pn 04 10 29.9 +1.7**
SBF *e*Sn **Sn 04 11 15.0 -5.1**
comp=N,28nm,0.7s
ROSI Rosskopf 4.49 343 ⇓P **Pn 04 10 31.0 +2.3**
RUDO Rudo 4.53 76 *e*Pn **Pn 04 10 29.6 +0.5**
BBLS Lazići 4.61 73 *e*Pn **Pn 04 10 31.6 +1.4**
FETA Feichten 4.75 338 *e*Pn **Pn 04 10 35.7 +3.6**
comp=N,2.1nm,0.3s
FETA *e*Sn **Sn 04 11 30.5 +3.3**
comp=N,2.6nm,0.3s
WTTA Wattenberg 4.77 346 *e*Pn **Pn 04 10 35.4 +2.9**
comp=N,2.0nm,0.2s,SNR=5.0
WTTA Wattenberg 4.77 346 ⇑P **Pn 04 10 35.7 +3.3**
DAVOX Davos/Dischmat 4.80 331 Pn **Pn 04 10 36.0 +3.0**
comp=N,1.2nm,0.3s,baz=146,slow=16,SNR=16
DAVOX Sn **Sn 04 11 30.3 +1.7**
comp=N,1.3nm,0.3s,baz=143,slow=18,SNR=4.2
comp=N,4.8nm,0.4s
SQTA Sankt Quirin 4.81 343 Pn **Pn 04 10 36.3 +3.3**
comp=N,4.5nm,0.1s,SNR=9.2
SQTA *e*Sn **Sn 04 11 31.8 +3.0**
comp=N,18nm,0.6s
WATA Walderalm 4.85 346 Pn **Pn 04 10 37.3 +3.8**
comp=N,5.6nm,0.2s,SNR=9.5
ARSA Arzberg 4.86 18 *e*Pn **Pn 04 10 37.3 +3.8**
comp=N,1.5nm,0.2s
ARSA *e*Sn **Sn 04 11 28.6 -1.2**
comp=N,3.4nm,0.3s
MOTA Moosalm 4.95 342 *e*Pn **Pn 04 10 37.9 +3.0**
comp=N,1.5nm,0.2s
LMR La Mourre 5.04 280 *e*P **Pn 04 10 36.6 +0.6**
LMR *e*Sn Sn 04 11 28.7 -5.5
comp=N,1.7nm,0.3s
BIOA Bad Ischl, Aus 5.05 2 *e*Pn **Pn 04 10 39.2 +3.0**
comp=N,3.6nm,0.3s
DIVS Divibare 5.08 71 *e*Pn **Pn 04 10 37.4 +0.8**
RETA Reutte 5.17 340 *i* Pn **Pn 04 10 40.6 +2.7**
comp=N,2.6nm,0.3s,SNR=5.3
RETA *e*Sn **Sn 04 11 39.8 +2.4**
comp=N,5.8nm,0.3s
MBDF Montbardon 5.18 296 *e*P **Pn 04 10 40.2 +2.1**
MBDF *e*Sn **Sn 04 11 32.3 -5.6**
comp=N,11nm,0.8s
DAVA Damuels 5.24 333 *e*Pn **Pn 04 10 41.7 +2.8**
comp=N,6.7nm,0.5s,SNR=4.8
DAVA *e*Sn **Sn 04 11 36.6 -2.7**
comp=N,9.4nm,0.4s
MOA Molln 5.25 7 *e*Pn **Pn 04 10 41.5 +2.6**
comp=N,1.5nm,0.2s
FRGS Fruska Gora 5.32 60 *e*Pn **Pn 04 10 40.3 +0.4**
RONA Rosalia, Austr 5.47 22 *e*Pn **Pn 04 10 42.1 +0.1**
comp=N,2.7nm,0.2s
LPG La Plagne 5.52 303 *e*P **Pn 04 10 45.1 +2.2**
LPG *e*Sn **Sn 04 11 40.7 -5.8**
comp=N,1.9nm,0.3s
LPL La Plagne 5.54 303 *e*P **Pn 04 10 45.0 +1.9**
LPL *e*Sn **Sn 04 11 41.0 -5.9**
comp=N,4.9nm,0.6s
CONA Conrad Observa 5.58 18 *e*Pn **Pn 04 10 43.8 +0.3**
comp=N,1.8nm,0.2s
CONA *e*Sn **Sn 04 11 46.6 -0.9**
comp=N,5.6nm,0.6s
OHR Ohrid 5.79 103 *i* Pn **Pn 04 10 48.7 +2.3**
SMRF Simiane la Rot 5.80 286 *e*P **Pn 04 10 48.4 +1.8**
SMRF *e*Sn Sn 04 11 46.9 -6.2
comp=N,1.1nm,0.2s
ORIF Oris-en-Rattie 5.84 295 *e*P **Pn 04 10 50.3 +3.2**
ORIF *e*Sn **Sn 04 11 48.1 -6.0**
comp=N,2.3nm,0.4s
KBN Korca 5.95 107 P **Pn 04 10 50.8 +2.2**
GERES GERESS Array B 6.21 2 Pn **Pn 04 10 51.9 -0.2**
comp=N,0.3nm,0.3s,baz=178,slow=13,SNR=12
GERES Sn **Sn 04 12 02.1 -0.9**
comp=N,1.5nm,0.3s,baz=170,slow=24,SNR=6.8
comp=N,0.5nm,0.3s
CKRC Cesky Krumlov 6.21 6 *e*SN **Sn 04 12 00.0 -3.0**
KHC Kasperske Hory 6.49 2 *e*PN **Pn 04 10 56.9 +1.0**
KHC *e*SN **Sn 04 12 06.9 -2.9**
CABF La Chapelle 6.50 310 *e*P **Pn 04 10 58.2 +2.0**
CABF *e*Sn **Sn 04 12 03.8 -6.6**
comp=N,20nm,1.0s
VIVF Saint-Julien-l 6.64 292 *e*P **Pn 04 11 00.2 +2.2**
VIVF *e*Sn Sn 04 12 07.0 -6.6
comp=N,0.6nm,0.4s
STIP Stip 6.66 95 *i* Pn **Pn 04 11 01.4 +3.2**
HINF Hinteralfeld 6.89 321 *e*P **Pn 04 11 03.4 +1.9**
HINF *e*Sn **Sn 04 12 13.1 -6.8**
comp=N,13nm,0.5s
LASF Ste Croix 7.04 285 *e*P **Pn 04 11 06.0 +2.5**
LASF *e*Sn Sn 04 12 16.6 -6.9
comp=N,2.2nm,0.4s
CDF Champ du Feu 7.16 326 *e*P **Pn 04 11 05.7 +0.6**
CDF *e*Sn **Sn 04 12 19.3 -7.1**
comp=N,2.7nm,0.2s
HAU Haudompre 7.27 320 *e*P **Pn 04 11 07.7 +1.1**
HAU *e*Sn **Sn 04 12 22.0 -7.0**
comp=N,11nm,0.4s
KEST Kesra 7.56 205 Pn Pn 04 11 16.0 +5.2
comp=N,0.3nm,0.3s,baz=345,slow=7.1,SNR=4.8
comp=N,3.1nm,0.7s
SMF Signal de Mont 7.85 304 *e*P **Pn 04 11 16.0 +1.4**
SMF *e*Sn Sn 04 12 36.1 -7.3
comp=N,2.6nm,0.6s
SFTF Sexfontaines 8.05 317 *e*P **Pn 04 11 20.1 +2.8**
SFTF *e*Sn **Sn 04 12 40.9 -7.3**
comp=N,4.6nm,0.4s
LOR Lormes 8.14 308 *e*P **Pn 04 11 19.4 +0.8**
baz=125
LOR *e*Sn Sn 04 12 42.8 -7.8
comp=N,3.6nm,0.4s
MTLF Montolieu 8.17 279 *e*P **Pn 04 11 21.8 +2.8**
MTLF *e*Sn Sn 04 12 43.3 -7.9
comp=N,0.8nm,0.3s
AVF Avril sur Loir 8.22 304 *e*P **Pn 04 11 20.9 +1.3**
AVF *e*Sn Sn 04 12 44.7 -7.6
comp=N,0.8nm,0.4s
MEZF Maizieres J'vi 8.24 318 *e*P **Pn 04 11 22.9 +3.0**
MEZF *e*Sn **Sn 04 12 45.6 -7.2**
comp=N,5.7nm,0.5s
SSF Saint Saulge 8.25 306 *e*Pn **Pn 04 11 18.2 -1.9**
SSF *e*Sn Sn 04 12 45.5 -7.6
comp=N,1.3nm,0.4s
BGF Bois d'Agland 8.43 301 *e*P **Pn 04 11 25.3 +2.7**
BGF *e*Sn Sn 04 12 49.9 -7.7
comp=N,2.3nm,0.3s
CAF Calviac 8.46 289 *e*P **Pn 04 11 25.1 +2.2**
CAF *e*Sn Sn 04 12 50.4 -7.9
comp=N,7.5nm,0.9s
CLL Collm 8.67 359 *e*Pn **Pn 04 11 23.0 -2.7**
CLL *e*Pg **Pg 04 12 03.0 -3.4**
CLL *e*x x 04 13 17.0
CLL *e*Sg **Sg 04 13 56.0 -2.5**
TCF Toulx Ste Croi 8.74 298 *e*P **Pn 04 11 29.3 +2.5**
TCF *e*Sn Sn 04 12 57.3 -7.9
comp=N,0.4nm,0.3s
RJF Les Rejaudoux 8.92 291 *e*P **Pn 04 11 32.2 +3.0**
RJF *e*Sn Sn 04 13 01.3 -8.2
comp=N,0.5nm,0.2s
LFF La Frestale 9.38 288 *e*P **Pn 04 11 38.4 +2.8**
LFF *e*Sn Sn 04 13 12.5 -8.5
comp=N,0.6nm,0.2s
TORD Torodi Ar. Bea 31.07 202 P **P 04 15 41.1 +2.5**
comp=N,0.3nm,0.7s,baz=20,slow=9.1,SNR=1.9
comp=N,0.3nm,0.7s

IDC 14 04:18:02.5±4.6, 5°.31S×147°.36E, h180km±56km, mb3.3/2, mbtmp3.9/5, Error ellipse: s-maj=97.0km s-min=37.6km az=107.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.08**	**183**	P	Pn	04 19 04.7	+0.1
	9.9nm,0.4s,baz=18,slow=13,SNR=2.4						
PMG				S	Sn	04 19 49.7	-3.5
	23nm,0.4s,baz=170,slow=19,SNR=8.7						
CTA	**Charters Tower**	**14.73**	**184**	P	P	04 21 23.7	0.0
	3.5nm,0.9s,baz=21,slow=13,SNR=1.6						
WRA	**Warramunga Arr**	**19.29**	**220**	P	P	04 22 13.4	-0.3
	5.3nm,0.6s,baz=47,slow=12,SNR=101						
ASAR	**Alice Springs**	**22.39**	**214**	P	P	04 22 46.1	0.0
	3.1nm,0.6s,baz=49,slow=8.5,SNR=38						
	3.1nm,0.6s						
MKAR	**Makanchi Array**	**77.20**	**320**	P	P	04 29 36.5	-0.1
	0.4nm,0.7s,baz=101,slow=7.5,SNR=2.5						
	0.4nm,0.7s						

WEL 14 04:25:33.4±0.9, 37°S±4°×17°9E±°, h20km, M3.5/23, mB6.5/1, ML3.8/30, MLv3.5/23, Mw(mB)6.2/1, Error ellipse: s-maj=0.0km s-min=0.0km az=79.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.85**	**222**	P	Pb	04 25 48.5	-1.0
MXZ				S	Sb	04 26 00.2	-0.2
WMGZ	**Waiomatatini S**	**1.01**	**208**	P	Pn	04 25 52.5	0.0
WMGZ				S	Sn	04 26 07.8	+1.7
PKGZ	**Pakihiroa**	**1.22**	**218**	P	Pn	04 25 55.3	0.0
PKGZ				S	Sn	04 26 12.1	+0.8
HAZ	**Te Kaha**	**1.28**	**230**	P	Pn	04 25 55.6	-0.6
HAZ				S	Sb	04 26 16.3	+3.3
PUZ	**Puketiti**	**1.29**	**208**	P	Pn	04 25 55.8	-0.5
RUGZ	**Raukumara Rang**	**1.49**	**226**	P	Pb	04 26 00.3	-0.1
TWGZ	**Tauwhareparae**	**1.49**	**213**	P	Pn	04 25 59.4	+0.3
TKGZ	**Te Karaka**	**1.77**	**211**	P	Pn	04 26 01.7	-1.2
TKGZ				S	Sn	04 26 25.3	+0.5
MWZ	**Matawai**	**1.83**	**220**	P	Pn	04 26 03.7	-0.1
URZ	**Urewera**	**2.02**	**228**	P	Pn	04 26 06.5	+0.2
RIGZ	**Rimuhau**	**2.03**	**209**	P	Pn	04 26 05.6	-1.0
RIGZ				S	Sn	04 26 31.1	-0.3
EDRZ	**Edgecumbe**	**2.16**	**236**	P	Pn	04 26 09.1	+0.7
SNGZ	**Shannon Statio**	**2.28**	**215**	P	Pn	04 26 09.9	0.0
RTZ	**Ruatahuna**	**2.33**	**223**	P	Pn	04 26 11.4	+0.6
TGRZ	**Tauranga**	**2.34**	**249**	P	Pn	04 26 12.1	+1.4
KNZ	**Kokohu**	**2.34**	**207**	P	Pn	04 26 08.9	-1.9
MUGZ	**Murupara**	**2.36**	**229**	P	Pn	04 26 10.9	-0.1
MTHZ	**Maungataniwha**	**2.58**	**221**	P	Pn	04 26 13.5	-0.6
MTHZ				S	Sn	04 26 45.3	+0.4
KMRZ	**Kaimai**	**2.62**	**249**	P	Pn	04 26 15.4	+0.8
KUZ	**Kuaotunu**	**2.66**	**273**	P	Pn	04 26 14.3	-0.8
KUZ				S	Sn	04 26 44.0	-2.6
NMHZ	**Naumai**	**2.78**	**218**	P	Pn	04 26 16.6	-0.3
NMHZ				S	Sn	04 26 50.3	+0.4
ARHZ	**Aropaoanui**	**2.82**	**214**	P	Pn	04 26 17.1	-0.3
TOZ	**Tahuroa Road**	**2.92**	**253**	P	Pn	04 26 18.4	-0.3
GRZ	**Great Barrier**	**2.95**	**282**	P	Pn	04 26 19.5	+0.5
BKZ	**Black Stump Fm**	**2.99**	**221**	P	Pn	04 26 18.9	-0.9
MKAZ	**Moumakai**	**3.10**	**266**	P	Pn	04 26 20.5	-0.6
MKAZ				S	Sn	04 26 57.6	+0.1
KWHZ	**Kaweka Forest**	**3.22**	**219**	P	Pn	04 26 21.9	-1.1
ETAZ	**East Tamaki Re**	**3.28**	**268**	P	Pn	04 26 24.5	+0.8
KAHZ	**Kahuranaki**	**3.32**	**210**	P	Pn	04 26 21.8	-2.5
NTVZ	**North Tongarir**	**3.42**	**230**	P	Pn	04 26 28.4	+2.7
ETVZ	**East Tongariro**	**3.42**	**229**	P	Pn	04 26 25.4	-0.3
BHHZ	**Black Hill Sta**	**3.46**	**221**	P	Pn	04 26 24.9	-1.2
OTVZ	**Oturere**	**3.46**	**229**	P	Pn	04 26 25.5	-0.8
HIZ	**Hauiti**	**3.66**	**243**	P	Pn	04 26 30.3	+1.4
WAZ	**Wanganui**	**4.24**	**227**	P	Pn	04 26 36.8	-0.1
KHEZ	**Kahui Hut**	**4.60**	**238**	P	Pn	04 26 44.6	+2.7
OUZ	**Omahuta**	**4.71**	**290**	P	Pn	04 26 44.8	+1.4
MRNZ	**Matariki Terra**	**6.60**	**226**	P	Pn	04 27 11.4	+2.1
CTZ	**Chatham Island**	**7.57**	**155**	P	Pn	04 27 19.5	-3.1

NNC 14 04:27:55.7±3.4, 36°.60N×68°.93E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=27.6km s-min=21.7km az=167.0
IDC 14 04:27:58.8±3.6, 37°.43N×68°.52E, h0km, mb3.6/1, mbtmp3.7/3, ML3.7/2, MS2.6/3, Error ellipse: s-maj=97.4km s-min=33.1km az=156.0
ISC 14 04:27:55.3±2.2, 36°.3N±0°.2×68°.86E±0°.09, h43km, n9, σ0s84/11, 2C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.92**	**10**	⇓P	**Pn**	**04 29 35.4**	**+1.3**
	0.7nm,0.3s,baz=192,slow=11,SNR=9.1						
KK31				⇑S	**Sn**	**04 30 52.4**	**+0.9**
	0.8nm,0.2s,baz=188,slow=22,SNR=4.8						
CHMS	**Chumysh**	**8.09**	**32**	⇓P	**Pn**	**04 29 51.0**	**+0.8**
	3.6nm,0.5s						
CHMS				⇓S	**Sn**	**04 31 20.0**	**-0.4**
	10nm,0.7s						
TKM2	**Tokmak 2**	**8.41**	**36**	⇓P	**Pn**	**04 29 54.6**	**-0.2**
	9.5nm,1.4s						
TKM2				⇑S	**Sn**	**04 31 28.5**	**0.0**
	14nm,1.4s						
GEYT	**Alibeck**	**8.73**	**284**	Pn	**Pn**	**04 29 59.7**	**+0.7**
	1.9nm,0.3s,baz=110,slow=9.1,SNR=7.4						
GEYT				Sn	**Sn**	**04 31 35.5**	**-0.7**
	0.3nm,0.3s,baz=54,slow=20,SNR=1.7						
GEYT				LR	LR	04 33 41.0	
	comp=Z,18nm,20.9s,baz=168,slow=41						
	2.5nm,0.4s						
AB31	**Akbulak array**	**14.49**	**336**	⇓P	**Pn**	**04 31 17.0**	**-0.6**
	1.4nm,0.6s,baz=158,slow=12,SNR=22						
AB31				⇓S	**Sn**	**04 33 56.0**	**-0.8**
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**20.85**	**27**	P	**P**	**04 32 32.5**	**-0.7**
	0.5nm,0.3s,baz=213,slow=12,SNR=3.2						
	0.8nm,0.3s						
EIL	**Elat**	**29.09**	**267**	LR	LR	04 47 44.0	
	comp=Z,25nm,19.5s,baz=241,slow=41						
NOA	**NORSAR Array B**	**43.50**	**323**	LR	LR	04 55 32.0	
	comp=Z,8.8nm,19.0s,baz=345,slow=39						
TORD	**Torodi Ar. Bea**	**63.98**	**267**	P	P	04 38 32.9	+8.3
	0.4nm,0.7s,baz=39,slow=5.2,SNR=4.1						
	0.4nm,0.7s						

NOU 14 04:32:34.0, 36°.88S×176°.85W, h0km, MLv4.6/6, East of North Island, N.Z.
WEL 14 04:33:04.7±0.9, 37°S±10°×17°9W±°, h33km, M3.8/12, ML4.2/15, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=173.9
ISC 14 04:33:02.2±2.9, 37°.5S±0°.1×179°.1W±0°.1, h35km, n25, σ1s23/40, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.01**	**259**	P	**Pn**	**04 33 34.3**	**+0.8**
MXZ	**Matakaoa Point**	**2.07**	**267**	P	**Pn**	**04 33 35.4**	**+1.0**
PUZ	**Puketiti**	**2.18**	**253**	P	**Pn**	**04 33 36.2**	**+0.2**
PUZ				S	**Sn**	**04 34 01.9**	**+0.1**
PKGZ	**Pakihiroa**	**2.28**	**259**	P	**Pn**	**04 33 37.7**	**+0.3**
PKGZ				S	**Sn**	**04 34 03.4**	**-1.0**
TWGZ	**Tauwhareparae**	**2.42**	**252**	P	**Pn**	**04 33 39.9**	**+0.6**
TWGZ				S	**Sn**	**04 34 08.5**	**+0.8**
HAZ	**Te Kaha**	**2.50**	**263**	P	**Pn**	**04 33 41.0**	**+0.7**
HAZ				S	**Sn**	**04 34 08.0**	**-1.5**
TKGZ	**Te Karaka**	**2.60**	**247**	P	**Pn**	**04 33 42.2**	**+0.4**
TKGZ				S	**Sn**	**04 34 12.3**	**+0.2**
RUGZ	**Raukumara Rang**	**2.60**	**258**	P	**Pn**	**04 33 42.3**	**+0.4**
RIGZ	**Rimuhau**	**2.77**	**243**	P	**Pn**	**04 33 44.6**	**+0.5**
RIGZ				S	**Sn**	**04 34 16.1**	**-0.2**
MWZ	**Matawai**	**2.81**	**251**	P	**Pn**	**04 33 44.6**	**0.0**
MWZ				S	**Sn**	**04 34 16.1**	**-1.1**
MHGZ	**Mahia Peninsul**	**2.89**	**234**	P	**Pn**	**04 33 46.2**	**+0.5**
KNZ	**Kokohu**	**2.97**	**238**	P	**Pn**	**04 33 47.3**	**+0.4**
KNZ				S	**Sn**	**04 34 20.8**	**-0.5**
URZ	**Urewera**	**3.10**	**254**	P	**Pn**	**04 33 49.5**	**+0.8**
URZ				S	**Sn**	**04 34 23.3**	**-1.1**
URZ	**Urewera**	**3.10**	**254**	P	**Pn**	**04 33 49.7**	**+1.1**
RTZ	**Ruatahuna**	**3.30**	**249**	P	**Pn**	**04 33 52.7**	**+1.3**
RTZ				S	**Sn**	**04 34 30.0**	**+0.5**
MUGZ	**Murupara**	**3.42**	**252**	P	**Pn**	**04 33 53.7**	**+0.8**
MUGZ				S	**Sn**	**04 34 29.8**	**-2.5**
OPRZ	**Ohinepanea**	**3.47**	**263**	P	**Pn**	**04 33 54.6**	**+0.9**
OPRZ				S	**Sn**	**04 34 30.3**	**-3.3**
MTHZ	**Maungataniwha**	**3.48**	**246**	P	**Pn**	**04 33 54.5**	**+0.5**
MTHZ				S	**Sn**	**04 34 33.6**	**-0.4**
ARHZ	**Aropaoanui**	**3.55**	**239**	P	**Pn**	**04 33 55.7**	**+0.9**
ARHZ				S	**Sn**	**04 34 36.5**	**+0.9**
TARZ	**Mount Tarawera**	**3.56**	**256**	P	**Pn**	**04 33 55.9**	**+0.8**
BKZ	**Black Stump Fm**	**3.86**	**243**	P	**Pn**	**04 33 59.8**	**+0.7**
KUZ	**Kuaotunu**	**4.21**	**278**	P	**Pn**	**04 34 03.3**	**-0.5**
BFZ	**Birch Farm**	**4.83**	**227**	P	**Pn**	**04 34 12.1**	**-0.4**
HIZ	**Hauiti**	**4.89**	**256**	P	**Pn**	**04 34 15.2**	**+2.0**
CTZ	**Chatham Island**	**6.53**	**164**	P	**Pn**	**04 34 38.3**	**+2.7**
CTZ				S	**Sn**	**04 35 45.9**	**-2.9**

SNET 14 04:46:13.3±1.2, 15°.07N×88°.92W, h13km±9km, ML3.4
GCG 14 04:46:19.6±1.4, 15°.10N×89°.39W, h6km, MD3.2
ISC 14 04:46:10.9±2.1, 15°.19N±0°.08×88°.95W±0°.07, h13km±15km, n23, σ1s01/31, 1C-1D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.72**	**261**	⇓*e*P	**Pb**	**04 46 25.9**	**+0.5**
MRL				*e*S	**Sg**	**04 46 31.5**	**-2.9**
ESQI	**Esquipulas**	**0.73**	**211**	⇑*e*P	**Pb**	**04 46 25.1**	**-0.5**
ESQI				*e*S	**Sg**	**04 46 36.0**	**+1.1**
MTO3	**Montecristo**	**0.88**	**207**	*e*P	**Pb**	**04 46 27.5**	**-0.7**
MTO3				*e*S	**Sb**	**04 46 39.5**	**-0.4**
P5NO	**Presa 5 de nov**	**1.21**	**171**	*e*P	**Pn**	**04 46 32.2**	**-1.4**
P5NO				*e*S	**Sb**	**04 46 47.3**	**-1.9**
SLOZ	**Alcaldia de Sa**	**1.41**	**215**	*e*P	**Pn**	**04 46 36.5**	**+0.2**
SLOZ				IAML		04 47 05.2	
	comp=Z,371nm,0.5s						
RTR	**El Retiro**	**1.45**	**208**	*e*P	**Pb**	**04 46 38.1**	**+0.2**
SNJE	**San Jose**	**1.46**	**206**	*e*P	**Pb**	**04 46 37.9**	**-0.1**
PAVA	**Las Pavas**	**1.47**	**180**	*e*P	**Pn**	**04 46 37.5**	**+0.3**
NBG	**Las Nubes**	**1.48**	**246**	*e*P	**Pg**	**04 46 39.2**	**-0.1**
NBG				*e*S	**Sg**	**04 47 01.2**	**+2.5**
UEES	**Universidad Ev**	**1.49**	**191**	*e*P	**Pn**	**04 46 37.6**	**+0.2**
SBLS	**San Blas**	**1.49**	**206**	*e*P	**Pb**	**04 46 38.5**	**-0.1**
SBLS				*e*S	**Sg**	**04 46 59.0**	**0.0**
SCLA	**Alcaldia de Sa**	**1.50**	**172**	*e*P	**Pn**	**04 46 37.6**	**+0.1**
CEVE	**Cerro Verde**	**1.50**	**206**	*e*P	**Pb**	**04 46 39.2**	**+0.4**
CEVE				*e*S	**Sb**	**04 46 58.1**	**+0.2**
CEVE				IAML		04 47 03.1	
	comp=Z,1μm,0.6s						
NUBE	**Las Nubes**	**1.51**	**212**	*e*P	**Pb**	**04 46 38.5**	**-0.4**
COEG	**Centro de Oper**	**1.56**	**178**	*e*P	**Pn**	**04 46 38.4**	**0.0**
SJTE	**Alcalda de S**	**1.57**	**182**	*e*P	**Pn**	**04 46 38.7**	**+0.2**
PQSS	**Presa 15 de Se**	**1.60**	**166**	*e*P	**Pn**	**04 46 39.5**	**+0.6**
COEB	**Comit de Eme**	**1.73**	**166**	*e*P	**Pn**	**04 46 41.6**	**+0.9**
COEB				IAML		04 47 07.5	
	comp=Z,298nm,0.5s						
PCG	**Pacaya**	**1.79**	**244**	*e*P	**Pg**	**04 46 46.1**	**+0.8**
PACA	**Pacayal**	**1.81**	**160**	*e*P	**Pn**	**04 46 42.8**	**+0.9**
FUG	**Fuego 3**	**1.97**	**248**	*e*P	**Pg**	**04 46 48.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.98**	**125**	*e*P	**Pn**	**04 46 44.3**	**+0.1**
TGUH				*e*S	**Sn**	**04 47 09.0**	**+0.2**
CNCH	**Conchagua**	**2.19**	**150**	*e*P	**Pn**	**04 46 48.2**	**+1.1**

IDC 14 04:46:49.4±5.9, 13°.89N×89°.36W, h0km, mb3.6/2, mbtmp3.7/2, MS2.8/2, Error ellipse: s-maj=437.5km s-min=65.5km az=41.0
INET 14 04:46:58.0±2.6, 15°.12N×89°.40W, h7km±23km, MW4.0
UCR 14 04:46:58.1±1.2, 15°.10N×88°.96W, h15km±8km, ML3.8
SNET 14 04:46:58.0±1.1, 15°.11N×88°.96W, h13km±9km, ML3.9
GCG 14 04:47:03.1±1.0, 15°.18N×89°.32W, h7km, MD4.0
ISC 14 04:46:54.7±1.4, 15°.18N±0°.05×88°.82W±0°.03, h6km±10km, n57, σ0s99/65, 3C-1D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**0.79**	**219**	⇑*i*P	**Pg**	**04 47 10.3**	**+0.3**
ESQI				*e*S	**Sg**	**04 47 20.9**	**+0.7**
MRL	**Marmol**	**0.84**	**263**	⇓*i*P	**Pg**	**04 47 11.1**	**+0.3**
MRL				*e*S	**Sg**	**04 47 18.6**	**-3.1**
MTO3	**Montecristo**	**0.93**	**214**	⇑*e*P	**Pg**	**04 47 12.6**	**-0.1**
MTO3				*e*S	**Sg**	**04 47 24.7**	**-0.1**
MTO3	**Montecristo**	**0.93**	**214**	⇑*e*P	**Pg**	**04 47 12.6**	**-0.1**
MTO3				*e*S	**Sg**	**04 47 24.7**	**-0.1**
MTO3	**Montecristo**	**0.93**	**214**	*e*P	**Pg**	**04 47 12.6**	**-0.1**
MTO3				*e*S	**Sg**	**04 47 24.3**	**-0.5**
P5NO	**Presa 5 de nov**	**1.19**	**177**	*e*P	**Pg**	**04 47 17.4**	**-0.1**
LFU	**La Fuente**	**1.45**	**191**	*e*P	**Pn**	**04 47 22.2**	**+0.7**
LFU	**La Fuente**	**1.45**	**191**	*e*P	**Pn**	**04 47 22.2**	**+0.7**
PAVA	**Las Pavas**	**1.46**	**184**	*e*P	**Pb**	**04 47 22.9**	**+0.5**
PAVA				IAML		04 47 45.1	
	comp=Z,2μm,0.3s						
PAVA	**Las Pavas**	**1.46**	**184**	*e*P	**Pb**	**04 47 22.9**	**+0.5**
PAVA				IAML		04 47 45.1	
	comp=Z,2μm,0.3s						
SCLA	**Alcaldia de Sa**	**1.47**	**176**	*e*P	**Pg**	**04 47 23.2**	**+0.3**
SCLA				IAML		04 47 47.1	
	comp=Z,727nm,0.2s						
SCLA	**Alcaldia de Sa**	**1.47**	**176**	*e*P	**Pg**	**04 47 23.2**	**+0.3**
SCLA				IAML		04 47 47.1	
	comp=Z,727nm,0.2s						
SLOZ	**Alcaldia de Sa**	**1.48

NUBE	Las Nubes	1.57 216	eP	Pn	04 47 23.4	+0.1
NBG	Las Nubes	1.59 248	eP	Pb	04 47 25.0	+0.4
NBG			eS	Sn	04 47 41.4	-3.2
APG	El Apazote	1.60 264	LR	LR	04 47 46.2	
	comp=Z,196nm,20.2s,baz=59,slow=37					
COEB	Comit de Eme	1.69 170	eP	Pb	04 47 27.2	+0.8
COEB			IAML		04 47 52.7	
	comp=Z,1µm,0.4s					
COEB	Comit de Eme	1.69 170	eP	Pb	04 47 27.2	+0.8
COEB			IAML		04 47 52.7	
	comp=Z,1µm,0.4s					
TGUH	Tegucigalpa,Un	1.87 126	eP	Pb	04 47 29.4	0.0
TGUH			eS	Sg	04 47 55.2	+0.4
TGUH	Tegucigalpa,Un	1.87 126	eP	Pb	04 47 29.4	0.0
TGUH			eS	Sg	04 47 55.2	+0.4
PCG	Pacaya	1.90 246	eP	Pb	04 47 30.1	+0.2
PCG			eS	Sn	04 47 53.9	+1.7
PETF	Flores	2.00 330	eP	Pn	04 47 29.5	+0.5
FUG	Fuego 3	2.08 250	eP	Pb	04 47 33.5	+0.5
FUG			eS	Sn	04 47 55.5	-1.3
STG3	Santiaguito 3,	2.70 260	eP	Pn	04 47 40.0	+1.2
RCON	San Juan de Ri	3.08 123	eP	Pb	04 47 51.3	+1.1
TEL3	Telica 3	3.23 143	eP	Pb	04 47 51.5	-0.9
CNGN	Cerro Negro	3.37 142	eP	Pb	04 47 52.8	-2.1
MATN	Matagalpa	3.59 128	eP	Pb	04 48 00.1	+1.4
MATN			eS	Sg	04 48 48.0	-2.2
COPN	Copaltepe	3.69 144	eP	Pb	04 47 59.3	-1.0
HUEN		3.82 137	eP	Pb	04 48 00.5	-2.1
ACON	Acoyapa	4.77 132	eP	Pn	04 48 13.1	+5.9
TXAR	Lajitas Array	19.65 318	P	Pn	04 51 27.0	+1.3
	comp=Z,3.3nm,0.8s,baz=137,slow=10,SNR=23					
TXAR			LR	LR	04 59 34.8	
	comp=Z,25nm,20.9s,baz=335,slow=38					
	comp=Z,3.3nm,0.8s					
SJG	San Juan	21.91 79	LR	LR	04 59 30.4	
	comp=Z,30nm,19.0s,baz=292,slow=34					
NVAR	Mina Array Bea	34.79 317	P	P	04 53 47.1	+0.6
	comp=Z,0.6nm,0.7s,baz=132,slow=6.6,SNR=5.3					
	comp=Z,0.6nm,0.7s					
CMAR	Chiang Mai Arr	145.71 347	PKPbc	PKPdf	05 06 33.7	-1.5
	comp=Z,0.8nm,0.4s,baz=332,slow=3.3,SNR=5.4					

NOU 14 04:48:40.6, 36.77S×179.27W, h18km, MLv4.5/8, East of North Island, N.Z.
IDC 14 04:48:51.5±1.6, 36.57S×179.19E, h0km, mb4.1/3, mbtmp4.1/4, ML3.9/1, MS3.2/6, Error ellipse: s-maj=40.0km s-min=30.9km az=54.0
WEL 14 04:48:57.4±1.5, 37°S±4°×17°9E±1°1, h19km±9km, M3.8/20, ML4.0/23, MLv3.8/20, Error ellipse: s-maj=0.0km s-min=0.0km az=86.3
ISC 14 04:48:54.1±3.5, 36.89S±0.06×179.25E±0.08, h17km±21km, n96, σ1§45/102, mb4.0/3, MS3.2/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.01	228	P	Pb	04 49 13.0	-0.1
MXZ				S	Sb	04 49 24.4	-1.8
MXZ	Matakaoa Point	1.01	228	P	Pb	04 49 13.4	+0.3
WMGZ	Waiomatatini S	1.14	215	P	Pn	04 49 16.8	+1.5
WMGZ				S	Sb	04 49 32.0	+2.0
PKGZ	Pakihiroa	1.37	223	P	Pn	04 49 19.6	+1.1
PUZ	Puketiti	1.42	213	P	Pn	04 49 20.1	+0.9
PUZ				S	Sn	04 49 37.5	-0.1
HAZ	Te Kaha	1.46	233	P	Pn	04 49 19.7	+0.1
TWGZ	Tauwhareparae	1.64	218	P	Pn	04 49 23.5	+1.3
RUGZ	Raukumara Rang	1.65	229	P	Pn	04 49 23.7	+1.2
WIZ	White Island	1.77	248	P	Pn	04 49 23.6	-0.2
CNGZ	Carnagh Statio	1.79	207	P	Pn	04 49 25.9	+1.6
CNGZ				S	Sn	04 49 48.8	+2.1
TKGZ	Te Karaka	1.91	215	P	Pn	04 49 26.8	+1.0
MWZ	Matawai	1.99	223	P	Pn	04 49 28.1	+1.1
WHRZ	Whale Island	2.06	241	P	Pb	04 49 30.9	0.0
RIGZ	Rimuhau	2.16	213	P	Pn	04 49 29.9	+0.5
RIGZ				S	Sn	04 49 55.5	-0.4
RAGZ	Rawiri	2.17	222	P	Pn	04 49 30.5	+1.0
URZ	Urewera	2.18	231	Pn	Pn	04 49 31.0	+1.4
	30nm,0.3s,baz=355,slow=5.0,SNR=212						
URZ				Sn	Sn	04 49 55.3	-0.9
	30nm,0.3s,baz=55,slow=22,SNR=14						
URZ				LR	LR	04 50 13.9	
	comp=Z,191nm,19.6s,baz=109,slow=35						
	163nm,0.4s						
URZ	Urewera	2.18	231	P	Pn	04 49 30.8	+1.1
URZ	Urewera	2.18	231	P	Pn	04 49 31.2	+1.6
OPRZ	Ohinepanea	2.35	245	P	Pn	04 49 32.9	+1.0
SNGZ	Shannon Statio	2.42	218	P	Pn	04 49 33.6	+0.6
SNGZ				S	Sn	04 50 02.6	+0.3
MYRZ	Mayor Island	2.44	260	P	Pn	04 49 34.1	+0.9
KNZ	Kokohu	2.47	210	P	Pn	04 49 33.1	-0.4
KNZ				S	Sn	04 50 01.1	-2.2
MHGZ	Mahia Peninsul	2.50	205	P	Pn	04 49 34.3	+0.3
MUGZ	Murupara	2.53	230	P	Pn	04 49 35.4	+1.0
TARZ	Mount Tarawera	2.56	238	P	Pn	04 49 36.9	+1.9
RRRZ	Republican Roa	2.61	235	P	Pn	04 49 37.1	+1.5
RAHZ	Arahi	2.65	220	P	Pn	04 49 37.8	+1.7
RAHZ				S	Sn	04 50 08.1	+0.2
WHHZ	Waihua	2.70	215	P	Pn	04 49 38.3	+1.4
WHHZ				S	Sn	04 50 08.3	-0.8
MTHZ	Maungataniwha	2.73	223	P	Pn	04 49 38.2	+0.9
MTHZ				S	Sn	04 50 09.7	-0.3
KMRZ	Kaimai	2.81	249	P	Pn	04 49 38.0	-0.3
KUZ	Kuaotunu	2.84	272	P	Pn	04 49 38.7	+0.1
KUZ				S	Sn	04 50 08.7	-3.7
ALRZ	Allen Road	2.85	233	P	Pn	04 49 39.7	+0.9
NMHZ	Naumai	2.93	220	P	Pn	04 49 40.7	+0.7
ARHZ	Aropaoanui	2.96	216	P	Pn	04 49 40.9	+0.5
ARHZ				S	Sn	04 50 15.6	0.0
MRHZ	Matea Rd	2.97	228	P	Pn	04 49 41.7	+1.2
TOZ	Tahuroa Road	3.10	253	P	Pn	04 49 42.6	+0.3
GRZ	Great Barrier	3.12	281	P	Pn	04 49 43.3	+0.8
BKZ	Black Stump Fm	3.15	223	P	Pn	04 49 43.3	+0.3
BKZ	Black Stump Fm	3.15	223	P	Pn	04 49 43.3	+0.3
KUTZ	Kaahu Road	3.15	239	P	Pn	04 49 44.6	+1.6
MCHZ	McNeill Hill	3.25	217	P	Pn	04 49 44.3	0.0
MCHZ				S	Sn	04 50 21.7	-1.0
CKHZ	Cape Kidnapper	3.25	211	P	Pn	04 49 43.7	-0.6
CKHZ				S	Sn	04 50 20.6	-2.1
MKAZ	Moumakai	3.28	265	P	Pn	04 49 45.4	+0.7
WIAZ	Waiheke Island	3.30	270	P	Pn	04 49 46.2	+1.1
KWHZ	Kaweka Forest	3.37	221	P	Pn	04 49 45.7	-0.4
RATZ	Rangitukua	3.39	233	P	Pb	04 49 51.2	-2.5
RITZ	Rihia Road	3.40	231	P	Pn	04 49 48.2	+1.8
KAHZ	Kahuranaki	3.45	212	P	Pn	04 49 46.2	-0.9
ETAZ	East Tamaki Re	3.46	268	P	Pn	04 49 48.6	+1.4
KATZ	Kakaramea	3.50	232	P	Pn	04 49 51.9	+4.0
ABAZ	Army Bay	3.56	273	P	Pn	04 49 50.8	+2.2
TMVZ	Te Maari	3.58	230	P	Pn	04 49 49.5	+0.5
NTVZ	North Tongarir	3.58	231	P	Pn	04 49 49.9	+0.9
ETVZ	East Tongariro	3.58	230	P	Pn	04 49 49.6	+0.5
BHHZ	Black Hill Sta	3.61	223	P	Pn	04 49 49.9	+0.5
OTVZ	Oturere	3.63	230	P	Pn	04 49 50.5	+0.8
NNVZ	North Ngauruho	3.64	231	P	Pn	04 49 52.2	+2.3
WTVZ	West Tongariro	3.65	231	P	Pn	04 49 52.5	+2.6
PXZ	Pawanui	3.66	210	P	Pn	04 49 48.6	-1.3
SNVZ	South Ngauruho	3.66	230	P	Pn	04 49 51.1	+1.0
NGZ	Ngauruhoe	3.68	230	P	Pn	04 49 51.5	+1.2
AWAZ	Awhitu Peninsu	3.69	266	P	Pn	04 49 52.1	+1.7
TWVZ	Taurewa	3.72	233	P	Pn	04 49 54.3	+3.4
MOVZ	Moawhango	3.73	227	P	Pn	04 49 52.1	+1.1
WTAZ	Waiatarua	3.75	268	P	Pn	04 49 53.1	+1.9
RVAZ	Riverhead Bore	3.75	270	P	Pn	04 49 53.6	+2.4
WHVZ	Whangaehu Hut	3.75	229	P	Pn	04 49 52.2	+0.8
FWVZ	Far West T-bar	3.75	230	P	Pn	04 49 52.3	+0.8
HIZ	Hauiti	3.84	244	P	Pn	04 49 55.2	+2.7
HIZ	Hauiti	3.84	244	P	Pn	04 49 55.2	+2.7
PNHZ	Pukenui	3.86	218	P	Pn	04 49 51.9	-0.8
WPHZ	Waipukurau	3.86	214	P	Pn	04 49 51.8	-1.0
WCZ	Waipu Caves	4.07	282	P	Pn	04 49 57.2	+1.7
TSZ	Takapari Road	4.08	218	P	Pn	04 49 55.7	-0.1
WAZ	Wanganui	4.41	228	P	Pn	04 50 01.1	+0.8
BFZ	Birch Farm	4.46	211	P	Pn	04 49 58.2	-2.7
NEZ	North Egmont	4.71	238	P	Pn	04 50 08.3	+3.8
KHEZ	Kahui Hut	4.78	238	P	Pn	04 50 07.9	+2.5
OUZ	Omahuta	4.87	288	P	Pn	04 50 08.7	+2.1
OUZ	Omahuta	4.87	288	P	Pn	04 50 08.6	+2.0
OGWZ	Otaki Gorge	5.05	218	P	Pn	04 50 08.3	-0.8
QRZ	Quartz Range	6.55	231	P	Pn	04 50 28.5	-1.2
QRZ	Quartz Range	6.55	231	P	Pn	04 50 30.0	+0.3
CTZ	Chatham Island	7.53	157	P	Pn	04 50 43.8	+0.7
GLKZ	Green Lake	7.97	18	P	Pb	04 51 00.1	-12
RPZ	Rata Peaks	9.25	220	LR	LR	04 55 32.3	
	comp=Z,197nm,21.0s,baz=38,slow=42						
DZM	Mont Dzumac	18.47	320	LR	LR	04 58 06.3	
	comp=Z,103nm,18.6s,baz=27,slow=30						
CTA	Charters Tower	33.27	291	LR	LR	05 07 23.4	
	comp=Z,16nm,19.1s,baz=79,slow=34						
ASAR	Alice Springs	40.96	276	P	P	04 56 35.5	-0.6
	2.7nm,0.8s,baz=120,slow=8.0,SNR=21						
	2.7nm,0.8s						
WRA	Warramunga Arr	42.54	281	P	P	04 56 48.1	-0.9
	0.9nm,0.5s,baz=121,slow=7.8,SNR=13						
	0.9nm,0.5s						
QSPA	South Pole Qui	53.24	180	P	P	04 58 14.5	+3.0
	2.9nm,0.9s,baz=44,slow=2.9,SNR=6.1						
	2.9nm,0.9s						
KAPI	Kappang	62.79	285	LR	LR	05 27 36.4	
	comp=Z,15nm,18.4s,baz=80,slow=37						
MAW	Mawson	65.45	202	LR	LR	05 26 23.9	
	comp=Z,30nm,18.7s,baz=108,slow=34						
ARCES	ARCESS Array B	144.33	345	PKP	PKPdf	05 08 27.5	-0.7
	3.3nm,1.1s,baz=16,slow=1.8,SNR=5.4						
FINES	FINESS Array B	150.22	334	PKPbc	PKPbc	05 08 42.6	-0.7
	0.8nm,0.5s,baz=56,slow=4.8,SNR=4.9						
TORD	Torodi Ar. Bea	156.26	186	PKPab	PKPab	05 09 15.9	-0.2
	0.5nm,0.8s,baz=182,slow=2.8,SNR=4.7						

IDC 14 04:51:23.7±1.0, 32.90N×75.81E, h0km, mb3.7/9, mbtmp3.7/11, ML3.3/2, Error ellipse: s-maj=30.3km s-min=19.7km az=65.0
NDI 14 04:51:28.3±1.8, 32.97N×75.92E, h10km, ML3.7
ISC 14 04:51:28.3±0.7, 33.00N±0.05×75.98E±0.06, h28km, n17, σ1§43/21, mb3.7/8, 1C-1D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	0.60	202	ePg	Pb	04 51 38.8	-1.5
THN				i Sg	Sb	04 51 47.9	-0.6
JMU	Jammu	0.95	253	ePg	Pb	04 51 47.2	+1.1
JMU				i Sg	Sn	04 51 58.8	+0.4
BHK	Bhakra	1.62	167	ePg	Pb	04 51 58.2	+0.6
BHK				i Sg	Sb	04 52 21.5	+4.0
SMLA	Simla	2.12	151	eP	Pb	04 52 05.0	-0.9
SMLA				eS	Sb	04 52 31.1	-0.7
SMLA				IAML		04 52 36.4	
	comp=E,1µm,0.3s						
SMLA				IAML		04 52 37.3	
	comp=N,494nm,0.5s						
AAK	Ala-Archa	9.69	353	Pn	Pn	04 53 48.2	+2.3
	comp=N,0.5nm,0.3s,baz=187,slow=14,SNR=5.4						
	comp=N,2.3nm,0.5s						
KK31	Karatay Array	10.97	338	⇑Pn	Pn	04 54 02.6	-0.7
	comp=N,0.5nm,0.3s,baz=168,slow=14,SNR=5.2						
KK31				⇓Lg	Lg	04 54 47.1	
	comp=N,2.5nm,0.6s,baz=169,slow=28						
MKAR	Makanchi Array	14.60	17	Pn	Pn	04 54 52.8	-0.1
	comp=N,0.1nm,0.3s,baz=205,slow=16,SNR=1.9						
	comp=N,0.3nm,0.3s						
KURBB	Kurchatov Arra	17.71	5	P	Pn	04 55 30.6	-2.1
	comp=N,0.8nm,0.6s,baz=193,slow=12,SNR=4.8						
BVAR	Borovoye Array	20.42	350	P	P	04 56 03.2	+0.2
	comp=N,0.9nm,0.5s,baz=148,slow=8.7,SNR=7.5						
	comp=N,0.9nm,0.5s						
ZALV	Zalesovo Beam	21.87	14	P	P	04 56 18.8	+0.1
	comp=N,1.1nm,0.3s,baz=203,slow=7.9,SNR=4.5						
	comp=N,1.1nm,0.3s						
AKTO	Aktyubinsk	21.89	328	P	P	04 56 17.5	-1.3
	comp=N,2.8nm,0.6s,baz=120,slow=10.0,SNR=8.2						
	comp=N,2.8nm,0.6s						
FINES	FINESS Array B	42.66	327	P	P	04 59 20.9	-1.2
	comp=N,1.2nm,0.7s,baz=116,slow=13,SNR=4.4						
	comp=N,1.2nm,0.7s						
ARCES	ARCESS Array B	45.93	338	P	P	04 59 49.0	+0.8
	comp=N,0.8nm,0.5s,baz=110,slow=7.8,SNR=9.4						
	comp=N,0.8nm,0.5s						
TORD	Torodi Ar. Bea	69.86	273	P	P	05 02 36.0	-0.9
	comp=N,1.0nm,0.5s,baz=53,slow=6.1,SNR=14						
	comp=N,1.0nm,0.5s						
WRA	Warramunga Arr	76.65	125	P	P	05 03 17.1	+0.3
	comp=N,0.3nm,0.6s,baz=322,slow=6.1,SNR=6.1						
	comp=N,0.3nm,0.6s						
ILAR	Eielson Array	76.95	17	P	P	05 03 18.4	+0.5
	comp=N,0.6nm,0.9s,baz=261,slow=4.5,SNR=4.1						
	comp=N,0.6nm,0.9s						
ASAR	Alice Springs	78.88	128	P	P	05 03 29.4	+0.2
	comp=N,0.3nm,0.6s,baz=318,slow=4.0,SNR=4.2						
	comp=N,0.3nm,0.6s						

IDC 14 04:51:19.8±1.7, 0.08S×122.55E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=209.6km s-min=26.6km az=61.0
DJA 14 04:51:36.9±0.5, 0°S±4°×12°3E±°, h146km±5km, M4.3/11, mb4.5/1, MLv4.3/11
ISC 14 04:51:37.0±0.9, 0.13S±0.07×122.87E±0.06, h162km, n14, σ1§24/17, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.77	11	P	Pn	04 52 00.7	-0.5
GTOI				S	Sn	04 52 19.1	-0.8
LUWI	Luwuk	0.92	186	P	Pn	04 52 01.6	-0.6
LUWI				S	Sn	04 52 19.7	-2.0
MRSI	Marisa	1.10	303	P	Pn	04 52 02.1	-1.6
KMSI	Cibinong	1.31	58	P	Pn	04 52 05.5	-0.1
APSI	Ampana	1.45	237	P	Pn	04 52 06.4	-0.5
APSI				S	Sn	04 52 28.2	-1.7
MPSI	Mapaga	3.00	279	P	Pn	04 52 24.9	+0.1
SANI	Sanana	3.66	121	P	Pn	04 52 31.3	-1.9
TTSI	Tana Toraja	4.21	226	P	Pn	04 52 40.1	-0.1
LBMI	Labuha	4.66	96	P	Pn	04 52 45.1	-1.1
NLAI	Namlea	5.24	126	P	Pn	04 52 54.4	+0.6
WRA	Warramunga Arr	22.68	151	P	P	04 56 24.9	+0.1
	3.2nm,0.9s,baz=326,slow=10,SNR=35						
	3.2nm,0.9s						
ASAR	Alice Springs	25.74	156	P	P	04 56 54.8	+2.1
	0.7nm,0.8s,baz=327,slow=8.1,SNR=5.6						
	0.7nm,0.8s						
STKA	Stephens Creek	36.21	152	P	P	04 58 25.1	+0.8
	2.0nm,0.7s,baz=338,slow=7.8,SNR=5.6						
	2.0nm,0.7s						
MKAR	Makanchi Array	58.65	328	P	P	05 01 17.8	+0.6
	0.4nm,0.8s,baz=126,slow=9.7,SNR=2.3						
	0.4nm,0.8s						

IDC 14 04:58:19.0±6.0, 28.31S×177.13W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=267.9km s-min=94.0km az=163.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.02	264	P	P	05 06 28.6	-0.1
	0.3nm,0.5s,baz=103,slow=7.8,SNR=4.5						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.82	270	P	P	05 06 35.0	-0.1
	0.4nm,0.5s,baz=110,slow=8.0,SNR=6.7						
	0.4nm,0.5s						
FINES	FINESS Array B	143.43	341	PKP	PKPdf	05 17 53.9	-0.9
	0.9nm,0.6s,baz=64,slow=3.2,SNR=6.2						

SNET 14 05:00:43.4±1.0, 13.23N×90.05W, h24km±3km, ML3.0
GCG 14 05:00:45.2±0.4, 13.32N×90.22W, h68km±39km, MD3.6
ISC 14 05:00:39.5±1.8, 13.06N±0.07×90.11W±0.04, h20km±4km, n28, σ0§61/42, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.90	31	eP	Pn	05 00 57.7	+0.3
CEVE				eS	Sg	05 01 09.2	0.0
CEVE				IAML		05 01 11.3	
	comp=Z,3µm,0.3s						
NUBE	Las Nubes	0.90	21	eP	Pn	05 00 57.3	0.0
NUBE				eS	Sb	05 01 07.8	-0.5
SBLS	San Blas	0.91	31	eP	Pn	05 00 58.0	+0.5
SBLS				eS	Sg	05 01 09.2	-0.3
SNJE	San Jose	0.94	31	eP	Pn	05 00 58.4	+0.4
SNJE				eS	Sb	05 01 09.2	-0.4
RTR	El Retiro	0.95	28	eP	Pn	05 00 58.6	+0.6
RTR				eS	Sb	05 01 09.7	-0.1
CEDA	San Andres	1.02	43	eP	Pn	05 00 59.4	+0.6
CEDA				eS	Sb	05 01 11.7	+0.2
SLOZ	Alcaldia de Sa	1.02	18	eP	Pg	05 00 59.1	-0.2
SLOZ				eS	Sb	05 01 11.5	0.0
SLOZ				IAML		05 01 14.9	
	comp=Z,379nm,0.4s						
BOQS	Boqueron	1.05	50	eP	Pg	05 00 60.0	-0.1
BOQS				eS	Sn	05 01 14.5	+0.9
SNET	Serv Nac Est T	1.06	53	eP	Pg	05 01 00.2	+0.1
UEES	Universidad Ev	1.07	52	eP	Pg	05 01 00.8	+0.5
UEES				IAML		05 01 20.7	
	comp=Z,588nm,0.2s						
LFRS	El Faro	1.16	61	eP	Pg	05 01 02.3	+0.1
SJTE	Alcalda de S	1.21	62	eP	Pg	05 01 02.7	-0.2
SJTE				IAML		05 01 21.9	
	comp=Z,188nm,0.2s						
LBRS	Las Brisas	1.24	57	eP	Pg	05 01 03.4	-0.2
PAVA	Las Pavas	1.31	60	eP	Pg	05 01 04.9	-0.1
PAVA				IAML		05 01 28.1	
	comp=Z,295nm,0.3s						
COEG	Centro de Oper	1.32	65	eP	Pg	05 01 04.4	-0.7
COEG				IAML		05 01 27.3	
	comp=Z,436nm,0.5s						
PCG	Pacaya	1.42	340	eP	Pg	05 01 06.3	-0.6
PCG				eS	Sg	05 01 25.8	+0.3
SCLA	Alcaldia de Sa	1.49	64	eP	Pg	05 01 07.5	-0.8
SCLA				IAML		05 01 32.1	
	comp=Z,54nm,0.4s						
MTO3	Montecristo	1.52	28	eP	Pb	05 01 07.0	-0.2
NBG	Las Nubes	1.54	351	eP	Pb	05 01 08.2	+0.6
NBG				eS	Sn	05 01 25.9	+0.1
FUG	Fuego 3	1.56	333	eP	Pb	05 01 07.7	-0.1
FUG				eS	Sn	05 01 24.3	-1.9
COEB	Comit de Eme	1.60	74	eP	Pb	05 01 08.6	+0.1
P5NO	Presa 5 de nov	1.60	55	eP	Pb	05 01 08.4	-0.2
PQSS	Presa 15 de Se	1.61	69	eP	Pb	05 01 09.1	+0.5
PQSS				IAML		05 01 31.1	
	comp=Z,69nm,0.1s						
ESQI	Esquipulas	1.67	26	eP	Pb	05 01 09.1	-0.6
ESQI				eS	Sn	05 01 29.1	+0.4
PACA	Pacayal	1.79	76	eP	Pb	05 01 12.4	+0.7
PACA				eS	Sb	05 01 33.5	-0.3
PACA				IAML		05 01 37.7	
	comp=Z,2µm,0.4s						
LCND	La Caada	2.17	83	eP	Pb	05 01 17.2	-1.0
LCND				IAML		05 01 50.2	
	comp=Z,119nm,0.3s						
STG3	Santiaguito 3,	2.17	319	eP	Pn	05 01 16.4	+1.5
STG3				eS	Sn	05 01 40.8	-0.5
CNCH	Conchagua	2.23	84	eP	Pb	05 01 18.2	-1.0

NOU 14 05:01:16.0, 37.76S×176.14E, h321km, MLv3.7/14, North Island, New Zealand
WEL 14 05:01:22.0±0.6, 38°S±4°×17°6E±°, h260km±5km, M3.1/59, MLv3.1/59, Error ellipse: s-maj=0.0km s-min=0.0km az=95.0
ISC 14 05:01:15.3±1.5, 37.87S±0.07×176.00E±0.07, h309km±9km, n162, σ2§63/178, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.25	57	P	Pn	05 01 55.8	+1.4
OMRZ	Omania	0.38	129	P	Pn	05 01 56.4	+1.8
TOZ	Tahuroa Road	0.41	289	P	Pn	05 01 56.6	+1.9
OPRZ	Ohinepanea	0.44	87	P	Pn	05 01 55.9	+1.2
HLRZ	Highlands Stat	0.48	144	P	Pn	05 01 57.1	+2.3
HSRZ	Hossack Road	0.48	156	P	Pn	05 01 57.3	+2.5
GRRZ	Galatos Road	0.49	169	P	Pn	05 01 57.0	+2.2
TARZ	Mount Tarawera	0.55	133	P	Pn	05 01 57.0	+1.9
HRRZ	Handcock Road	0.57	157	P	Pn	05 01 57.2	+2.1
TLZ	Tolley Road	0.59	218	P	Pn	05 01 57.8	+2.7
RRRZ	Republican Roa	0.62	139	P	Pn	05 01 56.9	+1.8
KUTZ	Kaahu Road	0.64	192	P	Pn	05 01 57.5	+2.3
WPRZ	Whakapapatarin	0.66	169	P	Pn	05 01 57.6	+2.3
PRRZ	Plateau Road	0.70	154	P	Pn	05 01 57.4	+2.0
ALRZ	Allen Road	0.75	159	P	Pn	05 01 57.8	+2.3
MUGZ	Murupara	0.86	135	P	Pn	05 01 57.5	+1.5
URZ	Urewera	0.96	114	P	Pn	05 01 57.4	+1.0
URZ				S	S	05 02 26.2	-2.9
URZ	Urewera	0.96	114	P	Pn	05 01 57.4	+1.0
MKAZ	Moumakai	1.01	319	P	Pn	05 01 58.4	+1.8
MRHZ	Matea Rd	1.02	161	P	Pn	05 01 58.8	+2.1
MRHZ				S	S	05 02 27.1	-2.5
RTZ	Ruatahuna	1.08	134	P	Pn	05 01 57.4	+0.4
RTZ				S	S	05 02 28.8	-1.4
HIZ	Hauiti	1.11	234	P	Pn	05 01 59.8	+2.8
HIZ	Hauiti	1.11	234	P	Pn	05 01 59.7	+2.7
RITZ	Rihia Road	1.11	186	P	Pn	05 02 00.1	+3.0
KUZ	Kuaotunu	1.14	349	P	Pn	05 01 58.3	+0.9
KUZ	Kuaotunu	1.14	349	P	Pn	05 01 58.2	+0.9
MTHZ	Maungataniwha	1.19	146	P	Pn	05 01 59.8	+2.3
MTHZ				S	S	05 02 29.0	-2.1
ETAZ	East Tamaki Re	1.25	317	P	Pn	05 01 59.5	+1.7
NTVZ	North Tongarir	1.25	191	P	Pn	05 01 58.7	+0.8
KRVZ	Karewarewa	1.26	193	P	Pn	05 02 01.2	+3.3
TMVZ	Te Maari	1.27	190	P	Pn	05 02 01.1	+3.1
TMVZ				S	S	05 02 30.9	-1.1
WIAZ	Waiheke Island	1.27	327	P	Pn	05 01 59.5	+1.5
RAGZ	R

WPHZ	Waipukurau	2.22 171	P	Pn	05 02 07.6	+3.1
PXZ	Pawanui	2.26 163	P	Pn	05 02 08.0	+3.2
WCZ	Waipu Caves	2.34 325	P	Pn	05 02 07.5	+1.9
OHWZ	Ohakea	2.40 193	P	Pn	05 02 09.6	+3.7
DVHZ	Dannevirke	2.43 177	P	Pn	05 02 09.0	+2.7
DVHZ	Dannevirke	2.43 177	P	S	05 02 43.4	-3.6
PRHZ	Porangahau	2.45 168	P	Pn	05 02 09.6	+3.2
POWZ	Post Office Ro	2.53 184	P	Pn	05 02 10.0	+2.9
POWZ	Post Office Ro	2.53 184	P	S	05 02 43.9	-4.7
ANWZ	Angora Road	2.62 172	P	Pn	05 02 11.4	+3.5
ANWZ	Angora Road	2.62 172	P	S	05 02 48.2	-1.8
PRWZ	Pori Road	2.68 180	P	Pn	05 02 11.7	+3.2
PRWZ	Pori Road	2.68 180	P	S	05 02 46.6	-4.5
MRZ	Mangatainoka R	2.81 186	P	Pn	05 02 12.4	+2.7
BFZ	Birch Farm	2.82 176	P	Pn	05 02 12.8	+3.0
BFZ	Birch Farm	2.82 176	P	Pn	05 02 13.0	+3.2
TIWZ	Tintock	2.91 182	P	Pn	05 02 13.7	+3.1
TIWZ	Tintock	2.91 182	P	S	05 02 50.0	-5.0
OGWZ	Otaki Gorge	3.01 192	P	Pn	05 02 14.6	+3.0
CPWZ	Castlepoint	3.04 177	P	Pn	05 02 15.6	+3.7
CPWZ	Castlepoint	3.04 177	P	S	05 02 54.6	-2.6
HOWZ	Holdsworth Sta	3.05 187	P	Pn	05 02 14.6	+2.6
KIW	Kapiti Island	3.11 195	P	Pn	05 02 15.3	+2.8
TMWZ	Te Maipa	3.24 181	P	Pn	05 02 16.7	+2.9
TMWZ	Te Maipa	3.24 181	P	S	05 02 58.0	-2.8
OUZ	Omahuta	3.27 323	P	Pn	05 02 13.7	-0.7
OUZ	Omahuta	3.27 323	P	Pn	05 02 16.3	+1.9
MTW	Mount Morrison	3.31 186	P	Pn	05 02 17.1	+2.5
MTW	Mount Morrison	3.31 186	P	S	05 02 57.8	-4.3
CAW	Cannon Point	3.31 192	P	Pn	05 02 17.5	+2.8
DUWZ	D'Urville Isla	3.34 208	P	Pn	05 02 17.6	+2.7
TRWZ	Traveller	3.53 184	P	Pn	05 02 19.9	+3.0
PAWZ	Paruwai Farm	3.54 187	P	Pn	05 02 19.8	+2.8
WEL	Wellington	3.54 195	P	Pn	05 02 19.7	+2.7
WEL	Wellington	3.54 195	P	S	05 03 02.4	-3.9
SNZO	South Karori	3.58 196	P	Pn	05 02 19.9	+2.6
MSWZ	Moikau Station	3.59 189	P	Pn	05 02 20.1	+2.6
MSWZ	Moikau Station	3.59 189	P	S	05 03 04.2	-3.1
TCW	Tory Channel	3.59 201	P	Pn	05 02 20.4	+2.9
PLWZ	Palliser	3.74 189	P	Pn	05 02 21.7	+2.6
TUWZ	Tuamarina	3.89 203	P	Pn	05 02 23.6	+2.9
NNZ	Nelson	3.91 210	P	Pn	05 02 23.2	+2.4
TKNZ	Takaka Hill	3.94 216	P	Pn	05 02 23.1	+1.9
QRZ	Quartz Range	3.99 221	P	Pn	05 02 23.7	+1.9
QRZ	Quartz Range	3.99 221	P	Pn	05 02 23.6	+1.9
CMWZ	Cape Campbell	4.11 199	P	Pn	05 02 26.6	+3.5
BSWZ	Blackbirch Sta	4.17 202	P	Pn	05 02 26.8	+3.1
MRNZ	Matariki Terra	4.32 214	P	Pn	05 02 27.3	+1.9
THZ	Tophouse	4.56 210	P	Pn	05 02 30.3	+2.2
KHZ	Kahutara	4.92 202	P	Pn	05 02 35.2	+3.2
KHZ	Kahutara	4.92 202	P	Pn	05 02 35.5	+3.5
DSZ	Denniston Nort	5.04 218	P	Pn	05 02 35.3	+1.7
GVZ	Greta Valley S	5.57 203	P	Pn	05 02 42.3	+2.6
LTZ	Lake Taylor	5.67 209	P	Pn	05 02 43.2	+2.3
AMCZ	Amberley	5.88 205	P	Pn	05 02 46.2	+2.9
INZ	Inchbonnie	5.97 214	P	Pn	05 02 46.9	+2.6
OXZ	Oxford	6.23 208	P	Pn	05 02 49.6	+2.2
OKCZ	Okains Bay	6.26 200	P	Pn	05 02 50.8	+3.0
MQZ	McQueen's Vall	6.36 202	P	Pn	05 02 51.0	+2.1
AKCZ	Akaroa Harbour	6.44 200	P	Pn	05 02 53.4	+3.5
RACZ	Rakaia	6.54 205	P	Pn	05 02 53.8	+2.7
WVZ	Waitaha Valley	6.57 216	P	Pn	05 02 54.0	+2.6
WACZ	Wakanui South	6.84 206	P	Pn	05 02 57.3	+2.7
RPZ	Rata Peaks	6.94 211	P	Pn	05 02 58.1	+2.2
RPZ	Rata Peaks	6.94 211	P	Pn	05 02 58.2	+2.2
GCSZ	Gaunt Creek Bo	6.94 217	P	Pn	05 02 58.6	+2.6
ARCZ	Arundel	7.08 209	P	Pn	05 02 59.9	+2.2
FOZ	Fox Glacier	7.35 218	P	Pn	05 03 02.7	+1.8
TMZ	Timaru	7.52 208	P	Pn	05 03 05.8	+2.9
LBZ	Lake Benmore	7.85 212	P	Pn	05 03 09.7	+2.7
ODZ	Otahua Downs	8.22 208	P	P	05 03 15.0	-1.3
ODZ	Otahua Downs	8.22 208	P	Pn	05 03 14.1	+2.7
JCZ	Jackson Bay	8.26 219	P	Pn	05 03 13.5	+1.5
JCZ	Jackson Bay	8.26 219	P	Pn	05 03 15.1	+3.1
WKZ	Wanaka	8.71 215	P	Pn	05 03 20.0	+2.6
EAZ	Earnscleugh	8.90 212	P	Pn	05 03 22.1	+2.3
MLZ	Mavora Lakes	9.53 216	P	P	05 03 30.8	-0.4
WHZ	Wether Hill Ro	10.01 214	P	P	05 03 36.3	-0.2

*GII **14** 05:03:36.9±0.0, 34°.37N×31°.83E, h10km, Mm2.1/4*
*NIC **14** 05:03:41.2±0.0, 34°.31N×31°.89E, h14km±1km, Ml2.8/5*
ISC 14 05:03:40.6±1.3,**34°.28N**±0°.04×**31°.97E**±0°.05,**h17**km±10km,
n22,σ1§**09**/38,**1C,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATA	**Nata**	**0.70**	**44**	P	**Pn**	**05 03 56.0**	**+0.2**
NATA				S	**Sn**	**05 04 05.5**	**-0.9**
NATA				AML	AML	05 04 12.3	
	1.6nm,0.4s						
NATA				AML	AML	05 04 12.3	
	1.6nm,0.4s						
NATA				AML	AML	05 04 14.3	
	1.7nm,0.4s						
NATA				AML	AML	05 04 14.3	
	1.7nm,0.4s						
AKMS	**Akamas**	**0.80**	**22**	⇑P	**Pn**	**05 03 56.9**	**-0.3**
AKMS				S	**Sn**	**05 04 08.2**	**-0.5**
AKMS				AML	AML	05 04 09.6	
	0.8nm,0.3s						
AKMS				AML	AML	05 04 09.6	
	0.8nm,0.3s						
AKMS				AML	AML	05 04 10.2	
	1.3nm,0.3s						
AKMS				AML	AML	05 04 10.2	
	1.3nm,0.3s						
SZAC	**Souni**	**0.89**	**57**	P	**Pn**	**05 03 59.5**	**+1.1**
SZAC				S	**Sn**	**05 04 12.7**	**+1.7**
SZAC				AML	AML	05 04 14.0	
	1.6nm,0.2s						
SZAC				AML	AML	05 04 14.0	
	1.6nm,0.2s						
SZAC				AML	AML	05 04 14.1	
	2.3nm,0.2s						
SZAC				AML	AML	05 04 14.1	
	2.3nm,0.2s						
OSC1	**CSNet OBS 1**	**0.97**	**217**	P	**Pb**	**05 03 59.0**	**+0.1**
OSC1				S	**Sg**	**05 04 12.9**	**+0.8**
ALFC	**Alefka**	**1.02**	**30**	P	**Pn**	**05 04 00.3**	**+0.1**
ALFC				S	**Sn**	**05 04 15.2**	**+1.0**
ALFC				AML	AML	05 04 16.4	
	0.9nm,0.2s						
ALFC				AML	AML	05 04 16.4	
	0.9nm,0.2s						
ALFC				AML	AML	05 04 18.2	
	0.8nm,0.2s						
ALFC				AML	AML	05 04 18.2	
	0.8nm,0.2s						
ASGA	**Asgata**	**1.17**	**64**	P	**Pg**	**05 04 03.9**	**+0.7**
ASGA				S	**Sn**	**05 04 20.1**	**+2.2**
ASGA				AML	AML	05 04 21.7	
	0.6nm,0.3s						
ASGA				AML	AML	05 04 21.7	
	0.6nm,0.3s						
ASGA				AML	AML	05 04 24.1	
	0.6nm,0.3s						
ASGA				AML	AML	05 04 24.1	
	0.6nm,0.3s						
CSS	**Mathiatis**	**1.31**	**58**	P	**Pg**	**05 04 06.0**	**+0.1**
CSS				S	**Sg**	**05 04 24.4**	**+1.3**
CSS	**Mathiatis**	**1.31**	**58**	Pn	**Pn**	**05 04 03.3**	**-0.9**
CSS				Sn	**Sb**	**05 04 19.6**	**-1.8**
MVOU	**Mavrovouni**	**1.56**	**61**	P	**Pg**	**05 04 09.5**	**-1.0**
MVOU				S	**Sg**	**05 04 30.1**	**-0.6**
HNTI	**Hanita**	**2.92**	**113**	Sn	**Sn**	**05 05 01.9**	**+0.8**
GEM	**Giv'at Ha'Em**	**3.25**	**108**	Pn	**Pn**	**05 04 30.3**	**-0.6**
GEM				Sn	**Sn**	**05 05 10.0**	**+0.7**
NATI	**Neve Ativ**	**3.29**	**107**	Sn	**Sn**	**05 05 11.6**	**+1.4**
MMLI	**Mount Malkishu**	**3.42**	**121**	Pn	**Pn**	**05 04 31.5**	**-1.7**
MMLI				Sn	**Sn**	**05 05 14.7**	**+1.3**
SALP	**Salfit**	**3.48**	**128**	Sn	**Sn**	**05 05 16.2**	**+1.2**
HMDT	**Nahal Hemdat**	**3.60**	**123**	Pn	**Pn**	**05 04 34.9**	**-0.7**
HMDT				Sn	**Sn**	**05 05 18.8**	**+1.1**
KZIT	**Kziot**	**3.94**	**148**	Pn	**Pn**	**05 04 39.5**	**-0.8**
KZIT				Sn	**Sn**	**05 05 26.5**	**+0.4**
DSI	**Dead Sea**	**3.94**	**132**	Pn	**Pn**	**05 04 39.2**	**-1.1**
DSI				Sn	**Sn**	**05 05 27.5**	**+1.4**
MDBI	**Mazsada**	**4.11**	**135**	Pn	**Pn**	**05 04 41.4**	**-1.2**
MDBI				Sn	**Sn**	**05 05 30.9**	**+0.7**
PRNI	**Paran**	**4.68**	**146**	Pn	**Pn**	**05 04 49.9**	**-0.6**
KRMI	**Paran Flat**	**4.76**	**150**	Pn	**Pn**	**05 04 51.0**	**-0.6**
MBRI	**Mt Berech**	**5.12**	**150**	Pn	**Pn**	**05 04 55.6**	**-1.0**
MBRI				Sn	**Sn**	**05 05 56.8**	**+1.4**
EIL	**Elat**	**5.24**	**150**	Pn	**Pn**	**05 04 57.8**	**-0.5**

*NNC **14** 05:53:28.2±0.4, 42°.87N×77°.18E, h0km, mb3.4, mpv3.7,*
Error ellipse: s-maj=2.3km s-min=2.0km az=19.0
*SOME **14** 05:53:28.9, 42°.87N×77°.17E, h15km*
*KRNET **14** 05:53:28.9±0.1, 42°.90N×77°.17E, h19km, mb3.4*
*KNET **14** 05:53:30.5±0.7, 42°.88N×77°.05E, h20km±5km, ml2.5, Error ellipse: s-maj=3.2km s-min=2.6km az=75.0*
ISC 14 05:53:28.1±0.9,**42°.89N**±0°.02×**77°.15E**±0°.01,**h16**km±6km,
n74,σ0§**77**/135,**24C-29D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.21**	**316**	*e*P	**Pb**	**05 53 33.9**	**0.0**
TNSS	baz=11			*e*S	**Sg**	**05 53 37.1**	**+0.2**
TNSS	**Tian-Shan**	**0.21**	**316**	*e*P	**Pb**	**05 53 33.9**	**0.0**
TNSS	139nm,0.1s			*e*S	**Sg**	**05 53 37.1**	**+0.2**
TNSS	**Tian-Shan**	**0.21**	**316**	P	**Pb**	**05 53 33.9**	**0.0**
TNSS	139nm,0.1s			S	**Sg**	**05 53 37.1**	**+0.2**
MDOK	**Medeo**	**0.29**	**345**	*e*P	**Pb**	**05 53 34.7**	**-0.4**
MDOK	baz=42			*e*S	**Sg**	**05 53 38.3**	**-0.3**
MDOK	**Medeo**	**0.29**	**345**	*e*P	**Pb**	**05 53 34.7**	**-0.4**
MDOK	127nm,0.1s			*e*S	**Sg**	**05 53 38.4**	**-0.3**
MDOK	**Medeo**	**0.29**	**345**	⇓P	**Pb**	**05 53 34.7**	**-0.4**
MDOK	91nm,0.4s			Pg	**Pb**	**05 53 34.7**	**-0.4**
MDOK	127nm,0.1s			Lg	Lg	05 53 38.4	
MDOK	1μm,0.4s			⇓S	**Sg**	**05 53 38.7**	**+0.1**
KOTS	**Kotyrbulak**	**0.35**	**356**	*e*P	**Pb**	**05 53 35.9**	**-0.2**
KOTS	baz=53			*e*S	**Sg**	**05 53 40.5**	**0.0**
KOTS	**Kotyrbulak**	**0.35**	**356**	*e*P	**Pb**	**05 53 35.9**	**-0.2**
KOTS	320nm,0.2s			*e*S	**Sg**	**05 53 40.5**	**0.0**
KOTS	**Kotyrbulak**	**0.35**	**356**	P	**Pb**	**05 53 35.9**	**-0.2**
KOTS	320nm,0.2s			S	**Sg**	**05 53 40.5**	**0.0**
KNDC	**Almaty**	**0.36**	**338**	⇓P	**Pb**	**05 53 36.1**	**-0.1**
KNDC	162nm,0.5s			⇑S	**Sb**	**05 53 41.4**	**-0.3**
AAA	**Alma-Ata**	**0.37**	**332**	*e*P	**Pb**	**05 53 36.6**	**+0.2**
AAA	baz=29			*e*S	**Sb**	**05 53 42.0**	**0.0**
AAA	**Alma-Ata**	**0.37**	**332**	*e*P	**Pb**	**05 53 36.6**	**+0.2**
AAA	659nm,0.1s			*e*S	**Sb**	**05 53 42.0**	**0.0**
AAA	**Alma-Ata**	**0.37**	**332**	P	**Pb**	**05 53 36.6**	**+0.2**
AAA	659nm,0.1s			S	**Sb**	**05 53 42.0**	**0.0**
IZV	**Izvestkoviy**	**0.42**	**291**	*e*P	**Pb**	**05 53 37.8**	**+0.4**
IZV	baz=88			*e*S	**Sb**	**05 53 43.8**	**+0.2**
IZV	**Izvestkoviy**	**0.42**	**291**	*e*P	**Pb**	**05 53 37.8**	**+0.4**
IZV	74nm,0.1s			*e*S	**Sb**	**05 53 43.8**	**+0.2**
IZV	**Izvestkoviy**	**0.42**	**291**	P	**Pb**	**05 53 37.8**	**+0.4**
IZV	74nm,0.1s			S	**Sb**	**05 53 43.8**	**+0.2**
MTBS	**Maitube**	**0.58**	**295**	*e*P	**Pb**	**05 53 40.1**	**0.0**
MTBS	baz=93			*e*S	**Sg**	**05 53 47.6**	**+0.2**
MTBS	**Maitube**	**0.58**	**295**	*e*P	**Pb**	**05 53 40.1**	**0.0**
MTBS	28nm,0.2s			*e*S	**Sg**	**05 53 47.6**	**+0.2**
MTBS	**Maitube**	**0.58**	**295**	P	**Pb**	**05 53 40.1**	**0.0**
MTBS	28nm,0.2s			S	**Sg**	**05 53 47.6**	**+0.2**
KST	**Kastek**	**0.88**	**281**	*e*P	**Pn**	**05 53 45.9**	**-0.2**
KST	baz=79			*e*S	**Sb**	**05 53 57.6**	**+0.7**
KST	**Kastek**	**0.88**	**281**	*e*P	**Pn**	**05 53 45.9**	**-0.2**
KST	13nm,0.2s			*e*S	**Sb**	**05 53 57.6**	**+0.7**
KST	**Kastek**	**0.88**	**281**	P	**Pn**	**05 53 45.9**	**-0.2**
KST	13nm,0.2s			S	**Sb**	**05 53 57.6**	**+0.7**
KTBS	**Karatobe**	**0.89**	**338**	*e*P	**Pg**	**05 53 45.3**	**-0.2**
KTBS	baz=37			*e*S	**Sb**	**05 53 56.8**	**-0.3**
KTBS	**Karatobe**	**0.89**	**338**	*e*P	**Pg**	**05 53 45.3**	**-0.2**
KTBS	54nm,0.2s			*e*S	**Sb**	**05 53 56.8**	**-0.3**
KTBS	**Karatobe**	**0.89**	**338**	P	**Pg**	**05 53 45.3**	**-0.2**
KTBS	54nm,0.2s			S	**Sb**	**05 53 56.8**	**-0.3**
ULHL	**Ulahol**	**0.93**	**227**	⇓P	**Pn**	**05 53 47.0**	**+0.3**
ULHL	16nm,0.2s,SNR=6.0			⇑S	**Sn**	**05 53 59.8**	**0.0**
ULHL	**Ulahol**	**0.93**	**227**	⇓*i*P	**Pn**	**05 53 46.5**	**-0.3**
ULHL	baz=26			⇓*i*S	**Sn**	**05 53 59.4**	**-0.4**
SATY	**Saty**	**0.94**	**79**	*e*P	**Pn**	**05 53 46.6**	**-0.3**
SATY	baz=80			*e*S	**Sn**	**05 53 59.0**	**-1.1**
SATY	**Saty**	**0.94**	**79**	*e*P	**Pn**	**05 53 46.6**	**-0.3**
SATY	11nm,0.1s			*e*S	**Sn**	**05 53 59.0**	**-1.1**
SATY	**Saty**	**0.94**	**79**	P	**Pn**	**05 53 46.6**	**-0.3**
SATY	11nm,0.1s			S	**Sn**	**05 53 59.0**	**-1.1**
BOOM	**Boomskoye usch**	**0.97**	**247**	⇑*i*P	**Pn**	**05 53 47.2**	**-0.2**
BOOM	baz=46			⇑*i*S	**Sn**	**05 54 00.6**	**-0.4**
CHKK	**Chushkaly**	**0.98**	**353**	*e*P	**Pg**	**05 53 46.7**	**-0.4**
CHKK	83nm,0.1s			*e*S	**Sb**	**05 53 58.7**	**-0.8**
CHKK	**Chushkaly**	**0.98**	**353**	P	**Pg**	**05 53 46.7**	**-0.4**
CHKK	83nm,0.1s			S	**Sb**	**05 53 58.7**	**-0.8**
TKM2	**Tokmak 2**	**1.14**	**272**	⇓P	**Pg**	**05 53 50.5**	**+0.3**
TKM2	3.7nm,0.1s,SNR=44			⇑S	**Sn**	**05 54 05.9**	**+0.7**
TKM2	**Tokmak 2**	**1.14**	**272**	⇑*i*P	**Pg**	**05 53 50.5**	**+0.3**
TKM2	baz=71			⇑*i*S	**Sn**	**05 54 06.1**	**+0.9**
TKM2	**Tokmak 2**	**1.14**	**272**	⇑P	**Pg**	**05 53 50.4**	**+0.3**
TKM2	3.7nm,0.5s			⇓S	**Sn**	**05 54 05.8**	**+0.7**
KUU	**Kurty**	**1.17**	**330**	*e*P	**Pb**	**05 53 50.0**	**0.0**
KUU	32nm,0.3s			*e*S	**Sb**	**05 54 04.6**	**-0.3**
KUU	**Kurty**	**1.17**	**330**	P	**Pb**	**05 53 50.0**	**0.0**
KUU	32nm,0.3s			S	**Sb**	**05 54 04.6**	**-0.3**
TARG	**Taragay, Kyrgy**	**1.25**	**157**	⇓*i*P	**Pg**	**05 53 51.8**	**-0.6**
TARG	baz=58			⇓*i*S	**Sg**	**05 54 09.0**	**+0.2**
KRBS	**Karabastau**	**1.35**	**308**	*e*P	**Pb**	**05 53 53.4**	**+0.3**
KRBS	89nm,0.3s			*e*S	**Sb**	**05 54 10.4**	**+0.3**
KRBS	**Karabastau**	**1.35**	**308**	P	**Pb**	**05 53 53.4**	**+0.3**
KRBS	89nm,0.3s			S	**Sb**	**05 54 10.4**	**+0.3**
UZB	**Uzynbulak**	**1.40**	**79**	*e*P	**Pg**	**05 53 54.4**	**-0.7**
UZB	baz=79			*e*S	**Sg**	**05 54 12.1**	**-1.3**
UZB	**Uzynbulak**	**1.40**	**79**	*e*P	**Pg**	**05 53 54.4**	**-0.7**
UZB	13nm,0.1s			*e*S	**Sg**	**05 54 12.1**	**-1.3**
UZB	**Uzynbulak**	**1.40**	**79**	P	**Pg**	**05 53 54.4**	**-0.7**
UZB	13nm,0.1s			S	**Sg**	**05 54 12.1**	**-1.3**
BLB	**Baldybastay**	**1.55**	**38**	*e*P	**Pb**	**05 53 56.5**	**-0.1**
BLB	41nm,0.1s			*e*S	**Sb**	**05 54 16.2**	**+0.1**
BLB	**Baldybastay**	**1.55**	**38**	P	**Pb**	**05 53 56.5**	**-0.1**
BLB	41nm,0.1s			S	**Sb**	**05 54 16.2**	**+0.1**
KBK	**Karagaybulak**	**1.64**	**263**	⇓P	**Pg**	**05 53 59.6**	**0.0**
KBK	10nm,0.2s,SNR=10			⇓S	**Sg**	**05 54 21.5**	**+0.6**
KBK	**Karagaybulak**	**1.64**	**263**	⇑*i*P	**Pg**	**05 53 59.2**	**-0.4**
KBK	baz=62			⇑*i*S	**Sg**	**05 54 21.0**	**+0.1**
NRN	**Naryn**	**1.68**	**211**	⇓*i*P	**Pg**	**05 53 59.9**	**-0.6**
NRN	baz=11			⇓*i*S	**Sg**	**05 54 23.1**	**+0.7**
SHLS	**Shalkode**	**1.72**	**80**	*e*P	Pg	05 54 05.8	+4.7
SHLS	39nm,0.5s			*e*S	Sg	05 54 32.0	+8.5
SHLS	**Shalkode**	**1.72**	**80**	Pg	Pg	05 54 05.8	+4.7
SHLS	39nm,0.5s			Lg	Lg	05 54 32.0	
CHMS	**Chumysh**	**1.76**	**275**	⇑P	**Pg**	**05 54 01.2**	**-0.9**
CHMS	5.2nm,0.1s			⇓S	**Sg**	**05 54 24.5**	**-0.4**
CHMS	**Chumysh**	**1.76**	**275**	⇑*i*P	**Pg**	**05 54 01.1**	**-0.9**
CHMS	baz=74			⇑*i*S	**Sg**	**05 54 25.0**	**+0.1**
CHMS	**Chumysh**	**1.76**	**275**	⇑P	**Pg**	**05 54 01.2**	**-0.9**
CHMS	4.4nm,0.6s			⇑S	**Sg**	**05 54 24.4**	**-0.4**
PDGK	**Podgornoye**	**1.77**	**75**	⇑P	**Pb**	**05 54 00.4**	**0.0**
PDGK	7.4nm,0.4s			⇓S	**Sb**	**05 54 22.2**	**-0.2**
SGDS	**Sogindy**	**1.93**	**288**	*e*P	**Pb**	**05 54 03.8**	**+0.8**
SGDS	9.8nm,0.1s			*e*S	**Sb**	**05 54 28.3**	**+1.4**
SGDS	**Sogindy**	**1.93**	**288**	P	**Pb**	**05 54 03.8**	**+0.8**
SGDS	9.8nm,0.1s			S	**Sb**	**05 54 28.3**	**+1.4**
AAK	**Ala-Archa**	**1.97**	**264**	⇓P	**Pg**	**05 54 04.9**	**-1.0**
AAK	11nm,0.3s,SNR=10			⇓S	**Sg**	**05 54 31.5**	**0.0**
AAK	**Ala-Archa**	**1.97**	**264**	⇓*i*P	**Pb**	**05 54 04.2**	**+0.4**
AAK	baz=63			⇓*i*S	**Sg**	**05 54 29.9**	**-1.6**
USP	**Ospenovka**	**1.98**	**282**	⇓P	**Pb**	**05 54 04.4**	**+0.6**
USP	17nm,0.2s,SNR=35			⇓S	**Sg**	**05 54 30.9**	**-0.9**
USP	**Ospenovka**	**1.98**	**282**	⇑*i*P	**Pb**	**05 54 04.5**	**+0.7**
USP	baz=81			⇑*i*S	**Sg**	**05 54 30.5**	**-1.3**
UCH	**Uchtor**	**2.05**	**252**	⇑P	**Pg**	**05 54 07.1**	**-0.6**
UCH	3.9nm,0.2s,SNR=9.2						
UCH	**Uchtor**	**2.05**	**252**	⇓*i*P	**Pb**	**05 54 05.4**	**0.0**
UCH	baz=52			⇓*i*S	**Sb**	**05 54 32.3**	**+1.4**
TDK	**Taldyqorghan**	**2.30**	**23**	*e*P	**Pb**	**05 54 10.1**	**+0.8**
TDK	54nm,0.1s			*e*S	**Sb**	**05 54 39.1**	**+1.4**
DJR	**Jarkent**	**2.40**	**52**	*e*P	**Pb**	**05 54 12.0**	**+0.9**
DJR	3.1nm,0.2s			*e*S	**Sb**	**05 54 42.5**	**+1.9**
DJR	**Jarkent**	**2.40**	**52**	Pg	**Pb**	**05 54 12.0**	**+0.9**
DJR	3.1nm,0.2s			Lg	Lg	05 54 42.5	
KTMS	**Ketmen**	**2.41**	**75**	*e*P	**Pb**	**05 54 12.2**	**+0.9**
KTMS	1.9nm,0.3s			*e*S	**Sb**	**05 54 42.4**	**+1.6**
KTMS	**Ketmen**	**2.41**	**75**	Pg	**Pb**	**05 54 12.2**	**+0.9**
KTMS	1.9nm,0.3s			Lg	Lg	05 54 42.4	
EKS2	**Erkin-Say**	**2.49**	**266**	⇑*i*P	**Pb**	**05 54 11.2**	**-1.4**
EKS2	baz=66			⇑*i*S	**Sb**	**05 54 42.7**	**-0.4**
KK31	**Karatay Array**	**4.87**	**275**	⇓Pg	**Pg**	**05 54 57.7**	**-3.7**
KK31	1.5nm,0.6s,baz=82,slow=18,SNR=4.0			⇑Lg	Lg	05 56 03.2	
MK31	**Makanchi Array**	**5.35**	**41**	⇑Pn	**Pn**	**05 54 49.7**	**+2.3**
MK31	2.9nm,0.5s,baz=79,slow=24,SNR=10			⇓Sn	**Sn**	**05 55 51.4**	**+2.6**
MK31	3.7nm,1.2s,baz=224,slow=13,SNR=4.1			⇓Lg	Lg	05 56 20.0	
OTUK	**Ortayu**	**6.33**	**329**	⇓Lg	Lg	05 56 50.3	
KURBB	**Kurchatov Arra**	**7.80**	**7**	⇑Lg	Lg	05 57 35.6	
KURK	**Kurchatov**	**7.90**	**7**	⇓Lg	Lg	05 57 39.0	

*BJI **14** 06:28:13.8±0.0, 15°.06N×147°.76E, h35km, mb4.7/27,*
mB5.0/17, Ms4.2/3, Ms7 4.0/3
*IDC **14** 06:28:15.6±0.7, 15°.64N×147°.26E, h0km, mb4.1/15,*
mbtmp4.1/16, ML3.6/1, MS3.5/9, Error ellipse:
s-maj=24.3km s-min=14.8km az=98.0
*NEIC **14** 06:28:19.1±2.6, 15°.31N±0°.09×147°.44E±0°.09, h31km±5km,*
mb4.9/30, Error ellipse: s-maj=14.1km s-min=11.8km
az=134.0
ISC 14 06:28:19.1±0.5,**15°.30N**±0°.07×**147°.24E**±0°.08,**h33**km,**n77**,
σ1§**63**/72,**mb4.6**/34,**MS3.4**/9,**1D,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.86**	**234**	Pn	**Pb**	**06 29 07.1**	**-2.3**
GUMO	7.6nm,0.3s,baz=36,slow=19,SNR=1.4			Sn	**Sb**	**06 29 42.3**	**-1.7**
	33nm,0.3s,baz=4.1,slow=20,SNR=6.3						
	55nm,0.6s						
GUMO	**Guam**	**2.86**	**234**	Pn	**Pb**	**06 29 04.8**	**-4.6**
PATS	**Pohnpei**	**13.73**	**127**	Pn	**Pn**	**06 31 28.1**	**-3.5**
H11S3	**WAKE ISLAND Hy**	**18.87**	**78**	T	T	06 51 44.2	
	baz=263,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**18.89**	**78**	T	T	06 51 48.1	

baz=263,slow=74,SNR=14
H11S2 WAKE ISLAND Hy 18.89 78 T T 06 51 46.3
baz=263,slow=74,SNR=13
H11N1 WAKE ISLAND Hy 19.24 74 T T 06 52 15.4
baz=259,slow=75,SNR=4.8
H11N2 WAKE ISLAND Hy 19.25 74 T T 06 52 17.5
baz=259
H11N3 WAKE ISLAND Hy 19.26 74 T T 06 52 13.9
baz=259,slow=75,SNR=4.4
JYT Yasato 21.77 344 P **P** **06 33 08.1 +0.1**
JYT IAmb IAmb 06 33 16.2
comp=Z,29nm,0.4s
INU Inuyama 21.98 337 P **P** **06 33 10.0 -0.2**
JGF Kuroka 22.07 338 P **P** **06 33 09.4 -1.9**
MJAR Matsushiro Arr 22.64 341 P **P** **06 33 17.3 -0.1**
comp=Z,3.0nm,0.7s,baz=164,slow=9.2,SNR=4.5
JSD Sado 24.00 342 P **P** **06 33 29.2 -1.6**
JSD IAmb IAmb 06 33 56.1
comp=Z,23nm,1.0s
HNR Honiara 27.61 152 LR LR 06 43 50.8
comp=Z,814nm,20.9s,baz=336,slow=34
KSRS Korea Array 27.93 326 P **P** **06 34 05.5 -0.8**
comp=Z,1.1nm,0.5s,baz=144,slow=8.4,SNR=4.7
KSRS LR LR 06 44 06.5
comp=Z,67nm,20.2s,baz=120,slow=34
comp=Z,1.1nm,0.5s
NJ2 Nanjing 30.75 308 *e*P **P** **06 34 30.0 -1.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
WHN Wuhan 33.73 302 ||P P 06 35 02.4 +4.8
KLR Kul'dur 36.14 343 P **P** **06 35 15.5 -2.6**
comp=Z,1.6nm,0.5s,baz=180,slow=6.1,SNR=5.4
comp=Z,1.6nm,0.5s
LYN LuoYang 36.65 308 *e*P **P** **06 35 24.6 +1.9**
WRA Warramunga Arr 37.25 200 P **P** **06 35 31.4 +3.6**
comp=Z,1.3nm,1.1s,baz=24,slow=9.6,SNR=11
comp=Z,1.3nm,1.1s
HHC Hu-ho-hao-te 40.05 317 *e*P **P** **06 35 55.4 +4.0**
HHC pmax pmax
comp=Z,170nm,6.8s
ASAR Alice Springs 40.86 199 P **P** **06 36 01.1 +3.1**
comp=Z,0.3nm,0.6s,baz=26,slow=7.5,SNR=6.1
comp=Z,0.3nm,0.6s
DZM Mont Dzumac 41.63 153 LR LR 06 50 48.1
comp=Z,75nm,19.9s,baz=215,slow=32
LZH Lanzhou 43.81 306 *e*P **P** **06 36 24.5 +2.3**
LZH pP sP 06 36 33.8 0.0
LZH sP pwP 06 36 38.6 +1.3
LZH pmax pmax
comp=Z,23nm,1.3s
CMAR Chiang Mai Arr 46.22 281 P **P** **06 36 43.4 +1.9**
comp=Z,4.1nm,0.5s,baz=72,slow=6.4,SNR=18
CMAR LR LR 06 57 20.5
comp=Z,14nm,18.6s,baz=95,slow=38
comp=Z,4.1nm,0.5s
SONM Songino Array 46.72 323 P **P** **06 36 45.2 +0.1**
comp=Z,0.8nm,0.4s,baz=147,slow=9.1,SNR=4.2
SONM LR LR 06 55 39.0
comp=Z,41nm,21.0s,baz=114,slow=35
comp=Z,0.8nm,0.4s
STKA Stephens Creek 47.22 187 P **P** **06 36 52.8 +3.9**
comp=Z,0.8nm,0.4s,baz=342,slow=14,SNR=4.4
comp=Z,0.8nm,0.4s
GTA Gaotai 47.81 310 *e*P **P** **06 36 54.8 +1.0**
GTA pP sP 06 37 05.6 +0.2
GTA sP pwP 06 37 14.6 +5.6
GTA pmax pmax
comp=Z,3.0nm,0.9s
GOMU GeErMu 50.94 304 P **P** **06 37 20.3 +2.3**
GOMU pP pP 06 37 25.9 -0.4
GOMU pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 53.30 296 P **P** **06 37 37.5 +1.7**
LSA IAmb IAmb 06 37 40.9
comp=Z,9.2nm,0.5s
LSA Lhasa 53.30 296 P **P** **06 37 37.6 +1.9**
LSA pP **sP** **06 37 47.4 0.0**
MORW Morawa 53.43 214 P **P** **06 37 37.4 +1.4**
TIXI Tiksi 57.40 353 P **P** **06 38 03.7 -0.3**
comp=Z,1.4nm,0.5s,baz=0.0,slow=1.1
TIXI LR LR 07 05 28.8
comp=Z,22nm,18.1s,baz=180,slow=39
comp=Z,1.4nm,0.5s
TIXI Tiksi 57.40 353 P **P** **06 38 03.1 -0.8**
TIXI pP **sP** **06 38 14.6 -1.0**
WMQ Urumqi 57.66 312 *e*P **P** **06 38 09.6 +3.2**
ZALV Zalesovo Beam 61.61 323 P **P** **06 38 32.1 -1.2**
comp=Z,1.0nm,0.5s,baz=109,slow=11,SNR=4.2
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 61.89 315 P **P** **06 38 35.3 -0.1**
MKAR Makanchi Array 61.89 315 P **P** **06 38 35.5 +0.1**
comp=Z,2.8nm,0.6s,baz=90,slow=8.3,SNR=19
MKAR LR LR 07 05 03.7
comp=Z,20nm,19.8s,baz=86,slow=36
comp=Z,2.8nm,0.6s
MAKZ Makanchi 62.10 315 P **P** **06 38 35.8 -1.0**
MAKZ pP **sP** **06 38 46.6 -2.1**
J20K Nowinta River 62.88 25 P **P** **06 38 42.7 +1.1**
J20K IAmb IAmb 06 38 57.6
comp=Z,25nm,1.6s
SKT Skwentna 63.23 28 P **P** **06 38 43.0 -1.0**
CAST Castle Rocks 63.46 26 P **P** **06 38 46.1 +0.6**
CAST IAmb IAmb 06 38 47.0
comp=Z,6.0nm,0.9s
IMAR Indian Mountai 63.73 23 P **P** **06 38 46.8 -0.4**
RC01 Rabbit Creek A 63.78 29 P **P** **06 38 48.0 +0.4**
TRF Thorofare Moun 64.24 26 P **P** **06 38 50.5 -0.3**
TRF IAmb IAmb 06 38 54.8
comp=Z,26nm,1.8s
PWL Port Wells 64.37 29 P **P** **06 38 52.3 +0.7**
PWL IAmb IAmb 06 38 53.0
comp=Z,12nm,1.0s
SML Sawmill 64.62 28 P **P** **06 38 53.8 +0.5**
KURK Kurchatov 64.79 319 P **P** **06 38 53.8 -0.6**
KURK IAmb IAmb 06 38 55.0
comp=Z,18nm,1.1s
KURK Kurchatov 64.79 319 P **P** **06 38 52.2 -2.2**
KURK pP **pP** **06 39 03.1 +0.3**
HIN Hinchinbrook I 65.13 30 P **P** **06 38 55.9 -0.6**
NRIK Noril'sk 65.29 340 P **P** **06 38 57.1 -0.3**
comp=Z,1.5nm,0.4s,baz=109,slow=8.1,SNR=2.0
comp=Z,1.5nm,0.4s
CCB Clear Creek Bu 65.64 25 P **P** **06 38 59.6 0.0**
CCB IAmb IAmb 06 39 35.1
comp=Z,9.7nm,1.6s
H24K Noodor Dome 65.95 24 P **P** **06 39 02.0 +0.2**
H24K IAmb IAmb 06 40 14.7
comp=Z,18nm,1.6s
ILAR Eielson Array 66.05 25 P **P** **06 39 01.2 -1.2**
comp=Z,1.5nm,0.9s,baz=262,slow=4.9,SNR=9.0
comp=Z,1.5nm,0.9s
BOOM Boomskoye usch 66.09 310 P **P** **06 39 03.8 +0.5**
N25K Chitina, Valde 66.30 29 P **P** **06 39 05.5 +1.3**
N25K IAmb IAmb 06 40 32.6
comp=Z,36nm,2.0s
J26L Joseph Creek 67.37 26 P **P** **06 39 11.5 +0.5**
BMAR Burnt Mountain 67.64 23 P **P** **06 39 13.5 +1.0**
BCAR Beaver Creek A 67.87 28 P **P** **06 39 15.0 +1.0**
BTK Batken 70.01 307 P **P** **06 39 29.0 +1.1**
BTK IAmb IAmb 06 39 38.1
comp=Z,3.8nm,0.6s
KK31 Karatay Array 70.08 311 P **P** **06 39 28.2 +0.1**
KKAR Karatay Array 70.08 311 P **P** **06 39 27.5 -0.6**
BRVK Borovoye 70.10 321 P **P** **06 39 27.7 -0.2**
GAR Garm 70.46 306 P **P** **06 39 30.9 +0.2**
GAR IAmb IAmb 06 39 32.0
comp=Z,13nm,1.1s
CHGR Chuyangaron 71.39 306 P **P** **06 39 36.7 +0.4**
CHGR IAmb IAmb 06 39 37.6
comp=Z,14nm,0.8s
SIMJ Simiganj 71.51 306 P **P** **06 39 36.9 -0.2**
SIMJ pP **pP** **06 39 45.0 -0.6**
ARU Arti 76.68 325 P **P** **06 40 06.2 -0.5**
ABKAR Akbulak array 76.83 318 P **P** **06 40 06.4 -1.3**
AKTO Aktyubinsk 77.89 319 LR LR 07 13 54.7
comp=Z,23nm,21.5s,baz=68,slow=35
BELG Belogornoye 83.78 323 LR LR 07 19 32.1
comp=Z,26nm,18.4s,baz=165,slow=37
NVAR Mina Array Bea 84.06 52 P **P** **06 40 48.5 +1.4**
comp=Z,0.5nm,0.8s,baz=242,slow=5.8,SNR=2.9
comp=Z,0.5nm,0.8s
CASY Casey 85.80 194 P **P** **06 40 53.0 -1.7**
ARCES ARCESS Array B 86.17 343 P **P** **06 40 56.6 0.0**
comp=Z,0.8nm,0.5s,baz=69,slow=6.6,SNR=9.0
comp=Z,0.8nm,0.5s
FINES FINESS Array B 90.58 336 P **P** **06 41 16.5 -1.3**
comp=Z,1.1nm,0.5s,baz=52,slow=7.5,SNR=5.4
comp=Z,1.1nm,0.5s
TORD Torodi Ar. Bea 135.72 308 PKP **PKiKP** **06 47 39.4 +0.6**
comp=Z,0.5nm,0.8s,baz=23,slow=4.7,SNR=2.5
LPAZ La Paz 145.97 97 PKPbc **PKiKP** **06 47 59.6 -0.9**
comp=Z,2.0nm,0.7s,baz=264,slow=2.2,SNR=12

IDC 14 06:38:30.9±2.7, 49°.44S×125°.34E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=108.0km s-min=26.9km az=95.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.70**	**326**	T	T	07 00 02.2	
	baz=151,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**16.70**	**326**	T	T	07 00 01.2	
	baz=151,slow=75,SNR=12						
H01W3	**Cape Leeuwin H**	**16.72**	**326**	T	T	07 00 00.4	
	baz=151,slow=75,SNR=12						
STKA	**Stephens Creek**	**21.36**	**41**	P	P	06 43 18.9	-0.8
	4.4nm,0.8s,baz=218,slow=11,SNR=9.8						
	4.4nm,0.8s						
ASAR	**Alice Springs**	**26.59**	**18**	P	P	06 44 11.2	+0.4
	2.2nm,0.6s,baz=193,slow=9.1,SNR=19						
	2.2nm,0.6s						
WRA	**Warramunga Arr**	**30.30**	**17**	P	P	06 44 43.9	+0.1
	0.3nm,0.5s,baz=191,slow=10,SNR=6.4						
	0.3nm,0.5s						
VNDA	**Vanda**	**31.40**	**166**	P	P	06 44 53.0	-0.1
	1.2nm,1.0s,baz=287,slow=9.5,SNR=3.7						
	1.2nm,1.0s						

NOU 14 07:06:31.6, 15°.45S×166°.36E, h7km, MLv4.4/11, Vanuatu Islands
IDC 14 07:06:35.4±8.7, 14°.99S×165°.52E, h0km, mb3.7/3, mbtmp3.7/3, MS3.2/6, Error ellipse: s-maj=446.6km s-min=35.1km az=143.0
ISC 14 07:06:37.4±1.4, 15°.75±0°.1×166°.3E±0°.1, h35km, n16, σ1°.28/10, mb3.8/3, MS3.0/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**2.90**	**136**	P	**Pn**	**07 07 20.8**	**-0.3**
LIFNC	**LIFOU**	**5.12**	**170**	P	**Pn**	**07 07 51.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**5.18**	**201**	P	**Pn**	**07 07 53.7**	**+1.2**
MARNC	**Mare, Loyalty**	**5.97**	**164**	P	**Pn**	**07 08 04.4**	**+1.1**
DZM	**Mont Dzumac**	**6.33**	**179**	LR	LR	07 10 25.7	
	comp=Z,122nm,18.1s,baz=40,slow=32						
YATNC	**Mamie plateau,**	**6.34**	**175**	P	**Pn**	**07 08 07.8**	**-0.6**
NOUC	**Port Laguerre**	**6.36**	**180**	P	**Pn**	**07 08 09.6**	**+1.0**
ONTNC	**Ouen Toro**	**6.56**	**179**	P	**Pn**	**07 08 12.2**	**+0.7**
HNR	**Honiara**	**8.80**	**314**	LR	LR	07 11 03.7	
	comp=Z,979nm,18.1s,baz=218,slow=35						
MSVF	**Nonsavu**	**11.43**	**102**	LR	LR	07 13 06.3	
	comp=Z,158nm,18.3s,baz=310,slow=32						
WRA	**Warramunga Arr**	**30.69**	**257**	P	**P**	**07 12 47.5**	**-1.7**
	0.5nm,0.9s,baz=85,slow=7.4,SNR=3.4						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**31.46**	**250**	P	**P**	**07 12 54.6**	**-1.3**
	1.2nm,0.7s,baz=72,slow=10,SNR=19						
	1.2nm,0.7s						
GUMO	**Guam**	**36.01**	**323**	LR	LR	07 26 35.6	
	comp=Z,30nm,21.1s,baz=130,slow=34						
JCJ	**Chichijima**	**48.57**	**331**	LR	LR	07 36 40.5	
	comp=Z,6.3nm,18.0s,baz=298,slow=38						
YAK	**Yakutsk**	**82.70**	**344**	LR	LR	07 55 58.5	
	comp=Z,14nm,18.4s,baz=264,slow=36						
ILAR	**Eielson Array**	**87.74**	**18**	P	**P**	**07 19 23.6**	**+1.4**
	0.3nm,0.5s,baz=232,slow=4.3,SNR=5.8						
	0.3nm,0.5s						

INET 14 07:14:03.9±0.8, 12°.20N×87°.64W, h15km±6km, MW3.1
SNET 14 07:14:06.7±1.0, 12°.39N×87°.89W, h29km±7km, ML3.0
ISC 14 07:14:02.7±1.8, 12°.2N±0°.1×87°.75W±0°.05, h48km, n14, σ0°.74/26, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.88**	**51**	*e*P	**Pn**	**07 14 19.1**	**+0.3**
CRIN				*e*S	**Sn**	**07 14 31.5**	**+1.0**
CNGN	**Cerro Negro**	**1.08**	**71**	*e*P	**Pn**	**07 14 21.8**	**+0.2**
CNGN				*e*S	**Sn**	**07 14 34.1**	**-1.4**
COPN	**Copaltepe**	**1.13**	**88**	*e*P	**Pn**	**07 14 22.3**	**+0.1**
LCND	**La Caada**	**1.16**	**353**	*e*P	**Pn**	**07 14 23.0**	**+0.4**
LCND				*e*S	**Sn**	**07 14 36.8**	**-0.5**
LCND				IAML		07 14 42.8	
	comp=Z,537nm,0.3s						
MOMN	**Momotombo**	**1.21**	**78**	*e*P	**Pn**	**07 14 23.2**	**-0.1**
MOMN				*e*S	**Sn**	**07 14 38.4**	**-0.2**
PACA	**Pacayal**	**1.43**	**337**	*e*P	**Pn**	**07 14 26.5**	**+0.1**
MGAN	**Managua**	**1.47**	**90**	*e*P	**Pn**	**07 14 26.7**	**-0.1**
MGAN				*e*S	**Sn**	**07 14 44.9**	**0.0**
WILN	**Americas 2**	**1.53**	**89**	*e*P	**Pn**	**07 14 27.4**	**-0.2**
WILN				*e*S	**Sn**	**07 14 46.6**	**+0.4**
PQSS	**Presa 15 de Se**	**1.67**	**332**	*e*P	**Pn**	**07 14 29.7**	**+0.2**
PQSS				*i* Sg	**Sn**	**07 14 49.7**	**0.0**
SCLA	**Alcaldia de Sa**	**1.81**	**328**	*e*P	**Pn**	**07 14 32.7**	**+1.1**
SCLA				*e*S	**Sn**	**07 14 52.9**	**-0.5**
COEG	**Centro de Oper**	**1.83**	**323**	*e*P	**Pn**	**07 14 32.3**	**+0.4**
COEG				*e*S	**Sn**	**07 14 52.0**	**-1.9**
COEG				IAML		07 14 58.0	
	comp=Z,179nm,0.3s						
SJTE	**Alcalda de S**	**1.90**	**320**	*e*P	**Pn**	**07 14 33.5**	**+0.7**
SJTE				*e*S	**Sn**	**07 14 54.9**	**-0.8**
MATN	**Matagalpa**	**1.94**	**66**	*e*P	**Pn**	**07 14 33.4**	**+0.1**
MATN				*e*S	**Sn**	**07 14 56.9**	**+0.3**
NUBE	**Las Nubes**	**2.64**	**312**	*e*P	**Pn**	**07 14 44.2**	**+1.2**
NUBE				*e*S	**Sn**	**07 15 12.9**	**-1.0**

JMA 14 07:17:11.8±0.2, 43°.5N±0°.7×14°.6E±°, h102km±1km, MV2.9/26, NEAR KUNASHIRI ISLAND
SKHL 14 07:17:12.1±0.3, 43°.50N×146°.10E, h100km±9km, mb4.3/2, msha4.8/2
ISC 14 07:17:12.3±3.8, 43°.50N±0°.08×146°.1E±0°.1, h99km±19km, n11, σ0°.42/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.27**	**239**	P	**Pn**	**07 17 26.5**	**-0.1**
NEM2				*e*S	**Sn**	**07 17 37.5**	**+0.3**
NMR	**Nemuro--Hokkai**	**0.28**	**241**	*i* P	**Pn**	**07 17 26.3**	**-0.3**
NMR				AMB	AMB	07 17 27.0	
	110nm,0.3s						
NMR				*i* S	**Sn**	**07 17 37.1**	**-0.1**
NMR				A	A	07 17 38.0	
	80nm,0.2s						
NMR				A	A	07 17 38.0	
	50nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.55**	**345**	*e*P	**Pn**	**07 17 28.5**	**+0.2**
YUK				AMB	AMB	07 17 30.4	
	80nm,0.2s						
YUK				*e*S	**Sn**	**07 17 39.8**	**-0.5**
YUK				A	A	07 17 44.1	
	310nm,0.4s						
YUK				A	A	07 17 44.1	
	360nm,0.4s						
JKHN	**Kushirohamanak**	**0.78**	**238**	P	**Pn**	**07 17 30.4**	**+0.2**
JKHN				*e*S	**Sn**	**07 17 44.4**	**+0.6**
JRA	**Rausu**	**0.81**	**303**	P	**Pn**	**07 17 30.5**	**0.0**
JRA				*e*S	**Sn**	**07 17 44.6**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.81**	**290**	P	**Pn**	**07 17 30.8**	**+0.2**
JNSB				*e*S	**Sn**	**07 17 45.2**	**+0.8**
JNK	**Nakash**	**0.98**	**275**	*e*P	**Pn**	**07 17 32.0**	**-0.3**
JNK				*e*S	**Sn**	**07 17 46.6**	**-0.8**
AKK	**Akkeshi**	**1.01**	**242**	*e*P	**Pn**	**07 17 32.4**	**-0.3**
AKK				*e*S	**Sn**	**07 17 47.5**	**-0.6**
JAK	**Akkeshi**	**1.12**	**244**	P	**Pn**	**07 17 33.8**	**-0.1**
JAK				*e*S	**Sn**	**07 17 50.3**	**+0.1**
JTKR	**Abashiri--Toko**	**1.63**	**287**	P	**Pn**	**07 17 39.8**	**-0.2**
JOB	**Onbets**	**1.73**	**251**	*e*P	**Pn**	**07 17 41.6**	**+0.3**
JOB				*e*S	**Sn**	**07 18 03.6**	**+0.1**

IDC 14 07:27:38.7±1.3, 48°.37S×125°.18E, h0km, mb3.8/4, mbtmp3.9/4, MS3.4/12, Error ellipse: s-maj=127.3km s-min=23.0km az=112.0
ISC 14 07:27:40.0±1.2, 48°.4S±0°.3×125°.2E±0°.7, h10km, n23, σ0°.71/10, mb4.0/3, MS3.4/11, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.79**	**325**	T	T	07 48 24.9	
	baz=149,slow=76,SNR=19						
H01W2	**Cape Leeuwin H**	**15.79**	**325**	T	T	07 48 25.7	
	baz=149,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**15.80**	**325**	T	T	07 48 26.3	
	baz=149,slow=76,SNR=15						
NWAO	**Narrogin (SRO)**	**16.57**	**336**	LR	LR	07 36 42.4	
	comp=Z,266nm,18.4s,baz=280,slow=33						
STKA	**Stephens Creek**	**20.66**	**43**	P	**P**	**07 32 19.6**	**-0.2**
	2.4nm,0.8s,baz=226,slow=14,SNR=3.4						
	2.4nm,0.8s						
ASAR	**Alice Springs**	**25.63**	**19**	P	**P**	**07 33 09.5**	**-0.2**
	3.0nm,0.8s,baz=186,slow=9.3,SNR=20						
ASAR				LR	LR	07 43 28.6	
	comp=Z,42nm,18.1s,baz=166,slow=37						
	3.0nm,0.8s						
WRA	**Warramunga Arr**	**29.34**	**18**	P	**P**	**07 33 42.6**	**-0.3**
	0.9nm,1.0s,baz=191,slow=9.0,SNR=1.2						
WRA				LR	LR	07 44 33.8	
	comp=Z,86nm,19.8s,baz=162,slow=35						
	0.9nm,1.0s						
VNDA	**Vanda**	**32.44**	**166**	LR	LR	07 45 52.6	
	comp=Z,109nm,19.0s,baz=331,slow=34						
CTA	**Charters Tower**	**32.96**	**38**	LR	LR	07 46 59.5	
	comp=Z,53nm,19.9s,baz=253,slow=35						
QSPA	**South Pole Qui**	**41.72**	**180**	LR	LR	07 51 22.9	
	comp=Z,75nm,20.7s,baz=346,slow=34						
PMG	**Port Moresby**	**43.04**	**33**	LR	LR	07 53 03.0	
	comp=Z,33nm,19.1s,baz=33,slow=35						
KAPI	**Kappang**	**43.48**	**352**	LR	LR	07 54 38.5	
	comp=Z,26nm,18.1s,baz=139,slow=37						
LEM	**Lembang**	**44.03**	**334**	LR	LR	07 51 11.9	
	comp=Z,43nm,20.3s,baz=136,slow=32						
TROLL	**Troll, Antarti**	**53.35**	**199**	P	**P**	**07 36 58.8**	**-0.2**
SNAA	**Sanae**	**54.73**	**198**	P	**P**	**07 37 08.2**	**-0.9**
SNAA	**Sanae**	**54.73**	**198**	P	**P**	**07 37 09.2**	**+0.1**
	1.6nm,0.8s,baz=145,slow=9.4,SNR=13						
	1.6nm,0.8s						
DAV	**Davao City (W)**	**55.23**	**0**	LR	LR	08 01 40.3	
	comp=Z,21nm,20.3s,baz=174,slow=37						
VNA2	**Neumayer--Watz**	**56.23**	**197**	P	**P**	**07 37 19.5**	**-0.2**
	baz=155,slow=6.6						
VNA3	**Neumayer Olymp**	**56.40**	**196**	P	**P**	**07 37 20.5**	**-0.5**
VNA1	**Neumayer--Stat**	**56.62**	**197**	P	**P**	**07 37 22.5**	**0.0**
JCJ	**Chichijima**	**76.68**	**16**	LR	LR	08 11 31.5	
	comp=Z,20nm,21.8s,baz=360,slow=34						
PLCA	**Paso Flores**	**90.16**	**168**	LR	LR	08 17 16.4	
	comp=Z,21nm,20.6s,baz=196,slow=33						
YKA	**Yellowknife Ar**	**144.69**	**44**	PKP	**PKPdf**	**07 47 17.1**	**+1.5**
	2.4nm,0.8s,baz=276,slow=0.5,SNR=4.6						

IDC 14 07:30:24.9±554.0, 53°.37N×34°.22E, h0km, Error ellipse: s-maj=218.2km s-min=76.0km az=20.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.77**	**26**	I		07 52 50.0	
	0.2nm,0.7s,baz=209,slow=320,SNR=1.5						
I37NO	**I37NO**	**17.36**	**341**	I		09 20 10.0	
	baz=147,slow=326,SNR=1.2						
I46RU	**ZALESOVO INFRA**	**29.48**	**68**	I		10 32 00.0	
	baz=286,slow=329,SNR=0.2						
I34MN	**SONGINO INFRAS**	**44.37**	**67**	I		12 01 50.0	
	baz=307,slow=323,SNR=0.7						

IDC 14 07:36:10.3±2.9, 53°.59N×87°.81E, h0km, mbtmp3.0/2, ML2.4/2, Error ellipse: s-maj=26.3km s-min=17.6km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**283**	I		07 48 40.0	
	baz=98,slow=342,SNR=5.0						
ZALV	**Zalesovo Beam**	**1.81**	**283**	Pn	Pn	07 36 42.8	0.0
	1.2nm,0.3s,baz=101,slow=12,SNR=11						
ZALV				Lg	Lg	07 37 07.3	
	2.1nm,0.3s,baz=99,slow=32,SNR=11						
KURBB	**Kurchatov Arra**	**6.45**	**246**	Pn	Pn	07 37 47.2	+0.8
	0.1nm,0.3s,baz=63,slow=14,SNR=9.5						
KURBB				Lg	Lg	07 39 34.2	
	baz=63,slow=33,SNR=5.0						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	Pn	07 38 04.3	+1.0
	0.1nm,0.3s,baz=28,slow=14,SNR=2.5						
MKAR				Lg	Lg	07 40 11.1	
	0.1nm,0.3s,baz=32,slow=31,SNR=3.2						
	0.6nm,0.8s						

IDC 14 07:55:29.3±3.2, 53°.63N×87°.83E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=30.4km s-min=19.3km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**281**	I		08 08 25.0	
	baz=97,slow=340,SNR=7.2						
ZALV	**Zalesovo Beam**	**1.81**	**281**	Pn	Pn	07 56 02.0	+0.2
	1.0nm,0.3s,baz=96,slow=13,SNR=6.7						
ZALV				Lg	Lg	07 56 26.6	
	1.7nm,0.3s,baz=100,slow=32,SNR=6.8						
KURBB	**Kurchatov Arra**	**6.47**	**246**	Pn	Pn	07 57 06.2	+0.6
	0.1nm,0.3s,baz=60,slow=14,SNR=6.2						
KURBB				Lg	Lg	07 58 53.6	
	0.1nm,0.3s,baz=61,slow=35,SNR=4.9						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	07 57 23.9	+1.1
	0.1nm,0.3s,baz=30,slow=13,SNR=1.6						
	0.3nm,0.5s						

IDC 14 08:08:25.2±1.5, 5°.84N×61°.52E, h0km, mb4.1/4, mbtmp4.1/4, MS3.5/30, Error ellipse: s-maj=71.0km s-min=31.2km az=34.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.52**	**351**	LR	LR	08 17 53.3	
	comp=Z,108nm,21.5s,baz=180,slow=32						
PALK	**Pallekele**	**19.11**	**85**	LR	LR	08 18 48.6	
	comp=Z,188nm,18.5s,baz=7.2,slow=33						
ATD	**Arta Tunnel**	**19.30**	**288**	LR	LR	08 19 18.7	
	comp=Z,76nm,20.1s,baz=10.0,slow=34						
MBAR	**Mbarara**	**31.39**	**259**	LR	LR	08 26 38.1	
	comp=Z,51nm,19.6s,baz=64,slow=35						
EIL	**Elat**	**34.49**	**317**	LR	LR	08 28 46.2	
	comp=Z,101nm,18.4s,baz=72,slow=35						
MMAI	**Mount Meron Ar**	**36.36**	**321**	LR	LR	08 30 32.8	
	comp=Z,39nm,18.0s,baz=83,slow=36						
GNI	**Garni**	**37.34**	**339**	LR	LR	08 31 27.0	
	comp=Z,42nm,20.0s,baz=146,slow=37						
PSI	**Prapat**	**37.41**	**93**	LR	LR	08 28 51.2	
	comp=Z,74nm,19.2s,baz=258,slow=33						
AAK	**Ala-Archa**	**38.41**	**15**	LR	LR	08 32 10.5	
	comp=Z,68nm,21.9s,baz=198,slow=37						
CMAR	**Chiang Mai Arr**	**38.58**	**68**	LR	LR	08 30 34.6	
	comp=Z,39nm,21.9s,baz=250,slow=34						
LSZ	**Lusaka**	**39.13**	**237**	LR	LR	08 30 05.4	
	comp=Z,149nm,18.8s,baz=110,slow=33						
KBZ	**Khabaz**	**41.14**	**339**	LR	LR	08 35 49.3	
	comp=Z,24nm,18.5s,baz=128,slow=40						
BRTR	**Keskin Array B**	**42.05**	**327**	LR	LR	08 34 04.3	
	comp=Z,44nm,19.1s,baz=134,slow=37						
AKTO	**Aktyubinsk**	**44.54**	**357**	LR	LR	08 36 02.2	
	comp=Z,34nm,21.5s,baz=168,slow=37						
MKAR	**Makanchi Array**	**44.56**	**20**	LR	LR	08 37 44.9	
	comp=Z,38nm,18.1s,baz=254,slow=40						
LBTB	**Lobatse**	**46.49**	**227**	LR	LR	08 32 54.7	
	comp=Z,139nm,21.6s,baz=22,slow=32						
KURBB	**Kurchatov Arra**	**46.85**	**15**	LR	LR	08 39 01.8	
	comp=Z,43nm,18.1s,baz=198,slow=39						
BVAR	**Borovoye Array**	**47.60**	**7**	LR	LR	08 39 21.5	
	comp=Z,113nm,18.7s,baz=192,slow=39						
BOSA	**Boshof**	**48.92**	**224**	LR	LR	08 36 15.0

comp=Z,15nm,19.1s,baz=115,slow=38
ESDC Sonseca Array 67.49 311 P P 08 19 23.4 0.0
1.0nm,0.9s,baz=94,slow=7.3,SNR=5.2
1.0nm,0.9s
KSRS Korea Array 67.78 52 P P 08 19 24.9 -0.2
0.8nm,0.7s,baz=261,slow=7.8,SNR=4.9
KSRS LR LR 08 49 58.0
comp=Z,25nm,21.7s,baz=235,slow=37
0.8nm,0.7s
WRA Warramunga Arr 75.98 112 P P 08 20 14.9 +0.2
3.6nm,0.9s,baz=292,slow=4.6,SNR=16
3.6nm,0.9s
ASAR Alice Springs 76.37 116 P P 08 20 16.9 -0.1
1.9nm,0.8s,baz=287,slow=5.6,SNR=16
1.9nm,0.8s
BBTS Babate 77.01 284 LR LR 08 53 54.6
comp=Z,66nm,19.7s,baz=97,slow=35
TIXI Tiksi 77.45 17 LR LR 08 56 07.7
comp=Z,30nm,18.0s,baz=359,slow=37
PETK Petropavlovsk- 89.08 37 LR LR 09 03 03.6
comp=Z,34nm,18.8s,baz=81,slow=37
VNDA Vanda 97.90 168 LR LR 09 01 13.7
comp=Z,36nm,18.0s,baz=262,slow=32
RCBR Riachuelo 97.94 265 LR LR 08 59 40.9
comp=Z,42nm,20.0s,baz=310,slow=31

NOU 14 08:12:40.7, 16°.83S×167°.74E, h8km, MLv4.3/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.16**	**146**	P	Pg	08 13 02.2	-0.8
LIFNC	**LIFOU**	**3.96**	**187**	P	Pn	08 13 41.8	+0.1
MARNC	**Mare, Loyalty**	**4.63**	**177**	P	Pn	08 13 51.0	-0.1
KOUNC	**Koumac, New Ca**	**4.94**	**221**	P	Pn	08 13 54.9	-0.4
YATNC	**Mamie plateau,**	**5.26**	**189**	P	Pn	08 13 58.7	-1.0
DZM	**Mont Dzumac**	**5.36**	**193**	P	Pn	08 14 00.3	-0.8
ONTNC	**Ouen Toro**	**5.58**	**192**	P	Pn	08 14 04.5	+0.4
OUENC	**Ouen Island, N**	**5.62**	**189**	P	Pn	08 14 05.4	+0.7

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*IDC **14** 08:24:54.6±7.1, 9°.92S×12°.25W, h0km, mb3.9/4, mbtmp3.9/4, MS3.4/26, Error ellipse: s-maj=211.3km s-min=140.0km az=136.0*
*NEIC **14** 08:24:55.1±2.2, 9°.95S±0°.07×12°.46W±0°.10, h10km±1km, mb4.6/18, Error ellipse: s-maj=18.2km s-min=9.1km az=121.0*
ISC 14 08:24:54.5±0.6, 10°.0S±0°.1×12°.4W±0°.1, h10km, n52, σ1=23/27, mb4.4/11, MS3.4/25, 3C, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**2.84**	**317**	Pn	**Pn**	**08 25 38.9**	**-1.1**
LIC	**Lamto**	**17.76**	**25⇑**	*e*P	**P**	**08 29 05.9**	**+3.0**
39nm,1.2s
KIC Kosan Boka 18.00 25⇑ *e*P **P 08 29 08.3 +2.8**
5.7nm,0.6s
TIC Toumodi 18.14 24⇑ *e*P **P 08 29 09.5 +2.4**
18nm,1.0s
DBIC Dimbokro 18.23 25 LR LR 08 34 20.2
comp=Z,90nm,22.0s,baz=180,slow=31
DBIC Dimbokro 18.23 25 P **Pn 08 29 06.2 -1.7**
RCBR Riachuelo 23.63 278 LR LR 08 37 17.0
comp=Z,85nm,21.4s,baz=252,slow=31
KOWA Kowa 25.76 19 LR LR 08 39 04.0
comp=Z,80nm,19.5s,baz=170,slow=33
KOWA Kowa 25.76 19 P **P 08 30 24.5 -1.2**
TOA0 Torodi Ar. Sit 26.96 32 P **P 08 30 35.7 -0.9**
TORD Torodi Ar. Bea 26.96 32 P **P 08 30 36.2 -0.3**
2.5nm,0.6s,baz=215,slow=8.1,SNR=11
TORD LR LR 08 39 34.3
comp=Z,85nm,20.3s,baz=196,slow=33
2.5nm,0.6s
BDFB Brasilia 35.12 257 LR LR 08 43 58.1
comp=Z,97nm,21.3s,baz=285,slow=32
SUR Sutherland 37.87 131 LR LR 08 46 32.3
comp=Z,50nm,18.1s,baz=326,slow=34
LBTB Lobatse 39.03 117 LR LR 08 45 51.6
comp=Z,65nm,19.1s,baz=282,slow=32
BOSA Boshof 39.83 123 LR LR 08 45 35.0
comp=Z,50nm,18.2s,baz=12,slow=31
LSZ Lusaka 39.91 102 LR LR 08 46 00.3
comp=Z,61nm,20.1s,baz=212,slow=32
MBAR Mbarara 43.92 80 LR LR 08 48 00.4
comp=Z,40nm,21.3s,baz=141,slow=32
MBAR Mbarara 43.92 80 P **P 08 33 00.8 -1.4**
MBAR IAmb IAmb 08 33 02.2
comp=Z,8.2nm,1.2s
CPUP Villa Florida 45.38 243 LR LR 08 49 36.5
comp=Z,66nm,19.4s,baz=92,slow=32
CPUP Villa Florida 45.38 243 P **P 08 33 14.4 +0.9**
CPUP IAmb IAmb 08 33 39.8
comp=Z,6.5nm,1.3s
SIV San Ignacio 47.69 258 LR LR 08 52 18.7
comp=Z,43nm,19.0s,baz=97,slow=34
LODK Lodwar 49.43 77 P **P 08 33 44.8 -0.6**
LODK IAmb IAmb 08 33 45.5
comp=Z,5.3nm,1.2s
KEST Kesra 49.95 23 LR LR 08 55 30.2
comp=Z,46nm,19.3s,baz=286,slow=37
LPAZ La Paz 54.47 257 LR LR 08 56 19.4
comp=Z,37nm,19.9s,baz=94,slow=34
LVC Limon Verde 55.35 249 LR LR 08 57 08.4
comp=Z,37nm,19.0s,baz=111,slow=35
PB03 IPOC Station P 56.10 250 P **P 08 34 35.0 +0.4**
BO04 La Punta 58.15 236 P **P 08 34 49.3 +0.4**
BO04 IAmb IAmb 08 35 13.1
comp=Z,12nm,1.4s
ATD Arta Tunnel 58.96 70 LR LR 08 59 38.6
comp=Z,39nm,18.3s,baz=16,slow=36
PLCA Paso Flores 59.49 229 LR LR 08 57 08.7
comp=Z,29nm,19.4s,baz=144,slow=32
SJG San Juan 59.96 298 LR LR 08 58 19.5
comp=Z,17nm,18.1s,baz=162,slow=33
DAVOX Davos/Dischmat 59.97 18 LR LR 09 00 47.5
comp=Z,46nm,18.0s,baz=246,slow=36
EIL Elat 60.32 47 LR LR 09 00 14.9
comp=Z,30nm,18.3s,baz=236,slow=35
GERES GERESS Array B 62.99 19 P **P 08 35 22.6 +1.0**
comp=Z,0.7nm,0.7s,baz=208,slow=6.1,SNR=5.2
comp=Z,0.7nm,0.7s
NNA Nana 63.14 262 LR LR 09 01 22.4
comp=Z,47nm,19.4s,baz=128,slow=35
ROSC El Rosal 63.40 281 LR LR 09 02 27.7
comp=Z,59nm,20.0s,baz=76,slow=36
MLR Muntele Rosu 65.16 29 P **P 08 35 36.5 +0.5**
MLR IAmb IAmb 08 35 52.3
comp=Z,9.1nm,1.2s
ATAH Atahualpa 65.21 267 LR LR 09 04 47.2
comp=Z,40nm,18.3s,baz=49,slow=37
BR131 Keskin Array S 65.37 38 P **P 08 35 37.9 +0.4**
BR131 IAmb IAmb 08 36 06.1
comp=Z,5.3nm,1.0s
BRTR Keskin Array B 65.37 38 P **P 08 35 38.2 +0.7**
comp=Z,1.3nm,0.9s,baz=214,slow=4.7,SNR=6.1
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 65.37 38 P **P 08 35 37.9 +0.4**
BNN Bunyan 66.19 40 P **P 08 35 42.0 -0.7**
AKASG Malin Array Be 70.47 27 P **P 08 36 09.2 0.0**
comp=Z,0.2nm,0.3s,baz=227,slow=6.5,SNR=13
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 70.47 27 P **P 08 36 08.8 -0.3**
AKASG IAmb IAmb 08 36 10.7
comp=Z,5.8nm,1.4s
AKBB Malin Array Si 70.47 27 P **P 08 36 09.2 +0.1**
AKBB IAmb IAmb 08 36 11.0
comp=Z,7.1nm,1.1s
GNI Garni 72.66 42 LR LR 09 09 27.7
comp=Z,12nm,18.4s,baz=300,slow=37
NOA NORSAR Array B 73.27 12 LR LR 09 10 07.0
comp=Z,5.8nm,18.7s,baz=355,slow=37
KIV Kislovodsk 73.32 38 P **P 08 36 26.7 +0.1**
KIV IAmb IAmb 08 36 40.8
comp=Z,8.1nm,1.0s
QSPA South Pole Qui 80.09 180 P **P 08 37 04.5 0.0**
AKTO Aktyubinsk 85.54 37 LR LR 09 18 55.9
comp=Z,11nm,21.1s,baz=71,slow=38
CASY Casey 93.34 160 P **P 08 38 08.8 -0.8**
DGMT Dagmar 98.61 318 P **P 08 38 33.4 -0.5**
COEN Coen 146.02 134 PKPab **PKPdf 08 44 35.5 +0.5**

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*NOU **14** 08:31:19.9, 18°.97S×169°.51E, h263km, mb4.3/29, Vanuatu Islands*

*NEIC **14** 08:31:20.4±2.6, 19°.09S±0°.09×169°.61E±0°.10, h264km±8km, mb4.5/25, Error ellipse: s-maj=15.0km s-min=10.8km az=136.0*
*IDC **14** 08:31:20.4±1.8, 19°.02S×169°.52E, h277km±19km, mb3.5/10, mbtmp4.2/12, Error ellipse: s-maj=16.9km s-min=14.4km az=155.0*
ISC 14 08:31:18.1±0.5, 19°.04S±0°.06×169°.55E±0°.07, h246km, n79, σ1=81/75, mb4.3/27, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.63**	**319**	P	**Pn**	**08 32 00.3**	**+3.2**
LIFNC	**LIFOU**	**2.78**	**231**		**Pn**	**08 32 10.1**	**+2.2**
LIFNC	**LIFOU**	**2.78**	**231**	P	**Pn**	**08 32 10.3**	**+2.4**
MARNC	**Mare, Loyalty**	**2.82**	**210**		**Pn**	**08 32 10.6**	**+2.3**
MARNC	**Mare, Loyalty**	**2.82**	**210**	P	**Pn**	**08 32 10.8**	**+2.5**
YATNC	**Mamie plateau,**	**3.90**	**219**	P	**Pn**	**08 32 22.2**	**+1.6**
DZM	**Mont Dzumac**	**4.19**	**223**	P	**Pn**	**08 32 27.2**	**+3.2**
42nm,0.7s,baz=60,slow=17,SNR=68
DZM Mont Dzumac 4.19 223 Pn **Pn 08 32 26.9 +2.8**
DZM Mont Dzumac 4.19 223 P **Pn 08 32 27.3 +3.2**
OUENC Ouen Island, N 4.21 217 Pn **Pn 08 32 27.0 +2.8**
OUENC Ouen Island, N 4.21 217 P **Pn 08 32 27.5 +3.3**
NOUC Port Laguerre 4.31 224 P **Pn 08 32 28.7 +3.4**
ONTNC Ouen Toro 4.36 221 Pn **Pn 08 32 28.5 +2.6**
ONTNC Ouen Toro 4.36 221 P **Pn 08 32 29.3 +3.4**
KOUNC Koumac, New Ca 5.18 252 Pn **Pn 08 32 39.4 +3.5**
KOUNC Koumac, New Ca 5.18 252 P **Pn 08 32 39.8 +3.9**
186nm,1.3s
MSVF Nonsavu 8.18 82 P **Pn 08 33 16.6 +2.8**
26nm,0.6s,baz=267,slow=12,SNR=39
MSVF Nonsavu 8.18 82 Pn **Pn 08 33 16.4 +2.8**
MSVF Nonsavu 8.18 82 P **Pn 08 33 16.5 +2.8**
68nm,0.9s
LHI Lord Howe Isla 15.62 215 **Pn 08 34 46.9 +1.1**
OUZ Omahuta 16.52 168 P **Pn 08 34 55.8 -0.5**
OUZ IAmb IAmb 08 34 59.8
comp=Z,29nm,1.0s
OUZ Omahuta 16.52 168 P **Pn 08 34 56.8 +0.5**
comp=Z,30nm,0.7s
EIDS Eidsvold 18.21 246 P **Pn 08 35 15.3 -1.2**
EIDS IAmb IAmb 08 35 24.5
comp=Z,25nm,1.4s
KUZ Kuaotunu 18.46 164 P **Pn 08 35 17.7 -1.4**
comp=Z,35nm,1.0s
ARMA Armidale 19.80 232 P **P 08 35 31.7 +1.3**
ARMA IAmb IAmb 08 35 48.2
comp=Z,22nm,1.4s
MXZ Matakaoa Point 19.98 159 P **P 08 35 33.4 +1.3**
comp=Z,78nm,0.8s
URZ Urewera 20.25 163 P **P 08 35 35.7 +0.7**
comp=Z,12nm,0.7s,baz=359,slow=1.7,SNR=9.4
comp=Z,12nm,0.7s
URZ Urewera 20.25 163 P **P 08 35 35.9 +0.9**
URZ IAmb IAmb 08 35 42.2
comp=Z,17nm,0.8s
URZ Urewera 20.25 163 P **P 08 35 37.0 +2.0**
comp=Z,20nm,0.9s
BKZ Black Stump Fm 20.94 165 P **P 08 35 42.6 +0.3**
BKZ IAmb IAmb 08 35 44.9
comp=Z,26nm,1.2s
BKZ Black Stump Fm 20.94 165 P **P 08 35 43.0 +0.7**
comp=Z,28nm,1.1s
BFZ Birch Farm 22.33 166 P **P 08 35 55.8 +0.5**
comp=Z,33nm,2.1s
SNZO South Karori 22.64 170 P **P 08 35 58.8 +0.8**
comp=Z,101nm,1.7s
THZ Tophouse 22.83 174 P **P 08 36 00.7 +0.7**
THZ IAmb IAmb 08 36 43.2
comp=Z,35nm,1.1s
PMG Port Moresby 23.69 291 P **P 08 36 08.7 +0.7**
PMG IAmb IAmb 08 36 15.9
comp=Z,20nm,1.1s
CNB Canberra Magne 24.12 224 P **P 08 36 12.6 +0.8**
comp=Z,9.9nm,1.2s
FOZ Fox Glacier 24.42 180 P **P 08 36 14.8 +0.5**
CMSA Cobar Meteorol 24.84 235 P **P 08 36 18.5 +0.3**
comp=Z,7.7nm,0.8s
TOO Toolangi 27.97 224 P **P 08 36 46.6 +0.5**
TOO IAmb IAmb 08 37 12.8
comp=Z,12nm,1.2s
STKA Stephens Creek 28.20 238 P **P 08 36 48.8 +0.6**
comp=Z,3.9nm,0.7s,baz=67,slow=9.1,SNR=18
comp=Z,3.9nm,0.7s
STKA Stephens Creek 28.20 238 P **P 08 36 48.5 +0.3**
STKA Stephens Creek 28.20 238 P **P 08 36 49.0 +0.8**
comp=Z,1.3nm,0.7s
MOO Moorlands 30.05 214 P **P 08 37 05.0 +0.6**
comp=Z,32nm,1.9s
LCRK Leigh Creek 30.54 242 P **P 08 37 09.0 +0.1**
comp=Z,13nm,1.9s
OOD Oodnadatta 32.19 248 P **P 08 37 24.0 +0.7**
comp=Z,4.2nm,0.9s
WB2 Warramunga Arr 33.16 262 P **P 08 37 30.4 -1.4**
WB2 IAmb IAmb 08 37 50.7
comp=Z,16nm,1.5s
WRAB Tennant Creek 33.16 263 P **P 08 37 30.5 -1.3**
comp=Z,5.4nm,2.2s
WRA Warramunga Arr 33.17 262 P **P 08 37 30.7 -1.2**
comp=Z,0.3nm,0.4s,baz=81,slow=5.9,SNR=23
comp=Z,0.3nm,0.4s
AS01 Alice Springs 33.42 256 P **P 08 37 33.5 -0.5**
comp=Z,7.6nm,0.7s
AS31 Alice Springs 33.46 256 P **P 08 37 33.8 -0.6**
ASAR Alice Springs 33.46 256 P **P 08 37 33.7 -0.7**
comp=Z,4.4nm,0.6s,baz=83,slow=9.0,SNR=93
comp=Z,4.4nm,0.6s
ASAR Alice Springs 33.46 256 P **P 08 37 33.5 -0.9**
MULG Mulgathing 34.01 244 P **P 08 37 38.6 -0.4**
comp=Z,8.7nm,0.6s
WAKE Wake Island 38.19 356 P **P 08 38 15.3 +1.0**
MMRI Maumere 46.95 276 P **P 08 39 25.5 +0.7**
VNDA Vanda 58.64 182 P **P 08 40 48.1 -1.0**
comp=Z,0.5nm,0.5s,baz=7.9,slow=7.2,SNR=7.9
comp=Z,0.5nm,0.5s
VNDA Vanda 58.64 182 P **P 08 40 48.6 -0.5**
SBA Scott Base 58.87 181 P **P 08 40 50.9 +0.2**
MJAR Matsushiro Arr 62.71 332 P **P 08 41 16.1 -1.0**
comp=Z,2.3nm,0.9s,baz=124,slow=11,SNR=4.5
comp=Z,2.3nm,0.9s
NACB Ninganchiao 63.47 311 P **P 08 41 21.8 -0.5**
QSPA South Pole Qui 71.02 180 P **P 08 42 07.7 -1.4**
PETK Petropavlovsk- 72.57 353 P **P 08 42 17.7 -0.5**
comp=Z,3.3nm,0.8s,baz=156,slow=11,SNR=4.2
comp=Z,3.3nm,0.8s
BELA Belgrano 2 82.27 175 P **P 08 43 09.7 -1.9**
N18K Kilae Creek 84.19 16 P **P 08 43 20.1 -1.3**
N18K IAmb IAmb 08 43 43.7
comp=Z,7.9nm,1.4s
SONM Songino Array 87.23 323 P **P 08 43 36.1 -0.7**
comp=Z,0.4nm,0.5s,baz=133,slow=6.1,SNR=3.3
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 88.45 48 P **P 08 43 42.7 -0.2**
comp=Z,2.3nm,1.0s,baz=228,slow=7.1,SNR=6.4
comp=Z,2.3nm,1.0s
TROLL Troll, Antarti 88.76 184 P **P 08 43 42.0 -1.7**
SNAA Sanae 89.38 182 P **P 08 43 44.6 -1.9**
SNAA Sanae 89.38 182 P **P 08 43 44.5 -1.9**
SNAA IAmb IAmb 08 43 52.3
comp=Z,5.2nm,1.4s
ILAR Eielson Array 89.95 17 P **P 08 43 46.4 -2.6**
comp=Z,0.6nm,0.8s,baz=239,slow=6.0,SNR=6.4
comp=Z,0.6nm,0.8s
VNA3 Neumayer Olymp 89.95 180 P **P 08 43 47.2 -1.9**
VNA3 Neumayer Olymp 89.95 180 pP pP 08 44 51.2 +2.8
VNA3 Neumayer Olymp 89.95 180 sP sP 08 45 20.3 +6.3
L27K Beaver Creek, 90.22 20 P **P 08 43 52.2 +1.9**
L27K IAmb IAmb 08 44 20.3
comp=Z,4.8nm,1.5s
BCAR Beaver Creek A 90.24 20 P **P 08 43 52.6 +2.2**
VNA2 Neumayer--Watz 90.25 181 pP pP 08 44 53.7 +3.9
PRN Pahroc Range 90.36 50 P **P 08 43 51.4 -0.3**
PRN IAmb IAmb 08 43 52.8
comp=Z,6.1nm,1.0s
WMQ Urumqi 97.28 314 *e*P Pdif 08 44 24.8 +1.6
ARCES ARCESS Array B 124.95 345 PKP **PKPdf 08 49 45.6 -2.6**
comp=Z,1.7nm,0.8s,baz=29,slow=2.8,SNR=4.9

IDC 14 08:36:26.8±3.1, 53°.46N×87°.44E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=28.3km s-min=16.5km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**289**	I		08 46 50.0	
baz=106,slow=336,SNR=1.8
ZALV Zalesovo Beam 1.63 289 Pg Pn 08 36 55.6 -1.1
0.7nm,0.3s,baz=111,slow=15,SNR=8.0
ZALV Lg Lg 08 37 18.9
1.0nm,0.3s,baz=109,slow=24,SNR=5.2
KURBB Kurchatov Arra 6.18 246 Pn Pn 08 37 59.5 +0.3
0.1nm,0.3s,baz=62,slow=14,SNR=4.7
KURBB Lg Lg 08 39 44.4
0.1nm,0.3s,baz=65,slow=33,SNR=6.2
0.4nm,0.4s
MKAR Makanchi Array 7.44 208 Pn Pn 08 38 18.2 +1.6
0.1nm,0.3s,baz=25,slow=9.3,SNR=4.3
0.1nm,0.3s

IDC 14 08:51:14.4±11.0, 5°.43N×61°.38E, h0km, mb3.9/3, mbtmp3.9/3, MS3.2/6, Error ellipse: s-maj=841.6km s-min=32.6km az=44.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**19.29**	**84**	LR	LR	09 01 06.0	
comp=Z,63nm,21.9s,baz=4.2,slow=31
PSI Prapat 37.53 92 LR LR 09 10 54.5
comp=Z,48nm,20.2s,baz=226,slow=31
LSZ Lusaka 38.79 237 LR LR 09 12 00.4
comp=Z,38nm,19.7s,baz=162,slow=32
AAK Ala-Archa 38.83 15 LR LR 09 15 29.0
comp=Z,22nm,19.3s,baz=238,slow=38
BRTR Keskin Array B 42.32 328 P P 08 59 10.2 -0.1
3.2nm,1.2s,baz=140,slow=11,SNR=4.1
3.2nm,1.2s
LBTB Lobatse 46.12 227 LR LR 09 14 50.7
comp=Z,32nm,21.0s,baz=66,slow=31
KLR Kul'dur 73.12 40 LR LR 09 33 32.5
comp=Z,23nm,21.1s,baz=341,slow=35
WRA Warramunga Arr 75.96 112 P P 09 03 03.6 -0.2
1.4nm,1.0s,baz=288,slow=5.0,SNR=8.7
1.4nm,1.0s
ASAR Alice Springs 76.31 116 P P 09 03 06.2 +0.4
0.6nm,0.8s,baz=282,slow=5.6,SNR=6.7
0.6nm,0.8s

ROM 14 08:56:10.0±0.1, 42°.865N±0°.003×13°.074E±0°.004, h9km, ML1.6/4, 4C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=235.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**137**	P	Pg	08 56 11.9	+0.1
NRCA	**Norcia**	**0.04**	**137**	P	Pg	08 56 11.9	+0.1
NRCA S Sg 08 56 13.1 -0.1
NRCA AML AML
comp=E,2665μm,0.1s
NRCA AML AML
comp=N,3625μm,0.1s
NRCA AML AML
comp=E,2900μm,0.4s
NRCA AML AML
comp=N,4065μm,0.1s
NRCA AML AML
comp=N,3625μm,0.1s
NRCA AML AML
comp=N,4065μm,0.1s
NRCA AML AML
comp=E,2665μm,0.1s
NRCA AML AML
comp=E,2900μm,0.4s
NRCA Norcia 0.04 137 S Sg 08 56 13.1 -0.2
T1216 Preci, Frazion 0.05 302 P Pg 08 56 11.9 0.0
T1216 Preci, Frazion 0.05 302 S Sg 08 56 12.9 -0.3
T1216 Preci, Frazion 0.05 302 P Pg 08 56 11.9 0.0
T1216 S Sg 08 56 12.9 -0.3
T1216 AML AML
comp=E,2220μm,0.2s
T1216 AML AML
comp=N,3565μm,0.2s
T1216 AML AML
comp=E,2225μm,0.2s
T1216 AML AML
comp=N,3565μm,0.2s
T1216 Preci, Frazion 0.05 302 P Pg 08 56 11.9 0.0
T1216 Preci, Frazion 0.05 302 AML AML
comp=N,3565μm,0.2s
T1216 AML AML
comp=E,2220μm,0.2s
T1216 AML AML
comp=E,2225μm,0.2s
T1245 Castelsantange 0.08 96 P Pg 08 56 12.6 +0.2
T1245 S Sg 08 56 14.6 +0.5
T1245 AML AML
comp=E,733μm,1.3s
T1245 AML AML
comp=N,1016μm,0.6s
T1245 AML AML
comp=N,1016μm,0.6s
T1245 AML AML
comp=E,733μm,1.3s
T1245 Castelsantange 0.08 96 P Pg 08 56 12.7 +0.3
T1245 S Sg 08 56 14.5 +0.4
T1245 AML AML
comp=E,732μm,1.3s
T1245 AML AML
comp=N,1016μm,0.6s
T1245 AML AML
comp=E,733μm,1.3s
T1245 AML AML
comp=E,664μm,0.3s
T1245 AML AML
comp=E,749μm,0.3s
T1245 AML AML
comp=N,1011μm,0.5s
MC2 Monte Cornacci 0.10 61 P Pg 08 56 12.9 +0.3
MC2 S Sg 08 56 15.0 +0.5
MC2 Monte Cornacci 0.10 61 P Pg 08 56 12.9 +0.3
MC2 S Sg 08 56 15.2 +0.6
T1215 Vallo di Nera, 0.16 247 P Pg 08 56 14.2 +0.7
T1215 S Sg 08 56 17.1 +1.2
T1215 Vallo di Nera, 0.16 247 ⇑P Pg 08 56 14.2 +0.7
T1215 S Sg 08 56 17.1 +1.1
FDMO Fiordimonte 0.17 3 P Pg 08 56 14.1 +0.5
FDMO S Sg 08 56 17.2 +1.1
FDMO AML AML
comp=E,229μm,0.3s
FDMO AML AML
comp=N,254μm,0.2s
FDMO AML AML
comp=E,229μm,0.3s
FDMO AML AML
comp=N,254μm,0.2s
FDMO Fiordimonte 0.17 3 P Pg 08 56 14.2 +0.5
FDMO S Sg 08 56 17.3 +1.2
FDMO AML AML
comp=E,184μm,0.9s
FDMO AML AML
comp=N,156μm,0.8s
T1217 Poggiodomo (PG 0.19 214 P Pg 08 56 14.7 +0.8
T1217 S Sg 08 56 18.1 +1.6
T1217 Poggiodomo (PG 0.19 214 ⇑P Pg 08 56 14.7 +0.8
T1217 S Sg 08 56 18.1 +1.5
CESI CESI - Serrava 0.19 318 P Pg 08 56 14.4 +0.5
CESI S Sg 08 56 17.6 +1.0
CESI AML AML
comp=E,144μm,0.7s
CESI AML AML
comp=N,216μm,1.3s
CESI AML AML
comp=E,148μm,1.2s
CESI AML AML
comp=N,217μm,1.3s
CESI AML AML
comp=N,217μm,1.3s
CESI AML AML
comp=E,148μm,1.2s
CESI CESI - Serrava 0.19 318 P Pg 08 56 14.5 +0.6
CESI S Sg 08 56 17.7 +1.0
CESI AML AML
comp=E,107μm,0.2s
CESI AML AML
comp=N,193μm,0.2s
MMO1 Montemonaco 0.19 80 P Pg 08 56 14.5 +0.6
MMO1 S Sg 08 56 17.9 +1.2
MMO1 Montemonaco 0.19 80 ⇑P Pg 08 56 14.6 +0.6
MMO1 S Sg 08 56 17.9 +1.2
T1201 Domo (RI) 0.24 148 P Pg 08 56 16.0 +1.0
T1204 Amatrice, Fraz 0.26 137 P Pg 08 56 16.1 +0.8

T1204				S	Sb	08 56 20.5	-1.0
GUMA	**Gualdo di Mace**	**0.28**	**44**	P	Pb	08 56 16.4	-0.8
GUMA				S	Sb	08 56 21.0	-0.9
GUMA	**Gualdo di Mace**	**0.28**	**44**	⇑P	Pb	08 56 16.4	-0.7
GUMA				S	Sb	08 56 21.3	-0.6
ASSB	**Assisi San Ben**	**0.35**	**300**	P	Pg	08 56 17.6	+0.6
T1211	**Morro Reatino**	**0.37**	**206**	P	Pb	08 56 18.1	-0.6
T1211				S	Sb	08 56 23.9	-0.7
T1211	**Morro Reatino**	**0.37**	**206**	P	Pg	08 56 17.9	+0.7
T1211				AML	AML		
	comp=E,535μm,1.6s						
T1211				AML	AML		
	comp=N,528μm,1.6s						
T1211				AML	AML		
	comp=E,702μm,1.6s						
T1211				AML	AML		
	comp=N,707μm,1.6s						
T1211				AML	AML		
	comp=E,113μm,1.0s						
T1211				AML	AML		
	comp=E,95μm,0.1s						
T1211	**Morro Reatino**	**0.37**	**206**	⇓P	Pb	08 56 18.1	-0.6
RM33	**Pellescritta (**	**0.37**	**164**	P	Pg	08 56 17.9	+0.6
RM33				S	Sb	08 56 23.7	-1.0
TERO	**Teramo**	**0.46**	**122**	P	Pg	08 56 19.1	+0.2
TERO				S	Sb	08 56 26.4	-0.8
TERO	**Teramo**	**0.46**	**122**	P	Pg	08 56 19.1	+0.2
TERO				S	Sg	08 56 25.9	+1.0

*IDC **14** 09:06:40.5±1.5, 16°.56N×148°.19E, h0km, mb3.8/6, mbtmp3.8/6, MS2.5/1, Error ellipse: s-maj=60.3km s-min=22.5km az=80.0*

ISC 14 09:06:45.5±1.4, 16°.5N±0°.1×148°.3E±0°.2, h35km, n8, σ0s30/8, mb3.7/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.40**	**229**	Sn	**Sn**	**09 08 39.9**	**0.0**
	5.5nm,0.3s,baz=219,slow=15,SNR=1.3						
GUMO				LR	LR	09 09 48.2	
	comp=Z,53nm,19.0s,baz=72,slow=43						
WRA	**Warramunga Arr**	**38.75**	**201**	P	**P**	**09 14 06.8**	**+0.1**
	0.8nm,0.6s,baz=27,slow=9.0,SNR=8.7						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**42.35**	**200**	P	**P**	**09 14 36.2**	**-0.2**
	0.3nm,0.7s,baz=29,slow=8.2,SNR=4.5						
	0.3nm,0.7s						
SONM	**Songino Array**	**46.34**	**322**	P	**P**	**09 15 08.0**	**-0.3**
	0.4nm,0.5s,baz=125,slow=4.8,SNR=2.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**61.70**	**315**	P	**P**	**09 17 00.7**	**+0.5**
	0.4nm,0.7s,baz=95,slow=11,SNR=3.1						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**64.54**	**319**	P	**P**	**09 17 18.8**	**-0.2**
	1.9nm,0.2s,baz=99,slow=7.0,SNR=16						
	1.9nm,0.2s						
BVAR	**Borovoye Array**	**69.68**	**321**	P	**P**	**09 17 51.4**	**-0.2**
	1.5nm,0.7s,baz=98,slow=7.6,SNR=10.0						
	1.5nm,0.7s						
LPAZ	**La Paz**	**145.12**	**95**	PKPbc	**PKPdf**	**09 26 21.1**	**+0.2**
	0.8nm,0.6s,baz=252,slow=9.6,SNR=3.7						

*ECX **14** 09:24:44.5±0.7, 28°.16N×112°.27W, h11km±8km, MD3.5, ML3.7*
*MEX **14** 09:24:46.1±1.7, 28°.12N×112°.33W, h10km, MD4.0*

ISC 14 09:24:42.3±1.7, 28°.08N±0°.03×112°.31W±0°.03, h10km±13km, n19, σ0s88/31, 3C-5D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFQB	**San Francisqui**	**0.58**	**304**	⇑*iP*	**Pb**	**09 24 54.7**	**+0.2**
SFQB				*iS*	**Sb**	**09 25 02.8**	**0.0**
SRIG	**Santa Rosalia**	**0.76**	**175**	*iP*	**Pn**	**09 24 59.3**	**+0.3**
SRIG				*iS*	**Sn**	**09 25 10.6**	**0.0**
SRIG	**Santa Rosalia**	**0.76**	**175**	⇓*iP*	**Pn**	**09 24 59.3**	**+0.3**
SRIG				*eS*	**Sn**	**09 25 10.4**	**-0.1**
GUYB	**Guaymas**	**1.29**	**98**	*eP*	**Pn**	**09 25 05.4**	**-0.8**
GUYB				*eS*	**Sg**	**09 25 23.6**	**-0.2**
GUYB	**Guaymas**	**1.29**	**98**	*eP*	**Pb**	**09 25 06.3**	**-0.2**
GUYB				*eS*	**Sg**	**09 25 23.4**	**-0.3**
GUYB				⇑*e*		09 25 25.1	
GUYB				IAML		09 25 25.1	
	comp=N,2μm,0.6s						
GUYB				⇓*e*		09 25 25.5	
GUYB				IAML		09 25 25.5	
	comp=E,2μm,0.2s						
BAHB	**Baha de los**	**1.39**	**308**	*eP*	**Pn**	**09 25 06.8**	**-1.0**
BAHB				*eS*	**Sn**	**09 25 25.8**	**-0.3**
BAHB	**Baha de los**	**1.39**	**308**	*eP*	**Pn**	**09 25 06.9**	**-0.8**
BAHB				*eS*	**Sb**	**09 25 26.8**	**+0.6**
BAHB				IAML		09 25 29.3	
	comp=N,903nm,0.3s						
NE74	**Guerrero Negro**	**1.50**	**268**	*eP*	**Pb**	**09 25 10.5**	**+0.2**
NE74				*eS*	**Sg**	**09 25 32.0**	**+1.3**
NE74				⇓*e*		09 25 35.4	
NE74				IAML		09 25 35.4	
	comp=N,874nm,1.0s						
HSIG		**1.52**	**52**	*iP*	**Pn**	**09 25 09.7**	**+0.2**
HSIG				*iS*	**Sn**	**09 25 29.3**	**0.0**
HSIG		**1.52**	**52**	*eP*	**Pn**	**09 25 08.7**	**-0.8**
HSIG				*eS*	**Sn**	**09 25 29.2**	**-0.1**
HSIG				IAML		09 25 30.3	
	comp=N,898nm,0.6s						
HSIG				⇓*e*		09 25 30.3	
PLIB	**Puerto Liberta**	**1.85**	**350**	*eP*	**Pn**	**09 25 13.1**	**-1.0**
NE77	**Loreto B.C.S**	**2.23**	**157**	*eP*	**Pb**	**09 25 21.3**	**-1.3**
LAPR	**La Primavera**	**2.41**	**360**	*eP*	**Pn**	**09 25 21.9**	**+0.1**
LAPR				*eS*	**Sn**	**09 25 51.6**	**+0.4**
LAPR	**La Primavera**	**2.41**	**360**	*eP*	**Pn**	**09 25 22.1**	**+0.5**
LAPR				IAML		09 26 11.1	
	comp=E,645nm,1.3s						
LAPR				⇑*e*		09 26 11.1	
LAPR				IAML		09 26 11.9	
	comp=N,626nm,0.8s						
LAPR				⇓*e*		09 26 11.9	
SLGB	**San Luis Gonza**	**2.53**	**314**	*eP*	**Pb**	**09 25 25.7**	**-2.0**
NE80	**Navojoa**	**2.98**	**112**	*eP*	**Pn**	**09 25 30.7**	**+1.2**
NZIG	**Nacozari, Sono**	**3.32**	**46**	*eP*	**Pn**	**09 25 36.4**	**+2.1**
NZIG				*eS*	**Sn**	**09 26 13.7**	**-0.3**
PIX	**Pinacate**	**3.60**	**344**	*eP*	**Pn**	**09 25 38.8**	**+0.7**
TUC	**Tucson**	**4.42**	**17**	*e*	**Pn**	**09 25 50.8**	**+1.5**
TUC				*e*		09 26 50.3	

IDC 14 09:30:48.2±3.3, 53°.48N×87°.46E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=30.1km s-min=17.5km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.64**	**288**	I		09 41 20.0	
	baz=106,slow=330,SNR=1.1						
ZALV	**Zalesovo Beam**	**1.64**	**288**	Pg	Pn	09 31 16.8	-1.4
	0.5nm,0.3s,baz=108,slow=19,SNR=5.4						
ZALV				Lg	Lg	09 31 40.2	
	1.0nm,0.3s,baz=118,slow=21,SNR=3.2						
KURBB	**Kurchatov Arra**	**6.21**	**246**	Pn	Pn	09 32 21.5	+0.6
	baz=62,slow=14,SNR=5.6						
KURBB				Lg	Lg	09 34 06.2	
	baz=64,slow=33,SNR=5.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.47**	**208**	Pn	Pn	09 32 39.8	+1.5
	0.1nm,0.3s,baz=24,slow=14,SNR=2.3						
	0.2nm,0.4s						

*IDC **14** 09:36:49.5±1.0, 4°.12S×80°.89W, h0km, mb3.7/6, mbtmp3.8/9, ML3.5/3, MS3.3/8, Error ellipse: s-maj=64.3km s-min=15.0km az=53.0*
*ARE **14** 09:36:50±2.8, 3°.94S±0°.06×80°.5W±0°.1, h33km±8km, Error ellipse: s-maj=15.7km s-min=8.0km az=88.0*
*NEIC **14** 09:36:50.6±1.5, 3°.97S±0°.05×80°.35W±0°.07, h9km±10km, mb3.9/2, ML4.1(ARE), Error ellipse: s-maj=11.1km s-min=5.0km az=126.0*
*IGQ **14** 09:36:55±0.8, 4°S±3°×8°0W±°, h5km*

ISC 14 09:36:51.6±0.8, 3°.84S±0°.04×80°.40W±0°.07, h10km, n80, σ2s02/72, mb3.7/6, MS3.4/5, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAMO	**ALAMOR**	**0.41**	**115**	P	**Pg**	**09 37 00.0**	**+0.2**
ARNL	**Arenillas**	**0.44**	**49**		**Pg**	**09 37 00.2**	**0.0**
ARNL					**Sb**	**09 37 06.2**	**-1.9**
ARNL	**Arenillas**	**0.44**	**49**	P	**Pg**	**09 37 00.0**	**-0.2**
ARNL				S	**Sg**	**09 37 06.0**	**0.0**
ACH1	**Ecuador-Univer**	**0.73**	**42**	P	**Pg**	**09 37 05.0**	**-0.8**
ACH1	**Ecuador-Univer**	**0.73**	**42**	S	**Sb**	**09 37 16.0**	**-0.5**
ACH2	**Ecuador-Machal**	**0.82**	**46**	P	**Pg**	**09 37 06.0**	**-1.4**
GONZ	**Gonzanam**	**1.07**	**112**	P	**Pg**	**09 37 10.0**	**-2.4**
ACUE	**Ecuador-Cuenca**	**1.71**	**57**	P	**Pb**	**09 37 23.0**	**-0.3**
MILO	**Milagro-Astudi**	**1.76**	**28**	P	**Pn**	**09 37 23.0**	**+0.8**
COHC	**Cochancay**	**1.78**	**40**	Pn	**Pn**	**09 37 22.0**	**-0.4**
COHC	**Cochancay**	**1.78**	**40**	*eP*	**Pn**	**09 37 21.8**	**-0.6**
COHC	**Cochancay**	**1.78**	**40**	P	**Pn**	**09 37 22.0**	**-0.4**
AGUAY	**Guayaquil**	**1.83**	**14**	P	**Pn**	**09 37 25.0**	**+1.9**
AMIL	**Milagro (Trans**	**1.87**	**25**	P	**Pn**	**09 37 24.0**	**+0.3**
BOSC	**San Juan Bosco**	**2.02**	**70**	Pn	**Pn**	**09 37 26.2**	**+0.3**
BOSC	**San Juan Bosco**	**2.02**	**70**	P	**Pb**	**09 37 27.0**	**-1.5**
ISPT	**Isla de la Pla**	**2.65**	**345**	P	Pn	09 37 34.0	-0.4
CHSH	**Refugio Sur-Vo**	**2.78**	**33**	P	**Pn**	**09 37 36.0**	**-0.8**
AMNT	**Manta-Manabi**	**2.90**	**353**	P	**Pn**	**09 37 38.0**	**+0.2**
BMAS	**Trigal station**	**3.01**	**40**	P	**Pn**	**09 37 41.0**	**+1.3**
ARRY	**Arrayan**	**3.02**	**40**	P	**Pn**	**09 37 41.0**	**+1.1**
BPAT	**Tungurahua Vol**	**3.04**	**40**	P	**Pn**	**09 37 42.0**	**+1.8**
BBIL	**Ulba Tungurahu**	**3.04**	**39**	P	**Pb**	**09 37 45.0**	**-1.1**
RETU	**Refugio**	**3.07**	**39**	P	**Pb**	**09 37 45.0**	**-1.7**
POND	**Pondoa**	**3.09**	**39**	P	**Pn**	**09 37 43.0**	**+2.2**
BULB	**Ulba Tungurahu**	**3.10**	**40**	P	**Pn**	**09 37 43.0**	**+2.0**
BRUN	**Tungurahua Vol**	**3.11**	**39**	P	**Pn**	**09 37 43.0**	**+2.0**
PIAT	**Ana Tenorio**	**3.54**	**37**	*eP*	**Pn**	**09 37 50.5**	**+3.5**
PIAT	**Ana Tenorio**	**3.54**	**37**	P	**Pn**	**09 37 48.0**	**+1.0**
SRAM	**San Ramn-Vol**	**3.57**	**31**	P	**Pn**	**09 37 51.0**	**+3.5**
PAST	**Pastocalle**	**3.58**	**29**	P	**Pn**	**09 37 52.0**	**+4.3**
SLOR	**San Lorenzo -**	**3.62**	**32**	Pn	**Pn**	**09 37 50.1**	**+1.8**
SLOR	**San Lorenzo -**	**3.62**	**32**	P	**Pn**	**09 37 51.0**	**+2.7**
BMOR	**Cotopaxi Volca**	**3.64**	**32**	P	**Pn**	**09 37 52.0**	**+3.4**
CAMI	**Rancho Maria**	**3.67**	**31**	P	**Pn**	**09 37 53.0**	**+4.2**
BNAS	**Cotopaxi Volca**	**3.68**	**31**	P	**Pn**	**09 37 51.0**	**+1.9**
SUCR	**Mariscal Sucre**	**3.70**	**31**	P	**Pn**	**09 37 52.0**	**+2.7**
BREF	**Cotopaxi Volca**	**3.71**	**32**	P	**Pn**	**09 37 53.0**	**+3.5**
BVC2	**Cotopaxi Volca**	**3.73**	**32**	P	**Pn**	**09 37 53.0**	**+3.2**
MAG1	**Magdalena**	**3.79**	**9**	P	**Pn**	**09 37 51.0**	**+0.8**
ATAH	**Atahualpa**	**3.83**	**149**	Pn	**Pn**	**09 37 51.4**	**+0.3**
	5.1nm,0.3s,baz=334,slow=8.7,SNR=37						
ATAH				Sn	**Sn**	**09 38 39.1**	**+2.7**
	17nm,0.3s,baz=245,slow=20,SNR=6.0						
ATAH				LR	LR	09 39 00.3	
	comp=Z,77nm,19.7s,baz=324,slow=34						
	56nm,0.7s						
ARDO	**Archidona, Ten**	**3.83**	**43**	P	**Pn**	**09 37 51.0**	**+0.2**
ANTI	**Antisana**	**4.04**	**34**	P	Pn	09 37 59.0	+4.9
TERV	**Terraza Guagua**	**4.06**	**26**	P	**Pn**	**09 37 56.0**	**+1.7**
BV15	**Puerto Quito-O**	**4.14**	**16**	P	**Pn**	**09 37 54.0**	**-1.0**
PULU	**Pululahua**	**4.28**	**26**	Pn	**Pn**	**09 37 57.9**	**+0.7**
CAYA	**Cayambe**	**4.57**	**32**	P	**Pn**	**09 38 06.0**	**+4.7**
CUSE	**Cuicocha Este**	**4.58**	**26**	*eP*	**Pn**	**09 38 03.3**	**+2.0**
CUIC	**Cuicocha-Domo**	**4.59**	**26**	P	**Pn**	**09 38 02.0**	**+0.5**
IMBA	**Imbabura, San**	**4.64**	**28**	Pn	**Pn**	**09 38 02.2**	**0.0**
URCU	**Urcuqui**	**4.76**	**27**	P	**Pn**	**09 38 05.0**	**+1.2**
CHL1	**Volc¡n Chiles**	**5.21**	**28**	P	**Pn**	**09 38 14.0**	**+3.8**
CHMA	**Chilma**	**5.22**	**27**	P	**Pn**	**09 38 12.0**	**+1.9**
TULM	**Tulcn-Chalpat**	**5.22**	**30**	Pn	**Pn**	**09 38 11.6**	**+1.3**
TULM	**Tulcn-Chalpat**	**5.22**	**30**	*eP*	**Pn**	**09 38 11.2**	**+0.9**
ECEN	**Cerro Negro**	**5.23**	**28**	P	**Pn**	**09 38 13.0**	**+2.6**
CMBC	**Cumbal**	**5.40**	**28**	*eP*	**Pn**	**09 38 17.1**	**+4.4**
GCUF	**Volcan Galeras**	**5.88**	**31**	*eP*	**Pn**	**09 38 21.0**	**+1.7**
BBAC	**Balboa, Cauca**	**6.62**	**28**	*eP*	**Pn**	**09 38 29.7**	**+0.5**
BBAC	**Balboa, Cauca**	**6.62**	**28**	P	**Pn**	**09 38 32.0**	**+2.8**
PTLC	**Puerto Leguiza**	**6.87**	**55**	*eP*	Pn	09 38 27.0	-5.5
NNA	**Nana**	**8.83**	**157**	Pn	**Pn**	**09 38 59.2**	**-0.3**
	1.0nm,0.3s,baz=305,slow=16,SNR=1.4						
NNA				Sn	**Sn**	**09 40 38.3**	**-0.8**
	1.3nm,0.3s,baz=212,slow=21,SNR=1.4						
NNA				Lg	Lg	09 41 19.3	
	2.1nm,0.3s,baz=286,slow=24,SNR=6.2						
	4.0nm,0.3s						
NNA	**Nana**	**8.83**	**157**	Pn	Pn	09 38 55.8	-3.6
BCIP	**Isla Barro Col**	**12.93**	**2**	Pn	**Pn**	**09 39 55.9**	**+0.3**
SDV	**Santo Domingo**	**15.95**	**38**	LR	LR	09 46 33.8	
	comp=Z,77nm,20.7s,baz=238,slow=36						
LPAZ	**La Paz**	**17.27**	**137**	P	**Pn**	**09 40 54.7**	**+1.0**
	0.1nm,0.3s,baz=337,slow=10,SNR=6.2						
LPAZ				LR	LR	09 48 43.5	
	comp=Z,215nm,18.5s,baz=321,slow=41						
	1.6nm,0.8s						
PB16	**IPOC Station P**	**17.92**	**144**		**Pn**	**09 41 00.9**	**-0.8**
PB16				IAmb	IAmb	09 41 32.4	
	comp=Z,12nm,1.4s						
LVC	**Limon Verde**	**21.73**	**150**	P	**P**	**09 41 43.8**	**+0.2**
	comp=Z,6.8nm,0.7s,baz=308,slow=9.8,SNR=4.5						
	comp=Z,6.8nm,0.7s						
SIV	**San Ignacio**	**22.51**	**124**	P	**P**	**09 41 52.2**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=292,slow=9.2,SNR=5.4						
	comp=Z,0.8nm,0.5s						
CMIG	**Matias Romero**	**25.24**	**326**	LR	LR	09 50 27.7	
	comp=Z,21nm,18.4s,baz=220,slow=32						
MDP	**Montagnes des**	**29.11**	**72**	LR	LR	09 55 01.8	
	comp=Z,96nm,20.8s,baz=215,slow=37						
RPN	**Rapa Nui**	**36.06**	**227**	LR	LR	09 54 43.4	
	comp=Z,48nm,18.1s,baz=6.5,slow=30						
TXAR	**Lajitas Array**	**39.83**	**327**	P	P	09 44 24.9	-0.6
	comp=Z,0.4nm,0.8s,baz=148,slow=9.8,SNR=4.8						
TXAR				PcP	**PcP**	**09 46 30.4**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=156,slow=4.9,SNR=4.1						
	comp=Z,0.4nm,0.8s						
RCBR	**Riachuelo**	**44.37**	**94**	LR	LR	10 05 28.7	
	comp=Z,68nm,18.3s,baz=92,slow=38						
PDAR	**Pinedale Array**	**53.37**	**333**	P	P	09 46 09.9	-1.7
	comp=Z,0.4nm,0.6s,baz=124,slow=13,SNR=5.2						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**54.75**	**324**	P	**P**	**09 46 22.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=136,slow=6.8,SNR=6.9						
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**71.08**	**344**	LR	LR	10 22 39.9	
	comp=Z,45nm,19.1s,baz=4.5,slow=39						
TORD	**Torodi Ar. Bea**	**83.18**	**76**	P	**P**	**09 49 22.2**	**+3.4**
	comp=Z,0.5nm,0.8s,baz=297,slow=6.3,SNR=2.3						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**136.82**	**229**	PKP	PKPdf	09 56 11.3	-4.2
	0.2nm,0.5nm,0.9s,baz=145,slow=3.4,SNR=3.1						
WRA	**Warramunga Arr**	**138.49**	**234**	PKP	**PKPdf**	**09 56 15.6**	**-3.0**
	comp=Z,0.4nm,0.8s,baz=118,slow=1.0,SNR=2.2						

IDC 14 09:46:13.2±1.3, 55°.90S×27°.05W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=58.6km s-min=34.0km az=86.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**46.73**	**183**	P	P	09 54 43.2	0.0
	0.6nm,0.7s,baz=194,slow=6.9,SNR=7.1						
	0.6nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.83**	**17**	T	T	10 46 54.7	
	baz=189						
H10S3	**ASCENSION HYDR**	**47.84**	**17**	T	T	10 46 55.0	
	baz=31,SNR=3.8						
H10N1	**ASCENSION HYDR**	**48.95**	**17**	T	T	10 48 18.0	
	baz=198						
H10N3	**ASCENSION HYDR**	**48.95**	**17**	T	T	10 48 17.5	
	baz=198,slow=74,SNR=6.7						
H10N2	**ASCENSION HYDR**	**48.97**	**17**	T	T	10 48 21.6	
	baz=198,slow=74,SNR=4.8						
LPAZ	**La Paz**	**50.35**	**305**	P	P	09 55 12.7	+0.1
	1.0nm,0.7s,baz=153,slow=6.8,SNR=3.0						
	1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.89**	**29**	P	P	09 57 44.0	+0.2
	0.5nm,0.7s,baz=206,slow=5.9,SNR=2.2						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**150.07**	**312**	PKPbc	PKPbc	10 06 03.4	-0.8
	0.5nm,0.7s,baz=129,slow=1.7,SNR=4.9						

*SOME **14** 09:53:30.7, 42°.33N×69°.93E, h10km*
*KRNET **14** 09:53:30.5±0.1, 43°.81N×69°.77E, mb3.0*
*NNC **14** 09:53:31.7±1.1, 43°.63N×69°.69E, h0km, mb3.8, mpv3.0, Error ellipse: s-maj=5.7km s-min=3.8km az=122.0, Suspected Mining explosion.*

ISC 14 09:53:31.8±2.9, 43°.84N±0°.09×69°.8E±0°.1, h0km, n13, σ1s49/22, 9C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.88**	**146**	⇑P	**Pg**	**09 53 47.3**	**-1.4**
	1.3nm,0.4s,baz=315,slow=15,SNR=88						
KK31				S	**Sg**	**09 53 58.4**	**-1.7**
	24nm,0.6s,baz=310,slow=31,SNR=43						
KKAR	**Karatay Array**	**0.88**	**146**	⇑*iP*	**Pg**	**09 53 47.4**	**-1.3**
	baz=42						
KKAR				⇑*iS*	**Sg**	**09 53 59.8**	**-0.3**
	baz=42						
TRKS	**Terek-Say**	**2.50**	**157**	⇑*iP*	**Pn**	**09 54 14.5**	**+0.6**
	baz=56						
TRKS				⇑*iS*	**Sn**	**09 54 46.6**	**+1.5**
	baz=56						
EKS2	**Erkin-Say**	**3.11**	**111**	⇑*iP*	**Pn**	**09 54 22.6**	**+0.4**
	baz=10.0						
EKS2				⇑*iS*	**Sn**	**09 55 00.7**	**+0.5**
	baz=10.0						
USP	**Ospenovka**	**3.44**	**98**	⇑*eP*	**Pn**	**09 54 27.2**	**+0.5**
	baz=97						
USP				⇑*eS*	**Sn**	**09 55 08.5**	**+0.4**
	baz=97						
SGDS	**Sogindy**	**3.50**	**95**	*eP*	**Pg**	**09 54 38.0**	**-0.9**
	3.8nm,0.5s						
SGDS				*eS*	**Sg**	**09 55 25.7**	**+1.4**
	6.2nm,0.4s						
SGDS	**Sogindy**	**3.50**	**95**	Pg	**Pg**	**09 54 38.0**	**-0.9**
	2.3nm,0.4s						
SGDS				Lg	Lg	09 55 25.7	
	4.5nm,0.5s						
KRBS	**Karabastau**	**4.23**	**90**	*eP*	**Pg**	**09 54 50.8**	**-2.2**
	3.0nm,0.3s						
KRBS				*eS*	**Sg**	**09 55 47.8**	**+0.1**
	3.7nm,0.3s						
KRBS	**Karabastau**	**4.23**	**90**	Pg	**Pg**	**09 54 50.7**	**-2.2**
	3.0nm,0.7s						
KRBS				Lg	Lg	09 55 47.8	
	3.7nm,0.7s						
TKM2	**Tokmak 2**	**4.30**	**100**	⇓Pg	**Pb**	**09 54 49.6**	**+1.3**
	5.7nm,1.1s						
TKM2				⇓Lg	Lg	09 55 49.6	
	3.8nm,0.7s						
KUU	**Kurty**	**4.70**	**87**	*eP*	**Pg**	**09 55 00.1**	**-1.8**
	4.3nm,0.5s						
KUU				*eS*	**Sg**	**09 56 04.1**	**+1.2**
	6.8nm,0.3s						
KUU	**Kurty**	**4.70**	**87**	Pg	**Pg**	**09 55 00.1**	**-1.8**
	4.3nm,0.6s						
KUU				Lg	Lg	09 56 04.1	
	6.9nm,0.4s						
KTBS	**Karatobe**	**4.96**	**89**	*eP*	**Pg**	**09 55 03.9**	**-3.0**
	1.4nm,0.4s						
KTBS				*eS*	**Sg**	**09 56 10.5**	**-0.6**
	5.6nm,0.3s						

IDC 14 09:59:43.1±6.8, 6°.62S×147°.09E, h101km±68km, mb3.0/2, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=75.8km s-min=35.1km az=138.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.77**	**179**	P	Pn	10 00 27.0	+1.2
	6.2nm,0.4s,baz=7.5,slow=24,SNR=2.3						
PMG				S	Sn	10 00 59.4	+0.8
	36nm,0.3s,baz=146,slow=21,SNR=34						
WRA	**Warramunga Arr**	**18.13**	**222**	P	P	10 03 45.8	-1.7
	0.1nm,0.3s,baz=47,slow=11,SNR=11						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**21.16**	**215**	P	P	10 04 19.4	-1.0
	0.4nm,0.5s,baz=54,slow=8.5,SNR=12						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**86.01**	**23**	P	P	10 12 11.3	-0.7
	0.4nm,0.7s,baz=244,slow=4.9,SNR=4.2						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.33**	**283**	PKPbc	PKPab	10 19 11.6	+1.1
	0.2nm,0.5s,baz=86,slow=4.4,SNR=1.4						

ZUR 14 10:05:32.7, 46°.26N×7°.40E, h7km±1km, MLh0.3/3, 1D, Error ellipse: s-maj=2.4km s-min=0.9km az=222.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIOV	**Sion-Valere**	**0.03**	**224**	Pg	Pg	10 05 34.3	+0.2
SIOV				Sg	Sg	10 05 35.3	+0.2
SENIN	**Lac Senin/Sane**	**0.12**	**327**	⇓Pg	Pg	10 05 35.7	+0.2
SENIN				Sg	Sg	10 05 37.7	+0.2
DIX	**Grande Dixence**	**0.18**	**178**	Pg	Pg	10 05 36.9	+0.5
DIX				Sg	Sg	10 05 39.4	+0.4
GRYON	**Gryon**	**0.20**	**267**	Pg	Pg	10 05 36.9	+0.2
GRYON				Sg	Sg	10 05 39.8	+0.4

ZUR 14 10:05:47.2, 46°.26N×7°.40E, h7km±1km, MLh0.2/3, 1D, Error ellipse: s-maj=2.5km s-min=0.9km az=184.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIOV	**Sion-Valere**	**0.04**	**229**	Pg	Pg	10 05 49.0	+0.3
SIOV				Sg	Sg	10 05 49.9	+0.1
SENIN	**Lac Senin/Sane**	**0.13**	**325**	⇓Pg	Pg	10 05 50.3	+0.2
SENIN				Sg	Sg	10 05 52.4	+0.3
DIX	**Grande Dixence**	**0.18**	**179**	Sg	Sg	10 05 54.0	+0.5
GRYON

JOTO OTAMA OYAMA 1.57 275 A A 10 21 31.8
comp=E,32nm,0.4s,comp=E,34nm,1.1s
JOU Okura 1.60 306 ⇓*i*P **Pn 10 21 32.1 -0.8**
JOU ⇓*e*S **Sn 10 21 50.6 -2.3**
JOU Okura 1.60 306 A A 10 21 32.1
comp=E,23nm,2.0s,comp=E,26nm,0.5s
JHO Hitachi 1.61 240 A A 10 21 32.5
comp=E,8.0nm,0.6s,comp=E,8.0nm,3.9s
JOFO Osakifurukawao 1.61 317 A A 10 21 32.1
comp=E,60nm,1.8s,comp=E,55nm,2.3s
OFUJ Ofunato 1.73 343 A A 10 21 34.5
comp=E,6.0nm,1.4s,comp=E,6.0nm,1.5s
JMK Ichinoseki 1.75 331 ⇓*i*P **Pn 10 21 34.5 -0.4**
JMK ⇓S **Sn 10 21 54.8 -1.6**
JMK Ichinoseki 1.75 331 A A 10 21 34.5
comp=E,7.0nm,1.8s,comp=E,8.0nm,0.9s
JHYU Hitachinakayam 1.75 232 A A 10 21 34.8
comp=E,14nm,1.5s,comp=E,9.0nm,0.5s
JYAR Yonezawaarcadi 1.78 286 A A 10 21 34.3
comp=E,32nm,1.2s,comp=E,45nm,1.1s
JYS Shiratake 1.94 295 ⇓*i*P **Pn 10 21 37.0 -0.7**
JYS ⇓*e*S **Sn 10 21 59.5 -1.8**
JYS Shiratake 1.94 295 A A 10 21 37.0
comp=E,13nm,1.5s,comp=E,14nm,1.0s
JSB Shiboa 1.96 257 A A 10 21 37.1
comp=E,35nm,0.9s,comp=E,24nm,1.5s
JIHU Itakohorinouch 2.04 225 A A 10 21 39.2
comp=E,40nm,2.1s,comp=E,33nm,0.9s
JFY Yanaizu 2.07 270 P **Pn 10 21 38.9 -0.5**
JFY *e*S **Sn 10 22 03.7 -0.7**
JFY Yanaizu 2.07 270 A A 10 21 38.9
comp=E,5.0nm,3.7s,comp=E,5.0nm,1.0s
JYT Yasato 2.07 235 Pn **Pn 10 21 38.5 -0.9**
JYT Yasato 2.07 235 A A 10 21 39.3
comp=E,14nm,0.3s,comp=E,10.0nm,0.4s
CHOJ Chosi 2.08 215 A A 10 21 40.0
comp=E,7.0nm,1.1s,comp=E,9.0nm,2.3s
JYK Kaneyama 2.14 315 ⇓*i*P **Pn 10 21 39.9 -0.4**
JYK Kaneyama 2.14 315 A A 10 21 39.9
comp=E,8.0nm,3.5s,comp=E,6.0nm,1.3s
JOM Ohasama 2.19 339 ⇓*i*P **Pn 10 21 41.2 +0.2**
JOM ⇓*e*S **Sn 10 22 07.2 -0.2**
JOM Ohasama 2.19 339 A A 10 21 41.2
comp=E,8.0nm,0.8s,comp=E,6.0nm,1.5s
JSMT Sammumatsuo 2.32 221 A A 10 21 43.4
comp=E,20nm,2.6s,comp=E,22nm,1.9s
JYA Atsumi 2.36 300 P **Pn 10 21 42.8 -0.5**
JYA Atsumi 2.36 300 A A 10 21 42.8
comp=E,9.0nm,0.7s,comp=E,7.0nm,0.5s
JRG Rokugo 2.37 327 ⇓P **Pn 10 21 43.8 +0.4**
JRG ⇓*e*S **Sn 10 22 11.7 0.0**
JRG Rokugo 2.37 327 A A 10 21 43.8
comp=E,9.0nm,2.7s,comp=E,9.0nm,2.4s
JNS Sasagawa 2.41 280 P **Pn 10 21 43.8 -0.2**
JYYZ Yamagatayuza 2.45 311 A A 10 21 44.1
comp=E,22nm,2.2s,comp=E,16nm,4.4s
JAG Ashikaga 2.49 247 A A 10 21 45.0
comp=E,3.0nm,4.8s,comp=E,5.0nm,2.4s
JTH Tanohata 2.53 352 A A 10 21 46.4
comp=E,5.0nm,1.9s,comp=E,4.0nm,2.2s
JSZI Iwateshizukuis 2.54 336 A A 10 21 46.0
comp=E,12nm,1.3s,comp=E,14nm,2.7s
JCN Nagara 2.62 221 A A 10 21 47.7
comp=E,21nm,3.6s,comp=E,13nm,2.4s
JYW Yuwa 2.68 323 A A 10 21 47.6
comp=E,16nm,1.2s,comp=E,16nm,1.2s
TOK Tokyo 2.69 231 A A 10 21 48.2
comp=E,15nm,1.1s,comp=E,17nm,3.2s
JKEN Kujiedanarisaw 2.81 351 A A 10 21 50.3
comp=E,12nm,0.6s,comp=E,14nm,1.0s
JIZZ Izumozaki 2.86 273 A A 10 21 49.9
comp=E,7.0nm,3.1s,comp=E,8.0nm,5.3s
JANG Nango 3.01 348 A A 10 21 53.0
comp=E,4.0nm,1.9s,comp=E,5.0nm,2.0s
JAH Hinai 3.05 335 A A 10 21 53.3
comp=E,7.0nm,2.3s,comp=E,7.0nm,1.6s
JYO Yokosk 3.06 225 A A 10 21 53.7
comp=E,9.0nm,1.9s,comp=E,10.0nm,5.8s
JSD Sado 3.27 282 Pn **Pn 10 21 55.1 -0.7**
JNTW Noshirotokiwa 3.30 330 A A 10 21 56.6
comp=E,17nm,2.5s,comp=E,20nm,1.7s
JOD2 Odawara 2 3.38 231 A A 10 21 58.0
comp=E,4.0nm,2.1s,comp=E,6.0nm,2.8s
MJAR Matsushiro Arr 3.40 256 Pn **Pn 10 21 58.0 +0.4**
2.6nm,0.3s,baz=81,slow=26,SNR=46
MJAR Sn **Sn 10 22 38.6 +1.4**
6.2nm,0.3s,baz=25,slow=43,SNR=2.3
MAJO Matsushiro 3.40 256 Pn **Pn 10 21 58.2 +0.6**
MAJO Matsushiro 3.40 256 P **Pn 10 21 58.2 +0.6**
MJB9 Matsu-Tunnel 3.40 256 **Pn 10 21 58.2 +0.5**
JTM Tenmabayashi 3.49 344 Pn **Pn 10 21 59.7 +0.8**
JOG3 Oga3 3.55 316 A A 10 21 54.5
comp=E,6.0nm,3.9s,comp=E,8.0nm,2.7s
JHHS Hirosakihyakuz 3.56 335 A A 10 22 00.4
comp=E,9.0nm,4.1s,comp=E,15nm,2.2s
JHTM Izuhatsuma 3.63 228 A A 10 22 01.7
comp=E,8.0nm,0.7s,comp=E,10.0nm,3.2s
JIW Iwasaki 3.63 331 A A 10 22 01.4
comp=E,4.0nm,1.2s,comp=E,4.0nm,1.8s
JAHD Aomorihigashid 3.91 349 A A 10 22 05.8
comp=E,12nm,1.2s,comp=E,11nm,2.0s
JSI2 Shiura 2 3.91 339 A A 10 22 05.6
comp=E,5.0nm,3.1s,comp=E,3.0nm,1.1s
JNY Yasuok 4.14 241 A A 10 22 08.4
comp=E,4.0nm,1.5s,comp=E,4.0nm,1.8s
JGF Kuroka 4.38 247 Pn **Pn 10 22 10.5 -0.7**
ERM Erimo 4.63 8 Pn **Pn 10 22 14.4 -0.1**
ERM Erimo 4.63 8*d i*P **Pn 10 22 14.5 -0.1**
INU Inuyama 4.74 246 Pn **Pn 10 22 16.2 +0.1**
JHJ2 Mitsune 4.76 206 **Pn 10 22 16.7 +0.4**
JHJ Hachijo jima 2 4.77 206 Pn **Pn 10 22 16.6 +0.2**
264nm,0.3s,baz=131,slow=23,SNR=16
JHJ Sn **Sn 10 23 08.6 -2.3**
199nm,0.3s,baz=89,slow=23,SNR=9.0
JEW Eniwo 5.45 353 Pn **Pn 10 22 25.9 +0.1**
NMR Nemuro--Hokkai 6.49 23 *e*P **Pn 10 22 38.1 -1.9**
NMR *i* S **Sn 10 23 46.4 -6.8**
ASAJ Asahikawa 6.69 2 P **Pn 10 22 43.1 +0.3**
JKA Kamikawa-asahi 6.69 2 Pn **Pn 10 22 43.1 +0.3**
RUSJ Misakicho 7.04 18 *e*P **Pn 10 22 46.7 -0.8**
RUSJ *e*S **Sn 10 24 01.8 -4.9**
YUK Yuzh-Kuril'sk 7.13 21*c i*P **Pn 10 22 48.1 -0.8**
YUK *i* S **Sn 10 24 02.7 -6.4**
YUK pmax pmax
comp=Z,91nm,0.2s
YUK pmax pmax
comp=E,14nm,0.1s
JMN Monobe 7.79 244 Pn **Pn 10 22 56.9 -1.1**
JHS Saijyo 7.81 255 **Pn 10 22 57.7 -0.6**
TEY Ternei 8.73 332 *e*P **Pn 10 23 13.7 +2.9**
KUR Kuril'sk 8.85 26 *e*P **Pn 10 23 12.0 -0.4**
KUR *e*S **Sn 10 24 46.1 -5.2**
KUR smax smax
comp=E,184nm,0.5s
KUR smax smax
comp=N,27nm,0.3s
KUR MLR MLR
comp=Z,600nm,11.0s
YSS Yuzh-Sakhalins 9.53 2 Pn **Pn 10 23 22.5 +0.8**
YSS Yuzh-Sakhalins 9.53 2 *e*P **Pn 10 23 22.9 +1.2**
YSS *e*S **Sn 10 25 05.2 -2.7**
YSS pmax pmax
comp=Z,40nm,0.9s
YSS MLR MLR
comp=N,200nm,16.0s
YSS MLR MLR
comp=Z,200nm,16.0s
VLA Vladivostok 9.78 309 ⇓*e*P **Pn 10 23 26.3 +1.1**
MSHR Mys Shultsa 9.98 305 ⇑*e*P **Pn 10 23 29.3 +1.4**
JCJ Chichijima 10.30 181 Pn **Pn 10 23 29.9 -2.5**
comp=Z,17nm,0.3s,baz=58,slow=20,SNR=11
JCJ Sn Sn 10 25 17.9 -9.2
comp=Z,21nm,0.3s,baz=73,slow=21,SNR=4.6
JCJ Chichijima 10.30 181 Pn **Pn 10 23 30.9 -1.5**
USA0B Ussuriysk Arra 10.34 314 Pn **Pn 10 23 32.2 -0.6**
USA0B Ussuriysk Arra 10.34 314*ce*P **Pn 10 23 35.2 +2.4**
USRK Ussuriysk Ar. 10.34 314 Pn **Pn 10 23 34.7 +1.9**
comp=Z,2.0nm,0.3s,baz=129,slow=13,SNR=50
USRK LR LR 10 27 16.2
comp=Z,748nm,19.3s,baz=133,slow=36
USRK Ussuriysk Ar. 10.34 314 Pn **Pn 10 23 32.5 -0.3**
USRK Ussuriysk Ar. 10.34 314 P **Pn 10 23 32.5 -0.3**
KSRS Korea Array 11.44 275 Pn **Pn 10 23 51.2 +3.3**
comp=Z,0.6nm,0.3s,baz=87,slow=14,SNR=18
KSRS LR LR 10 28 00.6
comp=Z,467nm,18.9s,baz=85,slow=37

KSAR Wonju Array Be 11.47 274 Pn **Pn 10 23 45.1 -3.2**
KSAR Wonju Array Be 11.47 274 P **Pn 10 23 45.1 -3.2**
KS19 Wonju Array Si 11.48 275 **Pn 10 23 46.3 -2.1**
MDJ Mudanjiang 11.98 311 Pn **Pn 10 23 53.6 -1.8**
TJN Taejon 12.01 270⇑*e*P **Pn 10 23 58.3 +2.6**
BNX BinXian 13.89 311 ⇑P **P 10 24 25.4 -4.0**
BNX pmax pmax
comp=Z,6.0nm,0.7s
BNX pmax pmax
comp=Z,86nm,4.0s
GRNR Gornyy 13.99 344 ⇓*i*P **P 10 24 31.6 +1.2**
GRNR pmax pmax
comp=Z,20nm,0.7s
GRNR MLR MLR
comp=E,170nm,13.0s
GRNR MLR MLR
comp=N,200nm,16.0s
KLR Kul'dur 14.06 330 Pn **Pn 10 24 22.4 -1.3**
comp=N,0.1nm,0.3s,baz=133,slow=12,SNR=2.7
KLR LR LR 10 29 47.5
comp=N,618nm,18.8s,baz=140,slow=37
comp=N,0.9nm,0.5s
KLR Kul'dur 14.06 330⇑*e*P **Pn 10 24 22.6 -1.1**
KLR pmax pmax
comp=Z,1.0nm,0.6s
CN2 Changchun 14.29 302 *e*P **Pn 10 24 27.3 +0.4**
CN2 S **Sn 10 27 05.3 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.1s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,300nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
JMZ Minamidaito 2 14.92 222 Pn **Pn 10 24 35.8 +0.3**
SNY Shenyang 15.08 293 ⇑P P 10 24 49.8 +7.2
SNY S S 10 27 48.4 +7.7
PETK Petropavlovsk- 18.99 29 P **P 10 25 26.5 +0.7**
comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=3.0
PETK LR LR 10 33 28.1
comp=Z,99nm,18.1s,baz=213,slow=39
comp=Z,2.6nm,0.8s
PETK Petropavlovsk- 18.99 29 P **P 10 25 25.6 -0.2**
ZEA Zeya 19.35 332 *e*P **P 10 25 28.2 -1.5**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA MLR MLR
comp=N,200nm,12.0s
ZEA MLR MLR
comp=Z,200nm,14.0s
NJ2 Nanjing 19.98 261 *e*P **P 10 25 36.0 -0.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
TIA Tai'an 20.18 274 *e*P Pn 10 25 41.6 +0.7
TIA pmax pmax
comp=Z,16nm,0.8s
TIA LR LR
comp=Z,200nm,13.1s
TIA LR LR
comp=Z,240nm,11.0s
TIA LR LR
comp=Z,260nm,15.7s
XLT XiLinHaoTe 20.87 296 *e*P **P 10 25 41.8 -4.6**
XLT pP pP 10 25 51.6 -1.3
HNS HongShan 21.90 278 ⇑P **P 10 25 57.6 +0.3**
HNS PP **PnPn 10 26 19.3 +0.3**
HNS S **S 10 29 57.5 -0.5**
HNS pmax pmax
comp=Z,30nm,0.6s
HNS LR LR
comp=Z,180nm,13.4s
HNS LR LR
comp=Z,270nm,16.2s
HNS LR LR
comp=Z,290nm,14.7s
MA2 Magadan 22.83 11 P **P 10 26 08.5 +1.4**
comp=Z,12nm,0.7s,baz=211,slow=7.7,SNR=5.7
MA2 LR LR 10 34 26.2
comp=Z,108nm,21.8s,baz=188,slow=35
comp=Z,12nm,0.7s
MA2 Magadan 22.83 11⇑*e*P **P 10 26 08.8 +1.7**
MA2 pmax pmax
comp=Z,12nm,0.8s
GUMO Guam 23.85 174 LR LR 10 36 00.6
comp=Z,86nm,21.4s,baz=31,slow=38
WHN Wuhan 24.12 262 ⇓P **P 10 26 16.8 -3.2**
WHN LR LR
comp=Z,630nm,15.9s
KNMB Chin-men Tao 24.16 244 P **P 10 26 17.0 -3.4**
LYN LuoYang 24.27 272 *e*P **P 10 26 20.5 -0.9**
LYN pP pP 10 26 29.5 +1.1
LYN S **S 10 30 36.3 -2.4**
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN pmax pmax
comp=Z,90nm,3.6s
LYN LR LR
comp=Z,130nm,11.4s
LYN LR LR
comp=Z,260nm,17.1s
LYN LR LR
comp=Z,240nm,14.6s
YAK Yakutsk 25.85 346 P **P 10 26 35.7 +0.3**
comp=Z,18nm,0.6s,baz=134,slow=1.6,SNR=7.0
YAK LR LR 10 37 02.1
comp=Z,257nm,18.5s,baz=90,slow=37
comp=Z,18nm,0.6s
YAK Yakutsk 25.85 346 P **P 10 26 35.0 -0.4**
YAK Yakutsk 25.85 346 *e*P **P 10 26 34.7 -0.7**
YAK *e**PP **pP 10 26 40.8 -1.6**
YAK *e* 10 27 12.0
YAK *e*S **S 10 31 04.4 +1.0**
YAK *e**SS **sS 10 31 16.6 +1.5**
YAK *e*SS **SnSn 10 32 02.4 +2.3**
YAK pmax pmax
comp=Z,20nm,0.7s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,67nm,2.7s
YAK pmax pmax
comp=N,49nm,2.5s
YAK pmax pmax
comp=E,47nm,2.9s
YAK smax smax
comp=E,34nm,2.4s
YAK smax smax
comp=N,27nm,1.7s
YAK MLR MLR
comp=Z,346nm,16.0s
YAK MLR MLR
comp=N,198nm,15.0s
YAK MLR MLR
comp=E,59nm,16.0s
SEY Seymchan 26.27 10 P **P 10 26 40.9 +1.7**
comp=E,5.5nm,0.7s,baz=197,slow=8.6,SNR=20
comp=E,5.5nm,0.7s
SEY Seymchan 26.27 10⇑*e*P **P 10 26 40.2 +1.0**
SEY pmax pmax
comp=Z,9.0nm,0.9s
XAN Xi'an 27.23 273 P **P 10 26 49.3 +1.1**
XAN pP sP 10 26 59.6 +1.3
XAN sP pP 10 27 04.8 +10
XAN pmax pmax
comp=Z,15nm,0.9s
BOD Bodaibo 27.59 327 *e*P **P 10 26 49.6 -1.5**
BOD pmax pmax
comp=Z,13nm,0.9s
ULN Ulaanbaatar 27.73 303 P **P 10 26 49.7 -3.0**
ULN Ulaanbaatar 27.73 303⇓*e*P **P 10 26 52.7 0.0**
ULN pmax pmax
comp=Z,5.0nm,0.6s
H11N2 WAKE ISLAND Hy 27.75 123 T T 10 56 05.1
baz=315,slow=75,SNR=382
H11N1 WAKE ISLAND Hy 27.76 123 T T 10 56 30.1
baz=315,slow=75,SNR=566
H11N3 WAKE ISLAND Hy 27.77 123 T T 10 56 25.3
baz=315,slow=75,SNR=423
ENH Enshi 28.07 265 P **P 10 26 52.8 -3.0**
SONM Songino Array 28.16 303 P **P 10 26 56.7 +0.1**
comp=Z,4.3nm,0.8s,baz=105,slow=9.4,SNR=14
SONM LR LR 10 38 29.1
comp=Z,175nm,18.9s,baz=81,slow=37
comp=Z,4.3nm,0.8s
SONM Songino Array 28.16 303 P **P 10 26 54.0 -2.5**
H11S1 WAKE ISLAND Hy 28.48 125 T T 10 57 21.2
baz=317,slow=76,SNR=241
H11S3 WAKE ISLAND Hy 28.49 125 T T 10 57 20.2
baz=317,slow=76,SNR=305
H11S2 WAKE ISLAND Hy 28.50 125 T T 10 56 59.9
baz=317,slow=76,SNR=197
ZAK Zakamensk 30.59 308 *e*P **P 10 27 17.3 -0.7**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
LZH Lanzhou 30.70 279 *e*P P 10 27 08.6 -11
LZH pP pP 10 27 19.8 -6.5
LZH sP sP 10 27 26.0 -3.2
GTA Gaotai 33.13 287 *e*P **P 10 27 41.8 +1.3**
GTA pP sP 10 27 52.4 +1.9
GTA sP pP 10 27 55.9 +8.3
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,91nm,5.8s
GTA LR LR
comp=Z,120nm,20.0s
GTA LR LR
comp=Z,180nm,19.6s
GTA LR LR
comp=Z,150nm,18.2s
BILL Bilibino 33.45 16 *i* P **P 10 27 41.9 -0.9**
BILL *i* 10 27 52.4
BILL pmax pmax
comp=Z,9.0nm,1.1s
DAV Davao City (W) 33.83 211 LR LR 10 40 33.5
comp=Z,77nm,21.2s,baz=52,slow=35
TIXI Tiksi 34.99 353⇑*e*P **P 10 27 58.1 +2.1**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
KMI Kunming 35.72 261 ⇓P **P 10 28 06.0 +2.8**
KMI sP sP 10 28 17.8 +4.7
KMI pmax pmax
comp=Z,8.0nm,0.8s
KMI LR LR
comp=Z,150nm,11.0s
KMI LR LR
comp=Z,240nm,16.5s
KMI LR LR
comp=Z,220nm,19.8s
PZH PanZhiHua 35.85 264 P **P 10 28 06.0 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,4.8s
GOMU GeErMu 37.73 283 P **P 10 28 21.4 +1.1**
GOMU pP pP 10 28 24.5 -2.9
GOMU pmax pmax
comp=Z,5.0nm,0.5s
GOMU pmax pmax
comp=Z,61nm,4.7s
GOMU LR LR
comp=Z,91nm,13.3s
GOMU LR LR
comp=Z,86nm,15.9s
GOMU LR LR
comp=Z,120nm,17.1s
MYLDM Lahad Datu 38.77 220 P **P 10 28 29.2 +0.4**
MYLDM IAmb IAmb 10 29 06.4
comp=Z,20nm,1.1s
SIJI Sorong 39.45 198 LR LR 10 42 23.9
comp=Z,66nm,18.7s,baz=97,slow=32
DGZ Jazzator, Alta 40.74 306*c i*P **P 10 28 45.8 +0.7**
DGZ pmax pmax
comp=Z,16nm,0.9s
WMQ Urumqi 41.30 297 *e*P **P 10 28 50.8 +1.1**
WMQ pP sP 10 28 59.9 +0.2
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ LR LR
comp=Z,170nm,21.5s
ZAA0 Zalesovo Array 42.18 312 P **P 10 28 56.5 -0.1**
ZAA0 IAmb IAmb 10 29 06.8
comp=Z,9.7nm,0.9s
ZALV Zalesovo Beam 42.18 312 P **P 10 28 56.5 0.0**
comp=Z,6.8nm,0.7s,baz=90,slow=7.0,SNR=20
ZALV LR LR 10 47 06.8
comp=Z,184nm,18.9s,baz=94,slow=37
comp=Z,6.8nm,0.7s
CMAR Chiang Mai Arr 42.28 256 P **P 10 28 59.2 +1.3**
comp=Z,0.6nm,0.5s,baz=46,slow=6.4,SNR=1.9
CMAR LR LR 10 47 28.3
comp=Z,38nm,18.8s,baz=60,slow=38
comp=Z,0.6nm,0.5s
NRIK Noril'sk 43.21 335 LR LR 10 48 03.3
comp=Z,261nm,18.0s,baz=74,slow=38
NRIK Noril'sk 43.21 335⇑*e*P **P 10 29 05.4 +0.6**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
MK31 Makanchi Array 44.52 302 P **P 10 29 15.6 0.0**
MK31 IAmb IAmb 10 29 26.5
comp=Z,12nm,0.9s
MK31 Makanchi Array 44.52 302*d i*P **P 10 29 15.4 -0.2**
MKAR Makanchi Array 44.52 302 P **P 10 29 15.3 -0.3**
comp=Z,3.8nm,0.6s,baz=86,slow=9.4,SNR=25
MKAR LR LR 10 48 59.2
comp=Z,77nm,18.4s,baz=114,slow=38
comp=Z,3.8nm,0.6s
MKAR Makanchi Array 44.52 302 P **P 10 29 15.1 -0.6**
MAKZ Makanchi 44.72 302 P **P 10 29 16.5 -0.8**
MAKZ Makanchi 44.72 302 P **P 10 29 16.5 -0.8**
MAKZ pmax pmax
comp=Z,22nm,1.2s
L19K White Mountain 45.18 36 P **P 10 29 20.3 -0.4**
L19K IAmb IAmb 10 29 40.1
comp=Z,11nm,1.4s
N19K Bonanza Creek 45.30 38 P **P 10 29 21.0 -0.8**
K20K Telida 45.60 34 P **P 10 29 23.1 -0.9**
J20K Nowinta River 45.63 33 P **P 10 29 24.6 +0.5**
J20K IAmb IAmb 10 29 55.0
comp=Z,11nm,1.4s
IMAR Indian Mountai 45.95 31 P **P 10 29 27.7 +1.0**
KURK Kurchatov 46.25 308 P **P 10 29 28.8 -0.4**
KURK Kurchatov 46.25 308*c i*P **P 10 29 28.5 -0.8**
KURK pmax pmax
comp=Z,9.0nm,0.6s
H21K Melozitna Rive 46.31 31 P **P 10 29 30.6 +1.1**
KURBB Kurchatov Arra 46.32 308 P **P 10 29 29.4 -0.5**
comp=Z,10.0nm,0.5s,baz=82,slow=8.0,SNR=39
KURBB LR LR 10 49 30.1
comp=Z,177nm,20.3s,baz=53,slow=37
comp=Z,10.0nm,0.5s
KDAK Kodiak Island 46.33 42 LR LR 10 56 28.1
comp=Z,19nm,18.1s,baz=231,slow=46
KDAK Kodiak Island 46.33 42 P **P 10 29 29.7 -0.1**
KDAK Kodiak Island 46.33 42 P **P 10 29 29.7 -0.1**
KDAK pmax pmax
comp=Z,35nm,1.4s
PPLA Purkeypile 46.44 35 P **P 10 29 31.2 +0.4**
PPLA IAmb IAmb 10 30 03.7
comp=Z,7.5nm,1.1s
CAST Castle Rocks 46.50 34 P **P 10 29 31.6 +0.6**
SKT Skwentna 46.74 36 P **P 10 29 32.5 -0.5**
SKT IAmb IAmb 10 29 42.3
comp=Z,11nm,1.4s
PMG Port Moresby 46.81 173 P **P 10 29 32.7 -1.2**
PMG pmax pmax
comp=Z,20nm,1.1s
SUA Susitna One 47.12 37 P **P 10 29 35.8 -0.3**
SUA IAmb IAmb 10 30 07.1
comp=Z,14nm,1.3s
KAPI Kappang 47.16 211 LR LR 10 48 14.8
comp=Z,27nm,21.8s,baz=53,slow=35
TRF Thorofare Moun 47.31 34 P **P 10 29 38.3 +0.7**
RAMN Ramite 47.69 274 *e*P **P 10 29 40.2 -0.9**
comp=Z,4.9nm,0.5s
GUN Gumba 47.83 276 *e*P **P 10 29 42.5 +0.2**
comp=Z,7.6nm,0.3s
GHO Glory Hole Cre 47.98 37 P **P 10 29 41.9 -0.7**
GHO IAmb IAmb 10 30 13.3
comp=Z,6.9nm,1.0s
MDM Murphy Dome 48.20 32 P **P 10 29 45.7 +1.3**
MDM IAmb IAmb 10 29 55.5
comp=Z,8.8nm,1.2s

SML	**Sawmill**	**48.26**	**37**	P	**P**	**10 29 43.9**	**-0.9**
SML				IAmb	IAmb	10 29 59.4	
comp=Z,5.4nm,0.9s							
DHY	**Denali Highway**	**48.63**	**35**	P	**P**	**10 29 48.6**	**+0.8**
DHY				IAmb	IAmb	10 30 13.1	
comp=Z,12nm,1.5s							
SCM	**Sheep Creek Mo**	**48.73**	**36**	P	**P**	**10 29 49.5**	**+1.0**
SCM	**Sheep Creek Mo**	**48.73**	**36**	P	**P**	**10 29 49.5**	**+1.0**
SCM				pmax	pmax		
comp=Z,17nm,1.4s							
IL31		**48.78**	**33**	P	**P**	**10 29 50.1**	**+1.4**
ILAR	**Eielson Array**	**48.78**	**33**	P	**P**	**10 29 50.2**	**+1.5**
comp=Z,1.0nm,0.6s,baz=263,slow=6.2,SNR=16							
comp=Z,1.0nm,0.6s							
ILAR	**Eielson Array**	**48.78**	**33**	P	**P**	**10 29 49.8**	**+1.1**
TARG	**Taragay, Kyrgy**	**48.87**	**296**	P	**P**	**10 29 48.4**	**-1.8**
TARG	**Taragay, Kyrgy**	**48.87**	**296**	P	**P**	**10 29 48.4**	**-1.8**
TARG				pmax	pmax		
comp=Z,27nm,1.3s							
GLI	**Glacier Island**	**48.91**	**38**	P	**P**	**10 29 50.4**	**+0.6**
DANN	**Dangsing**	**49.31**	**277**	*e*P	**P**	**10 29 53.5**	**-0.1**
comp=Z,28nm,0.8s							
KLU	**Klutina**	**49.43**	**37**	P	**P**	**10 29 54.6**	**+0.8**
KLU				IAmb	IAmb	10 30 38.7	
comp=Z,8.2nm,1.2s							
HNR	**Honiara**	**49.46**	**157**	LR	LR	10 49 23.8	
comp=Z,2μm,20.4s,baz=33,slow=34							
PYUN	**Piuthan**	**50.02**	**278**	*e*P	**P**	**10 29 58.8**	**-0.2**
comp=Z,10nm,0.6s							
N25K	**Chitina, Valde**	**50.05**	**37**	P	**P**	**10 29 58.1**	**-0.4**
N25K				IAmb	IAmb	10 30 32.3	
comp=Z,12nm,1.5s							
MCARA	**McCarthy VSAT**	**50.82**	**37**	P	**P**	**10 30 04.8**	**+0.5**
MCARA				IAmb	IAmb	10 30 08.4	
comp=Z,13nm,1.3s							
BVAR	**Borovoye Array**	**50.84**	**312**	P	**P**	**10 30 04.2**	**-0.4**
comp=Z,1.3nm,0.7s,baz=72,slow=9.5,SNR=8.2							
BVAR				LR	LR	10 52 35.1	
comp=Z,172nm,18.7s,baz=80,slow=37							
comp=Z,1.3nm,0.7s							
BRVK	**Borovoye**	**50.89**	**312**	P	**P**	**10 30 03.6**	**-1.3**
BRVK				IAmb	IAmb	10 30 15.7	
comp=Z,5.1nm,0.9s							
BRVK	**Borovoye**	**50.89**	**312⇑**	*e*P	**P**	**10 30 04.8**	**-0.1**
BRVK				pmax	pmax		
comp=Z,4.0nm,1.3s							
K27K	**Chicken**	**50.92**	**33**	P	**P**	**10 30 07.0**	**+2.0**
K27K				IAmb	IAmb	10 30 13.7	
comp=Z,13nm,1.5s							
AAK	**Ala-Archa**	**50.93**	**298**	P	**P**	**10 30 06.6**	**+1.0**
comp=Z,1.8nm,0.5s,baz=116,slow=9.7,SNR=6.4							
AAK				LR	LR	10 53 11.4	
comp=Z,202nm,18.6s,baz=74,slow=38							
comp=Z,1.8nm,0.5s							
AAK	**Ala-Archa**	**50.93**	**298**	P	**P**	**10 30 04.5**	**-1.1**
AAK				IAmb	IAmb	10 30 17.6	
comp=Z,5.5nm,0.8s							
AAK	**Ala-Archa**	**50.93**	**298⇑**	*e*P	**P**	**10 30 04.5**	**-1.1**
AAK				pmax	pmax		
comp=Z,4.0nm,0.8s							
COEN	**Coen**	**51.11**	**179**	P	**P**	**10 30 08.2**	**+1.3**
L27K	**Beaver Creek,**	**51.15**	**35**	P	**P**	**10 30 08.3**	**+1.5**
BCAR	**Beaver Creek A**	**51.17**	**35**	P	**P**	**10 30 05.4**	**-1.6**
M27K	**Edge Creek, AK**	**51.22**	**35**	P	**P**	**10 30 06.6**	**-0.8**
BARN	**Barnard Glacie**	**51.52**	**37**	P	**P**	**10 30 09.3**	**-0.5**
BARN				IAmb	IAmb	10 30 52.3	
comp=Z,20nm,1.5s							
CTGM	**Chitina Glacie**	**51.70**	**37**	P	**P**	**10 30 13.2**	**+2.2**
CTGM				IAmb	IAmb	10 30 20.5	
comp=Z,7.3nm,1.3s							
DAWY	**Dawson**	**52.09**	**33**	P	**P**	**10 30 13.5**	**-0.3**
I29M	**Ogilvie Camp,**	**52.35**	**31**	P	**P**	**10 30 16.7**	**+1.0**
I29M				IAmb	IAmb	10 30 53.5	
comp=Z,4.5nm,0.8s							
BCPM	**Bancas Point**	**52.71**	**38**	P	**P**	**10 30 18.8**	**+0.4**
EPYK	**Eagle Plains**	**52.83**	**30**	P	**P**	**10 30 20.7**	**+1.5**
EPYK				IAmb	IAmb	10 30 35.8	
comp=Z,12nm,1.1s							
KKAR	**Karatay Array**	**53.54**	**300**	P	**P**	**10 30 23.1**	**-1.7**
KKAR	**Karatay Array**	**53.54**	**300**	P	**P**	**10 30 23.1**	**-1.7**
HYT	**Haines Junctio**	**53.56**	**37**	P	**P**	**10 30 22.3**	**-2.5**
HYT				IAmb	IAmb	10 30 55.5	
comp=Z,7.3nm,1.1s							
INK	**Inuvik**	**53.71**	**27**	P	**P**	**10 30 28.8**	**+3.2**
comp=Z,2.1nm,0.8s,baz=224,slow=9.9,SNR=3.5							
comp=Z,2.1nm,0.8s							
INK	**Inuvik**	**53.71**	**27**	P	**P**	**10 30 25.6**	**0.0**
KNRA	**Kununurra**	**54.34**	**196**	P	**P**	**10 30 31.7**	**+1.0**
GAR	**Garm**	**55.17**	**295**	P	**P**	**10 30 35.0**	**-1.9**
SVE	**Sverdlovsk**	**55.33**	**319**	*e*P	P	10 30 44.4	+6.9
SVE				pmax	pmax		
comp=Z,19nm,0.9s							
P33M	**Teslin, Yukon**	**55.96**	**37**	P	**P**	**10 30 43.6**	**+1.5**
P33M				IAmb	IAmb	10 31 07.5	
comp=Z,15nm,1.4s							
CHGR	**Chuyangaron**	**56.14**	**296**	P	**P**	**10 30 42.6**	**-1.2**
CHGR	**Chuyangaron**	**56.14**	**296**	P	**P**	**10 30 42.6**	**-1.2**
CHGR				pmax	pmax		
comp=Z,38nm,1.0s							
ARU	**Arti**	**56.54**	**319**	LR	LR	10 57 14.5	
comp=Z,206nm,18.4s,baz=60,slow=38							
ARU	**Arti**	**56.54**	**319**	P	**P**	**10 30 45.3**	**-0.9**
ARU	**Arti**	**56.54**	**319**	*ce*P	**P**	**10 30 46.0**	**-0.2**
ARU				pmax	pmax		
comp=Z,8.0nm,0.7s							
CTAO	**Charters Tower**	**57.33**	**176**	P	**P**	**10 30 52.8**	**+0.7**
CTAO	**Charters Tower**	**57.33**	**176**	P	**P**	**10 30 52.8**	**+0.7**
CTAO				pmax	pmax		
comp=Z,15nm,1.2s							
WB0	**Warramunga Arr**	**57.37**	**189**	P	**P**	**10 30 52.6**	**+0.2**
WRAB	**Tennant Creek**	**57.54**	**189**	P	**P**	**10 30 53.6**	**0.0**
WRAB	**Tennant Creek**	**57.54**	**189**	*e*P	**P**	**10 30 53.6**	**0.0**
WRAB				pmax	pmax		
comp=Z,26nm,1.2s							
WR0	**Warramunga Arr**	**57.54**	**189**	P	**P**	**10 30 53.8**	**+0.2**
WB2	**Warramunga Arr**	**57.55**	**189**	P	**P**	**10 30 53.5**	**-0.2**
WRA	**Warramunga Arr**	**57.55**	**189**	P	**P**	**10 30 53.8**	**0.0**
comp=Z,15nm,0.7s,baz=6.0,slow=7.0,SNR=167							
WRA				LR	LR	10 56 12.9	
comp=Z,36nm,18.2s,baz=26,slow=37							
comp=Z,15nm,0.7s							
WRA	**Warramunga Arr**	**57.55**	**189**	P	**P**	**10 30 52.6**	**-1.1**
ABKAR	**Akbulak array**	**58.23**	**310**	P	**P**	**10 30 57.6**	**-0.6**
ABKAR				IAmb	IAmb	10 31 08.8	
comp=Z,14nm,1.4s							
AKTO	**Aktyubinsk**	**58.94**	**312**	LR	LR	10 57 24.8	
comp=Z,79nm,21.1s,baz=64,slow=37							
SPITS	**Spitsbergen Ar**	**60.28**	**349**	LR	LR	10 58 41.3	
comp=Z,84nm,21.0s,baz=354,slow=38							
KIRV	**Kirov**	**60.37**	**323**	LR	LR	11 00 03.5	
comp=Z,75nm,18.1s,baz=64,slow=39							
KIRV	**Kirov**	**60.37**	**323**	*de*P	**P**	**10 31 13.3**	**+0.5**
PRGR	**Permogore**	**60.83**	**327**	*e*P	**P**	**10 31 19.9**	**+4.0**
PRGR				pmax	pmax		
comp=Z,4.0nm,0.6s							
AS31	**Alice Springs**	**61.28**	**189**	P	**P**	**10 31 20.4**	**+1.0**
AS31				IAmb	IAmb	10 31 21.2	
comp=Z,4.0nm,0.8s							
ASAR	**Alice Springs**	**61.28**	**189**	P	**P**	**10 31 19.9**	**+0.5**
comp=Z,13nm,0.7s,baz=14,slow=6.8,SNR=156							
ASAR				LR	LR	10 58 27.1	
comp=Z,31nm,19.4s,baz=7.0,slow=37							
comp=Z,13nm,0.7s							
MBWA	**Marble Bar**	**62.03**	**204**	P	**P**	**10 31 24.1**	**-0.3**
RES	**Resolute Bay**	**62.04**	**15**	P	**P**	**10 31 25.1**	**+1.1**
RES				pmax	pmax		
comp=Z,6.0nm,1.0s							
PSA00	**Pilbara Seismi**	**62.38**	**204**	P	**P**	**10 31 26.8**	**0.0**
PSA00				IAmb	IAmb	10 31 27.7	
comp=Z,3.8nm,0.8s							
YKA	**Yellowknife Ar**	**63.11**	**30**	LR	LR	11 00 26.2	
comp=Z,37nm,19.1s,baz=328,slow=37							
DZM	**Mont Dzumac**	**63.40**	**155**	*e*LR	LR	10 50 25.4	
comp=Z,220nm,21.6s							
DZM	**Mont Dzumac**	**63.40**	**155**	LR	LR	10 56 16.1	
comp=Z,140nm,21.4s,baz=17,slow=33							
KLMR	**Klimovskoe**	**63.80**	**328**	*e*P	**P**	**10 31 33.5**	**-2.4**
KLMR				*e*		10 34 00.6	
KLMR				pmax	pmax		
comp=Z,14nm,1.6s							
KLMR	**Klimovskoe**	**63.80**	**328**	*e*P	**P**	**10 31 33.5**	**-2.4**
KLMR				AMP		10 31 44.8	
comp=Z,14nm,1.6s							
KLMR				*e*PP	**PP**	**10 34 00.6**	**+4.8**
ARCES	**ARCESS Array B**	**63.88**	**340**	P	**P**	**10 31 36.7**	**+0.4**
comp=Z,2.2nm,0.8s,baz=30,slow=8.4,SNR=4.0							
ARCES				LR	LR	11 04 24.5	
comp=Z,99nm,18.0s,baz=28,slow=41							
comp=Z,2.2nm,0.8s							
BELG	**Belogornoye**	**64.00**	**317**	LR	LR	11 00 43.4	
comp=Z,42nm,21.6s,baz=173,slow=37							
GEYT	**Alibeck**	**64.27**	**299**	P	**P**	**10 31 39.8**	**+0.4**
comp=Z,1.0nm,0.4s,baz=108,slow=4.7,SNR=1.7							
comp=Z,1.0nm,0.4s							
MSVF	**Nonsavu**	**64.37**	**142**	LR	LR	10 55 22.4	
comp=Z,50nm,21.4s,baz=326,slow=32							
SGF	**Sodankyl**	**64.87**	**337**	P	**P**	**10 31 42.6**	**-0.1**
SGF				pmax	pmax		
comp=Z,8.0nm,1.8s							
OUL	**Oulu**	**66.53**	**336**	P	**P**	**10 31 53.5**	**0.0**
OUL				pmax	pmax		
comp=Z,8.0nm,1.5s							
AFI	**Afiamalu**	**66.84**	**131**	LR	LR	10 57 19.2	
comp=Z,27nm,20.9s,baz=14,slow=32							
OBN	**Obninsk**	**68.21**	**323**	*e*P	**P**	**10 32 00.9**	**-3.3**
OBN				pmax	pmax		
comp=Z,5.0nm,0.7s							
FIA1	**FINESS Array S**	**68.80**	**332**	P	**P**	**10 32 07.9**	**0.0**
FINES	**FINESS Array B**	**68.80**	**332**	P	**P**	**10 32 08.1**	**+0.2**
comp=Z,6.0nm,0.7s,baz=66,slow=6.5,SNR=15							
FINES				LR	LR	11 03 21.8	
comp=Z,62nm,21.4s,baz=27,slow=37							
comp=Z,6.0nm,0.7s							
VORR	**Voronezh**	**68.83**	**319**	*e*P	**P**	**10 32 09.4**	**+1.2**
VORR				pmax	pmax		
comp=Z,40nm,0.4s							
STKA	**Stephens Creek**	**68.95**	**181**	P	**P**	**10 32 10.0**	**+1.0**
comp=Z,4.0nm,0.7s,baz=321,slow=6.7,SNR=11							
comp=Z,4.0nm,0.7s							
STKA	**Stephens Creek**	**68.95**	**181**	P	**P**	**10 32 10.1**	**+1.1**
STKA	**Stephens Creek**	**68.95**	**181⇓**	*e*P	**P**	**10 32 09.7**	**+0.7**
FORT	**Forrest**	**69.15**	**193**	P	**P**	**10 32 11.3**	**+1.1**
JMIC	**Jan Mayen**	**69.88**	**350**	LR	LR	11 06 33.0	
comp=Z,30nm,18.0s,baz=224,slow=39							
KBZ	**Khabaz**	**71.19**	**311**	LR	LR	11 06 19.3	
comp=Z,72nm,18.2s,baz=64,slow=38							
KBZ	**Khabaz**	**71.19**	**311⇑**	*e*P	**P**	**10 32 21.7**	**-1.1**
KBZ				pmax	pmax		
comp=Z,11nm,1.5s							
KIV	**Kislovodsk**	**71.19**	**311**	*e*P	**P**	**10 32 21.2**	**-1.8**
KIV				pmax	pmax		
comp=Z,8.0nm,1.1s							
KIV				MLR	MLR		
comp=Z,45nm,18.0s							
WSAR	**Wadi Sarin**	**71.45**	**285**	LR	LR	11 08 27.1	
comp=Z,38nm,18.7s,baz=118,slow=40							
GNI	**Garni**	**72.04**	**307**	LR	LR	11 06 00.5	
comp=Z,47nm,21.1s,baz=74,slow=38							
NACGM	**Naroch**	**72.79**	**327**	*e*P	P	10 32 42.5	+10
baz=47							
KVN	**Kaiserville**	**73.95**	**53**	P	**P**	**10 32 39.5**	**-0.2**
KVN				IAmb	IAmb	10 32 42.8	
comp=Z,5.5nm,1.1s							
KVN	**Kaiserville**	**73.95**	**53**	P	**P**	**10 32 39.5**	**-0.2**
KVN				pmax	pmax		
comp=Z,6.0nm,1.1s							
BOZ	**Bozeman (W)**	**73.96**	**45**	P	**P**	**10 32 39.2**	**-0.3**
BOZ				IAmb	IAmb	10 32 42.4	
comp=Z,4.9nm,0.8s							
BOZ	**Bozeman (W)**	**73.96**	**45**	P	**P**	**10 32 39.2**	**-0.3**
BOZ				pmax	pmax		
comp=Z,5.0nm,0.9s							
HFS	**Hagfors**	**74.02**	**336**	LR	LR	11 08 02.5	
comp=Z,231nm,19.2s,baz=39,slow=38							
NB2	**NORSAR Subarra**	**74.10**	**338**	P	**P**	**10 32 40.1**	**+0.2**
comp=Z,4.7nm,1.0s,baz=38,slow=6.2							
NOA	**NORSAR Array B**	**74.10**	**338**	P	**P**	**10 32 39.9**	**0.0**
comp=Z,1.0nm,0.5s,baz=39,slow=6.0,SNR=5.4							
NOA				LR	LR	11 07 44.8	
comp=Z,127nm,21.8s,baz=40,slow=38							
comp=Z,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**74.18**	**54**	P	**P**	**10 32 43.6**	**+2.6**
comp=Z,2.4nm,0.7s,baz=283,slow=5.5,SNR=14							
comp=Z,2.4nm,0.7s							
NVAR	**Mina Array Bea**	**74.18**	**54**	P	**P**	**10 32 42.4**	**+1.3**
AKASG	**Malin Array Be**	**74.42**	**323**	P	**P**	**10 32 41.5**	**-0.3**
comp=Z,0.8nm,0.4s,baz=46,slow=6.0,SNR=9.2							
AKASG				LR	LR	11 07 25.0	
comp=Z,55nm,20.1s,baz=57,slow=37							
comp=Z,0.8nm,0.4s							
GCMT	**Greycliff**	**74.93**	**44**	P	**P**	**10 32 45.5**	**+0.3**
H17A	**Grant Village**	**75.29**	**45**	P	**P**	**10 32 48.3**	**+0.9**
H17A				IAmb	IAmb	10 32 52.2	
comp=Z,6.5nm,0.8s							
R11A	**Troy Canyon, C**	**75.96**	**52**	P	**P**	**10 32 52.9**	**+1.6**
RAO	**Raoul Island**	**76.08**	**145**	LR	LR	11 02 44.7	
comp=Z,56nm,19.0s,baz=52,slow=33							
TPNV	**Topopah Spring**	**76.37**	**54**	P	**P**	**10 32 54.1**	**+0.5**
TPNV				IAmb	IAmb	10 32 56.5	
comp=Z,5.5nm,0.8s							
TPNV	**Topopah Spring**	**76.37**	**54**	P	**P**	**10 32 54.1**	**+0.5**
TPNV				pmax	pmax		
comp=Z,6.0nm,0.8s							
GWY	**Greenwater Val**	**76.55**	**55**	P	**P**	**10 32 56.6**	**+2.0**
GWY				IAmb	IAmb	10 32 57.4	
comp=Z,5.0nm,0.7s							
DUG	**Dugway, Tooele**	**76.56**	**50**	P	**P**	**10 32 56.2**	**+1.7**
DUG				IAmb	IAmb	10 32 57.7	
comp=Z,3.7nm,0.6s							
DUG	**Dugway, Tooele**	**76.56**	**50**	P	**P**	**10 32 56.3**	**+1.7**
DUG				pmax	pmax		
comp=Z,4.0nm,0.6s							
PRN	**Pahroc Range**	**76.86**	**53**	P	**P**	**10 32 58.0**	**+1.6**
PRN				IAmb	IAmb	10 32 59.5	
comp=Z,4.4nm,1.0s							
BW06	**Boulder Array**	**76.88**	**46**	P	**P**	**10 32 58.2**	**+1.7**
BW06				IAmb	IAmb	10 32 58.8	
comp=Z,3.1nm,0.7s							
PD31	**Pinedale Array**	**76.88**	**46**	P	**P**	**10 32 57.9**	**+1.5**
PDAR	**Pinedale Array**	**76.88**	**46**	P	**P**	**10 32 58.0**	**+1.5**
comp=Z,2.3nm,0.6s,baz=274,slow=2.1,SNR=30							
comp=Z,2.3nm,0.6s							
PDAR	**Pinedale Array**	**76.88**	**46**	P	**P**	**10 32 57.5**	**+1.0**
PSUT	**Pine Spring**	**76.93**	**51**	P	**P**	**10 32 58.6**	**+1.8**
SHPR	**Sheep Range**	**77.34**	**54**	P	**P**	**10 32 59.6**	**+0.5**
MPU	**Maple Canyon**	**77.38**	**49**	P	**P**	**10 33 00.3**	**+1.0**
MPU				IAmb	IAmb	10 33 02.4	
comp=Z,3.7nm,0.7s							
ELS	**Elsinore Mount**	**77.56**	**57**	P	**P**	**10 33 02.1**	**+1.8**
MSU	**Marysvale**	**77.98**	**51**	P	**P**	**10 33 02.2**	**-0.5**
MSU	**Marysvale**	**77.98**	**51**	P	**P**	**10 33 02.2**	**-0.5**
LCMT	**Little Creek M**	**78.25**	**52**	P	**P**	**10 33 02.8**	**-1.3**
BURAR	**Bucovina Array**	**78.44**	**322**	P	**P**	**10 33 04.6**	**-0.3**
P18A	**Preston Nutter**	**78.46**	**49**	P	**P**	**10 33 06.2**	**+0.7**
KNB	**Kanab**	**78.51**	**52**	P	**P**	**10 33 07.8**	**+2.2**
KNB				IAmb	IAmb	10 33 09.1	
comp=Z,6.7nm,1.2s							
KNB	**Kanab**	**78.51**	**52**	P	**P**	**10 33 07.8**	**+2.2**
KNB				pmax	pmax		
comp=Z,7.0nm,1.2s							
DGAR	**Diego Garcia**	**78.79**	**252**	*ce*P	**P**	**10 33 04.8**	**-2.3**
DGAR				pmax	pmax		
comp=Z,198nm,1.7s							
BRTR	**Keskin Array B**	**79.12**	**312**	P	**P**	**10 33 10.8**	**+2.0**
comp=Z,0.7nm,0.6s,baz=53,slow=7.4,SNR=1.8							
BRTR				LR	LR	11 11 58.0	
comp=Z,53nm,18.6s,baz=39,slow=39							
comp=Z,0.7nm,0.6s							
U15A	**North Rim**	**79.21**	**52**	P	**P**	**10 33 08.8**	**-0.8**
MLR	**Muntele Rosu**	**79.54**	**320**	LR	LR	11 10 35.3	
comp=Z,143nm,21.0s,baz=50,slow=37							
PV21	**Cone Mtn., Par**	**79.90**	**49**	P	**P**	**10 33 15.4**	**+2.2**
PV21				IAmb	IAmb	10 33 16.1	
comp=Z,7.1nm,0.7s							
PV14	**Lion Creek, Pa**	**79.99**	**49**	P	**P**	**10 33 15.2**	**+1.5**
PV14				IAmb	IAmb	10 33 16.7	
comp=Z,12nm,1.1s							
WUAZ	**Wupatki**	**80.36**	**53**	P	**P**	**10 33 14.9**	**-0.8**
WUAZ				IAmb	IAmb	10 33 18.9	
comp=Z,4.6nm,0.8s							
MORC	**Moravsky Berou**	**80.42**	**327**	P	**P**	**10 33 15.0**	**-0.6**
MORC				IAmb	IAmb	10 33 27.1	
comp=Z,7.5nm,1.2s							
MORC	**Moravsky Berou**	**80.42**	**327**	P	**P**	**10 33 15.0**	**-0.6**
MORC				pmax	pmax		
comp=Z,8.0nm,1.2s							
MVCO	**Mesa Verde**	**81.06**	**50**	P	**P**	**10 33 18.8**	**-0.7**
CLL	**Collm**	**81.11**	**331**	P	**P**	**10 33 18.4**	**-0.7**
CLL				IAmb	IAmb	10 33 33.2	
comp=Z,5.6nm,0.8s							
CLL	**Collm**	**81.11**	**331**	*e*P	**P**	**10 33 19.0**	**-0.1**
CLL				*e*		10 33 28.0	
CLL				pmax	pmax		
comp=Z,6.0nm,1.0s							
CLL	**Collm**	**81.11**	**331**	*e*P	**P**	**10 33 19.0**	**-0.1**
comp=Z,6.0nm,1.0s							
CLL				*ep*P	**pP**	**10 33 28.0**	**+1.2**
VRAC	**Vranov**	**81.18**	**327**	LR	LR	11 13 19.5	
comp=Z,90nm,18.2s,baz=50,slow=39							
PRU	**Pruhonice**	**81.52**	**329**	*e*P	P	10 33 30.9	+10
URZ	**Urewera**	**81.87**	**153**	LR	LR	11 04 50.6	
comp=Z,70nm,21.5s,baz=24,slow=32							
MMAI	**Mont Meron Ar**	**82.32**	**306**	LR	LR	11 12 32.7	
comp=Z,63nm,21.7s,baz=192,slow=38							
KHC	**Kasperske Hory**	**82.58**	**329**	*e*P	**P**	**10 33 28.0**	**+1.0**
KHC	**Kasperske Hory**	**82.58**	**329**	*e*P	**P**	**10 33 28.0**	**+1.0**
GERES	**GERESS Array B**	**82.75**	**329**	P	**P**	**10 33 28.9**	**+1.0**
comp=Z,0.8nm,0.6s,baz=19,slow=4.5,SNR=4.3							
comp=Z,0.8nm,0.6s							
GERES	**GERESS Array B**	**82.75**	**329**	P	**P**	**10 33 26.1**	**-1.9**
EKA	**Eskdalemuir Ar**	**83.00**	**341**	LR	LR	11 14 30.4	
comp=Z,74nm,18.5s,baz=5.5,slow=39							
ECSD	**EROS Data Cent**	**83.17**	**39**	P	**P**	**10 33 31.5**	**+1.4**
ECSD				IAmb	IAmb	10 33 31.8	
comp=Z,3.3nm,0.8s							
T25A	**Trinidad**	**83.55**	**48**	P	**P**	**10 33 34.4**	**+1.9**
T25A				IAmb	IAmb	10 33 35.3	
comp=Z,3.9nm,0.7s							
ANMO	**Albuquerque**	**83.79**	**50**	P	**P**	**10 33 35.5**	**+1.7**
ANMO				IAmb	IAmb	10 33 37.6	
comp=Z,3.5nm,1.1s							
ANMO	**Albuquerque**	**83.79**	**50**	P	**P**	**10 33 35.5**	**+1.7**
ANMO				pmax	pmax		
comp=Z,3.0nm,1.1s							
PPT	**Papeete**	**84.17**	**117**	LR	LR	11 06 16.1	
comp=Z,71nm,19.9s,baz=199,slow=32							
PPT2	**Papeete2**	**84.19**	**117**	*e*LR	LR	11 00 03.1	
comp=Z,69nm,21.8s							
EIL	**Elat**	**84.76**	**303**	LR	LR	11 14 54.4	
comp=Z,53nm,19.3s,baz=56,slow=38							
TAOE	**Nuku Hiva Isla**	**85.58**	**105**	*e*LR	LR	11 00 41.8	
comp=Z,84nm,23.4s							
DAVOX	**Davos/Dischmat**	**85.96**	**329**	LR	LR	11 15 37.2	
comp=Z,122nm,18.6s,baz=78,slow=38							
TBI	**Tubuai**	**88.12**	**121**	*e*LR	LR	11 01 51.9	
comp=Z,68nm,27.0s							
TBI	**Tubuai**	**88.12**	**121**	*e*T	T	12 11 14.2	
comp=Z,10nm,0.3s							
TXAR	**Lajitas Array**	**89.32**	**53**	P	**P**	**10 34 02.1**	**+1.4**
comp=Z,1.0nm,0.7s,baz=303,slow=3.0,SNR=13							
comp=Z,1.0nm,0.7s							
ESDC	**Sonseca Array**	**97.25**	**334**	LR	LR	11 23 12.8	
comp=Z,123nm,19.4s,baz=350,slow=38							
TORD	**Torodi Ar. Bea**	**117.55**	**316**	PKP	**PKPdf**	**10 39 49.6**	**-0.9**
comp=Z,0.4nm,0.8s,baz=0.0,slow=1.4,SNR=2.2							
CDITO	**Canoas**	**117.73**	**52**		**PKPdf**	**10 39 49.1**	**-1.7**
LPAZ	**La Paz**	**145.88**	**60**	PKPbc	**PKPbc**	**10 40 45.4**	**+0.8**
comp=Z,6.0nm,0.8s,baz=353,slow=3.1,SNR=15							
H03N2	**Juan Fernandez**	**146.35**	**96**	T	T	13 24 59.0	
baz=292,slow=76,SNR=9.1							
H03N3	**Juan Fernandez**	**146.37**	**96**	T	T	13 24 35.8	
baz=292,slow=76,SNR=8.2							
H03N1	**Juan Fernandez**	**146.37**	**96**	T	T	13 24 59.2	
baz=292,slow=76,SNR=7.9							
PLCA	**Paso Flores**	**154.36**	**108**	PKPbc	**PKiKP**	**10 41 05.3**	**+1.1**
comp=Z,0.9nm,0.7s,baz=260,slow=1.6,SNR=5.1							
PLCA				PKPab	**PKPab**	**10 41 20.5**	**+2.0**
comp=Z,2.3nm,0.8s,baz=321,slow=2.0,SNR=4.9							

*NEIC **14** 10:48:15.3±0.4, 15°.38S±0°.04×172°.4W±0°.2, h10km±2km, mb4.4/17, Error ellipse: s-maj=25.5km s-min=6.0km az=92.0*

IDC 14 10:49:56.9±3.6, 17°.14S×178°.96W, h596km±18km, mb3.4/3, mbtmp4.2/5, Error ellipse: s-maj=115.1km s-min=59.2km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.92**	**258**	P	P	10 51 15.2	-0.1
4.2nm,0.5s,baz=249,slow=23,SNR=10							
MARNC	**Mare, Loyalty**	**13.02**	**249**	P	P	10 52 43.2	-2.7
OUENC	**Ouen Island, N**	**14.36**	**246**	P	P	10 52 56.3	-3.0
OUENC				IAmb	IAmb	10 53 04.0	
comp=Z,28nm,1.3s							
DZM	**Mont Dzumac**	**14.60**	**248**	P	P	10 53 03.0	+1.3
comp=Z,2.7nm,0.6s,baz=246,slow=23,SNR=6.8							
ARMA	**Armidale**	**29.88**	**238**	P	P	10 55 16.0	-2.1
CTAO	**Charters Tower**	**33.06**	**259**	P	P	10 55 46.2	+1.1
CTAO				IAmb	IAmb	10 56 02.4	
comp=Z,13nm,

VAO 14 10:58:11.3±0.3, 37°.51S×73°.46W, h21km, mb4.7
NEIC 14 10:58:11.7±1.5, 37°.54S±0°.04×73°.72W±0°.09, h35km±2km, mb4.6/34, Mwr4.4/26, Mwr4.8(GUC), Error ellipse: s-maj=11.7km s-min=6.4km az=84.0
NEIC 14 10:58:12.6, 37°.54S×73°.53W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mr=2.14; Mθθ=1.19; Mφφ=0.96; Mrθ=0.70; Mrφ=0.19; Mθφ=-5.29; Fault plane solution: M0=5.66000×10^15 NP1:φs=171.34000°, δ=81.74000°, λ=92.34000°. NP2:φs=335.45000°, δ=8.58000°, λ=74.28000°. Principal axes: T 6.1348, Plg=53.0000°, Azm=84.0000°; N -1.1291, Plg=2.0000°, Azm=351.0000°; P -5.0057, Plg=37.0000°, Azm=259.0000°;

ISC 14 10:58:10.8±0.4, 37°.50S±0°.04×73°.64W±0°.05, h23km, n200, σ1§12/182, mb4.5/20, MS4.0/27, 6C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.78**	**33**	*eP*	**Pn**	**10 58 26.9**	**+0.6**
CCSP				*i* S	**Sn**	**10 58 38.5**	**+1.3**
BI05	**Punta Hualpn**	**0.83**	**26**	Pn	**Pn**	**10 58 27.6**	**+0.6**
BI05				Sn	**Sn**	**10 58 41.1**	**+2.6**
BI05	**Punta Hualpn**	**0.83**	**26**	⇑*iP*	**Pn**	**10 58 27.6**	**+0.6**
BI05				*i* S	**Sn**	**10 58 39.7**	**+1.1**
BI05				IAML		10 58 42.9	
	comp=E,35μm,0.5s						
LR02	**Universidad Au**	**2.33**	**173**	IAML		10 59 28.5	
	comp=E,26μm,0.4s						
ML02	**Panimavida**	**2.48**	**47**	Pn	**Pn**	**10 58 50.8**	**+1.0**
ML02	**Panimavida**	**2.48**	**47**	*eP*	**Pn**	**10 58 50.8**	**+1.0**
ML02				*i* S	**Sb**	**10 59 21.6**	**-3.3**
ML02				IAML		10 59 34.5	
	comp=N,8μm,0.7s						
BO03	**Pichilemu**	**3.29**	**25**	*eP*	**Pn**	**10 59 01.0**	**+0.2**
BO03				IAML		11 00 03.1	
	comp=N,1μm,0.8s						
LL04	**Puerto Octay**	**3.54**	**165**	Pn	**Pn**	**10 59 02.9**	**-1.5**
LL04	**Puerto Octay**	**3.54**	**165**	*eP*	**Pn**	**10 59 03.4**	**-0.9**
LL04				*i* S	**Sn**	**10 59 39.8**	**-5.7**
BO02	**Sierra Bellavi**	**3.55**	**41**		**Pn**	**10 59 05.2**	**+0.6**
BO02	**Sierra Bellavi**	**3.55**	**41**	*eP*	**Pn**	**10 59 05.0**	**+0.5**
BO02				*i* S	**Sn**	**10 59 47.5**	**+1.6**
BO01	**Tunca**	**3.73**	**34**	Pn	**Pn**	**10 59 06.7**	**-0.2**
BO01	**Tunca**	**3.73**	**34**	*eP*	**Pn**	**10 59 07.6**	**+0.7**
LL03	**Petrohue**	**3.76**	**166**		**Pn**	**10 59 06.8**	**-0.6**
LL03	**Petrohue**	**3.76**	**166**	*eP*	**Pn**	**10 59 06.8**	**-0.6**
LL05	**Los Muermos**	**3.91**	**178**		**Pn**	**10 59 08.1**	**-1.2**
LL05	**Los Muermos**	**3.91**	**178**	*eP*	**Pn**	**10 59 08.1**	**-1.2**
PLCA	**Paso Flores**	**4.02**	**144**	Pn	**Pn**	**10 59 11.4**	**+0.3**
	comp=N,3.3nm,0.3s,baz=319,slow=12,SNR=130						
PLCA				Sn	**Sn**	**11 00 02.2**	**+4.7**
	comp=N,12nm,0.3s,baz=283,slow=8.9,SNR=3.5						
PLCA				Lg	Lg	11 00 14.7	
	comp=N,22nm,0.3s,baz=221,slow=24,SNR=5.8						
PLCA				LR	LR	11 01 01.5	
	comp=N,488nm,20.2s,baz=278,slow=43						
	comp=N,12nm,0.3s						
PLCA	**Paso Flores**	**4.02**	**144**	Pn	**Pn**	**10 59 11.1**	**0.0**
MT01	**Popeta**	**4.11**	**29**	Pn	**Pn**	**10 59 12.8**	**+0.6**
MT01	**Popeta**	**4.11**	**29**	*eP*	**Pn**	**10 59 12.5**	**+0.2**
VA05	**Santo Domingo**	**4.17**	**24**		**Pn**	**10 59 13.2**	**+0.2**
VA05	**Santo Domingo**	**4.17**	**24**	*eP*	**Pn**	**10 59 12.9**	**-0.1**
BO04	**La Punta**	**4.28**	**36**		**Pn**	**10 59 14.9**	**+0.3**
MT09	**Talagante**	**4.29**	**31**		**Pn**	**10 59 15.4**	**+0.6**
MT09	**Talagante**	**4.29**	**31**	⇑*iP*	**Pn**	**10 59 15.6**	**+0.8**
LMEL	**Las Melosas**	**4.59**	**39**		**Pn**	**10 59 20.2**	**+1.3**
LMEL	**Las Melosas**	**4.59**	**39**	*eP*	**Pn**	**10 59 20.2**	**+1.3**
MT02	**Curacav**	**4.69**	**26**		**Pn**	**10 59 19.6**	**-0.6**
MT02	**Curacav**	**4.69**	**26**	⇑*iP*	**Pn**	**10 59 20.3**	**0.0**
MT02				*i* S	**Sn**	**11 00 13.9**	**0.0**
MT05	**Renca**	**4.73**	**31**	Pn	**Pn**	**10 59 21.4**	**+0.6**
MT05	**Renca**	**4.73**	**31**	*eP*	**Pn**	**10 59 21.4**	**+0.6**
MT03	**Universidad Ad**	**4.74**	**33**		**Pn**	**10 59 21.5**	**+0.5**
VA01	**Torpederas**	**4.75**	**21**		**Pn**	**10 59 20.8**	**-0.2**
PEL	**Peldehue**	**4.97**	**30**	⇑*iP*	**Pn**	**10 59 24.4**	**+0.3**
PEL				*i* S	**Sn**	**11 00 19.3**	**-1.5**
ROC1	**El Roble**	**4.99**	**26**		**Pn**	**10 59 25.1**	**+0.5**
ROCH	**El Roble**	**5.00**	**26**	⇑*iP*	**Pn**	**10 59 24.9**	**+0.3**
ROCH				⇓*iP*	Pb	10 59 25.1	-13
VA06	**Catapilco**	**5.28**	**22**		**Pn**	**10 59 28.1**	**-0.2**
VA06	**Catapilco**	**5.28**	**22**	⇑*eP*	**Pn**	**10 59 28.0**	**-0.2**
VA06				*i* S	**Sn**	**11 00 27.5**	**-1.0**
VA03	**San Esteban**	**5.36**	**29**		**Pn**	**10 59 29.4**	**0.0**
H03S1	**Juan Fernandez**	**5.63**	**309**	Pn	**Pn**	**10 59 32.9**	**+0.1**
H03S1				T	T	11 05 15.2	
	baz=130,SNR=3720						
H03S3	**Juan Fernandez**	**5.64**	**309**	Pn	**Pn**	**10 59 32.9**	**-0.1**
H03S3				T	T	11 05 16.3	
	baz=130,SNR=2741						
H03S2	**Juan Fernandez**	**5.65**	**309**	Pn	**Pn**	**10 59 32.8**	**-0.2**
H03S2				T	T	11 05 14.9	
	baz=130,SNR=3257						
VA04	**Juan Ferndez**	**5.72**	**311**	Pn	**Pn**	**10 59 32.5**	**-1.8**
LL02	**Futaleuf**	**5.85**	**167**	Pn	**Pn**	**10 59 35.5**	**-0.5**
H03N3	**Juan Fernandez**	**5.91**	**311**	Pn	**Pn**	**10 59 37.1**	**+0.4**
	baz=147,slow=25						
H03N3				T	T	11 05 36.5	
	baz=123,slow=77,SNR=65						
H03N1	**Juan Fernandez**	**5.91**	**312**	Pn	**Pn**	**10 59 36.6**	**0.0**
	baz=147,slow=25						
H03N1				T	T	11 05 41.5	
	baz=123,slow=77,SNR=44						
H03N2	**Juan Fernandez**	**5.92**	**312**	Pn	**Pn**	**10 59 37.1**	**+0.3**
	baz=147,slow=25						
H03N2				T	T	11 05 35.1	
	baz=123,slow=77,SNR=43						
CO02	**Combarbal**	**6.64**	**20**	Pn	**Pn**	**10 59 47.1**	**-0.1**
AY01	**Puyuhuapi**	**6.96**	**174**	Pn	**Pn**	**10 59 50.1**	**-1.1**
CO06	**Fray Jorge**	**7.00**	**14**		**Pn**	**10 59 51.2**	**-0.8**
CO03	**El Pedregal**	**7.08**	**21**	Pn	**Pn**	**10 59 53.4**	**+0.4**
ZON	**Zonda**	**7.21**	**36**		**Pn**	**10 59 55.5**	**+0.6**
CO05	**La Serena**	**7.82**	**15**		**Pn**	**11 00 03.7**	**+0.6**
CO01	**Juntas del Tor**	**8.06**	**22**		**Pn**	**11 00 06.8**	**+0.2**
LCO	**Las Campanas**	**8.81**	**17**	Pn	**Pn**	**11 00 16.7**	**-0.3**
AC05	**El Transito**	**9.08**	**19**	Pn	**Pn**	**11 00 20.3**	**-0.4**
TRQA	**Tornquist**	**9.25**	**97**		**Pn**	**11 00 21.1**	**-1.6**
AC04	**Llanos de Chal**	**9.51**	**14**	Pn	**Pn**	**11 00 25.6**	**-0.7**
AC06	**Mina Casimiro**	**10.48**	**16**		**Pn**	**11 00 37.9**	**-1.8**
AC02	**Maricunga**	**11.29**	**21**		**Pn**	**11 00 51.0**	**-0.2**
AC01	**Pan de Azucar**	**11.60**	**14**	Pn	**Pn**	**11 00 53.3**	**-1.8**
PB15	**IPOC Station P**	**14.69**	**15**	Pn	**Pn**	**11 01 38.5**	**+1.2**
LVC	**Limon Verde**	**15.39**	**17**	Pn	**Pn**	**11 01 46.6**	**-0.2**
	comp=N,0.4nm,0.3s,baz=175,slow=2.0,SNR=3.0						
LVC				LR	LR	11 07 35.3	
	comp=N,183nm,20.2s,baz=194,slow=37						
	comp=N,2.6nm,0.7s						
LVC	**Limon Verde**	**15.39**	**17**	Pn	**Pn**	**11 01 45.4**	**-1.4**
LVC	**Limon Verde**	**15.39**	**17**	*eP*	**Pn**	**11 01 46.1**	**-0.7**
PB03	**IPOC Station P**	**15.76**	**13**	Pn	**Pn**	**11 01 51.1**	**-0.3**
PB07	**IPOC Station P**	**16.05**	**13**	Pn	**Pn**	**11 01 54.8**	**-0.4**
PB09	**IPOC Station P**	**16.10**	**15**	Pn	**Pn**	**11 01 55.9**	**0.0**
PB09				IAmb	IAmb	11 02 03.9	
	comp=Z,43nm,1.2s						
PB02	**IPOC Station P**	**16.44**	**12**	Pn	**Pn**	**11 02 00.2**	**+0.1**
PB02				IAmb	IAmb	11 02 06.6	
	comp=Z,39nm,0.8s						
RODS	**Rosario do Sul**	**16.87**	**70**	*eP*	**Pn**	**11 02 05.2**	**-0.2**
PATCX	**Punta Patache**	**16.89**	**11**	Pn	**Pn**	**11 02 03.8**	**-2.0**
PATCX				IAmb	IAmb	11 02 11.3	
	comp=Z,30nm,0.9s						
PLTB	**Pedras Altas**	**17.44**	**77**		**Pn**	**11 02 11.0**	**-1.6**
PLTB	**Pedras Altas**	**17.44**	**77**	*eP*	**Pn**	**11 02 10.9**	**-1.6**
AZCA	**Azaras, Argent**	**17.54**	**63**	*eP*	**Pn**	**11 02 13.4**	**-0.4**
UNIS	**Unistalda (Bra**	**17.63**	**67**	*eP*	**Pn**	**11 02 13.6**	**-1.3**
CPUP	**Villa Florida**	**17.74**	**56**	P	**Pn**	**11 02 15.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=223,slow=8.1,SNR=6.4						
CPUP				LR	LR	11 09 41.7	
	comp=Z,433nm,20.1s,baz=233,slow=39						
	comp=Z,3.2nm,0.7s						
CPUP	**Villa Florida**	**17.74**	**56**		**Pn**	**11 02 16.2**	**0.0**
EFI	**East Falkland**	**17.94**	**147**		**Pn**	**11 02 18.4**	**-0.1**
CPSB	**Cacapava Do Su**	**18.17**	**73**	*eP*	**Pn**	**11 02 20.0**	**-1.6**
PB12	**IPOC Station P**	**19.04**	**10**	P	**P**	**11 02 29.5**	**-1.8**
CRSM	**Crissiumal (Br**	**19.27**	**65**	*eP*	**P**	**11 02 32.9**	**-0.9**
ALGR	**Alto Alegre (B**	**19.28**	**69**	*eP*	**P**	**11 02 32.5**	**-1.5**
PB16	**IPOC Station P**	**19.43**	**12**	P	**P**	**11 02 35.1**	**-1.0**
PB16				IAmb	IAmb	11 02 47.0	
	comp=Z,41nm,1.3s						
CNLB	**Canela**	**20.66**	**73**	*eP*	**P**	**11 02 47.6**	**-1.4**
ITAB	**Concordia**	**20.80**	**67**	P	**P**	**11 02 50.3**	**-0.2**
ITAB	**Concordia**	**20.80**	**67**	*eP*	**P**	**11 02 50.7**	**+0.2**
FRBT	**Francisco Belt**	**20.88**	**63**	*eP*	**P**	**11 02 51.1**	**-0.3**
LPAZ	**La Paz**	**21.68**	**14**	P	**P**	**11 03 00.8**	**+0.2**
	comp=Z,5.4nm,1.0s,baz=204,slow=7.1,SNR=8.4						
	comp=Z,5.4nm,1.0s						
LPAZ	**La Paz**	**21.68**	**14**	P	**P**	**11 02 59.6**	**-1.0**
ANTJ	**Antonio Joao (**	**21.69**	**50**	*eP*	**P**	**11 03 00.2**	**+0.2**
TER01	**Tubaro-SC**	**22.36**	**74**	*eP*	**P**	**11 03 06.7**	**-0.6**
PTGB	**Pitanga**	**22.37**	**61**	*eP*	**P**	**11 03 07.3**	**-0.2**
BBRB	**Robore, Bolivi**	**22.66**	**36**	*eP*	**P**	**11 03 10.4**	**-0.1**
AQDB	**Aquidauana**	**23.04**	**48**	P	**P**	**11 03 13.5**	**-0.9**
AQDB				IAmb	IAmb	11 03 37.0	
	comp=Z,16nm,0.8s						
AQDB	**Aquidauana**	**23.04**	**48**	*eP*	**P**	**11 03 13.4**	**-0.9**
BBSD	**Serra de San D**	**23.26**	**33**	*eP*	**P**	**11 03 17.1**	**+0.4**
TRCB	**Terra Rica**	**23.26**	**57**	P	**P**	**11 03 14.9**	**-1.8**
TRCB	**Terra Rica**	**23.26**	**57**	*eP*	**P**	**11 03 15.8**	**-0.9**
SIV	**San Ignacio**	**24.13**	**31**	P	**P**	**11 03 25.2**	**+0.1**
	comp=Z,7.5nm,0.9s,baz=216,slow=9.4,SNR=21						
SIV				LR	LR	11 14 19.4	
	comp=Z,202nm,19.7s,baz=266,slow=40						
	comp=Z,7.5nm,0.9s						
PCMB	**Pacaembu**	**25.00**	**57**	*eP*	**P**	**11 03 33.4**	**+0.4**
FRTB	**Fartura**	**25.00**	**62**	*eP*	**P**	**11 03 32.9**	**-0.1**
PTLB	**Pontes e Lacer**	**25.44**	**34**	*eP*	**P**	**11 03 37.5**	**+0.5**
NNA	**Nana**	**25.56**	**353**	LR	LR	11 11 33.4	
	comp=Z,85nm,18.2s,baz=172,slow=32						
NNA	**Nana**	**25.56**	**353**	P	**P**	**11 03 36.2**	**-1.9**
NNA				IAmb	IAmb	11 03 51.0	
	comp=Z,28nm,1.2s						
C2SB	**Chapadao do Su**	**26.06**	**50**	*eP*	**P**	**11 03 43.0**	**+0.4**
PET01	**Itanhaem-SP**	**26.07**	**67**	*eP*	**P**	**11 03 43.6**	**+1.0**
SALV	**Santo Antonio**	**26.73**	**41**	*eP*	**P**	**11 03 49.2**	**+0.6**
RCLB	**Rio Claro- Sao**	**27.03**	**64**	*eP*	**P**	**11 03 51.5**	**+0.1**
VAO	**Valinhos**	**27.07**	**65**	*eP*	**P**	**11 03 51.4**	**-0.4**
BB19B	**Bebedouro**	**27.22**	**60**	*eP*	**P**	**11 03 52.3**	**-0.8**
VILB	**Vilhena**	**27.23**	**30**	*eP*	**P**	**11 03 54.5**	**+1.3**
PARB	**Paraibuna**	**27.85**	**68**	*eP*	**P**	**11 03 59.6**	**+0.9**
PMSA	**Palmer Station**	**27.90**	**171**	LR	LR	11 13 54.5	
	comp=Z,176nm,19.9s,baz=308,slow=34						
ETMB	**Extrema**	**28.36**	**16**	*eP*	**P**	**11 04 04.6**	**+1.4**
PDRB	**Porto dos Gac**	**29.91**	**35**	*eP*	**P**	**11 04 17.2**	**+0.2**
PMNB	**Patos De Minas**	**30.38**	**59**	*eP*	**P**	**11 04 22.0**	**+0.8**
ATAH	**Atahualpa**	**30.53**	**351**	LR	LR	11 15 40.3	
	comp=Z,68nm,18.0s,baz=149,slow=34						
CLDB	**Colider**	**30.98**	**36**	*eP*	**P**	**11 04 26.7**	**+0.2**
BDFB	**Brasilia**	**31.42**	**53**	P	**P**	**11 04 30.5**	**0.0**
	comp=Z,2.9nm,0.6s,baz=203,slow=5.6,SNR=3.3						
BDFB				LR	LR	11 18 02.8	
	comp=Z,236nm,20.3s,baz=213,slow=38						
	comp=Z,2.9nm,0.6s						
BDFB	**Brasilia**	**31.42**	**53**	*eP*	**P**	**11 04 30.6**	**+0.1**
RPN	**Rapa Nui**	**31.73**	**279**	LR	LR	11 13 35.3	
	comp=Z,233nm,18.9s,baz=28,slow=29						
JANB	**Januaria**	**34.27**	**57**	*eP*	**P**	**11 04 54.3**	**-1.0**
NPGB	**Novo Progresso**	**34.57**	**33**	*eP*	**P**	**11 04 57.9**	**+0.1**
NAN01	**Guarapari, ES**	**35.29**	**66**	*eP*	**P**	**11 05 02.4**	**-1.6**
SDBA	**SAO DESIDERIO**	**35.83**	**53**	*eP*	**P**	**11 05 08.9**	**+0.2**
GUA01	**Guaratinga, BA**	**36.34**	**64**	*eP*	**P**	**11 05 12.7**	**-0.4**
ITTB	**Itaituba**	**36.82**	**31**	*eP*	**P**	**11 05 16.6**	**-0.5**
SMTB	**Santa Maria do**	**36.97**	**46**	*eP*	**P**	**11 05 18.8**	**+0.3**
CMC01	**Camacan, BA**	**37.36**	**63**	*eP*	**P**	**11 05 21.4**	**-0.3**
SGCB	**SEo Gabriel d**	**37.69**	**11**	*eP*	**P**	**11 05 24.4**	**0.0**
GDU01	**Guandu, BA**	**38.44**	**61**	*eP*	**P**	**11 05 30.4**	**-0.5**
BOAV	**Boa Vista**	**41.51**	**20**	*eP*	**P**	**11 05 56.4**	**0.0**
NBAN	**Anadia - AL**	**43.58**	**60**	*eP*	**P**	**11 06 13.6**	**+0.4**
ROSB	**Rosrio**	**43.80**	**45**	*eP*	**P**	**11 06 13.2**	**-1.8**
SDV	**Santo Domingo**	**46.22**	**4**	*eP*	**P**	**11 06 35.4**	**+1.0**
BAUV	**El Baul**	**46.49**	**8**	P	**P**	**11 06 32.8**	**-3.5**
RCBR	**Riachuelo**	**46.61**	**57**	LR	LR	11 27 41.0	
	comp=Z,516nm,18.2s,baz=350,slow=38						
VNA3	**Neumayer Olymp**	**46.65**	**156**	P	**P**	**11 06 37.6**	**+0.6**
MDP	**Montagnes des**	**46.68**	**29**	LR	LR	11 28 01.9	
	comp=Z,155nm,18.6s,baz=167,slow=38						
MPGF	**Montagnes des**	**46.68**	**29**	P	P	11 06 27.1	-11
MPGF				pP	pP	11 06 38.0	-7.0
VNA1	**Neumayer--Stat**	**47.00**	**156**	P	**P**	**11 06 39.8**	**+0.1**
VNA2	**Neumayer--Watz**	**47.33**	**156**	P	**P**	**11 06 42.9**	**+0.6**
	baz=286,slow=9.3						
SNAA	**Sanae**	**48.87**	**157**	P	**P**	**11 06 54.7**	**+0.5**
SNAA	**Sanae**	**48.87**	**157**	P	**P**	**11 06 53.7**	**-0.5**
TROLL	**Troll, Antarti**	**50.56**	**157**	P	**P**	**11 07 07.7**	**+0.5**
QSPA	**South Pole Qui**	**52.75**	**180**	P	**P**	**11 07 23.9**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=161,slow=3.5,SNR=5.6						
	comp=Z,1.9nm,0.9s						
QSPA	**South Pole Qui**	**52.75**	**180**	P	**P**	**11 07 24.0**	**+0.4**
QSPA				IAmb	IAmb	11 08 00.3	
	comp=Z,4.5nm,0.9s						
QSPA	**South Pole Qui**	**52.75**	**180**	P	**P**	**11 07 22.8**	**-0.8**
QSPA				pP	**sP**	**11 07 37.0**	**+3.4**
APG	**El Apazote**	**54.57**	**340**	LR	LR	11 25 33.7	
	comp=Z,58nm,21.5s,baz=73,slow=30						
SBA	**Scott Base**	**59.39**	**192**	P	**P**	**11 08 10.9**	**+0.2**
SBA				pP	**sP**	**11 08 22.0**	**+1.2**
VNDA	**Vanda**	**60.42**	**192**	P	**P**	**11 08 19.6**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=96,slow=9.2,SNR=3.7						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**60.42**	**192**	P	P	11 08 09.5	-8.4
VNDA				pP	pP	11 08 19.5	-5.6
TBI	**Tubuai**	**65.30**	**259**	*e*LR	LR	11 28 29.2	
	comp=Z,124nm,25.0s						
TAOE	**Nuku Hiva Isla**	**66.05**	**277**	*e*LR	LR	11 28 50.7	
	comp=Z,106nm,24.9s						
CCD	**Concordia, Ant**	**67.12**	**185**	P	**P**	**11 09 01.6**	**-0.9**
CCD				pP	**sP**	**11 09 13.3**	**+0.7**
PPT2	**Papeete2**	**68.51**	**264**	*e*LR	LR	11 29 58.7	
	comp=Z,108nm,24.5s						
PPT	**Papeete**	**68.52**	**264**	LR	LR	11 33 25.7	
	comp=Z,152nm,18.4s,baz=138,slow=31						
MAW	**Mawson**	**70.20**	**164**	P	**P**	**11 09 22.1**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=226,slow=8.1,SNR=4.0						
	comp=Z,1.5nm,0.6s						
LPIG	**La Paz**	**70.32**	**325**	LR	LR	11 33 30.2	
	comp=Z,94nm,18.0s,baz=241,slow=30						
TX31	**Lajitas Ar. Si**	**72.19**	**333**	P	**P**	**11 09 34.0**	**+0.2**
TX32	**Lajitas Array**	**72.19**	**333**	P	**P**	**11 09 32.9**	**-0.9**
TX32				IAmb	IAmb	11 10 04.9	
	comp=Z,19nm,2.0s						
TXAR	**Lajitas Array**	**72.19**	**333**	P	**P**	**11 09 33.4**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=148,slow=8.3,SNR=13						
	comp=Z,1.4nm,0.8s						
TXAR	**Lajitas Array**	**72.19**	**333**	P	**P**	**11 09 34.7**	**+0.8**
SWET	**Sewanee**	**73.24**	**350**	P	**P**	**11 09 41.1**	**+1.3**
SWET				IAmb	IAmb	11 09 41.8	
	comp=Z,25nm,1.5s						
V48A	**Smith Brothers**	**73.89**	**349**	P	**P**	**11 09 44.4**	**+0.8**
V48A				IAmb	IAmb	11 09 46.4	
	comp=Z,6.3nm,0.7s						
SUR	**Sutherland**	**74.28**	**119**	LR	LR	11 39 32.1	
	comp=Z,48nm,18.3s,baz=178,slow=34						
BBTS	**Babate**	**74.59**	**57**	LR	LR	11 42 10.8	
	comp=Z,169nm,18.1s,baz=229,slow=36						
ANMO	**Albuquerque**	**78.26**	**333**	P	**P**	**11 10 10.3**	**+1.5**
TSUM	**Tsumeb**	**79.50**	**106**	LR	LR	11 42 52.9	
	comp=Z,89nm,18.6s,baz=323,slow=34						
BOSA	**Boshof**	**79.59**	**118**	P	**P**	**11 10 16.3**	**-0.1**
	comp=Z,5.2nm,1.0s,baz=200,slow=6.5,SNR=3.6						
BOSA				LR	LR	11 45 46.6	
	comp=Z,43nm,18.1s,baz=190,slow=36						
	comp=Z,5.2nm,1.0s						
URZ	**Urewera**	**80.37**	**229**	LR	LR	11 38 58.8	
	comp=Z,75nm,19.1s,baz=320,slow=30						
LBTB	**Lobatse**	**82.00**	**115**	LR	LR	11 43 05.9	
	comp=Z,35nm,19.1s,baz=172,slow=33						
LBTB	**Lobatse**	**82.00**	**115**	P	**P**	**11 10 29.3**	**0.0**
LBTB				IAmb	IAmb	11 10 30.3	
	comp=Z,6.6nm,0.8s						
SMCO	**Snowmass**	**82.24**	**334**	P	**P**	**11 10 29.8**	**-0.6**
SMCO				IAmb	IAmb	11 10 55.5	
	comp=Z,11nm,0.9s						
KOWA	**Kowa**	**83.25**	**66**	LR	LR	11 45 20.5	
	comp=Z,47nm,20.5s,baz=210,slow=34						
KOWA	**Kowa**	**83.25**	**66**	P	**P**	**11 10 35.8**	**+0.1**
ECSD	**EROS Data Cent**	**83.50**	**343**	P	**P**	**11 10 37.5**	**+1.1**
ECSD				IAmb	IAmb	11 10 38.4	
	comp=Z,11nm,1.2s						
P18A	**Preston Nutter**	**83.80**	**332**	P	**P**	**11 10 40.0**	**+1.7**
P18A				IAmb	IAmb	11 10 47.9	
	comp=Z,17nm,1.6s						
NVAR	**Mina Array Bea**	**86.04**	**326**	P	**P**	**11 10 51.6**	**+2.1**
	comp=Z,0.7nm,0.8s,baz=147,slow=5.4,SNR=3.1						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**86.32**	**334**	P	**P**	**11 10 52.3**	**+1.5**
	comp=Z,0.6nm,1.0s,baz=180,slow=5.6,SNR=4.5						
	comp=Z,0.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**86.61**	**71**	P	**P**	**11 10 52.7**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=223,slow=3.9,SNR=7.1						
	comp=Z,1.6nm,0.6s						
AFI	**Afiamalu**	**87.97**	**254**	LR	LR	11 40 36.0	
	comp=Z,48nm,20.1s,baz=158,slow=29						
LSZ	**Lusaka**	**89.92**	**109**	LR	LR	11 51 14.9	
	comp=Z,74nm,18.2s,baz=173,slow=36						
MSVF	**Nonsavu**	**93.14**	**245**	LR	LR	11 44 38.4	
	comp=Z,39nm,19.5s,baz=210,slow=30						
MDT	**Midelt**	**95.00**	**52**	LR	LR	11 54 15.9	
	comp=Z,97nm,18.9s,baz=144,slow=36						
DZM	**Mont Dzumac**	**98.14**	**234**	*e*LR	LR	11 43 41.3	
	comp=Z,94nm,23.9s						
DZM	**Mont Dzumac**	**98.14**	**234**	LR	LR	11 45 20.1	
	comp=Z,48nm,21.8s,baz=14,slow=29						
ESDC	**Sonseca Array**	**99.92**	**47**	LR	LR	11 56 42.2	
	comp=Z,45nm,18.4s,baz=174,slow=35						
H11S2	**WAKE ISLAND Hyl24.37 268**			T	T	13 33 46.9	
	baz=126,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hyl24.39 268**			T	T	13 33 47.4	
	baz=126,slow=75,SNR=7.6						
H11S3	**WAKE ISLAND Hyl24.39 268**			T	T	13 33 47.6	
	baz=126,slow=75,SNR=6.5						
AKASG	**Malin Array Be**	**125.48**	**50**	PKP	**PKPdf**	**11 17 09.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=268,slow=2.3,SNR=4.5						
AKTO	**Aktyubinsk**	**143.52**	**53**	PKhKP	PKPpre	11 17 40.5	
	comp=Z,1.5nm,0.6s,baz=328,slow=5.0,SNR=5.6						
TIXI	**Tiksi**	**143.87**	**348**	PKhKP	PKPpre	11 17 40.4	
	comp=Z,3.2nm,0.7s,baz=90,slow=23,SNR=15						
NRIK	**Noril'sk**	**146.50**	**12**	PKPbc	**PKPab**	**11 17 50.9**	**+0.9**
	comp=Z,2.4nm,0.4s,baz=337,slow=16,SNR=5.7						
AAK	**Ala-Archa**	**155.16**	**68**	PKPab	**PKPab**	**11 18 27.8**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=243,slow=2.7,SNR=9.6						
ZALV	**Zalesovo Beam**	**157.85**	**35**	PKP	**PKPdf**	**11 18 04.5**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=321,slow=3.8,SNR=5.4						
ZALV				PKPab	**PKPab**	**11 18 38.8**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=305,slow=5.2,SNR=6.6						
MKAR	**Makanchi Array**	**159.94**	**55**	PKP	**PKPdf**	**11 18 07.7**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=284,slow=4.9,SNR=3.7						
MKAR				PKPab	**PKPab**	**11 18 47.4**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=305,slow=4.3,SNR=8.0						
PZH	**PanZhiHua**	**168.36**	**159**	PKP	**PKPdf**	**11 18 14.6**	**-1.3**

MAN 14 11:25:11.3, 8°.30N×126°.50E, h57km, mb4.1, ML2.9, MS2.5, 4C-4D, Mindanao

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

GTOI	**Gorontalo**	**4.62 257**	P		**Pn**	**11 49 48.8**	**+0.8**
DDMP	**Don Marcelino,**	**4.72 338**	⇓*e*P		**Pn**	**11 49 48.3**	**-1.0**
DDMP			*e*S		Sn	11 50 36.7	-6.6
NLAI	**Namlea**	**4.93 185**	P		**Pn**	**11 49 52.0**	**-0.1**
KRAI	**Karang Ratu**	**5.07 170**	P		**Pn**	**11 49 54.2**	**+0.2**
MSAI	**Masohi**	**5.22 164**	P		**Pn**	**11 49 57.1**	**+1.1**
	0.0nm11nm,0.6s						
AAI	**Ambon**	**5.40 173**	P		**Pn**	**11 49 58.4**	**-0.1**
	0.3nm56nm,0.8s						
LUWI	**Luwuk**	**5.47 240**	Pn		**Pn**	**11 49 57.1**	**-2.2**
LUWI	**Luwuk**	**5.47 240**	P		**Pn**	**11 49 58.9**	**-0.4**
	0.9nm3um46nm,0.8s						
SKMP	**Bagumbayan, Su**	**5.62 328**	⇓*e*P		**Pn**	**11 50 00.8**	**-0.6**
SKMP			*e*S		**Sn**	**11 51 01.2**	**-3.6**
MRSI	**Marisa**	**5.70 258**	P		**Pn**	**11 50 01.9**	**-0.5**
KCP	**Kidapawan**	**5.79 335**	⇓*e*P		**Pn**	**11 50 03.4**	**-0.4**
KCP			*e*S		**Sn**	**11 51 10.1**	**+1.0**
FAKI	**Fak Fak**	**6.60 134**	Pn		**Pn**	**11 50 14.7**	**+0.1**
TOLI2	**Tolitoli**	**6.75 265**	Pn		**Pn**	**11 50 16.4**	**-0.2**
MYLDM	**Lahad Datu**	**9.63 291**	Pn		**Pn**	**11 50 55.0**	**-0.4**
MTN	**Manton Dam**	**14.90 166**	Pn		**Pn**	**11 52 02.3**	**-1.9**
SBUM	**Sibu**	**15.30 273**	Pn		**Pn**	**11 52 07.8**	**-1.4**
KNRA	**Kununurra**	**17.32 176**			**Pn**	**11 52 33.2**	**-0.8**
KNRA			IAmb		IAmb	11 52 35.4	
	comp=Z,6.4nm,0.7s						
WB0	**Warramunga Arr**	**22.39 163**	P		**P**	**11 53 27.4**	**-0.5**
WB0			IAmb		IAmb	11 53 27.9	
	comp=Z,12nm,0.4s						
WRAB	**Tennant Creek**	**22.53 163**	P		**P**	**11 53 29.0**	**-0.3**
WRAB			IAmb		IAmb	11 53 29.1	
	comp=Z,9.4nm,0.4s						
WRA	**Warramunga Arr**	**22.54 163**	P		**P**	**11 53 28.8**	**-0.6**
	comp=Z,5.7nm,0.4s,baz=340,slow=11,SNR=83						
	comp=Z,5.7nm,0.4s						
WRA	**Warramunga Arr**	**22.54 163**	P		**P**	**11 53 27.7**	**-1.7**
WB2	**Warramunga Arr**	**22.54 163**	P		**P**	**11 53 29.1**	**-0.4**
WB2			IAmb		IAmb	11 53 29.2	
	comp=Z,7.5nm,0.5s						
WR0	**Warramunga Arr**	**22.61 163**	P		**P**	**11 53 29.7**	**-0.4**
WR0			IAmb		IAmb	11 53 30.9	
	comp=Z,6.5nm,0.5s						
AS31	**Alice Springs**	**25.98 167**	P		**P**	**11 54 00.9**	**0.0**
AS31			IAmb		IAmb	11 54 04.8	
	comp=Z,3.6nm,0.2s						
ASAR	**Alice Springs**	**25.98 167**	P		**P**	**11 54 00.5**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=347,slow=7.5,SNR=46						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**25.98 167**	P		**P**	**11 54 00.8**	**0.0**
FORT	**Forrest**	**32.31 179**	P		**P**	**11 54 56.6**	**-0.2**
MORW	**Morawa**	**32.52 199**	P		**P**	**11 54 58.7**	**0.0**
BBOO	**Buckleboo**	**35.27 167**	P		**P**	**11 55 22.3**	**-0.1**
KSRS	**Korea Array**	**35.57 1**	P		**P**	**11 55 26.6**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=174,slow=12,SNR=4.1						
	comp=Z,0.5nm,0.6s						
STKA	**Stephens Creek**	**35.98 159**	P		**P**	**11 55 28.9**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=337,slow=9.5,SNR=11						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**35.98 159**	P		**P**	**11 55 29.0**	**+0.5**
SONM	**Songino Array**	**49.45 341**	P		**P**	**11 57 18.5**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=154,slow=8.0,SNR=2.8						
	comp=Z,0.6nm,0.4s						
MK31	**Makanchi Array**	**59.65 326**	P		**P**	**11 58 32.4**	**+1.7**
MK31			IAmb		IAmb	11 58 32.9	
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**59.65 326**	P		**P**	**11 58 32.2**	**+1.5**
	comp=Z,2.4nm,0.5s,baz=117,slow=8.1,SNR=26						
	comp=Z,2.4nm,0.5s						
MKAR	**Makanchi Array**	**59.65 326**	P		**P**	**11 58 32.4**	**+1.7**
KURK	**Kurchatov**	**63.85 328**	P		**P**	**11 59 00.0**	**+1.3**
KURK			IAmb		IAmb	11 59 00.5	
	comp=Z,3.7nm,0.9s						
VNDA	**Vanda**	**81.34 173**	P		**P**	**12 00 41.5**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=318,slow=5.9,SNR=2.5						
	comp=Z,0.2nm,0.4s						

*NEIC **14** 11:50:31.2±0.9, 36°.52N±0°.02×99°.09W±0°.04, h5km±2km, Error ellipse: s-maj=5.9km s-min=4.1km az=268.0*
*TUL **14** 11:50:31.3±1.0, 36°.51N±0°.02×99°.07W±0°.04, h6km±7km, ML3.2, mb_Lg3.2/93(NEIC), Error ellipse: s-maj=4.6km s-min=1.9km az=121.0*
*IDC **14** 11:50:31.9±3.4, 36°.60N×99°.14W, h0km, mb3.2/1, mbtmp3.1/3, ML3.8/2, MS3.8/1, Error ellipse: s-maj=60.4km s-min=15.1km az=90.0*
*ANF **14** 11:50:32.0±0.5, 36°.50N×99°.06W, h5km, ML4.1/13, Error ellipse: s-maj=5.1km s-min=4.0km az=78.0*

ISC 14 11:50:31.4±1.3, 36°.51N±0°.03×99°.07W±0°.04, h4km±10km, n112, σ0°.89/92, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.27**	**98**	Pg	**Pg**	**11 50 37.1**	**+0.5**
OK038				Sg	**Sg**	**11 50 40.4**	**+0.3**
OK035	**E0210 Rd and N**	**0.35**	**56**	Pg	**Pg**	**11 50 38.7**	**+0.5**
OK035				Sg	**Sg**	**11 50 43.9**	**+1.1**
KAN10	**Anthony SW Sta**	**0.99**	**52**		**Pg**	**11 50 50.3**	**-0.2**
KAN14	**Manchester OK**	**0.99**	**63**		**Pg**	**11 50 50.4**	**-0.1**
KAN16	**Harper SW Stat**	**1.08**	**48**		**Pg**	**11 50 51.8**	**-0.2**
KAN08	**Anthony NE Sta**	**1.13**	**51**		**Pg**	**11 50 52.8**	**-0.4**
KAN12	**Harper NE Stat**	**1.16**	**47**	Pg	**Pg**	**11 50 53.3**	**-0.4**
KAN17	**Caldwell West**	**1.18**	**63**		**Pg**	**11 50 53.5**	**-0.5**
KAN06	**Argonia West S**	**1.22**	**53**		**Pg**	**11 50 54.4**	**-0.4**
KAN01	**Argonia South**	**1.23**	**58**		**Pg**	**11 50 54.5**	**-0.5**
KAN09	**Caldwell North**	**1.32**	**62**	Pn	**Pn**	**11 50 55.8**	**-0.9**
KS21	**Milan North St**	**1.37**	**55**		**Pn**	**11 50 56.8**	**-0.6**
KAN13	**South Haven SW**	**1.37**	**68**	Pn	**Pn**	**11 50 56.9**	**-0.5**
KS20	**Mayfield South**	**1.41**	**59**		**Pn**	**11 50 57.7**	**-0.2**
OK049	**E0420 Rd and N**	**1.43**	**94**		**Pn**	**11 50 57.9**	**-0.3**
OK025	**Westminster Rd**	**1.69**	**123**		**Pn**	**11 51 01.6**	**-0.1**
OK050	**Pawnee Station**	**1.69**	**93**		**Pn**	**11 51 01.5**	**-0.2**
OK048	**Pawnee Station**	**1.72**	**93**		**Pn**	**11 51 02.0**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**1.73**	**129**		**Pn**	**11 51 02.2**	**-0.1**
OK045	**Pawnee Station**	**1.73**	**92**		**Pn**	**11 51 02.3**	**0.0**
OK046	**Pawnee Station**	**1.75**	**93**		**Pn**	**11 51 02.8**	**+0.3**
OK033	**Mehan**	**1.79**	**105**		**Pn**	**11 51 03.0**	**-0.1**
WMOK	**Wichita Mounta**	**1.79**	**172**	Pn	**Pn**	**11 51 02.7**	**-0.4**
WMOK	**Wichita Mounta**	**1.79**	**172**	P	**Pn**	**11 51 03.0**	**-0.2**
	baz=353,SNR=217						
WMOK				S	**Sb**	**11 51 27.4**	**-0.1**
	baz=353						
OK051	**E0350 and S346**	**1.80**	**90**		**Pn**	**11 51 03.0**	**-0.3**
OK044	**Pawnee Station**	**1.84**	**94**		**Pn**	**11 51 03.6**	**-0.2**
FNO	**Franklin**	**1.85**	**132**		**Pn**	**11 51 04.3**	**+0.4**
OK031	**S. Brethren Rd**	**1.89**	**107**		**Pn**	**11 51 04.2**	**-0.3**
R32A	**Long Quarter,**	**1.93**	**8**	IAmb_Lg		11 51 32.1	
	comp=Z,93nm,1.0s						
R32A	**Long Quarter,**	**1.93**	**8**	P	**Pb**	**11 51 06.1**	**-1.0**
	baz=188,SNR=36						
R32A				S	**Sb**	**11 51 32.3**	**+0.7**
	baz=188						
OK034	**N. Norfolk Rd.**	**1.97**	**104**		**Pn**	**11 51 05.1**	**-0.5**
T35A	**Sooner Cattle**	**2.10**	**78**		**Pn**	**11 51 07.2**	**-0.1**
T35A				IAmb_Lg		11 51 38.6	
	comp=Z,105nm,0.8s						
T35B	**Sooner Cattle**	**2.10**	**78**	P	**Pn**	**11 51 07.6**	**+0.3**
	baz=259,SNR=48						
T35B				S	**Sb**	**11 51 36.9**	**+0.5**
	baz=259						
X34A	**Smith Ranch, M**	**2.16**	**152**		**Pn**	**11 51 07.8**	**-0.4**
X34A				IAmb_Lg		11 51 43.8	
	comp=Z,140nm,0.9s						
CBKS	**Cedar Bluff**	**2.36**	**347**		**Pn**	**11 51 10.8**	**-0.1**
CBKS				IAmb_Lg		11 51 50.7	
	comp=Z,99nm,0.8s						
CBKS	**Cedar Bluff**	**2.36**	**347**	P	**Pb**	**11 51 13.0**	**-1.5**
	baz=166,SNR=30						
CBKS				S	**Sb**	**11 51 44.9**	**+1.0**
	baz=166						
AMTX	**Amarillo**	**2.67**	**233**		**Pn**	**11 51 16.2**	**+0.9**
AMTX				IAmb_Lg		11 51 56.1	
	comp=Z,97nm,1.0s						
AMTX	**Amarillo**	**2.67**	**233**	P	**Pn**	**11 51 16.7**	**+1.3**
	baz=52,SNR=8.5						
TUL1	**Leonard**	**2.72**	**102**		**Pn**	**11 51 15.4**	**-0.5**
TUL1	**Leonard**	**2.72**	**102**	S	**Sn**	**11 51 49.7**	**+0.5**
	baz=284						
KSU1	**Kansas State U**	**3.24**	**36**		**Pn**	**11 51 23.9**	**+0.9**
KSU1				IAmb_Lg		11 52 15.0	
	comp=Z,43nm,0.9s						
KSU1	**Kansas State U**	**3.24**	**36**	P	**Pn**	**11 51 23.5**	**+0.4**
	baz=217						
KSU1				S	**Sn**	**11 52 03.3**	**+1.3**
	baz=217						
Z35A	**Perchaven, San**	**3.51**	**154**	Pn	**Pn**	**11 51 26.1**	**-0.7**
X37A	**Clayton**	**3.58**	**121**		**Pn**	**11 51 27.5**	**-0.1**
X37A	**Clayton**	**3.58**	**121**	P	**Pn**	**11 51 27.7**	**+0.1**
	baz=304,SNR=14						
X37A				S	**Sn**	**11 52 10.5**	**+0.2**
	baz=304						
KSCO	**Kaye Shedlock'**	**3.76**	**313**	Pn	**Pn**	**11 51 30.4**	**0.0**
KSCO				IAmb_Lg		11 52 31.3	
	comp=Z,49nm,0.8s						
KSCO	**Kaye Shedlock'**	**3.76**	**313**	S	**Sn**	**11 52 15.2**	**0.0**
	baz=130						
U38A	**Gravette**	**3.78**	**90**	Pn	**Pn**	**11 51 29.8**	**-0.7**
ABTX	**Abilene, Hawle**	**3.91**	**187**	Pn	**Pn**	**11 51 32.6**	**+0.3**
ABTX				IAmb_Lg		11 52 39.1	
	comp=Z,36nm,1.0s						
MSTX	**Muleshoe**	**3.95**	**231**	Pn	**Pn**	**11 51 33.3**	**+0.3**
MSTX	**Muleshoe**	**3.95**	**231**	P	**Pn**	**11 51 33.6**	**+0.6**
	baz=49,SNR=7.4						
HHAR	**Hobbs**	**4.15**	**92**	Pn	**Pn**	**11 51 34.7**	**-0.8**
HHAR				IAmb_Lg		11 52 40.9	
	comp=Z,50nm,0.9s						
T25A	**Trinidad**	**4.33**	**280**	Pn	**Pn**	**11 51 37.1**	**-1.2**
N33B	**J Bar K, Exete**	**4.40**	**16**	S	**Sn**	**11 52 29.7**	**-1.1**
	baz=197						
N33A	**J Bar K, Exete**	**4.41**	**16**	Pn	**Pn**	**11 51 38.7**	**-0.4**
N33A				IAmb_Lg		11 52 52.8	
	comp=Z,40nm,0.9s						
Z38A	**Mt. Pleasant**	**4.67**	**133**	Pn	**Pn**	**11 51 41.9**	**-0.8**
WHTX	**Lake Whitney,**	**4.71**	**163**	Pn	**Pn**	**11 51 43.4**	**+0.1**
S39A	**Bolivar**	**4.74**	**74**	Pn	**Pn**	**11 51 43.7**	**0.0**
MIAR	**Mount Ida**	**4.89**	**112**		**Pn**	**11 51 45.6**	**-0.1**
MIAR				IAmb_Lg		11 53 19.5	
	comp=Z,41nm,0.9s						
MIAR	**Mount Ida**	**4.89**	**112**	P	**Pn**	**11 51 45.9**	**+0.2**
	baz=295,SNR=13						
N35A	**Tabor**	**5.10**	**31**	Pn	**Pn**	**11 51 45.2**	**-3.4**
237A	**Washetta, Mont**	**5.25**	**148**	IAmb_Lg		11 53 25.0	
	comp=Z,60nm,1.1s						
SDCO	**Great Sand Dun**	**5.28**	**285**		**Pn**	**11 51 50.7**	**-0.7**
SDCO				IAmb_Lg		11 53 28.1	
	comp=Z,36nm,1.2s						
P38A	**Dawn**	**5.36**	**53**	Pn	**Pn**	**11 51 53.0**	**+0.8**
P38A	**Dawn**	**5.36**	**53**	P	**Pn**	**11 51 52.8**	**+0.6**
	baz=236						
Q24A	**Divide**	**5.40**	**299**	Pn	**Pn**	**11 51 50.4**	**-2.7**
Q24A				IAmb_Lg		11 53 24.8	
	comp=Z,55nm,0.7s						
MGMO	**Mountain Grove**	**5.49**	**81**		**Pn**	**11 51 54.4**	**+0.3**
HTMS	**Hat Mesa**	**5.52**	**224**	Pn	**Pn**	**11 51 52.9**	**-1.6**
WHAR	**Wooly Hollow**	**5.64**	**101**	Pn	**Pn**	**11 51 56.5**	**+0.4**
WHAR				IAmb_Lg		11 53 39.4	
	comp=Z,52nm,0.8s						
WLAR	**White Oak Lake**	**5.64**	**118**	IAmb_Lg		11 53 37.4	
	comp=Z,30nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.65**	**94**	Pn	**Pn**	**11 51 56.3**	**+0.1**
FCAR				IAmb_Lg		11 53 35.3	
	comp=Z,39nm,0.8s						
R40A	**Maddies Statio**	**5.70**	**70**	Pn	**Pn**	**11 51 56.6**	**-0.2**
R40A	**Maddies Statio**	**5.70**	**70**	P	**Pn**	**11 51 57.3**	**+0.5**
	baz=254,SNR=13						
UALR	**University of**	**5.75**	**106**	IAmb_Lg		11 53 44.9	
	comp=Z,44nm,1.0s						
BRIGG	**Briggsdale**	**5.78**	**316**	IAmb_Lg		11 53 43.9	
	comp=Z,41nm,1.0s						
CLNB	**Carlsbad**	**5.81**	**225**	Pn	**Pn**	**11 51 57.8**	**-0.7**
435B	**Jarrell**	**5.85**	**167**	IAmb_Lg		11 53 40.9	
	comp=Z,41nm,0.9s						
NATX	**Nacogdoches**	**5.99**	**141**	IAmb_Lg		11 53 57.8	
	comp=Z,30nm,0.8s						
ISCO	**Idaho Springs**	**6.11**	**304**	Pn	**Pn**	**11 52 01.2**	**-1.6**
GDL2	**Guadalupe Moun**	**6.14**	**227**		**Pn**	**11 52 02.5**	**-0.5**
ANMO	**Albuquerque**	**6.21**	**258**	Pn	**Pn**	**11 52 00.5**	**-3.5**
N38A	**Joes South For**	**6.25**	**45**	Pn	**Pn**	**11 52 03.4**	**-1.1**
N38A				IAmb_Lg		11 53 59.0	
	comp=Z,44nm,0.9s						
P40A	**Paris**	**6.31**	**59**		**Pn**	**11 52 04.4**	**-0.9**
P40A				IAmb_Lg		11 53 54.4	
	comp=Z,48nm,0.7s						
LCAR	**Lake Charles**	**6.41**	**92**		**Pn**	**11 52 05.8**	**-0.8**
CCM	**Cathedral Cave**	**6.43**	**74**	Pn	**Pn**	**11 52 05.5**	**-1.3**
CCM				IAmb_Lg		11 53 53.5	
	comp=Z,28nm,0.8s						
CCAR	**Cane Creek**	**6.51**	**111**	IAmb_Lg		11 54 10.1	
	comp=Z,45nm,0.9s						
SMCO	**Snowmass**	**6.79**	**295**	Pn	**Pn**	**11 52 12.0**	**-0.3**
PHWY	**Pilot Hill**	**6.90**	**316**	IAmb_Lg		11 54 16.2	
	comp=Z,25nm,0.8s						
N23A	**Red Feather La**	**6.93**	**311**	Pn	**Pn**	**11 52 14.8**	**+0.8**
N23A				IAmb_Lg		11 54 25.2	
	comp=Z,31nm,0.7s						
SCIA	**State Center**	**7.05**	**38**	IAmb_Lg		11 54 27.3	
	comp=Z,28nm,0.8s						
SLM	**Saint Louis**	**7.33**	**71**	IAmb_Lg		11 54 40.2	
	comp=Z,18nm,0.8s						
GNAR	**Gosnell**	**7.34**	**92**	IAmb_Lg		11 54 43.4	
	comp=Z,34nm,0.7s						
143A	**Socs Landing,**	**7.38**	**119**	IAmb_Lg		11 54 29.2	
	comp=Z,21nm,0.8s						
ECSD	**EROS Data Cent**	**7.45**	**14**	Pn	**Pn**	**11 52 20.0**	**-0.9**
K38A	**Parkersburg**	**7.82**	**37**	IAmb_Lg		11 54 57.4	
	comp=Z,31nm,0.8s						
PV02	**Paradox Valley**	**7.88**	**285**	IAmb_Lg		11 55 02.3	
	comp=Z,15nm,1.3s						
S44A	**Carbondale**	**7.93**	**79**	IAmb_Lg		11 54 59.1	
	comp=Z,23nm,0.8s						
PV13	**Radium Mtn., P**	**7.94**	**285**	IAmb_Lg		11 54 54.2	
	comp=Z,15nm,1.2s						
TXAR	**Lajitas Array**	**8.13**	**210**	Pn	**Pn**	**11 52 30.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=36,slow=11,SNR=14						
TXAR				Lg	Lg	11 54 47.2	
	comp=Z,0.7nm,0.3s,baz=24,slow=26,SNR=14						
	comp=Z,0.5nm,0.5s						
P43A	**Skaggs, Pawnee**	**8.15**	**65**	IAmb_Lg		11 54 56.9	
	comp=Z,30nm,0.9s						
833A	**Chaparral WMA,**	**8.17**	**182**	IAmb_Lg		11 55 06.4	
	comp=Z,20nm,0.8s						
L40A	**Anamosa**	**8.23**	**45**	IAmb_Lg		11 54 55.6	
	comp=Z,32nm,1.1s						
RSSD	**Black Hills**	**8.49**	**335**	IAmb_Lg		11 55 10.4	
	comp=Z,16nm,0.9s						
L42A	**Oliver, Polo**	**9.12**	**50**	IAmb_Lg		11 55 23.8	
	comp=Z,16nm,0.8s						
JFWS	**Jewell Farm**	**9.33**	**44**	IAmb_Lg		11 55 27.0	
	comp=Z,16nm,0.8s						
F33A	**5 Mile Ranch,**	**9.55**	**12**	IAmb_Lg		11 55 46.9	
	comp=Z,13nm,0.9s						
I40A	**Norwalk**	**9.80**	**39**	IAmb_Lg		11 56 03.2	
	comp=Z,22nm,1.2s						
SPMN	**Marine on St.**	**9.91**	**27**	IAmb_Lg		11 55 49.2	
	comp=Z,13nm,1.1s						
PDAR	**Pinedale Array**	**10.21**	**311**	Pn	**Pn**	**11 53 00.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=5.1						
PDAR				Pg		11 53 41.6	
	comp=Z,0.2nm,0.3s,baz=112,slow=14,SNR=9.3						
PDAR				Lg	Lg	11 55 51.5	
	comp=Z,0.3nm,0.3s,baz=102,slow=35,SNR=3.2						
	comp=Z,0.3nm,0.5s						
ULM	**Lac du Bonnet**	**13.92**	**9**	Lg	Lg	11 57 43.8	
	baz=116,slow=5.7						
INK	**Inuvik**	**37.16**	**340**	LR	LR	12 15 02.3	
	comp=Z,135nm,19.0s,baz=231,slow=40						
ILAR	**Eielson Array**	**39.90**	**330**	P	**P**	**11 58 07.0**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=113,slow=8.9,SNR=2.2						
	comp=Z,0.2nm,0.6s						

*NNC **14** 11:57:13.9±1.8, 42°.60N×70°.12E, h0km, mpv1.6, Error ellipse: s-maj=41.7km s-min=8.9km az=119.0, Suspected Mining explosion.*
*KRNET **14** 11:57:15.2±0.1, 42°.91N×71°.08E, mb2.9*

ISC 14 11:57:16.5±1.6, 42°.74N±0°.07×70°.9E±0°.1, h0km, n15, σ0°.58/28, 20C-10D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK06	**Karatay Array**	**0.46**	**320**	⇑P	**Pg**	**11 57 25.4**	**+0.1**
KK06				⇑S	**Sb**	**11 57 34.9**	**-0.2**
KK07	**Karatay Array**	**0.47**	**318**	⇑P	**Pg**	**11 57 25.3**	**-0.3**
KK07				⇑S	**Sb**	**11 57 34.7**	**-0.6**
KK02	**Karatay Array**	**0.48**	**320**	⇓P	**Pg**	**11 57 25.4**	**-0.3**
KK02				⇑S	**Sb**	**11 57 34.9**	**-0.5**
KK31	**Karatay Array**	**0.48**	**320**	⇓P	**Pg**	**11 57 25.2**	**-0.4**
	1.0nm,0.5s,baz=216,slow=18,SNR=31						
KK31				⇑S	**Sg**	**11 57 32.7**	**+0.8**
	2.3nm,0.3s,baz=209,slow=32,SNR=17						
KKAR	**Karatay Array**	**0.48**	**320**	⇑*i*P	**Pg**	**11 57 25.6**	**0.0**
	baz=96						
KKAR				⇑*i*S	**Sg**	**11 57 33.0**	**+1.2**
	baz=96						
KK01	**Karatay Array**	**0.48**	**320**	⇑P	**Pg**	**11 57 25.4**	**-0.3**
KK01				⇑S	**Sb**	**11 57 34.9**	**-0.7**
KK03	**Karatay Array**	**0.48**	**319**	⇑P	**Pg**	**11 57 25.5**	**-0.2**
KK03				⇑S	**Sb**	**11 57 35.0**	**-0.5**
KK05	**Karatay Array**	**0.48**	**322**	⇑P	**Pg**	**11 57 25.8**	**+0.1**
KK05				⇑S	**Sb**	**11 57 35.2**	**-0.3**
KK04	**Karatay Array**	**0.48**	**320**	⇑P	**Pg**	**11 57 25.6**	**-0.2**
KK04				⇓S	**Sb**	**11 57 35.1**	**-0.5**
KK08	**Karatay Array**	**0.49**	**318**	⇓P	**Pg**	**11 57 25.8**	**-0.1**
KK08				⇓S	**Sb**	**11 57 35.5**	**-0.3**
KK09	**Karatay Array**	**0.50**	**320**	⇓P	**Pg**	**11 57 25.7**	**-0.3**
KK09				⇓S	**Sb**	**11 57 35.4**	**-0.6**
TRKS	**Terek-Say**	**1.22**	**173**	⇓*i*P	**Pn**	**11 57 40.8**	**-0.1**
	baz=77						
TRKS				⇓*i*S	**Sn**	**11 57 59.8**	**+1.6**
	baz=77						
TAS	**Tashkent**	**1.87**	**221**	⇑*i*P	**Pn**	**11 57 49.6**	**-0.1**
	baz=21						
TAS				⇑*i*S	**Sn**	**11 58 14.3**	**+0.3**
	baz=21						
BTK	**Batken**	**2.68**	**182**	⇑*i*P	**Pn**	**11 58 00.6**	**-0.4**
	baz=84						
BTK				⇑*i*S	**Sn**	**11 58 33.3**	**-0.9**
	baz=84						
MK31	**Makanchi Array**	**9.04**	**59**	⇓Pg	Pn	11 59 19.9	-8.3
	0.3nm,0.4s,baz=194,slow=16,SNR=6.8						
MK31				⇑Lg	Lg	11 59 53.3	
	3.0nm,0.5s,baz=193,slow=27,SNR=12						

*NNC **14** 12:02:32.3±1.5, 41°.51N×73°.94E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=13.2km s-min=6.3km az=167.0*
*SOME **14** 12:02:32.3, 41°.60N×73°.93E, h0km*
*KRNET **14** 12:02:33.0±0.1, 41°.61N×73°.92E, h14km, mb2.8*
*KNET **14** 12:02:34.2±0.3, 41°.66N×73°.99E, h6km±1km, ml1.5, Error ellipse: s-maj=2.3km s-min=1.7km az=161.0*

ISC 14 12:02:33.3±1.3, 41°.60N±0°.05×73°.95E±0°.03, h8km±11km, n40, σ0°.93/66, 27C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.38**	**47**	⇑*i*P	**Pg**	**12 02 41.0**	**+0.1**
	baz=51						
ARLS				⇑*i*S	**Sg**	**12 02 46.4**	**+0.5**
	baz=51						
AML	**Almayashu**	**0.56**	**340**	⇑P	**Pg**	**12 02 44.0**	**-0.3**
	12nm,0.2s,SNR=12						
AML				⇓S	**Sb**	**12 02 52.8**	**-1.3**
	16nm,0.2s						
UCH	**Uchtor**	**0.75**	**34**	⇑P	**Pg**	**12 02 47.8**	**-0.1**
	7.1nm,0.1s,SNR=55						
UCH				⇓S	**Sg**	**12 02 58.4**	**+0.6**
	9.5nm,0.1s						
UCH	**Uchtor**	**0.75**	**34**	⇓*i*P	**Pg**	**12 02 47.5**	**-0.4**
	baz=35						
UCH				⇓*i*S	**Sb**	**12 02 58.5**	**-1.1**
	baz=35						
EKS2	**Erkin-Say**	**1.07**	**353**	⇑P	**Pg**	**12 02 53.4**	**-0.4**
	2.7nm,0.1s,SNR=10						
EKS2	**Erkin-Say**	**1.07**	**353**	⇓*i*P	**Pg**	**12 02 53.2**	**-0.6**
	baz=54						
EKS2				⇓*i*S	**Sb**	**12 03 07.9**	**-0.4**
	baz=54						
AAK	**Ala-Archa**	**1.11**	**21**	⇑P	**Pg**	**12 02 54.3**	**-0.4**
	4.4nm,0.1s,SNR=11						
AAK				⇑S	**Sb**	**12 03 10.1**	**+0.5**
	4.1nm,0.2s						
AAK	**Ala-Archa**	**1.11**	**21**	⇑*i*P	**Pg**	**12 02 54.3**	**-0.4**
	baz=22						
AAK				⇑*i*S	**Sb**	**12 03 09.5**	**-0.1**
	baz=22						
KBK	**Karagaybulak**	**1.29**	**35**	⇑P	**Pn**	**12 02 57.6**	**-0.2**
	8.1nm,0.1s,SNR=17						
KBK	**Karagaybulak**	**1.29**	**35**	⇑*i*P	**Pn**	**12 02 57.4**	**-0.4**
	baz=36						
KBK				⇑*i*S	**Sn**	**12 03 15.8**	**+0.4**
	baz=36						
CHMS	**Chumysh**	**1.52**	**23**	⇑*i*P	**Pb**	**12 03 01.6**	**-0.1**
	baz=24						
CHMS				⇑*i*S	**Sg**	**12 03 22.6**	**+0.5**
	baz=24						
NRN

11nm,0.5s
KOTS Lg Lg 12 04 03.7
15nm,0.6s
KUU Kurty 2.89 37 *e*P **Pb 12 03 26.1 +1.0**
2.6nm,0.2s
KUU *e*S **Sg 12 04 04.9 -1.1**
7.0nm,0.8s
KUU Kurty 2.89 37 Pg **Pb 12 03 26.2 +1.0**
2.6nm,0.2s
KUU Lg Lg 12 04 04.9
7.0nm,0.8s
KTBS Karatobe 2.92 43 *e*P **Pb 12 03 26.9 +1.3**
3.0nm,0.2s
KTBS *e*S **Sg 12 04 06.2 -0.8**
6.9nm,0.3s
KTBS Karatobe 2.92 43 Pg **Pb 12 03 26.9 +1.3**
3.0nm,0.2s
KTBS Lg Lg 12 04 06.2
6.9nm,0.3s
KK31 Karatay Array 2.96 302 ⇓Pg **Pb 12 03 27.2 +1.0**
0.3nm,0.2s,baz=114,slow=16,SNR=17
KK31 ⇓Lg Lg 12 04 07.1
0.6nm,0.3s,baz=117,slow=29,SNR=5.5
KKAR Karatay Array 2.96 302 ⇑*i*P **Pn 12 03 22.7 +2.1**
baz=2.0
KKAR ⇑*i*S **Sb 12 03 59.5 -3.0**
baz=2.0
CHKK Chushkaly 3.17 44 *e*P **Pb 12 03 31.4 +1.4**
1.0nm,0.2s
CHKK *e*S **Sg 12 04 14.0 -1.3**
5.8nm,0.3s

*IDC **14** 12:12:07.2±1.5,20°.22S×177°.72W,h540km±17km,mb3.3/9, mbtmp4.3/12,Error ellipse: s-maj=22.0km s-min=13.5km az=136.0*
*NEIC **14** 12:12:08.0±0.8,20°.1S±0°.2×177°.5W±0°.2,h563km±20km, mb4.3/22,Error ellipse: s-maj=31.2km s-min=20.8km az=192.0*
ISC 14 12:12:07.5±0.5,**20°.10S**±0°.10×**177°.63W**±0°.08,**h550**km, **n43,**σ1§**18**/45,**mb4.1**/19,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**299**	P	**P**	**12 13 35.4**	**+0.2**
1.7nm,0.5s,baz=175,slow=16,SNR=5.3							
MSVF	**Nonsavu**	**4.71**	**299**		**P**	**12 13 36.6**	**+1.4**
NIUE	**Niue**	**7.34**	**83**	P	**P**	**12 13 58.8**	**+0.1**
AFI	**Afiamalu**	**8.32**	**43**	P	**P**	**12 14 07.5**	**-1.1**
25nm,0.4s,baz=222,slow=15,SNR=13							
AFI				S	**S**	**12 15 44.3**	**-3.5**
6.3nm,0.3s,baz=264,slow=18,SNR=1.6							
AFI	**Afiamalu**	**8.32**	**43**	P	**P**	**12 14 07.7**	**-0.9**
DZM	**Mont Dzumac**	**14.99**	**260**	P	**P**	**12 15 17.1**	**+0.1**
3.7nm,0.4s,baz=138,slow=3.9,SNR=23							
DZM	**Mont Dzumac**	**14.99**	**260**	P	**P**	**12 15 19.6**	**+2.5**
DZM				IAmb	IAmb	12 15 47.0	
comp=Z,17nm,1.3s							
OUZ	**Omahuta**	**16.94**	**205**	P	**P**	**12 15 36.0**	**+0.5**
OUZ				IAmb	IAmb	12 15 55.4	
comp=Z,25nm,1.3s							
URZ	**Urewera**	**18.67**	**193**	P	**P**	**12 15 48.7**	**-2.6**
comp=Z,6.7nm,0.3s,baz=2.7,slow=4.0,SNR=24							
HIZ	**Hauiti**	**19.47**	**198**	P	**P**	**12 15 58.7**	**+0.1**
QRZ	**Quartz Range**	**22.30**	**200**	P	**P**	**12 16 22.6**	**-1.5**
RPZ	**Rata Peaks**	**25.38**	**199**	P	**P**	**12 16 50.6**	**-0.8**
comp=Z,20nm,1.0s,baz=0.0,slow=5.1,SNR=2.6							
comp=Z,20nm,1.0s							
MLZ	**Mavora Lakes**	**27.82**	**202**	P	**P**	**12 17 13.1**	**+0.3**
WHZ	**Wether Hill Ro**	**28.34**	**201**		**P**	**12 17 17.0**	**-0.3**
EIDS	**Eidsvold**	**29.29**	**254**	P	**P**	**12 17 25.6**	**-0.3**
ARMA	**Armidale**	**29.55**	**244**	P	**P**	**12 17 28.5**	**+0.3**
ARMA				IAmb	IAmb	12 17 41.1	
comp=Z,15nm,1.3s							
CTAO	**Charters Tower**	**33.87**	**264**	P	**P**	**12 18 04.5**	**-0.6**
CTAO				IAmb	IAmb	12 18 05.5	
comp=Z,15nm,1.2s							
STKA	**Stephens Creek**	**38.27**	**244**	P	**P**	**12 18 40.3**	**-1.0**
comp=Z,2.3nm,0.5s,baz=91,slow=12,SNR=6.4							
comp=Z,2.3nm,0.5s							
STKA	**Stephens Creek**	**38.27**	**244**	P	**P**	**12 18 40.8**	**-0.4**
BBOO	**Buckleboo**	**43.03**	**243**	P	**P**	**12 19 18.3**	**-0.8**
BBOO				IAmb	IAmb	12 19 24.4	
comp=Z,16nm,1.4s							
WR0	**Warramunga Arr**	**44.81**	**262**	P	**P**	**12 19 32.4**	**-0.6**
WR0				IAmb	IAmb	12 19 34.9	
comp=Z,8.6nm,1.4s							
AS31	**Alice Springs**	**44.95**	**256**	P	**P**	**12 19 33.8**	**-0.3**
ASAR	**Alice Springs**	**44.95**	**256**	P	**P**	**12 19 33.6**	**-0.4**
comp=Z,5.3nm,0.5s,baz=89,slow=7.8,SNR=186							
ASAR				S	**S**	**12 25 30.9**	**-1.8**
comp=Z,1.2nm,0.9s,baz=91,slow=16,SNR=7.1							
comp=Z,5.3nm,0.5s							
ASAR	**Alice Springs**	**44.95**	**256**	P	**P**	**12 19 33.5**	**-0.6**
WB0	**Warramunga Arr**	**44.97**	**262**	P	**P**	**12 19 34.0**	**-0.3**
WB0				IAmb	IAmb	12 19 34.1	
comp=Z,6.1nm,0.4s							
WB2	**Warramunga Arr**	**44.99**	**262**	P	**P**	**12 19 34.0**	**-0.4**
WB2				IAmb	IAmb	12 19 42.4	
comp=Z,5.4nm,1.2s							
WRAB	**Tennant Creek**	**44.99**	**262**	P	**P**	**12 19 33.9**	**-0.5**
WRAB				IAmb	IAmb	12 19 34.5	
comp=Z,6.7nm,1.1s							
WRA	**Warramunga Arr**	**45.00**	**262**	P	**P**	**12 19 33.8**	**-0.7**
comp=Z,2.3nm,0.3s,baz=97,slow=7.5,SNR=127							
comp=Z,2.3nm,0.3s							
WRA	**Warramunga Arr**	**45.00**	**262**	P	**P**	**12 19 34.1**	**-0.4**
MTN	**Manton Dam**	**49.50**	**270**	P	**P**	**12 20 09.0**	**+0.6**
MTN				IAmb	IAmb	12 20 36.1	
comp=Z,18nm,1.2s							
KNRA	**Kununurra**	**51.03**	**266**	P	**P**	**12 20 19.3**	**-0.1**
KNRA				IAmb	IAmb	12 20 36.4	
comp=Z,18nm,1.5s							
VNDA	**Vanda**	**58.34**	**185**	P	**P**	**12 21 10.0**	**+0.3**
comp=Z,0.6nm,0.7s,baz=348,slow=6.5,SNR=6.2							
comp=Z,0.6nm,0.7s							
VNDA	**Vanda**	**58.34**	**185**	P	**P**	**12 21 09.9**	**+0.3**
CASY	**Casey**	**64.47**	**205**	P	**P**	**12 21 49.6**	**-0.2**
QSPA	**South Pole Qui**	**69.97**	**180**	P	**P**	**12 22 24.3**	**+0.6**
QSPA				IAmb	IAmb	12 22 27.5	
comp=Z,8.8nm,1.5s							
NVAR	**Mina Array Bea**	**80.50**	**43**	P	**P**	**12 23 24.9**	**+2.0**
comp=Z,0.7nm,0.6s,baz=217,slow=8.5,SNR=4.9							
comp=Z,0.7nm,0.6s							
TXAR	**Lajitas Array**	**86.55**	**57**	P	**P**	**12 23 55.3**	**+2.4**
comp=Z,0.6nm,0.7s,baz=224,slow=8.8,SNR=7.3							
comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**87.85**	**13**	P	**P**	**12 23 58.9**	**+0.8**
comp=Z,0.5nm,0.4s,baz=212,slow=5.8,SNR=9.0							
comp=Z,0.5nm,0.4s							
TROLL	**Troll, Antarti**	**88.13**	**180**	P	**P**	**12 23 59.0**	**-0.7**
PDAR	**Pinedale Array**	**88.43**	**43**	P	**P**	**12 24 03.2**	**+1.6**
comp=Z,0.5nm,0.6s,baz=193,slow=3.4,SNR=5.5							
comp=Z,0.5nm,0.6s							
VNA3	**Neumayer Olymp**	**88.52**	**176**	P	**P**	**12 24 00.8**	**-0.5**
BVAR	**Borovoye Array**	**118.99**	**320**	PKP	**PKiKP**	**12 29 53.8**	**+0.1**
comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=3.5							
AKASG	**Malin Array Be**	**142.82**	**332**	PKP	**PKPdf**	**12 30 36.3**	**-2.1**
comp=Z,1.8nm,0.5s,baz=40,slow=4.0,SNR=9.5							

*IDC **14** 12:15:27.4±0.6,4°.27N×32°.54W,h0km,mb4.2/18, mbtmp4.2/19,ML3.8/1,MS3.7/56,Error ellipse: s-maj=23.5km s-min=15.0km az=136.0*
*GCMT **14** 12:15:30.0±0.4,4°.35N±0°.05×32°.45W±0°.03,h24km±1km, MW4.9/78,Moment Tensor Solution. s18,c18; s78,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.55±.20; Mθθ0.33±.12; Mφφ2.22±.13; Mrθ0.32±.19; Mrφ-0.19±.08; Mθφ-0.33±.16; Best double couple: M0 2.43600×10^16 NP1:φ348.00000°,δ50.00000°,λ-97.00000°. NP2: φ180.00000°,δ41.00000°,λ-82.00000°. Principal axes: T 2.2670, Plg4.0000°, Azm84.0000°; N 0.3420, Plg6.0000°, Azm353.0000°; P -2.6050, Plg83.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 14 12:15:28.7±0.6,**4°.12N**±0°.10×**32°.5W**±0°.1,**h10**km,**n67,** σ1§**36**/23,**mb4.2**/18,**MS3.7**/54,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.44**	**199**	Pn	**Pn**	**12 17 59.9**	**+1.3**
0.8nm,0.3s,baz=193,slow=3.7,SNR=1.3							
RCBR				Sn	**Sn**	**12 19 51.7**	**-4.2**
0.4nm,0.3s,baz=84,slow=7.7,SNR=1.6							
RCBR				LR	LR	12 21 04.3	
comp=Z,406nm,21.6s,baz=148,slow=32							
12nm,0.8s							
BBTS	**Babate**	**18.92**	**55**	LR	LR	12 25 23.3	
comp=Z,319nm,18.4s,baz=244,slow=32							
MDP	**Montagnes des**	**20.07**	**274**	LR	LR	12 26 28.5	
comp=Z,143nm,21.0s,baz=99,slow=33							
H10N3	**ASCENSION HYDR**	**21.56**	**123**	T	T	12 42 52.2	
baz=303,slow=75,SNR=242							
H10N2	**ASCENSION HYDR**	**21.57**	**123**	T	T	12 42 52.5	
baz=303,slow=75,SNR=333							
H10N1	**ASCENSION HYDR**	**21.58**	**123**	T	T	12 42 53.7	
baz=303,slow=75,SNR=278							
H10S3	**ASCENSION HYDR**	**22.05**	**126**	T	T	12 43 23.9	
baz=303,slow=74,SNR=68							
H10S2	**ASCENSION HYDR**	**22.07**	**126**	T	T	12 43 25.2	
baz=277,slow=74,SNR=29							
BDFB	**Brasilia**	**24.91**	**218**	LR	LR	12 29 48.8	
comp=Z,171nm,20.1s,baz=313,slow=34							
DBIC	**Dimbokro**	**27.67**	**84**	P	**P**	**12 21 18.5**	**+1.4**
3.1nm,0.9s,baz=280,slow=9.7,SNR=1.7							
DBIC				LR	LR	12 30 17.0	
comp=Z,147nm,18.5s,baz=272,slow=32							
3.1nm,0.9s							
KOWA	**Kowa**	**29.93**	**68**	P	**P**	**12 21 37.9**	**+0.7**
0.7nm,0.3s,baz=270,slow=7.8,SNR=2.0							
KOWA				LR	LR	12 32 18.4	
comp=Z,498nm,19.3s,baz=204,slow=34							
0.7nm,0.3s							
SIV	**San Ignacio**	**34.59**	**234**	LR	LR	12 36 03.2	
comp=Z,332nm,18.7s,baz=98,slow=36							
TORD	**Torodi Ar. Bea**	**34.97**	**73**	P	**P**	**12 22 19.8**	**-1.6**
4.5nm,1.0s,baz=265,slow=8.1,SNR=10							
TORD				LR	LR	12 34 42.7	
comp=Z,222nm,19.8s,baz=240,slow=33							
4.5nm,1.0s							
SJG	**San Juan**	**35.70**	**296**	LR	LR	12 33 26.1	
comp=Z,113nm,19.4s,baz=108,slow=30							
SDV	**Santo Domingo**	**38.13**	**279**	P	**P**	**12 22 48.5**	**-0.2**
2.8nm,0.3s,baz=180,slow=6.1,SNR=3.7							
SDV				LR	LR	12 38 41.9	
comp=Z,56nm,19.6s,baz=112,slow=37							
2.8nm,0.3s							
CPUP	**Villa Florida**	**38.64**	**217**	P	**P**	**12 22 53.9**	**+1.4**
1.5nm,0.7s,baz=78,slow=9.3,SNR=3.0							
CPUP				LR	LR	12 38 14.1	
comp=Z,183nm,20.5s,baz=39,slow=35							
1.5nm,0.7s							
MDT	**Midelt**	**38.68**	**39**	LR	LR	12 37 21.7	
comp=Z,152nm,20.7s,baz=220,slow=34							
LPAZ	**La Paz**	**40.62**	**239**	P	**P**	**12 23 10.2**	**+0.3**
1.4nm,0.9s,baz=14,slow=10,SNR=4.4							
LPAZ				LR	LR	12 39 10.8	
comp=Z,136nm,20.7s,baz=108,slow=35							
1.4nm,0.9s							
ROSC	**El Rosal**	**41.66**	**273**	LR	LR	12 41 21.9	
comp=Z,221nm,18.1s,baz=78,slow=37							
ESDC	**Sonseca Array**	**43.82**	**32**	LR	LR	12 39 04.4	
comp=Z,46nm,19.3s,baz=198,slow=32							
LVC	**Limon Verde**	**44.37**	**232**	LR	LR	12 43 06.6	
comp=Z,112nm,19.2s,baz=56,slow=37							
NNA	**Nana**	**46.87**	**249**	LR	LR	12 43 32.8	
comp=Z,120nm,19.1s,baz=76,slow=36							
ATAH	**Atahualpa**	**47.12**	**256**	LR	LR	12 44 14.2	
comp=Z,196nm,18.4s,baz=71,slow=37							
KEST	**Kesra**	**49.78**	**45**	LR	LR	12 45 35.5	
comp=Z,135nm,19.4s,baz=266,slow=36							
TSUM	**Tsumeb**	**54.47**	**11**	LR	LR	12 42 44.9	
comp=Z,112nm,21.5s,baz=326,slow=30							
DAVOX	**Davos/Dischmat**	**56.08**	**34**	LR	LR	12 45 46.2	
comp=Z,39nm,21.6s,baz=81,slow=32							
EKA	**Eskdalemuir Ar**	**56.27**	**20**	P	**P**	**12 25 08.8**	**-0.5**
0.9nm,0.5s,baz=205,slow=6.3,SNR=2.3							
EKA				LR	LR	12 47 11.4	
comp=Z,57nm,18.5s,baz=185,slow=34							
0.9nm,0.5s							
PLCA	**Paso Flores**	**56.58**	**214**	LR	LR	12 49 07.3	
comp=Z,104nm,20.3s,baz=46,slow=36							
TKL	**Tuckaleechee C**	**56.63**	**311**	LR	LR	12 43 58.4	
comp=Z,80nm,21.4s,baz=123,slow=30							
GERES	**GERESS Array B**	**59.38**	**34**	P	**P**	**12 25 31.7**	**+0.3**
1.4nm,0.9s,baz=241,slow=5.5,SNR=6.6							
1.4nm,0.9s							
VRAC	**Vranov**	**61.24**	**34**	P	**P**	**12 25 43.7**	**-0.3**
2.9nm,0.5s,baz=198,slow=7.1,SNR=2.0							
VRAC				LR	LR	12 49 42.5	
comp=Z,26nm,19.9s,baz=240,slow=34							
2.9nm,0.5s							
IDI	**Anoyia**	**61.29**	**52**	LR	LR	12 52 24.0	
comp=Z,57nm,21.3s,baz=265,slow=36							
SUR	**Sutherland**	**62.24**	**130**	LR	LR	12 45 56.3	
comp=Z,58nm,21.1s,baz=344,slow=29							
CMIG	**Matias Romero**	**62.38**	**287**	LR	LR	12 53 52.9	
comp=Z,30nm,18.7s,baz=110,slow=37							
LSZ	**Lusaka**	**63.12**	**109**	LR	LR	12 49 10.6	
comp=Z,43nm,18.4s,baz=159,slow=32							
MBAR	**Mbarara**	**63.39**	**93**	LR	LR	12 51 39.9	
comp=Z,100nm,18.4s,baz=82,slow=34							
LBTB	**Lobatse**	**63.40**	**120**	LR	LR	12 47 59.7	
comp=Z,76nm,21.0s,baz=259,slow=31							
BOSA	**Boshof**	**64.31**	**124**	P	**P**	**12 26 05.8**	**+0.8**
4.5nm,1.0s,baz=327,slow=4.7,SNR=4.1							
BOSA				LR	LR	12 48 36.8	
comp=Z,58nm,20.7s,baz=329,slow=31							
4.5nm,1.0s							
FRB	**Frobisher Bay**	**64.99**	**343**	LR	LR	12 49 50.5	
comp=Z,33nm,21.0s,baz=81,slow=32							
MLR	**Muntele Rosu**	**65.32**	**41**	P	**P**	**12 26 11.3**	**0.0**
9.2nm,1.1s,baz=348,slow=4.6,SNR=5.4							
MLR				LR	LR	12 52 06.2	
comp=Z,61nm,21.9s,baz=281,slow=34							
9.2nm,1.1s							
NOA	**NORSAR Array B**	**65.60**	**22**	P	**P**	**12 26 12.3**	**-0.4**
1.5nm,0.9s,baz=227,slow=6.5,SNR=3.3							
NOA				LR	LR	12 53 15.4	
comp=Z,26nm,18.6s,baz=220,slow=35							
1.5nm,0.9s							
HFS	**Hagfors**	**65.97**	**23**	LR	LR	12 52 32.7	
comp=Z,18nm,20.0s,baz=243,slow=34							
EIL	**Elat**	**68.43**	**60**	LR	LR	12 57 24.2	
comp=Z,155nm,18.3s,baz=240,slow=37							
JMIC	**Jan Mayen**	**68.53**	**8**	LR	LR	12 50 35.6	
comp=Z,17nm,20.9s,baz=220,slow=31							
BRTR	**Keskin Array B**	**69.13**	**49**	P	**P**	**12 26 35.8**	**+0.2**
2.0nm,1.0s,baz=265,slow=6.7,SNR=4.5							
BRTR				LR	LR	12 58 46.1	
comp=Z,53nm,19.0s,baz=297,slow=38							
2.0nm,1.0s							
AKASG	**Malin Array Be**	**69.19**	**37**	P	**P**	**12 26 34.2**	**-1.3**
0.9nm,0.7s,baz=248,slow=7.1,SNR=9.6							
AKASG				LR	LR	12 56 55.3	
comp=Z,21nm,18.8s,baz=226,slow=36							
0.9nm,0.7s							
MMAI	**Mount Meron Ar**	**69.30**	**56**	LR	LR	13 00 20.1	
comp=Z,30nm,18.7s,baz=157,slow=39							
FINES	**FINESS Array B**	**71.80**	**26**	P	**P**	**12 26 49.2**	**-2.1**
3.7nm,1.1s,baz=224,slow=5.8,SNR=2.5							
3.7nm,1.1s							
ANMO	**Albuquerque**	**74.48**	**305**	LR	LR	12 56 36.2	
comp=Z,62nm,19.8s,baz=87,slow=33							
ATD	**Arta Tunnel**	**74.88**	**79**	LR	LR	12 58 24.6	
comp=Z,39nm,18.4s,baz=22,slow=34							
ARCES	**ARCESS Array B**	**75.37**	**18**	P	**P**	**12 27 12.3**	**+0.2**
1.8nm,0.9s,baz=242,slow=5.0,SNR=2.0							
ARCES				LR	LR	12 56 29.8	
comp=Z,15nm,20.2s,baz=308,slow=33							
1.8nm,0.9s							
GNI	**Garni**	**77.63**	**50**	LR	LR	13 02 38.2	
comp=Z,23nm,21.6s,baz=267,slow=36							
PDAR	**Pinedale Array**	**77.69**	**313**	LR	LR	12 57 05.9	
comp=Z,40nm,21.3s,baz=116,slow=32							
RPN	**Rapa Nui**	**80.18**	**242**	LR	LR	12 57 57.4	
comp=Z,38nm,20.9s,baz=34,slow=32							
BELG	**Belogornoye**	**80.74**	**38**	LR	LR	13 02 40.2	
comp=Z,23nm,18.7s,baz=117,slow=35							
ELK	**Elko**	**81.80**	**310**	LR	LR	13 02 27.4	
comp=Z,55nm,18.8s,baz=95,slow=34							
YKA	**Yellowknife Ar**	**82.70**	**332**	LR	LR	13 01 50.6	
comp=Z,34nm,18.8s,baz=302,slow=34							
NVAR	**Mina Array Bea**	**84.15**	**308**	P	**P**	**12 28 00.9**	**+0.1**
0.7nm,0.8s,baz=101,slow=7.7,SNR=3.8							
0.7nm,0.8s							
AKTO	**Aktyubinsk**	**87.20**	**40**	LR	LR	13 05 51.2	
comp=Z,18nm,21.8s,baz=268,slow=35							
ARU	**Arti**	**87.20**	**34**	LR	LR	13 05 27.5	
comp=Z,31nm,20.5s,baz=270,slow=34							
YBH	**Yreka Blue Hor**	**87.42**	**311**	LR	LR	13 06 31.9	
comp=Z,55nm,18.4s,baz=23,slow=35							
GEYT	**Alibeck**	**88.01**	**52**	LR	LR	13 12 17.9	
comp=Z,22nm,18.0s,baz=48,slow=39							
WSAR	**Wadi Sarin**	**89.46**	**67**	LR	LR	13 08 12.6	
comp=Z,62nm,22.0s,baz=302,slow=35							
QSPA	**South Pole Qui**	**94.17**	**180**	P	**P**	**12 28 49.2**	**+1.5**
1.9nm,1.0s,baz=228,slow=0.5,SNR=3.8							
1.9nm,1.0s							
BVAR	**Borovoye Array**	**94.46**	**36**	LR	LR	13 13 03.4	
comp=Z,26nm,18.3s,baz=297,slow=37							
STKA	**Stephens Creek**	**151.85**	**169**	PKPbc	**PKPbc**	**12 35 24.9**	**+0.3**
1.6nm,0.7s,baz=225,slow=1.4,SNR=4.1							
ASAR	**Alice Springs**	**156.57**	**147**	PKP	**PKPdf**	**12 35 24.0**	**-1.0**
0.6nm,0.9s,baz=195,slow=2.9,SNR=3.2							
ASAR				PKPab	**PKPab**	**12 35 54.2**	**+0.5**
1.3nm,1.0s,baz=230,slow=5.7,SNR=4.8							

*WEL **14** 12:57:36.6±1.1,30°S±7°×17°7E±1°5,h33km,M4.5/5, mB5.0/1,ML4.8/8,MLv4.5/5,Mw(mB)4.4/1,Error ellipse: s-maj=0.0km s-min=0.0km az=105.3*
ISC 14 12:57:41.0±3.5,**30°.1S**±0°.2×**177°.8E**±0°.3,**h35**km,**n15,** σ2§**43**/24,**North of New Zealand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.84**	**78**	P	**Pn**	**12 58 38.5**	**+0.9**
MXZ	**Matakaoa Point**	**7.43**	**177**	P	**Pn**	**12 59 26.1**	**-0.8**
HAZ	**Te Kaha**	**7.61**	**180**	P	**Pn**	**12 59 28.5**	**-0.9**
HAZ				S	**Sn**	**13 00 59.4**	**+5.0**
WMGZ	**Waiomatatini S**	**7.69**	**176**	P	**Pn**	**12 59 26.5**	**-4.0**
WMGZ				S	**Sn**	**13 00 56.3**	**-0.1**
PKGZ	**Pakihiroa**	**7.75**	**178**	P	**Pn**	**12 59 29.4**	**-2.0**
PKGZ				S	**Sn**	**13 00 58.1**	**+0.2**
RUGZ	**Raukumara Rang**	**7.82**	**181**	P	**Pn**	**12 59 31.6**	**-0.8**
RUGZ				S	**Sn**	**13 01 02.8**	**+3.1**
PUZ	**Puketiti**	**7.94**	**177**	P	**Pn**	**12 59 30.9**	**-3.0**
PUZ				S	**Sn**	**13 00 59.3**	**-3.1**
URZ	**Urewera**	**8.13**	**184**	P	**Pn**	**12 59 35.6**	**-0.9**
URZ				S	**Sn**	**13 01 09.8**	**+2.6**
MWZ	**Matawai**	**8.19**	**181**	P	**Pn**	**12 59 36.6**	**-0.7**
MWZ				S	**Sn**	**13 01 08.8**	**+0.1**
CNGZ	**Carnagh Statio**	**8.35**	**178**	P	**Pn**	**12 59 37.6**	**-1.9**
MUGZ	**Murupara**	**8.37**	**185**	P	**Pn**	**12 59 39.1**	**-0.8**
BKZ	**Black Stump Fm**	**9.08**	**186**	P	**Pn**	**12 59 46.9**	**-2.7**
BKZ				S	**Sn**	**13 01 34.6**	**+3.9**
ARHZ	**Aropaoanui**	**9.14**	**184**	P	**Pn**	**12 59 47.6**	**-2.7**
ARHZ				S	**Sn**	**13 01 32.2**	**+0.3**
KWHZ	**Kaweka Forest**	**9.34**	**186**	P	**Pn**	**12 59 51.2**	**-2.0**
KWHZ				S	**Sn**	**13 01 38.4**	**+1.3**
PXZ	**Pawanui**	**9.91**	**184**	P	Pn	12 59 55.2	-5.7

*IDC **14** 12:59:03.1±1.3,59°.82N×151°.98W,h54km±16km,mb3.7/16, mbtmp4.0/20,ML4.2/5,MS3.0/3,Error ellipse: s-maj=16.5km s-min=8.8km az=115.0*
*NEIC **14** 12:59:04.7±1.0,59°.77N±0°.05×151°.79W±0°.08,h67km±6km, Error ellipse: s-maj=7.8km s-min=5.5km az=165.0*
*NEIC **14** 12:59:04.6,59°.77N×151°.77W,h67km,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr0.32; Mθθ-1.09; Mφφ0.77; Mrθ-0.55; Mθφ-0.04; Mφr0.70; Fault plane solution: M0 1.32000×10^15 NP1:φ309.13000°, δ79.64000°,λ135.44000°. NP2:φ49.18000°,δ46.35000°, λ14.40000°. Principal axes: T 1.3373, Plg38.0000°, Azm259.0000°; N -0.0410, Plg44.0000°, Azm119.0000°; P -1.2963, Plg21.0000°, Azm6.0000°;*
*ANF **14** 12:59:04.8±0.1,59°.78N×151°.79W,h66km±1km,ML4.3/74, ML4.3/75 Error ellipse: s-maj=1.2km s-min=0.9km az=168.0*
*AEIC **14** 12:59:05±1.1,59°.80N±0°.05×151°.78W±0°.06,h63km±5km, ML4.0,mb4.4/2(NEIC),ML4.1/152(NEIC),Mwr4.0/13(NEIC), Error ellipse: s-maj=6.8km s-min=4.3km az=175.0*
ISC 14 12:59:04.7±0.6,**59°.78N**±0°.03×**151°.77W**±0°.03,**h68**km±5km, **n325,** σ0§**64**/351,**mb4.0**/19,**1C,Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOM	**Homer**	**0.14**	**151**		**Pn**	**12 59 14.9**	**+0.1**
HOM				Sn	**Sn**	**12 59 22.7**	**+0.5**
HOM	**Homer**	**0.14**	**151**	P	**Pn**	**12 59 14.9**	**+0.1**
baz=336,SNR=126							
HOM				S	**Sn**	**12 59 22.7**	**+0.5**
baz=336							
CNPM	**China Poot**	**0.37**	**133**		**Pn**	**12 59 16.4**	**+0.1**
CNPM				Sn	**Sn**	**12 59 24.6**	**-0.1**
BRLK	**Bradley Lake**	**0.45**	**92**		**Pn**	**12 59 16.8**	**-0.2**
BRLK				Sn	**Sn**	**12 59 25.4**	**-0.5**
BRLK				IAML		12 59 26.5	
comp=N,18μm,0.5s							
BRLK				IAML		12 59 26.5	
comp=E,22μm,0.5s							
BRSE	**Bradley Lake S**	**0.52**	**94**	P	**Pn**	**12 59 17.7**	**+0.1**
baz=277,SNR=1000							
BRSE				S	**Sn**	**12 59 27.0**	**-0.1**
baz=277							
O20K	**Slope Mountain**	**0.53**	**306**	P	**Pn**	**12 59 17.4**	**-0.3**
baz=123,SNR=257							
O20K				S	**Sn**	**12 59 26.9**	**-0.3**
baz=123							
P19K	**Oil Pt**	**0.75**	**261**		**Pn**	**12 59 20.2**	**0.0**
P19K				Sn	**Sn**	**12 59 31.5**	**0.0**
P19K				IAML		12 59 32.5	
comp=E,13μm,0.5s							
P19K	**Oil Pt**	**0.75**	**261**	P	**Pn**	**12 59 20.1**	**0.0**
baz=78,SNR=275							
P19K				S	**Sn**	**12 59 31.6**	**+0.2**
baz=78							
RSO	**Redoubt South**	**0.84**	**325**		**Pn**	**12 59 21.0**	**-0.4

baz=90
SUA Susitna One 1.76 16 Pn 12 59 33.5 +0.3
SUA IAML 12 59 59.7
comp=N,2µm,0.7s
SUA IAML 13 00 14.8
comp=E,2µm,0.9s
SUA Susitna One 1.76 16 P Pn 12 59 33.6 +0.3
baz=197,SNR=165
SUA S Sn 12 59 55.5 +0.7
baz=197
P18K Big Mountain, 1.80 259 Pn 12 59 33.2 -0.4
P18K IAML 12 59 58.7
comp=N,2µm,0.7s
P18K Big Mountain, 1.80 259 P Pn 12 59 33.2 -0.4
baz=75,SNR=42
P18K S Sn 12 59 54.7 -0.9
baz=75
Q18K Katmai Hardscr 2.01 237 P Pn 12 59 36.6 0.0
baz=54,SNR=44
Q18K S Sn 13 00 01.1 +0.3
baz=54
PWL Port Wells 2.02 56 Pn 12 59 36.6 0.0
PWL Port Wells 2.02 56 P Pn 12 59 36.6 0.0
baz=240,SNR=196
KDAK Kodiak Island 2.05 192 P Pn 12 59 36.8 -0.1
comp=N,18nm,0.3s,baz=59,slow=6.7,SNR=472
KDAK S Sn 13 00 00.1 -1.3
comp=N,225nm,0.3s,baz=279,slow=23,SNR=10
KDAK LR LR 13 00 37.6
comp=N,250nm,20.9s,baz=16,slow=46
comp=N,105nm,0.5s
KDAK Kodiak Island 2.05 192 Pn 12 59 36.7 -0.1
KDAK IAML 13 00 12.1
comp=N,882nm,0.6s
KDAK IAML 13 00 13.6
comp=N,1µm,0.7s
KDAK Kodiak Island 2.05 192 P Pn 12 59 36.8 -0.1
baz=11
M22K Willow 2.14 22 Pn 12 59 38.7 +0.6
M22K Willow 2.14 22 P Pn 12 59 38.7 +0.6
baz=203,SNR=151
SKT Skwentna 2.21 3 Pn 12 59 39.8 +0.6
SKT IAML 13 00 13.9
comp=N,973nm,0.4s
SKT IAML 13 00 25.9
comp=E,1µm,0.9s
SKT Skwentna 2.21 3 P Pn 12 59 39.8 +0.6
baz=183,SNR=255
M20K Styx River 2.21 343 Pn 12 59 39.8 +0.5
M20K Styx River 2.21 343 P Pn 12 59 39.8 +0.5
baz=162
P23K Montague Islan 2.21 82 P Pn 12 59 39.7 +0.6
baz=267
PMR Palmer 2.24 34 Pn 12 59 39.3 -0.1
PMR IAML 13 00 11.1
comp=E,783nm,0.4s
PMR Palmer 2.24 34 P Pn 12 59 39.3 -0.1
baz=217,SNR=168
PMR S Sn 13 00 05.6 -0.3
baz=217
N18K Kilae Creek 2.24 296 Pn 12 59 39.3 -0.3
N18K Kilae Creek 2.24 296 P Pn 12 59 39.3 -0.3
baz=112,SNR=219
N18K S Sn 13 00 05.3 -0.9
baz=112
SVW2 Sparrevohn 2.31 307 Pn 12 59 39.9 -0.5
SVW2 IAML 13 00 07.5
comp=E,793nm,0.8s
KNK Knik Glacier 2.31 43 Pn 12 59 40.6 +0.1
KNK Knik Glacier 2.31 43 P Pn 12 59 40.6 +0.1
baz=227,SNR=154
KNK S Sn 13 00 07.9 0.0
baz=227
GHO Glory Hole Cre 2.44 34 Pn 12 59 42.2 0.0
GHO IAML 13 00 18.0
comp=N,1µm,0.8s
M19K Big River Lodg 2.49 330 Pn 12 59 43.0 +0.1
M19K IAML 13 00 12.5
comp=E,632nm,0.8s
M19K Big River Lodg 2.49 330 P Pn 12 59 43.1 +0.2
baz=148
M19K S Sn 13 00 11.9 -0.2
baz=148
GLI Glacier Island 2.58 63 Pn 12 59 42.8 -1.3
GLI IAML 13 00 27.4
comp=N,964nm,1.0s
GLI IAML 13 00 29.9
comp=E,1µm,0.5s
GLI Glacier Island 2.58 63 P Pn 12 59 42.7 -1.3
baz=247,SNR=22
Q17K Contact Creek 2.61 236 P Pn 12 59 45.1 +0.4
baz=52,SNR=13
SML Sawmill 2.64 38 Pn Pn 12 59 45.0 -0.1
SML IAML 13 00 26.3
comp=N,1µm,0.9s
SML IAML 13 00 34.4
comp=E,783nm,0.5s
SML Sawmill 2.64 38 P Pn 12 59 44.9 -0.1
baz=222,SNR=74
OHAK Old Harbor 2.69 198 Pn Pn 12 59 45.0 -0.5
OHAK IAML 13 00 16.4
comp=N,482nm,0.4s
OHAK Old Harbor 2.69 198 P Pn 12 59 45.0 -0.5
baz=16,SNR=20
O17K Koliganek Bris 2.69 272 P Pn 12 59 45.8 +0.2
baz=87,SNR=343
O17K S Sn 13 00 16.9 -0.1
baz=87
HIN Hinchinbrook I 2.71 75 Pn Pn 12 59 45.2 -0.7
HIN IAML 13 00 19.7
comp=N,660nm,0.7s
HIN IAML 13 00 37.3
comp=E,630nm,1.0s
CUT Chulitna 2.73 15 Pn 12 59 46.8 +0.7
CUT Chulitna 2.73 15 P Pn 12 59 46.9 +0.7
baz=196,SNR=42
Q16K King Salmon 2.74 248 P Pn 12 59 47.0 +0.7
baz=64,SNR=57
Q23K Middleton Isla 2.78 95 P Pn 12 59 47.1 +0.4
baz=280
FID Port Fidalgo 2.81 67 Pn 12 59 45.8 -1.5
FID IAML 13 00 19.8
comp=N,888nm,0.6s
FID IAML 13 00 19.9
comp=E,790nm,0.3s
M23K Glacier View 2.83 43 P Pn 12 59 47.5 0.0
baz=227,SNR=135
L19K White Mountain 2.84 329 Pn Pn 12 59 47.9 +0.2
L19K IAML 13 00 20.8
comp=E,721nm,0.4s
L19K IAML 13 00 20.8
comp=N,641nm,0.5s
L19K White Mountain 2.84 329 P Pn 12 59 47.9 +0.2
baz=147,SNR=163
L19K S Sn 13 00 20.0 -0.7
baz=147
L20K Farewell, AK 2.90 340 P Pn 12 59 48.7 +0.2
baz=158,SNR=73
SCM Sheep Creek Mo 3.00 45 Pn 12 59 49.9 +0.1
SCM IAML 13 00 42.9
comp=N,807nm,0.9s
SCM Sheep Creek Mo 3.00 45 P Pn 12 59 50.5 +0.6
baz=229,SNR=190
EYAK Cordova Ski Ar 3.11 73 Pn 12 59 50.2 -1.0
EYAK Cordova Ski Ar 3.11 73 P Pn 12 59 49.8 -1.4
baz=259
PPLA Purkeypile 3.13 357 Pn 12 59 52.3 +0.6
PPLA Purkeypile 3.13 357 P Pn 12 59 52.4 +0.6
baz=176,SNR=139
O16K Kokwok River B 3.21 269 P Pn 12 59 52.8 +0.2
baz=84,SNR=110
P16K Nushagak River 3.27 259 P Pn 12 59 53.9 +0.5
baz=74,SNR=11
DIV Divide 3.27 63 Pn 12 59 53.2 -0.3
KLU Klutina 3.35 57 Pn 12 59 54.6 -0.1
KLU IAML 13 00 34.1
comp=E,366nm,0.4s
KLU IAML 13 00 39.3
comp=N,647nm,0.4s
KLU Klutina 3.35 57 P Pn 12 59 54.6 -0.1
baz=242,SNR=143
WAT6 Susitna Watana 3.42 33 P Pn 12 59 56.2 +0.5
baz=217,SNR=219
WAT1 Susitna Watana 3.43 26 P Pn 12 59 56.4 +0.7
baz=208
SII Sitkinak Islan 3.47 203 Pn 12 59 56.4 +0.2
SII IAML 13 00 57.5
comp=N,593nm,0.7s
SII IAML 13 00 58.9
comp=E,558nm,0.8s
SII Sitkinak Islan 3.47 203 P Pn 12 59 56.2 -0.1
baz=20
N16K Nishlik Lake 3.57 284 P Pn 12 59 58.0 +0.4
baz=98,SNR=170
M24K Tolsona, Glenn 3.59 47 Pn 12 59 58.4 +0.4
M24K Tolsona, Glenn 3.59 47 P Pn 12 59 58.3 +0.4
baz=232,SNR=238
RAGM Ragged Mountai 3.61 77 Pn 12 59 58.8 +0.7
RAGM IAML 13 00 42.4
comp=E,452nm,0.4s
CAST Castle Rocks 3.66 358 Pn 12 59 58.8 0.0
CAST Castle Rocks 3.66 358 P Pn 12 59 58.7 -0.1
baz=178,SNR=131
KAIM Kayak Island 3.71 85 Pn Pn 12 59 59.7 +0.2
KAIM IAML 13 00 46.9
comp=N,216nm,0.6s
KAIM Kayak Island 3.71 85 P Pn 13 00 00.6 +1.0
baz=271
TRF Thorofare Moun 3.75 10 Pn 13 00 00.5 +0.3
TRF IAML 13 01 01.2
comp=E,287nm,0.7s
TRF Thorofare Moun 3.75 10 P Pn 13 00 00.3 +0.1
baz=192,SNR=237
BMRM Bremner River 3.75 68 Pn 12 59 59.2 -1.0
BMRM Bremner River 3.75 68 P Pn 12 59 59.4 -0.8
baz=255
R16K Pilot Point 3.75 236 P Pn 13 00 00.6 +0.6
baz=51
K20K Telida 3.75 344 Pn Pn 13 00 00.5 +0.4
K20K Telida 3.75 344 P Pn 13 00 00.7 +0.5
baz=162,SNR=54
TTA Tatalina 3.76 329 Pn Pn 13 00 00.1 -0.1
TTA Tatalina 3.76 329 P Pn 13 00 00.1 -0.1
baz=145,SNR=20
HMT Hamilton 3.81 78 Pn 13 00 01.2 +0.4
HMT IAML 13 00 46.3
comp=N,413nm,0.6s
KTH Kantishna Hill 3.81 6 Pn Pn 13 00 01.2 +0.3
KTH IAML 13 01 10.2
comp=N,393nm,1.0s
KTH IAML 13 01 23.4
comp=E,300nm,1.1s
RND Reindeer 3.90 20 Pn Pn 13 00 02.8 +0.6
RND IAML 13 01 07.4
comp=E,205nm,0.8s
DHY Denali Highway 3.92 31 Pn 13 00 03.0 +0.5
DHY IAML 13 00 49.5
comp=E,402nm,0.5s
DHY IAML 13 01 03.4
comp=N,259nm,0.9s
DHY Denali Highway 3.92 31 P Pn 13 00 03.1 +0.5
baz=215,SNR=196
N25K Chitina, Valde 3.98 59 Pn 13 00 02.9 -0.3
N25K IAML 13 01 08.9
comp=N,217nm,0.7s
N25K IAML 13 01 10.6
comp=E,206nm,1.1s
N25K Chitina, Valde 3.98 59 P Pn 13 00 03.0 -0.2
baz=246,SNR=22
SUCK Suckling Hills 4.04 82 Pn Pn 13 00 04.5 +0.6
BERG Berg Lake 4.09 78 Pn 13 00 04.6 -0.1
BERG IAML 13 00 54.2
comp=E,403nm,0.5s
CHUM Lake Minchumin 4.13 357 P Pn 13 00 05.3 +0.2
baz=176,SNR=42
HARP HAARP 4.15 48 P Pn 13 00 05.8 +0.3
baz=234,SNR=33
MCK McKinley 4.19 18 Pn Pn 13 00 06.8 +0.7
MCK IAML 13 01 17.2
comp=N,227nm,1.2s
MCK IAML 13 01 19.1
comp=E,187nm,0.7s
MCK McKinley 4.19 18 P Pn 13 00 06.7 +0.7
baz=200,SNR=325
GLB Gilahina Butte 4.26 64 Pn 13 00 06.7 -0.4
GLB IAML 13 01 16.8
comp=E,176nm,0.8s
GLB IAML 13 01 17.4
comp=N,155nm,0.9s
BPAW Bear Paw Mtn. 4.35 5 Pn 13 00 07.5 -0.8
BPAW Bear Paw Mtn. 4.35 5 P Pn 13 00 07.8 -0.4
baz=185,SNR=113
VRDI Verde Repeater 4.36 67 Pn 13 00 08.1 -0.5
VRDI IAML 13 00 57.3
comp=N,159nm,0.6s
PAX Paxson 4.41 41 Pn 13 00 09.3 +0.2
PAX Paxson 4.41 41 P Pn 13 00 09.4 +0.3
baz=226,SNR=258
CHIR Chirikof Islan 4.47 209 Pn Pn 13 00 09.2 -0.7
CHIR IAML 13 00 45.4
comp=E,235nm,4.3s
CHIR IAML 13 01 21.6
comp=N,225nm,0.7s
CHIR Chirikof Islan 4.47 209 P Pn 13 00 09.5 -0.4
baz=26
SNH Sunshine Point 4.51 81 Pn Pn 13 00 09.6 -0.8
SNH IAML 13 01 04.0
comp=N,119nm,0.5s
SNH IAML 13 01 05.5
comp=E,166nm,0.6s
WAX Waxell Ridge 4.51 78 Pn 13 00 09.8 -0.7
WAX IAML 13 01 04.1
comp=E,293nm,0.5s
BWN Browne 4.54 13 Pn 13 00 10.3 -0.5
J20K Nowinta River 4.55 347 Pn 13 00 10.6 -0.3
J20K Nowinta River 4.55 347 P Pn 13 00 11.3 +0.3
baz=165,SNR=73
TGL Tana Glacier 4.56 74 Pn 13 00 10.6 -0.6
TGL IAML 13 01 02.2
comp=E,148nm,0.4s
TGL IAML 13 01 03.0
comp=N,114nm,0.3s
MCARA McCarthy VSAT 4.61 66 Pn 13 00 11.5 -0.2
MCARA IAML 13 01 32.7
comp=N,278nm,0.8s
MCARA IAML 13 01 45.8
comp=E,239nm,1.0s
MCARA McCarthy VSAT 4.61 66 P Pn 13 00 11.5 -0.2
baz=254
ISLE Juniper Island 4.78 76 Pn 13 00 14.4 +0.1
ISLE IAML 13 01 10.7
comp=N,198nm,0.6s
ISLE IAML 13 01 12.2
comp=E,128nm,0.6s
K24K Donnelly Dome 4.94 33 P Pn 13 00 16.8 +0.5
baz=218
MESA MESA 4.95 81 Pn 13 00 17.7 +1.1
MESA IAML 13 01 14.2
comp=E,176nm,0.4s
MESA MESA 4.95 81 P Pn 13 00 16.8 +0.2
baz=270,SNR=18
NEA2 Nenana 4.99 14 Pn 13 00 16.4 -0.6
NEA2 Nenana 4.99 14 P Pn 13 00 16.6 -0.4
baz=196,SNR=66
MENT Mentasta 5.00 47 Pn 13 00 17.5 +0.3
MENT IAML 13 01 43.0
comp=E,167nm,0.7s
MENT IAML 13 01 52.6
comp=N,206nm,0.7s
M26K Nabesna, AK 5.00 55 Pn 13 00 17.6 +0.4
M26K IAML 13 01 41.9
comp=N,114nm,0.7s
M26K Nabesna, AK 5.00 55 P Pn 13 00 17.2 0.0
baz=242,SNR=33
WRH Wood River Hil 5.02 19 Pn 13 00 17.1 -0.2
WRH IAML 13 01 57.8
comp=N,105nm,0.8s
YAH Yahtse 5.06 79 Pn 13 00 17.7 -0.4
YAH IAML 13 01 16.1
comp=E,126nm,0.6s
RIDG Independent Ri 5.16 37 Pn 13 00 19.9 +0.7
RIDG IAML 13 01 35.8
comp=N,183nm,1.3s
RIDG Independent Ri 5.16 37 P Pn 13 00 19.9 +0.7
baz=223,SNR=35
HDA Harding Lake 5.17 24 Pn 13 00 18.6 -0.7
HDA IAML 13 01 19.0
comp=E,158nm,0.3s
HDA Harding Lake 5.17 24 P Pn 13 00 20.1 +0.7
baz=208,SNR=230
BARN Barnard Glacie 5.17 71 Pn 13 00 20.6 +0.9
BARN IAML 13 01 21.4
comp=N,94nm,0.6s
BARN IAML 13 01 21.4
comp=E,74nm,0.6s
L26K Log Cabin Wild 5.19 48 Pn 13 00 19.6 -0.1
L26K IAML 13 01 56.4
comp=N,93nm,0.6s
L26K IAML 13 01 59.1
comp=E,122nm,0.6s
L26K Log Cabin Wild 5.19 48 P Pn 13 00 19.8 +0.1
baz=235,SNR=23
CCB Clear Creek Bu 5.22 19 Pn 13 00 20.2 +0.1
CCB IAML 13 01 49.4
comp=E,83nm,0.8s
MLY Manley 5.29 5 Pn Pn 13 00 21.8 +0.7
MLY Manley 5.29 5 P Pn 13 00 20.9 -0.2
baz=186,SNR=93
CTG Chitna Glacier 5.31 73 P Pn 13 00 22.2 +0.7
baz=262,SNR=7.2
CTGM Chitina Glacie 5.32 73 Pn 13 00 21.9 +0.4
CTGM IAML 13 01 22.0
comp=N,69nm,0.4s
DOT Dot Lake 5.34 40 Pn 13 00 21.8 +0.1
TABL Table Mountain 5.36 78 Pn 13 00 23.0 +0.8
I21K Tanana 5.42 359 Pn 13 00 24.3 +1.5
I21K Tanana 5.42 359 P Pn 13 00 23.7 +0.9
baz=179,SNR=150
TCOL CIGO, UAF Yank 5.43 18 Pn 13 00 23.1 +0.3
TCOL CIGO, UAF Yank 5.43 18 P Pn 13 00 23.2 +0.3
baz=202,SNR=296
COLA College 5.43 18 Pn 13 00 23.1 +0.1
COLA College 5.43 18 P Pn 13 00 23.0 +0.1
baz=202
MDM Murphy Dome 5.45 16 Pn 13 00 23.5 +0.2
M27K Edge Creek, AK 5.46 57 Pn 13 00 23.7 +0.3
M27K Edge Creek, AK 5.46 57 P Pn 13 00 23.5 0.0
baz=246,SNR=9.0
LOGN Logan Glacier 5.46 74 Pn 13 00 23.3 -0.2
I23K Minto, Yukon-K 5.50 11 Pn 13 00 23.7 -0.2
I23K Minto, Yukon-K 5.50 11 P Pn 13 00 24.1 +0.2
baz=193,SNR=158
IL31 5.50 22 Pn 13 00 23.9 0.0
ILAR Eielson Array 5.50 22 P Pn 13 00 23.9 -0.1
comp=N,28nm,0.3s,baz=204,slow=14,SNR=845
ILAR S Sn 13 01 23.4 -2.4
comp=N,21nm,0.5s,baz=211,slow=28,SNR=6.1
ILAR Eielson Array 5.50 22 Pn 13 00 23.5 -0.5
GCSA Galena City Sc 5.53 337 P Pn 13 00 24.9 +0.7
baz=152,SNR=51
SCRK Sand Creek 5.59 38 Pn Pn 13 00 25.2 -0.1
SCRK Sand Creek 5.59 38 P Pn 13 00 25.1 -0.1
baz=225,SNR=29
J25K Salcha River, 5.70 29 Pn 13 00 26.9 +0.2
J25K Salcha River, 5.70 29 P Pn 13 00 26.8 +0.2
baz=215,SNR=109
POKR Poker Plat Res 5.72 19 Pn 13 00 26.7 -0.2
POKR Poker Plat Res 5.72 19 P Pn 13 00 26.8 -0.2
baz=203,SNR=41
L27K Beaver Creek, 5.80 51 Pn 13 00 28.2 +0.2
L27K Beaver Creek, 5.80 51 P Pn 13 00 28.0 0.0
baz=240,SNR=14
PCA Pinnacle 5.80 82 Pn 13 00 28.8 +0.7
PINM Pinnacle 5.80 82 P Pn 13 00 28.0 -0.1
baz=272
BCAR Beaver Creek A 5.82 51 Pn Pn 13 00 28.1 -0.2
O28M Mount Upton 5.85 75 P Pn 13 00 28.8 -0.2
baz=266,SNR=32
YUK3 Moose Creek 5.89 65 P Pn 13 00 29.4 -0.1
baz=255,SNR=7.4
BVCY Beaver Creek 5.91 59 P Pn 13 00 29.7 +0.1
baz=248
H21K Melozitna Rive 5.92 356 Pn Pn 13 00 29.0 -0.6
H21K Melozitna Rive 5.92 356 P Pn 13 00 29.0 -0.6
baz=175,SNR=91
J26L Joseph Creek 6.10 36 Pn 13 00 32.1 0.0
J26L Joseph Creek 6.10 36 P Pn 13 00 32.2 0.0
baz=223,SNR=118
YUK8 Steele Glacier 6.12 71 P Pn 13 00 33.3 +0.7
baz=261
BCPM Bancas Point 6.12 83 Pn 13 00 30.8 -1.6
H22K Ishtalitna Cre 6.14 2 P Pn 13 00 32.5 -0.1
baz=182,SNR=192
H23K Yukon River 6.15 9 Pn Pn 13 00 33.1 +0.3
H23K Yukon River 6.15 9 P Pn 13 00 33.2 +0.3
baz=191,SNR=82
K27K Chicken 6.25 43 Pn 13 00 33.8 -0.4
K27K Chicken 6.25 43 P Pn 13 00 33.9 -0.3
baz=232
PNL Peninsula 6.26 86 P Pn 13 00 34.7 +0.3
baz=277,SNR=28
IMAR Indian Mountai 6.29 353 Pn 13 00 34.3 -0.4
H24K Noodor Dome 6.34 15 Pn Pn 13 00 35.6 +0.3
H24K Noodor Dome 6.34 15 P Pn 13 00 35.5 +0.1
baz=198,SNR=43
PRP Porcupine Dome 6.44 24 Pn 13 00 37.0 +0.2
PRP Porcupine Dome 6.44 24 P Pn 13 00 37.2 +0.4
baz=210,SNR=45
SDPT Sand Point 6.45 230 Pn Pn 13 00 37.0 +0.1
SDPT Sand Point 6.45 230 P Pn 13 00 36.9 +0.1
baz=43
O29M Mount Kennedy 6.63 80 P Pn 13 00 39.8 +0.3
baz=271,SNR=15
YUK4 Talbot Arm 6.66 71 P Pn 13 00 40.6 +0.7
baz=262
YUK6 Outpost Mounta 6.75 74 P Pn 13 00 41.4 +0.1
baz=266,SNR=5.0
G21K Allakaket 6.81 354 P Pn 13 00 41.2 -0.6
baz=173,SNR=46
I26K Coal Creek Min 6.82 32 Pn 13 00 41.3 -0.6
I26K Coal Creek Min 6.82 32 P Pn 13 00 41.8 -0.2
baz=220,SNR=52
M29M Somme Creek 6.98 62 P Pn 13 00 44.2 0.0
baz=254,SNR=7.4
G23K Bananza Creek 7.00 6 P Pn 13 00 44.8 +0.4
baz=187,SNR=83
EGAK Eagle 7.04 40 Pn 13 00 45.0 0.0
EGAK Eagle 7.04 40 P Pn 13 00 44.9 0.0
baz=230,SNR=23
H25K Birch Creek 7.05 20 P Pn 13 00 45.5 +0.5
baz=205,SNR=12
P29M Windy Craggy 7.10 85 Pn Pn 13 00 46.1 +0.2
P29M Windy Craggy 7.10 85 P Pn 13 00 46.1 +0.2
baz=278,SNR=35
HYT Haines Junctio 7.17 75 Pn 13 00 47.4 +0.6
HYT Haines Junctio 7.17 75 P Pn 13 00 47.4 +0.6
baz=268
G22K Bettles 7.17 1 P Pn 13 00 47.2 +0.5
baz=181
G24K Hadweenzic Riv 7.21 14 P Pn 13 00 47.3 0.0
baz=198,SNR=17
DAWY Dawson 7.25 48 Pn Pn 13 00 48.0 +0.1
DAWY Dawson 7.25 48 P Pn 13 00 47.6 -0.2
baz=239,SNR=17
L29M L29M 7.34 57 P Pn 13 00 48.9 -0.2
baz=249
N30M Aishikik Lake 7.42 71 P Pn 13 00 49.6 -0.6
baz=264,SNR=9.6
FYU Fort Yukon 7.42 21 Pn Pn 13 00 50.2 +0.1
P30M Million Dollar 7.45 81 P Pn 13 00 51.2 +0.6
baz=274
G25K Bearman Lake 7.46 18 P Pn 13 00 50.4 -0.3
baz=203,SNR=21
I27K Kandik River 7.47 34 P Pn 13 00 50.9 0.0
baz=223,SNR=22
F21K Alatna River 7.51 355 P Pn 13 00 52.3 +1.0
baz=173,SNR=58
F22K John River 7.76 359 P Pn 13 00 55.3 +0.5
baz=178,SNR=7.6
PLBC Pleasant Camp 7.82 86 P Pn 13 00 56.1 +0.5
baz=279,SNR=9.9
O30N Mendenhall 7.86 76 P Pn 13 00 56.1 -0.1
baz=270
K29M Barlow Dome 7.88 53 P Pn 13 00 56.3 -0.2
baz=246
J29M Klondike Camp 7.89 48 Pn 13 00 56.8 +0.2
J29M Klondike Camp 7.89 48 P Pn 13 00 55.5 -1.1
baz=240
F24K Squaw Lake 7.96 11 P Pn 13 00 57.1 -0.4
baz=194,SNR=24
H27K Steamboat Moun 7.97 31 P Pn 13 00 57.1 -0.5
baz=221,SNR=8.7
FALS False Pass 8.00 237 Pn Pn 13 00 58.4 +0.4
G26K Porcupine Rive 8.04 23 P Pn 13 00 58.2 -0.3
baz=210,SNR=21
N31M Braeburn, Yuko 8.04 71 Pn 13 00 58.7 0.0
N31M Braeburn, Yuko 8.04 71 P Pn 13 00 58.7 0.0
baz=265
F25K Christian Rive 8.30 16 P Pn 13 01 01.8 -0.4

baz=202,SNR=14
BMAR Burnt Mountain 8.31 20 Pn Pn 13 01 01.7 -0.7
SKAG Skagway 8.34 85 Pn 13 01 03.6 +0.9
SKAG Skagway 8.34 85 P Pn 13 01 02.7 0.0
baz=279
I29M Ogilvie Camp, 8.35 42 Pn Pn 13 01 02.8 -0.1
I29M Ogilvie Camp, 8.35 42 P Pn 13 01 03.0 +0.1
baz=234,SNR=9.8
E23K Chandalar 8.37 6 P Pn 13 01 03.2 +0.1
baz=188,SNR=14
R31K City Hall, Gus 8.37 92 P Pn 13 01 02.9 -0.1
baz=286
G27K Doyon Strip 8.39 28 P Pn 13 01 02.5 -0.8
baz=218,SNR=20
E22K Anaktuvuk Pass 8.39 360 P Pn 13 01 05.1 +1.7
baz=180
E24K Your Creek 8.45 8 P Pn 13 01 04.2 0.0
baz=191,SNR=15
MAYO Mayo, Yukon 8.45 56 Pn Pn 13 01 02.3 -2.0
WHY Whitehorse 8.46 77 Pn 13 01 05.4 +1.0
WHY Whitehorse 8.46 77 P Pn 13 01 04.4 0.0
baz=272,SNR=9.1
F26K Sheenjek River 8.63 20 P Pn 13 01 05.9 -0.7
baz=207,SNR=13
M31M Drury Creek, Y 8.78 66 Pn Pn 13 01 06.2 -2.6
M31M Drury Creek, Y 8.78 66 P Pn 13 01 08.7 -0.1
baz=262
TOLK Toolik Lake Re 8.95 5 Pn Pn 13 01 11.5 +0.5
TOLK Toolik Lake Re 8.95 5 P Pn 13 01 12.0 +1.0
baz=187,SNR=14
R32K Eaglecrest 9.02 92 P Pn 13 01 12.7 +0.7
baz=287
JIS Juneau Island 9.09 92 Pn Pn 13 01 14.2 +1.3
P32M Atlin 9.13 83 P Pn 13 01 13.8 +0.2
baz=279
D23K Nanushuk River 9.24 2 P Pn 13 01 16.3 +1.4
baz=184,SNR=33
S32K Killisnoo 9.26 97 P Pn 13 01 15.3 +0.1
baz=292
FARO Faro, Yukon 9.27 67 P Pn 13 01 15.5 +0.1
baz=263
N32M Quiet Lake 9.33 73 P Pn 13 01 16.6 +0.4
baz=270
EPYK Eagle Plains 9.48 39 Pn 13 01 17.5 -0.8
EPYK Eagle Plains 9.48 39 P Pn 13 01 17.4 -0.8
baz=233
D24K Happy Valley 9.50 6 P Pn 13 01 19.1 +0.7
baz=189
P33M Teslin, Yukon 9.50 79 Pn Pn 13 01 18.1 -0.5
P33M Teslin, Yukon 9.50 79 P Pn 13 01 17.8 -0.9
baz=276
E27K Coleen River 9.53 24 P Pn 13 01 18.0 -1.0
baz=213
D25K Kavik River 9.85 11 P Pn 13 01 23.8 +0.4
baz=196
Q32M Nakina River 9.98 86 P Pn 13 01 25.3 0.0
baz=283
G30M tAoh Zraii Nji 10.01 37 P Pn 13 01 24.8 -0.7
baz=231
UNV Unalaska Valle 10.02 240 P Pn 13 01 25.3 -0.2
baz=48
C24K Franklin Bluff 10.07 6 P Pn 13 01 25.9 -0.2
baz=189
C23K Itkillik River 10.11 2 P Pn 13 01 26.9 +0.1
baz=183
GAMB Gambell 10.23 302 P Pn 13 01 28.2 -0.3
baz=104
MMPY Sheldon Lake, 10.28 65 P Pn 13 01 29.3 0.0
baz=263
C27K Jago River 10.46 16 P Pn 13 01 31.8 +0.2
baz=203
R33M Jennings River 10.55 83 P Pn 13 01 33.0 0.0
baz=281
U33K Whale Pass 10.56 102 P Pn 13 01 32.1 -0.9
baz=298
S34M Telegraph Cree 10.85 91 P Pn 13 01 37.7 +0.8
baz=289
F31M Tsiigehtchic 11.06 38 P Pn 13 01 39.3 -0.5
baz=235
DLBC Dease Lake 11.25 87 P Pn 13 01 44.1 +1.6
comp=N,1.6nm,0.3s,baz=258,slow=7.8,SNR=26
DLBC S **Sn 13 03 42.6 -3.8**
comp=N,0.9nm,0.4s,baz=315,slow=19,SNR=1.6
comp=N,4.0nm,0.3s
DLBC Dease Lake 11.25 87 P Pn 13 01 42.8 +0.3
baz=286
T35M Bob Quinn 11.62 95 P Pn 13 01 48.2 +0.7
baz=293
INK Inuvik 11.65 35 P Pn 13 01 48.1 +0.4
comp=N,0.4nm,0.3s,baz=242,slow=13,SNR=9.9
comp=N,2.3nm,0.5s
INK Inuvik 11.65 35 Pn 13 01 46.6 -1.1
INK Inuvik 11.65 35 P Pn 13 01 48.1 +0.4
baz=232
YKA Yellowknife Ar 17.98 65 P Pn 13 03 10.2 +0.6
comp=N,0.8nm,0.3s,baz=277,slow=9.8,SNR=10
comp=N,2.6nm,0.5s
RES Resolute Bay 25.17 32 P P 13 04 22.5 -0.5
comp=N,1.7nm,0.8s,baz=234,slow=11,SNR=1.8
comp=N,1.7nm,0.8s
SEY Seymchan 26.23 301 P P 13 04 31.4 -1.4
comp=N,2.4nm,0.9s,baz=39,slow=22,SNR=2.9
comp=N,2.4nm,0.9s
PETK Petropavlovsk- 28.10 279 P P 13 04 48.6 -1.0
comp=N,1.3nm,0.7s,baz=74,slow=12,SNR=13
comp=N,1.3nm,0.7s
PDAR Pinedale Array 30.74 105 P P 13 05 13.9 +0.6
comp=N,0.3nm,0.6s,baz=297,slow=6.0,SNR=3.1
comp=N,0.3nm,0.6s
TXAR Lajitas Array 44.33 112 P P 13 07 09.1 +1.3
comp=N,0.1nm,0.5s,baz=337,slow=8.8,SNR=2.0
SSPA Standing Stone 48.21 79 P P 13 07 39.8 +1.8
SSPA IAmb IAmb 13 07 56.1
comp=Z,12nm,1.2s
ARCES ARCESS Array B 50.97 1 P P 13 07 57.3 -1.3
comp=Z,0.7nm,0.6s,baz=358,slow=8.5,SNR=6.7
comp=Z,0.7nm,0.6s
KSRS Korea Array 53.83 284 P P 13 08 20.3 +0.1
comp=Z,0.8nm,0.5s,baz=43,slow=7.2,SNR=6.6
KSRS LR LR 13 31 18.3
comp=Z,10nm,20.6s,baz=10.0,slow=36
comp=Z,0.8nm,0.5s
SONM Songino Array 55.42 307 P P 13 08 31.2 -0.6
comp=Z,0.5nm,0.4s,baz=42,slow=7.2,SNR=2.8
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 57.92 324 P P 13 08 49.1 0.0
comp=Z,1.1nm,0.5s,baz=38,slow=6.9,SNR=5.7
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 57.92 324 P P 13 08 50.0 +0.9
NOA NORSAR Array B 58.79 10 P P 13 08 54.9 -0.3
comp=Z,0.9nm,0.8s,baz=349,slow=6.8,SNR=3.3
comp=Z,0.9nm,0.8s
FINES FINESS Array B 59.09 1 P P 13 08 55.9 -1.2
comp=Z,1.8nm,0.8s,baz=355,slow=7.0,SNR=3.3
comp=Z,1.8nm,0.8s
FINES FINESS Array B 59.09 1 P P 13 08 57.8 +0.6
HFS Hagfors 59.89 8 P P 13 09 02.2 -0.5
comp=Z,2.6nm,0.9s,baz=0.0,slow=2.9,SNR=1.5
comp=Z,2.6nm,0.9s
EKA Eskdalemuir Ar 62.54 20 P P 13 09 20.8 +0.1
comp=Z,2.9nm,0.7s,baz=339,slow=5.2,SNR=6.2
comp=Z,2.9nm,0.7s
KURBB Kurchatov Arra 62.67 327 P P 13 09 20.9 -0.7
comp=Z,0.7nm,0.2s,baz=30,slow=6.9,SNR=1.7
comp=Z,0.7nm,0.2s
LYN LuoYang 63.57 293 ⇑*iP* P 13 09 23.0 -4.8
MKAR Makanchi Array 64.99 322 P P 13 09 36.1 -0.8
comp=Z,0.4nm,0.7s,baz=38,slow=7.3,SNR=2.9
comp=Z,0.4nm,0.7s
GTA Gaotai 65.06 306 *eP* **P 13 09 39.3 +1.6**
GTA pP pP 13 09 49.0 -6.7
GTA sP sP 13 09 53.0 -10
ABKAR Akbulak array 68.30 338 P **P 13 09 58.9 +0.9**
ABKAR IAmb IAmb 13 10 12.2
comp=Z,2.3nm,1.1s
AKASG Malin Array Be 69.87 359 P P 13 10 06.8 -0.8
comp=Z,1.7nm,0.5s,baz=5.7,slow=6.1,SNR=12
comp=Z,1.7nm,0.5s
KKAR Karatay Array 71.75 329 P P 13 10 19.3 +0.1
SJG San Juan 72.35 84 LR LR 13 42 28.2
comp=Z,25nm,20.3s,baz=200,slow=36
ESDC Sonseca Array 77.40 25 P P 13 10 52.9 +0.8
comp=Z,1.3nm,0.9s,baz=347,slow=6.7,SNR=5.5
comp=Z,1.3nm,0.9s

*NEIC **14** 13:18:04.3±1.0, 19°.5S±0°.4×177°.7W±0°.2, h429km±22km, mb4.0/16, Error ellipse: s-maj=54.6km s-min=19.8km az=190.0*

*IDC **14** 13:18:08.4±3.0, 19°.68S×178°.05W, h451km±27km, mb3.2/5, mbtmp4.0/6, Error ellipse: s-maj=37.9km s-min=31.4km az=138.0*

ISC 14 13:18:06.1±0.8, 19°.6S±0°.2×177°.7W±0°.1, h450km, n26, σ1§23/27, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**294**	P	**P**	**13 19 24.9**	**-0.4**
	2.7nm,0.7s,baz=74,slow=15,SNR=2.3						
NIUE	**Niue**	**7.37**	**87**	P	**P**	**13 19 52.1**	**-2.7**
MARNC	**Mare, Loyalty**	**13.49**	**260**	P	**P**	**13 21 00.1**	**-1.0**
DZM	**Mont Dzumac**	**15.01**	**258**	P	**P**	**13 21 18.2**	**+0.7**
	4.0nm,0.6s,baz=96,slow=15,SNR=5.7						
ARMA	**Armidale**	**29.70**	**243**	P	**P**	**13 23 33.5**	**-0.6**
CTAO	**Charters Tower**	**33.86**	**263**	P	**P**	**13 24 09.8**	**0.0**
STKA	**Stephens Creek**	**38.42**	**243**	P	**P**	**13 24 47.2**	**-0.5**
	2.4nm,0.5s,baz=72,slow=9.6,SNR=7.4						
	2.4nm,0.5s						
STKA	**Stephens Creek**	**38.42**	**243**	P	**P**	**13 24 46.9**	**-0.8**
BBOO	**Buckleboo**	**43.19**	**243**	P	**P**	**13 25 25.0**	**-0.9**
WR0	**Warramunga Arr**	**44.81**	**261**	P	**P**	**13 25 38.0**	**-0.7**
WR0				IAmb	IAmb	13 26 16.7	
	comp=Z,4.1nm,1.1s						
WB0	**Warramunga Arr**	**44.97**	**261**	P	**P**	**13 25 39.1**	**-1.0**
WB0				IAmb	IAmb	13 25 57.3	
	comp=Z,8.1nm,1.4s						
WB2	**Warramunga Arr**	**44.99**	**261**	P	**P**	**13 25 39.6**	**-0.5**
WB2				IAmb	IAmb	13 26 08.6	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**44.99**	**261**	P	**P**	**13 25 39.1**	**-1.0**
WRAB				IAmb	IAmb	13 26 18.0	
	comp=Z,10nm,1.5s						
AS31	**Alice Springs**	**44.99**	**256**	P	**P**	**13 25 39.3**	**-0.8**
ASAR	**Alice Springs**	**44.99**	**256**	P	**P**	**13 25 39.9**	**-0.3**
	comp=Z,4.9nm,0.6s,baz=92,slow=8.2,SNR=122						
ASAR				PcP	**PcP**	**13 27 13.6**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=104,slow=5.9,SNR=2.7						
	comp=Z,4.9nm,0.6s						
ASAR	**Alice Springs**	**44.99**	**256**	P	**P**	**13 25 39.2**	**-1.0**
WRA	**Warramunga Arr**	**45.00**	**261**	P	**P**	**13 25 39.3**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=97,slow=7.5,SNR=37						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.00**	**261**	P	**P**	**13 25 39.9**	**-0.3**
FORT	**Forrest**	**49.90**	**246**	P	**P**	**13 26 16.2**	**-0.8**
KNRA	**Kununurra**	**50.99**	**265**	P	**P**	**13 26 25.4**	**0.0**
KNRA				IAmb	IAmb	13 27 06.3	
	comp=Z,16nm,1.4s						
MBWA	**Marble Bar**	**58.32**	**257**	P	**P**	**13 27 16.7**	**-0.3**
MBWA				IAmb	IAmb	13 27 23.9	
	comp=Z,16nm,1.3s						
SBA	**Scott Base**	**58.77**	**184**	P	**P**	**13 27 21.4**	**+2.4**
SBA				IAmb	IAmb	13 27 22.1	
	comp=Z,3.4nm,1.2s						
VNDA	**Vanda**	**58.81**	**185**	P	**P**	**13 27 20.8**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=2.3,slow=8.8,SNR=3.4						
	comp=Z,0.5nm,0.8s						
VNDA	**Vanda**	**58.81**	**185**	P	**P**	**13 27 20.4**	**+1.0**
ILAR	**Eielson Array**	**87.40**	**13**	P	**P**	**13 30 06.7**	**+2.9**
	comp=Z,0.2nm,0.7s,baz=193,slow=3.7,SNR=1.5						
	comp=Z,0.2nm,0.7s						
SNAA	**Sanae**	**88.88**	**178**	P	**P**	**13 30 11.3**	**+0.4**
SNAA				IAmb	IAmb	13 30 13.0	
	comp=Z,4.7nm,1.5s						

IDC 14 13:33:03.7±7.8, 17°.58S×174°.28W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=338.0km s-min=41.1km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.56**	**259**	P	P	13 41 48.4	-0.8
	0.1nm,0.2s,baz=96,slow=8.2,SNR=12						
	0.1nm,0.2s						
ASAR	**Alice Springs**	**48.66**	**254**	P	P	13 41 50.5	+0.5
	0.7nm,0.4s,baz=90,slow=7.8,SNR=33						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**84.74**	**11**	P	P	13 45 39.2	0.0
	0.3nm,0.7s,baz=217,slow=5.5,SNR=2.2						
	0.3nm,0.7s						

*IDC **14** 13:46:28.3±1.3, 31°.08N×49°.96E, h0km, mb3.8/15, mbtmp3.9/19, ML3.8/4, MS2.7/6, Error ellipse: s-maj=25.9km s-min=16.0km az=177.0*
*NEIC **14** 13:46:29.3±1.1, 30°.98N±0°.09×49°.8E±0°.1, h10km±1km, mb4.3/15, mb_Lg3.8(TEH), Error ellipse: s-maj=18.7km s-min=12.4km az=127.0*
*TEH **14** 13:46:31.0, 31°.06N×50°.02E, h16km, ML3.8*
*DSN **14** 13:46:35.0±1.9, 30°.61N×50°.24E, h15km, ML3.6/10, Error ellipse: s-maj=24.8km s-min=9.9km az=1.0*
*OMAN **14** 13:46:39.0±0.3, 30°.78N×50°.45E, h154km±6km, mb4.6/20, Error ellipse: s-maj=6.1km s-min=4.5km az=345.0*

ISC 14 13:46:31.6±0.5, 30°.95N±0°.05×50°.04E±0°.04, h30km, n166, σ1§88/178, mb4.2/22, MS2.5/3, 2C-4D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.40**	**152**	*e*Pg	**Pn**	**13 46 41.5**	**+0.2**
AMIS	**Naft Sefid**	**0.96**	**318**	*e*Pg	**Pn**	**13 46 48.6**	**-0.5**
AMIS				*e*		13 47 07.2	
	comp=Z,44μm,0.4s						
AHWZ	**Ahwaz**	**1.25**	**288**	*e*Pg	**Pb**	**13 46 53.1**	**-1.6**
AHWZ				*e*		13 47 18.5	
	comp=Z,44μm,0.2s						
KLNJ	**Kolanjah**	**1.34**	**87**	*e*Pn	**Pn**	**13 46 55.3**	**+0.7**
KLNJ				*e*		13 47 21.1	
	comp=Z,24μm,0.4s						
SHK1	**Shahrekord**	**1.55**	**28**	*e*Pg	**Pn**	**13 46 58.6**	**+1.1**
SHK1				*e*		13 46 59.5	
	comp=Z,15μm,0.4s						
IPIR	**Pirpir**	**1.88**	**23**	*e*		13 47 05.3	
	comp=Z,12μm,0.2s						
IPIR				*e*Pg	**Pn**	**13 47 03.9**	**+1.9**
KAZ1	**Kazerun**	**1.91**	**133**	*e*		13 47 49.0	
	comp=Z,10μm,0.4s						
KAZ1				*e*Pn	**Pb**	**13 47 05.6**	**-0.3**
IRAM	**Ramesheh**	**2.18**	**66**	*e*		13 47 10.3	
	comp=Z,4μm,0.2s						
IRAM				*e*Pn	**Pn**	**13 47 08.9**	**+2.8**
IGAR	**Gharneh**	**2.24**	**49**	*e*		13 47 13.4	
	comp=Z,4μm,0.2s						
IGAR				*e*Pn	**Pn**	**13 47 08.6**	**+1.7**
AHBU	**AHRAM**	**2.35**	**152**	*e*Pn	**Pb**	**13 47 12.9**	**-0.4**
AHBU				*e*		13 48 01.0	
	comp=Z,99nm,0.4s						
SHI	**Shiraz**	**2.51**	**121**	*e*Pn	**Pb**	**13 47 14.3**	**-1.8**
SHI				*e*		13 48 02.8	
	comp=Z,3μm,0.7s						
IKLH	**Kolahrood**	**2.70**	**29**	*e*Pn	**Pn**	**13 47 14.5**	**+1.2**
IZEF	**Zefreh**	**2.75**	**45**	*e*Pn	**Pn**	**13 47 15.7**	**+1.8**
IZEF				*e*		13 47 22.1	
	comp=Z,2μm,0.1s						
KHMZ	**Khomeyn**	**2.78**	**359**	*e*Pn	**Pn**	**13 47 16.3**	**+1.9**
DHL1	**Dehloran**	**2.91**	**307**	*e*Pn	**Pn**	**13 47 16.6**	**+0.6**
IKMR	**Kamar-syah**	**2.92**	**332**	*e*Pn	**Pn**	**13 47 17.1**	**+1.1**
NASN	**Na'in**	**2.99**	**51**	*e*Pn	**Pn**	**13 47 19.1**	**+1.8**
QAMS	**Qamsar**	**3.01**	**22**	*e*Pn	**Pn**	**13 47 19.5**	**+2.0**
IKFM	**Kafar-mosalman**	**3.17**	**325**	*e*Pn	**Pn**	**13 47 20.7**	**+1.3**
IDOB	**Doab**	**3.24**	**331**	*e*Pn	**Pn**	**13 47 21.1**	**+0.5**
ISAD	**Sadrabad**	**3.26**	**72**	*e*Pn	**Pn**	**13 47 23.7**	**+2.7**
ISAD				*e*		13 47 25.0	
	comp=Z,2μm,0.2s						
HSAM	**Samen**	**3.47**	**340**	*e*Pn	**Pn**	**13 47 25.0**	**+1.1**
HSAM				*e*		13 47 36.2	
	comp=Z,1μm,0.3s						
KRSH	**Karshahi**	**3.49**	**30**	*e*Pn	**Pn**	**13 47 25.5**	**+1.4**
ASAO	**Ashtian**	**3.59**	**360**	*e*Pn	**Pn**	**13 47 27.3**	**+1.8**
GHVR	**GHOM**	**3.67**	**16**	*e*Pn	**Pn**	**13 47 25.3**	**-1.2**
ANAR	**Anarak**	**3.85**	**54**	*e*Pn	**Pn**	**13 47 30.7**	**+1.8**
ANAR				*e*		13 47 46.8	
	comp=Z,790nm,0.6s						
IKOM	**Komasi**	**3.86**	**327**	*e*Pn	**Pn**	**13 47 30.4**	**+1.3**
ISFB	**Sefidab**	**3.87**	**28**	*e*Pn	**Pn**	**13 47 30.5**	**+1.3**
ISFB				*e*		13 47 31.3	
	comp=Z,3μm,0.2s						
HAGD	**Aghdareh**	**3.93**	**349**	*e*Pn	**Pn**	**13 47 31.3**	**+1.1**
HAGD				*e*		13 48 34.7	
	comp=Z,1μm,0.5s						
ICHK	**Chekchek**	**3.94**	**70**	*e*Pn	**Pn**	**13 47 32.4**	**+2.0**
ICHK				*e*		13 47 32.9	
	comp=Z,2μm,0.3s						
IMEH	**Mehriz**	**3.94**	**82**	*e*Pn	**Pn**	**13 47 33.1**	**+2.7**
IBZA	**Bozab**	**3.96**	**333**	*e*Pn	**Pn**	**13 47 30.9**	**+0.3**
IBZA				*e*		13 48 45.3	
	comp=Z,1μm,0.6s						
IQOM	**Qom**	**3.98**	**12**	*e*Pn	**Pn**	**13 47 32.0**	**+1.2**
YZKH	**Yazd**	**4.14**	**69**	*e*Pn	**Pn**	**13 47 35.0**	**+2.1**
KER	**Kermanshah**	**4.21**	**325**	*e*Pn	**Pn**	**13 47 34.8**	**+0.9**
IVRN	**Varamin**	**4.28**	**19**	*e*Pn	**Pn**	**13 47 35.7**	**+0.9**
IRAZ	**Razeghan**	**4.44**	**359**	*e*Pn	**Pn**	**13 47 38.2**	**+1.0**
IRAZ				*e*		13 49 03.4	
	comp=Z,931nm,0.8s						
IHSB	**Hasanabad**	**4.59**	**13**	*e*Pn	**Pn**	**13 47 40.3**	**+1.1**
IHSB				*e*		13 47 59.8	
	comp=Z,828nm,0.8s						
SNGE	**Sanandaj**	**4.71**	**332**	*e*Pn	**Pn**	**13 47 41.6**	**+0.8**
ILIN	**Lien**	**4.73**	**328**	*e*Pn	**Pn**	**13 47 41.8**	**+0.7**
ILIN				*e*		13 48 41.9	
	comp=Z,1μm,0.3s						
QABG	**Abgarm-Qazvin**	**4.76**	**356**	*e*Pn	**Pn**	**13 47 41.3**	**-0.3**
IBAF	**Bafgh**	**4.78**	**81**	*e*Pn	**Pn**	**13 47 44.0**	**+2.3**
IBAF				*e*		13 47 44.9	
	comp=Z,700nm,0.4s						
IDHR	**Dehrash**	**4.84**	**322**	*e*Pn	**Pn**	**13 47 43.6**	**+1.0**
IDMV	**Damavand**	**4.91**	**19**	*e*Pn	**Pn**	**13 47 44.5**	**+0.9**
IDMV				*e*		13 47 45.0	
	comp=Z,1μm,0.4s						
DAMV	**Damavand**	**4.94**	**19**	*e*Pn	**Pn**	**13 47 44.9**	**+0.8**
SAKB	**Bahrain**	**4.97**	**175**	P	Pn	13 47 48.6	+4.3
SAKB				S	**Sn**	**13 48 46.2**	**+5.4**
CHTH	**Charan**	**5.03**	**10**	*e*Pn	**Pn**	**13 47 46.2**	**+0.9**
ILAS	**Lasjerd**	**5.05**	**28**	*e*Pn	**Pn**	**13 47 46.6**	**+1.0**
ILAS				*e*		13 47 48.3	
	comp=Z,793nm,0.1s						
IFIR	**Firoozkooh**	**5.20**	**25**	*e*Pn	**Pn**	**13 47 48.5**	**+0.8**
QALM	**Alamut, Qazvin**	**5.49**	**5**	*e*Pn	**Pn**	**13 47 52.4**	**+0.8**
IANJ	**Anjilo**	**5.55**	**35**	*e*Pn	**Pn**	**13 47 53.3**	**+0.8**
ISHM	**Shahmirzad**	**5.55**	**28**	*e*Pn	**Pn**	**13 47 53.5**	**+1.0**
KHGB	**Koh Gabri**	**5.58**	**94**	*e*Pn	**Pn**	**13 47 54.4**	**+1.6**
KHGB				*e*		13 49 04.0	
	comp=Z,191nm,0.4s						
QSDN	**Sirdan**	**5.58**	**353**	*e*Pn	**Pn**	**13 47 53.7**	**+0.8**
IPRN	**Peran**	**5.62**	**19**	*e*Pn	**Pn**	**13 47 55.1**	**+1.9**
ZNJK	**Zanjan**	**5.81**	**349**	*e*Pn	**Pn**	**13 47 57.5**	**+1.4**
KRBR	**Kerman**	**5.88**	**98**	*e*Pn	**Pn**	**13 48 00.0**	**+2.9**
TVBK	**TV Kerman**	**5.88**	**98**	*e*Pn	**Pn**	**13 47 59.6**	**+2.5**
NGRK	**Negar Kerman**	**5.93**	**101**	*e*Pn	**Pn**	**13 48 00.6**	**+2.8**
GIDE	**GILAN DEYLAMAN**	**5.96**	**359**	*e*Pn	**Pn**	**13 47 59.2**	**+1.2**
TPRV	**Parvadeh(Tabas**	**6.01**	**68**	*e*Pn	**Pn**	**13 48 00.6**	**+1.9**
TNSJ	**Nastanj**	**6.31**	**60**	*e*Pn	**Pn**	**13 48 04.2**	**+1.4**
IGLO	**Ghaloghah**	**6.37**	**29**	*e*Pn	**Pn**	**13 48 04.9**	**+1.2**
TKDS	**Koohdasht(Taba**	**6.56**	**64**	*e*Pn	**Pn**	**13 48 07.9**	**+1.7**
TABS	**Tabas**	**6.57**	**64**	*e*Pn	**Pn**	**13 48 08.3**	**+2.0**
SLWR	**Sila**	**7.01**	**168**	P	**Pn**	**13 48 15.2**	**+3.0**
SLWR				S	**Sn**	**13 49 33.4**	**+2.4**
SHRO	**Shahrood**	**7.08**	**43**	*e*Pn	**Pn**	**13 48 15.2**	**+1.9**
SHME	**Shamm**	**7.26**	**131**	P	**Pn**	**13 48 17.1**	**+1.4**
SHME				S	**Sn**	**13 49 35.4**	**-1.6**
SHME	**Shamm**	**7.26**	**131**	P	**Pn**	**13 48 15.9**	**+0.2**
BANOM	**Banah**	**7.45**	**131**	P	**Pn**	**13 48 19.7**	**+1.4**
	SNR=15						
BANOM				S	**Sn**	**13 49 39.2**	**-2.6**
BANOM	**Banah**	**7.45**	**131**	P	**Pn**	**13 48 17.5**	**-0.8**
KBAM	**BAM**	**7.51**	**102**	*e*Pn	**Pn**	**13 48 21.4**	**+2.1**
NAZ	**Nazwa, Dubai**	**7.74**	**139**	P	**Pn**	**13 48 26.1**	**+3.7**
MASF	**Masafi**	**7.75**	**134**	P	**Pn**	**13 48 22.8**	**+0.3**
MASF				S	**Sn**	**13 49 46.8**	**-2.5**
MSFE	**Esma-Masafi**	**7.76**	**134**	P	**Pn**	**13 48 23.5**	**+0.9**
MSFE				S	**Sn**	**13 49 46.3**	**-3.1**
IKOO	**Kooshah**	**7.78**	**77**	*e*Pn	**Pn**	**13 48 24.6**	**+1.5**
BSRN	**Basiran**	**7.83**	**80**	*e*Pn	**Pn**	**13 48 25.3**	**+1.6**
ASUD	**Al Ashush, Dub**	**7.85**	**142**	P	**Pn**	**13 48 26.8**	**+3.0**
ASUD				S	**Sn**	**13 49 51.1**	**-0.6**
ASUD	**Al Ashush, Dub**	**7.85**	**142**	P	**Pn**	**13 48 22.8**	**-1.0**
FAQ	**Al Faqa, Dubai**	**7.90**	**140**	P	**Pn**	**13 48 28.5**	**+4.0**
FAQ				S	**Sn**	**13 49 52.1**	**-0.8**
FAQ	**Al Faqa, Dubai**	**7.90**	**140**	P	**Pn**	**13 48 24.9**	**+0.5**
AFRZ	**Afriz**	**8.00**	**70**	*e*Pn	**Pn**	**13 48 27.8**	**+1.8**
GRMI	**Germi**	**8.03**	**348**	*e*Pn	**Pn**	**13 48 28.4**	**+2.0**
UOSS	**Minazif**	**8.09**	**136**	Pn	**Pn**	**13 48 28.1**	**+0.9**
UOSS	**Minazif**	**8.09**	**136**	P	**Pn**	**13 48 28.3**	**+1.1**
UOSS				S	**Sn**	**13 49 54.2**	**-3.4**
UOSS	**Minazif**	**8.09**	**136**	P	**Pn**	**13 48 27.1**	**0.0**
HATD	**Hatta, Dubai**	**8.14**	**137**	P	**Pn**	**13 48 30.2**	**+2.4**
HATD				S	**Sn**	**13 49 56.3**	**-2.5**
HATD	**Hatta, Dubai**	**8.14**	**137**	P	**Pn**	**13 48 26.8**	**-1.0**
ASHO	**Ashiyiah**	**8.21**	**138**	P	**Pn**	**13 48 31.9**	**+3.1**
	SNR=11						
ASHO				S	**Sn**	**13 49 58.2**	**-2.3**
ASHO	**Ashiyiah**	**8.21**	**138**	P	**Pn**	**13 48 28.8**	**+0.1**
SBZV	**Sabzevar**	**8.32**	**47**	*e*Pn	**Pn**	**13 48 31.6**	**+1.2**
RAYN	**Ar Rayn**	**8.43**	**210**	P	**Pn**	**13 48 32.6**	**+0.9**
MZR	**Muzera**	**8.49**	**158**	P	**Pn**	**13 48 34.2**	**+1.5**
ALNE	**Al Ain**	**8.54**	**142**	P	**Pn**	**13 48 35.2**	**+2.0**
ALNE				S	**Sn**	**13 50 08.0**	**-0.6**
SOHO	**SOHO**	**8.90**	**138**	P	**Pn**	**13 48 39.2**	**+0.9**
SOHO				S	**Sn**	**13 50 15.3**	**-2.3**
SOHO	**SOHO**	**8.90**	**138**	P	**Pn**	**13 48 37.5**	**-0.8**
ISFR	**Sfrayin**	**8.98**	**45**	*e*Pn	**Pn**	**13 48 41.8**	**+2.2**
BJRD	**Bojnurd**	**9.08**	**40**	*e*Pn	**Pn**	**13 48 43.2**	**+2.5**
SHRT	**Shahrakht**	**9.09**	**70**	*e*Pn	**Pn**	**13 48 43.1**	**+2.3**
UMZA	**Um Al Zommool**	**9.39**	**150**	P	**Pn**	**13 48 47.3**	**+2.3**
UMZA				S	**Sn**	**13 50 26.6**	**-2.9**
ARQ	**Araqi**	**9.53**	**141**	P	**Pn**	**13 48 50.0**	**+3.1**
	SNR=9.3						
ARQ				S	**Sn**	**13 50 30.3**	**-2.7**
IEMG	**Emamgholi**	**9.61**	**46**	*e*Pn	**Pn**	**13 48 49.8**	**+1.6**
GEYT	**Alibeck**	**9.64**	**42**	Pn	**Pn**	**13 48 49.0**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=240,slow=12,SNR=14						
GEYT				LR	LR	13 52 18.4	
	comp=Z,26nm,20.1s,baz=264,slow=36						
	comp=Z,7.6nm,0.7s						
GEYT	**Alibeck**	**9.64**	**42**		**Pn**	**13 48 50.3**	**+2.0**
GYA0B	**ALIBECK ARRAY**	**9.64**	**42**		**Pn**	**13 48 50.3**	**+2.0**
HOQ	**Hoqain**	**9.78**	**137**	P	**Pn**	**13 48 51.7**	**+1.4**
HOQ				S	**Sn**	**13 50 35.8**	**-3.4**
BSY	**Bisya**	**10.37**	**140**	P	**Pn**	**13 48 59.1**	**+0.7**

AKTO	**Aktyubinsk**	20.36	15	P	P	13 51 05.2 -0.3
	comp=Z,1.7nm,0.5s,baz=231,slow=11,SNR=4.7					
AKTO				LR	LR	14 01 52.5
	comp=Z,20nm,18.2s,baz=230,slow=46					
	comp=Z,1.7nm,0.5s					
IDI	**Anoyia**	21.48	288	P	P	13 51 19.3 +1.4
	comp=Z,3.2nm,0.7s,baz=82,slow=14,SNR=1.5					
	comp=Z,3.2nm,0.7s					
IDI	**Anoyia**	21.48	288	P	P	13 51 15.3 -2.6
IDI				IAmb	IAmb	13 51 36.5
	comp=Z,20nm,1.3s					
BELG	**Belogornoye**	21.50	356	P	P	13 51 17.8 0.0
	comp=Z,14nm,0.5s,baz=212,slow=15,SNR=2.0					
BELG				LR	LR	14 01 27.2
	comp=Z,19nm,18.5s,baz=138,slow=42					
	comp=Z,14nm,0.5s					
CFR	**Carcaliu**	22.25	316	⇓P	P	13 51 31.9 +6.0
AAK	**Ala-Archa**	22.71	52	P	P	13 51 31.8 +0.7
	comp=Z,0.6nm,0.3s,baz=234,slow=8.7,SNR=1.4					
	comp=Z,0.6nm,0.3s					
VRI	**Vrincioaia**	23.45	316	⇓P	P	13 51 46.2 +7.8
PLOR	**Plostina**	23.49	316	⇓P	P	13 51 49.2 +10
VOIR		24.26	314	⇑P	P	13 51 48.2 +2.1
TARG	**Taragay, Kyrgy**	24.72	57	P	P	13 51 50.9 +0.2
TARG				IAmb	IAmb	13 52 30.6
	comp=Z,17nm,1.5s					
AKASG	**Malin Array Be**	25.09	328	P	P	13 51 52.2 -1.3
	comp=Z,0.5nm,0.3s,baz=134,slow=9.5,SNR=7.3					
	comp=Z,0.5nm,0.3s					
AKBB	**Malin Array Si**	25.09	328	P	P	13 51 52.2 -1.3
AKBB				IAmb	IAmb	13 51 55.0
	comp=Z,3.9nm,0.4s					
BURAR	**Bucovina Array**	25.25	318	⇓P	P	13 51 51.3 -3.8
GZR	**Gura Zlata**	25.68	312	⇑P	P	13 51 59.4 +0.5
BVAR	**Borovoye Array**	26.57	28	P	P	13 52 07.8 +1.0
	comp=Z,1.0nm,0.6s,baz=228,slow=5.8,SNR=10.0					
	comp=Z,1.0nm,0.6s					
KURBB	**Kurchatov Arra**	28.90	39	P	P	13 52 28.6 +0.9
	comp=Z,0.5nm,0.3s,baz=242,slow=10.0,SNR=2.1					
	comp=Z,0.5nm,0.3s					
MK31	**Makanchi Array**	29.42	48	P	P	13 52 33.2 +0.8
MKAR	**Makanchi Array**	29.42	48	P	P	13 52 33.4 +1.0
	comp=Z,0.3nm,0.3s,baz=246,slow=8.2,SNR=14					
	comp=Z,0.3nm,0.3s					
MKAR	**Makanchi Array**	29.42	48	P	P	13 52 33.7 +1.2
VRAC	**Vranov**	31.12	316	LR	LR	14 07 30.5
	comp=Z,21nm,18.6s,baz=48,slow=41					
NRCA	**Norcia**	31.58	302	P	P	13 52 48.1 -3.5
GERES	**GERESS Array B**	32.71	314	P	P	13 53 01.6 0.0
	comp=Z,0.3nm,0.5s,baz=110,slow=8.5,SNR=1.2					
	comp=Z,0.3nm,0.5s					
SQTA	**Sankt Quirin**	33.83	310	*i* P	P	13 53 11.2 -0.1
	comp=Z,7.8nm,0.3s					
ZALV	**Zalesovo Beam**	33.91	37	P	P	13 53 12.1 +0.3
	comp=Z,1.4nm,0.5s,baz=251,slow=10,SNR=7.1					
	comp=Z,1.4nm,0.5s					
MOTA	**Moosalm**	33.94	310	*i* P	P	13 53 11.9 -0.4
	comp=Z,4.5nm,0.4s					
FETA	**Feichten**	34.10	309	*i* P	P	13 53 13.8 +0.1
	comp=Z,1.8nm,0.4s					
RETA	**Reutte**	34.20	310	*i* P	P	13 53 13.8 -0.6
	comp=Z,1.7nm,0.3s					
FIA1	**FINESS Array S**	34.30	340	P	P	13 53 14.6 -0.5
FINES	**FINESS Array B**	34.30	340	P	P	13 53 14.4 -0.7
	comp=Z,2.0nm,0.3s,baz=143,slow=9.6,SNR=22					
	comp=Z,2.0nm,0.3s					
DAVA	**Damuels**	34.73	310	*i* P	P	13 53 19.0 -0.2
	comp=Z,6.4nm,0.3s					
NC405	**NORSAR Array S**	39.23	332	P	P	13 53 56.3 -0.7
NC405				IAmb	IAmb	13 54 01.7
	comp=Z,16nm,1.1s					
NB2	**NORSAR Subarra**	39.39	331	P	P	13 53 57.0 -1.4
	comp=Z,0.8nm,0.6s,baz=123,slow=8.6					
NOA	**NORSAR Array B**	39.39	331	P	P	13 53 57.3 -1.1
	comp=Z,0.3nm,0.4s,baz=124,slow=8.5,SNR=4.1					
	comp=Z,0.3nm,0.4s					
ARCES	**ARCESS Array B**	41.07	347	P	P	13 54 12.2 +0.1
	comp=Z,0.6nm,0.5s,baz=148,slow=7.1,SNR=7.7					
	comp=Z,0.6nm,0.5s					
ARCES	**ARCESS Array B**	41.07	347	P	P	13 54 11.9 -0.3
ARCES				IAmb	IAmb	13 54 37.0
	comp=Z,9.9nm,1.4s					
TORD	**Torodi Ar. Bea**	47.78	259	P	P	13 55 07.9 +1.4
	comp=Z,0.7nm,0.5s,baz=54,slow=7.7,SNR=4.2					
	comp=Z,0.7nm,0.5s					
KSRS	**Korea Array**	63.04	61	P	P	13 56 56.2 +0.3
	comp=Z,0.8nm,0.4s,baz=276,slow=6.8,SNR=6.6					
	comp=Z,0.8nm,0.4s					
SCHQ	**Schefferville**	78.89	328	P	P	13 58 31.9 0.0

*DJA **14** 13:47:51.8±0.4, 8°S±5°×12°3E±°, h254km±5km, M3.8/7, mB4.5/1, mb3.8/7, MLv3.8/7, Mw(mB)3.7/1*
*NEIC **14** 13:47:51.4±1.4, 7°.7S±0°.2×123°.0E±0°.1, h245km±11km, mb4.0/10, Error ellipse: s-maj=24.7km s-min=19.4km az=169.0*
*IDC **14** 13:47:57.8±5.0, 7°.47S×123°.78E, h291km±53km, mb3.0/2, mbtmp3.8/4, Error ellipse: s-maj=142.2km s-min=15.3km az=60.0*
ISC 14 13:47:52.8±0.8, **7°.96S**±0°.08×**122°.85E**±0°.09, **h250**km, **n28,** σ1§**26**/32, **mb3.5**/3, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	0.90	222	Pn	Pn	13 48 27.1	-0.2
MMRI	**Maumere**	0.90	222	P	Pn	13 48 26.5	-0.8
MMRI				S	S	13 48 54.0	-0.5
SOEI	**Soe**	2.26	142	Pn	Pn	13 48 38.1	+0.2
SOEI	**Soe**	2.26	142	P	Pn	13 48 36.9	-1.0
SOEI				S	S	13 49 14.4	+0.9
BBSI	**Bau Bau**	2.48	354	P	Pn	13 48 39.6	-0.2
BNSI	**Bone**	4.47	322	P	Pn	13 49 02.7	+0.5
PLAI	**Plampang**	5.09	260	P	Pn	13 49 09.2	-0.6
	0.1nm16nm,1.1s						
TTSI	**Tana Toraja**	5.74	328	P	Pn	13 49 16.9	-0.9
	0.1nm10nm,0.4s						
TWSI	**Taliwang, Sumb**	5.96	262	P	Pn	13 49 19.1	-1.3
	0.1nm9.2nm,0.9s						
KLNI	**Mataram**	6.70	266	P	Pn	13 49 29.0	-0.8
	0.1nm789nm11nm,1.7s						
MTN	**Manton Dam**	9.48	121	Pn	Pn	13 50 03.8	-1.0
KNRA	**Kununurra**	9.60	144		Pn	13 50 05.8	-0.6
PCJI	**Pacitan**	11.56	268	P	Pn	13 50 29.3	-1.7
WB0	**Warramunga Arr**	16.21	138	P	P	13 51 26.1	0.0
WB0				IAmb	IAmb	13 52 02.9	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	16.30	138	P	P	13 51 27.2	+0.3
	comp=Z,0.7nm,0.5s,baz=314,slow=12,SNR=42						
WRA				S	S	13 54 25.3	+0.3
	comp=Z,0.6nm,0.6s,baz=319,slow=24,SNR=4.0						
WRA	**Warramunga Arr**	16.30	138	P	P	13 51 26.9	-0.1
WRAB	**Tennant Creek**	16.30	138	P	P	13 51 27.6	+0.6
WRAB				IAmb	IAmb	13 52 10.9	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	16.31	138	P	P	13 51 27.2	+0.1
WB2				IAmb	IAmb	13 51 27.3	
	comp=Z,7.1nm,1.4s						
WR0	**Warramunga Arr**	16.45	138		P	13 51 29.3	+0.7
WR0				IAmb	IAmb	13 51 43.1	
	comp=Z,7.3nm,1.3s						
AS31	**Alice Springs**	18.87	147	P	P	13 51 57.4	+2.5
AS31				IAmb	IAmb	13 52 01.1	
	comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	18.87	147	P	P	13 51 56.8	+1.9
	comp=Z,5.0nm,0.6s,baz=326,slow=11,SNR=72						
ASAR				S	S	13 55 15.8	-0.2
	comp=Z,0.3nm,0.6s,baz=333,slow=26,SNR=2.9						
ASAR	**Alice Springs**	18.87	147	P	P	13 51 57.6	+2.8
COEN	**Coen**	20.81	108	P	P	13 52 12.0	-3.6
BBOO	**Buckleboo**	27.59	155	P	P	13 53 17.0	-0.1
MKAR	**Makanchi Array**	65.35	331	P	P	13 58 09.3	+0.8
	comp=Z,0.3nm,0.6s,baz=136,slow=6.5,SNR=3.3						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	69.50	337	P	P	13 58 34.9	+0.7
	comp=Z,0.4nm,0.4s,baz=152,slow=6.5,SNR=2.2						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	72.44	172	P	P	13 58 51.9	+0.5
QSPA	**South Pole Qui**	82.02	180	P	P	13 59 46.3	+1.4
QSPA				IAmb	IAmb	13 59 47.0	
	comp=Z,1.5nm,0.8s						

*NOU **14** 14:10:16.6, 17°.53S×178°.51W, h548km, mb4.3/17, Fiji Islands Region*
*NEIC **14** 14:10:17.1±1.6, 17°.6S±0°.1×178°.7W±0°.1, h540km±10km, mb4.3/24, Error ellipse: s-maj=20.5km s-min=16.7km az=142.0*
*IDC **14** 14:10:18.5±1.1, 17°.78S×178°.77W, h558km±9km, mb3.4/14, mbtmp4.3/16, Error ellipse: s-maj=21.8km s-min=13.7km az=132.0*
ISC 14 14:10:17.3±0.4, **17°.51S**±0°.09×**178°.60W**±0°.08, **h547**km, **n108,** σ1§**92**/107, **mb4.1**/25, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.20	266	P	P	14 11 34.1	+0.7
	155nm,0.8s,baz=112,slow=4.7,SNR=128						
MSVF				S	S	14 12 37.5	+2.1
	12nm,1.0s,baz=2.3,slow=23,SNR=7.4						
MSVF	**Nonsavu**	3.20	266	P	P	14 11 34.1	+0.7
FUTU	**Fugatoga**	3.22	8	P	P	14 11 33.5	-0.1
AFI	**Afiamalu**	7.48	62	P	P	14 12 06.6	-3.4
	53nm,0.6s,baz=14,slow=1.0,SNR=15						
AFI				S	S	14 13 36.1	-6.1
	8.1nm,0.5s,baz=249,slow=23,SNR=1.3						
AFI	**Afiamalu**	7.48	62	P	P	14 12 08.8	-1.1
AFI	**Afiamalu**	7.48	62	P	P	14 12 09.0	-1.0
NIUE	**Niue**	8.38	102	P	P	14 12 18.9	+0.2
MARNC	**Mare, Loyalty**	13.21	250	P	P	14 13 05.9	-2.4
LIFNC	**LIFOU**	13.77	254	P	P	14 13 12.0	-2.1
OUENC	**Ouen Island, N**	14.53	248	P	P	14 13 22.1	+0.1
DZM	**Mont Dzumac**	14.79	250	P	P	14 13 21.8	-3.0
	6.7nm,0.9s,baz=128,slow=19,SNR=6.2						
DZM	**Mont Dzumac**	14.79	250	P	P	14 13 22.6	-2.2
KOUNC	**Koumac, New Ca**	16.46	257	P	P	14 13 39.8	-1.5
KOUNC				IAmb	IAmb	14 13 41.0	
	comp=Z,14nm,0.8s						
KOUNC	**Koumac, New Ca**	16.46	257	P	P	14 13 40.4	-0.9
OUZ	**Omahuta**	18.96	200	P	P	14 14 03.7	-0.2
URZ	**Urewera**	21.01	189	P	P	14 14 18.5	-3.9
	comp=Z,8.5nm,0.8s,baz=320,slow=14,SNR=3.0						
	comp=Z,8.5nm,0.8s						
MUGZ	**Murupara**	21.28	190	P	P	14 14 39.0	+14
PRRZ	**Plateau Road**	21.36	191	P	P	14 14 33.7	+8.0
RTZ	**Ruatahuna**	21.38	190	P	P	14 14 41.2	+15
WPRZ	**Whakapapatarin**	21.43	191	P	P	14 14 30.9	+4.7
ALRZ	**Allen Road**	21.43	191	P	P	14 14 31.9	+5.6
KUTZ	**Kaahu Road**	21.46	192	P	P	14 14 31.9	+5.4
WHTZ	**Whakaora**	21.61	192	P	P	14 14 27.9	0.0
MRHZ	**Matea Rd**	21.68	191	P	P	14 14 30.3	+1.7
WATZ	**Wairara**	21.69	192	P	P	14 14 28.9	+0.3
RATZ	**Rangitukua**	21.84	192	P	P	14 14 27.1	-2.9
KATZ	**Kakaramea**	21.95	192	P	P	14 14 28.7	-2.4
BKZ	**Black Stump Fm**	21.99	190	P	P	14 14 33.5	+2.1
BKZ	**Black Stump Fm**	21.99	190	P	P	14 14 34.1	+2.7
BKZ	**Black Stump Fm**	21.99	190	P	P	14 14 30.9	-0.5
ARHZ	**Aropaoanui**	22.01	189	P	P	14 14 42.6	+11
NTVZ	**North Tongarir**	22.08	192	P	P	14 14 30.4	-1.8
KRVZ	**Karewarewa**	22.08	192	P	P	14 14 30.7	-1.6
TMVZ	**Te Maari**	22.09	192	P	P	14 14 30.4	-1.9
ETVZ	**East Tongariro**	22.11	192	P	P	14 14 30.6	-1.8
WTVZ	**West Tongariro**	22.11	192	P	P	14 14 31.5	-1.0
NNVZ	**North Ngauruho**	22.12	192	P	P	14 14 31.5	-1.2
OTVZ	**Oturere**	22.14	192	P	P	14 14 31.4	-1.4
NGZ	**Ngauruhoe**	22.17	192	P	P	14 14 32.2	-0.8
SNVZ	**South Ngauruho**	22.17	192	P	P	14 14 30.7	-2.4
MCHZ	**McNeill Hill**	22.23	190	P	P	14 14 41.2	+7.8
TUVZ	**Tukino**	22.25	192	P	P	14 14 33.1	-0.6
FWVZ	**Far West T-bar**	22.25	192	P	P	14 14 33.7	-0.2
KWHZ	**Kaweka Forest**	22.26	190	P	P	14 14 37.4	+3.7
MOVZ	**Moawhango**	22.36	192	P	P	14 14 34.6	-0.1
BHHZ	**Black Hill Sta**	22.38	191	P	P	14 14 36.1	+1.3
PNHZ	**Pukenui**	22.77	190	P	P	14 14 44.7	+6.4
LHI	**Lord Howe Isla**	24.58	231	P	P	14 14 55.5	+1.1
LTZ	**Lake Taylor**	26.36	195	P	P	14 15 07.4	-2.6
JCZ	**Jackson Bay**	28.54	199	P	P	14 15 27.4	-1.7
EIDS	**Eidsvold**	29.23	249	P	P	14 15 33.9	-1.5
MLZ	**Mavora Lakes**	29.91	199	P	P	14 15 38.9	-2.1
MLZ				IAmb	IAmb	14 15 39.8	
	comp=Z,17nm,0.9s						
ARMA	**Armidale**	29.98	239	P	P	14 15 41.4	-0.6
ARMA				IAmb	IAmb	14 15 42.3	
	comp=Z,7.8nm,0.6s						
ARMA	**Armidale**	29.98	239	P	P	14 15 41.6	-0.3
CTAO	**Charters Tower**	33.34	260	P	P	14 16 10.1	-0.5
CNB	**Canberra Magne**	33.53	232	P	P	14 16 11.6	-0.4
CAN	**Canberra**	33.80	232	P	P	14 16 12.6	-1.6
CMSA	**Cobar Meteorol**	35.19	240	P	P	14 16 25.1	-0.8
MTSU	**Mount Surprise**	35.27	263	P	P	14 16 27.8	+1.0
TOO	**Toolangi**	37.28	230	P	P	14 16 42.8	-0.3
TOO				IAmb	IAmb	14 16 43.4	
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	38.66	241	P	P	14 16 51.9	-2.5
	comp=Z,4.2nm,0.7s,baz=95,slow=11,SNR=10						
	comp=Z,4.2nm,0.7s						
STKA	**Stephens Creek**	38.66	241	P	P	14 16 53.1	-1.3
BBOO	**Buckleboo**	43.44	241	P	P	14 17 30.8	-1.4
BBOO				IAmb	IAmb	14 18 01.8	
	comp=Z,20nm,1.4s						
WB0	**Warramunga Arr**	44.49	259	P	P	14 17 39.7	-0.9
WB0				IAmb	IAmb	14 17 59.5	
	comp=Z,7.8nm,1.4s						
WB2	**Warramunga Arr**	44.52	259	P	P	14 17 39.7	-1.1
WB2				IAmb	IAmb	14 17 52.1	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	44.53	259	P	P	14 17 39.2	-1.6
	comp=Z,1.2nm,0.6s,baz=96,slow=7.2,SNR=42						
WRA				PcP	PcP	14 19 12.1	-0.1
	comp=Z,0.5nm,0.7s,baz=94,slow=3.5,SNR=2.6						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	44.53	259	P	P	14 17 39.5	-1.3
AS31	**Alice Springs**	44.72	254	P	P	14 17 41.5	-0.9
AS31				IAmb	IAmb	14 17 42.0	
	comp=Z,4.5nm,0.6s						
ASAR	**Alice Springs**	44.73	254	P	P	14 17 41.5	-0.9
	comp=Z,13nm,0.6s,baz=88,slow=8.2,SNR=214						
ASAR				PcP	PcP	14 19 13.0	+0.1
	comp=Z,0.7nm,0.5s,baz=105,slow=3.6,SNR=5.2						
	comp=Z,13nm,0.6s						
FORT	**Forrest**	50.01	244	P	P	14 18 20.3	-1.6
KNRA	**Kununurra**	50.35	264	P	P	14 18 22.9	-1.7
KNRA				IAmb	IAmb	14 18 42.6	
	comp=Z,12nm,1.2s						
VNDA	**Vanda**	60.82	185	P	P	14 19 39.9	+3.8
MJAR	**Matsushiro Arr**	67.48	323	P	P	14 20 19.7	+0.6
	comp=Z,2.2nm,0.6s,baz=154,slow=5.7,SNR=6.9						
	comp=Z,2.2nm,0.6s						
MAJO	**Matsushiro**	67.49	323	P	P	14 20 19.9	+0.8
QSPA	**South Pole Qui**	72.54	180	P	P	14 20 48.6	-0.2
PETK	**Petropavlovsk-**	73.25	345	P	P	14 20 53.3	+0.5
	comp=Z,3.5nm,0.8s,baz=146,slow=8.6,SNR=10						
	comp=Z,3.5nm,0.8s						
KSRS	**Korea Array**	74.29	318	P	P	14 21 00.7	+1.7
	comp=Z,0.6nm,0.6s,baz=95,slow=6.1,SNR=2.9						
	comp=Z,0.6nm,0.6s						
USRK	**Ussuriysk Ar.**	76.19	326	P	P	14 21 10.4	+1.0
	comp=Z,0.8nm,0.6s,baz=156,slow=4.6,SNR=2.2						
	comp=Z,0.8nm,0.6s						
KDAK	**Kodiak Island**	78.06	14	P	P	14 21 20.9	+1.6
KDAK				IAmb	IAmb	14 21 42.5	
	comp=Z,32nm,1.4s						
NVAR	**Mina Array Bea**	79.27	44	P	P	14 21 28.6	+2.1
	comp=Z,1.9nm,0.7s,baz=225,slow=9.5,SNR=6.5						
	comp=Z,1.9nm,0.7s						
MAW	**Mawson**	84.17	200	P	P	14 21 50.5	-0.2
	comp=Z,0.9nm,0.4s,baz=135,slow=2.9,SNR=6.4						
	comp=Z,0.9nm,0.4s						
ILAR	**Eielson Array**	85.55	13	P	P	14 21 57.5	+0.3
	comp=Z,0.9nm,0.4s,baz=225,slow=5.2,SNR=14						
	comp=Z,0.9nm,0.4s						
TXAR	**Lajitas Array**	85.94	58	P	P	14 22 02.6	+2.5
	comp=Z,1.9nm,0.7s,baz=216,slow=6.2,SNR=26						
	comp=Z,1.9nm,0.7s						
J26L	**Joseph Creek**	86.07	14	P	P	14 22 01.1	+1.2
J26L				IAmb	IAmb	14 22 02.0	
	comp=Z,2.3nm,0.6s						
PD31	**Pinedale Array**	87.19	44	P	P	14 22 07.3	+1.4
PDAR	**Pinedale Array**	87.19	44	P	P	14 22 07.2	+1.4
	comp=Z,0.8nm,0.5s,baz=216,slow=2.9,SNR=9.0						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	87.19	44	P	P	14 22 07.0	+1.1
CMAR	**Chiang Mai Arr**	88.58	290	P	P	14 22 13.1	+0.4
	comp=Z,0.4nm,0.3s,baz=103,slow=1.9,SNR=2.1						
	comp=Z,0.4nm,0.3s						
TROLL	**Troll, Antarti**	90.70	180	P	P	14 22 20.7	-0.9
SNAA	**Sanae**	90.99	179	P	P	14 22 21.9	-1.0
SNAA	**Sanae**	90.99	179	P	P	14 22 21.9	-1.0
SNAA				IAmb	IAmb	14 22 58.9	
	comp=Z,3.4nm,1.3s						
VNA3	**Neumayer Olymp**	91.14	176	P	P	14 22 22.9	-0.6
MKAR	**Makanchi Array**	108.73	314	PKiKP	PKiKP	14 27 43.4	-1.0
	comp=Z,0.3nm,0.5s,baz=80,slow=0.2,SNR=5.5						
ARCES	**ARCESS Array B**	125.90	350	PKP	PKiKP	14 28 16.9	-0.1
	comp=Z,2.9nm,1.0s,baz=353,slow=2.9,SNR=4.7						
BRTR	**Keskin Array B**	144.38	315	PKP	PKPab	14 28 52.5	+0.3
	comp=Z,1.1nm,0.5s,baz=142,slow=4.2,SNR=6.6						
DPC	**Dobruska-Polom**	145.12	343	*e*PKP	PKPab	14 28 54.3	-0.2
KHC	**Kasperske Hory**	146.95	345	*e*PKP	PKPbc	14 28 59.3	+0.7
CKRC	**Cesky Krumlov**	147.06	344	*e*PKP	PKPbc	14 28 59.8	+0.9
GERES	**GERESS Array B**	147.19	345	PKPbc	PKPbc	14 29 00.2	+0.9
	comp=Z,2.3nm,0.5s,baz=30,slow=3.0,SNR=16						
CONA	**Conrad Observa**	147.43	342	*i* P	PKiKP	14 29 01.5	-0.1
	comp=Z,3.9nm,0.7s						
RONA	**Rosalia, Austr**	147.51	341	*i* P	PKiKP	14 29 01.6	-0.1
	comp=Z,4.1nm,0.6s						
KBA	**Koelnbreinsper**	148.91	344	*i* P	PKPbc	14 29 04.1	+0.3
	comp=Z,2.3nm,0.4s						
WATA	**Walderalm**	149.10	346	*i* P	PKiKP	14 29 05.0	-0.1
	comp=Z,2.9nm,0.5s						
RETA	**Reutte**	149.13	348	*i* P	PKiKP	14 29 05.1	0.0
	comp=Z,1.9nm,0.5s						
WTTA	**Wattenberg**	149.16	346	*i* P	PKiKP	14 29 05.5	+0.2
	comp=Z,3.5nm,0.4s						
MYKA	**Terra Mystica**	149.25	343	*i* P	PKPbc	14 29 04.7	+0.2
	comp=Z,3.7nm,0.5s						
SQTA	**Sankt Quirin**	149.29	347	*i* P	PKiKP	14 29 05.6	+0.1
	comp=Z,6.2nm,0.7s						
ABTA	**Abfaltersbach**	149.43	345	*i* P	PKPbc	14 29 05.3	+0.3
	comp=Z,3.2nm,0.5s						

MAN 14 14:35:35.9, 9°.28N×125°.67E, h27km, **mb4.5, ML3.4, MS3.2, 2C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	0.31	190	⇓*e*P	Pb	14 35 40.4	-2.8
BUTP				*e*S	Sb	14 35 45.6	-2.6
SCPH	**Surigao**	0.53	340	⇑*i*P	Pn	14 35 47.5	-0.2
SCPH				*i* S	Sn	14 35 57.2	+1.4
GLSP	**General Luna,**	0.67	42	⇓*e*P	Pn	14 35 49.6	-0.1
GLSP				*e*S	Sn	14 35 59.9	+0.6
MSLP	**Maasin**	1.17	317	⇓*e*P	Pn	14 35 55.5	-1.0
MSLP				*e*S	Sb	14 36 13.1	+0.9
BIPH	**Bislig**	1.28	148	⇓*e*P	Pn	14 35 56.5	-1.6
BIPH				*e*S	Sn	14 36 12.2	-2.1
GHBP	**Garcia Hernand**	1.38	285	⇓*i*P	Pn	14 35 57.4	-1.9
GHBP				*i* S	Sb	14 36 17.6	-0.6
TABP	**Talibon, Bohol**	1.55	302	⇑*i*P	Pn	14 36 01.1	-0.6
TABP				*i* S	Sn	14 36 21.3	+0.4
TBP	**Tagbilaran**	1.83	283	*e*P	Pn	14 36 05.9	+0.3
TBP				*i* S	Sb	14 36 33.0	+1.7
PAGZ	**Pagadian**	2.67	238	⇓*e*P	Pn	14 36 18.0	+0.8
PAGZ				*i* S	Sn	14 36 51.0	+2.2

*UCR **14** 14:38:29.4±2.1, 10°.99N×86°.90W, h12km±14km, MW3.8*
*INET **14** 14:38:32.5±0.5, 11°.10N×86°.69W, h15km±6km, MW3.4*
ISC 14 14:38:30.7±2.0, **11°.03N**±0°.08×**86°.9W**±0°.1, **h30**km, **n34,** σ1§**32**/38, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	1.18	14	*e*P	Pn	14 38 51.8	+0.6
HZTE	**Horizontes, Gu**	1.29	104	*e*P	Pn	14 38 52.5	-0.1
HZTE				*e*S	Sb	14 39 10.4	-0.2
HZTE	**Horizontes, Gu**	1.29	104	*e*P	Pn	14 38 52.6	-0.1
WILN	**Americas 2**	1.31	31	*e*P	Pn	14 38 53.1	+0.2
MOMN	**Momotombo**	1.41	13	*e*P	Pn	14 38 54.8	+0.4
MOMN				*e*S	Sn	14 39 12.5	+0.6
GBS3	**Finca Las Img**	1.42	100	*e*P	Pn	14 38 54.5	+0.1
LAPC	**Finca la Perla**	1.44	100	*e*P	Pn	14 38 54.8	+0.1
LAPC				*e*S	Sn	14 39 13.1	+0.4
BUEV	**Buena Vista**	1.46	99	*e*P	Pn	14 38 55.7	+0.6
GB1A	**Borinquen Arri**	1.46	98	*e*P	Pn	14 38 55.1	0.0
CNGN	**Cerro Negro**	1.47	7	*e*P	Pn	14 38 55.2	0.0
CNGN	**Cerro Negro**	1.47	7	*e*P	Pn	14 38 55.1	-0.1
SAJU	**San Juanillo,**	1.49	130	*e*P	Pn	14 38 54.1	-1.4
VRLE	**La Esc

comp=N,48383μm,0.5s
UPR University Cam 0.14 184 P **Pg** **15 44 15.2 -0.2**
UPR S **Sg** **15 44 17.9 +0.2**
SERG Sergoula 0.20 94 P **Pg** **15 44 15.9 -0.5**
SERG S **Sg** **15 44 19.6 +0.2**
comp=N,9μm,0.3s
SERG Sergoula 0.20 94 P **Pg** **15 44 16.1 -0.3**
SERG S **Sg** **15 44 19.3 -0.1**
SERG AML AML 15 44 20.5
comp=N,18110μm,0.3s
SERG AML AML 15 44 21.2
comp=E,24990μm,0.4s
TRIZ Trizonia 0.23 106 P **Pg** **15 44 16.3 -0.5**
TRIZ S **Sg** **15 44 19.9 -0.1**
LAKA Lakka 0.23 143 P **Pg** **15 44 16.6 -0.4**
LAKA S **Sg** **15 44 20.3 0.0**
comp=E,5μm,0.3s
LAKA Lakka 0.23 143 P **Pg** **15 44 16.8 -0.2**
LAKA S **Sg** **15 44 20.2 0.0**
LAKA AML AML 15 44 21.7
comp=N,9667μm,0.3s
LAKA AML AML 15 44 25.3
comp=E,10521μm,0.3s
PVO Paravola 0.28 312 P **Pg** **15 44 17.4 -0.5**
PVO S **Sg** **15 44 22.1 +0.3**
comp=E,5μm,0.4s
PVO Paravola 0.28 312 P **Pg** **15 44 17.6 -0.3**
ALIK Aliki, Aigiali 0.30 124 P **Pg** **15 44 17.9 -0.2**
ALIK S **Sg** **15 44 22.9 +0.8**
RLS Riolos of Patr 0.45 215 P **Pg** **15 44 20.4 -0.6**
RLS S **Sg** **15 44 27.7 +0.8**
comp=E,2μm,0.2s
RLS Riolos of Patr 0.45 215 P **Pg** **15 44 20.6 -0.4**
RLS S **Sg** **15 44 27.2 +0.3**
RLS AML AML 15 44 29.6
comp=N,7097μm,0.2s
RLS AML AML 15 44 29.9
comp=E,2619μm,0.3s
KLV Kalavryta, Ach 0.47 144 P **Pg** **15 44 20.6 -0.8**
KLV S **Sb** **15 44 29.0 -0.5**
comp=E,600nm,0.3s
KLV Kalavryta, Ach 0.47 144 P **Pg** **15 44 20.9 -0.5**
KLV S **Sg** **15 44 27.7 +0.1**
KLV AML AML 15 44 29.8
comp=E,1141μm,0.2s
KLV AML AML 15 44 31.7
comp=N,886μm,0.3s
DRO Drossia 0.48 188 P **Pg** **15 44 20.8 -0.7**
DRO S **Sg** **15 44 28.7 +0.9**
comp=N,8μm,0.3s
DRO Drossia 0.48 188 P **Pg** **15 44 21.3 -0.2**
DRO S **Sg** **15 44 27.9 +0.1**
DRO AML AML 15 44 29.7
comp=N,13410μm,0.4s
DRO AML AML 15 44 32.0
comp=E,17588μm,0.2s
EVR Evrytania 0.49 1 P **Pg** **15 44 21.0 -0.7**
EVR S **Sg** **15 44 28.5 +0.3**
comp=E,2μm,0.5s
EVR Evrytania 0.49 1 P **Pg** **15 44 21.2 -0.5**
EVR S **Sg** **15 44 28.1 0.0**
EVR AML AML 15 44 33.1
comp=E,3174μm,0.5s
EVR AML AML 15 44 34.6
comp=N,3262μm,0.6s
DLFA Delphi 0.55 85 P **Pg** **15 44 22.1 -0.7**
MAKR Makrakomi, Fth 0.64 24 P **Pg** **15 44 24.1 -0.4**
MAKR S **Sb** **15 44 34.2 -0.1**
comp=N,3μm,0.4s
MAKR Makrakomi, Fth 0.64 24 P **Pg** **15 44 24.2 -0.4**
MAKR S **Sg** **15 44 33.0 +0.1**
MAKR AML AML 15 44 35.5
comp=E,6767μm,0.3s
MAKR AML AML 15 44 37.0
comp=N,3499μm,0.4s
THAL Thalero 0.79 120 P **Pg** **15 44 27.0 -0.3**
NYDR Nydri-Lefkada 0.91 289 P **Pg** **15 44 28.2 -1.4**
EVGI Lefkada island 0.92 283 P **Pg** **15 44 28.5 -1.3**
EVGI Lefkada island 0.92 283 P **Pg** **15 44 29.3 -0.4**
LKD2 Lefkada island 0.96 292 P **Pg** **15 44 29.5 -1.2**
LKD2 Lefkada island 0.96 292 P **Pg** **15 44 29.9 -0.7**
LKR Lokris 0.97 76 P **Pg** **15 44 28.6 -2.1**
FSK Fiskardo 0.97 272 P **Pg** **15 44 30.1 -0.7**
FSK Fiskardo 0.97 272 P **Pg** **15 44 30.5 -0.3**
FSK S **Sg** **15 44 43.4 -0.1**
FSK AML AML 15 44 47.5
comp=N,691μm,0.2s
FSK AML AML 15 44 47.7
comp=E,1528μm,0.4s
TSLK Tsoukalades, L 0.98 294 P **Pg** **15 44 30.6 -0.3**
TSLK Tsoukalades, L 0.98 294 P **Pg** **15 44 30.7 -0.3**
VLS Valsamata 0.98 256 P **Pg** **15 44 29.3 -1.7**
DRAG Dragano-Lefkad 0.99 285 P **Pg** **15 44 29.7 -1.5**
PSDA Pessada-Kefalo 1.00 252 P **Pg** **15 44 29.7 -1.7**
LOUT Loutraki 1.03 115 P **Pb** **15 44 32.0 +0.1**
LOUT Loutraki 1.03 115 P **Pg** **15 44 30.8 -1.0**
LTHK Lithakia 1.04 227 P **Pg** **15 44 30.6 -1.6**
LTHK Lithakia 1.04 227 P **Pg** **15 44 31.7 -0.5**
KEF4 Livadi, Kephal 1.09 262 P **Pg** **15 44 31.3 -1.8**
DMLN Damoulianata-K 1.14 261 P **Pg** **15 44 32.4 -1.5**
THL Klokotos Trika 1.15 8 P **Pg** **15 44 33.8 -0.4**
VIL2 Platees 1.18 100 P **Pb** **15 44 34.7 +0.2**
VILL Villia 1.22 102 P **Pg** **15 44 34.8 -0.7**
ITM Ithomi 1.25 175 P **Pg** **15 44 34.8 -1.3**
ITM Ithomi 1.25 175 P **Pg** **15 44 35.0 -1.1**
EPID Epidavros 1.32 127 P **Pg** **15 44 36.8 -0.7**
EPID Epidavros 1.32 127 P **Pg** **15 44 36.4 -1.0**
TYRN Tyrnavos 1.32 15 P **Pg** **15 44 36.6 -1.0**
NEO Neokhori 1.42 51 P **Pn** **15 44 37.7 -0.2**
NEO Neokhori 1.42 51 P **Pn** **15 44 37.8 -0.1**
XOR Xorichti 1.44 49 P **Pn** **15 44 38.0 -0.1**
XOR Xorichti 1.44 49 P **Pn** **15 44 38.1 -0.1**
KRND KRANIDI 1.49 134 P **Pn** **15 44 39.3 +0.4**
PYL PYLOS 1.53 182 P **Pn** **15 44 39.4 0.0**
PYL PYLOS 1.53 182 P **Pn** **15 44 39.9 +0.5**
ATHU Athens Univers 1.63 106 P **Pn** **15 44 41.6 +0.8**
VLY Voula,Athens 1.68 109 P **Pn** **15 44 41.2 -0.2**
VLY Voula,Athens 1.68 109 P **Pn** **15 44 41.9 +0.5**
DION Dionisos Attik 1.72 101 P **Pn** **15 44 42.1 +0.1**
LIT Litokhoron 1.75 18 P **Pn** **15 44 42.2 -0.3**
VLI Veliai 1.93 152 P **Pn** **15 44 45.0 +0.1**
OHR Ohrid 2.79 344 *i* Pn **Pb** **15 45 03.5 +1.5**
TORD Torodi Ar. Bea 30.86 221 P **P** **15 50 28.8 +0.2**
comp=E,0.6nm,0.6s,baz=32,slow=9.0,SNR=3.9
comp=E,0.6nm,0.6s
ARCES ARCESS Array B 31.23 3 P **P** **15 50 31.5 +0.2**
comp=E,1.0nm,0.9s,baz=184,slow=10,SNR=1.4
comp=E,1.0nm,0.9s
MKAR Makanchi Array 44.31 59 P **P** **15 52 22.2 +0.2**
comp=E,1.1nm,0.5s,baz=276,slow=7.6,SNR=14
comp=E,1.1nm,0.5s
ZALV Zalesovo Beam 44.77 48 P **P** **15 52 25.4 -0.1**
comp=E,0.6nm,0.4s,baz=275,slow=8.5,SNR=2.5
comp=E,0.6nm,0.4s

UCR 14 15:47:47.9±1.7, 8°.32N×83°.07W, h22km±9km, MW3.6, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.51**	**11**	*eP*	Pb	15 47 58.5	+0.2
EDSV				*eS*	Sb	15 48 05.5	+0.2
BRU2	**Volcan**	**0.60**	**39**	*eP*	Pb	15 47 59.9	-0.1
POTG	**Potrero Grande**	**0.73**	**356**	*eP*	Pb	15 48 01.5	-0.5
POTG				*eS*	Sb	15 48 12.1	+0.4
EDPN	**Palmar Norte**	**0.74**	**329**	*eP*	Pb	15 48 01.4	-0.8
EDPN				*eS*	Sb	15 48 12.2	+0.3
EDDO	**Dominical**	**1.21**	**320**	*eP*	Pn	15 48 09.0	-0.6
PEZE	**Perez Zeledon,**	**1.22**	**331**	*eP*	Pn	15 48 08.5	-1.1
CDM	**Cerro de Muert**	**1.41**	**331**	*eP*	Pn	15 48 11.9	-0.7
MRVA	**Moravia de Chi**	**1.54**	**346**	*eP*	Pn	15 48 13.8	-0.4
RIMA	**Rio Macho**	**1.64**	**332**	*eP*	Pn	15 48 14.9	-0.7
LCR2	**La Lucha 2**	**1.69**	**327**	*eP*	Pn	15 48 15.8	-0.5
OCM	**Ochomogo**	**1.79**	**331**	*eP*	Pn	15 48 18.0	+0.2
HDC	**Heredia**	**1.96**	**329**	*eP*	Pn	15 48 21.1	+1.1
JACO	**JACO, Garabito**	**2.06**	**311**	*eP*	Pn	15 48 20.0	-1.2
CASO	**Castillo**	**2.67**	**322**	*eP*	Pb	15 48 32.8	-2.3
CEDE	**Laguna Cedeo**	**2.69**	**323**	*eP*	Pn	15 48 32.4	+2.4
JTS	**Las Juntas de**	**2.70**	**317**	*eP*	Pn	15 48 31.4	+1.4
ACAL	**Aguas Claras**	**3.01**	**320**	*eP*	Pn	15 48 36.7	+2.4
PLVR	**Palo Verde**	**3.02**	**312**	*eP*	Pn	15 48 34.1	-0.5
CUI	**Cuipilapa**	**3.11**	**319**	*eP*	Pn	15 48 37.5	+1.8
SAJU	**San Juanillo,**	**3.13**	**304**	*eP*	Pn	15 48 35.5	-0.4
COLC	**Colonia**	**3.14**	**318**	*eP*	Pn	15 48 39.0	+2.8
LAPC	**Finca la Perla**	**3.37**	**316**	*eP*	Pn	15 48 41.4	+2.1
GB1A	**Borinquen Arri**	**3.38**	**317**	*eP*	Pn	15 48 41.4	+1.9

*IDC **14** 15:54:39.3±2.2, 2°.08N×128°.03E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=141.6km s-min=27.7km az=67.0*
*DJA **14** 15:54:55.5±0.8, 2°N±4°×12°7E±°, h114km±8km, M3.6/7, mb3.8/4, mB4.4/1, MLv3.5/7, Mw(mB)3.5/1*
ISC 14 15:54:54.9±1.1, 1°.80N±0°.08×127°.42E±0°.07, h112km, n11, σ1°28/13, mb3.4/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.37**	**83**	P	**Pn**	**15 55 11.5**	**+0.3**
GAMI				S	**Sn**	**15 55 27.8**	**+4.3**
LBMI	**Labuha**	**2.42**	**178**	P	**Pn**	**15 55 35.1**	**+1.7**
SGSI	**Sangihe**	**2.67**	**315**	S	**Sn**	**15 56 10.2**	**+1.6**
KMSI	**Cibinong**	**3.65**	**251**	P	**Pn**	**15 55 49.2**	**-0.4**
KMSI				S	**Sn**	**15 56 33.2**	**+1.3**
GTOI	**Gorontalo**	**4.56**	**255**	P	**Pn**	**15 56 04.5**	**+2.7**
NLAI	**Namlea**	**5.01**	**184**	P	**Pn**	**15 56 08.6**	**+0.6**
0.1nm7.7nm,0.7s							
MRSI	**Marisa**	**5.63**	**257**	P	**Pn**	**15 56 16.2**	**-0.2**
0.1nm413nm7.5nm,0.4s							
APSI	**Ampana**	**6.37**	**245**	P	**Pn**	**15 56 27.6**	**+1.3**
WRA	**Warramunga Arr**	**22.64**	**163**	P	**P**	**15 59 43.9**	**-3.0**
0.9nm,0.5s,baz=344,slow=11,SNR=18							
0.9nm,0.5s							
ASAR	**Alice Springs**	**26.08**	**166**	P	**P**	**16 00 15.6**	**-2.7**
0.3nm,0.5s,baz=347,slow=7.6,SNR=14							
0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.53**	**326**	P	**P**	**16 04 45.6**	**-1.0**
0.2nm,0.3s,baz=106,slow=8.1,SNR=2.0							
0.2nm,0.3s							

*NEIC **14** 15:55:42.5±2.1, 32°.10S±0°.08×178°.5W±0°.1, h59km±7km, mb4.6/18, Error ellipse: s-maj=17.1km s-min=12.0km az=95.0*
*IDC **14** 15:55:43.0±2.6, 32°.05S×178°.66W, h53km±23km, mb4.1/8, mbtmp4.3/10, ML4.7/2, MS3.4/6, Error ellipse: s-maj=21.2km s-min=15.8km az=105.0*
*NOU **14** 15:55:43.8, 32°.67S×178°.08W, h190km, mb4.2/10, South of Kermadec Islands*
*WEL **14** 15:57:01.8, 38°S±33°×17°8E±2°3, h36km±30km, M2.0/7, ML2.1/8, MLv2.0/7, Error ellipse: s-maj=0.1km s-min=0.0km az=167.2*
ISC 14 15:55:41.2±0.5, 32°.19S±0°.06×178°.6W±0°.1, h45km, n81, σ1°33/64, mb4.6/18, MS3.1/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.98**	**11**	P	**Pn**	**15 56 25.7**	**-0.2**
52nm,0.3s,baz=144,slow=19,SNR=2.4							
RAO				S	**Sn**	**15 57 00.1**	**-0.3**
373nm,0.3s,baz=258,slow=23,SNR=4.5							
195nm,0.3s							
RAO	**Raoul Island**	**2.98**	**11**	Pn	**Pn**	**15 56 26.1**	**+0.2**
RAO	**Raoul Island**	**2.98**	**11**	P	Pn	15 56 37.3	+11
MXZ	**Matakaoa Point**	**5.95**	**205**	Pn	**Pn**	**15 57 08.4**	**+1.8**
MXZ	**Matakaoa Point**	**5.95**	**205**	P	**Pn**	**15 57 08.8**	**+2.2**
WMGZ	**Waiomatatini S**	**6.14**	**203**	P	**Pn**	**15 57 08.5**	**-0.8**
HAZ	**Te Kaha**	**6.31**	**207**	P	**Pn**	**15 57 11.2**	**-0.4**
PKGZ	**Pakihiroa**	**6.32**	**205**	P	**Pn**	**15 57 10.3**	**-1.5**
PUZ	**Puketiti**	**6.42**	**203**	P	**Pn**	**15 57 10.9**	**-2.3**
RUGZ	**Raukumara Rang**	**6.53**	**207**	P	**Pn**	**15 57 14.5**	**-0.3**
KUZ	**Kuaotunu**	**6.55**	**224**	P	Pn	15 57 19.5	+4.6
TWGZ	**Tauwhareparae**	**6.61**	**204**	P	**Pn**	**15 57 15.0**	**-0.7**
CNGZ	**Carnagh Statio**	**6.81**	**202**	P	**Pn**	**15 57 17.2**	**-1.3**
TKGZ	**Te Karaka**	**6.89**	**204**	P	**Pn**	**15 57 18.7**	**-0.9**
MWZ	**Matawai**	**6.91**	**206**	P	**Pn**	**15 57 18.0**	**-1.9**
OPRZ	**Ohinepanea**	**6.92**	**214**	P	**Pn**	**15 57 21.7**	**+1.8**
URZ	**Urewera**	**7.01**	**209**	P	**Pn**	**15 57 18.8**	**-2.5**
15nm,0.3s,baz=343,slow=3.0,SNR=27							
URZ				S	**Sn**	**15 58 38.5**	**-1.1**
17nm,0.4s,baz=158,slow=11,SNR=2.1							
URZ	**Urewera**	**7.01**	**209**	P	**Pn**	**15 57 19.0**	**-2.2**
URZ	**Urewera**	**7.01**	**209**	P	**Pn**	**15 57 20.7**	**-0.5**
OUZ	**Omahuta**	**7.20**	**243**	Pn	**Pn**	**15 57 27.1**	**+3.4**
OUZ	**Omahuta**	**7.20**	**243**	P	Pn	15 57 28.4	+4.7
BKZ	**Black Stump Fm**	**8.04**	**209**	P	**Pn**	**15 57 34.4**	**-1.0**
BFZ	**Birch Farm**	**9.45**	**205**	P	**Pn**	**15 57 52.2**	**-2.4**
KHZ	**Kahutara**	**11.98**	**209**	P	Pn	15 58 24.0	-5.2
RPZ	**Rata Peaks**	**14.11**	**212**	P	Pn	15 58 52.5	-5.7
3.2nm,0.8s,baz=333,slow=6.8,SNR=0.8							
RPZ				S	Sn	16 01 16.9	-16
6.8nm,0.7s,baz=132,slow=21,SNR=1.8							
MSVF	**Nonsavu**	**14.71**	**347**	P	**Pn**	**15 59 06.1**	**-0.4**
0.2nm,0.3s,baz=151,slow=17,SNR=2.7							
MSVF				LR	LR	16 03 40.4	
comp=Z,128nm,18.6s,baz=168,slow=33							
4.3nm,0.9s							
MSVF	**Nonsavu**	**14.71**	**347**	P	**P**	**15 59 09.5**	**-2.3**
DZM	**Mont Dzumac**	**16.70**	**303**	*e*LR	LR	16 03 13.2	
comp=Z,234nm,24.9s							
DZM	**Mont Dzumac**	**16.70**	**303**	LR	LR	16 04 21.5	
comp=Z,210nm,18.6s,baz=182,slow=31							
TBI	**Tubuai**	**27.15**	**78**	*e*LR	LR	16 08 05.6	
comp=Z,81nm,28.0s							
TBI	**Tubuai**	**27.15**	**78**	*e*T	T	16 29 53.8	
22nm,0.4s							
PAE	**Paea**	**29.89**	**68**	*e*T	T	16 33 07.1	
9.2nm,0.3s							
PPT2	**Papeete2**	**29.93**	**68**	*e*LR	LR	16 09 15.1	
comp=Z,44nm,22.5s							
PPT2	**Papeete2**	**29.93**	**68**	*e*T	T	16 33 15.7	
5.9nm,0.3s							
PMOR	**Pomariorio Ree**	**32.74**	**66**	*e*T	T	16 36 40.8	
3.1nm,0.3s							
STKA	**Stephens Creek**	**33.64**	**260**	P	**P**	**16 02 18.2**	**+0.7**
CTA	**Charters Tower**	**33.65**	**282**	P	**P**	**16 02 18.5**	**+0.7**
3.7nm,0.5s,baz=113,slow=9.6,SNR=12							
CTA				LR	LR	16 13 24.9	
comp=Z,37nm,21.5s,baz=80,slow=32							
3.7nm,0.5s							
CTAO	**Charters Tower**	**33.65**	**282**	P	**P**	**16 02 17.3**	**-0.4**
CTAO				IAmb	IAmb	16 02 24.3	
comp=Z,9.2nm,1.1s							
BBOO	**Buckleboo**	**38.05**	**257**	P	**P**	**16 02 53.6**	**-1.7**
BBOO				IAmb	IAmb	16 03 00.6	
comp=Z,14nm,1.1s							
PMG	**Port Moresby**	**38.97**	**298**	P	**P**	**16 03 02.3**	**-0.9**
PMG				IAmb	IAmb	16 03 12.5	
comp=Z,12nm,0.9s							
KRVT	**Keravat (AS076**	**39.09**	**309**	P	**P**	**16 03 04.3**	**+0.2**
comp=Z,50nm,0.6s,baz=125,slow=0.5,SNR=22							
COEN	**Coen**	**39.33**	**288**	P	**P**	**16 03 05.7**	**-0.5**
COEN				IAmb	IAmb	16 03 15.6	
comp=Z,11nm,1.1s							
TAOE	**Nuku Hiva Isla**	**42.47**	**65**	*e*LR	LR	16 15 02.0	
comp=Z,36nm,26.8s							
AS31	**Alice Springs**	**42.56**	**269**	P	**P**	**16 03 32.4**	**-0.4**
ASAR	**Alice Springs**	**42.56**	**269**	P	**P**	**16 03 33.1**	**+0.3**
comp=Z,4.4nm,0.7s,baz=109,slow=8.0,SNR=69							
ASAR				PcP	**PcP**	**16 05 24.4**	**-0.3**
comp=Z,0.2nm,0.5s,baz=113,slow=2.8,SNR=1.3							
ASAR				LR	LR	16 19 00.9	
comp=Z,34nm,20.0s,baz=132,slow=33							
comp=Z,4.4nm,0.7s							
ASAR	**Alice Springs**	**42.56**	**269**	P	**P**	**16 03 31.8**	**-1.0**
WR0	**Warramunga Arr**	**43.53**	**274**	P	**P**	**16 03 41.1**	**+0.4**
WR0				IAmb	IAmb	16 03 41.6	
comp=Z,7.4nm,0.6s							
WB2	**Warramunga Arr**	**43.70**	**274**	P	**P**	**16 03 42.3**	**+0.3**
WRA	**Warramunga Arr**	**43.71**	**274**	P	**P**	**16 03 42.4**	**+0.2**
comp=Z,8.7nm,0.5s,baz=114,slow=7.7,SNR=256							
WRA				LR	LR	16 20 06.7	
comp=Z,42nm,19.8s,baz=112,slow=34							
comp=Z,8.7nm,0.5s							
WRA	**Warramunga Arr**	**43.71**	**274**	P	**P**	**16 03 41.3**	**-0.8**
WB0	**Warramunga Arr**	**43.74**	**275**	P	**P**	**16 03 42.5**	**+0.1**
FORT	**Forrest**	**45.15**	**257**	P	**P**	**16 03 51.8**	**-1.6**
SBA	**Scott Base**	**46.22**	**184**	P	**P**	**16 04 01.2**	**-0.1**
SBA				IAmb	IAmb	16 04 06.7	
comp=Z,1.8nm,0.8s							
VNDA	**Vanda**	**46.27**	**186**	P	**P**	**16 04 03.0**	**+1.4**
comp=Z,0.4nm,0.6s,baz=356,slow=6.0,SNR=5.1							
comp=Z,0.4nm,0.6s							
MTN	**Manton Dam**	**49.81**	**281**	P	**P**	**16 04 27.2**	**-2.6**
MTN				IAmb	IAmb	16 04 30.4	
comp=Z,6.9nm,0.7s							
KNRA	**Kununurra**	**50.38**	**276**	P	**P**	**16 04 32.4**	**-1.7**
KNRA				IAmb	IAmb	16 04 50.1	
comp=Z,6.5nm,0.8s							
CASY	**Casey**	**53.34**	**208**	P	**P**	**16 04 54.3**	**-1.1**
CASY				IAmb	IAmb	16 05 08.9	
comp=Z,2.1nm,0.9s							
QSPA	**South Pole Qui**	**57.93**	**180**	P	**P**	**16 05 31.6**	**+3.1**
comp=Z,6.5nm,0.6s,baz=344,slow=0.5,SNR=23							
comp=Z,6.5nm,0.6s							
QSPA	**South Pole Qui**	**57.93**	**180**	P	**P**	**16 05 31.0**	**+2.4**
BELA	**Belgrano 2**	**68.08**	**172**	P	**P**	**16 06 36.7**	**+1.1**
MAW	**Mawson**	**70.47**	**201**	P	**P**	**16 06 51.8**	**+1.3**
comp=Z,1.4nm,0.6s,baz=79,slow=3.1,SNR=3.7							
comp=Z,1.4nm,0.6s							
LEM	**Lembang**	**72.70**	**273**	LR	LR	16 39 36.0	
comp=Z,31nm,18.6s,baz=209,slow=36							
SNAA	**Sanae**	**76.39**	**179**	P	**P**	**16 07 26.4**	**+1.0**
SNAA				IAmb	IAmb	16 07 32.2	
comp=Z,3.2nm,1.0s							
H03S2	**Juan Fernandez**	**79.89**	**124**	T	T	17 36 21.5	
baz=237							
H03S1	**Juan Fernandez**	**79.90**	**124**	T	T	17 36 22.6	
baz=237							
H03S3	**Juan Fernandez**	**79.90**	**124**	T	T	17 36 20.1	
baz=237							
H03N3	**Juan Fernandez**	**80.09**	**123**	T	T	17 36 33.4	
baz=240,slow=72,SNR=58							
H03N2	**Juan Fernandez**	**80.09**	**123**	T	T	17 36 26.7	
baz=240,slow=72,SNR=40							
H03N1	**Juan Fernandez**	**80.10**	**123**	T	T	17 36 25.9	
baz=240,slow=72,SNR=92							
PETK	**Petropavlovsk-**	**87.42**	**346**	P	**P**	**16 08 23.1**	**0.0**
comp=Z,2.9nm,0.9s,baz=152,slow=4.3,SNR=2.1							
comp=Z,2.9nm,0.9s							
NVAR	**Mina Array Bea**	**89.88**	**43**	P	**P**	**16 08 37.1**	**+1.7**
comp=Z,0.5nm,0.6s,baz=209,slow=7.0,SNR=2.7							
comp=Z,0.5nm,0.6s							
ARCES	**ARCESS Array B**	**140.22**	**347**	PKhKP	PKPpre	16 14 58.4	
comp=Z,2.0nm,0.9s,baz=46,slow=3.5,SNR=4.0							
ARCES				PKP	**PKiKP**	**16 15 05.8**	**-0.7**
comp=Z,1.5nm,0.8s,baz=80,slow=2.3,SNR=7.7							
KBZ	**Khabaz**	**145.67**	**302**	PKPbc	**PKPab**	**16 15 15.5**	**+0.4**
comp=Z,1.2nm,0.8s,baz=102,slow=5.0,SNR=3.9							
FINES	**FINESS Array B**	**146.64**	**339**	PKPbc	**PKPbc**	**16 15 16.7**	**-0.4**
comp=Z,6.3nm,0.7s,baz=47,slow=3.8,SNR=40							
NB2	**NORSAR Subarra**	**150.43**	**350**	PKP	**PKiKP**	**16 15 27.6**	**-0.2**
comp=Z,1.4nm,0.5s,baz=16,slow=2.6							
NOA	**NORSAR Array B**	**150.43**	**350**	PKPbc	**PKiKP**	**16 15 27.5**	**-0.2**
comp=Z,2.6nm,0.6s,baz=16,slow=4.2,SNR=14							
HFS	**Hagfors**	**150.89**	**347**	PKPbc	**PKiKP**	**16 15 28.2**	**-0.5**
comp=Z,2.4nm,0.4s,baz=98,slow=3.0,SNR=19							
MMAI	**Mount Meron Ar**	**151.44**	**281**	PKPbc	**PKiKP**	**16 15 31.3**	**+0.5**
comp=Z,0.8nm,0.5s,baz=78,slow=9.5,SNR=4.0							
AKASG	**Malin Array Be**	**152.39**	**320**	PKPbc	**PKPbc**	**16 15 31.5**	**-0.3**
comp=Z,0.3nm,0.3s,baz=42,slow=3.0,SNR=4.8							
AKASG				PKPab	**PKPab**	**16 15 41.6**	**-0.5**
comp=Z,0.2nm,0.4s,baz=61,slow=2.7,SNR=4.0							
BRTR	**Keskin Array B**	**152.97**	**295**	PKPbc	**PKPbc**	**16 15 33.4**	**-0.3**
comp=Z,0.4nm,0.6s,baz=127,slow=3.0,SNR=2.0							
TORD	**Torodi Ar. Bea**	**161.05**	**181**	PKPab	**PKPab**	**16 16 19.9**	**-0.1**
comp=Z,1.0nm,0.7s,baz=183,slow=3.7,SNR=4.8							

*DJA **14** 16:06:02.8±0.6, 9°S±9°×11°8E±°, h115km±7km, M3.9/9, MLv3.9/9*
*IDC **14** 16:06:03.4±2.8, 8°.52S×118°.53E, h146km±19km, mb3.3/4, mbtmp3.7/6, Error ellipse: s-maj=48.6km s-min=12.8km az=54.0*
ISC 14 16:06:02.6±0.6, 8°.67S±0°.07×118°.30E±0°.05, h152km, n35, σ1°73/41, mb3.7/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.54**	**253**	P	**Pn**	**16 06 22.0**	**-2.4**
PLAI				S	**Sn**	**16 06 36.7**	**-4.2**
PLAI	**Plampang**	**0.54**	**253**	P	**Pn**	**16 06 22.3**	**-2.1**
TWSI	**Taliwang, Sumb**	**1.41**	**267**	P	**Pn**	**16 06 30.0**	**-1.3**
TWSI				S	**Sn**	**16 06 51.2**	**-2.1**
KLNI	**Mataram**	**2.20**	**276**	P	**Pn**	**16 06 39.6**	**-0.5**
SRBI	**Singaraja**	**3.11**	**281**	P	**Pn**	**16 06 51.0**	**-0.4**
IGBI	**Denpasar**	**3.12**	**267**	P	**Pn**	**16 06 51.7**	**+0.1**
IGBI				S	**Sn**	**16 07 30.2**	**+0.7**
BSSI	**Bau Bau, Buton**	**3.32**	**41**	P	**Pn**	**16 06 52.1**	**-2.0**
RTBI	**Rangdo, Negare**	**3.33**	**273**	P	**Pn**	**16 06 54.1**	**-0.2**
BKSI	**Bulukumba**	**3.79**	**29**	P	**Pn**	**16 06 58.3**	**-1.8**
MMRI	**Maumere**	**3.89**	**90**	P	**Pn**	**16 07 00.5**	**-0.9**
MMRI	**Maumere**	**3.89**	**90**	P	**Pn**	**16 07 00.6**	**-0.9**
KAPI	**Kappang**	**3.91**	**22**	P	**Pn**	**16 07 00.7**	**-1.0**
18nm,0.5s,baz=194,slow=8.6,SNR=4.6							
JAGI	**Jajag, Banyuwa**	**4.11**	**272**	P	**Pn**	**16 07 03.2**	**-1.1**
JAGI	**Jajag, Banyuwa**	**4.11**	**272**	P	**Pn**	**16 07 03.5**	**-0.8**
BNSI	**Bone**	**4.61**	**23**	P	**Pn**	**16 07 10.8**	**-0.1**
SOEI	**Soe**	**5.99**	**101**	P	**Pn**	**16 07 28.0**	**-1.3**
KNRA	**Kununurra**	**12.37**	**125**	P	**Pn**	**16 08 52.0**	**-1.6**
MBWA	**Marble Bar**	**12.49**	**174**	P	**Pn**	**16 08 54.7**	**-0.5**
MTN	**Manton Dam**	**13.27**	**109**	P	**Pn**	**16 09 02.5**	**-2.7**
GIRL	**Giralia**	**14.43**	**195**	P	**P**	**16 09 22.0**	**-0.4**
KDU	**Kakadu**	**14.48**	**107**	P	**Pn**	**16 09 19.3**	**-1.3**
FAKI	**Fak Fak**	**15.00**	**68**	P	**Pn**	**16 09 26.9**	**-0.2**
WRKA	**Warakurna**	**18.86**	**151**	P	**Pn**	**16 10 14.2**	**+0.7**
WRA	**Warramunga Arr**	**19.14**	**128**	P	**P**	**16 10 14.7**	**+0.4**
2.0nm,0.8s,baz=302,slow=12,SNR=26							
WRA				S	**S**	**16 13 41.1**	**-2.1**
0.5nm,0.7s,baz=301,slow=27,SNR=2.8							
WRA				ScP	**ScP**	**16 17 55.9**	**+2.2**
0.3nm,0.8s,baz=319,slow=2.2,SNR=1.8							
WRAB	**Tennant Creek**	**19.14**	**128**	P	**Pn**	**16 10 14

OKCZ	Okains Bay	1.49 205	P		Pb	16 07 00.7	-0.5
PAWZ	Paruwai Farm	1.50 49	P		Pb	16 07 00.1	-1.3
PAWZ			S		Sb	16 07 19.8	-0.4
TKNZ	Takaka Hill	1.52 331	P		Pb	16 07 01.1	-0.7
TKNZ			S		Sb	16 07 21.2	+0.4
CAW	Cannon Point	1.53 34	P		Pb	16 07 00.7	-1.2
CAW			S		Sb	16 07 20.3	-0.7
DUWZ	D'Urville Isla	1.57 360	P		Pb	16 07 01.7	-1.0
DUWZ			S		Sb	16 07 21.8	-0.5
MQZ	McQueen's Vall	1.62 215	P		Pn	16 07 01.6	-0.2
MQZ			S		Sn	16 07 21.9	-0.3
AKCZ	Akaroa Harbour	1.67 206	P		Pb	16 07 03.2	-1.1
AKCZ			S		Sb	16 07 24.3	-0.7
OXZ	Oxford	1.68 235	P		Pn	16 07 02.4	-0.2
OXZ			S		Sn	16 07 23.1	-0.6
KIW	Kapiti Island	1.69 26	P		Pb	16 07 03.1	-1.5
DSZ	Denniston Nort	1.70 291	P		Pn	16 07 03.8	+0.9
DSZ			S		Sb	16 07 26.1	+0.2
OGWZ	Otaki Gorge	1.82 31	P		Pn	16 07 04.6	+0.1
INZ	Inchbonnie	1.86 258	P		Pn	16 07 05.6	+0.5
QRZ	Quartz Range	1.87 326	P		Pb	16 07 06.4	-1.3
QRZ			S		Sb	16 07 29.5	-1.2
QRZ	Quartz Range	1.87 326	P		Pb	16 07 06.8	-0.9
RACZ	Rakaia	1.88 223	P		Pn	16 07 05.4	+0.1
MRZ	Mangatainoka R	2.12 36	P		Pn	16 07 08.4	-0.2
WACZ	Wakanui South	2.19 224	P		Pn	16 07 09.7	+0.2
BFZ	Birch Farm	2.43 47	P		Pg	16 07 24.7	+4.0
WVZ	Waitaha Valley	2.45 252	P		Pn	16 07 13.9	+0.8
RPZ	Rata Peaks	2.49 237	P		Pn	16 07 13.5	-0.2
RPZ			S		Sn	16 07 42.8	-0.9
RPZ	Rata Peaks	2.49 237	P		Pn	16 07 13.8	0.0
ARCZ	Arundel	2.55 231	P		Pn	16 07 14.6	0.0
ARCZ			S		Sn	16 07 43.8	-1.3
WAZ	Wanganui	2.74 17	P		Pn	16 07 19.0	+1.8
GCSZ	Gaunt Creek Bo	2.81 249	P		Pn	16 07 19.1	+1.1
TMZ	Timaru	2.92 226	P		Pn	16 07 19.7	+0.1
KHEZ	Kahui Hut	3.08 1	P		Pg	16 07 31.0	-2.1
FOZ	Fox Glacier	3.23 248	P		Pn	16 07 24.8	+1.0
VRZ	Vera Road	3.31 11	P		Pn	16 07 26.9	+1.9
NNVZ	North Ngauruho	3.49 22	P		Pn	16 07 30.5	+2.9
ODZ	Otahua Downs	3.57 221	P		Pn	16 07 28.5	0.0
ODZ	Otahua Downs	3.57 221	P		Pn	16 07 28.9	+0.3
BKZ	Black Stump Fm	3.75 32	P		Pb	16 07 36.2	-3.6
HIZ	Hauiti	3.92 11	P		Pb	16 07 43.1	+0.4

*LDG **14** 16:08:48.7±0.1, 49°.90N×8°.66E, h8km, Md3.1/2, Ml3.1/36, Error ellipse: s-maj=1.2km s-min=0.8km az=149.0*
*BNS **14** 16:08:48.7±0.3, 49°.93N×8°.68E, h3km±2km, ML2.6*
*BGR **14** 16:08:48.8±0.2, 49°.92N×8°.70E, h6km, ML2.9/45, Error ellipse: s-maj=2.2km s-min=1.1km az=112.0*
*BUG **14** 16:08:49.0±0.0, 49°.89N×8°.66E, h0km±3km, MD3.5/11, ML3.3/18*
*STR **14** 16:08:49.3±0.6, 50°N±4°×±°, h11km±2km, MLv3.2/30, Error ellipse: s-maj=0.0km s-min=0.0km az=8.8, preliminary*
*PRU **14** 16:08:50.4±0.0, 49°.85N×8°.86E, h0km, Darmstadt*

ISC 14 16:08:47.4±0.9, **49°.90N**±0°.01×**8°.63E**±0°.01, **h18**km±2km, **n174**, σ1°**42**/316, **2C-5D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBB	Darmstadt	0.06	159	Pg	Pg	16 08 50.6	-0.2
WBB				Sg	Sg	16 08 51.8	-1.2
GODD	Goddelau	0.10	226	Pg	Pg	16 08 52.0	+0.9
GODD				Sg	Sg	16 08 55.2	+1.6
BODE	Bodenheim	0.22	274	Pg	Pg	16 08 53.4	+0.8
BODE				Sg	Sg	16 08 56.8	+0.6
WBA	Furth	0.27	153	Pg	Pb	16 08 54.3	+0.7
WBA				Sg	Sb	16 08 58.1	+0.3
TOD	Tromm	0.31	159	Pg	Pb	16 08 54.7	+0.3
TOD				Sg	Sb	16 08 59.3	+0.2
TNS	Taunus Mts	0.35	340	Pg	Pb	16 08 55.3	+0.2
TNS				Sg	Sb	16 09 00.6	+0.3
GWBE	Wiesbaden	0.36	306	Pg	Pb	16 08 55.9	+0.6
GWBE				Sg	Sb	16 09 01.0	+0.4
GWBO	Ockenheim	0.42	276	Pg	Pb	16 08 57.2	+0.9
GWBO				Sg	Sb	16 09 03.1	+0.8
MILB	Miltenberg	0.43	99	Pg	Pb	16 08 57.0	+0.5
MILB				Sg	Sb	16 09 02.9	+0.2
GWBD	Espenschied/He	0.52	295	Pg	Pn	16 08 59.0	-0.9
GWBD				Sg	Sb	16 09 05.7	+0.6
WBG	Bieber	0.54	59	Pg	Pb	16 08 58.7	+0.5
WBG				Sg	Sb	16 09 06.4	+0.8
IMS	Imsbach	0.56	238	Pg	Pb	16 08 59.5	+0.9
IMS				PmP		16 09 01.5	
IMS				Sg	Sb	16 09 07.1	+0.8
NAST	IGS Nastaetten	0.58	301	*e*Pg	Pn	16 08 59.9	-0.8
FACH	Fachingen	0.62	318	Pg	Pg	16 09 00.5	+0.9
FACH				Sg	Sg	16 09 08.2	+0.3
FACH				SmS		16 09 11.7	
KTD	Kalmit	0.68	212	Pg	Pn	16 09 01.7	-0.4
KTD	Kalmit	0.68	212	⇓Pg	Pn	16 09 01.7	-0.4
KTD				Sg	Sn	16 09 11.3	-0.9
WBFO	Grube Fortuna	0.69	349	Pg	Pn	16 09 01.9	-0.3
WBFO				Sg	Sg	16 09 10.4	+0.2
ABH	Alteburg	0.70	269	Pg	Pg	16 09 01.4	+0.2
ABH				SmS		16 09 14.2	
ABH	Alteburg	0.70	269	Sg	Sg	16 09 11.6	+1.1
ABH	Alteburg	0.70	269	⇓Pg	Pg	16 09 01.4	+0.2
KOE	Koeppel	0.78	313	*e*Pg	Pn	16 09 03.8	+0.2
EBSD	Ebsdorfer Grun	0.82	11	Pg	Pb	16 09 00.2	-2.9
SIND	Sindeldorf	0.84	131	⇓Pn	Pn	16 09 04.8	+0.5
SIND				PmP		16 09 05.3	
SIND				Sg	Sn	16 09 15.9	-0.2
BRET	Bretten	0.89	178	Pn	Pn	16 09 05.8	+0.9
BRET				Sn	Sn	16 09 17.8	+0.5
BGG	Burgeitz	0.89	291	*e*Pg	Pn	16 09 05.8	+0.8
GWBF	Romrod	0.90	23	Pg	Pn	16 09 06.0	+0.8
BIW	Bindweide	0.98	329	Pn	Pg	16 09 07.0	+0.6
BIW				Sn	Sn	16 09 19.9	+0.3
FSH	Hochheid	1.00	281	Sg	Sn	16 09 20.0	-0.1
PEB	Petersbachel	1.02	216	Pn	Pg	16 09 07.4	+0.2
PEB				Sn	Sn	16 09 21.1	+0.4
BHE	Schloss Buerre	1.04	297	Sn	Sg	16 09 22.0	+0.7
SZBH	soultz borehol	1.09	208	Pn	Pg	16 09 09.0	+0.5
SZBH				Sn	Sg	16 09 23.7	+0.9
GALG	Neuhausen (Enz	1.12	175	Pn	Pg	16 09 09.0	0.0
SPAHL	Spahl	1.12	47	Pg	Pg	16 09 09.1	+0.1
SPAHL				Sg	Sg	16 09 24.1	+0.5
HROE	Hohe Rhon--Fla	1.17	56	Pg	Pg	16 09 10.3	+0.2
HROE				Sg	Sg	16 09 26.0	+0.6
STU	Stuttgart	1.19	162	Pg	Pg	16 09 11.4	+1.1
STU				Sg	Sg	16 09 27.0	+1.2
RIVT	Riveris	1.22	262	Pn	Pg	16 09 10.8	-0.3
UBBA	Unterbreizbach	1.27	43	Pg	Pb	16 09 11.4	+0.7
UBBA				*e*Sg	Sg	16 09 28.1	-0.5
KASTN	Kahler Asten	1.31	354	Pg	Pb	16 09 12.0	+0.5
KASTN				*e*Sg	Sn	16 09 28.0	+0.1
HILG	Hillesheim	1.32	288	*e*Sg	Sg	16 09 30.4	+0.4
	166nm,0.8s						
CIEL	Dossenheim-sur	1.35	218	⇓Pn	Pg	16 09 13.4	0.0
CIEL				Sn	Sg	16 09 31.2	+0.2
VITZ	Vitzeroda	1.36	43	*e*Pn	Pb	16 09 12.8	+0.5
VITZ				*e*Pg	Pg	16 09 13.9	+0.2
VITZ				*e*Sg	Sg	16 09 30.8	-0.6
HOBG	Hohbusch	1.37	323	*e*Pg	Pb	16 09 13.1	+0.7
OPP	Oppenau	1.43	192	Pn	Pn	16 09 12.9	+0.5
CRUX	Bergwerk Schwa	1.56	62	Pn	Pn	16 09 14.9	+0.7
CRUX				*e*Pg	Pg	16 09 17.1	-0.2
CRUX				*e*Sg	Sg	16 09 37.2	-0.4
BFO	Black Forest	1.58	187	Pn	Pn	16 09 15.3	+0.8
BFO				*e*Pg	Pg	16 09 18.6	+0.8
BFO				*e*Sg	Sg	16 09 39.1	+0.7
WLF	Walferdange	1.62	263	*e*Pn	Pb	16 09 16.8	0.0
WLF				Sg	Sg	16 09 40.7	+0.9
WLF	Walferdange	1.62	263	⇑Pn	Pb	16 09 16.8	0.0
GRF	Grafenberg Arr	1.69	96	*e*Pg	Pg	16 09 20.0	+0.1
GRF				*e*Sg	Sg	16 09 41.5	-0.4
WLS	Welschbruch	1.71	210	Pn	Pn	16 09 16.3	+0.1
WLS				Sn	Sn	16 09 37.1	-0.4
DREG	Dreilaegerbach	1.72	297	*e*Pn	Pb	16 09 17.9	-0.5
CDF	Champ du Feu	1.73	211	*e*Pn	Pn	16 09 16.5	-0.1
CDF	Champ du Feu	1.73	211	*e*Pg	Pg	16 09 20.8	+0.1
CDF				*e*Sn	Sn	16 09 38.5	+0.2
CDF				*e*Sg	Sg	16 09 43.7	+0.5
	71nm,0.2s						
NORI	Noerdlinger Ri	1.76	131	*e*Pg	Pg	16 09 21.5	+0.3
NORI				*e*Sg	Sg	16 09 43.8	-0.3
BKLB	Ruhr-Universit	1.77	331	Pg	Pg	16 09 20.7	-0.7
BUG	Bochum--Univer	1.77	331	Pg	Pg	16 09 20.7	-0.8
BUG				Sg	Sb	16 09 41.2	+0.1
BTEZ	Ruhr-Universit	1.78	332	Pg	Pg	16 09 21.9	+0.4
BULI	Ruhr-Universit	1.79	331	Pg	Pg	16 09 21.9	+0.2
BULI				Sg	Sg	16 09 46.1	+1.1
GTTG	Gottingen	1.85	27	*e*Sg	Sg	16 09 46.7	-0.5
GUT	Gutenstein	1.85	170	Pn	Pn	16 09 19.3	+1.0
VOGT	Vogtsburg - To	1.92	200	Pn	Pg	16 09 24.7	+0.3
VOGT	Vogtsburg - To	1.92	200	Sn	Sg	16 09 49.8	+0.4
HGN	Heimansgroeve	1.94	298	Pg	Pg	16 09 25.1	+0.5
HGN				Sg	Sb	16 09 45.2	-0.7
ECH	Echery	1.94	210	Pn	Pn	16 09 19.2	-0.3
HWTS	Hohenwarte Tal	1.95	68	*e*Pg	Pg	16 09 24.3	-0.6
HWTS				*e*Sg	Sg	16 09 49.3	-1.0
KIZ	Kirchzarten	2.00	194	Pn	Pn	16 09 21.5	+1.3
POSS	Possen	2.02	44	*e*Pn	Pn	16 09 21.3	+0.7
POSS				*e*Sg	Sg	16 09 51.7	-0.8
MOX	Moxa	2.06	68	*e*Pn	Pn	16 09 22.6	+1.6
MOX				Pg	Pg	16 09 25.8	-1.1
MOX				*e*Sg	Sg	16 09 52.6	-0.9
BZER	Hlnxe	2.06	328	Sg	Sg	16 09 53.8	+0.2
FELD	Feldberg im Sc	2.06	192	Pn	Pn	16 09 21.7	+0.4
SLE	Schleitheim	2.14	183	Sn	Sn	16 09 47.2	-0.9
SLE	Schleitheim	2.14	183	⇓Pn	Pn	16 09 22.6	+0.5
CHRS	Christianenhau	2.21	38	*e*Pn	Pn	16 09 23.8	+0.7
CHRS				*e*Pg	Pg	16 09 29.1	-0.6
CHRS				*e*Sg	Sg	16 09 57.1	-1.3
CLZ	Clausthal	2.24	29	*e*Pn	Pn	16 09 24.7	+1.2
CLZ				*e*Pg	Pg	16 09 30.4	+0.1
MANZ	Manzenberg	2.25	86	*e*Pg	Pg	16 09 31.1	+0.5
MANZ				*e*Sg	Sb	16 09 57.4	+2.5
TAUT	Tautenburg	2.25	60	*e*Pg	Pg	16 09 31.2	+0.7
TAUT				*e*Sg	Sg	16 09 58.3	-1.4
TRIB	Obertriebel	2.30	77	*e*Pg	Pg	16 09 31.4	-0.1
TRIB				*e*Sg	Sg	16 10 00.3	-1.1
ROTZ	Rotzenmuhle	2.32	92	*e*Pg	Pg	16 09 31.6	-0.3
ROTZ				*e*Sg	Sb	16 09 59.4	+2.5
PAGF	Fort de Pagny	2.33	236	*e*Pn	Pn	16 09 25.7	+0.9
	baz=58						
PAGF	Fort de Pagny	2.33	236	*e*Pg	Pg	16 09 32.3	+0.2
PAGF				*e*Sg	Sg	16 10 03.4	+1.1
	19nm,0.2s						
PLN	Plauen	2.34	74	*e*Pg	Pb	16 09 30.9	+1.9
PLN				*e*Sg	Sg	16 10 01.3	-1.4
MLFH	Mildenfurth	2.38	67	*e*Pg	Pg	16 09 32.5	-0.6
MLFH				*e*Sg	Sg	16 10 02.7	-1.3
HINF	Hinteralfeld	2.39	210	*e*Pn	Pn	16 09 26.3	+0.7
HINF	Hinteralfeld	2.39	210	*e*Pg	Pg	16 09 32.7	-0.5
HINF				*e*Sn	Sn	16 09 54.6	+0.1
HINF				*e*Sg	Sg	16 10 04.1	-0.1
	68nm,0.2s						
SULZ	Cheisacher	2.40	188	Pn	Pn	16 09 25.9	+0.2
NEUB	Neuenburg	2.40	56	*e*Sg	Sg	16 10 03.7	-0.8
ROHR	Rohrbach	2.40	81	*e*Pg	Pg	16 09 33.1	-0.3
ROHR				*e*Sg	Sb	16 10 02.2	+3.0
HAU	Haudompre	2.42	219	*e*Pn	Pn	16 09 26.7	+0.7
HAU	Haudompre	2.42	219	*e*Pg	Pg	16 09 33.6	-0.2
HAU				*e*Sg	Sg	16 10 05.5	+0.4
	60nm,0.2s						
UBR	Ueberruh	2.42	156	*e*Pn	Pn	16 09 28.2	+2.0
UBR				*e*Pg	Pg	16 09 34.6	+0.7
UBR				*e*Sg	Sg	16 10 07.5	+2.2
GUNZ	Gunzen	2.43	77	*e*Pn	Pn	16 09 27.3	+1.1
GUNZ				*e*Pg	Pg	16 09 33.2	-0.7
GUNZ				*e*Sg	Sg	16 10 04.7	-0.7
WERD	Werda	2.43	75	*e*Sg	Sg	16 10 03.8	-1.6
WERN	Wernitzgruen	2.44	79	*e*Pn	Pn	16 09 28.3	+1.9
WERN				*e*Pg	Pg	16 09 33.5	-0.7
WERN				*e*Sg	Sg	16 10 04.8	-1.2
WIMM	Wimmelburg	2.45	47	*e*Pg	Pg	16 09 33.5	-0.8
WIMM				*e*Sg	Sg	16 10 04.1	-1.9
FUR	Furstenfeldbru	2.46	134	*e*Sg	Sg	16 10 05.7	-0.7
GIVF	Givet	2.47	276	*e*Pn	Pn	16 09 28.4	+1.8
GIVF	Givet	2.47	276	*e*Pg	Pg	16 09 35.3	+0.6
GIVF				*e*Sn	Sn	16 09 58.2	+2.0
GIVF				*e*Sg	Sg	16 10 07.8	+1.2
	46nm,0.3s						
IBBN	Ibbenburen	2.48	347	*e*Sg	Sg	16 10 07.2	+0.3
MULD	Muldenberg	2.48	77	*e*Sg	Sg	16 10 05.6	-1.5
NKC	Novy Kostel	2.48	81	*e*PG	Pg	16 09 34.3	-0.7
NKC				*e*SG	Sg	16 10 05.5	-1.7
	comp=Z,69nm,0.4s						
NKC	Novy Kostel	2.48	81	*e*Pg	Pg	16 09 34.5	-0.5
NKC				*e*Sg	Sg	16 10 05.5	-1.7
HKWD	Heukewalde	2.51	67	*e*Pg	Pg	16 09 35.0	-0.5
HKWD				*e*Sg	Sg	16 10 07.1	-0.9
TANN	Tannenbergstha	2.52	77	*e*Pg	Pg	16 09 35.3	-0.4
TANN				*e*Sg	Sg	16 10 07.3	-1.0
SCHF	Schoenfels	2.54	71	*e*Sg	Sg	16 10 06.9	-2.1
ASSE	Asse, Remlinge	2.58	29	*e*Sg	Sg	16 10 09.9	-0.4
DOU	Dourbes	2.61	276	Pn	Pn	16 09 30.5	+1.9
DOU				Pg	Pg	16 09 38.0	+0.5
SAVF	Savonnieres en	2.63	242	*e*Pg	Pg	16 09 38.1	+0.3
	baz=63						
SAVF				*e*Sg	Sg	16 10 13.2	+1.3
	14nm,0.3s						
MODW	Modelwitz	2.67	65	*e*Pg	Pg	16 09 38.1	-0.5
MODW				*e*Sg	Sg	16 10 12.2	-0.9
BOURR	Bourrignon	2.67	201	⇑Pn	Pg	16 09 38.8	+0.1
OBER	Oberstdorf	2.73	156	*e*Pn	Pn	16 09 32.6	+2.3
OBER				*e*Sn	Sn	16 10 02.9	+0.1
MEZF	Maizieres J'vi	2.73	241	*e*Pg	Pg	16 09 39.7	0.0
	baz=62						
MEZF				*e*Sg	Sg	16 10 16.4	+1.3
	16nm,0.3s						
ABG1	Leinawald	2.74	65	*e*Sg	Sg	16 10 14.9	-0.4
DAVA	Damuels	2.74	162	*e*Pg	Pn	16 09 32.6	+2.1
	0.5nm,0.1s						
DAVA				*e*Pg	Pg	16 09 41.9	+1.9
	11nm,0.3s						
DAVA				*e*Sg	Sg	16 10 17.8	+2.3
	16nm,0.3s						
RETA	Reutte	2.79	149	*e*Pn	Pn	16 09 33.3	+2.1
	4.0nm,0.1s,SNR=12						
RETA				*i* Sn	Sn	16 10 04.5	+0.1
	3.2nm,0.2s						
RETA				*e*Sg	Sg	16 10 20.1	+2.9
	7.5nm,0.3s						
BAIF	Baives	2.86	275	*e*Pn	Pn	16 09 34.0	+2.0
BAIF				*e*Sn	Sn	16 10 08.1	+2.1
BAIF				*e*Sg	Sg	16 10 20.4	+1.1
	34nm,0.5s						
WET	Wettzell	2.87	104	*e*Pn	Pb	16 09 35.7	-2.3
WET				*e*Sg	Sg	16 10 17.3	-2.2
SFTF	Sexfontaines	2.91	236	*e*Pn	Pn	16 09 33.3	+0.6
SFTF	Sexfontaines	2.91	236	*e*Pg	Pg	16 09 43.0	-0.1
	baz=57						
SFTF				*e*Sg	Sg	16 10 21.3	+0.5
	16nm,0.2s						
MOTA	Moosalm	3.04	146	*i* Pn	Pn	16 09 36.6	+2.0
	1.7nm,0.1s,SNR=5.8						
MOTA				*i* Sn	Sn	16 10 09.8	-0.7
	3.4nm,0.2s						
MOTA				*e*Sg	Sg	16 10 25.4	+0.5
	5.3nm,0.2s						
CLL	Collm	3.12	61	*e*Pg	Pb	16 09 45.0	+2.7
CLL				*ex*	x	16 09 51.0	
CLL				*e*Sn	Sn	16 10 01.0	-11
CLL				*e*Sg	Sg	16 10 26.0	-1.7
	comp=Z,26nm,0.6s						
CLL	Collm	3.12	61	*e*Pg	Pg	16 09 45.9	-1.3
CLL				*e*Sg	Sg	16 10 26.9	-0.8
SQTA	Sankt Quirin	3.18	146	*i* Pn	Pn	16 09 39.0	+2.5
	comp=Z,3.9nm,0.2s,SNR=5.1						
SQTA				*i* Sn	Sn	16 10 13.5	-0.6
	comp=Z,4.4nm,0.2s						
FBE	Freiberg	3.19	69	*e*Pg	Pg	16 09 47.9	-0.6
FBE				*e*Sg	Sg	16 10 28.0	-1.9
FETA	Feichten	3.20	153	*i* Pn	Pn	16 09 39.9	+3.0
	comp=Z,7.1nm,0.2s,SNR=23						
FETA				*i* Sn	Sn	16 10 17.8	+3.2
	comp=Z,0.6nm,0.1s						
FETA				*e*Sg	Sg	16 10 30.8	+0.6
	comp=Z,4.0nm,0.3s						
WATA	Walderalm	3.22	142	*i* Pn	Pn	16 09 40.0	+2.9
	comp=Z,7.0nm,0.2s,SNR=9.1						
WATA				*i* Sn	Sn	16 10 14.4	-0.8
	comp=Z,1.9nm,0.1s						
WATA				*e*Sg	Sg	16 10 30.6	-0.3
	comp=Z,5.5nm,0.2s						
WTTA	Wattenberg	3.31	142	*i* Pn	Pn	16 09 41.3	+2.9
	comp=Z,5.1nm,0.2s,SNR=9.0						
WTTA				*e*Sg	Sg	16 10 34.2	+0.7
	comp=Z,14nm,0.3s						
KHC	Kasperske Hory	3.31	101	*e*PN	Pn	16 09 40.8	+2.5
KHC				*e*PG	Pg	16 09 49.7	-1.2
KHC				*e*SN	Sn	16 10 16.5	-0.7
KHC				*e*SG	Sg	16 10 32.2	-1.6
	comp=Z,24nm,0.5s						
GEC2	GERESS Array S	3.48	106	*e*Pn	Pn	16 09 43.3	+2.7
GEC2				*e*Sg	Sg	16 10 38.1	-0.9
RJOB	Jochberg	3.50	127	*e*Pn	Pn	16 09 44.5	+3.6
RJOB				*e*Sg	Sg	16 10 39.0	-0.7
CABF	La Chapelle	3.70	208	*e*Pn	Pn	16 09 44.3	+0.6
CABF	La Chapelle	3.70	208	*e*Pg	Pg	16 09 57.4	-0.9
CABF				*e*Sn	Sn	16 10 26.8	-0.1
CABF				*e*Sg	Sg	16 10 45.1	-1.1
	comp=Z,32nm,0.5s						
PRU	Pruhonice	3.82	86	*e*PG	Pg	16 09 58.5	-2.0
PRU				*e*SG	Sg	16 10 46.6	-3.3
	comp=Z,13nm,0.4s						
CKRC	Cesky Krumlov	3.87	104	*e*SG	Sg	16 10 48.2	-3.2
	comp=Z,14nm,0.4s						
PVCC	Panska Ves	3.87	78	*e*SG	Sg	16 10 49.7	-1.8
	comp=Z,22nm,0.4s						
BIOA	Bad Ischl, Aus	3.98	122	*i* Pn	Pn	16 09 50.4	+3.0
	comp=Z,3.5nm,0.2s						
BIOA				*e*Sg	Sg	16 10 53.7	-1.4
	comp=Z,14nm,0.4s						
ABTA	Abfaltersbach	4.08	139	*i* Pn	Pn	16 09 52.5	+3.7
	comp=Z,0.7nm,0.1s,SNR=4.4						
ABTA				*e*Sg	Sg	16 10 57.4	-0.9
	comp=Z,4.1nm,0.3s						
LOR	Lormes	4.12	232	*e*Pn	Pn	16 09 49.2	-0.2
	baz=51						
LOR	Lormes	4.12	232	*e*Pg	Pg	16 10 05.4	-0.8
	baz=52						
LOR				*e*Sn	Sn	16 10 37.0	0.0
LOR				*e*Sg	Sg	16 10 59.0	-0.5
	comp=Z,12nm,0.3s						
KBA	Koelnbreinsper	4.22	130	*i* Pn	Pn	16 09 54.4	+3.5
	comp=Z,1.5nm,0.1s,SNR=6.3						
KBA				*i* Sn	Sn	16 10 41.4	+1.7
	comp=Z,0.5nm,0.1s						
KBA				Sg	Sg	16 11 01.0	-1.7
	comp=Z,1.7nm,0.2s						
MOA	Molln	4.25	117	*i* Pn	Pn	16 09 54.2	+3.0
	comp=Z,1.1nm,0.1s,SNR=7.1						
MOA				*i* Sn	Sn	16 10 40.6	+0.4
	comp=Z,1.5nm,0.1s						
MOA				Sg	Sg	16 11 04.7	+1.0
	comp=Z,6.4nm,0.3s						
SSF	Saint Saulge	4.43	232	*e*Pn	Pn	16 09 53.2	-0.5
SSF	Saint Saulge	4.43	232	*e*Pg	Pg	16 10 10.8	-1.5
SSF				*e*Sn	Sn	16 10 44.5	-0.3
SSF				*e*Sg	Sg	16 11 08.8	-0.9
	comp=Z,8.0nm,0.3s						
SMF	Signal de Mont	4.56	226	*e*Pn	Pn	16 09 55.2	-0.3
SMF	Signal de Mont	4.56	226	*e*Pg	Pg	16 10 13.7	-1.0
SMF				*e*Sg	Sg	16 11 12.2	-1.6
	comp=Z,14nm,0.3s						
LPL	La Plagne	4.57	197	*e*Pn	Pn	16 09 56.3	+0.6
LPL	La Plagne	4.57	197	*e*Pg	Pg	16 10 12.4	-2.4
LPL				*e*Sg	Sg	16 11 10.1	-3.9
	comp=Z,1.7nm,0.3s						
LPG	La Plagne	4.58	197	*e*Pn	Pn	16 09 56.0	0.0
LPG	La Plagne	4.58	197	*e*Pg	Pg	16 10 12.7	-2.4
LPG				*e*Sn	Sn	16 10 47.6	-1.2
LPG				*e*Sg	Sg	16 11 13.4	-1.0
	comp=Z,3.3nm,0.4s						
AVF	Avril sur Loir	4.70	231	*e*Pn	Pn	16 09 57.1	-0.2
AVF	Avril sur Loir	4.70	231	*e*Pg	Pg	16 10 15.5	-1.8
AVF				*e*Sn	Sn	16 10 50.5	-0.7
AVF				*e*Sg	Sg	16 11 17.1	-0.9
	comp=Z,3.5nm,0.3s						
HYF	Humbligny	4.77	239	*e*Pn	Pn	16 09 59.3	+1.0
HYF	Humbligny	4.77	239	*e*Pg	Pg	16 10 17.1	-1.5
HYF				*e*Sn	Sn	16 10 53.1	+0.1
HYF				*e*Sg	Sg	16 11 19.8	-0.6
	comp=Z,22nm,0.2s						
DPC	Dobruska-Polom	4.97	82	*e*SG	Sg	16 11 22.2	-4.6
	comp=Z,7.4nm,0.5s						
BGF	Bois d'Agland	5.11	231	*e*Pn

LMGC	**Las Mercedes**	**2.41 278**	*eP*	**Pn**	**16 10 47.1**	**+0.8**
LMGC			*eS*	**Sn**	**16 11 14.3**	**-0.3**
LMGC			IAML		16 11 21.7	
	comp=E,66nm,0.1s					
LMGC			IAML		16 11 24.2	
	comp=N,82nm,0.2s					
SDDR	**Presa de Saban**	**3.10 104**	*eP*	**Pn**	**16 10 55.4**	**-0.5**
SDDR	**Presa de Saban**	**3.10 104**	*i P*	**Pn**	**16 10 55.7**	**-0.2**
SDDR			*eS*	**Sn**	**16 11 31.5**	**-0.3**
SDDR			IAML		16 11 33.1	
	comp=Z,49nm,0.5s					
MTDJ	**Mount Denham**	**3.27 243**	*eP*	**Pn**	**16 10 59.0**	**+0.7**

*GUC **14** 16:14:50.0±0.7, 32°.13S×70°.78W, h64km±2km, ML3.8*
*IDC **14** 16:14:50.2±6.2, 32°.22S×70°.64W, h64km±51km, mb2.9/1, mbtmp3.4/2, ML3.9/1, Error ellipse: s-maj=76.4km s-min=39.0km az=123.0*

ISC 14 16:14:50.2±0.9, 32°.11S±0°.03×70°.78W±0°.05, h61km±9km, n39, σ0°86/54, 7C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.62**	**224**	⇑*iP*		**Pn**	**16 15 03.7**	**0.0**
VA06				*i* S		**Sn**	**16 15 13.9**	**+0.5**
VA03	**San Esteban**	**0.68**	**163**	⇑*iP*		**Pn**	**16 15 04.0**	**-0.4**
VA03				*eS*		**Sn**	**16 15 14.8**	**0.0**
VA03				IAML			16 15 18.2	
	comp=E,13μm,0.1s							
ROCH	**El Roble**	**0.88**	**193**	⇑*iP*		**Pn**	**16 15 06.6**	**-0.4**
ROCH				*eS*		**Sn**	**16 15 19.5**	**+0.2**
ROCH				IAML			16 15 21.2	
	comp=E,4μm,0.3s							
CO02	**Combarbal**	**0.93**	**348**	⇓*iP*		**Pn**	**16 15 07.3**	**-0.2**
CO02				*eS*		**Sn**	**16 15 21.1**	**+0.9**
PEL	**Peldehue**	**1.03**	**175**	*i P*		**Pn**	**16 15 08.7**	**-0.1**
PEL				*eS*		**Sn**	**16 15 23.0**	**+0.5**
PEL				IAML			16 15 24.7	
	comp=E,3μm,0.4s							
VA01	**Torpederas**	**1.16**	**219**	*i P*		**Pn**	**16 15 10.2**	**-0.3**
VA01				*eS*		**Sn**	**16 15 25.1**	**-0.4**
MT02	**Curacav**	**1.18**	**195**	⇑*iP*		**Pn**	**16 15 10.4**	**-0.3**
MT02				*i* S		**Sn**	**16 15 25.8**	**-0.2**
CO03	**El Pedregal**	**1.27**	**4**	⇑*iP*		**Pn**	**16 15 12.6**	**+0.6**
CO03				*i* S		**Sn**	**16 15 29.5**	**+1.2**
CO03				IAML			16 15 31.4	
	comp=E,4μm,0.1s							
MT05	**Renca**	**1.27**	**178**	⇑*iP*		**Pn**	**16 15 12.2**	**+0.2**
MT05				*eS*		**Sn**	**16 15 29.1**	**+0.8**
MT05				IAML			16 15 31.4	
	comp=E,5μm,0.3s							
FCH	**Farellones**	**1.28**	**161**	⇑*iP*		**Pn**	**16 15 12.7**	**+0.4**
FCH				*eS*		**Sn**	**16 15 30.1**	**+1.3**
MT03	**Universidad Ad**	**1.40**	**171**	*eP*		**Pn**	**16 15 14.2**	**+0.6**
MT03				*eS*		**Sn**	**16 15 33.0**	**+1.8**
MT03				IAML			16 15 35.7	
	comp=N,4μm,0.1s							
CO06	**Fray Jorge**	**1.61**	**333**	*eP*		**Pn**	**16 15 16.9**	**+0.5**
CO06				*eS*		**Sn**	**16 15 37.2**	**+1.0**
CO06				IAML			16 15 42.4	
	comp=N,1μm,0.2s							
MT09	**Talagante**	**1.67**	**186**	*i P*		**Pn**	**16 15 17.2**	**-0.2**
MT09				*i* S		**Sn**	**16 15 38.3**	**+0.5**
MT09				IAML			16 15 46.0	
	comp=N,2μm,0.1s							
VA05	**Santo Domingo**	**1.69**	**204**	*eP*		**Pn**	**16 15 18.0**	**+0.5**
VA05				*eS*		**Sn**	**16 15 38.8**	**+0.6**
VA05				IAML			16 15 45.5	
	comp=E,2μm,0.3s							
MT01	**Popeta**	**1.79**	**193**	*eP*		**Pn**	**16 15 18.9**	**+0.1**
MT01				*i* S		**Sn**	**16 15 41.0**	**+0.5**
MT01				IAML			16 15 44.5	
	comp=E,704nm,0.2s							
LMEL	**Las Melosas**	**1.80**	**164**	*eP*		**Pn**	**16 15 19.9**	**+0.8**
LMEL				*eS*		**Sn**	**16 15 43.5**	**+2.5**
LMEL				IAML			16 15 47.6	
	comp=N,2μm,0.1s							
BO04	**La Punta**	**1.88**	**176**	*eP*		**Pn**	**16 15 20.2**	**+0.1**
BO04				*eS*		**Sn**	**16 15 44.0**	**+1.2**
BO04				IAML			16 15 47.6	
	comp=E,566nm,0.3s							
GO04	**Tololo Observa**	**1.94**	**360**	*eP*		**Pn**	**16 15 20.9**	**-0.2**
GO04				*eS*		**Sn**	**16 15 44.1**	**-0.3**
CO01	**Juntas del Tor**	**2.21**	**16**	*eP*		**Pn**	**16 15 25.8**	**+1.0**
CO05	**La Serena**	**2.22**	**350**	*eP*		**Pn**	**16 15 25.2**	**+0.5**
CO05				IAML			16 15 55.7	
	comp=E,541nm,0.4s							
BO01	**Tunca**	**2.29**	**186**	*eP*		**Pn**	**16 15 25.6**	**0.0**
BO03	**Pichilemu**	**2.57**	**202**	*eP*		**Pn**	**16 15 29.3**	**-0.2**
BO02	**Sierra Bellavi**	**2.67**	**180**	*eP*		**Pn**	**16 15 31.4**	**+0.5**
BO02				IAML			16 16 28.5	
	comp=N,514nm,0.2s							
GO05	**Huala**	**3.04**	**198**	*eP*		**Pn**	**16 15 35.5**	**-0.5**
GO05				IAML			16 16 30.9	
	comp=N,107nm,0.4s							
LCO	**Las Campanas**	**3.09**	**1**	*eP*		**Pn**	**16 15 36.6**	**-0.3**
AC05	**El Transito**	**3.30**	**8**	*eP*		**Pn**	**16 15 39.8**	**+0.3**
AC05				IAML			16 16 38.3	
	comp=E,203nm,0.3s							
AC04	**Llanos de Chal**	**3.90**	**356**	*eP*		**Pn**	**16 15 48.0**	**+0.3**
H03N1	**Juan Fernandez**	**6.97**	**257**	P		**Pn**	**16 16 30.8**	**+1.4**
	baz=2.9,slow=78,SNR=32							
H03N3	**Juan Fernandez**	**6.98**	**257**	P		**Pn**	**16 16 31.1**	**+1.5**
	baz=2.9,slow=78,SNR=13							
H03N2	**Juan Fernandez**	**6.99**	**257**	P		**Pn**	**16 16 31.4**	**+1.8**
	baz=2.9,slow=78,SNR=13							
H03S1	**Juan Fernandez**	**7.04**	**254**	P		**Pn**	**16 16 31.0**	**+0.6**
LPAZ	**La Paz**	**15.94**	**9**	P		**P**	**16 18 32.0**	**-1.8**
	comp=E,0.2nm,0.3s,baz=188,slow=6.4,SNR=4.5							
	comp=E,1.2nm,0.7s							
TXAR	**Lajitas Array**	**68.63**	**329**	P		**P**	**16 25 47.7**	**+0.7**
	comp=E,0.2nm,0.6s,baz=156,slow=9.8,SNR=2.1							
	comp=E,0.2nm,0.6s							
WRA	**Warramunga Arr**	**122.92**	**208**	PKP	**PKiKP**		**16 33 39.2**	**-1.1**
	comp=E,0.2nm,0.8s,baz=160,slow=1.7,SNR=1.0							
H11S2	**WAKE ISLAND Hyt26.84**	**270**		T	T		18 53 10.6	
	baz=118,slow=75,SNR=23							
H11S1	**WAKE ISLAND Hyt26.85**	**270**		T	T		18 53 07.0	
	baz=118,slow=75,SNR=20							
H11S3	**WAKE ISLAND Hyt26.86**	**270**		T	T		18 53 11.9	
	baz=118,slow=75,SNR=19							
ZALV	**Zalesovo Beam**	**152.07**	**31**	PKPab	**PKPab**		**16 34 46.7**	**-1.0**
	comp=E,0.4nm,0.3s,baz=317,slow=6.1,SNR=2.2							
MKAR	**Makanchi Array**	**154.72**	**47**	PKPab	**PKPab**		**16 34 58.8**	**-0.5**
	comp=E,0.8nm,1.0s,baz=314,slow=3.8,SNR=2.7							

WEL 14 16:32:10.9, 38°S±31°×17°8E±1°9, h19km±20km, M2.2/8, ML2.6/7, MLv2.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=178.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.09**	**263**	P		Pg	16 32 15.0	+0.4
WMGZ	**Waiomatatini S**	**0.27**	**180**	P		Pg	16 32 18.1	+1.0
PKGZ	**Pakihiroa**	**0.43**	**219**	P		Pn	16 32 21.3	-0.9
PUZ	**Puketiti**	**0.53**	**194**	P		Pg	16 32 21.9	+0.2
HAZ	**Te Kaha**	**0.54**	**248**	P		Pn	16 32 22.8	-0.8
TWGZ	**Tauwhareparae**	**0.71**	**209**	P		Pn	16 32 25.6	-0.5
RUGZ	**Raukumara Rang**	**0.72**	**235**	P		Pn	16 32 26.3	+0.1
CNGZ	**Carnagh Statio**	**0.94**	**190**	P		Pb	16 32 27.7	-1.0
TKGZ	**Te Karaka**	**0.99**	**207**	P		Pb	16 32 28.7	-0.9
MWZ	**Matawai**	**1.05**	**222**	P		Pb	16 32 30.3	-0.3
SNGZ	**Shannon Statio**	**1.49**	**214**	P		Pn	16 32 36.4	-0.3
HSRZ	**Hossack Road**	**1.88**	**245**	P		Pg	16 32 52.1	+5.0
KATZ	**Kakaramea**	**2.57**	**236**	P		Pn	16 32 47.2	-4.5
TMVZ	**Te Maari**	**2.64**	**233**	P		Pn	16 32 47.0	-5.6
NTVZ	**North Tongarir**	**2.65**	**234**	P		Pn	16 32 48.1	-4.7
NNVZ	**North Ngauruho**	**2.71**	**234**	P		Pn	16 32 45.8	-7.8
WTVZ	**West Tongariro**	**2.72**	**234**	P		Pn	16 32 45.4	-8.2
SNVZ	**South Ngauruho**	**2.73**	**232**	P		Pn	16 32 46.4	-7.4
TUVZ	**Tukino**	**2.77**	**231**	P		Pn	16 32 50.3	-4.0
TWVZ	**Taurewa**	**2.79**	**236**	P		Pn	16 32 43.8	-11
FWVZ	**Far West T-bar**	**2.82**	**232**	P		Pn	16 32 46.9	-8.3
PKVZ	**Pokaka**	**2.97**	**233**	P		Pn	16 32 44.8	-12

*IDC **14** 16:40:48.2±2.9, 16°.69S×167°.72E, h0km, mb3.9/5, mbtmp3.9/6, ML3.8/1, MS3.3/4, Error ellipse: s-maj=60.0km s-min=33.9km az=56.0*
*NOU **14** 16:40:51.5, 16°.88S×167°.74E, h0km, MLv4.4/14, Vanuatu Islands*

ISC 14 16:40:53.8±1.5, 16°.9S±0°.1×167°.8E±0°.1, h35km, n17, σ1°35/15, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.94**	**155**	P		**Pn**	**16 41 10.2**	**-0.3**
MARNC	**Mare, Loyalty**	**4.59**	**177**	P		**Pn**	**16 42 01.6**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.93**	**222**	P		**Pn**	**16 42 06.0**	**+0.5**
YATNC	**Mamie plateau,**	**5.23**	**189**	P		**Pn**	**16 42 09.3**	**-0.3**
DZM	**Mont Dzumac**	**5.32**	**193**	Pn		**Pn**	**16 42 10.5**	**-0.4**
	2.7nm,0.3s,baz=96,slow=19,SNR=22							
DZM				Sn		**Sn**	**16 43 09.3**	**-1.8**
	5.1nm,0.3s,baz=61,slow=13,SNR=11							
DZM				LR		LR	16 44 15.6	
	comp=Z,185nm,18.3s,baz=30,slow=38							
	8.8nm,0.4s							
DZM	**Mont Dzumac**	**5.32**	**193**	P		**Pn**	**16 42 11.3**	**+0.4**
NOUC	**Port Laguerre**	**5.38**	**195**	P		**Pn**	**16 42 13.2**	**+1.5**
ONTNC	**Ouen Toro**	**5.55**	**193**	P		**Pn**	**16 42 16.6**	**+2.6**
OUENC	**Ouen Island, N**	**5.59**	**189**	P		**Pn**	**16 42 16.9**	**+2.4**
MSVF	**Nonsavu**	**9.85**	**97**	LR		LR	16 46 14.2	
	comp=Z,120nm,18.2s,baz=291,slow=33							
HNR	**Honiara**	**10.62**	**313**	LR		LR	16 47 24.5	
	comp=Z,608nm,18.0s,baz=252,slow=38							
PMG	**Port Moresby**	**21.39**	**288**	LR		LR	16 53 03.0	
	comp=Z,43nm,18.9s,baz=31,slow=34							
STKA	**Stephens Creek**	**28.04**	**233**	P		**P**	**16 46 41.8**	**-0.1**
	1.9nm,0.9s,baz=50,slow=7.9,SNR=3.8							
	1.9nm,0.9s							
WRA	**Warramunga Arr**	**31.84**	**259**	P		**P**	**16 47 14.8**	**-1.0**
	0.5nm,0.9s,baz=85,slow=8.1,SNR=6.0							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**32.43**	**252**	P		**P**	**16 47 20.4**	**-0.4**
	4.5nm,0.7s,baz=78,slow=8.7,SNR=86							
	4.5nm,0.7s							
VNDA	**Vanda**	**60.74**	**181**	P		**P**	**16 51 02.4**	**+0.9**
	0.8nm,0.8s,baz=9.0,slow=6.5,SNR=6.8							
	0.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**76.27**	**294**	P		**P**	**16 52 39.3**	**-0.1**
	0.3nm,0.4s,baz=107,slow=5.8,SNR=1.8							
	0.3nm,0.4s							

KRSC 14 17:02:02.6±0.4, 54°.91N×162°.37E, h44km±7km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.51**	**226**	P		Pn	17 02 14.1	+0.4
MKZ				S		Sn	17 02 22.4	+0.9
KBTR	**Krutoberegovo**	**1.32**	**11**	P		Pn	17 02 25.7	+1.1
KBTR				S		Sn	17 02 43.0	+1.9
TUMR	**Tumrok**	**1.33**	**287**	P		Pn	17 02 27.0	+2.2
TUMR				S		Sn	17 02 44.6	+3.2
KBG	**Krutoberegovo**	**1.36**	**8**	P		Pn	17 02 26.6	+1.5
KBG				S		Sn	17 02 44.3	+2.4
BZGR	**Bezymyannyi-Gr**	**1.40**	**318**	P		Pn	17 02 27.0	+1.2
BZGR				S		Sn	17 02 44.6	+1.4
KMNR	**Kamenistaya**	**1.48**	**306**	P		Pn	17 02 28.5	+1.6
KMNR				S		Sn	17 02 47.4	+2.3
KPT	**Kopyto**	**1.62**	**312**	P		Pn	17 02 30.2	+1.5
KLY	**Klyuchi**	**1.71**	**326**	P		Pn	17 02 31.1	+1.2
SMKR	**Semkarok**	**1.75**	**343**	S		Sn	17 02 53.7	+2.0
BDR	**Baidarnaya**	**1.79**	**339**	P		Pn	17 02 32.8	+1.8
KOZ	**Kozyrevsk**	**1.83**	**310**	P		Pn	17 02 33.6	+2.1
SRKR	**Sorokina**	**1.87**	**339**	P		Pn	17 02 34.3	+2.1
SRDR	**Sredinnyy**	**2.06**	**314**	P		Pn	17 02 37.4	+2.6
SPN	**Mys Shipunski**	**2.28**	**218**	P		Pn	17 02 40.0	+2.2
SPN				S		Sn	17 03 07.3	+2.6
NLC	**Nalytchevo**	**2.49**	**227**	P		Pn	17 02 43.3	+2.7
NLC				S		Sn	17 03 13.2	+3.4
SDLR	**Sedlovina**	**2.62**	**233**	P		Pn	17 02 45.4	+2.8
SDLR				S		Sn	17 03 16.7	+3.5
KRER	**Koryakskii**	**2.67**	**234**	P		Pn	17 02 46.2	+2.9
KRER				S		Sn	17 03 17.9	+3.4
SMAR	**Somma**	**2.67**	**233**	P		Pn	17 02 46.3	+3.0
KRX	**Arik**	**2.68**	**236**	P		Pn	17 02 46.4	+3.0
UGLR	**Uglovaya**	**2.70**	**232**	P		Pn	17 02 47.0	+3.4
UGLR				S		Sn	17 03 18.9	+3.9
AVH	**Avacha**	**2.70**	**234**	P		Pn	17 02 47.1	+3.5
AVH				S		Sn	17 03 19.2	+4.2
KOK	**Koryaka**	**2.73**	**235**	P		Pn	17 02 47.5	+3.5
DALK	**Dalny**	**2.85**	**230**	P		Pn	17 02 48.8	+3.3
DALK				S		Sn	17 03 22.5	+4.0
GNL	**Ganaly**	**2.87**	**247**	P		Pn	17 02 48.9	+3.0
KRMR	**Karymshinskiy**	**3.26**	**232**	P		Pn	17 02 54.9	+3.7
KRMR				S		Sn	17 03 33.3	+4.6
GRL	**Gorelyy**	**3.48**	**229**	P		Pn	17 02 58.1	+3.8
GRL				S		Sn	17 03 38.4	+4.2
APC	**Apacha**	**3.67**	**239**	P		Pn	17 03 00.8	+4.0
ASAK	**Asacha**	**3.67**	**228**	S		Sn	17 03 43.4	+4.4
KDTR	**Khodutka, Kamc**	**4.03**	**221**	P		Pn	17 03 05.7	+3.9

TRN 14 17:06:43.7, 16°.33N×62°.07W, h194km, MD3.9, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBFL	**Flemmings, Mon**	**0.44**	**342**	*eP*		Pn	17 07 11.0	+1.0
MBFL				*eS*		Sn	17 07 31.2	+0.8
CBE	**Ff, Capester**	**0.51**	**120**	*eP*		Pn	17 07 12.2	+1.9
CBE	**Ff, Capester**	**0.51**	**120**	*e*		Pn	17 07 23.4	+13
CBE				*eS*		Sn	17 07 32.0	+1.3
ABD	**La Joyeuse, An**	**0.57**	**75**	*eP*		Pn	17 07 11.8	+1.4
ABD	**La Joyeuse, An**	**0.57**	**75**	*e*		Pn	17 07 25.1	+15
ABD				*eS*		Sn	17 07 31.1	0.0
TBG	**Guadaloupe-3**	**0.62**	**139**	*eP*		Pn	17 07 11.7	+1.0
TBG	**Guadaloupe-3**	**0.62**	**139**	*e*		Pn	17 07 21.7	+11
TDBA	**Terre de Bas,**	**0.63**	**139**	*eP*		Pn	17 07 11.8	+1.1
TDBA	**Terre de Bas,**	**0.63**	**139**	*e*		Pn	17 07 22.0	+11
TDBA				*eS*		Sn	17 07 32.7	+1.0
ANBD	**Bethesda, Anti**	**0.77**	**22**	*eP*		Pn	17 07 12.6	+1.2
ANBD				*eS*		Sn	17 07 32.7	-0.3
ANDO	**Antigua, Disas**	**0.81**	**16**	*eP*		Pn	17 07 12.9	+1.3
ANDO				*eS*		Sn	17 07 33.2	-0.3
MAGL	**Barre de l'ile**	**0.84**	**116**	*eP*		Pn	17 07 13.4	+1.5
MAGL				*eS*		Sn	17 07 33.9	+0.3
MDCT	**Cottage Hill,**	**0.92**	**140**	*eP*		Pn	17 07 13.3	+1.0
MDVC	**Dominica, Viel**	**0.95**	**138**	*eP*		Pn	17 07 14.1	+1.5
DSLB	**Salisbury**	**1.08**	**145**	*i P*		Pn	17 07 14.4	+0.9
DSLB	**Salisbury**	**1.08**	**145**	*e*		Pn	17 07 28.0	+14
MDN	**Morne-Daniel**	**1.20**	**147**	*eP*		Pn	17 07 15.3	+0.9
DLPL	**La Plaine**	**1.27**	**141**	*eS*		Sn	17 07 40.7	+1.6
ANWB	**Willy Bob**	**1.36**	**11**	*eP*		Pn	17 07 17.6	+1.9
ANWB				*eS*		Sn	17 07 40.9	+0.3
SVN	**Savane Anatole**	**1.71**	**149**	*eP*		Pn	17 07 19.5	+0.5
PCM	**Pelee Case Pet**	**1.72**	**151**	*eP*		Pn	17 07 19.3	+0.3
CXM	**Morne La Croix**	**1.74**	**150**	*eP*		Pn	17 07 20.0	+0.6
BAMF	**Morne Balai**	**1.75**	**149**	*eP*		Pn	17 07 19.8	+0.5
GBMF	**Grand Be**	**1.75**	**150**	*eP*		Pn	17 07 19.8	+0.4
PML	**Morne Lenard**	**1.76**	**151**	*eP*		Pn	17 07 21.0	+1.5
ILAM	**Ilet Lapin Mar**	**1.93**	**143**	*eP*		Pn	17 07 22.1	+1.0
ILAM				*eS*		Sn	17 07 49.4	-0.7
SMRT	**St. Maarten**	**1.96**	**331**	*eP*		Pn	17 07 22.1	+0.7
SMRT				*eS*		Sn	17 07 49.8	-1.1
BIM	**Bigot**	**2.04**	**152**	*eP*		Pn	17 07 23.0	+0.7
BIM				*eS*		Sn	17 07 51.7	-0.6
LPMF	**Morne Lapointe**	**2.04**	**149**	*eP*		Pn	17 07 22.8	+0.5
MVM	**Montagne Vaucl**	**2.10**	**147**	*eP*		Pn	17 07 23.7	+0.8
MPOM	**Morne Pois Mar**	**2.21**	**148**	*i P*		Pn	17 07 24.9	+0.8
MPOM				*eS*		Sn	17 07 54.8	-0.6
SLBI	**Saint Lucia, B**	**2.52**	**155**	*eP*		Pn	17 07 28.1	+0.5
SLBI				*eS*		Sn	17 08 01.9	+0.1
SLB	**Belfond**	**2.68**	**158**	*eP*		Pn	17 07 29.6	+0.2
MCLT	**Moule a Chique**	**2.82**	**157**	*eP*		Pn	17 07 31.6	+0.6
BBGH	**Gun Hill**	**3.99**	**142**	*eP*		Pn	17 07 46.6	+1.4
BBGH	**Gun Hill**	**3.99**	**142**	*eS*		Sn	17 08 31.9	-1.5
BBSP	**Saint Philip**	**4.08**	**141**	*eS*		Sn	17 08 36.2	+0.8
AOPR	**Arecibo Observ**	**4.90**	**295**	*eP*		Pn	17 07 57.3	+0.6
AOPR	**Arecibo Observ**	**4.90**	**295**	*eS*		Sn	17 08 52.0	-2.3

IDC 14 17:15:58.6±4.1, 30°.16N×141°.62E, h0km, mb3.3/3, mbtmp3.3/5, ML3.1/2, Error ellipse: s-maj=167.2km s-min=22.3km az=72.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.09**	**171**	Pn		Pn	17 16 49.7	+1.1
	4.5nm,0.3s,baz=270,slow=20,SNR=1.5							
JCJ				Sn		Sn	17 17 25.4	-0.8
	6.1nm,0.3s,baz=291,slow=23,SNR=5.6							
	44nm,0.9s							

MJAR	**Matsushiro Arr**	**6.98**	**337**	Pn	Pn	17 17 40.6	-1.4
	0.1nm,0.3s,baz=161,slow=11,SNR=8.5					
	1.1nm,0.5s					
MKAR	**Makanchi Array**	**48.19**	**308**	P	P	17 24 41.3	+0.6
	0.3nm,0.7s,baz=86,slow=9.7,SNR=2.4					
	0.3nm,0.7s					
WRA	**Warramunga Arr**	**50.30**	**189**	P	P	17 24 57.5	+0.5
	0.4nm,0.7s,baz=6.7,slow=7.6,SNR=4.9					
	0.4nm,0.7s					
ASAR	**Alice Springs**	**54.02**	**189**	P	P	17 25 23.4	-1.3
	0.3nm,0.9s,baz=3.7,slow=5.4,SNR=2.2					
	0.3nm,0.9s					

IDC 14 17:16:26.9±2.0, 16°.68S×179°.59W, h576km±21km, mb2.7/4, mbtmp3.6/5, Error ellipse: s-maj=128.0km s-min=24.6km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.49**	**245**	P		P	17 17 41.4	0.0
	8.9nm,0.6s,baz=102,slow=19,SNR=16							
WRA	**Warramunga Arr**	**43.76**	**258**	P		P	17 23 42.7	+0.1
	0.3nm,0.5s,baz=96,slow=6.9,SNR=16							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**44.05**	**253**	P		P	17 23 44.6	-0.3
	3.1nm,0.6s,baz=88,slow=8.4,SNR=102							
	3.1nm,0.6s							
ILAR	**Eielson Array**	**84.95**	**13**	P		P	17 28 00.9	-0.6
	0.3nm,0.7s,baz=224,slow=5.0,SNR=1.8							
	0.3nm,0.7s							
TXAR	**Lajitas Array**	**86.30**	**58**	P		P	17 28 09.4	+0.4
	0.1nm,0.4s,baz=224,slow=3.5,SNR=1.9							
	0.1nm,0.4s							

IDC 14 17:23:04.2±4.6, 4°.19S×133°.81E, h181km±34km, mb2.9/1, mbtmp3.2/4, Error ellipse: s-maj=119.6km s-min=19.7km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.16**	**322**	P		Pn	17 24 07.2	-0.3
	1.6nm,0.2s,baz=113,slow=13,SNR=6.9							
SIJI				S		Sn	17 24 57.7	+0.6
	1.2nm,0.3s,baz=156,slow=18,SNR=1.6							
WRA	**Warramunga Arr**	**15.67**	**178**	P		Pn	17 26 35.7	+0.1
	0.4nm,0.6s,baz=357,slow=11,SNR=6.0							
ASAR	**Alice Springs**	**19.36**	**180**	P		P	17 27 16.2	0.0
	0.3nm,0.6s,baz=6.4,slow=10,SNR=7.2							
MKAR	**Makanchi Array**	**68.06**	**325**	P		P	17 33 44.3	0.0
	0.3nm,0.7s,baz=116,slow=6.7,SNR=2.2							
	0.3nm,0.7s							

*IDC **14** 17:23:16.7±3.2, 36°.43N×71°.30E, h155km±29km, mb3.3/9, mbtmp3.9/16, Error ellipse: s-maj=23.8km s-min=15.6km az=20.0*
*MOS **14** 17:23:18.5±0.9, 36°.62N×71°.32E, h176km, mb4.3/3, Error ellipse: s-maj=10.7km s-min=5.3km az=82.4*
*BJI **14** 17:23:19.3±0.0, 36°.76N×71°.23E, h195km, mb4.4/14, mB4.5/4*
*NNC **14** 17:23:20.1±3.1, 37°.10N×71°.03E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=24.7km s-min=17.2km az=177.0*
*NEIC **14** 17:23:21.3±2.5, 36°.77N±0°.06×71°.20E±0°.09, h191km±7km, mb4.4/13, Error ellipse: s-maj=11.6km s-min=7.1km az=115.0*

ISC 14 17:23:19.8±0.6, 36°.68N±0°.04×71°.23E±0°.04, h181km±7km, n119, σ1°67/149, mb3.9/15, 12C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.43**	**343**	Pn	**Pn**	**17 24 03.1**	**+1.3**
GAR				Sn	**Sn**	**17 24 33.6**	**-1.0**
CHGR	**Chuyangaron**	**2.57**	**321**		**Pn**	**17 24 04.7**	**+1.3**
CHGR				Sn	**Sn**	**17 24 36.2**	**-1.2**
CHGR	**Chuyangaron**	**2.57**	**321**	PN	**Pn**	**17 24 04.7**	**+1.3**
KBL	**Kabul**	**2.78**	**220**	Pn	**Pn**	**17 24 08.3**	**+2.2**
KBL				Sn	**Sn**	**17 24 42.5**	**+0.5**
KBL	**Kabul**	**2.78**	**220**	PN	**Pn**	**17 24 08.3**	**+2.2**
KBL				S	**Sn**	**17 24 42.5**	**+0.5**
DRK	**Karamyk**	**2.83**	**9**		**P

MDOK S Sn 17 26 40.9 +1.1
MDOK Medeo 7.87 33 ⇓P Pn 17 25 12.2 +0.8
comp=N,6.9nm,0.6s
MDOK ⇓S Sn 17 26 41.0 +1.1
comp=N,7.1nm,0.7s
PDGK Podgornoye 9.18 41 P Pn 17 25 28.9 +0.3
PDGK S Sn 17 27 16.0 +5.0
PDGK Podgornoye 9.18 41 ⇑P Pn 17 25 28.9 +0.3
comp=N,4.3nm,0.8s
PDGK ⇑S Sn 17 27 16.0 +5.0
comp=N,7.0nm,1.2s
GEYT Alibeck 10.52 281 P Pn 17 25 45.1 -1.0
comp=N,7.1nm,0.4s,baz=106,slow=11,SNR=24
GEYT S Sn 17 27 39.1 -4.0
comp=N,5.1nm,0.5s,baz=296,slow=31,SNR=6.7
GEYT Alibeck 10.52 281 Pn Pn 17 25 44.9 -1.2
GYA0 ALIBECK ARRAY 10.52 281 P Pn 17 25 44.9 -1.2
GYA0B ALIBECK ARRAY 10.52 281 Pn Pn 17 25 44.9 -1.2
GYA0B Sn 17 27 38.8 -4.3
MAKZ Makanchi 12.90 35 Pn Pn 17 26 16.3 -0.3
MAKZ Makanchi 12.90 35 P Pn 17 26 16.3 -0.3
MK31 Makanchi Array 13.04 36 Pn Pn 17 26 18.4 +0.1
MK31 Makanchi Array 13.04 36 *e*P Pn 17 26 18.4 -1.5
MKAR Makanchi Array 13.04 36 P Pn 17 26 18.1 -0.2
comp=N,0.8nm,0.6s,baz=219,slow=12,SNR=7.4
MKAR S Sn 17 28 40.7 -2.5
comp=N,0.2nm,0.4s,baz=250,slow=17,SNR=1.8
MKAR Makanchi Array 13.04 36 P Pn 17 26 18.5 +0.2
PYUN Piuthan 13.10 127 *e*P Pn 17 26 17.8 -1.7
comp=N,42nm,0.4s
PYUN *e*S Sn 17 28 34.5 -11
DANN Dangsing 13.44 125 *e*P Pn 17 26 22.2 -1.5
comp=N,22nm,0.3s
DANN *e*S Sn 17 28 43.5 -10
KOLN Koldanda 13.72 127 *e*P Pn 17 26 26.6 -0.6
KOLN Koldanda 13.72 127 *e*P Pn 17 26 26.6 -0.6
GKN Gorkha 14.25 124 *e*P Pn 17 26 33.4 -0.3
comp=N,27nm,0.3s
BHPL Bhopal 14.42 157 *e*P P 17 26 38.8 +1.2
BHPL *e*S Sn 17 29 04.9 -12
WMQ Urumqi 14.44 55 *e*P P 17 26 37.8 +0.1
WMQ pmax pmax
comp=N,16nm,0.8s
DMN Daman 14.82 124 *e*P Pn 17 26 41.2 +0.3
comp=N,19nm,0.3s
KKN Kakani 14.82 123 *e*P Pn 17 26 40.1 -0.7
KURBB Kurchatov Arra 14.89 18 P P 17 26 42.6 0.0
comp=N,0.5nm,0.5s,baz=208,slow=11,SNR=7.2
KURK Kurchatov 15.00 18 P Pn 17 26 43.2 +0.6
KURK Kurchatov 15.00 18⇑ *e*P Pn 17 26 39.8 -2.9
KURK pmax pmax
comp=Z,1.0nm,1.1s
AB31 Akbulak array 15.02 330 P P 17 26 46.8 +2.9
AB31 S Sn 17 29 28.1 -2.3
AB31 Akbulak array 15.02 330 P P 17 26 46.1 +2.1
comp=Z,2.3nm,0.5s,baz=144,slow=12,SNR=62
AB31 S Sn 17 29 28.1 -2.3
comp=Z,4.4nm,0.5s,baz=152,slow=22,SNR=11
ABKAR Akbulak array 15.02 330 P Pn 17 26 42.5 -0.3
ABKAR Akbulak array 15.02 330 Pn 17 26 42.1 -0.8
PKIN Phulchoki 15.03 123 *e*P Pn 17 26 43.2 -0.4
comp=Z,19nm,0.4s
PKI Pulchoki 15.04 123 *e*P Pn 17 26 43.3 -0.5
comp=Z,5.1nm,0.3s
GUN Gumba 15.15 121 *e*P Pn 17 26 44.3 -0.8
comp=Z,9.9nm,0.4s
JIRN Jiri 15.52 121 *e*P Pn 17 26 49.5 -0.1
comp=Z,41nm,0.5s
RAMN Ramite 16.25 122 *e*P P 17 26 57.8 -0.3
comp=Z,9.6nm,0.3s
BVAR Borovoye Array 16.36 358 P P 17 26 58.9 +0.2
comp=Z,0.9nm,0.7s,baz=152,slow=10,SNR=5.6
AKTO Aktyubinsk 16.72 329 P Pn 17 27 04.7 +1.2
comp=Z,13nm,0.5s,baz=137,slow=11,SNR=29
AKTO S S 17 30 04.0 -3.6
comp=Z,1.9nm,0.6s,baz=149,slow=22,SNR=3.2
AKTO Aktyubinsk 16.72 329 ⇑P Pn 17 27 07.1 +3.6
comp=Z,16nm,0.9s
AKTO ⇓S Sn 17 30 12.0 +1.0
comp=Z,12nm,1.1s
DGZ Jazzator, Alta 17.53 37⇑ *e*P P 17 27 12.1 +0.4
DGZ pmax pmax
comp=Z,7.0nm,1.2s
ZAA0 Zalesovo Array 19.68 24 P P 17 27 34.2 -0.6
ZALV Zalesovo Beam 19.68 24 P P 17 27 35.3 +0.5
comp=Z,1.3nm,0.3s,baz=211,slow=11,SNR=6.7
ZALV Zalesovo Beam 19.68 24 P P 17 27 33.0 -1.7
GNI Garni 21.01 288⇑ *e*P P 17 27 49.9 +0.5
GNI pmax pmax
comp=Z,9.0nm,1.3s
ARU Arti 21.52 341 P P 17 27 55.8 +1.4
comp=Z,1.8nm,0.4s,baz=139,slow=7.5,SNR=4.2
comp=Z,1.8nm,0.4s
ARU Arti 21.52 341 P P 17 27 54.7 +0.2
ARU Arti 21.52 341⇑ *e*P P 17 27 55.3 +0.9
KBZ Khabaz 22.68 297 P P 17 28 07.3 +1.5
comp=Z,1.0nm,0.7s,baz=86,slow=14,SNR=1.3
comp=Z,1.0nm,0.7s
BELG Belogornoye 22.87 321⇓ *e*P P 17 28 07.7 +0.4
BELG *i* *PP pP 17 28 41.6 +1.1
KIRV Kirov 26.16 334⇑ *e*P P 17 28 38.1 +1.0
PZH PanZhiHua 27.80 103 P P 17 28 54.0 +1.8
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.8s
AKASG Malin Array Be 32.98 309 P P 17 29 38.4 +1.1
comp=Z,0.2nm,0.3s,baz=78,slow=7.8,SNR=6.4
comp=Z,0.2nm,0.3s
NRIK Noril'sk 33.92 10⇓ *e*P P 17 29 44.2 -1.0
NRIK pmax pmax
comp=Z,11nm,2.3s
BUR08 Bucovina Ar. S 35.35 303 P P 17 29 59.3 +1.3
FIA1 FINESS Array S 37.44 326 P P 17 30 16.8 +1.6
FIA1 IAmb IAmb 17 30 53.6
comp=Z,16nm,1.4s
FINES FINESS Array B 37.44 326 P P 17 30 16.8 +1.6
comp=Z,0.9nm,0.4s,baz=120,slow=9.7,SNR=8.4
comp=Z,0.9nm,0.4s
FINES FINESS Array B 37.44 326 P P 17 30 16.4 +1.2
FINES FINESS Array B 37.44 326 P P 17 30 16.4 +1.2
SCTE Santa Cesarea 41.00 291 P P 17 30 42.5 -2.6
ARCES ARCESS Array B 41.05 337 P P 17 30 46.6 +1.5
comp=Z,0.4nm,0.3s,baz=119,slow=9.7,SNR=7.0
comp=Z,0.4nm,0.3s
ARCES ARCESS Array B 41.05 337 P P 17 30 46.6 +1.5
ARCES IAmb IAmb 17 31 08.7
comp=Z,15nm,1.5s
ARCES ARCESS Array B 41.05 337 P P 17 30 46.6 +1.5
ARCES pmax pmax
comp=Z,15nm,1.5s
KULM Kulim 41.26 132 P P 17 30 47.4 +0.1
KULM IAmb IAmb 17 30 59.8
comp=Z,27nm,1.5s
NC602 NORSAR Array S 44.16 322 P P 17 31 10.9 +0.7
NORES NORESS Array B 44.16 322 P P 17 31 10.9 +0.7
NC303 NORSAR Array S 44.29 323 P P 17 31 12.9 +1.7
NC303 IAmb IAmb 17 31 39.6
comp=Z,22nm,1.4s
NB201 NORSAR Array S 44.31 323 P P 17 31 12.5 +1.1
NB2 NORSAR Subarra 44.35 323 P P 17 31 12.7 +1.0
comp=Z,1.6nm,0.6s,baz=96,slow=7.9
NOA NORSAR Array B 44.35 323 P P 17 31 12.8 +1.0
comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=5.2
comp=Z,0.9nm,0.6s
NBO00 NORSAR Array S 44.56 323 P P 17 31 13.9 +0.6
NC204 NORSAR Array S 44.59 323 P P 17 31 14.2 +0.5
NC204 IAmb IAmb 17 31 46.9
comp=Z,26nm,1.2s
TORD Torodi Ar. Bea 65.91 269 P P 17 33 45.9 -0.7
comp=Z,0.6nm,0.4s,baz=60,slow=6.1,SNR=7.3
comp=Z,0.6nm,0.4s
WRA Warramunga Arr 81.93 122 P P 17 35 18.3 -1.1
comp=Z,0.6nm,0.7s,baz=326,slow=4.8,SNR=13
comp=Z,0.6nm,0.7s
ASAR Alice Springs 84.21 125 P P 17 35 30.1 -0.9
comp=Z,0.8nm,0.7s,baz=307,slow=5.0,SNR=15
comp=Z,0.8nm,0.7s

*TRN **14** 17:25:23.8, 16°.67N×60°.79W, h24km, MD4.7*
*IDC **14** 17:25:23.2±2.2, 16°.75N×60°.68W, h28km±14km, mb3.6/6, mbtmp3.9/10, ML3.4/4, MS3.8/52, Error ellipse: s-maj=20.2km s-min=15.6km az=104.0*
*NEIC **14** 17:25:24.3±1.6, 16°.72N±0°.05×60°.73W±0°.07, h25km±7km, mb4.6/5, Mwr4.4/39, Error ellipse: s-maj=10.7km s-min=5.9km az=69.0*
*NEIC **14** 17:25:25, 16°.70N×60°.73W, h28km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_r=0.62; $M_{\theta\theta}$=0.14; $M_{\phi\phi}$=0.48; M_{rr}=1.47; $M_{\theta\phi}$=0.01; $M_{r\theta}$=5.39; Fault plane solution: M_0=5.6100×10^{15} NP1:φs180.18000°, δ2.87000°, λ105.35000°. NP2:φs344.82000°, δ87.23000°, λ89.24000°. Principal axes: T 5.6863, Plg48.0000°, Azm254.0000°; N -0.1530, Plg1.0000°, Azm345.0000°; P -5.5334, Plg42.0000°, Azm76.0000°;*
ISC 14 17:25:23.3±1.4, 16°.73N±0°.03×60°.66W±0°.06, h29km±9km, n140, σ1§41/117, mb3.9/8, MS3.8/47, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**0.56**	**223**	Pg	**Pb**	**17 25 34.5**	**-0.1**
H05N1				Sn	**Sn**	**17 25 43.5**	**-0.1**
GDSD	**La Dsirade Is**	**0.57**	**223**		**Pb**	**17 25 34.3**	**-0.5**
GDSD				Sg	**Sb**	**17 25 43.0**	**+0.4**
ABD	**La Joyeuse, An**	**0.83**	**252**		**Pn**	**17 25 39.0**	**-0.1**
ABD				Sn	**Sn**	**17 25 50.9**	**+0.5**
ABD	**La Joyeuse, An**	**0.83**	**252**	*e*P	**Pn**	**17 25 38.8**	**-0.3**
ABD				*e*S	**Sn**	**17 25 51.4**	**+1.1**
MAGL	**Barre de l'ile**	**0.98**	**218**		**Pn**	**17 25 40.8**	**-0.3**
MAGL	**Barre de l'ile**	**0.98**	**218**	*e*P	**Pn**	**17 25 41.0**	**-0.1**
MAGL				*e*S	**Sb**	**17 25 54.4**	**+0.2**
ANBD	**Bethesda, Anti**	**1.10**	**287**	*e*P	**Pn**	**17 25 43.0**	**+0.2**
ANBD				*e*S	**Sb**	**17 25 58.2**	**+0.5**
CBE	**Ff, Capester**	**1.12**	**234**		**Pn**	**17 25 43.2**	**+0.1**
CBE				Sn	**Sb**	**17 25 58.2**	**-0.1**
CBE	**Ff, Capester**	**1.12**	**234**	*e*P	**Pn**	**17 25 43.5**	**+0.5**
CBE				*e*S	**Sb**	**17 25 58.9**	**+0.6**
GDHS	**Morne Mazeau,**	**1.15**	**247**		**Pn**	**17 25 43.6**	**+0.1**
TDBA	**Terre de Bas,**	**1.28**	**227**		**Pn**	**17 25 45.6**	**+0.3**
TDBA				Sn	**Sn**	**17 26 02.0**	**+0.5**
TDBA	**Terre de Bas,**	**1.28**	**227**	*e*P	**Pn**	**17 25 45.8**	**+0.5**
TDBA				*e*S	**Sb**	**17 26 03.0**	**+0.1**
TBG	**Guadaloupe-3**	**1.28**	**227**	*e*P	**Pn**	**17 25 46.0**	**+0.7**
TBG				*e*S	**Sb**	**17 26 02.4**	**-0.7**
MDCT	**Cottage Hill,**	**1.35**	**215**	*e*P	**Pn**	**17 25 47.0**	**+0.8**
MDCT				*e*S	**Sb**	**17 26 04.8**	**0.0**
ANWB	**Willy Bob**	**1.42**	**311**		**Pn**	**17 25 47.4**	**+0.2**
ANWB	**Willy Bob**	**1.42**	**311**	*e*P	**Pb**	**17 25 48.2**	**-1.0**
ANWB				*e*S	**Sb**	**17 26 08.6**	**+1.6**
DSLB	**Salisbury**	**1.48**	**210**	*e*P	**Pn**	**17 25 48.4**	**+0.4**
DSLB				*e*S	**Sn**	**17 26 06.8**	**+0.5**
DLPL	**La Plaine**	**1.50**	**202**		**Pn**	**17 25 48.5**	**+0.2**
DLPL	**La Plaine**	**1.50**	**202**	*e*P	**Pn**	**17 25 48.7**	**+0.4**
DLPL				*e*S	**Sn**	**17 26 07.4**	**+0.6**
MDN	**Morne-Daniel**	**1.57**	**207**	*e*P	**Pn**	**17 25 50.0**	**+0.8**
MDN				*e*S	**Sn**	**17 26 10.0**	**+1.4**
SVN	**Savane Anatole**	**1.94**	**195**		**Pn**	**17 25 54.8**	**+0.4**
SVN	**Savane Anatole**	**1.94**	**195**	*e*P	**Pn**	**17 25 56.1**	**+1.7**
ILAM	**Ilet Lapin Mar**	**1.95**	**186**		**Pn**	**17 25 55.8**	**+1.3**
ILAM	**Ilet Lapin Mar**	**1.95**	**186**	*e*P	**Pn**	**17 25 56.1**	**+1.5**
ILAM				*e*S	**Sn**	**17 26 19.2**	**+1.1**
BAMF	**Morne Balai**	**1.96**	**194**	*e*P	**Pn**	**17 25 56.4**	**+1.7**
CXM	**Morne La Croix**	**1.97**	**194**	*e*P	**Pn**	**17 25 55.5**	**+0.6**
PCM	**Pelee Case Pet**	**1.98**	**196**	*e*P	**Pn**	**17 25 56.2**	**+1.4**
GBMF	**Grand Be**	**1.98**	**194**	*e*P	**Pn**	**17 25 56.4**	**+1.4**
PML	**Morne Lenard**	**2.00**	**195**	*e*P	**Pn**	**17 25 57.2**	**+2.0**
FDF	**Fort de France**	**2.04**	**193**	Pn	**Pn**	**17 25 56.5**	**+0.7**
FDF	**Fort de France**	**2.04**	**193**	*e*P	**Pn**	**17 25 56.7**	**+0.9**
FDF				*e*S	**Sn**	**17 26 20.7**	**+0.4**
LPMF	**Morne Lapointe**	**2.16**	**188**	*e*P	**Pn**	**17 25 59.0**	**+1.5**
ZAM	**Aeronautique**	**2.17**	**189**	*e*P	**Pn**	**17 25 58.9**	**+1.3**
MVM	**Montagne Vaucl**	**2.17**	**186**	*e*P	**Pn**	**17 26 00.0**	**+2.4**
BIM	**Bigot**	**2.23**	**190**		**Pn**	**17 25 59.6**	**+1.2**
BIM	**Bigot**	**2.23**	**190**	*e*P	**Pn**	**17 25 59.7**	**+1.2**
BIM				*e*S	**Sn**	**17 26 26.4**	**+1.3**
H05S1	**Guadeloupe/Mar**	**2.30**	**184**	Pn	**Pn**	**17 26 00.7**	**+1.5**
H05S1				Sn	**Sn**	**17 26 29.1**	**+2.5**
SEUS	**St. Eustatius**	**2.34**	**289**		**Pn**	**17 26 00.9**	**+1.1**
SEUS	**St. Eustatius**	**2.34**	**289**	*e*P	**Pn**	**17 26 01.4**	**+1.5**
SMRT	**St. Maarten**	**2.65**	**300**	Pn	**Pn**	**17 26 04.6**	**+0.5**
SMRT	**St. Maarten**	**2.65**	**300**	*e*P	**Pn**	**17 26 05.5**	**+1.3**
SLBI	**Saint Lucia, B**	**2.71**	**186**	*e*P	**Pn**	**17 26 07.1**	**+2.2**
SLBI				*e*S	**Sn**	**17 26 39.0**	**+2.3**
SLB	**Belfond**	**2.91**	**187**	*e*P	**Pn**	**17 26 10.4**	**+2.7**
SLB				*e*S	**Sb**	**17 26 46.5**	**-3.3**
MCLT	**Moule a Chique**	**3.02**	**185**	Pn	**Pn**	**17 26 10.8**	**+1.7**
MCLT	**Moule a Chique**	**3.02**	**185**	*e*P	**Pn**	**17 26 12.0**	**+2.8**
MCLT				*e*S	**Sn**	**17 26 46.3**	**+2.0**
SFAN	**Fancy Village**	**3.36**	**188**	*e*P	**Pn**	**17 26 16.8**	**+2.9**
SVB	**Belmont**	**3.48**	**189**		**Pn**	**17 26 17.2**	**+1.6**
SVB	**Belmont**	**3.48**	**189**	*e*P	**Pn**	**17 26 17.7**	**+2.1**
SVB				*e*S	**Sn**	**17 26 57.6**	**+1.6**
GCMP	**Grenada, Carri**	**4.28**	**190**	*e*P	**Pn**	**17 26 29.4**	**+2.8**
GCMP	**Grenada, Carri**	**4.28**	**190**	*e*S	**Sn**	**17 27 16.0**	**+0.4**
STVI	**Saint Thomas**	**4.40**	**292**		**Pn**	**17 26 28.9**	**+0.7**
GRGR	**Grenville**	**4.67**	**192**	Pn	**Pn**	**17 26 32.6**	**+0.7**
GRGR	**Grenville**	**4.67**	**192**	*e*P	**Pn**	**17 26 34.7**	**+2.7**
CUPR	**Culebra, Puert**	**4.68**	**290**	Pn	**Pn**	**17 26 32.2**	**+0.1**
CBYP	**Canovanas**	**5.19**	**288**		**Pn**	**17 26 39.3**	**+0.2**
TOSP	**Speyside**	**5.40**	**179**	Pn	**Pn**	**17 26 43.8**	**+1.8**
TOSP	**Speyside**	**5.40**	**179**	*e*P	**Pn**	**17 26 45.1**	**+3.1**
GCPR	**Guaynabo City**	**5.40**	**288**	Pn	**Pn**	**17 26 42.0**	**0.0**
SJG	**San Juan**	**5.42**	**286**	Pn	**Pn**	**17 26 43.1**	**+0.9**
SJG				Sn	**Sn**	**17 27 45.4**	**+1.8**
SJG				LR	LR	17 29 09.5	
SJG	**San Juan**	**5.42**	**286**		**Pn**	**17 26 42.3**	**+0.2**
SJG	**San Juan**	**5.42**	**286**	*e*P	**Pn**	**17 26 44.6**	**+2.4**
CELP	**Cerrillos**	**5.80**	**284**	Pn	**Pn**	**17 26 48.5**	**+1.0**
AOPR	**Arecibo Observ**	**6.03**	**286**		**Pn**	**17 26 52.0**	**+1.3**
AOPR	**Arecibo Observ**	**6.03**	**286**	*e*P	**Pn**	**17 26 54.1**	**+3.5**
TRN	**Trinidad (W)**	**6.09**	**187**	*e*P	**Pn**	**17 26 53.9**	**+2.5**
TRN	**Trinidad (W)**	**6.09**	**187**	*e*S	**Sn**	**17 27 59.2**	**-1.0**
MLPR	**Magueyes Islan**	**6.22**	**282**		**Pn**	**17 26 54.0**	**+0.8**
CRPR	**Cabo Rojo, PR**	**6.29**	**283**	Pn	**Pn**	**17 26 55.4**	**+1.3**
PRSN	**Puerto Rico Se**	**6.36**	**284**	Pn	**Pn**	**17 26 57.0**	**+1.8**
AGPR	**Aguadilla, PR**	**6.39**	**287**	Pn	**Pn**	**17 26 55.6**	**+0.1**
PCRV	**Puerto La Cruz**	**7.57**	**211**	Pn	**Pn**	**17 27 09.8**	**-2.1**
	0.2nm,0.3s,baz=15,slow=19,SNR=2.3						
PCRV				LR	LR	17 30 28.3	
	comp=Z,634nm,20.7s,slow=40						
	15nm,1.0s						
DR12	**Loma Pena Alta**	**8.55**	**285**		**Pn**	**17 27 27.0**	**+1.6**
SDDR	**Presa de Saban**	**10.36**	**284**		**Pn**	**17 27 50.6**	**+0.5**
SDDR	**Presa de Saban**	**10.36**	**284**	*e*P	**Pn**	**17 27 52.4**	**+2.2**
BAUV	**El Baul**	**10.56**	**224**		**Pn**	**17 27 53.5**	**+0.6**
BAUV	**El Baul**	**10.56**	**224**	*e*P	**Pn**	**17 27 54.3**	**+1.4**
BAUV	**El Baul**	**10.56**	**224**	*e*S	**Sn**	**17 29 47.4**	**-2.8**
SDV	**Santo Domingo**	**12.46**	**232**	Pn	**Pn**	**17 28 18.6**	**-0.3**
	0.6nm,0.3s,baz=58,slow=9.6,SNR=2.9						
SDV				Sn	**Sn**	**17 30 38.4**	**+1.5**
	0.1nm,0.3s,baz=48,slow=17,SNR=1.7						
SDV				LR	LR	17 33 18.2	
	comp=Z,480nm,21.8s,baz=47,slow=38						
	2.0nm,0.3s						
SDV	**Santo Domingo**	**12.46**	**232**	Pn	**Pn**	**17 28 19.4**	**+0.4**
MDP	**Montagnes des**	**13.98**	**145**	Pn	**Pn**	**17 28 40.0**	**+0.4**
	0.5nm,0.3s,baz=332,slow=14,SNR=2.1						
MDP				Sn	Sn	17 30 59.9	-14
	0.9nm,0.3s,baz=263,slow=7.7,SNR=4.5						
MDP				LR	LR	17 34 53.5	
	comp=Z,194nm,20.6s,baz=288,slow=41						
	1.6nm,0.3s						
ROSC	**El Rosal**	**17.86**	**230**	LR	LR	17 38 02.4	
	comp=Z,478nm,18.8s,baz=51,slow=42						
LCCY	**Blossom Villag**	**18.68**	**282**		**P**	**17 29 38.0**	**-1.3**
061Z	**Ochoppi**	**20.91**	**299**		**P**	**17 30 02.4**	**-1.3**
SOR	**Soroa**	**21.86**	**290**	P	**P**	**17 30 13.9**	**0.0**
SOR				IAmb	IAmb	17 30 45.0	
	comp=Z,40nm,1.4s						
SRBA	**San Rafael, Bu**	**23.32**	**254**	P	**P**	**17 30 27.5**	**-1.9**
SRBA				IAmb	IAmb	17 30 38.0	
	comp=Z,16nm,1.1s						
SAML	**Samuel**	**25.64**	**186**		**P**	**17 30 51.2**	**+0.7**
TKL	**Tuckaleechee C**	**27.90**	**317**	LR	LR	17 42 48.5	
	comp=Z,130nm,20.5s,baz=128,slow=38						
ATAH	**Atahualpa**	**29.49**	**218**	P	**P**	**17 31 24.7**	**-1.0**
	comp=Z,4.9nm,0.8s,baz=14,slow=8.3,SNR=2.1						
ATAH				LR	LR	17 45 34.6	
	comp=Z,338nm,19.9s,baz=357,slow=41						
	comp=Z,4.9nm,0.8s						
SADO	**Sadowa**	**31.99**	**335**	LR	LR	17 44 28.2	
	comp=Z,110nm,18.5s,baz=174,slow=36						
SIV	**San Ignacio**	**32.52**	**181**	LR	LR	17 45 54.3	
	comp=Z,124nm,20.1s,baz=14,slow=38						
NNA	**Nana**	**32.71**	**210**	LR	LR	17 46 20.7	
	comp=Z,188nm,20.1s,baz=16,slow=38						
CMIG	**Matias Romero**	**32.72**	**276**	LR	LR	17 46 37.2	
	comp=Z,124nm,18.5s,baz=28,slow=39						
RCBR	**Riachuelo**	**33.20**	**130**	LR	LR	17 42 50.8	
	comp=Z,111nm,21.4s,baz=116,slow=32						
LPAZ	**La Paz**	**33.62**	**193**	LR	LR	17 46 31.8	
	comp=Z,157nm,20.3s,baz=3.5,slow=38						
SCHQ	**Schefferville**	**38.32**	**354**	LR	LR	17 48 58.4	
	comp=Z,53nm,18.8s,baz=151,slow=37						
LVC	**Limon Verde**	**39.92**	**192**	LR	LR	17 50 45.8	
	comp=Z,157nm,20.0s,baz=351,slow=38						
TXAR	**Lajitas Array**	**41.30**	**296**	P	**P**	**17 33 05.7**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=100,slow=8.6,SNR=5.0						
TXAR				LR	LR	17 53 04.8	
	comp=Z,68nm,21.9s,baz=80,slow=40						
	comp=Z,0.3nm,0.4s						
BBTS	**Babate**	**42.47**	**86**	LR	LR	17 47 34.2	
	comp=Z,164nm,18.6s,baz=262,slow=31						
ANMO	**Albuquerque**	**44.60**	**303**	LR	LR	17 54 53.5	
	comp=Z,120nm,19.1s,baz=115,slow=40						
LPIG	**La Paz**	**46.91**	**288**	LR	LR	17 54 39.6	
	comp=Z,75nm,21.4s,baz=49,slow=38						
FRB	**Frobisher Bay**	**47.28**	**355**	LR	LR	17 52 58.8	
	comp=Z,60nm,20.4s,baz=225,slow=35						
PDAR	**Pinedale Array**	**48.89**	**313**	P	**P**	**17 34 06.8**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=131,slow=11,SNR=6.5						
PDAR				LR	LR	17 56 11.1	
	comp=Z,84nm,19.4s,baz=116,slow=38						
	comp=Z,0.5nm,0.5s						
SFJD	**Kangerlussuaq**	**50.66**	**5**	LR	LR	17 53 10.0	
	comp=Z,52nm,21.2s,baz=173,slow=33						
H10N3	**ASCENSION HYDR**	**51.77**	**115**	T	T	18 30 21.4	
	baz=298,slow=75,SNR=81						
H10N2	**ASCENSION HYDR**	**51.78**	**115**	T	T	18 30 21.9	
	baz=298,slow=75,SNR=79						
H10N1	**ASCENSION HYDR**	**51.79**	**115**	T	T	18 30 23.0	
	baz=298,slow=75,SNR=127						
H10S3	**ASCENSION HYDR**	**52.17**	**116**	T	T	18 30 48.7	
	baz=293,slow=74,SNR=42						
H10S2	**ASCENSION HYDR**	**52.18**	**116**	T	T	18 30 50.6	
	baz=287,slow=74,SNR=19						
ELK	**Elko**	**52.55**	**309**	LR	LR	18 00 12.1	
	comp=Z,94nm,18.2s,baz=112,slow=40						
PFO	**Pinyon Flats O**	**52.62**	**300**	LR	LR	18 02 50.3	
	comp=Z,61nm,18.3s,baz=114,slow=43						
MDT	**Midelt**	**52.78**	**61**	LR	LR	17 53 15.2	
	comp=Z,71nm,19.9s,baz=304,slow=32						
ESDC	**Sonseca Array**	**53.99**	**53**	LR	LR	17 53 28.1	
	comp=Z,70nm,19.7s,baz=260,slow=31						
KOWA	**Kowa**	**54.45**	**84**	LR	LR	17 54 18.6	
	comp=Z,95nm,20.6s,baz=238,slow=32						
NVAR	**Mina Array Bea**	**54.56**	**305**	LR	LR	17 59 11.5	
	comp=Z,137nm,21.2s,baz=92,slow=37						
BORG	**Borgarnes**	**54.81**	**19**	LR	LR	17 53 31.0	
	comp=Z,58nm,21.4s,baz=241,slow=31						
NEW	**Newport**	**55.49**	**317**	LR	LR	18 01 12.6	
	comp=Z,117nm,18.8s,baz=120,slow=39						
PLCA	**Paso Flores**	**57.90**	**189**	P	**P**	**17 35 13.9**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=31,slow=8.7,SNR=4.0						
	comp=Z,1.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**58.07**	**35**	LR	LR	17 55 49.1	
	comp=Z,72nm,20.0s,baz=8.5,slow=32						
YBH	**Yreka Blue Hor**	**58.27**	**309**	LR	LR	18 01 52.0	
	comp=Z,83nm,20.5s,baz=68,slow=38						
TORD	**Torodi Ar. Bea**	**60.15**	**84**	P	**P**	**17 35 28.1**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=287,slow=6.2,SNR=2.0						
TORD				LR	LR	17 58 22.0	
	comp=Z,134nm,20.3s,baz=226,slow=33						
	comp=Z,0.5nm,0.7s						
RES	**Resolute Bay**	**60.90**	**350**	LR	LR	18 01 44.9	
	comp=Z,48nm,19.3s,baz=142,slow=36						
JMIC	**Jan Mayen**	**62.42**	**17**	LR	LR	17 58 10.9	
	comp=Z,49nm,20.7s,baz=260,slow=32						
NOA	**NORSAR Array B**	**66.74**	**30**	LR	LR	18 00 00.6	
	comp=Z,69nm,21.7s,baz=260,slow=31						
HFS	**Hagfors**	**67.85**	**31**	LR	LR	18 01 53.2	
	comp=Z,44nm,20.2s,baz=254,slow=32						
VAE	**Valguarnera**	**68.31**	**56**	LR	LR	18 01 33.5	
	comp=Z,96nm,20.7s,baz=178,slow=32						
VRAC	**Vranov**	**69.23**	**43**	LR	LR	18 02 38.2	
	comp=Z,30nm,21.3s,baz=256,slow=32						
SPITS	**Spitsbergen Ar**	**71.08**	**12**	LR	LR	18 03 52.6	
	comp=Z,37nm,21.8s,baz=254,slow=32						
ILAR	**Eielson Array**	**73.41**	**333**	P	**P**	**17 36 53.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=96,slow=4.6,SNR=4.1						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**73.91**	**30**	LR	LR	18 04 12.8	
	comp=Z,51nm,21.1s,baz=259,slow=32						
KDAK	**Kodiak Island**	**77.03**	**327**	LR	LR	18 11 29.2	
	comp=Z,62nm,20.2s,baz=106,slow=36						
AKASG	**Malin Array Be**	**77.17**	**41**	LR	LR	18 07 52.6	
	comp=Z,93nm,20.2s,baz=250,slow=33						
BRTR	**Keskin Array B**	**82.72**	**51**	LR	LR	18 10 03.7	
	comp=Z,36nm,20.3s,baz=504,slow=32						
TSUM	**Tsumeb**	**84.78**	**112**	LR	LR	18 08 28.2	
	comp=Z,52nm,19.6s,baz=328,slow=30						
KIRV	**Kirov**	**85.91**	**30**	LR	LR	18 12 04.3	
	comp=Z,48nm,21.0s,baz=296,slow=33						
EIL	**Elat**	**86.60**	**60**	LR	LR	18 17 38.5	
	comp=Z,59nm,18.8s,baz=239,slow=36						
BELG	**Belogornoye**	**87.60**	**36**	LR	LR	18 15 03.

MSVF LR LR 17 54 34.6
comp=Z,303nm,19.7s,baz=165,slow=34
3.5nm,0.9s
NIUE Niue 12.79 35 Pn Pn 17 50 26.3 -8.4
QRZ Quartz Range 13.60 213 P P 17 50 49.0 -5.2
THZ Tophouse 14.17 210 Pn **Pn 17 50 51.3 -2.3**
THZ Tophouse 14.17 210 P **Pn 17 50 52.0 -1.6**
THZ S **Sn 17 53 21.3 -8.3**
KHZ Kahutara 14.45 207 P **Pn 17 50 54.8 -2.5**
KHZ S Sn 17 53 24.8 -11
KHZ Kahutara 14.45 207 P **Pn 17 50 58.3 +1.0**
DSZ Denniston Nort 14.65 213 P **P 17 51 02.7 -3.3**
DSZ S **Sn 17 53 32.8 -8.5**
GVZ Greta Valley S 15.11 207 P **Pn 17 51 04.0 -2.3**
GVZ S Sn 17 53 39.7 -13
LTZ Lake Taylor 15.27 209 P **Pn 17 51 04.9 -3.5**
LTZ S Sn 17 53 44.1 -12
INZ Inchbonnie 15.59 211 P **P 17 51 13.8 -2.6**
INZ S Sn 17 53 50.9 -13
OXZ Oxford 15.81 209 P **Pn 17 51 14.0 -1.4**
OXZ IAmb IAmb 17 51 19.9
comp=Z,25nm,0.5s
OXZ Oxford 15.81 209 P **P 17 51 16.8 -2.1**
OXZ S Sn 17 53 55.6 -14
WVZ Waitaha Valley 16.18 212 P **P 17 51 22.0 -0.9**
WVZ S Sn 17 54 03.0 -15
DZM Mont Dzumac 16.23 295 *e*LR LR 17 55 23.1
comp=Z,461nm,25.5s
DZM Mont Dzumac 16.23 295 LR LR 17 56 17.6
comp=Z,248nm,20.9s,baz=40,slow=32
DZM Mont Dzumac 16.23 295 P **P 17 51 25.9 +2.2**
NOUC Port Laguerre 16.32 294 P **P 17 51 26.7 +2.1**
RPZ Rata Peaks 16.55 210 P **Pn 17 51 23.4 -1.3**
comp=Z,6.9nm,0.5s,baz=24,slow=20,SNR=7.0
RPZ S Sn 17 54 12.0 -15
comp=Z,4.6nm,0.4s,baz=126,slow=22,SNR=6.2
RPZ LR LR 17 57 53.1
comp=Z,124nm,21.3s,baz=38,slow=37
RPZ Rata Peaks 16.55 210 P **P 17 51 25.3 -1.7**
RPZ S Sn 17 54 12.1 -15
RPZ Rata Peaks 16.55 210 P **Pn 17 51 24.1 -0.7**
GCSZ Gaunt Creek Bo 16.56 212 P **P 17 51 25.8 -1.3**
GCSZ S Sn 17 54 14.3 -13
ARCZ Arundel 16.68 209 P **P 17 51 26.1 -2.4**
ODZ Otahua Downs 17.80 208 P **P 17 51 39.5 -1.3**
ODZ S Sn 17 54 43.4 -14
ODZ Otahua Downs 17.80 208 P **P 17 51 39.6 -1.2**
JCZ Jackson Bay 17.86 213 P **P 17 51 40.5 -1.1**
RAR Rarotonga 18.25 66 P **Pn 17 51 41.8 -4.3**
TBI Tubuai 25.99 82 *e*LR LR 17 59 23.8
comp=Z,183nm,27.5s
ARMA Armidale 26.54 261 P **P 17 53 11.0 +0.9**
ARMA IAmb IAmb 17 53 15.1
comp=Z,11nm,0.7s
ARMA Armidale 26.54 261 P **P 17 53 14.5 +4.4**
EIDS Eidsvold 28.01 271 P **P 17 53 25.8 +2.6**
EIDS IAmb IAmb 17 53 42.0
comp=Z,14nm,1.1s
PPT2 Papeete2 28.36 71 *e*LR LR 18 00 22.9
comp=Z,175nm,26.8s
PPT Papeete 28.37 71 LR LR 18 01 20.7
comp=Z,73nm,20.5s,baz=186,slow=29
CAN Canberra 28.55 250 P **P 17 53 29.5 +1.5**
CAN IAmb IAmb 17 54 03.3
comp=Z,12nm,1.2s
CAN Canberra 28.55 250 P **P 17 53 31.7 +3.7**
HNR Honiara 29.14 309 LR LR 18 03 11.9
comp=Z,825nm,19.8s,baz=167,slow=32
RMQ Roma 29.73 268 P **P 17 53 42.2 +3.6**
CMSA Cobar Meteorol 31.48 257 P **P 17 53 56.4 +2.5**
QLP Quilpie 33.64 266 P **P 17 54 15.2 +2.3**
CTA Charters Tower 34.00 278 LR LR 18 06 09.1
comp=Z,124nm,19.4s,baz=80,slow=33
CTAO Charters Tower 34.00 278 P **P 17 54 16.6 +0.6**
STKA Stephens Creek 34.90 256 P **P 17 54 26.5 +2.7**
comp=Z,8.4nm,0.6s,baz=94,slow=11,SNR=12
STKA LR LR 18 07 11.5
comp=Z,86nm,18.2s,baz=25,slow=34
comp=Z,8.4nm,0.6s
STKA Stephens Creek 34.90 256 P **P 17 54 25.7 +1.9**
INKA Innaminka 36.38 263 P **P 17 54 38.0 +1.5**
HTT Hallett 36.95 253 P **P 17 54 43.1 +1.7**
LCRK Leigh Creek 37.99 258 P **P 17 54 51.6 +1.5**
PMG Port Moresby 38.62 294 LR LR 18 09 00.5
comp=Z,46nm,20.9s,baz=100,slow=33
COEN Coen 39.39 285 P **P 17 55 01.9 -0.1**
BBOO Buckleboo 39.42 253 P **P 17 55 02.8 +0.7**
BBOO IAmb IAmb 17 55 03.8
comp=Z,12nm,0.8s
BBOO Buckleboo 39.42 253 P **P 17 55 03.9 +1.8**
OOD Oodnadatta 40.72 261 P **P 17 55 14.4 +1.5**
TAOE Nuku Hiva Isla 40.80 67 *e*LR LR 18 06 07.0
comp=Z,116nm,27.1s
MULG Mulgathing 41.54 257 P **P 17 55 20.8 +1.1**
AS31 Alice Springs 43.44 266 P **P 17 55 34.6 -0.6**
ASAR Alice Springs 43.44 266 P **P 17 55 35.3 +0.1**
comp=Z,5.5nm,0.6s,baz=99,slow=6.9,SNR=119
ASAR PcP **PcP 17 57 23.9 +0.8**
comp=Z,3.2nm,1.2s,baz=117,slow=4.1,SNR=4.5
ASAR LR LR 18 12 49.9
comp=Z,106nm,20.0s,baz=92,slow=35
comp=Z,5.5nm,0.6s
ASAR Alice Springs 43.44 266 P **P 17 55 34.2 -1.0**
WR0 Warramunga Arr 44.19 271 P **P 17 55 40.9 -0.3**
WR0 IAmb IAmb 17 55 43.0
comp=Z,14nm,1.1s
WB1 Warramunga Ar. 44.36 271 P **P 17 55 42.8 +0.2**
WB2 Warramunga Arr 44.36 271 P **P 17 55 42.7 0.0**
WRAB Tennant Creek 44.37 271 P **P 17 55 42.3 -0.4**
WRAB Tennant Creek 44.37 271 P **P 17 55 43.2 +0.5**
WRA Warramunga Arr 44.37 271 P **P 17 55 42.7 0.0**
comp=Z,12nm,0.6s,baz=113,slow=7.0,SNR=126
WRA PcP **PP 17 57 27.6 +1.0**
comp=Z,0.8nm,0.7s,baz=110,slow=7.2,SNR=1.9
WRA LR LR 18 12 36.8
comp=Z,57nm,19.6s,baz=143,slow=34
comp=Z,12nm,0.6s
WRA Warramunga Arr 44.37 271 P **P 17 55 42.8 0.0**
WB0 Warramunga Arr 44.39 272 P **P 17 55 42.6 -0.3**
FORT Forrest 46.49 254 P **P 17 55 59.2 -0.1**
FORT Forrest 46.49 254 P **P 17 55 59.7 +0.4**
WRKA Warakurna 47.85 262 P **P 17 56 09.9 -0.2**
SBA Scott Base 48.66 184 P **P 17 56 17.0 +1.5**
SBA IAmb IAmb 17 56 36.6
comp=Z,9.0nm,1.1s
SBA PcP **PcP 17 57 42.4 +2.0**
VNDA Vanda 48.72 186 P **P 17 56 18.4 +2.4**
comp=Z,0.6nm,0.6s,baz=356,slow=6.4,SNR=7.7
comp=Z,0.6nm,0.6s
MTN Manton Dam 50.18 278 P **P 17 56 26.7 -1.3**
MTN IAmb IAmb 17 57 10.6
comp=Z,12nm,1.2s
MTN Manton Dam 50.18 278 P **P 17 56 28.2 +0.2**
comp=Z,7.6nm,0.8s
KNRA Kununurra 50.95 274 P **P 17 56 33.5 -0.3**
KNRA IAmb IAmb 17 56 37.7
comp=Z,11nm,0.9s
KNRA Kununurra 50.95 274 P **P 17 56 34.0 +0.2**
CASY Casey 55.80 208 P **P 17 57 09.6 +0.9**
CASY IAmb IAmb 17 57 10.3
comp=Z,6.0nm,0.7s
BLDU Ballidu 55.96 251 P **P 17 57 10.1 -0.3**
SIJI Sorong 56.39 291 P **P 17 57 13.2 -0.5**
comp=Z,12nm,0.8s,baz=128,slow=7.6,SNR=9.8
comp=Z,12nm,0.8s
MORW Morawa 56.98 253 P **P 17 57 17.2 -0.5**
MORW Morawa 56.98 253 P **P 17 57 17.4 -0.3**
QSPA South Pole Qui 60.31 180 LR LR 18 20 25.6
comp=Z,19nm,21.7s,baz=80,slow=32
QSPA South Pole Qui 60.31 180 P **P 17 57 42.1 +1.6**
PLAI Plampang 63.62 275 P **P 17 58 03.1 -0.2**
BELA Belgrano 2 70.34 172 P **P 17 58 45.2 +0.2**
BELA IAmb IAmb 17 59 02.7
comp=Z,5.6nm,1.2s
MAW Mawson 72.97 200 P **P 17 59 02.5 +1.6**
comp=Z,4.2nm,0.7s,baz=125,slow=7.6,SNR=13
comp=Z,4.2nm,0.7s
MAW Mawson 72.97 200 P **P 17 59 03.1 +2.1**
TROLL Troll, Antarti 78.47 180 P **P 17 59 33.8 +1.3**
SNAA Sanae 78.74 178 P **P 17 59 34.9 +0.9**
SNAA Sanae 78.74 178 P **P 17 59 34.4 +0.5**
SNAA IAmb IAmb 17 59 51.9
comp=Z,3.8nm,1.0s
VNA3 Neumayer Olymp 78.88 176 P **P 17 59 35.4 +0.7**
VNA2 Neumayer--Watz 79.32 177 P **P 17 59 38.7 +1.7**
VNA1 Neumayer--Stat 79.55 176 P **P 17 59 39.2 +0.9**
H03S2 Juan Fernandez 80.55 123 T T 19 29 11.8
baz=240,SNR=123
H03S1 Juan Fernandez 80.56 124 T T 19 29 12.9
baz=240,SNR=123
H03S3 Juan Fernandez 80.57 123 T T 19 29 11.8
baz=240,SNR=146
H03N3 Juan Fernandez 80.74 123 T T 19 29 27.3
baz=232,slow=77
H03N2 Juan Fernandez 80.74 123 T T 19 29 25.0
baz=232,slow=77
H03N1 Juan Fernandez 80.75 123 T T 19 29 20.6
baz=232,slow=77
PLCA Paso Flores 82.70 133 P **P 17 59 56.6 +0.9**
comp=Z,0.9nm,0.8s,baz=236,slow=8.2,SNR=3.2
comp=Z,0.9nm,0.8s
KSRS Korea Array 84.08 319 P **P 18 00 03.5 +1.1**
comp=Z,1.6nm,0.9s,baz=153,slow=5.6,SNR=6.2
comp=Z,1.6nm,0.9s
PETK Petropavlovsk- 85.31 345 P **P 18 00 07.8 -0.5**
comp=Z,2.5nm,0.7s,baz=120,slow=7.1,SNR=7.9
comp=Z,2.5nm,0.7s
PFO Pinyon Flats O 85.58 47 LR LR 18 35 54.8
comp=Z,51nm,18.2s,baz=270,slow=34
NVAR Mina Array Bea 87.60 43 P **P 18 00 20.2 -0.1**
comp=Z,1.1nm,0.7s,baz=225,slow=11,SNR=2.5
comp=Z,1.1nm,0.7s
KLR Kul'dur 90.67 330 P **P 18 00 35.0 +1.0**
comp=Z,2.3nm,0.6s,baz=115,slow=1.3,SNR=8.8
comp=Z,2.3nm,0.6s
TXAR Lajitas Array 91.82 57 P **P 18 00 40.7 +0.7**
comp=Z,0.7nm,0.9s,baz=216,slow=6.2,SNR=5.3
comp=Z,0.7nm,0.9s
ILAR Eielson Array 97.28 13 P Pdif 18 01 03.4 -0.8
comp=Z,0.2nm,0.5s,baz=220,slow=8.1,SNR=2.5
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 117.61 310 PKP **PKiKP 18 06 16.4 -1.2**
comp=Z,0.3nm,0.4s,baz=126,slow=0.7,SNR=7.8
ZALV Zalesovo Beam 117.78 319 PKP **PKPdf 18 06 16.0 -1.5**
comp=Z,0.3nm,0.3s,baz=101,slow=1.5,SNR=3.5
NRIK Noril'sk 119.21 336 PKP **PKiKP 18 06 19.4 -0.5**
comp=Z,1.1nm,0.3s,baz=56,slow=5.9,SNR=3.7
GEYT Alibeck 133.57 296 PKP **PKiKP 18 06 48.5 -1.0**
comp=Z,1.4nm,0.7s,baz=359,slow=6.3,SNR=3.6
ARCES ARCESS Array B 138.07 348 PKhKP PKPpre 18 06 49.8
comp=Z,2.2nm,0.7s,baz=79,slow=1.6,SNR=5.8
ARCES PKP **PKiKP 18 06 55.7 -2.0**
comp=Z,1.4nm,0.5s,baz=322,slow=3.9,SNR=6.1
H10S2 ASCENSION HYDR 138.14 154 T T 20 41 52.9
baz=16,slow=74,SNR=10.0
H10S3 ASCENSION HYDR 138.14 154 T T 20 41 52.9
baz=204,slow=74,SNR=26
H10N3 ASCENSION HYDR 139.22 154 T T 20 43 03.2
baz=204,slow=75,SNR=70
H10N1 ASCENSION HYDR 139.22 154 T T 20 43 03.6
baz=204,slow=75,SNR=75
H10N2 ASCENSION HYDR 139.24 154 T T 20 43 04.5
baz=204,slow=75,SNR=72
FINES FINESS Array B 144.68 340 PKP PKPbc 18 07 05.6 -1.0
comp=Z,11nm,0.6s,baz=59,slow=3.4,SNR=98
NB2 NORSAR Subarra 148.20 352 PKP **PKiKP 18 07 16.6 -2.2**
comp=Z,4.8nm,0.6s,baz=11,slow=2.8
NOA NORSAR Array B 148.20 352 PKPbc **PKPbc 18 07 16.2 -0.9**
comp=Z,7.5nm,0.7s,baz=15,slow=4.3,SNR=24
ASF Jabal al Asfar 150.35 283 PKPbc **PKiKP 18 07 23.1 -1.1**
comp=Z,6.1nm,1.0s,baz=127,slow=2.6,SNR=8.4
AKASG Malin Array Be 151.00 324 PKPbc **PKiKP 18 07 23.6 -1.2**
comp=Z,24nm,0.8s,baz=47,slow=3.1,SNR=52
MMAI Mount Meron Ar 151.66 285 PKPbc **PKiKP 18 07 27.2 +0.3**
comp=Z,6.9nm,0.5s,baz=83,slow=7.7,SNR=21
EIL Elat 151.73 278 PKPbc **PKiKP 18 07 26.6 -0.5**
comp=Z,6.6nm,0.7s,baz=48,slow=3.0,SNR=7.3
BRTR Keskin Array B 152.56 300 PKPbc **PKiKP 18 07 27.8 -0.9**
comp=Z,1.5nm,0.5s,baz=144,slow=5.9,SNR=9.1
CLL Collm 157.09 343 *e*PKPab **PKPab 18 07 59.0 +1.5**
comp=Z,6.0nm,0.7s
GERES GERESS Array B 159.09 339 PKPab **PKPab 18 08 05.7 -0.8**
comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=5.3
TORD Torodi Ar. Bea 163.42 178 PKPab **PKPab 18 08 26.1 +0.2**
comp=Z,1.3nm,0.5s,baz=178,slow=3.1,SNR=4.1

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*IDC **14** 17:50:36.3±1.1, 32.°26N×104.°14E, h0km, mb3.4/5, mbtmp3.4/7, ML3.3/2, Error ellipse: s-maj=63.5km s-min=20.2km az=63.0*
ISC 14 17:50:37.8±1.1, 32.°3N±0.°1×104.°1E±0.°3, h10km, n7, σ0.25/7, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.51**	**200**	Pn	**Pn**	**17 54 03.2**	**-0.1**
	0.1nm,0.3s,baz=8.0,slow=14,SNR=1.8						
	0.5nm,0.7s						
SONM	**Songino Array**	**15.66**	**6**	Pn	**Pn**	**17 54 18.3**	**-0.2**
	0.1nm,0.3s,baz=182,slow=12,SNR=2.7						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**22.13**	**317**	P	**P**	**17 55 33.3**	**-0.2**
	0.2nm,0.5s,baz=117,slow=10,SNR=3.7						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**25.70**	**333**	P	**P**	**17 56 07.9**	**0.0**
	0.6nm,0.5s,baz=123,slow=10,SNR=2.7						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**56.62**	**326**	P	**P**	**18 00 20.9**	**+0.3**
	1.5nm,0.9s,baz=54,slow=7.1,SNR=1.8						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**59.42**	**147**	P	**P**	**18 00 40.9**	**+0.1**
	0.4nm,0.6s,baz=338,slow=7.5,SNR=5.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**62.47**	**149**	P	**P**	**18 01 01.3**	**-0.1**
	0.3nm,0.8s,baz=336,slow=6.7,SNR=6.7						
	0.3nm,0.8s						

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*IDC **14** 18:08:00.2±1.2, 25.°58N×127.°50E, h0km, mb3.5/4, mbtmp3.5/4, MS2.3/1, Error ellipse: s-maj=36.8km s-min=19.3km az=100.0*
*JMA **14** 18:08:03.4±0.5, 26.°N±2.°×12.°8E±.°, h40km±4km, MV3.3/10, NEAR OKINAWAJIMA ISLAND*
ISC 14 18:08:02.9±2.1, 25.°56N±0.°08×127.°75E±0.°06, h24km±15km, n14, σ1.9°06/20, mb3.5/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.58**	**3**	*i* P	**Pn**	**18 08 15.5**	**-0.2**
JJT3				S	**Sn**	**18 08 24.2**	**-0.2**
JNTH	**Nagotoyohara**	**0.99**	**15**	P	**Pn**	**18 08 21.3**	**+0.1**
JNTH				*e*S	**Sn**	**18 08 34.5**	**+0.1**
JAGN	**Aguni-jima**	**1.12**	**336**	P	**Pb**	**18 08 23.2**	**-0.4**
JAGN				S	**Sn**	**18 08 36.9**	**-0.9**
JKE	**Kume jima 2**	**1.15**	**312**	P	**Pn**	**18 08 23.0**	**-0.5**
JKE				*e*S	**Sn**	**18 08 37.9**	**-0.6**
JOW	**Kunigami**	**1.35**	**20**	Pn	**Pb**	**18 08 28.1**	**+0.5**
	62nm,0.3s,baz=199,slow=14,SNR=61						
JOW				Sn	**Sb**	**18 08 46.2**	**+1.8**
	52nm,0.3s,baz=127,slow=29,SNR=9.1						
JOW	**Kunigami**	**1.35**	**20**	P	**Pb**	**18 08 26.8**	**-0.8**
JIH	**Iheya**	**1.48**	**8**	P	**Pb**	**18 08 28.6**	**-1.2**
JIH				*e*S	**Sb**	**18 08 48.2**	**0.0**
JYRO	**Yoronjima**	**1.59**	**23**	P	**Pb**	**18 08 31.6**	**0.0**
JKDJ	**Kitadaitoujima**	**3.23**	**82**	P	**Pn**	**18 08 51.8**	**-0.2**
JKDJ				*e*S	**Sn**	**18 09 27.3**	**-2.4**
KSRS	**Korea Array**	**11.86**	**1**	LR	LR	18 15 09.8	
	comp=Z,14nm,21.2s,baz=130,slow=36						
MKAR	**Makanchi Array**	**41.66**	**313**	P	**P**	**18 15 49.0**	**-0.4**
	0.6nm,0.8s,baz=96,slow=8.8,SNR=3.8						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**45.68**	**171**	P	**P**	**18 16 21.9**	**-0.1**
	0.7nm,1.0s,baz=352,slow=8.1,SNR=2.8						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**49.30**	**173**	P	**P**	**18 16 52.3**	**+2.3**
	0.3nm,0.9s,baz=355,slow=7.9,SNR=5.8						
	0.3nm,0.9s						
FINES	**FINESS Array B**	**73.23**	**331**	P	**P**	**18 19 31.8**	**+0.2**
	1.6nm,1.0s,baz=69,slow=7.6,SNR=4.2						
	1.6nm,1.0s						

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*VAO **14** 18:09:27.1±0.3, 21.°81S×68.°36W, h10km, mb5.2*
*IDC **14** 18:09:32.7±0.6, 21.°75S×68.°23W, h102km±6km, mb4.3/18, mbtmp4.6/23, MS3.3/5, Error ellipse: s-maj=13.1km s-min=9.0km az=98.0*
*NEIC **14** 18:09:33, 21.°85S×68.°36W, h120km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=7.34; $M_{\theta\theta}$=0.52; $M_{\phi\phi}$=6.82; $M_{r\theta}$=3.98; $M_{\theta\phi}$=0.12; $M_{\phi r}$=4.26; Fault plane solution: M_0=9.19000×10^{15} NP1:ϕ_s=166.21000°, δ=31.09000°, λ=-123.38000°. NP2:ϕ_p=23.78000°, δ=64.46000°, λ=-71.65000°. Principal axes: T 8.2081, Plg17.0000°, Azm100.0000°; N 1.7145, Plg17.0000°, Azm196.0000°; P -9.9226, Plg66.0000°, Azm326.0000°;*
*SJA **14** 18:09:33.2±1.7, 21.°90S×68.°53W, h121km±16km, ML4.3, MW4.3*
*NEIC **14** 18:09:33.7±1.7, 21.°86S±0.°04×68.°46W±0.°06, h119km±4km, mb4.8/141, Mwr4.6/38, Mwr4.7(GUC), Error ellipse: s-maj=8.7km s-min=5.5km az=77.0*
*GUC **14** 18:09:34.1±0.8, 21.°89S×68.°42W, h116km±4km, ML4.6*
ISC 14 18:09:33.2±0.6, 21.°84S±0.°03×68.°36W±0.°04, h112km±5km, n367, σ1.9°31/352, mb4.8/83, 12C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.82**	**273**		**Pn**	**18 09 53.5**	**+0.6**
PB09				Sn	**Sn**	**18 10 08.5**	**+0.6**
PB09	**IPOC Station P**	**0.82**	**273**	⇑*i* P	**Pn**	**18 09 54.0**	**+1.1**
PB09				*i* S	**Sn**	**18 10 08.9**	**+1.1**
PB09	**IPOC Station P**	**0.82**	**273**	*i* P	**Pn**	**18 09 54.0**	**+1.1**
PB09				IAML		18 10 10.4	
	comp=Z,11μm,0.6s						
LVC	**Limon Verde**	**0.92**	**214**	P	**Pn**	**18 09 55.0**	**+0.8**
	comp=Z,2μm,0.3s,baz=7.4,slow=7.6,SNR=6645						
LVC				S	**Sn**	**18 10 10.8**	**+0.9**
	comp=Z,3μm,0.4s,baz=248,slow=19,SNR=22						
LVC				LR	LR	18 10 35.3	
	comp=Z,720nm,19.8s,baz=152,slow=59						
LVC	**Limon Verde**	**0.92**	**214**	Pn	**Pn**	**18 09 54.8**	**+0.8**
LVC				Sn	**Sn**	**18 10 10.3**	**+0.4**
LVC	**Limon Verde**	**0.92**	**214**	*e*P	**Pn**	**18 09 54.9**	**+0.8**
LVC				*i* S	**Sn**	**18 10 10.2**	**+0.4**
LVC	**Limon Verde**	**0.92**	**214**	*i* P	**Pn**	**18 09 54.0**	**-0.1**
LVC				IAML		18 10 13.7	
	comp=Z,2μm,0.3s						
AF01	**San Pedro de A**	**1.12**	**171**		**Pn**	**18 09 57.9**	**+1.8**
AF01	**San Pedro de A**	**1.12**	**171**	*e*P	**Pn**	**18 09 54.1**	**-2.0**
PB03	**IPOC Station P**	**1.31**	**261**		**Pn**	**18 09 57.9**	**0.0**
PB03				Sn	**Sn**	**18 10 15.9**	**-0.9**
PB03	**IPOC Station P**	**1.31**	**261**	⇑*i* P	**Pn**	**18 09 58.1**	**+0.1**
PB03				*e*S	**Sn**	**18 10 16.3**	**-0.5**
PB03				IAML		18 10 18.3	
	comp=N,8μm,0.3s						
PB03	**IPOC Station P**	**1.31**	**261**	*i* P	**Pn**	**18 09 58.0**	**0.0**
PB03				IAML		18 10 18.8	
	comp=Z,8μm,0.4s						
PB01	**IPOC Station P**	**1.32**	**307**		**Pn**	**18 09 58.3**	**+0.3**
PB01				Sn	**Sn**	**18 10 17.5**	**+0.6**
PB01	**IPOC Station P**	**1.32**	**307**	⇑*i* P	**Pn**	**18 09 58.6**	**+0.6**
PB01				*e*S	**Sn**	**18 10 17.5**	**+0.6**
PB01				IAML		18 10 20.1	
	comp=N,9μm,0.2s						
PB01	**IPOC Station P**	**1.32**	**307**	*i* P	**Pn**	**18 09 58.0**	**-0.1**
PB01				IAML		18 10 21.1	
	comp=Z,5μm,0.2s						
PB06	**IPOC Station P**	**1.41**	**232**	Pn	**Pn**	**18 09 59.4**	**+0.1**
PB06				Sn	**Sn**	**18 10 19.0**	**+0.1**
PB06	**IPOC Station P**	**1.41**	**232**	⇑*i* P	**Pn**	**18 09 59.8**	**+0.6**
PB06				*e*S	**Sn**	**18 10 19.2**	**+0.2**
PB06				IAML		18 10 20.4	
	comp=N,13μm,0.4s						
PB06	**IPOC Station P**	**1.41**	**232**	*i* P	**Pn**	**18 09 59.0**	**-0.2**
PB06				IAML		18 10 23.4	
	comp=Z,8μm,0.2s						
PB07	**IPOC Station P**	**1.42**	**274**	Pn	**Pn**	**18 09 59.0**	**-0.4**
PB07				Sn	**Sn**	**18 10 18.6**	**-0.6**
PB07	**IPOC Station P**	**1.42**	**274**	⇑*i* P	**Pn**	**18 09 59.5**	**+0.2**
PB07				*e*S	**Sn**	**18 10 19.5**	**+0.3**
PB07				IAML		18 10 20.7	
	comp=E,11μm,0.2s						
PB07	**IPOC Station P**	**1.42**	**274**	*i* P	**Pn**	**18 09 59.0**	**-0.4**
PB07				IAML		18 10 20.9	
	comp=Z,8μm,0.4s						
PB02	**IPOC Station P**	**1.52**	**290**		**Pn**	**18 10 00.1**	**-0.4**
PB02				Sn	**Sn**	**18 10 20.8**	**-0.4**
PB02	**IPOC Station P**	**1.52**	**290**	⇑*i* P	**Pn**	**18 10 00.6**	**+0.1**
PB02				*e*S	**Sn**	**18 10 21.4**	**+0.3**
PB02				IAML		18 10 22.9	
	comp=N,13μm,0.2s						
PB02	**IPOC Station P**	**1.52**	**290**	*i* P	**Pn**	**18 10 00.0**	**-0.4**
PB02				IAML		18 10 23.4	
	comp=Z,15μm,0.2s						
PB15	**IPOC Station P**	**1.70**	**217**	Pn	**Pn**	**18 10 03.2**	**+0.5**
PB15				Sn	**Sn**	**18 10 26.0**	**+0.7**
PB15	**IPOC Station P**	**1.70**	**217**	*e*P	**Pn**	**18 10 03.2**	**+0.5**
PB15				*e*S	**Sn**	**18 10 26.3**	**+1.1**
PB15	**IPOC Station P**	**1.70**	**217**	*i* P	**Pn**	**18 10 03.0**	**+0.3**
PB15				IAML		18 10 31.6	
	comp=Z,12μm,0.2s						
PB04	**IPOC Station P**	**1.73**	**253**		**Pn**	**18 10 02.6**	**-0.4**
PB04	**IPOC Station P**	**1.73**	**253**	⇑*i* P	**Pn**	**18 10 02.8**	**-0.2**
PB04				*e*S	**Sn**	**18 10 25.4**	**-0.4**
PB04				IAML		18 10 29.9	
	comp=E,6μm,0.6s						
PB04	**IPOC Station P**	**1.73**	**253**	*i* P	**Pn**	**18 10 02.0**	**-1.0**
PB04				IAML		18 10 28.5	
	comp=Z,5μm,0.3s						
PB08	**IPOC Station P**	**1.85**	**336**		**Pn**	**18 10 06.0**	**+1.3**
PB08	**IPOC Station P**	**1.85**	**336**	⇑*i* P	**Pn**	**18 10 06.8**	**+2.0**
PB08				*i* S	**Sn**	**18 10 30.6**	**+1.9**
PB08				IAML		18 10 32.3	
	comp=E,5μm,0.3s						
PB08	**IPOC Station P**	**1.85**	**336**	*i* P	**Pn**	**18 10 06.0**	**+1.3**
PB08				IAML		18 10 33.5	
	comp=Z,2μm,0.2s						
PATCX	**Punta Patache**	**1.96**	**301**		**Pn**	**18 10 05.6**	**-0.2**
PATCX	**Punta Patache**	**1.96**	**301**	⇑*i* P	**Pn**	**18 10 05.8**	**0.0**
PATCX				*e*S	**Sn**	**18 10 30.1**	**-0.6**
PATCX				IAML		18 10 33.1	
	comp=E,10μm,0.6s						
PATCX	**Punta Patache**	**1.96**	**301**	*i* P	**Pn**	**18 10 06.0**	**+0.2**
PATCX				IAML		18 10 36.8	
	comp=Z,4μm,1.2s						
TA01	**Diego Aracena**	**2.12**	**306**	Pn	**Pn**	**18 10 07.4**	**-0.4**
TA01	**Diego Aracena**	**2.12**	**306**	*i* P	**Pn**	**18 10 07.4**	**-0.4**
TA01				*i* S	**Sn**	**18 10 33.3**	**-0.9**
TA01	**Diego Aracena**	**2.12**	**306**	*i* P	**Pn**	**18 10 07.0**	**-0.8**
TA01				IAML		18 10 35.4	
	comp=Z,3μm,0.7s						
TA02	**Huaiquique**	**2.28**	**313**	Pn	**Pn**	**18 10 09.4**	**-0.4**
TA02	**Huaiquique**	**2.28**	**313**	*e*P	**Pn**	**18 10 09.2**	**-0.6**
TA02				*e*S	**Sn**	**18 10 37.5**	**-0.3**
TA02	**Huaiquique**	**2.28**	**313**	*i* P	**Pn**	**18 10 10.0**	**+0.2**
TA02				IAML		18 10 48.3	
	comp=Z,3μm,0.5s						
GO01	**Chusmiza**	**2.30**	**340**		**Pn**	**18 10 11.9**	**+1.4**
GO01	**Chusmiza**	**2.30**	**340**	⇑*i* P	**Pn**	**18 10 11.9**	**+1.4**
GO01				*e*S	**Sn**	**18 10 41.4**	**+2.2**
GO01				IAML		18 10 45.4	
	comp=E,6μm,0.1s						
GO01	**Chusmiza**	**2.30**	**340**	*i* P	**Pn**	**18 10 12.0**	**+1.4**
PB10	**IPOC Station P**	**2.62**	**230**	Pn	**Pn**	**18 10 14.1**	**-0.2**
PB10	**IPOC Station P**	**2.62**	**230**	*e*P	**Pn**	**18 10 14.0**	**-0.2**
PB10				IAML		18 10 55.7	
	comp=N,2μm,0.5s						
PB10	**IPOC Station P**	**2.62**	**230**	*i* P	**Pn**	**18 10 14.0**	**-0.2**
PB10				IAML		18 10 54.7	
	comp=Z,898nm,0.6s						
YJA	**Yavi**	**2.66**	**98**	*i* P	**Pn**	**18 10 19.0**	**+3.8**
YJA				IAML		18 10 55.2	
	comp=Z,55nm,0.6s						
HJA	**Humahuaca**	**3.05**	**117**	*i* P	**Pn**	**18 10 24.0**	**+3.8**
HJA				IAML		18 11 04.7	
	comp=Z,67nm,0.7s						
PB14	**IPOC

AZAP Zapla 3.85 129 *i* P **Pn 18 10 33.0 +2.2**
AZAP IAML 18 11 21.5
comp=Z,112nm,2.2s
SLA San Lorenzo 3.88 138 *i* P **Pn 18 10 35.0 +3.8**
AP01 Chacalluta 3.92 331 Pn 18 10 30.4 -1.1
AP01 Chacalluta 3.92 331 *e*P **Pn 18 10 29.8 -1.7**
AP01 Chacalluta 3.92 331 *i* P **Pn 18 10 35.0 +3.4**
AP01 IAML 18 11 32.0
comp=Z,1µm,0.5s
ASTB Santa Barbara 4.17 121 *i* P **Pn 18 10 37.0 +2.1**
ASTB IAML 18 11 33.9
comp=Z,3.5nm,0.4s
AC01 Pan de Azucar 4.75 205 Pn **Pn 18 10 40.9 -1.7**
AC01 Pan de Azucar 4.75 205 *e*P **Pn 18 10 40.8 -1.9**
AC02 Maricunga 5.02 188 Pn **Pn 18 10 46.5 -0.2**
AC02 Maricunga 5.02 188 *e*P **Pn 18 10 46.6 -0.2**
AC02 Maricunga 5.02 188 *i* P **Pn 18 10 47.0 +0.3**
AC02 IAML 18 12 15.6
comp=Z,106nm,0.3s
LPAZ La Paz 5.53 2 P **Pn 18 10 53.6 -0.2**
comp=Z,14nm,0.3s,baz=170,slow=2.2,SNR=124
LPAZ S **Sn 18 11 53.1 -3.4**
comp=Z,18nm,0.6s,baz=186,slow=12,SNR=4.2
LPAZ La Paz 5.53 2 Pn **Pn 18 10 55.6 +1.8**
AC06 Mina Casimiro 5.78 198 Pn 18 10 53.8 -2.8
AC04 Llanos de Chal 6.79 201 Pn **Pn 18 11 06.4 -3.9**
AC05 El Transito 7.17 194 Pn **Pn 18 11 12.5 -3.0**
LCO Las Campanas 7.44 196 Pn 18 11 16.0 -3.4
CO01 Juntas del Tor 8.25 191 Pn **Pn 18 11 27.8 -2.5**
GO04 Tololo Observa 8.58 194 Pn **Pn 18 11 30.2 -4.5**
BBRB Robore, Bolivi 8.78 68 *e*P **Pn 18 11 34.4 -3.0**
SIV San Ignacio 9.02 51 P **Pn 18 11 38.8 -1.8**
comp=Z,46nm,0.4s,baz=239,slow=11,SNR=190
SIV S Sn 18 13 12.2 -8.4
comp=Z,11nm,0.5s,baz=299,slow=21,SNR=8.1
CO03 El Pedregal 9.22 193 Pn 18 11 38.7 -4.3
CO06 Fray Jorge 9.27 198 Pn Pn 18 11 38.0 -5.8
CO02 Combarbal 9.62 194 Pn Pn 18 11 42.9 -5.8
PTLB Pontes e Lacer 10.81 56 *e*P **Pn 18 12 01.7 -3.0**
VA06 Catapilco 10.99 193 Pn Pn 18 12 01.3 -5.8
CPUP Villa Florida 11.02 116 P **Pn 18 12 06.4 -1.2**
comp=Z,12nm,0.9s,baz=292,slow=11,SNR=13
CPUP LR LR 18 17 17.6
comp=Z,224nm,18.1s,baz=242,slow=42
CPUP Villa Florida 11.02 116 Pn **Pn 18 12 04.3 -3.2**
CPUP Villa Florida 11.02 116 *e*P **Pn 18 12 06.2 -1.4**
ROC1 El Roble 11.34 191 Pn **Pn 18 12 09.4 -2.5**
MT02 Curacav 11.63 192 Pn **Pn 18 12 12.7 -3.0**
AQDB Aquidauana 11.89 86 Pn **Pn 18 12 16.5 -2.7**
AQDB Aquidauana 11.89 86 *e*P **Pn 18 12 17.4 -1.7**
LMEL Las Melosas 12.07 187 Pn **Pn 18 12 19.1 -2.5**
MT09 Talagante 12.11 190 Pn Pn 18 12 16.6 -5.5
MT01 Popeta 12.24 191 Pn Pn 18 12 16.8 -6.9
BO04 La Punta 12.26 189 Pn Pn 18 12 19.0 -5.1
NNA Nana 12.72 319 P **Pn 18 12 31.0 +0.8**
comp=Z,5.0nm,0.3s,baz=175,slow=11,SNR=1.3
NNA LR LR 18 17 37.1
comp=Z,49nm,21.4s,baz=178,slow=38
BO02 Sierra Bellavi 13.08 189 P **Pn 18 12 33.5 -1.2**
ITQB Itaqui 13.13 129 *e*P **Pn 18 12 34.8 -0.5**
SALV Santo Antonio 13.36 66 *e*P **Pn 18 12 36.8 -1.6**
GO05 Huala 13.49 193 P **Pn 18 12 38.8 -1.2**
RPRD Ribas do Rio P 13.74 87 *e*P **Pn 18 12 42.5 -1.0**
SAML Samuel 13.75 22 P **Pn 18 12 43.6 +0.1**
UNIS Unistalda (Bra 13.99 124 *e*P **Pn 18 12 45.6 -0.9**
CRSM Crissiumal (Br 14.18 116 *e*P **Pn 18 12 49.3 +0.4**
RODS Rosario do Sul 14.54 128 *e*P **Pn 18 12 54.0 +0.6**
FRBT Francisco Belt 14.58 109 *e*P **Pn 18 12 54.8 +0.7**
TRCB Terra Rica 14.59 97 Pn 18 12 55.0 +0.8
TRCB Terra Rica 14.59 97 *e*P **Pn 18 12 54.2 0.0**
CZSB Cruzeiro do Su 14.64 343 *e*P **Pn 18 12 55.7 +0.7**
C2SB Chapadao do Su 14.88 81 *e*P **Pn 18 12 57.0 -1.0**
PDRB Porto dos Gac 15.07 49 *e*P **Pn 18 12 59.8 -0.7**
PTGB Pitanga 15.24 104 *e*P **Pn 18 13 03.7 +1.1**
ALGR Alto Alegre (B 15.49 120 *e*P **Pn 18 13 05.6 0.0**
ITAB Concordia 15.71 113 P **Pn 18 13 09.1 +0.8**
ITAB IAmb IAmb 18 13 11.9
comp=Z,69nm,0.9s
ITAB Concordia 15.71 113 *e*P **Pn 18 13 09.0 +0.8**
CPSB Cacapava Do Su 15.87 126 *e*P **Pn 18 13 09.3 -0.9**
PCMB Pacaembu 15.89 92 *e*P **Pn 18 13 10.8 +0.2**
CLDB Colider 16.24 50 *e*P **Pn 18 13 15.8 +0.8**
PLTB Pedras Altas 16.45 130 Pn 18 13 15.4 -2.0
TRQA Tornquist 17.07 163 P 18 13 22.7 -2.2
FRTB Fartura 17.42 98 *e*P **Pn 18 13 29.6 +0.2**
TBTG Tabatinga, AM 17.62 355 *e*P **Pn 18 13 32.7 +1.0**
GO06 Curarrehue 17.88 188 P **P 18 13 32.5 -1.5**
TIJ01 Guaruva-PR 18.07 105 *e*P **P 18 13 36.9 +0.7**
PLCA Paso Flores 18.92 185 P **Pn 18 13 46.4 -0.8**
comp=Z,3.6nm,1.0s,baz=354,slow=12,SNR=5.4
PLCA PcP **PcP 18 18 07.2 +0.5**
comp=Z,1.2nm,0.8s,baz=40,slow=2.9,SNR=3.3
PLCA Paso Flores 18.92 185 P **P 18 13 43.0 -2.3**
PLCA Paso Flores 18.92 185 *e*P **Pn 18 13 49.0 +1.9**
LL04 Puerto Octay 19.32 189 P **P 18 13 48.5 -0.9**
BDFB Brasilia 20.22 76 P **P 18 13 58.6 -1.0**
comp=Z,10nm,0.5s,baz=240,slow=10.0,SNR=11
comp=Z,10nm,0.5s
BDFB Brasilia 20.22 76 P **P 18 13 58.2 -1.4**
BOSC San Juan Bosco 21.03 331 P **P 18 14 06.6 -1.8**
COHC Cochancay 21.98 330 P **P 18 14 17.4 -0.9**
SLOR San Lorenzo - 23.20 333 P **P 18 14 31.9 +1.0**
SLOR IAmb IAmb 18 14 54.8
comp=Z,20nm,0.8s
FLOC Florencia 24.35 342 *e*P **P 18 14 41.6 +0.7**
CAM01 Campos-RJ 24.78 95 *e*P **P 18 14 48.6 +3.9**
GARC Garzon, Huila 24.88 343 *e*P **P 18 14 46.7 +0.7**
BBAC Balboa, Cauca 25.26 339 *e*P **P 18 14 50.3 +0.9**
POPC Popayan, Colom 25.56 340 *e*P **P 18 14 53.4 +1.3**
PRAC Prado 26.19 345 *e*P **P 18 14 58.0 +0.4**
MCPB Macapa, AP 26.62 39 *e*P **P 18 15 05.1 +3.7**
CHIC Chingaza 26.83 348 *e*P **P 18 15 03.6 -0.1**
YOTC Yotoco, Valle 26.83 342 *e*P **P 18 15 03.6 +0.2**
ROSC El Rosal 27.15 347 LR LR 18 27 20.0
comp=Z,116nm,19.5s,baz=216,slow=39
PLMC San Jos del P 27.69 343 *e*P **P 18 15 10.8 -0.3**
GUY2C Guyana, Caldas 27.76 345 *e*P **P 18 15 12.3 +0.2**
SPBC San Pablo de B 27.89 348 *e*P **P 18 15 12.5 -0.3**
RUSC La Rusia 27.95 350 *e*P **P 18 15 13.7 -0.1**
NORC Norcasia 27.97 346 *e*P **P 18 15 12.8 -0.7**
CBOC Ciudad Bolivar 28.54 344 *e*P **P 18 15 18.7 0.0**
PTBC PUERTO BERRIO, 28.83 347 *e*P **P 18 15 18.8 -2.3**
PAMC Pamplona, Colo 29.31 351 *e*P **P 18 15 24.8 -1.1**
ZARC Zaragoza, Cauc 29.84 347 *e*P **P 18 15 27.5 -2.6**
SOCV Socops 30.04 355 *e*P **P 18 15 30.8 -1.0**
BAUV El Baul 30.60 1 P **P 18 15 34.1 -2.6**
SDV Santo Domingo 30.62 356 P **P 18 15 35.5 -1.6**
comp=Z,5.5nm,0.7s,baz=173,slow=8.7,SNR=6.9
SDV LR LR 18 30 56.5
comp=Z,62nm,19.3s,baz=219,slow=42
comp=Z,5.5nm,0.7s
SDV Santo Domingo 30.62 356 P **P 18 15 34.1 -3.0**
MDP Montagnes des 30.89 32 P **P 18 15 38.4 -0.9**
comp=Z,3.5nm,0.7s,baz=207,slow=9.0,SNR=1.7
MDP LR LR 18 29 58.0
comp=Z,57nm,18.3s,baz=133,slow=40
comp=Z,3.5nm,0.7s
PCRV Puerto La Cruz 32.03 7 P **P 18 15 49.0 -0.3**
comp=Z,13nm,0.9s,baz=175,slow=14,SNR=2.3
comp=Z,13nm,0.9s
BRU2 Volcan 33.54 334 P **P 18 16 04.0 +1.4**
BRU2 IAmb IAmb 18 16 05.9
comp=Z,21nm,0.8s
TOSP Speyside 33.82 14 P **P 18 16 05.0 +0.2**
TOSP IAmb IAmb 18 16 40.6
comp=Z,27nm,1.1s
SRBA San Rafael, Bu 34.21 333 P **P 18 16 09.5 +1.1**
SRBA IAmb IAmb 18 16 11.6
comp=Z,16nm,1.0s
RIMA Rio Macho 34.90 333 P **P 18 16 14.6 +0.1**
RIMA IAmb IAmb 18 16 57.0
comp=Z,27nm,1.5s
JACO JACO, Garabito 35.16 331 P **P 18 16 14.5 -1.9**
RCBR Riachuelo 35.19 68 P **P 18 16 15.6 -1.3**
comp=Z,12nm,1.0s,baz=29,slow=9.7,SNR=4.3
comp=Z,12nm,1.0s
CELP Cerrillos 39.71 3 P **P 18 16 52.9 -1.8**
SJG San Juan 39.77 3 P **P 18 16 52.9 -2.3**
comp=Z,9.1nm,0.4s,baz=288,slow=6.8,SNR=5.1
comp=Z,9.1nm,0.4s
MTO3 Montecristo 41.49 328 P **P 18 17 08.9 -0.8**
MTO3 IAmb IAmb 18 17 11.8
comp=Z,12nm,0.8s

APG El Apazote 42.55 327 P **P 18 17 19.8 +1.4**
comp=Z,11nm,0.7s,baz=130,slow=2.4,SNR=9.5
comp=Z,11nm,0.7s
PMSA Palmer Station 43.01 177 P **P 18 17 22.1 +0.9**
comp=Z,7.0nm,0.9s,baz=354,slow=10,SNR=1.4
comp=Z,7.0nm,0.9s
CMIG Matias Romero 46.61 324 P **P 18 17 50.9 +0.6**
comp=Z,5.5nm,0.8s,baz=92,slow=7.0,SNR=6.5
comp=Z,5.5nm,0.8s
TIGA Tifton 54.95 344 P **P 18 18 52.1 -0.5**
baz=163
ZAIG Zacatecas 55.47 321 P **P 18 18 55.4 -1.5**
ZAIG IAmb IAmb 18 18 59.5
comp=Z,8.2nm,0.9s
NHSC New Hope 55.80 348 P **P 18 18 58.0 -0.6**
baz=167
GOGA Godfrey 56.80 345 P **P 18 19 05.2 -0.6**
baz=163
BIRD Birdtown, Kers 57.34 348 P **P 18 19 09.0 -0.6**
LRAL Lakeview Retre 57.40 341 P **P 18 19 09.6 -0.4**
baz=160
KMSC Kings Mountain 57.99 347 P **P 18 19 12.9 -1.2**
KMSC IAmb IAmb 18 19 15.3
comp=Z,13nm,0.8s
KMSC Kings Mountain 57.99 347 P **P 18 19 13.8 -0.3**
baz=166
833A Chaparral WMA, 58.18 328 P **P 18 19 13.9 -1.6**
833A Chaparral WMA, 58.18 328 P **P 18 19 15.9 +0.3**
baz=146
X51A Calhoun 58.25 344 P **P 18 19 14.7 -1.2**
V55A Taylorsville 58.66 348 P **P 18 19 18.5 -0.3**
X48A Hartselle 58.74 342 P **P 18 19 18.3 -1.0**
V53A Saluda 58.81 346 P **P 18 19 18.8 -1.2**
V53A IAmb IAmb 18 19 20.6
comp=Z,8.2nm,0.8s
W50A Signal Mountai 58.97 344 P **P 18 19 20.1 -0.8**
U56A King 58.98 349 P **P 18 19 20.6 -0.4**
CPCT Cooper Cave 59.01 345 P **P 18 19 20.5 -0.6**
CPCT IAmb IAmb 18 19 21.7
comp=Z,12nm,1.0s
TKL Tuckaleechee C 59.02 345 P **P 18 19 20.1 -1.2**
SWET Sewanee 59.15 343 P **P 18 19 20.9 -1.3**
T57A Hurt 59.42 350 IAmb IAmb 18 19 24.6
comp=Z,11nm,0.9s
OXF Oxford 59.51 340 P **P 18 19 23.7 -0.9**
baz=157
PLAL Pickwick Lake 59.53 341 IAmb IAmb 18 19 24.6
comp=Z,12nm,1.1s
VNA3 Neumayer Olymp 59.59 161 P **P 18 19 25.8 +1.0**
TZTN Tazewell 59.82 346 P **P 18 19 25.4 -1.3**
baz=164
BLA Blacksburg 59.83 349 P **P 18 19 27.3 +0.4**
baz=167
V48A Smith Brothers 59.88 343 P **P 18 19 25.8 -1.4**
VNA2 Neumayer--Watz 60.16 161 P **P 18 19 29.1 +0.4**
JCT Junction City 60.16 329 P **P 18 19 28.2 -1.1**
JCT Junction City 60.16 329 P **P 18 19 29.0 -0.3**
baz=146
CBN Corbin Frederi 60.33 352 P **P 18 19 30.0 -0.1**
baz=170
U49A Red Boiling Sp 60.33 344 IAmb IAmb 18 19 29.9
comp=Z,8.0nm,0.7s
WHTX Lake Whitney, 60.34 332 P **P 18 19 30.4 0.0**
baz=149
WVT Waverly 60.53 342 P **P 18 19 29.9 -1.7**
WVT Waverly 60.53 342 P **P 18 19 30.6 -0.9**
baz=159
T50A Nancy 60.58 345 IAmb IAmb 18 19 32.0
comp=Z,11nm,0.8s
MIAR Mount Ida 60.99 336 IAmb IAmb 18 19 35.4
comp=Z,16nm,1.1s
MIAR Mount Ida 60.99 336 P **P 18 19 34.5 -0.2**
baz=153
TXAR Lajitas Array 61.20 325 P **P 18 19 36.8 +0.4**
comp=Z,0.8nm,0.6s,baz=153,slow=8.1,SNR=9.9
comp=Z,0.8nm,0.6s
LCAR Lake Charles 61.51 339 P **P 18 19 36.7 -1.4**
LCAR IAmb IAmb 18 19 38.3
comp=Z,8.7nm,0.9s
Q54A Coxs Mills 61.62 349 IAmb IAmb 18 19 39.8
comp=Z,13nm,0.8s
P57A Homestead Farm 61.67 352 IAmb IAmb 18 19 40.4
comp=Z,9.9nm,0.8s
SNAA Sanae 61.79 161 P **P 18 19 40.7 +0.9**
SNAA Sanae 61.79 161 P **P 18 19 39.0 -0.8**
SNAA IAmb IAmb 18 20 11.9
comp=Z,15nm,1.4s
ABTX Abilene, Hawle 61.87 330 P **P 18 19 40.4 -0.3**
baz=147
WCI Wyandotte Cave 62.08 344 P **P 18 19 40.6 -1.4**
WCI IAmb IAmb 18 19 41.8
comp=Z,19nm,1.1s
WCI Wyandotte Cave 62.08 344 P **P 18 19 41.8 -0.2**
baz=161
MCWV Mont Chateau 62.12 350 P **P 18 19 41.7 -0.5**
MCWV Mont Chateau 62.12 350 P **P 18 19 42.4 +0.2**
baz=168
P53A Whipple 62.22 349 P **P 18 19 42.2 -0.7**
P52A Corning 62.50 348 P **P 18 19 44.0 -0.7**
baz=166
HHAR Hobbs 62.67 337 IAmb IAmb 18 19 46.6
comp=Z,11nm,1.0s
SSPA Standing Stone 62.79 352 P **P 18 19 46.8 +0.1**
baz=170
O53A New Philadelph 62.92 349 P **P 18 19 47.3 -0.2**
baz=167
P49A Miami Univ. Ec 62.94 346 P **P 18 19 47.0 -0.7**
baz=163
ACSO Alum Creek Sta 63.24 348 P **P 18 19 49.3 -0.4**
baz=165
WMOK Wichita Mounta 63.26 332 P **P 18 19 49.5 -0.5**
baz=148
CCM Cathedral Cave 63.35 340 P **P 18 19 49.2 -1.2**
CCM IAmb IAmb 18 19 50.7
comp=Z,17nm,1.0s
CCM Cathedral Cave 63.35 340 P **P 18 19 49.7 -0.7**
baz=156
TROLL Troll, Antarti 63.50 161 P **P 18 19 52.4 +1.2**
S39A Bolivar 63.71 338 IAmb IAmb 18 19 53.3
comp=Z,13nm,0.9s
O48B Farmland 63.73 346 P **P 18 19 52.3 -0.6**
baz=163
R40A Maddies Statio 63.89 339 IAmb IAmb 18 19 54.2
comp=Z,12nm,1.1s
M53A WI Miller and 63.99 350 P **P 18 19 54.3 -0.2**
baz=167
BINY Binghamton 64.11 354 P **P 18 19 56.1 +0.7**
baz=172
MSTX Muleshoe 64.45 329 P **P 18 19 56.7 -1.2**
MSTX IAmb IAmb 18 19 58.7
comp=Z,14nm,0.9s
MSTX Muleshoe 64.45 329 P **P 18 19 57.5 -0.4**
baz=145
ERPA Erie 64.54 350 P **P 18 19 58.2 +0.1**
baz=168
P40A Paris 64.95 340 IAmb IAmb 18 20 01.1
comp=Z,12nm,0.9s
HSIG 65.13 319 IAmb IAmb 18 20 04.7
comp=Z,17nm,1.3s
121A Cookes Peak, D 65.91 324 IAmb IAmb 18 20 10.0
comp=Z,15nm,1.1s
121A Cookes Peak, D 65.91 324 P **P 18 20 08.8 +1.4**
baz=140
LONY Lake Ozonia 66.38 355 P **P 18 20 10.4 +0.4**
baz=174
BNM Barren Site 66.53 326 P **P 18 20 11.0 -0.4**
LENM Lemitar 66.73 326 P **P 18 20 12.8 +0.2**
PKME Peaks-Kenny Pk 66.79 359 P **P 18 20 13.4 +0.9**
baz=179
ANMO Albuquerque 67.06 327 P **P 18 20 14.7 0.0**
ANMO Albuquerque 67.06 327 P **P 18 20 15.8 +1.0**
baz=142
CBKS Cedar Bluff 67.12 334 P **P 18 20 14.9 0.0**
baz=149
TUC Tucson 67.42 322 P **P 18 20 18.3 +1.3**
baz=138
JFWS Jewell Farm 67.52 343 P **P 18 20 17.1 -0.1**
baz=158
LIC Lamto 67.99 73⇓ *e*P **P 18 20 20.4 -0.4**
comp=Z,34nm,0.6s
TIC Toumodi 68.19 73⇑ *e*P **P 18 20 22.1 0.0**
comp=Z,6.6nm,0.6s
KIC Kosan Boka 68.31 73⇑ *e*P **P 18 20 22.1 -0.7**
comp=Z,29nm,0.4s
QSPA South Pole Qui 68.35 180 P **P 18 20 22.9 +0.5**
QSPA IAmb IAmb 18 20 24.5
comp=Z,7.6nm,0.9s

214A Organ Pipe Nat 68.35 320 IAmb IAmb 18 20 25.4
comp=Z,18nm,0.9s
214A Organ Pipe Nat 68.35 320 P **P 18 20 24.3 +1.6**
baz=136,SNR=9.1
BGNE Belgrade 68.73 336 P **P 18 20 25.4 +0.5**
baz=150
SDCO Great Sand Dun 68.80 329 P **P 18 20 26.7 +1.0**
baz=143,SNR=11
W18A Petrified Fore 68.92 324 P **P 18 20 27.4 +1.0**
baz=139
S22A 4UR Ranch, Cre 69.44 328 P **P 18 20 30.3 +0.6**
baz=142
Q24A Divide 69.61 330 IAmb IAmb 18 20 32.6
comp=Z,16nm,1.1s
Q24A Divide 69.61 330 P **P 18 20 31.6 +0.9**
baz=144
MVCO Mesa Verde 69.86 327 IAmb IAmb 18 20 34.3
comp=Z,29nm,1.4s
MVCO Mesa Verde 69.86 327 P **P 18 20 33.4 +1.2**
baz=141
WUAZ Wupatki 70.11 324 P **P 18 20 34.5 +0.8**
WUAZ IAmb IAmb 18 20 36.4
comp=Z,22nm,0.9s
WUAZ Wupatki 70.11 324 P **P 18 20 35.2 +1.6**
baz=138
GLA Glamis 70.33 320 IAmb IAmb 18 20 37.3
comp=Z,12nm,0.8s
GLA Glamis 70.33 320 P **P 18 20 36.4 +1.5**
baz=135,SNR=5.7
SPMN Marine on St. 70.37 342 P **P 18 20 35.2 +0.4**
baz=156
ISCO Idaho Springs 70.50 330 P **P 18 20 36.8 +0.7**
baz=144
BLYC Blythe 70.64 320 IAmb IAmb 18 20 39.3
comp=Z,16nm,0.9s
SMCO Snowmass 70.64 329 IAmb IAmb 18 20 44.2
comp=Z,13nm,0.8s
PV15 Paradox Valley 70.72 328 IAmb IAmb 18 20 40.0
comp=Z,17nm,1.0s
PDMCI Parker Dam,Lak 70.80 321 P **P 18 20 39.3 +1.6**
baz=135
IKP In-Ko-Pah, Jac 70.83 319 P **P 18 20 39.8 +1.8**
baz=134
SWSC Sam W. Stewart 70.84 319 P **P 18 20 39.5 +1.6**
baz=134
CBX Cerro Bola 70.94 318 P **P 18 20 39.5 +0.8**
BC3 Big Chuckawall 71.12 320 P **P 18 20 41.2 +1.4**
baz=134,SNR=11
MONP2 Monument Peak 71.19 319 P **P 18 20 41.7 +1.4**
baz=133
W13A Hualapai Mount 71.22 322 IAmb IAmb 18 20 43.1
comp=Z,7.0nm,0.7s
IRM Iron Mountain 71.29 320 P **P 18 20 42.2 +1.5**
baz=135,SNR=9.4
N23A Red Feather La 71.53 331 P **P 18 20 42.7 +0.5**
baz=144
BELC Belle Mtn. Jos 71.69 320 P **P 18 20 44.7 +1.5**
baz=134
TPFO Pinon Flats 71.69 319 P **P 18 20 44.6 +1.3**
baz=134
PFO Pinyon Flats O 71.70 319 P **P 18 20 44.0 +0.7**
PFO Pinyon Flats O 71.70 319 P **P 18 20 44.6 +1.3**
baz=134
O20A White River Ci 72.00 329 IAmb IAmb 18 20 47.2
comp=Z,11nm,0.8s
O20A White River Ci 72.00 329 P **P 18 20 45.6 +0.6**
baz=141
GMRC Granite Mounta 72.03 321 P **P 18 20 47.0 +1.8**
baz=134,SNR=16
MURC Murrieta 72.14 319 P **P 18 20 47.3 +1.5**
baz=133
V12A Nelson 72.22 322 P **P 18 20 45.8 -0.5**
V12A IAmb IAmb 18 20 48.7
comp=Z,11nm,0.9s
LCMT Little Creek M 72.23 324 IAmb IAmb 18 20 49.0
comp=Z,11nm,1.0s
ELS Elsinore Mount 72.32 319 P **P 18 20 47.7 +0.8**
ELS IAmb IAmb 18 20 49.4
comp=Z,15nm,1.1s
HEC Hector,Ludlow 72.46 320 P **P 18 20 49.4 +1.7**
baz=134,SNR=5.7
Q16A Castle Valley 72.53 326 IAmb IAmb 18 20 51.4
comp=Z,14nm,1.2s
P18A Preston Nutter 72.59 327 IAmb IAmb 18 20 51.0
comp=Z,14nm,0.7s
KOWA Kowa 72.69 66 P **P 18 20 49.0 -0.4**
KOWA IAmb IAmb 18 20 50.0
comp=Z,12nm,0.7s
P17A Butcher Ranch, 72.72 327 IAmb IAmb 18 20 51.5
comp=Z,18nm,1.0s
MVU Marysvale 72.76 325 P **P 18 20 49.6 0.0**
TMUT Trail Mountain 72.83 326 P **P 18 20 50.4 +0.3**
BFSC Mount Baldy Ra 72.86 319 P **P 18 20 51.1 +0.9**
baz=133
GSC Goldstone, Bar 73.07 320 P **P 18 20 52.8 +1.5**
baz=134,SNR=5.5
RSSD Black Hills 73.33 334 P **P 18 20 53.4 +0.6**
baz=146
EDW2 Edwards Air Fo 73.50 319 P **P 18 20 54.8 +1.0**
baz=133
PRN Pahroc Range 73.52 323 P **P 18 20 54.3 +0.3**
PRN IAmb IAmb 18 20 57.0
comp=Z,11nm,1.0s
GWY Greenwater Val 73.59 321 IAmb IAmb 18 20 56.8
comp=Z,12nm,0.9s
PSUT Pine Spring 73.67 324 IAmb IAmb 18 20 57.4
comp=Z,9.8nm,0.9s
TPNV Topopah Spring 73.88 322 P **P 18 20 57.9 +1.7**
baz=134,SNR=5.3
JLU Jordanelle 73.93 327 P **P 18 20 56.1 -0.4**
JLU IAmb IAmb 18 20 58.2
comp=Z,9.9nm,0.8s
MPMC Manual Prospec 73.99 320 P **P 18 20 57.9 +1.1**
baz=133
ISA Isabella, Lake 74.31 320 P **P 18 20 59.0 +0.5**
ISA IAmb IAmb 18 21 01.2
comp=Z,13nm,0.8s
ISA Isabella, Lake 74.31 320 P **P 18 21 00.1 +1.6**
baz=132
DUG Dugway, Tooele 74.33 326 P **P 18 21 00.0 +1.4**
baz=138,SNR=7.0
R11A Troy Canyon, C 74.48 323 P **P 18 21 01.3 +1.6**
baz=135,SNR=7.7
GRAC Grapevine Rang 74.56 321 P **P 18 21 01.6 +1.7**
baz=134
CWC Cottonwood Cre 74.60 320 P **P 18 21 01.9 +1.5**
baz=133
PKM Mcpherson Peak 74.62 318 P **P 18 21 02.1 +1.7**
baz=131
BW06 Boulder Array 74.66 330 P **P 18 21 01.4 +0.8**
baz=141
PD31 Pinedale Array 74.66 330 P **P 18 20 59.5 -1.1**
PDAR Pinedale Array 74.66 330 P **P 18 21 01.1 +0.5**
comp=Z,1.7nm,0.6s,baz=131,slow=6.9,SNR=14
comp=Z,1.7nm,0.6s
HWUT Hardware Ranch 74.74 328 IAmb IAmb 18 21 04.0
comp=Z,7.5nm,0.8s
SMMC Simmler 75.01 318 P **P 18 21 04.4 +1.8**
baz=131
TPH Tonopah 75.22 322 P **P 18 21 04.6 +0.7**
AHID Auburn Hatcher 75.39 329 IAmb IAmb 18 21 06.6
comp=Z,17nm,0.9s
SBA Scott Base 75.58 190 P **P 18 21 06.9 +1.7**
ULM Lac du Bonnet 75.80 342 P **P 18 21 05.8 -0.8**
comp=Z,3.4nm,0.6s,baz=164,slow=9.2,SNR=2.4
comp=Z,3.4nm,0.6s
NVAR Mina Array Bea 76.08 322 P **P 18 21 10.4 +1.6**
comp=Z,5.4nm,1.0s,baz=152,slow=7.3,SNR=14
comp=Z,5.4nm,1.0s
NVAR Mina Array Bea 76.08 322 P **P 18 21 09.4 +0.6**
LAO LASA Array 76.31 334 P **P 18 21 10.9 +1.1**
baz=144
RLMT Red Lodge 76.36 332 P **P 18 21 11.5 +1.2**
baz=141
KVN Kaiserville 76.39 322 IAmb IAmb 18 21 12.5
comp=Z,12nm,1.0s
DGMT Dagmar 76.99 336 P **P 18 21 14.5 +1.1**
baz=146
TOA0 Torodi Ar. Sit 76.99 70 P **P 18 21 12.4 -1.7**
TOA0 IAmb IAmb 18 21 16.0
comp=Z,18nm,0.8s
TORD Torodi Ar. Bea 76.99 70 P **P 18 21 13.8 -0.4**
comp=Z,15nm,0.7s,baz=260,slow=6.0,SNR=85
comp=Z,15nm,0.7s
HLID Hailey 77.61 328 IAmb IAmb 18 21 19.9
comp=Z,13nm,0.8s
HLID Hailey 77.61 328 P **P 18 21 18.9 +1.7**
baz=137

BOZ	**Bozeman (W)**	77.79	331	P	P	18 21 19.4	+1.2
	baz=140						
ORV	**Oroville**	78.68	321	IAmb	IAmb	18 21 25.5	
	comp=Z,17nm,1.1s						
EGMT	**Eagleton**	78.83	333	P	P	18 21 24.6	+0.8
	baz=141						
TSUM	**Tsumeb**	79.45	106	P	P	18 21 27.3	-0.6
TSUM				IAmb	IAmb	18 21 29.8	
	comp=Z,8.6nm,0.8s						
PLID	**Pearl Lake**	79.49	328	IAmb	IAmb	18 21 29.6	
	comp=Z,14nm,0.9s						
MOD	**Modoc Plateau**	79.55	323	IAmb	IAmb	18 21 30.6	
	comp=Z,12nm,1.0s						
MSO	**Missoula**	79.77	330	P	P	18 21 30.4	+1.4
	baz=138						
BMO	**Blue Mountains**	79.98	327	IAmb	IAmb	18 21 32.2	
	comp=Z,11nm,0.9s						
K05A	**Summer Lake**	80.42	324	IAmb	IAmb	18 21 35.3	
	comp=Z,25nm,1.0s						
BOSA	**Boshof**	82.83	118	P	P	18 21 46.0	+0.3
	comp=Z,3.1nm,0.6s,baz=249,slow=3.3,SNR=9.5						
	comp=Z,3.1nm,0.6s						
MAW	**Mawson**	83.86	163	P	P	18 21 51.1	+1.1
	comp=Z,2.1nm,0.6s,baz=247,slow=3.8,SNR=6.8						
	comp=Z,2.1nm,0.6s						
ESDC	**Sonseca Array**	85.72	44	P	P	18 22 00.7	+0.9
	comp=Z,3.1nm,1.1s,baz=229,slow=6.3,SNR=8.8						
	comp=Z,3.1nm,1.1s						
ESDC	**Sonseca Array**	85.72	44	P	P	18 21 59.9	+0.1
YKA	**Yellowknife Ar**	91.68	340	P	P	18 22 27.5	+0.1
	comp=Z,8.3nm,0.8s,baz=140,slow=4.1,SNR=9.2						
	comp=Z,8.3nm,0.8s						
CASY	**Casey**	92.15	180	P	P	18 22 30.0	+0.2
CASY				IAmb	IAmb	18 22 32.2	
	comp=Z,6.5nm,0.9s						
S34M	**Telegraph Cree**	94.93	332	P	P	18 22 45.1	+2.6
	baz=124						
ASAR	**Alice Springs**	129.84	207	PKP	PKiKP	18 28 30.1	-0.9
	comp=Z,3.4nm,0.9s,baz=131,slow=2.0,SNR=24						
WRA	**Warramunga Arr**	132.91	210	PKP	PKiKP	18 28 36.3	-1.0
	comp=Z,1.9nm,0.6s,baz=165,slow=1.8,SNR=31						
PETK	**Petropavlovsk-**	133.14	323	PKP	PKiKP	18 28 35.8	-0.8
	comp=Z,3.6nm,0.9s,baz=226,slow=3.8,SNR=3.7						
ZALV	**Zalesovo Beam**	142.04	26	PKnKP	PKPpre	18 28 47.1	
	comp=Z,4.4nm,0.7s,baz=316,slow=4.1,SNR=5.2						
ZALV				PKP	PKPdf	18 28 52.8	+1.0
	comp=Z,5.1nm,0.8s,baz=310,slow=2.4,SNR=17						
KSH	**Kashi**	144.91	52	PKP	PKPdf	18 28 57.5	0.0
KSH				sPKP		18 29 33.8	
MKAR	**Makanchi Array**	145.61	37	PKPbc	PKPab	18 28 59.0	-0.2
	comp=Z,5.8nm,0.9s,baz=310,slow=4.6,SNR=27						
SIJI	**Sorong**	150.39	223	PKP	PKPdf	18 29 07.0	-0.1
	comp=Z,1.9nm,0.5s,baz=333,slow=4.5,SNR=2.3						
SIJI				PKPbc	PKiKP	18 29 13.4	+0.2
	comp=Z,12nm,0.7s,baz=156,slow=2.8,SNR=11						
MJAR	**Matsushiro Arr**	152.68	308	PKPbc	PKiKP	18 29 16.8	-0.5
	comp=Z,4.4nm,1.0s,baz=77,slow=1.4,SNR=8.8						
SONM	**Songino Array**	153.73	8	PKP	PKPdf	18 29 11.3	+0.1
	comp=Z,1.7nm,0.9s,baz=353,slow=1.3,SNR=9.3						
SONM				PKPbc	PKiKP	18 29 19.4	+0.1
	comp=Z,2.0nm,1.0s,baz=321,slow=2.4,SNR=6.5						
SONM				PKPab	PKPab	18 29 32.5	+0.2
	comp=Z,1.0nm,0.8s,baz=309,slow=3.2,SNR=5.1						
KSRS	**Korea Array**	159.02	321	PKP	PKPdf	18 29 18.6	+0.4
	comp=Z,1.6nm,0.9s,baz=106,slow=0.3,SNR=9.1						
KSRS				PKPab	PKPab	18 29 54.9	-0.3
	comp=Z,1.0nm,0.8s,baz=50,slow=6.7,SNR=4.7						
CMAR	**Chiang Mai Arr**	167.61	104	PKP	PKPdf	18 29 27.4	+0.5
	comp=Z,0.6nm,0.9s,baz=286,slow=1.8,SNR=4.9						
PZH	**PanZhiHua**	169.84	61	PKP	PKPdf	18 29 26.1	-2.2

*MDD **14** 18:28:50.3±0.5, 35°.81N×7°.49W, h40km±14km, mb_Lg2.9/19, Error ellipse: s-maj=5.2km s-min=2.5km az=32.0*
*SFS **14** 18:28:50.0, 35°.81N×7°.49W, h40km, ML2.9, GOLFO DE CADIZ*
*INMG **14** 18:28:51.8±1.2, 35°.87N×7°.46W, h31km, ML2.2, Error ellipse: s-maj=4.0km s-min=2.4km az=27.0*

ISC 14 18:28:49.6±1.5, **35°.88N**±0°.06×**7°.42W**±0°.04, **h35**km, **n51**, σ**1**$**36/97**, **1C-5D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVAQ	**Vaqueiros**	1.54	351	⇓*iP*		**Pn**	18 29 15.5	+1.0
PVAQ				*e*S		**Sn**	18 29 33.2	-0.1
PVAQ				A		A	18 29 35.6	
	25nm,0.1s						
ESPR	**Espera**	1.60	52	Pn		**Pn**	18 29 16.5	+1.1
ESPR				Sn		**Sn**	18 29 36.0	+1.1
ESPR				*i* Vmb_Lg			18 29 37.6	
EGRO	**El Granado**	1.65	358	Pn		**Pn**	18 29 17.4	+1.3
EGRO				Sn		**Sn**	18 29 36.7	+0.6
EGRO				*i* Vmb_Lg			18 29 38.0	
CEU	**Ceuta**	1.67	89	P		**Pn**	18 29 18.2	+1.9
PFVI	**Vila Bisbo**	1.68	318	⇑*e*Pn		**Pn**	18 29 16.8	+0.2
PFVI				*e*Sn		**Sn**	18 29 36.5	-0.4
PFVI				A		A	18 29 42.1	
	9.1nm,0.2s						
MORF	**Marmelete**	1.73	325	*e*P		**Pn**	18 29 17.4	+0.2
MORF				*e*S		**Sn**	18 29 37.1	-1.0
MORF				IAML			18 29 38.0	
	comp=N,11nm,0.2s						
MORF	**Marmelete**	1.73	325	⇓*e*Pn		**Pn**	18 29 17.5	+0.2
MORF				*e*Sn		**Sn**	18 29 38.1	0.0
MORF				A		A	18 29 43.9	
	comp=N,18nm,0.1s						
PCVE	**Castro Verde**	1.81	344	*e*Pn		**Pn**	18 29 19.4	+1.0
PCVE				*e*Sn		**Sn**	18 29 40.2	+0.1
PCVE				A		A	18 29 42.9	
	comp=N,7.3nm,0.5s						
PTEO	**Sao Teotonio**	1.96	328	*e*Pn		**Pn**	18 29 21.0	+0.6
PTEO				*e*Sn		**Sn**	18 29 43.5	-0.2
EMIN	**Mina Concepcio**	1.98	18	Pn		**Pn**	18 29 21.6	+1.0
EMIN				Sn		**Sn**	18 29 44.1	0.0
EMIN				*i* Vmb_Lg			18 29 49.3	
MESJ	**Messejana**	2.05	342	*e*P		**Pn**	18 29 22.5	+0.8
MESJ	**Messejana**	2.05	342	*e*Pn		**Pn**	18 29 22.6	+0.9
MESJ				*e*Sn		**Sn**	18 29 46.4	+0.3
MESJ				A		A	18 29 48.2	
	comp=N,7.2nm,0.2s						
PBEJ	**Beja**	2.17	351	⇓*i*Pn		**Pn**	18 29 24.4	+1.1
PBEJ				*e*Sn		**Sn**	18 29 48.7	-0.2
PBEJ				A		A	18 29 51.0	
	comp=N,6.2nm,0.1s						
EMIJ	**Mijas**	2.25	72	Pn		**Pn**	18 29 25.4	+1.0
EMIJ				Sn		**Sn**	18 29 51.0	+0.1
EMIJ				*i* Vmb_Lg			18 29 55.3	
PBAR	**Barrancos**	2.31	8	*e*Pn		**Pn**	18 29 26.4	+1.2
PBAR				*e*Sn		**Sn**	18 29 52.6	+0.3
PBAR				A		A	18 29 54.6	
	comp=N,7.4nm,0.2s						
PNCL	**Nicolau / Gran**	2.39	339	⇓*e*Pn		**Pn**	18 29 26.9	+0.6
PNCL				*e*Sn		**Sn**	18 29 53.4	-1.0
PNCL				A		A	18 30 06.3	
	comp=N,5.2nm,0.2s						
EMAL	**Malaga-Limoner**	2.57	69	P		**Pn**	18 29 29.9	+1.1
EMAL				S		**Sn**	18 29 59.5	+0.7
EVO	**Evora**	2.69	350	P		**Pn**	18 29 31.4	+1.0
EVO				S		**Sn**	18 30 01.4	-0.2
EVO	**Evora**	2.69	350	*e*Pn		**Pn**	18 29 31.4	+1.0
EVO				*e*Sn		**Sn**	18 30 01.4	-0.2
ECAB	**El Cabril**	2.71	36	Pn		**Pn**	18 29 32.6	+1.8
ECAB				Sn		**Sn**	18 30 01.5	-0.9
EBAD	**Badajoz**	2.89	6	Pn		**Pn**	18 29 33.9	+0.8
EBAD				Sn		**Sn**	18 30 05.8	-0.7
EBAD				*i* Vmb_Lg			18 30 10.6	
EGOR	**Sierra Gorda,**	2.94	64	Pn		**Pn**	18 29 35.5	+1.6
EGOR				Sn		**Sn**	18 30 07.7	-0.4
EGOR				*i* Vmb_Lg			18 30 44.3	
PESTR	**Estremoz**	2.98	357	*e*Pn		**Pn**	18 29 35.3	+0.9
PESTR				*e*Sn		**Sn**	18 30 07.6	-1.4
IFR	**Ifrane**	3.02	141	P		**Pn**	18 29 34.8	-0.4
PACT	**Alcochete**	3.09	339	*e*Pn		**Pn**	18 29 37.3	+1.4
PACT				*e*Sn		**Sn**	18 30 11.9	+0.3
ELGU	**Los Guajares,**	3.22	71	Pn		**Pn**	18 29 39.0	+1.3
ELGU				Sn		**Sn**	18 30 15.3	+0.4
ELGU				*i* Vmb_Lg			18 30 48.7	
EADA	**Adamuz**	3.22	44	Pn		**Pn**	18 29 39.5	+1.7
EADA				Sn		**Sn**	18 30 13.7	-1.3
EADA				*i* Vmb_Lg			18 30 16.9	
PMTG	**Montargil**	3.24	349	*e*Pn		**Pn**	18 29 39.0	+1.0
PMTG				*e*Sn		**Sn**	18 30 15.3	-0.1
PMTG				A		A	18 30 16.4	
	comp=N,2.9nm,0.2s						
PMAFR	**Mafra**	3.41	335	*e*Pn		**Pn**	18 29 41.3	+1.0
PMAFR				*e*Sn		**Sn**	18 30 18.5	-0.9
PMAFR				A		A	18 30 23.0	
	comp=N,15nm,0.5s						
EQUE	**Quentar**	3.47	66	Pn		**Pn**	18 29 42.9	+1.7
EQUE				Sn		**Sn**	18 30 21.8	+0.7
EQUE				*i* Vmb_Lg			18 30 33.4	
PMRV	**Marv??o**	3.54	0	*e*Pn		**Pn**	18 29 43.1	+1.0
PMRV				*e*Sn		**Sn**	18 30 22.1	-0.6
PMRV				A		A	18 30 25.7	
	comp=N,3.3nm,0.4s						
PSBE	**So Bento**	3.78	344	⇓*e*Pn		**Pn**	18 29 46.6	+1.1
PSBE				*e*Sn		**Sn**	18 30 29.0	+0.2
EBER	**Berja**	3.79	73	Pn		**Pn**	18 29 46.3	+0.5
EBER				*i* Vmb_Lg			18 30 45.6	
PCBR	**Castelo Branco**	3.95	359	*e*Pn		**Pn**	18 29 49.0	+1.3
PCBR				*e*Sn		**Sn**	18 30 32.4	-0.4
PCBR				A		A	18 30 34.2	
	comp=N,2.4nm,0.3s						
EQES	**Quesada**	3.98	60	Pn		**Pn**	18 29 49.4	+1.1
EQES				Sn		**Sn**	18 30 32.6	-1.1
EQES				*i* Vmb_Lg			18 30 37.5	
PCAS	**Casmilo, Conde**	4.25	349	*e*Pn		**Pn**	18 29 53.0	+1.2
PCAS				*e*Sn		**Sn**	18 30 39.0	-1.2
EPLA	**Plasencia**	4.31	14	Pn		**Pn**	18 29 54.1	+1.5
EPLA				Sn		**Sn**	18 30 40.5	-1.2
EPLA				*i* Vmb_Lg			18 30 42.7	
PAB	**San Pablo**	4.39	33	Pn		**Pn**	18 29 55.2	+1.3
PAB				Sn		**Sn**	18 30 41.2	-2.7
PAB				*i* Vmb_Lg			18 30 44.6	
ESDC	**Sonseca Array**	4.67	35	Pn		**Pn**	18 29 57.5	-0.2
ESDC				Sn		**Sn**	18 30 48.2	-2.6
ESDC				*i* Vmb_Lg			18 30 52.1	
EZAR	**Zarzadilla de**	5.00	65	Pn		**Pn**	18 30 02.8	+0.5
EZAR				Sn		**Sn**	18 30 57.9	-1.1
EZAR				*i* Vmb_Lg			18 31 27.4	
MVO	**Moncorvo**	5.28	3	*e*Pn		**Pn**	18 30 07.4	+1.3
MVO				*e*Sn		**Sn**	18 31 04.3	-1.5
MVO				A		A	18 31 07.6	
	comp=N,3.0nm,0.6s						
GUD	**Guadarrama**	5.40	27	Pn		**Pn**	18 30 08.7	+0.8
GUD				Sn		**Sn**	18 31 05.9	-3.0
GUD				*i* Vmb_Lg			18 31 13.4	
ETOB	**Tobarra**	5.44	58	Pn		**Pn**	18 30 09.1	+0.9
ETOB				Sn		**Sn**	18 31 06.3	-3.2
ETOB				*i* Vmb_Lg			18 31 08.8	
POLO	**Lamas de Olo**	5.49	357	*e*Pn		**Pn**	18 30 09.8	+0.8
POLO				*e*Sn		**Sn**	18 31 10.3	-0.6
POLO				A		A	18 31 12.6	
	comp=N,1.6nm,0.7s						
UCM	**Universidad Co**	5.51	35	P		**Pn**	18 30 11.3	+2.1
UCM				S		**Sn**	18 31 09.3	-2.1
PBRG	**Braganca**	5.94	5	*e*Pn		**Pn**	18 30 16.3	+1.2
PBRG				*e*Sn		**Sn**	18 31 20.1	-1.8
ELOB	**Lobios**	6.00	355	Pn		**Pn**	18 30 16.5	+0.6
ELOB				Sn		**Sn**	18 31 20.5	-2.9
ECAL	**Calabor**	6.07	5	Pn		**Pn**	18 30 19.2	+2.3
ECAL				Sn		**Sn**	18 31 22.1	-3.1
PGAV	**Gavieira, Arco**	6.11	354	*e*Pn		**Pn**	18 30 18.6	+1.1
PGAV				*e*Sn		**Sn**	18 31 26.7	+0.5
ETOR	**Torete**	6.49	39	Pn		**Pn**	18 30 24.5	+1.9
ETOR				Sn		**Sn**	18 31 31.7	-3.7
EALK	**Alkurruntz**	8.63	30	Sn		**Sn**	18 32 24.6	-3.6

*BJI **14** 18:28:59.2±0.0, 8°.90N×125°.82E, h33km, mb5.0/72, mB5.0/50, Ms4.6/74, Ms7 4.5/71*
*MOS **14** 18:29:02.8±0.9, 9°.14N×125°.58E, h45km, mb5.6/63, MS4.6/10, Error ellipse: s-maj=7.7km s-min=3.8km az=115.7*
*MAN **14** 18:29:03.9, 9°.10N×125°.47E, h34km, mb5.8, ML4.9, MS5.3*
MAN INTENSITY V - NASIPIT & CARMEN AGUSAN DEL NORTE; BUTUAN CITY; INTENSITY IV -MAINIT & PLACER SURIGAO DEL NORTE; CABADBARAN CITY LAS NIEVES REMEDIOS ROMUALDEZ & MAGALLANES AGUSAN DEL NORTE; INTENSITY III - SURIGAO CITY; GINGOOG CITY MISAMIS ORIENTAL; MAMBAJAO CAMIGUIN; SISON BACUAG & TAGANAAN SURIGAO DEL NORTE; INTENSITY II - CAGAYAN DE ORO CITY; CEBU CITY.
*NEIC **14** 18:29:04.2±1.8, 9°.13N±0°.06×125°.60E±0°.07, h40km±5km, mb5.4/236, Error ellipse: s-maj=10.5km s-min=8.6km az=53.0*
*DJA **14** 18:29:04.8±0.5, 9°N±3°×12°6E±°, h45km±4km, M5.0/72, mb5.1/72, mB5.4/47, MLv5.6/5, Mw(mB)4.9/47, MwWwp4.8/8, Mwp5.1/8*
*GCMT **14** 18:29:05.2±0.2, 9°.00N±0°.01×125°.42E±0°.01, h34km, MW5.1/111, Moment Tensor Solution. s71,c98; s111,c186; Duration: 0 Moment tensor: Scale 1016Nm; Mrr4.46±.18; Mθθ-5.32±.12; Mφφ0.86±.13; Mrθ3.73±.14; Mθφ-2.04±.08; Mφr0.09±.17; Best double couple: M0 6.42900×1016 NP1:φ85.00000°, δ63.00000°, λ103.00000°. NP2:φ238.00000°, δ29.00000°, λ67.00000°. Principal axes: T 5.7900, Plg69.0000°, Azm20.0000°; N 1.2790, Plg11.0000°, Azm259.0000°; P -7.0670, Plg17.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **14** 18:29:07.0±1.4, 9°.15N×125°.49E, h63km±14km, mb4.7/35, mbtmp5.0/38, MS4.2/58 Error ellipse: s-maj=12.9km s-min=8.3km az=89.0*

ISC 14 18:29:04.1±0.3, **9°.06N**±0°.02×**125°.52E**±0°.03, **h41**km±2km, **h41**km:**pP-P, n942**, σ1$**50**/929, **mb5.3**/231, **MS4.4**/93, **74C-42D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	0.14	133	⇓*e*P		**Pn**	18 29 11.9	+0.9
BUTP				*e*S		**Sn**	18 29 18.7	+2.8
SCPH	**Surigao**	0.71	358	⇓*i*P		**Pn**	18 29 18.2	+0.4
SCPH				*i* S		**Sn**	18 29 28.2	+0.6
GLSP	**General Luna,**	0.93	40	⇓*e*P		**Pn**	18 29 21.9	+1.1
GLSP				*e*S		**Sn**	18 29 33.2	+0.2
CGP	**Cagayan de Oro**	1.01	233	⇑*i*P		**Pn**	18 29 20.9	-1.0
CGP				*i* S		**Sn**	18 29 33.0	-2.0
BIPH	**Bislig**	1.21	136	⇓*i*P		**Pn**	18 29 26.3	+1.7
BIPH				*i* S		**Sn**	18 29 43.2	+3.5
MSLP	**Maasin**	1.25	329	⇓*e*P		**Pn**	18 29 24.8	-0.3
MSLP				*i* S		**Sn**	18 29 40.4	-0.3
BUKP	**Musuan**	1.26	201	⇑*e*P		**Pn**	18 29 25.2	-0.1
BUKP				*i* S		**Sn**	18 29 42.8	+1.7
GHBP	**Garcia Hernand**	1.31	296	⇓*e*P		**Pn**	18 29 25.2	-0.8
GHBP				*i* S		**Sn**	18 29 41.5	-0.7
TABP	**Talibon, Bohol**	1.55	311	⇓*e*P		**Pn**	18 29 28.5	-0.8
TABP				*e*S		**Sn**	18 29 46.1	-2.2
TBP	**Tagbilaran**	1.75	291	*e*P		**Pn**	18 29 31.5	-0.5
TBP				*i* S		**Sn**	18 29 52.7	-0.4
LSIP	**Lazi, Siquijor**	1.87	272	⇑*e*P		**Pn**	18 29 32.7	-0.9
LSIP				*i* S		**Sn**	18 29 55.2	-0.7
LLP	**Lapu-Lapu**	1.97	309	⇑*i*P		**Pn**	18 29 35.0	-0.1
LLP				*i* S		**Sn**	18 29 58.2	-0.4
DAV	**Davao City (W)**	1.98	178	P		**Pn**	18 29 38.3	+3.1
	5μm,0.5s,baz=285,slow=3.3,SNR=89						
DAV				S		**Sn**	18 30 05.8	+7.0
	6μm,0.5s,baz=104,slow=23,SNR=6.6						
DAV				LR	LR	18 30 31.1	
	comp=Z,15μm,19.5s,baz=350,slow=41						
DAV	**Davao City (W)**	1.98	178	Pn		**Pn**	18 29 36.9	+1.7
DAV	**Davao City (W)**	1.98	178	P		**Pn**	18 29 38.9	+3.7
DAV	**Davao City (W)**	1.98	178	P		**Pn**	18 29 36.6	+1.4
DAV	**Davao City (W)**	1.98	178	P		**Pn**	18 29 39.3	+4.1
KCP	**Kidapawan**	2.08	192	⇓*i*P		**Pn**	18 29 37.3	+0.6
KCP				*i* S		**Sn**	18 30 03.0	+1.6
CTBH	**Cotabato--PC H**	2.22	215	⇑*e*P		**Pn**	18 29 39.0	+0.5
MATI	**Mati**	2.23	161	⇓*e*P		**Pn**	18 29 39.1	+0.6
MATI				*e*S		**Sn**	18 30 06.8	+1.9
SNPH	**Sibulan**	2.27	277	⇑*i*P		**Pn**	18 29 38.7	-0.5
SNPH				*i* S		**Sn**	18 30 06.1	+0.1
PAGZ	**Pagadian**	2.44	240	⇑*e*P		**Pn**	18 29 42.1	+0.7
PAGZ				*i* S		**Sn**	18 30 12.0	+2.0
BESP	**Borongan**	2.52	358	⇓*e*P		**Pn**	18 29 44.5	+1.9
BESP				*e*S		**Sn**	18 30 15.8	+3.6
SKMP	**Bagumbayan, Su**	2.71	201	⇓*e*P		**Pn**	18 29 44.3	-0.9
SKMP				*e*S		**Sn**	18 30 19.9	+3.2
CNOP	**Candoni, Negro**	2.94	285	⇓*e*P		**Pn**	18 29 48.8	+0.4
CNOP				*i* S		**Sn**	18 30 21.2	-1.3
DDMP	**Don Marcelino,**	2.95	176	⇓*e*P		**Pn**	18 29 47.4	-1.1
DDMP				*e*S		**Sn**	18 30 24.4	+1.8
GSPH	**General Santos**	3.01	191	⇑*e*P		**Pn**	18 29 49.5	+0.1
GUIM	**Jordan**	3.28	299	⇓*e*P		**Pn**	18 29 52.4	-0.6
GUIM				*e*S		**Sn**	18 30 28.1	-2.7
CNP	**Catarman**	3.53	346	⇓*e*P		**Pn**	18 30 00.3	+3.9
CNP				*e*S		**Sn**	18 30 39.1	+2.2
RCP	**Roxas**	3.69	313	⇓*e*P		**Pn**	18 29 59.9	+1.3
RCP				*e*S		**Sn**	18 30 40.2	-0.7
JAP	**San Jose, Anti**	3.90	296	⇑*e*P		**Pn**	18 30 03.3	+1.8
ZCP	**Zamboanga City**	4.01	238	⇓*e*P		**Pn**	18 30 04.5	+1.3
ZCP				*e*S		**Sn**	18 30 45.4	-3.6
SGSI	**Sangihe**	5.34	180	P		**Pn**	18 30 22.5	+1.1
	5.4nm8μm431nm,0.8s						
BUSP	**Coron**	5.99	300	⇓*e*P		**Pn**	18 30 29.9	-0.4
BUSP				*e*S		Sn	18 31 27.3	-10
LQP	**Lukban**	6.35	323	⇓*e*P		**Pn**	18 30 38.0	+2.5
PPR	**Puerto Princes**	6.74	277	⇑*e*P		**Pn**	18 30 40.6	0.0
LUBP	**Lubang**	6.95	312	⇑*i*P		**Pn**	18 30 46.3	+2.9
GAMI	**Galela, Maluku**	7.53	162	P		**Pn**	18 30 53.4	+2.0
	1.0nm4μm3μm212nm,0.6s						
PCPH	**Palayan**	7.77	327	⇓*e*P		**Pn**	18 30 57.5	+2.8
MYLDM	**Lahad Datu**	7.96	241			**Pn**	18 30 58.7	+1.4
MYLDM	**Lahad Datu**	7.96	241	P		**Pn**	18 30 59.8	+2.4
	3μm2μm128nm,0.8s						
TNTI	**Ternate**	8.44	167	Pn		**Pn**	18 31 04.5	+0.6
TNTI	**Ternate**	8.44	167	P		**Pn**	18 31 05.7	+1.8
	2μm2μm123nm,0.7s						
TNTI	**Ternate**	8.44	167	P		**Pn**	18 31 07.0	+3.1
	204nm,1.5s						
SMPP	**San Manuel, Pa**	8.48	327	⇓*e*P		**Pn**	18 31 06.0	+1.5
SMPP				*e*S		**Sn**	18 32 47.0	+8.1
KMSI	**Cibinong**	8.57	190	P		**Pn**	18 31 07.1	+1.4
	200nm,0.8s						
GTOI	**Gorontalo**	8.74	197	P		**Pn**	18 31 07.7	-0.3
	0.2nm552nm52nm,0.7s						
I39PW	**PALAU INFRASON**	9.06	99	I			19 22 10.0	
	baz=279,slow=307,SNR=0.9						
TOLI2	**Tolitoli**	9.20	211			**Pn**	18 31 16.3	+1.9
TOLI2	**Tolitoli**	9.20	211	P		**Pn**	18 31 17.8	+3.4
	27nm,0.8s						
MRSI	**Marisa**	9.24	203	P		**Pn**	18 31 17.7	+2.7
	902nm70nm,0.8s						
KKM	**Kota Kinabalu**	9.70	253	Pn		**Pn**	18 31 22.3	+1.0
KKM	**Kota Kinabalu**	9.70	253	P		**Pn**	18 31 22.7	+1.4
	28nm,0.9s						
KKM	**Kota Kinabalu**	9.70	253	P		**Pn**	18 31 23.1	+1.8
	28nm,0.9s						
LBMI	**Labuha**	9.84	168	P		**Pn**	18 31 23.6	+0.5
	4μm185nm,1.0s						
PACPP	**Pamplona Cagay**	10.18	337	⇓*i*P		**Pn**	18 31 30.3	+2.6
MPSI	**Mapaga**	10.32	213	P		**Pn**	18 31 32.3	+2.6
	409nm22nm,1.1s						
LUWI	**Luwuk**	10.40	195	Pn		**Pn**	18 31 32.1	+1.3
LUWI	**Luwuk**	10.40	195	P		**Pn**	18 31 34.5	+3.6
	3μm234nm,1.3s						
LUWI	**Luwuk**	10.40	195	P		**Pn**	18 31 33.6	+2.7
	283nm,1.3s						
APSI	**Ampana**	10.63	201	P		**Pn**	18 31 38.7	+4.7
	2μm109nm,1.4s						
SANI	**Sanana**	11.05	178	P		**Pn**	18 31 37.4	-2.3
	3μm1μm91nm,0.8s						
SANI	**Sanana**	11.05	178	P		**Pn**	18 31 40.6	+0.9
	79nm,0.7s						
SWI	**Sorong**	11.40	150	P		**Pn**	18 31 46.4	+1.9
SWI				pmax	pmax			
	comp=Z,186nm,1.0s						
SWI	**Sorong**	11.40	150	P		**Pn**	18 31 44.7	+0.2
	comp=Z,2μmcomp=Z,188nm,1.0s						
SIJI	**Sorong**	11.41	150	P		**Pn**	18 31 46.5	+1.9
	comp=Z,10nm,0.4s,baz=336,slow=14,SNR=16						
SIJI				S		**Sn**	18 33 45.5	-5.3
	comp=Z,4.4nm,0.5s,baz=223,slow=23,SNR=0.9						
SIJI				LR	LR	18 37 32.7	
	comp=Z,796nm,19.1s,baz=336,slow=44						
SIJI	**Sorong**	11.41	150	P		**Pn**	18 31 44.6	0.0
	comp=Z,1μmcomp=Z,119nm,1.0s						
NLAI	**Namlea**	12.32	173	P		**Pn**	18 31

KMMI	Kalianget	19.72 216	P	Pn	18 33 32.1	0.0
	comp=Z,2μmcomp=Z,113nm,0.9s					
KLNI	Mataram	19.75 209	P	P	18 33 30.8	+0.1
SRBI	Singaraja	19.89 211	P	P	18 33 33.2	+1.0
	comp=Z,1μmcomp=Z,50nm,0.8s					
UBPT	Khong Chiam	20.54 289	P	P	18 33 39.4	+0.1
UBPT	Khong Chiam	20.54 289	P	P	18 33 40.3	+1.0
	comp=Z,71nm,1.1s					
JAGI	Jajag, Banyuwa	20.77 213	P	P	18 33 42.2	+0.4
JAGI	Jajag, Banyuwa	20.77 213	P	P	18 33 42.8	+0.9
	comp=Z,978nmcomp=Z,70nm,0.8s					
SMRI	Semarang	21.95 224	P	P	18 33 56.1	+1.6
SMRI			IAmb	IAmb	18 33 59.4	
	comp=Z,92nm,0.8s					
SMRI	Semarang	21.95 224	P	P	18 33 57.5	+3.0
	comp=Z,129nm,0.8s					
PPBI	Pangkal Pinang	22.30 241	P	P	18 33 58.2	-0.1
	comp=Z,684nmcomp=Z,37nm,0.8s					
PCJI	Pacitan	22.32 220	P	P	18 34 00.3	+1.9
	comp=Z,95nm,2.2s					
MTN	Manton Dam	22.47 166	P	P	18 34 00.2	+0.2
	baz=22,SNR=20					
MTN	Manton Dam	22.47 166	P	P	18 33 59.2	-0.8
MTN			IAmb	IAmb	18 34 03.3	
	comp=Z,152nm,1.4s					
UGM	Wanagama	22.53 222	P	P	18 34 03.0	+2.3
UGM	Wanagama	22.53 222	P	P	18 34 03.4	+2.6
	comp=Z,198nm,1.9s					
KDU	Kakadu	22.69 162	P	P	18 34 02.6	+0.3
	baz=23,SNR=16					
MYKOM	Kota Tinggi	22.74 253	P	P	18 34 01.4	-1.5
MYKOM	Kota Tinggi	22.74 253	P	P	18 34 03.3	+0.4
	comp=Z,27nm,0.8s					
JSU	Suzuyama	22.80 11	P	P	18 34 02.1	-1.3
DSRI	Dabo	22.91 247	P	P	18 34 04.3	-0.5
	comp=Z,459nmcomp=Z,34nm,1.1s					
BTDF	Bukit Timah Da	22.95 252	P	P	18 34 04.9	-0.3
	comp=Z,339nmcomp=Z,42nm,1.1s					
NJ2	Nanjing	23.70 346	eP	P	18 34 11.8	-0.4
NJ2			pmax	pmax		
	comp=Z,24nm,0.8s					
NJ2			LR	LR		
	comp=Z,520nm,12.8s					
NJ2			LR	LR		
	comp=Z,790nm,13.7s					
NJ2			LR	LR		
	comp=Z,880nm,15.6s					
WHN	Wuhan	23.78 336	⇑P	P	18 34 12.1	-0.9
WHN			S	S	18 38 28.4	+2.6
WHN			LR	LR		
	comp=Z,10μm,23.2s					
WHN			LR	LR		
	comp=Z,3μm,17.6s					
WHN			LR	LR		
	comp=Z,6μm,21.7s					
LEM	Lembang	23.82 229	P	P	18 34 15.0	+1.2
	comp=Z,39nm,0.7s,baz=127,slow=12,SNR=9.4					
LEM			LR	LR	18 46 20.1	
	comp=Z,654nm,18.4s,baz=86,slow=43					
	comp=Z,39nm,0.7s					
LEM	Lembang	23.82 229	P	P	18 34 15.0	+1.2
LEM	Lembang	23.82 229	P	P	18 34 15.4	+1.6
JCJ	Chichijima	23.88 39	P	P	18 34 14.7	+0.7
	comp=Z,287nm,0.7s,baz=268,slow=5.9,SNR=14					
JCJ			LR	LR	18 41 53.9	
	comp=Z,387nm,20.8s,baz=250,slow=32					
JCJ	Chichijima	23.88 39	P	P	18 34 12.6	-1.4
CBJI	Citeko	24.14 231	P	P	18 34 19.2	+2.7
	comp=Z,4μmcomp=Z,126nm,0.8s					
CNJI	Cibinong	24.50 229	P	P	18 34 22.5	+2.7
	comp=Z,824nmcomp=Z,71nm,1.3s					
IPM	Ipoh	24.74 261	P	P	18 34 21.5	-0.5
IPM	Ipoh	24.74 261	P	P	18 34 21.8	-0.3
	comp=Z,747nmcomp=Z,30nm,1.2s					
KNRA	Kununurra	24.79 173	P	P	18 34 24.2	+1.8
	baz=25,SNR=60					
KNRA	Kununurra	24.79 173	P	P	18 34 22.4	0.0
KNRA			IAmb	IAmb	18 34 26.7	
	comp=Z,81nm,0.8s					
GYA	Guiyang	24.87 316	⇑iP	P	18 34 26.1	+2.8
GYA			sP	sP	18 34 38.8	-0.1
GYA			pmax	pmax		
	comp=Z,26nm,1.3s					
GYA			LR	LR		
	comp=Z,880nm,16.2s					
GYA			LR	LR		
	comp=Z,530nm,12.8s					
GYA			LR	LR		
	comp=Z,1μm,18.2s					
KULM	Kulim	24.95 263	P	P	18 34 24.2	+0.2
KASI	Kota Agung	25.48 236	P	P	18 34 31.1	+2.4
	comp=Z,101nm,2.2s					
LWLI	Liwa	25.56 238	P	P	18 34 29.7	+0.1
	comp=Z,3μmcomp=Z,208nm,0.8s					
SRIT	Nakonsritamara	25.61 271	P	P	18 34 29.4	-0.5
JMN	Monobe	25.73 16	P	P	18 34 29.9	-0.9
BKNI	Bangkinang	25.87 252	P	P	18 34 32.9	+0.6
	comp=Z,100nm,0.7s					
ENH	Enshi	25.88 327	P	P	18 34 31.1	-1.1
SDSI	Sungai Dareh	25.97 249	P	P	18 34 33.5	+0.3
	comp=Z,17nm,1.0s					
KSI	Kapahiang	26.11 242	P	P	18 34 36.4	+1.9
	comp=Z,70nm,0.9s					
MASI	Maura Aman, Be	26.18 243	P	P	18 34 38.2	+3.1
	comp=Z,57nm,1.6s					
JHS	Saijyo	26.73 14	P	P	18 34 38.0	-1.9
KMI	Kunming	26.93 309	⇑P	P	18 34 43.3	+1.3
KMI			sP	sP	18 35 01.4	+3.8
KMI			PP	PnPn	18 35 33.3	+7.9
KMI			S	S	18 39 14.8	-1.8
KMI			sS	sS	18 39 34.1	-1.1
KMI			SS	SnSn	18 40 36.4	+12
KMI			pmax	pmax		
	comp=Z,220nm,4.3s					
KMI			LR	LR		
	comp=Z,420nm,14.9s					
KMI			LR	LR		
	comp=Z,860nm,15.1s					
KMI			LR	LR		
	comp=Z,940nm,17.1s					
MNSI	Mandailing Nat	27.09 254	P	P	18 34 43.3	-0.1
	comp=Z,35nm,0.8s					
PSI	Prapat	27.16 258	P	P	18 34 44.6	+0.5
	comp=Z,43nm,1.1s,baz=45,slow=5.0,SNR=13					
PSI			LR	LR	18 48 43.7	
	comp=Z,341nm,18.2s,baz=84,slow=43					
	comp=Z,43nm,1.1s					
PSI	Prapat	27.16 258	P	P	18 34 43.6	-0.5
	comp=Z,397nmcomp=Z,33nm,1.4s,comp=Z,633nm,1.4s,					
	comp=Z,55nm,1.4s					
PSI			P	pP	18 34 43.7	-11
	comp=Z,397nmcomp=Z,33nm,1.4s,comp=Z,633nm,1.4s,					
	comp=Z,55nm,1.4s					
RPSI	Rantau Prapat	27.19 258	P	P	18 34 42.9	-1.2
TJN	Taejon	27.24 3	⇓eP	P	18 34 43.0	-1.4
JHJ	Hachijo jima 2	27.32 27	LR	LR	18 46 36.9	
	comp=Z,220nm,19.2s,baz=253,slow=38					
JHJ2	Mitsune	27.33 27	P	P	18 34 43.3	-1.9
CM31	Chiang Mai Arr	27.41 293	P	P	18 34 45.0	-1.2
CMAR	Chiang Mai Arr	27.41 293	P	P	18 34 47.1	+0.9
	comp=Z,10.0nm,1.1s,baz=113,slow=6.8,SNR=42					
CMAR			PcP	PcP	18 38 05.3	+0.9
	comp=Z,2.3nm,0.8s,baz=93,slow=1.7,SNR=9.3					
CMAR			LR	LR	18 45 32.7	
	comp=Z,262nm,19.5s,baz=110,slow=36					
CMAR			PKiKP	PKiKP	18 45 41.4	-0.5
	comp=Z,1.1nm,0.7s,baz=264,slow=1.0,SNR=9.7					
	comp=Z,10.0nm,1.1s					
CMAR	Chiang Mai Arr	27.41 293	P	P	18 34 46.3	+0.1
CMAR	Chiang Mai Arr	27.41 293	P	P	18 34 46.3	+0.1
LYN	LuoYang	28.05 337	⇑iP	P	18 34 49.8	-1.9
LYN			pP	pP	18 35 02.3	-0.5
LYN			S	S	18 39 37.5	+3.9
LYN			SS	SnSn	18 40 56.4	+5.1
LYN			LR	LR		
	comp=Z,1μm,17.2s					
LYN			LR	LR		
	comp=Z,1μm,21.5s					
KCSI	Kotacane, Aceh	28.11 260	P	P	18 34 51.5	-1.0
	comp=Z,52nm,0.9s					
INU	Inuyama	28.20 20	P	P	18 34 51.2	-1.7
PMG	Port Moresby	28.30 130	P	P	18 34 56.1	+2.0
	comp=Z,8.2nm,0.8s,baz=342,slow=9.6,SNR=1.6					
	comp=Z,8.2nm,0.8s					
KSAR	Wonju Array Be	28.33 4	P	P	18 34 52.8	-1.4
KSAR	Wonju Array Be	28.33 4	P	P	18 34 52.8	-1.4
KSRS	Korea Array	28.35 4	P	P	18 34 53.9	-0.4
	comp=Z,5.2nm,0.8s,baz=184,slow=10,SNR=28					
KSRS			PcP	PcP	18 38 06.8	+0.4
	comp=Z,1.1nm,0.9s,baz=193,slow=5.1,SNR=4.2					
KSRS			LR	LR	18 45 17.3	
	comp=Z,712nm,21.9s,baz=180,slow=34					
	comp=Z,5.2nm,0.8s					
KS19	Wonju Array Si	28.39 4	P	P	18 34 51.9	-2.8
PZH	PanZhiHua	28.43 311	P	P	18 34 55.4	+0.1
PZH			PP	PnPn	18 35 45.0	-0.8
PZH			pmax	pmax		
	comp=Z,20nm,1.1s					
PZH			pmax	pmax		
	comp=Z,120nm,4.3s					
PZH			LR	LR		
	comp=Z,2μm,18.6s					
PZH			LR	LR		
	comp=Z,1μm,19.6s					
PZH			LR	LR		
	comp=Z,2μm,19.4s					
JGF	Kuroka	28.54 20	P	P	18 34 54.4	-1.7
COEN	Coen	28.81 142	P	P	18 34 59.6	+1.0
	baz=29,SNR=6.2					
COEN	Coen	28.81 142	P	P	18 34 57.2	-1.5
GSI	Gunungsitoli	28.86 256	P	P	18 34 58.2	-0.8
GSI			IAmb	IAmb	18 34 59.1	
	comp=Z,94nm,1.1s					
GSI	Gunungsitoli	28.86 256	P	P	18 34 58.3	-0.8
	comp=Z,88nm,1.1s					
XAN	Xi'an	29.17 331	⇑P	P	18 35 00.5	-1.2
XAN			pP	pwP	18 35 13.6	-0.8
XAN			sP	sP	18 35 19.6	+2.5
XAN			PcP	PcP	18 38 08.8	+0.2
XAN			pmax	pmax		
	comp=Z,22nm,0.8s					
XAN			LR	LR		
	comp=Z,870nm,18.6s					
XAN			LR	LR		
	comp=Z,350nm,17.9s					
XAN			LR	LR		
	comp=Z,990nm,17.2s					
KRVT	Keravat (AS076	29.57 116	P	P	18 35 07.2	+1.8
	comp=Z,4.3nm,0.6s,baz=293,slow=7.7,SNR=1.3					
	comp=Z,4.3nm,0.6s					
MJAR	Matsushiro Arr	29.69 21	P	P	18 35 04.6	-1.6
	comp=Z,6.0nm,0.9s,baz=193,slow=8.6,SNR=13					
MJAR			LR	LR	18 45 14.1	
	comp=Z,763nm,21.7s,baz=216,slow=33					
	comp=Z,6.0nm,0.9s					
MJB9	Matsu-Tunnel	29.69 21	P	P	18 35 03.4	-2.9
CD2	Chengdu	29.73 320	P	P	18 35 06.8	+0.1
CD2			S	S	18 40 03.8	+3.6
CD2			pmax	pmax		
	comp=Z,30nm,0.9s					
CD2			LR	LR		
	comp=Z,710nm,19.1s					
CD2			LR	LR		
	comp=Z,1μm,18.6s					
CD2			LR	LR		
	comp=Z,1μm,16.5s					
HNS	HongShan	29.86 343	⇓P	P	18 35 07.6	-0.1
HNS			PP	PnPn	18 36 08.1	+3.2
HNS			S	S	18 40 05.5	+3.6
HNS			pmax	pmax		
	comp=Z,25nm,0.9s					
HNS			LR	LR		
	comp=Z,400nm,20.7s					
HNS			LR	LR		
	comp=Z,610nm,20.9s					
HNS			LR	LR		
	comp=Z,680nm,19.0s					
WB0	Warramunga Arr	29.95 163	P	P	18 35 07.6	-1.1
WRAB	Tennant Creek	30.10 163	P	P	18 35 08.8	-1.2
WRAB	Tennant Creek	30.10 163	⇑eP	P	18 35 09.9	-0.1
WRAB			pmax	pmax		
	comp=Z,37nm,1.7s					
WRAB	Tennant Creek	30.10 163	P	P	18 35 08.0	-2.0
WRA	Warramunga Arr	30.10 163	P	P	18 35 09.9	-0.2
	comp=Z,4.6nm,0.7s,baz=341,slow=10.0,SNR=46					
WRA			PcP	PcP	18 38 10.6	-0.5
	comp=Z,1.1nm,0.7s,baz=343,slow=3.5,SNR=2.3					
	comp=Z,4.6nm,0.7s					
WRA	Warramunga Arr	30.10 163	P	P	18 35 08.4	-1.6
WB2	Warramunga Arr	30.11 163	P	P	18 35 09.8	-0.2
	baz=30					
WB2	Warramunga Arr	30.11 163	P	P	18 35 09.1	-1.0
WR0	Warramunga Arr	30.18 163	P	P	18 35 09.4	-1.2
PSA00	Pilbara Seismi	30.95 190	P	P	18 35 17.2	-0.3
PSA00			IAmb	IAmb	18 35 31.2	
	comp=Z,65nm,1.6s					
PSA00	Pilbara Seismi	30.95 190	P	P	18 35 16.4	-1.1
PSA00			IAmb	IAmb	18 36 05.9	
	comp=Z,18nm,1.4s					
JSD	Sado	31.05 20	P	P	18 35 16.1	-2.1
JSD			IAmb	IAmb	18 35 37.2	
	comp=Z,26nm,0.6s					
BJT	Baijiatuau	31.93 346	P	P	18 35 24.5	-1.5
BJT	Baijiatuau	31.93 346	P	P	18 35 24.5	-1.5
BJT			pmax	pmax		
	comp=Z,15nm,1.0s					
BJI	Beijing	31.95 346	P	P	18 35 25.4	-0.7
BJI			pP	pP	18 35 33.1	-4.0
BJI			sP	sP	18 35 38.8	-3.1
BJI			pmax	pmax		
	comp=Z,14nm,0.8s					
BJI			LR	LR		
	comp=Z,98nm,21.4s					
BJI			LR	LR		
	comp=Z,470nm,20.6s					
BJI			LR	LR		
	comp=Z,590nm,21.5s					
QIS	Mount Isa	32.53 155	P	P	18 35 31.9	+0.5
	baz=33,SNR=7.9					
PATS	Pohnpei	32.55 91	P	P	18 35 29.9	-1.8
SNY	Shenyang	32.68 357	⇑P	P	18 35 31.9	-0.5
SNY			S	S	18 40 42.0	-3.9
SNY			pmax	pmax		
	comp=Z,45nm,0.8s					
SNY			pmax	pmax		
	comp=Z,150nm,4.2s					
SNY			LR	LR		
	comp=Z,640nm,14.9s					
SNY			LR	LR		
	comp=Z,260nm,12.9s					
SNY			LR	LR		
	comp=Z,670nm,20.0s					
MTSU	Mount Surprise	32.78 146	P	P	18 35 34.7	+1.0
	baz=33,SNR=18					
LZH	Lanzhou	33.36 327	eP	P	18 35 41.3	+2.6
LZH			pP	pP	18 35 49.4	-0.3
LZH			sP	sP	18 35 54.4	0.0
LZH			PcP	PcP	18 38 20.8	+0.9
LZH			SS	SS	18 43 04.6	-18
LZH			pmax	pmax		
	comp=Z,49nm,1.4s					
LZH			pmax	pmax		
	comp=Z,89nm,5.2s					
LZH			LR	LR		
	comp=Z,1μm,15.2s					
LZH			LR	LR		
	comp=Z,2μm,15.6s					
LZH			LR	LR		
	comp=Z,3μm,16.6s					
AS31	Alice Springs	33.55 166	P	P	18 35 39.9	-0.4
ASAR	Alice Springs	33.55 166	P	P	18 35 40.7	+0.4
	comp=Z,3.4nm,0.5s,baz=346,slow=7.3,SNR=85					
ASAR			PcP	PcP	18 38 20.5	+0.1
	comp=Z,2.0nm,0.6s,baz=350,slow=2.8,SNR=2.1					
ASAR			LR	LR	18 51 14.9	
	comp=Z,228nm,21.5s,baz=350,slow=40					
	comp=Z,3.4nm,0.5s					
ASAR	Alice Springs	33.55 166	P	P	18 35 39.8	-0.5
MSHR	Mys Shultsa	33.75 8	⇑eP	P	18 35 41.1	-0.7
MSHR			pmax	pmax		
	comp=Z,28nm,1.0s					
HHC	Hu-ho-hao-te	33.99 341	eP	P	18 35 45.8	+1.7
HHC			PP	PP	18 37 00.0	-1.6
HHC			S	S	18 41 07.8	+1.2
HHC			pmax	pmax		
	comp=Z,24nm,0.8s					
HHC			pmax	pmax		
	comp=Z,180nm,7.4s					
HHC			LR	LR		
	comp=Z,1μm,18.1s					
HHC			LR	LR		
	comp=Z,590nm,15.9s					
HHC			LR	LR		
	comp=Z,2μm,19.2s					
WRKA	Warakurna	34.00 175	P	P	18 35 44.4	+0.2
	baz=34,SNR=15					
VLA	Vladivostok	34.38 8	⇑eP	P	18 35 45.8	-1.4
VLA			pmax	pmax		
	comp=Z,28nm,1.0s					
CN2	Changchun	34.60 360	eP	P	18 35 48.1	-1.1
CN2			S	S	18 41 14.4	-1.3
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
CN2			pmax	pmax		
	comp=Z,100nm,7.0s					
CN2			LR	LR		
	comp=Z,400nm,17.0s					
CN2			LR	LR		
	comp=Z,200nm,17.0s					
CN2			LR	LR		
	comp=Z,500nm,19.0s					
CTAO	Charters Tower	35.44 145	P	P	18 35 57.0	+0.3
CTAO			IAmb	IAmb	18 36 09.5	
	comp=Z,55nm,1.6s					
CTAO	Charters Tower	35.44 145	P	P	18 35 57.0	+0.3
CTAO			pmax	pmax		
	comp=Z,55nm,1.6s					
USA0B	Ussuriysk Arra	35.45 8	P	P	18 35 55.4	-1.1
USA0B			IAmb	IAmb	18 35 57.8	
	comp=Z,32nm,0.8s					
USA0B	Ussuriysk Arra	35.45 8	c iP	P	18 35 55.7	-0.8
USRK	Ussuriysk Ar.	35.45 8	P	P	18 35 56.7	+0.2
	comp=Z,29nm,0.7s,baz=194,slow=8.1,SNR=44					
USRK			LR	LR	18 49 20.0	
	comp=Z,478nm,21.8s,baz=179,slow=34					
	comp=Z,29nm,0.7s					
USRK	Ussuriysk Ar.	35.45 8	P	P	18 35 55.8	-0.7
MDJ	Mudanjiang	35.60 5	P	P	18 35 56.6	-1.1
MDJ	Mudanjiang	35.60 5	P	P	18 35 57.5	-0.2
MDJ			pP	pP	18 36 08.9	-0.2
MDJ			sP	sP	18 36 15.0	+1.0
MDJ			S	S	18 41 40.0	+9.0
MDJ			pmax	pmax		
	comp=Z,15nm,1.2s					
MDJ			pmax	pmax		
	comp=Z,190nm,4.9s					
MDJ			LR	LR		
	comp=Z,390nm,24.4s					
MDJ			LR	LR		
	comp=Z,290nm,24.8s					
MDJ			LR	LR		
	comp=Z,620nm,23.9s					
MDJ	Mudanjiang	35.60 5	P	P	18 35 56.9	-0.9
MDJ			pP	pP	18 36 06.1	-3.0
MDJ			sP	sP	18 36 10.9	-3.1
XLT	XiLinHaoTe	35.66 348	eP	P	18 35 57.8	-0.7
XLT			S	S	18 41 35.1	+2.9
XLT			sS	sS	18 41 54.5	+3.4
XLT			pmax	pmax		
	comp=Z,13nm,1.0s					
XLT			pmax	pmax		
	comp=Z,100nm,8.3s					
XLT			LR	LR		
	comp=Z,44nm,21.1s					
XLT			LR	LR		
	comp=Z,350nm,17.8s					
XLT			LR	LR		
	comp=Z,540nm,21.6s					
SHL	Shillong	35.91 301	P	P	18 35 59.7	-1.3
SHL	Shillong	35.91 301	P	P	18 35 59.7	-1.3
SHL			pmax	pmax		
	comp=Z,115nm,0.9s					
SHL	Shillong	35.91 301	P	P	18 36 01.6	+0.7
	SNR=6.3					
BNX	BinXian	36.58 2	⇓P	P	18 36 05.8	-0.3
BNX			pmax	pmax		
	comp=Z,13nm,0.6s					
BNX			pmax	pmax		
	comp=Z,77nm,4.1s					
TEY	Ternei	37.10 13	eP	P	18 36 10.2	-0.3
TEY			e		18 44 57.9	
GTA	Gaotai	37.96 327	⇑P	P	18 36 18.4	+0.3
GTA			pP	pP	18 36 26.8	-2.4
GTA			sP	sP	18 36 30.4	-3.5
GTA			PcP	PcP	18 38 34.1	+0.7
GTA			ScP	ScP	18 42 20.8	+2.8
GTA			sS	sS	18 42 23.1	-3.3
GTA			pmax	pmax		
	comp=Z,32nm,0.9s					
GTA			pmax	pmax		
	comp=Z,110nm,4.7s					
GTA			LR	LR		
	comp=Z,640nm,18.2s					
GTA			LR	LR		
	comp=Z,940nm,19.3s					
GTA			LR	LR		
	comp=Z,1μm,18.2s					
LSA	Lhasa	38.14 307	P	P	18 36 21.0	+0.8
LSA			IAmb	IAmb	18 36 24.6	
	comp=Z,20nm,0.6s					
LSA	Lhasa	38.14 307	P	P	18 36 21.4	+1.2
LSA			pmax	pmax		
	comp=Z,24nm,0.8s					
LSA	Lhasa	38.14 307	P	P	18 36 21.0	+0.8
LSA			pmax	pmax		
	comp=Z,20nm,0.6s					
LSA	Lhasa	38.14 307	P	P	18 36 21.6	+1.4
LSA	Lhasa	38.14 307	P	P	18 36 20.8	+0.6
LSA			sP	sP	18 36 35.5	-0.4
GOMU	GeErMu	38.84 319	eP	P	18 36 27.3	+1.5
GOMU			pP	pP	18 36 32.1	-4.8
GOMU			sP	sP	18 36 34.8	-6.8
GOMU			S	S	18 42 19.1	-2.2
GOMU			pmax	pmax		
	comp=Z,30nm,1.3s					
GOMU			pmax	pmax		
	comp=Z,88nm,4.1s					
GOMU			LR	LR		
	comp=Z,330nm,14.7s					
GOMU			LR	LR		
	comp=Z,390nm,16.9s					
GOMU			LR	LR		
	comp=Z,520nm,15.8s					
MORW	Morawa	39.00 193	P	P	18 36 29.4	+2.7
	baz=39,SNR=3.4					
MORW	Morawa	39.00 193	P	P	18 36 25.1	-1.6
FORT	Forrest	39.69 177	P	P	18 36 33.4	+0.9
	baz=40,SNR=26					
FORT	Forrest	39.69 177	P	P	18 36 32.2	-0.2
FORT			IAmb	IAmb	18 36 53.6	
	comp=Z,51nm,1.0s					
FORT				PcP	18 38 39.3	+0.6
TAPN	Taplejung	40.04 302	eP	P	18 36 36.8	+0.9
	comp=Z,133nm,0.7s					
ODAN	Odare	40.15 301	eP	P	18 36 37.6	+0.9
HIA	Hailar	40.36 354	ceP	P	18 36 37.0	-0.9
HIA			pmax	pmax		
	comp=Z,9.0nm,0.8s					
KLR	Kul'dur	40.38 6	P	P	18 36 37.7	-0.3
	comp=Z,5.4nm,0.6s,baz=197,slow=4.6,SNR=24					
KLR			LR	LR	18 52 57.1	
	comp=Z,296nm,21.4s,baz=196,slow=36					
	comp=Z,5.4nm,0.6s					
KLR	Kul'dur	40.38 6	deP	P	18 36 37.0	-1.0
KLR			pmax	pmax		
	comp=Z,20nm,1.7s					
YSS	Yuzh-Sakhalins	40.52 18	P	P	18 36 39.4	+0.2
YSS	Yuzh-Sakhalins	40.52 18	eP	P	18 36 39.4	+0.2
YSS			pmax	pmax		
	comp=Z,20nm,0.7s					
RAMN	Ramite	40.84 301	eP	P	18 36 43.3	+0.8
H11S3	WAKE ISLAND Hy	40.98 72	T	T	19 19 52.3	
	baz=263,slow=76					
H11S1	WAKE ISLAND Hy	41.00 72	T	T	19 19 50.4	
	baz=263,slow=76					
H11S2	WAKE ISLAND Hy	41.00 72	T	T	19 19 46.2	
	baz=263,slow=76					
H11N1	WAKE ISLAND Hy	41.34 70	T	T	19 20 30.6	
	baz=265,slow=74,SNR=77					
H11N2	WAKE ISLAND Hy	41.35 70	T	T	19 20 26.9	
	baz=265,slow=74,SNR=50					
H11N3	WAKE ISLAND Hy	41.36 70	T	T	19 20 34.3	
	baz=265,slow=74,SNR=65					
JIRN	Jiri	41.42 302	eP	P	18 36 48.0	+0.7
	comp=Z,189nm,0.8s					
ULN	Ulaanbaatar	41.71 341	P	P	18 36 47.0	-2.1
ULN	Ulaanbaatar	41.71 341	ceP	P	18 36 48.6	-0.6
ULN			pmax	pmax		

comp=Z,8.0nm,0.7s
ULN Ulaanbaatar 41.71 341 P P 18 36 48.8 -0.4
ULN Ulaanbaatar 41.71 341 P P 18 36 48.5 -0.6
comp=Z,51nm,0.7s
ULN Ulaanbaatar 41.71 341 P P 18 36 48.1 -1.1
ULN sP **sP 18 37 03.6 -1.6**
GUN Gumba 41.76 302 *eP* **P 18 36 50.9 +0.8**
comp=Z,300nm,0.9s
SONM Songino Array 41.90 341 P P 18 36 49.8 -0.9
comp=Z,2.2nm,0.6s,baz=154,slow=9.3,SNR=10.0
SONM PcP **PcP 18 38 45.4 -0.4**
comp=Z,4.5nm,0.8s,baz=172,slow=3.8,SNR=6.3
SONM LR LR 18 56 23.2
comp=Z,794nm,19.4s,baz=159,slow=39
comp=Z,2.2nm,0.6s
SONM Songino Array 41.90 341 P P 18 36 49.6 -1.0
PKI Pulchoki 42.05 301 *eP* **P 18 36 52.5 +0.1**
PKIN Phulchoki 42.06 301 *eP* **P 18 36 52.4 -0.1**
comp=Z,61nm,0.6s
KKN Kakani 42.22 302 *eP* **P 18 36 54.1 +0.4**
UGL Uglegorsk 42.23 16 *eP* **P 18 36 53.4 +0.2**
UGL pmax pmax
comp=Z,160nm,0.8s
DMN Daman 42.31 301 *eP* **P 18 36 54.8 +0.3**
comp=Z,132nm,1.0s
EIDS Eidsvold 42.32 145 P P 18 36 52.9 -1.3
NWAO Narrogin (SRO) 42.50 190 LR LR 18 56 35.0
comp=Z,223nm,20.5s,baz=256,slow=39
NWAO Narrogin (SRO) 42.50 190 P P 18 36 56.2 +0.7
NWAO IAmb IAmb 18 37 09.0
comp=Z,208nm,1.8s
NWAO Narrogin (SRO) 42.50 190 P P 18 36 56.2 +0.7
NWAO pmax pmax
comp=Z,209nm,1.8s
GRNR Gornyy 42.55 10⇑ *iP* **P 18 36 56.4 +0.7**
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR MLR MLR
comp=E,90nm,10.0s
GRNR MLR MLR
comp=N,130nm,16.0s
GKN Gorkha 42.83 302 *eP* **P 18 36 58.5 -0.1**
BBOO Buckleboo 42.84 167 P P 18 36 59.3 +1.0
baz=43,SNR=51
BBOO Buckleboo 42.84 167 P P 18 36 58.6 +0.3
BBOO IAmb IAmb 18 37 00.4
comp=Z,146nm,1.4s
STKA Stephens Creek 43.52 160 P P 18 37 04.8 +1.0
comp=Z,20nm,1.0s,baz=343,slow=7.9,SNR=19
comp=Z,20nm,1.0s
STKA Stephens Creek 43.52 160 P P 18 37 05.0 +1.2
baz=44,SNR=16
STKA Stephens Creek 43.52 160 P P 18 37 03.7 -0.1
KOLN Koldanda 43.63 301 *eP* **P 18 37 05.7 +0.5**
comp=Z,29nm,1.0s
DANN Dangsing 43.67 302 *eP* **P 18 37 05.7 +0.1**
comp=Z,199nm,0.8s
HTT Hallett 44.14 164 P P 18 37 10.2 +1.4
baz=44,SNR=12
PALK Pallekele 44.38 271 LR LR 18 56 19.6
comp=Z,210nm,21.6s,baz=188,slow=37
PALK Pallekele 44.38 271 P P 18 37 11.2 +0.1
PALK IAmb IAmb 18 38 11.4
comp=Z,54nm,1.4s
PALK Pallekele 44.38 271 P P 18 37 11.2 +0.1
PALK pmax pmax
comp=Z,54nm,1.5s
ZEA Zeya 44.57 1 *eP* **P 18 37 11.1 -0.9**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
HYBB Hyderabad (bro 46.37 285 *eP* **P 18 37 26.7 -0.2**
HYBB *ep*P **pP 18 37 38.5 +0.3**
HYBB *e*ScP **ScP 18 42 51.1 -0.8**
HYBB *e*S **S 18 44 12.5 +0.6**
ARMA Armidale 46.59 148 P P 18 37 29.4 +1.0
ARMA IAmb IAmb 18 38 29.4
comp=Z,46nm,1.8s
WMQ Urumqi 47.73 323 *eP* **P 18 37 38.6 +1.5**
WMQ sP sP 18 37 53.8 +0.8
WMQ pmax pmax
comp=Z,58nm,1.3s
WMQ pmax pmax
comp=Z,330nm,4.1s
WMQ LR LR
comp=Z,1μm,16.5s
WMQ LR LR
comp=Z,780nm,20.3s
WMQ LR LR
comp=Z,650nm,22.7s
WMQ Urumqi 47.73 323 P P 18 37 36.4 -0.7
WMQ sP **sP 18 37 53.4 +0.4**
ARPS Mount Arapiles 48.10 162 P P 18 37 41.4 +1.5
baz=48,SNR=8.2
PCHI Peechi 48.44 276⇓ *eP* **P 18 37 43.5 +0.5**
PCHI *e*S **S 18 44 46.4 +5.1**
CAN Canberra 49.40 155 P P 18 37 49.7 -0.3
CAN IAmb IAmb 18 37 54.5
comp=Z,123nm,1.9s
CAN Canberra 49.40 155 P P 18 37 49.7 -0.3
CAN pmax pmax
comp=Z,123nm,1.9s
CAN Canberra 49.40 155 P P 18 37 52.1 +2.1
CAN pP **pP 18 38 03.8 +2.0**
CAN sP **sP 18 38 08.7 +2.1**
BOD Bodaibo 49.45 352 *eP* **P 18 37 48.8 -1.2**
BOD pmax pmax
comp=Z,15nm,1.3s
TOO Toolangi 50.02 159 P P 18 37 56.2 +1.6
baz=50,SNR=3.8
TOO Toolangi 50.02 159 P P 18 37 53.4 -1.2
TOO IAmb IAmb 18 38 20.5
comp=Z,59nm,1.4s
TOO Toolangi 50.02 159 P P 18 37 53.4 -1.2
TOO pmax pmax
comp=Z,59nm,1.4s
LIFNC LIFOU 50.61 126 P P 18 37 57.2 -2.1
DZM Mont Dzumac 50.67 128 *e*LR LR 18 52 30.7
comp=Z,544nm,25.2s
DZM Mont Dzumac 50.67 128 LR LR 19 01 57.9
comp=Z,188nm,18.4s,baz=316,slow=39
DZM Mont Dzumac 50.67 128 P P 18 37 58.4 -1.5
DZM IAmb IAmb 18 38 05.8
comp=Z,96nm,1.8s
PEA0B Petropavlovsk- 51.03 24 P P 18 37 59.9 -2.2
PEA0B IAmb IAmb 18 38 04.6
comp=Z,100nm,1.4s
PEA0B Petropavlovsk- 51.03 24⇓ *eP* **P 18 38 01.3 -0.8**
PETK Petropavlovsk- 51.03 24 P P 18 38 02.5 +0.4
comp=Z,24nm,0.8s,baz=214,slow=3.6,SNR=49
PETK LR LR 18 58 06.8
comp=Z,323nm,21.1s,baz=221,slow=34
comp=Z,24nm,0.8s
PETK Petropavlovsk- 51.03 24 P P 18 38 02.2 +0.1
PET Petropavlovsk 51.37 25 P P 18 38 02.6 -2.0
PET Petropavlovsk 51.37 25 *eP* **P 18 38 05.9 +1.4**
PET *e*S **S 18 45 21.9 +0.9**
PET pmax pmax
comp=Z,68nm,1.5s
DGZ Jazzator, Alta 51.41 329*ceP* **P 18 38 05.7 +0.6**
DGZ pmax pmax
comp=Z,11nm,1.3s
ZSN Zaisan 51.43 326 *eP* **P 18 38 03.6 -1.6**
ZSN Zaisan 51.43 326 *eP* **P 18 38 03.6 -1.6**
baz=326
MARNC Mare, Loyalty 51.60 127 P P 18 38 03.8 -2.9
SHLS Shalkode 52.54 318 *i P* **P 18 38 12.3 -1.4**
SHLS pmax pmax
comp=Z,36nm,1.0s
SHLS Shalkode 52.54 318 *i P* **P 18 38 12.3 -1.4**
comp=Z,36nm,1.0s,baz=318
MK31 Makanchi Array 52.54 324 P P 18 38 13.4 -0.1
MK31 PcP **PcP 18 39 22.8 -0.7**
MK31 Makanchi Array 52.54 324*c iP* **P 18 38 14.2 +0.7**
MK31 pmax pmax
comp=Z,110nm,0.8s
MKAR Makanchi Array 52.54 324 P P 18 38 14.2 +0.7
comp=Z,77nm,0.8s,baz=124,slow=8.3,SNR=471
MKAR PcP **PcP 18 39 23.4 -0.1**
comp=Z,14nm,0.7s,baz=106,slow=4.4,SNR=6.1
comp=Z,77nm,0.8s
PDGK Podgornoye 52.60 319 P P 18 38 14.3 +0.2
MAKZ Makanchi 52.73 324 P P 18 38 15.3 +0.4
MAKZ Makanchi 52.73 324 P P 18 38 15.4 +0.5
MAKZ Makanchi 52.73 324 P P 18 38 11.6 -3.3
UZB Uzynbulak 52.82 318 *eP* **P 18 38 14.6 -1.2**
UZB Uzynbulak 52.82 318 *eP* **P 18 38 14.6 -1.2**
baz=318
YAK Yakutsk 52.96 2 P P 18 38 15.4 -0.8
comp=Z,12nm,0.6s,baz=0.3,slow=1.7,SNR=9.4
YAK LR LR 19 00 16.2
comp=Z,167nm,21.0s,baz=254,slow=35
comp=Z,12nm,0.6s
YAK Yakutsk 52.96 2 *eP* **P 18 38 15.1 -1.1**
YAK *e**PP **pP 18 38 28.8 +0.8**
YAK *e* 18 39 24.7
YAK *e* 18 40 14.9
YAK *e*PPP PPP 18 41 21.0
YAK *e*S **S 18 45 41.2 -1.3**
YAK *e**SS **sS 18 46 02.8 +0.7**
YAK *e* 18 48 01.3
YAK *e*SS **SS 18 49 19.3 -2.6**
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,82nm,3.5s
YAK pmax pmax
comp=N,57nm,2.8s
YAK pmax pmax
comp=E,42nm,3.0s
YAK smax smax
comp=E,38nm,2.5s
YAK smax smax
comp=N,25nm,2.0s
KPKS Kokpek 53.19 318*c iP* **P 18 38 18.9 +0.5**
KPKS pmax pmax
comp=Z,30nm,0.8s
KPKS Kokpek 53.19 318⇑ *iP* **P 18 38 19.0 +0.5**
comp=Z,30nm,0.8s,baz=318
SATY Saty 53.19 318*c iP* **P 18 38 19.4 +0.9**
SATY pmax pmax
comp=Z,34nm,0.8s
SATY Saty 53.19 318⇑ *iP* **P 18 38 19.4 +0.9**
comp=Z,34nm,0.8s,baz=318
KSH Kashi 53.49 313 P P 18 38 22.9 +2.1
KSH pP pP 18 38 30.8 -1.3
KSH S **S 18 45 57.6 +6.7**
KSH pmax pmax
comp=Z,55nm,1.0s
KSH pmax pmax
comp=Z,120nm,3.9s
KSH LR LR
comp=Z,320nm,22.7s
KSH LR LR
comp=Z,500nm,19.9s
KSH LR LR
comp=Z,690nm,18.5s
NIL Nilore 53.81 305 P P 18 38 22.2 -0.8
NIL pP **pP 18 38 35.8 +1.1**
MA2 Magadan 53.89 16 P P 18 38 23.7 +0.5
comp=Z,21nm,0.6s,baz=203,slow=7.3,SNR=30
MA2 LR LR 18 59 15.5
comp=Z,196nm,21.9s,baz=202,slow=34
comp=Z,21nm,0.6s
MA2 Magadan 53.89 16 P P 18 38 23.2 +0.1
MA2 IAmb IAmb 18 38 24.6
comp=Z,24nm,0.7s
MA2 Magadan 53.89 16*c iP* **P 18 38 23.6 +0.5**
MA2 pmax pmax
comp=Z,24nm,0.8s
TDK Taldyqorghan 54.04 320*c iP* **P 18 38 25.3 +0.8**
TDK Taldyqorghan 54.04 320⇑ *iP* **P 18 38 25.4 +0.8**
baz=320
MDOK Medeo 54.14 317 *i P* **P 18 38 26.4 +1.0**
MDOK Medeo 54.14 317 *i P* **P 18 38 26.4 +1.0**
baz=317
TNSS Tian-Shan 54.16 317 *i P* **P 18 38 26.9 +1.0**
TNSS Tian-Shan 54.16 317 *i P* **P 18 38 26.9 +1.0**
baz=317
NRN Naryn 54.17 315 P P 18 38 26.9 +1.0
NRN IAmb IAmb 18 38 27.9
comp=Z,42nm,0.8s
NRN Naryn 54.17 315 P P 18 38 27.0 +1.0
NRN pmax pmax
comp=Z,42nm,0.8s
ULHL Ulahol 54.32 316 P P 18 38 28.2 +1.3
SNR=7.3
CHKK Chushkaly 54.46 318 *eP* **P 18 38 27.8 +0.2**
CHKK Chushkaly 54.46 318 *eP* **P 18 38 27.9 +0.2**
baz=318
BOOM Boomskoye usch 54.62 316 P P 18 38 28.4 -0.5
BOOM IAmb IAmb 18 38 31.1
comp=Z,50nm,1.2s
BOOM Boomskoye usch 54.62 316 P P 18 38 28.5 -0.5
BOOM pmax pmax
comp=Z,51nm,1.2s
KUU Kurty 54.91 318*c iP* **P 18 38 31.6 +0.8**
KUU Kurty 54.91 318⇑ *iP* **P 18 38 31.7 +0.8**
baz=318
TKM2 Tokmak 2 55.02 317 P P 18 38 32.6 +0.7
SNR=74
ZAA0 Zalesovo Array 55.33 332 P P 18 38 32.6 -1.1
ZALV Zalesovo Beam 55.33 332 P P 18 38 33.3 -0.4
comp=Z,17nm,0.7s,baz=125,slow=6.5,SNR=62
ZALV PcP **PcP 18 39 32.5 -1.4**
comp=Z,4.6nm,0.7s,baz=142,slow=3.4,SNR=3.7
ZALV LR LR 19 04 07.0
comp=Z,409nm,18.4s,baz=125,slow=38
comp=Z,17nm,0.7s
ZALV Zalesovo Beam 55.33 332 P P 18 38 32.6 -1.1
ZALV PcP **PcP 18 39 31.7 -2.2**
KBK Karagaybulak 55.36 316 P P 18 38 35.7 +1.4
SNR=51
UCH Uchtor 55.50 316 P P 18 38 37.3 +1.6
SNR=157
CHMS Chumysh 55.62 316 P P 18 38 36.9 +0.8
SNR=41
CHMS Chumysh 55.62 316 *i P* **P 18 38 36.8 +0.8**
CHMS pmax pmax
comp=Z,55nm,0.7s
AAK Ala-Archa 55.66 316 P P 18 38 37.8 +1.3
SNR=26
AAK Ala-Archa 55.66 316 P P 18 38 37.2 +0.7
AAK IAmb IAmb 18 38 39.1
comp=Z,22nm,0.8s
AAK Ala-Archa 55.66 316*c iP* **P 18 38 37.6 +1.1**
AAK pmax pmax
comp=Z,19nm,0.9s
AAK Ala-Archa 55.66 316 P P 18 38 37.8 +1.3
AAK Ala-Archa 55.66 316 *i P* **P 18 38 37.5 +1.0**
SNR=12
AAK Ala-Archa 55.66 316 P P 18 38 34.2 -2.3
AAK pP **pP 18 38 45.4 -2.6**
SGDS Sogindy 55.88 317*c iP* **P 18 38 38.2 +0.3**
SGDS pmax pmax
comp=Z,6.0nm,0.5s
SGDS Sogindy 55.88 317⇑ *iP* **P 18 38 38.2 +0.3**
comp=Z,6.0nm,0.5s,baz=317
USP Ospenovka 55.89 317 P P 18 38 38.9 +0.9
SNR=126
AML Almayashu 56.03 315 P P 18 38 41.0 +1.6
SNR=6.7
OHH Osh 56.14 313 P P 18 38 41.0 +1.2
OHH pmax pmax
comp=Z,84nm,0.9s
EKS2 Erkin-Say 56.17 316 P P 18 38 41.4 +1.4
SNR=101
DRK Karamyk 56.53 312 P P 18 38 43.1 +0.1
KURK Kurchatov 56.64 326 P P 18 38 43.0 -0.1
KURK Kurchatov 56.64 326*c iP* **P 18 38 43.3 +0.2**
KURK pmax pmax
comp=Z,187nm,1.3s
KURK Kurchatov 56.64 326 P P 18 38 43.9 +0.7
KURK Kurchatov 56.64 326 P P 18 38 41.7 -1.4
KURK pP **pP 18 38 56.2 +1.3**
KURBB Kurchatov Arra 56.65 326 LR LR 19 04 39.7
comp=Z,300nm,19.3s,baz=87,slow=38
KURBB Kurchatov Arra 56.65 326 P P 18 38 43.3 +0.2
SEY Seymchan 57.16 14 P P 18 38 48.1 +1.5
comp=Z,16nm,0.7s,baz=218,slow=5.8,SNR=76
comp=Z,16nm,0.7s
SEY Seymchan 57.16 14⇑ *eP* **P 18 38 47.9 +1.3**
SEY pmax pmax
comp=Z,52nm,1.7s
KBL Kabul 57.41 305 P P 18 38 49.2 +0.1
KBL Kabul 57.41 305 P P 18 38 49.3 +0.1
KBL pmax pmax
comp=Z,66nm,0.8s
KBL Kabul 57.41 305 P P 18 38 50.0 +0.9
SNR=26
BTK Batken 57.43 312 P P 18 38 49.5 +0.5
BTK Batken 57.43 312 P P 18 38 49.5 +0.5
BTK pmax pmax
comp=Z,81nm,1.2s
GAR Garm 57.50 311 P P 18 38 50.2 +0.6
CHGR Chuyangaron 58.28 310 P P 18 38 54.8 -0.2
CHGR Chuyangaron 58.28 310 P P 18 38 54.8 -0.2
CHGR pmax pmax
comp=Z,138nm,0.8s
MSVF Nonsavu 58.31 117 P P 18 38 54.7 -0.8
MSVF IAmb IAmb 18 39 28.1
comp=Z,19nm,1.0s
MSVF Nonsavu 58.31 117 P P 18 38 54.7 -0.8
MSVF pmax pmax
comp=Z,19nm,1.0s
MSVF Nonsavu 58.31 117 P P 18 38 57.9 +2.4
SIMJ Simiganj 58.40 310 P P 18 38 54.6 -1.3
SIMJ sP **sP 18 39 13.8 +1.9**
SHEM Shemya Is, Ala 58.56 32 LR LR 18 59 24.2
comp=Z,110nm,22.0s,baz=262,slow=31
KK31 Karatay Array 58.57 315 P P 18 38 56.8 -0.1
KK31 Karatay Array 58.57 315 *i P* **P 18 38 57.5 +0.6**
KKAR Karatay Array 58.57 315 P P 18 38 57.0 +0.2
KKAR Karatay Array 58.57 315 P P 18 38 57.1 +0.2
KKAR IAmb IAmb 18 38 58.5
comp=Z,64nm,0.8s
KKAR Karatay Array 58.57 315 P P 18 38 57.1 +0.2
KKAR pmax pmax
comp=Z,64nm,0.8s
IUG Iuzhnay 58.62 314*c iP* **P 18 38 58.1 +0.8**
IUG Iuzhnay 58.62 314⇑ *iP* **P 18 38 58.2 +0.8**
baz=314
TAS Tashkent 58.90 313 P P 18 38 59.7 +0.5
TAS Tashkent 58.90 313 P P 18 38 59.7 +0.5
TAS pmax pmax
comp=Z,73nm,0.8s
BRZS Berezniki 59.69 323*c iP* **P 18 39 04.3 -0.2**
BRZS pmax pmax
comp=Z,26nm,0.9s
BRZS Berezniki 59.69 323⇑ *iP* **P 18 39 04.3 -0.2**
comp=Z,26nm,0.9s,baz=323
BVAR Borovoye Array 62.24 326 LR LR 19 08 20.3
comp=Z,374nm,21.0s,baz=113,slow=38
BRVK Borovoye 62.31 326 P P 18 39 21.6 -0.5
BRVK Borovoye 62.31 326*c iP* **P 18 39 22.2 0.0**
BRVK pmax pmax
comp=Z,64nm,1.1s
BRVK Borovoye 62.31 326 P P 18 39 22.6 +0.4
BRVK Borovoye 62.31 326 P P 18 39 20.7 -1.4
BRVK sP **pP 18 39 36.0 +2.0**
TIXI Tiksi 62.56 1 P P 18 39 22.9 -0.6
comp=Z,23nm,0.9s,baz=90,slow=14,SNR=87
TIXI LR LR 19 06 32.2
comp=Z,464nm,21.9s,baz=181,slow=36
comp=Z,23nm,0.9s
TIXI Tiksi 62.56 1 P P 18 39 22.1 -1.4
TIXI IAmb IAmb 18 39 24.0
comp=Z,59nm,1.2s
TIXI Tiksi 62.56 1*c iP* **P 18 39 22.6 -0.9**
TIXI pmax pmax
comp=Z,36nm,1.1s
TIXI Tiksi 62.56 1 P P 18 39 21.2 -2.3
TIXI pP **pP 18 39 33.8 -1.7**
HRA Herat 62.91 304 P P 18 39 26.6 -0.3
HRA IAmb IAmb 18 39 29.3
comp=Z,31nm,0.9s
BILL Bilibino 64.76 16 P P 18 39 37.5 -0.6
BILL IAmb IAmb 18 39 40.5
comp=Z,28nm,0.8s
BILL Bilibino 64.76 16*d iP* **P 18 39 38.3 +0.2**
BILL *e* 18 40 11.7
BILL pmax pmax
comp=Z,26nm,1.0s
BILL MLR MLR
comp=Z,100nm,18.0s
BILL Bilibino 64.76 16 P P 18 39 37.7 -0.3
WBK Wadi Bani Khal 64.97 291 P P 18 39 40.0 -0.4
NRIK Noril'sk 65.00 346 P P 18 39 39.1 -0.5
comp=Z,30nm,0.7s,baz=120,slow=6.6,SNR=50
NRIK LR LR 19 08 49.2
comp=Z,396nm,21.8s,baz=148,slow=37
comp=Z,30nm,0.7s
NRIK Noril'sk 65.00 346 P P 18 39 38.5 -1.1
NRIK IAmb IAmb 18 39 40.1
comp=Z,35nm,0.8s
NRIK Noril'sk 65.00 346*c iP* **P 18 39 38.9 -0.7**
NRIK pmax pmax
comp=Z,35nm,0.9s
WSAR Wadi Sarin 65.29 291 LR LR 19 13 21.8
comp=Z,81nm,18.1s,baz=107,slow=41
BIDO Bidbid 65.76 292 P P 18 39 46.0 +0.6
SNR=8.1
JMDO Jabal Madar 65.77 290 P P 18 39 45.4 -0.1
SMDO Samad 65.83 291 P P 18 39 45.5 -0.4
MHTO MHTO 65.91 289 P P 18 39 45.5 -0.9
JASK Jask - Hormozg 66.03 294 P P 18 39 48.3 +1.2
SNR=5.7
AFI Afiamalu 66.27 110 LR LR 19 03 15.9
comp=Z,116nm,21.5s,baz=290,slow=31
RAO Raoul Island 66.45 127 LR LR 19 07 06.1
comp=Z,25nm,21.5s,baz=358,slow=34
HOQ Hoqain 66.50 292 P P 18 39 49.7 -0.5
BSY Bisya 66.61 291 P P 18 39 50.6 -0.3
GEYT Alibeck 66.68 307 P P 18 39 52.4 +1.3
comp=Z,37nm,0.9s,baz=143,slow=3.0,SNR=77
comp=Z,37nm,0.9s
GEYT Alibeck 66.68 307 P P 18 39 52.0 +0.9
GYA0B ALIBECK ARRAY 66.68 307 P P 18 39 51.6 +0.6
ARQ Araqi 67.23 291 P P 18 39 54.6 -0.3
URZ Urewera 67.26 138 LR LR 19 10 42.7
comp=Z,231nm,19.6s,baz=34,slow=37
AB31 Akbulak array 67.31 320 *i P* **P 18 39 54.3 -0.5**
ABKAR Akbulak array 67.31 320 P P 18 39 54.2 -0.5
ABKAR IAmb IAmb 18 39 56.0
comp=Z,25nm,0.8s
ABKAR Akbulak array 67.31 320 P P 18 39 54.4 -0.4
BKZ Black Stump Fm 67.35 139 P P 18 39 55.3 0.0
BANOM Banah 67.44 294 P P 18 39 56.1 -0.1
BANOM Banah 67.44 294 P P 18 39 56.1 -0.1
UOSS Minazif 67.52 293 P P 18 39 55.4 -1.3
UOSS Minazif 67.52 293 P P 18 39 56.3 -0.3
UOSS Minazif 67.52 293 P P 18 39 55.8 -0.8
MSFE Esma-Masafi 67.56 294 P P 18 39 57.3 +0.4
MASF Masafi 67.56 294 P P 18 39 58.4 +1.4
HATD Hatta, Dubai 67.58 293 P P 18 39 57.0 0.0
HATD Hatta, Dubai 67.58 293 *i P* **P 18 39 56.8 -0.3**
SNR=9.6
SHME Shamm 67.59 294 P P 18 39 57.4 +0.4
SHME Shamm 67.59 294 P P 18 39 57.1 +0.1
ASHO Ashiyiah 67.65 293 P P 18 39 57.1 -0.4
ASHO Ashiyiah 67.65 293 P P 18 39 56.8 -0.7
ALNE Al Ain 67.93 292 P P 18 39 59.5 +0.2
SNR=7.3
ALNE Al Ain 67.93 292 *i P* **P 18 39 59.3 0.0**
SNR=5.8
NAZ Nazwa, Dubai 68.01 293 P P 18 39 59.1 -0.6
UMQ Umm Al-Quwin 68.01 294 P P 18 40 00.9 +1.2
FAQ Al Faqa, Dubai 68.08 293 P P 18 39 59.8 -0.3
NIKH Nikolski High 68.21 36 P P 18 40 01.0 +0.5
baz=256
ASUD Al Ashush, Dub 68.32 293 P P 18 40 02.1 +0.5
ASUD Al Ashush, Dub 68.32 293 P P 18 40 01.9 +0.3
UMZA Um Al Zommool 68.49 291 P P 18 40 02.4 -0.3
SPIA Saint Paul Isl 68.59 32 P P 18 40 03.1 +0.4
baz=253
SVE Sverdlovsk 68.83 328*de*P **P 18 40 04.1 -0.1**
SVE pmax pmax
comp=Z,64nm,1.1s
SVE MLR MLR
comp=Z,378nm,20.0s
DMTO DMTO 68.87 285 P P 18 40 05.4 +0.3
RBK Rabkut 69.59 285 P P 18 40 09.8 +0.1
SNR=5.3
DOK Doka 69.60 286 P P 18 40 09.6 -0.1
SNR=6.5
MZWR Madinat Zayed 69.65 292 P P 18 40 10.1 +0.2
UNV Unalaska Valle 69.79 36 P P 18 40 08.6 -1.5
UNV Unalaska Valle 69.79 36 P P 18 40 10.6 +0.5
baz=257
ARU Arti 69.82 327 LR LR 19 13 00.1
comp=Z,488nm,20.7s,baz=101,slow=38
ARU Arti 69.82 327 P P 18 40 09.0 -1.3

ARU IAmb IAmb 18 40 11.0
comp=Z,25nm,0.7s
ARU Arti 69.82 327*c i*P **P** **18 40 09.6 -0.7**
ARU pmax pmax
comp=Z,18nm,0.8s
ARU Arti 69.82 327 P **P** **18 40 08.4 -2.0**
ARU pP **pP** **18 40 23.1 +0.8**
WHFO Wadi Hawf 69.98 286 P **P** **18 40 11.8 -0.3**
MZR Muzera 70.03 291 P **P** **18 40 12.6 +0.3**
SNR=5.9
MZR Muzera 70.03 291 *i* P **P** **18 40 12.3 0.0**
SNR=14
GAMB Gambell 70.07 25 P **P** **18 40 12.4 +0.7**
baz=249
ABTO Aybut 70.46 285 P **P** **18 40 15.2 +0.2**
SNR=5.3
GHWR Ruwais 70.56 292 P **P** **18 40 15.9 +0.4**
JRN Qarnain Island 70.57 293 P **P** **18 40 15.3 -0.2**
MSEY Mahe Island 71.13 262 P **P** **18 40 19.4 +0.2**
SLWR Sila 71.64 292 P **P** **18 40 22.8 +0.7**
FALS False Pass 71.76 35 P **P** **18 40 22.6 +0.5**
baz=260
TNA Tin City 72.19 24 P **P** **18 40 25.9 +1.4**
baz=252
SHMA Al-Shehemyia 72.25 294 P **P** **18 40 25.1 -0.5**
SMRA Abu-Samra 72.41 293 P **P** **18 40 26.5 -0.1**
SAKB Bahrain 72.63 294 P **P** **18 40 27.7 -0.3**
ANM Nome 72.95 25 P **P** **18 40 30.3 +1.2**
baz=255
SDPT Sand Point 73.51 35 P **P** **18 40 30.8 -1.7**
SDPT Sand Point 73.51 35 P **P** **18 40 33.0 +0.5**
baz=262
LKRN Lenkeran, Azer 74.06 308 P **P** **18 40 36.9 +0.8**
CHGN Chignik 74.78 34 P **P** **18 40 39.5 -0.4**
CHGN IAmb IAmb 18 40 43.7
comp=Z,51nm,0.7s
CHGN Chignik 74.78 34 P **P** **18 40 40.6 +0.7**
baz=263
KIRV Kirov 75.07 328 LR LR 19 16 44.9
comp=Z,692nm,19.7s,baz=102,slow=38
KIRV Kirov 75.07 328*c i*P **P** **18 40 40.9 -0.6**
MAK Makhachkala 75.12 312 *e*P **P** **18 40 40.6 -1.5**
MAK *e* 18 43 28.7
MAK *e*SS **S** **18 50 17.4 -0.3**
MAK *e*SS **SS** **18 55 07.0 -0.3**
MAK pmax pmax
comp=Z,580nm,1.7s
N16K Nishlik Lake 75.13 30 P **P** **18 40 43.5 +1.6**
baz=262
SEKA Sheki 75.31 310 P **P** **18 40 44.9 +1.5**
P16K Nushagak River 75.33 31 P **P** **18 40 44.4 +1.3**
baz=263
O16K Kokwok River B 75.35 31 P **P** **18 40 44.4 +1.3**
baz=263,SNR=28
MNGR Mingechevir, A 75.39 310 P **P** **18 40 44.7 +0.9**
BELG Belogornoye 75.49 322 LR LR 19 15 39.9
comp=Z,165nm,21.3s,baz=332,slow=37
BELG Belogornoye 75.49 322*c i*P **P** **18 40 43.4 -0.6**
BELG pmax pmax
comp=Z,13nm,0.9s
ZKTA Zakatala 75.75 311 P **P** **18 40 46.9 +1.0**
O17K Koliganek Bris 75.87 31 P **P** **18 40 47.5 +1.4**
baz=264,SNR=13
CASY Casey 75.94 186 P **P** **18 40 46.0 -0.3**
GANJ Ganja 75.97 310 P **P** **18 40 48.0 +0.8**
Q16K King Salmon 75.98 32 P **P** **18 40 47.4 +0.7**
baz=264
P17K Kvichak River 76.14 31 P **P** **18 40 48.6 +0.9**
baz=264
CHIR Chirikof Islan 76.30 35 P **P** **18 40 50.0 +1.4**
baz=266
Q17K Contact Creek 76.34 32 P **P** **18 40 48.9 -0.1**
baz=265,SNR=16
GROC Groznyy 76.37 312 *e*P **P** **18 40 49.3 0.0**
GROC *e* 18 43 41.2
GROC pmax pmax
comp=Z,92nm,0.7s
N18K Kilae Creek 76.56 30 P **P** **18 40 48.9 -1.1**
N18K IAmb IAmb 18 40 52.8
comp=Z,92nm,1.6s
N18K Kilae Creek 76.56 30 P **P** **18 40 51.4 +1.3**
baz=264,SNR=11
GCSA Galena City Sc 76.56 26 P **P** **18 40 51.0 +1.1**
baz=263
TTA Tatalina 76.73 27 P **P** **18 40 49.9 -1.2**
TTA Tatalina 76.73 27 P **P** **18 40 49.9 -1.2**
TTA pmax pmax
comp=Z,16nm,0.8s
TTA Tatalina 76.73 27 P **P** **18 40 52.1 +1.0**
baz=264
SVW2 Sparrevohn 76.75 29 P **P** **18 40 49.8 -1.3**
SVW2 IAmb IAmb 18 40 53.8
comp=Z,32nm,1.1s
P18K Big Mountain, 76.78 31 P **P** **18 40 51.5 +0.1**
baz=265
Q18K Koktuh Hills 76.83 31 P **P** **18 40 52.7 +1.1**
Q18K Koktuh Hills 76.83 31 P **P** **18 40 53.1 +1.5**
baz=265
Q18K Katmai Hardscr 76.83 32 P **P** **18 40 51.7 -0.1**
baz=266,SNR=6.7
SII Sitkinak Islan 77.14 34 P **P** **18 40 54.5 +1.1**
baz=267
GNI Garni 77.18 309 P **P** **18 40 54.9 +0.7**
GNI IAmb IAmb 18 41 04.0
comp=Z,30nm,0.8s
GNI Garni 77.18 309*ce*P **P** **18 40 55.3 +1.1**
GNI pmax pmax
comp=Z,41nm,1.3s
GNI Garni 77.18 309 P **P** **18 40 54.3 +0.1**
GNI Garni 77.18 309 P **P** **18 40 55.4 +1.2**
L19K White Mountain 77.19 28 P **P** **18 40 53.5 -0.2**
L19K IAmb IAmb 18 40 56.1
comp=Z,35nm,0.8s
L19K White Mountain 77.19 28 P **P** **18 40 54.9 +1.3**
baz=265,SNR=25
N19K Bonanza Creek 77.26 30 P **P** **18 40 54.4 +0.3**
N19K IAmb IAmb 18 40 56.8
comp=Z,44nm,0.9s
N19K Bonanza Creek 77.26 30 P **P** **18 40 55.5 +1.4**
baz=266,SNR=23
PRGR Permogore 77.27 331 *e*P **P** **18 40 49.8 -4.2**
PRGR pmax pmax
comp=Z,15nm,0.7s
RAYN Ar Rayn 77.33 292 P **P** **18 40 54.6 -0.6**
RAYN IAmb IAmb 18 40 56.3
comp=Z,27nm,0.8s
RAYN Ar Rayn 77.33 292 P **P** **18 40 54.6 -0.6**
RAYN pmax pmax
comp=Z,27nm,0.9s
RAYN Ar Rayn 77.33 292 P **P** **18 40 55.3 +0.1**
RAYN Ar Rayn 77.33 292 *i* P **P** **18 40 55.1 -0.1**
SNR=42
M19K Big River Lodg 77.39 29 P **P** **18 40 55.4 +0.7**
M19K Big River Lodg 77.39 29 P **P** **18 40 56.1 +1.4**
baz=266
Q19K Cape Douglas, 77.56 32 P **P** **18 40 55.8 0.0**
baz=267
K20K Telida 77.65 27 P **P** **18 40 57.6 +1.4**
baz=266
OHAK Old Harbor 77.67 33 P **P** **18 40 56.5 +0.3**
OHAK IAmb IAmb 18 40 57.9
comp=Z,44nm,0.9s
OHAK Old Harbor 77.67 33 P **P** **18 40 57.3 +1.0**
baz=268,SNR=8.7
L20K Farewell, AK 77.67 28 P **P** **18 40 57.5 +1.2**
baz=266,SNR=6.8
J20K Nowinta River 77.68 26 P **P** **18 40 55.7 -0.5**
J20K IAmb IAmb 18 40 58.9
comp=Z,91nm,1.6s
J20K Nowinta River 77.68 26 P **P** **18 40 57.6 +1.3**
baz=265,SNR=21
ZEI Tsey 77.77 312 *e*P **P** **18 40 56.1 -1.4**
ZEI pmax pmax
comp=Z,71nm,1.3s
P19K Oil Pt 77.81 31 P **P** **18 40 56.0 -1.2**
P19K Oil Pt 77.81 31 P **P** **18 40 58.3 +1.2**
baz=267
M20K Styx River 77.98 29 P **P** **18 40 59.0 +0.9**
baz=267
IMAR Indian Mountai 78.00 24 P **P** **18 40 58.2 +0.2**
KDAK Kodiak Island 78.07 33 P **P** **18 40 59.5 +1.0**
comp=Z,30nm,0.6s,baz=277,slow=4.4,SNR=39
KDAK LR LR 19 11 56.0
comp=Z,69nm,21.8s,baz=267,slow=33
comp=Z,30nm,0.6s
KDAK Kodiak Island 78.07 33 P **P** **18 40 57.0 -1.5**

KDAK Kodiak Island 78.07 33 P **P** **18 40 59.4 +0.8**
baz=268
RSO Redoubt South 78.09 30 P **P** **18 40 58.2 -0.7**
ONI Oni 78.10 312 P **P** **18 40 59.1 0.0**
ONI IAmb IAmb 18 41 02.5
comp=Z,55nm,1.3s
ONI Oni 78.10 312 P **P** **18 40 59.1 0.0**
ONI pmax pmax
comp=Z,55nm,1.3s
O20K Slope Mountain 78.14 30 P **P** **18 40 59.0 0.0**
baz=268
G21K Allakaket 78.14 24 P **P** **18 41 00.2 +1.3**
baz=265,SNR=38
Q20K Shuyak Island 78.20 32 P **P** **18 40 59.8 +0.6**
baz=268
F21K Alatna River 78.21 23 P **P** **18 40 60.0 +0.8**
baz=265
GOF Gofitskoye 78.34 314⇑ *e*P **P** **18 41 01.0 +0.7**
H21K Melozitna Rive 78.36 25 P **P** **18 41 01.1 +1.0**
H21K IAmb IAmb 18 41 02.6
comp=Z,38nm,0.9s
H21K Melozitna Rive 78.36 25 P **P** **18 41 01.4 +1.3**
baz=266,SNR=30
SPCR Spurr Chakacha 78.39 29 P **P** **18 41 00.7 +0.3**
baz=268
N20K Mount Spurr 78.39 29 P **P** **18 41 00.9 +0.5**
baz=268,SNR=7.7
KARS Kars 78.44 310 P **P** **18 41 01.4 +0.3**
KARS Kars 78.44 310 P **P** **18 41 01.4 +0.3**
KARS pmax pmax
comp=Z,184nm,1.0s
SPU Mount Spurr 78.47 29 P **P** **18 41 00.6 -0.1**
CHUM Lake Minchumin 78.47 27 P **P** **18 41 01.9 +1.3**
baz=267
PPLA Purkeypile 78.47 28 P **P** **18 41 01.4 +0.5**
PPLA IAmb IAmb 18 41 02.9
comp=Z,21nm,0.8s
PPLA Purkeypile 78.47 28 P **P** **18 41 01.6 +0.8**
baz=267,SNR=7.8
KBZ Khabaz 78.48 313 P **P** **18 41 01.2 +0.2**
comp=Z,21nm,0.9s,baz=108,slow=2.0,SNR=22
comp=Z,21nm,0.9s
KBZ Khabaz 78.48 313*c i*P **P** **18 41 01.2 +0.2**
KBZ pmax pmax
comp=Z,32nm,1.0s
CAST Castle Rocks 78.55 27 P **P** **18 41 01.1 0.0**
CAST Castle Rocks 78.55 27 P **P** **18 41 02.2 +1.0**
baz=267,SNR=57
GEVA Gevas 78.55 307 P **P** **18 41 01.9 0.0**
KVAR Kislovodsk Arr 78.62 313 LR LR 19 20 09.3
comp=Z,229nm,21.5s,baz=268,slow=39
HOM Homer 78.62 31 P **P** **18 41 02.5 +1.0**
baz=268
KIV Kislovodsk 78.62 313 P **P** **18 41 01.8 -0.3**
KIV IAmb IAmb 18 41 04.2
comp=Z,48nm,0.8s
KIV Kislovodsk 78.62 313 *e*P **P** **18 41 02.7 +0.7**
KIV pmax pmax
comp=Z,63nm,1.0s
KIV MLR MLR
comp=Z,189nm,18.0s
KIV Kislovodsk 78.62 313 P **P** **18 41 02.1 0.0**
KIV Kislovodsk 78.62 313 *i* P **P** **18 41 02.2 +0.1**
SNR=5.5
I21K Tanana 78.68 25 P **P** **18 41 01.5 -0.3**
I21K IAmb IAmb 18 41 04.3
comp=Z,51nm,0.8s
I21K Tanana 78.68 25 P **P** **18 41 03.2 +1.5**
baz=267,SNR=12
F22K John River 78.73 23 P **P** **18 41 03.3 +1.2**
baz=266
SKT Skwentna 78.74 29 IAmb IAmb 18 41 03.4
comp=Z,36nm,1.0s
SKT Skwentna 78.74 29 P **P** **18 41 02.3 +0.1**
baz=268,SNR=16
CAPN Captain Cook N 78.89 30 P **P** **18 41 04.3 +1.3**
baz=269
G22K Bettles 78.96 23 P **P** **18 41 04.1 +0.8**
baz=267
H22K Ishtalitna Cre 78.97 25 P **P** **18 41 04.9 +1.6**
baz=267,SNR=31
BRLK Bradley Lake 79.00 31 IAmb IAmb 18 41 07.0
comp=Z,50nm,1.0s
BPAW Bear Paw Mtn. 79.06 26 P **P** **18 41 05.0 +1.0**
baz=268,SNR=13
BRSE Bradley Lake S 79.08 31 P **P** **18 41 04.2 +0.1**
baz=269,SNR=13
SUA Susitna One 79.10 29 IAmb IAmb 18 41 05.5
comp=Z,53nm,0.9s
SUA Susitna One 79.10 29 P **P** **18 41 04.5 +0.2**
baz=269,SNR=34
VRH Novokhopyorsk 79.12 320 *e*P **P** **18 41 03.4 -1.0**
VRH pmax pmax
comp=Z,80nm,0.8s
MLY Manley 79.20 25 IAmb IAmb 18 41 06.8
comp=Z,40nm,0.7s
MLY Manley 79.20 25 P **P** **18 41 05.8 +1.1**
baz=268,SNR=30
RAR Rarotonga 79.24 114 LR LR 19 11 59.9
comp=Z,68nm,18.4s,baz=300,slow=32
GURO Guroymak-BITLI 79.34 308 IAmb IAmb 18 41 08.7
comp=Z,60nm,0.8s
TRF Thorofare Moun 79.36 27 IAmb IAmb 18 41 07.2
comp=Z,39nm,0.8s
TRF Thorofare Moun 79.36 27 P **P** **18 41 06.2 +0.5**
baz=269,SNR=23
D23K Nanushuk River 79.37 21 P **P** **18 41 07.0 +1.5**
baz=267,SNR=11
M22K Willow 79.41 29 P **P** **18 41 05.0 -0.8**
M22K Willow 79.41 29 P **P** **18 41 05.5 -0.2**
baz=269
C23K Itkillik River 79.43 21 P **P** **18 41 07.0 +1.2**
baz=267,SNR=13
G23K Bananza Creek 79.54 24 P **P** **18 41 08.1 +1.5**
baz=268,SNR=18
RC01 Rabbit Creek A 79.59 29 IAmb IAmb 18 41 07.9
comp=Z,52nm,1.2s
RC01 Rabbit Creek A 79.59 29 P **P** **18 41 06.8 0.0**
baz=270,SNR=8.9
O22K Cooper Landing 79.59 30 P **P** **18 41 07.2 +0.4**
baz=270,SNR=7.2
H23K Yukon River 79.72 25 IAmb IAmb 18 41 10.1
comp=Z,28nm,0.9s
H23K Yukon River 79.72 25 P **P** **18 41 08.9 +1.4**
baz=269,SNR=16
SEW Seward 79.73 30 P **P** **18 41 07.6 0.0**
SEW IAmb IAmb 18 41 09.0
comp=Z,39nm,0.8s
SEW Seward 79.73 30 P **P** **18 41 07.9 +0.3**
baz=270,SNR=8.8
E23K Chandalar 79.73 22 P **P** **18 41 09.2 +1.6**
baz=269,SNR=23
TOLK Toolik Lake Re 79.76 22 IAmb IAmb 18 41 09.7
comp=Z,33nm,0.8s
TOLK Toolik Lake Re 79.76 22 P **P** **18 41 08.9 +1.2**
baz=268,SNR=15
I23K Minto, Yukon-K 79.78 25 IAmb IAmb 18 41 10.9
comp=Z,32nm,0.8s
I23K Minto, Yukon-K 79.78 25 P **P** **18 41 08.8 +1.1**
baz=269,SNR=26
PMR Palmer 79.88 29 IAmb IAmb 18 41 09.5
comp=Z,51nm,0.8s
PMR Palmer 79.88 29 P **P** **18 41 08.5 +0.2**
baz=270,SNR=6.6
NEA2 Nenana 79.91 26 IAmb IAmb 18 41 10.4
comp=Z,42nm,0.8s
NEA2 Nenana 79.91 26 P **P** **18 41 09.3 +0.8**
baz=270,SNR=22
MCK McKinley 79.96 27 P **P** **18 41 09.2 +0.3**
baz=270,SNR=50
RND Reindeer 80.00 27 IAmb IAmb 18 41 10.2
comp=Z,84nm,1.5s
D24K Happy Valley 80.04 21 P **P** **18 41 10.7 +1.5**
baz=269
C24K Franklin Bluff 80.09 21 P **P** **18 41 10.5 +1.1**
baz=269
WAT1 Susitna Watana 80.14 28 P **P** **18 41 09.9 +0.1**
baz=270
E24K Your Creek 80.16 22 P **P** **18 41 11.2 +1.3**
baz=270,SNR=16
KLMR Klimovskoe 80.20 330 *e*P **P** **18 41 07.5 -2.6**
KLMR pmax pmax
comp=Z,70nm,1.4s
KLMR MLR MLR
comp=Z,333nm,17.0s
KLMR Klimovskoe 80.20 330 *e*P **P** **18 41 07.5 -2.6**
KLMR AMP 18 41 11.6
comp=Z,70nm,1.4s
KLMR *e*PP **PP** **18 44 05.4 -7.3**
KLMR LR LR 19 12 46.4
KLMR AMP 19 19 38.2
comp=Z,333nm,17.2s
KNK Knik Glacier 80.20 29 P **P** **18 41 09.8 -0.4**
KNK Knik Glacier 80.20 29 P **P** **18 41 10.9 +0.7**
baz=271,SNR=28
SML Sawmill 80.26 29 P **P** **18 41 11.2 +0.7**
baz=271,SNR=25
PWL Port Wells 80.27 30 P **P** **18 41 11.2 +0.7**
baz=271,SNR=56
WRH Wood River Hil 80.33 26 P **P** **18 41 10.1 -0.6**
WRH IAmb IAmb 18 41 12.2
comp=Z,54nm,1.4s
F24K Squaw Lake 80.39 23 P **P** **18 41 12.7 +1.6**
baz=270,SNR=27
H24K Noodor Dome 80.40 25 IAmb IAmb 18 41 13.6
comp=Z,18nm,0.8s
H24K Noodor Dome 80.40 25 P **P** **18 41 12.4 +1.1**
baz=271,SNR=20
MARD Mardin 80.41 306 IAmb IAmb 18 41 14.2
comp=Z,19nm,0.6s
TCOL CIGO, UAF Yank 80.42 26 P **P** **18 41 10.5 -0.7**
baz=271
COLA College 80.43 26⇑ *e*P **P** **18 41 11.2 0.0**
COLA pmax pmax
comp=Z,11nm,0.7s
COLA College 80.43 26 P **P** **18 41 10.5 -0.7**
baz=271
KOPT Kop Dagi 80.44 309 IAmb IAmb 18 41 14.9
comp=Z,87nm,1.3s
CCB Clear Creek Bu 80.45 26 IAmb IAmb 18 41 12.6
comp=Z,17nm,0.6s
WAT6 Susitna Watana 80.52 28 P **P** **18 41 12.5 +0.5**
baz=271,SNR=26
M23K Glacier View 80.55 29 P **P** **18 41 12.5 +0.5**
baz=271,SNR=25
G24K Hadweenzic Riv 80.55 24 P **P** **18 41 13.4 +1.5**
baz=271,SNR=8.9
POKR Poker Plat Res 80.60 25 P **P** **18 41 11.6 -0.6**
POKR Poker Plat Res 80.60 25 P **P** **18 41 13.7 +1.4**
baz=271,SNR=7.3
DHY Denali Highway 80.67 27 IAmb IAmb 18 41 16.2
comp=Z,24nm,0.8s
DHY Denali Highway 80.67 27 P **P** **18 41 13.0 +0.2**
baz=272,SNR=25
VORR Voronezh 80.67 321⇓ *i*P **P** **18 41 12.9 0.0**
VORR pmax pmax
comp=Z,55nm,1.5s
VSR Storozhevoye 80.72 321 *e*P **P** **18 41 11.7 -1.4**
VSR pmax pmax
comp=Z,30nm,0.7s
SCM Sheep Creek Mo 80.73 29 P **P** **18 41 13.8 +0.7**
baz=272,SNR=24
P23K Montague Islan 80.76 31 P **P** **18 41 14.1 +0.9**
baz=272
LPSR Galich'ya Gora 80.80 322 *e*P **P** **18 41 13.0 -0.5**
LPSR pmax pmax
comp=Z,70nm,0.8s
HDA Harding Lake 80.83 26 IAmb IAmb 18 41 13.9
comp=Z,35nm,0.6s
HDA Harding Lake 80.83 26 P **P** **18 41 13.1 -0.3**
baz=272,SNR=30
ILAR Eielson Array 80.84 26 P **P** **18 41 12.9 -0.5**
comp=Z,11nm,0.7s,baz=241,slow=4.8,SNR=86
ILAR LR LR 19 15 43.8
comp=Z,123nm,22.0s,baz=266,slow=35
comp=Z,11nm,0.7s
ILAR Eielson Array 80.84 26 P **P** **18 41 12.2 -1.3**
ILAR Eielson Array 80.84 26 P **P** **18 41 13.0 -0.5**
GLI Glacier Island 80.88 30 P **P** **18 41 14.4 +0.6**
baz=272,SNR=24
D25K Kavik River 80.92 21 P **P** **18 41 15.1 +1.2**
baz=271,SNR=9.7
G25K Bearman Lake 81.10 24 P **P** **18 41 16.4 +1.6**
baz=272,SNR=7.3
FID Port Fidalgo 81.19 30 IAmb IAmb 18 41 17.2
comp=Z,32nm,0.7s
H25K Birch Creek 81.23 24 P **P** **18 41 17.1 +1.6**
baz=272,SNR=12
F25K Christian Rive 81.24 23 P **P** **18 41 17.5 +1.8**
baz=272,SNR=16
E25K Arctic Village 81.25 22 P **P** **18 41 17.2 +1.5**
baz=272,SNR=15
M24K Tolsona, Glenn 81.27 28 P **P** **18 41 17.2 +1.3**
baz=273,SNR=17
Q23K Middleton Isla 81.32 31 P **P** **18 41 17.3 +1.2**
baz=273
K24K Donnelly Dome 81.36 27 P **P** **18 41 16.7 +0.4**
baz=273,SNR=11
PRP Porcupine Dome 81.39 25 P **P** **18 41 17.3 +0.7**
baz=273
MOS Moscow 81.40 325 *e*P **P** **18 41 15.3 -1.3**
MOS *e* 18 41 27.7
MOS pmax pmax
comp=Z,47nm,0.7s
C26K Camden Bay 81.41 20 P **P** **18 41 18.4 +2.0**
baz=273
KLU Klutina 81.42 29 P **P** **18 41 15.9 -0.8**
KLU IAmb IAmb 18 41 18.3
comp=Z,20nm,0.8s
KLU Klutina 81.42 29 P **P** **18 41 17.7 +0.9**
baz=273,SNR=11
FYU Fort Yukon 81.45 24 IAmb IAmb 18 41 19.5
comp=Z,119nm,1.8s
J25K Salcha River, 81.50 26 P **P** **18 41 16.5 -0.6**
baz=273,SNR=12
DIV Divide 81.51 29 IAmb IAmb 18 41 19.5
comp=Z,56nm,0.9s
PAX Paxson 81.55 28 P **P** **18 41 18.5 +1.1**
baz=273,SNR=24
EYAK Cordova Ski Ar 81.56 30 IAmb IAmb 18 41 19.7
comp=Z,24nm,0.9s
EYAK Cordova Ski Ar 81.56 30 P **P** **18 41 18.6 +1.3**
baz=273
BMAR Burnt Mountain 81.66 23 P **P** **18 41 18.6 +0.7**
HARP HAARP 81.73 28 P **P** **18 41 19.5 +1.3**
baz=274
RIDG Independent Ri 81.78 27 P **P** **18 41 17.9 -0.7**
RIDG Independent Ri 81.78 27 P **P** **18 41 19.3 +0.7**
baz=274,SNR=24
F26K Sheenjek River 81.81 23 P **P** **18 41 20.6 +1.9**
baz=274,SNR=6.6
C27K Jago River 81.84 21 P **P** **18 41 20.4 +1.6**
baz=274,SNR=8.0
G26K Porcupine Rive 82.00 23 P **P** **18 41 21.3 +1.7**
baz=274,SNR=12
OBN Obninsk 82.04 325 LR LR 19 19 40.7
comp=Z,60nm,20.4s,baz=88,slow=37
OBN Obninsk 82.04 325 P **P** **18 41 18.9 -1.1**
OBN IAmb IAmb 18 41 20.6
comp=Z,40nm,1.0s
OBN Obninsk 82.04 325*c i*P **P** **18 41 18.8 -1.2**
OBN *i* 18 44 30.2
OBN *e*S **S** **18 51 26.7 -4.6**
OBN *e*SS **SS** **18 56 55.1 +4.4**
OBN pmax pmax
comp=Z,33nm,1.1s
OBN MLR MLR
comp=Z,250nm,19.0s
N25K Chitina, Valde 82.04 29 IAmb IAmb 18 41 22.5
comp=Z,55nm,1.3s
N25K Chitina, Valde 82.04 29 P **P** **18 41 21.2 +1.2**
baz=274,SNR=18
BMRM Bremner River 82.09 30 IAmb IAmb 18 41 22.4
comp=Z,48nm,1.0s
BMRM Bremner River 82.09 30 P **P** **18 41 21.2 +0.9**
baz=274,SNR=8.6
RAGM Ragged Mountai 82.10 30 IAmb IAmb 18 41 23.7
comp=Z,36nm,0.9s
DOT Dot Lake 82.14 27 IAmb IAmb 18 41 22.1
comp=Z,35nm,1.0s
SCRK Sand Creek 82.14 26 IAmb IAmb 18 41 22.5
comp=Z,64nm,1.5s
SCRK Sand Creek 82.14 26 P **P** **18 41 21.2 +0.6**
baz=274,SNR=30
KAIM Kayak Island 82.26 31 P **P** **18 41 22.7 +1.6**
baz=275
J26L Joseph Creek 82.29 26 P **P** **18 41 21.7 +0.4**
baz=275,SNR=19
ANN Anapa 82.33 314 *e*P **P** **18 41 20.8 -1.0**
ANN *e* 18 51 43.3
ANN pmax pmax
comp=Z,136nm,1.1s
MENT Mentasta 82.35 27 IAmb IAmb 18 41 23.8
comp=Z,34nm,0.8s

I26K Coal Creek Min 82.39 25 P P 18 41 21.2 -0.5
I26K IAmb IAmb 18 41 25.0
comp=Z,28nm,0.8s
I26K Coal Creek Min 82.39 25 P P 18 41 22.3 +0.6
baz=275,SNR=24
APA Apatity 82.50 337⇓ *i* P P 18 41 21.0 -1.2
APA pmax pmax
comp=Z,11nm,1.0s
L26K Log Cabin Wild 82.51 27 IAmb IAmb 18 41 24.7
comp=Z,30nm,0.8s
L26K Log Cabin Wild 82.51 27 P P 18 41 23.8 +1.4
baz=275,SNR=18
BERG Berg Lake 82.58 30 IAmb IAmb 18 41 25.2
comp=Z,50nm,0.9s
VRDI Verde Repeater 82.62 29 IAmb IAmb 18 41 25.2
comp=Z,28nm,0.9s
E27K Coleen River 82.73 22 P P 18 41 25.1 +1.7
baz=276,SNR=12
M26K Nabesna, AK 82.73 28 IAmb IAmb 18 41 25.9
comp=Z,30nm,0.9s
M26K Nabesna, AK 82.73 28 P P 18 41 24.8 +1.2
baz=276,SNR=16
MCARA McCarthy VSAT 82.81 29 IAmb IAmb 18 41 38.1
comp=Z,20nm,0.8s
MCARA McCarthy VSAT 82.81 29 P P 18 41 25.3 +1.3
baz=276,SNR=5.6
G27K Doyon Strip 82.85 23 P P 18 41 25.9 +1.8
baz=276,SNR=9.1
H27K Steamboat Moun 82.97 24 P P 18 41 26.6 +1.9
baz=276,SNR=13
TGL Tana Glacier 82.97 30 P P 18 41 25.5 +0.6
TGL IAmb IAmb 18 41 27.1
comp=Z,38nm,0.8s
K27K Chicken 82.98 26 IAmb IAmb 18 41 27.9
comp=Z,53nm,0.9s
K27K Chicken 82.98 26 P P 18 41 26.7 +2.0
baz=276
I27K Kandik River 83.00 25 P P 18 41 26.7 +1.7
baz=276,SNR=73
SNH Sunshine Point 83.03 30 IAmb IAmb 18 41 28.0
comp=Z,55nm,0.9s
L27K Beaver Creek, 83.19 27 IAmb IAmb 18 41 28.7
comp=Z,24nm,0.8s
L27K Beaver Creek, 83.19 27 P P 18 41 27.6 +1.6
baz=276,SNR=22
ISLE Juniper Island 83.23 30 P P 18 41 26.6 +0.3
ISLE IAmb IAmb 18 41 28.5
comp=Z,21nm,0.8s
M27K Edge Creek, AK 83.25 28 IAmb IAmb 18 41 28.9
comp=Z,26nm,0.9s
M27K Edge Creek, AK 83.25 28 P P 18 41 27.8 +1.4
baz=276
EGAK Eagle 83.29 26 P P 18 41 27.4 +1.1
baz=277,SNR=7.6
MESA MESA 83.47 30 P P 18 41 28.8 +1.2
baz=277
YAH Yahtse 83.55 30 IAmb IAmb 18 41 30.4
comp=Z,34nm,0.8s
CTG Chitna Glacier 83.67 29 P P 18 41 30.6 +2.0
baz=277,SNR=36
BVCY Beaver Creek 83.72 28 P P 18 41 30.4 +1.8
baz=277,SNR=12
YUK3 Moose Creek 83.99 28 P P 18 41 31.8 +1.6
baz=278,SNR=9.7
DAWY Dawson 84.14 26 P P 18 41 31.7 +0.9
DAWY Dawson 84.14 26 P P 18 41 32.2 +1.4
baz=278,SNR=22
O28M Mount Upton 84.26 29 P P 18 41 33.4 +1.6
baz=278,SNR=28
PINM Pinnacle 84.32 30 P P 18 41 33.5 +1.6
baz=278,SNR=12
YUK8 Steele Glacier 84.39 29 P P 18 41 34.3 +2.0
baz=278,SNR=18
I29M Ogilvie Camp, 84.40 25 P P 18 41 33.4 +1.3
baz=279,SNR=50
MSF Maaselka 84.44 336 P P 18 41 32.1 -0.1
MSF pmax pmax
comp=Z,26nm,1.2s
J29M Klondike Camp 84.59 26 P P 18 41 34.8 +1.8
baz=280
BCPM Bancas Point 84.65 30 IAmb IAmb 18 41 36.2
comp=Z,36nm,1.0s
SIM Simferopol' 84.66 315 *e*P P 18 41 33.9 +0.1
SIM pmax pmax
comp=Z,98nm,1.0s
SIM MLR MLR
comp=Z,107nm,21.0s
PNL Peninsula 84.81 31 P P 18 41 36.0 +1.7
baz=279,SNR=7.5
M29M Somme Creek 84.81 28 P P 18 41 36.3 +2.0
baz=280,SNR=48
L29M L29M 84.85 27 P P 18 41 36.6 +2.2
baz=280,SNR=68
EPYK Eagle Plains 84.87 24 P P 18 41 35.2 +0.8
baz=281,SNR=32
YUK4 Talbot Arm 84.91 29 P P 18 41 36.7 +1.8
baz=280,SNR=8.0
G30M tAoh Zraii Nji 84.95 23 P P 18 41 35.2 +0.5
baz=281,SNR=21
K29M Barlow Dome 85.00 26 P P 18 41 36.8 +1.6
baz=280,SNR=34
SPITS Spitsbergen Ar 85.05 349 LR LR 19 25 25.4
comp=Z,206nm,18.4s,baz=41,slow=40
ARA0 ARCESS Array S 85.06 340 *e*P P 18 41 35.3 +0.1
ARCES ARCESS Array B 85.06 340 P P 18 41 35.1 -0.2
comp=Z,1.4nm,0.4s,baz=91,slow=4.9,SNR=28
ARCES LR LR 19 24 15.6
comp=Z,175nm,18.8s,baz=89,slow=39
comp=Z,1.4nm,0.4s
YUK6 Outpost Mounta 85.11 29 P P 18 41 37.7 +1.7
baz=280,SNR=7.1
O29M Mount Kennedy 85.12 30 P P 18 41 37.6 +1.7
baz=280,SNR=5.9
GHAJ Ghor Haditha 85.32 301 P P 18 41 37.3 0.0
GHAJ IAmb IAmb 18 41 38.4
comp=Z,16nm,0.8s
HAMF Hammerfest 85.41 341 *e*P P 18 41 37.0 +0.1
HYT Haines Junctio 85.55 29 IAmb IAmb 18 41 40.8
comp=Z,32nm,0.9s
HYT Haines Junctio 85.55 29 P P 18 41 39.5 +1.5
baz=280,SNR=18
N30M Aishikik Lake 85.63 29 P P 18 41 40.0 +1.6
baz=281,SNR=16
P29M Windy Craggy 85.65 30 IAmb IAmb 18 41 41.5
comp=Z,32nm,0.9s
P29M Windy Craggy 85.65 30 P P 18 41 40.2 +1.8
baz=280,SNR=8.0
INK Inuvik 85.67 21 P P 18 41 38.5 +0.3
comp=Z,43nm,1.1s,baz=275,slow=5.6,SNR=30
comp=Z,43nm,1.1s
INK Inuvik 85.67 21 IAmb IAmb 18 41 40.0
comp=Z,42nm,1.0s
INK Inuvik 85.67 21 P P 18 41 38.9 +0.6
baz=283,SNR=20
BR131 Keskin Array S 85.72 309 IAmb IAmb 18 41 40.2
comp=Z,17nm,1.0s
BR131 Keskin Array S 85.72 309⇑ *e*P P 18 41 38.5 -0.9
BRTR Keskin Array B 85.72 309 P P 18 41 38.9 -0.5
comp=Z,6.7nm,0.8s,baz=117,slow=3.6,SNR=30
comp=Z,6.7nm,0.8s
F31M Tsiigehtchic 85.79 22 P P 18 41 39.2 +0.3
baz=283,SNR=16
P30M Million Dollar 85.94 30 P P 18 41 41.6 +1.7
baz=281
KTK1 Kautokeino 85.97 339 *e*P P 18 41 41.1 +1.4
EIL Elat 86.07 299 LR LR 19 26 08.0
comp=Z,123nm,20.6s,baz=59,slow=40
N31M Braeburn, Yuko 86.24 28 P P 18 41 43.0 +1.7
baz=282,SNR=5.1
O30N Mendenhall 86.24 29 P P 18 41 42.9 +1.6
baz=282,SNR=9.6
PLBC Pleasant Camp 86.37 30 P P 18 41 43.4 +1.5
baz=282
FIA1 FINESS Array S 86.59 332 P P 18 41 42.3 -0.7
FIA1 IAmb IAmb 18 41 43.5
comp=Z,63nm,1.6s
FINES FINESS Array B 86.59 332 P P 18 41 42.5 -0.5
comp=Z,7.8nm,0.8s,baz=78,slow=4.8,SNR=32
FINES LR LR 19 24 55.5
comp=Z,242nm,19.7s,baz=86,slow=39
comp=Z,7.8nm,0.8s
CSS Mathiatis 86.66 305 IAmb IAmb 18 41 47.0
comp=Z,23nm,0.8s
M31M Drury Creek, Y 86.73 28 IAmb IAmb 18 41 46.0
comp=Z,15nm,0.8s
M31M Drury Creek, Y 86.73 28 P P 18 41 45.0 +1.3
baz=283,SNR=11
S31K Pelican 86.74 32 P P 18 41 44.9 +1.2
baz=282
JETT Jettan, Norway 86.79 340 *e*P P 18 41 43.4 -0.4
WHY Whitehorse 86.84 29 IAmb IAmb 18 41 47.2
comp=Z,26nm,0.8s
WHY Whitehorse 86.84 29 P P 18 41 45.8 +1.4
baz=283,SNR=14
SKAG Skagway 86.89 30 P P 18 41 46.1 +1.7
baz=282
VSU Vasula 86.91 329 *c*eP P 18 41 43.5 -1.1
VSU pmax pmax
comp=Z,38nm,0.9s
VSU Vasula 86.91 329 *e*P P 18 41 44.0 -0.5
AKASG Malin Array Be 87.02 321 P P 18 41 44.2 -1.1
comp=Z,15nm,1.0s,baz=64,slow=5.1,SNR=60
AKASG LR LR 19 25 45.7
comp=Z,146nm,19.0s,baz=73,slow=39
comp=Z,15nm,1.0s
AKASG Malin Array Be 87.02 321 IAmb IAmb 18 41 46.1
comp=Z,58nm,1.6s
AKBB Malin Array Si 87.02 321 IAmb IAmb 18 41 46.6
comp=Z,47nm,1.2s
AKBB Malin Array Si 87.02 321 *c*eP P 18 41 44.3 -1.0
MNK Minsk 87.10 325 *d*iP P 18 41 45.0 -0.6
MNK Minsk 87.10 325 *i* P P 18 41 45.0 -0.6
comp=E,2.0nm,0.8s
MNK *i* P P 18 41 45.0 -0.6
comp=N,21nm,0.9s
MNK *i* P P 18 41 45.0 -0.6
comp=Z,14nm,0.8s,baz=78
MNK *i* PPP PPP 18 47 03.6
MNK *i* S S 18 52 09.0 -13
MNK *i* LQ LQ 19 14 12.4
MNK *i* LR LR 19 16 42.6
MNK *i* LRM MLR 19 22 04.3
comp=Z,204nm,19.3s
MNK *i* LRM MLR 19 22 43.5
comp=E,29nm,19.3s
MNK *i* LRM MLR 19 22 58.6
comp=N,238nm,19.5s
FARO Faro, Yukon 87.19 27 P P 18 41 45.8 -0.2
FARO IAmb IAmb 18 41 48.6
comp=Z,29nm,0.8s
FARO Faro, Yukon 87.19 27 P P 18 41 47.4 +1.4
baz=284,SNR=17
A36M Sachs Harbour 87.28 17 P P 18 41 47.0 +0.9
baz=291
N32M Quiet Lake 87.58 28 P P 18 41 48.9 +1.0
baz=284
NACGM Naroch 87.64 325 *e*P P 18 41 48.4 +0.1
baz=77
MEF Metsahovi 87.68 331 *e*P P 18 41 48.0 -0.2
NOR Nord 87.70 355 *i* P P 18 41 47.7 -0.4
NOR IAmb IAmb 18 41 48.4
comp=Z,35nm,1.8s
PPT Papeete 87.90 108 LR LR 19 12 19.7
comp=Z,82nm,21.8s,baz=319,slow=30
PPT2 Papeete2 87.90 108 *e*LR LR 19 09 44.6
comp=Z,182nm,24.2s
P33M Teslin, Yukon 87.94 29 P P 18 41 50.4 +0.7
baz=285
MMPY Sheldon Lake, 88.03 27 P P 18 41 50.9 +0.9
baz=286
MAW Mawson 88.32 200 P P 18 41 50.8 -0.2
comp=Z,1.8nm,0.7s,baz=48,slow=9.3,SNR=4.6
comp=Z,1.8nm,0.7s
TLCR 88.33 315 ⇑P P 18 41 52.4 +0.7
TLCR 88.33 315 ⇑P P 18 41 52.4 +0.7
MTSE Matsula 88.34 329 *e*P P 18 41 50.9 -0.5
JURR Julimovca 88.37 315 ⇓P P 18 42 09.2 +17
KMBO Kilima Mbogo 88.46 269 P P 18 41 52.2 -1.0
comp=Z,0.2nm,0.6s,baz=332,slow=24,SNR=4.1
KMBO Kilima Mbogo 88.46 269 P P 18 41 52.5 -0.8
Q32M Nakina River 88.53 30 P P 18 41 53.2 +0.5
baz=285
C36M Paulatuk 88.62 19 P P 18 41 52.6 +0.1
baz=292
RAF Rauma 88.72 332 *e*P P 18 41 52.4 -0.7
VNDA Vanda 88.83 173 P P 18 41 54.0 +0.7
comp=Z,7.8nm,0.7s,baz=316,slow=6.2,SNR=92
VNDA LR LR 19 21 53.5
comp=Z,70nm,21.5s,baz=350,slow=36
comp=Z,7.8nm,0.7s
VNDA Vanda 88.83 173 P P 18 41 53.2 -0.1
VNDA IAmb IAmb 18 41 54.9
comp=Z,9.0nm,0.8s
TBI Tubuai 89.02 114 *e*LR LR 19 10 15.8
comp=Z,200nm,24.8s
R33M Jennings River 89.06 30 P P 18 41 55.9 +0.8
baz=286
PABE Paberze 89.07 326 IAmb IAmb 18 41 54.7
comp=Z,32nm,1.1s
PABE Paberze 89.07 326 *e*P P 18 41 54.6 -0.3
STEI Steigen 89.11 339 *e*P P 18 41 53.2 -1.6
WRAK Wrangell Islan 89.16 33 P P 18 41 56.3 +1.0
baz=285
DRBR Darabani 89.20 319 ⇑P P 18 42 03.6 +7.9
FAUS Fauske 89.30 339 *e*P P 18 41 54.5 -1.3
S34M Telegraph Cree 89.39 31 P P 18 41 57.4 +1.0
baz=286
EUNU Eureka 89.52 5 IAmb IAmb 18 41 58.0
comp=Z,26nm,1.1s
TESR Tescani 89.54 317 ⇑P P 18 41 57.5 +0.1
VRI Vrincioaia 89.63 316 ⇑P P 18 41 58.5 +0.6
VRI Vrincioaia 89.63 316 ⇑P P 18 41 58.5 +0.6
PLOR Plostina 89.69 316 ⇑P P 18 41 58.0 -0.1
PLOR Plostina 89.69 316 ⇑P P 18 41 58.0 -0.1
TGTN Hyland Airport 89.70 27 P P 18 41 58.8 +0.9
baz=288
SBA Scott Base 89.75 172 P P 18 41 58.6 +1.0
SBA IAmb IAmb 18 42 27.7
comp=Z,13nm,1.1s
SBA Scott Base 89.75 172 P P 18 41 58.6 +1.0
SBA pmax pmax
comp=Z,13nm,1.2s
DLBC Dease Lake 89.80 31 LR LR 19 16 57.2
comp=Z,152nm,20.6s,baz=289,slow=32
BIZ Bicaz 89.81 317 ⇑P P 18 42 01.1 +2.4
MOR8 Moi Rana 90.08 338 *e*P P 18 41 58.1 -1.3
T35M Bob Quinn 90.11 32 P P 18 42 00.8 +1.0
baz=287
BURAR Bucovina Array 90.24 318 ⇑P P 18 42 00.9 +0.1
BURAR Bucovina Array 90.24 318 ⇑P P 18 42 00.9 +0.1
MLR Muntele Rosu 90.25 316 ⇓P P 18 42 00.5 -0.4
MLR Muntele Rosu 90.25 316 LR LR 19 27 17.7
comp=Z,252nm,21.9s,baz=62,slow=39
MLR Muntele Rosu 90.25 316 IAmb IAmb 18 42 22.2
comp=Z,28nm,1.6s
MLR Muntele Rosu 90.25 316 ⇓P P 18 42 00.5 -0.4
LVV L'vov 90.47 321 *e*P P 18 42 01.1 -0.5
WRGLY Wrigley 91.20 25 P P 18 42 05.3 +0.6
baz=293
NSS Namsos 91.69 337 *e*P P 18 42 05.8 -1.1
DAG Danmarks Havn 91.84 352 P P 18 42 06.7 -0.7
DAG pmax pmax
comp=Z,15nm,1.2s
DAG Danmarks Havn 91.84 352 *i* P P 18 42 06.0 -1.4
DAG IAmb IAmb 18 42 07.8
comp=Z,12nm,1.0s
UZH Uzhgorod 91.88 320⇓ *i*P P 18 42 08.3 +0.1
UZH *e* 18 42 22.0
CRVS Cervenica-Dubn 92.33 320 *e*P P 18 42 11.2 +0.9
CRVS pmax pmax
comp=Z,48nm,1.3s
HFS Hagfors 92.77 332 LR LR 19 26 44.1
comp=Z,410nm,21.5s,baz=62,slow=37
RES Resolute Bay 92.81 10 LR LR 19 23 44.9
comp=Z,64nm,21.8s,baz=343,slow=35
RES Resolute Bay 92.81 10 IAmb IAmb 18 42 13.3
comp=Z,17nm,0.9s
RES Resolute Bay 92.81 10 P P 18 42 12.3 +0.4
RES pmax pmax
comp=Z,20nm,1.2s
NIE Niedzica 92.91 321 *e*P P 18 42 13.4 +0.4
NIE Niedzica 92.91 321 P P 18 42 13.4 +0.4
NIE pmax pmax
comp=Z,7.0nm,1.5s
SIRR Siria 92.95 318 ⇑P P 18 42 13.5 +0.3
BLKB Belogradchik 92.97 315 ⇓P P 18 42 12.7 -0.7
OJC Ojcow 92.98 322 *e*P P 18 42 11.3 -1.9
OJC *e*L L 19 27 16.6
comp=Z,254nm,19.4s
OJC Ojcow 92.98 322 P P 18 42 11.0 -2.3
OJC IAmb IAmb 18 42 12.5
comp=Z,10nm,0.8s
OJC Ojcow 92.98 322 P P 18 42 11.0 -2.3
OJC pmax pmax
comp=Z,10.0nm,0.8s
KNT Kendrikon 93.46 312 P P 18 42 14.2 -1.5
KNT pmax pmax
comp=Z,7.0nm,1.8s
NB2 NORSAR Subarra 93.50 334 P P 18 42 13.8 -1.7
comp=Z,5.7nm,1.0s,baz=65,slow=4.6
NB2 NORSAR Subarra 93.50 334 P P 18 42 13.8 -1.7
baz=65,slow=4.6
NOA NORSAR Array B 93.50 334 P P 18 42 13.9 -1.5
comp=Z,2.3nm,0.8s,baz=64,slow=4.7,SNR=9.1
NOA LR LR 19 28 10.0
comp=Z,594nm,20.1s,baz=60,slow=38
comp=Z,2.3nm,0.8s
NOA NORSAR Array B 93.50 334 P P 18 42 14.0 -1.5
NEEM North Greenlan 93.61 359 *i* P P 18 42 14.6 -1.4
LIT Litokhoron 94.04 311 IAmb IAmb 18 42 18.3
comp=Z,19nm,1.4s
LIT Litokhoron 94.04 311 P P 18 42 16.4 -2.0
LIT pmax pmax
comp=Z,7.0nm,1.3s
OKC Ostrava-Krasne 94.11 322 AMS AMS 19 27 30.0
comp=Z,300nm,23.5s
VYHS Vyhne 94.11 320 *e*P P 18 42 19.4 +0.9
JMIC Jan Mayen 94.42 346 LR LR 19 28 52.8
comp=Z,193nm,21.6s,baz=330,slow=38
MORC Moravsky Berou 94.50 322 ⇓P P 18 42 20.8 +0.5
MORC Moravsky Berou 94.50 322 P P 18 42 18.8 -1.5
MORC Moravsky Berou 94.50 322 ⇓P P 18 42 20.8 +0.5
MORC Moravsky Berou 94.50 322 *e*P P 18 42 19.8 -0.5
JAVC Velka Javorina 94.73 321 *e*P P 18 42 22.3 +0.9
MBAR Mbarara 94.81 270 LR LR 19 24 48.9
comp=Z,61nm,19.5s,baz=64,slow=35
KRLC Kraliky 94.86 322 *e*P P 18 42 22.1 +0.1
KRLC MLR MLR
comp=Z,200nm,16.5s
KRLC Kraliky 94.86 322 *e*P P 18 42 22.1 +0.1
KRLC AMS AMS 19 30 30.0
comp=Z,200nm,16.5s
MORH Mrgy, Hungar 94.96 318 ⇑P P 18 42 21.5 -0.9
OSTC Ostas 95.03 323 AMS AMS 19 27 50.0
comp=Z,300nm,18.9s
DPC Dobruska-Polom 95.04 323 *e*P P 18 42 23.2 +0.4
DPC MLR MLR
comp=Z,300nm,15.5s
DPC Dobruska-Polom 95.04 323 *e*P P 18 42 23.2 +0.4
DPC AMS AMS 19 28 00.0
comp=Z,300nm,15.5s
YKA Yellowknife Ar 95.15 24 P P 18 42 21.7 -1.2
comp=Z,6.6nm,0.9s,baz=296,slow=4.4,SNR=7.0
comp=Z,6.6nm,0.9s
UPC Upice 95.17 323 AMS AMS 19 28 00.0
comp=Z,300nm,20.0s
VRAC Vranov 95.24 322 ⇑P P 18 42 24.7 +1.0
VRAC Vranov 95.24 322 LR LR 19 28 58.4
comp=Z,244nm,19.6s,baz=69,slow=38
VRAC Vranov 95.24 322 ⇑P P 18 42 24.7 +1.0
VRAC Vranov 95.24 322 *e*P P 18 42 23.6 -0.1
KRUC Moravsky 95.45 321 P P 18 42 24.8 +0.2
KRUC pmax pmax
comp=Z,11nm,1.7s
KRUC Moravsky 95.45 321 *e*P P 18 42 23.8 -0.8
TAOE Nuku Hiva Isla 95.61 98 *e*LR LR 19 13 18.2
comp=Z,162nm,24.3s
PDG Podgorica 95.72 314 ⇓P P 18 42 24.0 -1.9
PVCC Panska Ves 96.02 323 AMS AMS 19 28 20.0
comp=Z,300nm,21.4s
GOPC GO Pecny, Ondr 96.12 323 *e*P P 18 42 27.7 0.0
GOPC GO Pecny, Ondr 96.12 323 *e*P P 18 42 27.7 0.0
PRU Pruhonice 96.24 323 *e*P P 18 42 28.1 -0.1
PRU MLR MLR
comp=Z,300nm,17.4s
PRU Pruhonice 96.24 323 *e*P P 18 42 28.1 -0.1
PRU AMS AMS 19 28 20.0
comp=Z,300nm,17.4s
WAPA Wapiti River 96.50 31 IAmb IAmb 18 42 30.6
comp=Z,18nm,1.0s
CLL Collm 96.64 324 *i* P P 18 42 29.4 -0.5
CLL pmax pmax
comp=Z,61nm,2.4s
CLL Collm 96.64 324 *i* P P 18 42 29.4 -0.5
comp=Z,61nm,2.4s
CLL LmV 19 32 00.0
comp=Z,200nm,19.6s
CKRC Cesky Krumlov 96.82 322 *e*P P 18 42 31.3 +0.4
CKRC AMS AMS 19 31 10.0
comp=Z,300nm,20.3s
KHC Kasperske Hory 97.15 322 *e*P P 18 42 32.3 -0.1
KHC MLR MLR
comp=Z,300nm,14.9s
KHC Kasperske Hory 97.15 322 *e*P P 18 42 32.3 -0.1
KHC AMS AMS 19 29 20.0
comp=Z,300nm,14.9s
GEC2 GERESS Array S 97.18 322 IAmb IAmb 18 42 34.6
comp=Z,7.4nm,1.0s
GEC2 GERESS Array S 97.18 322 P Pdif 18 42 32.8 +0.1
GEC2 pmax pmax
comp=Z,12nm,1.2s
GERES GERESS Array B 97.18 322 P P 18 42 32.3 -0.3
comp=Z,3.2nm,0.8s,baz=70,slow=4.4,SNR=25
comp=Z,3.2nm,0.8s
QSPA South Pole Qui 98.94 180 LR LR 19 28 22.1
comp=Z,142nm,19.6s,baz=338,slow=36
LSZ Lusaka 99.36 256 LR LR 19 27 29.4
comp=Z,97nm,18.5s,baz=125,slow=35
YBH Yreka Blue Hor 99.81 45 LR LR 19 24 15.3
comp=Z,43nm,18.8s,baz=308,slow=33
NEW Newport 100.77 37 P Pdif 18 42 48.6 -0.1
baz=297
PKM Mcpherson Peak 104.46 50 P Pdif 18 43 05.7 +0.2
baz=292
HLID Hailey 104.61 41 P Pdif 18 43 06.2 +0.2
baz=298
SNCC San Nicolas Is 105.30 52 P PKiKP 18 47 22.5 -0.5
baz=292
TXAR Lajitas Array 119.17 49 PKP PKiKP 18 47 49.9 +0.3
comp=Z,1.0nm,0.6s,baz=300,slow=0.1,SNR=16
TOA0 Torodi Ar. Sit 120.01 291 PKPdf 18 47 50.0 -1.4
TORD Torodi Ar. Bea 120.01 291 PKP PKPdf 18 47 50.4 -1.1
comp=Z,2.7nm,0.7s,baz=38,slow=1.8,SNR=13
JCT Junction City 121.37 46 P PKiKP 18 47 54.1 +0.3
baz=305
833A Chaparral WMA, 122.87 48 P PKiKP 18 47 57.2 +0.4
baz=304
MIAR Mount Ida 122.98 38 P PKiKP 18 47 57.2 +0.3
baz=312
PKME Peaks-Kenny Pk 124.30 13 P PKPdf 18 47 58.9 +0.1
baz=342
WVT Waverly 125.17 33 P PKPdf 18 48 00.8 0.0
baz=318
BINY Binghamton 125.31 20 P PKiKP 18 48 01.4 +0.1
baz=334
OXF Oxford 125.48 35 P PKPdf 18 48 01.2 -0.2
baz=316
SSPA Standing Stone 126.03 22 P PKPdf 18 48 02.0 -0.3
baz=331
L61B Northampton 126.10 17 P PKiKP 18 48 02.7 -0.1
baz=338
LRAL Lakeview Retre 127.93 35 P PKPdf 18 48 06.2 +0.1
baz=318
BLA Blacksburg 127.94 26 P PKPdf 18 48 05.2 -1.0
baz=327
060A Indiantown 136.21 34 PKPpre 18 48 10.8
PLCA Paso Flores 145.38 158 PKPbc PKPab 18 48 39.5 +1.3
comp=Z,9.1nm,0.8s,baz=247,slow=2.4,SNR=30
CPUP Villa Florida 162.62 171 PKP PKPdf 18 49 02.9 +0.5
comp=Z,4.6nm,1.0s,baz=13,slow=5.7,SNR=5.3
LPAZ La Paz 164.88 120 PKP PKPdf 18 49 06.0 +0.4
comp=Z,2.0nm,0.8s,baz=80,slow=0.3,SNR=7.8
LPAZ La Paz 164.88 120 PKIKP PKPdf 18 49 06.0 +0.4

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*NEIC **14** 18:34:26.6±1.6, 41°.43N±0°.04×142°.42E±0°.10, h62km±6km, mb4.6/26, Error ellipse: s-maj=10.7km s-min=5.2km az=92.0*
*NIED **14** 18:34:28.2, 41°.48N×142°.01E, h64km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.06; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.86; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.28; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.38000×10^{15} NP1: ϕ_s197.00000°, δ24.00000°, λ83.00000°. NP2:ϕ_s24.00000°, δ67.00000°, λ93.00000°.*
*JMA **14** 18:34:28.2±0.1, 41°.5N±0°.4×142°.0E±0°.6, h64km±1km, MV3.8/40, E OFF AOMORI PREF*
JMA Felt I J1 at E OFF AOMORI PREF .
*IDC **14** 18:34:31.3±2.9, 41°.43N×142°.02E, h90km±25km, mb3.8/15,*

mbtmp4.1/18, Error ellipse: s-maj=22.2km s-min=16.9km az=87.0

ISC 14 18:34:28.5±0.8, 41°47N±0°04×142°03E±0°04, h66km±7km, n89, σ1§11/97, mb4.4/28, 24D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.56**	**249**	⇓*i*P	**Pn**	**18 34 41.3**	**-0.2**
JAHD				⇓S	**Sn**	**18 34 51.0**	**-0.1**
JARK	**Aomorirokkasho**	**0.68**	**227**	*i* P	**Pn**	**18 34 42.3**	**-0.5**
JARK				S	**Sn**	**18 34 52.4**	**-1.0**
JOT	**Ohata**	**0.74**	**263**	⇓*i*P	**Pn**	**18 34 43.0**	**-0.5**
JOT				⇓*e*S	**Sn**	**18 34 54.1**	**-0.6**
JKB	**Kayabe**	**0.85**	**299**	⇓*i*P	**Pn**	**18 34 44.1**	**-0.8**
JKB				⇓*e*S	**Sn**	**18 34 56.2**	**-0.9**
JNBK	**Urakawa-nobuka**	**0.97**	**34**	*i* P	**Pn**	**18 34 45.7**	**-0.7**
JTM	**Tenmabayashi**	**1.00**	**227**		**Pn**	**18 34 46.6**	**-0.1**
JTM				Sn	**Sn**	**18 34 59.8**	**-0.5**
JTM	**Tenmabayashi**	**1.00**	**227**	⇓*i*P	**Pn**	**18 34 46.7**	**-0.1**
JTM				⇓S	**Sn**	**18 35 00.0**	**-0.2**
JEM	**Erimo**	**1.00**	**57**	*i* P	**Pn**	**18 34 46.5**	**-0.3**
JEM				*e*S	**Sn**	**18 35 00.3**	**-0.1**
JIAM	**Iburiatsuma**	**1.15**	**356**	⇓P	**Pn**	**18 34 49.1**	**+0.4**
JIAM				⇓*e*S	**Sn**	**18 35 05.3**	**+1.5**
JANG	**Nango**	**1.17**	**200**	*i* P	**Pn**	**18 34 48.5**	**-0.4**
JANG				*e*S	**Sn**	**18 35 03.1**	**-1.0**
JSR	**Shiriuchi**	**1.21**	**273**	⇓*i*P	**Pn**	**18 34 49.2**	**-0.2**
JSR				⇓*e*S	**Sn**	**18 35 04.7**	**-0.5**
JNB	**Noboribetsu**	**1.24**	**324**	⇓*i*P	**Pn**	**18 34 48.9**	**-0.9**
JNB				⇓S	**Sn**	**18 35 04.7**	**-1.2**
JBT2	**Biratori 2**	**1.33**	**11**	⇓*i*P	**Pn**	**18 34 51.2**	**+0.2**
JBT2				⇓*e*S	**Sn**	**18 35 09.0**	**+1.1**
JYM2	**Yakumo 2**	**1.40**	**298**	⇓*i*P	**Pn**	**18 34 52.1**	**+0.1**
JYM2				⇓*e*S	**Sn**	**18 35 09.5**	**-0.1**
JEW	**Eniwo**	**1.43**	**343**		**Pn**	**18 34 52.1**	**-0.3**
JEW				Sn	**Sn**	**18 35 08.7**	**-1.7**
JEW	**Eniwo**	**1.43**	**343**	⇓*i*P	**Pn**	**18 34 52.4**	**0.0**
JEW				⇓S	**Sn**	**18 35 10.2**	**-0.2**
JCH	**Churui**	**1.51**	**41**	*i* P	**Pn**	**18 34 54.0**	**+0.6**
JCH				*e*S	**Sn**	**18 35 14.4**	**+2.1**
JOMM	**Oshimamatsumae**	**1.52**	**273**	⇓*i*P	**Pn**	**18 34 53.2**	**-0.3**
JOMM				⇓*e*S	**Sn**	**18 35 11.6**	**-0.9**
JOSM	**Okushiri--Mats**	**2.01**	**289**	⇓*e*P	**Pn**	**18 34 59.4**	**-0.7**
JOSM				⇓*e*S	**Sn**	**18 35 22.8**	**-1.4**
JMM	**Marumori**	**3.73**	**195**		**Pn**	**18 35 22.6**	**-1.0**
JSD	**Sado**	**4.50**	**221**	Pn	**Pn**	**18 35 34.9**	**+0.8**
JYT	**Yasato**	**5.43**	**196**	Pn	**Pn**	**18 35 45.7**	**-1.1**
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	Pn	Pn	18 35 42.9	-4.9
MJB9	**Matsu-Tunnel**	**5.75**	**212**	Pn	**Pn**	**18 35 52.0**	**+0.7**
MAJO	**Matsushiro**	**5.75**	**212**		**Pn**	**18 35 51.9**	**+0.6**
MJAR	**Matsushiro Arr**	**5.75**	**212**	P	**Pn**	**18 35 53.4**	**+2.1**
	2.7nm,0.5s,baz=24,slow=14,SNR=11						
JGF	**Kuroka**	**6.91**	**213**	Pn	**Pn**	**18 36 10.5**	**+3.3**
INU	**Inuyama**	**7.27**	**214**	Pn	**Pn**	**18 36 12.6**	**+0.6**
USA0B	**Ussuriysk Arra**	**7.87**	**294**	Pn	**Pn**	**18 36 20.1**	**0.0**
USRK	**Ussuriysk Ar.**	**7.87**	**294**	P	**Pn**	**18 36 21.7**	**+1.6**
	6.6nm,0.6s,baz=100,slow=14,SNR=6.1						
USRK	**Ussuriysk Ar.**	**7.87**	**294**	Pn	**Pn**	**18 36 20.4**	**+0.2**
JHS	**Saijyo**	**9.53**	**230**	Pn	**Pn**	**18 36 45.8**	**+2.9**
KSRS	**Korea Array**	**11.62**	**254**	P	Pn	18 37 15.7	+4.3
	4.3nm,0.6s,baz=64,slow=14,SNR=15						
KSRS				S	**Sn**	**18 39 24.9**	**+5.6**
	4.4nm,0.7s,baz=68,slow=24,SNR=8.6						
KS19	**Wonju Array Si**	**11.64**	**255**	Pn	Pn	18 37 17.8	+6.2
KSAR	**Wonju Array Be**	**11.65**	**254**	Pn	Pn	18 37 16.5	+4.7
SONM	**Songino Array**	**25.97**	**296**	P	**P**	**18 39 55.0**	**+0.1**
	2.4nm,0.7s,baz=85,slow=8.8,SNR=5.4						
SONM	**Songino Array**	**25.97**	**296**	P	**P**	**18 39 54.5**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**30.27**	**128**	T	T	19 12 46.4	
	baz=321,slow=75,SNR=44						
H11N1	**WAKE ISLAND Hy**	**30.28**	**128**	T	T	19 12 47.2	
	baz=321,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**30.29**	**128**	T	T	19 12 47.8	
	baz=321,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**31.11**	**130**	T	T	19 14 03.5	
	baz=320,slow=74						
H11S3	**WAKE ISLAND Hy**	**31.11**	**130**	T	T	19 14 03.2	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**31.13**	**130**	T	T	19 14 03.8	
	baz=320,slow=74						
ZAA0	**Zalesovo Array**	**39.40**	**308**	P	**P**	**18 41 51.5**	**0.0**
ZAA0				IAmb	IAmb	18 41 52.5	
	comp=Z,5.5nm,0.8s						
ZALV	**Zalesovo Beam**	**39.40**	**308**	P	**P**	**18 41 51.8**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=90,slow=8.2,SNR=8.3						
ZALV				PcP	**PcP**	**18 43 59.3**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=99,slow=4.6,SNR=4.1						
	comp=Z,5.3nm,0.7s						
ZALV	**Zalesovo Beam**	**39.40**	**308**	P	**P**	**18 41 51.7**	**+0.2**
MK31	**Makanchi Array**	**42.31**	**298**		**P**	**18 42 15.6**	**0.0**
MKAR	**Makanchi Array**	**42.31**	**298**	P	**P**	**18 42 15.8**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=89,slow=8.2,SNR=8.7						
MKAR				PcP	**PcP**	**18 44 08.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=78,slow=3.4,SNR=2.1						
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**42.31**	**298**		**P**	**18 42 14.9**	**-0.7**
MAKZ	**Makanchi**	**42.51**	**298**	P	**P**	**18 42 17.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**43.23**	**251**	P	**P**	**18 42 23.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=43,slow=6.6,SNR=5.0						
	comp=Z,0.4nm,0.7s						
KURK	**Kurchatov**	**43.69**	**305**	P	**P**	**18 42 26.6**	**0.0**
KURK				IAmb	IAmb	18 42 27.4	
	comp=Z,4.9nm,0.7s						
TOLK	**Toolik Lake Re**	**44.34**	**29**	P	**P**	**18 42 28.9**	**-2.8**
TOLK				IAmb	IAmb	18 42 35.5	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**45.53**	**35**	P	**P**	**18 42 41.8**	**+0.7**
	comp=Z,2.3nm,1.0s,baz=278,slow=7.2,SNR=2.8						
	comp=Z,2.3nm,1.0s						
TARG	**Taragay, Kyrgy**	**46.99**	**293**	P	**P**	**18 42 52.2**	**-1.2**
TARG				IAmb	IAmb	18 42 56.4	
	comp=Z,5.8nm,1.0s						
BRVK	**Borovoye**	**48.08**	**310**	P	**P**	**18 43 00.7**	**-0.5**
BRVK				IAmb	IAmb	18 43 08.5	
	comp=Z,4.9nm,1.1s						
CTGM	**Chitina Glacie**	**48.65**	**39**	P	P	18 42 59.6	-6.0
CTGM				IAmb	IAmb	18 43 26.4	
	comp=Z,7.3nm,1.1s						
LOGN	**Logan Glacier**	**48.84**	**39**	P	P	18 43 01.9	-5.2
LOGN				IAmb	IAmb	18 43 14.9	
	comp=Z,10nm,1.1s						
AAK	**Ala-Archa**	**48.92**	**295**	P	**P**	**18 43 08.5**	**+0.5**
INK	**Inuvik**	**50.24**	**29**	P	**P**	**18 43 18.5**	**+1.1**
	comp=Z,4.0nm,0.6s,baz=283,slow=10,SNR=4.9						
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	**50.24**	**29**	P	**P**	**18 43 18.6**	**+1.1**
INK				IAmb	IAmb	18 43 19.7	
	comp=Z,7.6nm,1.1s						
KKAR	**Karatay Array**	**51.41**	**297**	P	**P**	**18 43 26.5**	**-0.1**
CHGR	**Chuyangaron**	**54.29**	**293**	P	**P**	**18 43 47.8**	**-0.2**
ABKAR	**Akbulak array**	**55.51**	**308**	P	**P**	**18 43 56.8**	**+0.2**
ABKAR				IAmb	IAmb	18 43 57.6	
	comp=Z,3.4nm,0.6s						
ABKAR	**Akbulak array**	**55.51**	**308**	P	**P**	**18 43 56.6**	**+0.1**
EUNU	**Eureka**	**55.73**	**9**	P	**P**	**18 43 57.7**	**-0.1**
EUNU				IAmb	IAmb	18 43 59.0	
	comp=Z,4.1nm,0.7s						
HATHI	**Halema'uma'u T**	**57.09**	**93**	P	P	18 44 02.3	-6.0
RES	**Resolute Bay**	**58.19**	**15**	P	**P**	**18 44 13.7**	**-1.4**
RES				IAmb	IAmb	18 44 16.5	
	comp=Z,5.4nm,0.8s						
WB2	**Warramunga Arr**	**61.52**	**188**	P	**P**	**18 44 37.3**	**-1.1**
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**18 44 38.0**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=3.9,slow=6.8						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**18 44 36.0**	**-2.5**
GEYT	**Alibeck**	**62.17**	**297**	P	**P**	**18 44 43.3**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=34,slow=6.1,SNR=4.9						
	comp=Z,2.7nm,0.7s						
FIA1	**FINESS Array S**	**65.13**	**332**	P	**P**	**18 45 01.6**	**-0.3**
FIA1				IAmb	IAmb	18 45 10.5	
	comp=Z,5.0nm,0.8s						
FINES	**FINESS Array B**	**65.13**	**332**	P	**P**	**18 45 01.9**	**0.0**
	comp=Z,3.0nm,0.7s,baz=55,slow=6.8,SNR=12						
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**65.13**	**332**	P	**P**	**18 45 01.7**	**-0.2**
ASAR	**Alice Springs**	**65.24**	**188**	P	**P**	**18 45 02.5**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=8.9,slow=6.6,SNR=1.8						
	comp=Z,0.3nm,0.7s						
KBZ	**Khabaz**	**68.41**	**310**	P	**P**	**18 45 23.8**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=143,slow=5.1,SNR=2.7						
	comp=Z,2.1nm,0.8s						
NC405	**NORSAR Array S**	**70.08**	**337**	P	**P**	**18 45 32.9**	**-0.2**
NC204	**NORSAR Array S**	**70.23**	**337**	P	**P**	**18 45 33.6**	**-0.5**
NB201	**NORSAR Array S**	**70.26**	**337**	P	**P**	**18 45 32.4**	**-1.9**
NB2	**NORSAR Subarra**	**70.29**	**337**	P	**P**	**18 45 34.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**70.29**	**337**	P	**P**	**18 45 34.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=38,slow=6.3,SNR=4.1						
	comp=Z,0.6nm,0.5s						
UOSS	**Minazif**	**70.95**	**287**	P	**P**	**18 45 38.3**	**-0.8**
UOSS				IAmb	IAmb	18 45 39.7	
	comp=Z,11nm,1.4s						
AKASG	**Malin Array Be**	**71.10**	**322**	P	**P**	**18 45 39.3**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=44,slow=6.6,SNR=16						
	comp=Z,1.6nm,0.4s						
AKBB	**Malin Array Si**	**71.10**	**322**	P	**P**	**18 45 39.1**	**-0.4**
AKBB				IAmb	IAmb	18 45 40.2	
	comp=Z,4.1nm,0.8s						
BUR08	**Bucovina Ar. S**	**75.13**	**321**	P	**P**	**18 46 03.2**	**-0.3**
BURAR	**Bucovina Array**	**75.14**	**321**	P	**P**	**18 46 02.8**	**-0.8**
BRTR	**Keskin Array B**	**76.28**	**311**	P	**P**	**18 46 10.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=58,slow=6.0,SNR=2.5						
	comp=Z,0.8nm,0.6s						
ESDC	**Sonseca Array**	**93.51**	**334**	P	**P**	**18 47 37.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=343,slow=4.0,SNR=2.9						
	comp=Z,0.4nm,0.7s						

*IDC **14** 18:48:01.4±0.8, 6°37S×149°41E, h0km, mb3.9/11, mbtmp4.0/15, ML4.0/4, MS3.8/32, Error ellipse: s-maj=29.6km s-min=15.0km az=98.0*

*DJA **14** 18:48:08.3±0.4, 7°S±3°×14°9E±°, h17km±2km, M4.9/18, mB5.3/4, mb4.7/18, MLv5.1/3, Mw(mB)4.7/4*

*NEIC **14** 18:48:09.8±1.3, 6°39S±0°07×149°13E±0°09, h45km±8km, mb4.7/20, Error ellipse: s-maj=13.8km s-min=9.1km az=119.0*

ISC 14 18:48:09.4±0.5, 6°42S±0°06×149°24E±0°07, h49km, n97, σ1§62/75, mb4.5/23, MS3.9/28, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.48**	**53**	LR	LR	18 49 44.7	
	comp=Z,554nm,19.9s,baz=58,slow=31						
PMG	**Port Moresby**	**3.61**	**215**	Pn	**Pn**	**18 49 02.2**	**-0.6**
	111nm,0.3s,baz=32,slow=5.0,SNR=135						
PMG				Sn	**Sn**	**18 49 44.2**	**0.0**
	99nm,0.3s,baz=54,slow=22,SNR=17						
PMG				LR	LR	18 50 32.6	
	comp=Z,855nm,19.3s,baz=353,slow=40						
	255nm,0.3s						
PMG	**Port Moresby**	**3.61**	**215**		**Pn**	**18 49 03.5**	**+0.7**
PMG	**Port Moresby**	**3.61**	**215**	P	**Pn**	**18 49 03.6**	**+0.7**
PMG	**Port Moresby**	**3.61**	**215**	P	**Pn**	**18 49 03.5**	**+0.7**
RABL	**Rabaul**	**3.66**	**53**	Pn	**Pn**	**18 49 04.5**	**+1.0**
RABL	**Rabaul**	**3.66**	**53**	P	**Pn**	**18 49 05.7**	**+2.1**
MANU	**Manus Island**	**4.73**	**337**	Pn	**Pn**	**18 49 17.8**	**-0.4**
COEN	**Coen**	**9.57**	**218**	Pn	**Pn**	**18 50 24.2**	**-0.5**
COEN	**Coen**	**9.57**	**218**	P	**Pn**	**18 50 24.5**	**-0.2**
GENI	**Genyem**	**9.80**	**292**	P	Pn	18 50 34.7	+6.9
	33nm,1.2s						
SMPI	**Sarmi**	**11.38**	**292**	P	Pn	18 50 55.8	+6.4
	21nm,1.5s						
MTSU	**Mount Surprise**	**12.60**	**202**	P	**Pn**	**18 51 06.1**	**+0.1**
SRPI	**Serui, Papua**	**13.72**	**289**	P	Pn	18 51 07.7	-14
CTA	**Charters Tower**	**13.89**	**192**	Pn	**Pn**	**18 51 21.6**	**-2.1**
	0.2nm,0.3s,baz=13,slow=14,SNR=2.6						
CTA				LR	LR	18 56 29.0	
	comp=Z,333nm,19.6s,baz=328,slow=36						
	9.4nm,1.1s						
RKPI	**Ransiki, Papua**	**15.79**	**287**	P	**P**	**18 51 52.3**	**+0.6**
	19nm,1.3s						
QIS	**Mount Isa**	**16.88**	**213**	P	**Pn**	**18 52 03.1**	**+0.8**
KDU	**Kakadu**	**17.66**	**248**	P	**P**	**18 52 11.7**	**-0.7**
SIJI	**Sorong**	**18.75**	**286**	P	**P**	**18 52 22.8**	**-1.8**
	0.2nm,0.3s,baz=135,slow=19,SNR=1.7						
	1.2nm,0.3s						
SIJI	**Sorong**	**18.75**	**286**	P	**Pn**	**18 52 29.0**	**+3.6**
	11nm,0.9s						
SWI	**Sorong**	**18.76**	**286**	P	**Pn**	**18 52 30.7**	**+5.2**
	16nm,1.0s						
MTN	**Manton Dam**	**18.95**	**249**	P	**P**	**18 52 25.4**	**-1.2**
WB0	**Warramunga Arr**	**19.60**	**226**	P	**P**	**18 52 33.3**	**-0.4**
WB0				IAmb	IAmb	18 52 49.6	
	comp=Z,36nm,0.9s						
WR0	**Warramunga Arr**	**19.62**	**225**	P	**P**	**18 52 34.2**	**+0.2**
WR0				IAmb	IAmb	18 52 49.9	
	comp=Z,33nm,0.9s						
WRAB	**Tennant Creek**	**19.74**	**226**	P	**P**	**18 52 35.2**	**-0.1**
WRAB				IAmb	IAmb	18 52 51.4	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	**19.74**	**226**	P	**P**	**18 52 35.3**	**+0.1**
WRA	**Warramunga Arr**	**19.75**	**226**	P	**P**	**18 52 34.5**	**-0.9**
	comp=Z,3.6nm,0.3s,baz=51,slow=11,SNR=126						
WRA				S	**S**	**18 56 14.9**	**-0.6**
	comp=Z,3.4nm,1.0s,baz=51,slow=22,SNR=5.1						
WRA				ScP	**ScP**	**19 00 29.9**	**+5.0**
	comp=Z,0.7nm,0.8s,baz=48,slow=2.7,SNR=5.0						
WRA				LR	LR	19 00 47.0	
	comp=Z,313nm,19.6s,baz=26,slow=38						
	comp=Z,11nm,0.4s						
WRA	**Warramunga Arr**	**19.75**	**226**	P	**P**	**18 52 34.5**	**-0.9**
RMQ	**Roma**	**19.96**	**181**	P	**P**	**18 52 38.3**	**+0.7**
GUMO	**Guam**	**20.34**	**348**	P	**P**	**18 52 40.8**	**-1.0**
	comp=Z,35nm,0.4s,baz=198,slow=20,SNR=1.6						
GUMO				LR	LR	18 59 39.3	
	comp=Z,236nm,19.5s,baz=164,slow=34						
QLP	**Quilpie**	**20.61**	**193**	P	**P**	**18 52 46.5**	**+1.9**
KNRA	**Kununurra**	**22.08**	**244**	P	**P**	**18 52 59.5**	**-1.0**
KNRA				IAmb	IAmb	18 53 27.4	
	comp=Z,62nm,1.4s						
KNRA	**Kununurra**	**22.08**	**244**	P	**P**	**18 53 00.3**	**-0.2**
AS01	**Alice Springs**	**22.59**	**219**	P	**P**	**18 53 05.7**	**-0.2**
AS31	**Alice Springs**	**22.61**	**219**	P	**P**	**18 53 06.0**	**-0.3**
ASAR	**Alice Springs**	**22.61**	**219**	P	**P**	**18 53 05.7**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=62,slow=9.7,SNR=36						
ASAR				S	**S**	**18 57 11.1**	**+0.3**
	comp=Z,8.4nm,1.1s,baz=33,slow=22,SNR=11						
ASAR				LR	LR	19 02 27.6	
	comp=Z,290nm,18.4s,baz=26,slow=38						
	comp=Z,2.3nm,0.4s						
ASAR	**Alice Springs**	**22.61**	**219**	P	**P**	**18 53 04.8**	**-1.4**
INKA	**Innaminka**	**22.69**	**200**	P	**P**	**18 53 08.8**	**+1.9**
DZM	**Mont Dzumac**	**22.77**	**135**	P	**P**	**18 53 07.5**	**-0.4**
	comp=Z,12nm,0.9s,baz=308,slow=17,SNR=4.8						
DZM	**Mont Dzumac**	**22.77**	**135**	P	**P**	**18 53 08.3**	**+0.4**
DZM				IAmb	IAmb	18 53 19.9	
	comp=Z,25nm,1.0s						
OOD	**Oodnadatta**	**24.85**	**210**	P	**P**	**18 53 27.8**	**+0.5**
SOEI	**Soe**	**24.94**	**261**	P	**P**	**18 53 30.7**	**+2.2**
SOEI	**Soe**	**24.94**	**261**	pP	P	18 53 35.9	+7.4
	comp=Z,1μmcomp=Z,48nm,0.8s						
CMSA	**Cobar Meteorol**	**25.21**	**187**	P	**P**	**18 53 31.5**	**+0.9**
LCRK	**Leigh Creek**	**26.05**	**202**	P	**P**	**18 53 39.9**	**+1.6**
STKA	**Stephens Creek**	**26.32**	**195**	LR	LR	19 04 30.9	
	comp=Z,422nm,19.7s,baz=13,slow=38						
BBSI	**Bau Bau**	**26.54**	**271**	P	**P**	**18 53 47.1**	**+4.3**
	comp=Z,36nm,1.0s						
MMRI	**Maumere**	**26.85**	**264**	P	**P**	**18 53 44.0**	**-1.7**
MMRI	**Maumere**	**26.85**	**264**	P	**P**	**18 53 47.2**	**+1.5**
	comp=Z,1μmcomp=Z,156nm,1.2s						
MMRI	**Maumere**	**26.85**	**264**	P	**P**	**18 53 46.8**	**+1.1**
GTOI	**Gorontalo**	**27.10**	**284**	P	P	18 53 55.2	+7.3
	comp=Z,7.8nm,0.8s						
KAPI	**Kappang**	**29.37**	**271**	LR	LR	19 09 36.0	
	comp=Z,130nm,18.5s,baz=108,slow=44						
MSVF	**Nonsavu**	**30.29**	**114**	P	P	18 54 22.9	+6.6
MSVF				IAmb	IAmb	18 54 43.1	
	comp=Z,16nm,1.0s						
MBWA	**Marble Bar**	**32.09**	**240**	P	**P**	**18 54 29.3**	**-2.8**
MBWA				IAmb	IAmb	18 54 41.9	
	comp=Z,22nm,1.2s						
JCJ	**Chichijima**	**34.01**	**349**	LR	LR	19 07 08.4	
	comp=Z,177nm,21.8s,baz=141,slow=34						
JAGI	**Jajag, Banyuwa**	**34.84**	**264**	P	**P**	**18 54 54.8**	**-1.3**
JAGI	**Jajag, Banyuwa**	**34.84**	**264**	P	**P**	**18 54 55.5**	**-0.6**
	comp=Z,40nm,1.1s						
JOW	**Kunigami**	**38.79**	**329**	LR	LR	19 08 26.4	
	comp=Z,267nm,21.7s,baz=125,slow=32						
RPZ	**Rata Peaks**	**41.80**	**156**	LR	LR	19 11 25.1	
	comp=Z,232nm,19.5s,baz=311,slow=34						
CNJI	**Cibinong**	**41.80**	**266**	P	**P**	**18 55 56.9**	**+2.2**
	comp=Z,44nm,1.1s						
MJAR	**Matsushiro Arr**	**43.97**	**347**	P	**P**	**18 56 09.2**	**-2.7**
	comp=Z,2.1nm,0.9s,baz=161,slow=7.8,SNR=3.2						
MJAR				LR	LR	19 14 09.1	
	comp=Z,128nm,18.5s,baz=184,slow=36						
	comp=Z,2.1nm,0.9s						
LWLI	**Liwa**	**44.96**	**269**	P	**P**	**18 56 22.7**	**+2.4**
KSRS	**Korea Array**	**47.97**	**337**	P	**P**	**18 56 41.0**	**-2.3**
	comp=Z,0.3nm,0.4s,baz=162,slow=7.7,SNR=2.0						
	comp=Z,0.3nm,0.4s						
PSI	**Prapat**	**51.06**	**279**	LR	LR	19 21 10.9	
	comp=Z,99nm,19.8s,baz=110,slow=39						
USRK	**Ussuriysk Ar.**	**52.73**	**344**	LR	LR	19 17 36.8	
	comp=Z,87nm,21.5s,baz=154,slow=34						
CMAR	**Chiang Mai Arr**	**55.41**	**297**	P	**P**	**18 57 38.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=150,slow=3.8,SNR=1.7						
	comp=Z,0.3nm,0.3s						
KLR	**Kul'dur**	**57.48**	**346**	LR	LR	19 20 51.5	
	comp=Z,88nm,19.7s,baz=186,slow=34						
PEA0B	**Petropavlovsk-**	**59.73**	**6**	P	**P**	**18 58 10.1**	**+1.1**
PETK	**Petropavlovsk-**	**59.73**	**6**	P	**P**	**18 58 08.9**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=174,slow=7.5,SNR=19						
PETK				LR	LR	19 19 57.0	
	comp=Z,53nm,21.7s,baz=202,slow=32						
	comp=Z,2.9nm,0.5s						
PETK	**Petropavlovsk-**	**59.73**	**6**	P	**P**	**18 58 10.4**	**+1.5**
SHEM	**Shemya Is, Ala**	**62.60**	**17**	LR	LR	19 20 42.1	
	comp=Z,126nm,21.5s,baz=283,slow=31						
ADK	**Adak**	**64.97**	**23**	P	**P**	**18 58 44.7**	**+0.7**
CASY	**Casey**	**65.46**	**196**	P	**P**	**18 58 46.6**	**-0.3**
MA2	**Magadan**	**65.79**	**1**	LR	LR	19 23 55.5	
	comp=Z,72nm,21.9s,baz=200,slow=33						
SONM	**Songino Array**	**65.86**	**330**	P	**P**	**18 58 51.2**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=161,slow=5.6,SNR=2.3						
SONM				LR	LR	19 27 04.4	
	comp=Z,75nm,20.6s,baz=125,slow=36						
	comp=Z,0.4nm,0.7s						
YAK	**Yakutsk**	**69.90**	**350**	LR	LR	19 28 35.8	
	comp=Z,24nm,21.8s,baz=268,slow=35						
VNDA	**Vanda**	**71.38**	**177**	P	**P**	**18 59 22.9**	**-0.9**
	comp=Z,2.7nm,0.9s,baz=317,slow=5.9,SNR=20						
	comp=Z,2.7nm,0.9s						
VNDA	**Vanda**	**71.38**	**177**		**P**	**18 59 24.2**	**+0.4**
VNDA				IAmb	IAmb	18 59 37.7	
	comp=Z,6.2nm,0.9s						
SBA	**Scott Base**	**71.99**	**176**		**P**	**18 59 28.4**	**+1.0**
KDAK	**Kodiak Island**	**79.23**	**28**	LR	LR	19 30 07.5	
	comp=Z,55nm,21.4s,baz=254,slow=32						
MKAR	**Makanchi Array**	**79.24**	**320**	P	**P**	**19 00 08.8**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=93,slow=9.0,SNR=4.9						
MKAR				LR	LR	19 34 58.2	
	comp=Z,45nm,19.5s,baz=76,slow=36						
	comp=Z,0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**80.55**	**327**	P	**P**	**19 00 15.1**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=97,slow=5.8,SNR=1.8						
ZALV				LR	LR	19 34 41.9	
	comp=Z,88nm,21.6s,baz=92,slow=35						
	comp=Z,0.4nm,0.3s						
CNPM	**China Poot**	**80.72**	**26**	P	**P**	**19 00 17.9**	**+0.7**
CNPM				IAmb	IAmb	19 00 48.2	
	comp=Z,26nm,1.5s						
MAW	**Mawson**	**82.72**	**203**	P	**P**	**19 00 27.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=355,slow=9.8,SNR=2.4						
MAW				LR	LR	19 35 16.6	
	comp=Z,74nm,20.4s,baz=73,slow=34						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**83.55**	**180**	P	**P**	**19 00 31.5**	**-0.6**
QSPA				IAmb	IAmb	19 00 47.8	
	comp=Z,5.9nm,0.9s						
ILAR

IDC 14 19:26:00.9±1.7, 5°83S×150°15E, h0km, mb3.0/2, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=97.5km s-min=24.1km az=135.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.41**	**51**	Pn	Pn	19 26 40.2	-1.3
	6.8nm,0.3s,baz=225,slow=4.3,SNR=6.3						
KRVT				Sn	Sn	19 27 03.8	-7.9
	7.5nm,0.3s,baz=180,slow=20,SNR=4.6						
	35nm,0.7s						
PMG	**Port Moresby**	**4.63**	**220**	Pn	Pn	19 27 11.8	-0.3
	7.0nm,0.3s,baz=34,slow=9.1,SNR=14						
PMG				Sn	Sn	19 27 53.7	-13
	8.1nm,0.3s,baz=51,slow=20,SNR=9.7						
	28nm,0.5s						
WRA	**Warramunga Arr**	**20.81**	**226**	P	P	19 30 43.2	-0.8
	0.6nm,0.7s,baz=50,slow=11,SNR=10						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**23.64**	**220**	P	P	19 31 13.7	-0.4
	0.3nm,0.7s,baz=54,slow=9.6,SNR=4.5						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.08**	**285**	PKPbc	PKiKP	19 45 50.7	-0.7
	0.3nm,0.8s,baz=84,slow=3.1,SNR=1.6						

MAN 14 19:51:27.6, 8°92N×121°23E, h25km, mb4.7, ML3.6, MS3.5
IDC 14 19:51:29.4±2.9, 8°33N×121°85E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=383.1km s-min=29.1km az=62.0

ISC 14 19:51:23.0±1.7, 8°74N±0°04×121°45E±0°06, h10km±13km, n19, σ2°02/32, mb3.4/3, 9C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**1.59**	**47⇑**	*e*P	**Pg**	**19 51 54.9**	**+1.3**
CNOP				*i* S	**Sg**	**19 52 15.8**	**+1.5**
SNPH	**Sibulan**	**1.86**	**71⇑**	*i*P	**Pg**	**19 51 60.0**	**+1.2**
SNPH				*i* S	**Sg**	**19 52 25.5**	**+2.5**
ZCP	**Zamboanga City**	**1.90**	**161⇓**	*i*P	**Pg**	**19 51 57.9**	**-1.6**
ZCP				*i* S	**Sb**	**19 52 20.1**	**-1.6**
PAGZ	**Pagadian**	**2.11**	**115⇑**	*e*P	**Pg**	**19 52 04.2**	**+0.7**
PAGZ				*i* S	**Sg**	**19 52 31.4**	**+0.6**
GUIM	**Jordan**	**2.18**	**31⇓**	*e*P	**Pb**	**19 52 03.3**	**+0.7**
GUIM				*e*S	**Sb**	**19 52 28.6**	**-1.2**
LSIP	**Lazi, Siquijor**	**2.19**	**80⇑**	*i*P	**Pg**	**19 52 04.8**	**-0.2**
LSIP				*i* S	**Sg**	**19 52 33.8**	**+0.4**
TBP	**Tagbilaran**	**2.56**	**68⇑**	*i*P	**Pg**	**19 52 10.2**	**-2.0**
TBP				*e*S	**Sg**	**19 52 43.5**	**-1.9**
PPR	**Puerto Princes**	**2.87**	**291⇓**	*e*P	**Pn**	**19 52 09.1**	**+0.1**
LLP	**Lapu-Lapu**	**2.94**	**58⇓**	*i*P	**Pb**	**19 52 16.9**	**+1.4**
LLP				*i* S	**Sb**	**19 52 51.4**	**0.0**
GHBP	**Garcia Hernand**	**2.97**	**72⇑**	*i*P	**Pb**	**19 52 16.2**	**+0.2**
GHBP				*i* S	**Sg**	**19 52 54.4**	**-4.1**
RCP	**Roxas**	**3.08**	**24⇑**	*e*P	**Pb**	**19 52 17.1**	**-0.7**
RCP				*e*S	**Sb**	**19 52 53.5**	**-2.0**
TABP	**Talibon, Bohol**	**3.15**	**65⇓**	*i*P	**Pb**	**19 52 18.3**	**-0.7**
TABP				*e*S	**Sb**	**19 52 55.5**	**-2.0**
CTBH	**Cotabato--PC H**	**3.16**	**118⇑**	*e*P	**Pg**	**19 52 21.9**	**-1.6**
BUSP	**Coron**	**3.47**	**339⇓**	*e*P	**Pn**	**19 52 17.9**	**+0.9**
BUSP				*e*S	**Sn**	**19 52 55.5**	**-2.7**
MSLP	**Maasin**	**3.64**	**67⇓**	*e*P	**Pb**	**19 52 25.9**	**-1.5**
MSLP				*e*S	**Sb**	**19 53 10.2**	**-1.5**
LUBP	**Lubang**	**5.10**	**347⇓**	*e*P	**Pn**	**19 52 41.7**	**+2.2**
LUBP				*e*S	**Sn**	**19 53 34.3**	**-4.3**
WRA	**Warramunga Arr**	**31.20**	**156**	P	**P**	**19 57 45.4**	**+2.7**
	0.4nm,0.8s,baz=336,slow=9.8,SNR=2.3						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**34.44**	**160**	P	**P**	**19 58 14.7**	**+3.7**
	0.3nm,0.7s,baz=334,slow=6.6,SNR=5.0						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**50.48**	**326**	P	P	20 00 33.4	+12
	0.4nm,0.7s,baz=122,slow=9.3,SNR=3.8						
	0.4nm,0.7s						

NEIC 14 19:58:14.8±1.2, 24°1S±0°1×179°9E±0°4, h494km±41km, mb4.4/16, Error ellipse: s-maj=50.3km s-min=7.4km az=74.0
IDC 14 19:58:16.8±3.1, 24°12S×179°66E, h504km±32km, mb3.3/6, mbtmp4.2/7, Error ellipse: s-maj=39.0km s-min=25.1km az=159.0

ISC 14 19:58:18.0±1.0, 24°1S±0°1×179°7E±0°2, h537km, n25, σ1°48/27, mb4.2/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.31**	**188**	P	**P**	**20 01 18.8**	**-1.4**
	4.4nm,0.6s,baz=66,slow=1.4,SNR=2.1						
URZ				S	**S**	**20 03 50.5**	**0.0**
	9.4nm,1.0s,baz=347,slow=16,SNR=1.8						
BKZ	**Black Stump Fm**	**15.29**	**190**	P	**P**	**20 01 27.6**	**-2.8**
BKZ				IAmb	IAmb	20 02 11.8	
	comp=Z,20nm,1.5s						
FUNA	**Funafuti**	**15.48**	**358**	P	**P**	**20 01 28.9**	**-3.9**
QRZ	**Quartz Range**	**17.75**	**198**	P	**P**	**20 01 53.6**	**-0.4**
LTZ	**Lake Taylor**	**19.64**	**196**	P	**P**	**20 02 10.3**	**-0.9**
EIDS	**Eidsvold**	**26.02**	**261**	P	**P**	**20 03 09.9**	**+1.3**
EIDS				IAmb	IAmb	20 03 15.8	
	comp=Z,22nm,1.3s						
CTA	**Charters Tower**	**31.22**	**271**	P	**P**	**20 03 55.1**	**+1.3**
	comp=Z,6.2nm,0.4s,baz=91,slow=10,SNR=13						
	comp=Z,6.2nm,0.4s						
CTAO	**Charters Tower**	**31.22**	**271**	P	**P**	**20 03 53.0**	**-0.8**
CTAO				IAmb	IAmb	20 03 56.0	
	comp=Z,10nm,0.7s						
STKA	**Stephens Creek**	**34.42**	**248**	P	**P**	**20 04 21.0**	**+0.3**
	comp=Z,3.9nm,1.2s,baz=85,slow=11,SNR=1.7						
	comp=Z,3.9nm,1.2s						
STKA	**Stephens Creek**	**34.42**	**248**	P	**P**	**20 04 20.2**	**-0.5**
BBOO	**Buckleboo**	**39.14**	**247**	P	**P**	**20 04 59.8**	**+0.3**
BBOO				IAmb	IAmb	20 05 39.7	
	comp=Z,22nm,1.2s						
AS31	**Alice Springs**	**41.75**	**261**	P	**P**	**20 05 21.0**	**+0.4**
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**20 05 20.9**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=96,slow=7.5,SNR=36						
ASAR				ScP	**ScP**	**20 10 07.2**	**+3.7**
	comp=Z,0.4nm,0.8s,baz=105,slow=4.4,SNR=4.7						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**20 05 21.0**	**+0.4**
WR0	**Warramunga Arr**	**41.95**	**266**	P	**P**	**20 05 22.1**	**0.0**
WR0				IAmb	IAmb	20 05 22.5	
	comp=Z,3.2nm,0.7s						
WB2	**Warramunga Arr**	**42.13**	**266**	P	**P**	**20 05 23.7**	**+0.2**
WB2				IAmb	IAmb	20 05 24.0	
	comp=Z,4.2nm,0.5s						
WB0	**Warramunga Arr**	**42.13**	**267**	P	**P**	**20 05 23.7**	**+0.1**
WB0				IAmb	IAmb	20 05 24.3	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**42.14**	**266**	P	**P**	**20 05 23.3**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=96,slow=8.3,SNR=104						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**42.14**	**266**	P	**P**	**20 05 22.5**	**-1.1**
FORT	**Forrest**	**46.01**	**250**	P	**P**	**20 05 53.3**	**-0.1**
MTN	**Manton Dam**	**47.21**	**275**	P	**P**	**20 06 02.2**	**-0.5**
MTN				IAmb	IAmb	20 06 22.5	
	comp=Z,17nm,1.3s						
KNRA	**Kununurra**	**48.43**	**270**	P	**P**	**20 06 12.3**	**+0.6**
KNRA				IAmb	IAmb	20 06 32.1	
	comp=Z,18nm,1.2s						
NVAR	**Mina Array Bea**	**85.06**	**44**	P	**P**	**20 09 59.8**	**+2.4**
	comp=Z,0.6nm,0.5s,baz=236,slow=5.1,SNR=3.4						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**92.27**	**14**	P	**P**	**20 10 30.5**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=195,slow=1.8,SNR=2.2						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**147.48**	**307**	PKPbc	**PKPab**	**20 17 05.5**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=73,slow=4.8,SNR=2.6						

AZER 14 19:58:39.6±0.1, 36°73N×49°55E, h10km, Error ellipse: s-maj=3.2km s-min=2.3km az=249.0
TEH 14 19:58:40.1, 36°61N×48°77E, h8km, ML4.2
IDC 14 19:58:42.6±2.4, 36°90N×48°52E, h0km, mb3.6/5, mbtmp3.7/9, ML3.8/4, MS2.8/2, Error ellipse: s-maj=36.3km s-min=25.3km az=174.0
NNC 14 19:58:55.8±3.4, 37°61N×49°39E, h0km, mb3.9, Error ellipse: s-maj=37.8km s-min=19.7km az=33.0

ISC 14 19:58:41.2±0.9, 36°65N±0°03×48°74E±0°03, h10km±6km, n107, σ2°58/133, mb3.7/6, 2C, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**0.04**	**295**	*e*Pn	**Pg**	**19 58 43.3**	**-0.2**
QSDN	**Sirdan**	**0.38**	**113**	*e*Pg	**Pg**	**19 58 47.2**	**-1.6**
QSDN				*e*Sg	**Sg**	**19 58 52.5**	**-1.5**
JIR1	**Jirandeh**	**0.86**	**86**	*e*Pg	**Pg**	**19 58 56.9**	**-0.9**
JIR1				*e*		19 59 09.2	
	comp=Z,68μm,0.2s						
CSN1	**Caspian**	**0.95**	**17**	*e*Pg	**Pg**	**19 59 00.3**	**+0.7**
CSN1				*e*		19 59 00.7	
	comp=Z,16μm,0.4s						
GIDE	**GILAN DEYLAMAN**	**0.98**	**74**	*e*Pn	**Pg**	**19 58 59.5**	**-0.6**
LHJ2	**Lahijan - Gila**	**1.18**	**64**	*e*Pg	**Pb**	**19 59 02.9**	**-0.7**
LHJ2				*e*		19 59 28.2	
	comp=Z,37μm,0.3s						
IGZV	**Ghazvin**	**1.22**	**102**	*e*Pn	**Pn**	**19 59 02.9**	**-1.6**
IGZV				*e*		19 59 21.8	
	comp=Z,66μm,0.2s						
IHSH	**Hashtrud**	**1.35**	**299**	*e*Pn	**Pn**	**19 59 06.0**	**-0.3**
ISRB	**Sarab**	**1.45**	**324**	*e*		19 59 08.7	
	comp=Z,48μm,0.2s						
ISRB				*e*Pn	**Pn**	**19 59 08.4**	**+0.8**
QALM	**Alamut, Qazvin**	**1.56**	**98**	*e*		19 59 34.3	
	comp=Z,41μm,0.4s						
QALM				*e*Pn	**Pn**	**19 59 08.4**	**-0.7**
IRAZ	**Razeghan**	**1.58**	**142**	*e*		19 59 34.3	
	comp=Z,35μm,1.0s						
IRAZ				*e*Pn	**Pn**	**19 59 08.0**	**-1.4**
GAS1	**Astara - Iran**	**1.73**	**3**	*e*Pn	**Pb**	**19 59 13.1**	**0.0**
GAS1				*e*		19 59 42.1	
	comp=Z,34μm,0.4s						
IBST	**Bostanabad**	**1.81**	**306**	*e*Pn	**Pn**	**19 59 13.6**	**+1.1**
IBST				*e*		19 59 15.3	
	comp=Z,15μm,0.2s						
IMHD	**Mahdasht**	**1.84**	**121**	*e*Pn	**Pn**	**19 59 13.1**	**+0.3**
IMHD				*e*		19 59 40.9	
	comp=Z,27μm,0.4s						
HAGD	**Aghdareh**	**1.85**	**170**	*e*Pn	**Pn**	**19 59 13.7**	**+0.5**
HAGD				*e*		19 59 40.4	
	comp=Z,10μm,0.3s						
ASTR	**Astara**	**1.91**	**1**	P	**Pn**	**19 59 15.5**	**+1.8**
	SNR=453						
ASTR				S	**Sg**	**19 59 43.5**	**+1.1**
SNGE	**Sanandaj**	**1.92**	**216**	*e*Pn	**Pn**	**19 59 14.6**	**+0.5**
LRK	**Lerik**	**2.01**	**351**	P	**Pb**	**19 59 18.3**	**+0.3**
	SNR=116						
LRK				S	**Sg**	**19 59 47.6**	**+1.7**
LKRN	**Lenkeran, Azer**	**2.06**	**1**	P	**Pn**	**19 59 17.5**	**+1.8**
	SNR=13						
LKRN				S	**Sg**	**19 59 46.4**	**-0.8**
CHTH	**Charan**	**2.07**	**110**	*e*Pn	**Pn**	**19 59 17.0**	**+0.8**
IHRS	**Heris**	**2.14**	**322**	*e*Pn	**Pn**	**19 59 18.8**	**+1.7**
IHRS				*e*		19 59 21.2	
	comp=Z,26μm,0.2s						
ILIN	**Lien**	**2.25**	**220**	*e*Pn	**Pn**	**19 59 20.2**	**+1.5**
ILIN				*e*		19 59 24.0	
	comp=Z,10μm,0.3s						
GRMI	**Germi**	**2.25**	**343**	*e*Pn	**Pn**	**19 59 20.9**	**+2.3**
GRMI				*e*		20 00 01.5	
	comp=Z,99nm,0.6s						
IBZA	**Bozab**	**2.29**	**198**	*e*Pn	**Pn**	**19 59 20.4**	**+1.2**
IBZA				*e*		19 59 26.5	
	comp=Z,6μm,0.3s						
YRD	**Yardimli**	**2.29**	**350**	P	**Pb**	**19 59 22.3**	**-0.4**
	SNR=187						
YRD				S	**Sg**	**19 59 55.6**	**+0.7**
TEHA	**Amirabad Tehra**	**2.33**	**112**	*e*Pn	**Pn**	**19 59 21.7**	**+2.1**
TEH	**Tehran**	**2.33**	**112**	*e*Pn	**Pn**	**19 59 21.4**	**+1.8**
ASAO	**Ashtian**	**2.35**	**153**	*e*Pn	**Pn**	**19 59 20.8**	**+0.8**
TAB1	**Tabriz**	**2.37**	**307**	*e*Pn	**Pn**	**19 59 21.8**	**+1.6**
IHSB	**Hasanabad**	**2.39**	**120**	*e*Pn	**Pn**	**19 59 21.9**	**+1.5**
IHSB				*e*		19 59 23.5	
	comp=Z,16μm,0.3s						
IAZR	**Azarshahr**	**2.43**	**296**	*e*Pn	**Pn**	**19 59 23.0**	**+1.9**
IAZR				*e*		19 59 29.2	
	comp=Z,18μm,0.3s						
HSAM	**Samen**	**2.44**	**183**	*e*Pn	**Pn**	**19 59 22.6**	**+1.4**
MAHB	**Mahabad**	**2.44**	**274**	*e*Pn	**Pn**	**19 59 23.3**	**+2.2**
MAHB				*e*		19 59 59.9	
	comp=Z,5μm,0.4s						
TVRZ	**Varzaqan**	**2.47**	**319**	*e*Pn	**Pn**	**19 59 23.0**	**+1.3**
TVRZ				*e*		20 00 10.7	
	comp=Z,11μm,0.5s						
ITBZ	**Tabriz**	**2.59**	**308**	*e*Pn	**Pn**	**19 59 24.2**	**+0.9**
GLBA	**Clilabad**	**2.60**	**354**	P	**Pn**	**19 59 26.0**	**+2.7**
	SNR=26						
GLBA				S	**Sb**	**20 00 01.3**	**+1.5**
KER	**Kermanshah**	**2.61**	**211**	*e*Pn	**Pn**	**19 59 25.2**	**+1.7**
IQOM	**Qom**	**2.62**	**133**	*e*Pn	**Pn**	**19 59 23.8**	**0.0**
IQOM				*e*		20 00 04.5	
	comp=Z,14μm,0.4s						
IKOM	**Komasi**	**2.67**	**202**	*e*Pn	**Pn**	**19 59 26.3**	**+2.0**
KCHF	**Cheshme Sefid,**	**2.75**	**211**	*e*Pn	**Pn**	**19 59 26.9**	**+1.5**
DAMV	**Damavand**	**2.81**	**110**	*e*Pn	**Pn**	**19 59 28.1**	**+1.7**
IGHG	**Ghaleghazi**	**2.91**	**218**	*e*Pn	**Pn**	**19 59 30.5**	**+2.7**
IGHG				*e*		19 59 35.4	
	comp=Z,7μm,0.8s						
IPRN	**Peran**	**2.93**	**97**	*e*Pn	**Pn**	**19 59 29.7**	**+1.7**
IVRN	**Varamin**	**2.94**	**123**	*e*Pn	**Pn**	**19 59 29.3**	**+1.3**
IVRN				*e*		19 59 32.8	
	comp=Z,13μm,0.4s						
ISHB	**Shabestar**	**2.97**	**304**	*e*Pn	**Pn**	**19 59 29.1**	**+0.6**
ISHB				*e*		19 59 34.4	
	comp=Z,6μm,0.3s						
GHVR	**GHOM**	**3.01**	**135**	*e*Pn	**Pn**	**19 59 29.0**	**+0.1**
QRD	**Qoradiz**	**3.02**	**339**	P	**Pb**	**19 59 34.7**	**-0.3**
	SNR=7.8						
QRD				S	**Sg**	**20 00 15.7**	**-2.4**
KHMZ	**Khomeyn**	**3.07**	**161**	*e*Pn	**Pn**	**19 59 31.9**	**+1.9**
IKMR	**Kamar-syah**	**3.14**	**185**	*e*Pn	**Pn**	**19 59 32.9**	**+2.3**
ORD	**Ordubad**	**3.14**	**317**	P	**Pb**	**19 59 37.9**	**+0.7**
	SNR=17						
ORD				S	**Sg**	**20 00 21.3**	**-0.8**
IMRD	**Marand**	**3.17**	**311**	*e*Pn	**Pn**	**19 59 33.3**	**+2.1**
BLQ	**Beylaqan**	**3.20**	**344**	P	**Pb**	**19 59 35.7**	**-2.4**
	SNR=20						
BLQ				S	**Sb**	**20 00 19.7**	**+2.6**
IKFM	**Kafar-mosalman**	**3.20**	**193**	*e*Pn	**Pn**	**19 59 33.3**	**+1.8**
IKFM				*e*		19 59 44.0	
	comp=Z,3μm,0.4s						
ALIB	**Äli-Bayra**	**3.31**	**4**	P	**Pn**	**19 59 34.7**	**+1.7**
ALIB				S	**Sb**	**20 00 16.9**	**-3.3**
IFIR	**Firoozkooh**	**3.41**	**106**	*e*Pn	**Pn**	**19 59 36.0**	**+1.4**
IFIR				*e*		20 00 40.9	
	comp=Z,2μm,0.5s						
NAX	**Nakhchivan**	**3.59**	**315**	P	**Pb**	**19 59 46.1**	**+1.3**
	SNR=6.9						
NAX				S	**Sg**	**20 00 35.3**	**-1.3**
QAMS	**Qamsar**	**3.63**	**142**	*e*Pn	**Pn**	**19 59 38.3**	**+0.6**
QAMS				*e*		20 00 37.1	
	comp=Z,3μm,0.4s						
ILAS	**Lasjerd**	**3.65**	**109**	*e*Pn	**Pn**	**19 59 40.2**	**+2.3**
ILAS				*e*		20 00 50.6	
	comp=Z,2μm,0.5s						
ISFB	**Sefidab**	**3.67**	**128**	*e*Pn	**Pn**	**19 59 38.5**	**+0.5**
ISFB				*e*		20 00 51.1	
	comp=Z,2μm,0.5s						
AGDM	**Agdam**	**3.68**	**340**	P	**Pb**	**19 59 44.5**	**-1.7**
	SNR=12						
AGDM				S	**Sb**	**20 00 31.4**	**+0.5**
ZRD	**Zardab**	**3.71**	**347**	P	**Pn**	**19 59 42.3**	**+3.8**
ZRD				S	**Sb**	**20 00 28.8**	**-3.0**
SBZ	**Shahbuz**	**3.72**	**318**	P	**Pb**	**19 59 48.6**	**+1.6**
	SNR=6.7						
SBZ				S	**Sg**	**20 00 38.9**	**-1.7**
ISHM	**Shahmirzad**	**3.78**	**102**	*e*		20 00 48.4	
	comp=Z,5μm,0.4s						
BRDA	**Brd**	**3.81**	**342**	P	**Pn**	**19 59 44.4**	**+4.6**
BRDA				S	**Sb**	**20 00 33.8**	**-0.7**
KRSH	**Karshahi**	**3.86**	**133**	*e*Pn	**Pn**	**19 59 42.2**	**+1.5**
GBS	**Qobustan**	**3.88**	**2**	P	**Pn**	**19 59 43.2**	**+2.3**
GBS				S	**Sn**	**20 00 30.7**	**+4.2**
IKLH	**Kolahrood**	**4.06**	**144**	*e*Pn	**Pn**	**19 59 45.7**	**+2.1**
IKLH				*e*		20 00 46.9	
	comp=Z,1μm,0.4s						
PQL	**Pirkuli**	**4.13**	**359**	P	**Pn**	**19 59 46.2**	**+1.8**
PQL				S	**Sn**	**20 00 38.0**	**+5.1**
HYR	**Heyderabad**	**4.33**	**316**	P	**Pb**	**19 59 56.6**	**-0.8**
HYR				S	**Sg**	**20 00 55.6**	**-4.6**
IPIR	**Pirpir**	**4.34**	**155**	*e*Pn	**Pn**	**19 59 49.4**	**+2.0**
GANJ	**Ganja**	**4.41**	**335**	P	**Pn**	**19 59 51.4**	**+3.3**
	SNR=7.2						
GANJ				S	**Sb**	**20 00 52.6**	**+0.6**
SIZA	**Siyzn**	**4.42**	**2**	P	**Pn**	**19 59 50.3**	**+2.0**
SIZA				S	**Sn**	**20 00 43.4**	**+3.5**
XNQ	**Khinaliq**	**4.54**	**354**	P	**Pn**	**19 59 53.8**	**+3.8**
XNQ				S	**Sn**	**20 00 47.9**	**+4.9**
GDB	**GEDABAY**	**4.69**	**331**	P	**Pb**	**20 00 00.4**	**-3.0**
	SNR=18						
GDB				S	**Sb**	**20 01 00.5**	**+0.5**
GNI	**Garni**	**4.69**	**319**	Lg	Lg	20 01 12.3	
	comp=Z,1.8nm,0.3s,baz=43,slow=22,SNR=1.6						
QUBA	**Quba, Azerbaij**	**4.70**	**358**	P	**Pn**	**19 59 55.1**	**+2.9**
QUBA				S	**Sn**	**20 00 50.9**	**+4.2**
SEKA	**Sheki**	**4.71**	**346**	P	**Pn**	**19 59 54.2**	**+1.9**
SEKA				S	**Sb**	**20 00 54.0**	**-6.5**
IZEF	**Zefreh**	**4.77**	**141**	*e*Pn	**Pn**	**19 59 54.6**	**+1.2**
NASN	**Na'in**	**5.10**	**138**	*e*Pn	**Pn**	**19 59 59.4**	**+1.5**
QZX	**Qazax, Azerbai**	**5.12**	**330**	P	Pb	20 00 05.8	-5.0
	SNR=6.4						
QZX				S	**Sb**	**20 01 11.9**	**-0.6**
ZKTA	**Zakatala**	**5.24**	**342**	P	**Pn**	**20 00 03.9**	**+4.3**
ZKTA				S	**Sb**	**20 01 10.5**	**-5.3**
SHRO	**Shahrood**	**5.91**	**94**	*e*Pn	**Pn**	**20 00 11.6**	**+2.7**
MRVT	**Maraveh tapeh**	**5.96**	**78**	*e*Pn	**Pn**	**20 00 10.9**	**+1.4**
YZKH	**Yazd**	**6.44**	**130**	*e*Pn	**Pn**	**20 00 17.5**	**+1.4**
BJRD	**Bojnurd**	**7.00**	**79**	*e*Pn	**Pn**	**20 00 25.5**	**+1.6**
SBZV	**Sabzevar**	**7.15**	**89**	*e*Pn	**Pn**	**20 00 30.0**	**+4.0**
ISFR	**Sfrayin**	**7.44**	**84**	*e*Pn	**Pn**	**20 00 33.8**	**+3.8**
TPRV	**Parvadeh(Tabas**	**7.47**	**117**	*e*Pn	**Pn**	**20 00 31.5**	**+1.3**
TABS	**Tabas**	**7.49**	**111**	*e*Pn	**Pn**	**20 00 31.7**	**+1.1**
TKDS	**Koohdasht(Taba**	**7.51**	**111**	*e*Pn	**Pn**	**20 00 32.3**	**+1.5**
GEYT	**Alibeck**	**7.59**	**78**	Pn	**Pn**	**20 00 34.0**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=270,slow=13,SNR=12						
GEYT				Sn	**Sn**	**20 02 00.0**	**+2.2**
	comp=Z,0.9nm,0.3s,baz=242,slow=28,SNR=2.3						
	comp=Z,1.8nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**7.59**	**78**	P	Pn	20 00 37.2	+5.4
GYA0B				S	**Sn**	**20 02 00.1**	**+2.3**
IKOO	**Kooshah**	**9.46**	**113**	*e*Pn	**Pn**	**20 00 59.2**	**+1.5**
BSRN	**Basiran**	**9.78**	**116**	*e*Pn	**Pn**	**20 01 03.8**	**+1.8**
AB31	**Akbulak array**	**15.01**	**29**	P	**Pn**	**20 02 13.4**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=210,slow=15,SNR=17						
AB31				⇑S	Sn	20 04 49.2	-10
	comp=Z,1.4nm,0.6s,baz=215,slow=26,SNR=8.6						
AKTO	**Aktyubinsk**	**15.31**	**23**	Pn	**Pn**	**20 02 14.4**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=202,slow=14,SNR=13						
AKTO				Sn	Sn	20 04 56.6	-10
	comp=Z,0.3nm,0.3s,baz=193,slow=19,SNR=7.3						
AKTO				LR	LR	20 10 03.1	
	comp=Z,36nm,19.2s,baz=210,slow=45						
	comp=Z,1.9nm,0.3s						
AKTO	**Aktyubinsk**	**15.31**	**23**	P	**Pn**	**20 02 17.5**	**+0.2**
	comp=Z,2.4nm,0.7s						
AKTO				⇑S	**Sn**	**20 04 58.4**	**-8.5**
	comp=Z,5.8nm,0.8s						
BELG	**Belogornoye**	**15.76**	**357**	Pn	**Pn**	**20 02 22.8**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=150,slow=20,SNR=4.2						
BELG				Sn	**Sn**	**20 05 09.7**	**-7.9**
	comp=Z,0.6nm,0.3s,baz=162,slow=20,SNR=3.2						
	comp=Z,3.2nm,0.5s						
AKASG	**Malin Array Be**	**19.82**	**321**	P	**P**	**20 03 12.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=123,slow=12,SNR=1.7						
	comp=Z,0.2nm,0.3s						
AAK	**Ala-Archa**	**20.68**	**65**	LR	LR	20 12 44.9	
	comp=Z,27nm,18.9s,baz=260,slow=41						
ARU	**Arti**	**20.87**	**15**	P	**P**	**20 03 24.3**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=208,slow=10,SNR=4.2						
ARU				S	**S**	**20 07 06.6**	**-8.9**
	comp=Z,0.9nm,0.4s,baz=252,slow=20,SNR=3.1						
	comp=Z,1.4nm,0.4s						
BRVK	**Borovoye**	**22.28**	**36**	P	**P**	**20 03 43.2**	**+4.9**
	comp=Z,6.3nm,1.0s						
BVA0	**Borovoye Array**	**22.31**	**36**	P	**P**	**20 03 43.2**	**+4.6**
	comp=Z,3.8nm,0.8s,baz=228,slow=7.2,SNR=17						
BVAR	**Borovoye Array**	**22.31**	**36**	P	**P**	**20 03 41.5**	**+2.9**
	comp=Z,3.0nm,0.7s,baz=228,slow=7.8,SNR=12						
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**26.83**	**57**	P	**P**	**20 04 24.8**	**+3.2**
	comp=Z,0.4nm,0.6s,baz=259,slow=7.6,SNR=4.3						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**28.21**	**307**	P	**P**	**20 04 33.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=114,slow=12,SNR=2.7						
	comp=Z,0.3nm,0.6s						
**ZALV

```
                0.8nm,0.5s,baz=92,slow=8.2,SNR=14
MKAR                                    PcP   PcP    20 20 50.3  0.0
                0.2nm,0.5s,baz=87,slow=5.0,SNR=1.8
                0.8nm,0.5s
ILAR  Eielson Array    62.14  27  P          P      20 20 40.5 -1.1
                0.2nm,0.4s,baz=268,slow=5.2,SNR=3.4
                0.2nm,0.4s
ARCES ARCESS Array B  79.14 342  P          P      20 22 23.4 -0.1
                1.3nm,0.6s,baz=73,slow=7.9,SNR=8.5
                1.3nm,0.6s
FINES FINESS Array B  83.40 335  P          P      20 22 44.8 -1.1
                0.9nm,0.4s,baz=68,slow=5.2,SNR=15
                0.9nm,0.4s
PLCA  Paso Flores    145.54 132  PKPbc      PKPdf  20 29 56.4 +1.5
                0.8nm,0.6s,baz=151,slow=0.9,SNR=5.0
```

MAN 14 20:14:25.8, 9°.16N×125°.36E, h10km, mb4.4, ML3.2, MS3.0, 5C-5D, Mindanao

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
BUTP  Butuan          0.32 127  ⇓eP   Pb       20 14 33.9 +0.2
BUTP                            eS    Sb       20 14 40.3 +1.4
CGP   Cagayan de Oro  0.96 223  ⇑iP   Pg       20 14 43.1 -1.3
CGP                             i S   Sg       20 14 55.0 -1.9
GLSP  General Luna,   0.98  51  ⇓eP   Pg       20 14 44.0 -0.7
GLSP                            eS    Sn       20 14 59.1 -0.5
MSLP  Maasin          1.09 333  ⇓eP   Pb       20 14 45.9 -0.9
MSLP                            eS    Sn       20 15 02.3  0.0
GHBP  Garcia Hernand  1.13 295  ⇑eP   Pg       20 14 47.6  0.0
GHBP                            i S   Sn       20 15 04.2 +1.0
BUKP  Musuan          1.31 193  ⇑eP   Pn       20 14 48.4 -1.9
BUKP                            i S   Sb       20 15 05.9 -1.5
TABP  Talibon, Bohol  1.37 312  ⇑eP   Pn       20 14 50.6 -0.5
TABP                            i S   Sb       20 15 08.4 -0.8
LSIP  Lazi, Siquijor  1.71 269  ⇑eP   Pn       20 14 52.0 -3.7
LSIP                            i S   Sn       20 15 14.5 -3.1
SNPH  Sibulan         2.11 275  eP    Pn       20 15 01.1 -0.1
SNPH                            i S   Sn       20 15 28.1 +0.6
KCP   Kidapawan       2.15 187  ⇓eP   Pg       20 15 10.4 +3.2
KCP                             i S   Sn       20 15 26.0 -2.8
DDMP  Don Marcelino,  3.06 173  ⇓eP   Pn       20 15 10.8 -3.4
DDMP                            eS    Sn       20 15 42.2 -8.6
```

*IDC **14** 20:26:00.3±0.7, 6°.00S×74°.97W, h0km, mb3.9/9, mbtmp3.9/13, ML3.9/4, MS3.3/11, Error ellipse: s-maj=22.9km s-min=18.4km az=64.0*
*VAO **14** 20:26:04.3±0.7, 6°.09S×75°.08W, h17km, mb4.3*
*NEIC **14** 20:26:06.3±2.8, 6°.16S±0°.07×75°.19W±0°.04, h41km±12km, mb4.3/9, Error ellipse: s-maj=11.9km s-min=4.0km az=207.0*

ISC 14 20:26:04.4±0.5, 6°.10S±0°.05×75°.18W±0°.05, h27km, n54, σ1§53/54, mb4.0/12, MS3.6/4, Northern Peru

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
CZSB  Cruzeiro do Su  2.94 123  eP    Pn       20 26 51.5 +2.2
CZSB                            eS    Sn       20 27 25.0 +1.2
ATAH  Atahualpa       3.36 252  Pn    Pn       20 26 57.4 +1.9
                8.8nm,0.3s,baz=68,slow=13,SNR=101
ATAH                            Sn    Sb       20 27 42.7 -1.3
                28nm,0.3s,baz=87,slow=23,SNR=5.1
ATAH                            LR    LR       20 28 42.1
                comp=Z,404nm,19.7s,baz=43,slow=45
                21nm,0.2s
BOSC  San Juan Bosco  4.42 311          Pn       20 27 09.4 -0.4
COHC  Cochancay       5.44 311          Pn       20 27 24.6 +0.9
ARNL  Arenillas       5.49 297          Pn       20 27 23.1 -1.4
TBTG  Tabatinga, AM   5.58  70  eP    Pn       20 27 25.8 +0.1
TBTG                            eS    Sn       20 28 28.6 -0.5
NNA   Nana            6.07 196  Pn    Pn       20 27 33.5 +1.0
                8.6nm,0.3s,baz=12,slow=9.2,SNR=4.4
NNA                             Sn    Sn       20 28 40.0 -1.2
                17nm,0.3s,baz=207,slow=16,SNR=5.7
NNA                             LR    LR       20 30 26.7
                comp=Z,154nm,20.4s,baz=4.0,slow=43
                16nm,0.3s
NNA   Nana            6.07 196          Pn       20 27 32.4 -0.1
SLOR  San Lorenzo -   6.28 328  Pn    Pn       20 27 39.4 +3.6
ETMB  Extrema         9.61 113  eP    Pn       20 28 20.2 -0.9
ETMB                            eS    Sn       20 30 07.6 -0.7
SGCB  SÃo Gabriel d  10.07  54  eP    Pn       20 28 27.9 +0.6
SGCB                            eS    Sn       20 30 15.7 -3.9
ROSC  El Rosal        10.90   5  LR    LR       20 33 57.2
                comp=Z,124nm,19.7s,baz=210,slow=44
LPAZ  La Paz          12.25 146  Pn    Pn       20 28 56.8 -1.0
                0.3nm,0.3s,baz=347,slow=15,SNR=4.6
LPAZ                            LR    LR       20 34 22.3
                comp=Z,55nm,20.5s,baz=24,slow=41
                1.2nm,0.6s
LPAZ  La Paz          12.25 146  eP    Pn       20 28 58.2 +0.4
MACA  Manacapuru-AM   14.74  79  eP    Pn       20 29 29.6 -1.6
SDV   Santo Domingo   15.56  17  LR    LR       20 36 41.3
                comp=Z,57nm,21.1s,baz=182,slow=42
BAUV  El Baul         16.55  26  Pn    Pn       20 29 55.7 +0.9
BAUV                            IAmb  IAmb     20 30 10.6
                comp=Z,10nm,0.8s
PB09  IPOC Station P  16.62 160  Pn    Pn       20 29 55.7 -0.2
PB09                            IAmb  IAmb     20 30 11.3
                comp=Z,12nm,1.0s
BOAV  Boa Vista       16.89  60  eP    Pn       20 29 59.0 -0.1
BOAV                            eS    Sn       20 33 12.4 +6.2
SIV   San Ignacio     16.96 127  Pn    Pn       20 29 58.0 -2.0
                baz=313,slow=13,SNR=9.9
SIV                             LR    LR       20 36 44.5
                comp=Z,113nm,20.3s,baz=290,slow=38
                comp=Z,3.1nm,0.8s
LVC   Limon Verde     17.49 160  LR    LR       20 37 56.6
                comp=Z,66nm,19.1s,baz=350,slow=41
BBSD  Serra de San D  18.01 129  eP    Pn       20 30 13.6 +0.7
PTLB  Pontes e Lacer  18.28 122  eP    Pn       20 30 13.8 -2.4
PDRB  Porto dos Gac   19.03 108  eP    P        20 30 23.9 -0.6
BBRB  Robore, Bolivi  19.27 130  eP    P        20 30 27.9 +0.7
ITTB  Itaituba        19.44  86  eP    P        20 30 29.0  0.0
NPGB  Novo Progresso  19.71  94  eP    P        20 30 30.9 -1.1
CLDB  Colider         19.74 105  eP    P        20 30 31.8 -0.6
SALV  Santo Antonio   21.44 119  eP    P        20 30 51.7 +1.0
MCPB  Macapa, AP      23.77  77  eP    P        20 31 16.1 +1.1
MDP   Montagnes des   25.10  64  LR    LR       20 41 47.4
                comp=Z,101nm,18.3s,baz=252,slow=38
DR12  Loma Pena Alta  25.39  13  P     P        20 31 27.7 -2.0
BB19B Bebedouro       29.79 123  eP    P        20 32 10.7 +1.4
PLCA  Paso Flores     34.73 174  P     P        20 32 52.7 +0.4
                comp=Z,2.0nm,1.0s,baz=351,slow=11,SNR=5.0
                comp=Z,2.0nm,1.0s
V48A  Smith Brothers  43.04 346  P     P        20 34 01.4 -0.5
V48A                            IAmb  IAmb     20 34 02.5
                comp=Z,11nm,0.8s
TXAR  Lajitas Array   44.63 324  P     P        20 34 15.9 +1.0
                comp=Z,0.2nm,0.5s,baz=146,slow=8.5,SNR=5.2
                comp=Z,0.2nm,0.5s
ANMO  Albuquerque     50.36 326  P     P        20 35 00.1 +0.6
ANMO                            IAmb  IAmb     20 35 01.5
                comp=Z,2.9nm,0.8s
N23A  Red Feather La  54.63 332  P     P        20 35 32.4 +1.3
N23A                            IAmb  IAmb     20 35 53.2
                comp=Z,6.4nm,0.8s
PDAR  Pinedale Array  57.80 331  P     P        20 35 53.4 -0.3
                comp=Z,0.2nm,0.4s,baz=122,slow=8.6,SNR=3.5
                comp=Z,0.2nm,0.4s
ULM   Lac du Bonnet   58.92 345  P     P        20 36 00.1 -1.0
                comp=Z,3.2nm,0.6s,baz=184,slow=6.0,SNR=4.1
                comp=Z,3.2nm,0.6s
NVAR  Mina Array Bea  59.69 322  P     P        20 36 07.7 +0.8
                comp=Z,0.3nm,0.3s,baz=148,slow=5.3,SNR=2.5
                comp=Z,0.3nm,0.3s
KOWA  Kowa            73.46  73  LR    LR       21 09 19.8
                comp=Z,30nm,18.3s,baz=225,slow=36
YKA   Yellowknife Ar  74.75 342  P     P        20 37 41.7 +0.1
                comp=Z,1.3nm,0.6s,baz=142,slow=6.0,SNR=4.0
                comp=Z,1.3nm,0.6s
TORD  Torodi Ar, Bea  78.69  75  P     P        20 38 03.8 -1.1
                comp=Z,0.7nm,0.7s,baz=278,slow=5.9,SNR=8.6
                comp=Z,0.7nm,0.7s
ESDC  Sonseca Array   79.63  48  P     P        20 38 09.5 -0.2
                comp=Z,0.6nm,0.9s,baz=264,slow=7.0,SNR=4.1
                comp=Z,0.6nm,0.9s
ILAR  Eielson Array   87.80 336  P     P        20 38 50.9 +0.1
                comp=Z,1.0nm,0.9s,baz=109,slow=2.9,SNR=7.7
                comp=Z,1.0nm,0.9s
MDM   Murphy Dome     88.41 336  P     P        20 38 53.9 +0.2
SKT   Skwentna        88.99 333  P     P        20 38 56.5  0.0
TSUM  Tsumeb          90.61 109  LR    LR       21 16 29.9
                comp=Z,36nm,19.0s,baz=138,slow=34
LBTB  Lobatse         97.14 116  LR    LR       21 19 14.3
                comp=Z,20nm,20.6s,baz=104,slow=33
ZALV  Zalesovo Beam  129.61  15  PKP   PKPdf    20 45 10.6 -0.3
                comp=Z,0.9nm,0.4s,baz=298,slow=3.2,SNR=5.3
MKAR  Makanchi Array 135.06  22  PKP   PKPdf    20 45 21.3 -0.1
                comp=Z,0.2nm,0.4s,baz=275,slow=3.3,SNR=5.7
ASAR  Alice Springs  139.00 223  PKP   PKPdf    20 45 30.5 +1.0
                comp=Z,0.3nm,0.7s,baz=134,slow=2.7,SNR=1.8
WRA   Warramunga Arr 141.10 228  PKP   PKPdf    20 45 34.7 +1.4
                comp=Z,0.4nm,0.6s,baz=120,slow=2.2,SNR=2.6
```

TAP 14 20:26:13.0, 23°.23N×120°.92E, h8km±1km, ML1.1, B, Taiwan

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
ELDTW Lidau           0.10 115  eP    Pg       20 26 16.4 +0.8
                baz=114
ELDTW                           eS    Sg       20 26 17.8 +0.5
                baz=114
STYH  Taoyuan         0.14 245  eP    Pg       20 26 16.8 +0.6
                baz=247
STYH                            eS    Sg       20 26 19.2 +0.9
                baz=247
STYT  Tauyuan         0.16 245  eP    Pg       20 26 18.0 +1.5
                baz=243
STYT                            eS    Sg       20 26 20.6 +1.7
                baz=243
ALS   Alishan         0.30 339  eP    Pg       20 26 19.7 +0.7
                baz=340
ALS                             eS    Sb       20 26 24.7 -1.2
                baz=340
SGST  Jiashian        0.34 244  eP    Pg       20 26 20.3 +0.5
                baz=243
SGST                            eS    Sb       20 26 26.2 -0.8
                baz=243
FULB  Fuli            0.35  95  eP    Pb       20 26 21.1 -0.4
                baz=95
FULB                            eS    Sb       20 26 26.7 -0.4
                baz=95
YULB  Yu-li           0.38  65  eP    Pb       20 26 22.1  0.0
                baz=65
YULB                            eS    Sb       20 26 27.6 -0.6
                baz=65
```

JMA 14 20:26:27.1±0.2, 25°N±2°×12°3E±°, h33km, MV1.6/6, NW OFF ISHIGAKIJIMA IS, Taiwan region

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
JYNG  Yonagunijimaku  0.28 157  P     Pb       20 26 33.5 -1.2
JYNG                            eS    Sn       20 26 37.4 -2.2
YOJ   Yonaguni jima   0.30 145  P     Pb       20 26 34.3 -0.7
YOJ                             eS    Sb       20 26 38.6 -1.7
IRIF  Iriomote-Funau  0.91 114  P     Pn       20 26 43.6  0.0
IRIF                            eS    Sn       20 26 55.6  0.0
JKRS  Kuro-shima      1.18 113  P     Pn       20 26 47.9 +0.5
JKRS                            eS    Sn       20 27 02.8 +0.5
JIJ   Ishigaki jima   1.25 106  P     Pn       20 26 48.7 +0.4
JIJ                             S     Sn       20 27 04.3 +0.3
```

IDC 14 20:30:25.8±2.3, 11°.25S×123°.52E, h0km, mb3.4/1, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=125.3km s-min=27.9km az=51.0, South of Timor

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
WRA   Warramunga Arr 13.53 131  Pn    Pn       20 33 38.7 -0.5
                0.2nm,0.3s,baz=306,slow=15,SNR=9.1
WRA                             Sn    Sn       20 36 09.2 -1.2
                0.7nm,0.3s,baz=308,slow=25,SNR=14
                0.4nm,0.6s
ASAR  Alice Springs  15.81 143  Pn    Pn       20 34 11.7 +1.6
                0.3nm,0.3s,baz=318,slow=12,SNR=16
ASAR                            Sn    Sn       20 37 07.2 +1.1
                0.3nm,0.3s,baz=316,slow=21,SNR=7.2
                1.1nm,0.5s
MKAR  Makanchi Array 68.53 331  P     P        20 41 30.2 -0.1
                0.3nm,0.7s,baz=141,slow=7.1,SNR=2.6
                0.3nm,0.7s
```

*NEIC **14** 20:36:11.7±1.1, 20°.3S±0°.3×177°.5W±0°.2, h538km±18km, mb4.3/14, Error ellipse: s-maj=54.4km s-min=23.5km az=154.0*
*IDC **14** 20:36:19.7±11.0, 19°.94S×178°.11W, h608km±108km, mb3.3/5, mbtmp4.3/6, Error ellipse: s-maj=110.6km s-min=46.7km az=108.0*

ISC 14 20:36:11.3±0.9, 20°.2S±0°.3×177°.4W±0°.1, h550km, n27, σ0§68/27, mb4.2/12, Fiji Islands region

```
Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
NIUE  Niue            7.10  82  P     P        20 38 00.1 -0.3
DZM   Mont Dzumac    15.22 260  P     P        20 39 24.7 +1.5
                2.4nm,0.4s,baz=99,slow=19,SNR=6.3
DZM   Mont Dzumac    15.22 260  P     P        20 39 23.6 +0.4
DZM                             IAmb  IAmb     20 40 03.0
                comp=Z,20nm,1.2s
CTA   Charters Tower 34.11 264  P     P        20 42 10.7 -0.2
                comp=Z,2.8nm,0.4s,baz=94,slow=10.0,SNR=1.8
                comp=Z,2.8nm,0.4s
CTAO  Charters Tower 34.11 264  P     P        20 42 10.7 -0.2
COEN  Coen           38.16 273  P     P        20 42 43.6 -0.7
COEN                            IAmb  IAmb     20 43 17.3
                comp=Z,14nm,1.2s
STKA  Stephens Creek 38.45 244  P     P        20 42 47.0 +0.5
                comp=Z,1.4nm,0.4s,baz=88,slow=11,SNR=7.5
                comp=Z,1.4nm,0.4s
STKA  Stephens Creek 38.45 244  P     P        20 42 46.1 -0.4
BBOO  Buckleboo      43.21 243  P     P        20 43 24.3  0.0
BBOO                            IAmb  IAmb     20 43 25.1
                comp=Z,7.3nm,0.8s
WR0   Warramunga Arr 45.04 262  P     P        20 43 37.6 -1.0
WR0                             IAmb  IAmb     20 44 20.6
                comp=Z,5.1nm,1.2s
AS31  Alice Springs  45.16 256  P     P        20 43 39.3 -0.3
ASAR  Alice Springs  45.16 256  P     P        20 43 39.4 -0.2
                comp=Z,4.8nm,0.5s,baz=92,slow=7.8,SNR=80
ASAR                            PcP   PcP      20 45 08.7 +0.5
                comp=Z,0.4nm,0.5s,baz=110,slow=3.5,SNR=3.0
                comp=Z,4.8nm,0.5s
ASAR  Alice Springs  45.16 256  P     P        20 43 38.9 -0.7
WB0   Warramunga Arr 45.21 262  P     P        20 43 39.0 -1.0
WB2   Warramunga Arr 45.22 262  P     P        20 43 38.9 -1.1
WB2                             IAmb  IAmb     20 43 39.8
                comp=Z,9.8nm,1.1s
WRA   Warramunga Arr 45.23 262  P     P        20 43 39.1 -1.0
                comp=Z,3.0nm,0.4s,baz=97,slow=8.0,SNR=71
                comp=Z,3.0nm,0.4s
WRA   Warramunga Arr 45.23 262  P     P        20 43 39.2 -0.9
FORT  Forrest        49.96 246  P     P        20 44 15.0 -0.3
KNRA  Kununurra      51.27 266  P     P        20 44 24.5 -0.6
KNRA                            IAmb  IAmb     20 44 47.2
                comp=Z,20nm,1.3s
SOEI  Soe            57.08 271  P     P        20 45 06.2 +0.1
SOEI                            IAmb  IAmb     20 45 07.9
                comp=Z,11nm,0.6s
TOLI2 Tolitoli       64.12 282  P     P        20 45 52.5 +0.1
TOLI2                           IAmb  IAmb     20 46 31.9
                comp=Z,7.3nm,1.1s
MJAR  Matsushiro Arr 70.32 323  P     P        20 46 29.7 -0.2
                comp=Z,0.7nm,0.6s,baz=154,slow=6.6,SNR=2.7
                comp=Z,0.7nm,0.6s
AKASG Malin Array Be 143.03 332 PKhKP PKPpre   20 54 39.9
                comp=Z,0.4nm,0.3s,baz=44,slow=4.4,SNR=5.1
BRTR  Keskin Array B 147.07 313 PKPbc PKPbc    20 54 53.4 +0.3
                comp=Z,0.7nm,0.5s,baz=150,slow=3.9,SNR=4.6
CLL   Collm          147.90 348 i PKPbc PKPbc  20 54 55.5 +0.8
MMAI  Mount Meron Ar 148.18 300 PKPbc PKiKP    20 54 57.1 -0.2
                comp=Z,1.0nm,0.5s,baz=62,slow=5.7,SNR=3.7
GERES GERESS Array B 150.06 345 PKPbc PKPbc    20 55 01.0 +0.8
                comp=Z,0.8nm,0.8s,baz=104,slow=1.7,SNR=5.2
```

*JMA **14** 20:43:52.8±0.3, 24°N±1°×122°.8E±0°.9, h59km, MV1.8/8, NW OFF ISHIGAKIJIMA IS*
*TAP **14** 20:43:52.6, 23°.85N×122°.83E, h42km±1km, ML2.6, D*

ISC 14 20:43:50.0±1.2, 23°.77N±0°.04×122°.76E±0°.02, h10km±10km, n37, σ0§77/69, Taiwan region

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Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
JYNG  Yonagunijimaku  0.70  14  P     Pb       20 44 04.8 +0.5
JYNG                            eS    Sg       20 44 13.3 +0.7
YOJ   Yonaguni jima   0.72  18  eP    Pb       20 44 05.5 +0.8
                baz=14
YOJ                             eS    Sb       20 44 14.9 +0.2
                baz=14
YOJ   Yonaguni jima   0.72  18  P     Pb       20 44 05.4 +0.6
YOJ                             eS    Sb       20 44 14.7 -0.1
HATJ  Hateruma jima   0.99  73  eS    Sb       20 44 23.2 +0.7
IRIF  Iriomote-Funau  1.05  57  P     Pb       20 44 10.4 +0.2
IRIF                            eS    Sg       20 44 23.1 -0.6
ESL   Shilin          1.22 272  eP    Pg       20 44 13.0 -0.4
                baz=259
ESL                             eS    Sb       20 44 29.7 +0.7
                baz=259
EGFH  Guangfu         1.23 266  eP    Pn       20 44 14.1 +0.8
                baz=262
EGFH                            eS    Sb       20 44 29.6 +0.3
                baz=262
JKRS  Kuro-shima      1.23  67  P     Pn       20 44 13.8 +0.5
JKRS                            eS    Sn       20 44 29.9 -0.1
ETLH  Xiulin Townshi  1.25 291  eP    Pn       20 44 14.1 +0.5
                baz=277
ETLH                            eS    Sg       20 44 29.0 -1.3
                baz=277
HGSD  Ruisui          1.26 258  eP    Pg       20 44 14.1 -0.1
                baz=254
HGSD                            eS    Sg       20 44 29.8 -0.8
                baz=254
EHY   Hungye          1.35 259  eP    Pg       20 44 15.7 -0.2
                baz=256
EHY                             eS    Sb       20 44 32.6 -0.1
                baz=256
TWE   Neicheng        1.38 314  eP    Pg       20 44 17.2 +0.7
                baz=309
TWE                             eS    Sb       20 44 33.9 +0.4
                baz=309
JIJ   Ishigaki jima   1.39  65  P     Pn       20 44 15.5  0.0
JIJ                             eS    Sb       20 44 31.4 -2.5
YULB  Yu-li           1.40 255  eP    Pb       20 44 16.2  0.0
                baz=244
YULB                            eS    Sn       20 44 34.5 +0.4
                baz=244
FUSB  Fushanzhiwuyua  1.46 313  eP    Pg       20 44 18.4 +0.4
                baz=308
FUSB                            eS    Sn       20 44 35.6 -0.1
                baz=308
FULB  Fuli            1.46 247  eP    Pn       20 44 17.0 +0.5
                baz=238
FULB                            eS    Sn       20 44 34.7 -1.1
                baz=238
OWD   Renai           1.47 278  eP    Pg       20 44 17.9 -0.2
                baz=266
OWD                             eS    Sn       20 44 35.0 -1.0
                baz=266
FUSS  Fushou          1.47 289  eP    Pb       20 44 17.6 +0.1
                baz=285
TIPB  Shuangxi        1.47 325  eP    Pb       20 44 17.7 +0.2
                baz=333
TIPB                            eS    Sn       20 44 34.7 -1.3
                baz=333
CHGB  Renai           1.48 282  eP    Pb       20 44 17.7 -0.1
                baz=269
CHGB                            eS    Sn       20 44 35.6 -1.0
                baz=269
VWDT  VWDT            1.49 270  eP    Pb       20 44 17.9 +0.2
                baz=266
VWDT                            eS    Sn       20 44 36.0 -0.3
                baz=266
WUSB  Renai           1.52 279  eP    Pb       20 44 18.2 -0.2
                baz=274
WUSB                            eS    Sn       20 44 37.3 -0.1
                baz=274
SXI1  Grass Mountain  1.55 329  eP    Pn       20 44 17.9 +0.2
                baz=325
YHNB  Yeheng          1.55 306  eP    Pn       20 44 18.4 +0.7
                baz=288
YHNB                            eS    Sn       20 44 36.6 -1.5
                baz=288
EHD   Haiduan         1.56 247  eP    Pn       20 44 17.8 -0.1
                baz=237
EHD                             eS    Sn       20 44 36.6 -1.5
                baz=237
NSK   Sanguang        1.57 305  eP    Pn       20 44 17.8 -0.2
                baz=288
NSK                             eS    Sn       20 44 36.1 -2.4
                baz=288
ELDTW Lidau           1.71 251  eP    Pn       20 44 20.7 +0.8
                baz=248
ELDTW                           eS    Sn       20 44 40.8 -1.1
                baz=248
SMLT  Sun Moon Lake   1.71 274  eP    Pb       20 44 21.4 -0.2
                baz=270
SMLT                            eS    Sn       20 44 42.1 +0.1
                baz=270
WCS   Beigang Elemen  1.72 280  eP    Pb       20 44 21.7 +0.1
                baz=269
WCS                             eS    Sn       20 44 42.6 +0.5
                baz=269
NFF   Wufeng Townshi  1.73 300  eP    Pb       20 44 21.3 -0.6
                baz=295
NFF                             eS    Sn       20 44 42.6 +0.2
                baz=295
WHYT  Xinyi Township  1.75 268  eP    Pb       20 44 22.4 +0.1
                baz=258
ALS   Alishan         1.81 262  eP    Pb       20 44 23.5  0.0
                baz=259
LIOB  Emei            1.82 299  eP    Pb       20 44 23.4  0.0
                baz=285
LIOB                            eS    Sn       20 44 45.5 +0.9
                baz=285
WCKO  Fanlu           2.01 261  eP    Pb       20 44 26.1 -0.5
                baz=250
WCKO                            eS    Sb       20 44 52.1 +0.4
                baz=250
CHN1  Nanshi          2.13 255  eP    Pb       20 44 29.0 +0.3
                baz=252
CHN1                            eS    Sb       20 44 55.4 +0.1
                baz=252
TWK   Hsinying        2.15 257  eP    Pb       20 44 29.5 +0.5
                baz=247
TWK                             eS    Sb       20 44 56.6 +0.8
                baz=247
MASBT Mashibuluo      2.27 240  eP    Pn       20 44 29.5 +1.8
                baz=234
MASBT                           eS    Sn       20 44 56.3 +0.6
                baz=234
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*NEIC **14** 20:52:05.6±1.7, 6°.07N±0°.06×125°.32E±0°.08, h110km±5km, mb4.8/96, Error ellipse: s-maj=11.2km s-min=8.8km az=79.0*
*DJA **14** 20:52:05.8±0.4, 6°N±4°×12°5E±°, h107km±3km, M4.6/33, mB5.0/14, mb4.8/33, MLv5.0/12, Mw(mB)4.4/14*
*BJI **14** 20:52:05.7±0.0, 6°.23N×125°.32E, h113km, mb4.4/25, mB4.7/14*
*IDC **14** 20:52:06.3±0.5, 6°.13N×125°.42E, h121km±4km, mb4.1/23, mbtmp4.5/24, MS3.0/6, Error ellipse: s-maj=14.4km s-min=7.1km az=79.0*
*MAN **14** 20:52:06.8, 6°.19N×125°.25E, h100km, mb5.2, ML4.1, MS4.2*
MAN INTENSITY II - GENERAL SANTOS CITY; ALABEL & MALAPATAN SARANGANI.

ISC 14 20:52:05.8±0.5, 6°.10N±0°.03×125°.41E±0°.04, h117km±4km, n394, σ1§23/430, mb4.8/80, 9C-13D, Mindanao

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Code  Station Name     Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC         h m s    ISC
DDMP  Don Marcelino,  0.30  90  ⇓eP   Pn       20 52 22.4  0.0
DDMP                            eS    Sn       20 52 28.7 -6.1
GSPH  General Santos  0.46 268  ⇑iP   Pn       20 52 21.7 -1.7
GSPH                            i S   Sn       20 52 34.0 -2.5
KCP   Kidapawan       0.96 340  ⇑iP   Pn       20 52 26.3 -1.0
KCP                             i S   Sn       20 52 41.2 -2.2
SKMP  Bagumbayan, Su  0.96 296  ⇓eP   Pn       20 52 25.3 -1.9
SKMP                            eS    Sn       20 52 40.0 -3.3
DAV   Davao City (W)  0.98  10  P     Pn       20 52 28.0 +0.6
                3μm,0.4s,baz=251,slow=6.4,SNR=57
DAV                             S     Sn       20 52 44.8 +1.1
                5μm,0.3s,baz=275,slow=17,SNR=9.3
DAV                             LR    LR       20 52 59.4
                comp=Z,1μm,18.6s,baz=121,slow=56
DAV   Davao City (W)  0.98  10          Pn       20 52 27.5 +0.1
DAV   Davao City (W)  0.98  10  P     Pn       20 52 27.6 +0.2
MATI  Mati            1.19  45  ⇓eP   Pn       20 52 28.9 -0.6
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MATI eS Sn 20 52 41.7 -5.8
CTBH Cotabato--PC H 1.61 314⇑iP Pn 20 52 33.1 -1.2
CTBH i S Sn 20 52 53.3 -2.7
BUKP Musuan 1.80 349⇓eP Pn 20 52 36.5 -0.2
BUKP eS Sn 20 52 58.8 -1.5
BIPH Bislig 2.27 24⇑iP Pn 20 52 42.6 0.0
BIPH i S Sn 20 53 10.9 +0.1
SGSI Sangihe 2.40 177 P Pn 20 52 44.1 -0.2
SGSI S Sn 20 53 13.0 -0.8
CGP Cagayan de Oro 2.44 343⇓eP Pn 20 52 44.9 +0.1
CGP eS Sn 20 53 14.2 -0.5
PAGZ Pagadian 2.66 311⇓eP Pn 20 52 46.6 -0.9
BUTP Butuan 2.86 4⇓eP Pn 20 52 51.1 +1.0
BUTP eS Sn 20 53 27.7 +3.4
LSIP Lazi, Siquijor 3.49 330⇑iP Pn 20 52 58.8 +0.2
LSIP i S Sn 20 53 52.1 +13
GHBP Garcia Hernand 3.67 343⇑iP Pn 20 53 01.2 +0.2
GHBP i S Sn 20 53 41.3 -2.3
GLSP General Luna, 3.73 11⇓eP Pn 20 53 02.0 +0.4
GLSP eS Sn 20 53 44.1 -0.8
SNPH Sibulan 3.88 326⇓iP Pn 20 53 04.0 +0.3
TBP Tagbilaran 3.88 337 eP Pn 20 53 03.5 -0.3
TBP i S Sn 20 54 12.0 +23
MSLP Maasin 4.04 352⇓eP Pn 20 53 04.2 -1.8
MSLP eS Sn 20 53 50.1 -2.4
TABP Talibon, Bohol 4.11 345⇓eP Pn 20 53 06.6 -0.2
TABP i S Sn 20 53 52.6 -1.4
LLP Lapu-Lapu 4.43 341⇑iP Pn 20 53 11.3 +0.3
LLP eS Sn 20 54 00.3 -1.4
CNOP Candoni, Negro 4.61 324⇑iP Pn 20 53 13.8 +0.3
GAMI Galela, Maluku 4.85 151 P Pn 20 53 15.7 -1.1
TNTI Ternate 5.64 160 Pn Pn 20 53 26.8 -0.7
TNTI Ternate 5.64 160 P Pn 20 53 27.3 -0.2
0.6nm2µm103nm0,6s
TNTI Ternate 5.64 160 P Pn 20 53 27.7 +0.2
KMSI Cibinong 5.67 195 P Pn 20 53 28.6 +0.7
0.9nm2µm153nm0,7s
GTOI Gorontalo 5.94 204 P Pn 20 53 30.0 -1.4
0.2nm540nm43nm0,7s
RCP Roxas 6.03 334⇑eP Pn 20 53 33.6 +0.9
MRSI Marisa 6.58 212 P Pn 20 53 40.5 +0.4
0.6nm2µm89nm0,8s
TOLI2 Tolitoli 6.78 223 Pn Pn 20 53 40.4 -2.5
TOLI2 Tolitoli 6.78 223 P Pn 20 53 40.7 -2.1
MYLDM Lahad Datu 6.94 263 Pn Pn 20 53 44.9 -0.1
MYLDM Lahad Datu 6.94 263 P Pn 20 53 47.3 +2.3
0.2nm60nm0,9s
LBMI Labuha 7.01 163 P Pn 20 53 45.8 -0.2
1.3nm1µm105nm0,9s
LUWI Luwuk 7.57 200 Pn Pn 20 53 49.7 -3.8
LUWI Luwuk 7.57 200 P Pn 20 53 51.2 -2.3
0.7nm2µm124nm0,9s
APSI Ampana 7.92 208 P Pn 20 54 01.7 +3.5
0.3nm1µm62nm0,8s
SANI Sanana 8.12 176 P Pn 20 53 58.2 -2.8
0.3nm1µm40nm0,7s
SANI Sanana 8.12 176 P Pn 20 53 59.2 -1.8
SIJI Sorong 9.06 140 P Pn 20 54 14.1 +0.3
15nm,0.4s,baz=338,slow=20,SNR=11
SIJI S Sn 20 55 52.5 -1.5
8.9nm,0.5s,baz=180,slow=20,SNR=2.3
SIJI Sorong 9.06 140 P Pn 20 54 13.8 +0.1
26nm,0.7s
KKM Kota Kinabalu 9.15 270 Pn Pn 20 54 14.1 -0.9
KKM Kota Kinabalu 9.15 270 P Pn 20 54 15.4 +0.4
501nm39nm,1.4s
NLAI Namlea 9.43 170 P Pn 20 54 16.8 -1.9
31nm,0.5s
KRAI Karang Ratu 9.82 162 P Pn 20 54 23.7 -0.3
47nm,0.6s
TTSI Tana Toraja 10.67 212 P Pn 20 54 31.0 -4.4
35nm,0.9s
BKB Balikpapan 11.22 230 Pn Pn 20 54 40.8 -2.0
FAKI Fak Fak 11.27 143 Pn Pn 20 54 42.5 -0.9
FAKI Fak Fak 11.27 143 P Pn 20 54 44.4 +0.9
RKPI Ransiki, Papua 11.57 131 P Pn 20 54 49.5 +2.0
14µm52nm0,6s
BNSI Bone 11.70 207 P Pn 20 54 53.0 +3.8
542nm45nm,1.2s
KAPI Kappang 12.40 207 Pn Pn 20 54 54.8 -3.7
BKSI Bulukumba 12.52 205 P Pn 20 55 01.8 +1.8
429nm33nm,1.4s
MTKI Muara Teweh, K 12.62 237 P P 20 55 15.8 +7.8
SBUM Sibu 13.64 255 P Pn 20 55 15.5 +0.8
SBUM Sibu 13.64 255 P P 20 55 23.1 +3.7
BBKI Banjar Baru 14.20 228 P P 20 55 31.6 +6.0
MMRI Maumere 14.98 192 P Pn 20 55 32.7 +1.1
SAUI Saumlaki 15.17 157 P Pn 20 55 33.1 -0.9
SOEI Soe 15.79 184 Pn Pn 20 55 41.5 -0.4
SOEI Soe 15.79 184 P P 20 55 45.1 +1.7
33nm,1.1s
PLAI Plampang 16.67 207 P P 20 55 54.9 +1.9
49nm,0.9s
PLAI Plampang 16.67 207 P Pn 20 55 51.0 -1.6
TWSI Taliwang, Sumb 17.02 210 P P 20 55 59.4 +2.6
952nm98nm,1.0s
KLNI Mataram 17.16 213 P Pn 20 56 00.8 +2.2
1µm119nm,1.1s
KMMI Kalianget 17.35 221 P Pn 20 56 01.9 +1.0
49nm,0.9s
YULB Yu-li 17.64 347 P P 20 56 02.9 -0.7
TPUB Ta-pu 17.71 345 P P 20 56 04.6 +0.2
JAGI Jajag, Banyuwa 18.32 218 P Pn 20 56 14.5 +2.0
MTN Manton Dam 19.66 163 P P 20 56 26.3 +0.6
MTN Manton Dam 19.66 163 P P 20 56 27.1 +1.4
KDU Kakadu 19.94 159 P P 20 56 29.5 +0.8
DSRI Dabo 21.80 253 P P 20 56 49.5 +0.7
23nm,0.7s
KNRA Kununurra 21.89 171 P P 20 56 49.3 -0.3
KNRA Kununurra 21.89 171 P P 20 56 49.4 -0.2
LEM Lembang 21.91 234 P P 20 56 51.6 +1.5
88nm,0.7s,baz=12,slow=12,SNR=22
88nm,0.7s
CBJI Citeko 22.32 236 P P 20 56 56.6 +2.6
3µm46nm,0.6s
KLI Kotabumi 23.23 242 P P 20 57 03.8 +0.8
64nm,0.9s
LWLI Liwa 24.01 243 P P 20 57 10.2 0.0
149nm,0.8s
KULM Kulim 24.65 269 P P 20 57 17.3 +1.4
MNAI Manna 24.71 246 P P 20 57 17.6 +1.2
SDSI Sungai Dareh 24.94 255 P P 20 57 18.5 0.0
22nm,0.9s
JCJ Chichijima 26.28 36 P P 20 57 29.9 -0.6
61nm,0.5s,baz=284,slow=11,SNR=6.4
JCJ Chichijima 26.28 36 P P 20 57 29.7 -0.7
WHN Wuhan 26.45 338⇓iP P 20 57 30.9 -1.0
COEN Coen 26.61 139 P P 20 57 34.2 +0.6
COEN Coen 26.61 139 P P 20 57 34.1 +0.6
WB0 Warramunga Arr 27.18 161 P P 20 57 37.9 -0.7
WRAB Tennant Creek 27.32 161 P P 20 57 39.5 -0.3
WRAB Tennant Creek 27.32 161 P P 20 57 40.0 +0.1
WRA Warramunga Arr 27.33 161 P P 20 57 39.6 -0.4
8.2nm,0.6s,baz=329,slow=11,SNR=90
WRA pP pP 20 58 07.2 +2.5
5.1nm,0.6s,baz=343,slow=10,SNR=4.5
WRA PcP PcP 21 00 56.3 -0.4
1.4nm,0.5s,baz=326,slow=2.3,SNR=5.1
WRA S S 21 02 07.4 -3.9
1.5nm,0.9s,baz=334,slow=14,SNR=4.5
WRA ScP ScP 21 04 25.9 -0.6
0.6nm,0.8s,baz=339,slow=3.2,SNR=2.3
8.2nm,0.6s
WRA Warramunga Arr 27.33 161 P P 20 57 38.8 -1.2
WB2 Warramunga Arr 27.33 161 P P 20 57 39.5 -0.5
WB2 IAmb IAmb 20 57 40.5
comp=Z,16nm,0.8s
WR0 Warramunga Arr 27.41 161 P P 20 57 40.1 -0.5
MBWA Marble Bar 27.66 191 P P 20 57 42.0 -0.9
MBWA Marble Bar 27.66 191 P P 20 57 41.9 -0.9
PSA00 Pilbara Seismi 28.04 191 P P 20 57 45.6 -0.6
PSA00 IAmb IAmb 20 57 46.5
comp=Z,28nm,1.1s
PSA00 Pilbara Seismi 28.04 191 P P 20 57 44.2 -2.0
PSA00 IAmb IAmb 20 57 46.4
comp=Z,12nm,1.1s
PSA00 Pilbara Seismi 28.04 191 P P 20 57 45.6 -0.6
CMAR Chiang Mai Arr 28.58 298 P P 20 57 52.2 +1.1
comp=Z,1.8nm,0.3s,baz=100,slow=6.6,SNR=5.4
comp=Z,1.8nm,0.3s
QIS Mount Isa 29.94 153 P P 20 58 03.9 +0.8
PZH PanZhiHua 30.35 315 P P 20 58 07.3 +0.5
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.0s
AS31 Alice Springs 30.73 165 P P 20 58 10.1 0.0
AS31 IAmb IAmb 20 58 12.0
comp=Z,6.2nm,0.4s
AS31 PcP PcP 21 01 04.9 -0.3
ASAR Alice Springs 30.73 165 P P 20 58 10.2 +0.2
comp=Z,7.1nm,0.5s,baz=342,slow=6.9,SNR=216
ASAR PcP PcP 21 01 04.8 -0.3
comp=Z,3.4nm,0.5s,baz=342,slow=2.7,SNR=9.6
ASAR S S 21 03 03.8 -0.8
comp=Z,0.9nm,0.7s,baz=336,slow=14,SNR=5.5
ASAR ScP ScP 21 04 35.6 -1.6
comp=Z,0.5nm,0.5s,baz=339,slow=3.0,SNR=4.1
comp=Z,7.1nm,0.5s
AS01 Alice Springs 30.74 165 P P 20 58 10.2 +0.1
WRKA Warakurna 31.08 175 P P 20 58 13.4 +0.3
KSRS Korea Array 31.29 4 P P 20 58 14.9 +0.1
comp=Z,0.9nm,0.6s,baz=184,slow=10,SNR=5.6
KSRS pP pP 20 58 41.3 +1.0
comp=Z,1.6nm,0.9s,baz=184,slow=12,SNR=2.9
KSRS PcP PcP 21 01 06.5 +0.1
comp=Z,1.5nm,0.6s,baz=176,slow=2.5,SNR=6.7
KSRS LR LR 21 11 24.4
comp=Z,14nm,21.3s,baz=165,slow=37
comp=Z,0.9nm,0.6s
MJAR Matsushiro Arr 32.48 19 PcP PcP 21 01 09.8 +0.1
comp=Z,1.6nm,0.7s,baz=177,slow=3.1,SNR=5.1
MJAR LR LR 21 11 50.1
comp=Z,14nm,18.8s,baz=167,slow=36
HNS HongShan 32.65 344 ⇓P P 20 58 25.1 -1.6
CTA Charters Tower 33.13 142 P P 20 58 32.8 +1.7
comp=Z,3.1nm,0.5s,baz=328,slow=9.5,SNR=5.8
comp=Z,3.1nm,0.5s
CTAO Charters Tower 33.13 142 P P 20 58 32.0 +0.9
OOD Oodnadatta 35.13 164 P P 20 58 48.8 +0.5
LZH Lanzhou 35.81 329 eP P 20 58 49.8 -4.4
LZH pP pP 20 59 16.5 -3.9
LZH sP sP 20 59 29.1 -4.7
MORW Morawa 36.11 194 P P 20 58 55.8 -0.8
MORW Morawa 36.11 194 P P 20 58 56.0 -0.7
HHC Hu-ho-hao-te 36.75 342 eP P 20 59 03.3 +1.2
HHC pmax pmax
comp=Z,29nm,0.6s
HHC pmax pmax
comp=Z,140nm,6.7s
FORT Forrest 36.76 176 P P 20 59 02.0 -0.1
FORT Forrest 36.76 176 P P 20 59 02.2 +0.1
INKA Innaminka 36.76 157 P P 20 59 03.4 +1.2
BLDU Ballidu 37.45 192 P P 20 59 07.1 -0.9
KLBR Kellerberrin 38.19 191 P P 20 59 13.6 -0.6
USRK Ussuriysk Ar. 38.38 8 P P 20 59 16.3 +0.7
comp=Z,1.0nm,0.5s,baz=182,slow=6.9,SNR=3.3
USRK pP pP 20 59 42.4 +0.7
comp=Z,2.4nm,0.6s,baz=183,slow=6.4,SNR=4.3
comp=Z,1.0nm,0.5s
NWAO Narrogin (SRO) 39.58 191 P P 20 59 25.9 +0.1
comp=Z,25nm,0.7s,baz=47,slow=10.0,SNR=25
comp=Z,25nm,0.7s
NWAO Narrogin (SRO) 39.58 191 P P 20 59 25.5 -0.3
BBOO Buckleboo 40.00 166 P P 20 59 29.9 +0.7
BBOO PcP PcP 21 01 31.8 -0.4
EIDS Eidsvold 40.02 142 P P 20 59 29.5 0.0
EIDS IAmb IAmb 20 59 44.0
comp=Z,36nm,1.6s
STKA Stephens Creek 40.80 159 P P 20 59 36.9 +0.9
comp=Z,20nm,0.8s,baz=336,slow=8.5,SNR=32
STKA PcP PcP 21 01 34.7 -0.1
comp=Z,7.2nm,0.6s,baz=344,slow=3.8,SNR=6.7
comp=Z,20nm,0.8s
STKA Stephens Creek 40.80 159 P P 20 59 36.8 +0.9
STKA PcP PcP 21 01 34.5 -0.3
GOMU GeErMu 41.02 321 P P 20 59 39.0 +0.9
GOMU pmax pmax
comp=Z,3.0nm,1.2s
GOMU pmax pmax
comp=Z,49nm,4.8s
TAPN Taplejung 41.58 305 eP P 20 59 42.9 +0.2
RAMN Ramite 42.33 304 eP P 20 59 49.5 +0.7
JIRN Jiri 42.94 305 eP P 20 59 54.3 +0.5
comp=Z,12nm,0.5s
GUN Gumba 43.29 305 eP P 20 59 57.0 +0.4
comp=Z,19nm,0.6s
KLR Kul'dur 43.31 6 P P 20 59 55.7 -0.3
comp=Z,0.8nm,0.5s,baz=214,slow=5.0,SNR=3.8
KLR PcP PcP 21 01 42.7 -0.2
comp=Z,2.5nm,0.7s,baz=211,slow=1.5,SNR=5.7
KLR LR LR 21 19 47.4
comp=Z,12nm,19.5s,baz=236,slow=38
comp=Z,0.8nm,0.5s
PKI Pulchoki 43.55 304 eP P 20 59 58.4 -0.3
PKIN Phulchoki 43.56 304 eP P 20 59 58.7 0.0
DMN Daman 43.81 304 eP P 21 00 01.0 +0.3
ARMA Armidale 44.16 147 P P 21 00 04.2 +1.0
ARMA IAmb IAmb 21 00 05.5
comp=Z,11nm,0.8s
GKN Gorkha 44.34 304 eP P 21 00 04.2 -0.6
comp=Z,7.8nm,0.9s
SONM Songino Array 44.65 342 P P 21 00 06.4 -0.5
comp=Z,0.4nm,0.7s,baz=160,slow=7.4,SNR=4.3
SONM PcP PcP 21 01 47.6 0.0
comp=Z,0.4nm,0.6s,baz=155,slow=3.6,SNR=1.8
SONM LR LR 21 20 31.6
comp=Z,31nm,18.4s,baz=148,slow=38
SONM Songino Array 44.65 342 P P 21 00 06.7 -0.2
DANN Dangsing 45.19 304 eP P 21 00 11.7 0.0
comp=Z,24nm,0.7s
CAN Canberra 46.81 153 P P 21 00 24.2 +0.3
CAN IAmb IAmb 21 00 26.6
comp=Z,16nm,0.7s
CAN PcP PcP 21 01 55.8 +0.5
CAN Canberra 46.81 153 P P 21 00 24.9 +1.0
TOO Toolangi 47.31 158 P P 21 00 29.1 +1.3
TOO IAmb IAmb 21 00 30.5
comp=Z,9.6nm,0.7s
TOO PcP PcP 21 01 56.9 -0.1
DZM Mont Dzumac 48.98 126 P P 21 00 41.5 +0.6
comp=Z,4.4nm,0.7s,baz=270,slow=14,SNR=1.4
comp=Z,4.4nm,0.7s
DZM Mont Dzumac 48.98 126 P P 21 00 41.4 +0.5
WMQ Urumqi 50.04 325 eP P 21 00 50.8 +2.1
PEA0B Petropavlovsk- 53.77 24 P P 21 01 16.8 +0.8
PEA0B PcP PcP 21 02 20.1 -0.5
PETK Petropavlovsk- 53.77 24 P P 21 01 15.9 -0.2
comp=Z,2.8nm,0.7s,baz=214,slow=5.0,SNR=5.5
PETK PcP PcP 21 02 19.7 -0.9
comp=Z,2.7nm,0.9s,baz=194,slow=4.3,SNR=6.1
comp=Z,2.8nm,0.7s
PETK Petropavlovsk- 53.77 24 P P 21 01 16.7 +0.7
PETK PcP PcP 21 02 19.8 -0.8
MK31 Makanchi Array 54.87 325 P P 21 01 23.5 -0.7
MKAR Makanchi Array 54.87 325 P P 21 01 23.6 -0.6
comp=Z,0.8nm,0.4s,baz=119,slow=6.7,SNR=21
MKAR pP pP 21 01 52.4 +0.2
comp=Z,2.7nm,0.9s,baz=120,slow=7.3,SNR=6.4
comp=Z,0.8nm,0.4s
YAK Yakutsk 55.90 2 P P 21 01 30.8 -0.4
comp=Z,4.1nm,0.4s,baz=179,slow=4.1,SNR=6.0
comp=Z,4.1nm,0.4s
YAK Yakutsk 55.90 2 P P 21 01 30.5 -0.7
YAK IAmb IAmb 21 01 31.7
comp=Z,14nm,0.8s
GAR Garm 59.37 312 P P 21 01 55.6 -0.5
GAR IAmb IAmb 21 01 56.6
comp=Z,15nm,1.0s
SEY Seymchan 60.04 14 P P 21 02 00.8 +0.6
comp=Z,1.0nm,0.5s,baz=203,slow=6.2,SNR=8.9
comp=Z,1.0nm,0.5s
KK31 Karatay Array 60.62 317 P P 21 02 04.3 -0.1
KKAR Karatay Array 60.62 317 P P 21 02 03.8 -0.7
KKAR Karatay Array 60.62 317 P P 21 02 03.0 -1.5
KKAR IAmb IAmb 21 02 33.0
comp=Z,3.3nm,1.0s
LBZ Lake Benmore 64.37 146 P P 21 02 30.1 +0.7
RPZ Rata Peaks 64.44 145 P P 21 02 30.9 +1.1
comp=Z,21nm,0.8s,baz=296,slow=5.2,SNR=8.1
comp=Z,21nm,0.8s
RPZ Rata Peaks 64.44 145 P P 21 02 30.9 +1.1
BVAR Borovoye Array 64.63 327 LR LR 21 31 31.2
comp=Z,25nm,18.9s,baz=10,slow=37
ODZ Otahua Downs 65.04 146 P P 21 02 34.6 +1.0
URZ Urewera 65.16 137 P P 21 02 35.5 +0.9
comp=Z,6.7nm,0.6s,baz=168,slow=0.9,SNR=5.5
comp=Z,6.7nm,0.6s
BKZ Black Stump Fm 65.21 138 P P 21 02 35.2 +0.3
MQZ McQueen's Vall 65.36 144 P P 21 02 36.9 +1.2
TIXI Tiksi 65.51 1 P P 21 02 35.6 -0.6
comp=Z,0.7nm,0.3s,baz=82,slow=18,SNR=6.5
comp=Z,0.7nm,0.3s
GEYT Alibeck 68.40 308 P P 21 02 55.9 +0.7
comp=Z,2.4nm,0.8s,baz=145,slow=5.4,SNR=6.2
GEYT pP pP 21 03 24.0 -0.5
comp=Z,1.1nm,0.7s,baz=23,slow=12,SNR=2.0
comp=Z,2.4nm,0.8s
ABKAR Akbulak array 69.50 320 P P 21 03 00.7 -1.1
ABKAR Akbulak array 69.50 320 P P 21 03 00.9 -0.8
AKUT Akutan 72.73 35 P P 21 03 21.9 +0.8
CASY Casey 73.01 186 P P 21 03 22.5 0.0
CASY IAmb IAmb 21 03 23.4
comp=Z,13nm,0.8s
FALS False Pass 74.23 35 P P 21 03 29.6 -0.3
baz=258
N16K Nishlik Lake 77.74 29 P P 21 03 51.4 +1.7
baz=261
O16K Kokwok River B 77.93 30 P P 21 03 51.5 +0.7
baz=262
RAYN Ar Rayn 78.36 293 P P 21 03 52.8 -1.2
O17K Koliganek Bris 78.46 30 P P 21 03 54.4 +0.7
baz=262
P17K Kvichak River 78.72 31 P P 21 03 56.7 +1.6
baz=263
CHIR Chirikof Islan 78.78 34 P P 21 03 56.3 +0.8
CHIR Chirikof Islan 78.78 34 P P 21 03 56.4 +0.9
baz=264
Q17K Contact Creek 78.89 32 P P 21 03 55.2 -1.0
baz=264
N18K Kilae Creek 79.17 29 P P 21 03 59.0 +1.4
N18K IAmb IAmb 21 04 11.6
comp=Z,41nm,2.0s
N18K Kilae Creek 79.17 29 P P 21 03 58.9 +1.3
baz=263
GCSA Galena City Sc 79.27 25 P P 21 03 59.2 +1.2
baz=262
SVW2 Sparrevohn 79.37 29 P P 21 04 00.2 +1.5
SVW2 IAmb IAmb 21 04 44.3
comp=Z,20nm,1.5s
Q18K Katmai Hardscr 79.39 32 P P 21 03 58.6 -0.4
baz=264
TTA Tatalina 79.40 27 P P 21 03 59.3 +0.4
baz=263
O18K Koktuh Hills 79.42 30 P P 21 04 00.4 +1.4
O18K IAmb IAmb 21 04 01.2
comp=Z,13nm,0.7s
O18K Koktuh Hills 79.42 30 P P 21 04 00.3 +1.4
baz=264
SII Sitkinak Islan 79.65 34 P P 21 04 01.0 +0.8
baz=265
L19K White Mountain 79.84 28 P P 21 04 02.3 +1.1
L19K White Mountain 79.84 28 P P 21 04 02.6 +1.4
baz=264
N19K Bonanza Creek 79.87 29 P P 21 04 02.8 +1.3
N19K IAmb IAmb 21 04 04.5
comp=Z,50nm,1.8s
N19K Bonanza Creek 79.87 29 P P 21 04 02.9 +1.3
baz=264
M19K Big River Lodg 80.03 28 P P 21 04 03.4 +1.2
baz=264
Q19K Cape Douglas, 80.13 31 P P 21 04 03.0 +0.2
Q19K Cape Douglas, 80.13 31 P P 21 04 03.2 +0.3
baz=266
OHAK Old Harbor 80.19 33 P P 21 04 04.2 +1.1
OHAK Old Harbor 80.19 33 P P 21 04 04.2 +1.1
baz=266
K20K Telida 80.32 27 P P 21 04 04.9 +1.1
baz=264
L20K Farewell, AK 80.32 28 P P 21 04 05.0 +1.1
baz=265
J20K Nowinta River 80.37 26 P P 21 04 05.4 +1.4
J20K Nowinta River 80.37 26 P P 21 04 05.5 +1.5
baz=264
KDAK Kodiak Island 80.60 33 P P 21 04 06.7 +1.3
KDAK Kodiak Island 80.60 33 P P 21 04 05.9 +0.5
baz=267
M20K Styx River 80.62 28 P P 21 04 07.0 +1.5
baz=265
IMAR Indian Mountai 80.73 24 P P 21 04 07.1 +1.2
Q20K Shuyak Island 80.75 32 P P 21 04 06.7 +0.6
baz=267
G21K Allakaket 80.88 24 P P 21 04 08.1 +1.4
baz=264,SNR=7.3
F21K Alatna River 80.96 23 P P 21 04 08.6 +1.5
baz=264
N20K Mount Spurr 81.01 29 P P 21 04 08.1 +0.6
baz=266
SPCR Spurr Chakacha 81.01 29 P P 21 04 08.1 +0.5
baz=266
GURO Guroymak-BITLI 81.06 308 P P 21 04 08.3 -0.1
H21K Melozitna Rive 81.08 25 P P 21 04 08.5 +0.7
H21K Melozitna Rive 81.08 25 P P 21 04 09.1 +1.3
baz=265,SNR=8.2
SPU Mount Spurr 81.08 29 P P 21 04 09.1 +1.2
PPLA Purkeypile 81.13 27 P P 21 04 09.2 +0.9
PPLA IAmb IAmb 21 05 57.7
comp=Z,54nm,2.0s
PPLA Purkeypile 81.13 27 P P 21 04 09.0 +0.7
baz=266
CHUM Lake Minchumin 81.15 26 P P 21 04 09.3 +1.2
baz=266
CAST Castle Rocks 81.22 27 P P 21 04 09.3 +0.8
CAST IAmb IAmb 21 04 10.5
comp=Z,11nm,0.8s
CAST Castle Rocks 81.22 27 P P 21 04 09.6 +1.0
baz=266,SNR=9.0
SKT Skwentna 81.38 28 P P 21 04 09.7 +0.2
SKT Skwentna 81.38 28 P P 21 04 10.0 +0.5
baz=267
I21K Tanana 81.39 25 P P 21 04 10.2 +0.8
I21K IAmb IAmb 21 04 12.3
comp=Z,14nm,0.8s
I21K Tanana 81.39 25 P P 21 04 11.2 +1.8
baz=266,SNR=8.5
CNPM China Poot 81.40 31 P P 21 04 10.0 +0.4
BRLK Bradley Lake 81.59 31 P P 21 04 10.5 -0.1
BRSE Bradley Lake S 81.66 31 P P 21 04 11.0 0.0
baz=268
E22K Anaktuvuk Pass 81.68 22 P P 21 04 12.3 +1.3
baz=266
H22K Ishtalitna Cre 81.69 24 P P 21 04 12.8 +1.8
baz=266,SNR=7.8
G22K Bettles 81.70 23 P P 21 04 11.7 +0.7
baz=266
SUA Susitna One 81.73 29 P P 21 04 11.5 +0.1
SUA IAmb IAmb 21 04 12.8
comp=Z,11nm,0.7s
SUA Susitna One 81.73 29 P P 21 04 11.9 +0.5
baz=268,SNR=7.9
BPAW Bear Paw Mtn. 81.75 26 P P 21 04 12.5 +1.2
baz=267
KTH Kantishna Hill 81.75 27 P P 21 04 12.0 +0.6
KTH IAmb IAmb 21 04 15.7
comp=Z,16nm,1.3s
VOI Vohitsoka 81.78 247 P P 21 04 11.2 -1.3
MLY Manley 81.90 25 P P 21 04 12.6 +0.4
MLY IAmb IAmb 21 04 14.2
comp=Z,9.9nm,0.7s
MLY Manley 81.90 25 P P 21 04 13.5 +1.4
baz=267,SNR=8.2
TRF Thorofare Moun 82.03 27 P P 21 04 12.6 -0.4
TRF IAmb IAmb 21 04 14.3
comp=Z,13nm,1.0s
TRF Thorofare Moun 82.03 27 P P 21 04 13.9 +0.9
baz=268
M22K Willow 82.04 29 P P 21 04 12.1 -0.7
M22K IAmb IAmb 21 04 14.9
comp=Z,33nm,1.1s
M22K Willow 82.04 29 P P 21 04 13.6 +0.7
baz=268
D23K Nanushuk River 82.15 21 P P 21 04 15.1 +1.8
baz=267
RC01 Rabbit Creek A 82.20 29 P P 21 04 13.8 0.0
RC01 IAmb IAmb 21 04 15.2
comp=Z,8.8nm,0.5s
RC01 Rabbit Creek A 82.20 29 P P 21 04 14.2 +0.4
baz=268
C23K Itkillik River 82.23 20 P P 21 04 14.7 +1.0
baz=267
G23K Bananza Creek 82.28 24 P P 21 04 15.6 +1.5
baz=268,SNR=5.3
SEW Seward 82.32 30 P P 21 04 15.2 +0.9
baz=269
H23K Yukon River 82.44 24 P P 21 04 15.7 +0.8
H23K IAmb IAmb 21 04 17.9
comp=Z,9.3nm,0.8s

H23K	Yukon River	82.44	24	P	P	21 04 16.3 +1.4
	baz=268,SNR=9.6					
I23K	Minto, Yukon-K	82.49	25	P	P	21 04 16.2 +1.1
I23K				IAmb	IAmb	21 04 19.0
	comp=Z,12nm,0.7s					
I23K	Minto, Yukon-K	82.49	25	P	P	21 04 16.5 +1.3
	baz=268,SNR=11					
E23K	Chandalar	82.50	22	P	P	21 04 16.6 +1.4
	baz=268					
PMR	Palmer	82.51	29	P	P	21 04 15.5 +0.2
	baz=269					
TOLK	Toolik Lake Re	82.54	22	P	P	21 04 16.2 +0.8
TOLK				IAmb	IAmb	21 04 17.7
	comp=Z,8.1nm,0.8s					
TOLK	Toolik Lake Re	82.54	22	P	P	21 04 17.0 +1.6
	baz=268					
NEA2	Nenana	82.60	26	P	P	21 04 15.6 -0.2
NEA2				IAmb	IAmb	21 04 18.1
	comp=Z,21nm,1.4s					
NEA2	Nenana	82.60	26	P	P	21 04 16.3 +0.5
	baz=269,SNR=7.2					
MCK	McKinley	82.64	27	P	P	21 04 15.9 -0.1
MCK				IAmb	IAmb	21 04 17.3
	comp=Z,16nm,0.8s					
MCK	McKinley	82.64	27	P	P	21 04 16.3 +0.3
	baz=269,SNR=9.9					
WAT1	Susitna Watana	82.80	27	P	P	21 04 17.0 +0.1
	baz=269					
D24K	Happy Valley	82.83	21	P	P	21 04 17.7 +0.9
	baz=268					
KNK	Knik Glacier	82.83	29	P	P	21 04 17.1 +0.1
KNK				IAmb	IAmb	21 04 19.4
	comp=Z,15nm,0.9s					
KNK	Knik Glacier	82.83	29	P	P	21 04 17.8 +0.8
	baz=270,SNR=5.5					
PWL	Port Wells	82.88	29	P	P	21 04 17.5 +0.2
PWL				IAmb	IAmb	21 04 18.9
	comp=Z,23nm,1.0s					
PWL	Port Wells	82.88	29	P	P	21 04 18.2 +0.9
	baz=270,SNR=6.3					
C24K	Franklin Bluff	82.89	21	P	P	21 04 17.9 +0.8
	baz=268					
SML	Sawmill	82.89	29	P	P	21 04 17.8 +0.4
SML				IAmb	IAmb	21 04 19.5
	comp=Z,18nm,1.0s					
SML	Sawmill	82.89	29	P	P	21 04 18.3 +1.0
	baz=270,SNR=8.8					
E24K	Your Creek	82.92	22	P	P	21 04 18.8 +1.4
	baz=269					
MDM	Murphy Dome	82.97	25	P	P	21 04 17.7 0.0
WRH	Wood River Hil	83.02	26	P	P	21 04 18.2 +0.3
WRH				IAmb	IAmb	21 04 19.6
	comp=Z,14nm,0.8s					
H24K	Noodor Dome	83.12	24	P	P	21 04 19.0 +0.5
H24K				IAmb	IAmb	21 04 21.5
	comp=Z,14nm,0.8s					
H24K	Noodor Dome	83.12	24	P	P	21 04 20.2 +1.7
	baz=270,SNR=12					
F24K	Squaw Lake	83.14	23	P	P	21 04 19.9 +1.4
	baz=269,SNR=6.0					
CCB	Clear Creek Bu	83.15	26	P	P	21 04 18.4 -0.1
CCB				IAmb	IAmb	21 04 20.1
	comp=Z,8.8nm,0.8s					
WAT6	Susitna Watana	83.17	28	P	P	21 04 20.0 +1.1
	baz=270,SNR=5.0					
M23K	Glacier View	83.18	29	P	P	21 04 19.4 +0.6
	baz=270					
G24K	Hadweenzic Riv	83.29	24	P	P	21 04 20.9 +1.6
	baz=270,SNR=7.8					
DHY	Denali Highway	83.34	27	P	P	21 04 20.2 +0.4
DHY	Denali Highway	83.34	27	P	P	21 04 20.2 +0.4
	baz=270					
P23K	Montague Islan	83.35	30	P	P	21 04 20.4 +0.7
	baz=271					
SCM	Sheep Creek Mo	83.37	28	P	P	21 04 20.7 +0.8
	baz=271					
GLI	Glacier Island	83.49	29	P	P	21 04 20.3 -0.1
GLI				IAmb	IAmb	21 04 21.9
	comp=Z,12nm,0.6s					
GLI	Glacier Island	83.49	29	P	P	21 04 20.9 +0.5
	baz=271,SNR=5.3					
HDA	Harding Lake	83.52	26	P	P	21 04 20.3 -0.2
	baz=271					
IL31		83.54	26	P	P	21 04 19.7 -0.8
IL31				IAmb	IAmb	21 04 21.5
	comp=Z,8.6nm,0.8s					
ILAR	Eielson Array	83.54	26	P	P	21 04 19.7 -0.9
FID	Port Fidalgo	83.79	30	P	P	21 04 22.1 +0.2
G25K	Bearman Lake	83.84	24	P	P	21 04 23.6 +1.6
	baz=271,SNR=5.6					
Q23K	Middleton Isla	83.89	31	P	P	21 04 22.4 -0.1
	baz=272					
M24K	Tolsona, Glenn	83.91	28	P	P	21 04 23.6 +1.0
M24K	Tolsona, Glenn	83.91	28	P	P	21 04 23.6 +1.0
	baz=272					
H25K	Birch Creek	83.96	24	P	P	21 04 24.1 +1.4
	baz=271					
F25K	Christian Rive	84.00	23	P	P	21 04 24.9 +1.9
	baz=272,SNR=6.9					
E25K	Arctic Village	84.02	22	P	P	21 04 24.5 +1.5
	baz=272,SNR=5.5					
K24K	Donnelly Dome	84.04	26	P	P	21 04 23.6 +0.4
	baz=272,SNR=10					
KLU	Klutina	84.04	29	P	P	21 04 23.7 +0.4
	baz=272					
DIV	Divide	84.13	29	P	P	21 04 24.2 +0.5
DIV				IAmb	IAmb	21 04 25.8
	comp=Z,13nm,1.0s					
EYAK	Cordova Ski Ar	84.16	30	P	P	21 04 24.1 +0.3
	baz=272					
J25K	Salcha River,	84.20	26	P	P	21 04 23.4 -0.6
J25K				IAmb	IAmb	21 04 24.4
	comp=Z,7.8nm,0.7s					
J25K	Salcha River,	84.20	26	P	P	21 04 23.7 -0.3
	baz=272,SNR=9.6					
PAX	Paxson	84.21	27	P	P	21 04 24.5 +0.4
PAX				IAmb	IAmb	21 04 25.9
	comp=Z,16nm,1.3s					
PAX	Paxson	84.21	27	P	P	21 04 24.7 +0.5
	baz=272,SNR=5.6					
HARP	HAARP	84.37	28	P	P	21 04 25.3 +0.4
	baz=272					
BMAR	Burnt Mountain	84.41	23	P	P	21 04 26.1 +1.1
RIDG	Independent Ri	84.46	27	P	P	21 04 25.6 +0.2
RIDG				IAmb	IAmb	21 04 26.8
	comp=Z,16nm,0.8s					
RIDG	Independent Ri	84.46	27	P	P	21 04 26.4 +1.0
	baz=273					
F26K	Sheenjek River	84.57	23	P	P	21 04 27.4 +1.6
	baz=273					
C27K	Jago River	84.63	21	P	P	21 04 27.7 +1.7
	baz=273					
N25K	Chitina, Valde	84.67	29	P	P	21 04 27.4 +0.9
	baz=273					
BMRM	Bremner River	84.70	29	P	P	21 04 27.6 +1.0
	baz=273					
G26K	Porcupine Rive	84.75	23	P	P	21 04 27.8 +1.2
	baz=273,SNR=11					
DOT	Dot Lake	84.81	27	P	P	21 04 27.7 +0.7
DOT				IAmb	IAmb	21 05 08.9
	comp=Z,25nm,1.8s					
SCRK	Sand Creek	84.83	26	P	P	21 04 27.4 +0.1
SCRK	Sand Creek	84.83	26	P	P	21 04 27.7 +0.4
	baz=273					
KAIM	Kayak Island	84.85	30	P	P	21 04 29.2 +1.9
KAIM	Kayak Island	84.85	30	P	P	21 04 28.7 +1.4
	baz=273					
J26L	Joseph Creek	84.98	26	P	P	21 04 28.3 +0.3
J26L				IAmb	IAmb	21 04 29.4
	comp=Z,8.8nm,0.8s					
J26L	Joseph Creek	84.98	26	P	P	21 04 29.0 +1.0
	baz=274,SNR=11					
I26K	Coal Creek Min	85.10	25	P	P	21 04 29.0 +0.6
	baz=274					
L26K	Log Cabin Wild	85.17	27	P	P	21 04 29.8 +0.9
	baz=274					
MCARA	McCarthy VSAT	85.44	29	P	P	21 04 31.6 +1.4
	baz=274					
E27K	Coleen River	85.50	22	P	P	21 04 31.6 +1.2
	baz=275					
MAW	Mawson	85.52	200	P	P	21 04 30.4 +0.1
	comp=Z,4.0nm,0.8s,baz=68,slow=4.2,SNR=8.2					
	comp=Z,4.0nm,0.8s					
MAW	Mawson	85.52	200	P	P	21 04 30.1 -0.2
G27K	Doyon Strip	85.59	23	P	P	21 04 32.3 +1.3
	baz=275					
K27K	Chicken	85.66	26	P	P	21 04 32.5 +1.2
	baz=275					
H27K	Steamboat Moun	85.70	24	P	P	21 04 32.9 +1.4
	baz=275,SNR=5.6					
I27K	Kandik River	85.72	25	P	P	21 04 32.8 +1.2
	baz=275,SNR=17					
L27K	Beaver Creek,	85.86	27	P	P	21 04 32.5 +0.2
L27K				IAmb	IAmb	21 04 33.9
	comp=Z,17nm,1.8s					
L27K	Beaver Creek,	85.86	27	P	P	21 04 33.4 +1.1
	baz=275					
M27K	Edge Creek, AK	85.90	28	P	P	21 04 33.7 +1.1
	baz=275					
VNDA	Vanda	85.93	173	P	P	21 04 32.3 +0.1
	comp=Z,0.9nm,0.5s,baz=317,slow=7.1,SNR=17					
	comp=Z,0.9nm,0.5s					
VNDA	Vanda	85.93	173	P	P	21 04 31.8 -0.5
EGAK	Eagle	85.99	25	P	P	21 04 33.8 +1.0
	baz=276					
MESA	MESA	86.07	30	P	P	21 04 33.8 +0.2
	baz=275					
BARN	Barnard Glacie	86.13	29	P	P	21 04 34.7 +0.8
BARN				IAmb	IAmb	21 04 36.0
	comp=Z,6.7nm,0.6s					
CTG	Chitna Glacier	86.29	29	P	P	21 04 35.8 +1.2
	baz=276					
CTGM	Chitina Glacie	86.29	29	P	P	21 04 35.6 +1.0
CTGM				IAmb	IAmb	21 04 37.2
	comp=Z,9.5nm,0.6s					
O28M	Mount Upton	86.87	29	P	P	21 04 38.8 +1.2
	baz=277					
YUK8	Steele Glacier	87.01	29	P	P	21 04 39.2 +0.9
	baz=277					
I29M	Ogilvie Camp,	87.12	25	P	P	21 04 37.8 -0.6
I29M	Ogilvie Camp,	87.12	25	P	P	21 04 39.0 +0.6
	baz=278					
M29M	Somme Creek	87.47	28	P	P	21 04 40.9 +0.7
	baz=278					
BRTR	Keskin Array B	87.51	310	P	P	21 04 40.6 -0.4
	comp=Z,1.0nm,0.9s,baz=67,slow=6.9,SNR=4.2					
	comp=Z,1.0nm,0.9s					
L29M	L29M	87.53	27	P	P	21 04 41.2 +0.8
	baz=279					
G30M	tAoh Zraii Nji	87.70	23	P	P	21 04 41.2 0.0
	baz=280					
ARCES	ARCESS Array B	87.78	340	P	P	21 04 40.8 -0.7
	comp=Z,0.7nm,0.6s,baz=81,slow=6.5,SNR=1.2					
	comp=Z,0.7nm,0.6s					
HYT	Haines Junctio	88.17	29	P	P	21 04 43.8 +0.2
	baz=279					
P29M	Windy Craggy	88.24	30	P	P	21 04 44.2 +0.3
	baz=279					
N30M	Aishikik Lake	88.26	28	P	P	21 04 44.8 +0.8
	baz=280					
INK	Inuvik	88.45	21	P	P	21 04 44.5 -0.1
INK				IAmb	IAmb	21 04 45.8
	comp=Z,11nm,1.2s					
INK	Inuvik	88.45	21	P	P	21 04 44.5 -0.1
	baz=283					
F31M	Tsiigehtchic	88.55	22	P	P	21 04 44.6 -0.5
	baz=282					
N31M	Braeburn, Yuko	88.88	28	P	P	21 04 46.4 -0.4
	baz=281					
FINES	FINESS Array B	89.14	332	P	P	21 04 45.6 -2.3
	comp=Z,0.9nm,0.5s,baz=54,slow=5.0,SNR=12					
M31M	Drury Creek, Y	89.38	27	P	P	21 04 49.2 0.0
	baz=282					
WHY	Whitehorse	89.47	29	P	P	21 04 50.1 +0.4
	baz=282					
FARO	Faro, Yukon	89.86	27	P	P	21 04 52.0 +0.6
FARO				IAmb	IAmb	21 04 52.8
	comp=Z,8.8nm,0.7s					
FARO	Faro, Yukon	89.86	27	P	P	21 04 51.8 +0.4
	baz=283					
N32M	Quiet Lake	90.22	28	P	P	21 04 54.0 +0.8
	baz=283					
MMPY	Sheldon Lake,	90.71	27	P	P	21 04 55.8 +0.5
	baz=285					
NOA	NORSAR Array B	96.09	333	LR	LR	21 53 00.5
	comp=Z,11nm,19.1s,baz=305,slow=38					
H17A	Grant Village	108.97	39	P	PKiKP	21 10 22.0 -0.2
	baz=300					
RLMT	Red Lodge	109.42	38	P	PKiKP	21 10 23.4 +0.4
	baz=301					
OGNE	Ogallala	116.14	38	P	PKPdf	21 10 36.0 +0.2
	baz=306					
SCHQ	Schefferville	118.43	8	PKP	PKPdf	21 10 39.2 -0.4
	comp=Z,3.2nm,0.4s,baz=4.8,slow=3.5,SNR=7.7					
TORD	Torodi Ar. Bea	120.92	289	PKP	PKPdf	21 10 43.8 -1.7
	comp=Z,0.7nm,0.4s,baz=73,slow=1.4,SNR=8.9					
TXAR	Lajitas Array	121.15	50	PKP	PKPdf	21 10 45.8 +0.1
	comp=Z,0.3nm,0.5s,baz=65,slow=0.3,SNR=5.4					
CCM	Cathedral Cave	124.40	35	P	PKPdf	21 10 50.3 -1.3
	baz=314					
MIAR	Mount Ida	125.34	40	P	PKPdf	21 10 52.6 -0.9
	baz=310					
WCI	Wyandotte Cave	126.96	31	P	PKPdf	21 10 54.8 -1.7
	baz=319					
ACSO	Alum Creek Sta	127.00	27	P	PKPdf	21 10 55.6 -1.0
	baz=324					
M53A	WI Miller and	127.00	24	P	PKPdf	21 10 55.2 -1.3
	baz=327					
PKME	Peaks-Kenny Pk	127.19	13	P	PKPdf	21 10 56.1 -0.6
	baz=342					
LBNH	Lisbon	127.51	16	P	PKPdf	21 10 56.5 -0.9
	baz=338					
WVT	Waverly	127.68	34	P	PKPdf	21 10 57.1 -0.8
	baz=317					
P52A	Corning	127.86	27	P	PKPdf	21 10 57.1 -1.1
	baz=325					
BINY	Binghamton	128.12	20	P	PKPdf	21 10 58.0 -0.7
	baz=333					
SSPA	Standing Stone	128.80	23	P	PKPdf	21 10 58.9 -1.0
	baz=330					
L61B	Northampton	128.95	17	P	PKPdf	21 10 58.7 -1.5
	baz=337					
HRV	Adam Dziewonsk	129.21	16	P	PKPdf	21 10 59.1 -1.6
	baz=338					
LRAL	Lakeview Retre	130.38	36	P	PKPdf	21 11 01.7 -1.4
	baz=316					
KMSC	Kings Mountain	131.86	30	P	PKPdf	21 11 05.6 -0.4
	baz=323					
PLCA	Paso Flores	142.67	160	PKhKP	PKPpre	21 11 22.5
	comp=Z,1.3nm,0.5s,baz=275,slow=3.5,SNR=7.6					
TRQA	Tornquist	147.49	169		PKPbc	21 11 36.5 -0.2
BO01	Tunca	147.98	154		PKPbc	21 11 37.8 -0.3
CO03	El Pedregal	151.12	150		PKPbc	21 11 45.3 -0.8

KRSC 14 20:55:22.4±2.4, 50°.41N×156°.94E, h59km±21km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.59	298	eP	Pn	20 55 34.7	-0.6
SKR				eS	Sn	20 55 43.5	-1.2
PAU	Pauzhetka	1.06	356	eP	Pn	20 55 43.0	+1.8
PAU				eS	Sn	20 55 57.5	+2.3
KDTR	Khodutka, Kamc	1.58	27	eP	Pn	20 55 49.5	+1.4
KDTR				eS	Sn	20 56 09.4	+2.0
ASAK	Asacha	2.07	17	eP	Pn	20 55 57.8	+3.0
ASAK				eS	Sn	20 56 23.8	+4.3
MTVR	Mutnovka	2.22	20	eP	Pn	20 56 00.8	+3.8
MTVR				eS	Sn	20 56 26.6	+3.3
RUS	Russkaya	2.25	25	eP	Pn	20 55 58.8	+1.5
RUS				eS	Sn	20 56 25.5	+1.6
GRL	Gorelyy	2.26	18	eP	Pn	20 56 00.5	+3.0
GRL				eS	Sn	20 56 28.4	+4.1
PET	Petropavlovsk	2.83	21	eS	Sn	20 56 41.7	+3.7
DALK	Dalny	2.86	23	eP	Pn	20 56 08.4	+2.9
DALK				eS	Sn	20 56 42.8	+4.1
UGLR	Uglovaya	3.04	22	eP	Pn	20 56 12.3	+4.2
AVH	Avacha	3.07	21	eP	Pn	20 56 12.3	+3.8
KOK	Koryaka	3.08	19	eP	Pn	20 56 12.8	+4.2
SMAR	Somma	3.08	21	eP	Pn	20 56 13.2	+4.4
KRER	Koryakskii	3.11	20	eP	Pn	20 56 13.7	+4.5
SDLR	Sedlovina	3.12	22	eP	Pn	20 56 12.1	+2.9
KRX	Arik	3.14	19	eP	Pn	20 56 13.9	+4.4
NLC	Nalytchevo	3.15	27	eS	Sn	20 56 46.4	+0.7
SPN	Mys Shipunski	3.31	34	eP	Pn	20 56 14.2	+2.6
SPN				eS	Sn	20 56 51.8	+2.1
GNL	Ganaly	3.35	10	eP	Pn	20 56 14.5	+2.1
MKZ	Mys Kozlova	5.08	33	eP	Pn	20 56 37.9	+2.0
MKZ				eS	Sn	20 57 34.1	+0.9

UCR 14 21:05:45.6±1.1, 9°.58N×84°.87W, h19km±3km, MW3.5, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACO	JACO, Garabito	0.22	68	eP	Pg	21 05 51.1	+0.1
JACO				eS	Sg	21 05 55.5	+0.8
INDI	Punta indio, G	0.69	295	eP	Pb	21 05 58.3	-0.6
INDI				eS	Sg	21 06 09.1	+0.8
JTS	Las Juntas de	0.71	353	eP	Pb	21 05 58.4	-1.1
JTS				eS	Sb	21 06 08.1	-0.8
HDC	Heredia	0.86	60	eP	Pb	21 06 01.2	-0.8
HDC				eS	Sg	21 06 13.9	+0.2
LCR2	La Lucha 2	0.87	79	eP	Pb	21 06 01.3	-0.9
CEDE	Laguna Cedeo	0.92	10	eP	Pb	21 06 02.5	-0.5
SAJU	San Juanillo,	0.96	300	eP	Pb	21 06 03.2	-0.5
ORTG	Ortega, Santa	0.97	323	eP	Pb	21 06 03.1	-0.8
RIMA	Rio Macho	1.01	79	eP	Pb	21 06 03.8	-0.9
ACAL	Águas Claras	1.06	351	eP	Pb	21 06 04.6	-0.9
ACAL				eS	Sb	21 06 19.2	+0.2
HAYA	Volcan Irazu	1.09	68	eP	Pb	21 06 06.0	-0.1
CDM	Cerro de Muert	1.09	91	eP	Pb	21 06 05.8	-0.3
CUI	Cuipilapa	1.11	345	eP	Pn	21 06 05.2	-1.0
CUI				eS	Sn	21 06 21.3	+0.2
COLC	Colonia	1.13	343	eP	Pn	21 06 05.5	-1.0
COLC				eS	Sn	21 06 21.6	+0.1
PTEN	Parque Tenorio	1.14	354	eP	Pn	21 06 05.9	-0.7
HORNC	Hornillas	1.17	345	iP	Pn	21 06 06.1	-1.0
HORNC				eS	Sb	21 06 21.4	-0.7
LIM1	Limonal	1.18	341	eP	Pn	21 06 06.2	-1.0
LIM1				eS	Sn	21 06 23.0	+0.3
GUAB	Guayabo de Bag	1.18	343	eP	Pn	21 06 06.8	-0.3
PEZE	Perez Zeledon,	1.19	99	eP	Pn	21 06 07.2	-0.2
COVE	Coope Vega, Sa	1.22	22	eP	Pn	21 06 07.1	-0.6
VMAR	Armenia, Volca	1.25	349	eP	Pn	21 06 07.7	-0.5
GPS3	Bodega del ICE	1.27	337	eP	Pn	21 06 07.5	-0.9
VERA	Finca Concepci	1.27	0	eP	Pn	21 06 08.1	-0.3
GPS1	Guardaparques	1.28	338	eP	Pn	21 06 08.2	-0.4
GPS1				eS	Sn	21 06 25.9	+0.5
LAPC	Finca la Perla	1.30	335	eP	Pn	21 06 08.2	-0.7
BUEV	Buena Vista	1.32	336	eP	Pn	21 06 09.1	-0.1
GBS3	Finca Las Img	1.33	334	eP	Pn	21 06 08.8	-0.4
HZTE	Horizontes, Gu	1.34	328	eP	Pn	21 06 09.4	+0.1
GB1A	Borinquen Arri	1.34	337	eP	Pn	21 06 08.9	-0.5
BUAI	Buenos Aires	1.37	341	eP	Pn	21 06 09.4	-0.3
BUAI				eS	Sb	21 06 28.1	+0.3
SRBA	San Rafael, Bu	1.53	103	eP	Pn	21 06 11.8	-0.3
CTCR	Cotoan	2.19	108	eP	Pn	21 06 21.6	+0.4

IDC 14 21:09:22.9±2.2, 1°.66N×126°.48E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=169.9km s-min=28.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.81	161	P	P	21 14 27.7	0.0
	0.4nm,0.4s,baz=339,slow=11,SNR=12						
	0.4nm,0.4s						
ASAR	Alice Springs	26.19	164	P	P	21 14 59.5	0.0
	0.2nm,0.4s,baz=345,slow=8.0,SNR=5.4						
	0.2nm,0.4s						
MKAR	Makanchi Array	59.11	326	P	P	21 19 25.2	-0.1
	0.1nm,0.4s,baz=111,slow=6.0,SNR=1.9						
	0.1nm,0.4s						

*MOS **14** 21:28:44.9±1.2, 52°.36N×158°.00E, h139km, mb3.9/4, Error ellipse: s-maj=13.2km s-min=5.7km az=75.3*
*KRSC **14** 21:28:44.3±1.1, 52°.23N×158°.33E, h132km±10km, ML4.4*
*NEIC **14** 21:28:46.4±1.8, 52°.4N±0°.1×158°.1E±0°.2, h129km±7km, mb4.3/10, Error ellipse: s-maj=19.4km s-min=14.1km az=140.0*
*IDC **14** 21:28:46.9±1.2, 52°.47N×157°.63E, h135km±5km, mb3.5/12, mbtmp3.9/13, Error ellipse: s-maj=25.3km s-min=20.8km az=163.0*

ISC 14 21:28:45.5±0.6, 52°.27N±0°.04×158°.20E±0°.05, h136km±4km, n101, σ1°.33/141, mb3.8/20, 5C-3D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTVR	Mutnovka	0.21	357	PN	Pn	21 29 03.5	-0.7
MTVR				S	Sn	21 29 18.0	-0.5
MTVR	Mutnovka	0.21	357	eP	Pn	21 29 03.5	-0.7
MTVR				eS	Sn	21 29 18.0	-0.5
ASAK	Asacha	0.22	301	PN	Pn	21 29 04.0	-0.2
ASAK				S	Sn	21 29 18.0	-0.3
ASAK	Asacha	0.22	301	eP	Pn	21 29 04.0	-0.2
ASAK				eS	Sn	21 29 18.0	-0.3
RUS	Russkaya	0.25	50	PN	Pn	21 29 03.7	-0.4
RUS				S	Sn	21 29 16.9	-1.3
RUS	Russkaya	0.25	50	eP	Pn	21 29 03.7	-0.4
RUS				eS	Sn	21 29 16.9	-1.3
GRL	Gorelyy	0.29	344	PN	Pn	21 29 04.7	+0.3
GRL				S	Sn	21 29 18.8	0.0
GRL	Gorelyy	0.29	344	eP	Pn	21 29 04.7	+0.3
GRL				eS	Sn	21 29 18.8	0.0
KDTR	Khodutka, Kamc	0.47	189	PN	Pn	21 29 04.3	-0.7
KDTR				S	Sn	21 29 17.8	-1.9
KDTR	Khodutka, Kamc	0.47	189	eP	Pn	21 29 04.3	-0.7
KDTR				eS	Sn	21 29 17.8	-1.9
KRMR	Karymshinskiy	0.56	356	PN	Pn	21 29 05.1	-0.4
KRMR				S	Sn	21 29 19.9	-0.8
KRMR	Karymshinskiy	0.56	356	eP	Pn	21 29 05.1	-0.4
KRMR				eS	Sn	21 29 19.9	-0.8
PET	Petropavlovsk	0.80	20		Pn	21 29 06.9	-0.2
PET				Sn	Sn	21 29 22.9	-0.8
PET	Petropavlovsk	0.80	20	ePN	Pn	21 29 07.0	-0.2
PET				eS	Sn	21 29 22.7	-1.0
PET				pmax	pmax		
	comp=Z,321nm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.5s						
PET				smax	smax		
	comp=N,4μm,0.5s						
PET	Petropavlovsk	0.80	20	eP	Pn	21 29 07.1	-0.1
PET				eS	Sn	21 29 22.7	-1.0
DALK	Dalny	0.83	24	PN	Pn	21 29 07.4	0.0
DALK				S	Sn	21 29 23.3	-0.8
DALK	Dalny	0.83	24	eP	Pn	21 29 07.4	0.0
DALK				eS	Sn	21 29 23.3	-0.8
PEA0B	Petropavlovsk-	0.89	340		Pn	21 29 07.7	-0.2
PEA0B	Petropavlovsk-	0.89	340	c iPN	Pn	21 29 07.5	-0.4
PETK	Petropavlovsk-	0.89	340	P	Pn	21 29 06.9	-1.0
	comp=N,562nm,0.4s,baz=132,slow=10,SNR=1607						
PETK				S	Sn	21 29 24.4	-0.6
	comp=N,118nm,0.7s,baz=150,slow=18,SNR=8.1						
PETK	Petropavlovsk-	0.89	340		Pn	21 29 06.7	-1.2
APC	Apacha	0.91	316	PN	Pn	21 29 07.6	-0.5
APC	Apacha	0.91	316	eP	Pn	21 29 07.6	-0.5
UGLR	Uglovaya	1.01	22	PN	Pn	21 29 09.8	+0.7
UGLR				S	Sn	21 29 27.4	+0.3
UGLR	Uglovaya	1.01	22	eP	Pn	21 29 09.8	+0.7
UGLR				eS	Sn	21 29 27.4	+0.3
AVH	Avacha	1.05	18	PN	Pn	21 29 10.1	+0.7
AVH				S	Sn	21 29 28.3	+0.7
AVH	Avacha	1.05	18	eP	Pn	21 29 10.1	+0.7
AVH				eS	Sn	21 29 28.3	+0.7
KOK	Koryaka	1.05	14	PN	Pn	21 29 10.2	+0.7
KOK				S	Sn	21 29 28.1	+0.3
KOK	Koryaka	1.05	14	eP	Pn	21 29 10.2

Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.26±.15; $M_{\theta\theta}$0.91±.19; $M_{\phi\phi}$-2.17±.20; $M_{r\theta}$1.00±.12; $M_{\theta\phi}$-2.16±.20; $M_{\phi r}$-1.99±.13; Best double couple: $M_0$3.63000×10^{16} NP1:ϕ_s169.00000°, δ75.00000°, λ43.00000°. NP2: ϕ_s66.00000°, δ49.00000°, λ160.00000°. Principal axes: T 3.5830, Plg41.0000°, Azm37.0000°; N 0.0920, Plg45.0000°, Azm185.0000°; P -3.6770, Plg17.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 21:30:30.7±0.5, 12.46S±0.04×166.93E±0.05, h195km±4km, h195km:pP-P,n541,σ0=81/525, mb4.8/143, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.48**	**293**	P		**Pn**		**21 32 17.4**	**+0.2**
	1μm,0.8s,baz=231,slow=4.5,SNR=10.0								
HNR	**Honiara**	**7.48**	**293**	Pn		**Pn**		**21 32 16.1**	**-1.2**
HNR	**Honiara**	**7.48**	**293**	P		**Pn**		**21 32 18.1**	**+0.8**
LIFNC	**LIFOU**	**8.28**	**178**	Pn		**Pn**		**21 32 26.8**	**-0.8**
KOUNC	**Koumac, New Ca**	**8.44**	**197**	Pn		**Pn**		**21 32 30.0**	**+0.3**
KOUNC	**Koumac, New Ca**	**8.44**	**197**	P		**Pn**		**21 32 30.5**	**+0.8**
MARNC	**Mare, Loyalty**	**9.03**	**173**	Pn		**Pn**		**21 32 36.2**	**-1.2**
YATNC	**Mamie plateau,**	**9.55**	**180**	P		**Pn**		**21 32 45.0**	**+0.8**
DZM	**Mont Dzumac**	**9.57**	**183**	P		**Pn**		**21 32 46.4**	**+1.8**
	16nm,0.5s,baz=44,slow=15,SNR=31								
DZM				S		**Sn**		**21 34 30.5**	**-1.1**
	10nm,0.6s,baz=138,slow=23,SNR=1.4								
DZM				LR		LR		21 35 36.1	
	comp=Z,231nm,19.5s,baz=29,slow=32								
DZM	**Mont Dzumac**	**9.57**	**183**	Pn		**Pn**		**21 32 46.7**	**+2.1**
DZM	**Mont Dzumac**	**9.57**	**183**	P		**Pn**		**21 32 47.3**	**+2.7**
DNTNC	**Ouen Toro**	**9.80**	**183**	Pn		**Pn**		**21 32 49.4**	**+1.9**
OUENC	**Ouen Island, N**	**9.90**	**180**	Pn		**Pn**		**21 32 49.5**	**+0.7**
MSVF	**Nonsavu**	**11.95**	**117**	P		**P**		**21 33 23.8**	**+3.6**
	34nm,0.9s,baz=277,slow=11,SNR=12								
MSVF	**Nonsavu**	**11.95**	**117**			**P**		**21 33 19.6**	**-0.7**
FUNA	**Funafuti**	**12.68**	**73**	P		**P**		**21 33 27.9**	**-0.4**
TARA	**Tarawa**	**14.96**	**24**			**Pn**		**21 33 52.5**	**-0.3**
TARA	**Tarawa**	**14.96**	**24**	P		**P**		**21 33 54.6**	**+1.0**
RABL	**Rabaul**	**16.75**	**298**	P		**P**		**21 34 11.8**	**-1.6**
KRVT	**Keravat (AS076**	**16.81**	**298**	P		**P**		**21 34 14.2**	**+0.1**
	79nm,0.5s,baz=150,slow=2.5,SNR=13								
GD1S	**Gladstone Soft**	**18.75**	**231**	P		**Pn**		**21 34 38.0**	**+0.1**
RK1H	**Rockhampton Ha**	**19.02**	**233**	P		**P**		**21 34 39.2**	**+1.2**
PMG	**Port Moresby**	**19.64**	**277**	P		**P**		**21 34 44.8**	**0.0**
	64nm,0.9s,baz=78,slow=5.7,SNR=12								
PMG	**Port Moresby**	**19.64**	**277**	P		**P**		**21 34 44.0**	**-0.8**
PMG	**Port Moresby**	**19.64**	**277**	P		**P**		**21 34 44.8**	**0.0**
	788nm63nm,1.0s								
PMG	**Port Moresby**	**19.64**	**277**	P		**P**		**21 34 45.4**	**+0.6**
PMG	**Port Moresby**	**19.64**	**277**	P		**P**		**21 34 45.1**	**+0.3**
EIDS	**Eidsvold**	**19.71**	**227**	P		**P**		**21 34 46.9**	**+1.4**
	baz=20,SNR=49								
EIDS	**Eidsvold**	**19.71**	**227**	P		**P**		**21 34 46.0**	**+0.6**
EIDS	**Eidsvold**	**19.71**	**227**	P		**P**		**21 34 46.8**	**+1.4**
LHI	**Lord Howe Isla**	**20.31**	**200**	P		**P**		**21 34 53.1**	**+1.3**
TV1H	**Townsville Har**	**20.50**	**248**	P		**P**		**21 34 54.9**	**+1.0**
AFI	**Afiamalu**	**20.79**	**96**	P		**P**		**21 34 57.7**	**+0.6**
	23nm,0.3s,baz=304,slow=3.0,SNR=4.7								
	23nm,0.3s								
AFI	**Afiamalu**	**20.79**	**96**	P		**P**		**21 34 56.2**	**-0.9**
PATS	**Pohnpei**	**21.00**	**335**	P		**P**		**21 34 58.4**	**-0.8**
CTA	**Charters Tower**	**21.23**	**246**	P		**P**		**21 35 01.9**	**+0.2**
	90nm,0.6s,baz=76,slow=12,SNR=111								
	90nm,0.6s								
CTA	**Charters Tower**	**21.23**	**246**	P		**P**		**21 35 01.6**	**-0.1**
CTAO	**Charters Tower**	**21.23**	**246**	P		**P**		**21 35 01.5**	**-0.2**
CTAO	**Charters Tower**	**21.23**	**246**	P		**P**		**21 35 01.7**	**0.0**
MANU	**Manus Island**	**21.97**	**297**	P		**P**		**21 35 09.0**	**-0.2**
MANU	**Manus Island**	**21.97**	**297**	P		**P**		**21 35 08.8**	**-0.4**
RMQ	**Roma**	**22.05**	**228**	P		**P**		**21 35 10.9**	**+1.0**
	baz=22,SNR=49								
RMQ	**Roma**	**22.05**	**228**	P		**P**		**21 35 10.9**	**+1.0**
MTSU	**Mount Surprise**	**22.52**	**253**	P		**P**		**21 35 15.2**	**+0.9**
	baz=23,SNR=24								
MTSU	**Mount Surprise**	**22.52**	**253**	P		**P**		**21 35 15.3**	**+0.9**
ARMA	**Armidale**	**22.80**	**216**	P		**P**		**21 35 18.2**	**+1.2**
	baz=23,SNR=68								
ARMA	**Armidale**	**22.80**	**216**	P		**P**		**21 35 17.6**	**+0.7**
ARMA	**Armidale**	**22.80**	**216**	P		**P**		**21 35 18.1**	**+1.2**
COEN	**Coen**	**23.17**	**264**	P		**P**		**21 35 20.9**	**+0.7**
	baz=23,SNR=43								
COEN	**Coen**	**23.17**	**264**	P		**P**		**21 35 20.8**	**+0.5**
COEN	**Coen**	**23.17**	**264**	P		**P**		**21 35 20.8**	**+0.5**
QLP	**Quilpie**	**25.53**	**233**	P		**P**		**21 35 41.8**	**+0.3**
	baz=26,SNR=7.4								
QLP	**Quilpie**	**25.53**	**233**	P		**P**		**21 35 41.9**	**+0.3**
URZ	**Urewera**	**27.25**	**162**	P		**P**		**21 35 56.6**	**-0.2**
URZ				IAmb		IAmb		21 36 02.6	
	comp=Z,20nm,1.2s								
CMSA	**Cobar Meteorol**	**27.26**	**222**	P		**P**		**21 35 57.0**	**0.0**
	baz=27,SNR=30								
CMSA	**Cobar Meteorol**	**27.26**	**222**	P		**P**		**21 35 57.0**	**0.0**
QIS	**Mount Isa**	**27.37**	**249**	P		**P**		**21 35 58.0**	**-0.2**
	baz=28,SNR=9.5								
QIS	**Mount Isa**	**27.37**	**249**	P		**P**		**21 35 58.1**	**-0.1**
CNB	**Canberra Magne**	**27.76**	**212**	P		**P**		**21 36 02.0**	**+0.5**
	baz=28,SNR=5.2								
BKZ	**Black Stump Fm**	**27.92**	**164**	P		**P**		**21 36 03.1**	**+0.3**
BKZ				IAmb		IAmb		21 36 14.0	
	comp=Z,8.4nm,0.7s								
CAN	**Canberra**	**27.95**	**212**	P		**P**		**21 36 03.4**	**+0.3**
INKA	**Innaminka**	**28.82**	**234**	P		**P**		**21 36 11.3**	**+0.5**
NNZ	**Nelson**	**29.20**	**170**	P		**P**		**21 36 15.3**	**+1.3**
BFZ	**Birch Farm**	**29.28**	**165**	P		**P**		**21 36 13.6**	**-1.2**
TUWZ	**Tuamarina**	**29.51**	**169**	P		**P**		**21 36 17.0**	**+0.2**
THZ	**Tophouse**	**29.66**	**171**	P		**P**		**21 36 18.2**	**+0.1**
THZ				IAmb		IAmb		21 36 44.6	
	comp=Z,40nm,1.2s								
BSWZ	**Blackbirch Sta**	**29.77**	**169**	P		**P**		**21 36 21.9**	**+2.8**
SMPI	**Sarmi**	**29.82**	**288**	P		**P**		**21 36 19.5**	**-0.4**
	comp=Z,111nm,0.9s								
STKA	**Stephens Creek**	**30.26**	**226**	P		**P**		**21 36 24.1**	**+0.5**
	comp=Z,21nm,0.7s,baz=47,slow=7.6,SNR=32								
STKA				PcP		**PcP**		**21 39 19.3**	**0.0**
	comp=Z,2.6nm,0.6s,baz=27,slow=2.3,SNR=2.0								
STKA				ScP		**ScP**		**21 42 44.3**	**+0.9**
	comp=Z,3.4nm,0.7s,baz=275,slow=5.7,SNR=3.9								
	comp=Z,21nm,0.7s								
STKA	**Stephens Creek**	**30.26**	**226**	P		**P**		**21 36 24.1**	**+0.5**
	baz=30,SNR=28								
STKA	**Stephens Creek**	**30.26**	**226**	P		**P**		**21 36 24.0**	**+0.5**
STKA	**Stephens Creek**	**30.26**	**226**	P		**P**		**21 36 24.3**	**+0.8**
KHZ	**Kahutara**	**30.40**	**170**	P		**P**		**21 36 23.5**	**-1.0**
LTZ	**Lake Taylor**	**30.57**	**172**	P		**P**		**21 36 26.3**	**+0.2**
LTZ				IAmb		IAmb		21 36 27.0	
	comp=Z,23nm,0.7s								
FOZ	**Fox Glacier**	**31.06**	**176**	P		**P**		**21 36 31.3**	**+0.9**
OXZ	**Oxford**	**31.07**	**173**	P		**P**		**21 36 30.9**	**+0.4**
OXZ				IAmb		IAmb		21 36 34.3	
	comp=Z,28nm,1.1s								
RPZ	**Rata Peaks**	**31.35**	**174**	P		**P**		**21 36 33.3**	**+0.4**
	comp=Z,7.9nm,0.6s,baz=339,slow=4.2,SNR=10								
RPZ				LR		LR		21 46 55.7	
	comp=Z,53nm,18.8s,baz=250,slow=31								
	comp=Z,7.9nm,0.6s								
RPZ	**Rata Peaks**	**31.35**	**174**	P		**P**		**21 36 34.3**	**+1.4**
RPZ				IAmb		IAmb		21 37 15.9	
	comp=Z,30nm,1.3s								
TOO	**Toolangi**	**31.51**	**214**	P		**P**		**21 36 35.2**	**+0.7**
	baz=32,SNR=5.3								
TOO	**Toolangi**	**31.51**	**214**	P		**P**		**21 36 34.8**	**+0.3**
MQZ	**McQueen's Vall**	**31.53**	**172**	P		**P**		**21 36 34.3**	**-0.1**
WR0	**Warramunga Arr**	**31.94**	**252**	P		**P**		**21 36 37.2**	**-1.2**
WR0				IAmb		IAmb		21 36 38.3	
	comp=Z,26nm,1.2s								
LBZ	**Lake Benmore**	**31.94**	**176**	P		**P**		**21 36 38.2**	**+0.1**
LBZ				IAmb		IAmb		21 37 19.2	
	comp=Z,33nm,1.3s								
LCRK	**Leigh Creek**	**32.02**	**231**	P		**P**		**21 36 38.8**	**-0.2**
WB0	**Warramunga Arr**	**32.05**	**253**	P		**P**		**21 36 38.4**	**-1.0**
WB2	**Warramunga Arr**	**32.11**	**252**	P		**P**		**21 36 38.5**	**-1.4**
	baz=32								
WB2	**Warramunga Arr**	**32.11**	**252**	IAmb		IAmb		21 36 39.8	
	comp=Z,42nm,1.2s								
WRAB	**Tennant Creek**	**32.11**	**252**	P		**P**		**21 36 38.9**	**-1.0**
WRAB				IAmb		IAmb		21 36 39.8	
	comp=Z,30nm,1.1s								
WRAB	**Tennant Creek**	**32.11**	**252**	P		**P**		**21 36 38.8**	**-1.1**
WRA	**Warramunga Arr**	**32.12**	**252**	P		**P**		**21 36 38.9**	**-1.1**
	comp=Z,12nm,0.6s,baz=84,slow=9.0,SNR=147								
WRA				pP		**pP**		**21 37 19.1**	**+0.1**
	comp=Z,5.9nm,1.0s,baz=84,slow=8.3,SNR=2.5								
WRA				ScP		**ScP**		**21 42 50.5**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=75,slow=3.9,SNR=12								
WRA				LR		LR		21 48 59.7	
	comp=Z,70nm,19.5s,baz=109,slow=35								
	comp=Z,12nm,0.6s								
WRA	**Warramunga Arr**	**32.12**	**252**	P		**P**		**21 36 37.5**	**-2.6**
WKZ	**Wanaka**	**32.31**	**177**	P		**P**		**21 36 41.4**	**+0.1**
ODZ	**Otahua Downs**	**32.63**	**175**	P		**P**		**21 36 44.5**	**+0.5**
ODZ				IAmb		IAmb		21 37 07.7	
	comp=Z,21nm,1.2s								
MLZ	**Mavora Lakes**	**32.81**	**178**	P		**P**		**21 36 46.1**	**+0.4**
MLZ				IAmb		IAmb		21 36 51.4	
	comp=Z,48nm,1.5s								
DCZ	**Deep Cove**	**32.90**	**180**	P		**P**		**21 36 46.6**	**+0.2**
DCZ				IAmb		IAmb		21 36 48.0	
	comp=Z,25nm,1.1s								
OOD	**Oodnadatta**	**32.93**	**238**	P		**P**		**21 36 47.1**	**+0.1**
HTT	**Hallett**	**32.99**	**226**	P		**P**		**21 36 48.0**	**+0.5**
	baz=33,SNR=12								
HTT	**Hallett**	**32.99**	**226**	P		**P**		**21 36 48.0**	**+0.5**
ARPS	**Mount Arapiles**	**33.06**	**219**	P		**P**		**21 36 48.7**	**+0.7**
	baz=33,SNR=6.2								
AS01	**Alice Springs**	**33.19**	**246**	P		**P**		**21 36 48.3**	**-1.0**
AS31	**Alice Springs**	**33.23**	**246**	P		**P**		**21 36 48.9**	**-0.8**
ASAR	**Alice Springs**	**33.23**	**246**	P		**P**		**21 36 48.6**	**-1.0**
	comp=Z,21nm,0.8s,baz=72,slow=9.8,SNR=190								
ASAR				pP		**pP**		**21 37 28.6**	**-0.3**
	comp=Z,14nm,0.8s,baz=74,slow=9.6,SNR=9.4								
ASAR				S		**S**		**21 41 53.3**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=74,slow=14,SNR=3.1								
ASAR				ScP		**ScP**		**21 42 54.2**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=83,slow=3.4,SNR=19								
ASAR				LR		LR		21 49 23.3	
	comp=Z,60nm,21.5s,baz=78,slow=34								
	comp=Z,21nm,0.8s								
ASAR	**Alice Springs**	**33.23**	**246**	P		**P**		**21 36 48.8**	**-0.9**
WHZ	**Wether Hill Ro**	**33.33**	**179**	P		**P**		**21 36 50.1**	**-0.1**
WHZ				IAmb		IAmb		21 37 04.0	
	comp=Z,48nm,1.4s								
KDU	**Kakadu**	**33.61**	**266**	P		**P**		**21 36 52.7**	**-0.3**
	baz=34,SNR=37								
KDU	**Kakadu**	**33.61**	**266**	P		**P**		**21 36 52.7**	**-0.3**
WHYH	**Whyalla**	**33.75**	**228**	P		**P**		**21 36 54.3**	**+0.4**
GUMO	**Guam**	**33.88**	**319**	LR		LR		21 52 23.6	
	comp=Z,25nm,18.3s,baz=154,slow=39								
RKPI	**Ransiki, Papua**	**34.23**	**286**	P		**P**		**21 36 58.5**	**+0.2**
	comp=Z,3μmcomp=Z,57nm,1.0s								
BBOO	**Buckleboo**	**34.75**	**229**	P		**P**		**21 37 02.7**	**+0.2**
	baz=35,SNR=71								
BBOO	**Buckleboo**	**34.75**	**229**	P		**P**		**21 37 02.8**	**+0.2**
BBOO	**Buckleboo**	**34.75**	**229**	P		**P**		**21 37 02.8**	**+0.2**
MTN	**Manton Dam**	**34.91**	**265**	P		**P**		**21 37 03.9**	**-0.3**
	baz=35,SNR=18								
MTN	**Manton Dam**	**34.91**	**265**	P		**P**		**21 37 04.1**	**0.0**
MTN	**Manton Dam**	**34.91**	**265**	P		**P**		**21 37 04.0**	**-0.2**
MULG	**Mulgathing**	**35.19**	**235**	P		**P**		**21 37 05.8**	**-0.6**
FAKI	**Fak Fak**	**35.60**	**283**	P		**P**		**21 37 08.8**	**-1.3**
FAKI				IAmb		IAmb		21 37 22.8	
	comp=Z,28nm,1.1s								
KNRA	**Kununurra**	**37.12**	**260**	P		**P**		**21 37 22.7**	**-0.2**
	baz=37,SNR=29								
KNRA	**Kununurra**	**37.12**	**260**	P		**P**		**21 37 22.6**	**-0.3**
KNRA	**Kununurra**	**37.12**	**260**	P		**P**		**21 37 22.8**	**-0.1**
SIJI	**Sorong**	**37.18**	**285**	P		**P**		**21 37 23.4**	**-0.1**
	comp=Z,31nm,0.4s,baz=340,slow=22,SNR=20								
SIJI				LR		LR		21 54 05.4	
	comp=Z,38nm,18.6s,baz=141,slow=38								
	comp=Z,31nm,0.4s								
SIJI	**Sorong**	**37.18**	**285**	P		**P**		**21 37 22.9**	**-0.6**
	comp=Z,702nmcomp=Z,70nm,1.2s								
SWI	**Sorong**	**37.19**	**285**	P		**P**		**21 37 23.1**	**-0.4**
	comp=Z,97nm,1.1s								
WRKA	**Warakurna**	**38.52**	**245**	P		**P**		**21 37 34.0**	**-0.6**
	baz=39,SNR=31								
WRKA	**Warakurna**	**38.52**	**245**	P		**P**		**21 37 34.0**	**-0.6**
KRAI	**Karang Ratu**	**39.18**	**280**	P		**P**		**21 37 39.7**	**-0.5**
	comp=Z,23nm,0.6s								
FORT	**Forrest**	**40.21**	**237**	P		**P**		**21 37 48.5**	**+0.1**
	baz=40,SNR=20								
FORT	**Forrest**	**40.21**	**237**	P		**P**		**21 37 48.6**	**+0.2**
FORT	**Forrest**	**40.21**	**237**	P		**P**		**21 37 48.5**	**+0.1**
NLAI	**Namlea**	**40.45**	**280**	P		**P**		**21 37 50.2**	**-0.4**
	comp=Z,3μmcomp=Z,69nm,0.9s								
LBMI	**Labuha**	**40.81**	**284**	P		**P**		**21 37 53.4**	**-0.2**
	comp=Z,94nm,1.3s								
SANI	**Sanana**	**41.84**	**281**	P		**P**		**21 38 02.4**	**+0.5**
	comp=Z,36nm,1.2s								
SANI	**Sanana**	**41.84**	**281**	P		**P**		**21 38 01.9**	**0.0**
SOEI	**Soe**	**41.91**	**269**	P		**P**		**21 38 03.1**	**+0.4**
SOEI				IAmb		IAmb		21 38 03.5	
	comp=Z,20nm,0.7s								
MMRI	**Maumere**	**44.06**	**270**	P		**P**		**21 38 19.4**	**-0.4**
MMRI	**Maumere**	**44.06**	**270**	P		**P**		**21 38 19.0**	**-0.8**
	comp=Z,63nm,0.9s								
MMRI	**Maumere**	**44.06**	**270**	P		**P**		**21 38 19.3**	**-0.4**
SGSI	**Sangihe**	**44.15**	**289**	P		**P**		**21 38 20.4**	**-0.1**
	comp=Z,5μmcomp=Z,120nm,0.8s								
LUWI	**Luwuk**	**45.21**	**281**	P		**P**		**21 38 28.4**	**-0.5**
LUWI				IAmb		IAmb		21 38 29.9	
	comp=Z,48nm,1.2s								
KKSI	**Kolaka, Sulawe**	**45.49**	**276**	P		**P**		**21 38 31.4**	**+0.3**
	comp=Z,51nm,1.0s								
PSA00	**Pilbara Seismi**	**45.77**	**252**	P		**P**		**21 38 33.3**	**0.0**
PSA00				IAmb		IAmb		21 38 34.2	
	comp=Z,80nm,1.4s								
PSA00	**Pilbara Seismi**	**45.77**	**252**	P		**P**		**21 38 33.2**	**0.0**
PSA00				IAmb		IAmb		21 38 34.3	
	comp=Z,35nm,1.4s								
PSA00	**Pilbara Seismi**	**45.77**	**252**	P		**P**		**21 38 33.2**	**0.0**
MBWA	**Marble Bar**	**45.86**	**253**	P		**P**		**21 38 33.9**	**0.0**
MBWA				IAmb		IAmb		21 38 35.0	
	comp=Z,33nm,0.9s								
MBWA	**Marble Bar**	**45.86**	**253**	P		**P**		**21 38 33.9**	**0.0**
BNSI	**Bone**	**46.94**	**276**	P		**P**		**21 38 42.7**	**+0.4**
	comp=Z,467nmcomp=Z,55nm,0.8s								
KAPI	**Kappang**	**47.15**	**275**	P		**P**		**21 38 44.1**	**+0.1**
KAPI				IAmb		IAmb		21 38 45.1	
	comp=Z,34nm,0.8s								
KAPI	**Kappang**	**47.15**	**275**	P		**P**		**21 38 44.4**	**+0.4**
	comp=Z,42nm,1.0s								
KAPI	**Kappang**	**47.15**	**275**	P		**P**		**21 38 44.3**	**+0.3**
TOLI2	**Tolitoli**	**47.74**	**283**	P		**P**		**21 38 47.5**	**-1.1**
TOLI2	**Tolitoli**	**47.74**	**283**	P		**P**		**21 38 47.7**	**-0.8**
MPSI	**Mapaga**	**48.35**	**282**	P		**P**		**21 38 52.9**	**-0.3**
	comp=Z,46nm,0.7s								
PLAI	**Plampang**	**48.39**	**269**	P		**P**		**21 38 53.4**	**-0.1**
	comp=Z,866nmcomp=Z,94nm,0.7s								
PLAI	**Plampang**	**48.39**	**269**	P		**P**		**21 38 53.0**	**-0.5**
KLBR	**Kellerberrin**	**48.95**	**239**	P		**P**		**21 38 56.8**	**-0.8**
	baz=49,SNR=6.9								
TWSI	**Taliwang, Sumb**	**49.27**	**269**	P		**P**		**21 38 59.9**	**-0.3**
	comp=Z,530nmcomp=Z,57nm,0.6s								
NWAO	**Narrogin (SRO)**	**49.66**	**237**	P		**P**		**21 39 02.3**	**-0.6**
	comp=Z,24nm,1.0s,baz=82,slow=4.3,SNR=3.3								
	comp=Z,24nm,1.0s								
NWAO	**Narrogin (SRO)**	**49.66**	**237**	P		**P**		**21 39 02.6**	**-0.2**
	baz=50,SNR=3.8								
NWAO				P		**P**		**21 39 02.6**	**-0.2**
	baz=50,SNR=3.8								
NWAO	**Narrogin (SRO)**	**49.66**	**237**	P		**P**		**21 39 02.1**	**-0.7**
NWAO				IAmb		IAmb		21 39 05.8	
	comp=Z,28nm,1.0s								
MORW	**Morawa**	**49.98**	**242**	P		**P**		**21 39 05.6**	**+0.2**
	baz=50,SNR=8.4								
MORW	**Morawa**	**49.98**	**242**	P		**P**		**21 39 05.3**	**-0.1**
MORW				IAmb		IAmb		21 39 06.1	
	comp=Z,35nm,1.3s								
SRBI	**Singaraja**	**51.01**	**270**	P		**P**		**21 39 13.5**	**+0.2**
	comp=Z,59nm,1.0s								
GIRL	**Giralia**	**51.02**	**251**	P		**P**		**21 39 14.4**	**+1.1**
MYLDM	**Lahad Datu**	**51.22**	**287**	P		**P**		**21 39 16.1**	**+1.3**
MYLDM				IAmb		IAmb		21 39 17.5	
	comp=Z,43nm,1.4s								
JAGI	**Jajag, Banyuwa**	**51.98**	**269**	P		**P**		**21 39 18.9**	**-1.6**
JAGI	**Jajag, Banyuwa**	**51.98**	**269**	P		**P**		**21 39 19.2**	**-1.3**
KKM	**Kota Kinabalu**	**53.65**	**287**	P		**P**		**21 39 32.7**	**-0.2**
KKM	**Kota Kinabalu**	**53.65**	**287**	P		**P**		**21 39 32.6**	**-0.2**
	comp=Z,547nmcomp=Z,53nm,1.1s								
KKM	**Kota Kinabalu**	**53.65**	**287**	P		**P**		**21 39 33.1**	**+0.3**
JGF	**Kuroka**	**55.38**	**331**	P		**P**		**21 39 44.4**	**-0.4**
UGM	**Wanagama**	**55.62**	**269**	P		**P**		**21 39 46.6**	**-0.3**
JMN	**Monobe**	**55.68**	**327**	P		**P**		**21 39 47.0**	**+0.1**
MJAR	**Matsushiro Arr**	**55.75**	**332**	P		**P**		**21 39 46.8**	**-0.6**
	comp=Z,6.1nm,0.8s,baz=165,slow=8.6,SNR=19								

*BJI **14** 21:30:30.8±0.0, 11.99S×167.39E, h203km, mb4.5/32, mB4.7/17*
*NEIC **14** 21:30:30.4±1.2, 12.41S±0.08×166.94E±0.03, h186km±6km, mb4.8/191, Error ellipse: s-maj=12.4km s-min=3.9km az=190.0*
*IDC **14** 21:30:30.9±0.6, 12.48S×166.88E, h194km±5km, mb4.3/29, mbtmp4.8/33, MS3.3/7, Error ellipse: s-maj=9.6km s-min=8.2km az=122.0*
*NOU **14** 21:30:31.8, 12.43S×166.89E, h202km, mb5.0/48, Santa Cruz Islands*
*GCMT **14** 21:30:31.4±0.4, 12.32S±0.03×166.76E±0.03, h193km±4km, MW5.0/80, Moment Tensor Solution. s17,c19; s80,c95;*

comp=Z,6.1nm,0.8s
MAJO Matsushiro 55.75 332 P **P 21 39 47.2 -0.2**
MAJO IAmb IAmb 21 39 47.8
comp=Z,10nm,0.8s
MJB9 Matsu-Tunnel 55.76 332 P **P 21 39 46.8 -0.6**
MJB9 IAmb IAmb 21 39 47.7
comp=Z,10.0nm,0.8s
JSD Sado 56.96 333 P **P 21 39 56.8 +0.9**
JSD IAmb IAmb 21 39 57.6
comp=Z,27nm,1.1s
JHS Saijyo 57.05 327 P **P 21 39 57.0 +0.4**
JHS IAmb IAmb 21 40 40.5
comp=Z,18nm,1.2s
DRV Dumont d'Urvil 57.07 192 P **P 21 39 55.4 -0.8**
DRV sP **pP 21 40 39.8 -0.5**
TPUB Ta-pu 57.58 308 P **P 21 39 58.7 -1.8**
LEM Lembang 58.64 270 LR LR 22 07 01.3
comp=Z,34nm,18.4s,baz=344,slow=37
KSRS Korea Array 61.69 325 P **P 21 40 28.9 +0.7**
comp=Z,2.4nm,0.6s,baz=137,slow=7.0,SNR=7.6
comp=Z,2.4nm,0.6s
NJ2 Nanjing 63.83 315 *e*P **P 21 40 44.0 +1.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
USRK Ussuriysk Ar. 64.72 333 P **P 21 40 49.1 +1.0**
comp=Z,6.6nm,0.8s,baz=154,slow=5.3,SNR=8.1
comp=Z,6.6nm,0.8s
VNDA Vanda 65.11 181 P **P 21 40 50.5 +0.4**
comp=Z,2.2nm,0.6s,baz=355,slow=7.1,SNR=37
comp=Z,2.2nm,0.6s
VNDA Vanda 65.11 181 P **P 21 40 50.7 +0.6**
VNDA Vanda 65.11 181 P **P 21 40 49.3 -0.8**
VNDA pP **PcP 21 41 21.6 +0.5**
VNDA sP **pP 21 41 36.6 +1.5**
SBA Scott Base 65.39 180 P **P 21 40 52.9 +1.0**
SBA IAmb IAmb 21 40 54.4
comp=Z,9.2nm,0.8s
SBA Scott Base 65.39 180 P **P 21 40 51.9 -0.1**
SBA pP **PcP 21 41 23.5 +1.2**
CASY Casey 65.50 202 P **P 21 40 52.0 -0.7**
KIWB Kanaga Island 65.52 11 P **P 21 40 52.9 -0.1**
PETK Petropavlovsk- 65.78 354 P **P 21 40 55.2 +0.6**
comp=Z,6.8nm,0.8s,baz=185,slow=13,SNR=6.2
comp=Z,6.8nm,0.8s
PETK Petropavlovsk- 65.78 354 P **P 21 40 54.8 +0.1**
MDJ Mudanjiang 66.13 332 P **P 21 40 57.4 +0.3**
MDJ pmax pmax
comp=Z,13nm,0.8s
MDJ pmax pmax
comp=Z,130nm,3.9s
CCD Concordia, Ant 67.05 191 P **P 21 41 01.3 -1.7**
CCD pP **PcP 21 41 33.7 +4.0**
CCD sP **pP 21 41 49.9 +1.3**
CN2 Changchun 67.54 329 *e*P **P 21 41 06.1 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
IPM Ipoh 67.60 280 P **P 21 41 06.6 -0.4**
IPM IAmb IAmb 21 41 08.2
comp=Z,18nm,0.9s
BNX BinXian 68.00 331 ⇑P **P 21 41 08.9 +0.1**
BNX pmax pmax
comp=Z,9.0nm,1.3s
BNX pmax pmax
comp=Z,53nm,4.3s
GSI Gunungsitoli 70.15 276 P **P 21 41 23.3 +0.5**
GSI IAmb IAmb 21 42 01.8
comp=Z,31nm,1.0s
CHNA Chernabura Isl 72.75 20 P **P 21 41 36.5 -0.9**
baz=214
SDPT Sand Point 72.90 19 P **P 21 41 37.6 -0.6**
baz=213
CMAR Chiang Mai Arr 73.73 294 P **P 21 41 45.5 +1.5**
comp=Z,2.4nm,0.4s,baz=125,slow=4.7,SNR=17
CMAR pP **pP 21 42 30.5 +1.6**
comp=Z,1.3nm,0.4s,baz=120,slow=4.1,SNR=2.2
comp=Z,2.4nm,0.4s
PZH PanZhiHua 74.20 302 P **P 21 41 48.0 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,4.3s
SEY Seymchan 76.00 353 P **P 21 41 56.4 +0.4**
comp=Z,16nm,0.6s,baz=167,slow=5.9,SNR=58
comp=Z,16nm,0.6s
Q17K Contact Creek 76.74 19 P **P 21 41 59.9 -0.4**
baz=217
OHAK Old Harbor 76.80 21 P **P 21 42 00.5 -0.1**
OHAK IAmb IAmb 21 42 01.4
comp=Z,29nm,1.0s
OHAK Old Harbor 76.80 21 P **P 21 41 59.7 -0.9**
baz=220
Q16K King Salmon 76.83 19 P **P 21 42 00.1 -0.6**
baz=216
O16K Kokwok River B 77.14 17 P **P 21 42 01.8 -0.6**
baz=215
P17K Kvichak River 77.31 18 P **P 21 42 02.6 -0.8**
baz=217
Q18K Katmai Hardscr 77.33 19 P **P 21 42 03.7 0.0**
baz=218
KDAK Kodiak Island 77.47 21 P **P 21 42 04.5 +0.2**
KDAK IAmb IAmb 21 42 22.4
comp=Z,44nm,1.4s
KDAK Kodiak Island 77.47 21 P **P 21 42 04.3 0.0**
baz=220
QSPA South Pole Qui 77.56 180 P **P 21 42 05.2 +0.2**
comp=Z,4.7nm,0.6s,baz=342,slow=0.6,SNR=24
comp=Z,4.7nm,0.6s
QSPA South Pole Qui 77.56 180 P **P 21 42 05.2 +0.2**
O17K Koliganek Bris 77.58 18 P **P 21 42 04.3 -0.6**
baz=216
N16K Nishlik Lake 77.68 17 P **P 21 42 06.1 +0.7**
baz=214
P18K Big Mountain, 77.85 19 IAmb IAmb 21 42 07.1
comp=Z,34nm,1.1s
P18K Big Mountain, 77.85 19 P **P 21 42 05.4 -1.1**
baz=218
Q19K Cape Douglas, 77.99 20 P **P 21 42 07.0 -0.2**
Q19K Cape Douglas, 77.99 20 P **P 21 42 06.5 -0.7**
baz=219
O18K Koktuh Hills 78.22 18 P **P 21 42 07.6 -0.9**
O18K Koktuh Hills 78.22 18 P **P 21 42 08.3 -0.1**
baz=218
N18K Kilae Creek 78.67 18 P **P 21 42 11.2 +0.3**
N18K Kilae Creek 78.67 18 P **P 21 42 10.7 -0.3**
baz=217
P19K Oil Pt 78.69 19 P **P 21 42 10.8 -0.2**
baz=220
SVW2 Sparrevohn 79.10 18 P **P 21 42 14.6 +1.4**
N19K Bonanza Creek 79.20 18 P **P 21 42 13.9 0.0**
N19K IAmb IAmb 21 42 35.3
comp=Z,17nm,1.4s
N19K Bonanza Creek 79.20 18 P **P 21 42 13.5 -0.4**
baz=218
CNPM China Poot 79.25 20 P **P 21 42 15.1 +1.0**
CNPM IAmb IAmb 21 42 17.4
comp=Z,34nm,1.2s
RSO Redoubt South 79.47 19 P **P 21 42 17.8 +2.3**
BRLK Bradley Lake 79.55 20 P **P 21 42 16.3 +0.6**
BRLK IAmb IAmb 21 42 16.6
comp=Z,14nm,0.8s
BRSE Bradley Lake S 79.58 20 P **P 21 42 15.9 0.0**
baz=222
YAK Yakutsk 79.77 343 P **P 21 42 17.1 +0.3**
baz=314,slow=0.9
YAK Yakutsk 79.77 343 P **P 21 42 17.1 +0.3**
YAK IAmb IAmb 21 42 17.6
comp=Z,25nm,0.8s
M19K Big River Lodg 80.09 17 P **P 21 42 19.8 +1.3**
M19K Big River Lodg 80.09 17 P **P 21 42 19.6 +1.1**
baz=218
ULN Ulaanbaatar 80.12 324 P **P 21 42 18.5 -0.7**
ULN Ulaanbaatar 80.12 324 P **P 21 42 17.8 -1.4**
comp=Z,31nm,1.0s
L19K White Mountain 80.17 17 P **P 21 42 19.7 +0.7**
L19K White Mountain 80.17 17 P **P 21 42 19.8 +0.8**
baz=218
SEW Seward 80.29 21 P **P 21 42 19.5 0.0**
baz=223
M20K Styx River 80.44 18 P **P 21 42 20.6 +0.1**
M20K Styx River 80.44 18 P **P 21 42 20.8 +0.3**
baz=219
SONM Songino Array 80.48 324 P **P 21 42 21.6 +0.4**
comp=Z,0.7nm,0.4s,baz=143,slow=6.3,SNR=7.0
comp=Z,0.7nm,0.4s
SONM Songino Array 80.48 324 P **P 21 42 21.5 +0.4**
L20K Farewell, AK 80.69 17 P **P 21 42 22.4 +0.7**
baz=219
GTA Gaotai 80.86 314 *e*P **P 21 42 24.5 +1.2**
GTA pmax pmax
comp=Z,4.0nm,1.1s
SUA Susitna One 80.87 19 IAmb IAmb 21 42 25.6
comp=Z,15nm,1.2s
SUA Susitna One 80.87 19 P **P 21 42 23.0 +0.2**
baz=222
RC01 Rabbit Creek A 80.92 20 IAmb IAmb 21 42 24.5
comp=Z,9.2nm,0.6s
RC01 Rabbit Creek A 80.92 20 P **P 21 42 23.0 +0.1**
baz=223
SKT Skwentna 81.01 18 P **P 21 42 23.3 -0.1**
baz=221
PWL Port Wells 81.22 20 P **P 21 42 24.7 +0.2**
baz=224
M22K Willow 81.28 19 P **P 21 42 24.5 -0.3**
M22K IAmb IAmb 21 42 27.1
comp=Z,30nm,1.0s
M22K Willow 81.28 19 P **P 21 42 24.7 0.0**
baz=222
K20K Telida 81.32 17 P **P 21 42 24.8 -0.2**
K20K IAmb IAmb 21 42 29.6
comp=Z,16nm,1.4s
K20K Telida 81.32 17 P **P 21 42 25.2 +0.1**
baz=218
PMR Palmer 81.48 20 P **P 21 42 25.8 -0.1**
PMR IAmb IAmb 21 42 26.6
comp=Z,17nm,0.9s
PMR Palmer 81.48 20 P **P 21 42 26.2 +0.4**
baz=223
PPLA Purkeypile 81.51 18 P **P 21 42 26.4 +0.2**
baz=220
KNK Knik Glacier 81.58 20 IAmb IAmb 21 42 27.0
comp=Z,14nm,0.7s
KNK Knik Glacier 81.58 20 P **P 21 42 26.7 +0.3**
baz=224,SNR=8.9
GLI Glacier Island 81.66 21 IAmb IAmb 21 42 27.5
comp=Z,20nm,1.0s
GLI Glacier Island 81.66 21 P **P 21 42 26.6 -0.3**
baz=225,SNR=5.5
GCSA Galena City Sc 81.69 15 P **P 21 42 27.7 +0.8**
baz=216
CUT Chulitna 81.72 19 P **P 21 42 27.0 -0.1**
baz=222
FID Port Fidalgo 81.78 21 IAmb IAmb 21 42 28.1
comp=Z,16nm,0.9s
EYAK Cordova Ski Ar 81.90 22 P **P 21 42 28.5 +0.4**
EYAK Cordova Ski Ar 81.90 22 P **P 21 42 28.1 0.0**
baz=226
SML Sawmill 81.90 20 IAmb IAmb 21 42 28.7
comp=Z,23nm,1.2s
SML Sawmill 81.90 20 P **P 21 42 28.4 +0.2**
baz=224,SNR=5.8
CAST Castle Rocks 81.94 17 IAmb IAmb 21 42 29.4
comp=Z,16nm,0.8s
CAST Castle Rocks 81.94 17 P **P 21 42 27.7 -0.6**
baz=220,SNR=18
J20K Nowinta River 81.95 16 P **P 21 42 28.7 +0.4**
baz=218,SNR=8.7
KAIM Kayak Island 81.97 22 P **P 21 42 29.1 +0.6**
KAIM Kayak Island 81.97 22 P **P 21 42 28.8 +0.4**
baz=228
M23K Glacier View 82.09 20 P **P 21 42 29.2 +0.1**
baz=224,SNR=5.8
SCM Sheep Creek Mo 82.26 20 IAmb IAmb 21 42 31.1
comp=Z,30nm,1.0s
SCM Sheep Creek Mo 82.26 20 P **P 21 42 30.2 +0.2**
baz=225,SNR=7.3
DIV Divide 82.30 21 P **P 21 42 29.8 -0.5**
DIV IAmb IAmb 21 42 31.2
comp=Z,18nm,1.0s
KTH Kantishna Hill 82.38 18 IAmb IAmb 21 42 31.8
comp=Z,10nm,0.7s
TRF Thorofare Moun 82.49 18 IAmb IAmb 21 42 32.6
comp=Z,15nm,0.8s
TRF Thorofare Moun 82.49 18 P **P 21 42 30.8 -0.6**
baz=222,SNR=10.0
KLU Klutina 82.50 21 P **P 21 42 31.1 -0.2**
baz=226
BERG Berg Lake 82.55 22 P **P 21 42 31.5 0.0**
WAT1 Susitna Watana 82.57 19 P **P 21 42 31.3 -0.3**
baz=224
BMRM Bremner River 82.60 22 IAmb IAmb 21 42 32.3
comp=Z,21nm,1.1s
BMRM Bremner River 82.60 22 P **P 21 42 31.9 +0.1**
baz=228,SNR=6.3
WAT6 Susitna Watana 82.65 19 P **P 21 42 32.3 +0.1**
baz=224,SNR=10
M24K Tolsona, Glenn 82.84 20 P **P 21 42 33.6 +0.6**
M24K Tolsona, Glenn 82.84 20 P **P 21 42 33.5 +0.6**
baz=226,SNR=8.5
RND Reindeer 82.90 18 IAmb IAmb 21 42 33.8
comp=Z,16nm,1.2s
WAX Waxell Ridge 82.90 23 P **P 21 42 33.6 +0.2**
N25K Chitina, Valde 83.04 21 IAmb IAmb 21 42 35.4
comp=Z,33nm,1.1s
N25K Chitina, Valde 83.04 21 P **P 21 42 34.5 +0.4**
baz=227,SNR=13
MESA MESA 83.06 23 P **P 21 42 34.7 +0.3**
baz=230
TGL Tana Glacier 83.11 22 IAmb IAmb 21 42 35.6
comp=Z,18nm,1.0s
MCK McKinley 83.11 18 IAmb IAmb 21 42 34.8
comp=Z,17nm,1.0s
MCK McKinley 83.11 18 P **P 21 42 34.0 -0.4**
baz=223,SNR=7.4
DHY Denali Highway 83.12 19 P **P 21 42 34.7 +0.1**
baz=225,SNR=6.4
ISLE Juniper Island 83.19 23 P **P 21 42 34.8 -0.1**
ISLE IAmb IAmb 21 42 36.0
comp=Z,29nm,1.0s
VRDI Verde Repeater 83.19 22 IAmb IAmb 21 42 35.4
comp=Z,9.1nm,0.8s
GLB Gilahina Butte 83.21 22 IAmb IAmb 21 42 35.9
comp=Z,29nm,1.2s
BWN Browne 83.28 18 P **P 21 42 35.1 -0.1**
I21K Tanana 83.32 16 IAmb IAmb 21 42 36.7
comp=Z,14nm,0.8s
I21K Tanana 83.32 16 P **P 21 42 35.9 +0.6**
baz=220,SNR=8.0
HARP HAARP 83.38 20 P **P 21 42 35.8 0.0**
baz=227
MCARA McCarthy VSAT 83.45 22 IAmb IAmb 21 42 37.2
comp=Z,18nm,1.0s
MCARA McCarthy VSAT 83.45 22 P **P 21 42 36.1 0.0**
baz=229,SNR=7.2
H21K Melozitna Rive 83.46 16 P **P 21 42 36.7 +0.7**
baz=219,SNR=8.5
TABL Table Mountain 83.54 23 IAmb IAmb 21 42 37.9
comp=Z,27nm,0.9s
MLY Manley 83.55 17 P **P 21 42 36.5 -0.1**
baz=221
SCZ2 Santa Cruz Isl 83.57 53 P **P 21 42 36.7 -0.6**
baz=250
PCA Pinnacle 83.67 24 P **P 21 42 37.0 -0.3**
PCA IAmb IAmb 21 42 38.2
comp=Z,18nm,1.0s
PINM Pinnacle 83.67 24 P **P 21 42 37.3 0.0**
baz=232
PAX Paxson 83.67 20 P **P 21 42 36.7 -0.6**
baz=226
NEA2 Nenana 83.70 18 P **P 21 42 36.1 -1.2**
NEA2 Nenana 83.70 18 P **P 21 42 36.8 -0.5**
baz=223,SNR=5.1
PKM Mcpherson Peak 83.73 52 P **P 21 42 37.4 -0.9**
baz=250
BARN Barnard Glacie 83.74 22 IAmb IAmb 21 42 39.0
comp=Z,18nm,1.0s
CTG Chitna Glacier 83.80 23 P **P 21 42 37.8 -0.2**
baz=230,SNR=7.4
CTGM Chitina Glacie 83.80 23 P **P 21 42 38.2 +0.1**
CTGM IAmb IAmb 21 42 39.2
comp=Z,28nm,1.1s
LOGN Logan Glacier 83.84 23 IAmb IAmb 21 42 39.4
comp=Z,28nm,1.2s
MAW Mawson 83.85 202 P **P 21 42 38.7 +0.6**
comp=Z,2.6nm,0.8s,baz=121,slow=5.5,SNR=5.5
comp=Z,2.6nm,0.8s
WRH Wood River Hil 83.91 18 IAmb IAmb 21 42 38.7
comp=Z,34nm,1.1s
G21K Allakaket 83.95 15 P **P 21 42 39.0 +0.4**
baz=219,SNR=5.6
H22K Ishtalitna Cre 84.03 16 P **P 21 42 39.7 +0.8**
baz=221,SNR=8.2
I23K Minto, Yukon-K 84.03 17 P **P 21 42 39.2 +0.3**
I23K Minto, Yukon-K 84.03 17 P **P 21 42 38.5 -0.3**
baz=223
YBH Yreka Blue Hor 84.06 45 P **P 21 42 40.2 +0.4**
comp=Z,8.5nm,0.9s,baz=132,slow=1.1,SNR=8.6
comp=Z,8.5nm,0.9s
S31K Pelican 84.06 27 P **P 21 42 39.8 +0.6**
baz=235
ORV Oroville 84.10 48 P **P 21 42 39.9 0.0**
CCB Clear Creek Bu 84.12 18 IAmb IAmb 21 42 39.1
comp=Z,15nm,0.6s
O28M Mount Upton 84.12 23 P **P 21 42 40.0 +0.1**
baz=232,SNR=11
M26K Nabesna, AK 84.13 21 IAmb IAmb 21 42 40.7
comp=Z,21nm,1.1s
M26K Nabesna, AK 84.13 21 P **P 21 42 40.0 +0.4**
baz=229,SNR=12
K24K Donnelly Dome 84.15 19 P **P 21 42 39.9 +0.3**
baz=226,SNR=17
HDA Harding Lake 84.21 18 P **P 21 42 40.0 +0.2**
baz=225,SNR=19
TCOL CIGO, UAF Yank 84.26 18 P **P 21 42 39.2 -0.8**
TCOL CIGO, UAF Yank 84.26 18 P **P 21 42 39.6 -0.5**
baz=224
COLA College 84.27 18 P **P 21 42 39.6 -0.5**
COLA College 84.27 18 P **P 21 42 40.1 0.0**
baz=224
AFDM Forest Hills D 84.27 48 P **P 21 42 40.9 +0.1**
AFDM IAmb IAmb 21 42 42.0
comp=Z,20nm,1.3s
P29M Windy Craggy 84.40 25 P **P 21 42 40.5 -0.5**
P29M IAmb IAmb 21 42 42.1
comp=Z,22nm,1.1s
P29M Windy Craggy 84.40 25 P **P 21 42 40.8 -0.2**
baz=234,SNR=6.5
RIDG Independent Ri 84.41 19 P **P 21 42 41.1 +0.2**
RIDG Independent Ri 84.41 19 P **P 21 42 40.4 -0.5**
baz=227,SNR=7.9
L26K Log Cabin Wild 84.42 20 P **P 21 42 41.2 +0.2**
L26K IAmb IAmb 21 42 42.4
comp=Z,19nm,1.2s
L26K Log Cabin Wild 84.42 20 P **P 21 42 41.4 +0.3**
baz=228,SNR=5.7
O29M Mount Kennedy 84.46 24 P **P 21 42 41.3 0.0**
baz=233
H23K Yukon River 84.47 17 IAmb IAmb 21 42 42.4
comp=Z,25nm,1.1s
H23K Yukon River 84.47 17 P **P 21 42 41.5 +0.3**
baz=222,SNR=14
ILAR Eielson Array 84.48 18 P **P 21 42 40.8 -0.5**
comp=Z,19nm,0.7s,baz=234,slow=6.0,SNR=134
comp=Z,19nm,0.7s
M27K Edge Creek, AK 84.50 21 IAmb IAmb 21 42 43.0
comp=Z,15nm,1.1s
M27K Edge Creek, AK 84.50 21 P **P 21 42 42.1 +0.6**
baz=230,SNR=6.8
F21K Alatna River 84.51 14 P **P 21 42 41.9 +0.5**
baz=219
S32K Killisnoo 84.53 28 P **P 21 42 41.4 -0.1**
baz=237
POKR Poker Plat Res 84.57 18 P **P 21 42 40.9 -0.7**
POKR Poker Plat Res 84.57 18 **P 21 42 41.3 -0.4**
POKR Poker Plat Res 84.57 18 P **P 21 42 41.0 -0.6**
baz=224,SNR=8.2
YUK8 Steele Glacier 84.60 23 P **P 21 42 42.5 +0.3**
baz=232,SNR=11
DOT Dot Lake 84.60 20 IAmb IAmb 21 42 42.9
comp=Z,22nm,1.1s
YUK3 Moose Creek 84.64 22 P **P 21 42 42.6 +0.3**
baz=231,SNR=7.0
PASC Pasadena Art C 84.76 53 P **P 21 42 41.8 -1.6**
PASC IAmb IAmb 21 42 43.7
comp=Z,24nm,1.4s
G22K Bettles 84.77 15 P **P 21 42 43.7 +1.1**
baz=221
V35K Ketchikan 84.79 30 P **P 21 42 43.6 +0.7**
baz=239
J25K Salcha River, 84.84 19 P **P 21 42 43.0 -0.1**
baz=226,SNR=36
SCRK Sand Creek 84.85 20 IAmb IAmb 21 42 44.4
comp=Z,27nm,1.2s
SCRK Sand Creek 84.85 20 P **P 21 42 43.5 +0.3**
baz=228,SNR=16
PLBC Pleasant Camp 84.86 25 P **P 21 42 43.2 0.0**
baz=235
BVCY Beaver Creek 84.90 22 P **P 21 42 43.9 +0.5**
baz=231,SNR=6.3
YUK6 Outpost Mounta 84.93 24 P **P 21 42 43.3 -0.5**
baz=233
H24K Noodor Dome 84.95 17 P **P 21 42 42.8 -0.8**
baz=224
L27K Beaver Creek, 84.97 21 P **P 21 42 44.2 +0.4**
baz=230,SNR=6.6
WRAK Wrangell Islan 85.00 29 P **P 21 42 44.0 0.0**
baz=239
G23K Bananza Creek 85.00 16 P **P 21 42 44.7 +0.9**
baz=222,SNR=11
P30M Million Dollar 85.00 25 P **P 21 42 44.5 +0.5**
baz=234
BEKR Beckworth 85.04 48 P **P 21 42 44.3 -0.5**
F22K John River 85.05 15 P **P 21 42 45.3 +1.3**
baz=220
YUK4 Talbot Arm 85.06 23 P **P 21 42 45.0 +0.6**
baz=233
HYT Haines Junctio 85.20 24 P **P 21 42 45.1 0.0**
HYT Haines Junctio 85.20 24 P **P 21 42 45.2 +0.2**
baz=234
J26L Joseph Creek 85.34 19 P **P 21 42 46.4 +0.8**
baz=228,SNR=11
PRP Porcupine Dome 85.42 18 P **P 21 42 46.1 0.0**
baz=226
K27K Chicken 85.52 20 P **P 21 42 47.6 +1.2**
baz=230
CWC Cottonwood Cre 85.58 51 P **P 21 42 46.6 -0.9**
baz=251
E22K Anaktuvuk Pass 85.62 14 P **P 21 42 47.6 +0.7**
baz=220
G24K Hadweenzic Riv 85.69 17 P **P 21 42 47.9 +0.7**
baz=224,SNR=8.5
O30N Mendenhall 85.73 24 P **P 21 42 47.1 -0.4**
baz=235
N30M Aishikik Lake 85.73 24 P **P 21 42 47.2 -0.4**
baz=234
MONP2 Monument Peak 85.76 55 P **P 21 42 49.0 +0.4**
baz=252
M29M Somme Creek 85.80 22 P **P 21 42 47.9 0.0**
baz=233
MPMC Manual Prospec 85.91 52 P **P 21 42 49.3 0.0**
baz=252
IKP In-Ko-Pah, Jac 85.94 55 P **P 21 42 49.7 +0.4**
baz=252
DSP Deep Springs 85.96 51 P **P 21 42 49.6 +0.5**
I26K Coal Creek Min 86.01 19 IAmb IAmb 21 42 50.5
comp=Z,18nm,1.2s
I26K Coal Creek Min 86.01 19 P **P 21 42 49.0 +0.2**
baz=228
NVAR Mina Array Bea 86.05 49 P **P 21 42 49.4 -0.5**
comp=Z,2.0nm,0.8s,baz=226,slow=7.9,SNR=7.9
NVAR pP **pwP 21 43 39.2 -0.4**
comp=Z,1.1nm,0.7s,baz=243,slow=6.5,SNR=2.5
comp=Z,2.0nm,0.8s
P32M Atlin 86.06 26 P **P 21 42 49.3 +0.1**
baz=237
E23K Chandalar 86.11 15 P **P 21 42 50.6 +1.3**
baz=222
G25K Bearman Lake 86.12 17 P **P 21 42 50.3 +1.1**
baz=226
WHY Whitehorse 86.16 25 P **P 21 42 49.1 -0.7**
baz=236
F24K Squaw Lake 86.17 16 P **P 21 42 50.7 +1.1**
baz=224
N31M Braeburn, Yuko 86.26 24 P **P 21 42 51.2 +1.1**
baz=235
SWSC Sam W. Stewart 86.28 55 P **P 21 42 51.3 +0.4**
baz=253
EGAK Eagle 86.30 20 IAmb IAmb 21 42 51.7
comp=Z,24nm,1.0s
EGAK Eagle 86.30 20 P **P 21 42 50.2 0.0**
baz=230,SNR=18
L29M L29M 86.32 22 P **P 21 42 50.7 +0.3**
baz=233,SNR=5.3
S34M Telegraph Cree 86.33 28 P **P 21 42 50.6 +0.1**
baz=240
KVN Kaiserville 86.41 49 P **P 21 42 51.0 -0.6**
E24K Your Creek 86.41 15 P **P 21 42 51.4 +0.6**
baz=223
BELC Belle Mtn. Jos 86.44 54 P **P 21 42 50.8 -1.0**
baz=252
DAWY Dawson 86.45 21 P **P 21 42 51.6 +0.5**
baz=232
FURC Furnace Creek, 86.51 52 P **P 21 42 52.0 +0.1**

baz=252
D23K Nanushuk River 86.53 14 P P 21 42 52.3 +1.0
baz=221
TOLK Toolik Lake Re 86.56 15 P P 21 42 52.2 +0.7
baz=222
I27K Kandik River 86.69 19 P P 21 42 52.8 +0.6
baz=230
BC3 Big Chuckawall 86.77 55 P P 21 42 53.4 0.0
baz=253
F25K Christian Rive 86.83 16 P P 21 42 54.2 +1.4
baz=226
G26K Porcupine Rive 86.92 17 P P 21 42 54.1 +1.0
baz=228
GMRC Granite Mounta 86.94 54 P P 21 42 54.4 +0.3
baz=253
K29M Barlow Dome 86.98 21 P P 21 42 53.5 -0.2
baz=234
BMAR Burnt Mountain 87.01 17 P P 21 42 54.1 +0.4
DLBC Dease Lake 87.10 28 P P 21 42 54.4 +0.1
baz=241
D24K Happy Valley 87.12 14 P P 21 42 55.1 +1.0
baz=223
H27K Steamboat Moun 87.12 19 P P 21 42 55.1 +0.9
baz=230
R33M Jennings River 87.16 27 P P 21 42 54.9 +0.2
baz=240
IRM Iron Mountain 87.16 54 P P 21 42 55.4 +0.2
baz=253
C23K Itkillik River 87.20 14 P P 21 42 54.9 +0.5
baz=221
E25K Arctic Village 87.22 16 P P 21 42 55.9 +1.3
baz=226
G27K Doyon Strip 87.45 18 P P 21 42 56.9 +1.1
baz=230
BMN Battle Mountai 87.49 48 P P 21 42 57.4 +0.7
BMN IAmb IAmb 21 42 59.3
comp=Z,11nm,1.3s
J08A Circle Bar Ran 87.56 45 P P 21 42 57.2 +0.2
J08A IAmb IAmb 21 42 57.9
comp=Z,9.5nm,1.0s
C24K Franklin Bluff 87.56 14 P P 21 42 57.4 +1.3
baz=223
TIXI Tiksi 87.69 349 P P 21 42 56.9 +0.1
SHPR Sheep Range 87.83 52 P P 21 42 59.2 +0.7
D25K Kavik River 87.85 15 P P 21 42 58.5 +0.9
baz=225
PDMCI Parker Dam,Lak 88.00 54 P P 21 42 59.6 +0.5
baz=254
R11A Troy Canyon, C 88.06 50 P P 21 42 59.9 +0.4
baz=252
PRN Pahroc Range 88.18 51 P P 21 43 00.8 +0.8
PRN IAmb IAmb 21 43 02.8
comp=Z,13nm,1.3s
E27K Coleen River 88.36 17 P P 21 43 01.2 +1.1
baz=230
214A Organ Pipe Nat 88.42 57 P P 21 43 02.0 +0.8
214A IAmb IAmb 21 43 03.3
comp=Z,14nm,1.2s
214A Organ Pipe Nat 88.42 57 P P 21 43 02.1 +0.9
baz=254
W13A Hualapai Mount 88.42 54 P P 21 43 01.5 +0.2
W13A IAmb IAmb 21 43 03.2
comp=Z,14nm,1.4s
C26K Camden Bay 88.63 15 P P 21 43 02.1 +0.9
baz=227
C27K Jago River 88.74 15 P P 21 43 02.9 +1.2
baz=228
BELA Belgrano 2 89.00 176 IAmb IAmb 21 43 03.5
comp=Z,11nm,1.0s
ELK Elko 89.03 48 P P 21 43 04.2 +0.1
comp=Z,6.3nm,1.1s,baz=251,slow=6.1,SNR=8.8
comp=Z,6.3nm,1.1s
ELK Elko 89.03 48 P P 21 43 04.1 0.0
G30M tAoh Zraii Nji 89.26 19 P P 21 43 03.8 -0.4
baz=235
MFID Camas Ranch 89.41 45 IAmb IAmb 21 43 07.0
comp=Z,8.1nm,1.0s
LCMT Little Creek M 89.45 52 IAmb IAmb 21 43 07.8
comp=Z,8.0nm,1.1s
KNB Kanab 89.78 52 P P 21 43 08.3 +0.7
KNB IAmb IAmb 21 43 09.6
comp=Z,14nm,1.4s
U15A North Rim 90.03 53 P P 21 43 09.0 +0.1
U15A IAmb IAmb 21 43 11.5
comp=Z,7.8nm,1.1s
NEW Newport 90.06 40 P P 21 43 08.6 +0.1
comp=Z,5.2nm,0.7s,baz=249,slow=4.2,SNR=5.9
comp=Z,5.2nm,0.7s
NEW Newport 90.06 40 P P 21 43 08.7 +0.3
baz=251
TUC Tucson 90.17 57 P P 21 43 10.1 +0.6
TUC IAmb IAmb 21 43 11.5
comp=Z,7.1nm,1.1s
TUC Tucson 90.17 57 P P 21 43 10.0 +0.6
baz=255
HLID Hailey 90.44 45 P P 21 43 10.1 -0.4
HLID Hailey 90.44 45 P P 21 43 11.0 +0.5
baz=253
WUAZ Wupatki 90.51 54 P P 21 43 11.6 +0.6
WUAZ IAmb IAmb 21 43 13.0
comp=Z,11nm,1.2s
WUAZ Wupatki 90.51 54 P P 21 43 11.6 +0.6
baz=255
INK Inuvik 90.86 19 P P 21 43 13.3 +1.7
baz=237
WMQ Urumqi 90.91 315 eP P 21 43 14.0 +1.5
SMAI San Martin Ant 90.93 162 P P 21 43 12.3 +0.3
HVU Hansel Valley 91.10 48 IAmb IAmb 21 43 15.2
comp=Z,13nm,1.1s
X18A Snowflake 91.40 55 P P 21 43 16.2 +1.1
121A Cookes Peak, D 92.69 57 P P 21 43 21.6 +0.4
baz=257
BOZ Bozeman (W) 92.90 44 P P 21 43 22.5 +0.7
baz=255
PDAR Pinedale Array 93.66 47 P P 21 43 26.3 +0.8
comp=Z,0.3nm,0.5s,baz=242,slow=1.9,SNR=3.2
comp=Z,0.3nm,0.5s
ANMO Albuquerque 94.30 55 P P 21 43 30.2 +1.7
comp=Z,2.0nm,0.9s,baz=223,slow=6.9,SNR=3.9
comp=Z,2.0nm,0.9s
ANMO Albuquerque 94.30 55 P P 21 43 29.3 +0.8
baz=258
S22A 4UR Ranch, Cre 94.59 53 P P 21 43 30.6 +0.7
baz=258
TROLL Troll, Antarti 95.08 185 P P 21 43 30.7 -0.6
MK31 Makanchi Array 95.34 317 P P 21 43 32.8 +0.1
MK31 IAmb IAmb 21 43 34.3
comp=Z,3.2nm,1.0s
MKAR Makanchi Array 95.34 317 P P 21 43 32.8 0.0
comp=Z,2.6nm,0.7s,baz=86,slow=6.4,SNR=26
MKAR pP pP 21 44 17.4 -3.1
comp=Z,1.2nm,0.7s,baz=101,slow=5.4,SNR=3.9
MKAR PKKPbc PKKPbc 22 00 23.5 -3.1
comp=Z,1.1nm,0.7s,baz=264,slow=3.9,SNR=8.6
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 95.34 317 P P 21 43 32.6 -0.1
ZALV Zalesovo Beam 95.37 324 P P 21 43 31.8 -0.9
comp=Z,0.5nm,0.3s,baz=123,slow=5.5,SNR=6.2
ZALV PKKPbc PKKPdf 22 00 23.5 -3.3
comp=Z,0.4nm,0.4s,baz=301,slow=4.8,SNR=4.3
comp=Z,0.5nm,0.3s
TXAR Lajitas Array 95.49 61 P P 21 43 33.8 -0.2
comp=Z,1.3nm,0.8s,baz=224,slow=5.7,SNR=16
TXAR pP pwP 21 44 23.4 -0.8
comp=Z,0.5nm,0.8s,baz=223,slow=5.1,SNR=3.1
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 95.69 27 P P 21 43 33.0 -0.9
comp=Z,2.2nm,0.5s,baz=257,slow=5.1,SNR=7.1
comp=Z,2.2nm,0.5s
SNAA Sanae 95.78 183 P P 21 43 33.5 -0.9
SNAA Sanae 95.78 183 P P 21 43 33.5 -0.9
SNAA IAmb IAmb 21 43 35.2
comp=Z,9.8nm,1.3s
N23A Red Feather La 95.90 50 P P 21 43 36.1 +0.3
baz=259
T25A Trinidad 96.35 53 P P 21 43 38.1 +0.2
baz=259
VNA3 Neumayer Olymp 96.46 181 P P 21 43 36.6 -0.9
VNA1 Neumayer--Stat 97.03 182 P P 21 43 39.5 -0.4
KURBB Kurchatov Arra 98.50 320 PKKPbc PKKPbc 22 00 15.4 -2.7
comp=Z,0.2nm,0.6s,baz=292,slow=3.2,SNR=4.2
KMSC Kings Mountain 114.79 57 P PKPdf 21 48 48.8 +0.3
baz=272
M53A WI Miller and 114.91 50 P PKiKP 21 48 48.2 -0.4
baz=275
BLA Blacksburg 115.43 55 P PKPdf 21 48 49.3 -0.4
baz=274
ARA0 ARCESS Array S 117.98 346 ePKPdf PKPdf 21 48 53.4 -0.2
ARA0 IAmb IAmb 21 48 54.2
comp=Z,6.5nm,0.6s
ARCES ARCESS Array B 117.98 346 PKP PKPdf 21 48 53.4 -0.2
comp=Z,4.0nm,0.5s,baz=78,slow=1.6,SNR=48
ARCES PKKPbc PKKPbc 21 59 13.0 -3.9
comp=Z,2.0nm,0.8s,baz=204,slow=2.7,SNR=5.8
KTK1 Kautokeino 118.92 346 ePKPdf PKPdf 21 48 54.7 -0.8
KTK1 IAmb IAmb 21 48 57.2
comp=Z,18nm,1.4s
JETT Jettan, Norway 119.14 347 ePKPdf PKPdf 21 48 55.6 -0.4
TRO Tromso 119.39 348 ePKPdf PKPdf 21 48 55.7 -0.6
TRO IAmb IAmb 21 48 56.4
comp=Z,15nm,1.2s
STEI Steigen 121.56 348 ePKPdf PKPdf 21 49 00.1 -0.4
STEI IAmb IAmb 21 49 00.9
comp=Z,12nm,0.7s
FAUS Fauske 122.01 347 ePKPdf PKPdf 21 49 00.8 -0.7
CPUP Villa Florida 122.23 132 PKP PKPdf 21 49 02.2 -0.9
comp=Z,2.7nm,0.7s,baz=336,slow=3.5,SNR=5.0
MOR8 Moi Rana 123.22 347 ePKPdf PKPdf 21 49 02.9 -1.0
KONS Konsvik 123.22 348 ePKPdf PKPdf 21 49 03.8 0.0
FINES FINESS Array B 123.50 339 PKP PKPdf 21 49 03.1 -1.3
comp=Z,3.6nm,0.8s,baz=82,slow=2.6,SNR=19
FINES PKKPbc PKKPab 21 58 54.1 +0.7
comp=Z,1.0nm,0.6s,baz=209,slow=3.5,SNR=4.4
SIV San Ignacio 124.75 120 PKP PKPdf 21 49 07.3 -1.0
comp=Z,1.8nm,0.6s,baz=295,slow=2.2,SNR=7.8
NB2 NORSAR Subarra 128.36 345 PKPdf PKPdf 21 49 13.6 -0.2
comp=Z,1.0nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B 128.36 345 PKP PKPdf 21 49 13.7 -0.2
comp=Z,2.0nm,0.7s,baz=31,slow=2.0,SNR=10
NC602 NORSAR Array S 128.54 345 ePKPdf PKPdf 21 49 14.2 +0.1
BRTR Keskin Array B 130.76 312 SKPbc SKPbc 21 52 24.5 -0.6
comp=Z,1.3nm,0.8s,baz=68,slow=5.7,SNR=1.8
BDFB Brasilia 135.56 128 PKP PKPdf 21 49 28.4 -0.5
comp=Z,3.0nm,0.6s,baz=196,slow=4.6,SNR=5.0
CLL Collm 135.85 337 i PKPdf PKiKP 21 49 29.9 0.0
comp=Z,6.0nm,1.2s
GERES GERESS Array B 137.47 334 PKP PKiKP 21 49 33.1 -0.3
comp=Z,0.2nm,0.5s,baz=45,slow=4.0,SNR=3.6
GERES SKPbc SKPbc 21 52 47.6 +0.9
comp=Z,0.5nm,0.7s,baz=27,slow=4.5,SNR=3.0
KEST Kesra 149.23 323 PKPbc PKPbc 21 49 57.4 +0.6
comp=Z,8.7nm,0.6s,baz=6.1,slow=0.4,SNR=14
PBRG Braganca 150.25 350 ePKPbc PKPbc 21 49 59.3 +0.3
PGAV Gavieira, Arco 150.31 353 ePKPbc PKPbc 21 49 59.6 +0.3
PCAB Cabril 150.53 352 ePKPbc PKPbc 21 49 59.9 +0.2
POLO Lamas de Olo 150.83 352 ePKPbc PKPbc 21 50 00.9 +0.4
PVRL Vila Real 150.91 352 ePKPbc PKiKP 21 50 01.3 +0.1
PVRL Vila Real 150.91 352 ePKPab PKPab 21 50 08.9 +0.4
MVO Moncorvo 150.92 351 ePKPbc PKiKP 21 50 01.4 +0.2
PTO Porto 151.16 352 ePKPbc PKiKP 21 50 01.6 0.0
PVIS Viseu 151.49 352 ePKPbc PKiKP 21 50 02.5 +0.1
ESDC Sonseca Array 151.72 345 PKPbc PKiKP 21 50 03.2 +0.3
comp=Z,7.5nm,0.8s,baz=9.4,slow=2.4,SNR=45
ESDC PKPab PKPab 21 50 12.8 +0.8
comp=Z,6.6nm,0.7s,baz=11,slow=4.2,SNR=23
MTE Manteigas 151.75 351 ePKPbc PKiKP 21 50 03.2 +0.3
COI Coimbra 152.06 352 ePKPbc PKPbc 21 50 03.5 +0.3
PCAS Casmilo, Conde 152.22 352 ePKPbc PKiKP 21 50 03.9 0.0
PCBR Castelo Branco 152.28 351 ePKPbc PKPbc 21 50 04.0 +0.3
PMRV Marv??o 152.67 350 ePKPbc PKiKP 21 50 05.1 +0.3
PMTG Montargil 153.15 352 ePKPbc PKPbc 21 50 05.1 -0.6
PESTR Estremoz 153.25 350 ePKPab PKPab 21 50 19.4 +1.0
EVO Evora 153.65 351 ePKPbc PKiKP 21 50 07.0 +0.2
EVO Evora 153.65 351 ePKPab PKPab 21 50 19.3 -0.7
PBAR Barrancos 153.83 349 ePKPbc PKPbc 21 50 07.3 +0.1
PBAR Barrancos 153.83 349 ePKPab PKPab 21 50 21.6 +0.8
PBEJ Beja 154.12 351 ePKPbc PKiKP 21 50 08.3 +0.5
PBEJ Beja 154.12 351 ePKPab PKPab 21 50 23.6 +1.6
PNCL Nicolau / Gran 154.13 352 ePKPbc PKPbc 21 50 07.2 -0.6
PNCL Nicolau / Gran 154.13 352 ePKPab PKPab 21 50 21.4 -0.7
MESJ Messejana 154.35 351 ePKPbc PKiKP 21 50 08.9 +0.6
MESJ Messejana 154.35 351 ePKPab PKPab 21 50 24.2 +1.1
PVAQ Vaqueiros 154.70 350 ePKPab PKPab 21 50 25.6 +1.1
MORF Marmelete 154.94 352 ePKPab PKPab 21 50 25.6 0.0
PFVI Vila Bisbo 155.14 352 ePKPab PKPab 21 50 27.9 +1.5
TORD Torodi Ar. Bea 165.58 274 PKPab PKPab 21 51 13.0 +0.2
comp=Z,2.1nm,1.0s,baz=76,slow=2.3,SNR=6.0

*PDG **14** 21:37:40.4±0.1, 43°.03N×18°.32E, h18km, MD2.5/1, ML2.4/13, Error ellipse: s-maj=0.2km s-min=0.5km az=0.0*
*BEO **14** 21:37:41.3±0.5, 43°.05N×18°.36E, h11km±2km, ML2.0/9*
*RHSSO **14** 21:37:41.1±0.3, 43°.04N×18°.33E, h8km±3km, ML2.3/8*
ISC 14 21:37:40.0±0.9, **43°.08N**±0°.02×**18°.32E**±0°.02, **h12**km±7km, **n45**, σ0°.90/88, **4C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	Bratogost	0.24	137	⇑iPg	Pg	21 37 45.5	+0.3
BRY				eSg	Sg	21 37 49.7	+1.0
BRY	Bratogost	0.24	137	ePg	Pg	21 37 45.3	+0.1
BRY				i Sg	Sg	21 37 49.3	+0.6
DBRK	Dubrovnik	0.43	197	i Pg	Pg	21 37 47.2	-1.4
DBRK				Sg	Sg	21 37 54.0	-0.2
UPM	Unac-Piva	0.45	74	⇓iPg	Pb	21 37 49.1	-0.9
UPM				eSg	Sb	21 37 56.6	-0.1
UPM	Unac-Piva	0.45	74	⇑iPg	Pb	21 37 49.4	-0.6
UPM				i Sg	Sb	21 37 57.1	+0.4
NKME	Niksic	0.56	124	⇓iPg	Pg	21 37 50.8	-0.2
NKME				i Sg	Sb	21 37 59.6	-0.2
HCY	Herceg Novi	0.64	168	⇓iPg	Pg	21 37 51.5	-1.1
HCY				eSg	Sg	21 38 01.2	+0.1
HCY	Herceg Novi	0.64	168	⇓iPg	Pg	21 37 51.7	-0.9
HCY				i Sg	Sg	21 38 01.4	+0.3
CEME	Cevo	0.69	140	ePg	Pg	21 37 52.9	-0.6
CEME				i Sg	Sb	21 38 03.4	-0.1
PLE	Pljevlja	0.82	72	ePg	Pb	21 37 56.1	-0.2
PLE				i Sg	Sn	21 38 09.2	-0.4
BUM	Brajici-Budva	0.89	151	⇓iPg	Pg	21 37 56.2	-1.0
BUM				i Sg	Sb	21 38 09.6	+0.5
KOME	Kolasin	0.91	104	ePg	Pg	21 37 57.2	-0.4
KOME				i Sg	Sn	21 38 11.4	-0.3
RUDO	Rudo	0.94	55	⇑iPg	Pb	21 37 57.9	-0.3
RUDO				eSg	Sn	21 38 11.6	-0.8
RUDO	Rudo	0.94	55	ePg	Pb	21 37 57.8	-0.4
RUDO				eSg	Sn	21 38 11.5	-0.8
PDG	Podgorica	0.95	133	ePg	Pg	21 37 58.1	-0.2
PDG				eSg	Sg	21 38 10.7	0.0
TTG	Podgorica	0.95	133	⇑iPg	Pg	21 37 57.5	-0.8
TTG				i Sg	Sn	21 38 12.0	-0.5
RICI	Ricice	0.96	296	ePg	Pn	21 37 59.0	-0.3
RICI				Sg	Sn	21 38 14.7	+1.9
MAKA	Makarska	0.97	283	Sg	Sn	21 38 15.1	+2.0
LSTV	Lastovo	1.09	254	ePg	Pb	21 38 00.4	-0.4
LSTV				Sg	Sg	21 38 15.5	+0.3
DRME	Dracevica, Mon	1.10	144	ePg	Pb	21 38 00.4	-0.5
DRME				eSg	Sb	21 38 15.3	+0.2
DRME	Dracevica, Mon	1.10	144	ePg	Pb	21 38 00.1	-0.8
DRME				i Sg	Sn	21 38 16.6	+0.4
BBLS	Lazići	1.12	45	ePg	Pn	21 38 01.8	+0.3
BBLS				eSg	Sn	21 38 17.5	+0.7
BBLS	Lazići	1.12	45	ePg	Pn	21 38 02.3	+0.8
BBLS				eSg	Sn	21 38 16.6	-0.2
IVA	Berane	1.18	100	⇓iPg	Pb	21 38 02.0	-0.3
IVA				i Sg	Sn	21 38 20.1	+1.8
SJES	Sjenica	1.23	81	ePg	Pg	21 38 03.5	-0.1
SJES				eSg	Sn	21 38 19.7	+0.1
PVY	Plav	1.30	111	⇓iPg	Pn	21 38 04.0	-0.1
PVY				i Sg	Sg	21 38 23.7	+1.7
ULC	Ulcinj	1.31	148	ePg	Pn	21 38 03.7	-0.4
ULC				i Sg	Sg	21 38 23.1	+0.9
HVAR	Hvar	1.37	275	ePn	Pg	21 38 06.0	-0.4
HVAR				Sn	Sg	21 38 25.2	+1.0
IVAS	Ivanjica	1.43	69	ePg	Pb	21 38 06.4	-0.2
IVAS				eSg	Sg	21 38 25.5	-0.5
DIVS	Divibare	1.59	49	ePn	Pb	21 38 08.7	-0.6
DIVS				eSn	Sg	21 38 30.7	-0.4
DIVS	Divibare	1.59	49	ePg	Pb	21 38 08.9	-0.4
DIVS				eSg	Sg	21 38 31.0	-0.1
MGRS	Mrkonjic Grad	1.61	327	ePn	Pg	21 38 10.6	-0.3
MGRS				eSn	Sg	21 38 32.1	+0.3
TEKS	Tekeris	1.71	30	ePn	Pb	21 38 11.4	0.0
TEKS				eSn	Sg	21 38 34.9	-0.2
TEKS	Tekeris	1.71	30	ePg	Pg	21 38 12.6	-0.3
TEKS				eSg	Sg	21 38 36.4	+1.3
BLY	Banja Luka	1.86	334	ePn	Pb	21 38 13.6	-0.3
BLY				eSn	Sb	21 38 37.2	+0.1
BLY	Banja Luka	1.86	334	ePn	Pb	21 38 13.6	-0.3
BLY				eSn	Sg	21 38 38.8	-1.0
TRUS	Trudelj	1.90	52	ePn	Pb	21 38 13.1	-1.5
TRUS				eSn	Sb	21 38 38.6	+0.3
A050A	Klekovaca	1.91	318	ePn	Pb	21 38 14.5	-0.3
A050A				eSn	Sb	21 38 38.8	+0.2
GRUS	Gruza	1.92	64	ePn	Pn	21 38 12.8	+0.3
GRUS				eSn	Sb	21 38 38.1	-0.8
SELS	Selova	2.06	85	ePn	Pn	21 38 14.8	+0.4
SELS				eSn	Sn	21 38 41.0	+1.1
MORI	Morici	2.06	293	ePn	Pb	21 38 16.9	-0.4
MORI				Sn	Sg	21 38 44.3	-1.8
A051A	Mrakovica	2.18	333	ePn	Pb	21 38 17.8	-1.7
A051A				eSn	Sb	21 38 45.4	-1.1
BARS	Barje	2.58	95	ePn	Pn	21 38 22.3	+0.7
BARS				eSn	Sn	21 38 53.0	+0.1
MOSL	Moslavina	2.77	337	ePn	Pb	21 38 26.5	-3.0
BOJS	Bojanci	3.27	319	ePn	Pn	21 38 33.7	+2.6
BOJS				eSn	Sn	21 39 12.3	+2.4

*VAO **14** 21:45:01.1±1.5, 10°.05S×79°.92W, h10km, mb4.3*
*IDC **14** 21:45:07.7±0.9, 10°.92S×79°.14W, h0km, mb4.1/10, mbtmp4.0/14, ML3.5/4, MS3.7/14, Error ellipse: s-maj=20.7km s-min=11.8km az=53.0*
*NEIC **14** 21:45:12.7±2.5, 10°.84S±0°.04×78°.74W±0°.06, h10km±2km, mb4.3/14, Error ellipse: s-maj=10.6km s-min=5.2km az=292.0*
ISC 14 21:45:12.7±0.7, **10°.77S**±0°.06×**78°.85W**±0°.09, **h24**km, **n68**, σ2°.19/54, **mb4.2**/13, **MS3.8**/11, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.32	122	Pn	Pn	21 45 48.7	-0.7
	12nm,0.3s,baz=295,slow=12,SNR=19						
NNA				LR	LR	21 46 21.2	
	comp=Z,439nm,19.7s,baz=302,slow=30						
NNA				Sn	Sn	21 46 21.2	+4.0
	45nm,0.3s,baz=148,slow=19,SNR=3.6						
NNA				Lg	Lg	21 46 27.6	
	68nm,0.3s,baz=190,slow=17,SNR=11						
	48nm,0.4s						
NNA	Nana	2.32	122	Pn	Pn	21 45 48.9	-0.5
ATAH	Atahualpa	3.63	7	Pn	Pn	21 46 10.2	+2.4
	1.9nm,0.3s,baz=216,slow=4.4,SNR=12						
ATAH				Pg	Pb	21 46 16.4	-0.1
	6.5nm,0.3s,baz=219,slow=12,SNR=23						
ATAH				Sn	Sb	21 46 56.4	-4.0
	19nm,0.3s,baz=97,slow=19,SNR=4.1						
ATAH				Lg	Lg	21 47 08.4	
	31nm,0.3s,baz=196,slow=22,SNR=7.5						
	9.1nm,0.5s						
ARNL	Arenillas	7.27	350		Sb	21 48 48.8	+4.3
BOSC	San Juan Bosco	7.57	3	Pn	Pn	21 47 01.2	-0.7
COHC	Cochancay	8.25	357	Pn	Pn	21 47 11.7	+0.7
SLOR	San Lorenzo -	9.98	2		Pn	21 47 37.7	+2.7
PULU	Pululahua	10.72	2	Pn	Pn	21 47 47.8	+2.6
TULM	Tulcn-Chalpat	11.46	5	Pn	Pn	21 47 58.9	+3.5
PB16	IPOC Station P	11.76	131	Pn	Pn	21 47 58.7	-0.9
LPAZ	La Paz	11.78	119	Pn	Pn	21 48 07.2	+7.3
	0.1nm,0.3s,baz=72,slow=9.4,SNR=1.7						
LPAZ	La Paz	11.78	119	eP	Pn	21 48 07.1	+7.2
LVC	Limon Verde	15.14	142	Pn	Pn	21 48 45.3	-0.2
	0.2nm,0.3s,baz=304,slow=7.3,SNR=2.1						
LVC				LR	LR	21 54 10.4	
	comp=Z,171nm,18.7s,baz=318,slow=36						
	2.4nm,0.8s						
LVC	Limon Verde	15.14	142	eP	P	21 48 51.8	+1.4
SGCB	S?o Gabriel d	15.81	49	eP	Pn	21 48 48.1	-5.8
ROSC	El Rosal	16.15	16	Pn	P	21 49 05.6	+3.9
	2.1nm,0.3s,baz=92,slow=19,SNR=4.1						
GO02	Mina Guanaco	16.80	150	Pn	Pn	21 49 07.1	+0.3
GO02				IAmb	IAmb	21 49 11.7	
	comp=Z,21nm,1.1s						
SIV	San Ignacio	18.06	109	P	P	21 49 22.7	+0.2
	baz=275,slow=14,SNR=7.0						
SIV				LR	LR	21 57 40.2	
	comp=Z,241nm,18.7s,baz=283,slow=41						
	comp=Z,4.7nm,1.0s						
AC06	Mina Casimiro	18.34	155	P	P	21 49 23.8	-1.8
AC06				IAmb	IAmb	21 49 27.6	
	comp=Z,23nm,1.2s						
VILB	Vilhena	18.39	99	eP	Pn	21 49 29.1	+2.9
AC02	Maricunga	18.43	151		P	21 49 25.8	-1.2
BBSD	Serra de San D	18.81	112	eP	Pn	21 49 35.9	+4.5
MACA	Manacapuru-AM	19.54	69	eP	P	21 49 37.6	-1.2
SDV	Santo Domingo	21.17	23	LR	LR	21 58 42.1	
	comp=Z,174nm,19.0s,baz=214,slow=38						
SDV	Santo Domingo	21.17	23	eP	P	21 49 45.0	-12
BAUV	El Baul	22.34	29	P	P	21 50 09.3	+0.3
BOAV	Boa Vista	22.44	55	eP	P	21 50 05.8	-4.4
H03N2	Juan Fernandez	22.57	180	T	T	22 14 11.2	
	baz=0.2,slow=75,SNR=31						
H03N1	Juan Fernandez	22.57	180	T	T	22 14 12.1	
	baz=0.2,slow=75,SNR=31						
H03N3	Juan Fernandez	22.59	180	T	T	22 14 11.8	
	baz=0.2,slow=75,SNR=31						
CLDB	Colider	22.65	92	eP	P	21 50 11.6	-0.7
MURT	Porto Murtinho	23.07	121	eP	P	21 50 18.0	+1.3
SALV	Santo Antonio	23.10	105	eP	P	21 50 18.4	+1.4
NPGB	Novo Progresso	23.50	83	eP	P	21 50 21.0	-0.1
ITTB	Itatuba	23.77	76	eP	P	21 50 23.4	-0.3
AQDB	Aquidauana	24.27	116	P	P	21 50 29.1	+0.8
AQDB				IAmb	IAmb	21 50 31.2	
	comp=Z,18nm,1.1s						
AQDB	Aquidauana	24.27	116	eP	P	21 50 30.4	+2.1
LMEL	Las Melosas	24.30	162	P	P	21 50 29.6	+0.9
LMEL				IAmb	IAmb	21 50 43.0	
	comp=Z,27nm,1.5s						
BO04	La Punta	24.32	163	P	P	21 50 30.1	+1.4
BO04				IAmb	IAmb	21 50 51.7	
	comp=Z,7.2nm,1.1s						
ANTJ	Antonio Joao (	24.57	120	eP	P	21 50 31.9	+0.9
PCRV	Puerto La Cruz	25.15	35	P	P	21 50 38.5	+2.2
	comp=Z,25nm,1.1s,baz=336,slow=17,SNR=3.9						
	comp=Z,25nm,1.1s						
CPUP	Villa Florida	25.55	130	P	P	21 50 39.5	-0.3
	comp=Z,4.4nm,1.0s,baz=302,slow=9.0,SNR=4.8						
	comp=Z,4.4nm,1.0s						
SNDB	Serra Nova Dou	27.04	95	eP	P	21 50 54.4	+0.9
MCPB	Macapa, AP	28.57	71	eP	P	21 51 04.2	-2.9
BDFB	Brasilia	30.39	103	P	P	21 51 23.8	+0.4
	comp=Z,4.3nm,0.9s,baz=194,slow=11,SNR=3.3						
	comp=Z,4.3nm,0.9s						
MDP	Montagnes des	30.49	60	LR	LR	22 04 42.7	
	comp=Z,479nm,18.2s,baz=246,slow=38						
PLCA	Paso Flores	30.74	168	P	P	21 51 23.8	-2.3
	comp=Z,2.6nm,1.0s,baz=29,slow=7.3,SNR=3.1						
	comp=Z,2.6nm,1.0s						
SJG	San Juan	31.31	24	LR	LR	22 05 35.1	
	comp=Z,91nm,19.8s,baz=225,slow=39						
RCBR	Riachuelo	42.76	87	LR	LR	22 12 00.9	
	comp=Z,176nm,18.3s,baz=44,slow=38						
TXAR	Lajitas Array	46.50	330	P	P	21 53 37.2	-1.2
	comp=Z,0.2nm,0.6s,baz=152,slow=8.2,SNR=1.7						
	comp=Z,0.2nm,0.6s						
SADO	Sadowa	55.27	360	LR	LR	22 18 59.2	
	comp=Z,37nm,20.0s,baz=160,slow=37						
PDAR	Pinedale Array	60.22	334	P	P	21 55 18.5	-0.6
	comp=Z,0.4nm,0.8s,baz=143,slow=9.1,SNR=2.5						
	comp=Z,0.4nm,0.8s						
NVAR	Mina Array Bea	61.24	325	P	P	21 55 24.7	-1.5
	comp=Z,0.2nm,0.3s,baz=154,slow=6.8,SNR=1.7						
	comp=Z,0.2nm,0.3s						
YPP	Pitchstone Pla	61.97	334	P	P	21 55 33.5	+2.4
SNAA	Sanae	75.45	162	P	P	21 56 53.4	-1.1
SNAA	Sanae	75.45	162	P	P	21 56 52.3	-2.2
TROLL	Troll, Antarti	77.17	162	P	P	21 57 04.3	0.0
KOWA	Kowa	78.30	73	LR	LR	22 32 55.6	
	comp=Z,46nm,19.0s,baz=244,slow=36						
MDT	Midelt	82.84	55	LR	LR	22 33 47.2	
	comp=Z,60nm,18.0s,baz=302,slow=35						
TORD	Torodi Ar. Bea	83.38	75	P	P	21 57 39.2	+0.6
	comp=Z,2.5nm,0.8s,baz=270,slow=4.5,SNR=10						
TORD				LR	LR	22 34 04.0	
	comp=Z,60nm,18.2s,baz=214,slow=35						
	comp=Z,2.5nm,0.8s						
ESDC	Sonseca Array	85.43	48	L

comp=Z,22nm,20.1s,baz=224,slow=33
WRA Warramunga Arr 135.29 227 PKP PKPdf 22 04 29.9 -1.5
comp=Z,0.5nm,0.9s,baz=126,slow=1.7,SNR=2.9
KSRS Korea Array 144.15 322 PKP PKPbc 22 04 44.7 -0.3
comp=Z,0.4nm,0.4s,baz=64,slow=4.1,SNR=2.1
PZH PanZhiHua 164.33 358 PKP **PKPdf 22 05 16.0 +0.8**

*IDC **14** 21:49:17.2±2.3, 26°.20N×128°.69E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=136.7km s-min=19.1km az=66.0*
*JMA **14** 21:49:19.9±0.3, 26°.1N±0°.9×12°.9E±°, h32km, MV3.2/13, NEAR OKINAWAJIMA ISLAND*
ISC 14 21:49:18.8±1.4, 26°.12N±0°.05×128°.68E±0°.04, h15km±9km, n18, σ0§87/27, mb3.6/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.71**	**304**	*i* P	**Pn**	**21 49 33.4**	**-0.9**
JNTH				*eS*	**Sn**	**21 49 43.5**	**-1.4**
JOW	**Kunigami**	**0.79**	**333**	Pn	**Pn**	**21 49 35.5**	**0.0**
	216nm,0.3s,baz=134,slow=19,SNR=215						
JOW				Sn	**Sn**	**21 49 46.1**	**-1.0**
	223nm,0.3s,baz=115,slow=27,SNR=9.4						
JOW	**Kunigami**	**0.79**	**333**	*i* P	**Pn**	**21 49 35.4**	**0.0**
JOW				*eS*	**Sn**	**21 49 46.0**	**-1.0**
JJT3	**Tamagusuku3**	**0.80**	**272**	P	**Pn**	**21 49 35.1**	**-0.5**
JJT3				S	**Sg**	**21 49 45.9**	**+1.0**
JYRO	**Yoronjima**	**0.92**	**347**	*i* P	**Pn**	**21 49 37.4**	**+0.2**
JIH	**Iheya**	**1.11**	**325**	*i* P	**Pg**	**21 49 40.2**	**0.0**
JIH				*eS*	**Sg**	**21 49 55.2**	**+0.5**
JOKE	**Okinoerabujima**	**1.24**	**356**	P	**Pg**	**21 49 42.4**	**-0.2**
JOKE				*eS*	**Sg**	**21 49 59.4**	**+0.6**
JAGN	**Aguni-jima**	**1.37**	**290**	P	**Pb**	**21 49 43.5**	**-0.5**
JAGN				*eS*	**Sg**	**21 50 01.9**	**-1.0**
JTK	**Tokunoshima**	**1.68**	**8**	P	**Pb**	**21 49 48.5**	**-0.8**
JKE	**Kume jima 2**	**1.71**	**277**	P	**Pn**	**21 49 47.3**	**-0.7**
JMZ	**Minamidaito 2**	**2.31**	**97**	P	**Pn**	**21 49 56.1**	**-0.2**
JMZ				S	**Sn**	**21 50 23.0**	**-1.5**
JKDJ	**Kitadaitoujima**	**2.37**	**94**	P	**Pn**	**21 49 57.0**	**0.0**
JKDJ				S	**Sn**	**21 50 23.9**	**-2.0**
SONM	**Songino Array**	**27.86**	**327**	P	**P**	**21 55 08.6**	**+0.7**
	0.7nm,0.7s,baz=128,slow=9.6,SNR=4.5						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**41.90**	**312**	P	**P**	**21 57 08.8**	**+0.1**
	0.4nm,0.5s,baz=91,slow=9.7,SNR=6.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**45.20**	**316**	P	**P**	**21 57 35.1**	**0.0**
	0.3nm,0.5s,baz=104,slow=9.2,SNR=5.3						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**46.12**	**173**	P	**P**	**21 57 43.5**	**+0.9**
	0.3nm,0.4s,baz=356,slow=10.0,SNR=1.4						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**73.15**	**331**	P	**P**	**22 00 49.0**	**+0.5**
	1.8nm,1.1s,baz=66,slow=6.5,SNR=5.7						
	1.8nm,1.1s						
BRTR	**Keskin Array B**	**77.41**	**308**	P	**P**	**22 01 14.6**	**+0.9**
	0.4nm,0.5s,baz=70,slow=3.1,SNR=2.0						
	0.4nm,0.5s						

MAN 14 21:50:01.8, 7°.81N×124°.64E, h1km, mb4.8, ML3.7, MS3.6, 6C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.42**	**80**	⇓*eP*	Pg	21 50 10.4	+0.5
CGP	**Cagayan de Oro**	**0.65**	**51**	*eP*	Pg	21 50 14.7	+0.4
CGP				*i* S	Sb	21 50 24.6	-0.8
CTBH	**Cotabato--PC H**	**0.70**	**214**	⇓*iP*	Pg	21 50 15.8	+0.5
CTBH				*i* S	Sb	21 50 27.1	+0.1
KCP	**Kidapawan**	**0.91**	**151**	⇓*eP*	Pg	21 50 16.0	-3.2
KCP				*i* S	Sg	21 50 31.7	+0.6
PAGZ	**Pagadian**	**1.25**	**272**	⇑*iP*	Pg	21 50 25.6	-0.1
PAGZ				*i* S	Sn	21 50 44.3	+0.5
SKMP	**Bagumbayan, Su**	**1.28**	**184**	⇓*eP*	Pg	21 50 23.9	-2.6
SKMP				*eS*	Sn	21 50 44.8	+0.1
LSIP	**Lazi, Siquijor**	**1.65**	**323**	⇓*eP*	Pb	21 50 33.0	-0.1
LSIP				*i* S	Sg	21 50 58.6	+3.6
BIPH	**Bislig**	**1.75**	**77**	⇑*eP*	Pn	21 50 32.7	-0.5
BIPH				*eS*	Sg	21 50 59.0	+1.0
GHBP	**Garcia Hernand**	**1.84**	**350**	⇑*eP*	Pn	21 50 34.4	-0.1
GHBP				*eS*	Sb	21 50 59.2	-0.6
DDMP	**Don Marcelino,**	**2.00**	**148**	⇓*eP*	Pn	21 50 36.5	-0.3
DDMP				*eS*	Sb	21 51 03.7	-0.7
SNPH	**Sibulan**	**2.06**	**318**	⇑*iP*	Pb	21 50 39.6	-0.5
SNPH				*i* S	Sg	21 51 12.0	+3.8
TABP	**Talibon, Bohol**	**2.29**	**352**	⇑*iP*	Pn	21 50 41.3	+0.6
TABP				*i* S	Sb	21 51 11.9	-0.9

*IDC **14** 22:02:32.0±1.0, 16°.60N×148°.52E, h0km, mb4.3/13, mbtmp4.3/14, ML3.8/1, MS3.1/8, Error ellipse: s-maj=32.2km s-min=17.6km az=94.0*
*BJI **14** 22:02:33.3±0.0, 16°.54N×148°.26E, h15km, mb4.6/24, mB4.8/15, Ms4.1/3, Ms7 3.7/3*
*NEIC **14** 22:02:34.0±1.5, 16°.5N±0°.1×148°.41E±0°.10, h10km±1km, mb4.6/35, Error ellipse: s-maj=20.4km s-min=15.6km az=165.0*
ISC 14 22:02:36.7±0.6, 16°.43N±0°.08×148°.46E±0°.09, h35km, n64, σ1§08/60, mb4.6/34, MS2.8/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.47**	**231**	Pn	**Pn**	**22 03 41.5**	**-0.5**
	4.2nm,0.3s,baz=309,slow=14,SNR=1.6						
GUMO				Sn	**Sn**	**22 04 31.2**	**-1.7**
	27nm,0.3s,baz=360,slow=23,SNR=6.4						
GUMO				LR	LR	22 05 40.5	
	comp=Z,88nm,18.6s,baz=108,slow=41						
	33nm,0.6s						
GUMO	**Guam**	**4.47**	**231**	Pn	**Pn**	**22 03 42.2**	**+0.2**
PATS	**Pohnpei**	**13.56**	**134**	Pn	**Pn**	**22 05 45.4**	**-1.2**
INU	**Inuyama**	**21.44**	**334**	P	**P**	**22 07 19.6**	**-2.2**
INU				IAmb	IAmb	22 07 22.8	
	comp=Z,27nm,0.9s						
JGF	**Kuroka**	**21.51**	**335**	P	**P**	**22 07 21.9**	**-0.7**
JGF				IAmb	IAmb	22 07 23.6	
	comp=Z,21nm,0.8s						
MJAR	**Matsushiro Arr**	**22.00**	**338**	P	**P**	**22 07 26.5**	**-1.4**
	comp=Z,3.6nm,0.7s,baz=168,slow=9.4,SNR=13						
	comp=Z,3.6nm,0.7s						
MAJO	**Matsushiro**	**22.00**	**338**	P	**P**	**22 07 28.9**	**+0.9**
MJB9	**Matsu-Tunnel**	**22.01**	**338**	P	**P**	**22 07 28.7**	**+0.7**
MJB9				IAmb	IAmb	22 07 30.8	
	comp=Z,11nm,0.6s						
JHS	**Saijyo**	**23.03**	**326**	P	**P**	**22 07 38.7**	**-0.1**
JSD	**Sado**	**23.32**	**339**	P	**P**	**22 07 41.0**	**-0.7**
JSD				IAmb	IAmb	22 07 41.5	
	comp=Z,12nm,0.7s						
DAV	**Davao City (W)**	**24.23**	**250**	LR	LR	22 16 44.2	
	comp=Z,20nm,20.5s,baz=359,slow=35						
PMG	**Port Moresby**	**25.70**	**183**	LR	LR	22 17 36.6	
	comp=Z,30nm,19.9s,baz=66,slow=35						
YHNB	**Yeheng**	**26.61**	**292**	P	**P**	**22 08 11.0**	**-1.1**
SSLB	**Suanglung**	**26.81**	**290**	P	**P**	**22 08 13.1**	**-0.8**
SSLB				IAmb	IAmb	22 08 17.0	
	comp=Z,26nm,1.1s						
KSRS	**Korea Array**	**27.70**	**323**	P	**P**	**22 08 21.2**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=152,slow=9.1,SNR=6.4						
KSRS				LR	LR	22 19 29.3	
	comp=Z,16nm,18.3s,baz=160,slow=37						
	comp=Z,1.8nm,0.7s						
KSAR	**Wonju Array Be**	**27.71**	**323**	P	**P**	**22 08 21.6**	**-0.2**
KS19	**Wonju Array Si**	**27.76**	**323**	P	**P**	**22 08 22.3**	**+0.1**
KS19				IAmb	IAmb	22 08 23.5	
	comp=Z,28nm,1.4s						
HNR	**Honiara**	**28.10**	**155**	LR	LR	22 18 56.2	
	comp=Z,323nm,19.7s,baz=249,slow=35						
NJ2	**Nanjing**	**31.02**	**306**	*eP*	**P**	**22 08 48.1**	**-3.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WR0	**Warramunga Arr**	**38.66**	**201**	P	**P**	**22 09 57.7**	**+0.6**
WR0				IAmb	IAmb	22 10 08.6	
	comp=Z,7.1nm,0.7s						
WRA	**Warramunga Arr**	**38.72**	**202**	P	**P**	**22 09 59.6**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=24,slow=9.3,SNR=17						
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**38.72**	**202**	P	**P**	**22 09 58.9**	**+1.3**
HHC	**Hu-ho-hao-te**	**40.06**	**315**	*eP*	**P**	**22 10 09.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,43nm,5.2s						
ASAR	**Alice Springs**	**42.31**	**200**	P	**P**	**22 10 29.0**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=19,slow=5.5,SNR=4.5						
	comp=Z,0.7nm,0.8s						
LZH	**Lanzhou**	**44.09**	**305**	*eP*	**P**	**22 10 42.4**	**+0.6**
LZH				pP	pP	22 10 45.9	-4.4
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
PZH	**PanZhiHua**	**44.41**	**291**	P	**P**	**22 10 46.3**	**+1.9**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,90nm,3.9s						
ULN	**Ulaanbaatar**	**46.17**	**322**	P	**P**	**22 10 57.2**	**-0.9**
SONM	**Songino Array**	**46.55**	**322**	P	**P**	**22 11 01.3**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=135,slow=6.6,SNR=19						
	comp=Z,2.6nm,0.6s						
SONM	**Songino Array**	**46.55**	**322**	P	**P**	**22 11 01.1**	**0.0**
CMAR	**Chiang Mai Arr**	**47.17**	**280**	P	**P**	**22 11 07.2**	**+1.0**
	comp=Z,2.2nm,0.3s,baz=76,slow=6.5,SNR=9.4						
CMAR				LR	LR	22 27 33.5	
	comp=Z,10nm,20.4s,baz=345,slow=32						
	comp=Z,2.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**47.17**	**280**	P	**P**	**22 11 06.1**	**-0.1**
GOMU	**GeErMu**	**51.28**	**303**	P	**P**	**22 11 39.8**	**+1.9**
GOMU				pP	pP	22 11 43.0	-3.4
GOMU				sP	sP	22 11 43.9	-5.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,34nm,5.5s						
LSA	**Lhasa**	**53.88**	**295**	P	**P**	**22 11 57.4**	**+0.1**
LSA				IAmb	IAmb	22 12 01.3	
	comp=Z,3.4nm,0.7s						
WMQ	**Urumqi**	**57.78**	**312**	*eP*	**P**	**22 12 26.8**	**+2.3**
N19K	**Bonanza Creek**	**59.95**	**28**	P	**P**	**22 12 41.2**	**+1.8**
N19K				IAmb	IAmb	22 12 41.4	
	comp=Z,7.2nm,1.1s						
ZAA0	**Zalesovo Array**	**61.41**	**323**	P	**P**	**22 12 48.4**	**-0.9**
ZAA0				IAmb	IAmb	22 12 49.8	
	comp=Z,4.6nm,0.8s						
ZALV	**Zalesovo Beam**	**61.41**	**323**	P	**P**	**22 12 49.0**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=107,slow=7.0,SNR=21						
	comp=Z,5.2nm,0.7s						
MK31	**Makanchi Array**	**61.92**	**315**	P	**P**	**22 12 52.5**	**-0.5**
MKAR	**Makanchi Array**	**61.92**	**315**	P	**P**	**22 12 53.4**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=91,slow=8.8,SNR=16						
	comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**61.92**	**315**	P	**P**	**22 12 52.9**	**0.0**
MAKZ	**Makanchi**	**62.14**	**315**	P	**P**	**22 12 54.3**	**-0.1**
MAKZ				IAmb	IAmb	22 12 55.5	
	comp=Z,4.4nm,0.7s						
FID	**Port Fidalgo**	**63.67**	**30**	P	**P**	**22 13 05.1**	**+0.8**
FID				IAmb	IAmb	22 13 05.4	
	comp=Z,4.1nm,0.7s						
ILAR	**Eielson Array**	**64.53**	**25**	P	**P**	**22 13 09.1**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=246,slow=4.7,SNR=6.5						
	comp=Z,0.9nm,0.9s						
NRIK	**Noril'sk**	**64.63**	**340**	P	**P**	**22 13 10.4**	**0.0**
	comp=Z,3.2nm,0.5s,baz=94,slow=7.4,SNR=3.8						
	comp=Z,3.2nm,0.5s						
KURK	**Kurchatov**	**64.71**	**319**	P	**P**	**22 13 11.0**	**-0.2**
PCA	**Pinnacle**	**66.58**	**31**	P	**P**	**22 13 24.2**	**+1.0**
AAK	**Ala-Archa**	**67.34**	**310**	LR	LR	22 44 10.9	
	comp=Z,20nm,18.8s,baz=98,slow=37						
NIL	**Nilore**	**68.93**	**300**	P	**P**	**22 13 39.5**	**+1.0**
BRVK	**Borovoye**	**69.95**	**321**	P	**P**	**22 13 44.7**	**+0.3**
KK31	**Karatay Array**	**70.23**	**310**	P	**P**	**22 13 46.5**	**+0.1**
KK31				IAmb	IAmb	22 13 47.5	
	comp=Z,3.4nm,0.8s						
KKAR	**Karatay Array**	**70.23**	**310**	P	**P**	**22 13 46.7**	**+0.3**
KKAR				IAmb	IAmb	22 13 47.5	
	comp=Z,3.4nm,0.8s						
KKAR	**Karatay Array**	**70.23**	**310**	P	**P**	**22 13 46.5**	**+0.1**
GAR	**Garm**	**70.74**	**306**	P	**P**	**22 13 49.0**	**-0.7**
CHGR	**Chuyangaron**	**71.68**	**306**	P	**P**	**22 13 55.3**	**0.0**
KBL	**Kabul**	**72.29**	**302**	P	**P**	**22 13 58.8**	**-0.4**
KBL				IAmb	IAmb	22 14 00.2	
	comp=Z,4.9nm,0.7s						
ARU	**Arti**	**76.43**	**325**	P	**P**	**22 14 22.3**	**-0.3**
ARU				IAmb	IAmb	22 14 23.6	
	comp=Z,6.9nm,0.6s						
ABKAR	**Akbulak array**	**76.78**	**318**	P	**P**	**22 14 24.2**	**-0.5**
ABKAR				IAmb	IAmb	22 14 25.5	
	comp=Z,3.6nm,0.9s						
HRA	**Herat**	**77.85**	**302**	P	**P**	**22 14 31.4**	**+0.1**
BELG	**Belogornoye**	**83.59**	**323**	LR	LR	22 54 56.1	
	comp=Z,29nm,18.1s,baz=120,slow=38						
ARCES	**ARCESS Array B**	**85.44**	**343**	P	**P**	**22 15 10.3**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=64,slow=5.5,SNR=5.5						
	comp=Z,2.0nm,0.7s						
SNOW	**Snow King Moun**	**86.45**	**46**	P	**P**	**22 15 14.5**	**-1.7**
KBZ	**Khabaz**	**89.60**	**316**	P	**P**	**22 15 30.8**	**-0.1**
	comp=Z,3.4nm,1.0s,baz=177,slow=5.7,SNR=3.5						
	comp=Z,3.4nm,1.0s						
FINES	**FINESS Array B**	**90.03**	**336**	P	**P**	**22 15 31.6**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=71,slow=5.7,SNR=18						
	comp=Z,2.0nm,0.6s						
LPAZ	**La Paz**	**144.92**	**95**	PKP	**PKPdf**	**22 22 13.9**	**+2.1**
	comp=Z,2.8nm,0.3s,baz=240,slow=14,SNR=29						

MAN 14 22:15:19.1, 9°.34N×125°.57E, h25km, mb4.0, ML2.8, MS2.4, 1C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.37**	**173**	⇓*eP*	Pb	22 15 25.4	-1.8
BUTP				*eS*	Sb	22 15 31.6	-1.3
SCPH	**Surigao**	**0.45**	**349**	⇓*iP*	Pn	22 15 29.5	-0.4
SCPH				*i* S	Sb	22 15 35.9	+1.1
GLSP	**General Luna,**	**0.70**	**51**	⇓*eP*	Pb	22 15 32.2	-0.5
GLSP				*eS*	Sb	22 15 40.4	-1.5
CGP	**Cagayan de Oro**	**1.24**	**225**	⇑*eP*	Pn	22 15 40.5	-0.3
CGP				*eS*	Sn	22 15 56.5	-0.2
BIPH	**Bislig**	**1.39**	**146**	⇓*eP*	Pn	22 15 41.1	-1.8
BIPH				*eS*	Sn	22 15 59.3	-1.1
BUKP	**Musuan**	**1.54**	**199**	⇓*iP*	Pn	22 15 45.9	+0.9
BUKP				*i* S	Sb	22 16 07.9	+1.8

*IDC **14** 22:24:15.7±1.1, 22°.47N×101°.50E, h0km, mb3.7/5, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=30.0km s-min=17.4km az=96.0*
ISC 14 22:24:17.3±1.1, 22°.5N±0°.1×101°.6E±0°.2, h10km, n6, σ1§20/7, mb3.7/5, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.77**	**212**	Pn	**Pn**	**22 25 28.1**	**-1.2**
	1.2nm,0.3s,baz=27,slow=12,SNR=5.0						
CMAR				Pg	**Pb**	**22 25 42.4**	**+1.3**
	1.7nm,0.3s,baz=31,slow=17,SNR=17						
CMAR				Lg	Lg	22 26 41.7	
	0.9nm,0.3s,baz=38,slow=32,SNR=1.8						
	1.5nm,0.3s						
SONM	**Songino Array**	**25.53**	**7**	P	**P**	**22 29 47.7**	**+1.4**
	0.7nm,0.7s,baz=179,slow=8.3,SNR=4.5						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**28.80**	**332**	P	**P**	**22 30 15.0**	**-0.5**
	0.3nm,0.6s,baz=136,slow=9.8,SNR=5.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**52.95**	**140**	P	**P**	**22 33 34.2**	**0.0**
	0.7nm,0.8s,baz=333,slow=8.4,SNR=5.4						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**55.63**	**144**	P	**P**	**22 33 53.2**	**-0.5**
	0.7nm,0.8s,baz=314,slow=5.7,SNR=5.5						
	0.7nm,0.8s						
FINES	**FINESS Array B**	**63.57**	**329**	P	**P**	**22 34 47.6**	**-0.3**
	2.2nm,1.0s,baz=115,slow=9.6,SNR=2.5						
	2.2nm,1.0s						

*IDC **14** 22:36:16.3±0.9, 16°.58N×148°.58E, h0km, mb4.0/14, mbtmp4.0/15, ML3.8/1, MS2.9/3, Error ellipse: s-maj=29.1km s-min=16.9km az=94.0*
*NEIC **14** 22:36:20.3±1.4, 16°.58N±0°.03×148°.14E±0°.09, h10km±1km, mb4.5/36, Error ellipse: s-maj=14.9km s-min=3.6km az=76.0*
ISC 14 22:36:22.3±0.8, 16°.49N±0°.09×148°.2E±0°.1, h35km, n55, σ1§11/56, mb4.4/30, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.34**	**229**	Pn	**Pn**	**22 37 26.3**	**+0.4**
	4.8nm,0.3s,baz=348,slow=3.1,SNR=1.7						
GUMO				Sn	**Sn**	**22 38 13.7**	**-1.7**
	16nm,0.3s,baz=22,slow=23,SNR=4.7						
GUMO				LR	LR	22 39 25.0	
	comp=Z,65nm,19.8s,baz=66,slow=40						
	37nm,0.7s						
GUMO	**Guam**	**4.34**	**229**	Pn	**Pn**	**22 37 26.2**	**+0.3**
GUMO				Sn	**Sn**	**22 38 15.2**	**-0.2**
JOW	**Kunigami**	**21.18**	**302**	P	**P**	**22 41 01.5**	**-3.3**
INU	**Inuyama**	**21.29**	**334**	P	**P**	**22 41 06.9**	**+1.1**
INU				IAmb	IAmb	22 41 07.5	
	comp=Z,20nm,0.9s						
JGF	**Kuroka**	**21.36**	**335**	P	**P**	**22 41 06.6**	**-0.1**
JGF				IAmb	IAmb	22 41 08.1	
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**21.86**	**338**	P	**P**	**22 41 10.8**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=168,slow=9.9,SNR=8.3						
	comp=Z,1.1nm,0.4s						
MAJO	**Matsushiro**	**21.86**	**338**	P	**P**	**22 41 14.4**	**+2.3**
MJB9	**Matsu-Tunnel**	**21.87**	**338**	P	**P**	**22 41 14.4**	**+2.3**
JHS	**Saijyo**	**22.86**	**327**	P	**P**	**22 41 22.7**	**0.0**
JSD	**Sado**	**23.19**	**340**	P	**P**	**22 41 25.7**	**-0.3**
JSD				IAmb	IAmb	22 41 29.9	
	comp=Z,11nm,0.8s						
KSRS	**Korea Array**	**27.52**	**323**	P	**P**	**22 42 05.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=145,slow=9.3,SNR=7.5						
	comp=Z,1.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**30.85**	**337**	P	**P**	**22 42 35.3**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=124,slow=7.2,SNR=2.0						
	comp=Z,0.6nm,0.4s						
WB0	**Warramunga Arr**	**38.51**	**201**	P	**P**	**22 43 42.7**	**+1.1**
WR0	**Warramunga Arr**	**38.64**	**201**	P	**P**	**22 43 43.7**	**+1.1**
WR0				IAmb	IAmb	22 43 53.1	
	comp=Z,6.9nm,0.8s						
WB2	**Warramunga Arr**	**38.69**	**201**	P	**P**	**22 43 44.0**	**+1.0**
WB2				IAmb	IAmb	22 43 53.6	
	comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**38.69**	**201**	P	**P**	**22 43 44.1**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=27,slow=9.1,SNR=20						
	comp=Z,1.8nm,0.6s						
WRA	**Warramunga Arr**	**38.69**	**201**	P	**P**	**22 43 44.3**	**+1.3**
ASAR	**Alice Springs**	**42.30**	**200**	P	**P**	**22 44 13.6**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=24,slow=7.9,SNR=7.8						
	comp=Z,0.4nm,0.5s						
ULN	**Ulaanbaatar**	**45.99**	**322**	P	**P**	**22 44 42.4**	**+0.1**
SONM	**Songino Array**	**46.36**	**322**	P	**P**	**22 44 45.8**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=136,slow=7.1,SNR=10						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	**46.36**	**322**	P	**P**	**22 44 45.4**	**+0.1**
CM31	**Chiang Mai Arr**	**46.94**	**280**	P	**P**	**22 44 50.1**	**+0.1**
CM31				IAmb	IAmb	22 45 03.0	
	comp=Z,4.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.94**	**280**	P	**P**	**22 44 51.6**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=76,slow=6.2,SNR=14						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.94**	**280**	P	**P**	**22 44 50.8**	**+0.7**
PSI	**Prapat**	**50.32**	**260**	LR	LR	23 08 07.0	
	comp=Z,26nm,19.5s,baz=233,slow=38						
CNBA	**Chernabura Isl**	**55.22**	**34**	P	**P**	**22 45 53.9**	**+2.3**
SVW2	**Sparrevohn**	**59.61**	**28**	P	**P**	**22 46 22.7**	**+0.1**
SVW2				IAmb	IAmb	22 46 37.8	
	comp=Z,8.6nm,1.4s						
N19K	**Bonanza Creek**	**60.00**	**28**	P	**P**	**22 46 25.8**	**+0.5**
ZAA0	**Zalesovo Array**	**61.22**	**323**	P	**P**	**22 46 33.9**	**+0.2**
ZAA0				IAmb	IAmb	22 46 34.4	
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**61.22**	**323**	P	**P**	**22 46 33.7**	**0.0**
	comp=Z,3.5nm,0.7s,baz=108,slow=7.6,SNR=14						
ZALV				LR	LR	23 11 10.3	
	comp=Z,12nm,21.0s,baz=44,slow=34						
	comp=Z,3.5nm,0.7s						
ZALV	**Zalesovo Beam**	**61.22**	**323**	P	**P**	**22 46 34.0**	**+0.3**
MKAR	**Makanchi Array**	**61.72**	**315**	P	**P**	**22 46 38.0**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=89,slow=7.4,SNR=12						
	comp=Z,1.4nm,0.7s						
PPLA	**Purkeypile**	**61.75**	**27**	P	**P**	**22 46 37.8**	**+0.5**
H21K	**Melozitna Rive**	**62.50**	**24**	P	**P**	**22 46 42.8**	**+0.7**
H21K				IAmb	IAmb	22 47 02.6	
	comp=Z,6.2nm,1.4s						
NRIK	**Noril'sk**	**64.50**	**340**	P	**P**	**22 46 55.0**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=96,slow=9.9,SNR=3.5						
	comp=Z,2.8nm,0.8s						
KURK	**Kurchatov**	**64.52**	**319**	P	**P**	**22 46 55.8**	**+0.1**
ILAR	**Eielson Array**	**64.57**	**25**	P	**P**	**22 46 54.0**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=266,slow=8.0,SNR=4.2						
	comp=Z,0.5nm,0.8s						
BOOM	**Boomskoye usch**	**66.06**	**310**	P	**P**	**22 47 06.8**	**+0.8**
BOOM				IAmb	IAmb	22 47 12.6	
	comp=Z,2.8nm,0.8s						
L27K	**Beaver Creek,**	**66.36**	**28**	P	**P**	**22 47 06.9**	**-0.5**
LOGN	**Logan Glacier**	**66.37**	**30**	P	**P**	**22 47 08.0**	**+0.3**
BCAR	**Beaver Creek A**	**66.38**	**28**	P	**P**	**22 47 08.0**	**+0.4**
K27K	**Chicken**	**66.43**	**27**	P	**P**	**22 47 08.4**	**+0.7**
K27K				IAmb	IAmb	22 47 27.9	
	comp=Z,3.9nm,1.3s						
HYT	**Haines Junctio**	**68.08**	**31**

NBEZ	Newall Road No	0.71	257	P	Pn	23 35 13.8	+1.7
OTVZ	Oturere	0.71	94	P	Pn	23 35 13.9	+1.6
TUVZ	Tukino	0.71	103	P	Pn	23 35 13.9	+1.6
TMVZ	Te Maari	0.74	90	P	Pn	23 35 14.0	+1.6
ETVZ	East Tongariro	0.74	92	P	Pn	23 35 14.0	+1.5
KATZ	Kakaramea	0.74	80	P	Pn	23 35 13.6	+1.1
KATZ				S	S	23 35 37.1	-0.8
NMEZ	Namu Road	0.74	246	P	Pn	23 35 14.1	+1.8
NMEZ				S	S	23 35 37.1	-0.5
MOVZ	Moawhango	0.83	111	P	Pn	23 35 13.8	+1.0
MOVZ				S	S	23 35 35.0	-3.4
RATZ	Rangitukua	0.83	73	P	Pn	23 35 13.8	+1.0
WATZ	Wairara	0.86	62	P	Pn	23 35 14.3	+1.3
RITZ	Rihia Road	0.87	81	P	Pn	23 35 14.3	+1.4
TLZ	Tolley Road	0.99	38	P	Pn	23 35 14.6	+1.0
KUTZ	Kaahu Road	1.04	54	P	Pn	23 35 15.3	+1.3
BHHZ	Black Hill Sta	1.08	111	P	Pn	23 35 15.3	+1.2
OHWZ	Ohakea	1.17	159	P	Pn	23 35 16.8	+2.2
OHWZ				S	S	23 35 40.8	-1.0
MRHZ	Matea Rd	1.32	78	P	Pn	23 35 16.7	+0.9
MRHZ				S	S	23 35 40.0	-3.9
TSZ	Takapari Road	1.32	136	P	Pn	23 35 17.6	+1.9
KWHZ	Kaweka Forest	1.33	104	P	Pn	23 35 17.7	+1.9
BKZ	Black Stump Fm	1.35	93	P	Pn	23 35 17.2	+1.2
BKZ	Black Stump Fm	1.35	93	P	Pn	23 35 17.3	+1.3
ALRZ	Allen Road	1.36	67	P	Pn	23 35 17.3	+1.3
PNHZ	Pukenui	1.37	126	P	Pn	23 35 17.9	+1.8
POWZ	Post Office Ro	1.50	149	P	Pn	23 35 18.6	+1.6
TOZ	Tahuroa Road	1.50	23	P	Pn	23 35 18.4	+1.3
MCHZ	McNeill Hill	1.54	103	P	Pn	23 35 19.8	+2.4
NMHZ	Naumai	1.59	90	P	Pn	23 35 20.2	+2.3
DVHZ	Dannevirke	1.61	138	P	Pn	23 35 19.6	+1.7
WPHZ	Waipukurau	1.61	127	P	Pn	23 35 19.9	+2.0
OMRZ	Omania	1.62	52	P	Pn	23 35 19.3	+1.2
TARZ	Mount Tarawera	1.63	58	P	Pn	23 35 19.6	+1.4
MTHZ	Maungataniwha	1.65	82	P	Pn	23 35 19.5	+1.2
MRZ	Mangatainoka R	1.67	158	P	Pn	23 35 19.9	+1.5
MUGZ	Murupara	1.70	69	P	Pn	23 35 19.4	+0.7
PRWZ	Pori Road	1.72	147	P	Pn	23 35 20.7	+2.0
OGWZ	Otaki Gorge	1.73	170	P	Pn	23 35 20.8	+1.9
ARHZ	Aropaoanui	1.75	96	P	Pn	23 35 21.2	+2.2
KIW	Kapiti Island	1.75	176	P	Pn	23 35 20.6	+1.6
KAHZ	Kahuranaki	1.78	113	P	Pn	23 35 21.7	+2.3
DUWZ	D'Urville Isla	1.80	201	P	Pn	23 35 21.2	+1.6
RTZ	Ruatahuna	1.81	75	P	Pn	23 35 20.9	+1.2
RAHZ	Arahi	1.83	85	P	Pn	23 35 21.7	+1.9
EDRZ	Edgecumbe	1.85	58	P	Pn	23 35 20.9	+0.8
PRHZ	Porangahau	1.85	129	P	Pn	23 35 22.1	+2.2
PXZ	Pawanui	1.87	120	P	Pn	23 35 22.2	+2.1
TIWZ	Tintock	1.87	153	P	Pn	23 35 21.9	+1.7
HOWZ	Holdsworth Sta	1.87	162	P	Pn	23 35 21.6	+1.5
CKHZ	Cape Kidnapper	1.88	108	P	Pn	23 35 22.7	+2.4
ANWZ	Angora Road	1.89	136	P	Pn	23 35 22.4	+2.1
OPRZ	Ohinepanea	1.90	49	P	Pn	23 35 21.7	+1.3
WHHZ	Waihua	1.93	90	P	Pn	23 35 22.6	+1.9
BFZ	Birch Farm	1.94	144	P	Pn	23 35 22.4	+1.6
BFZ	Birch Farm	1.94	144	P	Pn	23 35 22.4	+1.6
CAW	Cannon Point	2.00	173	P	Pn	23 35 23.0	+1.7
URZ	Urewera	2.03	66	P	Pn	23 35 22.3	+0.6
URZ	Urewera	2.03	66	P	Pn	23 35 22.3	+0.6
MKAZ	Moumakai	2.03	9	P	Pn	23 35 23.6	+1.9
SNGZ	Shannon Statio	2.04	81	P	Pn	23 35 23.5	+1.7
AWAZ	Awhitu Peninsu	2.05	357	P	Pn	23 35 23.7	+1.8
CPWZ	Castlepoint	2.11	149	P	Pn	23 35 24.5	+2.2
MTW	Mount Morrison	2.12	165	P	Pn	23 35 23.8	+1.4
TCW	Tory Channel	2.13	190	P	Pn	23 35 24.4	+1.9
ETAZ	East Tamaki Re	2.16	4	P	Pn	23 35 25.0	+2.1
WEL	Wellington	2.17	180	P	Pn	23 35 24.4	+1.6
RAGZ	Rawiri	2.17	74	P	Pn	23 35 24.3	+1.3
TMWZ	Te Maipa	2.17	157	P	Pn	23 35 23.5	+0.5
WTAZ	Waiatarua	2.18	356	P	Pn	23 35 25.5	+2.3
SNZO	South Karori	2.19	181	P	Pn	23 35 24.7	+1.6
KNZ	Kokohu	2.27	89	P	Pn	23 35 25.6	+1.7
MWZ	Matawai	2.30	71	P	Pn	23 35 25.4	+1.1
PAWZ	Paruwai Farm	2.32	167	P	Pn	23 35 25.9	+1.5
MSWZ	Moikau Station	2.33	171	P	Pn	23 35 25.9	+1.4
WIAZ	Waiheke Island	2.34	7	P	Pn	23 35 26.8	+2.1
NNZ	Nelson	2.35	206	P	Pn	23 35 26.2	+1.5
TKNZ	Takaka Hill	2.36	215	P	Pn	23 35 25.9	+1.0
RIGZ	Rimuhau	2.38	81	P	Pn	23 35 26.7	+1.6
TRWZ	Traveller	2.39	163	P	Pn	23 35 26.7	+1.5
TUWZ	Tuamarina	2.40	195	P	Pn	23 35 26.8	+1.7
QRZ	Quartz Range	2.42	224	P	Pn	23 35 26.3	+0.9
QRZ	Quartz Range	2.42	224	P	Pn	23 35 26.3	+0.9
MHGZ	Mahia Peninsul	2.45	92	P	Pn	23 35 27.8	+2.0
PLHZ	Palliser	2.48	177	P	Pn	23 35 27.4	+1.3
KUZ	Kuaotunu	2.48	18	P	Pn	23 35 28.1	+2.0
KUZ	Kuaotunu	2.48	18	P	Pn	23 35 28.2	+2.0
TKGZ	Te Karaka	2.51	75	P	Pn	23 35 28.1	+1.7
RUGZ	Raukumara Rang	2.56	64	P	Pn	23 35 27.3	+0.2
CMWZ	Cape Campbell	2.66	189	P	Pn	23 35 30.3	+2.3
BSWZ	Blackbirch Sta	2.68	194	P	Pn	23 35 30.0	+1.9
TWGZ	Tauwhareparae	2.69	71	P	Pn	23 35 29.9	+1.5
HAZ	Te Kaha	2.74	61	P	Pn	23 35 29.1	+0.4
MRNZ	Matariki Terra	2.75	213	P	Pn	23 35 30.0	+1.1
CNGZ	Carnagh Statio	2.77	78	P	Pn	23 35 31.0	+1.9
PKGZ	Pakihiroa	2.88	66	P	Pn	23 35 31.4	+1.0
GRZ	Great Barrier	2.91	11	P	Pn	23 35 33.2	+2.4
PUZ	Puketiti	2.93	70	P	Pn	23 35 31.9	+0.9
THZ	Tophouse	3.00	208	P	Pn	23 35 32.9	+1.2
WMGZ	Waiomatatini S	3.15	67	P	Pn	23 35 34.3	+0.9
WCZ	Waipu Caves	3.19	354	P	Pn	23 35 35.2	+1.4
MXZ	Matakaoa Point	3.19	62	P	Pn	23 35 34.9	+1.1
MXZ	Matakaoa Point	3.19	62	P	Pn	23 35 35.3	+1.5
KHZ	Kahutara	3.42	195	P	Pn	23 35 37.9	+1.6
KHZ	Kahutara	3.42	195	P	Pn	23 35 38.1	+1.8
DSZ	Denniston Nort	3.46	220	P	Pn	23 35 37.8	+0.9
GVZ	Greta Valley S	4.06	198	P	Pn	23 35 45.0	+1.1
LTZ	Lake Taylor	4.12	206	P	Pn	23 35 45.6	+1.0
AMCZ	Amberley	4.36	201	P	Pn	23 35 48.8	+1.4
INZ	Inchbonnie	4.39	214	P	Pn	23 35 48.3	+0.5
OXZ	Oxford	4.68	205	P	Pn	23 35 51.8	+0.4
OKCZ	Okains Bay	4.78	195	P	Pn	23 35 53.4	+0.8
MQZ	McQueen's Vall	4.85	198	P	Pn	23 35 53.6	+0.2
AKCZ	Akaroa Harbour	4.95	196	P	Pn	23 35 55.4	+0.7
WVZ	Waitaha Valley	4.99	216	P	Pn	23 35 55.4	+0.3
RACZ	Rakaia	5.01	202	P	Pn	23 35 56.2	+0.8
MHCZ	Mount Hutt	5.02	208	P	Pn	23 35 57.2	+1.6
WACZ	Wakanui South	5.30	203	P	Pn	23 35 59.8	+0.9
GCSZ	Gaunt Creek Bo	5.36	217	P	Pn	23 35 59.9	+0.1
RPZ	Rata Peaks	5.37	210	P	Pn	23 36 00.5	+0.6
RPZ	Rata Peaks	5.37	210	P	Pn	23 36 00.6	+0.7
ARCZ	Arundel	5.53	208	P	Pn	23 36 02.2	+0.4
FOZ	Fox Glacier	5.77	219	P	Pn	23 36 04.5	-0.3
TMZ	Timaru	5.96	207	P	Pn	23 36 08.4	+1.1
LBZ	Lake Benmore	6.28	212	P	Pn	23 36 11.4	+0.1
ODZ	Otahua Downs	6.67	206	P	Pn	23 36 17.1	+0.9
ODZ	Otahua Downs	6.67	206	P	Pn	23 36 17.9	+1.7
JCZ	Jackson Bay	6.67	220	P	Pn	23 36 16.3	-0.1
JCZ	Jackson Bay	6.67	220	P	Pn	23 36 16.7	+0.3
WKZ	Wanaka	7.13	215	P	Pn	23 36 21.5	-0.5
EAZ	Earnscleugh	7.33	212	P	Pn	23 36 23.9	-0.7
HHSZ	Highcliff Hill	7.43	203	P	Pn	23 36 28.4	+2.5
MSZ	Milford Sound	7.54	220	P	Pn	23 36 27.4	+0.2
TUZ	Tuapeka	7.81	207	P	Pn	23 36 32.7	+2.1
MLZ	Mavora Lakes	7.95	216	P	Pn	23 36 32.7	+0.2
WHZ	Wether Hill Ro	8.43	214	P	Pn	23 36 38.4	-0.2
DCZ	Deep Cove	8.48	219	P	Pn	23 36 39.5	+0.2
SYZ	Scrubby Hill	8.49	207	P	Pn	23 36 41.1	+1.9
SYZ	Scrubby Hill	8.49	207	P	Pn	23 36 41.2	+1.9
APZ	The Paps	9.17	211	P	Pn	23 36 48.7	+0.7

*IDC **14** 23:40:07.3±1.8, 2°.27N×126°.78E, h0km, mb3.8/5, mbtmp3.8/5, MS2.7/2, Error ellipse: s-maj=180.6km s-min=19.4km az=67.0*
*NEIC **14** 23:40:13.3±0.6, 2°.2N±0°.1×126°.59E±0°.10, h34km±8km, mb4.2/13, Error ellipse: s-maj=24.6km s-min=3.9km az=213.0*
*DJA **14** 23:40:14.9±2.1, 2°.N±4°×12°.6E±°, h29km±21km, M3.6/7, MLv3.6/7*

ISC 14 23:40:14.7±0.7, 2°.09N±0°.06×126°.49E±0°.06, h47km, n30, σ0°.98/30, mb4.1/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	1.32	101	P	Pn	23 40 37.5	+0.8
GAMI				S	Sn	23 40 56.0	+2.8
TNTI	Ternate	1.57	146	Pn	Pn	23 40 39.1	-1.1
TNTI	Ternate	1.57	146	P	Pn	23 40 40.5	+0.3
SGSI	Sangihe	1.85	329	P	Pn	23 40 44.5	+0.4
SGSI				S	Sn	23 41 07.7	+1.3
LBMI	Labuha	2.89	160	P	Pn	23 40 59.0	+0.7
KMSI	Cibinong	2.93	239	P	Pn	23 41 00.5	+1.7
GTOI	Gorontalo	3.77	248	P	Pn	23 41 11.5	+1.1
TOLI2	Tolitoli	5.79	260	Pn	Pn	23 41 38.1	0.0
MTN	Manton Dam	15.54	163	Pn	Pn	23 43 49.9	-0.8
MTN				IAmb	IAmb	23 44 07.7	
	comp=Z,20nm,1.2s						
KNRA	Kununurra	17.80	173	P	P	23 44 18.9	-0.5
KNRA				IAmb	IAmb	23 44 25.1	
	comp=Z,29nm,1.4s						
WB0	Warramunga Arr	23.06	161	P	P	23 45 15.8	-0.5
WB0				IAmb	IAmb	23 45 35.3	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	23.21	161	P	P	23 45 16.5	-1.3
	comp=Z,1.7nm,0.6s,baz=340,slow=11,SNR=26						
	comp=Z,1.7nm,0.6s						
WRA	Warramunga Arr	23.21	161	P	P	23 45 17.5	-0.3
WB2	Warramunga Arr	23.21	161	P	P	23 45 17.9	0.0
WR0	Warramunga Arr	23.29	161	P	P	23 45 17.8	-0.8
WR0				IAmb	IAmb	23 45 37.6	
	comp=Z,9.7nm,1.4s						
AS31	Alice Springs	26.60	165	P	P	23 45 48.6	-0.2
ASAR	Alice Springs	26.60	165	P	P	23 45 49.0	+0.2
	comp=Z,0.4nm,0.4s,baz=349,slow=9.4,SNR=8.2						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	26.60	165	P	P	23 45 49.9	+1.1
CMAR	Chiang Mai Arr	31.52	303	LR	LR	00 01 11.9	
	comp=Z,8.0nm,18.3s,baz=205,slow=40						
BBOO	Buckleboo	35.87	166	P	P	23 47 09.9	-0.3
NWAO	Narrogin (SRO)	35.91	193	P	P	23 47 10.5	-0.1
TOO	Toolangi	43.21	158	P	P	23 48 12.0	+0.6
MK31	Makanchi Array	58.77	326	P	P	23 50 07.5	-0.6
MK31				IAmb	IAmb	23 50 48.0	
	comp=Z,1.9nm,1.3s						
MKAR	Makanchi Array	58.77	326	P	P	23 50 07.3	-0.8
	comp=Z,0.7nm,0.4s,baz=121,slow=8.0,SNR=29						
	comp=Z,0.7nm,0.4s						
MAKZ	Makanchi	58.95	326	P	P	23 50 08.9	-0.5
MAKZ				IAmb	IAmb	23 50 25.6	
	comp=Z,4.0nm,1.2s						
KURBB	Kurchatov Arra	62.99	328	P	P	23 50 36.2	-0.4
	comp=Z,0.7nm,0.4s,baz=124,slow=5.2,SNR=11						
	comp=Z,0.7nm,0.4s						
KURK	Kurchatov	62.99	328	P	P	23 50 36.0	-0.6
KURK				IAmb	IAmb	23 50 48.0	
	comp=Z,5.1nm,1.5s						
BVAR	Borovoye Array	68.56	327	P	P	23 51 11.2	-1.3
	comp=Z,0.3nm,0.5s,baz=111,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.5s						
ABKAR	Akbulak array	73.27	321	P	P	23 51 40.4	-0.8
EIL	Elat	90.32	300	LR	LR	00 39 36.4	
	comp=Z,6.4nm,18.5s,baz=252,slow=39						

*IDC **14** 23:42:32.0±7.8, 16°.64N×148°.85E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=292.6km s-min=25.6km az=83.0*

ISC 14 23:42:35.9±10.0, 16°.7N±0°.4×14°.9E±°, h35km, n6, σ0°.47/6, mb3.5/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.21	202	P	P	23 50 00.8	-0.1
	0.3nm,0.6s,baz=26,slow=9.9,SNR=1.9						
	0.3nm,0.6s						
ASAR	Alice Springs	42.79	201	P	P	23 50 30.4	0.0
	0.2nm,0.5s,baz=29,slow=8.1,SNR=2.2						
	0.2nm,0.5s						
SONM	Songino Array	46.82	321	P	P	23 51 01.8	-0.5
	0.2nm,0.4s,baz=134,slow=8.3,SNR=2.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	62.27	314	P	P	23 52 55.1	+0.6
	0.2nm,0.6s,baz=111,slow=7.9,SNR=1.8						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	65.06	318	P	P	23 53 12.8	+0.2
	1.0nm,0.7s,baz=97,slow=7.1,SNR=12						
	1.0nm,0.7s						
BVAR	Borovoye Array	70.16	321	P	P	23 53 44.9	0.0
	0.6nm,0.6s,baz=104,slow=5.0,SNR=5.3						
	0.6nm,0.6s						

KRSC 14 23:42:36.5±1.3, 52°.96N×160°.15E, h52km±11km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.16	332	eP	Pn	23 42 46.4	+1.6
SPN				eS	Sn	23 42 51.7	+1.0
NLC	Nalytchevo	0.53	294	eP	Pn	23 42 49.4	+1.3
NLC				eS	Sn	23 42 57.1	+0.5
SDLR	Sedlovina	0.83	293	eP	Pn	23 42 53.5	+1.5
SDLR				eS	Sn	23 43 04.0	+0.6
UGLR	Uglovaya	0.84	288	eP	Pn	23 42 53.7	+1.5
UGLR				eS	Sn	23 43 04.8	+1.2
DALK	Dalny	0.85	275	eP	Pn	23 42 53.3	+1.2
DALK				eS	Sn	23 43 04.0	+0.4
SMAR	Somma	0.87	291	eP	Pn	23 42 54.0	+1.3
SMAR				eS	Sn	23 43 05.3	+0.8
AVH	Avacha	0.90	290	eP	Pn	23 42 54.8	+1.8
AVH				eS	Sn	23 43 06.6	+1.5
PET	Petropavlovsk	0.91	275	eP	Pn	23 42 54.2	+1.3
PET				eS	Sn	23 43 05.4	+0.4
KRER	Koryakskii	0.91	293	eP	Pn	23 42 55.0	+1.8
KRER				eS	Sn	23 43 06.6	+1.1
KOK	Koryaka	0.97	291	eP	Pn	23 42 55.6	+1.7
KRX	Arik	0.99	295	eP	Pn	23 42 55.7	+1.5
KRX				eS	Sn	23 43 07.9	+0.7
RUS	Russkaya	1.12	243	eP	Pn	23 42 57.3	+1.4
RUS				eS	Sn	23 43 11.4	+1.1
KRMR	Karymshinskiy	1.23	265	eP	Pn	23 42 58.4	+1.1
KRMR				eS	Sn	23 43 13.3	+0.5
MTVR	Mutnovka	1.29	249	eP	Pn	23 43 00.2	+2.0
MTVR				eS	Sn	23 43 15.6	+1.2
GRL	Gorelyy	1.32	253	eP	Pn	23 43 01.0	+2.3
GRL				eS	Sn	23 43 17.2	+1.9
ASAK	Asacha	1.48	248	eP	Pn	23 43 03.5	+2.7
ASAK				eS	Sn	23 43 21.8	+2.7
GNL	Ganaly	1.52	300	eP	Pn	23 43 03.5	+2.2
GNL				eS	Sn	23 43 22.0	+2.1
KDTR	Khodutka, Kamc	1.71	229	eP	Pn	23 43 06.5	+2.7
KDTR				eS	Sn	23 43 26.4	+1.8
APC	Apacha	1.81	270	eP	Pn	23 43 08.1	+2.9
APC				eS	Sn	23 43 30.0	+3.1
MKZ	Mys Kozlova	1.86	30	eP	Pn	23 43 08.3	+2.5
MKZ				eS	Sn	23 43 29.8	+1.8
TUMR	Tumrok	2.33	360	eP	Pn	23 43 16.1	+3.7
TUMR				eS	Sn	23 43 42.6	+2.7
PAU	Pauzhetka	2.54	235	P	Pn	23 43 18.0	+2.9
KMNR	Kamenistaya	2.80	1	eP	Pn	23 43 23.5	+4.6
KMNR				eS	Sn	23 43 56.2	+4.7
BDR	Baidarnaya	3.67	9	P	Pn	23 43 31.8	+1.1
SRKR	Sorokina	3.75	9	P	Pn	23 43 37.0	+5.2
BKI	Bering	4.10	54	S	Sn	23 44 22.0	-1.2

*IDC **15** 00:46:52.3±1.0, 1°.11S×24°.58W, h0km, mb3.8/5, mbtmp3.9/6, ML4.2/1, MS3.5/45, Error ellipse: s-maj=43.9km s-min=24.7km az=144.0*
*NEIC **15** 00:46:53.9±1.3, 1°.1S±0°.2×24°.71W±0°.05, h10km±2km, mb4.5/4, Error ellipse: s-maj=39.5km s-min=7.8km az=355.0*

ISC 15 00:46:55.2±0.7, 1°.1S±0°.1×24°.65W±0°.10, h22km, n60, σ0°.77/15, mb3.7/5, MS3.5/43, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	12.12	124	T	T	01 02 04.1	
	baz=304,slow=74,SNR=234						
H10N2	ASCENSION HYDR	12.13	124	T	T	01 02 05.8	
	baz=304,slow=74,SNR=299						
H10N1	ASCENSION HYDR	12.14	124	T	T	01 02 06.9	
	baz=304,slow=74,SNR=441						
RCBR	Riachuelo	12.17	247	Pn	Pn	00 49 47.3	-0.1
	1.3nm,0.3s,baz=226,slow=11,SNR=7.2						
RCBR				LR	LR	00 53 24.7	
	comp=Z,323nm,20.4s,baz=232,slow=32						
	6.5nm,0.4s						
RCBR	Riachuelo	12.17	247	Pn	Pn	00 49 46.9	-0.5
ASCN	Ascension	12.29	124	Pn	Pn	00 49 49.4	+0.4
H10S3	ASCENSION HYDR	12.63	128	T	T	01 02 45.9	
	baz=273,slow=74,SNR=112						
H10S2	ASCENSION HYDR	12.65	128	T	T	01 02 41.7	
	baz=307,slow=74,SNR=35						
BBTS	Babate	17.61	27	LR	LR	00 56 20.9	
	comp=Z,188nm,19.4s,baz=216,slow=32						
DBIC	Dimbokro	21.21	68	P	P	00 51 38.9	-0.7
KOWA	Kowa	25.64	52	P	P	00 52 23.9	+0.4
	4.1nm,0.7s,baz=238,slow=8.8,SNR=12						
KOWA				LR	LR	01 01 13.3	
	comp=Z,158nm,18.5s,baz=209,slow=34						
	4.1nm,0.7s						
KOWA	Kowa	25.64	52	P	P	00 52 23.7	+0.3
KOWA				IAmb	IAmb	00 52 32.7	
	comp=Z,11nm,1.2s						
MDP	Montagnes des	28.64	283	LR	LR	01 01 40.7	
	comp=Z,76nm,21.0s,baz=30,slow=31						
TORD	Torodi Ar. Bea	29.72	61	P	P	00 52 58.6	-1.5
	comp=Z,1.4nm,1.1s,baz=259,slow=11,SNR=3.9						
TORD				LR	LR	01 03 29.9	
	comp=Z,137nm,19.2s,baz=220,slow=34						
	comp=Z,1.4nm,1.1s						
TAM	Tamanrasset	37.79	49	P	P	00 54 09.9	-0.3
MDT	Midelt	38.68	27	LR	LR	01 09 45.6	
	comp=Z,86nm,18.6s,baz=259,slow=36						
SIV	San Ignacio	38.83	246	LR	LR	01 09 44.8	
	comp=Z,143nm,20.7s,baz=102,slow=35						
CPUP	Villa Florida	40.21	229	LR	LR	01 11 08.0	
	comp=Z,96nm,18.2s,baz=55,slow=36						
ESDC	Sonseca Array	44.79	23	P	P	00 55 08.4	+1.0
	comp=Z,1.0nm,1.0s,baz=233,slow=7.9,SNR=5.1						
ESDC				LR	LR	01 13 44.1	
	comp=Z,29nm,18.0s,baz=250,slow=36						
	comp=Z,1.0nm,1.0s						
SJG	San Juan	45.07	297	LR	LR	01 10 22.4	
	comp=Z,57nm,20.3s,baz=96,slow=31						
TSUM	Tsumeb	45.10	116	LR	LR	01 10 41.3	
	comp=Z,63nm,18.9s,baz=324,slow=32						
LPAZ	La Paz	45.41	248	LR	LR	01 13 52.1	
	comp=Z,66nm,19.3s,baz=60,slow=36						
SDV	Santo Domingo	46.88	283	LR	LR	01 13 08.8	
	comp=Z,38nm,19.2s,baz=92,slow=34						
LVC	Limon Verde	48.01	240	LR	LR	01 16 53.6	
	comp=Z,56nm,19.5s,baz=58,slow=38						
ROSC	El Rosal	49.97	277	LR	LR	01 16 10.8	
	comp=Z,120nm,18.1s,baz=62,slow=35						
VAE	Valguarnera	52.70	39	LR	LR	01 19 26.1	
	comp=Z,105nm,19.5s,baz=149,slow=37						
SUR	Sutherland	52.87	131	LR	LR	01 15 13.4	
	comp=Z,26nm,18.4s,baz=308,slow=32						
NNA	Nana	52.87	256	LR	LR	01 18 01.7	
	comp=Z,150nm,20.1s,baz=41,slow=35						
GTBY	Guantanamo Bay	53.68	296	P	P	00 56 14.7	-1.0
ATAH	Atahualpa	53.91	262	LR	LR	01 18 51.5	
	comp=Z,99nm,21.7s,baz=73,slow=36						
LBTB	Lobatse	53.97	120	LR	LR	01 15 33.0	
	comp=Z,42nm,19.5s,baz=280,slow=32						
LSZ	Lusaka	53.99	108	LR	LR	01 15 00.8	
	comp=Z,46nm,20.5s,baz=283,slow=31						
BOSA	Boshof	54.88	125	LR	LR	01 15 18.5	
	comp=Z,50nm,21.0s,baz=358,slow=31						
MBAR	Mbarara	55.38	90	LR	LR	01 17 45.1	
	comp=Z,117nm,18.5s,baz=251,slow=34						
DAVOX	Davos/Dischmat	56.48	28	LR	LR	01 18 51.7	
	comp=Z,20nm,18.6s,baz=271,slow=34						
PLCA	Paso Flores	57.24	220	LR	LR	01 19 24.6	
	comp=Z,26nm,20.0s,baz=62,slow=34						
EKA	Eskdalemuir Ar	58.95	14	LR	LR	01 18 15.0	
	comp=Z,29nm,18.3s,baz=178,slow=32						
VRAC	Vranov	61.47	29	LR	LR	01 23 13.4	
	comp=Z,27nm,18.3s,baz=210,slow=36						
MLR	Muntele Rosu	64.35	37	LR	LR	01 26 38.7	
	comp=Z,57nm,19.1s,baz=213,slow=37						
EIL	Elat	64.47	56	LR	LR	01 27 00.5	
	comp=Z,77nm,18.4s,baz=240,slow=37						
TKL	Tuckaleechee C	66.00	310	LR	LR	01 21 31.9	
	comp=Z,25nm,21.6s,baz=122,slow=32						
SADO	Sadowa	66.41	321	LR	LR	01 22 19.3	
	comp=Z,25nm,20.2s,baz=230,slow=32						
NOA	NORSAR Array B	67.81	18	LR	LR	01 26 40.7	
	comp=Z,6.0nm,18.6s,baz=295,slow=35						
ATD	Arta Tunnel	68.20	77	LR	LR	01 25 59.9	
	comp=Z,27nm,19.3s,baz=18,slow=34						
AKASG	Malin Array Be	68.

comp=Z,26nm,1.2s
URZ Urewera 20.89 189 P P 00 54 05.9 -1.5
comp=Z,18nm,0.7s
BKZ Black Stump Fm 21.87 190 P P 00 54 14.3 -1.9
BKZ IAmb IAmb 00 54 32.3
comp=Z,28nm,1.3s
BKZ Black Stump Fm 21.87 190 P P 00 54 14.0 -2.3
BFZ Birch Farm 23.39 190 P P 00 54 28.3 -1.4
QRZ Quartz Range 24.33 196 P P 00 54 37.7 -0.4
QRZ Quartz Range 24.33 196 P P 00 54 39.3 +1.2
comp=Z,74nm,1.9s
TUWZ Tuamarina 24.56 193 P P 00 54 38.1 -1.9
THZ Tophouse 25.11 195 P P 00 54 44.8 -0.2
KHZ Kahutara 25.59 193 P P 00 54 47.1 -2.0
KHZ Kahutara 25.59 193 P P 00 54 47.1 -2.0
comp=Z,46nm,2.9s
LTZ Lake Taylor 26.23 195 P P 00 54 53.8 -1.0
LTZ IAmb IAmb 00 54 56.4
comp=Z,26nm,1.2s
OXZ Oxford 26.80 195 P P 00 54 58.6 -1.2
OXZ IAmb IAmb 00 54 58.8
comp=Z,14nm,0.8s
FOZ Fox Glacier 27.60 198 P P 00 55 06.1 -0.7
JCZ Jackson Bay 28.40 199 P P 00 55 13.3 -0.7
comp=Z,42nm,1.7s
ODZ Otahua Downs 28.76 196 P P 00 55 15.4 -1.5
ODZ IAmb IAmb 00 55 56.0
comp=Z,29nm,1.4s
WKZ Wanaka 29.02 198 P P 00 55 17.6 -1.6
EIDS Eidsvold 29.09 249 P P 00 55 20.0 -0.1
EIDS IAmb IAmb 00 55 20.4
comp=Z,9.5nm,0.7s
MLZ Mavora Lakes 29.77 199 P P 00 55 25.8 +0.1
MLZ IAmb IAmb 00 55 26.6
comp=Z,14nm,0.8s
ARMA Armidale 29.83 239 P P 00 55 27.2 +0.6
ARMA IAmb IAmb 00 55 27.9
comp=Z,10nm,0.7s
ARMA Armidale 29.83 239 P P 00 55 27.3 +0.7
comp=Z,16nm,0.7s
DCZ Deep Cove 30.17 200 P P 00 55 31.4 +2.3
WHZ Wether Hill Ro 30.30 199 P P 00 55 30.5 +0.3
WHZ IAmb IAmb 00 55 31.8
comp=Z,24nm,1.1s
MGCD Mangrove Creek 31.22 234 P P 00 55 39.5 +1.2
comp=Z,18nm,0.8s
CTAO Charters Tower 33.20 260 P P 00 55 55.1 -0.3
CTAO IAmb IAmb 00 55 55.8
comp=Z,12nm,0.9s
CAN Canberra 33.65 232 P P 00 55 59.3 +0.3
CAN IAmb IAmb 00 56 08.2
comp=Z,6.1nm,1.0s
COEN Coen 36.80 270 P P 00 56 25.9 +0.4
COEN IAmb IAmb 00 56 26.4
comp=Z,11nm,0.7s
TOO Toolangi 37.12 230 P P 00 56 28.2 +0.4
TOO IAmb IAmb 00 56 29.1
comp=Z,14nm,0.9s
STKA Stephens Creek 38.51 241 P P 00 56 39.6 +0.5
comp=Z,8.2nm,0.5s,baz=89,slow=9.7,SNR=27
comp=Z,8.2nm,0.5s
STKA Stephens Creek 38.51 241 P P 00 56 39.6 +0.5
BBOO Buckleboo 43.29 241 P P 00 57 16.9 -0.1
BBOO IAmb IAmb 00 57 17.7
comp=Z,24nm,0.8s
WR0 Warramunga Arr 44.20 259 P P 00 57 23.6 -0.7
WR0 IAmb IAmb 00 57 23.9
comp=Z,11nm,1.3s
WB0 Warramunga Arr 44.36 260 P P 00 57 24.5 -1.0
WB0 IAmb IAmb 00 57 25.2
comp=Z,9.3nm,1.0s
WB2 Warramunga Arr 44.38 259 P P 00 57 24.7 -1.0
WB2 IAmb IAmb 00 57 25.4
comp=Z,8.3nm,0.6s
WRAB Tennant Creek 44.38 259 P P 00 57 24.7 -1.0
WRAB IAmb IAmb 00 57 25.4
comp=Z,6.9nm,0.7s
WRA Warramunga Arr 44.39 259 P P 00 57 24.7 -1.1
comp=Z,4.9nm,0.6s,baz=98,slow=7.1,SNR=102
WRA PcP **PcP 00 58 57.4 -0.4**
comp=Z,1.4nm,0.7s,baz=96,slow=3.6,SNR=5.4
comp=Z,4.9nm,0.6s
WRA Warramunga Arr 44.39 259 P P 00 57 24.3 -1.6
AS31 Alice Springs 44.58 254 P P 00 57 26.8 -0.5
ASAR Alice Springs 44.58 254 P P 00 57 27.0 -0.3
comp=Z,55nm,0.6s,baz=88,slow=8.1,SNR=718
ASAR PcP **PcP 00 58 58.1 -0.3**
comp=Z,1.9nm,0.4s,baz=104,slow=4.2,SNR=7.3
ASAR Alice Springs 44.58 254 P P 00 57 26.7 -0.6
MTN Manton Dam 48.51 268 P P 00 57 56.4 -0.5
MTN IAmb IAmb 00 57 56.8
comp=Z,11nm,0.8s
FORT Forrest 49.86 244 P P 00 58 06.1 -0.6
KNRA Kununurra 50.22 264 P P 00 58 09.2 -0.3
KNRA IAmb IAmb 00 58 09.6
comp=Z,20nm,0.7s
SIJI Sorong 51.88 283 P P 00 58 21.8 +0.2
comp=Z,33nm,0.7s,baz=135,slow=4.8,SNR=6.5
comp=Z,33nm,0.7s
SOEI Soe 55.77 270 P P 00 58 49.9 +0.7
SOEI IAmb IAmb 00 58 51.2
comp=Z,24nm,0.7s
PSA00 Pilbara Seismi 57.69 255 P P 00 59 01.6 -0.6
PSA00 IAmb IAmb 00 59 02.1
comp=Z,14nm,0.7s
MBWA Marble Bar 57.86 256 P P 00 59 02.6 -0.7
MBWA IAmb IAmb 00 59 38.2
comp=Z,18nm,1.2s
MORW Morawa 60.33 246 P P 00 59 19.0 -0.8
MORW IAmb IAmb 00 59 35.8
comp=Z,28nm,1.2s
TOLI2 Tolitoli 62.37 281 P P 00 59 34.4 +1.1
GIRL Giralia 62.69 253 P P 00 59 35.0 -0.3
MJAR Matsushiro Arr 67.50 323 P P 01 00 04.8 -0.3
comp=Z,2.3nm,0.6s,baz=162,slow=5.9,SNR=5.3
comp=Z,2.3nm,0.6s
UGM Wanagama 69.36 268 P P 01 00 16.5 -0.5
QSPA South Pole Qui 72.44 180 P P 01 00 34.5 +0.3
PETK Petropavlovsk- 73.32 345 P P 01 00 39.0 -0.1
comp=Z,2.6nm,0.7s,baz=186,slow=12,SNR=3.6
comp=Z,2.6nm,0.7s
PETK Petropavlovsk- 73.32 345 P P 01 00 39.2 +0.1
PAHR Pah Rah Range 79.41 42 P P 01 01 11.5 -1.6
NVAR Mina Array Bea 79.42 44 P P 01 01 14.3 +1.0
comp=Z,0.7nm,0.7s,baz=227,slow=7.5,SNR=5.7
comp=Z,0.7nm,0.7s
O18K Koktuh Hills 79.53 12 P P 01 01 12.9 -0.2
KVN Kaiserville 79.89 44 P P 01 01 16.0 +0.3
M19K Big River Lodg 81.58 11 P P 01 01 23.0 -0.7
SUA Susitna One 81.92 13 P P 01 01 25.1 -0.4
PWL Port Wells 81.93 14 P P 01 01 24.7 -0.8
GLI Glacier Island 82.25 15 P P 01 01 26.5 -0.6
GLI IAmb IAmb 01 02 00.9
comp=Z,17nm,1.4s
PSUT Pine Spring 82.47 46 P P 01 01 30.9 +1.9
SCM Sheep Creek Mo 83.02 14 P P 01 01 30.9 -0.2
N25K Chitina, Valde 83.50 16 P P 01 01 33.5 0.0
N25K IAmb IAmb 01 02 13.0
comp=Z,10nm,1.4s
GLB Gilahina Butte 83.57 16 P P 01 01 33.6 -0.2
TRF Thorofare Moun 83.79 12 P P 01 01 34.3 -0.6
BARN Barnard Glacie 83.84 17 P P 01 01 35.3 0.0
BARN IAmb IAmb 01 01 43.2
comp=Z,12nm,1.4s
CTGM Chitina Glacie 83.85 17 P P 01 01 35.2 -0.1
CTGM IAmb IAmb 01 01 36.7
comp=Z,9.3nm,1.4s
MAW Mawson 84.03 200 P P 01 01 35.4 -0.6
comp=Z,1.5nm,0.6s,baz=164,slow=5.7,SNR=3.7
comp=Z,1.5nm,0.6s
MAW Mawson 84.03 200 P P 01 01 37.0 +0.9
TXAR Lajitas Array 86.09 58 P P 01 01 48.5 +1.6
comp=Z,0.6nm,0.7s,baz=221,slow=5.7,SNR=11
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 87.35 44 P P 01 01 52.6 0.0
comp=Z,0.4nm,0.5s,baz=211,slow=3.6,SNR=5.0
comp=Z,0.4nm,0.5s
CMAR Chiang Mai Arr 88.50 290 P P 01 01 59.3 +1.0
comp=Z,1.2nm,0.4s,baz=105,slow=2.7,SNR=9.1
comp=Z,1.2nm,0.4s
TROLL Troll, Antarti 90.60 180 P P 01 02 06.5 -0.6
SNAA Sanae 90.89 179 P P 01 02 07.4 -1.1
VNA3 Neumayer Olymp 91.05 176 P P 01 02 08.7 -0.4
MKAR Makanchi Array 108.72 314 PKiKP **PKiKP 01 07 28.8 -1.5**
comp=Z,0.6nm,0.5s,baz=182,slow=0.4,SNR=7.6
ARCES ARCESS Array B 125.98 350 PKP **PKiKP 01 08 02.2 -1.0**
comp=Z,1.8nm,1.1s,baz=111,slow=2.1,SNR=6.0
FINES FINESS Array B 132.83 344 PKP **PKiKP 01 08 18.6 +1.4**
comp=Z,2.0nm,1.0s,baz=280,slow=1.2,SNR=4.0
LODK Lodwar 143.74 251 PKPdf 01 08 36.5 -0.9
BR131 Keskin Array S 144.37 315 PKPab 01 08 37.4 -0.7
BRTR Keskin Array B 144.37 315 PKP **PKPab 01 08 37.4 -0.7**
comp=Z,3.4nm,0.8s,baz=127,slow=3.6,SNR=17
BRTR Keskin Array B 144.37 315 PKPbc 01 08 37.1 -0.5
OSTC Ostas 145.03 343 *e*PKP **PKPab 01 08 39.8 -0.3**
CHVC Chvalec 145.04 344 *e*PKP **PKPab 01 08 39.8 -0.3**
CLL Collm 145.11 347 PKPab 01 08 39.1 -1.2
CLL Collm 145.11 347 *i* PKPbc **PKPab 01 08 39.1 -1.2**
comp=Z,9.0nm,0.7s
DPC Dobruska-Polom 145.18 343 *e*PKP **PKPab 01 08 39.9 -0.8**
MORC Moravsky Berou 145.34 341 *e*PKP **PKPab 01 08 40.2 -1.1**
PRU Pruhonice 145.99 345 *e*PKP **PKPbc 01 08 41.7 -0.2**
VRAC Vranov 146.04 342 *e*PKP **PKPab 01 08 42.6 -1.5**
JAVC Velka Javorina 146.11 340 *e*PKP **PKPab 01 08 43.3 -1.1**
KRUC Moravsky 146.32 342 *e*PKP **PKPbc 01 08 43.0 +0.1**
KHC Kasperske Hory 147.02 345 *e*PKP **PKPbc 01 08 44.8 0.0**
CKRC Cesky Krumlov 147.12 344 *e*PKP **PKPbc 01 08 45.0 -0.1**
GERES GERESS Array B 147.25 345 PKPbc **PKPbc 01 08 45.4 -0.1**
comp=Z,2.2nm,0.5s,baz=37,slow=3.4,SNR=18
CONA Conrad Observa 147.49 342 *i* P **PKiKP 01 08 46.4 -1.4**
comp=Z,3.9nm,0.6s
RONA Rosalia, Austr 147.56 341 *i* P **PKiKP 01 08 46.7 -1.2**
comp=Z,4.6nm,0.7s
MOA Molln 148.02 343 *i* P **PKiKP 01 08 47.5 -1.3**
comp=Z,9.3nm,1.5s
SOKA Soboth 148.87 342 *i* P **PKPbc 01 08 49.0 -0.6**
comp=Z,13nm,2.0s
KBA Koelnbreinsper 148.98 344 *i* P **PKPbc 01 08 49.0 -1.0**
comp=Z,3.3nm,0.5s
WATA Walderalm 149.17 346 *e*P **PKPbc 01 08 49.8 -0.6**
comp=Z,4.1nm,0.5s,SNR=4.0
RETA Reutte 149.21 347 *i* P **PKiKP 01 08 50.0 -1.2**
comp=Z,1.5nm,0.4s
WTTA Wattenberg 149.23 346 *e*P **PKiKP 01 08 50.3 -1.2**
comp=Z,5.1nm,0.4s,SNR=8.4
MOTA Moosalm 149.27 347 *i* P **PKiKP 01 08 50.3 -1.2**
comp=Z,3.0nm,0.5s
MYKA Terra Mystica 149.31 343 *i* P **PKPbc 01 08 49.8 -0.9**
comp=Z,2.6nm,0.5s
SQTA Sankt Quirin 149.36 347 *i* P **PKPbc 01 08 50.4 -0.5**
comp=Z,6.5nm,0.6s
ABTA Abfaltersbach 149.50 345 *i* P **PKPbc 01 08 50.2 -0.9**
comp=Z,6.4nm,0.6s,SNR=4.1
DAVA Damuels 149.57 348 *i* P **PKiKP 01 08 51.3 -0.8**
comp=Z,2.6nm,0.8s
TORD Torodi Ar. Bea 175.54 185 PKP **PKPdf 01 09 10.4 -1.1**
comp=Z,0.5nm,0.8s,baz=101,slow=0.6,SNR=2.4

*MAN **15** 01:21:28.4,5.°11N×125.°26E,h86km,mb4.1,ML2.9,MS2.5*
*DJA **15** 01:21:29.3±0.6,5.°N±4.°×12.°5E±.°,h84km±18km,M4.0/7,*
mb4.0/4,mB4.7/2,MLv4.0/7,Mw(mB)3.9/2,MwMwp4.4/1,
Mwp4.8/1
ISC 15 01:21:26.6±1.3,4.°88N±0.°04×125.°32E±0.°08,h100km,n12,
σ2°27/18,1C-4D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.21**	**170**	P	**Pn**	**01 21 49.5**	**+0.1**
SGSI				S	**Sn**	**01 22 05.3**	**-1.3**
DDMP	**Don Marcelino,**	**1.28**	**18**	⇓*e*P	**Pn**	**01 21 49.1**	**-1.1**
DDMP				*e*S	**Sn**	**01 22 05.4**	**-2.6**
SKMP	**Bagumbayan, Su**	**1.80**	**335**	⇓*e*P	**Pn**	**01 21 55.6**	**-1.0**
SKMP				*e*S	**Sn**	**01 22 15.8**	**-3.7**
KCP	**Kidapawan**	**2.12**	**354**	⇓*e*P	**Pn**	**01 22 01.7**	**+0.8**
KCP				*i* S	**Sn**	**01 22 27.5**	**+0.4**
DAV	**Davao City (W)**	**2.19**	**7**	P	**Pn**	**01 22 05.2**	**+3.5**
BUKP	**Musuan**	**2.99**	**355**	⇓*e*P	**Pn**	**01 22 14.9**	**+2.6**
BUKP				*e*S	**Sn**	**01 22 50.0**	**+2.6**
PAGZ	**Pagadian**	**3.52**	**327**	⇑*e*P	**Pn**	**01 22 19.3**	**-0.1**
PAGZ				*e*S	**Sn**	**01 22 57.2**	**-2.9**
GTOI	**Gorontalo**	**4.81**	**209**	P	**Pn**	**01 22 37.3**	**+0.5**
GTOI				S	Sn	01 23 27.5	-3.8
MRSI	**Marisa**	**5.52**	**218**	P	**Pn**	**01 22 48.9**	**+2.4**
MRSI	0.4nm2μm41nm,0.5s			S	**Sn**	**01 23 46.6**	**-2.1**
MYLDM	**Lahad Datu**	**6.80**	**273**	P	**Pn**	**01 23 06.3**	**+2.5**
APSI	**Ampana**	**6.82**	**213**	P	Pn	01 23 10.1	+6.0
MPSI	**Mapaga**	**7.05**	**230**	P	**Pn**	**01 23 07.9**	**+0.7**

*SOME **15** 01:27:55.1,42.°23N×81.°52E,h15km*
*NNC **15** 01:27:56.4±1.0,42.°23N×81.°48E,h0km,mb3.7,mpv3.6,*
Error ellipse: s-maj=6.9km s-min=4.4km az=160.0
ISC 15 01:27:55.4±2.1,42.°03N±0.°10×81.°26E±0.°06,h14km±11km,
n41,σ1°40/64,9C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.57**	**335**	*e*P	**Pn**	**01 28 23.3**	**+0.3**
KTMS	15nm,0.2s			*e*S	**Sn**	**01 28 43.4**	**+0.2**
KTMS	**Ketmen**	**1.57**	**335**	P	**Pn**	**01 28 23.3**	**+0.3**
KTMS	15nm,0.2s			S	**Sn**	**01 28 43.4**	**+0.2**
SHLS	**Shalkode**	**1.74**	**311**	*e*P	**Pn**	**01 28 24.4**	**-1.0**
SHLS	22nm,0.1s			*e*S	**Sn**	**01 28 45.4**	**-2.0**
SHLS	**Shalkode**	**1.74**	**311**	P	**Pn**	**01 28 24.4**	**-1.0**
SHLS	22nm,0.1s			S	**Sn**	**01 28 45.4**	**-2.0**
PDGK	**Podgornoye**	**1.84**	**316**	⇑P	**Pb**	**01 28 29.6**	**+0.7**
PDGK	5.6nm,0.4s			⇓S	**Sg**	**01 28 55.4**	**+0.8**
UZB	**Uzynbulak**	**1.99**	**305**	*e*P	**Pg**	**01 28 33.3**	**-0.4**
UZB	16nm,0.3s			*e*S	**Sg**	**01 29 00.8**	**+1.4**
UZB	**Uzynbulak**	**1.99**	**305**	Pg	**Pg**	**01 28 33.3**	**-0.4**
UZB	16nm,0.3s			Lg	Lg	01 29 00.8	
SATY	**Saty**	**2.34**	**297**	*e*P	**Pg**	**01 28 40.9**	**+0.5**
SATY	14nm,0.1s			*e*S	**Sg**	**01 29 14.0**	**+3.3**
SATY	**Saty**	**2.34**	**297**	Pg	**Pg**	**01 28 40.9**	**+0.5**
SATY	14nm,0.1s			Lg	Lg	01 29 14.0	
KPKS	**Kokpek**	**2.38**	**308**	*e*P	**Pg**	**01 28 39.9**	**-1.1**
KPKS	17nm,0.1s			*e*S	**Sg**	**01 29 12.3**	**+0.5**
KPKS	**Kokpek**	**2.38**	**308**	Pg	**Pg**	**01 28 39.9**	**-1.1**
KPKS	17nm,0.1s			Lg	Lg	01 29 12.3	
DJR	**Jarkent**	**2.54**	**336**	*e*P	**Pb**	**01 28 39.7**	**-1.1**
DJR	4.2nm,0.2s			*e*S	**Sb**	**01 29 11.8**	**-0.2**
DJR	**Jarkent**	**2.54**	**336**	Pg	**Pb**	**01 28 39.7**	**-1.1**
DJR	4.2nm,0.2s			Lg	Lg	01 29 11.8	
BLB	**Baldybastay**	**2.90**	**316**	*e*P	**Pb**	**01 28 48.1**	**+1.1**
BLB	14nm,0.2s			*e*S	**Sg**	**01 29 26.1**	**-2.5**
BLB	**Baldybastay**	**2.90**	**316**	Pg	**Pb**	**01 28 48.1**	**+1.1**
BLB	14nm,0.2s			Lg	Lg	01 29 26.1	
KOTS	**Kotyrbulak**	**3.29**	**293**	*e*P	**Pg**	**01 28 57.0**	**-1.3**
KOTS	7.2nm,0.4s			*e*S	**Sg**	**01 29 41.6**	**+0.7**
KOTS	**Kotyrbulak**	**3.29**	**293**	Pg	**Pg**	**01 28 57.0**	**-1.3**
KOTS	7.2nm,0.4s			Lg	Lg	01 29 41.6	
MDOK	**Medeo**	**3.31**	**291**	*e*P	**Pg**	**01 28 57.4**	**-1.4**
MDOK	7.1nm,0.5s			*e*S	**Sg**	**01 29 42.3**	**+0.7**
MDOK	**Medeo**	**3.31**	**291**	Pg	**Pg**	**01 28 57.4**	**-1.4**
MDOK	7.1nm,0.5s			Pg	Pb	01 28 58.8	+4.9
MDOK	4.7nm,0.5s			Lg	Lg	01 29 42.3	
MDOK	12nm,0.6s			⇑Lg	Lg	01 29 45.9	
TNSS	**Tian-Shan**	**3.34**	**289**	*e*P	**Pg**	**01 28 58.2**	**-1.2**
TNSS	4.7nm,0.3s			*e*S	**Sg**	**01 29 43.6**	**+0.9**
TNSS	**Tian-Shan**	**3.34**	**289**	Pg	**Pg**	**01 28 58.2**	**-1.2**
TNSS	4.7nm,0.3s			Lg	Lg	01 29 43.6	
TDK	**Taldyqorghan**	**3.62**	**326**	*e*P	**Pb**	**01 28 59.7**	**+0.5**
TDK	25nm,0.2s			*e*S	**Sb**	**01 29 46.2**	**+3.2**
TDK	**Taldyqorghan**	**3.62**	**326**	Pg	**Pb**	**01 28 59.7**	**+0.5**
TDK	25nm,0.2s			Lg	Lg	01 29 46.3	
CHKK	**Chushkaly**	**3.63**	**302**	*e*P	**Pg**	**01 29 02.3**	**-2.5**
CHKK	2.3nm,0.0s			*e*S	**Sg**	**01 29 50.6**	**-1.2**
CHKK	**Chushkaly**	**3.63**	**302**	Pg	**Pg**	**01 29 02.3**	**-2.5**
CHKK	2.3nm,0.0s			Lg	Lg	01 29 50.6	
MTBS	**Maitube**	**3.73**	**289**	*e*P	**Pg**	**01 29 05.7**	**-1.2**
MTBS	4.0nm,0.2s			*e*S	**Sg**	**01 29 56.4**	**+1.2**
MTBS	**Maitube**	**3.73**	**289**	Pg	**Pg**	**01 29 05.7**	**-1.2**
MTBS	4.0nm,0.2s			Lg	Lg	01 29 56.4	
KST	**Kastek**	**4.04**	**286**	*e*P	**Pg**	**01 29 11.5**	**-1.2**
KST	4.8nm,0.3s			*e*S	**Sg**	**01 30 06.5**	**+1.4**
KST	**Kastek**	**4.04**	**286**	Pg	**Pg**	**01 29 11.5**	**-1.2**
KST	4.8nm,0.3s			Lg	Lg	01 30 06.5	
KUU	**Kurty**	**4.06**	**299**	*e*P	**Pg**	**01 29 11.3**	**-1.8**
KUU	1.9nm,0.2s			*e*S	**Sg**	**01 30 06.3**	**+0.5**
KUU	**Kurty**	**4.06**	**299**	Pg	**Pg**	**01 29 11.3**	**-1.8**
KUU	1.9nm,0.2s			Lg	Lg	01 30 06.3	
TKM2	**Tokmak 2**	**4.28**	**284**	⇑Pg	**Pg**	**01 29 17.3**	**0.0**
TKM2	3.2nm,0.6s			⇑Lg	Lg	01 30 17.5	
KRBS	**Karabastau**	**4.43**	**294**	*e*P	**Pg**	**01 29 18.2**	**-2.0**
KRBS	2.6nm,0.5s			*e*S	**Sg**	**01 30 17.9**	**+0.4**
KRBS	**Karabastau**	**4.43**	**294**	Pg	**Pg**	**01 29 18.2**	**-2.0**
KRBS	2.6nm,0.5s			Lg	Lg	01 30 17.9	
MAKZ	**Makanchi**	**4.81**	**6**	⇓Pn	**Pn**	**01 29 07.6**	**+0.3**
MAKZ	1.5nm,0.2s			⇑Sn	**Sn**	**01 30 02.5**	**-0.4**
MAKZ	4.8nm,0.8s			⇑Lg	Lg	01 30 20.1	
MK31	**Makanchi Array**	**4.82**	**8**	⇓Pn	**Pn**	**01 29 07.5**	**-0.1**
MK31	0.4nm,0.3s,baz=188,slow=12,SNR=36			⇑Pg	**Pb**	**01 29 21.0**	**+1.3**
MK31	0.7nm,0.3s,baz=181,slow=14,SNR=3.8			⇑Sn	**Sn**	**01 30 02.7**	**-0.6**
MK31	2.0nm,0.5s,baz=45,slow=12,SNR=5.6			⇓Lg	Lg	01 30 19.5	
SGDS	**Sogindy**	**5.08**	**288**	*e*P	**Pg**	**01 29 30.8**	**-1.9**
SGDS	1.3nm,0.2s			*e*S	**Sg**	**01 30 39.6**	**+1.1**
SGDS	**Sogindy**	**5.08**	**288**	Pg	**Pg**	**01 29 30.8**	**-1.9**
SGDS	1.3nm,0.2s			Lg	Lg	01 30 39.6	
ZSN	**Zaisan**	**6.00**	**24**	*e*P	**Pb**	**01 29 39.2**	**-0.5**
ZSN	3.4nm,0.4s			*e*S	**Sb**	**01 30 54.1**	**+2.7**
ZSN	**Zaisan**	**6.00**	**24**	Pg	**Pb**	**01 29 39.2**	**-0.5**
ZSN	3.4nm,0.4s			Lg	Lg	01 30 54.1	
KK31	**Karatay Array**	**8.00**	**281**	⇑Lg	Lg	01 32 15.8	
	0.7nm,0.5s,baz=93,slow=28,SNR=5.4						

*IDC **15** 01:40:56.2±8.6,36.°20N×71.°57E,h73km±39km,mb3.3/2,*
mbtmp3.7/8,ML3.6/6,Error ellipse: s-maj=120.6km
s-min=30.0km az=157.0
*NNC **15** 01:41:06.5±3.5,37.°18N×71.°03E,h72km±69km,mb3.7,*
mpv4.0,Error ellipse: s-maj=29.1km s-min=27.2km
az=65.0
ISC 15 01:41:05.7±1.8,37.°1N±0.°1×71.°0E±0.°1,h100km,n21,
σ1°27/25,3C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.39**	**21**	P	**Pn**	**01 42 24.4**	**+0.4**
	SNR=28						
UCH	**Uchtor**	**5.74**	**27**	P	**Pn**	**01 42 28.9**	**+0.1**
	SNR=9.2						
EKS2	**Erkin-Say**	**5.90**	**20**	P	**Pn**	**01 42 31.6**	**+0.9**
	SNR=10						
KK31	**Karatay Array**	**5.97**	**356**	⇓P	**Pn**	**01 42 32.5**	**+1.0**
	6.6nm,0.4s,baz=181,slow=12,SNR=188						
KK31				S	**Sn**	**01 43 39.2**	**+0.7**
	2.0nm,0.3s,baz=179,slow=20,SNR=5.7						
AAK	**Ala-Archa**	**6.10**	**25**	P	**Pn**	**01 42 33.9**	**+0.5**
	SNR=13						
AAK	**Ala-Archa**	**6.10**	**25**	P	**Pn**	**01 42 33.9**	**+0.5**
	3.9nm,0.3s,baz=182,slow=6.3,SNR=33						
AAK				S	**Sn**	**01 43 41.4**	**-0.3**
	3.5nm,0.5s,baz=346,slow=21,SNR=10						
	9.9nm,0.3s						
CHMS	**Chumysh**	**6.50**	**25**	P	**Pn**	**01 42 39.0**	**+0.2**
	SNR=9.5						
CHMS	**Chumysh**	**6.50**	**25**	⇑P	**Pn**	**01 42 38.7**	**-0.1**
	6.5nm,0.3s						
CHMS				⇑S	**Sn**	**01 43 52.1**	**+0.6**
	7.1nm,0.7s						
USP	**Ospenovka**	**6.67**	**22**	P	**Pn**	**01 42 40.7**	**-0.3**
	SNR=11						
TKM2	**Tokmak 2**	**6.75**	**30**	P	**Pn**	**01 42 42.2**	**-0.1**
	SNR=6.4						
TKM2	**Tokmak 2**	**6.75**	**30**	⇑P	**Pn**	**01 42 42.2**	**-0.1**
	3.1nm,0.4s						
GEYT	**Alibeck**	**10.30**	**278**	P	**Pn**	**01 43 29.1**	**-1.3**
	0.5nm,0.3s,baz=104,slow=8.2,SNR=6.5						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**12.76**	**37**	P	**Pn**	**01 44 01.6**	**-1.7**
	0.1nm,0.3s,baz=226,slow=15,SNR=4.5						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**14.51**	**19**	P	**P**	**01 44 29.1**	**-0.6**
	0.1nm,0.3s,baz=212,slow=8.7,SNR=2.4						
	0.9nm,0.3s						
AB31	**Akbulak array**	**14.54**	**330**	P	**Pn**	**01 44 25.6**	**-0.8**
	0.3nm,0.3s,baz=136,slow=13,SNR=26						
AB31				S	**Sn**	**01 47 04.0**	**-2.6**
	0.2nm,0.4s,baz=153,slow=22,SNR=4.2						
BVA0	**Borovoye Array**	**15.89**	**359**	P	**P**	**01 44 46.5**	**+1.4**
	1.8nm,1.1s,baz=163,slow=11,SNR=5.2						
BVAR	**Borovoye Array**	**15.89**	**359**	P	**P**	**01 44 47.2**	**+2.1**
	0.2nm,0.3s,baz=172,slow=12,SNR=6.9						
	0.3nm,0.4s						
AKTO	**Aktyubinsk**	**16.25**	**329**	P	**P**	**01 44 50.8**	**+1.7**
	0.4nm,0.3s,baz=138,slow=11,SNR=8.0						
	1.4nm,0.4s						
AKTO	**Aktyubinsk**	**16.25**	**329**	⇓P	**P**	**01 44 51.4**	**+2.4**
	2.6nm,0.9s						
ZALV	**Zalesovo Beam**	**19.32**	**25**	P	**P**	**01 45 21.8**	**-1.0**
	0.9nm,0.4s,baz=227,slow=10,SNR=3.7						

0.9nm,0.4s
FINES FINESS Array B 36.97 326 P **P** **01 48 07.0 +2.1**
0.4nm,0.4s,baz=110,slow=8.3,SNR=4.5
0.4nm,0.4s

*IDC **15** 01:53:23.8±5.5, 6°.56S×130°.02E, h110km±73km, mb3.2/1, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=143.9km s-min=24.7km az=81.0*
ISC 15 01:53:23.4±1.0, 6°.51S±0°.07×130°.3E±0°.2, h100km, n8, σ3°27/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.69**	**10**	P	**Pn**	**01 54 47.5**	**+1.9**
	3.0nm,0.3s,baz=247,slow=22,SNR=21						
SIJI				S	**Sn**	**01 55 47.1**	**-2.5**
	9.1nm,0.3s,baz=306,slow=19,SNR=1.9						
	6.8nm,0.3s						
MTN	**Manton Dam**	**6.35**	**172**	P	**Pn**	**01 54 57.4**	**+2.9**
KDU	**Kakadu**	**6.51**	**161**	P	**Pn**	**01 54 59.6**	**+2.9**
KNRA	**Kununurra**	**9.23**	**189**	P	**Pn**	**01 55 33.7**	**0.0**
WRAB	**Tennant Creek**	**13.92**	**164**	P	**Pn**	**01 56 35.5**	**-0.9**
WRA	**Warramunga Arr**	**13.93**	**164**	P	**Pn**	**01 56 35.1**	**-1.4**
	0.4nm,0.3s,baz=346,slow=13,SNR=40						
WRA				S	Sn	01 58 59.1	-11
	0.5nm,0.5s,baz=337,slow=25,SNR=3.1						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**17.41**	**169**	P	**Pn**	**01 57 21.0**	**+0.8**
	0.3nm,0.3s,baz=340,slow=8.6,SNR=12						
ASAR				S	**Sn**	**02 00 27.6**	**-6.5**
	0.4nm,0.7s,baz=357,slow=29,SNR=2.5						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**67.96**	**327**	P	**P**	**02 04 10.2**	**-1.5**
	0.3nm,0.5s,baz=116,slow=8.2,SNR=4.2						
	0.3nm,0.5s						

TRN 15 01:57:55.6, 19°.67N×62°.68W, h89km, MD4.0, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**1.65**	**193**	*eP*	Pn	01 58 24.5	+1.2
ANWB	**Willy Bob**	**2.16**	**157**	*eP*	Pn	01 58 30.6	+0.7
ANWB				*eS*	Sn	01 58 58.0	+2.0
SEUS	**St. Eustatius**	**2.18**	**188**	*eP*	Pn	01 58 32.6	+2.5
ANBD	**Bethesda, Anti**	**2.75**	**161**	*eP*	Pn	01 58 38.8	+1.1
ANBD				*eS*	Sn	01 59 09.9	-0.1
MBFL	**Flemmings, Mon**	**2.94**	**171**	*eP*	Pn	01 58 41.8	+1.5
MBFL				*eS*	Sn	01 59 16.2	+1.5
CBE	**Ff, Capester**	**3.72**	**164**	*eP*	Pn	01 58 52.8	+1.9
CBE				*eS*	Sn	01 59 33.7	0.0
TBG	**Guadaloupe-3**	**3.92**	**165**	*eP*	Pn	01 58 55.9	+2.4
TDBA	**Terre de Bas,**	**3.92**	**165**	*eP*	Pn	01 58 55.9	+2.3
MAGL	**Barre de l'ile**	**3.93**	**160**	*eP*	Pn	01 58 55.4	+1.7
AOPR	**Arecibo Observ**	**4.07**	**252**	*eP*	Pn	01 58 56.7	+1.1
AOPR	**Arecibo Observ**	**4.07**	**252**	*eS*	Sn	01 59 42.0	-0.2
DSLB	**Salisbury**	**4.37**	**164**	*eP*	Pn	01 59 01.8	+2.0
MPOM	**Morne Pois Mar**	**5.48**	**161**	*eP*	Pn	01 59 15.7	+1.0

*IDC **15** 02:25:01.7±3.4, 18°.91N×145°.31E, h217km±33km, mb3.5/9, mbtmp4.1/10, Error ellipse: s-maj=35.3km s-min=16.1km az=107.0*
*NEIC **15** 02:25:06.2±0.7, 18°.4N±0°.1×144°.9E±0°.5, h211km±22km, mb4.0/7, Error ellipse: s-maj=63.5km s-min=16.7km az=85.0*
ISC 15 02:24:60.0±0.7, 18°.82N±0°.08×145°.5E±0°.2, h200km, n20, σ1°32/20, mb3.8/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.23**	**187**	P	**Pn**	**02 26 20.6**	**+3.2**
	18nm,0.3s,baz=180,slow=20,SNR=1.6						
GUMO				S	**Sn**	**02 27 17.2**	**-1.4**
	28nm,0.6s,baz=197,slow=20,SNR=1.3						
GUMO	**Guam**	**5.23**	**187**	Pn	**Pn**	**02 26 17.0**	**-0.4**
COEN	**Coen**	**32.65**	**184**	P	**P**	**02 31 13.4**	**+0.1**
COEN				IAmb	IAmb	02 31 13.8	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**40.05**	**196**	P	**P**	**02 32 16.3**	**+0.5**
	comp=Z,8.3nm,0.5s,baz=22,slow=9.1,SNR=136						
	comp=Z,8.3nm,0.5s						
WRA	**Warramunga Arr**	**40.05**	**196**	P	**P**	**02 32 15.1**	**-0.7**
WRA				IAmb	IAmb	02 32 17.3	
	comp=Z,0.6nm,0.7s						
AS31	**Alice Springs**	**43.71**	**195**	P	**P**	**02 32 43.9**	**-1.6**
AS31				IAmb	IAmb	02 32 48.9	
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**43.72**	**195**	P	**P**	**02 32 45.5**	**0.0**
	comp=Z,1.3nm,0.7s,baz=19,slow=9.0,SNR=19						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**43.72**	**195**	P	**P**	**02 32 45.9**	**+0.3**
MBWA	**Marble Bar**	**47.07**	**214**	P	**P**	**02 33 11.2**	**-0.6**
MBWA				IAmb	IAmb	02 33 19.4	
	comp=Z,28nm,1.4s						
PSA00	**Pilbara Seismi**	**47.35**	**213**	P	**P**	**02 33 13.1**	**-0.9**
MORW	**Morawa**	**55.46**	**212**	P	**P**	**02 34 13.7**	**-0.4**
MKAR	**Makanchi Array**	**58.24**	**314**	P	**P**	**02 34 33.2**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=85,slow=8.1,SNR=2.9						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**58.24**	**314**	P	P	02 34 37.0	+3.5
ILAR	**Eielson Array**	**63.62**	**26**	P	**P**	**02 35 08.8**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=249,slow=6.0,SNR=9.5						
	comp=Z,0.7nm,0.5s						
NIL	**Nilore**	**65.31**	**299**	P	**P**	**02 35 23.1**	**+2.2**
NIL				IAmb	IAmb	02 35 23.7	
	comp=Z,9.8nm,1.5s						
INK	**Inuvik**	**69.34**	**23**	P	**P**	**02 35 44.8**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=319,slow=11,SNR=3.0						
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**82.32**	**342**	P	**P**	**02 36 58.0**	**-0.9**
	comp=Z,1.7nm,1.0s,baz=28,slow=9.6,SNR=1.1						
	comp=Z,1.7nm,1.0s						
NVAR	**Mina Array Bea**	**83.22**	**52**	P	**P**	**02 37 06.0**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=268,slow=5.9,SNR=12						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**86.70**	**335**	P	**P**	**02 37 19.1**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=79,slow=4.1,SNR=8.0						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**87.88**	**45**	P	**P**	**02 37 27.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=242,slow=1.9,SNR=2.1						
	comp=Z,0.2nm,0.4s						

*NEIC **15** 02:26:48.0±0.8, 23°.8S±0°.2×179°.63W±0°.09, h415km±11km, mb4.2/21, Error ellipse: s-maj=22.7km s-min=11.1km az=190.0*
*IDC **15** 02:26:49.9±8.5, 23°.75S×179°.68W, h425km±89km, mb3.7/7, mbtmp4.5/7, Error ellipse: s-maj=42.5km s-min=20.3km az=46.0*
ISC 15 02:26:46.8±0.7, 23°.8S±0°.1×179°.6W±0°.1, h400km, n32, σ1°00/32, mb4.2/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.42**	**340**	P	**Pn**	**02 28 24.9**	**+0.7**
NIUE	**Niue**	**10.20**	**64**	P	**P**	**02 29 06.5**	**-0.2**
LTZ	**Lake Taylor**	**20.07**	**198**	P	**P**	**02 30 51.6**	**-0.1**
RPZ	**Rata Peaks**	**21.28**	**199**	P	**P**	**02 31 04.8**	**+2.1**
	9.8nm,0.5s,baz=23,slow=1.7,SNR=11						
	9.8nm,0.5s						
ARMA	**Armidale**	**26.36**	**249**	P	**P**	**02 31 47.7**	**-1.0**
ARMA				IAmb	IAmb	02 31 53.1	
	comp=Z,16nm,1.4s						
EIDS	**Eidsvold**	**26.64**	**261**	P	**P**	**02 31 50.8**	**-0.3**
CAN	**Canberra**	**29.47**	**240**	P	**P**	**02 32 16.1**	**+0.1**
CAN				IAmb	IAmb	02 32 19.6	
	comp=Z,14nm,1.3s						
CTA	**Charters Tower**	**31.80**	**270**	P	**P**	**02 32 38.6**	**+2.2**
	comp=Z,13nm,0.4s,baz=98,slow=12						
	comp=Z,13nm,0.4s						
CTAO	**Charters Tower**	**31.80**	**270**	P	**P**	**02 32 36.4**	**+0.1**
TOO	**Toolangi**	**32.77**	**237**	P	**P**	**02 32 44.1**	**-0.4**
TOO				IAmb	IAmb	02 32 47.1	
	comp=Z,7.5nm,0.7s						
TAU	**Tasmania Unive**	**33.23**	**227**	P	**P**	**02 32 48.4**	**+0.1**
STKA	**Stephens Creek**	**35.06**	**248**	P	**P**	**02 33 05.5**	**+1.6**
	comp=Z,2.4nm,0.5s,baz=87,slow=6.8,SNR=13						
	comp=Z,2.4nm,0.5s						
STKA	**Stephens Creek**	**35.06**	**248**	P	**P**	**02 33 02.7**	**-1.3**
BBOO	**Buckleboo**	**39.78**	**247**	P	**P**	**02 33 42.7**	**-0.4**
BBOO				IAmb	IAmb	02 33 49.5	
	comp=Z,25nm,1.4s						

AS31	**Alice Springs**	**42.37**	**260**	P	**P**	**02 34 03.7**	**-0.4**
ASAR	**Alice Springs**	**42.37**	**260**	P	**P**	**02 34 04.5**	**+0.4**
	comp=Z,7.0nm,0.7s,baz=99,slow=7.8,SNR=44						
	comp=Z,7.0nm,0.7s						
ASAR	**Alice Springs**	**42.37**	**260**	P	**P**	**02 34 03.9**	**-0.1**
WB2	**Warramunga Arr**	**42.73**	**266**	P	**P**	**02 34 06.5**	**-0.4**
WB2				IAmb	IAmb	02 34 07.4	
	comp=Z,8.7nm,0.7s						
WRA	**Warramunga Arr**	**42.74**	**266**	P	**P**	**02 34 06.8**	**-0.2**
	comp=Z,7.5nm,0.5s,baz=96,slow=8.4,SNR=53						
	comp=Z,7.5nm,0.5s						
WRA	**Warramunga Arr**	**42.74**	**266**	P	**P**	**02 34 06.0**	**-1.0**
FORT	**Forrest**	**46.65**	**249**	P	**P**	**02 34 36.6**	**-0.6**
MTN	**Manton Dam**	**47.77**	**274**	P	**P**	**02 34 45.4**	**-0.6**
MTN				IAmb	IAmb	02 34 51.6	
	comp=Z,18nm,1.4s						
KNRA	**Kununurra**	**49.01**	**270**	P	**P**	**02 34 54.7**	**-0.6**
KNRA				IAmb	IAmb	02 35 00.2	
	comp=Z,8.8nm,0.9s						
VNDA	**Vanda**	**54.49**	**185**	P	**P**	**02 35 36.2**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=14,slow=6.5,SNR=7.8						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**54.49**	**185**	P	**P**	**02 35 35.4**	**+1.0**
PSA00	**Pilbara Seismi**	**55.50**	**259**	P	**P**	**02 35 41.6**	**-0.8**
PSA00				IAmb	IAmb	02 35 45.1	
	comp=Z,7.4nm,1.0s						
MBWA	**Marble Bar**	**55.71**	**260**	P	**P**	**02 35 43.3**	**-0.6**
MBWA				IAmb	IAmb	02 35 56.1	
	comp=Z,20nm,1.3s						
QSPA	**South Pole Qui**	**66.27**	**180**	P	**P**	**02 36 53.9**	**+0.6**
QSPA				IAmb	IAmb	02 36 54.8	
	comp=Z,2.0nm,0.8s						
BELA	**Belgrano 2**	**76.48**	**173**	P	**P**	**02 37 51.5**	**-1.8**
TXAR	**Lajitas Array**	**90.11**	**58**	P	**P**	**02 39 03.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=212,slow=7.4,SNR=8.3						
	comp=Z,0.6nm,0.7s						
BRTR	**Keskin Array B**	**147.78**	**307**	PKPbc	**PKiKP**	**02 45 47.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=88,slow=2.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**169.32**	**187**	PKPab	**PKPab**	**02 47 21.2**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=158,slow=4.7,SNR=2.2						

*WEL **15** 02:28:15.1±1.2, 37°.S±5°.×17°.9E±°, h20km±6km, M2.8/12, ML3.2/16, MLv2.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=95.9*
*NOU **15** 02:28:18.4, 37°.32S×178°.39E, h18km, MLv3.0/5, Off E. Coast of N. Island, N.Z.*
*IDC **15** 02:28:19.4±2.6, 36°.99S×177°.25E, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=63.7km s-min=22.3km az=78.0*
ISC 15 02:28:13.8±2.4, 37°.21S±0°.06×178°.9E±0°.1, h25km±13km, n29, σ0°95/37, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.59**	**233**	P	**Pb**	**02 28 25.5**	**0.0**
MXZ				S	**Sb**	**02 28 33.2**	**-0.3**
MXZ	**Matakaoa Point**	**0.59**	**233**	P	**Pb**	**02 28 25.4**	**0.0**
WMGZ	**Waiomatatini S**	**0.72**	**212**	P	**Pn**	**02 28 29.2**	**+0.8**
PKGZ	**Pakihiroa**	**0.94**	**224**	P	**Pn**	**02 28 31.8**	**+0.3**
PKGZ				S	**Sn**	**02 28 45.2**	**+1.0**
PUZ	**Puketiti**	**1.00**	**210**	P	**Pn**	**02 28 32.8**	**+0.5**
PUZ				S	**Sn**	**02 28 46.0**	**+0.4**
HAZ	**Te Kaha**	**1.04**	**238**	P	**Pb**	**02 28 32.6**	**-0.5**
HAZ				S	**Sn**	**02 28 48.0**	**+1.4**
TWGZ	**Tauwhareparae**	**1.21**	**217**	P	**Pb**	**02 28 36.3**	**+0.2**
TWGZ				S	**Sn**	**02 28 52.1**	**+1.3**
RUGZ	**Raukumara Rang**	**1.23**	**232**	P	**Pb**	**02 28 36.6**	**+0.2**
CNGZ	**Carnagh Statio**	**1.39**	**203**	P	**Pb**	**02 28 38.7**	**-0.3**
MWZ	**Matawai**	**1.56**	**224**	P	**Pn**	**02 28 40.9**	**+0.9**
RIGZ	**Rimuhau**	**1.75**	**211**	P	**Pn**	**02 28 42.9**	**+0.4**
URZ	**Urewera**	**1.76**	**233**	Pn	**Pn**	**02 28 43.8**	**+1.1**
	4.3nm,0.3s,baz=146,slow=8.4,SNR=34						
URZ				Sn	**Sn**	**02 29 04.0**	**-0.3**
	11nm,0.3s,baz=67,slow=18,SNR=16						
URZ	**Urewera**	**1.76**	**233**	P	**Pn**	**02 28 43.5**	**+0.8**
URZ				S	**Sn**	**02 29 03.9**	**-0.5**
URZ	**Urewera**	**1.76**	**233**	P	**Pn**	**02 28 43.5**	**+0.8**
RTZ	**Ruatahuna**	**2.07**	**227**	P	**Pn**	**02 28 48.5**	**+1.5**
MTHZ	**Maungataniwha**	**2.31**	**224**	P	**Pn**	**02 28 51.0**	**+0.7**
MTHZ				S	**Sn**	**02 29 18.0**	**0.0**
KUZ	**Kuaotunu**	**2.59**	**279**	P	**Pn**	**02 28 53.5**	**-0.5**
KUZ	**Kuaotunu**	**2.59**	**279**	P	**Pn**	**02 28 53.5**	**-0.5**
BKZ	**Black Stump Fm**	**2.72**	**223**	P	**Pn**	**02 28 56.3**	**+0.3**
BKZ	**Black Stump Fm**	**2.72**	**223**	P	**Pn**	**02 28 56.1**	**+0.1**
KWHZ	**Kaweka Forest**	**2.95**	**221**	P	**Pn**	**02 28 58.9**	**-0.2**
MKAZ	**Moumakai**	**2.99**	**271**	P	**Pn**	**02 28 59.6**	**+0.1**
RVAZ	**Riverhead Bore**	**3.48**	**276**	P	**Pn**	**02 29 07.3**	**+0.9**
WCZ	**Waipu Caves**	**3.88**	**288**	P	**Pn**	**02 29 12.8**	**+1.0**
OUZ	**Omahuta**	**4.72**	**293**	P	**Pn**	**02 29 25.0**	**+1.7**
OUZ	**Omahuta**	**4.72**	**293**	P	**Pn**	**02 29 25.1**	**+1.7**
ASAR	**Alice Springs**	**40.71**	**276**	P	**P**	**02 35 50.1**	**-2.4**
	0.3nm,0.5s,baz=124,slow=6.4,SNR=1.6						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.33**	**281**	P	**P**	**02 36 04.6**	**-1.2**
	0.2nm,0.3s,baz=120,slow=8.4,SNR=2.4						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**150.38**	**334**	PKPbc	**PKPab**	**02 48 09.8**	**+1.3**
	2.1nm,0.9s,baz=96,slow=2.8,SNR=4.5						

IDC 15 02:33:57.4±2.3, 2°.99S×151°.36E, h0km, mb3.5/2, mbtmp3.5/2, MS2.9/2, Error ellipse: s-maj=44.4km s-min=34.0km az=49.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.47**	**153**	Pn	Pn	02 34 25.1	-0.1
	36nm,0.3s,baz=223,slow=3.0,SNR=9.5						
KRVT				Sn	Sn	02 34 52.5	+7.3
	53nm,0.3s,baz=205,slow=19,SNR=9.3						
PMG	**Port Moresby**	**7.62**	**213**	LR	LR	02 39 05.9	
	comp=Z,85nm,19.8s,baz=60,slow=40						
WRA	**Warramunga Arr**	**23.66**	**223**	P	P	02 39 11.0	+0.2
	1.2nm,0.8s,baz=51,slow=10.0,SNR=8.1						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**26.60**	**218**	P	P	02 39 38.6	+0.9
	0.7nm,0.7s,baz=56,slow=8.8,SNR=6.8						
	0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.81**	**295**	LR	LR	03 03 23.1	
	comp=Z,13nm,21.7s,baz=25,slow=32						
TORD	**Torodi Ar. Bea**	**148.35**	**290**	PKPbc	PKPbc	02 53 45.3	-1.6
	0.8nm,0.7s,baz=68,slow=2.3,SNR=7.0						

*IDC **15** 02:44:48.7±1.0, 23°.95S×66°.74W, h186km±9km, mb3.6/8, mbtmp4.2/14, MS3.2/3, Error ellipse: s-maj=15.6km s-min=12.1km az=22.0*
*NEIC **15** 02:44:48.8±1.4, 24°.11S±0°.05×66°.88W±0°.09, h193km±7km, mb4.5/27, Md4.7(SJA), ML4.7(GUC), Error ellipse: s-maj=12.6km s-min=7.1km az=76.0*
*GUC **15** 02:44:49.6±0.4, 24°.08S×67°.17W, h226km±6km, ML4.8*
*SJA **15** 02:44:49.7±1.1, 24°.11S×66°.92W, h180km, ML4.4, MW4.2*
ISC 15 02:44:48.9±0.7, 24°.07S±0°.03×66°.95W±0°.04, h195km±6km, n123, σ1°21/150, mb4.3/20, 15C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.47**	**117**	*eP*	**Pn**	**02 45 22.7**	**+0.6**
AF01	**San Pedro de A**	**1.58**	**314**	Pn	**Pn**	**02 45 25.2**	**+1.9**
AF01	**San Pedro de A**	**1.58**	**314**	*iP*	**Pn**	**02 45 25.2**	**+1.9**
HJA	**Humahuaca**	**1.65**	**59**	*eP*	**Pn**	**02 45 24.0**	**0.0**
AZAP	**Zapla**	**1.73**	**96**	*eP*	**Pn**	**02 45 24.6**	**0.0**
ASTB	**Santa Barbara**	**2.29**	**88**	*eP*	**Pn**	**02 45 30.1**	**-0.1**
YJA	**Yavi**	**2.30**	**35**	*eP*	**Pn**	**02 45 31.5**	**+0.7**
YJA				*eS*	**Sn**	**02 46 04.4**	**+1.1**
LVC	**Limon Verde**	**2.31**	**308**	P	**Pn**	**02 45 32.0**	**+1.2**
	521nm,0.5s,baz=130,slow=5.3,SNR=948						
LVC				LR	LR	02 45 58.8	
	comp=Z,129nm,20.0s,baz=101,slow=29						
LVC				S	**Sn**	**02 46 03.7**	**+0.2**
	370nm,0.5s,baz=284,slow=20,SNR=21						
LVC	**Limon Verde**	**2.31**	**308**	Pn	**Pn**	**02 45 31.9**	**+1.1**
LVC	**Limon Verde**	**2.31**	**308**	*iP*	**Pn**	**02 45 32.0**	**+1.2**
LVC				*eS*	**Sn**	**02 46 04.3**	**+0.9**
LVC	**Limon Verde**	**2.31**	**308**	*eP*	**Pn**	**02 45 32.1**	**+1.2**
LVC				*eS*	**Sn**	**02 46 05.3**	**+1.9**
PB15	**IPOC Station P**	**2.47**	**290**		**Pn**	**02 45 33.6**	**+1.3**
PB15	**IPOC Station P**	**2.47**	**290**	*iP*	**Pn**	**02 45 33.6**	**+1.3**
PB15				*eS*	**Sn**	**02 46 06.2**	**0.0**
PB15	**IPOC Station P**	**2.47**	**290**	*eP*	**Pn**	**02 45 33.7**	**+1.3**
PB15				*eS*	**Sn**	**02 46 06.3**	**+0.1**
PB15				IAML		02 46 11.4	
	comp=Z,3μm,0.2s						
GO02	**Mina Guanaco**	**2.64**	**245**		**Pn**	**02 45 35.3**	**+1.0**
GO02	**Mina Guanaco**	**2.64**	**245**	*iP*	**Pn**	**02 45 35.3**	**+1.0**
GO02				*eS*	**Sn**	**02 46 10.2**	**+0.3**
GO02				IAML		02 46 12.0	
	comp=N,3μm,0.3s						
GO02	**Mina Guanaco**	**2.64**	**245**	*eP*	**Pn**	**02 45 35.4**	**+1.0**
GO02				*eS*	**Sn**	**02 46 10.9**	**+1.0**
ALOL	**LOMAS DE OLMED**	**2.73**	**85**	*eP*	**Pn**	**02 45 34.9**	**-0.2**
PB06	**IPOC Station P**	**2.77**	**299**		**Pn**	**02 45 36.8**	**+1.0**
PB06	**IPOC Station P**	**2.77**	**299**	*iP*	**Pn**	**02 45 36.7**	**+1.0**
PB06				*eS*	**Sn**	**02 46 12.2**	**0.0**
PB06				IAML		02 46 16.6	
	comp=N,1μm,0.2s						
PB06	**IPOC Station P**	**2.77**	**299**	*eP*	**Pn**	**02 45 36.6**	**+1.0**
PB06				*eS*	**Sn**	**02 46 12.1**	**0.0**
PB06				IAML		02 46 14.9	
	comp=Z,814nm,0.4s						
AHML	**Horco Molle**	**3.07**	**152**	*eP*	**Pn**	**02 45 39.3**	**+0.1**
AHML				*eS*	**Sn**	**02 46 16.9**	**-1.8**
PB09	**IPOC Station P**	**3.10**	**316**		**Pn**	**02 45 40.9**	**+1.3**
PB09	**IPOC Station P**	**3.10**	**316**	*iP*	**Pn**	**02 45 40.9**	**+1.3**
PB09				*eS*	**Sn**	**02 46 19.2**	**-0.1**
PB09	**IPOC Station P**	**3.10**	**316**	*eP*	**Pn**	**02 45 40.7**	**+1.1**
PB09				*eS*	**Sn**	**02 46 20.0**	**+0.8**
PB09				IAML		02 46 23.9	
	comp=Z,573nm,0.4s						
PB14	**IPOC Station P**	**3.20**	**259**		**Pn**	**02 45 41.4**	**+0.4**
PB14	**IPOC Station P**	**3.20**	**259**	*iP*	**Pn**	**02 45 41.4**	**+0.4**
PB14				*eS*	**Sn**	**02 46 19.8**	**-1.8**
PB14	**IPOC Station P**	**3.20**	**259**	*eP*	**Pn**	**02 45 41.9**	**+0.9**
PB14				*eS*	**Sn**	**02 46 21.3**	**-0.4**
PB14				IAML		02 46 23.7	
	comp=Z,700nm,0.7s						
PB03	**IPOC Station P**	**3.27**	**307**		**Pn**	**02 45 42.4**	**+0.6**
PB03	**IPOC Station P**	**3.27**	**307**	*eP*	**Pn**	**02 45 42.3**	**+0.6**
PB03				*eS*	**Sn**	**02 46 21.6**	**-1.4**
PB03	**IPOC Station P**	**3.27**	**307**	*eP*	**Pn**	**02 45 42.4**	**+0.6**
PB03				*eS*	**Sn**	**02 46 22.8**	**-0.3**
PB03				IAML		02 46 26.1	
	comp=Z,820nm,0.3s						
PB10	**IPOC Station P**	**3.35**	**279**		**Pn**	**02 45 43.2**	**+0.8**
PB10	**IPOC Station P**	**3.35**	**279**	*iP*	**Pn**	**02 45 43.3**	**+0.8**
PB10				*eS*	**Sn**	**02 46 23.0**	**-1.4**
PB10	**IPOC Station P**	**3.35**	**279**	*eP*	**Pn**	**02 45 43.3**	**+0.8**
PB10				*eS*	**Sn**	**02 46 24.4**	**+0.1**
PB10				IAML		02 46 28.0	
	comp=Z,659nm,0.6s						
AC02	**Maricunga**	**3.39**	**215**		**Pn**	**02 45 43.7**	**+0.3**
AC02	**Maricunga**	**3.39**	**215**	*eP*	**Pn**	**02 45 44.0**	**+0.6**
AC02				*eS*	**Sn**	**02 46 22.5**	**-3.6**
PB04	**IPOC Station P**	**3.41**	**300**		**Pn**	**02 45 43.9**	**+0.5**
PB04	**IPOC Station P**	**3.41**	**300**	*iP*	**Pn**	**02 45 43.9**	**+0.5**
PB04				*eS*	**Sn**	**02 46 24.0**	**-2.1**
PB04	**IPOC Station P**	**3.41**	**300**	*eP*	**Pn**	**02 45 44.0**	**+0.5**
PB04				*eS*	**Sn**	**02 46 25.7**	**-0.4**
PB04				IAML		02 46 28.4	
	comp=Z,732nm,0.3s						
PB07	**IPOC Station P**	**3.57**	**310**	Pn	**Pn**	**02 45 45.6**	**+0.2**
PB07	**IPOC Station P**	**3.57**	**310**	*iP*	**Pn**	**02 45 45.8**	**+0.4**
PB07				*eS*	**Sn**	**02 46 27.7**	**-2.0**
PB07	**IPOC Station P**	**3.57**	**310**	*eP*	**Pn**	**02 45 45.8**	**+0.4**
PB07				*eS*	**Sn**	**02 46 29.7**	**0.0**
PB07				IAML		02 46 33.0	
	comp=Z,622nm,0.8s						
PB01	**IPOC Station P**	**3.82**	**322**		**Pn**	**02 45 48.4**	**0.0**
PB01	**IPOC Station P**	**3.82**	**322**	*iP*	**Pn**	**02 45 48.3**	**0.0**
PB01				*eS*	**Sn**	**02 46 32.8**	**-2.2**
PB01	**IPOC Station P**	**3.82**	**322**	*eP*	**Pn**	**02 45 48.7**	**+0.3**
PB01				*eS*	**Sn**	**02 46 34.3**	**-0.7**
PB01				IAML		02 46 36.7	
	comp=Z,354nm,0.3s						
PB02	**IPOC Station P**	**3.86**	**315**		**Pn**	**02 45 48.8**	**-0.1**
PB02	**IPOC Station P**	**3.86**	**315**	*iP*	**Pn**	**02 45 48.8**	**-0.1**
PB02				*eS*	**Sn**	**02 46 33.3**	**-2.6**
PB02	**IPOC Station P**	**3.86**	**315**	*eP*	**Pn**	**02 45 49.0**	**+0.1**
PB02				*eP*		02 45 49.1	
PB02				*eS*	**Sn**	**02 46 35.1**	**-0.8**
PB02				IAML		02 46 40.3	
	comp=Z,838nm,0.7s						
AC01	**Pan de Azucar**	**3.90**	**237**		**Pn**	**02 45 48.7**	**-0.6**
AC01	**Pan de Azucar**	**3.90**	**237**	*eP*	**Pn**	**02 45 49.9**	**+0.6**
AC01				*eS*	**Sn**	**02 46 35.1**	**-

HHAR	Hobbs	65.22	336	IAmb	IAmb	02 55 10.7	
	comp=Z,4.3nm,0.8s						
CCM	Cathedral Cave	65.88	339	P	P	02 55 13.8	+0.4
CCM				IAmb	IAmb	02 55 14.5	
	comp=Z,9.7nm,0.8s						
QSPA	South Pole Qui	66.14	180	P	P	02 55 14.8	-0.3
QSPA				IAmb	IAmb	02 55 16.8	
	comp=Z,4.6nm,0.7s						
S39A	Bolivar	66.25	337	IAmb	IAmb	02 55 17.3	
	comp=Z,7.5nm,0.8s						
R40A	Maddies Statio	66.43	338	IAmb	IAmb	02 55 18.0	
	comp=Z,6.8nm,1.1s						
MSTX	Muleshoe	67.02	328	IAmb	IAmb	02 55 23.3	
	comp=Z,11nm,0.9s						
P38A	Dawn	68.05	338	IAmb	IAmb	02 55 28.3	
	comp=Z,8.5nm,0.8s						
214A	Organ Pipe Nat	70.88	320	P	P	02 55 45.1	+0.3
214A				IAmb	IAmb	02 55 48.2	
	comp=Z,10nm,1.4s						
SDCO	Great Sand Dun	71.37	329	P	P	02 55 48.6	+0.8
G40A	Rib Lake	72.19	343	P	P	02 55 52.9	+0.7
G40A				IAmb	IAmb	02 56 04.2	
	comp=Z,14nm,1.2s						
KOWA	Kowa	72.42	65	P	P	02 55 53.5	-0.7
	comp=Z,1.2nm,0.4s,baz=242,slow=4.2,SNR=14						
	comp=Z,1.2nm,0.4s						
VNDA	Vanda	74.64	190	P	P	02 56 08.8	+2.7
	comp=Z,1.1nm,1.0s,baz=186,slow=10,SNR=1.9						
	comp=Z,1.1nm,1.0s						
TORD	Torodi Ar. Bea	76.55	69	P	P	02 56 17.2	-0.7
	comp=Z,1.3nm,0.3s,baz=269,slow=7.3,SNR=58						
	comp=Z,1.3nm,0.3s						
PDAR	Pinedale Array	77.23	329	P	P	02 56 22.6	+1.0
	comp=Z,0.3nm,0.4s,baz=134,slow=7.3,SNR=6.1						
	comp=Z,0.3nm,0.4s						
MDND	Maddock	77.37	338	P	P	02 56 22.4	+0.5
SCHQ	Schefferville	78.58	0	LR	LR	03 32 30.0	
	comp=Z,24nm,21.6s,baz=209,slow=36						
NVAR	Mina Array Bea	78.62	321	P	P	02 56 31.2	+1.9
	comp=Z,0.9nm,0.8s,baz=154,slow=8.2,SNR=8.0						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	78.62	321	P	P	02 56 29.6	+0.3
MCMT	McKenzie Canyo	80.34	329	P	P	02 56 39.6	+1.2
BOSA	Boshof	80.66	117	P	P	02 56 41.1	+0.6
	comp=Z,0.8nm,0.3s,baz=226,slow=3.7,SNR=10						
	comp=Z,0.8nm,0.3s						
MAW	Mawson	81.36	163	P	P	02 56 45.2	+2.0
	comp=Z,1.8nm,0.5s,baz=248,slow=2.8,SNR=6.3						
	comp=Z,1.8nm,0.5s						
FRB	Frobisher Bay	87.53	359	LR	LR	03 37 02.2	
	comp=Z,25nm,21.4s,baz=230,slow=36						
ASAR	Alice Springs	128.41	205	PKP	PKPdf	03 03 33.2	+0.2
	comp=Z,1.2nm,0.8s,baz=154,slow=1.8,SNR=11						
WRA	Warramunga Arr	131.59	207	PKP	PKPdf	03 03 39.7	+0.7
	comp=Z,0.7nm,0.4s,baz=154,slow=2.0,SNR=28						
ZALV	Zalesovo Beam	143.43	28	PKP	PKPbc	03 03 58.2	+0.8
	comp=Z,1.2nm,0.4s,baz=310,slow=5.0,SNR=8.6						
MKAR	Makanchi Array	146.55	40	PKPbc	PKPdf	03 04 05.7	+0.3
	comp=Z,3.3nm,0.8s,baz=328,slow=1.9,SNR=18						
KLR	Kul'dur	150.91	334	PKPbc	PKPbc	03 04 18.6	+0.6
	comp=Z,1.6nm,0.4s,baz=84,slow=3.5,SNR=5.6						
PZH	PanZhiHua	169.48	74	PKP	PKPdf	03 04 31.4	-2.0

ISK ***15*** *02:49:15.2, 38°.93N×27°.72E, h12km, ML4.0/17*
CFUSG ***15*** *02:49:15.7, 38°.99N×27°.87E, h26km, Western Turkey*
PDG ***15*** *02:49:15.8±0.4, 38°.94N×27°.74E, h20km, ML4.3/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
IDC ***15*** *02:49:15.1±1.1, 38°.93N×27°.76E, h0km, mb3.4/5, mbtmp3.6/10, ML3.6/5, MS3.4/1, Error ellipse: s-maj=20.5km s-min=17.0km az=78.0*
THE ***15*** *02:49:15.7, 38°.95N×27°.74E, h0km±1km, ML3.9/5, Error ellipse: s-maj=2.8km s-min=1.1km az=87.0*
DDA ***15*** *02:49:16.5±0.0, 38°.93N×27°.72E, h8km, MW4.1*
NEIC ***15*** *02:49:16.6±1.9, 38°.990N±0°.007×27°.77E±0°.06, h10km±2km, mb3.8/6, ML3.9(THE), ML4.0(ISK), Error ellipse: s-maj=7.6km s-min=3.0km az=268.0*
SOF ***15*** *02:49:18.5, 39°.25N×27°.59E, h8km, MD4.1*
ISC 15 02:49:15.8±0.8, 38°.95N±0°.02×27°.74E±0°.01, h10km±6km, n202, σ1§07/258, mb3.7/9, 29C-10D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.09	141	PG	Pg	02 49 17.9	-0.4
AKS				SG	Sg	02 49 19.9	-0.1
GOMA	Golmarmara-Man	0.28	150	PG	Pg	02 49 21.5	+0.1
GOMA				SG	Sg	02 49 25.6	+0.4
STEP	BALIKESIR_Sava	0.42	358	P	Pg	02 49 24.6	+0.4
STEP				*i* AML	AML	02 49 31.0	
	comp=E,2μm,0.7s						
STEP				S	Sb	02 49 31.2	-0.8
STEP				*i* AML	AML	02 49 32.0	
	comp=N,1μm,0.3s						
ZEDA	zmir-Bergama	0.52	272	P	Pg	02 49 25.8	-0.1
ZEDA				*i* AML	AML	02 49 33.0	
	comp=N,1μm,0.4s						
ZEDA				*i* AML	AML	02 49 33.0	
	comp=E,4μm,0.5s						
ZEDA				S	Sg	02 49 33.4	+0.8
DKL	Dikili	0.66	281	PG	Pg	02 49 28.8	+0.2
DKL				SG	Sb	02 49 37.9	-0.8
BUHA	Balikesir, Bur	0.75	317	P	Pg	02 49 30.3	-0.1
BUHA				S	Sb	02 49 42.6	+1.3
DEMI	Demirci	0.77	83	P	Pg	02 49 30.9	+0.3
DEMI				S	Sb	02 49 41.8	-0.1
DEMI				*i* AML	AML	02 49 45.0	
	comp=N,7μm,0.3s						
DEMI				*i* AML	AML	02 49 45.0	
	comp=E,7μm,0.3s						
BLCB	Balcova	0.79	224	PG	Pg	02 49 30.3	-0.6
BLCB				SG	Sg	02 49 41.3	+0.1
BLCB	Balcova	0.79	224	P	Pg	02 49 30.3	-0.6
BLCB				S	Sb	02 49 42.2	-0.1
MANT	Manisa	0.79	125		Pg	02 49 31.0	-0.1
MANT	Manisa	0.79	125	P	Pg	02 49 30.9	-0.1
MANT				S	Sb	02 49 42.5	-0.1
MANT				*i* AML	AML	02 49 44.0	
	comp=E,3μm,0.4s						
BALY	Balya	0.79	353	P	Pg	02 49 30.2	-0.9
BALY				S	Sg	02 49 41.2	-0.2
BALY				*i* AML	AML	02 49 42.0	
	comp=N,5μm,0.6s						
FOCM	Foa	0.82	253	PG	Pg	02 49 31.1	-0.5
FOCM				SG	Sg	02 49 42.6	+0.2
DURS	Dursunbey	0.86	41	P	Pg	02 49 32.1	-0.4
DURS				S	Sb	02 49 44.8	+0.1
DURS				*i* AML	AML	02 49 47.0	
	comp=N,4μm,0.3s						
DURS				*i* AML	AML	02 49 48.0	
	comp=E,5μm,0.2s						
AYVA	Ayvalik	0.89	294	P	Pg	02 49 32.9	-0.1
AYVA				S	Sb	02 49 45.1	-0.2
AYVA				*i* AML	AML	02 49 47.0	
	comp=E,7μm,0.6s						
AYVA				*i* AML	AML	02 49 49.0	
	comp=N,7μm,0.6s						
DST	Dursunbey	0.94	46	PG	Pb	02 49 34.4	+0.1
DST				SG	Sn	02 49 48.4	-0.5
SMAA	Simav-Kutahya	0.98	81	PG	Pb	02 49 34.9	0.0
SMAA				SG	Sn	02 49 49.3	-0.4
AYDB	Zeytinkoy-Aydi	1.01	173	PG	Pg	02 49 34.7	-0.5
AYDB				SG	Sb	02 49 48.8	-0.1
USAK	Uak-Merkez	1.03	103	P	Pg	02 49 35.2	-0.4
USAK				S	Sn	02 49 51.1	+0.2
URLA	Izmir	1.07	237	P	Pg	02 49 34.4	-2.0
URLA				S	Sg	02 49 49.3	-1.0
GONE	Gonen-Balikesi	1.09	358	PN	Pg	02 49 36.8	-0.1
DGB	zmir	1.12	217	P	Pb	02 49 36.1	-1.2
DGB				S	Sg	02 49 51.9	0.0
PRK	Paraskevi	1.18	285	P	Pg	02 49 39.3	+0.9
PRK				S	Sn	02 49 55.4	+0.9
	9μm,0.8s						
ZEYE	Izmir, Urla-Ze	1.20	234	P	Pb	02 49 37.6	-1.1
ZEYE				S	Sb	02 49 54.2	0.0
BAYC	CANAKKALE_Bayr	1.22	311	P	Pb	02 49 38.6	-0.4
BAYC				S	Sg	02 49 55.0	+0.1
BAYC				*i* AML	AML	02 49 57.0	
	comp=N,3μm,0.5s						
AYDN	Tasoluk	1.29	175	P	Pn	02 49 39.2	-0.8
AYDN				S	Sb	02 49 56.3	-0.7
AYDN				*i* AML	AML	02 50 01.0	
	comp=E,2μm,0.9s						
GEDZ	Gediz	1.31	85	PN	Pn	02 49 40.3	+0.1
GCAM	G?zelcaml?	1.31	198	PN	Pn	02 49 39.0	-1.2
GCAM	G?zelcaml?	1.31	198	P	Pn	02 49 38.8	-1.4
GCAM				S	Sg	02 49 59.2	+1.3
KNL	Balıkesir	1.33	353	P	Pn	02 49 40.3	-0.1
KNL				S	Sg	02 49 58.4	-0.2
KOCA	Canakkale, Ayv	1.36	294	P	Pn	02 49 40.6	-0.3
KOCA				S	Sb	02 49 58.7	-0.1
KOCA				*i* AML	AML	02 49 59.0	
	comp=N,3μm,0.4s						
GDZ	Gediz	1.36	84	P	Pn	02 49 41.0	-0.1
GDZ				S	Sg	02 49 59.9	+0.2
GDZ				*i* AML	AML	02 50 01.0	
	comp=N,1μm,0.7s						
GDZ				*i* AML	AML	02 50 01.0	
	comp=E,885nm,0.8s						
EDC	Edincik	1.40	4	PN	Pn	02 49 41.5	+0.1
EZN	Ezine	1.40	309	PN	Pn	02 49 41.4	0.0
EZN	Ezine	1.40	309	P	Pn	02 49 41.3	-0.1
EZN				S	Sb	02 50 00.0	0.0
	2μm,0.5s						
ORLT	Orhaneli	1.41	39	PN	Pn	02 49 41.9	+0.2
TVSB	Tavsanli	1.43	69	PN	Pn	02 49 41.4	-0.5
SMG	Samos	1.43	210	P	Pn	02 49 40.5	-1.4
SMG				S	Sg	02 50 03.1	+1.3
	3μm,0.7s						
CHOS	Chios island	1.43	247	PN	Pn	02 49 41.5	-0.4
CHOS	Chios island	1.43	247	P	Pn	02 49 41.6	-0.4
CHOS				S	Sg	02 50 03.5	+1.6
	11μm,0.5s						
SIGR	SIGRI	1.49	281	PN	Pn	02 49 42.3	-0.3
SIGR	SIGRI	1.49	281	P	Pn	02 49 42.3	-0.3
SIGR				S	Sn	02 50 01.4	-0.8
	3μm,0.5s						
PASA	Karahalli, USA	1.50	113	P	Pb	02 49 44.0	+0.3
PASA				S	Sg	02 50 05.7	+1.8
KHL	Karahalli	1.53	114	PN	Pn	02 49 42.9	-0.4
DDIM	Aydin, Didim	1.54	195	P	Pb	02 49 44.1	-0.4
DDIM				S	Sg	02 50 06.6	+1.2
BOZC	Bozcaada	1.58	305	PN	Pn	02 49 43.6	-0.3
BOZC	Bozcaada	1.58	305	P	Pn	02 49 43.6	-0.3
BOZC				S	Sn	02 50 03.5	-0.9
ULDT	Uludag	1.61	42	P	Pn	02 49 44.4	-0.1
ULDT				S	Sg	02 50 08.2	+0.7
ULDT				*i* AML	AML	02 50 11.0	
	comp=N,2μm,0.4s						
ULDT				*i* AML	AML	02 50 14.0	
	comp=E,5μm,0.5s						
ECEA	Canakkale, Ece	1.63	313	P	Pn	02 49 44.5	-0.1
ECEA				S	Sn	02 50 06.0	+0.3
MRMT	Marmara Adasi	1.65	356	PN	Pn	02 49 45.0	0.0
MDNY	Mudanya-Bursa	1.67	32	PN	Pn	02 49 45.3	+0.2
IGD	Bursa	1.73	40	P	Pn	02 49 46.0	0.0
IGD				S	Sg	02 50 12.3	+0.8
TAVA	DENIZLI_Tavas	1.75	148	P	Pn	02 49 46.4	+0.1
TAVA				S	Sg	02 50 12.2	+0.2
MULA	Mugla, Merkez-	1.75	165	P	Pn	02 49 45.4	-1.0
MULA				S	Sg	02 50 12.6	+0.4
ANDZ	Kutahya, Merke	1.77	71	P	Pn	02 49 47.1	+0.5
ANDZ				S	Sg	02 50 13.4	+0.7
ANDZ				*i* AML	AML	02 50 16.0	
	comp=E,1μm,0.5s						
ANDZ				*i* AML	AML	02 50 17.0	
	comp=N,807nm,0.4s						
YER	Yerkesik	1.86	167	PN	Pn	02 49 47.5	-0.4
GOKA	anakkale-Gk	1.88	312	P	Pn	02 49 48.3	+0.3
BDRM	Kayabasi	1.90	187	P	Pn	02 49 46.9	-1.4
BDRM				S	Sg	02 50 16.9	+0.2
ESNK	Esenk¶y	1.93	29	P	Pn	02 49 47.8	-0.9
ESNK				S	Sn	02 50 14.0	+1.0
SMTH	Samothraki Isl	2.28	312	P	Pn	02 49 53.6	0.0
BORA	Eskisehir	2.30	65		Pn	02 49 55.3	+1.4
ALN	Alexandroupoli	2.34	327	Pn	Pn	02 49 54.7	+0.4
ALN	Alexandroupoli	2.34	327	P	Pn	02 49 54.5	+0.2
ISK	Istanbul-Kandi	2.34	25	P	Pn	02 49 54.1	-0.3
ISP	Isparta	2.46	116		Pn	02 49 57.7	+1.5
APE	Apeiranthos	2.56	224	⇑P	Pg	02 50 04.8	-0.2
APE	Apeiranthos	2.56	224	P	Pn	02 49 56.2	-1.3
ARG	Arkhangelos	2.75	173		Pn	02 50 00.5	+0.5
ARG	Arkhangelos	2.75	173	P	Pn	02 49 59.4	-0.6
RDO	Rodhopi	2.77	323	Pn	Pn	02 50 00.2	0.0
RDO	Rodhopi	2.77	323	P	Pn	02 50 00.7	+0.5
ELL	Elmali	2.79	141	Pn	Pn	02 50 02.8	+2.1
EDRB	Edirne	2.99	346	P	Pn	02 50 03.2	-0.1
MDUB	Mudurnu	3.07	59	Pn	Pn	02 50 03.5	-1.0
AKAS	Kas	3.09	151	Pn	Pn	02 50 04.8	0.0
DION	Dionisos Attik	3.11	255	P	Pn	02 50 04.9	-0.1
SANT	Santorini	3.15	216	Pn	Pn	02 50 07.8	+2.3
KSL	Kastellorizon	3.16	152	P	Pn	02 50 07.0	+1.4
KAVA	Kavala	3.21	311	P	Pn	02 50 06.5	+0.2
OUR	Ouranopolis	3.21	297	P	Pn	02 50 06.6	+0.3
KDZ	Kurdzhali	3.23	327	*i* P	Pn	02 50 07.3	+0.7
KOKK	Kokkinochori,	3.43	304	P	Pn	02 50 09.2	-0.1
KARP	Karpathos	3.43	188	Pn	Pn	02 50 11.3	+1.9
DIM	Dimitrovgrad	3.52	332	*i* P	Pn	02 50 10.7	+0.1
NEO	Neokhori	3.53	277	P	Pn	02 50 10.4	-0.4
XOR	Xorichti	3.56	278	P	Pn	02 50 11.5	+0.3
RZN	Rozhen	3.58	321	*i* P	Pn	02 50 12.0	+0.4
JMB	Yambol	3.62	346	*i* P	Pn	02 50 10.0	-2.0
NVR	Nevrokopi	3.82	310	P	Pn	02 50 15.2	+0.5
SRS	Serrai	3.85	306	P	Pn	02 50 15.3	+0.2
PLD	Plovdiv	3.91	326	*i* P	Pn	02 50 16.7	+0.8
HORT	Hortiatis	3.94	296	P	Pn	02 50 16.8	+0.4
KRND	KRANIDI	3.94	248	P	Pn	02 50 17.6	+1.2
AXAR	Agios Charalam	3.97	269	P	Pn	02 50 17.2	+0.4
ANTO	Ankara	4.02	75	⇓P	Pb	02 50 24.4	-2.4
MMB	Musomiste	4.04	312	*i* P	Pn	02 50 17.9	+0.1
LIT	Litokhoron	4.22	287		Pn	02 50 21.9	+1.7
PRD	Provadia	4.25	357	*i* P	Pn	02 50 21.3	+0.7
IDI	Anoyia	4.31	213	Pn	Pn	02 50 20.8	-0.8
	0.9nm,0.3s,baz=64,slow=10,SNR=13						
	4.9nm,0.4s						
IDI	Anoyia	4.31	213	Pn	Pn	02 50 22.2	+0.8
IDI	Anoyia	4.31	213	P	Pn	02 50 20.7	-0.8
KNT	Kendrikon	4.32	302	P	Pn	02 50 22.2	+0.6
TYRN	Tyrnavos	4.34	282	P	Pn	02 50 22.5	+0.7
MAKR	Makrakomi, Fth	4.37	273	P	Pn	02 50 24.2	+1.9
VLI	Veliai	4.41	241	P	Pn	02 50 22.1	-0.7
ALIK	Aliki, Aigiali	4.46	263	P	Pn	02 50 25.6	+2.1
KLV	Kalavryta, Ach	4.48	260	P	Pn	02 50 24.3	+0.5
THL	Klokotos Trika	4.49	280	P	Pn	02 50 24.6	+0.8
PGB	Panagyurishte	4.50	324	*i* P	Pn	02 50 24.3	+0.1
SZH	Strazhica	4.52	343	*i* P	Pn	02 50 23.0	-1.4
KKB	Krupnik	4.59	311	*i* P	Pn	02 50 25.6	+0.2
VAY	Valandovo	4.61	302	*i* Pn	Pn	02 50 27.1	+1.5
BR131	Keskin Array S	4.64	79		Pn	02 50 27.0	+0.9
BRTR	Keskin Array B	4.64	79	Pn	Pn	02 50 27.6	+1.5
	2.3nm,0.3s,baz=251,slow=13,SNR=49						
BRTR				Pg	Pg	02 50 43.4	-1.3
	3.1nm,0.3s,baz=257,slow=14,SNR=24						
	6.6nm,0.5s						
BRTR	Keskin Array B	4.64	79		Pn	02 50 27.0	+0.9
ITM	Ithomi	4.92	251		Pn	02 50 30.7	+0.9
VTS	Vitosha	5.01	318	⇓P	Pn	02 50 32.1	+0.9
VTS	Vitosha	5.01	318	Pn	Pn	02 50 32.0	+0.8
STIP	Stip	5.05	305	*i* Pn	Pn	02 50 30.9	-0.7
ICOR	Ion Corvin	5.16	0	⇑P	Pn	02 50 33.6	+0.5
NEST	Nestorio	5.36	288	P	Pn	02 50 37.8	+1.8
TIRR	Tirgusor	5.53	5	⇑P	Pn	02 50 38.4	+0.3
TIRR	Tirgusor	5.53	5	Pn	Pn	02 50 38.2	0.0
KBN	Korca	5.61	290		Pn	02 50 40.6	+1.2
SKO	Skopje	5.67	304	*i* Pn	Pn	02 50 37.0	-3.1
HARR	Harsova	5.74	1	⇑P	Pn	02 50 41.6	+0.6
OHR	Ohrid	5.75	294	*i* Pn	Pn	02 50 43.4	+2.1
TPGR	Topolog	5.92	5	⇑P	Pn	02 50 44.0	+0.4
BLKB	Belogradchik	6.03	322	⇓P	Pn	02 50 45.5	+0.4
ISR	Istrita	6.23	352	⇑P	Pn	02 50 49.0	+1.2
CFR	Carcaliu	6.23	3	⇑P	Pn	02 50 48.0	+0.3
TLCR		6.28	7	⇓P	Pn	02 50 50.2	+1.7
BNN	Bunyan	6.33	88	Pn	Pn	02 50 49.2	0.0
BOVS	Bovan	6.52	318	⇑P	Pn	02 50 52.5	+0.7
MLR	Muntele Rosu	6.67	349	⇑P	Pn	02 50 55.1	+1.1
MLR	Muntele Rosu	6.67	349	Pn	Pn	02 50 55.7	+1.8
	0.8nm,0.3s,baz=207,slow=7.6,SNR=18						
	5.1nm,0.6s						
MLR	Muntele Rosu	6.67	349	Pn	Pn	02 50 55.0	+1.1
SCTR	Scanteiesti	6.72	2	⇑P	Pn	02 50 55.4	+0.9
VOIR		6.78	344	⇑P	Pn	02 50 55.8	+0.4
ARR	Arges	6.81	341	⇑P	Pn	02 50 55.7	-0.2
ODBI	Odobesti	6.83	356	⇑P	Pn	02 50 57.7	+1.7
TOKA	Tokat	6.88	76	Pn	Pn	02 50 56.9	+0.1
VLDR	Vladesti	6.89	2	⇓P	Pn	02 50 58.4	+1.5
DJES	Djerdap	6.91	327	⇓P	Pn	02 50 57.0	-0.2
PVY	Plav	6.94	304	⇑*i*Pn	Pn	02 50 58.4	+0.8
PVY				*i* Sn	Sn	02 52 15.5	-1.1
PLOR	Plostina	6.94	354	⇑P	Pn	02 50 59.1	+1.4
VRI	Vrincioaia	6.95	354	⇑P	Pn	02 50 59.1	+1.4
COVR	Voineasa-Covas	6.98	351	⇓P	Pn	02 50 59.5	+1.4
IVA	Berane	7.12	306	*e*Pn	Pn	02 51 00.9	+0.8
IVA				*i* Sn	Sn	02 52 19.8	-1.2
LOT	Lotru	7.13	337	⇑P	Pn	02 51 00.5	+0.3
HERR	Herculane	7.13	328	⇓P	Pn	02 51 00.0	-0.1
SEV	Sevastopol'	7.13	37	*e*S	Sn	02 52 17.6	-3.6
SEV				Sm		02 52 20.5	
	comp=N,1.0nm,0.2s						
SEV				Sm		02 52 20.6	
	comp=E,2.0nm,0.3s						
ULC	Ulcinj	7.14	298	*e*Pn	Pn	02 51 01.2	+0.8
ULC				*i* Sn	Sn	02 52 20.4	-1.2
DOPR	Dopca	7.22	347	⇑P	Pn	02 51 02.1	+0.7
DRME	Dracevica, Mon	7.27	299	⇓*i*Pn	Pn	02 51 03.0	+0.9
DRME				*i* Sn	Sn	02 52 23.5	-1.2
YAL	Yalta	7.32	39	*e*S	Sn	02 52 23.5	-2.4
YAL				Sm		02 52 27.4	
	comp=N,7.0nm,0.2s						
YAL				Sm		02 52 27.4	
	comp=E,3.0nm,0.3s						
PDG	Podgorica	7.32	301	⇑P	Pn	02 51 03.1	+0.3
PDG	Podgorica	7.32	301	Pn	Pn	02 51 03.5	+0.7
TTG	Podgorica	7.32	301	⇑*i*Pn	Pn	02 51 03.8	+1.0
TTG				*i* Sn	Sn	02 52 24.9	-1.1
KOME	Kolasin	7.34	305	⇓*i*Pn	Pn	02 51 04.1	+0.9
KOME				*i* Sn	Sn	02 52 25.4	-1.3
GZR	Gura Zlata	7.42	332	⇑P	Pn	02 51 03.8	-0.3
BUM	Brajici-Budva	7.51	299	*e*Pn	Pn	02 51 06.4	+0.9
BUM				*i* Sn	Sn	02 52 29.5	-1.3
ALU	Alushta	7.58	39	*e*S	Sn	02 52 28.6	-3.8
ALU				Sm		02 52 33.9	
	comp=N,10.0nm,0.3s						
CEME	Cevo	7.60	301	*e*Pn	Pn	02 51 07.6	+0.9
CEME				*i* Sn	Sn	02 52 31.6	-1.3
TESR	Tescani	7.60	354	⇑P	Pn	02 51 07.2	+0.6
SIM	Simferopol'	7.65	36	*e*S	Sn	02 52 29.3	-4.6
SIM				Sm		02 52 36.9	
	comp=E,14nm,0.4s						
SIM				Sm		02 52 37.0	
	comp=N,25nm,0.5s						
PLE	Pljevlja	7.67	307	⇑*i*Pn	Pn	02 51 08.6	+0.9
PLE				*i* Sn	Sn	02 52 33.3	-1.4
NKME	Niksic	7.67	303	⇑*i*Pn	Pn	02 51 08.7	+1.0
NKME				*i* Sn	Sn	02 52 33.4	-1.2
HCY	Herceg Novi	7.84	299	*e*Pn	Pn	02 51 11.1	+1.1
HCY				*i* Sn	Sn	02 52 37.5	-1.3
UPM	Unac-Piva	7.91	305	*e*Pn	Pn	02 51 11.9	+0.9
UPM				*i* Sn	Sn	02 52 39.2	-1.5
MILM	Milestii Mici	8.00	5	⇑P	Pn	02 51 12.7	+0.6
MILM	Milestii Mici	8.00	5	*e*P	Pn	02 51 12.0	-0.1
MILM				*e*S	Sn	02 52 38.0	-4.6
SUDU	Sudak	8.03	40	*e*S	Sn	02 52 41.1	-2.2
SUDU				Sm		02 52 45.3	
	comp=N,40nm,0.5s						
SUDU				Sm		02 52 45.3	
	comp=E,3.0nm,0.2s						
BZS	Buzias	8.06	328	⇑P	Pn	02 51 12.5	-0.4
SIRR	Siria	8.57	330	⇑P	Pn	02 51 20.6	+0.7
MMAI	Mount Meron Ar	8.58	131	Pn	Pn	02 51 19.3	-0.9
	comp=E,1.1nm,0.3s,baz=321,slow=12,SNR=12						
	comp=E,1.1nm,0.4s						
DRGR		8.66	336	⇑P	Pn	02 51 21.2	0.0
BURAR	Bucovina Array	8.85	349	⇑P	Pn	02 51 25.0	+1.1
BURAR	Bucovina Array	8.85	349	Pn	Pn	02 51 23.8	-0.1
BUR08	Bucovina Ar. S	8.88	349		Pn	02 51 23.4	-0.9
EIL	Elat	11.01	145	Pn	Pn	02 51 53.1	-0.2
	comp=E,0.6nm,0.3s,baz=295,slow=7.2,SNR=6.1						
	comp=E,1.9nm,0.4s						
GEC2	GERESS Array S	14.13	319	Pn	Pn	02 52 35.2	-0.8
GERES	GERESS Array B	14.13	319	Pn	P	02 52 43.0	-0.7
	comp=E,0.1nm,0.3s,baz=134,slow=13,SNR=5.1						
GERES	GERESS Array B	14.13	319	Pn	Pn	02 52 36.5	+0.5
DAVOX	Davos/Dischmat	15.23	307	Pn	P	02 52 58.3	+2.2
	comp=E,0.3nm,0.3s,baz=119,slow=9.8,SNR=7.3						
CLL	Collm	16.11	325	Pn	Pn	02 53 01.1	-1.1
CLL	Collm	16.11	325	*e*sP	P	02 53 07.0	+1.4
FINES	FINESS Array

BUHA S **Sb** **02 51 31.6 +0.2**
DEMI Demirci 0.78 81 P **Pg** **02 51 19.3 -2.0**
DEMI S **Sg** **02 51 30.5 -1.1**
MANT Manisa 0.78 123 Pg **Pg** **02 51 19.3 -1.9**
MANT Manisa 0.78 123 P **Pg** **02 51 19.2 -2.0**
MANT S **Sg** **02 51 30.6 -0.9**
MANT *i* AML AML 02 51 32.0
comp=N,9μm,0.4s
MANT *i* AML AML 02 51 32.0
comp=E,7μm,0.5s
FOCM Foa 0.80 255 PG **Pg** **02 51 19.5 -2.1**
BALY Balya 0.82 354 P **Pg** **02 51 19.0 -2.9**
BALY S **Sg** **02 51 29.7 -3.0**
AYVA Ayvalik 0.89 296 P **Pg** **02 51 21.3 -1.9**
AYVA S **Sg** **02 51 33.5 -1.4**
DURS Dursunbey 0.89 41 P **Pg** **02 51 20.5 -2.8**
DURS S **Sg** **02 51 33.2 -1.8**
DST Dursunbey 0.97 45 PG **Pb** **02 51 22.1 -2.6**
DST Dursunbey 0.97 45 P **Pb** **02 51 22.6 -2.1**
AYDB Zeytinkoy-Aydi 0.98 172 PG **Pb** **02 51 23.2 -1.7**
SMAA Simav-Kutahya 1.00 79 PG **Pb** **02 51 23.5 -1.6**
USAK Uak-Merkez 1.03 101 P **Pb** **02 51 23.9 -1.8**
USAK S **Sg** **02 51 39.4 -0.1**
URLA Izmir 1.05 238 P **Pb** **02 51 22.8 -3.1**
URLA S **Sb** **02 51 37.8 -1.7**
DGB zmir 1.09 217 P **Pb** **02 51 24.5 -2.2**
DGB S **Sb** **02 51 40.1 -0.7**
DGB *i* AML AML 02 51 42.0
comp=E,7μm,0.5s
GONE Gonen-Balikesi 1.12 359 PN **Pb** **02 51 25.3 -1.9**
PRK Paraskevi 1.17 286 P **Pn** **02 51 27.6 -0.4**
PRK S **Sn** **02 51 43.9 +0.1**
18μm,0.7s
PRK Paraskevi 1.17 286 P **Pn** **02 51 27.6 -0.4**
PRK S **Sn** **02 51 43.9 +0.1**
ZEYE Izmir, Urla-Ze 1.18 235 P **Pn** **02 51 25.9 -2.1**
ZEYE S **Sb** **02 51 42.7 -0.5**
ZEYE *i* AML AML 02 51 44.0
comp=N,1μm,0.6s
ZEYE *i* AML AML 02 51 47.0
comp=E,1μm,0.6s
BAYC CANAKKALE_Bayr 1.22 312 P **Pn** **02 51 27.1 -1.6**
BAYC S **Sb** **02 51 44.3 -0.3**
BAYC *i* AML AML 02 51 46.0
comp=N,7μm,0.5s
AYDN Tasoluk 1.27 174 P **Pn** **02 51 27.6 -1.7**
AYDN S **Sb** **02 51 45.0 -0.8**
GCAM G?zelcaml? 1.28 198 PN **Pn** **02 51 27.3 -2.2**
GCAM G?zelcaml? 1.28 198 P **Pn** **02 51 27.2 -2.2**
GCAM S **Sb** **02 51 46.2 0.0**
GEDZ Gediz 1.32 84 PN **Pn** **02 51 29.5 -0.6**
KNL Balıkesir 1.35 354 P **Pn** **02 51 28.8 -1.7**
KNL S **Sn** **02 51 47.5 -0.8**
KNL *i* AML AML 02 51 51.0
comp=N,7μm,1.1s
KOCA Canakkale, Ayv 1.36 296 P **Pn** **02 51 29.0 -1.5**
KOCA S **Sn** **02 51 46.9 -1.5**
GDZ Gediz 1.38 83 P **Pn** **02 51 29.4 -1.6**
GDZ S **Sn** **02 51 47.6 -1.6**
GDZ *i* AML AML 02 51 50.0
comp=N,5μm,0.8s
SMG Samos 1.40 210 P **Pn** **02 51 29.5 -1.6**
SMG S **Sg** **02 51 51.5 +0.4**
11μm,0.6s
EZN Ezine 1.41 310 PN **Pn** **02 51 29.8 -1.4**
EZN Ezine 1.41 310 P **Pn** **02 51 29.8 -1.4**
EZN S **Sg** **02 51 51.1 -0.3**
5μm,0.7s
EZN Ezine 1.41 310 P **Pn** **02 51 29.8 -1.4**
EZN S **Sg** **02 51 51.1 -0.3**
EZN Ezine 1.41 310 Pg **Pn** **02 51 29.8 -1.4**
EZN Sg **Sn** **02 51 48.8 -0.8**
CHOS Chios island 1.41 248 PN **Pn** **02 51 30.3 -1.1**
CHOS Chios island 1.41 248 P **Pn** **02 51 31.6 +0.2**
CHOS S **Sg** **02 51 51.1 -0.4**
26μm,0.5s
EDC Edincik 1.43 4 PN **Pn** **02 51 30.0 -1.4**
EDC Edincik 1.43 4 P **Pn** **02 51 30.1 -1.4**
ORLT Orhaneli 1.44 39 PN **Pn** **02 51 30.4 -1.4**
TVSB Tavsanli 1.45 68 PN **Pn** **02 51 29.9 -2.0**
SIGR SIGRI 1.48 282 PN **Pn** **02 51 30.7 -1.5**
SIGR SIGRI 1.48 282 P **Pn** **02 51 30.7 -1.5**
PASA Karahalli, USA 1.50 112 P **Pn** **02 51 31.9 -0.6**
PASA S **Sg** **02 51 55.0 +0.8**
DDIM Aydin, Didim 1.51 195 P **Pn** **02 51 31.1 -1.6**
KHL Karahalli 1.53 112 PN **Pn** **02 51 32.1 -0.9**
BOZC Bozcaada 1.59 306 PN **Pn** **02 51 32.1 -1.6**
ULDT Uludag 1.64 41 P **Pn** **02 51 32.1 -2.5**
ECEA Canakkale, Ece 1.64 314 P **Pn** **02 51 31.6 -2.8**
ECEA S **Sn** **02 51 53.5 -1.8**
MRMT Marmara Adasi 1.68 357 PN **Pn** **02 51 33.6 -1.5**
MDNY Mudanya-Bursa 1.70 31 PN **Pn** **02 51 33.6 -1.6**
MULA Mugla, Merkez- 1.73 164 P **Pn** **02 51 32.6 -3.2**
MULA S **Sn** **02 51 57.5 -0.2**
TAVA DENIZLI_Tavas 1.73 147 P **Pn** **02 51 34.1 -1.7**
IGD Bursa 1.76 40 P **Pn** **02 51 33.6 -2.5**
ANDZ Kutahya, Merke 1.79 70 P **Pn** **02 51 35.6 -1.0**
ANDZ S **Sn** **02 51 58.5 -0.7**
YER Yerkesik 1.84 166 PN **Pn** **02 51 35.9 -1.3**
YER Yerkesik 1.84 166 P **Pn** **02 51 36.8 -0.4**
BODT Bodrum 1.89 190 P **Pn** **02 51 34.9 -2.9**
GOKA anakkale-Gk 1.89 313 P **Pn** **02 51 35.6 -2.3**
KZIL AFYON_Kizioren 2.01 109 P **Pb** **02 51 41.3 -1.1**
AFYO Afyonkarahisar 2.02 93 P **Pg** **02 51 43.6 -1.1**
BILE Bilecik/Merkez 2.07 53 P **Pn** **02 51 41.0 +0.6**
BILE S **Sg** **02 52 10.9 -1.8**
BILE *i* AML AML 02 52 18.0
comp=E,2μm,0.7s
BRDR BURDUR-Merkez 2.21 123 P **Pn** **02 51 42.1 -0.3**
SMTH Samothraki Isl 2.29 313 P **Pn** **02 51 42.2 -1.2**
SMTH Samothraki Isl 2.29 313 Pn **Pn** **02 51 42.0 -1.4**
SMTH Sn **Sn** **02 52 09.3 -2.1**
BORA Eskisehir 2.32 65 Pn **Pb** **02 51 46.2 -1.4**
ALN Alexandroupoli 2.35 327 Pn **Pn** **02 51 43.6 -0.6**
ALN Alexandroupoli 2.35 327 P **Pn** **02 51 43.0 -1.3**
ALN S **Sn** **02 52 13.9 +0.9**
2μm,0.7s
ALN Alexandroupoli 2.35 327 P **Pn** **02 51 43.6 -0.6**
ALN Alexandroupoli 2.35 327 Pn **Pn** **02 51 43.2 -1.1**
ISK Istanbul-Kandi 2.37 25 P **Pn** **02 51 42.8 -1.7**
ISK S **Sb** **02 52 16.9 -0.8**
1μm,0.8s
ISK Istanbul-Kandi 2.37 25 P **Pn** **02 51 42.8 -1.7**
ISK S **Sb** **02 52 16.9 -0.8**
ISP Isparta 2.46 116 **Pn** **02 51 45.2 -0.6**
ISP Isparta 2.46 116⇓ *e*P **Pn** **02 51 44.8 -1.0**
ISP Isparta 2.46 116 Pn **Pn** **02 51 44.8 -1.0**
APE Apeiranthos 2.54 224⇓ *e*P **Pn** **02 51 45.5 -1.3**
APE Apeiranthos 2.54 224 Pn **Pn** **02 51 43.5 -3.3**
ARG Arkhangelos 2.72 173 Pn **Pn** **02 51 49.1 -0.2**
ARG Arkhangelos 2.72 173 P **Pn** **02 51 48.4 -0.9**
ARG S **Sn** **02 52 24.4 +2.4**
2μm,1.2s
ARG Arkhangelos 2.72 173 P **Pn** **02 51 49.1 -0.2**
ELL Elmali 2.78 141 Pn **Pn** **02 51 51.8 +1.6**
ELL Elmali 2.78 141 P **Pn** **02 51 51.8 +1.6**
RDO Rodhopi 2.78 324 Pn **Pn** **02 51 48.2 -1.9**
RDO Rodhopi 2.78 324 P **Pn** **02 51 49.4 -0.7**
EDRB Edirne 3.01 346 P **Pn** **02 51 52.4 -0.9**
AKAS Kas 3.08 150 Pn **Pn** **02 51 53.5 -0.8**
MDUB Mudurnu 3.09 59 Pn **Pb** **02 51 57.9 -3.0**
SANT Santorini 3.12 216 Pn **Pn** **02 51 54.6 -0.2**
KSL Kastellorizon 3.14 151 P **Pn** **02 51 55.6 +0.6**
OUR Ouranopolis 3.21 297 P **Pn** **02 51 55.2 -0.8**
OUR Ouranopolis 3.21 297 P **Pn** **02 51 55.2 -0.8**
KAVA Kavala 3.22 311 P **Pn** **02 51 54.9 -1.2**
KARP Karpathos 3.40 188 **Pn** **02 51 58.5 -0.1**
KARP Karpathos 3.40 188 P **Pn** **02 51 57.9 -0.8**
KARP Karpathos 3.40 188 Pn **Pn** **02 51 57.9 -0.8**
KARP sP **Pb** **02 52 02.2 -3.9**
NVR Nevrokopi 3.82 311 P **Pn** **02 52 03.7 -0.8**
NVR Nevrokopi 3.82 311 Pn **Pn** **02 52 03.4 -1.1**
NVR pP **Pn** **02 52 05.2 +0.7**
HORT Hortiatis 3.94 297 P **Pn** **02 52 05.3 -0.8**
ZKR Zakros 3.99 198 P **Pn** **02 52 08.8 +2.1**
LIT Litokhoron 4.21 288 Pn **Pn** **02 52 09.8 -0.1**
LIT Litokhoron 4.21 288 P **Pn** **02 52 09.6 -0.2**
LIT Litokhoron 4.21 288 P **Pn** **02 52 09.8 -0.1**
IDI Anoyia 4.28 213 Pn **Pn** **02 52 09.1 -1.7**
2.3nm,0.3s,baz=357,slow=6.6,SNR=6.2
IDI Sn **Sn** **02 52 57.9 -2.6**
4.4nm,0.3s,baz=294,slow=19,SNR=2.1
IDI LR LR 02 54 03.0
comp=Z,670nm,18.2s,baz=9.0,slow=42
15nm,0.6s
KNT Kendrikon 4.33 303 P **Pn** **02 52 10.9 -0.5**
KNT Kendrikon 4.33 303 P **Pn** **02 52 10.9 -0.5**
TYRN Tyrnavos 4.33 282 P **Pn** **02 52 11.3 -0.1**
ALIK Aliki, Aigiali 4.45 263 P **Pn** **02 52 13.8 +0.8**
THL Klokotos Trika 4.48 280 P **Pn** **02 52 13.1 -0.3**
GRG Griva 4.57 298 P **Pn** **02 52 14.8 +0.1**
GRG Griva 4.57 298 P **Pn** **02 52 14.8 +0.1**
BR131 Keskin Array S 4.66 78 *c*e P **Pn** **02 52 16.2 +0.1**
BRTR Keskin Array B 4.66 78 Pn **Pn** **02 52 15.8 -0.2**
3.6nm,0.3s,baz=255,slow=14,SNR=7.2
BRTR Pg **Pb** **02 52 30.9 +3.4**
3.3nm,0.3s,baz=257,slow=13,SNR=7.0
BRTR Sn **Sn** **02 53 07.5 -2.5**
0.7nm,0.3s,baz=257,slow=13,SNR=0.9
BRTR LR LR 02 54 07.9
comp=Z,469nm,21.5s,baz=274,slow=40
13nm,0.5s
KZN Kozani 4.80 289 P **Pn** **02 52 18.9 +1.0**
ITM Ithomi 4.89 251 P **Pn** **02 52 20.9 +1.7**
KBN Korca 5.61 290 **Pn** **02 52 27.7 -1.3**
KBN Korca 5.61 290 P **Pn** **02 52 27.7 -1.3**
LSK Leskovik 5.64 285 P **Pn** **02 52 31.1 +1.6**
IGT Igoumenitsa 5.77 278 P **Pn** **02 52 33.7 +2.5**
IGT Igoumenitsa 5.77 278 P **Pn** **02 52 33.7 +2.5**
CSS Mathiatis 5.98 130 Pn **Pn** **02 52 33.4 -0.8**
CSS Mathiatis 5.98 130 Pn **Pn** **02 52 33.2 -1.0**
BNN Bunyan 6.34 88 Pn **Pn** **02 52 39.5 +0.4**
TIR Tirane 6.49 294 **Pn** **02 52 42.0 +0.9**
TIR Tirane 6.49 294 P **Pn** **02 52 42.0 +0.9**
MLR Muntele Rosu 6.69 349 Pn **Pn** **02 52 43.8 -0.2**
1.2nm,0.3s,baz=164,slow=5.9,SNR=7.5
30nm,0.9s
DJES Djerdap 6.93 328 Pn **Pn** **02 52 45.3 -1.8**
PVY Plav 6.94 304 *e*Pn **Pn** **02 52 47.5 +0.1**
PVY *i* Sn **Sn** **02 54 04.9 -1.3**
IVA Berane 7.12 306⇓ *i*Pn **Pn** **02 52 50.0 +0.2**
IVA *i* Sn **Sn** **02 54 09.3 -1.3**
ULC Ulcinj 7.14 298 *e*Pn **Pn** **02 52 50.4 +0.3**
ULC *i* Sn **Sn** **02 54 09.9 -1.1**
SEV Sevastopol' 7.16 36 *e*P **Pn** **02 52 48.4 -1.9**
SEV Pm 02 52 50.8
comp=Z,3.0nm,0.4s
SEV *e*S **Sn** **02 54 07.5 -3.9**
SEV Sm 02 54 12.5
comp=N,2.0nm,0.4s
SEV Sm 02 54 12.5
comp=E,4.0nm,0.4s
SEV Sevastopol' 7.16 36 *e*P **Pn** **02 52 48.2 -2.1**
SEV *e*S **Sn** **02 54 07.3 -4.1**
DRME Dracevica, Mon 7.27 299⇑ *i*Pn **Pn** **02 52 52.2 +0.4**
DRME *i* Sn **Sn** **02 54 13.1 -1.0**
PDG Podgorica 7.33 301 **Pn** **02 52 52.6 +0.1**
TTG Podgorica 7.33 301⇑ *i*Pn **Pn** **02 52 52.9 +0.4**
TTG *i* Sn **Sn** **02 54 14.4 -1.0**
KOME Kolasin 7.35 305⇓ *i*Pn **Pn** **02 52 53.2 +0.2**
KOME *i* Sn **Sn** **02 54 14.9 -1.3**
YAL Yalta 7.35 39 *e*P **Pn** **02 52 51.2 -1.7**
YAL Pm 02 52 54.8
comp=Z,4.0nm,0.3s
YAL *e*S **Sn** **02 54 12.4 -3.6**
YAL Sm 02 54 16.9
comp=E,13nm,0.4s
YAL Sm 02 54 17.0
comp=N,3.0nm,0.2s
YAL Yalta 7.35 39 *e*P **Pn** **02 52 51.2 -1.7**
YAL *e*S **Sn** **02 54 12.4 -3.6**
BUM Brajici-Budva 7.51 299⇓ *i*Pn **Pn** **02 52 55.6 +0.4**
BUM *i* Sn **Sn** **02 54 19.1 -1.1**
CEME Cevo 7.60 301⇑ *i*Pn **Pn** **02 52 56.8 +0.4**
CEME *i* Sn **Sn** **02 54 21.1 -1.2**
ALU Alushta 7.61 39 *e*S **Sn** **02 54 17.2 -5.3**
ALU Sm 02 54 25.1
comp=N,12nm,0.5s
NKME Niksic 7.67 303⇑ *i*Pn **Pn** **02 52 57.8 +0.4**
NKME *i* Sn **Sn** **02 54 22.8 -1.4**
PLE Pljevlja 7.68 308 *e*Pn **Pn** **02 52 57.8 +0.3**
PLE *i* Sn **Sn** **02 54 22.8 -1.5**
SIM Simferopol' 7.68 36 *e*S **Sn** **02 54 19.6 -4.5**
SIM Sm 02 54 26.7
comp=N,80nm,0.8s
SIM Sm 02 54 26.8
comp=E,67nm,0.8s
SIM Simferopol' 7.68 36 *e*P Pb 02 53 13.8 -5.0
SIM *e*S **Sn** **02 54 22.1 -2.0**
SIM pmax pmax
comp=Z,34nm,0.8s
SIM smax smax
comp=N,76nm,0.9s
SIM smax smax
comp=E,163nm,1.1s
HCY Herceg Novi 7.84 300⇑ *i*Pn **Pn** **02 53 00.1 +0.4**
HCY *i* Sn **Sn** **02 54 27.0 -1.3**
UPM Unac-Piva 7.91 306 *e*Pn **Pn** **02 53 01.0 +0.2**
UPM *i* Sn **Sn** **02 54 28.7 -1.5**
BRY Bratogost 8.01 303 *e*Pn **Pn** **02 53 02.3 +0.3**
BRY *i* Sn **Sn** **02 54 31.0 -1.5**
MILM Milestii Mici 8.03 5 *i* P **Pn** **02 53 01.0 -1.2**
MILM *i* S **Sn** **02 54 29.0 -3.7**
MILM *e*L L 02 55 30.0
MILM LRM MLR 02 56 19.0
comp=E,500nm,12.0s
MILM Milestii Mici 8.03 5 *i* P **Pn** **02 53 01.0 -1.2**
MILM *i* S **Sn** **02 54 29.0 -3.7**
MILM MLR MLR
comp=Z,500nm,12.0s
MILM MLR MLR
comp=N,500nm,9.4s
SUDU Sudak 8.06 40 *e*S **Sn** **02 54 30.4 -3.1**
SUDU Sm 02 54 33.8
comp=E,3.0nm,0.2s
SUDU Sm 02 54 33.9
comp=N,27nm,0.5s
BZS Buzias 8.07 328 P **Pn** **02 53 01.1 -1.7**
BZS pmax pmax
comp=Z,35nm,0.7s
KIS Kishinev 8.11 5 *e*P **Pn** **02 53 02.0 -1.3**
KIS *e*L L 02 56 02.0
KIS LRM MLR 02 56 21.0
comp=Z,200nm,12.0s
KIS Kishinev 8.11 5 *e*P **Pn** **02 53 02.0 -1.3**
KIS MLR MLR
comp=Z,200nm,12.0s
MMA0 Mount Meron ar 8.57 131 Pn **Pn** **02 53 07.5 -2.2**
MMAI Mount Meron Ar 8.57 131 Pn **Pn** **02 53 08.1 -1.7**
comp=Z,4.5nm,0.3s,baz=319,slow=12,SNR=17
MMAI Sn **Sn** **02 54 42.6 -3.6**
comp=Z,1.2nm,0.3s,baz=320,slow=26,SNR=1.8
MMAI LR LR 02 57 44.4
comp=Z,87nm,20.1s,baz=206,slow=47
comp=Z,3.0nm,0.4s
GEM Giv'at Ha'Em 8.59 129 Pn **Pn** **02 53 08.0 -1.9**
NATI Neve Ativ 8.60 129 Pn **Pn** **02 53 08.3 -1.7**
OFRI `Ofer 8.62 135 Pn **Pn** **02 53 08.7 -1.7**
BURAR Bucovina Array 8.88 349 **Pn** **02 53 13.0 -0.9**
BURAR Bucovina Array 8.88 349 P **Pn** **02 53 13.0 -0.9**
SLTI Sal'it 8.94 136 Pn **Pn** **02 53 13.0 -1.7**
MMLI Mount Malkishu 9.00 134 Pn **Pn** **02 53 13.4 -2.2**
SALP Salfit 9.15 136 Pn **Pn** **02 53 15.3 -2.4**
HMDT Nahal Hemdat 9.20 134 Pn **Pn** **02 53 17.1 -1.2**
AMAZ Amatzia 9.43 139 Pn **Pn** **02 53 18.5 -3.0**
DSI Dead Sea 9.64 137 Pn **Pn** **02 53 22.7 -1.6**
DSI Sn **Sn** **02 55 10.2 -2.3**
YTIR Yattir 9.67 139 Pn **Pn** **02 53 22.9 -1.9**
SOC Sochi 10.16 59 *e*P **Pn** **02 53 30.0 -1.4**
SOC *e* 02 55 26.1
SOC MLR MLR
comp=Z,104nm,14.0s
PRNI Paran 10.44 143 Pn **Pn** **02 53 33.3 -2.0**
KRMI Paran Flat 10.51 145 Pn **Pn** **02 53 34.7 -1.6**
HRFI Mount Harif 10.72 144 Pn **Pn** **02 53 37.9 -1.3**
HRFI Sn **Sn** **02 55 36.7 -2.3**
MBRI Mt Berech 10.87 145 Pn **Pn** **02 53 38.6 -2.6**
EIL Elat 10.99 145 Pn **Pn** **02 53 41.4 -1.4**
comp=Z,1.9nm,0.3s,baz=241,slow=6.6,SNR=14
EIL Sn **Sn** **02 55 38.4 -7.3**
comp=Z,0.2nm,0.3s,baz=252,slow=20,SNR=2.1
comp=Z,5.6nm,0.4s
EIL Elat 10.99 145 Pn **Pn** **02 53 41.2 -1.6**
LUBAR Lubar, Ukraine 10.99 0 Pn **Pn** **02 53 40.4 -2.4**
comp=Z,9.7nm,0.8s
AKASG Malin Array Be 11.82 5 Pn **Pn** **02 53 51.4 -2.7**
comp=Z,0.4nm,0.3s,baz=185,slow=11,SNR=2.5
AKASG Sn **Sn** **02 56 04.9 -0.9**
comp=Z,0.2nm,0.3s,baz=188,slow=25,SNR=1.4
AKASG LR LR 02 58 12.0
comp=Z,130nm,19.7s,baz=191,slow=36
comp=Z,0.4nm,0.4s
AKBB Malin Array Si 11.82 5⇓ *e*P **Pn** **02 53 53.9 -0.2**
AKBB Malin Array Si 11.82 5 Pn **Pn** **02 53 52.7 -1.4**
comp=Z,4.6nm,0.7s
AKBB pP **Pn** **02 53 56.4 +2.3**
comp=Z,4.6nm,0.7s
MI28 Mi28,Pidlybu 12.01 360 Pn **Pn** **02 53 53.9 -2.7**
comp=Z,7.2nm,0.9s
NEY Neytrino 12.11 64⇑ *e*P **Pn** **02 53 59.2 +0.9**
NEY pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 12.30 61 *e*P **Pn** **02 53 59.4 -1.4**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,67nm,11.0s
KBZ Khabaz 12.37 62 LR LR 03 00 03.5
comp=Z,292nm,18.7s,baz=256,slow=44
KBZ Khabaz 12.37 62⇑ *e*P **Pn** **02 54 02.0 +0.4**
CONA Conrad Observa 12.45 320 *e*P Pn 02 54 08.0 +5.2
comp=Z,6.0nm,0.9s
RNPP1 Kostyukhnivka 12.50 354 Pn **Pn** **02 54 00.9 -2.5**
GNI Garni 13.20 79 LR LR 02 59 22.1
comp=Z,227nm,18.9s,baz=281,slow=38
CKRC Cesky Krumlov 13.82 320 AMS AMS 03 00 10.0
comp=Z,300nm,11.9s
GEC2 GERESS Array S 14.14 319 Pn **Pn** **02 54 26.0 +0.1**
GERES GERESS Array B 14.14 319 Pn **Pn** **02 54 28.1 +2.2**
comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=2.2
comp=Z,0.5nm,0.5s
GERES GERESS Array B 14.14 319 Pn **Pn** **02 54 24.6 -1.2**
GROC Groznyy 14.29 67 P **Pn** **02 54 27.3 -0.5**
KHC Kasperske Hory 14.38 320 Pn **Pn** **02 54 28.4 -0.8**
KHC Kasperske Hory 14.38 320 *e*P **P** **02 54 36.6 +0.5**
KHC MLR MLR
comp=Z,600nm,9.5s
KHC Kasperske Hory 14.38 320 *e*P **P** **02 54 36.6 +0.5**
KHC AMS AMS 03 00 30.0
comp=Z,600nm,9.5s
WTTA Wattenberg 14.39 311 *e*P **P** **02 54 32.9 -3.4**
comp=Z,13nm,1.2s
WATA Walderalm 14.46 311 *e*P **P** **02 54 34.7 -2.4**
comp=Z,16nm,1.4s
PRU Pruhonice 14.50 324 AMS AMS 03 00 30.0
comp=Z,400nm,8.7s
SQTA Sankt Quirin 14.62 310 *i* P **Pn** **02 54 35.5 +3.0**
comp=Z,16nm,1.2s
VSR Storozhevoye 14.69 29 *e*P **Pn** **02 54 30.1 -3.1**
VSR pmax pmax
comp=Z,7.0nm,0.6s
MOTA Moosalm 14.74 310 *e*P **Pn** **02 54 36.7 +2.5**
comp=Z,8.7nm,1.1s
FETA Feichten 14.82 309 *i* P **P** **02 54 39.4 -1.7**
comp=Z,18nm,1.1s
KEST Kesra 14.96 263 Pn **P** **02 54 43.1 +0.5**
comp=Z,0.3nm,0.3s,baz=16,slow=19,SNR=6.0
RETA Reutte 15.02 310 *i* P **P** **02 54 42.0 -1.1**
comp=Z,7.2nm,1.1s
VORR Voronezh 15.07 28 *e*P **Pn** **02 54 34.2 -4.1**
VORR pmax pmax
comp=Z,50nm,0.4s
DAVOX Davos/Dischmat 15.24 307 Pn **Pn** **02 54 40.3 -0.6**
comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=2.1
DAVOX LR LR 03 01 29.0
comp=Z,188nm,20.8s,baz=86,slow=41
comp=Z,3.2nm,0.9s
TUE Stuetta 15.45 305 Pn **Pn** **02 54 43.5 -0.2**
TUE IAmb IAmb 02 55 01.6
comp=Z,10nm,0.8s
DAVA Damuels 15.46 308 *e*P **P** **02 54 48.0 -0.1**
comp=Z,23nm,1.2s
MAK Makhachkala 15.48 69 *e*P **Pn** **02 54 40.0 -3.8**
MAK *e*S **Sn** **02 57 32.9 -2.1**
MAK pmax pmax
comp=Z,305nm,1.5s
MAK MLR MLR
comp=Z,144nm,20.0s
MNK Minsk 15.59 0 *i* P **Pn** **02 54 44.9 -0.2**
MNK *i* S **Sn** **02 57 39.4 +2.0**
MNK pmax pmax
comp=E,3.0nm,1.3s
MNK pmax pmax
comp=N,31nm,1.0s
MNK pmax pmax
comp=Z,17nm,0.9s
MNK MLR MLR
comp=N,265nm,14.0s
MNK MLR MLR
comp=E,8.0nm,11.0s
MNK MLR MLR
comp=Z,112nm,15.0s
MNK Minsk 15.59 0 *i* P **Pn** **02 54 44.9 -0.2**
comp=E,3.0nm,1.3s
MNK *i* P **Pn** **02 54 44.9 -0.2**
comp=N,31nm,1.0s
MNK *i* P **Pn** **02 54 44.9 -0.2**
comp=Z,17nm,0.8s,baz=181
MNK *i* PP **sP** **02 55 00.5 +5.4**
MNK *i* S **Sn** **02 57 39.4 +2.0**
MNK *i* SS **S** **02 57 52.2 -0.7**
MNK *i* LQ LQ 02 59 19.3
MNK *i* LR LR 03 00 30.2
MNK *i* LRM MLR 03 01 06.2
comp=N,265nm,13.7s
MNK *i* LRM MLR 03 01 09.4
comp=E,8.0nm,11.0s
MNK *i* LRM MLR 03 01 29.7
comp=Z,112nm,15.3s
LPSR Galich'ya Gora 15.73 26 *e*P **Pn** **02 54 45.4 -1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VRH Novokhopyorsk 15.73 34 *e*P **Pn** **02 54 46.7 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.8s
NACGM Naroch 16.00 358 *e*P **P** **02 54 57.7 +3.8**
baz=177
CLL Collm 16.12 325 Pn **Pn** **02 54 52.0 -0.1**
CLL Collm 16.12 325 *e*P **P** **02 54 55.0 -0.3**
CLL pmax pmax
comp=Z,18nm,1.5s
CLL Collm 16.12 325 *e*sP **P** **02 54 55.0 -0.3**
comp=Z,18nm,1.5s
CLL *e*PP **sP** **02 55 01.0 -0.1**
CLL *e*sPP 02 55 05.0
CLL *e*x x 02 55 07.0
CLL *e*x x 02 55 50.0
SENIN Lac Senin/Sane 16.74 303 Pn **Pn** **02 55 00.4 +0.2**
SENIN IAmb IAmb 02 55 24.3
comp=Z,23nm,1.4s
BNI Bardonecchia 16.78 298 Pn **Pn** **02 55 00.6 0.0**
BNI IAmb IAmb 02 55 10.7
comp=Z,20nm,1.2s
BNI Bardonecchia 16.78 298 P **Pn** **02 55 00.6 0.0**
BNI pmax pmax
comp=Z,20nm,1.2s
OBN Obninsk 17.26 17 Pn **Pn** **02 55 06.1 -0.3**
OBN IAmb IAmb 02 55 06.3
comp=Z,14nm,1.0s
OBN Obninsk 17.26 17⇑ *e*P **Pn** **02 55 05.6 -0.8**
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN MLR MLR
comp=Z,82nm,16.0s
BELG Belogornoye 19.28 39 LR LR 03 03 34.7
comp=Z,38nm,19.9s,baz=131,slow=39
BELG Belogornoye 19.28 39⇑ *e*P **Pn** **02 55 32.4 +1.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
RCHB Rochefort 19.49 312 *d*P **P** **02 55 32.9 +0.4**
VSU Vasula 19.57 358⇑ *e*P **P** **02 55 32.3 -0.9**
VSU pmax pmax
comp=Z,23nm,0.9s
BCLA Clavier 19.57 313 *d*P **Pn** **02 55 34.3 -0.3**
BCLA *d*Pn **sP** **02 55 41.1 +1.9**
BGES Gesves 19.68 313 *d*P **P** **02 55 35.2 +0.6**
BMRD Maredsous 19.82 312 *d*P **P** **02 55 35.9 -0.2**
DOU Dourbes 19.83 312 *d*P **P** **02 55 36.5 +0.3**
DOU *d*pP **pP** **02 55 41.0 +0.8**
DOU *d*PP **PnPn** **02 55 52.5 +0.8**

RAYN Ar Rayn 21.55 130 P P 02 55 53.9 -1.1
RAYN IAmb IAmb 02 55 59.4
comp=Z,9.3nm,1.2s
RAYN Ar Rayn 21.55 130 P P 02 55 53.9 -1.1
RAYN pmax pmax
comp=Z,9.0nm,1.3s
FINES FINESS Array B 22.57 358 P P 02 56 05.5 0.0
comp=Z,5.5nm,0.6s,baz=156,slow=10,SNR=17
FINES LR LR 03 05 56.0
comp=Z,66nm,18.2s,baz=168,slow=40
comp=Z,5.5nm,0.6s
FINES FINESS Array B 22.57 358 P P 02 56 05.7 +0.1
FINES FINESS Array B 22.57 358 P P 02 56 05.7 +0.1
HFS Hagfors 23.00 342 LR LR 03 04 58.9
comp=Z,47nm,19.0s,baz=111,slow=36
KLMR Klimovskoe 23.16 15 *eP* **P 02 56 09.6 -2.1**
KLMR pmax pmax
comp=Z,26nm,1.7s
KLMR Klimovskoe 23.16 15 *eP* **P 02 56 09.7 -2.0**
KLMR AMP 02 56 28.3
comp=Z,26nm,1.7s
GEYT Alibeck 23.78 83 P P 02 56 19.7 +1.5
comp=Z,9.2nm,1.0s,baz=291,slow=12,SNR=11
GEYT LR LR 03 06 23.2
comp=Z,54nm,20.7s,baz=272,slow=39
comp=Z,9.2nm,1.0s
GEYT Alibeck 23.78 83 P P 02 56 19.1 +0.9
GYA0B ALIBECK ARRAY 23.78 83 P P 02 56 20.2 +2.0
KIRV Kirov 24.12 28 LR LR 03 06 17.1
comp=Z,82nm,21.6s,baz=236,slow=38
AKTO Aktyubinsk 24.25 52 P P 02 56 21.5 -0.9
comp=Z,0.7nm,0.4s,baz=249,slow=11,SNR=2.1
AKTO LR LR 03 08 36.1
comp=Z,77nm,19.0s,baz=248,slow=43
comp=Z,0.7nm,0.4s
NB2 NORSAR Subarra 24.41 340 P P 02 56 22.3 -1.5
comp=Z,0.7nm,0.7s,baz=143,slow=10
NOA NORSAR Array B 24.41 340 P P 02 56 22.6 -1.2
comp=Z,1.1nm,0.8s,baz=145,slow=9.3,SNR=4.4
NOA LR LR 03 07 45.3
comp=Z,80nm,18.6s,baz=130,slow=41
comp=Z,1.1nm,0.8s
ESDC Sonseca Array 24.47 282 P P 02 56 24.3 -0.3
comp=Z,0.9nm,0.7s,baz=69,slow=9.9,SNR=8.6
ESDC LR LR 03 06 41.4
comp=Z,46nm,18.0s,baz=72,slow=38
comp=Z,0.9nm,0.7s
TAM Tamanrasset 24.84 236 P P 02 56 29.1 +0.9
TAM Tamanrasset 24.84 236 P P 02 56 29.1 +0.9
TAM pmax pmax
comp=Z,4.0nm,1.1s
ABKAR Akbulak array 25.16 55 P P 02 56 30.9 +0.2
PRGR Permogore 25.28 20 *eP* **P 02 56 30.6 -1.0**
PRGR pmax pmax
comp=Z,7.0nm,0.6s
MDT Midelt 26.81 267 P P 02 56 45.9 0.0
comp=Z,1.7nm,0.9s,baz=320,slow=13,SNR=3.8
comp=Z,1.7nm,0.9s
ARU Arti 26.83 39 P P 02 56 46.3 +0.6
comp=Z,1.1nm,0.2s,baz=245,slow=6.0,SNR=4.9
ARU LR LR 03 10 12.1
comp=Z,45nm,18.4s,baz=239,slow=43
comp=Z,1.1nm,0.2s
ARU Arti 26.83 39 P P 02 56 46.8 +1.1
ARU Arti 26.83 39*c iP* **P 02 56 48.4 +2.7**
ARU 02 57 28.0
ARU SS 03 02 36.2
ARU pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 32.26 50↑ *eP* **P 02 57 36.3 +2.4**
BRVK pmax pmax
comp=Z,2.0nm,1.4s
KK31 Karatay Array 32.30 69 P P 02 57 35.0 +0.6
KK31 IAmb IAmb 02 57 43.9
comp=Z,3.1nm,1.2s
KK31 Karatay Array 32.30 69 P P 02 57 35.0 +0.6
KK31 pmax pmax
comp=Z,3.0nm,1.2s
KKAR Karatay Array 32.30 69 P P 02 57 35.2 +0.8
KKAR IAmb IAmb 02 57 43.9
comp=Z,3.1nm,1.2s
KKAR Karatay Array 32.30 69 P P 02 57 35.2 +0.8
KKAR pmax pmax
comp=Z,3.0nm,1.2s
BVAR Borovoye Array 32.31 50 LR LR 03 13 10.6
comp=Z,63nm,19.1s,baz=283,slow=41
GAR Garm 32.90 76 P P 02 57 41.0 +1.2
TORD Torodi Ar. Bea 34.49 229 P P 02 57 54.4 +0.7
comp=Z,0.8nm,0.5s,baz=35,slow=9.0,SNR=5.5
comp=Z,0.8nm,0.5s
AAK Ala-Archa 35.26 69 LR LR 03 15 36.3
comp=Z,64nm,18.0s,baz=295,slow=42
AAK Ala-Archa 35.26 69 P P 02 58 00.5 +0.2
AAK IAmb IAmb 02 58 07.4
comp=Z,2.8nm,0.8s
AAK Ala-Archa 35.26 69↑ *eP* **P 02 58 00.0 -0.3**
AAK pmax pmax
comp=Z,2.0nm,1.1s
KURBB Kurchatov Arra 37.22 55 P P 02 58 16.3 -0.4
comp=Z,0.3nm,0.4s,baz=280,slow=9.3,SNR=3.3
KURBB LR LR 03 15 55.0
comp=Z,68nm,19.5s,baz=278,slow=40
comp=Z,0.3nm,0.4s
KURK Kurchatov 37.27 55↑ *eP* **P 02 58 17.3 +0.1**
KURK pmax pmax
comp=Z,1.0nm,1.1s
MBAR Mbarara 39.43 175 P P 02 58 36.6 +0.8
MBAR IAmb IAmb 02 58 49.7
comp=Z,7.0nm,1.1s
MBAR Mbarara 39.43 175↑ *eP* **P 02 58 35.7 -0.2**
MK31 Makanchi Array 40.06 60 P P 02 58 41.0 +0.2
MK31 Makanchi Array 40.06 60↓ *eP* **P 02 58 39.9 -0.8**
MKAR Makanchi Array 40.06 60 P P 02 58 40.6 -0.1
comp=Z,1.1nm,0.7s,baz=289,slow=7.6,SNR=6.8
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 40.06 60 P P 02 58 39.5 -1.2
KMBO Kilima Mbogo 40.81 165↓ *eP* **P 02 58 48.8 +1.4**
ZALV Zalesovo Beam 40.96 49 P P 02 58 47.5 -0.5
comp=Z,0.3nm,0.3s,baz=246,slow=7.2,SNR=1.5
comp=Z,0.3nm,0.3s
ZALV Zalesovo Beam 40.96 49 P P 02 58 49.9 +1.9
ZALV Zalesovo Beam 40.96 49 P P 02 58 49.9 +1.9
DGZ Jazzator, Alta 43.00 55↓ *eP* **P 02 59 07.9 +3.0**
DGZ pmax pmax
comp=Z,2.0nm,1.0s
NRIK Noril'sk 43.60 26↓ *eP* **P 02 59 11.5 +2.2**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
WMQ Urumqi 44.42 64 *eP* **P 02 59 19.4 +3.1**
ULN Ulaanbaatar 55.95 53↓ *eP* **P 03 00 45.1 +1.3**
ULN pmax pmax
comp=Z,2.0nm,0.9s
TSUM Tsumeb 58.59 191 LR LR 03 29 18.7
comp=Z,63nm,18.6s,baz=338,slow=39
HHC Hu-ho-hao-te 61.89 59 *eP* **P 03 01 26.6 +1.5**
PZH PanZhiHua 61.95 77 P P 03 01 29.3 +3.6
XLT XiLinHaoTe 63.35 54 *eP* **P 03 01 34.8 0.0**
XLT pP pP 03 01 38.0 -1.3
XLT sP sP 03 01 40.0 -1.0
BILL Bilibino 68.91 15↓ *eP* **P 03 02 11.3 +1.4**
BILL *e* 03 02 15.6
BILL 03 02 33.0
BILL pmax pmax
comp=Z,3.0nm,0.4s
SUR Sutherland 71.23 186 LR LR 03 33 40.6
comp=Z,21nm,18.7s,baz=28,slow=36
RCBR Riachuelo 73.64 248 LR LR 03 34 50.8
comp=Z,37nm,19.6s,baz=144,slow=36
BDFB Brasilia 89.00 249 P P 03 04 01.5 +0.8
comp=Z,2.7nm,0.6s,baz=54,slow=8.7,SNR=5.1
comp=Z,2.7nm,0.6s

DDA ***15*** *03:02:28.7±0.0, 38°.92N×27°.73E, h19km±1km, ML3.5*
ISK ***15*** *03:02:28.6, 38°.92N×27°.71E, h8km, ML3.7/18*
THE ***15*** *03:02:29.0, 38°.92N×27°.78E, h0km±1km, ML3.4/7, Error ellipse: s-maj=2.5km s-min=1.3km az=89.0*
ISC 15 03:02:29.1±0.8, 38°.91N±0°.02×27°.74E±0°.02, h11km±6km, n78, σ0=97/107, 8C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.07**	**118**	PG		**Pg**		**03 02 31.1**	**-0.3**
AKS				SG		**Sg**		**03 02 32.9**	**-0.2**
GOMA	**Golmarmara-Man**	**0.25**	**145**	PG		**Pg**		**03 02 34.5**	**+0.3**
GOMA				SG		**Sg**		**03 02 38.8**	**+1.2**
STEP	**BALIKESIR_Sava**	**0.47**	**358**	P		**Pg**		**03 02 38.0**	**-0.3**
STEP				S		**Sg**		**03 02 44.7**	**+0.3**
STEP				*i* AML		AML		03 02 45.0	
	comp=E,4μm,0.7s								
STEP				*i* AML		AML		03 02 45.0	
	comp=N,4μm,0.6s								
ZEDA	**zmir-Bergama**	**0.52**	**276**	P		**Pg**		**03 02 39.3**	**+0.1**
ZEDA				S		**Sg**		**03 02 46.7**	**+0.7**
ZEDA				*i* AML		AML		03 02 47.0	
	comp=N,3μm,0.3s								
DKL	**Dikili**	**0.67**	**284**	PG		**Pg**		**03 02 42.3**	**+0.3**
DKL				SG		**Sg**		**03 02 50.9**	**+0.1**
BLCB	**Balcova**	**0.76**	**226**	PG		**Pg**		**03 02 43.5**	**-0.2**
BLCB				SG		**Sb**		**03 02 54.2**	**-0.4**
BLCB	**Balcova**	**0.76**	**226**	P		**Pg**		**03 02 43.5**	**-0.2**
BLCB				S		**Sb**		**03 02 55.0**	**+0.4**
MANT	**Manisa**	**0.77**	**123**	P		**Pg**		**03 02 43.9**	**-0.1**
MANT				S		**Sb**		**03 02 55.5**	**+0.3**
BUHA	**Balikesir, Bur**	**0.78**	**319**	P		**Pg**		**03 02 43.4**	**-0.8**
BUHA				S		**Sb**		**03 02 55.1**	**-0.3**
FOCM	**Foa**	**0.81**	**256**	PG		**Pg**		**03 02 44.3**	**-0.4**
FOCM				SG		**Sg**		**03 02 55.7**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**0.97**	**173**	PG		**Pb**		**03 02 47.9**	**-0.1**
DST	**Dursunbey**	**0.97**	**44**	PG		**Pb**		**03 02 48.1**	**0.0**
SMAA	**Simav-Kutahya**	**0.99**	**79**	PG		**Pn**		**03 02 48.5**	**-0.5**
USAK	**Uak-Merkez**	**1.02**	**101**	P		**Pb**		**03 02 48.3**	**-0.6**
USAK				S		**Sn**		**03 03 02.9**	**-0.9**
USAK				*i* AML		AML		03 03 09.0	
	comp=N,276nm,0.5s								
DGB	**zmir**	**1.09**	**218**	P		**Pb**		**03 02 49.2**	**-0.7**
DGB				S		**Sn**		**03 03 04.9**	**-0.5**
DGB				*i* AML		AML		03 03 06.0	
	comp=N,974nm,0.3s								
DGB				*i* AML		AML		03 03 07.0	
	comp=E,752nm,0.2s								
GONE	**Gonen-Balikesi**	**1.13**	**358**	PN		**Pg**		**03 02 50.8**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**1.18**	**236**	P		**Pb**		**03 02 50.6**	**-0.8**
ZEYE				S		**Sg**		**03 03 07.2**	**+0.1**
ZEYE				*i* AML		AML		03 03 08.0	
	comp=N,1μm,0.4s								
ZEYE				*i* AML		AML		03 03 12.0	
	comp=E,1μm,0.3s								
PRK	**Paraskevi**	**1.19**	**287**	P		**Pg**		**03 02 52.7**	**+0.8**
PRK				S		**Sn**		**03 03 08.7**	**+0.9**
	2μm,0.5s								
BAYC	**CANAKKALE_Bayr**	**1.24**	**312**	P		**Pn**		**03 02 52.1**	**-0.3**
BAYC				S		**Sg**		**03 03 09.2**	**+0.2**
BAYC				*i* AML		AML		03 03 10.0	
	comp=N,2μm,0.3s								
BAYC				*i* AML		AML		03 03 11.0	
	comp=E,1μm,0.4s								
GCAM	**G?zelcaml?**	**1.27**	**198**	PN		**Pn**		**03 02 52.7**	**-0.1**
GEDZ	**Gediz**	**1.31**	**84**	PN		**Pg**		**03 02 54.5**	**+0.2**
KNL	**Balıkesir**	**1.37**	**353**	P		**Pn**		**03 02 53.6**	**-0.5**
KNL				S		**Sn**		**03 03 12.2**	**-0.1**
KNL				*i* AML		AML		03 03 13.0	
	comp=E,1μm,0.3s								
KNL				*i* AML		AML		03 03 14.0	
	comp=N,994nm,0.4s								
GDZ	**Gediz**	**1.37**	**82**	P		**Pn**		**03 02 54.3**	**-0.1**
GDZ				S		**Sg**		**03 03 13.6**	**+0.3**
GDZ				*i* AML		AML		03 03 16.0	
	comp=E,356nm,0.3s								
KOCA	**Canakkale, Ayv**	**1.37**	**296**	P		**Pn**		**03 02 53.8**	**-0.4**
KOCA				S		**Sn**		**03 03 11.0**	**-1.5**
KOCA				*i* AML		AML		03 03 16.0	
	comp=N,524nm,0.5s								
KOCA				*i* AML		AML		03 03 16.0	
	comp=E,477nm,0.7s								
SMG	**Samos**	**1.39**	**211**	P		**Pb**		**03 02 55.0**	**-0.2**
SMG				S		**Sg**		**03 03 15.8**	**+1.8**
	2μm,0.5s								
CHOS	**Chios island**	**1.42**	**249**	PN		**Pn**		**03 02 55.1**	**+0.2**
CHOS	**Chios island**	**1.42**	**249**	P		**Pg**		**03 02 56.3**	**0.0**
CHOS				S		**Sg**		**03 03 15.9**	**+1.2**
	4μm,0.4s								
EZN	**Ezine**	**1.43**	**310**	PN		**Pn**		**03 02 54.9**	**0.0**
EZN	**Ezine**	**1.43**	**310**	P		**Pn**		**03 02 54.8**	**-0.1**
EZN				S		**Sg**		**03 03 17.8**	**+2.8**
	490nm,0.4s								
EDC	**Edincik**	**1.44**	**4**	PN		**Pn**		**03 02 55.0**	**-0.1**
TVSB	**Tavsanli**	**1.45**	**68**	PN		**Pb**		**03 02 55.5**	**-0.6**
ORLT	**Orhaneli**	**1.45**	**38**	PN		**Pb**		**03 02 56.1**	**0.0**
SIGR	**SIGRI**	**1.50**	**282**	PN		**Pn**		**03 02 55.7**	**-0.2**
SIGR	**SIGRI**	**1.50**	**282**	P		**Pn**		**03 02 55.7**	**-0.2**
SIGR				S		**Sg**		**03 03 17.6**	**+0.4**
	962nm,0.4s								
DDIM	**Aydin, Didim**	**1.50**	**195**	P		**Pn**		**03 02 55.4**	**-0.7**
DDIM				S		**Sg**		**03 03 19.5**	**+2.0**
DDIM				*i* AML		AML		03 03 22.0	
	comp=N,337nm,0.5s								
KHL	**Karahalli**	**1.52**	**112**	PN		**Pb**		**03 02 57.2**	**-0.2**
BOZC	**Bozcaada**	**1.60**	**306**	PN		**Pn**		**03 02 57.5**	**+0.1**
ULDT	**Uludag**	**1.64**	**41**	P		**Pn**		**03 02 58.4**	**+0.3**
ULDT				S		**Sn**		**03 03 19.3**	**0.0**
ULDT				*i* AML		AML		03 03 27.0	
	comp=E,689nm,0.4s								
ULDT				*i* AML		AML		03 03 29.0	
	comp=N,471nm,0.7s								
MRMT	**Marmara Adasi**	**1.69**	**356**	PN		**Pn**		**03 02 59.2**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.70**	**31**	PN		**Pn**		**03 02 59.3**	**+0.5**
ANDZ	**Kutahya, Merke**	**1.78**	**70**	P		**Pb**		**03 03 02.3**	**+0.4**
ANDZ				S		**Sg**		**03 03 27.7**	**+1.2**
ANDZ				*i* AML		AML		03 03 29.0	
	comp=E,369nm,0.4s								
ANDZ				*i* AML		AML		03 03 30.0	
	comp=N,298nm,0.3s								
YER	**Yerkesik**	**1.83**	**166**	PN		**Pn**		**03 03 01.3**	**+0.8**
YER	**Yerkesik**	**1.83**	**166**	P		**Pn**		**03 03 00.5**	**0.0**
BODT	**Bodrum**	**1.88**	**190**	P		**Pn**		**03 02 59.6**	**-1.6**
BODT				S		**Sg**		**03 03 28.7**	**-0.7**
BILE	**Bilecik/Merkez**	**2.07**	**52**	P		**Pb**		**03 03 06.7**	**-0.2**
BILE				S		**Sg**		**03 03 36.3**	**+0.6**
BILE				*i* AML		AML		03 03 38.0	
	comp=N,335nm,0.5s								
BILE				*i* AML		AML		03 03 39.0	
	comp=E,230nm,0.3s								
SMTH	**Samothraki Isl**	**2.31**	**313**	P		**Pn**		**03 03 07.2**	**+0.1**
ALN	**Alexandroupoli**	**2.37**	**327**	P		**Pn**		**03 03 08.1**	**+0.1**
ALN				S		**Sn**		**03 03 38.5**	**+1.4**
	268nm,0.4s								
ISK	**Istanbul-Kandi**	**2.38**	**25**	P		**Pn**		**03 03 07.7**	**-0.4**
ISK				S		**Sn**		**03 03 37.0**	**-0.3**
	442nm,0.5s								
APE	**Apeiranthos**	**2.53**	**224**	P		**Pn**		**03 03 09.8**	**-0.5**
ARG	**Arkhangelos**	**2.71**	**173**	P		**Pn**		**03 03 12.3**	**-0.3**
RDO	**Rodhopi**	**2.80**	**324**	P		**Pn**		**03 03 14.2**	**+0.4**
EDRB	**Edirne**	**3.03**	**346**	P		**Pn**		**03 03 16.7**	**-0.3**
DION	**Dionisos Attik**	**3.10**	**256**	P		**Pn**		**03 03 18.2**	**+0.2**
KSL	**Kastellorizon**	**3.12**	**151**	P		**Pn**		**03 03 20.4**	**+2.1**
OUR	**Ouranopolis**	**3.23**	**297**	P		**Pn**		**03 03 20.0**	**+0.3**
KAVA	**Kavala**	**3.24**	**311**	P		**Pn**		**03 03 19.9**	**+0.1**
KOKK	**Kokkinochori,**	**3.45**	**305**	P		**Pn**		**03 03 22.7**	**-0.1**
NVR	**Nevrokopi**	**3.84**	**311**	P		**Pn**		**03 03 28.6**	**+0.4**
SRS	**Serrai**	**3.87**	**306**	P		**Pn**		**03 03 28.8**	**+0.2**
SOH	**Sokhos**	**3.87**	**301**	P		**Pn**		**03 03 29.2**	**+0.5**
HORT	**Hortiatis**	**3.95**	**297**	P		**Pn**		**03 03 30.2**	**+0.4**
ANTO	**Ankara**	**4.03**	**75**	↑P		**Pg**		**03 03 45.0**	**-1.3**
KNT	**Kendirikon**	**4.34**	**303**	P		**Pn**		**03 03 35.9**	**+0.8**
KLV	**Kalavryta, Ach**	**4.47**	**261**	P		**Pn**		**03 03 37.8**	**+0.9**
VAY	**Valandovo**	**4.63**	**303**	*i* Pn		**Pn**		**03 03 40.7**	**+1.7**
STIP	**Stip**	**5.07**	**305**	*i* Pn		**Pn**		**03 03 44.4**	**-0.7**
TLBR	**Topalu**	**5.63**	**2**	↓P		**Pn**		**03 03 53.3**	**+0.5**
CFR	**Carcaliu**	**6.27**	**3**	↑P		**Pn**		**03 04 00.6**	**-0.9**
TLCR		**6.32**	**7**	↑P		**Pn**		**03 04 02.2**	**0.0**
MLR	**Muntele Rosu**	**6.71**	**349**	↑P		**Pn**		**03 04 08.9**	**+1.3**
VLDR	**Vladesti**	**6.93**	**2**	↑P		**Pn**		**03 04 11.9**	**+1.2**
PLOR	**Plostina**	**6.98**	**354**	↓P		**Pn**		**03 04 13.9**	**+2.6**
VRI	**Vrincioaia**	**6.99**	**354**	↓P		**Pn**		**03 04 12.1**	**+0.7**
COVR	**Voineasa-Covas**	**7.02**	**351**	↑P		**Pn**		**03 04 11.3**	**-0.6**
GZR	**Gura Zlata**	**7.45**	**332**	↑P		**Pn**		**03 04 17.0**	**-0.8**
BZS	**Buzias**	**8.09**	**328**	↓P		**Pn**		**03 04 26.1**	**-0.4**
MATE	**Matera**	**8.67**	**285**	↓P		**Pn**		**03 04 29.9**	**-4.6**
BURAR	**Bucovina Array**	**8.89**	**349**	↑P		**Pn**		**03 04 34.0**	**-3.5**

SNET ***15*** *03:04:11.5±1.1, 14°.08N×91°.95W, h62km±10km, ML4.8*
UCR ***15*** *03:04:11.8±1.1, 14°.09N×91°.94W, h61km±10km, ML4.5*
IDC ***15*** *03:04:11.8±1.2, 14°.16N×91°.89W, h65km±6km, mb3.5/8, mbtmp3.8/10, MS3.0/7, Error ellipse: s-maj=28.7km s-min=18.4km az=31.0*

GCG ***15*** *03:04:13.8±0.3, 14°.38N×91°.81W, h68km±58km, MD4.1*
ISC 15 03:04:11.2±0.8, 14°.07N±0°.07×92°.03W±0°.06, h67km±6km, n62, σ0=84/79, mb3.9/9, 3C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.55**	**35**	*eP*		**Pn**		**03 04 23.5**	**-0.8**
RTAL				*eS*		**Sn**		**03 04 33.4**	**-0.5**
STG3	**Santiaguito 3,**	**0.78**	**35**	↑*iP*		**Pn**		**03 04 26.3**	**-0.7**
FUG	**Fuego 3**	**1.21**	**72**	*eP*		**Pn**		**03 04 32.1**	**-0.2**
HUEH	**Huehuetenango**	**1.34**	**22**	*eP*		**Pn**		**03 04 34.2**	**0.0**
HUEH				*eS*		**Sn**		**03 04 52.7**	**+1.3**
HUEH	**Huehuetenango**	**1.34**	**22**	*eP*		**Pn**		**03 04 34.2**	**0.0**
HUEH				*eS*		**Sn**		**03 04 52.7**	**+1.3**
PCG	**Pacaya**	**1.41**	**77**	↑*iP*		**Pn**		**03 04 35.3**	**+0.2**
NBG	**Las Nubes**	**1.71**	**72**	↑*eP*		**Pn**		**03 04 40.3**	**+1.2**
APG	**El Apazote**	**1.77**	**58**	P		**Pn**		**03 04 39.9**	**-0.1**
	680nm,0.3s,baz=256,slow=6.1,SNR=460								
APG				S		**Sn**		**03 05 02.5**	**+0.7**
	1μm,0.3s,baz=104,slow=21,SNR=19								
APG				LR		LR		03 05 20.1	
	comp=Z,2μm,18.8s,baz=52,slow=42								
SLOZ	**Alcaldia de Sa**	**2.17**	**91**	*eP*		**Pn**		**03 04 45.1**	**-0.1**
SLOZ				*eS*		**Sn**		**03 05 11.3**	**+0.1**
NUBE	**Las Nubes**	**2.19**	**94**	*eS*		**Sn**		**03 05 10.4**	**-1.2**
NUBE	**Las Nubes**	**2.19**	**94**	*eS*		**Sn**		**03 05 10.4**	**-1.2**
RTR	**El Retiro**	**2.32**	**94**	*eP*		**Pn**		**03 04 47.7**	**+0.5**
RTR	**El Retiro**	**2.32**	**94**	*eP*		**Pn**		**03 04 47.7**	**+0.5**
CEVE	**Cerro Verde**	**2.34**	**96**	*eP*		**Pn**		**03 04 47.7**	**+0.1**
CEVE				*eS*		**Sn**		**03 05 16.5**	**+1.0**
CEVE				IAML				03 05 20.3	
	comp=Z,5μm,0.5s								
CEVE	**Cerro Verde**	**2.34**	**96**	*eP*		**Pn**		**03 04 47.7**	**+0.1**
CEVE				*eS*		**Sn**		**03 05 16.5**	**+1.0**
CEVE				IAML				03 05 20.3	
	comp=Z,5μm,0.5s								
SBLS	**San Blas**	**2.34**	**95**	*eP*		**Pn**		**03 04 47.8**	**+0.2**
SBLS	**San Blas**	**2.34**	**95**	*eP*		**Pn**		**03 04 47.8**	**+0.2**
SNJE	**San Jose**	**2.36**	**95**	*eP*		**Pn**		**03 04 47.8**	**+0.1**
SNJE	**San Jose**	**2.36**	**95**	*eP*		**Pn**		**03 04 47.8**	**+0.1**
MTO3	**Montecristo**	**2.60**	**82**	*eP*		**Pn**		**03 04 50.5**	**-0.7**
MTO3	**Montecristo**	**2.60**	**82**	*eP*		**Pn**		**03 04 50.5**	**-0.7**
ESQI	**Esquipulas**	**2.65**	**79**	*eP*		**Pn**		**03 04 51.1**	**-0.5**
BOQS	**Boqueron**	**2.69**	**97**	*eP*		**Pn**		**03 04 52.5**	**+0.2**
BOQS	**Boqueron**	**2.69**	**97**	*eP*		**Pn**		**03 04 52.5**	**+0.2**
SNET	**Serv Nac Est T**	**2.74**	**98**	*eP*		**Pn**		**03 04 52.3**	**-0.6**
SNET				*eS*		**Sn**		**03 05 24.1**	**-0.9**
SNET	**Serv Nac Est T**	**2.74**	**98**	*eP*		**Pn**		**03 04 52.3**	**-0.6**
SNET				*eS*		**Sn**		**03 05 24.1**	**-0.9**
LFRS	**El Faro**	**2.91**	**98**	*eP*		**Pn**		**03 04 55.9**	**+0.6**
LFRS	**El Faro**	**2.91**	**98**	*eP*		**Pn**		**03 04 55.9**	**+0.6**
SJTE	**Alcalda de S**	**2.97**	**98**	*eS*		**Sn**		**03 05 30.1**	**-0.4**
SJTE	**Alcalda de S**	**2.97**	**98**	*eS*		**Sn**		**03 05 30.1**	**-0.4**
PAVA	**Las Pavas**	**3.02**	**96**	*eP*		**Pn**		**03 04 56.6**	**-0.2**
PAVA	**Las Pavas**	**3.02**	**96**	*eP*		**Pn**		**03 04 56.6**	**-0.2**
COEG	**Centro de Oper**	**3.09**	**98**	*eP*		**Pn**		**03 04 58.3**	**+0.7**
COEG				*eS*		**Sn**		**03 05 33.2**	**-0.2**
COEG	**Centro de Oper**	**3.09**	**98**	*eP*		**Pn**		**03 04 58.3**	**+0.7**
COEG				*eS*		**Sn**		**03 05 33.2**	**-0.2**
P5NO	**Presa 5 de nov**	**3.17**	**91**	*eP*		**Pn**		**03 04 57.7**	**-1.0**
SCLA	**Alcaldia de Sa**	**3.22**	**96**	*eP*		**Pn**		**03 04 59.5**	**+0.1**
SCLA	**Alcaldia de Sa**	**3.22**	**96**	*eP*		**Pn**		**03 04 59.5**	**+0.1**
COEB	**Comit de Eme**	**3.44**	**99**	*eP*		**Pn**		**03 05 02.4**	**-0.1**
COEB				*eS*		**Sn**		**03 05 42.3**	**+0.1**
COEB	**Comit de Eme**	**3.44**	**99**	*eP*		**Pn**		**03 05 02.4**	**-0.1**
COEB				*eS*		**Sn**		**03 05 42.3**	**+0.1**
PETF	**Flores**	**3.51**	**36**	*eP*		**Pn**		**03 05 03.8**	**+0.5**
PETF	**Flores**	**3.51**	**36**	*eP*		**Pn**		**03 05 03.8**	**+0.5**
PACA	**Pacayal**	**3.65**	**99**	*eP*		**Pn**		**03 05 05.7**	**+0.4**
PACA	**Pacayal**	**3.65**	**99**	*eP*		**Pn**		**03 05 05.7**	**+0.4**
CMIG	**Matias Romero**	**4.08**	**318**	P		**Pn**		**03 05 10.9**	**-0.1**
	comp=Z,9.2nm,0.3s,baz=162,slow=12,SNR=67								
CMIG				S		**Sn**		**03 05 55.7**	**-1.9**
	comp=Z,63nm,0.3s,baz=259,slow=20,SNR=8.2								
CMIG				LR		LR		03 06 43.2	
	comp=Z,65nm,21.1s,baz=158,slow=37								
LCND	**La Caada**	**4.09**	**100**	*eP*		**Pn**		**03 05 11.9**	**+0.6**
LCND				*eS*		**Sn**		**03 05 58.4**	**+0.5**
LCND	**La Caada**	**4.09**	**100**	*eP*		**Pn**		**03 05 11.9**	**+0.6**
LCND				*eS*		**Sn**		**03 05 58.4**	**+0.5**
TXAR	**Lajitas Array**	**18.63**	**327**	P		**Pn**		**03 08 25.6**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=152,slow=10,SNR=14								
TKL	**Tuckaleechee C**	**22.74**	**18**	P		**P**		**03 09 05.9**	**-2.0**
	comp=Z,2.3nm,0.5s,baz=204,slow=14,SNR=5.6								
TKL				LR		LR		03 18 26.7	
	comp=Z,61nm,19.3s,baz=192,slow=38								
	comp=Z,2.3nm,0.5s								
ANMO	**Albuquerque**	**24.53**	**330**	P		**P**		**03 09 25.5**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=108,slow=13,SNR=1.8								
	comp=Z,0.8nm,0.5s								
SJG	**San Juan**	**25.17**	**77**	LR		LR		03 19 32.8	
	comp=Z,25nm,20.7s,baz=233,slow=37								
PDAR	**Pinedale Array**	**32.35**	**336**	P		**P**		**03 10 34.0**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=155,slow=6.7,SNR=2.1								
PDAR				LR		LR		03 24 16.1	
	comp=Z,27nm,19.0s,baz=70,slow=37								
	comp=Z,0.2nm,0.6s								
SADO	**Sadowa**	**32.50**	**17**	LR		LR		03 25 50.9	
	comp=Z,28nm,18.6s,baz=232,slow=40	

comp=Z,7μm,21.9s,baz=118,slow=32
RPZ Rata Peaks 29.90 201 LR LR 03 25 00.3
comp=Z,101nm,18.0s,baz=54,slow=35
TAOE Nuku Hiva Isla 34.42 82 *e*LR LR 03 22 50.8
comp=Z,237nm,27.9s
KRVT Keravat (AS076 34.83 286 LR LR 03 27 01.4
comp=Z,187nm,21.3s,baz=263,slow=33
CTA Charters Tower 37.29 258 LR LR 03 28 05.7
comp=Z,122nm,18.8s,baz=80,slow=33
PMG Port Moresby 37.83 276 LR LR 03 28 48.0
comp=Z,62nm,18.1s,baz=81,slow=33
STKA Stephens Creek 42.56 240 LR LR 03 31 30.2
comp=Z,61nm,19.1s,baz=30,slow=34
WRA Warramunga Arr 48.48 258 LR LR 03 35 42.7
comp=Z,61nm,19.4s,baz=84,slow=35
ASAR Alice Springs 48.70 253 P **P** **03 16 23.1 -1.3**
4.0nm,0.8s,baz=86,slow=8.6,SNR=35
ASAR LR LR 03 36 06.1
comp=Z,149nm,18.4s,baz=150,slow=35
4.0nm,0.8s
SIJI Sorong 55.44 280 LR LR 03 41 06.7
comp=Z,51nm,20.0s,baz=102,slow=36
JCJ Chichijima 60.15 315 LR LR 03 39 08.5
comp=Z,55nm,20.9s,baz=92,slow=31
RPN Rapa Nui 61.04 112 LR LR 03 35 57.8
comp=Z,44nm,21.9s,baz=274,slow=28
VNDA Vanda 62.36 186 LR LR 03 40 00.6
comp=Z,12nm,21.1s,baz=1.0,slow=31
DAV Davao City (W) 63.55 287 LR LR 03 43 58.0
comp=Z,36nm,19.4s,baz=357,slow=34
MJAR Matsushiro Arr 68.87 321 LR LR 03 42 49.0
comp=Z,25nm,21.4s,baz=100,slow=30
PFO Pinyon Flats O 74.41 47 LR LR 03 44 46.1
comp=Z,72nm,20.1s,baz=258,slow=30
LPIG La Paz 74.52 59 LR LR 03 44 21.7
comp=Z,68nm,19.9s,baz=265,slow=30
YBH Yreka Blue Hor 75.04 38 LR LR 03 48 47.0
comp=Z,54nm,18.2s,baz=251,slow=33
NVAR Mina Array Bea 75.80 42 LR LR 03 44 32.5
comp=Z,67nm,21.8s,baz=278,slow=29
KSRS Korea Array 75.98 316 LR LR 03 51 01.6
comp=Z,8.6nm,18.6s,baz=300,slow=34
LEM Lembang 76.39 267 LR LR 03 56 44.9
comp=Z,37nm,18.3s,baz=62,slow=38
ELK Elko 79.05 42 LR LR 03 48 23.5
comp=Z,81nm,20.2s,baz=256,slow=31
TXAR Lajitas Array 82.10 56 LR LR 03 50 10.3
comp=Z,50nm,19.2s,baz=268,slow=31
ANMO Albuquerque 82.29 50 LR LR 03 50 52.2
comp=Z,58nm,19.4s,baz=263,slow=32
DLBC Dease Lake 82.98 22 LR LR 03 51 06.1
comp=Z,40nm,18.6s,baz=50,slow=31
ILAR Eielson Array 83.56 12 P **P** **03 20 08.4 +1.2**
1.2nm,1.1s,baz=224,slow=3.8,SNR=3.3
1.2nm,1.1s
PDAR Pinedale Array 83.73 42 LR LR 03 53 13.3
comp=Z,63nm,20.2s,baz=49,slow=33
CMIG Matias Romero 85.30 71 LR LR 03 48 52.6
comp=Z,30nm,19.0s,baz=252,slow=29
MAW Mawson 86.56 199 LR LR 04 00 25.7
comp=Z,21nm,18.4s,baz=210,slow=37
APG El Apazote 88.71 74 LR LR 03 54 42.1
comp=Z,35nm,18.3s,baz=75,slow=32
YAK Yakutsk 89.48 337 LR LR 03 53 19.5
comp=Z,14nm,21.5s,baz=92,slow=30
PLCA Paso Flores 89.78 133 LR LR 03 52 47.7
comp=Z,27nm,22.0s,baz=236,slow=30
CMAR Chiang Mai Arr 91.77 289 LR LR 03 57 48.9
comp=Z,22nm,21.4s,baz=280,slow=33
LVC Limon Verde 97.69 116 LR LR 03 54 14.6
comp=Z,37nm,20.5s,baz=241,slow=29
MORC Moravsky Berou 145.19 346 *e*PKP **PKiKP** **03 27 23.2 +2.1**
VRAC Vranov 145.84 347 *e*PKP **PKiKP** **03 27 25.3 +2.9**
BRTR Keskin Array B 146.09 319 PKPbc **PKPab** **03 27 20.3 -0.4**
0.8nm,0.8s,baz=104,slow=2.3,SNR=3.1
GERES GERESS Array B 146.84 350 PKPbc **PKPab** **03 27 21.7 -1.5**
0.6nm,0.8s,baz=349,slow=4.5,SNR=2.6

IDC 15 03:23:20.1±4.7, 11°.80S×166°.77E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=236.4km s-min=34.4km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.18**	**251**	P	P	03 29 50.1	+0.1
	0.2nm,0.6s,baz=82,slow=8.9,SNR=4.9						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**33.36**	**245**	P	P	03 30 00.2	-0.2
	0.2nm,0.4s,baz=76,slow=9.3,SNR=4.8						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**83.91**	**18**	P	P	03 35 51.6	0.0
	0.2nm,0.5s,baz=217,slow=7.4,SNR=5.5						
	0.2nm,0.5s						

*IDC **15** 03:44:03.8±1.9, 18°.58S×177°.35W, h0km, mb4.5/5, mbtmp4.5/5, Error ellipse: s-maj=54.7km s-min=34.5km az=120.0*
*NEIC **15** 03:45:20.6±1.5, 20°.4S±0°.3×179°.4E±0°.2, h553km±15km, mb4.3/15, Error ellipse: s-maj=46.7km s-min=21.5km az=187.0*

ISC 15 03:45:19.8±1.0, 20°.5S±0°.3×179°.4E±0°.1, h550km, n28, σ0 95/21, mb4.3/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.01**	**335**	P	**P**	**03 46 35.0**	**-0.1**
NIUE	**Niue**	**10.14**	**84**	P	**P**	**03 47 39.4**	**+0.2**
URZ	**Urewera**	**17.84**	**186**	P	P	03 48 40.6	-15
	3.5nm,0.3s,baz=2.9,slow=4.2,SNR=6.9						
	3.5nm,0.3s						
EIDS	**Eidsvold**	**26.52**	**254**	P	**P**	**03 50 15.3**	**+1.4**
ARMA	**Armidale**	**26.91**	**243**	P	**P**	**03 50 19.2**	**+1.7**
ARMA				IAmb	IAmb	03 50 20.6	
	comp=Z,9.1nm,1.1s						
CTAO	**Charters Tower**	**31.07**	**265**	P	**P**	**03 50 53.0**	**-0.6**
COEN	**Coen**	**35.16**	**275**	P	**P**	**03 51 28.9**	**+0.8**
COEN				IAmb	IAmb	03 51 46.3	
	comp=Z,9.6nm,1.1s						
STKA	**Stephens Creek**	**35.62**	**244**	P	**P**	**03 51 32.7**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=100,slow=10,SNR=6.1						
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**35.62**	**244**	P	**P**	**03 51 32.5**	**+0.7**
BBOO	**Buckleboo**	**40.39**	**243**	P	**P**	**03 52 10.3**	**-0.2**
BBOO				IAmb	IAmb	03 52 11.2	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**42.16**	**257**	P	**P**	**03 52 24.8**	**+0.1**
ASAR	**Alice Springs**	**42.16**	**257**	P	**P**	**03 52 25.9**	**+1.2**
	comp=Z,7.5nm,0.5s,baz=95,slow=7.6,SNR=158						
	comp=Z,7.5nm,0.5s						
ASAR	**Alice Springs**	**42.16**	**257**	P	**P**	**03 52 24.9**	**+0.2**
WB2	**Warramunga Arr**	**42.19**	**263**	P	**P**	**03 52 25.2**	**+0.2**
WB2				IAmb	IAmb	03 52 27.0	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**42.20**	**263**	P	**P**	**03 52 25.9**	**+0.8**
	comp=Z,2.6nm,0.4s,baz=98,slow=7.9,SNR=162						
	comp=Z,2.6nm,0.4s						
WRA	**Warramunga Arr**	**42.20**	**263**	P	**P**	**03 52 25.6**	**+0.5**
MTN	**Manton Dam**	**46.73**	**271**	P	**P**	**03 52 59.7**	**-0.3**
MTN				IAmb	IAmb	03 53 10.0	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**47.07**	**247**	P	**P**	**03 53 00.6**	**-1.8**
KNRA	**Kununurra**	**48.23**	**267**	P	**P**	**03 53 10.6**	**-0.7**
KNRA				IAmb	IAmb	03 53 23.7	
	comp=Z,24nm,1.4s						
SOEI	**Soe**	**54.07**	**273**	P	**P**	**03 53 53.4**	**-0.3**
SOEI				IAmb	IAmb	03 54 04.6	
	comp=Z,15nm,0.6s						
PSA00	**Pilbara Seismi**	**55.30**	**257**	P	**P**	**03 54 00.7**	**-1.4**
PSA00				IAmb	IAmb	03 54 01.8	
	comp=Z,7.8nm,0.8s						
MBWA	**Marble Bar**	**55.48**	**258**	P	**P**	**03 54 02.4**	**-1.0**
MBWA				IAmb	IAmb	03 54 14.6	
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**87.82**	**290**	P	P	03 57 07.0	-4.3
	comp=Z,1.4nm,0.4s,baz=127,slow=3.1,SNR=5.1						
	comp=Z,1.4nm,0.4s						
AKASG	**Malin Array Be**	**141.78**	**329**	PKhKP	PKPpre	04 03 32.0	
	comp=Z,1.4nm,0.5s,baz=43,slow=4.4,SNR=14						
BRTR	**Keskin Array B**	**145.00**	**311**	PKPbc	PKPdf	04 03 44.3	-11
	comp=Z,0.9nm,0.7s,baz=90,slow=3.7,SNR=4.4						
MMAI	**Mount Meron Ar**	**145.68**	**299**	PKPbc	PKPdf	04 03 47.9	-8.4
	comp=Z,1.3nm,0.6s,baz=81,slow=5.2,SNR=5.3						
MMAI	**Mount Meron Ar**	**145.68**	**299**		PKPdf	04 03 47.9	-8.4
GERES	**GERESS Array B**	**149.46**	**341**	PKPbc	PKPdf	04 03 53.0	-9.0
	comp=Z,0.2nm,0.4s,baz=56,slow=3.4,SNR=3.6						

*SOME **15** 03:50:40.7, 39°.40N×73°.68E, h15km*
*IDC **15** 03:50:41.4±0.8, 39°.24N×73°.58E, h0km, mb3.9/14, mbtmp3.9/21, ML3.4/7, MS3.1/11, Error ellipse: s-maj=15.5km s-min=13.4km az=26.0*
*KRNET **15** 03:50:41.3±0.1, 39°.37N×73°.70E, mb4.2*
*NNC **15** 03:50:46.3±0.8, 39°.67N×73°.34E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=7.1km s-min=3.6km az=172.0*
*NEIC **15** 03:50:49.5±1.4, 39°.43N±0°.07×73°.45E±0°.08, h42km±9km, mb4.2/16, Error ellipse: s-maj=10.5km s-min=8.3km az=147.0*

ISC 15 03:50:45.3±1.3, 39°.57N±0°.03×73°.53E±0°.02, h12km±8km, n137, σ2 916/171, mb4.0/20, MS3.1/7, 26C-22D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.11**	**329**	⇑*i*P	**Pb**	**03 51 05.8**	**-0.7**
	baz=29						
OHH				⇑*i*S	**Sn**	**03 51 24.1**	**+2.1**
	baz=29						
DRK	**Karamyk**	**1.34**	**267**	⇑*i*P	**Pn**	**03 51 08.4**	**-1.6**
	baz=75						
DRK				⇑*i*S	**Sb**	**03 51 27.9**	**+0.3**
	baz=75						
DRK	**Karamyk**	**1.34**	**267**		**Pn**	**03 51 08.9**	**-1.1**
BTK	**Batken**	**2.14**	**284**	⇑*i*P	**Pn**	**03 51 21.2**	**+0.3**
	baz=88						
BTK				⇑*i*S	**Sb**	**03 51 50.4**	**-0.2**
	baz=88						
BTK	**Batken**	**2.14**	**284**	Pn	**Pn**	**03 51 22.5**	**+1.6**
ARLS	**Aral**	**2.37**	**15**	⇑*i*P	**Pn**	**03 51 23.9**	**-0.2**
	baz=11						
ARLS				⇑*i*S	**Sb**	**03 51 55.2**	**-2.0**
	baz=11						
GAR	**Garm**	**2.55**	**258**	⇓*e*P	**Pn**	**03 51 25.8**	**-0.8**
	baz=63						
GAR				⇓*e*S	**Sn**	**03 51 58.3**	**+0.6**
	baz=63						
GAR	**Garm**	**2.55**	**258**	Pn	**Pn**	**03 51 27.8**	**+1.2**
AML	**Almayashu**	**2.56**	**3**	P	**Pb**	**03 51 30.4**	**-1.0**
	SNR=86						
NRN	**Naryn**	**2.65**	**45**	⇓*e*P	**Pn**	**03 51 26.3**	**-1.8**
	baz=40						
NRN				⇓*i*S	**Sn**	**03 51 59.3**	**-1.1**
	baz=40						
NRN	**Naryn**	**2.65**	**45**	Pn	**Pn**	**03 51 31.3**	**+3.1**
UCH	**Uchtor**	**2.76**	**15**	P	**Pb**	**03 51 33.5**	**-1.4**
	SNR=104						
UCH	**Uchtor**	**2.76**	**15**	⇑*e*P	**Pn**	**03 51 29.9**	**+0.2**
	baz=12						
UCH				⇑*i*S	**Sn**	**03 52 05.4**	**+2.2**
	baz=12						
EKS2	**Erkin-Say**	**3.10**	**3**	P	**Pb**	**03 51 40.0**	**-0.3**
	SNR=7.0						
EKS2	**Erkin-Say**	**3.10**	**3**	⇓*i*P	**Pn**	**03 51 34.7**	**+0.6**
	baz=1.0						
EKS2				⇓*i*S	**Sn**	**03 52 13.5**	**+2.5**
	baz=1.0						
AAK	**Ala-Archa**	**3.15**	**13**	P	**Pb**	**03 51 39.2**	**-2.2**
	SNR=40						
AAK	**Ala-Archa**	**3.15**	**13**	Pn	**Pb**	**03 51 39.1**	**-2.2**
	7.5nm,0.3s,baz=201,slow=9.5,SNR=38						
AAK				Sn	**Sb**	**03 52 17.9**	**-1.9**
	5.0nm,0.3s,baz=183,slow=12,SNR=3.7						
	40nm,0.6s						
AAK	**Ala-Archa**	**3.15**	**13**	⇑*e*P	**Pn**	**03 51 35.2**	**+0.3**
	baz=10.0						
AAK				⇑*i*S	**Sn**	**03 52 14.3**	**+1.8**
	baz=10.0						
AAK	**Ala-Archa**	**3.15**	**13**	Pn	**Pn**	**03 51 38.4**	**+3.5**
KBK	**Karagaybulak**	**3.27**	**19**	P	**Pb**	**03 51 41.0**	**-2.3**
	SNR=24						
KBK	**Karagaybulak**	**3.27**	**19**	⇓*i*P	**Pn**	**03 51 36.7**	**+0.2**
	baz=16						
KBK				⇓*i*S	**Sn**	**03 52 16.5**	**+1.2**
	baz=16						
FRU1	**Bishkek**	**3.34**	**14**	⇓*e*P	**Pn**	**03 51 37.7**	**+0.3**
	baz=11						
FRU1				⇓*i*S	**Sn**	**03 52 19.3**	**+2.2**
	baz=11						
ULHL	**Ulahol**	**3.37**	**37**	P	**Pb**	**03 51 47.0**	**+1.8**
	SNR=29						
ULHL	**Ulahol**	**3.37**	**37**	⇓*e*P	**Pn**	**03 51 37.1**	**-0.9**
	baz=33						
ULHL				⇓*i*S	**Sn**	**03 52 17.7**	**-0.3**
	baz=33						
BOOM	**Boomskoye usch**	**3.44**	**31**	Pn	**Pn**	**03 51 42.7**	**+3.8**
CHGR	**Chuyangaron**	**3.52**	**256**		**Pn**	**03 51 40.3**	**+0.5**
CHMS	**Chumysh**	**3.55**	**15**	P	**Pb**	**03 51 45.3**	**-2.7**
	SNR=8.7						
CHMS	**Chumysh**	**3.55**	**15**	⇓*i*P	**Pn**	**03 51 40.5**	**+0.3**
	baz=12						
CHMS				⇓*i*S	**Sn**	**03 52 23.6**	**+1.5**
	baz=12						
CHMS	**Chumysh**	**3.55**	**15**	⇑Pn	**Pn**	**03 51 42.4**	**+2.2**
	12nm,0.7s						
CHMS				⇑Pg	**Pb**	**03 51 51.2**	**+3.2**
	21nm,0.6s						
CHMS				⇓Lg	Lg	03 52 37.4	
	132nm,0.7s						
IUG	**Iuzhnay**	**3.69**	**315**	*e*P	**Pg**	**03 51 55.9**	**-0.2**
	2μm,0.7s						
IUG				*e*S	**Sg**	**03 52 50.1**	**+6.1**
	489nm,0.8s						
IUG	**Iuzhnay**	**3.69**	**315**	Pg	**Pb**	**03 51 47.7**	**-2.8**
	2μm,0.7s						
IUG				Lg	Lg	03 52 35.6	
	283nm,0.8s						
TKM2	**Tokmak 2**	**3.69**	**24**	⇑Pn	**Pn**	**03 51 44.7**	**+2.4**
	14nm,0.9s						
TKM2				⇓Pg	**Pb**	**03 51 53.4**	**+2.8**
	41nm,0.8s						
TKM2				⇑Lg	Lg	03 52 43.0	
	91nm,0.7s						
DZA	**Taraz**	**3.71**	**334**	*e*P	**Pb**	**03 51 52.8**	**+2.1**
	39nm,0.1s						
DZA				*e*S	**Sg**	**03 52 45.0**	**+0.6**
	330nm,0.6s						
DZA	**Taraz**	**3.71**	**334**	Pg	**Pb**	**03 51 49.3**	**-1.4**
	73nm,0.1s						
DZA				Lg	Lg	03 52 38.2	
	330nm,0.6s						
USP	**Ospenovka**	**3.77**	**11**	P	**Pb**	**03 51 49.2**	**-2.5**
	SNR=19						
USP	**Ospenovka**	**3.77**	**11**	⇑*e*P	**Pn**	**03 51 43.4**	**+0.2**
	baz=9.0						
USP				⇑*i*S	**Sn**	**03 52 29.1**	**+1.6**
	baz=9.0						
TARG	**Taragay, Kyrgy**	**3.91**	**55**		**Pn**	**03 51 48.1**	**+2.7**
KST	**Kastek**	**3.93**	**27**	*e*P	**Pb**	**03 51 56.5**	**+2.0**
	29nm,0.8s						
KST				*e*S	**Sg**	**03 52 50.5**	**-0.9**
	234nm,0.5s						
KST	**Kastek**	**3.93**	**27**	Pg	**Pb**	**03 51 56.5**	**+2.0**
	29nm,0.8s						
KST				Lg	Lg	03 52 50.5	
	234nm,0.5s						
SGDS	**Sogindy**	**3.97**	**12**	*e*P	**Pb**	**03 51 56.8**	**+1.6**
	22nm,0.5s						
SGDS				*e*S	**Sg**	**03 52 50.7**	**-1.9**
	99nm,0.5s						
SGDS	**Sogindy**	**3.97**	**12**	Pg	**Pb**	**03 51 56.8**	**+1.6**
	22nm,0.5s						
SGDS				Lg	Lg	03 52 50.7	
	99nm,0.5s						
CHM	**Chimkent**	**4.05**	**314**	*e*P	**Pb**	**03 51 58.5**	**+2.1**
	163nm,0.3s						
CHM				*e*S	**Sg**	**03 52 54.7**	**-0.5**
	296nm,0.5s						
IZV	**Izvestkoviy**	**4.17**	**33**	*e*P	**Pb**	**03 52 01.2**	**+2.5**
	32nm,0.6s						
IZV				*e*S	**Sg**	**03 52 58.8**	**-0.4**
	200nm,0.6s						
IZV	**Izvestkoviy**	**4.17**	**33**	Pg	**Pb**	**03 52 01.2**	**+2.5**
	32nm,0.6s						
IZV				Lg	Lg	03 52 58.8	
	200nm,0.6s						
MTBS	**Maitube**	**4.17**	**31**	*e*P	**Pb**	**03 52 01.2**	**+2.5**
	34nm,0.4s						
MTBS				*e*S	**Sg**	**03 52 58.7**	**-0.6**
	68nm,0.5s						
MTBS	**Maitube**	**4.17**	**31**	Pg	**Pb**	**03 52 01.2**	**+2.5**
	34nm,0.4s						
MTBS				Lg	Lg	03 52 58.7	
	68nm,0.5s						
KK31	**Karatay Array**	**4.20**	**328**		**Pn**	**03 51 52.3**	**+3.2**
KK31	**Karatay Array**	**4.20**	**328**	⇑Pn	**Pn**	**03 51 50.7**	**+1.6**
	14nm,0.8s,baz=138,slow=13,SNR=75						
KK31				⇑Pg	**Pb**	**03 52 00.8**	**+1.7**
	17nm,0.6s,baz=157,slow=16,SNR=8.2						
KK31				⇓Lg	Lg	03 52 55.0	
	51nm,0.6s,baz=337,slow=32,SNR=3.9						
KKAR	**Karatay Array**	**4.20**	**328**	⇑*e*P	**Pn**	**03 51 50.7**	**+1.6**
	baz=28						
KKAR				⇑*i*S	**Sn**	**03 52 41.3**	**+3.3**
	baz=28						
KKAR	**Karatay Array**	**4.20**	**328**		**Pn**	**03 51 51.5**	**+2.4**
KKAR	**Karatay Array**	**4.20**	**328**		**Pn**	**03 51 52.3**	**+3.2**
TNSS	**Tian-Shan**	**4.32**	**36**	*e*P	**Pb**	**03 52 03.8**	**+2.5**
	20nm,0.6s						
TNSS				*e*S	**Sg**	**03 53 03.5**	**-0.4**
	46nm,0.6s						
TNSS	**Tian-Shan**	**4.32**	**36**	Pg	**Pb**	**03 52 03.8**	**+2.5**
	20nm,0.6s						
TNSS				Lg	Lg	03 53 03.6	
	46nm,0.6s						
KRBS	**Karabastau**	**4.43**	**21**	*e*P	**Pb**	**03 52 05.7**	**+2.8**
	21nm,0.5s						
KRBS				*e*S	**Sg**	**03 53 06.5**	**-0.9**
	42nm,0.5s						
KRBS	**Karabastau**	**4.43**	**21**	Pg	**Pb**	**03 52 05.7**	**+2.8**
	21nm,0.5s						
KRBS				Lg	Lg	03 53 06.5	
	42nm,0.5s						
AAA	**Alma-Ata**	**4.44**	**34**	*e*P	**Pb**	**03 52 06.4**	**+3.1**
	51nm,0.3s						
AAA				*e*S	**Sg**	**03 53 07.6**	**-0.3**
	154nm,0.8s						
AAA	**Alma-Ata**	**4.44**	**34**	Pg	**Pb**	**03 52 06.4**	**+3.1**
	51nm,0.3s						
AAA				Lg	Lg	03 53 07.6	
	154nm,0.8s						
MDOK	**Medeo**	**4.46**	**35**	*e*P	**Pb**	**03 52 06.8**	**+3.1**
	25nm,0.3s						
MDOK				*e*S	**Sg**	**03 53 08.4**	**-0.2**
	95nm,0.9s						
MDOK	**Medeo**	**4.46**	**35**	⇑Pn	**Pn**	**03 51 56.7**	**+3.8**
	7.4nm,0.6s						
MDOK				Pg	**Pb**	**03 52 06.8**	**+3.1**
	25nm,0.3s						
MDOK				Pg	**Pg**	**03 52 08.6**	**-2.2**
	21nm,0.6s						
MDOK				Lg	Lg	03 53 07.8	
	140nm,0.8s						
MDOK				Lg	Lg	03 53 08.4	
	95nm,0.9s						
KNDC	**Almaty**	**4.47**	**34**	⇓Pg	**Pb**	**03 52 07.6**	**+3.9**
	62nm,0.6s						
KNDC				⇑Lg	Lg	03 53 08.7	
	789nm,1.4s						
KOTS	**Kotyrbulak**	**4.55**	**35**	*e*P	**Pb**	**03 52 08.3**	**+3.2**
	28nm,0.4s						
KOTS				*e*S	**Sg**	**03 53 10.9**	**-0.4**
	194nm,0.7s						
KOTS	**Kotyrbulak**	**4.55**	**35**	Pg	**Pb**	**03 52 08.3**	**+3.2**
	28nm,0.4s						
KOTS				Lg	Lg	03 53 10.9	
	194nm,0.7s						
KUU	**Kurty**	**4.81**	**25**	*e*P	**Pb**	**03 52 12.8**	**+3.3**
	20nm,0.5s						
KUU				*e*S	**Sg**	**03 53 18.5**	**-1.1**
	126nm,1.1s						
KUU	**Kurty**	**4.81**	**25**	Pg	**Pb**	**03 52 12.8**	**+3.3**
	20nm,0.5s						
KUU				Lg	Lg	03 53 18.5	
	126nm,1.1s						
CHKK	**Chushkaly**	**5.00**	**30**	*e*P	**Pb**	**03 52 16.0**	**+3.2**
	4.3nm,0.0s						
CHKK				*e*S	**Sg**	**03 53 24.3**	**-1.6**
	51nm,0.3s						
CHKK	**Chushkaly**	**5.00**	**30**	Pg	**Pb**	**03 52 16.0**	**+3.2**
	4.3nm,0.0s						
CHKK				Lg	Lg	03 53 24.3	
	51nm,0.3s						
UZB	**Uzynbulak**	**5.47**	**47**	*e*P	**Pg**	**03 52 26.6**	**-3.4**
	9.9nm,0.6s						
UZB				*e*S	**Sg**	**03 53 42.0**	**+1.3**
	24nm,0.7s						
UZB	**Uzynbulak**	**5.47**	**47**	Pg	**Pg**	**03 52 26.6**	**-3.4**
	9.9nm,0.6s						
UZB				Lg	Lg	03 53 42.0	
	24nm,0.7s						
KPKS	**Kokpek**	**5.49**	**43**	*e*P	Pb	03 52 26.5	+5.4
	17nm,0.4s						
KPKS				*e*S	**Sg**	**03 53 42.2**	**+0.7**
	48nm,0.4s						
KPKS	**Kokpek**	**5.49**	**43**	Pg	Pb	03 52 26.5	+5.4
	17nm,0.4s						
KPKS				Lg	Lg	03 53 42.2	
	48nm,0.4s						
SHLS	**Shalkode**	**5.73**	**49**	Pg	**Pg**	**03 52 35.4**	**+0.5**
	14nm,0.6s						
SHLS				Lg	Lg	03 53 57.5	
	34nm,0.8s						
BLB	**Baldybastay**	**5.84**	**38**	Pg	Pb	03 52 33.1	+5.9
	25nm,0.3s						
BLB				Lg	Lg	03 53 53.4	
	39nm,0.6s						
PDGK	**Podgornoye**	**5.85**	**48**	⇓Pn	**Pn**	**03 52 15.2**	**+3.3**
	9.0nm,0.9s						
PDGK				⇓Pg	Pg	03 52 33.4	-3.9
	19nm,1.1s						
PDGK				⇓Lg	Lg	03 53 50.5	
	68nm,1.2s						
CEP	**Cherat**	**5.88**	**193**	P	**Pn**	**03 52 15.2**	**+2.9**
CEP				S	**Sn**	**03 53 26.0**	**+6.3**
CHCP	**Chirah Chowk**	**5.90**	**182**	P	**Pn**	**03 52 15.1**	**+2.5**
NIL	**Nilore**	**5.91**	**182**		**Pn**	**03 52 12.9**	**+0.2**
KBL	**Kabul**	**6.17**	**217**		**Pn**	**03 52 17.0**	**+0.6**
KTMS	**Ketmen**	**6.42**	**51**	Pg	**Pg**	**03 52 44.7**	**-3.6**
	3.9nm,0.6s						
KTMS				Lg	Lg	03 54 13.5	
	10nm,0.8s						
TDK	**Taldyqorghan**	**6.52**	**32**	Pg	Pg	03 52 45.9	-4.2
	54nm,0.3s						
TDK				Lg	Lg	03 54 15.6	
	158nm,1.0s						
DJR	**Jarkent**	**6.67**	**42**	Pg	Pg	03 52 48.7	-4.2
	3.9nm,0.5s						
DJR				Lg	Lg	03 54 19.9	
	22nm,0.4s						
JMU	**Jammu**	**6.93**	**170**	*e*S	**Sn**	**03 53 46.8**	**+1.5**
THN	**Thein Dam**	**7.34**	**165**	*e*P	**Pn**	**03 52 32.2**	**0.0**
THN				*e*S	**Sn**	**03 53 54.0**	**-1.4**
BHK	**Bhakra**	**8.47**	**163**	*e*S	**Sn**	**03 54 23.1**	**-0.2**
SMLA	**Simla**	**8.93**	**159**	*e*P	**Pn**	**03 52 56.4**	**+2.3**
SMLA				*e*S	**Sn**	**03 54 28.6**	**-6.0**
SMLA				IAML		03 54 36.2	
	comp=E,37nm,1.1s						
SMLA				IAML		03 54 37.3	
	comp=N,33nm,0.2s						
MK31	**Makanchi Array**	**9.64**	**39**	Pn	**Pn**	**03 53 07.9**	**+4.0**
MKAR	**Makanchi Array**	**9.64**	**39**	Pn	**Pn**	**03 53 08.2**	**+4.4**
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=5.6						
MKAR				Lg	Lg	03 55 48.5	
	comp=N,0.1nm,0.3s,baz=224,slow=26,SNR=3.2						
MKAR				LR	LR	03 56 43.9	
	comp=N,26nm,21.2s,baz=226,slow=37						
MKAR	**Makanchi Array**	**9.64**	**39**	Pn	**Pn**	**03 53 07.9**	**+4.0**
KURBB	**Kurchatov Arra**	**11.60**	**16**	Pn	**Pn**	**03 53 32.6**	**+2.0**
	baz=204,slow=12,SNR=4.0						
KURBB				Lg	Lg	03 56 50.0	

AB31 Sn **Sn** **03 56 31.8 +0.8**
comp=N,2.6nm,0.7s,baz=130,slow=25,SNR=3.3
ABKAR Akbulak array 13.69 319 Pn Pn 03 53 59.5 +0.4
AKTO Aktyubinsk 15.40 320 Pn **Pn 03 54 22.8 +0.5**
comp=N,0.2nm,0.3s,baz=116,slow=12,SNR=16
AKTO Sn **Sn** **03 57 09.6 -3.2**
comp=N,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.5
AKTO LR LR 04 00 59.2
comp=N,62nm,20.8s,baz=117,slow=39
comp=N,7.5nm,1.0s
AKTO Aktyubinsk 15.40 320 ⇑Pn **Pn 03 54 22.2 -0.1**
comp=N,6.7nm,0.9s
AKTO ⇓Sn **Sn** **03 57 11.7 -1.0**
comp=N,3.1nm,0.8s
ZAA0 Zalesovo Array 16.30 24 Pn **Pn 03 54 35.3 +1.5**
ZALV Zalesovo Beam 16.30 24 Pn **P 03 54 36.8 0.0**
comp=N,0.3nm,0.3s,baz=214,slow=10,SNR=10
ZALV LR LR 04 01 10.1
comp=N,38nm,19.0s,baz=16,slow=38
comp=N,3.3nm,0.7s
ZALV Zalesovo Beam 16.30 24 Pn **P 03 54 36.4 -0.4**
ARU Arti 19.54 335 P **Pn 03 55 14.7 +0.9**
baz=41,slow=2.2,SNR=5.4
comp=N,4.6nm,0.8s
ARU Arti 19.54 335 P **Pn 03 55 14.7 +0.9**
BELG Belogornoye 21.96 314 P **P 03 55 38.6 0.0**
comp=N,8.7nm,0.4s,baz=313,slow=4.2,SNR=4.8
BELG LR LR 04 05 24.1
comp=N,41nm,19.0s,baz=159,slow=40
comp=N,8.7nm,0.4s
GNI Garni 22.07 281 P **P 03 55 42.6 +2.5**
GNI IAmb IAmb 03 55 51.6
comp=Z,15nm,1.1s
ONI Oni 22.81 287 P **P 03 55 49.3 +1.4**
KIV Kislovodsk 23.34 291 P **P 03 55 55.0 +1.6**
KIV IAmb IAmb 03 56 17.4
comp=Z,6.6nm,0.8s
KIRV Kirov 24.49 329 LR LR 04 06 34.9
comp=Z,63nm,20.3s,baz=114,slow=38
SONM Songino Array 25.01 60 P **P 03 56 08.2 -0.9**
comp=Z,0.7nm,0.3s,baz=230,slow=11,SNR=4.1
comp=Z,0.7nm,0.3s
SONM Songino Array 25.01 60 P **P 03 56 10.7 +1.6**
BR131 Keskin Array S 30.54 283 P **P 03 56 57.8 -0.9**
BR131 IAmb IAmb 03 57 13.4
comp=Z,5.0nm,1.0s
BRTR Keskin Array B 30.54 283 P **P 03 56 59.2 +0.6**
comp=Z,1.9nm,0.8s,baz=87,slow=8.9,SNR=9.7
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 30.54 283 P **P 03 56 58.5 -0.1**
AKASG Malin Array Be 32.71 305 P **P 03 57 16.8 -0.6**
comp=Z,0.3nm,0.4s,baz=78,slow=7.4,SNR=4.8
comp=Z,0.3nm,0.4s
PALK Pallekele 32.80 167 LR LR 04 10 53.8
comp=Z,59nm,19.2s,baz=201,slow=37
EIL Elat 33.03 265 LR LR 04 12 25.5
comp=Z,20nm,18.2s,baz=62,slow=40
BURAR Bucovina Array 35.41 299 P **P 03 57 41.4 +0.4**
BURAR IAmb IAmb 03 57 44.4
comp=Z,1.4nm,1.1s
FINES FINESS Array B 36.14 323 P **P 03 57 47.8 +0.8**
comp=Z,1.2nm,0.5s,baz=114,slow=10,SNR=15
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 39.13 336 P **P 03 58 11.8 -0.3**
comp=Z,1.2nm,0.6s,baz=128,slow=3.4,SNR=6.3
ARCES LR LR 04 15 41.1
comp=Z,29nm,18.1s,baz=342,slow=38
comp=Z,1.2nm,0.6s
HFS Hagfors 41.95 320 LR LR 04 16 48.4
comp=Z,53nm,18.6s,baz=80,slow=37
KSAR Wonju Array Be 42.05 75 P **P 03 58 36.7 0.0**
TIXI Tiksi 42.18 23 P **P 03 58 38.1 +0.8**
TIXI IAmb IAmb 03 58 40.3
comp=Z,2.1nm,0.9s
GERES GERESS Array B 42.86 303 P **P 03 58 43.5 +0.2**
comp=Z,0.4nm,0.7s,baz=88,slow=12,SNR=3.4
comp=Z,0.4nm,0.7s
CLL Collm 42.89 307 *e*P **P 03 58 46.0 +2.7**
NB2 NORSAR Subarra 43.19 321 P **P 03 58 45.2 -0.5**
comp=Z,1.0nm,0.5s,baz=91,slow=7.9
NOA NORSAR Array B 43.19 321 P **P 03 58 45.8 0.0**
comp=Z,1.8nm,0.7s,baz=91,slow=7.7,SNR=7.7
NOA LR LR 04 17 48.6
comp=Z,31nm,18.5s,baz=250,slow=37
comp=Z,1.8nm,0.7s
MJB9 Matsu-Tunnel 50.03 72 P **P 03 59 40.1 +0.4**
MAJO Matsushiro 50.03 72 P **P 03 59 40.1 +0.4**
MJAR Matsushiro Arr 50.04 72 P **P 03 59 39.2 -0.5**
comp=Z,2.1nm,0.9s,baz=301,slow=7.0,SNR=4.7
comp=Z,2.1nm,0.9s
ESDC Sonseca Array 57.81 297 P **P 04 00 35.4 -1.1**
comp=Z,0.6nm,0.7s,baz=55,slow=7.2,SNR=7.4
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 67.78 269 P **P 04 01 40.9 -2.3**
comp=Z,1.0nm,0.7s,baz=49,slow=4.6,SNR=7.5
comp=Z,1.0nm,0.7s
IL31 71.28 17 P **P 04 02 05.0 +1.0**
IL31 IAmb IAmb 04 02 45.4
comp=Z,3.6nm,1.3s
ILAR Eielson Array 71.28 17 P **P 04 02 02.9 -1.2**
comp=Z,1.1nm,1.0s,baz=309,slow=4.1,SNR=7.3
comp=Z,1.1nm,1.0s
MENT Mentasta 73.57 17 P **P 04 02 20.5 +2.7**
WRA Warramunga Arr 81.98 124 P **P 04 03 02.7 -2.5**
comp=Z,1.0nm,0.7s,baz=329,slow=5.2,SNR=13
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 81.98 124 P **P 04 03 02.7 -2.5**
WB2 Warramunga Arr 81.99 124 P **P 04 03 02.8 -2.4**
WB2 IAmb IAmb 04 03 22.8
comp=Z,5.3nm,1.1s
ASAR Alice Springs 84.43 127 P **P 04 03 14.8 -2.9**
comp=Z,0.6nm,0.7s,baz=322,slow=5.1,SNR=7.6
comp=Z,0.6nm,0.7s

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*IDC **15** 03:51:19.6±2.5, 17°.98S×178°.57W, h586km±22km, mb3.0/5, mbtmp4.0/6, Error ellipse: s-maj=108.3km s-min=18.7km az=152.0*
ISC 15 03:51:19.0±1.5, **18°.1S**±0°.6×**178°.5W**±0°.3, **h579**km, **n6, σ0s73/6, mb3.6/5, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**276**	P	**P**	**03 52 39.1**	**+0.6**
	29nm,0.5s,baz=128,slow=4.1,SNR=60						
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**03 57 52.5**	**0.0**
	1.8nm,0.6s,baz=89,slow=11,SNR=6.0						
	1.8nm,0.6s						
WRA	**Warramunga Arr**	**44.53**	**260**	P	**P**	**03 58 39.8**	**-0.6**
	0.9nm,0.5s,baz=97,slow=6.9,SNR=32						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**03 58 41.3**	**-0.2**
	8.8nm,0.6s,baz=89,slow=8.5,SNR=133						
	8.8nm,0.6s						
NVAR	**Mina Array Bea**	**79.63**	**44**	P	**P**	**04 02 26.6**	**-0.7**
	0.5nm,0.8s,baz=245,slow=5.7,SNR=3.3						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**04 03 00.7**	**+0.6**
	0.2nm,0.7s,baz=219,slow=6.9,SNR=4.2						
	0.2nm,0.7s						

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*ISU **15** 04:24:02, 39°.62N×73°.81E, h5km*
*SOME **15** 04:24:04.6, 39°.38N×73°.50E, h20km*
*KRNET **15** 04:24:05.2±0.1, 39°.41N×73°.52E, mb3.0*
*NNC **15** 04:24:07.7±1.8, 39°.62N×73°.43E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=14.7km s-min=6.4km az=167.0*
ISC 15 04:24:07.2±1.8, **39°.60N**±0°.07×**73°.42E**±0°.04, **h2**km±12km, **n31, σ2s01/53, 8C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.05**	**332**	⇑*e*P	**Pn**	**04 24 28.2**	**-0.8**
	baz=33						
OHH				⇑*e*S	**Sn**	**04 24 45.2**	**+1.0**
	baz=33						
OHH	**Osh**	**1.05**	**332**	P	**Pg**	**04 24 27.5**	**+0.2**
OHH				S	**Sn**	**04 24 45.1**	**+0.9**
DRK	**Karamyk**	**1.26**	**265**	⇓*e*P	**Pn**	**04 24 29.8**	**-2.3**
	baz=74						
DRK				⇓*e*S	**Sb**	**04 24 47.9**	**-0.7**
	baz=74						
FRG	**Fergana**	**1.48**	**302**	P	**Pb**	**04 24 35.2**	**-0.2**
FRG				S	**Sg**	**04 24 59.2**	**+4.5**
CHMI	**Chimion**	**1.61**	**295**	P	**Pb**	**04 24 36.9**	**-0.7**
CHMI				S	**Sg**	**04 25 03.1**	**+4.3**
BTK	**Batken**	**2.06**	**284**	⇓*e*P	**Pn**	**04 24 43.4**	**+0.5**
	baz=88						
BTK				⇓*e*S	**Sb**	**04 25 11.2**	**-0.1**
	baz=88						
BTK	**Batken**	**2.06**	**284**	P	**Pb**	**04 24 44.1**	**-1.2**
BTK				S	**Sg**	**04 25 17.5**	**+4.3**
ARLS	**Aral**	**2.36**	**17**	⇑*e*P	**Pn**	**04 24 47.9**	**+0.7**
	baz=14						
ARLS				⇑*e*S	**Sb**	**04 25 19.2**	**-1.1**
	baz=14						
GAR	**Garm**	**2.48**	**257**	⇑*e*P	**Pn**	**04 24 48.1**	**-0.6**
	baz=62						
GAR				⇑*e*S	**Sn**	**04 25 19.2**	**-0.4**
	baz=62						
UCH	**Uchtor**	**2.76**	**17**	⇑*e*P	**Pn**	**04 24 53.8**	**+1.0**
	baz=15						
UCH				⇑*e*S	**Sb**	**04 25 29.4**	**-2.5**
	baz=15						
EKS2	**Erkin-Say**	**3.07**	**5**	⇓*e*P	**Pn**	**04 24 58.1**	**+1.2**
	baz=3.0						
EKS2				⇓*i*S	**Sb**	**04 25 36.8**	**-3.9**
	baz=3.0						
KBK	**Karagaybulak**	**3.27**	**20**	⇓*e*P	**Pn**	**04 25 00.5**	**+0.9**
	baz=18						
KBK				⇓*e*S	**Sn**	**04 25 40.8**	**+1.6**
	baz=18						
IUG	**Iuzhnay**	**3.62**	**316**	*e*P	**Pb**	**04 25 11.4**	**-0.5**
	85nm,0.3s						
IUG				*e*S	**Sg**	**04 25 59.8**	**-3.6**
	26nm,0.6s						
IUG	**Iuzhnay**	**3.62**	**316**	Pg	**Pb**	**04 25 11.4**	**-0.5**
	85nm,0.3s						
IUG				Lg	Lg	04 25 59.8	
	26nm,0.6s						
KST	**Kastek**	**3.94**	**28**	*e*P	**Pb**	**04 25 19.0**	**+1.5**
	2.0nm,0.3s						
KST				*e*S	**Sg**	**04 26 12.8**	**-0.9**
	9.7nm,0.4s						
KST	**Kastek**	**3.94**	**28**	Pg	**Pb**	**04 25 19.0**	**+1.5**
	2.0nm,0.3s						
KST				Lg	Lg	04 26 12.8	
	9.7nm,0.4s						
SGDS	**Sogindy**	**3.96**	**13**	*e*P	**Pb**	**04 25 19.4**	**+1.7**
	1.1nm,0.2s						
SGDS				*e*S	**Sg**	**04 26 13.6**	**-0.7**
	3.4nm,0.2s						
SGDS	**Sogindy**	**3.96**	**13**	Pg	**Pb**	**04 25 19.4**	**+1.7**
	1.1nm,0.2s						
SGDS				Lg	Lg	04 26 13.6	
	3.4nm,0.2s						
KK31	**Karatay Array**	**4.13**	**329**	Pn	**Pn**	**04 25 13.1**	**+1.8**
	0.2nm,0.3s,baz=138,slow=13,SNR=7.1						
KK31				⇓Pg	**Pg**	**04 25 24.5**	**-1.8**
	0.3nm,0.3s,baz=146,slow=15,SNR=5.1						
KK31				⇓Lg	Lg	04 26 19.3	
	2.3nm,0.5s,baz=172,slow=26,SNR=3.7						
MTBS	**Maitube**	**4.19**	**32**	*e*P	**Pb**	**04 25 23.5**	**+1.7**
	4.1nm,0.1s						
MTBS				*e*S	**Sg**	**04 26 20.4**	**-1.5**
	5.1nm,0.5s						
MTBS	**Maitube**	**4.19**	**32**	Pg	**Pb**	**04 25 23.5**	**+1.7**
	4.1nm,0.1s						
MTBS				Lg	Lg	04 26 20.4	
	5.1nm,0.5s						
TNSS	**Tian-Shan**	**4.34**	**37**	*e*P	**Pb**	**04 25 26.1**	**+1.7**
	1.5nm,0.2s						
TNSS				*e*S	**Sg**	**04 26 25.2**	**-1.5**
	6.0nm,0.3s						
TNSS	**Tian-Shan**	**4.34**	**37**	Pg	**Pb**	**04 25 26.1**	**+1.7**
	1.5nm,0.2s						
TNSS				Lg	Lg	04 26 25.2	
	6.0nm,0.3s						
KRBS	**Karabastau**	**4.43**	**22**	*e*P	**Pb**	**04 25 27.7**	**+1.9**
	1.6nm,0.3s						
KRBS				*e*S	**Sg**	**04 26 27.8**	**-1.7**
	5.1nm,0.5s						
KRBS	**Karabastau**	**4.43**	**22**	Pg	**Pb**	**04 25 27.7**	**+1.9**
	1.6nm,0.3s						
KRBS				Lg	Lg	04 26 27.8	
	5.1nm,0.5s						
MDOK	**Medeo**	**4.49**	**36**	*e*P	**Pb**	**04 25 28.9**	**+2.1**
	2.0nm,0.3s						
MDOK				*e*S	**Sg**	**04 26 29.7**	**-1.6**
	4.1nm,0.3s						
MDOK	**Medeo**	**4.49**	**36**	Pg	**Pb**	**04 25 28.9**	**+2.1**
	2.0nm,0.3s						
MDOK				Lg	Lg	04 26 29.7	
	4.1nm,0.3s						
KOTS	**Kotyrbulak**	**4.57**	**36**	*e*P	**Pb**	**04 25 30.5**	**+2.2**
	2.3nm,0.3s						
KOTS				*e*S	**Sg**	**04 26 32.5**	**-1.5**
	16nm,0.5s						
KOTS	**Kotyrbulak**	**4.57**	**36**	Pg	**Pb**	**04 25 30.5**	**+2.2**
	2.3nm,0.3s						
KOTS				Lg	Lg	04 26 32.5	
	16nm,0.5s						
KUU	**Kurty**	**4.82**	**26**	*e*P	**Pb**	**04 25 35.3**	**+3.0**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**04 26 40.9**	**-1.0**
	6.7nm,0.3s						
KUU	**Kurty**	**4.82**	**26**	Pg	**Pb**	**04 25 35.3**	**+3.0**
	1.6nm,0.1s						
KUU				Lg	Lg	04 26 40.9	
	6.7nm,0.3s						

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*ISK **15** 04:52:09.3, 38°.95N×27°.71E, h7km, ML3.5/19*
*DDA **15** 04:52:09.7±0.0, 38°.93N×27°.72E, h7km±2km, ML3.3*
*THE **15** 04:52:10.2, 38°.93N×27°.72E, h0km±1km, ML3.1/6, Error ellipse: s-maj=3.0km s-min=1.1km az=93.0*
ISC 15 04:52:09.9±0.9, **38°.93N**±0°.02×**27°.74E**±0°.02, **h10**km±6km, **n51, σ0s45/72, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.08**	**131**	PG	**Pg**	**04 52 12.0**	**-0.2**
AKS				SG	**Sg**	**04 52 14.1**	**+0.2**
GOMA	**Golmarmara-Man**	**0.27**	**148**	PG	**Pg**	**04 52 15.6**	**+0.3**
GOMA				SG	**Sb**	**04 52 20.2**	**-1.2**
STEP	**BALIKESIR_Sava**	**0.44**	**358**	P	**Pg**	**04 52 18.6**	**0.0**
STEP				S	**Sg**	**04 52 25.2**	**+0.8**
STEP				*i* AML	AML	04 52 26.0	
	comp=N,2μm,0.3s						
ZEDA	**zmir-Bergama**	**0.51**	**274**	P	**Pg**	**04 52 19.9**	**0.0**
ZEDA				S	**Sg**	**04 52 26.8**	**+0.1**
ZEDA				*i* AML	AML	04 52 27.0	
	comp=N,2μm,0.3s						
DKL	**Dikili**	**0.66**	**282**	PG	**Pg**	**04 52 22.3**	**-0.4**
DKL				SG	**Sg**	**04 52 31.4**	**0.0**
BUHA	**Balikesir, Bur**	**0.76**	**318**	P	**Pg**	**04 52 24.5**	**-0.1**
BLCB	**Balcova**	**0.77**	**225**	PG	**Pg**	**04 52 24.7**	**0.0**
BLCB				SG	**Sb**	**04 52 35.5**	**-0.4**
BLCB	**Balcova**	**0.77**	**225**	P	**Pg**	**04 52 24.6**	**-0.1**
BLCB				S	**Sb**	**04 52 35.7**	**-0.2**
MANT	**Manisa**	**0.78**	**124**	P	**Pg**	**04 52 25.0**	**+0.1**
MANT				S	**Sb**	**04 52 36.3**	**-0.1**
MANT				*i* AML	AML	04 52 38.0	
	comp=E,1μm,0.3s						
FOCM	**Foa**	**0.81**	**255**	PG	**Pg**	**04 52 25.0**	**-0.6**
DST	**Dursunbey**	**0.96**	**45**	PG	**Pg**	**04 52 28.4**	**0.0**
SMAA	**Simav-Kutahya**	**0.98**	**80**	PG	**Pb**	**04 52 29.1**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**173**	PG	**Pg**	**04 52 29.0**	**0.0**
AYDB				SG	**Sn**	**04 52 43.4**	**-0.7**
USAK	**Uak-Merkez**	**1.02**	**102**	P	**Pg**	**04 52 29.4**	**-0.2**
USAK				S	**Sg**	**04 52 43.1**	**+0.1**
DGB	**zmir**	**1.10**	**218**	P	**Pb**	**04 52 30.0**	**-1.0**
DGB				S	**Sg**	**04 52 45.3**	**-0.1**
DGB				*i* AML	AML	04 52 49.0	
	comp=N,422nm,0.3s						
GONE	**Gonen-Balikesi**	**1.11**	**358**	PN	**Pb**	**04 52 30.8**	**-0.5**
PRK	**Paraskevi**	**1.18**	**286**	P	**Pg**	**04 52 33.3**	**+0.7**
PRK				S	**Sn**	**04 52 49.2**	**+0.6**
	840nm,0.7s						
ZEYE	**Izmir, Urla-Ze**	**1.19**	**235**	P	**Pg**	**04 52 33.0**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.23**	**312**	P	**Pn**	**04 52 32.8**	**-0.3**
BAYC				S	**Sb**	**04 52 48.2**	**-0.9**
BAYC				*i* AML	AML	04 52 51.0	
	comp=E,555nm,0.3s						
GCAM	**G?zelcaml?**	**1.29**	**198**	PN	**Pb**	**04 52 34.2**	**-0.1**
GEDZ	**Gediz**	**1.31**	**85**	PN	**Pg**	**04 52 35.1**	**0.0**
KNL	**Balıkesir**	**1.35**	**353**	P	**Pg**	**04 52 35.7**	**0.0**
KNL				S	**Sg**	**04 52 53.2**	**0.0**
KNL				*i* AML	AML	04 52 55.0	
	comp=E,740nm,0.4s						
GPNR	**Gulpinar-Canak**	**1.35**	**293**	PN	**Pn**	**04 52 34.7**	**-0.1**
KOCA	**Canakkale, Ayv**	**1.36**	**295**	P	**Pn**	**04 52 34.3**	**-0.7**
GDZ	**Gediz**	**1.37**	**83**	P	**Pn**	**04 52 34.6**	**-0.6**
GDZ				S	**Sn**	**04 52 53.5**	**+0.1**
GDZ				*i* AML	AML	04 52 55.0	
	comp=N,286nm,0.9s						
GDZ				*i* AML	AML	04 52 56.0	
	comp=E,280nm,0.3s						
EZN	**Ezine**	**1.41**	**310**	PN	**Pn**	**04 52 35.7**	**+0.1**
EZN	**Ezine**	**1.41**	**310**	P	**Pn**	**04 52 35.3**	**-0.3**
EZN				S	**Sg**	**04 52 55.0**	**-0.3**
	280nm,0.5s						
SMG	**Samos**	**1.41**	**210**	P	**Pb**	**04 52 36.5**	**+0.2**
SMG				S	**Sg**	**04 52 56.3**	**+1.0**
	825nm,0.5s						
EDC	**Edincik**	**1.42**	**4**	PN	**Pn**	**04 52 35.9**	**+0.2**
CHOS	**Chios island**	**1.42**	**248**	PN	**Pn**	**04 52 36.1**	**+0.2**
CHOS	**Chios island**	**1.42**	**248**	P	**Pn**	**04 52 35.8**	**-0.1**
CHOS				S	**Sg**	**04 52 56.2**	**+0.5**
	2μm,0.4s						
ORLT	**Orhaneli**	**1.43**	**39**	PN	**Pb**	**04 52 36.5**	**-0.2**
TVSB	**Tavsanli**	**1.44**	**68**	PN	**Pb**	**04 52 36.7**	**-0.1**
SIGR	**SIGRI**	**1.49**	**281**	PN	**Pn**	**04 52 36.5**	**-0.2**
SIGR	**SIGRI**	**1.49**	**281**	P	**Pn**	**04 52 36.5**	**-0.2**
SIGR				S	**Sg**	**04 52 58.1**	**+0.3**
	320nm,0.4s						
KHL	**Karahalli**	**1.53**	**113**	PN	**Pb**	**04 52 38.3**	**-0.1**
BOZC	**Bozcaada**	**1.59**	**305**	PN	**Pn**	**04 52 38.2**	**+0.1**
ULDT	**Uludag**	**1.62**	**41**	P	**Pn**	**04 52 38.8**	**+0.1**
ECEA	**Canakkale, Ece**	**1.64**	**313**	P	**Pn**	**04 52 38.9**	**+0.1**
MRMT	**Marmara Adasi**	**1.67**	**356**	PN	**Pn**	**04 52 39.7**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.69**	**31**	PN	**Pn**	**04 52 39.7**	**+0.3**
IGD	**Bursa**	**1.75**	**40**	P	**Pn**	**04 52 40.2**	**0.0**
IGD				S	**Sg**	**04 53 05.8**	**-0.3**
YER	**Yerkesik**	**1.85**	**166**	PN	**Pn**	**04 52 42.6**	**+0.9**
GOKA	**anakkale-Gk**	**1.89**	**312**	P	**Pn**	**04 52 42.7**	**+0.5**
KZIL	**AFYON_Kizioren**	**2.00**	**109**	P	**Pb**	**04 52 46.7**	**+0.2**
SMTH	**Samothraki Isl**	**2.29**	**313**	P	**Pn**	**04 52 48.0**	**+0.2**
ALN	**Alexandroupoli**	**2.35**	**327**	P	**Pn**	**04 52 48.9**	**+0.3**
ALN				S	**Sn**	**04 53 19.0**	**+1.4**
	225nm,0.4s						
ISK	**Istanbul-Kandi**	**2.36**	**25**	P	**Pn**	**04 52 48.4**	**-0.3**
RDO	**Rodhopi**	**2.78**	**323**	P	**Pn**	**04 52 55.2**	**+0.7**
KAVA	**Kavala**	**3.22**	**311**	P	**Pn**	**04 53 00.8**	**+0.3**
NVR	**Nevrokopi**	**3.83**	**310**	P	**Pn**	**04 53 09.5**	**+0.6**

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*SOME **15** 04:57:13.9, 42°.25N×78°.67E, h10km*
*NNC **15** 04:57:14.7±0.5, 42°.30N×78°.73E, h0km, mb3.4, mpv3.6, Error ellipse: s-maj=3.3km s-min=1.5km az=162.0*
*KRNET **15** 04:57:14.1±0.1, 42°.25N×78°.73E, h18km, mb3.5*
ISC 15 04:57:14.8±1.4, **42°.30N**±0°.04×**78°.74E**±0°.02, **h3**km±10km, **n70, σ0s98/132, 25C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.31**	**306**	⇑*i*P	**Pg**	**04 57 21.2**	**+0.3**
	baz=16						
PRZ				⇑*i*S	**Sg**	**04 57 26.4**	**+1.4**
	baz=16						
SATY	**Saty**	**0.80**	**342**	*e*P	**Pg**	**04 57 30.0**	**-0.2**
	baz=44						
SATY				*e*S	**Sg**	**04 57 41.5**	**+1.0**
	baz=44						
SATY	**Saty**	**0.80**	**342**	*e*P	**Pg**	**04 57 30.0**	**-0.2**
	10nm,0.1s						
SATY				*e*S	**Sg**	**04 57 41.5**	**+1.0**
	156nm,0.1s						
SATY	**Saty**	**0.80**	**342**	P	**Pg**	**04 57 30.0**	**-0.2**
	10nm,0.1s						
SATY				S	**Sg**	**04 57 41.5**	**+1.0**
	156nm,0.1s						
UZB	**Uzynbulak**	**0.87**	**14**	*e*P	**Pg**	**04 57 31.1**	**-0.4**
	baz=14						
UZB				*e*S	**Sb**	**04 57 43.3**	**-1.5**
	baz=14						
UZB	**Uzynbulak**	**0.87**	**14**	*e*P	**Pg**	**04 57 31.1**	**-0.4**
	11nm,0.2s						
UZB				*e*S	**Sb**	**04 57 43.3**	**-1.5**
	20nm,0.1s						
UZB	**Uzynbulak**	**0.87**	**14**	P	**Pg**	**04 57 31.1**	**-0.4**
	11nm,0.2s						
UZB				S	**Sb**	**04 57 43.3**	**-1.5**
	20nm,0.1s						
ZHN	**Zhinishke**	**0.90**	**345**	*e*P	**Pg**	**04 57 31.7**	**-0.3**
	baz=47						
ZHN				*e*S	**Sg**	**04 57 44.3**	**+0.7**
	baz=47						
ZHN	**Zhinishke**	**0.90**	**345**	*e*P	**Pg**	**04 57 31.7**	**-0.3**
	17nm,0.2s						
ZHN				*e*S	**Sg**	**04 57 44.3**	**+0.7**
	104nm,0.3s						
ZHN	**Zhinishke**	**0.90**	**345**	P	**Pg**	**04 57 31.7**	**-0.3**
	17nm,0.2s						
ZHN				S	**Sg**	**04 57 44.3**	**+0.7**
	104nm,0.3s						
SHLS	**Shalkode**	**1.01**	**32**	*e*P	**Pn**	**04 57 37.1**	**+1.1**
	baz=43						
SHLS				*e*S	**Sn**	**04 57 53.5**	**+2.7**
	baz=43						
SHLS	**Shalkode**	**1.01**	**32**	*e*P	**Pn**	**04 57 37.1**	**+1.1**
	13nm,0.2s						
SHLS				*e*S	**Sn**	**04 57 53.5**	**+2.7**
	26nm,0.2s						
SHLS	**Shalkode**	**1.01**	**32**	P	**Pn**	**04 57 37.1**	**+1.1**
	13nm,0.2s						
SHLS				S	**Sn**	**04 57 53.5**	**+2.7**
	26nm,0.2s						
KPKS	**Kokpek**	**1.16**	**358**	⇓*i*P	**Pg**	**04 57 36.8**	**-0.4**
	baz=59						
KPKS				⇓*e*S	**Sb**	**04 57 53.2**	**-0.1**
	baz=59						
KPKS	**Kokpek**	**1.16**	**358**	⇓*i*P	**Pg**	**04 57 36.8**	**-0.4**
	50nm,0.1s						
KPKS				*e*S	**Sb**	**04 57 53.1**	**-0.1**
	108nm,0.2s						
KPKS	**Kokpek**	**1.16**	**358**	P	**Pg**	**04 57 36.8**	**-0.4**
	50nm,0.1s						
KPKS				S	**Sb**	**04 57 53.1**	**-0.1**
	108nm,0.2s						
PDGK	**Podgornoye**	**1.17**	**28**	⇓P	**Pg**	**04 57 36.2**	**-1.0**
	7.3nm,0.2s						
PDGK				⇑S	**Sn**	**04 57 53.0**	**-1.7**
	20nm,0.5s						
KURS	**Kuram**	**1.26**	**341**	*e*P	**Pn**	**04 57 38.1**	**-1.3**
	baz=42						
KURS				*e*S	**Sg**	**04 57 55.3**	**0.0**
	baz=42						
KURS	**Kuram**	**1.26**	**341**	*e*P	**Pn**	**04 57 38.1**	**-1.3**
	5.9nm,0.2s						
KURS				*e*S	**Sg**	**04 57 55.3**	**0.0**
	21nm,0.2s						
KURS	**Kuram**	**1.26**	**341**	P	**Pn**	**04 57 38.1**	**-1.3**
	5.9nm,0.2s						
KURS				S	**Sg**	**04 57 55.3**	**0.0**
	21nm,0.2s						
TNSS	**Tian-Shan**	**1.51**	**300**	*e*P	**Pn**	**04 57 42.2**	**-1.1**
	baz=2.0						
TNSS				*e*S	**Sn**	**04 58 02.5**	**-1.2**
	baz=2.0						
TNSS	**Tian-Shan**	**1.51**	**300**	*e*P	**Pn**	**04 57 42.2**	**-1.1**
	20nm,0.2s						
TNSS				*e*S	**Sn**	**04 58 02.5**	**-1.2**
	31nm,0.2s						
TNSS	**Tian-Shan**	**1.51**	**300**	P	**Pn**	**04 57 42.2**	**-1.1**
	20nm,0.2s						
TNSS				S	**Sn**	**04 58 02.5**	**-1.2**
	31nm,0.2s						
MDOK	**Medeo**	**1.52**	**305**	⇓*e

	20nm,0.2s					
KOTS			*e*S	**Sn**	**04 58 03.2**	**-0.3**
	199nm,0.1s					
KOTS	**Kotyrbulak**	**1.52 308**	P	**Pn**	**04 57 42.6**	**-0.5**
	20nm,0.2s					
KOTS			S	**Sn**	**04 58 03.2**	**-0.3**
	199nm,0.1s					
AAA	**Alma-Ata**	**1.62 305**	*e*P	**Pn**	**04 57 44.4**	**0.0**
AAA	baz=6.0		*e*S	**Sn**	**04 58 06.3**	**+0.4**
AAA	**Alma-Ata**	**1.62 305**	*e*P	**Pn**	**04 57 44.4**	**0.0**
	105nm,0.1s					
AAA			*e*S	**Sn**	**04 58 06.2**	**+0.4**
	122nm,0.2s					
AAA	**Alma-Ata**	**1.62 305**	P	**Pn**	**04 57 44.4**	**0.0**
	105nm,0.1s					
AAA			S	**Sn**	**04 58 06.2**	**+0.4**
	122nm,0.2s					
KTMS	**Ketmen**	**1.65 45**	*e*P	**Pg**	**04 57 45.4**	**-1.0**
	baz=44					
KTMS			*e*S	**Sg**	**04 58 07.9**	**+0.2**
	baz=44					
KTMS	**Ketmen**	**1.65 45**	*e*P	**Pg**	**04 57 45.4**	**-1.0**
	9.0nm,0.2s					
KTMS			*e*S	**Sg**	**04 58 08.0**	**+0.2**
	22nm,0.2s					
KTMS	**Ketmen**	**1.65 45**	P	**Pg**	**04 57 45.4**	**-1.0**
	9.0nm,0.2s					
KTMS			S	**Sg**	**04 58 08.0**	**+0.2**
	22nm,0.2s					
IZV	**Izvestkoviy**	**1.73 296**	*e*P	**Pn**	**04 57 46.1**	**0.0**
	baz=97					
IZV			*e*S	**Sn**	**04 58 09.2**	**+0.4**
	baz=97					
IZV	**Izvestkoviy**	**1.73 296**	*e*P	**Pn**	**04 57 46.1**	**0.0**
	57nm,0.2s					
IZV			*e*S	**Sn**	**04 58 09.1**	**+0.4**
	133nm,0.1s					
IZV	**Izvestkoviy**	**1.73 296**	P	**Pn**	**04 57 46.1**	**0.0**
	57nm,0.2s					
IZV			S	**Sn**	**04 58 09.1**	**+0.4**
	133nm,0.1s					
BLB	**Baldybastay**	**1.81 354**	*e*P	**Pb**	**04 57 48.4**	**-0.3**
	142nm,0.2s					
BLB			*e*S	**Sg**	**04 58 13.1**	**+0.2**
	133nm,0.4s					
BLB	**Baldybastay**	**1.81 354**	P	**Pb**	**04 57 48.4**	**-0.3**
	142nm,0.2s					
BLB			S	**Sg**	**04 58 13.1**	**+0.2**
	133nm,0.4s					
ULHL	**Ulahol**	**1.86 269**	⇑*i*P	**Pn**	**04 57 47.5**	**-0.3**
	baz=71					
ULHL			⇑*i*S	**Sn**	**04 58 11.8**	**-0.1**
	baz=71					
MTBS	**Maitube**	**1.90 297**	*e*P	**Pn**	**04 57 48.7**	**+0.5**
	baz=98					
MTBS			*e*S	**Sn**	**04 58 13.6**	**+1.0**
	baz=98					
MTBS	**Maitube**	**1.90 297**	*e*P	**Pn**	**04 57 48.7**	**+0.5**
	37nm,0.2s					
MTBS			*e*S	**Sn**	**04 58 13.6**	**+1.0**
	51nm,0.3s					
MTBS	**Maitube**	**1.90 297**	P	**Pn**	**04 57 48.7**	**+0.5**
	37nm,0.2s					
MTBS			S	**Sn**	**04 58 13.6**	**+1.0**
	51nm,0.3s					
CHKK	**Chushkaly**	**2.02 321**	*e*P	**Pb**	**04 57 52.1**	**0.0**
	14nm,0.1s					
CHKK			*e*S	**Sg**	**04 58 19.5**	**-0.1**
	193nm,0.2s					
CHKK	**Chushkaly**	**2.02 321**	Pg	**Pb**	**04 57 52.1**	**0.0**
	14nm,0.1s					
CHKK			Lg	Lg	04 58 19.5	
	193nm,0.2s					
BOOM	**Boomskoye usch**	**2.08 276**	⇑*i*P	**Pn**	**04 57 50.6**	**-0.3**
	baz=78					
BOOM			⇑*i*S	**Sn**	**04 58 17.4**	**0.0**
	baz=78					
DJR	**Jarkent**	**2.17 20**	*e*P	**Pb**	**04 57 54.8**	**0.0**
	20nm,0.3s					
DJR			*e*S	**Sg**	**04 58 24.0**	**-0.5**
	54nm,0.2s					
DJR	**Jarkent**	**2.17 20**	Pg	**Pb**	**04 57 54.8**	**0.0**
	20nm,0.3s					
DJR			Lg	Lg	04 58 24.0	
	54nm,0.2s					
KST	**Kastek**	**2.18 291**	*e*P	**Pb**	**04 57 54.0**	**-1.0**
	18nm,0.2s					
KST			*e*S	**Sb**	**04 58 22.8**	**+0.4**
	99nm,0.6s					
KST	**Kastek**	**2.18 291**	Pg	**Pb**	**04 57 54.0**	**-1.0**
	18nm,0.2s					
KST			Lg	Lg	04 58 22.8	
	99nm,0.6s					
NRN	**Naryn**	**2.22 248**	⇑*i*P	**Pn**	**04 57 52.4**	**-0.5**
	baz=49					
NRN			⇑*i*S	**Sn**	**04 58 20.4**	**-0.7**
	baz=49					
KUU	**Kurty**	**2.37 313**	*e*P	**Pb**	**04 57 57.4**	**-0.8**
	4.5nm,0.2s					
KUU			*e*S	**Sb**	**04 58 28.7**	**+0.8**
	56nm,0.3s					
KUU	**Kurty**	**2.37 313**	Pg	**Pb**	**04 57 57.4**	**-0.8**
	4.5nm,0.2s					
KUU			Lg	Lg	04 58 28.7	
	56nm,0.3s					
TKM2	**Tokmak 2**	**2.40 286**	⇑Pn	**Pn**	**04 57 56.4**	**+1.1**
	4.1nm,0.3s					
TKM2			⇑Lg	Lg	04 58 29.4	
	24nm,0.6s					
KRBS	**Karabastau**	**2.65 303**	*e*P	**Pb**	**04 58 02.6**	**-0.4**
	7.0nm,0.2s					
KRBS			*e*S	**Sb**	**04 58 37.5**	**+1.7**
	88nm,0.3s					
KRBS	**Karabastau**	**2.65 303**	Pg	**Pb**	**04 58 02.6**	**-0.4**
	7.0nm,0.2s					
KRBS			Lg	Lg	04 58 37.5	
	88nm,0.3s					
TDK	**Taldyqorghan**	**2.71 355**	*e*P	**Pb**	**04 58 04.5**	**+0.5**
	45nm,0.3s					
TDK			*e*S	**Sg**	**04 58 40.5**	**-1.4**
	91nm,0.5s					
TDK	**Taldyqorghan**	**2.71 355**	Pg	**Pb**	**04 58 04.5**	**+0.5**
	45nm,0.3s					
TDK			Lg	Lg	04 58 40.5	
	91nm,0.5s					
KBK	**Karagaybulak**	**2.83 278**	⇓*i*P	**Pn**	**04 58 01.0**	**-0.1**
	baz=80					
KBK			⇓*i*S	**Sn**	**04 58 35.4**	**-0.4**
	baz=80					
CHMS	**Chumysh**	**3.02 285**	⇑*i*P	**Pn**	**04 58 03.6**	**-0.1**
	baz=86					
CHMS			⇑*i*S	**Sn**	**04 58 39.9**	**-0.5**
	baz=86					
CHMS	**Chumysh**	**3.02 285**	⇓Pn	**Pn**	**04 58 04.2**	**+0.5**
	1.5nm,0.3s					
CHMS			⇑Lg	Lg	04 58 50.3	
	4.2nm,0.4s					
UCH	**Uchtor**	**3.14 270**	⇑*i*P	**Pn**	**04 58 05.4**	**-0.2**
	baz=71					
UCH			⇑*i*S	**Sn**	**04 58 42.8**	**-1.0**
	baz=71					
AAK	**Ala-Archa**	**3.16 278**	⇑*e*P	**Pn**	**04 58 05.6**	**-0.1**
	baz=78					
AAK			⇑*i*S	**Sn**	**04 58 43.2**	**-0.8**
	baz=78					
SGDS	**Sogindy**	**3.23 292**	*e*P	**Pb**	**04 58 12.5**	**-0.4**
	7.3nm,0.5s					
SGDS			*e*S	**Sb**	**04 58 54.0**	**+1.3**
	9.3nm,0.3s					
SGDS	**Sogindy**	**3.23 292**	Pg	**Pb**	**04 58 12.5**	**-0.4**
	7.3nm,0.5s					
SGDS			Lg	Lg	04 58 54.0	
	9.3nm,0.3s					
ARLS	**Aral**	**3.32 264**	⇑*i*P	**Pn**	**04 58 07.3**	**-0.5**
	baz=65					
ARLS			⇑*i*S	**Sn**	**04 58 46.4**	**-1.5**
	baz=65					
EKS2	**Erkin-Say**	**3.69 277**	⇑*i*P	**Pn**	**04 58 13.0**	**+0.1**
	baz=78					
EKS2			⇑*i*S	**Sn**	**04 58 55.9**	**-1.1**
	baz=78					
MK31	**Makanchi Array**	**5.16 28**	Pn	**Pn**	**04 58 34.0**	**+1.1**
	0.1nm,0.2s,baz=77,slow=9.2,SNR=11					
MK31			⇑Pg	**Pg**	**04 58 50.6**	**-3.0**
	0.3nm,0.3s,baz=237,slow=13,SNR=4.9					
MK31			⇓Sn	**Sn**	**04 59 34.5**	**+1.5**
	1.4nm,0.5s,baz=211,slow=25,SNR=4.6					
MK31			⇓Lg	Lg	04 59 57.1	
	0.9nm,0.5s,baz=206,slow=15,SNR=4.1					
KK31	**Karatay Array**	**6.12 280**	⇑Pg	**Pb**	**04 59 06.7**	**+4.7**
	0.2nm,0.3s,baz=90,slow=16,SNR=4.2					
KK31			⇓Lg	Lg	05 00 28.4	
	0.9nm,0.5s,baz=95,slow=26,SNR=4.6					

IDC ***15*** *05:59:58.1±0.8, 3°.06S×129°.54E, h0km, mb4.1/8, mbtmp4.2/10, ML4.1/2, MS3.3/9, Error ellipse: s-maj=33.4km s-min=14.2km az=77.0*
DJA ***15*** *05:00:04.3±0.2, 3°.5±2°.×13°.0E±°, h47km±7km, M4.4/14, mb4.6/13, mB5.0/5, MLv4.3/14, Mw(mB)4.3/5*
ISC 15 05:00:02.8±0.6,**2°.91S**±0°.05×**129°.57E**±0°.04,**h28**km,**n45,** σ1§**80**/46,**mb4.0**/8,**MS3.1**/7,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.78**	**236**	P	**Pb**	**05 00 16.6**	**-1.2**
KRAI	**Karang Ratu**	**1.25**	**251**	P	**Pb**	**05 00 26.3**	**+0.6**
AAI	**Ambon**	**1.58**	**241**	P	**Pn**	**05 00 30.5**	**+1.5**
BNDI	**Bandanaira**	**1.64**	**168**	P	**Pb**	**05 00 32.8**	**+0.4**
BNDI	**Bandanaira**	**1.64**	**168**	P	**Pb**	**05 00 32.9**	**+0.5**
NLAI	**Namlea**	**2.49**	**262**	P	**Pn**	**05 00 43.3**	**+1.8**
NLAI				S	**Sn**	**05 01 11.9**	**+0.8**
SIJI	**Sorong**	**2.64**	**40**	Pn	**Pn**	**05 00 43.6**	**0.0**
	78nm,0.3s,baz=226,slow=23,SNR=199						
SIJI				Sn	**Sn**	**05 01 15.2**	**+0.6**
	58nm,0.3s,baz=205,slow=23,SNR=13						
SIJI				LR	LR	05 02 19.6	
	comp=Z,703nm,18.0s,baz=262,slow=51						
	211nm,0.2s						
SIJI	**Sorong**	**2.64**	**40**	P	**Pn**	**05 00 44.4**	**+0.8**
SIJI				S	**Sn**	**05 01 14.7**	**0.0**
SWI	**Sorong**	**2.64**	**40**	P	**Pn**	**05 00 42.8**	**-0.8**
FAKI	**Fak Fak**	**2.67**	**90**	P	**Pn**	**05 00 44.6**	**+0.6**
FAKI	**Fak Fak**	**2.67**	**90**	P	**Pn**	**05 00 44.9**	**+0.9**
LBMI	**Labuha**	**3.06**	**317**	P	**Pn**	**05 00 49.1**	**-0.3**
SANI	**Sanana**	**3.68**	**283**	P	**Pn**	**05 00 57.6**	**-0.3**
SANI				S	**Sn**	**05 01 38.5**	**-2.0**
SANI	**Sanana**	**3.68**	**283**	P	**Pn**	**05 00 57.7**	**-0.2**
TNTI	**Ternate**	**4.27**	**329**	P	**Pn**	**05 01 05.0**	**-1.0**
RKPI	**Ransiki, Papua**	**4.80**	**73**	P	**Pn**	**05 01 12.3**	**-1.1**
MWPI	**Manokwari, Pap**	**4.88**	**66**	P	**Pn**	**05 01 16.4**	**+2.0**
KMSI	**Cibinong**	**6.58**	**302**	P	**Pn**	**05 01 39.5**	**+1.8**
	0.8nm117nm,0.6s						
APSI	**Ampana**	**8.16**	**284**	P	**Pn**	**05 01 59.2**	**-0.4**
	1μm117nm,0.7s						
MRSI	**Marisa**	**8.34**	**294**	P	**Pn**	**05 02 02.6**	**+0.7**
	84nm32nm,0.6s						
TOLI2	**Tolitoli**	**9.65**	**294**	P	**Pn**	**05 02 21.4**	**+1.4**
BKSI	**Bulukumba**	**9.73**	**255**	P	**Pn**	**05 02 23.4**	**+2.4**
	20nm,1.4s						
MTN	**Manton Dam**	**9.99**	**171**	P	**Pn**	**05 02 27.6**	**+3.0**
KAPI	**Kappang**	**10.02**	**258**	Pn	**Pn**	**05 02 29.4**	**+4.4**
	1.7nm,0.3s,baz=94,slow=7.3,SNR=8.5						
KAPI				LR	LR	05 06 56.7	
	comp=Z,143nm,21.6s,baz=72,slow=42						
KAPI	**Kappang**	**10.02**	**258**	P	**Pn**	**05 02 28.8**	**+3.8**
	37nm,1.1s						
PLAI	**Plampang**	**13.12**	**243**	P	**Pn**	**05 03 07.0**	**-0.5**
	15nm,1.0s						
PLAI	**Plampang**	**13.12**	**243**	P	**Pn**	**05 03 09.4**	**+1.9**
JAGI	**Jajag, Banyuwa**	**16.31**	**250**	P	**Pn**	**05 03 50.6**	**+0.6**
	31nm,1.1s						
COEN	**Coen**	**17.35**	**130**	P	**P**	**05 04 06.2**	**+1.9**
WRA	**Warramunga Arr**	**17.56**	**165**	P	**Pn**	**05 04 03.6**	**-2.1**
	0.5nm,0.3s,baz=353,slow=12,SNR=39						
WRA				S	**Sn**	**05 07 17.0**	**-3.6**
	1.1nm,0.9s,baz=352,slow=17,SNR=3.5						
	3.2nm,0.5s						
PWJI	**Pagerwojo**	**18.40**	**253**	P	**P**	**05 04 16.2**	**+0.3**
	20nm,1.4s						
ASAR	**Alice Springs**	**21.06**	**169**	P	**P**	**05 04 44.0**	**-0.9**
	15nm,0.7s,baz=346,slow=9.7,SNR=124						
ASAR				S	**S**	**05 08 33.0**	**-5.1**
	2.4nm,0.8s,baz=350,slow=21,SNR=8.0						
	15nm,0.7s						
LEM	**Lembang**	**22.22**	**259**	LR	LR	05 15 47.3	
	comp=Z,92nm,18.2s,baz=318,slow=43						
STKA	**Stephens Creek**	**30.96**	**160**	P	**P**	**05 06 17.3**	**-0.4**
	1.4nm,0.6s,baz=290,slow=12,SNR=2.9						
STKA				LR	LR	05 18 42.8	
	comp=Z,46nm,21.2s,baz=12,slow=36						
	1.4nm,0.6s						
PSI	**Prapat**	**31.16**	**280**	LR	LR	05 19 53.6	
	comp=Z,94nm,19.0s,baz=281,slow=38						
NWAO	**Narrogin (SRO)**	**32.03**	**200**	LR	LR	05 19 44.6	
	comp=Z,93nm,18.9s,baz=110,slow=37						
CMAR	**Chiang Mai Arr**	**36.88**	**306**	P	**P**	**05 07 10.6**	**+1.3**
	0.8nm,0.3s,baz=136,slow=7.1,SNR=9.0						
CMAR				LR	LR	05 25 50.2	
	comp=Z,17nm,18.1s,baz=160,slow=42						
	0.8nm,0.3s						
KSRS	**Korea Array**	**40.19**	**358**	LR	LR	05 23 26.2	
	comp=Z,25nm,21.7s,baz=180,slow=35						
KLR	**Kul'dur**	**51.96**	**2**	LR	LR	05 31 10.9	
	comp=Z,12nm,19.8s,baz=177,slow=36						
PETK	**Petropavlovsk-**	**60.60**	**19**	P	**P**	**05 10 12.6**	**+1.7**
	5.3nm,0.8s,baz=187,slow=10,SNR=4.4						
	5.3nm,0.8s						
MKAR	**Makanchi Array**	**64.60**	**326**	P	**P**	**05 10 37.3**	**-0.5**
	0.4nm,0.4s,baz=134,slow=4.2,SNR=3.0						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**67.75**	**333**	P	**P**	**05 10 56.9**	**-0.9**
	0.8nm,0.5s,baz=124,slow=7.2,SNR=4.6						
	0.8nm,0.5s						
SEY	**Seymchan**	**67.89**	**11**	P	**P**	**05 10 59.4**	**+0.9**
	2.0nm,0.8s,baz=238,slow=3.8,SNR=5.1						
	2.0nm,0.8s						
VNDA	**Vanda**	**76.53**	**173**	P	**P**	**05 11 48.0**	**-2.0**
	0.5nm,0.7s,baz=315,slow=6.9,SNR=5.6						
	0.5nm,0.7s						
CPUP	**Villa Florida**	**150.18**	**167**	PKPbc	**PKPbc**	**05 19 50.7**	**-1.3**
	2.0nm,0.8s,baz=180,slow=1.0,SNR=4.3						

DDA ***15*** *05:03:24.7±0.0, 38°.95N×27°.72E, h7km±2km, ML3.3*
THE ***15*** *05:03:24.6, 38°.91N×27°.80E, h0km±2km, ML3.3/5, Error ellipse: s-maj=3.4km s-min=1.3km az=89.0*
ISK ***15*** *05:03:24.8, 38°.94N×27°.71E, h7km, ML3.6/19*
ATH ***15*** *05:03:25.8, 38°.98N×27°.76E, h32km±7km, ML3.2/6, Error ellipse: s-maj=8.0km s-min=1.9km az=57.0*
ISC 15 05:03:25.1±0.9,**38°.95N**±0°.02×**27°.75E**±0°.02,**h10**km±7km,
n55, σ0§**63**/74,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.09**	**145**	PG	**Pg**	**05 03 27.5**	**0.0**
AKS				SG	**Sg**	**05 03 29.6**	**+0.4**
GOMA	**Golmarmara-Man**	**0.28**	**151**	PG	**Pg**	**05 03 30.9**	**+0.3**
GOMA				SG	**Sb**	**05 03 35.4**	**-1.5**
STEP	**BALIKESIR_Sava**	**0.43**	**357**	P	**Pg**	**05 03 33.0**	**-0.5**
STEP				S	**Sg**	**05 03 39.3**	**+0.2**
STEP				*i* AML	AML	05 03 41.0	
	comp=N,4μm,0.2s						
ZEDA	**zmir-Bergama**	**0.52**	**272**	P	**Pg**	**05 03 35.2**	**0.0**
ZEDA				S	**Sg**	**05 03 42.2**	**0.0**
ZEDA				*i* AML	AML	05 03 43.0	
	comp=N,3μm,0.4s						
DKL	**Dikili**	**0.67**	**281**	PG	**Pg**	**05 03 37.9**	**-0.1**
BUHA	**Balikesir, Bur**	**0.76**	**317**	P	**Pg**	**05 03 39.3**	**-0.4**
MANT	**Manisa**	**0.78**	**126**	P	**Pb**	**05 03 40.5**	**-0.5**
MANT				S	**Sb**	**05 03 52.0**	**+0.3**
MANT				*i* AML	AML	05 03 54.0	
	comp=N,1μm,0.4s						
BLCB	**Balcova**	**0.79**	**225**	PG	**Pg**	**05 03 39.9**	**-0.4**
BLCB				SG	**Sg**	**05 03 50.6**	**0.0**
BLCB	**Balcova**	**0.79**	**225**	P	**Pg**	**05 03 40.0**	**-0.4**
BLCB				S	**Sg**	**05 03 51.1**	**+0.5**
FOCM	**Foa**	**0.83**	**254**	PG	**Pg**	**05 03 40.6**	**-0.5**
DST	**Dursunbey**	**0.94**	**46**	PG	**Pb**	**05 03 43.8**	**+0.3**
SMAA	**Simav-Kutahya**	**0.97**	**81**	PG	**Pn**	**05 03 44.6**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**174**	PG	**Pg**	**05 03 44.4**	**-0.1**
AYDB				SG	**Sb**	**05 03 57.8**	**-0.3**
USAK	**Uak-Merkez**	**1.02**	**103**	P	**Pb**	**05 03 44.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.10**	**357**	PN	**Pn**	**05 03 46.5**	**0.0**
PRK	**Paraskevi**	**1.19**	**285**	P	**Pn**	**05 03 48.6**	**+0.8**
PRK				S	**Sn**	**05 04 05.1**	**+1.1**
	1μm,0.5s						
PRK	**Paraskevi**	**1.19**	**285**	P	**Pn**	**05 03 48.2**	**+0.4**
PRK				S	**Sn**	**05 04 04.1**	**+0.1**
PRK				AML	AML	05 04 07.0	
	comp=E,2896μm,0.4s						
PRK				AML	AML	05 04 07.6	
	comp=N,2284μm,0.7s						
BAYC	**CANAKKALE_Bayr**	**1.22 311**	P	**Pb**	**05 03 48.1**	**-0.2**
BAYC			S	**Sg**	**05 04 03.3**	**-1.1**
BAYC			*i* AML	AML	05 04 07.0	
	comp=N,494nm,0.6s					
GEDZ	**Gediz**	**1.30 85**	PN	**Pg**	**05 03 50.4**	**+0.4**
GCAM	**G?zelcaml?**	**1.31 198**	PN	**Pn**	**05 03 49.6**	**+0.1**
KNL	**Balıkesir**	**1.33 353**	P	**Pn**	**05 03 48.9**	**-0.9**
KNL			S	**Sb**	**05 04 06.4**	**-0.9**
KNL			*i* AML	AML	05 04 11.0	
	comp=N,754nm,0.4s					
GPNR	**Gulpinar-Canak**	**1.35 292**	PN	**Pn**	**05 03 50.3**	**+0.2**
KOCA	**Canakkale, Ayv**	**1.37 294**	P	**Pn**	**05 03 49.5**	**-0.8**
EDC	**Edincik**	**1.40 4**	PN	**Pb**	**05 03 51.3**	**0.0**
EZN	**Ezine**	**1.41 309**	PN	**Pb**	**05 03 51.2**	**-0.3**
EZN	**Ezine**	**1.41 309**	P	**Pn**	**05 03 50.5**	**-0.3**
ORLT	**Orhaneli**	**1.41 39**	PN	**Pg**	**05 03 52.0**	**-0.1**
TVSB	**Tavsanli**	**1.42 69**	PN	**Pg**	**05 03 52.2**	**-0.2**
SMG	**Samos**	**1.43 210**	P	**Pn**	**05 03 50.3**	**-0.9**
SMG			S	**Sg**	**05 04 11.8**	**+0.7**
	comp=N,850nm,0.3s					
SMG	**Samos**	**1.43 210**	P	**Pb**	**05 03 51.9**	**0.0**
SMG			S	**Sg**	**05 04 10.9**	**-0.3**
SMG			AML	AML	05 04 14.8	
	comp=E,1412μm,0.3s					
SMG			AML	AML	05 04 21.4	
	comp=N,1971μm,0.4s					
CHOS	**Chios island**	**1.44 248**	PN	**Pn**	**05 03 51.6**	**+0.3**
CHOS	**Chios island**	**1.44 248**	P	**Pn**	**05 03 51.2**	**-0.1**
CHOS			S	**Sg**	**05 04 12.9**	**+1.5**
	comp=N,2μm,0.4s					
CHOS	**Chios island**	**1.44 248**	P	**Pb**	**05 03 52.0**	**-0.1**
CHOS			S	**Sg**	**05 04 11.2**	**-0.2**
CHOS			AML	AML	05 04 13.2	
	comp=E,5619μm,0.5s					
CHOS			AML	AML	05 04 14.5	
	comp=N,3121μm,0.3s					
SIGR	**SIGRI**	**1.50 281**	PN	**Pn**	**05 03 52.3**	**+0.3**
SIGR	**SIGRI**	**1.50 281**	P	**Pn**	**05 03 51.9**	**-0.1**
SIGR			S	**Sg**	**05 04 13.2**	**0.0**
	comp=N,608nm,0.4s					
SIGR	**SIGRI**	**1.50 281**	P	**Pn**	**05 03 51.9**	**-0.1**
SIGR			AML	AML	05 04 15.5	
	comp=E,863μm,0.4s					
SIGR			AML	AML	05 04 15.7	
	comp=N,1567μm,0.3s					
KHL	**Karahalli**	**1.52 114**	PN	**Pb**	**05 03 53.5**	**0.0**
BOZC	**Bozcaada**	**1.59 305**	PN	**Pn**	**05 03 53.7**	**+0.4**
ULDT	**Uludag**	**1.60 42**	P	**Pn**	**05 03 54.0**	**+0.3**
ULDT			S	**Sg**	**05 04 15.8**	**-0.9**
ULDT			*i* AML	AML	05 04 23.0	
	comp=N,524nm,0.4s					
ULDT			*i* AML	AML	05 04 24.0	
	comp=N,404nm,0.4s					
ECEA	**Canakkale, Ece**	**1.64 312**	P	**Pn**	**05 03 54.0**	**0.0**
MRMT	**Marmara Adasi**	**1.66 356**	PN	**Pb**	**05 03 55.1**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.67 31**	PN	**Pn**	**05 03 54.9**	**+0.5**
YER	**Yerkesik**	**1.86 167**	PN	**Pn**	**05 03 57.9**	**+0.8**
BODT	**Bodrum**	**1.92 191**	P	**Pn**	**05 03 56.0**	**-1.8**
SMTH	**Samothraki Isl**	**2.29 312**	P	**Pn**	**05 04 03.2**	**+0.3**
SMTH	**Samothraki Isl**	**2.29 312**	P	**Pn**	**05 04 03.3**	**+0.4**
SMTH			AML	AML	05 04 40.8	
	comp=E,226μm,0.5s					
SMTH			AML	AML	05 04 44.6	
	comp=N,250μm,0.4s					
ISK	**Istanbul-Kandi**	**2.34 25**	P	**Pn**	**05 04 03.2**	**-0.4**
ALN	**Alexandroupoli**	**2.34 327**	P	**Pn**	**05 04 04.0**	**+0.3**
ALN			S	**Sn**	**05 04 34.6**	**+2.0**
	comp=N,240nm,0.3s					
ALN	**Alexandroupoli**	**2.34 327**	P	**Pn**	**05 04 04.1**	**+0.4**
ALN			AML	AML	05 04 40.9	
	comp=E,594μm,0.3s					
ALN			AML	AML	05 04 45.2	
	comp=N,364μm,0.4s					
APE	**Apeiranthos**	**2.57 224**	P	**Pn**	**05 04 05.9**	**-0.9**
RDO	**Rodhopi**	**2.77 323**	P	**Pn**	**05 04 10.6**	**+1.0**
RDO	**Rodhopi**	**2.77 323**	P	**Pn**	**05 04 10.4**	**+0.8**
KAVA	**Kavala**	**3.22 310**	P	**Pn**	**05 04 16.0**	**+0.3**
SRS	**Serrai**	**3.85 305**	P	**Pn**	**05 04 24.7**	**+0.2**
KNT	**Kendrikon**	**4.33 302**	P	**Pn**	**05 04 31.9**	**+0.9**

IDC ***15*** *05:10:01.6±1.7, 7°.32N×127°.32E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=45.7km s-min=23.9km az=53.0*
MAN ***15*** *05:10:11.4, 6°.81N×126°.72E, h40km, mb4.3, ML3.1, MS2.9*
ISC 15 05:10:11.1±1.4,**6°.81N**±0°.06×**126°.8E**±0°.1,**h63**km±12km,
n12, σ2§**07**/20,**mb3.2**/3,**4C-4D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.53**	**285**	⇑*e*P	**Pn**	**05 10 23.1**	**-0.4**
MATI				*e*S	**Sn**	**05 10 32.1**	**-0.6**
DAV	**Davao City (W)**	**1.21**	**282**	Pn	**Pn**	**05 10 33.4**	**+1.5**
	144nm,0.3s,baz=70,slow=2.5,SNR=11						
DAV				Sn	**Sn**	**05 10 52.2**	**+4.7**
	132nm,0.3s,baz=74,slow=20,SNR=4.4						
DDMP	**Don Marcelino,**	**1.26**	**236**	⇑*e*P	**Pn**	**05 10 32.6**	**-0.1**
DDMP				*e*S	**Sn**	**05 10 48.8**	**0.0**
BIPH	**Bislig**	**1.43**	**344**	⇓*i*P	**Pn**	**05 10 34.9**	**0.0**
BIPH				*i* S	**Sn**	**05 10 51.3**	**-1.4**
KCP	**Kidapawan**	**1.68**	**277**	⇑*e*P	**Pn**	**05 10 38.3**	**0.0**
KCP				*i* S	**Sn**	**05 10 53.6**	**-5.3**
BUKP	**Musuan**	**2.00**	**302**	⇓*e*P	**Pn**	**05 10 43.5**	**+0.9**
BUKP				*e*S	**Sn**	**05 11 07.5**	**+0.8**
SKMP	**Bagumbayan, Su**	**2.23**	**263**	⇑*e*P	**Pn**	**05 10 45.9**	**+0.2**
SKMP				*e*S	**Sn**	**05 11 11.0**	**-1.1**
CTBH	**Cotabato--PC H**	**2.54**	**279**	⇓*i*P	**Pn**	**05 10 50.5**	**+0.6**
CGP	**Cagayan de Oro**	**2.63**	**309**	⇓*e*P	**Pn**	**05 10 52.8**	**+1.7**
CGP				*e*S	**Sn**	**05 11 22.1**	**+0.2**
WRA	**Warramunga Arr**	**27.61**	**164**	P	**P**	**05 15 54.3**	**+1.6**
	0.3nm,0.6s,baz=345,sl

n546,σ1982/547,mb4.6/67,MS3.9/55,31C-44D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.53**	**332**	PG	**Pg**	**05 33 04.5**	**-1.0**
ZKR				SG	**Sg**	**05 33 11.2**	**-1.4**
ZKR	**Zakros**	**0.53**	**332**	P	**Pg**	**05 33 04.5**	**-1.0**
ZKR				S	**Sg**	**05 33 08.9**	**-3.7**
ZKR	**Zakros**	**0.53**	**332**	P	**Pg**	**05 33 04.2**	**-1.2**
ZKR				S	**Sb**	**05 33 14.2**	**0.0**
ZKR				AML	AML	05 33 18.6	
	26nm,0.8s						
ZKR				AML	AML	05 33 18.6	
	26nm,0.8s						
ZKR				AML	AML	05 33 18.7	
	60nm,0.4s						
ZKR				AML	AML	05 33 18.7	
	60nm,0.4s						
ZKR	**Zakros**	**0.53**	**332**	P	**Pg**	**05 33 04.5**	**-1.0**
ZKR				S	**Sn**	**05 33 16.9**	**-0.8**
ZKR				AML	AML	05 33 19.8	
	comp=E,67047μm,0.4s						
ZKR				AML	AML	05 33 23.7	
	comp=N,26038μm,0.6s						
FRMA	**Ierapetra Chan**	**0.75**	**300**	P	**Pg**	**05 33 07.2**	**-2.3**
FRMA				S	**Sg**	**05 33 15.4**	**-3.9**
FRMA	**Ierapetra Chan**	**0.75**	**300**	P	**Pg**	**05 33 07.4**	**-2.1**
FRMA				S	**Sg**	**05 33 19.3**	**0.0**
FRMA				AML	AML	05 33 20.0	
	comp=N,60386μm,0.5s						
FRMA				AML	AML	05 33 25.4	
	comp=E,43041μm,0.6s						
KARP	**Karpathos**	**1.04**	**30**	PG	**Pg**	**05 33 14.5**	**-0.6**
KARP				SG	**Sg**	**05 33 27.9**	**-0.8**
KARP	**Karpathos**	**1.04**	**30**		**Pg**	**05 33 15.0**	**-0.2**
KARP				Sg	**Sg**	**05 33 27.4**	**-1.4**
KARP	**Karpathos**	**1.04**	**30**	P	**Pb**	**05 33 15.3**	**+0.1**
KARP				S	**Sb**	**05 33 29.0**	**+0.1**
	comp=E,28μm,1.0s						
KARP	**Karpathos**	**1.04**	**30**	P	**Pg**	**05 33 15.1**	**0.0**
KARP				S	**Sn**	**05 33 34.4**	**+4.1**
KARP				AML	AML	05 33 38.0	
	comp=E,71nm,1.0s						
KARP				AML	AML	05 33 38.0	
	comp=E,71nm,1.0s						
KARP				AML	AML	05 33 38.9	
	comp=E,41nm,1.0s						
KARP				AML	AML	05 33 38.9	
	comp=E,41nm,1.0s						
KARP	**Karpathos**	**1.04**	**30**	P	**Pg**	**05 33 15.2**	**0.0**
KARP				S	**Sn**	**05 33 32.2**	**+1.9**
HRKL	**Herakleio**	**1.34**	**300**	PN	**Pg**	**05 33 22.2**	**+1.3**
HRKL	**Herakleio**	**1.34**	**300**	P	**Pn**	**05 33 19.1**	**-0.7**
HRKL				S	**Sg**	**05 33 39.8**	**+1.5**
HRKL				AML	AML	05 33 56.0	
	comp=E,93868μm,1.2s						
HRKL				AML	AML	05 34 06.8	
	comp=N,97774μm,0.8s						
KSTL	**Kastelli Herak**	**1.36**	**299**	P	Pn	05 33 15.4	-4.6
KSTL	**Kastelli Herak**	**1.36**	**299**	P	Pn	05 33 15.1	-4.9
KSTL				S	**Sb**	**05 33 32.8**	**-5.2**
KSTL				AML	AML	05 33 36.0	
	comp=N,17157μm,0.7s						
KSTL				AML	AML	05 33 50.0	
	comp=E,6072μm,1.0s						
IACM	**Heraklion**	**1.36**	**299**	P	**Pg**	**05 33 23.4**	**+2.2**
IACM	**Heraklion**	**1.36**	**299**	P	**Pn**	**05 33 20.0**	**0.0**
IACM				S	**Sg**	**05 33 39.7**	**+0.7**
SIVA	**Sivas**	**1.46**	**285**	P	**Pb**	**05 33 22.8**	**+0.6**
SIVA	**Sivas**	**1.46**	**285**	P	**Pn**	**05 33 20.6**	**-0.7**
SIVA				S	**Sb**	**05 33 41.6**	**+0.8**
SIVA				AML	AML	05 34 00.4	
	comp=E,15387μm,0.6s						
SIVA				AML	AML	05 34 01.8	
	comp=N,11634μm,0.7s						
IDI	**Anoyia**	**1.49**	**296**	Pg	**Pn**	**05 33 21.7**	**-0.1**
	comp=N,13nm,0.3s,baz=145,slow=11,SNR=31						
IDI				LR	LR	05 34 14.2	
	comp=N,3μm,19.0s,baz=118,slow=58						
IDI	**Anoyia**	**1.49**	**296**	PN	**Pg**	**05 33 23.9**	**+0.3**
IDI	**Anoyia**	**1.49**	**296**	P	**Pn**	**05 33 22.0**	**+0.2**
IDI				S	**Sn**	**05 33 39.8**	**-1.5**
	comp=N,2μm,0.6s						
IDI	**Anoyia**	**1.49**	**296**	P	**Pn**	**05 33 21.8**	**-0.1**
IDI				S	**Sg**	**05 33 42.7**	**-0.3**
IDI				AML	AML	05 34 02.4	
	comp=E,4536μm,0.5s						
IDI				AML	AML	05 34 03.0	
	comp=N,5314μm,0.6s						
TMBK	**Timbaki Herakl**	**1.51**	**287**	P	**Pb**	**05 33 23.5**	**+0.5**
TMBK				S	**Sn**	**05 33 42.2**	**+0.6**
	comp=N,3μm,0.8s						
TMBK	**Timbaki Herakl**	**1.51**	**287**	P	**Pn**	**05 33 22.2**	**+0.2**
TMBK				AML	AML	05 34 11.0	
	comp=E,21148μm,1.1s						
TMBK				AML	AML	05 34 11.2	
	comp=N,15669μm,0.8s						
PRNS	**Prines Rethymn**	**1.81**	**294**	P	**Pb**	**05 33 28.5**	**+0.3**
SANT	**Santorini**	**1.93**	**334**	PN	**Pn**	**05 33 29.0**	**+1.1**
SANT	**Santorini**	**1.93**	**334**	Pn	**Pn**	**05 33 29.0**	**+1.1**
THR3	**Thira Island,**	**1.99**	**333**	P	**Pn**	**05 33 30.0**	**+1.4**
THT2	**Imerovigli**	**2.00**	**334**	PN	**Pn**	**05 33 30.1**	**+1.3**
GVDS	**Gavdos**	**2.01**	**276**	PN	**Pb**	**05 33 32.9**	**+1.2**
GVDS	**Gavdos**	**2.01**	**276**	P	**Pb**	**05 33 31.7**	**0.0**
GVDS				S	**Sb**	**05 33 56.4**	**-0.3**
	comp=N,2μm,0.7s						
GVD	**Gavdhos**	**2.02**	**276**	PN	**Pb**	**05 33 31.7**	**0.0**
GVD	**Gavdhos**	**2.02**	**276**	P	**Pb**	**05 33 31.5**	**-0.2**
GVD	**Gavdhos**	**2.02**	**276**	P	**Pn**	**05 33 29.1**	**+0.1**
GVD				AML	AML	05 34 17.1	
	comp=N,3615μm,0.4s						
GVD				AML	AML	05 34 21.3	
	comp=E,5819μm,0.7s						
NIS1	**Nisyros Isl.**	**2.03**	**15**	PN	**Pn**	**05 33 30.6**	**+1.4**
NIS1	**Nisyros Isl.**	**2.03**	**15**	P	**Pn**	**05 33 29.5**	**+0.3**
NIS1				S	**Sn**	**05 33 54.7**	**+0.2**
	comp=E,6μm,0.8s						
ARG	**Arkhangelos**	**2.04**	**39**	PN	**Pb**	**05 33 31.6**	**-0.6**
ARG	**Arkhangelos**	**2.04**	**39**		**Pn**	**05 33 30.2**	**+0.8**
ARG	**Arkhangelos**	**2.04**	**39**	P	**Pb**	**05 33 32.5**	**+0.3**
ARG				S	**Sn**	**05 33 55.0**	**+0.1**
	comp=E,4μm,0.9s						
ARG	**Arkhangelos**	**2.04**	**39**	P	**Pn**	**05 33 30.2**	**+0.8**
ARG	**Arkhangelos**	**2.04**	**39**	P	**Pb**	**05 33 30.8**	**-1.4**
ARG				S	**Sb**	**05 33 58.7**	**+1.1**
ARG	**Arkhangelos**	**2.04**	**39**	P	**Pb**	**05 33 31.0**	**-1.2**
ARG				S	**Sg**	**05 33 59.6**	**-1.2**
ARG				AML	AML	05 34 20.9	
	comp=E,8159μm,0.9s						
ARG				AML	AML	05 34 21.4	
	comp=N,6803μm,1.0s						
KOSK	**Kos Island**	**2.14**	**10**	PN	**Pn**	**05 33 31.7**	**+1.0**
CHAN	**Chania**	**2.21**	**294**	P	**Pn**	**05 33 33.6**	**+1.9**
CHAN				S	**Sb**	**05 34 03.6**	**+1.1**
CHAN				AML	AML	05 34 23.7	
	comp=N,5144μm,0.8s						
CHAN				AML	AML	05 34 43.4	
	comp=E,6464μm,1.4s						
IMMV	**Iera Moni Meta**	**2.24**	**292**	PN	**Pb**	**05 33 35.3**	**-0.2**
IMMV	**Iera Moni Meta**	**2.24**	**292**	P	**Pn**	**05 33 33.8**	**+1.7**
IMMV	**Iera Moni Meta**	**2.24**	**292**	P	**Pn**	**05 33 33.8**	**+1.7**
IMMV				S	**Sb**	**05 34 04.4**	**+1.1**
IMMV				AML	AML	05 34 33.1	
	comp=N,4938μm,1.0s						
IMMV				AML	AML	05 34 39.9	
	comp=E,6139μm,0.9s						
KNDR	**Palaiochora Ch**	**2.40**	**285**	PN	**Pb**	**05 33 36.9**	**-1.4**
KNDR	**Palaiochora Ch**	**2.40**	**285**	P	**Pb**	**05 33 37.1**	**-1.2**
KNDR	**Palaiochora Ch**	**2.40**	**285**	P	**Pn**	**05 33 36.3**	**+1.9**
KNDR				AML	AML	05 34 37.7	
	comp=N,2856μm,0.7s						
KNDR				AML	AML	05 34 42.1	
	comp=E,2029μm,0.5s						
RODP	**Rodopos**	**2.44**	**293**	PN	**Pb**	**05 33 39.1**	**+0.1**
BODT	**Bodrum**	**2.50**	**15**	PN	**Pn**	**05 33 36.7**	**+1.0**
BDRM	**Kayabasi**	**2.53**	**17**	P	**Pn**	**05 33 35.3**	**-0.8**
TURN	**Turunc**	**2.55**	**33**	PN	**Pn**	**05 33 38.1**	**+1.8**
TURN	**Turunc**	**2.55**	**33**	P	**Pn**	**05 33 37.2**	**+0.9**
APE	**Apeiranthos**	**2.55**	**342**	⇓P	**Pn**	**05 33 37.2**	**+0.7**
APE	**Apeiranthos**	**2.55**	**342**	PN	**Pn**	**05 33 37.1**	**+0.7**
APE	**Apeiranthos**	**2.55**	**342**	*d iP*	**Pn**	**05 33 36.8**	**+0.4**
APE	**Apeiranthos**	**2.55**	**342**	Pn	**Pn**	**05 33 34.8**	**-1.6**
DALY	**Dalyan (Mula)**	**2.78**	**38**	PN	**Pn**	**05 33 41.7**	**+2.2**
DDIM	**Aydin, Didim**	**2.87**	**12**	P	**Pb**	**05 33 43.9**	**-2.3**
YER	**Yerkesik**	**2.87**	**29**	PN	**Pn**	**05 33 42.8**	**+2.0**
YER	**Yerkesik**	**2.87**	**29**	P	**Pn**	**05 33 42.8**	**+2.0**
FETHY	**Fethiye**	**2.88**	**46**	PN	**Pn**	**05 33 43.1**	**+2.2**
KSL	**Kastellorizon**	**2.92**	**58**	P	**Pn**	**05 33 43.3**	**+1.9**
KSL	**Kastellorizon**	**2.92**	**58**	P	**Pn**	**05 33 43.1**	**+1.7**
KSL				S	**Sb**	**05 34 21.7**	**-1.1**
AKAS	**Kas**	**2.98**	**57**	PN	**Pn**	**05 33 43.2**	**+0.9**
AKAS	**Kas**	**2.98**	**57**	Pn	**Pn**	**05 33 42.9**	**+0.5**
AKAS	**Kas**	**2.98**	**57**	P	**Pn**	**05 33 43.1**	**+0.7**
MULA	**Mugla, Merkez-**	**2.99**	**29**	P	**Pn**	**05 33 42.8**	**+0.3**
GCAM	**G?zelcaml?**	**3.10**	**10**	PN	**Pn**	**05 33 46.1**	**+2.1**
AYDN	**Tasoluk**	**3.21**	**20**	P	**Pn**	**05 33 45.7**	**+0.2**
CAME	**Cameli-Denizli**	**3.22**	**44**	PN	**Pn**	**05 33 47.5**	**+1.8**
KTHA	**Kythira Island**	**3.25**	**301**	PN	**Pn**	**05 33 48.8**	**+2.8**
SLUM	**Salum**	**3.33**	**200**	P	**Pn**	**05 33 48.5**	**+1.4**
	baz=201						
SLUM				S	**Sn**	**05 34 24.4**	**-2.2**
	baz=201						
MATC	**Matruh**	**3.34**	**170**	P	**Pn**	**05 33 48.4**	**+1.2**
	baz=170						
CAEL	**Denizli, Camel**	**3.36**	**42**	P	**Pn**	**05 33 49.9**	**+2.3**
DGB	**zmir**	**3.42**	**5**	P	**Pn**	**05 33 48.0**	**-0.2**
TAVA	**DENIZLI_Tavas**	**3.42**	**34**	P	**Pn**	**05 33 49.5**	**+1.1**
ELL	**Elmali**	**3.46**	**52**	PN	**Pn**	**05 33 50.9**	**+1.8**
ELL	**Elmali**	**3.46**	**52**	Pn	**Pn**	**05 33 51.1**	**+2.0**
ELL	**Elmali**	**3.46**	**52**	P	**Pn**	**05 33 51.1**	**+2.0**
ELL	**Elmali**	**3.46**	**52**	P	**Pn**	**05 33 50.4**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.48**	**18**	PN	**Pn**	**05 33 50.9**	**+1.7**
AKUM	**Antalya-Kumluc**	**3.54**	**61**	P	**Pn**	**05 33 50.9**	**+0.9**
ZEYE	**Izmir, Urla-Ze**	**3.59**	**360**	P	**Pn**	**05 33 50.2**	**-0.4**
APMY	**Acipayam-Deniz**	**3.61**	**38**	PN	**Pn**	**05 33 52.3**	**+1.3**
CHOS	**Chios island**	**3.76**	**354**	PN	**Pn**	**05 33 53.7**	**+0.7**
BLCB	**Balcova**	**3.76**	**6**	PN	**Pn**	**05 33 55.1**	**+2.1**
KORT	**Korkueli**	**3.90**	**52**	PN	**Pn**	**05 33 57.9**	**+2.9**
ANTB	**Antalya**	**4.04**	**55**	PN	**Pn**	**05 34 00.2**	**+3.3**
OSC1	**CSNet OBS 1**	**4.11**	**105**	P	**Pn**	**05 33 58.4**	**+0.7**
MANT	**Manisa**	**4.17**	**23**		**Pn**	**05 33 59.3**	**+0.4**
MANT	**Manisa**	**4.17**	**23**	P	**Pn**	**05 33 60.0**	**+1.0**
BRDR	**BURDUR-Merkez**	**4.18**	**42**	P	**Pn**	**05 34 01.4**	**+2.6**
BUCA	**Burdur, Bucak-**	**4.23**	**50**	P	**Pn**	**05 34 01.3**	**+1.8**
BASM	**Basmaki-Afyon**	**4.34**	**40**	PN	**Pn**	**05 34 02.7**	**+1.7**
PASA	**Karahalli, USA**	**4.40**	**32**	P	**Pn**	**05 34 01.9**	**0.0**
DKL	**Dikili**	**4.43**	**4**	PN	**Pn**	**05 34 04.2**	**+2.0**
ITM	**Ithomi**	**4.51**	**305**	Pn	**Pn**	**05 34 03.1**	**-0.2**
ISP	**Isparta**	**4.53**	**44**	PN	**Pn**	**05 34 06.7**	**+3.0**
ISP	**Isparta**	**4.53**	**44**		**Pn**	**05 34 05.1**	**+1.4**
ISP	**Isparta**	**4.53**	**44**	P	**Pn**	**05 34 05.1**	**+1.4**
ISP	**Isparta**	**4.53**	**44**	Pn	**Pn**	**05 34 01.5**	**-2.2**
USAK	**Uak-Merkez**	**4.53**	**26**	P	**Pn**	**05 34 02.6**	**-1.1**
SIGR	**SIGRI**	**4.59**	**354**	PN	**Pn**	**05 34 06.2**	**+1.8**
KZIL	**AFYON_Kizioren**	**4.64**	**38**	P	**Pn**	**05 34 03.7**	**-1.5**
KEPZ	**Antalya-Kepez**	**4.71**	**60**	P	**Pn**	**05 34 06.5**	**+0.4**
KEPZ				S	**Sn**	**05 34 59.5**	**-1.2**
AKMS	**Akamas**	**4.79**	**84**	P	**Pn**	**05 34 07.6**	**+0.3**
AKMS				AML	AML	05 35 07.0	
	comp=E,2.3nm,0.6s						
AKMS				AML	AML	05 35 07.6	
	comp=E,2.7nm,0.5s						
STEP	**BALIKESIR_Sava**	**4.82**	**11**	P	**Pn**	**05 34 07.8**	**+0.2**
KOCA	**Canakkale, Ayv**	**4.86**	**356**	P	**Pn**	**05 34 09.7**	**+1.5**
BUHA	**Balikesir, Bur**	**4.87**	**5**	P	**Pn**	**05 34 08.2**	**-0.1**
GEDZ	**Gediz**	**4.97**	**27**	PN	**Pn**	**05 34 12.5**	**+2.9**
NATA	**Nata**	**4.98**	**87**	P	**Pn**	**05 34 10.7**	**+0.9**
NATA				AML	AML	05 35 21.0	
	comp=E,4.5nm,1.0s						
NATA				AML	AML	05 35 27.9	
	comp=E,8.1nm,0.8s						
GAZI	**Gazipasa**	**4.99**	**70**	P	**Pn**	**05 34 08.4**	**-1.5**
GAZI				S	**Sn**	**05 35 02.4**	**-5.2**
ALFC	**Alefka**	**5.02**	**82**	P	**Pn**	**05 34 11.6**	**+1.2**
ALFC				AML	AML	05 35 11.0	
	comp=E,3.5nm,0.8s						
ALFC				AML	AML	05 35 11.5	
	comp=E,4.2nm,0.5s						
SHUT	**Suhut-Afyon**	**5.07**	**39**	PN	**Pn**	**05 34 14.4**	**+3.3**
SEDI	**Konya, Seydise**	**5.08**	**55**	P	**Pn**	**05 34 14.2**	**+2.9**
SEDI				S	**Sn**	**05 35 12.5**	**+2.5**
SEDI				*i* AML	AML	05 35 18.0	
	comp=E,179nm,0.9s						
SEDI				*i* AML	AML	05 35 39.0	
	comp=E,205nm,1.8s						
BAYC	**CANAKKALE_Bayr**	**5.09**	**0**	P	**Pn**	**05 34 11.9**	**+0.6**
BALY	**Balya**	**5.16**	**9**	P	**Pn**	**05 34 09.7**	**-2.6**
EZN	**Ezine**	**5.18**	**358**	PN	**Pn**	**05 34 13.9**	**+1.5**
EZN	**Ezine**	**5.18**	**358**	P	**Pn**	**05 34 15.2**	**+2.8**
DURS	**Dursunbey**	**5.19**	**17**	P	**Pn**	**05 34 11.7**	**-1.0**
BOZC	**Bozcaada**	**5.20**	**356**	PN	**Pn**	**05 34 15.2**	**+2.4**
SZAC	**Souni**	**5.24**	**87**	P	**Pn**	**05 34 14.5**	**+1.1**
SZAC				AML	AML	05 35 27.4	
	comp=E,2.4nm,0.7s						
SZAC				AML	AML	05 35 27.9	
	comp=E,2.3nm,0.6s						
TVSB	**Tavsanli**	**5.34**	**25**	PN	**Pn**	**05 34 17.5**	**+2.7**
DOGA	**KONYA_Doganhis**	**5.40**	**49**	P	**Pn**	**05 34 19.0**	**+3.3**
DOGA				S	**Sn**	**05 35 17.6**	**-0.4**
DOGA				*i* AML	AML	05 35 28.0	
	comp=E,131nm,0.7s						
SWA2		**5.46**	**190**	P	**Pn**	**05 34 17.6**	**+1.2**
	baz=191						
ASGA	**Asgata**	**5.54**	**87**	P	**Pn**	**05 34 18.4**	**+0.9**
ASGA				AML	AML	05 35 27.3	
	comp=E,2.2nm,0.5s						
ASGA				AML	AML	05 35 29.2	
	comp=E,3.0nm,0.6s						
ANDZ	**Kutahya, Merke**	**5.56**	**28**	P	**Pn**	**05 34 19.0**	**+1.2**
GADA	**Gvkgeada**	**5.56**	**355**	PN	**Pn**	**05 34 19.7**	**+2.0**
ERMK	**Ermenek**	**5.57**	**67**	P	**Pn**	**05 34 20.8**	**+2.7**
CSS	**Mathiatis**	**5.61**	**85**	Pn	**Pn**	**05 34 20.2**	**+1.7**
CSS	**Mathiatis**	**5.61**	**85**	Pn	**Pn**	**05 34 17.1**	**-1.3**
KMER	**Konya-Meram**	**5.66**	**55**	P	**Pn**	**05 34 22.0**	**+2.7**
GELI	**Tayfur-Gelibol**	**5.75**	**360**	PN	**Pn**	**05 34 23.1**	**+2.8**
KKBE	**Karaman, Kazim**	**5.81**	**62**	P	**Pn**	**05 34 23.8**	**+2.6**
KKBE				S	**Sn**	**05 35 25.4**	**-2.5**
KKBE				*i* AML	AML	05 35 33.0	
	comp=E,164nm,1.4s						
KKBE				*i* AML	AML	05 35 34.0	
	comp=E,118nm,1.1s						
MVOU	**Mavrovouni**	**5.86**	**84**	P	**Pn**	**05 34 23.1**	**+1.3**
MVOU				AML	AML	05 35 35.3	
	comp=E,1.4nm,0.9s						
MVOU				AML	AML	05 35 48.3	
	comp=E,1.2nm,0.7s						
ULDT	**Uludag**	**5.87**	**20**	P	**Pn**	**05 34 22.1**	**-0.1**
KDHN	**Kadinhani**	**5.94**	**48**	P	**Pn**	**05 34 23.4**	**+0.4**
GULN	**MERSIN_Gulnar**	**5.94**	**73**	P	**Pn**	**05 34 22.4**	**-0.5**
GULN				S	**Sn**	**05 35 25.0**	**-5.8**
HMYD	**Mayadein**	**6.04**	**142**	P	**Pn**	**05 34 26.1**	**+1.7**
	baz=142						
HNAT	**Natroun**	**6.08**	**144**	P	**Pn**	**05 34 26.5**	**+1.5**
	baz=144						
BORA	**Eskisehir**	**6.09**	**30**	Pn	**Pn**	**05 34 25.0**	**-0.2**
PARAL	**Paralimni**	**6.19**	**85**	P	**Pn**	**05 34 28.4**	**+2.0**
ALN	**Alexandroupoli**	**6.25**	**357**	Pn	**Pn**	**05 34 29.0**	**+1.8**
ALN	**Alexandroupoli**	**6.25**	**357**	P	**Pn**	**05 34 29.0**	**+1.8**
ALIN	**Konya, Altinte**	**6.29**	**53**	P	**Pn**	**05 34 29.1**	**+1.2**
LIT	**Litokhoron**	**6.32**	**331**		**Pn**	**05 34 29.0**	**+0.8**
LIT	**Litokhoron**	**6.32**	**331**	P	**Pn**	**05 34 29.0**	**+0.8**
RYAN	**Fayoum**	**6.40**	**149**	P	**Pn**	**05 34 30.7**	**+1.4**
	baz=149						
RYAN				S	**Sn**	**05 35 39.3**	**-3.0**
	baz=149						
KOT	**Kottamia**	**6.50**	**135**	P	**Pn**	**05 34 30.4**	**-0.3**
	baz=135						
RDO	**Rodhopi**	**6.54**	**353**	Pn	**Pn**	**05 34 32.2**	**+1.1**
HSAF	**As Saff**	**6.58**	**138**	P	**Pn**	**05 34 33.1**	**+1.3**
	baz=138						
THE	**Thessaloniki**	**6.61**	**336**	P	**Pn**	**05 34 36.5**	**+4.4**
THE				pmax	pmax		
	comp=Z,38nm,0.8s						
SOH	**Sokhos**	**6.66**	**339**	P	**Pn**	**05 34 36.2**	**+3.3**
SOH				pmax	pmax		
	comp=Z,22nm,0.9s						
GLL	**Jalalah**	**6.70**	**138**	P	**Pn**	**05 34 34.0**	**+0.6**
	baz=138						
SRS	**Serrai**	**6.87**	**341**	P	**Pn**	**05 34 38.5**	**+2.8**
SRS				pmax	pmax		
	comp=Z,45nm,1.6s						
MDUB	**Mudurnu**	**6.90**	**31**		**Pn**	**05 34 36.9**	**+0.7**
KDZ	**Kurdzhali**	**7.05**	**353**	*eP*	**Pn**	**05 34 40.5**	**+2.3**
GRG	**Griva**	**7.10**	**334**	P	**Pn**	**05 34 43.5**	**+4.6**
GRG				pmax	pmax		
	comp=Z,70nm,1.1s						
KNT	**Kendrikon**	**7.11**	**337**	P	**Pn**	**05 34 43.7**	**+4.7**
KNT				pmax	pmax		
	comp=Z,29nm,1.0s						
SUZ	**Suez**	**7.17**	**130**	P	**Pn**	**05 34 41.6**	**+1.6**
	baz=130						
RZN	**Rozhen**	**7.18**	**349**	*eP*	**Pn**	**05 34 41.6**	**+1.5**
BR231	**Keskin MP Arra**	**7.20**	**42**		**Pn**	**05 34 42.4**	**+2.0**
ANTO	**Ankara**	**7.22**	**42**	⇓P	**Pn**	**05 34 43.4**	**+2.7**
ANTO	**Ankara**	**7.22**	**42**	Pn	**Pn**	**05 34 41.2**	**+0.6**
ANTO	**Ankara**	**7.22**	**42**	⇓P	**Pn**	**05 34 43.4**	**+2.7**
NBNS	**Bani Suef**	**7.25**	**145**	P	**Pn**	**05 34 42.4**	**+1.5**
	baz=145						
MMB	**Musomiste**	**7.28**	**343**	*eP*	**Pn**	**05 34 41.5**	**+0.2**
OFRI	**`Ofer**	**7.34**	**104**	Pn	**Pn**	**05 34 42.4**	**+0.2**
VAY	**Valandovo**	**7.36**	**336**	*i P*	Pn	05 34 47.6	+5.1
HNTI	**Hanita**	**7.36**	**100**	Pn	**Pn**	**05 34 41.8**	**-0.7**
HNTI				Sn	**Sn**	**05 36 06.2**	**+0.1**
SLTI	**Sal'it**	**7.51**	**106**	Pn	**Pn**	**05 34 44.3**	**-0.2**
MMA0	**Mount Meron ar**	**7.56**	**100**	Pn	**Pn**	**05 34 45.8**	**+0.4**
MMAI	**Mount Meron Ar**	**7.56**	**100**	Pn	**Pn**	**05 34 46.0**	**+0.6**
	comp=Z,6.0nm,0.3s,baz=289,slow=10.0,SNR=25						
MMAI				Sn	**Sn**	**05 36 12.8**	**+1.7**
	comp=Z,7.6nm,0.3s,baz=298,slow=34,SNR=3.4						
	comp=Z,5.2nm,0.3s						
PLD	**Plovdiv**	**7.59**	**350**	P	**Pn**	**05 34 50.2**	**+4.7**
PLD				pmax	pmax		
	comp=Z,142nm,1.5s						
BR131	**Keskin Array S**	**7.61**	**46**		**Pn**	**05 34 47.3**	**+1.2**
BR131	**Keskin Array S**	**7.61**	**46**	P	**Pn**	**05 34 47.3**	**+1.2**
BRTR	**Keskin Array B**	**7.61**	**46**	Pn	**Pn**	**05 34 47.5**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=226,slow=14,SNR=8.7						
BRTR				Sn	**Sn**	**05 36 13.2**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=211,slow=25,SNR=5.1						
BRTR				LR	LR	05 38 38.1	
	comp=Z,3μm,19.3s,baz=242,slow=45						
	comp=Z,2.1nm,0.6s						
BRTR	**Keskin Array B**	**7.61**	**46**		**Pn**	**05 34 47.6**	**+1.5**
BRTR	**Keskin Array B**	**7.61**	**46**	P	**Pn**	**05 34 47.6**	**+1.5**
HFRF	**Wahat Farafira**	**7.63**	**168**	P	**Pn**	**05 34 46.4**	**+0.3**
	baz=168						
HFRF				S	**Sn**	**05 36 06.1**	**-6.5**
	baz=168						
SALP	**Salfit**	**7.69**	**107**	Pn	**Pn**	**05 34 46.8**	**-0.3**
AMAZ	**Amatzia**	**7.70**	**111**	Pn	**Pn**	**05 34 46.2**	**-0.9**
KKB	**Krupnik**	**7.70**	**340**	*eP*	**Pn**	**05 34 49.1**	**+1.9**
GEM	**Giv'at Ha'Em**	**7.73**	**98**	Pn	**Pn**	**05 34 47.7**	**+0.2**
GEM				Sn	**Sn**	**05 36 14.7**	**-0.4**
MMLI	**Mount Malkishu**	**7.75**	**104**	Pn	**Pn**	**05 34 47.4**	**-0.4**
NATI	**Neve Ativ**	**7.78**	**98**	Pn	**Pn**	**05 34 47.2**	**-1.0**
HWQ	**Hawqa**	**7.79**	**90**	*eP*	**Pn**	**05 34 50.2**	**+1.7**
JMB	**Yambol**	**7.81**	**0**	*eP*	**Pn**	**05 34 44.6**	**-4.0**
RCY	**Rachaya**	**7.81**	**96**	*eP*	**Pn**	**05 34 48.8**	**0.0**
STIP	**Stip**	**7.82**	**335**	*i P*	Pn	05 34 53.7	+4.9
HMDT	**Nahal Hemdat**	**7.89**	**105**	Pn	**Pn**	**05 34 50.0**	**+0.2**
TAMRE	**El Minia**	**7.89**	**150**	P	**Pn**	**05 34 50.6**	**+0.8**
	baz=150						
YTIR	**Yattir**	**7.92**	**112**	Pn	**Pn**	**05 34 50.4**	**+0.1**
UJAP	**Al Uja**	**7.95**	**107**	Pn	**Pn**	**05 34 50.8**	**+0.3**
DSI	**Dead Sea**	**8.04**	**110**	Pn	**Pn**	**05 34 52.2**	**+0.4**
PGB	**Panagyurishte**	**8.11**	**348**	*eP*	**Pn**	**05 34 55.0**	**+2.3**
DAMI2	**DAM2**	**8.26**	**112**	Pn	**Pn**	**05 34 55.1**	**+0.4**
DAMI2				Sn	**Sn**	**05 36 28.5**	**+0.5**
KRMI	**Paran Flat**	**8.27**	**121**	Pn	**Pn**	**05 34 55.4**	**+0.4**
GHAJ	**Ghor Haditha**	**8.29**	**111**		**Pn**	**05 34 55.7**	**+0.4**
GRB	**Gharib**	**8.30**	**138**	P	**Pn**	**05 34 55.4**	**-0.1**
	baz=138						
SKO	**Skopje**	**8.34**	**333**	*i P*	**Pn**	**05 35 00.4**	**+4.6**

KIS pmax pmax
comp=Z,70nm,2.1s
KIS MLR MLR
comp=Z,400nm,13.0s
KIS MLR MLR
comp=N,500nm,12.5s
DRGR 12.47 348 ⇑P P 05 35 59.6 -4.8
DRGR 12.47 348 ⇑P P 05 35 59.6 -4.8
MABD Mabed 12.69 155 P **Pn 05 35 56.4 +0.9**
baz=155
BUR01 Bucovina Ar. S 13.00 356 ⇓P **Pn 05 36 04.2 +4.5**
BURAR Bucovina Array 13.00 356 **Pn 05 36 01.4 +1.7**
BURAR Bucovina Array 13.00 356 P **Pn 05 36 01.4 +1.7**
MORH Mrgy, Hungar 13.02 335 P P 05 36 05.7 -4.7
BUR08 Bucovina Ar. S 13.03 356 **Pn 05 36 01.7 +1.6**
ANN Anapa 13.15 36 *e*P **Pn 05 35 57.9 -3.8**
ANN pmax pmax
comp=Z,19nm,0.6s
SOC Sochi 13.57 45 *e*P **Pn 05 36 06.8 -0.7**
SOC *e* 05 38 39.8
SOC MLR MLR
comp=Z,552nm,16.0s
TRPA Tarpa 13.80 349 P **P 05 36 15.4 -3.6**
PSZ Piszkesteto 14.16 341 ⇓P **Pn 05 36 18.7 +3.1**
PSZ Piszkesteto 14.16 341 ⇓P **Pn 05 36 18.7 +3.1**
PSZ Piszkesteto 14.16 341 P **Pn 05 36 18.7 +3.1**
UZH Uzhgorod 14.33 349 *e*P **P 05 36 22.5 -2.4**
UZH *e*S **Sn 05 39 04.7 +8.2**
UZH MLR MLR
comp=N,200nm,13.0s
UZH MLR MLR
comp=E,70nm,13.0s
UZH MLR MLR
comp=Z,110nm,13.0s
KOLS Kolonicke sedl 14.62 349 *e*P **P 05 36 27.5 -0.7**
CRVS Cervenica-Dubn 14.73 347 *e*P **P 05 36 28.5 -1.0**
SOKA Soboth 14.83 328 *e*Pn **Pn 05 36 26.4 +1.7**
comp=Z,1.9nm,0.6s
OBKA Obir 14.92 326 *e*Pn **Pn 05 36 27.7 +1.8**
comp=Z,1.6nm,0.5s
VYHS Vyhne 14.97 340 *e*P **P 05 36 33.9 +1.8**
ARSA Arzberg 15.07 330 *e*Pn **Pn 05 36 28.5 +0.7**
comp=Z,1.4nm,0.5s
RONA Rosalia, Austr 15.13 333 *i* Pn **P 05 36 32.6 -1.3**
comp=Z,1.7nm,0.4s
SHA1 Shidzhatmaz 15.44 49⇑*e*P **Pn 05 36 31.0 -2.0**
GNI Garni 15.48 64 Pn **P 05 36 36.8 -1.1**
comp=Z,9.7nm,0.6s,baz=198,slow=7.8,SNR=3.1
GNI LR LR 05 43 58.1
comp=Z,987nm,18.3s,baz=276,slow=43
GNI Garni 15.48 64⇑*e*P **Pn 05 36 32.9 -0.6**
CONA Conrad Observa 15.48 332 *e*Pn **Pn 05 36 33.3 -0.1**
comp=Z,1.8nm,0.6s
KIV Kislovodsk 15.57 49 ⇓P **P 05 36 37.8 -1.0**
KIV Kislovodsk 15.57 49 *e*P **P 05 36 37.7 -1.1**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,166nm,13.0s
KVAR Kislovodsk Arr 15.57 49 Pn **P 05 36 36.9 -2.0**
baz=262,slow=19
KVAR LR LR 05 44 26.0
comp=Z,240nm,19.7s,baz=270,slow=44
comp=Z,5.7nm,0.7s
KBZ Khabaz 15.58 50 Pn **P 05 36 38.1 -0.7**
comp=Z,0.1nm,0.3s,baz=278,slow=6.9,SNR=10
KBZ LR LR 05 44 20.9
comp=Z,159nm,18.5s,baz=264,slow=44
comp=Z,28nm,1.0s
KBZ Khabaz 15.58 50⇓*e*P **Pn 05 36 36.6 +2.0**
ZEI Tsey 15.80 54 *e*P **Pn 05 36 38.5 +0.9**
ZEI pmax pmax
comp=Z,42nm,1.1s
KBA Koelnbreinsper 15.90 325 *i* Pn **Pn 05 36 40.8 +1.9**
comp=Z,3.1nm,0.6s
MAUC Maruska 16.05 339 *e*P **Pn 05 36 41.7 +1.0**
ABTA Abfaltersbach 16.07 323 *i* Pn **P 05 36 43.6 -0.7**
comp=Z,2.9nm,0.5s
AKASG Malin Array Be 16.17 6 Pn **Pn 05 36 43.5 +1.4**
comp=Z,3.0nm,0.3s,baz=193,slow=11,SNR=22
AKASG LR LR 05 43 32.3
comp=Z,593nm,19.4s,baz=188,slow=40
AKASG Malin Array Be 16.17 6 **Pn 05 36 42.2 +0.1**
AKASG Malin Array Be 16.17 6 P **Pn 05 36 42.2 +0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKBB Malin Array Si 16.17 6*de*P **P 05 36 44.2 -1.1**
KRUC Moravsky 16.24 336 *e*PN **Pn 05 36 43.2 +0.1**
OKC Ostrava-Krasne 16.38 340 AMS AMS 05 44 10.0
comp=Z,700nm,11.3s
VRAC Vranov 16.39 336 Pn **Pn 05 36 45.6 +0.6**
comp=Z,0.4nm,0.3s,baz=124,slow=11,SNR=6.7
VRAC LR LR 05 43 46.1
comp=Z,251nm,21.2s,baz=151,slow=40
comp=Z,3.5nm,0.6s
VRAC Vranov 16.39 336 *e*PN **Pn 05 36 45.2 +0.3**
SALO Salr 16.39 317 **Pn 05 36 45.1 0.0**
SALO IAmb IAmb 05 36 57.2
comp=Z,31nm,0.9s
MORC Moravsky Berou 16.50 339 P **P 05 36 52.0 +2.9**
MORC pmax pmax
comp=Z,11nm,1.1s
MORC Moravsky Berou 16.50 339 *e*PN **P 05 36 49.5 +0.4**
TREC Trest 16.75 334 *e*P **Pn 05 36 50.3 +0.7**
TREC Trest 16.75 334 *e*P **Pn 05 36 50.3 +0.7**
CKRC Cesky Krumlov 16.81 331 AMS AMS 05 45 00.0
comp=Z,600nm,11.2s
KRLC Kraliky 17.00 338 P **Pn 05 36 52.3 -0.4**
KRLC pmax pmax
comp=Z,14nm,1.4s
GEC2 GERESS Array S 17.08 330 **Pn 05 36 53.4 -0.4**
GERES GERESS Array B 17.08 330 Pn **Pn 05 36 52.9 -0.9**
comp=Z,0.1nm,0.3s,baz=139,slow=12,SNR=10
comp=Z,1.6nm,0.7s
GERES GERESS Array B 17.08 330 **Pn 05 36 53.1 -0.7**
GERES GERESS Array B 17.08 330 P **Pn 05 36 53.1 -0.7**
FUORN Ofenpass-Fuorn 17.15 319 P **P 05 36 56.1 -0.4**
FETA Feichten 17.16 321 *e*Pn **P 05 36 56.6 +0.1**
comp=Z,5.6nm,0.9s
MOTA Moosalm 17.18 322 *e*Pn **P 05 36 57.5 +0.8**
comp=Z,4.7nm,0.6s
MOTA *e*Sn **Sn 05 40 08.3 +2.2**
comp=Z,8.1nm,1.2s
KHC Kasperske Hory 17.35 330 P **Pn 05 36 57.9 +0.8**
KHC Kasperske Hory 17.35 330 *e*P **Pn 05 36 56.2 -1.0**
KHC MLR MLR
comp=Z,600nm,12.8s
KHC Kasperske Hory 17.35 330 *e*P **Pn 05 36 56.2 -1.0**
KHC *ex* x 05 37 05.0
KHC AMS AMS 05 44 40.0
comp=Z,600nm,12.8s
DPC Dobruska-Polom 17.38 338 *e*P **Pn 05 36 56.6 -0.9**
DPC MLR MLR
comp=Z,500nm,13.2s
DPC Dobruska-Polom 17.38 338 *e*P **Pn 05 36 56.6 -0.9**
DPC AMS AMS 05 44 50.0
comp=Z,500nm,13.2s
DAVOX Davos/Dischmat 17.45 319 P **P 05 37 00.0 +0.2**
comp=Z,2.6nm,0.6s,baz=164,slow=17,SNR=5.2
DAVOX LR LR 05 45 11.7
comp=Z,552nm,18.6s,baz=96,slow=43
GOPC GO Pecny, Ondr 17.52 334 *e*P **Pn 05 36 58.9 -0.4**
GOPC MLR MLR
comp=Z,500nm,9.6s
GOPC GO Pecny, Ondr 17.52 334 *e*P **Pn 05 36 58.9 -0.4**
GOPC AMS AMS 05 45 10.0
comp=Z,500nm,9.6s
OSTC Ostas 17.59 338 AMS AMS 05 45 00.0
comp=Z,400nm,13.3s
UPC Upice 17.61 337 AMS AMS 05 44 50.0
comp=Z,500nm,12.2s
WET Wettzell 17.65 329 P **Pn 05 37 01.0 +0.1**
WET pmax pmax
comp=Z,8.0nm,1.6s
CHVC Chvalec 17.67 338 AMS AMS 05 45 00.0
comp=Z,400nm,13.4s
PRU Pruhonice 17.67 334 *e*P **Pn 05 37 00.7 -0.4**
PRU MLR MLR
comp=Z,500nm,13.6s
PRU Pruhonice 17.67 334 *e*P **Pn 05 37 00.7 -0.4**
PRU AMS AMS 05 45 40.0
comp=Z,500nm,13.6s
PVCC Panska Ves 18.11 335 P **P 05 37 06.9 +0.1**
PVCC pmax pmax
comp=Z,18nm,1.4s
PVCC Panska Ves 18.11 335 AMS AMS 05 46 10.0
comp=Z,300nm,11.3s
MBDF Montbardon 18.19 310 *e*P **Pn 05 37 07.8 +0.1**
MBDF pmax pmax
comp=Z,9.0nm,0.8s
MAK Makhachkala 18.31 57 *e*P **Pn 05 37 04.7 -4.2**
MAK *e*S **Sn 05 40 30.2 -3.1**
MAK pmax pmax
comp=Z,596nm,2.5s
MAK MLR MLR
comp=Z,114nm,9.0s
LPL La Plagne 18.59 312 *e*P **Pn 05 37 14.6 +2.0**
LPL pmax pmax
comp=Z,16nm,1.1s
SENIN Lac Senin/Sane 18.67 315 P **P 05 37 13.2 -0.1**
SENIN IAmb IAmb 05 37 25.8
comp=Z,20nm,0.7s
SLE Schleitheim 18.80 320 P **P 05 37 14.4 -0.1**
SLE pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 18.93 25 *e*P **Pn 05 37 16.4 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.4s
CLL Collm 19.32 334 *i* P **Pn 05 37 21.3 +0.2**
CLL *e*S **Sn 05 40 56.0 -1.6**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.32 334 *i* P **Pn 05 37 21.3 +0.2**
comp=Z,5.0nm,0.8s
CLL *i* x x 05 37 29.4
CLL *e*PP **PnPn 05 37 37.0 +2.9**
CLL *i* PPP PPP 05 37 42.7
CLL *e*S **Sn 05 40 56.0 -1.6**
CLL *ex* x 05 41 36.0
VORR Voronezh 19.32 24 *e*P **P 05 37 16.2 -3.9**
VORR pmax pmax
comp=Z,90nm,0.4s
CABF La Chapelle 19.52 314 *e*P **P 05 37 21.0 -1.4**
CABF pmax pmax
comp=Z,18nm,0.9s
VIVF Saint-Julien-l 19.60 308 *e*P **Pn 05 37 24.9 +0.3**
VIVF pmax pmax
comp=Z,25nm,1.5s
HINF Hinteralfeld 19.73 318 *e*P **P 05 37 22.9 -1.7**
HINF pmax pmax
comp=Z,2.0nm,0.5s
VRH Novokhopyorsk 19.88 29 *e*P **P 05 37 25.5 -0.7**
VRH pmax pmax
comp=Z,110nm,1.4s
MNK Minsk 19.88 2 *i* P **P 05 37 23.5 -2.7**
MNK *i* S **S 05 41 03.9 -5.8**
MNK pmax pmax
comp=E,4.0nm,1.4s
MNK pmax pmax
comp=N,27nm,0.8s
MNK pmax pmax
comp=Z,36nm,1.2s
MNK MLR MLR
comp=Z,336nm,15.0s
MNK MLR MLR
comp=N,762nm,21.0s
MNK MLR MLR
comp=E,27nm,17.0s
MNK Minsk 19.88 2 *i* P **P 05 37 23.5 -2.7**
comp=E,4.0nm,1.4s
MNK *i* P **P 05 37 23.5 -2.7**
comp=N,27nm,0.8s
MNK *i* P **P 05 37 23.5 -2.7**
comp=Z,36nm,1.2s,baz=183
MNK *i* PP **PnPn 05 37 39.3 -2.4**
MNK *i* S **S 05 41 03.9 -5.8**
MNK *i* SS **SnSn 05 41 30.1 +4.6**
MNK *i* LQ LQ 05 43 25.5
MNK *i* LR LR 05 44 29.9
MNK *i* LRM MLR 05 45 37.5
comp=Z,336nm,15.5s
MNK *i* LRM MLR 05 45 44.6
comp=N,762nm,20.6s
MNK *i* LRM MLR 05 45 52.4
comp=E,27nm,17.4s
RAYN Ar Rayn 19.91 119 P **Pn 05 37 29.4 +0.9**
RAYN IAmb IAmb 05 37 33.6
comp=Z,38nm,1.3s
RAYN Ar Rayn 19.91 119 P **Pn 05 37 29.4 +0.9**
RAYN pmax pmax
comp=Z,38nm,1.3s
LPSR Galich'ya Gora 20.02 23 *e*P Pn 05 37 29.3 -0.1
LPSR pmax pmax
comp=Z,30nm,1.4s
HAU Haudompre 20.11 318 *e*P **P 05 37 28.5 -0.3**
HAU pmax pmax
comp=Z,8.0nm,0.8s
NACGM Naroch 20.26 0⇓*e*P **P 05 37 29.6 -0.7**
baz=182
TNS Taunus Mts 20.42 325 P **P 05 37 32.8 +0.6**
TNS pmax pmax
comp=Z,11nm,1.3s
KLNR Kaliningrad 20.44 349⇓*e*P Pn 05 37 34.2 -0.2
KLNR pmax pmax
comp=Z,25nm,0.3s
IIGN Ignalina 20.71 360 *e*P Pn 05 37 37.1 -0.4
SMF Signal de Mont 20.89 312 *e*P **P 05 37 37.2 -0.1**
SMF pmax pmax
comp=Z,7.0nm,0.6s
ISAL Salakas 20.93 359 *e*P Pn 05 37 39.2 -0.9
PABE Paberze 20.94 356 P **P 05 37 38.3 +0.7**
PABE IAmb IAmb 05 37 41.3
comp=Z,26nm,0.7s
PABE Paberze 20.94 356 *e*P Pn 05 37 39.4 -0.8
LOR Lormes 21.17 313 P **P 05 37 44.3 +4.0**
LOR pmax pmax
comp=Z,18nm,0.8s
WLF Walferdange 21.19 321 *d*P **P 05 37 39.6 -0.8**
WLF *d*PP **PnPn 05 37 58.7 -1.0**
AVF Avril sur Loir 21.26 312 *e*P **P 05 37 40.9 -0.3**
AVF pmax pmax
comp=Z,12nm,1.0s
SSF Saint Saulge 21.29 313 *e*P **P 05 37 41.7 +0.2**
SSF pmax pmax
comp=Z,14nm,0.8s
OBN Obninsk 21.63 16 P **P 05 37 46.1 +1.1**
comp=Z,3.9nm,0.4s,baz=195,slow=14,SNR=5.3
OBN LR LR 05 47 00.0
comp=Z,129nm,18.6s,baz=190,slow=39
OBN Obninsk 21.63 16⇓*e*P **P 05 37 47.4 +2.4**
OBN *SP **pwP 05 37 53.0 +1.4**
OBN PPP PPP 05 38 16.0
OBN *i* S **S 05 41 43.6 -0.7**
OBN 05 41 48.0
OBN pmax pmax
comp=Z,50nm,1.7s
OBN MLR MLR
comp=Z,448nm,16.0s
BHOU Houvegnez 21.69 323 *d*P **P 05 37 46.9 +1.1**
BTNL Terneli 21.78 323 *d*P **P 05 37 45.6 -1.2**
TAM Tamanrasset 21.83 243 P **P 05 37 48.9 +1.2**
TAM Tamanrasset 21.83 243 P **P 05 37 48.9 +1.2**
TAM pmax pmax
comp=Z,11nm,1.2s
MEM Membach 21.85 323 P **P 05 37 46.8 -0.7**
MEM pmax pmax
comp=Z,33nm,0.9s
MEM Membach 21.85 323 *d*P **P 05 37 46.1 -1.4**
RCHB Rochefort 21.97 321 *d*P **P 05 37 49.5 +0.7**
BSTI Sart Tilman 22.05 323 *d*P **P 05 37 49.4 -0.3**
BCLA Clavier 22.09 322 *d*P **P 05 37 48.8 -1.3**
GIVF Givet 22.14 321 *e*P **P 05 37 48.3 -2.4**
GIVF pmax pmax
comp=Z,4.0nm,0.5s
BGES Gesves 22.18 322 *d*P **P 05 37 51.0 -0.1**
DOU Dourbes 22.26 321 *d*P **P 05 37 50.2 -1.7**
BMRD Maredsous 22.29 321 *d*P **P 05 37 51.6 -0.7**
BAIF Baives 22.44 320 *e*P **P 05 37 52.4 -1.4**
BAIF pmax pmax
comp=Z,21nm,0.8s
MOS Moscow 22.44 17 *e*P **P 05 37 55.0 +1.2**
MOS *e* 05 38 21.2
MOS *e*S **S 05 42 03.2 +3.3**
MOS pmax pmax
comp=Z,100nm,1.1s
MOS pmax pmax
comp=Z,51nm,0.8s
MOS MLR MLR
comp=Z,500nm,18.0s
ETSF Etsaut 22.60 299 *e*P **P 05 37 56.4 +0.7**
ETSF pmax pmax
comp=Z,3.0nm,0.6s
SNF Seneffe 22.66 321 *d*P **P 05 37 55.0 -1.2**
SJPF Ste Jean 23.12 300 *e*P **P 05 38 01.2 +0.1**
SJPF pmax pmax
comp=Z,16nm,0.9s
BELG Belogornoye 23.29 34 P **P 05 38 01.4 -1.1**
comp=Z,25nm,0.4s,baz=54,slow=3.0,SNR=14
BELG LR LR 05 49 27.2
comp=Z,186nm,18.7s,baz=155,slow=43
comp=Z,25nm,0.4s
VSU Vasula 23.83 0⇑*e*P **P 05 38 07.5 -0.4**
VSU pmax pmax
comp=Z,38nm,1.1s
VSU Vasula 23.83 0 *e*P **P 05 38 09.1 +1.2**
ESDC Sonseca Array 24.74 291 P **P 05 38 15.9 -0.7**
comp=Z,0.9nm,0.6s,baz=80,slow=8.6,SNR=15
ESDC LR LR 05 48 29.4
comp=Z,110nm,20.0s,baz=86,slow=38
comp=Z,0.9nm,0.6s
GEYT Alibeck 25.61 73 P **P 05 38 25.9 +1.4**
comp=Z,12nm,0.8s,baz=282,slow=7.3,SNR=15
comp=Z,12nm,0.8s
GEYT Alibeck 25.61 73 P **P 05 38 26.1 +1.7**
GYA0B ALIBECK ARRAY 25.61 73 P **P 05 38 25.7 +1.2**
AAL Aland 25.90 353 *e*P **P 05 38 24.7 -2.1**
MDT Midelt 25.91 275 P **P 05 38 26.2 -1.1**
comp=Z,1.4nm,0.8s,baz=81,slow=13,SNR=2.5
MDT LR LR 05 51 44.0
comp=Z,162nm,18.0s,baz=85,slow=44
comp=Z,1.4nm,0.8s
RAF Rauma 26.57 355 *e*P **P 05 38 30.2 -2.6**
FINES FINESS Array B 26.82 360 P **P 05 38 32.5 -2.5**
comp=Z,2.8nm,0.6s,baz=160,slow=10,SNR=13
FINES LR LR 05 50 58.1
comp=Z,98nm,18.6s,baz=178,slow=41
comp=Z,2.8nm,0.6s
HFS Hagfors 26.84 346 P **P 05 38 33.2 -2.1**
comp=Z,3.4nm,0.6s,baz=133,slow=11,SNR=10.0
HFS LR LR 05 50 56.3
comp=Z,432nm,18.9s,baz=142,slow=40
comp=Z,3.4nm,0.6s
KLMR Klimovskoe 27.54 14 *e*P **P 05 38 38.2 -3.3**
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 27.54 14 *e*P **P 05 38 38.2 -3.3**
KLMR AMP 05 38 44.2
comp=Z,22nm,1.2s
AKTO Aktyubinsk 27.79 46 P **P 05 38 43.9 0.0**
comp=Z,5.8nm,0.4s,baz=245,slow=10,SNR=12
comp=Z,5.8nm,0.4s
NC602 NORSAR Array S 27.85 344 *e*P **P 05 38 43.1 -1.2**
NORES NORESS Array B 27.85 344 P **P 05 38 46.2 +1.9**
NB2 NORSAR Subarra 28.19 344 P **P 05 38 45.5 -1.9**
comp=Z,0.4nm,0.5s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.19 344 P **P 05 38 45.5 -1.9**
baz=156,slow=9.3
NOA NORSAR Array B 28.19 344 P **P 05 38 44.7 -2.7**
comp=Z,0.7nm,0.7s,baz=149,slow=9.4,SNR=2.5
NOA LR LR 05 50 54.5
comp=Z,164nm,21.2s,baz=155,slow=38
comp=Z,0.7nm,0.7s
KIRV Kirov 28.37 25 P **P 05 38 47.0 -2.0**
comp=Z,9.9nm,0.5s,baz=246,slow=1.2,SNR=3.7
comp=Z,9.9nm,0.5s
KIRV Kirov 28.37 25*de*P **P 05 38 47.7 -1.3**
ABKAR Akbulak array 28.55 49 P **P 05 38 50.9 +0.2**
ABKAR IAmb IAmb 05 39 23.4
comp=Z,14nm,1.0s
ABKAR Akbulak array 28.55 49 P **P 05 38 50.6 -0.1**
EKA Eskdalemuir Ar 29.11 324 P **P 05 38 54.2 -1.4**
comp=Z,1.9nm,0.4s,baz=119,slow=10,SNR=11
EKA LR LR 05 51 35.7
comp=Z,179nm,20.5s,baz=171,slow=39
comp=Z,1.9nm,0.4s
HRA Herat 29.34 80 P **P 05 38 59.5 +1.4**
PRGR Permogore 29.63 18 *e*P **P 05 38 56.4 -3.7**
PRGR *e*S **S 05 43 52.3 -2.9**
PRGR pmax pmax
comp=Z,17nm,0.9s
ARU Arti 30.82 35 P **P 05 39 10.1 -0.6**
ARU IAmb IAmb 05 39 27.3
comp=Z,4.8nm,0.7s
ARU Arti 30.82 35*d i*P **P 05 39 10.4 -0.3**
ARU 05 40 07.3
ARU S **S 05 44 14.7 +0.8**
ARU pmax pmax
comp=Z,12nm,1.4s
ARU MLR MLR
comp=Z,131nm,14.0s
TOA0 Torodi Ar. Sit 31.04 232 P **P 05 39 13.6 +0.5**
TORD Torodi Ar. Bea 31.04 232 P **P 05 39 13.9 +0.9**
comp=Z,12nm,0.7s,baz=35,slow=9.5,SNR=80
TORD LR LR 05 54 55.6
comp=Z,162nm,18.7s,baz=218,slow=42
comp=Z,12nm,0.7s
NSS Namsos 31.21 348 *e*P **P 05 39 11.6 -2.4**
NSS IAmb IAmb 05 39 21.6
comp=Z,23nm,0.9s
SVE Sverdlovsk 32.01 36 *e*P **P 05 39 21.4 +0.2**
SVE pmax pmax
comp=Z,14nm,1.3s
MOR8 Moi Rana 32.37 351 *e*P **P 05 39 22.9 -1.3**
KONS Konsvik 32.86 350 *e*P **P 05 39 26.0 -2.5**
FAUS Fauske 33.42 352 *e*P **P 05 39 31.9 -1.5**
FAUS IAmb IAmb 05 39 44.3
comp=Z,11nm,1.0s
STEI Steigen 33.95 352 *e*P **P 05 39 36.0 -2.0**
STEI IAmb IAmb 05 39 39.3
comp=Z,12nm,0.8s
KOWA Kowa 34.05 242 P **P 05 39 39.7 +0.2**
comp=Z,2.6nm,0.6s,baz=58,slow=9.8,SNR=12
KOWA LR LR 05 56 04.4
comp=Z,166nm,18.3s,baz=38,slow=41
comp=Z,2.6nm,0.6s
KOWA Kowa 34.05 242 P **P 05 39 41.3 +1.9**
KOWA IAmb IAmb 05 40 03.1
comp=Z,7.5nm,1.2s
CHGR Chuyangaron 34.22 71 P **P 05 39 41.2 +0.4**
CHGR Chuyangaron 34.22 71 P **P 05 39 41.2 +0.4**
CHGR pmax pmax
comp=Z,11nm,0.8s
KTK1 Kautokeino 34.47 358 *e*P **P 05 39 41.0 -1.6**
KTK1 IAmb IAmb 05 39 44.9
comp=Z,14nm,1.1s
KK31 Karatay Array 34.94 63 P **P 05 39 47.8 +0.8**
KK31 IAmb IAmb 05 39 58.0
comp=Z,16nm,1.1s
KK31 Karatay Array 34.94 63 P **P 05 39 47.8 +0.8**
KK31 pmax pmax
comp=Z,16nm,1.1s
KKAR Karatay Array 34.94 63 P **P 05 39 48.0 +1.1**
KKAR Karatay Array 34.94 63 P **P 05 39 47.8 +0.8**
KKAR IAmb IAmb 05 39 58.0
comp=Z,16nm,1.1s
KKAR Karatay Array 34.94 63 P **P 05 39 48.1 +1.1**
KKAR pmax pmax
comp=Z,16nm,1.1s
ARA0 ARCESS Array S 34.95 359 *e*P **P 05 39 44.9 -1.8**
ARA0 IAmb IAmb 05 39 47.9
comp=Z,26nm,1.2s
ARCES ARCESS Array B 34.95 359 P **P 05 39 44.3 -2.4**
comp=Z,2.9nm,0.5s,baz=178,slow=8.4,SNR=27
ARCES LR LR 05 55 46.4
comp=Z,35nm,20.2s,baz=152,slow=39
comp=Z,2.9nm,0.5s
TRO Tromso 35.30 355 *e*P **P 05 39 49.7 +0.1**
TRO IAmb IAmb 05 39 53.9
comp=Z,29nm,1.6s
BRVK Borovoye 35.85 45 P **P 05 39 54.8 +0.2**
BRVK IAmb IAmb 05 40 06.9
comp=Z,6.9nm,0.8s
BRVK Borovoye 35.85 45*ce*P **P 05 39 55.1 +0.5**
BRVK pmax pmax
comp=Z,14nm,1.7s
BVAR Borovoye Array 35.90 46 LR LR 05 58 22.1
comp=Z,200nm,19.9s,baz=262,slow=43
HAMF Hammerfest 36.09 358 *e*P **P 05 39 54.9 -1.5**
KMBO Kilima Mbogo 36.98 162 LR LR 05 57 43.3
comp=Z,116nm,18.4s,baz=276,slow=40
AAK Ala-Archa 37.89 63 P **P 05 40 13.7 +1.5**
comp=Z,4.0nm,0.7s,baz=256,slow=5.1,SNR=10.0
AAK LR LR 06 00 18.2
comp=Z,79nm,18.2s,baz=292,slow=43
comp=Z,4.0nm,0.7s
AAK Ala-Archa 37.89 63*ce*P **P 05 40 13.8 +1.5**
AAK pmax pmax
comp=Z,9.0nm,1.3s

NIL Nilore 38.42 78 P **P 05 40 17.1 +0.4**
NIL Nilore 38.42 78 P **P 05 40 17.1 +0.4**
NIL pmax pmax
comp=Z,28nm,1.4s
KSH Kashi 39.35 68 P **P 05 40 24.4 -0.2**
TARG Taragay, Kyrgy 40.42 64 P **P 05 40 33.3 -0.5**
TARG Taragay, Kyrgy 40.42 64 P **P 05 40 33.3 -0.5**
TARG pmax pmax
comp=Z,7.0nm,1.1s
KURBB Kurchatov Arra 40.58 51 P **P 05 40 35.2 +0.7**
comp=Z,7.0nm,0.7s,baz=277,slow=8.9,SNR=31
comp=Z,7.0nm,0.7s
KURK Kurchatov 40.64 50 P **P 05 40 34.9 0.0**
KURK IAmb IAmb 05 40 44.0
comp=Z,14nm,0.8s
KURK Kurchatov 40.64 50 *ceP* **P 05 40 35.6 +0.6**
KURK pmax pmax
comp=Z,20nm,1.7s
JMIC Jan Mayen 40.90 343 LR LR 05 59 24.5
comp=Z,144nm,18.1s,baz=122,slow=39
BORG Borgarnes 41.54 331 LR LR 05 59 55.3
comp=Z,96nm,19.1s,baz=119,slow=39
MK31 Makanchi Array 43.13 56 P **P 05 40 55.6 +0.2**
MK31 Makanchi Array 43.13 56 *c iP* **P 05 40 56.2 +0.8**
MKAR Makanchi Array 43.13 56 P **P 05 40 56.3 +0.9**
comp=Z,4.8nm,0.5s,baz=269,slow=8.0,SNR=41
MKAR LR LR 06 02 10.8
comp=Z,77nm,20.3s,baz=280,slow=41
comp=Z,4.8nm,0.5s
MKAR Makanchi Array 43.13 56 P **P 05 40 55.9 +0.5**
BBTS Babate 43.50 254 LR LR 06 03 09.4
comp=Z,131nm,18.3s,baz=56,slow=42
SPA0 Spitsbergen Ar 43.86 357 *eP* **P 05 41 01.4 +0.6**
SPITS Spitsbergen Ar 43.86 357 LR LR 06 02 06.5
comp=Z,123nm,18.6s,baz=139,slow=40
ZAA0 Zalesovo Array 44.56 46 P **P 05 41 06.3 -0.4**
ZAA0 IAmb IAmb 05 41 07.5
comp=Z,8.0nm,0.6s
ZALV Zalesovo Beam 44.56 46 P **P 05 41 06.7 0.0**
comp=Z,9.2nm,0.4s,baz=268,slow=8.8,SNR=46
ZALV LR LR 06 03 47.5
comp=Z,114nm,18.8s,baz=298,slow=42
comp=Z,9.2nm,0.4s
ZALV Zalesovo Beam 44.56 46 P **P 05 41 06.4 -0.3**
DGZ Jazzator, Alta 46.32 52⇑ *eP* **P 05 41 21.8 +0.8**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
WMQ Urumqi 47.30 60 *eP* **P 05 41 31.0 +2.4**
NRIK Noril'sk 47.87 25 P **P 05 41 32.4 -0.3**
comp=Z,1.7nm,0.4s,baz=246,slow=12,SNR=3.6
NRIK LR LR 06 05 03.5
comp=Z,115nm,19.5s,baz=350,slow=40
comp=Z,1.7nm,0.4s
NRIK Noril'sk 47.87 25⇓ *eP* **P 05 41 32.9 +0.3**
NRIK pmax pmax
comp=Z,4.0nm,1.2s
DANN Dangsing 48.66 81 *eP* **P 05 41 41.1 +1.5**
KOLN Koldanda 48.75 82 *eP* **P 05 41 40.7 +0.5**
comp=Z,5.8nm,1.4s
GKN Gorkha 49.50 81 *eP* **P 05 41 46.8 +0.8**
LSZ Lusaka 49.67 178 LR LR 06 03 04.1
comp=Z,106nm,21.1s,baz=131,slow=36
DMN Daman 50.04 81 *eP* **P 05 41 51.1 +0.9**
comp=Z,28nm,0.7s
KKN Kakani 50.11 81 *eP* **P 05 41 51.6 +0.9**
PKIN Phulchoki 50.29 81 *eP* **P 05 41 52.7 +0.6**
comp=Z,29nm,1.0s
PKI Pulchoki 50.30 81 *eP* **P 05 41 52.9 +0.7**
comp=Z,25nm,0.9s
GUN Gumba 50.55 80 *eP* **P 05 41 55.0 +0.9**
comp=Z,18nm,0.6s
JIRN Jiri 50.90 81 *eP* **P 05 41 57.6 +0.8**
RAMN Ramite 51.52 81 *eP* **P 05 42 01.4 +0.1**
TAPN Taplejung 52.26 80 *eP* **P 05 42 06.8 -0.1**
comp=Z,29nm,1.1s
SFJD Kangerlussuaq 53.67 332 LR LR 06 08 01.9
comp=Z,94nm,18.4s,baz=86,slow=39
TSUM Tsumeb 54.22 190 LR LR 06 06 58.6
comp=Z,178nm,20.1s,baz=331,slow=38
GOMU GeErMu 54.59 67 P **P 05 42 26.4 +2.4**
GOMU pP pwP 05 42 30.3 -0.7
GOMU sP sP 05 42 31.5 +4.2
ZAK Zakamensk 56.25 49 *eP* **P 05 42 35.4 0.0**
ZAK pmax pmax
comp=Z,8.0nm,0.9s
PALK Pallekele 56.64 106 LR LR 06 09 25.2
comp=Z,94nm,20.2s,baz=42,slow=38
GTA Gaotai 57.22 62 *eP* **P 05 42 43.3 +0.8**
GTA pP pwP 05 42 52.8 +3.3
GTA sP sP 05 42 56.4 +11
SONM Songino Array 58.95 51 P **P 05 42 54.5 +0.1**
comp=Z,2.0nm,0.7s,baz=283,slow=8.6,SNR=4.6
SONM LR LR 06 12 59.0
comp=Z,74nm,18.4s,baz=33,slow=41
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 59.36 51 P **P 05 42 57.4 +0.1**
ULN IAmb IAmb 05 43 08.6
comp=Z,5.9nm,0.8s
ULN Ulaanbaatar 59.36 51⇓ *eP* **P 05 42 58.3 +1.0**
ULN pmax pmax
comp=Z,3.0nm,0.7s
TIXI Tiksi 61.26 21 LR LR 06 13 17.5
comp=Z,178nm,18.5s,baz=273,slow=40
TIXI Tiksi 61.26 21⇑ *eP* **P 05 43 11.2 +1.5**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
LZH Lanzhou 61.42 64 *eP* P 05 43 06.3 -5.3
LZH sP pP 05 43 13.0 -1.0
FRB Frobisher Bay 61.68 330 LR LR 06 13 09.1
comp=Z,57nm,18.9s,baz=12,slow=39
BOSA Boshof 62.93 181 P **P 05 43 23.1 +1.6**
comp=Z,1.9nm,0.6s,baz=350,slow=6.2,SNR=7.6
BOSA LR LR 06 10 13.8
comp=Z,80nm,21.5s,baz=13,slow=36
comp=Z,1.9nm,0.6s
PZH PanZhiHua 63.92 75 P **P 05 43 30.3 +1.9**
SCHQ Schefferville 64.30 320 P **P 05 43 29.4 -0.9**
comp=Z,5.9nm,0.6s,baz=47,slow=4.7,SNR=7.9
SCHQ LR LR 06 11 32.1
comp=Z,62nm,18.8s,baz=28,slow=36
comp=Z,5.9nm,0.6s
RES Resolute Bay 64.45 345 LR LR 06 13 29.7
comp=Z,46nm,18.1s,baz=30,slow=38
HHC Hu-ho-hao-te 64.99 57 *eP* **P 05 43 35.4 +0.2**
CMAR Chiang Mai Arr 65.52 84 P **P 05 43 39.8 +1.0**
comp=Z,1.0nm,0.3s,baz=299,slow=8.2,SNR=12
CMAR LR LR 06 20 10.6
comp=Z,25nm,19.6s,baz=265,slow=43
comp=Z,1.0nm,0.3s
XAN Xi'an 66.06 64 ⇑P **P 05 43 42.6 +0.5**
XAN pP sP 05 43 46.8 +1.4
XAN sP pwP 05 43 50.1 +1.0
SUR Sutherland 66.89 185 LR LR 06 17 35.5
comp=Z,104nm,18.3s,baz=356,slow=40
BJI Beijing 68.50 56 P **P 05 43 56.5 -0.9**
BJI PcP **PcP 05 44 25.0 +2.4**
RCBR Riachuelo 71.18 249 LR LR 06 15 58.0
comp=Z,91nm,18.5s,baz=180,slow=36
BNX BinXian 72.85 46 ⇑P P 05 44 33.1 +9.3
KLR Kul'dur 73.42 41 LR LR 06 21 54.9
comp=Z,95nm,18.3s,baz=310,slow=40
KLR Kul'dur 73.42 41⇑ *eP* **P 05 44 27.3 +0.1**
KLR pmax pmax
comp=Z,6.0nm,1.6s
MA2 Magadan 75.47 26 LR LR 06 22 06.6
comp=Z,48nm,18.8s,baz=304,slow=39
SADO Sadowa 76.20 315 LR LR 06 20 26.6
comp=Z,61nm,18.0s,baz=30,slow=38
INK Inuvik 76.28 352 LR LR 06 22 26.3
comp=Z,56nm,18.5s,baz=323,slow=39
USRK Ussuriysk Ar. 76.41 45 P **P 05 44 44.3 -0.2**
comp=Z,2.6nm,0.5s,baz=298,slow=4.2,SNR=6.9
comp=Z,2.6nm,0.5s
USRK Ussuriysk Ar. 76.41 45 P **P 05 44 44.0 -0.5**
KSAR Wonju Array Be 77.69 53 P **P 05 44 52.3 +0.5**
KSAR Wonju Array Be 77.69 53 P **P 05 44 52.3 +0.5**
KSRS Korea Array 77.70 53 P **P 05 44 52.2 +0.3**
comp=Z,2.4nm,0.9s,baz=296,slow=4.6,SNR=7.9
KSRS LR LR 06 24 25.4
comp=Z,86nm,18.9s,baz=310,slow=40
comp=Z,2.4nm,0.9s
YKA Yellowknife Ar 78.28 343 LR LR 06 20 48.9
comp=Z,83nm,18.5s,baz=334,slow=37
EPYK Eagle Plains 78.48 353 P **P 05 44 57.4 +1.5**
I29M Ogilvie Camp, 79.62 354 P **P 05 45 01.6 -0.5**
H21K Melozitna Rive 80.02 360 P **P 05 45 04.3 +0.1**
H21K IAmb IAmb 05 45 15.1
comp=Z,8.3nm,0.9s
ILAR Eielson Array 80.78 357 P **P 05 45 07.5 -0.8**
comp=Z,0.9nm,0.7s,baz=338,slow=4.0,SNR=8.9
ILAR LR LR 06 22 23.7
comp=Z,29nm,20.2s,baz=266,slow=37
comp=Z,0.9nm,0.7s
ILAR Eielson Array 80.78 357 P **P 05 45 07.8 -0.4**
ILAR Eielson Array 80.78 357 P **P 05 45 07.9 -0.4**
DAWY Dawson 80.99 354 P **P 05 45 08.9 -0.5**
DAWY IAmb IAmb 05 45 20.0
comp=Z,9.8nm,0.9s
HDA Harding Lake 81.14 357 P **P 05 45 09.5 -0.8**
J20K Nowinta River 81.51 0 P **P 05 45 12.5 +0.4**
J20K IAmb IAmb 05 45 22.2
comp=Z,8.4nm,0.9s
BCAR Beaver Creek A 82.18 355 P **P 05 45 15.9 +0.1**
L27K Beaver Creek, 82.18 355 P **P 05 45 16.2 +0.4**
L27K IAmb IAmb 05 45 26.4
comp=Z,5.8nm,0.8s
PPLA Purkeypile 82.79 359 P **P 05 45 18.8 -0.3**
PETK Petropavlovsk- 82.86 27 LR LR 06 26 44.8
comp=Z,51nm,18.0s,baz=306,slow=39
TKL Tuckaleechee C 84.52 310 LR LR 06 24 12.9
comp=Z,62nm,19.3s,baz=38,slow=36
MJAR Matsushiro Arr 84.83 49 P **P 05 45 30.6 +0.8**
comp=Z,2.8nm,0.8s,baz=305,slow=5.4,SNR=5.5
MJAR LR LR 06 28 00.4
comp=Z,48nm,20.1s,baz=321,slow=39
comp=Z,2.8nm,0.8s
DLBC Dease Lake 85.22 348 LR LR 06 24 30.2
comp=Z,107nm,21.6s,baz=28,slow=36
KDAK Kodiak Island 87.92 360 LR LR 06 29 23.0
comp=Z,43nm,18.1s,baz=56,slow=39
SHEM Shemya Is, Ala 88.51 19 LR LR 06 29 31.7
comp=Z,56nm,18.6s,baz=296,slow=38
NEW Newport 91.30 337 LR LR 06 29 09.1
comp=Z,77nm,18.9s,baz=22,slow=37
PDAR Pinedale Array 93.12 329 P **P 05 46 10.4 +1.0**
comp=Z,0.5nm,0.8s,baz=39,slow=5.9,SNR=1.9
PDAR LR LR 06 30 13.0
comp=Z,77nm,18.9s,baz=42,slow=37
comp=Z,0.5nm,0.8s
JCJ Chichijima 93.55 54 LR LR 06 33 20.3
comp=Z,37nm,19.3s,baz=102,slow=39
ELK Elko 97.13 332 LR LR 06 34 44.2
comp=Z,75nm,18.1s,baz=24,slow=38
ANMO Albuquerque 98.00 323 LR LR 06 32 55.3
comp=Z,71nm,18.4s,baz=44,slow=37
YBH Yreka Blue Hor 98.92 337 LR LR 06 37 09.7
comp=Z,62nm,20.7s,baz=0.5,slow=39
WRA Warramunga Arr 115.42 97 PKP **PKPdf 05 51 35.8 -1.6**
comp=Z,0.3nm,0.8s,baz=290,slow=1.6,SNR=1.3
ASAR Alice Springs 116.85 101 PKhKP PKPpre 05 51 37.3
comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=1.5

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*IDC **15** 05:38:02.7±2.0, 6°.57S×149°.37E, h49km±21km, mb3.6/3, mbtmp4.1/6, ML4.4/2, MS3.3/7, Error ellipse: s-maj=68.1km s-min=14.9km az=129.0*
*NEIC **15** 05:38:03.0±2.1, 6°.59S±0°.08×149°.47E±0°.09, h37km±8km, mb4.3/13, Error ellipse: s-maj=15.7km s-min=4.4km az=131.0*
ISC 15 05:38:03.0±0.6, **6°.55S**±0°.08×**149°.44E**±0°.08, **h49**km, **n37**, σ1**9**18/34, **mb4.3**/11, **MS3.2**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.40**	**49**	P	**Pn**	**05 38 54.5**	**+0.9**
	24nm,0.3s,baz=304,slow=1.9,SNR=8.6						
KRVT				S	Sn	05 39 50.9	+18
	181nm,0.6s,baz=130,slow=5.1,SNR=4.9						
	108nm,0.5s						
RABL	**Rabaul**	**3.58**	**49**		**Pn**	**05 38 55.1**	**-1.0**
PMG	**Port Moresby**	**3.63**	**218**	P	**Pn**	**05 38 56.3**	**-0.4**
	54nm,0.3s,baz=20,slow=5.5,SNR=34						
PMG				S	**Sn**	**05 39 36.6**	**-1.7**
	112nm,0.3s,baz=37,slow=20,SNR=12						
PMG				LR	LR	05 40 34.7	
	comp=Z,296nm,19.7s,baz=112,slow=43						
PMG	**Port Moresby**	**3.63**	**218**		**Pn**	**05 38 56.4**	**-0.3**
PMG	**Port Moresby**	**3.63**	**218**	P	**Pn**	**05 38 56.9**	**+0.2**
MANU	**Manus Island**	**4.93**	**335**		**Pn**	**05 39 14.3**	**-0.2**
COEN	**Coen**	**9.60**	**219**	Pn	**Pn**	**05 40 19.0**	**+0.3**
CTA	**Charters Tower**	**13.81**	**193**	LR	LR	05 46 29.2	
	comp=Z,84nm,19.7s,baz=40,slow=37						
PATS	**Pohnpei**	**15.97**	**34**	Pn	**Pn**	**05 41 44.5**	**0.0**
MTN	**Manton Dam**	**19.09**	**249**	P	P	**05 42 22.3**	**+0.5**
MTN				IAmb	IAmb	05 42 46.9	
	comp=Z,19nm,1.3s						
WB0	**Warramunga Arr**	**19.66**	**227**	P	P	**05 42 27.7**	**-0.2**
WRAB	**Tennant Creek**	**19.79**	**226**	P	P	**05 42 28.6**	**-0.9**
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**19.81**	**226**	P	P	**05 42 29.0**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=51,slow=11,SNR=54						
WRA				LR	LR	05 51 19.4	
	comp=Z,93nm,18.0s,baz=48,slow=40						
	comp=Z,3.7nm,0.5s						
WRA	**Warramunga Arr**	**19.81**	**226**	P	P	**05 42 28.5**	**-1.1**
KNRA	**Kununurra**	**22.20**	**244**	P	P	**05 42 54.8**	**-0.7**
KNRA				IAmb	IAmb	05 43 06.5	
	comp=Z,10.0nm,0.9s						
KNRA	**Kununurra**	**22.20**	**244**	P	P	**05 42 55.3**	**-0.2**
	comp=Z,17nm,2.0s						
DZM	**Mont Dzumac**	**22.54**	**135**	P	P	**05 42 58.0**	**-1.1**
DZM				IAmb	IAmb	05 43 23.6	
	comp=Z,24nm,1.3s						
AS01	**Alice Springs**	**22.61**	**220**	P	P	**05 43 01.4**	**+1.6**
	comp=Z,9.2nm,0.8s						
AS31	**Alice Springs**	**22.64**	**220**	P	P	**05 43 00.8**	**+0.7**
ASAR	**Alice Springs**	**22.64**	**220**	P	P	**05 42 59.5**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=55,slow=9.7,SNR=21						
ASAR				LR	LR	05 52 22.3	
	comp=Z,79nm,18.7s,baz=348,slow=38						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**22.64**	**220**	P	P	**05 43 00.4**	**+0.2**
OUENC	**Ouen Island, N**	**23.04**	**135**	P	P	**05 43 04.9**	**+0.7**
SOEI	**Soe**	**25.12**	**261**	P	P	**05 43 24.4**	**+0.7**
SOEI				IAmb	IAmb	05 43 39.6	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**26.25**	**195**	LR	LR	05 54 22.4	
	comp=Z,102nm,20.2s,baz=26,slow=37						
MMRI	**Maumere**	**27.04**	**264**	P	P	**05 43 42.5**	**+1.5**
WRKA	**Warakurna**	**27.34**	**225**	P	P	**05 43 47.9**	**+4.3**
	comp=Z,9.3nm,0.9s						
JCJ	**Chichijima**	**34.17**	**348**	LR	LR	05 56 45.5	
	comp=Z,35nm,21.3s,baz=122,slow=33						
RPZ	**Rata Peaks**	**41.60**	**156**	LR	LR	06 01 34.4	
	comp=Z,40nm,21.7s,baz=289,slow=34						
PETK	**Petropavlovsk-**	**59.84**	**6**	P	P	**05 48 03.5**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=176,slow=9.7,SNR=5.0						
	comp=Z,5.1nm,0.9s						
VNDA	**Vanda**	**71.24**	**177**	P	P	**05 49 17.0**	**+0.4**
VNDA				IAmb	IAmb	05 49 21.3	
	comp=Z,3.7nm,1.0s						
SBA	**Scott Base**	**71.85**	**176**	P	P	**05 49 21.2**	**+1.0**
SBA				IAmb	IAmb	05 49 34.7	
	comp=Z,2.6nm,1.3s						
QSPA	**South Pole Qui**	**83.43**	**180**	P	P	**05 50 25.0**	**-0.2**
QSPA				IAmb	IAmb	05 50 26.2	
	comp=Z,2.9nm,1.1s						
ILAR	**Eielson Array**	**85.04**	**23**	P	P	**05 50 31.5**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=247,slow=5.5,SNR=4.0						
	comp=Z,0.3nm,0.7s						
GERES	**GERESS Array B**	**123.71**	**326**	PKP	**PKPdf**	**05 56 54.6**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=13,slow=1.8,SNR=4.4						
TOA0	**Torodi Ar. Sit**	**147.57**	**284**		**PKPbc**	**05 57 42.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**147.57**	**284**	PKPbc	**PKPdf**	**05 57 42.0**	**+1.8**
	comp=Z,3.4nm,0.7s,baz=46,slow=2.3,SNR=17						
BDFB	**Brasilia**	**151.99**	**142**	PKPbc	**PKPbc**	**05 57 53.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=90,slow=3.0,SNR=3.9						

IDC 15 05:50:34.0±45.0, **15°.35S×172°.05W, h0**km, **mb4.1**/3, **mbtmp4.1**/3, **Error ellipse: s-maj=877.4km s-min=194.9km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.19**	**240**	P	P	05 58 52.9	-0.1
	0.8nm,0.4s,baz=90,slow=5.8,SNR=3.2						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**51.12**	**257**	P	P	05 59 39.1	0.0
	0.5nm,0.5s,baz=92,slow=7.0,SNR=9.9						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**51.37**	**252**	P	P	05 59 40.6	-0.3
	5.6nm,0.6s,baz=90,slow=8.2,SNR=83						
	5.6nm,0.6s						

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*SCB **15** 06:16:29.2±1.1, 20°.51S×67°.30W, h198km, ML3.2/6, MW3.6, Error ellipse: s-maj=3.9km s-min=2.9km az=0.0*
*GUC **15** 06:16:29.5±0.8, 20°.56S×67°.65W, h234km±9km, ML3.8*
ISC 15 06:16:25.0±2.0, **20°.49S**±0°.05×**67°.30W**±0°.05, **h217**km±17km, **n26**, σ2**8**10/44, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.73**	**116**	P	**Pn**	**06 17 04.0**	**+1.3**
MOCB				S	**Sn**	**06 17 29.6**	**-2.5**
MOCB				IAML		06 17 32.6	
	153nm,0.6s						
MOCB				IAML		06 17 33.5	
	107nm,0.6s						
PB08	**IPOC Station P**	**1.78**	**281**	*eP*	**Pn**	**06 17 04.5**	**+1.4**
PB08				*eS*	**Sn**	**06 17 32.8**	**0.0**
PB08				IAML		06 17 35.4	
	comp=E,99nm,0.2s						
GO01	**Chusmiza**	**1.96**	**294**	*eP*	**Pn**	**06 17 06.2**	**+1.2**
GO01				*eS*	**Sn**	**06 17 37.7**	**+1.5**
GO01				IAML		06 17 43.0	
	comp=E,228nm,0.1s						
GO01	**Chusmiza**	**1.96**	**294**	P	**Pn**	**06 17 06.1**	**+1.1**
GO01				IAML		06 17 42.7	
	comp=E,37nm,0.1s						
PB01	**IPOC Station P**	**2.12**	**255**	*eS*	**Sn**	**06 17 37.2**	**-1.0**
PB01				IAML		06 17 38.5	
	comp=N,277nm,0.2s						
PB09	**IPOC Station P**	**2.23**	**234**	*eP*	**Pn**	**06 17 11.7**	**+4.3**
PB09				*eS*	**Sn**	**06 17 40.9**	**+0.4**
PB09				IAML		06 17 44.5	
	comp=E,112nm,0.1s						
YJA	**Yavi**	**2.36**	**136**	P	**Pn**	**06 17 10.4**	**+1.4**
YJA				S	**Sn**	**06 17 40.0**	**-3.4**
PB02	**IPOC Station P**	**2.57**	**251**	*eP*	**Pn**	**06 17 12.9**	**+2.1**
PB02				*eS*	**Sn**	**06 17 45.0**	**-1.7**
PB02				IAML		06 17 46.9	
	comp=E,506nm,0.3s						
PB02	**IPOC Station P**	**2.57**	**251**	P	**Pn**	**06 17 13.1**	**+2.3**
TA02	**Huaiquique**	**2.67**	**274**	*eP*	**Pn**	**06 17 12.3**	**+0.5**
TA02				*eS*	**Sn**	**06 17 46.4**	**-2.1**
TA02				IAML		06 17 47.7	
	comp=N,1μm,0.1s						
PATCX	**Punta Patache**	**2.69**	**263**	*eP*	**Pn**	**06 17 13.1**	**+0.9**
PATCX				*eS*	**Sn**	**06 17 47.1**	**-2.0**
PATCX				IAML		06 17 50.1	
	comp=N,231nm,0.2s						
TA01	**Diego Aracena**	**2.71**	**268**	*eP*	**Pn**	**06 17 12.6**	**+0.4**
TA01				*eS*	**Sn**	**06 17 46.5**	**-2.7**
TA01	**Diego Aracena**	**2.71**	**268**	P	**Pn**	**06 17 14.2**	**+2.0**
TA01				S	**Sn**	**06 17 46.3**	**-2.9**
PB07	**IPOC Station P**	**2.71**	**243**	*eP*	**Pn**	**06 17 14.0**	**+1.5**
PB07				*eS*	**Sn**	**06 17 48.4**	**-1.3**
PB07				IAML		06 17 50.4	
	comp=N,272nm,0.1s						
PB03	**IPOC Station P**	**2.77**	**235**	*eP*	**Pn**	**06 17 14.8**	**+1.7**
PB03				*eS*	**Sn**	**06 17 48.9**	**-1.9**
PB03				IAML		06 17 50.2	
	comp=N,245nm,0.2s						
PB06	**IPOC Station P**	**3.06**	**223**	*eP*	**Pn**	**06 17 18.1**	**+1.8**
PB06				*eS*	**Sn**	**06 17 56.2**	**-0.5**
PB06				IAML		06 17 57.6	
	comp=E,463nm,0.1s						
PB06	**IPOC Station P**	**3.06**	**223**	P	**Pn**	**06 17 18.4**	**+2.0**
PB06				S	**Sn**	**06 17 53.5**	**-3.2**
PB06				IAML		06 17 57.7	
	comp=E,124nm,0.2s						
PB04	**IPOC Station P**	**3.23**	**235**	*eP*	**Pn**	**06 17 19.7**	**+1.3**
PB04				*eS*	**Sn**	**06 17 58.2**	**-2.1**
PB04	**IPOC Station P**	**3.23**	**235**	P	**Pn**	**06 17 20.0**	**+1.6**
PB04				S	**Sn**	**06 17 56.2**	**-4.1**
PB04				IAML		06 18 01.0	
	comp=E,144nm,0.2s						
PB15	**IPOC Station P**	**3.38**	**216**	*eP*	**Pn**	**06 17 22.5**	**+2.4**
PB15				*eS*	**Sn**	**06 18 03.5**	**0.0**
PB15	**IPOC Station P**	**3.38**	**216**	P	**Pn**	**06 17 22.0**	**+1.9**
PB12	**IPOC Station P**	**3.42**	**303**	*eP*	**Pn**	**06 17 20.2**	**-0.3**
PB12				*eS*	**Sn**	**06 18 01.0**	**-3.1**
BBOE	**La Paz, Chanca**	**3.72**	**350**	P	**Pn**	**06 17 26.7**	**+2.1**
BBOE				IAML		06 18 17.6	
	comp=E,5.5nm,3.6s						
BBOD	**La Paz, Gloria**	**4.03**	**342**	P	**Pn**	**06 17 30.7**	**+2.3**
LPAZ	**La Paz**	**4.25**	**349**	P	**Pn**	**06 17 32.8**	**+1.5**
GO02	**Mina Guanaco**	**5.11**	**204**	P	**Pn**	**06 17 42.8**	**+1.3**

IDC 15 06:17:04.0±1.6, **17°.22S×177°.54W, h0**km, **mb4.1**/5, **mbtmp4.1**/5, **Error ellipse: s-maj=49.3km s-min=31.4km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.48**	**192**	P	P	06 21 54.8	+0.5
	2.2nm,0.3s,baz=354,slow=2.2,SNR=6.0						
	2.2nm,0.3s						
STKA	**Stephens Creek**	**39.69**	**241**	P	P	06 24 38.2	0.0
	2.1nm,0.6s,baz=101,slow=10,SNR=3.4						
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**45.58**	**259**	P	P	06 25 26.3	+0.1
	2.3nm,0.4s,baz=98,slow=6.7,SNR=130						
	2.3nm,0.4s						
ASAR	**Alice Springs**	**45.78**	**254**	P	P	06 25 27.1	-0.7
	2.9nm,0.5s,baz=88,slow=8.1,SNR=60						
	2.9nm,0.5s						
TXAR	**Lajitas Array**	**84.93**	**57**	P	P	06 29 41.5	0.0
	0.3nm,0.8s,baz=223,slow=7.4,SNR=4.4						
	0.3nm,0.8s						

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*IDC **15** 06:31:11.8±1.3, 30°.30S×69°.93W, h0km, mb3.4/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=53.3km s-min=38.5km az=86.0*
*GUC **15** 06:31:27.2±0.7, 31°.03S×69°.42W, h148km±8km, ML3.7*
ISC 15 06:31:28.6±1.1, **31°.07S**±0°.05×**69°.5W**±0°.1, **h151**km±10km, **n14**, σ1**9**45/23, **7C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO03	**El Pedregal**	**1.01**	**283**	⇑*iP*	**Pn**	**06 31 53.5**	**-0.1**
CO03				*eS*	**Sn**	**06 32 13.3**	**+0.6**
CO03				IAML		06 32 14.8	
	comp=E,2μm,0.5s						
CO01	**Juntas del Tor**	**1.19**	**336**	⇑*iP*	**Pn**	**06 31 54.6**	**-0.8**
CO01				*eS*	**Sn**	**06 32 14.9**	**-1.0**
CO01				IAML		06 32 17.1	
	comp=E,253nm,0.3s						
CO02	**Combarbal**	**1.26**	**264**	⇑*iP*	**Pn**	**06 31 56.1**	**+0.2**
CO02				*eS*	**Sn**	**06 32 18.2**	**+1.5**
CO02				IAML		06 32 19.8	
	comp=E,3μm,0.2s						
GO04	**Tololo Observa**	**1.41**	**309**	⇑*iP*	**Pn**	**06 31 57.2**	**-0.3**
GO04				*eS*	**Sn**	**06 32 20.6**	**+1.1**
GO04				IAML		06 32 23.0	
	comp=E,2μm,0.3s						
CO06	**Fray Jorge**	**1.84**	**282**	⇑*iP*	**Pn**	**06 32 01.8**	**-0.1**
CO06				*eS*	**Sn**	**06 32 27.7**	**+0.2**
CO06				IAML		06 32 37.3	
	comp=E,496nm,0.5s						
LCO	**Las Campanas**	**2.29**	**334**	⇑*iP*	**Pn**	**06 32 06.8**	**-0.7**
LCO				*eS*	**Sn**	**06 32 37.6**	**+0.4**
AC05	**El Transito**	**2.31**	**344**	⇑*iP*	**Pn**	**06 32 07.6**	**-0.1**
AC05				*eS*	**Sn**	**06 32 39.0**	**+1.3**
AC05				IAML		06 32 40.3	
	comp=E,516nm,0.2s						
FCH	**Farellones**	**2.34**	**196**	*eP*	**Pn**	**06 32 07.5**	**-0.5**
FCH				*eS*	**Sn**	**06 32 39.1**	**+0.5**
BO04	**La Punta**	**3.05**	**197**	*eP*	**Pn**	**06 32 15.7**	**-0.9**
BO04				*eS*	**Sn**	**06 32 52.8**	**-1.0**
BO04				IAML		06 32 55.4	
AC04	**Llanos de Chal**	**3.15**	**335**	*eP*	**Pn**	**06 32 17.1**	**-0.8**
PLCA	**Paso Flores**	**9.68**	**185**	Pn	**Pn**	**06 33 43.4**	**-0.9**
	comp=E,0.1nm,0.3s,baz=4.4,slow=16,SNR=5.5						
	comp=E,0.5nm,0.5s						
TXAR	**Lajitas Array**	**68.29**	**328**	P	**P**	**06 42 09.8**	**-3.6**
	comp=E,0.1nm,0.4s,baz=144,slow=6.7,SNR=3.5						
	comp=E,0.

*IDC **15** 07:16:06.7±1.3, 6°.74N×72°.89W, h169km±17km, mb3.0/1, mbtmp3.8/3, Error ellipse: s-maj=46.8km s-min=14.9km az=131.0*
*RSNC **15** 07:16:07.5±1.1, 6°.81N×73°.14W, h149km±4km, ML3.4, Mw3.8, Fault plane solution: NP1:φs68.00000°, δ88.00000°, λ-142.00000°.*

ISC 15 07:16:06.3±1.0, 6°.82N±0°.03×73°.12W±0°.03, h155km±6km, n34, σ1s36/64, 4C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**196**	⇓ *iP*	**Pn**	**07 16 27.6**	**+0.1**
BARC				*eS*	**Sn**	**07 16 42.5**	**-1.3**
BARC				*i*		07 16 43.8	
	comp=Z,1μm,0.3s						
BRRC	**Barranca, Sant**	**0.66**	**296**	⇑ *iP*	**Pn**	**07 16 29.4**	**+0.4**
BRRC				*eS*	**Sn**	**07 16 46.3**	**-0.1**
BRRC				*i*		07 16 49.6	
	comp=Z,616nm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**39**	⇑ *iP*	**Pn**	**07 16 30.5**	**+0.8**
PAMC				*eS*	**Sn**	**07 16 47.4**	**0.0**
PAMC				*i*		07 16 49.9	
	comp=Z,586nm,0.5s						
RUSC	**La Rusia**	**0.93**	**178**	⇓ *iP*	**Pn**	**07 16 31.6**	**+0.1**
RUSC				*eS*	**Sn**	**07 16 50.5**	**-0.3**
RUSC				*i*		07 16 51.2	
	comp=Z,184nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*eP*	**Pn**	**07 16 34.1**	**-0.7**
PTBC				*eS*	**Sn**	**07 16 55.2**	**-1.5**
PTBC				*i*		07 17 02.6	
	comp=Z,393nm,0.4s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇓ *iP*	**Pn**	**07 16 36.1**	**+1.1**
TAMC				*i*		07 16 57.0	
	comp=Z,196nm,0.3s						
TAMC				*eS*	**Sn**	**07 16 57.2**	**+0.3**
OCAC	**Ocana**	**1.42**	**352**	⇑ *iP*	**Pn**	**07 16 35.7**	**+0.1**
OCAC				*eS*	**Sn**	**07 16 58.3**	**+0.2**
OCAC				*i*		07 17 05.9	
	comp=Z,463nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**219**	⇓ *iP*	**Pn**	**07 16 36.4**	**+0.1**
SPBC				*eS*	**Sn**	**07 16 58.9**	**-0.5**
SPBC				*i*		07 17 03.5	
	comp=Z,488nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*eP*	**Pn**	**07 16 39.9**	**-0.1**
ZARC				*eS*	**Sn**	**07 17 05.3**	**-0.6**
ZARC				*i*		07 17 16.1	
	comp=Z,302nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*eP*	**Pn**	**07 16 43.4**	**0.0**
NORC				*eS*	**Sn**	**07 17 11.3**	**-0.7**
NORC				*i*		07 17 19.0	
	comp=Z,146nm,0.4s						
CHIC	**Chingaza**	**2.26**	**196**	*eP*	**Pn**	**07 16 45.9**	**+0.7**
CHIC				*eS*	**Sn**	**07 17 15.0**	**-0.2**
CHIC				*i*		07 17 18.8	
	comp=Z,203nm,0.4s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**07 16 47.5**	**+1.8**
	comp=Z,137nm,0.4s,baz=349,slow=1.4,SNR=135						
ROSC				S	**Sn**	**07 17 14.5**	**-1.5**
	comp=Z,296nm,0.4s,baz=56,slow=16,SNR=8.7						
HELC	**Santa Helena**	**2.48**	**255**	*eP*	**Pn**	**07 16 48.1**	**+0.4**
HELC				*eS*	**Sn**	**07 17 22.3**	**+2.7**
HELC				*i*		07 17 27.9	
	comp=Z,198nm,0.3s						
SOCV	**Socops**	**2.67**	**57**	⇑ *iP*	**Pn**	**07 16 50.5**	**+0.7**
SOCV				*eS*	**Sn**	**07 17 22.7**	**-0.6**
LL1C	**La Loma 1 Cana**	**2.74**	**351**	*eP*	**Pn**	**07 16 53.0**	**+2.4**
LL1C				*eS*	**Sn**	**07 17 28.1**	**+3.3**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	*eP*	**Pn**	**07 16 52.5**	**+1.4**
GUY2C				*eS*	**Sn**	**07 17 29.0**	**+3.3**
GUY2C				*i*		07 17 35.9	
	comp=Z,157nm,0.4s						
VILC	**Villavicencio,**	**2.75**	**192**	*eP*	**Pn**	**07 16 50.9**	**0.0**
VILC				*eS*	**Sn**	**07 17 24.9**	**-0.6**
VILC				*i*		07 17 30.8	
	comp=Z,281nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.78**	**159**	⇓ *iP*	**Pn**	**07 16 50.8**	**-0.4**
PTGC				*eS*	**Sn**	**07 17 24.1**	**-1.8**
PTGC				*i*		07 17 27.0	
	comp=Z,196nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.90**	**357**	*eP*	Pn	07 16 32.9	-20
LL6C				*eS*	Sn	07 17 08.1	-20
LL6C				*i*		07 17 15.4	
	comp=Z,83nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*eP*	**Pn**	**07 16 55.2**	**+0.8**
CBOC				*eS*	**Sn**	**07 17 31.0**	**-0.6**
CBOC				*i*		07 17 52.2	
	comp=Z,43nm,0.6s						
DBBC	**Dabeiba**	**3.08**	**274**	*eP*	**Pn**	**07 16 55.8**	**+1.0**
DBBC				*eS*	**Sn**	**07 17 30.8**	**-1.7**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**07 16 57.2**	**+0.6**
	comp=Z,43nm,0.4s,baz=202,slow=2.1,SNR=20						
SDV				S	**Sn**	**07 17 34.6**	**-0.9**
	comp=Z,52nm,0.5s,baz=80,slow=21,SNR=10						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*eP*	**Pn**	**07 16 58.2**	**+1.6**
ARGC				*eS*	**Sn**	**07 17 35.2**	**-0.5**
ARGC				*i*		07 17 41.0	
	comp=Z,30nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**225**	*eP*	**Pn**	**07 16 58.8**	**+1.5**
ANIL				*eS*	**Sn**	**07 17 38.2**	**+1.4**
PRAC	**Prado**	**3.56**	**210**	*eP*	**Pn**	**07 17 01.3**	**+0.4**
PRAC				*eS*	**Sn**	**07 17 43.4**	**-0.1**
PRAC				*i*		07 17 48.9	
	comp=Z,135nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*	**Pn**	**07 17 01.7**	**-0.8**
SJCC				*eS*	**Sn**	**07 17 42.3**	**-3.9**
SJCC				*i*		07 17 46.8	
	comp=Z,58nm,0.4s						
PLMC	**San Jos del P**	**3.68**	**239**	*eP*	**Pn**	**07 17 03.0**	**+0.3**
PLMC				*eS*	**Sn**	**07 17 46.4**	**0.0**
PLMC				*i*		07 17 53.0	
	comp=Z,52nm,0.3s						
LCBC	**Los crdobas,**	**3.80**	**302**	*eP*	**Pn**	**07 17 03.1**	**-1.0**
LCBC				*eS*	**Sn**	**07 17 47.6**	**-1.4**
LCBC				*i*		07 17 52.4	
	comp=Z,74nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*eP*	**Pn**	**07 17 07.9**	**-1.2**
CRJC				*eS*	**Sn**	**07 17 54.9**	**-3.1**
CRJC				*i*		07 17 58.5	
	comp=Z,66nm,0.5s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*eP*	**Pn**	**07 17 09.9**	**-0.5**
YOTC				*eS*	**Sn**	**07 18 01.5**	**+1.1**
GUVC	**San Jose del G**	**4.28**	**173**	*eP*	**Pn**	**07 17 09.9**	**-0.4**
GUVC				*eS*	**Sn**	**07 17 58.1**	**-2.1**
GUVC				*i*		07 18 05.1	
	comp=Z,69nm,0.3s						
BBAC	**Balboa, Cauca**	**6.30**	**221**	*eP*	**Pn**	**07 17 38.7**	**+1.4**
BBAC				*eS*	**Sn**	**07 18 47.4**	**-1.1**
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**07 22 57.5**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=128,slow=8.7,SNR=5.9						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPbc**	**07 35 39.0**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=105,slow=2.6,SNR=5.8						

IDC 15 07:21:36.8±1.6, 2°.56N×123°.79E, h0km, mb3.6/4, mbtmp3.6/4, MS3.0/1, Error ellipse: s-maj=201.1km s-min=23.3km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.64**	**156**	P	P	07 26 58.3	-1.0
	0.7nm,0.5s,baz=333,slow=11,SNR=17						
	0.7nm,0.5s						
PMG	**Port Moresby**	**26.15**	**117**	LR	LR	07 40 01.6	
	comp=Z,34nm,20.2s,baz=61,slow=42						
ASAR	**Alice Springs**	**27.86**	**160**	P	P	07 27 29.6	+1.2
	0.3nm,0.9s,baz=345,slow=11,SNR=3.3						
	0.3nm,0.9s						
STKA	**Stephens Creek**	**38.20**	**155**	P	P	07 28 58.3	0.0
	1.5nm,0.7s,baz=328,slow=12,SNR=2.0						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**56.89**	**327**	P	P	07 31 23.4	-0.2
	0.4nm,0.4s,baz=116,slow=6.5,SNR=10.0						
	0.4nm,0.4s						

MAN 15 07:39:01.3, 8°.99N×125°.35E, h8km, mb3.7, ML2.4, MS1.9, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.27**	**95**	⇓ *eP*	Pg	07 39 07.6	+0.8
BUTP				*eS*	Sb	07 39 13.9	+0.7
CGP	**Cagayan de Oro**	**0.84**	**230**	⇑ *eP*	Pg	07 39 16.8	-0.6
CGP				*eS*	Sg	07 39 28.7	+0.3
BUKP	**Musuan**	**1.14**	**194**	⇓ *eP*	Pg	07 39 22.8	-0.5
BUKP				*eS*	Sn	07 39 39.5	-0.1
BIPH	**Bislig**	**1.29**	**129**	⇓ *iP*	Pn	07 39 22.5	-3.1
BIPH				*i S*	Sb	07 39 40.8	-1.7
TABP	**Talibon, Bohol**	**1.48**	**318**	⇓ *eP*	Pn	07 39 18.5	-10
TABP				*eS*	Sn	07 39 42.2	-5.6

*IDC **15** 07:41:18.8±1.6, 20°.69S×178°.90W, h634km±18km, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=26.9km s-min=13.9km az=151.0*

ISC 15 07:41:17.2±0.7, 20°.9S±0°.1×178°.8W±0°.1, h619km, n30, σ1s57/31, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.35**	**316**	P	**P**	**07 42 46.9**	**+0.2**
	41nm,0.7s,baz=150,slow=12,SNR=31						
KUZ	**Kuaotunu**	**16.52**	**196**	P	**P**	**07 44 40.1**	**+1.7**
MKAZ	**Moumakai**	**17.01**	**197**	P	**P**	**07 44 43.9**	**+1.1**
HAZ	**Te Kaha**	**17.08**	**189**	P	**P**	**07 44 42.5**	**-0.9**
RUGZ	**Raukumara Rang**	**17.30**	**190**	P	**P**	**07 44 43.9**	**-1.7**
PUZ	**Puketiti**	**17.32**	**188**	P	**P**	**07 44 48.1**	**+2.4**
TWGZ	**Tauwhareparae**	**17.46**	**189**	P	**P**	**07 44 46.3**	**-0.6**
URZ	**Urewera**	**17.68**	**191**	P	**P**	**07 44 46.5**	**-2.4**
	16nm,0.7s,baz=346,slow=2.9,SNR=14						
URZ	**Urewera**	**17.68**	**191**	P	**P**	**07 44 46.6**	**-2.3**
MWZ	**Matawai**	**17.68**	**190**	P	**P**	**07 44 47.7**	**-1.3**
MUGZ	**Murupara**	**17.95**	**191**	P	**P**	**07 44 49.6**	**-1.8**
BKZ	**Black Stump Fm**	**18.67**	**192**	P	**P**	**07 44 55.7**	**-2.3**
KWHZ	**Kaweka Forest**	**18.94**	**192**	P	**P**	**07 44 59.1**	**-1.3**
BHHZ	**Black Hill Sta**	**19.07**	**192**	P	**P**	**07 44 59.7**	**-1.9**
TSZ	**Takapari Road**	**19.64**	**192**	P	**P**	**07 45 05.8**	**-0.9**
ANWZ	**Angora Road**	**19.93**	**191**	P	**P**	**07 45 07.7**	**-1.5**
STKA	**Stephens Creek**	**36.98**	**244**	P	**P**	**07 47 37.0**	**+0.7**
	2.4nm,0.6s,baz=89,slow=13,SNR=4.4						
	2.4nm,0.6s						
ASAR	**Alice Springs**	**43.74**	**257**	P	**P**	**07 48 30.4**	**+0.4**
	7.3nm,0.6s,baz=96,slow=7.6,SNR=106						
ASAR				S	**S**	**07 54 16.2**	**-0.9**
	1.3nm,0.8s,baz=92,slow=17,SNR=6.4						
	7.3nm,0.6s						
WRA	**Warramunga Arr**	**43.85**	**263**	P	**P**	**07 48 30.7**	**-0.1**
	3.4nm,0.3s,baz=97,slow=7.6,SNR=320						
	3.4nm,0.3s						
VNDA	**Vanda**	**57.47**	**185**	P	**P**	**07 50 09.7**	**+1.4**
	0.6nm,0.6s,baz=358,slow=6.1,SNR=6.8						
	0.6nm,0.6s						
NVAR	**Mina Array Bea**	**81.79**	**44**	P	**P**	**07 52 34.1**	**+0.9**
	0.7nm,0.8s,baz=237,slow=5.9,SNR=4.5						
	0.7nm,0.8s						
TXAR	**Lajitas Array**	**87.86**	**58**	P	**P**	**07 53 04.0**	**+1.3**
	0.3nm,0.8s,baz=207,slow=7.0,SNR=3.8						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**88.84**	**13**	P	**P**	**07 53 05.2**	**-1.0**
	0.4nm,0.7s,baz=221,slow=5.2,SNR=4.7						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**89.58**	**290**	P	**P**	**07 53 12.8**	**+2.1**
	1.0nm,0.3s,baz=134,slow=3.6,SNR=5.1						
PDAR	**Pinedale Array**	**89.72**	**44**	P	**P**	**07 53 11.6**	**+0.4**
	0.4nm,0.7s,baz=177,slow=2.7,SNR=4.8						
	0.4nm,0.7s						
ARCES	**ARCESS Array B**	**129.17**	**349**	PKP	**PKPdf**	**07 59 15.8**	**+0.2**
	2.7nm,0.9s,baz=62,slow=5.6,SNR=4.6						
FINES	**FINESS Array B**	**135.94**	**343**	PKP	**PKPdf**	**07 59 26.5**	**-2.0**
	2.2nm,0.9s,baz=48,slow=2.1,SNR=2.4						
AKASG	**Malin Array Be**	**143.00**	**330**	PKP	**PKPdf**	**07 59 39.2**	**-2.4**
	3.5nm,0.5s,baz=43,slow=4.4,SNR=24						
BRTR	**Keskin Array B**	**146.57**	**311**	PKPbc	**PKPbc**	**07 59 50.7**	**-0.3**
	0.9nm,0.6s,baz=141,slow=4.0,SNR=3.7						
GERES	**GERESS Array B**	**150.37**	**343**	PKPbc	**PKPbc**	**07 59 57.9**	**-2.1**
	0.4nm,0.6s,baz=11,slow=1.4,SNR=5.2						

*NOU **15** 07:48:29.8, 37°.79S×175°.97E, h255km, MLv3.9/7, North Island, New Zealand*
*WEL **15** 07:48:43.0±0.6, 38°.S±4°.×17°.6E±°., h163km±5km, M2.7/31, MLv2.7/31, Error ellipse: s-maj=0.0km s-min=0.0km az=18.6*

ISC 15 07:48:37.9±1.8, 38°.44S±0°.05×175°.67E±0°.05, h201km±9km, n95, σ1s71/109, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLZ	**Tolley Road**	**0.15**	**317**	P	**Pn**	**07 49 06.0**	**+1.6**
HIZ	**Hauiti**	**0.64**	**263**	P	**Pn**	**07 49 04.5**	**-1.2**
TWVZ	**Taurewa**	**0.66**	**196**	P	**Pn**	**07 49 07.6**	**+1.7**
TMVZ	**Te Maari**	**0.68**	**177**	P	**Pn**	**07 49 08.0**	**+1.9**
WTVZ	**West Tongariro**	**0.68**	**185**	P	**Pn**	**07 49 07.7**	**+1.7**
WTVZ				S	**Sn**	**07 49 27.5**	**-0.5**
NNVZ	**North Ngauruho**	**0.69**	**183**	P	**Pn**	**07 49 07.9**	**+1.8**
MRHZ	**Matea Rd**	**0.71**	**124**	P	**Pn**	**07 49 07.2**	**+1.1**
MRHZ				S	**Sn**	**07 49 25.6**	**-2.4**
TOZ	**Tahuroa Road**	**0.72**	**350**	P	**Pn**	**07 49 07.8**	**+1.7**
OTVZ	**Oturere**	**0.72**	**180**	P	**Pn**	**07 49 08.2**	**+1.9**
OTVZ				S	**Sn**	**07 49 27.4**	**-1.1**
NGZ	**Ngauruhoe**	**0.74**	**184**	P	**Pn**	**07 49 08.2**	**+1.8**
NGZ				S	**Sn**	**07 49 28.2**	**-0.4**
SNVZ	**South Ngauruho**	**0.75**	**181**	P	**Pn**	**07 49 08.5**	**+2.0**
SNVZ				S	**Sn**	**07 49 27.9**	**-0.8**
FWVZ	**Far West T-bar**	**0.82**	**186**	P	**Pn**	**07 49 08.7**	**+1.7**
MUGZ	**Murupara**	**0.87**	**93**	P	**Pn**	**07 49 07.9**	**+0.9**
MUGZ				S	**Sn**	**07 49 26.2**	**-3.2**
PKVZ	**Pokaka**	**0.89**	**196**	P	**Pn**	**07 49 09.0**	**+1.9**
PKVZ				S	**Sn**	**07 49 29.3**	**-0.6**
MTVZ	**Mangateitei**	**0.96**	**189**	P	**Pn**	**07 49 09.5**	**+1.9**
MOVZ	**Moawhango**	**0.97**	**176**	P	**Pn**	**07 49 09.2**	**+1.5**
MOVZ				S	**Sn**	**07 49 28.4**	**-2.5**
BKZ	**Black Stump Fm**	**0.97**	**139**	P	**Pn**	**07 49 09.1**	**+1.5**
BKZ				S	**Sn**	**07 49 28.7**	**-2.1**
BKZ	**Black Stump Fm**	**0.97**	**139**	P	**Pn**	**07 49 09.1**	**+1.5**
MTHZ	**Maungataniwha**	**1.01**	**115**	P	**Pn**	**07 49 09.4**	**+1.5**
MTHZ				S	**Sn**	**07 49 29.0**	**-2.1**
RTZ	**Ruatahuna**	**1.05**	**100**	P	**Pn**	**07 49 09.3**	**+1.2**
RTZ				S	**Sn**	**07 49 29.4**	**-2.2**
BHHZ	**Black Hill Sta**	**1.09**	**164**	P	**Pn**	**07 49 10.1**	**+1.6**
BHHZ				S	**Sn**	**07 49 29.7**	**-2.7**
NMHZ	**Naumai**	**1.11**	**127**	P	**Pn**	**07 49 11.1**	**+2.4**
NMHZ				S	**Sn**	**07 49 32.3**	**-0.2**
KWHZ	**Kaweka Forest**	**1.15**	**149**	P	**Pn**	**07 49 10.7**	**+1.9**
URZ	**Urewera**	**1.15**	**82**	P	**Pn**	**07 49 09.6**	**+0.8**
RAHZ	**Arahi**	**1.21**	**114**	P	**Pn**	**07 49 11.2**	**+1.9**
RAHZ				S	**Sn**	**07 49 32.7**	**-1.0**
MCHZ	**McNeill Hill**	**1.29**	**142**	P	**Pn**	**07 49 12.3**	**+2.5**
ARHZ	**Aropaoanui**	**1.33**	**129**	P	**Pn**	**07 49 12.3**	**+2.1**
SNGZ	**Shannon Statio**	**1.36**	**105**	P	**Pn**	**07 49 12.2**	**+1.7**
WHHZ	**Waihua**	**1.38**	**118**	P	**Pn**	**07 49 12.6**	**+2.0**
MKAZ	**Moumakai**	**1.39**	**343**	P	**Pn**	**07 49 12.8**	**+2.0**
WAZ	**Wanganui**	**1.42**	**202**	P	**Pn**	**07 49 13.2**	**+2.2**
MWZ	**Matawai**	**1.47**	**87**	P	**Pn**	**07 49 12.6**	**+1.1**
NEZ	**North Egmont**	**1.48**	**235**	P	**Pn**	**07 49 14.5**	**+2.9**
PNHZ	**Pukenui**	**1.53**	**164**	P	**Pn**	**07 49 13.9**	**+1.9**
KHEZ	**Kahui Hut**	**1.55**	**236**	P	**Pn**	**07 49 15.1**	**+2.9**
KHEZ	**Kahui Hut**	**1.55**	**236**	P	**Pn**	**07 49 15.2**	**+3.0**
ETAZ	**East Tamaki Re**	**1.59**	**338**	P	**Pn**	**07 49 14.6**	**+2.1**
AWAZ	**Awhitu Peninsu**	**1.59**	**329**	P	**Pn**	**07 49 12.8**	**+0.2**
TSZ	**Takapari Road**	**1.64**	**172**	P	**Pn**	**07 49 14.9**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.64**	**138**	P	**Pn**	**07 49 15.2**	**+2.2**
KAHZ	**Kahuranaki**	**1.65**	**146**	P	**Pn**	**07 49 15.4**	**+2.3**
RUGZ	**Raukumara Rang**	**1.65**	**74**	P	**Pn**	**07 49 13.6**	**+0.3**
RIGZ	**Rimuhau**	**1.67**	**100**	P	**Pn**	**07 49 14.9**	**+1.7**
KNZ	**Kokohu**	**1.68**	**111**	P	**Pn**	**07 49 15.1**	**+1.8**
TKGZ	**Te Karaka**	**1.71**	**91**	P	**Pn**	**07 49 15.7**	**+2.1**
WPHZ	**Waipukurau**	**1.73**	**160**	P	**Pn**	**07 49 15.8**	**+2.0**
MBAZ	**Motutapu North**	**1.77**	**340**	P	**Pn**	**07 49 16.4**	**+2.1**
HAZ	**Te Kaha**	**1.80**	**69**	P	**Pn**	**07 49 15.2**	**+0.7**
TWGZ	**Tauwhareparae**	**1.84**	**83**	P	**Pn**	**07 49 17.1**	**+2.1**
PXZ	**Pawanui**	**1.84**	**150**	P	**Pn**	**07 49 16.8**	**+2.0**
MHGZ	**Mahia Peninsul**	**1.89**	**113**	P	**Pn**	**07 49 17.3**	**+2.0**
DVHZ	**Dannevirke**	**1.90**	**168**	P	**Pn**	**07 49 17.1**	**+1.6**
POWZ	**Post Office Ro**	**1.95**	**178**	P	**Pn**	**07 49 17.7**	**+1.8**
PRHZ	**Porangahau**	**1.98**	**158**	P	**Pn**	**07 49 18.1**	**+1.9**
PKGZ	**Pakihiroa**	**1.98**	**75**	P	**Pn**	**07 49 17.8**	**+1.5**
CNGZ	**Carnagh Statio**	**2.00**	**92**	P	**Pn**	**07 49 18.6**	**+2.2**
PUZ	**Puketiti**	**2.07**	**81**	P	**Pn**	**07 49 18.7**	**+1.4**
ANWZ	**Angora Road**	**2.12**	**163**	P	**Pn**	**07 49 19.6**	**+2.0**
PRWZ	**Pori Road**	**2.13**	**174**	P	**Pn**	**07 49 19.8**	**+2.0**
MRZ	**Mangatainoka R**	**2.22**	**182**	P	**Pn**	**07 49 20.3**	**+1.5**
WMGZ	**Waiomatatini S**	**2.25**	**75**	P	**Pn**	**07 49 20.6**	**+1.4**
MXZ	**Matakaoa Point**	**2.26**	**68**	P	**Pn**	**07 49 20.8**	**+1.6**
BFZ	**Birch Farm**	**2.29**	**169**	P	**Pn**	**07 49 21.0**	**+1.5**
BFZ	**Birch Farm**	**2.29**	**169**	P	**Pn**	**07 49 21.2**	**+1.7**
TIWZ	**Tintock**	**2.34**	**176**	P	**Pn**	**07 49 21.9**	**+1.8**
OGWZ	**Otaki Gorge**	**2.41**	**189**	P	**Pn**	**07 49 22.4**	**+1.6**
HOWZ	**Holdsworth Sta**	**2.46**	**183**	P	**Pn**	**07 49 22.8**	**+1.4**
KIW	**Kapiti Island**	**2.49**	**193**	P	**Pn**	**07 49 23.1**	**+1.3**
TMWZ	**Te Maipa**	**2.67**	**176**	P	**Pn**	**07 49 25.2**	**+1.4**
CAW	**Cannon Point**	**2.71**	**190**	P	**Pn**	**07 49 25.5**	**+1.3**
DUWZ	**D'Urville Isla**	**2.72**	**209**	P	**Pn**	**07 49 25.6**	**+1.3**
MTW	**Mount Morrison**	**2.72**	**183**	P	**Pn**	**07 49 25.4**	**+1.1**
WEL	**Wellington**	**2.93**	**193**	P	**Pn**	**07 49 28.0**	**+1.3**
SNZO	**South Karori**	**2.96**	**194**	P	**Pn**	**07 49 28.9**	**+1.8**
TCW	**Tory Channel**	**2.97**	**201**	P	**Pn**	**07 49 28.5**	**+1.3**
MSWZ	**Moikau Station**	**2.99**	**186**	P	**Pn**	**07 49 28.4**	**+1.0**
PLWZ	**Palliser**	**3.14**	**186**	P	**Pn**	**07 49 30.2**	**+0.9**
TUWZ	**Tuamarina**	**3.27**	**203**	P	**Pn**	**07 49 31.7**	**+1.0**
NNZ	**Nelson**	**3.29**	**212**	P	**Pn**	**07 49 31.9**	**+1.0**
QRZ	**Quartz Range**	**3.40**	**224**	P	**Pn**	**07 49 32.9**	**+0.6**
QRZ	**Quartz Range**	**3.40**	**224**	P	**Pn**	**07 49 35.0**	**+2.7**
BSWZ	**Blackbirch Sta**	**3.55**	**202**	P	**Pn**	**07 49 35.3**	**+1.1**
MRNZ	**Matariki Terra**	**3.71**	**216**	P	**Pn**	**07 49 36.8**	**+0.7**
THZ	**Tophouse**	**3.94**	**212**	P	**Pn**	**07 49 40.5**	**+1.6**
KHZ	**Kahutara**	**4.29**	**202**	P	**Pn**	**07 49 44.5**	**+1.2**
KHZ	**Kahutara**	**4.29**	**202**	P	**Pn**	**07 49 44.7**	**+1.4**
DSZ	**Denniston Nort**	**4.44**	**221**	P	**Pn**	**07 49 45.5**	**+0.3**
GVZ	**Greta Valley S**	**4.95**	**203**	P	**Pn**	**07 49 52.3**	**+0.6**
LTZ	**Lake Taylor**	**5.05**	**210**	P	**Pn**	**07 49 53.7**	**+0.7**
INZ	**Inchbonnie**	**5.35**	**216**	P	**Pn**	**07 49 57.9**	**+1.2**
OKCZ	**Okains Bay**	**5.64**	**200**	P	**Pn**	**07 50 00.9**	**+0.5**
MQZ	**McQueen's Vall**	**5.73**	**202**	P	**Pn**	**07 50 01.2**	**-0.4**
RPZ	**Rata Peaks**	**6.32**	**212**	P	**Pn**	**07 50 09.7**	**+0.5**
TMZ	**Timaru**	**6.89**	**209**	P	**Pn**	**07 50 16.9**	**+0.1**
ODZ	**Otahua Downs**	**7.59**	**208**	P	**Pn**	**07 50 27.0**	**+1.3**

*SNET **15** 08:03:30.2±1.0, 12°.99N×88°.74W, h55km±9km, ML3.7*
*UCR **15** 08:03:30.2±1.1, 12°.94N×88°.76W, h35km±10km, ML3.7*
*INET **15** 08:03:33.6±1.4, 13°.06N×88°.42W, h15km, ML3.6*

ISC 15 08:03:30.6±1.4, 13°.00N±0°.08×88°.72W±0°.04, h60km±13km, n51, σ0s59/84, 4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.53**	**20**	*eP*	**Pn**	**08 03 42.5**	**-0.5**
COEB				*eS*	**Sn**	**08 03 52.1**	**0.0**
COEB	**Comit de Eme**	**0.53**	**20**	*eP*	**Pn**	**08 03 42.5**	**-0.5**
COEB				*eS*	**Sn**	**08 03 52.1**	**0.0**
PACA	**Pacayal**	**0.61**	**39**	*eP*	**Pn**	**08 03 43.9**	**0.0**
PACA				*eS*	**Sn**	**08 03 54.3**	**+0.7**
PACA	**Pacayal**	**0.61**	**39**	*eP*	**Pn**	**08 03 43.9**	**0.0**
PACA				*eS*	**Sn**	**08 03 54.3**	**+0.7**
SNVI	**San Vicente**	**0.62**	**349**	*eP*	**Pn**	**08 03 43.7**	**-0.4**
SNVI	**San Vicente**	**0.62**	**349**	*eP*	**Pn**	**08 03 43.7**	**-0.4**
COEG	**Centro de Oper**	**0.64**	**346**	*eP*	**Pn**	**08 03 43.6**	**-0.6**
COEG				*eS*	**Sn**	**08 03 53.8**	**-0.3**
COEG				IAML		08 03 58.5	
	comp=Z,4μm,0.3s						
COEG	**Centro de Oper**	**0.64**	**346**	*eP*	**Pn**	**08 03 43.6**	**-0.6**
COEG				*eS*	**Sn**	**08 03 53.8**	**-0.3**
COEG				IAML		08 03 58.5	
	comp=Z,4μm,0.3s						
PQSS	**Presa 15 de Se**	**0.64**	**14**	*eP*	**Pn**	**08 03 44.1**	**-0.1**
PQSS				*eS*	**Sn**	**08 03 54.9**	**+

λ-128.97000°. Principal axes: T 4.1890, Plg11.0000°, Azm123.0000°; N 0.4819, Plg24.0000°, Azm218.0000°; P -4.6708, Plg64.0000°, Azm10.0000°;

DJA **15** 08:03:38.9±0.2,4˚S±2˚×15˚0E±˚,h451km±2km,M5.6/98, mB5.9/84, mb5.8/98, MLv6.2/3, Mw(mB)5.5/84, MwMwp5.7/55, Mwp5.8/55

NEIC **15** 08:03:38.1±2.0,4˚27S±0˚.08×150˚.36E±0˚.08,h442km±1km, mb6.0/142, Mwb6.4/45, Mwc6.3/93, Mww6.3, Error ellipse: s-maj=14.2km s-min=13.9km az=204.0

KLM **15** 08:03:39,4˚.25S×150˚.35E,h456km,mb5.8

NEIC **15** 08:03:41,4˚.17S×150˚.31E,h460km,Moment Tensor Solution. Duration:5s2 Moment tensor: Scale 1018Nm; Mrr=2.93; Mθθ0.57; Mφφ2.36; Mrθ-1.75; Mθφ 1.62; Mφr0.12; Fault plane solution: M0 3.60000×1018 NP1: φs188.00000°,δ43.00000°,λ-127.00000°. NP2: φs54.00000°,δ57.00000°,λ-60.00000°. Principal axes: T 3.4242, Plg8.0000°, Azm124.0000°; N 0.3225, Plg24.0000°, Azm217.0000°; P -3.7467, Plg64.0000°, Azm17.0000°;

GCMT **15** 08:03:41.2±0.1,4˚.16S±0˚.01×150˚.40E,h453km, MW6.3/174, Moment Tensor Solution. s174,c451; s167,c263; Duration: 3s5 Moment tensor: Scale 1018 Nm; Mrr=3.02±.01; Mθθ0.56±.03; Mφφ2.46±.03; Mrθ-1.97±.02; Mθφ 1.82±.02; Mφr-0.11±.02; Best double couple: M0 3.86200×1018 NP1:φs55.00000°,δ60.00000°, λ-62.00000°. NP2:φs188.00000°,δ41.00000°, λ-129.00000°. Principal axes: T 3.7630, Plg10.0000°, Azm125.0000°; N 0.1940, Plg24.0000°, Azm220.0000°; P -3.9610, Plg63.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function

NEIC **15** 08:03:52.2,4˚.29S×150˚.16E,h461km,Moment Tensor Solution. Duration: 7s8 Moment tensor: Scale 1018Nm; Mrr=3.17; Mθθ1.04; Mφφ2.13; Mrθ-1.65; Mθφ 1.43; Mφr-0.27; Fault plane solution: M0 3.54000×1018 NP1: φs198.95000°,δ37.08000°,λ-117.85000°. NP2: φs52.47000°,δ57.78000°,λ-70.55000°. Principal axes: T 3.3297, Plg11.0000°, Azm129.0000°; N 0.4146, Plg16.0000°, Azm222.0000°; P -3.7443, Plg70.0000°, Azm7.0000°;

ISC 15 08:03:38.5±0.2,4˚31S±0˚.02×150˚.40E±0˚.03,h456km±1km, h457km±pP-P,n1927,σ1s54/2517,mb6.0/267,25C-158D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.62**	**90**	P	**P**	**08 04 37.0**	**-0.7**
	13μm,0.5s,baz=208,slow=0.5,SNR=368						
KRVT				S	**S**	**08 05 24.5**	**-1.1**
	8μm,0.8s,baz=191,slow=24,SNR=31						
RABL	**Rabaul**	**1.77**	**86**	P	**P**	**08 04 36.7**	**-1.7**
RABL	**Rabaul**	**1.77**	**86**	P	**P**	**08 04 37.6**	**-0.8**
MANU	**Manus Island**	**3.77**	**307**	P	**P**	**08 04 53.6**	**+1.5**
PMG	**Port Moresby**	**6.00**	**212**	P	**P**	**08 05 14.1**	**+1.1**
	4μm,0.9s,baz=26,slow=8.9,SNR=222						
PMG				S	**S**	**08 06 29.1**	**-1.1**
	825nm,0.6s,baz=210,slow=14,SNR=1.2						
PMG	**Port Moresby**	**6.00**	**212**	P	**P**	**08 05 13.7**	**+0.7**
PMG	**Port Moresby**	**6.00**	**212**	*d* P	**P**	**08 05 13.9**	**+0.8**
PMG				pmax	pmax		
	comp=Z,8μm,1.3s						
PMG	**Port Moresby**	**6.00**	**212**	P	**P**	**08 05 15.7**	**+2.6**
	comp=Z,20nmcomp=Z,110μmcomp=Z,59μmcomp=Z,6μm,1.2s						
PMG	**Port Moresby**	**6.00**	**212**	P	**P**	**08 05 14.4**	**+1.3**
PMG	**Port Moresby**	**6.00**	**212**	P	**P**	**08 05 14.2**	**+1.1**
GENI	**Genyem**	**10.35**	**279**	P	**P**	**08 05 59.4**	**-0.1**
	comp=Z,82μcomp=Z,68μmcomp=Z,7μm,1.1s						
GENI	**Genyem**	**10.35**	**279**	P	**P**	**08 06 00.6**	**+1.1**
HNR	**Honiara**	**10.76**	**119**	P	**P**	**08 06 03.9**	**0.0**
	comp=Z,251μm,0.9s,baz=182,slow=5.0,SNR=103						
HNR				S	**S**	**08 08 06.4**	**+2.7**
	comp=Z,30μm,0.8s,baz=206,slow=20,SNR=2.0						
HNR	**Honiara**	**10.76**	**119**	P	**P**	**08 06 03.3**	**-0.6**
HNR	**Honiara**	**10.76**	**119**	P	**P**	**08 06 04.8**	**+0.9**
SMPI	**Sarmi**	**11.89**	**281**	P	**P**	**08 06 17.5**	**+1.2**
	comp=Z,75μmcomp=Z,144μmcomp=Z,11μm,1.1s						
COEN	**Coen**	**11.95**	**216**	P	**P**	**08 06 18.8**	**+2.0**
	baz=12,SNR=127						
COEN	**Coen**	**11.95**	**216**	P	**P**	**08 06 18.3**	**+1.5**
COEN	**Coen**	**11.95**	**216**	P	**P**	**08 06 18.9**	**+2.1**
PATS	**Pohnpei**	**13.60**	**36**	P	**P**	**08 06 35.3**	**+0.7**
	baz=14,SNR=258						
PATS	**Pohnpei**	**13.60**	**36**	P	**P**	**08 06 34.5**	**-0.1**
PATS	**Pohnpei**	**13.60**	**36**	P	**P**	**08 06 35.3**	**+0.7**
SRPI	**Serui, Papua**	**14.34**	**279**	P	**P**	**08 06 42.8**	**+0.2**
	comp=Z,21μmcomp=Z,33μmcomp=Z,3μm,1.2s						
MTSU	**Mount Surprise**	**14.97**	**203**	P	**P**	**08 06 51.1**	**+1.8**
	baz=15,SNR=129						
MTSU	**Mount Surprise**	**14.97**	**203**	P	**P**	**08 06 51.1**	**+1.8**
TV1H	**Townsville Har**	**15.27**	**193**	P	**P**	**08 06 54.1**	**+1.7**
CTA	**Charters Tower**	**16.20**	**194**	P	**P**	**08 07 03.6**	**+1.4**
	comp=Z,224nm,0.6s,baz=11,slow=11,SNR=128						
CTA				S	**S**	**08 09 54.0**	**+3.5**
	comp=Z,69nm,1.0s,baz=20,slow=7.5,SNR=1.1						
CTA	**Charters Tower**	**16.20**	**194**	P	**P**	**08 07 03.6**	**+1.4**
CTAO	**Charters Tower**	**16.20**	**194**	P	**P**	**08 07 03.4**	**+1.2**
CTAO	**Charters Tower**	**16.20**	**194**	P	**P**	**08 07 03.4**	**+1.2**
CTAO	**Charters Tower**	**16.20**	**194**	P	**P**	**08 07 03.6**	**+1.4**
RKPI	**Ransiki, Papua**	**16.43**	**279**	P	**P**	**08 07 04.3**	**-0.5**
	comp=Z,26μmcomp=Z,27μmcomp=Z,3μm,0.8s						
MWPI	**Manokwari, Pap**	**16.68**	**281**	P	**P**	**08 07 07.4**	**0.0**
	comp=Z,25μmcomp=Z,24μmcomp=Z,2μm,0.9s						
FAKI	**Fak Fak**	**18.16**	**274**	P	**P**	**08 07 21.7**	**-1.0**
FAKI	**Fak Fak**	**18.16**	**274**	P	**P**	**08 07 22.1**	**-0.7**
	comp=Z,21μmcomp=Z,20μmcomp=Z,3μm,0.9s						
FAKI	**Fak Fak**	**18.16**	**274**	P	**P**	**08 07 22.3**	**-0.5**
GUMO	**Guam**	**18.61**	**343**	P	**P**	**08 07 26.0**	**-0.8**
	comp=Z,1μm,0.8s,baz=145,slow=4.5,SNR=37						
GUMO				S	**S**	**08 10 31.4**	**-2.2**
	comp=Z,299nm,1.0s,baz=343,slow=21,SNR=6.6						
GUMO	**Guam**	**18.61**	**343**	P	**P**	**08 07 25.8**	**-1.1**
GUMO	**Guam**	**18.61**	**343**	P	**P**	**08 07 26.1**	**-0.8**
RK1H	**Rockhampton Ha**	**18.97**	**180**	P	**P**	**08 07 31.2**	**+1.1**
QIS	**Mount Isa**	**19.27**	**212**	P	**P**	**08 07 33.5**	**+0.6**
	baz=19,SNR=501						
QIS	**Mount Isa**	**19.27**	**212**	P	**P**	**08 07 33.8**	**+0.8**
SAUI	**Saumlaki**	**19.33**	**258**	P	**P**	**08 07 34.5**	**+0.9**
SAUI	**Saumlaki**	**19.33**	**258**	P	**P**	**08 07 34.8**	**+1.2**
	comp=Z,14μmcomp=Z,30μmcomp=Z,3μm,1.3s						
SAUI	**Saumlaki**	**19.33**	**258**	P	**P**	**08 07 35.7**	**+2.1**
SIJI	**Sorong**	**19.41**	**280**	P	**P**	**08 07 34.4**	**0.0**
	comp=Z,1μm,0.7s,baz=81,slow=8.0,SNR=110						
SIJI				S	**S**	**08 10 50.4**	**+3.6**
	comp=Z,42nm,0.9s,baz=96,slow=19,SNR=1.0						
SIJI				PcP	**PcP**	**08 11 34.9**	**+1.1**
	comp=Z,59nm,0.8s,baz=105,slow=16,SNR=1.9						
SIJI				ScP	**ScP**	**08 14 26.3**	**0.0**
	comp=Z,36nm,0.6s,baz=65,slow=9.1,SNR=5.5						
SIJI	**Sorong**	**19.41**	**280**	P	**P**	**08 07 34.4**	**0.0**
	comp=Z,14μmcomp=Z,23μmcomp=Z,2μm,1.2s						
SWI	**Sorong**	**19.42**	**280**	P	**P**	**08 07 34.6**	**+0.2**
SWI				pmax	pmax		
	comp=Z,3μm,1.2s						
SWI	**Sorong**	**19.42**	**280**	P	**P**	**08 07 34.8**	**+0.4**
	comp=Z,16μmcomp=Z,27μmcomp=Z,3μm,1.2s						
KDU	**Kakadu**	**19.57**	**244**	P	**P**	**08 07 35.1**	**-0.6**
	baz=20,SNR=436						
KDU	**Kakadu**	**19.57**	**244**	P	**P**	**08 07 35.6**	**-0.2**
BNDI	**Bandanaira**	**20.43**	**269**	P	**P**	**08 07 45.5**	**+1.8**
	comp=Z,9μmcomp=Z,23μmcomp=Z,2μm,1.6s						
BNDI	**Bandanaira**	**20.43**	**269**	P	**P**	**08 07 45.1**	**+1.4**
MTN	**Manton Dam**	**20.84**	**245**	P	**P**	**08 07 46.6**	**-0.7**
	baz=21,SNR=48						
MTN	**Manton Dam**	**20.84**	**245**	P	**P**	**08 07 46.8**	**-0.5**
MTN	**Manton Dam**	**20.84**	**245**	P	**P**	**08 07 47.9**	**+0.6**
EIDS	**Eidsvold**	**20.95**	**178**	P	**P**	**08 07 48.9**	**+0.7**
	baz=21,SNR=66						
EIDS	**Eidsvold**	**20.95**	**178**	P	**P**	**08 07 48.8**	**+0.5**
EIDS	**Eidsvold**	**20.95**	**178**	P	**P**	**08 07 50.0**	**+1.8**
KOUNC	**Koumac, New Ca**	**21.05**	**141**	P	**P**	**08 07 51.1**	**+1.9**
MSAI	**Masohi**	**21.44**	**272**	P	**P**	**08 07 51.9**	**-1.0**
	comp=Z,75nm,0.7s						
KWAJ	**Kwajalein Atol**	**21.55**	**53**	P	**P**	**08 07 53.5**	**-0.2**
KWAJ	**Kwajalein Atol**	**21.55**	**53**	P	**P**	**08 07 53.5**	**-0.2**
KWAJ	**Kwajalein Atol**	**21.55**	**53**	P	**P**	**08 07 54.4**	**+0.7**
WB0	**Warramunga Arr**	**21.90**	**224**	P	**P**	**08 07 56.8**	**-0.1**
WR0	**Warramunga Arr**	**21.93**	**223**	P	**P**	**08 07 57.1**	**-0.1**
KRAI	**Karang Ratu**	**21.98**	**272**	P	**P**	**08 07 58.8**	**+1.1**
	comp=Z,5μmcomp=Z,287nm,0.7s						
WRAB	**Tennant Creek**	**22.04**	**224**	P	**P**	**08 07 58.0**	**-0.2**
WRAB	**Tennant Creek**	**22.04**	**224**	*d* P	**P**	**08 07 58.4**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,676nm,1.3s						
WRAB	**Tennant Creek**	**22.04**	**224**	P	**P**	**08 07 58.8**	**+0.6**
WB2	**Warramunga Arr**	**22.05**	**224**	P	**P**	**08 07 57.9**	**-0.4**
WRA	**Warramunga Arr**	**22.05**	**224**	P	**P**	**08 07 58.8**	**+0.4**
	comp=Z,353nm,0.8s,baz=47,slow=9.4,SNR=458						
WRA				S	**S**	**08 11 27.5**	**-1.5**
	comp=Z,34nm,0.8s,baz=43,slow=8.7,SNR=2.0						
WRA				ScP	**ScP**	**08 14 33.2**	**+0.6**
	comp=Z,29nm,0.6s,baz=49,slow=2.7,SNR=8.3						
WRA				PKiKP	**PKiKP**	**08 19 22.9**	**-1.5**
	comp=Z,4.2nm,0.7s,baz=352,slow=0.9,SNR=6.9						
WRA				P3KPbc		08 41 20.2	
	comp=Z,0.5nm,0.6s,baz=228,slow=2.8,SNR=8.5						
	comp=Z,353nm,0.8s						
RMQ	**Roma**	**22.11**	**184**	P	**P**	**08 07 59.5**	**+0.8**
	baz=22,SNR=15						
RMQ	**Roma**	**22.11**	**184**	P	**P**	**08 07 59.7**	**+1.0**
AAI	**Ambon**	**22.16**	**271**	P	**P**	**08 07 59.2**	**-0.1**
AAI				pmax	pmax		
	comp=Z,860nm,0.9s						
AAI	**Ambon**	**22.16**	**271**	P	**P**	**08 08 00.5**	**+1.2**
	comp=Z,7μmcomp=Z,870nm,0.9s						
RTV	**Rentapao**	**22.16**	**129**	P	**P**	**08 08 02.2**	**+2.9**
QLP	**Quilpie**	**22.92**	**194**	P	**P**	**08 08 07.0**	**+1.0**
	baz=23,SNR=27						
QLP	**Quilpie**	**22.92**	**194**	P	**P**	**08 08 07.3**	**+1.3**
	comp=Z,183nm,0.9s						
LIFNC	**LIFOU**	**23.16**	**136**	P	**P**	**08 08 09.0**	**+0.8**
LIFNC	**LIFOU**	**23.16**	**136**	P	**P**	**08 08 09.1**	**+0.9**
LBMI	**Labuha**	**23.16**	**278**	P	**P**	**08 08 12.1**	**+3.7**
	comp=Z,11μmcomp=Z,1μm,0.9s						
TARA	**Tarawa**	**23.20**	**76**	P	**P**	**08 08 08.8**	**+0.1**
NLAI	**Namlea**	**23.27**	**272**	P	**P**	**08 08 08.3**	**-1.1**
	comp=Z,26μcomp=Z,241nm,0.7s						
GAMI	**Galela, Maluku**	**23.40**	**285**	P	**P**	**08 08 13.8**	**+3.2**
	comp=Z,12μcomp=Z,6μcomp=Z,280nm,0.8s						
NOUC	**Port Laguerre**	**23.46**	**140**	P	**P**	**08 08 11.8**	**+0.9**
DZM	**Mont Dzumac**	**23.53**	**140**	*e* Pn	**P**	**08 08 12.0**	**+0.3**
	comp=Z,3μm,1.4s						
DZM				*e* pP	**pP**	**08 09 26.2**	**-2.2**
	comp=Z,706nm,1.3s						
DZM				*e* S	**S**	**08 11 54.2**	**+1.8**
	comp=Z,20μm,26.6s						
DZM	**Mont Dzumac**	**23.53**	**140**	P	**P**	**08 08 12.2**	**+0.6**
	comp=Z,524nm,0.9s,baz=93,slow=5.0,SNR=157						
DZM				S	**S**	**08 11 53.5**	**+1.1**
	comp=Z,29nm,1.0s,baz=272,slow=10,SNR=1.1						
DZM				ScP	**ScP**	**08 14 39.6**	**+3.0**
	comp=Z,66nm,0.8s,baz=116,slow=2.7,SNR=7.6						
	comp=Z,524nm,0.9s						
DZM	**Mont Dzumac**	**23.53**	**140**	P	**P**	**08 08 11.8**	**+0.1**
DZM	**Mont Dzumac**	**23.53**	**140**	P	**P**	**08 08 12.6**	**+0.9**
TNTI	**Ternate**	**23.56**	**282**	P	**P**	**08 08 12.3**	**+0.4**
TNTI	**Ternate**	**23.56**	**282**	P	**P**	**08 08 15.1**	**+3.2**
	comp=Z,5μcomp=Z,3μcomp=Z,248nm,1.2s						
ONTNC	**Ouen Toro**	**23.71**	**140**	P	**P**	**08 08 13.0**	**-0.2**
ONTNC	**Ouen Toro**	**23.71**	**140**	P	**P**	**08 08 13.6**	**+0.5**
YATNC	**Mamie plateau,**	**23.81**	**139**	P	**P**	**08 08 16.1**	**+2.0**
OUENC	**Ouen Island, N**	**24.04**	**140**	P	**P**	**08 08 16.4**	**+0.4**
OUENC	**Ouen Island, N**	**24.04**	**140**	P	**P**	**08 08 16.7**	**+0.6**
KNRA	**Kununurra**	**24.08**	**240**	P	**P**	**08 08 15.8**	**-0.8**
	baz=24,SNR=31						
KNRA	**Kununurra**	**24.08**	**240**	P	**P**	**08 08 15.8**	**-0.8**
KNRA	**Kununurra**	**24.08**	**240**	P	**P**	**08 08 16.3**	**-0.3**
MARNC	**Mare, Loyalty**	**24.17**	**136**	P	**P**	**08 08 17.4**	**+0.1**
MARNC	**Mare, Loyalty**	**24.17**	**136**	P	**P**	**08 08 18.3**	**+1.0**
SANI	**Sanana**	**24.47**	**274**	P	**P**	**08 08 19.0**	**-1.1**
	comp=Z,7μcomp=Z,3μcomp=Z,250nm,0.8s						
SANI	**Sanana**	**24.47**	**274**	P	**P**	**08 08 20.1**	**0.0**
AS01	**Alice Springs**	**24.95**	**218**	P	**P**	**08 08 24.6**	**+0.4**
AS31	**Alice Springs**	**24.97**	**218**	P	**P**	**08 08 24.5**	**0.0**
ASAR	**Alice Springs**	**24.98**	**218**	P	**P**	**08 08 24.3**	**-0.2**
	comp=Z,106nm,0.6s,baz=52,slow=8.1,SNR=446						
ASAR				PcP	**PcP**	**08 11 45.4**	**+0.3**
	comp=Z,54nm,0.8s,baz=47,slow=2.1,SNR=4.8						
ASAR				S	**S**	**08 12 12.2**	**-2.8**
	comp=Z,63nm,0.9s,baz=54,slow=13,SNR=5.3						
ASAR				ScP	**ScP**	**08 14 40.6**	**+0.1**
	comp=Z,32nm,0.8s,baz=34,slow=3.3,SNR=4.9						
ASAR				P3KPbc		08 41 10.2	
	comp=Z,0.8nm,0.7s,baz=204,slow=2.2,SNR=4.6						
	comp=Z,106nm,0.6s						
ASAR	**Alice Springs**	**24.98**	**218**	P	**P**	**08 08 24.4**	**-0.1**
ASAR	**Alice Springs**	**24.98**	**218**	P	**P**	**08 08 24.4**	**-0.1**
INKA	**Innaminka**	**25.05**	**201**	P	**P**	**08 08 25.5**	**+0.5**
ARMA	**Armidale**	**26.00**	**178**	P	**P**	**08 08 35.2**	**+1.7**
	baz=26,SNR=157						
ARMA	**Armidale**	**26.00**	**178**	P	**P**	**08 08 34.6**	**+1.1**
ARMA	**Armidale**	**26.00**	**178**	P	**P**	**08 08 35.4**	**+1.9**
SGSI	**Sangihe**	**26.09**	**287**	P	**P**	**08 08 35.3**	**+0.9**
	comp=Z,11μcomp=Z,980nm,0.5s						
SOEI	**Soe**	**26.48**	**257**	P	**P**	**08 08 38.5**	**+0.4**
SOEI	**Soe**	**26.48**	**257**	P	**P**	**08 08 40.4**	**+2.4**
	comp=Z,9μcomp=Z,3μcomp=Z,339nm,0.8s						
SOEI	**Soe**	**26.48**	**257**	P	**P**	**08 08 39.2**	**+1.2**
KMSI	**Cibinong**	**26.84**	**280**	P	**P**	**08 08 40.9**	**-0.1**
	comp=Z,12μcomp=Z,2μm,0.7s						
DAV	**Davao City (W)**	**27.23**	**294**	P	**P**	**08 08 46.1**	**+1.6**
DAV	**Davao City (W)**	**27.23**	**294**	P	**P**	**08 08 45.2**	**+0.7**
	comp=Z,25μcomp=Z,344nm,0.5s						
OOD	**Oodnadatta**	**27.24**	**209**	P	**P**	**08 08 44.3**	**-0.1**
CMSA	**Cobar Meteorol**	**27.45**	**189**	P	**P**	**08 08 46.8**	**+0.6**
	baz=28,SNR=146						
CMSA	**Cobar Meteorol**	**27.45**	**189**	P	**P**	**08 08 47.0**	**+0.8**
BBSI	**Bau Bau**	**27.75**	**266**	P	**P**	**08 08 55.0**	**+5.9**
H11S3	**WAKE ISLAND Hy**	**27.77**	**35**	P	**P**	**08 08 48.5**	**-0.5**
	baz=228,slow=6.7,SNR=85						
H11S2	**WAKE ISLAND Hy**	**27.78**	**35**	P	**P**	**08 08 48.5**	**-0.5**
	baz=228,slow=6.7,SNR=129						
LUWI	**Luwuk**	**27.78**	**276**	P	**P**	**08 08 49.9**	**+0.5**
LUWI	**Luwuk**	**27.78**	**276**	P	**P**	**08 08 51.2**	**+1.8**
	comp=Z,17μcomp=Z,7μcomp=Z,798nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**27.79**	**35**	P	**P**	**08 08 48.6**	**-0.6**
	baz=228,slow=6.7,SNR=134						
GTOI	**Gorontalo**	**27.80**	**280**	P	**P**	**08 08 51.6**	**+2.0**
	comp=Z,7μcomp=Z,4μcomp=Z,586nm,0.7s						
LHI	**Lord Howe Isla**	**28.27**	**164**	P	**P**	**08 08 55.1**	**+1.7**
	baz=28,SNR=20						
LHI	**Lord Howe Isla**	**28.27**	**164**	P	**P**	**08 08 53.9**	**+0.5**
LHI	**Lord Howe Isla**	**28.27**	**164**	P	**P**	**08 08 55.7**	**+2.3**
MMRI	**Maumere**	**28.30**	**260**	P	**P**	**08 08 52.5**	**-1.4**
MMRI	**Maumere**	**28.30**	**260**	P	**P**	**08 08 53.3**	**-0.6**
	comp=Z,10μcomp=Z,5μcomp=Z,393nm,1.0s						
MMRI	**Maumere**	**28.30**	**260**	P	**P**	**08 08 54.8**	**+0.9**
WAKE	**Wake Island**	**28.38**	**34**	P	**P**	**08 08 53.7**	**-0.8**
LCRK	**Leigh Creek**	**28.43**	**203**	P	**P**	**08 08 54.9**	**+0.1**
STKA	**Stephens Creek**	**28.64**	**196**	P	**P**	**08 08 56.4**	**-0.2**
	comp=Z,40nm,0.6s,baz=356,slow=8.7,SNR=88						
STKA				S	**S**	**08 13 10.2**	**-2.0**
	comp=Z,34nm,0.8s,baz=189,slow=19,SNR=2.2						
STKA				ScP	**ScP**	**08 14 52.7**	**+1.3**
	comp=Z,61nm,1.1s,baz=349,slow=9.6,SNR=4.2						
	comp=Z,40nm,0.6s						
STKA	**Stephens Creek**	**28.64**	**196**	P	**P**	**08 08 56.5**	**-0.2**
	baz=29,SNR=84						
STKA	**Stephens Creek**	**28.64**	**196**	P	**P**	**08 08 56.8**	**+0.1**
STKA	**Stephens Creek**	**28.64**	**196**	*c i* P	**P**	**08 08 56.2**	**-0.5**
STKA	**Stephens Creek**	**28.64**	**196**	P	**P**	**08 08 56.5**	**-0.2**
KKSI	**Kolaka, Sulawe**	**28.67**	**269**	P	**P**	**08 08 59.3**	**+2.1**
	comp=Z,3μcomp=Z,238nm,0.6s						
MRSI	**Marisa**	**28.83**	**279**	P	**P**	**08 08 58.0**	**-0.6**
	comp=Z,18μcomp=Z,3μcomp=Z,307nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**28.86**	**34**	P	**P**	**08 08 58.1**	**-0.4**
	baz=218,slow=13,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.87**	**34**	P	**P**	**08 08 58.7**	**+0.1**
	baz=218,slow=13,SNR=30						
H11N2	**WAKE ISLAND Hy**	**28.88**	**34**	P	**P**	**08 08 58.9**	**+0.3**
	baz=218,slow=13,SNR=13						
APSI	**Ampana**	**28.91**	**276**	P	**P**	**08 08 59.3**	**0.0**
	comp=Z,19μcomp=Z,8μcomp=Z,1μm,1.0s						
FUNA	**Funafuti**	**28.91**	**100**	P	**P**	**08 08 59.8**	**+0.5**
FUNA	**Funafuti**	**28.91**	**100**	P	**P**	**08 09 00.4**	**+1.1**
RIV	**Riverview**	**29.38**	**179**	P	**P**	**08 09 04.3**	**+1.2**
	baz=30,SNR=4.9						
RIV	**Riverview**	**29.38**	**179**	P	**P**	**08 09 04.8**	**+1.7**
RIV				pmax	pmax		
	comp=Z,376nm,1.7s						
RIV	**Riverview**	**29.38**	**179**	P	**P**	**08 09 05.0**	**+1.9**
WRKA	**Warakurna**	**29.60**	**224**	P	**P**	**08 09 04.4**	**-0.8**
	baz=30,SNR=292						
WRKA	**Warakurna**	**29.60**	**224**	P	**P**	**08 09 04.9**	**-0.3**
NFK	**Norfolk Island**	**29.70**	**148**	P	**P**	**08 09 07.0**	**+1.0**
	baz=30,SNR=9.6						
BSSI	**Bau Bau, Buton**	**29.84**	**265**	P	**P**	**08 09 07.5**	**+0.1**
	comp=Z,18μcomp=Z,4μmcomp=Z,385nm,1.4s						
TOLI2	**Tolitoli**	**30.08**	**280**	P	**P**	**08 09 08.9**	**-0.6**
MULG	**Mulgathing**	**30.09**	**209**	P	**P**	**08 09 08.9**	**-0.5**
MSVF	**Nonsavu**	**30.18**	**118**	P	**P**	**08 09 11.3**	**+0.9**
	comp=Z,291nm,0.9s,baz=268,slow=11,SNR=56						
MSVF				S	**S**	**08 13 36.6**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=13,slow=3.6,SNR=0.6						
MSVF				ScP	**ScP**	**08 14 59.6**	**+2.8**
	comp=Z,38nm,0.7s,baz=266,slow=5.6,SNR=13						
	comp=Z,291nm,0.9s						
MSVF	**Nonsavu**	**30.18**	**118**	P	**P**	**08 09 11.1**	**+0.7**
MSVF				IAmb	IAmb	08 09 15.3	
	comp=Z,517nm,1.1s						
MSVF	**Nonsavu**	**30.18**	**118**	*c i* P	**P**	**08 09 10.5**	**+0.1**
MSVF				pmax	pmax		
	comp=Z,626nm,1.3s						
MSVF	**Nonsavu**	**30.18**	**118**	P	**P**	**08 09 11.6**	**+1.2**
MSVF	**Nonsavu**	**30.18**	**118**	⇑P	**P**	**08 09 11.6**	**+1.2**
MSVF				pP	**pP**	**08 10 31.1**	**+2.3**
MSVF				sP	**sP**	**08 11 24.2**	**+3.3**
MSVF				ScP	**ScP**	**08 15 00.3**	**+3.6**
BKSI	**Bulukumba**	**30.18**	**267**	P	**P**	**08 09 10.5**	**+0.1**
	comp=Z,12μcomp=Z,1μmcomp=Z,114nm,0.9s						
BNSI	**Bone**	**30.20**	**269**	P	**P**	**08 09 13.5**	**+2.9**
	comp=Z,11μcomp=Z,3μmcomp=Z,209nm,0.9s						
TTSI	**Tana Toraja**	**30.54**	**271**	P	**P**	**08 09 14.3**	**+0.8**
	comp=Z,19μcomp=Z,2μmcomp=Z,115nm,0.8s						
SPSI	**Sidrap Palu**	**30.55**	**270**	P	**P**	**08 09 14.3**	**+0.7**
	comp=Z,3μcomp=Z,238nm,0.9s						
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 13.7**	**+0.1**
	comp=Z,83nm,0.5s,baz=88,slow=5.1,SNR=37						
KAPI				PP	**PP**	**08 10 41.9**	**+4.5**
	comp=Z,108nm,0.9s,baz=95,slow=9.2,SNR=9.2						
KAPI				S	**S**	**08 13 42.2**	**-0.2**
	comp=Z,19nm,0.6s,baz=278,slow=17,SNR=1.7						
KAPI				ScP	**ScP**	**08 14 58.9**	**+0.9**
	comp=Z,27nm,0.7s,baz=186,slow=9.9,SNR=4.9						
	comp=Z,83nm,0.5s						
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 13.8**	**+0.1**
KAPI	**Kappang**	**30.55**	**267**	*c i* P	**P**	**08 09 13.4**	**-0.2**
KAPI				pmax	pmax		
	comp=Z,251nm,1.4s						
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 14.1**	**+0.5**
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 14.8**	**+1.2**
	comp=Z,12μcomp=Z,2μmcomp=Z,204nm,1.1s						
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 13.4**	**-0.2**
KAPI	**Kappang**	**30.55**	**267**	P	**P**	**08 09 13.4**	**-0.2**
KAPI				pP	**pwP**	**08 10 35.5**	**-0.1**
KAPI				ScP	**ScP**	**08 14 58.7**	**+0.8**
MPSI	**Mapaga**	**30.82**	**278**	P	**P**	**08 09 16.1**	**+0.2**
	comp=Z,13μcomp=Z,11μcomp=Z,1μm,0.7s						
CNB	**Canberra Magne**	**30.87**	**182**	P	**P**	**08 09 17.6**	**+1.5**
	baz=31,SNR=186						
CNB	**Canberra Magne**	**30.87**	**182**	P	**P**	**08 09 17.6**	**+1.5**
CAN	**Canberra**	**30.89**	**182**	P	**P**	**08 09 17.1**	**+0.9**
CAN	**Canberra**	**30.89**	**182**	P	**P**	**08 09 17.1**	**+0.9**

JAM	**Amami Oshima**	**38.20 330**	P	**P**	**08 10 19.2 +1.4**
AFI	**Afiamalu**	**38.49 107**	P	**P**	**08 10 21.6 +1.0**
	comp=Z,61nm,0.5s,baz=197,slow=3.0,SNR=16				
AFI			ScP	**ScP**	**08 15 29.5 +2.8**
	comp=Z,36nm,0.8s,baz=308,slow=21,SNR=2.8				
	comp=Z,61nm,0.5s				
AFI	**Afiamalu**	**38.49 107**	P	**P**	**08 10 21.5 +1.0**
AFI	**Afiamalu**	**38.49 107**	P	**P**	**08 10 21.7 +1.2**
AFI	**Afiamalu**	**38.49 107**	P	**P**	**08 10 21.6 +1.0**
AFI			pP	**pP**	**08 11 44.4 +0.6**
AFI			PP	**PP**	**08 12 02.6 +1.0**
AFI			ScP	**ScP**	**08 15 30.3 +3.7**
PWJI	**Pagerwojo**	**38.53 263**	P	**P**	**08 10 20.9 +0.1**
	comp=Z,3μmcomp=Z,385nm,0.9s				
TAU	**Tasmania Unive**	**38.54 184**	P	**P**	**08 10 22.0 +1.6**
TAU	**Tasmania Unive**	**38.54 184**	P	**P**	**08 10 22.0 +1.6**
TAU			pmax	pmax	
	comp=Z,111nm,0.6s				
TAU	**Tasmania Unive**	**38.54 184**	P	**P**	**08 10 22.0 +1.6**
TAU	**Tasmania Unive**	**38.54 184**	P	**P**	**08 10 22.0 +1.6**
TAU			pP	**pP**	**08 11 38.2 -5.8**
TAU			ScP	**ScP**	**08 15 28.5 +2.3**
JHJ2	**Mitsune**	**38.54 346**	P	**P**	**08 10 18.6 -2.0**
JHJ2	**Mitsune**	**38.54 346**	P	**P**	**08 10 18.6 -2.0**
PBKI	**Pangkalan Bun**	**38.69 271**	P	**P**	**08 10 22.2 +0.1**
	comp=Z,9μmcomp=Z,797nm,0.9s				
SBUM	**Sibu**	**38.74 279**	P	**P**	**08 10 23.4 +0.9**
SBUM	**Sibu**	**38.74 279**	P	**P**	**08 10 24.0 +1.5**
NGJI	**Ngawi**	**38.84 264**	P	**P**	**08 10 26.0 +2.6**
	comp=Z,171nm,1.0s				
RAO	**Raoul Island**	**38.94 133**	P	**P**	**08 10 24.9 +1.1**
	comp=Z,251nm,0.5s,baz=96,slow=21,SNR=4.1				
	comp=Z,251nm,0.5s				
YOJ	**Yonaguni jima**	**39.09 318**	P	**P**	**08 10 25.8 +0.6**
YOJ			IAmb	IAmb	08 10 30.2
	comp=Z,1μm,0.9s				
YOJ	**Yonaguni jima**	**39.09 318**	P	**P**	**08 10 25.8 +0.6**
YOJ			pmax	pmax	
	comp=Z,1μm,0.9s				
YOJ	**Yonaguni jima**	**39.09 318**	P	**P**	**08 10 26.3 +1.1**
YOJ	**Yonaguni jima**	**39.09 318**	P	**P**	**08 10 26.5 +1.3**
PCJI	**Pacitan**	**39.16 262**	P	**P**	**08 10 25.6 -0.4**
	comp=Z,9μmcomp=Z,1μm,0.9s				
GIRL	**Giralia**	**39.44 239**	P	**P**	**08 10 27.9 -0.1**
	baz=40,SNR=16				
GIRL	**Giralia**	**39.44 239**	P	**P**	**08 10 28.0 -0.1**
YULB	**Yu-li**	**39.55 315**	P	**P**	**08 10 29.0 +0.1**
YULB			IAmb	IAmb	08 10 34.1
	comp=Z,526nm,0.9s				
KUZ	**Kuaotunu**	**39.78 148**	P	**P**	**08 10 32.2 +1.6**
UGM	**Wanagama**	**39.80 263**	P	**P**	**08 10 30.6 -0.6**
UGM			IAmb	IAmb	08 10 39.3
	comp=Z,553nm,1.0s				
UGM	**Wanagama**	**39.80 263**	P	**P**	**08 10 30.3 -0.8**
	comp=Z,6μmcomp=Z,688nm,1.1s				
UGM	**Wanagama**	**39.80 263**	P	**P**	**08 10 31.8 +0.7**
SMRI	**Semarang**	**39.84 264**	P	**P**	**08 10 31.4 -0.1**
SMRI	**Semarang**	**39.84 264**	P	P	08 10 37.2 +5.7
NACB	**Ninganchiao**	**39.85 317**	P	**P**	**08 10 31.6 +0.3**
NACB			IAmb	IAmb	08 10 36.1
	comp=Z,883nm,0.9s				
TPUB	**Ta-pu**	**39.96 315**	P	**P**	**08 10 31.8 -0.5**
TPUB			IAmb	IAmb	08 10 33.1
	comp=Z,342nm,0.7s				
TPUB	**Ta-pu**	**39.96 315**	P	**P**	**08 10 32.1 -0.2**
YOGI	**Yogyakarta**	**40.02 263**	P	**P**	**08 10 32.9 0.0**
	comp=Z,5μmcomp=Z,475nm,0.7s				
SSLB	**Suanglung**	**40.04 316**	P	**P**	**08 10 32.8 -0.2**
SSLB			IAmb	IAmb	08 10 38.5
	comp=Z,456nm,0.7s				
SSLB	**Suanglung**	**40.04 316**	P	**P**	**08 10 33.4 +0.4**
YHNB	**Yeheng**	**40.33 317**	P	**P**	**08 10 36.3 +1.0**
JSU	**Suzuyama**	**40.37 333**	P	**P**	**08 10 35.6 +0.1**
JSU			IAmb	IAmb	08 10 39.8
	comp=Z,524nm,1.1s				
JSU	**Suzuyama**	**40.37 333**	P	**P**	**08 10 36.1 +0.7**
JSG	**Sagara**	**40.45 344**	P	**P**	**08 10 35.7 -0.3**
TATO	**Taipei**	**40.45 317**	P	**P**	**08 10 36.9 +0.7**
TATO	**Taipei**	**40.45 317**	P	**P**	**08 10 36.8 +0.7**
TATO			pP	**pwP**	**08 12 03.9 +1.4**
KSM	**Kuching**	**40.47 277**	P	**P**	**08 10 37.0 +0.5**
KSM	**Kuching**	**40.47 277**	P	**P**	**08 10 37.1 +0.5**
JIE	**Ise**	**40.60 342**	P	**P**	**08 10 37.0 -0.2**
JIE			S	**S**	**08 16 09.5 -3.4**
HIZ	**Hauiti**	**40.68 150**	P	**P**	**08 10 40.5 +2.7**
JOD2	**Odawara 2**	**40.77 346**	P	**P**	**08 10 37.0 -1.6**
MORW	**Morawa**	**40.82 229**	P	**P**	**08 10 38.2 -1.0**
	baz=41,SNR=27				
MORW	**Morawa**	**40.82 229**	P	**P**	**08 10 38.1 -1.0**
MORW	**Morawa**	**40.82 229**	P	**P**	**08 10 38.4 -0.8**
KHEZ	**Kahui Hut**	**40.88 152**	P	**P**	**08 10 40.4 +0.9**
JMN	**Monobe**	**40.93 339**	P	**P**	**08 10 40.9 +1.0**
JMN			S	**S**	**08 16 19.2 +1.4**
KLBR	**Kellerberrin**	**40.93 225**	P	**P**	**08 10 39.4 -0.6**
	baz=41,SNR=8.4				
KLBR	**Kellerberrin**	**40.93 225**	P	**P**	**08 10 38.9 -1.1**
CTJI	**Waduk Cacaban**	**41.09 264**	P	**P**	**08 10 44.0 +2.5**
	comp=Z,4μmcomp=Z,282nm,1.2s				
SCJI	**Gunung Srandil**	**41.13 263**	P	**P**	**08 10 41.5 -0.3**
	comp=Z,4μmcomp=Z,532nm,1.0s				
BLDU	**Ballidu**	**41.14 227**	P	**P**	**08 10 40.8 -0.8**
	baz=41,SNR=18				
BLDU	**Ballidu**	**41.14 227**	P	**P**	**08 10 40.6 -1.1**
NIUE	**Niue**	**41.40 114**	P	**P**	**08 10 45.2 +1.3**
	baz=41,SNR=12				
NIUE	**Niue**	**41.40 114**	P	**P**	**08 10 45.0 +1.1**
NIUE			IAmb	IAmb	08 10 49.0
	comp=Z,620nm,1.1s				
INU	**Inuyama**	**41.40 343**	P	**P**	**08 10 43.2 -0.4**
INU			IAmb	IAmb	08 10 49.4
	comp=Z,551nm,0.8s				
INU	**Inuyama**	**41.40 343**	P	**P**	**08 10 43.6 -0.1**
INU	**Inuyama**	**41.40 343**	⇓P	**P**	**08 10 43.5 -0.1**
INU			pP	**pP**	**08 12 06.7 -0.5**
INU			PP	**PP**	**08 12 30.9 -1.0**
INU			ScP	**ScP**	**08 15 38.3 +0.8**
JYT	**Yasato**	**41.44 348**	P	**P**	**08 10 42.8 -1.1**
JYT			IAmb	IAmb	08 10 47.3
	comp=Z,890nm,0.8s				
JYT	**Yasato**	**41.44 348**	P	**P**	**08 10 43.2 -0.7**
QRZ	**Quartz Range**	**41.45 154**	P	**P**	**08 10 46.2 +2.3**
QRZ			IAmb	IAmb	08 10 49.8
	comp=Z,810nm,1.4s				
QRZ	**Quartz Range**	**41.45 154**	P	**P**	**08 10 46.6 +2.7**
JRY	**Ryogami san**	**41.53 346**	P	**P**	**08 10 44.0 -0.7**
JRY			S	**S**	**08 16 21.4 -5.2**
JGF	**Kuroka**	**41.54 344**	P	**P**	**08 10 44.3 -0.5**
JGF			IAmb	IAmb	08 10 49.6
	comp=Z,533nm,0.8s				
JGF	**Kuroka**	**41.54 344**	P	**P**	**08 10 44.2 -0.6**
JGF			S	**S**	**08 16 22.4 -4.3**
JNU	**Nakatsue**	**41.57 335**	P	**P**	**08 10 45.9 +0.8**
URZ	**Urewera**	**41.65 148**	S	**S**	**08 16 29.4 +1.4**
	comp=Z,94nm,1.1s,baz=86,slow=23,SNR=10				
URZ			ScS	**SS**	**08 19 54.0 +1.9**
	comp=Z,11nm,0.9s,baz=204,slow=24,SNR=2.2				
JWT	**Wachi**	**41.83 341**	P	**P**	**08 10 47.1 +0.1**
JAD	**Aida**	**41.92 340**	P	**P**	**08 10 48.3 +0.5**
JCJI	**Jatiwangi**	**41.99 265**	P	**P**	**08 10 50.0 +1.3**
	comp=Z,12μmcomp=Z,918nm,1.3s				
NWAO	**Narrogin (SRO)**	**42.06 223**	P	**P**	**08 10 47.9 -1.1**
	comp=Z,25nm,0.5s,baz=265,slow=4.8,SNR=17				
NWAO	**Narrogin (SRO)**	**42.06 223**	P	**P**	**08 10 48.1 -0.9**
	baz=42,SNR=12				
NWAO			P	**P**	**08 10 48.1 -0.9**
	baz=42,SNR=12				
NWAO	**Narrogin (SRO)**	**42.06 223**	P	**P**	**08 10 48.0 -1.0**
NWAO	**Narrogin (SRO)**	**42.06 223**	P	**P**	**08 10 48.3 -0.7**
JFU	**Fukue jima 2**	**42.11 332**	P	**P**	**08 10 50.1 +0.8**
JGN	**Niukaw**	**42.14 344**	P	**P**	**08 10 49.1 -0.4**
MJAR	**Matsushiro Arr**	**42.20 345**	P	**P**	**08 10 49.0 -1.0**
	comp=Z,397nm,0.8s,baz=167,slow=8.1,SNR=491				
MJAR			PcP	**PcP**	**08 12 34.6 +0.5**
	comp=Z,114nm,0.8s,baz=160,slow=3.4,SNR=10				
MJAR			ScP	**ScP**	**08 15 41.4 +0.6**
	comp=Z,34nm,0.9s,baz=163,slow=4.3,SNR=6.5				
	comp=Z,397nm,0.8s				
MAJO	**Matsushiro**	**42.21 345**	P	**P**	**08 10 49.1 -0.9**
MAJO	**Matsushiro**	**42.21 345**	P	**P**	**08 10 49.1 -0.9**
MAJO			pmax	pmax	
	comp=Z,994nm,0.7s				
MAJO	**Matsushiro**	**42.21 345**	P	**P**	**08 10 49.6 -0.4**
MAJO	**Matsushiro**	**42.21 345**	P	**P**	**08 10 49.3 -0.8**
MAJO			pP	**pP**	**08 12 14.2 0.0**
MAJO			PcP	**PcP**	**08 12 33.9 -0.2**
MAJO			ScP	**ScP**	**08 15 41.6 +0.8**
MAT	**Matsushiro**	**42.21 345**	P	**P**	**08 10 48.9 -1.1**
MAT			S	**S**	**08 16 31.9 -4.4**
MJB9	**Matsu-Tunnel**	**42.21 345**	P	**P**	**08 10 48.9 -1.2**
MUN	**Mundaring**	**42.24 225**	P	**P**	**08 10 49.7 -0.6**
	baz=42,SNR=27				
MUN	**Mundaring**	**42.24 225**	P	**P**	**08 10 49.8 -0.6**
KNMB	**Chin-men Tao**	**42.28 314**	P	**P**	**08 10 51.2 +0.4**
KNMB			IAmb	IAmb	08 10 52.5
	comp=Z,463nm,0.7s				
JHS	**Saijyo**	**42.34 339**	P	**P**	**08 10 51.9 +0.7**
JHS			IAmb	IAmb	08 10 55.6
	comp=Z,455nm,0.7s				
JHS	**Saijyo**	**42.34 339**	P	**P**	**08 10 51.8 +0.7**
THZ	**Tophouse**	**42.38 155**	P	**P**	**08 10 51.6 +0.3**
QZH	**Quanzhou**	**42.44 315**	⇓*iP*	**P**	**08 10 53.1 +1.1**
QZH			pP	**pP**	**08 12 17.3 0.0**
QZH			S	**S**	**08 16 42.3 +2.5**
QZH			sS	**sS**	**08 19 17.3 +3.0**
QZH			SS	**ScS**	**08 20 03.3 +0.9**
QZH			pmax	pmax	
	comp=Z,860nm,0.6s				
TUWZ	**Tuamarina**	**42.55 154**	P	**P**	**08 10 52.8 +0.1**
LEM	**Lembang**	**42.64 265**	P	**P**	**08 10 54.1 +0.1**
LEM			pmax	pmax	
	comp=Z,345nm,0.9s				
FOZ	**Fox Glacier**	**42.67 159**	P	**P**	**08 10 55.1 +1.5**
BSWZ	**Blackbirch Sta**	**42.76 154**	P	**P**	**08 10 55.1 +0.8**
JCZ	**Jackson Bay**	**42.79 160**	P	**P**	**08 10 57.7 +3.0**
SNZO	**South Karori**	**42.80 153**	P	**P**	**08 10 55.8 +1.2**
SNZO			IAmb	IAmb	08 10 58.9
	comp=Z,724nm,1.2s				
SNZO	**South Karori**	**42.80 153**	P	**P**	**08 10 55.2 +0.6**
SNZO	**South Karori**	**42.80 153**	P	**P**	**08 10 54.4 -0.2**
SNZO			pP	**pP**	**08 12 18.5 -0.4**
JMM	**Marumori**	**42.90 349**	P	**P**	**08 10 55.0 -0.4**
JMM			IAmb	IAmb	08 10 57.3
	comp=Z,878nm,0.8s				
JMM	**Marumori**	**42.90 349**	P	**P**	**08 10 55.3 -0.1**
CMWZ	**Cape Campbell**	**42.93 154**	P	**P**	**08 10 56.6 +0.9**
LTZ	**Lake Taylor**	**42.96 156**	P	**P**	**08 10 56.8 +0.9**
BFZ	**Birch Farm**	**43.03 151**	P	**P**	**08 10 56.7 +0.2**
BFZ			IAmb	IAmb	08 11 00.7
	comp=Z,546nm,1.0s				
BFZ	**Birch Farm**	**43.03 151**	P	**P**	**08 10 56.9 +0.4**
MSWZ	**Moikau Station**	**43.13 152**	P	**P**	**08 10 57.6 +0.3**
CNJI	**Cibinong**	**43.14 264**	P	**P**	**08 10 58.2 +0.5**
	comp=Z,1μmcomp=Z,8μmcomp=Z,1μm,1.0s				
KHZ	**Kahutara**	**43.18 155**	P	**P**	**08 10 57.3 -0.3**
RKGY	**Rocky Gully**	**43.22 222**	P	**P**	**08 10 58.5 +0.5**
	baz=43,SNR=9.2				
RKGY	**Rocky Gully**	**43.22 222**	P	**P**	**08 10 58.3 +0.2**
PLWZ	**Palliser**	**43.26 153**	P	**P**	**08 10 58.4 +0.1**
RPZ	**Rata Peaks**	**43.28 158**	P	**P**	**08 10 60.0 +1.6**
	comp=Z,254nm,0.7s,baz=302,slow=4.3,SNR=52				
RPZ			S	**S**	**08 16 51.3 -0.3**
	comp=Z,17nm,1.1s,baz=12,slow=16,SNR=1.2				
	comp=Z,254nm,0.7s				
RPZ	**Rata Peaks**	**43.28 158**	P	**P**	**08 10 59.3 +0.9**
RPZ			IAmb	IAmb	08 11 03.2
	comp=Z,321nm,0.8s				
RPZ	**Rata Peaks**	**43.28 158**	P	**P**	**08 10 59.3 +0.9**
OXZ	**Oxford**	**43.33 157**	P	**P**	**08 10 58.8 +0.1**
CBJI	**Citeko**	**43.40 265**	P	**P**	**08 11 00.3 +0.5**
	comp=Z,368nm,0.8s				
JTU	**Tsushima**	**43.40 334**	P	**P**	**08 10 59.9 +0.5**
JTU			IAmb	IAmb	08 11 04.0
	comp=Z,614nm,1.3s				
JSD	**Sado**	**43.61 346**	S	**S**	**08 16 53.4 -2.9**
SKJI	**Sukabumi**	**43.70 264**	P	**P**	**08 11 02.9 +0.7**
	comp=Z,5μmcomp=Z,546nm,0.9s				
JYA	**Atsumi**	**43.82 348**	P	**P**	**08 11 03.5 +0.9**
HKPS	**Hong Kong Po S**	**44.22 308**	P	**P**	**08 11 07.7 +1.7**
HKPS			IAmb	IAmb	08 11 08.6
	comp=Z,446nm,0.6s				
PPBI	**Pangkal Pinang**	**44.24 271**	P	**P**	**08 11 06.7 +0.3**
	comp=Z,3μmcomp=Z,15μmcomp=Z,108nm,1.0s				
ODZ	**Otahua Downs**	**44.28 159**	P	**P**	**08 11 07.4 +1.2**
JOM	**Ohasama**	**44.37 350**	P	**P**	**08 11 06.7 -0.2**
JOM			S	**S**	**08 17 05.6 -1.4**
XMI	**Christmas Isla**	**44.72 260**	P	**P**	**08 11 10.7 +0.6**
JOHN	**Johnston Islan**	**44.78 61**	P	**P**	**08 11 10.6 +0.2**
MIDW	**Midway**	**44.82 42**	P	**P**	**08 11 10.9 +0.3**
MIDW	**Midway**	**44.82 42**	P	**P**	**08 11 10.8 +0.3**
SSE	**Sheshan**	**44.90 324**	P	**P**	**08 11 11.8 +0.6**
SSE			pP	**pP**	**08 12 37.3 -0.3**
SSE			PcP	**PcP**	**08 12 43.3 -0.1**
SSE			S	**S**	**08 17 16.3 +1.4**
SSE			pmax	pmax	
	comp=Z,100nm,1.2s				
SSE			pmax	pmax	
	comp=Z,1μm,7.0s				
SYZ	**Scrubby Hill**	**45.10 162**	P	**P**	**08 11 13.6 +1.1**
H01W1	**Cape Leeuwin H**	**45.28 223**	P	**P**	**08 11 15.4 +1.6**
	SNR=7.6				
JTM	**Tenmabayashi**	**45.68 350**	P	**P**	**08 11 17.1 +0.1**
KASI	**Kota Agung**	**45.74 267**	P	**P**	**08 11 17.9 -0.1**
	comp=Z,4μmcomp=Z,426nm,1.1s				
TJN	**Taejon**	**45.85 334**	P	**P**	**08 11 18.3 -0.1**
TJN	**Taejon**	**45.85 334**	*diP*	**P**	**08 11 19.1 +0.7**
TJN	**Taejon**	**45.85 334**	P	**P**	**08 11 19.4 +1.0**
	comp=Z,3μm,1.8s				
DSRI	**Dabo**	**45.93 273**	P	**P**	**08 11 20.5 +1.1**
	comp=Z,2μmcomp=Z,4μmcomp=Z,221nm,1.6s				
TPRI	**Tanjung Pinang**	**46.13 275**	P	**P**	**08 11 21.5 +0.5**
QIZ	**Qiongzhong**	**46.16 301**	P	**P**	**08 11 21.6 +0.4**
QIZ	**Qiongzhong**	**46.16 301**	⇓*iP*	**P**	**08 11 22.6 +1.5**
QIZ			pP	**PcP**	**08 12 48.0 -0.1**
QIZ			S	**S**	**08 17 34.9 +1.8**
QIZ			ScS	**ScS**	**08 20 28.1 +1.5**
QIZ			pmax	pmax	
	comp=Z,300nm,0.8s				
QIZ			pmax	pmax	
	comp=Z,2μm,9.3s				
QIZ	**Qiongzhong**	**46.16 301**	P	**P**	**08 11 22.4 +1.3**
QIZ	**Qiongzhong**	**46.16 301**	P	**P**	**08 11 22.3 +1.1**
QIZ			pP	**pP**	**08 12 48.6 +0.1**
LWLI	**Liwa**	**46.18 267**	P	**P**	**08 11 23.1 +1.6**
	comp=Z,565nm,1.0s				
JOT	**Ohata**	**46.27 350**	P	**P**	**08 11 21.4 -0.1**
KSRS	**Korea Array**	**46.52 335**	P	**P**	**08 11 24.4 +1.0**
	comp=Z,336nm,0.9s,baz=152,slow=8.6,SNR=858				
KSRS			PcP	**PcP**	**08 12 49.8 +0.8**
	comp=Z,85nm,0.9s,baz=157,slow=3.1,SNR=15				
KSRS			ScP	**ScP**	**08 15 58.8 +0.3**
	comp=Z,14nm,0.9s,baz=140,slow=4.9,SNR=4.2				
KSRS			S	**S**	**08 17 39.8 +2.3**
	comp=Z,0.7nm,0.7s,baz=140,slow=44,SNR=1.8				
KSRS			PKiKP	**PKiKP**	**08 19 41.2 -0.9**
	comp=Z,2.5nm,0.7s,baz=150,slow=1.1,SNR=5.7				
	comp=Z,336nm,0.9s				
KSAR	**Wonju Array Be**	**46.52 335**	P	**P**	**08 11 23.6 0.0**
KSAR	**Wonju Array Be**	**46.52 335**	P	**P**	**08 11 23.6 0.0**
ERM	**Erimo**	**46.57 353**	P	**P**	**08 11 24.2 +0.4**
ERM	**Erimo**	**46.57 353**	*diP*	**P**	**08 11 24.3 +0.5**
ERM			pmax	pmax	
	comp=Z,486nm,1.3s				
ERM	**Erimo**	**46.57 353**	P	**P**	**08 11 24.3 +0.5**
ERM	**Erimo**	**46.57 353**	P	**P**	**08 11 24.1 +0.3**
ERM			pP	**pP**	**08 12 50.9 +1.3**
JEM	**Erimo**	**46.57 353**	P	**P**	**08 11 24.2 +0.4**
KS19	**Wonju Array Si**	**46.58 335**	P	**P**	**08 11 23.9 -0.1**
KS19			IAmb	IAmb	08 11 28.2
	comp=Z,533nm,1.0s				
JMBI	**JAMBI**	**46.76 272**	P	**P**	**08 11 26.2 +0.4**
	comp=Z,3μmcomp=Z,159nm,0.9s				
JMBI			pP	**PcP**	**08 12 51.7 +1.3**
	comp=Z,3μmcomp=Z,159nm,0.9s				
BTDF	**Bukit Timah Da**	**46.93 276**	P	**P**	**08 11 27.3 +0.2**
	comp=Z,2μmcomp=Z,104nm,0.9s				
NJ2	**Nanjing**	**46.98 323**	⇓*iP*	**P**	**08 11 28.5 +1.4**
NJ2			PP	**PP**	**08 13 19.4 -3.9**
NJ2			sP	**sP**	**08 13 43.8 -1.4**
NJ2			ScP	**ScP**	**08 16 00.9 +0.3**
NJ2			S	**S**	**08 17 41.3 -2.8**
NJ2			sS	**sS**	**08 20 24.6 +2.9**
NJ2			pmax	pmax	
	comp=Z,300nm,0.8s				
NJ2			pmax	pmax	
	comp=Z,3μm,3.6s				
INCN	**Inchon**	**47.09 334**	P	**P**	**08 11 28.5 +0.6**
INCN			IAmb	IAmb	08 11 33.6
	comp=Z,1μm,1.1s				
INCN	**Inchon**	**47.09 334**	P	**P**	**08 11 28.5 +0.6**
INCN			pmax	pmax	
	comp=Z,1μm,1.1s				
INCN	**Inchon**	**47.09 334**	P	**P**	**08 11 29.4 +1.5**
INCN	**Inchon**	**47.09 334**	P	**P**	**08 11 30.0 +2.1**
INCN	**Inchon**	**47.09 334**	⇓P	**P**	**08 11 29.1 +1.2**
INCN			pP	**PcP**	**08 12 51.1 0.0**
INCN			sP	**sP**	**08 13 43.6 -2.3**
INCN			ScP	**ScP**	**08 16 01.4 +0.4**
MNAI	**Manna**	**47.30 268**	P	**P**	**08 11 28.9 -1.0**
	comp=Z,243nm,1.2s				
JEW	**Eniwo**	**47.62 351**	P	**P**	**08 11 31.4 -0.4**
JEW	**Eniwo**	**47.62 351**	P	**P**	**08 11 32.3 +0.5**
JSH	**Shimam**	**47.67 350**	P	**P**	**08 11 32.4 +0.3**
HJU	**Haeju**	**47.96 334**	P	**P**	**08 11 35.6 +1.3**
HJU			pP	**pP**	**08 13 02.7 +0.5**
HJU			S	**S**	**08 17 59.1 +1.6**
MASI	**Maura Aman, Be**	**48.06 270**	P	**P**	**08 11 36.0 +0.3**
	comp=Z,79nm,0.4s				
YUK	**Yuzh-Kuril'sk**	**48.30 356**	*ciP*	**P**	**08 11 36.0 -0.8**
YUK			*i* *PP	**PcP**	**08 12 55.4 +0.2**
YUK			*i*		08 13 52.5
YUK			*i* S	**S**	**08 18 00.3 -1.6**
YUK			pmax	pmax	
	comp=Z,1μm,1.2s				
YUK			pmax	pmax	
	comp=N,317nm,0.4s				
YUK			pmax	pmax	
	comp=E,410nm,1.0s				
CNSH	**ChangSha**	**48.42 314**	⇓P	**P**	**08 11 39.8 +1.7**
CNSH			S	**S**	**08 18 07.8 +3.6**
CNSH			pmax	pmax	
	comp=E,110nm,0.5s				
JMP	**Maruseppu**	**48.51 353**	P	**P**	**08 11 39.2 +0.7**
UBPT	**Khong Chiam**	**48.56 295**	P	**P**	**08 11 39.8 +0.5**
ASAJ	**Asahikawa**	**48.71 353**	P	**P**	**08 11 40.8 +0.9**
WHN	**Wuhan**	**48.86 318**	⇓P	**P**	**08 11 42.5 +1.2**
WHN			S	**S**	**08 18 08.6 -1.6**
WHN			pmax	pmax	
	comp=E,700nm,0.8s				
CTZ	**Chatham Island**	**48.87 148**	P	**P**	**08 11 42.4 +1.2**
SDSI	**Sungai Dareh**	**49.02 272**	P	**P**	**08 11 42.0 -0.8**
	comp=E,8μmcomp=E,368nm,0.7s				
KUR	**Kuril'sk**	**49.37 358**	*diP*	**P**	**08 11 45.6 +0.8**
KUR			*e*		08 13 42.5
KUR			S	**S**	**08 18 11.3 -5.4**
KUR			*e*SS	**SS**	**08 21 47.9 -7.9**
KUR			pmax	pmax	
	comp=Z,4μm,0.9s				
KUR			pmax	pmax	
	comp=Z,10μm,5.5s				
KUR			MLR	MLR	
	comp=Z,952nm,16.0s				
BKNI	**Bangkinang**	**49.53 274**	P	**P**	**08 11 45.9 -0.7**
BKNI			IAmb	IAmb	08 13 25.5
	comp=Z,518nm,1.2s				
BKNI	**Bangkinang**	**49.53 274**	P	**P**	**08 11 48.8 +2.2**
	comp=Z,3μmcomp=Z,6μmcomp=Z,270nm,0.7s				
MSHR	**Mys Shultsa**	**49.83 341**	*diP*	**P**	**08 11 48.9 +0.7**
MSHR			pmax	pmax	
	comp=Z,237nm,1.3s				
JWK2	**Keihoku**	**49.98 352**	P	**P**	**08 11 50.0 +0.7**
IPM	**Ipoh**	**50.09 279**	P	**P**	**08 11 50.3 -0.4**
VLA	**Vladivostok**	**50.09 342**	*diP*	**P**	**08 11 50.0 -0.2**
VLA			pmax	pmax	
	comp=Z,2μm,1.5s				
SUJ	**Sinuiju**	**50.20 334**	P	**P**	**08 11 52.0 +1.0**
SUJ			pP	**pP**	**08 13 19.4 -0.5**
SUJ			S	**S**	**08 18 29.6 +1.5**
DL2	**Dalian**	**50.55 331**	⇓*iP*	**P**	**08 11 54.5 +0.8**
DL2			pP	**pP**	**08 13 21.3 -1.3**
DL2			sP	**sP**	**08 14 11.6 -1.2**
DL2			S	**S**	**08 18 35.0 +2.0**
DL2			pmax	pmax	
	comp=Z,750nm,0.8s				
DL2			pmax	pmax	
	comp=Z,2μm,8.4s				
KULM	**Kulim**	**50.59 280**	P	**P**	**08 11 53.6 -0.8**
TEY	**Ternei**	**50.65 347**	⇓*eP*	**P**	**08 11 53.8 -0.4**
TEY			*e*		08 14 09.6
TEY			*e*		08 18 30.3
TEY			pmax	pmax	
	comp=N,70nm,0.9s				
TEY			pmax	pmax	
	comp=E,30nm,0.9s				
TEY			pmax	pmax	
	comp=Z,140nm,0.9s				
TEY			pmax	pmax	
	comp=N,200nm,6.7s				
TEY			pmax	pmax	
	comp=Z,300nm,7.0s				
TEY			pmax	pmax	
	comp=E,100nm,7.0s				
TIA	**Tai'an**	**50.92 325**	⇓P	**P**	**08 11 56.6 +0.1**
TIA			S	**S**	**08 18 34.1 -4.1**
TIA			pmax	pmax	
	comp=E,2μm,3.5s				
MNSI	**Mandailing Nat**	**51.03 274**	P	**P**	**08 11 56.6 -1.0**
	comp=E,3μmcomp=E,207nm,0.8s				
USA0B	**Ussuriysk Arra**	**51.05 343**	P	**P**	**08 11 57.6 +0.4**
USA0B			IAmb	IAmb	08 12 01.8
	comp=Z,923nm,1.1s				
USA0B	**Ussuriysk Arra**	**51.05 343**	*diP*	**P**	**08 11 57.9 +0.7**
USRK	**Ussuriysk Ar.**	**51.05 343**	P	**P**	**08 11 57.9 +0.8**
	comp=Z,197nm,0.5s,baz=140,slow=6.2,SNR=363				
USRK			ScP	**ScP**	**08 16 17.1 -0.6**
	comp=Z,20nm,0.8s,baz=184,slow=2.1,SNR=4.4				
USRK			S	**S**	**08 18 40.3 +0.8**
	comp=Z,2.9nm,0.7s,baz=143,slow=35,SNR=1.9				
	comp=Z,197nm,0.5s				
USRK	**Ussuriysk Ar.**	**51.05 343**	P	**P**	**08 11 57.2 +0.1**
RAR	**Rarotonga**	**51.17 114**	P	**P**	**08 11 59.5 +1.0**
RAR	**Rarotonga**	**51.17 114**	P	**P**	**08 11 58.8 +0.3**
YSS	**Yuzh-Sakhalins**	**51.49 353**	P	**P**	**08 12 00.2 -0.1**
YSS			IAmb	IAmb	08 12 03.6
	comp

MDJ pmax pmax
comp=Z,990nm,1.3s
MDJ Mudanjiang 52.16 341 P P 08 12 06.2 +1.0
MDJ Mudanjiang 52.16 341 P P 08 12 06.0 +0.7
MDJ PcP **PcP 08 13 09.9 +0.3**
MDJ pP **pP 08 13 37.0 +1.7**
MDJ ScP **ScP 08 16 22.9 +0.4**
GYA Guiyang 52.20 308⇓ *i*P **P 08 12 07.3 +1.2**
GYA PcP **PcP 08 13 11.3 +0.9**
GYA pP pP 08 13 39.1 +2.8
GYA sP sP 08 14 28.8 +2.9
GYA S **S 08 18 57.6 +1.6**
GYA SS **SS 08 22 40.8 -0.6**
GYA pmax pmax
comp=Z,290nm,0.7s
GYA pmax pmax
comp=Z,2μm,3.5s
SRIT Nakonsritamara 52.25 284 P P 08 12 06.2 -0.3
TSI Tuntungan 52.37 278 P P 08 12 07.2 -0.2
comp=Z,348nm,1.1s
LYN LuoYang 52.62 320⇓ *i*P **P 08 12 08.1 -0.7**
LYN PcP **PcP 08 13 10.6 -1.0**
LYN pP pP 08 13 38.1 -0.9
LYN ScP **ScP 08 16 24.8 0.0**
LYN S **S 08 18 58.8 -2.3**
LYN sS sS 08 21 40.6 -2.0
LYN SS **SS 08 22 46.8 -0.7**
LYN pmax pmax
comp=Z,260nm,0.8s
LYN pmax pmax
comp=Z,2μm,2.8s
CN2 Changchun 52.90 337⇓ *i*P **P 08 12 11.0 +0.4**
CN2 PcP **PcP 08 13 12.3 -0.2**
CN2 sP sP 08 14 28.6 -2.0
CN2 ScP **ScP 08 16 26.1 +0.3**
CN2 S **S 08 19 04.8 +0.3**
CN2 pmax pmax
comp=Z,240nm,1.2s
CN2 pmax pmax
comp=Z,4μm,4.0s
GSI Gunungsitoli 53.08 275 P P 08 12 10.8 -1.7
GSI Gunungsitoli 53.08 275 P P 08 12 12.0 -0.5
comp=Z,6μmcomp=Z,348nm,0.8s
GSI Gunungsitoli 53.08 275 P P 08 12 11.8 -0.7
LASI Langsa, Aceh 53.09 279 P P 08 12 13.2 +0.6
comp=Z,12μmcomp=Z,608nm,1.1s
HNS HongShan 53.14 324⇓ P **P 08 12 13.3 +0.9**
HNS PcP **PcP 08 13 14.3 +0.8**
HNS pP **pP 08 13 41.8 -1.1**
HNS sP **sP 08 14 31.0 -1.8**
HNS S **S 08 19 04.4 -3.4**
HNS pmax pmax
comp=Z,560nm,1.1s
HNS pmax pmax
comp=Z,4μm,6.2s
KCSI Kotacane, Aceh 53.16 278 P P 08 12 11.1 -2.0
comp=Z,3μmcomp=Z,318nm,0.8s
COCO West Island 53.51 258 P P 08 12 16.2 +0.7
COCO West Island 53.51 258 P P 08 12 16.2 +0.7
COCO pmax pmax
comp=Z,357nm,0.9s
UGL Uglegorsk 53.66 353*d* *i*P **P 08 12 16.4 +0.5**
UGL *e* 08 13 16.0
UGL *e* 08 14 34.8
UGL *e*S **S 08 19 15.0 +0.7**
UGL pmax pmax
comp=Z,1μm,1.0s
UGL pmax pmax
comp=N,2μm,3.0s
UGL pmax pmax
comp=E,2μm,3.0s
UGL pmax pmax
comp=Z,5μm,3.0s
UGL pmax pmax
comp=Z,3μm,6.0s
UGL smax smax
comp=E,4μm,9.5s
UGL smax smax
comp=N,4μm,7.0s
BNX BinXian 53.87 340⇓ P **P 08 12 17.5 0.0**
BNX sP **sP 08 14 38.5 +0.6**
BNX S **S 08 19 16.8 -0.5**
BNX SS **SS 08 23 04.5 -2.3**
BNX pmax pmax
comp=N,2μm,0.7s
BNX pmax pmax
comp=N,3μm,9.6s
BJT Baijiatuau 54.17 328 P **P 08 12 20.3 +0.5**
BJT pmax pmax
comp=Z,180nm,1.1s
BJT Baijiatuau 54.17 328⇓ P **P 08 12 20.1 +0.3**
BJT PcP **PcP 08 13 17.8 +0.4**
BJT pP **pP 08 13 50.2 -0.4**
BJT ScP **ScP 08 16 32.2 +0.8**
BJI Beijing 54.18 328 P **P 08 12 20.3 +0.5**
BJI PcP **PcP 08 13 17.8 +0.3**
BJI pP **pP 08 13 50.4 -0.2**
BJI PP **PP 08 14 28.0 +0.2**
BJI sP **sP 08 14 38.9 -1.5**
BJI PcS **PcS 08 17 18.0 +0.4**
BJI pmax pmax
comp=Z,160nm,1.4s
BJI pmax pmax
comp=Z,3μm,3.5s
LHMI Lhok Sumawe 54.22 280 P **P 08 12 20.2 -0.4**
LHMI IAmb IAmb 08 12 24.6
comp=Z,822nm,1.1s
LHMI Lhok Sumawe 54.22 280 P **P 08 12 20.9 +0.3**
XAN Xi'an 54.63 318⇓ *i*P **P 08 12 23.5 +0.2**
XAN PcP **PcP 08 13 18.4 -1.1**
XAN pP pP 08 13 54.0 -0.5
XAN ScP **ScP 08 16 35.4 +1.7**
XAN PcS **PcS 08 17 21.9 +1.9**
XAN S **S 08 19 21.8 -6.1**
XAN ScS **ScS 08 21 23.0 -1.8**
XAN sS sS 08 22 09.8 -1.0
XAN SS **SS 08 23 22.5 +3.2**
XAN pmax pmax
comp=Z,780nm,0.9s
XAN pmax pmax
comp=Z,4μm,7.5s
XAN Xi'an 54.63 318⇓ P **P 08 12 23.4 +0.2**
XAN pP **pP 08 13 53.7 -0.8**
TIY Taiyuan 54.69 323⇓ P **P 08 12 24.3 +0.7**
TIY PcP **PcP 08 13 20.3 +0.7**
TIY pP **pP 08 13 55.8 +1.1**
TIY sP **sP 08 14 45.3 +0.7**
TIY S **S 08 19 26.9 -1.6**
TIY sS **sS 08 22 15.9 +4.4**
TIY pmax pmax
comp=Z,180nm,0.5s
TIY pmax pmax
comp=Z,2μm,10.0s
KMI Kunming 54.73 305⇓ P **P 08 12 26.1 +1.8**
KMI PcP **PcP 08 13 21.3 +1.0**
KMI pP pwP 08 13 59.8 +1.7
KMI sP sP 08 14 46.5 +1.8
KMI S **S 08 19 31.3 +1.4**
KMI sS sS 08 22 11.8 -1.0
KMI pmax pmax
comp=Z,340nm,1.1s
KMI pmax pmax
comp=Z,2μm,3.5s
KMI Kunming 54.73 305 P **P 08 12 25.9 +1.6**
KMI PcP **PcP 08 13 21.1 +0.8**
KMI pP **pwP 08 13 58.4 +0.2**
SKR Severo-Kuril's 54.99 4*d* *i*P **P 08 12 25.7 +0.4**
SKR *i* *PP pwP 08 14 11.0 +10
SKR *i* 08 14 44.7
SKR *i* S **S 08 19 31.0 -0.8**
SKR *i* SS **sS 08 22 13.0 -2.0**
SKR pmax pmax
comp=Z,3μm,5.4s
SKR pmax pmax
comp=Z,906nm,0.8s
SKR MLR MLR
comp=Z,1μm,15.0s
KEKH Kekaha 55.35 60 P **P 08 12 28.9 +0.5**
KEKH IAmb IAmb 08 12 32.1
comp=Z,606nm,1.0s
TYV Tymovskoe 55.36 354 *e*P **P 08 12 28.6 +0.7**
TYV *e*S **S 08 19 38.6 +2.0**
TYV pmax pmax
comp=Z,3μm,2.9s
TYV pmax pmax
comp=Z,677nm,1.1s
TYV smax smax
comp=N,2μm,4.1s
TYV smax smax
comp=E,1μm,4.1s
CM31 Chiang Mai Arr 55.51 296 P **P 08 12 30.5 +0.9**
CM31 IAmb IAmb 08 12 35.3
comp=Z,590nm,0.9s
CMAR Chiang Mai Arr 55.51 296 P **P 08 12 30.9 +1.4**
comp=Z,292nm,0.9s,baz=114,slow=5.2,SNR=791
CMAR PcP **PcP 08 13 24.3 +1.2**
comp=Z,71nm,0.8s,baz=103,slow=2.2,SNR=8.2
CMAR S **S 08 19 42.8 +3.1**
comp=Z,1.8nm,0.3s,baz=98,slow=35,SNR=1.8
CMAR PKP2bc 08 42 40.1
comp=Z,14nm,0.6s,baz=292,slow=4.4,SNR=14
CMAR P4KPbc 08 49 45.3
comp=Z,3.7nm,0.2s,baz=97,slow=2.8,SNR=8.0
comp=Z,292nm,0.9s
CMAR Chiang Mai Arr 55.51 296 P **P 08 12 30.3 +0.8**
CHTO Chiang Mai 55.62 296 P **P 08 12 30.0 -0.4**
KLR Kul'dur 55.73 345*d* *i*P **P 08 12 31.1 +0.5**
KLR pmax pmax
comp=Z,942nm,1.7s
PZH PanZhiHua 56.14 306⇓ P **P 08 12 34.6 +0.6**
PZH pP **pwP 08 14 09.1 +0.8**
PZH PP **PP 08 14 51.3 +5.7**
PZH S **S 08 19 48.5 +0.5**
PZH ScS **ScS 08 21 35.8 -0.4**
PZH SS **SS 08 23 50.1 +6.7**
PZH pmax pmax
comp=Z,180nm,1.2s
PZH pmax pmax
comp=Z,2μm,6.8s
GRNR Gornyy 56.16 349⇓ *i*P **P 08 12 34.3 +0.7**
GRNR *e* 08 14 52.2
GRNR *e*S **S 08 19 49.8 +2.6**
GRNR pmax pmax
comp=E,80nm,0.6s
GRNR pmax pmax
comp=N,130nm,0.9s
GRNR pmax pmax
comp=Z,280nm,0.7s
GRNR smax smax
comp=E,10.0nm,0.6s
HON Honolulu 56.60 61 P **P 08 12 38.1 +1.0**
HON IAmb IAmb 08 12 39.5
comp=Z,886nm,1.0s
HON Honolulu 56.60 61 P **P 08 12 38.1 +1.0**
HON pmax pmax
comp=Z,886nm,1.0s
CD2 Chengdu 56.61 312⇓ *i*P **P 08 12 37.9 +0.8**
CD2 PcP **PcP 08 13 26.0 -1.3**
CD2 PP **PP 08 14 55.9 +6.3**
CD2 S **S 08 19 54.1 +0.3**
CD2 ScS **ScS 08 21 36.1 -3.3**
CD2 SS **SS 08 23 53.4 +2.9**
CD2 pmax pmax
comp=Z,640nm,0.7s
CD2 pmax pmax
comp=Z,2μm,5.2s
KIP Kipapa 56.62 61 P **P 08 12 37.6 +0.3**
KIP IAmb IAmb 08 12 39.5
comp=Z,594nm,1.0s
KIP Kipapa 56.62 61*d* *i*P **P 08 12 37.9 +0.6**
KIP pmax pmax
comp=Z,1μm,1.7s
KIP Kipapa 56.62 61 P **P 08 12 38.4 +1.1**
KIP Kipapa 56.62 61 P **P 08 12 37.5 +0.2**
KIP PcP **PcP 08 13 29.4 +1.9**
OPA Opana 56.72 61 P **P 08 12 38.4 +0.4**
OPA IAmb IAmb 08 12 42.4
comp=Z,1μm,1.1s
OPA Opana 56.72 61 P **P 08 12 38.4 +0.4**
OPA pmax pmax
comp=Z,1μm,1.1s
XLT XiLinHaoTe 57.06 331⇓ *i*P **P 08 12 40.3 +0.3**
XLT PcP **PcP 08 13 28.9 +0.1**
XLT pP pP 08 14 12.4 +0.4
XLT S **S 08 19 54.8 -4.3**
XLT pmax pmax
comp=Z,1μm,1.2s
XLT pmax pmax
comp=Z,4μm,5.7s
HHC Hu-ho-hao-te 57.27 326 *e*P **P 08 12 42.6 +1.0**
HHC pP pP 08 14 13.4 -0.5
HHC PP **PP 08 14 57.6 +2.3**
HHC S **S 08 20 02.6 +0.5**
HHC sS sS 08 22 49.5 +2.8
HHC pmax pmax
comp=Z,870nm,1.1s
HHC pmax pmax
comp=Z,4μm,5.5s
PEA0B Petropavlovsk- 57.53 5 P **P 08 12 43.1 +0.1**
PEA0B Petropavlovsk- 57.53 5*d* *i*P **P 08 12 43.5 +0.5**
PETK Petropavlovsk- 57.53 5 P **P 08 12 43.0 0.0**
comp=Z,1μm,0.5s,baz=162,slow=6.6,SNR=1720
comp=Z,1μm,0.5s
PETK Petropavlovsk- 57.53 5 P **P 08 12 42.5 -0.5**
PETK Petropavlovsk- 57.53 5 P **P 08 12 43.0 0.0**
PET Petropavlovsk 57.54 6 P **P 08 12 43.0 +0.1**
PET IAmb IAmb 08 12 44.4
comp=Z,939nm,0.8s
PET Petropavlovsk 57.54 6*k* *i*P **P 08 12 43.1 +0.1**
PET *e* 08 13 30.6
PET *e**SP **sP 08 15 03.1 -0.6**
PET *e*S **S 08 20 05.5 +0.7**
PET *e*SP **SPn 08 20 21.1 +4.7**
PET *e*SS **SS 08 24 10.8 +6.6**
PET pmax pmax
comp=Z,6μm,6.9s
PET pmax pmax
comp=Z,4μm,14.4s
PET MLR MLR
comp=Z,2μm,17.0s
PET Petropavlovsk 57.54 6 P **P 08 12 43.2 +0.2**
PET Petropavlovsk 57.54 6 ⇓P **P 08 12 43.2 +0.2**
PET PcP **PcP 08 13 30.1 -0.2**
PET pP **pP 08 14 14.8 0.0**
KHLU Kahalu`u 57.89 64 P **P 08 12 46.7 +0.6**
KHLU IAmb IAmb 08 12 48.2
comp=Z,1μm,1.6s
HLK Haleakala 57.94 62 P **P 08 12 47.7 +1.0**
HLK IAmb IAmb 08 12 48.9
comp=Z,534nm,1.0s
HUH Hualalai 57.97 64 P **P 08 12 47.5 +0.7**
HUH IAmb IAmb 08 12 49.1
comp=Z,797nm,1.4s
BTO Baotou 57.99 324 *e*P **P 08 12 48.4 +1.9**
BTO S **S 08 20 13.4 +2.1**
KHU Kahuku 58.03 64 P **P 08 12 48.0 +0.7**
KHU IAmb IAmb 08 12 49.2
comp=Z,1μm,1.6s
KHU Kahuku 58.03 64 P **P 08 12 48.0 +0.7**
KHU pmax pmax
comp=Z,1μm,1.6s
AIN Ainahou 58.21 64 P **P 08 12 48.9 +0.5**
AIN IAmb IAmb 08 12 52.0
comp=Z,567nm,1.3s
HMH Humu'ula Sheep 58.26 64 P **P 08 12 50.0 +1.0**
HMH IAmb IAmb 08 12 51.4
comp=Z,1μm,1.2s
POHA Pohakuloa 58.26 64 P **P 08 12 49.8 +0.9**
POHA Pohakuloa 58.26 64 P **P 08 12 49.5 +0.7**
LZH Lanzhou 59.22 317⇓ P **P 08 12 56.5 +1.5**
LZH PcP **PcP 08 13 39.6 +1.9**
LZH pP pwP 08 14 30.3 +0.2
LZH S **S 08 20 29.0 +1.7**
LZH SS **SS 08 24 35.8 +4.3**
LZH pmax pmax
comp=Z,860nm,1.4s
LZH pmax pmax
comp=Z,4μm,6.0s
PBA Port Blair 59.49 286 P **P 08 12 56.0 -0.9**
SNR=5.5
PBA Port Blair 59.49 286 *e*P **P 08 12 54.1 -2.9**
HIA Hailar 59.63 337 P **P 08 12 57.2 -0.1**
HIA IAmb IAmb 08 12 58.9
comp=Z,582nm,0.6s
HIA Hailar 59.63 337 P **P 08 12 57.2 -0.1**
HIA pmax pmax
comp=Z,582nm,0.6s
HIA Hailar 59.63 337 P **P 08 12 58.0 +0.7**
PPT Papeete 60.16 108 P **P 08 13 03.8 +2.4**
comp=Z,67nm,0.5s,baz=38,slow=3.7,SNR=8.9
comp=Z,67nm,0.5s
PPT2 Papeete2 60.16 108 *e*P **P 08 13 02.8 +1.3**
comp=Z,142nm,1.0s
PPT2 *e*S **S 08 20 40.7 +1.3**
comp=Z,6μm,27.2s
PPT2 Papeete2 60.16 108 *e*LR LR 08 31 30.6
comp=Z,2μm,25.8s
PAE Paea 60.16 108 *e*P **P 08 13 02.6 +1.2**
comp=Z,36nm,1.2s
PPTF Pamatai, Papee 60.17 108 P **P 08 13 04.1 +2.5**
PPTF Pamatai, Papee 60.17 108 P **P 08 13 03.4 +1.8**
SHEM Shemya Is, Ala 60.26 16 P **P 08 13 02.0 +0.7**
comp=Z,1μm,0.4s,baz=46,slow=2.9,SNR=393
comp=Z,1μm,0.4s
TIAR Tiarei 60.37 108 *e*PKP1 **P 08 13 04.0 +1.1**
comp=Z,58nm,0.8s
TIAR *e*pP **pP 08 14 35.7 -0.3**
comp=Z,20nm,1.0s
TVO Taravao 60.48 108 *e*P **P 08 13 04.6 +1.0**
comp=Z,72nm,0.9s
TBI Tubuai 60.94 114 *e*P **P 08 13 07.3 +0.8**
comp=Z,210nm,1.1s
TBI *e*S **S 08 20 50.3 +1.4**
comp=Z,4μm,30.0s
ZEA Zeya 61.01 345*d* *i*P **P 08 13 07.5 +1.2**
ZEA *e* 08 13 44.8
ZEA *e**PP **pP 08 14 46.6 +6.5**
ZEA *e* 08 15 28.6
ZEA *e*S **S 08 20 50.7 +2.1**
ZEA *e*SS **SS 08 25 05.5 +7.2**
ZEA pmax pmax
comp=N,670nm,1.1s
ZEA pmax pmax
comp=E,180nm,1.1s
ZEA pmax pmax
comp=Z,1μm,1.1s
ZEA pmax pmax
comp=N,2μm,1.5s
ZEA pmax pmax
comp=Z,3μm,1.7s
ZEA pmax pmax
comp=E,400nm,6.9s
ZEA pmax pmax
comp=N,900nm,8.1s
ZEA pmax pmax
comp=Z,2μm,8.6s
ZEA smax smax
comp=E,1μm,10.1s
ZEA smax smax
comp=N,3μm,9.5s
LKP Lekhapani 61.29 304⇓ *i*P **P 08 13 08.5 -0.2**
PMOR Pomariorio Ree 61.58 105 *e*P **P 08 13 11.6 +0.8**
MEH Mehetia 61.62 108 *e*PKP1 **P 08 13 12.5 +1.4**
comp=N,59nm,1.0s
VAH Vaihoa 61.85 105 *e*P **P 08 13 13.8 +1.2**
comp=N,85nm,0.9s
IMP Imphal 61.99 301⇓ *i*P **P 08 13 13.2 -0.4**
MOKO MOKOCHONG 62.02 303⇓ *i*P **P 08 13 13.5 -0.3**
MOKO IAmb IAmb 08 13 18.0
comp=Z,490nm,1.1s
DIBR DIBRUGARH 62.11 304⇓ *i*P **P 08 13 14.6 +0.5**
KOHI KOHIMA 62.16 302⇓ *i*P **P 08 13 14.2 -0.5**
JORH JORHAT 62.40 303⇓ *i*P **P 08 13 16.1 +0.1**
ADK Adak 62.59 22 P **P 08 13 17.2 +0.5**
ADK Adak 62.59 22 ⇓P **P 08 13 17.4 +0.6**
DRV Dumont d'Urvil 62.67 185 P **P 08 13 17.6 +0.6**
DRV pP **pP 08 14 48.7 -1.1**
SILR SILCHAR 62.96 300⇓ *i*P **P 08 13 21.1 +1.5**
ITAN ITANAGAR 62.98 303⇓ *i*P **P 08 13 20.9 +1.2**
ITAN IAmb IAmb 08 13 27.3
comp=Z,535nm,1.0s
ITAN *e*x x 08 24 12.2
ZIRO ZIRO 63.01 304⇓ *i*P **P 08 13 21.0 +0.8**
TEZP TEZPUR 63.57 302⇓ *i*P **P 08 13 24.0 +0.4**
TEZP *i* x **pP 08 15 02.7 +4.7**
TEZP *e*x **sP 08 15 46.1 -0.5**
GTA Gaotai 63.68 318 ⇓P **P 08 13 25.4 +1.1**
GTA PcP **PcP 08 13 57.1 +1.3**
GTA pP pwP 08 15 02.1 +0.3
GTA sP sP 08 15 47.6 +0.5
GTA S **S 08 21 23.9 +1.5**
GTA ScS **ScS 08 22 34.4 +2.0**
GTA sS sS 08 24 12.3 +1.2
GTA pmax pmax
comp=Z,310nm,0.6s
GTA pmax pmax
comp=Z,3μm,4.7s
MA2 Magadan 63.69 0 S **S 08 21 21.2 -0.1**
comp=Z,15nm,0.9s,baz=350,slow=19,SNR=7.7
MA2 Magadan 63.69 0*d* *i*P **P 08 13 23.7 0.0**
MA2 pmax pmax
comp=Z,1μm,1.3s
MA2 Magadan 63.69 0 P **P 08 13 24.0 +0.3**
MA2 Magadan 63.69 0 ⇓P **P 08 13 23.9 +0.2**
MA2 PcP **PcP 08 13 55.0 -0.2**
SHL Shillong 64.00 301 P **P 08 13 27.4 +0.8**
SNR=32
CIT Chita 64.25 336 *e*P **P 08 13 29.1 +1.6**
CIT *e* 08 13 57.0
CIT *e*S **S 08 21 32.2 +3.6**
CIT *e* 08 21 51.2
CIT *e* 08 22 07.0
CIT *e* 08 22 38.3
CIT pmax pmax
comp=Z,2μm,1.3s
ULN Ulaanbaatar 64.33 329 P **P 08 13 29.2 +0.9**
ULN IAmb IAmb 08 13 33.5
comp=Z,398nm,0.8s
ULN Ulaanbaatar 64.33 329*d* *i*P **P 08 13 29.4 +1.1**
ULN pmax pmax
comp=Z,725nm,1.3s
ULN Ulaanbaatar 64.33 329 P **P 08 13 29.9 +1.6**
ULN Ulaanbaatar 64.33 329 ⇓P **P 08 13 29.7 +1.4**
ULN PcP **PcP 08 13 57.8 -0.5**
ULN pP **pwP 08 15 05.2 -0.2**
SONM Songino Array 64.65 329 P **P 08 13 31.5 +1.2**
comp=Z,386nm,0.5s,baz=147,slow=5.0,SNR=377
SONM PcP **PcP 08 14 00.0 +0.4**
comp=Z,99nm,0.6s,baz=166,slow=7.2,SNR=4.7
SONM S **S 08 21 37.2 +3.4**
comp=Z,0.8nm,0.4s,baz=226,slow=49,SNR=1.2
SONM PKP2bc 08 42 15.4
comp=Z,15nm,1.1s,baz=304,slow=2.6,SNR=9.1
comp=Z,386nm,0.5s
SONM Songino Array 64.65 329 P **P 08 13 30.9 +0.7**
GOMU GeErMu 65.67 313⇓ *e*P **P 08 13 38.6 +1.3**
GOMU S **S 08 21 47.0 0.0**
GOMU pmax pmax
comp=Z,120nm,0.7s
DHUB DHUBRI 65.76 301⇓ *i*P **P 08 13 37.5 -0.1**
LSA Lhasa 65.99 305 P **P 08 13 39.9 +0.4**
LSA IAmb IAmb 08 13 42.0
comp=Z,383nm,0.7s
LSA Lhasa 65.99 305 P **P 08 13 40.5 +1.0**
LSA pmax pmax
comp=Z,640nm,0.9s
LSA Lhasa 65.99 305 P **P 08 13 39.9 +0.4**
LSA pmax pmax
comp=Z,383nm,0.7s
LSA Lhasa 65.99 305 P **P 08 13 40.6 +1.1**
LSA Lhasa 65.99 305 P **P 08 13 40.8 +1.3**
LSA pP **pwP 08 15 18.8 +0.9**
LSA sP **sP 08 16 05.5 +2.4**
NIKH Nikolski High 66.58 25 P **P 08 13 41.8 -0.3**
NIKH Nikolski High 66.58 25 P **P 08 13 42.1 0.0**
baz=225,SNR=56
NIKH S **S 08 21 57.4 +1.1**
baz=225
SEY Seymchan 67.07 1 S **S 08 22 03.9 +2.1**
comp=Z,4.4nm,0.9s,baz=348,slow=21,SNR=1.3
SEY PKPPKP 08 42 06.2
comp=Z,6.6nm,1.1s,baz=338,slow=3.5,SNR=6.1
SEY Seymchan 67.07 1*d* *i*P **P 08 13 45.0 +0.1**
SEY pmax pmax
comp=Z,875nm,1.3s
GTK Tadong 67.34 302 *i*P **P 08 13 48.6 +1.0**
CASY Casey 67.80 196 P **P 08 13 49.0 -0.4**
CASY Casey 67.80 196 ⇓P **P 08 13 49.2 -0.2**
ZAK Zakamensk 67.84 330 *e*P **P 08 13 50.7 +0.6**
ZAK *e* 08 15 32.0
ZAK pmax pmax
comp=Z,958nm,1.0s

BWNR Bhubaneshwar 67.92 294⇓*i*P P 08 13 51.8 +0.7
BWNR *i* x **pP 08 15 30.8 +3.4**
BWNR *e*x **sP 08 16 14.3 -1.5**
YAK Yakutsk 68.04 350 S **S 08 22 13.7 +0.5**
comp=Z,21nm,0.5s,baz=267,slow=0.7,SNR=1.3
YAK Yakutsk 68.04 350 P **P 08 13 51.0 +0.1**
YAK Yakutsk 68.04 350*d*iP **P 08 13 51.5 +0.6**
YAK *e* 08 14 11.7
YAK *e**PP **pP 08 15 31.5 +4.1**
YAK *e* 08 16 31.7
YAK *e*S **S 08 22 14.2 +1.1**
YAK *e* 08 23 05.6
YAK pmax pmax
comp=Z,2μm,1.1s
YAK pmax pmax
comp=N,491nm,1.1s
YAK pmax pmax
comp=E,156nm,1.0s
YAK pmax pmax
comp=Z,154nm,1.0s
YAK pmax pmax
comp=E,17nm,0.5s
YAK pmax pmax
comp=N,73nm,0.9s
YAK smax smax
comp=E,830nm,2.5s
YAK smax smax
comp=N,1μm,2.5s
YAK Yakutsk 68.04 350 P **P 08 13 51.4 +0.4**
YAK PcP **PcP 08 14 11.8 -1.4**
YAK pP **pP 08 15 24.6 -2.8**
TAPN Taplejung 68.11 302 *e*P **P 08 13 53.1 +0.6**
comp=N,1μm,0.8s
UNV Unalaska Valle 68.20 26 P **P 08 13 51.9 -0.1**
UNV Unalaska Valle 68.20 26 P **P 08 13 52.1 +0.1**
baz=227,SNR=99
UNV S **S 08 22 15.8 +0.5**
baz=227
ODAN Odare 68.24 301 *e*P **P 08 13 53.4 +0.2**
comp=N,105nm,0.8s
ODAN Odare 68.24 301 *e*P **P 08 13 53.7 +0.5**
BOD Bodaibo 68.50 340⇑*i*P P 08 13 53.8 0.0
BOD pmax pmax
comp=Z,685nm,1.2s
IRK Irkutsk 68.52 332 *e*P **P 08 13 54.1 0.0**
IRK *e*S **S 08 22 22.3 +3.1**
IRK pmax pmax
comp=Z,867nm,1.3s
BOK Bokaro 68.71 297⇓*i*P P 08 13 56.8 +1.0
AKUT Akutan 68.72 26 P **P 08 13 55.2 0.0**
RAMN Ramite 68.94 301 *e*P **P 08 13 58.0 +0.5**
comp=Z,409nm,0.6s
SPIA Saint Paul Isl 69.06 22 P **P 08 13 57.8 +0.6**
SPIA Saint Paul Isl 69.06 22 P **P 08 13 58.1 +0.9**
baz=223
SPIA S **S 08 22 28.2 +3.1**
baz=223
TAOE Nuku Hiva Isla 69.07 98 *e*PKP1 **P 08 13 58.3 0.0**
comp=Z,364nm,1.2s
TAOE *e*S **S 08 22 27.9 +0.8**
comp=Z,3μm,26.7s
TAOE Nuku Hiva Isla 69.07 98 *e*LR LR 08 35 38.0
comp=Z,1μm,23.4s
TAOE Nuku Hiva Isla 69.07 98 P **P 08 13 59.7 +1.4**
JIRN Jiri 69.49 301 *e*P **P 08 14 01.6 +0.7**
comp=Z,888nm,0.7s
MOY Mondy 69.77 330 *e*P **P 08 14 03.0 +1.2**
MOY pmax pmax
comp=Z,1μm,2.7s
GUN Gumba 69.82 302 *e*P **P 08 14 03.7 +0.8**
RAGD RAYAGADA 69.84 292⇓*i*P P 08 14 03.4 +0.6
RAGD *i* x **sP 08 16 25.1 -2.8**
PKI Pulchoki 70.13 301 *e*P **P 08 14 05.1 +0.4**
PKIN Phulchoki 70.14 301 *e*P **P 08 14 04.9 +0.2**
comp=Z,962nm,0.8s
FALS False Pass 70.22 26 P **P 08 14 04.5 +0.2**
baz=230,SNR=35
FALS S **S 08 22 40.1 +1.5**
baz=230
FALS False Pass 70.22 26 P **P 08 14 05.0 +0.7**
KKN Kakani 70.30 301 *e*P **P 08 14 06.2 +0.6**
comp=Z,57nm,0.6s
DMN Daman 70.40 301 *e*P **P 08 14 06.9 +0.6**
PALK Pallekele 70.49 279*d*iP **P 08 14 07.2 +0.4**
PALK pmax pmax
comp=Z,180nm,0.9s
PALK Pallekele 70.49 279 P **P 08 14 07.3 +0.5**
PALK Pallekele 70.49 279 P **P 08 14 07.2 +0.4**
PALK pP **pP 08 15 44.2 +0.3**
PALK sP **sP 08 16 31.6 -0.2**
GKN Gorkha 70.90 301 *e*P **P 08 14 09.6 +0.5**
comp=Z,2μm,0.8s
KNGR Kungurtug, Tuv 70.98 327*d*iP **P 08 14 10.1 +1.1**
KNGR pmax pmax
comp=Z,827nm,1.0s
VLK Valmikinagar 71.38 301⇓*i*P P 08 14 12.5 +0.8
VLK *i* x **pP 08 15 56.1 +7.0**
VLK *e*x **sP 08 16 35.4 -1.6**
VAR Varanasi 71.61 298 *i*P **P 08 14 13.2 +0.1**
BLSP Bilaspur 71.67 295⇓*i*P P 08 14 13.4 -0.2
BLSP *e*x x 08 16 37.7
KOLN Koldanda 71.73 301 *e*P **P 08 14 14.3 +0.3**
comp=Z,226nm,0.6s
KOLN Koldanda 71.73 301 *e*P **P 08 14 14.5 +0.5**
DANN Dangsing 71.74 302 *e*P **P 08 14 14.3 +0.1**
comp=Z,1μm,0.7s
MDRS Chennai 71.75 285⇓*i*P P 08 14 14.3 +0.2
MDRS IAmb IAmb 08 14 18.5
comp=Z,113nm,0.6s
SDPT Sand Point 71.85 27 P **P 08 14 14.1 +0.2**
baz=232,SNR=86
SDPT S **S 08 22 57.6 +0.6**
baz=232
VJD Vijayawada 71.94 289 *e*P **P 08 14 15.0 -0.2**
CNBA Chernabura Isl 71.94 28 P **P 08 14 14.3 -0.1**
CHNA Chernabura Isl 71.95 28 P **P 08 14 14.7 +0.3**
baz=234,SNR=56
CHNA S **S 08 22 58.9 +0.8**
baz=234
PYUN Piuthan 72.33 301 *e*P **P 08 14 17.6 0.0**
comp=Z,2μm,0.9s
ALBI Allahabad 72.68 298⇓*i*P P 08 14 19.4 0.0
ALBI *i* x **pP 08 15 53.8 -3.3**
ALBI *e*x **sP 08 16 40.8 -4.2**
BILL Bilibino 73.04 6 P **P 08 14 21.2 +0.6**
BILL Bilibino 73.04 6*c*iP **P 08 14 21.1 +0.6**
BILL *e* 08 14 38.8
BILL *e**SP **sP 08 16 44.4 -2.0**
BILL *i* 08 17 06.8
BILL *e*S **S 08 23 12.4 +2.4**
BILL *e* 08 24 01.2
BILL *i*SS **SS 08 27 59.0 -3.7**
BILL pmax pmax
comp=Z,2μm,1.3s
BILL MLR MLR
comp=Z,696nm,18.0s
CHGN Chignik 73.36 27 P **P 08 14 22.7 +0.2**
baz=234,SNR=58
CHGN S **S 08 23 14.2 +0.4**
baz=234
VNDA Vanda 73.42 177 P **P 08 14 23.3 +0.7**
comp=Z,75nm,0.7s,baz=332,slow=6.6,SNR=526
VNDA S **S 08 23 15.8 +1.9**
comp=Z,7.7nm,1.1s,baz=324,slow=13,SNR=11
comp=Z,75nm,0.7s
SALM Salem 73.52 283⇓*i*P P 08 14 25.7 +1.4
GAMB Gambell 73.58 17 P **P 08 14 24.6 +1.0**
baz=220,SNR=35
GAMB S **S 08 23 18.8 +2.9**
baz=220
WMQ Urumqi 73.77 318⇓*i*P P 08 14 26.4 +1.1
WMQ PcP **PcP 08 14 40.8 +2.5**
WMQ pP pwP 08 16 06.6 +0.2
WMQ sP sP 08 16 51.0 +0.2
WMQ PP **PP 08 17 17.3 -0.4**
WMQ S **S 08 23 20.8 +1.7**
WMQ SKS **SKSac 08 23 46.3 -1.9**
WMQ SS **SS 08 28 12.4 -2.4**
WMQ pmax pmax
comp=Z,690nm,0.9s
WMQ pmax pmax
comp=Z,4μm,3.8s
SBA Scott Base 74.00 176 P **P 08 14 27.7 +1.8**
SBA pmax pmax
comp=Z,160nm,1.6s

KOD Kodaikanal 74.04 282⇓*i*P P 08 14 28.7 +1.0
KOD *i*pP **pP 08 16 05.7 -0.3**
KOD *e*sP **sP 08 16 52.0 -1.7**
HYB Hyderabad 74.07 289⇓*i*P P 08 14 27.4 -0.2
HYB IAmb IAmb 08 14 28.1
comp=Z,266nm,0.8s
HYB *i* x **P 08 14 30.4 +2.9**
HYBB Hyderabad (bro 74.07 289 *e*P **P 08 14 27.3 -0.2**
HYBB *e*pP **pP 08 16 04.1 -1.9**
HYBB *e*sP **sP 08 16 51.6 -2.1**
HYBB *e*PP **PP 08 17 22.0 +1.2**
HYBB *e*S **S 08 23 22.3 -1.0**
NGP Nagpur 74.28 293⇓*i*P P 08 14 28.5 -0.1
TRD Trivandrum 74.33 280 *e*P **P 08 14 29.9 +0.9**
TRD IAmb IAmb 08 14 31.1
comp=Z,175nm,0.9s
CHIR Chirikof Islan 74.37 28 P **P 08 14 28.9 +0.5**
CHIR Chirikof Islan 74.37 28 P **P 08 14 29.2 +0.8**
baz=237,SNR=48
R16K Pilot Point 74.47 26 P **P 08 14 29.5 +0.7**
baz=235
R16K S **S 08 23 28.6 +2.7**
baz=235
LGTI Lohaghat 75.00 302⇓*i*P P 08 14 33.7 +1.1
LGTI *i* x x 08 16 18.0
PTH Pithoragarh 75.05 302⇓*i*P P 08 14 33.5 +0.4
P16K Nushagak River 75.15 25 P **P 08 14 33.0 +0.3**
baz=234,SNR=47
P16K S **S 08 23 33.6 +0.3**
baz=234
PCHI Peechi 75.17 282⇓*e*P P 08 14 34.9 +1.1
PCHI *e*S **S 08 23 35.7 +0.3**
O16K Kokwok River B 75.44 24 P **P 08 14 34.8 +0.5**
baz=234,SNR=258
O16K S **S 08 23 37.3 +0.9**
baz=234
SII Sitkinak Islan 75.45 28 P **P 08 14 34.8 +0.3**
SII Sitkinak Islan 75.45 28 P **P 08 14 35.4 +0.9**
baz=238,SNR=50
SII S **S 08 23 38.0 +1.2**
baz=238
SII Sitkinak Islan 75.45 28 P **P 08 14 35.5 +1.0**
Q16K King Salmon 75.51 26 P **P 08 14 34.4 -0.3**
baz=235,SNR=89
Q16K S **S 08 23 36.0 -1.2**
baz=235
JHNI Jhansi 75.59 298⇓*i*P P 08 14 34.6 -1.4
Q17K Contact Creek 75.61 26 P **P 08 14 35.6 +0.2**
baz=236,SNR=460
Q17K S **S 08 23 38.7 0.0**
baz=236
N16K Nishlik Lake 75.69 23 P **P 08 14 37.1 +1.4**
baz=233,SNR=398
N16K S **S 08 23 42.4 +3.1**
baz=233
P17K Kvichak River 75.89 25 P **P 08 14 36.4 -0.4**
baz=235
P17K S **S 08 23 42.6 +1.2**
baz=235
O17K Koliganek Bris 75.95 24 P **P 08 14 38.1 +0.9**
baz=235
O17K S **S 08 23 43.9 +1.9**
baz=235
TNA Tin City 75.99 17 P **P 08 14 37.4 +0.2**
TNA IAmb IAmb 08 14 39.2
comp=Z,422nm,1.0s
TNA Tin City 75.99 17 P **P 08 14 37.9 +0.6**
baz=223,SNR=18
TNA S **S 08 23 43.0 +0.7**
baz=223
ANM Nome 76.04 18 P **P 08 14 38.8 +1.2**
baz=226,SNR=56
ANM S **S 08 23 44.6 +1.8**
baz=226
AKL Akola 76.07 292⇓*i*P P 08 14 38.5 -0.2
BHPL Bhopal 76.16 295⇓*i*P P 08 14 37.9 -1.3
Q18K Katmai Hardscr 76.20 26 P **P 08 14 38.8 +0.1**
baz=237,SNR=523
Q18K S **S 08 23 44.5 -0.6**
baz=237
OHAK Old Harbor 76.22 28 P **P 08 14 39.4 +0.7**
baz=239,SNR=112
OHAK S **S 08 23 46.3 +1.3**
baz=239
DGZ Jazzator, Alta 76.26 323*d*iP **P 08 14 39.6 +0.3**
DGZ pmax pmax
comp=Z,684nm,1.0s
P18K Big Mountain, 76.52 25 P **P 08 14 39.7 -0.7**
P18K IAmb IAmb 08 14 40.7
comp=Z,317nm,0.8s
P18K Big Mountain, 76.52 25 P **P 08 14 40.0 -0.4**
baz=236
P18K S **S 08 23 46.8 -1.5**
baz=236
O18K Koktuh Hills 76.78 25 P **P 08 14 42.0 +0.1**
baz=236
O18K S **S 08 23 50.4 -0.7**
baz=236
KDAK Kodiak Island 76.83 27*d*iP **P 08 14 42.4 +0.3**
KDAK pmax pmax
comp=Z,1μm,1.0s
KDAK Kodiak Island 76.83 27 P **P 08 14 42.8 +0.7**
baz=239
KDAK S **S 08 23 52.9 +1.4**
baz=239
Q19K Cape Douglas, 76.95 26 P **P 08 14 42.8 0.0**
baz=238,SNR=225
Q19K S **S 08 23 53.4 +0.5**
baz=238
MNGI Mangalore 76.96 284 *e*P **P 08 14 44.0 +0.3**
N18K Kilae Creek 76.97 24 P **P 08 14 44.1 +1.2**
baz=236,SNR=203
N18K S **S 08 23 57.0 +4.0**
baz=236
ZSN Zaisan 76.97 321 *i*P **P 08 14 43.6 +0.5**
ZSN *e*S **S 08 23 52.4 -1.1**
ZSN pmax pmax
comp=Z,210nm,1.2s
ZSN Zaisan 76.97 321 *i*P **P 08 14 43.7 +0.5**
comp=Z,210nm,1.2s,baz=320
ZSN *e*S **S 08 23 52.5 -1.1**
baz=320
DDI Dehra Dun 77.05 302⇓*i*P P 08 14 44.4 +0.3
DDI IAmb IAmb 08 14 49.0
comp=Z,290nm,0.6s
TIXI Tiksi 77.11 353 P **P 08 14 42.7 -0.6**
comp=Z,245nm,0.5s,baz=268,slow=23,SNR=419
TIXI S **S 08 23 54.0 0.0**
comp=Z,2.9nm,1.0s,baz=90,slow=24,SNR=1.1
comp=Z,245nm,0.5s
TIXI Tiksi 77.11 353*d*iP **P 08 14 42.4 -0.9**
TIXI pmax pmax
comp=Z,588nm,1.0s
Q20K Shuyak Island 77.34 27 P **P 08 14 45.5 +0.6**
baz=239,SNR=52
Q20K S **S 08 23 58.2 +1.3**
baz=239
O19K Port Alsworth 77.34 25 P **P 08 14 44.8 0.0**
baz=237
O19K S **S 08 23 57.5 +0.6**
baz=237
NDI New Delhi 77.42 300 *e*P **P 08 14 46.5 +0.5**
NDI *e*S **S 08 23 56.0 -3.0**
H08S2 Diego Garcia H 77.47 263 P **P 08 14 47.3 +1.1**
baz=38,slow=5.9,SNR=65
KAAM Kaadhehdhoo 77.48 271 P **P 08 14 47.0 +0.4**
H08S3 Diego Garcia H 77.48 263 P **P 08 14 47.1 +0.9**
baz=38,slow=5.9,SNR=39
H08S1 Diego Carcia H 77.49 263 P **P 08 14 47.2 +0.9**
baz=38,slow=5.9,SNR=56
P19K Oil Pt 77.52 26 P **P 08 14 46.4 +0.5**
baz=238,SNR=285
P19K S **S 08 23 58.8 -0.1**
baz=238
DGAR Diego Garcia 77.52 263 P **P 08 14 47.3 +0.5**
DGAR IAmb IAmb 08 14 48.6
comp=Z,628nm,0.9s
DGAR Diego Garcia 77.52 263*c*eP **P 08 14 47.8 +1.0**
DGAR pmax pmax
comp=Z,1μm,1.7s
DGAR Diego Garcia 77.52 263 P **P 08 14 47.5 +0.7**
N19K Bonanza Creek 77.61 24 P **P 08 14 47.1 +0.7**
baz=237,SNR=161
N19K S **S 08 24 00.9 +0.9**
baz=237
BHGR Bahadurgarh 77.66 300 *e*P **P 08 14 46.2 -1.0**

HMDM Hanimaadhoo 77.85 278 P **P 08 14 50.3 +1.7**
SMLA Simla 77.97 303⇓*i*P P 08 14 49.0 +0.1
SMLA IAmb IAmb 08 14 51.4
comp=Z,424nm,0.8s
O20K Slope Mountain 78.00 25 P **P 08 14 48.5 -0.1**
baz=239,SNR=83
O20K S **S 08 24 03.3 -0.7**
baz=239
MNCY Minicoy 78.16 279⇓*i*P P 08 14 51.0 +0.8
KAD Karad 78.17 289⇓*i*P P 08 14 49.8 -0.5
KAD *e*x **sP 08 17 15.0 -2.5**
TTA Tatalina 78.20 22 P **P 08 14 50.5 +0.9**
baz=235,SNR=183
TTA S **S 08 24 08.5 +2.4**
baz=235
HOM Homer 78.21 26 P **P 08 14 50.2 +0.7**
baz=240,SNR=102
HOM S **S 08 24 08.1 +2.0**
baz=240
L19K White Mountain 78.22 23 P **P 08 14 50.7 +1.0**
baz=236,SNR=690
L19K S **S 08 24 08.8 +2.6**
baz=236
M19K Big River Lodg 78.25 23 P **P 08 14 50.9 +1.1**
baz=237
M19K S **S 08 24 09.7 +3.2**
baz=237
MK31 Makanchi Array 78.39 319 *i*P **P 08 14 51.3 +0.4**
MK31 pmax pmax
comp=Z,162nm,0.5s
MKAR Makanchi Array 78.39 319 P **P 08 14 51.4 +0.5**
comp=Z,168nm,0.5s,baz=99,slow=7.4,SNR=1541
MKAR S **S 08 24 08.2 -0.4**
comp=Z,1.0nm,0.8s,baz=201,slow=29,SNR=2.2
MKAR PKKPbc **PKKPbc 08 33 44.1 -2.2**
comp=Z,3.1nm,0.8s,baz=323,slow=1.8,SNR=6.2
MKAR PKP2bc 08 41 42.3
comp=Z,2.3nm,0.9s,baz=275,slow=4.5,SNR=5.7
MKAR PKPPKP **P'P'df 08 41 47.8 -0.3**
comp=Z,2.4nm,0.8s,baz=357,slow=2.4,SNR=6.6
comp=Z,168nm,0.5s
MAKZ Makanchi 78.60 319 P **P 08 14 52.3 +0.3**
BRSE Bradley Lake S 78.65 26 P **P 08 14 52.3 +0.4**
baz=240,SNR=136
BRSE S **S 08 24 11.8 +1.1**
baz=240
BHK Bhakra 78.66 303⇓*i*P P 08 14 52.6 -0.1
BHK *i* x **pP 08 16 39.8 +7.6**
BHK *e*x **sP 08 17 16.0 -3.6**
POO Poona 78.67 290⇓*i*P P 08 14 48.0 -5.0
comp=Z,360nm,1.0s
POO ⇓*i*P **PcP 08 14 52.4 -7.6**
M20K Styx River 78.74 24 P **P 08 14 53.3 +0.8**
baz=238
M20K S **S 08 24 14.6 +2.9**
baz=238
N20K Mount Spurr 78.76 25 P **P 08 14 51.9 -0.7**
baz=239,SNR=97
N20K S **S 08 24 11.6 -0.3**
baz=239
SPCR Spurr Chakacha 78.76 25 P **P 08 14 51.9 -0.7**
baz=239,SNR=71
SPCR S **S 08 24 11.4 -0.5**
baz=239
L20K Farewell, AK 78.77 23 P **P 08 14 53.6 +1.1**
baz=237,SNR=398
L20K S **S 08 24 15.0 +3.1**
baz=237
GCSA Galena City Sc 78.95 20 P **P 08 14 54.2 +0.8**
baz=234
GCSA S **S 08 24 16.1 +2.6**
baz=234
CAPN Captain Cook N 78.98 25 P **P 08 14 54.6 +1.0**
baz=240
CAPN S **S 08 24 15.9 +1.9**
baz=240
K20K Telida 79.17 22 P **P 08 14 55.9 +1.2**
baz=237,SNR=204
K20K S **S 08 24 19.1 +3.0**
baz=237
SHLS Shalkode 79.19 315*d*iP **P 08 14 54.7 -0.7**
SHLS *i*S **S 08 24 15.0 -2.3**
SHLS pmax pmax
comp=Z,117nm,0.6s
SHLS smax smax
comp=N,166nm,3.8s
SHLS Shalkode 79.19 315⇓*i*P P 08 14 54.7 -0.7
comp=N,117nm,0.6s,baz=315
SHLS *i*S **S 08 24 15.0 -2.3**
comp=N,166nm,3.8s,baz=315
PDGK Podgornoye 79.22 315 P **P 08 14 56.0 +0.4**
AJM Ajmer 79.23 298⇓*i*P P 08 14 55.6 -0.3
SEW Seward 79.39 26 P **P 08 14 56.2 +0.3**
baz=242,SNR=186
SEW S **S 08 24 19.4 +1.1**
baz=242
ZAA0 Zalesovo Array 79.43 327 P **P 08 14 55.3 -0.9**
ZALV Zalesovo Beam 79.43 327 P **P 08 14 55.8 -0.4**
comp=N,707nm,0.6s,baz=111,slow=5.4,SNR=2043
ZALV S **S 08 24 16.8 -2.2**
comp=N,4.4nm,0.7s,baz=104,slow=9.6,SNR=5.0
ZALV PKKPbc **PKKPbc 08 33 42.1 -2.2**
comp=N,4.4nm,0.4s,baz=292,slow=2.1,SNR=10
comp=N,707nm,0.6s
ZALV Zalesovo Beam 79.43 327 P **P 08 14 55.4 -0.8**
SKT Skwentna 79.44 24 P **P 08 14 55.0 -1.2**
baz=239,SNR=130
SKT S **S 08 24 18.1 -0.7**
baz=239
O22K Cooper Landing 79.45 26 P **P 08 14 56.4 +0.2**
baz=241,SNR=166
O22K S **S 08 24 20.1 +1.1**
baz=241
THN Thein Dam 79.46 304⇓*i*P P 08 14 56.9 +0.1
THN *e*P **P 08 14 57.0 +0.1**
THN *i* x x 08 16 44.0
THN *e*S **S 08 24 18.0 -2.2**
UZB Uzynbulak 79.50 315 *i*P **P 08 14 57.6 +0.6**
UZB *i*S **S 08 24 21.0 +0.4**
UZB Uzynbulak 79.50 315 *i*P **P 08 14 57.7 +0.6**
baz=315
UZB *i*S **S 08 24 21.1 +0.4**
baz=315
SUA Susitna One 79.50 25 P **P 08 14 56.0 -0.6**
baz=240,SNR=123
SUA S **S 08 24 17.1 -2.6**
baz=240
J20K Nowinta River 79.60 22 P **P 08 14 58.0 +1.1**
baz=237,SNR=765
J20K S **S 08 24 22.8 +2.5**
baz=237
PPLA Purkeypile 79.65 23 P **P 08 14 57.1 -0.3**
baz=239,SNR=188
PPLA S **S 08 24 20.0 -1.3**
baz=239
RC01 Rabbit Creek A 79.74 25 P **P 08 14 57.7 0.0**
baz=241,SNR=298
RC01 S **S 08 24 22.2 +0.2**
baz=241
KPKS Kokpek 79.83 315*d*iP **P 08 14 59.3 +0.6**
KPKS *i*S **S 08 24 24.2 +0.4**
KPKS pmax pmax
comp=Z,357nm,1.4s
KPKS smax smax
comp=N,159nm,2.8s
KPKS Kokpek 79.83 315⇓*i*P P 08 14 59.3 +0.6
comp=N,357nm,1.4s,baz=315
KPKS *i*S **S 08 24 24.2 +0.4**
comp=N,158nm,2.8s,baz=315
M22K Willow 79.91 25 P **P 08 14 58.1 -0.4**
baz=241,SNR=225
M22K S **S 08 24 22.3 -1.2**
baz=241
SATY Saty 79.91 315*d*iP **P 08 14 59.9 +0.7**
SATY *e*S **S 08 24 24.7 0.0**
SATY pmax pmax
comp=Z,93nm,0.6s
SATY Saty 79.91 315⇓*i*P P 08 14 60.0 +0.7
comp=Z,93nm,0.6s,baz=315
SATY *e*S **S 08 24 24.8 0.0**
baz=315
CAST Castle Rocks 79.96 23 P **P 08 14 58.9 0.0**
baz=239,SNR=1000
CAST S **S 08 24 24.0 -0.3**
baz=239
TARG Taragay, Kyrgy 79.99 314 P **P 08 14 58.4 -1.6**
TARG IAmb IAmb 08 15 03.3

comp=Z,475nm,1.2s
TARG Taragay, Kyrgy 79.99 314 P P 08 14 58.4 -1.6
TARG pmax pmax
comp=Z,475nm,1.2s
CHUM Lake Minchumin 80.12 22 P P 08 15 00.3 +0.7
baz=238,SNR=153
CHUM S S 08 24 26.7 +1.0
baz=238
CUT Chulitna 80.17 24 P P 08 14 59.2 -0.7
baz=240,SNR=157
CUT S S 08 24 24.3 -2.0
baz=240
JMU Jammu 80.19 304⇓*i*P P 08 15 01.7 +1.0
JMU *i* x x 08 16 50.2
JMU *e*x **sP 08 17 29.4 +1.4**
PWL Port Wells 80.24 26 P P 08 15 00.8 +0.4
baz=243,SNR=952
PWL S S 08 24 27.7 +0.6
baz=243
PMR Palmer 80.24 25 P P 08 15 00.2 -0.1
baz=242,SNR=271
PMR S S 08 24 26.4 -0.7
baz=242
P23K Montague Islan 80.26 27 P P 08 15 01.0 +0.6
baz=244
P23K S S 08 24 29.7 +2.4
baz=244
TDK Taldyqorghan 80.44 317*d*iP **P 08 15 02.4 +0.6**
TDK *e*S **S 08 24 29.8 -0.1**
TDK pmax pmax
comp=Z,884nm,1.2s
TDK Taldyqorghan 80.44 317⇓*i*P P 08 15 02.4 +0.6
comp=Z,884nm,1.2s,baz=316
TDK *e*S **S 08 24 29.8 -0.1**
baz=316
KNK Knik Glacier 80.44 25 P P 08 15 01.7 +0.3
baz=242,SNR=216
KNK S S 08 24 29.4 +0.1
baz=242
Q23K Middleton Isla 80.49 28 P P 08 15 02.5 +0.8
baz=245,SNR=11
Q23K S S 08 24 31.5 +1.9
baz=245
TRF Thorofare Moun 80.67 23 P P 08 15 02.1 -0.7
baz=240,SNR=534
TRF S S 08 24 29.8 -2.0
baz=240
SML Sawmill 80.68 25 P P 08 15 03.0 +0.3
baz=242,SNR=732
SML S S 08 24 31.4 -0.3
baz=242
BPAW Bear Paw Mtn. 80.73 22 P P 08 15 02.5 -0.4
baz=240,SNR=290
BPAW S S 08 24 30.3 -1.8
baz=240
GLI Glacier Island 80.79 26 P P 08 15 03.6 +0.4
baz=244,SNR=394
GLI S S 08 24 32.9 +0.1
baz=244
KSH Kashi 80.80 311 P P 08 15 06.3 +2.3
KSH sP sP 08 17 33.8 +2.7
KSH S **S 08 24 36.6 +2.5**
KSH sS sS 08 27 34.8 +3.0
KSH pmax pmax
comp=Z,460nm,0.9s
KSH pmax pmax
comp=Z,3μm,5.7s
H21K Melozitna Rive 80.88 21 P P 08 15 04.1 +0.5
baz=238,SNR=296
H21K S S 08 24 35.3 +1.8
baz=238
MDOK Medeo 80.90 315 *i* P **P 08 15 05.2 +0.8**
MDOK *i* S **S 08 24 33.1 -1.8**
MDOK Medeo 80.90 315 *i* P **P 08 15 05.3 +0.8**
baz=314
MDOK *i* S **S 08 24 33.2 -1.8**
baz=314
I21K Tanana 80.92 21 P P 08 15 04.7 +0.9
I21K Tanana 80.92 21 P P 08 15 04.7 +0.9
baz=238,SNR=522
I21K S S 08 24 35.9 +2.0
baz=238
M23K Glacier View 80.93 25 P P 08 15 04.1 +0.1
baz=243,SNR=213
M23K S S 08 24 34.4 +0.2
baz=243
TNSS Tian-Shan 80.94 315 *i* P **P 08 15 06.2 +1.3**
TNSS Tian-Shan 80.94 315 *i* P **P 08 15 06.2 +1.3**
baz=314
FID Port Fidalgo 81.00 26 P P 08 15 04.2 -0.2
AAA Alma-Ata 81.00 315*d*iP **P 08 15 05.7 +0.9**
AAA *e*S **S 08 24 36.2 +0.4**
AAA Alma-Ata 81.00 315⇓*i*P P 08 15 05.8 +0.9
baz=314
AAA *e*S **S 08 24 36.2 +0.4**
baz=314
WAT1 Susitna Watana 81.07 24 P P 08 15 04.6 -0.1
baz=242
WAT1 S S 08 24 34.3 -1.3
baz=242
G21K Allakaket 81.11 20 P P 08 15 05.3 +0.5
baz=237
G21K S S 08 24 37.3 +1.5
baz=237
SCM Sheep Creek Mo 81.11 25 P P 08 15 05.5 +0.5
SCM Sheep Creek Mo 81.11 25 P P 08 15 05.5 +0.5
SCM pmax pmax
comp=Z,1μm,1.0s
SCM Sheep Creek Mo 81.11 25 P P 08 15 05.2 +0.2
baz=243,SNR=337
SCM S S 08 24 35.9 -0.3
baz=243
RND Reindeer 81.22 23 P P 08 15 04.8 -0.7
RND Reindeer 81.22 23 P P 08 15 04.8 -0.7
RND pmax pmax
comp=Z,1μm,0.8s
NRN Naryn 81.23 313 P P 08 15 06.1 -0.3
NRN IAmb IAmb 08 15 12.8
comp=Z,370nm,1.2s
NRN Naryn 81.23 313 P P 08 15 06.1 -0.3
NRN pmax pmax
comp=Z,370nm,1.2s
EYAK Cordova Ski Ar 81.24 27 P P 08 15 05.6 +0.1
EYAK IAmb IAmb 08 15 07.3
comp=Z,632nm,1.2s
EYAK Cordova Ski Ar 81.24 27 P P 08 15 05.8 +0.2
baz=245,SNR=80
EYAK S S 08 24 38.1 +0.8
baz=245
ULHL Ulahol 81.25 314 P P 08 15 07.2 +0.9
SNR=268
WAT6 Susitna Watana 81.28 24 P P 08 15 05.9 -0.1
baz=243,SNR=298
WAT6 S S 08 24 36.8 -1.3
baz=243
MLY Manley 81.30 22 P P 08 15 06.2 +0.3
MLY Manley 81.30 22 P P 08 15 06.2 +0.3
baz=240,SNR=875
MLY S S 08 24 38.2 +0.3
baz=240
MCK McKinley 81.34 23 P P 08 15 05.7 -0.4
baz=242,SNR=1000
MCK S S 08 24 35.4 -3.0
baz=242
F21K Alatna River 81.50 19 P P 08 15 07.3 +0.5
baz=237,SNR=331
F21K S S 08 24 41.3 +1.5
baz=237
H22K Ishtalitna Cre 81.51 21 P P 08 15 07.7 +0.8
baz=239,SNR=346
H22K S S 08 24 41.8 +1.8
baz=239
BOOM Boomskoye usch 81.52 314 P P 08 15 08.0 +0.3
BOOM Boomskoye usch 81.52 314 P P 08 15 08.0 +0.3
BOOM pmax pmax
comp=Z,799nm,0.6s
KLU Klutina 81.57 26 P P 08 15 08.0 +0.6
baz=245,SNR=821
KLU S S 08 24 42.2 +1.4
baz=245
KUU Kurty 81.58 315*d*iP **P 08 15 08.3 +0.6**
KUU *e*S **S 08 24 40.5 -1.0**
KUU Kurty 81.58 315⇓*i*P P 08 15 08.3 +0.6
baz=315
KUU *e*S **S 08 24 40.6 -1.0**
baz=315
KAIM Kayak Island 81.59 28 P P 08 15 08.1 +0.7
baz=246,SNR=27
KAIM S S 08 24 42.5 +1.7
baz=246
DHY Denali Highway 81.66 24 P P 08 15 08.1 +0.2
baz=243,SNR=742
DHY S S 08 24 41.6 -0.2
baz=243
NEA2 Nenana 81.70 22 P P 08 15 07.5 -0.4
baz=241,SNR=580
NEA2 S S 08 24 40.7 -1.2
baz=241
M24K Tolsona, Glenn 81.72 25 P P 08 15 09.1 +1.0
M24K Tolsona, Glenn 81.72 25 P P 08 15 09.0 +0.8
baz=244,SNR=397
M24K S S 08 24 44.5 +2.2
baz=244
NIL Nilore 81.73 305 P P 08 15 08.6 -0.2
I23K Minto, Yukon-K 81.86 22 P P 08 15 08.5 -0.1
I23K IAmb IAmb 08 15 09.7
comp=Z,372nm,0.6s
I23K Minto, Yukon-K 81.86 22 P P 08 15 08.6 -0.1
baz=241,SNR=548
I23K S S 08 24 43.1 -0.3
baz=241
TKM2 Tokmak 2 81.87 314 P P 08 15 10.5 +1.0
SNR=304
TKM2 Tokmak 2 81.87 314 *i* P **P 08 15 10.3 +0.8**
TKM2 pmax pmax
comp=Z,479nm,0.5s
KURK Kurchatov 81.92 322*d*iP **P 08 15 09.5 +0.3**
KURK pmax pmax
comp=Z,1μm,1.1s
KURK Kurchatov 81.92 322 P P 08 15 09.6 +0.4
BMRM Bremner River 81.92 27 P P 08 15 09.7 +0.5
baz=246,SNR=280
BMRM S S 08 24 45.9 +1.5
baz=246
KURBB Kurchatov Arra 81.94 322 PKKPbc PKKPbc 08 33 36.4 -2.1
comp=Z,7.2nm,0.8s,baz=293,slow=2.7,SNR=19
KURBB Kurchatov Arra 81.94 322 P P 08 15 09.4 0.0
G22K Bettles 82.00 20 P P 08 15 09.8 +0.4
baz=239,SNR=460
G22K S S 08 24 46.1 +1.4
baz=239
F22K John River 82.08 19 P P 08 15 10.7 +0.9
baz=238,SNR=498
F22K S S 08 24 47.1 +1.5
baz=238
H23K Yukon River 82.13 21 P P 08 15 10.6 +0.5
baz=241,SNR=436
H23K S S 08 24 47.5 +1.3
baz=241
BGLC Bering Glacier 82.19 28 P P 08 15 11.6 +1.2
baz=247
N25K Chitina, Valde 82.19 26 P P 08 15 11.2 +0.6
baz=246,SNR=194
N25K S S 08 24 47.9 +0.8
baz=246
KBK Karagaybulak 82.27 314 P P 08 15 12.8 +1.3
SNR=14
HARP HAARP 82.28 25 P P 08 15 11.5 +0.5
baz=245,SNR=226
TCOL CIGO, UAF Yank 82.29 22 P P 08 15 10.1 -0.8
baz=242,SNR=388
TCOL S S 08 24 45.9 -1.9
baz=242
COLA College 82.30 22*d*iP **P 08 15 09.7 -1.2**
COLA pmax pmax
comp=Z,2μm,0.9s
COLA College 82.30 22 P P 08 15 10.2 -0.6
baz=242
COLA S S 08 24 46.2 -1.6
baz=242
PAX Paxson 82.39 25 P P 08 15 11.5 -0.1
baz=245,SNR=337
PAX S S 08 24 48.2 -0.8
baz=245
G23K Bananza Creek 82.40 20 P P 08 15 12.3 +0.8
baz=240,SNR=762
G23K S S 08 24 50.8 +2.0
baz=240
HDA Harding Lake 82.43 23 P P 08 15 10.8 -0.8
baz=243,SNR=780
HDA S S 08 24 46.4 -2.8
baz=243
HDA S S 08 24 46.4 -2.8
baz=243
GLB Gilahina Butte 82.47 26 P P 08 15 11.9 0.0
CHMS Chumysh 82.49 314 P P 08 15 13.6 +1.2
SNR=16
CHMS Chumysh 82.49 314 *i* P **P 08 15 13.1 +0.6**
CHMS pmax pmax
comp=Z,780nm,0.7s
UCH Uchtor 82.49 313 P P 08 15 14.6 +1.6
SNR=727
WAX Waxell Ridge 82.51 27 P P 08 15 12.7 +0.5
E22K Anaktuvuk Pass 82.53 19 P P 08 15 12.9 +0.8
baz=238
E22K S S 08 24 48.8 -1.4
baz=238
VRDI Verde Repeater 82.54 27 P P 08 15 12.2 -0.3
VRDI IAmb IAmb 08 15 14.2
comp=Z,555nm,0.9s
POKR Poker Plat Res 82.57 22 P P 08 15 11.1 -1.2
POKR Poker Plat Res 82.57 22 P P 08 15 11.0 -1.3
baz=243,SNR=178
POKR S S 08 24 47.4 -3.1
baz=243
COLD Coldfoot 82.59 20 P P 08 15 13.3 +0.9
baz=240
COLD S S 08 24 51.3 +0.5
baz=240
AAK Ala-Archa 82.60 314 P P 08 15 14.3 +1.1
SNR=360
AAK Ala-Archa 82.60 314 S S 08 24 49.9 -2.1
comp=Z,3.0nm,0.9s,baz=251,slow=23,SNR=1.6
AAK PKKPbc PKKPbc 08 33 36.4 -0.3
comp=Z,6.7nm,0.9s,baz=201,slow=4.4,SNR=7.5
AAK Ala-Archa 82.60 314 P P 08 15 14.1 +0.9
AAK IAmb IAmb 08 15 15.5
comp=Z,512nm,0.8s
AAK Ala-Archa 82.60 314*d*iP **P 08 15 14.0 +0.9**
AAK pmax pmax
comp=Z,483nm,0.7s
AAK Ala-Archa 82.60 314 P P 08 15 14.3 +1.1
AAK Ala-Archa 82.60 314 *i* P **P 08 15 14.3 +1.1**
SNR=531
JASL Jaisalmer 82.60 298 *e*P **P 08 15 13.3 0.0**
IL31 82.62 23 P P 08 15 11.2 -1.2
ILAR Eielson Array 82.62 23 P P 08 15 11.7 -0.9
comp=Z,1μm,0.7s,baz=249,slow=5.1,SNR=7300
ILAR S **S 08 24 48.6 -2.4**
comp=Z,6.0nm,1.1s,baz=268,slow=6.7,SNR=7.0
ILAR PKKPbc **PKKPbc 08 33 33.9 -3.7**
comp=Z,4.1nm,0.7s,baz=2.5,slow=1.0,SNR=14
ILAR PKPPKP **P'P'df 08 41 39.5 -0.1**
comp=Z,1.4nm,0.9s,baz=317,slow=0.9,SNR=4.9
ILAR Eielson Array 82.62 23 P P 08 15 11.5 -1.0
K24K Donnelly Dome 82.62 24 P P 08 15 12.9 +0.2
baz=244,SNR=470
K24K S S 08 24 50.9 -0.3
baz=244
SGDS Sogindy 82.68 315*d*iP **P 08 15 13.9 +0.5**
SGDS *e*S **S 08 24 48.3 -4.4**
SGDS pmax pmax
comp=Z,152nm,0.5s
SGDS Sogindy 82.68 315⇓*i*P P 08 15 14.0 +0.5
comp=Z,152nm,0.5s,baz=314
SGDS *e*S **S 08 24 48.3 -4.4**
baz=314
USP Ospenovka 82.73 314 P P 08 15 14.7 +1.0
SNR=40
H24K Noodor Dome 82.74 21 P P 08 15 12.8 -0.4
baz=242,SNR=389
H24K S S 08 24 51.3 -1.0
baz=242
MCARA McCarthy VSAT 82.79 26 P P 08 15 14.3 +0.7
baz=247,SNR=238
MCARA S S 08 24 53.1 +0.2
baz=247
MESA MESA 82.83 28 P P 08 15 14.8 +0.8
baz=248,SNR=48
MESA S S 08 24 53.3 -0.4
baz=248
A21K Barrow 82.95 15 P P 08 15 14.4 +0.4
baz=233
A21K S **S 08 24 54.3 +0.3**
baz=233
RIDG Independent Ri 82.97 24 P P 08 15 14.8 +0.3
baz=245,SNR=181
RIDG S **S 08 24 54.2 -0.5**
baz=245
AML Almayashu 83.07 313 P P 08 15 17.3 +1.5
SNR=104
EKS2 Erkin-Say 83.12 314 P P 08 15 17.1 +1.4
SNR=927
J25K Salcha River, 83.13 23 P P 08 15 15.4 +0.2
baz=245,SNR=1000
J25K S **S 08 24 55.2 -1.1**
baz=245
M26K Nabesna, AK 83.20 25 P P 08 15 16.1 +0.5
baz=247,SNR=173
M26K S **S 08 24 56.1 -0.9**
baz=247
E23K Chandalar 83.20 19 P P 08 15 16.5 +0.9
baz=240,SNR=562
E23K S **S 08 24 55.2 -1.7**
baz=240
G24K Hadweenzic Riv 83.28 21 P P 08 15 16.6 +0.7
baz=243,SNR=664
G24K S **S 08 24 56.7 -0.8**
baz=243
L26K Log Cabin Wild 83.30 25 P P 08 15 16.8 +0.8
baz=247,SNR=639
L26K S **S 08 24 56.4 -1.5**
baz=247
D23K Nanushuk River 83.32 18 P P 08 15 17.2 +1.2
baz=239,SNR=810
D23K S **S 08 24 59.2 +1.3**
baz=239
CTG Chitna Glacier 83.39 27 P P 08 15 17.7 +1.0
baz=249,SNR=240
CTG S **S 08 25 01.1 +1.9**
baz=249
OHH Osh 83.41 311 P P 08 15 18.3 +1.1
OHH pmax pmax
comp=Z,1μm,1.1s
SCRK Sand Creek 83.42 24 P P 08 15 17.1 +0.3
baz=246,SNR=680
SCRK S **S 08 24 59.1 -0.2**
baz=246
PRP Porcupine Dome 83.46 22 P P 08 15 15.2 -1.8
baz=244,SNR=88
TOLK Toolik Lake Re 83.51 19 P P 08 15 17.9 +0.9
baz=240,SNR=436
TOLK S **S 08 25 01.7 +1.9**
baz=240
F24K Squaw Lake 83.52 20 P P 08 15 18.1 +1.0
baz=242,SNR=1000
F24K S **S 08 25 01.2 +1.2**
baz=242
E24K Your Creek 83.58 19 P P 08 15 18.1 +0.7
baz=242,SNR=261
E24K S **S 08 25 01.9 +1.3**
baz=242
PINM Pinnacle 83.59 28 P P 08 15 18.3 +0.7
baz=250,SNR=53
PINM S **S 08 25 02.5 +1.5**
baz=250
M27K Edge Creek, AK 83.67 26 P P 08 15 19.0 +1.0
baz=248,SNR=1000
M27K S **S 08 25 03.1 +1.2**
baz=248
H25K Birch Creek 83.68 21 P P 08 15 17.3 -0.5
baz=244,SNR=156
C23K Itkillik River 83.79 17 P P 08 15 19.4 +1.0
baz=239,SNR=178
C23K S **S 08 25 03.3 +0.9**
baz=239
G25K Bearman Lake 83.80 21 P P 08 15 19.3 +0.9
baz=244,SNR=228
G25K S **S 08 25 05.1 +2.5**
baz=244
J26L Joseph Creek 83.80 23 P P 08 15 19.1 +0.5
baz=246,SNR=935
J26L S **S 08 25 02.6 -0.4**
baz=246
PNL Peninsula 83.85 29 P P 08 15 19.9 +1.0
baz=251,SNR=71
PNL S **S 08 25 05.5 +2.0**
baz=251
O28M Mount Upton 83.85 28 P P 08 15 20.1 +0.8
baz=250,SNR=172
O28M S **S 08 25 06.1 +2.1**
baz=250
L27K Beaver Creek, 83.95 25 P P 08 15 20.3 +0.9
baz=248,SNR=617
L27K S **S 08 25 05.5 +1.1**
baz=248
D24K Happy Valley 84.00 18 P P 08 15 20.5 +1.1
baz=241
D24K S **S 08 25 05.9 +1.4**
baz=241
YUK3 Moose Creek 84.08 27 P P 08 15 21.1 +0.9
baz=250,SNR=306
YUK3 S **S 08 25 07.4 +1.4**
baz=250
BVCY Beaver Creek 84.13 26 P P 08 15 21.2 +1.0
baz=249,SNR=599
BVCY S **S 08 25 07.3 +1.1**
baz=249
K27K Chicken 84.21 24 P P 08 15 21.9 +1.4
baz=248
K27K S **S 08 25 08.5 +1.7**
baz=248
YUK8 Steele Glacier 84.22 27 P P 08 15 22.1 +1.1
baz=250,SNR=250
YUK8 S **S 08 25 09.9 +2.3**
baz=250
I26K Coal Creek Min 84.28 23 P P 08 15 20.9 +0.1
baz=247
I26K S **S 08 25 07.1 -0.3**
baz=247
C24K Franklin Bluff 84.31 18 P P 08 15 22.0 +1.1
baz=241
C24K S **S 08 25 08.6 +1.1**
baz=241
F25K Christian Rive 84.32 20 P P 08 15 22.1 +1.0
baz=244,SNR=353
F25K S **S 08 25 10.0 +2.1**
baz=244
O29M Mount Kennedy 84.45 28 P P 08 15 23.1 +1.2
baz=251,SNR=220
O29M S **S 08 25 12.5 +3.0**
baz=251
E25K Arctic Village 84.58 20 P P 08 15 23.2 +0.9
baz=244,SNR=186
E25K S **S 08 25 12.6 +2.3**
baz=244
P29M Windy Craggy 84.64 29 P P 08 15 22.4 -0.4
P29M Windy Craggy 84.64 29 P P 08 15 23.9 +1.1
baz=252,SNR=145
P29M S **S 08 25 12.3 +1.1**
baz=252
G26K Porcupine Rive 84.71 21 P P 08 15 24.2 +1.4
baz=246,SNR=653
G26K S **S 08 25 14.2 +2.7**
baz=246
NRIK Noril'sk 84.73 342 P P 08 15 22.6 -0.3
comp=Z,386nm,0.6s,baz=113,slow=4.8,SNR=398
NRIK S **SKSac 08 25 02.7 0.0**
comp=Z,3.2nm,0.4s,baz=338,slow=22,SNR=12
comp=Z,386nm,0.6s
NRIK Noril'sk 84.73 342*d*iP **P 08 15 22.4 -0.6**
NRIK pmax pmax
comp=Z,405nm,0.6s
YUK4 Talbot Arm 84.75 27 P P 08 15 25.0 +1.5
baz=251,SNR=322
YUK6 Outpost Mounta 84.75 28 P P 08 15 24.6 +1.0
baz=252,SNR=109
YUK6 S **S 08 25 15.0 +2.3**
baz=252
BTK Batken 84.80 311 P P 08 15 24.6 +0.5
BTK pmax pmax
comp=Z,520nm,1.6s
D25K Kavik River 84.85 19 P P 08 15 24.3 +0.6
baz=243,SNR=376
D25K S **S 08 25 12.8 -0.2**
baz=243
EGAK Eagle 84.86 24 P P 08 15 23.5 -0.2
EGAK Eagle 84.86 24 P P 08 15 24.4 +0.7
baz=249,SNR=1000
EGAK S **S 08 25 14.7 +1.7**
baz=249

F26K	**Sheenjek River**	**84.89**	**20**	P	**P**	**08 15 25.1**	**+1.3**
	baz=246,SNR=639						
F26K				S	**S**	**08 25 15.6**	**+2.3**
	baz=246						
S31K	**Pelican**	**84.89**	**31**	P	**P**	**08 15 24.9**	**+1.0**
	baz=254,SNR=54						
S31K				S	**S**	**08 25 15.1**	**+1.5**
	baz=254						
DZA	**Taraz**	**84.93**	**314**	*d* P	**P**	**08 15 26.6**	**+2.0**
DZA				*e* S	**SKSac**	**08 25 04.4**	**-0.7**
DZA				pmax	pmax		
	comp=Z,502nm,0.8s						
DZA	**Taraz**	**84.93**	**314**	⇓ *i* P	**P**	**08 15 26.6**	**+2.0**
	comp=Z,502nm,0.8s,baz=313						
DZA				*e* S	**SKSac**	**08 25 04.5**	**-0.7**
	baz=313						
I27K	**Kandik River**	**84.99**	**23**	P	**P**	**08 15 25.1**	**+0.7**
	baz=248,SNR=1000						
I27K				S	**S**	**08 25 15.7**	**+1.3**
	baz=248						
GAR	**Garm**	**85.00**	**310**	P	**P**	**08 15 24.3**	**-0.9**
GAR				IAmb	IAmb	08 15 26.8	
	comp=Z,635nm,1.2s						
MAW	**Mawson**	**85.10**	**203**	P	**P**	**08 15 25.0**	**+0.1**
	comp=Z,103nm,0.6s,baz=86,slow=5.9,SNR=140						
MAW				PKKPbc	**PKKPbc**	**08 33 28.8**	**-2.8**
	comp=Z,9.2nm,0.8s,baz=358,slow=2.5,SNR=8.2 comp=Z,103nm,0.6s						
MAW	**Mawson**	**85.10**	**203**	P	**P**	**08 15 25.0**	**+0.1**
	baz=85,SNR=75						
MAW	**Mawson**	**85.10**	**203**	P	**P**	**08 15 25.0**	**+0.1**
HYT	**Haines Junctio**	**85.11**	**28**	P	**P**	**08 15 25.7**	**+0.5**
HYT	**Haines Junctio**	**85.11**	**28**	P	**P**	**08 15 26.4**	**+1.2**
	baz=252,SNR=804						
HYT				S	**S**	**08 25 18.1**	**+2.1**
	baz=252						
SIT	**Sitka**	**85.11**	**32**	P	**P**	**08 15 26.1**	**+1.0**
SIT	**Sitka**	**85.11**	**32**	P	**P**	**08 15 26.2**	**+1.1**
	baz=254,SNR=35						
SIT				S	**S**	**08 25 18.5**	**+2.7**
	baz=254						
P30M	**Million Dollar**	**85.16**	**29**	P	**P**	**08 15 26.7**	**+1.3**
	baz=253						
P30M				S	**S**	**08 25 18.9**	**+2.6**
	baz=253						
M29M	**Somme Creek**	**85.19**	**26**	P	**P**	**08 15 26.6**	**+1.0**
	baz=251,SNR=938						
M29M				S	**S**	**08 25 19.2**	**+2.6**
	baz=251						
PLBC	**Pleasant Camp**	**85.25**	**29**	P	**P**	**08 15 26.5**	**+0.8**
	baz=253,SNR=176						
PLBC				S	**S**	**08 25 18.9**	**+1.9**
	baz=253						
H27K	**Steamboat Moun**	**85.26**	**22**	P	**P**	**08 15 26.9**	**+1.2**
	baz=248,SNR=1000						
H27K				S	**S**	**08 25 19.6**	**+2.6**
	baz=248						
R31K	**City Hall, Gus**	**85.27**	**30**	P	**P**	**08 15 26.5**	**+0.7**
	baz=254						
KBL	**Kabul**	**85.32**	**305**	P	**P**	**08 15 26.0**	**-0.9**
KBL				pmax	pmax		
	comp=Z,342nm,0.9s						
KBL	**Kabul**	**85.32**	**305**	P	**P**	**08 15 26.0**	**-0.9**
	SNR=105						
DAWY	**Dawson**	**85.33**	**25**	P	**P**	**08 15 27.1**	**+1.0**
	baz=250,SNR=1000						
DAWY				S	**S**	**08 25 20.7**	**+2.9**
	baz=250						
BRZS	**Berezniki**	**85.42**	**321**	*d* P	**P**	**08 15 26.1**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,169nm,1.4s						
BRZS	**Berezniki**	**85.42**	**321**	⇓ *i* P	**P**	**08 15 26.2**	**-0.7**
	comp=Z,169nm,1.4s,baz=320						
G27K	**Doyon Strip**	**85.42**	**22**	P	**P**	**08 15 27.5**	**+1.0**
	baz=248,SNR=563						
N30M	**Aishikik Lake**	**85.50**	**27**	P	**P**	**08 15 27.9**	**+0.9**
	baz=253,SNR=306						
N30M				S	**S**	**08 25 21.7**	**+2.1**
	baz=253						
L29M	**L29M**	**85.55**	**26**	P	**P**	**08 15 28.2**	**+1.0**
	baz=252,SNR=1000						
L29M				S	**S**	**08 25 21.7**	**+1.8**
	baz=252						
KK31	**Karatay Array**	**85.56**	**314**	*i* P	**P**	**08 15 27.9**	**+0.2**
C26K	**Camden Bay**	**85.57**	**18**	P	**P**	**08 15 28.6**	**+1.5**
	baz=245,SNR=131						
C26K				S	**S**	**08 25 21.9**	**+2.1**
	baz=245						
S32K	**Killisnoo**	**85.62**	**32**	P	**P**	**08 15 28.7**	**+1.2**
	baz=255						
S32K				S	**S**	**08 25 22.8**	**+2.2**
	baz=255						
QSPA	**South Pole Qui**	**85.65**	**180**	S	**SKSac**	**08 25 05.5**	**-3.3**
	comp=Z,6.9nm,1.1s,baz=118,slow=21,SNR=9.9						
QSPA				PKKPbc	PKKPbc	08 33 27.7	-3.5
	comp=Z,18nm,1.0s,baz=214,slow=0.6,SNR=12						
IUG	**Iuzhnay**	**85.74**	**313**	*d* P	**P**	**08 15 29.3**	**+0.6**
IUG				*e* S	**SKSac**	**08 25 09.1**	**-1.2**
IUG	**Iuzhnay**	**85.74**	**313**	⇓ *i* P	**P**	**08 15 29.3**	**+0.6**
	baz=312						
IUG				*e* S	**SKSac**	**08 25 09.2**	**-1.2**
	baz=312						
H02S1	**DAWSON INLET T**	**85.75**	**36**	P	**P**	**08 15 29.4**	**+1.1**
	SNR=126						
O30N	**Mendenhall**	**85.76**	**28**	P	**P**	**08 15 29.4**	**+1.1**
	baz=254,SNR=322						
O30N				S	**S**	**08 25 24.1**	**+2.0**
	baz=254						
SKAG	**Skagway**	**85.76**	**30**	P	**P**	**08 15 29.3**	**+1.1**
	baz=254,SNR=156						
SKAG				S	**S**	**08 25 24.9**	**+2.9**
	baz=254						
C27K	**Jago River**	**85.83**	**19**	P	**P**	**08 15 29.5**	**+1.2**
	baz=246,SNR=373						
C27K				S	**S**	**08 25 23.3**	**+1.0**
	baz=246						
CHGR	**Chuyangaron**	**85.84**	**309**	P	**P**	**08 15 29.3**	**+0.1**
CHGR				pmax	pmax		
	comp=Z,1μm,1.0s						
R32K	**Eaglecrest**	**85.86**	**31**	P	**P**	**08 15 29.8**	**+1.1**
	baz=255,SNR=62						
R32K				S	**S**	**08 25 26.6**	**+3.7**
	baz=255						
CRAG	**Craig**	**85.90**	**34**	P	**P**	**08 15 29.9**	**+1.0**
	baz=256,SNR=28						
CRAG				S	**S**	**08 25 26.5**	**+3.1**
	baz=256						
JIS	**Juneau Island**	**85.92**	**31**	P	**P**	**08 15 29.6**	**+0.7**
JIS				IAmb	IAmb	08 15 33.8	
	comp=Z,759nm,1.4s						
J29M	**Klondike Camp**	**85.94**	**24**	P	**P**	**08 15 30.2**	**+1.1**
	baz=251,SNR=154						
J29M				S	**S**	**08 25 25.3**	**+1.7**
	baz=251						
E27K	**Coleen River**	**85.97**	**20**	P	**P**	**08 15 30.2**	**+1.1**
	baz=248,SNR=529						
E27K				S	**S**	**08 25 25.1**	**+1.4**
	baz=248						
K29M	**Barlow Dome**	**86.04**	**25**	P	**P**	**08 15 30.6**	**+1.0**
	baz=252,SNR=1000						
K29M				S	**S**	**08 25 27.3**	**+2.6**
	baz=252						
U33K	**Whale Pass**	**86.06**	**33**	P	**P**	**08 15 30.6**	**+1.0**
	baz=256,SNR=36						
U33K				S	**S**	**08 25 27.6**	**+2.8**
	baz=256						
N31M	**Braeburn, Yuko**	**86.11**	**28**	P	**P**	**08 15 30.9**	**+1.0**
	baz=254,SNR=449						
N31M				S	**S**	**08 25 28.2**	**+2.9**
	baz=254						
TAS	**Tashkent**	**86.15**	**312**	P	**P**	**08 15 31.4**	**+0.8**
TAS				pmax	pmax		
	comp=Z,1μm,1.0s						
I29M	**Ogilvie Camp,**	**86.20**	**23**	P	**P**	**08 15 30.6**	**+0.4**
	baz=251,SNR=979						
WHY	**Whitehorse**	**86.30**	**28**	P	**P**	**08 15 31.7**	**+0.8**
	baz=255,SNR=420						
WHY				S	**S**	**08 25 29.9**	**+2.6**
	baz=255						
T33K	**Petersburg**	**86.31**	**32**	P	**P**	**08 15 31.9**	**+1.0**
	baz=256,SNR=23						
T33K				S	**S**	**08 25 30.7**	**+3.5**
	baz=256						
WRAK	**Wrangell Islan**	**86.55**	**33**	P	**P**	**08 15 33.0**	**+1.0**
	baz=257,SNR=73						
WRAK				S	**S**	**08 25 34.3**	**+4.8**
	baz=257						
P32M	**Atlin**	**86.59**	**30**	P	**P**	**08 15 33.2**	**+1.0**
	baz=256,SNR=148						
P32M				S	**S**	**08 25 32.6**	**+2.6**
	baz=256						
MAYO	**Mayo, Yukon**	**86.66**	**25**	P	**P**	**08 15 33.5**	**+1.1**
	baz=254,SNR=229						
MAYO				S	**S**	**08 25 33.1**	**+2.8**
	baz=254						
V35K	**Ketchikan**	**86.71**	**34**	P	**P**	**08 15 33.7**	**+0.9**
	baz=258,SNR=43						
V35K				S	**S**	**08 25 34.7**	**+3.6**
	baz=258						
M31M	**Drury Creek, Y**	**86.94**	**27**	P	**P**	**08 15 34.3**	**+0.5**
	baz=255,SNR=247						
M31M				S	**S**	**08 25 34.6**	**+1.5**
	baz=255						
EPYK	**Eagle Plains**	**87.13**	**23**	P	**P**	**08 15 35.3**	**+0.7**
	baz=253,SNR=589						
EPYK				S	**S**	**08 25 35.6**	**+0.7**
	baz=253						
Q32M	**Nakina River**	**87.16**	**30**	P	**P**	**08 15 36.4**	**+1.2**
	baz=257,SNR=114						
Q32M				S	**S**	**08 25 39.2**	**+3.4**
	baz=257						
P33M	**Teslin, Yukon**	**87.18**	**29**	P	**P**	**08 15 35.8**	**+0.7**
	baz=256,SNR=138						
P33M				S	**S**	**08 25 37.3**	**+1.7**
	baz=256						
N32M	**Quiet Lake**	**87.28**	**28**	P	**P**	**08 15 36.5**	**+1.0**
	baz=256						
N32M				S	**S**	**08 25 38.2**	**+1.8**
	baz=256						
FARO	**Faro, Yukon**	**87.42**	**27**	P	**P**	**08 15 36.7**	**+0.6**
	baz=256,SNR=392						
FARO				S	**S**	**08 25 38.8**	**+1.2**
	baz=256						
BVA0	**Borovoye Array**	**87.42**	**323**	*i* P	**P**	**08 15 35.3**	**-0.9**
BVAR	**Borovoye Array**	**87.42**	**323**	PKKPbc	PKKPbc	08 33 24.1	-1.5
	comp=Z,0.9nm,0.5s,baz=320,slow=4.4,SNR=3.6						
BRVK	**Borovoye**	**87.49**	**323**	*d* P	**P**	**08 15 35.5**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,587nm,1.3s						
BRVK	**Borovoye**	**87.49**	**323**	P	**P**	**08 15 36.0**	**-0.5**
G30M	**tAoh Zraii Nji**	**87.50**	**22**	P	**P**	**08 15 36.5**	**+0.1**
	baz=253,SNR=435						
G30M				S	**S**	**08 25 37.9**	**-0.4**
	baz=253						
S34M	**Telegraph Cree**	**87.52**	**32**	P	**P**	**08 15 37.9**	**+1.3**
	baz=258,SNR=189						
S34M				S	**S**	**08 25 42.0**	**+3.3**
	baz=258						
T35M	**Bob Quinn**	**87.80**	**33**	P	**P**	**08 15 39.2**	**+1.2**
	baz=259,SNR=114						
T35M				S	**S**	**08 25 43.1**	**+1.7**
	baz=259						
R33M	**Jennings River**	**87.91**	**30**	P	**P**	**08 15 39.8**	**+1.2**
	baz=258,SNR=186						
R33M				S	**S**	**08 25 45.0**	**+2.4**
	baz=258						
DLBC	**Dease Lake**	**88.20**	**31**	P	**P**	**08 15 41.0**	**+1.1**
	baz=259,SNR=219						
DLBC				S	**S**	**08 25 48.6**	**+3.5**
	baz=259						
F31M	**Tsiigehtchic**	**88.56**	**22**	P	**P**	**08 15 41.1**	**-0.2**
	baz=255,SNR=290						
F31M				S	**S**	**08 25 46.8**	**-1.0**
	baz=255						
INK	**Inuvik**	**88.86**	**21**	P	**P**	**08 15 42.6**	**0.0**
	comp=Z,554nm,1.0s,baz=248,slow=6.1,SNR=8.7						
INK				PKPPKP	**P'P'df**	**08 41 27.9**	**-0.1**
	comp=Z,6.5nm,1.1s,baz=118,slow=7.8,SNR=4.1 comp=Z,554nm,1.0s						
INK	**Inuvik**	**88.86**	**21**	P	**P**	**08 15 42.4**	**-0.2**
	baz=256,SNR=314						
INK				S	**S**	**08 25 48.6**	**-2.0**
	baz=256						
WTLY	**Watson Lake, Y**	**89.13**	**30**	P	**P**	**08 15 45.1**	**+1.0**
	baz=260,SNR=26						
TGTN	**Hyland Airport**	**89.62**	**28**	P	**P**	**08 15 47.4**	**+0.9**
	baz=260,SNR=140						
TGTN				S	**S**	**08 26 00.2**	**+2.2**
	baz=260						
LIRD	**Liard River Hi**	**90.37**	**31**	P	**P**	**08 15 50.4**	**+0.6**
	baz=262						
HRA	**Herat**	**90.88**	**304**	P	**P**	**08 15 52.0**	**-1.1**
HRA				IAmb	IAmb	08 15 53.8	
	comp=Z,261nm,1.0s						
SAO	**San Andreas Ge**	**91.07**	**53**	P	**P**	**08 15 54.4**	**+0.8**
NGCH	**Negor - Chabah**	**91.16**	**295**	P	**P**	**08 15 55.1**	**+0.9**
	SNR=9.9						
ORV	**Oroville**	**91.25**	**51**	P	**P**	**08 15 53.9**	**-0.5**
ORV				IAmb	IAmb	08 15 55.8	
	comp=Z,336nm,1.6s						
ORV	**Oroville**	**91.25**	**51**	P	**P**	**08 15 53.9**	**-0.5**
ORV				pmax	pmax		
	comp=Z,336nm,1.6s						
KOTAN	**Kotaneelee Air**	**91.48**	**30**	P	**P**	**08 15 55.5**	**+0.5**
	baz=264						
FLDN	**Fort Liard**	**91.78**	**30**	P	**P**	**08 15 57.2**	**+0.9**
	baz=265,SNR=26						
CMB	**Columbia Colle**	**92.01**	**52**	P	**P**	**08 15 57.6**	**-0.4**
WRGLY	**Wrigley**	**92.07**	**27**	P	**P**	**08 15 58.0**	**+0.4**
	baz=265,SNR=74						
WRGLY				S	**S**	**08 26 19.4**	**-0.3**
	baz=265						
SMMC	**Simmler**	**92.14**	**55**	P	**P**	**08 15 59.7**	**+1.0**
	baz=266,SNR=51						
SMMC				S	**S**	**08 26 19.1**	**-2.5**
	baz=266						
PKM	**Mcpherson Peak**	**92.26**	**55**	P	**P**	**08 16 00.4**	**+1.0**
	baz=266,SNR=78						
A36M	**Sachs Harbour**	**92.31**	**18**	P	**P**	**08 15 58.4**	**-0.1**
	baz=263,SNR=56						
A36M				S	**S**	**08 26 20.5**	**-1.0**
	baz=263						
SBC	**Santa Barbara**	**92.32**	**56**	P	**P**	**08 16 00.5**	**+1.1**
	baz=266						
SCZ2	**Santa Cruz Isl**	**92.35**	**56**	P	**P**	**08 16 00.1**	**+0.5**
	baz=266						
SNCC	**San Nicolas Is**	**92.40**	**57**	P	**P**	**08 16 01.1**	**+1.3**
	baz=266,SNR=6.6						
C36M	**Paulatuk**	**92.42**	**21**	P	**P**	**08 15 58.4**	**-0.6**
	baz=264,SNR=31						
PNTR	**Pine Nut**	**92.69**	**51**	P	**P**	**08 16 01.4**	**+0.1**
PNTR				IAmb	IAmb	08 16 05.5	
	comp=Z,435nm,1.4s						
VOG	**Valley Oaks Go**	**92.70**	**54**	P	**P**	**08 16 01.3**	**+0.2**
	baz=267,SNR=22						
WAKR	**Walker**	**92.78**	**52**	P	**P**	**08 16 01.4**	**-0.3**
RER	**Riviere de l'E**	**92.79**	**249**	P	**P**	**08 16 02.5**	**+0.5**
F07A	**Phinny Hill Vi**	**92.83**	**44**	P	**P**	**08 16 01.6**	**+0.1**
F07A				IAmb	IAmb	08 16 05.8	
	comp=Z,170nm,1.5s						
VES	**Vestal, Richgr**	**92.91**	**54**	P	**P**	**08 16 01.9**	**-0.2**
	baz=267,SNR=74						
WBK	**Wadi Bani Khal**	**92.95**	**292**	P	**P**	**08 16 02.3**	**-0.3**
	SNR=32						
ARVC	**Arvin**	**93.08**	**55**	P	**P**	**08 16 03.6**	**+0.7**
	baz=267,SNR=39						
OSI	**Osito Audit: C**	**93.14**	**56**	P	**P**	**08 16 04.1**	**+0.8**
	baz=267,SNR=6.3						
SCI2	**San Clemente I**	**93.20**	**57**	P	**P**	**08 16 04.1**	**+0.6**
	baz=267						
MLAC	**Mammoth, Mammo**	**93.21**	**53**	P	**P**	**08 16 04.2**	**+0.5**
	baz=267,SNR=10						
PNT	**Penticton**	**93.22**	**41**	P	**P**	**08 16 01.4**	**-1.9**
PNT				pmax	pmax		
	comp=Z,435nm,1.4s						
WSAR	**Wadi Sarin**	**93.30**	**293**	PKKPbc	PKKPbc	08 33 10.1	+0.4
	comp=Z,16nm,0.6s,baz=263,slow=3.9,SNR=21						
CIS	**Catalina Islan**	**93.33**	**57**	P	**P**	**08 16 04.7**	**+0.6**
	baz=267,SNR=17						
ISA	**Isabella, Lake**	**93.40**	**55**	P	**P**	**08 16 04.5**	**0.0**
	baz=267,SNR=96						
SVE	**Sverdlovsk**	**93.44**	**327**	*c i* P	**P**	**08 16 02.9**	**-1.1**
SVE				pmax	pmax		
	comp=Z,192nm,0.9s						
DECC	**Green Verdugo**	**93.44**	**56**	P	**P**	**08 16 05.0**	**+0.4**
	baz=267,SNR=11						
FMP	**Fort Macarthur**	**93.45**	**57**	P	**P**	**08 16 05.1**	**+0.5**
	baz=267						
AB31	**Akbulak array**	**93.53**	**319**	*i* P	**P**	**08 16 02.7**	**-1.9**
WVOR	**Wild Horse Val**	**93.59**	**48**	P	**P**	**08 16 05.5**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,73nm,1.4s						
TIN	**Tinemaha, Big**	**93.66**	**53**	P	**P**	**08 16 06.3**	**+0.6**
	baz=267						
NVAR	**Mina Array Bea**	**93.67**	**52**	P	**P**	**08 16 05.9**	**+0.1**
	comp=Z,99nm,1.1s,baz=256,slow=6.2,SNR=270						
NVAR				PP	**PP**	**08 19 57.5**	**-0.9**
	comp=Z,8.9nm,1.0s,baz=264,slow=8.0,SNR=3.6						
NVAR				PKPPKP	**P'P'df**	**08 41 13.7**	**-6.9**
	comp=Z,0.8nm,0.7s,baz=96,slow=7.6,SNR=3.9 comp=Z,99nm,1.1s						
JMDO	**Jabal Madar**	**93.74**	**292**	P	**P**	**08 16 05.3**	**-0.9**
	SNR=17						
CWC	**Cottonwood Cre**	**93.75**	**54**	P	**P**	**08 16 06.5**	**+0.3**
	baz=268						
EDW2	**Edwards Air Fo**	**93.75**	**55**	P	**P**	**08 16 06.7**	**+0.6**
	baz=267,SNR=93						
BIDO	**Bidbid**	**93.78**	**293**	P	**P**	**08 16 06.0**	**-0.3**
	SNR=49						
MHTO	**MHTO**	**93.79**	**291**	P	**P**	**08 16 05.6**	**-0.8**
	SNR=29						
SMDO	**Samad**	**93.83**	**293**	P	**P**	**08 16 06.0**	**-0.7**
	SNR=20						
BFSC	**Mount Baldy Ra**	**94.00**	**56**	P	**P**	**08 16 07.5**	**+0.2**
	baz=268,SNR=47						
LRMC	**Laurel Mtn Rad**	**94.04**	**55**	P	**P**	**08 16 08.1**	**+0.7**
	baz=268,SNR=31						
E09A	**Wood Farm, Sta**	**94.10**	**44**	P	**P**	**08 16 07.2**	**-0.1**
E09A				IAmb	IAmb	08 16 12.2	
	comp=Z,138nm,1.0s						
DQM	**DQM**	**94.13**	**290**	P	**P**	**08 16 06.9**	**-1.1**
	SNR=10						
JASK	**Jask - Hormozg**	**94.13**	**296**	P	**P**	**08 16 08.6**	**+0.7**
	SNR=29						
LCH	**Last Change Ra**	**94.14**	**53**	P	**P**	**08 16 06.7**	**-1.2**
MPMC	**Manual Prospec**	**94.22**	**54**	P	**P**	**08 16 08.9**	**+0.5**
	baz=268,SNR=236						
GRAC	**Grapevine Rang**	**94.35**	**53**	P	**P**	**08 16 09.2**	**+0.5**
	baz=268,SNR=53						
MURC	**Murrieta**	**94.36**	**57**	P	**P**	**08 16 09.4**	**+0.5**
	baz=268,SNR=26						
109C	**Camp Elliot, M**	**94.41**	**57**	P	**P**	**08 16 10.0**	**+1.0**
	baz=268,SNR=27						
GEYT	**Alibeck**	**94.42**	**308**	P	**P**	**08 16 08.3**	**-0.7**
	comp=Z,63nm,0.9s,baz=207,slow=0.3,SNR=76						
GEYT				PKKPbc	**PKKPbc**	**08 33 07.0**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=204,slow=3.2,SNR=4.7 comp=Z,63nm,0.9s						
GEYT	**Alibeck**	**94.42**	**308**	P	**P**	**08 16 07.0**	**-2.0**
GEYT				IAmb	IAmb	08 16 12.4	
	comp=Z,138nm,1.1s						
GYA0	**ALIBECK ARRAY**	**94.42**	**308**	P	**P**	**08 16 08.4**	**-0.6**
HOQ	**Hoqain**	**94.53**	**293**	P	**P**	**08 16 09.0**	**-0.8**
	SNR=46						
MSEY	**Mahe Island**	**94.54**	**265**	P	**P**	**08 16 06.3**	**-3.8**
RRX	**Edison Barstow**	**94.57**	**55**	P	**P**	**08 16 10.6**	**+0.8**
	baz=268						
ARU	**Arti**	**94.58**	**326**	PKKPbc	PKKPbc	08 33 08.3	+0.5
	comp=Z,8.9nm,0.6s,baz=242,slow=2.0,SNR=5.6						
ARU	**Arti**	**94.58**	**326**	*d i* P	**P**	**08 16 07.4**	**-1.8**
ARU				*PP	**pP**	**08 17 51.1**	**-1.0**
ARU				*SP	**sP**	**08 18 33.1**	**-5.3**
ARU						08 20 03.2	
ARU				PPP	PPP	08 22 10.4	
ARU				S	**SKSac**	**08 25 56.8**	**-3.1**
ARU				SP	**SP**	**08 28 01.6**	**+0.3**
ARU				SSS	SSS	08 37 12.0	
ARU				pmax	pmax		
	comp=Z,151nm,0.6s						
BSY	**Bisya**	**94.59**	**292**	P	**P**	**08 16 09.1**	**-1.0**
	SNR=16						
BBRC	**Big Bear Solar**	**94.61**	**56**	P	**P**	**08 16 10.6**	**+0.4**
	baz=268,SNR=24						
FURC	**Furnace Creek,**	**94.74**	**54**	P	**P**	**08 16 11.0**	**+0.6**
	baz=268,SNR=77						
GSC	**Goldstone, Bar**	**94.75**	**55**	P	**P**	**08 16 11.0**	**+0.4**
	baz=268,SNR=72						
BRLDA	**Berland Lookou**	**94.75**	**36**	P	**P**	**08 16 10.6**	**+0.4**
AKTO	**Aktyubinsk**	**94.81**	**320**	PKKPbc	PKKPbc	08 33 05.1	-1.8
	comp=Z,5.9nm,0.9s,baz=296,slow=1.6,SNR=4.6						
AKTO	**Aktyubinsk**	**94.81**	**320**	P	**P**	**08 16 08.5**	**-1.9**
NEW	**Newport**	**94.84**	**42**	PP	**PP**	**08 20 06.5**	**-0.4**
	comp=Z,12nm,0.8s,baz=283,slow=7.4,SNR=4.8						
NEW	**Newport**	**94.84**	**42**	P	**P**	**08 16 10.8**	**+0.1**
NEW				pmax	pmax		
	comp=Z,140nm,2.0s						
NEW	**Newport**	**94.84**	**42**	P	**P**	**08 16 10.8**	**+0.1**
	baz=269,SNR=66						
WCT	**Wildcat Mounta**	**94.94**	**54**	P	**P**	**08 16 10.8**	**-0.7**
WCT				IAmb	IAmb	08 16 15.4	
	comp=Z,178nm,0.9s						
PFO	**Pinyon Flats O**	**94.98**	**57**	*d i* P	**P**	**08 16 11.6**	**-0.2**
PFO				pmax	pmax		
	comp=Z,200nm,1.1s						
PFO	**Pinyon Flats O**	**94.98**	**57**	P	**P**	**08 16 12.3**	**+0.6**
	baz=268,SNR=57						
TPFO	**Pinon Flats**	**94.98**	**57**	P	**P**	**08 16 12.3**	**+0.5**
	baz=268,SNR=62						
MONP2	**Monument Peak**	**94.98**	**57**	P	**P**	**08 16 12.9**	**+1.0**
	baz=268,SNR=67						
HILA	**High Level**	**95.00**	**32**	P	**P**	**08 16 10.5**	**-0.6**
HEC	**Hector,Ludlow**	**95.12**	**56**	P	**P**	**08 16 12.6**	**+0.3**
	baz=268,SNR=45						
SHOC	**Shoshone, Teco**	**95.19**	**54**	P	**P**	**08 16 13.1**	**+0.5**
	baz=268,SNR=72						
IKP	**In-Ko-Pah, Jac**	**95.24**	**58**	P	**P**	**08 16 14.0**	**+1.1**
	baz=268,SNR=24						
ARQ	**Araqi**	**95.24**	**293**	P	**P**	**08 16 12.4**	**-0.6**
	SNR=35						
TPNV	**Topopah Spring**	**95.24**	**53**	P	**P**	**08 16 13.4**	**+0.5**
	baz=269,SNR=42						
SOHO	**SOHO**	**95.26**	**294**	P	**P**	**08 16 12.3**	**-0.8**
SOHO	**SOHO**	**95.26**	**294**	*i* P	**P**	**08 16 11.8**	**-1.3**
	SNR=40						
BELC	**Belle Mtn. Jos**	**95.37**	**56**	P	**P**	**08 16 14.2**	**+0.6**
	baz=268,SNR=63						
TUQ	**Turquoise Moun**	**95.47**	**55**	P	**P**	**08 16 14.4**	**+0.4**
	baz=269,SNR=48						
SWSC	**Sam W. Stewart**	**95.51**	**57**	P	**P**	**08 16 14.8**	**+0.8**
	baz=268,SNR=46						
BANOM	**Banah**	**95.55**	**296**	P	**P**	**08 16 14.1**	**-0.3**
	SNR=26						
BANOM	**Banah**	**95.55**	**296**	*i* P	**P**	**08 16 13.5**	**-0.9**
	SNR=59						
PLID	**Pearl Lake**	**95.57**	**45**	P	**P**	**08 16 13.1**	**-1.2**
PLID				IAmb	IAmb	08 16 17.1	
	comp=Z,62nm,0.7s						
UOSS	**Minazif**	**95.59**	**295**	P	**P**	**08 16 13.5**	**-1.1**
UOSS	**Minazif**	**95.59**	**295**	*i* P	**P**	**08 16 13.0**	**-1.6**
	SNR=39						
MSFE	**Esma-Masafi**	**95.65**	**295**	*i* P	**P**	**08 16 14.0**	**-0.9**
	SNR=42						
MASF	**Masafi**	**95.65**	**295**	P	**P**	**08 16 14.4**	**-0.4**
	SNR=59						
HATD	**Hatta, Dubai**	**95.66**	**294**	P	**P**	**08 16 14.2**	**-0.7**
	SNR=31						
HATD	**Hatta, Dubai**	**95.66**	**294**	*i* P	**P**	**08 16 13.8**	**-1.1**
	SNR=28						
S11A	**Rachel**	**95.66**	**53**	P	**P**	**08 16 14.5**

comp=Z,5.1nm,0.7s,baz=87,slow=2.5,SNR=9.4
comp=Z,136nm,0.9s
YKA Yellowknife Ar 96.11 28 P **P 08 16 15.1 -0.9**
FAQ Al Faqa, Dubai 96.14 294 P **P 08 16 16.1 -0.9**
SNR=14
FAQ Al Faqa, Dubai 96.14 294 *i* P **P 08 16 16.0 -1.0**
SNR=16
PRN Pahroc Range 96.21 53 P **P 08 16 17.0 -0.3**
PRN IAmb IAmb 08 16 22.3
comp=Z,133nm,1.2s
GLA Glamis 96.33 57 P **P 08 16 19.0 +1.3**
baz=269,SNR=9.0
ASUD Al Ashush, Dub 96.38 294 P **P 08 16 18.0 -0.1**
SNR=24
ASUD Al Ashush, Dub 96.38 294 *i* P **P 08 16 17.5 -0.6**
SNR=58
UMZA Um Al Zommool 96.47 292 P **P 08 16 17.5 -1.1**
DMTO DMTO 96.48 287 P **P 08 16 17.7 -1.0**
NEE2 Needles Airpor 96.53 56 P **P 08 16 19.1 +0.6**
baz=269,SNR=18
AJN Ajban 96.69 294 P **P 08 16 18.7 -0.8**
SNR=6.2
AJN Ajban 96.69 294 *i* P **P 08 16 18.2 -1.3**
SNR=5.3
HLID Hailey 96.71 47 P **P 08 16 19.6 +0.1**
baz=270,SNR=57
PDMCI Parker Dam,Lak 96.92 56 Pdiff **P 08 16 21.1 +0.7**
baz=270
MSO Missoula 97.00 44 Pdiff **P 08 16 19.7 -0.8**
baz=271
W13A Hualapai Mount 97.13 55 P **P 08 16 21.4 -0.2**
W13A IAmb IAmb 08 16 25.4
comp=Z,66nm,1.0s
PSUT Pine Spring 97.16 52 P **P 08 16 21.2 -0.3**
RBK Rabkut 97.18 287 P **P 08 16 20.7 -1.2**
SNR=14
DOK Doka 97.29 288 P **P 08 16 21.0 -1.3**
SNR=23
WHFO Wadi Hawf 97.61 287 P **P 08 16 22.3 -1.5**
SNR=10
MZWR Madinat Zayed 97.68 293 P **P 08 16 23.2 -0.7**
MCMT McKenzie Canyo 97.81 46 P **P 08 16 23.9 -0.5**
DUG Dugway, Tooele 97.95 50 P **P 08 16 25.0 0.0**
DUG pmax pmax
comp=Z,28nm,1.1s
DUG Dugway, Tooele 97.95 50 Pdiff Pdif 08 16 24.9 -0.1
baz=271
214A Organ Pipe Nat 98.02 58 Pdiff **P 08 16 27.0 +1.6**
baz=270
MZR Muzera 98.03 293 P Pdif 08 16 25.2 -0.3
SNR=21
MZR Muzera 98.03 293 *i* P Pdif 08 16 25.0 -0.5
SNR=51
ABTO Aybut 98.04 287 P Pdif 08 16 24.6 -1.1
SNR=15
GHWR Ruwais 98.60 293 P Pdif 08 16 27.4 -0.7
BOZ Bozeman (W) 98.64 45 Pdiff **P 08 16 28.2 +0.3**
baz=273
WUAZ Wupatki 99.18 55 Pdiff **Pdif 08 16 31.6 +1.0**
baz=271
KIRV Kirov 99.39 329 PP **PP 08 20 39.9 -1.0**
comp=Z,22nm,0.8s,baz=70,slow=8.6,SNR=8.6
KIRV PKKPbc **PKKPbc 08 32 53.0 -1.7**
comp=Z,10nm,0.7s,baz=136,slow=2.7,SNR=3.8
KIRV Kirov 99.39 329 *d i* P **Pdif 08 16 29.0 -1.7**
H17A Grant Village 99.45 46 Pdiff **Pdif 08 16 33.1 +1.3**
baz=273
SLWR Sila 99.69 294 P **Pdif 08 16 32.1 -0.7**
TUC Tucson 99.74 58 P **Pdif 08 16 34.7 +1.6**
TUC pmax pmax
comp=Z,18nm,1.0s
TUC Tucson 99.74 58 Pdiff **Pdif 08 16 34.6 +1.5**
baz=271
EGMT Eagleton 99.78 42 Pdiff **Pdif 08 16 33.0 +0.2**
baz=274
NVL N'lazarevskaya 100.22 193 *e*P **Pdif 08 16 30.9 -3.3**
NVL pmax pmax
comp=Z,8.0nm,0.6s
NVL MLR MLR
comp=Z,3μm,16.0s
BW06 Boulder Array 100.28 47 Pdiff **Pdif 08 16 34.9 -0.6**
baz=274
PDAR Pinedale Array 100.29 47 P **Pdif 08 16 34.8 -0.7**
comp=Z,39nm,0.8s,baz=241,slow=2.1,SNR=230
PDAR PKKPbc **PKKPbc 08 32 50.2 -1.7**
comp=Z,1.4nm,0.7s,baz=108,slow=4.8,SNR=4.8
PDAR PKPPKP **P'P'df 08 41 06.6 -1.2**
comp=Z,1.9nm,1.0s,baz=90,slow=2.1,SNR=8.0
RLMT Red Lodge 100.33 45 Pdiff **Pdif 08 16 36.5 +0.9**
baz=274
SHMA Al-Shehemyia 100.35 295 P **Pdif 08 16 34.9 -0.9**
SMRA Abu-Samra 100.48 294 P **Pdif 08 16 36.0 -0.3**
RES Resolute Bay 100.53 14 P **Pdif 08 16 34.8 -0.7**
comp=Z,37nm,0.8s,baz=332,slow=3.6,SNR=56
RES PKiKP **PKiKP 08 20 59.0 -0.1**
comp=Z,4.9nm,0.5s,baz=208,slow=2.0,SNR=6.4
W18A Petrified Fore 100.53 55 Pdiff **Pdif 08 16 38.3 +1.7**
baz=272
SAKB Bahrain 100.73 295 P **Pdif 08 16 37.4 0.0**
PRGR Permogore 100.78 332 *e*P **Pdif 08 16 33.2 -3.6**
PRGR *e* 08 20 48.5
PRGR pmax pmax
comp=Z,109nm,0.7s
VOI Vohitsoka 100.96 247 P **Pdif 08 16 37.7 -1.1**
VOI Vohitsoka 100.96 247 P **Pdif 08 16 44.5 +5.8**
TROLL Troll, Antarti 101.04 190 PKKPbc PKKPbc 08 32 44.3 -6.4
TROLL Troll, Antarti 101.04 190 Pdiff **Pdif 08 16 37.3 -0.8**
TROLL Troll, Antarti 101.04 190 pPdiff pPdif 08 18 22.1 0.0
OPO Ambohidratompo 101.10 250 PKiKP **PKiKP 08 21 02.7 +0.8**
comp=Z,4.6nm,0.8s,baz=31,slow=1.8,SNR=3.2
OPO PKKPbc **PKKPbc 08 32 49.5 +0.8**
comp=Z,8.9nm,0.8s,baz=289,slow=5.5,SNR=7.0
MVCO Mesa Verde 101.44 53 Pdiff **Pdif 08 16 41.4 +0.7**
baz=273
O20A White River Ci 101.45 50 Pdiff **Pdif 08 16 40.6 -0.1**
baz=274
HOPEN Hopen 102.01 349 *e*Pdif **Pdif 08 16 42.7 +0.6**
HOPEN *e*PP **PP 08 21 00.6 +0.6**
SNAA Sanae 102.18 188 PKKPbc PKKPbc 08 32 43.2 -4.2
SNAA Sanae 102.18 188 PKiKP **PKiKP 08 21 02.0 -0.3**
SNAA Sanae 102.18 188 Pdiff **Pdif 08 16 42.2 -0.9**
SNAA Sanae 102.18 188 pPdiff pPdif 08 18 25.8 -1.4
SNAA Sanae 102.18 188 PKKPbc PKKPbc 08 32 43.1 -4.3
comp=Z,10nm,0.9s,baz=337,slow=3.2,SNR=9.8
121A Cookes Peak, D 102.27 58 P **Pdif 08 16 44.4 0.0**
baz=273
121A Cookes Peak, D 102.27 58 Pdiff **Pdif 08 16 46.1 +1.7**
baz=273
LAO LASA Array 102.30 43 P **Pdif 08 16 44.5 +0.4**
baz=277
LAO LASA Array 102.30 43 Pdiff **Pdif 08 16 44.7 +0.6**
baz=277
MAK Makhachkala 102.36 313 *d i* P **Pdif 08 16 42.5 -1.8**
MAK *e* 08 21 03.2
MAK *e*PPP PPP 08 23 17.8
MAK *e*SSS SSS 08 39 07.8
MAK pmax pmax
comp=Z,57nm,0.5s
SPA0 Spitsbergen Ar 102.47 351 IVmB_BB 08 16 48.9
comp=Z,2μm,3.4s
SPA0 *e*PP **PP 08 21 03.9 +0.5**
SPITS Spitsbergen Ar 102.47 351 P **Pdif 08 16 42.4 -1.7**
comp=Z,8.2nm,0.5s,baz=64,slow=6.6,SNR=25
NOR Nord 102.52 358 *i* P **Pdif 08 16 42.1 -2.2**
NOR IAmb IAmb 08 16 46.1
comp=Z,17nm,0.9s
K22A Casper 102.52 47 P **Pdif 08 16 45.0 -0.3**
baz=276
K22A Casper 102.52 47 Pdiff **Pdif 08 16 45.2 -0.1**
baz=276
KBS Kingsbay 102.56 352 *e*Pdif **Pdif 08 16 45.4 +0.9**
KBS *e*PP **PP 08 21 04.4 +0.3**
KBS Kingsbay 102.56 352 *i* P **Pdif 08 16 42.9 -1.6**
S22A 4UR Ranch, Cre 102.72 52 Pdiff **Pdif 08 16 47.4 +0.9**
baz=274
Y22A Socorro 102.88 56 P **Pdif 08 16 47.1 0.0**
baz=274
Y22D IRIS PASSCAL I 102.90 56 Pdiff **Pdif 08 16 47.9 +0.7**
baz=274
Y22F Passcal Instru 102.90 56 Pdiff **Pdif 08 16 47.9 +0.7**
baz=274
N23A Red Feather La 103.13 49 Pdiff **Pdif 08 16 48.6 +0.4**
baz=276
ANMO Albuquerque 103.23 55 P **Pdif 08 16 50.2 +1.5**
baz=274
ANMO Albuquerque 103.23 55 Pdiff **Pdif 08 16 49.7 +1.0**
baz=274
KIDD KIDD Seismic O 103.39 59 P **Pdif 08 16 51.4 +2.1**
baz=273
DGMT Dagmar 103.42 41 P **Pdif 08 16 49.4 +0.5**
baz=279
DGMT Dagmar 103.42 41 Pdiff **Pdif 08 16 49.2 +0.2**
baz=279
VNA3 Neumayer Olymp 103.45 187 PKKPbc PKKPbc 08 32 36.9 -6.6
VNA3 Neumayer Olymp 103.45 187 Pdiff **Pdif 08 16 48.1 -0.6**
ISCO Idaho Springs 103.49 50 P **Pdif 08 16 50.4 +0.5**
ISCO pmax pmax
comp=Z,11nm,1.0s
ISCO Idaho Springs 103.49 50 P **Pdif 08 16 50.3 +0.5**
baz=276
ISCO Idaho Springs 103.49 50 Pdiff **Pdif 08 16 50.2 +0.3**
baz=276
SDCO Great Sand Dun 103.77 52 P **Pdif 08 16 51.2 +0.1**
baz=275
SDCO Great Sand Dun 103.77 52 Pdiff **Pdif 08 16 50.1 -1.0**
baz=275
KLMR Klimovskoe 103.83 332 *d i* P **Pdif 08 16 48.5 -1.9**
KLMR 08 26 45.6
KLMR *e* 08 35 35.4
KLMR pmax pmax
comp=Z,146nm,1.6s
KLMR Klimovskoe 103.83 332 ⇓ *i* Pdif **Pdif 08 16 48.6 -1.9**
KLMR ⇑ *i* Pdif **Pdif 08 16 48.6 -1.9**
KLMR *e*Pdif **Pdif 08 16 48.6 -1.9**
KLMR AMP 08 16 52.6
comp=Z,146nm,1.6s
KLMR *e*PKiKP **PKiKP 08 21 02.2 -3.2**
KLMR SKSac **SKSac 08 26 45.7 +0.5**
KLMR SKSac **SKSac 08 26 45.7 +0.5**
KLMR *e*PKKP **PKKPbc 08 32 37.9 -4.1**
KLMR *e*SKKP **SKKPbc 08 35 35.5 -4.7**
VNA1 Neumayer--Stat 103.84 187 PKKPbc PKKPbc 08 32 37.1 -5.2
VNA1 Neumayer--Stat 103.84 187 Pdiff **Pdif 08 16 50.2 -0.1**
Q24A Divide 103.93 51 Pdiff **Pdif 08 16 52.2 +0.3**
baz=276
APA Apatity 104.04 339 ⇓ *i* P **Pdif 08 16 48.7 -2.5**
APA *i* PPP PPP 08 23 34.0
APA *i* 08 27 55.0
APA *i* PS **PS 08 30 40.0 +0.9**
APA pmax pmax
comp=Z,47nm,0.8s
RSSD Black Hills 104.15 46 P **Pdif 08 16 52.3 -0.3**
RSSD pmax pmax
comp=Z,32nm,1.2s
RSSD Black Hills 104.15 46 P **Pdif 08 16 52.5 -0.1**
baz=278
RSSD Black Hills 104.15 46 Pdiff **Pdif 08 16 52.4 -0.1**
baz=278
BJO1 Bjornoya 104.43 348 *e*Pdif **Pdif 08 16 52.9 0.0**
BJO1 *e*PP **PP 08 21 18.0 +0.2**
T25A Trinidad 104.69 53 Pdiff **Pdif 08 16 56.2 +1.0**
baz=276
VRH Novokhopyorsk 105.00 322 *e*P **Pdif 08 16 52.9 -3.0**
VRH pmax pmax
comp=Z,40nm,0.7s
ZEI Tsey 105.01 313 *e*P **Pdif 08 16 53.4 -3.0**
ZEI pmax pmax
comp=Z,67nm,1.3s
KEV Kevo 105.13 342 P **Pdif 08 16 54.6 -1.4**
GOF Gofitskoye 105.28 315 ⇑ *e*P **Pdif 08 16 56.8 -0.5**
RAYN Ar Rayn 105.36 293 P **Pdif 08 16 57.1 -1.1**
KBZ Khabaz 105.59 314 Pdiff **Pdif 08 16 57.9 -0.8**
comp=Z,14nm,1.1s,baz=82,slow=2.6,SNR=12
HAMF Hammerfest 105.61 344 *e*Pdif **Pdif 08 16 58.7 +0.5**
HAMF IVmB_BB 08 16 59.5
comp=Z,377nm,1.6s
HAMF *e*PP **PP 08 21 26.6 +0.1**
HAMF *e*SP SP 08 29 58.4 +1.2
ARA0 ARCESS Array S 105.69 343 *e*Pdif **Pdif 08 16 58.6 0.0**
ARA0 *e*PP **PP 08 21 27.7 +0.6**
ARA0 *e*SP SP 08 30 00.8 +2.6
ARA0 *e*SS **SS 08 35 52.2 +2.2**
ARCES ARCESS Array B 105.69 343 Pdiff **Pdif 08 16 57.4 -1.2**
comp=Z,23nm,0.8s,baz=65,slow=3.1,SNR=62
ARCES PKiKP **PKiKP 08 21 08.3 -0.4**
comp=Z,17nm,0.7s,baz=105,slow=1.2,SNR=18
ARCES PKKPbc **PKKPbc 08 32 32.6 -4.1**
comp=Z,6.6nm,0.5s,baz=234,slow=3.0,SNR=20
KIV Kislovodsk 105.71 314 *e*P **Pdif 08 16 57.8 -1.5**
KIV *e* 08 21 26.4
KIV *e*PPP PPP 08 23 44.3
KIV *e* 08 26 52.9
KIV *e*PS PS 08 30 54.0 -2.5
KIV *e*SS SS 08 35 51.2 -0.7
KIV *e*SSS SSS 08 39 57.0
KIV pmax pmax
comp=Z,97nm,1.0s
KSCO Kaye Shedlock' 105.88 51 PKiKP **PKiKP 08 21 08.7 -1.4**
baz=278
TXAR Lajitas Array 105.99 61 Pdiff **Pdif 08 17 02.9 +2.0**
comp=Z,2.3nm,0.6s,baz=253,slow=3.3,SNR=21
TXAR PKiKP **PKiKP 08 21 10.8 +0.2**
comp=Z,5.7nm,1.0s,baz=242,slow=1.9,SNR=12
TXAR PKKPbc **PKKPbc 08 32 34.5 -0.1**
comp=Z,1.4nm,0.7s,baz=116,slow=5.3,SNR=5.4
TXAR PKKPab **PKKPab 08 32 51.5 -0.8**
comp=Z,6.0nm,0.9s,baz=102,slow=7.1,SNR=11
TXAR PKPPKP 08 40 55.7
comp=Z,0.7nm,0.9s,baz=92,slow=3.3,SNR=3.7
NEEM North Greenlan 106.01 5 *i* P **Pdif 08 16 59.9 -0.3**
NEEM IAmb IAmb 08 17 02.3
comp=Z,741nm,2.6s
NEEM North Greenlan 106.01 5 *i* P **PKiKP 08 21 09.4 -0.1**
OGNE Ogallala 106.06 49 PKiKP **PKiKP 08 21 09.7 -0.7**
baz=278
MOS Moscow 106.25 327 *e*P **Pdif 08 16 57.2 -4.1**
MOS *e* 08 21 27.2
MOS pmax pmax
comp=Z,200nm,1.7s
MOS pmax pmax
comp=Z,106nm,1.4s
MSTX Muleshoe 106.35 56 PKiKP **PKiKP 08 21 10.1 -1.0**
baz=276
LPSR Galich'ya Gora 106.36 324 *e*P **Pdif 08 16 59.9 -2.0**
LPSR pmax pmax
comp=Z,30nm,0.9s
VORR Voronezh 106.43 323 *e*P **Pdif 08 16 57.8 -4.4**
VORR pmax pmax
comp=Z,140nm,0.4s
MDND Maddock 106.55 41 P **PKiKP 08 21 10.8 -0.1**
baz=282
MDND Maddock 106.55 41 PKiKP **PKiKP 08 21 10.1 -0.8**
baz=282
PMSA Palmer Station 106.56 165 PKKPbc PKKPbc 08 32 31.3 -2.7
comp=Z,13nm,0.6s,baz=49,slow=2.0,SNR=16
VSR Storozhevoye 106.57 322 *e*P **Pdif 08 17 00.6 -2.2**
VSR pmax pmax
comp=Z,10.0nm,0.7s
KTK1 Kautokeino 106.66 343 *e*Pdif **Pdif 08 17 02.8 -0.1**
KTK1 IVmBBB 08 17 05.3
comp=Z,412nm,1.3s
KTK1 *e*PP **PP 08 21 35.7 +1.6**
OBN Obninsk 107.01 327 *d i* P **Pdif 08 17 03.3 -1.4**
OBN pmax pmax
comp=Z,94nm,1.5s
AMTX Amarillo 107.14 55 PKiKP **PKiKP 08 21 11.6 -0.9**
baz=277
JETT Jettan, Norway 107.16 344 *e*Pdif **Pdif 08 17 05.4 +0.3**
JETT IVmBBB 08 17 06.4
comp=Z,434nm,0.7s
JETT *e*PP **PP 08 21 38.3 +0.5**
DAG Danmarks Havn 107.34 357 *i* P **Pdif 08 17 04.0 -1.8**
DAG IAmb IAmb 08 17 07.9
comp=Z,25nm,0.8s
TRO Tromso 107.52 344 *e*Pdif **Pdif 08 17 07.0 +0.4**
TRO IVmBBB 08 17 07.5
comp=Z,397nm,1.3s
TRO *e*PP **PP 08 21 40.5 +0.2**
TRO *e*SP SP 08 30 17.1 +0.4
SUSD Miller 107.69 45 PKiKP **PKiKP 08 21 12.5 -0.7**
baz=282
ATD Arta Tunnel 108.03 281 *e*P **Pdif 08 17 16.4 +6.2**
CBKS Cedar Bluff 108.14 51 PKiKP **PKiKP 08 21 14.0 -0.2**
baz=279
ULM Lac du Bonnet 108.35 38 Pdiff **Pdif 08 17 11.1 +0.3**
comp=Z,16nm,0.9s,baz=280,slow=5.2,SNR=9.4
ULM PKiKP **PKiKP 08 21 13.1 -1.0**
comp=Z,14nm,0.7s,baz=307,slow=2.2,SNR=9.2
BGNE Belgrade 108.88 48 PKiKP **PKiKP 08 21 14.9 -0.6**
baz=281
AGMN Agassiz Nation 108.88 40 PKiKP **PKiKP 08 21 15.5 +0.2**
baz=285
R32A Long Quarter, 109.00 51 P **PKiKP 08 21 15.9 +0.1**
baz=280
ABTX Abilene, Hawle 109.10 57 PKiKP **PKiKP 08 21 15.9 -0.3**
baz=277
JCT Junction City 109.22 59 P **PKiKP 08 21 16.3 -0.2**
baz=276,SNR=8.1
JCT Junction City 109.22 59 PKiKP **PKiKP 08 21 16.0 -0.5**
baz=276
ECSD EROS Data Cent 109.49 45 P **PKiKP 08 21 15.7 -0.8**
baz=283
ECSD EROS Data Cent 109.49 45 PKiKP **PKiKP 08 21 15.6 -1.0**
baz=283
N33B J Bar K, Exete 109.53 48 P **PKiKP 08 21 16.3 -0.4**
baz=282
WMOK Wichita Mounta 109.53 55 P **PKiKP 08 21 16.9 0.0**
baz=279,SNR=7.1
WMOK Wichita Mounta 109.53 55 PKiKP **PKiKP 08 21 16.9 0.0**
baz=279
FINES FINESS Array B 109.61 335 Pdiff **Pdif 08 17 14.4 -1.7**
comp=Z,48nm,0.7s,baz=63,slow=4.2,SNR=115
FINES PKiKP **PKiKP 08 21 15.9 -0.3**
comp=Z,19nm,0.6s,baz=74,slow=2.4,SNR=22
FINES PKKPbc **PKKPbc 08 32 21.9 -2.5**
comp=Z,2.4nm,0.7s,baz=200,slow=3.3,SNR=6.5
FINES PKKPab **PKKPab 08 32 35.1 -0.7**
comp=Z,7.4nm,0.9s,baz=178,slow=7.1,SNR=4.9
STEI Steigen 109.65 344 *e*Pdif **Pdif 08 17 16.2 0.0**
STEI IVmBBB 08 17 18.5
comp=Z,366nm,0.7s
STEI *e*PP **PP 08 21 56.2 +0.6**
STEI *e*SKPdf **SKiKP 08 24 07.8 0.0**
833A Chaparral WMA, 109.81 62 P **PKiKP 08 21 17.9 +0.3**
baz=276,SNR=6.0
833A Chaparral WMA, 109.81 62 PKiKP **PKiKP 08 21 17.7 +0.1**
baz=276
LOF Lofoten 109.98 344 *e*Pdif **Pdif 08 17 18.0 +0.4**
LOF *e*PP **PP 08 21 58.8 +0.8**
LOF *e*SKPdf **SKiKP 08 24 08.1 -0.3**
FAUS Fauske 110.00 343 *e*Pdif **Pdif 08 17 18.1 +0.3**
FAUS *e*PP **PP 08 21 58.3 +0.1**
KSU1 Kansas State U 110.48 50 P **PKiKP 08 21 18.3 -0.3**
baz=282
KSU1 Kansas State U 110.48 50 PKiKP **PKiKP 08 21 18.7 +0.2**
baz=282
VSU Vasula 110.73 332 *e*P **Pdif 08 17 20.4 -0.8**
MEF Metsahovi 110.93 334 *e*P **Pdif 08 17 21.3 -0.7**
T35B Sooner Cattle 110.98 52 P **PKiKP 08 21 19.7 +0.1**
baz=281,SNR=7.6
WHTX Lake Whitney, 111.02 57 PKiKP **PKiKP 08 21 19.5 -0.3**
baz=278
ANKE Ethiopia-Afar 111.06 279 *e*P **Pdif 08 17 33.4 +9.2**
MOR8 Moi Rana 111.06 342 *e*Pdif **Pdif 08 17 21.7 -0.9**
MOR8 IVmB_BB 08 17 22.1
comp=Z,374nm,2.1s
MOR8 *e*PP **PP 08 22 05.0 -0.7**
MOR8 *e*SKPdf **SKPdf 08 24 10.1 -0.5**
F36A Milaca 111.08 42 P **PKiKP 08 21 18.9 -0.6**
baz=286
435B Jarrell 111.08 59 P **PKiKP 08 21 20.1 +0.2**
baz=278
435B Jarrell 111.08 59 PKiKP **PKiKP 08 21 20.1 +0.2**
baz=278
RAF Rauma 111.61 336 *e*P **Pdif 08 17 23.7 -1.4**
I37B Waseca 111.67 44 P **PKiKP 08 21 20.0 -0.7**
baz=286
TUL1 Leonard 111.74 53 P **PKiKP 08 21 20.9 -0.1**
baz=281,SNR=6.1
TUL1 Leonard 111.74 53 PKiKP **PKiKP 08 21 20.5 -0.5**
baz=281
SPMN Marine on St. 111.75 43 P **PKiKP 08 21 20.0 -0.8**
baz=287
SPMN Marine on St. 111.75 43 PKiKP **PKiKP 08 21 19.8 -1.0**
baz=287
EYMN Ely 111.78 40 PKiKP **PKiKP 08 21 19.6 -1.1**
baz=289
MNK Minsk 111.92 328 *i* P **Pdif 08 17 26.2 -0.3**
MNK *i* 08 22 12.4
MNK *i* SS SS 08 37 15.2 +1.7
MNK *i* SSS SSS 08 41 32.5
MNK Minsk 111.92 328 *i* P **Pdif 08 17 26.3 -0.3**
MNK *i* P **Pdif 08 17 26.3 -0.3**
MNK *i* P **Pdif 08 17 26.3 -0.3**
baz=245
MNK *i* pP **pPdif 08 19 03.2 -6.4**
MNK *i* PP **PP 08 22 12.4 +0.3**
MNK *i* SPP SPP 08 33 53.5
MNK *i* SS **SS 08 37 15.2 +1.7**
MNK *i* SSS SSS 08 41 32.6
MNK Minsk 111.92 328 *i* PP PKiKP 08 21 34.0 +13
MNK *i* S SKiKP 08 23 45.4 -27
MNK *i* LQ LQ 08 24 54.4
MNK *i* LR LR 08 26 01.8
MNK *i* LRM MLR 08 26 39.1
comp=E,100nm,15.2s
MNK *i* LRM MLR 08 26 39.1
comp=N,2μm,16.2s
MNK *i* LRM MLR 08 26 39.1
comp=Z,2μm,15.2s
MTSE Matsula 111.95 333 *e*P **Pdif 08 17 25.4 -1.2**
AAE Adis Abeba 112.01 278 *e*P **Pdif 08 17 34.0 +5.7**
JMIC Jan Mayen 112.05 353 *e*PP **PP 08 22 13.4 +0.9**
FURI Furi 112.09 278 *e*P **Pdif 08 17 34.0 +5.3**
ASF Jabal al Asfar 112.13 303 Pdiff **Pdif 08 17 27.8 -0.4**
comp=Z,3.8nm,1.0s,baz=155,slow=1.9,SNR=4.6
ASF PKKPbc **PKKPbc 08 32 17.9 +2.6**
comp=Z,6.4nm,0.8s,baz=234,slow=4.3,SNR=6.1
NACGM Naroch 112.32 329 ⇓ *e*P PKiKP 08 21 34.5 +13
baz=167
NACGM Naroch 112.32 329 ⇑ *e*P **Pdif 08 17 28.2 -0.1**
baz=64
X37A Clayton 112.32 54 P **PKiKP 08 21 22.4 +0.3**
baz=281,SNR=9.2
SCIA State Center 112.36 46 P **PKiKP 08 21 21.7 -0.4**
baz=285
SCIA State Center 112.36 46 PKiKP **PKiKP 08 21 21.6 -0.4**
baz=285
N38A Joes South For 112.63 47 P **PKiKP 08 21 22.2 -0.4**
baz=285
AKASG Malin Array Be 112.70 324 Pdiff **Pdif 08 17 28.5 -1.6**
comp=Z,1.8nm,0.5s,baz=52,slow=6.0,SNR=14
AKASG PKKPbc **PKKPbc 08 32 11.6 -2.3**
comp=Z,7.5nm,0.7s,baz=263,slow=3.6,SNR=14
AKASG SKKPbc SKKPbc 08 35 14.0 -0.7
comp=Z,1.4nm,0.7s,baz=260,slow=2.7,SNR=5.4
P38A Dawn 112.70 49 P **PKiKP 08 21 22.2 -0.5**
baz=284
HKT Hockley 112.70 59 *i* PKiKP **PKiKP 08 21 22.6 -0.3**
U38A Gravette 112.75 52 P **PKiKP 08 21 22.5 -0.5**
baz=282,SNR=25
USHA Ushuaia 112.87 157 PKKPbc PKKPbc 08 32 12.7 -0.9
comp=Z,46nm,0.7s,baz=215,slow=1.4,SNR=4.1
Z38A Mt. Pleasant 112.88 56 P **PKiKP 08 21 23.6 +0.4**
baz=280
NSS Namsos 112.95 342 IVmB_BB 08 17 46.8
comp=Z,613nm,2.6s
NSS *e*PP **PP 08 22 19.9 +0.9**
KMBO Kilima Mbogo 112.98 267 *i* PKiKP **PKiKP 08 21 24.1 -0.2**
KMBO Kilima Mbogo 112.98 267 *e*P **Pdif 08 17 36.4 +3.8**
KMBO Kilima Mbogo 112.98 267 P **PKiKP 08 21 24.3 0.0**
HHAR Hobbs 113.14 52 P **PKiKP 08 21 22.8 -0.9**
baz=282
BRTR Keskin Array B 113.19 311 Pdiff **Pdif 08 17 32.1 -0.7**
comp=Z,1.1nm,0.5s,baz=93,slow=2.5,SNR=5.9
BRTR PKKPbc **PKKPbc 08 32 11.9 -0.2**
comp=Z,4.9nm,0.8s,baz=211,slow=4.1,SNR=9.7
MMAI Mount Meron Ar 113.23 304 Pdiff **Pdif 08 17 33.0 -0.1**
comp=Z,1.1nm,0.5s,baz=110,slow=12,SNR=5.9
MMAI PKKPbc **PKKPbc 08 32 12.4 +0.8**
comp=Z,2.4nm,0.6s,baz=279,slow=1.6,SNR=5.5
S39A Bolivar 113.31 51 P **PKiKP 08 21 23.6 -0.3**
baz=283,SNR=19
NATX Nacogdoches 113.41 57 P **PKiKP 08 21 24.7 +0.4**
baz=280,SNR=6.2
NATX Nacogdoches 113.41 57 PKiKP **PKiKP 08 21 24.5 +0.2**
baz=280
PABE Paberze 113.47 330 *e*P **Pdif 08 17 32.0 -1.4**
G40A Rib Lake 113.49 42 P **PKiKP 08 21 23.5 -0.6**
baz=289
I40A Norwalk 113.64 44 P **PKiKP 08 21 23.2 -1.2**
baz=288
ILULI Ilulissat 113.64 8 *i* P **PKiKP 08 21 22.7 -0.9**
L40A Anamosa 113.75 46 P **PKiKP 08 21 23.7 -1.0**
baz=287
MIAR Mount Ida 113.78 54 P **PKiKP 08 21 25.1 +0.1**
baz=282

MIAR	Mount Ida	113.78	54	PKiKP	PKiKP	08 21 24.6	-0.4
	baz=282						
P40A	Paris	113.83	49	P	PKiKP	08 21 24.4	-0.5
	baz=285,SNR=14						
COWI	Conover	113.92	41	P	PKiKP	08 21 24.1	-0.8
	baz=290						
D41A	Chassel	113.95	40	P	PKiKP	08 21 24.6	-0.3
	baz=291						
R40A	Maddies Statio	113.98	50	P	PKiKP	08 21 24.6	-0.6
	baz=284,SNR=15						
EIL	Elat	114.18	301	PKiKP	PKPdf	08 21 25.8	-0.1
	comp=Z,48nm,0.8s,baz=7.5,slow=2.7,SNR=23						
EIL				PKKPbc	PKKPbc	08 32 08.4	+0.2
	comp=Z,14nm,0.7s,baz=357,slow=4.0,SNR=7.5						
JFWS	Jewell Farm	114.19	45	P	PKPdf	08 21 24.5	-1.0
	baz=288						
JFWS	Jewell Farm	114.19	45	PKiKP	PKPdf	08 21 24.2	-1.3
	baz=288						
N41A	Harden Midland	114.40	47	P	PKPdf	08 21 25.2	-0.7
	baz=286						
F42A	Maple Grove Fa	114.69	41	P	PKPdf	08 21 25.6	-0.8
	baz=291						
I42A	Draeger Farm,	114.80	43	P	PKPdf	08 21 25.4	-1.3
	baz=289						
CCM	Cathedral Cave	114.82	50	P	PKPdf	08 21 26.1	-0.7
	baz=285						
CCM	Cathedral Cave	114.82	50	PKiKP	PKPdf	08 21 26.0	-0.8
	baz=285						
CMIG	Matias Romero	114.87	73	PKKPab	PKKPab	08 32 12.4	-0.4
	comp=Z,12nm,0.8s,baz=70,slow=4.7,SNR=10						
CMIG				SKKP		08 35 19.4	
	comp=Z,1.5nm,0.4s,baz=138,slow=10,SNR=12						
L42A	Oliver, Polo	114.88	45	P	PKPdf	08 21 26.0	-0.9
	baz=288						
ICESG	Greenland Ices	114.97	4	*i* P	PKPdf	08 21 25.7	-1.0
LODK	Lodwar	115.19	272	*e*P	Pdif	08 17 45.6	+3.5
HFS	Hagfors	115.33	338	PKP	PKPdf	08 21 25.8	-1.4
	comp=Z,17nm,0.6s,baz=112,slow=4.0,SNR=16						
HFS				PKKPbc	PKKPbc	08 32 02.0	-3.4
	comp=Z,5.9nm,0.8s,baz=108,slow=1.9,SNR=6.5						
LCAR	Lake Charles	115.38	52	P	PKPdf	08 21 27.3	-0.7
	baz=284,SNR=20						
CFR	Carcaliu	115.42	319	⇑P	PKKPbc	08 32 02.9	-1.7
342B	Flagon Creek P	115.44	57	P	PKiKP	08 21 28.7	+0.5
	baz=281,SNR=11						
HDIL	Hopedale	115.58	47	P	PKPdf	08 21 27.5	-0.8
	baz=288						
HDIL	Hopedale	115.58	47	PKiKP	PKPdf	08 21 27.7	-0.5
	baz=288						
NB2	NORSAR Subarra	115.63	339	PKPdf	PKPdf	08 21 26.3	-1.5
	comp=Z,12nm,0.7s,baz=44,slow=1.9						
NB2	NORSAR Subarra	115.63	339	P	Pdif	08 17 41.3	-1.7
	comp=Z,12nm,0.9s,baz=45,slow=5.1						
NB2	NORSAR Subarra	115.63	339	*e*	PKPdf	08 21 26.3	-1.5
	baz=44,slow=1.9						
NOA	NORSAR Array B	115.63	339	PKP	PKPdf	08 21 26.9	-0.8
	comp=Z,29nm,0.7s,baz=48,slow=1.9,SNR=84						
NOA				PKKPbc	PKKPbc	08 32 01.9	-2.6
	comp=Z,5.7nm,0.9s,baz=228,slow=3.1,SNR=4.2						
NOA	NORSAR Array B	115.63	339	PKiKP	PKPdf	08 21 27.0	-0.8
DOMB	Dombas	115.64	341	*e*PP	PP	08 22 39.0	+1.2
P43A	Skaggs, Pawnee	115.68	48	P	PKPdf	08 21 28.1	-0.4
	baz=287,SNR=19						
NC602	NORSAR Array S	115.72	339	*e*PP	PP	08 22 38.5	+0.1
SFJD	Kangerlussuaq	115.75	9	PKP	PKPdf	08 21 27.2	-0.5
	comp=Z,26nm,0.9s,baz=292,slow=1.1,SNR=4.8						
SFJD	Kangerlussuaq	115.75	9	*i* P	PKPdf	08 21 26.6	-1.1
143A	Socs Landing,	115.94	56	P	PKPdf	08 21 29.1	-0.1
	baz=282,SNR=7.8						
L44A	Lake County Fo	116.06	45	P	PKPdf	08 21 28.2	-0.9
	baz=289						
L44A	Lake County Fo	116.06	45	PKiKP	PKPdf	08 21 28.2	-0.9
	baz=289						
VRI	Vrincioaia	116.08	320	⇓P	PKKPbc	08 32 00.7	-1.7
LVV	L'vov	116.09	324	*e*P	Pdif	08 17 41.3	-4.0
LVV				*e*		08 22 40.8	
LVV				MLR	MLR		
	comp=N,600nm,18.0s						
LVV				MLR	MLR		
	comp=E,1μm,18.0s						
LVV				MLR	MLR		
	comp=Z,1μm,20.0s						
AKN	Aaknes	116.20	342	*e*PP	PP	08 22 42.0	+0.3
AKN				*e*PKSdf	PKSdf	08 25 05.2	0.0
Q44A	Meyer Farm, Va	116.27	49	P	PKPdf	08 21 29.0	-0.7
	baz=287,SNR=7.5						
O44A	Mansfield	116.30	47	P	PKPdf	08 21 29.4	-0.2
	baz=288,SNR=18						
BURAR	Bucovina Array	116.34	322	⇓P	PKKPbc	08 32 01.0	-0.7
S44A	Carbondale	116.43	50	P	PKPdf	08 21 29.5	-0.4
	baz=286,SNR=11						
ISR	Istrita	116.49	319	⇓P	PKKPbc	08 32 00.1	-0.9
G45A	Suttons Bay	116.58	41	P	PKPdf	08 21 29.8	-0.2
	baz=292						
G45A				P	PKPdf	08 21 29.8	-0.2
	baz=292						
MLR	Muntele Rosu	116.73	319	⇑P	PKKPbc	08 31 58.7	-1.6
MLR	Muntele Rosu	116.73	319	SKKPbc	SKKPbc	08 35 03.9	+1.5
	comp=Z,2.1nm,0.7s,baz=132,slow=11,SNR=3.8						
344A	Westbrook Farm	116.76	57	P	PKiKP	08 21 31.4	+0.6
	baz=282,SNR=16						
VBMS	Vicksburg	116.77	56	P	PKPdf	08 21 30.7	-0.1
	baz=283,SNR=6.0						
VBMS	Vicksburg	116.77	56	PKiKP	PKiKP	08 21 30.8	0.0
	baz=283						
DY2G	Dye2	116.86	7	*i* P	PKPdf	08 21 29.0	-1.3
SKAR	Skarslia	116.89	340	*e*PP	PP	08 22 47.1	+0.6
E46A	Sault Ste Mari	116.92	39	P	PKPdf	08 21 30.2	-0.4
	baz=294						
OLIL	Olney	117.00	48	P	PKPdf	08 21 30.6	-0.4
	baz=288						
T45B	Paducah	117.08	50	P	PKPdf	08 21 30.4	-0.8
	baz=286,SNR=8.0						
OXF	Oxford	117.14	53	P	PKPdf	08 21 30.8	-0.7
	baz=284						
OXF	Oxford	117.14	53	PKiKP	PKPdf	08 21 30.5	-0.9
	baz=284						
W45A	Hickory Valley	117.16	53	P	PKPdf	08 21 30.6	-0.8
	baz=285						
KONO	Kongsberg	117.17	339	*e*PP	PP	08 22 48.8	+0.4
KONO				*e*PKSdf	PKSdf	08 25 07.2	+0.1
Y45A	Yeager Farm, C	117.19	54	P	PKPdf	08 21 31.3	-0.3
	baz=284,SNR=16						
HYA	Hoyanger	117.22	341	*e*PP	PP	08 22 49.4	+0.7
SFIN	Lafayette	117.23	46	P	PKPdf	08 21 31.2	-0.2
	baz=289,SNR=12						
SFIN	Lafayette	117.23	46	PKiKP	PKPdf	08 21 31.0	-0.4
	baz=289						
FOO	Floro	117.24	342	*e*PP	PP	08 22 49.9	+1.1
L46A	Eue Claire	117.25	44	P	PKPdf	08 21 31.1	-0.3
	baz=290						
L46A				P	PKPdf	08 21 31.1	-0.3
	baz=290						
VOIR		117.33	320	⇓P	PKKPbc	08 31 56.4	-1.7
GLMI	Grayling	117.34	41	P	PKPdf	08 21 30.9	-0.6
	baz=293						
GLMI	Grayling	117.34	41	PKiKP	PKPdf	08 21 31.0	-0.6
	baz=293						
P46A	Rosedale	117.39	47	P	PKPdf	08 21 31.6	-0.2
	baz=289,SNR=26						
ARR	Arges	117.63	320	⇑P	PKKPbc	08 31 55.5	-1.5
SUE	Sulen	117.75	342	*e*PP	PP	08 22 53.2	+0.9
J47A	Sunmer	117.82	43	P	PKPdf	08 21 32.0	-0.4
	baz=292						
J47A				P	PKPdf	08 21 32.0	-0.4
	baz=292						
346A	Big Creek Wild	117.83	57	P	PKPdf	08 21 32.8	0.0
	baz=283,SNR=8.9						
146A	Union	117.88	55	P	PKPdf	08 21 32.6	-0.3
	baz=284,SNR=23						
MATP	Matopo	117.93	244	PKP	PKPdf	08 21 32.7	-0.8
	comp=Z,34nm,0.5s,baz=120,slow=1.8,SNR=95						
MATP				PKKPab	PKKPab	08 31 59.3	-0.6
	comp=Z,22nm,0.9s,baz=273,slow=2.5,SNR=11						
WVT	Waverly	117.96	51	P	PKPdf	08 21 32.2	-0.8
	baz=286						
WVT	Waverly	117.96	51	PKiKP	PKPdf	08 21 32.2	-0.8
	baz=286						
BOSA	Boshof	117.98	234	PKP	PKPdf	08 21 33.0	-0.4
	comp=Z,15nm,0.6s,baz=116,slow=1.9,SNR=45						
BOSA				PKKPbc	PKKPbc	08 31 55.2	-0.3
	comp=Z,16nm,0.8s,baz=323,slow=4.1,SNR=7.3						
BOSA	Boshof	117.98	234	PKIKP	PKPdf	08 21 33.0	-0.4
GKP	Gorka Klasztor	117.99	330	*e*PKPdf	PKiKP	08 21 32.6	+0.1
BSD	Bornholm Skovb	118.01	333	*i* P	PKPdf	08 21 31.0	-1.4
ODD1	Odda	118.02	340	*e*PP	PP	08 22 55.3	+1.0
N47A	Urbana	118.06	45	P	PKPdf	08 21 32.3	-0.7
	baz=290,SNR=11						
N47A				P	PKPdf	08 21 32.3	-0.7
	baz=290,SNR=11						
BER	Bergen	118.09	341	*e*PP	PP	08 22 55.4	+0.8
NUUK	Nuuk	118.14	11	*i* P	PKPdf	08 21 31.9	-0.5
DRGR		118.23	322	⇓P	PKKPbc	08 31 53.6	-1.4
T47A	Sharon Grove	118.27	50	P	PKPdf	08 21 33.0	-0.5
	baz=287,SNR=42						
BLS5	Blasjo	118.44	340	*e*PP	PP	08 22 57.8	+0.7
WCI	Wyandotte Cave	118.51	49	P	PKPdf	08 21 33.4	-0.5
	baz=289,SNR=24						
WCI	Wyandotte Cave	118.51	49	PKiKP	PKPdf	08 21 33.2	-0.7
	baz=289						
DEV	Deva	118.52	321	⇓P	PKKPbc	08 31 53.2	-0.6
ISOG	Isortoq, Green	118.52	4	*i* P	PKPdf	08 21 31.8	-1.3
ANGG	Ammassalik, Gr	118.54	4	*i* P	PKPdf	08 21 31.6	-1.5
Z47A	Carrollton	118.55	54	P	PKPdf	08 21 33.1	-1.1
	baz=285,SNR=9.8						
HOMB	Homborsund	118.56	338	*e*PP	PP	08 22 58.5	+0.6
L48A	N Adams	118.57	44	P	PKPdf	08 21 33.5	-0.5
	baz=292,SNR=24						
L48A				P	PKPdf	08 21 33.5	-0.5
	baz=292,SNR=24						
O48B	Farmland	118.67	46	P	PKPdf	08 21 33.5	-0.7
	baz=290,SNR=26						
O48B	Farmland	118.67	46	PKiKP	PKPdf	08 21 33.6	-0.7
	baz=290						
P48A	Milroy	118.74	47	P	PKPdf	08 21 33.7	-0.7
	baz=290,SNR=25						
P48A				P	PKPdf	08 21 33.7	-0.7
	baz=290,SNR=25						
COP	Copenhagen	118.75	334	*i* P	PKPdf	08 21 33.7	-0.2
GZR	Gura Zlata	118.81	320	⇓P	PKKPbc	08 31 51.5	-1.3
V48A	Smith Brothers	118.86	51	P	PKPdf	08 21 33.4	-1.3
	baz=287						
I49A	Point Hope	118.87	41	P	PKPdf	08 21 34.0	-0.5
	baz=294						
I49A				P	PKPdf	08 21 34.0	-0.5
	baz=294						
AAM	Ann Arbor	118.97	43	P	PKPdf	08 21 34.4	-0.3
	baz=293						
AAM	Ann Arbor	118.97	43	PKiKP	PKPdf	08 21 34.1	-0.6
	baz=293						
LBTB	Lobatse	119.01	238	PKP	PKPdf	08 21 35.1	-0.4
	comp=Z,23nm,0.7s,baz=134,slow=2.2,SNR=30						
LBTB				PKKPbc	PKKPbc	08 31 51.8	+0.1
	comp=Z,21nm,0.8s,baz=276,slow=4.5,SNR=12						
X48A	Hartselle	119.04	53	P	PKPdf	08 21 33.8	-1.3
	baz=286,SNR=16						
N49A	Columbus Grove	119.12	45	P	PKPdf	08 21 34.6	-0.4
	baz=292,SNR=24						
N49A				P	PKPdf	08 21 34.6	-0.4
	baz=292,SNR=24						
SIRR	Siria	119.12	322	⇓P	PKKPbc	08 31 50.9	-0.8
P49A	Miami Univ. Ec	119.23	47	P	PKPdf	08 21 34.6	-0.8
	baz=290,SNR=25						
P49A	Miami Univ. Ec	119.23	47	PKiKP	PKPdf	08 21 34.5	-0.8
	baz=290						
APG	El Apazote	119.24	75	PKKPbc	PKKPbc	08 31 53.3	+2.7
	comp=Z,11nm,0.7s,baz=358,slow=13,SNR=8.9						
O49A	Covington	119.28	46	P	PKPdf	08 21 34.6	-0.7
	baz=291,SNR=28						
O49A				P	PKPdf	08 21 34.6	-0.7
	baz=291,SNR=28						
R49A	Shelbyville	119.32	48	P	PKPdf	08 21 34.8	-0.7
	baz=290,SNR=12						
R49A				P	PKPdf	08 21 34.8	-0.7
	baz=290,SNR=12						
U49A	Red Boiling Sp	119.43	50	P	PKPdf	08 21 35.0	-0.7
	baz=288						
BZS	Buzias	119.44	321	⇑P	PKKPbc	08 31 48.9	-1.6
LRAL	Lakeview Retre	119.46	54	P	PKPdf	08 21 35.2	-0.7
	baz=285,SNR=30						
LRAL	Lakeview Retre	119.46	54	PKiKP	PKPdf	08 21 35.2	-0.7
	baz=285						
K50A	Casco	119.48	43	P	PKPdf	08 21 34.5	-1.2
	baz=294						
K50A				P	PKPdf	08 21 34.5	-1.2
	baz=294						
MBAR	Mbarara	119.52	267	PKP	PKiKP	08 21 37.5	+0.6
	comp=Z,18nm,0.5s,baz=77,slow=4.9,SNR=5.0						
MBAR	Mbarara	119.52	267	*e*P	Pdif	08 18 05.5	+4.1
LSZ	Lusaka	119.57	250	PKP	PKPdf	08 21 36.7	0.0
	comp=Z,25nm,0.5s,baz=143,slow=1.6,SNR=46						
LSZ				PKKPbc	PKKPbc	08 31 50.4	+1.0
	comp=Z,13nm,0.7s,baz=300,slow=2.7,SNR=11						
MUD	Monsted U'grnd	119.58	336	PKiKP	PKiKP	08 21 36.4	+0.9
MUD	Monsted U'grnd	119.58	336	*i* P	PKPdf	08 21 35.2	-0.2
BLKB	Belogradchik	119.63	319	⇑P	PKKPbc	08 31 48.7	-1.1
VTS	Vitosha	119.67	317	⇑P	PKKPbc	08 31 51.7	+1.9
VTS	Vitosha	119.67	317	PKIKP	PKPdf	08 21 36.3	0.0
Y49A	Blount Mountai	119.71	53	P	PKPdf	08 21 35.3	-1.2
	baz=286,SNR=12						
VYHS	Vyhne	119.72	325	*i* P	Pdif	08 18 02.0	+0.5
VYHS				*e*		08 21 35.9	
M50A	Fremont	119.74	44	P	PKPdf	08 21 35.5	-0.7
	baz=293,SNR=8.3						
M50A				P	PKPdf	08 21 35.5	-0.7
	baz=293,SNR=8.3						
MORC	Moravsky Berou	119.77	327	*e*PDIFF	Pdif	08 18 01.2	-0.5
MORC	Moravsky Berou	119.77	327	*e*PKP	PKPdf	08 21 36.0	-0.1
MORC				*e*PKKP	PKKPbc	08 31 47.9	-1.7
KSP	Ksiaz	119.85	328	*e*PKPdf	PKiKP	08 21 36.2	0.0
KSP				*e*PP	PP	08 23 06.9	-0.1
SUR	Sutherland	119.86	229	PKP	PKiKP	08 21 37.4	+0.3
	comp=Z,22nm,1.0s,baz=128,slow=6.8,SNR=11						
SUR				PKKPbc	PKKPbc	08 31 48.8	-0.2
	comp=Z,32nm,0.8s,baz=283,slow=3.8,SNR=12						
BRAL	Brewton	119.89	56	PKiKP	PKPdf	08 21 36.6	-0.2
	baz=284						
R50A	Paris	119.95	48	P	PKPdf	08 21 35.9	-0.8
	baz=290,SNR=22						
R50A				P	PKPdf	08 21 35.9	-0.8
	baz=290,SNR=22						
T50A	Nancy	119.99	49	P	PKPdf	08 21 36.1	-0.7
	baz=289						
T50A				P	PKPdf	08 21 36.1	-0.7
	baz=289						
KRLC	Kraliky	120.02	327	*e*PKIKP	PKiKP	08 21 36.8	+0.1
KRLC				*e*		08 23 05.9	
KRLC	Kraliky	120.02	327	*e*PKP	PKiKP	08 21 36.8	+0.1
KRLC				*e*PP	PP	08 23 05.9	-2.4
OSTC	Ostas	120.05	328	*e*PDIFF	Pdif	08 18 02.5	-0.4
OSTC				*e*PKP	PKiKP	08 21 36.7	0.0
OSTC				*e*PP	PP	08 23 08.3	-0.1
DPC	Dobruska-Polom	120.11	328	*i* P	Pdif	08 18 03.1	-0.1
DPC				*e*		08 21 36.9	
DPC				MLR	MLR		
	comp=Z,1μm,21.4s						
DPC	Dobruska-Polom	120.11	328	*e*PDIFF	Pdif	08 18 03.1	-0.1
DPC				*e*PKP	PKiKP	08 21 36.9	+0.1
DPC				AMS	AMS	09 12 30.0	
	comp=Z,1μm,21.4s						
CHVC	Chvalec	120.12	328	*e*PDIFF	Pdif	08 18 03.3	+0.1
CHVC				*e*PKP	PKiKP	08 21 36.8	0.0
UPC	Upice	120.19	328	*e*PKIKP	PKPdf	08 21 36.6	-0.2
UPC				MLR	MLR		
	comp=Z,2μm,16.6s						
UPC	Upice	120.19	328	*e*PKP	PKPdf	08 21 36.6	-0.2
UPC				AMS	AMS	09 13 40.0	
	comp=Z,2μm,16.6s						
JAVC	Velka Javorina	120.19	326	*e*PDIFF	Pdif	08 18 05.1	+1.5
JAVC	Velka Javorina	120.19	326	*e*PKP	PKiKP	08 21 37.9	+0.8
JAVC				*e*PKKP	PKKPbc	08 31 47.3	-0.7
W50A	Signal Mountai	120.19	52	P	PKPdf	08 21 36.5	-0.8
	baz=288,SNR=33						
ACSO	Alum Creek Sta	120.22	45	P	PKPdf	08 21 36.6	-0.6
	baz=292,SNR=14						
ACSO	Alum Creek Sta	120.22	45	PKiKP	PKPdf	08 21 36.6	-0.6
	baz=292						
LRW	Lerwick	120.23	344	*e*P	PKPdf	08 21 36.4	-0.2
BOVS	Bovan	120.26	319	⇓P	PKKPbc	08 31 43.8	-3.7
SANT	Santorini	120.33	310	⇑P	PKKPbc	08 31 48.8	+1.8
250A	Grady	120.33	55	P	PKPdf	08 21 37.3	-0.4
	baz=285,SNR=17						
SRO	Srobarova	120.37	325	*e*PKIKP	PKiKP	08 21 37.5	+0.2
N51A	Ashland	120.39	44	P	PKPdf	08 21 36.9	-0.6
	baz=293,SNR=24						
N51A				P	PKPdf	08 21 36.9	-0.6
	baz=293,SNR=24						
Q51A	Peebles	120.41	47	P	PKPdf	08 21 36.9	-0.7
	baz=291,SNR=20						
Q51A				P	PKPdf	08 21 36.9	-0.7
	baz=291,SNR=20						
P51A	Williamsport	120.45	46	P	PKPdf	08 21 36.6	-1.0
	baz=292,SNR=19						
P51A				P	PKPdf	08 21 36.6	-1.0
	baz=292,SNR=19						
VRAC	Vranov	120.54	327	⇑P	PKKPbc	08 31 45.1	-1.5
VRAC	Vranov	120.54	327	PKP	PKiKP	08 21 37.6	0.0
	comp=Z,51nm,0.9s,baz=68,slow=2.0,SNR=26						
VRAC	Vranov	120.54	327	*e*PDIFF	Pdif	08 18 05.8	+0.7
VRAC	Vranov	120.54	327	*e*PKP	PKPdf	08 21 37.5	-0.1
VRAC				*e*PKKP	PKKPbc	08 31 44.7	-2.0
MODS	Modra-Piesok	120.67	326	*e*PKIKP	PKiKP	08 21 38.3	+0.3
S51A	Beattyville	120.72	48	P	PKPdf	08 21 37.8	-0.5
	baz=290,SNR=35						
S51A				P	PKPdf	08 21 37.8	-0.5
	baz=290,SNR=35						
X51A	Calhoun	120.74	52	P	PKPdf	08 21 37.5	-0.9
	baz=288,SNR=12						
X51A				P	PKPdf	08 21 37.5	-0.9
	baz=288,SNR=12						
V51A	Loudon	120.75	51	P	PKPdf	08 21 37.6	-0.7
	baz=289,SNR=12						
KRUC	Moravsky	120.79	327	*e*PDIFF	Pdif	08 18 05.9	-0.3
KRUC	Moravsky	120.79	327	*e*PKP	PKPdf	08 21 37.8	-0.2
KRUC				*e*PKKP	PKKPbc	08 31 44.0	-1.8
TEIG	Tepich	120.83	69	*e*P	PKPdf	08 21 38.3	-0.6
M52A	Chesterland	120.84	43	P	PKPdf	08 21 37.6	-0.8
	baz=294,SNR=5.7						
M52A				P	PKPdf	08 21 37.6	-0.8
	baz=294,SNR=5.7						
Z51A	Franklin	120.86	54	P	PKPdf	08 21 38.1	-0.6
	baz=287,SNR=37						
ZST	Bratislava	120.86	325	*e*PKIKP	PKiKP	08 21 38.7	+0.4
PVCC	Panska Ves	120.93	329	*e*PKIKP	PKiKP	08 21 38.5	+0.1
PVCC				*e*		08 23 14.5	
PVCC				MLR	MLR		
	comp=Z,1μm,17.2s						
PVCC	Panska Ves	120.93	329	*e*PKP	PKiKP	08 21 38.5	+0.1
PVCC				*e*PP	PP	08 23 14.5	+0.2
PVCC				AMS	AMS	09 12 40.0	
	comp=Z,1μm,17.2s						
MORH	Mrgy, Hungar	120.98	323	⇓P	PKKPbc	08 31 44.4	-0.5
P52A	Corning	121.06	46	PKiKP	PKPdf	08 21 38.1	-0.8
	baz=293						
O52A	Adamsville	121.08	45	P	PKPdf	08 21 38.0	-0.8
	baz=293,SNR=17						
O52A				P	PKPdf	08 21 38.0	-0.8
	baz=293,SNR=17						
IDI	Anoyia	121.11	309	PKP	PKPdf	08 21 39.2	0.0
	comp=Z,122nm,0.6s,baz=32,slow=15,SNR=22						
TZTN	Tazewell	121.12	50	P	PKPdf	08 21 39.0	-0.1
	baz=290,SNR=14						
TZTN	Tazewell	121.12	50	PKiKP	PKPdf	08 21 39.0	-0.1
	baz=290						
TREC	Trest	121.15	327	PKIKP	PKPdf	08 21 37.2	-1.5
TREC	Trest	121.15	327	*e*P	PKiKP	08 21 39.0	+0.1
TREC	Trest	121.15	327	*e*PKP	PKiKP	08 21 39.0	+0.1
GOPC	GO Pecny, Ondr	121.17	328	*e*PKIKP	PKiKP	08 21 38.9	0.0
GOPC				MLR	MLR		
	comp=Z,2μm,18.3s						
GOPC	GO Pecny, Ondr	121.17	328	*e*PKP	PKiKP	08 21 38.9	0.0
GOPC				AMS	AMS	09 14 00.0	
	comp=Z,2μm,18.3s						
LIT	Litokhoron	121.19	315	PKIKP	PKPdf	08 21 37.8	-1.3
Q52A	Bidwell	121.21	46	P	PKPdf	08 21 38.0	-1.1
	baz=292,SNR=12						
Q52A				P	PKPdf	08 21 38.0	-1.1
	baz=292,SNR=12						
TKL	Tuckaleechee C	121.24	51	P	PKPdf	08 21 38.9	-0.4
	baz=289,SNR=24						
CLL	Collm	121.25	330	⇓*e*P	Pdif	08 18 07.0	-1.2
CLL				*i*		08 21 38.7	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,116nm,0.7s						
CLL				pmax	pmax		
	comp=Z,25nm,1.5s						
CLL	Collm	121.25	330	*e*Pdif	Pdif	08 18 07.0	-1.2
	comp=Z,9.0nm,1.0s						
CLL				*ex*	x	08 18 23.0	
CLL				⇓*i*PKPdf	PKPdf	08 21 38.7	-0.1
	comp=Z,116nm,0.7s						
CLL				*i* PKiKP	PKiKP	08 21 41.3	+2.3
CLL				*e*PP	PP	08 23 17.0	+0.6
CLL				*e*(pPKPdf)		08 23 29.0	
CLL				*e*SKPdf	SKiKP	08 24 33.0	+2.0
CLL				*ex*	x	08 25 05.0	
CLL				*e*PKSdf	PKSdf	08 25 15.0	-0.3
CLL				*es*PP		08 25 42.0	
CLL				*e*PKKPbc	PKKPbc	08 31 42.0	-2.1
	comp=Z,25nm,1.5s						
CLL				*e*PS	PS	08 33 06.0	-10
CLL				*e*PPS	PPS	08 34 36.0	
CLL				*es*PS		08 35 18.0	
CLL				*e*SS	SS	08 39 14.0	+0.3
CLL				*e*SSS	SSS	08 43 42.0	
CLL				*e*SSSS		08 47 18.0	
PRU	Pruhonice	121.26	328	*e*PKIKP	PKPdf	08 21 38.8	-0.1
PRU				*e*		08 23 16.6	
PRU				MLR	MLR		
	comp=Z,2μm,19.1s						
PRU	Pruhonice	121.26	328	*e*PKP	PKPdf	08 21 38.8	-0.1
PRU				*e*PP	PP	08 23 16.6	+0.1
PRU				AMS	AMS	09 14 00.0	
	comp=Z,2μm,19.1s						
W52A	Murphy	121.

CKRC Cesky Krumlov 122.06 327 *e*PDIFF Pdif 08 18 12.1 +0.2
CKRC *e*PKP **PKPdf 08 21 40.5 0.0**
CKRC *e*PP **PP 08 23 22.5 +0.5**
CKRC AMS AMS 09 15 00.0
comp=Z,1µm,18.4s
O54A Avella 122.08 44 P PKPdf 08 21 40.7 -0.1
baz=294,SNR=28
O54A P **PKPdf 08 21 40.7 -0.1**
baz=294,SNR=28
CASEE Lake Jocassee 122.11 51 P PKiKP 08 21 41.2 0.0
baz=289,SNR=27
GOGA Godfrey 122.19 53 P PKPdf 08 21 40.9 -0.3
baz=288,SNR=23
GOGA Godfrey 122.19 53 PKiKP PKPdf 08 21 40.9 -0.3
baz=288
UPAO U. Pittsburgh 122.20 44 P PKPdf 08 21 40.7 -0.3
baz=295
Q54A Coxs Mills 122.24 46 P PKPdf 08 21 40.8 -0.3
baz=293,SNR=45
Q54A P **PKPdf 08 21 40.8 -0.3**
baz=293,SNR=45
KHC Kasperske Hory 122.27 328 *i* P Pdif 08 18 12.9 +0.1
KHC *e* 08 21 40.4
KHC *e* 08 23 21.9
KHC MLR MLR
comp=Z,2µm,19.4s
KHC Kasperske Hory 122.27 328 *e*PDIFF Pdif 08 18 12.9 +0.1
KHC *e*PKP **PKPdf 08 21 40.4 -0.5**
KHC *e*PP **PP 08 23 21.9 -1.5**
KHC AMS AMS 09 14 40.0
comp=Z,2µm,19.4s
ARSA Arzberg 122.27 325 *i* P PKPdf 08 21 40.2 -0.8
comp=Z,64nm,1.4s
ARSA *i* P **PKKPab 08 31 39.2 -0.9**
comp=Z,9.8nm,0.8s
WVNY West Valley, N 122.32 41 P PKPdf 08 21 40.3 -0.9
baz=297,SNR=17
S54A Dingess, Beckl 122.35 47 P PKPdf 08 21 41.0 -0.5
baz=292,SNR=28
S54A P **PKPdf 08 21 41.0 -0.5**
baz=292,SNR=28
BIGH Upper Bighouse 122.37 344 *e*P PKPdf 08 21 39.9 -0.8
GERES GERESS Array B 122.37 328 PKP PKPdf 08 21 41.0 -0.2
comp=Z,80nm,0.6s,baz=60,slow=7.9,SNR=252
GERES PKKPbc **PKKPab 08 31 38.2 -1.5**
comp=Z,2.6nm,0.6s,baz=219,slow=3.4,SNR=5.4
GERES GERESS Array B 122.37 328 PKiKP PKPdf 08 21 41.0 -0.2
TGUH Tegucigalpa,Un 122.38 76 *e*P PKiKP 08 21 42.7 +0.3
MLA1 Latheron 122.38 344 *e*P PKPdf 08 21 40.2 -0.5
PDG Podgorica 122.41 319 ⇑P PKKPbc 08 31 38.7 -0.7
J55A Hilton 122.44 40 P PKPdf 08 21 40.3 -1.0
baz=298,SNR=7.8
J55A P **PKPdf 08 21 40.3 -1.0**
baz=298,SNR=7.8
U54A Nelsons Funny 122.44 49 P PKPdf 08 21 40.9 -0.7
baz=291,SNR=11
U54A P **PKPdf 08 21 40.9 -0.7**
baz=291,SNR=11
TIR Tirane 122.48 317 PKIKP PKPdf 08 21 40.4 -1.1
M55A Ridgway 122.64 42 P PKPdf 08 21 41.3 -0.6
baz=296,SNR=18
M55A P **PKPdf 08 21 41.3 -0.6**
baz=296,SNR=18
MOA Molln 122.64 326 *i* P PKPdf 08 21 41.0 -0.6
comp=Z,40nm,0.7s,SNR=12
MOA *i* P **PP 08 23 22.8 -3.1**
comp=Z,49nm,1.8s
MOA *e*P **PKKPab 08 31 37.6 -0.9**
comp=Z,36nm,1.4s,SNR=8.7
MCWV Mont Chateau 122.67 45 P PKPdf 08 21 41.5 -0.4
baz=295,SNR=13
MCWV Mont Chateau 122.67 45 PKiKP PKPdf 08 21 41.5 -0.4
baz=295
GAC Glen Almond 122.67 37 PKIKP PKPdf 08 21 40.6 -1.1
TIGA Tifton 122.68 55 P PKPdf 08 21 42.2 0.0
baz=287,SNR=25
TIGA Tifton 122.68 55 PKiKP PKPdf 08 21 42.1 0.0
baz=287
CRIN San Cristobal 122.68 78 *e*P PKiKP 08 21 43.0 +0.1
154A Montrose 122.72 54 P PKPdf 08 21 42.0 -0.2
baz=288,SNR=6.5
PSDB Penn State Uni 122.79 43 P PKPdf 08 21 41.6 -0.5
baz=296
PERS Pernice 122.84 325 *i* PKPdf PKPdf 08 21 41.0 -1.1
PERS *i* PP **PP 08 23 28.9 +1.6**
SOKA Soboth 122.87 325 *i* P PKPdf 08 21 41.4 -0.8
comp=Z,76nm,0.8s,SNR=10
SOKA *e*P **PP 08 23 25.3 -2.2**
comp=Z,64nm,1.3s
SOKA *i* P **PKKPab 08 31 36.9 -0.7**
comp=Z,17nm,1.3s
HODGE Hodges 122.89 52 P PKPdf 08 21 42.4 -0.1
baz=289,SNR=26
MCD Coleburn Disti 122.97 343 *e*P PKPdf 08 21 41.5 -0.5
R55A Marlinton 123.03 46 P PKPdf 08 21 42.6 -0.1
baz=294
R55A P **PKPdf 08 21 42.6 -0.1**
baz=294
CNGN Cerro Negro 123.03 78 *e*P PKPdf 08 21 41.7 -1.6
PAULI Pauline 123.03 51 P PKPdf 08 21 42.8 0.0
baz=290,SNR=25
J56A Wolcott 123.05 40 P PKPdf 08 21 41.5 -1.0
baz=299,SNR=9.1
J56A P **PKPdf 08 21 41.5 -1.0**
baz=299,SNR=9.1
BIOA Bad Ischl, Aus 123.08 326 *i* P PKPdf 08 21 41.6 -0.9
comp=Z,44nm,0.8s,SNR=22
BIOA *i* P **PKKPab 08 31 35.5 -1.1**
comp=Z,22nm,1.3s
V55A Taylorsville 123.13 50 P PKPdf 08 21 42.5 -0.4
baz=291,SNR=20
V55A P **PKPdf 08 21 42.5 -0.4**
baz=291,SNR=20
L56A Greenwood 123.13 41 P PKPdf 08 21 42.0 -0.8
baz=298,SNR=19
L56A P **PKPdf 08 21 42.0 -0.8**
baz=298,SNR=19
GRFO Grafenberg 123.15 330 PKIKP PKPdf 08 21 42.3 -0.2
BLA Blacksburg 123.22 48 P PKPdf 08 21 42.6 -0.5
baz=293,SNR=31
BLA Blacksburg 123.22 48 PKiKP PKPdf 08 21 42.7 -0.5
baz=293
OBKA Obir 123.24 325 *i* P PKPdf 08 21 42.2 -0.7
comp=Z,92nm,1.5s
OBKA *e*P **PP 08 23 29.4 -0.6**
comp=Z,41nm,1.1s
OBKA *i* P **PKKPab 08 31 35.9 -0.1**
comp=Z,33nm,1.4s
KMSC Kings Mountain 123.29 50 P PKPdf 08 21 43.1 -0.2
baz=291,SNR=31
KMSC Kings Mountain 123.29 50 PKiKP PKPdf 08 21 43.1 -0.2
baz=291
Q56A Snyder Ridge, 123.39 45 P PKPdf 08 21 42.7 -0.7
baz=295,SNR=12
Q56A P **PKPdf 08 21 42.7 -0.7**
baz=295,SNR=12
LEWI Lewis, Hebride 123.44 346 *e*P PKPdf 08 21 41.7 -1.2
255A Hazlehurst 123.44 54 P PKPdf 08 21 43.1 -0.5
baz=288,SNR=6.5
WCNY West Carthage 123.45 39 P PKPdf 08 21 42.4 -0.9
baz=301,SNR=12
LJU Ljubljana 123.51 324 *i* PKPdf PKPdf 08 21 43.2 -0.2
LJU *i* PP **PP 08 23 32.9 +1.2**
J57A Williamstown 123.53 39 P PKPdf 08 21 42.9 -0.5
baz=300,SNR=10
J57A P **PKPdf 08 21 42.9 -0.5**
baz=300,SNR=10
K57A Scipio Center 123.53 40 P PKPdf 08 21 42.9 -0.6
baz=299,SNR=22
U56A King 123.58 49 P PKPdf 08 21 43.4 -0.4
baz=292,SNR=10.0
U56A P **PKPdf 08 21 43.4 -0.4**
baz=292,SNR=10.0
KBA Koelnbreinsper 123.60 326 *i* P PKPdf 08 21 42.5 -1.3
comp=Z,60nm,0.7s,SNR=22
KBA *e*P **PKKPab 08 31 33.9 -0.6**
comp=Z,19nm,1.1s,SNR=6.7
SSPA Standing Stone 123.60 43 P PKPdf 08 21 43.3 -0.4
baz=297,SNR=23
SSPA Standing Stone 123.60 43 PKiKP PKPdf 08 21 43.3 -0.4
baz=297
JSC Jenkinsville 123.65 51 P PKPdf 08 21 43.8 -0.2
baz=290,SNR=28
HAW Hawthorne Fire 123.68 52 P PKPdf 08 21 43.7 -0.3
baz=289,SNR=12
MYKA Terra Mystica 123.69 325 *i* P PKPdf 08 21 42.7 -1.1
comp=Z,60nm,0.7s,SNR=12

MYKA *e*P **PP 08 23 29.9 -3.0**
comp=Z,39nm,1.0s
MYKA *i* P **PKKPab 08 31 34.2 +0.2**
comp=Z,20nm,1.0s
BMNY Brushton-Moira 123.71 37 P PKPdf 08 21 43.1 -0.7
baz=302,SNR=20
CEY Cerknica 123.74 324 *i* PKPdf PKPdf 08 21 43.2 -0.6
LONY Lake Ozonia 123.78 37 PKiKP PKPdf 08 21 43.3 -0.6
baz=302
EDU Dundee 123.78 343 *e*P PKPdf 08 21 43.1 -0.4
M57A Sunshine Farm, 123.79 42 P PKPdf 08 21 43.6 -0.4
baz=298,SNR=26
M57A P **PKPdf 08 21 43.6 -0.4**
baz=298,SNR=26
KPL Plockton 123.84 345 *e*P PKPdf 08 21 42.8 -0.8
J58A Remsen 124.00 39 P PKPdf 08 21 43.9 -0.5
baz=301,SNR=21
J58A P **PKPdf 08 21 43.9 -0.5**
baz=301,SNR=21
P57A Homestead Farm 124.02 44 P PKPdf 08 21 44.1 -0.4
baz=296,SNR=13
P57A P **PKPdf 08 21 44.1 -0.4**
baz=296,SNR=13
S57A Dark Hollow, R 124.08 47 P PKPdf 08 21 43.9 -0.8
baz=294,SNR=8.1
S57A P **PKPdf 08 21 43.9 -0.8**
baz=294,SNR=8.1
656A Willston 124.13 57 P PKPdf 08 21 44.6 -0.4
baz=286
BINY Binghamton 124.13 41 P PKPdf 08 21 44.3 -0.4
baz=299,SNR=16
BINY Binghamton 124.13 41 PKiKP PKPdf 08 21 44.3 -0.4
baz=299
BIRD Birdtown, Kers 124.14 51 P PKPdf 08 21 44.7 -0.2
baz=291,SNR=14
T57A Hurt 124.17 48 P PKPdf 08 21 44.6 -0.3
baz=293,SNR=15
T57A P **PKPdf 08 21 44.6 -0.3**
baz=293,SNR=15
INVG Invergeldie, C 124.19 343 *e*P PKPdf 08 21 44.1 -0.2
ESY Stoneypath 124.19 342 *e*P PKPdf 08 21 44.3 0.0
ABTA Abfaltersbach 124.25 326 *i* P PKPdf 08 21 43.8 -1.1
comp=Z,131nm,0.8s,SNR=42
ABTA *e*P **PP 08 23 32.8 -3.9**
comp=Z,38nm,1.1s
ABTA *e*P **PKKPab 08 31 31.6 0.0**
comp=Z,11nm,0.8s,SNR=5.3
FRNY Flat Rock 124.26 37 P PKPdf 08 21 43.9 -0.9
baz=303,SNR=20
N58A Sunbury 124.30 42 P PKPdf 08 21 44.6 -0.4
baz=298,SNR=25
N58A P **PKPdf 08 21 44.6 -0.4**
baz=298,SNR=25
W57A Gilead 124.31 50 P PKPdf 08 21 45.2 0.0
baz=292,SNR=17
W57A P **PKPdf 08 21 45.2 0.0**
baz=292,SNR=17
NCB Newcomb 124.34 38 P PKPdf 08 21 44.8 -0.2
baz=302,SNR=21
Y57A Sumter 124.41 51 P PKiKP 08 21 45.8 0.0
baz=291,SNR=25
Y57A P **PKiKP 08 21 45.8 0.0**
baz=291,SNR=25
WATA Walderalm 124.42 327 *i* P PKPdf 08 21 44.5 -0.7
comp=Z,234nm,1.3s,SNR=40
WATA *e*P **PP 08 23 36.2 -1.6**
comp=Z,56nm,1.2s
WTTA Wattenberg 124.43 327 *i* P PKPdf 08 21 44.8 -0.5
comp=Z,200nm,0.7s,SNR=46
WTTA *e*P **PP 08 23 36.5 -1.4**
comp=Z,140nm,1.5s
WTTA *i* P **PKKPab 08 31 31.2 +0.2**
comp=Z,16nm,0.9s
J59A Piesco 124.43 39 P PKPdf 08 21 44.9 -0.3
baz=302,SNR=25
J59A P **PKPdf 08 21 44.9 -0.3**
baz=302,SNR=25
EBL Broad Law 124.44 342 *e*P PKPdf 08 21 44.8 0.0
ACON Acoyapa 124.55 79 *e*P PKiKP 08 21 46.8 +0.3
KSPA Keystone Colle 124.59 41 P PKPdf 08 21 45.0 -0.6
baz=299,SNR=13
MOTA Moosalm 124.67 327 *i* P PKPdf 08 21 45.0 -0.7
comp=Z,184nm,0.7s,SNR=47
MOTA *e*P **PP 08 23 32.6 -6.8**
comp=Z,61nm,1.5s
MOTA *i* P **PKKPab 08 31 29.7 -0.2**
comp=Z,14nm,0.9s
SQTA Sankt Quirin 124.69 327 *i* P PKPdf 08 21 45.2 -0.5
comp=Z,154nm,0.8s,SNR=35
SQTA *i* P **PP 08 23 34.0 -5.6**
comp=Z,66nm,1.2s
SQTA *i* P **PKKPab 08 31 30.0 +0.1**
comp=Z,10nm,0.9s
LAWE Loch Awe, Argy 124.71 344 *e*P PKPdf 08 21 45.1 -0.2
V58A Windy Hill, Pi 124.74 49 P PKPdf 08 21 46.0 0.0
baz=293,SNR=13
V58A P **PKPdf 08 21 46.0 0.0**
baz=293,SNR=13
L59A Walton 124.74 40 P PKPdf 08 21 45.8 -0.1
baz=300,SNR=14
L59A P **PKPdf 08 21 45.8 -0.1**
baz=300,SNR=14
RETA Reutte 124.76 328 *i* P PKPdf 08 21 45.0 -0.8
comp=Z,47nm,0.6s,SNR=18
RETA *i* P **PKKPab 08 31 29.5 +0.1**
comp=Z,6.9nm,0.6s
R58B Mineral 124.77 46 P PKPdf 08 21 45.5 -0.4
baz=295,SNR=14
R58B P **PKPdf 08 21 45.5 -0.4**
baz=295,SNR=14
JTS Las Juntas de 124.83 81 *e*P PKiKP 08 21 47.1 0.0
PGBU Glenifferbraes 124.84 343 *e*P PKPdf 08 21 45.4 -0.1
EKA Eskdalemuir Ar 124.85 342 PKP PKPdf 08 21 45.5 -0.1
comp=Z,31nm,0.5s,baz=20,slow=2.3,SNR=78
EKA PKKPbc **PKKPab 08 31 28.0 -0.9**
comp=Z,3.7nm,0.7s,baz=218,slow=3.3,SNR=6.9
EKA SKKPbc SKKPbc 08 34 36.4 -0.3
comp=Z,1.6nm,0.6s,baz=224,slow=3.0,SNR=5.0
SDMD Soldier's Deli 124.87 44 P PKPdf 08 21 45.8 -0.3
baz=297,SNR=16
ESK Eskdalemuir 124.88 342 *e*P PKPdf 08 21 45.1 -0.5
ESK Eskdalemuir 124.88 342 PKIKP PKiKP 08 21 46.2 +0.2
EDMD Edmundbyers 124.89 341 *e*P PKPdf 08 21 45.5 -0.2
HCNY Howe Caverns 124.90 39 P PKPdf 08 21 45.5 -0.6
baz=301,SNR=14
NHSC New Hope 124.90 52 P PKPdf 08 21 46.0 -0.3
baz=290
NHSC New Hope 124.90 52 PKiKP PKiKP 08 21 46.6 -0.2
baz=290
ACCN Adirondack Com 124.99 38 P PKPdf 08 21 45.8 -0.5
baz=302,SNR=7.7
BTNL Ternell 125.00 333 *d*PKP PKPdf 08 21 45.6 -0.4
Y58A Scranton 125.02 51 P PKiKP 08 21 47.1 +0.1
baz=291,SNR=17
Y58A P **PKiKP 08 21 47.1 +0.1**
baz=291,SNR=17
CBN Corbin Frederi 125.03 45 P PKPdf 08 21 46.3 -0.2
baz=296,SNR=18
CBN Corbin Frederi 125.03 45 PKiKP PKPdf 08 21 46.1 -0.3
baz=296
VT1 Waterbury 125.03 37 P PKPdf 08 21 46.3 0.0
baz=304,SNR=11
MEM Membach 125.03 333 *d*PKPdf PKPdf 08 21 45.9 -0.2
X58A Rowland 125.03 50 P PKPdf 08 21 46.7 +0.1
baz=292,SNR=13
X58A P **PKPdf 08 21 46.7 +0.1**
baz=292,SNR=13
BEBN Eben Emael 125.05 333 *d*PKPdf PKPdf 08 21 46.0 -0.1
FETA Feichten 125.07 327 *i* P PKPdf 08 21 45.9 -0.6
comp=Z,237nm,1.1s,SNR=48
FETA *i* P **PKKPab 08 31 28.4 +0.2**
comp=Z,12nm,1.1s
MCVT Middlebury Col 125.10 37 P PKPdf 08 21 46.4 -0.1
baz=303,SNR=13
BHOU Houvegnez 125.22 333 *d*PKPdf PKPdf 08 21 46.6 +0.1
BSTI Sart Tilman 125.25 333 *d*PKP PKPdf 08 21 46.2 -0.3
DAVA Damuels 125.36 328 *i* P PKPdf 08 21 46.6 -0.4
comp=Z,134nm,0.7s,SNR=30
DAVA *i* P **PKKPab 08 31 27.4 +0.4**
comp=Z,22nm,1.2s
NEWG New Galloway 125.36 342 *e*P PKPdf 08 21 45.5 -1.1
T59A Double "B" Far 125.42 47 P PKPdf 08 21 47.2 -0.1
baz=295,SNR=23
T59A P **PKPdf 08 21 47.2 -0.1**
baz=295,SNR=23
LMK Market Rasen 125.45 339 *e*P PKPdf 08 21 46.9 +0.1
BFO Black Forest 125.48 330 PKIKP PKPdf 08 21 46.4 -0.7

BCLA Clavier 125.49 333 *d*PKPdf PKPdf 08 21 46.8 -0.1
HPK Haverah Park 125.50 340 *e*P PKPdf 08 21 46.9 +0.1
U59A Littleton 125.50 48 P PKPdf 08 21 46.9 -0.5
baz=294,SNR=9.9
U59A P **PKPdf 08 21 46.9 -0.5**
baz=294,SNR=9.9
D62A Allapoint, All 125.50 32 P PKPdf 08 21 46.4 -0.7
baz=309,SNR=16
D62A P **PKPdf 08 21 46.4 -0.7**
baz=309,SNR=16
GEDE Greenville 125.51 43 P PKPdf 08 21 46.8 -0.5
baz=298,SNR=14
E62A Clayton Lake 125.54 33 P PKPdf 08 21 46.3 -0.9
baz=308,SNR=11
E62A P **PKPdf 08 21 46.3 -0.9**
baz=308,SNR=11
NPNY Mohonk Preserv 125.54 40 P PKPdf 08 21 47.0 -0.3
baz=301,SNR=11
LBNH Lisbon 125.58 37 P PKPdf 08 21 47.5 +0.1
baz=304,SNR=11
LBNH Lisbon 125.58 37 PKiKP PKPdf 08 21 47.4 +0.1
baz=304
PSUB Penn St. - Bra 125.58 43 P PKPdf 08 21 47.4 0.0
baz=299
ODNJ Ogdensburg 125.58 41 P PKPdf 08 21 47.1 -0.4
baz=300,SNR=16
Y59A Loris 125.60 51 P PKPdf 08 21 47.8 +0.2
baz=292,SNR=6.8
Y59A P **PKPdf 08 21 47.8 +0.2**
baz=292,SNR=6.8
BGES Gesves 125.61 333 *d*PKPdf PKPdf 08 21 46.9 -0.4
WLF Walferdange 125.63 332 PKIKP PKiKP 08 21 47.7 0.0
WLF Walferdange 125.63 332 *d*PKPdf PKiKP 08 21 47.8 +0.1
TUPA Temple Univers 125.64 42 P PKPdf 08 21 47.3 -0.3
baz=299,SNR=8.0
HNH Hanover 125.66 37 P PKiKP 08 21 48.0 +0.1
baz=304,SNR=21
DAVOX Davos/Dischmat 125.67 327 PKP PKiKP 08 21 48.1 -0.1
comp=Z,120nm,0.6s,baz=174,slow=0.9,SNR=74
WACR West Acre 125.68 338 *e*P PKPdf 08 21 47.3 +0.1
J61A Chester 125.70 38 P PKiKP 08 21 47.8 -0.2
baz=303,SNR=15
J61A P **PKiKP 08 21 47.8 -0.2**
baz=303,SNR=15
RCHB Rochefort 125.71 333 *d*PKPdf PKPdf 08 21 47.2 -0.2
GAL1 Galloway 125.72 343 *e*P PKPdf 08 21 47.1 -0.1
F62A Pittston Farm, 125.73 34 P PKPdf 08 21 47.5 -0.1
baz=307,SNR=14
F62A P **PKPdf 08 21 47.5 -0.1**
baz=307,SNR=14
BRNY Black Rk. Fore 125.80 40 P PKPdf 08 21 47.7 -0.1
baz=301,SNR=8.6
BRNJ Basking Ridge 125.81 42 P PKPdf 08 21 48.0 +0.1
baz=300,SNR=12
BMRD Maredsous 125.81 333 *d*PKPdf PKPdf 08 21 47.5 -0.1
G62A West of Eustis 125.82 35 P PKPdf 08 21 47.5 -0.3
baz=306,SNR=11
G62A P **PKPdf 08 21 47.5 -0.3**
baz=306,SNR=11
H62A Milan 125.84 36 P PKiKP 08 21 48.2 -0.1
baz=306,SNR=10.0
H62A P **PKiKP 08 21 48.2 -0.1**
baz=306,SNR=10.0
PANJ Princeton 125.86 42 P PKPdf 08 21 47.7 -0.3
baz=300,SNR=12
CNNC Cliffs of the 125.87 49 P PKPdf 08 21 48.1 -0.1
baz=293,SNR=14
CNNC Cliffs of the 125.87 49 PKiKP PKPdf 08 21 48.1 -0.1
baz=293
SNF Seneffe 125.87 334 *d*PKPdf PKPdf 08 21 47.8 +0.1
CLGH Cloghs, Cushen 125.94 344 *e*P PKPdf 08 21 46.9 -0.8
T60A Surry 125.94 46 P PKPdf 08 21 47.9 -0.3
baz=296,SNR=20
T60A P **PKPdf 08 21 47.9 -0.3**
baz=296,SNR=20
DOU Dourbes 126.04 333 PKIKP PKiKP 08 21 48.6 +0.1
DOU Dourbes 126.04 333 *d*PKPdf PKPdf 08 21 47.8 -0.2
ELMS Elmsett, Ipswi 126.04 337 *e*P PKPdf 08 21 48.0 0.0
PAL Palisades 126.08 41 P PKPdf 08 21 48.0 -0.4
baz=301,SNR=12
PAL Palisades 126.08 41 PKiKP PKPdf 08 21 47.9 -0.4
baz=301
L61B Northampton 126.11 39 P PKPdf 08 21 47.9 -0.5
baz=303,SNR=9.8
L61B Northampton 126.11 39 PKiKP PKPdf 08 21 48.1 -0.3
baz=303
I62A Tamworth 126.14 37 P PKPdf 08 21 48.1 -0.4
baz=305,SNR=8.1
I62A P **PKPdf 08 21 48.1 -0.4**
baz=305,SNR=8.1
FOR Fordham 126.16 41 P PKPdf 08 21 47.6 -1.0
baz=301,SNR=5.2
FFD Franklin Falls 126.17 37 P PKiKP 08 21 49.5 +0.5
baz=304
IOMK Kirk Michael 126.19 342 *e*P PKPdf 08 21 48.1 -0.1
AQU L'Aquila 126.20 321 PKIKP PKPdf 08 21 47.9 -0.8
E63A Oxbow 126.25 33 P PKPdf 08 21 47.7 -0.9
baz=309
E63A P **PKPdf 08 21 47.7 -0.9**
baz=309
K62A Royalston 126.27 38 P PKPdf 08 21 48.1 -0.6
baz=303,SNR=8.3
K62A P **PKPdf 08 21 48.1 -0.6**
baz=303,SNR=8.3
WIM Isle of Man 126.32 342 *e*P PKPdf 08 21 47.3 -1.1
F63A Nahmakanta, Br 126.33 34 P PKPdf 08 21 48.7 -0.1
baz=308,SNR=8.4
F63A P **PKPdf 08 21 48.7 -0.1**
baz=308,SNR=8.4
CWF Charnwood Fore 126.38 339 *e*P PKPdf 08 21 47.5 -1.1
QUA2 Belchertown 126.40 39 P PKPdf 08 21 49.1 +0.1
baz=303,SNR=12
I63A Otisfield 126.48 36 P PKiKP 08 21 49.4 -0.2
baz=306,SNR=5.8
I63A P **PKiKP 08 21 49.4 -0.2**
baz=306,SNR=5.8
PKME Peaks-Kenny Pk 126.50 34 P PKPdf 08 21 49.2 +0.1
baz=308,SNR=6.6
PKME Peaks-Kenny Pk 126.50 34 PKiKP PKPdf 08 21 48.9 -0.2
baz=308
V61A Roper 126.63 48 P PKiKP 08 21 50.0 -0.1
baz=295,SNR=7.1
V61A P **PKiKP 08 21 50.0 -0.1**
baz=295,SNR=7.1
F64A Sherman 126.64 33 P PKPdf 08 21 49.0 -0.4
baz=309,SNR=8.4
F64A P **PKPdf 08 21 49.0 -0.4**
baz=309,SNR=8.4
WVL Waterville 126.71 35 P PKPdf 08 21 49.0 -0.5
baz=307,SNR=8.5
HRV Adam Dziewonsk 126.77 38 PKIKP PKPdf 08 21 49.6 -0.1
HRV Adam Dziewonsk 126.77 38 P PKPdf 08 21 49.5 -0.1
baz=304,SNR=8.8
HRV Adam Dziewonsk 126.77 38 PKiKP PKPdf 08 21 49.5 -0.1
baz=304
WME Myndd Eilian 126.85 341 *e*P PKPdf 08 21 48.9 -0.5
UNH University of 126.86 37 P PKPdf 08 21 49.0 -0.8
baz=305,SNR=7.4
WPS Cemaes, Angles 126.91 341 *e*P PKPdf 08 21 48.9 -0.7
FOEL Foel Wylfa 126.91 340 *e*P PKPdf 08 21 48.9 -0.8
CDITO Canoas 126.93 83 *e*P PKiKP 08 21 52.7 +1.4
WLF1 Llynfaes 126.97 341 *e*P PKPdf 08 21 49.6 -0.1
YLL Llanberis 127.02 341 *e*P PKPdf 08 21 49.6 -0.2
YRC Rhoscolyn 127.06 341 *e*P PKPdf 08 21 49.5 -0.4
M63A Gales Ferry 127.07 40 P PKPdf 08 21 49.1 -1.1
baz=303,SNR=5.6
M63A P **PKPdf 08 21 49.1 -1.1**
baz=303,SNR=5.6
BRU2 Volcan 127.11 82 *e*P PKiKP 08 21 52.4 +0.6
BRU2 Volcan 127.11 82‖*e*P PKiKP 08 21 52.6 +0.7
HLM1 Long Mynd 127.11 340 *e*P PKPdf 08 21 49.9 -0.1
BCO2 Palmira 127.27 82 *e*P PKiKP 08 21 53.0 +0.8
CNI2 El Empalme, Bo 127.31 81 *e*P PKiKP 08 21 53.7 +1.7
STRD Stroud 127.47 339 *e*P PKPdf 08 21 50.5 -0.2
G65A Princeton 127.49 33 P PKPdf 08 21 50.7 -0.2
baz=310,SNR=9.1
G65A P **PKPdf 08 21 50.7 -0.2**
baz=310,SNR=9.1
L64A Middleborough 127.53 38 P PKPdf 08 21 50.7 -0.4
baz=304,SNR=7.6
L64A P **PKPdf 08 21 50.7 -0.4**
baz=304,SNR=7.6
SWN1 Swindon 127.55 338 *e*P PKPdf 08 21 51.0 +0.2
MCH1 Michaelchurch 127.58 340 *e*P PKPdf 08 21 50.1 -0.8
MONM Monmouth 127.65 339 *e*P PKPdf 08 21 50.7 -0.3
TSUM Tsumeb 128.03 242 PKP PKiKP 08 21 53.4 -0.2

comp=Z,39nm,0.9s,baz=124,slow=2.7,SNR=26
MAPC Malpelo 128.14 88 eP PKiKP 08 21 53.8 +0.1
PRVC Isla de Provid 128.16 76 eP PKiKP 08 21 54.0 +0.3
RSBS Rosebush, Pemb 128.21 341 eP PKPdf 08 21 51.6 -0.5
CACAO El Cacao, Vera 128.94 84 eP PKiKP 08 21 55.6 +0.3
DYA Yadsworthy 129.21 339 eP PKPdf 08 21 53.6 -0.5
PTGL Punta Galera 129.51 93 eP PKiKP 08 21 57.3 +0.8
JSA Saint Aubin 129.57 337 eP PKPdf 08 21 54.9 +0.1
FLF1 Flavio Alfaro- 129.59 94 eP PKiKP 08 21 57.5 +0.8
CCA1 Carnmenellis 129.87 340 eP PKPdf 08 21 54.7 -0.6
BCIP Isla Barro Col 129.91 82 eP PKPdf 08 21 55.8 -0.6
COHC Cochancay 129.93 97 eP PKiKP 08 21 57.7 +0.4
ATAH Atahualpa 130.00 103 PKP PKiKP 08 21 59.3 +1.3
comp=Z,118nm,1.0s,baz=178,slow=1.0,SNR=34
UPA Univ. de Panam 130.22 82 eP PKPdf 08 21 56.5 -0.6
NNA Nana 130.32 110 PKP PKiKP 08 21 58.2 +0.1
comp=Z,89nm,1.0s,baz=268,slow=6.0,SNR=20
NNA SKPbc SKPab 08 24 40.6 +2.7
comp=Z,50nm,0.9s,baz=259,slow=5.5,SNR=10
NNA Nana 130.32 110 eP PKiKP 08 21 58.1 -0.1
PIAT Ana Tenorio 131.09 95 eP PKiKP 08 22 00.1 -0.1
MTDJ Mount Denham 131.16 70 eP PKPdf 08 21 52.3 -6.6
GR1C Gorgona, Isla 131.52 90 eP PKPdf 08 21 59.7 +0.1
CMBC Cumbal 131.72 93 eP PKiKP 08 22 01.7 +0.1
UPD2 Meteti 131.73 82 eP PKiKP 08 22 01.8 +0.9
TULM Tulcn-Chalpat 131.74 93 eP PKiKP 08 22 02.1 +0.4
PTAC Punta Ardita, 131.97 84 eP PKPdf 08 22 00.8 +0.4
BONI La Bonita 131.97 93 eP PKiKP 08 22 01.4 -0.4
GCUF Volcan Galeras 132.22 92 eP PKiKP 08 22 02.1 -0.5
MALC Bahia Malaga 132.40 89 eP PKiKP 08 22 02.6 +0.2
KEST Kesra 132.41 316 PKhKP PKPpre 08 21 45.7
comp=Z,9.1nm,0.7s,baz=225,slow=0.5,SNR=6.0
KEST PKP PKiKP 08 22 01.4 -0.5
comp=Z,76nm,0.7s,baz=294,slow=2.3,SNR=29
KEST SKPbc SKPbc 08 24 44.5 0.0
comp=Z,82nm,0.8s,baz=302,slow=1.4,SNR=9.4
CRUC La Cruz 132.64 92 eP PKiKP 08 22 03.2 -0.1
POPC Popayan, Colom 132.98 91 eP PKPpre 08 21 52.0
GTBY Guantanamo Bay 133.06 67 eP PKPdf 08 22 02.4 +0.2
LVC Limon Verde 133.19 127 PKhKP PKPpre 08 21 48.5
comp=Z,5.9nm,0.6s,baz=283,slow=2.9,SNR=9.0
LVC PKP PKiKP 08 22 04.1 -0.1
comp=Z,30nm,0.8s,baz=186,slow=2.2,SNR=12
LVC SKPbc SKPab 08 24 51.0 +0.6
comp=Z,45nm,0.9s,baz=223,slow=2.6,SNR=12
LVC SKKP 08 34 42.4
comp=Z,4.6nm,0.4s,baz=145,slow=9.8,SNR=2.6
YOTC Yotoco, Valle 133.38 89 eP PKPdf 08 22 03.7 +0.5
PLMC San Jos del P 133.47 87 eP PKPpre 08 21 50.5
FLOC Florencia 133.94 92 eP PKiKP 08 22 05.2 -0.3
BETC Betania 134.22 90 eP PKPdf 08 21 58.5 -6.1
HELC Santa Helena 134.24 86 eP PKPdf 08 22 00.0 -5.1
ANIL Santa Ana 134.34 88 eP PKPdf 08 21 59.1 -6.1
GUY2C Guyana, Caldas 134.39 87 eP PKPpre 08 21 52.6
SJCC San Jacinto, C 134.47 80 eP PKPpre 08 21 54.4
PRAC Prado 134.83 89 eP PKPpre 08 21 55.0
ARGC Ariguani, Magd 135.39 80 eP PKiKP 08 22 07.7 -0.7
ROSC El Rosal 135.43 87 PKP PKiKP 08 22 08.8 -0.1
comp=Z,301nm,0.7s,baz=107,slow=15,SNR=21
SPBC San Pablo de B 135.69 86 eP PKPpre 08 21 54.0
VILC Villavicencio, 136.03 89 eP PKPdf 08 22 02.5 -5.6
BRRC Barranca, Sant 136.03 84 eP PKPdf 08 22 06.9 -1.1
LL1C La Loma 1 Cana 136.09 81 eP PKiKP 08 22 09.7 -0.1
OCAC Ocana 136.39 83 eP PKPpre 08 21 56.5
BARC Barichara 136.57 85 eP PKPpre 08 21 56.3
CRJC Cerrejon, Guaj 136.63 79 eP PKPpre 08 21 58.0
RUSC La Rusia 136.67 86 eP PKPpre 08 21 57.1
LPAZ La Paz 136.75 119 PP PP 08 25 02.4 +4.0
comp=Z,34nm,0.7s,baz=254,slow=5.8,SNR=8.3
LPAZ La Paz 136.75 119 eP PKPpre 08 21 58.6
SDDR Presa de Saban 136.79 67 eP PKPpre 08 22 00.5
GUVC San Jose del G 137.02 91 eP PKPdf 08 22 06.8 -3.0
PAMC Pamplona, Colo 137.03 84 eP PKPpre 08 21 59.8
URIC Uribia, Colomb 137.43 77 eP PKPpre 08 22 00.6
PBRG Braganca 137.44 335 ePKPdf PKPpre 08 21 58.4
PTGC Puerto Gaitan, 137.59 88 eP PKPpre 08 21 58.6
ESDC Sonseca Array 137.84 330 PKhKP PKPpre 08 21 60.0
comp=Z,5.8nm,0.6s,baz=19,slow=3.4,SNR=27
ESDC PKP PKPdf 08 22 10.7 0.0
comp=Z,18nm,0.8s,baz=0.3,slow=3.3,SNR=15
ESDC PP PP 08 25 02.1 -1.1
comp=Z,28nm,0.8s,baz=23,slow=5.1,SNR=11
ESDC SKKPbc SKKPbc 08 33 50.3 +0.7
comp=Z,5.7nm,1.0s,baz=225,slow=2.6,SNR=4.8
PGAV Gavieira, Arco 137.94 336 ePKPdf PKPpre 08 22 00.8
PGAV Gavieira, Arco 137.94 336 ePP PP 08 25 02.2 -1.4
TAMC Tame, Arauca 137.95 85 eP PKPpre 08 22 02.5
PCAB Cabril 138.06 336 ePKPdf PKPpre 08 22 00.0
PCAB Cabril 138.06 336 ePP PP 08 25 02.4 -1.9
MVM Moncorvo 138.09 334 ePKPdf PKPpre 08 22 01.6
MVO Moncorvo 138.09 334 ePP PP 08 25 02.4 -2.2
PAB San Pablo 138.13 330 P PKPdf 08 22 01.7 -10
POLO Lamas de Olo 138.24 335 ePKPdf PKPpre 08 22 01.0
POLO Lamas de Olo 138.24 335 ePP PP 08 25 03.0 -2.5
PVRL Vila Real 138.29 335 ePKPdf PKPpre 08 22 02.1
PVRL Vila Real 138.29 335 ePP PP 08 25 03.0 -2.7
SOCV Socops 138.82 82 eP PKPpre 08 22 03.3
PVIS Viseu 138.83 335 ePKPdf PKPpre 08 22 03.4
PVIS Viseu 138.83 335 ePP PP 08 25 04.5 -4.6
DABV Dabajuro 138.84 78 eP PKPdf 08 22 05.4 -7.6
TBTG Tabatinga, AM 138.85 101 eP PKPpre 08 22 03.9
MTE Manteigas 138.94 334 ePKPdf PKPpre 08 22 04.3
MTE Manteigas 138.94 334 ePP PP 08 25 04.9 -4.9
SDV Santo Domingo 139.01 81 PKhKP PKPpre 08 22 06.7
comp=Z,46nm,0.7s,baz=293,slow=2.7,SNR=16
SDV PKP PKPdf 08 22 14.1 +0.5
comp=Z,364nm,0.9s,baz=273,slow=2.6,SNR=34
PCBR Castelo Branco 139.37 334 ePKPdf PKPpre 08 22 05.2
PCBR Castelo Branco 139.37 334 ePP PP 08 25 06.0 -6.3
CPUP Villa Florida 139.40 140 PKhKP PKPpre 08 22 05.3
comp=Z,15nm,0.8s,baz=235,slow=1.1,SNR=20
CPUP PKP PKPdf 08 22 14.4 +0.6
comp=Z,47nm,0.8s,baz=323,slow=1.5,SNR=20
CPUP SKPbc SKiKP 08 25 07.5 -1.2
comp=Z,47nm,1.0s,baz=230,slow=3.7,SNR=11
CPUP PKKP PKKPdf 08 31 39.5 -1.7
comp=Z,5.5nm,0.9s,baz=14,slow=5.1,SNR=5.7
CPUP SKKPbc SKKPbc 08 33 40.9 -1.8
comp=Z,4.3nm,0.9s,baz=337,slow=0.5,SNR=3.6
PCAS Casmilo, Conde 139.63 335 ePKPdf PKPdf 08 22 06.1 -7.8
PCAS Casmilo, Conde 139.63 335 ePP PP 08 25 06.3 -7.6
PMRV Marv??o 139.66 333 ePKPdf PKPdf 08 22 06.0 -8.0
PMRV Marv??o 139.66 333 ePP PP 08 25 06.8 -7.3
PESTR Estremoz 140.21 333 ePKPdf PKPdf 08 22 07.8 -7.2
PESTR Estremoz 140.21 333 ePP PP 08 25 08.2 -9.3
PSBE So Bento 140.21 335 ePKPdf PKPdf 08 22 08.9 -6.1
PSBE So Bento 140.21 335 ePP PP 08 25 08.3 -9.1
EMAL Malaga-Limoner 140.28 328 PKP PKPdf 08 22 03.5 -12
PMTG Montargil 140.33 334 ePKPdf PKPdf 08 22 07.7 -7.4
PMTG Montargil 140.33 334 ePP PP 08 25 08.3 -10
PBAR Barrancos 140.51 332 ePKPdf PKPdf 08 22 08.8 -6.7
PBAR Barrancos 140.51 332 ePP PP 08 25 09.0 -10
WMELI Melilla 140.52 325 PKP PKPpre 08 22 05.7
EVO Evora 140.67 333 PKP PKPpre 08 22 06.8
EVO Evora 140.67 333 ePKPdf PKPdf 08 22 09.6 -6.2
EVO Evora 140.67 333 ePP PP 08 25 09.3 -11
PACT Alcochete 140.84 334 ePKPdf PKPdf 08 22 11.1 -4.9
PACT Alcochete 140.84 334 ePP PP 08 25 10.1 -11
PMAFR Mafra 140.88 335 ePKPdf PKPdf 08 22 09.8 -6.4
PMAFR Mafra 140.88 335 ePP PP 08 25 10.1 -11
PBEJ Beja 141.01 332 ePKPdf PKPdf 08 22 10.8 -5.6
PBEJ Beja 141.01 332 ePP PP 08 25 10.4 -12
PMST Lisbon--Monsan 141.02 334 ePKPdf PKPdf 08 22 11.8 -4.6
AOPR Arecibo Observ 141.10 66 eP PKPdf 08 22 11.2 -6.0
ARNO Arenosillo 141.20 330 PKP PKPpre 08 22 08.4
PNCL Nicolau / Gran 141.25 333 ePKPdf PKPdf 08 22 10.3 -6.5
PNCL Nicolau / Gran 141.25 333 ePP PP 08 25 11.1 -13
MESJ Messejana 141.33 332 ePKPdf PKPdf 08 22 11.2 -5.8
MESJ Messejana 141.33 332 ePP PP 08 25 11.2 -13
PVLZ Peæn de 141.39 326 PKP PKPdf 08 22 06.9 -10
PCVE Castro Verde 141.41 332 ePKPdf PKPdf 08 22 10.7 -6.4
PCVE Castro Verde 141.41 332 ePP PP 08 25 11.4 -13
CEU Ceuta 141.44 328 PKP PKPdf 08 22 08.6 -8.6
SFS San Fernando 141.44 329 PKP PKPdf 08 22 00.5 -17
PVAQ Vaqueiros 141.45 332 ePKPdf PKPdf 08 22 10.0 -7.2
PVAQ Vaqueiros 141.45 332 ePP PP 08 25 25.2 +0.3
BAUV El Baul 141.56 81 eP PKPdf 08 22 11.2 -6.9
SJG San Juan 141.72 66 PKhKP PKPpre 08 22 12.3
comp=Z,50nm,0.6s,baz=12,slow=1.4,SNR=23
SJG PKP PKPdf 08 22 19.1 +0.9
comp=Z,102nm,0.6s,baz=359,slow=5.0,SNR=12
SJG SKPbc SKiKP 08 25 13.5 -0.2
comp=Z,13nm,0.3s,baz=329,slow=20,SNR=5.0
SJG San Juan 141.72 66 eP PKPdf 08 22 11.4 -6.7
PTEO Sao Teotonio 141.80 333 ePKPdf PKPdf 08 22 12.1 -5.7
PTEO Sao Teotonio 141.80 333 ePP PP 08 25 12.6 -14
MORF Marmelete 141.96 332 ePKPdf PKPdf 08 22 13.6 -4.6
MORF Marmelete 141.96 332 ePP PP 08 25 29.3 +1.2
PFVI Vila Bisbo 142.18 332 ePKPdf PKPdf 08 22 14.5 -4.0
PFVI Vila Bisbo 142.18 332 ePP PP 08 25 13.5 -16
LCRM LCR 142.78 325 P PKPdf 08 22 17.0 -2.9
SIV San Ignacio 142.90 124 PKhKP PKPpre 08 22 17.4
comp=Z,94nm,0.7s,baz=235,slow=3.8,SNR=298
SIV SKPbc SKiKP 08 25 18.2 +2.0
comp=Z,43nm,0.7s,baz=307,slow=1.0,SNR=5.3
SIV SKKPab SKKPab 08 33 29.4 -0.4
comp=Z,4.8nm,1.0s,baz=44,slow=5.6,SNR=3.3
IFR Ifrane 143.06 325 PKP PKPab 08 22 17.0 -0.6
MDT Midelt 143.26 324 PKP PKPbc 08 22 18.8 +0.1
comp=Z,60nm,0.5s,baz=90,slow=2.2,SNR=259
MDT SKKPbc SKKPbc 08 33 28.6 +0.4
comp=Z,12nm,1.0s,baz=235,slow=4.4,SNR=9.7
AVE Averroes 144.50 327 PKP PKPbc 08 22 20.5 -2.0
SMRT St. Maarten 144.53 65 eP PKPbc 08 22 20.8 -2.1
H07N1 FLORES T-PHASB 144.75 2 PKP PKPab 08 22 24.3 +0.9
SNR=46
H07N1 FLORES T-PHASB 144.75 2 ePKP PKPab 08 22 23.9 +0.4
PCRV Puerto La Cruz 144.78 79 PKP PKPdf 08 22 22.8 -1.0
comp=Z,181nm,0.6s,baz=26,slow=1.9,SNR=97
SEUS St. Eustatius 144.78 66 eP PKPdf 08 22 21.7 -1.8
H07S1 FLORES T-PHASB 145.06 2 PKPbc PKPab 08 22 25.1 +0.4
SNR=110
H07S1 FLORES T-PHASB 145.06 2 ePKP PKPab 08 22 24.6 0.0
PGRA Graciosa 145.41 358 ePKP PKPab 08 22 26.4 +0.5
PAGU Agualva, Azore 145.63 357 ePKP PKPab 08 22 26.8 0.0
PSBA Serra de Santa 145.64 357 ePKP PKPab 08 22 26.8 -0.1
PSCM Serra do Cume 145.69 357 ePKP PKPab 08 22 26.9 -0.2
MBFL Flemmings, Mon 145.71 66 eP PKPdf 08 22 24.7 -0.4
ROSA Rosais 145.72 358 ePKP PKPab 08 22 26.9 -0.3
ADH Angra Heroismo 145.74 357 ePKP PKPab 08 22 27.2 0.0
PMAN Manadas 145.81 358 ePKP PKPab 08 22 27.2 -0.3
ANWB Willy Bob 145.81 65 eP PKPbc 08 22 26.1 -0.7
ANWB Willy Bob 145.81 65 eP PKPdf 08 22 24.7 -0.6
PCED Cedros 145.83 359 ePKP PKPab 08 22 27.0 -0.6
CALA Caldeira 145.88 359 ePKP PKPbc 08 22 27.0 +0.5
HOR Horta 145.93 359 ePKP PKPab 08 22 27.6 -0.4
PICO Pico 145.95 358 ePKP PKPab 08 22 27.9 -0.3
PPNO Prainha do Nor 145.97 358 ePKP PKPbc 08 22 27.4 +0.6
PCAN Candelaria 145.99 358 ePKP PKPab 08 22 27.6 -0.7
PID Ribeirinha 146.00 358 ePKP PKPbc 08 22 27.5 +0.7
ANBD Bethesda, Anti 146.03 66 eP PKPdf 08 22 25.6 -0.1
OUK Oukaimeden 146.32 325 P PKPbc 08 22 29.2 +0.8
BART Pico Bartolome 146.44 354 ePKP PKPbc 08 22 28.8 +0.7
ABD La Joyeuse, An 146.45 67 eP PKPbc 08 22 27.5 -1.1
PSET Sete Cidades 146.45 354 ePKP PKPab 08 22 29.2 -0.9
CBE Ff, Capester 146.46 67 PKPdf 08 22 26.3 -0.2
CBE Ff, Capester 146.46 67 ePP PKPbc 08 22 27.6 -1.1
PGRON Lagoa das Cont 146.47 354 ePKP PKPbc 08 22 28.8 +0.6
TBG Guadaloupe-3 146.49 68 eP PKPbc 08 22 28.8 +0.1
TDBA Terre de Bas, 146.50 68 PKPdf 08 22 25.4 -1.1
TDBA Terre de Bas, 146.50 68 eP PKPdf 08 22 27.1 +0.6
PDA Ponta Delgada 146.52 354 ePKP PKPab 08 22 29.6 -0.7
MDCT Cottage Hill, 146.73 68 eP PKPbc 08 22 29.8 +0.4
MDVC Dominica, Viel 146.78 68 eP PKPdf 08 22 28.0 +1.1
MAGL Barre de l'ile 146.80 67 PKPdf 08 22 25.6 -1.4
MAGL Barre de l'ile 146.80 67 eP PKPbc 08 22 28.8 -0.8
DSLB Salisbury 146.81 68 eP PKPbc 08 22 28.6 -1.1
GDSD La Dsirade Is 146.89 67 PKPdf 08 22 26.2 -0.9
H05N1 Guadeloupe/Mar 146.90 67 PKPbc PKPbc 08 22 30.5 +0.7
SNR=356
DLPL La Plaine 147.00 68 eP PKPdf 08 22 28.1 +0.7
PSMN Pico do Norte, 147.19 353 ePKP PKPbc 08 22 30.4 +0.3
PSMA Santa Maria 147.21 353 ePKP PKPbc 08 22 30.3 +0.2
FDF Fort de France 147.26 69 PKPdf 08 22 27.1 -0.8
FDF Fort de France 147.26 69 PKIKP PKPdf 08 22 27.1 -0.8
FDF Fort de France 147.26 69 ePP PKPdf 08 22 28.0 +0.2
GRGR Grenville 147.37 74 eP PKPdf 08 22 25.6 -2.5
BIM Bigot 147.39 70 eP PKPbc 08 22 30.5 -0.8
ILAM Ilet Lapin Mar 147.50 69 eP PKPdf 08 22 28.7 +0.5
SVB Belmont 147.51 72 eP PKPbc 08 22 30.2 -1.4
GCMP Grenada, Carri 147.52 74 eP PKPdf 08 22 28.0 -0.2
SLB Belfond 147.59 71 eP PKPbc 08 22 30.5 -1.3
SLBI Saint Lucia, B 147.60 71 eP PKPdf 08 22 26.9 -1.4
MPOM Morne Pois Mar 147.60 70 PKPdf 08 22 28.6 +0.3
MPOM Morne Pois Mar 147.60 70 eP PKPdf 08 22 29.7 +1.3
H05S1 Guadeloupe/Mar 147.63 70 PKPbc PKPbc 08 22 32.2 +0.4
SNR=211
MCLT Moule a Chique 147.71 71 eP PKPab 08 22 36.0 +0.1
TRN Trinidad (W) 147.87 77 eP PKPdf 08 22 28.3 -0.6
TORD Torodi Ar. Bea 147.88 288 PKPbc PKPbc 08 22 32.6 +0.2
comp=Z,668nm,0.7s,baz=72,slow=3.7,SNR=310
TORD SKPbc SKPbc 08 25 26.3 -0.1
comp=Z,13nm,0.7s,baz=48,slow=2.1,SNR=1.1
TORD PP PP 08 26 03.9 -0.7
comp=Z,26nm,0.7s,baz=57,slow=5.4,SNR=3.8
CGR Cap Guir 147.88 327 P PKPbc 08 22 32.4 +0.4
TOSP Speyside 148.60 75 eP PKPdf 08 22 31.0 +1.0
PMPST Porto Santo, M 148.81 338 ePKPdf PKPdf 08 22 30.2 +0.3
PMPST Porto Santo, M 148.81 338 ePKPbc PKPbc 08 22 34.7 +0.4
PMPST Porto Santo, M 148.81 338 ePP PP 08 26 07.2 -0.8
BBGH Gun Hill 149.15 72 eP PKiKP 08 22 37.5 +0.9
BBGH Gun Hill 149.15 72 eP PKiKP 08 22 38.7 +2.1
BBSP Saint Philip 149.25 72 eP PKiKP 08 22 38.3 +1.5
PMAR Madeira 149.34 339 ePKPdf PKPdf 08 22 32.0 +1.0
PMAR Madeira 149.34 339 ePKPbc PKiKP 08 22 36.5 -0.3
PMAR Madeira 149.34 339 ePP PP 08 26 10.4 -0.9
PMOZ Porto Moniz, M 149.35 339 ePKPdf PKPdf 08 22 32.0 +1.1
PMOZ Porto Moniz, M 149.35 339 ePKPbc PKPbc 08 22 36.2 +0.4
PMOZ Porto Moniz, M 149.35 339 ePP PP 08 26 10.6 -0.6
PMOZ Porto Moniz, M 149.35 339 P PKiKP 08 22 37.6 +0.9
KOWA Kowa 152.84 294 PKP PKPdf 08 22 35.7 -0.7
comp=Z,181nm,0.4s,baz=56,slow=2.2,SNR=224
KOWA PKPbc PKiKP 08 22 44.3 +0.1
comp=Z,207nm,0.4s,baz=61,slow=2.5,SNR=117
BDFB Brasilia 153.07 138 PKP PKPdf 08 22 37.5 +0.5
comp=Z,62nm,0.9s,baz=184,slow=1.2,SNR=74
BDFB PKPbc PKPbc 08 22 44.4 -0.3
comp=Z,72nm,0.6s,baz=167,slow=0.5,SNR=23
BDFB PKPab PKPab 08 22 58.5 +0.2
comp=Z,133nm,0.8s,baz=219,slow=3.9,SNR=12
KIC Kosan Boka 155.16 276 eP PKIKP PKPdf 08 22 38.5 -1.3
comp=Z,71nm,0.6s
TIC Toumodi 155.42 277 eP PKIKP PKPdf 08 22 38.4 -1.8
comp=Z,110nm,0.6s
LIC Lamto 155.46 276 eP PKIKP PKPdf 08 22 39.0 -1.2
comp=Z,191nm,0.5s
MDP Montagnes des 157.03 87 PKP PKPdf 08 22 42.6 +0.4
comp=Z,60nm,0.9s,baz=331,slow=1.4,SNR=22
MDP PKPab PKPab 08 23 15.3 -0.1
comp=Z,124nm,0.9s,baz=252,slow=5.3,SNR=16
BBTS Babate 163.52 310 PKP PKPdf 08 22 50.4 +1.2
comp=Z,142nm,1.0s,baz=340,slow=1.5,SNR=9.3
BBTS PKPab PKPab 08 23 44.1 +0.6
comp=Z,146nm,0.8s,baz=39,slow=0.7,SNR=9.6
RCBR Riachuelo 168.13 148 PKP PKPdf 08 22 52.9 -0.1
comp=Z,44nm,0.9s,baz=238,slow=3.3,SNR=7.7
RCBR PKPab PKPab 08 24 03.5 -0.4
comp=Z,25nm,0.8s,baz=307,slow=6.0,SNR=4.9

WEL 15 08:10:01.3±1.2, 37°S±5°×17°9E±°, h21km±9km, M4.2/57, ML4.4/16, MLv4.2/57, Error ellipse: s-maj=0.0km s-min=0.0km az=101.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.81	235	P	Pb	08 10 15.7	-1.1
MXZ				S	Sb	08 10 26.7	-0.5
WMGZ	Waiomatatini S	0.93	218	P	Pn	08 10 19.4	+0.3
WMGZ				S	Sn	08 10 33.1	+1.4
PKGZ	Pakihiroa	1.16	227	P	Pn	08 10 22.2	-0.2
PKGZ				S	Sn	08 10 38.2	+0.6
PUZ	Puketiti	1.20	215	P	Pn	08 10 22.9	0.0
PUZ				S	Sn	08 10 40.3	+1.7
HAZ	Te Kaha	1.27	238	P	Pn	08 10 22.7	-1.1
HAZ				S	Sb	08 10 42.2	+1.8
TWGZ	Tauwhareparae	1.42	220	P	Pn	08 10 26.2	+0.2
TWGZ				S	Sb	08 10 45.7	+0.9
RUGZ	Raukumara Rang	1.45	233	P	Pn	08 10 26.9	+0.4
CNGZ	Carnagh Statio	1.57	208	P	Pn	08 10 28.6	+0.6
WIZ	White Island	1.61	254	P	Pn	08 10 27.3	-1.3
WSRZ	White Island S	1.62	254	P	Pn	08 10 28.8	+0.1
TKGZ	Te Karaka	1.69	217	P	Pn	08 10 29.2	-0.4
MWZ	Matawai	1.78	225	P	Pn	08 10 30.8	-0.1
MWZ				S	Sn	08 10 53.1	+0.1
WHRZ	Whale Island	1.88	246	P	Pn	08 10 33.0	+0.7
WHRZ				S	Sn	08 10 56.0	+0.6
RIGZ	Rimuhau	1.94	214	P	Pn	08 10 32.8	-0.3
RIGZ				S	Sn	08 10 54.0	-2.9
RAGZ	Rawiri	1.96	224	P	Pn	08 10 33.4	+0.1
URZ	Urewera	1.99	234	P	Pn	08 10 33.9	+0.3
URZ				S	Sn	08 10 58.6	+0.7
MARZ	Manawahe	2.15	245	P	Pn	08 10 37.3	+1.3
EDRZ	Edgecumbe	2.16	241	P	Pn	08 10 36.7	+0.6
OPRZ	Ohinepanea	2.19	249	P	Pn	08 10 36.2	-0.3
SNGZ	Shannon Statio	2.21	220	P	Pn	08 10 36.3	-0.4
KNZ	Kokohu	2.25	211	P	Pn	08 10 36.1	-1.2
KNZ				S	Sn	08 10 55.8	-8.6
MHGZ	Mahia Peninsul	2.27	205	P	Pn	08 10 37.1	-0.6
RTZ	Ruatahuna	2.29	228	P	Pn	08 10 38.1	+0.1
MYRZ	Mayor Island	2.32	265	P	Pn	08 10 38.4	+0.1
MUGZ	Murupara	2.33	233	P	Pn	08 10 38.3	-0.2
TGRZ	Tauranga	2.38	254	P	Pn	08 10 39.0	-0.1
TARZ	Mount Tarawera	2.38	241	P	Pn	08 10 40.3	+1.1
OMRZ	Omania	2.42	244	P	Pn	08 10 40.5	+0.8
RRRZ	Republican Roa	2.42	238	P	Pn	08 10 40.1	+0.3
RAHZ	Arahi	2.44	221	P	Pn	08 10 39.7	-0.2
KARZ	Kaharoa	2.48	247	P	Pn	08 10 41.2	+0.7
HLRZ	Highlands Stat	2.50	242	P	Pn	08 10 41.5	+0.8
MTHZ	Maungataniwha	2.53	225	P	Pn	08 10 41.4	+0.2
HSRZ	Hossack Road	2.60	241	P	Pn	08 10 43.2	+1.0
HRRZ	Handcock Road	2.61	239	P	Pn	08 10 42.7	+0.4
KMRZ	Kaimai	2.65	253	P	Pn	08 10 42.8	-0.1
ALRZ	Allen Road	2.66	236	P	Pn	08 10 42.8	-0.1
GRRZ	Galatos Road	2.71	242	P	Pn	08 10 44.7	+1.1
NMHZ	Naumai	2.72	222	P	Pn	08 10 43.6	-0.2
ARHZ	Aropaoanui	2.75	217	P	Pn	08 10 43.7	-0.5
WPRZ	Whakapapatarin	2.75	238	P	Pn	08 10 44.6	+0.4
MRHZ	Matea Rd	2.77	230	P	Pn	08 10 44.4	-0.1
BKZ	Black Stump Fm	2.94	224	P	Pn	08 10 46.1	-0.8
BKZ	Black Stump Fm	2.94	224	P	Pn	08 10 49.6	+2.8
BKZ	Black Stump Fm	2.94	224	P	Pn	08 10 45.8	-1.0
KUTZ	Kaahu Road	2.97	241	P	Pn	08 10 46.1	-1.2
CKHZ	Cape Kidnapper	3.03	212	P	Pn	08 10 46.4	-1.6
MCHZ	McNeill Hill	3.03	219	P	Pn	08 10 47.3	-0.8
GRZ	Great Barrier	3.08	285	P	Pn	08 10 48.8	+0.1
WATZ	Wairara	3.14	238	P	Pn	08 10 48.7	-0.9
KWHZ	Kaweka Forest	3.16	222	P	Pn	08 10 48.7	-1.2
MKAZ	Moumakai	3.18	269	P	Pn	08 10 49.7	-0.4
KAHZ	Kahuranaki	3.23	213	P	Pn	08 10 49.1	-1.8
ETAZ	East Tamaki Re	3.37	271	P	Pn	08 10 51.1	-1.7
PXZ	Pawanui	3.43	211	P	Pn	08 10 51.2	-2.4
ABAZ	Army Bay	3.49	277	P	Pn	08 10 54.6	+0.3
AWAZ	Awhitu Peninsu	3.60	269	P	Pn	08 10 56.2	+0.4
WPHZ	Waipukurau	3.64	215	P	Pn	08 10 54.2	-2.2
RVAZ	Riverhead Bore	3.67	274	P	Pn	08 10 56.8	0.0
PRHZ	Porangahau	3.73	211	P	Pn	08 10 55.2	-2.4
WCZ	Waipu Caves	4.03	285	P	Pn	08 11 01.7	-0.1
OUZ	Omahuta	4.86	291	P	Pn	08 11 13.8	+0.6

FUNV 15 08:12:08.2, 9°94N×71°61W, h3km, MW4.0
ISC 15 08:12:07.0±1.5, 9°96N±0°04×71°61W±0°03, h6km±12km, n36, σ1°38/45, 1C, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	Machiques	0.92	276	eP	Pb	08 12 25.4	0.0
MCQV				eS	Sb	08 12 38.3	+0.4
DABV	Dabajuro	1.35	45	⇑iP	Pb	08 12 33.5	+0.6
DABV	Dabajuro	1.35	45	eP	Pb	08 12 33.3	+0.5
DABV				eS	Sn	08 12 52.2	+1.3
CURV	Curarigua	1.62	88	eS	Sg	08 12 59.3	0.0
CRJC	Cerrejon, Guaj	1.64	310	eP	Pn	08 12 36.7	+0.1
URIC	Uribia, Colomb	1.78	348	eP	Pn	08 12 37.7	-0.6
SOCV	Socops	1.82	156	eP	Pb	08 12 41.6	+0.7
SOCV	Socops	1.82	156	eP	Pb	08 12 41.5	+0.7
SOCV				eS	Sn	08 13 02.8	+0.4
SIQV	Siquisique	1.90	69	eP	Pn	08 12 41.3	+1.2
SIQV				eS	Sb	08 13 06.0	-0.2
LL1C	La Loma 1 Cana	1.96	258	eP	Pn	08 12 39.8	-1.1
CAPV	Capacho	2.19	199	eP	Pn	08 12 44.4	+0.2
CAPV				eS	Sn	08 13 12.0	+0.2
OCAC	Ocana	2.40	225	eP	Pn	08 12 48.5	+1.5
ARGC	Ariguani, Magd	2.60	268	eP	Pg	08 12 55.9	-1.1
PAMC	Pamplona, Colo	2.81	203	eP	Pn	08 12 53.9	+0.8
JACV	Jacura	2.95	67	eP	Pn	08 12 55.2	+0.7
JACV				eS	Sn	08 13 29.8	-0.7
MAPV	Macapo	3.11	92	eP	Pn	08 12 57.8	+1.2
MAPV				eS	Sn	08 13 33.2	-0.9
TAMC	Tame, Arauca	3.50	183	eP	Pg	08 13 14.8	+0.6
BRRC	Barranca, Sant	3.51	217	eP	Pb	08 13 07.8	-1.9
SJCC	San Jacinto, C	3.52	269	eP	Pn	08 13 02.6	+0.2
BAUV	El Baul	3.66	106	eP	Pn	08 13 04.5	+0.3
BAUV				eS	Sn	08 13 46.3	-1.4
BARC	Barichara	3.69	205	eP	Pn	08 13 06.0	+1.1
BENV	Beln	3.95	90	eP	Pn	08 13 08.9	+0.6
BENV				eS	Sn	08 13 53.0	-2.0
ZARC	Zaragoza, Cauc	4.04	233	eP	Pn	08 13 10.8	+1.3
RUSC	La Rusia	4.29	200	eP	Pn	08 13 14.3	+0.9
PTBC	PUERTO BERRIO,	4.41	220	eP	Pn	08 13 14.3	-0.3
SPBC	San Pablo de B	4.92	210	eP	Pn	08 13 21.7	0.0
HELC	Santa Helena	5.39	226	eP	Pn	08 13 31.1	+2.7
NORC	Norcasia	5.43	217	eP	Pn	08 13 29.3	+0.6
CHIC	Chingaza	5.70	202	eP	Pn	08 13 32.6	0.0
PTGC	Puerto Gaitan,	5.74	185	eP	Pn	08 13 30.2	-2.7
CBOC	Ciudad Bolivar	5.96	227	eP	Pn	08 13 38

Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s18,c26; Duration: 1ˢ4 Moment tensor: Scale 10¹⁶Nm; M_{rr}2.89±.47; $M_{\theta\theta}$-2.01±.28; $M_{\phi\phi}$-0.88±.25; $M_{r\theta}$-1.02±.41; $M_{r\phi}$-2.15±.10; $M_{\theta\phi}$1.19±.43; Best double couple: $M_0$3.70000×10¹⁶ NP1:ϕ_s257.00000°,δ52.00000°, λ127.00000°. NP2:ϕ_s27.00000°,δ51.00000°,λ53.00000°. Principal axes: T 3.7200, Plg62.0000°, Azm231.0000°; N -0.0500, Plg28.0000°, Azm53.0000°; P -3.6700, Plg1.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.

NEIC **15** *08:18:33.6, 42.°12N×30.°72E, h8ᵏᵐ, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; M_{rr}3.74; $M_{\theta\theta}$-2.71; $M_{\phi\phi}$-1.03; $M_{r\theta}$0.26; $M_{\theta\phi}$-2.10; $M_{\phi r}$0.15; Fault plane solution: $M_0$3.96000×10¹⁶ NP1:ϕ_s235.58000°, δ42.85000°,λ89.51000°. NP2:ϕ_s56.25000°,δ47.15000°, λ90.45000°. Principal axes: T 3.7487, Plg88.0000°, Azm335.0000°; N 0.3926, Plg0.0000°, Azm236.0000°; P -4.1413, Plg2.0000°, Azm146.0000°;*

SIGU **15** *08:18:33.3, 42.°12N×30.°70E, h17ᵏᵐ, Mc5.1, MD5.2/2, msh5.0/5, Black Sea region 9*

GCMT **15** *08:18:35.9±0.4, 42.°50N±0.°03×31.°05E±0.°05, h22ᵏᵐ±1ᵏᵐ, MW5.3/66, Moment Tensor Solution. s18,c20; s66,c93; Duration: 1ˢ1 Moment tensor: Scale 10¹⁷Nm; M_{rr}1.19±.10; $M_{\theta\theta}$-1.02±.07; $M_{\phi\phi}$-0.16±.05; $M_{r\theta}$-0.57±.08; $M_{r\phi}$-0.08±.03; $M_{\theta\phi}$0.29±.07; Best double couple: $M_0$1.27400×10¹⁷ NP1:ϕ_s279.00000°,δ60.00000°, λ103.00000°. NP2:ϕ_s75.00000°,δ33.00000°,λ70.00000°. Principal axes: T 1.3890, Plg72.0000°, Azm219.0000°; N -0.2280, Plg11.0000°, Azm92.0000°; P -1.1600, Plg14.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DDA **15** *08:18:35.7±0.4, 42.°08N×30.°64E, h27ᵏᵐ±1ᵏᵐ, MW4.8*

THE **15** *08:18:38.2, 42.°22N×30.°36E, h31ᵏᵐ±21ᵏᵐ, ML4.6/14, Error ellipse: s-maj=23.1km s-min=2.4km az=64.0*

CFUSG **15** *08:18:38.4, 42.°52N×30.°68E, h35ᵏᵐ, mb4.3/6, Black Sea District 9 Magtype MSH 3.9 from 6 stations*

NEIC **15** *08:18:39, 42.°13N×30.°73E, h16ᵏᵐ, Moment Tensor Solution. Duration: 1ˢ4 Moment tensor: Scale 10¹⁶Nm; M_{rr}4.37; $M_{\theta\theta}$-2.72; $M_{\phi\phi}$-1.65; $M_{r\theta}$2.82; $M_{\theta\phi}$-3.08; $M_{\phi r}$1.82; Fault plane solution: $M_0$5.94000×10¹⁶ NP1: ϕ_s224.00000°,δ28.00000°,λ80.00000°. NP2:ϕ_s55.00000°, δ62.00000°,λ95.00000°. Principal axes: T 5.4374, Plg72.0000°, Azm337.0000°; N 0.9047, Plg5.0000°, Azm232.0000°; P -6.3421, Plg17.0000°, Azm141.0000°;*

BEO **15** *08:18:59.7±2.0, 43.°12N×28.°15E, h0ᵏᵐ, ML4.4/13*

ISC 15 08:18:31.9±0.8, 42.°19N±0.°02×30.°69E±0.°02, h3ᵏᵐ±4ᵏᵐ, n951, σ1°64/1054, mb5.2/117, MS5.2/26, 86C-66D, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDZE	**Karadeniz Ereo**	**1.04**	**147**	PG	**Pn**	**08 18 53.1**	**-0.4**
KDZE				SG	**Sb**	**08 19 05.9**	**-0.8**
KAND	**Kocaeli-Kandir**	**1.16**	**199**	P	**Pn**	**08 18 54.9**	**-0.1**
KAND				S	**Sb**	**08 19 08.4**	**-1.5**
KAYN	**Sakarya, Kayna**	**1.25**	**192**	P	**Pg**	**08 18 55.8**	**-0.1**
KAYN				S	**Sb**	**08 19 11.1**	**-1.6**
BTIN	**Bartın**	**1.29**	**115**	P	**Pg**	**08 18 56.4**	**-0.3**
BTIN				S	**Sb**	**08 19 11.3**	**-2.5**
SILT	**Sile**	**1.30**	**217**	PN	**Pg**	**08 18 56.6**	**-0.2**
SAHE	**Sakarya_HENDEK**	**1.34**	**175**	P	**Pg**	**08 18 57.2**	**-0.5**
SAHE				S	**Sb**	**08 19 13.7**	**-1.6**
YIGI	**Dzce**	**1.35**	**155**	P	**Pb**	**08 18 57.1**	**-0.8**
YIGI				S	**Sb**	**08 19 13.5**	**-2.1**
DEVR	**Zonguldak/Devr**	**1.42**	**137**	P	**Pb**	**08 18 58.0**	**-1.1**
DEVR				S	**Sn**	**08 19 12.6**	**-5.3**
SAUV	**Serdivan-Sakar**	**1.47**	**191**	PN	**Pb**	**08 18 59.1**	**-0.9**
SAUV				SN	**Sb**	**08 19 18.1**	**-1.0**
KLYT	**Kilyos**	**1.55**	**233**	PN	**Pb**	**08 19 00.4**	**-0.8**
KLYT	**Kilyos**	**1.55**	**233**	Pn	**Pb**	**08 18 59.9**	**-1.3**
HRT	**Hereke**	**1.57**	**210**	PN	**Pb**	**08 19 00.7**	**-0.9**
HRT	**Hereke**	**1.57**	**210**	P	**Pb**	**08 19 00.6**	**-1.0**
BTAS	**Taskesti**	**1.64**	**172**	P	**Pb**	**08 19 02.0**	**-0.8**
BTAS				S	**Sn**	**08 19 19.0**	**-4.2**
ISK	**Istanbul-Kandi**	**1.66**	**228**	PN	**Pb**	**08 19 01.9**	**-1.2**
ISK	**Istanbul-Kandi**	**1.66**	**228**	P	**Pb**	**08 19 01.8**	**-1.3**
ISK				S	**Sn**	**08 19 21.5**	**-2.2**
	23μm,0.9s						
ISK	**Istanbul-Kandi**	**1.66**	**228**	P	**Pb**	**08 19 01.8**	**-1.3**
ISK				S	**Sn**	**08 19 21.5**	**-2.2**
KAVV	**Kandilli-Istan**	**1.66**	**228**	PN	**Pb**	**08 19 01.9**	**-1.2**
CIDE	**Kastamonu/Cide**	**1.71**	**100**	P	**Pb**	**08 19 03.2**	**-0.8**
CIDE				S	**Sn**	**08 19 22.1**	**-2.9**
BCAM	**Yenicaga**	**1.72**	**143**	P	**Pb**	**08 19 03.2**	**-1.1**
GEYV	**SAKARYA_Geyve**	**1.73**	**190**	P	**Pb**	**08 19 03.6**	**-0.7**
GEYV				S	**Sn**	**08 19 22.2**	**-3.3**
KBUK	**KARABUK-Merkez**	**1.74**	**123**	P	**Pn**	**08 19 02.6**	**-0.5**
KBUK				S	**Sn**	**08 19 22.6**	**-3.1**
BGKT	**Bogazkoy**	**1.75**	**236**	PN	**Pb**	**08 19 03.3**	**-1.4**
MDUB	**Mudurnu**	**1.76**	**167**	PN	**Pb**	**08 19 03.1**	**-1.8**
MDUB	**Mudurnu**	**1.76**	**167**	Pn	**Pn**	**08 19 02.8**	**-0.6**
MDUB				Sn	**Sn**	**08 19 25.2**	**-1.1**
GULT	**Gulveren**	**1.76**	**184**	PN	**Pb**	**08 19 03.8**	**-1.1**
SAFT	**Safranbolu**	**1.77**	**122**	PN	**Pn**	**08 19 02.9**	**-0.6**
CTKS	**Kestanelik-??a**	**1.89**	**240**	PN	**Pb**	**08 19 05.2**	**-1.8**
ADVT	**Abdulvahap**	**1.90**	**202**	PN	**Pb**	**08 19 05.3**	**-1.8**
AVCI	**Avcilar-stanb**	**1.90**	**232**	PN	**Pb**	**08 19 05.3**	**-1.9**
YLV	**Yalova**	**1.90**	**212**	PN	**Pn**	**08 19 05.2**	**-0.1**
YLV	**Yalova**	**1.90**	**212**	P	**Pb**	**08 19 05.5**	**-1.8**
YLV				S	**Sn**	**08 19 28.5**	**-1.2**
YLV	**Yalova**	**1.90**	**212**	Pn	**Pn**	**08 19 05.2**	**-0.1**
GPA	**Golpazari**	**1.92**	**189**	PN	**Pb**	**08 19 05.6**	**-2.0**
GPA	**Golpazari**	**1.92**	**189**	P	**Pb**	**08 19 06.9**	**-0.7**
CTYL	**Yalikoy Yolu**	**1.93**	**249**	PN	**Pb**	**08 19 05.7**	**+0.1**
KURT	**Yalova, Merkez**	**1.95**	**215**	P	**Pb**	**08 19 06.3**	**-1.8**
KURT				P	**Pn**	**08 19 06.6**	**+0.7**
YUVA	**Yuva-Kibriscik**	**1.95**	**157**	PN	**Pb**	**08 19 06.7**	**-1.4**
KIBS	**BOLU**	**1.98**	**153**	P	**Pb**	**08 19 07.8**	**-0.7**
ELBA	**Catalca**	**1.99**	**239**	P	**Pb**	**08 19 06.8**	**-1.9**
ELBA				S	**Sn**	**08 19 29.8**	**-2.0**
ESNK	**Esenkŋy**	**2.02**	**220**	P	**Pb**	**08 19 08.7**	**-0.6**
CAVI	**Cavuskoy**	**2.09**	**198**	PN	**Pb**	**08 19 08.1**	**-2.3**
SLVT	**Silivri**	**2.09**	**243**	PN	**Pb**	**08 19 08.7**	**-1.7**
BILE	**Bilecik/Merkez**	**2.12**	**197**	P	**Pb**	**08 19 08.9**	**-2.0**
ARMT	**Armutlu**	**2.13**	**221**	PN	**Pn**	**08 19 08.7**	**+0.3**
SRCK	**Saricakaya, Es**	**2.15**	**181**	PN	**Pn**	**08 19 08.9**	**+0.3**
PELI	**Kastamonı-Ara**	**2.16**	**113**	P	**Pb**	**08 19 10.1**	**-1.5**
CMDR	**Camlidere-ANKA**	**2.16**	**141**	P	**Pb**	**08 19 09.9**	**-1.9**
VIZE	**Kirklareli, Vi**	**2.21**	**255**	P	**Pn**	**08 19 09.8**	**+0.3**
VIZE				S	**Sn**	**08 19 35.3**	**-2.0**
TSMN	**Mangalia Port-**	**2.22**	**317**	⇓P	**Pb**	**08 19 10.5**	**-2.3**
TSMN				⇑S	**Sn**	**08 19 36.5**	**-1.1**
IGD	**Bursa**	**2.23**	**211**	P	**Pn**	**08 19 10.1**	**+0.4**
MANR	**Mangalia**	**2.24**	**317**	⇑P	**Pb**	**08 19 10.8**	**-2.2**
MANR				⇑S	**Sn**	**08 19 37.8**	**-0.2**
MDNY	**Mudanya-Bursa**	**2.27**	**217**	PN	**Pn**	**08 19 10.7**	**+0.4**
BORA	**Eskisehir**	**2.31**	**184**	PN	**Pn**	**08 19 11.2**	**+0.2**
BORA	**Eskisehir**	**2.31**	**184**	Pn	**Pn**	**08 19 11.2**	**+0.2**
BORA	**Eskisehir**	**2.31**	**184**	P	**Pn**	**08 19 11.6**	**+0.5**
BORA				S	**Sn**	**08 19 37.0**	**-3.1**
AUBOZ	**BOZOYUK**	**2.33**	**192**	PN	**Pn**	**08 19 10.5**	**-0.7**
AUBOZ	**BOZOYUK**	**2.33**	**192**	P	**Pn**	**08 19 10.6**	**-0.7**
AUBOZ				S	**Sn**	**08 19 38.5**	**-1.9**
ULDT	**Uludag**	**2.36**	**210**	P	**Pn**	**08 19 11.9**	**+0.2**
PSN	**Preselentsi**	**2.37**	**310**	*e*P	**Pn**	**08 19 12.0**	**+0.4**
AUMIH	**MIHALICIK**	**2.40**	**165**	PN	**Pn**	**08 19 12.4**	**+0.2**
AUMIH	**MIHALICIK**	**2.40**	**165**	P	**Pb**	**08 19 13.3**	**-2.5**
AVR	**AVREN**	**2.41**	**294**	*e*P	**Pb**	**08 19 13.6**	**-2.4**
EFOR	**EFORIE**	**2.41**	**322**	⇑P	**Pb**	**08 19 13.6**	**-2.4**
EFOR				⇑S	**Sn**	**08 19 41.7**	**-0.6**
PHSR	**Pinarhisar**	**2.43**	**258**	PN	**Pn**	**08 19 12.9**	**+0.4**
ARMN	**Kirklareli, Me**	**2.45**	**263**	P	**Pn**	**08 19 13.3**	**+0.5**
ARMN				S	**Sn**	**08 19 40.1**	**-3.2**
CRLT	**Corlu**	**2.45**	**245**	PN	**Pb**	**08 19 14.2**	**-2.4**
TSCT	**Constanta Port**	**2.47**	**324**	⇑P	**Pn**	**08 19 13.8**	**+0.8**
TSCT				⇓S	**Sn**	**08 19 43.2**	**-0.4**
BZK	**Bozkurt**	**2.48**	**94**	Pn	**Pn**	**08 19 11.3**	**-1.9**
ORLT	**Orhaneli**	**2.53**	**213**	PN	**Pn**	**08 19 14.3**	**+0.3**
ILGA	**Ilgaz**	**2.54**	**116**		**Pn**	**08 19 14.8**	**+0.5**
ILGA	**Ilgaz**	**2.54**	**116**	P	**Pb**	**08 19 15.4**	**-2.9**
PRD	**Provadia**	**2.62**	**294**	P	**Pn**	**08 19 15.1**	**-0.1**
SGAZ	**Eskisehir, Sey**	**2.66**	**177**	P	**Pn**	**08 19 16.1**	**+0.3**
ELDT	**Eldivan**	**2.67**	**129**	P	**Pn**	**08 19 16.8**	**+0.8**
KIRK	**Kırklareli**	**2.71**	**263**	P	**Pn**	**08 19 16.9**	**+0.6**
KIRK				S	**Sn**	**08 19 45.5**	**-4.1**
ANDZ	**Kutahya, Merke**	**2.74**	**193**	P	**Pn**	**08 19 17.8**	**+0.9**
TOS	**Tosya**	**2.75**	**114**	PN	**Pn**	**08 19 17.4**	**+0.3**
LOD	**Lodumlu**	**2.79**	**145**	PN	**Pn**	**08 19 16.9**	**-0.6**
TIRR	**Tirgusor**	**2.81**	**325**	⇓P	**Pn**	**08 19 18.4**	**+0.7**
TIRR				⇓S	**Sn**	**08 19 50.5**	**-1.5**
TIRR	**Tirgusor**	**2.81**	**325**	Pn	**Pn**	**08 19 18.3**	**+0.7**
TIRR	**Tirgusor**	**2.81**	**325**	P	**Pn**	**08 19 18.3**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.81**	**167**	PN	**Pn**	**08 19 18.1**	**+0.2**
ANTO	**Ankara**	**2.81**	**145**	PN	**Pn**	**08 19 18.3**	**+0.4**
ANTO	**Ankara**	**2.81**	**145**	Pn	**Pn**	**08 19 18.5**	**+0.7**
ANTO	**Ankara**	**2.81**	**145**	P	**Pn**	**08 19 18.5**	**+0.7**
EDC	**Edincik**	**2.81**	**230**	PN	**Pn**	**08 19 18.2**	**+0.4**
EDC	**Edincik**	**2.81**	**230**	P	**Pn**	**08 19 18.4**	**+0.6**
MRMT	**Marmara Adasi**	**2.81**	**237**	PN	**Pn**	**08 19 18.1**	**+0.2**
AUSIV	**SIVRIHISAR**	**2.82**	**166**	PN	**Pn**	**08 19 18.5**	**+0.5**
AUSIV	**SIVRIHISAR**	**2.82**	**166**	P	**Pn**	**08 19 18.8**	**+0.8**
BR231	**Keskin MP Arra**	**2.83**	**145**		**Pn**	**08 19 18.3**	**+0.2**
CIFT	**Cifteler, Eski**	**2.84**	**174**	PN	**Pn**	**08 19 18.5**	**+0.3**
ICOR	**Ion Corvin**	**2.86**	**313**	⇑P	**Pn**	**08 19 19.4**	**+1.0**
ICOR				⇑S	**Sn**	**08 19 53.4**	**+0.1**
CVDA	**Cernavoda**	**2.89**	**319**	⇑P	**Pn**	**08 19 19.9**	**+1.1**
CVDA				⇑S	**Sn**	**08 19 52.8**	**-1.2**
JURR	**Jurilovca**	**2.89**	**334**	⇓P	**Pn**	**08 19 18.8**	**0.0**
TVSB	**Tavsanli**	**2.89**	**199**	PN	**Pn**	**08 19 18.3**	**-0.7**
EDRB	**Edirne**	**2.96**	**265**	PN	**Pn**	**08 19 19.9**	**+0.1**
EDRB	**Edirne**	**2.96**	**265**	P	**Pn**	**08 19 19.9**	**+0.1**
EDRB				S	**Sn**	**08 19 50.3**	**-5.4**
	3μm,0.8s						
SART	**Tekirdag**	**3.03**	**242**	P	**Pn**	**08 19 20.4**	**-0.4**
RKY	**Sarkoy-Tekirda**	**3.04**	**242**	PN	**Pn**	**08 19 21.5**	**+0.6**
TLBR	**Topalu**	**3.04**	**322**	⇑P	**Pn**	**08 19 22.1**	**+1.2**
TLBR				⇓S	**Sn**	**08 19 57.0**	**-0.7**
TSSL	**Sulina**	**3.05**	**347**	⇑P	**Pn**	**08 19 21.5**	**+0.5**
JMB	**Yambol**	**3.06**	**277**	P	**Pn**	**08 19 20.2**	**-0.9**
KNL	**Balıkesir**	**3.06**	**232**	P	**Pn**	**08 19 21.3**	**+0.1**
DURS	**Dursunbey**	**3.08**	**214**	P	**Pn**	**08 19 22.1**	**+0.6**
GONE	**Gonen-Balikesi**	**3.12**	**228**	PN	**Pn**	**08 19 22.0**	**0.0**
TPGR	**Topolog**	**3.13**	**329**	⇓P	**Pn**	**08 19 22.0**	**-0.2**
TPGR				⇑S	**Sn**	**08 19 58.1**	**-2.1**
SEV	**Sevastopol'**	**3.20**	**42**	*e*Pn	**Pn**	**08 19 23.7**	**+0.6**
SEV				Pnm		08 19 24.8	
	comp=Z,87nm,0.3s						
SEV				*e*Sn	**Sn**	**08 19 58.3**	**-3.5**
SEV				Snm		08 19 59.8	
	comp=N,423nm,0.3s						
SEV				Snm		08 20 02.4	
	comp=E,489nm,0.2s						
SEV	**Sevastopol'**	**3.20**	**42**	⇓*i*P	**Pn**	**08 19 23.3**	**+0.2**
SEV				*i*		08 19 57.9	
SEV	**Sevastopol'**	**3.20**	**42**	*i* Pn	**Pn**	**08 19 23.3**	**+0.2**
SEV				Pnm		08 19 24.8	
	comp=Z,164nm,0.3s						
SEV				*i* Sn	**Sn**	**08 19 57.9**	**-3.9**
SEV				Snm		08 19 59.4	
	comp=E,1μm,0.3s						
SEV				Snm		08 19 59.9	
	comp=N,940nm,0.3s						
HARR	**Harsova**	**3.21**	**322**	⇑P	**Pn**	**08 19 24.0**	**+0.8**
HARR	**Harsova**	**3.21**	**322**	P	**Pn**	**08 19 23.9**	**+0.8**
GDZ	**Gediz**	**3.23**	**197**	P	**Pn**	**08 19 23.2**	**-0.5**
RASA	**Rasa**	**3.28**	**309**	⇓P	**Pn**	**08 19 25.4**	**+1.2**
RASA				⇑S	**Sn**	**08 20 02.2**	**-1.5**
TLCR		**3.29**	**336**	⇑P	**Pn**	**08 19 24.3**	**0.0**
TLCR		**3.29**	**336**	P	**Pn**	**08 19 24.3**	**0.0**
GEDZ	**Gediz**	**3.29**	**198**	PN	**Pn**	**08 19 25.2**	**+0.8**
KESN	**Edirne-Kesan**	**3.30**	**247**	P	**Pn**	**08 19 24.7**	**-0.1**
BR131	**Keskin Array S**	**3.33**	**137**		**Pn**	**08 19 25.5**	**+0.5**
BR131	**Keskin Array S**	**3.33**	**137**	*d iP*	**Pn**	**08 19 24.9**	**-0.1**
BRTR	**Keskin Array B**	**3.33**	**137**	Pn	**Pn**	**08 19 25.8**	**+0.8**
	comp=N,26nm,0.3s,baz=324,slow=12,SNR=463						
BRTR				Sn	**Sn**	**08 20 02.5**	**-2.5**
	comp=N,110nm,0.3s,baz=309,slow=26,SNR=7.8						
BRTR				Lg	Lg	08 20 16.1	
	comp=N,57nm,0.3s,baz=312,slow=25,SNR=4.8						
	comp=N,70nm,0.4s						
BRTR	**Keskin Array B**	**3.33**	**137**	PN	**Pn**	**08 19 25.6**	**+0.6**
BRTR	**Keskin Array B**	**3.33**	**137**	Pn	**Pn**	**08 19 24.8**	**-0.2**
RAZG	**Razgrad**	**3.37**	**296**	⇑P	**Pn**	**08 19 26.5**	**+1.1**
BALY	**Balya**	**3.37**	**225**	P	**Pn**	**08 19 24.6**	**-1.0**
AFYO	**Afyonkarahisar**	**3.41**	**185**	P	**Pn**	**08 19 27.1**	**+1.0**
YAL	**Yalta**	**3.42**	**47**	⇑*i*Pn	**Pn**	**08 19 25.7**	**-0.3**
YAL				Pnm		08 19 26.9	
	comp=Z,739nm,0.2s						
YAL				*e*Sn	**Sn**	**08 20 02.1**	**-4.9**
YAL				Snm		08 20 05.8	
	comp=N,3μm,0.2s						
YAL				Snm		08 20 06.6	
	comp=E,3μm,0.2s						
YAL	**Yalta**	**3.42**	**47**	⇑*i*Pn	**Pn**	**08 19 25.4**	**-0.6**
YAL				Pnm		08 19 26.9	
	comp=Z,739nm,0.2s						
YAL				*e*Sn	**Sn**	**08 20 02.1**	**-4.9**
YAL				Snm		08 20 05.8	
	comp=N,3μm,0.2s						
YAL				Snm		08 20 06.6	
	comp=E,3μm,0.2s						
KIZT	**Kizilcal**	**3.43**	**164**	PN	**Pn**	**08 19 26.9**	**+0.5**
AMRR	**Amara**	**3.44**	**316**	⇑P	**Pn**	**08 19 27.5**	**+1.2**
AMRR				⇓S	**Sn**	**08 20 06.3**	**-1.2**
DIKM	**Dikmen**	**3.45**	**97**	PN	**Pn**	**08 19 27.6**	**+1.0**
DIKM	**Dikmen**	**3.45**	**97**	Pn	**Pn**	**08 19 27.1**	**+0.5**
DEMI	**Demirci**	**3.48**	**206**	P	**Pn**	**08 19 27.1**	**0.0**
CFR	**Carcaliu**	**3.51**	**329**	⇑P	**Pn**	**08 19 28.3**	**+0.9**
CFR				⇑S	**Sn**	**08 20 07.1**	**-2.4**
CFR	**Carcaliu**	**3.51**	**329**	P	**Pn**	**08 19 28.2**	**+0.9**
CFR				S	**Sn**	**08 20 07.0**	**-2.4**
CORM	**Corum**	**3.59**	**123**	PN	**Pn**	**08 19 29.5**	**+0.9**
STEP	**BALIKESIR_Sava**	**3.60**	**220**	P	**Pn**	**08 19 28.8**	**+0.1**
LEHL	**Lehliu**	**3.63**	**310**	⇓P	**Pn**	**08 19 30.3**	**+1.4**
LEHL				⇑S	**Sn**	**08 20 11.5**	**-0.7**
SHUT	**Suhut-Afyon**	**3.63**	**182**	PN	**Pn**	**08 19 29.9**	**+0.7**
KAMT	**Kaman**	**3.64**	**140**	PN	**Pn**	**08 19 30.1**	**+0.9**
SZH	**Strazhica**	**3.66**	**289**	P	**Pn**	**08 19 27.7**	**-1.8**
ALU	**Alushta**	**3.68**	**46**	⇓*i*Pn	**Pn**	**08 19 29.5**	**-0.1**
ALU				Pnm		08 19 30.3	
	comp=Z,185nm,0.2s						
ALU				*i* Sn	**Sn**	**08 20 08.7**	**-4.8**
ALU				Snm		08 20 13.9	
	comp=E,514nm,0.4s						
ALU				Snm		08 20 14.7	
	comp=N,641nm,0.4s						
ALU	**Alushta**	**3.68**	**46**	⇓*i*P	**Pn**	**08 19 29.5**	**-0.1**
ALU				*i*		08 20 08.7	
ALU	**Alushta**	**3.68**	**46**	⇓*i*Pn	**Pn**	**08 19 29.5**	**-0.1**
ALU				Pnm		08 19 30.3	
	comp=Z,185nm,0.2s						
ALU				*i* Sn	**Sn**	**08 20 08.7**	**-4.8**
USAK	**Uak-Merkez**	**3.70**	**201**	P	**Pn**	**08 19 30.6**	**+0.6**
ALN	**Alexandroupoli**	**3.71**	**251**	Pn	**Pn**	**08 19 30.2**	**0.0**
ALN	**Alexandroupoli**	**3.71**	**251**	P	**Pn**	**08 19 30.4**	**+0.2**
ALN	**Alexandroupoli**	**3.71**	**251**	P	**Pn**	**08 19 30.2**	**0.0**
ALN	**Alexandroupoli**	**3.71**	**251**	Pn	**Pn**	**08 19 30.2**	**0.0**
SIM	**Simferopol'**	**3.72**	**41**	⇓*i*Pn	**Pn**	**08 19 31.3**	**+1.1**
SIM				Pnm		08 19 32.1	
	comp=Z,580nm,0.2s						
SIM				*i* Sn	**Sn**	**08 20 11.2**	**-3.2**
SIM				Snm		08 20 13.1	
	comp=E,3μm,0.3s						
SIM				Snm		08 20 14.9	
	comp=N,5μm,0.5s						
SIM	**Simferopol'**	**3.72**	**41**	*e*P	**Pn**	**08 19 31.5**	**+1.3**
SIM				*i* S	**Sn**	**08 20 11.3**	**-3.2**
SIM				pmax	pmax		
	comp=Z,647nm,1.1s						
SIM				smax	smax		
	comp=E,7μm,1.0s						
SIM				smax	smax		
	comp=N,5μm,0.9s						
SIM	**Simferopol'**	**3.72**	**41**	⇓*i*Pn	**Pn**	**08 19 31.3**	**+1.1**
SIM				Pnm		08 19 32.1	
	comp=Z,580nm,0.2s						
SIM				*i* Sn	**Sn**	**08 20 11.2**	**-3.2**
SIM				Snm		08 20 13.1	
	comp=E,3μm,0.3s						
SIM				Snm		08 20 14.9	
	comp=N,5μm,0.5s						
GIUM	**Giurgiulesti**	**3.75**	**332**	⇓P	**Pn**	**08 19 31.5**	**+0.8**
GISR	**Galati**	**3.77**	**331**	⇑P	**Pn**	**08 19 32.3**	**+1.4**
GISR				⇑S	**Sn**	**08 20 13.7**	**-2.0**
DIM	**Dimitrovgrad**	**3.84**	**270**	P	**Pn**	**08 19 31.6**	**-0.2**
SCHL	**Schela**	**3.90**	**329**	⇓P	**Pn**	**08 19 34.5**	**+1.8**
SCHL				⇓S	**Sn**	**08 20 18.5**	**-0.4**
TATR	**Tatarca**	**3.90**	**332**	⇓P	**Pn**	**08 19 33.3**	**+0.6**
TATR				⇓S	**Sn**	**08 20 16.9**	**-2.1**
SERE	**Sereflikochisa**	**3.91**	**145**	PN	**Pn**	**08 19 33.7**	**+0.7**
IZVR	**Izvoarele**	**3.96**	**329**	⇑P	**Pn**	**08 19 35.5**	**+2.0**
IZVR				⇑S	**Sn**	**08 20 19.6**	**-0.8**
KDZ	**Kurdzhali**	**3.97**	**264**	P	**Pn**	**08 19 34.4**	**+0.7**
CHBY	**Cihanbeyli**	**3.98**	**154**	PN	**Pn**	**08 19 34.7**	**+0.8**
SCTR	**Scanteiesti**	**3.99**	**332**	⇓P	**Pn**	**08 19 34.5**	**+0.6**
SCTR				⇓S	**Sn**	**08 20 19.0**	**-2.1**
RDO	**Rodhopi**	**4.00**	**257**	Pn	**Pn**	**08 19 34.4**	**+0.3**
RDO	**Rodhopi**	**4.00**	**257**	P	**Pn**	**08 19 34.0**	**-0.1**
RDO	**Rodhopi**	**4.00**	**257**	Pn	**Pn**	**08 19 33.9**	**-0.1**
SGRR	**Singureni**	**4.00**	**302**	⇑P	**Pn**	**08 19 35.0**	**+0.9**
SLCR	**Slobozia Conac**	**4.00**	**329**	⇑P	**Pn**	**08 19 35.8**	**+1.7**
SLCR				⇑S	**Sn**	**08 20 20.6**	**-0.8**
YAYX	**Yaylak**	**4.03**	**143**	PN	**Pn**	**08 19 35.5**	**+0.9**
BUC1	**Bucharest**	**4.03**	**304**	⇓P	**Pn**	**08 19 36.8**	**+2.4**
BUC1	**Bucharest**	**4.03**	**304**	P	**Pn**	**08 19 36.8**	**+2.4**
MANT	**Manisa**	**4.04**	**204**		**Pn**	**08 19 35.3**	**+0.4**
TUDR		**4.04**	**328**	⇑P	**Pn**	**08 19 36.5**	**+1.8**
TUDR				⇓S	**Sn**	**08 20 22.8**	**+0.4**
EZN	**Ezine**	**4.06**	**236**	P	**Pn**	**08 19 35.1**	**+0.2**
EZN				S	**Sn**	**08 20 18.4**	**-4.5**
	comp=N,928nm,0.6s						
EZN	**Ezine**	**4.06**	**236**	P	**Pn**	**08 19 35.1**	**+0.2**
EZN				S	**Sn**	**08 20 18.4**	**-4.5**
EZN	**Ezine**	**4.06**	**236**	Pn	**Pn**	**08 19 35.1**	**+0.2**
SULR		**4.07**	**309**	⇓P	**Pn**	**08 19 36.9**	**+1.8**
SULR				⇓S	**Sn**	**08 20 24.1**	**+0.9**
VLDR	**Vladesti**	**4.11**	**334**	⇓P	**Pn**	**08 19 36.3**	**+0.7**
SUDU	**Sudak**	**4.14**	**48**	⇓*i*Pn	**Pn**	**08 19 37.2**	**+1.3**
SUDU				Pnm		08 19 38.0	
	comp=Z,3μm,0.3s						
SUDU				*i* Sn	**Sn**	**08 20 21.5**	**-3.3**
SUDU				Snm		08 20 25.5	
	comp=N,3μm,0.4s						
SUDU				Snm		08 20 25.5	
	comp=E,2μm,0.3s						
SUDU	**Sudak**	**4.14**	**48**	⇑*i*Pn	**Pn**	**08 19 36.4**	**+0.5**
SUDU				Pnm		08 19 37.3	
	comp=Z,3μm,0.3s						
SUDU				*e*Sn	**Sn**	**08 20 20.7**	**-4.1**
SUDU				Snm		08 20 24.1	
	comp=E,2μm,0.3s						
SUDU				Snm		08 20 25.0	
	comp=N,5μm,0.6s						
KVT	**Kavak**	**4.17**	**104**	PN	**Pn**	**08 19 37

VOIR pmax pmax
comp=Z,754nm,0.8s
MMB Musomiste 5.23 266 P Pn 08 19 50.6 -0.4
OZUR 5.26 320 ⇑P Pn 08 19 53.0 +1.6
OZUR ⇑S Sn 08 20 51.2 -1.3
DOPR Dopca 5.37 316 ⇑P Pn 08 19 54.6 +1.7
DOPR ⇑S Sn 08 20 54.3 -0.9
YER Yerkesik 5.38 201 P Pn 08 19 54.4 +1.3
YER Yerkesik 5.38 201 P Pn 08 19 54.4 +1.3
OUR Ouranopolis 5.38 252 P Pn 08 19 53.0 -0.1
OUR Ouranopolis 5.38 252 P Pn 08 19 53.0 -0.1
ARR Arges 5.41 308 ⇓P Pn 08 19 54.6 +1.0
SRS Serrai 5.42 261 P Pn 08 19 53.2 -0.5
SRS pmax pmax
comp=Z,152nm,0.7s
ELL Elmali 5.47 187 Pn 08 19 55.0 +0.6
ELL Elmali 5.47 187 P Pn 08 19 55.0 +0.6
IAS Iasi 5.48 337 ⇑P Pn 08 19 54.8 +0.4
IAS Iasi 5.48 337 P Pn 08 19 54.3 -0.1
IAS pmax pmax
comp=Z,2µm,0.6s
VTS Vitosha 5.53 277 ⇑P Pn 08 19 55.8 +0.5
VTS Vitosha 5.53 277 Pn Pn 08 19 55.2 -0.1
VTS Vitosha 5.53 277 P Pn 08 19 55.2 -0.1
VTS Vitosha 5.53 277 ⇓P Pn 08 19 55.7 +0.4
ANN Anapa 5.56 60 *c eP* **Pn 08 19 54.9 -0.5**
ANN pmax pmax
comp=Z,639nm,1.0s
GIRR Girov 5.62 329 ⇓P Pn 08 19 57.7 +1.3
SOH Sokhos 5.67 258 P Pn 08 19 57.1 -0.1
SOH S Sn 08 20 58.4 -4.4
comp=Z,498nm,0.7s
SOH Sokhos 5.67 258 P Pn 08 19 57.0 -0.1
SOH S Sn 08 20 58.4 -4.4
BIZ Bicaz 5.77 327 ⇓S Sn 08 21 04.0 -1.0
JOSR Joseni 5.84 322 ⇑P Pn 08 20 00.6 +1.2
JOSR ⇑S Sn 08 21 05.7 -1.1
KNT Kendrikon 5.92 263 P Pn 08 20 00.5 0.0
KNT S Sn 08 21 03.6 -5.3
comp=Z,698nm,0.7s
KNT Kendrikon 5.92 263 P Pn 08 20 00.2 -0.3
KNT pmax pmax
comp=Z,93nm,0.7s
HORT Hortiatis 5.92 257 P Pn 08 20 00.6 0.0
LOT Lotru 5.97 305 ⇓P Pn 08 20 02.4 +1.2
SRE Strehaia 5.98 297 ⇓P Pn 08 20 02.4 +1.0
SRE ⇓S Sn 08 21 09.5 -0.9
SRE Strehaia 5.98 297 P Pn 08 20 02.3 +1.0
SRE S Sn 08 21 09.4 -0.9
AKAS Kas 6.01 188 Pn 08 20 02.7 +0.8
THE Thessaloniki 6.01 258 P Pn 08 20 02.1 +0.4
THE pmax pmax
comp=Z,44nm,1.0s
MDB Medias 6.01 313 ⇑P Pn 08 20 03.7 +1.9
MDB ⇑S Sn 08 21 10.5 -0.6
MDB Medias 6.01 313 P Pn 08 20 03.6 +1.9
MDB S Sn 08 21 10.5 -0.6
ZAPS Zavoj 6.03 283 *e*Pn **Pn 08 20 02.4 +0.4**
PUNG Punghina 6.04 293 ⇑P Pn 08 20 02.1 0.0
BLKB Belogradchik 6.05 286 ⇓P Pn 08 20 02.6 +0.2
KSL Kastellorizon 6.09 188 P Pn 08 20 05.4 +2.6
VAY Valandovo 6.13 265 P Pn 08 20 04.0 +0.6
VAY pmax pmax
comp=Z,52nm,1.0s
VAY Valandovo 6.13 265 *i* Pn **Pn 08 20 03.7 +0.3**
ARG Arkhangelos 6.29 199 Pn 08 20 07.6 +2.1
ARG Arkhangelos 6.29 199 P Pn 08 20 07.6 +2.1
GRG Griva 6.33 262 P Pn 08 20 05.8 -0.4
GRG pmax pmax
comp=Z,38nm,0.7s
NEO Neokhori 6.36 246 P Pn 08 20 06.1 -0.4
NEO S Sn 08 21 13.8 -5.8
comp=Z,335nm,0.4s
STIP Stip 6.36 268 *i* Pn **Pn 08 20 04.3 -2.2**
ZAGS Zajecar 6.41 288 *e*Pn **Pn 08 20 06.2 -0.9**
DJES Djerdap 6.44 295 *e*Pn **Pn 08 20 06.5 -1.1**
APE Apeiranthos 6.48 220 P Pn 08 20 08.1 -0.1
APE Apeiranthos 6.48 220 *i* P **Pn 08 20 07.3 -0.9**
LIT Litokhoron 6.53 254 Pn 08 20 09.0 +0.1
LIT Litokhoron 6.53 254 P Pn 08 20 08.9 0.0
LIT Litokhoron 6.53 254 P Pn 08 20 09.0 +0.1
GZR Gura Zlata 6.56 302 ⇓P Pn 08 20 10.6 +1.3
GZR Gura Zlata 6.56 302 P Pn 08 20 10.6 +1.3
HERR Herculane 6.58 297 ⇑P Pn 08 20 09.6 0.0
BARS Barje 6.59 278 *e*Pn **Pn 08 20 07.8 -1.8**
BARS Barje 6.59 278 *e*Pn **Pn 08 20 10.0 +0.4**
LZRR Lazarevskoye 6.60 72 *e*P **Pn 08 20 11.2 +1.4**
LZRR *e*S **Sn 08 21 19.1 -6.4**
ARCR ARCALIA 6.66 319 ⇓P Pn 08 20 11.6 +1.0
BURAR Bucovina Array 6.67 326 ⇑P Pn 08 20 12.9 +2.1
BURAR Bucovina Array 6.67 326 Pn 08 20 11.7 +0.9
BURAR Bucovina Array 6.67 326 P Pn 08 20 11.7 +0.9
BUR08 Bucovina Ar. S 6.70 326 Pn 08 20 11.6 +0.4
KTI Kastanea 6.70 257 P Pn 08 20 11.9 +0.6
DEV Deva 6.71 306 ⇑P Pn 08 20 13.1 +1.7
DEV Deva 6.71 306 P Pn 08 20 12.6 +1.2
DEV pmax pmax
comp=Z,301nm,0.8s
BOVS Bovan 6.75 285 ⇓P Pn 08 20 11.9 0.0
BOVS Bovan 6.75 285 *e*Pn **Pn 08 20 11.8 0.0**
SOC Sochi 6.78 75 *e*P **Pn 08 20 10.2 -2.0**
SOC *e* 08 21 25.0
SOC pmax pmax
comp=Z,82nm,0.3s
SOC smax smax
comp=E,109nm,0.4s
CJR Cluj-Napoca 6.79 314 ⇑P Pn 08 20 13.8 +1.2
CJR ⇑S **Sn 08 21 28.9 -1.5**
CJR Cluj-Napoca 6.79 314 P Pn 08 20 13.7 +1.2
CJR S **Sn 08 21 28.8 -1.5**
CBBR Cluj-Babes-Bol 6.85 314 ⇑P Pn 08 20 14.8 +1.5
TYRN Tyrnavos 6.86 252 P Pn 08 20 14.0 +0.6
TYRN S **Sn 08 21 27.7 -4.3**
comp=E,428nm,0.9s
KUBS Kucevo 6.94 292 *e*Pn **Pn 08 20 12.8 -1.7**
KZN Kozani 6.98 257 P Pn 08 20 15.5 +0.4
KZN Kozani 6.98 257 P Pn 08 20 15.5 +0.4
MDVR Moldovita 7.02 295 ⇑P Pn 08 20 15.5 -0.1
KMPD K-Podol'skiy 7.03 336 Pn **Pn 08 20 14.0 -1.7**
comp=E,304nm,0.8s
KMPD pP **Pn 08 20 15.7 0.0**
comp=E,304nm,0.8s
THL Klokotos Trika 7.08 251 P Pn 08 20 16.8 +0.5
GAZ Gaziantep 7.10 133 Pn **Pn 08 20 18.2 +1.4**
SELS Selova 7.12 282 *e*Pn **Pn 08 20 16.9 -0.1**
GUZR Guzeripl' 7.14 72 *e*P **Pn 08 20 16.6 -0.6**
MAKR Makrakomi, Fth 7.24 247 P Pn 08 20 19.4 +0.7
MAKR S **Sn 08 21 40.3 -1.1**
comp=E,478nm,0.8s
DRGR 7.33 312 ⇑P Pn 08 20 20.1 +0.3
DRGR 7.33 312 P Pn 08 20 20.1 +0.3
DRGR pmax pmax
comp=Z,335nm,1.0s
BZS Buzias 7.39 301 ⇑P Pn 08 20 20.5 -0.1
BZS Buzias 7.39 301 P Pn 08 20 20.5 -0.1
BZS pmax pmax
comp=Z,66nm,0.9s
MESR Meseseni 7.41 315 ⇓P Pn 08 20 22.2 +1.2
NEST Nestorio 7.47 259 P Pn 08 20 22.3 +0.4
NEST S **Sn 08 21 41.0 -6.1**
comp=Z,122nm,0.8s
BMR Baia Mare 7.49 320 ⇑P Pn 08 20 23.4 +1.5
BMR Baia Mare 7.49 320 P Pn 08 20 23.1 +1.1
BMR pmax pmax
comp=Z,603nm,0.9s
GRUS Gruza 7.50 286 *e*Pn **Pn 08 20 22.4 +0.2**
CSS Mathiatis 7.51 163 Pn 08 20 23.4 +1.1
EVR Evrytania 7.51 247 P Pn 08 20 23.3 +0.9
EVR S **Sn 08 21 42.5 -5.5**
comp=Z,155nm,0.9s
KRND KRANIDI 7.53 233 P Pn 08 20 23.0 +0.4
NE55 Skvira 7.56 355 Pn **Pn 08 20 21.6 -1.4**
KBN Korca 7.61 261 Pn **Pn 08 20 23.2 -0.5**
KBN Korca 7.61 261 P Pn 08 20 23.2 -0.5
SIRR Siria 7.66 305 ⇓P Pn 08 20 24.6 +0.3
LABN Labinsk 7.71 68 *e*P **Pn 08 20 25.8 +0.8**
LABN *e*S **Sn 08 21 47.7 -5.1**
LABN pmax pmax
comp=Z,510nm,0.8s
TRUS Trudelj 7.78 289 *e*Pn **Pn 08 20 25.1 -0.9**
AHMR Akhmetovskaya 7.82 72 *i* P **Pn 08 20 26.3 -0.3**
BEO Beograd 7.87 293 P Pn 08 20 26.2 -1.1

BEO pmax pmax
comp=Z,27nm,0.6s
BEO Beograd 7.87 293 *e*Pn **Pn 08 20 25.5 -1.8**
ARXR Arkhyz 7.90 76 *i* P **Pn 08 20 27.7 -0.1**
ERBR Yeremizino-Bor 7.90 60 *e*P **Pn 08 20 27.4 -0.2**
ERBR *e*S **Sn 08 21 52.0 -5.4**
SJES Sjenica 7.96 281 *e*Pn **Pn 08 20 29.9 +1.3**
LUBAR Lubar, Ukraine 8.00 346 Pn **Pn 08 20 27.4 -1.5**
comp=Z,129nm,0.8s
DIVS Divibare 8.05 287 Pn 08 20 29.2 -0.6
DIVS Divibare 8.05 287 *e*Pn **Pn 08 20 29.6 -0.2**
LTVH Ltavrtes, Hu 8.12 313 P Pn 08 20 32.4 +1.8
IDI Anoyia 8.24 215 Pn **Pn 08 20 33.9 +1.4**
comp=Z,0.8nm,0.3s,baz=330,slow=16,SNR=2.1
comp=Z,9.3nm,0.7s
IDI Anoyia 8.24 215 Pn **Pn 08 20 34.5 +2.0**
TRPA Tarpa 8.27 319 P **Pn 08 20 33.2 +0.6**
TRPA S **Sn 08 22 02.4 -4.1**
IGT Igoumenitsa 8.28 255 P Pn 08 20 37.2 +4.3
IGT pmax pmax
comp=Z,49nm,0.8s
ITM Ithomi 8.40 236 Pn 08 20 36.1 +1.5
FRGS Fruska Gora 8.42 294 ⇑P Pn 08 20 35.4 +0.6
FRGS Fruska Gora 8.42 294 *e*Pn **Pn 08 20 35.0 +0.2**
BBLS Lazići 8.43 285 *e*Pn **Pn 08 20 35.6 +0.6**
EVGI Lefkada island 8.44 248 P Pn 08 20 38.2 +3.1
AK06 Malin Array Si 8.46 354 Pn 08 20 34.0 -1.3
TEKS Tekeris 8.46 290 *e*Pn **Pn 08 20 33.9 -1.5**
AK10 Malin Array Si 8.47 354 Pn 08 20 33.7 -1.7
DRAG Dragano-Lefkad 8.47 249 P Pn 08 20 38.5 +3.0
PDG Podgorica 8.48 275 ⇑P Pn 08 20 38.8 +3.3
AK09 Malin Array Si 8.48 354 Pn 08 20 33.7 -1.9
AK05 Malin Array Si 8.49 354 Pn 08 20 34.2 -1.5
AK13 Malin Array Si 8.50 353 Pn 08 20 34.1 -1.7
AK08 Malin Array Si 8.50 354 Pn 08 20 34.1 -1.8
AK14 Malin Array Si 8.51 353 Pn 08 20 34.3 -1.7
AK02 Malin Array Si 8.53 354 Pn 08 20 34.7 -1.5
AK16 Malin Array Si 8.55 353 Pn 08 20 34.9 -1.6
AK11 Malin Array Si 8.55 353 Pn 08 20 34.9 -1.7
NVNR Nevinnomyssk 8.56 70 *e*P **Pn 08 20 35.9 -0.8**
NVNR *e*S **Sn 08 22 06.5 -7.3**
AK01 Malin Array Si 8.56 354 Pn 08 20 35.0 -1.7
AK17 Malin Array Si 8.57 353 Pn 08 20 35.0 -1.8
AKASG Malin Array Be 8.57 354 Pn 08 20 34.8 -2.0
comp=Z,6.5nm,0.3s,baz=161,slow=14,SNR=58
AKASG Sn **Sn 08 22 06.9 -7.0**
comp=Z,85nm,0.3s,baz=182,slow=32,SNR=5.2
AKASG Malin Array Be 8.57 354 Pn 08 20 35.4 -1.4
AKBB Malin Array Si 8.57 354 Pn 08 20 35.2 -1.7
AKBB Malin Array Si 8.57 354 *i* P **Pn 08 20 35.1 -1.7**
AKBB Malin Array Si 8.57 354 Pn 08 20 35.2 -1.7
comp=Z,91nm,0.8s
AKBB pP **Pn 08 20 37.5 +0.7**
comp=Z,91nm,0.8s
AKBB sP **Pn 08 20 38.9 +2.1**
comp=Z,91nm,0.8s
AK03 Malin Array Si 8.60 354 Pn 08 20 35.6 -1.6
AK04 Malin Array Si 8.60 354 Pn 08 20 35.5 -1.7
AK18 Malin Array Si 8.61 353 Pn 08 20 35.5 -1.8
AK19 Malin Array Si 8.61 353 Pn 08 20 35.5 -1.9
AK20 Malin Array Si 8.63 353 Pn 08 20 35.7 -1.9
AK23 Malin Array Si 8.64 353 Pn 08 20 35.9 -1.9
AK22 Malin Array Si 8.64 353 Pn 08 20 36.1 -1.7
UZH Uzhgorod 8.73 320 *e*P **Pn 08 20 39.2 +0.2**
SHA1 Shidzhatmaz 8.91 76 *i* P **Pn 08 20 41.7 -0.1**
SHA1 pmax pmax
comp=Z,92nm,0.5s
LVV L'vov 8.92 331 *e*P **Pn 08 20 41.5 -0.1**
LVV *e*S **Sn 08 22 18.2 -4.4**
NEY Neytrino 8.92 79 *e*P **Pn 08 20 41.6 -0.3**
NEY pmax pmax
comp=Z,69nm,0.6s
KOLS Kolonicke sedl 8.96 322 *e*P **Pn 08 20 43.4 +1.3**
KIV Kislovodsk 8.96 75 Pn 08 20 40.9 -1.3
KIV Kislovodsk 8.96 75 *e*P **Pn 08 20 41.1 -1.2**
KIV *e*S **Sn 08 22 23.3 -0.4**
KIV pmax pmax
comp=Z,98nm,1.0s
KIV MLR MLR
comp=Z,186nm,10.0s
KVAR Kislovodsk Arr 8.97 75 Pn **Pn 08 20 42.2 -0.2**
baz=263,slow=23
KVAR Sn **Sn 08 22 16.7 -7.2**
baz=343,slow=11
comp=Z,27nm,0.4s
MI28 Mi28,Pidlybu 8.98 348 Pn 08 20 40.5 -2.0
ABAH Abaujker 9.03 316 P Pn 08 20 43.9 +0.7
KBZ Khabaz 9.09 76 Pn **Pn 08 20 43.9 0.0**
comp=Z,5.1nm,0.3s,baz=277,slow=11,SNR=30
KBZ Sn **Sn 08 22 20.6 -6.0**
comp=Z,6.3nm,0.3s,baz=59,slow=11,SNR=5.2
comp=Z,32nm,0.5s
KBZ Khabaz 9.09 76 *i* P **Pn 08 20 42.7 -1.2**
MARD Mardin 9.17 119 Pn 08 20 46.3 +1.1
CRVS Cervenica-Dubn 9.32 319 *e*P **Pn 08 20 48.3 +1.2**
GOF Gofitskoye 9.41 68 *e*P **Pn 08 20 49.1 +0.8**
GOF *e*S **Sn 08 22 26.6 -8.0**
GOF pmax pmax
comp=Z,123nm,0.6s
GOF smax smax
comp=E,561nm,1.0s
GOF smax smax
comp=N,941nm,0.9s
ONI Oni 9.46 83 Pn 08 20 47.6 -1.5
ONI Oni 9.46 83 P Pn 08 20 47.6 -1.5
MORH Mrgy, Hungar 9.54 299 P Pn 08 20 50.6 +0.5
PSZ Piszkesteto 9.54 311 ⇑P Pn 08 20 50.2 0.0
PSZ Piszkesteto 9.54 311 Pn 08 20 49.5 -0.7
PSZ Piszkesteto 9.54 311 P Pn 08 20 49.5 -0.7
PSZ Piszkesteto 9.54 311 P Pn 08 20 50.4 +0.2
KECS Kecovo 9.54 315 *e*P **Pn 08 20 51.0 +0.8**
DIGR Digorskoe uzhe 9.55 81 *e*P **Pn 08 20 50.4 0.0**
DIGR pmax pmax
comp=Z,13nm,0.5s
STHS Stebnicka Huta 9.78 321 *e*P **Pn 08 20 54.2 +0.8**
KOVH Kovagotottos 9.85 298 P Pn 08 20 54.5 +0.1
MMAI Mount Meron Ar 9.89 156 Pn **Pn 08 20 55.5 +0.5**
comp=Z,4.2nm,0.3s,baz=336,slow=12,SNR=19
MMAI LR LR 08 25 07.7
comp=Z,840nm,18.1s,baz=216,slow=40
comp=Z,6.1nm,0.5s
LACR Lac 10.07 82 *e*P **Pn 08 20 56.5 -1.0**
LACR pmax pmax
comp=Z,12nm,0.3s
CSKK Cskako 10.23 305 P Pn 08 21 01.3 +1.7
SRO Srobarova 10.41 307 P Pn 08 21 02.3 +0.4
SRO pmax pmax
comp=Z,328nm,0.7s
VYHS Vyhne 10.45 311 *e*P **Pn 08 21 03.5 +0.9**
MPLH Magyarpolny 10.60 302 P Pn 08 21 05.7 +1.1
MPLH S **Sn 08 23 01.0 -2.8**
VSR Storozhevoye 10.73 30 *e*P **Pn 08 21 05.6 -0.8**
VSR pmax pmax
comp=Z,80nm,0.6s
VSR pmax pmax
comp=Z,100nm,0.7s
VSR MLR MLR
comp=Z,1µm,13.0s
GNI Garni 10.79 96 Pn **Pn 08 21 09.9 +2.4**
comp=Z,16nm,0.7s,baz=141,slow=18,SNR=6.7
TIP Timpagrande 11.00 259 Pn 08 21 10.9 +0.7
OJC Ojcow 11.01 321 Pn 08 21 08.3 -1.9
OJC Ojcow 11.01 321 P Pn 08 21 08.3 -1.9
VORR Voronezh 11.12 29 *e*P Pn 08 21 05.9 -5.8
VORR pmax pmax
comp=Z,70nm,0.4s
VORR pmax pmax
comp=Z,90nm,0.4s
ASF Jabal al Asfar 11.15 152 Pn **Pn 08 21 13.3 +0.9**
comp=Z,0.3nm,0.3s,baz=152,slow=2.1,SNR=5.1
ASF LR LR 08 26 04.7
comp=Z,680nm,20.9s,baz=328,slow=41
comp=Z,5.1nm,0.8s
GROC Groznyy 11.17 80 *e*P **Pn 08 21 12.3 -0.1**
GROC *e*S **Sn 08 23 12.9 -4.8**
GROC pmax pmax
comp=Z,139nm,0.7s
MODS Modra-Piesok 11.28 308 *e*P **Pn 08 21 15.0 +1.0**
JAVC Velka Javorina 11.30 311 *e*PN **Pn 08 21 14.8 +0.6**
ZST Bratislava 11.30 307 *e*P **Pn 08 21 15.5 +1.3**
CUC Castrocucco 11.44 264 Pn 08 21 16.6 +0.5
RONA Rosalia, Austr 11.58 303 *e*Pn **Pn 08 21 20.3 +2.2**
comp=Z,2.0nm,0.3s
OKC Ostrava-Krasne 11.59 316 P Pn 08 21 19.4 +1.3

OKC pmax pmax
comp=Z,120nm,0.8s
DOBS Dobrina 11.62 295 *i* P **Pn 08 21 18.8 +0.1**
GROS Grobnik 11.68 297 *i* P **Pn 08 21 19.7 +0.2**
VRH Novokhopyorsk 11.76 36 *e*P **Pn 08 21 21.1 +0.6**
VRH pmax pmax
comp=Z,120nm,1.3s
VRH pmax pmax
comp=Z,120nm,1.2s
BEL Belsk 11.77 328 P **Pn 08 21 22.7 +2.2**
BEL pmax pmax
comp=Z,395nm,0.8s
LPSR Galich'ya Gora 11.81 25 *e*P **Pn 08 21 20.3 -0.8**
LPSR pmax pmax
comp=Z,90nm,0.6s
LPSR pmax pmax
comp=Z,100nm,0.6s
LPSR MLR MLR
comp=Z,2µm,14.0s
MORC Moravsky Berou 11.87 314 ⇓P Pn 08 21 23.4 +1.4
MORC Moravsky Berou 11.87 314 Pn 08 21 21.7 -0.3
MORC Moravsky Berou 11.87 314 P Pn 08 21 21.7 -0.3
MORC Moravsky Berou 11.87 314 *e*PN **Pn 08 21 21.6 -0.4**
ARSA Arzberg 11.91 300 *e*Pn **Pn 08 21 24.2 +1.7**
comp=Z,16nm,0.7s
CONA Conrad Observa 11.94 304 *e*Pn **Pn 08 21 25.1 +2.0**
comp=Z,4.0nm,0.6s
PERS Pernice 11.98 297 *i* P **Pn 08 21 24.1 +0.5**
SOKA Soboth 12.05 297 *e*Pn **Pn 08 21 24.9 +0.4**
comp=Z,8.1nm,0.8s
PAOL Paolisi 12.12 270 Pn 08 21 26.2 +0.6
KRUC Moravsky 12.13 309 *e*PN **Pn 08 21 26.4 +0.9**
VRAC Vranov 12.14 311 Pn Pn 08 21 27.5 +1.9
comp=Z,0.6nm,0.3s,baz=106,slow=9.0,SNR=5.0
VRAC LR LR 08 26 18.0
comp=Z,1µm,21.1s,baz=162,slow=38
comp=Z,4.9nm,0.5s
VRAC Vranov 12.14 311 *e*PN **Pn 08 21 25.1 -0.5**
OBKA Obir 12.33 296 *e*Pn **Pn 08 21 27.3 -1.1**
comp=Z,9.6nm,0.9s
MAK Makhachkala 12.43 81 *d i*P **Pn 08 21 31.0 +1.4**
MAK *e*S **Sn 08 23 51.3 +2.8**
MAK pmax pmax
comp=Z,216nm,1.3s
MAK MLR MLR
comp=Z,381nm,11.0s
MNK Minsk 12.46 352 *c i*P **Pn 08 21 26.2 -3.8**
MNK Minsk 12.46 352 *i* P **Pn 08 21 26.2 -3.8**
comp=E,18nm,0.9s
MNK Minsk 12.46 352 *i* P **Pn 08 21 26.2 -3.8**
comp=N,199nm,0.9s
MNK Minsk 12.46 352 *i* P **Pn 08 21 26.2 -3.8**
comp=Z,223nm,0.8s,baz=171
INTR Introdacqua 12.47 275 Pn 08 21 30.4 +0.1
CAMP Campotosto 12.79 277 Pn 08 21 33.5 -1.2
EIL Elat 12.96 163 LR LR 08 27 44.6
comp=Z,881nm,18.4s,baz=266,slow=43
VAE Valguarnera 13.36 255 Pn Pn 08 21 44.6 +2.2
comp=Z,2.4nm,0.3s,baz=344,slow=23,SNR=1.3
comp=Z,8.0nm,0.3s
CLUD Cludinico 13.44 295 Pn 08 21 42.8 -0.6
IIGN Ignalina 13.49 349 *e*P **Pn 08 21 41.3 -2.8**
IIGN IAmb IAmb 08 21 54.2
comp=Z,183nm,0.8s
OBN Obninsk 13.50 15 Pn Pn 08 21 39.7 -4.4
comp=Z,2.0nm,0.3s,baz=37,slow=5.6,SNR=5.3
OBN Sn Sn 08 24 03.9 -11
comp=Z,2.7nm,0.3s,baz=21,slow=21,SNR=2.7
comp=Z,7.2nm,0.3s
OBN Obninsk 13.50 15 ⇓ *e*P **Pn 08 21 43.1 -1.0**
OBN pmax pmax
comp=Z,113nm,1.4s
OBN MLR MLR
comp=Z,2µm,16.0s
GERES GERESS Array B 13.63 305 LR LR 08 28 39.1
comp=Z,1µm,18.3s,baz=131,slow=44
ISAL Salakas 13.72 349 *e*P **Pn 08 21 44.0 -3.2**
ISAL IAmb IAmb 08 21 56.5
comp=Z,86nm,0.7s
PABE Paberze 14.03 344 *e*P Pn 08 21 46.8 -4.6
KLNR Kaliningrad 14.22 334 *i* P **Pn 08 21 50.8 -3.2**
MOS Moscow 14.29 16 *e*P Pn 08 21 40.8 -14
MOS MLR MLR
comp=Z,2µm,17.0s
VSVD Vaisvydziai 14.48 345 *e*P **Pn 08 21 53.6 -4.0**
PBUR Paburge 14.97 341 *e*P **Pn 08 22 01.2 -3.0**
BELG Belogornoye 15.33 42 *i* P **Pn 08 22 08.5 -0.5**
SLIT Slitere, Latvi 16.35 344 *e*P **Pn 08 22 15.7 -6.6**
VSU Vasula 16.48 353 *i* P **Pn 08 22 19.6 -4.3**
VSU Vasula 16.48 353 *e*P **Pn 08 22 18.4 -5.5**
BSD Bornholm Skovb 16.55 327 *e*P **Pn 08 22 20.5 -4.3**
MTSE Matsula 17.10 348 *e*P **Pn 08 22 26.6 -5.0**
PUL Pulkovo 17.61 359 *i* P **P 08 22 38.3 -0.8**
DEL Delary 17.93 329 *e*P **Pn 08 22 38.3 -3.8**
MEF Metsahovi 18.46 350 *e*P **P 08 22 43.5 -5.0**
VIKU Vikbolandet 18.54 336 *e*P **P 08 22 45.9 -3.5**
AAL Aland 19.17 344 *e*P **P 08 22 52.1 -4.2**
UPP Uppsala 19.44 340 *e*P **P 08 22 56.2 -3.0**
KLMR Klimovskoe 19.45 13 *e*P **Pn 08 22 59.1 -1.4**
KLMR *e* 08 26 38.4
KLMR pmax pmax
comp=Z,101nm,0.7s
KLMR Klimovskoe 19.45 13 *e*Pn **Pn 08 22 59.2 -1.3**
KLMR *e*Pn **Pn 08 22 59.2 -1.3**
KLMR *e*Pn **Pn 08 22 59.2 -1.3**
KLMR AMP 08 23 12.4
comp=Z,101nm,0.7s
KLMR *e*Sn **S 08 26 38.5 -1.0**
KLMR *e*Sn **S 08 26 38.5 -1.0**
FINES FINESS Array B 19.48 353 P **P 08 22 57.0 -2.7**
comp=Z,14nm,0.4s,baz=169,slow=13,SNR=22
FINES S Sn 08 26 26.2 -13
comp=Z,32nm,0.8s,baz=163,slow=20,SNR=7.9
FINES FINESS Array B 19.48 353 P P 08 22 57.8 -1.9
FINES FINESS Array B 19.48 353 P P 08 22 57.8 -1.9
FIA1 FINESS Array S 19.48 353 P P 08 22 58.9 -0.8
RAF Rauma 19.62 347 *e*P **P 08 22 56.9 -4.3**
KIRV Kirov 20.18 29 P Pn 08 23 07.9 -1.2
comp=Z,22nm,0.5s,baz=237,slow=4.5,SNR=6.4
comp=Z,22nm,0.5s
KIRV Kirov 20.18 29 *i* P Pn 08 23 07.4 -1.7
AKTO Aktyubinsk 20.51 57 P Pn 08 23 11.5 -1.6
comp=Z,38nm,0.6s,baz=253,slow=12,SNR=28
comp=Z,38nm,0.6s
HFS Hagfors 20.77 336 P Pn 08 23 13.9 -2.2
comp=Z,23nm,0.7s,baz=141,slow=14,SNR=27
comp=Z,23nm,0.7s
HOMB Homborsund 21.30 327 *e*P **P 08 23 20.3 +0.9**
GEYT Alibeck 21.38 92 P P 08 23 21.4 +0.8
comp=Z,20nm,0.6s,baz=294,slow=11,SNR=11
comp=Z,20nm,0.6s
GEYT Alibeck 21.38 92 P P 08 23 19.7 -0.8
GYA0B ALIBECK ARRAY 21.38 92 P P 08 23 19.8 -0.8
VAF Ylistaro 21.41 350 P P 08 23 22.4 +1.8
VAF pmax pmax
comp=Z,72nm,0.9s
PRGR Permogore 21.44 20 *e*P **P 08 23 19.8 -1.1**
PRGR *e*S **S 08 27 17.3 -1.8**
PRGR pmax pmax
comp=Z,118nm,0.7s
ABKAR Akbulak array 21.52 61 P P 08 23 21.4 -0.5
OSL Oslo 21.60 332 *e*P **P 08 23 23.4 +0.8**
OSL IAmb IAmb 08 23 34.9
comp=Z,68nm,0.8s
KONO Kongsberg 21.79 331 P P 08 23 23.7 -1.1
KONO Kongsberg 21.79 331 *i* P **P 08 23 24.1 -0.6**
KONO pmax pmax
comp=Z,78nm,0.9s
KONO MLR MLR
comp=Z,1µm,16.0s
KONO Kongsberg 21.79 331 *e*P **P 08 23 24.5 -0.3**
NC602 NORSAR Array S 21.92 334 P P 08 23 25.2 -0.9
NC602 IAmb IAmb 08 23 39.6
comp=Z,98nm,0.8s
NC602 NORSAR Array S 21.92 334 *e*P **P 08 23 26.1 0.0**
NC602 IAmb IAmb 08 23 39.3
comp=Z,58nm,0.8s
NORES NORESS Array B 21.92 334 P P 08 23 28.3 +2.2
NB2 NORSAR Subarra 22.25 335 P P 08 23 29.5 -0.2
comp=Z,34nm,0.9s,baz=139,slow=11
NB2 NORSAR Subarra 22.25 335 P P 08 23 29.5 -0.2
baz=139,slow=11
NOA NORSAR Array B 22.25 335 P P 08 23 30.0 +0.3
comp=Z,12nm,0.7s,baz=138,slow=11,SNR=16
comp=Z,12nm,0.7s

RAYN Ar Rayn 22.33 142 P **P 08 23 32.3 +1.4**
BLS5 Blasjo 22.85 327 *e*P **P 08 23 37.0 +0.9**
BLS5 IAmb IAmb 08 23 49.6
comp=Z,39nm,1.0s
ARU Arti 22.88 42 P **P 08 23 36.6 +0.2**
comp=Z,73nm,0.7s,baz=225,slow=9.4,SNR=25
comp=Z,73nm,0.7s
ARU Arti 22.88 42 *e*P **P 08 23 35.7 -0.7**
ARU Arti 22.88 42*c i*P **P 08 23 36.2 -0.2**
ARU 08 24 03.1
ARU S **S 08 27 48.9 +2.3**
ARU SS **SnSn 08 28 23.9 +6.9**
ARU pmax pmax
comp=Z,290nm,1.1s
SKAR Skarslia 22.98 331 *e*P **P 08 23 38.0 +0.6**
SKAR IAmb IAmb 08 23 59.1
comp=Z,69nm,1.0s
ODD1 Odda 23.09 328 *e*P **P 08 23 39.3 +0.7**
ODD1 IAmb IAmb 08 23 50.9
comp=Z,43nm,0.9s
OUL Oulu 23.10 355 P **P 08 23 39.4 +0.9**
OUL pmax pmax
comp=Z,61nm,1.0s
DOMB Dombas 23.69 334 *e*P **P 08 23 45.4 +0.8**
MSF Maaselka 23.79 358 P **P 08 23 46.6 +1.2**
MSF pmax pmax
comp=Z,77nm,0.9s
BER Bergen 23.89 328 *e*P **P 08 23 47.2 +0.8**
BER IAmb IAmb 08 23 50.3
comp=Z,27nm,1.0s
HYA Hoyanger 24.07 330 *e*P **P 08 23 48.7 +0.6**
HYA IAmb IAmb 08 24 14.1
comp=Z,54nm,0.9s
SVE Sverdlovsk 24.09 42*de*P **P 08 23 49.0 +0.6**
SVE pmax pmax
comp=Z,155nm,1.5s
TBLU Trondheim 24.24 337 *e*P **P 08 23 51.3 +1.6**
AKN Aaknes 24.47 333 *e*P **P 08 23 52.6 +0.8**
AKN IAmb IAmb 08 24 11.8
comp=Z,68nm,0.8s
SUE Sulen 24.53 329 *e*P **P 08 23 53.0 +0.6**
SUE IAmb IAmb 08 23 58.8
comp=Z,34nm,1.0s
MOL Molde 24.56 334 *e*P **P 08 23 53.4 +0.7**
FOO Floro 24.77 330 *e*P **P 08 23 54.9 +0.4**
FOO IAmb IAmb 08 24 10.8
comp=Z,85nm,1.5s
NSS Namsos 24.81 341 *e*P **P 08 23 55.4 +0.5**
NSS IAmb IAmb 08 24 16.1
comp=Z,45nm,0.8s
APA Apatity 25.48 2⇓*i*P P 08 24 08.0 +7.1
APA *i* 08 24 34.0
APA MLR MLR
comp=Z,2μm,16.0s
EKA Eskdalemuir Ar 25.60 313 P **P 08 24 01.9 -0.3**
comp=Z,5.5nm,0.6s,baz=108,slow=9.8,SNR=4.3
EKA PcP **PcP 08 27 32.9 0.0**
comp=Z,5.6nm,0.8s,baz=118,slow=2.5,SNR=4.4
comp=Z,5.5nm,0.6s
MOR8 Moi Rana 25.67 345 *e*P **P 08 24 03.4 +0.7**
MOR8 IAmb IAmb 08 24 17.0
comp=Z,37nm,0.9s
LVZ Lovozero 25.85 3 *i*P **P 08 24 05.4 +1.0**
LVZ pmax pmax
comp=Z,61nm,1.9s
LVZ MLR MLR
comp=Z,1μm,15.0s
HRA Herat 25.86 97 P **P 08 24 05.2 +0.3**
KONS Konsvik 26.22 344 *e*P **P 08 24 08.3 +0.7**
KONS IAmb IAmb 08 24 31.9
comp=Z,53nm,0.8s
FAUS Fauske 26.60 347 *e*P **P 08 24 11.7 +0.7**
FAUS IAmb IAmb 08 24 35.9
comp=Z,34nm,0.9s
STEI Steigen 27.10 347 *e*P **P 08 24 16.1 +0.5**
STEI IAmb IAmb 08 24 39.2
comp=Z,30nm,0.8s
KTK1 Kautokeino 27.17 354 *e*P **P 08 24 16.5 +0.4**
KTK1 IAmb IAmb 08 24 44.7
comp=Z,90nm,0.6s
ARA0 ARCESS Array S 27.54 356 *e*P **P 08 24 20.1 +0.6**
ARA0 IAmb IAmb 08 24 49.1
comp=Z,83nm,0.7s
ARCES ARCESS Array B 27.54 356 P **P 08 24 20.2 +0.7**
comp=Z,4.3nm,0.6s,baz=177,slow=9.6,SNR=6.1
comp=Z,4.3nm,0.6s
JETT Jettan, Norway 27.95 352 IAmb IAmb 08 24 54.2
comp=Z,73nm,0.3s
TRO Tromso 28.18 351 *e*P **P 08 24 26.6 +1.4**
BRVK Borovoye 28.46 54*c i*P **P 08 24 28.8 +0.9**
BRVK pmax pmax
comp=Z,41nm,1.3s
BRVK MLR MLR
comp=Z,2μm,24.0s
BVAR Borovoye Array 28.52 54 P **P 08 24 30.0 +1.5**
comp=Z,4.7nm,0.5s,baz=266,slow=7.3,SNR=15
BVAR PP **PnPn 08 25 16.1 -1.5**
comp=Z,9.1nm,0.7s,baz=266,slow=13,SNR=4.9
comp=Z,4.7nm,0.5s
BVAR Borovoye Array 28.52 54 P **P 08 24 30.0 +1.5**
IUG Iuzhnay 28.99 77 *e*P **P 08 24 31.7 -1.1**
IUG Iuzhnay 28.99 77 *e*P **P 08 24 31.8 -1.1**
baz=77
KK31 Karatay Array 29.12 75 P **P 08 24 34.3 +0.4**
KK31 IAmb IAmb 08 24 37.0
comp=Z,32nm,0.8s
KK31 Karatay Array 29.12 75 P **P 08 24 34.3 +0.4**
KK31 pmax pmax
comp=Z,32nm,0.8s
KKAR Karatay Array 29.12 75 P **P 08 24 33.9 0.0**
KKAR Karatay Array 29.12 75 P **P 08 24 33.9 0.0**
BRZS Berezniki 29.82 60 *e*P **P 08 24 38.4 -1.6**
BRZS Berezniki 29.82 60 *e*P **P 08 24 38.5 -1.6**
baz=60
WSAR Wadi Sarin 29.96 120 PcP **PcP 08 27 44.0 -0.1**
comp=Z,3.4nm,0.5s,baz=237,slow=6.0,SNR=4.7
OHH Osh 31.41 79 P **P 08 24 56.1 +1.8**
OHH pmax pmax
comp=Z,23nm,1.9s
EKS2 Erkin-Say 31.56 74 P **P 08 24 57.3 +1.7**
SNR=11
SGDS Sogindy 31.98 73 *e*P **P 08 24 58.5 -0.7**
SGDS Sogindy 31.98 73 *e*P **P 08 24 58.6 -0.7**
baz=73
AAK Ala-Archa 32.08 74 P **P 08 25 02.7 +2.5**
SNR=17
AAK Ala-Archa 32.08 74 P **P 08 25 02.4 +2.2**
comp=Z,58nm,0.6s,baz=241,slow=2.6,SNR=65
AAK Ala-Archa 32.08 74 P **P 08 24 59.0 -1.2**
AAK Ala-Archa 32.08 74*c i*P **P 08 24 59.9 -0.3**
AAK pmax pmax
comp=Z,137nm,1.5s
CHMS Chumysh 32.17 73 P **P 08 25 02.6 +1.8**
SNR=6.7
KBK Karagaybulak 32.40 74 P **P 08 25 05.3 +2.3**
SNR=7.7
KUU Kurty 33.09 71 *e*P **P 08 25 08.5 -0.3**
KUU Kurty 33.09 71 *e*P **P 08 25 08.5 -0.3**
baz=71
ULHL Ulahol 33.43 74 P **P 08 25 14.0 +2.0**
SNR=8.7
KURK Kurchatov 33.59 59 *i*P **P 08 25 11.4 -1.7**
KURK pmax pmax
comp=Z,48nm,1.4s
MDOK Medeo 33.76 72 *e*P **P 08 25 15.1 +0.2**
MDOK Medeo 33.76 72 *e*P **P 08 25 15.2 +0.2**
baz=72
KSH Kashi 34.05 79 P **P 08 25 20.1 +2.7**
KSH pmax pmax
comp=Z,30nm,1.6s
SATY Saty 34.75 72 *e*P **P 08 25 24.4 +1.0**
SATY pmax pmax
comp=Z,42nm,1.1s
SATY Saty 34.75 72 *e*P **P 08 25 24.4 +1.0**
comp=Z,42nm,1.1s,baz=72
KPKS Kokpek 34.84 71 *e*P **P 08 25 24.3 +0.1**
KPKS pmax pmax
comp=Z,19nm,1.0s
KPKS Kokpek 34.84 71 *e*P **P 08 25 24.3 +0.1**
comp=Z,19nm,1.0s,baz=71
SHLS Shalkode 35.47 72 *e*P **P 08 25 31.8 +2.2**
SHLS Shalkode 35.47 72 *e*P **P 08 25 31.9 +2.2**
baz=72
MK31 Makanchi Array 36.55 65*c i*P **P 08 25 39.5 +0.7**
MKAR Makanchi Array 36.55 65 P **P 08 25 40.0 +1.3**
comp=Z,23nm,0.7s,baz=277,slow=8.7,SNR=45

MKAR PcP **PcP 08 28 02.4 +0.2**
comp=Z,5.8nm,0.8s,baz=273,slow=3.7,SNR=3.8
MKAR LR LR 08 44 31.6
comp=Z,1μm,19.2s,baz=126,slow=43
comp=Z,23nm,0.7s
ZAA0 Zalesovo Array 37.15 52 P **P 08 25 43.5 -0.2**
ZAA0 IAmb IAmb 08 25 45.6
comp=Z,97nm,1.2s
ZALV Zalesovo Beam 37.15 52 P **P 08 25 44.5 +0.8**
comp=Z,27nm,0.5s,baz=268,slow=9.5,SNR=57
comp=Z,27nm,0.5s
ZALV Zalesovo Beam 37.15 52 P **P 08 25 43.5 -0.2**
DGZ Jazzator, Alta 39.33 59*c i*P **P 08 26 03.5 +1.2**
DGZ pmax pmax
comp=Z,56nm,1.4s
DGZ MLR MLR
comp=Z,2μm,16.0s
NRIK Noril'sk 39.67 28 P **P 08 26 06.8 +2.1**
comp=Z,18nm,0.6s,baz=244,slow=6.5,SNR=11
comp=Z,18nm,0.6s
NRIK Noril'sk 39.67 28 *e*P **P 08 26 06.2 +1.5**
NRIK pmax pmax
comp=Z,66nm,1.4s
NRIK MLR MLR
comp=Z,1μm,16.0s
WMQ Urumqi 41.01 68⇑*i*P **P 08 26 18.0 +1.8**
WMQ S **S 08 32 27.4 -1.7**
WMQ pmax pmax
comp=Z,53nm,1.3s
WMQ LR LR
comp=Z,2μm,16.9s
WMQ LR LR
comp=Z,2μm,18.5s
MBAR Mbarara 42.60 180 *i*P **P 08 26 29.4 -0.1**
KMBO Kilima Mbogo 43.52 170 PcP **PcP 08 28 26.1 +1.0**
comp=Z,7.4nm,0.8s,baz=4.1,slow=5.1,SNR=9.6
KMBO Kilima Mbogo 43.52 170 *i*P **P 08 26 37.5 +0.4**
PYUN Piuthan 44.36 91 *e*P **P 08 26 44.2 +0.4**
DAAN Dangsing 44.80 90 *e*P **P 08 26 48.3 +0.9**
KOLN Koldanda 44.99 91 *e*P **P 08 26 48.7 -0.1**
KNGR Kungurtug, Tuv 45.41 55 *i*P **P 08 26 50.7 -1.1**
KNGR pmax pmax
comp=Z,46nm,1.7s
GKN Gorkha 45.63 90 *e*P **P 08 26 54.0 +0.1**
DMN Daman 46.20 90 *e*P **P 08 26 58.7 +0.3**
KKN Kakani 46.23 90 *e*P **P 08 26 58.7 +0.1**
PKIN Phulchoki 46.43 90 *e*P **P 08 27 00.1 -0.2**
PKI Pulchoki 46.44 90 *e*P **P 08 27 00.7 +0.3**
GUN Gumba 46.61 89 *e*P **P 08 27 02.0 +0.2**
JIRN Jiri 46.98 89 *e*P **P 08 27 05.0 +0.3**
HYBB Hyderabad (bro 47.54 106 *e*P **P 08 27 08.5 -0.2**
HYBB *e*pP **sP 08 27 10.6 +1.3**
HYBB *e*PcP **PcP 08 28 38.6 -0.2**
HYBB *e*PP **PP 08 29 01.4 +1.3**
HYBB *e*ScP **ScP 08 32 32.8 -0.9**
HYBB *e*PcS **PcS 08 32 33.9 -0.6**
HYBB *e*S **S 08 34 04.8 +0.2**
RAMN Ramite 47.67 90 *e*P **P 08 27 09.8 -0.1**
comp=Z,84nm,0.6s
TAPN Taplejung 48.27 89 *e*P **P 08 27 15.0 +0.3**
ODAN Odare 48.31 90 *e*P **P 08 27 15.1 +0.3**
ZAK Zakamensk 48.98 54 *e*P **P 08 27 19.6 0.0**
ZAK *e* 08 28 42.3
ZAK pmax pmax
comp=Z,21nm,1.4s
GOMU GeErMu 49.02 75 P **P 08 27 21.6 +1.2**
GOMU pP pwP 08 27 24.8 +1.2
GOMU sP sP 08 27 26.4 +5.5
GOMU pmax pmax
comp=Z,10.0nm,0.7s
LSA Lhasa 49.56 84 P **P 08 27 23.6 -1.2**
LSA IAmb IAmb 08 27 26.9
comp=Z,39nm,0.9s
LSA Lhasa 49.56 84 P **P 08 27 23.6 -1.2**
LSA pmax pmax
comp=Z,39nm,0.9s
GTA Gaotai 51.08 68⇑P **P 08 27 36.8 +1.1**
GTA pP pwP 08 27 44.3 +5.4
GTA sP sP 08 27 48.6 +12
GTA PcP **PcP 08 28 52.3 +0.8**
GTA pmax pmax
comp=Z,19nm,1.3s
GTA pmax pmax
comp=Z,750nm,6.5s
GTA LR LR
comp=Z,430nm,18.9s
GTA LR LR
comp=Z,760nm,20.0s
GTA LR LR
comp=Z,570nm,21.4s
SONM Songino Array 51.83 56 P **P 08 27 42.6 +1.4**
comp=Z,17nm,0.5s,baz=292,slow=8.3,SNR=24
SONM PcP **PcP 08 28 54.9 +0.8**
comp=Z,4.9nm,0.8s,baz=302,slow=3.3,SNR=4.2
comp=Z,17nm,0.5s
SONM Songino Array 51.83 56 P **P 08 27 41.5 +0.3**
SONM Songino Array 51.83 56 P **P 08 27 41.5 +0.3**
SONM pmax pmax
comp=Z,20nm,0.8s
ULN Ulaanbaatar 52.22 56 P **P 08 27 44.9 +0.8**
ULN IAmb IAmb 08 27 46.6
comp=Z,26nm,0.9s
ULN Ulaanbaatar 52.22 56 *i*P **P 08 27 44.3 +0.1**
ULN pmax pmax
comp=Z,34nm,1.0s
BOD Bodaibo 52.30 42 *e*P **P 08 27 42.7 -1.7**
BOD pmax pmax
comp=Z,33nm,1.3s
SHL Shillong 52.37 88 P **P 08 27 44.3 -1.3**
SHL Shillong 52.37 88 P **P 08 27 44.3 -1.3**
SHL pmax pmax
comp=Z,152nm,1.6s
TIXI Tiksi 53.05 23 *i*P **P 08 27 49.7 0.0**
TIXI pmax pmax
comp=Z,28nm,1.4s
EUNU Eureka 53.13 349 P **P 08 27 51.1 +0.8**
LZH Lanzhou 55.47 70⇓P **P 08 28 09.9 +1.8**
LZH pP pwP 08 28 16.8 +5.5
LZH pmax pmax
comp=Z,71nm,1.4s
LSZ Lusaka 57.23 183 P **P 08 28 21.9 +1.3**
comp=Z,6.9nm,0.9s,baz=27,slow=7.5,SNR=5.2
comp=Z,6.9nm,0.9s
YAK Yakutsk 57.63 33 *e*P **P 08 28 22.4 -0.5**
YAK pmax pmax
comp=Z,16nm,0.6s
YAK pmax pmax
comp=E,11nm,1.5s
RES Resolute Bay 57.99 345 P **P 08 28 26.0 +0.8**
comp=E,4.9nm,0.8s,baz=43,slow=6.9,SNR=6.9
comp=E,4.9nm,0.8s
CD2 Chengdu 58.13 76 P **P 08 28 28.1 +1.2**
CD2 pmax pmax
comp=E,90nm,0.8s
HHC Hu-ho-hao-te 58.31 62 *e*P **P 08 28 29.9 +1.8**
HHC sP pwP 08 28 40.3 +9.0
HHC pmax pmax
comp=E,90nm,1.0s
HHC pmax pmax
comp=E,4μm,5.5s
HIA Hailar 59.10 50 P **P 08 28 32.8 -0.6**
HIA IAmb IAmb 08 28 35.7
comp=Z,37nm,0.9s
HIA Hailar 59.10 50 *i*P **P 08 28 34.0 +0.6**
HIA pmax pmax
comp=Z,39nm,1.0s
PZH PanZhiHua 59.12 81 P **P 08 28 34.5 +0.5**
PZH pmax pmax
comp=Z,70nm,1.0s
XLT XiLinHaoTe 59.64 57⇓*i*P **P 08 28 39.0 +1.7**
XLT PcP **PcP 08 29 25.8 +1.4**
XLT pmax pmax
comp=Z,35nm,1.2s
XAN Xi'an 60.09 70⇑P **P 08 28 41.1 +0.6**
XAN pP pwP 08 28 51.8 +8.2
XAN pmax pmax
comp=Z,40nm,1.5s
XAN LR LR
comp=Z,710nm,15.8s
XAN LR LR
comp=Z,1μm,15.8s
KMI Kunming 60.65 82⇓P **P 08 28 45.1 +0.4**
KMI pmax pmax
comp=Z,35nm,1.0s
ZEA Zeya 60.80 43 *e*P **P 08 28 46.3 +1.3**

ZEA pmax pmax
comp=Z,10.0nm,1.1s
BJI Beijing 61.73 60 P **P 08 28 52.5 +1.1**
BJI PP **PP 08 31 07.1 +0.2**
BJI pmax pmax
comp=Z,29nm,1.0s
CMAR Chiang Mai Arr 61.84 90 P **P 08 28 52.3 -0.3**
comp=Z,18nm,0.9s,baz=304,slow=7.6,SNR=55
comp=Z,18nm,0.9s
HNS HongShan 62.20 64⇑P **P 08 28 55.6 +0.9**
HNS pmax pmax
comp=Z,27nm,1.2s
LYN LuoYang 62.26 67⇓*i*P **P 08 28 55.1 0.0**
LYN pmax pmax
comp=Z,10.0nm,1.0s
MATP Matopo 62.33 182 P **P 08 28 56.3 +0.6**
comp=Z,9.2nm,0.9s,baz=359,slow=8.0,SNR=5.7
comp=Z,9.2nm,0.9s
OPO Ambohidratompo 62.35 162 P **P 08 28 56.9 +1.0**
comp=Z,3.0nm,0.6s,baz=324,slow=6.3,SNR=5.0
comp=Z,3.0nm,0.6s
A36M Sachs Harbour 64.86 352 P **P 08 29 11.0 -0.7**
baz=20
BILL Bilibino 65.15 17⇓*e*P **P 08 29 13.0 -0.6**
BILL *e* 08 29 17.0
BILL PPP PPP 08 33 14.0
BILL S **S 08 37 55.0 -1.7**
BILL *e* 08 39 11.4
BILL *e*SS **SS 08 42 15.3 +7.4**
BILL pmax pmax
comp=Z,15nm,0.9s
BILL MLR MLR
comp=Z,563nm,17.0s
CN2 Changchun 65.36 53 P **P 08 29 16.3 +0.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
BNX BinXian 65.37 50⇓P **P 08 29 16.3 +0.9**
BNX pmax pmax
comp=Z,35nm,0.8s
SEY Seymchan 65.39 25 P **P 08 29 16.8 +1.5**
comp=Z,20nm,0.9s,baz=322,slow=6.2,SNR=32
comp=Z,20nm,0.9s
SEY Seymchan 65.39 25 *i*P **P 08 29 16.5 +1.2**
SEY pmax pmax
comp=Z,28nm,1.0s
KLR Kul'dur 65.68 45*c i*P **P 08 29 18.0 +0.6**
KLR pmax pmax
comp=Z,34nm,0.9s
LBTB Lobatse 67.03 185 P **P 08 29 27.4 +1.1**
comp=Z,5.7nm,0.7s,baz=350,slow=6.5,SNR=5.6
comp=Z,5.7nm,0.7s
C36M Paulatuk 67.22 351 P **P 08 29 27.0 +0.1**
baz=20
MA2 Magadan 67.27 29 *i*P **P 08 29 27.0 -0.4**
MA2 pmax pmax
comp=Z,18nm,0.9s
PKME Peaks-Kenny Pk 67.49 311 P **P 08 29 30.3 +1.3**
baz=52
NJ2 Nanjing 68.06 66 *e*P **P 08 29 32.3 -0.5**
NJ2 pmax pmax
comp=Z,19nm,0.8s
C26K Camden Bay 68.16 358 P **P 08 29 32.7 -0.1**
baz=3.5
C23K Itkillik River 68.29 0 P **P 08 29 35.0 +1.4**
baz=359
C27K Jago River 68.42 358 P **P 08 29 35.7 +1.2**
baz=4.4
D25K Kavik River 68.78 359 P **P 08 29 37.9 +1.0**
baz=2.3
USA0B Ussuriysk Arra 68.89 49 *i*P **P 08 29 37.7 -0.1**
USRK Ussuriysk Ar. 68.89 49 P **P 08 29 38.4 +0.5**
comp=Z,27nm,0.8s,baz=302,slow=5.0,SNR=33
comp=Z,27nm,0.8s
D24K Happy Valley 68.97 360 P **P 08 29 38.5 +0.5**
baz=0.4
D23K Nanushuk River 69.16 1 P **P 08 29 40.4 +1.3**
baz=359
INK Inuvik 69.19 354 P **P 08 29 39.4 +0.2**
comp=Z,10nm,1.1s,baz=329,slow=8.1,SNR=4.7
comp=Z,10nm,1.1s
INK Inuvik 69.19 354 P **P 08 29 39.9 +0.6**
baz=12,SNR=6.1
TOLK Toolik Lake Re 69.49 0 P **P 08 29 41.6 +0.4**
baz=360
VLA Vladivostok 69.51 50 *i*P **P 08 29 40.2 -1.5**
VLA pmax pmax
comp=Z,70nm,1.0s
LBNH Lisbon 69.60 312 P **P 08 29 42.1 -0.2**
baz=51
RDOG Red Dog Mine 69.60 5 P **P 08 29 41.9 0.0**
baz=349
E27K Coleen River 69.79 357 P **P 08 29 43.3 +0.3**
baz=6.1,SNR=5.9
E25K Arctic Village 69.98 359 P **P 08 29 43.7 -0.5**
baz=2.9,SNR=5.9
E22K Anaktuvuk Pass 69.98 1 P **P 08 29 44.5 +0.2**
baz=358
F31M Tsiigehtchic 70.06 354 P **P 08 29 45.2 +0.6**
baz=12,SNR=7.1
E24K Your Creek 70.06 360 P **P 08 29 44.5 -0.2**
baz=0.6
E23K Chandalar 70.08 0 P **P 08 29 45.9 +1.0**
baz=360,SNR=5.1
F26K Sheenjek River 70.37 358 P **P 08 29 47.8 +1.2**
baz=4.0,SNR=9.4
HRV Adam Dziewonsk 70.49 310 P **P 08 29 48.4 +0.6**
baz=50
F25K Christian Rive 70.51 359 P **P 08 29 48.1 +0.6**
baz=2.9
F22K John River 70.61 1 P **P 08 29 49.3 +1.3**
baz=358
F24K Squaw Lake 70.61 359 P **P 08 29 49.1 +1.0**
baz=1.1,SNR=8.0
KS19 Wonju Array Si 70.62 57 P **P 08 29 48.6 -0.1**
KS19 IAmb IAmb 08 29 50.4
comp=Z,39nm,0.9s
BOSA Boshof 70.63 185 P **P 08 29 49.1 +0.5**
comp=Z,8.6nm,0.6s,baz=2.5,slow=5.8,SNR=17
comp=Z,8.6nm,0.6s
BMAR Burnt Mountain 70.65 358 P **P 08 29 49.8 +1.4**
KSRS Korea Array 70.69 57 P **P 08 29 49.2 +0.3**
comp=Z,27nm,0.8s,baz=309,slow=5.3,SNR=91
comp=Z,27nm,0.8s
G30M tAoh Zrail Nji 70.70 355 P **P 08 29 48.9 +0.2**
baz=10
LONY Lake Ozonia 70.81 313 P **P 08 29 50.7 +1.0**
baz=49
F21K Alatna River 70.87 2 P **P 08 29 50.7 +1.0**
baz=357,SNR=12
COLD Coldfoot 70.91 0 P **P 08 29 50.4 +0.6**
COLD Coldfoot 70.91 0 P **P 08 29 50.5 +0.6**
baz=359
G26K Porcupine Rive 71.11 358 P **P 08 29 52.0 +1.0**
baz=4.3,SNR=7.7
G27K Doyon Strip 71.17 357 P **P 08 29 52.7 +1.2**
baz=6.0,SNR=5.4
G22K Bettles 71.21 1 P **P 08 29 52.4 +0.8**
baz=358,SNR=5.9
EPYK Eagle Plains 71.34 355 P **P 08 29 52.9 +0.4**
baz=9.8,SNR=6.0
G23K Bananza Creek 71.43 0 P **P 08 29 53.8 +0.7**
baz=359
G24K Hadweenzic Riv 71.43 359 P **P 08 29 53.4 +0.4**
baz=1.4
FYU Fort Yukon 71.53 358 IAMs_20 IAMs_20 09 00 00.4
comp=Z,839nm,19.0s
G21K Allakaket 71.58 2 P **P 08 29 54.5 +0.6**
baz=357
TNA Tin City 71.61 8 P **P 08 29 54.3 +0.2**
baz=346
H27K Steamboat Moun 71.75 357 P **P 08 29 55.9 +0.9**
baz=6.0,SNR=8.0
H25K Birch Creek 71.84 359 P **P 08 29 56.8 +1.3**
baz=2.7
YKA Yellowknife Ar 72.00 344 P **P 08 29 57.1 +0.6**
comp=Z,19nm,0.8s,baz=27,slow=5.5,SNR=18
comp=Z,19nm,0.8s
PSI Prapat 72.08 103 P **P 08 29 57.0 -0.9**
comp=Z,19nm,0.6s,baz=309,slow=7.5,SNR=12
comp=Z,19nm,0.6s
IMAR Indian Mountai 72.11 2 P **P 08 29 58.3 +1.2**
RPSI Rantau Prapat 72.15 103 P **P 08 29 56.6 -1.5**
RPSI IAmb IAmb 08 29 57.7
comp=Z,32nm,0.9s
RPSI Rantau Prapat 72.15 103 P **P 08 29 57.0 -1.1**
H22K Ishtalitna Cre 72.24 1 P **P 08 29 59.1 +1.1**
baz=358,SNR=9.0
H23K Yukon River 72.32 0 P **P 08 29 59.6 +1.2**

H23K IAmb IAmb 08 30 01.7
comp=Z,54nm,1.6s
H23K Yukon River 72.32 0 P P 08 29 59.2 +0.8
baz=360,SNR=8.4
I27K Kandik River 72.38 357 P P 08 29 59.3 +0.5
baz=6.0,SNR=5.7
I29M Ogilvie Camp, 72.44 355 P P 08 29 59.3 +0.1
baz=8.5
H21K Melozitna Rive 72.45 2 P P 08 30 00.2 +1.0
baz=357,SNR=8.4
PRP Porcupine Dome 72.59 358 P P 08 30 00.7 +0.5
baz=2.9
I26K Coal Creek Min 72.73 357 P P 08 30 01.6 +0.7
baz=4.8
YSS Yuzh-Sakhalins 72.77 42 P P 08 30 01.7 +0.4
YSS Yuzh-Sakhalins 72.77 42 *e*P **P 08 30 02.0 +0.6**
YSS pmax pmax
comp=Z,110nm,0.9s
PAL Palisades 72.81 310 P P 08 30 03.2 +1.5
baz=49
WRGLY Wrigley 72.92 348 P P 08 30 02.7 +0.8
baz=20
I21K Tanana 72.95 1 P P 08 30 02.7 +0.6
baz=358
I23K Minto, Yukon-K 73.00 0 P P 08 30 03.2 +0.8
I23K Minto, Yukon-K 73.00 0 P P 08 30 03.3 +0.9
baz=360,SNR=5.7
POKR Poker Plat Res 73.02 359 P P 08 30 03.1 +0.5
baz=1.4
MLY Manley 73.11 1 P P 08 30 03.7 +0.5
baz=359
SADO Sadowa 73.14 316 P P 08 30 04.1 +0.5
comp=Z,7.6nm,0.7s,baz=90,slow=3.4,SNR=4.8
comp=Z,7.6nm,0.7s
BINY Binghamton 73.18 312 P P 08 30 04.5 +0.6
baz=48
EGAK Eagle 73.18 356 P P 08 30 03.9 +0.4
baz=6.3
GCSA Galena City Sc 73.24 3 P P 08 30 05.4 +1.6
baz=354
COLA College 73.27 359 *i* P **P 08 30 03.2 -0.8**
COLA pmax pmax
comp=Z,5.0nm,0.9s
COLA College 73.27 359 P P 08 30 04.2 +0.2
baz=1.1
TCOL CIGO, UAF Yank 73.27 359 P P 08 30 04.4 +0.4
baz=1.1
ILAR Eielson Array 73.36 359 P P 08 30 05.3 +0.7
comp=Z,1.6nm,0.5s,baz=346,slow=5.4,SNR=15
comp=Z,1.6nm,0.5s
J25K Salcha River, 73.49 358 P P 08 30 05.5 0.0
baz=3.0
J26L Joseph Creek 73.55 357 P P 08 30 05.8 0.0
baz=4.4,SNR=8.9
NEA2 Nenana 73.56 360 P P 08 30 05.8 +0.1
baz=0.2
HDA Harding Lake 73.73 359 P P 08 30 06.8 +0.1
baz=1.8,SNR=8.3
DAWY Dawson 73.80 355 P P 08 30 07.7 +0.5
baz=7.6,SNR=7.2
K29M Barlow Dome 73.90 355 P P 08 30 07.9 0.0
baz=9.1
J20K Nowinta River 73.91 2 P P 08 30 08.2 +0.4
baz=356,SNR=6.3
K27K Chicken 73.97 357 P P 08 30 09.1 +0.9
K27K IAmb IAmb 08 30 10.8
comp=Z,37nm,1.2s
K27K Chicken 73.97 357 P P 08 30 08.6 +0.4
baz=5.5
MAYO Mayo, Yukon 74.02 354 P P 08 30 08.3 -0.2
baz=10
BPAW Bear Paw Mtn. 74.04 1 P P 08 30 09.0 +0.4
baz=359
SCRK Sand Creek 74.09 358 P P 08 30 09.4 +0.4
baz=4.1,SNR=5.3
K24K Donnelly Dome 74.31 358 P P 08 30 10.4 +0.2
baz=2.7,SNR=7.0
RIDG Independent Ri 74.35 358 P P 08 30 10.7 +0.2
baz=3.4
MCK McKinley 74.42 360 P P 08 30 11.7 +0.9
MCK McKinley 74.42 360 P P 08 30 11.1 +0.2
baz=0.3,SNR=6.1
L29M L29M 74.67 355 P P 08 30 12.8 +0.5
baz=8.6
PETK Petropavlovsk- 74.69 30 P P 08 30 12.0 -0.5
comp=Z,9.0nm,1.0s,baz=242,slow=3.2,SNR=7.1
comp=Z,9.0nm,1.0s
TRF Thorofare Moun 74.70 0 P P 08 30 12.5 -0.1
baz=359
CAST Castle Rocks 74.71 1 P P 08 30 12.9 +0.4
baz=358,SNR=9.9
SUR Sutherland 74.76 189 P P 08 30 14.4 +1.1
comp=Z,4.5nm,0.6s,baz=2.3,slow=5.2,SNR=9.9
comp=Z,4.5nm,0.6s
L27K Beaver Creek, 74.92 356 P P 08 30 14.1 +0.3
baz=5.7,SNR=5.6
L26K Log Cabin Wild 75.02 357 P P 08 30 14.4 +0.1
baz=4.5,SNR=7.1
DHY Denali Highway 75.07 359 P P 08 30 15.0 +0.2
baz=1.5,SNR=6.5
TTA Tatalina 75.09 3 P P 08 30 14.9 +0.1
baz=355
FARO Faro, Yukon 75.14 352 P P 08 30 16.0 +1.0
baz=12
PAX Paxson 75.14 358 P P 08 30 16.3 +1.2
baz=2.9
TGTN Hyland Airport 75.23 350 P P 08 30 16.6 +0.9
baz=16,SNR=8.0
PPLA Purkeypile 75.24 1 P P 08 30 16.2 +0.5
baz=358
M31M Drury Creek, Y 75.26 353 P P 08 30 16.4 +0.7
baz=11,SNR=6.4
SSPA Standing Stone 75.29 312 P P 08 30 16.8 +0.6
baz=47
M29M Somme Creek 75.35 355 P P 08 30 17.1 +0.7
baz=8.3,SNR=12
ERPA Erie 75.41 314 P P 08 30 16.9 0.0
baz=46
BVCY Beaver Creek 75.52 356 P P 08 30 17.5 +0.2
baz=6.4,SNR=7.6
WAT6 Susitna Watana 75.57 359 P P 08 30 17.7 0.0
baz=1.2,SNR=5.4
L20K Farewell, AK 75.61 2 P P 08 30 18.0 +0.2
baz=356
M27K Edge Creek, AK 75.63 356 P P 08 30 18.7 +0.7
baz=5.7
M26K Nabesna, AK 75.63 357 P P 08 30 18.5 +0.6
baz=4.8,SNR=7.9
HARP HAARP 75.71 358 P P 08 30 18.8 +0.5
baz=3.1
FLDN Fort Liard 75.75 347 P P 08 30 19.5 +1.1
baz=20
L19K White Mountain 75.88 3 P P 08 30 20.5 +1.2
baz=356
KOTAN Kotaneelee Air 75.95 347 P P 08 30 20.2 +0.6
baz=19
M24K Tolsona, Glenn 76.02 358 P P 08 30 20.7 +0.6
baz=2.4
HILA High Level 76.08 343 P P 08 30 21.4 +1.0
N31M Braeburn, Yuko 76.09 353 P P 08 30 21.6 +1.1
baz=10
YUK3 Moose Creek 76.14 356 P P 08 30 22.0 +1.0
baz=6.7,SNR=7.6
SKT Skwentna 76.17 1 P P 08 30 21.2 +0.3
baz=358,SNR=5.3
N32M Quiet Lake 76.17 352 P P 08 30 21.0 +0.1
baz=12
M19K Big River Lodg 76.18 2 P P 08 30 21.3 +0.4
baz=356
N30M Aishikik Lake 76.23 354 P P 08 30 21.6 +0.3
baz=9.3
M20K Styx River 76.23 2 P P 08 30 21.6 +0.3
baz=357
SCM Sheep Creek Mo 76.32 359 P P 08 30 22.7 +0.9
baz=1.5,SNR=11
SML Sawmill 76.35 360 P P 08 30 22.2 +0.2
baz=0.7,SNR=5.1
M23K Glacier View 76.36 359 P P 08 30 22.5 +0.5
baz=1.2,SNR=6.8
M22K Willow 76.41 0 P P 08 30 22.3 +0.1
baz=359
YUK4 Talbot Arm 76.45 355 P P 08 30 22.7 -0.1
baz=8.2
N25K Chitina, Valde 76.48 358 P P 08 30 23.4 +0.6
baz=3.6
PMR Palmer 76.57 360 P P 08 30 23.3 +0.1
baz=0.1
YUK8 Steele Glacier 76.59 355 P P 08 30 22.8 -0.8
baz=7.2
KLU Klutina 76.63 358 P P 08 30 23.3 -0.3
baz=2.6
CBN Corbin Frederi 76.67 310 P P 08 30 24.3 +0.2
baz=46
SUA Susitna One 76.69 1 P P 08 30 24.1 +0.1
baz=359
KNK Knik Glacier 76.75 360 P P 08 30 24.3 +0.1
baz=0.6,SNR=5.2
EYMN Ely 76.75 324 P P 08 30 24.6 +0.1
baz=40
ULM Lac du Bonnet 76.77 328 P P 08 30 25.1 +0.6
comp=Z,15nm,1.0s,baz=22,slow=5.2,SNR=7.5
comp=Z,15nm,1.0s
O30N Mendenhall 76.83 353 P P 08 30 24.8 0.0
baz=10.0
WHY Whitehorse 76.83 353 P P 08 30 24.9 +0.1
baz=11
YUK6 Outpost Mounta 76.83 355 P P 08 30 25.5 +0.5
baz=8.3
HYT Haines Junctio 76.89 354 P P 08 30 26.0 +0.8
baz=8.9,SNR=7.1
SPCR Spurr Chakacha 76.94 1 P P 08 30 26.1 +0.7
baz=358
N20K Mount Spurr 76.94 1 P P 08 30 26.3 +0.9
baz=358
LIRD Liard River Hi 76.96 348 P P 08 30 26.6 +1.2
baz=17
CTG Chitna Glacier 76.99 356 P P 08 30 26.3 +0.5
baz=6.0
P33M Teslin, Yukon 77.06 352 P P 08 30 26.4 +0.3
baz=12,SNR=6.6
RC01 Rabbit Creek A 77.07 0 P P 08 30 26.4 +0.4
baz=360,SNR=6.7
BMRM Bremner River 77.12 358 P P 08 30 26.4 0.0
baz=3.5
N19K Bonanza Creek 77.27 3 P P 08 30 27.6 +0.4
baz=356,SNR=6.9
GLI Glacier Island 77.27 359 P P 08 30 27.4 +0.2
baz=1.7
PWL Port Wells 77.30 360 P P 08 30 27.7 +0.4
baz=0.7
N18K Kilae Creek 77.34 3 P P 08 30 27.8 +0.2
baz=355
O53A New Philadelph 77.38 313 P P 08 30 28.6 +0.4
baz=45
N16K Nishlik Lake 77.40 5 P P 08 30 28.1 +0.2
baz=353
O29M Mount Kennedy 77.48 355 P P 08 30 28.6 +0.1
baz=8.1
MAJO Matsushiro 77.50 52*c i*P **P 08 30 28.5 -0.4**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MJAR Matsushiro Arr 77.50 52 P **P 08 30 29.5 +0.6**
comp=Z,7.8nm,0.9s,baz=315,slow=6.0,SNR=14
comp=Z,7.8nm,0.9s
P30M Million Dollar 77.54 354 P P 08 30 28.9 +0.2
baz=9.3
EYAK Cordova Ski Ar 77.58 358 P P 08 30 28.8 0.0
baz=2.7
R33M Jennings River 77.64 351 P P 08 30 30.7 +1.3
baz=14,SNR=17
O22K Cooper Landing 77.68 0 P P 08 30 29.8 +0.4
baz=360
P32M Atlin 77.76 352 P P 08 30 30.2 +0.2
baz=12
PINM Pinnacle 77.80 355 P P 08 30 30.4 +0.2
baz=6.8
O19K Port Alsworth 77.89 3 P P 08 30 31.5 +1.0
baz=356
SKAG Skagway 78.05 353 P P 08 30 32.5 +1.0
baz=10
SEW Seward 78.06 0 P P 08 30 32.3 +0.7
baz=360
P29M Windy Craggy 78.09 354 P P 08 30 32.4 +0.6
baz=8.7
PLBC Pleasant Camp 78.15 353 P P 08 30 32.6 +0.6
baz=9.8
P23K Montague Islan 78.16 359 P P 08 30 32.3 +0.2
baz=1.4
PNL Peninsula 78.17 355 P P 08 30 32.4 +0.2
baz=7.5
O17K Koliganek Bris 78.19 4 P P 08 30 32.7 +0.4
baz=354
O18K Koktuh Hills 78.20 3 P P 08 30 32.9 +0.5
O18K IAmb IAmb 08 30 34.4
comp=Z,17nm,0.8s
O18K Koktuh Hills 78.20 3 P P 08 30 32.8 +0.5
baz=356
Q32M Nakina River 78.22 351 P P 08 30 33.0 +0.3
baz=13
AGMN Agassiz Nation 78.31 327 P P 08 30 33.5 +0.3
baz=38
P52A Corning 78.31 313 P P 08 30 33.7 +0.4
baz=44
O16K Kokwok River B 78.32 5 P P 08 30 33.5 +0.5
baz=353
BRSE Bradley Lake S 78.42 1 P P 08 30 34.0 +0.4
baz=359
DLBC Dease Lake 78.46 350 P P 08 30 34.6 +0.8
baz=14
P17K Kvichak River 78.80 4 P P 08 30 35.3 -0.3
baz=355
S34M Telegraph Cree 79.11 350 P P 08 30 38.4 +1.0
baz=14,SNR=8.4
R32K Eaglecrest 79.14 352 P P 08 30 37.9 +0.4
baz=11
F36A Milaca 79.24 324 P P 08 30 38.7 +0.3
F36A IAmb IAmb 08 30 39.7
comp=Z,21nm,0.8s
SPMN Marine on St. 79.42 323 P P 08 30 39.2 -0.1
baz=39,SNR=5.8
O48B Farmland 79.47 316 P P 08 30 38.9 -0.8
baz=43
Q17K Contact Creek 79.76 4 P P 08 30 40.8 -0.2
baz=355
T35M Bob Quinn 79.90 350 P P 08 30 42.1 +0.4
baz=14
JFWS Jewell Farm 80.02 320 P P 08 30 41.8 -0.8
baz=40
EDM Edmonton 80.04 339 P P 08 30 42.2 -0.4
EDM IAmb IAmb 08 30 44.2
comp=Z,41nm,0.9s
EDM Edmonton 80.04 339 P P 08 30 42.2 -0.4
EDM pmax pmax
comp=Z,41nm,0.9s
MDND Maddock 80.16 329 P P 08 30 42.6 -0.7
baz=35
KDAK Kodiak Island 80.35 2 *i* P **P 08 30 43.4 -0.7**
KDAK pmax pmax
comp=Z,13nm,0.8s
KDAK Kodiak Island 80.35 2 P P 08 30 43.8 -0.3
baz=358
WRAK Wrangell Islan 80.72 351 P P 08 30 45.5 -0.6
baz=13
OHAK Old Harbor 80.90 2 P P 08 30 47.1 +0.1
baz=357
R49A Shelbyville 80.92 314 P P 08 30 47.8 +0.2
R49A IAmb IAmb 08 30 49.7
comp=Z,85nm,1.8s
KMSC Kings Mountain 81.08 310 P P 08 30 49.4 +1.0
baz=44
SEUS St. Eustatius 81.11 285 IAMs_20 IAMs_20 09 03 29.3
comp=Z,508nm,20.0s
DGMT Dagmar 81.35 332 IAMs_20 IAMs_20 09 02 31.1
comp=Z,1μm,20.0s
DGMT Dagmar 81.35 332 P P 08 30 50.0 +0.3
baz=32
HDIL Hopedale 81.35 318 P P 08 30 50.1 +0.4
baz=40
SII Sitkinak Islan 81.53 3 P P 08 30 50.2 -0.3
baz=356
WCI Wyandotte Cave 81.56 315 P P 08 30 51.6 +0.7
WCI Wyandotte Cave 81.56 315 P P 08 30 50.6 -0.3
baz=42
E28A Huff 81.63 328 P P 08 30 51.3 +0.1
MDP Montagnes des 81.66 269 P P 08 30 52.9 +1.1
comp=Z,5.0nm,0.6s,baz=58,slow=5.5,SNR=5.0
comp=Z,5.0nm,0.6s
NHSC New Hope 81.86 308 IAMs_20 IAMs_20 09 12 36.4
comp=Z,2μm,19.0s
CHIR Chirikof Islan 82.21 4 P P 08 30 54.1 +0.1
baz=355
ECSD EROS Data Cent 82.27 324 P P 08 30 55.4 +0.7
ECSD IAmb IAmb 08 30 57.0
comp=Z,26nm,1.2s
ECSD EROS Data Cent 82.27 324 P P 08 30 54.6 0.0
baz=36,SNR=7.3
CPCT Cooper Cave 82.65 312 P P 08 30 57.1 +0.4
CPCT IAmb IAmb 08 30 58.2
comp=Z,24nm,1.1s
SUSD Miller 82.69 326 P P 08 30 56.7 -0.1
baz=35
CHNA Chernabura Isl 82.95 6 P P 08 30 58.1 +0.2
baz=352
N38A Joes South For 83.07 321 P P 08 30 58.4 -0.4
P40A Paris 83.49 319 P P 08 30 00.5 -0.5
P40A IAmb IAmb 08 32 19.5
comp=Z,16nm,0.8s
GOGA Godfrey 83.55 310 P P 08 31 02.4 +1.0
baz=43
LAO LASA Array 83.58 332 P P 08 31 02.6 +1.2
LAO LASA Array 83.58 332 P P 08 31 02.0 +0.6
baz=31,SNR=14
EGMT Eagleton 83.61 335 P P 08 31 01.9 +0.4
baz=28,SNR=8.2
CCM Cathedral Cave 84.23 318 P P 08 31 05.2 +0.4
CCM pmax pmax
comp=Z,26nm,1.3s
CCM Cathedral Cave 84.23 318 P P 08 31 05.6 +0.8
baz=39
BGNE Belgrade 84.82 324 P P 08 31 07.8 +0.1
baz=35
RSSD Black Hills 84.97 329 P P 08 31 09.0 +0.3
RSSD Black Hills 84.97 329 P P 08 31 09.1 +0.4
baz=32
TIGA Tifton 85.06 309 P P 08 31 09.0 -0.1
baz=43
NEW Newport 85.55 339 P P 08 31 12.1 +0.8
NEW IAmb IAmb 08 31 13.6
comp=Z,30nm,1.1s
NEW Newport 85.55 339 P P 08 31 12.1 +0.8
NEW pmax pmax
comp=Z,30nm,1.1s
NEW Newport 85.55 339 P P 08 31 11.8 +0.5
baz=23,SNR=14
LRAL Lakeview Retre 85.81 312 P P 08 31 12.7 -0.1
baz=41,SNR=10
MSO Missoula 85.96 337 P P 08 31 13.5 0.0
baz=25,SNR=12
KSU1 Kansas State U 85.99 322 P P 08 31 13.8 +0.2
baz=36
RLMT Red Lodge 86.00 333 P P 08 31 14.5 +0.6
baz=28,SNR=9.6
OXF Oxford 86.01 314 IAMs_20 IAMs_20 09 08 59.6
comp=Z,1μm,20.0s
C09A Chrisman Ranch 86.28 340 P P 08 31 15.7 +0.8
C09A IAmb IAmb 08 31 17.1
comp=Z,16nm,0.7s
BOZ Bozeman (W) 86.36 335 P P 08 31 15.5 0.0
baz=27,SNR=9.8
LRM Limekiln Ridge 86.42 335 P P 08 31 15.4 -0.5
OGNE Ogallala 86.85 326 P P 08 31 18.3 +0.4
baz=33
H17A Grant Village 87.08 333 P P 08 31 22.0 +2.8
baz=28,SNR=12
K22A Casper 87.17 330 P P 08 31 19.1 -0.5
baz=30,SNR=6.8
CBKS Cedar Bluff 87.64 323 P P 08 31 21.6 -0.1
baz=34
MIAR Mount Ida 88.15 317 IAMs_20 IAMs_20 09 05 13.1
comp=Z,1μm,20.0s
MIAR Mount Ida 88.15 317 P P 08 31 24.7 +0.5
baz=38
TUL1 Leonard 88.16 319 P P 08 31 24.0 -0.3
baz=37,SNR=5.8
BW06 Boulder Array 88.17 332 P P 08 31 23.7 -0.7
baz=28
PDAR Pinedale Array 88.17 332 P P 08 31 24.8 +0.3
comp=Z,4.3nm,0.9s,baz=58,slow=3.7,SNR=11
comp=Z,4.3nm,0.9s
OK045 Pawnee Station 88.28 320 IAMs_20 IAMs_20 09 02 01.2
comp=Z,1μm,21.0s
OK046 Pawnee Station 88.31 320 IAMs_20 IAMs_20 09 01 55.1
comp=Z,1μm,22.0s
OK048 Pawnee Station 88.31 320 IAMs_20 IAMs_20 09 01 54.1
comp=Z,1μm,22.0s
OK050 Pawnee Station 88.35 320 IAMs_20 IAMs_20 09 15 21.1
comp=Z,1μm,20.0s
VBMS Vicksburg 88.36 314 P P 08 31 25.8 +0.6
baz=39
N23A Red Feather La 88.46 329 P P 08 31 26.7 +0.7
baz=31,SNR=7.7
OK033 Mehan 88.61 320 IAMs_20 IAMs_20 09 11 35.0
comp=Z,1μm,19.0s
KSCO Kaye Shedlock' 88.72 325 P P 08 31 27.8 +0.8
baz=33
OK035 E0210 Rd and N 88.90 322 IAMs_20 IAMs_20 09 12 38.6
comp=Z,1μm,20.0s
OK029 Liberty Lake 89.05 320 IAMs_20 IAMs_20 09 03 01.8
comp=Z,1μm,20.0s
OK038 West end E0370 89.10 321 IAMs_20 IAMs_20 09 07 50.0
comp=Z,1μm,18.0s
ISCO Idaho Springs 89.27 328 P P 08 31 30.3 +0.5
baz=31
Q24A Divide 89.80 327 P P 08 31 32.4 +0.1
baz=31
SMCO Snowmass 90.34 328 IAMs_20 IAMs_20 09 01 45.3
comp=Z,1μm,20.0s
WMOK Wichita Mounta 90.54 321 P P 08 31 36.0 +0.5
baz=35,SNR=7.4
SDCO Great Sand Dun 90.99 327 P P 08 31 38.0 +0.2
baz=31
T25A Trinidad 91.05 326 P P 08 31 38.3 +0.3
baz=32
S22A 4UR Ranch, Cre 91.52 328 P P 08 31 40.4 +0.1
baz=30,SNR=5.7
DUG Dugway, Tooele 91.57 333 P P 08 31 41.4 +1.1
baz=26
Q16A Castle Valley 92.14 331 P P 08 31 43.5 +0.5
Q16A IAmb IAmb 08 31 44.5
comp=Z,13nm,1.1s
BDFB Brasilia 92.23 251 P P 08 31 44.9 +1.4
comp=Z,7.2nm,0.8s,baz=42,slow=3.8,SNR=3.6
comp=Z,7.2nm,0.8s
MVCO Mesa Verde 92.64 329 P P 08 31 46.0 +0.6
baz=29
ABTX Abilene, Hawle 92.69 320 P P 08 31 46.0 +0.6
baz=34
ANMO Albuquerque 93.78 326 P P 08 31 51.1 +0.4
baz=30
R11A Troy Canyon, C 94.16 334 P P 08 31 52.7 +0.4
baz=24
NVAR Mina Array Bea 94.94 336 P P 08 31 57.1 +1.2
comp=Z,1.7nm,0.7s,baz=17,slow=4.1,SNR=10.0
comp=Z,1.7nm,0.7s
WUAZ Wupatki 95.23 330 P P 08 31 57.9 +0.7
baz=27
GRAC Grapevine Rang 95.97 335 P P 08 32 01.3 +0.9
baz=23
MPMC Manual Prospec 96.86 335 P P 08 32 05.1 +0.5
baz=23
PDMCI Parker Dam,Lak 97.33 331 P Pdif 08 32 06.9 +0.3
baz=25
TXAR Lajitas Array 97.33 321 P Pdif 08 32 06.9 +0.1
comp=Z,1.3nm,0.8s,baz=57,slow=6.6,SNR=6.1
comp=Z,1.3nm,0.8s
TUC Tucson 97.84 328 P Pdif 08 32 09.1 0.0
baz=28
EDW2 Edwards Air Fo 98.11 334 P Pdif 08 32 10.8 +0.7
baz=23
BELC Belle Mtn. Jos 98.25 333 P Pdif 08 32 11.3 +0.4
baz=24
PKM Mcpherson Peak 98.67 336 P Pdif 08 32 12.8 -0.1
baz=22
PFO Pinyon Flats O 98.76 333 P Pdif 08 32 13.2 +0.1
baz=24
TPFO Pinon Flats 98.76 333 P Pdif 08 32 13.6 +0.3
baz=24
ASAR Alice Springs 115.02 100 PKP PKiKP 08 37 13.2 -1.4
comp=Z,1.8nm,0.8s,baz=313,slow=2.2,SNR=6.7
TROLL Troll, Antarti 115.62 189 P Pdif 08 33 12.4 -15
CTA Charters Tower 122.00 89 PKP PKiKP 08 37 27.9 -0.3
comp=Z,4.1nm,0.9s,baz=252,slow=5.1,SNR=3.7
PLCA Paso Flores 123.02 243 PKP PKiKP 08 37 29.3 -0.3
comp=Z,3.7nm,0.5s,baz=47,slow=1.9,SNR=20
STKA Stephens Creek 125.26 103 PKP PKiKP 08 37 33.0 -1.3
comp=Z,5.6nm,0.8s,baz=350,slow=6.8,SNR=7.1
STKA Stephens Creek 125.26 103 PKIKP PKiKP 08 37 33.0 -1.3
JCZ Jackson Bay 149.60 108 P PKPbc 08 38 21.4 -1.1
FOZ Fox Glacier 150.22 107 P PKiKP 08 38 24.0 -0.6
WVZ Waitaha Valley 150.78 105 P PKiKP 08 38 24.3 -1.6
RPZ Rata Peaks 151.14 107 PKPbc PKiKP 08 38 26.0 -0.7
comp=Z,60nm,1.0s,baz=258,slow=1.9,SNR=17
RPZ Rata Peaks 151.14 107 P PKiKP 08 38 25.9 -0.7
INZ Inchbonnie 151.22 104 P PKPdf 08 38 19.8 -0.5

TMZ	**Timaru**	**151.22 108**	P	**PKiKP**	**08 38 26.4**	**-0.4**
DSZ	**Denniston Nort**	**151.25 102**	P	**PKiKP**	**08 38 25.5**	**-1.4**
ARCZ	**Arundel**	**151.27 107**	P	**PKiKP**	**08 38 26.3**	**-0.6**
QRZ	**Quartz Range**	**151.55 100**	P	**PKiKP**	**08 38 26.0**	**-1.5**
OXZ	**Oxford**	**151.77 106**	P	**PKiKP**	**08 38 26.9**	**-1.0**
LTZ	**Lake Taylor**	**151.82 104**	P	**PKiKP**	**08 38 27.3**	**-0.8**
THZ	**Tophouse**	**152.06 102**	P	**PKiKP**	**08 38 28.2**	**-0.4**
MQZ	**McQueen's Vall**	**152.28 106**	P	**PKiKP**	**08 38 28.2**	**-0.7**

PGC 15 08:23:53.1±0.5, 65°.33N×134°.74W, h15km, ML2.5, ML3.0/13, 235km south of Fort McPherson, Nt Northern Yukon Territory, Canada, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPYK	**Eagle Plains**	**1.33**	**323**	P	Pn	08 24 17.2	0.0
EPYK				S	Sn	08 24 35.1	+0.6
I29M	**Ogilvie Camp,**	**1.50**	**273**	Pn	Pn	08 24 18.7	-0.8
I29M				Sn	Sn	08 24 38.4	-0.3
J29M	**Klondike Camp**	**1.73**	**241**	Sg	Sb	08 24 47.2	+1.2
MAYO	**Mayo, Yukon**	**1.81**	**197**	Pn	Pn	08 24 23.9	+0.2
MAYO				Sn	Sn	08 24 46.4	0.0
K29M	**Barlow Dome**	**1.92**	**220**	Pn	Pn	08 24 25.4	+0.2
K29M				Sn	Sn	08 24 49.8	+0.7
DAWY	**Dawson**	**2.37**	**240**	Pn	Pn	08 24 31.3	-0.2
DAWY				Sn	Sn	08 25 00.2	0.0
L29M	**L29M**	**2.68**	**215**	Pn	Pn	08 24 36.0	+0.4
L29M				Sn	Sn	08 25 08.1	+0.3
I27K	**Kandik River**	**2.88**	**279**	Pn	Pn	08 24 37.7	-0.8
I27K				Sn	Sn	08 25 11.5	-1.4
H27K	**Steamboat Moun**	**2.94**	**291**	Pn	Pn	08 24 38.6	-0.7
H27K				Sn	Sn	08 25 11.9	-2.5
INK	**Inuvik**	**3.03**	**9**	Pn	Pn	08 24 39.3	-1.2
INK				Sn	Sn	08 25 15.5	-0.9
M31M	**Drury Creek, Y**	**3.14**	**177**	Pn	Pn	08 24 40.8	-1.2
M31M				Sn	Sn	08 25 16.8	-2.5
FARO	**Faro, Yukon**	**3.17**	**168**	Pn	Pn	08 24 40.4	-2.1
FARO				Sn	Sn	08 25 18.4	-1.6
G27K	**Doyon Strip**	**3.19**	**301**	Pn	Pn	08 24 42.0	-0.7
G27K				Sn	Sn	08 25 18.8	-1.5
G27K	**Doyon Strip** baz=248	**3.19**	**301**	S	Sn	08 25 19.2	-1.2
M29M	**Somme Creek**	**3.33**	**211**	Pn	Pn	08 24 44.7	-0.1
M29M				Sn	Sn	08 25 22.3	-1.7
K27K	**Chicken**	**3.41**	**251**	Pn	Pn	08 24 44.5	-1.2
K27K				Sn	Sn	08 25 24.4	-1.5
L27K	**Beaver Creek,**	**3.84**	**237**	Pn	Pn	08 24 51.4	-0.3
N31M	**Braeburn, Yuko**	**3.89**	**187**	Pn	Pn	08 24 51.5	-0.8
N31M				Sn	Sn	08 25 36.1	-1.6
BVCY	**Beaver Creek**	**3.99**	**226**	Pn	Pn	08 24 53.7	0.0
BVCY				Sn	Sn	08 25 38.6	-1.4
N30M	**Aishikik Lake**	**4.03**	**196**	Pn	Pn	08 24 54.0	-0.3
N30M				Sn	Sn	08 25 39.3	-1.8
N32M	**Quiet Lake**	**4.26**	**169**	Pn	Pn	08 24 56.7	-0.7
N32M				Sn	Sn	08 25 42.7	-4.2
M27K	**Edge Creek, AK**	**4.34**	**230**	Pn	Pn	08 24 58.0	-0.7
M27K				Sg	Sg	08 26 07.6	-4.9
YUK4	**Talbot Arm**	**4.37**	**206**	Pn	Pn	08 24 57.9	-1.2
DOT	**Dot Lake**	**4.37**	**252**	Pn	Pn	08 24 57.6	-1.3
YUK3	**Moose Creek**	**4.39**	**218**	Pn	Pn	08 24 59.4	0.0
YUK3				Sn	Sn	08 25 48.0	-2.2
YUK5	**Granite Creek**	**4.44**	**200**	Pn	Pn	08 25 00.3	+0.3
YUK2	**White River**	**4.48**	**220**	Pn	Pn	08 25 00.9	+0.4
YUK2				Sn	Sn	08 25 50.7	-1.7
YUK8	**Steele Glacier**	**4.65**	**211**	Pn	Pn	08 25 02.9	-0.1
YUK8				Sn	Sn	08 25 54.3	-2.4
WHY	**Whitehorse**	**4.69**	**181**	Pn	Pn	08 25 02.6	-0.8
HYT	**Haines Junctio**	**4.69**	**197**	Pn	Pn	08 25 03.5	0.0
HYT				Sn	Sn	08 25 55.6	-2.0
YUK6	**Outpost Mounta**	**4.70**	**202**	Pn	Pn	08 25 04.4	+0.7
O28M	**Mount Upton**	**5.20**	**211**	Pn	Pn	08 25 12.4	+1.8
P33M	**Teslin, Yukon**	**5.21**	**169**	Pn	Pn	08 25 09.2	-1.4
P33M				Sn	Sn	08 26 07.0	-3.3
P30M	**Million Dollar**	**5.33**	**192**	Pn	Pn	08 25 12.7	+0.6
P30M				Sn	Sn	08 26 10.5	-2.6
O29M	**Mount Kennedy**	**5.34**	**201**	Pn	Pn	08 25 13.0	+0.7

*SNET **15** 08:24:40.1±0.8, 13°.30N×90°.13W, h33km±59km, ML3.0*
*GCG **15** 08:24:41.2±0.6, 13°.30N×90°.25W, h32km±4km, MD3.3*
ISC 15 08:24:40.1±2.4, 13°.3N±0°.1×90°.13W±0°.05, h29km±15km, n11, σ0°.54/18, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.70**	**29**	*eP*	**Pn**	**08 24 53.7**	**-0.5**
NUBE				*eS*	**Sb**	**08 25 03.8**	**+0.5**
CEVE	**Cerro Verde**	**0.73**	**42**	*eP*	**Pn**	**08 24 54.5**	**-0.2**
CEVE				*eS*	**Sn**	**08 25 05.9**	**+0.9**
CEVE	comp=Z,2μm,0.3s			IAML		08 25 07.3	
SLOZ	**Alcaldia de Sa**	**0.81**	**24**	*eP*	**Pn**	**08 24 54.5**	**-1.1**
SLOZ				*eS*	**Sn**	**08 25 07.0**	**+0.3**
CEDA	**San Andres** comp=Z,209nm,0.2s	**0.88**	**54**	IAML		08 25 15.8	
SJTE	**Alcalda de S**	**1.14**	**73**	*eS*	**Sn**	**08 25 15.3**	**+0.4**
PCG	**Pacaya**	**1.19**	**337**	*eS*	**Sb**	**08 25 17.6**	**+0.2**
COEG	**Centro de Oper**	**1.26**	**75**	*eP*	**Pn**	**08 25 01.5**	**-0.3**
COEG				*eS*	**Sn**	**08 25 17.9**	**0.0**
NBG	**Las Nubes**	**1.31**	**351**	*eP*	**Pb**	**08 25 03.9**	**-0.3**
NBG				*eS*	**Sb**	**08 25 21.5**	**+0.7**
FUG	**Fuego 3**	**1.35**	**329**	*eP*	**Pb**	**08 25 04.5**	**-0.3**
FUG				*eS*	**Sn**	**08 25 19.7**	**-0.4**
PQSS	**Presa 15 de Se**	**1.56**	**77**	*eP*	**Pn**	**08 25 05.7**	**-0.2**
PQSS				*eS*	**Sn**	**08 25 25.5**	**+0.3**
STG3	**Santiaguito 3,**	**1.99**	**316**	*eP*	**Pn**	**08 25 12.3**	**+0.3**
STG3				*eS*	**Sn**	**08 25 36.5**	**+0.4**

IDC 15 08:25:55.8±2.0, 0°.01N×125°.97E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=164.1km s-min=28.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.2nm,0.7s,baz=336,slow=11,SNR=14 1.2nm,0.7s	**21.46**	**158**	P	P	08 30 45.1	-0.9
ASAR	**Alice Springs** 0.3nm,0.4s,baz=340,slow=10,SNR=6.8 0.3nm,0.4s	**24.76**	**162**	P	P	08 31 20.1	+0.7
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=135,slow=6.2,SNR=1.4 0.3nm,0.4s	**60.20**	**327**	P	P	08 36 05.5	-0.1

GUC 15 08:28:07.0±0.5, 25°.75S×70°.21W, h42km±13km, ML3.9, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.53**	**221**	⇓*iP*	Pn	08 28 17.9	-0.3
AC01				*eS*	Sn	08 28 25.7	-0.5
GO02	**Mina Guanaco**	**0.81**	**44**	⇑*iP*	Pn	08 28 26.1	+3.8
GO02				*eS*	Sn	08 28 40.5	+7.2
GO02	comp=E,7μm,0.1s			IAML		08 28 42.2	
PB14	**IPOC Station P**	**1.13**	**351**	*eP*	Pn	08 28 29.2	+2.4
PB14				*eS*	Sn	08 28 42.7	+1.5
AC02	**Maricunga**	**1.45**	**138**	⇑*iP*	Pn	08 28 32.6	+1.4
AC02				*eS*	Sn	08 28 51.3	+1.9
AC02	comp=E,3μm,0.2s			IAML		08 28 52.2	
AC06	**Mina Casimiro**	**1.61**	**185**	*eP*	Pn	08 28 31.2	-1.8
AC06				*i* S	Sn	08 28 49.0	-3.5
AC04	**Llanos de Chal**	**2.56**	**197**	*eP*	Pn	08 28 42.5	-3.5
AC04				*eS*	Sn	08 29 04.7	-11
PB06	**IPOC Station P**	**3.09**	**11**	*eP*	Pn	08 28 55.1	+1.7
PB06				*i* S	Sn	08 29 32.0	+2.9
PB04	**IPOC Station P**	**3.40**	**1**	*eP*	Pn	08 28 58.1	+0.4
PB04				*i* S	Sn	08 29 39.4	+2.5
PB03	**IPOC Station P**	**3.71**	**7**	*eP*	Pn	08 29 02.5	+0.6
CO03	**El Pedregal**	**5.09**	**185**	*eP*	Pn	08 29 17.3	-3.5
CO03				*i* S	Sn	08 30 12.5	-5.9

*DDA **15** 08:42:33.7±0.0, 39°.96N×39°.63E, h7km±4km, ML1.8*
*ISK **15** 08:42:33.3, 39°.99N×39°.61E, h9km, ML2.5/6*
ISC 15 08:42:33.7±1.0, 39°.97N±0°.03×39°.60E±0°.03, h10km±9km, n12, σ0°.44/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	**0.28**	**165**	P	**Pg**	**08 42 39.4**	**0.0**
EUZM				S	**Sg**	**08 42 43.1**	**0.0**
EUZM	comp=E,90nm,0.5s			*i* AML	AML	08 42 45.0	
KELT	**Kelkit**	**0.32**	**303**	P	**Pb**	**08 42 41.2**	**-0.3**
KELT				S	**Sb**	**08 42 46.0**	**-0.9**
KELT	comp=E,238nm,0.4s			*i* AML	AML	08 42 46.0	
GUMT	**Gumushane**	**0.49**	**349**	PG	**Pg**	**08 42 43.8**	**+0.4**
GUMT				SG	**Sg**	**08 42 50.6**	**+0.6**
BAYB	**BAYBURT**	**0.58**	**60**	P	**Pg**	**08 42 44.7**	**-0.3**
BAYB				S	**Sg**	**08 42 52.2**	**-0.4**
BAYB	comp=N,58nm,0.3s			*i* AML	AML	08 42 54.0	
BAYB	comp=E,61nm,0.4s			*i* AML	AML	08 42 55.0	
BAYT	**Aydıntepe-Bayb**	**0.59**	**44**	PG	**Pg**	**08 42 45.0**	**-0.2**
BAYT				SG	**Sg**	**08 42 53.1**	**+0.1**
KOPT	**Kop Dagi**	**0.69**	**86**	P	**Pb**	**08 42 47.3**	**-0.6**
KOPT				S	**Sb**	**08 42 58.3**	**+0.7**
KOPT	comp=E,42nm,0.6s			*i* AML	AML	08 43 03.0	
KOPT	comp=N,45nm,0.4s			*i* AML	AML	08 43 03.0	
ALUC	**Giresun/Alucra**	**0.74**	**300**	P	**Pb**	**08 42 48.6**	**-0.1**
ALUC				S	**Sb**	**08 42 58.6**	**-0.3**
ALUC	comp=E,50nm,0.3s			*i* AML	AML	08 43 02.0	
ALUC	comp=N,55nm,0.5s			*i* AML	AML	08 43 02.0	
KTUT	**Trabzon**	**1.02**	**7**	PG	**Pb**	**08 42 53.2**	**-0.2**
KTUT				SG	**Sb**	**08 43 07.6**	**+0.8**
PTK	**Pertek**	**1.09**	**189**	PN	**Pb**	**08 42 54.9**	**+0.1**
PTK				SN	**Sn**	**08 43 10.6**	**+0.2**
ESPY	**Espiye-Giresun**	**1.15**	**325**	PN	**Pg**	**08 42 55.7**	**-0.2**
ESPY				SN	**Sn**	**08 43 11.7**	**0.0**
CHAY	**Cayeli-Rize**	**1.40**	**37**	PN	**Pn**	**08 42 59.3**	**+0.1**
CHOM	**Cayeli-Rize**	**1.43**	**38**	PN	**Pn**	**08 42 59.8**	**+0.2**

*NOU **15** 09:16:31.3, 36°.23S×179°.77W, h80km, MLv4.0/6, East of North Island, N.Z.*
*WEL **15** 09:16:37.2±0.9, 36°.5±6°.×18°.0E±1°.0, h20km, M3.5/18, ML3.6/24, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=110.0*
ISC 15 09:16:32.3±3.1, 36°.4S±0°.1×179°.8E±0°.2, h2km±16km, n38, σ1°.03/51, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.68**	**224**	P	**Pb**	**09 17 03.6**	**-0.4**
MXZ				S	**Sb**	**09 17 25.3**	**-0.3**
MXZ	**Matakaoa Point**	**1.68**	**224**	P	**Pb**	**09 17 03.5**	**-0.4**
WMGZ	**Waiomatatini S**	**1.82**	**216**	P	**Pg**	**09 17 07.3**	**+0.1**
WMGZ				S	**Sb**	**09 17 30.5**	**+0.9**
PKGZ	**Pakihiroa**	**2.04**	**221**	P	**Pb**	**09 17 10.0**	**-0.2**
PKGZ				S	**Sn**	**09 17 34.7**	**+0.7**
PUZ	**Puketiti**	**2.10**	**215**	P	**Pb**	**09 17 10.6**	**-0.5**
PUZ				S	**Sn**	**09 17 35.5**	**+0.3**
HAZ	**Te Kaha**	**2.12**	**228**	P	**Pb**	**09 17 11.0**	**-0.3**
TWGZ	**Tauwhareparae**	**2.31**	**218**	P	**Pb**	**09 17 13.6**	**-1.1**
TWGZ				S	**Sn**	**09 17 41.6**	**+1.1**
RUGZ	**Raukumara Rang**	**2.32**	**225**	P	**Pb**	**09 17 13.8**	**-1.2**
CNGZ	**Carnagh Statio**	**2.46**	**210**	P	**Pb**	**09 17 15.9**	**-1.4**
TKGZ	**Te Karaka**	**2.58**	**216**	P	**Pn**	**09 17 16.7**	**+1.5**
TKGZ				S	**Sn**	**09 17 47.2**	**0.0**
MWZ	**Matawai**	**2.66**	**221**	P	**Pn**	**09 17 17.9**	**+1.6**
MWZ				S	**Sn**	**09 17 48.1**	**-1.1**
RIGZ	**Rimuhau**	**2.84**	**214**	P	**Pn**	**09 17 20.2**	**+1.5**
RIGZ				S	**Sn**	**09 17 53.3**	**-0.3**
URZ	**Urewera**	**2.85**	**227**	P	**Pn**	**09 17 20.1**	**+1.3**
URZ	**Urewera**	**2.85**	**227**	P	**Pn**	**09 17 20.1**	**+1.3**
OPRZ	**Ohinepanea**	**2.97**	**239**	P	**Pn**	**09 17 21.7**	**+1.2**
SNGZ	**Shannon Statio**	**3.10**	**218**	P	**Pn**	**09 17 23.7**	**+1.4**
SNGZ				S	**Sn**	**09 17 59.5**	**-0.4**
KNZ	**Kokohu**	**3.14**	**211**	P	**Pn**	**09 17 23.3**	**+0.5**
KNZ				S	**Sn**	**09 17 59.4**	**-1.4**
MHGZ	**Mahia Peninsul**	**3.16**	**207**	P	**Pn**	**09 17 24.2**	**+1.1**
MUGZ	**Murupara**	**3.19**	**227**	P	**Pn**	**09 17 24.2**	**+0.7**
MUGZ				S	**Sn**	**09 18 00.8**	**-1.4**
TARZ	**Mount Tarawera**	**3.21**	**233**	P	**Pn**	**09 17 25.6**	**+1.7**
RRRZ	**Republican Roa**	**3.26**	**232**	P	**Pn**	**09 17 25.9**	**+1.3**
KUZ	**Kuaotunu**	**3.28**	**262**	P	**Pn**	**09 17 24.9**	**+0.2**
KUZ	**Kuaotunu**	**3.28**	**262**	P	**Pn**	**09 17 25.1**	**+0.4**
RAHZ	**Arahi**	**3.33**	**219**	P	**Pn**	**09 17 26.7**	**+1.3**
WHHZ	**Waihua**	**3.38**	**216**	P	**Pn**	**09 17 27.2**	**+1.1**
MTHZ	**Maungataniwha**	**3.41**	**222**	P	**Pn**	**09 17 28.0**	**+1.5**
PRRZ	**Plateau Road**	**3.44**	**230**	P	**Pn**	**09 17 27.7**	**+0.8**
ALRZ	**Allen Road**	**3.50**	**230**	P	**Pn**	**09 17 28.9**	**+1.0**
NMHZ	**Naumai**	**3.61**	**220**	P	**Pn**	**09 17 30.9**	**+1.6**
NMHZ				S	**Sn**	**09 18 11.2**	**-1.3**
MRHZ	**Matea Rd**	**3.63**	**226**	P	**Pn**	**09 17 29.5**	**-0.2**
ARHZ	**Aropaoanui**	**3.64**	**216**	P	**Pn**	**09 17 30.4**	**+0.7**
ARHZ				S	**Sn**	**09 18 13.0**	**-0.3**
MKAZ	**Moumakai**	**3.77**	**257**	P	**Pn**	**09 17 32.0**	**+0.5**
BKZ	**Black Stump Fm**	**3.82**	**222**	P	**Pn**	**09 17 32.5**	**+0.3**
BKZ	**Black Stump Fm**	**3.82**	**222**	P	**Pn**	**09 17 32.6**	**+0.3**
MCHZ	**McNeill Hill**	**3.93**	**217**	P	**Pn**	**09 17 34.2**	**+0.6**
ETAZ	**East Tamaki Re**	**3.94**	**260**	P	**Pn**	**09 17 35.2**	**+1.5**
BFZ	**Birch Farm**	**5.13**	**211**	P	**Pn**	**09 17 49.3**	**-0.8**
OUZ	**Omahuta**	**5.14**	**281**	P	**Pn**	**09 17 50.8**	**+0.5**

*IDC **15** 09:50:43.6±0.9, 5°.51S×150°.68E, h89km±8km, mb3.9/15, mbtmp4.2/16, Error ellipse: s-maj=15.3km s-min=7.8km az=125.0*
*NEIC **15** 09:50:45.0±0.7, 5°.5S±0°.1×150°.7E±0°.1, h97km±10km, mb4.4/24, Error ellipse: s-maj=20.9km s-min=4.3km az=136.0*
ISC 15 09:50:44.9±0.5, 5°.58S±0°.06×150°.80E±0°.06, h100km, n67, σ1°.07/75, mb4.2/23, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 190nm,0.5s,baz=217,slow=2.3,SNR=23	**1.76**	**44**	P	**Pn**	**09 51 14.2**	**-0.2**
KRVT	976nm,0.9s,baz=253,slow=20,SNR=19			S	**Sn**	**09 51 35.6**	**-1.3**
RABL	**Rabaul**	**1.94**	**45**		**Pn**	**09 51 16.0**	**-0.7**
MANU	**Manus Island**	**4.91**	**316**		**Pn**	**09 51 59.8**	**+3.4**
PMG	**Port Moresby** 58nm,0.4s,baz=43,slow=11,SNR=24	**5.24**	**223**	P	**Pn**	**09 52 01.2**	**+0.3**
PMG	124nm,0.3s,baz=94,slow=15,SNR=12			S	**Sn**	**09 52 57.2**	**-3.0**
PMG	**Port Moresby**	**5.24**	**223**		**Pn**	**09 52 01.1**	**+0.1**
PMG	**Port Moresby**	**5.24**	**223**	P	**Pn**	**09 52 01.5**	**+0.5**
COEN	**Coen**	**11.21**	**221**	Pn	**Pn**	**09 53 22.0**	**-0.2**
COEN	**Coen**	**11.21**	**221**	P	**Pn**	**09 53 21.9**	**-0.2**
CTA	**Charters Tower** 11nm,0.8s,baz=8.8,slow=14,SNR=11	**15.09**	**197**	P	**P**	**09 54 15.2**	**-0.6**
CTAO	**Charters Tower**	**15.09**	**197**		**P**	**09 54 18.0**	**+2.3**
CTAO	comp=Z,16nm,1.0s			IAmb	IAmb	09 54 19.2	
CTAO	**Charters Tower**	**15.09**	**197**	P	**Pn**	**09 54 14.4**	**+1.6**
QIS	**Mount Isa**	**18.44**	**215**	P	**Pn**	**09 54 54.0**	**0.0**
KDU	**Kakadu** comp=Z,18nm,0.6s	**19.41**	**247**	P	**P**	**09 55 02.1**	**-1.3**
EIDS	**Eidsvold**	**19.68**	**179**	P	**Pn**	**09 55 08.0**	**-0.6**
EIDS	comp=Z,18nm,0.8s			IAmb	IAmb	09 55 08.1	
EIDS	**Eidsvold**	**19.68**	**179**	P	**Pn**	**09 55 07.9**	**-0.6**
MTN	**Manton Dam**	**20.70**	**248**	P	**P**	**09 55 17.0**	**-0.4**
MTN	comp=Z,25nm,1.4s			IAmb	IAmb	09 55 44.4	
MTN	**Manton Dam**	**20.70**	**248**	P	**P**	**09 55 17.3**	**0.0**
RMQ	**Roma**	**20.88**	**185**	P	**P**	**09 55 21.1**	**+1.9**
WB0	**Warramunga Arr**	**21.30**	**227**	P	**P**	**09 55 23.5**	**-0.3**
WB0	comp=Z,14nm,1.3s			IAmb	IAmb	09 55 45.9	
WR0	**Warramunga Arr**	**21.32**	**226**	P	**P**	**09 55 23.7**	**-0.2**
WR0	comp=Z,17nm,1.4s			IAmb	IAmb	09 55 40.4	
WRAB	**Tennant Creek**	**21.44**	**227**	P	**P**	**09 55 24.7**	**-0.5**
WRAB	**Tennant Creek**	**21.44**	**227**	P	**P**	**09 55 24.9**	**-0.3**
WB2	**Warramunga Arr**	**21.44**	**227**	P	**P**	**09 55 24.9**	**-0.4**
WB2	comp=Z,11nm,1.1s			IAmb	IAmb	09 55 46.7	
WRA	**Warramunga Arr** comp=Z,1.7nm,0.4s,baz=50,slow=10,SNR=41	**21.45**	**227**	P	**P**	**09 55 24.4**	**-1.0**
WRA	comp=Z,1.3nm,0.8s,baz=54,slow=16,SNR=4.6			S	**S**	**09 59 15.9**	**-1.9**
WRA	comp=Z,0.7nm,0.7s,baz=36,slow=2.0,SNR=5.6			PcP	**PcP**	**09 59 25.1**	**+0.1**
WRA	comp=Z,1.6nm,0.9s,baz=52,slow=2.8,SNR=9.4 comp=Z,1.7nm,0.4s			ScP	**ScP**	**10 02 52.3**	**-0.8**
WRA	**Warramunga Arr**	**21.45**	**227**	P	**P**	**09 55 23.9**	**-1.5**
DZM	**Mont Dzumac** comp=Z,10nm,0.5s,baz=306,slow=9.6,SNR=16 comp=Z,10nm,0.5s	**22.31**	**139**	P	**P**	**09 55 34.6**	**+0.1**
DZM	**Mont Dzumac**	**22.31**	**139**	P	**P**	**09 55 35.5**	**+0.9**
DZM	comp=Z,20nm,0.9s			IAmb	IAmb	09 55 38.3	
DZM	**Mont Dzumac**	**22.31**	**139**	P	**P**	**09 55 35.2**	**+0.7**
KNRA	**Kununurra**	**23.84**	**243**	P	**P**	**09 55 48.8**	**-0.4**
KNRA	comp=Z,16nm,0.7s			IAmb	IAmb	09 55 50.6	
KNRA	**Kununurra**	**23.84**	**243**	P	**P**	**09 55 48.0**	**-1.2**
INKA	**Innaminka**	**24.03**	**202**	P	**P**	**09 55 51.2**	**+0.6**
AS01	**Alice Springs**	**24.22**	**220**	P	**P**	**09 55 53.2**	**+0.7**
AS31	**Alice Springs**	**24.25**	**220**	P	**P**	**09 55 53.4**	**+0.6**
ASAR	**Alice Springs** comp=Z,5.0nm,0.8s,baz=57,slow=9.2,SNR=50	**24.25**	**220**	P	**P**	**09 55 53.2**	**+0.4**
ASAR	comp=Z,0.3nm,0.6s,baz=39,slow=3.1,SNR=2.2			PcP	**PcP**	**09 59 30.1**	**-0.7**
ASAR	comp=Z,0.8nm,0.9s,baz=43,slow=14,SNR=4.8			S	**S**	**10 00 03.5**	**-1.0**
ASAR	comp=Z,1.3nm,0.8s,baz=44,slow=3.1,SNR=8.0 comp=Z,5.0nm,0.8s			ScP	**ScP**	**10 03 01.0**	**+0.5**
ASAR	**Alice Springs**	**24.25**	**220**	P	**P**	**09 55 53.0**	**+0.2**
ARMA	**Armidale**	**24.72**	**178**	P	**P**	**09 55 58.4**	**+1.3**
ARMA	comp=Z,7.2nm,0.8s			IAmb	IAmb	09 56 00.9	
ARMA	**Armidale**	**24.72**	**178**	P	**P**	**09 55 58.1**	**+1.0**
OOD	**Oodnadatta**	**26.35**	**211**	P	**P**	**09 56 11.7**	**-0.1**
LCRK	**Leigh Creek**	**27.43**	**204**	P	**P**	**09 56 21.5**	**+0.1**
STKA	**Stephens Creek** comp=Z,4.1nm,0.7s,baz=359,slow=7.5,SNR=8.9 comp=Z,4.1nm,0.7s	**27.55**	**197**	P	**P**	**09 56 22.1**	**-0.3**
STKA	**Stephens Creek**	**27.55**	**197**	P	**P**	**09 56 22.1**	**-0.3**
BBOO	**Buckleboo**	**30.38**	**205**	P	**P**	**09 56 47.6**	**0.0**
BBOO	comp=Z,11nm,1.1s			IAmb	IAmb	09 57 30.4	
TOO	**Toolangi**	**32.21**	**188**	P	**P**	**09 57 04.7**	**+1.1**
TOO	comp=Z,19nm,1.4s			IAmb	IAmb	09 57 35.3	
FORT	**Forrest**	**32.94**	**218**	P	**P**	**09 57 10.2**	**+0.1**
MBWA	**Marble Bar**	**33.86**	**240**	P	**P**	**09 57 17.6**	**-0.6**
PSA00	**Pilbara Seismi**	**33.92**	**239**	P	**P**	**09 57 18.8**	**0.0**
PSA00	comp=Z,15nm,1.1s			IAmb	IAmb	09 57 45.0	
OUZ	**Omahuta**	**36.22**	**148**	P	**P**	**09 57 38.9**	**+0.7**
MORW	**Morawa**	**40.31**	**230**	P	**P**	**09 58 12.3**	**-0.4**
URZ	**Urewera** comp=Z,4.4nm,0.7s,baz=0.0,slow=2.0,SNR=1.9 comp=Z,4.4nm,0.7s	**40.37**	**147**	P	**P**	**09 58 13.7**	**+0.8**
THZ	**Tophouse**	**41.06**	**155**	P	**P**	**09 58 19.5**	**+0.8**
TUWZ	**Tuamarina**	**41.25**	**153**	P	**P**	**09 58 21.5**	**+1.4**
SNZO	**South Karori**	**41.50**	**153**	P	**P**	**09 58 23.4**	**+1.2**
RPZ	**Rata Peaks** comp=Z,9.7nm,0.8s,baz=322,slow=20,SNR=6.4 comp=Z,9.7nm,0.8s	**41.96**	**158**	P	**P**	**09 58 27.4**	**+1.4**
KSRS	**Korea Array** comp=Z,1.4nm,0.7s,baz=153,slow=8.0,SNR=4.9 comp=Z,1.4nm,0.7s	**47.83**	**335**	P	**P**	**09 59 11.8**	**-0.7**
PETK	**Petropavlovsk-** comp=Z,1.3nm,0.6s,baz=160,slow=4.6,SNR=7.8 comp=Z,1.3nm,0.6s	**58.76**	**5**	P	**P**	**10 00 33.1**	**+0.8**
PPT	**Papeete** comp=Z,20nm,0.7s,baz=80,slow=16,SNR=3.5 comp=Z,20nm,0.7s	**59.40**	**107**	P	**P**	**10 00 39.8**	**+2.4**
SONM	**Songino Array** comp=Z,1.0nm,0.6s,baz=129,slow=3.9,SNR=2.1 comp=Z,1.0nm,0.6s	**65.94**	**329**	P	**P**	**10 01 19.5**	**-1.0**
VNDA	**Vanda** comp=Z,0.8nm,0.7s,baz=322,slow=7.3,SNR=8.2 comp=Z,0.8nm,0.7s	**72.14**	**177**	P	**P**	**10 01 57.9**	**-0.3**
VNDA	**Vanda**	**72.14**	**177**	P	**P**	**10 01 59.3**	**+1.1**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.6s,baz=110,slow=7.0,SNR=3.5 comp=Z,0.4nm,0.6s	**79.61**	**319**	P	**P**	**10 02 40.9**	**-0.4**
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.7s,baz=107,slow=5.2,SNR=6.0 comp=Z,1.8nm,0.7s	**80.70**	**327**	P	**P**	**10 02 45.4**	**-1.5**
ZALV	**Zalesovo Beam**	**80.70**	**327**	P	**P**	**10 02 46.0**	**-0.9**
ILAR	**Eielson Array** comp=Z,0.7nm,0.7s,baz=239,slow=5.1,SNR=8.8 comp=Z,0.7nm,0.7s	**83.63**	**22**	P	**P**	**10 03 00.1**	**-1.9**
QSPA	**South Pole Qui**	**84.39**	**180**	P	**P**	**10 03 06.5**	**+0.5**
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.5s,baz=266,slow=12,SNR=1.7 comp=Z,0.2nm,0.5s	**94.13**	**52**	P	**P**	**10 03 53.4**	**+0.5**
GERES	**GERESS Array B** comp=Z,0.3nm,0.6s,baz=76,slow=4.1,SNR=2.5	**123.65**	**327**	PKP

*NOU **15** 10:30:55.8, 36.99S × 179.67E, h0km, MLv3.9/7, Off E. Coast of N. Island, N.Z.*
*WEL **15** 10:31:04.6 ± 1.1, 37.5S ± 6.1° × 17.9E ± .1°, h15km ± 7km, M3.2/18, ML3.5/25, MLv3.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=118.5*
ISC 15 10:31:02.1 ± 2.5, 37.05S ± 0.07 × 179.1E ± 0.1, h10km ± 11km, n61, σ1.9 02/71, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.82**	**231**	P	**Pg**	**10 31 16.3**	**+0.5**
MXZ				S	**Sg**	**10 31 26.9**	**-1.6**
MXZ	**Matakaoa Point**	**0.82**	**231**	P	**Pg**	**10 31 18.2**	**+0.3**
WMGZ	**Waiomatatini S**	**0.94**	**215**	P	**Pn**	**10 31 22.7**	**+1.2**
WMGZ				S	**Sb**	**10 31 35.8**	**+2.6**
PKGZ	**Pakihiroa**	**1.17**	**224**	P	**Pn**	**10 31 24.6**	**0.0**
PKGZ				S	**Sb**	**10 31 40.7**	**+1.0**
PUZ	**Puketiti**	**1.22**	**213**	P	**Pg**	**10 31 26.4**	**+0.8**
PUZ				S	**Sb**	**10 31 41.5**	**+0.3**
HAZ	**Te Kaha**	**1.27**	**236**	P	**Pn**	**10 31 25.0**	**-0.9**
HAZ				S	**Sb**	**10 31 43.5**	**+1.0**
RUGZ	**Raukumara Rang**	**1.46**	**231**	P	**Pn**	**10 31 29.4**	**+0.7**
RUGZ				S	**Sn**	**10 31 48.9**	**+1.1**
CNGZ	**Carnagh Statio**	**1.60**	**206**	P	**Pb**	**10 31 32.1**	**+0.3**
TKGZ	**Te Karaka**	**1.71**	**215**	P	**Pb**	**10 31 33.2**	**-0.4**
MWZ	**Matawai**	**1.79**	**224**	P	**Pn**	**10 31 34.1**	**+1.0**
RIGZ	**Rimuhau**	**1.97**	**212**	P	**Pb**	**10 31 37.0**	**-1.1**
RAGZ	**Rawiri**	**1.97**	**222**	P	**Pn**	**10 31 36.9**	**+1.3**
URZ	**Urewera**	**1.99**	**232**	P	**Pn**	**10 31 36.7**	**+0.9**
URZ				S	**Sn**	**10 32 00.2**	**-0.6**
URZ	**Urewera**	**1.99**	**232**	P	**Pn**	**10 31 36.7**	**+0.9**
OPRZ	**Ohinepanea**	**2.18**	**248**	P	**Pn**	**10 31 39.3**	**+0.8**
OPRZ				S	**Sn**	**10 32 02.8**	**-2.7**
SNGZ	**Shannon Statio**	**2.22**	**218**	P	**Pn**	**10 31 39.9**	**+0.8**
SNGZ				S	**Sn**	**10 32 06.3**	**-0.3**
KNZ	**Kokohu**	**2.27**	**209**	P	**Pn**	**10 31 40.1**	**+0.4**
RTZ	**Ruatahuna**	**2.30**	**226**	P	**Pn**	**10 31 41.0**	**+0.8**
MHGZ	**Mahia Peninsul**	**2.30**	**204**	P	**Pn**	**10 31 40.8**	**+0.6**
MUGZ	**Murupara**	**2.33**	**232**	P	**Pn**	**10 31 41.2**	**+0.6**
MUGZ				S	**Sn**	**10 32 07.7**	**-1.7**
RRRZ	**Republican Roa**	**2.42**	**237**	P	**Pn**	**10 31 42.1**	**+0.3**
WHHZ	**Waihua**	**2.51**	**215**	P	**Pn**	**10 31 44.5**	**+1.5**
MTHZ	**Maungataniwha**	**2.54**	**224**	P	**Pn**	**10 31 44.3**	**+0.9**
PRRZ	**Plateau Road**	**2.59**	**235**	P	**Pn**	**10 31 45.0**	**+0.9**
ALRZ	**Allen Road**	**2.66**	**234**	P	**Pn**	**10 31 45.1**	**0.0**
KUZ	**Kuaotunu**	**2.73**	**275**	P	**Pn**	**10 31 45.0**	**-1.0**
KUZ	**Kuaotunu**	**2.73**	**275**	P	**Pn**	**10 31 45.2**	**-0.8**
NMHZ	**Naumai**	**2.73**	**221**	P	**Pn**	**10 31 47.2**	**+1.0**
ARHZ	**Aropaoanui**	**2.77**	**216**	P	**Pn**	**10 31 47.2**	**+0.7**
TOZ	**Tahuroa Road**	**2.95**	**256**	P	**Pn**	**10 31 48.3**	**-0.7**
BKZ	**Black Stump Fm**	**2.95**	**223**	P	**Pn**	**10 31 49.4**	**+0.3**
BKZ	**Black Stump Fm**	**2.95**	**223**	P	**Pn**	**10 31 49.5**	**+0.3**
MCHZ	**McNeill Hill**	**3.05**	**218**	P	**Pn**	**10 31 50.8**	**+0.4**
CKHZ	**Cape Kidnapper**	**3.06**	**211**	P	**Pn**	**10 31 49.7**	**-0.7**
MKAZ	**Moumakai**	**3.15**	**268**	P	**Pn**	**10 31 51.3**	**-0.5**
KWHZ	**Kaweka Forest**	**3.18**	**221**	P	**Pn**	**10 31 52.2**	**0.0**
KAHZ	**Kahuranaki**	**3.25**	**212**	P	**Pn**	**10 31 52.6**	**-0.7**
ETAZ	**East Tamaki Re**	**3.34**	**270**	P	**Pn**	**10 31 54.7**	**+0.2**
TMVZ	**Te Maari**	**3.38**	**231**	P	**Pn**	**10 31 55.4**	**+0.3**
KRVZ	**Karewarewa**	**3.41**	**232**	P	**Pn**	**10 31 56.1**	**+0.6**
BHHZ	**Black Hill Sta**	**3.42**	**224**	P	**Pn**	**10 31 55.5**	**0.0**
NNVZ	**North Ngauruho**	**3.45**	**232**	P	**Pn**	**10 31 56.6**	**+0.6**
WTVZ	**West Tongariro**	**3.46**	**232**	P	**Pn**	**10 31 57.4**	**+1.3**
PXZ	**Pawanui**	**3.46**	**210**	P	**Pn**	**10 31 55.2**	**-0.8**
SNVZ	**South Ngauruho**	**3.47**	**231**	P	**Pn**	**10 31 56.6**	**+0.3**
NGZ	**Ngauruhoe**	**3.48**	**231**	P	**Pn**	**10 31 56.8**	**+0.2**
MOVZ	**Moawhango**	**3.54**	**227**	P	**Pn**	**10 31 57.0**	**-0.2**
RVAZ	**Riverhead Bore**	**3.64**	**273**	P	**Pn**	**10 31 58.7**	**+0.3**
PNHZ	**Pukenui**	**3.66**	**218**	P	**Pn**	**10 31 58.3**	**-0.6**
HIZ	**Hauiti**	**3.67**	**245**	P	**Pn**	**10 32 00.8**	**+1.9**
HIZ	**Hauiti**	**3.67**	**245**	P	**Pn**	**10 32 00.8**	**+1.9**
TSZ	**Takapari Road**	**3.89**	**218**	P	**Pn**	**10 32 00.5**	**-1.5**
DVHZ	**Dannevirke**	**3.98**	**214**	P	**Pn**	**10 32 01.9**	**-1.3**
WCZ	**Waipu Caves**	**3.99**	**285**	P	**Pn**	**10 32 03.9**	**+0.5**
VRZ	**Vera Road**	**4.01**	**238**	P	**Pn**	**10 32 04.9**	**+1.4**
WAZ	**Wanganui**	**4.21**	**229**	P	**Pn**	**10 32 06.9**	**+0.5**
BFZ	**Birch Farm**	**4.26**	**211**	P	**Pn**	**10 32 04.8**	**-2.2**
TIWZ	**Tintock**	**4.49**	**213**	P	**Pn**	**10 32 10.0**	**-0.3**
HOWZ	**Holdsworth Sta**	**4.75**	**215**	P	**Pn**	**10 32 12.7**	**-1.1**
OUZ	**Omahuta**	**4.81**	**291**	P	**Pn**	**10 32 15.6**	**+1.0**
OUZ	**Omahuta**	**4.81**	**291**	P	**Pn**	**10 32 15.8**	**+1.1**

*IDC **15** 10:48:28.9 ± 0.6, 85.57N × 86.10E, h0km, mb4.1/21, mbtmp4.1/24, ML4.0/3, MS3.5/37, Error ellipse: s-maj=16.7km s-min=11.7km az=125.0*
*MOS **15** 10:48:28.9 ± 1.1, 85.54N × 87.08E, h9km, mb4.7/32, Error ellipse: s-maj=95.5km s-min=6.1km az=89.3*
*NEIC **15** 10:48:30.5 ± 1.0, 85.58N ± 0.02 × 8.4E ± .1°, h10km ± 1km, mb4.5/75, Error ellipse: s-maj=14.9km s-min=4.2km az=91.0*
*IEPN **15** 10:48:32.0, 85.42N × 87.48E, h10km*
ISC 15 10:48:30.6 ± 0.4, 85.53N ± 0.05 × 84.47E ± 0.05, h10km, n190, σ1.67/156, mb4.5/76, MS3.5/33, 1D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI	**Zemlya Franca-**	**6.25**	**242**	*e*P	**Pn**	**10 50 00.9**	**-1.7**
ZFI				*e*S	**Sn**	**10 51 07.4**	**-6.6**
ZFI				*i* tx	tx	10 54 15.7	
OMEGA	**Omega**	**6.27**	**242**	*e*P	**Pn**	**10 50 01.3**	**-1.6**
OMEGA				*e*S	**Sn**	**10 51 07.5**	**-6.9**
NOR	**Nord**	**10.31**	**306**	P	**Pn**	**10 51 02.7**	**+4.5**
NOR				pmax	pmax		
	comp=Z,25nm,2.1s						
KBS	**Kingsbay**	**10.69**	**276**	P	**Pn**	**10 51 07.9**	**+4.6**
KBS				*e*S	**Sn**	**10 52 59.0**	**-3.8**
SPA0	**Spitsbergen Ar**	**11.03**	**270**	*e*P	**Pn**	**10 51 06.2**	**-1.9**
SPA0				*e*S	Sn	10 53 01.1	-10
SPITS	**Spitsbergen Ar**	**11.03**	**270**	Pn	**Pn**	**10 51 05.0**	**-3.0**
	baz=21,slow=12						
SPITS				Sn	Sn	10 53 01.3	-10
	baz=42,slow=11						
SPITS	**Spitsbergen Ar**	**11.03**	**270**	P	**Pn**	**10 51 06.1**	**-1.9**
SPB2	**Spitsbergen Ar**	**11.03**	**270**	Pn	**Pn**	**10 51 07.0**	**-1.1**
EUNU	**Eureka**	**14.48**	**354**	Pn	**Pn**	**10 51 51.6**	**-3.6**
DAG	**Danmarks Havn**	**14.98**	**300**	P	**Pn**	**10 52 02.9**	**+1.0**
DAG				pmax	pmax		
	comp=Z,16nm,1.4s						
TIXI	**Tiksi**	**15.56**	**124**	Pn	**Pn**	**10 52 08.6**	**-0.9**
	comp=Z,13nm,0.3s,baz=90,slow=23,SNR=1.6						
TIXI				LR	LR	10 58 20.6	
	comp=Z,93nm,18.8s,baz=201,slow=38						
	comp=Z,0.5nm,0.3s						
TIXI	**Tiksi**	**15.56**	**124**	Pn	**Pn**	**10 52 09.5**	**0.0**
TIXI	**Tiksi**	**15.56**	**124**	P	**Pn**	**10 52 09.5**	**0.0**
TIXI				pmax	pmax		
	comp=Z,15nm,1.4s						
NRIK	**Noril'sk**	**16.29**	**176**	Pn	**Pn**	**10 52 14.4**	**-4.6**
	comp=Z,0.6nm,0.3s,baz=26,slow=9.9,SNR=4.7						
NRIK				Sn	Sn	10 55 02.9	-17
	comp=Z,0.4nm,0.3s,baz=24,slow=20,SNR=1.3						
NRIK				LR	LR	10 58 59.3	
	comp=Z,213nm,20.2s,baz=28,slow=39						
NRIK	**Noril'sk**	**16.29**	**176**	Pn	**Pn**	**10 52 18.2**	**-0.8**
NRIK	**Noril'sk**	**16.29**	**176**	P	**Pn**	**10 52 18.2**	**-0.8**
NRIK				pmax	pmax		
	comp=Z,18nm,0.8s						
KEV	**Kevo**	**18.33**	**249**	P	**Pn**	**10 52 43.6**	**-0.7**
KEV				IAmb	IAmb	10 53 10.3	
	comp=Z,42nm,1.4s						
KEV	**Kevo**	**18.33**	**249**	P	**Pn**	**10 52 43.7**	**-0.7**
KEV				pmax	pmax		
	comp=Z,42nm,1.4s						
ARCES	**ARCESS Array B**	**18.66**	**250**	P	**P**	**10 52 47.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=25,slow=10,SNR=10						
ARCES				S	Sn	10 56 04.7	-12
	comp=Z,3.7nm,0.9s,baz=19,slow=28,SNR=2.2						
ARCES				LR	LR	11 00 21.3	
	comp=Z,295nm,18.9s,baz=356,slow=38						
	comp=Z,8.0nm,0.9s						
ARCES	**ARCESS Array B**	**18.66**	**250**	P	**P**	**10 52 47.5**	**-0.5**
ARCES	**ARCESS Array B**	**18.66**	**250**	P	**P**	**10 52 47.5**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,25nm,1.2s						
LVZ	**Lovozero**	**19.62**	**239**	P	**P**	**10 52 56.4**	**-2.3**
LVZ				IAmb	IAmb	10 53 10.8	
	comp=Z,39nm,1.1s						
LVZ	**Lovozero**	**19.62**	**239**	P	**P**	**10 52 56.4**	**-2.3**
LVZ				pmax	pmax		
	comp=Z,39nm,1.1s						
JMIC	**Jan Mayen**	**19.86**	**286**	LR	LR	10 58 56.9	
	comp=Z,49nm,20.5s,baz=78,slow=31						
RES	**Resolute Bay**	**19.92**	**360**	P	**P**	**10 53 00.3**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=333,slow=14,SNR=1.9						
RES				LR	LR	10 59 57.2	
	comp=Z,52nm,18.4s,baz=197,slow=35						
	comp=Z,2.8nm,1.0s						
RES	**Resolute Bay**	**19.92**	**360**	P	**P**	**10 53 01.2**	**-0.6**
RES	**Resolute Bay**	**19.92**	**360**	P	**P**	**10 53 01.2**	**-0.6**
RES				pmax	pmax		
	comp=Z,15nm,1.3s						
SGF	**Sodankyl**	**20.64**	**248**	P	Pn	10 53 12.9	+0.9
SGF				pmax	pmax		
	comp=Z,26nm,1.6s						
BILL	**Bilibino**	**21.89**	**87**	P	**P**	**10 53 23.4**	**+0.3**
BILL				IAmb	IAmb	10 53 38.2	
	comp=Z,23nm,1.1s						
BILL	**Bilibino**	**21.89**	**87**	↓*e*P	**P**	**10 53 27.0**	**+3.9**
BILL				*e*		10 53 34.1	
BILL				*e*PPP	PPP	10 53 50.9	
BILL				S	**S**	**10 57 21.0**	**-3.4**
BILL				pmax	pmax		
	comp=Z,25nm,1.5s						
BILL				MLR	MLR		
	comp=Z,46nm,14.0s						
LSH	**Leshukonskoye**	**21.93**	**226**	*e*P	**P**	**10 53 23.1**	**-0.4**
	comp=Z,85nm,1.2s						
MSF	**Maaselka**	**21.97**	**245**	P	**P**	**10 53 28.5**	**+4.5**
MSF				pmax	pmax		
	comp=Z,45nm,1.0s						
OUL	**Oulu**	**23.02**	**248**	P	**P**	**10 53 38.9**	**+3.8**
OUL				pmax	pmax		
	comp=Z,20nm,1.2s						
TOLK	**Toolik Lake Re**	**24.40**	**46**	P	**P**	**10 53 49.5**	**+0.9**
YAK	**Yakutsk**	**25.14**	**128**	P	**P**	**10 53 53.7**	**-1.5**
	comp=Z,12nm,0.5s,baz=211,slow=0.4,SNR=2.2						
YAK				LR	LR	11 03 32.8	
	comp=Z,114nm,21.7s,baz=90,slow=36						
	comp=Z,12nm,0.5s						
YAK	**Yakutsk**	**25.14**	**128**	P	**P**	**10 53 53.9**	**-1.2**
PRGR	**Permogore**	**25.16**	**225**	*e*P	**P**	**10 53 57.1**	**+1.7**
PRGR				pmax	pmax		
	comp=Z,37nm,0.9s						
PRGR	**Permogore**	**25.16**	**225**	*e*P	**P**	**10 53 57.1**	**+1.7**
INK	**Inuvik**	**25.52**	**32**	P	**P**	**10 53 58.0**	**-0.6**
	comp=Z,6.8nm,0.9s,baz=357,slow=11,SNR=8.1						
INK				LR	LR	11 04 56.2	
	comp=Z,60nm,20.0s,baz=341,slow=39						
	comp=Z,6.8nm,0.9s						
INK	**Inuvik**	**25.52**	**32**	P	**P**	**10 53 58.4**	**-0.1**
INK	**Inuvik**	**25.52**	**32**	P	**P**	**10 53 58.4**	**-0.1**
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
COLD	**Coldfoot**	**25.77**	**47**	P	**P**	**10 54 01.0**	**+0.1**
SEY	**Seymchan**	**25.84**	**103**	P	**P**	**10 54 03.4**	**+1.9**
	comp=Z,3.8nm,0.9s,baz=344,slow=6.3,SNR=8.7						
BMAR	**Burnt Mountain**	**25.87**	**42**	P	**P**	**10 54 01.3**	**-0.6**
KLMR	**Klimovskoe**	**26.30**	**231**	*e*P	**P**	**10 54 07.7**	**+2.1**
KLMR				pmax	pmax		
	comp=Z,30nm,1.1s						
KLMR	**Klimovskoe**	**26.30**	**231**	*e*P	**P**	**10 54 07.4**	**+1.7**
	comp=Z,34nm,1.2s						
KLMR	**Klimovskoe**	**26.30**	**231**	*e*	**P**	**10 54 07.8**	**+2.1**
KLMR				AMP		10 54 16.7	
	comp=Z,30nm,1.1s						
SFJD	**Kangerlussuaq**	**26.51**	**322**	LR	LR	11 04 13.4	
	comp=Z,78nm,19.2s,baz=4.5,slow=36						
FIA1	**FINESS Array S**	**26.61**	**246**	P	**P**	**10 54 08.2**	**-0.3**
FIA1				IAmb	IAmb	10 54 17.3	
	comp=Z,12nm,0.8s						
FINES	**FINESS Array B**	**26.61**	**246**	P	**P**	**10 54 09.1**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=18,slow=11,SNR=6.5						
FINES				LR	LR	11 05 11.6	
	comp=Z,172nm,18.9s,baz=4.5,slow=38						
	comp=Z,1.9nm,0.7s						
FINES	**FINESS Array B**	**26.61**	**246**	P	**P**	**10 54 08.5**	**0.0**
FYU	**Fort Yukon**	**26.70**	**43**	P	**P**	**10 54 08.6**	**-0.6**
IMAR	**Indian Mountai**	**26.79**	**51**	P	**P**	**10 54 09.9**	**-0.2**
BORG	**Borgarnes**	**26.95**	**294**	P	**P**	**10 54 15.2**	**+3.6**
H21K	**Melozitna Rive**	**27.17**	**50**	P	**P**	**10 54 13.7**	**+0.1**
EPYK	**Eagle Plains**	**27.31**	**35**	P	**P**	**10 54 14.8**	**0.0**
EPYK				IAmb	IAmb	10 54 23.6	
	comp=Z,17nm,1.1s						
KIRV	**Kirov**	**28.01**	**220**	LR	LR	11 08 06.1	
	comp=Z,146nm,20.8s,baz=349,slow=42						
NB2	**NORSAR Subarra**	**28.13**	**261**	P	P	10 54 30.1	+7.9
	comp=Z,3.1nm,0.8s,baz=9.3,slow=9.3						
ILAR	**Eielson Array**	**28.39**	**45**	P	**P**	**10 54 25.1**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=354,slow=6.9,SNR=9.2						
ILAR				LR	LR	11 05 07.2	
	comp=Z,86nm,21.9s,baz=336,slow=35						
	comp=Z,0.9nm,0.9s						
EGAK	**Eagle**	**28.69**	**40**	P	**P**	**10 54 27.0**	**-0.1**
EGAK				IAmb	IAmb	10 54 36.1	
	comp=Z,9.0nm,1.2s						
HFS	**Hagfors**	**28.84**	**258**	P	**P**	**10 54 31.1**	**+2.7**
	comp=Z,2.5nm,0.8s,baz=27,slow=13,SNR=2.5						
HFS				LR	LR	11 05 26.5	
	comp=Z,126nm,21.4s,baz=7.5,slow=35						
	comp=Z,2.5nm,0.8s						
J26L	**Joseph Creek**	**28.84**	**42**	P	**P**	**10 54 28.9**	**+0.3**
J26L				IAmb	IAmb	10 54 37.8	
	comp=Z,8.0nm,1.1s						
SCRK	**Sand Creek**	**29.34**	**42**	P	**P**	**10 54 33.0**	**0.0**
ARU	**Arti**	**29.75**	**209**	LR	LR	11 08 36.8	
	comp=Z,109nm,19.2s,baz=342,slow=40						
BCAR	**Beaver Creek A**	**30.37**	**41**	P	**P**	**10 54 41.7**	**-0.4**
SKT	**Skwentna**	**30.91**	**50**	P	**P**	**10 54 46.5**	**-0.2**
SKT				IAmb	IAmb	10 54 55.3	
	comp=Z,4.7nm,0.8s						
SCM	**Sheep Creek Mo**	**31.30**	**46**	P	**P**	**10 54 50.0**	**-0.2**
SCM	**Sheep Creek Mo**	**31.30**	**46**	P	**P**	**10 54 50.0**	**-0.2**
SCM				pmax	pmax		
	comp=Z,19nm,1.2s						
ZALV	**Zalesovo Beam**	**31.73**	**180**	P	**P**	**10 54 55.0**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=353,slow=10,SNR=4.1						
ZALV				LR	LR	11 08 43.2	
	comp=Z,47nm,18.9s,baz=228,slow=38						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**31.95**	**17**	LR	LR	11 07 49.3	
	comp=Z,148nm,18.6s,baz=318,slow=36						
OBN	**Obninsk**	**32.20**	**233**	LR	LR	11 13 29.4	
	comp=Z,23nm,18.1s,baz=5.0,slow=46						
BRVK	**Borovoye**	**32.77**	**196**	P	**P**	**10 55 06.4**	**+3.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
BVAR	**Borovoye Array**	**32.81**	**196**	LR	LR	11 11 27.5	
	comp=Z,96nm,18.9s,baz=12,slow=42						
HYT	**Haines Junctio**	**32.81**	**37**	P	**P**	**10 55 03.4**	**-0.2**
HYT				IAmb	IAmb	10 55 13.1	
	comp=Z,7.0nm,1.1s						
P33M	**Teslin, Yukon**	**33.64**	**33**	P	**P**	**10 55 11.3**	**+0.5**
P33M				IAmb	IAmb	10 55 28.0	
	comp=Z,11nm,1.1s						
BELG	**Belogornoye**	**34.28**	**221**	LR	LR	11 11 04.7	
	comp=Z,102nm,21.2s,baz=3.4,slow=39						
KURK	**Kurchatov**	**34.99**	**186**	P	**P**	**10 55 22.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KDAK	**Kodiak Island**	**35.02**	**52**	LR	LR	11 09 47.8	
	comp=Z,113nm,19.1s,baz=1.9,slow=37						
KURBB	**Kurchatov Arra**	**35.09**	**187**	LR	LR	11 12 37.8	
	comp=Z,124nm,20.2s,baz=350,slow=41						
DLBC	**Dease Lake**	**35.53**	**31**	LR	LR	11 09 56.9	
	comp=Z,98nm,21.8s,baz=352,slow=36						
DLBC	**Dease Lake**	**35.53**	**31**	P	**P**	**10 55 27.2**	**+0.1**
DLBC				IAmb	IAmb	10 55 36.6	
	comp=Z,11nm,1.0s						
AKTO	**Aktyubinsk**	**35.77**	**209**	LR	LR	11 11 11.8	
	comp=Z,126nm,20.9s,baz=24,slow=38						
ABKAR	**Akbulak array**	**36.88**	**207**	P	**P**	**10 55 39.6**	**+1.1**
AKASG	**Malin Array Be**	**37.07**	**240**	P	**P**	**10 55 40.9**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=8.2,slow=8.7,SNR=11						
	comp=Z,2.3nm,0.7s						
ULN	**Ulaanbaatar**	**38.20**	**155**	P	**P**	**10 55 50.9**	**+0.9**
ULN	**Ulaanbaatar**	**38.20**	**155**	P	**P**	**10 55 50.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SONM	**Songino Array**	**38.21**	**156**	P	**P**	**10 55 50.3**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=352,slow=7.5,SNR=4.5						
	comp=Z,3.4nm,0.9s						
SONM	**Songino Array**	**38.21**	**156**	P	**P**	**10 55 50.3**	**+0.3**
SONM	**Songino Array**	**38.21**	**156**	P	**P**	**10 55 50.3**	**+0.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MOX	**Moxa**	**38.42**	**258**	P	**P**	**10 55 53.9**	**+2.3**
MOX				pmax	pmax		
	comp=Z,11nm,0.8s						
NKC	**Novy Kostel**	**38.76**	**257**	P	**P**	**10 55 56.9**	**+2.3**
NKC				pmax	pmax		
	comp=Z,20nm,1.0s						
MAKZ	**Makanchi**	**38.88**	**183**	P	**P**	**10 55 56.4**	**+0.8**
MAKZ	**Makanchi**	**38.88**	**183**	P	**P**	**10 55 56.4**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**38.90**	**182**	P	**P**	**10 55 54.9**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=11,slow=6.8,SNR=12						
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**38.90**	**182**	P	**P**	**10 55 55.8**	**+0.1**
MKAR	**Makanchi Array**	**38.90**	**182**	P	**P**	**10 55 55.8**	**+0.1**
VRAC	**Vranov**	**39.37**	**253**	LR	LR	11 12 34.3	
	comp=Z,57nm,19.3s,baz=6.5,slow=37						
KRUC	**Moravsky**	**39.63**	**253**	P	**P**	**10 56 05.0**	**+3.2**
KRUC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GERES	**GERESS Array B**	**40.05**	**256**	P	**P**	**10 56 07.0**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=24,slow=10,SNR=4.4						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	**40.05**	**256**	P	**P**	**10 56 07.0**	**+1.6**
EDM	**Edmonton**	**41.27**	**16**	P	**P**	**10 56 15.8**	**+0.4**
EDM				IAmb	IAmb	10 56 23.9	
	comp=Z,10nm,1.0s						
EDM	**Edmonton**	**41.27**	**16**	P	**P**	**10 56 15.8**	**+0.4**
EDM				pmax	pmax		
	comp=Z,11nm,1.0s						
DRGR		**41.42**	**246**	P	**P**	**10 56 19.8**	**+3.1**
DRGR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BBB	**Bella Bella**	**41.86**	**30**	LR	LR	11 15 13.6	
	comp=Z,45nm,18.7s,baz=12,slow=38						
KK31	**Karatay Array**	**42.73**	**195**	P	**P**	**10 56 27.7**	**+0.4**
KK31	**Karatay Array**	**42.73**	**195**	P	**P**	**10 56 27.7**	**+0.4**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KKAR	**Karatay Array**	**42.73**	**195**	P	**P**	**10 56 27.9**	**+0.6**
KKAR	**Karatay Array**	**42.73**	**195**	P	**P**	**10 56 27.9**	**+0.6**
AAK	**Ala-Archa**	**43.12**	**191**	LR	LR	11 17 26.7	
	comp=Z,84nm,18.4s,baz=0.0,slow=40						
AAK	**Ala-Archa**	**43.12**	**191**	P	**P**	**10 56 30.5**	**-0.2**
AAK				IAmb	IAmb	10 56 40.5	
	comp=Z,10nm,1.3s						
AAK	**Ala-Archa**	**43.12**	**191**	P	**P**	**10 56 30.5**	**-0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KBZ	**Khabaz**	**43.17**	**225**	P	**P**	**10 56 33.0**	**+2.1**
	comp=Z,3.5nm,0.9s,baz=256,slow=8.3,SNR=4.0						
KBZ				LR	LR	11 19 44.4	
	comp=Z,57nm,18.7s,baz=352,slow=43						
	comp=Z,3.5nm,0.9s						
KBZ	**Khabaz**	**43.17**	**225**	P	**P**	**10 56 33.0**	**+2.1**
BOOM	**Boomskoye usch**	**43.25**	**189**	P	**P**	**10 56 32.2**	**+0.4**
BOOM				IAmb	IAmb	10 56 35.8	
	comp=Z,7.9nm,0.8s						
BOOM	**Boomskoye usch**	**43.25**	**189**	P	**P**	**10 56 32.2**	**+0.4**
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TARG	**Taragay, Kyrgy**	**43.99**	**187**	P	**P**	**10 56 36.9**	**-1.1**
TARG				IAmb	IAmb	10 56 50.7	
	comp=Z,5.1nm,0.8s						
TARG	**Taragay, Kyrgy**	**43.99**	**187**	P	**P**	**10 56 36.9**	**-1.1**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULM	**Lac du Bonnet**	**44.44**	**0**	P	**P**	**10 56 39.3**	**-1.7**
	comp=Z,2.4nm,0.7s,baz=0.0,slow=6.1,SNR=2.3						
	comp=Z,2.4nm,0.7s						
BTK	**Batken**	**45.76**	**195**	P	**P**	**10 56 52.0**	**+0.3**
BTK				IAmb	IAmb	10 56 55.8	
	comp=Z,5.9nm,0.8s						
BTK	**Batken**	**45.76**	**195**	P	**P**	**10 56 52.0**	**+0.3**
BTK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	**Newport**	**46.14**	**20**	LR	LR	11 16 15.5	
	comp=Z,86nm,20.4s,baz=344,slow=36						
NEW	**Newport**	**46.14**	**20**	P	**P**	**10 56 54.4**	**-0.1**
NEW				IAmb

LCH	Last Change Ra comp=Z,5.1nm,1.3s	57.14	21	IAmb	IAmb	10 58 28.6
DANN	Dangsing	57.31	181	*eP*	**P**	**10 58 17.3 -1.1**
LCMT	Little Creek M comp=Z,5.3nm,0.9s	57.48	17	IAmb	IAmb	10 58 28.5
KNB	Kanab comp=Z,8.8nm,1.1s	57.48	16	IAmb	IAmb	10 58 29.5
PYUN	Piuthan comp=Z,19nm,0.9s	57.56	182	*eP*	**P**	**10 58 19.2 -0.9**
GKN	Gorkha	57.65	180	*eP*	**P**	**10 58 20.0 -0.7**
GUN	Gumba comp=Z,32nm,1.0s	57.74	179	*eP*	**P**	**10 58 21.4 -0.2**
KOLN	Koldanda	57.88	181	*eP*	**P**	**10 58 21.4 -1.0**
JIRN	Jiri	57.99	178	*eP*	**P**	**10 58 22.9 -0.5**
PKI	Pulchoki comp=Z,15nm,0.9s	58.08	179	*eP*	**P**	**10 58 22.8 -1.1**
GWY	Greenwater Val comp=Z,6.0nm,1.0s	58.21	20	IAmb	IAmb	10 58 33.0
HHAR	Hobbs	58.41	358	P	**P**	**10 58 24.1 -1.6**
CLTN	Cedars of Leba	58.54	351	P	**P**	**10 58 26.3 -0.3**
RAMN	Ramite	58.70	178	*eP*	**P**	**10 58 27.4 -0.8**
TKL	Tuckaleechee C comp=Z,78nm,18.1s,baz=4.0,slow=36	58.94	349	LR	LR	11 23 39.0
ANMO	Albuquerque comp=Z,70nm,18.1s,baz=0.5,slow=37	59.66	10	LR	LR	11 24 50.5
ANMO ANMO	Albuquerque comp=Z,3.4nm,1.1s	59.66	10	P IAmb	**P** IAmb	**10 58 33.8 -0.9** 10 58 35.3
ANMO ANMO	Albuquerque comp=Z,3.0nm,1.2s	59.66	10	P pmax	**P** pmax	**10 58 33.8 -0.9**
WMOK WMOK	Wichita Mounta comp=Z,7.0nm,0.9s	59.94	3	P pmax	**P** pmax	**10 58 36.1 -0.3**
TUC TUC	Tucson comp=Z,7.0nm,1.3s	62.22	15	P pmax	**P** pmax	**10 58 52.1 +0.2**
CLNB	Carlsbad	62.37	8	P	**P**	**10 58 52.2 -0.8**
JCT	Junction City	64.18	4	P	**P**	**10 59 04.1 -0.8**
JCT JCT	Junction City comp=Z,10.0nm,1.2s	64.18	4	P pmax	**P** pmax	**10 59 04.1 -0.8**
TX32 TX32	Lajitas Array comp=Z,4.1nm,1.2s	65.29	8	P IAmb	**P** IAmb	**10 59 11.6 -0.6** 10 59 34.1
TXAR TXAR	Lajitas Array comp=Z,0.9nm,0.7s,baz=353,slow=3.2,SNR=13 comp=Z,76nm,18.1s,baz=344,slow=37 comp=Z,0.9nm,0.7s	65.29	8	P LR	**P** LR	**10 59 11.1 -1.1** 11 28 37.7
CMAR	Chiang Mai Arr comp=Z,0.6nm,0.4s,baz=352,slow=8.4,SNR=6.2 comp=Z,0.6nm,0.4s	67.30	165	P	**P**	**10 59 24.4 -0.6**
TOA0 TOA0	Torodi Ar. Sit comp=Z,3.0nm,0.8s	76.41	264	P IAmb	**P** IAmb	**11 00 19.9 +0.1** 11 00 21.9
TORD	Torodi Ar. Bea comp=Z,2.8nm,0.8s,baz=357,slow=5.8,SNR=11 comp=Z,2.8nm,0.8s	76.41	264	P	**P**	**11 00 19.4 -0.4**
PALK	Pallekele comp=Z,59nm,18.6s,baz=105,slow=38	78.28	184	LR	LR	11 37 48.9
BAUV	El Baul	85.12	333	P	**P**	**11 01 05.8 -0.5**

*IDC **15** 10:56:47.8±3.3, 13°.12S×167°.07E, h183km±28km, mb3.3/5, mbtmp3.8/6, Error ellipse: s-maj=35.2km s-min=24.6km az=136.0*

ISC 15 10:56:47.5±1.4, 13°.1S±0°.1×167°.1E±0°.2, h180km, n6, σ1º01/9, mb3.5/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.94	184	P	**Pn**	**10 58 54.1**	**+0.8**
DZM 3.5nm,0.4s,baz=53,slow=15,SNR=2.4				S	**Sn**	**11 00 32.4**	**-0.8**
CTA	Charters Tower	21.15	248	P	**P**	**11 01 20.3**	**+1.6**
2.8nm,0.9s,baz=96,slow=10,SNR=1.1 2.8nm,0.9s							
STKA	Stephens Creek	29.95	227	P	**P**	**11 02 39.0**	**+0.1**
1.3nm,0.5s,baz=49,slow=8.8,SNR=4.2 1.3nm,0.5s							
WRA	Warramunga Arr	32.10	253	P	**P**	**11 02 57.2**	**-0.8**
0.7nm,0.7s,baz=86,slow=9.1,SNR=7.3 0.7nm,0.7s							
ASAR	Alice Springs	33.14	247	P	**P**	**11 03 05.9**	**-1.1**
0.6nm,0.5s,baz=75,slow=9.4,SNR=20							
ASAR 0.3nm,0.8s,baz=73,slow=2.0,SNR=4.3				PcP	**PcP**	**11 05 45.3**	**-0.6**
ASAR 0.8nm,0.9s,baz=63,slow=2.5,SNR=4.6 0.6nm,0.5s				ScP	**ScP**	**11 09 13.1**	**-0.2**
ILAR	Eielson Array 0.3nm,0.6s,baz=238,slow=4.9,SNR=8.9 0.3nm,0.6s	85.04	18	P	**P**	**11 09 02.5**	**+0.1**

*NOU **15** 12:00:31.9, 37°.38S×179°.93W, h0km, MLv4.5/8, East of North Island, N.Z.*
*WEL **15** 12:00:47.4±1.0, 37°.S±4°.×17°.9E±°, h29km±5km, M3.3/28, ML3.5/36, MLv3.3/28, Error ellipse: s-maj=0.0km s-min=0.0km az=84.6*

ISC 15 12:00:43.3±2.8, 37°.30S±0°.07×179°.1E±0°.1, h28km±13km, n93, σ1º36/102, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.71	248	P	**Pb**	**12 00 57.2**	**+0.1**
MXZ				S	**Sb**	**12 01 04.7**	**-1.8**
MXZ	Matakaoa Point	0.71	248	P	**Pb**	**12 00 57.2**	**+0.1**
WMGZ	Waiomatatini S	0.77	228	P	**Pn**	**12 01 00.5**	**+2.2**
WMGZ				S	**Sn**	**12 01 10.9**	**+1.8**
PKGZ	Pakihiroa	1.02	235	P	**Pb**	**12 01 03.3**	**+0.8**
PKGZ				S	**Sn**	**12 01 15.6**	**+0.2**
PUZ	Puketiti	1.04	222	P	**Pn**	**12 01 04.1**	**+2.0**
PUZ				S	**Sn**	**12 01 17.5**	**+1.9**
HAZ	Te Kaha	1.17	247	P	**Pn**	**12 01 04.1**	**+0.3**
HAZ				S	**Sb**	**12 01 18.6**	**-1.0**
TWGZ	Tauwhareparae	1.26	226	P	**Pn**	**12 01 07.2**	**+2.0**
TWGZ				S	**Sb**	**12 01 24.1**	**+1.7**
RUGZ	Raukumara Rang	1.33	240	P	**Pb**	**12 01 07.8**	**+0.1**
CNGZ	Carnagh Statio	1.39	212	P	**Pn**	**12 01 09.5**	**+2.6**
TKGZ	Te Karaka	1.52	222	P	**Pn**	**12 01 10.3**	**+1.6**
MWZ	Matawai	1.64	231	P	**Pn**	**12 01 11.7**	**+1.4**
RIGZ	Rimuhau	1.77	217	P	**Pn**	**12 01 13.7**	**+1.6**
WHRZ	Whale Island	1.80	252	P	**Pn**	**12 01 13.2**	**+0.7**
RAGZ	Rawiri	1.81	228	P	**Pn**	**12 01 14.4**	**+1.7**
URZ	Urewera	1.87	239	P	**Pn**	**12 01 14.5**	**+1.1**
URZ				S	**Sn**	**12 01 36.0**	**-0.1**
URZ	Urewera	1.87	239	P	**Pn**	**12 01 14.8**	**+1.4**
SNGZ	Shannon Statio	2.05	223	P	**Pn**	**12 01 17.2**	**+1.3**
EDRZ	Edgecumbe	2.06	246	P	**Pn**	**12 01 17.5**	**+1.3**
KNZ	Kokohu	2.07	213	P	**Pn**	**12 01 17.1**	**+1.0**
MARZ	Manawahe	2.07	250	P	**Pn**	**12 01 16.6**	**+0.4**
MHGZ	Mahia Peninsul	2.08	207	P	**Pn**	**12 01 17.1**	**+0.7**
OPRZ	Ohinepanea	2.12	254	P	**Pn**	**12 01 16.9**	**0.0**
RTZ	Ruatahuna	2.15	232	P	**Pn**	**12 01 18.6**	**+1.2**
MUGZ	Murupara	2.21	237	P	**Pn**	**12 01 19.0**	**+0.8**
TARZ	Mount Tarawera	2.28	245	P	**Pn**	**12 01 20.5**	**+1.3**
RRRZ	Republican Roa	2.32	243	P	**Pn**	**12 01 20.9**	**+1.2**
WHHZ	Waihua	2.32	220	P	**Pn**	**12 01 21.1**	**+1.4**
WHHZ				S	**Sn**	**12 01 47.9**	**+0.7**
TGRZ	Tauranga	2.33	259	P	**Pn**	**12 01 19.6**	**-0.1**
MTHZ	Maungataniwha	2.38	229	P	**Pn**	**12 01 21.9**	**+1.3**
HLRZ	Highlands Stat	2.40	246	P	**Pn**	**12 01 20.1**	**-0.7**
KARZ	Kaharoa	2.40	252	P	**Pn**	**12 01 21.4**	**+0.5**
NGRZ	Ngongotaha	2.47	250	P	**Pn**	**12 01 22.9**	**+1.1**
PRRZ	Plateau Road	2.48	240	P	**Pn**	**12 01 22.4**	**+0.6**
HSRZ	Hossack Road	2.50	245	P	**Pn**	**12 01 24.5**	**+2.3**
HRRZ	Handcock Road	2.50	243	P	**Pn**	**12 01 23.2**	**+1.0**
ALRZ	Allen Road	2.54	240	P	**Pn**	**12 01 23.4**	**+0.6**
NMHZ	Naumai	2.56	225	P	**Pn**	**12 01 24.7**	**+1.6**
ARHZ	Aropaoanui	2.58	220	P	**Pn**	**12 01 24.4**	**+1.2**
MRHZ	Matea Rd	2.63	234	P	**Pn**	**12 01 24.7**	**+0.7**
KUZ	Kuaotunu	2.79	281	P	**Pn**	**12 01 25.3**	**-0.8**
BKZ	Black Stump Fm	2.79	227	P	**Pn**	**12 01 27.0**	**+0.8**
CKHZ	Cape Kidnapper	2.85	214	P	**Pn**	**12 01 27.5**	**+0.5**
CKHZ				S	**Sn**	**12 01 59.4**	**-1.0**
MCHZ	McNeill Hill	2.87	221	P	**Pn**	**12 01 28.3**	**+1.1**
TOZ	Tahuroa Road	2.92	261	P	**Pn**	**12 01 27.9**	**0.0**
KWHZ	Kaweka Forest	3.00	224	P	**Pn**	**12 01 30.0**	**+0.8**
KAHZ	Kaharanaki	3.05	215	P	**Pn**	**12 01 29.6**	**-0.2**
RATZ	Rangitukua	3.08	239	P	**Pn**	**12 01 31.3**	**+1.2**
MKAZ	Moumakai	3.18	272	P	**Pn**	**12 01 31.5**	**0.0**
PXZ	Pawanui	3.25	212	P	**Pn**	**12 01 32.0**	**-0.4**
TMVZ	Te Maari	3.25	235	P	**Pn**	**12 01 33.1**	**+0.5**
BHHZ	Black Hill Sta	3.25	227	P	**Pn**	**12 01 33.3**	**+0.7**
ETVZ	East Tongariro	3.26	235	P	**Pn**	**12 01 33.2**	**+0.5**
KRVZ	Karewarewa	3.28	236	P	**Pn**	**12 01 33.7**	**+0.7**
OTVZ	Oturere	3.30	235	P	**Pn**	**12 01 33.7**	**+0.4**
NNVZ	North Ngauruho	3.32	236	P	**Pn**	**12 01 34.5**	**+0.9**
WTVZ	West Tongariro	3.33	236	P	**Pn**	**12 01 34.6**	**+1.0**
SNVZ	South Ngauruho	3.33	235	P	**Pn**	**12 01 34.1**	**+0.3**
NGZ	Ngauruhoe	3.35	235	P	**Pn**	**12 01 34.4**	**+0.4**
ETAZ	East Tamaki Re	3.38	275	P	**Pn**	**12 01 34.5**	**+0.3**
MOVZ	Moawhango	3.39	231	P	**Pn**	**12 01 34.6**	**+0.1**
WHVZ	Whangaehu Hut	3.42	234	P	**Pn**	**12 01 35.5**	**+0.5**
FWVZ	Far West T-bar	3.43	234	P	**Pn**	**12 01 35.8**	**+0.7**
MBAZ	Motutapu North	3.43	278	P	**Pn**	**12 01 35.9**	**+1.0**
WPHZ	Waipukurau	3.47	217	P	**Pn**	**12 01 35.4**	**0.0**
PNHZ	Pukenui	3.48	221	P	**Pn**	**12 01 35.2**	**-0.4**
EPAZ	Eden Park BICE	3.54	276	P	**Pn**	**12 01 37.4**	**+1.0**
HBAZ	Herne Bay Bore	3.55	276	P	**Pn**	**12 01 37.9**	**+1.3**
MTVZ	Mangateitei	3.55	233	P	**Pn**	**12 01 36.9**	**+0.2**
HIZ	Hauiti	3.59	249	P	**Pn**	**12 01 38.5**	**+1.4**
HIZ	Hauiti	3.59	249	P	**Pn**	**12 01 38.9**	**+1.7**
AWAZ	Awhitu Peninsu	3.60	272	P	**Pn**	**12 01 37.9**	**+0.7**
RVAZ	Riverhead Bore	3.69	277	P	**Pn**	**12 01 39.0**	**+0.6**
TSZ	Takapari Road	3.71	221	P	**Pn**	**12 01 37.9**	**-0.9**
DVHZ	Dannevirke	3.78	217	P	**Pn**	**12 01 39.0**	**-0.8**
VRZ	Vera Road	3.90	241	P	**Pn**	**12 01 42.6**	**+1.3**
POWZ	Post Office Ro	4.05	219	P	**Pn**	**12 01 42.9**	**-0.5**
WAZ	Wanganui	4.07	232	P	**Pn**	**12 01 44.7**	**+0.9**
PRWZ	Pori Road	4.08	216	P	**Pn**	**12 01 43.5**	**-0.3**
WCZ	Waipu Caves	4.09	288	P	**Pn**	**12 01 44.6**	**+0.6**
TIWZ	Tintock	4.29	215	P	**Pn**	**12 01 45.8**	**-1.0**
LREZ	Lake Rotokare	4.30	238	P	**Pn**	**12 01 48.1**	**+1.3**
PREZ	Palmer Road	4.41	241	P	**Pn**	**12 01 50.8**	**+2.4**
NEZ	North Egmont	4.42	242	P	**Pn**	**12 01 50.7**	**+2.0**
PKE	Pukeiti	4.47	243	P	**Pn**	**12 01 52.6**	**+3.3**
KHEZ	Kahui Hut	4.49	242	P	**Pn**	**12 01 52.1**	**+2.5**
NBEZ	Newall Road No	4.58	243	P	**Pn**	**12 01 53.8**	**+3.0**
OUZ	Omahuta	4.94	293	P	**Pn**	**12 01 56.7**	**+1.1**
OUZ	Omahuta	4.94	293	P	**Pn**	**12 01 56.9**	**+1.3**
TKNZ	Takaka Hill	6.07	230	P	**Pn**	**12 02 09.3**	**-1.9**
TKNZ				S	**Sn**	**12 03 14.8**	**-5.0**
QRZ	Quartz Range	6.23	234	P	**Pn**	**12 02 12.0**	**-1.4**
KHZ	Kahutara	6.68	218	P	**Pn**	**12 02 18.1**	**-1.4**
RPZ	Rata Peaks	8.88	221	P	**Pn**	**12 02 46.9**	**-2.8**
ODZ	Otahua Downs	10.03	217	P	Pn	12 03 02.0	-3.5

*IDC **15** 12:01:57.3±1.8, 7°.58S×123°.34E, h0km, mb3.7/2, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=177.7km s-min=27.7km az=58.0*

ISC 15 12:02:14.0±1.2, 8°.3S±0°.2×123°.1E±0°.1, h150km, n15, σ1º94/16, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.89	245	P	**Pn**	**12 02 37.7**	**-0.1**
SOEI	Soe	1.92	141	P	**Pn**	**12 02 49.9**	**+1.6**
PLAI	Plampang	5.24	263	P	**Pn**	**12 03 31.3**	**+0.6**
JAGI	Jajag, Banyuwa 17nm,1.1s	8.80	268	P	**Pn**	**12 04 18.0**	**-0.2**
MTN	Manton Dam	9.16	121	P	**Pn**	**12 04 22.6**	**-0.3**
KDU	Kakadu	10.26	116	P	**Pn**	**12 04 36.6**	**-0.9**
UGM	Wanagama	12.41	271	P	**Pn**	**12 05 05.3**	**-0.3**
WRA	Warramunga Arr 0.5nm,0.3s,baz=318,slow=12,SNR=28	15.95	138	Pn	**Pn**	**12 05 49.5**	**-0.7**
WRA 0.2nm,0.3s,baz=317,slow=25,SNR=2.9 0.8nm,0.4s				Sn	S	12 08 31.7	-17
WRKA	Warakurna	17.42	164	P	**P**	**12 06 07.7**	**+0.7**
ASAR	Alice Springs 0.2nm,0.3s,baz=321,slow=9.2,SNR=14	18.52	147	P	**P**	**12 06 20.2**	**+1.2**
ASAR 1.0nm,0.7s,baz=312,slow=21,SNR=5.9 0.4nm,0.4s				S	**S**	**12 09 36.8**	**-5.7**
AS01	Alice Springs	18.54	147	P	**Pn**	**12 06 21.6**	**+0.3**
QIS	Mount Isa	20.14	129	P	**P**	**12 06 38.5**	**+1.9**
OOD	Oodnadatta	22.81	150	P	**P**	**12 07 05.3**	**+1.3**
STKA	Stephens Creek 0.6nm,0.4s,baz=335,slow=14,SNR=3.7 0.6nm,0.4s	29.15	146	P	**P**	**12 08 02.7**	**+1.6**
MKAR	Makanchi Array 0.2nm,0.4s,baz=145,slow=8.5,SNR=1.5 0.2nm,0.4s	65.70	331	P	**P**	**12 12 41.2**	**-1.2**

*ISK **15** 12:15:49.0, 40°.47N×40°.26E, h12km, ML2.8/5*
*DDA **15** 12:15:49.6±0.0, 40°.45N×40°.24E, h7km±3km, ML2.2*

ISC 15 12:15:49.1±0.9, 40°.47N±0°.03×40°.26E±0°.02, h11km±7km, n18, σ0º53/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	Aydıntepe-Bayb	0.12	229	PG	**Pg**	**12 15 52.4**	**+0.1**
BAYT				SG	**Sg**	**12 15 54.9**	**+0.3**
BAYB	BAYBURT	0.21	180	P	**Pg**	**12 15 54.0**	**+0.2**
BAYB				S	**Sg**	**12 15 57.2**	**+0.2**
KOPT	Kop Dagi	0.49	158	P	**Pb**	**12 15 59.7**	**-0.2**
KOPT				S	**Sb**	**12 16 06.9**	**-0.3**
KRIK	Erzurum-spir	0.53	104	P	**Pb**	**12 16 00.1**	**-0.4**
KRIK				S	**Sb**	**12 16 07.3**	**-0.9**
GUMT	Gumushane	0.59	269	PG	**Pb**	**12 16 01.1**	**-0.5**
GUMT				SG	**Sb**	**12 16 09.8**	**-0.2**
MACK	Trabzon	0.60	322	P	**Pb**	**12 16 01.5**	**-0.2**
MACK				S	**Sb**	**12 16 10.8**	**+0.6**
KTUT	Trabzon	0.64	324	PG	**Pb**	**12 16 01.9**	**-0.3**
KTUT				SG	**Sb**	**12 16 11.2**	**+0.1**
CHAY	Cayeli-Rize	0.71	30	PG	**Pb**	**12 16 03.3**	**-0.2**
CHAY				SG	**Sb**	**12 16 13.6**	**+0.4**
CHOM	Cayeli-Rize	0.73	31	PG	**Pb**	**12 16 03.7**	**-0.2**
CHOM				SG	**Sb**	**12 16 14.4**	**+0.5**
KELT	Kelkit	0.83	247	P	**Pb**	**12 16 05.4**	**-0.3**
KELT				S	**Sb**	**12 16 16.8**	**-0.2**
KELT comp=E,66nm,0.2s				*i* AML	AML	12 16 19.0	
KELT comp=N,95nm,0.2s				*i* AML	AML	12 16 19.0	
ERZM	Erzurum	1.02	123	P	**Pb**	**12 16 08.6**	**-0.4**
ERZM				S	**Sn**	**12 16 25.7**	**+1.7**
ALUC	Giresun/Alucra	1.14	264	P	**Pn**	**12 16 11.5**	**+0.3**
ALUC				S	**Sn**	**12 16 26.8**	**-0.1**
ALUC comp=E,60nm,0.4s				*i* AML	AML	12 16 29.0	
ALUC comp=N,66nm,0.3s				*i* AML	AML	12 16 32.0	
DDEM	Demirkent	1.21	69	P	**Pb**	**12 16 11.3**	**-0.8**
DDEM comp=N,47nm,0.3s				*i* AML	AML	12 16 34.0	
DBAD	Bademkaya	1.22	63	P	**Pb**	**12 16 11.7**	**-0.6**
DBAD				S	**Sg**	**12 16 28.1**	**-0.4**
ESPY	Espiye-Giresun	1.25	291	PN	**Pg**	**12 16 12.9**	**-0.2**
DBOC	Borcka	1.38	50	P	**Pn**	**12 16 14.3**	**0.0**
DAGI	Agillar	1.40	64	P	**Pb**	**12 16 14.8**	**-0.5**
SUSE	Susehri	1.59	261	P	**Pb**	**12 16 18.3**	**-0.3**
SUSE				S	**Sg**	**12 16 39.8**	**-0.6**
SUSE comp=N,40nm,0.2s				*i* AML	AML	12 16 42.0	

*NEIC **15** 12:24:54.5±1.5, 22°.64S±0°.08×174°.26W±0°.08, h10km±1km, mb4.7/20, Error ellipse: s-maj=17.2km s-min=6.8km az=141.0*
*IDC **15** 12:24:55.1±0.6, 22°.68S×174°.63W, h0km, mb4.2/16, mbtmp4.2/17, ML4.7/2, MS3.4/5, Error ellipse: s-maj=21.9km s-min=15.0km az=133.0*

ISC 15 12:24:55.5±0.5, 22°.75S±0°.07×174°.27W±0°.07, h10km, n60, σ2º07/55, mb4.5/24, MS3.5/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.46	49	P	**Pn**	**12 26 13.5**	**-3.5**
RAO	Raoul Island 75nm,0.3s,baz=7.5,slow=21,SNR=7.2	7.26	206	Pn	**Pn**	**12 26 40.9**	**-0.8**
RAO 34nm,0.3s,baz=227,slow=24,SNR=1.2				Sn	**Sn**	**12 28 02.7**	**-1.5**
MSVF	Nonsavu 0.8nm,0.3s,baz=118,slow=19,SNR=10.0	8.77	303	Pn	**Pn**	**12 27 05.3**	**+2.7**
MSVF	Nonsavu	8.77	303	Pn	Pn	12 27 06.7	+4.2
AFI	Afiamalu 2.5nm,0.3s,baz=191,slow=3.8,SNR=11	9.11	15	Pn	**Pn**	**12 27 03.5**	**-3.6**
AFI 4.6nm,0.3s,baz=210,slow=16,SNR=2.2				Sn	Sn	12 28 35.7	-14
AFI	Afiamalu	9.11	15	Pn	**Pn**	**12 27 04.6**	**-2.5**
RAR	Rarotonga	13.53	86	Pn	**Pn**	**12 28 04.3**	**-3.4**
URZ	Urewera 0.5nm,0.3s,baz=86,slow=16,SNR=2.0	17.14	204	P	**Pn**	**12 28 54.2**	**-0.9**
URZ 8.2nm,1.0s,baz=117,slow=12,SNR=2.0 8.8nm,0.7s				S	Sn	12 31 48.0	-18
URZ URZ comp=Z,36nm,1.5s	Urewera	17.14	204	 IAmb	**P** IAmb	**12 28 56.9** 12 29 17.9	**+0.1**
DZM	Mont Dzumac comp=Z,12nm,1.0s,baz=56,slow=18,SNR=2.8	17.85	268	P	**P**	**12 29 06.0**	**+1.0**
BKZ	Black Stump Fm	18.16	204	P	**Pn**	**12 29 08.0**	**+0.1**
BFZ	Birch Farm	19.59	202	P	**Pn**	**12 29 25.7**	**+0.5**
BFZ comp=Z,95nm,1.4s				IAmb	IAmb	12 29 44.2	
TUWZ	Tuamarina	21.09	205	P	**P**	**12 29 36.0**	**-4.1**
BSWZ	Blackbirch Sta	21.36	205	P	**P**	**12 29 45.4**	**+2.3**
KHZ	Kahutara comp=Z,25nm,1.2s	22.09	205	P	**P**	**12 29 47.4**	**-3.5**
KHZ comp=Z,25nm,1.2s				IAmb	IAmb	12 29 58.4	
PPT	Papeete comp=Z,17nm,0.6s,baz=99,slow=13,SNR=4.6	23.73	82	P	**P**	**12 30 11.0**	**+3.0**
PPT comp=Z,73nm,19.1s,baz=302,slow=34 comp=Z,17nm,0.6s				LR	LR	12 38 42.3	
RPZ	Rata Peaks comp=Z,5.9nm,0.7s,baz=37,slow=10,SNR=1.7 comp=Z,5.9nm,0.7s	24.18	207	P	**P**	**12 30 13.4**	**+1.4**
FOZ FOZ comp=Z,36nm,1.1s	Fox Glacier	24.56	209	P IAmb	**P** IAmb	**12 30 17.3** 12 30 56.8	**+1.8**
EIDS EIDS comp=Z,16nm,1.3s	Eidsvold	31.70	258	P IAmb	**P** IAmb	**12 31 17.9** 12 31 58.0	**-1.6**
CTA	Charters Tower comp=Z,2.4nm,0.3s,baz=99,slow=10,SNR=18 comp=Z,2.4nm,0.3s	36.78	267	P	**P**	**12 32 01.1**	**-2.6**
CTAO	Charters Tower	36.78	267	P	**P**	**12 32 02.1**	**-1.5**
STKA	Stephens Creek comp=Z,1.9nm,0.5s,baz=88,slow=9.4,SNR=6.9 comp=Z,1.9nm,0.5s	40.03	247	P	**P**	**12 32 28.5**	**-2.4**
STKA	Stephens Creek	40.03	247	P	**P**	**12 32 29.1**	**-1.8**
BBOO	Buckleboo	44.73	246	P	**P**	**12 33 07.2**	**-2.0**
AS31	Alice Springs	47.42	258	P	**P**	**12 33 28.6**	**-2.1**
ASAR	Alice Springs comp=Z,9.8nm,1.0s,baz=92,slow=8.3,SNR=49 comp=Z,9.8nm,1.0s	47.43	258	P	**P**	**12 33 28.6**	**-2.0**
WR0 WR0 comp=Z,12nm,1.5s	Warramunga Arr	47.57	263	P IAmb	**P** IAmb	**12 33 29.8** 12 33 53.6	**-1.9**
WB2 WB2 comp=Z,12nm,1.4s	Warramunga Arr	47.75	263	P IAmb	**P** IAmb	**12 33 31.2** 12 33 36.2	**-1.9**
WB0 WB0 comp=Z,3.9nm,0.8s	Warramunga Arr	47.75	263	P IAmb	**P** IAmb	**12 33 31.2** 12 33 31.5	**-1.9**
WRAB WRAB comp=Z,9.1nm,1.2s	Tennant Creek	47.75	263	P IAmb	**P** IAmb	**12 33 30.5** 12 33 37.3	**-2.6**
WRA WRA comp=Z,3.0nm,0.6s,baz=96,slow=8.2,SNR=115 comp=Z,0.8nm,0.9s,baz=108,slow=2.7,SNR=2.5 comp=Z,3.0nm,0.6s	Warramunga Arr	47.76	263	P PcP	**P** **PcP**	**12 33 30.7** **12 35 02.7**	**-2.5** **+0.4**
WRA	Warramunga Arr	47.76	263	P	**P**	**12 33 30.5**	**-2.7**
MTN	Manton Dam	52.67	271	P	**P**	**12 34 08.0**	**-2.5**
KNRA	Kununurra	53.99	267	P	**P**	**12 34 18.5**	**-1.7**
VNDA	Vanda comp=Z,1.1nm,0.9s,baz=332,slow=6.2,SNR=5.9 comp=Z,1.1nm,0.9s	56.02	186	P	**P**	**12 34 36.6**	**+2.7**
RPN	Rapa Nui comp=Z,32nm,18.2s,baz=29,slow=32	58.47	109	LR	LR	12 56 29.7	
MORW	Morawa	62.20	248	P	**P**	**12 35 16.4**	**-1.2**
QSPA	South Pole Qui comp=Z,5.6nm,1.1s	67.33	180	P	**P**	**12 35 52.3**	**+1.7**
QSPA comp=Z,5.6nm,1.1s				IAmb	IAmb	12 35 53.8	
MJAR	Matsushiro Arr comp=Z,2.8nm,1.0s,baz=153,slow=5.3,SNR=4.5 comp=Z,2.8nm,1.0s	74.09	322	P	**P**	**12 36 32.1**	**+0.2**
PETK	Petropavlovsk- comp=Z,2.5nm,0.7s,baz=134,slow=8.3,SNR=5.5 comp=Z,2.5nm,0.7s	79.37	343	P	**P**	**12 37 02.2**	**+0.9**
PETK	Petropavlovsk-	79.37	343	P	**P**	**12 37 02.0**	**+0.6**
NVAR	Mina Array Bea comp=Z,0.5nm,0.6s,baz=213,slow=9.5,SNR=4.5 comp=Z,0.5nm,0.6s	80.34	41	P	**P**	**12 37 09.8**	**+2.5**
MAW	Mawson comp=Z,3.7nm,0.7s,baz=133,slow=8.1,SNR=10 comp=Z,3.7nm,0.7s	80.61	199	P	**P**	**12 37 09.7**	**+1.7**
MAW	Mawson	80.61	199		**P**	**12 37 10.5**	**+2.5**
KSRS	Korea Array comp=Z,1.0nm,0.7s,baz=126,slow=6.4,SNR=4.5	80.88	317	P	**P**	**12 37 10.8**	**+1.0**
KSRS comp=Z,13nm,21.5s,baz=150,slow=32 comp=Z,1.0nm,0.7s				LR	LR	13 07 57.4	
H03S2	Juan Fernandez baz=246,SNR=5.1	81.86	123	T	T	14 09 23.9	
H03S1	Juan Fernandez baz=246,SNR=4.3	81.87	123	T	T	14 09 18.0	
H03S3	Juan Fernandez baz=246,SNR=5.7	81.88	123	T	T	14 09 16.8	
TXAR	Lajitas Array comp=Z

baz=34
AAK Ala-Archa 1.20 23⇓eP Pn 12 54 45.0 -0.9
baz=22
AAK ⇓eS Sb 12 55 00.8 -0.6
baz=22
OHH Osh 1.30 219⇑iP Pg 12 54 47.5 -0.4
baz=20
OHH ⇑eS Sg 12 55 05.0 +0.2
baz=20
CHMS Chumysh 1.60 24 ⇑Pg Pn 12 54 51.7 +0.3
0.7nm,0.3s
CHMS ⇑Lg Lg 12 55 14.1
1.9nm,0.4s
TKM2 Tokmak 2 1.89 42⇓eP Pb 12 54 56.8 -0.9
baz=42
TKM2 ⇓eS Sb 12 55 21.1 -0.3
baz=42
TKM2 Tokmak 2 1.89 42 ⇓Pg Pb 12 54 58.0 +0.4
2.3nm,0.6s
TKM2 ⇓Lg Lg 12 55 23.4
2.5nm,0.6s
SGDS Sogindy 2.00 16 eP Pg 12 55 01.2 -0.1
1.4nm,0.8s
SGDS eS Sg 12 55 29.1 +2.0
2.6nm,0.5s
SGDS Sogindy 2.00 16 Pg Pg 12 55 01.2 -0.1
1.4nm,0.8s
SGDS Lg Lg 12 55 29.1
2.6nm,0.5s
KST Kastek 2.17 45 eP Pb 12 55 02.9 +0.6
0.9nm,0.2s
KST eS Sg 12 55 32.5 -0.2
5.0nm,0.5s
KST Kastek 2.17 45 Pg Pb 12 55 02.9 +0.6
0.9nm,0.2s
KST Lg Lg 12 55 32.5
5.0nm,0.5s
KRBS Karabastau 2.54 31 eP Pb 12 55 09.8 +1.2
4.8nm,0.3s
KRBS eS Sg 12 55 44.5 0.0
4.5nm,0.5s
KRBS Karabastau 2.54 31 Pg Pb 12 55 09.8 +1.2
4.8nm,0.3s
KRBS Lg Lg 12 55 44.6
4.5nm,0.5s
MDOK Medeo 2.87 54 eP Pb 12 55 15.8 +1.5
3.1nm,0.6s
MDOK eS Sg 12 55 54.7 -0.4
2.7nm,0.3s
MDOK Medeo 2.87 54 Pg Pb 12 55 15.8 +1.5
3.1nm,0.6s
MDOK Lg Lg 12 55 54.7
2.7nm,0.3s
KK31 Karatay Array 2.94 303 ⇑Pg Pb 12 55 15.7 +0.3
0.4nm,0.5s,baz=127,slow=17,SNR=3.9
KK31 ⇓Lg Lg 12 55 55.9
1.1nm,0.6s,baz=203,slow=15,SNR=2.6
KUU Kurty 2.98 37 eP Pb 12 55 17.3 +1.1
1.7nm,0.3s
KUU eS Sg 12 55 56.8 -1.9
4.2nm,0.6s
KUU Kurty 2.98 37 Pg Pb 12 55 17.3 +1.1
1.7nm,0.3s
KUU Lg Lg 12 55 56.8
4.2nm,0.6s
KTBS Karatobe 3.01 43 eP Pb 12 55 18.1 +1.4
3.0nm,0.6s
KTBS eS Sg 12 55 58.3 -1.4
5.9nm,0.6s
KTBS Karatobe 3.01 43 Pg Pb 12 55 18.1 +1.4
3.0nm,0.6s
KTBS Lg Lg 12 55 58.3
5.9nm,0.6s

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*NEIC **15** 13:03:44.5±2.7,32°.84S±0°.04×69°.16W±0°.05,h10km±2km, Md3.5(SJA),ML2.9(GUC),Error ellipse: s-maj=8.0km s-min=5.6km az=131.0*
*GUC **15** 13:03:45.7±0.9,32°.83S×69°.23W,h17km±6km,ML2.9*
ISC 15 13:03:44.6±2.1,32°.84S±0°.03×69°.18W±0°.06,h11km±17km, n46,σ0°93/57,1C-2D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.05**	**242**	⇓iP	**Pb**	**13 04 04.3**	**-0.7**
FCH				i S	**Sg**	**13 04 19.2**	**+0.7**
VA03	**San Esteban**	**1.16**	**273**		**Pb**	**13 04 06.0**	**-0.7**
VA03				Sn	**Sg**	**13 04 21.9**	**+0.1**
VA03	**San Esteban**	**1.16**	**273**	⇓iP	**Pb**	**13 04 06.0**	**-0.7**
VA03				i S	**Sg**	**13 04 21.9**	**+0.1**
MT03	**Universidad Ad**	**1.29**	**239**		**Pn**	**13 04 08.4**	**-0.3**
MT03	**Universidad Ad**	**1.29**	**239**	eP	**Pn**	**13 04 08.7**	**0.0**
MT03				eS	**Sg**	**13 04 26.9**	**+0.6**
MT03				IAML		13 04 29.0
comp=E,318nm,0.2s							
PEL	**Peldehue**	**1.30**	**256**	eP	**Pn**	**13 04 08.1**	**-0.7**
PEL				i S	**Sb**	**13 04 25.4**	**-0.5**
PEL				IAML		13 04 26.9
comp=N,467nm,0.4s							
LMEL	**Las Melosas**	**1.32**	**220**		**Pn**	**13 04 09.2**	**0.0**
LMEL				Sn	**Sb**	**13 04 26.3**	**-0.3**
LMEL	**Las Melosas**	**1.32**	**220**	eP	**Pn**	**13 04 09.1**	**0.0**
LMEL				eS	**Sg**	**13 04 27.3**	**+0.2**
LMEL				IAML		13 04 29.8
comp=N,369nm,0.2s							
ZON	**Zonda**	**1.36**	**18**	Pn	**Pn**	**13 04 09.4**	**-0.3**
MT05	**Renca**	**1.42**	**247**		**Pn**	**13 04 10.2**	**-0.3**
MT05	**Renca**	**1.42**	**247**	eP	**Pb**	**13 04 10.9**	**-0.2**
MT05				IAML		13 04 36.3
comp=N,417nm,0.8s							
ROCH	**El Roble**	**1.54**	**265**	eP	**Pn**	**13 04 12.8**	**+0.5**
ROCH				eS	**Sb**	**13 04 33.4**	**+0.3**
ROCH				IAML		13 04 35.1
comp=E,427nm,0.5s							
ROC1	**El Roble**	**1.55**	**265**		**Pn**	**13 04 12.5**	**+0.1**
BO04	**La Punta**	**1.65**	**226**		**Pb**	**13 04 15.1**	**-0.1**
BO04	**La Punta**	**1.65**	**226**	i P	**Pb**	**13 04 15.1**	**-0.1**
BO04				eS	**Sg**	**13 04 37.4**	**-0.5**
BO04				IAML		13 04 39.5
comp=E,98nm,0.5s							
MT02	**Curacav**	**1.69**	**255**		**Pn**	**13 04 13.4**	**-0.8**
MT02	**Curacav**	**1.69**	**255**	eP	**Pb**	**13 04 15.1**	**-0.7**
MT02				eS	**Sb**	**13 04 37.5**	**+0.3**
MT09	**Talagante**	**1.78**	**238**		**Pn**	**13 04 14.8**	**-0.6**
MT09	**Talagante**	**1.78**	**238**	eP	**Pb**	**13 04 16.7**	**-0.7**
MT09				eS	**Sb**	**13 04 40.7**	**+1.0**
MT09				IAML		13 04 48.2
comp=N,117nm,0.5s							
VA06	**Catapilco**	**1.81**	**278**		**Pn**	**13 04 16.3**	**+0.6**
VA06	**Catapilco**	**1.81**	**278**	eP	**Pb**	**13 04 16.8**	**-0.9**
MT01	**Popeta**	**2.01**	**239**		**Pn**	**13 04 19.7**	**+1.2**
MT01	**Popeta**	**2.01**	**239**	eP	**Pb**	**13 04 20.0**	**-1.2**
MT01				IAML		13 04 49.8
comp=N,108nm,0.3s							
VA05	**Santo Domingo**	**2.19**	**248**		**Pb**	**13 04 23.3**	**-1.1**
VA05	**Santo Domingo**	**2.19**	**248**	eP	**Pb**	**13 04 23.6**	**-0.8**
VA05				IAML		13 04 55.5
comp=N,274nm,0.4s							
BO01	**Tunca**	**2.22**	**225**		**Pn**	**13 04 22.5**	**+1.1**
BO01	**Tunca**	**2.22**	**225**	eP	**Pb**	**13 04 24.5**	**-0.3**
CO02	**Combarbal**	**2.25**	**316**		**Pn**	**13 04 23.4**	**+1.5**
CO02	**Combarbal**	**2.25**	**316**	⇑iP	**Pb**	**13 04 24.7**	**-0.6**
BO02	**Sierra Bellavi**	**2.36**	**214**		**Pn**	**13 04 23.4**	**-0.1**
BO02	**Sierra Bellavi**	**2.36**	**214**	eP	**Pb**	**13 04 27.8**	**+0.6**
CO03	**El Pedregal**	**2.37**	**327**		**Pn**	**13 04 24.6**	**+1.0**
CO03	**El Pedregal**	**2.37**	**327**	eP	**Pb**	**13 04 27.1**	**-0.4**
CO03				IAML		13 05 04.8
comp=N,177nm,0.2s							
CO01	**Juntas del Tor**	**2.96**	**344**		**Pn**	**13 04 34.1**	**+2.3**
GO04	**Tololo Observa**	**3.00**	**332**		**Pn**	**13 04 32.2**	**-0.1**
GO04	**Tololo Observa**	**3.00**	**332**	eP	**Pn**	**13 04 34.8**	**+2.5**
CO06	**Fray Jorge**	**3.01**	**315**		**Pn**	**13 04 33.1**	**+0.9**
CO06	**Fray Jorge**	**3.01**	**315**	eP	**Pn**	**13 04 33.5**	**+1.3**
GO05	**Huala**	**3.15**	**226**		**Pn**	**13 04 36.1**	**+1.9**
CO05	**La Serena**	**3.40**	**328**	Pn	**Pn**	**13 04 38.9**	**+1.2**
ML02	**Panimavida**	**3.45**	**212**	Pn	**Pn**	**13 04 37.5**	**-0.9**
LCO	**Las Campanas**	**4.04**	**341**	Pn	**Pn**	**13 04 45.8**	**-0.9**
AC05	**El Transito**	**4.10**	**346**	Pn	**Pn**	**13 04 48.8**	**+1.4**
AC04	**Llanos de Chal**	**4.90**	**340**	Pn	**Pn**	**13 04 59.0**	**+0.7**
AC01	**Pan de Azucar**	**6.78**	**349**	Pn	**Pn**	**13 05 24.4**	**+0.2**
TRQA	**Tornquist**	**7.85**	**134**	Pn	**Pn**	**13 05 36.7**	**-2.1**

DJA 15 13:12:32.7±0.7,3°S±4°×12°9E±°,h12km±7km,M3.9/12, mb4.3/6,mB5.2/2,MLv3.7/12,Mw(mB)4.5/2,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.63**	**216**	P	Pg	13 12 44.9	-0.1
KRAI	**Karang Ratu**	**1.03**	**242**	P	Pb	13 12 52.1	-0.3
AAI	**Ambon**	**1.39**	**232**	P	Pb	13 12 58.6	-0.1
NLAI	**Namlea**	**2.23**	**259**	P	Pn	13 13 10.4	+0.8
SIJI	**Sorong**	**2.77**	**45**	P	Pn	13 13 17.1	+0.2
SWI	**Sorong**	**2.77**	**45**	P	Pn	13 13 17.5	+0.6
LBMI	**Labuha**	**2.82**	**320**	P	Pn	13 13 17.7	0.0
FAKI	**Fak Fak**	**2.95**	**92**	P	Pn	13 13 18.8	-0.6
SANI	**Sanana**	**3.40**	**283**	P	Pn	13 13 24.0	-1.6
RKPI	**Ransiki, Papua** 0.3nm3µm34nm,0.9s	**5.05**	**75**	P	Pn	13 13 48.7	+0.4
APSI	**Ampana** 0.1nm19nm,0.5s	**7.88**	**284**	P	Pn	13 14 27.7	+0.5
MRSI	**Marisa** 914nm16nm,0.5s	**8.06**	**294**	P	Pn	13 14 29.6	0.0

MAN 15 13:19:37.6,16°.20N×119°.94E,h24km,mb3.9,ML2.6, MS2.2,6C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.18**	**353**	⇑eP	Pn	13 19 44.8	-0.1
BOLP				eS	Sb	13 19 51.0	+4.5
SMPP	**San Manuel, Pa**	**0.72**	**94**	⇑eP	Pb	13 19 51.8	+0.3
SMPP				eS	Sn	13 20 02.8	+0.3
SAMP	**Sagada Mountai**	**1.27**	**47**	⇑eP	Pn	13 19 59.3	-0.6
SAMP				eS	Sb	13 20 16.7	-0.2
PCPH	**Palayan**	**1.29**	**120**	⇑eP	Pn	13 19 59.5	-0.5
PCPH				eS	Sn	13 20 16.8	+0.2
BALP	**Baler**	**1.64**	**106**	⇓eP	Pb	13 20 06.5	-0.7
BALP				eS	Sb	13 20 26.8	-0.8
SIPP	**Brgy, Tapao**	**1.78**	**16**	⇓iP	Pn	13 20 08.1	+1.2
SIPP				i S	Sb	13 20 39.2	+7.7
MACP	**Maragondon, Ca**	**2.07**	**158**	⇑eP	Pn	13 20 10.3	-0.6
MACP				eS	Sb	13 20 39.4	-0.4
LUBP	**Lubang**	**2.47**	**173**	⇓eP	Pn	13 20 16.4	0.0
LUBP				eS	Sn	13 20 47.5	+1.6
LQP	**Lukban**	**2.59**	**143**	⇑eP	Pn	13 20 19.9	+1.7

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*LDG **15** 13:37:52.7±0.3,36°.44N×12°.74E,h10km,Ml3.4/2,Error ellipse: s-maj=9.0km s-min=4.5km az=8.0*
*ROM **15** 13:37:53.2±0.1,36°.31N×12°.63E,h38km,ML3.2/4,Error ellipse: s-maj=0.0km s-min=0.0km az=45.0*
ISC 15 13:37:52.9±3.1,36°.4N±0°.1×12°.77E±0°.09,h14km±13km, n33,σ1°11/39,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAVR	**Favara**	**1.15**	**39**	P	**Pg**	**13 38 15.4**	**+0.2**
CLTA	**Licata**	**1.24**	**50**	P	**Pg**	**13 38 16.0**	**-0.8**
RAFF	**Raffo Rosso**	**1.54**	**56**	P	**Pn**	**13 38 20.0**	**0.0**
RAFF				AML	AML		
comp=N,526µm,1.3s							
RAFF				AML	AML		
comp=E,415µm,0.6s							
CORL	**Corleone**	**1.58**	**16**	P	**Pn**	**13 38 19.7**	**-1.0**
CORL				S	**Sn**	**13 38 40.8**	**-0.1**
CORL				AML	AML		
comp=E,564µm,0.9s							
CORL				AML	AML		
comp=N,511µm,0.6s							
ALJA	**Alia**	**1.59**	**30**	P	**Pn**	**13 38 21.0**	**+0.3**
ALJA				AML	AML		
comp=E,240µm,1.6s							
ALJA				AML	AML		
comp=N,286µm,1.2s							
ALJA				AML	AML		
comp=N,287µm,1.2s							
ERC	**Erice**	**1.67**	**355**	P	**Pn**	**13 38 20.6**	**-1.3**
ERC				S	**Sn**	**13 38 40.7**	**-2.4**
HMDC	**Modica**	**1.72**	**69**	P	**Pn**	**13 38 22.3**	**-0.2**
HMDC				S	**Sn**	**13 38 44.3**	**-0.1**
HMDC				AML	AML		
comp=E,699µm,1.1s							
HMDC				AML	AML		
comp=N,728µm,1.2s							
HMDC				AML	AML		
comp=E,700µm,1.1s							
HMDC				AML	AML		
comp=N,728µm,1.2s							
HVZN	**Vizzini**	**1.76**	**62**	P	**Pn**	**13 38 22.9**	**-0.2**
PETRA	**Petralia Sopra**	**1.82**	**36**	P	**Pn**	**13 38 24.6**	**+0.7**
PETRA				AML	AML		
comp=E,208µm,0.4s							
PETRA				AML	AML		
comp=N,218µm,0.6s							
SOLUN	**Solunto**	**1.83**	**19**	P	**Pn**	**13 38 23.2**	**-0.7**
SOLUN				AML	AML		
comp=E,125µm,1.0s							
SOLUN				AML	AML		
comp=N,110µm,0.9s							
MPG	**Monte Pellegri**	**1.85**	**15**	P	**Pn**	**13 38 23.6**	**-0.7**
CSLB	**Castelbuono**	**1.88**	**33**	P	**Pn**	**13 38 24.8**	**+0.1**
CSLB				AML	AML		
comp=E,73µm,0.4s							
CSLB				AML	AML		
comp=N,85µm,1.2s							
GIB	**Gibilmanna**	**1.91**	**31**	P	**Pn**	**13 38 25.2**	**+0.1**
GIB				AML	AML		
comp=E,341µm,0.6s							
GIB				AML	AML		
comp=N,319µm,0.8s							
HPAC	**Pachino**	**1.92**	**79**	P	**Pn**	**13 38 24.6**	**-0.5**
HLNI	**Lentini**	**1.95**	**59**	P	**Pn**	**13 38 25.8**	**+0.1**
HLNI				S	**Sn**	**13 38 49.5**	**-0.4**
HLNI				AML	AML		
comp=E,345µm,1.2s							
HLNI				AML	AML		
comp=N,316µm,0.3s							
PLLN	**Pollina**	**1.96**	**34**	P	**Pn**	**13 38 26.4**	**+0.6**
GALF	**Gagliano Caste**	**1.97**	**47**	P	**Pn**	**13 38 27.4**	**+1.5**
GALF				AML	AML		
comp=E,245µm,0.4s							
GALF				AML	AML		
comp=N,124µm,0.7s							
HAVL	**Avola**	**1.99**	**72**	P	**Pn**	**13 38 26.1**	**-0.1**
HAVL				S	**Sn**	**13 38 50.7**	**-0.2**
HAVL				AML	AML		
comp=E,762µm,1.1s							
HAVL				AML	AML		
comp=N,820µm,0.3s							
SSY	**Sortino**	**2.01**	**66**	P	**Pn**	**13 38 27.0**	**+0.5**
SSY				S	**Sn**	**13 38 51.4**	**-0.1**
SSY				AML	AML		
comp=E,603µm,1.0s							
SSY				AML	AML		
comp=E,608µm,0.6s							
SSY				AML	AML		
comp=N,1835µm,0.5s							
ESML	**S. M. di Licod**	**2.10**	**53**	P	**Pn**	**13 38 28.6**	**+0.9**
ESML				AML	AML		
comp=E,346µm,0.8s							
ESML				AML	AML		
comp=N,300µm,1.1s							
HAGA	**Augusta**	**2.12**	**64**	P	**Pn**	**13 38 27.9**	**-0.1**
HAGA				AML	AML		
comp=E,388µm,1.6s							
HAGA				AML	AML		
comp=N,330µm,1.2s							
MNO	**Monte Soro**	**2.19**	**44**	P	**Pn**	**13 38 30.9**	**+1.7**
MNO				AML	AML		
comp=E,333µm,0.5s							
MNO				AML	AML		
comp=N,450µm,0.5s							
ESLN	**Serra La Nave**	**2.21**	**53**	P	**Pn**	**13 38 30.5**	**+1.2**
ESLN				AML	AML		
comp=E,1470µm,1.1s							
ESLN				AML	AML		
comp=N,956µm,0.7s							
MSFR	**San Fratello**	**2.21**	**41**	P	**Pn**	**13 38 30.9**	**+1.6**
MSFR				AML	AML		
comp=E,264µm,0.3s							
MSFR				AML	AML		
comp=N,266µm,0.3s							
EPZF	**Pizzo Felice**	**2.21**	**48**	P	**Pn**	**13 38 31.2**	**+1.9**
EPZF				AML	AML		
comp=E,314µm,1.6s							
EPZF				AML	AML		
comp=N,440µm,0.9s							
EMSG	**Monte Spagnolo**	**2.27**	**50**	P	**Pn**	**13 38 31.9**	**+1.8**
EMSG				AML	AML		
comp=E,850µm,0.5s							
EMSG				AML	AML		
comp=N,633µm,0.8s							
IACL	**Alicudi**	**2.50**	**30**	P	**Pn**	**13 38 32.6**	**-0.7**
AIO	**Antillo**	**2.54**	**50**	P	**Pn**	**13 38 34.5**	**+0.8**
AIO				AML	AML		
comp=E,105µm,1.0s							
AIO				AML	AML		
comp=N,94µm,0.5s							
VPL	**Vulcano Piano**	**2.67**	**41**	P	**Pn**	**13 38 36.3**	**+0.7**
VPL				AML	AML		
comp=E,586µm,0.4s							
VPL				AML	AML		
comp=N,664µm,1.1s							
LLI	**Lipari**	**2.70**	**39**	P	**Pn**	**13 38 36.3**	**+0.3**
MSRU	**Castanea**	**2.89**	**48**	P	**Pn**	**13 38 39.6**	**+1.0**
MSRU				AML	AML		
comp=E,152µm,1.1s							
MSRU				AML	AML		
comp=N,145µm,1.2s							
PGF	**Pioggiola**	**6.82**	**336**	eP	**Pn**	**13 39 34.1**	**+1.4**
PGF				eSn	Sn	13 40 43.7	-6.5
comp=N,6.4nm,0.5s							
MBDF	**Montbardon**	**9.51**	**333**	eP	**Pn**	**13 40 12.7**	**+3.1**

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*IDC **15** 13:44:06.1±0.9,12°.45S×78°.01W,h0km,mb3.8/9, mbtmp3.8/11,ML3.7/2,MS3.5/12,Error ellipse: s-maj=19.5km s-min=14.0km az=169.0*
*NEIC **15** 13:44:07.2±3.0,12°.50S±0°.03×78°.1W±0°.1,h24km±12km, mb4.3/3,ML4.7(ARE),Error ellipse: s-maj=15.2km s-min=3.1km az=75.0*
*ARE **15** 13:44:08±3.0,12°.50S±0°.09×78°.14W±0°.09,h25km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=117.0*
ISC 15 13:44:10.5±0.7,12°.43S±0°.08×77°.98W±0°.08,h35km,n48, σ1°62/33,mb3.8/10,MS3.5/9,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.19**	**68**	Pg	**Pn**	**13 44 30.5**	**-0.2**
2µm,0.3s,baz=259,slow=12,SNR=889							
NNA				Lg	Lg	13 44 46.5	
2µm,0.3s,baz=163,slow=11,SNR=11							
NNA	**Nana**	**1.19**	**68**	Pn	**Pn**	**13 44 29.9**	**-0.8**
NNA				Sn	**Sn**	**13 44 46.9**	**+1.1**
ATAH	**Atahualpa**	**5.28**	**355**	Pn	**Pn**	**13 45 29.3**	**+2.0**
5.2nm,0.3s,baz=175,slow=2.0,SNR=30							
ATAH				Sn	**Sn**	**13 46 26.7**	**-0.4**
9.8nm,0.3s,baz=293,slow=22,SNR=3.5							
ATAH				LR	LR	13 47 35.6	
comp=Z,222nm,21.4s,baz=199,slow=39							
11nm,0.3s							
BOSC	**San Juan Bosco**	**9.23**	**357**	Pn	**Pn**	**13 46 19.1**	**-2.3**
PB12	**IPOC Station P**	**9.60**	**131**	Pn	**Pn**	**13 46 24.5**	**-1.8**
COHC	**Cochancay**	**9.98**	**353**	Pn	**Pn**	**13 46 30.6**	**-0.9**
PB16	**IPOC Station P**	**10.05**	**127**	Pn	**Pn**	**13 46 31.6**	**-1.4**
LPAZ	**La Paz**	**10.28**	**113**	Pn	**Pn**	**13 46 37.4**	**+1.2**
0.2nm,0.3s,baz=331,slow=8.6,SNR=3.9							
LPAZ				LR	LR	13 50 16.0	
comp=Z,55nm,20.3s,baz=302,slow=36							
0.8nm,0.5s							
LPAZ	**La Paz**	**10.28**	**113**	Pn	**Pn**	**13 46 36.2**	**+0.1**
TA01	**Diego Aracena**	**11.01**	**138**	Pn	**Pn**	**13 46 44.6**	**-1.0**
GO01	**Chusmiza**	**11.09**	**132**	Pn	**Pn**	**13 46 45.0**	**-2.1**
PB08	**IPOC Station P**	**11.42**	**133**	Pn	**Pn**	**13 46 48.5**	**-3.0**
PB02	**IPOC Station P**	**11.74**	**140**	Pn	**Pn**	**13 46 53.3**	**-2.4**
PB03	**IPOC Station P**	**12.37**	**142**	Pn	**Pn**	**13 47 04.4**	**+0.1**
SAML	**Samuel**	**14.94**	**78**	Pn	**Pn**	**13 47 36.8**	**-2.4**
SIV	**San Ignacio**	**16.76**	**104**	Pn	**P**	**13 48 06.3**	**+1.6**
baz=265,slow=12,SNR=4.5							
SIV				LR	LR	13 55 04.4	
comp=Z,185nm,18.1s,baz=282,slow=39							
H03N2	**Juan Fernandez**	**20.93**	**182**	T	T	14 10 47.8	
baz=3.6,slow=75,SNR=40							
H03N1	**Juan Fernandez**	**20.93**	**182**	T	T	14 10 43.7	
baz=3.6,slow=75,SNR=67							
H03N3	**Juan Fernandez**	**20.95**	**182**	T	T	14 10 47.3	
baz=3.6,slow=75,SNR=66							
SDV	**Santo Domingo**	**22.40**	**19**	P	**P**	**13 49 06.4**	**+0.1**
3.7nm,0.3s,baz=249,slow=4.1,SNR=1.9							
SDV				LR	LR	13 59 03.5	
comp=Z,146nm,19.9s,baz=186,slow=40							
3.7nm,0.3s							
BAUV	**El Baul**	**23.42**	**25**	P	**P**	**13 49 13.6**	**-2.9**
BAUV				IAmb	IAmb	13 49 19.4	
comp=Z,37nm,0.9s							
CPUP	**Villa Florida**	**23.84**	**128**	P	**P**	**13 49 21.1**	**+0.6**
comp=Z,2.4nm,0.9s,baz=303,slow=11,SNR=4.3							
comp=Z,2.4nm,0.9s							
PLCA	**Paso Flores**	**28.94**	**168**	P	**P**	**13 50 07.0**	**+0.5**
comp=Z,0.7nm,1.0s,baz=190,slow=9.9,SNR=1.0							
comp=Z,0.7nm,1.0s							
BDFB	**Brasilia**	**29.23**	**100**	P	**P**	**13 50 09.6**	**+0.2**
comp=Z,2.2nm,0.5s,baz=233,slow=10,SNR=4.5							
comp=Z,2.2nm,0.5s							
MDP	**Montagnes des**	**30.62**	**57**	LR	LR	14 03 16.2	
comp=Z,59nm,20.9s,baz=282,slow=38							
RCBR	**Riachuelo**	**42.01**	**85**	LR	LR	14 10 26.9	
comp=Z,144nm,18.8s,baz=12,slow=38							
TXAR	**Lajitas Array**	**48.36**	**330**	P	**P**	**13 52 50.3**	**+1.2**
comp=Z,0.2nm,0.6s,baz=160,slow=12,SNR=2.0							
comp=Z,0.2nm,0.6s							
PDAR	**Pinedale Array**	**62.09**	**334**	P	**P**	**13 54 28.9**	**+0.8**
comp=Z,0.2nm,0.6s,baz=152,slow=4.1,SNR=3.0							
comp=Z,0.2nm,0.6s							
FRB	**Frobisher Bay**	**76.29**	**4**	LR	LR	14 31 40.3	
comp=Z,24nm,19.9s,baz=201,slow=37							
KOWA	**Kowa**	**77.98**	**72**	LR	LR	14 29 59.5	
comp=Z,84nm,18.2s,baz=206,slow=35							
SFJD	**Kangerlussuaq**	**81.70**	**11**	LR	LR	14 34 23.8	
comp=Z,14nm,18.9s,baz=197,slow=37							
TORD	**Torodi Ar. Bea**	**82.97**	**75**	P	**P**	**13 56 34.0**	**+1.4**
comp=Z,2.1nm,1.0s,baz=262,slow=6.2,SNR=5.7							
comp=Z,2.1nm,1.0s							
MDT	**Midelt**	**83.10**	**54**	LR	LR	14 31 58.4	
comp=Z,16nm,18.6s,baz=278,slow=34							
ESDC	**Sonseca Array**	**85.89**	**48**	P	**P**	**13 56 48.1**	**+1.1**
comp=Z,0.6nm,0.8s,baz=263,slow=7.4,SNR=5.0							
comp=Z,0.6nm,0.8s							
SUR	**Sutherland**	**90.70**	**123**	LR	LR	14 36 57.2	
comp=Z,27nm,18.5s,baz=142,slow=35							
ILAR	**Eielson Array**	**92.44**	**336**	P	**P**	**13 57 18.5**	**+1.1**
comp=Z,0.3nm,0.9s,baz=138,slow=3.3,SNR=2.1							
comp=Z,0.3nm,0.9s							
BOSA	**Boshof**	**95.43**	**121**	LR	LR	14 39 46.2	
comp=Z,38nm,18.1s,baz=181,slow=35							
H11N3	**WAKE ISLAND Hyl**	**17.54**	**286**	T	T	16 11 36.7	
baz=95,slow=75							
H11N2	**WAKE ISLAND Hyl**	**17.55**	**286**	T	T	16 11 33.1	
baz=95,slow=75							
H11N1	**WAKE ISLAND Hyl**	**17.56**	**286**	T	T	16 11 30.6	
baz=95,slow=75							
H11S2	**WAKE ISLAND Hyl**	**17.64**	**284**	T	T	16 11 40.9	
baz=94,slow=74,SNR=71							
H11S1	**WAKE ISLAND Hyl**	**17.64**	**284**	T	T	16 11 38.0	
baz=94,slow=74,SNR=75							
H11S3	**WAKE ISLAND Hyl**	**17.66**	**284**	T	T	16 11 38.8	
baz=94,slow=74,SNR=41							
ASAR	**Alice Springs**	**132.47**	**221**	PKP	**PKiKP**	**14 03 23.1**	**-0.1**
comp=Z,0.2nm,0.8s,baz=130,slow=2.9,SNR=1.4							
WRA	**Warramunga Arr**	**134.76**	**225**	PKP	**PKiKP**	**14 03 28.0**	**+0.1**
comp=Z,0.5nm,0.9s,baz=129,slow=1.8,SNR=2.5							
ZALV	**Zalesovo Beam**	**136.39**	**15**	PKP	**PKiKP**	**14 03 29.9**	**-0.3**
comp=Z,1.1nm,0.8s,baz=202,slow=3.1,SNR=3.9							
SONM	**Songino Array**	**144.52**	**355**	PKP	**PKiKP**	**14 03 44.4**	**-2.8**
comp=Z,0.9nm,0.4s,baz=5.5,slow=3.4,SNR=3.0							
KSRS	**Korea Array**	**145.98**	**322**	PKPbc	**PKiKP**	**14 03 47.5**	**-2.7**
comp=Z,0.3nm,0.5s,baz=64,slow=2.8,SNR=2.4							

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*ASRS **15** 13:50:29.2±0.4,47°N±3°×8°3E±°,h5km,MLh3.2/7,Error ellipse: s-maj=7.6km s-min=2.6km az=141.1,confirmed*
*SOME **15** 13:50:30.6,46°.88N×82°.

MK07				⇑S		Sb	13 50 49.4	+2.3
MK02	**Makanchi Array**	**0.45**	**261**	⇑P		**Pn**	**13 50 41.7**	**-1.2**
MK02				⇑S		**Sb**	**13 50 49.5**	**+2.4**
MK01	**Makanchi Array**	**0.45**	**262**	⇑P		**Pn**	**13 50 41.8**	**-1.1**
MK01				⇑S		**Sb**	**13 50 49.6**	**+2.3**
MK03	**Makanchi Array**	**0.45**	**261**	⇑P		**Pn**	**13 50 41.7**	**-1.2**
MK03				⇑S		**Sb**	**13 50 49.5**	**+2.3**
MK04	**Makanchi Array**	**0.45**	**262**	⇑P		**Pn**	**13 50 41.8**	**-1.1**
MK04				⇑S		**Sb**	**13 50 49.7**	**+2.3**
MK05	**Makanchi Array**	**0.45**	**265**	⇑P		**Pn**	**13 50 41.9**	**-1.1**
MK05				⇑S		**Sb**	**13 50 49.6**	**+2.3**
MK31	**Makanchi Array**	**0.46**	**265**	P		**Pn**	**13 50 41.9**	**-1.1**
	4.9nm,0.1s,baz=81,slow=18,SNR=700							
MK31				⇓S		**Sb**	**13 50 49.6**	**+2.2**
	5.9nm,0.2s,baz=188,slow=54,SNR=27							
MKAR	**Makanchi Array**	**0.46**	**265**	⇑Pg		**Pn**	**13 50 41.9**	**-1.1**
MKAR				Sg		**Sb**	**13 50 49.4**	**+2.0**
MK08	**Makanchi Array**	**0.46**	**260**	⇑P		**Pn**	**13 50 42.1**	**-1.0**
MK08				⇑S		**Sb**	**13 50 50.0**	**+2.4**
MK09	**Makanchi Array**	**0.47**	**262**	⇑P		**Pn**	**13 50 42.0**	**-1.1**
MK09				⇑S		**Sb**	**13 50 50.0**	**+2.3**
MAKZ	**Makanchi**	**0.67**	**268**	⇑P		**Pn**	**13 50 45.7**	**-0.2**
	9.0nm,0.2s							
MAKZ				⇑S		**Sn**	**13 50 56.1**	**-0.9**
	15nm,0.5s							
MAKZ	**Makanchi**	**0.67**	**268**	⇑Pg		**Pn**	**13 50 45.7**	**-0.2**
MAKZ				Sg		**Sn**	**13 50 55.7**	**-1.4**
ZSN	**Zaisan**	**1.45**	**64**	*e*P		**Pn**	**13 50 54.9**	**-1.7**
	7.6nm,0.2s							
ZSN				*e*S		**Sn**	**13 51 12.7**	**-3.5**
	40nm,0.4s							
ZSN	**Zaisan**	**1.45**	**64**	P		**Pn**	**13 50 54.9**	**-1.7**
	7.6nm,0.2s							
ZSN				S		**Sn**	**13 51 12.7**	**-3.5**
	40nm,0.4s							
DJR	**Jarkent**	**3.35**	**223**	*e*P		**Pg**	**13 51 32.3**	**-1.1**
	0.9nm,0.3s							
DJR				*e*S		**Sg**	**13 52 17.4**	**+0.7**
	4.6nm,0.4s							
DJR	**Jarkent**	**3.35**	**223**	Pg		**Pg**	**13 51 32.3**	**-1.1**
	0.9nm,0.3s							
DJR				Lg		Lg	13 52 17.4	
	4.6nm,0.4s							
KTMS	**Ketmen**	**3.86**	**209**	*e*P		**Pb**	**13 51 41.7**	**+3.5**
	0.9nm,0.2s							
KTMS				*e*S		**Sg**	**13 52 32.8**	**-0.3**
	3.3nm,0.2s							
KTMS	**Ketmen**	**3.86**	**209**	Pg		**Pb**	**13 51 41.7**	**+3.5**
	0.9nm,0.2s							
KTMS				Lg		Lg	13 52 32.8	
	3.3nm,0.2s							
DGZ	**Jazzator, Alta**	**4.14**	**45**	Pg		**Pb**	**13 51 46.9**	**+3.9**
DGZ				S		**Sn**	**13 52 15.7**	**-7.3**
DGZ				Sg		**Sb**	**13 52 36.8**	**+3.1**
UKR	**Ust'-Kan**	**4.28**	**16**	Pg		**Pb**	**13 51 44.9**	**-0.3**
UKR				Sg		**Sb**	**13 52 40.8**	**+3.5**
PDGK	**Podgornoye**	**4.28**	**216**	⇓Lg		Lg	13 52 45.9	
	6.4nm,0.7s							
SHLS	**Shalkode**	**4.43**	**215**	*e*P		**Pb**	**13 51 49.2**	**+1.2**
	2.6nm,0.3s							
SHLS				*e*S		**Sb**	**13 52 45.4**	**+3.4**
	5.4nm,0.6s							
SHLS	**Shalkode**	**4.43**	**215**	Pg		**Pb**	**13 51 49.2**	**+1.2**
	2.6nm,0.3s							
SHLS				Lg		Lg	13 52 45.4	
	5.4nm,0.6s							
KPKS	**Kokpek**	**4.52**	**223**	*e*P		**Pg**	**13 51 53.9**	**-2.0**
	1.8nm,0.2s							
KPKS				*e*S		**Sg**	**13 52 53.8**	**-0.7**
	8.3nm,0.3s							
KPKS	**Kokpek**	**4.52**	**223**	Pg		**Pg**	**13 51 53.9**	**-2.0**
	1.8nm,0.2s							
KPKS				Lg		Lg	13 52 53.8	
	8.3nm,0.3s							
CHBI	**Chibit, Altay**	**4.61**	**39**	Pg		**Pb**	**13 51 50.5**	**-0.4**
CHBI				Sg		**Sb**	**13 52 51.7**	**+4.8**
KURK	**Kurchatov**	**4.82**	**325**	⇑Lg		Lg	13 53 08.0	
	6.0nm,0.5s							
KURK	**Kurchatov**	**4.82**	**325**	Sg		**Sg**	**13 53 02.5**	**-1.5**
CUR	**Chagan-Uzun**	**4.85**	**46**	Sg		**Sb**	**13 53 00.1**	**+6.0**
SATY	**Saty**	**4.97**	**222**	*e*P		**Pg**	**13 52 02.3**	**-2.0**
	1.3nm,0.2s							
SATY				*e*S		**Sg**	**13 53 08.2**	**-0.6**
	5.5nm,0.3s							
SATY	**Saty**	**4.97**	**222**	Pg		**Pg**	**13 52 02.3**	**-2.0**
	1.3nm,0.2s							
SATY				Lg		Lg	13 53 08.2	
	5.5nm,0.3s							
ULGR	**Ulagan, Altay**	**5.03**	**39**	Sg		**Sb**	**13 53 06.4**	**+7.2**
ARTR	**Artybash**	**5.71**	**28**	Sg		**Sb**	**13 53 26.8**	**+8.1**

*IDC **15** 14:33:24.8±2.5,5°.65S×130°.39E, h0km, mb3.5/1, mbtmp3.3/3, ML3.5/2, MS4.0/1, Error ellipse: s-maj=142.2km s-min=32.7km az=70.0*

ISC 15 14:33:43.0±0.9, 6°.15S±0°.09×130°.4E±0°.1, h150km, n13, σ3°82/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.69**	**30**		P	**Pn**	**14 34 40.0**	**+0.7**
SANI	**Sanana**	**6.00**	**313**		P	**Pn**	**14 35 09.4**	**-0.4**
MTN	**Manton Dam**	**6.69**	**174**		P	**Pn**	**14 35 18.5**	**-0.5**
KDU	**Kakadu**	**6.81**	**163**		P	**Pn**	**14 35 20.0**	**-0.6**
SOEI	**Soe**	**7.06**	**239**		P	**Pn**	**14 35 23.1**	**-1.0**
PLAI	**Plampang**	**12.81**	**257**		P	**Pn**	**14 36 40.1**	**+0.3**
WRA	**Warramunga Arr**	**14.24**	**165**		Pn	**Pn**	**14 36 55.5**	**-2.5**
	0.3nm,0.3s,baz=348,slow=14,SNR=22							
WRA					Sn	Sn	14 39 23.8	-12
	0.6nm,0.3s,baz=340,slow=20,SNR=8.9							
	0.3nm,0.3s							
COEN	**Coen**	**14.77**	**123**		P	**P**	**14 37 10.0**	**+3.2**
ASAR	**Alice Springs**	**17.74**	**169**		P	**P**	**14 37 38.8**	**-0.8**
	0.1nm,0.3s,baz=350,slow=12,SNR=2.1							
ASAR					S	**S**	**14 40 49.5**	**-6.7**
	0.3nm,0.5s,baz=354,slow=25,SNR=2.1							
	0.2nm,0.5s							
AS01	**Alice Springs**	**17.75**	**169**		P	**Pn**	**14 37 46.4**	**+5.4**
	4.8nm,1.2s							
WRKA	**Warakurna**	**18.89**	**186**		P	**Pn**	**14 38 01.1**	**+6.7**
	14nm,1.9s							
HNR	**Honiara**	**29.44**	**98**		LR	LR	14 51 46.9	
	comp=Z,283nm,18.9s,baz=356,slow=37							
MKAR	**Makanchi Array**	**67.74**	**326**		P	**P**	**14 44 21.7**	**-2.8**
	0.2nm,0.4s,baz=119,slow=7.0,SNR=4.2							
	0.2nm,0.4s							

*ISN **15** 14:43:34.3±0.3, 36°.02N×45°.56E, h10km±2km, ML3.0*
*TEH **15** 14:43:35.7, 35°.97N×45°.70E, h6km, ML3.3*

ISC 15 14:43:35.5±1.0, 36°.04N±0°.05×45°.70E±0°.05, h10km, n32, σ1°28/34, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.72**	**1**	*e*Pg		**Pb**	**14 43 50.2**	**-0.1**
IKRK	**Kirkuk**	**1.28**	**240**	*e*Pg		**Pn**	**14 44 00.0**	**+0.6**
	baz=58							
IKRK				*e*Sg		**Sn**	**14 44 18.0**	**+1.4**
IKRK					AML	AML	14 44 25.7	
	comp=N,450nm,0.5s							
IKRK					AML	AML	14 44 25.9	
	comp=E,332nm,0.3s							
IDHR	**Dehrash**	**1.45**	**157**	*e*Pn		**Pn**	**14 44 00.3**	**-1.7**
IDHR				*e*			14 44 29.3	
	comp=Z,4μm,0.3s							
ILIN	**Lien**	**1.52**	**137**	*e*Pn		**Pn**	**14 44 01.7**	**-1.3**
ILIN				*e*			14 44 30.5	
	comp=Z,4μm,0.5s							
SNGE	**Sanandaj**	**1.65**	**125**	*e*Pn		**Pn**	**14 44 03.2**	**-1.5**
IAZR	**Azarshahr**	**1.65**	**8**	*e*			14 44 36.1	
	comp=Z,6μm,0.6s							
IAZR				*e*Pn		**Pg**	**14 44 06.3**	**-0.9**
IHSH	**Hashtrud**	**1.78**	**44**	*e*			14 44 39.0	
	comp=Z,1μm,0.2s							
IHSH				*e*Pn		**Pb**	**14 44 08.7**	**+0.2**
IGHG	**Ghaleghazi**	**1.85**	**157**	*e*			14 44 45.2	
	comp=Z,3μm,0.6s							
IGHG				*e*Pn		**Pn**	**14 44 07.6**	**+0.1**
IBST	**Bostanabad**	**1.91**	**30**	*e*Pn		**Pg**	**14 44 11.4**	**-0.8**
KER	**Kermanshah**	**2.03**	**144**	*e*Pn		**Pn**	**14 44 11.6**	**+1.8**
KER				*e*			14 44 43.9	
	comp=Z,2μm,0.3s							
KCHF	**Cheshme Sefid,**	**2.08**	**148**	*e*Pn		**Pn**	**14 44 12.4**	**+1.8**
KCHF				*e*			14 44 43.9	
	comp=Z,3μm,0.3s							
ITBZ	**Tabriz**	**2.22**	**9**	*e*Pn		**Pb**	**14 44 15.3**	**-0.5**
ISHB	**Shabestar**	**2.24**	**358**	*e*Pn		**Pb**	**14 44 15.2**	**-1.0**
IBZA	**Bozab**	**2.37**	**131**	*e*Pn		**Pn**	**14 44 15.7**	**+1.1**
IBZA				*e*			14 44 58.7	
	comp=Z,1μm,0.7s							
ISRB	**Sarab**	**2.38**	**41**	*e*Pn		**Pb**	**14 44 17.7**	**-0.9**
IKOM	**Komasi**	**2.38**	**141**	*e*Pn		**Pn**	**14 44 16.0**	**+1.2**
IKOM				*e*			14 45 02.8	
	comp=Z,2μm,0.5s							
ZNJK	**Zanjan**	**2.49**	**75**	*e*Pn		**Pn**	**14 44 17.1**	**+0.8**
IHRS	**Heris**	**2.51**	**25**	*e*Pn		**Pb**	**14 44 19.9**	**-1.0**
IMRD	**Marand**	**2.67**	**0**	*e*Pn		**Pb**	**14 44 22.4**	**-1.1**
IMRD				*e*			14 45 16.9	
	comp=Z,561nm,0.6s							
QSDN	**Sirdan**	**2.85**	**80**	*e*Pn		**Pn**	**14 44 23.2**	**+2.0**
IBDR	**Badra**	**2.93**	**176**	*e*Pn		**Pn**	**14 44 23.0**	**+0.9**
IBDR				*e*Sn		**Sn**	**14 44 57.0**	**-0.4**
HSAM	**Samen**	**3.00**	**127**	*e*Pn		**Pn**	**14 44 25.2**	**+1.9**
HSAM				*e*			14 45 15.8	
	comp=Z,390nm,0.6s							
IDOB	**Doab**	**3.04**	**137**	*e*Pn		**Pn**	**14 44 25.6**	**+1.8**
HAGD	**Aghdareh**	**3.06**	**112**	*e*Pn		**Pn**	**14 44 26.4**	**+2.2**
HAGD				*e*			14 45 15.5	
	comp=Z,371nm,0.8s							
IKFM	**Kafar-mosalman**	**3.07**	**144**	*e*Pn		**Pn**	**14 44 25.4**	**+1.4**
IKFM				*e*			14 44 27.4	
	comp=Z,2μm,0.2s							
QABG	**Abgarm-Qazvin**	**3.17**	**95**	*e*Pn		**Pn**	**14 44 26.4**	**+0.7**
GRMI	**Germi**	**3.27**	**32**	*e*Pn		**Pn**	**14 44 28.4**	**+1.5**
IKMR	**Kamar-syah**	**3.35**	**138**	*e*Pn		**Pn**	**14 44 29.5**	**+1.6**
IKMR				*e*			14 45 28.6	
	comp=Z,609nm,0.6s							
ASAO	**Ashtian**	**3.84**	**112**	*e*Pn		**Pn**	**14 44 34.8**	**-0.1**
KHMZ	**Khomeyn**	**4.19**	**122**	*e*Pn		**Pn**	**14 44 39.5**	**-0.1**
AMIS	**Naft Sefid**	**5.29**	**145**	*e*Pn		**Pn**	**14 44 55.6**	**+1.0**
IPIR	**Pirpir**	**5.45**	**126**	*e*Pn		**Pn**	**14 44 58.4**	**+1.4**

*JMA **15** 14:49:07.2±0.7, 36°N±3°×12°9E±°, h3km, MV2.6/7, S KOREAN PENINSULA REG*
*KMA **15** 14:49:08.6±0.2, 35°.76N×129°.18E, h13km±1km, Error ellipse: s-maj=0.8km s-min=0.7km az=146.0*

ISC 15 14:49:07.1±1.4, 35°.76N±0°.04×129°.21E±0°.05, h17km±17km, n13, σ0°86/22, South Korea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSDAG	**Daegu**	**0.25**	**273**	P		**Pb**	**14 49 13.8**	**+0.6**
	SNR=530							
KSDAG				S		**Sb**	**14 49 17.3**	**-0.1**
YOCB	**Yeongcheon**	**0.30**	**317**	P		**Pb**	**14 49 14.8**	**+0.6**
	SNR=45							
YOCB				S		**Sb**	**14 49 18.9**	**0.0**
KSPHA	**Pohang**	**0.46**	**17**	P		**Pn**	**14 49 17.8**	**-1.1**
	SNR=97							
KSPHA				P		**Pn**	**14 49 17.8**	**-1.1**
	SNR=97							
KSPHA				S		**Sb**	**14 49 24.3**	**+1.1**
KSPHA				S		**Sb**	**14 49 24.3**	**+1.1**
MIYA	**Miryang-si**	**0.46**	**235**	P		**Pb**	**14 49 17.5**	**+0.7**
	SNR=8.7							
MIYA				S		**Sb**	**14 49 23.5**	**+0.2**
KSDAU	**Deagu-acc**	**0.49**	**285**	P		**Pb**	**14 49 18.0**	**+0.6**
	SNR=89							
KSBUS	**Busan**	**0.51**	**189**	P		**Pb**	**14 49 18.5**	**+0.8**
	SNR=117							
KSBUS				P		**Pb**	**14 49 18.5**	**+0.8**
	SNR=117							
KSCHR	**CHANGNYEONG**	**0.62**	**250**	P		**Pb**	**14 49 20.0**	**+0.5**
	SNR=14							
KSADO	**Andong**	**0.69**	**342**	P		**Pn**	**14 49 21.5**	**-0.6**
	SNR=165							
JTU	**Tsushima**	**1.24**	**173**	P		**Pg**	**14 49 31.4**	**+0.4**
JTU				*e*S		**Sg**	**14 49 48.0**	**+0.8**
JTSM	**Tsushimamitsus**	**1.42**	**174**	*e*P		**Pg**	**14 49 34.4**	**-0.2**
JHGM	**Hagimishima**	**1.86**	**121**	*e*S		**Sg**	**14 50 06.9**	**-0.1**
JII	**Iki**	**2.00**	**167**	*e*P		**Pb**	**14 49 43.9**	**+0.8**
JII				*e*S		**Sg**	**14 50 10.6**	**-1.0**
JTY	**Toyota**	**2.13**	**134**	*e*S		**Sg**	**14 50 14.2**	**-1.6**

*INMG **15** 14:56:43.6±1.4, 36°.84N×4°.57W, h54km±8km, ML2.3, Error ellipse: s-maj=3.2km s-min=2.4km az=5.0*
*CNRM **15** 14:56:43.0, 36°.74N×4°.71W, h109km, ml2.2*
*MDD **15** 14:56:44.0±0.5, 36°.83N×4°.56W, h51km±6km, Mb3.6/21, Error ellipse: s-maj=4.7km s-min=2.2km az=173.0*
*SFS **15** 14:56:44.0, 36°.83N×4°.57W, h51km, ML2.6, S. ANTEQUERA (MALAGA)*

ISC 15 14:56:42.5±1.2, 36°.85N±0°.02×4°.55W±0°.02, h59km±7km, n51, σ1°25/96, 21C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EMAL	**Malaga-Limoner**	**0.13**	**130**	P		**Pn**	**14 56 51.3**	**-0.3**
EMAL				S		**Sn**	**14 56 57.1**	**-1.0**
EMIJ	**Mijas**	**0.33**	**212**	⇓Pg		**Pn**	**14 56 52.8**	**-0.1**
EMIJ				Sg		**Sn**	**14 56 59.8**	**-0.6**
EGOR	**Sierra Gorda,**	**0.44**	**53**	Pg		**Pn**	**14 56 54.7**	**+0.6**
EGOR				Sg		**Sn**	**14 57 03.1**	**+0.7**
ELGU	**Los Guajares,**	**0.74**	**88**	⇑Pg		**Pn**	**14 56 57.5**	**+0.2**
ELGU				⇑*i*Vmb_V			14 57 02.1	
	1μm,SNR=24							
ELGU				Sg		**Sn**	**14 57 08.4**	**+0.2**
EQUE	**Quentar**	**0.96**	**68**	Pg		**Pn**	**14 57 01.2**	**+1.1**
EQUE				⇑*i*Vmb_V			14 57 02.3	
	507nm,SNR=8.5							
EQUE				Sg		**Sn**	**14 57 14.7**	**+1.5**
ESPR	**Espera**	**1.05**	**272**	Pg		**Pn**	**14 57 02.5**	**+1.3**
ESPR				⇑*i*Vmb_V			14 57 08.7	
	198nm,SNR=3.7							
ESPR				Sg		**Sn**	**14 57 15.5**	**+0.5**
CEU	**Ceuta**	**1.15**	**215**	P		**Pn**	**14 57 03.4**	**+0.8**
CEU				S		**Sn**	**14 57 17.1**	**-0.4**
EADA	**Adamuz**	**1.32**	**359**	Pg		**Pn**	**14 57 06.0**	**+1.2**
EADA				⇑*i*Vmb_V			14 57 12.6	
	482nm,SNR=7.4							
EADA				Sg		**Sn**	**14 57 21.6**	**+0.1**
EBER	**Berja**	**1.33**	**87**	Pg		**Pn**	**14 57 05.5**	**+0.3**
EBER				⇑*i*Vmb_V			14 57 14.8	
	197nm,SNR=3.1							
EBER				Sg		**Sn**	**14 57 20.6**	**-1.5**
ECAB	**El Cabril**	**1.41**	**331**	Pg		**Pn**	**14 57 06.6**	**+0.6**
ECAB				⇑*i*Vmb_V			14 57 15.9	
	186nm,SNR=3.0							
ECAB				Sg		**Sn**	**14 57 23.6**	**0.0**
EQES	**Quesada**	**1.52**	**51**	⇓Pg		**Pn**	**14 57 08.4**	**+0.8**
EQES				⇑*i*Vmb_V			14 57 09.1	
	369nm,SNR=5.1							
EQES				Sg		**Sn**	**14 57 26.5**	**+0.1**
PVLZ	**Peæn de**	**1.68**	**173**	P		**Pn**	**14 57 10.6**	**+0.9**
PVLZ				S		**Sn**	**14 57 29.0**	**-1.1**
EMIN	**Mina Concepcio**	**1.92**	**299**	Pn		**Pn**	**14 57 13.3**	**+0.4**
EMIN				Pg		**Pn**	**14 57 14.9**	**+1.9**
EMIN				⇑*i*Vmb_V			14 57 19.1	
	194nm,SNR=3.3							
EMIN				Sn		**Sn**	**14 57 34.8**	**-1.2**
GOG	**Mont Gurugu**	**2.05**	**142**	P		**Pn**	**14 57 16.8**	**+2.0**
PBAR	**Barrancos**	**2.38**	**305**	*e*P		**Pn**	**14 57 19.7**	**+0.5**
PBAR				*e*S		**Sn**	**14 57 46.5**	**-0.7**
PBAR				A		A	14 57 49.2	
	7.6nm,0.1s							
AKLM	**AKL**	**2.40**	**166**	P		**Pn**	**14 57 20.9**	**+1.4**
AKLM				S		**Sn**	**14 57 49.2**	**+1.5**
EGRO	**El Granado**	**2.44**	**287**	Pn		**Pn**	**14 57 20.4**	**+0.4**
EGRO				⇑*i*Vmb_V			14 57 21.9	
	279nm,SNR=3.8							
EGRO				Sn		**Sn**	**14 57 47.0**	**-1.6**
EZAR	**Zarzadilla de**	**2.50**	**65**	Pn		**Pn**	**14 57 20.8**	**-0.1**
EZAR				⇑*i*Vmb_V			14 57 21.9	
	111nm,SNR=1.0							
EZAR				Sn		**Sn**	**14 57 49.1**	**-1.1**
PVAQ	**Vaqueiros**	**2.59**	**283**	⇓*e*P		**Pn**	**14 57 22.3**	**+0.2**
PVAQ				*e*S		**Sn**	**14 57 50.8**	**-1.5**
PVAQ				A		A	14 57 53.1	
	15nm,0.1s							
PVAQ	**Vaqueiros**	**2.59**	**283**	P		**Pn**	**14 57 22.2**	**+0.2**
PVAQ				S		**Sn**	**14 57 51.8**	**-0.5**
PAB	**San Pablo**	**2.70**	**3**	Pn		**Pn**	**14 57 24.6**	**+0.9**
PAB				⇑*i*Vmb_V			14 57 26.9	
	100nm,SNR=2.1							
PAB				Sn		**Sn**	**14 57 54.0**	**-1.2**
EBAD	**Badajoz**	**2.73**	**315**	Pn		**Pn**	**14 57 24.7**	**+0.9**
EBAD				⇑*i*Vmb_V			14 57 30.2	
	271nm,SNR=5.9							
EBAD				Sn		**Sn**	**14 57 54.6**	**-1.0**
PBEJ	**Beja**	**2.89**	**295**	*e*S		**Sn**	**14 57 58.6**	**-1.1**
PBEJ				A		A	14 58 00.9	
	4.8nm,0.2s							
PCVE	**Castro Verde**	**2.89**	**287**	*e*P		**Pn**	**14 57 26.8**	**+0.7**
PCVE				*e*S		**Sn**	**14 57 59.1**	**-0.6**
PCVE				A		A	14 58 00.3	
	6.1nm,0.6s							
JBK	**JBK**	**2.98**	**147**	P		**Pn**	**14 57 27.5**	**-0.1**
JBK				S		**Sn**	**14 58 01.3**	**-0.9**
ETOB	**Tobarra**	**2.98**	**52**	Pn		**Pn**	**14 57 27.9**	**+0.4**
ETOB				⇑*i*Vmb_V			14 57 28.3	
	344nm,SNR=3.2							
ETOB				Sn		**Sn**	**14 57 59.7**	**-2.3**
MESJ	**Messejana**	**3.09**	**290**	*e*P		**Pn**	**14 57 29.4**	**+0.6**
MESJ				*e*S		**Sn**	**14 58 02.6**	**-1.9**
MESJ				IAML			14 58 04.7	
	comp=N,9.3nm,0.1s							
MESJ	**Messejana**	**3.09**	**290**	*e*P		**Pn**	**14 57 29.5**	**+0.6**
MESJ				*e*S		**Sn**	**14 58 03.5**	**-1.0**
MESJ				A		A	14 58 06.0	
	comp=N,6.3nm,0.2s							
PESTR	**Estremoz**	**3.14**	**311**	*e*P		**Pn**	**14 57 31.3**	**+1.8**
PESTR				*e*S		**Sn**	**14 58 04.3**	**-1.5**
PESTR				A		A	14 58 06.0	
	comp=N,2.7nm,0.3s							
EVO	**Evora**	**3.22**	**303**	⇑*e*P		**Pn**	**14 57 32.5**	**+1.9**
EVO				*e*S		**Sn**	**14 58 06.7**	**-1.1**
EVO				A		A	14 58 08.4	
	comp=N,12nm,0.3s							
MORF	**Marmelete**	**3.31**	**279**	*e*P		**Pn**	**14 57 32.2**	**+0.3**
MORF				*e*S		**Sn**	**14 58 07.6**	**-2.5**
MORF				IAML			14 58 12.1	
	comp=N,14nm,0.3s							
MORF	**Marmelete**	**3.31**	**279**	*e*P		**Pn**	**14 57 32.4**	**+0.5**
MORF				*e*S		**Sn**	**14 58 09.2**	**-0.9**
MORF				A		A	14 58 10.5	
	comp=N,5.4nm,0.1s							
PTEO	**Sao Teotonio**	**3.40**	**283**	*e*P		**Pn**	**14 57 34.4**	**+1.3**
PTEO				*e*S		**Sn**	**14 58 11.8**	**-0.5**
PNCL	**Nicolau / Gran**	**3.41**	**293**	*e*P		**Pn**	**14 57 34.1**	**+0.9**
PNCL				*e*S		**Sn**	**14 58 11.2**	**-1.1**
PNCL				A		A	14 58 12.4	
	comp=N,4.6nm,0.1s							
PMRV	**Marv??o**	**3.41**	**320**	*e*P		**Pn**	**14 57 34.2**	**+0.9**
PMRV				*e*S		**Sn**	**14 58 12.2**	**-0.4**
PMRV				A		A	14 58 13.4	
	comp=N,3.6nm,0.2s							
EPLA	**Plasencia**	**3.43**	**340**	Pn		**Pn**	**14 57 34.9**	**+1.4**
EPLA				⇑*i*Vmb_V			14 57 36.7	
	comp=N,165nm,SNR=1.6							
EPLA				Sn		**Sn**	**14 58 12.1**	**-0.9**
PFVI	**Vila Bisbo**	**3.43**	**276**	*e*P		**Pn**	**14 57 34.0**	**+0.4**
PFVI				*e*S		**Sn**	**14 58 11.6**	**-1.4**
PFVI				A		A	14 58 15.4	
	comp=N,7.4nm,0.6s							
UCM	**Universidad Co**	**3.60**	**16**	P		**Pn**	**14 57 37.6**	**+1.6**
UCM				S		**Sn**	**14 58 15.8**	**-1.5**
PMTG	**Montargil**	**3.65**	**309**	*e*P		**Pn**	**14 57 37.9**	**+1.3**
PMTG				*e*S		**Sn**	**14 58 16.4**	**-2.0**
PMTG				A		A	14 58 18.4	
	comp=N,6.2nm,0.5s							
PCBR	**Castelo Branco**	**3.77**	**323**	*e*P		**Pn**	**14 57 39.5**	**+1.3**
PCBR				*e*S		**Sn**	**14 58 19.5**	**-1.8**
PCBR				A		A	14 58 21.8	
	comp=N,3.4nm,0.3s							
ZHG	**ZHG**	**3.80**	**207**	P		**Pn**	**14 57 40.7**	**+2.1**
GUD	**Guadarrama**	**3.80**	**5**	Pn		**Pn**	**14 57 40.4**	**+1.7**
GUD				⇑*i*Vmb_V			14 57 40.7	
	comp=N,110nm,SNR=2.0							
GUD				Sn		**Sn**	**14 58 20.0**	**-2.3**
PACT	**Alcochete**	**3.90**	**301**	*e*P		**Pn**	**14 57 41.8**	**+1.9**
PACT				*e*S		**Sn**	**14 58 24.6**	**+0.3**
ECHE	**Chera**	**3.93**	**45**	Pn		**Pn**	**14 57 40.7**	**+0.3**
ECHE				⇑*i*Vmb_V			14 57 41.8	
	comp=N,209nm,SNR=1.9							
MD31	**MD31**	**3.97**	**183**	P		**Pn**	**14 57 41.6**	**+0.5**
MD31				S		**Sn**	**14 58 24.2**	**-2.2**
MDT	**Midelt**	**4.02**	**181**	P		**Pn**	**14 57 42.7**	**+1.0**
MDT				S		**Sn**	**14 58 26.4**	**-1.3**
PMAFR	**Mafra**	**4.29**	**301**	*e*S		**Sn**	**14 58 32.8**	**-1.3**
PMAFR				A		A	14 58 33.8	
	comp=N,14nm,0.3s							
ETOR	**Torete**	**4.42**	**25**	Pn		**Pn**	**14 57 48.2**	**+1.1**
ETOR				⇑*i*Vmb_V			14 57 50.7	
	comp=N,146nm,SNR=1.5							
ETOR				Sn		**Sn**	**14 58 34.4**	**-2.9**
MVO	**

JOM	**Ohasama**	**2.45 290**	*i* P	Pn	15 28 11.6	+1.5
JOM			S	Sn	15 28 40.7	+1.9
JANG	**Nango**	**2.72 310**	*i* P	Pn	15 28 14.3	+0.4
JYK	**Kaneyama**	**3.06 276**	*i* P	Pn	15 28 20.2	+1.7
JOTO	**OTAMA OYAMA**	**3.29 252**	*i* P	Pn	15 28 23.1	+1.4
JOT	**Ohata**	**3.67 319**	P	Pn	15 28 27.3	+0.5
JNBK	**Urakawa-nobuka**	**3.79 343**	P	Pn	15 28 28.2	-0.3
JNBK			S	Sn	15 29 10.9	-0.9
JCH	**Churui**	**4.01 350**	P	Pn	15 28 30.2	-1.2
NEM2	**Nemuro 2**	**4.83 13**	P	Pn	15 28 39.0	-3.7
JOSM	**Okushiri--Mats**	**5.00 315**	P	Pn	15 28 46.3	+1.2
JRY	**Ryogami san**	**5.02 240**	*i* P	Pn	15 28 45.8	+0.4
JTKR	**Abashiri--Toko**	**5.31 357**	P	Pn	15 28 47.9	-1.5

*IDC **15** 15:30:50.2±5.5, 85°.06N×14°.01E, h0km, mb3.7/2, mbtmp3.7/4, ML3.7/2, MS2.9/9, Error ellipse: s-maj=114.0km s-min=26.5km az=104.0*
ISC 15 15:30:52.6±2.0, 84°.7N±0°.1×13°.2E±0°.1, h10km, n15, σ1§85/12, MS2.9/8, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI	**Zemlya Franca-**	**5.72**	**114**	*e*P	**Pn**	**15 32 18.8**	**+1.6**
ZFI				*e*S	**Sn**	**15 33 23.2**	**+0.4**
	28nm,1.6s						
OMEGA	**Omega**	**5.74**	**114**	*e*P	**Pn**	**15 32 18.9**	**+1.3**
OMEGA				*e*S	**Sn**	**15 33 23.0**	**-0.4**
SPA0	**Spitsbergen Ar**	**6.60**	**174**	*e*P	**Pn**	**15 32 29.7**	**+0.3**
SPA0				*e*S	**Sn**	**15 33 44.6**	**0.0**
SPITS	**Spitsbergen Ar**	**6.60**	**174**	Pn	**Pn**	**15 32 31.2**	**+1.7**
	baz=19,slow=14						
SPITS				Sn	**Sn**	**15 33 46.0**	**+1.3**
	baz=18,slow=20 2.0nm,0.3s						
ARCES	**ARCESS Array B**	**15.44**	**164**	Pn	**Pn**	**15 34 31.4**	**+1.4**
	0.1nm,0.3s,baz=355,slow=9.8,SNR=10						
ARCES				Sn	**Sn**	**15 37 16.9**	**-3.9**
	0.1nm,0.3s,baz=0.8,slow=20,SNR=3.7						
ARCES				LR	LR	15 40 26.8	
	comp=Z,30nm,18.5s,baz=122,slow=37 2.5nm,0.8s						
NOA	**NORSAR Array B**	**23.82**	**182**	LR	LR	15 46 26.2	
	comp=Z,16nm,18.1s,baz=5.0,slow=39						
KIRV	**Kirov**	**27.46**	**138**	LR	LR	15 49 39.4	
	comp=Z,22nm,19.2s,baz=337,slow=41						
ARU	**Arti**	**30.22**	**128**	LR	LR	15 51 33.6	
	comp=Z,22nm,18.8s,baz=22,slow=41						
YKA	**Yellowknife Ar**	**31.18**	**315**	LR	LR	15 48 32.7	
	comp=Z,20nm,19.6s,baz=348,slow=34						
BVAR	**Borovoye Array**	**34.53**	**116**	LR	LR	15 52 32.8	
	comp=Z,23nm,19.5s,baz=8.7,slow=38						
ZALV	**Zalesovo Beam**	**34.87**	**101**	P	**P**	**15 37 43.8**	**+0.4**
	0.6nm,0.6s,baz=1.1,slow=7.2,SNR=2.9 0.6nm,0.6s						
MKAR	**Makanchi Array**	**41.74**	**105**	LR	LR	15 59 58.4	
	comp=Z,18nm,18.4s,baz=140,slow=42						
VAE	**Valguarnera**	**47.40**	**179**	LR	LR	16 00 11.9	
	comp=Z,25nm,19.5s,baz=158,slow=37						
PDAR	**Pinedale Array**	**50.45**	**307**	LR	LR	16 00 06.3	
	comp=Z,25nm,19.3s,baz=304,slow=35						
CMAR	**Chiang Mai Arr**	**71.34**	**93**	P	**P**	**15 42 10.1**	**-2.0**
	0.5nm,0.7s,baz=354,slow=5.7,SNR=6.2 0.5nm,0.7s						

*IDC **15** 15:40:42.8±2.0, 31°.00S×71°.39W, h0km, mb3.6/2, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=52.6km s-min=46.3km az=88.0*
*GUC **15** 15:40:50.6±0.6, 30°.71S×71°.39W, h44km±1km, ML3.9*
ISC 15 15:40:50.8±1.0, 30°.69S±0°.03×71°.44W±0°.06, h42km±10km, n42, σ1§18/46, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.17**	**275**	⇑ *i*P	**Pn**	**15 40 58.1**	**0.0**
CO06				IAML		15 41 05.3	
	comp=E,9μm,0.2s						
CO02	**Combarbal**	**0.64**	**144**	⇓ *i*P	**Pn**	**15 41 02.8**	**-0.8**
CO02				*e*S	**Sn**	**15 41 11.7**	**-1.0**
CO03	**El Pedregal**	**0.66**	**103**	⇓ *i*P	**Pn**	**15 41 03.1**	**-0.8**
CO03				*i* S	**Sn**	**15 41 12.4**	**-0.8**
CO03				IAML		15 41 12.8	
	comp=E,7μm,0.1s						
GO04	**Tololo Observa**	**0.76**	**47**	⇓ *i*P	**Pn**	**15 41 05.0**	**-0.3**
GO04				*e*S	**Sn**	**15 41 15.4**	**-0.3**
CO05	**La Serena**	**0.79**	**13**	*e*P	**Pn**	**15 41 05.6**	**+0.1**
CO05				*e*S	**Sn**	**15 41 16.8**	**+0.7**
CO01	**Juntas del Tor**	**1.36**	**59**	*i* P	**Pn**	**15 41 14.1**	**+0.5**
CO01				*e*S	**Sn**	**15 41 31.8**	**+1.2**
LCO	**Las Campanas**	**1.79**	**21**	*i* P	**Pn**	**15 41 19.9**	**+0.4**
LCO				*e*S	**Sn**	**15 41 41.9**	**+0.7**
VA06	**Catapilco**	**1.87**	**176**	*i* P	**Pn**	**15 41 20.0**	**-0.3**
VA06				IAML		15 41 53.9	
	comp=N,1μm,0.4s						
AC05	**El Transito**	**2.11**	**29**	*e*P	**Pn**	**15 41 24.8**	**+1.1**
AC05				*e*S	**Sn**	**15 41 51.8**	**+3.0**
AC05				IAML		15 42 06.5	
	comp=N,640nm,0.5s						
VA03	**San Esteban**	**2.20**	**160**	*e*P	**Pn**	**15 41 25.5**	**+0.5**
VA03				*i* S	**Sn**	**15 41 52.8**	**+1.7**
VA03				IAML		15 41 55.3	
	comp=E,2μm,0.2s						
ROCH	**El Roble**	**2.30**	**171**	*e*P	**Pn**	**15 41 26.5**	**0.0**
ROCH				IAML		15 42 00.5	
	comp=N,953nm,0.3s						
AC04	**Llanos de Chal**	**2.50**	**7**	*e*P	**Pn**	**15 41 29.4**	**+0.5**
AC04				IAML		15 42 09.3	
	comp=N,415nm,0.5s						
PEL	**Peldehue**	**2.53**	**166**	*e*P	**Pn**	**15 41 30.1**	**+0.7**
PEL				*e*S	**Sn**	**15 42 01.1**	**+2.0**
PEL				IAML		15 42 09.2	
	comp=E,416nm,0.2s						
MT02	**Curacav**	**2.57**	**174**	*e*P	**Pn**	**15 41 30.5**	**+0.5**
MT02				*e*S	**Sn**	**15 42 01.1**	**+1.0**
MT05	**Renca**	**2.76**	**168**	*e*P	**Pn**	**15 41 33.4**	**+0.8**
MT05				*e*S	**Sn**	**15 42 07.5**	**+2.8**
MT05				IAML		15 42 23.3	
	comp=E,871nm,0.2s						
FCH	**Farellones**	**2.81**	**160**	*e*P	**Pn**	**15 41 34.3**	**+0.8**
FCH				IAML		15 42 17.9	
	comp=E,378nm,0.2s						
MT03	**Universidad Ad**	**2.90**	**165**	*e*P	**Pn**	**15 41 35.4**	**+0.8**
MT03				IAML		15 42 23.9	
	comp=E,737nm,0.2s						
VA05	**Santo Domingo**	**2.96**	**183**	*i* P	**Pn**	**15 41 34.1**	**-1.3**
VA05				IAML		15 42 30.9	
	comp=E,488nm,0.4s						
MT09	**Talagante**	**3.10**	**173**	*e*P	**Pn**	**15 41 37.4**	**0.0**
MT09				IAML		15 42 21.9	
	comp=E,484nm,0.2s						
MT01	**Popeta**	**3.17**	**177**	*e*P	**Pn**	**15 41 37.3**	**-0.9**
MT01				IAML		15 42 26.7	
	comp=E,312nm,0.1s						
LMEL	**Las Melosas**	**3.32**	**162**	*e*P	**Pn**	**15 41 41.8**	**+1.4**
LMEL				*e*S	**Sn**	**15 42 21.1**	**+2.5**
LMEL				IAML		15 42 28.7	
	comp=N,432nm,0.2s						
BO04	**La Punta**	**3.36**	**168**	*e*P	**Pn**	**15 41 41.1**	**+0.2**
BO04				*e*S	**Sn**	**15 42 20.5**	**+0.9**
BO04				IAML		15 42 30.4	
	comp=E,221nm,0.5s						
AC06	**Mina Casimiro**	**3.45**	**16**	*e*P	**Pn**	**15 41 42.5**	**+0.3**
AC06				IAML		15 42 38.4	
	comp=E,239nm,0.3s						
BO01	**Tunca**	**3.70**	**175**	*e*P	**Pn**	**15 41 44.8**	**-0.7**
BO03	**Pichilemu**	**3.82**	**186**	*e*P	**Pn**	**15 41 45.2**	**-2.0**
BO02	**Sierra Bellavi**	**4.13**	**172**	*e*P	**Pn**	**15 41 51.3**	**-0.1**
AC01	**Pan de Azucar**	**4.58**	**9**	*e*P	**Pn**	**15 41 56.6**	**-1.1**
H03N1	**Juan Fernandez**	**6.91**	**245**	T	T	15 49 18.4	
	baz=73,slow=72,SNR=353						
H03N3	**Juan Fernandez**	**6.92**	**245**	T	T	15 49 17.6	
	baz=73,slow=72,SNR=553						
H03N2	**Juan Fernandez**	**6.93**	**245**	T	T	15 49 19.2	
	baz=73,slow=72,SNR=447						
LVC	**Limon Verde**	**8.36**	**16**	Pn	**Pn**	**15 42 48.7**	**-1.1**
	comp=E,0.3nm,0.3s,baz=202,slow=11,SNR=1.6 comp=E,1.1nm,0.4s						
LPAZ	**La Paz**	**14.65**	**13**	Pn	**Pn**	**15 44 17.4**	**+1.4**
	comp=E,0.1nm,0.3s,baz=205,slow=5.4,SNR=4.0 comp=E,0.6nm,0.4s						
SIV	**San Ignacio**	**17.44**	**35**	P	**Pn**	**15 44 50.4**	**-0.6**
	baz=190,slow=12,SNR=5.3 comp=E,0.9nm,0.6s						
TXAR	**Lajitas Array**	**67.12**	**330**	P	**P**	**15 51 40.2**	**-0.1**

	comp=E,0.1nm,0.5s,baz=159,slow=8.2,SNR=2.6 comp=E,0.1nm,0.5s					
TORD	**Torodi Ar. Bea**	**82.61**	**70**	P	**P**	**15 53 08.6**	**-1.4**
	comp=E,0.8nm,0.7s,baz=246,slow=7.1,SNR=9.8 comp=E,0.8nm,0.7s					
H11S2	**WAKE ISLAND Hyl**	**26.27**	**271**	T	T	18 18 35.1	
	baz=116,slow=75,SNR=21					
H11S1	**WAKE ISLAND Hyl**	**26.28**	**271**	T	T	18 18 36.2	
	baz=116,slow=75,SNR=39					
H11S3	**WAKE ISLAND Hyl**	**26.29**	**271**	T	T	18 18 36.5	
	baz=116,slow=75,SNR=19					
H11N3	**WAKE ISLAND Hyl**	**26.60**	**273**	T	T	18 19 01.7	
	baz=113					
H11N1	**WAKE ISLAND Hyl**	**26.61**	**273**	T	T	18 19 01.6	
	baz=113					
H11N2	**WAKE ISLAND Hyl**	**26.61**	**273**	T	T	18 19 01.8	
	baz=113,SNR=4.6					
ZALV	**Zalesovo Beam**	**151.13**	**30**	PKPbc	**PKPbc**	**16 00 37.9**	**-1.1**
	comp=E,1.3nm,0.5s,baz=336,slow=3.3,SNR=6.6					

*LDG **15** 15:44:44.2±0.3, 51°.61N×16°.16E, h1km, Ml3.9/12, Error ellipse: s-maj=6.2km s-min=2.7km az=15.0, Suspected Mining induced.*
*MCSM **15** 15:44:45.5±0.4, 52°.N±3°.×1°.6E±°, h4km±2km, MLv3.6*
*IPEC **15** 15:44:45.6±0.2, 51°.51N×16°.23E, h1km, ML3.2/4, Error ellipse: s-maj=1.7km s-min=1.4km az=50.0*
*BGR **15** 15:44:46.9±0.6, 51°.43N×16°.12E, h1km, ML3.5/15, Error ellipse: s-maj=8.9km s-min=3.3km az=15.0*
*IDC **15** 15:44:46.2±0.6, 51°.52N×15°.96E, h0km, mb3.5/2, mbtmp3.4/10, ML3.1/8, Error ellipse: s-maj=11.1km s-min=6.3km az=112.0*
*PRU **15** 15:44:46.2±0.0, 51°.51N×16°.08E, h0km*
*DNK **15** 15:44:48.4±3.5, 51°.82N×16°.29E, h0km±122km, ML2.5*
*VIE **15** 15:44:49.2±0.5, 51°.27N×15°.87E, h0km, mb2.9/16, ml3.0/15, ms3.5/1, Error ellipse: s-maj=3.6km s-min=3.4km az=100.0 76 km NE of Liberec Suspected Mining induced.*
ISC 15 15:44:43.8±0.6, 51°.60N±0°.02×16°.08E±0°.02, h0km, n118, σ1§66/186, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**170**	*i* Pg	**Pg**	**15 44 58.9**	**+0.3**
KSP				*e*		15 45 06.2	
KSP				*e*Sg	**Sg**	**15 45 08.1**	**-0.5**
KSP	**Ksiaz**	**0.77**	**170**	*e*Pg	**Pg**	**15 44 59.0**	**+0.4**
KSP	**Ksiaz**	**0.77**	**170**	Pg	**Pg**	**15 44 58.9**	**+0.3**
KSP				Sg	**Sg**	**15 45 08.5**	**-0.1**
CHVC	**Chvalec**	**1.01**	**181**	*e*PG	**Pg**	**15 45 03.8**	**+0.5**
CHVC				*e*SG	**Sg**	**15 45 16.1**	**-0.3**
CHVC	**Chvalec**	**1.01**	**181**	Pg	**Pg**	**15 45 03.7**	**+0.5**
CHVC				Sg	**Sg**	**15 45 16.1**	**-0.3**
OSTC	**Ostas**	**1.05**	**175**	*e*PG	**Pg**	**15 45 04.3**	**+0.4**
OSTC				*e*SG	**Sg**	**15 45 16.8**	**-0.7**
OSTC	**Ostas**	**1.05**	**175**	Pg	**Pg**	**15 45 04.3**	**+0.4**
UPC	**Upice**	**1.10**	**182**	*e*PG	**Pg**	**15 45 05.0**	**+0.1**
UPC				*e*SG	**Sg**	**15 45 18.2**	**-0.8**
	comp=Z,237nm,0.4s						
UPC	**Upice**	**1.10**	**182**	Pg	**Pg**	**15 45 04.9**	**+0.1**
UPC				Sg	**Sg**	**15 45 19.1**	**+0.1**
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*PG	**Pg**	**15 45 07.7**	**-0.3**
DPC				*e*SG	**Sg**	**15 45 22.5**	**-1.8**
	comp=Z,213nm,0.8s						
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*Pg	**Pg**	**15 45 07.8**	**-0.3**
PVCC	**Panska Ves**	**1.44**	**222**	*e*PG	**Pb**	**15 45 11.8**	**+0.4**
PVCC				*e*SG	**Sn**	**15 45 32.2**	**+1.6**
	comp=Z,650nm,0.7s						
KRLC	**Kraliky**	**1.59**	**163**	*e*PG	**Pn**	**15 45 13.3**	**0.0**
KRLC				*e*SG	**Sn**	**15 45 34.0**	**-0.6**
	comp=Z,281nm,0.7s						
KRLC	**Kraliky**	**1.59**	**163**	Pn	**Pn**	**15 45 13.2**	**0.0**
RUE	**Ruedersdorf**	**1.67**	**303**	Pn	**Pg**	**15 45 15.8**	**0.0**
FBE	**Freiberg**	**1.84**	**249**	*e*Pn	**Pg**	**15 45 19.0**	**-0.1**
FBE				*e*Sg	**Sg**	**15 45 43.9**	**+1.0**
GOPC	**GO Pecny, Ondr**	**1.88**	**206**	*e*PN	**Pn**	**15 45 17.4**	**+0.2**
GOPC				*e*PG	**Pb**	**15 45 19.3**	**+0.3**
GOPC				*e*SG	**Sb**	**15 45 43.0**	**0.0**
GOPC	**GO Pecny, Ondr**	**1.88**	**206**	Pn	**Pn**	**15 45 17.3**	**+0.1**
PRU	**Pruhonice**	**1.89**	**212**	*e*PN	**Pn**	**15 45 17.3**	**0.0**
PRU				*e*PG	**Pb**	**15 45 19.2**	**+0.1**
PRU				*e*SG	**Sb**	**15 45 43.2**	**0.0**
	comp=Z,175nm,0.5s						
PRU	**Pruhonice**	**1.89**	**212**	Pn	**Pn**	**15 45 17.4**	**+0.1**
CLL	**Collm**	**1.95**	**263**	*e*Pn	**Pn**	**15 45 19.0**	**+0.9**
CLL				*e*Pg	**Pg**	**15 45 22.0**	**+0.9**
CLL				*ex*	x	15 45 25.0	
CLL				*e*Sg	**Sg**	**15 45 48.0**	**+1.7**
	comp=Z,185nm,1.0s						
CLL	**Collm**	**1.95**	**263**	*e*Pn	**Pn**	**15 45 19.1**	**+1.0**
RAC	**Raciborz**	**2.03**	**138**	*e*PG	**Pg**	**15 45 22.9**	**+0.2**
RAC				*e*SG	**Sg**	**15 45 49.6**	**+0.7**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*PN	**Pn**	**15 45 19.5**	**-0.1**
MORC				*e*SG	**Sn**	**15 45 46.0**	**+0.1**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*Pn	**Pn**	**15 45 19.5**	**-0.1**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*Pn	**Pn**	**15 45 19.4**	**-0.1**
	baz=335						
MORC				*e*Sg	**Sn**	**15 45 46.0**	**+0.1**
	comp=Z,160nm,0.9s,baz=335						
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*PG	**Pb**	**15 45 25.1**	**+0.6**
OKC				*e*SG	**Sb**	**15 45 52.6**	**+0.3**
	comp=Z,188nm,0.8s						
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*Pn	**Pn**	**15 45 21.0**	**-0.6**
OKC				*e*Sg	**Sb**	**15 45 52.2**	**-0.1**
VRAC	**Vranov**	**2.32**	**172**	Pn	**Pn**	**15 45 24.2**	**+0.9**
	comp=Z,4.0nm,0.3s,baz=319,slow=18,SNR=18						
VRAC				Lg	Lg	15 45 55.8	
	comp=Z,11nm,0.3s,baz=264,slow=21,SNR=12 comp=Z,13nm,0.3s						
VRAC	**Vranov**	**2.32**	**172**	*e*PN	**Pn**	**15 45 23.5**	**+0.2**
VRAC				*e*SG	**Sb**	**15 45 55.0**	**-0.7**
VRAC	**Vranov**	**2.32**	**172**	*e*Pn	**Pn**	**15 45 23.4**	**+0.2**
	baz=354						
VRAC				*e*Sg	**Sb**	**15 45 55.0**	**-0.7**
	comp=Z,139nm,0.9s,baz=354						
TREC	**Trest**	**2.34**	**190**	*e*PG	**Pb**	**15 45 26.8**	**-0.1**
TREC				*e*SG	**Sb**	**15 45 57.1**	**+0.8**
MAUC	**Maruska**	**2.50**	**153**	*e*PN	**Pn**	**15 45 26.3**	**+0.5**
MAUC				*e*PG	**Pb**	**15 45 30.1**	**+0.5**
KRUC	**Moravsky**	**2.55**	**175**	*e*PN	**Pn**	**15 45 26.9**	**+0.5**
KRUC				*e*SG	**Sb**	**15 46 02.7**	**+0.4**
KRUC	**Moravsky**	**2.55**	**175**	*e*Pn	**Pn**	**15 45 26.8**	**+0.4**
	baz=358						
KRUC				*e*Sg	**Sb**	**15 46 02.7**	**+0.4**
	comp=Z,103nm,0.8s,baz=358						
TANN	**Tannenbergstha**	**2.57**	**244**	*e*Pn	**Pn**	**15 45 27.9**	**+1.1**
TANN				*e*Sg	**Sg**	**15 46 07.3**	**+0.8**
WERD	**Werda**	**2.65**	**246**	*e*Pn	**Pn**	**15 45 29.1**	**+1.3**
NKC	**Novy Kostel**	**2.67**	**241**	*e*PN	**Pn**	**15 45 29.5**	**+1.3**
NKC				*e*PG	**Pg**	**15 45 35.2**	**+0.1**
NKC				*e*SG	**Sg**	**15 46 11.3**	**+1.6**
	comp=Z,153nm,0.3s						
OJC	**Ojcow**	**2.73**	**119**	Pn	**Pn**	**15 45 27.8**	**-1.1**
OJC				*e*Pg	**Pb**	**15 45 34.6**	**+1.1**
OJC				*e*Sg	**Sg**	**15 46 09.9**	**-1.6**
JAVC	**Velka Javorina**	**2.93**	**159**	*e*PN	**Pn**	**15 45 31.8**	**+0.1**
JAVC	**Velka Javorina**	**2.93**	**159**	*e*Pn	**Pn**	**15 45 31.7**	**+0.1**
	baz=341						
KHC	**Kasperske Hory**	**2.94**	**214**	*e*PN	**Pn**	**15 45 32.4**	**+0.5**
KHC				*e*PG	**Pb**	**15 45 38.1**	**+0.9**
KHC				*e*PG	**Pg**	**15 45 38.5**	**-1.8**
KHC				*e*SN	**Sn**	**15 46 07.6**	**-0.4**
KHC				*e*SG	**Sg**	**15 46 17.1**	**-1.3**
	comp=Z,58nm,0.6s						
MOX	**Moxa**	**2.97**	**253**	*e*Pn	**Pn**	**15 45 33.5**	**+1.3**
MOX				*e*Sg	**Sg**	**15 46 21.5**	**+2.3**
MANZ	**Manzenberg**	**2.99**	**239**	*e*Pn	**Pn**	**15 45 33.9**	**+1.3**
CKRC	**Cesky Krumlov**	**3.01**	**203**	*e*PN	**Pn**	**15 45 33.9**	**+1.2**
ROTZ	**Rotzenmuhle**	**3.07**	**235**	*e*Pn	**Pn**	**15 45 34.6**	**+1.0**
GEC2	**GERESS Array S**	**3.15**	**210**	*e*Pn	**Pn**	**15 45 35.7**	**+0.9**
GERES	**GERESS Array B**	**3.15**	**210**	Pn	**Pn**	**15 45 35.5**	**+0.7**
	comp=Z,3.5nm,0.3s,baz=33,slow=13,SNR=92						
GERES				Pg	**Pb**	**15 45 42.3**	**+1.6**
	comp=Z,7.4nm,0.3s,baz=30,slow=16,SNR=25						
GERES				Lg	Lg	15 46 22.4	
	comp=Z,9.2nm,0.3s,baz=33,slow=26,SNR=7.4 comp=Z,6.7nm,0.4s						
WET	**Wettzell**	**3.20**	**221**	*e*Pn	**Pn**	**15 45 36.0**	**+0.6**
CLZ	**Clausthal**	**3.56**	**276**	*e*Pn	**Pn**	**15 45 42.7**	**+2.4**
BSD	**Bornholm Skovb**	**3.59**	**349**	*i* P	**Pn**	**15 45 42.4**	**+1.8**
BSD				*i* S	**Sn**	**15 46 22.3**	**-1.4**
BSD				IAML		15 46 29.7	
	comp=Z,2.4nm,0.2s						
GRF	**Grafenberg Arr**	**3.63**	**240**	*e*Pn	**Pn**	**15 45 42.9**	**+1.6**
GRF				*e*Sg	**Sg**	**15 46 42.2**	**+1.7**
CONA	**Conrad Observa**	**3.68**	**182**	*i* Pn	**Pn**	**15 45 42.8**	**+0.8**
	comp=Z,4.3nm,0.4s,SNR=14						
CONA				*e*Sg	**Sg**	**15 46 39.1**	**-2.9**
	comp=Z,60nm,0.5s						
RONA	**Rosalia, Austr**	**3.91**	**178**	*i* Pn	**Pn**	**15 45 46.1**	**+1.0**
	comp=Z,1.2nm,0.2s						
RONA				*e*Sg	**Sg**	**15 46 47.1**	**-2.3**
	comp=Z,16nm,0.3s						
SOP	**Sopron**	**3.93**	**175**	P	**Pb**	**15 45 56.3**	**+2.3**
MOA	**Molln**	**3.94**	**198**	*i* Pn	**Pn**	**15 45 46.4**	**+1.0**
	comp=Z,9.6nm,0.3s,SNR=24						
MOA				*e*Sg	**Sg**	**15 46 48.0**	**-2.2**
	comp=Z,49nm,0.6s						
BIOA	**Bad Ischl, Aus**	**4.22**	**203**	*i* Pn	**Pn**	**15 45 50.3**	**+0.9**
	comp=Z,14nm,0.3s,SNR=7.2						
BIOA				*e*Sg	**Sg**	**15 46 56.5**	**-2.9**
	comp=Z,76nm,0.6s						
LUNU	**Lund**	**4.33**	**340**	*i* P	**Pn**	**15 45 52.0**	**+1.1**
LUNU				*i* S	**Sn**	**15 46 41.0**	**-1.0**
ARSA	**Arzberg**	**4.37**	**185**	*i* Pn	**Pn**	**15 45 54.2**	**+2.7**
	comp=Z,2.4nm,0.3s						
ARSA				*e*Sg	**Sg**	**15 47 02.1**	**-2.0**
	comp=Z,71nm,1.0s						
COP	**Copenhagen**	**4.63**	**334**	*i* S	**Sn**	**15 46 49.5**	**+0.1**
COP				IAML		15 47 46.5	
	comp=Z,9.0nm,0.5s						
BLEU	**Blekinge**	**4.71**	**358**	*i* P	**Pn**	**15 45 58.4**	**+2.3**
BJUU	**Bjuv**	**4.83**	**339**	*i* S	**Sn**	**15 46 51.5**	**-2.9**
KBA	**Koelnbreinsper**	**4.87**	**203**	*i* Pn	**Pn**	**15 45 59.4**	**+1.0**
	comp=Z,7.7nm,0.4s,SNR=13						
KBA				*e*Sg	**Sg**	**15 47 17.1**	**-3.0**
	comp=Z,28nm,0.8s						
SOKA	**Soboth**	**4.97**	**188**	*i* Pn	**Pn**	**15 46 01.7**	**+1.9**
	comp=Z,1.7nm,0.4s,SNR=4.4						
SOKA				Sg	**Sg**	**15 47 21.1**	**-2.4**
	comp=Z,15nm,0.8s						
DEL	**Delary**	**5.05**	**346**	*i* P	**Pn**	**15 46 01.0**	**+0.3**
DEL				*i* S	**Sn**	**15 46 57.7**	**-2.0**
WATA	**Walderalm**	**5.18**	**216**	*e*Pn	**Pn**	**15 46 03.5**	**+0.8**
	comp=Z,11nm,0.8s,SNR=6.0						
WATA				*e*Sg	**Sg**	**15 47 29.7**	**-0.5**
	comp=Z,9.2nm,0.5s						
WTTA	**Wattenberg**	**5.22**	**215**	*e*Pn	**Pn**	**15 46 04.1**	**+0.8**
	comp=Z,6.5nm,0.5s						
WTTA				Sg	**Sg**	**15 47 31.2**	**-0.2**
	comp=Z,24nm,0.8s						
MOTA	**Moosalm**	**5.35**	**219**	*e*Pn	**Pn**	**15 46 05.9**	**+0.8**
	comp=Z,3.0nm,0.4s						
MOTA				Sg	**Sg**	**15 47 33.6**	**-2.1**
	comp=Z,12nm,0.6s						
RETA	**Reutte**	**5.38**	**222**	*i* Pn	**Pn**	**15 46 06.1**	**+0.7**
	comp=Z,2.4nm,0.3s,SNR=7.8						
RETA				Sg	**Sg**	**15 47 36.3**	**-0.2**
	comp=Z,27nm,0.7s						
ABTA	**Abfaltersbach**	**5.39**	**207**	*i* Pn	**Pn**	**15 46 07.3**	**+1.7**
	comp=Z,2.9nm,0.4s						
ABTA				Sg	**Sg**	**15 47 35.9**	**-1.1**
	comp=Z,26nm,0.8s						
SQTA	**Sankt Quirin**	**5.41**	**218**	*i* Pn	**Pn**	**15 46 08.2**	**+2.3**
	comp=Z,1.7nm,0.2s,SNR=6.0						
SQTA				*e*Sg	**Sg**	**15 47 38.3**	**+0.6**
	comp=Z,28nm,0.7s						
FETA	**Feichten**	**5.76**	**219**	*i* Pn	**Pn**	**15 46 11.9**	**+1.2**
	comp=Z,2.4nm,0.5s						
FETA				Sg	**Sg**	**15 47 50.7**	**+1.8**
	comp=Z,18nm,1.0s						
DAVA	**Damuels**	**5.91**	**226**	*i* Pn	**Pn**	**15 46 13.3**	**+0.6**
	comp=Z,2.4nm,0.3s						
DAVA				Sg	**Sg**	**15 47 54.4**	**+0.7**
	comp=Z,15nm,0.6s						
RNPP5	**Staryi Chortor**	**6.15**	**90**	Pn	**Pn**	**15 46 17.4**	**+1.6**
ONAU	**Onsala**	**6.29**	**339**	*i* P	**Pn**	**15 46 22.3**	**+4.6**
ONAU				*i* S	**Sn**	**15 47 27.4**	**-2.9**
DAVOX	**Davos/Dischmat**	**6.30**	**222**	Pn	**Pn**	**15 46 18.8**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=38,slow=13,SNR=8.1						
DAVOX				Lg	Lg	15 48 04.7	
	comp=Z,0.7nm,0.3s,baz=171,slow=22,SNR=4.8 comp=Z,2.5nm,0.5s						
BORU	**Boraas**	**6.34**	**344**	*i* P	**Pn**	**15 46 22.8**	**+4.3**
BORU				*i* S	**Sn**	**

comp=Z,0.6nm,0.8s
ZALV **Zalesovo Beam** 40.17 59 P P 15 52 25.8 +4.5
comp=Z,0.2nm,0.3s,baz=278,slow=4.2,SNR=3.7
comp=Z,0.2nm,0.3s

NEIC ***15*** *16:16:22.1±1.3,26°.35S×0°.09×176°.8W±0°.1,h96km±14km, mb4.3/10, Error ellipse: s-maj=19.0km s-min=13.0km az=91.0*
IDC ***15*** *16:16:26.7±2.4,26°.40S×177°.32W,h108km±20km,mb3.8/6, mbtmp4.1/8,MS3.3/5, Error ellipse: s-maj=35.0km s-min=19.1km az=86.0*

ISC 15 16:16:23.5±0.7,26°.33S±0°.08×176°.9W±0°.1,h95km,n31, σ1°.77/27,mb4.2/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	3.04	197	P	Pn	16 17 09.6	-0.1
	335nm,0.2s,baz=104,slow=11,SNR=10						
RAO				S	Sn	16 17 46.2	+1.0
	868nm,0.5s,baz=61,slow=24,SNR=10						
RAO	**Raoul Island**	3.04	197	Pn	Pn	16 17 09.4	-0.3
NIUE	**Niue**	9.67	43	Pn	Pn	16 18 37.7	-2.1
MSVF	**Nonsavu**	9.75	330	P	Pn	16 18 42.9	+1.9
	4.3nm,0.7s,baz=139,slow=9.3,SNR=9.4						
DZM	**Mont Dzumac**	15.78	282	LR	LR	16 24 06.2	
	comp=Z,112nm,20.1s,baz=1.0,slow=30						
PPT	**Papeete**	26.76	77	LR	LR	16 32 05.8	
	comp=Z,19nm,18.4s,baz=234,slow=35						
HNR	**Honiara**	27.63	303	LR	LR	16 31 52.0	
	comp=Z,202nm,18.9s,baz=192,slow=34						
CTAO	**Charters Tower**	34.35	273	P	P	16 22 59.9	-1.5
CTAO				IAmb	IAmb	16 23 26.2	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	36.52	251	LR	LR	16 37 08.3	
	comp=Z,35nm,18.0s,baz=31,slow=34						
COEN	**Coen**	39.29	280	P	P	16 23 41.3	-2.1
AS31	**Alice Springs**	44.45	262	P	P	16 24 23.9	-1.5
ASAR	**Alice Springs**	44.45	262	P	P	16 24 24.0	-1.4
	comp=Z,1.7nm,0.6s,baz=95,slow=6.5,SNR=54						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	44.45	262	P	P	16 24 22.5	-2.9
WR0	**Warramunga Arr**	44.89	268	P	P	16 24 25.9	-3.0
WR0				IAmb	IAmb	16 24 29.1	
	comp=Z,3.3nm,0.8s						
WB2	**Warramunga Arr**	45.07	268	P	P	16 24 28.6	-1.7
WB2				IAmb	IAmb	16 24 31.2	
	comp=Z,4.4nm,0.8s						
WRAB	**Tennant Creek**	45.07	268	P	P	16 24 27.8	-2.5
WRAB				IAmb	IAmb	16 24 32.4	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	45.08	268	P	P	16 24 28.7	-1.7
	comp=Z,1.8nm,0.5s,baz=102,slow=6.0,SNR=21						
WRA				LR	LR	16 41 22.0	
	comp=Z,38nm,18.7s,baz=339,slow=34						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	45.08	268	P	P	16 24 28.0	-2.4
WB0	**Warramunga Arr**	45.08	268	P	P	16 24 28.3	-2.1
WB0				IAmb	IAmb	16 24 29.4	
	comp=Z,4.3nm,0.8s						
KNRA	**Kununurra**	51.50	270	P	P	16 25 17.6	-2.2
QSPA	**South Pole Qui**	63.76	180	P	P	16 26 45.4	+0.3
QSPA				IAmb	IAmb	16 26 51.2	
	comp=Z,1.9nm,0.8s						
MAW	**Mawson**	76.44	200	P	P	16 28 03.8	+1.5
	comp=Z,1.2nm,0.5s,baz=138,slow=11,SNR=2.3						
	comp=Z,1.2nm,0.5s						
KSRS	**Korea Array**	81.91	319	P	P	16 28 34.3	+1.8
	comp=Z,0.4nm,0.6s,baz=124,slow=7.0,SNR=2.1						
	comp=Z,0.4nm,0.6s						
PETK	**Petropavlovsk-**	82.14	345	P	P	16 28 35.5	+2.2
	comp=Z,2.5nm,0.8s,baz=189,slow=7.3,SNR=5.1						
	comp=Z,2.5nm,0.8s						
CMAR	**Chiang Mai Arr**	92.99	289	P	P	16 29 27.5	+0.8
	comp=Z,0.8nm,0.8s,baz=150,slow=3.0,SNR=7.1						
	comp=Z,0.8nm,0.8s						
ARCES	**ARCESS Array B**	134.81	349	PKP	PKiKP	16 35 31.6	-0.3
	comp=Z,5.6nm,1.1s,baz=352,slow=5.5,SNR=3.7						
FINES	**FINESS Array B**	141.62	342	PKhKP	PKPpre	16 35 40.8	
	comp=Z,1.4nm,0.8s,baz=0.0,slow=0.4,SNR=4.1						
NB2	**NORSAR Subarra**	144.87	353	PKP	PKPab	16 35 48.3	+0.1
	comp=Z,3.4nm,1.2s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	144.87	353	PKP	PKPdf	16 35 49.0	+0.1
	comp=Z,0.8nm,0.6s,baz=4.7,slow=3.7,SNR=6.0						
AKASG	**Malin Array Be**	148.53	328	PKPbc	PKPbc	16 35 58.5	-0.5
	comp=Z,0.6nm,0.4s,baz=45,slow=4.4,SNR=5.4						
BRTR	**Keskin Array B**	151.28	305	PKPbc	PKiKP	16 36 06.7	0.0
	comp=Z,0.6nm,0.7s,baz=116,slow=3.4,SNR=4.1						

MAN 15 16:30:59.0,9°.71N×126°.06E,h27km,mb3.8,ML2.5,MS2.1, 4C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	0.10	39	↑eP	Pb	16 31 06.2	+2.3
SCPH	**Surigao**	0.57	278	↑iP	Pn	16 31 11.5	+0.2
SCPH				i S	Sn	16 31 20.8	+1.0
BUTP	**Butuan**	0.85	211	↓eP	Pb	16 31 14.3	-0.9
BUTP				eS	Sb	16 31 26.3	+0.1
BIPH	**Bislig**	1.54	169	↑iP	Pn	16 31 23.8	-0.9
BIPH				i S	Sn	16 31 44.7	+0.8
TABP	**Talibon, Bohol**	1.75	283	↑eP	Pb	16 31 29.5	-0.9
TABP				eS	Sn	16 31 49.1	+0.2
BUKP	**Musuan**	2.07	209	↓eP	Pn	16 31 33.2	+1.2
BUKP				eS	Sn	16 31 57.9	+1.0

IDC ***15*** *16:54:11.4±2.8,37°.11N×71°.68E,h98km±24km,mb3.7/14, mbtmp4.1/20,MS3.0/2, Error ellipse: s-maj=23.4km s-min=15.3km az=172.0*
NEIC ***15*** *16:54:13.2±2.2,37°.18N±0°.07×71°.54E±0°.04, h132km±12km,mb4.0/6, Error ellipse: s-maj=10.2km s-min=3.4km az=162.0*
NNC ***15*** *16:54:15.6±2.7,37°.45N×71°.48E,h129km±38km,mb3.8, mpv4.5, Error ellipse: s-maj=25.3km s-min=18.0km az=164.0*

ISC 15 16:54:10.9±0.5,37°.11N±0°.05×71°.58E±0°.05,h106km,n85, σ2°.51/90,mb4.0/15,10C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	2.14	333		Pn	16 54 48.4	+2.8
DRK	**Karamyk**	2.37	4	Pn	Pn	16 54 52.1	+3.4
CHGR	**Chuyangaron**	2.46	310	Pn	Pn	16 54 52.5	+2.8
BTK	**Batken**	3.00	349	Pn	Pn	16 55 00.6	+3.8
KBL	**Kabul**	3.29	220	Pn	Pn	16 55 06.6	+5.8
NIL	**Nilore**	3.71	158		Pn	16 55 11.2	+4.9
AML	**Almayashu**	5.27	17	P	Pn	16 55 29.7	+2.0
	SNR=156						
NRN	**Naryn**	5.51	37	Pn	Pn	16 55 31.4	+0.6
UCH	**Uchtor**	5.59	23	P	Pn	16 55 33.6	+1.6
	SNR=46						
THN	**Thein Dam**	5.77	143	eP	Pn	16 55 38.2	+4.1
THN				eP	Pn	16 55 39.0	+4.9
THN				eS	Sn	16 56 39.7	+0.7
THN				eS	Sn	16 56 40.0	+1.0
EKS2	**Erkin-Say**	5.80	16	P	Pn	16 55 36.7	+2.2
	SNR=44						
AAK	**Ala-Archa**	5.96	21	P	Pn	16 55 39.0	+2.3
	SNR=78						
AAK	**Ala-Archa**	5.96	21	P	Pn	16 55 38.8	+2.1
	53nm,0.4s,baz=183,slow=5.9,SNR=197						
AAK				S	Sn	16 56 42.0	-1.6
	34nm,0.6s,baz=355,slow=19,SNR=13						
AAK	**Ala-Archa**	5.96	21	Pn	Pn	16 55 38.9	+2.2
KK31	**Karatay Array**	6.04	353	Pn	Pn	16 55 39.7	+1.9
KK31	**Karatay Array**	6.04	353	↓P	Pn	16 55 39.6	+1.9
	17nm,0.3s,baz=176,slow=12,SNR=427						
KK31				S	Sn	16 56 42.7	-2.8
	20nm,0.3s,baz=181,slow=16,SNR=12						
KKAR	**Karatay Array**	6.04	353	Pn	Pn	16 55 39.5	+1.8
KKAR	**Karatay Array**	6.04	353		Pn	16 55 39.7	+1.9
KBK	**Karagaybulak**	6.12	24	P	Pn	16 55 41.0	+2.2
	SNR=15						
ULHL	**Ulahol**	6.26	34	P	Pn	16 55 42.2	+1.3
	SNR=11						
BOOM	**Boomskoye usch**	6.33	31	Pn	Pn	16 55 43.4	+1.5
CHMS	**Chumysh**	6.37	21	P	Pn	16 55 44.2	+2.1
	SNR=37						
CHMS	**Chumysh**	6.37	21	↑P	Pn	16 55 43.9	+1.8
	44nm,0.7s						
CHMS				↓S	Sn	16 56 50.4	-3.0
	28nm,0.7s						
USP	**Ospenovka**	6.54	19	P	Pn	16 55 46.0	+1.4
	SNR=21						
TKM2	**Tokmak 2**	6.57	27	P	Pn	16 55 46.9	+1.8
	SNR=87						
TKM2	**Tokmak 2**	6.57	27	↑P	Pn	16 55 46.8	+1.8
	34nm,0.6s						
TKM2				↑S	Sn	16 56 57.2	-1.4
	20nm,0.7s						
TARG	**Taragay, Kyrgy**	6.67	44		Pn	16 55 42.9	-3.7
BHK	**Bhakra**	6.95	143	eP	Pn	16 55 56.7	+6.7
BHK				eS	Sn	16 57 04.6	-3.0
MDOK	**Medeo**	7.35	33	↑P	Pn	16 55 57.4	+1.8
	19nm,0.6s						
KNDC	**Almaty**	7.36	32	↑P	Pn	16 55 58.2	+2.5
	80nm,1.0s						
DDI	**Dehra Dun**	8.65	140	IAML		16 57 51.4	
	comp=N,190nm,0.3s						
DDI				IAML		16 57 52.8	
	comp=E,168nm,0.3s						
PDGK	**Podgornoye**	8.67	42	↑P	Pn	16 56 13.8	+0.4
	comp=E,9.7nm,0.9s						
NDI	**New Delhi**	9.64	149	ex	Sn	16 58 09.0	-4.1
GEYT	**Alibeck**	10.73	278	P	Pn	16 56 41.3	-0.1
	comp=E,4.6nm,0.4s,baz=91,slow=4.6,SNR=32						
GEYT				S	Sn	16 58 35.9	-3.5
	comp=E,8.0nm,0.3s,baz=116,slow=20,SNR=13						
GEYT	**Alibeck**	10.73	278	Pn	Pn	16 56 41.1	-0.3
GYA0B	**ALIBECK ARRAY**	10.73	278	Pn	Pn	16 56 40.5	-0.8
GYA0B	**ALIBECK ARRAY**	10.73	278	↑P	Pn	16 56 41.2	-0.2
GYA0B				↓S	Sn	16 58 34.9	-4.5
MK31	**Makanchi Array**	12.53	36		Pn	16 57 05.7	+0.4
MK31	**Makanchi Array**	12.53	36	P	Pn	16 57 05.3	+0.1
	comp=E,3.6nm,0.8s,baz=221,slow=13,SNR=13						
MKAR	**Makanchi Array**	12.53	36	P	Pn	16 57 05.0	-0.2
	comp=E,2.8nm,0.8s,baz=220,slow=12,SNR=13						
MKAR	**Makanchi Array**	12.53	36	Pn	Pn	16 57 05.1	-0.1
DANN	**Dangsing**	13.46	127	eP	Pn	16 57 15.9	-1.9
	comp=E,19nm,0.3s						
DANN				eS	Sn	16 59 32.2	-14
GKN	**Gorkha**	14.26	126	eP	Pn	16 57 26.2	-1.8
	comp=E,25nm,0.4s						
KURBB	**Kurchatov Arra**	14.40	18	P	Pn	16 57 28.2	-1.2
	comp=E,0.6nm,0.6s,baz=208,slow=12,SNR=3.2						
KURK	**Kurchatov**	14.51	18	↑P	P	16 57 34.5	+0.1
	comp=E,5.1nm,0.8s						
BHPL	**Bhopal**	14.71	158	eP	P	16 57 40.5	+3.4
BHPL				eS	Sn	17 00 07.5	-8.6
AB31	**Akbulak array**	14.79	329	↓P	Pn	16 57 34.0	-0.5
	comp=E,2.6nm,0.3s,baz=133,slow=14,SNR=172						
AB31				S	Sn	17 00 06.5	-11
	comp=E,7.1nm,0.5s,baz=145,slow=23,SNR=13						
ABKAR	**Akbulak array**	14.79	329	Pn	Pn	16 57 33.9	-0.6
ABKAR	**Akbulak array**	14.79	329	Pn	Pn	16 57 34.0	-0.5
DMN	**Daman**	14.83	126	eP	Pn	16 57 33.5	-1.9
PKIN	**Phulchoki**	15.04	125	eP	Pn	16 57 35.9	-2.2
	comp=E,21nm,0.5s						
PKI	**Pulchoki**	15.05	125	eP	Pn	16 57 36.0	-2.3
	comp=E,18nm,0.6s						
GUN	**Gumba**	15.14	123	eP	Pn	16 57 36.9	-2.5
JIRN	**Jiri**	15.51	123	eP	Pn	16 57 41.9	-2.2
	comp=E,57nm,0.5s						
RAMN	**Ramite**	16.25	124	eP	Pn	16 57 51.1	-2.1
	comp=E,18nm,0.4s						
AKTO	**Aktyubinsk**	16.50	328	P	P	16 57 57.0	+0.5
	comp=E,8.6nm,0.4s,baz=144,slow=11,SNR=34						
AKTO				S	Sn	17 00 52.3	-6.4
	comp=E,6.4nm,0.6s,baz=28,slow=20,SNR=6.5						
AKTO	**Aktyubinsk**	16.50	328	↑P	Pn	16 57 56.1	+0.3
	comp=E,9.1nm,0.5s						
AKTO				↑S	Sn	17 00 49.8	-8.9
	comp=E,8.4nm,0.8s						
TAPN	**Taplejung**	16.74	121	eP	Pn	16 57 56.9	-2.3
	comp=E,13nm,0.4s						
ZAA0	**Zalesovo Array**	19.17	24	P	P	16 58 24.3	-1.5
ZAA0				IAmb	IAmb	16 58 29.5	
	comp=Z,6.0nm,0.8s						
ZAA0	**Zalesovo Array**	19.17	24	↓P	P	16 58 25.4	-0.4
	comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	19.17	24	P	P	16 58 25.8	0.0
	comp=Z,4.9nm,0.4s,baz=221,slow=10,SNR=22						
ZALV	**Zalesovo Beam**	19.17	24	P	P	16 58 25.0	-0.8
TEZP	**TEZPUR**	20.79	114	eP	Pn	16 58 45.5	-1.6
GNI	**Garni**	21.16	287	P	P	16 58 50.1	+2.5
	comp=Z,9.4nm,0.6s,baz=260,slow=0.1,SNR=4.8						
	comp=Z,9.4nm,0.6s						
GNI	**Garni**	21.16	287	P	P	16 58 46.2	-1.4
ARU	**Arti**	21.22	340	P	P	16 58 49.4	+1.6
	comp=Z,1.8nm,0.3s,baz=157,slow=22,SNR=4.6						
	comp=Z,1.8nm,0.3s						
ARU	**Arti**	21.22	340	P	P	16 58 48.2	+0.4
ARU				IAmb	IAmb	16 58 49.9	
	comp=Z,3.3nm,0.6s						
KOHI	**KOHIMA**	22.27	114	eP	P	16 59 00.9	+1.4
KBZ	**Khabaz**	22.75	296	P	P	16 59 06.5	+2.5
	comp=Z,1.5nm,0.8s,baz=105,slow=12,SNR=2.0						
	comp=Z,1.5nm,0.8s						
BRTR	**Keskin Array B**	29.70	287	P	P	17 00 09.4	+2.5
	comp=Z,1.0nm,0.7s,baz=116,slow=8.1,SNR=6.4						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	30.35	120	P	P	17 00 13.9	+1.3
	comp=Z,0.4nm,0.3s,baz=312,slow=9.2,SNR=4.9						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	32.93	308	P	P	17 00 37.4	+2.4
	comp=Z,0.8nm,0.6s,baz=82,slow=9.4,SNR=5.2						
	comp=Z,0.8nm,0.6s						
BURAR	**Bucovina Array**	35.35	302	P	P	17 00 53.1	-3.0
BURAR				IAmb	IAmb	17 01 00.1	
	comp=Z,1.8nm,0.8s						
BUR08	**Bucovina Ar. S**	35.36	302	P	P	17 00 56.7	+0.5
FINES	**FINESS Array B**	37.24	326	P	P	17 01 13.9	+2.1
	comp=Z,1.7nm,0.3s,baz=119,slow=9.0,SNR=35						
	comp=Z,1.7nm,0.3s						
ARCES	**ARCESS Array B**	40.76	337	P	P	17 01 42.5	+1.5
	comp=Z,2.6nm,0.8s,baz=113,slow=8.0,SNR=7.5						
	comp=Z,2.6nm,0.8s						
GERES	**GERESS Array B**	42.96	305	P	P	17 02 02.0	+2.7
	comp=Z,0.2nm,0.5s,baz=71,slow=9.4,SNR=2.8						
	comp=Z,0.2nm,0.5s						
YAK	**Yakutsk**	43.20	36	LR	LR	17 22 24.8	
	comp=Z,17nm,21.7s,baz=244,slow=39						
NB2	**NORSAR Subarra**	44.18	323	P	P	17 02 10.2	+1.4
	comp=Z,1.8nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	44.18	323	P	P	17 02 10.2	+1.4
	comp=Z,2.7nm,0.6s,baz=95,slow=7.8,SNR=15						
	comp=Z,2.7nm,0.6s						
TIXI	**Tiksi**	45.03	22	P	P	17 02 16.3	+0.9
	comp=Z,1.4nm,0.3s,baz=270,slow=19,SNR=9.6						
	comp=Z,1.4nm,0.3s						
JOW	**Kunigami**	48.55	85	LR	LR	17 26 23.6	
	comp=Z,23nm,20.6s,baz=160,slow=40						
ESDC	**Sonseca Array**	57.59	298	P	P	17 03 51.5	+1.9
	comp=Z,0.9nm,0.5s,baz=54,slow=7.6,SNR=11						
	comp=Z,0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	66.20	269	P	P	17 04 48.4	+0.8
	comp=Z,0.4nm,0.5s,baz=54,slow=6.2,SNR=4.1						
	comp=Z,0.4nm,0.5s						
INK	**Inuvik**	73.23	9	P	P	17 05 30.9	+1.1
	comp=Z,1.2nm,0.5s,baz=316,slow=3.9,SNR=4.4						
	comp=Z,1.2nm,0.5s						

IDC 15 16:58:43.2±6.5,30°.95S×178°.89W,h0km,mb3.4/2, mbtmp3.4/2,Error ellipse: s-maj=255.3km s-min=61.7km az=156.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.32	268	P	P	17 06 38.5	-0.6
	0.2nm,0.6s,baz=106,slow=7.4,SNR=5.7						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	43.36	273	P	P	17 06 47.8	+0.2
	0.3nm,0.4s,baz=113,slow=7.7,SNR=11						
	0.3nm,0.4s						
FINES	**FINESS Array B**	145.39	339	PKPbc	PKPbc	17 18 21.4	-0.8
	2.2nm,1.0s,baz=36,slow=3.5,SNR=3.7						

IDC ***15*** *17:00:26.6±2.8,48°.15N×153°.18E,h156km±24km,mb3.3/9, mbtmp3.7/13, Error ellipse: s-maj=35.0km s-min=16.7km az=142.0*

ISC 15 17:00:26.2±1.3,48°.2N±0°.2×153°.1E±0°.2,h150km,n19, σ0°.52/13,mb3.6/9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	5.75	29	P	Pn	17 01 49.7	+0.2
	2.4nm,0.8s,baz=173,slow=12,SNR=14						
KLR	**Kul'dur**	14.14	282	P	P	17 03 42.3	-0.4
	1.7nm,0.6s,baz=77,slow=9.2,SNR=5.4						
USRK	**Ussuriysk Ar.**	15.14	263	P	P	17 03 53.7	-0.2
	1.4nm,0.6s,baz=73,slow=11,SNR=5.8						
MJAR	**Matsushiro Arr**	15.97	229	P	Pn	17 04 02.4	-0.1
	1.1nm,0.8s,baz=23,slow=15,SNR=2.7						
KSRS	**Korea Array**	21.26	249	P	P	17 05 00.8	+0.4
	1.4nm,0.5s,baz=51,slow=9.8,SNR=9.8						
	1.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	30.48	154	T	T	17 38 51.7	
	baz=343,slow=74,SNR=4.7						
H11N1	**WAKE ISLAND Hy**	30.50	154	T	T	17 38 47.8	
	baz=343,slow=74,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	30.50	154	T	T	17 38 16.0	
	baz=343						
H11S1	**WAKE ISLAND Hy**	31.58	155	T	T	17 40 08.3	
	baz=343,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	31.59	155	T	T	17 39 49.7	
	baz=343,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	31.60	155	T	T	17 40 12.0	
	baz=343,slow=76,SNR=12						
ZALV	**Zalesovo Beam**	41.80	305	P	P	17 08 00.4	-0.2
	0.4nm,0.4s,baz=64,slow=5.5,SNR=2.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	46.30	296	P	P	17 08 35.5	-1.1
	1.4nm,0.8s,baz=69,slow=8.9,SNR=6.1						
	1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	52.71	255	P	P	17 09 25.9	+0.5
	0.7nm,0.5s,baz=34,slow=7.1,SNR=9.6						
	0.7nm,0.5s						
FINES	**FINESS Array B**	62.76	334	P	P	17 10 34.8	-0.2
	1.2nm,0.4s,baz=38,slow=7.6,SNR=26						
	1.2nm,0.4s						
NOA	**NORSAR Array B**	66.89	341	P	P	17 11 02.3	+0.6
	0.9nm,0.9s,baz=29,slow=6.6,SNR=2.5						
	0.9nm,0.9s						
TXAR	**Lajitas Array**	76.81	61	P	P	17 12 00.8	-0.6
	0.2nm,0.6s,baz=294,slow=4.0,SNR=4.0						
	0.2nm,0.6s						
GERES	**GERESS Array B**	77.19	334	P	P	17 12 03.6	+0.3
	0.3nm,0.5s,baz=52,slow=8.6,SNR=4.1						
	0.3nm,0.5s						
BRTR	**Keskin Array B**	77.36	317	P	P	17 12 04.7	+0.3
	0.3nm,0.5s,baz=353,slow=4.9,SNR=1.9						
	0.3nm,0.5s						

UCR ***15*** *17:03:43.5±1.0,10°.56N×84°.86W,h120km±2km,MW3.8*
INET ***15*** *17:03:46.4±3.3,10°.77N×84°.62W,h15km±23km,MW3.1*

ISC 15 17:03:43.9±1.9,10°.57N±0°.05×84°.87W±0°.06, h119km±10km,n46,σ0°.47/66,15C,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAL	**Aguas Claras**	0.17	293	↑iP	Pn	17 04 00.5	0.0
ACAL				eS	Sn	17 04 13.1	+0.2
CEDE	**Laguna Cedeo**	0.18	115	↑eP	Pn	17 04 00.6	+0.1
CEDE				eS	Sn	17 04 13.2	+0.2
PTEN	**Parque Tenorio**	0.19	323	↑eP	Pn	17 04 00.7	+0.1
CASO	**Castillo**	0.19	134	↑eP	Pn	17 04 00.5	0.0
CASO				eS	Sn	17 04 13.3	+0.3
FORC	**Fortuna**	0.22	116	↑iP	Pn	17 04 00.5	0.0
FORC				eS	Sn	17 04 13.3	+0.3
JTS	**Las Juntas de**	0.28	196	eP	Pn	17 03 60.0	-0.8
JTS	**Las Juntas de**	0.28	196	eP	Pn	17 04 00.3	-0.5
JTS				eS	Sn	17 04 12.5	-0.9
VERA	**Finca Concepci**	0.29	1	eP	Pn	17 04 00.3	-0.4
VERA				eS	Sn	17 04 13.4	0.0
CUI	**Cuipilapa**	0.30	288	↑iP	Pn	17 04 00.6	-0.2
CUI				eS	Sn	17 04 14.0	+0.4
HORNC	**Hornillas**	0.33	296	↑eP	Pn	17 04 00.9	-0.1
COLC	**Colonia**	0.34	287	eP	Pn	17 04 00.7	-0.2
COLC				eS	Sn	17 04 14.1	+0.3
VMAR	**Armenia, Volca**	0.35	315	eP	Pn	17 04 00.8	-0.2
GUAB	**Guayabo de Bag**	0.38	292	↑eP	Pn	17 04 01.1	-0.1
GUAB				eS	Sn	17 04 15.1	+0.9
LIM1	**Limonal**	0.40	290	eP	Pn	17 04 01.4	+0.2
LIM1				eS	Sn	17 04 15.4	+1.1
COVE	**Coope Vega, Sa**	0.49	72	eP	Pn	17 04 00.9	-0.8
GPS2	**Hotel Rincn d**	0.51	292	↑eP	Pn	17 04 01.7	-0.2
GPS2				eS	Sn	17 04 16.2	+0.7
GPS1	**Guardaparques**	0.51	294	↑eP	Pn	17 04 01.8	-0.2
GPS3	**Bodega del ICE**	0.52	291	↑iP	Pn	17 04 01.8	-0.1
GPS3				eS	Sn	17 04 15.8	+0.3
BUAI	**Buenos Aires**	0.55	305	↑iP	Pn	17 04 02.0	-0.1
BUAI				eS	Sn	17 04 15.7	-0.1
BUEV	**Buena Vista**	0.57	294	↑iP	Pn	17 04 02.3	-0.1
BUEV				eS	Sn	17 04 16.9	+0.7
GB1A	**Borinquen Arri**	0.57	296	eP	Pn	17 04 02.5	+0.1
GB1A				eS	Sn	17 04 17.4	+1.1
LAPC	**Finca la Perla**	0.59	290	↑iP	Pn	17 04 02.0	-0.4
LAPC				eS	Sn	17 04 16.2	-0.1
ORTG	**Ortega, Santa**	0.61	251	eP	Pn	17 04 02.5	-0.1
ORTG	**Ortega, Santa**	0.61	251	eP	Pn	17 04 02.6	-0.1
ORTG				eS	Sn	17 04 16.7	0.0
GBS3	**Finca Las Img**	0.61	291	↑iP	Pn	17 04 02.3	-0.2
GBS3				eS	Sn	17 04 16.6

QSPA	**South Pole Qui**	74.34	180	P	P	17 15 19.6	+1.3
QSPA				IAmb	IAmb	17 15 23.6	
comp=Z,1.2nm,0.9s							
ILAR	**Eielson Array**	82.86	11	P	P	17 16 05.3	+0.6
comp=Z,0.3nm,0.5s,baz=200,slow=7.7,SNR=5.4							
comp=Z,0.3nm,0.5s							
PDAR	**Pinedale Array**	82.89	42	P	P	17 16 06.5	+0.9
comp=Z,0.4nm,0.6s,baz=235,slow=3.2,SNR=4.6							
comp=Z,0.4nm,0.6s							

*IDC **15** 17:17:24.4±3.4, 36°.71N×71°.33E, h80km±30km, mb3.5/7, mbtmp3.9/14, Error ellipse: s-maj=26.3km s-min=19.1km az=23.0*
*BJI **15** 17:17:27.5±0.0, 37°.20N×71°.25E, h119km, mb4.4/9, mB4.7/5*
*NNC **15** 17:17:28.4±2.2, 37°.06N×71°.02E, h114km±30km, mb3.5, mpv4.2, Error ellipse: s-maj=20.0km s-min=11.4km az=161.0*
*NEIC **15** 17:17:28.8±1.5, 37°.00N±0°.04×71°.28E±0°.06, h104km±6km, mb4.3/15, Error ellipse: s-maj=9.2km s-min=2.4km az=127.0*

ISC 15 17:17:26.6±0.5, 36°.96N±0°.04×71°.27E±0°.04, h106km, n95, σ2°58/116, mb4.1/16, 9C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	2.18	340		**Pn**	17 18 03.8	+2.1
GAR				Sn	**Sn**	17 18 29.2	+0.5
CHGR	**Chuyangaron**	2.38	316	Pn	**Pn**	17 18 05.8	+1.4
CHGR				Sn	**Sn**	17 18 33.3	-0.2
DRK	**Karamyk**	2.55	9		**Pn**	17 18 08.9	+2.0
KBL	**Kabul**	3.02	218	Pn	**Pn**	17 18 15.9	+3.0
KBL				Sn	**Sn**	17 18 51.4	+2.8
BTK	**Batken**	3.12	354	Pn	**Pn**	17 18 17.3	+3.2
BTK				Sn	**Sn**	17 18 52.2	+1.4
CEP	**Cherat**	3.17	170	P	**Pn**	17 18 18.0	+3.1
CEP				S	**Sn**	17 18 55.0	+2.9
CHCP	**Chirah Chowk**	3.67	153	P	**Pn**	17 18 24.2	+2.7
NIL	**Nilore**	3.67	153		**Pn**	17 18 23.9	+2.4
KSH	**Kashi**	4.50	54	P	**Pn**	17 18 31.4	-1.2
KSH				S	**Sn**	17 19 16.1	-7.8
KSH				smax	smax		
comp=N,930nm,0.6s							
KSH				smax	smax		
comp=E,510nm,0.6s							
TAS	**Tashkent**	4.62	341	Pn	**Pn**	17 18 34.5	+0.3
JMU	**Jammu**	5.17	144	*e*P	**Pn**	17 18 43.1	+1.4
JMU				*e*S	**Sn**	17 19 36.4	-3.8
AML	**Almayashu**	5.50	19	P	**Pn**	17 18 48.5	+2.1
SNR=485							
NRN	**Naryn**	5.78	38	Pn	**Pn**	17 18 51.2	+1.0
NRN				Sn	**Sn**	17 19 55.0	-0.4
THN	**Thein Dam**	5.81	140	*e*P	**Pn**	17 18 51.5	+1.2
THN				*e*P		17 18 51.6	
THN				*e*S	**Sn**	17 19 52.9	-2.6
THN				*e*S		17 19 53.0	
UCH	**Uchtor**	5.83	24	P	**Pn**	17 18 52.9	+2.0
SNR=31							
EKS2	**Erkin-Say**	6.01	18	P	**Pn**	17 18 55.5	+2.3
SNR=45							
KK31	**Karatay Array**	6.17	355	Pn	**Pn**	17 18 56.8	+1.7
KK31	**Karatay Array**	6.17	355	⇑P	**Pn**	17 18 57.1	+2.0
35nm,0.4s,baz=177,slow=12,SNR=860							
KK31				⇑S	**Sn**	17 20 04.8	+0.6
10nm,0.3s,baz=182,slow=22,SNR=5.3							
KKAR	**Karatay Array**	6.17	355	Pn	**Pn**	17 18 56.7	+1.5
KKAR	**Karatay Array**	6.17	355		**Pn**	17 18 56.8	+1.7
AAK	**Ala-Archa**	6.19	23	P	**Pn**	17 18 58.1	+2.5
SNR=45							
AAK	**Ala-Archa**	6.19	23	P	**Pn**	17 18 58.1	+2.5
28nm,0.3s,baz=197,slow=5.7,SNR=132							
AAK				S	**Sn**	17 20 06.0	+1.0
21nm,0.5s,baz=313,slow=21,SNR=11							
AAK	**Ala-Archa**	6.19	23	Pn	**Pn**	17 18 57.9	+2.3
KBK	**Karagaybulak**	6.36	25	P	**Pn**	17 19 01.1	+3.3
SNR=8.8							
ULHL	**Ulahol**	6.53	34	P	**Pn**	17 19 02.9	+2.7
SNR=15							
BOOM	**Boomskoye usch**	6.59	32	Pn	**Pn**	17 19 02.9	+1.9
CHMS	**Chumysh**	6.60	23	P	**Pn**	17 19 03.0	+2.0
SNR=22							
CHMS	**Chumysh**	6.60	23	⇑P	**Pn**	17 19 02.6	+1.7
16nm,0.5s							
CHMS				⇓S	**Sn**	17 20 15.7	+1.0
22nm,0.6s							
USP	**Ospenovka**	6.77	20	P	**Pn**	17 19 04.9	+1.6
SNR=46							
TKM2	**Tokmak 2**	6.82	28	P	**Pn**	17 19 06.3	+2.1
SNR=29							
TKM2	**Tokmak 2**	6.82	28	⇑P	**Pn**	17 19 06.0	+1.8
7.6nm,0.5s							
TKM2				⇓S	**Sn**	17 20 23.0	+2.7
14nm,1.1s							
TARG	**Taragay, Kyrgy**	6.95	45		**Pn**	17 19 06.4	+0.3
BHK	**Bhakra**	6.98	141	*e*P	**Pn**	17 19 07.8	+1.6
BHK				*e*S	**Sn**	17 20 19.1	-4.9
SMLA	**Simla**	7.59	138	*e*P	**Pn**	17 19 14.2	-0.3
SMLA				*e*S	**Sn**	17 20 32.3	-6.7
SMLA				IAML		17 20 36.7	
comp=E,220nm,0.2s							
SMLA				IAML		17 20 36.8	
comp=N,222nm,0.2s							
SMLA				IAML		17 20 40.9	
comp=N,231nm,0.4s							
SMLA				IAML		17 20 42.8	
comp=E,152nm,0.2s							
MDOK	**Medeo**	7.62	34	⇑P	**Pn**	17 19 16.6	+1.7
comp=E,4.5nm,0.7s							
PDGK	**Podgornoye**	8.95	42	⇑P	**Pn**	17 19 34.0	+1.1
comp=E,2.0nm,0.6s							
KHET	**Khetri**	9.65	155	*e*P	**Pn**	17 19 41.4	-1.0
GEYT	**Alibeck**	10.51	279	P	**Pn**	17 19 53.4	-0.7
comp=E,1.8nm,0.4s,baz=111,slow=8.6,SNR=8.4							
GEYT				S	**Sn**	17 21 45.2	-4.6
comp=E,4.5nm,0.4s,baz=129,slow=30,SNR=9.2							
GEYT	**Alibeck**	10.51	279	Pn	**Pn**	17 19 53.5	-0.6
GEYT					**Sn**	17 21 45.1	-4.7
GYA0B	**ALIBECK ARRAY**	10.51	279	Pn	**Pn**	17 19 53.1	-1.0
GYA0B					**Sn**	17 21 45.5	-4.4
GYA0B	**ALIBECK ARRAY**	10.51	279	⇓P	**Pn**	17 19 53.6	-0.5
GYA0B				⇑S	**Sn**	17 21 44.5	-5.3
LGTI	**Lohaghat**	10.60	132	*e*P	**Pn**	17 19 52.8	-2.5
MAKZ	**Makanchi**	12.65	36	Pn	**Pn**	17 20 26.1	+3.5
MK31	**Makanchi Array**	12.79	36	Pn	**Pn**	17 20 25.5	+1.1
MK31	**Makanchi Array**	12.79	36	P	**Pn**	17 20 26.0	+1.5
comp=E,2.3nm,0.7s,baz=212,slow=11,SNR=11							
MKAR	**Makanchi Array**	12.79	36	P	**Pn**	17 20 23.6	-0.8
comp=E,0.7nm,0.6s,baz=224,slow=16,SNR=6.0							
MKAR	**Makanchi Array**	12.79	36	Pn	**Pn**	17 20 25.5	+1.1
DANN	**Dangsing**	13.56	126	*e*P	**Pn**	17 20 32.1	-2.8
comp=E,6.0nm,0.2s							
DANN				*e*S	Sn	17 22 49.8	-15
WMQ	**Urumqi**	14.26	56	*e*P	**P**	17 20 46.3	-1.3
GKN	**Gorkha**	14.37	125	*e*P	**Pn**	17 20 42.0	-3.2
comp=E,3.7nm,0.3s							
KURBB	**Kurchatov Arra**	14.62	19	P	**P**	17 20 50.4	-1.0
comp=E,0.3nm,0.3s,baz=200,slow=11,SNR=5.5							
KURK	**Kurchatov**	14.73	19	Pn	**P**	17 20 51.9	-0.8
AB31	**Akbulak array**	14.80	330	⇓P	**Pn**	17 20 49.6	-0.7
comp=E,2.6nm,0.3s,baz=137,slow=12,SNR=194							
AB31				S	**Sn**	17 23 26.1	-7.3
comp=E,2.7nm,0.5s,baz=151,slow=22,SNR=4.5							
ABKAR	**Akbulak array**	14.80	330	Pn	**Pn**	17 20 49.7	-0.5
ABKAR	**Akbulak array**	14.80	330	Pn	**Pn**	17 20 49.8	-0.5
DMN	**Daman**	14.94	125	*e*P	**Pn**	17 20 49.8	-2.8
comp=E,3.7nm,0.3s							
PKIN	**Phulchoki**	15.16	124	*e*P	**Pn**	17 20 52.7	-2.6
comp=E,4.5nm,0.3s							
PKI	**Pulchoki**	15.17	124	*e*P	**Pn**	17 20 52.8	-2.7
comp=E,2.6nm,0.2s							
GUN	**Gumba**	15.26	122	*e*P	**Pn**	17 20 52.9	-3.8
comp=E,3.6nm,0.4s							
JIRN	**Jiri**	15.63	122	*e*P	**Pn**	17 20 57.7	-3.7
comp=E,8.3nm,0.3s							
BVAR	**Borovoye Array**	16.08	358	P	**Pn**	17 21 06.9	+0.6
comp=E,2.6nm,0.3s							
BRVK	**Borovoye**	16.12	358	Pn	**Pn**	17 21 07.4	+0.6
BRVK				IAmb	IAmb	17 21 11.8	
comp=Z,4.5nm,0.6s							
RAMN	**Ramite**	16.37	123	*e*P	**Pn**	17 21 06.7	-3.7
comp=Z,2.8nm,0.3s							
AKTO	**Aktyubinsk**	16.50	329	P	**P**	17 21 13.3	+1.0
comp=Z,5.1nm,0.5s,baz=141,slow=16,SNR=17							
AKTO	**Aktyubinsk**	16.50	329	⇑P	**P**	17 21 12.6	+0.3
comp=Z,6.6nm,0.7s							
AKTO				⇑S	**Sn**	17 24 09.2	-5.2
comp=Z,3.2nm,0.8s							
TAPN	**Taplejung**	16.87	120	*e*P	**Pn**	17 21 12.4	-4.2
comp=Z,6.1nm,0.3s							
LSA	**Lhasa**	18.10	108	P	**Pn**	17 21 33.9	+2.3
ZAA0	**Zalesovo Array**	19.41	25	P	**Pn**	17 21 45.8	-0.6
ZAA0	**Zalesovo Array**	19.41	25	⇓P	**Pn**	17 21 45.5	-0.9
comp=Z,0.2nm,0.4s							
ZALV	**Zalesovo Beam**	19.41	25	P	**Pn**	17 21 45.7	-0.7
comp=Z,1.9nm,0.3s,baz=211,slow=9.6,SNR=16							
ARU	**Arti**	21.27	340	P	**P**	17 22 06.3	+2.1
comp=Z,1.8nm,0.4s,baz=178,slow=2.9,SNR=5.3							
comp=Z,1.8nm,0.4s							
ARU	**Arti**	21.27	340	P	**P**	17 22 04.5	+0.3
GTA	**Gaotai**	22.53	75	⇓P	**P**	17 22 20.8	+3.1
GTA				pmax	pmax		
comp=Z,7.0nm,1.1s							
LZH	**Lanzhou**	26.12	82	*e*P	**P**	17 22 49.8	-1.0
LZH				pmax	pmax		
comp=Z,24nm,1.0s							
PZH	**PanZhiHua**	27.82	103	P	**P**	17 23 10.4	+4.3
PZH				pmax	pmax		
comp=Z,10.0nm,1.2s							
PZH				pmax	pmax		
comp=Z,100nm,4.3s							
SONM	**Songino Array**	27.90	56	P	**P**	17 23 08.3	+1.7
SONM				IAmb	IAmb	17 23 34.1	
comp=Z,7.2nm,1.3s							
ULN	**Ulaanbaatar**	28.34	56	P	**P**	17 23 09.9	-0.5
ULN				IAmb	IAmb	17 23 19.1	
comp=Z,9.7nm,0.7s							
HHC	**Hu-ho-hao-te**	31.40	70	*e*P	**P**	17 23 38.9	+1.3
HHC				pmax	pmax		
comp=Z,24nm,0.7s							
HHC				pmax	pmax		
comp=Z,160nm,6.2s							
FIA1	**FINESS Array S**	37.23	326	P	**P**	17 24 27.4	+0.1
FIA1				IAmb	IAmb	17 24 38.2	
comp=Z,9.0nm,1.1s							
FINES	**FINESS Array B**	37.23	326	P	**P**	17 24 29.8	+2.4
comp=Z,0.6nm,0.6s,baz=134,slow=6.2,SNR=8.4							
comp=Z,0.6nm,0.6s							
FINES	**FINESS Array B**	37.23	326	P	**P**	17 24 29.2	+1.8
ITM	**Ithomi**	39.01	286	P	**P**	17 24 44.1	+1.4
ARCES	**ARCESS Array B**	40.81	337	P	**P**	17 25 00.1	+3.0
comp=Z,4.7nm,1.0s,baz=121,slow=9.1,SNR=5.3							
comp=Z,4.7nm,1.0s							
NC405	**NORSAR Array S**	43.91	323	P	**P**	17 25 25.4	+3.0
NC602	**NORSAR Array S**	43.97	322	P	**P**	17 25 25.5	+2.7
NC303	**NORSAR Array S**	44.09	323	P	**P**	17 25 25.4	+1.6
NC303				IAmb	IAmb	17 25 34.0	
comp=Z,25nm,1.3s							
NB201	**NORSAR Array S**	44.11	323	P	**P**	17 25 26.7	+2.7
NOA	**NORSAR Array B**	44.15	323	P	**P**	17 25 26.7	+2.4
comp=Z,0.3nm,0.6s,baz=100,slow=7.8,SNR=1.1							
comp=Z,0.3nm,0.6s							
NBO00	**NORSAR Array S**	44.36	323	P	**P**	17 25 29.0	+3.0
NC204	**NORSAR Array S**	44.39	323	P	**P**	17 25 29.1	+2.9
TIXI	**Tiksi**	45.27	22	P	**P**	17 25 34.5	+1.6
TIXI				IAmb	IAmb	17 25 35.7	
comp=Z,2.6nm,0.9s							
TORD	**Torodi Ar. Bea**	65.95	269	P	**P**	17 28 02.3	+0.6
comp=Z,0.6nm,0.5s,baz=50,slow=6.7,SNR=5.5							
comp=Z,0.6nm,0.5s							
IMAR	**Indian Mountai**	71.67	18	P	**P**	17 28 38.0	+1.6
WRA	**Warramunga Arr**	82.05	122	P	**P**	17 29 35.2	-0.1
comp=Z,0.7nm,0.7s,baz=325,slow=4.9,SNR=17							
comp=Z,0.7nm,0.7s							
ASAR	**Alice Springs**	84.33	125	P	**P**	17 29 47.1	+0.1
comp=Z,0.8nm,0.6s,baz=314,slow=5.1,SNR=18							
comp=Z,0.8nm,0.6s							

MAN 15 17:24:39.1, 10°.04N×123°.15E, h1km, mb4.5, ML3.3, MS3.1, 5C-9D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	0.54	247	⇓*e*P	Pb	17 24 52.3	+0.8
CNOP				*e*S	Sn	17 25 02.0	-1.8
CNOP	**Candoni, Negro**	0.54	247	⇑*i*P	Pb	17 24 52.4	+0.9
CNOP				*i* S	Sn	17 25 02.1	-1.7
SNPH	**Sibulan**	0.70	173	⇓*i*P	Pn	17 24 55.4	-0.8
SNPH				*i* S	Sn	17 25 06.4	-1.3
TBP	**Tagbilaran**	0.78	116	⇓*e*P	Pb	17 24 54.9	-0.7
GUIM	**Jordan**	0.80	317	⇑*e*P	Pg	17 24 54.8	+0.3
GUIM				*e*S	Sg	17 25 06.0	+1.0
LLP	**Lapu-Lapu**	0.85	71	⇓*i*P	Pg	17 24 55.0	-0.5
LLP				*i* S	Sg	17 25 06.0	-0.6
LSIP	**Lazi, Siquijor**	1.02	152	⇓*i*P	Pb	17 25 00.1	+0.5
TABP	**Talibon, Bohol**	1.17	87	⇓*i*P	Pg	17 25 00.3	-1.2
TABP				*i* S	Sg	17 25 15.6	-1.1
GHBP	**Garcia Hernand**	1.23	109	⇑*i*P	Pg	17 25 02.6	0.0
GHBP				*i* S	Sn	17 25 20.1	-0.6
JAP	**San Jose, Anti**	1.38	301	⇓*e*P	Pb	17 25 08.8	+3.1
MSLP	**Maasin**	1.69	87	⇓*e*P	Pn	17 25 09.8	0.0
MSLP				*e*S	Sb	17 25 33.0	+0.2
PAGZ	**Pagadian**	2.19	174	⇓*e*P	Pn	17 25 18.1	+1.4
PAGZ				*e*S	Sg	17 25 50.9	+1.4
CGP	**Cagayan de Oro**	2.19	136	⇑*e*P	Pn	17 25 17.7	+1.0
CGP				*e*S	Sg	17 25 51.3	+1.6
CTBH	**Cotabato--PC H**	3.00	159	⇑*e*P	Pn	17 25 28.5	+0.6

*NEIC **15** 17:25:33.1±1.3, 13°.0N±0°.1×143°.5E±0°.2, h135km±13km, mb4.3/16, Error ellipse: s-maj=23.8km s-min=18.5km az=99.0*
*IDC **15** 17:25:33.2±1.1, 12°.99N×143°.63E, h144km±12km, mb3.4/10, mbtmp3.9/11, Error ellipse: s-maj=23.5km s-min=13.6km az=83.0*

ISC 15 17:25:33.6±0.7, 13°.0N±0°.1×143°.65E±0°.09, h150km, n31, σ1°06/34, mb4.1/18, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	1.32	63	P	**Pn**	17 26 00.6	-0.8
163nm,0.3s,baz=49,slow=2.3,SNR=49							
GUMO				LR	LR	17 26 13.1	
comp=Z,28nm,19.4s,baz=126,slow=30							
GUMO				S	**Sn**	17 26 21.7	-0.9
312nm,0.3s,baz=133,slow=22,SNR=28							
PATS	**Pohnpei**	15.68	112	P	**P**	17 29 09.7	+2.3
JOW	**Kunigami**	19.94	316	P	**P**	17 29 53.9	-0.1
11nm,0.4s,baz=129,slow=11,SNR=4.0							
JOW	**Kunigami**	19.94	316	P	**P**	17 29 53.3	-0.7
JYT	**Yasato**	23.35	353	P	**P**	17 30 28.1	-0.4
JYT				IAmb	IAmb	17 31 11.5	
comp=Z,19nm,1.2s							
YULB	**Yu-li**	23.59	299	P	**P**	17 30 32.0	+1.0
JHS	**Saijyo**	23.90	338	P	**P**	17 30 33.8	+0.2
JHS				IAmb	IAmb	17 30 56.7	
comp=Z,17nm,1.2s							
MJAR	**Matsushiro Arr**	23.96	349	P	**P**	17 30 33.4	-0.7
comp=Z,0.8nm,0.5s,baz=97,slow=3.3,SNR=9.8							
comp=Z,0.8nm,0.5s							
MAJO	**Matsushiro**	23.96	349	P	**P**	17 30 33.4	-0.7
JMM	**Marumori**	24.90	355	P	**P**	17 30 45.2	+2.6
JMM				IAmb	IAmb	17 30 50.8	
comp=Z,21nm,1.4s							
JSD	**Sado**	25.40	350	P	**P**	17 30 47.9	+0.7
JSD				IAmb	IAmb	17 31 28.5	
comp=Z,7.0nm,1.1s							
KSRS	**Korea Array**	28.13	333	P	**P**	17 31 12.9	+1.4
comp=Z,0.6nm,0.5s,baz=144,slow=9.8,SNR=5.0							
comp=Z,0.6nm,0.5s							
WB0	**Warramunga Arr**	33.80	196	P	**P**	17 32 00.6	-1.0
WB0				IAmb	IAmb	17 32 15.1	
comp=Z,6.2nm,1.1s							
WRAB	**Tennant Creek**	33.98	196	P	**P**	17 32 02.4	-0.6
WRAB				IAmb	IAmb	17 32 19.0	
comp=Z,7.0nm,1.4s							
WB2	**Warramunga Arr**	33.98	196	P	**P**	17 32 02.6	-0.5
WB2				IAmb	IAmb	17 32 11.6	
comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	33.99	196	P	**P**	17 32 02.7	-0.5
comp=Z,0.7nm,0.6s,baz=19,slow=9.6,SNR=19							
WRA				PcP	**PcP**	17 34 39.0	+1.0
comp=Z,0.3nm,0.6s,baz=14,slow=3.4,SNR=4.6							
comp=Z,0.7nm,0.6s							
WRA	**Warramunga Arr**	33.99	196	P	**P**	17 32 01.2	-1.9
ENH	**Enshi**	35.93	304	P	**P**	17 32 18.8	-1.0
ASAR	**Alice Springs**	37.66	195	P	**P**	17 32 33.7	-0.8
comp=Z,0.3nm,0.7s,baz=21,slow=12,SNR=9.9							
ASAR				PcP	**PcP**	17 34 49.9	+1.0
comp=Z,0.3nm,0.5s,baz=28,slow=2.5,SNR=6.6							
comp=Z,0.3nm,0.7s							
CMAR	**Chiang Mai Arr**	43.30	283	P	**P**	17 33 21.3	+0.4
comp=Z,0.2nm,0.5s,baz=84,slow=6.8,SNR=3.0							
comp=Z,0.2nm,0.5s							
SONM	**Songino Array**	46.55	326	P	**P**	17 33 47.3	+1.0
comp=Z,0.5nm,0.5s,baz=150,slow=8.0,SNR=3.0							
comp=Z,0.5nm,0.5s							
MK31	**Makanchi Array**	61.10	316	P	**P**	17 35 32.3	+0.4
MKAR	**Makanchi Array**	61.10	316	P	**P**	17 35 32.0	0.0
comp=Z,0.7nm,0.5s,baz=90,slow=8.8,SNR=9.8							
comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	61.10	316	P	**P**	17 35 32.1	+0.2
KURK	**Kurchatov**	64.28	320	P	**P**	17 35 53.0	+0.1
KURK				IAmb	IAmb	17 35 53.9	
comp=Z,2.6nm,0.9s							
ILAR	**Eielson Array**	69.61	25	P	**P**	17 36 25.6	-0.8
comp=Z,0.2nm,0.4s,baz=250,slow=6.0,SNR=5.0							
comp=Z,0.2nm,0.4s							
ABKAR	**Akbulak array**	76.19	318	P	**P**	17 37 04.4	-0.9
ABKAR	**Akbulak array**	76.19	318	P	**P**	17 37 03.8	-1.6
ABKAR				IAmb	IAmb	17 37 42.3	
comp=Z,1.6nm,1.1s							
ARCES	**ARCESS Array B**	87.28	342	P	**P**	17 38 03.0	0.0
comp=Z,4.3nm,1.1s,baz=72,slow=6.7,SNR=1.8							
comp=Z,4.3nm,1.1s							
FINES	**FINESS Array B**	91.20	335	P	**P**	17 38 20.1	-1.4
comp=Z,0.7nm,0.4s,baz=74,slow=4.6,SNR=12							
comp=Z,0.7nm,0.4s							
LPAZ	**La Paz**	149.09	100	PKPbc	**PKiKP**	17 45 07.4	+0.3
comp=Z,1.2nm,0.5s,baz=240,slow=8.2,SNR=5.4							

*IDC **15** 17:38:31.6±3.5, 16°.23N×100°.11W, h0km, mb3.7/3, mbtmp3.5/5, ML3.2/2, MS3.2/7, Error ellipse: s-maj=60.9km s-min=23.1km az=12.0*
*NEIC **15** 17:38:34.5±1.7, 16°.52N±0°.05×99°.90W±0°.03, h9km±9km, Error ellipse: s-maj=8.4km s-min=3.3km az=203.0*
*MEX **15** 17:38:35.2±0.9, 16°.45N×100°.10W, h17km±39km, MD4.4*

ISC 15 17:38:35.0±1.5, 16°.6N±0°.1×99°.95W±0°.06, h10km, n47, σ1°01/47, mb4.0/12, MS3.1/4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.56	326		**Pg**	17 38 45.1	-0.7
CAIG					**Sg**	17 38 52.9	-0.2
CAIG	**El Cayaco**	0.56	326	*e*P	**Pg**	17 38 45.1	-0.7
CAIG				*e*S	**Sg**	17 38 52.9	-0.2
CRIG	**Cruz Grande**	0.80	79		**Pg**	17 38 49.8	-0.6
CRIG	**Cruz Grande**	0.80	79	*e*P	**Pg**	17 38 49.8	-0.6
MEIG	**Mezcala**	1.37	13		**Pn**	17 38 59.0	-1.3
MEIG	**Mezcala**	1.37	13	*e*P	**Pn**	17 38 59.0	-1.3
MGIG	**Malinaltepec**	1.41	63		**Pn**	17 38 59.9	-1.1
MGIG	**Malinaltepec**	1.41	63	*e*P	**Pn**	17 38 59.9	-1.1
TLIG	**Tlapa**	1.64	53		**Pn**	17 39 03.0	-1.0
TLIG					**Sg**	17 39 28.5	+0.6
ARIG	**Puente Sto Nin**	1.73	347		**Pn**	17 39 04.0	-1.2
ARIG	**Puente Sto Nin**	1.73	347	*e*P	**Pn**	17 39 04.0	-1.2
UNM	**Universidad Na**	2.83	15		**Pn**	17 39 20.4	-0.1
MOIG	**Morelia**	3.30	339		**Pn**	17 39 27.0	+0.1
CMIG	**Matias Romero**	4.87	83	Pn	**Pn**	17 39 47.9	-0.5
1.1nm,0.3s,baz=252,slow=8.3,SNR=5.7							
CMIG				Lg	Lg	17 41 14.4	
4.2nm,0.3s,baz=336,slow=16,SNR=11							
CMIG				LR	LR	17 42 15.4	
comp=Z,208nm,21.9s,baz=336,slow=44							
2.0nm,0.3s							
TXAR	**Lajitas Array**	13.14	346	Pn	**Pn**	17 41 44.0	+2.1
baz=159,slow=14,SNR=1.9							
TXAR				Lg	Lg	17 45 37.7	
0.1nm,0.3s,baz=169,slow=28,SNR=2.8							
TXAR				LR	LR	17 46 42.4	
comp=Z,78nm,20.0s,baz=148,slow=36							
0.2nm,0.7s							
TXAR	**Lajitas Array**	13.14	346	Pn	**Pn**	17 41 42.6	+0.7
TX32	**Lajitas Array**	13.14	346	Pn	**Pn**	17 41 43.0	+1.0
HSIG		15.99	323	P	**P**	17 42 23.9	+0.3
HSIG				IAmb	IAmb	17 42 32.6	
comp=Z,15nm,1.4s							
GDL2	**Guadalupe Moun**	16.06	346	P	**Pn**	17 42 22.7	+1.6
BNM	**Barren Site**	18.50	342		**Pn**	17 42 54.2	+2.6
ANMO	**Albuqu

PATS	Pohnpei	20.92	335	P	P	17 51 33.7	-0.3
CTA	Charters Tower	21.44	246	P	P	17 51 39.8	+0.5
	5.0nm,0.8s,baz=75,slow=12,SNR=6.9						
	5.0nm,0.8s						
CTAO	Charters Tower	21.44	246	P	P	17 51 39.9	+0.5
CTAO				IAmb	IAmb	17 52 20.6	
	comp=Z,30nm,1.4s						
ARMA	Armidale	23.03	216	P	P	17 51 54.9	+0.8
COEN	Coen	23.35	263	P	P	17 51 58.1	+1.0
COEN				IAmb	IAmb	17 52 26.1	
	comp=Z,29nm,1.4s						
URZ	Urewera	27.35	163	P	P	17 52 31.2	-1.5
BKZ	Black Stump Fm	28.03	164	P	P	17 52 39.0	+0.2
BKZ				IAmb	IAmb	17 52 48.2	
	comp=Z,34nm,1.5s						
NNZ	Nelson	29.33	170	P	P	17 52 47.9	-2.4
BFZ	Birch Farm	29.40	166	P	P	17 52 48.8	-2.1
TUWZ	Tuamarina	29.63	170	P	P	17 52 50.9	-2.0
SNZO	South Karori	29.66	168	P	P	17 52 50.2	-2.9
THZ	Tophouse	29.79	171	P	P	17 52 56.4	+2.0
THZ				IAmb	IAmb	17 53 32.6	
	comp=Z,29nm,1.3s						
MSWZ	Moikau Station	29.87	168	P	P	17 52 55.3	+0.2
PLWZ	Palliser	30.02	168	P	P	17 52 55.4	-1.0
STKA	Stephens Creek	30.49	226	P	P	17 53 00.9	+0.3
	comp=Z,0.7nm,0.5s,baz=33,slow=9.6,SNR=4.3						
	comp=Z,0.7nm,0.5s						
STKA	Stephens Creek	30.49	226	P	P	17 53 01.2	+0.6
KHZ	Kahutara	30.52	171	P	P	17 53 00.3	-0.4
KHZ				IAmb	IAmb	17 53 30.0	
	comp=Z,24nm,1.2s						
LTZ	Lake Taylor	30.70	173	P	P	17 53 02.7	+0.3
LTZ				IAmb	IAmb	17 53 16.0	
	comp=Z,17nm,1.1s						
RPZ	Rata Peaks	31.49	174	P	P	17 53 09.5	+0.3
	comp=Z,5.1nm,0.6s,baz=15,slow=1.9,SNR=5.8						
	comp=Z,5.1nm,0.6s						
RPZ	Rata Peaks	31.49	174	P	P	17 53 08.7	-0.5
RPZ				IAmb	IAmb	17 53 15.4	
	comp=Z,29nm,1.3s						
MQZ	McQueen's Vall	31.66	172	P	P	17 53 11.2	+0.5
MQZ				IAmb	IAmb	17 53 55.1	
	comp=Z,34nm,1.3s						
LBZ	Lake Benmore	32.08	176	P	P	17 53 15.3	+0.9
WB0	Warramunga Arr	32.25	252	P	P	17 53 15.3	-0.9
WB2	Warramunga Arr	32.32	252	P	P	17 53 15.8	-0.9
WRAB	Tennant Creek	32.32	252	P	P	17 53 15.4	-1.4
WRA	Warramunga Arr	32.33	252	P	P	17 53 15.3	-1.6
	comp=Z,0.6nm,0.5s,baz=84,slow=8.7,SNR=17						
	comp=Z,0.6nm,0.5s						
ODZ	Otahua Downs	32.77	175	P	P	17 53 19.6	-0.8
ODZ				IAmb	IAmb	17 53 24.8	
	comp=Z,22nm,1.3s						
ASAR	Alice Springs	33.45	246	P	P	17 53 25.3	-1.3
	comp=Z,1.0nm,0.4s,baz=70,slow=11,SNR=9.3						
	comp=Z,1.0nm,0.4s						
BBOO	Buckleboo	34.98	229	P	P	17 53 39.4	-0.2
BBOO				IAmb	IAmb	17 53 42.0	
	comp=Z,28nm,1.3s						
MTN	Manton Dam	35.09	265	P	P	17 53 40.4	-0.3
MTN				IAmb	IAmb	17 53 50.9	
	comp=Z,18nm,1.3s						
FAKI	Fak Fak	35.73	282	P	P	17 53 46.4	+0.2
KNRA	Kununurra	37.31	260	P	P	17 53 59.4	-0.2
KNRA				IAmb	IAmb	17 54 34.3	
	comp=Z,21nm,1.3s						
FORT	Forrest	40.44	237	P	P	17 54 25.0	-0.3
FORT				IAmb	IAmb	17 55 09.2	
	comp=Z,47nm,1.2s						
PSA00	Pilbara Seismi	45.98	252	P	P	17 55 08.4	-1.3
MBWA	Marble Bar	46.06	252	P	P	17 55 10.2	-0.2
MBWA				IAmb	IAmb	17 55 26.4	
	comp=Z,33nm,1.4s						
GIRL	Giralia	51.23	251	P	P	17 55 50.6	+1.0
JGF	Kuroka	55.33	331	P	P	17 56 18.9	-0.2
JGF				IAmb	IAmb	17 56 19.3	
	comp=Z,7.1nm,0.7s						
JMN	Monobe	55.63	326	P	P	17 56 21.7	+0.3
MJAR	Matsushiro Arr	55.69	332	P	P	17 56 20.7	-1.0
	comp=Z,3.1nm,0.7s,baz=171,slow=8.2,SNR=15						
	comp=Z,3.1nm,0.7s						
MAJO	Matsushiro	55.69	332	P	P	17 56 20.9	-0.8
MAJO				IAmb	IAmb	17 56 21.8	
	comp=Z,10nm,0.9s						
MJB9	Matsu-Tunnel	55.70	332	P	P	17 56 22.0	+0.3
MJB9				IAmb	IAmb	17 56 22.8	
	comp=Z,9.7nm,0.9s						
UGM	Wanagama	55.78	269	P	P	17 56 22.4	-0.5
JSD	Sado	56.90	333	P	P	17 56 30.1	0.0
JSD				IAmb	IAmb	17 56 31.6	
	comp=Z,13nm,1.1s						
JHS	Saijyo	57.01	327	P	P	17 56 31.3	+0.2
JHS				IAmb	IAmb	17 56 42.5	
	comp=Z,21nm,1.2s						
YULB	Yu-li	57.15	308	P	P	17 56 33.2	+0.9
YULB				IAmb	IAmb	17 56 37.0	
	comp=Z,37nm,1.4s						
TJN	Taejon	61.21	324	P	P	17 56 59.5	-0.3
KSRS	Korea Array	61.65	325	P	P	17 57 02.8	+0.1
	comp=Z,1.6nm,0.7s,baz=140,slow=8.0,SNR=8.0						
	comp=Z,1.6nm,0.7s						
USRK	Ussuriysk Ar.	64.66	333	P	P	17 57 22.8	+0.5
	comp=Z,3.8nm,0.8s,baz=133,slow=8.1,SNR=6.2						
	comp=Z,3.8nm,0.8s						
VNDA	Vanda	65.27	181	P	P	17 57 25.8	0.0
	comp=Z,0.8nm,0.6s,baz=357,slow=6.5,SNR=16						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	65.27	181	P	P	17 57 26.5	+0.7
SBA	Scott Base	65.55	180	P	P	17 57 28.9	+1.3
PEA0B	Petropavlovsk-	65.64	354	P	P	17 57 28.9	+0.5
PEA0B				IAmb	IAmb	17 57 53.7	
	comp=Z,27nm,1.4s						
PETK	Petropavlovsk-	65.64	354	P	P	17 57 28.7	+0.3
	comp=Z,2.2nm,0.9s,baz=131,slow=7.9,SNR=2.8						
	comp=Z,2.2nm,0.9s						
CASY	Casey	65.70	202	P	P	17 57 28.3	-0.4
NIKH	Nikolski High	68.21	15	P	P	17 57 44.9	+0.3
	baz=205						
KULM	Kulim	68.31	281	P	P	17 57 44.8	-1.3
KULM				IAmb	IAmb	17 58 17.5	
	comp=Z,20nm,1.4s						
FALS	False Pass	71.38	17	P	P	17 58 04.4	+0.5
	baz=210						
SPIA	Saint Paul Isl	71.72	13	P	P	17 58 05.7	-0.1
CHNA	Chernabura Isl	72.55	19	P	P	17 58 10.9	+0.1
	baz=214						
MA2	Magadan	72.83	351	P	P	17 58 12.6	+0.2
CM31	Chiang Mai Arr	73.82	293	P	P	17 58 20.1	+1.0
CM31				IAmb	IAmb	17 58 21.3	
	comp=Z,9.8nm,1.2s						
CMAR	Chiang Mai Arr	73.82	293	P	P	17 58 19.9	+0.9
	comp=Z,2.7nm,0.9s,baz=118,slow=4.1,SNR=20						
	comp=Z,2.7nm,0.9s						
CMAR	Chiang Mai Arr	73.82	293	P	P	17 58 18.9	-0.2
CHGN	Chignik	74.14	19	P	P	17 58 19.1	-0.9
	baz=215						
Q17K	Contact Creek	76.54	19	P	P	17 58 32.9	-0.9
	baz=217						
OHAK	Old Harbor	76.59	21	P	P	17 58 33.6	-0.3
OHAK	Old Harbor	76.59	21	P	P	17 58 33.8	-0.1
	baz=220						
Q18K	Katmai Hardscr	77.13	19	P	P	17 58 36.8	-0.3
	baz=218						
O17K	Koliganek Bris	77.38	18	P	P	17 58 37.6	-0.7
	baz=216						
N16K	Nishlik Lake	77.48	17	P	P	17 58 39.4	+0.5
	baz=214						
P18K	Big Mountain,	77.64	19	P	P	17 58 38.9	-1.0
P18K				IAmb	IAmb	17 59 18.7	
	comp=Z,13nm,0.8s						
P18K	Big Mountain,	77.64	19	P	P	17 58 39.4	-0.5
	baz=218						
QSPA	South Pole Qui	77.71	180	P	P	17 58 40.4	+0.1
Q19K	Cape Douglas,	77.79	20	P	P	17 58 40.5	-0.1
Q19K	Cape Douglas,	77.79	20	P	P	17 58 40.4	-0.3
	baz=219						
O18K	Koktuh Hills	78.02	18	P	P	17 58 41.1	-0.7
O18K				IAmb	IAmb	17 59 05.8	
	comp=Z,28nm,1.4s						
N18K	Kilae Creek	78.47	18	P	P	17 58 43.2	-1.1
N18K				IAmb	IAmb	17 58 52.4	
	comp=Z,18nm,1.4s						
N18K	Kilae Creek	78.47	18	P	P	17 58 44.1	-0.2
	baz=217						
P19K	Oil Pt	78.48	19	P	P	17 58 43.8	-0.7
SVW2	Sparrevohn	78.90	17	P	P	17 58 45.4	-1.3
SVW2				IAmb	IAmb	17 58 50.0	
	comp=Z,12nm,1.3s						
CNPM	China Poot	79.05	20	P	P	17 58 47.6	+0.1
BRLK	Bradley Lake	79.34	20	P	P	17 58 48.9	-0.2
BRLK				IAmb	IAmb	17 58 51.7	
	comp=Z,9.0nm,0.8s						
BRSE	Bradley Lake S	79.38	20	P	P	17 58 48.9	-0.4
	baz=222						
YAK	Yakutsk	79.67	343	P	P	17 58 50.3	-0.4
TNA	Tin City	79.86	10	P	P	17 58 49.9	-1.8
M19K	Big River Lodg	79.89	17	P	P	17 58 52.3	+0.4
L19K	White Mountain	79.97	17	P	P	17 58 53.0	+0.6
L19K				IAmb	IAmb	17 59 30.1	
	comp=Z,9.5nm,1.2s						
L19K	White Mountain	79.97	17	P	P	17 58 53.0	+0.6
	baz=218						
SEW	Seward	80.08	20	P	P	17 58 52.6	-0.4
SEW				IAmb	IAmb	17 59 22.5	
	comp=Z,34nm,1.5s						
ULN	Ulaanbaatar	80.09	324	P	P	17 58 53.3	-0.2
BILL	Bilibino	80.13	360	P	P	17 58 53.2	+0.1
BILL				IAmb	IAmb	17 58 54.0	
	comp=Z,12nm,1.0s						
M20K	Styx River	80.24	18	P	P	17 58 54.0	0.0
M20K				IAmb	IAmb	17 59 19.3	
	comp=Z,14nm,1.4s						
SONM	Songino Array	80.45	323	P	P	17 58 56.3	+0.8
	comp=Z,1.3nm,0.6s,baz=149,slow=5.0,SNR=6.3						
	comp=Z,1.3nm,0.6s						
SONM	Songino Array	80.45	323	P	P	17 58 55.2	-0.2
L20K	Farewell, AK	80.49	17	P	P	17 58 55.9	+0.7
	baz=218						
SUA	Susitna One	80.66	19	P	P	17 58 55.6	-0.7
RC01	Rabbit Creek A	80.71	20	P	P	17 58 56.0	-0.3
RC01				IAmb	IAmb	17 59 03.5	
	comp=Z,23nm,1.1s						
RC01	Rabbit Creek A	80.71	20	P	P	17 58 58.3	+1.9
	baz=222						
SKT	Skwentna	80.81	18	P	P	17 58 56.5	-0.4
SKT	Skwentna	80.81	18	P	P	17 58 57.3	+0.5
	baz=221						
GTA	Gaotai	80.88	314	eP	P	17 58 58.6	+0.7
PWL	Port Wells	81.01	20	P	P	17 58 57.8	-0.2
PWL				IAmb	IAmb	17 59 00.1	
	comp=Z,16nm,0.9s						
PWL	Port Wells	81.01	20	P	P	17 58 58.1	+0.1
	baz=224						
M22K	Willow	81.08	19	P	P	17 58 58.3	+0.1
	baz=222						
PPLA	Purkeypile	81.31	18	P	P	17 58 58.2	-1.4
PPLA				IAmb	IAmb	17 59 38.6	
	comp=Z,20nm,1.4s						
KNK	Knik Glacier	81.37	20	P	P	17 58 59.5	-0.3
KNK				IAmb	IAmb	17 59 28.0	
	comp=Z,12nm,1.1s						
KNK	Knik Glacier	81.37	20	P	P	17 59 00.3	+0.4
	baz=224						
GLI	Glacier Island	81.45	21	P	P	17 59 00.0	-0.3
	baz=225						
FID	Port Fidalgo	81.58	21	P	P	17 59 00.7	-0.3
EYAK	Cordova Ski Ar	81.69	21	P	P	17 59 00.8	-0.7
EYAK	Cordova Ski Ar	81.69	21	P	P	17 59 01.8	+0.3
	baz=226						
SML	Sawmill	81.70	20	P	P	17 59 00.7	-0.9
SML				IAmb	IAmb	17 59 27.5	
	comp=Z,19nm,1.4s						
SML	Sawmill	81.70	20	P	P	17 59 01.1	-0.5
	baz=224						
CAST	Castle Rocks	81.74	17	P	P	17 59 00.3	-1.5
CAST				IAmb	IAmb	17 59 02.7	
	comp=Z,6.8nm,0.7s						
CAST	Castle Rocks	81.74	17	P	P	17 59 01.2	-0.6
	baz=220						
J20K	Nowinta River	81.75	16	P	P	17 59 01.8	+0.1
J20K	Nowinta River	81.75	16	P	P	17 59 02.8	+1.1
	baz=218						
M23K	Glacier View	81.89	20	P	P	17 59 02.4	-0.2
	baz=224						
CHUM	Lake Minchumin	82.03	17	P	P	17 59 04.2	+1.0
	baz=220						
SCM	Sheep Creek Mo	82.05	20	P	P	17 59 03.4	-0.1
SCM				IAmb	IAmb	17 59 04.3	
	comp=Z,17nm,0.8s						
SCM	Sheep Creek Mo	82.05	20	P	P	17 59 03.1	-0.3
	baz=225						
KTH	Kantishna Hill	82.18	18	P	P	17 59 03.1	-1.0
KTH				IAmb	IAmb	17 59 04.2	
	comp=Z,8.6nm,1.0s						
KLU	Klutina	82.29	21	P	P	17 59 04.0	-0.8
KLU				IAmb	IAmb	17 59 26.7	
	comp=Z,11nm,1.2s						
KLU	Klutina	82.29	21	P	P	17 59 04.6	-0.2
	baz=226						
TRF	Thorofare Moun	82.29	18	P	P	17 59 04.0	-0.8
TRF				IAmb	IAmb	17 59 05.4	
	comp=Z,8.5nm,0.9s						
TRF	Thorofare Moun	82.29	18	P	P	17 59 03.8	-1.0
	baz=222						
BERG	Berg Lake	82.33	22	P	P	17 59 05.1	+0.2
WAT1	Susitna Watana	82.37	19	P	P	17 59 05.1	+0.1
	baz=223						
BMRM	Bremner River	82.39	22	P	P	17 59 04.4	-0.8
BMRM				IAmb	IAmb	17 59 42.0	
	comp=Z,19nm,1.3s						
WAT6	Susitna Watana	82.45	19	P	P	17 59 05.8	+0.2
	baz=224						
SNH	Sunshine Point	82.52	23	P	P	17 59 05.1	-0.8
M24K	Tolsona, Glenn	82.63	20	P	P	17 59 06.8	+0.3
M24K	Tolsona, Glenn	82.63	20	P	P	17 59 06.8	+0.3
	baz=226						
RND	Reindeer	82.70	18	P	P	17 59 06.8	0.0
RND				IAmb	IAmb	17 59 07.1	
	comp=Z,8.4nm,0.5s						
N25K	Chitina, Valde	82.83	21	P	P	17 59 07.6	+0.1
N25K				IAmb	IAmb	17 59 08.4	
	comp=Z,8.5nm,0.8s						
N25K	Chitina, Valde	82.83	21	P	P	17 59 07.5	0.0
	baz=227						
MESA	MESA	82.85	23	P	P	17 59 07.3	-0.5
	baz=230						
MCK	McKinley	82.91	18	P	P	17 59 07.3	-0.6
MCK	McKinley	82.91	18	P	P	17 59 07.3	-0.6
	baz=223						
DHY	Denali Highway	82.92	19	P	P	17 59 08.0	0.0
DHY	Denali Highway	82.92	19	P	P	17 59 08.2	+0.1
	baz=224						
VRDI	Verde Repeater	82.98	22	P	P	17 59 08.4	-0.1
GLB	Gilahina Butte	83.00	21	P	P	17 59 07.6	-0.7
GLB				IAmb	IAmb	17 59 09.0	
	comp=Z,6.9nm,0.8s						
DIB	Dawson Inlet,	83.05	32	P	P	17 59 08.6	0.0
YAH	Yahtse	83.05	23	P	P	17 59 08.9	0.0
YAH				IAmb	IAmb	17 59 15.8	
	comp=Z,20nm,1.2s						
I21K	Tanana	83.12	16	P	P	17 59 09.1	+0.4
I21K				IAmb	IAmb	17 59 10.1	
	comp=Z,9.5nm,0.8s						
I21K	Tanana	83.12	16	P	P	17 59 09.3	+0.5
	baz=220						
HARP	HAARP	83.18	20	P	P	17 59 09.6	+0.3
	baz=227						
SNCC	San Nicolas Is	83.18	54	P	P	17 59 10.5	+0.6
	baz=250						
MCARA	McCarthy VSAT	83.24	22	P	P	17 59 09.8	+0.3
MCARA				IAmb	IAmb	17 59 10.5	
	comp=Z,13nm,1.1s						
MCARA	McCarthy VSAT	83.24	22	P	P	17 59 10.3	+0.8
	baz=229						
H21K	Melozitna Rive	83.27	16	P	P	17 59 10.2	+0.7
H21K	Melozitna Rive	83.27	16	P	P	17 59 10.4	+0.8
	baz=219						
IMAR	Indian Mountai	83.28	15	P	P	17 59 10.2	+0.6
TABL	Table Mountain	83.33	23	P	P	17 59 10.1	-0.1
MLY	Manley	83.35	17	P	P	17 59 09.8	-0.3
MLY				IAmb	IAmb	17 59 10.7	
	comp=Z,11nm,1.3s						
MLY	Manley	83.35	17	P	P	17 59 09.8	-0.3
	baz=221						
PCA	Pinnacle	83.46	24	P	P	17 59 09.8	-0.9
PAX	Paxson	83.47	20	P	P	17 59 10.0	-0.8
	baz=226						
NEA2	Nenana	83.50	18	P	P	17 59 09.3	-1.5
	baz=223						
BARN	Barnard Glacie	83.53	22	P	P	17 59 11.2	0.0
BARN				IAmb	IAmb	17 59 12.2	
	comp=Z,6.7nm,0.8s						
CTG	Chitna Glacier	83.59	23	P	P	17 59 11.2	-0.3
	baz=230						
CTGM	Chitina Glacie	83.59	23	P	P	17 59 10.7	-0.8
CTGM				IAmb	IAmb	17 59 12.4	
	comp=Z,9.2nm,0.8s						
LOGN	Logan Glacier	83.63	23	P	P	17 59 11.4	-0.3
LOGN				IAmb	IAmb	17 59 47.4	
	comp=Z,24nm,1.4s						
WRH	Wood River Hil	83.70	18	P	P	17 59 11.2	-0.6
WRH				IAmb	IAmb	17 59 11.9	
	comp=Z,13nm,1.0s						
G21K	Allakaket	83.76	15	P	P	17 59 12.5	+0.5
	baz=218						
I23K	Minto, Yukon-K	83.83	17	P	P	17 59 11.7	-0.6
I23K	Minto, Yukon-K	83.83	17	P	P	17 59 11.8	-0.6
	baz=222						
H22K	Ishtalitna Cre	83.83	16	P	P	17 59 12.5	+0.1
	baz=221						
O28M	Mount Upton	83.91	23	P	P	17 59 12.8	-0.4
	baz=231						
CCB	Clear Creek Bu	83.92	18	P	P	17 59 12.1	-0.7
CCB				IAmb	IAmb	17 59 12.8	
	comp=Z,11nm,0.6s						
M26K	Nabesna, AK	83.92	21	P	P	17 59 13.0	0.0
M26K				IAmb	IAmb	17 59 14.0	
	comp=Z,5.3nm,0.7s						
M26K	Nabesna, AK	83.92	21	P	P	17 59 12.9	-0.2
	baz=229						
K24K	Donnelly Dome	83.95	19	P	P	17 59 12.9	-0.2
	baz=226,SNR=6.5						
HUMO	Hull Mountain	83.99	44	P	P	17 59 13.9	+0.1
HUMO				IAmb	IAmb	17 59 16.5	
	comp=Z,10nm,1.1s						
HDA	Harding Lake	84.00	18	P	P	17 59 13.2	-0.2
HDA	Harding Lake	84.00	18	P	P	17 59 13.1	-0.2
	baz=225,SNR=23						
MDM	Murphy Dome	84.02	18	P	P	17 59 12.8	-0.6
MDM				IAmb	IAmb	17 59 13.5	
	comp=Z,12nm,0.8s						
MENT	Mentasta	84.03	20	P	P	17 59 13.4	-0.2
MENT				IAmb	IAmb	17 59 32.1	
	comp=Z,11nm,1.4s						
MAW	Mawson	84.06	202	P	P	17 59 13.9	+0.3
	comp=Z,3.7nm,0.9s,baz=78,slow=5.8,SNR=5.1						
	comp=Z,3.7nm,0.9s						
MAW	Mawson	84.06	202	P	P	17 59 13.5	-0.1
TCOL	CIGO, UAF Yank	84.06	18	P	P	17 59 12.7	-0.8
TCOL	CIGO, UAF Yank	84.06	18	P	P	17 59 13.0	-0.6
	baz=224						
COLA	College	84.06	18	P	P	17 59 12.7	-0.8
COLA	College	84.06	18	P	P	17 59 13.0	-0.6
	baz=224						
P29M	Windy Craggy	84.18	25	P	P	17 59 14.3	0.0
P29M				IAmb	IAmb	17 59 53.7	
	comp=Z,24nm,1.5s						
P29M	Windy Craggy	84.18	25	P	P	17 59 13.5	-0.8
	baz=234						
RIDG	Independent Ri	84.20	19	P	P	17 59 14.8	+0.3
	baz=227						
L26K	Log Cabin Wild	84.22	20	P	P	17 59 13.6	-0.9
L26K	Log Cabin Wild	84.22	20	P	P	17 59 14.2	-0.2
	baz=228						
H23K	Yukon River	84.28	17	P	P	17 59 14.2	-0.5
H23K	Yukon River	84.28	17	P	P	17 59 14.5	-0.2
	baz=222,SNR=5.5						
IL31		84.28	18	P	P	17 59 13.7	-1.0
ILAR	Eielson Array	84.28	18	P	P	17 59 13.9	-0.8
	comp=Z,12nm,0.6s,baz=246,slow=5.2,SNR=130						
ILAR	Eielson Array	84.28	18	P	P	17 59 13.7	-1.0
M27K	Edge Creek, AK	84.29	21	P	P	17 59 14.9	-0.1
M27K	Edge Creek, AK	84.29	21	P	P	17 59 14.7	-0.3
	baz=230						
F21K	Alatna River	84.32	14	P	P	17 59 14.7	-0.2
	baz=218						
POKR	Poker Plat Res	84.36	18	P	P	17 59 14.2	-0.9
POKR				IAmb	IAmb	17 59 15.1	
	comp=Z,12nm,0.7s						
POKR	Poker Plat Res	84.36	18	P	P	17 59 14.2	-0.9
	baz=224,SNR=5.3						
YUK8	Steele Glacier	84.39	23	P	P	17 59 15.9	+0.2
	baz=232						
DOT	Dot Lake	84.40	20	P	P	17 59 14.6	-0.8
DOT				IAmb	IAmb	17 59 16.2	
	comp=Z,7.9nm,0.8s						
YUK3	Moose Creek	84.43	22	P	P	17 59 15.8	0.0
	baz=231						
G22K	Bettles	84.58	15	P	P	17 59 16.5	+0.4
	baz=220						
J25K	Salcha River,	84.64	19	P	P	17 59 16.4	-0.1
J25K	Salcha River,	84.64	19	P	P	17 59 16.5	-0.1
	baz=226,SNR=16						
SCRK	Sand Creek	84.64	20	P	P	17 59 16.2	-0.5
SCRK				IAmb	IAmb	17 59 17.7	
	comp=Z,7.3nm,0.7s						
SCRK	Sand Creek	84.64	20	P	P	17 59 16.8	+0.1
	baz=228,SNR=7.9						
PLBC	Pleasant Camp	84.65	25	P	P	17 59 16.2	-0.4
	baz=235						
BVCY	Beaver Creek	84.69	22	P	P	17 59 17.2	+0.3
	baz=231						
H24K	Noodor Dome	84.75	17	P	P	17 59 15.4	-1.7
H24K	Noodor Dome	84.75	17	P	P	17 59 15.7	-1.4
	baz=224						
L27K	Beaver Creek,	84.77	21	P	P	17 59 17.1	-0.1
L27K	Beaver Creek,	84.77	21	P	P	17 59 17.5	+0.3
	baz=230						
R32K	Eaglecrest	84.78	27	P	P	17 59 16.8	-0.5
	baz=237						
BCAR	Beaver Creek A	84.78	21	P	P	17 59 17.7	+0.4
P30M	Million Dollar	84.79	25	P	P	17 59 17.1	-0.4
	baz=234						
G23K	Bananza Creek	84.80	16	P	P	17 59 18.1	+0.7
	baz=222,SNR=7.0						
F22K	John River	84.86	15	P	P	17 59 18.1	+0.5
	baz=220						
EDW2	Edwards Air Fo	84.91	53	P	P	17 59 19.2	+0.6
	baz=251						
HYT	Haines Junctio	84.98	24	P	P	17 59 18.2	-0.3
	baz=234						
J26L	Joseph Creek	85.13	19	P	P	17 59 19.6	+0.5
J26L	Joseph Creek	85.13	19	P	P	17 59 20.1	+1.0
	baz=228						
MURC	Murrieta	85.14	54	P	P	17 59 20.6	+0.8
	baz=252						
COLD	Coldfoot	85.14	15	P	P	17 59 19.1	+0.1
COLD				IAmb	IAmb	17 59 22.1	
	comp=Z,6.1nm,0.9s						
COLD	Coldfoot	85.14	15	P	P	17 59 20.0	+1.0
	baz=222						
K27K	Chicken	85.31	20	P	P	17 59 19.6	-0.2
	baz=229						
E22K	Anaktuvuk Pass	85.43	14	P	P	17 59 20.7	+0.3
	baz=220						
G24K	Hadweenzic Riv	85.49	17	P	P	17 59 20.7	0.0
	baz=224,SNR=8.9						
MONP2	Monument Peak	85.54	55	P	P	17 59 22.0	0.0
	baz=252						
MPMC	Manual Prospec	85.68	52	P

	baz=223							
DAWY	**Dawson**	86.25	21	P		P	17 59 24.9	+0.4
	baz=232							
D23K	**Nanushuk River**	86.33	14	P		P	17 59 26.5	+1.7
	baz=221							
TOLK	**Toolik Lake Re**	86.36	15	P		P	17 59 25.6	+0.6
	baz=222							
I27K	**Kandik River**	86.48	19	P		P	17 59 25.1	-0.6
	baz=230							
BC3	**Big Chuckawall**	86.54	55	P		P	17 59 26.5	-0.3
	baz=253							
P33M	**Teslin, Yukon**	86.56	26	P		P	17 59 25.8	-0.4
	baz=238							
F25K	**Christian Rive**	86.63	16	P		P	17 59 27.2	+0.9
	baz=226							
G26K	**Porcupine Rive**	86.71	17	P		P	17 59 26.9	+0.3
	baz=228,SNR=9.6							
K29M	**Barlow Dome**	86.77	21	P		P	17 59 27.2	0.0
	baz=234							
DLBC	**Dease Lake**	86.89	28	P		P	17 59 27.7	-0.1
	baz=240							
H27K	**Steamboat Moun**	86.92	18	P		P	17 59 28.3	+0.6
	baz=230							
D24K	**Happy Valley**	86.92	14	P		P	17 59 28.1	+0.5
	baz=223							
IRM	**Iron Mountain**	86.93	54	P		P	17 59 29.5	+1.0
	baz=253							
R33M	**Jennings River**	86.94	27	P		P	17 59 28.0	-0.1
	baz=240							
C23K	**Itkillik River**	87.01	14	P		P	17 59 29.2	+1.2
	baz=221							
E25K	**Arctic Village**	87.02	16	P		P	17 59 29.1	+1.0
	baz=226							
RAMN	**Ramite**	87.21	298	*e*P		P	17 59 29.5	-0.8
G27K	**Doyon Strip**	87.25	18	P		P	17 59 29.7	+0.4
	baz=230							
J08A	**Circle Bar Ran**	87.33	45	P		P	17 59 30.4	+0.1
J08A				IAmb		IAmb	17 59 31.5	
	comp=Z,4.6nm,0.8s							
C24K	**Franklin Bluff**	87.37	14	P		P	17 59 30.1	+0.4
	baz=223							
D25K	**Kavik River**	87.65	15	P		P	17 59 31.1	0.0
	baz=225							
JIRN	**Jiri**	87.75	299	*e*P		P	17 59 32.4	-0.6
R11A	**Troy Canyon, C**	87.83	50	P		P	17 59 33.3	+0.4
	baz=252							
PRN	**Pahroc Range**	87.95	51	P		P	17 59 33.2	-0.3
PRN				IAmb		IAmb	17 59 35.1	
	comp=Z,9.0nm,1.3s							
E27K	**Coleen River**	88.17	17	P		P	17 59 34.8	+1.2
	baz=230							
214A	**Organ Pipe Nat**	88.20	57	P		P	17 59 34.0	-0.6
	baz=254							
PKI	**Pulchoki**	88.39	299	*e*P		P	17 59 35.2	-0.8
PKIN	**Phulchoki**	88.41	299	*e*P		P	17 59 35.0	-1.0
	comp=Z,4.2nm,0.5s							
C26K	**Camden Bay**	88.44	15	P		P	17 59 35.3	+0.5
	baz=226							
DMN	**Daman**	88.67	298	*e*P		P	17 59 36.6	-0.5
	comp=Z,20nm,0.8s							
ELK	**Elko**	88.80	48	P		P	17 59 36.9	-0.5
LIRD	**Liard River Hi**	89.14	28	P		P	17 59 38.2	-0.1
	baz=244							
GKN	**Gorkha**	89.17	299	*e*P		P	17 59 38.5	-0.9
	comp=Z,9.2nm,0.8s							
NEW	**Newport**	89.83	40	P		P	17 59 42.2	+0.4
	baz=251							
TUC	**Tucson**	89.95	57	P		P	17 59 43.3	+0.4
	baz=255							
HLID	**Hailey**	90.21	45	P		P	17 59 42.9	-1.0
HLID	**Hailey**	90.21	45	P		P	17 59 43.6	-0.3
	baz=253							
DUG	**Dugway, Tooele**	90.42	49	P		P	17 59 44.8	-0.1
	baz=254							
HVU	**Hansel Valley**	90.87	47	P		P	17 59 47.0	+0.1
HVU				IAmb		IAmb	17 59 48.5	
	comp=Z,9.1nm,1.2s							
TROLL	**Troll, Antarti**	95.25	185	P		P	18 00 05.7	-0.9
TXAR	**Lajitas Array**	95.27	61	P		P	18 00 07.1	-0.3
	comp=Z,0.4nm,0.7s,baz=227,slow=5.6,SNR=5.4							
	comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	95.33	317	P		P	18 00 07.2	-0.1
	comp=Z,4.2nm,0.8s,baz=100,slow=6.4,SNR=22							
	comp=Z,4.2nm,0.8s							
MKAR	**Makanchi Array**	95.33	317	P		P	18 00 06.4	-0.8
ZALV	**Zalesovo Beam**	95.34	324	P		P	18 00 05.8	-1.2
	comp=Z,1.1nm,0.9s,baz=29,slow=3.4,SNR=3.6							
	comp=Z,1.1nm,0.9s							
SNAA	**Sanae**	95.95	183	P		P	18 00 08.3	-1.4
VNA3	**Neumayer Olymp**	96.63	181	P		P	18 00 11.7	-1.0
ARCES	**ARCESS Array B**	117.87	346	PKP		PKPdf	18 05 27.1	-0.7
	comp=Z,4.3nm,0.6s,baz=74,slow=2.0,SNR=23							
FINES	**FINESS Array B**	123.41	339	PKP		PKPdf	18 05 38.0	-0.6
	comp=Z,2.0nm,0.7s,baz=49,slow=1.8,SNR=16							
NB2	**NORSAR Subarra**	128.25	345	PKP		PKPdf	18 05 47.3	-0.6
	comp=Z,0.7nm,0.6s,baz=43,slow=2.8							
NOA	**NORSAR Array B**	128.25	345	PKP		PKPdf	18 05 47.6	-0.3
	comp=Z,1.0nm,0.7s,baz=28,slow=1.9,SNR=4.9							
AKASG	**Malin Array Be**	128.63	327	PKP		PKPdf	18 05 48.6	-0.3
	comp=Z,0.3nm,0.5s,baz=36,slow=1.8,SNR=5.0							
BRTR	**Keskin Array B**	130.78	312	PKP		PKPdf	18 05 53.2	-0.4
	comp=Z,0.4nm,0.5s,baz=118,slow=3.7,SNR=2.6							
CLL	**Collm**	135.77	337	*i* PKPdf		PKiKP	18 06 03.8	-0.2
	comp=Z,4.0nm,0.9s							
GERES	**GERESS Array B**	137.41	334	PKP		PKPdf	18 06 05.8	+0.2
	comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=8.5							
KEST	**Kesra**	149.21	323	PKPbc		PKPbc	18 06 30.6	-0.5
	comp=Z,11nm,0.9s,baz=114,slow=1.2,SNR=9.4							
ESDC	**Sonseca Array**	151.61	345	PKPbc		PKPbc	18 06 35.6	-1.0
	comp=Z,2.5nm,0.8s,baz=17,slow=2.9,SNR=17							
ESDC				PKPab		PKPab	18 06 46.4	+0.5
	comp=Z,2.7nm,0.8s,baz=11,slow=3.8,SNR=12							
TORD	**Torodi Ar. Bea**	165.73	275	PKPab		PKPab	18 07 47.4	-0.6
	comp=Z,1.5nm,0.9s,baz=78,slow=3.5,SNR=6.3							

*NOU **15** 18:11:42.9, 37°.17S×179°.66E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **15** 18:11:52.1±1.5, 37°.5S±6°×17°.9E±°, h13km±6km, M3.2/19, ML3.5/23, MLv3.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=83.7*
ISC 15 18:11:48.9±2.7, 37°.23S±0°.07×179°.2E±0°.1, h12km±11km, n49, σ1§19/56, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.75**	**243**	P	**Pb**	18 12 03.9	+0.1
MXZ				S	**Sg**	18 12 10.9	-2.3
MXZ	**Matakaoa Point**	**0.75**	**243**	P	**Pb**	18 12 04.0	+0.2
WMGZ	**Waiomatatini S**	**0.83**	**224**	P	**Pn**	18 12 07.7	+1.3
WMGZ				S	**Sn**	18 12 18.1	-0.4
PKGZ	**Pakihiroa**	**1.08**	**232**	P	**Pn**	18 12 10.2	+0.4
PKGZ				S	**Sb**	18 12 23.3	-0.2
PUZ	**Puketiti**	**1.10**	**220**	P	**Pn**	18 12 11.5	+1.4
PUZ				S	**Sg**	18 12 25.0	+0.6
HAZ	**Te Kaha**	**1.21**	**244**	P	**Pn**	18 12 10.8	-0.7
HAZ				S	**Sb**	18 12 27.2	0.0
TWGZ	**Tauwhareparae**	**1.32**	**224**	P	**Pg**	18 12 14.8	+0.5
TWGZ				S	**Sb**	18 12 31.0	+0.4
RUGZ	**Raukumara Rang**	**1.38**	**237**	P	**Pb**	18 12 15.0	+0.3
CNGZ	**Carnagh Statio**	**1.46**	**210**	P	**Pg**	18 12 17.3	+0.4
TKGZ	**Te Karaka**	**1.59**	**220**	P	**Pb**	18 12 18.1	-0.1
MWZ	**Matawai**	**1.69**	**229**	P	**Pb**	18 12 19.6	-0.4
RIGZ	**Rimuhau**	**1.84**	**216**	P	**Pn**	18 12 21.4	+1.1
RAGZ	**Rawiri**	**1.87**	**227**	P	**Pb**	18 12 22.0	-0.9
URZ	**Urewera**	**1.92**	**237**	P	**Pn**	18 12 22.5	+1.3
URZ	**Urewera**	**1.92**	**237**	P	**Pn**	18 12 22.6	+1.3
OPRZ	**Ohinepanea**	**2.15**	**253**	P	**Pn**	18 12 24.9	+0.4
RTZ	**Ruatahuna**	**2.20**	**230**	P	**Pn**	18 12 26.6	+1.3
MUGZ	**Murupara**	**2.26**	**236**	P	**Pn**	18 12 27.2	+1.2
RAHZ	**Arahi**	**2.34**	**223**	P	**Pn**	18 12 28.4	+1.3
RRRZ	**Republican Roa**	**2.36**	**241**	P	**Pn**	18 12 28.8	+1.3
MTHZ	**Maungataniwha**	**2.44**	**228**	P	**Pn**	18 12 30.0	+1.4
NMHZ	**Naumai**	**2.62**	**224**	P	**Pn**	18 12 32.5	+1.4
ARHZ	**Aropaoanui**	**2.65**	**219**	P	**Pn**	18 12 32.4	+1.1
MRHZ	**Matea Rd**	**2.69**	**233**	P	**Pn**	18 12 33.2	+1.3
KUZ	**Kuaotunu**	**2.79**	**279**	P	**Pn**	18 12 32.3	-0.9
KUZ	**Kuaotunu**	**2.79**	**279**	P	**Pn**	18 12 32.3	-0.9
BKZ	**Black Stump Fm**	**2.85**	**226**	P	**Pn**	18 12 35.0	+0.8
BKZ	**Black Stump Fm**	**2.85**	**226**	P	**Pn**	18 12 35.0	+0.8
CKHZ	**Cape Kidnapper**	**2.92**	**213**	P	**Pn**	18 12 35.0	-0.1
CKHZ				S	**Sn**	18 13 08.3	-1.8
MCHZ	**McNeill Hill**	**2.94**	**220**	P	**Pn**	18 12 36.0	+0.7
KWHZ	**Kaweka Forest**	**3.07**	**224**	P	**Pn**	18 12 37.6	+0.4
KAHZ	**Kahuranaki**	**3.12**	**214**	P	**Pn**	18 12 37.9	0.0
MKAZ	**Moumakai**	**3.19**	**271**	P	**Pn**	18 12 38.3	-0.5
TMVZ	**Te Maari**	**3.30**	**234**	P	**Pn**	18 12 41.2	+0.7
ETVZ	**East Tongariro**	**3.31**	**234**	P	**Pn**	18 12 41.2	+0.6
BHHZ	**Black Hill Sta**	**3.31**	**226**	P	**Pn**	18 12 41.0	+0.4
ETAZ	**East Tamaki Re**	**3.38**	**273**	P	**Pn**	18 12 41.2	-0.3
NGZ	**Ngauruhoe**	**3.40**	**234**	P	**Pn**	18 12 42.6	+0.7
MOVZ	**Moawhango**	**3.44**	**230**	P	**Pn**	18 12 42.8	+0.4
PNHZ	**Pukenui**	**3.54**	**220**	P	**Pn**	18 12 43.1	-0.6
HIZ	**Hauiti**	**3.63**	**248**	P	**Pn**	18 12 46.8	+1.9
HIZ	**Hauiti**	**3.63**	**248**	P	**Pn**	18 12 46.9	+2.0
TSZ	**Takapari Road**	**3.77**	**220**	P	**Pn**	18 12 45.6	-1.2
WCZ	**Waipu Caves**	**4.07**	**287**	P	**Pn**	18 12 51.7	+0.7
BFZ	**Birch Farm**	**4.12**	**212**	P	**Pn**	18 12 49.8	-1.9
NEZ	**North Egmont**	**4.47**	**241**	P	**Pn**	18 12 59.3	+2.9
KHEZ	**Kahui Hut**	**4.54**	**241**	P	**Pn**	18 13 00.4	+3.0
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	18 13 03.9	+1.3
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	18 13 03.8	+1.3

*SIGU **15** 18:16:52.1, 44°.48N×37°.83E, h18km, Black Sea region 5*
*MOS **15** 18:16:52.0±0.0, 44°.44N×37°.73E, h14km, MPVA3.4*
ISC 15 18:16:52.0±1.3, 44°.44N±0°.04×37°.74E±0°.03, h14km±10km, n18, σ1§07/33, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GL1R	**Gelendzhik**	**0.26**	**65**	*i* Pg	**Pb**	18 16 57.8	-0.7
GL1R				*i* Sg	**Sb**	18 17 01.8	-1.1
SPGR	**Shapsug**	**0.39**	**38**	*i* Pg	**Pb**	18 17 00.7	0.0
SPGR				*i* Sg	**Sb**	18 17 06.4	0.0
ANN	**Anapa**	**0.42**	**329**	*e*Pg	**Pn**	18 17 03.6	-0.1
ANN				*i* Sg	**Sn**	18 17 10.9	-0.3
KGUR	**Krasnodar**	**1.09**	**57**	*e*Pg	**Pg**	18 17 14.0	+1.0
KGUR				*e*Sg	**Sn**	18 17 29.0	+1.3
GOYR	**Goytkh**	**1.19**	**99**	*i* Pg	**Pg**	18 17 14.5	-0.4
GOYR				*e*Sg	**Sg**	18 17 31.1	+0.6
LZRR	**Lazarevskoye**	**1.28**	**113**	*e*Pg	**Pg**	18 17 16.9	+0.1
LZRR				*i* Sg	**Sg**	18 17 34.3	+0.8
SOC	**Sochi**	**1.67**	**120**	*e*Pg	**Pb**	18 17 22.1	-0.4
SOC				*e*Sg	**Sg**	18 17 45.3	-0.3
GUZR	**Guzeripl'**	**1.77**	**104**	*e*Pg	**Pb**	18 17 23.1	-1.2
GUZR				*e*Sg	**Sb**	18 17 45.1	-1.3
VSLR	**Vesyoloye**	**1.93**	**120**	*e*Pg	**Pn**	18 17 24.9	+0.5
VSLR				*e*Sg	**Sb**	18 17 50.0	-0.8
SUDU	**Sudak**	**2.00**	**284**	*e*Pn	**Pn**	18 17 26.0	+0.6
SUDU				Pnm		18 17 27.5	
	comp=Z,5.0nm,0.2s						
SUDU				*e*Sn	**Sn**	18 17 51.4	+1.1
SUDU				Snm		18 17 51.6	
	comp=E,10.0nm,0.3s						
SUDU				Snm		18 17 53.3	
	comp=N,50nm,0.3s						
ERBR	**Yeremizino-Bor**	**2.33**	**56**	*i* Pn	**Pb**	18 17 31.6	-2.2
ERBR				*e*Sn	**Sn**	18 17 58.7	+0.4
AHMR	**Akhmetovskaya**	**2.39**	**96**	*e*Pn	**Pn**	18 17 32.2	+1.3
AHMR				*e*Sn	**Sb**	18 18 01.6	-2.7
ALU	**Alushta**	**2.40**	**277**	*e*Sn	**Sn**	18 18 00.1	+0.1
ALU				Snm		18 18 02.1	
	comp=E,8.0nm,0.2s						
ALU				Snm		18 18 02.2	
	comp=N,10.0nm,0.2s						
YAL	**Yalta**	**2.57**	**272**	*e*Sn	**Sn**	18 18 05.0	+0.8
YAL				Snm		18 18 06.5	
	comp=E,36nm,0.2s						
YAL				Snm		18 18 06.8	
	comp=N,30nm,0.2s						
SIM	**Simferopol'**	**2.63**	**282**	*i* Sn	**Sn**	18 18 06.0	+0.2
SIM				Snm		18 18 06.3	
	comp=N,14nm,0.3s						
SIM				Snm		18 18 07.0	
	comp=E,11nm,0.2s						
SEV	**Sevastopol'**	**2.91**	**273**	*e*Pn	**Pn**	18 17 38.7	+0.8
SEV				Pnm		18 17 47.3	
	comp=Z,2.0nm,0.2s						
SEV				*e*Sn	**Sn**	18 18 13.3	+0.6
SEV				Snm		18 18 14.5	
	comp=N,10.0nm,0.3s						
SEV				Snm		18 18 16.1	
	comp=E,7.0nm,0.2s						
KIV	**Kislovodsk**	**3.59**	**96**	*e*Pn	**Pn**	18 17 47.2	-0.1
KIV				*e*Sn	**Sn**	18 18 30.4	+0.8
SHA1	**Shidzhatmaz**	**3.61**	**99**	*e*Pn	**Pn**	18 17 49.8	+2.0
SHA1				*e*Sn	**Sn**	18 18 31.7	+1.3

*AUST **15** 18:26:32.8±1.5, 19°.78S×148°.81E, h0km, Error ellipse: s-maj=18.9km s-min=9.6km az=24.0*
*NOU **15** 18:26:35.1, 19°.97S×148°.69E, h0km, MLv3.7/6, Queensland, Australia*
ISC 15 18:26:33.7±2.6, 19°.8S±0°.3×148°.8E±0°.2, h10km, n11, σ0§67/13, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUAYR	**Ayr State High**	**1.35**	**277**	P	**Pn**	18 26 58.8	+0.2
	baz=1.3						
AUAYR				S	**Sb**	18 27 16.3	0.0
	baz=1.3						
TV1H	**Townsville Har**	**1.98**	**284**	P	**Pb**	18 27 09.7	-0.1
CTA	**Charters Tower**	**2.44**	**262**	P	**Pn**	18 27 13.9	+0.2
	baz=2.4						
CTA	**Charters Tower**	**2.44**	**262**	P	**Pn**	18 27 14.1	+0.4
CTAO	**Charters Tower**	**2.44**	**262**	P	**Pn**	18 27 14.1	+0.4
AUNRC	**North Rockhamp**	**3.92**	**156**	P	**Pn**	18 27 33.5	-0.4
	baz=3.9						
RK1H	**Rockhampton Ha**	**3.94**	**157**	P	**Pn**	18 27 34.6	+0.4
MTSU	**Mount Surprise**	**4.56**	**290**	P	**Pn**	18 27 43.5	+0.7
	baz=4.6						
MTSU				S	**Sn**	18 28 34.8	-1.1
	baz=4.6						
MTSU	**Mount Surprise**	**4.56**	**290**	P	**Pn**	18 27 44.1	+1.3
EIDS	**Eidsvold**	**5.97**	**160**	P	**Pn**	18 28 02.6	+0.5
	baz=6.0						
EIDS	**Eidsvold**	**5.97**	**160**	P	**Pn**	18 28 02.6	+0.5

*TIF **15** 18:29:34.8, 42°.25N×45°.93E, h20km±2km*
*MOS **15** 18:29:34.9±0.0, 42°.16N×45°.94E, h17km, MPVA3.6*
*NORS **15** 18:29:35.5±0.0, 42°.09N×46°.29E, h34km, MPVA3.7*
*DRS **15** 18:29:37.5±0.0, 42°.17N×45°.88E, h16km*
ISC 15 18:29:35.7±1.0, 42°.16N±0°.02×45°.91E±0°.02, h17km±8km, n58, σ1§44/105, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.41**	**142**	P	**Pn**	18 29 44.8	-2.0
LGD				S	**Sb**	18 29 50.5	+0.1
LGD	**Lagodekhi**	**0.41**	**142**	*e*Pg	**Pn**	18 29 44.8	-2.0
LGD				*e*Sg	**Sb**	18 29 50.5	+0.1
BTLR	**Botlikh**	**0.56**	**25**	*e*Pg	**Pn**	18 29 47.3	-1.6
BTLR				*e*Sg	**Sn**	18 29 55.2	-2.7
XNZR	**Khunzakh**	**0.71**	**57**	*e*Pg	**Pn**	18 29 50.8	-0.3
XNZR				*e*Sg	**Sn**	18 30 00.6	-1.0
DDFL	**Dedoflistskaro**	**0.73**	**167**	P	**Pn**	18 29 54.8	+3.5
SHTL	**Shatili**	**0.75**	**312**	P	**Pg**	18 29 49.0	-1.4
SHTL				S	**Sg**	18 29 58.9	-1.5
DGRG	**David-gareji**	**0.81**	**210**	P	**Pn**	18 29 52.3	-0.1
DGRG				S	**Sn**	18 30 05.6	+1.5
DGRG	**David-gareji**	**0.81**	**210**	*e*Pg	**Pn**	18 29 52.3	-0.1
DGRG				*e*Sg	**Sn**	18 30 05.6	+1.5
DVE	**Vedeno**	**0.82**	**11**	*i* Pg	**Pn**	18 29 52.0	-0.4
DVE				*e*Sg	**Sn**	18 30 03.8	-0.4
GNBR	**Gunib**	**0.82**	**73**	*e*Pg	**Pn**	18 29 52.4	-0.2
GNBR				*e*Sg	**Sn**	18 30 03.7	-0.6
UNCR	**Uncukul**	**0.86**	**49**	*e*Pg	**Pn**	18 29 53.2	+0.2
UNCR				*e*Sg	**Sn**	18 30 05.0	-0.3
KMKR	**Kumukh**	**0.89**	**91**	*e*Pg	**Pn**	18 29 53.5	-0.1
KMKR				*e*Sg	**Sn**	18 30 05.8	-0.4
ARKR	**Arakani**	**0.92**	**61**	*e*Pg	**Pn**	18 29 54.2	+0.3
ARKR				*e*Sg	**Sn**	18 30 07.1	+0.3
BTNK	**Botanikuri**	**0.95**	**241**	P	Pb	18 29 46.6	-7.1
BTNK				S	**Sb**	18 30 00.5	-5.6
BTNK	**Botanikuri**	**0.95**	**241**	*e*Pg	Pb	18 29 46.6	-7.1
BTNK				*e*Sg	**Sb**	18 30 00.5	-5.6
KRNR	**Karanay**	**1.00**	**48**	*e*Pg	**Pn**	18 29 55.2	+0.2
KRNR				*e*Sg	**Sn**	18 30 08.7	-0.1
GROC	**Groznyy**	**1.05**	**356**	*e*Pg	**Pg**	18 29 57.1	+1.1
GROC				*e*Sg	**Sn**	18 30 12.4	+2.6
DLMR	**Dylym**	**1.06**	**30**	*e*Pg	**Pg**	18 29 56.1	-0.1
DLMR				*e*Sg	**Sn**	18 30 10.6	+0.4
PNSH	**Pansheti**	**1.07**	**297**	P	**Pb**	18 29 55.0	-0.8
PNSH				S	**Sb**	18 30 07.1	-2.5
PNSH	**Pansheti**	**1.07**	**297**	*e*Pg	**Pb**	18 29 55.0	-0.8
DBC	**Dubki**	**1.10**	**38**	*e*Pg	**Pg**	18 29 57.4	+0.4
DBC				*e*Sg	**Sn**	18 30 12.8	+1.5
GUDG	**Gudauri**	**1.10**	**287**	P	**Pg**	18 29 56.5	-0.6
GUDG	**Gudauri**	**1.10**	**287**	*e*Pg	**Pg**	18 29 56.5	-0.6
BUJR	**Buynaksk**	**1.11**	**53**	*e*Pg	**Pg**	18 29 57.8	+0.6
BUJR				*e*Sg	**Sg**	18 30 13.4	+1.6
KMGR	**Komgaron**	**1.18**	**320**	*e*Pg	**Pg**	18 30 00.2	+1.6
KMGR				*e*Sg	**Sg**	18 30 17.2	+3.2
URKR	**Urkarakh**	**1.28**	**89**	*e*Pg	**Pg**	18 30 00.5	0.0
URKR				*e*Sg	**Sg**	18 30 18.4	+1.0
SGKR	**Sergokala**	**1.33**	**76**	*e*Pg	**Pg**	18 30 02.0	+0.6
SGKR				*e*Sg	**Sg**	18 30 20.6	+1.8
LACR	**Lac**	**1.36**	**300**	*i* Pg	**Pg**	18 30 00.9	-1.2
MAK	**Makhachkala**	**1.43**	**55**	*e*Pg	**Pg**	18 30 03.0	-0.2
MAK				*e*Sg	**Sg**	18 30 23.3	+1.5
AKT	**Akhty**	**1.52**	**116**	*e*Pg	**Pg**	18 30 03.9	-1.1
AKT				*e*Sg	**Sg**	18 30 24.3	-0.6
DMNI	**Dmanisi**	**1.53**	**238**	P	**Pb**	18 30 03.2	-0.4
DMNI				S	**Sb**	18 30 23.9	+1.2
DMNI	**Dmanisi**	**1.53**	**238**	*e*Pg	**Pb**	18 30 03.2	-0.4
ARNR	**Ardon**	**1.57**	**311**	*e*Pg	**Pg**	18 30 05.4	-0.6
ARNR				*e*Sg	**Sg**	18 30 27.6	+1.1
ZEI	**Tsey**	**1.61**	**294**	*e*Pg	**Pg**	18 30 05.8	-0.9
ZEI				*e*Sg	**Sg**	18 30 27.8	0.0
BRNG	**Burnasheti**	**1.64**	**252**	P	**Pb**	18 30 05.5	-0.1
BRNG				S	**Sg**	18 30 28.0	-0.7
BRNG	**Burnasheti**	**1.64**	**252**	*e*Pg	**Pb**	18 30 05.5	-0.1
BRNG				*e*Sg	**Sg**	18 30 28.0	-0.7
KORR	**Kora**	**1.64**	**305**	*e*Pg	**Pg**	18 30 06.5	-0.9
KORR				*e*Sg	**Sg**	18 30 30.1	+1.4
ALIG	**Mtskhetisjvari**	**1.68**	**269**	P	**Pb**	18 30 05.5	-0.7
ALIG				S	**Sb**	18 30 27.8	+0.8
ALIG	**Mtskhetisjvari**	**1.68**	**269**	*e*Pg	**Pb**	18 30 05.5	-0.7
ALIG				*e*Sg	**Sb**	18 30 27.8	+0.8
TRKR	**Terskaya**	**1.79**	**332**	*e*Pg	**Pg**	18 30 10.8	+0.8
TRKR				*e*Sg	**Sg**	18 30 34.0	+0.7
STDR	**Stavd-Durt**	**1.82**	**312**	*e*Pg	**Pb**	18 30 07.7	-0.9
STDR				*e*Sg	**Sg**	18 30 33.2	-1.1
BKRG	**Bakuriani**	**1.82**	**258**	P	**Pb**	18 30 08.3	-0.4
BKRG				S	**Sb**	18 30 32.7	+1.5
BKRG	**Bakuriani**	**1.82**	**258**	*e*Pg	**Pb**	18 30 08.3	-0.4
BKRG				*e*Sg	**Sb**	18 30 32.7	+1.5
ONI	**Oni**	**1.87**	**284**	P	**Pb**	18 30 09.8	+0.4
ONI				S	**Sb**	18 30 33.5	+1.0
ONI	**Oni**	**1.87**	**284**	*e*Pg	**Pb**	18 30 09.8	+0.4
ONI				*e*Sg	**Sb**	18 30 33.5	+1.0
DIGR	**Digorskoe uzhe**	**1.87**	**294**	*e*Pg	**Pb**	18 30 09.3	-0.2
DIGR				*e*Sg	**Sb**	18 30 33.4	+0.6
LSNR	**Lesken**	**1.90**	**307**	*e*Pg	**Pg**	18 30 11.6	-0.6
LSNR				*e*Sg	**Sg**	18 30 36.5	-0.3
AZMN	**Azmana**	**2.13**	**248**	P	**Pn**	18 30 11.1	+0.4
AZMN				S	**Sb**	18 30 39.1	-1.1
TKB	**Tkibuli**	**2.17**	**276**	P	**Pb**	18 30 14.1	-0.4
TKB				S	**Sb**	18 30 41.3	+0.2
TKB	**Tkibuli**	**2.17**	**276**	*e*Pg	**Pb**	18 30 14.1	-0.4
TKB				*e*Sg	**Sb**	18 30 41.3	+0.2
GNI	**Garni**	**2.19**	**204**	*e*Pg	**Pb**	18 30 15.8	+0.8
ABS	**Abastumani**	**2.34**	**261**	P	**Pn**	18 30 15.1	+1.6
ABS				S	**Sb**	18 30 46.4	+0.3
ABS	**Abastumani**	**2.34**	**261**	*e*Pn	**Pn**	18 30 15.1	+1.6
ABS				*e*Sn	**Sb**	18 30 46.4	+0.3
GHRG	**Ghorjomi**	**2.69**	**262**	*e*Pn	**Pb**	18 30 22.5	-1.0
GHRG				*e*Sn	**Sb**	18 30 56.6	+0.3
KBZ	**Khabaz**	**2.71**	**306**	*e*Pn	**Pb**	18 30 23.0	-0.7
SHA1	**Shidzhat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=235						
NFF	**Wufeng Townshi**	**1.58**	**279**	*e*P	**Pn**	**18 31 48.9**	**+0.1**
	baz=269						
EHY	**Hungye**	**1.64**	**238**	*e*P	**Pn**	**18 31 49.5**	**-0.1**
	baz=247						
EHY				*e*S	**Sn**	**18 32 08.9**	**-0.8**
	baz=247						
YULB	**Yu-li**	**1.72**	**235**	P	**Pn**	**18 31 50.5**	**-0.1**
	baz=245						
YULB				*e*S	**Sn**	**18 32 10.7**	**-1.0**
	baz=245						
JTJ	**Tarama**	**1.72**	**81**	*e*S	**Sn**	**18 32 11.2**	**-0.5**
WHP	**Taichung City**	**1.72**	**267**	*e*P	**Pn**	**18 31 52.1**	**+1.3**
	baz=259						
EYUL	**Yuli**	**1.73**	**234**	P	**Pn**	**18 31 51.0**	**+0.2**
	baz=226						
EYUL				*e*S	**Sn**	**18 32 12.0**	**+0.1**
	baz=226						
EDH	**Donghe**	**1.99**	**225**	*e*P	**Pn**	**18 31 53.6**	**-0.7**
	baz=220						
EDH				*e*S	**Sn**	**18 32 16.6**	**-1.5**
	baz=220						
ELDTW	**Lidau**	**2.05**	**235**	*e*P	**Pn**	**18 31 55.1**	**-0.1**
	baz=234						
ELDTW				*e*S	**Sn**	**18 32 18.5**	**-1.2**
	baz=234						
LONT	**Longtian**	**2.15**	**227**	*e*P	**Pn**	**18 31 55.8**	**-0.7**
	baz=236						
WDLH	**Douliu**	**2.21**	**252**	*e*P	**Pn**	**18 31 58.8**	**+1.5**
	baz=242						
WDLH				*e*S	**Sn**	**18 32 26.2**	**+2.7**
	baz=242						
STYH	**Taoyuan**	**2.24**	**238**	*e*P	**Pn**	**18 31 57.8**	**+0.1**
	baz=231						
TWG	**Pinlang**	**2.24**	**226**	*e*P	**Pn**	**18 31 57.4**	**-0.4**
	baz=235						
TWG				*e*S	**Sn**	**18 32 24.2**	**-0.2**
	baz=235						
WCKO	**Fanlu**	**2.25**	**246**	*e*P	**Pn**	**18 31 59.0**	**+1.1**
	baz=245						
TPUB	**Ta-pu**	**2.29**	**242**	*e*P	**Pn**	**18 32 00.2**	**+1.8**
	baz=242						
WTP	**Ta-pu**	**2.33**	**241**	*e*P	**Pn**	**18 32 01.0**	**+2.1**
	baz=241						
TWK	**Hsinying**	**2.42**	**243**	*e*P	**Pn**	**18 32 02.4**	**+2.2**
	baz=243						
CHN1	**Nanshi**	**2.43**	**241**	*e*P	**Pn**	**18 32 02.6**	**+2.3**
	baz=241						

*IDC **15** 18:31:34.8±0.9, 13°.85N×144°.73E, h98km±11km, mb3.2/4, mbtmp3.5/4, Error ellipse: s-maj=58.3km s-min=24.4km az=96.0*
*NEIC **15** 18:31:36.0±0.6, 13°.7N±0°.1×144°.74E±0°.08, h105km±6km, mb4.3/4, Error ellipse: s-maj=17.8km s-min=6.6km az=143.0*

ISC 15 18:31:35.0±0.9, 13°.8N±0°.2×144°.8E±0°.2, h100km, n17, σ1°18/12, mb3.6/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.26**	**158**	P	**Pn**	**18 31 50.7**	**+1.2**
	2μm,0.3s,baz=256,slow=2.6,SNR=880						
GUMO				S	**Sn**	**18 32 01.5**	**+1.4**
	633nm,0.3s,baz=157,slow=23,SNR=27						
PATS	**Pohnpei**	**15.02**	**116**	Pn	**Pn**	**18 35 01.8**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**21.55**	**75**	T	T	18 58 43.6	
	baz=260,slow=75,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**21.57**	**75**	T	T	18 58 43.1	
	baz=260,slow=75,SNR=6.4						
H11S2	**WAKE ISLAND Hy**	**21.57**	**75**	T	T	18 58 41.4	
	baz=260,slow=75,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**21.96**	**72**	T	T	18 59 12.9	
	baz=255,slow=75,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**21.97**	**71**	T	T	18 59 19.1	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**21.98**	**72**	T	T	18 59 14.3	
	baz=255,slow=75,SNR=6.6						
WB0	**Warramunga Arr**	**34.91**	**197**	P	**P**	**18 38 15.2**	**-2.1**
WB0				IAmb	IAmb	18 38 51.3	
	comp=Z,7.7nm,1.3s						
WB2	**Warramunga Arr**	**35.09**	**197**	P	**P**	**18 38 17.4**	**-1.4**
WRA	**Warramunga Arr**	**35.09**	**197**	P	**P**	**18 38 18.2**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=13,slow=8.5,SNR=5.0						
	comp=Z,0.4nm,0.9s						
WRA	**Warramunga Arr**	**35.09**	**197**	P	**P**	**18 38 17.8**	**-1.0**
ASAR	**Alice Springs**	**38.75**	**196**	P	**P**	**18 38 50.2**	**+0.4**
	comp=Z,0.9nm,1.1s,baz=11,slow=6.6,SNR=2.4						
	comp=Z,0.9nm,1.1s						
MK31	**Makanchi Array**	**61.25**	**316**	P	**P**	**18 41 40.3**	**+0.6**
MK31				IAmb	IAmb	18 42 10.6	
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**61.25**	**316**	P	**P**	**18 41 39.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=95,slow=8.6,SNR=6.1						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**61.25**	**316**	P	**P**	**18 41 40.2**	**+0.5**
ILAR	**Eielson Array**	**68.39**	**25**	P	**P**	**18 42 24.8**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=255,slow=5.6,SNR=2.3						
	comp=Z,0.3nm,0.4s						

*VIE **15** 18:40:40.1±0.3, 46°.70N×10°.16E, h8km±4km, ml1.1/2, Error ellipse: s-maj=1.6km s-min=1.3km az=173.0 29 km ESE of Davos*

ZUR 15 18:40:40.1, 46°.68N×10°.15E, h9km±1km, MLh0.9/9, 2C-1D, Error ellipse: s-maj=2.2km s-min=1.0km az=267.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZER	**Zernez**	**0.04**	**291**	Pg	Pg	18 40 42.4	+0.2
SZER				Sg	Sg	18 40 43.7	+0.1
FUORN	**Ofenpass-Fuorn**	**0.10**	**129**	⇓Pg	Pg	18 40 43.3	+0.4
FUORN				Sg	Sg	18 40 45.3	+0.4
DAVOX	**Davos/Dischmat**	**0.21**	**298**	⇑Pg	Pg	18 40 44.8	+0.3
DAVOX				Sg	Sg	18 40 47.9	+0.4
BRMO	**Bormio**	**0.26**	**143**	Sg	Sg	18 40 49.4	+0.5
BERNI	**Berninapass**	**0.28**	**198**	⇑Pg	Pg	18 40 46.4	+0.5
BERNI				Sg	Sg	18 40 50.3	+0.5
FETA	**Feichten**	**0.52**	**50**	Pg	Pg	18 40 50.1	-0.2
FETA	**Feichten**	**0.52**	**50**	*i* Pg	Pg	18 40 50.1	-0.2
	0.2nm,0.0s						
FETA				*i* Sg	Sg	18 40 57.1	-0.2
	0.4nm,0.1s						

ROM 15 18:41:38.8±0.1, 43°.826N±0°.006×12°.119E±0°.007, h8km, ML1.0/3, Error ellipse: s-maj=0.7km s-min=0.5km az=227.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.21**	**292**	P	Pg	18 41 43.8	+0.7
SFI				S	Sg	18 41 47.6	+1.6
CRE	**Caprese Michel**	**0.24**	**211**	P	Pg	18 41 44.4	+0.8
CRE				S	Sg	18 41 48.6	+1.7
CRE				AML	AML		
	comp=E,42μm,1.3s						
CRE				AML	AML		
	comp=N,52μm,0.2s						
CRE				AML	AML		
	comp=E,42μm,0.7s						
ASQU	**Asqua**	**0.24**	**263**	P	Pg	18 41 44.3	+0.7
ASQU				S	Sg	18 41 48.3	+1.4
ASQU				AML	AML		
	comp=E,48μm,0.9s						
ASQU				AML	AML		
	comp=N,37μm,1.6s						
ASQU				AML	AML		
	comp=E,48μm,1.1s						
NARO	**Abbazia di Nar**	**0.40**	**123**	P	Pg	18 41 47.1	+0.5
NARO				S	Sb	18 41 53.9	-0.4
RUFI	**Rufina**	**0.44**	**272**	P	Pg	18 41 48.0	+0.6
RUFI				S	Sb	18 41 55.0	-0.6
RUFI				AML	AML		
	comp=E,68μm,1.6s						
RUFI				AML	AML		
	comp=N,78μm,1.6s						
RUFI				AML	AML		
	comp=E,68μm,0.4s						

*IDC **15** 19:11:49.1±1.7, 43°.55N×105°.39W, h0km, mb4.3/1, mbtmp3.9/3, ML3.4/2, MS3.2/5, Error ellipse: s-maj=43.2km s-min=8.4km az=152.0*

*NEIC **15** 19:11:51.0±1.4, 43°.62N±0°.05×105°.28W±0°.09, h0km±2km, ML3.4/56, Error ellipse: s-maj=10.6km s-min=8.5km az=87.0*

ISC 15 19:11:50.1±0.9, 43°.60N±0°.06×105°.29W±0°.06, h0km, n54, σ1°21/50, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.05**	**60**	Pg	**Pg**	**19 12 10.5**	**+0.3**
K22A	**Casper**	**1.31**	**224**		**Pg**	**19 12 14.2**	**-0.9**
K22A				IAML		19 12 37.1	
	comp=N,491nm,0.2s						
K22A				IAML		19 12 37.5	
	comp=E,516nm,0.8s						
PHWY	**Pilot Hill**	**2.30**	**183**		**Pn**	**19 12 30.3**	**+0.8**
RWWY	**Rawlins**	**2.38**	**217**		**Pn**	**19 12 32.1**	**+1.6**
RWWY				IAML		19 13 07.3	
	comp=E,256nm,0.9s						
RWWY				IAML		19 13 08.5	
	comp=E,263nm,0.7s						
N23A	**Red Feather La**	**2.75**	**190**		**Pn**	**19 12 37.1**	**+1.5**
N23A				IAML		19 13 18.4	
	comp=E,174nm,0.8s						
N23A				IAML		19 13 20.1	
	comp=N,129nm,0.8s						
LAO	**LASA Array**	**3.16**	**348**		**Pn**	**19 12 40.8**	**-0.3**
PD31	**Pinedale Array**	**3.23**	**257**		**Pn**	**19 12 42.4**	**+0.2**
PDAR	**Pinedale Array**	**3.23**	**257**	Pn	**Pn**	**19 12 42.6**	**+0.4**
	comp=N,2.1nm,0.3s,baz=79,slow=17,SNR=27						
PDAR				Pg	**Pb**	**19 12 49.1**	**+0.7**
	comp=N,6.6nm,0.3s,baz=76,slow=19,SNR=41						
PDAR				Lg	Lg	19 13 28.7	
	comp=N,11nm,0.3s,baz=73,slow=35,SNR=7.4						
PDAR				LR	LR	19 14 04.8	
	comp=N,262nm,19.8s,baz=100,slow=43						
	comp=N,2.1nm,0.3s						
PDAR	**Pinedale Array**	**3.23**	**257**		**Pn**	**19 12 42.5**	**+0.2**
BW06	**Boulder Array**	**3.23**	**257**		**Pn**	**19 12 42.4**	**+0.2**
RLMT	**Red Lodge**	**3.23**	**299**		**Pn**	**19 12 42.8**	**+0.5**
RLMT				IAML		19 13 41.8	
	comp=N,94nm,0.9s						
RLMT				IAML		19 14 49.6	
	comp=N,82nm,3.3s						
OGNE	**Ogallala**	**3.59**	**137**		**Pn**	**19 12 48.5**	**+1.5**
YMP	**Mirror Lake Pl**	**3.68**	**290**		**Pn**	**19 12 49.4**	**+0.9**
ISCO	**Idaho Springs**	**3.80**	**184**		**Pn**	**19 12 51.2**	**+1.0**
GCMT	**Greycliff**	**3.81**	**307**		**Pn**	**19 12 50.5**	**+0.3**
LOHW	**Long Hollow**	**3.86**	**272**		**Pn**	**19 12 52.2**	**+1.4**
LOHW				IAML		19 14 12.6	
	comp=N,44nm,1.2s						
H17A	**Grant Village**	**3.90**	**284**	Pn	**Pn**	**19 12 52.9**	**+1.5**
H17A				IAML		19 13 54.9	
	comp=N,45nm,1.5s						
H17A				IAML		19 14 02.9	
	comp=E,46nm,1.4s						
MOOW	**Moose Ponds**	**3.96**	**274**		**Pn**	**19 12 53.5**	**+1.2**
SNOW	**Snow King Moun**	**3.98**	**270**		**Pn**	**19 12 54.7**	**+2.2**
SNOW				IAML		19 14 21.8	
	comp=E,64nm,1.5s						
YNR	**Norris Junctio**	**4.04**	**288**		**Pn**	**19 12 55.6**	**+2.3**
YNR				IAML		19 14 06.1	
	comp=E,37nm,1.1s						
YNR				IAML		19 14 14.7	
	comp=N,35nm,1.7s						
YPP	**Pitchstone Pla**	**4.04**	**281**		**Pn**	**19 12 55.1**	**+1.7**
YPP				IAML		19 14 20.2	
	comp=E,33nm,1.4s						
YPP				IAML		19 15 18.3	
	comp=N,30nm,4.0s						
O20A	**White River Ci**	**4.10**	**213**		**Pn**	**19 12 55.7**	**+1.5**
IMW	**Indian Meadow**	**4.10**	**276**		**Pn**	**19 12 55.7**	**+1.4**
IMW				IAML		19 14 04.8	
	comp=N,43nm,1.0s						
IMW				IAML		19 14 10.9	
	comp=N,49nm,0.6s						
YHH	**Holmes Hill**	**4.17**	**288**		**Pn**	**19 12 56.6**	**+1.4**
YHH				IAML		19 14 05.8	
	comp=N,41nm,1.5s						
YHH				IAML		19 14 10.4	
	comp=E,33nm,1.5s						
AHID	**Auburn Hatcher**	**4.33**	**261**		**Pn**	**19 12 58.6**	**+1.3**
RDMU	**Red Mountain**	**4.39**	**228**		**Pn**	**19 12 60.0**	**+1.8**
RDMU				IAML		19 14 13.9	
	comp=N,34nm,1.4s						
RDMU				IAML		19 14 15.1	
	comp=E,48nm,1.4s						
E28A	**Huff**	**4.41**	**46**		**Pn**	**19 12 59.5**	**+1.3**
DGMT	**Dagmar**	**4.93**	**8**	Pn	**Pn**	**19 13 06.6**	**+1.2**
BOZ	**Bozeman (W)**	**4.95**	**296**		**Pn**	**19 13 06.5**	**+0.7**
BOZ				IAML		19 14 31.5	
	comp=E,22nm,0.8s						
BOZ				IAML		19 14 38.4	
	comp=E,25nm,1.1s						
KSCO	**Kaye Shedlock'**	**5.00**	**155**		**Pn**	**19 13 07.2**	**+0.7**
HWUT	**Hardware Ranch**	**5.04**	**249**		**Pn**	**19 13 07.4**	**+0.3**
P18A	**Preston Nutter**	**5.43**	**225**		**Pn**	**19 13 14.2**	**+1.6**
LRM	**Limekiln Ridge**	**5.57**	**296**		**Pn**	**19 13 14.9**	**+0.5**
MCMT	**McKenzie Canyo**	**5.57**	**285**		**Pn**	**19 13 17.4**	**+3.0**
HRY	**Holter Researc**	**5.58**	**306**		**Pn**	**19 13 15.4**	**+1.1**
CTU	**Camp Tracy**	**5.61**	**241**	Pn	**Pn**	**19 13 16.0**	**+1.1**
PV07	**Paradox Valley**	**5.75**	**207**		**Pn**	**19 13 17.5**	**+0.7**
PV15	**Paradox Valley**	**5.78**	**206**		**Pn**	**19 13 18.3**	**+1.0**
P17A	**Butcher Ranch,**	**5.81**	**227**		**Pn**	**19 13 17.8**	**+0.3**
SDCO	**Great Sand Dun**	**5.85**	**182**		**Pn**	**19 13 17.2**	**-1.1**
ECSD	**EROS Data Cent**	**6.29**	**86**		**Pn**	**19 13 24.3**	**+0.2**
T25A	**Trinidad**	**6.49**	**174**		**Pn**	**19 13 27.9**	**+0.9**
DUG	**Dugway, Tooele**	**6.56**	**241**		**Pn**	**19 13 28.4**	**+0.5**
MSO	**Missoula**	**6.91**	**301**	Pn	**Pn**	**19 13 33.1**	**+0.5**
JTMT	**Jette**	**7.54**	**306**	Pn	**Pn**	**19 13 41.7**	**+0.3**
KSU1	**Kansas State U**	**7.92**	**122**	Pn	**Pn**	**19 13 47.8**	**+1.3**
WALA	**Waterton Lakes**	**8.09**	**315**	Pn	**Pn**	**19 13 49.0**	**+0.2**
I10CA	**LAC DU BONNET**	**9.15**	**41**	I		20 02 50.0	
	comp=E,0.1nm,1.2s,baz=220,slow=315,SNR=4.5						
ULM	**Lac du Bonnet**	**9.26**	**41**	Pn	**Pn**	**19 14 02.6**	**-2.0**
	comp=E,1.5nm,0.3s,baz=230,slow=14,SNR=7.0						
ULM				Lg	Lg	19 16 38.1	
	comp=E,0.3nm,0.3s,baz=151,slow=13,SNR=2.0						
	comp=E,2.1nm,0.3s						
NEW	**Newport**	**9.47**	**304**	LR	LR	19 17 54.7	
	comp=E,133nm,20.0s,baz=114,slow=39						
BBB	**Bella Bella**	**17.49**	**307**	LR	LR	19 22 56.7	
	comp=E,139nm,19.8s,baz=49,slow=38						
FRB	**Frobisher Bay**	**29.03**	**33**	LR	LR	19 30 16.0	
	comp=E,34nm,20.4s,baz=190,slow=38						
FINES	**FINESS Array B**	**68.17**	**23**	P	**P**	**19 22 51.6**	**0.0**
	comp=E,4.0nm,1.1s,baz=309,slow=6.6,SNR=4.0						
	comp=E,4.0nm,1.1s						
KLR	**Kul'dur**	**74.94**	**325**	LR	LR	19 56 05.8	
	comp=E,19nm,20.7s,baz=144,slow=36						

*IDC **15** 19:13:19.7±1.1, 16°.72S×174°.76W, h0km, mb4.1/7, mbtmp4.1/7, MS3.7/36, Error ellipse: s-maj=39.6km s-min=27.5km az=132.0*

ISC 15 19:13:54.4±0.9, 16°.8S±0°.2×175°.1W±0°.2, h300km, n69, σ2°02/31, mb3.8/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.34**	**49**	LR	LR	19 15 33.7	
	comp=Z,656nm,20.9s,baz=204,slow=33						
MSVF	**Nonsavu**	**6.57**	**261**	LR	LR	19 17 28.8	
	comp=Z,2μm,18.0s,baz=71,slow=36						
DZM	**Mont Dzumac**	**18.13**	**250**	*e*LR	LR	19 22 21.0	
	comp=Z,815nm,25.4s						
DZM	**Mont Dzumac**	**18.13**	**250**	LR	LR	19 23 29.3	
	comp=Z,545nm,21.0s,baz=47,slow=33						
PAE	**Paea**	**24.43**	**96**	*e*T	T	19 43 09.1	
	2.2nm,0.2s						
PPT2	**Papeete2**	**24.43**	**96**	*e*LR	LR	19 23 58.9	
	comp=Z,479nm,26.5s						
PPT	**Papeete**	**24.43**	**96**	LR	LR	19 25 21.4	
	comp=Z,109nm,21.2s,baz=260,slow=30						
TVO	**Taravao**	**24.73**	**96**	*e*T	T	19 43 20.8	
	1.7nm,0.3s						
TBI	**Tubuai**	**24.96**	**109**	*e*LR	LR	19 24 23.2	
	comp=Z,462nm,28.2s						
TBI	**Tubuai**	**24.96**	**109**	*e*T	T	19 43 58.9	
	4.4nm,0.3s						
HNR	**Honiara**	**25.32**	**284**	LR	LR	19 27 24.0	
	comp=Z,7μm,19.3s,baz=93,slow=33						
RPZ	**Rata Peaks**	**29.27**	**201**	LR	LR	19 30 08.2	
	comp=Z,78nm,19.3s,baz=83,slow=34						
TAOE	**Nuku Hiva Isla**	**34.98**	**81**	*e*LR	LR	19 28 42.7	
	comp=Z,268nm,29.1s						
CTA	**Charters Tower**	**36.71**	**259**	LR	LR	19 34 06.8	
	comp=Z,151nm,19.0s,baz=78,slow=34						
PMG	**Port Moresby**	**37.40**	**277**	LR	LR	19 33 49.7	
	comp=Z,129nm,21.7s,baz=101,slow=33						
STKA	**Stephens Creek**	**41.89**	**241**	LR	LR	19 36 34.6	
	comp=Z,71nm,19.4s,baz=34,slow=33						
WRA	**Warramunga Arr**	**47.91**	**258**	P	**P**	**19 22 03.7**	**+0.2**
	0.6nm,0.9s,baz=92,slow=7.8,SNR=2.7						
WRA				LR	LR	19 41 03.5	
	comp=Z,99nm,19.5s,baz=86,slow=34						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**48.09**	**253**	P	**P**	**19 22 04.5**	**-0.4**
	7.8nm,0.8s,baz=86,slow=8.6,SNR=64						
ASAR				LR	LR	19 41 37.6	
	comp=Z,198nm,18.9s,baz=110,slow=35						
	7.8nm,0.8s						
GUMO	**Guam**	**49.72**	**305**	LR	LR	19 41 04.2	
	comp=Z,33nm,20.8s,baz=120,slow=33						
SIJI	**Sorong**	**55.06**	**281**	LR	LR	19 45 45.9	
	comp=Z,59nm,20.9s,baz=73,slow=35						
NWAO	**Narrogin (SRO)**	**62.48**	**241**	LR	LR	19 51 19.8	
	comp=Z,62nm,18.2s,baz=312,slow=36						
DAV	**Davao City (W)**	**63.22**	**287**	LR	LR	19 49 38.2	
	comp=Z,34nm,19.1s,baz=110,slow=34						
KAPI	**Kappang**	**64.75**	**272**	LR	LR	19 50 01.8	
	comp=Z,18nm,20.6s,baz=88,slow=34						
MJAR	**Matsushiro Arr**	**68.95**	**321**	P	**P**	**19 24 27.6**	**-0.1**
	1.6nm,0.9s,baz=144,slow=4.5,SNR=2.6						
MJAR				LR	LR	19 54 50.6	
	comp=Z,18nm,18.1s,baz=136,slow=36						
	1.6nm,0.9s						
SHEM	**Shemya Is, Ala**	**69.87**	**353**	LR	LR	19 47 52.7	
	comp=Z,28nm,21.9s,baz=325,slow=30						
JOW	**Kunigami**	**69.98**	**307**	LR	LR	19 49 43.6	
	comp=Z,50nm,19.1s,baz=74,slow=31						
QSPA	**South Pole Qui**	**73.25**	**180**	P	**P**	**19 24 52.6**	**-0.4**
	1.7nm,0.9s,baz=13,slow=4.5,SNR=3.6						
QSPA				LR	LR	19 50 53.6	
	comp=Z,15nm,19.6s,baz=46,slow=31						
	1.7nm,0.9s						
PETK	**Petropavlovsk-**	**73.47**	**343**	P	**P**	**19 24 53.6**	**-0.6**
	6.1nm,1.1s,baz=170,slow=13,SNR=2.2						
PETK				LR	LR	19 53 29.9	
	comp=Z,21nm,19.5s,baz=139,slow=33						
	6.1nm,1.1s						
PFO	**Pinyon Flats O**	**75.10**	**48**	LR	LR	19 49 21.6	
	comp=Z,76nm,20.4s,baz=232,slow=29						
LPIG	**La Paz**	**75.19**	**59**	LR	LR	19 50 06.0	
	comp=Z,67nm,18.6s,baz=235,slow=30						
YBH	**Yreka Blue Hor**	**75.73**	**38**	LR	LR	19 48 49.9	
	comp=Z,70nm,19.9s,baz=212,slow=28						
LEM	**Lembang**	**75.88**	**267**	LR	LR	19 58 55.5	
	comp=Z,77nm,19.3s,baz=166,slow=36						
KSRS	**Korea Array**	**76.00**	**317**	LR	LR	19 56 23.7	
	comp=Z,12nm,18.8s,baz=120,slow=34						
NVAR	**Mina Array Bea**	**76.49**	**43**	LR	LR	19 50 50.0	
	comp=Z,89nm,21.7s,baz=274,slow=30						
KDAK	**Kodiak Island**	**76.63**	**12**	LR	LR	19 50 40.0	
	comp=Z,43nm,21.1s,baz=199,slow=29						
USRK	**Ussuriysk Ar.**	**77.51**	**324**	LR	LR	19 53 32.1	
	comp=Z,51nm,20.5s,baz=134,slow=31						
ELK	**Elko**	**79.74**	**42**	LR	LR	19 51 39.1	
	comp=Z,77nm,20.8s,baz=246,slow=29						
TXAR	**Lajitas Array**	**82.78**	**57**	P	**P**	**19 25 45.8**	**0.0**
	0.7nm,1.0s,baz=270,slow=3.6,SNR=3.0						
TXAR				LR	LR	19 54 02.9	
	comp=Z,50nm,19.8s,baz=251,slow=30						
	0.7nm,1.0s						
ANMO	**Albuquerque**	**82.98**	**50**	LR	LR	19 55 15.1	
	comp=Z,49nm,20.8s,baz=260,slow=30						
PMSA	**Palmer Station**	**83.58**	**156**	LR	LR	19 52 36.9	
	comp=Z,32nm,21.7s,baz=167,slow=28						
ILAR	**Eielson Array**	**84.15**	**12**	P	**P**	**19 25 51.3**	**-0.4**
	2.5nm,1.1s,baz=218,slow=5.0,SNR=8.9						
	2.5nm,1.1s						
CMIG	**Matias Romero**	**85.92**	**71**	LR	LR	19 55 47.7	
	comp=Z,42nm,20.8s,baz=208,slow=30						
PLCA	**Paso Flores**	**89.81**	**133**	LR	LR	19 58 29.9	
	comp=Z,43nm,21.9s,baz=222,slow=30						
SNAA	**Sanae**	**91.59**	**178**	LR	LR	20 03 13.9	
	comp=Z,20nm,21.1s,baz=184,slow=33						
ATAH	**Atahualpa**	**94.37**	**99**	LR	LR	19 59 02.1	
	comp=Z,61nm,21.4s,baz=254,slow=29						
OSTC	**Ostas**	**145.11**	**347**	*e*P	**PKiKP**	**19 32 59.1**	**-1.1**
DPC	**Dobruska-Polom**	**145.29**	**347**	*e*P	**PKiKP**	**19 32 58.7**	**-1.9**
DPC				*ex*	x	19 33 03.7	
KRLC	**Kraliky**	**145.44**	**346**	*e*P	**PKiKP**	**19 32 58.9**	**-2.0**
KRLC				*ex*	x	19 33 03.7	
MORC	**Moravsky Berou**	**145.54**	**345**	*e*PKP	**PKiKP**	**19 33 03.3**	**+2.2**
MAUC	**Maruska**	**145.86**	**345**	*e*P	**PKiKP**	**19 33 01.6**	**-0.2**
PRU	**Pruhonice**	**145.99**	**349**	*e*P	**PKiKP**	**19 33 01.1**	**-0.9**
PRU				*ex*	x	19 33 06.1	
NKC	**Novy Kostel**	**146.10**	**351**	*e*P	**PKiKP**	**19 33 06.4**	**+4.2**
BRTR	**Keskin Array B**	**146.13**	**318**	PKPbc	**PKiKP**	**19 33 02.6**	**-0.1**
	1.8nm,0.9s,baz=90,slow=3.8,SNR=7.3						
VRAC	**Vranov**	**146.21**	**346**	*e*PKP	**PKiKP**	**19 33 06.7**	**+4.2**
JAVC	**Velka Javorina**	**146.36**	**345**	*e*PKP	**PKiKP**	**19 33 08.1**	**+5.2**
KRUC	**Moravsky**	**146.48**	**346**	*e*PKP	**PKiKP**	**19 33 07.4**	**+4.4**
KHC	**Kasperske Hory**	**146.99**	**349**	*e*P	**PKiKP**	**19 33 03.6**	**-0.5**
CKRC	**Cesky Krumlov**	**147.15**	**348**	*e*P	**PKPab**	**19 33 04.3**	**-0.4**
GERES	**GERESS Array B**	**147.24**	**349**	PKPbc	**PKiKP**	**19 33 03.2**	**-1.5**
	0.7nm,0.8s,baz=353,slow=4.2,SNR=4.4						
CONA	**Conrad Observa**	**147.67**	**346**	P	**PKPab**	**19 33 07.7**	**+0.7**
	3.6nm,1.0s						
MOA	**Molln**	**148.09**	**348**	P	**PKPab**	**19 33 08.2**	**-0.3**
	9.5nm,1.3s						
SOKA	**Soboth**	**149.04**	**346**	P	**PKPab**	**19 33 14.3**	**+1.8**
	7.6nm,1.5s						
WATA	**Walderalm**	**149.05**	**351**	P	**PKPab**	**19 33 12.6**	**0.0**
	7.9nm,1.4s						
MOTA	**Moosalm**	**149.11**	**352**	P	**PKPab**	**19 33 13.7**	**+0.8**
	5.2nm,1.1s						
SQTA	**Sankt Quirin**	**149.22**	**352**	P	**PKPab**	**19 33 14.1**	**+0.8**
	10nm,1.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE				eS	Sn	19 22 53.4	+0.8
RTR	**El Retiro**	0.57	67	eP	Pn	19 22 41.3	-0.5
SBLS	**San Blas**	0.57	74	eP	Pn	19 22 41.4	-0.5
SNJE	**San Jose**	0.60	71	eP	Pn	19 22 41.7	-0.3
UNIC	**Universidad Ca**	0.69	64	eP	Pn	19 22 42.1	-0.7
UNIC				eS	Sn	19 22 54.7	+0.3
PCG	**Pacaya**	0.82	330	eP	Pn	19 22 44.1	-0.4
PCG				eS	Sn	19 22 58.5	+1.4
PMON	**Piamonte**	0.85	88	eP	Pn	19 22 44.3	-0.3
PMON				eS	Sn	19 22 58.0	+0.5
NBG	**Las Nubes**	0.92	350	eP	Pn	19 22 45.7	+0.1
NBG				eS	Sn	19 23 00.4	+1.2
FUG	**Fuego 3**	0.99	320	eP	Pn	19 22 45.7	-0.7
FUG				eS	Sn	19 23 01.0	+0.3
MTO3	**Montecristo**	1.08	48	⇓iP	Pn	19 22 46.7	-0.7
MTO3				eS	Sn	19 23 02.2	-0.3
SJTE	**Alcalda de S**	1.15	93	eP	Pn	19 22 48.0	-0.1
SJTE				eS	Sn	19 23 04.9	+1.1
SJTE				IAML		19 23 08.3	
	comp=Z,360nm,0.2s						
ESQI	**Esquipulas**	1.20	43	eP	Pn	19 22 48.3	-0.5
ESQI				eS	Sn	19 23 05.5	+0.4
P5NO	**Presa 5 de nov**	1.42	77	eP	Pn	19 22 50.8	-0.8
P5NO				eS	Sn	19 23 10.0	+0.2
MRL	**Marmol**	1.48	19	eP	Pn	19 22 52.8	+0.3
MRL				eS	Sn	19 23 11.1	-0.4
STG3	**Santiaguito 3,**	1.69	308	eP	Pn	19 22 54.7	-0.5
STG3				eS	Sn	19 23 16.2	-0.2
CNCH	**Conchagua**	2.32	100	eP	Pn	19 23 03.7	+0.1

*SOME **15** 19:23:56.4, 40.°88N×83.°27E, h10km*
*NNC **15** 19:23:58.0±2.1, 41.°42N×83.°75E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=14.8km s-min=9.8km az=146.0
ISC 15 19:23:51.2±2.9, 40.°8N±0.°1×83.°44E±0.°09, h10km, n22, σ1°81/29, 8C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	3.79	310	eP	Pb	19 24 59.6	+1.4
SHLS	7.2nm,0.3s			eS	Sb	19 25 45.2	+0.9
	52nm,0.3s						
SHLS	**Shalkode**	3.79	310	Pg	Pb	19 24 59.6	+1.4
SHLS	7.2nm,0.3s			Lg	Lg	19 25 45.2	
	52nm,0.3s						
PDGK	**Podgornoye**	3.88	312	⇓Pn	Pb	19 24 57.7	-2.0
PDGK	1.4nm,0.5s			⇓Pg	Pg	19 25 06.4	+0.9
	12nm,0.6s						
PDGK				⇑Sn	Sn	19 25 42.0	+5.3
	13nm,0.6s						
PDGK				⇑Lg	Lg	19 25 57.6	
	40nm,0.8s						
UZB	**Uzynbulak**	4.05	307	eP	Pg	19 25 08.8	+0.1
UZB	2.7nm,0.3s			eS	Sg	19 26 00.7	-0.4
	26nm,0.6s						
UZB	**Uzynbulak**	4.05	307	Pg	Pg	19 25 08.8	+0.1
UZB	2.7nm,0.3s			Lg	Lg	19 26 00.7	
	26nm,0.6s						
SATY	**Saty**	4.38	303	eP	Pg	19 25 12.8	-2.3
SATY	2.2nm,0.2s			eS	Sg	19 26 08.1	-3.8
	19nm,0.5s						
SATY	**Saty**	4.38	303	Pg	Pg	19 25 12.8	-2.3
SATY	2.2nm,0.2s			Lg	Lg	19 26 08.1	
	19nm,0.5s						
KPKS	**Kokpek**	4.43	309	eP	Pg	19 25 15.0	-1.0
KPKS	3.9nm,0.2s			eS	Sg	19 26 11.6	-1.8
	51nm,0.4s						
KPKS	**Kokpek**	4.43	309	Pg	Pg	19 25 15.0	-1.0
KPKS	3.9nm,0.2s			Lg	Lg	19 26 11.6	
	51nm,0.4s						
DJR	**Jarkent**	4.45	324	eP	Pg	19 25 15.1	-1.2
DJR				eS	Sg	19 26 12.0	-1.9
DJR	**Jarkent**	4.45	324	Pg	Pg	19 25 15.1	-1.2
DJR				Lg	Lg	19 26 12.0	
MDOK	**Medeo**	5.32	299	eP	Pg	19 25 33.0	0.0
MDOK	3.3nm,0.4s			eS	Sg	19 26 43.1	+1.2
	14nm,0.7s						
MDOK	**Medeo**	5.32	299	Pg	Pg	19 25 33.0	0.0
MDOK	3.3nm,0.4s			Lg	Lg	19 26 43.1	
	14nm,0.7s						
TNSS	**Tian-Shan**	5.34	297	eP	Pg	19 25 32.6	-0.7
TNSS	1.2nm,0.2s			eS	Sg	19 26 41.8	-0.7
	5.4nm,0.6s						
TNSS	**Tian-Shan**	5.34	297	Pg	Pg	19 25 32.6	-0.7
TNSS	1.2nm,0.2s			Lg	Lg	19 26 41.8	
	5.4nm,0.6s						
MK31	**Makanchi Array**	6.05	352	Pn	Pn	19 25 19.9	-0.8
MK31	0.3nm,0.4s,baz=159,slow=14,SNR=13			⇑Pg	Pb	19 25 37.6	+0.9
	3.5nm,0.8s,baz=179,slow=13,SNR=5.2						
MK31				⇑Sn	Sn	19 26 25.2	-4.9
	1.4nm,0.3s,baz=181,slow=24,SNR=5.9						
MK31				⇓Lg	Lg	19 26 51.6	
	13nm,0.7s,baz=173,slow=33,SNR=4.4						
MAKZ	**Makanchi**	6.10	351	⇓Sn	Sn	19 26 26.9	-4.4
MAKZ	3.8nm,0.6s			⇑Lg	Lg	19 26 54.1	
	14nm,0.8s						
KUU	**Kurty**	6.10	303	eP	Pg	19 25 46.7	-1.3
KUU	1.1nm,0.7s			eS	Sg	19 27 05.5	-1.6
	5.2nm,0.7s						
KUU	**Kurty**	6.10	303	Pg	Pg	19 25 46.7	-1.3
KUU	1.1nm,0.7s			Lg	Lg	19 27 05.5	
	5.2nm,0.7s						
TKM2	**Tokmak 2**	6.23	293	⇑Pn	Pn	19 25 32.1	+8.8
TKM2	0.9nm,0.5s			⇓Sn	Sb	19 26 46.3	-8.2
	3.1nm,0.6s						
TKM2				⇑Lg	Lg	19 27 17.8	
	7.3nm,0.6s						
ZSN	**Zaisan**	6.73	8	Pg	Pg	19 25 55.2	-4.9
ZSN	2.2nm,0.6s			Lg	Lg	19 27 20.0	
	16nm,0.7s						
KURK	**Kurchatov**	10.47	343	⇑Lg	Lg	19 29 16.3	
	9.5nm,1.3s						

*MAN **15** 19:32:01.1, 6.°10N×126.°19E, h158km, mb5.0, ML3.9, MS3.9*
*IDC **15** 19:32:02.4±0.7, 6.°07N×126.°12E, h150km±6km, mb3.6/10, mbtmp4.1/12, MS3.2/1, Error ellipse: s-maj=26.7km s-min=11.2km az=73.0*
*DJA **15** 19:32:02.6±0.3, 6.°N±4.°×12.°6E±.°, h139km±4km, M4.4/21, mB4.9/8, mb4.4/21, MLv4.6/10, Mw(mB)4.2/8*
*NEIC **15** 19:32:02.8±1.6, 6.°05N±0.°07×126.°22E±0.°06, h146km±7km, mb4.5/25, Error ellipse: s-maj=12.4km s-min=4.2km az=222.0*
ISC 15 19:32:02.3±0.6, 6.°06N±0.°04×126.°12E±0.°06, h147km±6km, n110, σ1°21/124, mb4.2/18, 4C-10D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	0.41	277	⇓eP	Pn	19 32 22.4	-0.5
DDMP				eS	Sn	19 32 37.2	-1.3
MATI	**Mati**	0.90	9	⇓eP	Pn	19 32 25.3	-0.6
MATI				eS	Sn	19 32 46.0	+2.0
DAV	**Davao City (W)**	1.14	332	P	Pn	19 32 27.3	-0.8
	193nm,0.3s,baz=236,slow=3.7,SNR=13						
DAV				LR	LR	19 32 45.7	
	comp=Z,28nm,21.9s,baz=172,slow=38						
DAV				S	Sn	19 32 48.5	+0.7
	1μm,0.4s,baz=290,slow=24,SNR=24						
DAV	**Davao City (W)**	1.14	332	Pn	Pn	19 32 28.7	+0.6
DAV				Sn	Sn	19 32 49.7	+1.8
DAV	**Davao City (W)**	1.14	332	P	Pn	19 32 28.6	+0.5
DAV				S	Sn	19 32 47.6	-0.2
GSPH	**General Santos**	1.16	272	⇓eP	Pn	19 32 27.2	-1.2
GSPH				i S	Sn	19 32 47.3	-1.0
KCP	**Kidapawan**	1.39	313	⇓iP	Pn	19 32 30.5	-0.1
KCP				i S	Sn	19 32 52.6	+0.4
SKMP	**Bagumbayan, Su**	1.63	286	⇓eP	Pn	19 32 32.1	-1.0
SKMP				eS	Sn	19 32 56.6	-0.1
BUKP	**Musuan**	2.09	330	⇓iP	Pn	19 32 38.8	+0.3
BUKP				i S	Sn	19 33 06.7	+0.5
BIPH	**Bislig**	2.13	6	⇑eP	Pn	19 32 37.6	-1.2
BIPH				i S	Sn	19 33 06.6	-0.3
CTBH	**Cotabato--PC H**	2.19	302	⇓iP	Pn	19 32 39.2	-0.4
SGSI	**Sangihe**	2.43	194	P	Pn	19 32 42.9	+0.5
CGP	**Cagayan de Oro**	2.77	329	⇑eP	Pn	19 32 47.3	+0.6
CGP				eS	Sn	19 33 21.0	0.0
BUTP	**Butuan**	2.94	350	⇑eP	Pn	19 32 48.1	-0.6
BUTP				eS	Sn	19 33 27.4	+2.6
GLSP	**General Luna,**	3.70	0	⇓eP	Pn	19 32 57.8	-0.9
GLSP				eS	Sn	19 33 26.0	-1.6
SCPH	**Surigao**	3.75	350	eP	Pn	19 33 00.9	+1.6
SCPH				i S	Sn	19 33 43.0	-0.6
LSIP	**Lazi, Siquijor**	3.93	321	⇓iP	Pn	19 33 02.0	+0.4
GHBP	**Garcia Hernand**	3.97	333	⇓eP	Pn	19 33 02.1	-0.1
SNPH	**Sibulan**	4.34	319	eP	Pn	19 33 08.2	+1.2
TABP	**Talibon, Bohol**	4.38	336	⇑eP	Pn	19 33 07.2	-0.4
TABP				eS	Sn	19 33 56.2	-2.1
GAMI	**Galela, Maluku**	4.51	158	P	Pn	19 33 08.3	-0.9
TNTI	**Ternate**	5.39	167		Pn	19 33 20.2	-0.8
TNTI				Sn	Sn	19 34 19.2	-3.2
TNTI	**Ternate**	5.39	167	P	Pn	19 33 20.3	-0.7
TNTI	**Ternate**	5.39	167	P	Pn	19 33 20.6	-0.4
KMSI	**Cibinong**	5.85	201	P	Pn	19 33 27.8	+0.8
	0.6nm221nm,0.8s						
GTOI	**Gorontalo**	6.21	210	P	Pn	19 33 31.7	-0.2
	0.3nm844nm85nm,0.7s						
LBMI	**Labuha**	6.79	168	P	Pn	19 33 39.1	-0.5
	0.5nm1μm33nm,0.9s						
MRSI	**Marisa**	6.94	217	P	Pn	19 33 39.9	-1.7
	0.2nm678nm38nm,1.1s						
TOLI2	**Tolitoli**	7.24	228	Pn	Pn	19 33 45.5	-0.2
MYLDM	**Lahad Datu**	7.63	264		Pn	19 33 53.3	+2.4
LUWI	**Luwuk**	7.80	205	Pn	Pn	19 33 53.8	+0.7
LUWI	**Luwuk**	7.80	205	P	Pn	19 33 44.9	-8.3
SANI	**Sanana**	8.05	181	P	Pn	19 33 53.1	-3.4
	11μm140nm,0.7s						
SANI	**Sanana**	8.05	181	P	Pn	19 33 53.4	-3.1
APSI	**Ampana**	8.23	213	P	Pn	19 34 02.2	+3.3
	62nm,1.1s						
MPSI	**Mapaga**	8.41	228	P	Pn	19 34 01.6	+0.2
	9.6nm,1.4s						
SIJI	**Sorong**	8.59	143	P	Pn	19 34 02.8	-0.8
	8.2nm,0.3s,baz=332,slow=15,SNR=21						
SIJI	**Sorong**	8.59	143	P	Pn	19 34 02.6	-1.1
	487nm10nm,0.6s						
NLAI	**Namlea**	9.28	174	P	Pn	19 34 11.1	-1.9
KRAI	**Karang Ratu**	9.59	166	P	Pn	19 34 16.7	-0.3
	1μm21nm,0.5s						
AAI	**Ambon**	9.90	168	P	Pn	19 34 20.3	-0.8
	24nm,0.7s						
FAKI	**Fak Fak**	10.81	145	Pn	Pn	19 34 32.4	-0.8
FAKI	**Fak Fak**	10.81	145	P	Pn	19 34 32.8	-0.5
	34nm,1.5s						
FAKI	**Fak Fak**	10.81	145	P	Pn	19 34 34.0	+0.7
TTSI	**Tana Toraja**	11.01	215	P	Pn	19 34 38.4	+2.5
	832nm74nm,1.1s						
BNSI	**Bone**	12.00	210	P	Pn	19 34 49.2	+0.4
	20nm,1.0s						
KAPI	**Kappang**	12.70	210	P	Pn	19 34 57.3	-0.6
	13nm,0.8s,baz=25,slow=23,SNR=7.2						
KAPI	**Kappang**	12.70	210	P	Pn	19 34 58.2	+0.3
	17nm,0.8s						
SBUM	**Sibu**	14.31	256	P	P	19 35 22.6	+1.4
MMRI	**Maumere**	15.10	195		P	19 35 33.0	+3.0
MMRI				IAmb	IAmb	19 35 38.4	
	comp=Z,25nm,1.0s						
SOEI	**Soe**	15.81	187		P	19 35 38.7	+0.7
SOEI				IAmb	IAmb	19 35 43.7	
	comp=Z,17nm,0.6s						
SOEI	**Soe**	15.81	187	P	P	19 35 38.5	+0.5
	comp=Z,28nm,0.9s						
SOEI	**Soe**	15.81	187	P	Pn	19 35 37.5	+0.3
GENI	**Genyem**	16.45	121	P	P	19 35 47.4	+2.5
PLAI	**Plampang**	16.96	209	P	P	19 35 50.6	0.0
	comp=Z,48nm,0.8s						
PLAI	**Plampang**	16.96	209	P	P	19 35 47.6	-3.0
TWSI	**Taliwang, Sumb**	17.34	212	P	P	19 35 54.4	-0.3
	comp=Z,16nm,0.8s						
KLNI	**Mataram**	17.51	215	P	Pn	19 35 57.5	-0.2
YULB	**Yu-li**	17.85	345	P	P	19 35 58.4	-1.8
YULB				IAmb	IAmb	19 35 58.6	
	comp=Z,45nm,1.5s						
TPUB	**Ta-pu**	17.94	343	P	P	19 35 59.6	-1.7
JAGI	**Jajag, Banyuwa**	18.72	220	P	P	19 36 10.8	+0.9
JAGI				IAmb	IAmb	19 36 12.0	
	comp=Z,20nm,0.9s						
JAGI	**Jajag, Banyuwa**	18.72	220	P	P	19 36 11.0	+1.1
	comp=Z,28nm,1.3s						
MTN	**Manton Dam**	19.43	165	P	P	19 36 18.1	+0.7
MTN				IAmb	IAmb	19 36 36.1	
	comp=Z,26nm,1.3s						
MTN	**Manton Dam**	19.43	165	P	P	19 36 18.3	+0.9
KNRA	**Kununurra**	21.75	173	P	P	19 36 42.4	+0.1
KNRA	**Kununurra**	21.75	173	P	P	19 36 43.0	+0.7
COEN	**Coen**	26.11	140	P	P	19 37 23.5	+0.7
COEN				IAmb	IAmb	19 37 27.2	
	comp=Z,19nm,0.9s						
COEN	**Coen**	26.11	140	P	P	19 37 24.8	+2.0
WB0	**Warramunga Arr**	26.92	163	P	P	19 37 29.4	-0.6
WB0				IAmb	IAmb	19 37 43.3	
	comp=Z,4.4nm,0.5s						
WRAB	**Tennant Creek**	27.07	163	P	P	19 37 33.2	+1.9
WRA	**Warramunga Arr**	27.07	163	P	P	19 37 30.8	-0.5
	comp=Z,0.3nm,0.4s,baz=338,slow=10,SNR=9.6						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	27.07	163	P	P	19 37 31.1	-0.2
PSI	**Prapat**	27.30	264	LR	LR	19 49 15.5	
	comp=Z,52nm,18.8s,baz=71,slow=38						
MBWA	**Marble Bar**	27.76	193	P	P	19 37 36.3	-1.2
PSA00	**Pilbara Seismi**	28.14	192	P	P	19 37 40.0	-0.8
PSA00				IAmb	IAmb	19 37 41.1	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	28.14	192	P	P	19 37 40.5	-0.3
PSA00				IAmb	IAmb	19 37 55.3	
	comp=Z,9.3nm,1.4s						
PSA00	**Pilbara Seismi**	28.14	192	P	P	19 37 40.5	-0.3
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	29.22	297	P	P	19 37 50.5	0.0
	comp=Z,1.2nm,0.3s,baz=118,slow=7.3,SNR=4.5						
	comp=Z,1.2nm,0.3s						
QIS	**Mount Isa**	29.58	154	P	P	19 37 55.8	+2.2
AS31	**Alice Springs**	30.50	166	P	P	19 38 00.5	-1.3
ASAR	**Alice Springs**	30.50	166	P	P	19 38 01.6	-0.2
	comp=Z,1.1nm,0.4s,baz=343,slow=7.2,SNR=32						
ASAR				PcP	PcP	19 40 57.1	-0.3
	comp=Z,0.4nm,0.6s,baz=347,slow=3.1,SNR=4.1						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	30.50	166	P	P	19 38 01.3	-0.5
AS01	**Alice Springs**	30.51	166	P	P	19 38 01.2	-0.6
	comp=Z,4.8nm,1.2s						
WRKA	**Warakurna**	30.98	176	P	P	19 38 06.1	+0.2
MJB9	**Matsu-Tunnel**	32.30	18	P	P	19 38 16.8	-0.6
MJB9				IAmb	IAmb	19 38 17.5	
	comp=Z,14nm,1.4s						
MEEK	**Meekatharra**	33.30	192	P	P	19 38 25.5	-0.7
OOD	**Oodnadatta**	34.90	165	P	P	19 38 41.4	+1.5
MORW	**Morawa**	36.24	195	P	P	19 38 50.9	-0.5
MORW				IAmb	IAmb	19 39 01.0	
	comp=Z,22nm,1.3s						
MORW	**Morawa**	36.24	195	P	P	19 38 51.1	-0.3
FORT	**Forrest**	36.67	177	P	P	19 38 55.0	0.0
MULG	**Mulgathing**	36.92	169	P	P	19 38 57.6	+0.5
NWAO	**Narrogin (SRO)**	39.68	192	P	P	19 39 20.5	+0.4
	comp=Z,17nm,0.9s,baz=234,slow=7.2,SNR=9.1						
	comp=Z,17nm,0.9s						
NWAO	**Narrogin (SRO)**	39.68	192	P	P	19 39 20.1	0.0
BBOO	**Buckleboo**	39.79	167	P	P	19 39 20.9	-0.1
STKA	**Stephens Creek**	40.51	160	P	P	19 39 27.5	+0.5
	comp=Z,3.2nm,0.8s,baz=347,slow=8.8,SNR=5.0						
	comp=Z,3.2nm,0.8s						
STKA	**Stephens Creek**	40.51	160	P	P	19 39 27.0	0.0
PETK	**Petropavlovsk-**	53.53	23	P	P	19 41 07.7	-0.1
	comp=Z,1.4nm,0.7s,baz=235,slow=6.7,SNR=4.2						
	comp=Z,1.4nm,0.7s						
PETK	**Petropavlovsk-**	53.53	23	P	P	19 41 07.3	-0.4
MKAR	**Makanchi Array**	55.31	325	P	P	19 41 19.6	-1.2
	comp=Z,0.5nm,0.3s,baz=118,slow=7.0,SNR=16						
	comp=Z,0.5nm,0.3s						
TIXI	**Tiksi**	65.54	1	P	P	19 42 30.1	+0.4
ABKAR	**Akbulak array**	69.98	320	P	P	19 42 56.4	-1.4
ABKAR	**Akbulak array**	69.98	320	P	P	19 42 56.3	-1.5
ABKAR				IAmb	IAmb	19 43 14.1	
	comp=Z,5.3nm,1.4s						
IMAR	**Indian Mountai**	80.48	24	P	P	19 43 58.4	+0.8
H21K	**Melozitna Rive**	80.83	25	P	P	19 44 00.3	+0.7
SKT	**Skwentna**	81.09	28	P	P	19 44 00.6	-0.4
SKT				IAmb	IAmb	19 44 12.9	
	comp=Z,9.5nm,1.4s						
I21K	**Tanana**	81.13	25	P	P	19 44 02.3	+1.2
I21K				IAmb	IAmb	19 44 14.5	
	comp=Z,8.5nm,1.5s						
ILAR	**Eielson Array**	83.28	26	P	P	19 44 12.1	-0.2
	comp=Z,0.4nm,0.5s,baz=252,slow=5.7,SNR=5.4						
	comp=Z,0.4nm,0.5s						
BMAR	**Burnt Mountain**	84.18	23	P	P	19 44 18.5	+1.6
VNDA	**Vanda**	85.80	173	P	P	19 44 23.2	-1.4
	comp=Z,0.4nm,0.7s,baz=316,slow=3.1,SNR=2.3						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	89.51	332	P	P	19 44 42.6	-0.1
	comp=Z,2.7nm,1.0s,baz=297,slow=1.7,SNR=3.9						
	comp=Z,2.7nm,1.0s						

*SOME **15** 19:42:23.6, 46.°02N×82.°78E, h5km*
*NNC **15** 19:42:25.4±0.5, 46.°01N×82.°75E, h5km±4km, mb3.6, mpv3.3, Error ellipse: s-maj=5.4km s-min=1.7km az=104.0*
*ASRS **15** 19:42:28.1±0.5, 46.°N±3.°×8.°3E±.°, h4km, MLh3.8/7, Error ellipse: s-maj=6.1km s-min=3.0km az=167.9, confirmed*
ISC 15 19:42:24.3±1.3, 46.°13N±0.°03×83.°11E±0.°03, h1km±10km, n48, σ1°78/91, 11C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	0.87	320	⇑P	Pg	19 42 41.4	+0.4
	2.0nm,0.2s,baz=0.7,slow=29,SNR=3499						
MK31				⇑S	Sb	19 42 54.1	-0.3
	31nm,0.3s,baz=137,slow=34,SNR=52						
MKAR	**Makanchi Array**	0.87	320	Pg	Pg	19 42 41.3	+0.2
MKAR				Sg	Sb	19 42 54.4	-0.1
MAKZ	**Makanchi**	1.04	311	⇑P	Pg	19 42 44.0	-0.2
	3.5nm,0.3s						
MAKZ				⇑S	Sn	19 42 59.1	-2.0
	42nm,0.5s						
MAKZ	**Makanchi**	1.04	311	Pg	Pg	19 42 44.0	-0.2
MAKZ				Sg	Sb	19 42 58.9	-0.2
ZSN	**Zaisan**	1.78	42	eP	Pn	19 42 57.6	+1.3
	20nm,0.2s						
ZSN				eS	Sg	19 43 22.7	+1.1
	59nm,0.3s						
ZSN	**Zaisan**	1.78	42	P	Pn	19 42 57.6	+1.3
	20nm,0.2s						
ZSN				S	Sg	19 43 22.7	+1.1
	59nm,0.3s						
DJR	**Jarkent**	2.96	234	eP	Pn	19 43 14.5	+2.0
	6.1nm,0.3s						
DJR				eS	Sb	19 43 51.5	-3.0
	40nm,0.6s						
DJR	**Jarkent**	2.96	234	Pg	Pn	19 43 14.5	+2.0
	6.1nm,0.3s						
DJR				Lg	Lg	19 43 51.5	
	40nm,0.6s						
KTMS	**Ketmen**	3.33	217	eP	Pb	19 43 21.3	-2.9
	4.0nm,0.2s						
KTMS				eS	Sb	19 44 03.3	-2.0
	21nm,0.3s						
KTMS	**Ketmen**	3.33	217	Pg	Pb	19 43 21.3	-2.9
	4.0nm,0.2s						
KTMS				Lg	Lg	19 44 03.3	
	21nm,0.3s						
TDK	**Taldyqorghan**	3.50	253	eP	Pb	19 43 24.6	-2.3
	7.8nm,0.1s						
TDK				eS	Sb	19 44 08.8	-1.1
	40nm,0.6s						
TDK	**Taldyqorghan**	3.50	253	Pg	Pb	19 43 24.7	-2.3
	7.8nm,0.1s						
TDK				Lg	Lg	19 44 08.8	
	40nm,0.6s						
PDGK	**Podgornoye**	3.81	224	⇓Pn	Pn	19 43 22.0	-2.3
	1.1nm,0.2s						
PDGK				⇑Pg	Pb	19 43 31.2	-1.3
	9.1nm,0.7s						
PDGK				⇑Lg	Lg	19 44 19.6	
	38nm,0.7s						
SHLS	**Shalkode**	3.96	223	eP	Pn	19 43 29.2	+3.0
	7.1nm,0.4s						
SHLS				eS	Sn	19 44 16.5	+3.2
	74nm,0.7s						
SHLS	**Shalkode**	3.96	223	Pg	Pn	19 43 29.2	+3.0
	7.1nm,0.4s						
SHLS				Lg	Lg	19 44 16.5	
	74nm,0.7s						
KPKS	**Kokpek**	4.13	231	eP	Pb	19 43 35.8	-2.0
	4.4nm,0.1s						
KPKS				eS	Sb	19 44 27.8	-0.5
	76nm,0.5s						
KPKS	**Kokpek**	4.13	231	Pg	Pb	19 43 35.8	-2.0
	4.4nm,0.1s						
KPKS				Lg	Lg	19 44 27.8	
	76nm,0.5s						
UZB	**Uzynbulak**	4.18	226	eP	Pb	19 43 36.2	-2.4
	2.2nm,0.2s						
UZB				eS	Sb	19 44 28.4	-1.2
	18nm,0.4s						
UZB	**Uzynbulak**	4.18	226	Pg	Pb	19 43 36.2	-2.4
	2.2nm,0.2s						
UZB				Lg	Lg	19 44 28.4	
	18nm,0.4s						
SATY	**Saty**	4.56	229	eP	Pb	19 43 44.3	-0.8
	2.8nm,0.1s						
SATY				eS	Sb	19 44 42.3	+1.7
	32nm,0.3s						
SATY	**Saty**	4.56	229	Pg	Pb	19 43 44.3	-0.8
	2.8nm,0.1s						
SATY				Lg	Lg	19 44 42.3	
	32nm,0.3s						
DGZ	**Jazzator, Alta**	4.60	38	Pn	Pn	19 43 35.7	+0.6

TNSS				Lg	Lg	19 45 06.6	
	4.7nm,0.6s						
KURK	**Kurchatov**	**5.47 329**		⇑Pn	**Pn**	**19 43 46.4**	**-0.5**
	1.4nm,0.7s						
KURK				⇑Sn	**Sn**	**19 44 49.6**	**-0.8**
	2.2nm,0.5s						
KURK				⇑Lg	Lg	19 45 18.4	
	18nm,0.6s						
KURK	**Kurchatov**	**5.47 329**		Pn	**Pn**	**19 43 47.1**	**+0.2**
KURK				Pg	**Pg**	**19 44 08.4**	**-0.8**
KURK				S	**Sn**	**19 44 48.6**	**-1.8**
KURK				Sg	**Sg**	**19 45 16.5**	**-3.5**
ULGR	**Ulagan, Altay**	**5.53**	**34**	Pn	**Pn**	**19 43 50.6**	**+2.7**
ULGR				Pg	**Pg**	**19 44 08.4**	**-1.9**
ULGR				S	**Sn**	**19 44 52.7**	**+0.7**
ULGR				Sg	**Sg**	**19 45 24.4**	**+2.5**
MTBS	**Maitube**	**5.64 240**		*e*P	**Pb**	**19 44 01.9**	**-1.6**
	2.1nm,0.1s						
MTBS				*e*S	**Sb**	**19 45 12.4**	**+0.8**
	17nm,0.4s						
MTBS	**Maitube**	**5.64 240**		Pg	**Pb**	**19 44 01.9**	**-1.6**
	2.1nm,0.1s						
MTBS				Lg	Lg	19 45 12.4	
	17nm,0.4s						
KRBS	**Karabastau**	**5.82 248**		*e*P	**Pb**	**19 44 06.0**	**-0.6**
	0.6nm,0.5s						
KRBS				*e*S	**Sb**	**19 45 19.5**	**+2.7**
	2.9nm,0.3s						
KRBS	**Karabastau**	**5.82 248**		Pg	**Pb**	**19 44 06.0**	**-0.6**
	0.6nm,0.5s						
KRBS				Lg	Lg	19 45 19.5	
	2.9nm,0.3s						
KST	**Kastek**	**5.97 241**		*e*P	**Pb**	**19 44 08.3**	**-0.8**
	1.8nm,0.7s						
KST				*e*S	**Sb**	**19 45 23.5**	**+2.3**
	5.8nm,0.9s						
KST	**Kastek**	**5.97 241**		Pg	**Pb**	**19 44 08.3**	**-0.8**
	1.8nm,0.7s						
KST				Lg	Lg	19 45 23.5	
	5.8nm,0.9s						
GALT	**Gorno-Altaysk,**	**6.12**	**17**	Sg	**Sg**	**19 45 43.0**	**+2.3**
TKM2	**Tokmak 2**	**6.26 242**		⇑Pg	**Pb**	**19 44 13.9**	**-0.3**
	1.7nm,0.8s						
TKM2				⇓Lg	Lg	19 45 37.9	
	4.8nm,0.7s						
ARTR	**Artybash**	**6.30**	**24**	Pn	**Pn**	**19 43 59.3**	**+1.1**
ARTR				S	**Sn**	**19 45 09.1**	**-1.7**
ARTR				Sg	**Sg**	**19 45 46.0**	**-0.5**
TASR	**Tashtagol**	**7.32**	**23**	Sg	**Sg**	**19 46 23.2**	**+3.9**
ELT	**Eltsovka**	**7.42**	**15**	Pn	**Pn**	**19 44 13.4**	**-0.2**
ELT				S	**Sn**	**19 45 38.1**	**-0.1**
ELT				Sg	**Sg**	**19 46 25.8**	**+3.5**

CNRM ***15*** *19:55:29.2, 35°.53N×3°.77W, h14km, ml2.3*
MDD ***15*** *19:55:29.7±0.5, 35°.57N×3°.75W, h0km, mb_Lg2.4/11, Error ellipse: s-maj=4.2km s-min=2.8km az=31.0*
INMG ***15*** *19:55:30.9±1.2, 35°.59N×3°.66W, h15km, ML1.9, Error ellipse: s-maj=3.3km s-min=2.4km az=58.0*
SFS ***15*** *19:55:30.0, 35°.46N×3°.76W, h15km, ML2.7, ALBORAN SUR*

ISC 15 19:55:28.9±1.0, 35°.52N±0°.02×3°.78W±0°.02, h12km±8km, n42, σ1§15/79, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.33 204**		P	**Pg**	**19 55 35.9**	**+0.3**
PALE				S	**Sg**	**19 55 40.5**	**+0.5**
PVLZ	**Peæn de**	**0.55 231**		P	**Pg**	**19 55 39.9**	**+0.2**
PVLZ				S	**Sg**	**19 55 46.3**	**-0.7**
WMELI	**Melilla**	**0.70 106**		P	**Pg**	**19 55 42.4**	**-0.2**
WMELI				S	**Sg**	**19 55 50.9**	**-0.9**
GOG	**Mont Gurugu**	**0.70 115**		P	**Pg**	**19 55 42.3**	**-0.3**
GOG				S	**Sg**	**19 55 52.6**	**+0.8**
EMEL	**Melilla**	**0.70 108**		Pg	**Pg**	**19 55 43.3**	**+0.7**
EMEL				Sg	**Sg**	**19 55 51.4**	**-0.4**
AKLM	**AKL**	**1.01 184**		P	**Pb**	**19 55 48.2**	**-0.2**
AKLM				S	**Sb**	**19 56 01.0**	**-0.8**
CHAS	**Isla Isabel II**	**1.15 107**		P	**Pb**	**19 55 49.4**	**-1.4**
CHAS				S	**Sb**	**19 56 03.9**	**-1.8**
TAF	**Taforalt**	**1.32 122**		P	**Pn**	**19 55 53.7**	**+0.4**
TAF				S	**Sb**	**19 56 11.2**	**+0.6**
EMIJ	**Mijas**	**1.32 323**		Pg	**Pn**	**19 55 52.9**	**-0.4**
EMIJ				Sg	**Sn**	**19 56 11.3**	**+0.4**
EMIJ				*i* Vmb_Lg		19 56 15.6	
ELGU	**Los Guajares,**	**1.35**	**5**	Pg	**Pn**	**19 55 53.6**	**-0.1**
ELGU				Sg	**Sb**	**19 56 10.6**	**-1.0**
ELGU				*i* Vmb_Lg		19 56 15.4	
CEU	**Ceuta**	**1.35 287**		P	**Pn**	**19 55 52.4**	**-1.3**
ECEU	**Ceuta**	**1.36 287**		Pg	**Pn**	**19 55 52.7**	**-1.1**
ECEU				Sg	**Sn**	**19 56 08.9**	**-2.9**
ECEU				*i* Vmb_Lg		19 56 10.1	
JBK	**JBK**	**1.54 140**		P	**Pn**	**19 55 56.2**	**-0.3**
JBK				S	**Sn**	**19 56 17.3**	**+0.7**
EBER	**Berja**	**1.55**	**27**	Pg	**Pn**	**19 55 56.5**	**-0.1**
EBER				Sn	**Sn**	**19 56 16.1**	**-0.7**
EBER				Sg	**Sg**	**19 56 18.4**	**-0.5**
EBER				*i* Vmb_Lg		19 56 20.1	
EGOR	**Sierra Gorda,**	**1.61 350**		Pg	**Pb**	**19 55 58.2**	**-0.6**
EGOR				Sn	**Sn**	**19 56 17.8**	**-0.5**
EGOR				Sg	**Sg**	**19 56 19.6**	**-1.2**
EGOR				*i* Vmb_Lg		19 56 25.3	
IFR	**Ifrane**	**2.29 210**		Pn	**Pn**	**19 56 07.0**	**+0.3**
IFR	**Ifrane**	**2.29 210**		Pg	**Pb**	**19 56 11.0**	**+0.7**
IFR				S	**Sn**	**19 56 32.9**	**-2.1**
EQES	**Quesada**	**2.35**	**14**	Pg	**Pb**	**19 56 10.5**	**-0.9**
EQES				Sg	**Sb**	**19 56 40.2**	**-0.2**
EQES				*i* Vmb_Lg		19 56 42.8	
EADA	**Adamuz**	**2.72 347**		Pn	**Pn**	**19 56 14.5**	**+2.0**
EADA				Sn	**Sn**	**19 56 46.8**	**+1.3**
EADA				Sg	**Sb**	**19 56 51.3**	**+0.4**
EADA				*i* Vmb_Lg		19 56 53.4	
MD31	**MD31**	**2.77 197**		P	**Pn**	**19 56 13.4**	**+0.2**
MD31				S	**Sn**	**19 56 47.4**	**+0.7**
MDT	**Midelt**	**2.79 195**		P	**Pn**	**19 56 14.3**	**+0.8**
MDT				S	**Sn**	**19 56 47.4**	**+0.3**
ZHG	**ZHG**	**3.14 230**		P	**Pn**	**19 56 20.4**	**+2.0**
ETOB	**Tobarra**	**3.59**	**29**	Pn	**Pn**	**19 56 27.1**	**+2.5**
ETOB				Sn	**Sn**	**19 57 08.4**	**+1.4**
EGRO	**El Granado**	**3.60 305**		Pn	**Pn**	**19 56 25.5**	**+0.9**
EGRO				Sn	**Sn**	**19 57 05.5**	**-1.6**
EGRO				*i* Vmb_Lg		19 57 10.1	
PVAQ	**Vaqueiros**	**3.69 302**		*e*Pn	**Pn**	**19 56 26.9**	**+1.1**
PVAQ				*e*Sn	**Sn**	**19 57 09.1**	**-0.2**
PVAQ				A	A	19 57 09.8	
	2.9nm,0.7s						
PVAQ	**Vaqueiros**	**3.69 302**		P	**Pn**	**19 56 26.9**	**+1.1**
PVAQ				S	**Sn**	**19 57 09.0**	**-0.4**
PBAR	**Barrancos**	**3.73 316**		*e*Pn	**Pn**	**19 56 27.3**	**+1.0**
PBAR				*e*Sn	**Sn**	**19 57 09.3**	**-0.9**
PBAR				A	A	19 57 12.8	
	0.8nm,0.3s						
PCVE	**Castro Verde**	**4.03 303**		*e*Pn	**Pn**	**19 56 32.3**	**+1.8**
PCVE				*e*Sn	**Sn**	**19 57 19.0**	**+1.4**
PCVE				A	A	19 57 20.1	
	1.6nm,0.8s						
PAB	**San Pablo**	**4.04 354**		Pn	**Pn**	**19 56 33.3**	**+2.5**
PAB				Sn	**Sn**	**19 57 18.2**	**0.0**
PAB				*i* Vmb_Lg		19 57 34.2	
PBEJ	**Beja**	**4.13 309**		*e*Sn	**Sn**	**19 57 21.1**	**+1.0**
EBAD	**Badajoz**	**4.14 322**		Pn	**Pn**	**19 56 33.6**	**+1.6**
EBAD				Sn	**Sn**	**19 57 19.2**	**-1.1**
EBAD				*i* Vmb_Lg		19 57 27.8	
MESJ	**Messejana**	**4.26 304**		*e*P	**Pn**	**19 56 34.6**	**+1.0**
MESJ	**Messejana**	**4.26 304**		*e*Pn	**Pn**	**19 56 35.0**	**+1.4**
MESJ				*e*Sn	**Sn**	**19 57 23.4**	**+0.1**
MESJ				A	A	19 57 28.0	
	1.3nm,0.3s						
MORF	**Marmelete**	**4.32 296**		*e*Pn	**Pn**	**19 56 36.5**	**+2.0**
MORF				*e*Sn	**Sn**	**19 57 24.5**	**-0.3**
MORF				A	A	19 57 28.2	
	2.2nm,0.8s						
PFVI	**Vila Bisbo**	**4.38 293**		*e*Pn	**Pn**	**19 56 37.1**	**+1.7**
PFVI				*e*Sn	**Sn**	**19 57 25.6**	**-0.8**
PFVI				A	A	19 57 32.1	
	2.2nm,0.6s						
PTEO	**Sao Teotonio**	**4.47 298**		*e*Pn	**Pn**	**19 56 38.0**	**+1.5**
PTEO				*e*Sn	**Sn**	**19 57 28.0**	**-0.5**
PESTR	**Estremoz**	**4.52 319**		*e*Sn	**Sn**	**19 57 29.2**	**-0.6**
PESTR				A	A	19 57 33.8	
	1.2nm,0.6s						
EVO	**Evora**	**4.53 313**		*e*Pn	**Pn**	**19 56 39.3**	**+1.9**
EVO				*e*Sn	**Sn**	**19 57 28.9**	**-1.1**
EVO				A	A	19 57 33.6	
	1.4nm,0.2s						
PNCL	**Nicolau / Gran**	**4.61 306**		*e*Pn	**Pn**	**19 56 39.1**	**+0.6**
PNCL				*e*Sn	**Sn**	**19 57 31.6**	**-0.3**
PNCL				A	A	19 57 37.5	
	1.6nm,0.7s						
PMRV	**Marv??o**	**4.85 325**		*e*Pn	**Pn**	**19 56 43.4**	**+1.6**
PMTG	**Montargil**	**5.01 316**		*e*Pn	**Pn**	**19 56 45.5**	**+1.5**
PMTG				*e*Sn	**Sn**	**19 57 42.3**	**+0.4**
PACT	**Alcochete**	**5.18 310**		*e*Pn	**Pn**	**19 56 47.6**	**+1.3**

MDD ***15*** *20:01:55.6±0.3, 35°.49N×3°.77W, h0km, mb_Lg2.5/16, Error ellipse: s-maj=2.8km s-min=2.1km az=176.0*
CNRM ***15*** *20:01:57.0, 35°.48N×3°.78W, h24km, ml2.4*
SFS ***15*** *20:01:56.0, 35°.38N×3°.74W, h21km, ML2.8, ALBORAN SUR*
INMG ***15*** *20:01:57.1±1.3, 35°.53N×3°.72W, h10km, ML2.1, Error ellipse: s-maj=3.4km s-min=2.4km az=20.0*

ISC 15 20:01:55.2±1.1, 35°.49N±0°.02×3°.76W±0°.02, h12km±9km, n47, σ1§27/87, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.54 234**		P	**Pg**	**20 02 05.9**	**+0.1**
PVLZ				S	**Sg**	**20 02 12.0**	**-1.0**
GOG	**Mont Gurugu**	**0.68 113**		P	**Pg**	**20 02 08.6**	**+0.1**
GOG				S	**Sb**	**20 02 19.0**	**+0.5**
WMELI	**Melilla**	**0.68 104**		P	**Pg**	**20 02 08.8**	**+0.3**
WMELI				S	**Sg**	**20 02 17.7**	**+0.2**
EMEL	**Melilla**	**0.69 106**		Pg	**Pb**	**20 02 09.1**	**0.0**
EMEL				Sg	**Sb**	**20 02 18.7**	**+0.2**
AKLM	**AKL**	**0.98 185**		P	**Pn**	**20 02 15.4**	**+0.5**
AKLM				S	**Sg**	**20 02 27.2**	**+0.2**
CHAS	**Isla Isabel II**	**1.13 105**		P	**Pb**	**20 02 15.3**	**-1.4**
CHAS				S	**Sb**	**20 02 28.7**	**-2.6**
TAF	**Taforalt**	**1.29 121**		P	**Pn**	**20 02 19.2**	**+0.1**
TAF				S	**Sn**	**20 02 37.9**	**+1.5**
EMIJ	**Mijas**	**1.35 323**		Pg	**Pn**	**20 02 19.9**	**0.0**
EMIJ				Sg	**Sb**	**20 02 38.2**	**+0.5**
EMIJ				*i* Vmb_Lg		20 02 41.8	
ECEU	**Ceuta**	**1.38 288**		Pg	**Pn**	**20 02 19.2**	**-1.0**
ECEU				Sg	**Sb**	**20 02 35.7**	**-2.7**
ECEU				*i* Vmb_Lg		20 02 38.4	
ELGU	**Los Guajares,**	**1.38**	**5**	Pg	**Pn**	**20 02 20.2**	**-0.2**
ELGU				Sg	**Sb**	**20 02 37.5**	**-1.1**
ELGU				*i* Vmb_Lg		20 02 40.6	
EMAL	**Malaga-Limoner**	**1.38 337**		P	**Pn**	**20 02 19.8**	**-0.5**
EMAL				S	**Sb**	**20 02 37.7**	**-0.8**
JBK	**JBK**	**1.51 139**		P	**Pn**	**20 02 21.8**	**-0.6**
JBK				S	**Sb**	**20 02 43.1**	**+0.5**
EBER	**Berja**	**1.57**	**26**	Pn	**Pn**	**20 02 23.3**	**+0.2**
EBER				Sn	**Sn**	**20 02 42.7**	**-0.8**
EBER				*i* Vmb_Lg		20 02 46.6	
EGOR	**Sierra Gorda,**	**1.64 350**		Pn	**Pn**	**20 02 25.3**	**+1.2**
EGOR				Sn	**Sb**	**20 02 47.8**	**+1.5**
EGOR				*i* Vmb_Lg		20 02 51.9	
EQUE	**Quentar**	**1.73**	**9**	Pn	**Pb**	**20 02 27.3**	**+0.3**
EQUE				Sn	**Sn**	**20 02 46.7**	**-0.7**
EQUE				*i* Vmb_Lg		20 02 50.7	
ENIJ	**Nijar**	**1.94**	**40**	Pn	**Pn**	**20 02 27.7**	**-0.4**
ENIJ				Sn	**Sn**	**20 02 49.5**	**-2.9**
ENIJ				*i* Vmb_Lg		20 02 54.1	
ESPR	**Espera**	**2.18 310**		Pn	**Pn**	**20 02 29.8**	**-1.5**
ESPR				Sn	**Sn**	**20 02 58.9**	**+0.6**
ESPR				*i* Vmb_Lg		20 03 11.3	
IFR	**Ifrane**	**2.27 210**		P	**Pn**	**20 02 32.7**	**0.0**
IFR				S	**Sn**	**20 02 59.4**	**-1.2**
EQES	**Quesada**	**2.38**	**13**	Pn	**Pb**	**20 02 37.3**	**-0.7**
EQES				Sn	**Sn**	**20 03 06.0**	**+2.7**
EQES				*i* Vmb_Lg		20 03 09.4	
MD31	**MD31**	**2.74 198**		P	**Pn**	**20 02 40.3**	**+1.2**
MD31				S	**Sn**	**20 03 12.6**	**+0.3**
EADA	**Adamuz**	**2.75 347**		Pn	**Pn**	**20 02 41.1**	**+1.9**
EADA				Sn	**Sn**	**20 03 13.3**	**+0.9**
EADA				*i* Vmb_Lg		20 03 24.0	
MDT	**Midelt**	**2.76 195**		P	**Pn**	**20 02 41.5**	**+2.1**
MDT				S	**Sn**	**20 03 13.7**	**+1.1**
ECAB	**El Cabril**	**2.90 333**		Pn	**Pn**	**20 02 44.5**	**+3.2**
ECAB				Sn	**Sn**	**20 03 17.8**	**+1.7**
EZAR	**Zarzadilla de**	**2.90**	**34**	Pn	**Pn**	**20 02 40.7**	**-0.7**
EZAR				Sn	**Sn**	**20 03 14.8**	**-1.5**
EZAR				*i* Vmb_Lg		20 03 21.6	
EMUR	**La Murta**	**3.10**	**40**	Pn	**Pn**	**20 02 44.5**	**+0.5**
EMUR				Sn	**Sn**	**20 03 19.2**	**-1.9**
EMUR				*i* Vmb_Lg		20 03 26.9	
ZHG	**ZHG**	**3.13 230**		P	**Pn**	**20 02 46.6**	**+2.2**
ZHG				S	**Sn**	**20 03 21.0**	**-0.8**
EMIN	**Mina Concepcio**	**3.26 315**		Pn	**Pn**	**20 02 46.4**	**+0.2**
EMIN				Sn	**Sn**	**20 03 25.0**	**+0.1**
ETOB	**Tobarra**	**3.61**	**29**	Pn	**Pn**	**20 02 53.7**	**+2.6**
ETOB				Sn	**Sn**	**20 03 34.5**	**+0.8**
ETOB				*i* Vmb_Lg		20 03 36.7	
EGRO	**El Granado**	**3.63 305**		Pn	**Pn**	**20 02 51.9**	**+0.7**
EGRO				Sn	**Sn**	**20 03 32.0**	**-1.9**
EGRO				*i* Vmb_Lg		20 03 37.6	
PVAQ	**Vaqueiros**	**3.72 302**		*e*Pn	**Pn**	**20 02 53.2**	**+0.8**
PVAQ				*e*Sn	**Sn**	**20 03 35.5**	**-0.6**
PVAQ				A	A	20 03 36.3	
	4.8nm,0.6s						
PVAQ	**Vaqueiros**	**3.72 302**		P	**Pn**	**20 02 53.5**	**+1.1**
PBAR	**Barrancos**	**3.75 317**		*e*Pn	**Pn**	**20 02 53.8**	**+0.9**
PBAR				*e*Sn	**Sn**	**20 03 36.2**	**-0.8**
PBAR				A	A	20 03 37.7	
	2.0nm,0.6s						
PCVE	**Castro Verde**	**4.05 303**		*e*Sn	**Sn**	**20 03 43.8**	**-0.6**
PCVE				A	A	20 03 50.9	
	2.0nm,0.3s						
PAB	**San Pablo**	**4.08 354**		Pn	**Pn**	**20 02 59.0**	**+1.6**
PAB				Sn	**Sn**	**20 03 45.6**	**+0.5**
EBAD	**Badajoz**	**4.17 322**		Pn	**Pn**	**20 02 59.5**	**+0.9**
EBAD				Sn	**Sn**	**20 03 46.8**	**-0.4**
EBAD				*i* Vmb_Lg		20 03 52.2	
MESJ	**Messejana**	**4.28 305**		*e*Pn	**Pn**	**20 03 01.7**	**+1.5**
MESJ				*e*Sn	**Sn**	**20 03 49.1**	**-1.0**
MESJ				A	A	20 03 54.6	
	3.3nm,0.4s						
MORF	**Marmelete**	**4.34 296**		*e*Sn	**Sn**	**20 03 51.0**	**-0.6**
MORF				A	A	20 03 54.1	
	2.7nm,0.2s						
PFVI	**Vila Bisbo**	**4.41 293**		*e*Pn	**Pn**	**20 03 03.6**	**+1.7**
PFVI				*e*Sn	**Sn**	**20 03 52.0**	**-1.1**
PFVI				A	A	20 03 58.8	
	4.2nm,0.5s						
PTEO	**Sao Teotonio**	**4.49 299**		*e*Pn	**Pn**	**20 03 04.8**	**+1.7**
PTEO				*e*Sn	**Sn**	**20 03 55.5**	**+0.3**
PTEO				A	A	20 04 04.7	
	4.4nm,0.6s						
PESTR	**Estremoz**	**4.55 319**		*e*Pn	**Pn**	**20 03 05.2**	**+1.3**
PESTR				*e*Sn	**Sn**	**20 03 56.5**	**-0.2**
PESTR				A	A	20 03 59.5	
	1.3nm,1.0s						
PESTR	**Estremoz**	**4.55 319**		P	**Pn**	**20 03 05.2**	**+1.3**
EVO	**Evora**	**4.56 313**		*e*Pn	**Pn**	**20 03 05.7**	**+1.7**
EVO				*e*Sn	**Sn**	**20 03 55.6**	**-1.3**
EVO				A	A	20 04 00.5	
	2.4nm,0.6s						
PNCL	**Nicolau / Gran**	**4.63 306**		*e*Pn	**Pn**	**20 03 05.9**	**+0.9**
PNCL				*e*Sn	**Sn**	**20 03 58.3**	**-0.4**
PNCL				A	A	20 04 00.7	
	2.0nm,0.6s						
PMRV	**Marv??o**	**4.88 325**		*e*Pn	**Pn**	**20 03 10.0**	**+1.6**
PMTG	**Montargil**	**5.04 316**		*e*Pn	**Pn**	**20 03 12.0**	**+1.4**
PMTG				*e*Sn	**Sn**	**20 04 08.3**	**-0.5**
PACT	**Alcochete**	**5.21 310**		*e*Pn	**Pn**	**20 03 14.5**	**+1.6**
PSBE	**So Bento**	**5.67 317**		*e*Pn	**Pn**	**20 03 20.8**	**+1.5**

KRSC 15 20:03:12.1±1.6, 54°.85N×167°.05E, h56km±21km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.72 300**		*e*P	Pn	20 03 25.7	-0.5
BKI				*e*S	Sn	20 03 38.7	+2.1
KBTR	**Krutoberegovo**	**2.77 301**		*e*P	Pn	20 03 55.2	+1.3
MKZ	**Mys Kozlova**	**3.10 267**		*e*P	Pn	20 04 02.6	+4.2
MKZ				*e*S	Sn	20 04 38.0	+3.8
TUMR	**Tumrok**	**3.99 279**		*e*P	Pn	20 04 15.2	+4.4
SPN	**Mys Shipunski**	**4.50 250**		*e*P	Pn	20 04 20.5	+2.8
SPN				*e*S	Sn	20 05 11.6	+2.9
SDLR	**Sedlovina**	**5.06 255**		*e*P	Pn	20 04 29.4	+4.0
SDLR				*e*S	Sn	20 05 26.4	+3.8
SMAR	**Somma**	**5.11 255**		*e*P	Pn	20 04 30.4	+4.2
UGLR	**Uglovaya**	**5.12 255**		*e*P	Pn	20 04 30.6	+4.4
UGLR				*e*S	Sn	20 05 29.0	+5.0
AVH	**Avacha**	**5.15 255**		*e*P	Pn	20 04 30.8	+4.2
AVH				*e*S	Sn	20 05 27.7	+3.1
KRX	**Arik**	**5.16 257**		*e*P	Pn	20 04 30.8	+3.9
KRX				*e*S	Sn	20 05 28.3	+3.2
KOK	**Koryaka**	**5.19 256**		*e*P	Pn	20 04 31.1	+3.9
GNL	**Ganaly**	**5.46 262**		*e*P	Pn	20 04 35.5	+4.6
RUS	**Russkaya**	**5.62 248**		*e*P	Pn	20 04 36.2	+3.2
MTVR	**Mutnovka**	**5.78 249**		*e*P	Pn	20 04 39.3	+4.0
GRL	**Gorelyy**	**5.81 250**		*e*P	Pn	20 04 39.7	+4.0
ASAK	**Asacha**	**5.98 249**		*e*P	Pn	20 04 42.0	+4.0
KDTR	**Khodutka, Kamc**	**6.18 244**		*e*P	Pn	20 04 45.1	+4.5
KDTR				*e*S	Sn	20 05 51.8	+2.0

BJI ***15*** *20:14:39.9±0.0, 39°.37N×20°.06E, h10km, mb5.3/70, mB5.4/59, Ms5.6/68, Ms7 5.3/64*
GII ***15*** *20:14:43.8±0.0, 39°.81N×20°.66E, h21km, Mm5.1/3*
BGS ***15*** *20:14:46.8±1.5, 40°.14N×21°.31E, h10km, mb5.5*
MOS ***15*** *20:14:46.4±1.2, 39°.76N×20°.56E, h15km, mb5.5/87, MS5.3/70, Error ellipse: s-maj=3.1km s-min=2.1km az=89.8*
LDG ***15*** *20:14:48.5±0.1, 39°.78N×20°.64E, h10km, Ml4.9/38, Error ellipse: s-maj=4.3km s-min=1.8km az=27.0*
TIR ***15*** *20:14:48.3, 39°.76N×20°.79E, h8km±1km, Ml5.6*
PDG ***15*** *20:14:48.4±0.6, 39°.76N×20°.60E, h11km±1km, MD5.3/12, ML5.4/12, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
MED_RC ***15*** *20:14:48.0±0.3, 39°.61N×20°.67E, h30km, MW5.5/31, Moment Tensor Solution. Body waves: s3,c3;Mantle waves: s31,c63; Duration: 1§4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.47±.08; $M_{\theta\theta}$-1.17±.05; $M_{\phi\phi}$-0.30±.05; $M_{r\theta}$1.43±.07; $M_{\theta\phi}$1.29±.03; $M_{\phi r}$-0.83±.07; Best double couple: $M_0$2.43000×10^{17} NP1:ϕ_s121.00000°, δ67.00000°, λ85.00000°. NP2:ϕ_s314.00000°, δ24.00000°, λ102.00000°. Principal axes: T 2.1300, Plg68.0000°, Azm21.0000°; N 0.6100, Plg5.0000°, Azm123.0000°; P -2.7400, Plg21.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***15*** *20:14:49.7±1.7, 39°.81N±0°.04×20°.65E±0°.05, h22km±1km, mb5.3/262, Ms_20 5.2/209, Mwb5.3/42, Mww5.5, ML5.3(THE), ML5.6(TIR) Error ellipse: s-maj=7.7km s-min=6.5km az=192.0*
ROM ***15*** *20:14:49.9, 39°.78N×20°.64E, h20km, mb5.2/47, Mwp5.6/33, Mwpd5.8/4, Error ellipse: s-maj=2.1km s-min=0.9km az=195.0*
ATH ***15*** *20:14:49.3, 39°.79N×20°.69E, h17km±2km, ML5.3/22, Error ellipse: s-maj=2.4km s-min=1.1km az=312.0*
THE ***15*** *20:14:49.6, 39°.79N×20°.72E, h2km±1km, ML5.3/11, Error ellipse: s-maj=1.7km s-min=0.8km az=308.0*
IDC ***15*** *20:14:50.7±1.5, 39°.85N×20°.71E, h31km±10km, mb4.9/38, mbtmp5.1/53, ML4.7/14, MS5.1/91, Error ellipse: s-maj=8.0km s-min=7.8km az=144.0*
BEO ***15*** *20:14:50.8±0.6, 39°.88N×20°.95E, h0km, ML5.0/8*
GCMT ***15*** *20:14:50.7±0.1, 39°.57N±0°.01×20°.59E±0°.01, h30km, MW5.5/146, Moment Tensor Solution. s116,c198; s146,c279; Duration: 1§4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.58±.03; $M_{\theta\theta}$-1.13±.03; $M_{\phi\phi}$-0.45±.02; $M_{r\theta}$1.64±.05; $M_{\theta\phi}$1.12±.02; $M_{\phi r}$-0.40±.04; Best double couple: $M_0$2.46200×10^{17} NP1:ϕ_s110.00000°, δ68.00000°, λ74.00000°. NP2:ϕ_s326.00000°, δ27.00000°, λ124.00000°. Principal axes: T 2.3580, Plg64.0000°, Azm354.0000°; N 0.2020, Plg15.0000°, Azm116.0000°; P -2.5650, Plg21.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***15*** *20:14:50.1, 39°.84N×20°.63E, h23km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.01; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$-0.24; $M_{r\theta}$0.63; $M_{\theta\phi}$0.45; $M_{\phi r}$0.02; Fault plane solution: $M_0$1.20000×10^{17} NP1:ϕ_s314.00000°, δ32.71000°, λ115.65000°. NP2:ϕ_s104.29000°, δ60.84000°, λ74.46000°. Principal axes: T 1.2317, Plg70.0000°, Azm341.0000°; N -0.0715, Plg14.0000°, Azm112.0000°; P -1.1603, Plg15.0000°, Azm206.0000°;*
NEIC ***15*** *20:14:50, 39°.54N×20°.76E, h24km, Moment Tensor Solution. Duration: 2§0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.18; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$-0.40; $M_{r\theta}$1.25; $M_{\theta\phi}$1.07; $M_{\phi r}$-0.44; Fault plane solution: $M_0$1.99000×10^{17} NP1: ϕ_s333.00000°, δ28.00000°, λ126.00000°. NP2: ϕ_s113.00000°, δ68.00000°, λ72.00000°. Principal axes: T 1.7925, Plg63.0000°, Azm355.0000°; N 0.3553, Plg16.0000°, Azm120.0000°; P -2.1478, Plg21.0000°, Azm216.0000°;*

**ISC 15 20:14:48.3±0.3, 39°.74N±0°.01×20°.70E±0°.01, h20km±1km, h20km:pP-P, n1941, σ1§81/2045, mb5.3/305, MS5.2/233, 196C-87D, Greece-

comp=E,514nm,1.2s,baz=0.0
TSLK Tsoukalades, L 0.92 182 P Pn 20 15 07.3 +1.1
TSLK S Sn 20 15 24.1 +5.3
TSLK Tsoukalades, L 0.92 182 P Pn 20 15 07.1 +0.9
LKD2 Lefkada island 0.95 182 P Pn 20 15 08.2 +1.5
LKD2 Lefkada island 0.95 182 P Pn 20 15 07.7 +1.1
baz=187
LKD2 S Sn 20 15 22.5 +2.7
baz=187
LKD2 Lefkada island 0.95 182 P Pn 20 15 07.8 +1.1
LKD2 AML AML 20 15 27.0
LKD2 AML AML 20 15 28.4
KZN Kozani 0.99 55 P Pn 20 15 07.5 +0.2
KZN S Sn 20 15 20.9 +0.1
comp=E,95μm,0.6s
KZN Kozani 0.99 55 P Pn 20 15 07.4 +0.2
KZN AML AML 20 15 24.5
KZN AML AML 20 15 25.5
THL Klokotos Trika 1.03 100 P Pn 20 15 08.3 +0.7
THL S Sn 20 15 22.6 +1.1
comp=E,121μm,1.0s
THL Klokotos Trika 1.03 100 P Pn 20 15 08.0 +0.3
THL AML AML 20 15 25.5
THL AML AML 20 15 28.2
NYDR Nydri-Lefkada 1.03 180 P Pn 20 15 09.8 +2.1
NYDR S Sn 20 15 26.2 +4.7
comp=E,137μm,0.6s
EVGI Lefkada island 1.12 182 P Pn 20 15 10.6 +1.6
EVGI S Sn 20 15 27.4 +3.6
comp=E,160μm,0.4s
EVGI Lefkada island 1.12 182 P Pn 20 15 10.5 +1.5
VLO Vlora 1.18 308 Pg 20 15 11.4 +0.3
VLO Vlora 1.18 308 P Pg 20 15 11.5 +0.3
VLO S Sn 20 15 29.1 +4.0
comp=E,371μm,0.6s
VLO Vlora 1.18 308 P Pg 20 15 11.4 +0.3
VLO Vlora 1.18 308 P Pg 20 15 12.5 +1.4
baz=306
VLO S Sn 20 15 29.9 +4.7
baz=306
TYRN Tyrnavos 1.18 91 P Pg 20 15 10.8 -0.4
TYRN S Sn 20 15 26.9 +1.7
comp=E,287μm,0.5s
EVR Evrytania 1.19 134 P Pg 20 15 12.4 +1.0
EVR S Sn 20 15 28.3 +2.6
comp=E,140μm,0.5s
EVR Evrytania 1.19 134 P Pg 20 15 11.5 0.0
EVR AML AML 20 15 34.8
EVR AML AML 20 15 35.7
FSK Fiskardo 1.29 185 P Pg 20 15 14.6 +1.3
FSK S Sg 20 15 32.4 +2.3
comp=E,107μm,0.9s
FSK Fiskardo 1.29 185 P Pg 20 15 13.8 +0.5
FSK AML AML 20 15 45.5
FSK AML AML 20 15 46.3
PVO Paravola 1.29 150 P Pg 20 15 13.3 -0.1
PVO S Sg 20 15 33.7 +3.4
comp=E,189μm,0.7s
PVO Paravola 1.29 150 P Pg 20 15 14.2 +0.8
LRSO Larissa Observ 1.30 93 P Pg 20 15 13.6 0.0
MAKR Makrakomi, Fth 1.33 123 P Pg 20 15 14.1 +0.1
MAKR AML AML 20 15 39.7
MAKR AML AML 20 15 42.2
OHR Ohrid 1.37 3 P Pg 20 15 14.0 -0.8
OHR Ohrid 1.37 3 *e*Pg **Pg 20 15 15.3 +0.5**
OHR *e*Sg **Sg 20 15 32.0 -0.7**
OHR Ohrid 1.37 3 *i* Pn **Pg 20 15 14.1 -0.8**
LIT Litokhoron 1.42 75 Pg 20 15 14.6 -1.1
LIT Litokhoron 1.42 75 P Pg 20 15 14.6 -1.1
LIT Litokhoron 1.42 75 ⇓P **Pg 20 15 14.3 -1.4**
LIT Litokhoron 1.42 75 P Pg 20 15 14.9 -0.8
LIT AML AML 20 15 40.9
LIT AML AML 20 15 44.6
KEF4 Livadi, Kephal 1.50 188 P Pg 20 15 16.0 -1.3
VLS Valsamata 1.57 183 P Pg 20 15 16.7 -1.8
VLS Valsamata 1.57 183 P Pg 20 15 16.8 -1.8
VLS AML AML 20 15 45.2
VLS AML AML 20 15 45.3
EFP Efpalio 1.61 144 P Pg 20 15 19.5 0.0
EFP AML AML 20 15 54.2
EFP AML AML 20 15 55.4
PSDA Pessada-Kefalo 1.63 183 P Pg 20 15 18.0 -1.7
SERG Sergoula 1.70 141 P Pg 20 15 20.4 -0.6
SERG AML AML 20 15 56.3
SERG AML AML 20 15 59.5
TIR Tirane 1.72 339 ⇑P **Pg 20 15 20.4 -1.2**
TIR Tirane 1.72 339 Pg 20 15 19.5 -2.0
TIR Tirane 1.72 339 P Pg 20 15 19.5 -2.0
TIR Tirane 1.72 339 *e*Pg **Pg 20 15 20.7 -0.9**
TIR *e*Sg **Sg 20 15 42.4 -1.6**
TIR Tirane 1.72 339 P Pg 20 15 20.3 -1.2
baz=337
TIR S Sg 20 15 46.4 +2.4
baz=337
TIR AMP
comp=E,171nm,1.6s,baz=337
TIR Tirane 1.72 339 ⇑P **Pg 20 15 20.4 -1.2**
SCTE Santa Cesarea 1.75 281 Pn **Pb 20 15 19.3 -0.5**
SCTE Santa Cesarea 1.75 281 P Pg 20 15 20.5 -1.6
baz=281
SCTE AMP
comp=N,77nm,0.4s,baz=281
GRG Griva 1.77 46 P Pb 20 15 19.6 -0.6
GRG Griva 1.77 46 P Pb 20 15 19.7 -0.5
RLS Riolos of Patr 1.79 160 P Pg 20 15 21.5 -1.3
LAKA Lakka 1.80 146 P Pg 20 15 22.4 -0.6
LAKA AML AML 20 16 07.1
comp=N,88627μm,1.2s
LAKA AML AML 20 16 09.0
comp=E,78842μm,0.9s
AXAR Agios Charalam 1.81 122 P Pg 20 15 22.4 -0.7
AXAR AML AML 20 16 05.6
AXAR AML AML 20 16 17.3
DLFA Delphi 1.88 132 P Pg 20 15 24.0 -0.6
DLFA AML AML 20 15 55.0
DLFA AML AML 20 16 00.4
THE Thessaloniki 1.95 62 P Pb 20 15 23.0 -0.1
THE Thessaloniki 1.95 62 P Pg 20 15 23.5 -2.3
baz=61
PHP Peshkopia 1.95 354 P Pg 20 15 23.8 -2.0
PHP Peshkopia 1.95 354 P Pg 20 15 25.0 -0.9
baz=353
PHP S Sg 20 15 52.2 +1.1
baz=353
PHP AMP
comp=N,192nm,1.2s,baz=353
DRO Drossia 1.95 156 P Pg 20 15 23.9 -2.0
DRO AML AML 20 16 01.0
DRO AML AML 20 16 03.3
NEO Neokhori 2.00 102 P Pb 20 15 23.9 -0.1
NEO AML AML 20 15 59.0
comp=E,82789μm,0.6s
NEO AML AML 20 15 59.6
HORT Hortiatis 2.02 64 P Pb 20 15 23.4 -1.1
HORT AML AML 20 15 58.4
comp=N,30682μm,1.1s
HORT AML AML 20 16 04.9
comp=E,25666μm,1.3s
KLV Kalavryta, Ach 2.04 146 P Pg 20 15 25.5 -2.0
KLV AML AML 20 16 04.5
comp=E,86610μm,0.9s
KLV AML AML 20 16 09.7
comp=N,94022μm,1.0s
VAY Valandovo 2.12 41 P Pb 20 15 24.5 -1.6
VAY Valandovo 2.12 41 *e*Pg **Pb 20 15 25.1 -1.0**
VAY *e*Sg **Sn 20 15 50.3 +1.8**
VAY Valandovo 2.12 41 *i* Pn **Pb 20 15 24.7 -1.5**
KNT Kendrikon 2.19 49 P Pb 20 15 25.8 -1.5
STIP Stip 2.25 30 *i* Pn **Pb 20 15 28.6 +0.3**
SKO Skopje 2.29 14 *e*Pn **Pb 20 15 28.6 -0.5**
SKO *e*Sn **Sb 20 15 55.6 -1.4**
SKO Skopje 2.29 14 *i* Pn **Pb 20 15 28.5 -0.5**
SOH Sokhos 2.29 61 P Pb 20 15 27.6 -1.5
ULC Ulcinj 2.48 334 ⇓*i*Pn **Pn 20 15 29.2 +1.6**
ULC *i* Sn **Sb 20 16 00.8 -1.5**
OUR Ouranopolis 2.58 76 P Pb 20 15 31.2 -2.8
SRS Serrai 2.60 57 P Pn 20 15 31.2 +2.0
SRS Serrai 2.60 57 *e*Pg **Pb 20 15 31.6 -2.6**
SRS *e*Sg **Sb 20 16 03.6 -2.1**
BCI Bajram Curri 2.66 350 P Pb 20 15 34.7 -0.6
baz=349
DRME Dracevica, Mon 2.70 335 ⇑*i*Pn **Pn 20 15 32.7 +2.1**
DRME Dracevica, Mon 2.70 335 ⇑*i*Pn **Pn 20 15 32.2 +1.6**
DRME *i* Sn **Sb 20 16 06.1 -2.5**
ITM Ithomi 2.73 159 Pn **Pb 20 15 34.2 -2.3**
ITM Ithomi 2.73 159 ⇓P **Pb 20 15 34.3 -2.3**
BUM Brajici-Budva 2.90 332 ⇓*i*Pn **Pn 20 15 35.0 +1.6**
BUM *i* Sn **Sn 20 16 10.9 +3.1**
PDG Podgorica 2.90 338 ⇑P **Pn 20 15 35.4 +2.1**
PDG Podgorica 2.90 338 Pn **Pn 20 15 35.0 +1.7**
PDG Podgorica 2.90 338 ⇑P **Pn 20 15 35.1 +1.8**
TTG Podgorica 2.90 338 ⇑*i*Pn **Pn 20 15 35.1 +1.7**
TTG *i* Sn **Sn 20 16 11.1 +3.5**
PVY Plav 2.90 349 ⇓*i*Pn **Pn 20 15 35.3 +1.7**
PVY *i* Sn **Sb 20 16 11.6 -3.0**
ATH Athens Observa 2.94 126 P Pb 20 15 38.1 -2.0
TIP Timpagrande 3.11 261 Pn **Pn 20 15 37.4 +1.1**
TIP Timpagrande 3.11 261 ⇓P **Pn 20 15 37.2 +0.9**
CEME Cevo 3.11 335 ⇓*i*Pn **Pn 20 15 37.9 +1.6**
CEME *i* Sn **Sn 20 16 16.0 +3.1**
HCY Herceg Novi 3.17 329 ⇑*i*Pn **Pn 20 15 38.0 +0.8**
HCY Herceg Novi 3.17 329 ⇓*i*Pn **Pn 20 15 38.7 +1.5**
HCY *i* Sn **Sn 20 16 17.5 +3.0**
BARS Barje 3.18 15 *e*Pn **Pb 20 15 40.6 -3.6**
IVA Berane 3.18 349 ⇑*i*Pn **Pn 20 15 39.3 +1.9**
IVA *i* Sn **Sn 20 16 18.3 +3.5**
MATE Matera 3.19 288 ⇑P **Pn 20 15 38.4 +1.0**
KOME Kolasin 3.23 344 *e*Pn **Pn 20 15 39.8 +1.8**
KOME *i* Sn **Sn 20 16 19.4 +3.4**
NKME Niksic 3.30 337 ⇓*i*Pn **Pn 20 15 40.5 +1.6**
NKME *i* Sn **Sn 20 16 20.7 +3.2**
VTS Vitosha 3.45 33 ⇓P **Pn 20 15 44.3 +3.2**
VTS Vitosha 3.45 33 Pn **Pn 20 15 43.5 +2.4**
VTS Vitosha 3.45 33 P **Pn 20 15 43.5 +2.4**
VTS Vitosha 3.45 33 *e*Pn **Pn 20 15 44.1 +3.0**
VTS *e*Sn **Sn 20 16 21.3 -0.1**
VTS Vitosha 3.45 33 ⇑P **Pn 20 15 43.7 +2.6**
SELS Selova 3.49 5 *e*Pn **Pn 20 15 44.6 +3.1**
SJES Sjenica 3.56 351 *e*Pn **Pn 20 15 45.7 +3.2**
UPM Unac-Piva 3.71 339 ⇑*i*Pn **Pn 20 15 46.9 +2.2**
UPM Unac-Piva 3.71 339 ⇑*i*Pn **Pn 20 15 46.3 +1.6**
UPM *i* Sn **Sn 20 16 30.8 +2.8**
PLE Pljevlja 3.72 345 ⇑*i*Pn **Pn 20 15 46.5 +1.8**
PLE *i* Sn **Sn 20 16 31.2 +3.2**
CUC Castrocucco 3.77 275 Pn **Pn 20 15 47.8 +2.3**
ZAPS Zavoj 3.81 22 *e*Pn **Pn 20 15 49.8 +3.8**
PLD Plovdiv 3.84 51 P Pn 20 15 49.7 +3.4
PLD Plovdiv 3.84 51 *e*Pn **Pn 20 15 50.1 +3.8**
STON Ston 3.86 325 ⇑*i*Pn **Pn 20 15 46.0 -0.5**
RDO Rodhopi 3.94 68 Pn 20 15 49.8 +2.1
RDO Rodhopi 3.94 68 ⇑P **Pn 20 15 49.7 +1.9**
BOVS Bovan 3.96 11 ⇓P **Pn 20 15 50.2 +2.3**
BOVS Bovan 3.96 11 *e*Pn **Pn 20 15 50.1 +2.1**
BOVS *e*Sn **Sn 20 16 35.8 +2.0**
RUDO Rudo 4.00 346 *e*Pn **Pn 20 15 49.9 +1.4**
CEL Celeste 4.03 250 Pn 20 15 49.4 +0.4
CEL Celeste 4.03 250 ⇓P **Pn 20 15 49.7 +0.7**
GRUS Gruza 4.14 0 *e*Pn **Pn 20 15 52.6 +2.1**
BLKB Belogradchik 4.15 20 ⇑P **Pn 20 15 53.9 +3.3**
ZAGS Zajecar 4.22 15 *e*Pn **Pn 20 15 54.4 +2.8**
ZAGS *e*Sn **Sn 20 16 39.2 -1.1**
BBLS Lazići 4.23 347 ⇑*i*Pn **Pn 20 15 53.7 +1.9**
BBLS Lazići 4.23 347 *e*Pn **Pn 20 15 54.0 +2.2**
ALN Alexandroupoli 4.24 73 Pn **Pn 20 15 54.4 +2.5**
ALN Alexandroupoli 4.24 73 P Pn 20 15 54.4 +2.5
ALN Alexandroupoli 4.24 73 ⇓P **Pn 20 15 54.2 +2.4**
SGRT San Giovanni R 4.27 300 Pn Pn 20 15 53.0 +0.7
EZN Ezine 4.33 87 P Pn 20 15 57.0 +3.9
PRK Paraskevi 4.34 95 P Pb 20 15 58.2 -5.7
DIVS Divibare 4.38 353 Pn 20 15 55.1 +1.2
DIVS Divibare 4.38 353 ⇑*i*Pn **Pn 20 15 55.6 +1.7**
DIVS Divibare 4.38 353 *e*Pn **Pn 20 15 55.8 +1.9**
DIVS Divibare 4.38 353 ⇑P **Pn 20 15 55.3 +1.5**
TRUS Trudelj 4.48 357 *e*Pn **Pn 20 15 57.5 +2.4**
HAPS Han Pijesak,Bl 4.53 344 ⇑*i*Pn **Pn 20 15 57.4 +1.5**
APE Apeiranthos 4.64 124 *i* P **Pn 20 16 00.4 +3.1**
APE Apeiranthos 4.64 124 Pn **Pn 20 16 00.6 +3.3**
BAIL Bailesti 4.71 24 ⇑P **Pn 20 16 02.0 +3.8**
KUBS Kucevo 4.72 8 *e*Pn **Pn 20 16 00.3 +1.9**
PUNG Punghina 4.83 19 ⇓P **Pn 20 16 03.1 +3.2**
DKL Dikili 4.85 96 ⇑P Pn 20 16 04.7 +4.5
PAOL Paolisi 4.86 287 Pn 20 16 02.2 +1.8
TEKS Tekeris 4.88 350 ⇑*i*Pn **Pn 20 16 01.2 +0.6**
TEKS Tekeris 4.88 350 *e*Pn **Pn 20 16 01.5 +0.9**
SANT Santorini 5.04 130 ⇓P **Pn 20 16 06.7 +3.8**
SANT Santorini 5.04 130 Pn 20 16 06.0 +3.1
SRKY Kupres RS 5.06 330 ⇑*i*Pn **Pn 20 16 05.3 +2.1**
BEO Beograd 5.06 358 P Pn 20 16 03.5 +0.4
BEO Beograd 5.06 358 *e*Pn **Pn 20 16 03.6 +0.4**
VLAD Vladila 5.07 32 ⇓P **Pn 20 16 06.2 +3.1**
MDVR Moldovita 5.09 8 ⇑P **Pn 20 16 07.5 +3.9**
DJES Djerdap 5.10 15 ⇑P **Pn 20 16 07.8 +4.2**
DJES Djerdap 5.10 15 *e*Pn **Pn 20 16 06.5 +2.9**
BLJ Bijeljina 5.15 349 ⇑*i*Pn **Pn 20 16 04.7 +0.4**
SRE Strehaia 5.25 20 ⇑P **Pn 20 16 08.6 +2.8**
SRE Strehaia 5.25 20 P Pn 20 16 08.5 +2.8
HERR Herculane 5.29 13 ⇓P **Pn 20 16 09.5 +3.3**
MGRS Mrkonjic Grad 5.39 331 ⇑*i*Pn **Pn 20 16 09.5 +1.9**
VAE Valguarnera 5.42 247 Pn **Pn 20 16 10.3 +2.2**
comp=N,76nm,0.5s,baz=168,slow=4.4,SNR=21
VAE Sn **Sn 20 17 08.7 -1.3**
comp=N,45nm,0.3s,baz=8,9,slow=14,SNR=2.5
FRGS Fruska Gora 5.45 353 ⇓P **Pn 20 16 10.1 +1.6**
FRGS Fruska Gora 5.45 353 ⇑*i*Pn **Pn 20 16 09.6 +1.1**
FRGS Fruska Gora 5.45 353 *e*Pn **Pn 20 16 09.9 +1.4**
COPA Copaceanca 5.53 36 ⇑P **Pn 20 16 12.8 +3.3**
IDI Anoyia 5.55 142 ⇑P **Pn 20 16 11.1 +1.1**
IDI Anoyia 5.55 142 Pn Pn 20 16 11.1 +1.1
comp=N,26nm,0.3s,baz=282,slow=9.6,SNR=73
IDI Sn **Sn 20 17 12.4 -0.9**
comp=N,245nm,0.3s,baz=91,slow=19,SNR=10
comp=N,62nm,0.5s
IDI Anoyia 5.55 142 Pn 20 16 11.0 +1.0
IDI Anoyia 5.55 142 ⇑P **Pn 20 16 11.0 +1.0**
RAFF Raffo Rosso 5.58 245 Pn 20 16 09.7 -0.5
INTR Introdacqua 5.63 296 Pn 20 16 12.7 +1.7
BLY Banja Luka 5.64 334 ⇑*i*Pn **Pn 20 16 12.2 +1.2**
BLY Banja Luka 5.64 334 ⇑P **Pn 20 16 12.2 +1.2**
BANR Banloc 5.64 3 ⇑P **Pn 20 16 13.2 +2.1**
HUMR Humele 5.74 32 ⇑P **Pn 20 16 15.5 +3.1**
RAZG Razgrad 5.79 47 ⇑P **Pn 20 16 17.1 +4.0**
GZR Gura Zlata 5.85 14 ⇑P **Pn 20 16 17.1 +3.1**
GZR Gura Zlata 5.85 14 P Pn 20 16 17.1 +3.1
A052A Srbac 5.85 337 ⇑*i*Pn **Pn 20 16 14.4 +0.5**
BZS Buzias 5.91 6 ⇑P **Pn 20 16 16.8 +2.1**
BZS Buzias 5.91 6 P Pn 20 16 16.1 +1.4
BZS pmax pmax
comp=Z,84nm,1.4s
SGRR Singureni 5.95 40 ⇑P **Pn 20 16 19.1 +3.8**
A051A Mrakovica 5.97 333 ⇑*i*Pn **Pn 20 16 16.6 +1.0**
PRIJ Prijedor 6.00 332 ⇑*i*Pn **Pn 20 16 17.2 +1.2**
STFAR Stefanesti-Arg 6.01 30 ⇑P **Pn 20 16 20.4 +4.2**
AQU L'Aquila 6.10 298 Pn 20 16 18.5 +1.0
AQU L'Aquila 6.10 298 P Pn 20 16 18.5 +1.0
AQU L'Aquila 6.10 298 ⇑P **Pn 20 16 19.4 +1.9**
LOT Lotru 6.13 21 ⇑P **Pn 20 16 21.1 +3.2**
CAMP Campotosto 6.17 299 Pn 20 16 19.9 +1.5
MANT Manisa 6.23 99 Pn 20 16 23.6 +4.1
WDD Wied Dalam 6.26 233 Pn 20 16 19.0 -0.5
ARR Arges 6.32 26 ⇑P **Pn 20 16 23.5 +3.0**
DEV Deva 6.34 14 P Pn 20 16 24.3 +3.6
DEV pmax pmax
comp=Z,724nm,1.1s
MTUR Matau 6.35 29 ⇓P **Pn 20 16 24.5 +3.6**
SULR 6.42 38 ⇑P **Pn 20 16 25.9 +4.1**
NRCA Norcia 6.50 301 Pn 20 16 23.4 +0.5
PLAR PLOIESTI 6.50 36 ⇑P Pn 20 16 27.6 +4.7
VOIR 6.53 28 ⇓P **Pn 20 16 26.8 +3.4**
VOIR 6.53 28 P Pn 20 16 27.0 +3.7
VOIR pmax pmax
comp=Z,422nm,1.1s
LEHL Lehliu 6.56 42 ⇓P **Pn 20 16 27.8 +4.1**
RASA Rasa 6.56 45 ⇓P **Pn 20 16 27.6 +3.9**
SIRR Siria 6.56 6 ⇓P **Pn 20 16 27.3 +3.7**
AMBH Ambrzfalva 6.60 0 ⇓P **Pn 20 16 26.8 +2.6**
AMBH Ambrzfalva 6.60 0 P Pn 20 16 26.3 +2.1
SECR 6.61 35 ⇑P **Pn 20 16 28.8 +4.4**
KARP Karpathos 6.62 127 Pn 20 16 27.9 +3.4
KOVH Kovagotottos 6.62 344 P Pn 20 16 25.1 +0.6
MORH Mrgy, Hungar 6.64 348 P **Pn 20 16 25.0 +0.3**
CESX Cesi 6.76 298 Pn 20 16 27.5 +1.0
ARG Arkhangelos 6.84 119 Pn 20 16 32.2 +4.7
ARG Arkhangelos 6.84 119 P Pn 20 16 32.3 +4.8
ICOR Ion Corvin 6.86 48 ⇑P Pn 20 16 33.1 +5.3
ISR Istrita 6.89 37 ⇑P Pn 20 16 32.8 +4.5
ISR Istrita 6.89 37 P Pn 20 16 32.7 +4.4
ISR pmax pmax
comp=Z,1μm,0.9s
AMRR Amara 6.92 43 ⇑P **Pn 20 16 32.9 +4.3**
MLR Muntele Rosu 6.92 32 ⇑P Pn 20 16 33.3 +4.5
MLR Muntele Rosu 6.92 32 Pn **Pn 20 16 31.5 +2.8**
comp=Z,17nm,0.3s,baz=236,slow=6.2,SNR=191
MLR LR LR 20 19 48.7
comp=Z,66μm,18.5s,baz=190,slow=44
MLR Muntele Rosu 6.92 32 20 16 32.3 +3.5
PGOR Pogoanele 6.95 40 ⇓P **Pn 20 16 33.2 +4.3**
BOJS Bojanci 7.02 327 ⇑*i*Pn **Pn 20 16 30.8 +0.8**
BOJS Bojanci 7.02 327 ⇑*i*Pn **Pn 20 16 30.7 +0.8**
BOJS *i* Sn **Sn 20 17 46.4 -2.8**
BOJS IAML 20 19 16.1
comp=Z,7μm,2.1s
MURB Monte Urbino 7.07 302 Pn 20 16 32.4 +1.6
DOPR Dopca 7.11 27 ⇑P Pn 20 16 35.8 +4.6
MANR Mangalia 7.16 53 ⇑P **Pn 20 16 35.6 +3.8**
DRGR 7.19 11 ⇑P **Pn 20 16 35.7 +3.2**
DRGR 7.19 11 P Pn 20 16 35.4 +2.9
DRGR pmax pmax
comp=Z,167nm,1.5s
CRES Cresnjev 7.20 329 ⇑*i*Pn **Pn 20 16 32.8 +0.4**
MGAB Montegabbione 7.20 299 ⇑P **Pn 20 16 33.8 +1.3**
TLBR Topalu 7.26 46 ⇑P **Pn 20 16 37.3 +4.0**
CJR Cluj-Napoca 7.28 16 ⇓P **Pn 20 16 37.3 +3.7**
CJR Cluj-Napoca 7.28 16 P Pn 20 16 37.2 +3.7
HARR Harsova 7.29 45 ⇑P **Pn 20 16 37.7 +4.0**
LATE Laterza 7.30 296 Pn 20 16 35.3 +1.4
BEHE Becsehely 7.31 338 P Pn 20 16 34.9 +0.9
COVR Voineasa-Covas 7.32 32 ⇑P Pn 20 16 38.5 +4.4
OZUR 7.36 29 ⇓P **Pn 20 16 38.5 +3.8**
BORR Bors 7.38 6 ⇑P **Pn 20 16 39.2 +4.2**
TIRR Tirgusor 7.42 48 Pn 20 16 38.6 +3.2
TIRR Tirgusor 7.42 48 P Pn 20 16 38.6 +3.2
TIH Tihany 7.44 345 P Pn 20 16 37.2 +1.5
PLOR Plostina 7.51 34 ⇓P Pn 20 16 41.2 +4.5
PLOR Plostina 7.51 34 P Pn 20 16 41.2 +4.5
BORA Eskisehir 7.51 86 Pn 20 16 40.6 +3.9
VRI Vrincioaia 7.55 34 ⇓P Pn 20 16 41.7 +4.4
VRI Vrincioaia 7.55 34 P Pn 20 16 41.9 +4.6
VRI pmax pmax
comp=Z,1μm,1.2s
BSZH Besenyszg 7.56 358 ⇑P **Pn 20 16 40.6 +3.2**
BSZH Besenyszg 7.56 358 P Pn 20 16 40.0 +2.7
CEY Cerknica 7.56 324 ⇑*i*Pn **Pn 20 16 37.9 +0.4**
SKDS Skadanscina 7.61 322 ⇑*i*Pn **Pn 20 16 37.9 -0.2**
SKDS Skadanscina 7.61 322 ⇑*i*Pn **Pn 20 16 37.9 -0.2**
SKDS *i* Sn **Sn 20 17 59.3 -4.5**
SKDS IAML 20 19 21.4
comp=Z,10μm,3.4s
ODBI Odobesti 7.62 36 ⇑P Pn 20 16 43.4 +5.3
TPGR Topolog 7.67 46 ⇑P **Pn 20 16 42.1 +3.2**
LTVH Ltavrtes, Hu 7.69 6 ⇑P **Pn 20 16 43.4 +4.3**
LTVH Ltavrtes, Hu 7.69 6 P Pn 20 16 42.4 +3.2
CFR Carcaliu 7.72 43 ⇑P **Pn 20 16 43.7 +4.1**
CFR Carcaliu 7.72 43 P Pn 20 16 42.8 +3.2
CFR pmax pmax
comp=Z,170nm,0.7s
PANC Panciu 7.74 36 ⇑P Pn 20 16 44.7 +4.8
MPLH Magyarpolny 7.77 344 P Pn 20 16 41.4 +1.1
TUDR 7.78 39 ⇑P **Pn 20 16 44.4 +4.1**
IZVR Izvoarele 7.79 40 ⇑P **Pn 20 16 44.0 +3.5**
CSKK Cskako 7.82 348 P Pn 20 16 42.0 +1.1
SLCR Slobozia Conac 7.82 39 ⇑P **Pn 20 16 45.0 +4.0**
BUD Budapest 7.83 352 P Pn 20 16 42.8 +1.7
BUD pmax pmax
comp=Z,313nm,0.8s
BUD Budapest 7.83 352 P Pn 20 16 42.5 +1.4
ELL Elmali 7.84 110 Pn 20 16 45.7 +4.4
ELL Elmali 7.84 110 P Pn 20 16 45.7 +4.4
AKAS Kas 7.85 114 Pn 20 16 46.0 +4.4
JURR Jurilovca 7.87 48 ⇑P **Pn 20 16 45.1 +3.5**
ISP Isparta 7.91 101 Pn 20 16 46.4 +4.1
ISP Isparta 7.91 101 *c i* P Pn 20 16 47.2 +4.9
ISP Isparta 7.91 101 Pn Pn 20 16 46.4 +4.1
TATR Tatarca 7.97 40 ⇓P **Pn 20 16 47.0 +4.1**
SCTR Scanteiesti 7.99 40 ⇑P **Pn 20 16 47.4 +4.0**
GHRR 8.00 36 ⇑P Pn 20 16 48.3 +4.9
CASP Castiglione de 8.01 295 Pn 20 16 44.3 +0.7
OSSC Osservatorio P 8.03 301 Pn 20 16 41.9 -2.0
TESR Tescani 8.04 31 ⇓P **Pn 20 16 47.2 +3.3**
EGYH Egyhazaskeszo 8.05 343 P Pn 20 16 45.6 +1.5
SOKA Soboth 8.07 331 *i* Pn **Pn 20 16 44.6 +0.1**
comp=Z,105nm,0.4s,SNR=113
SOKA *e*Sn **Sn 20 18 15.3 +0.2**
comp=Z,190nm,0.9s
MDUB Mudurnu 8.08 81 Pn 20 16 47.0 +2.4
VARL Varlezi 8.09 38 ⇑P **Pn 20 16 48.6 +4.0**
TLCR 8.09 45 ⇑P **Pn 20 16 48.5 +3.9**
TLCR 8.09 45 P Pn 20 16 48.5 +3.9
OBKA Obir 8.12 328 ⇑*i*Pn **Pn 20 16 45.0 -0.1**
OBKA Obir 8.12 328 *e*Pn **Pn 20 16 45.1 -0.1**
comp=Z,178nm,0.6s,SNR=73
OBKA *i* Sn **Sn 20 18 16.9 +0.5**
comp=Z,621nm,0.8s
VLDR Vladesti 8.16 39 ⇓P **Pn 20 16 49.5 +3.9**
BMR Baia Mare 8.18 13 ⇑P **Pn 20 16 50.0 +4.1**
BMR Baia Mare 8.18 13 P Pn 20 16 50.0 +4.1
BMR pmax pmax
comp=Z,296nm,0.9s
PSZ Piszkesteto 8.19 356 ⇓P **Pn 20 16 47.9 +1.8**
PSZ Piszkesteto 8.19 356 Pn 20 16 46.0 -0.1
PSZ Piszkesteto 8.19 356 P Pn 20 16 46.1 -0.1
PSZ Piszkesteto 8.19 356 P Pn 20 16 47.9 +1.8
BIZ Bicaz 8.20 27 ⇓P Pn 20 16 50.6 +4.5
SRO Srobarova 8.25 349 P Pn 20 16 48.2 +1.4
SRO pmax pmax
comp=Z,2μm,0.9s
BIR Birlad 8.26 36 ⇓P **Pn 20 16 51.0 +4.1**
BIR Birlad 8.26 36 P Pn 20 16 51.0 +4.1
KDZE Karadeniz Ereo 8.33 76 ⇓P **Pn 20 16 51.7 +3.7**
GIRR Girov 8.35 28 ⇑P Pn 20 16 52.9 +4.7
ARSA Arzberg 8.39 335 *i* Pn **Pn 20 16 49.0 +0.2**
comp=Z,73nm,0.5s,SNR=64
ARSA Arzberg 8.39 335 ⇑P **Pn 20 16 48.9 0.0**
SOP Sopron 8.48 341 P Pn 20 16 50.6 +0.5
SOP pmax pmax
comp=Z,106nm,1.1s
SOP Sopron 8.48 341 P Pn 20 16 50.6 +0.5
TRPA Tarpa 8.49 8 ⇑P **Pn 20 16 52.9 +2.8**
TRPA Tarpa 8.49 8 P Pn 20 16 52.6 +2.5
PRED Cave del Predi 8.49 324 Pn 20 16 49.4 -0.8
BURAR Bucovina Array 8.52 21 ⇑P Pn 20 16 55.3 +4.7
BURAR Bucovina Array 8.52 21 Pn 20 16 52.9 +2.2
BURAR Bucovina Array 8.52 21 P Pn 20 16 55.3 +4.7
BUR08 Bucovina Ar. S 8.54 21 Pn 20 16 52.7 +1.7
PTCC Patocco-Chiusa 8.56 323 ⇑P **Pn 20 16 50.5 -0.6**
ABAH Abaujker 8.56 2 P Pn 20 16 53.3 +2.2
RONA Rosalia, Austr 8.57 340 *i* Pn **Pn 20 16 51.4 +0.2**
comp=Z,16nm,0.5s,SNR=61
ZCCA Zocca 8.57 306 Pn 20 16 53.3 +2.0
MYKA Terra Mystica 8.60 325 *i* Pn **Pn 20 16 51.9 +0.2**
comp=Z,62nm,0.6s,SNR=35
MYKA *e*Sn **Sn 20 18 25.8 -2.3**
comp=Z,75nm,0.4s
TEOL Teolo 8.71 313 Pn 20 16 52.7 -0.5
KECS Kecovo 8.74 359 *e*P **Pn 20 16 56.7 +3.2**
STAL STALIGIAL 8.75 321 Pn 20 16 52.9 -0.9
CLUD Cludinico 8.81 322 Pn 20 16 53.7 -1.0
ZST Bratislava 8.84 344 *e*P **Pn 20 16 56.1 +1.2**
ZST MLR MLR
comp=Z,26μm,12.6s
VYHS Vyhne 8.85 352 *e*P **Pn 20 16 57.1 +2.0**
VYHS MLR MLR
comp=Z,36μm,17.3s
VLC Villacollemand 8.86 303 Pn 20 16 54.2 -1.1
VLC Villacollemand 8.86 303 ⇑P **Pn 20 16 55.8 +0.5**
CONA Conrad Observa 8.90 338 *e*Pn **Pn 20 16 55.9 +0.1**
comp=Z,64nm,0.7s,SNR=35
IAS Iasi 8.95 32 P Pn 20 17 00.2 +3.7
IAS pmax pmax
comp=Z,444nm,0.6s
UZH Uzhgorod 8.96 7 *e*P **Pn 20 16 59.0 +2.5**
UZH *e*S **Sn 20 18 39.2 +2.4**
UZH MLR MLR
comp=N,5μm,13.0s
UZH MLR MLR
comp=E,4μm,13.0s

UZH MLR MLR
comp=Z,3μm,13.0s
MODS Modra-Piesok 8.97 345 *e*P **Pn 20 16 58.3 +1.5**
MODS MLR MLR
comp=Z,128μm,15.5s
KBA Koelnbreinsper 9.07 326 P **Pn 20 16 58.4 +0.1**
KBA pmax pmax
comp=Z,279nm,0.9s
KBA Koelnbreinsper 9.07 326 *e*Pn **Pn 20 16 58.2 -0.1**
comp=Z,68nm,0.6s,SNR=78
KBA *e*Sn **Sn 20 18 37.0 -3.0**
comp=Z,102nm,0.6s
KBA Koelnbreinsper 9.07 326 ⇑P **Pn 20 16 58.2 -0.1**
CTI Castel Tesino 9.15 316 **Pn 20 16 58.5 -0.8**
CTI Castel Tesino 9.15 316 P **Pn 20 16 58.5 -0.8**
CRVS Cervenica-Dubn 9.17 3 *e*P **Pn 20 17 03.1 +3.6**
CRVS MLR MLR
comp=Z,18μm,22.3s
PRMA PARMA 9.19 306 **Pn 20 17 00.0 +0.3**
ABTA Abfaltersbach 9.20 322 *i* Pn **Pn 20 16 59.6 -0.3**
comp=Z,68nm,0.4s,SNR=80
ABTA *e*Sn **Sn 20 18 42.5 -0.4**
comp=Z,381nm,0.8s
KOLS Kolonicke sedl 9.26 6 *e*P **Pn 20 17 04.5 +3.9**
PGF Pioggiola 9.26 291 *e*P **Pn 20 17 02.9 +2.0**
PGF *e*Sn **Sn 20 18 36.7 -7.8**
comp=Z,202nm,1.1s
MILM Milestii Mici 9.29 37 ⇓P **Pn 20 17 04.9 +3.8**
MILM Milestii Mici 9.29 37*c i*P **Pn 20 17 03.0 +2.0**
MILM *e*S **Sn 20 18 47.0 +2.1**
MILM pmax pmax
comp=Z,900nm,1.5s
MILM MLR MLR
comp=Z,36μm,13.0s
MILM MLR MLR
comp=N,16μm,12.5s
MILM MLR MLR
comp=E,23μm,12.0s
MILM Milestii Mici 9.29 37 LRM MLR 20 21 31.0
comp=E,36μm,13.0s
MILM Milestii Mici 9.29 37 M M 20 17 15.0
comp=E,2μm,2.5s
MILM Milestii Mici 9.29 37 *e*L L 20 20 15.0
BR231 Keskin MP Arra 9.29 86 **Pn 20 17 05.0 +3.7**
ANTO Ankara 9.31 85 **Pn 20 17 05.3 +3.9**
ANTO Ankara 9.31 85 P **Pn 20 17 05.3 +3.9**
ANTO Ankara 9.31 85 P **Pn 20 17 05.8 +4.4**
ANTO S **Sn 20 18 47.2 +1.7**
MOA Molln 9.34 332 *i* Pn **Pn 20 17 02.4 +0.5**
comp=E,50nm,0.3s,SNR=90
MOA *e*Sn **Sn 20 18 46.8 +0.6**
comp=E,47nm,0.4s
KIS Kishinev 9.35 36 ⇑P Pn 20 17 06.9 +5.0
KIS Kishinev 9.35 36⇑*e*P **Pn 20 17 04.6 +2.7**
comp=E,240nm,1.4s
KIS *e*S **Sn 20 18 52.0 +5.6**
KIS *e*L L 20 20 56.0
KIS LRM MLR 20 21 34.0
comp=E,10μm,10.7s
KIS Kishinev 9.35 36 *e*P **Pn 20 17 04.0 +2.1**
KIS *e*S **Sn 20 18 52.0 +5.6**
KIS pmax pmax
comp=Z,240nm,1.4s
KIS MLR MLR
comp=Z,13μm,12.7s
KIS MLR MLR
comp=N,6μm,12.8s
KIS MLR MLR
comp=E,10μm,10.7s
JAVC Velka Javorina 9.37 348 *e*PN **Pn 20 17 04.3 +2.1**
BIOA Bad Ischl, Aus 9.44 330 *i* Pn **Pn 20 17 03.6 +0.4**
comp=E,268nm,1.0s,SNR=221
BIOA *i* Sn **Sn 20 18 48.4 -0.5**
comp=E,150nm,0.8s
MSSA Maissana 9.49 302 **Pn 20 17 04.1 +0.1**
SALO Salr 9.52 311 **Pn 20 17 03.2 -1.1**
SALO Salr 9.52 311 ⇑P **Pn 20 17 03.5 -0.7**
STHS Stebnicka Huta 9.68 2 *e*P **Pn 20 17 09.7 +3.2**
KRUC Moravsky 9.81 343 P **Pn 20 17 09.0 +0.8**
KRUC pmax pmax
comp=Z,66nm,2.4s
KRUC Moravsky 9.81 343 *e*PN **Pn 20 17 08.5 +0.3**
MAUC Maruska 9.84 349 *e*PN **Pn 20 17 10.5 +1.9**
MAUC AMS AMS 20 22 10.0
comp=Z,53μm,12.1s
KEST Kesra 9.85 250 Pn **Pn 20 17 11.3 +2.5**
comp=Z,2.1nm,0.3s,baz=15,slow=3.5,SNR=64
KEST LR LR 20 22 10.0
comp=Z,11μm,19.2s,baz=20,slow=44
comp=Z,83nm,0.8s
KEST Kesra 9.85 250 **Pn 20 17 09.5 +0.7**
BR131 Keskin Array S 9.97 86 **Pn 20 17 14.1 +3.6**
BR131 Keskin Array S 9.97 86 *i* P Pn 20 17 15.1 +4.6
BRTR Keskin Array B 9.97 86 Pn **Pn 20 17 13.8 +3.3**
comp=Z,3.2nm,0.3s,baz=269,slow=10,SNR=42
comp=Z,14nm,0.5s
BRTR Keskin Array B 9.97 86 **Pn 20 17 14.2 +3.6**
BRTR Keskin Array B 9.97 86 P **Pn 20 17 14.2 +3.6**
WTTA Wattenberg 9.99 322 P **Pn 20 17 10.9 +0.1**
WTTA pmax pmax
comp=Z,297nm,0.9s
WTTA Wattenberg 9.99 322 *i* Pn **Pn 20 17 11.2 +0.3**
comp=Z,86nm,0.3s,SNR=166
WTTA *i* Sn **Sn 20 19 00.5 -1.9**
comp=Z,202nm,0.5s
VRAC Vranov 10.00 344 ⇓P **Pn 20 17 11.9 +1.1**
VRAC Vranov 10.00 344 Pn **Pn 20 17 11.0 +0.2**
comp=Z,0.7nm,0.3s,baz=173,slow=13,SNR=50
comp=Z,34nm,0.9s
VRAC Vranov 10.00 344 *e*PN **Pn 20 17 11.6 +0.7**
ILGA Ilgaz 10.01 78 **Pn 20 17 15.4 +4.1**
WATA Walderalm 10.07 322 *i* Pn **Pn 20 17 12.7 +0.8**
comp=Z,155nm,0.5s,SNR=308
WATA *e*Sn **Sn 20 19 01.4 -2.9**
comp=Z,214nm,0.8s
CKRC Cesky Krumlov 10.16 335 *e*PN **Pn 20 17 13.6 +0.5**
CKRC AMS AMS 20 21 40.0
comp=Z,34μm,13.2s
SQTA Sankt Quirin 10.16 320 *i* Pn **Pn 20 17 14.4 +1.1**
comp=Z,80nm,0.3s,SNR=114
SQTA *i* Sn **Sn 20 19 02.4 -4.2**
comp=Z,100nm,0.5s
TREC Trest 10.25 340 P **Pn 20 17 15.2 +1.0**
TREC pmax pmax
comp=Z,68nm,1.2s
TREC Trest 10.25 340 AMS AMS 20 21 40.0
comp=Z,40μm,12.7s
OKC Ostrava-Krasne 10.25 351 *e*P **Pn 20 17 16.1 +1.8**
OKC MLR MLR
comp=Z,20μm,17.9s
OKC Ostrava-Krasne 10.25 351 *e*PN **Pn 20 17 16.1 +1.8**
OKC AMS AMS 20 21 50.0
comp=Z,20μm,17.9s
FUORN Ofenpass-Fuorn 10.26 315 **Pn 20 17 14.4 -0.2**
FETA Feichten 10.27 318 *i* Pn **Pn 20 17 15.3 +0.6**
comp=Z,18nm,0.4s,SNR=48
FETA *e*Sn **Sn 20 19 06.2 -3.1**
comp=Z,59nm,0.6s
MORC Moravsky Berou 10.28 348 ⇑P **Pn 20 17 16.3 +1.6**
MORC Moravsky Berou 10.28 348 **Pn 20 17 15.6 +0.9**
MORC Moravsky Berou 10.28 348 P **Pn 20 17 15.6 +0.9**
MORC Moravsky Berou 10.28 348 *e*PN **Pn 20 17 15.8 +1.1**
MOTA Moosalm 10.30 321 *i* Pn **Pn 20 17 15.6 +0.5**
comp=Z,224nm,0.8s,SNR=239
MOTA *i* Sn **Sn 20 19 06.9 -3.1**
comp=Z,113nm,0.5s
BZK Bozkurt 10.32 73 **Pn 20 17 17.4 +2.2**
LVV L'vov 10.35 12 *e*P Pn 20 17 21.0 +5.4
LVV *e*S Sn 20 19 23.0 +12
LVV pmax pmax
comp=Z,270nm,1.2s
LVV MLR MLR
comp=N,12μm,13.0s
LVV MLR MLR
comp=E,7μm,13.0s
LVV MLR MLR
comp=Z,15μm,12.0s
GEC2 GERESS Array S 10.38 333 **Pn 20 17 15.8 -0.4**
GEC2 GERESS Array S 10.38 333 P **Pn 20 17 15.9 -0.3**
GEC2 pmax pmax
comp=Z,155nm,1.1s
GERES GERESS Array B 10.38 333 Pn **Pn 20 17 15.3 -0.9**
comp=Z,6.1nm,0.3s,baz=159,slow=13,SNR=108
GERES Sn **Sn 20 19 09.2 -2.8**
comp=Z,8.7nm,0.3s,baz=156,slow=24,SNR=6.4
GERES LR LR 20 22 25.1
comp=Z,20μm,21.9s,baz=142,slow=44
comp=Z,11nm,0.4s
GERES GERESS Array B 10.38 333 **Pn 20 17 15.2 -1.0**
RAC Raciborz 10.49 351 *e*P **Pn 20 17 18.8 +1.3**
RAC LMZ LR 20 21 58.1
comp=Z,20nm,17.9s
RAC Raciborz 10.49 351 *e*P **Pn 20 17 18.8 +1.3**
RAC MLR MLR
comp=Z,20μm,17.9s
OJC Ojcow 10.49 357 *e*P **Pn 20 17 17.9 +0.2**
OJC *e*L L 20 22 10.2
comp=Z,48μm,14.8s
OJC Ojcow 10.49 357 **Pn 20 17 16.8 -0.8**
OJC Ojcow 10.49 357 P **Pn 20 17 16.8 -0.8**
OJC Ojcow 10.49 357 ⇑P **Pn 20 17 17.8 +0.2**
DAVOX Davos/Dischmat 10.56 315 Pn **Pn 20 17 19.0 +0.2**
comp=Z,10nm,0.3s,baz=136,slow=12,SNR=130
DAVOX Sn **Sn 20 19 16.5 0.0**
comp=Z,12nm,0.3s,baz=335,slow=15,SNR=4.9
DAVOX LR LR 20 22 04.8
comp=Z,6μm,19.8s,baz=123,slow=41
comp=Z,112nm,0.6s
DAVOX Davos/Dischmat 10.56 315 P **Pn 20 17 19.0 +0.2**
RETA Reutte 10.57 320 *i* Pn **Pn 20 17 18.8 +0.1**
comp=Z,35nm,0.4s,SNR=30
RETA *e*Sn **Sn 20 19 13.6 -2.9**
comp=Z,113nm,0.6s
KHC Kasperske Hory 10.67 334 **Pn 20 17 19.5 -0.6**
KHC Kasperske Hory 10.67 334 *e*P **Pn 20 17 19.9 -0.2**
KHC *e* 20 19 17.4
KHC MLR MLR
comp=Z,35μm,13.3s
KHC Kasperske Hory 10.67 334 *e*PN **Pn 20 17 19.9 -0.2**
KHC *ex* x 20 17 26.0
KHC *e*SN **Sn 20 19 17.4 -1.5**
KHC AMS AMS 20 22 00.0
comp=Z,35μm,13.3s
KHC Kasperske Hory 10.67 334 ⇑P **Pn 20 17 19.7 -0.4**
TUE Stuetta 10.68 313 **Pn 20 17 19.8 -0.6**
TUE Stuetta 10.68 313 ⇑P **Pn 20 17 19.6 -0.7**
KRLC Kraliky 10.70 346 *e*P **Pn 20 17 21.5 +1.1**
KRLC MLR MLR
comp=Z,27μm,12.9s
KRLC Kraliky 10.70 346 *e*PN **Pn 20 17 21.5 +1.1**
KRLC *e*PN **Pn 20 17 22.0 +1.6**
KRLC AMS AMS 20 22 20.0
comp=Z,27μm,12.9s
SBF Sospel 10.72 297 *e*P **Pn 20 17 22.4 +1.6**
SBF *e*Sn **Sn 20 19 12.0 -8.3**
comp=Z,138nm,0.7s
SBF Sospel 10.72 297 P **Pn 20 17 23.2 +2.4**
FUR Furstenfeldbru 10.81 324 P **Pn 20 17 21.4 -0.6**
FUR pmax pmax
comp=Z,135nm,1.1s
MONC Moncucco Torin 10.84 304 ⇑P **Pn 20 17 23.5 +1.1**
DAVA Damuels 10.88 317 *i* Pn **Pn 20 17 24.2 +1.2**
comp=Z,94nm,0.7s,SNR=42
DAVA *i* Sn **Sn 20 19 21.6 -2.7**
comp=Z,131nm,0.5s
DAVA Damuels 10.88 317 ⇑P **Pn 20 17 23.5 +0.4**
WET Wettzell 10.93 332 P **Pn 20 17 22.6 -1.0**
WET pmax pmax
comp=Z,93nm,1.1s
GOPC GO Pecny, Ondr 11.00 340 *e*P **Pn 20 17 25.2 +0.7**
GOPC MLR MLR
comp=Z,32μm,12.4s
GOPC GO Pecny, Ondr 11.00 340 *e*PN **Pn 20 17 25.2 +0.7**
GOPC AMS AMS 20 22 10.0
comp=Z,32μm,12.4s
DPC Dobruska-Polom 11.05 345 *e*P **Pn 20 17 25.9 +0.7**
DPC MLR MLR
comp=Z,43μm,12.1s
DPC Dobruska-Polom 11.05 345 *e*PN **Pn 20 17 25.9 +0.7**
DPC AMS AMS 20 22 20.0
comp=Z,43μm,12.1s
ISO Isola 11.09 298 P **Pn 20 17 30.2 +4.4**
ISO pmax pmax
comp=Z,65nm,1.7s
CSS Mathiatis 11.12 111 **Pn 20 17 28.7 +2.4**
CSS Mathiatis 11.12 111 Pn **Pn 20 17 22.7 -3.6**
PRU Pruhonice 11.13 339 *e*P **Pn 20 17 26.8 +0.5**
PRU MLR MLR
comp=Z,33μm,12.5s
PRU Pruhonice 11.13 339 *e*PN **Pn 20 17 26.8 +0.5**
PRU AMS AMS 20 22 10.0
comp=Z,33μm,12.5s
SIM Simferopol' 11.20 58 *e*P **Pn 20 17 29.6 +2.3**
SIM pmax pmax
comp=Z,205nm,1.0s
SIM MLR MLR
comp=Z,5μm,14.7s
DIKM Dikmen 11.21 76 ⇑P Pn 20 17 32.1 +4.6
LMR La Mourre 11.23 293 *e*P **Pn 20 17 29.5 +1.9**
LMR *e*Sn Sn 20 19 23.0 -10
comp=Z,6.1nm,0.3s
LMR La Mourre 11.23 293 P **Pn 20 17 28.1 +0.5**
UPC Upice 11.26 344 *e*P **Pn 20 17 29.1 +1.1**
UPC MLR MLR
comp=Z,37μm,16.1s
UPC Upice 11.26 344 *e*PN **Pn 20 17 29.1 +1.1**
UPC AMS AMS 20 22 30.0
comp=Z,37μm,16.1s
MMK Mattmark 11.26 308 P **Pn 20 17 29.6 +1.2**
MMK pmax pmax
comp=Z,70nm,1.0s
OSTC Ostas 11.26 345 *e*PN **Pn 20 17 29.4 +1.3**
OSTC AMS AMS 20 22 20.0
comp=Z,38μm,13.1s
CHVC Chvalec 11.33 345 *e*PN **Pn 20 17 30.0 +1.0**
CHVC AMS AMS 20 22 30.0
comp=Z,35μm,15.9s
MBDF Montbardon 11.46 300 *e*Pn **Pn 20 17 29.5 -1.5**
MBDF Montbardon 11.46 300 *e*P **Pn 20 17 35.1 +4.1**
MBDF *e*Sn **Sn 20 19 30.5 -8.0**
comp=Z,154nm,0.8s
KSP Ksiaz 11.52 346 *e*P **Pn 20 17 32.5 +0.9**
KSP *e*L L 20 22 47.0
comp=Z,32μm,17.0s
KSP Ksiaz 11.52 346 P **Pn 20 17 32.6 +0.9**
KSP pmax pmax
comp=Z,64nm,1.2s
KSP Ksiaz 11.52 346 ⇑P **Pn 20 17 32.4 +0.8**
PVCC Panska Ves 11.62 340 *e*P **Pn 20 17 33.3 +0.4**
PVCC MLR MLR
comp=Z,26μm,12.7s
PVCC Panska Ves 11.62 340 *e*PN **Pn 20 17 33.3 +0.4**
PVCC AMS AMS 20 22 30.0
comp=Z,26μm,12.7s
BNI Bardonecchia 11.64 302 P **Pn 20 17 36.3 +2.8**
BNI pmax pmax
comp=Z,48nm,1.4s
BNI Bardonecchia 11.64 302 ⇑P **Pn 20 17 34.4 +1.0**
BNN Bunyan 11.77 90 **Pn 20 17 38.7 +3.5**
LPG La Plagne 11.77 304 *e*Pn **Pn 20 17 34.7 -0.7**
LPG *e*Sn Sn 20 19 35.2 -11
comp=Z,315nm,0.7s
LPG La Plagne 11.77 304 P **Pn 20 17 34.2 -1.2**
LPL La Plagne 11.79 304 *e*Pn **Pn 20 17 34.5 -1.1**
LPL *e*Sn Sn 20 19 35.6 -11
comp=Z,229nm,0.5s
LPL La Plagne 11.79 304 P **Pn 20 17 35.2 -0.4**
SENIN Lac Senin/Sane 11.82 308 **Pn 20 17 34.8 -1.2**
SLE Schleitheim 11.91 316 P **Pn 20 17 36.8 -0.3**
SLE pmax pmax
comp=Z,91nm,1.0s
NKC Novy Kostel 12.00 334 *e*P **Pn 20 17 39.4 +1.2**
NKC MLR MLR
comp=Z,32μm,13.0s
NKC Novy Kostel 12.00 334 *e*PN **Pn 20 17 39.4 +1.2**
NKC AMS AMS 20 22 50.0
comp=Z,32μm,13.0s
GRFO Grafenberg 12.01 329 **Pn 20 17 36.5 -1.7**
GRFO Grafenberg 12.01 329 P **Pn 20 17 36.6 -1.7**
SMRF Simiane la Rot 12.04 295 *e*P **Pn 20 17 40.7 +1.8**
SMRF *e*Sn Sn 20 19 42.3 -10
comp=Z,32nm,0.8s
BEL Belsk 12.09 0 *e*P **Pn 20 17 42.3 +2.9**
BEL *e*L L 20 23 23.5
comp=Z,48μm,14.0s
BEL Belsk 12.09 0 P **Pn 20 17 42.8 +3.4**
BEL pmax pmax
comp=Z,629nm,1.2s
BEL Belsk 12.09 0 ⇑P **Pn 20 17 42.3 +2.9**
TOKA Tokat 12.11 82 Pn 20 17 44.7 +4.9
ORIF Oris-en-Rattie 12.12 300 *e*Pn **Pn 20 17 38.1 -1.9**
ORIF Oris-en-Rattie 12.12 300 *e*P **Pn 20 17 43.6 +3.6**
ORIF *e*Sn Sn 20 19 42.5 -12
comp=Z,161nm,0.9s
ORIF Oris-en-Rattie 12.12 300 P **Pn 20 17 42.6 +2.6**
ORIF pmax pmax
comp=Z,54nm,0.9s
STU Stuttgart 12.21 321 **Pn 20 17 39.7 -1.4**
STU Stuttgart 12.21 321 P **Pn 20 17 39.7 -1.4**
BFO Black Forest 12.35 318 **Pn 20 17 41.8 -1.3**
BFO Black Forest 12.35 318 P **Pn 20 17 41.8 -1.3**
BFO Black Forest 12.35 318 ⇓P **Pn 20 17 42.2 -0.9**
AKASG Malin Array Be 12.48 26 Pn **Pn 20 17 45.4 +0.6**
comp=Z,2.3nm,0.3s,baz=209,slow=13,SNR=38
AKASG LR LR 20 23 47.4
comp=Z,12μm,21.9s,baz=202,slow=43
comp=Z,48nm,1.1s
AKBB Malin Array Si 12.48 26 **Pn 20 17 45.3 +0.6**
AKBB Malin Array Si 12.48 26*c e*P **Pn 20 17 46.2 +1.4**
MOX Moxa 12.63 333 P **Pn 20 17 45.7 -1.1**
MOX pmax pmax
comp=Z,110nm,1.0s
MAHO Mahon 12.64 276 P **Pn 20 17 51.0 +4.1**
MAHO S **Sn 20 20 09.9 +2.8**
CABF La Chapelle 12.68 308 *e*Pn **Pn 20 17 46.8 -0.7**
CABF *e*Sn Sn 20 19 58.0 -10
comp=Z,676nm,1.1s
CABF La Chapelle 12.68 308 P **Pn 20 17 47.7 +0.2**
CLL Collm 12.75 338 **Pn 20 17 47.2 -1.2**
CLL Collm 12.75 338 *e*P **Pn 20 17 48.0 -0.4**
CLL MLR MLR
comp=Z,26μm,17.6s
CLL Collm 12.75 338 *e*P **Pn 20 17 48.0 -0.4**
CLL *i* PP **PnPn 20 18 00.0 +3.8**
comp=Z,131nm,1.1s
CLL *e*sPPP 20 18 11.0
CLL *ex* x 20 18 22.0
CLL Lmax 20 23 00.0
HINF Hinteralfeld 12.84 313 *e*Pn **Pn 20 17 47.8 -1.9**
HINF *e*Sn Sn 20 20 01.8 -10
comp=Z,89nm,0.5s
HINF Hinteralfeld 12.84 313 P **Pn 20 17 48.6 -1.1**
ECH Echery 12.90 315 **Pn 20 17 49.5 -1.1**
ECH Echery 12.90 315 P **Pn 20 17 49.5 -1.1**
ECH Echery 12.90 315 ⇓P **Pn 20 17 49.6 -1.0**
VIVF Saint-Julien-l 12.91 299 *e*Pn **Pn 20 17 49.1 -1.7**
VIVF *e*Sn Sn 20 20 01.8 -12
comp=Z,11nm,0.5s
VIVF Saint-Julien-l 12.91 299 P **Pn 20 17 52.1 +1.3**
CDF Champ du Feu 12.96 316 *e*Pn **Pn 20 17 49.8 -1.5**
CDF Champ du Feu 12.96 316 *e*P **Pn 20 17 55.7 +4.4**
CDF *e*Sn Sn 20 20 04.3 -11
comp=Z,702nm,1.8s
SSB Saint Sauveur 13.14 300 **Pn 20 17 53.6 -0.2**
SSB Saint Sauveur 13.14 300 P **Pn 20 17 53.6 -0.2**
SSB Saint Sauveur 13.14 300 ⇓P **Pn 20 17 54.5 +0.7**
HAU Haudompre 13.23 313 *e*Pn **Pn 20 17 53.0 -2.0**
HAU Haudompre 13.23 313 *e*P **Pn 20 17 58.5 +3.5**
HAU *e*Sn Sn 20 20 10.6 -11
comp=Z,175nm,0.6s
HAU Haudompre 13.23 313 P **Pn 20 17 55.7 +0.7**
LASF Ste Croix 13.27 294 *e*Pn **Pn 20 17 55.1 -0.5**
LASF Ste Croix 13.27 294 *e*P **Pn 20 17 57.4 +1.8**
LASF *e*Sn Sn 20 20 12.7 -10
comp=Z,11nm,0.6s
BHL Bhannes 13.31 111 *e*P **Pn 20 17 55.9 -0.4**
ANN Anapa 13.37 62 *e*P **Pn 20 17 58.9 +2.0**
ANN *e*S **Sn 20 20 24.5 -0.4**
ANN pmax pmax
comp=Z,189nm,1.8s
ANN MLR MLR
comp=E,2μm,9.0s
ANN MLR MLR
comp=Z,3μm,11.0s
ANN MLR MLR
comp=N,3μm,11.0s
HNTI Hanita 13.41 115 Pn **Pn 20 17 53.8 -3.7**
HNTI Sn **Sn 20 20 22.2 -3.8**
QRWL Qaraoun 13.52 113 *e*P **Pn 20 18 01.4 +2.4**
TNS Taunus Mts 13.58 325 P **Pn 20 17 59.7 -0.1**
TNS pmax pmax
comp=Z,116nm,0.7s
RUE Ruedersdorf 13.60 342 *e*P **P 20 18 06.5 -2.3**
MMAI Mount Meron Ar 13.61 115 Pn **Pn 20 18 01.2 +0.9**
comp=Z,5.2nm,0.3s,baz=316,slow=12,SNR=24
MMAI Sn **Sn 20 20 31.8 +0.9**
comp=Z,10nm,0.3s,baz=325,slow=7.1,SNR=5.5
MMAI LR LR 20 24 26.8
comp=Z,6μm,20.1s,baz=186,slow=42
comp=Z,14nm,0.6s
RCY Rachaya 13.65 112 *e*P **Pn 20 18 03.2 +2.2**
SHBL Chebaa 13.66 113 *e*P **Pn 20 18 02.1 +1.0**
GEM Giv'at Ha'Em 13.68 114 Pn **Pn 20 17 56.7 -4.5**
GEM Sn **Sn 20 20 29.9 -2.7**
NATI Neve Ativ 13.71 113 Pn **Pn 20 17 58.6 -2.9**
GKP Gorka Klasztor 13.74 351 *e*P **Pn 20 18 05.3 +3.5**
GKP *e*L L 20 23 03.2
comp=Z,9μm,27.4s
GKP Gorka Klasztor 13.74 351 *e*P **P 20 18 11.7 +1.4**
SLTI Sal'it 13.80 118 Pn **Pn 20 18 00.2 -2.7**
SLTI Sn **Sn 20 20 33.1 -2.5**
PAGF Fort de Pagny 13.88 314 *e*Pn **Pn 20 18 02.7 -1.2**
baz=115
PAGF *e*Sn Sn 20 20 26.5 -11
comp=Z,358nm,1.2s
MMLI Mount Malkishu 13.95 117 Pn **Pn 20 18 01.2 -3.7**
SALP Salfit 14.01 119 Pn **Pn 20 18 02.7 -3.0**
SALP Sn **Sn 20 20 36.9 -3.7**
SFTF Sexfontaines 14.08 312 *e*Pn **Pn 20 18 05.1 -1.5**
baz=130
SFTF *e*Sn Sn 20 20 31.3 -11
comp=Z,167nm,1.0s
SMF Signal de Mont 14.09 305 *e*Pn **Pn 20 18 05.2 -1.5**
SMF *e*Sn Sn 20 20 31.8 -11
comp=Z,134nm,0.7s
SMF Signal de Mont 14.09 305 P **Pn 20 18 05.1 -1.6**
AMAZ Amatzia 14.15 121 Pn **Pn 20 18 03.5 -4.2**
MEZF Maizieres J'vi 14.23 313 *e*Pn **Pn 20 18 06.8 -1.8**
baz=126
MEZF *e*Sn Sn 20 20 34.9 -11
comp=Z,216nm,1.1s
SAVF Savonnieres en 14.25 314 *e*Pn **Pn 20 18 05.7 -3.2**
baz=133
SAVF *e*Sn Sn 20 20 35.3 -11
comp=Z,76nm,0.9s
UJAP Al Uja 14.26 118 Pn **Pn 20 18 05.4 -3.7**
UJAP Sn **Sn 20 20 42.8 -3.9**
MTLF Montolieu 14.30 291 *e*Pn **Pn 20 18 08.5 -1.2**
MTLF *e*Sn Sn 20 20 35.3 -12
comp=Z,1.3nm,0.3s
WLF Walferdange 14.31 319 **Pn 20 18 09.8 +0.1**
WLF Walferdange 14.31 319 P **Pn 20 18 09.8 +0.1**
WLF Walferdange 14.31 319 *d*P **Pn 20 18 09.7 +0.1**
WLF *dx* x 20 18 14.8
LOR Lormes 14.33 307 *e*Pn **Pn 20 18 08.1 -2.0**
baz=110
LOR *e*Sn Sn 20 20 36.1 -12
comp=Z,65nm,0.3s
YTIR Yattir 14.39 121 Pn **Pn 20 18 07.6 -3.5**
DSI Dead Sea 14.44 120 Sn **Sn 20 20 47.9 -3.2**
AVF Avril sur Loir 14.45 305 *e*Pn **Pn 20 18 10.3 -1.4**
AVF *e*Sn Sn 20 20 39.8 -12
comp=Z,78nm,0.8s
AVF Avril sur Loir 14.45 305 P **Pn 20 18 10.1 -1.6**
SSF Saint Saulge 14.47 306 *e*Pn **Pn 20 18 09.8 -2.1**
SSF *e*Sn Sn 20 20 40.4 -11
comp=Z,70nm,0.6s
MDBI Mazsada 14.59 121 Pn Pn 20 18 08.7 -4.8
BGF Bois d'Agland 14.69 303 *e*Pn **Pn 20 18 14.1 -0.9**
BGF *e*Sn Sn 20 20 45.1 -12
comp=Z,130nm,0.9s
CAF Calviac 14.72 297 *e*Pn **Pn 20 18 13.0 -2.4**
SOC Sochi 14.72 69*c i*P **Pn 20 18 15.7 +0.4**
SOC *e* 20 21 00.4
SOC pmax pmax
comp=Z,18nm,0.6s
SOC MLR MLR
comp=Z,1μm,12.0s
GHAJ Ghor Haditha 14.73 120 **Pn 20 18 16.0 +0.5**
DAMI2 DAM2 14.73 121 Sn **Sn 20 20 55.0 -3.1**
BHOU Houvegnez 14.82 321 *d*P **Pn 20 18 16.5 -0.1**
BHOU *dx* x 20 18 34.9
BTNL Ternell 14.91 321 *d*P **Pn 20 18 17.2 -0.7**
BTNL *d*PP **P 20 18 24.1 +0.6**

ZFRI Zfri 14.96 123 Pn **Pn 20 18 15.7 -2.9**
KRMI Paran Flat 14.97 126 Pn **Pn 20 18 15.0 -3.8**
PRNI Paran 14.98 124 Pn **Pn 20 18 15.8 -3.2**
MEM Membach 14.98 321 *d*P **Pn 20 18 18.9 +0.1**
MEM *d*PP **PnPn 20 18 27.0 +0.2**
TCF Toulx Ste Croi 15.01 302 *e*Pn **Pn 20 18 17.0 -2.3**
TCF *e*Sn Sn 20 20 53.5 -11
comp=Z,30nm,0.6s
TCF Toulx Ste Croi 15.01 302 P **Pn 20 18 18.3 -1.0**
RCHB Rochefort 15.08 319 *d*P **Pn 20 18 19.9 -0.2**
RCHB *d*PP **PnPn 20 18 27.1 -1.1**
HYF Humbligny 15.09 306 *e*Pn **Pn 20 18 18.8 -1.5**
HYF *e*Sn Sn 20 20 55.3 -12
ASF Jabal al Asfar 15.12 115 Pn **Pn 20 18 22.1 +1.1**
comp=Z,0.7nm,0.3s,baz=305,slow=3.1,SNR=22
ASF LR LR 20 25 24.6
comp=Z,5µm,19.3s,baz=309,slow=42
comp=Z,10nm,0.9s
BSTI Sart Tilman 15.18 321 *d*P **Pn 20 18 22.4 +0.9**
BSTI *d*PP **PnPn 20 18 29.1 -0.5**
RJF Les Rejaudoux 15.19 298 *e*P **P 20 18 24.5 -2.0**
KOPT Kop Dagi 15.20 83 **P 20 18 24.5 -2.6**
BCLA Clavier 15.21 320 *d*P **Pn 20 18 22.1 +0.3**
comp=Z,42nm,1.3s
HRFI Mount Harif 15.22 125 Pn **Pn 20 18 18.7 -3.4**
GIVF Givet 15.26 318 *e*P **P 20 18 24.9 -2.4**
GIVF *e*Sn Sn 20 20 59.7 -11
comp=Z,3.4nm,0.3s
BEBN Eben Emael 15.27 321 *d*P **Pn 20 18 23.1 +0.5**
BEBN *d*PP **pP 20 18 30.3 -2.8**
BGES Gesves 15.29 319 *d*P **Pn 20 18 23.1 +0.1**
BGES *d*PP **PnPn 20 18 31.2 +0.2**
MBRI Mt Berech 15.31 126 Pn **Pn 20 18 19.4 -4.0**
DOU Dourbes 15.37 318 *d*P **Pn 20 18 24.4 +0.4**
comp=Z,63nm,1.1s
DOU *d*PP **pP 20 18 30.6 -3.6**
BMRD Maredsous 15.41 318 *d*P **Pn 20 18 24.1 -0.4**
EIL Elat 15.42 126 Pn **Pn 20 18 23.4 -1.3**
comp=Z,2.5nm,0.3s,baz=334,slow=0.2,SNR=27
EIL Sn Sn 20 21 04.5 -10
comp=Z,9.5nm,0.3s,baz=342,slow=7.3,SNR=5.4
EIL LR LR 20 27 29.3
comp=Z,2µm,19.3s,baz=295,slow=49
EIL Elat 15.42 126 Pn **Pn 20 18 21.6 -3.1**
MNK Minsk 15.54 16 *i* P **Pn 20 18 24.1 -2.0**
MNK *i* S **Sn 20 21 16.1 -1.4**
MNK pmax pmax
comp=Z,756nm,1.0s
MNK pmax pmax
comp=E,35nm,1.0s
MNK pmax pmax
comp=N,643nm,1.0s
MNK MLR MLR
comp=Z,10µm,15.0s
MNK MLR MLR
comp=N,9µm,23.0s
MNK Minsk 15.54 16 *i* P **Pn 20 18 24.2 -2.0**
comp=E,35nm,1.1s
MNK *i* P **Pn 20 18 24.2 -2.0**
comp=N,643nm,1.1s
MNK *i* P **Pn 20 18 24.2 -2.0**
comp=Z,756nm,1.1s,baz=202
MNK *i* PP **pP 20 18 32.5 -3.6**
MNK *i* S **Sn 20 21 16.2 -1.4**
MNK *i* SS **SnSn 20 21 30.8 +0.4**
MNK *i* LQ LQ 20 22 57.5
MNK *i* LR LR 20 24 08.1
MNK *i* LRM MLR 20 24 44.4
comp=E,493nm,17.4s
MNK *i* LRM MLR 20 24 47.6
comp=Z,10µm,14.7s
MNK *i* LRM MLR 20 24 51.1
comp=N,9µm,22.6s
BAIF Baives 15.55 317 *e*Pn **Pn 20 18 23.9 -2.4**
BAIF Baives 15.55 317 *e*P **P 20 18 29.5 -1.0**
BAIF *e*Sn Sn 20 21 06.9 -11
comp=N,4.4nm,0.4s
BAIF Baives 15.55 317 P **Pn 20 18 27.6 +1.3**
EPF Esparros 15.63 289 *e*P **P 20 18 30.1 -1.4**
CLF Chambon-Foret 15.64 308 **Pn 20 18 27.5 +0.1**
CLF IAmb IAmb 20 18 34.6
comp=Z,516nm,1.8s
CLF Chambon-Foret 15.64 308 ⇓P **P 20 18 29.8 -1.7**
LFF La Frestale 15.64 296 *e*Pn **Pn 20 18 27.0 -0.5**
LFF *e*Sn **Sn 20 21 10.6 -9.5**
comp=Z,19nm,0.6s
NACGM Naroch 15.71 13⇑*i*P **Pn 20 18 26.8 -1.5**
baz=198
SNF Seneffe 15.78 318 *d*P **Pn 20 18 30.2 +0.9**
BSD Bornholm Skovb 15.86 348 *i* P **P 20 18 32.0 -1.9**
BSD IAmb IAmb 20 18 36.3
comp=Z,422nm,2.0s
MARD Mardin 15.90 92 **P 20 18 33.3 -1.3**
MARD IAmb IAmb 20 18 37.4
comp=Z,462nm,2.0s
PABE Paberze 15.92 7 Pn **Pn 20 18 30.7 -0.3**
PABE IAmb IAmb 20 18 32.8
comp=Z,306nm,0.9s
PABE Paberze 15.92 7 *e*P **Pn 20 18 32.1 +1.1**
IIGN Ignalina 16.04 11 *e*P **Pn 20 18 33.3 +0.7**
ISAL Salakas 16.24 11 *e*P **Pn 20 18 36.1 +0.9**
ETSF Etsaut 16.28 288 *e*P **P 20 18 38.4 -0.3**
VSVD Vaisvydziai 16.39 6 *e*P **Pn 20 18 37.5 +0.5**
GURO Guroymak-BITLI 16.59 87 P **P 20 18 42.5 +0.3**
MFF Saint Martin d 16.66 301 *e*Pn **Pn 20 18 40.1 -0.4**
MFF *e*Sn Sn 20 21 32.6 -12
comp=Z,14nm,0.7s
SJPF Ste Jean 16.78 289 *e*Pn **Pn 20 18 41.4 -0.7**
SJPF Ste Jean 16.78 289 P **P 20 18 43.3 -0.9**
SHA1 Shidzhatmaz 16.85 69*c i*P **P 20 18 46.2 +0.9**
NEY Neytrino 16.86 71 *i* P **P 20 18 45.3 +0.1**
KIV Kislovodsk 16.90 68 P **P 20 18 45.9 +0.3**
KIV Kislovodsk 16.90 68 *e*P **P 20 18 45.9 +0.3**
KIV *e*S **Sn 20 21 54.5 +3.6**
KIV pmax pmax
comp=Z,50nm,1.1s
KIV MLR MLR
comp=Z,1µm,14.0s
KIV Kislovodsk 16.90 68 P **P 20 18 45.4 -0.3**
KIV Kislovodsk 16.90 68 *i* P **P 20 18 45.6 0.0**
SNR=31
KIV Kislovodsk 16.90 68⇑P **P 20 18 46.6 +0.9**
KVAR Kislovodsk Arr 16.91 68 Pn **P 20 18 47.4 +1.7**
baz=94,slow=23
comp=Z,10nm,0.9s
KBZ Khabaz 17.02 69 Pn **P 20 18 46.7 -0.2**
comp=Z,1.3nm,0.3s,baz=260,slow=9.3,SNR=56
comp=Z,26nm,0.7s
KBZ Khabaz 17.02 69*c i*P **P 20 18 48.7 +1.8**
CART Cartagena 17.09 270 P P 20 18 56.1 +8.5
CART S **Sn 20 21 57.0 +1.6**
CART Cartagena 17.09 270 Pn **Pn 20 18 44.4 -1.5**
KARS Kars 17.12 80 P **P 20 18 49.1 +0.9**
KARS Kars 17.12 80 P **P 20 18 49.1 +0.9**
KARS pmax pmax
comp=Z,51nm,0.8s
VSR Storozhevoye 17.24 42 *e*P **Pn 20 18 48.3 +0.5**
VSR pmax pmax
comp=Z,130nm,1.0s
VSR MLR MLR
comp=Z,21µm,12.0s
GOF Gofitskoye 17.31 65⇑*e*P **P 20 18 51.6 +1.5**
GOF pmax pmax
comp=Z,991nm,2.3s
LDF La Druitiere 17.32 308 *e*Pn **Pn 20 18 49.2 +0.4**
LDF *e*Sn Sn 20 21 47.7 -13
comp=Z,90nm,1.0s
DEL Delary 17.33 347 *e*P **P 20 18 50.7 +0.5**
ONI Oni 17.35 73 P **P 20 18 51.2 +0.6**
ONI Oni 17.35 73 P **P 20 18 51.3 +0.6**
ONI pmax pmax
comp=Z,182nm,2.0s
GEVA Gevas 17.43 88 P **P 20 18 52.5 +0.9**
VORR Voronezh 17.53 41⇑*i*P **P 20 18 53.0 +0.6**
VORR pmax pmax
comp=Z,192nm,0.9s
VORR MLR MLR
comp=Z,6µm,12.0s
FLN La Foliniere 17.61 308 *e*Pn **Pn 20 18 52.5 +0.1**
baz=123
FLN *e*Sn Sn 20 21 54.8 -13
comp=Z,24nm,0.7s
FLN La Foliniere 17.61 308 P **Pn 20 18 52.3 -0.1**
ZEI Tsey 17.69 73 *e*P **P 20 18 56.9 +2.4**
ZEI pmax pmax
comp=Z,53nm,0.9s
GRR Gorron 17.70 306 *e*Pn **Pn 20 18 51.8 -1.7**
GRR *e*Sn Sn 20 21 57.4 -13
comp=Z,14nm,0.5s
SLIT Slitere, Latvi 17.93 3 *e*P **Pn 20 18 56.2 -0.1**
LPSR Galich'ya Gora 17.95 38 *e*P **P 20 18 57.4 +0.4**
LPSR pmax pmax
comp=Z,250nm,0.8s
LPSR MLR MLR
comp=Z,8µm,15.0s
UCM Universidad Co 18.34 279 P **P 20 19 02.8 +1.3**
UCM S **Sn 20 22 23.7 -2.1**
MUD Monsted U'grnd 18.36 339 *i* P **Pn 20 19 01.0 -0.6**
MUD IAmb IAmb 20 19 12.3
comp=Z,1µm,2.4s
GNI Garni 18.43 81 P **Pn 20 19 03.5 +0.8**
comp=Z,13nm,0.8s,baz=176,slow=2.4,SNR=22
GNI LR LR 20 26 24.5
comp=Z,4µm,19.0s,baz=269,slow=38
GNI Garni 18.43 81 P **Pn 20 19 04.0 +1.2**
GNI Garni 18.43 81*c i*P **Pn 20 19 05.6 +2.9**
GNI pmax pmax
comp=Z,115nm,1.7s
GNI Garni 18.43 81 P **Pn 20 19 05.1 +2.4**
GNI Garni 18.43 81 P **Pn 20 19 04.5 +1.8**
GNI Garni 18.43 81⇑P **Pn 20 19 05.1 +2.4**
VRH Novokhopyorsk 18.59 45 *e*P **Pn 20 19 04.7 +0.2**
VRH pmax pmax
comp=Z,180nm,1.1s
VRH MLR MLR
comp=Z,15µm,13.0s
OBN Obninsk 18.68 29 P **P 20 19 04.1 -1.0**
comp=Z,5.1nm,0.3s,baz=130,slow=1.0,SNR=44
OBN LR LR 20 27 18.4
comp=Z,6µm,18.3s,baz=215,slow=40
comp=Z,43nm,0.6s
OBN Obninsk 18.68 29 P **P 20 19 04.0 -1.0**
OBN Obninsk 18.68 29*c i*P **P 20 19 03.5 -1.5**
OBN *e*S **S 20 22 36.1 -0.7**
OBN pmax pmax
comp=Z,511nm,1.3s
OBN MLR MLR
comp=Z,23µm,17.0s
OBN Obninsk 18.68 29⇑P **P 20 19 03.5 -1.5**
SGMF Saint Gilles 18.72 305 *e*Pn **Pn 20 19 06.1 +0.1**
SGMF Saint Gilles 18.72 305 P **Pn 20 19 06.4 +0.4**
JQE Queens East 18.72 308 *e*P **Pn 20 19 06.7 +0.8**
VIKU Vikbolandet 18.95 354 *e*P **Pn 20 19 09.3 +0.6**
ESBB Sonseca Array 18.97 278 P **P 20 19 08.2 -0.3**
ESDC Sonseca Array 18.97 278 P **Pn 20 19 09.1 -0.1**
comp=Z,1.4nm,0.3s,baz=73,slow=11,SNR=159
ESDC LR LR 20 26 26.7
comp=Z,4µm,18.6s,baz=76,slow=37
comp=Z,22nm,1.0s
ESDC Sonseca Array 18.97 278 P **P 20 19 08.5 0.0**
GUD Guadarrama 19.00 281 P **P 20 19 08.7 -0.2**
QUIF Quistinic 19.00 303 *e*Pn **Pn 20 19 09.7 +0.2**
QUIF *e*Sn **Sn 20 22 37.9 -3.7**
comp=Z,93nm,1.2s
QUIF Quistinic 19.00 303 P **Pn 20 19 09.9 +0.4**
MTSE Matsula 19.09 5 *e*P **Pn 20 19 10.2 -0.2**
GROC Groznyy 19.09 71 *e*P **Pn 20 19 12.1 +1.5**
GROC *e*S **S 20 22 50.2 +4.8**
GROC pmax pmax
comp=Z,119nm,0.7s
VSU Vasula 19.13 10*c i*P **P 20 19 09.4 -0.6**
VSU pmax pmax
comp=Z,1µm,1.0s
VSU Vasula 19.13 10 *e*P **Pn 20 19 10.7 -0.1**
ROSF Rostrenen 19.20 304 *e*Pn **P 20 19 11.0 +0.2**
ROSF *e*Sn **Sn 20 22 43.1 -3.2**
comp=Z,62nm,1.1s
WMELI Melilla 19.26 264 P **Pn 20 19 13.3 +0.8**
WMELI S **S 20 22 53.2 +4.4**
PAB San Pablo 19.28 277 P **Pn 20 19 12.3 -0.6**
PAB San Pablo 19.28 277 P **Pn 20 19 12.3 -0.6**
PAB pmax pmax
comp=Z,166nm,1.3s
PAB San Pablo 19.28 277 P **Pn 20 19 12.8 -0.2**
PAB San Pablo 19.28 277⇑P **Pn 20 19 13.3 +0.3**
FIGM Figuig 19.31 254 P **Pn 20 19 15.0 +1.6**
JBK JBK 19.32 261 P **Pn 20 19 16.0 +2.3**
MOS Moscow 19.55 29 *e*P **P 20 19 11.6 -2.9**
MOS *e*S **S 20 22 49.7 -4.6**
MOS pmax pmax
comp=Z,1µm,1.3s
MOS pmax pmax
comp=Z,663nm,1.2s
MOS MLR MLR
comp=Z,23µm,18.0s
MOS MLR MLR
comp=E,11µm,15.0s
MOS MLR MLR
comp=N,16µm,17.0s
SWN1 Swindon 19.56 314 *e*P **Pn 20 19 15.8 -0.3**
SWN1 IAmb IAmb 20 19 16.3
comp=Z,292nm,1.0s
STRD Stroud 19.89 315 *e*P **Pn 20 19 19.3 -0.6**
STRD IAmb IAmb 20 19 20.3
comp=Z,292nm,1.0s
EMAL Malaga-Limoner 19.94 269 P **Pn 20 19 19.8 -1.0**
EMAL S **S 20 22 57.3 -5.2**
OLDB Oldbury-Upon-S 20.05 314 *e*P **P 20 19 20.7 +0.7**
OLDB IAmb IAmb 20 19 21.3
comp=Z,129nm,0.8s
HOMB Homborsund 20.13 341 *e*P **P 20 19 21.5 +0.6**
UPP Uppsala 20.23 356 *e*P **P 20 19 22.4 +0.5**
AKLM AKL 20.25 263 P Pn 20 19 25.0 +0.5
MONM Monmouth 20.27 314 *e*P **P 20 19 23.1 +0.7**
MONM IAmb IAmb 20 19 25.2
comp=Z,152nm,0.9s
MAK Makhachkala 20.34 72 *e*P **P 20 19 22.4 -0.9**
MAK *e*S **S 20 23 09.7 -0.7**
MAK pmax pmax
comp=Z,1µm,1.8s
MAK MLR MLR
comp=Z,2µm,13.0s
PVLZ Peæn de 20.34 265 P Pn 20 19 28.1 +2.6
PVLZ S **S 20 23 06.1 -4.4**
MCH1 Michaelchurch 20.45 315 *e*P **P 20 19 24.9 +0.5**
MCH1 IAmb IAmb 20 19 26.2
comp=Z,981nm,1.8s
MCH1 Michaelchurch 20.45 315⇑P **P 20 19 25.1 +0.7**
AAL Aland 20.46 359 *e*P **P 20 19 24.5 0.0**
SNART Snartemo 20.53 339 *e*P Pn 20 19 27.0 -0.5
SNART IAmb IAmb 20 19 28.4
comp=Z,672nm,1.1s
MEF Metsahovi 20.63 5 *e*P **P 20 19 26.5 +0.3**
HLM1 Long Mynd 20.63 316 *e*P **P 20 19 26.7 +0.3**
HLM1 IAmb IAmb 20 19 28.0
comp=Z,167nm,1.0s
HPK Haverah Park 20.74 321 *e*P **P 20 19 28.1 +0.6**
HPK IAmb IAmb 20 19 32.3
comp=Z,663nm,1.3s
PBRG Braganca 20.86 285 *e*P Pn 20 19 30.2 -1.3
comp=Z,148nm,1.8s
PBRG *e*S **S 20 23 22.7 +2.0**
HTL Hartland 20.86 311 *e*P Pn 20 19 30.1 -1.3
HFS Hagfors 20.88 350 P **P 20 19 28.7 -0.3**
comp=Z,133nm,0.7s,baz=162,slow=11,SNR=174
HFS LR LR 20 28 39.6
comp=Z,6µm,19.7s,baz=166,slow=40
comp=Z,133nm,0.7s
CEU Ceuta 20.93 268 P Pn 20 19 31.6 -0.7
CEU S **S 20 23 14.8 -7.3**
PUL Pulkovo 20.95 14*ce*P **P 20 19 28.8 -0.9**
PUL pmax pmax
comp=Z,530nm,0.8s
FOEL Foel Wylfa 20.98 317 *e*P **P 20 19 30.0 -0.2**
FOEL IAmb IAmb 20 19 31.1
comp=Z,685nm,1.5s
MVO Moncorvo 21.12 283 *e*P **P 20 19 32.7 +0.8**
comp=Z,96nm,1.4s
MVO *e*S **S 20 23 23.0 -3.0**
MVO A A 20 28 34.9
comp=Z,2µm,16.0s
KONO Kongsberg 21.12 344 P **P 20 19 30.5 -1.1**
KONO IAmb IAmb 20 19 32.6
comp=Z,215nm,1.1s
KONO Kongsberg 21.12 344 IAMs_20 IAMs_20 20 28 52.5
comp=Z,8µm,21.0s
KONO Kongsberg 21.12 344*ce*P **P 20 19 31.6 0.0**
KONO pmax pmax
comp=Z,239nm,1.3s
KONO MLR MLR
comp=Z,7µm,17.0s
KONO Kongsberg 21.12 344 *e*P **P 20 19 31.4 -0.2**
KONO IAmb IAmb 20 19 32.9
comp=Z,268nm,1.3s
KONO Kongsberg 21.12 344⇑P **P 20 19 30.9 -0.7**
OSL Oslo 21.17 346 *e*P **P 20 19 31.8 -0.2**
OSL IAmb IAmb 20 19 32.5
comp=Z,273nm,1.0s
TAM Tamanrasset 21.25 222 P **P 20 19 35.2 +1.7**
TAM IAmb IAmb 20 19 47.4
comp=Z,152nm,1.3s
TAM IAMs_20 IAMs_20 20 28 43.7
comp=Z,7µm,19.0s
TAM Tamanrasset 21.25 222 P **P 20 19 35.2 +1.7**
TAM pmax pmax
comp=Z,152nm,1.3s
TAM MLR MLR
comp=Z,7µm,19.0s
TAM Tamanrasset 21.25 222⇓P **P 20 19 35.7 +2.2**
RAF Rauma 21.31 1 *e*P **P 20 19 33.6 0.0**
LCRM LCR 21.33 262 P **P 20 19 38.0 +3.7**
RSBS Rosebush, Pemb 21.40 313 *e*P **P 20 19 35.2 +0.6**
RSBS IAmb IAmb 20 19 36.5
comp=Z,65nm,0.9s
SFS San Fernando 21.40 270 P **P 20 19 30.7 -4.1**
SFS S S 20 23 14.5 -17
MDT Midelt 21.50 259 P **P 20 19 36.8 +0.7**
comp=Z,7.8nm,0.8s,baz=83,slow=12,SNR=15
MDT LR LR 20 27 51.3
comp=Z,2µm,19.9s,baz=78,slow=36
comp=Z,7.8nm,0.8s
MDT Midelt 21.50 259 P **P 20 19 37.6 +1.6**
MTE Manteigas 21.59 281 *e*P **P 20 19 38.1 +1.2**
comp=Z,186nm,1.7s
MTE *e*S **S 20 23 33.3 -2.1**
MTE A A 20 28 42.3
comp=Z,4µm,18.0s
MTE Manteigas 21.59 281 P **P 20 19 36.9 -0.1**
MTE IAmb IAmb 20 19 39.0
comp=Z,145nm,1.3s
PBAR Barrancos 21.60 275 *e*P **P 20 19 37.7 +0.8**
comp=Z,280nm,1.8s
PBAR *e*S **S 20 23 32.6 -2.8**
IFR Ifrane 21.60 261 P **P 20 19 39.9 +2.7**
IFR S **S 20 23 33.9 -1.9**
YLL Llanberis 21.61 317 *e*P **P 20 19 36.6 -0.3**
PCBR Castelo Branco 21.62 279 *e*P **P 20 19 38.2 +1.0**
comp=Z,113nm,1.6s
PMRV Marv??o 21.62 278 *e*P **P 20 19 38.4 +1.2**
comp=Z,158nm,2.0s
PMRV *e*S **S 20 23 34.4 -1.5**
PMRV A A 20 28 21.8
comp=Z,3µm,18.0s
ARNO Arenosillo 21.63 272 P **P 20 19 42.2 +5.0**
ARNO S **S 20 23 30.2 -5.7**
BLS5 Blasjo 21.67 340 *e*P **P 20 19 38.3 +0.8**
BLS5 IAmb IAmb 20 19 51.6
comp=Z,352nm,1.4s
POLO Lamas de Olo 21.68 284 *e*P **P 20 19 39.0 +1.2**
comp=Z,65nm,1.6s
NC602 NORSAR Array S 21.77 348 P **P 20 19 38.1 -0.5**
NC602 NORSAR Array S 21.77 348 *e*P **P 20 19 38.3 -0.3**
NC602 IAmb IAmb 20 19 39.2
comp=Z,401nm,1.1s
NORES NORESS Array B 21.77 348 P **P 20 19 38.0 -0.6**
WLF1 Llynfaes 21.80 317 *e*P **P 20 19 38.2 -0.7**
WLF1 IAmb IAmb 20 19 41.4
comp=Z,250nm,1.3s
KESW Keswick, Cumbr 21.81 321 *e*P **P 20 19 38.6 -0.5**
KESW IAmb IAmb 20 19 45.0
comp=Z,386nm,1.3s
KMY Karmoy 21.82 338 *e*P **P 20 19 39.4 +0.4**
KMY IAmb IAmb 20 19 49.4
comp=Z,150nm,1.0s
PVIS Viseu 21.82 282 *e*P **P 20 19 39.5 +0.1**
comp=Z,121nm,1.8s
PESTR Estremoz 21.88 277 *e*P **P 20 19 40.6 +0.6**
comp=Z,100nm,1.4s
PESTR *e*S **S 20 23 35.5 -5.3**
PESTR Estremoz 21.88 277 P **P 20 19 38.9 -1.0**
PESTR Estremoz 21.88 277⇑P **P 20 19 40.2 +0.3**
YRC Rhoscolyn 21.88 316 *e*P **P 20 19 40.1 +0.3**
FINES FINESS Array B 21.98 7 P **P 20 19 40.0 -0.8**
comp=Z,90nm,0.6s,baz=169,slow=12,SNR=418
comp=Z,90nm,0.6s
FINES FINESS Array B 21.98 7 P **P 20 19 40.0 -0.8**
FIA1 FINESS Array S 21.98 7 P **P 20 19 39.1 -1.6**
PGAV Gavieira, Arco 21.98 285 *e*P **P 20 19 42.0 +0.8**
comp=Z,166nm,1.8s
PGAV *e*S **S 20 23 44.8 +1.8**
PGAV A A 20 28 39.6
comp=Z,2µm,18.0s
ODD1 Odda 22.05 341 *e*P **P 20 19 41.9 +0.3**
ODD1 IAmb IAmb 20 19 55.1
comp=Z,120nm,1.2s
NB201 NORSAR Array S 22.11 348 P **P 20 19 41.7 -0.6**
NB2 NORSAR Subarra 22.12 348 P **P 20 19 41.4 -0.9**
comp=Z,395nm,1.1s,baz=152,slow=11
NB2 NORSAR Subarra 22.12 348 P **P 20 19 41.4 -0.9**
baz=152,slow=11
NOA NORSAR Array B 22.12 348 P **P 20 19 41.2 -1.1**
comp=Z,193nm,1.0s,baz=165,slow=11,SNR=347
NOA LR LR 20 29 23.3
comp=Z,5µm,20.5s,baz=160,slow=40
comp=Z,193nm,1.0s
EKA Eskdalemuir Ar 22.25 322 P **P 20 19 43.9 +0.1**
comp=Z,79nm,0.8s,baz=120,slow=11,SNR=132
EKA ScP **ScP 20 27 14.3 -1.3**
comp=Z,1.4nm,0.6s,baz=130,slow=3.4,SNR=5.4
EKA LR LR 20 30 06.8
comp=Z,5µm,19.1s,baz=123,slow=41
comp=Z,79nm,0.8s
ESK Eskdalemuir 22.27 322 *e*P **P 20 19 43.7 -0.3**
ESK IAmb IAmb 20 19 45.0
comp=Z,145nm,0.9s
ESK Eskdalemuir 22.27 322 P **P 20 19 43.5 -0.4**
ESK IAmb IAmb 20 19 45.3
comp=Z,147nm,0.8s
ESK Eskdalemuir 22.27 322 P **P 20 19 43.5 -0.4**
ESK pmax pmax
comp=Z,147nm,0.9s
ESK MLR MLR
comp=Z,5µm,20.0s
ESK Eskdalemuir 22.27 322⇑P **P 20 19 44.1 +0.1**
PBEJ Beja 22.27 275 *e*P **P 20 19 44.6 +0.4**
comp=Z,125nm,1.4s
EVO Evora 22.27 276 P **P 20 19 46.8 +2.6**
EVO S **S 20 23 44.8 -3.4**
EVO Evora 22.27 276 *e*P **P 20 19 44.0 -0.2**
comp=Z,113nm,1.6s
PTO Porto 22.30 283 *e*P **P 20 19 44.9 +0.4**
comp=Z,100nm,1.3s
PVAQ Vaqueiros 22.31 273 *e*P **P 20 19 44.0 -0.6**
comp=Z,172nm,1.2s
PVAQ *e*S **S 20 23 41.5 -7.4**
PVAQ A A 20 29 28.4
comp=Z,1µm,18.0s
PVAQ Vaqueiros 22.31 273 P **P 20 19 43.9 -0.7**
PVAQ Vaqueiros 22.31 273 P **P 20 19 44.5 0.0**
PVAQ Vaqueiros 22.31 273⇑P **P 20 19 44.0 -0.6**
PMTG Montargil 22.33 278 *e*P **P 20 19 44.4 -0.3**
comp=Z,134nm,1.6s
PMTG *e*S **S 20 23 45.7 -3.6**
SKAR Skarslia 22.34 344 *e*P **P 20 19 45.0 +0.3**
SKAR IAmb IAmb 20 19 55.1
comp=Z,285nm,1.2s
WIM Isle of Man 22.36 319 *e*P **P 20 19 44.8 -0.2**
IOMK Kirk Michael 22.37 319 *e*P **P 20 19 44.5 -0.5**
IOMK IAmb IAmb 20 19 45.6
comp=Z,324nm,1.0s
PCAS Casmilo, Conde 22.37 280 *e*P **P 20 19 46.4 +1.2**
comp=Z,123nm,1.8s
PCAS *e*S **S 20 23 48.8 -1.2**
PCVE Castro Verde 22.50 274 *e*P **P 20 19 46.2 -0.4**
comp=Z,107nm,2.1s
PCVE *e*S **S 20 23 49.1 -3.3**
MESJ Messejana 22.59 274 *e*P **P 20 19 47.5 0.0**
MESJ IAmb IAmb 20 19 54.2
comp=Z,61nm,1.1s
MESJ Messejana 22.59 274 *e*P **P 20 19 47.7 +0.2**
comp=Z,180nm,1.4s
MESJ Messejana 22.59 274 *e*P **P 20 19 47.5 0.0**
MESJ Messejana 22.59 274⇑P **P 20 19 47.5 0.0**
EDI Edinburgh 22.61 324 *e*P **P 20 19 47.0 -0.5**

NEWG New Galloway 22.65 321 *eP* **P 20 19 47.5 -0.5**
PSBE So Bento 22.68 279 *eP* **P 20 19 49.3 +0.8**
comp=Z,150nm,2.0s
PSBE *eS* **S 20 23 51.4 -4.4**
GAL1 Galloway 22.75 320 *eP* **P 20 19 48.6 -0.5**
GAL1 IAmb IAmb 20 19 51.0
comp=Z,127nm,1.0s
PNCL Nicolau / Gran 22.76 275 *eP* **P 20 19 50.2 +0.9**
comp=Z,145nm,1.2s
PNCL *eS* **S 20 23 52.1 -5.0**
BER Bergen 22.78 340 *eP* **P 20 19 49.6 +0.3**
BER IAmb IAmb 20 20 00.2
comp=Z,120nm,1.1s
DSB Dublin 22.85 315 P **P 20 19 48.5 -1.7**
DSB IAmb IAmb 20 19 52.6
comp=Z,167nm,1.0s
EDU Dundee 22.90 325 *eP* **P 20 19 50.1 -0.5**
ASK Askoy 22.90 340 *eP* **P 20 19 50.6 0.0**
ASK IAmb IAmb 20 20 01.4
comp=Z,268nm,1.0s
PTEO Sao Teotonio 23.05 274 *eP* **P 20 19 52.7 +0.4**
comp=Z,163nm,1.6s
MORF Marmelete 23.05 273 *eP* **P 20 19 52.3 -0.2**
MORF IAmb IAmb 20 19 55.3
comp=Z,560nm,2.7s
MORF Marmelete 23.05 273 *eP* **P 20 19 51.8 -0.6**
comp=Z,124nm,1.8s
MORF *eS* **S 20 23 59.5 -2.8**
MORF Marmelete 23.05 273 *eP* **P 20 19 52.3 -0.2**
MORF Marmelete 23.05 273 ⇑P **P 20 19 51.8 -0.6**
GMM Mts of Mourne 23.07 318 *eP* **P 20 19 52.0 -0.3**
LIS Lisbon 23.10 277 *eP* **P 20 19 53.0 +0.1**
LIS IAmb IAmb 20 19 54.6
comp=Z,51nm,0.8s
LIS *eS* **S 20 24 04.7 +1.6**
LIS Lisbon 23.10 277 *eP* **P 20 19 53.0 +0.1**
LIS *eS* **S 20 24 04.7 +1.6**
PMAFR Mafra 23.16 278 *eS* **S 20 24 02.1 -1.9**
PFVI Vila Bisbo 23.23 273 *eP* **P 20 19 54.4 +0.2**
comp=Z,190nm,2.1s
PFVI *eS* **S 20 24 02.9 -2.3**
PFVI Vila Bisbo 23.23 273 P **P 20 19 53.2 -1.0**
PFVI IAmb IAmb 20 20 09.9
comp=Z,87nm,1.0s
PFVI Vila Bisbo 23.23 273 P **P 20 19 54.6 +0.4**
HYA Hoyanger 23.25 342 *eP* **P 20 19 54.4 +0.3**
HYA IAmb IAmb 20 20 04.2
comp=Z,228nm,1.2s
INVG Invergeldie, C 23.29 324 *eP* **P 20 19 53.8 -0.8**
DOMB Dombas 23.43 346 *eP* **P 20 19 56.1 +0.1**
DOMB IAmb IAmb 20 20 07.9
comp=Z,235nm,1.0s
AVE Averroes 23.44 263 P **P 20 19 58.7 +2.4**
AVE S **S 20 24 05.6 -3.1**
AVE Averroes 23.44 263 P **P 20 19 55.8 -0.5**
SUE Sulen 23.50 340 *eP* **P 20 19 56.4 -0.3**
SUE IAmb IAmb 20 20 08.3
comp=Z,264nm,1.3s
MCD Coleburn Disti 23.64 327 *eP* **P 20 19 57.6 -0.5**
LAWE Loch Awe, Argy 23.82 323 *eP* **P 20 19 59.6 -0.2**
FOO Floro 23.90 341 *eP* **P 20 20 04.3 +3.8**
FOO IAmb IAmb 20 20 12.7
comp=Z,126nm,1.5s
AKN Aaknes 23.96 344 *eP* **P 20 20 00.9 -0.2**
AKN IAmb IAmb 20 20 02.0
comp=Z,56nm,0.8s
MDO Dochfour 24.03 326 *eP* **P 20 20 01.1 -0.7**
KLMR Klimovskoe 24.14 23*d iP* **P 20 20 01.8 -0.9**
KLMR S **S 20 24 20.9 +1.6**
KLMR pmax pmax
comp=Z,154nm,1.0s
KLMR pmax pmax
comp=Z,2μm,3.0s
KLMR MLR MLR
comp=Z,8μm,20.0s
KLMR Klimovskoe 24.14 23⇓*iP* **P 20 20 01.8 -0.9**
KLMR ⇓*iP* **P 20 20 01.8 -0.9**
KLMR ⇓*iP* **P 20 20 01.8 -0.9**
KLMR AMP 20 20 10.8
comp=Z,154nm,1.0s
KLMR AMP 20 20 20.6
comp=Z,2μm,3.0s
KLMR S **S 20 24 20.9 +1.6**
KLMR S **S 20 24 20.9 +1.6**
KLMR LQ LQ 20 28 12.6
KLMR LQ LQ 20 28 12.6
KLMR LR LR 20 28 48.9
KLMR AMP 20 30 36.8
comp=Z,8μm,19.6s
MOL Molde 24.20 345 *eP* **P 20 20 03.1 -0.1**
MOL IAmb IAmb 20 20 13.4
comp=Z,117nm,1.0s
TBLU Trondheim 24.36 349 *eP* **P 20 20 05.7 +1.0**
TBLU IAmb IAmb 20 20 23.1
comp=Z,177nm,1.0s
KAC Achnashellach 24.47 325 *eP* **P 20 20 04.7 -1.2**
KPL Plockton 24.54 325 *eP* **P 20 20 05.8 -0.6**
KPL IAmb IAmb 20 20 06.5
comp=Z,103nm,1.1s
KPL Plockton 24.54 325 *eP* **P 20 20 08.3 +1.9**
LRW Lerwick 24.58 333 *eP* **P 20 20 05.9 -0.8**
LRW IAmb IAmb 20 20 07.7
comp=Z,194nm,0.9s
LRW Lerwick 24.58 333 ⇓P **P 20 20 06.4 -0.3**
NSS Namsos 25.35 351 *eP* **P 20 20 13.1 -0.6**
NSS IAmb IAmb 20 20 25.4
comp=Z,175nm,0.9s
KIRV Kirov 26.28 35 P **P 20 20 21.9 -0.2**
comp=Z,50nm,0.6s,baz=236,slow=21,SNR=24
KIRV LR LR 20 31 22.4
comp=Z,12μm,19.3s,baz=247,slow=38
comp=Z,50nm,0.6s
KIRV Kirov 26.28 35*ceP* **P 20 20 21.5 -0.6**
RAYN Ar Rayn 26.47 120 P **P 20 20 24.9 +0.6**
RAYN IAmb IAmb 20 20 41.7
comp=Z,179nm,2.0s
RAYN Ar Rayn 26.47 120 P **P 20 20 24.9 +0.6**
RAYN pmax pmax
comp=Z,179nm,2.0s
RAYN MLR MLR
comp=Z,2μm,19.0s
RAYN Ar Rayn 26.47 120 P **P 20 20 24.6 +0.4**
RAYN S **S 20 24 54.6 -2.7**
RAYN Ar Rayn 26.47 120 *i* P **P 20 20 24.7 +0.4**
SNR=38
PRGR Permogore 26.69 27⇑*iP* **P 20 20 25.3 -0.6**
PRGR pmax pmax
comp=Z,98nm,0.9s
MOR8 Moi Rana 26.71 354 *eP* **P 20 20 26.2 +0.2**
MOR8 IAmb IAmb 20 20 40.2
comp=Z,35nm,0.8s
STOK Stokkvaagen 26.99 353 *eP* **P 20 20 29.3 +0.9**
KONS Konsvik 27.14 353 *eP* **P 20 20 28.9 -1.0**
KONS IAmb IAmb 20 20 47.4
comp=Z,52nm,1.1s
FAUS Fauske 27.85 356 *eP* **P 20 20 35.7 -0.5**
FAUS IAmb IAmb 20 20 36.0
comp=Z,24nm,0.7s
AKTO Aktyubinsk 28.15 55 P **P 20 20 39.1 0.0**
comp=Z,8.5nm,0.4s,baz=266,slow=8.9,SNR=38
AKTO LR LR 20 33 53.8
comp=Z,5μm,20.0s,baz=278,slow=41
comp=Z,8.5nm,0.4s
AKTO Aktyubinsk 28.15 55 *i* P **P 20 20 38.9 -0.2**
AKTO pmax pmax
comp=Z,15nm,0.6s
STEI Steigen 28.40 356 *eP* **P 20 20 40.6 -0.4**
STEI IAmb IAmb 20 20 41.5
comp=Z,231nm,1.8s
LOF Lofoten 28.71 354 *eP* P 20 20 34.8 -9.0
LOF IAmb IAmb 20 20 55.1
comp=Z,56nm,1.2s
APA Apatity 28.75 10⇓*iP* **P 20 20 42.4 -1.8**
APA *i* 20 21 42.0
APA *i* PPP PPP 20 21 55.0
APA *i* S **S 20 25 25.0 -7.3**
APA pmax pmax
comp=Z,34nm,0.9s
SHMA Al-Shehemyia 28.80 110 P **P 20 20 45.3 +0.2**
SHMA S **S 20 25 30.2 -3.7**
GEYT Alibeck 29.07 81 P **P 20 20 48.4 +1.0**
comp=Z,18nm,0.8s,baz=272,slow=6.8,SNR=36
GEYT PcP **PcP 20 23 56.3 +1.1**
comp=Z,3.5nm,0.5s,baz=263,slow=5.8,SNR=4.6
GEYT LR LR 20 33 25.5
comp=Z,1μm,21.1s,baz=294,slow=38
comp=Z,18nm,0.8s
GEYT Alibeck 29.07 81 P **P 20 20 47.9 +0.6**
GEYT IAmb IAmb 20 20 51.4
comp=Z,65nm,1.2s
GYA0B ALIBECK ARRAY 29.07 81 P **P 20 20 48.0 +0.6**
GYA0B IAmb IAmb 20 20 59.9
comp=Z,36nm,0.8s
LVZ Lovozero 29.23 11 P **P 20 20 48.0 -0.5**
LVZ IAmb IAmb 20 21 18.4
comp=Z,60nm,0.9s
LVZ Lovozero 29.23 11*ceP* **P 20 20 48.4 -0.2**
LVZ pmax pmax
comp=Z,26nm,0.7s
LVZ MLR MLR
comp=Z,9μm,16.0s
LVZ Lovozero 29.23 11⇓P **P 20 20 48.6 +0.1**
AB31 Akbulak array 29.27 58 *i* P **P 20 20 49.2 +0.2**
AB31 pmax pmax
comp=Z,9.0nm,0.7s
ABKAR Akbulak array 29.27 58 P **P 20 20 49.0 +0.1**
ABKAR Akbulak array 29.27 58 P **P 20 20 48.7 -0.3**
ABKAR IAmb IAmb 20 21 39.5
comp=Z,36nm,1.3s
ABKAR Akbulak array 29.27 58⇑P **P 20 20 49.1 +0.1**
KTK1 Kautokeino 29.36 2 *eP* **P 20 20 49.4 -0.2**
KTK1 IAmb IAmb 20 20 50.0
comp=Z,66nm,0.8s
ARU Arti 29.81 43 P **P 20 20 53.8 +0.1**
comp=Z,11nm,0.4s,baz=235,slow=6.5,SNR=33
ARU LR LR 20 33 37.4
comp=Z,6μm,19.1s,baz=246,slow=38
comp=Z,11nm,0.4s
ARU Arti 29.81 43 P **P 20 20 53.0 -0.7**
ARU IAmb IAmb 20 21 04.2
comp=Z,51nm,1.1s
ARU Arti 29.81 43*c iP* **P 20 20 53.9 +0.2**
ARU 20 21 50.1
ARU PPP PPP 20 21 59.7
ARU S **S 20 25 50.7 +1.6**
ARU SS **SnSn 20 27 21.0 +1.4**
ARU pmax pmax
comp=Z,103nm,2.4s
ARU MLR MLR
comp=Z,8μm,15.0s
ARU Arti 29.81 43⇑P **P 20 20 53.1 -0.6**
JETT Jettan, Norway 29.88 360 *eP* **P 20 20 53.8 -0.4**
JETT IAmb IAmb 20 20 54.0
comp=Z,42nm,0.8s
ARA0 ARCESS Array S 29.96 3 *eP* **P 20 20 54.2 -0.7**
ARA0 IAmb IAmb 20 20 55.0
comp=Z,54nm,0.9s
ARCES ARCESS Array B 29.96 3 P **P 20 20 54.1 -0.9**
comp=Z,53nm,0.8s,baz=186,slow=10.0,SNR=149
ARCES LR LR 20 33 52.6
comp=Z,8μm,19.1s,baz=181,slow=38
comp=Z,53nm,0.8s
ARCES ARCESS Array B 29.96 3 P **P 20 20 54.1 -0.9**
ARCES IAmb IAmb 20 20 55.3
comp=Z,55nm,0.9s
ARCES ARCESS Array B 29.96 3 P **P 20 20 54.1 -0.9**
ARCES pmax pmax
comp=Z,55nm,0.9s
TRO Tromso 29.97 359 *eP* **P 20 20 54.6 -0.3**
TRO IAmb IAmb 20 20 55.1
comp=Z,207nm,1.6s
KEV Kevo 30.26 4 P **P 20 20 56.9 -0.6**
KEV IAmb IAmb 20 20 58.2
comp=Z,76nm,1.1s
KEV Kevo 30.26 4 P **P 20 20 56.9 -0.6**
KEV pmax pmax
comp=Z,76nm,1.1s
KEV MLR MLR
comp=Z,8μm,19.0s
KEV Kevo 30.26 4⇑P **P 20 20 57.1 -0.5**
SLWR Sila 30.41 112 P **P 20 20 57.9 -1.4**
SLWR P **P 20 20 57.9 -1.4**
SLWR S **S 20 25 53.1 -6.0**
SLWR S **S 20 25 53.1 -6.0**
JRN Qarnain Island 30.72 109 P **P 20 21 01.7 -0.4**
HAMF Hammerfest 31.00 2 *eP* **P 20 21 02.1 -2.0**
HAMF IAmb IAmb 20 21 04.9
comp=Z,26nm,0.7s
SVE Sverdlovsk 31.02 43*deP* **P 20 21 04.8 +0.4**
SVE *eS* **S 20 26 11.9 +3.8**
SVE pmax pmax
comp=Z,75nm,0.9s
SVE MLR MLR
comp=Z,8μm,14.0s
GHWR Ruwais 31.32 110 P **P 20 21 07.5 +0.1**
GHWR S **S 20 26 08.4 -5.0**
TOA0 Torodi Ar. Sit 31.35 218 P **P 20 21 08.9 +1.2**
TORD Torodi Ar. Bea 31.35 218 P **P 20 21 08.9 +1.2**
comp=Z,57nm,0.6s,baz=33,slow=9.1,SNR=343
TORD LR LR 20 35 13.2
comp=Z,3μm,18.4s,baz=32,slow=39
comp=Z,57nm,0.6s
TORD Torodi Ar. Bea 31.35 218 P **P 20 21 08.5 +0.9**
MZWR Madinat Zayed 32.18 110 P **P 20 21 15.7 +0.8**
MZWR P **P 20 21 15.7 +0.8**
MZR Muzera 32.35 111 P **P 20 21 16.7 +0.2**
SNR=5.0
MZR Muzera 32.35 111 *i* P **P 20 21 15.5 -0.9**
SNR=20
SHME Shamm 32.52 104 P **P 20 21 18.0 +0.1**
SHME Shamm 32.52 104 P **P 20 21 17.2 -0.7**
MACI Morro de la Ar 32.70 261 P **P 20 21 19.7 0.0**
MACI IAmb IAmb 20 21 23.4
comp=Z,68nm,1.1s
BANOM Banah 32.70 104 P **P 20 21 19.9 +0.3**
BANOM Banah 32.70 104 P **P 20 21 18.3 -1.3**
ASUD Al Ashush, Dub 32.72 107 P **P 20 21 20.6 +0.9**
ASUD P **P 20 21 20.6 +0.9**
ASUD S **S 20 26 30.0 -5.2**
ASUD S **S 20 26 30.0 -5.2**
ASUD Al Ashush, Dub 32.72 107 P **P 20 21 19.7 0.0**
NAZ Nazwa, Dubai 32.76 106 P **P 20 21 20.6 +0.5**
NAZ Nazwa, Dubai 32.76 106 *i* P **P 20 21 19.8 -0.2**
SNR=8.6
FAQ Al Faqa, Dubai 32.85 106 P **P 20 21 20.2 -0.5**
MASF Masafi 32.91 105 P **P 20 21 22.1 +0.7**
MSFE Esma-Masafi 32.92 105 P **P 20 21 20.5 -0.9**
UOSS Minazif 33.19 106 P **P 20 21 23.1 -0.6**
UOSS Minazif 33.19 106 P **P 20 21 23.5 -0.3**
UOSS S **S 20 26 36.0 -6.5**
UOSS Minazif 33.19 106 *i* P **P 20 21 23.2 -0.6**
SNR=6.0
UOSS Minazif 33.19 106⇑P **P 20 21 22.7 -1.1**
HATD Hatta, Dubai 33.20 106 P **P 20 21 23.1 -0.8**
SNR=5.7
HATD P **P 20 21 23.1 -0.8**
SNR=5.7
HATD S **S 20 26 36.9 -5.8**
HATD S **S 20 26 36.9 -5.8**
HATD Hatta, Dubai 33.20 106 *i* P **P 20 21 23.3 -0.6**
SNR=8.0
KOWA Kowa 33.20 228 P **P 20 21 25.4 +1.5**
comp=Z,15nm,0.7s,baz=34,slow=9.2,SNR=43
KOWA LR LR 20 36 36.1
comp=Z,5μm,19.3s,baz=38,slow=39
comp=Z,15nm,0.7s
KOWA Kowa 33.20 228 P **P 20 21 25.0 +1.0**
KOWA IAMs_20 IAMs_20 20 36 15.0
comp=Z,4μm,20.0s
KOWA Kowa 33.20 228 P **P 20 21 25.4 +1.5**
KOWA Kowa 33.20 228⇑P **P 20 21 25.4 +1.5**
ASHO Ashiyiah 33.23 106 P **P 20 21 23.2 -1.0**
SNR=5.2
ASHO Ashiyiah 33.23 106 *i* P **P 20 21 23.6 -0.6**
SNR=7.8
HRA Herat 33.35 86 P **P 20 21 26.1 +0.7**
HRA IAmb IAmb 20 21 27.7
comp=Z,52nm,0.9s
ALNE Al Ain 33.37 107 P **P 20 21 24.9 -0.5**
SNR=7.3
ALNE S **S 20 26 39.6 -5.7**
ALNE Al Ain 33.37 107 *i* P **P 20 21 25.1 -0.2**
SNR=5.6
UMZA Um Al Zommool 33.75 110 P **P 20 21 28.1 -0.5**
UMZA S **S 20 26 45.5 -5.7**
ATD Arta Tunnel 34.27 139 P **P 20 21 35.2 +1.9**
comp=Z,12nm,0.9s,baz=330,slow=7.6,SNR=6.9
ATD LR LR 20 33 47.8
comp=Z,476nm,22.0s,baz=331,slow=33
comp=Z,12nm,0.9s
ATD Arta Tunnel 34.27 139 P **P 20 21 35.6 +2.3**
ATD IAmb IAmb 20 21 48.7
comp=Z,71nm,1.4s
ATD Arta Tunnel 34.27 139 *eP* P 20 21 23.0 -10
ATD Arta Tunnel 34.27 139 *eP* P 20 21 40.7 +7.4
ARQ Araqi 34.36 108 P **P 20 21 33.1 -0.9**
SNR=7.1
ARQ S **S 20 26 55.9 -4.9**
ANKE Ethiopia-Afar 34.49 145 *eP* P 20 21 27.6 -7.9
ANKE Ethiopia-Afar 34.49 145 *eP* P 20 21 44.7 +9.1
AAE Adis Abeba 34.58 147 *eP* P 20 21 31.1 -5.1
AAE Adis Abeba 34.58 147 *eP* P 20 21 44.7 +8.4
FURI Furi 34.66 148 P **P 20 21 40.2 +3.3**
FURI Furi 34.66 148 *eP* P 20 21 31.0 -6.0
FURI Furi 34.66 148 *eP* P 20 21 48.7 +12
JMIC Jan Mayen 34.69 344 LR LR 20 35 58.5
comp=Z,812nm,21.9s,baz=132,slow=37
HOQ Hoqain 34.80 107 P **P 20 21 35.1 -2.7**
HOQ S **S 20 27 02.2 -5.3**
BORG Borgarnes 34.82 330 P **P 20 21 38.5 +1.0**
comp=Z,30nm,1.1s,baz=159,slow=6.1,SNR=7.5
BORG LR LR 20 36 24.9
comp=Z,2μm,21.2s,baz=125,slow=37
comp=Z,30nm,1.1s
BSY Bisya 35.22 108 P **P 20 21 40.0 -1.4**
SNR=6.2
BSY P **P 20 21 40.0 -1.4**
SNR=6.2
SMDO Samad 35.65 107 P **P 20 21 43.4 -1.8**
SNR=7.5
SMDO P **P 20 21 43.4 -1.8**
SNR=7.5
SMDO S **S 20 27 16.4 -4.4**
SMDO S **S 20 27 16.4 -4.4**
DOK Doka 35.68 116 P **P 20 21 45.4 0.0**
SNR=14
DOK P **P 20 21 45.4 0.0**
SNR=14
DOK S **S 20 27 15.4 -5.6**
DOK S **S 20 27 15.4 -5.6**
WHFO Wadi Hawf 35.91 118 P **P 20 21 47.3 -0.1**
WHFO P **pP 20 21 49.0 -4.7**
SNR=7.6
WHFO S **S 20 27 19.8 -4.9**
BRVK Borovoye 35.95 52 P **P 20 21 47.8 +0.4**
BRVK IAmb IAmb 20 22 14.7
comp=Z,38nm,0.9s
BRVK Borovoye 35.95 52 P **P 20 21 47.8 +0.4**
BRVK pmax pmax
comp=Z,38nm,1.0s
BRVK Borovoye 35.95 52 P **P 20 21 47.9 +0.5**
BRVK S **S 20 27 21.5 -3.1**
BRVK Borovoye 35.95 52⇑P **P 20 21 48.0 +0.5**
WSAR Wadi Sarin 35.98 106 P **P 20 21 48.2 +0.3**
comp=Z,10nm,0.8s,baz=316,slow=10,SNR=10
WSAR LR LR 20 40 15.5
comp=Z,1μm,20.1s,baz=331,slow=42
comp=Z,10nm,0.8s
ABTO Aybut 35.98 119 P **P 20 21 48.4 +0.3**
ABTO S **S 20 27 20.5 -5.3**
BVAR Borovoye Array 36.02 52 LR LR 20 38 55.1
comp=Z,1μm,19.7s,baz=266,slow=40
JMDO Jabal Madar 36.10 107 P **P 20 21 48.2 -0.9**
SNR=7.8
RBK Rabkut 36.50 118 P **P 20 21 52.5 +0.1**
SNR=15
RBK S **S 20 27 28.9 -4.7**
TAS Tashkent 36.58 71 P **P 20 21 53.9 +1.0**
TAS IAmb IAmb 20 22 08.8
comp=Z,30nm,0.6s
TAS Tashkent 36.58 71 P **P 20 21 53.9 +1.0**
TAS pmax pmax
comp=Z,30nm,0.6s
WBK Wadi Bani Khal 36.60 106 P **P 20 21 53.1 -0.2**
MHTO MHTO 36.86 109 P **P 20 21 55.3 -0.1**
SNR=7.4
MHTO S **S 20 27 34.8 -4.2**
DMTO DMTO 36.86 117 P **P 20 21 55.1 -0.4**
DMTO S **S 20 27 34.3 -4.7**
IUG Iuzhnay 36.92 70*c iP* **P 20 21 55.6 -0.3**
IUG *e* 20 23 24.1
IUG *eS* **S 20 27 46.1 +6.2**
IUG Iuzhnay 36.92 70⇑*iP* **P 20 21 55.6 -0.3**
baz=70
IUG *e*PP **PnPn 20 23 24.2 +4.0**
baz=70
IUG *eS* **S 20 27 46.2 +6.2**
baz=70
KK31 Karatay Array 37.06 68 P **P 20 21 57.3 +0.3**
KK31 IAmb IAmb 20 21 60.0
comp=Z,46nm,0.7s
KK31 Karatay Array 37.06 68 P **P 20 21 57.3 +0.3**
KK31 pmax pmax
comp=Z,46nm,0.7s
KKAR Karatay Array 37.06 68 P **P 20 21 57.2 +0.2**
KKAR Karatay Array 37.06 68 P **P 20 21 57.2 +0.2**
KKAR Karatay Array 37.06 68⇑P **P 20 21 57.4 +0.4**
CHGR Chuyangaron 37.20 76 P **P 20 21 59.0 +0.7**
CHGR Chuyangaron 37.20 76 P **P 20 21 59.0 +0.7**
CHGR pmax pmax
comp=Z,210nm,0.9s
BRZS Berezniki 37.54 57*c iP* **P 20 22 00.4 -0.5**
BRZS *eS* **S 20 27 54.1 +5.2**
BRZS pmax pmax
comp=Z,59nm,2.9s
BRZS Berezniki 37.54 57⇑*iP* **P 20 22 00.4 -0.5**
comp=Z,59nm,2.9s,baz=56
BRZS *eS* **S 20 27 54.2 +5.3**
baz=56
DZA Taraz 37.69 68 *eP* **P 20 22 01.7 -0.6**
DZA Taraz 37.69 68 *eP* **P 20 22 01.8 -0.6**
baz=68
SCO Scoresbysund 37.78 338 P **P 20 22 01.9 -0.8**
SCO Scoresbysund 37.78 338 P **P 20 22 01.9 -0.8**
SCO pmax pmax
comp=Z,118nm,1.1s
SCO MLR MLR
comp=Z,3μm,22.0s
SCO Scoresbysund 37.78 338 *i* P **P 20 22 03.1 +0.4**
SCO IAmb IAmb 20 22 05.2
comp=Z,97nm,1.0s
SCO Scoresbysund 37.78 338⇓P **P 20 22 04.6 +1.9**
GAR Garm 37.96 75 P **P 20 22 05.5 +0.7**
BTK Batken 38.03 73 P **P 20 22 05.4 +0.1**
BTK IAmb IAmb 20 22 06.6
comp=Z,46nm,0.9s
BTK Batken 38.03 73 P **P 20 22 05.4 +0.1**
BTK pmax pmax
comp=Z,46nm,1.0s
KBL Kabul 38.51 82 P **P 20 22 09.6 0.0**
KBL Kabul 38.51 82 P **P 20 22 09.6 0.0**
KBL pmax pmax
comp=Z,26nm,0.8s
KBL Kabul 38.51 82 P **P 20 22 10.1 +0.6**
SNR=14
LODK Lodwar 38.52 156 P **P 20 22 11.3 +1.7**
LODK IAMs_20 IAMs_20 20 39 12.2
comp=Z,3μm,19.0s
LODK Lodwar 38.52 156 P **P 20 22 12.5 +2.9**
SNR=14
SPITS Spitsbergen Ar 38.59 359 P **P 20 22 09.9 +0.5**
comp=Z,33nm,0.9s,baz=150,slow=10,SNR=9.0
SPITS LR LR 20 39 58.7
comp=Z,7μm,18.8s,baz=145,slow=39
comp=Z,33nm,0.9s
DRK Karamyk 38.92 73 P **P 20 22 13.5 +0.5**
KBS Kingsbay 39.45 357 IAMs_20 IAMs_20 20 40 24.8
comp=Z,4μm,18.0s
KBS Kingsbay 39.45 357*ceP* **P 20 22 14.8 -1.9**
KBS pmax pmax
comp=Z,123nm,1.7s
KBS MLR MLR
comp=Z,3μm,17.0s
KBS Kingsbay 39.45 357 *i* P **P 20 22 16.5 -0.1**
EKS2 Erkin-Say 39.50 68 P **P 20 22 18.8 +1.2**
SNR=86
AML Almayashu 39.57 69 P **P 20 22 19.0 +0.4**
SNR=22
SOEG Soedalen 39.85 333 *i* P **P 20 22 21.1 +1.1**
SOEG IAmb IAmb 20 22 22.2
comp=Z,66nm,1.1s
USP Ospenovka 39.86 67 P **P 20 22 21.9 +1.4**
SNR=8.3
SGDS Sogindy 39.91 67 *eP* **P 20 22 20.4 -0.6**

SGDS				*e*			20 23 51.6
SGDS	**Sogindy**	**39.91**	**67**	*e*P		**P**	**20 22 20.4 -0.6**
	baz=66						
SGDS				*e*PP		**PP**	**20 23 51.6 -1.1**
	baz=66						
AAK	**Ala-Archa**	**40.01**	**68**	P		**P**	**20 22 23.2 +1.2**
	SNR=29						
AAK	**Ala-Archa**	**40.01**	**68**	LR		LR	20 43 38.2
	comp=Z,3μm,18.4s,baz=286,slow=43						
AAK	**Ala-Archa**	**40.01**	**68**	P		**P**	**20 22 22.6 +0.6**
AAK	**Ala-Archa**	**40.01**	**68**	*c*eP		**P**	**20 22 22.9 +0.9**
AAK				pmax		pmax	
	comp=Z,148nm,2.5s						
AAK				MLR		MLR	
	comp=Z,3μm,16.0s						
AAK	**Ala-Archa**	**40.01**	**68**	P		**P**	**20 22 22.6 +0.6**
AAK				⇓P		**P**	**20 22 22.7 +0.6**
AAK				P		**sP**	**20 22 23.0 -7.6**
AAK	**Ala-Archa**	**40.01**	**68**	*i* P		**P**	**20 22 22.7 +0.8**
	SNR=47						
AAK	**Ala-Archa**	**40.01**	**68**	⇑P		**P**	**20 22 22.8 +0.8**
CHMS	**Chumysh**	**40.11**	**67**	P		**P**	**20 22 23.3 +0.7**
	SNR=20						
CHMS	**Chumysh**	**40.11**	**67**	*i* P		**P**	**20 22 22.4 -0.2**
CHMS				pmax		pmax	
	comp=Z,46nm,1.1s						
UCH	**Uchtor**	**40.13**	**68**	P		**P**	**20 22 24.0 +0.7**
	SNR=37						
DBIC	**Dimbokro**	**40.15**	**222**	P		**P**	**20 22 23.9 +0.9**
	comp=Z,6.9nm,0.3s,baz=3.1,slow=7.8,SNR=21						
DBIC				LR		LR	20 40 21.1
	comp=Z,5μm,19.4s,baz=9.5,slow=38						
	comp=Z,6.9nm,0.3s						
DBIC	**Dimbokro**	**40.15**	**222**	P		**P**	**20 22 23.6 +0.6**
DBIC	**Dimbokro**	**40.15**	**222**	P		**P**	**20 22 24.0 +0.9**
DBIC	**Dimbokro**	**40.15**	**222**	⇓P		**P**	**20 22 23.9 +0.9**
KBK	**Karagaybulak**	**40.33**	**68**	P		**P**	**20 22 25.8 +1.2**
	SNR=21						
TKM2	**Tokmak 2**	**40.73**	**67**	P		**P**	**20 22 28.4 +0.4**
	SNR=22						
TKM2	**Tokmak 2**	**40.73**	**67**	*i* P		**P**	**20 22 27.6 -0.4**
TKM2				pmax		pmax	
	comp=Z,25nm,1.0s						
DAG	**Danmarks Havn**	**40.80**	**347**	*i* P		**P**	**20 22 27.0 -0.8**
DAG				IAmb		IAmb	20 22 29.0
	comp=Z,20nm,0.8s						
KUU	**Kurty**	**41.01**	**65**	*c i*P		**P**	**20 22 30.1 +0.1**
KUU				*e*			20 24 04.0
KUU				*e*S		S	20 28 50.7 +10
KUU				pmax		pmax	
	comp=Z,286nm,2.5s						
KUU	**Kurty**	**41.01**	**65**	⇑*i*P		**P**	**20 22 30.1 +0.1**
	comp=Z,286nm,2.5s,baz=65						
KUU				*e*PP		**PP**	**20 24 04.1 -0.5**
	baz=65						
KUU				*e*S		S	20 28 50.8 +10
	baz=65						
BBTS	**Babate**	**41.04**	**243**	LR		LR	20 42 10.3
	comp=Z,4μm,19.0s,baz=52,slow=40						
BOOM	**Boomskoye usch**	**41.08**	**68**	P		**P**	**20 22 31.3 +0.5**
BOOM	**Boomskoye usch**	**41.08**	**68**	P		**P**	**20 22 31.3 +0.5**
BOOM				pmax		pmax	
	comp=Z,28nm,0.7s						
MBAR	**Mbarara**	**41.19**	**165**	P		**P**	**20 22 34.0 +2.1**
	comp=Z,2.3nm,0.2s,baz=323,slow=5.2,SNR=7.8						
MBAR				LR		LR	20 43 15.3
	comp=Z,2μm,18.4s,baz=337,slow=41						
	comp=Z,2.3nm,0.2s						
MBAR	**Mbarara**	**41.19**	**165**	P		**P**	**20 22 33.3 +1.4**
MBAR	**Mbarara**	**41.19**	**165**	*i* P		**P**	**20 22 33.2 +1.4**
MBAR				pmax		pmax	
	comp=Z,32nm,1.1s						
MBAR				MLR		MLR	
	comp=Z,2μm,21.0s						
MBAR	**Mbarara**	**41.19**	**165**	P		**P**	**20 22 34.7 +2.9**
MBAR	**Mbarara**	**41.19**	**165**	*e*P		P	20 22 44.5 +13
MBAR	**Mbarara**	**41.19**	**165**	⇑P		**P**	**20 22 35.3 +3.4**
KURBB	**Kurchatov Arra**	**41.20**	**55**	P		**P**	**20 22 31.3 -0.1**
	comp=Z,7.7nm,0.8s,baz=278,slow=8.7,SNR=52						
KURBB				PcP		**PcP**	**20 24 30.7 +0.5**
	comp=Z,4.5nm,0.8s,baz=281,slow=3.7,SNR=4.1						
KURBB				LR		LR	20 43 36.2
	comp=Z,2μm,18.2s,baz=262,slow=42						
	comp=Z,7.7nm,0.8s						
KURK	**Kurchatov**	**41.24**	**55**	P		**P**	**20 22 31.4 -0.4**
KURK	**Kurchatov**	**41.24**	**55**	IAMs_20		IAMs_20	20 40 48.9
	comp=Z,2μm,21.0s						
KURK	**Kurchatov**	**41.24**	**55**	*c i*P		**P**	**20 22 31.6 -0.3**
KURK				pmax		pmax	
	comp=Z,33nm,1.0s						
KURK				MLR		MLR	
	comp=Z,2μm,15.0s						
KURK	**Kurchatov**	**41.24**	**55**	P		**P**	**20 22 31.5 -0.3**
KURK	**Kurchatov**	**41.24**	**55**	⇑P		**P**	**20 22 31.5 -0.3**
ULHL	**Ulahol**	**41.37**	**68**	P		**P**	**20 22 34.3 +1.1**
	SNR=7.7						
NRN	**Naryn**	**41.42**	**69**	P		**P**	**20 22 33.9 +0.1**
NRN	**Naryn**	**41.42**	**69**	P		**P**	**20 22 33.9 +0.1**
NRN				pmax		pmax	
	comp=Z,27nm,0.8s						
AAA	**Alma-Ata**	**41.59**	**66**	*c*eP		**P**	**20 22 35.4 +0.6**
AAA	**Alma-Ata**	**41.59**	**66**	⇑*e*P		**P**	**20 22 35.5 +0.6**
	baz=66						
ANGG	**Ammassalik, Gr**	**41.64**	**328**	IAMs_20		IAMs_20	20 41 09.0
	comp=Z,3μm,19.0s						
MDOK	**Medeo**	**41.69**	**66**	*i* P		**P**	**20 22 35.7 -0.1**
MDOK				*e*			20 24 13.7
MDOK	**Medeo**	**41.69**	**66**	*i* P		**P**	**20 22 35.7 -0.1**
	baz=66						
MDOK				*e*PP		**PP**	**20 24 13.8 +1.6**
	baz=66						
KSH	**Kashi**	**41.98**	**72**	P		**P**	**20 22 37.8 -0.4**
KSH				sP		sP	20 22 46.1 -0.8
KSH				PP		**PP**	**20 24 20.6 +5.3**
KSH				ScP		**ScP**	**20 28 20.8 -1.7**
KSH				S		**S**	**20 28 54.0 -1.9**
KSH				pmax		pmax	
	comp=Z,35nm,1.2s						
KSH				LR		LR	
	comp=Z,3μm,20.3s						
KSH				LR		LR	
	comp=Z,3μm,16.1s						
KSH				LR		LR	
	comp=Z,3μm,18.6s						
NIL	**Nilore**	**42.07**	**81**	P		**P**	**20 22 39.2 +0.3**
NIL				IAmb		IAmb	20 23 25.6
	comp=Z,60nm,1.0s						
NIL	**Nilore**	**42.07**	**81**	P		**P**	**20 22 39.2 +0.3**
NIL				pmax		pmax	
	comp=Z,60nm,1.0s						
NIL				MLR		MLR	
	comp=Z,1μm,21.0s						
TDK	**Taldyqorghan**	**42.18**	**63**	*c i*P		**P**	**20 22 39.4 -0.2**
TDK				*e*			20 24 17.2
TDK				pmax		pmax	
	comp=Z,216nm,2.3s						
TDK	**Taldyqorghan**	**42.18**	**63**	⇑*i*P		**P**	**20 22 39.4 -0.2**
	comp=Z,216nm,2.3s,baz=63						
TDK				*e*PP		**PP**	**20 24 17.2 0.0**
	baz=63						
ISOG	**Isortoq, Green**	**42.18**	**328**	*i* P		**P**	**20 22 40.4 +1.2**
ISOG				IAmb		IAmb	20 22 41.3
	comp=Z,95nm,1.0s						
TARG	**Taragay, Kyrgy**	**42.63**	**68**	P		**P**	**20 22 42.9 -0.9**
TARG				IAmb		IAmb	20 22 44.9
	comp=Z,55nm,1.0s						
TARG	**Taragay, Kyrgy**	**42.63**	**68**	P		**P**	**20 22 42.9 -0.9**
TARG				pmax		pmax	
	comp=Z,55nm,1.0s						
SATY	**Saty**	**42.68**	**66**	*c i*P		**P**	**20 22 44.0 +0.2**
SATY				*e*			20 24 22.7
SATY				*e*S		**S**	**20 29 05.0 -1.1**
SATY				pmax		pmax	
	comp=Z,39nm,1.0s						
SATY	**Saty**	**42.68**	**66**	⇑*i*P		**P**	**20 22 44.1 +0.2**
	comp=Z,39nm,1.0s,baz=66						
SATY				*e*PP		**PP**	**20 24 22.7 0.0**
	baz=66						
SATY				*e*S		**S**	**20 29 05.1 -1.1**
	baz=66						
KPKS	**Kokpek**	**42.76**	**65**	*c i*P		**P**	**20 22 44.3 -0.1**
KPKS				*e*			20 24 25.0
KPKS				*e*S		**S**	**20 29 05.0 -2.3**
KPKS				pmax		pmax	
	comp=Z,63nm,2.5s						
KPKS	**Kokpek**	**42.76**	**65**	⇑*i*P		**P**	**20 22 44.4 -0.1**
	comp=Z,63nm,2.5s,baz=65						
KPKS				*e*PP		**PP**	**20 24 25.0 +1.4**
	baz=65						
KPKS				*e*S		**S**	**20 29 05.1 -2.3**
	baz=65						
ICESG	**Greenland Ices**	**43.01**	**333**	*i* P		**P**	**20 22 46.9 +0.6**
ICESG				IAmb		IAmb	20 22 47.9
	comp=Z,62nm,1.1s						
ICESG	**Greenland Ices**	**43.01**	**333**	⇓P		**P**	**20 22 47.4 +1.0**
UZB	**Uzyndulak**	**43.09**	**66**	*c i*P		**P**	**20 22 45.8 -1.3**
UZB				*e*			20 24 28.2
UZB	**Uzyndulak**	**43.09**	**66**	⇑*i*P		**P**	**20 22 45.9 -1.3**
	baz=66						
UZB				*e*PP		**PP**	**20 24 28.2 +1.1**
	baz=66						
PDGK	**Podgornoye**	**43.37**	**65**	*i* P		**P**	**20 22 49.3 -0.1**
PDGK				pmax		pmax	
	comp=Z,63nm,0.9s						
SHLS	**Shalkode**	**43.39**	**66**	*c i*P		**P**	**20 22 52.1 +2.5**
SHLS				pmax		pmax	
	comp=Z,19nm,0.8s						
SHLS	**Shalkode**	**43.39**	**66**	⇑*i*P		**P**	**20 22 52.1 +2.5**
	comp=Z,19nm,0.8s,baz=65						
KMBO	**Kilima Mbogo**	**43.41**	**156**	P		**P**	**20 22 53.0 +3.0**
	comp=Z,0.1nm,0.5s,baz=353,slow=23,SNR=6.0						
KMBO				LR		LR	20 42 14.8
	comp=Z,39nm,20.1s,baz=320,slow=38						
KMBO	**Kilima Mbogo**	**43.41**	**156**	P		**P**	**20 22 51.4 +1.3**
KMBO	**Kilima Mbogo**	**43.41**	**156**	*e*P		**P**	**20 22 52.8 +2.7**
KMBO				IAmb		IAmb	20 22 59.6
	comp=Z,10.0nm,0.9s						
KMBO	**Kilima Mbogo**	**43.41**	**156**	*i* P		**P**	**20 22 51.7 +1.7**
KMBO	**Kilima Mbogo**	**43.41**	**156**	P		**P**	**20 22 53.4 +3.4**
KMBO	**Kilima Mbogo**	**43.41**	**156**	*e*P		P	20 23 00.4 +10
KMBO	**Kilima Mbogo**	**43.41**	**156**	*i* P		**P**	**20 22 52.8 +2.7**
	SNR=14						
MAKZ	**Makanchi**	**44.16**	**60**	P		**P**	**20 22 55.3 -0.3**
MAKZ				IAmb		IAmb	20 22 57.2
	comp=Z,53nm,0.8s						
MAKZ				IAMs_20		IAMs_20	20 43 27.4
	comp=Z,3μm,19.0s						
MAKZ	**Makanchi**	**44.16**	**60**	P		**P**	**20 22 55.3 -0.3**
MAKZ				pmax		pmax	
	comp=Z,53nm,0.8s						
MAKZ				MLR		MLR	
	comp=Z,3μm,19.0s						
MAKZ	**Makanchi**	**44.16**	**60**	⇑P		**P**	**20 22 55.7 +0.1**
MK31	**Makanchi Array**	**44.38**	**60**	P		**P**	**20 22 57.4 +0.1**
MK31	**Makanchi Array**	**44.38**	**60**	*i* P		**P**	**20 22 57.3 0.0**
MK31				pmax		pmax	
	comp=Z,79nm,0.6s						
MKAR	**Makanchi Array**	**44.38**	**60**	P		**P**	**20 22 57.6 +0.3**
	comp=Z,75nm,0.5s,baz=279,slow=6.9,SNR=628						
MKAR				ScP		**ScP**	**20 28 29.6 -2.3**
	comp=Z,5.1nm,0.9s,baz=285,slow=4.8,SNR=4.9						
MKAR				LR		LR	20 43 44.2
	comp=Z,3μm,19.7s,baz=283,slow=39						
	comp=Z,75nm,0.5s						
MKAR	**Makanchi Array**	**44.38**	**60**	P		**P**	**20 22 57.4 +0.1**
MKAR	**Makanchi Array**	**44.38**	**60**	P		**P**	**20 22 57.4 +0.1**
ZAA0	**Zalesovo Array**	**44.55**	**49**	P		**P**	**20 22 58.2 -0.3**
ZAA0				IAmb		IAmb	20 23 20.6
	comp=Z,36nm,0.8s						
ZALV	**Zalesovo Beam**	**44.55**	**49**	P		**P**	**20 22 58.5 -0.1**
	comp=Z,42nm,0.5s,baz=277,slow=8.4,SNR=192						
ZALV				LR		LR	20 43 42.9
	comp=Z,5μm,18.1s,baz=282,slow=39						
	comp=Z,42nm,0.5s						
ZALV	**Zalesovo Beam**	**44.55**	**49**	P		**P**	**20 22 58.3 -0.3**
KIBK	**Kibwezi**	**44.80**	**155**	P		**P**	**20 23 02.3 +1.2**
KIBK	**Kibwezi**	**44.80**	**155**	P		**P**	**20 23 04.1 +3.1**
NRS	**Narsarsuaq**	**44.91**	**321**	IAMs_20		IAMs_20	20 41 02.3
	comp=Z,3μm,22.0s						
DY2G	**Dye2**	**45.22**	**329**	*i* P		**P**	**20 23 04.9 +0.8**
DY2G				IAmb		IAmb	20 23 05.9
	comp=Z,115nm,1.1s						
DY2G	**Dye2**	**45.22**	**329**	⇑P		**P**	**20 23 04.8 +0.7**
NRIK	**Noril'sk**	**45.34**	**27**	P		**P**	**20 23 06.2 +1.5**
	comp=Z,45nm,0.8s,baz=265,slow=5.3,SNR=35						
NRIK				LR		LR	20 44 34.4
	comp=Z,10μm,19.7s,baz=270,slow=39						
	comp=Z,45nm,0.8s						
NRIK	**Noril'sk**	**45.34**	**27**	P		**P**	**20 23 05.3 +0.7**
NRIK	**Noril'sk**	**45.34**	**27**	*c i*P		**P**	**20 23 05.9 +1.3**
NRIK				pmax		pmax	
	comp=Z,114nm,1.3s						
NRIK				MLR		MLR	
	comp=Z,9μm,19.0s						
ZSN	**Zaisan**	**45.91**	**58**	*e*P		**P**	**20 23 08.9 -0.6**
ZSN				*e*S		S	20 30 01.9 +9.1
ZSN				pmax		pmax	
	comp=Z,54nm,1.1s						
ZSN	**Zaisan**	**45.91**	**58**	*e*P		**P**	**20 23 08.9 -0.6**
	comp=Z,54nm,1.1s,baz=58						
ZSN				*e*S		S	20 30 02.0 +9.1
	baz=58						
IVI	**Ivigtut**	**46.23**	**321**	*i* P		**P**	**20 23 12.5 +0.7**
SFJD	**Kangerlussuaq**	**46.95**	**329**	LR		LR	20 43 19.5
	comp=Z,4μm,22.0s,baz=88,slow=36						
SFJD	**Kangerlussuaq**	**46.95**	**329**	P		**P**	**20 23 17.1 -0.2**
SFJD	**Kangerlussuaq**	**46.95**	**329**	IAMs_20		IAMs_20	20 43 07.3
	comp=Z,3μm,21.0s						
SFJD	**Kangerlussuaq**	**46.95**	**329**	P		**P**	**20 23 17.1 -0.2**
SFJD				pmax		pmax	
	comp=Z,119nm,1.7s						
SFJD				MLR		MLR	
	comp=Z,4μm,21.0s						
SFJD	**Kangerlussuaq**	**46.95**	**329**	*i* P		**P**	**20 23 17.3 0.0**
SFJD				IAmb		IAmb	20 23 30.2
	comp=Z,515nm,2.4s						
DGZ	**Jazzator, Alta**	**46.99**	**55**	*c i*P		**P**	**20 23 18.5 +0.4**
DGZ				pmax		pmax	
	comp=Z,59nm,0.8s						
DGZ				MLR		MLR	
	comp=Z,2μm,15.0s						
ILULI	**Ilulissat**	**47.09**	**332**	IAMs_20		IAMs_20	20 45 19.0
	comp=Z,3μm,19.0s						
NEEM	**North Greenlan**	**47.61**	**344**	*i* P		**P**	**20 23 22.8 0.0**
NEEM				IAmb		IAmb	20 23 23.9
	comp=Z,1μm,3.1s						
UPNV	**Upernavik**	**48.69**	**337**	*i* P		**P**	**20 23 30.1 -0.6**
UPNV				IAmb		IAmb	20 23 31.6
	comp=Z,30nm,0.8s						
WMQ	**Urumqi**	**48.89**	**62**	⇑*i*P		**P**	**20 23 33.5 +0.7**
WMQ				PP		**PP**	**20 25 28.5 +2.6**
WMQ				S		**S**	**20 30 33.8 -1.6**
WMQ				SS		**SS**	**20 34 04.4 -1.4**
WMQ				pmax		pmax	
	comp=Z,100nm,0.9s						
WMQ				pmax		pmax	
	comp=Z,350nm,3.8s						
WMQ				LR		LR	
	comp=Z,2μm,13.9s						
WMQ				LR		LR	
	comp=Z,3μm,15.3s						
WMQ				LR		LR	
	comp=Z,2μm,20.7s						
POO	**Poona**	**50.21**	**99**	*e*P		P	20 23 38.0 -5.1
TULEG	**Thule**	**51.64**	**343**	P		**P**	**20 23 52.6 -0.4**
JBP	**Jabalpur**	**52.30**	**90**	*e*P		**P**	**20 23 55.6 -3.0**
JBP				⇑*e*S		S	20 31 13.9 -9.1
DANN	**Dangsing**	**52.50**	**82**	*e*P		**P**	**20 23 59.8 -0.7**
	comp=Z,60nm,0.6s						
KOLN	**Koldanda**	**52.67**	**83**	*e*P		**P**	**20 23 59.7 -1.9**
KNGR	**Kungurtug, Tuv**	**52.92**	**51**	*d i*P		**P**	**20 24 03.7 +0.6**
KNGR				pmax		pmax	
	comp=Z,35nm,1.3s						
KNGR				MLR		MLR	
	comp=Z,928nm,15.0s						
GKN	**Gorkha**	**53.34**	**82**	*e*P		**P**	**20 24 05.3 -1.3**
DMN	**Daman**	**53.90**	**82**	*e*P		**P**	**20 24 09.8 -1.0**
	comp=Z,35nm,0.7s						
KKN	**Kakani**	**53.94**	**82**	*e*P		**P**	**20 24 09.5 -1.5**
EUNU	**Eureka**	**54.01**	**348**	P		**P**	**20 24 11.1 +0.5**
EUNU				IAmb		IAmb	20 24 11.9
	comp=Z,28nm,0.8s						
PKIN	**Phulchoki**	**54.14**	**82**	*e*P		**P**	**20 24 11.5 -1.0**
	comp=Z,28nm,0.7s						
PKI	**Pulchoki**	**54.15**	**82**	*e*P		**P**	**20 24 11.5 -1.2**
DRLN	**Deer Lake**	**54.24**	**308**	P		**P**	**20 24 13.0 +0.4**
DRLN	**Deer Lake**	**54.24**	**308**	⇓P		**P**	**20 24 13.3 +0.6**
GUN	**Gumba**	**54.34**	**81**	*e*P		**P**	**20 24 13.3 -0.8**
HYBB	**Hyderabad (bro**	**54.47**	**97**	*e*P		**P**	**20 24 13.6 -1.1**
HYBB				*es*P		**sP**	**20 24 25.4 +1.8**
HYBB				*e*PcP		**PcP**	**20 25 19.3 +1.2**
HYBB				*e*S		**S**	**20 31 55.0 +2.3**
HYBB				*e*ScS		**ScS**	**20 34 03.8 +0.5**
MSEY	**Mahe Island**	**54.57**	**136**	P		**P**	**20 24 16.4 +1.0**
MSEY				IAmb		IAmb	20 25 03.1
	comp=Z,61nm,1.4s						
MSEY	**Mahe Island**	**54.57**	**136**	P		**P**	**20 24 16.4 +1.0**
MSEY				pmax		pmax	
	comp=Z,61nm,1.4s						
MSEY				MLR		MLR	
	comp=Z,500nm,19.0s						
MSEY	**Mahe Island**	**54.57**	**136**	⇓p		P	20 24 21.4 +5.9
MOY	**Mondy**	**54.60**	**49**	*e*P		**P**	**20 24 16.3 +0.9**
MOY				pmax		pmax	
	comp=Z,64nm,2.8s						
JIRN	**Jiri**	**54.70**	**81**	*e*P		**P**	**20 24 15.9 -0.8**
	comp=Z,19nm,0.5s						
FRB	**Frobisher Bay**	**54.91**	**327**	LR		LR	20 48 47.9
	comp=Z,3μm,19.5s,baz=70,slow=37						
LSZ	**Lusaka**	**55.18**	**171**	LR		LR	20 51 29.2
	comp=Z,1μm,18.8s,baz=359,slow=40						
LSZ	**Lusaka**	**55.18**	**171**	P		**P**	**20 24 20.8 +1.0**
LSZ	**Lusaka**	**55.18**	**171**	P		**P**	**20 24 20.8 +1.0**
LSZ				pmax		pmax	
	comp=Z,14nm,0.8s						
LSZ				MLR		MLR	
	comp=Z,1μm,20.0s						
RAMN	**Ramite**	**55.38**	**82**	*e*P		**P**	**20 24 20.1 -1.4**
	comp=Z,42nm,0.6s						
TAPN	**Taplejung**	**56.02**	**81**	*e*P		**P**	**20 24 25.1 -1.0**
ODAN	**Odare**	**56.03**	**82**	*e*P		**P**	**20 24 25.5 -0.6**
IRK	**Irkutsk**	**56.27**	**47**	*e*P		**P**	**20 24 26.6 -0.6**
IRK				pmax		pmax	
	comp=Z,105nm,2.6s						
ZAK	**Zakamensk**	**56.43**	**50**	*e*P		**P**	**20 24 28.2 -0.3**
ZAK				pmax		pmax	
	comp=Z,30nm,1.2s						
GOMU	**GeErMu**	**56.96**	**68**	P		**P**	**20 24 32.9 +0.1**
GOMU				pP		pP	20 24 36.4 -3.0
GOMU				sP		sP	20 24 39.0 -2.8
GOMU				PP		**PP**	**20 26 38.0 -1.2**
GOMU				S		**S**	**20 32 21.0 -5.3**
GOMU				sS		sS	20 32 35.1 -1.7
GOMU				SS		**SS**	**20 36 16.6 +2.2**
GOMU				pmax		pmax	
	comp=Z,240nm,4.5s						
GOMU				LR		LR	
	comp=Z,660nm,19.8s						
GOMU				LR		LR	
	comp=Z,1μm,18.6s						
GOMU				LR		LR	
	comp=Z,520nm,20.4s						
PCHI	**Peechi**	**57.08**	**105**	*e*P		**P**	**20 24 33.3 -0.1**
PCHI				*e*S		**S**	**20 32 23.9 -3.5**
SCHQ	**Schefferville**	**57.41**	**317**	P		**P**	**20 24 35.6 +0.3**
	comp=Z,22nm,0.9s,baz=54,slow=10,SNR=11						
SCHQ				LR		LR	20 49 48.2
	comp=Z,756nm,18.4s,baz=67,slow=37						
	comp=Z,22nm,0.9s						
SCHQ	**Schefferville**	**57.41**	**317**	P		**P**	**20 24 35.3 0.0**
SCHQ				IAmb		IAmb	20 24 51.4
	comp=Z,22nm,0.7s						
SCHQ	**Schefferville**	**57.41**	**317**	⇓P		**P**	**20 24 35.8 +0.5**
LSA	**Lhasa**	**57.42**	**77**	P		**P**	**20 24 35.9 -0.4**
LSA	**Lhasa**	**57.42**	**77**	P		**P**	**20 24 35.8 -0.4**
LSA				pmax		pmax	
	comp=Z,14nm,0.9s						
LSA	**Lhasa**	**57.42**	**77**	P		**P**	**20 24 35.9 -0.4**
LSA				pmax		pmax	
	comp=Z,15nm,0.8s						
LSA	**Lhasa**	**57.42**	**77**	*i* P		**P**	**20 24 35.9 -0.4**
	SNR=8.5						
TIXI	**Tiksi**	**58.14**	**21**	LR		LR	20 53 41.0
	comp=Z,7μm,18.7s,baz=268,slow=40						
TIXI	**Tiksi**	**58.14**	**21**	P		**P**	**20 24 40.6 +0.5**
TIXI				IAmb		IAmb	20 24 42.4
	comp=Z,46nm,1.1s						
TIXI	**Tiksi**	**58.14**	**21**	*c i*P		**P**	**20 24 40.5 +0.5**
TIXI				pmax		pmax	
	comp=Z,65nm,1.5s						
TIXI				MLR		MLR	
	comp=Z,7μm,18.0s						
TIXI	**Tiksi**	**58.14**	**21**	⇑P		**P**	**20 24 40.7 +0.7**
GBN	**Guysborough**	**58.30**	**305**	P		**P**	**20 24 41.7 +0.1**
RES	**Resolute Bay**	**58.31**	**344**	LR		LR	20 51 36.2
	comp=Z,2μm,18.0s,baz=40,slow=38						
RES	**Resolute Bay**	**58.31**	**344**	P		**P**	**20 24 41.8 +0.6**
RES				IAmb		IAmb	20 24 52.3
	comp=Z,31nm,1.2s						
RES	**Resolute Bay**	**58.31**	**344**	P		**P**	**20 24 41.8 +0.6**
RES				pmax		pmax	
	comp=Z,31nm,1.2s						
RES	**Resolute Bay**	**58.31**	**344**	⇓P		**P**	**20 24 42.3 +1.1**
TSUM	**Tsumeb**	**58.71**	**183**	LR		LR	20 51 07.8
	comp=Z,2μm,20.6s,baz=7.0,slow=37						
TSUM	**Tsumeb**	**58.71**	**183**	P		**P**	**20 24 46.3 +1.5**
TSUM				IAmb		IAmb	20 24 53.5
	comp=Z,50nm,1.7s						
TSUM	**Tsumeb**	**58.71**	**183**	IAMs_20		IAMs_20	20 50 55.8
	comp=Z,2μm,21.0s						
GTA	**Gaotai**	**58.97**	**63**	⇑P		**P**	**20 24 46.4 -0.2**
GTA				pP		sP	20 24 53.9 -1.6
GTA				sP		pP	20 24 58.9 +5.7
GTA				S		**S**	**20 32 49.4 -2.6**
GTA				SS		**SS**	**20 36 47.1 +1.8**
GTA				pmax		pmax	
	comp=Z,41nm,0.9s						
GTA				pmax		pmax	
	comp=Z,210nm,5.5s						
GTA				LR		LR	
	comp=Z,1μm,22.9s						
GTA				LR		LR	
	comp=Z,2μm,20.4s						
GTA				LR		LR	
	comp=Z,2μm,20.4s						
BOD	**Bodaibo**	**59.06**	**39**	*e*P		**P**	**20 24 46.0 -0.7**
BOD				pmax		pmax	
	comp=Z,41nm,1.1s						
SONM	**Songino Array**	**59.36**	**51**	P		**P**	**20 24 49.5 +0.3**
	comp=Z,42nm,1.0s,baz=289,slow=8.4,SNR=148						
SONM				LR		LR	20 53 09.1
	comp=Z,3μm,19.6s,baz=296,slow=39						
	comp=Z,42nm,1.0s						
SONM	**Songino Array**	**59.36**	**51**	P		**P**	**20 24 49.2 +0.1**
SBV	**Sambava**	**59.51**	**147**	P		**P**	**20 24 52.4 +2.2**
ULN	**Ulaanbaatar**	**59.74**	**51**	P		**P**	**20 24 51.7 -0.1**
ULN				IAmb		IAmb	20 24 53.4
	comp=Z,39nm,1.0s						
ULN	**

F64A	**Sherman**	**62.33 308**	P	**P**	**20 25 09.4 +0.3**
	baz=60				
F64A			P	**P**	**20 25 09.4 +0.3**
	baz=60				
EMMW	**East Machias**	**62.35 306**	P	**P**	**20 25 09.4 +0.1**
EMMW			IAmb	IAmb	20 25 10.7
	comp=Z,28nm,1.0s				
EMMW			IAMs_20	IAMs_20	20 52 36.2
	comp=Z,1μm,21.0s				
PALK	**Pallekele**	**62.45 104**	LR	LR	20 55 17.3
	comp=Z,758nm,20.0s,baz=56,slow=39				
PALK	**Pallekele**	**62.45 104**	P	**P**	**20 25 10.1 -0.4**
PALK			IAmb	IAmb	20 25 11.0
	comp=Z,21nm,0.8s				
PALK	**Pallekele**	**62.45 104**	P	**P**	**20 25 10.1 -0.4**
PALK			pmax	pmax	
	comp=Z,21nm,0.8s				
PALK			MLR	MLR	
	comp=Z,900nm,20.0s				
PALK	**Pallekele**	**62.45 104**	P	**P**	**20 25 10.0 -0.4**
	comp=Z,32nm,1.0s				
PKME	**Peaks-Kenny Pk**	**63.20 308**	IAMs_20	IAMs_20	20 55 25.7
	comp=Z,1μm,19.0s				
PKME	**Peaks-Kenny Pk**	**63.20 308**	P	**P**	**20 25 16.2 +1.2**
	baz=60				
F62A	**Pittston Farm,**	**63.29 309**	P	**P**	**20 25 16.7 +1.1**
	baz=60				
F62A			P	**P**	**20 25 16.7 +1.1**
	baz=60				
LZH	**Lanzhou**	**63.38 64**	⇑P	**P**	**20 25 16.8 +0.2**
LZH			pP	sP	20 25 23.8 -1.8
LZH			sP	pP	20 25 26.8 +3.6
LZH			sS	sS	20 34 00.1 +1.2
LZH			pmax	pmax	
	comp=Z,58nm,1.2s				
LZH			pmax	pmax	
	comp=Z,330nm,4.9s				
LZH			LR	LR	
	comp=Z,2μm,18.6s				
LZH			LR	LR	
	comp=Z,2μm,17.5s				
LZH			LR	LR	
	comp=Z,2μm,19.9s				
ABPO	**Ambohimpanom**	**63.49 152**	P	**P**	**20 25 18.3 +1.0**
ABPO	**Ambohimpanom**	**63.49 152**	P	**P**	**20 25 18.3 +1.0**
ABPO			pmax	pmax	
	comp=Z,14nm,1.1s				
ABPO			MLR	MLR	
	comp=Z,1μm,20.0s				
LEPH	**Lephalale, Lim**	**63.62 173**	*e*P	**P**	**20 25 21.0 +3.0**
YAK	**Yakutsk**	**63.68 30**	LR	LR	20 56 25.8
	comp=Z,6μm,18.7s,baz=298,slow=39				
YAK	**Yakutsk**	**63.68 30**	P	**P**	**20 25 17.6 -0.2**
YAK	**Yakutsk**	**63.68 30**	*c i*P	**P**	**20 25 17.8 -0.1**
YAK			*e**PP	**sP**	**20 25 28.1 +1.2**
YAK			*e*		20 25 54.4
YAK			*e*		20 27 46.1
YAK			*e*S	**S**	**20 33 51.8 +1.0**
YAK			*e**SS	sS	20 34 11.6 +10
YAK			pmax	pmax	
	comp=Z,91nm,0.8s				
YAK			pmax	pmax	
	comp=E,24nm,1.1s				
YAK			pmax	pmax	
	comp=N,21nm,1.3s				
YAK			pmax	pmax	
	comp=Z,6.0nm,0.7s				
YAK			smax	smax	
	comp=N,64nm,9.8s				
YAK			smax	smax	
	comp=E,176nm,12.9s				
YAK			MLR	MLR	
	comp=Z,6μm,17.0s				
YAK			MLR	MLR	
	comp=E,3μm,13.0s				
YAK			MLR	MLR	
	comp=N,2μm,19.0s				
YAK	**Yakutsk**	**63.68 30**	⇑P	**P**	**20 25 17.7 -0.1**
MOPA	**Mopani**	**63.72 169**	*e*P	P	20 25 23.4 +4.9
MOPA	**Mopani**	**63.72 169**	*i* P	**P**	**20 25 22.3 +3.7**
MOPA	**Mopani**	**63.72 169**	*i* P	**P**	**20 25 22.3 +3.7**
LBTB	**Lobatse**	**64.58 175**	LR	LR	20 56 21.1
	comp=N,3μm,18.1s,baz=0.5,slow=38				
LBTB	**Lobatse**	**64.58 175**	P	**P**	**20 25 25.9 +1.6**
LBTB			IAmb	IAmb	20 25 34.0
	comp=Z,31nm,0.8s				
LBTB	**Lobatse**	**64.58 175**	*e*P	**P**	**20 25 28.4 +4.1**
LBTB	**Lobatse**	**64.58 175**	P	**P**	**20 25 25.9 +1.6**
LBTB			pmax	pmax	
	comp=Z,31nm,0.8s				
LBTB	**Lobatse**	**64.58 175**	*i* P	P	20 25 18.8 -5.5
LBTB	**Lobatse**	**64.58 175**	*i* P	P	20 25 18.8 -5.5
LBTB	**Lobatse**	**64.58 175**	⇑P	**P**	**20 25 27.2 +2.9**
I62A	**Tamworth**	**65.17 307**	P	**P**	**20 25 29.6 +1.7**
	baz=58				
I62A			P	**P**	**20 25 29.6 +1.7**
	baz=58				
BTO	**Baotou**	**65.17 57**	*e*P	**P**	**20 25 27.1 -1.1**
BTO			LR	LR	
	comp=Z,6μm,23.3s				
BTO			LR	LR	
	comp=Z,6μm,15.1s				
LBNH	**Lisbon**	**65.33 308**	P	**P**	**20 25 29.2 +0.2**
LBNH			IAmb	IAmb	20 25 31.3
	comp=Z,19nm,0.9s				
LBNH			IAMs_20	IAMs_20	20 54 49.2
	comp=Z,2μm,18.0s				
LBNH	**Lisbon**	**65.33 308**	P	**P**	**20 25 29.2 +0.2**
LBNH			pmax	pmax	
	comp=Z,19nm,1.0s				
LBNH			MLR	MLR	
	comp=Z,2μm,18.0s				
LBNH	**Lisbon**	**65.33 308**	P	**P**	**20 25 28.3 -0.7**
	baz=58,SNR=5.6				
LBNH	**Lisbon**	**65.33 308**	P	**P**	**20 25 30.3 +1.3**
	baz=58				
SLR	**Silverton**	**65.52 172**	*e*P	P	20 25 38.4 +8.0
FFD	**Franklin Falls**	**65.58 307**	IAMs_20	IAMs_20	20 53 50.6
	comp=Z,1μm,19.0s				
VT1	**Waterbury**	**65.79 308**	IAMs_20	IAMs_20	20 57 05.3
	comp=Z,1μm,18.0s				
HNH	**Hanover**	**65.84 307**	P	**P**	**20 25 33.9 +1.6**
	baz=57,SNR=5.1				
TRQ	**Mont Tremblant**	**65.84 311**	P	**P**	**20 25 32.4 0.0**
TRQ			IAmb	IAmb	20 25 34.4
	comp=Z,21nm,1.1s				
WES	**Weston**	**65.95 306**	P	**P**	**20 25 33.6 +0.7**
WES			IAmb	IAmb	20 25 35.4
	comp=Z,34nm,0.9s				
WES			IAMs_20	IAMs_20	20 55 02.6
	comp=Z,1μm,19.0s				
WES	**Weston**	**65.95 306**	P	**P**	**20 25 33.7 +0.7**
WES			pmax	pmax	
	comp=Z,34nm,0.9s				
WES			MLR	MLR	
	comp=Z,1μm,19.0s				
CRLN	**Carolina, Mapu**	**65.97 171**	*e*P	**P**	**20 25 37.6 +4.2**
CRLN			IAmb	IAmb	20 25 43.2
	comp=Z,20nm,0.8s				
VOI	**Vohitsoka**	**65.99 153**	P	**P**	**20 25 35.2 +1.7**
VOI			IAmb	IAmb	20 25 42.6
	comp=Z,25nm,0.9s				
A36M	**Sachs Harbour**	**66.02 349**	P	**P**	**20 25 33.9 +1.0**
	baz=28				
HRV	**Adam Dziewonsk**	**66.03 306**	P	**P**	**20 25 34.3 +0.8**
HRV			IAmb	IAmb	20 25 35.9
	comp=Z,20nm,0.8s				
HRV	**Adam Dziewonsk**	**66.03 306**	P	**P**	**20 25 34.3 +0.8**
HRV			pmax	pmax	
	comp=Z,20nm,0.9s				
HRV			MLR	MLR	
	comp=Z,900nm,20.0s				
HRV	**Adam Dziewonsk**	**66.03 306**	P	**P**	**20 25 35.1 +1.5**
	baz=57				
HRV	**Adam Dziewonsk**	**66.03 306**	P	**P**	**20 25 34.2 +0.6**
	baz=57				
HRV	**Adam Dziewonsk**	**66.03 306**	⇓P	**P**	**20 25 35.2 +1.7**
HHC	**Hu-ho-hao-te**	**66.04 56**	*e*P	**P**	**20 25 34.1 +0.3**
HHC			S	**S**	**20 34 21.4 +0.6**
HHC			pmax	pmax	
	comp=Z,90nm,1.1s				
HHC			pmax	pmax	
	comp=Z,290nm,6.2s				
HHC			LR	LR	
	comp=Z,2μm,14.6s				
HHC			LR	LR	
	comp=Z,3μm,14.2s				
HHC			LR	LR	
	comp=Z,5μm,14.5s				
CD2	**Chengdu**	**66.07 69**	P	**P**	**20 25 33.8 -0.2**
CD2			pmax	pmax	
	comp=Z,50nm,0.8s				
CD2			pmax	pmax	
	comp=Z,220nm,4.8s				
CD2			LR	LR	
	comp=Z,1μm,13.7s				
CD2			LR	LR	
	comp=Z,1μm,14.7s				
CD2			LR	LR	
	comp=Z,1μm,14.7s				
HIA	**Hailar**	**66.31 45**	P	**P**	**20 25 35.8 +0.5**
HIA			IAmb	IAmb	20 25 37.2
	comp=Z,32nm,1.0s				
HIA	**Hailar**	**66.31 45**	P	**P**	**20 25 35.8 +0.5**
HIA			pmax	pmax	
	comp=Z,31nm,1.0s				
HIA			MLR	MLR	
	comp=Z,2μm,19.0s				
BRYW	**Bryant College**	**66.34 305**	IAMs_20	IAMs_20	20 56 51.9
	comp=Z,1μm,18.0s				
QUA2	**Belchertown**	**66.65 306**	IAMs_20	IAMs_20	20 55 45.1
	comp=Z,1μm,18.0s				
QUA2	**Belchertown**	**66.65 306**	P	**P**	**20 25 39.5 +2.0**
	baz=57				
LONY	**Lake Ozonia**	**66.73 309**	IAMs_20	IAMs_20	20 55 45.1
	comp=Z,1μm,18.0s				
LONY	**Lake Ozonia**	**66.73 309**	P	**P**	**20 25 38.8 +0.8**
	baz=57				
L61B	**Northampton**	**66.76 306**	IAMs_20	IAMs_20	20 55 19.0
	comp=Z,1μm,21.0s				
L61B	**Northampton**	**66.76 306**	P	**P**	**20 25 39.7 +1.4**
	baz=57				
L61B	**Northampton**	**66.76 306**	P	**P**	**20 25 39.6 +1.4**
	baz=57				
ACCN	**Adirondack Com**	**66.86 308**	P	**P**	**20 25 40.0 +1.1**
ACCN			IAmb	IAmb	20 25 41.7
	comp=Z,22nm,0.9s				
ACCN	**Adirondack Com**	**66.86 308**	P	**P**	**20 25 40.3 +1.5**
	baz=57,SNR=7.3				
M63A	**Gales Ferry**	**66.94 305**	P	**P**	**20 25 40.9 +1.6**
	baz=57				
M63A			P	**P**	**20 25 40.9 +1.6**
	baz=57				
PZH	**PanZhiHua**	**67.03 74**	P	**P**	**20 25 39.1 -1.2**
PZH			sP	**sP**	**20 25 50.8 +1.4**
PZH			PP	**PP**	**20 28 09.1 +1.3**
PZH			S	**S**	**20 34 27.1 -6.1**
PZH			ScS	**SKSac**	**20 35 31.8 -5.0**
PZH			pmax	pmax	
	comp=Z,10.0nm,0.9s				
PZH			pmax	pmax	
	comp=Z,220nm,5.1s				
PZH			LR	LR	
	comp=Z,640nm,20.6s				
PZH			LR	LR	
	comp=Z,960nm,21.0s				
PZH			LR	LR	
	comp=Z,1μm,23.5s				
XLT	**XiLinHaoTe**	**67.18 51**	⇑*i*P	**P**	**20 25 41.5 +0.5**
XLT			sP	sP	20 25 50.8 +0.8
XLT			S	**S**	**20 34 33.3 -1.2**
XLT			sS	sS	20 34 43.3 -2.0
XLT			pmax	pmax	
	comp=Z,39nm,1.1s				
XLT			pmax	pmax	
	comp=Z,210nm,3.6s				
XLT			LR	LR	
	comp=Z,1μm,22.3s				
XLT			LR	LR	
	comp=Z,470nm,20.9s				
TRY	**Troy**	**67.22 307**	IAMs_20	IAMs_20	20 55 48.0
	comp=Z,1μm,19.0s				
J59A	**Piesco**	**67.32 308**	P	**P**	**20 25 42.5 +0.7**
J59A	**Piesco**	**67.32 308**	P	**P**	**20 25 43.6 +1.8**
	baz=56				
J59A			P	**P**	**20 25 43.6 +1.8**
	baz=56				
POGA	**Pongola**	**67.53 169**	P	**P**	**20 25 45.2 +2.2**
POGA			IAmb	IAmb	20 25 55.6
	comp=Z,23nm,1.0s				
YLE	**Yale**	**67.55 306**	IAMs_20	IAMs_20	20 57 19.5
	comp=Z,1μm,19.0s				
ZEA	**Zeya**	**67.55 38**	*ce*P	**P**	**20 25 44.1 +1.1**
ZEA			*e*		20 25 44.1
ZEA			*e*		20 28 16.0
ZEA			*e*S	**S**	**20 34 41.7 +3.3**
ZEA			*e*		20 35 41.1
ZEA			pmax	pmax	
	comp=Z,10.0nm,1.5s				
ZEA			pmax	pmax	
	comp=N,100nm,3.1s				
ZEA			pmax	pmax	
	comp=Z,100nm,4.2s				
ZEA			pmax	pmax	
	comp=Z,100nm,4.5s				
ZEA			pmax	pmax	
	comp=E,100nm,4.9s				
ZEA			smax	smax	
	comp=E,100nm,13.6s				
ZEA			MLR	MLR	
	comp=Z,2μm,16.0s				
HCNY	**Howe Caverns**	**67.68 307**	P	**P**	**20 25 45.7 +1.6**
	baz=56				
WCNY	**West Carthage**	**67.73 309**	P	**P**	**20 25 45.4 +1.1**
	baz=56,SNR=5.6				
AUGR	**Augrabies**	**67.99 180**	*e*P	**P**	**20 25 47.5 +1.5**
AUGR			IAmb	IAmb	20 26 01.5
	comp=Z,40nm,0.9s				
XAN	**Xi'an**	**67.99 64**	⇑P	**P**	**20 25 45.9 -0.3**
XAN			pP	sP	20 25 54.0 -1.3
XAN			sP	pP	20 25 57.8 +4.9
XAN			PcP	**PcP**	**20 26 13.3 +0.9**
XAN			S	**S**	**20 34 40.3 -4.1**
XAN			sS	sS	20 34 53.3 -1.9
XAN			pmax	pmax	
	comp=Z,54nm,1.3s				
XAN			pmax	pmax	
	comp=Z,370nm,6.5s				
XAN			LR	LR	
	comp=Z,940nm,16.5s				
XAN			LR	LR	
	comp=Z,1μm,14.4s				
XAN			LR	LR	
	comp=Z,2μm,22.7s				
BOSA	**Boshof**	**68.14 176**	P	**P**	**20 25 49.1 +2.1**
	comp=Z,7.3nm,0.7s,baz=2.8,slow=6.1,SNR=21				
BOSA			LR	LR	20 58 19.9
	comp=Z,4μm,18.2s,baz=3.5,slow=38				
	comp=Z,7.3nm,0.7s				
BOSA	**Boshof**	**68.14 176**	P	**P**	**20 25 48.7 +1.7**
BOSA	**Boshof**	**68.14 176**	*e*P	**P**	**20 25 48.1 +1.1**
BOSA			IAmb	IAmb	20 25 56.1
	comp=Z,30nm,0.7s				
C36M	**Paulatuk**	**68.16 347**	IAMs_20	IAMs_20	20 55 15.5
	comp=Z,1μm,22.0s				
C36M	**Paulatuk**	**68.16 347**	P	**P**	**20 25 47.2 +0.6**
	baz=29				
TIY	**Taiyuan**	**68.32 59**	⇓P	**P**	**20 25 50.9 +2.7**
TIY			S	**S**	**20 34 48.3 0.0**
TIY			LR	LR	
	comp=Z,1μm,14.2s				
TIY			LR	LR	
	comp=Z,1μm,13.7s				
TIY			LR	LR	
	comp=Z,2μm,12.9s				
PAL	**Palisades**	**68.33 306**	IAMs_20	IAMs_20	20 57 43.5
	comp=Z,1μm,18.0s				
PAL	**Palisades**	**68.33 306**	P	**P**	**20 25 49.3 +1.2**
	baz=56				
FOR	**Fordham**	**68.39 306**	P	**P**	**20 25 49.8 +1.3**
	baz=56				
KMI	**Kunming**	**68.55 75**	⇑P	**P**	**20 25 48.8 -1.2**
KMI			sP	sP	20 26 02.9 +3.8
KMI			S	**S**	**20 34 46.3 -5.3**
KMI			SS	**SS**	**20 39 19.0 +3.6**
KMI			pmax	pmax	
	comp=Z,15nm,1.4s				
KMI			pmax	pmax	
	comp=Z,220nm,3.6s				
KMI			LR	LR	
	comp=Z,490nm,28.3s				
KMI			LR	LR	
	comp=Z,650nm,22.7s				
KMI			LR	LR	
	comp=Z,950nm,27.1s				
ODNJ	**Ogdensburg**	**68.72 306**	P	**P**	**20 25 50.7 +0.1**
J56A	**Wolcott**	**68.84 309**	P	**P**	**20 25 51.3 0.0**
J56A			IAmb	IAmb	20 25 53.4
	comp=Z,32nm,1.1s				
RER	**Riviere de l'E**	**68.86 145**	P	**P**	**20 25 53.1 +1.4**
BINY	**Binghamton**	**68.93 308**	P	**P**	**20 25 52.8 +0.8**
BINY			IAmb	IAmb	20 25 54.7
	comp=Z,28nm,1.2s				
BINY	**Binghamton**	**68.93 308**	P	**P**	**20 25 52.6 +0.6**
	baz=55				
BINY	**Binghamton**	**68.93 308**	P	**P**	**20 25 53.0 +1.0**
	baz=55				
RCBR	**Riachuelo**	**69.02 243**	LR	LR	20 56 33.1
	comp=Z,2μm,19.9s,baz=194,slow=36				
RCBR	**Riachuelo**	**69.02 243**	IAMs_20	IAMs_20	20 56 01.7
	comp=Z,2μm,21.0s				
KSPA	**Keystone Colle**	**69.17 307**	P	**P**	**20 25 54.5 +1.1**
	baz=55				
A21K	**Barrow**	**69.22 359**	IAMs_20	IAMs_20	20 57 08.5
	comp=Z,1μm,21.0s				
A21K	**Barrow**	**69.22 359**	P	**P**	**20 25 54.9 +1.7**
	baz=2.2				
SADO	**Sadowa**	**69.33 311**	LR	LR	20 55 25.1
	comp=Z,1μm,20.5s,baz=25,slow=35				
BJI	**Beijing**	**69.41 55**	P	**P**	**20 25 55.0 +0.1**
BJI			pP	**sP**	**20 26 01.1 -2.8**
BJI			sP	**pP**	**20 26 02.3 +0.7**
BJI			S	**S**	**20 34 58.8 -2.1**
BJI			pmax	pmax	
	comp=Z,32nm,0.8s				
BJI			LR	LR	
	comp=Z,580nm,18.9s				
BJI			LR	LR	
	comp=Z,2μm,18.2s				
BJI			LR	LR	
	comp=Z,4μm,19.4s				
BJT	**Baijiatuau**	**69.42 55**	P	**P**	**20 25 54.9 0.0**
BJT			IAmb	IAmb	20 25 55.5
	comp=Z,24nm,0.8s				
BJT	**Baijiatuau**	**69.42 55**	P	**P**	**20 25 54.9 0.0**
BJT			pmax	pmax	
	comp=Z,24nm,0.8s				
BJT			MLR	MLR	
	comp=Z,3μm,20.0s				
BILL	**Bilibino**	**69.46 13**	P	**P**	**20 25 55.0 +0.3**
BILL			IAmb	IAmb	20 25 55.8
	comp=Z,34nm,1.1s				
BILL	**Bilibino**	**69.46 13**	*de*P	**P**	**20 25 55.0 +0.3**
BILL			*i* *PP	**sP**	**20 26 04.4 +0.6**
BILL			*i*		20 26 15.9
BILL			pmax	pmax	
	comp=Z,31nm,1.1s				
BILL			MLR	MLR	
	comp=Z,874nm,20.0s				
CM31	**Chiang Mai Arr**	**69.54 83**	P	**P**	**20 25 55.2 -0.8**
CM31			IAmb	IAmb	20 26 44.9
	comp=Z,22nm,1.1s				
CMAR	**Chiang Mai Arr**	**69.54 83**	P	**P**	**20 25 54.9 -1.2**
	comp=Z,2.9nm,0.3s,baz=304,slow=7.6,SNR=27				
CMAR			LR	LR	21 01 42.9
	comp=Z,331nm,21.7s,baz=300,slow=40				
	comp=Z,2.9nm,0.3s				
CMAR	**Chiang Mai Arr**	**69.54 83**	P	**P**	**20 25 55.1 -0.9**
CMAR	**Chiang Mai Arr**	**69.54 83**	P	**P**	**20 25 55.1 -0.9**
TUPA	**Temple Univers**	**69.60 306**	P	**P**	**20 25 57.9 +1.8**
	baz=55,SNR=10				
PSUB	**Penn St. - Bra**	**69.91 306**	P	**P**	**20 25 58.8 +0.9**
	baz=55				
L56A	**Greenwood**	**69.92 308**	P	**P**	**20 25 59.4 +1.3**
	baz=54,SNR=6.0				
L56A			P	**P**	**20 25 59.4 +1.3**
	baz=54,SNR=6.0				
HNS	**HongShan**	**69.98 58**	⇑P	**P**	**20 25 58.4 -0.1**
HNS			PP	**PP**	**20 28 35.8 +2.8**
HNS			S	**S**	**20 35 05.3 -2.4**
HNS			sS	**sS**	**20 35 18.9 +0.3**
HNS			pmax	pmax	
	comp=Z,30nm,1.0s				
HNS			pmax	pmax	
	comp=Z,240nm,4.6s				
HNS			LR	LR	
	comp=Z,1μm,16.5s				
HNS			LR	LR	
	comp=Z,1μm,16.1s				
HNS			LR	LR	
	comp=Z,1μm,17.3s				
LYN	**LuoYang**	**70.13 61**	⇑*i*P	**P**	**20 25 58.3 -1.1**
LYN			sP	sP	20 26 08.0 -0.4
LYN			ScS	**ScS**	**20 35 56.1 -4.8**
LYN			pmax	pmax	
	comp=Z,20nm,0.5s				
LYN			pmax	pmax	
	comp=Z,270nm,5.0s				
LYN			LR	LR	
	comp=Z,1μm,14.5s				
LYN			LR	LR	
	comp=Z,820nm,20.6s				
M57A	**Sunshine Farm,**	**70.13 308**	P	**P**	**20 26 01.1 +1.8**
	baz=54,SNR=7.1				
M57A			P	**P**	**20 26 01.1 +1.8**
	baz=54,SNR=7.1				
HVD	**Gariep Dam**	**70.13 176**	*e*P	P	20 26 05.2 +5.9
HVD			IAmb	IAmb	20 26 12.3
	comp=Z,45nm,1.2s				
C26K	**Camden Bay**	**70.14 355**	P	**P**	**20 26 00.4 +1.5**
	baz=12				
N58A	**Sunbury**	**70.17 307**	P	**P**	**20 26 00.8 +1.3**
	baz=54,SNR=7.0				
N58A			P	**P**	**20 26 00.8 +1.3**
	baz=54,SNR=7.0				
C27K	**Jago River**	**70.34 354**	P	**P**	**20 26 01.6 +1.5**
	baz=13,SNR=7.1				
WVNY	**West Valley, N**	**70.39 309**	P	**P**	**20 26 02.4 +1.5**
	baz=54,SNR=5.2				
ENH	**Enshi**	**70.51 67**	P	**P**	**20 26 00.8 -1.1**
ENH			IAMs_20	IAMs_20	21 01 03.5
	comp=Z,1μm,20.0s				
C23K	**Itkillik River**	**70.55 357**	P	**P**	**20 26 03.1 +1.8**
	baz=7.1,SNR=13				
INK	**Inuvik**	**70.55 350**	LR	LR	20 58 36.9
	comp=Z,918nm,21.6s,baz=30,slow=37				
INK	**Inuvik**	**70.55 350**	P	**P**	**20 26 01.5 +0.1**
INK			IAmb	IAmb	20 26 12.7
	comp=Z,28nm,1.1s				
INK	**Inuvik**	**70.55 350**	P	**P**	**20 26 01.5 +0.1**
INK			pmax	pmax	
	comp=Z,28nm,1.2s				
INK	**Inuvik**	**70.55 350**	P	**P**	**20 26 01.8 +0.4**
	baz=21				
C24K	**Franklin Bluff**	**70.57 356**	P	**P**	**20 26 03.0 +1.5**
	baz=8.7				
SEY	**Seymchan**	**70.62 21**	LR	LR	21 01 03.8
	comp=Z,2μm,18.4s,baz=328,slow=39				
SEY	**Seymchan**	**70.62 21**	*c i*P	**P**	**20 26 03.1 +1.2**
SEY			pmax	pmax	
	comp=Z,35nm,1.0s				
GYA	**Guiyang**	**70.68 71**	⇑*i*P	**P**	**20 26 01.9 -1.1**
GYA			pP	sP	20 26 10.8 -1.3
GYA			S	**S**	**20 35 16.5 0.0**
GYA			pmax	pmax	
	comp=Z,24nm,0.8s				
GYA			LR	LR	
	comp=Z,390nm,11.9s				
GYA			LR	LR	
	comp=Z,540nm,17.5s				
GYA			LR	LR	
	comp=Z,730nm,16.6s				
D25K	**Kavik River**	**70.83 355**	P	**P**	**20 26 04.3 +1.1**
	baz=11,SNR=9.4				
CVNA	**Calvinia**	**70.87 181**	*e*P	**P**	**20 26 06.9 +3.1**
CVNA			IAmb	IAmb	20 26 19.2
	comp=Z,38nm,1.1s				
SSPA	**Standing Stone**	**71.01 307**	P	**P**	**20 26 05.8 +1.1**
SSPA			IAmb	IAmb	20 26 07.3
	comp=Z,39nm,1.2s				
SSPA	**Standing Stone**	**71.01 307**	P	**P**	**20 26 06.4 +1.7**
	baz=54,SNR=9.7				
SSPA	**Standing Stone**	**71.01 307**	P	**P**	**20 26 05.6 +1.0**
	baz=54				
M55A	**Ridgway**	**71.05 308**	P	**P**	**20 26 06.6 +1.6**
	baz=53,SNR=7.1				
M55A			P	**P**	**20 26 06.6 +1.6**
	baz=53,SNR=7.1				
D24K	**Happy Valley**	**71.14 356**	P	**P**	**20 26 06.4 +1.4**
	baz=8.6				

BFON Badsfontein, M 71.24 177 *e*P **P 20 26 09.1 +3.1**
BFON IAmb IAmb 20 26 30.0
comp=Z,29nm,1.0s
PSDB Penn State Uni 71.24 308 P **P 20 26 07.3 +1.2**
baz=53
FRAZ Fraserburg 71.31 179 *e*P **P 20 26 08.5 +2.0**
FRAZ IAmb IAmb 20 26 15.6
comp=Z,34nm,1.1s
F31M Tsiigehtchic 71.39 350 P **P 20 26 07.1 +0.6**
baz=21,SNR=21
ERPA Erie 71.39 310 P **P 20 26 07.8 +0.8**
ERPA IAMs_20 IAMs_20 20 59 08.4
comp=Z,1µm,19.0s
ERPA Erie 71.39 310 P **P 20 26 08.5 +1.6**
baz=53
ERPA Erie 71.39 310 P **P 20 26 08.4 +1.4**
baz=53
D23K Nanushuk River 71.42 357 P **P 20 26 08.5 +1.8**
baz=7.0
E27K Coleen River 71.57 353 P **P 20 26 09.2 +1.5**
baz=14,SNR=15
TOLK Toolik Lake Re 71.69 356 IAMs_20 IAMs_20 20 58 21.7
comp=Z,2µm,20.0s
TOLK Toolik Lake Re 71.69 356 P **P 20 26 10.2 +1.8**
baz=7.9,SNR=8.8
GRAN Grantham 71.70 179 *e*P **P 20 26 12.7 +3.9**
GRAN IAmb IAmb 20 26 18.3
comp=Z,15nm,0.9s
GRAF Camdeboo Natio 71.75 177 *e*P P 20 26 15.1 +6.0
GRAF IAmb IAmb 20 26 19.3
comp=Z,5µm,5.4s
SUR Sutherland 71.76 180 LR LR 21 00 17.2
comp=Z,3µm,18.3s,baz=358,slow=38
SUR Sutherland 71.76 180 P **P 20 26 11.4 +2.1**
SUR IAmb IAmb 20 26 25.2
comp=Z,49nm,1.2s
P57A Homestead Farm 71.77 306 P **P 20 26 10.9 +1.6**
baz=53,SNR=7.8
P57A P **P 20 26 10.9 +1.6**
baz=53,SNR=7.8
E25K Arctic Village 71.96 355 P **P 20 26 11.2 +1.2**
baz=11,SNR=9.7
YKA Yellowknife Ar 71.97 340 P **P 20 26 10.6 +0.6**
comp=Z,16nm,0.9s,baz=32,slow=5.6,SNR=15
YKA LR LR 20 59 44.1
comp=Z,1µm,19.3s,baz=44,slow=38
comp=Z,16nm,0.9s
YKA Yellowknife Ar 71.97 340 P **P 20 26 09.8 -0.3**
CBN Corbin Frederi 72.13 305 P **P 20 26 12.4 +0.9**
baz=53
SRDT SRDT 72.13 86 P **P 20 26 09.9 -1.9**
comp=Z,21nm,0.9s
G30M tAoh Zraii Nji 72.15 351 P **P 20 26 11.7 +0.5**
baz=18,SNR=5.6
E24K Your Creek 72.19 356 P **P 20 26 12.6 +1.2**
baz=8.8
M53A WI Miller and 72.21 309 IAMs_20 IAMs_20 20 56 36.1
comp=Z,1µm,21.0s
M53A WI Miller and 72.21 309 P **P 20 26 12.3 +0.4**
baz=52
SOE Somerset East 72.23 176 P **P 20 26 14.0 +2.0**
TIA Tai'an 72.25 58 ⇓P **P 20 26 10.4 -1.9**
TIA pmax pmax
comp=Z,34nm,0.9s
TIA pmax pmax
comp=Z,250nm,4.3s
TIA LR LR
comp=Z,810nm,14.7s
TIA LR LR
comp=Z,2µm,15.5s
TIA LR LR
comp=Z,1µm,23.5s
F26K Sheenjek River 72.27 354 P **P 20 26 13.8 +1.9**
baz=12,SNR=14
E23K Chandalar 72.27 356 P **P 20 26 13.7 +1.7**
baz=7.9,SNR=19
E22K Anaktuvuk Pass 72.30 357 P **P 20 26 12.9 +0.9**
baz=6.1
T60A Surry 72.36 304 P **P 20 26 14.1 +1.3**
baz=53
T60A P **P 20 26 14.1 +1.3**
baz=53
GLMI Grayling 72.40 314 IAMs_20 IAMs_20 20 59 02.7
comp=Z,1µm,18.0s
GLMI Grayling 72.40 314 P **P 20 26 14.0 +1.0**
baz=51
UPAO U. Pittsburgh 72.40 308 P **P 20 26 14.4 +1.3**
baz=52
F25K Christian Rive 72.49 355 P **P 20 26 14.6 +1.4**
baz=11,SNR=14
RDOG Red Dog Mine 72.49 1 P **P 20 26 14.1 +0.9**
baz=357
BMAR Burnt Mountain 72.57 354 P **P 20 26 14.9 +1.3**
BNX BinXian 72.58 45 ⇑P **P 20 26 13.8 -0.2**
BNX pP **pP 20 26 18.0 -2.7**
BNX sP **sP 20 26 21.3 -1.8**
BNX S **S 20 35 38.6 +1.1**
BNX pmax pmax
comp=Z,31nm,0.7s
BNX pmax pmax
comp=Z,250nm,3.9s
BNX LR LR
comp=Z,960nm,16.3s
BNX LR LR
comp=Z,1µm,18.0s
BNX LR LR
comp=Z,740nm,17.5s
KLR Kul'dur 72.58 40 LR LR 21 00 57.2
comp=Z,2µm,18.6s,baz=316,slow=38
KLR Kul'dur 72.58 40*c i*P **P 20 26 14.2 +0.2**
KLR pmax pmax
comp=Z,41nm,1.7s
R58B Mineral 72.59 305 P **P 20 26 15.1 +0.9**
R58B IAmb IAmb 20 26 16.5
comp=Z,24nm,0.9s
R58B Mineral 72.59 305 P **P 20 26 15.6 +1.4**
baz=53,SNR=8.7
R58B P **P 20 26 15.6 +1.4**
baz=53,SNR=8.7
N53A Lisbon 72.69 309 P **P 20 26 15.6 +0.8**
N53A IAmb IAmb 20 26 16.7
comp=Z,18nm,0.8s
N53A Lisbon 72.69 309 P **P 20 26 16.4 +1.6**
baz=52,SNR=6.0
N53A P **P 20 26 16.4 +1.6**
baz=52,SNR=6.0
F24K Squaw Lake 72.71 355 P **P 20 26 16.3 +1.8**
baz=9.2,SNR=21
CN2 Changchun 72.71 47 P **P 20 26 15.3 +0.4**
CN2 pmax pmax
comp=Z,70nm,0.7s
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,3µm,14.0s
CN2 LR LR
comp=Z,4µm,15.0s
CER Ceres 72.75 181 *e*P P 20 26 25.2 +10
CER IAmb IAmb 20 26 47.6
comp=Z,237nm,3.3s
JSRW J. Sargeant Re 72.75 305 P **P 20 26 15.3 +0.2**
Q56A Snyder Ridge, 72.76 307 P **P 20 26 17.1 +1.9**
baz=52,SNR=19
Q56A P **P 20 26 17.1 +1.9**
baz=52,SNR=19
MCWV Mont Chateau 72.79 307 P **P 20 26 16.0 +0.6**
MCWV IAmb IAmb 20 26 18.1
comp=Z,34nm,0.9s
MCWV IAMs_20 IAMs_20 20 59 28.6
comp=Z,1µm,19.0s
MCWV Mont Chateau 72.79 307 P **P 20 26 17.3 +1.9**
baz=52,SNR=6.1
MCWV Mont Chateau 72.79 307 P **P 20 26 15.8 +0.4**
baz=52
EPYK Eagle Plains 72.79 351 IAMs_20 IAMs_20 21 04 02.8
comp=Z,975nm,18.0s
EPYK Eagle Plains 72.79 351 P **P 20 26 15.2 +0.2**
baz=18,SNR=7.6
O54A Avella 72.80 308 P **P 20 26 16.9 +1.4**
baz=52
O54A P **P 20 26 16.9 +1.4**
baz=52
MA2 Magadan 72.81 24 LR LR 21 02 31.5
comp=Z,4µm,18.5s,baz=322,slow=39
MA2 Magadan 72.81 24 P **P 20 26 16.1 +1.0**
MA2 Magadan 72.81 24*c i*P **P 20 26 16.4 +1.3**
MA2 pmax pmax
comp=Z,137nm,0.9s
G27K Doyon Strip 72.92 353 P **P 20 26 17.0 +1.3**
baz=14,SNR=20
F22K John River 72.94 357 P **P 20 26 17.5 +1.7**
baz=5.8
G26K Porcupine Rive 72.97 354 P **P 20 26 17.6 +1.6**
baz=12,SNR=28
T59A Double "B" Far 72.98 304 P **P 20 26 17.6 +1.1**
baz=53
T59A P **P 20 26 17.6 +1.1**
baz=53
O53A New Philadelph 73.26 309 IAMs_20 IAMs_20 20 57 10.9
comp=Z,928nm,18.0s
O53A New Philadelph 73.26 309 P **P 20 26 19.5 +1.3**
baz=52
F21K Alatna River 73.27 358 P **P 20 26 19.6 +1.8**
baz=4.7,SNR=15
G25K Bearman Lake 73.34 355 P **P 20 26 19.7 +1.6**
baz=11,SNR=14
AAM Ann Arbor 73.43 311 IAMs_20 IAMs_20 20 57 48.2
comp=Z,1µm,20.0s
AAM Ann Arbor 73.43 311 P **P 20 26 19.9 +0.7**
baz=51
WRGLY Wrigley 73.46 344 P **P 20 26 19.9 +1.0**
baz=28,SNR=7.7
H27K Steamboat Moun 73.47 353 P **P 20 26 20.3 +1.3**
baz=14,SNR=27
FYU Fort Yukon 73.47 354 P **P 20 26 20.4 +1.5**
FYU IAMs_20 IAMs_20 20 59 28.7
comp=Z,1µm,20.0s
DL2 Dalian 73.48 53 P **P 20 26 18.9 -0.6**
DL2 S **S 20 35 46.5 -1.5**
DL2 pmax pmax
comp=Z,26nm,0.7s
DL2 pmax pmax
comp=Z,220nm,7.3s
DL2 LR LR
comp=Z,2µm,14.7s
DL2 LR LR
comp=Z,1µm,14.7s
DL2 LR LR
comp=Z,2µm,22.6s
G22K Bettles 73.50 357 P **P 20 26 20.6 +1.5**
baz=6.3,SNR=15
G24K Hadweenzic Riv 73.50 355 P **P 20 26 20.9 +1.7**
baz=9.5,SNR=13
U59A Littleton 73.51 304 P **P 20 26 20.3 +0.7**
baz=52,SNR=7.8
U59A P **P 20 26 20.3 +0.7**
baz=52,SNR=7.8
G23K Bananza Creek 73.64 356 P **P 20 26 21.7 +1.8**
baz=7.5,SNR=15
O52A Adamsville 73.72 309 P **P 20 26 21.2 +0.3**
baz=52,SNR=7.0
O52A P **P 20 26 21.2 +0.3**
baz=52,SNR=7.0
WHN Wuhan 73.76 64 ⇑P **P 20 26 20.5 -0.7**
GRNR Gornyy 73.77 37 ⇑*i*P **P 20 26 21.8 +0.8**
GRNR *e*S **S 20 35 54.5 +3.6**
GRNR pmax pmax
comp=E,10.0nm,0.9s
GRNR pmax pmax
comp=N,10.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,2.0nm,1.0s
GRNR MLR MLR
comp=N,2µm,16.0s
GRNR MLR MLR
comp=Z,4µm,16.0s
R55A Marlinton 73.80 306 P **P 20 26 23.0 +1.5**
baz=52,SNR=9.5
R55A P **P 20 26 23.0 +1.5**
baz=52,SNR=9.5
H25K Birch Creek 73.81 354 P **P 20 26 23.1 +2.3**
baz=11,SNR=18
Q54A Coxs Mills 73.81 307 P **P 20 26 21.9 +0.5**
baz=52,SNR=6.7
Q54A P **P 20 26 21.9 +0.5**
baz=52,SNR=6.7
P53A Whipple 73.84 308 P **P 20 26 21.6 0.0**
baz=52,SNR=7.6
P53A P **P 20 26 21.6 0.0**
baz=52,SNR=7.6
FFC Flin Flon 73.91 329 P **P 20 26 21.8 +0.1**
FFC Flin Flon 73.91 329 P **P 20 26 21.8 +0.1**
FFC pmax pmax
comp=Z,16nm,0.8s
FFC MLR MLR
comp=Z,2µm,18.0s
I29M Ogilvie Camp, 73.95 351 IAMs_20 IAMs_20 21 04 40.5
comp=Z,1µm,18.0s
I29M Ogilvie Camp, 73.95 351 P **P 20 26 22.7 +0.9**
baz=17,SNR=35
G21K Allakaket 73.98 358 P **P 20 26 23.4 +1.5**
baz=4.7,SNR=21
ELIM Elim 73.98 181 *e*P **P 20 26 24.4 +2.3**
ELIM IAmb IAmb 20 26 53.4
comp=Z,339nm,2.5s
EYMN Ely 74.00 320 IAMs_20 IAMs_20 21 00 51.9
comp=Z,1µm,18.0s
EYMN Ely 74.00 320 P **P 20 26 23.2 +0.8**
baz=48
COWI Conover 74.02 317 IAMs_20 IAMs_20 20 59 32.5
comp=Z,1µm,20.0s
T57A Hurt 74.05 305 P **P 20 26 24.3 +1.5**
baz=52,SNR=5.2
T57A P **P 20 26 24.3 +1.5**
baz=52,SNR=5.2
CBE Ff, Capester 74.08 278 P **P 20 26 24.5 +1.2**
I27K Kandik River 74.09 352 P **P 20 26 24.2 +1.5**
baz=14,SNR=22
CNSH ChangSha 74.17 66 ⇓P **P 20 26 23.8 +0.1**
CNSH pmax pmax
comp=Z,50nm,0.8s
P52A Corning 74.20 309 IAMs_20 IAMs_20 20 58 50.7
comp=Z,1µm,18.0s
P52A Corning 74.20 309 P **P 20 26 24.2 +0.5**
baz=51
CNNC Cliffs of the 74.25 303 IAMs_20 IAMs_20 21 01 13.4
comp=Z,1µm,19.0s
CNNC Cliffs of the 74.25 303 P **P 20 26 25.1 +1.1**
baz=52
ACSO Alum Creek Sta 74.33 309 P **P 20 26 24.8 +0.3**
ACSO IAmb IAmb 20 26 26.4
comp=Z,25nm,1.0s
ACSO IAMs_20 IAMs_20 21 00 16.2
comp=Z,1µm,18.0s
ACSO Alum Creek Sta 74.33 309 P **P 20 26 25.3 +0.9**
baz=51,SNR=5.8
ACSO Alum Creek Sta 74.33 309 P **P 20 26 25.2 +0.7**
baz=51
H24K Noodor Dome 74.38 355 P **P 20 26 25.2 +0.8**
baz=9.2,SNR=12
MDJ Mudanjiang 74.48 45 P **P 20 26 24.4 -0.9**
MDJ IAMs_20 IAMs_20 21 01 51.5
comp=Z,1µm,20.0s
MDJ Mudanjiang 74.48 45 P **P 20 26 22.0 -3.3**
MDJ pmax pmax
comp=Z,11nm,2.9s
MDJ pmax pmax
comp=Z,260nm,10.2s
H23K Yukon River 74.49 356 IAMs_20 IAMs_20 21 01 19.7
comp=Z,804nm,19.0s
H23K Yukon River 74.49 356 P **P 20 26 26.9 +2.0**
baz=7.8,SNR=17
H22K Ishtalitna Cre 74.52 357 P **P 20 26 26.9 +1.8**
baz=6.4
IMAR Indian Mountai 74.52 358 P **P 20 26 26.5 +1.5**
PRP Porcupine Dome 74.52 354 P **P 20 26 26.3 +1.0**
PRP IAmb IAmb 20 26 28.2
comp=Z,30nm,1.2s
PRP IAMs_20 IAMs_20 21 00 01.6
comp=Z,1µm,20.0s
PRP Porcupine Dome 74.52 354 P **P 20 26 26.4 +1.0**
baz=11,SNR=5.4
ULM Lac du Bonnet 74.53 323 P **P 20 26 26.0 +0.5**
comp=Z,28nm,0.8s,baz=43,slow=6.3,SNR=18
ULM LR LR 20 58 43.1
comp=Z,2µm,21.7s,baz=52,slow=35
comp=Z,28nm,0.8s
ULM Lac du Bonnet 74.53 323 P **P 20 26 25.9 +0.5**
ULM IAmb IAmb 20 26 27.0
comp=Z,36nm,0.9s
ULM Lac du Bonnet 74.53 323 P **P 20 26 25.9 +0.5**
ULM pmax pmax
comp=Z,36nm,1.0s
I26K Coal Creek Min 74.53 353 P **P 20 26 26.3 +1.1**
baz=13
BIM Bigot 74.61 276 P **P 20 26 27.8 +1.4**
N49A Columbus Grove 74.61 311 P **P 20 26 27.2 +1.2**
baz=50,SNR=5.4
N49A P **P 20 26 27.2 +1.2**
baz=50,SNR=5.4
BLA Blacksburg 74.65 306 P **P 20 26 27.6 +1.1**
baz=52
BLA Blacksburg 74.65 306 P **P 20 26 27.5 +1.1**
baz=52
V58A Windy Hill, Pi 74.70 304 P **P 20 26 27.9 +1.3**
baz=52,SNR=5.5
V58A P **P 20 26 27.9 +1.3**
baz=52,SNR=5.5
Q52A Bidwell 74.70 308 P **P 20 26 27.4 +0.8**
baz=51
Q52A P **P 20 26 27.4 +0.8**
baz=51
H21K Melozitna Rive 74.81 357 P **P 20 26 28.2 +1.4**
H21K IAMs_20 IAMs_20 20 59 23.2
comp=Z,968nm,20.0s
H21K Melozitna Rive 74.81 357 P **P 20 26 28.7 +1.9**
baz=5.2,SNR=37
TNA Tin City 74.81 4 P **P 20 26 27.8 +1.1**
baz=353
J29M Klondike Camp 74.82 351 P **P 20 26 28.5 +1.6**
baz=17
EGAK Eagle 74.84 352 P **P 20 26 27.2 +0.3**
EGAK Eagle 74.84 352 P **P 20 26 28.1 +1.1**
baz=14,SNR=5.6
P51A Williamsport 74.85 309 P **P 20 26 28.1 +0.6**
baz=51
P51A P **P 20 26 28.1 +0.6**
baz=51
R53A Hurricane 74.90 307 P **P 20 26 29.2 +1.4**
baz=51,SNR=7.5
R53A P **P 20 26 29.2 +1.4**
baz=51,SNR=7.5
E38A The Farm, Brul 74.93 319 P **P 20 26 28.5 +0.7**
baz=48
POKR Poker Plat Res 75.06 355 P **P 20 26 29.4 +1.1**
POKR IAmb IAmb 20 26 30.4
comp=Z,31nm,0.9s
POKR IAMs_20 IAMs_20 20 58 28.8
comp=Z,1µm,22.0s
POKR Poker Plat Res 75.06 355 P **P 20 26 29.2 +1.0**
baz=9.5,SNR=8.7
I23K Minto, Yukon-K 75.15 356 P **P 20 26 29.8 +1.0**
I23K IAmb IAmb 20 26 30.9
comp=Z,29nm,1.1s
I23K Minto, Yukon-K 75.15 356 P **P 20 26 29.9 +1.2**
baz=7.9,SNR=17
U56A King 75.16 305 P **P 20 26 30.9 +1.6**
baz=51,SNR=5.7
U56A P **P 20 26 30.9 +1.6**
baz=51,SNR=5.7
O49A Covington 75.16 310 P **P 20 26 30.1 +0.8**
baz=50,SNR=8.5
O49A P **P 20 26 30.1 +0.8**
baz=50,SNR=8.5
I21K Tanana 75.25 357 P **P 20 26 30.9 +1.6**
I21K IAmb IAmb 20 26 31.9
comp=Z,24nm,0.9s
I21K Tanana 75.25 357 P **P 20 26 31.2 +1.9**
baz=5.9,SNR=14
MDM Murphy Dome 75.27 355 P **P 20 26 30.4 +0.9**
MDM IAmb IAmb 20 26 31.4
comp=Z,27nm,0.9s
Q51A Peebles 75.31 309 P **P 20 26 31.1 +1.0**
baz=50,SNR=7.0
Q51A P **P 20 26 31.1 +1.0**
baz=50,SNR=7.0
K29M Barlow Dome 75.31 350 P **P 20 26 31.5 +1.6**
baz=17,SNR=10
MAYO Mayo, Yukon 75.33 349 P **P 20 26 30.6 +0.8**
MAYO Mayo, Yukon 75.33 349 P **P 20 26 30.9 +1.1**
baz=18,SNR=7.1
COLA College 75.33 355 P **P 20 26 30.1 +0.4**
COLA IAmb IAmb 20 26 42.1
comp=Z,53nm,1.5s
COLA College 75.33 355 IAMs_20 IAMs_20 21 00 41.9
comp=Z,855nm,20.0s
COLA College 75.33 355 *i*P **P 20 26 30.8 +1.1**
COLA pmax pmax
comp=Z,15nm,0.9s
COLA MLR MLR
comp=Z,762nm,20.0s
COLA College 75.33 355 P **P 20 26 30.8 +1.1**
baz=9.1
TCOL CIGO, UAF Yank 75.33 355 IAMs_20 IAMs_20 21 00 41.9
comp=Z,916nm,21.0s
TCOL CIGO, UAF Yank 75.33 355 P **P 20 26 30.7 +0.9**
baz=9.1
DAWY Dawson 75.33 351 P **P 20 26 30.8 +0.9**
DAWY IAmb IAmb 20 26 32.4
comp=Z,42nm,0.9s
DAWY Dawson 75.33 351 P **P 20 26 31.3 +1.4**
baz=16,SNR=29
MLY Manley 75.35 356 P **P 20 26 30.9 +0.9**
MLY IAmb IAmb 20 26 32.2
comp=Z,25nm,1.0s
MLY IAMs_20 IAMs_20 21 01 37.3
comp=Z,1µm,20.0s
MLY Manley 75.35 356 P **P 20 26 31.5 +1.6**
baz=6.8,SNR=14
J26L Joseph Creek 75.35 353 P **P 20 26 30.7 +0.7**
baz=12,SNR=20
IL31 75.36 355 P **P 20 26 30.6 +0.7**
ILAR Eielson Array 75.36 355 P **P 20 26 30.9 +1.0**
comp=Z,8.2nm,0.9s,baz=0.4,slow=4.4,SNR=50
ILAR LR LR 21 01 25.1
comp=Z,1µm,19.5s,baz=344,slow=37
comp=Z,8.2nm,0.9s
ILAR Eielson Array 75.36 355 P **P 20 26 30.8 +0.8**
ILAR Eielson Array 75.36 355 P **P 20 26 30.8 +0.8**
J25K Salcha River, 75.40 354 P **P 20 26 31.2 +0.9**
baz=11,SNR=6.1
MMPY Sheldon Lake, 75.52 347 P **P 20 26 33.0 +2.0**
baz=22,SNR=20
CCB Clear Creek Bu 75.55 355 P **P 20 26 31.5 +0.5**
O48B Farmland 75.60 311 P **P 20 26 31.8 +0.1**
baz=50
K27K Chicken 75.67 352 IAMs_20 IAMs_20 20 54 46.8
comp=Z,927nm,22.0s
K27K Chicken 75.67 352 P **P 20 26 33.1 +1.3**
baz=14
NEA2 Nenana 75.69 355 P **P 20 26 32.8 +0.9**
baz=8.2,SNR=8.1
HDA Harding Lake 75.73 355 P **P 20 26 32.5 +0.4**
baz=9.8,SNR=20
WRH Wood River Hil 75.75 355 P **P 20 26 32.4 +0.2**
WRH IAmb IAmb 20 26 34.2
comp=Z,28nm,0.9s
P49A Miami Univ. Ec 75.81 310 P **P 20 26 32.9 -0.1**
P49A Miami Univ. Ec 75.81 310 P **P 20 26 33.1 +0.1**
baz=50
P49A Miami Univ. Ec 75.81 310 P **P 20 26 33.0 +0.1**
baz=50
AGMN Agassiz Nation 75.89 322 P **P 20 26 33.5 +0.2**
baz=45
NJ2 Nanjing 75.91 60 *e*P **P 20 26 33.0 -0.6**
NJ2 pmax pmax
comp=Z,38nm,0.7s
NJ2 pmax pmax
comp=Z,510nm,3.8s
NJ2 LR LR
comp=Z,1µm,20.4s
NJ2 LR LR
comp=Z,1µm,16.6s
NJ2 LR LR
comp=Z,1µm,16.8s
SCRK Sand Creek 75.91 353 IAMs_20 IAMs_20 21 02 19.2
comp=Z,1µm,21.0s
SCRK Sand Creek 75.91 353 P **P 20 26 34.3 +1.1**
baz=12,SNR=11
ANM Nome 75.92 3 IAMs_20 IAMs_20 21 02 47.6
comp=Z,1µm,19.0s
ANM Nome 75.92 3 P **P 20 26 33.4 +0.2**
baz=355
HILA High Level 75.92 339 P **P 20 26 34.0 +0.7**
L44A Lake County Fo 75.93 313 P **P 20 26 34.0 +0.4**
baz=49
U54A Nelsons Funny 75.96 306 P **P 20 26 35.1 +1.1**

baz=51,SNR=8.4
U54A P **P** **20 26 35.1 +1.1**
baz=51,SNR=8.4
TGTN Hyland Airport 75.98 345 P **P** **20 26 35.4 +1.8**
baz=24,SNR=7.2
V55A Taylorsville 76.00 305 P **P** **20 26 36.0 +1.8**
baz=51,SNR=7.7
V55A P **P** **20 26 36.0 +1.8**
baz=51,SNR=7.7
USA0B Ussuriysk Arra 76.05 44 P **P** **20 26 34.4 +0.1**
USA0B IAmb IAmb 20 26 35.3
comp=Z,22nm,0.8s
USA0B Ussuriysk Arra 76.05 44 *i* P **P** **20 26 33.7 -0.5**
USRK Ussuriysk Ar. 76.05 44 P **P** **20 26 33.6 -0.7**
comp=Z,21nm,0.8s,baz=294,slow=3.8,SNR=18
USRK LR LR 21 03 37.4
comp=Z,3μm,18.5s,baz=314,slow=38
comp=Z,21nm,0.8s
USRK Ussuriysk Ar. 76.05 44 P **P** **20 26 34.0 -0.3**
L29M L29M 76.10 350 P **P** **20 26 35.8 +1.5**
baz=17,SNR=13
GCPR Guaynabo City 76.12 282 P **P** **20 26 36.2 +1.2**
RIDG Independent Ri 76.22 353 P **P** **20 26 36.2 +1.3**
baz=11,SNR=9.1
K24K Donnelly Dome 76.23 354 P **P** **20 26 35.4 +0.4**
baz=11,SNR=9.2
FARO Faro, Yukon 76.24 348 P **P** **20 26 36.5 +1.4**
FARO IAmb IAmb 20 26 48.2
comp=Z,44nm,1.2s
FARO Faro, Yukon 76.24 348 P **P** **20 26 37.3 +2.2**
baz=20,SNR=13
BIRD Birdtown, Kers 76.27 304 P **P** **20 26 36.1 +0.4**
BIRD IAmb IAmb 20 26 38.0
comp=Z,34nm,1.1s
BIRD Birdtown, Kers 76.27 304 P **P** **20 26 36.8 +1.1**
baz=51,SNR=5.3
P48A Milroy 76.27 310 P **P** **20 26 36.0 +0.4**
baz=50
P48A P **P** **20 26 36.0 +0.4**
baz=50
I40A Norwalk 76.27 316 P **P** **20 26 36.8 +1.3**
baz=48
BPAW Bear Paw Mtn. 76.29 356 IAMs_20 IAMs_20 21 02 15.2
comp=Z,958nm,20.0s
BPAW Bear Paw Mtn. 76.29 356 P **P** **20 26 35.8 +0.5**
baz=6.6,SNR=8.1
SJG San Juan 76.29 282 LR LR 20 56 19.5
comp=Z,275nm,21.9s,baz=67,slow=33
J20K Nowinta River 76.34 358 IAMs_20 IAMs_20 21 01 42.6
comp=Z,890nm,19.0s
J20K Nowinta River 76.34 358 P **P** **20 26 36.8 +1.3**
baz=4.1,SNR=16
KOTAN Kotaneelee Air 76.34 343 P **P** **20 26 36.8 +1.2**
baz=27
S51A Beattyville 76.34 308 P **P** **20 26 36.3 +0.3**
S51A Beattyville 76.34 308 P **P** **20 26 36.5 +0.4**
baz=50
S51A P **P** **20 26 36.5 +0.4**
baz=50
GAMB Gambell 76.35 6 IAMs_20 IAMs_20 21 01 30.1
comp=Z,1μm,21.0s
GAMB Gambell 76.35 6 P **P** **20 26 35.6 +0.1**
baz=350
M31M Drury Creek, Y 76.43 348 IAMs_20 IAMs_20 21 01 35.9
comp=Z,799nm,20.0s
M31M Drury Creek, Y 76.43 348 P **P** **20 26 37.6 +1.5**
baz=20,SNR=17
F36A Milaca 76.44 319 P **P** **20 26 37.1 +0.7**
baz=46,SNR=8.1
TYV Tymovskoe 76.47 34 *e*P **P** **20 26 37.5 +1.0**
TYV *e*S **S** **20 36 22.5 +1.7**
TYV pmax pmax
comp=Z,50nm,1.0s
TYV pmax pmax
comp=Z,400nm,2.8s
TYV smax smax
comp=N,400nm,5.0s
TYV smax smax
comp=E,1μm,5.0s
GRGR Grenville 76.51 275 P **P** **20 26 38.2 +0.9**
SPMN Marine on St. 76.51 318 P **P** **20 26 37.3 +0.5**
baz=46
KMSC Kings Mountain 76.52 304 P **P** **20 26 37.7 +0.7**
baz=51,SNR=6.3
KMSC Kings Mountain 76.52 304 P **P** **20 26 37.8 +0.7**
baz=51,SNR=6.3
MCK McKinley 76.54 355 P **P** **20 26 37.4 +0.7**
baz=8.2,SNR=18
CHUM Lake Minchumin 76.56 357 P **P** **20 26 38.0 +1.1**
baz=5.6,SNR=5.0
BCAR Beaver Creek A 76.58 352 P **P** **20 26 38.2 +1.2**
L27K Beaver Creek, 76.59 352 P **P** **20 26 38.7 +1.7**
baz=14,SNR=25
SFIN Lafayette 76.65 312 P **P** **20 26 38.3 +0.5**
baz=49
SFIN Lafayette 76.65 312 P **P** **20 26 38.0 +0.3**
baz=49
JFWS Jewell Farm 76.73 315 IAMs_20 IAMs_20 21 02 17.3
comp=Z,1μm,18.0s
L26K Log Cabin Wild 76.78 353 P **P** **20 26 39.9 +1.7**
baz=13,SNR=8.5
M29M Somme Creek 76.78 350 P **P** **20 26 39.8 +1.6**
baz=16,SNR=43
KTH Kantishna Hill 76.83 356 IAMs_20 IAMs_20 21 01 46.5
comp=Z,922nm,20.0s
RND Reindeer 76.86 355 P **P** **20 26 38.5 -0.1**
RND Reindeer 76.86 355 P **P** **20 26 38.5 -0.1**
RND pmax pmax
comp=Z,11nm,0.7s
RND MLR MLR
comp=Z,600nm,21.0s
TRF Thorofare Moun 76.90 356 P **P** **20 26 39.5 +0.6**
TRF IAmb IAmb 20 26 40.7
comp=Z,25nm,1.0s
TRF Thorofare Moun 76.90 356 P **P** **20 26 39.0 +0.1**
baz=7.2,SNR=9.5
JSC Jenkinsville 77.01 304 P **P** **20 26 41.1 +1.2**
baz=51
TZTN Tazewell 77.02 307 P **P** **20 26 39.1 -0.8**
TZTN IAmb IAmb 20 28 13.4
comp=Z,37nm,1.4s
TZTN IAMs_20 IAMs_20 21 02 31.4
comp=Z,1μm,18.0s
TZTN Tazewell 77.02 307 P **P** **20 26 41.0 +1.1**
baz=50
CAST Castle Rocks 77.02 357 IAMs_20 IAMs_20 21 01 30.5
comp=Z,868nm,20.0s
CAST Castle Rocks 77.02 357 P **P** **20 26 40.0 +0.5**
baz=5.7,SNR=16
PAULI Pauline 77.03 304 P **P** **20 26 41.3 +1.3**
baz=50,SNR=7.9
PAX Paxson 77.03 354 P **P** **20 26 40.4 +0.8**
baz=11,SNR=5.8
NHSC New Hope 77.05 302 P **P** **20 26 41.9 +1.8**
baz=51
DHY Denali Highway 77.08 354 P **P** **20 26 40.7 +0.8**
DHY IAmb IAmb 20 26 42.0
comp=Z,40nm,0.8s
DHY Denali Highway 77.08 354 P **P** **20 26 40.5 +0.6**
baz=9.4,SNR=18
BLO Bloomington 77.11 310 P **P** **20 26 40.3 0.0**
BLO IAmb IAmb 20 26 42.1
comp=Z,38nm,0.9s
BLO Bloomington 77.11 310 P **P** **20 26 40.3 0.0**
BLO pmax pmax
comp=Z,38nm,1.0s
BVCY Beaver Creek 77.11 351 P **P** **20 26 41.5 +1.5**
baz=14,SNR=13
K20K Telida 77.16 358 IAMs_20 IAMs_20 21 00 46.2
comp=Z,1μm,21.0s
K20K Telida 77.16 358 P **P** **20 26 41.3 +1.1**
baz=4.2
N32M Quiet Lake 77.21 347 P **P** **20 26 41.8 +1.2**
baz=20
M27K Edge Creek, AK 77.28 352 P **P** **20 26 42.6 +1.5**
baz=14,SNR=6.9
N31M Braeburn, Yuko 77.32 349 P **P** **20 26 41.5 +0.3**
N31M IAmb IAmb 20 26 46.2
comp=Z,36nm,1.1s
N31M IAMs_20 IAMs_20 21 02 13.5
comp=Z,1μm,21.0s
N31M Braeburn, Yuko 77.32 349 P **P** **20 26 41.9 +0.7**
baz=18,SNR=9.8
M26K Nabesna, AK 77.36 352 IAMs_20 IAMs_20 21 00 16.4
comp=Z,1μm,22.0s
M26K Nabesna, AK 77.36 352 P **P** **20 26 42.8 +1.4**
baz=13,SNR=13

WAT1 Susitna Watana 77.41 355 P **P** **20 26 43.7 +2.1**
baz=8.5
INCN Inchon 77.44 52 P **P** **20 26 41.9 -0.3**
INCN IAmb IAmb 20 26 44.0
comp=Z,33nm,0.9s
INCN Inchon 77.44 52 P **P** **20 26 41.9 -0.3**
INCN pmax pmax
comp=Z,33nm,0.9s
INCN MLR MLR
comp=Z,2μm,19.0s
LIRD Liard River Hi 77.45 343 P **P** **20 26 43.7 +1.8**
baz=26
T50A Nancy 77.50 308 P **P** **20 26 43.3 +0.8**
T50A Nancy 77.50 308 P **P** **20 26 43.4 +0.8**
baz=49
T50A P **P** **20 26 43.4 +0.8**
baz=49
UGL Uglegorsk 77.53 35 *e*P **P** **20 26 44.1 +1.6**
UGL *e*S **S** **20 36 29.9 -2.5**
UGL pmax pmax
comp=Z,210nm,0.9s
UGL MLR MLR
comp=E,3μm,13.0s
UGL MLR MLR
comp=Z,4μm,13.0s
N30M Aishikik Lake 77.54 349 P **P** **20 26 43.8 +1.3**
baz=17,SNR=8.3
PPLA Purkeypile 77.55 357 P **P** **20 26 43.0 +0.5**
baz=5.6,SNR=9.4
HARP HAARP 77.57 353 P **P** **20 26 43.4 +0.8**
baz=11
WCI Wyandotte Cave 77.59 310 P **P** **20 26 43.4 +0.3**
WCI IAmb IAmb 20 26 44.5
comp=Z,19nm,0.8s
WCI Wyandotte Cave 77.59 310 P **P** **20 26 43.4 +0.3**
WCI pmax pmax
comp=Z,19nm,0.8s
WCI MLR MLR
comp=Z,2μm,18.0s
WCI Wyandotte Cave 77.59 310 P **P** **20 26 44.1 +1.0**
baz=49,SNR=7.0
WCI Wyandotte Cave 77.59 310 P **P** **20 26 43.7 +0.7**
baz=49
WAT6 Susitna Watana 77.60 355 P **P** **20 26 43.2 +0.3**
baz=9.1,SNR=6.0
TTA Tatalina 77.64 358 P **P** **20 26 44.0 +1.0**
baz=2.6
I37B Waseca 77.66 318 P **P** **20 26 44.4 +1.1**
baz=46
YUK3 Moose Creek 77.68 351 P **P** **20 26 44.6 +1.2**
baz=15,SNR=24
HODGE Hodges 77.68 304 P **P** **20 26 44.9 +1.2**
baz=50
TKL Tuckaleechee C 77.72 306 LR LR 21 01 06.8
comp=Z,868nm,21.3s,baz=50,slow=36
TKL Tuckaleechee C 77.72 306 P **P** **20 26 44.3 +0.4**
TKL Tuckaleechee C 77.72 306 P **P** **20 26 44.3 +0.4**
TKL pmax pmax
comp=Z,14nm,0.9s
TKL Tuckaleechee C 77.72 306 P **P** **20 26 44.7 +0.9**
baz=50
HDIL Hopedale 77.79 313 P **P** **20 26 44.5 +0.4**
baz=48
HAW Hawthorne Fire 77.82 303 P **P** **20 26 45.8 +1.4**
baz=50,SNR=5.2
L40A Anamosa 77.84 315 P **P** **20 26 44.5 +0.2**
L40A IAmb IAmb 20 26 45.8
comp=Z,25nm,1.1s
L40A Anamosa 77.84 315 P **P** **20 26 45.0 +0.6**
baz=47
YUK4 Talbot Arm 77.87 350 P **P** **20 26 44.9 +0.5**
baz=16,SNR=6.6
CUT Chulitna 77.94 356 P **P** **20 26 45.6 +1.0**
baz=7.1
M24K Tolsona, Glenn 77.94 354 P **P** **20 26 45.7 +1.0**
baz=10
MDND Maddock 77.96 324 P **P** **20 26 45.4 +0.4**
baz=43
WHY Whitehorse 77.97 348 P **P** **20 26 45.6 +0.7**
WHY Whitehorse 77.97 348 P **P** **20 26 45.4 +0.5**
baz=19,SNR=6.6
V51A Loudon 77.99 307 P **P** **20 26 46.9 +1.5**
baz=49
L20K Farewell, AK 78.03 357 P **P** **20 26 45.9 +0.7**
baz=4.3
P33M Teslin, Yukon 78.04 347 P **P** **20 26 45.4 0.0**
P33M IAMs_20 IAMs_20 21 02 54.6
comp=Z,1μm,19.0s
P33M Teslin, Yukon 78.04 347 P **P** **20 26 46.5 +1.2**
baz=21,SNR=8.2
O30N Mendenhall 78.05 349 P **P** **20 26 46.4 +1.1**
baz=18,SNR=8.1
YUK8 Steele Glacier 78.07 351 P **P** **20 26 46.2 +0.5**
baz=15
KS19 Wonju Array Si 78.16 51 P **P** **20 26 46.4 +0.1**
KS19 IAmb IAmb 20 26 47.3
comp=Z,28nm,0.7s
HYT Haines Junctio 78.21 349 P **P** **20 26 46.6 +0.3**
HYT IAmb IAmb 20 26 49.0
comp=Z,39nm,1.2s
HYT Haines Junctio 78.21 349 P **P** **20 26 47.1 +0.8**
baz=17,SNR=14
KSAR Wonju Array Be 78.21 51 P **P** **20 26 46.4 -0.1**
KSAR Wonju Array Be 78.21 51 P **P** **20 26 46.4 -0.1**
YUK6 Outpost Mounta 78.22 350 P **P** **20 26 47.8 +1.4**
baz=16,SNR=12
KSRS Korea Array 78.23 51 P **P** **20 26 46.6 +0.1**
comp=Z,27nm,0.7s,baz=311,slow=4.8,SNR=114
KSRS LR LR 21 05 03.5
comp=Z,2μm,18.5s,baz=305,slow=39
comp=Z,27nm,0.7s
N25K Chitina, Valde 78.30 353 IAMs_20 IAMs_20 21 03 43.2
comp=Z,1μm,21.0s
N25K Chitina, Valde 78.30 353 P **P** **20 26 47.3 +0.6**
baz=12,SNR=5.4
DR12 Loma Pena Alta 78.30 285 P **P** **20 26 46.6 -0.8**
SCM Sheep Creek Mo 78.31 354 IAMs_20 IAMs_20 21 00 42.6
comp=Z,932nm,22.0s
SCM Sheep Creek Mo 78.31 354 P **P** **20 26 48.2 +1.5**
baz=9.4,SNR=7.0
OLIL Olney 78.32 311 P **P** **20 26 47.9 +0.8**
baz=48
CPCT Cooper Cave 78.32 306 P **P** **20 26 47.2 0.0**
MCARA McCarthy VSAT 78.36 352 IAMs_20 IAMs_20 21 03 06.8
comp=Z,1μm,20.0s
MCARA McCarthy VSAT 78.36 352 P **P** **20 26 47.9 +1.0**
baz=13
L19K White Mountain 78.36 358 IAMs_20 IAMs_20 21 01 55.0
comp=Z,908nm,20.0s
L19K White Mountain 78.36 358 P **P** **20 26 47.6 +0.6**
baz=3.5,SNR=14
M23K Glacier View 78.38 354 P **P** **20 26 47.8 +0.7**
baz=9.1,SNR=12
GLB Gilahina Butte 78.38 352 P **P** **20 26 47.8 +0.7**
GLB IAmb IAmb 20 26 59.4
comp=Z,49nm,1.7s
GLB IAMs_20 IAMs_20 21 02 43.5
comp=Z,1μm,20.0s
U49A Red Boiling Sp 78.40 308 P **P** **20 26 47.9 +0.3**
baz=49,SNR=12
SML Sawmill 78.41 355 P **P** **20 26 47.8 +0.6**
baz=8.6,SNR=9.5
SKT Skwentna 78.43 356 P **P** **20 26 46.6 -0.7**
SKT IAmb IAmb 20 26 49.6
comp=Z,22nm,0.8s
SKT IAMs_20 IAMs_20 21 01 38.8
comp=Z,857nm,20.0s
SKT Skwentna 78.43 356 P **P** **20 26 47.1 -0.2**
baz=6.1,SNR=17
R33M Jennings River 78.47 346 P **P** **20 26 50.1 +2.4**
baz=22,SNR=19
BARN Barnard Glacie 78.52 351 IAMs_20 IAMs_20 20 58 31.2
comp=Z,863nm,20.0s
KLU Klutina 78.53 353 P **P** **20 26 48.7 +0.8**
KLU IAmb IAmb 20 27 03.4
comp=Z,25nm,1.0s
KLU IAMs_20 IAMs_20 21 01 51.4
comp=Z,995nm,21.0s
KLU Klutina 78.53 353 P **P** **20 26 48.9 +1.0**
baz=10,SNR=7.4
VRDI Verde Repeater 78.55 352 IAMs_20 IAMs_20 21 03 03.0
comp=Z,1μm,21.0s
N41A Harden Midland 78.56 314 P **P** **20 26 49.0 +0.6**
baz=47
CTG Chitna Glacier 78.57 351 P **P** **20 26 49.7 +1.4**
baz=14
CTGM Chitina Glacie 78.57 351 IAMs_20 IAMs_20 21 05 32.6

comp=Z,987nm,19.0s
M22K Willow 78.58 356 P **P** **20 26 48.5 +0.4**
M22K Willow 78.58 356 P **P** **20 26 48.9 +0.8**
baz=7.2,SNR=6.8
M20K Styx River 78.60 357 IAMs_20 IAMs_20 21 00 14.3
comp=Z,801nm,20.0s
M20K Styx River 78.60 357 P **P** **20 26 48.7 +0.3**
baz=4.9
TJN Taejon 78.60 52 P **P** **20 26 48.2 -0.5**
TJN Taejon 78.60 52 P **P** **20 26 48.2 -0.5**
TJN pmax pmax
comp=Z,181nm,1.2s
O28M Mount Upton 78.62 351 P **P** **20 26 50.1 +1.4**
baz=15,SNR=6.7
M19K Big River Lodg 78.62 358 IAMs_20 IAMs_20 21 01 52.0
comp=Z,1μm,22.0s
M19K Big River Lodg 78.62 358 P **P** **20 26 49.2 +0.9**
baz=3.9
LOGN Logan Glacier 78.67 351 P **P** **20 26 50.4 +1.6**
LOGN IAmb IAmb 20 26 51.0
comp=Z,24nm,0.9s
PMR Palmer 78.68 355 P **P** **20 26 49.9 +1.3**
baz=8.0,SNR=5.8
P32M Atlin 78.78 347 P **P** **20 26 49.7 +0.3**
baz=20,SNR=6.9
P30M Million Dollar 78.80 349 P **P** **20 26 50.6 +1.1**
baz=17
KNK Knik Glacier 78.81 355 IAMs_20 IAMs_20 21 02 44.8
comp=Z,807nm,20.0s
KNK Knik Glacier 78.81 355 P **P** **20 26 49.9 +0.5**
baz=8.5,SNR=6.5
O29M Mount Kennedy 78.86 350 P **P** **20 26 50.1 +0.2**
baz=16,SNR=6.1
T47A Sharon Grove 78.89 309 P **P** **20 26 50.6 +0.3**
T47A IAmb IAmb 20 26 52.1
comp=Z,39nm,0.9s
T47A Sharon Grove 78.89 309 P **P** **20 26 51.1 +0.9**
baz=48,SNR=14
SUA Susitna One 78.90 356 IAMs_20 IAMs_20 21 04 30.3
comp=Z,855nm,19.0s
SUA Susitna One 78.90 356 P **P** **20 26 50.6 +0.5**
baz=6.7
KULM Kulim 78.91 92 P **P** **20 26 49.8 -1.0**
KULM Kulim 78.91 92 P **P** **20 26 49.7 -1.0**
comp=Z,578nmcomp=Z,25nm,1.7s
BMRM Bremner River 78.92 353 P **P** **20 26 51.2 +1.1**
BMRM IAmb IAmb 20 26 52.3
comp=Z,71nm,1.4s
BMRM Bremner River 78.92 353 P **P** **20 26 50.3 +0.2**
baz=12,SNR=5.2
TGL Tana Glacier 78.95 352 P **P** **20 26 51.4 +1.0**
TGL IAmb IAmb 20 27 03.6
comp=Z,26nm,0.9s
W50A Signal Mountai 78.98 307 P **P** **20 26 52.2 +1.4**
baz=49,SNR=12
GOGA Godfrey 78.98 304 P **P** **20 26 51.7 +0.9**
baz=50
GOGA Godfrey 78.98 304 P **P** **20 26 52.3 +1.4**
baz=50
SCIA State Center 79.02 316 IAMs_20 IAMs_20 21 02 28.9
comp=Z,1μm,20.0s
SCIA State Center 79.02 316 P **P** **20 26 51.1 +0.1**
baz=46
TABL Table Mountain 79.06 351 IAMs_20 IAMs_20 21 05 58.5
comp=Z,1μm,20.0s
Y52A Lilburn 79.06 305 P **P** **20 26 52.8 +1.5**
baz=49,SNR=11
Y52A P **P** **20 26 52.8 +1.5**
baz=49,SNR=11
GSI Gunungsitoli 79.08 97 P **P** **20 26 51.8 +0.2**
GSI IAmb IAmb 20 29 50.1
comp=Z,47nm,1.0s
GSI Gunungsitoli 79.08 97 P **P** **20 26 52.1 +0.5**
comp=Z,48nm,1.6s
X51A Calhoun 79.11 306 P **P** **20 26 53.0 +1.5**
baz=49
X51A P **P** **20 26 53.0 +1.5**
baz=49
Q32M Nakina River 79.12 346 P **P** **20 26 52.6 +1.2**
baz=21,SNR=5.2
PSI Prapat 79.16 95 LR LR 21 04 37.6
comp=Z,310nm,21.8s,baz=304,slow=38
PSI Prapat 79.16 95 P **P** **20 26 51.8 -0.4**
PSI pmax pmax
comp=Z,86nm,1.8s
PSI MLR MLR
comp=Z,500nm,21.0s
PSI Prapat 79.16 95 P **P** **20 26 51.2 -1.0**
comp=Z,635nmcomp=Z,19nm,1.0s
DLBC Dease Lake 79.17 345 LR LR 21 04 29.2
comp=Z,1μm,18.9s,baz=22,slow=38
DLBC Dease Lake 79.17 345 P **P** **20 26 52.7 +1.1**
DLBC IAmb IAmb 20 27 10.4
comp=Z,55nm,1.9s
DLBC Dease Lake 79.17 345 P **P** **20 26 52.6 +1.1**
baz=23
SKAG Skagway 79.18 348 P **P** **20 26 52.5 +1.1**
SKAG IAmb IAmb 20 26 54.1
comp=Z,28nm,1.0s
SKAG Skagway 79.18 348 P **P** **20 26 51.9 +0.4**
baz=19
RC01 Rabbit Creek A 79.22 355 P **P** **20 26 52.6 +1.0**
RC01 IAmb IAmb 20 26 53.7
comp=Z,50nm,0.9s
RC01 Rabbit Creek A 79.22 355 P **P** **20 26 51.8 +0.2**
baz=7.5,SNR=6.8
RPSI Rantau Prapat 79.22 95 P **P** **20 26 51.8 -0.7**
RPSI IAmb IAmb 20 26 53.1
comp=Z,86nm,1.8s
GLI Glacier Island 79.23 354 IAMs_20 IAMs_20 21 01 48.0
comp=Z,1μm,22.0s
GLI Glacier Island 79.23 354 P **P** **20 26 51.9 +0.2**
baz=9.6
N20K Mount Spurr 79.24 357 P **P** **20 26 51.8 0.0**
baz=5.6,SNR=6.0
SPCR Spurr Chakacha 79.24 357 P **P** **20 26 52.0 +0.1**
baz=5.6
SPU Mount Spurr 79.25 356 P **P** **20 26 52.1 +0.2**
PINM Pinnacle 79.28 350 P **P** **20 26 53.6 +1.4**
baz=15,SNR=8.4
FID Port Fidalgo 79.31 354 IAMs_20 IAMs_20 21 03 41.9
comp=Z,1μm,20.0s
PLBC Pleasant Camp 79.35 348 P **P** **20 26 53.0 +0.7**
baz=18
PWL Port Wells 79.35 355 P **P** **20 26 52.9 +0.5**
PWL IAmb IAmb 20 27 29.8
comp=Z,34nm,1.0s
PWL IAMs_20 IAMs_20 21 03 20.1
comp=Z,963nm,20.0s
PWL Port Wells 79.35 355 P **P** **20 26 53.0 +0.6**
baz=8.6
P29M Windy Craggy 79.39 349 IAMs_20 IAMs_20 21 00 34.2
comp=Z,1μm,20.0s
P29M Windy Craggy 79.39 349 P **P** **20 26 53.5 +0.8**
baz=17
E28A Huff 79.40 323 P **P** **20 26 54.3 +1.3**
baz=42
MESA MESA 79.41 351 IAMs_20 IAMs_20 21 06 10.8
comp=Z,1μm,19.0s
MESA MESA 79.41 351 P **P** **20 26 53.3 +0.4**
baz=14
YSS Yuzh-Sakhalins 79.42 36 P **P** **20 26 53.9 +0.9**
YSS Yuzh-Sakhalins 79.42 36 *e*P **P** **20 26 52.3 -0.7**
YSS *e**PP **PcP** **20 27 07.0 +6.0**
YSS *e*S **S** **20 36 49.2 -3.6**
YSS *e*PS **ScS** **20 37 11.4 -3.7**
YSS pmax pmax
comp=Z,600nm,3.0s
YSS pmax pmax
comp=Z,220nm,0.9s
EYAK Cordova Ski Ar 79.44 353 P **P** **20 26 53.9 +1.0**
baz=11
WAPA Wapiti River 79.45 338 P **P** **20 26 53.9 +0.9**
WAPA IAmb IAmb 20 26 55.1
comp=Z,50nm,1.1s
SVW2 Sparrevohn 79.47 358 P **P** **20 26 54.6 +1.6**
ECSD EROS Data Cent 79.50 319 P **P** **20 26 53.6 +0.1**
ECSD EROS Data Cent 79.50 319 P **P** **20 26 54.4 +0.8**
baz=44,SNR=9.6
ECSD EROS Data Cent 79.50 319 P **P** **20 26 54.1 +0.5**
baz=44
HMT Hamilton 79.51 352 IAMs_20 IAMs_20 21 04 31.4
comp=Z,1μm,19.0s
DGMT Dagmar 79.53 326 P **P** **20 26 54.8 +1.2**
baz=40
V48A Smith Brothers 79.55 308 P **P** **20 26 54.7 +0.8**
baz=48

PNL	Peninsula	79.59 350	P	P	20 26 54.7 +1.0
	baz=16				
FPAL	Fort Paine	79.59 306	P	P	20 26 54.4 +0.2
SDDR	Presa de Saban	79.60 286	P	P	20 26 55.4 +0.9
SDDR			IAMs_20	IAMs_20	21 05 21.5
	comp=Z,854nm,19.0s				
BGLC	Bering Glacier	79.62 352	P	P	20 26 54.7 +0.9
	baz=12				
CAPN	Captain Cook N	79.62 356	P	P	20 26 54.6 +0.8
	baz=6.4				
S44A	Carbondale	79.69 311	P	P	20 26 55.1 +0.4
	baz=47				
IPM	Ipoh	79.71 93	P	P	20 26 54.7 -0.4
N19K	Bonanza Creek	79.72 358	IAMs_20	IAMs_20	21 05 02.9
	comp=Z,892nm,18.0s				
N19K	Bonanza Creek	79.72 358	P	P	20 26 55.1 +0.6
	baz=3.8,SNR=5.6				
BRLDA	Berland Lookou	79.83 336	P	P	20 26 55.7 +0.4
BRLDA			IAmb	IAmb	20 27 13.5
	comp=Z,51nm,1.4s				
S34M	Telegraph Cree	79.88 345	P	P	20 26 57.4 +2.1
	baz=22,SNR=6.7				
N18K	Kilae Creek	79.89 358	P	P	20 26 56.6 +1.3
	baz=2.7,SNR=5.3				
WVT	Waverly	79.90 309	P	P	20 26 55.7 -0.1
WVT	Waverly	79.90 309	IAMs_20	IAMs_20	21 03 16.5
	comp=Z,1μm,18.0s				
WVT	Waverly	79.90 309	P	P	20 26 55.7 -0.1
WVT			pmax	pmax	
	comp=Z,10.0nm,0.9s				
WVT			MLR	MLR	
	comp=Z,1μm,18.0s				
WVT	Waverly	79.90 309	P	P	20 26 56.1 +0.3
	baz=48,SNR=6.1				
WVT	Waverly	79.90 309	P	P	20 26 55.9 +0.1
	baz=48				
KAIM	Kayak Island	79.93 352	P	P	20 26 56.4 +0.9
	baz=12				
P40A	Paris	80.03 314	P	P	20 26 56.9 +0.4
	baz=46				
P23K	Montague Islan	80.13 354	P	P	20 26 56.8 +0.2
	baz=9.3				
N16K	Nishlik Lake	80.14 360	P	P	20 26 56.9 +0.3
	baz=0.5				
R32K	Eaglecrest	80.17 347	P	P	20 26 57.3 +0.5
	baz=19				
FVM	French Village	80.17 312	P	P	20 26 58.3 +1.0
	baz=47				
SEW	Seward	80.18 355	P	P	20 26 57.0 +0.1
	baz=7.7				
152A	Waverly Hall	80.26 304	P	P	20 26 59.0 +1.2
	baz=49,SNR=6.6				
PEA0B	Petropavlovsk-	80.32 25	P	P	20 26 57.5 -0.2
PEA0B			IAmb	IAmb	20 26 58.4
	comp=Z,63nm,1.2s				
PEA0B	Petropavlovsk-	80.32 25	*c iP*	P	20 26 56.7 -1.1
PETK	Petropavlovsk-	80.32 25	P	P	20 26 56.9 -0.9
	comp=Z,17nm,0.9s,baz=259,slow=2.4,SNR=20				
PETK			LR	LR	21 07 29.5
	comp=Z,3μm,18.6s,baz=320,slow=39				
	comp=Z,17nm,0.9s				
TIGA	Tifton	80.34 303	P	P	20 26 59.8 +1.5
	baz=49				
TIGA	Tifton	80.34 303	P	P	20 26 58.4 +0.2
	baz=49				
O20K	Slope Mountain	80.38 357	P	P	20 26 58.1 +0.1
	baz=5.2				
X48A	Hartselle	80.54 307	P	P	20 26 59.6 +0.4
X48A			IAmb	IAmb	20 27 01.2
	comp=Z,32nm,0.9s				
X48A	Hartselle	80.54 307	P	P	20 27 00.3 +1.0
	baz=48,SNR=12				
Y49A	Blount Mountai	80.54 306	P	P	20 27 00.3 +0.9
	baz=48,SNR=6.2				
T35M	Bob Quinn	80.57 344	P	P	20 27 00.4 +1.3
	baz=22,SNR=5.4				
CCM	Cathedral Cave	80.59 312	P	P	20 26 59.8 +0.3
CCM	Cathedral Cave	80.59 312	IAMs_20	IAMs_20	21 00 03.8
	comp=Z,1μm,21.0s				
CCM	Cathedral Cave	80.59 312	P	P	20 26 59.8 +0.3
CCM			pmax	pmax	
	comp=Z,15nm,0.7s				
CCM			MLR	MLR	
	comp=Z,1μm,21.0s				
CCM	Cathedral Cave	80.59 312	P	P	20 27 00.3 +0.8
	baz=46,SNR=10.0				
CCM	Cathedral Cave	80.59 312	P	P	20 26 59.8 +0.3
	baz=46				
Q23K	Middleton Isla	80.60 353	P	P	20 26 59.0 -0.2
	baz=10				
BRSE	Bradley Lake S	80.62 356	P	P	20 26 59.3 +0.1
	baz=6.7				
PET	Petropavlovsk	80.70 24	P	P	20 26 59.1 -0.6
PET			IAmb	IAmb	20 27 28.7
	comp=Z,39nm,1.2s				
PET	Petropavlovsk	80.70 24	*e*P	P	20 26 58.7 -1.0
PET			*e*		20 30 04.8
PET			*e*S	S	20 37 00.7 -5.3
PET			*e*PPS	PPS	20 38 01.9
PET			pmax	pmax	
	comp=Z,200nm,14.5s				
PET			pmax	pmax	
	comp=Z,200nm,13.1s				
O18K	Koktuh Hills	80.70 358	P	P	20 27 00.7 +1.0
O18K	Koktuh Hills	80.70 358	P	P	20 27 00.2 +0.5
	baz=3.2				
HOM	Homer	80.75 356	P	P	20 27 00.6 +0.6
	baz=6.0				
S31K	Pelican	80.75 348	P	P	20 27 00.4 +0.4
	baz=18				
P38A	Dawn	80.79 314	P	P	20 27 01.4 +0.9
	baz=45,SNR=9.1				
PLAL	Pickwick Lake	80.81 308	IAMs_20	IAMs_20	21 03 56.9
	comp=Z,1μm,19.0s				
O17K	Koliganek Bris	80.82 359	P	P	20 27 00.2 -0.1
	baz=1.8				
P19K	Oil Pt	80.83 357	P	P	20 27 00.3 -0.1
	baz=4.8				
CNPM	China Poot	80.86 356	IAMs_20	IAMs_20	21 04 17.1
	comp=Z,1μm,21.0s				
S32K	Killisnoo	80.94 347	P	P	20 27 01.4 +0.4
	baz=19				
O16K	Kokwok River B	81.01 359	P	P	20 27 02.0 +0.6
	baz=1.0				
R40A	Maddies Statio	81.01 313	P	P	20 27 02.7 +0.9
	baz=46,SNR=14				
P18K	Big Mountain,	81.16 358	IAMs_20	IAMs_20	21 10 08.1
	comp=Z,855nm,20.0s				
P18K	Big Mountain,	81.16 358	P	P	20 27 02.4 +0.1
	baz=3.2				
P17K	Kvichak River	81.39 359	P	P	20 27 03.6 +0.2
	baz=2.3				
LRAL	Lakeview Retre	81.45 306	P	P	20 27 04.7 +0.5
LRAL			IAmb	IAmb	20 27 06.3
	comp=Z,50nm,1.1s				
LRAL	Lakeview Retre	81.45 306	P	P	20 27 05.3 +1.2
	baz=48,SNR=10				
LRAL	Lakeview Retre	81.45 306	P	P	20 27 04.7 +0.5
	baz=48,SNR=10				
WRAK	Wrangell Islan	81.52 345	P	P	20 27 04.9 +0.9
	baz=21				
Q19K	Cape Douglas,	81.57 357	IAMs_20	IAMs_20	21 03 36.0
	comp=Z,974nm,20.0s				
Q19K	Cape Douglas,	81.57 357	P	P	20 27 04.7 +0.3
	baz=4.4				
P16K	Nushagak River	81.58 359	P	P	20 27 03.8 -0.5
	baz=1.1				
LAO	LASA Array	81.78 326	P	P	20 27 07.1 +1.4
	baz=38				
LAO	LASA Array	81.78 326	P	P	20 27 05.8 +0.1
	baz=38				
Q20K	Shuyak Island	81.84 356	P	P	20 27 06.2 +0.5
	baz=5.4				
JEW	Eniwo	81.86 40	P	P	20 27 07.1 +1.0
Q18K	Katmai Hardscr	81.90 358	P	P	20 27 05.6 -0.6
	baz=3.4				
Q16K	King Salmon	81.91 359	P	P	20 27 06.3 +0.3
	baz=2.1				
OXF	Oxford	81.94 308	IAMs_20	IAMs_20	21 04 36.7
	comp=Z,1μm,19.0s				
OXF	Oxford	81.94 308	P	P	20 27 06.2 -0.5
	baz=47				
U33K	Whale Pass	81.95 346	P	P	20 27 06.9 +0.5
	baz=20				
BGNE	Belgrade	81.97 318	P	P	20 27 05.5 -1.3
	baz=43				
Z47A	Carrollton	82.01 307	P	P	20 27 07.1 0.0
	baz=47				
S39A	Bolivar	82.03 313	P	P	20 27 07.4 +0.2
S39A			IAmb	IAmb	20 27 34.6
	comp=Z,44nm,1.8s				
S39A	Bolivar	82.03 313	P	P	20 27 07.4 +0.2
	baz=45				
EGMT	Eagleton	82.17 329	P	P	20 27 08.7 +0.8
EGMT	Eagleton	82.17 329	P	P	20 27 08.9 +1.1
	baz=36,SNR=19				
YHNB	Yeong	82.27 64	P	P	20 27 09.2 +0.4
Q17K	Contact Creek	82.31 358	P	P	20 27 07.0 -1.3
	baz=2.7				
V35K	Ketchikan	82.39 344	P	P	20 27 07.5 -1.2
	baz=21				
Y45A	Yeager Farm, C	82.46 308	P	P	20 27 10.2 +0.8
	baz=47,SNR=7.8				
SSLB	Suanglung	82.55 65	P	P	20 27 11.2 +1.1
KDAK	Kodiak Island	82.67 356	LR	LR	21 03 45.5
	comp=Z,691nm,21.6s,baz=29,slow=36				
KDAK	Kodiak Island	82.67 356	P	P	20 27 11.7 +1.6
KDAK	Kodiak Island	82.67 356	*c iP*	P	20 27 11.3 +1.2
KDAK			pmax	pmax	
	comp=Z,64nm,0.9s				
KDAK	Kodiak Island	82.67 356	P	P	20 27 11.2 +1.1
	baz=5.2				
U40A	Yellville	82.70 312	P	P	20 27 11.7 +1.1
	baz=45,SNR=7.9				
U40A			P	P	20 27 11.7 +1.1
	baz=45,SNR=7.9				
BRAL	Brewton	82.74 305	P	P	20 27 12.0 +1.0
	baz=48				
RSSD	Black Hills	82.80 323	P	P	20 27 12.9 +1.6
	baz=40,SNR=8.6				
RSSD	Black Hills	82.80 323	P	P	20 27 11.9 +0.6
	baz=40				
KSU1	Kansas State U	82.83 316	P	P	20 27 12.8 +1.4
	baz=44,SNR=8.3				
KSU1	Kansas State U	82.83 316	P	P	20 27 11.7 +0.4
	baz=44				
WALA	Waterton Lakes	82.91 332	P	P	20 27 12.1 +0.4
WALA			IAmb	IAmb	20 27 13.3
	comp=Z,18nm,0.8s				
JHS	Saijyo	82.98 50	P	P	20 27 11.6 -0.6
JHS			IAmb	IAmb	20 27 28.5
	comp=Z,67nm,1.8s				
YULB	Yu-li	83.04 65	P	P	20 27 12.1 -0.6
R16K	Pilot Point	83.04 359	P	P	20 27 12.6 +0.6
	baz=1.4				
JTM	Tenmabayashi	83.20 41	P	P	20 27 13.5 +0.3
OHAK	Old Harbor	83.27 357	P	P	20 27 13.7 +0.5
	baz=4.7				
ERM	Erimo	83.32 39	P	P	20 27 13.9 +0.2
ERM	Erimo	83.32 39	P	P	20 27 13.9 +0.2
ERM			pmax	pmax	
	comp=Z,120nm,1.3s				
ERM			MLR	MLR	
	comp=Z,2μm,19.0s				
HHAR	Hobbs	83.37 312	P	P	20 27 14.9 +0.7
	baz=45				
BAUV	El Baul	83.39 276	P	P	20 27 14.6 0.0
U38A	Gravette	83.51 313	P	P	20 27 15.7 +0.8
	baz=44,SNR=8.5				
JSD	Sado	83.74 45	P	P	20 27 15.4 -0.5
JSD			IAmb	IAmb	20 27 16.5
	comp=Z,34nm,1.2s				
SII	Sitkinak Islan	83.97 357	P	P	20 27 17.3 +0.4
	baz=4.0				
OGNE	Ogallala	84.27 320	P	P	20 27 19.2 +0.4
	baz=41				
RLMT	Red Lodge	84.31 327	P	P	20 27 19.5 +0.4
	baz=36,SNR=6.8				
CHGN	Chignik	84.32 360	P	P	20 27 19.2 +0.6
	baz=0.7				
BDFB	Brasilia	84.32 244	P	P	20 27 21.5 +2.3
	comp=Z,10.0nm,0.6s,baz=78,slow=3.8,SNR=17				
BDFB			LR	LR	21 06 38.3
	comp=Z,1μm,19.4s,baz=59,slow=37				
	comp=Z,10.0nm,0.6s				
BDFB	Brasilia	84.32 244	P	P	20 27 21.1 +1.8
BDFB	Brasilia	84.32 244	P	P	20 27 21.1 +1.8
BDFB			pmax	pmax	
	comp=Z,66nm,1.7s				
T35B	Sooner Cattle	84.36 314	P	P	20 27 19.8 +0.5
	baz=43,SNR=11				
MIAR	Mount Ida	84.39 311	P	P	20 27 20.3 +0.9
MIAR			IAmb	IAmb	20 27 21.5
	comp=Z,22nm,0.9s				
MIAR			IAMs_20	IAMs_20	21 06 12.3
	comp=Z,1μm,20.0s				
MIAR	Mount Ida	84.39 311	P	P	20 27 20.3 +0.9
MIAR			pmax	pmax	
	comp=Z,22nm,1.0s				
MIAR			MLR	MLR	
	comp=Z,1μm,20.0s				
MIAR	Mount Ida	84.39 311	P	P	20 27 20.9 +1.5
	baz=45,SNR=12				
MIAR	Mount Ida	84.39 311	P	P	20 27 20.4 +1.0
	baz=45				
R32A	Long Quarter,	84.45 317	P	P	20 27 20.1 +0.4
	baz=42,SNR=5.4				
BBB	Bella Bella	84.51 341	LR	LR	21 09 15.7
	comp=Z,966nm,18.2s,baz=25,slow=39				
TUL1	Leonard	84.69 313	P	P	20 27 21.1 +0.3
TUL1			IAmb	IAmb	20 27 22.5
	comp=Z,23nm,0.8s				
TUL1			IAMs_20	IAMs_20	21 06 46.0
	comp=Z,962nm,19.0s				
TUL1	Leonard	84.69 313	P	P	20 27 22.0 +1.1
	baz=44,SNR=6.2				
TUL1	Leonard	84.69 313	P	P	20 27 21.5 +0.6
	baz=44				
CBKS	Cedar Bluff	84.70 317	IAMs_20	IAMs_20	21 06 46.1
	comp=Z,1μm,18.0s				
CBKS	Cedar Bluff	84.70 317	P	P	20 27 22.4 +1.5
	baz=42,SNR=6.4				
CBKS	Cedar Bluff	84.70 317	P	P	20 27 21.5 +0.6
	baz=42				
NEW	Newport	84.72 333	LR	LR	21 08 56.6
	comp=Z,1μm,18.2s,baz=30,slow=38				
NEW	Newport	84.72 333	P	P	20 27 22.1 +1.2
	baz=31				
MSO	Missoula	84.78 331	P	P	20 27 21.7 +0.4
MSO			IAmb	IAmb	20 27 23.4
	comp=Z,24nm,1.2s				
MSO	Missoula	84.78 331	P	P	20 27 21.5 +0.2
	baz=33				
MJB9	Matsu-Tunnel	84.79 46	P	P	20 27 22.3 +0.9
MAJO	Matsushiro	84.79 46	P	P	20 27 21.2 -0.2
MAJO	Matsushiro	84.79 46	P	P	20 27 21.2 -0.2
MAJO			pmax	pmax	
	comp=Z,34nm,1.0s				
MAJO			MLR	MLR	
	comp=Z,1μm,18.0s				
MJAR	Matsushiro Arr	84.79 46	P	P	20 27 21.4 0.0
	comp=Z,38nm,0.8s,baz=322,slow=4.3,SNR=94				
MJAR			LR	LR	21 06 46.2
	comp=Z,880nm,21.2s,baz=327,slow=37				
	comp=Z,38nm,0.8s				
BOZ	Bozeman (W)	84.90 329	P	P	20 27 22.9 +0.9
BOZ			IAmb	IAmb	20 27 24.1
	comp=Z,21nm,1.0s				
BOZ	Bozeman (W)	84.90 329	P	P	20 27 22.9 +0.9
BOZ			pmax	pmax	
	comp=Z,21nm,1.0s				
BOZ			MLR	MLR	
	comp=Z,2μm,19.0s				
BOZ	Bozeman (W)	84.90 329	P	P	20 27 23.2 +1.3
	baz=35				
INU	Inuyama	84.99 47	P	P	20 27 22.1 -0.3
INU			IAmb	IAmb	20 27 23.0
	comp=Z,26nm,1.1s				
JGF	Kuroka	85.00 47	P	P	20 27 22.4 -0.1
SHEM	Shemya Is, Ala	85.05 16	LR	LR	21 10 45.5
	comp=Z,938nm,18.6s,baz=308,slow=40				
K22A	Casper	85.08 324	P	P	20 27 23.5 +0.6
	baz=38,SNR=7.2				
K22A	Casper	85.08 324	P	P	20 27 23.1 +0.2
	baz=38				
JMM	Marumori	85.22 43	P	P	20 27 23.1 -0.4
OK033	Mehan	85.23 314	IAMs_20	IAMs_20	21 07 06.3
	comp=Z,1μm,22.0s				
SDPT	Sand Point	85.27 1	P	P	20 27 23.8 +0.4
SDPT	Sand Point	85.27 1	P	P	20 27 23.9 +0.5
	baz=359				
X37A	Clayton	85.40 312	P	P	20 27 26.2 +1.8
	baz=44,SNR=10				
SDV	Santo Domingo	85.41 278	LR	LR	21 02 38.3
	comp=Z,148nm,20.0s,baz=47,slow=34				
SDV	Santo Domingo	85.41 278	P	P	20 27 25.7 +0.6
SDV			IAmb	IAmb	20 27 27.5
	comp=Z,24nm,0.8s				
H17A	Grant Village	85.45 327	P	P	20 27 27.1 +2.2
	baz=36,SNR=9.2				
JOW	Kunigami	85.53 59	LR	LR	21 11 04.1
	comp=Z,1μm,18.0s,baz=338,slow=40				
JOW	Kunigami	85.53 59	P	P	20 27 25.2 0.0
PHWY	Pilot Hill	85.64 322	P	P	20 27 26.4 +0.5
PHWY			IAmb	IAmb	20 27 28.4
	comp=Z,18nm,1.0s				
PHWY			IAMs_20	IAMs_20	21 08 25.7
	comp=Z,1μm,20.0s				
YPP	Pitchstone Pla	85.64 327	P	P	20 27 27.2 +1.3
YPP			IAmb	IAmb	20 27 30.2
	comp=Z,42nm,1.3s				
CHNA	Chernabura Isl	85.80 0	P	P	20 27 27.4 +1.4
	baz=360				
MCMT	McKenzie Canyo	86.02 329	P	P	20 27 28.6 +0.9
KSCO	Kaye Shedlock'	86.03 319	P	P	20 27 29.1 +1.3
	baz=40				
JYT	Yasato	86.11 45	P	P	20 27 27.7 -0.3
U32A	Winter Ranch,	86.11 315	P	P	20 27 30.1 +2.0
	baz=42,SNR=5.2				
N23A	Red Feather La	86.19 322	P	P	20 27 29.4 +0.7
	baz=38				
AKUT	Akutan	86.33 4	P	P	20 27 28.1 -0.5
BW06	Boulder Array	86.34 326	P	P	20 27 29.6 +0.3
	baz=36,SNR=8.0				
PD31	Pinedale Array	86.34 326	P	P	20 27 29.4 +0.1
PDAR	Pinedale Array	86.34 326	P	P	20 27 29.4 +0.1
	comp=Z,2.5nm,0.8s,baz=56,slow=4.9,SNR=16				
PDAR			PP	PP	20 30 52.7 +3.1
	comp=Z,2.0nm,0.9s,baz=55,slow=5.6,SNR=4.2				
PDAR			LR	LR	21 06 26.9
	comp=Z,2μm,20.6s,baz=33,slow=36				
	comp=Z,2.5nm,0.8s				
PDAR	Pinedale Array	86.34 326	P	P	20 27 29.1 -0.2
UNV	Unalaska Valle	86.58 4	P	P	20 27 30.9 +1.0
	baz=354				
BCYI	Bear Canyon	86.67 329	P	P	20 27 31.5 +0.7
ISCO	Idaho Springs	86.89 322	P	P	20 27 32.4 +0.2
	baz=38				
AHID	Auburn Hatcher	87.00 327	P	P	20 27 32.9 +0.4
NATX	Nacogdoches	87.01 310	P	P	20 27 33.9 +1.5
	baz=44				
WMOK	Wichita Mounta	87.21 314		P	20 27 33.9 +0.5
WMOK			IAmb	IAmb	20 27 36.1
	comp=Z,19nm,0.9s				
WMOK	Wichita Mounta	87.21 314	P	P	20 27 33.9 +0.5
WMOK			pmax	pmax	
	comp=Z,19nm,1.0s				
WMOK	Wichita Mounta	87.21 314	P	P	20 27 33.0 -0.4
	baz=42,SNR=7.9				
WMOK	Wichita Mounta	87.21 314	P	P	20 27 34.4 +1.0
	baz=42				
NIKH	Nikolski High	87.29 6	P	P	20 27 34.2 +0.8
	baz=353				
Q24A	Divide	87.32 321	P	P	20 27 34.6 +0.3
	baz=39				
HLID	Hailey	87.70 329	P	P	20 27 36.0 +0.2
	baz=33				
BMO	Blue Mountains	87.71 332	P	P	20 27 35.3 -0.4
BMO			IAmb	IAmb	20 27 46.7
	comp=Z,40nm,1.8s				
BMO	Blue Mountains	87.71 332	P	P	20 27 35.3 -0.4
BMO			pmax	pmax	
	comp=Z,40nm,1.8s				
O20A	White River Ci	87.86 323	P	P	20 27 36.7 0.0
	baz=37,SNR=6.6				
RDMU	Red Mountain	88.11 324	P	P	20 27 37.8 -0.1
HWUT	Hardware Ranch	88.14 326	P	P	20 27 37.7 -0.3
HWUT			IAmb	IAmb	20 27 39.7
	comp=Z,27nm,1.1s				
JHJ	Hachijo jima 2	88.18 47	LR	LR	21 11 30.3
	comp=Z,410nm,19.8s,baz=5.5,slow=39				
T25A	Trinidad	88.37 319	P	P	20 27 39.5 +0.4
	baz=39,SNR=6.2				
SDCO	Great Sand Dun	88.44 320	P	P	20 27 39.3 -0.3
SDCO	Great Sand Dun	88.44 320	P	P	20 27 40.0 +0.4
	baz=38,SNR=11				
SDCO	Great Sand Dun	88.44 320	P	P	20 27 40.0 +0.4
	baz=38,SNR=11				
WHTX	Lake Whitney,	88.48 311	P	P	20 27 39.8 +0.3
	baz=43				
AMTX	Amarillo	88.68 316	IAMs_20	IAMs_20	21 08 33.5
	comp=Z,1μm,20.0s				
AMTX	Amarillo	88.68 316	P	P	20 27 40.5 0.0
	baz=40				
KASI	Kota Agung	88.73 98	P	P	20 27 40.6 -0.3
	comp=Z,2μmcomp=Z,95nm,1.1s				
KSM	Kuching	88.76 89	P	P	20 27 40.8 -0.2
KSM			IAmb	IAmb	20 27 42.3
	comp=Z,16nm,1.0s				
KSM	Kuching	88.76 89	P	P	20 27 41.4 +0.4
	comp=Z,19nm,1.9s				
S22A	4UR Ranch, Cre	89.09 321	P	P	20 27 43.5 +0.9
	baz=38,SNR=7.2				
ABTX	Abilene, Hawle	89.26 313	P	P	20 27 43.7 +0.5
ABTX			IAmb	IAmb	20 27 45.3
	comp=Z,18nm,0.9s				
ABTX	Abilene, Hawle	89.26 313	P	P	20 27 43.7 +0.5
	baz=42,SNR=5.1				
ABTX	Abilene, Hawle	89.26 313	P	P	20 27 43.9 +0.8
	baz=42,SNR=5.1				
TPI	Tanjungpandan	89.39 94	P	P	20 27 43.8 -0.2
	comp=Z,357nmcomp=Z,18nm,1.9s				
435B	Jarrell	89.44 311	P	P	20 27 44.6 +0.6
	baz=43				
SBUM	Sibu	89.62 87	P	P	20 27 45.2 +0.1
SBUM	Sibu	89.62 87	P	P	20 27 45.5 +0.4
	comp=Z,9.5nm,2.7s				
PV13	Radium Mtn., P	89.71 323	P	P	20 27 45.6 +0.1
PV13			IAmb	IAmb	20 27 47.2
	comp=Z,19nm,1.1s				
DUG	Dugway, Tooele	89.84 326	P	P	20 27 46.3 +0.3
DUG			IAmb	IAmb	20 27 47.9
	comp=Z,20nm,1.1s				
DUG	Dugway, Tooele	89.84 326	P	P	20 27 46.3 +0.3
DUG			pmax	pmax	
	comp=Z,20nm,1.1s				
DUG	Dugway, Tooele	89.84 326	P	P	20 27 45.9 0.0
	baz=34				
MSTX	Muleshoe	89.96 316	P	P	20 27 47.1 +0.6
MSTX	Muleshoe	89.96 316	P	P	20 27 46.7 +0.2
	baz=40				
MSTX	Muleshoe	89.96 316	P	P	20 27 46.7 +0.2
	baz=40				
MVCO	Mesa Verde	90.32 322	P	P	20 27 49.0 +0.6
	baz=37				
ELK	Elko	90.40 328	LR	LR	21 10 16.0
	comp=Z,2μm,19.9s,baz=36,slow=37				
ELK	Elko	90.40 328	P	P	20 27 49.6 +0.9
ELK	Elko	90.40 328	P	P	20 27 49.6 +0.9
ELK			pmax	pmax	
	comp=Z,9.0nm,1.2s				
ELK			MLR	MLR	
	comp=Z,3μm,20.0s				
ROSC	El Rosal	90.80 277	P	P	20 27 52.0 +1.0
	comp=Z,6.8nm,0.5s,baz=168,slow=21,SNR=4.4				
ROSC			LR	LR	21 06 38.8
	comp=Z,429nm,19.8s,baz=56,slow=34				
	comp=Z,6.8nm,0.5s				
JCT	Junction City	90.94 312	P	P	20 27 52.1 +1.0
JCT			IAmb	IAmb	20 27 53.2
	comp=Z,21nm,1.1s				
JCT	Junction City	90.94 312	P	P	20 27 52.1 +1.0
JCT			pmax	pmax	
	comp=Z,21nm,1.2s				
JCT	Junction City	90.94 312	P	P	20 27 52.3 +1.2
	baz=42				
JCT	Junction City	90.94 312	P	P	20 27 52.3 +1.2
	baz=42				
TEIG	Tepich	90.95 297	P	P	20 27 50.9 -0.3
SAML	Samuel	90.99 259	P	P	20 27 50.4 -1.0
SAML			IAmb	IAmb	20 28 08.4
	comp=Z,22nm,1.9s				
SAML	Samuel	90.99 259	P	P	20 27 50.4 -1.0
SAML			pmax	pmax	
	comp=Z,22nm,1.9s				
ANMO	Albuquerque	91.12 319	LR	LR	21 10 48.9
	comp=Z,743nm,18.3s,baz=33,slow=37				
ANMO	Albuquerque	91.12 319	P	P	20 27 51.7 -0.3
ANMO	Albuquerque	91.12 319	P	P	20 27 51.7 -0.3
ANMO			pmax	pmax	
	comp=Z,9.0nm,1.4s				

ANMO	Albuquerque	91.12 319	P	P	20 27 52.5 +0.5
	baz=38				
LEM	Lembang	91.95 97	LR	LR	21 12 10.3
	comp=Z,272nm,21.9s,baz=358,slow=37				
Y22D	IRIS PASSCAL I	92.04 319	P	P	20 27 56.3 0.0
	baz=38				
Y22F	Passcal Instru	92.04 319	P	P	20 27 56.1 -0.2
	baz=38				
833A	Chaparral WMA,	92.31 310	P	P	20 27 58.5 +1.1
	baz=42				
YBH	Yreka Blue Hor	92.35 333	LR	LR	21 11 42.3
	comp=Z,1μm,19.2s,baz=15,slow=37				
R11A	Troy Canyon, C	92.56 327	P	P	20 27 59.3 +0.7
	baz=32				
U15A	North Rim	92.72 324	P	P	20 28 00.1 +0.6
U15A			IAmb	IAmb	20 28 01.3
	comp=Z,15nm,1.1s				
WUAZ	Wupatki	93.05 323	P	P	20 28 01.5 +0.6
	baz=35				
NVAR	Mina Array Bea	93.61 329	P	P	20 28 03.9 +0.4
	comp=Z,1.9nm,0.8s,baz=44,slow=4.0,SNR=6.0				
NVAR			PKKPbc	PKKPbc	20 45 10.9 +3.3
	comp=Z,1.0nm,0.7s,baz=193,slow=6.1,SNR=3.7				
NVAR			LR	LR	21 12 56.2
	comp=Z,2μm,19.0s,baz=26,slow=37				
	comp=Z,1.9nm,0.8s				
121A	Cookes Peak, D	93.70 319	P	P	20 28 04.6 +0.7
	baz=37				
SIV	San Ignacio	93.92 253	LR	LR	21 11 14.7
	comp=Z,676nm,20.4s,baz=97,slow=36				
TX31	Lajitas Ar. Si	94.00 314	P	P	20 28 06.3 +1.0
	baz=40,SNR=5.8				
TXAR	Lajitas Array	94.00 314	P	P	20 28 06.2 +1.0
	comp=Z,10nm,0.9s,baz=69,slow=4.2,SNR=41				
TXAR			LR	LR	21 12 55.0
	comp=Z,954nm,18.1s,baz=21,slow=37				
	comp=Z,10nm,0.9s				
TXAR	Lajitas Array	94.00 314	P	P	20 28 05.6 +0.3
TXAR	Lajitas Array	94.00 314	P	P	20 28 05.6 +0.3
JCJ	Chichijima	94.04 50	LR	LR	21 13 58.2
	comp=Z,501nm,18.7s,baz=279,slow=38				
BOAB	BOACO BROADBAND	94.35 290	P	P	20 28 06.8 -0.2
GRAC	Grapevine Rang	94.45 328	P	P	20 28 08.0 +0.8
	baz=31				
CWC	Cottonwood Cre	95.22 328	P	P	20 28 11.0 +0.1
	baz=31				
MPMC	Manual Prospec	95.31 327	P	P	20 28 11.8 +0.5
	baz=31				
PDMCI	Parker Dam,Lak	95.33 324	P	P	20 28 11.6 +0.4
	baz=33				
TUC	Tucson	95.38 320	P	P	20 28 11.8 +0.2
	baz=35				
GMRC	Granite Mounta	95.60 325	P	P	20 28 13.3 +0.7
	baz=32				
GSC	Goldstone, Bar	95.66 326	P	P	20 28 13.3 +0.5
	baz=31				
HEC	Hector,Ludlow	95.86 326	P	P	20 28 13.2 -0.5
	baz=32				
IRM	Iron Mountain	95.90 325	P	P	20 28 13.8 -0.1
	baz=33				
APG	El Apazote	96.04 295	LR	LR	21 09 32.9
	comp=Z,267nm,19.4s,baz=15,slow=34				
ISA	Isabella, Lake	96.06 328	P	P	20 28 15.1 +0.6
ISA			IAmb	IAmb	20 28 16.9
	comp=Z,12nm,1.1s				
ISA	Isabella, Lake	96.06 328	P	P	20 28 15.1 +0.6
ISA			pmax	pmax	
	comp=Z,12nm,1.1s				
ISA	Isabella, Lake	96.06 328	P	P	20 28 14.3 -0.3
	baz=30				
BELC	Belle Mtn. Jos	96.41 325	P	P	20 28 17.0 +0.7
	baz=32				
BC3	Big Chuckawall	96.46 324	P	P	20 28 16.9 +0.4
	baz=32				
EDW2	Edwards Air Fo	96.53 327	P	P	20 28 17.0 +0.3
	baz=31				
214A	Organ Pipe Nat	96.65 322	P	P	20 28 17.7 +0.4
	baz=34				
DAV	Davao City (W)	96.81 75	LR	LR	21 19 55.3
	comp=Z,448nm,18.8s,baz=339,slow=40				
BFSC	Mount Baldy Ra	96.93 326	P	P	20 28 18.8 +0.1
	baz=31				
PFO	Pinyon Flats O	96.95 325	LR	LR	21 13 01.1
	comp=Z,2μm,21.7s,baz=26,slow=36				
PFO	Pinyon Flats O	96.95 325	P	P	20 28 19.3 +0.6
PFO			IAmb	IAmb	20 28 21.2
	comp=Z,13nm,1.1s				
PFO	Pinyon Flats O	96.95 325	P	P	20 28 19.3 +0.6
PFO			pmax	pmax	
	comp=Z,13nm,1.2s				
PFO	Pinyon Flats O	96.95 325	P	P	20 28 19.0 +0.3
	baz=32				
TPFO	Pinon Flats	96.95 325	P	P	20 28 19.0 +0.3
	baz=32				
MONP2	Monument Peak	97.54 325	P	Pdif	20 28 21.7 +0.2
	baz=32				
CMIG	Matias Romero	97.61 300	LR	LR	21 13 50.9
	comp=Z,337nm,18.6s,baz=30,slow=36				
CPUP	Villa Florida	97.90 242	LR	LR	21 14 59.5
	comp=Z,1μm,18.6s,baz=51,slow=37				
LPAZ	La Paz	99.35 257	LR	LR	21 15 24.0
	comp=Z,319nm,19.1s,baz=57,slow=37				
SNAA	Sanae	112.36 188	IAms_20	IAms_20	21 24 21.4
	comp=Z,486nm,18.0s				
WRA	Warramunga Arr	120.44 91	PKP	PKPdf	20 33 38.4 -0.3
	comp=Z,3.9nm,0.7s,baz=318,slow=1.6,SNR=33				
WRA	Warramunga Arr	120.44 91	PKPdf	PKPdf	20 33 37.9 -0.8
WRAB	Tennant Creek	120.45 91		PKPdf	20 33 38.1 -0.5
WRAB	Tennant Creek	120.45 91	PKIKP	PKPdf	20 33 38.2 -0.5
WB2	Warramunga Arr	120.45 91	PKPdf	PKPdf	20 33 38.1 -0.6
BELA	Belgrano 2	121.99 192		PKiKP	20 33 40.5 +0.4
AS31	Alice Springs	122.19 95	PKPdf	PKPdf	20 33 41.6 -0.4
ASAR	Alice Springs	122.19 95	PKP	PKPdf	20 33 41.8 -0.2
	comp=Z,9.8nm,0.6s,baz=312,slow=1.5,SNR=113				
ASAR			PKKPbc	PKKPab	20 43 38.8 +0.8
	comp=Z,0.6nm,0.7s,baz=122,slow=3.7,SNR=9.5				
ASAR	Alice Springs	122.19 95	PKPdf	PKPdf	20 33 41.3 -0.7
QSPA	South Pole Qui	129.60 180	PKP	PKPdf	20 33 54.8 0.0
	comp=Z,5.7nm,0.9s,baz=276,slow=1.1,SNR=16				
STKA	Stephens Creek	132.18 100	PKP	PKiKP	20 34 01.5 -0.3
	comp=Z,5.3nm,0.8s,baz=348,slow=2.5,SNR=7.0				
STKA			SKPbc	SKPbc	20 37 25.1 -0.9
	comp=Z,4.3nm,0.8s,baz=275,slow=6.0,SNR=4.7				
STKA	Stephens Creek	132.18 100		PKPdf	20 34 00.4 -0.3
STKA	Stephens Creek	132.18 100	PKIKP	PKPdf	20 34 00.4 -0.3
VNDA	Vanda	138.78 168	PKP	PKPdf	20 34 11.7 0.0
	comp=Z,0.3nm,0.5s,baz=273,slow=4.7,SNR=3.9				
TAOE	Nuku Hiva Isla	144.80 326	eLR	LR	21 21 51.8
	comp=Z,794nm,23.0s				
TAOE	Nuku Hiva Isla	144.80 326		PKPbc	20 34 24.1 +0.6
LHI	Lord Howe Isla	145.43 89	PKPdf	PKPab	20 34 25.2 +0.1
DZM	Mont Dzumac	146.00 69	eLR	LR	21 22 27.5
	comp=Z,635nm,26.8s				
PPT2	Papeete2	156.37 336	eLR	LR	21 27 13.8
	comp=Z,639nm,22.8s				
URZ	Urewera	161.61 93	PKPab	PKPab	20 35 31.3 -1.3
	comp=Z,23nm,0.8s,baz=358,slow=2.1,SNR=14				
TBI	Tubuai	161.65 330	eLR	LR	21 29 40.7
	comp=Z,830nm,24.5s				

DDA ***15*** *20:15:09.5±0.0,40°.14N×31°.64E,h7km±1km,ML1.7*

ISK 15 20:15:08.9,40°.13N×31°.59E,h2km,ML2.2/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUVA	Yuva-Kibriscik	0.27	16	PG	Pg	20 15 15.3	+1.1
YUVA				SG	Sb	20 15 19.9	-1.8
AUMIH	MIHALICIK	0.27	197	PG	Pg	20 15 15.1	+0.9
AUMIH				SG	Sb	20 15 19.8	-1.9
AUMIH	MIHALICIK	0.27	197	P	Pg	20 15 14.8	+0.6
AUMIH				S	Sb	20 15 20.5	-1.2
AUMIH				*i* AML	AML	20 15 21.0	
	comp=E,123nm,0.3s						
AUMIH				*i* AML	AML	20 15 25.0	
	comp=N,118nm,0.4s						
KIBS	BOLU	0.35	35	P	Pg	20 15 16.0	+0.2
KIBS				*i* AML	AML	20 15 23.0	
	comp=E,180nm,0.4s						
KIBS				*i* AML	AML	20 15 26.0	
	comp=N,58nm,0.9s						
MDUB	Mudurnu	0.45	319	PG	Pg	20 15 18.2	+0.6
MDUB				SG	Sb	20 15 25.8	-1.1
BTAS	Taskesti	0.63	315	P	Pb	20 15 22.4	-0.3
SVRH	Sivrihisar-ESK	0.68	184	PG	Pb	20 15 23.0	-0.2
AUSIV	SIVRIHISAR	0.69	183	PG	Pb	20 15 23.0	-0.7
SRCK	Saricakaya, Es	0.74	264	PG	Pg	20 15 23.7	+0.5
CMDR	Camlidere-ANKA	0.77	61	P	Pg	20 15 23.5	-0.2
CMDR				S	Sb	20 15 36.6	+0.5
CMDR				*i* AML	AML	20 15 37.0	
	comp=E,62nm,0.6s						
CMDR				*i* AML	AML	20 15 45.0	
	comp=N,44nm,0.4s						
BCAM	Yenicaga	0.78	28	P	Pg	20 15 24.0	+0.2
CIFT	Cifteler, Eski	0.87	208	PG	Pb	20 15 26.4	-0.3
GULT	Gulveren	0.88	291	PG	Pb	20 15 26.8	0.0
BORA	Eskisehir	0.91	254	PG	Pb	20 15 27.1	-0.3
BORA	Eskisehir	0.91	254	P	Pg	20 15 26.3	+0.1
BORA				S	Sn	20 15 41.6	-0.7
BORA				*i* AML	AML	20 15 47.0	
	comp=E,39nm,0.3s						
BORA				*i* AML	AML	20 15 48.0	
	comp=N,32nm,0.4s						
SAHE	Sakarya_HENDEK	0.91	322	P	Pb	20 15 27.5	0.0
SAHE				*i* AML	AML	20 15 46.0	
	comp=E,13nm,0.5s						
SAHE				*i* AML	AML	20 15 46.0	
	comp=N,19nm,0.6s						
LOD	Lodumlu	0.93	105	PG	Pb	20 15 27.4	-0.4
ANTO	Ankara	0.96	105	PG	Pb	20 15 28.4	+0.1
GEYV	SAKARYA_Geyve	1.05	290	P	Pn	20 15 30.4	-0.2
GEYV				*i* AML	AML	20 15 51.0	
	comp=N,27nm,0.5s						
GEYV				*i* AML	AML	20 15 53.0	
	comp=E,22nm,0.4s						
SAUV	Serdivan-Sakar	1.14	303	PN	Pn	20 15 31.8	0.0
KDZE	Karadeniz Ereo	1.19	355	PN	Pn	20 15 32.4	-0.1
AUBOZ	BOZOYUK	1.22	260	PN	Pn	20 15 33.0	+0.1
CAVI	Cavuskoy	1.34	274	PN	Pb	20 15 35.6	+0.9
ADVT	Abdulvahap	1.45	283	PN	Pg	20 15 36.9	+0.3
BRTR	Keskin Array B	1.63	104	PN	Pb	20 15 39.3	-0.4
TVSB	Tavsanli	1.77	248	PN	Pb	20 15 41.6	-0.6

NEIC ***15*** *20:18:41.6±2.4,39°.75N±0°.05×20°.79E±0°.04,h10km±1km, mb4.6/12,ML4.1(THE),Error ellipse: s-maj=8.1km s-min=5.3km az=196.0*

ATH ***15*** *20:18:42.0,39°.75N×20°.74E,h19km±1km,ML3.9/11,Error ellipse: s-maj=1.6km s-min=0.9km az=190.0*

TIR ***15*** *20:18:42.0,39°.73N×20°.74E,h7km±2km,Md3.7,Ml4.1*

THE ***15*** *20:18:43.1,39°.74N×20°.74E,h0km±2km,ML4.1/14,Error ellipse: s-maj=2.5km s-min=0.7km az=12.0*

IDC ***15*** *20:18:44.0±4.3,39°.81N×20°.73E,h35km±40km,mb4.1/6, mbtmp4.3/9,ML3.2/1,Error ellipse: s-maj=27.6km s-min=22.0km az=143.0*

ISC 15 20:18:42.3±0.8,39°.74N±0°.01×20°.74E±0°.02,h17km±4km, n117,σ1$22/150,mb4.5/12,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.12	134	P	Pg	20 18 45.5	-0.5
JAN				S	Sg	20 18 48.6	+0.1
	91μm,0.2s						
JAN	Janina	0.12	134	P	Pg	20 18 45.5	-0.5
JAN				S	Sg	20 18 48.5	+0.1
JAN				AML	AML	20 18 48.9	
JAN				AML	AML	20 18 49.3	
IGT	Igoumenitsa	0.38	237	P	Pg	20 18 50.0	0.0
IGT				S	Sb	20 18 56.8	+0.7
	71μm,0.5s						
IGT	Igoumenitsa	0.38	237	P	Pg	20 18 50.0	0.0
	baz=239						
IGT				S	Sb	20 18 56.0	-0.1
	baz=239						
IGT	Igoumenitsa	0.38	237	P	Pg	20 18 50.0	0.0
IGT				S	Sb	20 18 56.4	+0.3
IGT				AML	AML	20 18 58.5	
IGT				AML	AML	20 18 59.8	
LSK	Leskovik	0.42	345	P	Pb	20 18 51.0	-0.5
LSK				S	Sb	20 18 57.7	0.0
	29μm,0.5s						
LSK	Leskovik	0.42	345	P	Pb	20 18 51.0	-0.5
	baz=346						
LSK				S	Sb	20 18 57.7	0.0
	baz=346						
LSK				AMP			
	comp=N,128nm,0.5s,baz=346						
PENT	Pentalofos	0.55	34	P	Pg	20 18 53.1	-0.2
PENT				S	Sb	20 19 03.1	+1.8
PENT	Pentalofos	0.55	34	P	Pg	20 18 53.0	-0.2
PENT				S	Sb	20 19 01.4	+0.1
PENT				AML	AML	20 19 03.4	
	comp=E,18439μm,0.4s						
PENT				AML	AML	20 19 03.7	
	comp=N,3585μm,0.4s						
SRN	Sarande	0.59	284	P	Pg	20 18 53.6	-0.3
SRN				S	Sb	20 19 02.7	+0.5
	comp=N,8μm,0.4s						
SRN	Sarande	0.59	284	P	Pg	20 18 53.6	-0.3
	baz=285						
SRN				S	Sb	20 19 02.4	+0.2
	baz=285						
SRN				AMP			
	comp=N,34nm,0.4s,baz=285						
KASA	Kassiopi	0.62	271	P	Pg	20 18 53.8	-0.7
KASA				S	Sg	20 19 02.6	-0.2
KASA				AML	AML	20 19 05.0	
	comp=E,25979μm,0.3s						
KASA				AML	AML	20 19 07.9	
	comp=N,32942μm,0.3s						
NEST	Nestorio	0.72	19	P	Pb	20 18 56.4	0.0
NEST	Nestorio	0.72	19	P	Pb	20 18 56.2	-0.3
NEST				S	Sg	20 19 05.6	-0.3
NEST				AML	AML	20 19 14.0	
	comp=N,11371μm,0.6s						
NEST				AML	AML	20 19 15.5	
	comp=E,12096μm,0.5s						
KEK	Kerkira	0.73	268		Pg	20 18 55.6	-1.0
KEK					Sb	20 19 06.7	+0.4
KEK	Kerkira	0.73	268	P	Pg	20 18 55.5	-1.0
KEK	Kerkira	0.73	268	P	Pg	20 18 55.5	-1.0
KEK				AML	AML	20 19 12.6	
	comp=E,20631μm,0.3s						
KEK				AML	AML	20 19 16.1	
	comp=N,19728μm,0.5s						
KBN	Korca	0.89	2		Pg	20 18 58.7	-0.9
KBN	Korca	0.89	2	P	Pg	20 18 58.8	-0.7
KBN	Korca	0.89	2	P	Pg	20 18 59.0	-0.5
	baz=2.0						
KBN				S	Sn	20 19 13.3	+0.7
	baz=2.0						
KBN				AMP			
	comp=N,17nm,0.6s,baz=2.0						
TSLK	Tsoukalades, L	0.91	184	P	Pb	20 19 00.3	+0.6
TSLK				S	Sn	20 19 15.1	+1.9
	comp=N,13μm,0.4s						
TSLK	Tsoukalades, L	0.91	184	P	Pb	20 19 00.1	+0.3
LKD2	Lefkada island	0.95	184	P	Pb	20 19 00.7	+0.3
LKD2				S	Sn	20 19 15.4	+1.3
	comp=N,10μm,0.4s						
LKD2	Lefkada island	0.95	184	P	Pb	20 19 00.7	+0.3
	baz=185						
LKD2				S	Sn	20 19 14.9	+0.7
	baz=185						
LKD2	Lefkada island	0.95	184	P	Pg	20 19 00.4	-0.3
LKD2				AML	AML	20 19 18.0	
	comp=E,18242μm,0.5s						
LKD2				AML	AML	20 19 22.0	
	comp=N,21403μm,0.4s						
KZN	Kozani	0.97	54	P	Pg	20 19 00.7	-0.5
KZN				S	Sn	20 19 16.6	+1.8
	comp=N,5μm,0.6s						
KZN	Kozani	0.97	54	P	Pg	20 19 00.5	-0.7
KZN				AML	AML	20 19 19.3	
	comp=E,12510μm,0.6s						
KZN				AML	AML	20 19 20.6	
	comp=N,8087μm,0.5s						
THL	Klokotos Trika	1.00	100	P	Pg	20 19 00.8	-0.9
THL	Klokotos Trika	1.00	100	P	Pg	20 19 01.2	-0.5
THL				AML	AML	20 19 19.5	
	comp=N,6925μm,0.8s						
THL				AML	AML	20 19 20.2	
	comp=E,7398μm,0.6s						
NYDR	Nydri-Lefkada	1.02	182	P	Pb	20 19 01.9	+0.3
NYDR				S	Sn	20 19 17.8	+1.9
	comp=E,8μm,0.6s						
DRAG	Dragano-Lefkad	1.06	187	P	Pg	20 19 01.9	-0.9
DRAG				S	Sn	20 19 18.6	+1.8
EVGI	Lefkada island	1.12	183	P	Pn	20 19 04.1	+0.9
EVGI				S	Sn	20 19 20.7	+2.5
	comp=E,12μm,0.3s						
EVGI	Lefkada island	1.12	183	P	Pb	20 19 03.3	+0.1
TYRN	Tyrnavos	1.15	91	P	Pb	20 19 03.4	-0.4
EVR	Evrytania	1.17	134	P	Pb	20 19 04.3	+0.2
VLO	Vlora	1.20	308	Pn	Pg	20 19 06.2	+0.7
VLO				Sn	Sn	20 19 24.3	+4.0
VLO	Vlora	1.20	308	P	Pg	20 19 06.8	+1.3
VLO				S	Sn	20 19 24.6	+4.3
	comp=E,11μm,0.5s						
VLO	Vlora	1.20	308	P	Pg	20 19 06.8	+1.3
	baz=308						
VLO				S	Sn	20 19 23.6	+3.3
	baz=308						
KTI	Kastanea	1.24	58	P	Pg	20 19 05.9	-0.4
LRSO	Larissa Observ	1.28	92	P	Pb	20 19 06.3	+0.4
LRSO	Larissa Observ	1.28	92	P	Pb	20 19 06.3	+0.4
PVO	Paravola	1.28	151	P	Pg	20 19 07.2	+0.3
PVO				S	Sg	20 19 27.1	+3.6
	comp=E,7μm,0.6s						
PVO	Paravola	1.28	151	P	Pg	20 19 07.2	+0.3
FSK	Fiskardo	1.28	186	P	Pg	20 19 07.7	+0.6
FSK				S	Sg	20 19 24.8	+1.0
	comp=E,8μm,0.3s						
FSK	Fiskardo	1.28	186	P	Pg	20 19 07.2	+0.1
MAKR	Makrakomi, Fth	1.30	123	P	Pg	20 19 07.0	-0.4
LIT	Litokhoron	1.39	74	Pn	Pn	20 19 07.6	+0.6
LIT	Litokhoron	1.39	74	P	Pb	20 19 07.9	0.0
LIT				S	Sg	20 19 29.8	+2.5
	comp=E,7μm,0.5s						
LIT	Litokhoron	1.39	74	P	Pb	20 19 07.9	0.0
LIT				AML	AML	20 19 34.6	
	comp=N,11818μm,0.5s						
LIT				AML	AML	20 19 35.1	
	comp=E,17581μm,0.6s						
KEF4	Livadi, Kephal	1.50	190	P	Pb	20 19 10.4	+0.7
KEF4	Livadi, Kephal	1.50	190	P	Pb	20 19 09.6	-0.1
DMLN	Damoulianata-K	1.52	191	P	Pb	20 19 10.2	+0.1
VLS	Valsamata	1.56	184	P	Pb	20 19 10.6	-0.2
VLS				AML	AML	20 19 36.0	
	comp=N,9705μm,0.4s						
VLS				AML	AML	20 19 37.8	
	comp=E,8187μm,0.3s						
EFP	Efpalio	1.59	145	P	Pg	20 19 13.1	+0.2
EFP	Efpalio	1.59	145	P	Pg	20 19 12.4	-0.6
PSDA	Pessada-Kefalo	1.63	184	P	Pb	20 19 12.2	+0.3
PSDA				S	Sg	20 19 34.1	-0.6
	comp=E,7μm,0.2s						
PSDA	Pessada-Kefalo	1.63	184	P	Pb	20 19 12.1	+0.2
SERG	Sergoula	1.67	142	P	Pg	20 19 14.3	-0.2
TIR	Tirane	1.74	338	Pn	Pg	20 19 14.8	-1.0
TIR	Tirane	1.74	338	P	Pb	20 19 14.3	+0.5
	baz=338						
GRG	Griva	1.76	46	P	Pb	20 19 13.7	-0.5
RLS	Riolos of Patr	1.77	161	P	Pb	20 19 15.2	+0.9
SCTE	Santa Cesarea	1.78	282	Pn	Pn	20 19 12.6	+0.3
SCTE	Santa Cesarea	1.78	282	P	Pb	20 19 15.0	+0.5
	baz=282						
THE	Thessaloniki	1.92	62	P	Pb	20 19 16.0	-0.9
	baz=61						
THE	Thessaloniki	1.92	62	P	Pn	20 19 15.8	+1.5
DRO	Drossia	1.94	157	P	Pb	20 19 17.7	+0.5
PHP	Peshkopia	1.96	353	P	Pb	20 19 18.2	+0.7
	baz=354						
PHP				S	Sg	20 19 47.2	+1.9
	baz=354						
PHP				AMP			
	comp=N,6.0nm,0.9s,baz=354						
NEO	Neokhori	1.97	102	P	Pb	20 19 17.0	-0.7
HORT	Hortiatis	2.00	64	P	Pn	20 19 16.9	+1.4
KLV	Kalavryta, Ach	2.02	147	P	Pb	20 19 19.0	+0.4
LKR	Lokris	2.06	121	P	Pn	20 19 17.9	+1.7
KNT	Kendrikon	2.18	48	P	Pn	20 19 19.0	+1.2
SOH	Sokhos	2.27	61	P	Pn	20 19 20.4	+1.2
OUR	Ouranopolis	2.56	76	P	Pn	20 19 24.4	+1.3
OUR	Ouranopolis	2.56	76	P	Pn	20 19 24.3	+1.3
SRS	Serrai	2.58	57	P	Pn	20 19 24.9	+1.6
KOKK	Kokkinochori,	2.72	66	P	Pn	20 19 27.0	+1.8
KOKK				S	Sn	20 20 01.2	+3.5
ITM	Ithomi	2.72	160	Pn	Pn	20 19 27.3	+2.0
TIP	Timpagrande	3.13	261	Pn	Pn	20 19 30.8	-0.2
VTS	Vitosha	3.44	32	Pn	Pn	20 19 37.2	+1.9
RDO	Rodhopi	3.92	67	Pn	Pn	20 19 42.5	+0.7
CEL	Celeste	4.05	250	Pn	Pn	20 19 43.6	0.0
ALN	Alexandroupoli	4.22	72	Pn	Pn	20 19 46.9	+1.1
DIVS	Divibare	4.39	353	Pn	Pn	20 19 49.4	+1.1
PAOL	Paolisi	4.89	287	Pn	Pn	20 19 56.1	+1.0
VAE	Valguarnera	5.45	248	Pn	Pn	20 20 03.7	+0.9
	comp=N,45nm,0.7s,baz=247,slow=23,SNR=0.6						
VAE				Sn	Sn	20 21 02.1	-2.9
	comp=N,3.5nm,0.3s,baz=206,slow=9.4,SNR=1.2						
IDI	Anoyia	5.53	142	Pn	Pn	20 20 04.7	+0.7
	comp=N,59nm,0.9s,baz=294,slow=18,SNR=1.0						
IDI				Sn	Sn	20 21 05.5	-1.8
	comp=N,10nm,0.3s,baz=325,slow=14,SNR=7.1						
RAFF	Raffo Rosso	5.60	245	Pn	Pn	20 20 03.7	-1.1
CAMP	Campotosto	6.20	299	Pn	Pn	20 20 13.8	+0.6
NRCA	Norcia	6.52	301	Pn	Pn	20 20 18.4	+0.8
MURB	Monte Urbino	7.10	302	Pn	Pn	20 20 27.4	+1.9
BORA	Eskisehir	7.48	86	Pn	Pn	20 20 33.3	+2.6
ISP	Isparta	7.88	101	Pn	Pn	20 20 38.5	+2.3
BRTR	Keskin Array B	9.94	86	Pn	Pn	20 21 06.5	+2.0
	comp=N,0.2nm,0.3s,baz=265,slow=11,SNR=1.2						
	comp=N,2.0nm,0.8s						
NC602	NORSAR Array S	21.79	348	P	P	20 23 32.8	-0.3
FINES	FINESS Array B	21.98	7	P	P	20 23 34.2	-1.0
	comp=N,10nm,0.8s,baz=209,slow=11,SNR=3.1						
	comp=N,10nm,0.8s						
FIA1	FINESS Array S	21.98	7	P	P	20 23 34.9	-0.3
FIA1				IAmb	IAmb	20 23 52.0	
	comp=Z,40nm,1.1s						
NOA	NORSAR Array B	22.13	348	P	P	20 23 35.4	-1.5
	comp=Z,4.3nm,0.8s,baz=165,slow=10,SNR=4.1						
	comp=Z,4.3nm,0.8s						
TORD	Torodi Ar. Bea	31.36	218	P	P	20 25 01.9	-0.3
	comp=Z,2.7nm,0.9s,baz=31,slow=8.4,SNR=2.4						
	comp=Z,2.7nm,0.9s						
KK31	Karatay Array	37.03	68	P	P	20 25 50.6	-0.7
KKAR	Karatay Array	37.03	68	P	P	20 25 50.5	-0.7
KKAR	Karatay Array	37.03	68	P	P	20 25 50.8	-0.4
KKAR				IAmb	IAmb	20 25 52.5	
	comp=Z,8.4nm,1.2s						
MAKZ	Makanchi	44.14	60	P	P	20 26 48.9	-1.0
MAKZ				IAmb	IAmb	20 26 50.6	
	comp=Z,7.4nm,0.9s						
MK31	Makanchi Array	44.35	60	P	P	20 26 50.4	-1.2
MK31				IAmb	IAmb	20 26 51.4	
	comp=Z,5.3nm,0.6s						
MKAR	Makanchi Array	44.35	60	P	P	20 26 50.7	-0.9
	comp=Z,5.3nm,0.4s,baz=283,slow=7.7,SNR=10						
	comp=Z,5.3nm,0.4s						
MKAR	Makanchi Array	44.35	60	P	P	20 26 50.5	-1.1
ZAA0	Zalesovo Array

*IDC **15** 20:22:31.9±4.2, 39.°80N×20.°78E, h31km±37km, mb3.7/9, mbtmp3.8/14, ML3.2/5, Error ellipse: s-maj=21.3km s-min=14.4km az=51.0*
*THE **15** 20:22:31.7, 39.°75N×20.°70E, h0km±2km, ML3.3/17, Error ellipse: s-maj=2.5km s-min=0.7km az=171.0*
ISC 15 20:22:30.8±0.7, 39.75N±0.02×20.71E±0.02, h17km±5km, n160, σ1§38/207, mb3.9/10, 4C-2D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**130**	P	**Pg**	**20 22 34.5**	**-0.4**
JAN				S	**Sg**	**20 22 38.1**	**+0.4**
	21μm,0.4s						
JAN	**Janina**	**0.15**	**130**	P	**Pg**	**20 22 34.5**	**-0.4**
JAN				S	**Sg**	**20 22 38.1**	**+0.4**
JAN				AML	AML	20 22 38.5	
	comp=E,36235μm,0.4s						
JAN				AML	AML	20 22 43.9	
	comp=N,46262μm,0.4s						
IGT	**Igoumenitsa**	**0.36**	**233**	P	**Pg**	**20 22 37.9**	**-0.4**
IGT				S	**Sb**	**20 22 45.3**	**+1.3**
	comp=N,14μm,0.5s						
IGT	**Igoumenitsa**	**0.36**	**233**	P	**Pg**	**20 22 37.9**	**-0.4**
	baz=238						
IGT				S	**Sb**	**20 22 44.7**	**+0.7**
	baz=238						
IGT	**Igoumenitsa**	**0.36**	**233**	P	**Pg**	**20 22 38.2**	**-0.1**
IGT				S	**Sb**	**20 22 44.2**	**+0.2**
IGT				AML	AML	20 22 46.5	
	comp=E,30755μm,0.5s						
IGT				AML	AML	20 22 48.9	
	comp=N,24751μm,0.4s						
LSK	**Leskovik**	**0.41**	**349**	P	**Pg**	**20 22 38.9**	**-0.3**
LSK				S	**Sb**	**20 22 46.7**	**+1.2**
	comp=N,15μm,0.7s						
LSK	**Leskovik**	**0.41**	**349**	P	**Pg**	**20 22 39.1**	**-0.1**
	baz=344						
LSK				S	**Sb**	**20 22 45.6**	**+0.2**
	baz=344						
LSK				AMP			
	comp=N,58nm,0.7s,baz=344						
PENT	**Pentalofos**	**0.56**	**37**	P	**Pg**	**20 22 41.7**	**-0.2**
PENT				S	**Sg**	**20 22 49.5**	**+0.1**
	comp=N,2μm,0.4s						
PENT	**Pentalofos**	**0.56**	**37**	P	**Pg**	**20 22 41.9**	**0.0**
PENT				S	**Sg**	**20 22 49.5**	**+0.1**
PENT				AML	AML	20 22 53.8	
	comp=N,1544μm,0.4s						
PENT				AML	AML	20 22 54.7	
	comp=E,4575μm,0.4s						
SRN	**Sarande**	**0.56**	**284**	P	**Pg**	**20 22 41.6**	**-0.2**
SRN				S	**Sb**	**20 22 50.4**	**+0.7**
	comp=E,6μm,0.5s						
SRN	**Sarande**	**0.56**	**284**	P	**Pg**	**20 22 41.7**	**-0.2**
	baz=284						
SRN				S	**Sb**	**20 22 50.3**	**+0.6**
	baz=284						
SRN				AMP			
	comp=N,17nm,0.4s,baz=284						
KASA	**Kassiopi**	**0.59**	**270**	P	**Pg**	**20 22 42.1**	**-0.5**
KASA				S	**Sg**	**20 22 50.5**	**0.0**
KASA				AML	AML	20 22 52.1	
	comp=N,12233μm,0.3s						
KASA				AML	AML	20 22 53.7	
	comp=E,12766μm,0.4s						
KEK	**Kerkira**	**0.70**	**267**		**Pg**	**20 22 43.4**	**-1.1**
KEK	**Kerkira**	**0.70**	**267**	P	**Pg**	**20 22 43.6**	**-0.9**
KEK				S	**Sb**	**20 22 54.7**	**+0.9**
	comp=E,4μm,0.3s						
KEK	**Kerkira**	**0.70**	**267**	P	**Pg**	**20 22 43.6**	**-0.9**
KEK				AML	AML	20 22 59.9	
	comp=E,8448μm,0.3s						
KEK				AML	AML	20 23 00.5	
	comp=N,7854μm,0.4s						
NEST	**Nestorio**	**0.71**	**22**	P	**Pg**	**20 22 44.5**	**-0.3**
NEST				S	**Sn**	**20 22 57.2**	**+0.5**
	comp=N,2μm,0.5s						
NEST	**Nestorio**	**0.71**	**22**	P	**Pg**	**20 22 44.5**	**-0.3**
KBN	**Korca**	**0.87**	**4**		**Pg**	**20 22 47.0**	**-0.9**
KBN	**Korca**	**0.87**	**4**	P	**Pg**	**20 22 46.9**	**-0.9**
KBN				S	**Sn**	**20 23 01.9**	**+1.2**
	comp=N,1μm,0.6s						
KBN	**Korca**	**0.87**	**4**	P	**Pg**	**20 22 47.2**	**-0.6**
	baz=1.0						
KBN				S	**Sb**	**20 23 00.9**	**+2.0**
	baz=1.0						
KBN				AMP			
	comp=N,5.8nm,0.7s,baz=1.0						
TSLK	**Tsoukalades, L**	**0.93**	**182**	P	**Pb**	**20 22 49.0**	**+0.7**
TSLK	**Tsoukalades, L**	**0.93**	**182**	P	**Pb**	**20 22 49.0**	**+0.7**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pb**	**20 22 49.9**	**+0.9**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pb**	**20 22 49.8**	**+0.8**
	baz=185						
LKD2				S	**Sn**	**20 23 03.5**	**+0.8**
	baz=185						
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pb**	**20 22 49.8**	**+0.9**
KZN	**Kozani**	**0.99**	**56**	P	**Pg**	**20 22 49.8**	**-0.2**
KZN				S	**Sn**	**20 23 06.1**	**+2.6**
	comp=N,1μm,0.6s						
KZN	**Kozani**	**0.99**	**56**	P	**Pg**	**20 22 49.7**	**-0.3**
KZN				AML	AML	20 23 05.8	
	comp=E,2511μm,1.0s						
KZN				AML	AML	20 23 06.7	
	comp=N,2547μm,0.6s						
THL	**Klokotos Trika**	**1.03**	**100**	P	**Pb**	**20 22 50.8**	**+0.8**
NYDR	**Nydri-Lefkada**	**1.04**	**180**	P	**Pb**	**20 22 50.7**	**+0.5**
DRAG	**Dragano-Lefkad**	**1.07**	**185**	P	**Pn**	**20 22 51.7**	**+0.8**
EVGI	**Lefkada island**	**1.13**	**182**	P	**Pn**	**20 22 52.7**	**+1.0**
VLO	**Vlora**	**1.17**	**308**		**Pg**	**20 22 54.1**	**+0.7**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**20 22 54.1**	**+0.7**
VLO				S	**Sn**	**20 23 12.9**	**+5.0**
	comp=N,5μm,0.4s						
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**20 22 54.2**	**+0.8**
	baz=308						
VLO				S	**Sn**	**20 23 12.1**	**+4.3**
	baz=308						
TYRN	**Tyrnavos**	**1.18**	**91**	P	**Pb**	**20 22 52.7**	**+0.1**
EVR	**Evrytania**	**1.20**	**134**	P	**Pg**	**20 22 54.7**	**+0.8**
EVR	**Evrytania**	**1.20**	**134**	P	**Pb**	**20 22 53.5**	**+0.5**
KTI	**Kastanea**	**1.26**	**59**	P	**Pn**	**20 22 54.4**	**+0.8**
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**20 22 56.1**	**+0.4**
FSK				S	**Sg**	**20 23 15.5**	**+2.9**
	comp=N,965nm,0.7s						
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**20 22 55.7**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.33**	**123**	P	**Pg**	**20 22 56.3**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.33**	**123**	P	**Pg**	**20 22 56.1**	**-0.3**
OHR	**Ohrid**	**1.36**	**3**	*e*Pg	**Pg**	**20 22 56.9**	**-0.1**
OHR				*e*Sg	**Sg**	**20 23 17.1**	**+2.3**
LIT	**Litokhoron**	**1.42**	**75**	Pn	**Pn**	**20 22 56.6**	**+0.9**
LIT	**Litokhoron**	**1.42**	**75**	P	**Pb**	**20 22 57.2**	**+0.5**
KEF4	**Livadi, Kephal**	**1.51**	**188**	P	**Pb**	**20 22 58.4**	**+0.2**
DMLN	**Damoulianata-K**	**1.53**	**190**	P	**Pg**	**20 22 59.9**	**-0.4**
VLS	**Valsamata**	**1.57**	**183**	P	**Pn**	**20 22 58.8**	**+0.9**
VLS				S	**Sg**	**20 23 22.2**	**+0.6**
	comp=N,822nm,0.5s						
EFP	**Efpalio**	**1.62**	**144**	P	**Pg**	**20 23 01.6**	**-0.3**
PSDA	**Pessada-Kefalo**	**1.64**	**183**	P	**Pb**	**20 23 00.8**	**+0.4**
SERG	**Sergoula**	**1.70**	**141**	P	**Pg**	**20 23 03.5**	**0.0**
TIR	**Tirane**	**1.72**	**338**		**Pn**	**20 23 01.4**	**+1.6**
TIR	**Tirane**	**1.72**	**338**	P	**Pb**	**20 23 02.1**	**+0.3**
TIR	**Tirane**	**1.72**	**338**	*e*Pn	**Pb**	**20 23 01.8**	**0.0**
TIR				*e*Sn	**Sg**	**20 23 26.8**	**+0.6**
TIR	**Tirane**	**1.72**	**338**	P	**Pb**	**20 23 02.3**	**+0.5**
	baz=338						
TIR				AMP			
	comp=N,1.9nm,1.0s,baz=338						
SCTE	**Santa Cesarea**	**1.75**	**281**	Pn	**Pn**	**20 23 00.8**	**+0.5**
GRG	**Griva**	**1.77**	**47**	P	**Pn**	**20 23 01.9**	**+1.3**
GRG				S	**Sg**	**20 23 28.3**	**+0.5**
	comp=N,660nm,0.8s						
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pb**	**20 23 03.3**	**+0.2**
LAKA	**Lakka**	**1.81**	**146**	P	**Pb**	**20 23 03.9**	**+0.6**
AXAR	**Agios Charalam**	**1.81**	**122**	P	**Pg**	**20 23 05.4**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.85**	**143**	P	**Pb**	**20 23 05.3**	**+1.3**
PHP	**Peshkopia**	**1.94**	**354**	P	**Pb**	**20 23 05.7**	**0.0**
PHP	**Peshkopia**	**1.94**	**354**	P	**Pb**	**20 23 06.1**	**+0.4**
	baz=353						
PHP				S	**Sg**	**20 23 35.1**	**+1.8**
	baz=353						
PHP				AMP			
	comp=N,2.8nm,0.8s,baz=353						
DRO	**Drossia**	**1.96**	**156**	P	**Pb**	**20 23 05.7**	**-0.3**
XOR	**Xorichti**	**1.96**	**101**	P	**Pb**	**20 23 05.5**	**-0.5**
HORT	**Hortiatis**	**2.02**	**64**	P	**Pn**	**20 23 05.7**	**+1.6**
HORT				S	**Sb**	**20 23 33.5**	**+1.6**
	comp=N,138nm,0.7s						
KLV	**Kalavryta, Ach**	**2.04**	**146**	P	**Pb**	**20 23 07.3**	**-0.1**
LKR	**Lokris**	**2.09**	**121**	P	**Pb**	**20 23 07.5**	**-0.7**
VAY	**Valandovo**	**2.12**	**42**	*e*Pn	**Pb**	**20 23 07.8**	**-0.8**
VAY				*e*Sn	**Sn**	**20 23 33.9**	**+2.7**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pn**	**20 23 07.2**	**+0.9**
SKO	**Skopje**	**2.29**	**14**	*e*Sn	**Sn**	**20 23 38.0**	**+2.6**
SOH	**Sokhos**	**2.29**	**61**	P	**Pn**	**20 23 09.8**	**+2.0**
SOH				S	**Sb**	**20 23 40.4**	**+0.7**
	comp=N,238nm,0.6s						
ULC	**Ulcinj**	**2.47**	**334**	⇑*i*Pn	**Pn**	**20 23 10.7**	**+0.5**
ULC				*i* Sn	**Sn**	**20 23 42.8**	**+2.8**
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**20 23 13.3**	**+1.6**
SRS	**Serrai**	**2.59**	**57**	P	**Pn**	**20 23 13.9**	**+2.0**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**20 23 12.9**	**+1.0**
SRS				*e*Sn	**Sn**	**20 23 44.1**	**+1.2**
DRME	**Dracevica, Mon**	**2.69**	**335**	⇑*i*Pn	**Pn**	**20 23 13.8**	**+0.6**
DRME				*i* Sn	**Sn**	**20 23 48.1**	**+2.7**
KOKK	**Kokkinochori,**	**2.74**	**66**	P	**Pn**	**20 23 15.2**	**+1.4**
KOKK				S	**Sb**	**20 23 51.2**	**-1.2**
	comp=N,68nm,0.7s						
ITM	**Ithomi**	**2.74**	**159**	Pn	**Pn**	**20 23 15.7**	**+1.8**
KKB	**Krupnik**	**2.78**	**40**	P	**Pn**	**20 23 16.2**	**+1.8**
BUM	**Brajici-Budva**	**2.89**	**332**	*e*Pn	**Pn**	**20 23 16.5**	**+0.5**
BUM				*i* Sn	**Sn**	**20 23 52.8**	**+2.4**
PDG	**Podgorica**	**2.89**	**338**	Pn	**Pn**	**20 23 17.1**	**+1.1**
TTG	**Podgorica**	**2.89**	**338**	*e*Pn	**Pn**	**20 23 16.7**	**+0.7**
TTG				*i* Sn	**Sn**	**20 23 53.0**	**+2.7**
PVY	**Plav**	**2.90**	**349**	*e*Pn	**Pn**	**20 23 17.1**	**+0.9**
PVY				*i* Sn	**Sn**	**20 23 53.7**	**+3.1**
MMB	**Musomiste**	**2.94**	**50**	P	**Pn**	**20 23 18.7**	**+2.0**
CEME	**Cevo**	**3.10**	**335**	⇑*i*Pn	**Pn**	**20 23 19.5**	**+0.6**
CEME				*i* Sn	**Sn**	**20 23 57.9**	**+2.3**
TIP	**Timpagrande**	**3.11**	**261**		**Pn**	**20 23 18.8**	**-0.2**
HCY	**Herceg Novi**	**3.17**	**329**	*e*Pn	**Pn**	**20 23 20.1**	**+0.3**
HCY				*i* Sn	**Sn**	**20 23 57.9**	**+0.7**
BARS	**Barje**	**3.17**	**15**	*e*Pn	**Pn**	**20 23 22.2**	**+2.3**
IVA	**Berane**	**3.18**	**349**	⇑*i*Pn	**Pn**	**20 23 21.0**	**+1.0**
IVA				*i* Sn	**Sn**	**20 24 00.5**	**+3.0**
KOME	**Kolasin**	**3.22**	**344**	⇓*i*Pn	**Pn**	**20 23 21.4**	**+0.8**
KOME				*i* Sn	**Sn**	**20 24 01.3**	**+2.7**
NKME	**Niksic**	**3.29**	**337**	⇓*i*Pn	**Pn**	**20 23 22.1**	**+0.6**
NKME				*i* Sn	**Sn**	**20 24 02.6**	**+2.4**
VTS	**Vitosha**	**3.44**	**33**	Pn	**Pn**	**20 23 25.2**	**+1.5**
VTS	**Vitosha**	**3.44**	**33**	P	**Pn**	**20 23 25.6**	**+1.9**
SELS	**Selova**	**3.48**	**5**	*e*Pn	**Pn**	**20 23 25.8**	**+1.7**
SJES	**Sjenica**	**3.55**	**351**	*e*Pn	**Pn**	**20 23 27.3**	**+2.2**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pn**	**20 23 28.0**	**+0.7**
UPM				*i* Sn	**Sn**	**20 24 12.6**	**+2.0**
PLE	**Pljevlja**	**3.71**	**345**	*e*Pn	**Pn**	**20 23 28.2**	**+0.9**
PLE				*i* Sn	**Sn**	**20 24 13.1**	**+2.4**
CUC	**Castrocucco**	**3.77**	**275**	Pn	**Pn**	**20 23 29.9**	**+1.8**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**	**20 23 30.9**	**+2.3**
KTHR	**Kythira**	**3.93**	**152**	P	**Pn**	**20 23 33.2**	**+3.0**
KTHR				S	**Sn**	**20 24 21.2**	**+5.3**
	comp=N,72nm,0.4s						
RDO	**Rodhopi**	**3.94**	**68**	Pn	**Pn**	**20 23 31.0**	**+0.6**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn	**Pn**	**20 23 31.7**	**+1.2**
CEL	**Celeste**	**4.03**	**250**	Pn	**Pn**	**20 23 31.6**	**-0.2**
GRUS	**Gruza**	**4.13**	**0**	*e*Pn	**Pn**	**20 23 34.6**	**+1.6**
ZAGS	**Zajecar**	**4.22**	**15**	*e*Pn	**Pn**	**20 23 35.3**	**+1.1**
BBLS	**Lazići**	**4.22**	**347**	*e*Pn	**Pn**	**20 23 35.3**	**+0.9**
ALN	**Alexandroupoli**	**4.24**	**73**	Pn	**Pn**	**20 23 35.8**	**+1.3**
SGRT	**San Giovanni R**	**4.27**	**300**	Pn	**Pn**	**20 23 34.7**	**-0.3**
DIVS	**Divibare**	**4.38**	**353**	Pn	**Pn**	**20 23 37.3**	**+0.8**
DIVS	**Divibare**	**4.38**	**353**	*e*Pn	**Pn**	**20 23 37.7**	**+1.2**
TRUS	**Trudelj**	**4.47**	**357**	*e*Pn	**Pn**	**20 23 39.2**	**+1.5**
KUBS	**Kucevo**	**4.71**	**8**	*e*Pn	**Pn**	**20 23 42.0**	**+1.0**
PAOL	**Paolisi**	**4.86**	**287**	Pn	**Pn**	**20 23 44.1**	**+1.1**
TEKS	**Tekeris**	**4.87**	**350**	*e*Pn	**Pn**	**20 23 43.3**	**+0.1**
VAE	**Valguarnera**	**5.43**	**247**	Pn	**Pn**	**20 23 51.2**	**+0.4**
	comp=N,0.4nm,0.3s,baz=179,slow=11,SNR=1.8						
VAE				Sn	**Sn**	**20 24 51.0**	**-1.9**
	comp=N,1.3nm,0.3s,baz=338,slow=11,SNR=1.8						
	comp=N,9.9nm,0.7s						
FRGS	**Fruska Gora**	**5.44**	**353**	*e*Pn	**Pn**	**20 23 51.7**	**+0.7**
IDI	**Anoyia**	**5.56**	**142**	Pn	**Pn**	**20 23 52.3**	**-0.4**
	comp=N,0.5nm,0.3s,baz=275,slow=17,SNR=1.3						
IDI				Sn	**Sn**	**20 24 53.6**	**-2.6**
	comp=N,1.6nm,0.3s,baz=165,slow=13,SNR=1.6						
	comp=N,9.3nm,0.8s						
RAFF	**Raffo Rosso**	**5.58**	**245**	Pn	**Pn**	**20 23 54.0**	**+1.1**
INTR	**Introdacqua**	**5.63**	**296**	Pn	**Pn**	**20 23 54.5**	**+0.9**
AQU	**L'Aquila**	**6.10**	**298**	Pn	**Pn**	**20 24 00.8**	**+0.6**
CAMP	**Campotosto**	**6.17**	**299**	Pn	**Pn**	**20 24 01.9**	**+0.8**
NRCA	**Norcia**	**6.49**	**301**	Pn	**Pn**	**20 24 06.3**	**+0.8**
CESX	**Cesi**	**6.76**	**298**	Pn	**Pn**	**20 24 09.8**	**+0.7**
MLR	**Muntele Rosu**	**6.92**	**32**	Pn	Pn	20 24 16.2	+4.9
	comp=N,0.5nm,0.3s,baz=249,slow=5.9,SNR=5.6						
MLR	**Muntele Rosu**	**6.92**	**32**	Pn	**Pn**	**20 24 14.7**	**+3.4**
MURB	**Monte Urbino**	**7.07**	**302**	Pn	**Pn**	**20 24 14.6**	**+1.2**
LATE	**Laterza**	**7.30**	**296**	Pn	**Pn**	**20 24 17.9**	**+1.4**
OSSC	**Osservatorio P**	**8.02**	**301**	Pn	**Pn**	**20 24 24.8**	**-1.7**
PSZ	**Piszkesteto**	**8.19**	**356**	Pn	**Pn**	**20 24 29.4**	**+0.7**
PRED	**Cave del Predi**	**8.48**	**324**	Pn	**Pn**	**20 24 32.9**	**0.0**
TEOL	**Teolo**	**8.71**	**313**	Pn	**Pn**	**20 24 34.4**	**-1.4**
STAL	**STALIGIAL**	**8.75**	**321**	Pn	**Pn**	**20 24 35.3**	**-1.1**
CLUD	**Cludinico**	**8.81**	**322**	Pn	**Pn**	**20 24 36.7**	**-0.6**
VLC	**Villacollemand**	**8.86**	**303**	Pn	**Pn**	**20 24 37.9**	**0.0**
CTI	**Castel Tesino**	**9.15**	**316**	Pn	**Pn**	**20 24 41.1**	**-0.8**
MSSA	**Maissana**	**9.49**	**302**	Pn	**Pn**	**20 24 47.3**	**+0.7**
SALO	**Salr**	**9.51**	**311**	Pn	**Pn**	**20 24 45.9**	**-1.0**
BRTR	**Keskin Array B**	**9.96**	**86**	Pn	**Pn**	**20 24 54.2**	**+1.0**
	baz=276,slow=13,SNR=1.2						
	comp=N,0.3nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**10.25**	**315**	Pn	**Pn**	**20 24 57.1**	**-0.2**
GERES	**GERESS Array B**	**10.38**	**333**	Pn	**Pn**	**20 24 59.2**	**+0.4**
	comp=N,0.3nm,0.3s,baz=154,slow=14,SNR=1.7						
GERES				Sn	**Sn**	**20 26 52.3**	**-2.4**
	comp=N,0.2nm,0.3s,baz=151,slow=24,SNR=3.6						
	comp=N,0.4nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.56**	**315**	Pn	**Pn**	**20 25 02.5**	**+1.1**
	comp=N,0.6nm,0.3s,baz=182,slow=21,SNR=1.8						
DAVOX				Sn	**Sn**	**20 26 57.7**	**-1.6**
	comp=N,0.4nm,0.3s,baz=80,slow=22,SNR=3.0						
	comp=N,1.7nm,0.4s						
SENIN	**Lac Senin/Sane**	**11.82**	**308**	Pn	**Pn**	**20 25 18.2**	**-0.4**
PABE	**Paberze**	**15.91**	**7**	Pn	**Pn**	**20 26 13.5**	**-0.1**
HFS	**Hagfors**	**20.87**	**350**	P	**P**	**20 27 10.6**	**-1.0**
	comp=N,3.3nm,0.6s,baz=163,slow=11,SNR=4.5						
	comp=N,3.3nm,0.6s						
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**20 27 22.2**	**-1.2**
	comp=N,2.4nm,0.6s,baz=178,slow=11,SNR=7.8						
	comp=N,2.4nm,0.6s						
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**20 27 22.0**	**-1.4**
FIA1	**FINESS Array S**	**21.97**	**7**	IAmb	IAmb	20 27 22.0	
	comp=Z,25nm,1.3s						
FIA1				P	**P**	**20 27 22.2**	**-1.2**
NC405	**NORSAR Array S**	**22.10**	**348**	P	**P**	**20 27 23.6**	**-1.2**
NC405				IAmb	IAmb	20 27 30.4	
	comp=Z,27nm,1.2s						
NB2	**NORSAR Subarra**	**22.11**	**348**	P	**P**	**20 27 24.8**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=154,slow=10						
NOA	**NORSAR Array B**	**22.11**	**348**	P	**P**	**20 27 23.8**	**-1.2**
	comp=Z,2.9nm,0.9s,baz=165,slow=11,SNR=4.6						
	comp=Z,2.9nm,0.9s						
EKA	**Eskdalemuir Ar**	**22.25**	**322**	P	**P**	**20 27 26.1**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=121,slow=11,SNR=3.7						
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**29.96**	**3**	P	**P**	**20 28 35.1**	**-2.6**
	comp=Z,3.6nm,0.9s,baz=192,slow=9.9,SNR=4.9						
	comp=Z,3.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.35**	**218**	P	**P**	**20 28 50.7**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=38,slow=9.4,SNR=2.5						
	comp=Z,0.8nm,0.7s						
KKAR	**Karatay Array**	**37.05**	**68**	P	**P**	**20 29 39.2**	**-0.5**
MK31	**Makanchi Array**	**44.37**	**60**	P	**P**	**20 30 39.1**	**-0.9**
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**20 30 38.7**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=282,slow=7.1,SNR=8.3						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**20 30 39.2**	**-0.8**
ZALV	**Zalesovo Beam**	**44.55**	**49**	P	**P**	**20 30 40.1**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=276,slow=8.6,SNR=2.5						
	comp=Z,0.6nm,0.4s						
KSRS	**Korea Array**	**78.22**	**51**	P	**P**	**20 34 28.0**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=306,slow=3.6,SNR=3.0						
	comp=Z,0.8nm,0.7s						

*IDC **15** 20:30:40.0±1.8, 39.°82N×20.°77E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=73.8km s-min=30.5km az=123.0*
*THE **15** 20:30:43.9, 39.°78N×20.°72E, h0km±2km, ML2.6/11, Error ellipse: s-maj=2.3km s-min=0.7km az=6.0*
*TIR **15** 20:30:43.3, 39.°80N×20.°69E, h6km±2km, Md2.6, Ml2.8*
*ATH **15** 20:30:43.8, 39.°79N×20.°68E, h13km±2km, ML2.7/8, Error ellipse: s-maj=2.3km s-min=1.1km az=318.0*
ISC 15 20:30:43.3±0.9, 39.79N±0.02×20.69E±0.02, h13km±6km, n54, σ0§89/78, mb3.5/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**137**	P	**Pg**	**20 30 47.2**	**-0.4**
JAN				S	**Sg**	**20 30 50.3**	**-0.2**
	9μm,0.2s						
JAN	**Janina**	**0.18**	**137**	P	**Pg**	**20 30 47.2**	**-0.4**
JAN				S	**Sg**	**20 30 51.1**	**+0.5**
JAN				AML	AML	20 30 51.2	
	comp=E,20662μm,0.3s						
JAN				AML	AML	20 30 51.5	
	comp=N,14898μm,0.2s						
LSK	**Leskovik**	**0.36**	**350**	P	**Pb**	**20 30 51.6**	**-0.1**
LSK				S	**Sb**	**20 30 58.4**	**+1.0**
	comp=N,1μm,0.4s						
LSK	**Leskovik**	**0.36**	**350**	P	**Pb**	**20 30 51.5**	**-0.2**
	baz=349						
LSK				S	**Sb**	**20 30 56.7**	**-0.7**
	baz=349						
LSK				AMP			
	comp=N,5.2nm,0.5s,baz=349						
IGT	**Igoumenitsa**	**0.38**	**227**	P	**Pb**	**20 30 51.4**	**-0.4**
IGT				S	**Sb**	**20 30 58.1**	**+0.5**
	comp=N,2μm,0.4s						
IGT	**Igoumenitsa**	**0.38**	**227**	P	**Pg**	**20 30 50.8**	**-0.1**
	baz=227						
IGT				S	**Sb**	**20 30 57.3**	**-0.2**
	baz=227						
IGT	**Igoumenitsa**	**0.38**	**227**	P	**Pb**	**20 30 51.5**	**-0.3**
IGT				S	**Sb**	**20 30 57.1**	**-0.5**
IGT				AML	AML	20 30 59.1	
	comp=N,2798μm,0.2s						
IGT				AML	AML	20 30 59.9	
	comp=E,3784μm,0.3s						
PENT	**Pentalofos**	**0.53**	**41**	P	**Pg**	**20 30 53.9**	**0.0**
PENT	**Pentalofos**	**0.53**	**41**	P	**Pg**	**20 30 53.9**	**0.0**
PENT				S	**Sg**	**20 31 02.3**	**+1.3**
SRN	**Sarande**	**0.54**	**280**	P	**Pb**	**20 30 53.8**	**-0.8**
SRN				S	**Sb**	**20 31 02.6**	**+0.5**
	comp=E,582nm,0.2s						
SRN	**Sarande**	**0.54**	**280**	P	**Pb**	**20 30 53.8**	**-0.8**
	baz=280						
SRN				S	**Sb**	**20 31 02.1**	**0.0**
	baz=280						
SRN				AMP			
	comp=N,2.6nm,0.3s,baz=280						
KASA	**Kassiopi**	**0.58**	**266**	P	**Pb**	**20 30 54.7**	**-0.7**
KASA				AML	AML	20 31 04.7	
	comp=N,1582μm,0.4s						
KASA				AML	AML	20 31 05.3	
	comp=E,2322μm,0.2s						
NEST	**Nestorio**	**0.68**	**24**	P	**Pg**	**20 30 57.2**	**+0.6**
NEST	**Nestorio**	**0.68**	**24**	P	**Pg**	**20 30 57.3**	**+0.6**
KEK	**Kerkira**	**0.69**	**264**	P	**Pg**	**20 30 56.2**	**-0.5**
KEK				S	**Sb**	**20 31 07.0**	**+0.4**
	comp=E,615nm,0.2s						
KEK	**Kerkira**	**0.69**	**264**	P	**Pg**	**20 30 56.3**	**-0.5**
KEK				AML	AML	20 31 08.3	
	comp=N,906μm,0.2s						
KEK				AML	AML	20 31 08.4	
	comp=E,1414μm,0.2s						
KBN	**Korca**	**0.83**	**5**	P	**Pg**	**20 30 59.6**	**0.0**
	baz=5.0						
KBN				S	**Sb**	**20 31 12.1**	**+1.2**
	baz=5.0						
KBN				AMP			
	comp=N,0.8nm,0.5s,baz=5.0						
TSLK	**Tsoukalades, L**	**0.97**	**181**	P	**Pg**	**20 31 01.8**	**-0.2**
TSLK			

*ATH **15** 20:33:41.1, 39°.74N×20°.67E, h11km±1km, ML3.1/6, Error ellipse: s-maj=2.0km s-min=0.9km az=291.0*
*THE **15** 20:33:41.1, 39°.73N×20°.70E, h0km±1km, ML3.1/26, Error ellipse: s-maj=1.4km s-min=0.4km az=286.0*
*IDC **15** 20:33:42.3±2.7, 39°.73N×20°.68E, h39km±29km, mb3.4/6, mbtmp3.5/9, ML2.9/3, Error ellipse: s-maj=26.5km s-min=19.2km az=61.0*
*VIE **15** 20:33:47.9±1.7, 40°.25N×20°.46E, h10km, mb3.2/4, ms4.0/1, Error ellipse: s-maj=19.2km s-min=5.9km az=4.0 132 km SSE of Tirana*

ISC 15 20:33:40.8±0.8, 39°.72N±0°.01×20°.69E±0°.02, h15km±5km, n111, σ1§24/169, mb3.5/5, 4C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**118**	P	**Pg**	**20 33 44.1**	**-0.5**
JAN				S	**Sg**	**20 33 46.9**	**-0.2**
	43μm,0.4s						
JAN	**Janina**	**0.14**	**118**	P	**Pg**	**20 33 44.2**	**-0.4**
JAN				S	**Sg**	**20 33 47.4**	**+0.3**
JAN				AML	AML	20 33 47.8	
JAN				AML	AML	20 33 48.2	
	comp=N,59792μm,0.4s						
IGT	**Igoumenitsa**	**0.34**	**236**	P	**Pg**	**20 33 47.7**	**0.0**
IGT				S	**Sb**	**20 33 53.7**	**0.0**
	comp=N,8μm,0.2s						
IGT	**Igoumenitsa**	**0.34**	**236**	P	**Pg**	**20 33 47.6**	**0.0**
	baz=236						
IGT				S	**Sb**	**20 33 53.6**	**-0.1**
	baz=236						
IGT	**Igoumenitsa**	**0.34**	**236**	P	**Pg**	**20 33 47.8**	**0.0**
IGT				S	**Sg**	**20 33 52.7**	**+0.2**
IGT				AML	AML	20 33 55.0	
	comp=N,11760μm,0.3s						
IGT				AML	AML	20 33 55.1	
	comp=E,19632μm,0.2s						
LSK	**Leskovik**	**0.43**	**351**	P	**Pg**	**20 33 49.5**	**-0.1**
LSK				S	**Sg**	**20 33 55.9**	**+0.4**
	comp=E,5μm,0.6s						
LSK	**Leskovik**	**0.43**	**351**	P	**Pg**	**20 33 49.4**	**-0.1**
	baz=351						
LSK				S	**Sb**	**20 33 56.6**	**-0.1**
	baz=351						
LSK				AMP			
	comp=N,24nm,0.7s,baz=351						
SRN	**Sarande**	**0.55**	**287**	P	**Pg**	**20 33 51.3**	**-0.5**
SRN				S	**Sb**	**20 34 00.5**	**+0.5**
	comp=N,2μm,0.3s						
SRN	**Sarande**	**0.55**	**287**	P	**Pg**	**20 33 51.2**	**-0.5**
	baz=287						
SRN				S	**Sb**	**20 34 00.3**	**+0.3**
	baz=287						
SRN				AMP			
	comp=N,7.0nm,0.3s,baz=287						
KPRO	**Kipourio**	**0.57**	**66**	P	**Pg**	**20 33 51.7**	**-0.4**
KPRO				S	**Sg**	**20 34 00.3**	**+0.7**
	comp=N,3μm,0.4s						
KASA	**Kassiopi**	**0.58**	**273**	P	**Pg**	**20 33 51.8**	**-0.5**
PENT	**Pentalofos**	**0.58**	**36**	P	**Pg**	**20 33 52.1**	**-0.3**
PENT				S	**Sb**	**20 34 01.5**	**+0.4**
PENT	**Pentalofos**	**0.58**	**36**	P	**Pg**	**20 33 52.3**	**-0.1**
PENT				S	**Sg**	**20 34 00.5**	**+0.2**
PENT				AML	AML	20 34 07.3	
	comp=N,829μm,0.4s						
PENT				AML	AML	20 34 07.6	
	comp=E,2810μm,0.3s						
KEK	**Kerkira**	**0.69**	**269**	P	**Pg**	**20 33 53.5**	**-0.8**
KEK				S	**Sb**	**20 34 04.7**	**+0.8**
KEK	**Kerkira**	**0.69**	**269**	P	**Pg**	**20 33 53.8**	**-0.5**
KEK				AML	AML	20 34 10.0	
	comp=N,2663μm,0.2s						
KEK				AML	AML	20 34 10.4	
	comp=E,2791μm,0.2s						
NEST	**Nestorio**	**0.74**	**22**	P	**Pg**	**20 33 55.2**	**-0.2**
NEST				S	**Sb**	**20 34 06.9**	**+1.2**
	comp=E,870nm,0.6s						
NEST	**Nestorio**	**0.74**	**22**	P	**Pg**	**20 33 55.2**	**-0.2**
NEST				AML	AML	20 34 09.9	
	comp=N,1693μm,0.5s						
NEST				AML	AML	20 34 11.0	
	comp=E,2553μm,0.3s						
TSLK	**Tsoukalades, L**	**0.90**	**182**	P	**Pg**	**20 33 57.9**	**-0.3**
TSLK				S	**Sb**	**20 34 11.0**	**+1.1**
	comp=E,2μm,0.6s						
TSLK	**Tsoukalades, L**	**0.90**	**182**	P	**Pg**	**20 33 57.9**	**-0.3**
TSLK				S	**Sb**	**20 34 10.7**	**+0.8**
TSLK				AML	AML	20 34 17.4	
	comp=E,3642μm,0.6s						
TSLK				AML	AML	20 34 18.0	
	comp=N,2543μm,0.6s						
KBN	**Korca**	**0.90**	**5**	P	**Pg**	**20 33 57.6**	**-0.7**
KBN				S	**Sb**	**20 34 11.1**	**+0.9**
	comp=N,502nm,0.7s						
KBN	**Korca**	**0.90**	**5**	P	**Pg**	**20 33 57.7**	**-0.7**
	baz=4.0						
KBN				S	**Sb**	**20 34 11.9**	**+1.7**
	baz=4.0						
KBN				AMP			
	comp=N,2.1nm,0.5s,baz=4.0						
LKD2	**Lefkada island**	**0.93**	**182**	P	**Pg**	**20 33 58.5**	**-0.4**
LKD2				S	**Sb**	**20 34 12.7**	**+1.7**
	comp=N,1μm,0.4s						
LKD2	**Lefkada island**	**0.93**	**182**	P	**Pg**	**20 33 59.1**	**+0.2**
	baz=182						
LKD2				S	**Sb**	**20 34 12.9**	**+2.0**
	baz=182						
LKD2	**Lefkada island**	**0.93**	**182**	P	**Pg**	**20 33 58.9**	**0.0**
NYDR	**Nydri-Lefkada**	**1.01**	**180**	P	**Pg**	**20 33 59.5**	**-0.8**
NYDR				S	**Sn**	**20 34 15.6**	**+1.2**
	comp=N,872nm,0.4s						
KZN	**Kozani**	**1.01**	**55**	P	**Pg**	**20 33 59.6**	**-0.9**
KZN				S	**Sb**	**20 34 15.1**	**+1.7**
	comp=N,705nm,0.5s						
KZN	**Kozani**	**1.01**	**55**	P	**Pg**	**20 33 59.8**	**-0.6**
THL	**Klokotos Trika**	**1.03**	**98**	P	**Pg**	**20 34 00.0**	**-0.8**
THL				S	**Sn**	**20 34 16.0**	**+0.9**
	comp=N,478nm,0.5s						
THL	**Klokotos Trika**	**1.03**	**98**	P	**Pg**	**20 34 00.4**	**-0.4**
DRAG	**Dragano-Lefkad**	**1.04**	**185**	P	**Pg**	**20 34 00.3**	**-0.6**
DRAG				S	**Sb**	**20 34 15.6**	**+1.5**
	comp=N,10μm,0.2s						
EVGI	**Lefkada island**	**1.10**	**181**	P	**Pg**	**20 34 01.8**	**-0.3**
EVGI				S	**Sn**	**20 34 17.7**	**+1.0**
	comp=N,1μm,0.3s						
EVGI	**Lefkada island**	**1.10**	**181**	P	**Pg**	**20 34 01.9**	**-0.2**
VLO	**Vlora**	**1.18**	**310**	P	**Pn**	**20 34 03.8**	**+0.9**
	baz=310						
VLO				S	**Sn**	**20 34 21.1**	**+2.5**
	baz=310						
VLO				AMP			
	comp=N,5.8nm,0.5s,baz=310						
EVR	**Evrytania**	**1.18**	**132**	P	**Pb**	**20 34 03.0**	**-0.1**
EVR				S	**Sn**	**20 34 20.7**	**+1.8**
	comp=N,658nm,0.6s						
EVR	**Evrytania**	**1.18**	**132**	P	**Pb**	**20 34 03.1**	**-0.1**
TYRN	**Tyrnavos**	**1.19**	**90**	P	**Pb**	**20 34 02.2**	**-0.9**
TYRN				S	**Sn**	**20 34 20.6**	**+1.7**
	comp=N,2μm,0.5s						
FSK	**Fiskardo**	**1.27**	**185**	P	**Pb**	**20 34 05.2**	**+0.8**
FSK				S	**Sn**	**20 34 23.5**	**+2.7**
	comp=N,735nm,0.5s						
PVO	**Paravola**	**1.28**	**149**	P	**Pg**	**20 34 05.8**	**+0.3**
PVO				S	**Sn**	**20 34 23.4**	**+2.2**
	comp=N,1μm,0.7s						
PVO	**Paravola**	**1.28**	**149**	P	**Pn**	**20 34 05.1**	**+0.8**
KTI	**Kastanea**	**1.28**	**58**	P	**Pn**	**20 34 04.7**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.32**	**122**	P	**Pn**	**20 34 05.6**	**+0.7**
MAKR				S	**Sg**	**20 34 24.8**	**+1.3**
	comp=N,2μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.32**	**122**	P	**Pn**	**20 34 05.8**	**+0.9**
OHR	**Ohrid**	**1.39**	**3**	*e*Pg	**Pg**	**20 34 08.2**	**+0.6**
OHR				*e*Sg	**Sg**	**20 34 28.6**	**+2.9**
OHR	**Ohrid**	**1.39**	**3**	*i* Pn	**Pg**	**20 34 08.0**	**+0.4**
LIT	**Litokhoron**	**1.44**	**74**	P	**Pn**	**20 34 06.8**	**+0.4**
LIT				S	**Sg**	**20 34 28.1**	**+1.0**
	comp=N,565nm,0.5s						
KEF4	**Livadi, Kephal**	**1.48**	**188**	P	**Pb**	**20 34 08.8**	**+0.8**
DMLN	**Damoulianata-K**	**1.50**	**190**	P	**Pb**	**20 34 09.2**	**+0.7**
DMLN				S	**Sb**	**20 34 28.8**	**+1.4**
	comp=N,710nm,0.4s						
EFP	**Efpalio**	**1.60**	**143**	P	**Pb**	**20 34 11.1**	**+0.9**
PSDA	**Pessada-Kefalo**	**1.61**	**183**	P	**Pb**	**20 34 11.1**	**+0.9**
SERG	**Sergoula**	**1.69**	**140**	P	**Pb**	**20 34 12.5**	**+0.9**
TIR	**Tirane**	**1.74**	**339**	*e*Pn	**Pn**	**20 34 12.1**	**+1.5**
TIR				*e*Sn	**Sg**	**20 34 39.5**	**+2.6**
TIR	**Tirane**	**1.74**	**339**	P	**Pb**	**20 34 13.3**	**+0.8**
	baz=340						
RLS	**Riolos of Patr**	**1.77**	**160**	P	**Pb**	**20 34 13.2**	**+0.2**
LAKA	**Lakka**	**1.79**	**145**	P	**Pb**	**20 34 13.5**	**+0.1**
LAKA				S	**Sn**	**20 34 36.0**	**+2.2**
	comp=N,712nm,0.8s						
LAKA	**Lakka**	**1.79**	**145**	P	**Pb**	**20 34 13.6**	**+0.3**
GRG	**Griva**	**1.80**	**46**	P	**Pn**	**20 34 12.0**	**+0.6**
AXAR	**Agios Charalam**	**1.80**	**121**	P	**Pb**	**20 34 13.5**	**-0.1**
AXAR				S	**Sb**	**20 34 36.8**	**+0.8**
	comp=N,588nm,0.5s						
AXAR	**Agios Charalam**	**1.80**	**121**	P	**Pb**	**20 34 13.9**	**+0.4**
DRO	**Drossia**	**1.94**	**155**	P	**Pn**	**20 34 15.1**	**+1.8**
DRO				S	**Sb**	**20 34 40.6**	**+0.7**
	comp=N,452nm,0.5s						
XOR	**Xorichti**	**1.97**	**100**	P	**Pn**	**20 34 15.9**	**+2.2**
PHP	**Peshkopia**	**1.97**	**355**	P	**Pb**	**20 34 16.1**	**-0.4**
PHP				S	**Sn**	**20 34 40.4**	**+2.1**
PHP	**Peshkopia**	**1.97**	**355**	P	**Pb**	**20 34 16.1**	**-0.4**
	baz=355						
NEO	**Neokhori**	**2.00**	**101**	P	**Pn**	**20 34 16.4**	**+2.2**
NEO				S	**Sn**	**20 34 41.5**	**+2.4**
	comp=N,245nm,0.6s						
KLV	**Kalavryta, Ach**	**2.03**	**145**	P	**Pb**	**20 34 17.1**	**-0.3**
HORT	**Hortiatis**	**2.04**	**64**	P	**Pn**	**20 34 16.0**	**+1.2**
HORT				S	**Sb**	**20 34 42.9**	**-0.1**
VAY	**Valandovo**	**2.15**	**41**	*e*Pn	**Pn**	**20 34 17.4**	**+1.3**
VAY				*e*Sn	**Sn**	**20 34 45.0**	**+2.5**
VAY	**Valandovo**	**2.15**	**41**	*i* Pn	**Pn**	**20 34 17.2**	**+1.0**
KNT	**Kendrikon**	**2.21**	**49**	P	**Pn**	**20 34 17.7**	**+0.6**
KNT				S	**Sb**	**20 34 47.3**	**-0.6**
STIP	**Stip**	**2.27**	**30**	*i* Pn	**Pn**	**20 34 20.6**	**+2.6**
SOH	**Sokhos**	**2.31**	**61**	P	**Pn**	**20 34 19.9**	**+1.4**
ULC	**Ulcinj**	**2.49**	**334**	↑*i* Pn	**Pn**	**20 34 21.4**	**+0.5**
ULC				*i* Sn	**Sn**	**20 34 53.0**	**+1.9**
OUR	**Ouranopolis**	**2.60**	**75**	P	**Pn**	**20 34 23.2**	**+0.8**
OUR				S	**Sn**	**20 34 56.2**	**+2.5**
	comp=N,172nm,0.4s						
SRS	**Serrai**	**2.62**	**57**	*e*Pn	**Pn**	**20 34 23.6**	**+1.0**
SRS				*e*Sn	**Sn**	**20 34 53.0**	**-1.2**
DRME	**Dracevica, Mon**	**2.71**	**336**	↓*i* Pn	**Pn**	**20 34 24.5**	**+0.6**
DRME				*i* Sn	**Sn**	**20 34 58.2**	**+1.7**
KKB	**Krupnik**	**2.81**	**40**	P	**Pn**	**20 34 26.5**	**+1.2**
BUM	**Brajici-Budva**	**2.91**	**333**	↑*i* Pn	**Pn**	**20 34 27.2**	**+0.5**
BUM				*i* Sn	**Sn**	**20 35 03.0**	**+1.5**
NVR	**Nevrokopi**	**2.91**	**55**	P	**Pn**	**20 34 27.9**	**+1.2**
TTG	**Podgorica**	**2.91**	**339**	*e*Pn	**Pn**	**20 34 27.2**	**+0.5**
TTG				*i* Sn	**Sn**	**20 35 03.1**	**+1.6**
PVY	**Plav**	**2.92**	**349**	↑*i* Pn	**Pn**	**20 34 27.5**	**+0.6**
PVY				*i* Sn	**Sn**	**20 35 03.5**	**+1.6**
MMB	**Musomiste**	**2.97**	**50**	P	**Pn**	**20 34 29.6**	**+2.1**
CEME	**Cevo**	**3.12**	**335**	*e*Pn	**Pn**	**20 34 30.1**	**+0.5**
CEME				*i* Sn	**Sn**	**20 35 07.8**	**+1.1**
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	**Pn**	**20 34 30.3**	**-0.2**
HCY				*i* Sn	**Sn**	**20 35 09.6**	**+1.4**
IVA	**Berane**	**3.20**	**349**	↑*i* Pn	**Pn**	**20 34 31.4**	**+0.6**
IVA				*i* Sn	**Sn**	**20 35 10.3**	**+1.6**
BARS	**Barje**	**3.21**	**15**	*e*Pn	**Pn**	**20 34 32.6**	**+1.9**
KOME	**Kolasin**	**3.25**	**345**	*e*Pn	**Pn**	**20 34 31.9**	**+0.5**
KOME				*i* Sn	**Sn**	**20 35 11.3**	**+1.4**
NKME	**Niksic**	**3.31**	**337**	*e*Pn	**Pn**	**20 34 32.8**	**+0.6**
NKME				*i* Sn	**Sn**	**20 35 12.6**	**+1.2**
VTS	**Vitosha**	**3.47**	**33**	P	**Pn**	**20 34 36.0**	**+1.5**
SELS	**Selova**	**3.51**	**5**	*e*Pn	**Pn**	**20 34 35.9**	**+1.0**
SJES	**Sjenica**	**3.58**	**352**	*e*Pn	**Pn**	**20 34 38.1**	**+2.2**
UPM	**Unac-Piva**	**3.73**	**339**	*e*Pn	**Pn**	**20 34 38.6**	**+0.5**
UPM				*i* Sn	**Sn**	**20 35 22.6**	**+0.8**
PLE	**Pljevlja**	**3.73**	**345**	*e*Pn	**Pn**	**20 34 38.8**	**+0.7**
PLE				*i* Sn	**Sn**	**20 35 22.9**	**+1.0**
ZAPS	**Zavoj**	**3.84**	**22**	*e*Pn	**Pn**	**20 34 41.3**	**+1.9**
BOVS	**Bovan**	**3.98**	**11**	*e*Pn	**Pn**	**20 34 41.9**	**+0.5**
ZAGS	**Zajecar**	**4.25**	**15**	*e*Pn	**Pn**	**20 34 45.9**	**+0.9**
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	**Pn**	**20 34 47.5**	**+0.2**
VAE	**Valguarnera**	**5.40**	**247**	Sn	**Sn**	**20 36 01.2**	**-1.8**
	comp=N,0.9nm,0.3s,baz=205,slow=9.5,SNR=2.1						
FRGS	**Fruska Gora**	**5.47**	**353**	*e*Pn	**Pn**	**20 35 02.1**	**+0.2**
IDI	**Anoyia**	**5.54**	**142**	Pn	**Pn**	**20 35 02.0**	**-0.9**
	comp=N,0.2nm,0.3s,baz=343,slow=22,SNR=1.5						
IDI				Sn	**Sn**	**20 36 02.6**	**-3.9**
	comp=N,0.7nm,0.3s,baz=333,slow=16,SNR=1.2						
	comp=N,17nm,1.1s						
MLR	**Muntele Rosu**	**6.95**	**32**	Pn	**Pn**	**20 35 25.6**	**+3.4**
	comp=N,0.3nm,0.3s,baz=304,slow=7.3,SNR=6.6						
SOKA	**Soboth**	**8.09**	**331**	*i* Pn	**Pn**	**20 35 37.8**	**0.0**
	comp=N,1.1nm,0.3s						
OBKA	**Obir**	**8.13**	**329**	*i* Pn	**Pn**	**20 35 39.2**	**+0.8**
	comp=N,0.5nm,0.1s						
MOA	**Molln**	**9.35**	**332**	*i* Pn	**Pn**	**20 35 56.6**	**+1.5**
	comp=N,0.6nm,0.2s						
BRTR	**Keskin Array B**	**9.98**	**86**	Pn	**Pn**	**20 36 04.9**	**+1.1**
	comp=N,0.1nm,0.3s,baz=273,slow=15,SNR=2.1						
	comp=N,0.3nm,0.5s						
WATA	**Walderalm**	**10.08**	**322**	*e*Pn	**Pn**	**20 36 05.3**	**+0.2**
	comp=N,0.6nm,0.1s						
GERES	**GERESS Array B**	**10.40**	**334**	Pn	**Pn**	**20 36 10.1**	**+0.6**
	comp=N,0.1nm,0.3s,baz=151,slow=14,SNR=2.5						
	comp=N,0.1nm,0.3s						
HFS	**Hagfors**	**20.90**	**350**	P	**P**	**20 38 20.8**	**-1.7**
	comp=N,2.5nm,0.9s,baz=157,slow=12,SNR=1.5						
	comp=N,2.5nm,0.9s						
FINES	**FINESS Array B**	**22.00**	**7**	P	**P**	**20 38 32.5**	**-1.7**
	comp=N,1.0nm,0.5s,baz=178,slow=11,SNR=8.5						
	comp=N,1.0nm,0.5s						
NOA	**NORSAR Array B**	**22.14**	**348**	P	**P**	**20 38 34.5**	**-1.3**
	comp=N,0.4nm,0.7s,baz=165,slow=11,SNR=2.8						
	comp=N,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**29.98**	**3**	P	**P**	**20 39 45.7**	**-2.7**
	comp=N,1.5nm,0.8s,baz=190,slow=12,SNR=5.9						
	comp=N,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.32**	**218**	P	**P**	**20 39 59.0**	**-1.7**
	comp=N,0.3nm,0.7s,baz=40,slow=8.5,SNR=1.8						
	comp=N,0.3nm,0.7s						
MKAR	**Makanchi Array**	**44.40**	**60**	P	**P**	**20 41 49.5**	**-1.2**
	comp=N,1.7nm,0.6s,baz=276,slow=7.4,SNR=18						
	comp=N,1.7nm,0.6s						

*IDC **15** 20:34:44.6±5.2, 52°.11N×171°.42W, h33km±39km, mb3.9/24, mbtmp4.1/27, ML3.7/3, MS3.9/6, Error ellipse: s-maj=19.9km s-min=12.0km az=178.0*
*NEIC **15** 20:34:44.9±1.9, 52°.0N±0°.1×171°.33W±0°.10, h37km±7km, mb4.4/77, ML4.5/6, ML4.2(AEIC), Error ellipse: s-maj=15.4km s-min=7.3km az=160.0*
*AEIC **15** 20:34:45±2.3, 52°.3N±0°.1×171°.53W±0°.10, h43km±6km, Error ellipse: s-maj=15.6km s-min=7.2km az=161.0*

ISC 15 20:34:45.5±0.5, 52°.0N±0°.1×171°.37W±0°.05, h44km, n170, σ1§18/159, mb4.3/48, MS4.0/5, 2C-1D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.81**	**57**	Pn	**Pn**	**20 35 12.4**	**-1.7**
GSTR	**Great Sitkin T**	**2.90**	**273**	Pn	**Pn**	**20 35 29.1**	**0.0**
ADK	**Adak**	**3.29**	**270**	Pn	**Pn**	**20 35 33.5**	**-0.9**
ADK				IAML		20 36 28.1	
	1μm,0.7s						
ADK				IAML		20 36 28.6	
	1μm,1.1s						
UNV	**Unalaska Valle**	**3.46**	**56**	Pn	**Pn**	**20 35 36.9**	**+0.1**
KIWB	**Kanaga Island**	**3.58**	**270**		**Pn**	**20 35 38.5**	**0.0**
AKUT	**Akutan**	**3.98**	**56**	Pn	**Pn**	**20 35 45.9**	**+1.9**
AKUT				IAML		20 36 58.6	
	comp=E,319nm,1.2s						
SPIA	**Saint Paul Isl**	**5.21**	**7**	Pn	**Pn**	**20 36 03.0**	**+2.3**
FALS	**False Pass**	**5.54**	**56**	Pn	**Pn**	**20 36 01.9**	**-3.3**
AMKA	**Amchitka**	**5.84**	**267**	Pn	**Pn**	**20 36 09.4**	**+0.1**
SDPT	**Sand Point**	**7.28**	**58**	Pn	**Pn**	**20 36 29.7**	**+0.6**
CNBA	**Chernabura Isl**	**7.58**	**64**	Pn	**Pn**	**20 36 33.4**	**+0.3**
SHEM	**Shemya Is, Ala**	**8.92**	**280**	LR	LR	20 40 03.5	
	comp=E,786nm,21.9s,baz=112,slow=36						
CHIR	**Chirikof Islan**	**10.03**	**62**	Pn	**Pn**	**20 37 04.9**	**-1.9**
N18K	**Kilae Creek**	**12.17**	**39**	Pn	**Pn**	**20 37 38.2**	**+2.1**
Q19K	**Cape Douglas,**	**12.18**	**48**	Pn	**Pn**	**20 37 35.5**	**-0.7**
KDAK	**Kodiak Island**	**12.23**	**55**	Pn	**Pn**	**20 37 38.0**	**+1.1**
	comp=E,1.1nm,0.3s,baz=288,slow=6.3,SNR=8.3						
	comp=E,3.5nm,0.3s						
SVW2	**Sparrevohn**	**12.55**	**37**	Pn	**Pn**	**20 37 43.4**	**+2.1**
N19K	**Bonanza Creek**	**12.80**	**40**	Pn	**Pn**	**20 37 47.0**	**+2.2**
RSO	**Redoubt South**	**13.32**	**43**		**Pn**	**20 37 53.3**	**+1.4**
M19K	**Big River Lodg**	**13.51**	**36**		**Pn**	**20 37 57.2**	**+3.0**
M20K	**Styx River**	**13.96**	**38**		**Pn**	**20 38 03.5**	**+2.9**
SEW	**Seward**	**14.61**	**48**	Pn	**Pn**	**20 38 07.8**	**-1.3**
RC01	**Rabbit Creek A**	**14.92**	**44**		**PcP**	**20 43 19.3**	**-0.8**
PPLA	**Purkeypile**	**14.93**	**36**		**P**	**20 38 16.2**	**-2.1**
J20K	**Nowinta River**	**15.13**	**30**		**P**	**20 38 19.1**	**-1.3**
J20K				IAmb	IAmb	20 38 38.3	
	comp=Z,22nm,1.5s						
KNK	**Knik Glacier**	**15.62**	**44**	Pn	**Pn**	**20 38 20.5**	**-1.8**
TRF	**Thorofare Moun**	**15.96**	**36**	P	**P**	**20 38 29.3**	**-0.4**
TRF				IAmb	IAmb	20 38 47.5	
	comp=Z,23nm,1.4s						
HIN	**Hinchinbrook I**	**16.09**	**49**	Pn	**Pn**	**20 38 26.7**	**-1.6**
HIN				IAmb	IAmb	20 38 52.9	
	comp=Z,58nm,1.1s						
SCM	**Sheep Creek Mo**	**16.29**	**44**		**Pn**	**20 38 30.0**	**-0.9**
SCM				IAmb	IAmb	20 38 45.0	
	comp=Z,20nm,0.9s						
I21K	**Tanana**	**16.50**	**30**	P	**P**	**20 38 35.4**	**-0.2**
IMAR	**Indian Mountai**	**16.58**	**26**		**P**	**20 38 37.6**	**+1.2**
KLU	**Klutina**	**16.76**	**46**		**Pn**	**20 38 35.1**	**-1.7**
MLY	**Manley**	**16.79**	**31**		**Pn**	**20 38 37.4**	**+0.2**
WRH	**Wood River Hil**	**17.34**	**35**	P	**Pn**	**20 38 43.8**	**-0.2**
CCB	**Clear Creek Bu**	**17.54**	**35**		**Pn**	**20 38 45.7**	**-0.7**
GLB	**Gilahina Butte**	**17.68**	**47**		**Pn**	**20 38 46.2**	**-2.0**
H23K	**Yukon River**	**17.69**	**30**	P	**P**	**20 38 48.9**	**+0.2**
VRDI	**Verde Repeater**	**17.77**	**48**	P	**Pn**	**20 38 48.6**	**-0.9**
IL31		**17.94**	**35**	P	**Pn**	**20 38 51.0**	**-0.3**
ILAR	**Eielson Array**	**17.94**	**35**	P	**Pn**	**20 38 51.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=224,slow=9.9,SNR=4.7						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**17.94**	**35**		**Pn**	**20 38 51.3**	**0.0**
H24K	**Noodor Dome**	**18.23**	**32**	P	**Pn**	**20 38 55.4**	**+0.5**
J25K	**Salcha River,**	**18.41**	**37**	P	**P**	**20 38 55.1**	**-1.5**
DOT	**Dot Lake**	**18.44**	**40**	P	**P**	**20 38 56.4**	**-0.6**
SCRK	**Sand Creek**	**18.62**	**39**	P	**P**	**20 38 58.5**	**-0.6**
PEA0B	**Petropavlovsk-**	**18.77**	**286**	P	**P**	**20 39 01.2**	**+0.6**
PEA0B				IAmb	IAmb	20 39 17.1	
	comp=Z,16nm,1.1s						
PETK	**Petropavlovsk-**	**18.77**	**286**	P	**P**	**20 39 00.9**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=99,slow=12,SNR=21						
	comp=Z,2.7nm,0.5s						
PETK	**Petropavlovsk-**	**18.77**	**286**	P	**Pn**	**20 39 01.6**	**+0.1**
M27K	**Edge Creek, AK**	**18.85**	**45**	P	**P**	**20 39 01.8**	**+0.1**
M27K				IAmb	IAmb	20 39 14.4	
	comp=Z,14nm,1.0s						
J26L	**Joseph Creek**	**19.03**	**38**	P	**P**	**20 39 02.5**	**-1.0**
BCAR	**Beaver Creek A**	**19.14**	**43**	P	**P**	**20 39 04.6**	**-0.2**
BILL	**Bilibino**	**19.36**	**334**	P	**Pn**	**20 39 07.6**	**-0.8**
BILL				IAmb	IAmb	20 39 22.0	
	comp=Z,40nm,1.5s						
I26K	**Coal Creek Min**	**19.57**	**36**	P	**P**	**20 39 08.5**	**-0.8**
I26K				IAmb	IAmb	20 39 35.3	
	comp=Z,20nm,1.3s						
TOLK	**Toolik Lake Re**	**19.65**	**24**		**P**	**20 39 09.7**	**-0.5**
TOLK				IAmb	IAmb	20 39 17.4	
	comp=Z,14nm,0.8s						
BMAR	**Burnt Mountain**	**20.24**	**30**	P	**P**	**20 39 17.5**	**+0.8**
HYT	**Haines Junctio**	**20.48**	**51**	P	**P**	**20 39 20.5**	**+1.1**
SEY	**Seymchan**	**22.01**	**314**	P	**P**	**20 39 36.1**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=77,slow=8.9,SNR=12						
	comp=Z,2.3nm,0.6s						
EPYK	**Eagle Plains**	**22.42**	**37**	P	**P**	**20 39 38.8**	**-1.2**
EPYK				IAmb	IAmb	20 39 57.5	
	comp=Z,6.9nm,0.8s						
P33M	**Teslin, Yukon**	**22.70**	**54**	P	**P**	**20 39 43.1**	**-0.1**
P33M				IAmb	IAmb	20 40 05.4	
	comp=Z,12nm,1.0s						
DLBC	**Dease Lake**	**24.12**	**58**	P	**P**	**20 39 58.3**	**+1.4**
	comp=Z,8.2nm,0.8s,baz=296,slow=14,SNR=11						
	comp=Z,8.2nm,0.8s						
DLBC	**Dease Lake**	**24.12**	**58**	P	**P**	**20 39 57.6**	**+0.7**
DLBC				IAmb	IAmb	20 40 05.3	
	comp=Z,28nm,1.3s						
INK	**Inuvik**	**24.32**	**34**	P	**P**	**20 39 58.1**	**-0.3**
	comp=Z,4.0nm,0.7s,baz=270,slow=7.8,SNR=5.4						
	comp=Z,4.0nm,0.7s						
INK	**Inuvik**	**24.32**	**34**	P	**P**	**20 39 58.0**	**-0.5**
INK				IAmb	IAmb	20 40 24.3

HHC	Hu-ho-hao-te	51.89	290	eP	P	20 43 50.4 +1.0
HNS	HongShan	52.28	285	⇓P	P	20 43 53.1 +0.9
TX31	Lajitas Ar. Si	53.99	87	P	P	20 44 04.9 -0.1
TXAR	Lajitas Array	53.99	87	P	P	20 44 05.3 +0.2
	comp=Z,1.9nm,0.7s,baz=299,slow=5.4,SNR=18					
	comp=Z,1.9nm,0.7s					
TXAR	Lajitas Array	53.99	87	P	P	20 44 05.1 +0.1
P40A	Paris	54.06	70	P	P	20 44 04.6 -0.7
LYN	LuoYang	55.54	284	⇑P	P	20 44 14.8 -1.3
JMIC	Jan Mayen	56.68	7	LR	LR	21 09 27.4
	comp=Z,77nm,18.9s,baz=78,slow=37					
ZALV	Zalesovo Beam	56.84	317	P	P	20 44 24.7 -0.3
	comp=Z,0.4nm,0.4s,baz=26,slow=5.3,SNR=3.2					
	comp=Z,0.4nm,0.4s					
ZALV	Zalesovo Beam	56.84	317	P	P	20 44 24.4 -0.6
XAN	Xi'an	58.01	286	⇑P	P	20 44 32.9 -0.8
XAN				pP	pP	20 44 46.3 +0.4
XAN				sP	sP	20 44 52.6 +1.8
ARCES	ARCESS Array B	58.13	353	P	P	20 44 32.6 -1.3
	comp=Z,6.0nm,1.0s,baz=11,slow=7.5,SNR=8.7					
	comp=Z,6.0nm,1.0s					
GTA	Gaotai	59.53	296	eP	P	20 44 43.3 -1.0
GTA				pP	pP	20 44 52.3 -4.4
GTA				sP	sP	20 44 56.3 -5.4
KURK	Kurchatov	61.80	317	P	P	20 44 59.4 0.0
KURK				IAmb	IAmb	20 45 00.6
	comp=Z,3.5nm,0.7s					
BATG	Bathurst New B	62.31	48	P	P	20 45 03.2 +0.4
WMQ	Urumqi	62.77	307	eP	P	20 45 09.3 +3.3
MK31	Makanchi Array	63.14	312	P	P	20 45 07.7 -0.7
MK31				IAmb	IAmb	20 45 21.7
	comp=Z,5.5nm,1.4s					
MKAR	Makanchi Array	63.14	312	P	P	20 45 07.3 -1.1
	comp=Z,1.0nm,0.5s,baz=43,slow=6.6,SNR=19					
	comp=Z,1.0nm,0.5s					
MKAR	Makanchi Array	63.14	312	P	P	20 45 07.7 -0.7
ARU	Arti	64.36	332	P	P	20 45 15.9 -0.3
	comp=Z,2.6nm,0.6s,baz=74,slow=1.3,SNR=6.1					
	comp=Z,2.6nm,0.6s					
ARU	Arti	64.36	332	P	P	20 45 15.8 -0.4
ARU				IAmb	IAmb	20 45 17.3
	comp=Z,3.0nm,0.8s					
KIRV	Kirov	64.87	338	LR	LR	21 18 05.9
	comp=Z,82nm,18.2s,baz=29,slow=40					
FIA1	FINESS Array S	66.03	351	P	P	20 45 26.9 0.0
FINES	FINESS Array B	66.03	351	P	P	20 45 25.8 -1.1
	comp=Z,1.2nm,0.6s,baz=7.4,slow=9.0,SNR=10					
FINES				LR	LR	21 18 58.5
	comp=Z,90nm,18.2s,baz=58,slow=40					
	comp=Z,1.2nm,0.6s					
FINES	FINESS Array B	66.03	351	P	P	20 45 26.3 -0.7
NOA	NORSAR Array B	67.27	359	P	P	20 45 34.6 -0.4
	comp=Z,0.7nm,0.6s,baz=2.5,slow=6.6,SNR=3.3					
	comp=Z,0.7nm,0.6s					
PZH	PanZhiHua	67.73	285	P	P	20 45 40.8 +2.3
HFS	Hagfors	68.12	357	P	P	20 45 40.0 -0.3
	comp=Z,2.4nm,0.7s,baz=44,slow=6.6,SNR=4.3					
	comp=Z,2.4nm,0.7s					
QIZ	Qiongzhong	68.38	273	P	P	20 45 42.5 0.0
QIZ				S	S	20 54 40.3 -0.3
BOOM	Boomskoye usch	69.34	313	P	P	20 45 48.4 +0.1
BOOM				IAmb	IAmb	20 45 49.7
	comp=Z,3.2nm,0.8s					
AKTO	Aktyubinsk	69.68	329	P	P	20 45 50.5 +0.3
	comp=Z,3.3nm,0.6s,baz=44,slow=7.4,SNR=15					
	comp=Z,3.3nm,0.6s					
AAK	Ala-Archa	69.87	314	P	P	20 45 51.8 +0.2
AAK				IAmb	IAmb	20 45 53.0
	comp=Z,3.5nm,0.9s					
ABKAR	Akbulak array	70.07	327	P	P	20 45 52.1 -0.4
ABKAR				IAmb	IAmb	20 46 21.3
	comp=Z,2.5nm,1.2s					
ABKAR	Akbulak array	70.07	327	P	P	20 45 51.7 -0.8
KK31	Karatay Array	71.22	317		P	20 45 59.7 +0.1
KKAR	Karatay Array	71.22	317	P	P	20 45 59.1 -0.5
LSA	Lhasa	71.48	295	P	P	20 46 03.3 +1.3
LSA				IAmb	IAmb	20 46 04.5
	comp=Z,6.0nm,0.9s					
KSH	Kashi	71.69	311	P	P	20 46 06.3 +3.6
EKA	Eskdalemuir Ar	72.56	7	P	P	20 46 07.9 +0.4
	comp=Z,1.2nm,0.7s,baz=350,slow=4.2,SNR=3.6					
	comp=Z,1.2nm,0.7s					
TAPN	Taplejung	75.22	295	eP	P	20 46 23.1 -0.7
	comp=Z,12nm,0.7s					
CHGR	Chuyangaron	75.46	315	P	P	20 46 24.7 0.0
CMAR	Chiang Mai Arr	75.49	281	P	P	20 46 25.9 +0.9
	comp=Z,1.7nm,0.7s,baz=26,slow=6.8,SNR=18					
	comp=Z,1.7nm,0.7s					
CMAR	Chiang Mai Arr	75.49	281	P	P	20 46 25.8 +0.7
GUN	Gumba	75.79	297	eP	P	20 46 26.6 -0.6
	comp=Z,10nm,0.4s					
JIRN	Jiri	75.82	297	eP	P	20 46 27.5 +0.2
	comp=Z,8.7nm,0.3s					
RAMN	Ramite	76.14	296	eP	P	20 46 28.7 -0.4
	comp=Z,24nm,0.8s					
AKASG	Malin Array Be	76.17	347	LR	LR	21 21 51.0
	comp=Z,100nm,21.6s,baz=24,slow=37					
PKI	Pulchoki	76.32	297	eP	P	20 46 29.8 -0.3
	comp=Z,18nm,1.3s					
PKIN	Phulchoki	76.32	297	eP	P	20 46 29.7 -0.4
GKN	Gorkha	76.40	298	eP	P	20 46 30.4 0.0
DMN	Daman	76.45	297	eP	P	20 46 31.0 +0.2
	comp=Z,3.7nm,0.4s					
DANN	Dangsing	76.61	299	eP	P	20 46 31.6 -0.1
	comp=Z,25nm,0.7s					
NIL	Nilore	77.72	310	P	P	20 46 38.5 +1.0
NIL				IAmb	IAmb	20 46 39.0
	comp=Z,4.9nm,0.9s					
GERES	GERESS Array B	79.42	357	P	P	20 46 46.7 0.0
	comp=Z,0.6nm,0.7s,baz=15,slow=5.5,SNR=6.9					
	comp=Z,0.6nm,0.7s					
GERES	GERESS Array B	79.42	357	P	P	20 46 46.9 +0.2
BUR08	Bucovina Ar. S	79.70	349	P	P	20 46 48.0 -0.3
BUR08				IAmb	IAmb	20 47 16.7
	comp=Z,4.4nm,1.2s					
BURAR	Bucovina Array	79.73	349	P	P	20 46 48.5 +0.1
GNI	Garni	82.97	333	LR	LR	21 32 32.6
	comp=Z,51nm,18.2s,baz=10.0,slow=42					
BNI	Bardonecchia	83.29	1	P	P	20 47 08.8 +1.4
WRA	Warramunga Arr	85.83	230	P	P	20 47 19.1 -1.1
	comp=Z,0.4nm,0.7s,baz=36,slow=5.9,SNR=4.6					
	comp=Z,0.4nm,0.7s					
RDO	Rodhopi	86.05	347	P	P	20 47 21.4 +0.3
ESDC	Sonseca Array	88.02	10	P	P	20 47 30.4 -0.5
	comp=Z,0.8nm,0.7s,baz=346,slow=4.4,SNR=11					
	comp=Z,0.8nm,0.7s					
ESDC	Sonseca Array	88.02	10	P	P	20 47 30.9 +0.1
AS31	Alice Springs	89.23	228	P	P	20 47 36.1 -0.4
AS31				IAmb	IAmb	20 47 46.5
	comp=Z,1.4nm,1.1s					
ASAR	Alice Springs	89.23	228	P	P	20 47 36.4 -0.2
	comp=Z,0.9nm,0.6s,baz=23,slow=4.9,SNR=17					
	comp=Z,0.9nm,0.6s					
ASAR	Alice Springs	89.23	228	P	P	20 47 35.9 -0.6
H03N2	Juan Fernandez	116.95	110	T	T	23 01 44.0
	baz=309,slow=76,SNR=3.5					
H03N1	Juan Fernandez	116.96	110	T	T	23 01 35.5
	baz=313,slow=76,SNR=3.4					
MAW	Mawson	149.84	218	PKPbc	PKPbc	20 54 29.8 +0.7
	comp=Z,2.1nm,0.8s,baz=147,slow=4.7,SNR=6.2					

PDG ***15*** *20:40:44.6±0.1, 39°.78N×20°.50E, h9km±1km, ML3.5/11, Error ellipse: s-maj=1.1km s-min=0.4km az=90.0*
BEO ***15*** *20:40:45.0±1.1, 39°.62N×20°.86E, h8km±5km, ML3.0/3*
TIR ***15*** *20:40:45.5, 39°.76N×20°.70E, h5km±1km, Md3.0, Ml3.4*
THE ***15*** *20:40:46.3, 39°.77N×20°.71E, h0km±1km, ML3.2/23, Error ellipse: s-maj=1.3km s-min=0.4km az=316.0*
ATH ***15*** *20:40:46.3, 39°.78N×20°.69E, h4km±3km, ML3.2/5, Error ellipse: s-maj=3.0km s-min=0.7km az=304.0*
IDC ***15*** *20:40:47.1±3.0, 39°.74N×20°.71E, h38km±31km, mb3.3/6, mbtmp3.5/11, ML3.4/4, MS3.5/1, Error ellipse: s-maj=25.2km s-min=18.4km az=98.0*
VIE ***15*** *20:40:53.9±0.6, 40°.12N×19°.88E, h10km, mb3.2/8, ms3.8/8, Error ellipse: s-maj=11.1km s-min=4.4km az=50.0 135 km S of Tirana*
ISC 15 20:40:45.8±0.8,**39°.78N**±0°.01×**20°.69E**±0°.02,**h16**km±5km, **n128**,σ1§**55**/190,**mb3.6**/5,**6C-3D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.17	133	P	Pg	20 40 49.4	-0.8
JAN				S	Sg	20 40 52.5	-0.6
	17μm,0.4s						
JAN	Janina	0.17	133	P	Pg	20 40 49.4	-0.8
JAN				S	Sg	20 40 52.4	-0.7
JAN				AML	AML	20 40 55.8	
	comp=E,29326μm,0.2s						
JAN				AML	AML	20 40 56.5	
	comp=N,23750μm,0.2s						
IGT	Igoumenitsa	0.37	228	P	Pg	20 40 53.3	0.0
IGT				S	Sb	20 41 00.0	+0.6
	comp=N,7μm,0.5s						
IGT	Igoumenitsa	0.37	228	P	Pg	20 40 53.3	0.0
	baz=231						
IGT				S	Sg	20 40 59.0	+0.6
	baz=231						
IGT	Igoumenitsa	0.37	228	P	Pg	20 40 53.5	+0.2
IGT				S	Sg	20 40 58.5	0.0
IGT				AML	AML	20 41 00.7	
	comp=N,13510μm,0.3s						
IGT				AML	AML	20 41 02.5	
	comp=E,13130μm,0.5s						
LSK	Leskovik	0.38	350	P	Pg	20 40 54.0	+0.4
LSK				S	Sg	20 41 00.3	+1.4
	comp=E,5μm,0.5s						
LSK	Leskovik	0.38	350	P	Pg	20 40 54.0	+0.4
	baz=350						
LSK				S	Sg	20 41 00.1	+1.2
	baz=350						
LSK				AMP			
	comp=E,19nm,0.5s,baz=350						
SRN	Sarande	0.54	281	P	Pg	20 40 56.4	0.0
SRN				S	Sb	20 41 05.2	+0.9
	comp=E,4μm,0.4s						
SRN	Sarande	0.54	281	P	Pg	20 40 56.4	0.0
	baz=283						
SRN				S	Sg	20 41 05.0	+1.4
	baz=283						
SRN				AMP			
	comp=N,11nm,0.5s,baz=283						
PENT	Pentalofos	0.54	39	P	Pg	20 40 56.5	-0.1
PENT	Pentalofos	0.54	39	P	Pg	20 40 56.8	+0.1
PENT				S	Sg	20 41 03.9	0.0
KPRO	Kipourio	0.55	71	P	Pg	20 40 56.5	-0.2
KPRO				S	Sb	20 41 05.2	+0.4
	comp=N,6μm,0.4s						
KASA	Kassiopi	0.58	267	P	Pg	20 40 57.0	-0.2
KASA				S	Sg	20 41 05.0	+0.1
KASA				AML	AML	20 41 08.3	
	comp=N,5946μm,0.3s						
KASA				AML	AML	20 41 10.6	
	comp=E,6675μm,0.3s						
KEK	Kerkira	0.69	265	P	Pg	20 40 58.6	-0.6
KEK				S	Sb	20 41 09.7	+1.1
	comp=E,2μm,0.4s						
KEK	Kerkira	0.69	265	P	Pg	20 40 59.2	-0.1
KEK				S	Sg	20 41 08.8	+0.4
KEK				AML	AML	20 41 14.4	
	comp=N,3650μm,0.5s						
KEK				AML	AML	20 41 14.8	
	comp=E,4665μm,0.3s						
NEST	Nestorio	0.70	23	P	Pg	20 40 59.6	+0.1
NEST				S	Sb	20 41 10.2	+1.2
	comp=E,1μm,0.3s						
NEST	Nestorio	0.70	23	P	Pg	20 40 59.6	+0.1
KBN	Korca	0.85	5	P	Pg	20 41 02.0	-0.3
KBN				S	Sb	20 41 15.4	+2.0
	comp=E,770nm,0.6s						
KBN	Korca	0.85	5	P	Pg	20 41 02.0	-0.3
	baz=4.0						
KBN				S	Sb	20 41 15.3	+1.9
	baz=4.0						
KBN				AMP			
	comp=N,3.0nm,0.5s,baz=4.0						
TSLK	Tsoukalades, L	0.95	181	P	Pg	20 41 03.5	-0.7
TSLK				S	Sn	20 41 18.9	+1.3
	comp=N,2μm,0.5s						
TSLK	Tsoukalades, L	0.95	181	P	Pg	20 41 04.2	0.0
TSLK				S	Sb	20 41 17.2	+1.1
TSLK				AML	AML	20 41 24.1	
	comp=N,2624μm,0.4s						
TSLK				AML	AML	20 41 24.6	
	comp=E,4068μm,0.4s						
LKD2	Lefkada island	0.99	181	P	Pg	20 41 04.5	-0.4
LKD2				S	Sb	20 41 19.1	+1.9
	comp=E,1μm,0.4s						
LKD2	Lefkada island	0.99	181	P	Pg	20 41 04.6	-0.2
	baz=182						
LKD2				S	Sb	20 41 19.4	+2.2
	baz=182						
LKD2	Lefkada island	0.99	181	P	Pg	20 41 04.9	0.0
KZN	Kozani	0.99	57	P	Pg	20 41 04.2	-0.7
KZN				S	Sb	20 41 18.4	+1.1
	comp=E,1μm,0.5s						
KZN	Kozani	0.99	57	P	Pg	20 41 04.6	-0.3
THL	Klokotos Trika	1.05	101	P	Pg	20 41 04.8	-1.2
THL				S	Sg	20 41 19.9	+0.2
	comp=E,540nm,0.8s						
THL	Klokotos Trika	1.05	101	P	Pg	20 41 05.7	-0.4
NYDR	Nydri-Lefkada	1.06	180	P	Pg	20 41 06.0	-0.3
NYDR				S	Sn	20 41 21.9	+1.6
	comp=E,1μm,0.4s						
DRAG	Dragano-Lefkad	1.09	185	P	Pg	20 41 06.9	0.0
DRAG				S	Sn	20 41 22.7	+1.5
	comp=E,12μm,0.3s						
VLO	Vlora	1.15	308	P	Pn	20 41 09.1	+2.0
VLO				S	Sn	20 41 24.9	+2.4
	comp=E,3μm,0.5s						
VLO	Vlora	1.15	308	P	Pg	20 41 08.4	+0.5
	baz=308						
VLO				S	Sn	20 41 26.2	+3.8
	baz=308						
VLO				AMP			
	comp=N,9.1nm,0.4s,baz=308						
EVGI	Lefkada island	1.15	181	P	Pg	20 41 07.6	-0.4
EVGI				S	Sn	20 41 25.2	+2.5
	comp=N,1μm,0.4s						
EVGI	Lefkada island	1.15	181	P	Pg	20 41 07.6	-0.4
TYRN	Tyrnavos	1.19	93	P	Pb	20 41 07.6	-0.4
TYRN				S	Sn	20 41 25.0	+1.4
	comp=N,2μm,0.6s						
EVR	Evrytania	1.22	134	P	Pb	20 41 08.4	-0.1
EVR	Evrytania	1.22	134	P	Pb	20 41 08.9	+0.3
KTI	Kastanea	1.26	60	P	Pn	20 41 09.4	+0.6
FSK	Fiskardo	1.32	184	P	Pn	20 41 11.0	+1.5
FSK				S	Sn	20 41 30.4	+3.7
	comp=N,1μm,0.3s						
PVO	Paravola	1.33	150	P	Pb	20 41 11.2	+0.9
PVO	Paravola	1.33	150	P	Pb	20 41 11.3	+1.0
OHR	Ohrid	1.34	4	ePg	Pg	20 41 11.9	+0.4
OHR				eSg	Sg	20 41 32.0	+3.0
OHR	Ohrid	1.34	4	i Pn	Pg	20 41 12.3	+0.8
MAKR	Makrakomi, Fth	1.35	124	P	Pn	20 41 11.3	+1.3
MAKR				S	Sg	20 41 31.0	+1.5
	comp=N,1μm,0.7s						
MAKR	Makrakomi, Fth	1.35	124	P	Pn	20 41 11.3	+1.3
LIT	Litokhoron	1.42	76	P	Pn	20 41 11.8	+0.8
LIT				S	Sg	20 41 32.3	+0.6
	comp=N,608nm,0.7s						
LIT	Litokhoron	1.42	76	P	Pn	20 41 12.6	+1.6
KEF4	Livadi, Kephal	1.53	188	P	Pn	20 41 13.9	+1.5
KEF4				S	Sg	20 41 35.4	+0.3
KEF4	Livadi, Kephal	1.53	188	P	Pn	20 41 14.3	+1.9
DMLN	Damoulianata-K	1.56	189	P	Pb	20 41 15.1	+0.9
DMLN				S	Sb	20 41 35.4	+1.8
	comp=N,940nm,0.4s						
VLS	Valsamata	1.60	183	P	Pn	20 41 15.2	+1.8
VLS				S	Sb	20 41 36.5	+1.6
	comp=N,795nm,0.3s						
VLS	Valsamata	1.60	183	P	Pb	20 41 15.5	+0.5
EFP	Efpalio	1.65	144	P	Pb	20 41 16.4	+0.7
PSDA	Pessada-Kefalo	1.66	183	P	Pb	20 41 16.7	+0.7
PSDA				S	Sb	20 41 38.2	+1.6
TIR	Tirane	1.69	339	P	Pb	20 41 17.2	+0.7
TIR	Tirane	1.69	339	ePn	Pn	20 41 16.9	+2.3
TIR				eSn	Sg	20 41 42.3	+2.1
TIR	Tirane	1.69	339	P	Pb	20 41 17.2	+0.7
	baz=339						
SERG	Sergoula	1.73	141	P	Pb	20 41 17.6	+0.5
GRG	Griva	1.76	47	P	Pn	20 41 16.6	+0.9
GRG				S	Sb	20 41 41.0	+1.4
AXAR	Agios Charalam	1.83	123	P	Pn	20 41 18.9	+2.3
AXAR	Agios Charalam	1.83	123	P	Pb	20 41 19.7	+0.8
LAKA	Lakka	1.83	146	P	Pb	20 41 19.1	+0.2
LAKA	Lakka	1.83	146	P	Pb	20 41 19.5	+0.5
PHP	Peshkopia	1.92	354	P	Pb	20 41 20.8	+0.4
XOR	Xorichti	1.98	101	P	Pn	20 41 20.9	+2.3
DRO	Drossia	1.99	156	P	Pn	20 41 20.7	+2.0
NEO	Neokhori	2.02	103	P	Pn	20 41 21.3	+2.2
NEO				S	Sb	20 41 47.7	+0.8
	comp=N,285nm,0.5s						
HORT	Hortiatis	2.02	65	P	Pn	20 41 20.3	+1.0
HORT				S	Sb	20 41 47.8	+0.7
KLV	Kalavryta, Ach	2.07	146	P	Pn	20 41 22.6	+2.7
VAY	Valandovo	2.11	42	ePn	Pn	20 41 21.2	+0.9
VAY				eSn	Sn	20 41 47.3	+1.1
VAY	Valandovo	2.11	42	i Pn	Pn	20 41 21.4	+1.0
KNT	Kendrikon	2.18	50	P	Pn	20 41 22.0	+0.6
STIP	Stip	2.23	30	i Pn	Pb	20 41 25.4	-0.3
SKO	Skopje	2.27	14	ePn	Pb	20 41 25.9	-0.4
ULC	Ulcinj	2.44	334	⇑i Pn	Pn	20 41 25.0	0.0
ULC				i Sn	Sn	20 41 56.2	+1.6
OUR	Ouranopolis	2.59	77	P	Pn	20 41 28.2	+1.2
OUR				S	Sn	20 42 00.5	+2.4
SRS	Serrai	2.59	58	P	Pn	20 41 28.1	+1.1
SRS	Serrai	2.59	58	ePn	Pn	20 41 27.7	+0.7
SRS				eSn	Sn	20 41 57.5	-0.7
DRME	Dracevica, Mon	2.66	335	ePn	Pn	20 41 28.1	+0.1
DRME				i Sn	Sn	20 42 01.5	+1.6
BUM	Brajici-Budva	2.86	332	ePn	Pn	20 41 30.7	-0.1
BUM				i Sn	Sn	20 42 06.3	+1.3
TTG	Podgorica	2.86	338	ePn	Pn	20 41 30.9	+0.2
TTG				i Sn	Sn	20 42 06.5	+1.7
PVY	Plav	2.87	349	ePn	Pn	20 41 31.4	+0.5
PVY				i Sn	Sn	20 42 07.4	+2.2
NVR	Nevrokopi	2.88	56	P	Pn	20 41 32.2	+1.1
PYL	PYLOS	2.99	164	P	Pn	20 41 33.4	+0.9
CEME	Cevo	3.07	335	ePn	Pn	20 41 33.7	0.0
CEME				i Sn	Sn	20 42 11.4	+1.3
HCY	Herceg Novi	3.14	329	⇑i Pn	Pn	20 41 34.4	-0.2
HCY				i Sn	Sn	20 42 12.7	+1.0
IVA	Berane	3.15	349	⇓i Pn	Pn	20 41 35.3	+0.5
IVA				i Sn	Sn	20 42 14.2	+2.1
BARS	Barje	3.15	15	ePn	Pn	20 41 37.1	+2.3
KOME	Kolasin	3.20	344	ePn	Pn	20 41 35.8	+0.4
KOME				i Sn	Sn	20 42 14.9	+1.7
NKME	Niksic	3.26	337	ePn	Pn	20 41 36.4	+0.1
NKME				i Sn	Sn	20 42 16.1	+1.3
SELS	Selova	3.46	5	ePn	Pn	20 41 40.7	+1.8
SJES	Sjenica	3.52	351	ePn	Pn	20 41 42.5	+2.6
UPM	Unac-Piva	3.68	339	ePn	Pn	20 41 42.3	+0.2
UPM				i Sn	Sn	20 42 26.1	+0.9
PLE	Pljevlja	3.68	345	ePn	Pn	20 41 42.5	+0.4
PLE				i Sn	Sn	20 42 26.7	+1.5
ZAPS	Zavoj	3.79	22	ePn	Pn	20 41 45.4	+1.9
BOVS	Bovan	3.93	11	ePn	Pn	20 41 47.1	+1.7
GRUS	Gruza	4.11	0	ePn	Pn	20 41 49.4	+1.5
ZAGS	Zajecar	4.20	15	ePn	Pn	20 41 50.5	+1.5
BBLS	Lazići	4.20	347	ePn	Pn	20 41 51.1	+1.9
DIVS	Divibare	4.35	353	ePn	Pn	20 41 52.4	+1.1
TRUS	Trudelj	4.45	357	ePn	Pn	20 41 53.8	+1.3
FRGS	Fruska Gora	5.42	353	⇓P	Pn	20 42 06.9	+1.1
FRGS	Fruska Gora	5.42	353	ePn	Pn	20 42 06.5	+0.6
VAE	Valguarnera	5.42	247	Pn	Pn	20 42 05.5	-0.5
	comp=N,3.6nm,0.6s,baz=212,slow=5.8,SNR=1.4						
VAE				Sn	Sn	20 43 05.8	-2.3
	comp=N,0.5nm,0.3s,baz=58,slow=23,SNR=1.3						
IDI	Anoyia	5.59	142	Pn	Pn	20 42 06.9	-1.3
	comp=N,0.3nm,0.3s,baz=277,slow=16,SNR=1.4						
IDI				Sn	Sn	20 43 08.2	-4.0
	comp=N,0.7nm,0.3s,baz=266,slow=20,SNR=0.7						
IDI				LR	LR	20 45 05.3	
	comp=N,479nm,18.5s,baz=51,slow=46						
	comp=N,9.1nm,0.8s						
BZS	Buzias	5.88	6	⇑P	Pn	20 42 14.2	+2.0
ARR	Arges	6.30	26	⇓P	Pn	20 42 19.8	+1.7
MLR	Muntele Rosu	6.90	32	⇑P	Pn	20 42 32.9	+6.6
MLR	Muntele Rosu	6.90	32	Pn	Pn	20 42 32.2	+5.8
	comp=N,0.5nm,0.3s,baz=266,slow=5.4,SNR=9.8						
PLOR	Plostina	7.49	34	⇑P	Pn	20 42 37.4	+3.1
VRI	Vrincioaia	7.53	34	⇑P	Pn	20 42 38.2	+3.3
SOKA	Soboth	8.04	331	i Pn	Pn	20 42 42.2	+0.4
	comp=N,0.2nm,0.1s,SNR=4.4						
SOKA				i Sn	Sn	20 44 07.9	-4.5
	comp=N,0.4nm,0.3s						
OBKA	Obir	8.09	328	i Pn	Pn	20 42 43.5	+0.9
	comp=N,1.2nm,0.2s,SNR=4.5						
OBKA				eSn	Sn	20 44 09.8	-3.9
	comp=N,1.9nm,0.2s						
ABTA	Abfaltersbach	9.17	322	i Pn	Pn	20 42 57.3	-0.1
	comp=N,0.8nm,0.3s						
ABTA				i Sn	Sn	20 44 34.8	-5.4
	comp=N,2.2nm,0.5s						
MOA	Molln	9.31	332	i Pn	Pn	20 43 00.5	+1.3
	comp=N,0.6nm,0.2s						
MOA				i Sn	Sn	20 44 40.6	-2.9
	comp=N,0.8nm,0.3s						
WTTA	Wattenberg	9.96	322	i Pn	Pn	20 43 08.9	+0.7
	comp=N,1.0nm,0.2s						
WTTA				i Sn	Sn	20 44 54.2	-5.5
	comp=N,2.0nm,0.4s						
WATA	Walderalm	10.04	322	i Pn	Pn	20 43 09.3	0.0
	comp=N,1.3nm,0.3s						
SQTA	Sankt Quirin	10.13	320	i Pn	Pn	20 43 11.2	+0.6
	comp=N,1.4nm,0.3s						
MOTA	Moosalm	10.27	321	i Pn	Pn	20 43 12.9	+0.3
	comp=N,0.6nm,0.3s						
MOTA				i Sn	Sn	20 45 02.6	-4.7
	comp=N,1.1nm,0.3s						
GERES	GERESS Array B	10.35	333	Pn	Pn	20 43 14.4	+0.8
	comp=N,0.1nm,0.3s,baz=154,slow=12,SNR=5.3						
	comp=N,0.2nm,0.3s						
DAVOX	Davos/Dischmat	10.53	315	Pn	Pn	20 43 17.1	+1.0
	comp=N,0.4nm,0.3s,baz=155,slow=11,SNR=5.7						
	comp=N,1.2nm,0.4s						
ESDC	Sonseca Array	18.95	278	P	P	20 45 05.8	-0.3
	baz=74,slow=11,SNR=1.8						
	comp=N,0.2nm,0.6s						
HFS	Hagfors	20.85	350	P	P	20 45 25.4	-1.2
	comp=N,1.7

```
KPRO                                S     Sg   20 43 13.2 +0.6
      comp=N,8μm,0.5s
SRN   Sarande        0.55 283       P     Pb   20 43 05.8  0.0
SRN                                 S     Sb   20 43 13.7 +0.1
      comp=N,2μm,0.3s
SRN   Sarande        0.55 283       P     Pg   20 43 04.0 -1.3
      baz=283
SRN                                 S     Sb   20 43 14.7 +1.1
      baz=283
SRN                                 AMP
      comp=N,5.1nm,0.3s,baz=283
PENT  Pentalofos     0.55  37       P     Pg   20 43 04.9 -0.5
PENT                                S     Sg   20 43 13.5 +0.7
KEK   Kerkira        0.70 267       P     Pg   20 43 07.2 -0.8
KEK                                 S     Sb   20 43 17.6 -0.1
      comp=N,1μm,0.3s
NEST  Nestorio       0.71  22       P     Pg   20 43 07.9 -0.4
NEST                                S     Sb   20 43 19.0 +0.7
KBN   Korca          0.87   4       P     Pg   20 43 10.8 -0.5
KBN                                 S     Sb   20 43 23.2 +0.4
      comp=N,728nm,1.1s
KBN   Korca          0.87   4       P     Pg   20 43 11.0 -0.3
      baz=2.0
KBN                                 S     Sn   20 43 24.9 +0.2
      baz=2.0
KBN                                 AMP
      comp=E,2.8nm,1.0s,baz=2.0
TSLK  Tsoukalades, L 0.93 182       P     Pg   20 43 12.7 +0.3
TSLK                                S     Sn   20 43 27.4 +1.3
      comp=E,3μm,0.4s
LKD2  Lefkada island 0.97 182       P     Pg   20 43 12.6 -0.5
LKD2                                S     Sn   20 43 28.1 +1.0
      comp=E,3μm,0.6s
LKD2  Lefkada island 0.97 182       P     Pg   20 43 13.3 +0.2
      baz=184
LKD2                                S     Sn   20 43 27.8 +0.7
      baz=184
KZN   Kozani         0.99  56       P     Pg   20 43 13.1 -0.5
KZN                                 S     Sb   20 43 27.1 +0.8
      comp=E,1μm,0.6s
THL   Klokotos Trika 1.03 100       P     Pg   20 43 13.5 -0.9
THL                                 S     Sb   20 43 28.8 +1.4
      comp=E,1μm,0.7s
NYDR  Nydri-Lefkada  1.04 180       P     Pg   20 43 14.1 -0.4
NYDR                                S     Sn   20 43 30.3 +1.5
      comp=E,2μm,0.6s
DRAG  Dragano-Lefkad 1.08 185       P     Pg   20 43 14.8 -0.4
DRAG                                S     Sn   20 43 30.8 +1.1
EVGI  Lefkada island 1.14 182       P     Pg   20 43 16.1 -0.2
EVGI                                S     Sn   20 43 33.5 +2.3
      comp=E,3μm,0.3s
VLO   Vlora          1.17 308       P     Pn   20 43 17.9 +1.7
      baz=308
VLO                                 S     Sn   20 43 35.7 +3.8
      baz=308
VLO                                 AMP
      comp=N,5.7nm,0.6s,baz=308
TYRN  Tyrnavos       1.18  92       P     Pg   20 43 16.3 -0.9
TYRN                                S     Sn   20 43 33.8 +1.4
      comp=N,3μm,0.5s
EVR   Evrytania      1.20 134       P     Pg   20 43 17.3 -0.3
EVR                                 S     Sn   20 43 34.6 +1.6
      comp=N,1μm,0.6s
KTI   Kastanea       1.26  59       P     Pn   20 43 17.8 +0.1
FSK   Fiskardo       1.30 185       P     Pg   20 43 19.8 +0.4
FSK                                 S     Sn   20 43 38.9 +3.7
      comp=N,2μm,0.3s
PVO   Paravola       1.31 150       P     Pg   20 43 20.4 +0.8
PVO                                 S     Sn   20 43 39.4 +4.0
      comp=N,2μm,0.8s
MAKR  Makrakomi, Fth 1.34 123       P     Pb   20 43 19.9 +0.7
MAKR                                S     Sn   20 43 40.1 +3.9
      comp=N,2μm,0.4s
OHR   Ohrid          1.35   3       ePg   Pb   20 43 20.0 +0.4
OHR                                 eSg   Sn   20 43 42.6 +5.9
OHR   Ohrid          1.35   3       i Pn  Pg   20 43 21.1 +0.5
LIT   Litokhoron     1.42  75       P     Pn   20 43 20.5 +0.7
LIT                                 S     Sg   20 43 40.5 +0.3
      comp=N,1μm,0.6s
KEF4  Livadi, Kephal 1.51 188       P     Pn   20 43 22.4 +1.4
KEF4                                S     Sg   20 43 43.6 +0.5
DMLN  Damoulianata-K 1.54 190       P     Pn   20 43 22.4 +1.0
DMLN                                S     Sg   20 43 44.6 +0.7
      comp=N,2μm,0.6s
VLS   Valsamata      1.58 183       P     Pn   20 43 23.4 +1.4
VLS                                 S     Sg   20 43 45.5 +0.2
      comp=N,1μm,0.4s
EFP   Efpalio        1.63 144       P     Pb   20 43 25.0 +0.8
PSDA  Pessada-Kefalo 1.64 183       P     Pb   20 43 24.9 +0.5
PSDA                                S     Sb   20 43 46.4 +1.4
      comp=N,2μm,0.4s
SERG  Sergoula       1.71 141       P     Pb   20 43 26.1 +0.5
TIR   Tirane         1.71 338       ⇑P    Pb   20 43 25.9 +0.2
TIR   Tirane         1.71 338       ePn   Pb   20 43 25.3  -0.3
TIR                                 eSn   Sg   20 43 53.1 +3.6
TIR   Tirane         1.71 338       P     Pb   20 43 26.0 +0.3
      baz=338
GRG   Griva          1.77  47       P     Pn   20 43 25.4 +0.8
GRG                                 S     Sb   20 43 49.6 +0.9
      comp=N,335nm,0.9s
RLS   Riolos of Patr 1.80 160       P     Pb   20 43 27.3 +0.2
LAKA  Lakka          1.81 146       P     Pb   20 43 27.4  0.0
AXAR  Agios Charalam 1.81 122       P     Pb   20 43 27.8 +0.4
PHP   Peshkopia      1.94 354       P     Pn   20 43 28.4 +1.5
PHP                                 S     Sb   20 43 53.2  -0.3
XOR   Xorichti       1.97 101       P     Pn   20 43 29.0 +1.7
DRO   Drossia        1.97 156       P     Pb   20 43 29.7  -0.3
NEO   Neokhori       2.00 102       P     Pb   20 43 30.6  0.0
NEO                                 S     Sb   20 43 56.3 +0.9
      comp=N,488nm,0.6s
HORT  Hortiatis      2.02  65       P     Pn   20 43 29.0 +0.9
KLV   Kalavryta, Ach 2.05 146       P     Pb   20 43 31.4  -0.1
VAY   Valandovo      2.12  42       ePn   Pn   20 43 29.6 +0.3
VAY                                 eSn   Sn   20 43 55.9 +0.5
VAY   Valandovo      2.12  42       i Pn  Pn   20 43 30.1 +0.8
KNT   Kendrikon      2.19  49       P     Pn   20 43 31.2 +0.9
KNT                                 S     Sn   20 43 59.6 +2.4
STIP  Stip           2.24  30       i Pn  Pb   20 43 34.4  -0.3
SKO   Skopje         2.28  14       ePn   Pn   20 43 33.5 +1.9
SKO                                 eSn   Sn   20 44 02.3 +2.8
OUR   Ouranopolis    2.58  76       P     Pn   20 43 37.0 +1.2
OUR                                 S     Sn   20 44 09.0 +2.1
      comp=N,250nm,0.6s
SRS   Serrai         2.59  57       ePn   Pn   20 43 35.6  -0.3
SRS                                 eSn   Sn   20 44 07.6 +0.4
TIP   Timpagrande    3.10 261       ⇑P    Pn   20 43 43.0  0.0
BARS  Barje          3.17  15       ePn   Pn   20 43 45.3 +1.5
SELS  Selova         3.47   5       ePn   Pn   20 43 49.1 +1.1
SJES  Sjenica        3.54 351       ePn   Pn   20 43 51.0 +1.9
ZAPS  Zavoj          3.80  22       ePn   Pn   20 43 53.3 +0.8
BOVS  Bovan          3.95  11       ePn   Pn   20 43 55.5 +1.0
ZAGS  Zajecar        4.21  15       ePn   Pn   20 43 59.1 +1.0
DIVS  Divibare       4.37 353       ePn   Pn   20 44 00.4  0.0
IDI   Anoyia         5.57 142       Pn    Pn   20 44 18.3 +1.4
      comp=N,0.4nm,0.3s,baz=215,slow=21,SNR=1.3
IDI                                 Sn    Sn   20 45 17.6  -3.0
      comp=N,1.5nm,0.3s,baz=304,slow=22,SNR=1.7
      comp=N,9.2nm,0.9s
MLR   Muntele Rosu   6.91  32       Pn    Pn   20 44 38.5 +3.1
      comp=N,0.1nm,0.3s,baz=247,slow=17,SNR=1.5
BRTR  Keskin Array B 9.97  86       Pn    Pn   20 45 16.4  -0.9
      comp=N,0.1nm,0.3s,baz=269,slow=12,SNR=1.8
      comp=N,0.4nm,0.7s
FINES FINESS Array B 21.96   7       P     P    20 47 45.3  -2.1
      comp=N,1.8nm,0.9s,baz=166,slow=13,SNR=1.5
      comp=N,1.8nm,0.9s
NOA   NORSAR Array B 22.10 348       P     P    20 47 48.2  -0.8
      comp=N,0.9nm,0.9s,baz=164,slow=11,SNR=2.7
      comp=N,0.9nm,0.9s
ARCES ARCESS Array B 29.95   3       P     P    20 48 59.0  -2.7
      comp=N,3.9nm,1.1s,baz=189,slow=11,SNR=1.8
      comp=N,3.9nm,1.1s
TORD  Torodi Ar. Bea 31.36 218       P     P    20 49 13.9  -0.7
      comp=N,0.5nm,0.6s,baz=39,slow=8.9,SNR=4.4
      comp=N,0.5nm,0.6s
MKAR  Makanchi Array 44.37  60       P     P    20 51 03.0  -1.1
      comp=N,0.8nm,0.6s,baz=273,slow=8.2,SNR=7.7
      comp=N,0.8nm,0.6s
ZALV  Zalesovo Beam  44.55  49       P     P    20 51 04.2  -1.2
      comp=N,0.2nm,0.3s,baz=289,slow=9.0,SNR=3.0
      comp=N,0.2nm,0.3s
```

*IPEC **15** 20:46:42.5±0.2, 51°.56N×16°.22E, h1km, ML2.4/4, Error*

ellipse: s-maj=1.8km s-min=1.4km az=53.0
*PRU **15** 20:46:43.9±0.0, 51°.49N×16°.13E, h0km*
*VIE **15** 20:46:45.0±0.9, 51°.38N×16°.02E, h0km, mb2.4/1, ml2.5/4,*
Error ellipse: s-maj=8.3km s-min=5.4km az=51.0 76 km
WNW of Wroclaw Suspected Mining induced.
ISC 15 20:46:41.3±0.8, 51°.60N±0°.03×16°.19E±0°.03, h0km, n31,
σ1§39/62, Poland

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Code  Station Name   Δ°   AZ°   Phase ID      Time      Res
                                Op    ISC     h m s     ISC
KSP   Ksiaz          0.76 175   ePg   Pg      20 46 56.5 +0.7
KSP                             eSg   Sg      20 47 05.4 -0.1
CHVC  Chvalec        1.01 185   ePG   Pg      20 47 01.3 +0.6
CHVC                            eSG   Sg      20 47 13.4 -0.4
      comp=Z,40nm,0.5s
OSTC  Ostas          1.04 179   ePG   Pg      20 47 02.0 +0.8
OSTC                            eSG   Sg      20 47 14.3 -0.4
      comp=Z,34nm,0.6s
UPC   Upice          1.10 186   ePG   Pg      20 47 02.6 +0.3
UPC                             eSG   Sg      20 47 15.7 -0.7
      comp=Z,92nm,0.6s
DPC   Dobruska-Polom 1.25 176   ePG   Pg      20 47 05.3 +0.1
DPC                             eSG   Sg      20 47 20.3 -1.1
      comp=Z,42nm,0.7s
PVCC  Panska Ves     1.48 224   ePG   Pn      20 47 09.6 +0.4
PVCC                            eSG   Sg      20 47 28.6 -0.2
      comp=Z,88nm,0.3s
KRLC  Kraliky        1.57 166   ePG   Pn      20 47 11.1 +0.7
KRLC                            eSG   Sg      20 47 29.7 -1.9
      comp=Z,21nm,0.5s
GOPC  GO Pecny, Ondr 1.91 208   ePG   Pn      20 47 16.3 +1.2
PRU   Pruhonice      1.92 214   ePG   Pb      20 47 17.0 -0.2
PRU                             eSG   Sn      20 47 40.5 +0.4
      comp=Z,26nm,0.6s
MORC  Moravsky Berou 2.01 154   ePN   Pn      20 47 17.2 +0.7
MORC                            eSG   Sb      20 47 44.3 -0.1
MORC  Moravsky Berou 2.01 154   ePn   Pn      20 47 17.1 +0.6
      baz=335
MORC                            eSg   Sb      20 47 44.3 -0.1
      18nm,0.6s,baz=335
CLL   Collm          2.02 263   ePn   Pn      20 47 17.0 +0.5
CLL                             ePg   Pg      20 47 20.0 +0.1
CLL                             ex    x       20 47 24.0
CLL                             ex    x       20 47 36.0
CLL                             eSg   Sg      20 47 46.0  0.0
      comp=Z,16nm,0.3s
OKC   Ostrava-Krasne 2.15 144   eSG   Sb      20 47 49.2 +0.8
      comp=Z,20nm,0.6s
VRAC  Vranov         2.31 173   ePN   Pn      20 47 21.3 +0.8
VRAC                            eSG   Sb      20 47 53.4 +0.7
VRAC  Vranov         2.31 173   ePn   Pn      20 47 21.3 +0.8
      baz=354
VRAC                            eSg   Sb      20 47 53.4 +0.7
      comp=Z,20nm,0.8s,baz=354
KRUC  Moravsky       2.54 177   ePN   Pn      20 47 24.4 +0.7
KRUC                            ePG   Pb      20 47 28.4 +0.7
KRUC                            eSG   Sb      20 48 00.8 +1.3
KRUC  Moravsky       2.54 177   ePn   Pn      20 47 24.3 +0.6
      baz=358
KRUC  Moravsky       2.54 177   ePg   Pb      20 47 28.3 +0.6
      baz=358
KRUC                            eSg   Sb      20 48 00.7 +1.3
      comp=Z,13nm,0.6s,baz=358
OJC   Ojcow          2.67 120   ePg   Pg      20 47 32.5 +0.1
OJC                             eSg   Sg      20 48 08.0 +1.1
NKC   Novy Kostel    2.73 242   ePN   Pn      20 47 27.5 +1.1
NKC                             ePG   Pg      20 47 33.3  -0.4
NKC                             eSG   Sg      20 48 09.2 +0.1
      comp=Z,35nm,0.3s
KHC   Kasperske Hory 2.98 215   ePN   Pn      20 47 29.9  0.0
KHC                             ePG   Pb      20 47 36.0 +0.7
KHC                             eSG   Sb      20 48 14.0 +1.7
      comp=Z,8.7nm,0.5s
CKRC  Cesky Krumlov  3.03 204   ePN   Pn      20 47 31.4 +0.9
CKRC                            ePG   Pb      20 47 37.5 +1.4
CKRC                            eSG   Sg      20 48 16.3  -2.3
      comp=Z,11nm,0.6s
BSD   Bornholm Skovb 3.61 348   i P   Pn      20 47 38.0  -0.4
BSD                             i S   Sn      20 48 19.5  -2.1
BSD                             IAML          20 48 23.2
      comp=Z,2.0nm,0.2s
CONA  Conrad Observa 3.68 183   ePn   Pn      20 47 39.4  0.0
      comp=Z,0.2nm,0.2s
CONA                            eSg   Sg      20 48 37.3  -2.1
      comp=Z,15nm,0.6s
RONA  Rosalia, Austr 3.90 179   eSg   Sg      20 48 43.2  -3.3
      comp=Z,5.5nm,0.4s
MOA   Molln          3.95 199   i Pn  Pn      20 47 43.9 +0.7
      comp=Z,1.1nm,0.3s
MOA                             eSg   Sg      20 48 47.1  -1.1
      comp=Z,6.6nm,0.4s
LUNU  Lund           4.36 339   i P   Pn      20 47 50.7 +1.9
LUNU                            i S   Sn      20 48 37.5  -2.8
ARSA  Arzberg        4.37 186   Sg    Sg      20 48 58.3  -3.4
      comp=Z,5.3nm,0.7s
BLEU  Blekinge       4.72 357   i P   Pn      20 47 55.2 +1.5
BLEU                            i S   Sn      20 48 47.3  -1.8
BJUU  Bjuv           4.86 339   i P   Pn      20 47 58.8 +3.1
BJUU                            i S   Sn      20 48 49.6  -3.0
DEL   Delary         5.07 345   i P   Pn      20 48 00.5 +2.0
DEL                             i S   Sn      20 48 54.7  -3.0
```

*MOS **15** 20:49:22.9±0.9, 47°.80N×152°.49E, h128km, mb4.5/22,*
Error ellipse: s-maj=10.3km s-min=6.5km az=94.8
*IDC **15** 20:49:26.5±2.6, 47°.78N×152°.65E, h134km±23km,*
mb3.8/27, mbtmp4.2/29, Error ellipse: s-maj=15.1km
s-min=11.3km az=147.0
*NEIC **15** 20:49:27.1±1.0, 47°.9N±0°.1×152°.5E±0°.2, h129km±9km,*
mb4.4/59, Error ellipse: s-maj=24.4km s-min=12.7km
az=142.0
*SKHL **15** 20:49:27.6±0.1, 48°.20N×152°.00E, h118km±3km, mb4.9/5,*
mbv5.3/2, msh5.1/3, msha5.7/4
*JMA **15** 20:49:28.8±0.8, 46°.9N±9°.×15°.3E±°., h149km, MV3.6/11,*
KURILE ISLANDS REGION
ISC 15 20:49:25.6±0.5, 47°.71N±0°.07×152°.60E±0°.07, h128km,
n249, σ1§14/256, mb4.3/74, 42C-4D, Kuril Islands

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Code  Station Name   Δ°   AZ°   Phase ID      Time      Res
                                Op    ISC     h m s     ISC
SKR   Severo-Kuril's 3.77  36   ePN   Pn      20 50 22.6 +0.5
SKR                             eS    Sn      20 51 03.9  -2.0
SKR                             pmax  pmax
      comp=Z,31nm,0.7s
SKR                             smax  smax
      comp=N,57nm,0.2s
SKR   Severo-Kuril's 3.77  36   eP    Pn      20 50 22.6 +0.5
SKR                             AMB   AMB     20 50 23.4
      comp=N,30nm,0.3s
SKR                             AMB   AMB     20 50 24.2
      comp=N,230nm,3.0s
SKR                             eS    Sn      20 51 03.9  -2.0
SKR                             A     A       20 51 07.0
      comp=N,100nm,0.2s
SKR                             A     A       20 51 07.0
      comp=N,90nm,0.2s
SKR                             A     A       20 51 07.5
      comp=N,300nm,3.0s
SKR                             A     A       20 51 07.5
      comp=N,200nm,3.0s
KUR   Kuril'sk       4.10 235   eP    Pn      20 50 28.8 +2.2
KUR                             AMB   AMB     20 50 30.9
      comp=N,60nm,0.5s
KUR                             eS    Sn      20 51 15.2 +1.3
KUR                             A     A       20 51 24.5
      comp=N,200nm,0.5s
KUR                             A     A       20 51 24.5
      comp=N,170nm,0.5s
KUR                             A     A       20 51 26.0
      comp=N,2μm,5.0s
KUR                             A     A       20 51 26.0
      comp=N,3μm,5.0s
PAU   Pauzhetka      4.65  34   eP    Pn      20 50 34.9 +1.0
PAU                             AMB   AMB     20 50 36.5
      comp=N,20nm,0.3s
PAU                             eS    Sn      20 51 25.3  -1.8
PAU                             A     A       20 51 33.8
      comp=N,170nm,0.3s
PAU                             A     A       20 51 33.8
      comp=N,150nm,0.3s
YUK   Yuzh-Kuril'sk  5.97 234   ePN   Pn      20 50 52.9 +1.3
YUK                             S     Sn      20 52 00.8 +2.1
YUK                             pmax  pmax
      comp=Z,141nm,0.2s
YUK                             pmax  pmax
      comp=N,38nm,0.3s
YUK                             smax  smax
      comp=E,52nm,0.1s
YUK                             smax  smax
      comp=N,40nm,0.2s
YUK   Yuzh-Kuril'sk  5.97 234   eP    Pn      20 50 53.4 +1.8
YUK                             AMB   AMB     20 50 57.1
      comp=N,160nm,0.4s
YUK                             AMB   AMB     20 51 00.5
      comp=N,900nm,2.0s
YUK                             eS    Sn      20 51 59.4 +0.7
YUK                             A     A       20 52 01.5
      comp=N,2μm,2.0s
YUK                             A     A       20 52 01.5
      comp=N,1μm,2.0s
YUK                             A     A       20 52 04.8
      comp=N,40nm,0.2s
YUK                             A     A       20 52 04.8
      comp=N,50nm,0.2s
PEA0B Petropavlovsk- 6.31  29   Pn    Pn      20 50 56.4 +0.2
PEA0B Petropavlovsk- 6.31  29   PN    Pn      20 50 56.4 +0.2
PETK  Petropavlovsk- 6.31  29   P     Pn      20 50 56.1  -0.1
      comp=N,2.6nm,0.6s,baz=201,slow=13,SNR=15
PETK  Petropavlovsk- 6.31  29   Pn    Pn      20 50 55.6  -0.5
JRA   Rausu          6.44 237   eP    Pn      20 50 59.4 +1.4
NEM2  Nemuro 2       6.48 230   eP    Pn      20 50 57.2  -1.3
NEM2                            eS    Sn      20 52 05.7  -5.5
NMR   Nemuro--Hokkai 6.49 231   ⇑i PN Pn      20 50 57.2  -1.4
NMR                             i S   Sn      20 52 06.5  -4.7
PET   Petropavlovsk  6.58  34   eS    Sn      20 52 10.2  -3.1
JNK   Nakash         6.89 236   eP    Pn      20 51 05.2 +1.2
JAK   Akkeshi        7.29 233   eP    Pn      20 51 08.2  -1.2
JAK                             eS    Sn      20 52 25.8  -4.8
JAR   Ashorobuto     7.61 238   eP    Pn      20 51 15.5 +1.8
JAR                             eS    Sn      20 52 37.8  -0.6
JOB   Onbets         7.82 235   eP    Pn      20 51 16.8 +0.2
JOB                             eS    Sn      20 52 40.3  -3.2
JKK2  Kamakawa 2     7.88 244   eP    Pn      20 51 20.2 +2.8
JCH   Churui         8.28 235   eP    Pn      20 51 21.9  -0.8
JCH                             eS    Sn      20 52 49.7  -4.8
ERM   Erimo          8.79 233   Pn    Pn      20 51 30.9 +1.3
ERM   Erimo          8.79 233   i PN  Pn      20 51 30.0 +0.4
JNBK  Urakawa-nobuka 8.84 236   eP    Pn      20 51 29.4  -0.8
JNBK                            eS    Sn      20 53 02.8  -5.2
KBG   Krutoberegovo  10.58  32  i P   Pn      20 51 51.5  -2.0
KBG                             AMB   AMB     20 51 52.0
      comp=N,30nm,0.3s
JANG  Nango          10.83 231  eS    Sn      20 53 44.6  -12
KLR   Kul'dur        13.91 284  eP    P       20 52 41.7 +0.6
      comp=N,3.1nm,0.8s,baz=74,slow=13,SNR=9.1
KLR   Kul'dur        13.91 284  i P   P       20 52 41.0  -0.1
SEY   Seymchan       15.26 360  P     P       20 52 55.1  -0.8
      comp=N,4.8nm,0.7s,baz=177,slow=9.2,SNR=22
SEY   Seymchan       15.26 360  ceP   P       20 52 54.9  -1.0
SEY                             pmax  pmax
      comp=Z,9.0nm,1.7s
MJAR  Matsushiro Arr 15.41 229  P     P       20 52 59.5 +1.6
      comp=Z,1.1nm,0.8s,baz=31,slow=10.0,SNR=3.4
YAK   Yakutsk        19.33 326  i P   P       20 53 41.4 +0.9
KSRS  Korea Array    20.78 249  P     P       20 53 57.1 +0.8
      comp=Z,3.6nm,0.8s,baz=53,slow=10,SNR=11
      comp=Z,3.6nm,0.8s
TIXI  Tiksi          26.45 343  P     P       20 54 49.0  -1.1
      comp=Z,1.4nm,0.4s,baz=91,slow=23,SNR=12
      comp=Z,1.4nm,0.4s
TIXI  Tiksi          26.45 343  P     P       20 54 49.0  -1.1
TIXI  Tiksi          26.45 343  P     P       20 54 49.0  -1.1
TIXI                            pmax  pmax
      comp=Z,7.0nm,1.3s
TIXI  Tiksi          26.45 343  eP    P       20 54 49.0  -1.1
NJ2   Nanjing        29.96 251  eP    P       20 55 19.4  -2.3
H11N2 WAKE ISLAND Hy 30.23 152  T     T       21 27 16.9
      baz=340,slow=76,SNR=28
H11N1 WAKE ISLAND Hy 30.25 152  T     T       21 27 20.7
      baz=340,slow=76,SNR=13
H11N3 WAKE ISLAND Hy 30.25 152  T     T       21 27 18.4
      baz=340,slow=76,SNR=18
SONM  Songino Array  30.70 288  P     P       20 55 27.8  -0.4
      comp=Z,0.5nm,0.6s,baz=121,slow=5.7,SNR=4.1
      comp=Z,0.5nm,0.6s
SONM  Songino Array  30.70 288  P     P       20 55 28.3 +0.1
SONM  Songino Array  30.70 288  P     P       20 55 28.3 +0.1
SONM                            pmax  pmax
      comp=Z,1.0nm,0.6s
H11S1 WAKE ISLAND Hy 31.32 154  T     T       21 29 02.2
      baz=342,slow=76,SNR=40
H11S3 WAKE ISLAND Hy 31.33 154  T     T       21 28 40.4
      baz=342,slow=76,SNR=40
H11S2 WAKE ISLAND Hy 31.34 154  T     T       21 29 03.5
      baz=342,slow=76,SNR=38
J20K  Nowinta River  32.87  40  P     P       20 55 46.7  -0.1
J20K                            IAmb  IAmb    20 55 48.2
      comp=Z,6.7nm,1.5s
IMAR  Indian Mountai 33.21  37  P     P       20 55 49.9 +0.1
M20K  Styx River     33.25  45  P     P       20 55 51.0 +0.7
M20K                            IAmb  IAmb    20 56 09.6
      comp=Z,9.7nm,1.4s
H21K  Melozitna Rive 33.56  38  P     P       20 55 53.1 +0.2
H21K                            IAmb  IAmb    20 55 53.9
      comp=Z,4.2nm,0.8s
CAST  Castle Rocks   33.74  42  P     P       20 55 55.1 +0.6
I21K  Tanana         33.87  39  P     P       20 55 56.2 +0.7
MLY   Manley         34.38  39  P     P       20 56 00.9 +0.9
TRF   Thorofare Moun 34.55  42  P     P       20 56 01.5  -0.1
H23K  Yukon River    34.91  38  P     P       20 56 05.2 +0.6
H23K                            IAmb  IAmb    20 56 06.6
      comp=Z,4.4nm,0.7s
I23K  Minto, Yukon-K 34.97  39  P     P       20 56 05.2 +0.2
TOLK  Toolik Lake Re 35.12  33  P     P       20 56 06.8 +0.5
COLA  College        35.61  39  i P   P       20 56 09.9  -0.5
COLA                            pmax  pmax
      comp=Z,6.0nm,1.0s
IL31                 36.02  39  P     P       20 56 13.2  -0.8
ILAR  Eielson Array  36.02  39  P     P       20 56 13.2  -0.8
      comp=Z,1.3nm,0.5s,baz=265,slow=6.6,SNR=18
      comp=Z,1.3nm,0.5s
ILAR  Eielson Array  36.02  39  P     P       20 56 13.9  -0.1
ILAR  Eielson Array  36.02  39  P     P       20 56 13.9  -0.1
BMAR  Burnt Mountain 36.93  35  P     P       20 56 22.5 +0.9
BCAR  Beaver Creek A 38.41  42  P     P       20 56 35.1 +0.8
ISLE  Juniper Island 38.56  46  P     P       20 56 35.9 +0.3
BARN  Barnard Glacie 38.80  45  P     P       20 56 38.2 +0.5
BARN                            IAmb  IAmb    20 56 40.1
      comp=Z,16nm,1.5s
EPYK  Eagle Plains   40.10  36  P     P       20 56 49.1 +0.9
EPYK                            IAmb  IAmb    20 56 59.9
      comp=Z,13nm,1.3s
HYT   Haines Junctio 40.83  45  P     P       20 56 55.2 +0.9
INK   Inuvik         41.03  33  P     P       20 56 55.2  -0.4
      comp=Z,2.7nm,0.5s,baz=304,slow=7.6,SNR=10
      comp=Z,2.7nm,0.5s
INK   Inuvik         41.03  33  P     P       20 56 56.3 +0.6
INK                             IAmb  IAmb    20 56 57.3
      comp=Z,13nm,1.4s
INK   Inuvik         41.03  33  P     P       20 56 56.3 +0.6
INK                             pmax  pmax
      comp=Z,13nm,1.4s
ZAA0  Zalesovo Array 41.77 305  P     P       20 57 01.6  -0.3
ZALV  Zalesovo Beam  41.77 305  P     P       20 57 01.7  -0.2
      comp=Z,3.6nm,0.5s,baz=63,slow=6.8,SNR=18
ZALV                            PcP   PcP     20 58 54.7  -0.9
      comp=Z,0.3nm,0.4s,baz=72,slow=4.7,SNR=3.7
      comp=Z,3.6nm,0.5s
ZALV  Zalesovo Beam  41.77 305  P     P       20 57 01.5  -0.4
DGZ   Jazzator, Alta 41.84 298  i P   P       20 57 02.9 +0.2
DGZ                             pmax  pmax
      comp=Z,9.0nm,3.6s
MK31  Makanchi Array 46.20 296  P     P       20 57 36.9  -0.5
MK31                            IAmb  IAmb    20 58 03.8
      comp=Z,6.9nm,1.4s
MK31  Makanchi Array 46.20 296  P     P       20 57 36.9  -0.5
MK31                            pmax  pmax
      comp=Z,7.0nm,1.4s
MKAR  Makanchi Array 46.20 296  P     P       20 57 37.3  0.0
      comp=Z,1.6nm,0.7s,baz=64,slow=8.4,SNR=8.8
      comp=Z,1.6nm,0.7s
MKAR  Makanchi Array 46.20 296  P     P       20 57 36.8  -0.6
KURK  Kurchatov      46.55 303  P     P       20 57 40.0  0.0
KURK                            IAmb  IAmb    20 57 40.6
      comp=Z,10nm,0.8s
KURK  Kurchatov      46.55 303  ceP   P       20 57 39.3  -0.7
KURK                            pmax  pmax
      comp=Z,11nm,0.8s
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KURK	Kurchatov	46.55	303	eP	P	20 57 39.3 -0.7
KURBB	Kurchatov Arra	46.64	303	P	P	20 57 40.8 0.0
	comp=Z,8.5nm,0.7s,baz=67,slow=8.2,SNR=27					
	comp=Z,8.5nm,0.7s					
EUNU	Eureka	48.26	12	P	P	20 57 53.1 +0.1
EUNU				IAmb	IAmb	20 57 54.2
	comp=Z,10nm,0.8s					
LSA	Lhasa	49.88	272	P	P	20 58 08.0 +1.6
LSA				IAmb	IAmb	20 58 09.5
	comp=Z,3.6nm,0.6s					
LSA	Lhasa	49.88	272	P	P	20 58 08.0 +1.6
LSA				pmax	pmax	
	comp=Z,4.0nm,0.6s					
BVAR	Borovoye Array	49.98	309	P	P	20 58 06.5 +0.1
	comp=Z,2.1nm,0.4s,baz=60,slow=7.2,SNR=34					
BVAR				PcP	PcP	20 59 24.4 0.0
	comp=Z,0.4nm,0.5s,baz=180,slow=0.1,SNR=3.9					
	comp=Z,2.1nm,0.4s					
BRVK	Borovoye	50.02	309	P	P	20 58 06.8 +0.2
BRVK				IAmb	IAmb	20 58 07.9
	comp=Z,4.4nm,0.7s					
BRVK	Borovoye	50.02	309	ceP	P	20 58 06.4 -0.2
BRVK				pmax	pmax	
	comp=Z,4.0nm,0.7s					
BRVK	Borovoye	50.02	309	eP	P	20 58 06.4 -0.2
RES	Resolute Bay	50.04	19	P	P	20 58 06.8 +0.4
RES				IAmb	IAmb	20 58 07.4
	comp=Z,13nm,1.5s					
RES	Resolute Bay	50.04	19	P	P	20 58 06.8 +0.4
RES				pmax	pmax	
	comp=Z,13nm,1.5s					
YKA	Yellowknife Ar	50.37	37	P	P	20 58 09.4 +0.4
	comp=Z,1.2nm,0.5s,baz=296,slow=6.9,SNR=2.7					
	comp=Z,1.2nm,0.5s					
CMAR	Chiang Mai Arr	52.27	255	P	P	20 58 25.2 +1.4
	comp=Z,1.8nm,0.8s,baz=37,slow=7.2,SNR=13					
	comp=Z,1.8nm,0.8s					
BOOM	Boomskoye usch	52.30	295	P	P	20 58 23.7 -0.3
BOOM				IAmb	IAmb	20 58 49.8
	comp=Z,4.1nm,0.9s					
BOOM	Boomskoye usch	52.30	295	P	P	20 58 23.7 -0.3
BOOM				pmax	pmax	
	comp=Z,4.0nm,1.0s					
AAK	Ala-Archa	53.10	295	P	P	20 58 29.9 +0.1
	comp=Z,1.4nm,0.6s,baz=102,slow=5.1,SNR=7.4					
	comp=Z,1.4nm,0.6s					
AAK	Ala-Archa	53.10	295	ceP	P	20 58 28.6 -1.3
AAK				pmax	pmax	
	comp=Z,1.0nm,0.7s					
AAK	Ala-Archa	53.10	295	eP	P	20 58 28.6 -1.3
TULEG	Thule	53.25	11	P	P	20 58 29.8 -0.5
ARU	Arti	54.07	317	P	P	20 58 36.2 -0.3
	comp=Z,4.9nm,0.5s,baz=58,slow=5.7,SNR=18					
	comp=Z,4.9nm,0.5s					
ARU	Arti	54.07	317	P	P	20 58 35.9 -0.6
ARU	Arti	54.07	317	c iP	P	20 58 35.9 -0.6
ARU				*PP	pP	20 59 04.6 -0.9
ARU						20 59 44.4
ARU				PPP	PPP	21 01 54.0
ARU				S	S	21 06 03.6 +1.0
ARU						21 08 06.7
ARU				SS	SS	21 09 41.8 -3.3
ARU				pmax	pmax	
	comp=Z,5.0nm,0.6s					
ARU	Arti	54.07	317	eP	P	20 58 35.9 -0.6
JIRN	Jiri	54.53	274	eP	P	20 58 42.0 +1.3
	comp=Z,17nm,0.8s					
RAMN	Ramite	54.71	273	eP	P	20 58 42.7 +0.8
	comp=Z,28nm,0.7s					
PKI	Pulchoki	55.11	274	eP	P	20 58 45.6 +0.8
PKIN	Phulchoki	55.12	274	eP	P	20 58 45.5 +0.7
KK31	Karatay Array	55.23	298	P	P	20 58 44.8 -0.3
KK31	Karatay Array	55.23	298	P	P	20 58 44.8 -0.3
KK31				pmax	pmax	
	comp=Z,2.0nm,1.0s					
KKAR	Karatay Array	55.23	298	P	P	20 58 44.6 -0.5
KKAR	Karatay Array	55.23	298	P	P	20 58 44.6 -0.5
DMN	Daman	55.29	274	eP	P	20 58 47.5 +1.4
GKN	Gorkha	55.35	275	eP	P	20 58 47.3 +0.9
	comp=Z,7.7nm,0.5s					
DANN	Dangsing	55.72	276	eP	P	20 58 50.3 +1.2
	comp=Z,12nm,0.5s					
ARCES	ARCESS Array B	56.83	340	P	P	20 58 56.0 -0.1
	comp=Z,2.2nm,0.7s,baz=18,slow=7.9,SNR=9.0					
	comp=Z,2.2nm,0.7s					
ARCES	ARCESS Array B	56.83	340	P	P	20 58 56.4 +0.3
ARCES	ARCESS Array B	56.83	340	P	P	20 58 56.4 +0.3
ARCES				pmax	pmax	
	comp=Z,20nm,1.4s					
ABKAR	Akbulak array	57.55	309	P	P	20 59 00.5 -0.9
ABKAR	Akbulak array	57.55	309	P	P	20 59 00.8 -0.6
NIL	Nilore	59.28	288	P	P	20 59 14.1 +0.4
NIL	Nilore	59.28	288	P	P	20 59 14.1 +0.4
NIL				pmax	pmax	
	comp=Z,11nm,1.1s					
KBL	Kabul	61.39	291	P	P	20 59 27.5 -0.8
KBL				IAmb	IAmb	20 59 29.6
	comp=Z,4.8nm,1.1s					
KBL	Kabul	61.39	291	P	P	20 59 27.5 -0.8
KBL				pmax	pmax	
	comp=Z,5.0nm,1.1s					
FIA1	FINESS Array S	63.02	334	P	P	20 59 37.9 -0.5
FINES	FINESS Array B	63.02	334	P	P	20 59 38.0 -0.4
	comp=Z,2.9nm,0.4s,baz=37,slow=7.3,SNR=66					
	comp=Z,2.9nm,0.4s					
FINES	FINESS Array B	63.02	334	P	P	20 59 38.0 -0.4
PDAR	Pinedale Array	64.47	54	P	P	20 59 49.5 +1.0
	comp=Z,0.2nm,0.6s,baz=343,slow=1.9,SNR=2.4					
	comp=Z,0.2nm,0.6s					
VORR	Voronezh	65.79	321	eP	P	20 59 57.4 +0.8
VORR				pmax	pmax	
	comp=Z,20nm,0.4s					
GEYT	Alibeck	65.81	300	P	P	20 59 57.7 +0.6
	comp=Z,1.5nm,0.7s,baz=9.5,slow=3.6,SNR=4.9					
	comp=Z,1.5nm,0.7s					
GEYT	Alibeck	65.81	300	P	P	20 59 57.3 +0.2
GYA0B	ALIBECK ARRAY	65.81	300	P	P	20 59 57.1 +0.1
GYA0B				IAmb	IAmb	20 59 58.4
	comp=Z,2.1nm,0.7s					
NC204	NORSAR Array S	67.10	341	P	P	21 00 05.2 +0.4
NB2	NORSAR Subarra	67.21	341	P	P	21 00 05.9 +0.4
	comp=Z,0.9nm,0.5s,baz=25,slow=6.5					
NOA	NORSAR Array B	67.21	341	P	P	21 00 05.6 +0.1
	comp=Z,2.3nm,0.8s,baz=27,slow=6.5,SNR=19					
	comp=Z,2.3nm,0.8s					
KONO	Kongsberg	68.81	341	P	P	21 00 15.7 +0.2
KONO	Kongsberg	68.81	341	P	P	21 00 15.7 +0.2
KONO				pmax	pmax	
	comp=Z,70nm,1.5s					
WRA	Warramunga Arr	69.31	198	P	P	21 00 19.4 +0.4
	comp=Z,1.6nm,0.3s,baz=176,slow=2.9,SNR=3.8					
	comp=Z,1.6nm,0.3s					
KBZ	Khabaz	69.94	313	P	P	21 00 23.4 +0.7
	comp=Z,4.2nm,0.8s,baz=88,slow=6.6,SNR=10.0					
	comp=Z,4.2nm,0.8s					
KBZ	Khabaz	69.94	313	ceP	P	21 00 23.2 +0.5
KBZ				pmax	pmax	
	comp=Z,4.0nm,0.9s					
KBZ	Khabaz	69.94	313	eP	P	21 00 23.2 +0.5
ECSD	EROS Data Cent	70.47	46	P	P	21 00 25.5 -0.5
AKASG	Malin Array Be	70.56	326	P	P	21 00 25.8 -0.5
	comp=Z,2.0nm,0.4s,baz=35,slow=6.1,SNR=11					
	comp=Z,2.0nm,0.4s					
AK05	Malin Array Si	70.63	326	P	P	21 00 26.0 -0.8
AK05				IAmb	IAmb	21 00 26.7
	comp=Z,4.9nm,0.5s					
ASAR	Alice Springs	73.01	198	P	P	21 00 41.9 +0.6
	comp=Z,0.7nm,0.6s,baz=11,slow=5.2,SNR=7.9					
	comp=Z,0.7nm,0.6s					
BUR08	Bucovina Ar. S	74.58	326	P	P	21 00 50.5 +0.2
BUR08				IAmb	IAmb	21 00 51.4
	comp=Z,3.6nm,0.6s					
BURAR	Bucovina Array	74.60	326	⇑P	P	21 00 51.1 +0.7
BURAR	Bucovina Array	74.60	326	P	P	21 00 50.6 +0.2
BURAR				IAmb	IAmb	21 00 51.7
	comp=Z,4.4nm,0.8s					
BURAR	Bucovina Array	74.60	326	⇑P	P	21 00 51.1 +0.7
TESR	Tescani	74.96	325	⇑P	P	21 00 52.6 +0.2
TRPA	Tarpa	75.15	328	⇑P	P	21 00 54.1 +0.7
OSTC	Ostas	75.16	333	eP	P	21 00 54.0 +0.5
CHVC	Chvalec	75.18	333	eP	P	21 00 54.1 +0.4
DPC	Dobruska-Polom	75.31	333	eP	P	21 00 54.9 +0.5
DPC	Dobruska-Polom	75.31	333	eP	P	21 00 54.9 +0.5
KRLC	Kraliky	75.41	332	eP	P	21 00 55.4 +0.4
KRLC	Kraliky	75.41	332	eP	P	21 00 55.4 +0.4
MORC	Moravsky Berou	75.43	332	⇑P	P	21 00 55.3 +0.3
MORC	Moravsky Berou	75.43	332	P	P	21 00 55.5 +0.4
MORC				IAmb	IAmb	21 00 56.5
	comp=Z,6.1nm,0.8s					
MORC	Moravsky Berou	75.43	332	P	P	21 00 55.5 +0.4
MORC				pmax	pmax	
	comp=Z,6.0nm,0.8s					
MORC	Moravsky Berou	75.43	332	eP	P	21 00 55.4 +0.3
CLL	Collm	75.45	335	P	P	21 00 55.0 -0.1
CLL	Collm	75.45	335	P	P	21 00 55.0 -0.1
CLL				pmax	pmax	
	comp=Z,14nm,0.6s					
CLL	Collm	75.45	335	⇑ i P	P	21 00 55.0 -0.1
	comp=Z,15nm,0.6s					
CFR	Carcaliu	75.46	323	⇑P	P	21 00 55.6 +0.3
CFR	Carcaliu	75.46	323	⇑P	P	21 00 55.6 +0.3
OZUR		75.64	325	⇑P	P	21 00 57.3 +0.9
COVR	Voineasa-Covas	75.68	324	⇑P	P	21 00 57.5 +0.9
MAUC	Maruska	75.69	331	eP	P	21 00 57.3 +0.7
DOPR	Dopca	75.90	325	⇑P	P	21 00 59.2 +1.4
CBBR	Cluj-Babes-Bol	75.93	327	⇑P	Pn	21 00 59.1 +1.7
HARR	Harsova	75.94	323	⇓P	P	21 00 58.8 +0.8
HARR	Harsova	75.94	323	⇓P	P	21 00 58.8 +0.8
CJR	Cluj-Napoca	75.96	327	⇑P	P	21 00 58.8 +0.6
CJR	Cluj-Napoca	75.96	327	⇑P	Pn	21 00 58.8 +0.8
UOSS	Minazif	76.05	292	P	P	21 00 59.5 +0.5
UOSS				IAmb	IAmb	21 01 00.0
	comp=Z,7.7nm,0.9s					
MLR	Muntele Rosu	76.08	324	⇑P	P	21 00 60.0 +1.0
MLR	Muntele Rosu	76.08	324	P	P	21 00 59.4 +0.4
MLR				IAmb	IAmb	21 01 01.0
	comp=Z,7.2nm,0.6s					
MLR	Muntele Rosu	76.08	324	⇑P	P	21 01 00.0 +1.0
VYHS	Vyhne	76.12	330	eP	P	21 00 59.5 +0.5
VYHS				pmax	pmax	
	comp=Z,4.0nm,0.7s					
VRAC	Vranov	76.14	332	⇑P	P	21 00 60.0 +0.9
VRAC	Vranov	76.14	332	⇑P	P	21 01 00.0 +0.9
VRAC	Vranov	76.14	332	eP	P	21 00 59.8 +0.7
ISR	Istrita	76.15	324	⇑P	P	21 01 00.4 +1.1
ISR	Istrita	76.15	324	⇑P	P	21 01 00.4 +1.1
MARR	Marisel-Cluj	76.17	327	P	P	21 00 59.6 +0.2
PRU	Pruhonice	76.17	334	eP	P	21 00 59.8 +0.6
PRU	Pruhonice	76.17	334	eP	P	21 00 59.8 +0.6
JAVC	Velka Javorina	76.19	331	eP	P	21 01 00.8 +1.4
DRGR		76.22	327	⇑P	P	21 00 59.9 +0.2
DRGR		76.22	327	⇑P	P	21 00 59.9 +0.2
PSZ	Piszkesteto	76.26	329	P	P	21 01 00.2 +0.3
PSZ				IAmb	IAmb	21 01 01.5
	comp=Z,6.6nm,1.1s					
PSZ	Piszkesteto	76.26	329	P	P	21 01 00.2 +0.3
PSZ				pmax	pmax	
	comp=Z,7.0nm,1.1s					
KRUC	Movravsky	76.42	332	eP	P	21 01 01.1 +0.4
ICOR	Ion Corvin	76.47	323	⇑P	P	21 01 02.1 +1.1
VOIR		76.47	325	⇑P	P	21 01 01.7 +0.6
VOIR		76.47	325	⇑P	P	21 01 01.7 +0.6
NKC	Novy Kostel	76.57	335	eP	P	21 01 02.0 +0.5
NKC	Novy Kostel	76.57	335	eP	P	21 01 02.0 +0.5
ARR	Arges	76.69	325	⇑P	P	21 01 04.1 +1.7
SRO	Srobarova	76.88	330	eP	P	21 01 04.5 +1.2
SRO				pmax	pmax	
	comp=Z,7.0nm,0.8s					
SIRR	Siria	77.05	327	⇑P	Pb	21 01 05.3 +4.3
KHC	Kasperske Hory	77.22	334	P	P	21 01 05.8 +0.5
KHC				IAmb	IAmb	21 01 06.7
	comp=Z,5.2nm,0.7s					
KHC	Kasperske Hory	77.22	334	eP	P	21 01 05.7 +0.5
KHC	Kasperske Hory	77.22	334	eP	P	21 01 05.7 +0.5
CKRC	Cesky Krumlov	77.28	333	eP	P	21 01 05.9 +0.4
TX31	Lajitas Ar. Si	77.32	60	P	P	21 01 06.3 +0.1
TX31				IAmb	IAmb	21 01 08.2
	comp=Z,7.3nm,1.4s					
TXAR	Lajitas Array	77.33	60	P	P	21 01 05.6 -0.6
	comp=Z,0.4nm,0.6s,baz=296,slow=3.5,SNR=7.2					
TXAR				pP	pP	21 01 40.7 +2.6
	comp=Z,1.2nm,0.8s,baz=298,slow=4.6,SNR=9.7					
	comp=Z,0.4nm,0.6s					
GZR	Gura Zlata	77.38	326	⇑P	P	21 01 06.4 +0.2
GZR	Gura Zlata	77.38	326	⇑P	P	21 01 06.4 +0.2
GRFO	Grafenberg	77.40	335		P	21 01 07.0 +0.8
GRFO	Grafenberg	77.40	335	P	P	21 01 07.0 +0.8
GRFO				pmax	pmax	
	comp=Z,16nm,0.9s					
GEC2	GERESS Array S	77.44	334	P	P	21 01 06.5 0.0
GERES	GERESS Array B	77.44	334	P	P	21 01 06.8 +0.3
	comp=Z,1.6nm,0.6s,baz=36,slow=5.7,SNR=22					
	comp=Z,1.6nm,0.6s					
GERES	GERESS Array B	77.44	334	P	P	21 01 06.7 +0.2
BR131	Keskin Array S	77.45	316	P	P	21 01 07.1 +0.3
BR131				IAmb	IAmb	21 01 08.4
	comp=Z,5.2nm,0.9s					
BR131	Keskin Array S	77.45	316	P	P	21 01 07.1 +0.3
BR131				pmax	pmax	
	comp=Z,5.0nm,0.9s					
BRTR	Keskin Array B	77.45	316	P	P	21 01 07.0 +0.2
	comp=Z,2.7nm,0.9s,baz=79,slow=3.3,SNR=15					
	comp=Z,2.7nm,0.9s					
BRTR	Keskin Array B	77.45	316		P	21 01 07.0 +0.2
BRTR	Keskin Array B	77.45	316	P	P	21 01 07.0 +0.2
CONA	Conrad Observa	77.58	332	eP	P	21 01 08.6 +1.2
	comp=Z,5.5nm,0.7s,SNR=7.9					
BZS	Buzias	77.62	327	⇑P	P	21 01 07.3 -0.1
BZS	Buzias	77.62	327	⇑P	P	21 01 07.3 -0.1
RONA	Rosalia, Austr	77.65	331	eP	P	21 01 09.0 +1.4
	comp=Z,4.5nm,0.7s					
HERR	Herculane	77.95	326	⇓P	P	21 01 09.1 -0.2
MORH	Mrgy, Hungar	78.16	329	⇑P	P	21 01 10.1 -0.3
ARSA	Arzberg	78.29	332	eP	P	21 01 12.2 +1.0
	comp=Z,2.7nm,0.6s,SNR=4.8					
BIOA	Bad Ischl, Aus	78.49	333	i P	P	21 01 12.5 +0.2
	comp=Z,5.3nm,0.9s					
FRGS	Fruska Gora	78.66	328	⇑P	P	21 01 13.5 +0.2
SOKA	Soboth	78.95	332	i P	P	21 01 15.6 +0.7
	comp=Z,3.9nm,0.6s,SNR=7.5					
BOVS	Bovan	79.28	326	⇓P	Pb	21 01 16.1 +2.3
WATA	Walderalm	79.43	334	i P	P	21 01 18.6 +1.1
	comp=Z,4.1nm,0.5s,SNR=6.0					
WTTA	Wattenberg	79.47	334	i P	P	21 01 19.0 +1.2
	comp=Z,6.2nm,0.5s,SNR=10					
DIVS	Divibare	79.51	327	P	P	21 01 17.8 -0.2
DIVS				IAmb	IAmb	21 01 18.3
	comp=Z,5.7nm,0.9s					
RETA	Reutte	79.53	335	i P	P	21 01 18.9 +0.9
	comp=Z,3.2nm,0.9s					
VTS	Vitosha	79.55	325	P	P	21 01 18.9 +0.6
VTS	Vitosha	79.55	325	P	P	21 01 18.9 +0.6
VTS				pmax	pmax	
	comp=Z,9.0nm,0.7s					
VTS	Vitosha	79.55	325	⇑P	Pn	21 01 18.9 +3.2
MOTA	Moosalm	79.56	334	i P	P	21 01 19.3 +1.0
	comp=Z,12nm,1.2s					
SQTA	Sankt Quirin	79.64	334	i P	P	21 01 19.7 +1.1
	comp=Z,6.6nm,1.1s					
RDO	Rodhopi	79.86	322	P	P	21 01 20.4 +0.7
RDO				IAmb	IAmb	21 01 21.3
	comp=Z,6.6nm,0.7s					
FUORN	Ofenpass-Fuorn	80.46	335	P	P	21 01 24.1 +0.8
FUORN				IAmb	IAmb	21 01 27.7
	comp=Z,5.3nm,1.1s					
ELL	Elmali	81.58	317	P	P	21 01 29.9 +0.7
ELL	Elmali	81.58	317	P	P	21 01 29.9 +0.7
ELL				pmax	pmax	
	comp=Z,29nm,1.2s					
ASF	Jabal al Asfar	81.81	309	P	P	21 01 30.9 +0.5
	comp=Z,3.1nm,0.8s,baz=51,slow=14,SNR=4.3					
	comp=Z,3.1nm,0.8s					
MMAI	Mount Meron Ar	81.92	311	P	P	21 01 32.1 +1.2
	comp=Z,5.9nm,0.6s,baz=48,slow=6.8,SNR=15					
	comp=Z,5.9nm,0.6s					
RAYN	Ar Rayn	83.66	298	⇑P	P	21 01 40.7 +0.7
VNDA	Vanda	125.09	178	PKP	PKPdf	21 08 08.0 -1.1
	comp=Z,0.3nm,0.3s,baz=80,slow=3.4,SNR=6.5					
VNDA	Vanda	125.09	178	PKIKP	PKPdf	21 08 08.0 -1.1

JMA 15 20:54:02.9±0.2, 31°.7N±0°.5×130°.6E±0°.9, h155km±1km, MV2.0/21, NEAR KAGOSHIMA CITY, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.24	213	eP	Pn	20 54 24.2	+0.1
JSU	Suzuyama	0.24	213	P	Pn	20 54 24.0	0.0
JTZ	Takazaki	0.45	65	P	Pn	20 54 24.7	+0.1
JTZ				eS	Sn	20 54 41.4	+0.1
JTSR	Tashiro 2	0.60	154	P	Pn	20 54 25.5	0.0
JTSR				eS	Sn	20 54 42.3	-0.4
JIU3	Izumi3	0.85	12	eP	Pn	20 54 27.0	-0.1
JTN	Tanegashima 3	1.10	163	eP	Pn	20 54 29.1	+0.1
JTN				eS	Sn	20 54 48.5	-0.6

VIE 15 20:58:55.5±0.7, 47°.41N×11°.26E, h10km±6km, ml-0.2/3, Error ellipse: s-maj=3.8km s-min=1.8km az=173.0 10 km NNE of Seefeld, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	Moosalm	0.12	237	eP	Pg	20 58 58.7	+0.1
	0.3nm,0.1s						
MOTA				i Sg	Sg	20 59 01.1	+0.3
	0.3nm,0.1s						
SQTA	Sankt Quirin	0.20	189	i Pg	Pg	20 58 59.9	+0.2
	0.2nm,0.1s						
SQTA				i Sg	Sg	20 59 02.9	+0.4
	0.4nm,0.1s						
WATA	Walderalm	0.23	109	i Pg	Pg	20 59 00.4	+0.1
	0.1nm,0.1s						
WATA				i Sg	Sg	20 59 04.1	+0.5
	0.2nm,0.1s						

IDC 15 21:02:07.0±1.7, 39°.82N×20°.77E, h0km, mb3.4/4, mbtmp3.5/4, MS4.0/1, Error ellipse: s-maj=51.2km s-min=28.9km az=115.0
THE 15 21:02:11.3, 39°.77N×20°.73E, h6km±1km, ML2.7/18, Error ellipse: s-maj=1.2km s-min=0.4km az=314.0
ISC 15 21:02:10.1±0.9, 39°.80N±0°.02×20°.73E±0°.03, h15km±6km, n39, σ0°92/58, mb3.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.17	145	P	Pg	21 02 14.0	-0.3
JAN				S	Sg	21 02 17.4	+0.3
	10μm,0.4s						
LSK	Leskovik	0.37	345	P	Pb	21 02 18.9	+0.5
LSK				S	Sb	21 02 24.9	+0.9
	2μm,0.4s						
IGT	Igoumenitsa	0.40	229	P	Pb	21 02 18.5	-0.4
IGT				S	Sb	21 02 25.3	+0.5
	4μm,0.3s						
PENT	Pentalofos	0.51	38	P	Pb	21 02 21.3	+0.5
PENT				S	Sb	21 02 29.4	+1.3
KPRO	Kipourio	0.52	72	P	Pb	21 02 21.0	+0.1
KPRO				S	Sb	21 02 28.9	+0.7
	1μm,0.4s						
SRN	Sarande	0.56	279	P	Pb	21 02 21.8	+0.1
SRN				S	Sb	21 02 30.1	+0.6
	452nm,0.4s						
NEST	Nestorio	0.67	22	P	Pn	21 02 24.8	-0.3
NEST				S	Sn	21 02 34.1	-1.2
	428nm,0.6s						
KEK	Kerkira	0.72	264	P	Pb	21 02 24.1	-0.2
KEK				S	Sn	21 02 35.4	-1.1
	570nm,0.3s						
KBN	Korca	0.83	3	P	Pn	21 02 27.1	-0.2
KBN				S	Sn	21 02 39.7	+0.4
	288nm,0.8s						
KZN	Kozani	0.95	57	P	Pn	21 02 28.8	-0.2
KZN				S	Sn	21 02 42.8	+0.5
	418nm,0.7s						
TSLK	Tsoukalades, L	0.97	183	P	Pb	21 02 28.7	+0.1
TSLK				S	Sn	21 02 43.1	+0.5
	542nm,0.5s						
LKD2	Lefkada island	1.01	183	P	Pn	21 02 29.9	+0.2
LKD2				S	Sn	21 02 45.1	+1.6
	382nm,0.4s						
THL	Klokotos Trika	1.02	103	P	Pn	21 02 29.8	0.0
THL				S	Sn	21 02 44.4	+0.5
	170nm,0.5s						
NYDR	Nydri-Lefkada	1.08	181	P	Pn	21 02 30.6	0.0
NYDR				S	Sn	21 02 46.0	+0.7
	328nm,0.6s						
DRAG	Dragano-Lefkad	1.11	186	P	Pn	21 02 31.6	+0.5
DRAG				S	Sn	21 02 47.9	+1.7
TYRN	Tyrnavos	1.16	94	P	Pg	21 02 32.2	-0.3
TYRN				S	Sn	21 02 49.2	+1.8
	568nm,0.6s						
EVGI	Lefkada island	1.17	183	P	Pn	21 02 32.0	+0.1
EVGI				S	Sn	21 02 50.4	+2.8
	528nm,0.2s						
EVR	Evrytania	1.21	136	P	Pg	21 02 32.9	-0.6
EVR				S	Sn	21 02 50.5	+1.7
	318nm,0.9s						
OHR	Ohrid	1.32	2	i Pn	Pg	21 02 37.2	+1.7
PVO	Paravola	1.33	152	P	Pg	21 02 36.0	+0.3
FSK	Fiskardo	1.34	186	P	Pg	21 02 36.3	+0.4
FSK				S	Sg	21 02 53.0	-0.3
	298nm,0.3s						
LIT	Litokhoron	1.39	77	P	Pg	21 02 36.3	-0.5
LIT				S	Sg	21 02 56.1	+1.2
	268nm,0.7s						
KEF4	Livadi, Kephal	1.55	189	P	Pb	21 02 38.5	0.0
DMLN	Damoulianata-K	1.58	190	P	Pb	21 02 39.1	+0.2
VLS	Valsamata	1.62	184	P	Pb	21 02 39.2	-0.4
EFP	Efpalio	1.65	146	P	Pb	21 02 40.0	-0.1
SERG	Sergoula	1.73	143	P	Pb	21 02 41.7	+0.2
GRG	Griva	1.73	47	P	Pb	21 02 41.2	-0.3
DRO	Drossia	1.99	157	P	Pb	21 02 45.1	-0.9
KLV	Kalavryta, Ach	2.07	147	P	Pb	21 02 46.5	-0.9
VAY	Valandovo	2.07	42	i Pn	Pb	21 02 46.3	-1.1
KNT	Kendrikon	2.15	50	P	Pb	21 02 47.1	-1.6
STIP	Stip	2.20	30	i Pn	Pb	21 02 50.0	+0.5
OUR	Ouranopolis	2.56	77	P	Pn	21 02 52.4	+1.5
FINES	FINESS Array B	21.93	7	P	P	21 07 01.4	-1.1
	5.1nm,1.1s,baz=191,slow=11,SNR=3.6						
	5.1nm,1.1s						
NOA	NORSAR Array B	22.07	348	P	P	21 07 03.0	-1.2
	0.6nm,0.8s,baz=154,slow=10,SNR=2.6						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	31.40	218	P	P	21 08 30.1	-0.4
	0.3nm,0.7s,baz=31,slow=9.5,SNR=2.3						
	0.3nm,0.7s						
MKAR	Makanchi Array	44.34	60	P	P	21 10 18.3	-1.1
	0.7nm,0.8s,baz=284,slow=6.1,SNR=4.3						
	0.7nm,0.8s						
NRI

NOA	**NORSAR Array B**	**22.11**	**348**	P	**P**	**21 07 38.4**	**-1.7**
	0.2nm,0.6s,baz=163,slow=11,SNR=1.8						
	0.2nm,0.6s						
ARU	**Arti**	**29.80**	**43**	LR	LR	21 20 48.8	
	comp=Z,204nm,18.2s,baz=50,slow=36						
TORD	**Torodi Ar. Bea**	**31.35**	**218**	P	**P**	**21 09 05.3**	**-0.2**
	0.5nm,1.1s,baz=33,slow=8.8,SNR=2.2						
	0.5nm,1.1s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 10 54.5**	**-0.6**
	0.5nm,0.4s,baz=284,slow=7.1,SNR=8.1						
	0.5nm,0.4s						

*BEO **15** 21:10:26.1±0.9, 39°.62N×20°.73E, h10km±4km, ML2.9/5*
*NEIC **15** 21:10:26.7±2.3, 39°.75N±0°.05×20°.74E±0°.06, h13km±7km, mb4.3/4, ML3.2(THE), Error ellipse: s-maj=8.4km s-min=5.8km az=221.0*
*ATH **15** 21:10:26.9, 39°.77N×20°.74E, h6km±3km, ML3.3/5, Error ellipse: s-maj=3.2km s-min=0.8km az=253.0*
*PDG **15** 21:10:26.3±0.4, 39°.73N×20°.73E, h18km±1km, ML3.4/11, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*THE **15** 21:10:27.0, 39°.73N×20°.75E, h0km±1km, ML3.2/14, Error ellipse: s-maj=1.5km s-min=0.4km az=166.0*
*IDC **15** 21:10:27.7±3.3, 39°.82N×20°.92E, h37km±35km, mb3.5/6, mbtmp3.6/9, ML3.1/3, Error ellipse: s-maj=30.7km s-min=18.5km az=73.0*

ISC 15 21:10:26.3±0.8, 39°.73N±0°.02×20°.71E±0°.02, h15km±5km, n143, σ1§65/187, mb3.8/7, 13C-7D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.13**	**124**	P	**Pg**	**21 10 29.5**	**-0.6**
JAN	**Janina**	**0.13**	**124**	P	**Pg**	**21 10 29.4**	**-0.6**
JAN				S	**Sg**	**21 10 32.2**	**-0.4**
JAN				AML	AML	21 10 32.9	
	comp=E,65537μm,0.3s						
JAN				AML	AML	21 10 32.9	
	comp=N,59083μm,0.3s						
IGT	**Igoumenitsa**	**0.35**	**236**	P	**Pg**	**21 10 34.0**	**+0.5**
IGT				S	**Sb**	**21 10 40.2**	**+0.6**
	comp=N,12μm,0.4s						
IGT	**Igoumenitsa**	**0.35**	**236**	P	**Pb**	**21 10 34.4**	**+0.2**
IGT				S	**Sb**	**21 10 40.1**	**+0.6**
IGT				AML	AML	21 10 42.8	
	comp=E,25878μm,0.4s						
IGT				AML	AML	21 10 44.6	
	comp=N,22436μm,0.5s						
LSK	**Leskovik**	**0.43**	**349**	P	**Pg**	**21 10 35.2**	**+0.3**
LSK				S	**Sg**	**21 10 41.9**	**+1.1**
	comp=N,4μm,0.4s						
KPRO	**Kipourio**	**0.55**	**66**	P	**Pg**	**21 10 36.9**	**-0.3**
KPRO				S	**Sg**	**21 10 44.9**	**+0.3**
	comp=N,3μm,0.5s						
SRN	**Sarande**	**0.56**	**285**	P	**Pg**	**21 10 37.7**	**+0.3**
SRN				S	**Sb**	**21 10 47.2**	**+1.5**
	comp=N,3μm,0.3s						
PENT	**Pentalofos**	**0.57**	**35**	P	**Pg**	**21 10 37.4**	**-0.2**
PENT				S	**Sg**	**21 10 46.4**	**+1.2**
	comp=N,1μm,0.2s						
PENT	**Pentalofos**	**0.57**	**35**	P	**Pg**	**21 10 37.2**	**-0.4**
PENT				S	**Sg**	**21 10 44.1**	**-1.1**
PENT				AML	AML	21 10 47.6	
	comp=E,4166μm,0.3s						
PENT				AML	AML	21 10 47.7	
	comp=N,1147μm,0.3s						
KASA	**Kassiopi**	**0.60**	**272**	P	**Pg**	**21 10 38.3**	**+0.3**
KASA				S	**Sb**	**21 10 47.2**	**+0.7**
KASA				AML	AML	21 10 49.0	
	comp=N,6021μm,0.7s						
KASA				AML	AML	21 10 49.5	
	comp=E,6256μm,0.4s						
KEK	**Kerkira**	**0.70**	**269**	Pg	**Pg**	**21 10 39.8**	**-0.2**
KEK				Sg	**Sb**	**21 10 51.0**	**+1.4**
KEK	**Kerkira**	**0.70**	**269**	P	**Pg**	**21 10 39.9**	**-0.1**
KEK				S	**Sn**	**21 10 51.6**	**-0.6**
	comp=E,2μm,0.5s						
KEK	**Kerkira**	**0.70**	**269**	P	**Pg**	**21 10 40.3**	**+0.3**
KEK				S	**Sb**	**21 10 50.4**	**+0.8**
KEK				AML	AML	21 10 55.8	
	comp=N,4298μm,0.5s						
KEK				AML	AML	21 10 56.7	
	comp=E,3867μm,0.2s						
NEST	**Nestorio**	**0.73**	**21**	P	**Pg**	**21 10 40.9**	**+0.3**
NEST				S	**Sb**	**21 10 51.8**	**+1.2**
	comp=E,1μm,0.6s						
KBN	**Korca**	**0.89**	**4**		**Pb**	**21 10 43.5**	**0.0**
KBN				Sg	**Sb**	**21 10 55.2**	**-0.1**
KBN	**Korca**	**0.89**	**4**	P	**Pb**	**21 10 44.5**	**+1.0**
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pg**	**21 10 44.2**	**+0.3**
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pn**	**21 10 44.6**	**+0.2**
TSLK				S	**Sn**	**21 10 57.5**	**+0.3**
LKD2	**Lefkada island**	**0.94**	**182**	P	**Pb**	**21 10 44.7**	**+0.4**
LKD2				S	**Sn**	**21 10 58.3**	**+0.2**
	comp=E,2μm,0.8s						
LKD2	**Lefkada island**	**0.94**	**182**	P	**Pg**	**21 10 45.1**	**+0.6**
LKD2				S	**Sn**	**21 10 59.0**	**+0.8**
KZN	**Kozani**	**1.00**	**55**	P	**Pb**	**21 10 45.0**	**-0.3**
KZN				S	**Sb**	**21 10 59.5**	**+1.2**
	comp=E,1μm,0.6s						
KZN	**Kozani**	**1.00**	**55**	P	**Pb**	**21 10 45.0**	**-0.3**
NYDR	**Nydri-Lefkada**	**1.02**	**180**	P	**Pb**	**21 10 45.9**	**+0.4**
NYDR				S	**Sn**	**21 11 01.1**	**+1.2**
	comp=E,1μm,0.7s						
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pb**	**21 10 45.3**	**-0.3**
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pb**	**21 10 45.7**	**0.0**
DRAG	**Dragano-Lefkad**	**1.05**	**186**	P	**Pg**	**21 10 46.7**	**+0.1**
DRAG				S	**Sn**	**21 11 02.2**	**+1.4**
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pg**	**21 10 48.1**	**+0.4**
EVGI				S	**Sn**	**21 11 04.7**	**+2.5**
	comp=E,2μm,0.5s						
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pg**	**21 10 48.2**	**+0.4**
EVGI				S	**Sn**	**21 11 04.1**	**+1.9**
TYRN	**Tyrnavos**	**1.18**	**91**	P	**Pn**	**21 10 47.7**	**-0.4**
TYRN				S	**Sg**	**21 11 05.7**	**+1.4**
	comp=E,1μm,1.0s						
EVR	**Evrytania**	**1.18**	**133**	P	**Pn**	**21 10 48.0**	**-0.3**
EVR	**Evrytania**	**1.18**	**133**	P	**Pb**	**21 10 49.0**	**+0.6**
VLO	**Vlora**	**1.19**	**309**		**Pg**	**21 10 50.9**	**+1.7**
FSK	**Fiskardo**	**1.27**	**185**	P	**Pg**	**21 10 51.3**	**+0.4**
FSK				S	**Sg**	**21 11 09.5**	**+2.0**
	comp=E,1μm,0.6s						
PVO	**Paravola**	**1.28**	**150**	P	**Pb**	**21 10 50.8**	**+0.7**
PVO	**Paravola**	**1.28**	**150**	P	**Pg**	**21 10 51.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pn**	**21 10 51.0**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pn**	**21 10 51.0**	**+0.9**
OHR	**Ohrid**	**1.38**	**3**	*e*Pg	**Pg**	**21 10 53.4**	**+0.5**
OHR				*e*Sg	**Sg**	**21 11 13.3**	**+2.4**
OHR	**Ohrid**	**1.38**	**3**	*i* Pn	**Pg**	**21 10 53.5**	**+0.5**
LIT	**Litokhoron**	**1.42**	**74**		**Pn**	**21 10 51.7**	**+0.2**
LIT	**Litokhoron**	**1.42**	**74**	P	**Pn**	**21 10 52.8**	**+1.3**
LIT				S	**Sg**	**21 11 13.5**	**+1.4**
	comp=E,780nm,0.6s						
KEF4	**Livadi, Kephal**	**1.49**	**189**	P	**Pb**	**21 10 54.3**	**+0.7**
DMLN	**Damoulianata-K**	**1.51**	**190**	P	**Pb**	**21 10 54.7**	**+0.7**
VLS	**Valsamata**	**1.56**	**183**	P	**Pb**	**21 10 54.7**	**0.0**
EFP	**Efpalio**	**1.60**	**144**	P	**Pb**	**21 10 56.0**	**+0.5**
TIR	**Tirane**	**1.74**	**339**	⇑P	**Pb**	**21 10 58.8**	**+0.9**
TIR	**Tirane**	**1.74**	**339**		**Pb**	**21 10 58.0**	**+0.1**
TIR	**Tirane**	**1.74**	**339**	*e*Pn	**Pb**	**21 10 58.4**	**+0.5**
TIR				*e*Sn	**Sg**	**21 11 22.6**	**+0.3**
SCTE	**Santa Cesarea**	**1.76**	**282**	Pn	**Pn**	**21 10 57.7**	**+1.6**
GRG	**Griva**	**1.78**	**46**	P	**Pn**	**21 10 58.3**	**+1.8**
AXAR	**Agios Charalam**	**1.79**	**122**	P	**Pb**	**21 10 59.6**	**+0.7**
VAY	**Valandovo**	**2.13**	**41**	*e*Pn	**Pn**	**21 11 02.6**	**+1.3**
VAY				*e*Sn	**Sb**	**21 11 31.1**	**+0.4**
VAY	**Valandovo**	**2.13**	**41**	*i* Pn	**Pn**	**21 11 02.9**	**+1.7**
STIP	**Stip**	**2.26**	**29**	*i* Pn	**Pb**	**21 11 07.3**	**+0.6**
SKO	**Skopje**	**2.31**	**14**	*e*Pn	**Pn**	**21 11 06.4**	**+2.7**
SKO				*e*Sn	**Sn**	**21 11 34.2**	**+2.4**
SKO	**Skopje**	**2.31**	**14**	*i* Pn	**Pb**	**21 11 06.7**	**-0.9**
ULC	**Ulcinj**	**2.49**	**334**	⇓*i*Pn	**Pn**	**21 11 07.2**	**+0.9**
ULC				*i* Sn	**Sn**	**21 11 38.8**	**+2.4**
SRS	**Serrai**	**2.60**	**57**	*e*Pn	**Pn**	**21 11 09.7**	**+1.9**
SRS				*e*Sn	**Sn**	**21 11 40.5**	**+1.4**
DRME	**Dracevica, Mon**	**2.71**	**335**	⇓*i*Pn	**Pn**	**21 11 10.2**	**+0.9**
DRME				*i* Sn	**Sn**	**21 11 44.0**	**+2.2**
ITM	**Ithomi**	**2.72**	**159**		**Pn**	**21 11 10.9**	**+1.5**
BUM	**Brajici-Budva**	**2.91**	**332**	*e*Pn	**Pn**	**21 11 13.0**	**+0.9**
BUM				*i* Sn	**Sn**	**21 11 49.0**	**+2.2**
PDG	**Podgorica**	**2.91**	**338**	⇓P	**Pn**	**21 11 11.2**	**-0.8**
PDG	**Podgorica**	**2.91**	**338**		**Pn**	**21 11 13.4**	**+1.4**
TTG	**Podgorica**	**2.91**	**338**	⇓*i*Pn	**Pn**	**21 11 12.9**	**+0.9**
TTG				*i* Sn	**Sn**	**21 11 48.8**	**+2.1**
TIP	**Timpagrande**	**3.11**	**261**	⇑P	**Pn**	**21 11 15.3**	**+0.6**
TIP	**Timpagrande**	**3.11**	**261**		**Pn**	**21 11 15.4**	**+0.6**
CEME	**Cevo**	**3.12**	**335**	*e*Pn	**Pn**	**21 11 15.7**	**+0.8**
CEME				*i* Sn	**Sn**	**21 11 53.8**	**+1.8**
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	**Pn**	**21 11 16.8**	**+1.0**
HCY				*i* Sn	**Sn**	**21 11 55.5**	**+2.0**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**21 11 17.9**	**+2.0**
IVA	**Berane**	**3.20**	**349**	*e*Pn	**Pn**	**21 11 16.9**	**+0.9**
IVA				*i* Sn	**Sn**	**21 11 55.6**	**+1.7**
MATE	**Matera**	**3.20**	**288**	⇑P	**Pn**	**21 11 16.5**	**+0.5**
KOME	**Kolasin**	**3.24**	**344**	*e*Pn	**Pn**	**21 11 17.6**	**+0.9**
KOME				*i* Sn	**Sn**	**21 11 56.7**	**+1.7**
NKME	**Niksic**	**3.31**	**337**	*e*Pn	**Pn**	**21 11 18.5**	**+1.0**
NKME				*i* Sn	**Sn**	**21 11 58.4**	**+1.8**
VTS	**Vitosha**	**3.46**	**33**	⇑P	**Pn**	**21 11 22.3**	**+2.7**
VTS	**Vitosha**	**3.46**	**33**	Pn	**Pn**	**21 11 21.2**	**+1.5**
SELS	**Selova**	**3.50**	**5**	*e*Pn	**Pn**	**21 11 22.3**	**+2.2**
SJES	**Sjenica**	**3.57**	**351**	*e*Pn	**Pn**	**21 11 23.7**	**+2.5**
UPM	**Unac-Piva**	**3.72**	**339**	*e*Pn	**Pn**	**21 11 24.3**	**+0.9**
UPM				*i* Sn	**Sn**	**21 12 08.3**	**+1.3**
PLE	**Pljevlja**	**3.73**	**345**	*e*Pn	**Pn**	**21 11 24.4**	**+1.0**
PLE				*i* Sn	**Sn**	**21 12 08.4**	**+1.4**
CUC	**Castrocucco**	**3.77**	**276**	Pn	**Pn**	**21 11 25.6**	**+1.7**
ZAPS	**Zavoj**	**3.82**	**22**	*e*Pn	**Pn**	**21 11 27.2**	**+2.6**
RDO	**Rodhopi**	**3.95**	**67**		**Pn**	**21 11 26.9**	**+0.7**
BOVS	**Bovan**	**3.97**	**11**	⇑P	**Pn**	**21 11 27.8**	**+1.2**
BOVS	**Bovan**	**3.97**	**11**	*e*Pn	**Pn**	**21 11 27.4**	**+0.8**
CEL	**Celeste**	**4.03**	**250**	Pn	**Pn**	**21 11 26.6**	**-0.8**
GRUS	**Gruza**	**4.15**	**0**	*e*Pn	**Pn**	**21 11 30.8**	**+1.7**
BLKB	**Belogradchik**	**4.16**	**20**	⇑P	**Pn**	**21 11 32.0**	**+2.8**
ZAGS	**Zajecar**	**4.23**	**15**	*e*Pn	**Pn**	**21 11 32.1**	**+1.9**
ALN	**Alexandroupoli**	**4.24**	**72**	Pn	**Pn**	**21 11 31.2**	**+0.9**
BBLS	**Lazići**	**4.25**	**347**	*e*Pn	**Pn**	**21 11 31.7**	**+1.3**
SGRT	**San Giovanni R**	**4.28**	**300**		**Pn**	**21 11 31.8**	**+0.9**
DIVS	**Divibare**	**4.40**	**353**	Pn	**Pn**	**21 11 33.6**	**+1.1**
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	**Pn**	**21 11 33.6**	**+1.1**
PAOL	**Paolisi**	**4.87**	**287**	Pn	**Pn**	**21 11 41.4**	**+2.5**
TEKS	**Tekeris**	**4.89**	**350**	*e*Pn	**Pn**	**21 11 39.3**	**0.0**
HERR	**Herculane**	**5.30**	**13**	⇓P	**Pn**	**21 11 47.8**	**+3.0**
FRGS	**Fruska Gora**	**5.46**	**353**	⇑P	**Pn**	**21 11 48.1**	**+1.0**
FRGS	**Fruska Gora**	**5.46**	**353**	*e*Pn	**Pn**	**21 11 47.9**	**+0.8**
IDI	**Anoyia**	**5.54**	**142**	Pn	**Pn**	**21 11 48.1**	**-0.1**
	comp=E,0.3nm,0.3s,baz=300,slow=2.4,SNR=1.5						
IDI				Sn	**Sn**	**21 12 49.0**	**-2.7**
	comp=E,0.9nm,0.3s,baz=116,slow=10,SNR=1.5						
	comp=E,8.4nm,0.9s						
IDI	**Anoyia**	**5.54**	**142**	Pn	**Pn**	**21 11 49.0**	**+0.8**
RAFF	**Raffo Rosso**	**5.57**	**245**	Pn	**Pn**	**21 11 47.5**	**-1.1**
INTR	**Introdacqua**	**5.64**	**296**	Pn	**Pn**	**21 11 51.0**	**+1.5**
BZS	**Buzias**	**5.92**	**6**	⇓P	**Pn**	**21 11 55.4**	**+2.1**
CAMP	**Campotosto**	**6.18**	**299**	Pn	**Pn**	**21 11 58.4**	**+1.3**
ARR	**Arges**	**6.33**	**26**	⇑P	**Pn**	**21 12 01.4**	**+2.4**
NRCA	**Norcia**	**6.50**	**301**		**Pn**	**21 12 02.2**	**+0.8**
VOIR		**6.54**	**28**	⇓P	**Pn**	**21 12 05.5**	**+3.6**
ISR	**Istrita**	**6.90**	**37**	⇑P	**Pn**	**21 12 11.4**	**+4.5**
MLR	**Muntele Rosu**	**6.93**	**32**	⇑P	**Pn**	**21 12 11.6**	**+4.3**
MLR	**Muntele Rosu**	**6.93**	**32**	Pn	**Pn**	**21 12 10.1**	**+2.7**
	comp=E,0.6nm,0.3s,baz=332,slow=7.9,SNR=15						
MLR	**Muntele Rosu**	**6.93**	**32**	Pn	**Pn**	**21 12 07.3**	**0.0**
MURB	**Monte Urbino**	**7.08**	**303**	Pn	**Pn**	**21 12 10.8**	**+1.4**
COVR	**Voineasa-Covas**	**7.33**	**32**	⇑P	**Pn**	**21 12 16.5**	**+3.8**
PLOR	**Plostina**	**7.51**	**34**	⇑P	**Pn**	**21 12 19.7**	**+4.5**
VRI	**Vrincioaia**	**7.56**	**34**	⇑P	**Pn**	**21 12 19.6**	**+3.7**
SOKA	**Soboth**	**8.08**	**331**	*i* Pn	**Pn**	**21 12 23.7**	**+0.6**
	comp=E,0.4nm,0.2s						
OBKA	**Obir**	**8.13**	**328**	*i* Pn	**Pn**	**21 12 24.8**	**+1.1**
	comp=E,0.4nm,0.1s						
TEOL	**Teolo**	**8.72**	**313**	Pn	**Pn**	**21 12 31.2**	**-0.6**
STAL	**STALIGIAL**	**8.77**	**321**	Pn	**Pn**	**21 12 32.7**	**+0.2**
VLC	**Villacollemand**	**8.87**	**303**	Pn	**Pn**	**21 12 34.3**	**+0.4**
CTI	**Castel Tesino**	**9.16**	**316**	Pn	**Pn**	**21 12 37.2**	**-0.7**
ABTA	**Abfaltersbach**	**9.21**	**322**	*i* Pn	**Pn**	**21 12 39.3**	**+0.7**
	comp=E,0.8nm,0.3s						
ABTA				*i* Sn	**Sn**	**21 14 17.2**	**-4.8**
	comp=E,1.0nm,0.3s						
MOA	**Molln**	**9.35**	**332**	*i* Pn	**Pn**	**21 12 42.1**	**+1.7**
	comp=E,1.1nm,0.3s						
WTTA	**Wattenberg**	**10.00**	**322**	*i* Pn	**Pn**	**21 12 50.8**	**+1.3**
	comp=E,1.1nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**10.27**	**316**	Pn	**Pn**	**21 12 53.5**	**+0.3**
FETA	**Feichten**	**10.28**	**318**	*e*Sn	**Sn**	**21 14 41.1**	**-7.2**
	comp=E,0.9nm,0.5s						
MOTA	**Moosalm**	**10.31**	**321**	*e*Pn	**Pn**	**21 12 55.8**	**+2.1**
	comp=E,2.3nm,0.7s						
MOTA				*e*Sn	**Sn**	**21 14 45.6**	**-3.5**
	comp=E,3.0nm,0.6s						
GERES	**GERESS Array B**	**10.40**	**333**	Pn	**Pn**	**21 12 54.5**	**-0.3**
	comp=E,0.1nm,0.3s,baz=162,slow=13,SNR=2.0						
	comp=E,0.1nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.58**	**315**	Pn	**Pn**	**21 12 58.4**	**+1.0**
	comp=E,0.1nm,0.3s,baz=222,slow=21,SNR=2.4						
	comp=E,0.9nm,0.5s						
RETA	**Reutte**	**10.58**	**320**	*i* Sn	**Sn**	**21 14 52.2**	**-3.3**
	comp=E,0.6nm,0.3s						
SENIN	**Lac Senin/Sane**	**11.83**	**308**	Pn	**Pn**	**21 13 15.1**	**+0.5**
HFS	**Hagfors**	**20.89**	**350**	P	**P**	**21 15 04.9**	**-2.8**
	comp=E,1.4nm,0.5s,baz=158,slow=15,SNR=1.3						
	comp=E,1.4nm,0.5s						
FINES	**FINESS Array B**	**21.99**	**7**	P	**P**	**21 15 17.9**	**-1.5**
	comp=E,1.4nm,0.6s,baz=182,slow=9.1,SNR=8.2						
	comp=E,1.4nm,0.6s						
FIA1	**FINESS Array S**	**21.99**	**7**	P	**P**	**21 15 18.3**	**-1.1**
FIA1				IAmb	IAmb	21 15 24.1	
	comp=Z,17nm,1.4s						
NB201	**NORSAR Array S**	**22.13**	**348**	P	**P**	**21 15 20.8**	**-0.2**
NOA	**NORSAR Array B**	**22.13**	**348**	P	**P**	**21 15 19.9**	**-1.1**
	comp=Z,1.6nm,0.9s,baz=164,slow=10,SNR=4.0						
	comp=Z,1.6nm,0.9s						
ABKAR	**Akbulak array**	**29.27**	**58**	P	**P**	**21 16 26.6**	**-1.0**
ARCES	**ARCESS Array B**	**29.98**	**3**	P	**P**	**21 16 31.3**	**-2.3**
	comp=Z,3.1nm,0.8s,baz=185,slow=9.1,SNR=2.5						
	comp=Z,3.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	**31.34**	**218**	P	**P**	**21 16 46.4**	**+0.2**
TOA0				IAmb	IAmb	21 16 54.7	
	comp=Z,5.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	**21 16 46.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=30,slow=9.1,SNR=3.3						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**44.38**	**60**	P	**P**	**21 18 35.1**	**-0.9**
MKAR	**Makanchi Array**	**44.38**	**60**	P	**P**	**21 18 32.5**	**-3.5**
	comp=Z,0.9nm,0.7s,baz=273,slow=7.3,SNR=6.6						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**44.38**	**60**	P	**P**	**21 18 35.0**	**-0.9**

*AEIC **15** 21:28:08±2.5, 52°.1N±0°.2×179°.74E±0°.07, h184km±9km, ML3.3, mb4.2/24(NEIC), Error ellipse: s-maj=28.3km s-min=6.2km az=181.0*
*NEIC **15** 21:28:08.3±1.7, 52°.1N±0°.3×179°.8E±0°.1, h180km±18km, Error ellipse: s-maj=43.2km s-min=10.5km az=178.0*
*IDC **15** 21:28:12.3±5.7, 52°.36N×179°.87E, h221km±53km, mb3.2/5, mbtmp3.8/7, MS3.2/1, Error ellipse: s-maj=35.0km s-min=26.5km az=125.0*

ISC 15 21:28:08.4±0.8, 51°.9N±0°.2×179°.84E±0°.07, h200km, n39, σ1§53/41, mb3.4/5, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.63**	**212**		**Pn**	**21 28 34.7**	**-1.3**
AMKA				Sn	**Sn**	**21 28 54.0**	**-3.3**
KIWB	**Kanaga Island**	**1.87**	**91**	Pn	**Pn**	**21 28 44.5**	**-1.0**
KIWB					**Sn**	**21 29 12.5**	**-1.8**
ADK	**Adak**	**2.15**	**89**	Pn	**Pn**	**21 28 47.1**	**-1.3**
ADK					**Sn**	**21 29 16.9**	**-2.7**
SMY	**Shemya**	**3.62**	**285**	Pn	**Pn**	**21 29 02.3**	**-3.1**
NIKH	**Nikolski High**	**7.00**	**77**	Pn	**Pn**	**21 29 48.9**	**+0.5**
UNV	**Unalaska Valle**	**8.49**	**71**	Pn	**Pn**	**21 30 06.5**	**-1.2**
PETK	**Petropavlovsk-**	**13.53**	**284**	P	**P**	**21 31 15.5**	**+0.7**
	0.5nm,0.3s,baz=104,slow=19,SNR=1.3						
N18K	**Kilae Creek**	**15.99**	**47**		**Pn**	**21 31 43.3**	**+1.0**
N18K				IAmb	IAmb	21 32 08.8	
	comp=Z,9.7nm,1.2s						
O18K	**Koktuh Hills**	**16.02**	**50**		**Pn**	**21 31 43.7**	**+1.0**
O18K				IAmb	IAmb	21 31 45.4	
	comp=Z,14nm,1.1s						
SVW2	**Sparrevohn**	**16.30**	**46**	P	**Pn**	**21 31 47.1**	**+1.2**
OHAK	**Old Harbor**	**16.40**	**61**	P	**P**	**21 31 45.4**	**-1.0**
OHAK				IAmb	IAmb	21 31 58.7	
	comp=Z,18nm,1.2s						
N19K	**Bonanza Creek**	**16.68**	**48**	P	**Pn**	**21 31 51.4**	**+0.7**
N19K				IAmb	IAmb	21 31 54.2	
	comp=Z,19nm,1.5s						
KDAK	**Kodiak Island**	**16.86**	**59**	P	**P**	**21 31 50.4**	**-1.0**
	comp=Z,2.3nm,0.3s,baz=277,slow=4.8,SNR=16						
KDAK	**Kodiak Island**	**16.86**	**59**	P	**P**	**21 31 50.2**	**-1.2**
P19K	**Oil Pt**	**16.92**	**52**	P	**Pn**	**21 31 53.9**	**+0.5**
CNPM	**China Poot**	**17.87**	**53**	P	**P**	**21 32 03.1**	**+0.6**
BRLK	**Bradley Lake**	**18.10**	**53**	P	**P**	**21 32 04.8**	**-0.1**
J20K	**Nowinta River**	**18.28**	**38**	P	**Pn**	**21 32 08.8**	**-0.4**
SKT	**Skwentna**	**18.42**	**46**	P	**P**	**21 32 09.9**	**+1.4**
SKT				IAmb	IAmb	21 32 14.7	
	comp=Z,6.0nm,0.8s						
PPLA	**Purkeypile**	**18.48**	**43**	P	**P**	**21 32 10.9**	**+1.6**
PPLA				IAmb	IAmb	21 32 32.0	
	comp=Z,16nm,1.5s						
SUA	**Susitna One**	**18.61**	**48**	P	**P**	**21 32 11.6**	**+1.0**
SUA				IAmb	IAmb	21 32 25.7	
	comp=Z,24nm,1.2s						
SEW	**Seward**	**18.88**	**52**	P	**P**	**21 32 14.0**	**+0.7**
PWL	**Port Wells**	**19.58**	**50**	P	**P**	**21 32 21.0**	**0.0**
PWL				IAmb	IAmb	21 32 24.9	
	comp=Z,9.0nm,1.0s						
SML	**Sawmill**	**19.81**	**48**	P	**P**	**21 32 23.9**	**+0.4**
SML				IAmb	IAmb	21 32 51.3	
	comp=Z,12nm,1.4s						
GLI	**Glacier Island**	**20.18**	**51**	P	**P**	**21 32 27.6**	**+0.3**
SCM	**Sheep Creek Mo**	**20.28**	**48**	P	**P**	**21 32 28.4**	**-0.1**
SCM				IAmb	IAmb	21 32 41.5	
	comp=Z,22nm,1.5s						
FID	**Port Fidalgo**	**20.45**	**51**	P	**P**	**21 32 29.7**	**-0.5**
DHY	**Denali Highway**	**20.60**	**44**	P	**P**	**21 32 32.2**	**+0.2**
DHY				IAmb	IAmb	21 32 49.5	
	comp=Z,11nm,1.5s						
KLU	**Klutina**	**20.86**	**49**	P	**P**	**21 32 35.6**	**+1.0**
KLU				IAmb	IAmb	21 32 48.6	
	comp=Z,8.6nm,1.3s						
CCB	**Clear Creek Bu**	**20.96**	**40**	P	**P**	**21 32 36.7**	**+1.2**
GLB	**Gilahina Butte**	**21.85**	**50**	P	**P**	**21 32 45.3**	**+0.6**
L27K	**Beaver Creek,**	**23.05**	**46**	P	**P**	**21 32 56.6**	**+0.8**
BCAR	**Beaver Creek A**	**23.07**	**46**	P	**P**	**21 32 57.6**	**+1.6**
KLR	**Kul'dur**	**30.22**	**284**	LR	LR	21 45 29.2	
	comp=Z,52nm,21.6s,baz=154,slow=34						
ARCES	**ARCESS Array B**	**57.42**	**350**	P	**P**	**21 37 35.4**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=21,slow=7.9,SNR=1.2						
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**59.04**	**307**	P	**P**	**21 37 45.7**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=52,slow=8.2,SNR=5.0						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**65.07**	**346**	P	**P**	**21 38 25.8**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=14,slow=7.1,SNR=5.7						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**81.82**	**223**	P	**P**	**21 40 08.2**	**+3.3**
	comp=Z,0.8nm,1.1s,baz=35,slow=5.9,SNR=5.0						
	comp=Z,0.8nm,1.1s						
ASAR	**Alice Springs**	**85.31**	**221**	P	**P**	**21 40 26.7**	**+4.1**
	comp=Z,0.1nm,0.5s,baz=29,slow=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.99**	**182**	P	**Pg**	**21 31 32.2**	**-0.2**
LKD2				S	**Sb**	**21 31 45.6**	**+0.3**
LKD2				AML	AML	21 31 50.7	
	comp=N,2406μm,0.3s						
LKD2				AML	AML	21 31 51.0	
	comp=E,3188μm,0.5s						
THL	**Klokotos Trika**	**1.04**	**101**	P	**Pg**	**21 31 32.9**	**-0.5**
THL				S	**Sn**	**21 31 48.4**	**+0.3**
	comp=E,725nm,0.8s						
THL	**Klokotos Trika**	**1.04**	**101**	P	**Pg**	**21 31 32.7**	**-0.7**
THL				S	**Sb**	**21 31 46.8**	**0.0**
THL				AML	AML	21 31 49.1	
	comp=N,1188μm,0.9s						
THL				AML	AML	21 31 54.4	
	comp=E,1858μm,0.3s						
NYDR	**Nydri-Lefkada**	**1.06**	**180**	P	**Pg**	**21 31 33.2**	**-0.6**
NYDR				S	**Sn**	**21 31 49.5**	**+1.0**
	comp=E,1μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.09**	**185**	P	**Pg**	**21 31 34.1**	**-0.4**
DRAG				S	**Sn**	**21 31 50.0**	**+0.6**
EVGI	**Lefkada island**	**1.15**	**181**	P	**Pg**	**21 31 35.2**	**-0.3**
EVGI				S	**Sn**	**21 31 52.3**	**+1.4**
	comp=E,2μm,0.4s						
EVGI	**Lefkada island**	**1.15**	**181**	P	**Pg**	**21 31 35.3**	**-0.3**
EVGI				S	**Sn**	**21 31 51.5**	**+0.7**
TYRN	**Tyrnavos**	**1.19**	**93**	P	**Pg**	**21 31 35.5**	**-0.7**
TYRN				S	**Sn**	**21 31 53.1**	**+1.4**
	comp=E,3μm,0.5s						
EVR	**Evrytania**	**1.22**	**134**	P	**Pg**	**21 31 36.0**	**-0.8**
EVR				S	**Sn**	**21 31 54.7**	**+2.1**
	comp=E,840nm,0.4s						
EVR	**Evrytania**	**1.22**	**134**	P	**Pg**	**21 31 36.0**	**-0.8**
EVR				S	**Sn**	**21 31 52.9**	**+0.3**
EVR				AML	AML	21 31 58.8	
	comp=E,1513μm,0.4s						
EVR				AML	AML	21 32 01.0	
	comp=N,1609μm,0.4s						
LRSO	**Larissa Observ**	**1.31**	**94**	P	**Pn**	**21 31 36.9**	**-0.5**
FSK	**Fiskardo**	**1.32**	**184**	P	**Pb**	**21 31 38.3**	**+0.3**
FSK				S	**Sn**	**21 31 57.9**	**+3.0**
	comp=N,955nm,0.3s						
FSK	**Fiskardo**	**1.32**	**184**	P	**Pg**	**21 31 38.6**	**-0.1**
FSK				S	**Sn**	**21 31 56.1**	**+1.2**
PVO	**Paravola**	**1.33**	**151**	P	**Pg**	**21 31 38.7**	**-0.2**
PVO				S	**Sn**	**21 31 58.3**	**+3.2**
	comp=N,1μm,0.9s						
PVO	**Paravola**	**1.33**	**151**	P	**Pg**	**21 31 38.5**	**-0.4**
OHR	**Ohrid**	**1.34**	**3**	*i* Pn	**Pg**	**21 31 39.9**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.35**	**124**	P	**Pg**	**21 31 38.9**	**-0.4**
MAKR				S	**Sn**	**21 31 59.5**	**+3.7**
	comp=N,2μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.35**	**124**	P	**Pb**	**21 31 38.6**	**0.0**
LIT	**Litokhoron**	**1.42**	**76**	P	**Pb**	**21 31 39.6**	**-0.1**
LIT				S	**Sg**	**21 32 01.2**	**+2.1**
	comp=N,825nm,0.6s						
LIT	**Litokhoron**	**1.42**	**76**	P	**Pb**	**21 31 39.5**	**-0.1**
LIT				S	**Sb**	**21 31 57.5**	**-0.2**
LIT				AML	AML	21 32 03.3	
	comp=N,1728μm,0.4s						
LIT				AML	AML	21 32 04.2	
	comp=E,1238μm,0.6s						
KEF4	**Livadi, Kephal**	**1.53**	**188**	P	**Pb**	**21 31 41.9**	**+0.3**
KEF4				S	**Sn**	**21 32 01.3**	**+1.2**
DMLN	**Damoulianata-K**	**1.56**	**189**	P	**Pb**	**21 31 42.4**	**+0.4**
DMLN				S	**Sg**	**21 32 03.8**	**+0.4**
VLS	**Valsamata**	**1.60**	**183**	P	**Pn**	**21 31 41.8**	**+0.4**
VLS				S	**Sg**	**21 32 04.7**	**-0.1**
	comp=E,868nm,0.4s						
VLS	**Valsamata**	**1.60**	**183**	P	**Pn**	**21 31 42.2**	**+0.8**
VLS				S	**Sn**	**21 32 03.0**	**+1.1**
EFP	**Efpalio**	**1.65**	**145**	P	**Pb**	**21 31 43.8**	**+0.3**
EFP				S	**Sg**	**21 32 06.4**	**+0.1**
	comp=E,542nm,0.6s						
EFP	**Efpalio**	**1.65**	**145**	P	**Pg**	**21 31 44.3**	**-0.7**
TIR	**Tirane**	**1.69**	**338**	⇑P	**Pg**	**21 31 45.1**	**-0.7**
SERG	**Sergoula**	**1.73**	**142**	P	**Pb**	**21 31 45.2**	**+0.3**
SERG	**Sergoula**	**1.73**	**142**	P	**Pg**	**21 31 45.7**	**-0.8**
GRG	**Griva**	**1.76**	**47**	P	**Pn**	**21 31 44.2**	**+0.6**
GRG				S	**Sb**	**21 32 08.3**	**+0.8**
	comp=E,278nm,0.5s						
GRG	**Griva**	**1.76**	**47**	P	**Pn**	**21 31 44.3**	**+0.7**
AXAR	**Agios Charalam**	**1.83**	**123**	P	**Pb**	**21 31 46.0**	**-0.7**
LAKA	**Lakka**	**1.83**	**146**	P	**Pb**	**21 31 46.5**	**-0.3**
ALIK	**Aliki, Aigiali**	**1.87**	**143**	P	**Pb**	**21 31 47.0**	**-0.4**
XOR	**Xorichti**	**1.97**	**101**	P	**Pb**	**21 31 48.6**	**-0.6**
NEO	**Neokhori**	**2.01**	**103**	P	**Pb**	**21 31 48.6**	**-1.2**
NEO	**Neokhori**	**2.01**	**103**	P	**Pb**	**21 31 48.7**	**-1.2**
HORT	**Hortiatis**	**2.02**	**65**	P	**Pn**	**21 31 48.2**	**+1.0**
VAY	**Valandovo**	**2.10**	**42**	*i* Pn	**Pn**	**21 31 49.3**	**+1.0**
KNT	**Kendrikon**	**2.18**	**50**	P	**Pn**	**21 31 49.8**	**+0.5**
STIP	**Stip**	**2.23**	**30**	*i* Pn	**Pb**	**21 31 53.3**	**-0.2**
SOH	**Sokhos**	**2.29**	**62**	P	**Pn**	**21 31 52.1**	**+1.2**
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**21 31 55.9**	**+1.0**
SRS	**Serrai**	**2.59**	**58**	P	**Pn**	**21 31 55.8**	**+0.9**
NVR	**Nevrokopi**	**2.88**	**56**	P	**Pn**	**21 32 00.3**	**+1.3**
TIP	**Timpagrande**	**3.10**	**260**	⇑P	**Pn**	**21 32 02.1**	**0.0**
VTS	**Vitosha**	**3.43**	**33**	⇑P	**Pn**	**21 32 08.3**	**+1.7**
BOVS	**Bovan**	**3.93**	**11**	⇑P	**Pn**	**21 32 15.1**	**+1.7**
BLKB	**Belogradchik**	**4.12**	**20**	⇑P	**Pn**	**21 32 18.5**	**+2.5**
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**21 32 34.8**	**-1.4**
	comp=E,0.3nm,0.3s,baz=26,slow=23,SNR=1.0						
	comp=E,2.6nm,0.5s						
GZR	**Gura Zlata**	**5.82**	**15**	⇑P	**Pn**	**21 32 41.2**	**+1.8**
VOIR		**6.50**	**28**	⇑P	**Pn**	**21 32 53.5**	**+4.7**
MLR	**Muntele Rosu**	**6.90**	**32**	⇑P	Pn	21 33 01.1	+6.8
MLR	**Muntele Rosu**	**6.90**	**32**	Pn	Pn	21 32 59.1	+4.9
	comp=E,0.4nm,0.3s,baz=207,slow=7.1,SNR=7.2						
PLOR	**Plostina**	**7.48**	**34**	⇑P	**Pn**	**21 33 05.9**	**+3.6**
VRI	**Vrincioaia**	**7.53**	**34**	⇑P	**Pn**	**21 33 06.1**	**+3.3**
SOKA	**Soboth**	**8.04**	**331**	*i* Pn	**Pn**	**21 33 10.3**	**+0.4**
	comp=E,1.2nm,0.4s						
OBKA	**Obir**	**8.09**	**328**	*i* Pn	**Pn**	**21 33 11.1**	**+0.5**
	comp=E,0.4nm,0.2s						
WTTA	**Wattenberg**	**9.96**	**322**	*i* Pn	**Pn**	**21 33 36.8**	**+0.5**
	comp=E,1.1nm,0.4s						
WATA	**Walderalm**	**10.04**	**322**	*i* Pn	**Pn**	**21 33 37.5**	**+0.2**
	comp=E,0.6nm,0.2s						
SQTA	**Sankt Quirin**	**10.13**	**320**	*i* Pn	**Pn**	**21 33 39.0**	**+0.3**
	comp=E,0.7nm,0.3s						
FINES	**FINESS Array B**	**21.95**	**7**	P	**P**	**21 36 04.8**	**-1.6**
	comp=E,2.4nm,0.9s,baz=176,slow=12,SNR=5.8						
	comp=E,2.4nm,0.9s						
NOA	**NORSAR Array B**	**22.08**	**348**	P	**P**	**21 36 07.3**	**-0.7**
	comp=E,1.1nm,0.9s,baz=153,slow=10.0,SNR=2.3						
	comp=E,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**21 37 32.8**	**-1.1**
	comp=E,0.5nm,0.6s,baz=30,slow=7.6,SNR=5.0						
	comp=E,0.5nm,0.6s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 39 22.2**	**-1.2**
	comp=E,0.9nm,0.4s,baz=279,slow=7.3,SNR=18						
	comp=E,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**44.54**	**49**	P	**P**	**21 39 23.1**	**-1.4**
	comp=E,0.4nm,0.5s,baz=287,slow=9.9,SNR=1.9						
	comp=E,0.4nm,0.5s						

BEO ***15*** *21:42:22.0±0.9, 39°.63N×20°.99E, h4km±4km, ML3.3/5*
ATH ***15*** *21:42:22.7, 39°.76N×20°.69E, h14km±2km, ML3.6/21, Error ellipse: s-maj=2.2km s-min=1.1km az=318.0*
NEIC ***15*** *21:42:22.7±2.4, 39°.72N±0°.05×20°.66E±0°.06, h10km±1km, mb4.3/7, ML3.7(THE), Error ellipse: s-maj=9.5km s-min=6.8km az=46.0*
THE ***15*** *21:42:23.4, 39°.75N×20°.75E, h0km±2km, ML3.7/24, Error ellipse: s-maj=2.0km s-min=0.7km az=327.0*
IDC ***15*** *21:42:23.6±3.8, 39°.74N×20°.70E, h33km±34km, mb3.6/8, mbtmp3.6/14, ML3.2/5, MS3.4/2, Error ellipse: s-maj=19.4km s-min=16.5km az=49.0*
ISC 15 21:42:22.6±0.8, 39°.75N±0°.01×20°.71E±0°.02, h18km±4km, n218, σ1$66/260, mb4.1/12, 9C-8D, Greece-Albania border region

	comp=E,17μm,0.3s						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pg**	**21 42 30.1**	**-0.1**
IGT				S	**Sb**	**21 42 35.6**	**-0.3**
IGT				AML	AML	21 42 38.3	
	comp=N,31258μm,0.3s						
IGT				AML	AML	21 42 38.9	
	comp=E,36380μm,0.5s						
LSK	**Leskovik**	**0.41**	**348**	P	**Pg**	**21 42 31.4**	**+0.4**
LSK				S	**Sg**	**21 42 37.2**	**+0.4**
	comp=E,12μm,0.7s						
KPRO	**Kipourio**	**0.54**	**68**	P	**Pg**	**21 42 33.4**	**-0.1**
KPRO				S	**Sb**	**21 42 42.1**	**+0.9**
	comp=E,14μm,0.5s						
PENT	**Pentalofos**	**0.55**	**36**	P	**Pg**	**21 42 33.6**	**-0.1**
PENT				S	**Sb**	**21 42 43.2**	**+1.7**
PENT	**Pentalofos**	**0.55**	**36**	P	**Pg**	**21 42 33.7**	**+0.1**
PENT				S	**Sg**	**21 42 41.7**	**+0.5**
PENT				AML	AML	21 42 44.2	
	comp=N,1569μm,0.5s						
PENT				AML	AML	21 42 46.2	
	comp=E,6715μm,0.8s						
SRN	**Sarande**	**0.56**	**284**	P	**Pg**	**21 42 33.7**	**-0.1**
SRN				S	**Sb**	**21 42 43.5**	**+1.9**
	comp=E,5μm,0.5s						
KASA	**Kassiopi**	**0.60**	**270**	P	**Pg**	**21 42 34.1**	**-0.3**
KASA				S	**Sg**	**21 42 41.3**	**-1.1**
KASA				AML	AML	21 42 46.9	
	comp=N,8378μm,0.6s						
KASA				AML	AML	21 42 49.6	
	comp=E,8931μm,0.4s						
KEK	**Kerkira**	**0.70**	**267**		**Pg**	**21 42 35.6**	**-0.8**
KEK	**Kerkira**	**0.70**	**267**	P	**Pg**	**21 42 35.6**	**-0.8**
KEK	**Kerkira**	**0.70**	**267**	P	**Pg**	**21 42 35.7**	**-0.7**
KEK				AML	AML	21 42 51.3	
	comp=N,6995μm,0.7s						
KEK				AML	AML	21 42 52.6	
	comp=E,7290μm,0.2s						
NEST	**Nestorio**	**0.71**	**21**	P	**Pg**	**21 42 36.3**	**-0.3**
NEST	**Nestorio**	**0.71**	**21**	P	**Pg**	**21 42 36.5**	**-0.1**
NEST				AML	AML	21 42 49.5	
	comp=N,3504μm,0.5s						
NEST				AML	AML	21 42 55.9	
	comp=E,4307μm,0.5s						
KBN	**Korca**	**0.88**	**4**		**Pg**	**21 42 39.1**	**-0.6**
KBN	**Korca**	**0.88**	**4**	P	**Pg**	**21 42 39.1**	**-0.6**
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pg**	**21 42 40.3**	**-0.2**
TSLK				S	**Sn**	**21 42 54.5**	**+1.0**
	comp=E,5μm,0.6s						
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pg**	**21 42 40.2**	**-0.4**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**21 42 41.2**	**0.0**
LKD2				S	**Sn**	**21 42 59.4**	**+5.0**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**21 42 40.6**	**-0.6**
LKD2				AML	AML	21 43 00.8	
	comp=E,7753μm,0.4s						
LKD2				AML	AML	21 43 07.2	
	comp=N,6952μm,0.5s						
KZN	**Kozani**	**0.99**	**55**	P	**Pg**	**21 42 40.9**	**-0.9**
KZN	**Kozani**	**0.99**	**55**	P	**Pg**	**21 42 40.9**	**-0.9**
KZN				AML	AML	21 43 00.9	
	comp=N,4703μm,0.6s						
KZN				AML	AML	21 43 01.0	
	comp=E,4658μm,0.6s						
THL	**Klokotos Trika**	**1.02**	**100**	P	**Pg**	**21 42 40.8**	**-1.6**
THL				S	**Sg**	**21 42 55.9**	**0.0**
	comp=E,2μm,0.6s						
THL	**Klokotos Trika**	**1.02**	**100**	P	**Pg**	**21 42 41.1**	**-1.3**
THL				AML	AML	21 42 58.6	
	comp=N,3950μm,0.5s						
THL				AML	AML	21 43 01.4	
	comp=E,5139μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.03**	**181**	P	**Pg**	**21 42 42.1**	**-0.5**
NYDR				S	**Sn**	**21 42 58.5**	**+2.3**
	comp=E,4μm,0.6s						
DRAG	**Dragano-Lefkad**	**1.07**	**186**	P	**Pg**	**21 42 42.3**	**-1.0**
EVGI	**Lefkada island**	**1.13**	**182**	P	**Pb**	**21 42 43.8**	**+0.2**
EVGI				S	**Sn**	**21 43 00.6**	**+2.1**
	comp=E,4μm,0.4s						
EVGI	**Lefkada island**	**1.13**	**182**	P	**Pb**	**21 42 43.6**	**+0.1**
TYRN	**Tyrnavos**	**1.18**	**91**	P	**Pb**	**21 42 43.9**	**-0.4**
TYRN				S	**Sb**	**21 43 00.7**	**+1.5**
	comp=E,7μm,0.5s						
VLO	**Vlora**	**1.18**	**308**		**Pg**	**21 42 46.0**	**+0.7**
VLO	**Vlora**	**1.18**	**308**	P	**Pg**	**21 42 47.4**	**+2.1**
VLO				S	**Sn**	**21 43 04.9**	**+5.2**
	comp=E,4μm,0.6s						
EVR	**Evrytania**	**1.19**	**134**	P	**Pb**	**21 42 44.5**	**-0.2**
EVR				S	**Sn**	**21 43 02.9**	**+2.7**
	comp=E,2μm,0.5s						
EVR	**Evrytania**	**1.19**	**134**	P	**Pb**	**21 42 44.6**	**-0.1**
EVR				AML	AML	21 43 08.0	
	comp=N,3492μm,0.7s						
EVR				AML	AML	21 43 11.5	
	comp=E,3051μm,0.6s						
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**21 42 47.5**	**0.0**
FSK				S	**Sg**	**21 43 06.6**	**+2.2**
	comp=E,3μm,0.4s						
FSK	**Fiskardo**	**1.29**	**185**	P	**Pb**	**21 42 47.0**	**+0.6**
FSK				AML	AML	21 43 09.0	
	comp=E,8104μm,0.4s						
FSK				AML	AML	21 43 09.7	
	comp=N,4091μm,0.5s						
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**21 42 47.4**	**-0.1**
PVO				S	**Sg**	**21 43 05.6**	**+1.1**
	comp=N,3μm,0.7s						
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**21 42 47.5**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pn**	**21 42 47.4**	**+1.2**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pn**	**21 42 46.8**	**+0.6**
MAKR				AML	AML	21 43 11.2	
	comp=E,14411μm,0.5s						
MAKR				AML	AML	21 43 21.2	
	comp=N,7197μm,0.8s						
OHR	**Ohrid**	**1.36**	**3**	*e*Pg	**Pg**	**21 42 49.4**	**+0.5**
OHR				*e*Sg	**Sg**	**21 43 10.0**	**+3.3**
OHR	**Ohrid**	**1.36**	**3**	*i* Pn	**Pg**	**21 42 49.4**	**+0.5**
LIT	**Litokhoron**	**1.41**	**75**	Pn	**Pn**	**21 42 48.2**	**+0.7**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pn**	**21 42 48.3**	**+0.8**
LIT				S	**Sg**	**21 43 10.2**	**+2.0**
	comp=N,2μm,0.7s						
LIT	**Litokhoron**	**1.41**	**75**	P	**Pn**	**21 42 48.2**	**+0.7**
LIT				AML	AML	21 43 13.6	
	comp=N,3931μm,0.9s						
LIT				AML	AML	21 43 16.8	
	comp=E,5568μm,0.5s						
KEF4	**Livadi, Kephal**	**1.51**	**189**	P	**Pb**	**21 42 50.4**	**+0.4**
KEF4				S	**Sg**	**21 43 12.0**	**+0.8**
	comp=E,14μm,0.6s						
KEF4	**Livadi, Kephal**	**1.51**	**189**	P	**Pb**	**21 42 50.4**	**+0.4**
DMLN	**Damoulianata-K**	**1.53**	**190**	P	**Pb**	**21 42 51.1**	**+0.7**
DMLN				S	**Sg**	**21 43 12.2**	**+0.2**
	comp=E,4μm,0.4s						
VLS	**Valsamata**	**1.57**	**183**	P	**Pn**	**21 42 51.0**	**+1.4**
VLS				S	**Sg**	**21 43 14.0**	**+0.7**
	comp=E,2μm,0.4s						
VLS	**Valsamata**	**1.57**	**183**	P	**Pn**	**21 42 50.4**	**+0.7**
VLS				AML	AML	21 43 16.3	
	comp=N,4543μm,0.4s						
VLS				AML	AML	21 43 21.9	
	comp=E,3825μm,0.5s						
EFP	**Efpalio**	**1.61**	**144**	P	**Pb**	**21 42 53.1**	**+1.2**
EFP				S	**Sg**	**21 43 15.6**	**+0.9**
	comp=E,2μm,0.7s						
EFP	**Efpalio**	**1.61**	**144**	P	**Pb**	**21 42 52.7**	**+0.9**
EFP				AML	AML	21 43 27.3	
	comp=N,3382μm,0.6s						
EFP				AML	AML	21 43 34.8	
	comp=E,3890μm,0.7s						
PSDA	**Pessada-Kefalo**	**1.64**	**183**	P	**Pn**	**21 42 52.0**	**+1.5**
SERG	**Sergoula**	**1.70**	**141**	P	**Pb**	**21 42 54.4**	**+1.1**
SERG	**Sergoula**	**1.70**	**141**	P	**Pb**	**21 42 54.4**	**+1.1**
SERG				AML	AML	21 43 26.6	
	comp=E,2691μm,0.6s						
SERG				AML	AML	21 43 26.8	
	comp=N,2846μm,0.6s						
TIR	**Tirane**	**1.72**	**338**	⇑P	**Pb**	**21 42 55.1**	**+1.4**
TIR	**Tirane**	**1.72**	**338**		**Pn**	**21 42 53.6**	**+1.9**
TIR	**Tirane**	**1.72**	**338**	P	**Pb**	**21 42 54.5**	**+0.8**
TIR	**Tirane**	**1.72**	**338**	*e*Pn	**Pb**	**21 42 54.8**	**+1.1**
TIR				*e*Sn	**Sg**	**21 43 20.5**	**+2.4**
SCTE	**Santa Cesarea**	**1.75**	**281**		**Pn**	**21 42 51.4**	**-0.8**
GRG	**Griva**	**1.77**	**46**	P	**Pn**	**21 42 53.2**	**+0.9**
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pb**	**21 42 54.8**	**0.0**
RLS				S	**Sb**	**21 43 18.2**	**+1.3**
	comp=N,708nm,0.7s						
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pb**	**21 42 54.6**	**-0.2**
RLS				AML	AML	21 43 30.9	
	comp=E,1046μm,0.7s						
RLS				AML	AML	21 43 33.0	
	comp=N,1783μm,0.8s						
LAKA	**Lakka**	**1.80**	**146**	P	**Pb**	**21 42 55.4**	**+0.3**
LAKA	**Lakka**	**1.80**	**146**	P	**Pb**	**21 42 55.4**	**+0.3**
LAKA				AML	AML	21 43 29.4	
	comp=E,4160μm,0.6s						
LAKA				AML	AML	21 43 37.1	
	comp=N,3060μm,0.6s						
AXAR	**Agios Charalam**	**1.80**	**122**	P	**Pb**	**21 42 55.8**	**+0.7**
AXAR	**Agios Charalam**	**1.80**	**122**	P	**Pb**	**21 42 55.5**	**+0.4**
AXAR				AML	AML	21 43 29.3	
	comp=N,2812μm,0.5s						
AXAR				AML	AML	21 43 29.9	
	comp=E,4188μm,0.4s						
ALIK	**Aliki, Aigiali**	**1.84**	**143**	P	**Pb**	**21 42 56.4**	**+0.6**
XOR	**Xorichti**	**1.96**	**100**	P	**Pn**	**21 42 56.8**	**+1.9**
DRO	**Drossia**	**1.96**	**156**	P	**Pn**	**21 42 56.6**	**+1.7**
DRO	**Drossia**	**1.96**	**156**	P	**Pn**	**21 42 56.7**	**+1.7**
DRO				AML	AML	21 43 37.7	
	comp=N,2694μm,0.8s						
DRO				AML	AML	21 43 41.0	
	comp=E,3926μm,0.5s						
NEO	**Neokhori**	**1.99**	**102**	P	**Pn**	**21 42 57.2**	**+1.8**
NEO				S	**Sb**	**21 43 23.4**	**+0.5**
	comp=E,1μm,0.5s						
NEO	**Neokhori**	**1.99**	**102**	P	**Pn**	**21 42 57.5**	**+2.1**
NEO				AML	AML	21 43 31.7	
	comp=E,1375μm,0.4s						
NEO				AML	AML	21 43 32.3	
	comp=N,3286μm,0.5s						
HORT	**Hortiatis**	**2.02**	**64**	P	**Pn**	**21 42 56.7**	**+0.9**
LTHK	**Lithakia**	**2.04**	**177**	P	**Pb**	**21 43 00.3**	**+1.2**
KLV	**Kalavryta, Ach**	**2.04**	**146**	P	**Pn**	**21 42 58.5**	**+2.4**
KLV	**Kalavryta, Ach**	**2.04**	**146**	P	**Pn**	**21 42 58.5**	**+2.4**
LKR	**Lokris**	**2.09**	**121**	P	**Pn**	**21 42 58.3**	**+1.6**
VAY	**Valandovo**	**2.12**	**41**	*e*Pg	**Pn**	**21 42 59.3**	**+2.2**
VAY				*e*Sg	**Sb**	**21 43 26.7**	**+0.4**
VAY	**Valandovo**	**2.12**	**41**	*i* Pn	**Pn**	**21 42 58.3**	**+1.2**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pn**	**21 42 59.0**	**+0.9**
STIP	**Stip**	**2.24**	**30**	*i* Pn	**Pb**	**21 43 02.4**	**-0.2**
SOH	**Sokhos**	**2.29**	**61**	P	**Pn**	**21 43 01.0**	**+1.5**
SOH				S	**Sb**	**21 43 31.2**	**-0.2**
	comp=N,422nm,0.6s						
SKO	**Skopje**	**2.29**	**14**	*e*Pn	**Pn**	**21 43 02.4**	**+2.9**
SKO				*e*Sn	**Sb**	**21 43 31.0**	**-0.3**
SKO	**Skopje**	**2.29**	**14**	*i* Pn	**Pb**	**21 43 02.6**	**-0.7**
THAL	**Thalero**	**2.29**	**138**	P	**Pn**	**21 43 01.7**	**+2.2**
LOUT	**Loutraki**	**2.49**	**134**	P	**Pn**	**21 43 04.1**	**+1.8**
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**21 43 04.5**	**+1.1**
OUR				S	**Sn**	**21 43 36.8**	**+2.5**
	comp=N,418nm,0.5s						
SRS	**Serrai**	**2.59**	**57**	P	**Pn**	**21 43 04.6**	**+1.0**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**21 43 04.7**	**+1.1**
SRS				*e*Sn	**Sn**	**21 43 33.7**	**-1.0**
DRME	**Dracevica, Mon**	**2.69**	**335**	*e*Pn	**Pn**	**21 43 06.3**	**+1.2**
KOKK	**Kokkinochori,**	**2.73**	**66**	P	**Pn**	**21 43 06.9**	**+1.3**
ITM	**Ithomi**	**2.74**	**159**	Pn	**Pn**	**21 43 07.4**	**+1.8**
ITM	**Ithomi**	**2.74**	**159**	P	**Pn**	**21 43 07.6**	**+1.9**
PDG	**Podgorica**	**2.90**	**338**	⇑P	**Pn**	**21 43 10.6**	**+2.8**
PDG	**Podgorica**	**2.90**	**338**		**Pn**	**21 43 09.2**	**+1.4**
DION	**Dionisos Attik**	**3.02**	**123**	P	**Pn**	**21 43 12.1**	**+2.6**
DION				S	**Sn**	**21 43 48.2**	**+3.0**
	comp=N,512nm,0.5s						
KRND	**KRANIDI**	**3.04**	**140**	P	**Pn**	**21 43 11.5**	**+1.7**
VLY	**Voula,Athens**	**3.06**	**127**	P	**Pn**	**21 43 12.3**	**+2.2**
TIP	**Timpagrande**	**3.11**	**261**	⇓P	**Pn**	**21 43 11.4**	**+0.5**
TIP				⇓S	**Sn**	**21 43 48.7**	**+1.1**
TIP	**Timpagrande**	**3.11**	**261**	Pn	**Pn**	**21 43 11.3**	**+0.4**
KAVA	**Kavala**	**3.16**	**66**	P	**Pn**	**21 43 12.5**	**+1.0**
HCY	**Herceg Novi**	**3.17**	**329**	*e*Pn	**Pn**	**21 43 11.4**	**-0.2**
BARS	**Barje**	**3.18**	**15**	*e*Pn	**Pn**	**21 43 14.3**	**+2.6**
MATE	**Matera**	**3.20**	**288**	⇓P	**Pn**	**21 43 13.5**	**+1.6**
VTS	**Vitosha**	**3.44**	**33**	⇑P	**Pn**	**21 43 17.6**	**+2.2**
VTS	**Vitosha**	**3.44**	**33**	Pn	**Pn**	**21 43 17.2**	**+1.8**
SELS	**Selova**	**3.48**	**5**	*e*Pn	**Pn**	**21 43 17.2**	**+1.3**
VLI	**Veliai**	**3.50**	**149**	P	**Pn**	**21 43 17.7**	**+1.6**
SJES	**Sjenica**	**3.55**	**351**	*e*Pn	**Pn**	**21 43 19.5**	**+2.6**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pb**	**21 43 25.1**	**-2.6**
CUC	**Castrocucco**	**3.77**	**275**		**Pn**	**21 43 22.1**	**+2.1**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**	**21 43 23.5**	**+3.1**
KTHR	**Kythira**	**3.93**	**152**	P	**Pn**	**21 43 24.7**	**+2.7**
RDO	**Rodhopi**	**3.94**	**68**		**Pn**	**21 43 23.4**	**+1.2**
BOVS	**Bovan**	**3.95**	**11**	⇓P	**Pn**	**21 43 24.3**	**+2.0**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn	**Pn**	**21 43 23.7**	**+1.4**
RUDO	**Rudo**	**3.99**	**346**	*e*Pn	**Pn**	**21 43 24.0**	**+1.1**
CEL	**Celeste**	**4.04**	**250**		**Pn**

MOA				*e*Sn	**Sn**	**21 46 19.9**	**-1.0**
	comp=N,0.9nm,0.4s						
KEST	**Kesra**	**9.85**	**250**	Pn	**Pn**	**21 44 44.4**	**+1.0**
BRTR	**Keskin Array B**	**9.96**	**86**	Pn	**Pn**	**21 44 47.0**	**+2.1**
	comp=N,0.1nm,0.3s,baz=265,slow=10,SNR=5.6						
	comp=N,0.4nm,0.5s						
BRTR	**Keskin Array B**	**9.96**	**86**	Pn	**Pn**	**21 44 46.2**	**+1.3**
WTTA	**Wattenberg**	**9.99**	**322**	*i* Pn	**Pn**	**21 44 46.3**	**+1.0**
	comp=N,1.5nm,0.3s						
WTTA				*e*Sn	**Sn**	**21 46 33.3**	**-3.6**
	comp=N,3.5nm,0.6s						
WATA	**Walderalm**	**10.07**	**322**	*e*Pn	**Pn**	**21 44 47.5**	**+1.2**
	comp=N,0.9nm,0.2s						
WATA				*i* Sn	**Sn**	**21 46 35.3**	**-3.6**
	comp=N,2.2nm,0.4s						
SQTA	**Sankt Quirin**	**10.16**	**320**	*i* Pn	**Pn**	**21 44 48.5**	**+0.8**
	comp=N,0.9nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**10.26**	**315**	Pn	**Pn**	**21 44 49.5**	**+0.4**
FETA	**Feichten**	**10.27**	**318**	*e*Pn	**Pn**	**21 44 51.1**	**+2.0**
	comp=N,1.8nm,0.7s						
FETA				*e*Sn	**Sn**	**21 46 42.7**	**-1.1**
	comp=N,2.2nm,0.7s						
MOTA	**Moosalm**	**10.30**	**321**	*e*Pn	**Pn**	**21 44 51.0**	**+1.4**
	comp=N,1.5nm,0.5s						
MOTA				*i* Sn	**Sn**	**21 46 40.2**	**-4.4**
	comp=N,4.2nm,0.9s						
GERES	**GERESS Array B**	**10.38**	**333**	Pn	**Pn**	**21 44 51.2**	**+0.6**
	comp=N,0.1nm,0.3s,baz=166,slow=13,SNR=2.3						
	comp=N,0.1nm,0.3s						
GERES	**GERESS Array B**	**10.38**	**333**	Pn	**Pn**	**21 44 51.1**	**+0.5**
DAVOX	**Davos/Dischmat**	**10.56**	**315**	Pn	**Pn**	**21 44 54.0**	**+0.8**
	comp=N,0.7nm,0.5s,baz=135,slow=17						
RETA	**Reutte**	**10.57**	**320**	*e*Sn	**Sn**	**21 46 47.7**	**-3.4**
	comp=N,1.7nm,0.5s						
CSS	**Mathiatis**	**11.12**	**111**	Pn	**Pn**	**21 45 02.0**	**+1.2**
SENIN	**Lac Senin/Sane**	**11.82**	**308**	Pn	**Pn**	**21 45 11.6**	**+1.1**
AKASG	**Malin Array Be**	**12.48**	**26**	LR	LR	21 51 08.9	
	comp=N,112nm,19.1s,baz=44,slow=42						
MMAI	**Mount Meron Ar**	**13.60**	**115**	Pn	**Pn**	**21 45 33.9**	**-0.8**
	comp=N,0.1nm,0.3s,baz=316,slow=12,SNR=2.3						
	comp=N,0.3nm,0.3s						
ESDC	**Sonseca Array**	**18.97**	**278**	P	**P**	**21 46 41.4**	**-1.6**
	baz=76,slow=11,SNR=2.8						
	comp=N,1.0nm,1.2s						
HFS	**Hagfors**	**20.88**	**350**	P	**P**	**21 47 02.4**	**-1.0**
	comp=N,1.1nm,0.5s,baz=166,slow=26,SNR=4.8						
	comp=N,1.1nm,0.5s						
NC602	**NORSAR Array S**	**21.77**	**348**	P	**P**	**21 47 12.2**	**-0.8**
NC602				IAmb	IAmb	21 47 38.6	
	comp=Z,26nm,1.3s						
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**21 47 14.2**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=169,slow=11,SNR=10						
	comp=Z,2.6nm,0.7s						
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**21 47 14.7**	**-0.5**
FIA1	**FINESS Array S**	**21.97**	**7**	P	**P**	**21 47 15.3**	**+0.1**
FIA1				IAmb	IAmb	21 47 32.7	
	comp=Z,23nm,1.3s						
NB2	**NORSAR Subarra**	**22.11**	**348**	P	**P**	**21 47 17.3**	**+0.5**
	comp=Z,4.2nm,1.1s,baz=158,slow=10						
NOA	**NORSAR Array B**	**22.11**	**348**	P	**P**	**21 47 16.4**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=165,slow=11,SNR=3.4						
	comp=Z,1.3nm,0.9s						
ARCES	**ARCESS Array B**	**29.96**	**3**	P	**P**	**21 48 27.9**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=187,slow=8.6,SNR=4.9						
	comp=Z,2.2nm,0.9s						
TOA0	**Torodi Ar. Sit**	**31.35**	**218**	P	**P**	**21 48 42.1**	**-0.1**
TOA0				IAmb	IAmb	21 49 03.8	
	comp=Z,5.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**31.35**	**218**	P	**P**	**21 48 41.4**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=35,slow=9.2,SNR=10						
	comp=Z,1.7nm,0.7s						
KK31	**Karatay Array**	**37.05**	**68**	P	**P**	**21 49 30.5**	**-0.9**
KKAR	**Karatay Array**	**37.05**	**68**	P	**P**	**21 49 31.1**	**-0.4**
GAR	**Garm**	**37.96**	**75**	P	**P**	**21 49 39.7**	**+0.4**
GAR				IAmb	IAmb	21 49 52.1	
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 50 31.2**	**-0.6**
MK31				IAmb	IAmb	21 50 34.8	
	comp=Z,3.9nm,1.1s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 50 31.2**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=278,slow=7.6,SNR=33						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 50 31.6**	**-0.2**
ZALV	**Zalesovo Beam**	**44.54**	**49**	P	**P**	**21 50 31.9**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=263,slow=7.5,SNR=2.3						
	comp=Z,0.5nm,0.5s						
TSUM	**Tsumeb**	**58.72**	**183**	LR	LR	22 19 57.8	
	comp=Z,54nm,18.8s,baz=336,slow=38						
SONM	**Songino Array**	**59.35**	**51**	P	**P**	**21 52 22.7**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=268,slow=8.7,SNR=3.5						
	comp=Z,0.5nm,0.8s						
BOSA	**Boshof**	**68.14**	**176**	P	**P**	**21 53 22.1**	**+0.5**

*ATH **15** 21:46:52.7, 39°.75N×20°.74E, h19km±1km, ML3.4/17, Error ellipse: s-maj=1.2km s-min=0.8km az=290.0*
*BEO **15** 21:46:52.6±0.7, 39°.68N×20°.97E, h0km, ML3.1/6*
*NEIC **15** 21:46:52.9±1.7, 39°.70N±0°.04×20°.70E±0°.06, h9km±7km, mb4.3/6, ML3.4(THE), Error ellipse: s-maj=8.2km s-min=2.1km az=49.0*
*THE **15** 21:46:53.5, 39°.75N×20°.74E, h2km±1km, ML3.4/12, Error ellipse: s-maj=1.4km s-min=0.4km az=335.0*
*IDC **15** 21:46:54.4±3.5, 39°.75N×20°.75E, h34km±33km, mb3.6/7, mbtmp3.6/12, ML3.2/5, Error ellipse: s-maj=23.0km s-min=17.2km az=56.0*
*PDG **15** 21:46:55.0±0.2, 39°.88N×20°.65E, h12km±1km, ML3.4/12, Error ellipse: s-maj=1.9km s-min=0.5km az=90.0*

ISC 15 21:46:52.9±0.8, 39°.74N±0°.02×20°.72E±0°.02, h15km±5km, n173, σ1°.40/225, mb4.0/9, 11C-9D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.13**	**127**	P	**Pg**	**21 46 56.4**	**-0.1**
JAN				S	**Sg**	**21 46 58.1**	**-0.8**
JAN	**Janina**	**0.13**	**127**	P	**Pg**	**21 46 56.4**	**-0.1**
JAN				S	**Sg**	**21 46 59.6**	**+0.7**
JAN				AML	AML	21 47 00.3	
	comp=N,86932μm,0.1s						
JAN				AML	AML	21 47 00.4	
	comp=E,70221μm,0.2s						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**21 47 00.5**	**+0.3**
IGT				S	**Sb**	**21 47 06.8**	**+0.4**
	comp=E,8μm,0.2s						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**21 47 00.5**	**+0.3**
IGT				S	**Sb**	**21 47 06.9**	**+0.4**
IGT				AML	AML	21 47 10.8	
	comp=E,23618μm,0.4s						
IGT				AML	AML	21 47 11.7	
	comp=N,18155μm,0.4s						
LSK	**Leskovik**	**0.42**	**348**	P	**Pg**	**21 47 01.6**	**+0.2**
LSK				S	**Sg**	**21 47 07.5**	**+0.3**
	comp=N,7μm,0.5s						
KPRO	**Kipourio**	**0.54**	**66**	P	**Pg**	**21 47 03.7**	**0.0**
KPRO				S	**Sg**	**21 47 10.7**	**-0.2**
	comp=N,9μm,0.5s						
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**21 47 04.0**	**0.0**
PENT				S	**Sg**	**21 47 11.8**	**+0.2**
	comp=N,1μm,0.3s						
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**21 47 03.7**	**-0.3**
PENT				S	**Sg**	**21 47 11.7**	**+0.1**
SRN	**Sarande**	**0.57**	**285**	P	**Pg**	**21 47 03.9**	**-0.2**
SRN				S	**Sb**	**21 47 13.4**	**+0.9**
	comp=N,4μm,0.4s						
KASA	**Kassiopi**	**0.60**	**271**	P	**Pg**	**21 47 04.5**	**-0.2**
KASA				S	**Sb**	**21 47 14.4**	**+1.0**
KASA				AML	AML	21 47 17.9	
	comp=N,7186μm,0.4s						
KASA				AML	AML	21 47 20.3	
	comp=E,7328μm,0.4s						
KEK	**Kerkira**	**0.71**	**268**		**Pg**	**21 47 06.0**	**-0.6**
KEK				Sg	**Sg**	**21 47 15.7**	**-0.3**
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**21 47 06.1**	**-0.6**
KEK				S	**Sb**	**21 47 17.5**	**+1.0**
	comp=E,3μm,0.5s						
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**21 47 06.0**	**-0.6**
KEK				S	**Sb**	**21 47 17.1**	**+0.6**
KEK				AML	AML	21 47 21.8	
	comp=N,5517μm,0.7s						
KEK				AML	AML	21 47 22.7	
	comp=E,5977μm,0.4s						
NEST	**Nestorio**	**0.72**	**21**	P	**Pg**	**21 47 07.2**	**+0.1**
NEST	**Nestorio**	**0.72**	**21**	P	**Pg**	**21 47 06.9**	**-0.1**
NEST				AML	AML	21 47 19.9	
	comp=N,2743μm,0.6s						
NEST				AML	AML	21 47 24.5	
	comp=E,2955μm,0.4s						
KBN	**Korca**	**0.89**	**4**		**Pb**	**21 47 09.6**	**-0.5**
KBN				Sg	**Sg**	**21 47 22.3**	**+0.5**
KBN	**Korca**	**0.89**	**4**	P	**Pb**	**21 47 09.6**	**-0.5**
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pb**	**21 47 10.6**	**+0.2**
TSLK				S	**Sn**	**21 47 24.4**	**+0.4**
	comp=E,3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pb**	**21 47 10.5**	**+0.1**
TSLK				AML	AML	21 47 30.1	
	comp=E,7002μm,0.5s						
TSLK				AML	AML	21 47 32.5	
	comp=N,5410μm,0.4s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pb**	**21 47 11.3**	**+0.3**
LKD2				S	**Sn**	**21 47 26.0**	**+1.0**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pb**	**21 47 10.9**	**-0.1**
KZN	**Kozani**	**0.99**	**55**	P	**Pb**	**21 47 11.5**	**-0.3**
KZN	**Kozani**	**0.99**	**55**	P	**Pb**	**21 47 11.4**	**-0.5**
KZN				AML	AML	21 47 31.2	
	comp=N,3321μm,0.5s						
KZN				AML	AML	21 47 31.3	
	comp=E,2937μm,0.4s						
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pb**	**21 47 11.8**	**-0.4**
THL				S	**Sg**	**21 47 26.8**	**+1.0**
	comp=E,1μm,0.6s						
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pb**	**21 47 11.2**	**-1.0**
THL				S	**Sb**	**21 47 25.7**	**+0.3**
THL				AML	AML	21 47 31.7	
	comp=E,3507μm,0.5s						
THL				AML	AML	21 47 32.6	
	comp=N,2676μm,0.8s						
NYDR	**Nydri-Lefkada**	**1.02**	**181**	P	**Pb**	**21 47 12.6**	**+0.3**
NYDR				S	**Sn**	**21 47 28.3**	**+1.6**
	comp=N,2μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.06**	**186**	P	**Pb**	**21 47 13.2**	**+0.3**
DRAG				S	**Sn**	**21 47 29.2**	**+1.6**
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pg**	**21 47 14.7**	**+0.3**
EVGI				S	**Sn**	**21 47 31.4**	**+2.3**
	comp=N,3μm,0.4s						
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pb**	**21 47 13.9**	**0.0**
TYRN	**Tyrnavos**	**1.17**	**91**	P	**Pn**	**21 47 14.2**	**-0.5**
EVR	**Evrytania**	**1.18**	**134**	P	**Pn**	**21 47 14.9**	**0.0**
EVR	**Evrytania**	**1.18**	**134**	P	**Pn**	**21 47 15.0**	**0.0**
EVR				AML	AML	21 47 38.3	
	comp=N,2799μm,0.5s						
EVR				AML	AML	21 47 39.2	
	comp=E,2195μm,0.4s						
VLO	**Vlora**	**1.19**	**308**		**Pg**	**21 47 16.5**	**+0.7**
KTI	**Kastanea**	**1.26**	**58**	P	**Pn**	**21 47 16.4**	**+0.3**
FSK	**Fiskardo**	**1.28**	**185**	P	**Pg**	**21 47 17.9**	**+0.4**
FSK				S	**Sg**	**21 47 36.8**	**+2.6**
	comp=E,2μm,0.3s						
FSK	**Fiskardo**	**1.28**	**185**	P	**Pb**	**21 47 17.3**	**+0.6**
FSK				S	**Sg**	**21 47 35.8**	**+1.6**
FSK				AML	AML	21 47 38.0	
	comp=N,2431μm,0.3s						
FSK				AML	AML	21 47 39.3	
	comp=E,5313μm,0.4s						
PVO	**Paravola**	**1.28**	**150**	P	**Pg**	**21 47 17.9**	**+0.3**
PVO	**Paravola**	**1.28**	**150**	P	**Pg**	**21 47 17.7**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pb**	**21 47 17.9**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pb**	**21 47 17.7**	**+0.4**
MAKR				AML	AML	21 47 41.5	
	comp=E,9408μm,0.4s						
MAKR				AML	AML	21 47 43.0	
	comp=N,5390μm,0.3s						
OHR	**Ohrid**	**1.38**	**3**	*e*Pg	**Pb**	**21 47 19.4**	**+1.0**
OHR				*e*Sg	**Sg**	**21 47 38.4**	**+1.1**
OHR	**Ohrid**	**1.38**	**3**	*i* Pn	**Pb**	**21 47 19.8**	**+1.4**
LIT	**Litokhoron**	**1.41**	**74**	Pn	**Pn**	**21 47 18.5**	**+0.4**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pn**	**21 47 18.8**	**+0.7**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pn**	**21 47 18.4**	**+0.4**
KEF4	**Livadi, Kephal**	**1.49**	**189**	P	**Pb**	**21 47 20.7**	**+0.4**
KEF4	**Livadi, Kephal**	**1.49**	**189**	P	**Pb**	**21 47 20.7**	**+0.4**
DMLN	**Damoulianata-K**	**1.52**	**190**	P	**Pn**	**21 47 20.3**	**+0.7**
VLS	**Valsamata**	**1.56**	**184**	P	**Pn**	**21 47 20.7**	**+0.5**
VLS	**Valsamata**	**1.56**	**184**	P	**Pn**	**21 47 20.6**	**+0.5**
VLS				AML	AML	21 47 46.3	
	comp=N,3238μm,0.3s						
VLS				AML	AML	21 47 46.9	
	comp=E,2619μm,0.5s						
EFP	**Efpalio**	**1.60**	**144**	P	**Pb**	**21 47 23.0**	**+0.8**
EFP				AML	AML	21 47 57.3	
	comp=E,2017μm,0.6s						
EFP				AML	AML	21 47 57.6	
	comp=N,1956μm,0.8s						
SERG	**Sergoula**	**1.68**	**141**	P	**Pb**	**21 47 23.7**	**+0.1**
SERG				AML	AML	21 47 56.9	
	comp=E,1989μm,0.6s						
SERG				AML	AML	21 47 57.1	
	comp=N,1796μm,0.5s						
TIR	**Tirane**	**1.74**	**338**	⇓P	**Pb**	**21 47 25.5**	**+1.0**
TIR	**Tirane**	**1.74**	**338**	Pn	**Pn**	**21 47 24.2**	**+1.7**
TIR	**Tirane**	**1.74**	**338**	*e*Pn	**Pb**	**21 47 25.5**	**+1.0**
TIR				*e*Sn	**Sg**	**21 47 51.2**	**+2.4**
SCTE	**Santa Cesarea**	**1.76**	**282**	Pn	**Pn**	**21 47 22.5**	**-0.4**
GRG	**Griva**	**1.77**	**46**	P	**Pn**	**21 47 24.0**	**+0.9**
GRG	**Griva**	**1.77**	**46**	P	**Pn**	**21 47 23.6**	**+0.5**
RLS	**Riolos of Patr**	**1.77**	**160**	P	**Pb**	**21 47 24.7**	**-0.5**
LAKA	**Lakka**	**1.79**	**146**	P	**Pb**	**21 47 25.8**	**+0.4**
LAKA				AML	AML	21 48 05.6	
	comp=E,490μm,0.8s						
LAKA				AML	AML	21 48 09.1	
	comp=N,439μm,1.3s						
AXAR	**Agios Charalam**	**1.79**	**122**	P	**Pn**	**21 47 24.8**	**+1.5**
THE	**Thessaloniki**	**1.94**	**62**	P	**Pn**	**21 47 27.0**	**+1.7**
XOR	**Xorichti**	**1.95**	**100**	P	**Pb**	**21 47 27.9**	**-0.2**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**21 47 28.3**	**0.0**
NEO	**Neokhori**	**1.99**	**102**	P	**Pn**	**21 47 27.7**	**+1.7**
HORT	**Hortiatis**	**2.02**	**64**	P	**Pn**	**21 47 27.3**	**+0.8**
KLV	**Kalavryta, Ach**	**2.03**	**146**	P	**Pb**	**21 47 28.6**	**-0.9**
LKR	**Lokris**	**2.08**	**121**	P	**Pn**	**21 47 28.5**	**+1.2**
VAY	**Valandovo**	**2.12**	**41**	*e*Pg	**Pn**	**21 47 28.7**	**+0.9**
VAY				*e*Sg	**Sn**	**21 47 56.5**	**+2.5**
VAY	**Valandovo**	**2.12**	**41**	*i* Pn	**Pn**	**21 47 28.3**	**+0.5**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pn**	**21 47 29.4**	**+0.6**
STIP	**Stip**	**2.25**	**29**	*i* Pn	**Pb**	**21 47 32.9**	**-0.5**
THAL	**Thalero**	**2.28**	**138**	P	**Pn**	**21 47 31.4**	**+1.4**
THAL				AML	AML	21 48 14.8	
	comp=E,1260μm,0.4s						
THAL				AML	AML	21 48 25.5	
	comp=N,1101μm,0.6s						
SKO	**Skopje**	**2.30**	**14**	*e*Pn	**Pn**	**21 47 32.8**	**+2.5**
SKO				*e*Sn	**Sn**	**21 48 01.3**	**+2.9**
SKO	**Skopje**	**2.30**	**14**	*i* Pn	**Pb**	**21 47 36.1**	**+2.0**
LOUT	**Loutraki**	**2.48**	**134**	P	**Pn**	**21 47 34.7**	**+1.9**
ULC	**Ulcinj**	**2.49**	**334**	⇑*i*Pn	**Pn**	**21 47 34.3**	**+1.4**
ULC				*i* Sn	**Sn**	**21 48 04.8**	**+1.7**
VIL2	**Platees**	**2.50**	**127**	P	**Pn**	**21 47 35.5**	**+2.3**
VIL2				AML	AML	21 48 18.3	
	comp=N,448μm,0.4s						
VIL2				AML	AML	21 48 29.2	
	comp=E,625μm,1.0s						
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**21 47 34.9**	**+0.8**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**21 47 34.9**	**+0.6**
SRS				*e*Sn	**Sn**	**21 48 05.7**	**+0.1**
DRME	**Dracevica, Mon**	**2.71**	**335**	⇓*i*Pn	**Pn**	**21 47 37.4**	**+1.5**
DRME				*i* Sn	**Sn**	**21 48 10.0**	**+1.5**
ITM	**Ithomi**	**2.72**	**159**	Pn	**Pn**	**21 47 36.7**	**+0.6**
KYMI	**Kymi, Euboea I**	**2.85**	**112**	P	**Pn**	**21 47 39.8**	**+2.0**
BUM	**Brajici-Budva**	**2.91**	**332**	*e*Pn	**Pn**	**21 47 40.1**	**+1.4**
BUM				*i* Sn	**Sn**	**21 48 14.8**	**+1.3**
PDG	**Podgorica**	**2.91**	**338**	⇓P	**Pn**	**21 47 41.6**	**+2.9**
PDG	**Podgorica**	**2.91**	**338**		**Pn**	**21 47 40.0**	**+1.3**
TTG	**Podgorica**	**2.91**	**338**	⇑*i*Pn	**Pn**	**21 47 40.3**	**+1.6**
TTG				*i* Sn	**Sn**	**21 48 14.9**	**+1.5**
PVY	**Plav**	**2.91**	**349**	*e*Pn	**Pn**	**21 47 40.4**	**+1.6**
PVY				*i* Sn	**Sn**	**21 48 15.1**	**+1.4**
TIP	**Timpagrande**	**3.11**	**261**	⇑P	**Pn**	**21 47 41.9**	**+0.4**
TIP				⇑S	**Sn**	**21 48 19.3**	**+0.7**
TIP	**Timpagrande**	**3.11**	**261**	Pn	**Pn**	**21 47 42.0**	**+0.4**
CEME	**Cevo**	**3.12**	**335**	*e*Pn	**Pn**	**21 47 43.0**	**+1.4**
CEME				*i* Sn	**Sn**	**21 48 19.7**	**+1.0**
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	**Pn**	**21 47 43.9**	**+1.4**
HCY				*i* Sn	**Sn**	**21 48 21.2**	**+1.0**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**21 47 44.8**	**+2.3**
BARS				*e*Sn	**Sn**	**21 48 21.4**	**+1.1**
IVA	**Berane**	**3.19**	**349**	⇓*i*Pn	**Pn**	**21 47 44.3**	**+1.6**
IVA				*i* Sn	**Sn**	**21 48 21.9**	**+1.4**
MATE	**Matera**	**3.21**	**288**	⇓P	**Pn**	**21 47 44.0**	**+1.3**
KOME	**Kolasin**	**3.24**	**344**	⇑*i*Pn	**Pn**	**21 47 44.8**	**+1.5**
KOME				*i* Sn	**Sn**	**21 48 22.9**	**+1.2**
NKME	**Niksic**	**3.31**	**337**	⇓*i*Pn	**Pn**	**21 47 45.6**	**+1.4**
NKME				*i* Sn	**Sn**	**21 48 24.3**	**+1.0**
VTS	**Vitosha**	**3.45**	**33**	⇑P	**Pn**	**21 47 47.9**	**+1.7**
VTS	**Vitosha**	**3.45**	**33**	Pn	**Pn**	**21 47 47.4**	**+1.2**
SELS	**Selova**	**3.49**	**5**	*e*Pn	**Pn**	**21 47 48.2**	**+1.5**
SJES	**Sjenica**	**3.57**	**351**	*e*Pn	**Pn**	**21 47 50.5**	**+2.7**
UPM	**Unac-Piva**	**3.72**	**339**	*e*Pn	**Pn**	**21 47 51.4**	**+1.4**
UPM				*i* Sn	**Sn**	**21 48 34.3**	**+0.6**
PLE	**Pljevlja**	**3.73**	**345**	⇑*i*Pn	**Pn**	**21 47 51.6**	**+1.6**
PLE				*i* Sn	**Sn**	**21 48 34.5**	**+0.8**
CUC	**Castrocucco**	**3.78**	**275**	Pn	**Pn**	**21 47 52.6**	**+1.9**
ZAPS	**Zavoj**	**3.82**	**22**	*e*Pn	**Pn**	**21 47 52.8**	**+1.6**
RDO	**Rodhopi**	**3.94**	**68**		**Pn**	**21 47 54.0**	**+1.2**
BOVS	**Bovan**	**3.97**	**10**	⇑P	**Pn**	**21 47 54.8**	**+1.6**
BOVS	**Bovan**	**3.97**	**10**	*e*Pn	**Pn**	**21 47 54.3**	**+1.1**
CEL	**Celeste**	**4.04**	**250**	Pn	**Pn**	**21 47 55.1**	**+0.9**
GRUS	**Gruza**	**4.15**	**360**	*e*Pn	**Pn**	**21 47 58.0**	**+2.3**
BLKB	**Belogradchik**	**4.15**	**20**	⇓P	**Pn**	**21 47 58.0**	**+2.3**
BLKB				⇓S	**Sn**	**21 48 47.3**	**+3.2**
ZAGS	**Zajecar**	**4.23**	**15**	*e*Pn	**Pn**	**21 47 58.0**	**+1.2**
ALN	**Alexandroupoli**	**4.24**	**72**	Pn	**Pn**	**21 47 57.9**	**+1.0**
BBLS	**Lazići**	**4.24**	**347**	*e*Pn	**Pn**	**21 47 59.1**	**+2.0**
SGRT	**San Giovanni R**	**4.28**	**300**	Pn	**Pn**	**21 47 57.7**	**0.0**
DIVS	**Divibare**	**4.39**	**353**	Pn	**Pn**	**21 48 00.0**	**+0.9**
DIVS	**Divibare**	**4.39**	**353**	*e*Pn	**Pn**	**21 47 59.5**	**+0.4**
TRUS	**Trudelj**	**4.49**	**357**	*e*Pn	**Pn**	**21 48 02.2**	**+1.8**
PAOL	**Paolisi**	**4.87**	**287**	Pn	**Pn**	**21 48 06.1**	**+0.4**
VAE	**Valguarnera**	**5.43**	**247**	Sn	**Sn**	**21 49 18.1**	**+2.5**
	comp=E,3.6nm,0.3s,baz=139,slow=20,SNR=7.3						
FRGS	**Fruska Gora**	**5.46**	**353**	*e*Pn	**Pn**	**21 48 13.9**	**+0.2**
IDI	**Anoyia**	**5.54**	**142**	⇑P	**Pn**	**21 48 14.3**	**-0.7**
IDI				⇑S	**Sn**	**21 49 18.1**	**-0.3**
IDI	**Anoyia**	**5.54**	**142**	Pn	**Pn**	**21 48 13.4**	**-1.5**
	comp=E,1.4nm,0.3s,baz=263,slow=5.6,SNR=9.2						
IDI				Sn	**Sn**	**21 49 17.7**	**-0.7**
	comp=E,1.3nm,0.3s,baz=158,slow=19,SNR=2.2						
	comp=E,3.0nm,0.3s						
IDI	**Anoyia**	**5.54**	**142**	Pn	**Pn**	**21 48 14.1**	**-0.9**
RAFF	**Raffo Rosso**	**5.58**	**245**	Pn	**Pn**	**21 48 14.0**	**-1.4**
INTR	**Introdacqua**	**5.64**	**296**		**Pn**	**21 48 17.4**	**+1.1**
GZR	**Gura Zlata**	**5.86**	**14**	⇓P	**Pn**	**21 48 21.3**	**+2.1**
BZS	**Buzias**	**5.92**	**6**	⇑P	**Pn**	**21 48 22.9**	**+2.9**
CAMP	**Campotosto**	**6.18**	**299**		**Pn**	**21 48 24.3**	**+0.5**
NRCA	**Norcia**	**6.51**	**301**		**Pn**	**21 48 28.9**	**+0.7**
ARG	**Arkhangelos**	**6.83**	**119**	Pn	**Pn**	**21 48 33.9**	**+1.4**
MLR	**Muntele Rosu**	**6.92**	**32**	Pn	**Pn**	**21 48 37.7**	**+3.8**
	comp=E,0.4nm,0.3s,baz=307,slow=16,SNR=3.9						
MLR	**Muntele Rosu**	**6.92**	**32**	Pn	**Pn**	**21 48 35.9**	**+2.0**
MURB	**Monte Urbino**	**7.09**	**302**	Pn	**Pn**	**21 48 36.7**	**+0.6**
ISP	**Isparta**	**7.89**	**101**	Pn	**Pn**	**21 48 46.5**	**-0.7**
SOKA	**Soboth**	**8.08**	**331**	*i* Pn	**Pn**	**21 48 50.0**	**+0.2**
	comp=E,1.5nm,0.4s						
OBKA	**Obir**	**8.13**	**328**	*i* Pn	**Pn**	**21 48 51.6**	**+1.2**
	comp=E,0.8nm,0.2s						
OBKA				*e*Sn	**Sn**	**21 50 19.0**	**-3.2**
	comp=E,3.5nm,0.4s						
PSZ	**Piszkesteto**	**8.20**	**356**	Pn	**Pn**	**21 48 52.5**	**+1.1**
ARSA	**Arzberg**	**8.40**	**335**	*e*Pn	**Pn**	**21 48 56.5**	**+2.3**
	comp=E,1.2nm,0.5s						
BURAR	**Bucovina Array**	**8.52**	**21**	Pn	**Pn**	**21 48 57.3**	**+1.4**
BUR08	**Bucovina Ar. S**	**8.54**	**21**	Pn	**Pn**

PENT				S	Sn	21 51 28.3	-1.9
KPRO	Kipourio	0.57	77	P	Pb	21 51 19.9	0.0
KPRO				S	Sb	21 51 28.1	+0.2
4µm,0.5s							
KEK	Kerkira	0.66	261	P	Pn	21 51 21.6	-1.5
KEK				S	Sn	21 51 32.9	-0.5
1µm,0.3s							
NEST	Nestorio	0.67	28	P	Pn	21 51 22.7	-0.5
NEST				S	Sn	21 51 32.0	-1.6
522nm,0.4s							
KBN	Korca	0.81	8	P	Pn	21 51 24.9	-0.3
KBN				S	Sn	21 51 37.6	+0.6
330nm,0.7s							
KZN	Kozani	0.99	60	P	Pn	21 51 27.7	0.0
KZN				S	Sn	21 51 42.4	+0.9
615nm,0.4s							
TSLK	Tsoukalades, L	1.00	180	P	Pb	21 51 26.7	-0.5
TSLK				S	Sn	21 51 41.7	+0.1
942nm,0.4s							
LKD2	Lefkada island	1.03	180	P	Pb	21 51 27.2	-0.6
LKD2				S	Sb	21 51 41.7	+0.4
858nm,0.4s							
THL	Klokotos Trika	1.09	103	P	Pb	21 51 28.2	-0.5
THL				S	Sg	21 51 43.9	+0.7
328nm,0.5s							
NYDR	Nydri-Lefkada	1.11	178	P	Pb	21 51 28.4	-0.7
NYDR				S	Sn	21 51 44.9	+0.5
535nm,0.4s							
DRAG	Dragano-Lefkad	1.14	183	P	Pb	21 51 29.1	-0.5
DRAG				S	Sb	21 51 44.8	+0.5
EVGI	Lefkada island	1.20	180	P	Pn	21 51 30.2	-0.3
EVGI				S	Sn	21 51 47.2	+0.5
945nm,0.2s							
TYRN	Tyrnavos	1.23	95	P	Pn	21 51 30.6	-0.3
TYRN				S	Sg	21 51 48.0	+0.4
980nm,0.6s							
KTI	Kastanea	1.26	63	P	Pg	21 51 32.4	0.0
EVR	Evrytania	1.28	135	P	Pn	21 51 31.6	-0.1
EVR				S	Sb	21 51 48.9	+0.5
332nm,0.6s							
FSK	Fiskardo	1.36	183	P	Pb	21 51 33.9	+0.5
FSK				S	Sb	21 51 51.7	+0.9
550nm,0.3s							
PVO	Paravola	1.39	150	P	Pb	21 51 34.3	+0.5
PVO				S	Sb	21 51 52.6	+1.2
458nm,0.5s							
MAKR	Makrakomi, Fth	1.41	125	P	Pb	21 51 34.4	+0.2
MAKR				S	Sn	21 51 52.1	+0.3
682nm,0.5s							
LIT	Litokhoron	1.44	78	P	Pb	21 51 35.0	+0.2
LIT				S	Sg	21 51 54.7	+0.2
442nm,0.5s							
KEF4	Livadi, Kephal	1.57	186	P	Pb	21 51 36.8	-0.2
KEF4				S	Sb	21 51 56.9	+0.1
VLS	Valsamata	1.65	182	P	Pb	21 51 37.7	-0.5
VLS				S	Sb	21 51 59.3	+0.4
445nm,0.3s							
EFP	Efpalio	1.71	145	P	Pn	21 51 38.3	+0.9
GRG	Griva	1.75	49	P	Pb	21 51 39.8	-0.3
NEO	Neokhori	2.06	104	P	Pb	21 51 44.4	-0.9
KNT	Kendrikon	2.17	51	P	Pb	21 51 45.2	-2.0
KNT				S	Sb	21 52 13.4	-0.7
40nm,0.6s							
IDI	Anoyia	5.64	142	Pn	Pn	21 52 30.4	-1.3
2.0nm,0.3s,baz=232,slow=23,SNR=1.6							
IDI				Sn	Sn	21 53 32.5	-3.9
0.8nm,0.3s,baz=66,slow=23,SNR=1.1							
17nm,1.0s							
MLR	Muntele Rosu	6.88	33	Pn	Pn	21 52 53.7	+5.1
0.2nm,0.3s,baz=230,slow=7.9,SNR=2.2							
GERES	GERESS Array B	10.29	333	Pn	Pn	21 53 38.1	+2.7
0.1nm,0.3s,baz=162,slow=13,SNR=1.5							
0.1nm,0.3s							
FINES	FINESS Array B	21.90	7	P	P	21 56 00.1	-0.4
2.6nm,0.9s,baz=178,slow=13,SNR=3.4							
2.6nm,0.9s							
NOA	NORSAR Array B	22.03	348	P	P	21 56 01.7	-0.3
0.7nm,0.8s,baz=163,slow=11,SNR=1.7							
0.7nm,0.8s							
TORD	Torodi Ar. Bea	31.38	217	P	P	21 57 28.8	+0.2
0.1nm,0.4s,baz=39,slow=9.2,SNR=1.9							
0.1nm,0.4s							
MKAR	Makanchi Array	44.37	60	P	P	21 59 17.7	-0.3
0.4nm,0.5s,baz=274,slow=8.1,SNR=7.1							
0.4nm,0.5s							
ZALV	Zalesovo Beam	44.53	49	P	P	21 59 18.2	-0.9
0.4nm,0.4s,baz=287,slow=10,SNR=2.1							
0.4nm,0.4s							

*IDC **15** 22:01:39.2±1.7, 39°.63N×20°.89E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=69.1km s-min=29.9km az=125.0*
*ATH **15** 22:01:41.9, 39°.76N×20°.71E, h9km±2km, ML2.8/7, Error ellipse: s-maj=2.3km s-min=0.9km az=321.0*
*THE **15** 22:01:42.6, 39°.75N×20°.74E, h12km±1km, ML2.7/13, Error ellipse: s-maj=1.1km s-min=0.5km az=317.0*
ISC 15 22:01:41.9±0.8, 39°.75N±0°.02×20°.72E±0°.02, h13km±5km, n43, σ0°58/67, mb3.6/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.14	132	P	Pg	22 01 45.1	-0.3
JAN				S	Sg	22 01 48.4	+0.6
7µm,0.2s							
JAN	Janina	0.14	132	P	Pg	22 01 45.1	-0.3
JAN				S	Sg	22 01 47.7	-0.1
JAN				AML	AML	22 01 49.2	
comp=E,11852µm,0.2s							
JAN				AML	AML	22 01 49.3	
comp=N,16386µm,0.2s							
IGT	Igoumenitsa	0.37	235	P	Pg	22 01 49.5	+0.2
IGT				S	Sb	22 01 55.8	-0.1
comp=N,2µm,0.5s							
IGT	Igoumenitsa	0.37	235	P	Pg	22 01 49.1	-0.2
IGT				S	Sg	22 01 54.1	-0.2
IGT				AML	AML	22 01 58.0	
comp=E,4952µm,0.6s							
IGT				AML	AML	22 02 00.4	
comp=N,4520µm,0.4s							
LSK	Leskovik	0.41	347	P	Pg	22 01 50.6	+0.4
LSK				S	Sb	22 01 56.8	-0.5
comp=N,2µm,0.6s							
KPRO	Kipourio	0.54	67	P	Pg	22 01 52.6	+0.2
KPRO				S	Sb	22 02 00.8	0.0
comp=N,2µm,0.5s							
PENT	Pentalofos	0.55	35	P	Pg	22 01 53.0	+0.3
PENT				S	Sb	22 02 02.0	+0.7
comp=N,355nm,0.3s							
PENT	Pentalofos	0.55	35	P	Pg	22 01 52.6	-0.1
PENT				S	Sg	22 01 59.5	-0.6
SRN	Sarande	0.57	284	P	Pb	22 01 53.7	0.0
SRN				S	Sb	22 02 02.2	+0.5
comp=N,1µm,0.3s							
KASA	Kassiopi	0.61	270	P	Pg	22 01 52.9	-0.8
KASA				S	Sg	22 02 02.1	+0.4
KASA				AML	AML	22 02 06.6	
comp=N,1753µm,0.4s							
KASA				AML	AML	22 02 09.0	
comp=E,1952µm,0.3s							
KEK	Kerkira	0.71	268	P	Pg	22 01 55.8	+0.1
KEK				S	Sn	22 02 08.2	-0.2
comp=E,722nm,0.3s							
KEK	Kerkira	0.71	268	P	Pg	22 01 54.7	-1.0
KEK				S	Sg	22 02 04.5	-0.6
KEK				AML	AML	22 02 11.2	
comp=N,1344µm,0.3s							
KEK				AML	AML	22 02 11.4	
comp=E,1535µm,0.3s							
NEST	Nestorio	0.71	21	P	Pb	22 01 56.2	0.0
NEST				S	Sb	22 02 06.9	+1.0
comp=E,252nm,0.4s							
NEST	Nestorio	0.71	21	P	Pg	22 01 56.0	+0.2
KBN	Korca	0.88	3	P	Pg	22 01 58.8	-0.1
TSLK	Tsoukalades, L	0.92	183	P	Pg	22 01 59.7	0.0
TSLK				S	Sn	22 02 14.6	+1.0
comp=E,530nm,0.4s							
TSLK	Tsoukalades, L	0.92	183	P	Pg	22 01 58.9	-0.8
TSLK				S	Sb	22 02 13.0	+1.2
LKD2	Lefkada island	0.96	183	P	Pg	22 02 00.0	-0.4
KZN	Kozani	0.98	55	P	Pg	22 02 00.6	-0.2
KZN				S	Sn	22 02 15.8	+0.6
comp=E,360nm,0.5s							
KZN	Kozani	0.98	55	P	Pg	22 02 00.3	-0.6
KZN				S	Sb	22 02 14.0	+0.3
KZN				AML	AML	22 02 18.0	
comp=E,683µm,0.4s							
KZN				AML	AML	22 02 20.1	
comp=N,757µm,0.4s							
THL	Klokotos Trika	1.01	100	P	Pg	22 02 01.2	-0.2
THL				S	Sn	22 02 15.7	-0.1
comp=N,280nm,0.5s							
THL	Klokotos Trika	1.01	100	P	Pg	22 02 00.5	-0.9
THL				S	Sb	22 02 15.0	+0.6
THL				AML	AML	22 02 20.5	
comp=E,767µm,0.5s							
THL				AML	AML	22 02 20.7	
comp=N,556µm,0.8s							
NYDR	Nydri-Lefkada	1.03	181	P	Pg	22 02 01.3	-0.5
NYDR				S	Sn	22 02 16.8	+0.5
comp=N,518nm,0.5s							
DRAG	Dragano-Lefkad	1.07	186	P	Pb	22 02 02.6	+0.4
DRAG				S	Sn	22 02 18.0	+0.8
EVGI	Lefkada island	1.13	183	P	Pb	22 02 03.4	+0.2
EVGI	Lefkada island	1.13	183	P	Pb	22 02 03.3	+0.2
EVGI				S	Sb	22 02 18.7	+1.0
TYRN	Tyrnavos	1.17	91	P	Pb	22 02 03.6	-0.2
TYRN				S	Sn	22 02 19.9	+0.3
comp=N,1µm,0.5s							
EVR	Evrytania	1.18	134	P	Pb	22 02 03.8	-0.4
PVO	Paravola	1.29	151	P	Pb	22 02 06.3	+0.3
FSK	Fiskardo	1.29	186	P	Pg	22 02 06.5	-0.2
FSK				S	Sn	22 02 23.3	+0.6
FSK				AML	AML	22 02 28.0	
comp=E,1549µm,0.3s							
FSK				AML	AML	22 02 28.8	
comp=N,611µm,0.3s							
MAKR	Makrakomi, Fth	1.32	123	P	Pg	22 02 06.8	-0.4
MAKR	Makrakomi, Fth	1.32	123	P	Pb	22 02 06.6	+0.2
OHR	Ohrid	1.36	2	*i* Pn	Pg	22 02 09.1	+1.0
LIT	Litokhoron	1.41	75	P	Pn	22 02 07.0	-0.2
LIT	Litokhoron	1.41	75	P	Pn	22 02 07.0	-0.2
KEF4	Livadi, Kephal	1.50	189	P	Pb	22 02 09.9	+0.3
VLS	Valsamata	1.57	184	P	Pb	22 02 10.9	+0.1
HORT	Hortiatis	2.01	64	P	Pn	22 02 16.8	+1.3
VAY	Valandovo	2.11	41	*i* Pn	Pn	22 02 18.0	+1.1
STIP	Stip	2.24	29	*i* Pn	Pb	22 02 21.1	-1.0
FINES	FINESS Array B	21.97	7	P	P	22 06 35.5	+0.3
comp=N,3.9nm,1.0s,baz=193,slow=11,SNR=3.8							
comp=N,3.9nm,1.0s							
TORD	Torodi Ar. Bea	31.36	218	P	P	22 08 01.5	-0.7
comp=N,0.3nm,0.6s,baz=28,slow=8.6,SNR=1.3							
comp=N,0.3nm,0.6s							
MKAR	Makanchi Array	44.36	60	P	P	22 09 50.6	-1.1
comp=N,0.5nm,0.6s,baz=281,slow=6.3,SNR=6.2							
comp=N,0.5nm,0.6s							

*IDC **15** 22:20:09.5±1.7, 39°.74N×20°.86E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=52.7km s-min=28.7km az=114.0*
*ATH **15** 22:20:13.5, 39°.77N×20°.71E, h8km±2km, ML2.6/8, Error ellipse: s-maj=2.5km s-min=0.8km az=335.0*
*THE **15** 22:20:14.0, 39°.79N×20°.72E, h0km±2km, ML2.6/17, Error ellipse: s-maj=2.1km s-min=0.7km az=311.0*
ISC 15 22:20:13.5±0.9, 39°.78N±0°.02×20°.71E±0°.02, h14km±5km, n55, σ1°24/87, mb3.4/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.16	139	P	Pg	22 20 16.9	-0.5
JAN				S	Sg	22 20 20.6	+0.5
JAN	Janina	0.16	139	P	Pg	22 20 16.9	-0.5
JAN				S	Sg	22 20 19.2	-0.9
JAN				AML	AML	22 20 20.8	
comp=E,9914µm,0.3s							
JAN				AML	AML	22 20 25.2	
comp=N,5423µm,0.4s							
LSK	Leskovik	0.38	347	P	Pg	22 20 21.5	+0.3
LSK				S	Sg	22 20 27.4	+0.9
comp=N,1µm,0.3s							
IGT	Igoumenitsa	0.38	230	P	Pg	22 20 21.0	-0.2
IGT				S	Sg	22 20 27.7	+1.3
comp=N,1µm,0.4s							
IGT	Igoumenitsa	0.38	230	P	Pg	22 20 21.0	-0.2
IGT				S	Sg	22 20 26.9	+0.5
IGT				AML	AML	22 20 29.3	
comp=N,2347µm,0.2s							
IGT				AML	AML	22 20 30.4	
comp=E,3293µm,0.4s							
KPRO	Kipourio	0.53	70	P	Pg	22 20 23.9	0.0
KPRO				S	Sg	22 20 31.8	+0.8
comp=E,1µm,0.5s							
PENT	Pentalofos	0.53	38	P	Pg	22 20 23.8	-0.2
PENT				S	Sg	22 20 31.9	+0.9
PENT	Pentalofos	0.53	38	P	Pg	22 20 24.0	0.0
PENT				S	Sg	22 20 31.4	+0.4
SRN	Sarande	0.56	281	P	Pg	22 20 24.3	-0.1
SRN				S	Sg	22 20 33.1	+1.2
comp=E,368nm,0.5s							
KASA	Kassiopi	0.60	267	P	Pg	22 20 24.2	-1.1
KASA				S	Sg	22 20 32.7	-0.6
NEST	Nestorio	0.69	22	P	Pg	22 20 26.9	0.0
NEST	Nestorio	0.69	22	P	Pg	22 20 27.0	+0.1
NEST				S	Sg	22 20 36.2	+0.2
NEST				AML	AML	22 20 41.6	
comp=E,864µm,0.5s							
NEST				AML	AML	22 20 44.1	
comp=N,836µm,0.4s							
KEK	Kerkira	0.71	265	P	Pg	22 20 26.4	-0.9
KEK	Kerkira	0.71	265	P	Pg	22 20 26.4	-0.9
KBN	Korca	0.85	4	P	Pg	22 20 29.9	0.0
TSLK	Tsoukalades, L	0.95	183	P	Pg	22 20 31.9	0.0
TSLK				S	Sn	22 20 47.3	+1.4
comp=N,402nm,0.6s							
TSLK	Tsoukalades, L	0.95	183	P	Pg	22 20 31.6	-0.3
TSLK				S	Sg	22 20 43.0	-1.4
TSLK				AML	AML	22 20 51.2	
comp=E,846µm,0.5s							
TSLK				AML	AML	22 20 54.6	
comp=N,806µm,0.8s							
KZN	Kozani	0.97	57	P	Pg	22 20 31.8	-0.4
KZN				S	Sb	22 20 46.1	+1.2
comp=N,410nm,0.6s							
KZN	Kozani	0.97	57	P	Pg	22 20 31.3	-0.9
KZN				S	Sg	22 20 44.9	0.0
KZN				AML	AML	22 20 46.6	
comp=E,1023µm,0.6s							
KZN				AML	AML	22 20 48.7	
comp=N,618µm,0.6s							
LKD2	Lefkada island	0.99	183	P	Pg	22 20 32.4	-0.2
LKD2				S	Sn	22 20 48.4	+1.6
comp=N,328nm,0.4s							
LKD2	Lefkada island	0.99	183	P	Pg	22 20 32.0	-0.6
THL	Klokotos Trika	1.03	102	P	Pg	22 20 32.3	-1.0
THL				S	Sb	22 20 47.7	+1.3
comp=N,175nm,0.5s							
THL	Klokotos Trika	1.03	102	P	Pg	22 20 32.3	-1.0
THL				S	Sg	22 20 46.4	-0.2
THL				AML	AML	22 20 50.6	
comp=E,295µm,0.4s							
THL				AML	AML	22 20 52.4	
comp=N,344µm,0.6s							
NYDR	Nydri-Lefkada	1.06	181	P	Pg	22 20 33.2	-0.8
NYDR				S	Sn	22 20 50.5	+1.9
comp=N,188nm,0.5s							
DRAG	Dragano-Lefkad	1.10	186	P	Pg	22 20 34.3	-0.4
DRAG				S	Sn	22 20 51.2	+1.7
comp=N,2µm,0.4s							
EVGI	Lefkada island	1.16	182	P	Pg	22 20 34.4	-1.4
EVGI	Lefkada island	1.16	182	P	Pg	22 20 34.7	-1.0
EVGI				S	Sg	22 20 50.9	+0.1
TYRN	Tyrnavos	1.17	93	P	Pg	22 20 34.5	-1.6
EVR	Evrytania	1.21	135	P	Pg	22 20 35.9	-0.9
EVR				S	Sb	22 20 53.6	+1.8
comp=N,250nm,0.5s							
EVR	Evrytania	1.21	135	P	Pg	22 20 35.6	-1.2
EVR				S	Sg	22 20 51.9	-0.6
EVR				AML	AML	22 20 56.5	
comp=N,531µm,0.6s							
EVR				AML	AML	22 20 59.5	
comp=E,470µm,0.4s							
KTI	Kastanea	1.24	60	P	Pg	22 20 36.7	-0.7
PVO	Paravola	1.32	151	P	Pn	22 20 39.1	+1.5
PVO	Paravola	1.32	151	P	Pg	22 20 37.6	-1.3
FSK	Fiskardo	1.32	185	P	Pg	22 20 38.3	-0.6
FSK				S	Sn	22 20 57.8	+2.8
comp=E,165nm,0.6s							
FSK	Fiskardo	1.32	185	P	Pg	22 20 38.1	-0.8
FSK				S	Sg	22 20 55.6	-0.5
MAKR	Makrakomi, Fth	1.34	124	P	Pn	22 20 41.1	+3.3
MAKR				S	Sn	22 20 58.8	+3.3
comp=E,615nm,0.5s							
MAKR	Makrakomi, Fth	1.34	124	P	Pg	22 20 38.2	-1.0
MAKR				S	Sb	22 20 56.7	+1.3
MAKR				AML	AML	22 21 00.7	
comp=N,1221µm,0.5s							
MAKR				AML	AML	22 21 04.2	
comp=E,1242µm,0.5s							
LIT	Litokhoron	1.40	76	P	Pg	22 20 39.1	-1.4
LIT				S	Sn	22 20 59.6	+2.5
comp=E,242nm,0.5s							
LIT	Litokhoron	1.40	76	P	Pg	22 20 38.5	-2.0
KEF4	Livadi, Kephal	1.54	189	P	Pg	22 20 42.8	-0.2
KEF4	Livadi, Kephal	1.54	189	P	Pn	22 20 41.6	+1.2
DMLN	Damoulianata-K	1.56	190	P	Pn	22 20 42.0	+1.1
DMLN				S	Sg	22 21 05.3	+1.6
comp=E,285nm,0.5s							
VLS	Valsamata	1.60	184	P	Pn	22 20 41.5	+0.1
EFP	Efpalio	1.64	145	P	Pg	22 20 45.1	+0.2
EFP				S	Sg	22 21 07.2	+1.0
comp=E,188nm,0.7s							
GRG	Griva	1.75	47	P	Pn	22 20 44.0	+0.5
LAKA	Lakka	1.82	147	P	Pn	22 20 46.2	+1.7
DRO	Drossia	1.98	157	P	Pn	22 20 48.1	+1.4
NEO	Neokhori	2.00	103	P	Pn	22 20 49.0	+2.1
NEO				S	Sb	22 21 15.1	+0.7
comp=E,102nm,0.4s							
HORT	Hortiatis	2.00	65	P	Pn	22 20 47.6	+0.6
HORT				S	Sn	22 21 13.2	+1.2
KLV	Kalavryta, Ach	2.06	147	P	Pn	22 20 49.5	+1.7
KNT	Kendrikon	2.17	50	P	Pn	22 20 49.4	+0.2
FINES	FINESS Array B	21.94	7	P	P	22 25 04.2	-2.2
comp=E,2.0nm,0.8s,baz=177,slow=11,SNR=5.4							
comp=E,2.0nm,0.8s							
NOA	NORSAR Array B	22.09	348	P	P	22 25 06.9	-1.1
comp=E,0.3nm,0.7s,baz=163,slow=11,SNR=1.5							
comp=E,0.3nm,0.7s							
TORD	Torodi Ar. Bea	31.38	218	P	P	22 26 32.4	-1.6
comp=E,0.3nm,0.6s,baz=34,slow=11,SNR=1.6							
comp=E,0.3nm,0.6s							
MKAR	Makanchi Array	44.35	60	P	P	22 28 20.7	-2.5
comp=E,0.4nm,0.7s,baz=285,slow=8.3,SNR=2.2							
comp=E,0.4nm,0.7s							

IDC 15 22:20:39.6±7.8, 30°.51S×178°.46W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=320.9km s-min=63.5km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.55	204	Sn	Sn	22 24 08.0	-14
0.6nm,0.3s,baz=179,slow=21,SNR=7.2							
ASAR	Alice Springs	42.71	267	P	P	22 28 38.2	-0.5
0.3nm,0.5s,baz=103,slow=7.4,SNR=4.8							
0.3nm,0.5s							
WRA	Warramunga Arr	43.71	273	P	P	22 28 46.9	+0.1
0.4nm,0.5s,baz=111,slow=8.1,SNR=13							
0.4nm,0.5s							
FINES	FINESS Array B	145.11	340	PKPbc	PKPbc	22 40 17.0	-0.8
1.6nm,0.8s,baz=42,slow=4.5,SNR=2.0							

*IDC **15** 22:22:35.4±0.8, 16°.65N×147°.37E, h0km, mb4.1/16, mbtmp4.1/17, ML4.2/1, MS3.4/6, Error ellipse: s-maj=25.9km s-min=14.7km az=101.0*
*NEIC **15** 22:22:35.6±1.3, 16°.6N±0°.1×147°.62E±0°.04, h10km±1km, mb4.6/20, Error ellipse: s-maj=18.2km s-min=3.5km az=161.0*
ISC 15 22:22:35.5±0.6, 16°.55N±0°.07×147°.60E±0°.10, h10km, n52, σ0°99/44, mb4.3/24, MS3.7/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.95	222	Pn	Pn	22 23 36.7	+0.5
17nm,0.3s,baz=275,slow=6.6,SNR=14							
GUMO				Sn	Sn	22 24 25.0	+2.3
57nm,0.3s,baz=14,slow=22,SNR=7.2							
GUMO				LR	LR	22 25 03.8	
comp=Z,524nm,18.4s,baz=5.5,slow=38							
37nm,0.3s							
GUMO	Guam	3.95	222	Pn	Pn	22 23 37.1	+0.9
PATS	Pohnpei	14.24	131	Pn	Pn	22 25 56.3	-1.1
H11S3	WAKE ISLAND Hy	18.30	81	T	T	22 46 02.8	
baz=266,slow=75,SNR=14							
H11S1	WAKE ISLAND Hy	18.32	81	T	T	22 45 54.2	
baz=266,slow=75,SNR=12							
H11S2	WAKE ISLAND Hy	18.32	81	T	T	22 45 53.9	
baz=266,slow=75,SNR=19							
H11N1	WAKE ISLAND Hy	18.60	77	T	T	22 46 07.2	
baz=263,slow=75,SNR=21							
H11N2	WAKE ISLAND Hy	18.61	77	T	T	22 46 09.9	
baz=263,slow=75,SNR=20							
H11N3	WAKE ISLAND Hy	18.62	77	T	T	22 46 10.3	
baz=263,slow=75,SNR=22							
JGF	Kuroka	21.06	336	P	P	22 27 19.7	-0.2
JGF				IAmb	IAmb	22 27 40.7	
comp=Z,31nm,1.5s							
MJAR	Matsushiro Arr	21.59	339	P	P	22 27 25.7	+0.1
comp=Z,2.7nm,0.4s,baz=167,slow=10,SNR=12							
comp=Z,2.7nm,0.4s							
MAJO	Matsushiro	21.59	339	P	P	22 27 24.2	-1.4
MJB9	Matsu-Tunnel	21.59	339	P	P	22 27 24.4	-1.2
JSD	Sado	22.93	341		P	22 27 39.5	-0.3
JSD				IAmb	IAmb	22 27 43.0	
comp=Z,40nm,1.2s							
SIJI	Sorong	23.65	225	P	P	22 27 48.5	+1.2
comp=Z,6.9nm,0.7s,baz=41,slow=13,SNR=6.1							
comp=Z,6.9nm,0.7s							
FAKI	Fak Fak	24.58	219	P	P	22 27 55.1	-0.9
FAKI				IAmb	IAmb	22 28 10.4	
comp=Z,38nm,1.4s							
YHNB	Yeheng	25.81	293	P	P	22 28 06.6	-0.6
YHNB				IAmb	IAmb	22 28 22.9	
comp=Z,25nm,1.1s							
SSLB	Suanglung	26.00	290	P	P	22 28 08.6	-0.2
KSRS	Korea Array	27.12	324	P	P	22 28 18.7	0.0
comp=Z,0.6nm,0.4s,baz=143,slow=8.8,SNR=4.6							
comp=Z,0.6nm,0.4s							
MTN	Manton Dam	33.44	210	P	P	22 29 14.3	-0.5
KLR	Kul'dur	35.06	342	P	P	22 29 28.6	0.0
comp=Z,1.6nm,0.3s,baz=148,slow=10,SNR=10							
comp=Z,1.6nm,0.3s							
KNRA	Kununurra	37.03	211	P	P	22 29 45.3	-0.4
KNRA				IAmb	IAmb	22 29 46.8	
comp=Z,21nm,1.1s							
WB0	Warramunga Arr	38.35	200	P	P	22 29 56.8	-0.1
WRA	Warramunga Arr	38.53	200	P	P	22 29 59.3	+0.9
comp=Z,0.9nm,0.5s,baz=24,slow=9.3,SNR=26							
comp=Z,0.9nm,0.5s							
WRA	Warramunga Arr	38.53	200	P	P	22 29 58.1	-0.3
KSM	Kuching	39.65	252	P	P	22 30 06.3	-1.6
KSM				IAmb	IAmb	22 30 08.2	
comp=Z,15nm,1.3s							
AS31	Alice Springs	42.15	199	P	P	22 30 27.2	-1.2
ASAR	Alice Springs	42.15	199	P	P	22 30 29.4	+1.0
comp=Z,0.6nm,0.6s,baz=17,slow=13,SNR=9.6							
comp=Z,0.6nm,0.6s							
ASAR	Alice Springs	42.15	199	P	P	22 30 27.0	-1.4
D

comp=Z,1.0nm,0.5s,baz=77,slow=7.8,SNR=4.1
ZALV LR LR 22 59 23.0
comp=Z,70nm,20.6s,baz=92,slow=36
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 60.82 323 P P 22 32 47.1 -0.7
KURK Kurchatov 64.08 319 P P 22 33 09.2 -0.4
ILAR Eielson Array 64.78 26 P P 22 33 14.8 +0.8
comp=Z,0.4nm,0.4s,baz=252,slow=6.2,SNR=9.6
comp=Z,0.4nm,0.4s
NIL Nilore 68.17 300 P P 22 33 36.1 -0.3
INK Inuvik 70.63 23 P P 22 33 52.7 +1.9
comp=Z,2.5nm,0.8s,baz=294,slow=5.8,SNR=2.1
comp=Z,2.5nm,0.8s
ARU Arti 75.86 325 P P 22 34 23.0 +1.0
comp=Z,1.6nm,0.4s,baz=73,slow=5.5,SNR=5.2
comp=Z,1.6nm,0.4s
YKA Yellowknife Ar 79.03 28 P P 22 34 42.2 +2.6
comp=Z,1.5nm,0.7s,baz=317,slow=6.5,SNR=1.7
comp=Z,1.5nm,0.7s
GEYT Alibeck 79.63 306 P P 22 34 44.0 +0.5
comp=Z,0.9nm,0.6s,baz=54,slow=7.3,SNR=3.6
comp=Z,0.9nm,0.6s
ARCES ARCESS Array B 85.08 343 P P 22 35 11.7 +0.4
comp=Z,4.9nm,0.8s,baz=54,slow=6.2,SNR=9.2
comp=Z,4.9nm,0.8s
PDAR Pinedale Array 88.02 46 LR LR 23 11 25.9
comp=Z,31nm,20.9s,baz=303,slow=33
FINES FINESS Array B 89.58 336 P P 22 35 32.5 -0.7
comp=Z,0.7nm,0.5s,baz=78,slow=4.7,SNR=12
comp=Z,0.7nm,0.5s
TORD Torodi Ar. Bea 135.22 309 PKP PKiKP 22 41 57.5 -0.4
comp=Z,0.7nm,1.1s,baz=46,slow=0.8,SNR=2.2
LPAZ La Paz 145.75 95 PKPbc PKiKP 22 42 19.7 -0.5
comp=Z,1.3nm,0.6s,baz=236,slow=2.0,SNR=6.0

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*ISK **15** 22:23:23.9, 38°.94N×27°.70E, h8km, ML3.6/28*
*DDA **15** 22:23:24.1±0.0, 38°.93N×27°.72E, h7km±2km, MW3.5*
ISC 15 22:23:24.4±0.9, 38°.93N±0°.02×27°.70E±0°.02, h8km±7km, n62, σ0°82/82, 3C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.10**	**121**	PG	**Pg**	**22 23 26.5**	**-0.4**
AKS				SG	**Sg**	**22 23 28.8**	**+0.2**
GOMA	**Golmarmara-Man**	**0.28**	**143**	PG	**Pg**	**22 23 30.0**	**0.0**
GOMA				SG	**Sb**	**22 23 34.8**	**-1.7**
STEP	**BALIKESIR_Sava**	**0.44**	**2**	P	**Pg**	**22 23 33.0**	**0.0**
STEP				S	**Sb**	**22 23 39.7**	**-1.6**
STEP				*i* AML	AML	22 23 40.0	
	comp=N,7μm,0.2s						
STEP				*i* AML	AML	22 23 40.0	
	comp=E,5μm,0.7s						
ZEDA	**zmir-Bergama**	**0.49**	**274**	P	**Pb**	**22 23 34.4**	**-0.8**
ZEDA				S	**Sb**	**22 23 41.9**	**-0.5**
ZEDA				*i* AML	AML	22 23 42.0	
	comp=N,2μm,0.4s						
ZEDA				*i* AML	AML	22 23 42.0	
	comp=E,1μm,0.3s						
DKL	**Dikili**	**0.63**	**283**	PG	**Pb**	**22 23 37.3**	**-0.4**
DKL				SG	**Sb**	**22 23 46.1**	**-0.6**
BUHA	**Balikesir, Bur**	**0.75**	**320**	P	**Pg**	**22 23 38.8**	**0.0**
BUHA				S	**Sn**	**22 23 53.0**	**+0.3**
BUHA				*i* AML	AML	22 23 53.0	
	comp=N,691nm,0.4s						
BUHA				*i* AML	AML	22 23 53.0	
	comp=E,813nm,0.5s						
BLCB	**Balcova**	**0.75**	**224**	PG	**Pg**	**22 23 38.9**	**+0.1**
BLCB				SG	**Sb**	**22 23 50.2**	**+0.2**
FOCM	**Foa**	**0.79**	**254**	PG	**Pg**	**22 23 39.7**	**+0.2**
FOCM				SG	**Sb**	**22 23 51.1**	**0.0**
MANT	**Manisa**	**0.80**	**123**	P	**Pg**	**22 23 39.6**	**-0.3**
MANT				S	**Sb**	**22 23 50.9**	**-0.9**
MANT				*i* AML	AML	22 23 53.0	
	comp=N,1μm,0.4s						
MANT				*i* AML	AML	22 23 53.0	
	comp=E,1μm,0.4s						
DST	**Dursunbey**	**0.98**	**46**	PG	**Pb**	**22 23 43.1**	**-0.5**
DST				SG	**Sb**	**22 23 57.1**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**171**	PG	**Pb**	**22 23 43.6**	**-0.3**
AYDB				SG	**Sb**	**22 23 57.4**	**+0.2**
SMAA	**Simav-Kutahya**	**1.01**	**80**	PG	**Pb**	**22 23 43.9**	**-0.3**
SMAA				SG	**Sb**	**22 23 57.9**	**+0.3**
DGB	**zmir**	**1.09**	**216**	P	**Pb**	**22 23 45.1**	**-0.2**
DGB				S	**Sn**	**22 24 00.8**	**-0.2**
DGB				*i* AML	AML	22 24 02.0	
	comp=E,451nm,0.5s						
DGB				*i* AML	AML	22 24 06.0	
	comp=N,474nm,0.8s						
GONE	**Gonen-Balikesi**	**1.11**	**359**	PN	**Pb**	**22 23 45.7**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**1.17**	**234**	P	**Pg**	**22 23 46.1**	**-0.6**
ZEYE				S	**Sn**	**22 24 02.8**	**-0.2**
ZEYE				*i* AML	AML	22 24 04.0	
	comp=N,880nm,0.4s						
ZEYE				*i* AML	AML	22 24 06.0	
	comp=E,971nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**1.21**	**312**	P	**Pb**	**22 23 47.1**	**-0.3**
BAYC				S	**Sn**	**22 24 04.0**	**0.0**
BAYC				*i* AML	AML	22 24 05.0	
	comp=N,1μm,0.4s						
BAYC				*i* AML	AML	22 24 05.0	
	comp=E,1μm,0.5s						
GCAM	**G?zelcaml?**	**1.28**	**197**	PN	**Pg**	**22 23 48.6**	**-0.4**
GPNR	**Gulpinar-Canak**	**1.32**	**294**	PN	**Pb**	**22 23 49.3**	**-0.2**
GEDZ	**Gediz**	**1.34**	**85**	PN	**Pg**	**22 23 49.7**	**-0.4**
KOCA	**Canakkale, Ayv**	**1.34**	**296**	P	**Pn**	**22 23 49.3**	**0.0**
KOCA				S	**Sg**	**22 24 07.4**	**-0.1**
KOCA				*i* AML	AML	22 24 13.0	
	comp=N,855nm,0.4s						
KOCA				*i* AML	AML	22 24 13.0	
	comp=E,838nm,0.6s						
KNL	**Balıkesir**	**1.34**	**354**	P	**Pn**	**22 23 49.0**	**-0.4**
KNL				S	**Sg**	**22 24 07.8**	**+0.2**
KNL				*i* AML	AML	22 24 09.0	
	comp=E,996nm,0.4s						
KNL				*i* AML	AML	22 24 10.0	
	comp=N,938nm,0.4s						
EZN	**Ezine**	**1.39**	**310**	PN	**Pn**	**22 23 49.8**	**-0.2**
CHOS	**Chios island**	**1.40**	**248**	PN	**Pg**	**22 23 51.4**	**+0.2**
EDC	**Edincik**	**1.42**	**5**	PN	**Pn**	**22 23 49.9**	**-0.5**
ORLT	**Orhaneli**	**1.45**	**39**	PN	**Pb**	**22 23 51.0**	**-0.6**
SIGR	**SIGRI**	**1.46**	**282**	PN	**Pn**	**22 23 51.2**	**+0.2**
TVSB	**Tavsanli**	**1.46**	**69**	PN	**Pb**	**22 23 51.2**	**-0.7**
KHL	**Karahalli**	**1.55**	**112**	PN	**Pn**	**22 23 52.4**	**+0.1**
BOZC	**Bozcaada**	**1.57**	**306**	PN	**Pn**	**22 23 52.5**	**0.0**
ECEA	**Canakkale, Ece**	**1.62**	**314**	P	**Pn**	**22 23 53.5**	**+0.4**
ECEA				S	**Sb**	**22 24 14.8**	**-0.3**
ECEA				*i* AML	AML	22 24 18.0	
	comp=N,1μm,0.3s						
ECEA				*i* AML	AML	22 24 21.0	
	comp=E,780nm,0.4s						
MRMT	**Marmara Adasi**	**1.67**	**357**	PN	**Pn**	**22 23 54.1**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.70**	**32**	PN	**Pn**	**22 23 53.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.74**	**328**	PN	**Pn**	**22 23 55.1**	**+0.2**
MULA	**Mugla, Merkez-**	**1.74**	**163**	P	**Pn**	**22 23 54.8**	**-0.2**
MULA				S	**Sg**	**22 24 21.7**	**+1.3**
MULA				*i* AML	AML	22 24 25.0	
	comp=N,160nm,0.5s						
MULA				*i* AML	AML	22 24 28.0	
	comp=E,165nm,0.7s						
RKY	**Sarkoy-Tekirda**	**1.80**	**347**	PN	**Pn**	**22 23 55.6**	**-0.1**
YER	**Yerkesik**	**1.85**	**165**	PN	**Pn**	**22 23 57.0**	**+0.5**
ARMT	**Armutlu**	**1.86**	**28**	PN	**Pn**	**22 23 56.8**	**+0.3**
GOKA	**anakkale-Gk**	**1.87**	**313**	P	**Pn**	**22 23 56.8**	**+0.2**
GOKA				S	**Sn**	**22 24 20.2**	**-0.2**
GOKA				*i* AML	AML	22 24 25.0	
	comp=N,889nm,0.3s						
GOKA				*i* AML	AML	22 24 28.0	
	comp=E,703nm,0.4s						
GADA	**Gvkgeada**	**1.88**	**313**	PN	**Pn**	**22 23 56.8**	**+0.1**
BODT	**Bodrum**	**1.89**	**189**	PN	**Pn**	**22 23 56.9**	**-0.1**
APMY	**Acipayam-Deniz**	**1.93**	**139**	PN	**Pn**	**22 23 57.9**	**+0.4**
AUBOZ	**BOZOYUK**	**2.05**	**61**	PN	**Pn**	**22 23 59.6**	**+0.4**
YLV	**Yalova**	**2.08**	**38**	PN	**Pn**	**22 24 00.0**	**+0.4**
CAVI	**Cavuskoy**	**2.09**	**52**	PN	**Pn**	**22 24 00.3**	**+0.7**
BASM	**Basmaki-Afyon**	**2.10**	**118**	PN	**Pn**	**22 24 00.2**	**+0.3**
ADVT	**Abdulvahap**	**2.17**	**46**	PN	**Pn**	**22 24 01.5**	**+0.7**
TURN	**Turunc**	**2.20**	**169**	PN	**Pn**	**22 24 01.5**	**+0.4**
DALY	**Dalyan (Mula)**	**2.24**	**160**	PN	**Pn**	**22 24 02.4**	**+0.7**
SHUT	**Suhut-Afyon**	**2.26**	**99**	PN	**Pn**	**22 24 02.9**	**+0.8**
KDZ	**Kurdzhali**	**3.23**	**328**	P	**Pn**	**22 24 15.8**	**+0.5**
DIM	**Dimitrovgrad**	**3.52**	**333**	P	**Pn**	**22 24 19.5**	**+0.1**
RZN	**Rozhen**	**3.58**	**321**	P	**Pn**	**22 24 20.6**	**+0.3**
PLD	**Plovdiv**	**3.91**	**325**	P	**Pn**	**22 24 25.1**	**+0.5**
MMB	**Musomiste**	**4.03**	**312**	P	**Pn**	**22 24 26.5**	**+0.1**
CFR	**Carcaliu**	**6.25**	**3**	⇓P	**Pn**	**22 24 56.5**	**-0.3**
MLR	**Muntele Rosu**	**6.68**	**349**	⇓P	**Pn**	**22 25 05.5**	**+2.6**
PLOR	**Plostina**	**6.96**	**354**	⇓P	**Pn**	**22 25 09.8**	**+3.2**
VRI	**Vrincioaia**	**6.97**	**354**	⇑P	**Pn**	**22 25 09.7**	**+3.0**
HERR	**Herculane**	**7.13**	**328**	⇓P	**Pn**	**22 25 07.1**	**-1.8**
TESR	**Tescani**	**7.62**	**355**	⇑P	**Pn**	**22 25 15.7**	**+0.2**
BZS	**Buzias**	**8.06**	**328**	⇓P	**Pn**	**22 25 21.9**	**+0.3**
BURAR	**Bucovina Array**	**8.87**	**349**	⇑P	**Pn**	**22 25 35.3**	**+2.5**

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*BEO **15** 22:23:43.3±0.7, 39°.56N×20°.97E, h0km, ML3.1/5*
*THE **15** 22:23:45.3, 39°.75N×20°.74E, h0km±2km, ML3.2/5, Error ellipse: s-maj=2.4km s-min=0.6km az=116.0*
*PDG **15** 22:23:46.6±0.1, 39°.73N×21°.34E, h9km±1km, ML3.6/11, Error ellipse: s-maj=1.5km s-min=0.3km az=90.0*
*IDC **15** 22:23:47.1±4.2, 39°.69N×20°.76E, h35km±40km, mb3.4/6, mbtmp3.6/9, ML3.1/3, Error ellipse: s-maj=30.6km s-min=20.7km az=80.0*
ISC 15 22:23:45.0±0.8, 39°.70N±0°.02×20°.76E±0°.02, h14km±5km, n75, σ1°40/100, mb3.6/5, 8C-3D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.08**	**122**	P	**Pg**	**22 23 48.2**	**+0.2**
JAN				S	**Sg**	**22 23 49.9**	**-0.1**
IGT	**Igoumenitsa**	**0.37**	**243**	P	**Pg**	**22 23 52.5**	**-0.1**
IGT				S	**Sg**	**22 23 58.6**	**+0.9**
	6μm,0.3s						
LSK	**Leskovik**	**0.47**	**344**	P	**Pg**	**22 23 53.5**	**-0.8**
LSK				S	**Sg**	**22 23 59.4**	**-1.2**
	4μm,0.5s						
KPRO	**Kipourio**	**0.53**	**61**	P	**Pg**	**22 23 55.5**	**0.0**
KPRO				S	**Sb**	**22 24 03.2**	**-0.5**
	5μm,0.6s						
PENT	**Pentalofos**	**0.57**	**30**	P	**Pg**	**22 23 55.8**	**-0.5**
SRN	**Sarande**	**0.61**	**287**	P	**Pg**	**22 23 56.0**	**-1.1**
SRN				S	**Sg**	**22 24 05.3**	**+0.1**
	2μm,0.4s						
KEK	**Kerkira**	**0.74**	**271**	P	**Pg**	**22 23 58.1**	**-1.4**
KEK				S	**Sg**	**22 24 09.5**	**+0.2**
	1μm,0.5s						
NEST	**Nestorio**	**0.75**	**17**	P	**Pg**	**22 23 59.4**	**-0.2**
TSLK	**Tsoukalades, L**	**0.88**	**186**	P	**Pn**	**22 24 02.7**	**-0.3**
LKD2	**Lefkada island**	**0.91**	**185**	P	**Pn**	**22 24 03.3**	**-0.2**
KBN	**Korca**	**0.92**	**1**	P	**Pg**	**22 24 02.0**	**-0.9**
THL	**Klokotos Trika**	**0.98**	**98**	P	**Pg**	**22 24 04.0**	**+0.1**
KZN	**Kozani**	**0.98**	**52**	P	**Pb**	**22 24 03.2**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.99**	**183**	P	**Pg**	**22 24 04.3**	**+0.2**
DRAG	**Dragano-Lefkad**	**1.02**	**188**	P	**Pb**	**22 24 04.6**	**0.0**
EVGI	**Lefkada island**	**1.08**	**184**	P	**Pn**	**22 24 06.5**	**+0.7**
EVR	**Evrytania**	**1.13**	**134**	P	**Pg**	**22 24 06.7**	**-0.1**
TYRN	**Tyrnavos**	**1.13**	**89**	P	**Pg**	**22 24 06.7**	**-0.2**
PVO	**Paravola**	**1.23**	**151**	P	**Pg**	**22 24 09.8**	**+1.0**
FSK	**Fiskardo**	**1.25**	**187**	P	**Pg**	**22 24 10.1**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.26**	**122**	P	**Pg**	**22 24 09.3**	**-0.1**
LIT	**Litokhoron**	**1.39**	**73**	P	**Pb**	**22 24 10.6**	**-0.2**
OHR	**Ohrid**	**1.41**	**1**	*e*Pg	**Pb**	**22 24 11.5**	**+0.3**
OHR				*e*Sg	**Sg**	**22 24 32.4**	**+1.9**
OHR	**Ohrid**	**1.41**	**1**	*i* Pn	**Pg**	**22 24 11.8**	**-0.4**
KEF4	**Livadi, Kephal**	**1.46**	**191**	P	**Pg**	**22 24 13.2**	**0.0**
DMLN	**Damoulianata-K**	**1.49**	**192**	P	**Pg**	**22 24 13.5**	**-0.2**
VLS	**Valsamata**	**1.53**	**185**	P	**Pg**	**22 24 14.0**	**-0.4**
TIR	**Tirane**	**1.78**	**338**	⇓P	**Pb**	**22 24 17.5**	**-0.1**
TIR	**Tirane**	**1.78**	**338**	*e*Pn	**Pb**	**22 24 17.6**	**+0.1**
TIR				*e*Sn	**Sg**	**22 24 44.8**	**+2.4**
VAY	**Valandovo**	**2.13**	**40**	*e*Pn	**Pn**	**22 24 20.7**	**+0.5**
VAY				*e*Sn	**Sb**	**22 24 48.2**	**-1.4**
VAY	**Valandovo**	**2.13**	**40**	*i* Pn	**Pn**	**22 24 21.1**	**+1.0**
STIP	**Stip**	**2.27**	**28**	*i* Pn	**Pb**	**22 24 25.1**	**-0.7**
SKO	**Skopje**	**2.33**	**13**	*e*Pn	**Pn**	**22 24 24.4**	**+1.4**
SKO				*e*Sn	**Sn**	**22 24 53.5**	**+2.1**
ULC	**Ulcinj**	**2.54**	**333**	*e*Pn	**Pb**	**22 24 31.9**	**+1.5**
ULC				*i* Sn	**Sg**	**22 25 06.7**	**+0.1**
SRS	**Serrai**	**2.58**	**56**	*e*Pn	**Pn**	**22 24 23.7**	**-2.8**
SRS				*e*Sn	**Sn**	**22 24 58.6**	**+0.9**
DRME	**Dracevica, Mon**	**2.76**	**335**	*e*Pn	**Pb**	**22 24 34.8**	**+0.7**
DRME				*i* Sn	**Sg**	**22 25 11.8**	**-1.8**
PVY	**Plav**	**2.96**	**348**	*e*Pn	**Pb**	**22 24 36.4**	**-1.2**
PVY				*i* Sn	**Sb**	**22 25 14.6**	**+1.0**
TTG	**Podgorica**	**2.96**	**336**	⇓*i*Pn	**Pb**	**22 24 37.3**	**-0.2**
TTG				*i* Sn	**Sb**	**22 25 16.1**	**+2.6**
BUM	**Brajici-Budva**	**2.96**	**332**	*e*Pn	**Pb**	**22 24 37.8**	**+0.2**
BUM				*i* Sn	**Sb**	**22 25 16.9**	**+3.3**
TIP	**Timpagrande**	**3.14**	**262**	⇑P	**Pn**	**22 24 33.5**	**-0.8**
CEME	**Cevo**	**3.17**	**334**	*e*Pn	**Pb**	**22 24 40.5**	**-0.7**
CEME				*i* Sn	**Sb**	**22 25 21.6**	**+1.9**
BARS	**Barje**	**3.21**	**14**	*e*Pn	**Pn**	**22 24 36.4**	**+1.3**
BARS				*e*Sn	**Sn**	**22 25 15.6**	**+2.4**
IVA	**Berane**	**3.24**	**349**	⇑*i*Pn	**Pb**	**22 24 40.3**	**-2.0**
IVA				*i* Sn	**Sb**	**22 25 21.1**	**-0.6**
HCY	**Herceg Novi**	**3.24**	**329**	*e*Pn	**Pb**	**22 24 41.8**	**-0.5**
HCY				*i* Sn	**Sb**	**22 25 23.9**	**+2.3**
KOME	**Kolasin**	**3.29**	**344**	⇑*i*Pn	**Pb**	**22 24 41.3**	**-1.9**
KOME				*i* Sn	**Sb**	**22 25 23.1**	**0.0**
NKME	**Niksic**	**3.35**	**337**	*e*Pn	**Pb**	**22 24 42.9**	**-1.4**
NKME				*i* Sn	**Sb**	**22 25 25.7**	**+0.7**
VTS	**Vitosha**	**3.46**	**32**	⇑P	**Pn**	**22 24 40.7**	**+2.0**
VTS	**Vitosha**	**3.46**	**32**	P	**Pn**	**22 24 40.7**	**+2.0**
SELS	**Selova**	**3.53**	**4**	*e*Pn	**Pn**	**22 24 40.4**	**+0.9**
SJES	**Sjenica**	**3.61**	**351**	*e*Pn	**Pn**	**22 24 43.4**	**+2.8**
UPM	**Unac-Piva**	**3.77**	**339**	*e*Pn	**Pb**	**22 24 48.4**	**-3.1**
UPM				*i* Sn	**Sb**	**22 25 35.3**	**-1.8**
PLE	**Pljevlja**	**3.77**	**345**	*e*Pn	**Pb**	**22 24 47.9**	**-3.6**
PLE				*i* Sn	**Sb**	**22 25 34.5**	**-2.6**
ZAPS	**Zavoj**	**3.84**	**21**	*e*Pn	**Pn**	**22 24 45.3**	**+1.6**
BOVS	**Bovan**	**4.00**	**10**	⇓P	**Pn**	**22 24 47.4**	**+1.5**
BOVS	**Bovan**	**4.00**	**10**	*e*Pn	**Pn**	**22 24 46.3**	**+0.4**
BLKB	**Belogradchik**	**4.17**	**19**	⇑P	**Pn**	**22 24 49.9**	**+1.6**
GRUS	**Gruza**	**4.19**	**360**	*e*Pn	**Pn**	**22 24 51.0**	**+2.5**
ZAGS	**Zajecar**	**4.25**	**14**	*e*Pn	**Pn**	**22 24 50.8**	**+1.4**
BBLS	**Lazići**	**4.29**	**347**	*e*Pn	**Pn**	**22 24 50.9**	**+1.0**
DIVS	**Divibare**	**4.43**	**353**	*e*Pn	**Pn**	**22 24 52.2**	**+0.2**
TRUS	**Trudelj**	**4.53**	**357**	*e*Pn	**Pn**	**22 24 55.6**	**+2.4**
IDI	**Anoyia**	**5.49**	**142**	Pn	**Pn**	**22 25 07.0**	**+0.5**
	0.5nm,0.3s,baz=278,slow=13,SNR=1.3						
IDI				Sn	**Sn**	**22 26 07.7**	**-1.8**
	0.7nm,0.3s,baz=37,slow=9.5,SNR=1.3						
	8.0nm,0.7s						
FRGS	**Fruska Gora**	**5.50**	**353**	⇑P	**Pn**	**22 25 07.9**	**+1.4**
FRGS	**Fruska Gora**	**5.50**	**353**	*e*Pn	**Pn**	**22 25 07.5**	**+0.9**
GZR	**Gura Zlata**	**5.88**	**14**	⇑P	**Pn**	**22 25 12.9**	**+1.1**
SIRR	**Siria**	**6.60**	**5**	⇑P	**Pn**	**22 25 23.4**	**+1.8**
GERES	**GERESS Array B**	**10.45**	**333**	Pn	**Pn**	**22 26 15.1**	**+0.7**
	0.1nm,0.3s,baz=166,slow=12,SNR=2.0						
	0.1nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.63**	**315**	Pn	**Pn**	**22 26 17.1**	**0.0**
	0.1nm,0.3s,baz=202,slow=20,SNR=1.4						
	0.5nm,0.3s						
HFS	**Hagfors**	**20.93**	**350**	P	**P**	**22 28 26.8**	**-0.3**
	2.4nm,0.9s,baz=183,slow=15,SNR=1.2						
	2.4nm,0.9s						
FINES	**FINESS Array B**	**22.02**	**7**	P	**P**	**22 28 38.4**	**-0.3**
	0.9nm,0.6s,baz=165,slow=12,SNR=4.3						
	0.9nm,0.6s						
NB2	**NORSAR Subarra**	**22.17**	**348**	P	**P**	**22 28 43.5**	**+3.1**
	comp=Z,0.7nm,0.6s,baz=149,slow=11						
NOA	**NORSAR Array B**	**22.17**	**348**	P	**P**	**22 28 40.0**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=165,slow=10,SNR=3.2						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**30.00**	**3**	P	**P**	**22 29 52.5**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=186,slow=7.3,SNR=1.3						
	comp=Z,2.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	**22 30 04.2**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=35,slow=8.7,SNR=3.7						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**44.36**	**60**	P	**P**	**22 31 53.5**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=281,slow=7.0,SNR=15						
	comp=Z,0.8nm,0.4s						

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*IDC **15** 22:23:56.8±5.8, 39°.79N×20°.70E, h36km±50km, mb3.6/7, mbtmp3.7/11, ML3.7/4, Error ellipse: s-maj=38.4km s-min=20.6km az=133.0*
ISC 15 22:23:53.5±1.1, 39°.8N±0°.1×20°.6E±0°.1, h8km, n27, σ2°05/27, mb3.8/6, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOKA	**Soboth**	**7.95**	**331**	*e*Pn	**Pn**	**22 25 49.8**	**+0.5**
	1.7nm,0.4s						
OBKA	**Obir**	**8.00**	**328**	*e*Pn	**Pn**	**22 25 51.3**	**+1.3**
	1.8nm,0.3s						
OBKA	**Obir**	**8.00**	**328**	*e*Sn	**Sn**	**22 27 22.1**	**+1.4**
	6.3nm,0.7s						
ARSA	**Arzberg**	**8.27**	**335**	*e*Pn	**Pn**	**22 25 55.2**	**+1.5**
	1.9nm,0.5s						
ABTA	**Abfaltersbach**	**9.08**	**322**	*i* Pn	**Pn**	**22 26 06.3**	**+1.5**
	1.5nm,0.4s						
ABTA	**Abfaltersbach**	**9.08**	**322**	*i* Sn	**Sn**	**22 27 47.0**	**-0.2**
	2.2nm,0.4s						
MOA	**Molln**	**9.22**	**332**	*e*Pn	**Pn**	**22 26 09.6**	**+2.9**
	0.9nm,0.3s						
BIOA	**Bad Ischl, Aus**	**9.32**	**330**	*e*Pn	**Pn**	**22 26 08.3**	**+0.2**
	1.0nm,0.2s						
WTTA	**Wattenberg**	**9.87**	**322**	*e*Pn	**Pn**	**22 26 17.6**	**+1.9**
	1.6nm,0.3s						
WTTA	**Wattenberg**	**9.87**	**322**	*e*Sn	**Sn**	**22 28 02.2**	**-4.5**
	2.9nm,0.5s						
VRAC	**Vranov**	**9.89**	**345**	Pn	**Pn**	**22 26 17.9**	**+2.1**
	0.5nm,0.3s,baz=175,slow=19,SNR=3.2						
	1.7nm,0.4s						
WATA	**Walderalm**	**9.95**	**322**	*i* Pn	**Pn**	**22 26 18.6**	**+1.9**
	0.9nm,0.2s						
WATA	**Walderalm**	**9.95**	**322**	*e*Sn	**Sn**	**22 28 04.6**	**-4.0**
	1.9nm,0.3s						
SQTA	**Sankt Quirin**	**10.04**	**320**	*e*Pn	**Pn**	**22 26 20.3**	**+2.3**
	2.9nm,0.5s						
FETA	**Feichten**	**10.15**	**318**	*e*Sn	**Sn**	**22 28 11.5**	**-2.1**
	0.6nm,0.4s						
MOTA	**Moosalm**	**10.18**	**321**	*e*Pn	**Pn**	**22 26 22.0**	**+2.0**
	1.8nm,0.5s						
MOTA	**Moosalm**	**10.18**	**321**	*e*Sn	**Sn**	**22 28 12.3**	**-2.0**
	3.7nm,1.0s						
GERES	**GERESS Array B**	**10.27**	**334**	Pn	**Pn**	**22 26 23.3**	**+2.2**
	0.2nm,0.3s,baz=145,slow=14,SNR=6.6						
	0.3nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.44**	**315**	Pn	**Pn**	**22 26 26.3**	**+2.7**
	0.4nm,0.3s,baz=146,slow=16,SNR=4.4						
	1.1nm,0.4s						
ESDC	**Sonseca Array**	**18.88**	**277**	P	**P**	**22 28 14.8**	**+0.6**
	baz=71,slow=11,SNR=4.8						
	0.3nm,0.7s						
HFS	**Hagfors**	**20.77**	**350**	P	**P**	**22 28 35.8**	**+1.2**
	2.9nm,0.8s,baz=134,slow=8.3,SNR=2.2						
	2.9nm,0.8s						
FINES	**FINESS Array B**	**21.89**	**7**	P	**P**	**22 28 46.7**	**+0.1**
	0.6nm,0.3s,baz=171,slow=12,SNR=9.5						
	0.6nm,0.3s						
EKA	**Eskdalemuir Ar**	**22.13**	**322**	P	**P**	**22 28 50.1**	**+0.9**
	1.2nm,0.7s,baz=121,slow=8.1,SNR=3.7						
	1.2nm,0.7s						
ARCES	**ARCESS Array B**	**29.87**	**3**	P	**P**	**22 30 00.2**	**-0.8**
	3.0nm,1.0s,baz=183,slow=8.8,SNR=5.3						
	3.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.38**	**217**	P	**P**	**22 30 14.2**	**-0.7**
	0.7nm,0.7s,baz=46,slow=9.9,SNR=7.1						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.39**	**60**	P	**P**	**22 32 03.6**	**-0.8**
	1.0nm,0.4s,baz=280,slow=7.6,SNR=12						
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**44.54**	**49**	P	**P**	**22 32 04.2**	**-1.2**
	0.7nm,0.4s,baz=285,slow=9.2,SNR=3.2						
	0.7nm,0.4s						

THE 15 22:24:55.9, 39°.75N×20°.73E, h0km±2km, ML2.8/6, Error ellipse: s-maj=2.6km s-min=0.7km az=262.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**134**	P	Pg	22 24 58.0	-0.5
JAN				S	Sg	22 25 01.3	+1.1
	7μm,0.3s						
IGT	**Igoumenitsa**	**0.37**	**234**	P	Pg	22 25 02.4	-0.6
IGT				S	Sg	22 25 09.1	+1.2
	2μm,0.6

EKS2				⇑iS		Sg	22 31 31.7	+1.0
	baz=46							
TAS	**Tashkent**	**2.00**	**270**	⇓eP		Pn	22 31 04.5	+0.2
TAS	baz=72			⇓iS		Sn	22 31 29.6	-0.1
	baz=72							
TAS	**Tashkent**	**2.00**	**270**	P		Pb	22 31 06.3	-0.3
TAS				S		Sg	22 31 33.5	-0.4
CHM	**Chimkent**	**2.01**	**300**	eP		Pb	22 31 07.2	+0.4
CHM	3.2nm,0.3s			eS		Sg	22 31 33.5	-0.7
	1μm,0.5s							
KK31	**Karatay Array**	**2.06**	**329**	⇓P		Pb	22 31 07.4	-0.3
KK31	6.3nm,0.2s,baz=137,slow=14,SNR=302			⇓S		Sg	22 31 35.4	-0.5
	12nm,0.2s,baz=146,slow=25,SNR=9.5							
KKAR	**Karatay Array**	**2.06**	**329**	⇓iP		Pb	22 31 06.4	-1.3
KKAR	baz=32			⇓iS		Sb	22 31 32.8	-0.9
	baz=32							
UCH	**Uchtor**	**2.11**	**64**	P		Pb	22 31 09.3	+0.4
	SNR=70							
UCH	**Uchtor**	**2.11**	**64**	⇑iP		Pb	22 31 08.9	0.0
UCH	baz=64			⇑iS		Sg	22 31 37.4	-0.3
	baz=64							
AAK	**Ala-Archa**	**2.30**	**55**	P		Pg	22 31 13.0	-0.8
	SNR=44							
AAK	**Ala-Archa**	**2.30**	**55**	⇓iP		Pb	22 31 11.1	-0.8
AAK	baz=55			⇓iS		Sb	22 31 41.6	+0.9
	baz=55							
FRU1	**Bishkek**	**2.48**	**53**	⇑iP		Pb	22 31 13.6	-1.3
FRU1	baz=53			⇑iS		Sb	22 31 46.0	+0.2
	baz=53							
KBK	**Karagaybulak**	**2.59**	**59**	P		Pb	22 31 16.8	-0.2
	SNR=23							
KBK	**Karagaybulak**	**2.59**	**59**	⇑iP		Pb	22 31 15.4	-1.5
KBK	baz=59			⇑iS		Sb	22 31 48.8	-0.4
	baz=59							
GAR	**Garm**	**2.65**	**209**	⇓iP		Pn	22 31 13.6	+0.2
GAR	baz=7.0			⇓iS		Sn	22 31 45.5	-0.5
	baz=7.0							
CHMS	**Chumysh**	**2.66**	**51**	P		Pb	22 31 18.7	+0.7
	SNR=39							
CHMS	**Chumysh**	**2.66**	**51**	⇑eP		Pb	22 31 16.3	-1.7
CHMS	baz=51			⇑iS		Sb	22 31 50.2	-0.9
	baz=51							
CHMS	**Chumysh**	**2.66**	**51**	Pg		Pn	22 31 07.2	-6.3
CHMS	3.2nm,0.3s			⇑Pg		Pb	22 31 18.9	+0.9
	36nm,0.6s							
CHMS				Lg		Lg	22 31 33.5	
	1μm,0.5s							
CHMS				⇑Lg		Lg	22 31 56.0	
	58nm,0.6s							
USP	**Ospenovka**	**2.70**	**44**	P		Pb	22 31 18.2	-0.4
	SNR=34							
USP	**Ospenovka**	**2.70**	**44**	⇑iP		Pb	22 31 16.4	-2.2
USP	baz=44			⇑iS		Sb	22 31 50.6	-1.5
	baz=44							
SGDS	**Sogindy**	**2.90**	**42**	eP		Pb	22 31 23.5	+1.5
SGDS	10.0nm,0.2s			eS		Sg	22 32 01.2	-1.7
	84nm,0.6s							
SGDS	**Sogindy**	**2.90**	**42**	Pg		Pb	22 31 23.5	+1.5
SGDS	10.0nm,0.2s			Lg		Lg	22 32 01.2	
	84nm,0.6s							
NRN	**Naryn**	**3.05**	**87**	⇑iP		Pn	22 31 21.3	+2.2
NRN	baz=86			⇑iS		Sb	22 31 58.9	-3.6
	baz=86							
TKM2	**Tokmak 2**	**3.14**	**59**	P		Pn	22 31 22.3	+2.2
	SNR=13							
TKM2	**Tokmak 2**	**3.14**	**59**	⇑eP		Pn	22 31 22.9	+2.7
TKM2	baz=59			⇑iS		Sb	22 32 01.7	-3.3
	baz=59							
TKM2	**Tokmak 2**	**3.14**	**59**	⇑Pn		Pb	22 31 23.1	-3.2
TKM2	1.0nm,0.3s			⇑Pg		Pg	22 31 28.6	-1.3
	5.8nm,0.5s							
TKM2				⇓Lg		Lg	22 32 10.2	
	42nm,0.6s							
ULHL	**Ulahol**	**3.34**	**73**	⇑iP		Pn	22 31 25.8	+2.9
ULHL	baz=73			⇑iS		Sb	22 32 06.3	-4.3
	baz=73							
CHGR	**Chuyangaron**	**3.43**	**220**	⇓iP		Pn	22 31 24.4	+0.3
CHGR	baz=19			⇓iS		Sn	22 32 04.1	-1.1
	baz=19							
KST	**Kastek**	**3.44**	**59**	eP		Pg	22 31 34.2	-1.3
KST	6.8nm,0.3s			eS		Sg	22 32 20.3	+0.2
	55nm,0.3s							
KST	**Kastek**	**3.44**	**59**	Pg		Pg	22 31 34.2	-1.3
KST	6.8nm,0.3s			Lg		Lg	22 32 20.3	
	55nm,0.3s							
KRBS	**Karabastau**	**3.62**	**48**	eP		Pg	22 31 37.5	-1.7
KRBS	4.7nm,0.2s			eS		Sg	22 32 25.2	-0.9
	41nm,0.3s							
KRBS	**Karabastau**	**3.62**	**48**	Pg		Pg	22 31 37.5	-1.7
KRBS	4.7nm,0.2s			Lg		Lg	22 32 25.2	
	41nm,0.3s							
MTBS	**Maitube**	**3.78**	**60**	eP		Pg	22 31 41.0	-1.1
MTBS	7.0nm,0.2s			eS		Sg	22 32 31.1	0.0
	23nm,0.5s							
MTBS	**Maitube**	**3.78**	**60**	Pg		Pg	22 31 41.0	-1.1
MTBS	7.0nm,0.2s			Lg		Lg	22 32 31.1	
	23nm,0.5s							
TNSS	**Tian-Shan**	**4.08**	**64**	eP		Pg	22 31 46.3	-1.7
TNSS	5.3nm,0.5s			eS		Sg	22 32 41.6	+0.7
	11nm,0.5s							
TNSS	**Tian-Shan**	**4.08**	**64**	Pg		Pg	22 31 46.3	-1.7
TNSS	5.3nm,0.5s			Lg		Lg	22 32 41.6	
	11nm,0.5s							
KUU	**Kurty**	**4.12**	**50**	eP		Pg	22 31 46.1	-2.7
KUU	23nm,0.8s			eS		Sg	22 32 39.9	-2.3
	28nm,0.4s							
KUU	**Kurty**	**4.12**	**50**	Pg		Pg	22 31 46.1	-2.7
KUU	23nm,0.8s			Lg		Lg	22 32 39.9	
	28nm,0.4s							
AAA	**Alma-Ata**	**4.13**	**61**	eP		Pg	22 31 49.3	+0.4
AAA	12nm,0.1s			eS		Sg	22 32 45.2	+2.8
	49nm,0.5s							
AAA	**Alma-Ata**	**4.13**	**61**	Pg		Pg	22 31 49.3	+0.4
AAA	12nm,0.1s			Lg		Lg	22 32 45.2	
	49nm,0.5s							
KNDC	**Almaty**	**4.17**	**62**	⇑Pg		Pg	22 31 48.9	-0.7
KNDC	32nm,0.7s			⇑Lg		Lg	22 32 44.5	
	65nm,0.9s							
MDOK	**Medeo**	**4.20**	**63**	eP		Pb	22 31 47.3	+3.0
MDOK	6.8nm,0.4s			eS		Sg	22 32 42.5	-2.1
	16nm,0.6s							
MDOK	**Medeo**	**4.20**	**63**	Pn		Pn	22 31 36.9	+2.2
MDOK	1.7nm,0.5s			⇑Pg		Pb	22 31 47.1	+2.8
	5.1nm,0.4s							
MDOK				Pg		Pb	22 31 47.3	+3.0
	6.8nm,0.4s							
MDOK				Lg		Lg	22 32 42.5	
	16nm,0.6s							
MDOK				⇓Lg		Lg	22 32 44.3	
	28nm,1.0s							
KTBS	**Karatobe**	**4.23**	**54**	eP		Pg	22 31 48.3	-2.4
KTBS	9.2nm,0.5s			eS		Sg	22 32 43.8	-1.7
	79nm,0.6s							
KTBS	**Karatobe**	**4.23**	**54**	Pg		Pg	22 31 48.3	-2.4
KTBS	9.2nm,0.5s			Lg		Lg	22 32 43.8	
	79nm,0.6s							
KOTS	**Kotyrbulak**	**4.27**	**62**	eP		Pg	22 31 50.0	-1.6
KOTS	4.7nm,0.6s			eS		Sg	22 32 46.8	-0.1
	28nm,0.4s							
KOTS	**Kotyrbulak**	**4.27**	**62**	Pg		Pg	22 31 50.0	-1.6
KOTS	4.7nm,0.6s			Lg		Lg	22 32 46.8	
	28nm,0.4s							
CHKK	**Chushkaly**	**4.49**	**54**	eP		Pg	22 31 53.1	-2.6
CHKK	2.4nm,0.2s			eS		Sg	22 32 51.8	-2.1
	26nm,0.6s							
CHKK	**Chushkaly**	**4.49**	**54**	Pg		Pg	22 31 53.1	-2.6
CHKK	2.4nm,0.2s			Lg		Lg	22 32 51.8	
	26nm,0.6s							
SATY	**Saty**	**5.10**	**68**	eP		Pg	22 32 05.0	-2.3
SATY	2.3nm,0.4s			eS		Sg	22 33 12.3	-1.0
	8.2nm,0.4s							
SATY	**Saty**	**5.10**	**68**	Pg		Pg	22 32 05.0	-2.3
SATY	2.3nm,0.4s			Lg		Lg	22 33 12.3	
	8.2nm,0.4s							
ZHN	**Zhinishke**	**5.15**	**67**	eP		Pg	22 32 06.8	-1.6
ZHN	6.3nm,0.4s			eS		Sg	22 33 15.3	+0.2
	13nm,0.2s							
ZHN	**Zhinishke**	**5.15**	**67**	Pg		Pg	22 32 06.8	-1.6
ZHN	6.3nm,0.4s			Lg		Lg	22 33 15.3	
	13nm,0.2s							
KPKS	**Kokpek**	**5.42**	**65**	eP		Pg	22 32 11.3	-2.3
KPKS	3.7nm,0.4s			eS		Sg	22 33 23.2	-0.6
	14nm,0.5s							
KPKS	**Kokpek**	**5.42**	**65**	Pg		Pg	22 32 11.3	-2.3
KPKS	3.7nm,0.4s			Lg		Lg	22 33 23.2	
	14nm,0.5s							
UZB	**Uzynbulak**	**5.55**	**69**	eP		Pg	22 32 12.9	-3.2
UZB	2.9nm,0.4s			eS		Sg	22 33 25.9	-2.2
	10nm,0.6s							
UZB	**Uzynbulak**	**5.55**	**69**	Pg		Pg	22 32 12.9	-3.2
UZB	2.9nm,0.4s			Lg		Lg	22 33 25.9	
	10nm,0.6s							
SHLS	**Shalkode**	**5.87**	**69**	eP		Pg	22 32 25.3	+3.3
SHLS	2.5nm,0.6s			eS		Sg	22 33 48.0	+10
	6.9nm,0.6s							
SHLS	**Shalkode**	**5.87**	**69**	Pg		Pg	22 32 25.3	+3.3
SHLS	2.5nm,0.6s			Lg		Lg	22 33 48.1	
	6.9nm,0.6s							
PDGK	**Podgornoye**	**5.93**	**68**	⇑Pg		Pb	22 32 18.1	+4.4
PDGK	3.9nm,0.7s			⇓Lg		Lg	22 33 38.8	
	12nm,0.8s							
KURBB	**Kurchatov Arra**	**10.35**	**24**	⇑Pn		Pn	22 33 02.8	+4.0
KURBB	9.1nm,1.2s			⇓Lg		Lg	22 35 59.4	
	17nm,0.7s							
KURK	**Kurchatov**	**10.46**	**24**	⇓Pn		Pn	22 33 02.5	+2.2
	8.7nm,1.2s							

*THE **15** 22:35:29.3, 38°.95N±27°.77E, h0km±1km, ML3.2/9, Error ellipse: s-maj=1.9km s-min=1.0km az=88.0*
*DDA **15** 22:35:29.6±0.0, 38°.93N±27°.72E, h7km±2km, MW3.4*
*ISK **15** 22:35:29.4, 38°.94N±27°.69E, h8km, ML3.6/32*
ISC 15 22:35:29.9±0.9, 38°.94N±0°.02×27°.72E±0°.02, h9km±8km, n75, σ0s73/102, 5C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.10**	**127**	PG	**Pg**	**22 35 31.8**	**-0.5**
GOMA	**Golmarmara-Man**	**0.28**	**145**	PG	**Pg**	**22 35 35.5**	**+0.1**
GOMA				SG	**Sb**	**22 35 40.3**	**-1.4**
STEP	**BALIKESIR_Sava**	**0.44**	**0**	P	**Pg**	**22 35 38.6**	**+0.1**
STEP				*i* AML	AML	22 35 45.0	
	comp=N,7μm,0.2s						
STEP				*i* AML	AML	22 35 45.0	
	comp=E,4μm,0.4s						
STEP				S	**Sb**	**22 35 45.1**	**-1.4**
ZEDA	**zmir-Bergama**	**0.50**	**274**	P	**Pb**	**22 35 39.9**	**-0.9**
ZEDA				S	**Sb**	**22 35 47.3**	**-0.9**
ZEDA				*i* AML	AML	22 35 48.0	
	comp=N,2μm,0.5s						
ZEDA				*i* AML	AML	22 35 51.0	
	comp=E,1μm,0.3s						
DKL	**Dikili**	**0.65**	**282**	PG	**Pg**	**22 35 42.4**	**+0.1**
DKL				SG	**Sg**	**22 35 51.3**	**+0.5**
BUHA	**Balikesir, Bur**	**0.75**	**319**	P	**Pg**	**22 35 44.2**	**-0.2**
BUHA				S	**Sb**	**22 35 56.7**	**+1.2**
BUHA				*i* AML	AML	22 35 58.0	
	comp=N,608nm,0.4s						
BUHA				*i* AML	AML	22 35 59.0	
	comp=E,902nm,0.6s						
BLCB	**Balcova**	**0.76**	**224**	PG	**Pg**	**22 35 44.3**	**-0.3**
BLCB				SG	**Sb**	**22 35 55.2**	**-0.5**
BLCB	**Balcova**	**0.76**	**224**	P	**Pg**	**22 35 44.1**	**-0.5**
BLCB				S	**Sb**	**22 35 55.7**	**0.0**
MANT	**Manisa**	**0.80**	**124**	P	**Pg**	**22 35 44.8**	**-0.4**
MANT				*i* AML	AML	22 35 58.0	
	comp=N,554nm,0.6s						
MANT				*i* AML	AML	22 35 58.0	
	comp=E,647nm,0.3s						
FOCM	**Foa**	**0.80**	**254**	PG	**Pg**	**22 35 44.9**	**-0.4**
FOCM				SG	**Sb**	**22 35 56.3**	**-0.5**
DST	**Dursunbey**	**0.97**	**46**	PG	**Pb**	**22 35 48.7**	**-0.1**
DST				SG	**Sn**	**22 36 02.6**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**172**	PG	**Pb**	**22 35 48.9**	**-0.4**
AYDB				SG	**Sb**	**22 36 03.3**	**+0.7**
SMAA	**Simav-Kutahya**	**1.00**	**80**	PG	**Pb**	**22 35 49.3**	**0.0**
USAK	**Uak-Merkez**	**1.04**	**102**	P	**Pg**	**22 35 49.2**	**-0.7**
USAK				S	**Sn**	**22 36 05.8**	**+0.5**
USAK				*i* AML	AML	22 36 07.0	
	comp=E,218nm,0.3s						
DGB	**zmir**	**1.10**	**217**	P	**Pg**	**22 35 50.6**	**-0.3**
DGB				S	**Sn**	**22 36 06.4**	**-0.2**
DGB				*i* AML	AML	22 36 07.0	
	comp=E,390nm,0.4s						
DGB				*i* AML	AML	22 36 08.0	
	comp=N,517nm,0.8s						
GONE	**Gonen-Balikesi**	**1.11**	**359**	PN	**Pb**	**22 35 51.1**	**-0.1**
PRK	**Paraskevi**	**1.17**	**286**	P	**Pn**	**22 35 53.0**	**+0.7**
PRK				S	**Sn**	**22 36 09.4**	**+1.1**
	2μm,0.8s						
BAYC	**CANAKKALE_Bayr**	**1.21**	**312**	P	**Pg**	**22 35 52.4**	**-0.7**
BAYC				S	**Sn**	**22 36 09.3**	**-0.1**
BAYC				*i* AML	AML	22 36 11.0	
	comp=E,1μm,0.4s						
BAYC				*i* AML	AML	22 36 14.0	
	comp=N,860nm,0.6s						
GCAM	**G?zelcaml?**	**1.29**	**197**	PN	**Pn**	**22 35 53.9**	**-0.1**
GEDZ	**Gediz**	**1.32**	**85**	PN	**Pg**	**22 35 55.1**	**-0.2**
GPNR	**Gulpinar-Canak**	**1.33**	**293**	PN	**Pn**	**22 35 54.6**	**0.0**
KNL	**Balıkesir**	**1.34**	**354**	P	**Pn**	**22 35 54.4**	**-0.3**
KNL				S	**Sn**	**22 36 13.1**	**+0.4**
KNL				*i* AML	AML	22 36 14.0	
	comp=E,935nm,0.4s						
KNL				*i* AML	AML	22 36 15.0	
	comp=N,1μm,0.3s						
KOCA	**Canakkale, Ayv**	**1.35**	**295**	P	**Pn**	**22 35 54.7**	**-0.1**
KOCA				S	**Sg**	**22 36 12.8**	**-0.5**
KOCA				*i* AML	AML	22 36 16.0	
	comp=N,675nm,0.5s						
KOCA				*i* AML	AML	22 36 18.0	
	comp=E,620nm,0.6s						
GDZ	**Gediz**	**1.38**	**83**	P	**Pn**	**22 35 55.1**	**-0.4**
GDZ				S	**Sb**	**22 36 13.6**	**-0.2**
GDZ				*i* AML	AML	22 36 15.0	
	comp=N,495nm,0.7s						
GDZ				*i* AML	AML	22 36 16.0	
	comp=E,534nm,0.3s						
EZN	**Ezine**	**1.40**	**310**	PN	**Pn**	**22 35 55.2**	**-0.3**
EZN	**Ezine**	**1.40**	**310**	P	**Pn**	**22 35 55.1**	**-0.4**
EZN				S	**Sg**	**22 36 15.5**	**+0.7**
	595nm,0.4s						
SMG	**Samos**	**1.41**	**210**	P	**Pn**	**22 35 55.1**	**-0.5**
SMG				S	**Sg**	**22 36 16.7**	**+1.6**
	830nm,0.6s						
CHOS	**Chios island**	**1.41**	**248**	PN	**Pn**	**22 35 55.9**	**+0.2**
CHOS	**Chios island**	**1.41**	**248**	P	**Pn**	**22 35 55.5**	**-0.2**
CHOS				S	**Sg**	**22 36 16.5**	**+1.2**
	2μm,0.5s						
EDC	**Edincik**	**1.41**	**5**	PN	**Pn**	**22 35 55.5**	**-0.2**
ORLT	**Orhaneli**	**1.44**	**39**	PN	**Pg**	**22 35 56.9**	**-0.5**
TVSB	**Tavsanli**	**1.45**	**69**	PN	**Pb**	**22 35 56.6**	**-0.4**
SIGR	**SIGRI**	**1.47**	**281**	PN	**Pn**	**22 35 56.3**	**-0.3**
SIGR	**SIGRI**	**1.47**	**281**	P	**Pn**	**22 35 56.2**	**-0.3**
SIGR				S	**Sg**	**22 36 17.9**	**+0.6**
	748nm,0.4s						
BOZC	**Bozcaada**	**1.57**	**306**	PN	**Pn**	**22 35 58.1**	**+0.2**
ULDT	**Uludag**	**1.63**	**42**	P	**Pb**	**22 36 00.1**	**0.0**
ULDT				S	**Sg**	**22 36 22.9**	**+0.6**
ULDT				*i* AML	AML	22 36 27.0	
	comp=E,848nm,0.8s						
ULDT				*i* AML	AML	22 36 28.0	
	comp=N,665nm,0.4s						
MRMT	**Marmara Adasi**	**1.67**	**357**	PN	**Pn**	**22 35 59.7**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.69**	**32**	PN	**Pb**	**22 36 00.2**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.75**	**327**	PN	**Pn**	**22 36 00.6**	**+0.3**
IGD	**Bursa**	**1.75**	**40**	P	**Pn**	**22 36 00.1**	**-0.3**
IGD				S	**Sg**	**22 36 26.7**	**+0.5**
IGD				*i* AML	AML	22 36 28.0	
	comp=N,214nm,0.5s						
IGD				*i* AML	AML	22 36 32.0	
	comp=E,270nm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.80**	**347**	PN	**Pn**	**22 36 01.4**	**+0.4**
ARMT	**Armutlu**	**1.85**	**28**	PN	**Pn**	**22 36 02.4**	**+0.7**
YER	**Yerkesik**	**1.85**	**166**	PN	**Pn**	**22 36 02.4**	**+0.6**
YER	**Yerkesik**	**1.85**	**166**	P	**Pn**	**22 36 01.5**	**-0.3**
YER				S	**Sb**	**22 36 26.7**	**-0.5**
GADA	**Gvkgeada**	**1.88**	**312**	PN	**Pn**	**22 36 02.5**	**+0.4**
BODT	**Bodrum**	**1.90**	**190**	PN	**Pn**	**22 36 02.9**	**+0.5**
BODT	**Bodrum**	**1.90**	**190**	P	**Pn**	**22 36 00.5**	**-1.9**
APMY	**Acipayam-Deniz**	**1.92**	**139**	PN	**Pn**	**22 36 03.4**	**+0.6**
AUBOZ	**BOZOYUK**	**2.04**	**61**	PN	**Pn**	**22 36 05.2**	**+0.8**
YLV	**Yalova**	**2.07**	**38**	PN	**Pn**	**22 36 05.6**	**+0.8**
CAVI	**Cavuskoy**	**2.07**	**52**	PN	**Pn**	**22 36 05.6**	**+0.8**
BASM	**Basmaki-Afyon**	**2.10**	**118**	PN	**Pn**	**22 36 05.9**	**+0.7**
ADVT	**Abdulvahap**	**2.16**	**46**	PN	**Pn**	**22 36 06.9**	**+0.9**
TURN	**Turunc**	**2.20**	**169**	PN	**Pn**	**22 36 07.4**	**+0.9**
DALY	**Dalyan (Mula)**	**2.24**	**160**	PN	**Pn**	**22 36 08.1**	**+1.0**
SHUT	**Suhut-Afyon**	**2.25**	**99**	PN	**Pn**	**22 36 08.5**	**+1.2**
KOSK	**Kos Island**	**2.26**	**195**	PN	**Pn**	**22 36 08.1**	**+0.8**
KOSK	**Kos Island**	**2.26**	**195**	P	**Pn**	**22 36 08.5**	**+1.2**
SMTH	**Samothraki Isl**	**2.28**	**313**	P	**Pn**	**22 36 07.5**	**-0.1**
ALN	**Alexandroupoli**	**2.34**	**327**	P	**Pn**	**22 36 08.4**	**-0.1**
ALN				S	**Sn**	**22 36 37.8**	**+0.5**
	278nm,0.3s						
ISK	**Istanbul-Kandi**	**2.36**	**25**	P	**Pn**	**22 36 07.4**	**-1.4**
ISK				S	**Sn**	**22 36 37.6**	**-0.2**
	325nm,0.5s						
NIS1	**Nisyros Isl.**	**2.37**	**191**	P	**Pn**	**22 36 08.3**	**-0.6**
APE	**Apeiranthos**	**2.54**	**223**	P	**Pn**	**22 36 10.9**	**-0.4**
ARG	**Arkhangelos**	**2.73**	**173**	P	**Pn**	**22 36 13.4**	**-0.5**
RDO	**Rodhopi**	**2.77**	**324**	P	**Pn**	**22 36 14.6**	**+0.3**
RDO				S	**Sn**	**22 36 49.2**	**+1.4**
	90nm,0.3s						
EDRB	**Edirne**	**3.00**	**346**	P	**Pn**	**22 36 16.9**	**-0.6**
EDRB				S	**Sn**	**22 36 52.7**	**-0.9**
	110nm,0.4s						
DION	**Dionisos Attik**	**3.09**	**255**	P	**Pn**	**22 36 20.4**	**+1.6**
KAVA	**Kavala**	**3.21**	**311**	P	**Pn**	**22 36 20.2**	**-0.2**
NVR	**Nevrokopi**	**3.81**	**310**	P	**Pn**	**22 36 28.9**	**+0.2**
BLKB	**Belogradchik**	**6.03**	**323**	⇑P	**Pn**	**22 36 59.2**	**+0.1**
BOVS	**Bovan**	**6.52**	**318**	⇓P	**Pn**	**22 37 06.0**	**+0.1**
MLR	**Muntele Rosu**	**6.68**	**349**	⇑P	Pn	22 37 16.5	+8.3
PLOR	**Plostina**	**6.96**	**354**	⇑P	**Pn**	**22 37 14.6**	**+2.7**
VRI	**Vrincioaia**	**6.96**	**354**	⇑P	**Pn**	**22 37 12.4**	**+0.4**
BZS	**Buzias**	**8.06**	**328**	⇑P	**Pn**	**22 37 27.5**	**+0.5**

ROM 15 22:35:58.4±0.2, 42°.776N±0°.003×13°.140E±0°.005, h9km±1km, ML1.6/5, 4C-1D, Error ellipse: s-maj=0.4km s-min=0.1km az=269.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**342**	P	Pg	22 36 01.3	+0.7
NRCA				S	Sg	22 36 02.9	+0.8
NRCA				END			
T1245	**Castelsantange**	**0.09**	**24**	P	Pg	22 36 01.7	+0.7
T1245				S	Sg	22 36 03.7	+0.9
T1245				END			
T1202	**Accumoli, Fraz**	**0.10**	**139**	P	Pg	22 36 02.1	+1.1
T1202				S	Sg	22 36 04.5	+1.7
T1202				END			
MC2	**Monte Cornacci**	**0.14**	**15**	P	Pg	22 36 02.4	+0.7
MC2				S	Sg	22 36 05.2	+1.1
T1216	**Preci, Frazion**	**0.14**	**322**	P	Pg	22 36 02.4	+0.7
T1216				S	Sg	22 36 04.9	+0.9
T1216				END			
T1204	**Amatrice, Fraz**	**0.16**	**127**	P	Pg	22 36 03.0	+1.0
T1204				S	Sg	22 36 06.0	+1.5
T1217	**Poggiodomo (PG**	**0.17**	**247**	P	Pg	22 36 02.9	+0.9
T1217				S	Sg	22 36 06.1	+1.5
MMO1	**Montemonaco**	**0.18**	**48**	P	Pg	22 36 03.0	+0.7
MMO1				S	Sg	22 36 06.3	+1.2
LNSS	**Leonessa**	**0.19**	**203**	P	Pg	22 36 03.4	+1.0
LNSS				S	Sg	22 36 06.9	+1.8
T1215	**Vallo di Nera,**	**0.20**	**277**	P	Pg	22 36 03.5	+0.8
SMA1	**SAN MARTINO**	**0.20**	**135**	P	Pg	22 36 03.6	+0.9
SMA1				S	Sg	22 36 07.0	+1.4
T1243	**Rocca Santa Ma**	**0.24**	**109**	P	Pg	22 36 03.9	+0.6
T1243				S	Sg	22 36 07.9	+1.2
AM05	**Amandola Campo**	**0.26**	**38**	P	Pg	22 36 04.4	+0.8
AM05				S	Sb	22 36 08.4	-1.3
RM33	**Pellescritta (**	**0.27**	**168**	P	Pb	22 36 04.8	-0.8
RM33				S	Sb	22 36 09.5	-0.8
CESI	**CESI - Serrava**	**0.29**	**323**	P	Pg	22 36 04.9	+0.7
CESI				S	Sg	22 36 09.3	+1.3
CESI				AML	AML		
	comp=E,286μm,1.0s						
CESI				AML	AML		
	comp=N,456μm,0.5s						
CESI				AML	AML		
	comp=E,285μm,1.0s						
CAMP	**Campotosto**	**0.31**	**140**	P	Pg	22 36 05.4	+0.7
CAMP				S	Sb	22 36 10.2	-1.2
CAMP				AML	AML		
	comp=E,74μm,0.2s						
CAMP				AML	AML		
	comp=N,58μm,1.2s						
GUMA	**Gualdo di Mace**	**0.32**	**27**	P	Pb	22 36 05.7	-0.7
GUMA				S	Sb	22 36 10.9	-0.7
GUMA				AML	AML		
	comp=E,563μm,0.3s						
GUMA				AML	AML		
	comp=N,390μm,0.7s						
T1211	**Morro Reatino**	**0.32**	**221**	P	Pb	22 36 05.8	-0.5
T1211				S	Sb	22 36 10.8	-0.9
ARRO	**Arrone**	**0.34**	**235**	P	Pb	22 36 05.9	-0.7
ARRO				S	Sb	22 36 11.3	-0.8
ARRO				AML	AML		
	comp=E,86μm,0.2s						
ARRO				AML	AML		
	comp=N,114μm,0.1s						
ARRO				AML	AML		
	comp=E,86μm,0.2s						
TERO	**Teramo**	**0.38**	**114**	P	Pg	22 36 06.2	+0.4
TERO				S	Sb	22 36 12.2	-1.0
ASSB	**Assisi San Ben**

EL6	Elcito	0.55	357	⇑P	Pg	22 36 09.4	+0.2
CING	Cingoli	0.60	4	⇑P	Pg	22 36 10.3	+0.2
MPAG	Monte Paganucc	0.90	342	S	Sn	22 36 30.0	-0.4

*IDC **15** 22:51:12.7±1.6, 39°.74N×20°.81E, h0km, mb3.3/4, mbtmp3.3/5, ML3.3/1, MS2.4/1, Error ellipse: s-maj=33.3km s-min=25.4km az=87.0*
*ATH **15** 22:51:15.5, 39°.77N×20°.69E, h17km±1km, ML3.1/14, Error ellipse: s-maj=1.5km s-min=0.8km az=185.0*
*THE **15** 22:51:16.5, 39°.77N×20°.68E, h6km±1km, ML3.2/19, Error ellipse: s-maj=1.0km s-min=0.4km az=305.0*
*VIE **15** 22:51:21.8±0.9, 40°.26N×20°.50E, h10km, mb3.1/3, ms3.6/6, Error ellipse: s-maj=10.6km s-min=4.0km az=4.0 132 km SSE of Tirana*

ISC 15 22:51:15.6±0.9, 39°.77N±0°.02×20°.65E±0°.02, h14km±6km, n71, σ0s72/99, mb3.3/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.19	127	P	Pg	22 51 19.5	-0.5
JAN				S	Sg	22 51 23.2	+0.2
	25μm,0.2s						
JAN	Janina	0.19	127	P	Pg	22 51 19.5	-0.5
JAN				S	Sg	22 51 23.0	0.0
JAN				AML	AML	22 51 23.5	
	comp=N,42899μm,0.2s						
JAN				AML	AML	22 51 24.0	
	comp=E,62508μm,0.2s						
IGT	Igoumenitsa	0.34	226	P	Pb	22 51 23.1	-0.4
IGT				S	Sb	22 51 29.2	+0.3
	comp=E,4μm,0.5s						
IGT	Igoumenitsa	0.34	226	P	Pb	22 51 23.1	-0.4
IGT				S	Sb	22 51 28.8	-0.1
IGT				AML	AML	22 51 31.4	
	comp=E,9958μm,0.3s						
IGT				AML	AML	22 51 33.5	
	comp=N,8829μm,0.3s						
LSK	Leskovik	0.38	354	P	Pb	22 51 24.1	-0.1
LSK				S	Sb	22 51 30.4	+0.5
	comp=N,5μm,0.5s						
SRN	Sarande	0.51	282	P	Pb	22 51 26.3	-0.1
SRN				S	Sb	22 51 35.1	+1.4
	comp=N,3μm,0.5s						
KASA	Kassiopi	0.55	267	P	Pb	22 51 26.8	-0.3
KASA				S	Sb	22 51 35.9	+1.0
KASA				AML	AML	22 51 38.5	
	comp=N,5028μm,0.3s						
KASA				AML	AML	22 51 38.5	
	comp=E,4727μm,0.4s						
PENT	Pentalofos	0.56	41	P	Pg	22 51 26.8	+0.1
PENT				S	Sb	22 51 35.5	+0.2
PENT	Pentalofos	0.56	41	P	Pg	22 51 26.5	-0.1
KPRO	Kipourio	0.58	71	P	Pg	22 51 26.8	-0.1
KPRO				S	Sb	22 51 35.6	0.0
	comp=E,6μm,0.6s						
KEK	Kerkira	0.66	265	P	Pg	22 51 28.5	0.0
KEK				S	Sn	22 51 39.5	-1.3
	comp=E,2μm,0.4s						
KEK	Kerkira	0.66	265	P	Pg	22 51 28.4	0.0
KEK				S	Sb	22 51 38.5	+0.5
KEK				AML	AML	22 51 44.2	
	comp=N,3508μm,0.4s						
KEK				AML	AML	22 51 45.3	
	comp=E,3786μm,0.3s						
NEST	Nestorio	0.71	25	P	Pg	22 51 29.5	+0.1
NEST				S	Sb	22 51 39.7	+0.2
	comp=E,752nm,0.4s						
NEST	Nestorio	0.71	25	P	Pg	22 51 29.6	+0.2
NEST				AML	AML	22 51 45.4	
	comp=E,2221μm,0.3s						
NEST				AML	AML	22 51 49.8	
	comp=N,1705μm,0.4s						
KBN	Korca	0.85	7	P	Pg	22 51 32.2	0.0
KBN				S	Sn	22 51 45.6	-0.1
	comp=N,550nm,0.5s						
TSLK	Tsoukalades, L	0.95	180	P	Pg	22 51 33.5	-0.4
TSLK				S	Sn	22 51 48.3	+0.5
	comp=N,2μm,0.5s						
TSLK	Tsoukalades, L	0.95	180	P	Pg	22 51 33.3	-0.5
TSLK				AML	AML	22 51 53.2	
	comp=E,3202μm,0.5s						
TSLK				AML	AML	22 51 54.2	
	comp=N,2754μm,0.6s						
LKD2	Lefkada island	0.98	180	P	Pb	22 51 34.7	+0.3
LKD2				S	Sn	22 51 50.2	+1.4
	comp=N,1μm,0.3s						
LKD2	Lefkada island	0.98	180	P	Pg	22 51 34.0	-0.5
LKD2				S	Sn	22 51 48.2	-0.6
LKD2				AML	AML	22 51 53.0	
	comp=N,2468μm,0.3s						
LKD2				AML	AML	22 51 54.4	
	comp=E,3439μm,0.3s						
KZN	Kozani	1.01	58	P	Pb	22 51 34.8	-0.1
KZN				S	Sn	22 51 50.5	+1.0
	comp=E,1μm,0.4s						
KZN	Kozani	1.01	58	P	Pb	22 51 34.3	-0.6
KZN				S	Sn	22 51 49.2	-0.3
KZN				AML	AML	22 51 52.0	
	comp=N,1436μm,0.4s						
KZN				AML	AML	22 51 52.6	
	comp=E,3271μm,0.4s						
NYDR	Nydri-Lefkada	1.06	178	P	Pg	22 51 35.9	-0.1
NYDR				S	Sn	22 51 51.8	+1.2
	comp=E,1μm,0.5s						
THL	Klokotos Trika	1.07	101	P	Pb	22 51 36.1	+0.2
THL				S	Sn	22 51 51.1	+0.2
	comp=E,432nm,0.8s						
THL	Klokotos Trika	1.07	101	P	Pb	22 51 34.5	-1.3
THL				S	Sb	22 51 49.8	0.0
THL				AML	AML	22 51 51.5	
	comp=N,887μm,0.8s						
THL				AML	AML	22 51 54.6	
	comp=E,837μm,0.5s						
DRAG	Dragano-Lefkad	1.09	183	P	Pb	22 51 36.0	-0.2
EVGI	Lefkada island	1.15	180	P	Pg	22 51 37.5	-0.2
EVGI	Lefkada island	1.15	180	P	Pb	22 51 36.8	-0.5
TYRN	Tyrnavos	1.22	92	P	Pn	22 51 38.0	-0.2
TYRN				S	Sg	22 51 55.7	+0.8
	comp=E,2μm,0.7s						
EVR	Evrytania	1.24	133	P	Pb	22 51 38.9	+0.1
EVR				S	Sg	22 51 57.4	+1.8
	comp=E,590nm,0.5s						
EVR	Evrytania	1.24	133	P	Pn	22 51 38.2	-0.4
EVR				S	Sg	22 51 55.7	+0.1
EVR				AML	AML	22 52 01.3	
	comp=E,1273μm,0.4s						
EVR				AML	AML	22 52 02.3	
	comp=N,1095μm,0.4s						
KTI	Kastanea	1.28	61	P	Pn	22 51 39.4	+0.2
FSK	Fiskardo	1.31	183	P	Pg	22 51 40.8	0.0
FSK				S	Sg	22 51 59.4	+1.5
	comp=N,968nm,0.2s						
FSK	Fiskardo	1.31	183	P	Pg	22 51 40.8	0.0
FSK				S	Sg	22 51 58.0	0.0
FSK				AML	AML	22 52 01.0	
	comp=N,916μm,0.4s						
FSK				AML	AML	22 52 02.0	
	comp=E,2983μm,0.2s						
PVO	Paravola	1.34	149	P	Pg	22 51 41.7	+0.4
PVO	Paravola	1.34	149	P	Pg	22 51 41.2	-0.2
OHR	Ohrid	1.34	5	*i* Pn	Pg	22 51 42.0	+0.6
MAKR	Makrakomi, Fth	1.38	123	P	Pb	22 51 41.2	+0.1
MAKR	Makrakomi, Fth	1.38	123	P	Pb	22 51 41.0	-0.1
MAKR				AML	AML	22 52 05.9	
	comp=N,2767μm,0.4s						
MAKR				AML	AML	22 52 08.1	
	comp=E,3048μm,0.3s						
LIT	Litokhoron	1.45	76	P	Pb	22 51 42.5	+0.1
LIT				S	Sg	22 52 01.9	-0.4
	comp=E,608nm,0.4s						
LIT	Litokhoron	1.45	76	P	Pn	22 51 41.6	+0.2
LIT				AML	AML	22 52 05.8	
	comp=N,1278μm,0.4s						
LIT				AML	AML	22 52 06.8	
	comp=E,1154μm,0.4s						
KEF4	Livadi, Kephal	1.52	187	P	Pb	22 51 43.2	-0.4
DMLN	Damoulianata-K	1.55	188	P	Pb	22 51 43.8	-0.2
VLS	Valsamata	1.59	182	P	Pb	22 51 44.4	-0.5
VLS				S	Sg	22 52 06.7	-0.2
	comp=E,808nm,0.3s						
VLS	Valsamata	1.59	182	P	Pb	22 51 44.4	-0.5
EFP	Efpalio	1.66	144	P	Pb	22 51 46.5	+0.6
EFP	Efpalio	1.66	144	P	Pb	22 51 46.3	+0.4
EFP				AML	AML	22 52 18.3	
	comp=E,874μm,0.4s						
EFP				AML	AML	22 52 18.6	
	comp=N,756μm,0.5s						
LAKA	Lakka	1.85	146	P	Pb	22 51 49.0	-0.2
AXAR	Agios Charalam	1.85	122	P	Pb	22 51 49.4	+0.1
DRO	Drossia	2.00	155	P	Pn	22 51 50.3	+1.4
NEO	Neokhori	2.04	102	P	Pb	22 51 51.4	-1.0
VAY	Valandovo	2.13	43	*i* Pn	Pn	22 51 51.7	+1.0
KNT	Kendrikon	2.20	50	P	Pn	22 51 52.2	+0.4
KNT	Kendrikon	2.20	50	P	Pn	22 51 52.2	+0.4
STIP	Stip	2.25	31	*i* Pn	Pb	22 51 55.6	-0.3
THAL	Thalero	2.34	137	P	Pn	22 51 55.2	+1.6
VIL2	Platees	2.57	127	P	Pn	22 51 58.9	+2.2
NVR	Nevrokopi	2.91	56	P	Pn	22 52 02.3	+0.8
MLR	Muntele Rosu	6.92	33	LR	LR	22 56 10.2	
	comp=N,29nm,19.9s,baz=160,slow=43						
SOKA	Soboth	8.03	331	*i* Pn	Pn	22 53 12.3	+0.5
	comp=N,1.1nm,0.3s						
OBKA	Obir	8.07	328	*i* Pn	Pn	22 53 13.3	+0.9
	comp=N,1.3nm,0.4s						
OBKA				*e*Sn	Sn	22 54 42.6	-1.0
	comp=N,1.7nm,0.3s						
ABTA	Abfaltersbach	9.15	322	*i* Pn	Pn	22 53 25.9	-1.4
	comp=N,0.6nm,0.4s						
MOA	Molln	9.30	332	*e*Pn	Pn	22 53 29.4	+0.3
	comp=N,0.6nm,0.3s						
WTTA	Wattenberg	9.94	322	*i* P	Pn	22 53 38.8	+0.7
	comp=N,1.3nm,0.4s						
WATA	Walderalm	10.02	322	*i* P	Pn	22 53 40.0	+0.7
	comp=N,0.6nm,0.3s						
SQTA	Sankt Quirin	10.12	320	*i* P	Pn	22 53 41.3	+0.8
	comp=N,0.5nm,0.3s						
MOTA	Moosalm	10.26	321	*i* P	Pn	22 53 43.1	+0.7
	comp=N,0.7nm,0.4s						
GERES	GERESS Array B	10.34	334	Pn	Pn	22 53 45.0	+1.4
	comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=4.1						
	comp=N,0.1nm,0.3s						
FINES	FINESS Array B	21.95	7	P	P	22 56 07.3	-1.2
	comp=N,0.4nm,0.4s,baz=177,slow=12,SNR=5.8						
	comp=N,0.4nm,0.4s						
NOA	NORSAR Array B	22.08	348	P	P	22 56 08.7	-1.3
	comp=N,0.3nm,0.7s,baz=162,slow=11,SNR=2.2						
	comp=N,0.3nm,0.7s						
TORD	Torodi Ar. Bea	31.35	217	P	P	22 57 35.3	-0.5
	comp=N,0.4nm,0.7s,baz=30,slow=9.6,SNR=3.3						
	comp=N,0.4nm,0.7s						
MKAR	Makanchi Array	44.39	60	P	P	22 59 24.4	-1.3
	comp=N,0.7nm,0.5s,baz=283,slow=7.2,SNR=6.5						
	comp=N,0.7nm,0.5s						

*IDC **15** 22:59:52.9±1.6, 39°.85N×20°.80E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=46.8km s-min=27.7km az=113.0*
*ATH **15** 22:59:56.0, 39°.76N×20°.70E, h12km±2km, ML2.8/6, Error ellipse: s-maj=2.5km s-min=0.9km az=310.0*
*THE **15** 22:59:56.3, 39°.77N×20°.71E, h7km±2km, ML2.9/8, Error ellipse: s-maj=2.5km s-min=0.9km az=267.0*

ISC 15 22:59:55.9±0.8, 39°.76N±0°.02×20°.70E±0°.02, h15km±5km, n51, σ1s07/69, mb3.6/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.15	133	P	Pg	22 59 59.3	-0.6
JAN				S	Sg	23 00 02.5	0.0
	9μm,0.3s						
JAN	Janina	0.15	133	P	Pg	22 59 59.2	-0.6
JAN				S	Sg	23 00 01.8	-0.7
JAN				AML	AML	23 00 03.0	
	comp=E,21348μm,0.3s						
JAN				AML	AML	23 00 03.4	
	comp=N,14792μm,0.3s						
IGT	Igoumenitsa	0.37	231	P	Pg	23 00 03.1	-0.2
IGT				S	Sb	23 00 10.0	+0.4
	comp=N,3μm,0.4s						
IGT	Igoumenitsa	0.37	231	P	Pg	23 00 03.2	-0.2
IGT				S	Sg	23 00 09.2	+0.7
IGT				AML	AML	23 00 11.0	
	comp=E,5629μm,0.3s						
IGT				AML	AML	23 00 12.9	
	comp=N,6966μm,0.5s						
LSK	Leskovik	0.40	348	P	Pg	23 00 04.2	+0.3
LSK				S	Sg	23 00 10.0	+0.6
	comp=N,2μm,0.6s						
KPRO	Kipourio	0.54	69	P	Pg	23 00 06.6	0.0
KPRO				S	Sb	23 00 15.2	+0.4
	comp=N,2μm,0.5s						
PENT	Pentalofos	0.55	37	P	Pg	23 00 06.7	0.0
PENT	Pentalofos	0.55	37	P	Pg	23 00 06.8	+0.1
PENT				S	Sg	23 00 14.6	+0.6
SRN	Sarande	0.55	282	P	Pg	23 00 06.5	-0.3
SRN				S	Sb	23 00 15.6	+0.6
	comp=N,2μm,0.4s						
KASA	Kassiopi	0.59	269	P	Pg	23 00 06.9	-0.6
KASA				S	Sg	23 00 14.2	-1.2
KEK	Kerkira	0.70	266	P	Pg	23 00 08.4	-1.1
KEK	Kerkira	0.70	266	P	Pg	23 00 08.7	-0.9
NEST	Nestorio	0.70	22	P	Pg	23 00 09.8	+0.2
NEST	Nestorio	0.70	22	P	Pg	23 00 09.9	+0.2
NEST				S	Sb	23 00 19.8	+0.4
NEST				AML	AML	23 00 24.0	
	comp=N,1177μm,0.4s						
NEST				AML	AML	23 00 27.0	
	comp=E,1248μm,0.4s						
KBN	Korca	0.86	4	P	Pg	23 00 12.3	-0.3
TSLK	Tsoukalades, L	0.94	182	P	Pg	23 00 13.7	-0.3
TSLK				S	Sn	23 00 29.5	+1.9
	comp=E,632nm,0.4s						
TSLK	Tsoukalades, L	0.94	182	P	Pg	23 00 13.7	-0.3
TSLK				S	Sg	23 00 25.9	-0.3
LKD2	Lefkada island	0.97	182	P	Pg	23 00 14.7	0.0
LKD2	Lefkada island	0.97	182	P	Pg	23 00 14.7	0.0
KZN	Kozani	0.98	56	P	Pg	23 00 13.6	-1.3
KZN				S	Sb	23 00 29.0	+1.5
	comp=E,410nm,0.5s						
KZN	Kozani	0.98	56	P	Pg	23 00 14.2	-0.7
KZN				S	Sb	23 00 28.6	+1.2
KZN				AML	AML	23 00 31.9	
	comp=N,645μm,0.4s						
KZN				AML	AML	23 00 33.2	
	comp=E,897μm,0.4s						
THL	Klokotos Trika	1.03	101	P	Pg	23 00 14.2	-1.6
THL	Klokotos Trika	1.03	101	P	Pg	23 00 14.7	-1.1
THL				S	Sb	23 00 30.1	+1.4
THL				AML	AML	23 00 34.3	
	comp=N,550μm,0.5s						
THL				AML	AML	23 00 36.0	
	comp=E,539μm,0.6s						
NYDR	Nydri-Lefkada	1.05	180	P	Pg	23 00 14.9	-1.2
NYDR				S	Sb	23 00 31.0	+1.8
	comp=E,488nm,0.5s						
EVGI	Lefkada island	1.14	182	P	Pg	23 00 17.4	-0.5
EVGI	Lefkada island	1.14	182	P	Pg	23 00 17.1	-0.7
EVGI				S	Sg	23 00 31.5	-1.2
TYRN	Tyrnavos	1.18	92	P	Pg	23 00 17.1	-1.5
EVR	Evrytania	1.20	134	P	Pg	23 00 17.9	-1.2
EVR	Evrytania	1.20	134	P	Pg	23 00 17.8	-1.2
KTI	Kastanea	1.25	59	P	Pb	23 00 19.3	0.0
FSK	Fiskardo	1.31	185	P	Pn	23 00 20.6	+1.1
FSK				S	Sb	23 00 37.8	+1.2
FSK				AML	AML	23 00 43.0	
	comp=N,706μm,0.5s						
FSK				AML	AML	23 00 43.4	
	comp=E,1061μm,0.3s						
PVO	Paravola	1.31	151	P	Pg	23 00 21.4	+0.3
PVO	Paravola	1.31	151	P	Pn	23 00 19.9	+0.3
MAKR	Makrakomi, Fth	1.34	124	P	Pn	23 00 21.1	+1.1
MAKR	Makrakomi, Fth	1.34	124	P	Pn	23 00 21.1	+1.1
LIT	Litokhoron	1.41	76	P	Pn	23 00 21.6	+0.5
LIT	Litokhoron	1.41	76	P	Pn	23 00 21.5	+0.5
KEF4	Livadi, Kephal	1.52	188	P	Pn	23 00 23.3	+0.9
VLS	Valsamata	1.58	183	P	Pn	23 00 24.6	+1.2
EFP	Efpalio	1.63	145	P	Pb	23 00 26.8	+1.2
GRG	Griva	1.76	47	P	Pn	23 00 27.6	+1.7
GRG	Griva	1.76	47	P	Pn	23 00 27.3	+1.4
AXAR	Agios Charalam	1.81	123	P	Pn	23 00 28.5	+1.9
LAKA	Lakka	1.82	146	P	Pn	23 00 28.6	+2.0
XOR	Xorichti	1.96	101	P	Pn	23 00 30.4	+1.7
NEO	Neokhori	2.00	102	P	Pn	23 00 30.9	+1.8
FINES	FINESS Array B	21.96	7	P	P	23 04 47.3	-1.4
	comp=E,2.9nm,1.0s,baz=180,slow=9.6,SNR=4.4						
	comp=E,2.9nm,1.0s						
NOA	NORSAR Array B	22.10	348	P	P	23 04 49.4	-1.0
	comp=E,0.6nm,0.8s,baz=161,slow=9.9,SNR=1.7						
	comp=E,0.6nm,0.8s						
ARCES	ARCESS Array B	29.95	3	P	P	23 06 00.8	-2.2
	comp=E,3.6nm,0.9s,baz=188,slow=11,SNR=2.7						
	comp=E,3.6nm,0.9s						
TORD	Torodi Ar. Bea	31.36	218	P	P	23 06 16.4	+0.5
	comp=E,0.2nm,0.4s,baz=34,slow=9.2,SNR=2.7						
	comp=E,0.2nm,0.4s						
MKAR	Makanchi Array	44.37	60	P	P	23 08 03.9	-1.6
	comp=E,0.7nm,0.6s,baz=273,slow=7.5,SNR=7.0						
	comp=E,0.7nm,0.6s						

*IDC **15** 23:01:30.2±1.7, 39°.83N×20°.81E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=50.7km s-min=29.0km az=115.0*
*THE **15** 23:01:33.4, 39°.75N×20°.73E, h12km±1km, ML2.7/9, Error ellipse: s-maj=1.6km s-min=0.8km az=324.0*

ISC 15 23:01:32.2±0.9, 39°.81N±0°.03×20°.77E±0°.03, h15km±6km, n22, σ0s60/33, mb3.3/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.16	158	P	Pg	23 01 36.2	-0.1
JAN				S	Sg	23 01 39.0	0.0
LSK	Leskovik	0.37	339	P	Pb	23 01 41.5	+0.9
LSK				S	Sn	23 01 48.9	-1.3
	1μm,0.5s						
IGT	Igoumenitsa	0.44	232	P	Pg	23 01 40.3	-0.7
IGT				S	Sg	23 01 46.9	0.0
	2μm,0.4s						
KPRO	Kipourio	0.48	72	P	Pn	23 01 43.5	-1.1
KPRO				S	Sn	23 01 52.2	-0.6
	2μm,0.5s						
PENT	Pentalofos	0.48	36	P	Pn	23 01 43.8	-0.9
PENT				S	Sn	23 01 52.8	-0.1
SRN	Sarande	0.60	277	P	Pg	23 01 43.9	-0.1
SRN				S	Sg	23 01 52.8	+0.8
	552nm,0.3s						
NEST	Nestorio	0.64	19	P	Pn	23 01 47.4	+0.5
KEK	Kerkira	0.76	263	P	Pg	23 01 46.0	-1.0
KZN	Kozani	0.91	56	P	Pn	23 01 51.2	+0.6
TSLK	Tsoukalades, L	0.98	185	P	Pb	23 01 50.7	-0.3
TSLK				S	Sn	23 02 05.9	+0.8
	408nm,0.4s						
THL	Klokotos Trika	0.99	104	P	Pn	23 01 51.9	+0.4
THL				S	Sn	23 02 05.5	+0.3
	228nm,0.6s						
LKD2	Lefkada island	1.02	185	P	Pb	23 01 51.7	+0.1
NYDR	Nydri-Lefkada	1.09	183	P	Pn	23 01 52.5	-0.3
NYDR				S	Sg	23 02 07.7	+0.2
	295nm,0.4s						
TYRN	Tyrnavos	1.13	94	P	Pg	23 01 53.9	-0.1
DRAG	Dragano-Lefkad	1.13	188	P	Pn	23 01 53.4	-0.1
DRAG				S	Sb	23 02 08.3	+0.3
	3μm,0.4s						
EVGI	Lefkada island	1.19	184	P	Pn	23 01 54.3	0.0
EVGI				S	Sg	23 02 11.2	+0.6
	505nm,0.3s						
EVR	Evrytania	1.20	138	P	Pb	23 01 54.6	-0.1
LIT	Litokhoron	1.35	77	P	Pg	23 01 57.8	-0.4
FINES	FINESS Array B	21.91	7	P	P	23 06 23.6	-1.0
	0.7nm,0.7s,baz=191,slow=11,SNR=1.1						
	0.7nm,0.7s						
NOA	NORSAR Array B	22.07	348	P	P	23 06 26.8	+0.4
	0.7nm,0.8s,baz=162,slow=10,SNR=3.5						
	0.7nm,0.8s						
TORD	Torodi Ar. Bea	31.43	218	P	P	23 07 53.4	+0.5
	0.5nm,1.1s,baz=32,slow=8.5,SNR=1.8						
	0.5nm,1.1s						
MKAR	Makanchi Array	44.30	60	P	P	23 09 41.3	0.0
	0.3nm,0.5s,baz=284,slow=7.1,SNR=4.4						
	0.3nm,0.5s						

*GII **15** 23:06:53.2±0.0, 39°.78N×20°.69E, h10km, Mm4.4/1*
*IDC **15** 23:06:56.5±0.5, 39°.76N×20°.71E, h0km, mb4.2/23, mbtmp4.1/37, ML3.8/11, MS3.5/35, Error ellipse: s-maj=10.1km s-min=9.2km az=124.0*
*BEO **15** 23:06:57.5±0.8, 39°.52N×20°.69E, h11km±4km, ML4.2/7*
*MOS **15** 23:06:57.2±1.1, 39°.71N×20°.63E, h15km, mb4.6/19, Error ellipse: s-maj=5.1km s-min=3.4km az=79.7*
*HLW **15** 23:06:57.6, 39°.73N×21°.66E, h10km±31km, Md5.1, Ml5.1*
*TIR **15** 23:06:58.3, 39°.75N×20°.83E, h5km±1km, Md3.8, Ml4.2*
*NEIC **15** 23:06:58.9±2.3, 39°.77N±0°.05×20°.67E±0°.06, h10km±1km, mb4.4/56, ML4.2(THE), Error ellipse: s-maj=8.7km s-min=6.9km az=209.0*
*THE **15** 23:06:59.9, 39°.76N×20°.70E, h0km±2km, ML4.2/17, Error ellipse: s-maj=2.2km s-min=0.6km az=314.0*
*ATH **15** 23:06:59.5, 39°.76N×20°.68E, h15km±2km, ML4.2/12, Error ellipse: s-maj=2.2km s-min=1.0km az=324.0*
*PDG **15** 23:06:59.1±0.5, 39°.75N×20°.66E, h12km, ML4.1/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*LDG **15** 23:07:00.7, 39°.69N×20°.62E, h30km*

ISC 15 23:06:59.6±0.7, 39°.73N±0°.01×20°.72E±0°.02, h20km±3km, n558, σ1s78/593, mb4.3/52, MS3.6/29, 23C-16D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.13	127	P	Pg	23 07 02.8	-1.1
JAN				S	Sg	23 07 06.7	0.0
	224μm,0.3s						
JAN	Janina	0.13	127	P	Pg	23 07 02.7	-1.1
JAN				S	Sg	23 07 06.6	-0.1
JAN	Janina	0.13	127	P	Pg	23 07 02.8	-1.1
JAN				S	Sg	23 07 06.7	-0.1
JAN				AML	AML	23 07 07.3	
JAN				AML	AML	23 07 07.4	
IGT	Igoumenitsa	0.36	236	P	Pb	23 07 06.7	-0.6
IGT				S	Sb	23 07 13.4	+0.9
	83μm,0.3s						
IGT	Igoumenitsa	0.36	236	P	Pb	23 07 06.4	-0.9
IGT				S	Sb	23 07 11.4	-1.1
IGT	Igoumenitsa	0.36	236	P	Pb	23 07 06.9	-0.4
	baz=242						
IGT				S	Sb	23 07 14.0	+1.5
	baz=242						
IGT	Igoumenitsa	0.36	236	P	Pb	23 07 06.5	-0.9
IGT				S	Sb	23 07 11.5	-1.1
IGT				AML	AML	23 07 16.1	
IGT				AML	AML	23 07 17.0	
LSK	Leskovik	0.42	348	P	Pb	23 07 08.0	-0.5
LSK				S	Sb	23 07 13.8	-0.8
	37μm,0.7s						
LSK	Leskovik	0.42	348	P	Pb	23 07 07.8	-0.7
	baz=337						
LSK				S	Sb	23 07 14.2	-0.4
	baz=337						
LSK				AMP			
	comp=N,113nm,0.8s,baz=337						
KPRO	Kipourio	0.55	66	P	Pb	23 07 10.3	-0.2
KPRO				S	Sb	23 07 18.9	+1.0
	comp=N,59μm,0.4s						
PENT	Pentalofos	0.56	35	P	Pb	23 07 10.3	-0.6
PENT				S	Sb	23 07 19.8	+1.3
	comp=N,7μm,0.5s						
PENT	Pentalofos	0.56	35	P	Pb	23 07 10.2	-0.6
PENT				S	Sb	23 07 19.1	+0.6
PENT				AML	AML	23 07 25.4	
	comp=N,6800μm,0.6s						
PENT				AML	AML	23 07 26.9	
	comp=E,19830μm,0.4s						
SRN	Sarande	0.57	285	P	Pb	23 07 10.2	-0.6
	baz=283						

comp=N,27347µm,0.4s
NEST Nestorio 0.73 21 P Pb 23 07 13.2 -0.4
KBN Korca 0.89 4 Pb 23 07 15.5 -0.9
KBN Korca 0.89 4 P Pb 23 07 15.7 -0.7
KBN Korca 0.89 4 P Pb 23 07 15.5 -0.9
KBN Korca 0.89 4 P Pb 23 07 15.7 -0.7
baz=358
KBN S **Sn 23 07 29.2 -0.2**
baz=358
KBN AMP
comp=E,26nm,0.6s,baz=358
TSLK Tsoukalades, L 0.91 183 P Pn 23 07 17.4 +0.2
TSLK Tsoukalades, L 0.91 183 P Pb 23 07 16.8 +0.1
LKD2 Lefkada island 0.94 183 P Pn 23 07 18.0 +0.2
LKD2 Lefkada island 0.94 183 P Pn 23 07 18.0 +0.2
baz=188
LKD2 S **Sn 23 07 32.0 +1.3**
baz=188
LKD2 Lefkada island 0.94 183 P Pb 23 07 17.2 -0.1
LKD2 AML AML 23 07 36.5
comp=N,31070µm,0.4s
LKD2 AML AML 23 07 43.8
comp=E,26149µm,0.4s
KZN Kozani 0.99 54 P Pb 23 07 18.0 -0.1
KZN S **Sn 23 07 33.3 +1.3**
comp=E,8µm,0.6s
KZN Kozani 0.99 54 P Pg 23 07 17.6 -1.3
KZN Kozani 0.99 54 P Pg 23 07 17.6 -1.3
KZN AML AML 23 07 35.9
comp=N,15672µm,0.5s
KZN AML AML 23 07 38.3
comp=E,15253µm,0.7s
THL Klokotos Trika 1.02 99 P Pg 23 07 18.0 -1.4
THL Klokotos Trika 1.02 99 P Pg 23 07 18.0 -1.4
THL AML AML 23 07 35.1
comp=N,16365µm,1.2s
THL AML AML 23 07 38.8
comp=E,12902µm,0.6s
NYDR Nydri-Lefkada 1.02 181 P Pn 23 07 19.1 +0.4
NYDR S **Sn 23 07 36.0 +3.5**
comp=E,15µm,0.6s
DRAG Dragano-Lefkad 1.05 186 P Pn 23 07 19.4 +0.1
DRAG S **Sn 23 07 35.8 +2.4**
comp=E,166µm,0.5s
EVGI Lefkada island 1.11 182 P Pn 23 07 20.6 +0.6
EVGI S **Sn 23 07 37.8 +3.0**
comp=E,18µm,0.6s
EVGI Lefkada island 1.11 182 P Pn 23 07 20.2 +0.1
TYRN Tyrnavos 1.17 91 P Pb 23 07 21.0 -0.1
TYRN S **Sn 23 07 39.1 +2.9**
comp=E,31µm,0.5s
EVR Evrytania 1.18 134 P Pg 23 07 21.9 -0.5
EVR Evrytania 1.18 134 P Pg 23 07 21.5 -0.9
EVR AML AML 23 07 49.1
comp=E,16498µm,0.5s
EVR AML AML 23 07 57.2
comp=N,14193µm,0.6s
VLO Vlora 1.19 308 Pg 23 07 21.9 -0.7
VLO Vlora 1.19 308 P Pg 23 07 22.9 +0.3
VLO Vlora 1.19 308 P Pg 23 07 21.9 -0.7
VLO Vlora 1.19 308 P Pg 23 07 23.4 +0.8
baz=306
VLO S **Sn 23 07 41.6 +4.9**
baz=306
FSK Fiskardo 1.28 185 P Pg 23 07 23.9 -0.4
FSK Fiskardo 1.28 185 P Pg 23 07 23.7 -0.6
FSK AML AML 23 07 47.0
comp=N,20111µm,0.5s
FSK AML AML 23 07 47.7
comp=E,29154µm,0.4s
PVO Paravola 1.28 150 P Pg 23 07 23.9 -0.5
LRSO Larissa Observ 1.29 92 P Pg 23 07 23.4 -1.2
MAKR Makrakomi, Fth 1.31 123 P Pg 23 07 24.6 -0.4
MAKR Makrakomi, Fth 1.31 123 P Pg 23 07 24.3 -0.7
MAKR AML AML 23 07 48.8
comp=E,40276µm,0.4s
MAKR AML AML 23 07 58.5
comp=N,31751µm,0.6s
OHR Ohrid 1.38 3 *e*Pg **Pg 23 07 26.4 +0.2**
OHR *e*Sg **Sg 23 07 47.8 +3.6**
OHR Ohrid 1.38 3 *i* Pn **Pg 23 07 26.1 -0.1**
LIT Litokhoron 1.41 74 Pn **Pb 23 07 24.9 -0.3**
LIT Litokhoron 1.41 74 P **Pg 23 07 25.6 -1.3**
LIT Litokhoron 1.41 74 P **Pb 23 07 24.9 -0.3**
LIT Litokhoron 1.41 74 P **Pb 23 07 25.0 -0.3**
KEF4 Livadi, Kephal 1.49 189 P **Pb 23 07 26.1 -0.5**
DMLN Damoulianata-K 1.52 190 P **Pb 23 07 26.8 -0.2**
DMLN S **Sg 23 07 49.2 +0.6**
comp=N,14µm,0.5s
VLS Valsamata 1.56 184 P **Pb 23 07 27.4 -0.3**
VLS Valsamata 1.56 184 P **Pb 23 07 27.0 -0.7**
VLS Valsamata 1.56 184 P **Pb 23 07 27.1 -0.7**
EFP Efpalio 1.60 144 P **Pg 23 07 30.0 -0.4**
EFP Efpalio 1.60 144 P **Pg 23 07 29.1 -1.3**
EFP AML AML 23 08 04.6
comp=N,11405µm,0.5s
EFP AML AML 23 08 08.4
comp=E,15862µm,0.8s
PSDA Pessada-Kefalo 1.62 184 P **Pb 23 07 28.1 -0.7**
PSDA S **Sg 23 07 52.4 +0.5**
comp=E,11µm,0.3s
SERG Sergoula 1.68 141 P **Pg 23 07 32.1 +0.1**
SERG Sergoula 1.68 141 P **Pb 23 07 30.5 +0.6**
TIR Tirane 1.74 338 ⇑P **Pg 23 07 31.2 -1.8**
TIR Tirane 1.74 338 **Pb 23 07 30.5 -0.3**
TIR Tirane 1.74 338 P **Pb 23 07 30.5 -0.3**
TIR Tirane 1.74 338 *e*Pn **Pg 23 07 31.0 -2.0**
TIR *e*Sn **Sg 23 07 55.2 -0.4**
TIR Tirane 1.74 338 P **Pg 23 07 31.0 -2.0**
baz=336
TIR S **Sg 23 07 57.5 +1.8**
baz=336
TIR AMP
comp=N,8.5nm,0.7s,baz=336
SCTE Santa Cesarea 1.76 282 Pb 23 07 29.6 -1.6
RLS Riolos of Patr 1.77 160 P **Pb 23 07 31.9 +0.5**
LAKA Lakka 1.79 146 P **Pg 23 07 32.5 -1.5**
AXAR Agios Charalam 1.79 122 P **Pg 23 07 32.7 -1.4**
ALIK Aliki, Aigiali 1.83 143 P **Pg 23 07 33.7 -1.1**
DRO Drossia 1.94 156 P **Pb 23 07 34.0 -0.3**
THE Thessaloniki 1.94 62 P **Pb 23 07 33.8 -0.5**
baz=60
THE S **Sg 23 08 00.0 -2.2**
baz=60
XOR Xorichti 1.95 100 P **Pb 23 07 33.6 -0.8**
PHP Peshkopia 1.96 354 P **Pb 23 07 34.5 -0.1**
baz=352
PHP S **Sg 23 08 03.5 +0.7**
baz=352
NEO Neokhori 1.99 102 P **Pb 23 07 34.2 -0.9**
HORT Hortiatis 2.02 64 P **Pn 23 07 33.7 +1.1**
LTHK Lithakia 2.02 177 P **Pb 23 07 35.0 -0.7**
KLV Kalavryta, Ach 2.03 146 P **Pb 23 07 35.7 -0.1**
LKR Lokris 2.08 121 P **Pb 23 07 35.7 -0.9**
VAY Valandovo 2.12 41 *e*Pn **Pb 23 07 35.5 -1.9**
VAY *e*Sn **Sb 23 08 04.0 +0.7**
VAY Valandovo 2.12 41 *i* Pn **Pn 23 07 35.2 +1.3**
KNT Kendrikon 2.19 49 P **Pn 23 07 35.9 +1.0**
STIP Stip 2.25 29 *i* Pn **Pb 23 07 39.2 -0.4**
SKO Skopje 2.30 14 *e*Pn **Pb 23 07 39.3 -1.1**
SKO *e*Sn **Sb 23 08 09.2 +0.7**
SKO Skopje 2.30 14 *i* Pn **Pb 23 07 39.6 -0.8**
LOUT Loutraki 2.48 134 P **Pb 23 07 41.4 -2.1**
ULC Ulcinj 2.49 334 *e*Pn **Pn 23 07 40.0 +1.0**
ULC *i* Sn **Sb 23 08 11.8 -2.1**
SRS Serrai 2.59 57 *e*Pn **Pn 23 07 41.7 +1.3**
SRS *e*Sn **Sn 23 08 13.7 +2.3**
DRME Dracevica, Mon 2.71 335 *e*Pn **Pn 23 07 43.0 +1.0**
DRME Dracevica, Mon 2.71 335 *e*Pn **Pn 23 07 43.2 +1.2**
DRME *i* Sn **Sb 23 08 17.1 -3.1**
ITM Ithomi 2.72 159 Pn **Pn 23 07 44.8 +2.6**
ITM Ithomi 2.72 159 P **Pn 23 07 44.6 +2.4**
KOKK Kokkinochori, 2.73 66 P **Pn 23 07 43.8 +1.4**
KYMI Kymi, Euboea I 2.85 112 P **Pn 23 07 46.2 +2.2**
NVR Nevrokopi 2.89 55 P **Pn 23 07 46.3 +1.8**
NVR S **Sn 23 08 21.3 +2.6**
comp=N,438nm,0.9s
PDG Podgorica 2.91 338 ⇓P **Pn 23 07 46.1 +1.4**
PDG Podgorica 2.91 338 Pn **Pn 23 07 45.5 +0.8**
TTG Podgorica 2.91 338 *e*Pn **Pn 23 07 45.8 +1.1**
TTG *i* Sn **Sn 23 08 22.0 +2.9**
BUM Brajici-Budva 2.91 332 *e*Pn **Pn 23 07 45.7 +0.9**
BUM *i* Sn **Sn 23 08 21.9 +2.6**

PVY Plav 2.91 349 *e*Pn **Pn 23 07 46.1 +1.2**
PVY *i* Sn **Sn 23 08 22.2 +2.8**
ATH Athens Observa 2.93 126 P **Pn 23 07 48.0 +3.0**
ATH S **Sn 23 08 22.9 +3.3**
comp=N,1µm,0.7s
ATHU Athens Univers 2.98 125 P **Pn 23 07 48.5 +2.8**
DION Dionisos Attik 3.01 122 P **Pn 23 07 49.1 +3.0**
DION S **Sn 23 08 24.6 +3.0**
comp=N,2µm,0.5s
KRND KRANIDI 3.03 140 P **Pn 23 07 48.4 +2.1**
TIP Timpagrande 3.11 261 ⇑S **Sn 23 08 25.0 +0.7**
TIP Timpagrande 3.11 261 Pn **Pn 23 07 48.2 +0.6**
CEME Cevo 3.12 335 *e*Pn **Pn 23 07 48.6 +0.9**
CEME *i* Sn **Sn 23 08 26.9 +2.5**
KAVA Kavala 3.16 65 P **Pn 23 07 49.5 +1.3**
HCY Herceg Novi 3.19 329 *e*Pn **Pn 23 07 48.5 -0.1**
HCY Herceg Novi 3.19 329 *e*Pn **Pn 23 07 49.6 +1.0**
HCY *i* Sn **Sn 23 08 28.5 +2.5**
BARS Barje 3.19 15 *e*Pn **Pn 23 07 50.9 +2.3**
IVA Berane 3.19 349 *e*Pn **Pn 23 07 50.0 +1.2**
IVA *i* Sn **Sn 23 08 29.0 +2.7**
MATE Matera 3.21 288 ⇓P **Pn 23 07 48.9 +0.1**
KOME Kolasin 3.24 344 ⇑*i* Pn **Pn 23 07 50.6 +1.2**
KOME *i* Sn **Sn 23 08 30.1 +2.6**
NKME Niksic 3.31 337 *e*Pn **Pn 23 07 51.4 +1.1**
NKME *i* Sn **Sn 23 08 31.5 +2.4**
VTS Vitosha 3.45 33 ⇓P **Pn 23 07 54.9 +2.5**
VTS ⇑S **Sn 23 08 36.6 +3.9**
VTS Vitosha 3.45 33 Pn **Pn 23 07 54.2 +1.9**
VTS Vitosha 3.45 33 P **Pn 23 07 54.2 +1.9**
SELS Selova 3.50 5 *e*Pn **Pn 23 07 55.0 +2.2**
SJES Sjenica 3.57 351 *e*Pn **Pn 23 07 55.5 +1.6**
UPM Unac-Piva 3.72 339 *e*Pn **Pn 23 07 58.0 +1.9**
UPM Unac-Piva 3.72 339 ⇑*i* Pn **Pn 23 07 57.2 +1.1**
UPM *i* Sn **Sn 23 08 41.7 +2.2**
PLE Pljevlja 3.73 345 ⇑*i* Pn **Pn 23 07 57.3 +1.2**
PLE *i* Sn **Sn 23 08 41.9 +2.4**
CUC Castrocucco 3.78 275 Pn **Pn 23 07 58.2 +1.4**
ZAPS Zavoj 3.82 22 *e*Pn **Pn 23 08 00.4 +3.1**
STON Ston 3.87 325 *e*Pn **Pn 23 07 55.8 -2.1**
KTHR Kythira 3.91 152 P **Pn 23 08 01.9 +3.4**
KTHA Kythira Island 3.94 151 P **Pn 23 08 01.6 +2.7**
RDO Rodhopi 3.94 67 Pn **Pn 23 08 00.1 +1.2**
RDO Rodhopi 3.94 67 P **Pn 23 08 00.2 +1.3**
BOVS Bovan 3.97 10 ⇑P **Pn 23 08 01.1 +1.8**
BOVS Bovan 3.97 10 *e*Pn **Pn 23 08 00.4 +1.1**
RUDO Rudo 4.01 346 *e*Pn **Pn 23 08 00.9 +1.0**
SIGR SIGRI 4.01 96 P **Pn 23 08 03.0 +3.1**
CEL Celeste 4.04 250 Pn 23 08 01.0 +0.7
KDZ Kurdzhali 4.05 60 P **Pn 23 08 01.8 +1.3**
GRUS Gruza 4.15 0 *e*Pn **Pn 23 08 03.5 +1.7**
BLKB Belogradchik 4.15 20 ⇑P **Pn 23 08 05.0 +3.1**
ZAGS Zajecar 4.23 15 *e*Pn **Pn 23 08 04.4 +1.5**
ALN Alexandroupoli 4.24 72 Pn **Pn 23 08 04.7 +1.7**
ALN Alexandroupoli 4.24 72 P **Pn 23 08 04.3 +1.3**
ALN Alexandroupoli 4.24 72 P **Pn 23 08 04.7 +1.7**
BBLS Lazići 4.24 347 *e*Pn **Pn 23 08 04.2 +1.1**
BBLS Lazići 4.24 347 *e*Pn **Pn 23 08 04.1 +1.0**
SGRT San Giovanni R 4.28 300 Pn **Pn 23 08 03.9 +0.2**
EZN Ezine 4.32 87 P **Pn 23 08 07.0 +2.8**
CHOS Chios island 4.37 106 P **Pn 23 08 07.8 +2.9**
ANKY Antikythira Is 4.37 151 P **Pn 23 08 07.6 +2.8**
ANKY S **Sn 23 08 59.4 +4.2**
comp=N,408nm,0.9s
DIVS Divibare 4.39 353 Pn **Pn 23 08 06.1 +0.9**
DIVS Divibare 4.39 353 *e*Pn **Pn 23 08 06.2 +1.0**
DIVS Divibare 4.39 353 *e*Pn **Pn 23 08 06.3 +1.0**
TRUS Trudelj 4.49 357 *e*Pn **Pn 23 08 08.2 +1.7**
HAPS Han Pijesak,BI 4.54 344 *e*Pn **Pn 23 08 07.7 +0.4**
APE Apeiranthos 4.62 124 ⇑P **Pn 23 08 11.0 +2.6**
APE Apeiranthos 4.62 124 P **Pn 23 08 10.9 +2.5**
APE Apeiranthos 4.62 124 P **Pn 23 08 11.0 +2.6**
APE Apeiranthos 4.62 124 Pn **Pn 23 08 09.8 +1.4**
KUBS Kucevo 4.73 8 *e*Pn **Pn 23 08 11.5 +1.7**
PAOL Paolisi 4.87 287 Pn 23 08 13.0 +1.2
TEKS Tekeris 4.89 350 *e*Pn **Pn 23 08 12.0 0.0**
TEKS Tekeris 4.89 350 *e*Pn **Pn 23 08 12.1 0.0**
SANT Santorini 5.03 130 ⇑P **Pn 23 08 16.1 +2.2**
SANT Santorini 5.03 130 Pn 23 08 16.4 +2.4
EDRB Edirne 5.04 60 P Pn 23 08 15.2 +1.2
KNDR Paliochora Ch 5.08 151 P **Pn 23 08 15.4 +0.9**
SRKY Kupres RS 5.08 330 *e*Pn **Pn 23 08 15.4 +0.8**
MDVR Moldovita 5.10 8 ⇓P **Pn 23 08 16.9 +2.0**
SMG Samos 5.20 111 P **Pn 23 08 19.5 +3.3**
SRE Strehaia 5.26 20 ⇓P **Pn 23 08 20.7 +3.6**
SRE Strehaia 5.26 20 P **Pn 23 08 20.6 +3.6**
HERR Herculane 5.29 13 ⇑P **Pn 23 08 19.9 +2.3**
DOB Doboj 5.36 340 *e*Pn **Pn 23 08 17.7 -0.7**
MGRS Mrkonjic Grad 5.40 331 *e*Pn **Pn 23 08 19.5 +0.5**
VAE Valguarnera 5.43 247 Pn **Pn 23 08 21.4 +2.0**
comp=N,5.4nm,0.3s,baz=122,slow=12,SNR=1.7
VAE Sn **Sn 23 09 22.3 +1.0**
comp=N,7.4nm,0.3s,baz=177,slow=18,SNR=3.0
FRGS Fruska Gora 5.46 353 *e*Pn **Pn 23 08 20.7 +0.9**
FRGS Fruska Gora 5.46 353 *e*Pn **Pn 23 08 20.7 +0.9**
IDI Anoyia 5.54 142 Pn **Pn 23 08 20.9 -0.1**
comp=N,5.0nm,0.3s,baz=318,slow=16,SNR=27
IDI Sn **Sn 23 09 22.5 -1.6**
comp=N,12nm,0.3s,baz=339,slow=18,SNR=7.1
IDI LR LR 23 11 14.7
comp=N,184nm,21.1s,baz=295,slow=46
comp=N,9.9nm,0.3s
RAFF Raffo Rosso 5.58 245 Pn 23 08 20.6 -0.9
INTR Introdacqua 5.64 296 Pn **Pn 23 08 23.1 +0.7**
BLY Banja Luka 5.65 334 *e*Pn **Pn 23 08 22.5 0.0**
HUMR Humele 5.74 32 ⇑P **Pn 23 08 25.9 +2.2**
BODT Bodrum 5.83 115 P **Pn 23 08 27.4 +2.5**
GZR Gura Zlata 5.86 14 ⇓P **Pn 23 08 27.8 +2.5**
GZR Gura Zlata 5.86 14 P **Pn 23 08 27.8 +2.5**
A052A Srbac 5.86 337 *e*Pn **Pn 23 08 25.6 +0.3**
BZS Buzias 5.92 6 ⇓P **Pn 23 08 28.2 +2.1**
BZS Buzias 5.92 6 P **Pn 23 08 28.2 +2.1**
A051A Mrakovica 5.98 333 *e*Pn **Pn 23 08 26.7 -0.3**
PRIJ Prijedor 6.02 332 *e*Pn Pn 23 08 22.4 -5.0
AQU L'Aquila 6.12 298 Pn 23 08 29.9 +1.0
AQU L'Aquila 6.12 298 P **Pn 23 08 29.9 +1.0**
LOT Lotru 6.14 21 ⇓P **Pn 23 08 31.5 +2.3**
CAMP Campotosto 6.18 299 Pn 23 08 30.7 +0.8
MANT Manisa 6.22 99 Pn **Pn 23 08 33.3 +2.7**
ARR Arges 6.33 26 ⇑P **Pn 23 08 33.8 +2.1**
NRCA Norcia 6.51 301 Pn 23 08 34.7 +0.5
VOIR 6.53 28 ⇓P **Pn 23 08 37.8 +3.2**
VOIR 6.53 28 P **Pn 23 08 37.8 +3.2**
KARP Karpathos 6.60 127 Pn **Pn 23 08 38.2 +2.6**
AMBH Ambrzfalva 6.61 0 P Pn 23 08 41.0 +5.4
KOVH Kovagotottos 6.63 344 P **Pn 23 08 36.8 +0.9**
MORH Mrgy, Hungar 6.65 347 P **Pn 23 08 36.5 +0.4**
CESX Cesi 6.78 298 Pn 23 08 39.2 +1.3
ARG Arkhangelos 6.83 119 Pn **Pn 23 08 40.9 +2.3**
ARG Arkhangelos 6.83 119 P **Pn 23 08 40.9 +2.3**
ISR Istrita 6.89 37 ⇑P **Pn 23 08 42.9 +3.3**
ISR Istrita 6.89 37 P **Pn 23 08 42.8 +3.3**
MLR Muntele Rosu 6.92 32 ⇓P **Pn 23 08 43.6 +3.6**
MLR Muntele Rosu 6.92 32 Pn **Pn 23 08 42.5 +2.5**
comp=N,16nm,0.7s,baz=224,slow=9.4
MLR Sn **Sn 23 09 58.3 0.0**
baz=291,slow=16
MLR Muntele Rosu 6.92 32 Pn **Pn 23 08 42.1 +2.1**
MLR Muntele Rosu 6.92 32 P **Pn 23 08 42.1 +2.1**
BOJS Bojanci 7.03 327 *e*Pn **Pn 23 08 40.4 -1.0**
BOJS Bojanci 7.03 327 *i* Pn **Pn 23 08 41.4 0.0**
MURB Monte Urbino 7.09 302 Pn 23 08 43.5 +1.3
DRGR 7.20 11 ⇑P **Pn 23 08 47.6 +3.8**
DRGR 7.20 11 P **Pn 23 08 47.6 +3.8**
CRES Cresnjev 7.21 329 *e*Pn **Pn 23 08 42.4 -1.4**
HARR Harsova 7.29 45 ⇓P **Pn 23 08 47.9 +2.9**
HARR Harsova 7.29 45 P **Pn 23 08 47.8 +2.9**
LATE Laterza 7.31 296 Pn **Pn 23 08 46.5 +1.2**
COVR Voineasa-Covas 7.32 32 ⇑P **Pn 23 08 48.8 +3.5**
BEHE Becsehely 7.32 338 P **Pn 23 08 48.5 +3.1**
TIRR Tirgusor 7.42 48 Pn **Pn 23 08 47.3 +0.6**
TIRR Tirgusor 7.42 48 P **Pn 23 08 47.3 +0.6**
TIH Tihany 7.45 345 P **Pn 23 08 47.9 +0.8**
BORA Eskisehir 7.50 86 Pn **Pn 23 08 49.8 +1.9**
PLOR Plostina 7.51 34 ⇓P **Pn 23 08 52.0 +4.0**
PLOR Plostina 7.51 34 P **Pn 23 08 51.9 +4.0**
VRI Vrincioaia 7.55 34 ⇑P **Pn 23 08 52.4 +3.8**
VRI Vrincioaia 7.55 34 P **Pn 23 08 52.3 +3.8**
BSZH Besenyszg 7.57 358 P Pn 23 08 58.5 +10
CEY Cerknica 7.58 324 *e*Pn **Pn 23 08 48.6 -0.3**

SKDS Skadanscina 7.62 322 *e*Pn **Pn 23 08 48.5 -1.0**
SKDS Skadanscina 7.62 322 *i* Pn **Pn 23 08 48.8 -0.8**
CFR Carcaliu 7.72 43 ⇑P **Pn 23 08 53.7 +2.8**
CFR Carcaliu 7.72 43 P **Pn 23 08 53.6 +2.8**
MPLH Magyarpolny 7.78 344 P **Pn 23 08 53.0 +1.3**
ELL Elmali 7.82 110 Pn 23 08 53.7 +1.3
ELL Elmali 7.82 110 P **Pn 23 08 53.7 +1.3**
CSKK Cskako 7.83 348 P Pn 23 08 57.5 +5.1
AKAS Kas 7.84 114 Pn 23 08 55.1 +2.5
BUD Budapest 7.84 352 P **Pn 23 08 53.8 +1.3**
KSL Kastellorizon 7.87 114 P Pn 23 08 59.0 +6.2
CASP Castiglione de 8.02 296 Pn **Pn 23 08 55.8 +0.8**
OSSC Osservatorio P 8.04 301 Pn **Pn 23 08 54.2 -1.0**
TESR Tescani 8.04 31 ⇓P **Pn 23 08 58.2 +3.0**
EGYH Egyhazaskeszo 8.06 343 P Pn 23 09 00.9 +5.5
MDUB Mudurnu 8.07 81 Pn **Pn 23 08 57.9 +2.2**
SOKA Soboth 8.08 331 *i* Pn **Pn 23 08 55.7 -0.2**
comp=N,4.3nm,0.5s,SNR=23
OBKA Obir 8.13 328 *e*Pn **Pn 23 08 56.2 -0.4**
OBKA Obir 8.13 328 *i* Pn **Pn 23 08 56.8 +0.2**
comp=N,2.3nm,0.4s,SNR=15
OBKA *e*Sn **Sn 23 10 26.4 -1.5**
comp=N,8.9nm,0.6s
VLDR Vladesti 8.16 39 ⇑P **Pn 23 09 00.8 +4.0**
PSZ Piszkesteto 8.20 356 ⇑P **Pn 23 08 59.3 +1.8**
PSZ Piszkesteto 8.20 356 Pn **Pn 23 08 58.2 +0.7**
PSZ Piszkesteto 8.20 356 P **Pn 23 08 58.2 +0.7**
PSZ Piszkesteto 8.20 356 P **Pn 23 08 59.9 +2.4**
ARSA Arzberg 8.40 335 *e*Pn **Pn 23 09 00.2 0.0**
comp=N,2.4nm,0.6s,SNR=6.9
TRPA Tarpa 8.50 8 ⇑P **Pn 23 09 04.8 +3.3**
TRPA Tarpa 8.50 8 P Pn 23 09 07.1 +5.7
BUR01 Bucovina Ar. S 8.52 21 ⇓P **Pn 23 09 05.5 +3.6**
BURAR Bucovina Array 8.52 21 Pn **Pn 23 09 03.6 +1.7**
BUR08 Bucovina Ar. S 8.55 21 Pn 23 09 03.5 +1.2
ABAH Abaujker 8.57 2 P **Pn 23 09 06.9 +4.5**
RONA Rosalia, Austr 8.58 340 *i* Pn **Pn 23 09 04.7 +2.1**
comp=N,0.8nm,0.4s
ZCCA Zocca 8.59 306 Pn 23 09 03.7 +0.9
MYKA Terra Mystica 8.61 325 *i* Pn **Pn 23 09 02.7 -0.4**
comp=N,1.5nm,0.3s
MYKA *e*Sn **Sn 23 10 36.1 -3.5**
comp=N,4.6nm,0.6s
TEOL Teolo 8.72 313 Pn 23 09 03.2 -1.4
KECS Kecovo 8.75 359 *e*P **Pn 23 09 07.2 +2.3**
STAL STALIGIAL 8.77 321 Pn 23 09 04.1 -1.1
CLUD Cludinico 8.83 322 Pn 23 09 05.5 -0.6
VYHS Vyhne 8.86 352 *e*P **Pn 23 09 08.7 +2.2**
VYHS *e* 23 10 44.3
VLC Villacollemand 8.87 303 Pn **Pn 23 09 06.9 +0.2**
CONA Conrad Observa 8.91 338 *e*Pn **Pn 23 09 08.0 +0.8**
comp=N,0.1nm,0.2s
UZH Uzhgorod 8.97 7 *e*P **Pn 23 09 09.0 +1.1**
MODS Modra-Piesok 8.98 345 *e*P Pn 23 09 15.2 +7.1
SLUM Salum 9.00 155 P **Pn 23 09 06.6 -1.8**
baz=159
SLUM S Sn 23 10 37.7 -12
baz=159
KBA Koelnbreinsper 9.09 326 P **Pn 23 09 10.4 +0.7**
KBA Koelnbreinsper 9.09 326 *e*Pn **Pn 23 09 10.4 +0.7**
comp=N,3.5nm,0.4s,SNR=5.0
KBA *e*Sn **Sn 23 10 49.0 -2.5**
comp=N,1.4nm,0.4s
CTI Castel Tesino 9.16 316 Pn 23 09 09.8 -0.9
CTI Castel Tesino 9.16 316 P **Pn 23 09 09.8 -0.9**
CRVS Cervenica-Dubn 9.18 3 *e*P **Pn 23 09 15.3 +4.4**
ABTA Abfaltersbach 9.21 322 *i* Pn **Pn 23 09 10.8 -0.6**
comp=N,0.5nm,0.3s,SNR=8.3
ABTA *e*Sn **Sn 23 10 50.6 -3.8**
comp=N,5.7nm,0.5s
KOLS Kolonicke sedl 9.26 6 *e*P **Pn 23 09 16.0 +4.0**
PGF Pioggiola 9.28 291 *e*P **Pn 23 09 13.6 +1.4**
MILM Milestii Mici 9.29 37 *e*P **Pn 23 09 14.0 +1.7**
MILM *e*S **Sn 23 10 58.0 +1.8**
MILM *e*L L 23 12 57.0
MILM LRM MLR 23 13 46.0
comp=N,700nm,13.5s
MILM Milestii Mici 9.29 37 *e*P **Pn 23 09 14.0 +1.7**
MILM *e*S **Sn 23 10 58.0 +1.8**
MILM MLR MLR
comp=Z,700nm,13.5s
KIS Kishinev 9.35 36 *e* Pn 23 09 21.0 +7.9
KIS *e*L L 23 13 11.0
KIS LRM MLR 23 13 46.0
comp=Z,300nm,11.0s
MOA Molln 9.35 332 *e*Pn **Pn 23 09 14.5 +1.2**
comp=Z,3.5nm,0.4s,SNR=8.0
MOA *e*Sn **Sn 23 10 56.1 -1.7**
comp=Z,2.7nm,0.5s
JAVC Velka Javorina 9.38 348 *e*PN Pn 23 09 19.4 +5.8
BIOA Bad Ischl, Aus 9.46 330 *e*Pn **Pn 23 09 15.4 +0.7**
comp=Z,4.5nm,0.4s,SNR=7.1
SALO Salr 9.53 311 Pn **Pn 23 09 14.4 -1.3**
KRUC Moravsky 9.82 343 *e*PN Pn 23 09 25.1 +5.5
MAUC Maruska 9.85 349 *e*PN **Pn 23 09 21.6 +1.6**
KEST Kesra 9.85 250 Pn **Pn 23 09 21.6 +1.5**
comp=Z,0.5nm,0.3s,baz=36,slow=5.3,SNR=8.2
KEST Sn **Sn 23 11 10.3 +0.1**
comp=Z,0.3nm,0.3s,baz=231,slow=14,SNR=1.4
KEST LR LR 23 14 11.7
comp=Z,225nm,20.1s,baz=3.0,slow=44
comp=Z,9.3nm,0.9s
MATC Matruh 9.91 146 P **Pn 23 09 18.6 -2.2**
baz=149
BR131 Keskin Array S 9.96 86 Pn 23 09 23.9 +2.2
BR131 Keskin Array S 9.96 86 P **Pn 23 09 23.9 +2.2**
BRTR Keskin Array B 9.96 86 Pn **Pn 23 09 25.8 +4.1**
comp=Z,0.6nm,0.3s,baz=265,slow=12,SNR=17
BRTR Sn **Sn 23 11 12.6 -0.2**
comp=Z,0.1nm,0.3s,baz=234,slow=12,SNR=1.3
BRTR LR LR 23 13 50.9
comp=Z,391nm,18.1s,baz=277,slow=42
WTTA Wattenberg 10.00 322 P **Pn 23 09 21.9 -0.3**
WTTA Wattenberg 10.00 322 *e*Pn **Pn 23 09 21.9 -0.3**
comp=Z,5.3nm,0.5s,SNR=22
WTTA *i* Sn **Sn 23 11 10.0 -4.0**
comp=Z,4.3nm,0.5s
VRAC Vranov 10.01 344 Pn **Pn 23 09 22.8 +0.6**
comp=Z,0.1nm,0.3s,baz=176,slow=15,SNR=1.7
VRAC LR LR 23 14 08.6
comp=Z,334nm,20.1s,baz=169,slow=43
comp=Z,0.9nm,0.4s
VRAC Vranov 10.01 344 *e*PN Pn 23 09 27.5 +5.3
WATA Walderalm 10.08 322 *i* Pn **Pn 23 09 23.8 +0.5**
comp=Z,1.1nm,0.3s,SNR=6.8
WATA *e*Sn **Sn 23 11 11.5 -4.3**
comp=Z,2.1nm,0.4s
CKRC Cesky Krumlov 10.17 335 *e*PN **Pn 23 09 25.9 +1.4**
SQTA Sankt Quirin 10.18 320 *i* Pn **Pn 23 09 25.2 +0.6**
comp=Z,1.3nm,0.3s,SNR=8.7
SQTA *e*Sn **Sn 23 11 14.6 -3.6**
comp=Z,4.2nm,0.4s
FUORN Ofenpass-Fuorn 10.27 315 Pn 23 09 26.0 0.0
FETA Feichten 10.28 318 *e*Pn **Pn 23 09 27.1 +1.0**
comp=Z,0.3nm,0.3s,SNR=5.2
FETA *e*Sn **Sn 23 11 17.6 -3.2**
comp=Z,2.0nm,0.6s
MORC Moravsky Berou 10.29 348 Pn 23 09 27.0 +0.9
MORC Moravsky Berou 10.29 348 P **Pn 23 09 27.0 +0.9**
MORC Moravsky Berou 10.29 348 *e*PN Pn 23 09 33.4 +7.3
MOTA Moosalm 10.31 321 *e*Pn **Pn 23 09 27.0 +0.5**
comp=Z,2.9nm,0.4s,SNR=14
MOTA *e*Sn **Sn 23 11 18.2 -3.4**
comp=Z,10nm,0.8s
GEC2 GERESS Array S 10.40 333 Pn 23 09 27.8 +0.1
GERES GERESS Array B 10.40 333 Pn **Pn 23 09 27.7 +0.1**
comp=Z,0.5nm,0.3s,baz=157,slow=14,SNR=19
GERES Sn **Sn 23 11 20.2 -3.3**
comp=Z,0.6nm,0.3s,baz=153,slow=24,SNR=4.7
comp=Z,0.9nm,0.4s
GERES GERESS Array B 10.40 333 Pn **Pn 23 09 28.0 +0.4**
DAVOX Davos/Dischmat 10.58 315 Pn **Pn 23 09 31.4 +1.2**
comp=Z,1.3nm,0.3s,baz=114,slow=16,SNR=27
DAVOX Sn **Sn 23 11 27.3 -0.7**
comp=Z,0.6nm,0.3s,baz=341,slow=24,SNR=2.5
DAVOX LR LR 23 14 27.1
comp=Z,125nm,22.0s,baz=108,slow=43
comp=Z,5.5nm,0.5s
RETA Reutte 10.58 320 *i* Pn **Pn 23 09 30.2 +0.1**
comp=Z,0.7nm,0.4s,SNR=4.2
RETA *e*Sn **Sn 23 11 24.7 -3.3**
comp=Z,3.9nm,0.6s
KHC Kasperske Hory 10.69 334 Pn 23 09 31.5 +0.1
KHC Kasperske Hory 10.69 334 *e*P **Pn 23 09 31.9 +0.4**
KHC *e* 23 11 28.8

KHC MLR MLR
comp=Z,600nm,10.2s
KHC Kasperske Hory 10.69 334 *e*PN **Pn 23 09 31.9 +0.4**
KHC *ex* x 23 09 39.5
KHC *e*Sn **Sn 23 11 28.8 -1.7**
KHC AMS AMS 23 14 10.0
comp=Z,600nm,10.2s
KRLC Kraliky 10.71 346 *e*P **Pn 23 09 32.7 +0.9**
KRLC Kraliky 10.71 346 *e*PN **Pn 23 09 32.7 +0.9**
SBF Sospel 10.74 297 *e*P **Pn 23 09 34.9 +2.7**
SBF *e*Sn Sn 23 11 20.8 -11
comp=Z,2.1nm,0.3s
DAVA Damuels 10.90 317 *i* Pn **Pn 23 09 35.9 +1.4**
comp=Z,0.6nm,0.2s
DAVA *e*Sn **Sn 23 11 33.1 -2.7**
comp=Z,6.4nm,0.5s
DPC Dobruska-Polom 11.06 345 *e*P **Pn 23 09 37.6 +1.0**
DPC MLR MLR
comp=Z,600nm,14.0s
DPC Dobruska-Polom 11.06 345 *e*PN **Pn 23 09 37.6 +1.0**
DPC AMS AMS 23 14 40.0
comp=Z,600nm,14.0s
CSS Mathiatis 11.11 111 Pn **Pn 23 09 39.4 +2.0**
CSS Mathiatis 11.11 111 Pn Pn 23 09 32.8 -4.5
PRU Pruhonice 11.14 339 AMS AMS 23 14 20.0
comp=Z,400nm,14.0s
SWA2 11.17 158 P **Pn 23 09 35.6 -2.5**
baz=162
LMR La Mourre 11.24 293 *e*P **Pn 23 09 39.8 +0.8**
LMR *e*Sn Sn 23 11 33.7 -10
comp=Z,0.3nm,0.4s
UPC Upice 11.27 344 AMS AMS 23 14 30.0
comp=Z,500nm,13.9s
OSTC Ostas 11.28 345 AMS AMS 23 14 30.0
comp=Z,500nm,13.8s
CHVC Chvalec 11.34 345 AMS AMS 23 14 30.0
comp=Z,400nm,14.5s
MBDF Montbardon 11.47 300 *e*P **Pn 23 09 44.7 +2.3**
MBDF *e*Sn Sn 23 11 37.2 -13
comp=Z,1.4nm,0.3s
BNI Bardonecchia 11.65 302 Pn **Pn 23 09 45.0 +0.1**
BNI Bardonecchia 11.65 302 P **Pn 23 09 45.0 +0.1**
LPG La Plagne 11.78 304 *e*Pn **Pn 23 09 44.0 -2.7**
LPG La Plagne 11.78 304 *e*P **Pn 23 09 50.0 +3.3**
LPG *e*Sn Sn 23 11 43.1 -15
comp=Z,14nm,0.6s
LPL La Plagne 11.80 304 *e*Pn **Pn 23 09 44.6 -2.4**
LPL La Plagne 11.80 304 *e*P **Pn 23 09 49.7 +2.7**
LPL *e*Sn Sn 23 11 43.7 -14
comp=Z,20nm,0.6s
SENIN Lac Senin/Sane 11.83 308 Pn **Pn 23 09 46.8 -0.6**
SMRF Simiane la Rot 12.06 295 *e*P **Pn 23 09 52.9 +2.6**
ORIF Oris-en-Rattie 12.14 300 *e*P **Pn 23 09 54.2 +2.8**
ORIF *e*Sn Sn 23 11 55.0 -11
comp=Z,4.8nm,0.6s
BFO Black Forest 12.37 318 **Pn 23 09 53.4 -1.0**
BFO Black Forest 12.37 318 P **Pn 23 09 53.4 -1.0**
AKASG Malin Array Be 12.49 26 Pn **Pn 23 09 58.8 +2.7**
comp=Z,0.3nm,0.3s,baz=211,slow=13,SNR=4.4
CABF La Chapelle 12.69 308 *e*Pn **Pn 23 09 56.9 -2.0**
CABF *e*Sn Sn 23 12 06.9 -13
comp=Z,6.3nm,0.6s
CLL Collm 12.77 338 *e*P **Pn 23 09 56.0 -3.8**
CLL Collm 12.77 338 *e*P **Pn 23 10 01.0 +1.2**
CLL *es*PP 23 10 12.0
CLL *i* sPPP 23 10 20.2
CLL *i* x x 23 10 31.0
CLL LmV 23 15 00.0
comp=N,200nm,19.4s
CLL LmV 23 15 00.0
comp=E,100nm,20.7s
CLL Lmax 23 15 00.0
CLL Collm 12.77 338 *e*PP Pn 23 10 12.0 +12
HINF Hinteralfeld 12.86 313 *e*Pn **Pn 23 09 59.7 -1.4**
HINF *e*Sn Sn 23 12 09.0 -15
comp=E,4.8nm,0.5s
VIVF Saint-Julien-l 12.93 299 *e*P **Pn 23 10 03.5 +1.4**
VIVF *e*Sn Sn 23 12 12.8 -13
comp=E,0.7nm,0.4s
CDF Champ du Feu 12.97 316 *e*Pn **Pn 23 10 02.6 -0.1**
CDF *e*Sn Sn 23 12 14.2 -12
comp=E,1.0nm,0.3s
RYAN Fayoum 13.23 141 P **Pn 23 10 02.8 -3.5**
baz=143
HAU Haudompre 13.24 313 *e*Pn **Pn 23 10 04.9 -1.5**
HAU *e*Sn Sn 23 12 18.2 -15
comp=E,17nm,0.7s
HNTI Hanita 13.40 115 Pn **Pn 23 10 04.3 -4.3**
GLL Jalalah 13.57 135 P Pn 23 10 06.4 -4.6
baz=137
MMA0 Mount Meron ar 13.59 115 Pn Pn 23 10 06.5 -4.8
MMAI Mount Meron Ar 13.59 115 Pn **Pn 23 10 10.8 -0.5**
comp=E,1.1nm,0.3s,baz=308,slow=12,SNR=8.4
MMAI Sn **Sn 23 12 37.5 -4.3**
comp=E,0.9nm,0.3s,baz=297,slow=19,SNR=1.5
comp=E,0.8nm,0.3s
GEM Giv'at Ha'Em 13.67 114 Pn Pn 23 10 07.2 -5.1
PAGF Fort de Pagny 13.89 314 *e*Pn **Pn 23 10 14.1 -1.2**
SALP Salfit 13.99 119 Pn **Pn 23 10 12.6 -4.2**
SUZ Suez 14.01 131 P **Pn 23 10 13.4 -3.5**
baz=133
HFRF Wahat Farafira 14.05 151 P **Pn 23 10 13.4 -4.2**
baz=154
SFTF Sexfontaines 14.09 312 *e*Pn **Pn 23 10 15.9 -2.1**
baz=133
SMF Signal de Mont 14.10 305 *e*Pn **Pn 23 10 15.4 -2.7**
SMF *e*Sn Sn 23 12 40.7 -13
comp=E,7.5nm,0.6s
HMDT Nahal Hemdat 14.11 117 Pn **Pn 23 10 14.0 -4.3**
MEZF Maizieres J'vi 14.24 313 *e*Pn **Pn 23 10 17.8 -2.2**
baz=136
SAVF Savonnieres en 14.26 314 *e*Pn **Pn 23 10 20.4 +0.1**
baz=134
SAVF *e*Sn Sn 23 12 44.3 -13
comp=E,0.5nm,0.3s
LOR Lormes 14.35 307 *e*Pn **Pn 23 10 18.7 -2.8**
baz=120
LOR *e*Sn Sn 23 12 46.8 -13
comp=E,5.5nm,0.4s
YTIR Yattir 14.38 121 Pn Pn 23 10 17.6 -4.5
DSI Dead Sea 14.43 120 Sn **Sn 23 12 58.7 -3.3**
AVF Avril sur Loir 14.47 305 *e*Pn **Pn 23 10 19.7 -3.4**
AVF *e*Sn Sn 23 12 44.7 -18
SSF Saint Saulge 14.48 306 *e*Pn **Pn 23 10 20.9 -2.4**
SSF *e*Sn Sn 23 12 50.2 -13
comp=E,4.1nm,0.5s
BGF Bois d'Agland 14.70 303 *e*Pn **Pn 23 10 25.4 -0.9**
BGF *e*Sn Sn 23 12 55.2 -13
comp=E,3.2nm,0.4s
GHAJ Ghor Haditha 14.72 120 Pn **Pn 23 10 24.9 -1.7**
GHAJ Ghor Haditha 14.72 120 Pn Pn 23 10 21.4 -5.2
KRMI Paran Flat 14.95 126 Pn **Pn 23 10 26.0 -3.8**
PRNI Paran 14.97 124 Pn Pn 23 10 25.4 -4.6
PRNI Sn **Sn 23 13 12.1 -3.2**
TCF Toulx Ste Croi 15.02 302 *e*Pn **Pn 23 10 28.2 -2.5**
TCF *e*Sn Sn 23 13 03.5 -13
comp=E,0.3nm,0.2s
ASF Jabal al Asfar 15.11 115 Pn **Pn 23 10 31.7 -0.3**
comp=E,0.1nm,0.3s,baz=280,slow=15,SNR=2.5
comp=E,0.9nm,0.5s
MBRI Mt Berech 15.29 126 Pn **Pn 23 10 30.5 -3.9**
EIL Elat 15.40 126 Pn **Pn 23 10 34.9 -0.8**
comp=E,0.7nm,0.3s,baz=360,slow=3,0,SNR=11
EIL Sn **Sn 23 13 19.3 -6.6**
comp=E,0.6nm,0.3s,baz=18,slow=18,SNR=1.8
EIL LR LR 23 18 35.1
comp=E,79nm,19.8s,baz=236,slow=45
comp=E,3.1nm,0.5s
EIL Elat 15.40 126 Pn **Pn 23 10 30.8 -5.0**
HKAT Jabal Katrina 15.66 132 P **Pn 23 10 36.0 -3.3**
baz=134
NACGM Naroch 15.71 13 *e*P **Pn 23 10 40.8 +1.2**
HDK1 Dakhla 15.92 150 P **Pn 23 10 39.7 -2.7**
baz=153
PABE Paberze 15.93 7 **Pn 23 10 42.2 -0.1**
PABE IAmb IAmb 23 10 51.6
comp=Z,51nm,1.1s
PABE Paberze 15.93 7 *e*P **Pn 23 10 42.6 +0.3**
IIGN Ignalina 16.05 11 *e*P **P 23 10 45.7 -1.6**
ISAL Salakas 16.25 11 *e*P **Pn 23 10 47.0 +0.5**
GURO Guroymak-BITLI 16.58 87 **P 23 10 53.0 -0.4**
MFF Saint Martin d 16.67 301 *e*P **P 23 10 54.6 +0.4**
KIV Kislovodsk 16.89 68 *e*P **Pn 23 10 56.0 +1.1**
KIV pmax pmax
comp=Z,5.0nm,1.1s

KBZ Khabaz 17.02 69 P **P 23 10 57.8 -0.3**
comp=Z,0.1nm,0.3s,baz=120,slow=11,SNR=2.0
comp=Z,1.1nm,0.5s
VSR Storozhevoye 17.24 42 *e*P **P 23 11 01.8 +1.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s
GOF Gofitskoye 17.31 65⇑ *e*P P 23 11 12.6 +11
LDF La Druitiere 17.33 308 *e*P **P 23 11 02.4 +0.9**
VORR Voronezh 17.53 41 *e*P **Pn 23 10 59.0 -3.6**
VORR pmax pmax
comp=Z,20nm,0.3s
FLN La Foliniere 17.62 308 *e*P **P 23 11 07.7 +3.1**
baz=132
GRR Gorron 17.71 306 *e*P **P 23 11 09.6 +4.0**
LPSR Galich'ya Gora 17.95 38 *e*P **Pn 23 11 06.8 -1.0**
LPSR pmax pmax
comp=Z,20nm,1.0s
GNI Garni 18.42 81 P **P 23 11 13.8 +0.1**
comp=Z,3.4nm,0.7s,baz=271,slow=20,SNR=2.6
GNI LR LR 23 18 33.7
comp=Z,91nm,20.4s,baz=224,slow=38
OBN Obninsk 18.68 29 P **P 23 11 16.1 -0.2**
comp=Z,0.5nm,0.3s,baz=96,slow=20,SNR=1.7
OBN LR LR 23 19 26.9
comp=Z,106nm,18.1s,baz=188,slow=40
comp=Z,3.6nm,0.8s
OBN Obninsk 18.68 29 P **P 23 11 15.9 -0.4**
OBN Obninsk 18.68 29 *d i P* **Pn 23 11 16.9 +0.2**
OBN pmax pmax
comp=Z,12nm,0.7s
OBN MLR MLR
comp=Z,360nm,17.0s
ESBB Sonseca Array 18.98 278 P **P 23 11 19.4 -0.4**
ESDC Sonseca Array 18.98 278 P **Pn 23 11 20.5 0.0**
comp=Z,0.1nm,0.3s,baz=74,slow=11,SNR=14
ESDC LR LR 23 18 46.4
comp=Z,76nm,18.4s,baz=106,slow=37
comp=Z,0.8nm,0.5s
ESDC Sonseca Array 18.98 278 P **Pn 23 11 20.2 -0.3**
QUIF Quistinic 19.02 303 *e*Pn **Pn 23 11 25.3 +4.5**
MTSE Matsula 19.10 5 *e*P **Pn 23 11 21.9 +0.2**
VSU Vasula 19.14 10 *e*P **P 23 11 20.9 -0.3**
PAB San Pablo 19.29 277 P **P 23 11 23.5 +0.3**
PAB San Pablo 19.29 277 P **P 23 11 23.5 +0.3**
PAB pmax pmax
comp=Z,17nm,1.4s
MOS Moscow 19.55 29 *e*P **P 23 11 25.3 -0.5**
MOS pmax pmax
comp=Z,100nm,1.0s
MOS pmax pmax
comp=Z,42nm,0.9s
UPP Uppsala 20.24 355 *e*P **P 23 11 32.5 -0.7**
MAK Makhachkala 20.34 72 *e*P **P 23 11 32.6 -1.9**
MAK *e*S **S 23 15 19.8 -1.7**
MAK pmax pmax
comp=Z,157nm,0.9s
MAK MLR MLR
comp=Z,57nm,14.0s
SNART Snartemo 20.54 339 *e*P **P 23 11 35.9 -0.6**
MEF Metsahovi 20.64 5 *e*P **P 23 11 37.2 -0.3**
HFS Hagfors 20.89 350 P **P 23 11 39.5 -0.8**
comp=Z,6.3nm,0.6s,baz=155,slow=11,SNR=20
HFS LR LR 23 20 22.9
comp=Z,117nm,18.8s,baz=154,slow=39
comp=Z,6.3nm,0.6s
OSL Oslo 21.18 346 *e*P **P 23 11 42.8 -0.6**
TAM Tamanrasset 21.25 222 P **P 23 11 45.4 +0.7**
TAM Tamanrasset 21.25 222 P **P 23 11 45.4 +0.7**
TAM pmax pmax
comp=Z,9.0nm,1.3s
RAF Rauma 21.32 1 *e*P **P 23 11 43.7 -1.3**
MDT Midelt 21.51 259 P **P 23 11 47.9 +0.5**
comp=Z,2.1nm,0.8s,baz=2.7,slow=9.0,SNR=4.7
MDT LR LR 23 20 02.0
comp=Z,70nm,18.1s,baz=118,slow=36
comp=Z,2.1nm,0.8s
BLS5 Blasjo 21.68 340 *e*P **P 23 11 49.0 +0.2**
NC602 NORSAR Array S 21.79 348 *e*P **P 23 11 49.0 -0.9**
NC602 IAmb IAmb 23 11 58.9
comp=Z,30nm,0.9s
PESTR Estremoz 21.89 277 P **P 23 11 50.2 -1.1**
FINES FINESS Array B 21.99 7 P **P 23 11 50.9 -1.2**
comp=Z,6.5nm,0.6s,baz=173,slow=12,SNR=34
FINES LR LR 23 20 45.9
comp=Z,109nm,18.2s,baz=198,slow=38
comp=Z,6.5nm,0.6s
FINES FINESS Array B 21.99 7 P **P 23 11 50.7 -1.4**
FIA1 FINESS Array S 21.99 7 P **P 23 11 50.9 -1.2**
FIA1 IAmb IAmb 23 12 03.0
comp=Z,16nm,0.7s
NC405 NORSAR Array S 22.12 348 P **P 23 11 52.8 -0.8**
NB2 NORSAR Subarra 22.13 348 P **P 23 11 52.8 -0.9**
comp=Z,49nm,1.2s,baz=163,slow=11
NB2 NORSAR Subarra 22.13 348 P **P 23 11 52.8 -0.9**
baz=163,slow=11
NOA NORSAR Array B 22.13 348 P **P 23 11 53.0 -0.7**
comp=Z,4.4nm,0.8s,baz=165,slow=10,SNR=20
NOA LR LR 23 21 07.3
comp=Z,84nm,21.1s,baz=165,slow=38
comp=Z,4.4nm,0.8s
EKA Eskdalemuir Ar 22.27 322 P **P 23 11 55.0 -0.2**
comp=Z,2.6nm,0.6s,baz=123,slow=10,SNR=14
comp=Z,2.6nm,0.6s
ESK Eskdalemuir 22.28 322 P **P 23 11 53.8 -1.5**
ESK Eskdalemuir 22.28 322 P **P 23 11 53.8 -1.5**
ESK pmax pmax
comp=Z,43nm,1.4s
PVAQ Vaqueiros 22.32 273 P **P 23 11 54.4 -1.5**
SKAR Skarslia 22.35 344 *e*P **P 23 11 56.4 +0.4**
BER Bergen 22.80 340 *e*P **P 23 12 00.9 +0.2**
DOMB Dombas 23.44 346 *e*P **P 23 12 07.6 +0.3**
KLMR Klimovskoe 24.14 23 *e*P **P 23 12 15.6 +1.6**
KLMR pmax pmax
comp=Z,14nm,1.0s
KLMR Klimovskoe 24.14 23 *e* **P 23 12 15.7 +1.7**
KLMR AMP 23 12 21.9
comp=Z,14nm,1.0s
KIRV Kirov 26.28 35 P **P 23 12 31.9 -1.5**
comp=Z,3.4nm,0.5s,baz=237,slow=9.7,SNR=2.2
KIRV LR LR 23 23 31.0
comp=Z,187nm,20.6s,baz=260,slow=38
comp=Z,3.4nm,0.5s
RAYN Ar Rayn 26.46 120 P **P 23 12 35.9 +0.5**
RAYN Ar Rayn 26.46 120 P **P 23 12 35.9 +0.5**
RAYN pmax pmax
comp=Z,3.0nm,0.9s
AKTO Aktyubinsk 28.15 55 P **P 23 12 50.3 0.0**
comp=Z,1.2nm,0.4s,baz=244,slow=5.9,SNR=7.6
comp=Z,1.2nm,0.4s
GEYT Alibeck 29.06 81 P **P 23 12 58.4 -0.1**
comp=Z,1.6nm,0.6s,baz=292,slow=7.8,SNR=3.9
comp=Z,1.6nm,0.6s
GEYT Alibeck 29.06 81 P **P 23 12 59.2 +0.7**
GYA0B ALIBECK ARRAY 29.06 81 P **P 23 12 59.8 +1.3**
GYA0B IAmb IAmb 23 13 13.9
comp=Z,3.2nm,0.7s
ABKAR Abkulak array 29.27 58 P **P 23 13 00.6 +0.4**
ABKAR Abkulak array 29.27 58 P **P 23 13 00.3 +0.2**
KTK1 Kautokeino 29.37 2 *e*P **P 23 13 00.2 -0.7**
ARU Arti 29.81 43 P **P 23 13 05.2 +0.2**
comp=Z,1.7nm,0.4s,baz=252,slow=12,SNR=6.0
ARU LR LR 23 25 45.4
comp=Z,79nm,21.5s,baz=312,slow=38
comp=Z,1.7nm,0.4s
ARU Arti 29.81 43 P **P 23 13 05.0 +0.1**
ARU IAmb IAmb 23 13 14.8
comp=Z,10nm,1.5s
ARCES ARCESS Array B 29.97 3 P **P 23 13 04.8 -1.4**
comp=Z,3.6nm,0.8s,baz=191,slow=9.9,SNR=19
ARCES LR LR 23 25 33.6
comp=Z,87nm,18.3s,baz=270,slow=37
comp=Z,3.6nm,0.8s
ARCES ARCESS Array B 29.97 3 P **P 23 13 04.7 -1.5**
TOA0 Torodi Ar. Sit 31.34 218 P **P 23 13 19.2 +0.3**
TOA0 IAmb IAmb 23 13 20.0
comp=Z,5.4nm,0.7s
TORD Torodi Ar. Bea 31.34 218 P **P 23 13 19.1 +0.2**
comp=Z,6.6nm,0.7s,baz=33,slow=9.4,SNR=45
comp=Z,6.6nm,0.7s
TORD Torodi Ar. Bea 31.34 218 P **P 23 13 18.9 +0.1**
TORD IAmb IAmb 23 13 20.5
comp=Z,5.7nm,1.1s
KOWA Kowa 33.20 228 P **P 23 13 34.4 -0.7**
comp=Z,1.3nm,0.6s,baz=28,slow=22,SNR=3.9
KOWA LR LR 23 28 47.0
comp=Z,108nm,18.2s,baz=68,slow=40

comp=Z,1.3nm,0.6s
KOWA Kowa 33.20 228 P **P 23 13 34.4 -0.7**
KOWA IAmb IAmb 23 13 45.4
comp=Z,3.1nm,0.8s
HRA Herat 33.35 86 P **P 23 13 36.7 +0.1**
HRA IAmb IAmb 23 13 37.7
comp=Z,8.5nm,0.9s
BRVK Borovoye 35.95 51 P **P 23 13 59.4 +0.8**
BRVK Borovoye 35.95 51 P **P 23 13 59.4 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.1s
WSAR Wadi Sarin 35.97 106 LR LR 23 32 24.1
comp=Z,65nm,18.2s,baz=258,slow=42
KK31 Karatay Array 37.05 68 P **P 23 14 08.3 +0.1**
KK31 IAmb IAmb 23 14 09.7
comp=Z,5.1nm,0.9s
KK31 Karatay Array 37.05 68 P **P 23 14 08.3 +0.1**
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KKAR Karatay Array 37.05 68 P **P 23 14 07.8 -0.3**
KKAR Karatay Array 37.05 68 P **P 23 14 07.8 -0.3**
CHGR Chuyangaron 37.20 76 P **P 23 14 09.4 -0.1**
CHGR Chuyangaron 37.20 76 P **P 23 14 09.4 -0.1**
CHGR pmax pmax
comp=Z,15nm,0.8s
GAR Garm 37.96 75 P **P 23 14 16.4 +0.4**
BTK Batken 38.02 73 P **P 23 14 16.6 +0.1**
BTK IAmb IAmb 23 14 30.3
comp=Z,4.6nm,0.6s
BTK Batken 38.02 73 P **P 23 14 16.6 +0.1**
BTK pmax pmax
comp=Z,5.0nm,0.6s
DRK Karamyk 38.91 73 P **P 23 14 24.5 +0.3**
DRK IAmb IAmb 23 14 36.8
comp=Z,5.0nm,0.8s
AAK Ala-Archa 40.01 68 LR LR 23 33 58.4
comp=Z,46nm,19.9s,baz=284,slow=40
AAK Ala-Archa 40.01 68 P **P 23 14 33.6 +0.4**
AAK Ala-Archa 40.01 68 P **P 23 14 33.6 +0.4**
AAK pmax pmax
comp=Z,5.0nm,1.1s
DBIC Dimbokro 40.15 222 LR LR 23 31 18.9
comp=Z,7μm,20.4s,baz=270,slow=36
BOOM Boomskoye usch 41.08 68 P **P 23 14 42.1 +0.1**
BOOM IAmb IAmb 23 14 44.1
comp=Z,4.6nm,0.8s
BOOM Boomskoye usch 41.08 68 P **P 23 14 42.1 +0.1**
BOOM pmax pmax
comp=Z,5.0nm,0.8s
KURK Kurchatov 41.24 55 P **P 23 14 41.9 -1.1**
KURK IAmb IAmb 23 14 44.2
comp=Z,7.7nm,1.4s
KURK Kurchatov 41.24 55 P **P 23 14 41.9 -1.1**
KURK pmax pmax
comp=Z,8.0nm,1.4s
NRN Naryn 41.41 69 P **P 23 14 44.2 -0.8**
NRN Naryn 41.41 69 P **P 23 14 44.2 -0.8**
NRN pmax pmax
comp=Z,4.0nm,0.9s
TARG Taragay, Kyrgy 42.62 68 P **P 23 14 54.3 -0.6**
TARG IAmb IAmb 23 14 54.9
comp=Z,5.9nm,1.0s
TARG Taragay, Kyrgy 42.62 68 P **P 23 14 54.3 -0.6**
TARG pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 44.16 60 P **P 23 15 06.0 -0.8**
MAKZ IAmb IAmb 23 15 20.8
comp=Z,8.6nm,1.4s
MAKZ Makanchi 44.16 60 P **P 23 15 06.0 -0.8**
MAKZ pmax pmax
comp=Z,9.0nm,1.4s
MK31 Makanchi Array 44.37 60 P **P 23 15 07.9 -0.6**
MK31 Makanchi Array 44.37 60 P **P 23 15 07.9 -0.6**
MK31 pmax pmax
comp=Z,8.0nm,0.7s
MKAR Makanchi Array 44.37 60 P **P 23 15 08.1 -0.4**
comp=Z,8.2nm,0.5s,baz=278,slow=7.5,SNR=126
MKAR LR LR 23 37 08.0
comp=Z,50nm,18.1s,baz=255,slow=41
comp=Z,8.2nm,0.5s
MKAR Makanchi Array 44.37 60 P **P 23 15 08.3 -0.3**
ZAA0 Zalesovo Array 44.55 49 P **P 23 15 08.9 -0.9**
ZAA0 IAmb IAmb 23 15 16.0
comp=Z,3.4nm,0.6s
ZALV Zalesovo Beam 44.55 49 P **P 23 15 09.2 -0.6**
comp=Z,1.7nm,0.4s,baz=279,slow=7.8,SNR=11
ZALV LR LR 23 36 01.1
comp=Z,74nm,18.9s,baz=349,slow=39
comp=Z,1.7nm,0.4s
ZALV Zalesovo Beam 44.55 49 P **P 23 15 08.9 -0.9**
NRIK Noril'sk 45.34 27 P **P 23 15 16.0 +0.2**
comp=Z,2.3nm,0.6s,baz=281,slow=15,SNR=3.6
NRIK LR LR 23 36 42.4
comp=Z,164nm,19.9s,baz=298,slow=39
comp=Z,2.3nm,0.6s
SFJD Kangerlussuaq 46.97 329 LR LR 23 35 27.8
comp=Z,79nm,20.4s,baz=64,slow=36
WMQ Urumqi 48.88 62 *e*P P 23 15 50.3 +6.3
WMQ sP sP 23 15 53.3 +0.4
EUNU Eureka 54.02 348 P **P 23 16 21.2 -0.7**
EUNU IAmb IAmb 23 16 28.9
comp=Z,4.4nm,0.9s
LSZ Lusaka 55.17 171 P **P 23 16 31.3 +0.4**
LSZ IAmb IAmb 23 16 38.8
comp=Z,2.5nm,0.8s
LSZ Lusaka 55.17 171 P **P 23 16 31.3 +0.4**
LSZ pmax pmax
comp=Z,3.0nm,0.9s
SCHQ Schefferville 57.43 317 P **P 23 16 45.9 -0.7**
comp=Z,11nm,1.3s,baz=223,slow=7.8,SNR=2.0
comp=Z,11nm,1.3s
TIXI Tiksi 58.14 21 LR LR 23 45 49.2
comp=Z,120nm,18.2s,baz=359,slow=40
TSUM Tsumeb 58.70 183 LR LR 23 43 17.8
comp=Z,42nm,18.4s,baz=334,slow=37
GTA Gaotai 58.97 63 *e*P **P 23 16 57.3 -0.5**
GTA pP sP 23 17 03.8 -2.9
GTA sP pP 23 17 06.4 +2.0
SONM Songino Array 59.36 51 P **P 23 17 00.7 +0.3**
comp=Z,3.7nm,1.0s,baz=287,slow=11,SNR=18
SONM LR LR 23 45 17.1
comp=Z,66nm,18.4s,baz=288,slow=39
comp=Z,3.7nm,1.0s
SONM Songino Array 59.36 51 P **P 23 17 00.0 -0.4**
SONM IAmb IAmb 23 17 01.0
comp=Z,5.0nm,1.1s
SONM Songino Array 59.36 51 P **P 23 17 00.0 -0.4**
SONM pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 59.74 51 P **P 23 17 02.8 -0.3**
ULN IAmb IAmb 23 17 03.5
comp=Z,3.5nm,0.9s
ULN Ulaanbaatar 59.74 51 P **P 23 17 02.8 -0.3**
ULN pmax pmax
comp=Z,3.0nm,1.0s
BATG Bathurst New B 60.28 308 P **P 23 17 07.9 +1.4**
LZH Lanzhou 63.38 64 *e*P **P 23 17 27.1 -0.7**
LZH pP sP 23 17 34.5 -2.3
YAK Yakutsk 63.68 30 LR LR 23 48 33.9
comp=Z,110nm,18.2s,baz=266,slow=39
YAK Yakutsk 63.68 30 P **P 23 17 28.7 -0.4**
HHC Hu-ho-hao-te 66.03 56 *e*P **P 23 17 45.8 +0.8**
PZH PanZhiHua 67.02 74 P **P 23 17 52.8 +1.3**
XLT XiLinHaoTe 67.18 51 ⇓ *i P* **P 23 17 52.1 -0.1**
XLT sP sP 23 17 58.8 -2.5
BOSA Boshof 68.13 176 P **P 23 17 58.8 +0.6**
comp=Z,3.1nm,0.8s,baz=3.7,slow=8.0,SNR=7.1
comp=Z,3.1nm,0.8s
BOSA Boshof 68.13 176 P **P 23 17 58.7 +0.6**
BOSA Boshof 68.13 176 P **P 23 17 58.7 +0.5**
BOSA pmax pmax
comp=Z,20nm,1.4s
BILL Bilibino 69.47 13⇑ *e*P **P 23 18 10.1 +4.1**
BILL *e* 23 18 28.4
BILL 23 20 47.0
BILL pmax pmax
comp=Z,17nm,1.6s
BILL MLR MLR
comp=Z,25nm,18.0s
BMAR Burnt Mountain 72.58 354 P **P 23 18 25.4 +0.4**
KLR Kul'dur 72.58 40 LR LR 23 52 17.2
comp=Z,43nm,19.8s,baz=286,slow=38
Q56A Snyder Ridge, 72.77 307 P **P 23 18 27.1 +0.6**
MA2 Magadan 72.81 24 LR LR 23 54 08.9
comp=Z,60nm,18.7s,baz=316,slow=39

COLD	**Coldfoot**	**73.14 356**	P	**P**	**23 18 28.9**	**+0.7**
COLD			IAmb	IAmb	23 18 36.6	
comp=Z,5.7nm,1.2s						
IMAR	**Indian Mountai**	**74.53 358**	P	**P**	**23 18 36.8**	**+0.5**
I26K	**Coal Creek Min**	**74.54 353**	P	**P**	**23 18 36.8**	**+0.4**
I26K			IAmb	IAmb	23 18 40.8	
comp=Z,7.1nm,1.4s						
H21K	**Melozitna Rive**	**74.82 357**	P	**P**	**23 18 39.1**	**+1.0**
H21K			IAmb	IAmb	23 18 54.1	
comp=Z,9.4nm,1.4s						
J26L	**Joseph Creek**	**75.36 353**	P	**P**	**23 18 41.4**	**+0.1**
J26L			IAmb	IAmb	23 18 52.6	
comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	**75.38 355**	P	**P**	**23 18 41.4**	**+0.1**
comp=Z,0.4nm,0.6s,baz=356,slow=2.7,SNR=6.0						
comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**75.38 355**	P	**P**	**23 18 41.1**	**-0.2**
ILAR	**Eielson Array**	**75.38 355**	P	**P**	**23 18 41.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**76.05 44**	LR	LR	23 56 03.3	
comp=Z,73nm,18.9s,baz=28,slow=39						
SJG	**San Juan**	**76.30 282**	LR	LR	23 51 30.1	
comp=Z,8.0nm,18.1s,baz=42,slow=35						
BCAR	**Beaver Creek A**	**76.59 352**	P	**P**	**23 18 49.3**	**+1.0**
DHY	**Denali Highway**	**77.09 354**	P	**P**	**23 18 51.3**	**+0.1**
PPLA	**Purkeypile**	**77.56 357**	P	**P**	**23 18 54.0**	**+0.1**
KSAR	**Wonju Array Be**	**78.21 51**	P	**P**	**23 18 57.2**	**-0.5**
KSAR	**Wonju Array Be**	**78.21 51**	P	**P**	**23 18 57.2**	**-0.5**
KSRS	**Korea Array**	**78.23 51**	P	**P**	**23 18 57.3**	**-0.5**
comp=Z,1.9nm,0.6s,baz=316,slow=5.2,SNR=7.4						
KSRS			LR	LR	23 57 02.5	
comp=Z,41nm,18.0s,baz=75,slow=38						
comp=Z,1.9nm,0.6s						
SKT	**Skwentna**	**78.44 356**	P	**P**	**23 18 57.8**	**-0.8**
O18K	**Koktuh Hills**	**80.71 358**	P	**P**	**23 19 11.3**	**+0.3**
BDFB	**Brasilia**	**84.32 244**	P	**P**	**23 19 30.8**	**+0.3**
comp=Z,2.2nm,0.7s,baz=86,slow=8.6,SNR=3.6						
comp=Z,2.2nm,0.7s						
MJAR	**Matsushiro Arr**	**84.79 46**	P	**P**	**23 19 32.6**	**0.0**
comp=Z,3.5nm,0.9s,baz=322,slow=4.1,SNR=8.1						
MJAR			LR	LR	00 02 26.0	
comp=Z,27nm,18.1s,baz=317,slow=39						
comp=Z,3.5nm,0.9s						
PDAR	**Pinedale Array**	**86.35 326**	LR	LR	23 58 44.2	
comp=Z,44nm,18.6s,baz=48,slow=36						
ELK	**Elko**	**90.41 328**	LR	LR	00 06 30.5	
comp=Z,50nm,18.1s,baz=64,slow=40						
TXAR	**Lajitas Array**	**94.01 314**	P	**P**	**23 20 16.7**	**+0.2**
comp=Z,0.8nm,0.9s,baz=80,slow=4.5,SNR=8.8						
comp=Z,0.8nm,0.9s						
WRA	**Warramunga Arr**	**120.44 91**	PKP	**PKPdf**	**23 25 48.5**	**-1.4**
comp=Z,0.4nm,0.7s,baz=277,slow=6.6,SNR=2.3						
ASAR	**Alice Springs**	**122.18 95**	PKP	**PKPdf**	**23 25 51.5**	**-1.6**
comp=Z,0.9nm,0.8s,baz=310,slow=1.8,SNR=7.5						

*IDC **15** 23:23:01.6±1.7, 9.°52S×153.°71E, h0km, mb3.7/4, mbtmp3.9/6, ML3.0/2, MS2.7/2, Error ellipse: s-maj=41.8km s-min=32.0km az=117.0*

ISC 15 23:23:07.6±1.5, 9.°5S±0.°2×153.°5E±0.°1, h35km, n7, σ0.97/8, mb3.7/4, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.26**	**270**	Pn	**Pn**	**23 24 37.0**	**-0.6**
2.2nm,0.3s,baz=316,slow=11,SNR=2.3							
PMG				Sn	**Sn**	**23 25 48.0**	**+0.1**
0.9nm,0.3s,baz=22,slow=19,SNR=2.3							
PMG				LR	LR	23 26 22.2	
comp=Z,52nm,21.4s,baz=347,slow=31							
14nm,0.6s							
CTA	**Charters Tower**	**12.66**	**213**	Pn	**Pn**	**23 26 06.1**	**+0.9**
0.4nm,0.3s,baz=29,slow=16,SNR=1.1							
CTA				LR	LR	23 30 30.6	
comp=Z,41nm,19.1s,baz=80,slow=35							
1.7nm,0.4s							
WRA	**Warramunga Arr**	**21.23**	**239**	P	**P**	**23 27 50.1**	**-0.6**
3.8nm,0.7s,baz=61,slow=11,SNR=21							
3.8nm,0.7s							
ASAR	**Alice Springs**	**23.45**	**231**	P	**P**	**23 28 14.2**	**+0.1**
2.9nm,0.7s,baz=62,slow=9.0,SNR=26							
2.9nm,0.7s							
SONM	**Songino Array**	**70.64**	**328**	P	**P**	**23 34 20.1**	**+0.3**
0.2nm,0.3s,baz=130,slow=6.2,SNR=2.5							
0.2nm,0.3s							
QSPA	**South Pole Qui**	**80.51**	**180**	P	**P**	**23 35 14.8**	**-1.2**
0.2nm,0.4s,baz=20,slow=2.3,SNR=5.8							
0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**152.13**	**280**	PKPbc	**PKiKP**	**23 43 02.0**	**+1.2**
0.3nm,0.9s,baz=58,slow=2.3,SNR=1.7							

*IDC **15** 23:33:35.9±1.7, 39.°50N×21.°36E, h0km, mb3.3/4, mbtmp3.2/5, ML3.7/1, Error ellipse: s-maj=40.7km s-min=27.0km az=130.0*
*ATH **15** 23:33:36.7, 39.°74N×20.°73E, h18km±1km, ML2.9/9, Error ellipse: s-maj=1.9km s-min=1.2km az=151.0*
*THE **15** 23:33:37.6, 39.°76N×20.°71E, h11km±3km, ML2.8/6, Error ellipse: s-maj=3.8km s-min=0.9km az=150.0*
*BEO **15** 23:33:41.0±1.0, 39.°82N×20.°97E, h19km±4km, ML2.4/4*

ISC 15 23:33:37.8±0.8, 39.°73N±0.°02×20.°74E±0.°02, h12km±5km, n46, σ1.46/60, mb3.3/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.11**	**131**	P	**Pg**	**23 33 40.4**	**-0.4**
JAN				S	**Sg**	**23 33 43.5**	**+0.5**
11μm,0.1s							
JAN	**Janina**	**0.11**	**131**	P	**Pg**	**23 33 40.4**	**-0.4**
JAN				S	**Sg**	**23 33 43.5**	**+0.5**
JAN				AML	AML	23 33 44.0	
comp=N,22571μm,0.2s							
JAN				AML	AML	23 33 44.0	
comp=E,19189μm,0.1s							
IGT	**Igoumenitsa**	**0.37**	**239**	P	**Pg**	**23 33 44.5**	**-0.8**
IGT				S	**Sg**	**23 33 51.1**	**+0.8**
comp=E,2μm,0.3s							
IGT	**Igoumenitsa**	**0.37**	**239**	P	**Pg**	**23 33 44.5**	**-0.8**
IGT				S	**Sg**	**23 33 50.6**	**+0.3**
IGT				AML	AML	23 33 54.7	
comp=E,4893μm,0.4s							
IGT				AML	AML	23 33 55.7	
comp=N,4106μm,0.4s							
LSK	**Leskovik**	**0.44**	**345**	P	**Pg**	**23 33 45.8**	**-0.7**
LSK				S	**Sg**	**23 33 50.8**	**-1.5**
comp=N,2μm,0.6s							
KPRO	**Kipourio**	**0.53**	**64**	P	**Pg**	**23 33 47.7**	**-0.5**
KPRO				S	**Sb**	**23 33 56.1**	**-0.6**
comp=N,2μm,0.5s							
PENT	**Pentalofos**	**0.56**	**33**	P	**Pg**	**23 33 48.0**	**-0.7**
PENT				S	**Sb**	**23 33 56.9**	**-0.7**
PENT	**Pentalofos**	**0.56**	**33**	P	**Pg**	**23 33 48.0**	**-0.7**
SRN	**Sarande**	**0.59**	**285**	P	**Pg**	**23 33 48.0**	**-1.4**
SRN				S	**Sg**	**23 33 57.2**	**0.0**
comp=N,872nm,0.3s							
KASA	**Kassiopi**	**0.62**	**272**	P	**Pg**	**23 33 48.5**	**-1.5**
KASA				AML	AML	23 34 01.9	
comp=N,1671μm,0.5s							
KASA				AML	AML	23 34 04.3	
comp=E,1696μm,0.3s							
NEST	**Nestorio**	**0.72**	**19**	P	**Pg**	**23 33 51.6**	**-0.3**
NEST	**Nestorio**	**0.72**	**19**	P	**Pg**	**23 33 50.8**	**-1.1**
KEK	**Kerkira**	**0.73**	**269**	P	**Pb**	**23 33 50.0**	**-2.5**
KEK	**Kerkira**	**0.73**	**269**	P	**Pb**	**23 33 50.0**	**-2.5**
KEK				AML	AML	23 34 06.5	
comp=N,1215μm,0.3s							
KEK				AML	AML	23 34 06.8	
comp=E,1314μm,0.3s							
TSLK	**Tsoukalades, L**	**0.91**	**184**	P	**Pb**	**23 33 54.7**	**-0.7**
TSLK				S	**Sn**	**23 34 10.4**	**+1.1**
comp=E,658nm,0.8s							
TSLK	**Tsoukalades, L**	**0.91**	**184**	P	**Pb**	**23 33 54.7**	**-0.7**
TSLK				AML	AML	23 34 14.5	
comp=E,1078μm,0.3s							
TSLK				AML	AML	23 34 16.9	
comp=N,1303μm,0.6s							
LKD2	**Lefkada island**	**0.94**	**184**	P	**Pb**	**23 33 55.4**	**-0.7**
LKD2	**Lefkada island**	**0.94**	**184**	P	**Pb**	**23 33 54.1**	**-1.9**
LKD2				AML	AML	23 34 13.6	
comp=E,1162μm,0.4s							
LKD2				AML	AML	23 34 17.0	
comp=N,880μm,0.2s							
KZN	**Kozani**	**0.98**	**53**	P	**Pb**	**23 33 55.4**	**-1.4**
KZN	**Kozani**	**0.98**	**53**	P	**Pb**	**23 33 55.3**	**-1.4**
EVR	**Evrytania**	**1.16**	**134**	P	**Pn**	**23 33 59.0**	**-1.0**
PVO	**Paravola**	**1.27**	**151**	P	**Pg**	**23 34 01.6**	**-0.5**
FSK	**Fiskardo**	**1.27**	**186**	P	**Pg**	**23 34 01.8**	**-0.5**
FSK				AML	AML	23 34 23.2	
comp=E,1493μm,0.2s							
FSK				AML	AML	23 34 24.0	
comp=N,493μm,0.3s							
MAKR	**Makrakomi, Fth**	**1.29**	**123**	P	**Pg**	**23 34 01.9**	**-0.8**
MAKR				AML	AML	23 34 25.4	
comp=E,1716μm,0.4s							
MAKR				AML	AML	23 34 26.9	
comp=N,1081μm,0.3s							
OHR	**Ohrid**	**1.38**	**2**	*e*Pg	**Pb**	**23 34 04.1**	**+0.4**
OHR				*e*Sg	**Sg**	**23 34 23.5**	**+1.1**
LIT	**Litokhoron**	**1.39**	**74**	P	**Pb**	**23 34 02.7**	**-1.1**
LIT				AML	AML	23 34 27.2	
comp=N,545μm,0.6s							
LIT				AML	AML	23 34 30.3	
comp=E,782μm,0.4s							
EFP	**Efpalio**	**1.58**	**145**	P	**Pb**	**23 34 06.3**	**-0.7**
TIR	**Tirane**	**1.75**	**338**	*e*Pn	**Pb**	**23 34 09.5**	**-0.4**
DRO	**Drossia**	**1.93**	**157**	P	**Pb**	**23 34 11.2**	**-1.7**
NEO	**Neokhori**	**1.96**	**102**	P	**Pb**	**23 34 11.4**	**-2.2**
VAY	**Valandovo**	**2.11**	**41**	*e*Pg	**Pb**	**23 34 15.7**	**-0.4**
VAY				*e*Sg	**Sb**	**23 34 41.0**	**-1.3**
SOH	**Sokhos**	**2.28**	**60**	P	**Pn**	**23 34 15.6**	**+0.4**
SRS	**Serrai**	**2.58**	**57**	*e*Pn	**Pn**	**23 34 20.1**	**+0.7**
SRS				*e*Sn	**Sn**	**23 34 48.3**	**-2.4**
KKB	**Krupnik**	**2.78**	**39**	*e*P	**Pn**	**23 34 23.0**	**+0.8**
MMB	**Musomiste**	**2.93**	**50**	*e*P	**Pn**	**23 34 26.1**	**+1.8**
BARS	**Barje**	**3.19**	**14**	*e*Pn	**Pn**	**23 34 28.7**	**+0.9**
BARS				*e*Sn	**Sn**	**23 35 04.9**	**-0.9**
VTS	**Vitosha**	**3.44**	**32**	*e*P	**Pn**	**23 34 33.0**	**+1.6**
SELS	**Selova**	**3.50**	**4**	*e*Pn	**Pn**	**23 34 33.3**	**+1.2**
ZAPS	**Zavoj**	**3.82**	**21**	*e*Pn	**Pn**	**23 34 37.8**	**+1.4**
BOVS	**Bovan**	**3.97**	**10**	*e*Pn	**Pn**	**23 34 37.9**	**-0.6**
BOVS				*e*Sn	**Sn**	**23 35 21.9**	**-3.1**
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	**Pn**	**23 34 45.6**	**+1.1**
ESDC	**Sonseca Array**	**19.00**	**278**	P	**Pn**	**23 38 04.4**	**+4.3**
baz=79,slow=11,SNR=1.4							
comp=E,0.1nm,0.4s							
FINES	**FINESS Array B**	**21.99**	**7**	P	**P**	**23 38 34.0**	**+2.5**
comp=E,2.2nm,1.0s,baz=174,slow=15,SNR=1.7							
comp=E,2.2nm,1.0s							
NOA	**NORSAR Array B**	**22.14**	**348**	P	**P**	**23 38 35.8**	**+2.7**
comp=E,0.5nm,0.9s,baz=162,slow=11,SNR=1.7							
comp=E,0.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**31.35**	**218**	P	**P**	**23 39 59.6**	**+1.2**
comp=E,0.3nm,1.0s,baz=37,slow=9.1,SNR=1.5							
comp=E,0.3nm,1.0s							
MKAR	**Makanchi Array**	**44.36**	**60**	P	**P**	**23 41 45.1**	**-2.7**
comp=E,0.4nm,0.6s,baz=274,slow=7.9,SNR=4.5							
comp=E,0.4nm,0.6s							

IDC 15 23:34:37.8±3.9, 16.°32S×174.°94W, h303km±56km, mb2.9/3, mbtmp3.6/4, Error ellipse: s-maj=359.9km s-min=32.3km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.88**	**52**	P	Pn	23 35 44.3	+1.3
7.5nm,0.2s,baz=214,slow=21,SNR=1.5							
AFI				S	S	23 36 35.0	-0.2
25nm,0.4s,baz=108,slow=23,SNR=4.1							
WRA	**Warramunga Arr**	**48.20**	**258**	P	P	23 42 48.6	-0.3
0.4nm,0.6s,baz=95,slow=6.9,SNR=2.6							
0.4nm,0.6s							
ASAR	**Alice Springs**	**48.42**	**253**	P	P	23 42 50.4	-0.2
0.8nm,0.6s,baz=87,slow=8.4,SNR=4.5							
0.8nm,0.6s							
ILAR	**Eielson Array**	**83.63**	**12**	P	P	23 46 32.3	+0.1
0.3nm,0.5s,baz=219,slow=4.7,SNR=2.2							
0.3nm,0.5s							

*IDC **15** 23:37:41.5±1.9, 18.°61S×168.°42E, h0km, mb3.9/5, mbtmp3.9/6, ML4.1/1, MS3.2/10, Error ellipse: s-maj=58.3km s-min=27.4km az=126.0*
*NOU **15** 23:37:45.7, 18.°79S×168.°36E, h14km, MLv4.4/14, Vanuatu Islands*
*NEIC **15** 23:37:49.4±0.9, 18.°9S±0.°1×168.°3E±0.°1, h38km±6km, mb4.3/6, Error ellipse: s-maj=20.0km s-min=16.9km az=93.0*

ISC 15 23:37:47.3±0.7, 18.°79S±0.°05×168.°4E±0.°1, h42km, n48, σ0.95/42, mb4.0/9, MS3.1/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.99**	**1**	P	**Pn**	**23 38 04.4**	**-0.4**
LIFNC	**LIFOU**	**2.26**	**209**	Pn	**Pn**	**23 38 21.1**	**-1.0**
LIFNC				Sn	**Sn**	**23 38 46.5**	**-2.2**
LIFNC	**LIFOU**	**2.26**	**209**	P	**Pn**	**23 38 21.2**	**-1.0**
MARNC	**Mare, Loyalty**	**2.70**	**187**	Pn	**Pn**	**23 38 27.4**	**-0.8**
MARNC				Sn	**Sn**	**23 38 57.5**	**-2.1**
MARNC	**Mare, Loyalty**	**2.70**	**187**	P	**Pn**	**23 38 27.7**	**-0.5**
YATNC	**Mamie plateau,**	**3.54**	**203**	P	**Pn**	**23 38 39.5**	**-0.4**
DZM	**Mont Dzumac**	**3.74**	**209**	Pn	**Pn**	**23 38 42.9**	**+0.2**
12nm,0.3s,baz=170,slow=2.0,SNR=146							
DZM				LR	LR	23 39 24.6	
comp=Z,127nm,19.6s,baz=46,slow=26							
DZM				Sn	**Sn**	**23 39 24.7**	**-0.9**
16nm,0.3s,baz=269,slow=22,SNR=11							
27nm,0.3s							
DZM	**Mont Dzumac**	**3.74**	**209**	Pn	**Pn**	**23 38 42.7**	**+0.1**
DZM	**Mont Dzumac**	**3.74**	**209**	P	**Pn**	**23 38 42.8**	**+0.1**
NOUC	**Port Laguerre**	**3.83**	**211**	P	**Pn**	**23 38 44.8**	**+0.9**
OUENC	**Ouen Island, N**	**3.89**	**202**	Pn	**Pn**	**23 38 45.4**	**+0.8**
OUENC	**Ouen Island, N**	**3.89**	**202**	P	**Pn**	**23 38 45.7**	**+1.1**
ONTNC	**Ouen Toro**	**3.94**	**207**	Pn	**Pn**	**23 38 45.6**	**+0.3**
ONTNC	**Ouen Toro**	**3.94**	**207**	P	**Pn**	**23 38 46.2**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.25**	**245**	P	**Pn**	**23 38 50.2**	**+0.6**
HNR	**Honiara**	**12.40**	**317**	LR	LR	23 44 53.6	
comp=Z,1μm,18.2s,baz=123,slow=35							
URZ	**Urewera**	**20.83**	**160**	LR	LR	23 49 13.8	
comp=Z,149nm,18.8s,baz=54,slow=33							
CTA	**Charters Tower**	**20.93**	**263**	LR	LR	23 49 34.5	
comp=Z,48nm,19.0s,baz=83,slow=34							
BKZ	**Black Stump Fm**	**21.48**	**163**	P	**P**	**23 42 33.2**	**+0.8**
BKZ				IAmb	IAmb	23 42 54.6	
comp=Z,21nm,1.3s							
PMG	**Port Moresby**	**22.59**	**291**	LR	LR	23 50 32.8	
comp=Z,58nm,18.0s,baz=65,slow=34							
RPZ	**Rata Peaks**	**24.95**	**175**	LR	LR	23 52 40.5	
comp=Z,97nm,19.1s,baz=250,slow=36							
STKA	**Stephens Creek**	**27.42**	**236**	LR	LR	23 53 53.0	
comp=Z,40nm,18.2s,baz=28,slow=35							
WB0	**Warramunga Arr**	**32.09**	**263**	P	**P**	**23 44 10.6**	**-0.1**
WRA	**Warramunga Arr**	**32.13**	**262**	P	**P**	**23 44 10.4**	**-0.6**
comp=Z,0.6nm,0.8s,baz=81,slow=6.0,SNR=5.2							
comp=Z,0.6nm,0.8s							
WRA	**Warramunga Arr**	**32.13**	**262**	P	**P**	**23 44 11.4**	**+0.4**
AS31	**Alice Springs**	**32.47**	**255**	P	**P**	**23 44 14.2**	**+0.2**
AS31				IAmb	IAmb	23 44 31.7	
comp=Z,1.8nm,1.2s							
ASAR	**Alice Springs**	**32.47**	**255**	P	**P**	**23 44 14.9**	**+0.9**
comp=Z,1.8nm,0.8s,baz=86,slow=8.8,SNR=16							
ASAR				LR	LR	23 55 22.6	
comp=Z,44nm,21.6s,baz=337,slow=33							
comp=Z,1.8nm,0.8s							
ASAR	**Alice Springs**	**32.47**	**255**	P	**P**	**23 44 14.0**	**-0.1**
GUMO	**Guam**	**39.67**	**323**	LR	LR	23 59 36.6	
comp=Z,23nm,20.1s,baz=140,slow=33							
VNDA	**Vanda**	**58.85**	**182**	LR	LR	00 09 43.6	
comp=Z,21nm,20.7s,baz=330,slow=33							
VNDA	**Vanda**	**58.85**	**182**	P	**P**	**23 47 42.9**	**+1.7**
VNDA				IAmb	IAmb	23 48 00.9	
comp=Z,3.9nm,1.4s							
MJAR	**Matsushiro Arr**	**61.99**	**333**	P	**P**	**23 48 01.7**	**-1.5**
comp=Z,1.7nm,0.7s,baz=168,slow=6.5,SNR=5.6							
comp=Z,1.7nm,0.7s							
QSPA	**South Pole Qui**	**71.26**	**180**	P	**P**	**23 49 03.6**	**+1.4**
QSPA				IAmb	IAmb	23 49 06.7	
comp=Z,4.4nm,1.1s							
MAW	**Mawson**	**78.55**	**202**	LR	LR	00 19 16.6	
comp=Z,20nm,21.4s,baz=52,slow=32							
SONM	**Songino Array**	**86.39**	**323**	P	**P**	**23 50 26.2**	**+0.9**
comp=Z,1.0nm,1.0s,baz=147,slow=8.2,SNR=5.4							
comp=Z,1.0nm,1.0s							
ILAR	**Eielson Array**	**90.04**	**18**	P	**P**	**23 50 42.0**	**-0.1**
comp=Z,0.4nm,0.9s,baz=241,slow=5.6,SNR=2.5							
comp=Z,0.4nm,0.9s							
ARCES	**ARCESS Array B**	**124.44**	**345**	PKP	**PKiKP**	**23 56 41.1**	**-0.5**
comp=Z,2.3nm,0.8s,baz=2.3,slow=4.5,SNR=5.0							
GERES	**GERESS Array B**	**143.73**	**332**	PKP	**PKPdf**	**23 57 16.3**	**-1.6**
comp=Z,0.3nm,0.6s,baz=57,slow=3.6,SNR=3.5							
SOKA	**Soboth**	**144.62**	**328**	*i* P	**PKPdf**	**23 57 19.2**	**-0.3**
comp=Z,0.6nm,0.4s							
MYKA	**Terra Mystica**	**145.34**	**329**	*i* P	**PKPab**	**23 57 21.4**	**+0.6**
comp=Z,2.2nm,0.4s							
WATA	**Walderalm**	**145.80**	**332**	*e*P	**PKPab**	**23 57 23.0**	**+0.4**
comp=Z,1.0nm,0.4s							
ABTA	**Abfaltersbach**	**145.80**	**330**	*i* P	**PKPab**	**23 57 22.5**	**0.0**
comp=Z,2.9nm,0.7s							
WTTA	**Wattenberg**	**145.83**	**331**	*e*P	**PKPdf**	**23 57 19.7**	**-2.0**
comp=Z,0.1nm,0.1s							
MOTA	**Moosalm**	**146.01**	**332**	*i* P	**PKPab**	**23 57 23.6**	**+0.3**
comp=Z,0.9nm,0.5s							
RETA	**Reutte**	**146.05**	**332**	*i* P	**PKPab**	**23 57 23.7**	**+0.3**
comp=Z,1.0nm,0.5s							
SQTA	**Sankt Quirin**	**146.05**	**332**	*e*P	**PKPab**	**23 57 23.9**	**+0.4**
comp=Z,2.2nm,0.5s							
FETA	**Feichten**	**146.42**	**332**	*e*P	**PKPab**	**23 57 25.1**	**+0.2**
comp=Z,3.8nm,0.9s							
DAVA	**Damuels**	**146.59**	**333**	*e*P	**PKPab**	**23 57 25.4**	**-0.1**
comp=Z,2.1nm,0.6s							

*AEIC **15** 23:40:50±2.0, 52.°2N±0.°3×176.°2W±0.°3, h194km±6km, Error ellipse: s-maj=46.4km s-min=15.1km az=154.0*

NEIC 15 23:40:49.6±2.0, 52.°5N±0.°2×176.°3W±0.°2, h194km±9km, mb3.9/15, ML3.3(AEIC), Error ellipse: s-maj=24.0km s-min=16.0km az=162.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.41**	**164**	Pn	Pn	23 41 15.6	-0.2
GSTR				Sn	Sn	23 41 36.1	+0.1
ADK	**Adak**	**0.67**	**204**		Pn	23 41 16.3	-0.4
ADK					Sn	23 41 36.6	-1.1
KIWB	**Kanaga Island**	**0.85**	**221**	Pn	Pn	23 41 17.6	-0.2
AMKA	**Amchitka**	**2.97**	**250**	Pn	Pn	23 41 38.0	-0.5
SDPT	**Sand Point**	**9.73**	**67**	Pn	Pn	23 43 04.1	-1.1
CNBA	**Chernabura Isl**	**10.16**	**70**	Pn	Pn	23 43 09.1	-1.6
Q19K	**Cape Douglas,**	**14.23**	**54**		Pn	23 44 02.0	-0.3
KDAK	**Kodiak Island**	**14.49**	**59**	Pn	Pn	23 44 03.9	-1.6
N19K	**Bonanza Creek**	**14.52**	**46**		Pn	23 44 06.4	+0.4
CNPM	**China Poot**	**15.59**	**53**	P	P	23 44 19.6	+0.5
SKT	**Skwentna**	**16.30**	**45**	P	P	23 44 24.0	-2.8
SKT				IAmb	IAmb	23 44 45.2	
comp=Z,7.7nm,1.1s							
CAST	**Castle Rocks**	**16.73**	**40**	P	Pn	23 44 32.3	-0.3
CAST				IAmb	IAmb	23 44 59.0	
comp=Z,7.1nm,1.4s							
PWL	**Port Wells**	**17.35**	**50**	P	P	23 44 39.0	+0.6
TRF	**Thorofare Moun**	**17.46**	**41**	P	P	23 44 39.6	-0.1
DHY	**Denali Highway**	**18.50**	**44**	P	P	23 44 51.4	+0.4
MDM	**Murphy Dome**	**18.95**	**38**	P	P	23 44 56.5	+0.7
MDM				IAmb	IAmb	23 45 06.3	
comp=Z,6.9nm,1.4s							
N25K	**Chitina, Valde**	**19.29**	**49**	P	P	23 45 00.9	+1.4
N25K				IAmb	IAmb	23 45 18.8	
comp=Z,7.3nm,1.2s							
RIDG	**Independent Ri**	**19.80**	**43**	P	P	23 45 05.5	+0.5
J25K	**Salcha River,**	**19.91**	**41**	P	P	23 45 06.8	+0.7
J25K				IAmb	IAmb	23 45 22.9	
comp=Z,5.3nm,1.4s							
DOT	**Dot Lake**	**20.11**	**44**	P	P	23 45 08.0	-0.2
DOT				IAmb	IAmb	23 45 19.1	
comp=Z,4.6nm,1.3s							
SCRK	**Sand Creek**	**20.24**	**43**	P	P	23 45 09.3	-0.4
SCRK				IAmb	IAmb	23 45 26.0	
comp=Z,4.8nm,1.4s							
J26L	**Joseph Creek**	**20.60**	**42**	P	P	23 45 13.1	-0.3
J26L				IAmb	IAmb	23 45 20.3	
comp=Z,5.3nm,1.5s							
BCAR	**Beaver Creek A**	**20.92**	**46**	P	P	23 45 17.0	+0.2
K27K	**Chicken**	**21.06**	**43**	P	P	23 45 19.3	+1.1
EGAK	**Eagle**	**21.67**	**42**	P	P	23 45 24.5	0.0
EGAK				IAmb	IAmb	23 45 28.3	
comp=Z,8.3nm,1.4s							

*IDC **15** 23:58:38.3±1.4, 39.°66N×20.°62E, h0km, mb3.6/7, mbtmp3.6/10, ML3.4/2, MS2.5/2, Error ellipse: s-maj=22.6km s-min=16.1km az=139.0*
*ATH **15** 23:58:41.4, 39.°76N×20.°70E, h16km±1km, ML3.2/15, Error ellipse: s-maj=1.7km s-min=0.8km az=160.0*
*PDG **15** 23:58:42.0±0.2, 39.°84N×20.°62E, h9km±1km, ML3.3/11, Error ellipse: s-maj=1.2km s-min=0.3km az=90.0*
*THE **15** 23:58:42.2, 39.°76N×20.°71E, h0km±1km, ML3.1/19, Error ellipse: s-maj=1.5km s-min=0.4km az=291.0*
*VIE **15** 23:58:49.8±1.1, 40.°49N×20.°54E, h10km, mb3.2/10, ms3.6/11, Error ellipse: s-maj=15.7km s-min=4.7km az=22.0 111 km SSE of Tirana*

ISC 15 23:58:41.4±0.8, 39.°76N±0.°02×20.°68E±0.°02, h13km±6km, n101, σ1.22/140, mb3.6/6, 6C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**127**	P	**Pg**	**23 58 45.0**	**-0.4**
JAN				S	**S

comp=E,1836μm,0.4s
LKD2 AML AML 23 59 25.0
comp=N,2174μm,0.5s
KZN Kozani 1.00 57 P **Pb 23 59 00.7 0.0**
KZN S **Sn 23 59 15.2 -0.1**
comp=N,895nm,0.4s
KZN Kozani 1.00 57 P **Pb 23 58 59.5 -1.2**
KZN AML AML 23 59 17.9
comp=N,1896μm,0.5s
KZN AML AML 23 59 21.7
comp=E,1196μm,0.4s
NYDR Nydri-Lefkada 1.04 179 P **Pb 23 59 01.2 -0.1**
NYDR S **Sn 23 59 17.2 +1.1**
comp=E,1μm,0.5s
THL Klokotos Trika 1.05 100 P **Pb 23 59 01.1 -0.3**
THL S **Sn 23 59 16.5 +0.2**
comp=E,528nm,0.7s
DRAG Dragano-Lefkad 1.07 184 P **Pb 23 59 02.0 +0.1**
DRAG S **Sn 23 59 18.8 +1.9**
EVGI Lefkada island 1.14 181 P **Pn 23 59 03.1 +0.1**
EVGI S **Sn 23 59 20.5 +2.1**
EVGI Lefkada island 1.14 181 P **Pb 23 59 02.6 -0.3**
VLO Vlora 1.15 309 P **Pg 23 59 04.8 +1.2**
TYRN Tyrnavos 1.20 92 P **Pn 23 59 03.4 -0.5**
TYRN S **Sg 23 59 21.6 +1.4**
comp=E,2μm,0.6s
EVR Evrytania 1.22 133 P **Pn 23 59 04.3 +0.1**
EVR S **Sg 23 59 23.2 +2.6**
comp=E,502nm,0.5s
EVR Evrytania 1.22 133 P **Pn 23 59 03.8 -0.4**
EVR AML AML 23 59 26.9
comp=E,1088μm,0.4s
EVR AML AML 23 59 27.8
comp=N,950μm,0.5s
KTI Kastanea 1.27 60 P **Pn 23 59 05.2 +0.2**
FSK Fiskardo 1.30 184 P **Pg 23 59 06.5 +0.1**
FSK S **Sg 23 59 25.5 +2.2**
comp=N,778nm,0.4s
FSK Fiskardo 1.30 184 P **Pg 23 59 06.3 -0.1**
FSK AML AML 23 59 27.1
comp=N,1188μm,0.5s
FSK AML AML 23 59 27.3
comp=E,1915μm,0.2s
PVO Paravola 1.32 150 P **Pg 23 59 07.0 +0.3**
PVO Paravola 1.32 150 P **Pb 23 59 06.2 +0.2**
MAKR Makrakomi, Fth 1.35 123 P **Pb 23 59 06.9 +0.3**
MAKR S **Sg 23 59 27.1 +2.1**
comp=E,2μm,0.5s
MAKR Makrakomi, Fth 1.35 123 P **Pb 23 59 06.6 +0.1**
MAKR S **Sg 23 59 25.3 +0.3**
MAKR AML AML 23 59 31.0
comp=E,4027μm,0.4s
MAKR AML AML 23 59 31.8
comp=N,2255μm,0.4s
OHR Ohrid 1.36 4 *i* Pn **Pg 23 59 08.2 +0.7**
OHR Ohrid 1.36 4 *i* Pn **Pg 23 59 08.2 +0.7**
LIT Litokhoron 1.44 76 P **Pg 23 59 07.7 +0.5**
LIT S **Sg 23 59 28.6 +0.9**
comp=N,685nm,0.4s
LIT Litokhoron 1.44 76 P **Pn 23 59 07.0 -0.1**
LIT AML AML 23 59 33.0
comp=N,1396μm,0.4s
LIT AML AML 23 59 33.5
comp=E,1337μm,0.4s
KEF4 Livadi, Kephal 1.51 188 P **Pg 23 59 10.1 -0.3**
KEF4 Livadi, Kephal 1.51 188 P **Pb 23 59 08.9 -0.4**
KEF4 AML AML 23 59 35.1
comp=N,8047μm,0.3s
KEF4 AML AML 23 59 36.7
comp=E,6280μm,0.3s
DMLN Damoulianata-K 1.54 189 P **Pb 23 59 09.8 +0.1**
VLS Valsamata 1.58 182 P **Pb 23 59 10.2 -0.3**
VLS Valsamata 1.58 182 P **Pb 23 59 10.1 -0.3**
EFP Efpalio 1.64 144 P **Pb 23 59 12.0 +0.6**
EFP AML AML 23 59 43.8
comp=E,1118μm,1.0s
EFP AML AML 23 59 45.9
comp=N,810μm,0.6s
TIR Tirane 1.71 339 P **Pb 23 59 12.9 +0.3**
SERG Sergoula 1.72 141 P **Pb 23 59 13.1 +0.3**
GRG Griva 1.78 47 P **Pb 23 59 13.4 -0.5**
LAKA Lakka 1.82 146 P **Pb 23 59 14.6 0.0**
AXAR Agios Charalam 1.83 122 P **Pb 23 59 15.1 +0.4**
AXAR AML AML 23 59 49.8
comp=E,1045μm,0.6s
AXAR AML AML 23 59 51.5
comp=N,826μm,0.4s
DRO Drossia 1.98 156 P **Pb 23 59 16.3 -1.0**
NEO Neokhori 2.02 102 P **Pb 23 59 17.0 -1.0**
NEO S **Sb 23 59 44.3 +1.2**
comp=N,305nm,0.5s
KLV Kalavryta, Ach 2.06 146 P **Pb 23 59 18.2 -0.6**
VAY Valandovo 2.13 42 *i* Pn **Pb 23 59 19.4 -0.5**
VAY Valandovo 2.13 42 *i* Pn **Pb 23 59 19.3 -0.5**
KNT Kendrikon 2.20 50 P **Pn 23 59 18.1 +0.4**
KNT Kendrikon 2.20 50 P **Pn 23 59 18.0 +0.3**
STIP Stip 2.25 30 *i* Pn **Pb 23 59 21.4 -0.5**
STIP Stip 2.25 30 *i* Pn **Pb 23 59 21.5 -0.5**
SKO Skopje 2.29 14 *i* Pn **Pb 23 59 22.8 +0.3**
SKO Skopje 2.29 14 *i* Pn **Pb 23 59 22.9 +0.4**
ULC Ulcinj 2.46 334 *e*Pn **Pn 23 59 22.1 +0.9**
ULC *i* Sn **Sn 23 59 53.0 +1.9**
DRME Dracevica, Mon 2.68 336 *e*Pn **Pn 23 59 25.2 +1.0**
DRME *i* Sn **Sn 23 59 58.4 +1.9**
BUM Brajici-Budva 2.88 333 *e*Pn **Pn 23 59 27.9 +0.9**
BUM *i* Sn **Sn 00 00 03.2 +1.7**
TTG Podgorica 2.88 339 ⇑*i*Pn **Pn 23 59 28.0 +1.1**
TTG *i* Sn **Sn 00 00 03.4 +2.0**
PVY Plav 2.89 349 *e*Pn **Pn 23 59 28.4 +1.2**
PVY *i* Sn **Sn 00 00 03.9 +2.1**
CEME Cevo 3.09 335 *e*Pn **Pn 23 59 30.9 +1.0**
CEME *i* Sn **Sn 00 00 08.3 +1.6**
HCY Herceg Novi 3.15 329 *e*Pn **Pn 23 59 31.8 +1.1**
HCY *i* Sn **Sn 00 00 09.7 +1.5**
IVA Berane 3.17 350 *e*Pn **Pn 23 59 32.3 +1.3**
IVA *i* Sn **Sn 00 00 10.7 +2.0**
KOME Kolasin 3.21 345 ⇓*i*Pn **Pn 23 59 32.9 +1.3**
KOME *i* Sn **Sn 00 00 11.7 +1.9**
NKME Niksic 3.28 337 *e*Pn **Pn 23 59 33.6 +1.1**
NKME *i* Sn **Sn 00 00 13.0 +1.7**
UPM Unac-Piva 3.69 339 *e*Pn **Pn 23 59 39.4 +1.1**
UPM *i* Sn **Sn 00 00 23.2 +1.5**
PLE Pljevlja 3.70 345 ⇑*i*Pn **Pn 23 59 39.6 +1.3**
PLE *i* Sn **Sn 00 00 23.6 +1.8**
MORH Mrgy, Hungar 6.62 348 ⇑P **Pn 00 00 18.6 +0.2**
MLR Muntele Rosu 6.92 32 ⇑P Pn 00 00 28.9 +6.2
MLR Muntele Rosu 6.92 32 Pn **Pn 00 00 25.6 +3.0**
baz=138,slow=16
MLR Sn **Sn 00 01 44.9 +3.6**
comp=N,0.1nm,0.3s,baz=164,slow=20,SNR=1.2
MLR LR LR 00 03 58.0
comp=N,57nm,20.7s,baz=14,slow=46
PLOR Plostina 7.51 34 ⇑P **Pn 00 00 34.9 +4.4**
VRI Vrincioaia 7.55 34 ⇑P **Pn 00 00 35.6 +4.4**
SOKA Soboth 8.05 331 *i* Pn **Pn 00 00 36.9 -1.1**
comp=N,2.0nm,0.4s,SNR=8.2
OBKA Obir 8.10 328 *i* Pn **Pn 00 00 39.0 +0.3**
comp=N,0.9nm,0.2s
ARSA Arzberg 8.37 335 *e*Pn **Pn 00 00 41.9 -0.5**
comp=N,0.5nm,0.3s
ABTA Abfaltersbach 9.18 322 *i* Pn **Pn 00 00 52.7 -0.8**
comp=N,0.8nm,0.2s
MOA Molln 9.32 332 *e*Pn **Pn 00 00 56.0 +0.6**
comp=N,1.0nm,0.3s
BIOA Bad Ischl, Aus 9.42 330 *e*Pn **Pn 00 00 56.8 0.0**
comp=N,0.9nm,0.3s
WTTA Wattenberg 9.96 322 *e*Pn **Pn 00 01 04.3 -0.1**
comp=N,1.5nm,0.4s
VRAC Vranov 9.98 344 LR LR 00 04 48.0
comp=N,17nm,18.9s,baz=228,slow=37
WATA Walderalm 10.04 322 *e*Pn **Pn 00 01 05.7 +0.2**
comp=N,0.9nm,0.2s,SNR=5.4
SQTA Sankt Quirin 10.14 320 *e*Pn **Pn 00 01 06.9 +0.2**
comp=N,0.9nm,0.2s,SNR=4.1
MOTA Moosalm 10.28 321 *e*Pn **Pn 00 01 08.9 +0.2**
comp=N,1.4nm,0.5s
GERES GERESS Array B 10.36 334 Pn **Pn 00 01 10.2 +0.4**
comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=6.4
comp=N,0.2nm,0.3s
DAVOX Davos/Dischmat 10.54 315 Pn **Pn 00 01 12.7 +0.4**
comp=N,0.6nm,0.3s,baz=164,slow=18
DAVOX Sn **Sn 00 03 05.5 -4.7**
comp=N,0.2nm,0.3s,baz=341,slow=23,SNR=1.5
ESDC Sonseca Array 18.95 278 P **P 00 03 02.0 -0.2**
baz=70,slow=11,SNR=2.6
comp=N,0.7nm,1.1s
HFS Hagfors 20.86 350 P **P 00 03 21.8 -1.1**
comp=N,1.8nm,0.6s,baz=140,slow=12,SNR=6.2
comp=N,1.8nm,0.6s
FINES FINESS Array B 21.97 7 P **P 00 03 33.4 -1.2**
comp=N,1.4nm,0.7s,baz=177,slow=12,SNR=12
comp=N,1.4nm,0.7s
NOA NORSAR Array B 22.10 348 P **P 00 03 34.6 -1.5**
comp=N,1.0nm,0.9s,baz=150,slow=11,SNR=2.7
comp=N,1.0nm,0.9s
ARCES ARCESS Array B 29.95 3 P **P 00 04 47.0 -1.9**
comp=N,2.7nm,0.9s,baz=188,slow=11,SNR=4.5
comp=N,2.7nm,0.9s
TORD Torodi Ar. Bea 31.34 218 P **P 00 05 00.8 -0.9**
comp=N,0.4nm,0.6s,baz=36,slow=9.5,SNR=3.8
comp=N,0.4nm,0.6s
MKAR Makanchi Array 44.39 60 P **P 00 06 50.3 -1.2**
comp=N,0.8nm,0.4s,baz=277,slow=8.1,SNR=13
comp=N,0.8nm,0.4s
ZALV Zalesovo Beam 44.56 49 P **P 00 06 51.4 -1.3**
comp=N,0.3nm,0.3s,baz=277,slow=8.6,SNR=2.5
comp=N,0.3nm,0.3s

KRSC 16 00:06:38.6±2.1, 48°.79N×156°.48E, h7km±32km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.91**	**353**	*e*S	Sn	00 07 35.0	-1.0
PAU	**Pauzhetka**	**2.69**	**4**	*e*S	Sb	00 07 58.3	-2.1
KDTR	**Khodutka, Kamc**	**3.20**	**18**	*e*P	Pn	00 07 32.3	+3.0
KDTR				*e*S	Sb	00 08 12.8	-2.0
ASAK	**Asacha**	**3.71**	**14**	*e*P	Pn	00 07 40.3	+3.8
MTVR	**Mutnovka**	**3.86**	**16**	*e*P	Pn	00 07 42.0	+3.5
MTVR				*e*S	Sb	00 08 29.4	-4.6
RUS	**Russkaya**	**3.88**	**19**	*e*P	Pn	00 07 41.4	+2.8
RUS				*e*S	Sn	00 08 28.4	+4.1
GRL	**Gorelyy**	**3.91**	**14**	*e*P	Pn	00 07 42.9	+3.7
KOK	**Koryaka**	**4.71**	**16**	*e*P	Pn	00 07 54.8	+4.6
KRX	**Arik**	**4.78**	**16**	*e*P	Pn	00 07 55.5	+4.3
GNL	**Ganaly**	**5.00**	**10**	*e*P	Pn	00 07 58.8	+4.6

BJI ***16*** *00:09:53.8±0.0, 39°.41N×20°.51E, h20km, mb4.8/43, mB5.0/26, Ms4.6/20, Ms7 4.4/20*
HLW ***16*** *00:09:55.7, 39°.74N×21°.16E, h10km±65km, Md5.5, Ml5.1*
MOS ***16*** *00:09:56.7±1.2, 39°.72N×20°.55E, h18km, mb5.1/51, MS4.2/23, Error ellipse: s-maj=3.2km s-min=2.2km az=86.1*
GII ***16*** *00:09:57.7±0.0, 39°.80N×20°.60E, h22km*
BEO ***16*** *00:09:58.0±0.7, 39°.59N×20°.68E, h13km±4km, ML4.8/8*
NEIC ***16*** *00:09:58.2±1.6, 39°.77N±0°.05×20°.71E±0°.05, h10km±1km, mb5.0/124, ML4.5(THE), Error ellipse: s-maj=8.0km s-min=5.8km az=189.0*
TIR ***16*** *00:09:58.7, 39°.75N×20°.71E, h2km, Md4.3, Ml5.1*
THE ***16*** *00:09:59.9, 39°.77N×20°.68E, h2km±1km, ML4.5/10, Error ellipse: s-maj=1.6km s-min=0.7km az=308.0*
MED_RC ***16*** *00:09:59.0±0.3, 39°.70N×20°.68E, h31km, MW4.9/23, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s23,c38; Duration: 1s3 Moment tensor: Scale 10^16Nm; Mrr2.23±.14; Mθθ-1.63±.08; Mφφ-0.60±.08; Mrθ0.53±.07; Mθφ1.41±.04; Mφr-0.36±.09; Best double couple: M0 2.51000×10^16 NP1:φs125.00000°, δ52.00000°, λ90.00000°. NP2:φs305.00000°, δ38.00000°, λ90.00000°. Principal axes: T 2.3100, Plg83.0000°, Azm33.0000°; N 0.3800, Plg0.0000°, Azm125.0000°; P -2.7000, Plg7.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
PDG ***16*** *00:09:59.1±0.5, 39°.77N×20°.58E, h13km, MD4.9/10, ML4.7/11 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
ATH ***16*** *00:09:59.4, 39°.78N×20°.67E, h16km, Mw4.6, Moment Tensor Solution. s8 Moment tensor: Mrr7.99; Mθθ-5.30; Mφφ-2.69; Mrθ4.89; Mθφ4.45; Mφr-0.20; Fault plane solution: NP1:φs323.00000°, δ34.00000°, λ118.00000°. NP2:φs110.00000°, δ60.00000°, λ72.00000°.*
ROM ***16*** *00:10:01.0, 39°.79N×20°.63E, h20km, mb4.6/31, Mwp4.9/12 Error ellipse: s-maj=3.2km s-min=1.3km az=207.0*
IDC ***16*** *00:10:00.9±1.7, 39°.80N×20°.64E, h33km±13km, mb4.4/33, mbtmp4.5/49, ML4.0/14, MS4.1/41, Error ellipse: s-maj=8.4km s-min=7.6km az=153.0*
LDG ***16*** *00:10:00.4, 39°.64N×20°.50E, h30km*
GCMT ***16*** *00:10:02.2±0.3, 39°.64N±0°.02×20°.64E±0°.03, h29km, MW4.9/75, Moment Tensor Solution. s29,c35; s75,c102; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.96±.19; Mθθ-1.82±.12; Mφφ-1.14±.11; Mrθ0.97±.15; Mθφ1.18±.06; Mφr0.27±.14; Best double couple: M0 2.99400×10^16 NP1:φs114.00000°, δ53.00000°, λ74.00000°. NP2: φs319.00000°, δ40.00000°, λ110.00000°. Principal axes: T 3.2100, Plg76.0000°, Azm331.0000°; N -0.4340, Plg13.0000°, Azm123.0000°; P -2.7770, Plg6.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 00:09:58.8±0.6, 39°.75N±0°.01×20°.70E±0°.01, h19km±2km, n1140, σ1960/1235, mb4.9/151, MS4.2/41, 118C-69D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**127**	P	**Pg**	**00 10 03.3**	**+0.2**
JAN				S	**Sg**	**00 10 07.2**	**+1.1**
218μm,0.4s							
JAN	**Janina**	**0.15**	**127**	P	**Pb**	**00 10 02.9**	**+1.1**
JAN	**Janina**	**0.15**	**127**	P	**Pg**	**00 10 03.4**	**+0.2**
JAN				S	**Sg**	**00 10 07.1**	**+0.9**
JAN				AML	AML	00 10 09.7	
JAN				AML	AML	00 10 09.9	
IGT	**Igoumenitsa**	**0.35**	**233**	P	**Pb**	**00 10 06.9**	**+0.4**
IGT				S	**Sb**	**00 10 13.2**	**+1.4**
90μm,0.5s							
IGT	**Igoumenitsa**	**0.35**	**233**	P	**Pg**	**00 10 06.3**	**0.0**
IGT	**Igoumenitsa**	**0.35**	**233**	P	**Pb**	**00 10 07.0**	**+0.4**
baz=235							
IGT				S	**Sb**	**00 10 12.6**	**+0.8**
baz=235							
IGT	**Igoumenitsa**	**0.35**	**233**	P	**Pb**	**00 10 06.7**	**+0.1**
IGT				S	**Sb**	**00 10 12.0**	**+0.2**
IGT				AML	AML	00 10 15.8	
IGT				AML	AML	00 10 17.4	
LSK	**Leskovik**	**0.41**	**350**	P	**Pb**	**00 10 07.8**	**+0.2**
LSK	**Leskovik**	**0.41**	**350**	P	**Pb**	**00 10 07.8**	**+0.2**
baz=348							
LSK				S	**Sb**	**00 10 14.4**	**+0.9**
baz=348							
LSK				AMP			
comp=N,1μm,0.5s,baz=348							
SRN	**Sarande**	**0.55**	**284**	P	**Pb**	**00 10 10.0**	**+0.2**
SRN				S	**Sb**	**00 10 18.7**	**+1.4**
comp=N,160μm,0.4s							
SRN	**Sarande**	**0.55**	**284**	P	**Pb**	**00 10 10.1**	**+0.3**
baz=284							
SRN				S	**Sb**	**00 10 18.9**	**+1.6**
baz=284							
SRN				AMP			
comp=N,533nm,0.4s,baz=284							
KPRO	**Kipourio**	**0.56**	**68**	P	**Pb**	**00 10 10.5**	**+0.6**
KPRO				S	**Sb**	**00 10 18.8**	**+1.3**
comp=N,74μm,0.4s							
PENT	**Pentalofos**	**0.56**	**37**	P	**Pg**	**00 10 10.4**	**+0.3**
PENT	**Pentalofos**	**0.56**	**37**	P	**Pb**	**00 10 10.4**	**+0.3**
PENT				S	**Sg**	**00 10 17.9**	**+0.1**
PENT				AML	AML	00 10 25.4	
comp=N,22129μm,0.5s							
PENT				AML	AML	00 10 26.1	
comp=E,67983μm,0.7s							
KASA	**Kassiopi**	**0.59**	**270**	P	**Pg**	**00 10 10.7**	**+0.2**
KASA				S	**Sb**	**00 10 18.5**	**+0.2**
KASA				AML	AML	00 10 22.0	
KASA				AML	AML	00 10 22.1	
KEK	**Kerkira**	**0.69**	**267**	Pg	**Pb**	**00 10 12.1**	**-0.1**
KEK				Sg	**Sg**	**00 10 21.9**	**+0.2**
KEK	**Kerkira**	**0.69**	**267**	P	**Pb**	**00 10 12.3**	**+0.1**
KEK				S	**Sg**	**00 10 22.4**	**+0.7**
comp=E,80μm,0.5s							
KEK	**Kerkira**	**0.69**	**267**	P	**Pb**	**00 10 12.1**	**-0.1**
KEK				S	**Sg**	**00 10 22.3**	**+0.6**
KEK				AML	AML	00 10 29.0	
KEK				AML	AML	00 10 29.1	
NEST	**Nestorio**	**0.72**	**22**	P	**Pg**	**00 10 13.3**	**+0.3**
NEST	**Nestorio**	**0.72**	**22**	P	**Pg**	**00 10 13.3**	**+0.3**
NEST				AML	AML	00 10 28.5	
comp=E,63136μm,0.9s							
NEST				AML	AML	00 10 32.0	
comp=N,58602μm,0.8s							
KBN	**Korca**	**0.88**	**5**		**Pb**	**00 10 15.4**	**-0.1**
KBN	**Korca**	**0.88**	**5**	P	**Pb**	**00 10 15.5**	**0.0**
KBN	**Korca**	**0.88**	**5**	P	**Pb**	**00 10 15.4**	**-0.1**
KBN	**Korca**	**0.88**	**5**	P	**Pg**	**00 10 16.1**	**+0.2**
baz=3.0							
KBN				S	**Sn**	**00 10 30.0**	**+1.4**
baz=3.0							
KBN				AMP			
comp=N,86nm,1.3s,baz=3.0							
TSLK	**Tsoukalades, L**	**0.92**	**182**	P	**Pn**	**00 10 17.1**	**+0.3**
TSLK	**Tsoukalades, L**	**0.92**	**182**	P	**Pg**	**00 10 16.9**	**+0.2**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**00 10 17.7**	**+0.3**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**00 10 18.4**	**+0.9**
baz=183							
LKD2				S	**Sn**	**00 10 32.8**	**+2.3**
baz=183							
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**00 10 17.7**	**+0.3**
LKD2				AML	AML	00 10 36.1	
comp=E,43722μm,0.5s							
LKD2				AML	AML	00 10 37.0	
comp=N,39120μm,0.3s							
KZN	**Kozani**	**1.00**	**56**	P	**Pb**	**00 10 17.7**	**+0.1**
KZN				S	**Sn**	**00 10 32.4**	**+0.9**
comp=N,22μm,0.6s							
KZN	**Kozani**	**1.00**	**56**	P	**Pn**	**00 10 18.2**	**+0.3**
KZN	**Kozani**	**1.00**	**56**	P	**Pb**	**00 10 17.6**	**+0.1**
KZN				S	**Sg**	**00 10 31.4**	**0.0**
KZN				AML	AML	00 10 36.2	
comp=E,58104μm,0.8s							
KZN				AML	AML	00 10 37.2	
comp=N,31064μm,0.9s							
NYDR	**Nydri-Lefkada**	**1.03**	**180**	P	**Pg**	**00 10 19.7**	**+0.9**
THL	**Klokotos Trika**	**1.03**	**100**	P	**Pn**	**00 10 18.6**	**+0.2**
THL	**Klokotos Trika**	**1.03**	**100**	P	**Pn**	**00 10 18.5**	**+0.2**
THL				AML	AML	00 10 40.5	
comp=N,21540μm,0.8s							
THL				AML	AML	00 10 40.9	
comp=E,21253μm,0.4s							
DRAG	**Dragano-Lefkad**	**1.07**	**185**	P	**Pn**	**00 10 19.2**	**+0.4**
DRAG				S	**Sg**	**00 10 37.1**	**+3.6**
comp=E,149μm,0.4s							
EVGI	**Lefkada island**	**1.12**	**182**	P	**Pg**	**00 10 21.0**	**+0.4**
EVGI				S	**Sg**	**00 10 38.4**	**+3.0**
comp=E,24μm,0.4s							
EVGI	**Lefkada island**	**1.12**	**182**	P	**Pg**	**00 10 20.7**	**+0.1**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**00 10 21.7**	**+0.3**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**00 10 22.5**	**+1.1**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**00 10 21.7**	**+0.3**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**00 10 22.6**	**+1.1**
baz=308							
VLO				S	**Sg**	**00 10 39.8**	**+3.1**
baz=308							
TYRN	**Tyrnavos**	**1.19**	**91**	P	**Pb**	**00 10 21.2**	**+0.5**
EVR	**Evrytania**	**1.20**	**133**	P	**Pg**	**00 10 22.8**	**+0.8**
EVR				S	**Sg**	**00 10 42.2**	**+4.5**
comp=E,11μm,0.5s							
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**00 10 23.7**	**0.0**
FSK				S	**Sg**	**00 10 42.6**	**+2.0**
comp=E,12μm,0.8s							
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**00 10 24.3**	**+0.5**
FSK				AML	AML	00 10 58.4	
comp=E,29925μm,0.7s							
FSK				AML	AML	00 10 59.2	
comp=N,17554μm,0.9s							
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**00 10 24.3**	**+0.4**
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**00 10 24.7**	**+0.8**
LRSO	**Larissa Observ**	**1.31**	**93**	P	**Pg**	**00 10 24.1**	**0.0**
LRSO				S	**Sg**	**00 10 44.4**	**+3.1**
MAKR	**Makrakomi, Fth**	**1.33**	**123**	P	**Pb**	**00 10 24.0**	**+0.8**
OHR	**Ohrid**	**1.36**	**3**	P	**Pb**	**00 10 24.7**	**+0.9**
OHR	**Ohrid**	**1.36**	**3**	*e*Pg	**Pg**	**00 10 25.4**	**+0.3**
OHR				*e*Sg	**Sg**	**00 10 46.7**	**+3.7**
OHR	**Ohrid**	**1.36**	**3**	*i* Pn	**Pg**	**00 10 25.5**	**+0.3**
LIT	**Litokhoron**	**1.43**	**75**	Pn	**Pb**	**00 10 24.8**	**0.0**
LIT	**Litokhoron**	**1.43**	**75**	P	**Pg**	**00 10 25.9**	**-0.4**
LIT				S	**Sg**	**00 10 46.4**	**+1.5**
LIT	**Litokhoron**	**1.43**	**75**	P	**Pb**	**00 10 24.8**	**0.0**
LIT	**Litokhoron**	**1.43**	**75**	P	**Pb**	**00 10 25.3**	**+0.5**
VLS	**Valsamata**	**1.57**	**183**	P	**Pb**	**00 10 27.7**	**+0.4**
VLS	**Valsamata**	**1.57**	**183**	P	**Pb**	**00 10 27.4**	**+0.1**
VLS				AML	AML	00 10 52.9	
comp=E,17233μm,0.6s							
VLS				AML	AML	00 10 54.0	
comp=N,24630μm,0.4s							
EFP	**Efpalio**	**1.62**	**144**	P	**Pg**	**00 10 29.7**	**-0.3**
EFP				AML	AML	00 11 06.7	
comp=N,20547μm,0.5s							
EFP				AML	AML	00 11 11.1	
comp=E,21212μm,0.6s							
PSDA	**Pessada-Kefalo**	**1.63**	**183**	P	**Pb**	**00 10 28.3**	**-0.1**
SERG	**Sergoula**	**1.70**	**141**	P	**Pg**	**00 10 30.9**	**-0.7**
SERG				AML	AML	00 11 08.5	
comp=E,18265μm,0.6s							
SERG				AML	AML	00 11 10.7	
comp=N,15774μm,0.4s							
TIR	**Tirane**	**1.72**	**339**	⇑P	**Pb**	**00 10 30.5**	**+0.7**
TIR	**Tirane**	**1.72**	**339**	Pn	**Pb**	**00 10 29.8**	**0.0**
TIR	**Tirane**	**1.72**	**339**	P	**Pb**	**00 10 29.8**	**0.0**
TIR	**Tirane**	**1.72**	**339**	*e*Pn	**Pb**	**00 10 30.7**	**+0.9**
TIR				*e*Sn	**Sg**	**00 10 54.7**	**+0.4**
TIR	**Tirane**	**1.72**	**339**	P	**Pb**	**00 10 30.8**	**+1.0**
baz=339							
TIR				S	**Sg**	**00 10 58.0**	**+3.8**
baz=339							
TIR				AMP			
comp=E,50nm,0.8s,baz=339							
TIR	**Tirane**	**1.72**	**339**	⇑P	**Pb**	**00 10 30.6**	**+0.7**
SCTE	**Santa Cesarea**	**1.74**	**281**	Pn	**Pn**	**00 10 29.1**	**+1.0**
SCTE				Sn	**Sn**	**00 10 49.3**	**-0.5**
SCTE	**Santa Cesarea**	**1.74**	**281**	P	**Pn**	**00 10 29.1**	**+1.0**
GRG	**Griva**	**1.78**	**47**	P	**Pb**	**00 10 30.4**	**-0.4**
GRG	**Griva**	**1.78**	**47**	P	**Pn**	**00 10 30.0**	**+1.4**
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pb**	**00 10 31.7**	**+0.7**
RLS				AML	AML	00 11 09.2	
comp=N,8867μm,0.8s							
RLS				AML	AML	00 11 10.4	
comp=E,5412μm,0.6s							
PHP	**Peshkopia**	**1.94**	**354**	P	**Pb**	**00 10 33.9**	**+0.2**
PHP	**Peshkopia**	**1.94**	**354**	P	**Pb**	**00 10 34.7**	**+1.0**
baz=354							
PHP				S	**Sg**	**00 11 03.8**	**+2.3**
baz=354							
PHP				AMP			
comp=N,64nm,0.7s,baz=354							
THE	**Thessaloniki**	**1.95**	**62**	P	**Pb**	**00 10 33.1**	**-0.6**
THE	**Thessaloniki**	**1.95**	**62**	P	**Pg**	**00 10 35.5**	**-0.8**
baz=62							
NEO	**Neokhori**	**2.00**	**102**	P	**Pb**	**00 10 34.7**	**+0.1**
NEO				AML	AML	00 11 05.4	
comp=N,10328μm,0.8s							
NEO				AML	AML	00 11 10.9	
comp=E,7641μm,0.4s							
VAY	**Valandovo**	**2.12**	**42**	P	**Pn**	**00 10 34.8**	**+1.5**
VAY	**Valandovo**	**2.12**	**42**	*e*Pn	**Pn**	**00 10 35.3**	**+2.0**
VAY				*e*Sn	**Sb**	**00 11 02.2**	**-0.5**
VAY	**Valandovo**	**2.12**	**42**	*i* Pn	**Pn**	**00 10 35.3**	**+2.0**
KNT	**Kendrikon**	**2.20**	**49**	P	**Pn**	**00 10 35.6**	**+1.3**
STIP	**Stip**	**2.25**	**30**	*i* Pn	**Pb**	**00 10 39.2**	**+0.3**
SKO	**Skopje**	**2.29**	**14**	P	**Pb**	**00 10 38.7**	**-0.9**
SKO	**Skopje**	**2.29**	**14**	*e*Pn	**Pb**	**00 10 38.9**	**-0.7**
SKO				*e*Sn	**Sb**	**00 11 08.1**	**+0.5**
SKO	**Skopje**	**2.29**	**14**	*i* Pn	**Pb**	**00 10 39.3**	**-0.3**
SOH	**Sokhos**	**2.30**	**61**	P	**Pb**	**00 10 38.1**	**-1.6**
ULC	**Ulcinj**	**2.47**	**334**	*e*Pn	**Pn**	**00 10 39.3**	**+1.2**
ULC				*i* Sn	**Sn**	**00 11 10.3**	**+2.5**
SRS	**Serrai**	**2.60**	**57**	P	**Pn**	**00 10 41.5**	**+1.7**
SRS	**Serrai**	**2.60**	**57**	*e*Pn	**Pn**	**00 10 41.6**	**+1.7**

BUM *i* Sn **Sn** **00 11 20.4 +2.2**
PDG Podgorica 2.89 338 ⇑P **Pn** **00 10 45.6 +1.7**
PDG Podgorica 2.89 338 Pn **Pn** **00 10 45.0 +1.1**
PDG Podgorica 2.89 338 ⇑P **Pn** **00 10 45.5 +1.7**
TTG Podgorica 2.89 338 ⇓*i*Pn **Pn** **00 10 45.2 +1.3**
TTG *i* Sn **Sn** **00 11 20.6 +2.5**
PVY Plav 2.90 349 *e*Pn **Pn** **00 10 45.4 +1.3**
PVY *i* Sn **Sn** **00 11 21.2 +2.7**
ATH Athens Observa 2.95 126 P **Pb** **00 10 49.0 -1.8**
TIP Timpagrande 3.10 261 ⇓P **Pn** **00 10 47.6 +0.8**
TIP Timpagrande 3.10 261 Pn **Pn** **00 10 47.4 +0.6**
TIP Timpagrande 3.10 261 ⇑P **Pn** **00 10 47.6 +0.8**
CEME Cevo 3.10 335 ⇓*i*Pn **Pn** **00 10 48.0 +1.2**
CEME *e*Sn **Sn** **00 11 25.6 +2.2**
HCY Herceg Novi 3.17 329 *e*Pn **Pn** **00 10 48.2 +0.5**
HCY Herceg Novi 3.17 329 *e*Pn **Pn** **00 10 48.9 +1.2**
HCY *i* Sn **Sn** **00 11 27.1 +2.1**
BARS Barje 3.18 15 *e*Pn **Pn** **00 10 50.3 +2.4**
IVA Berane 3.18 349 *e*Pn **Pn** **00 10 49.4 +1.5**
IVA *i* Sn **Sn** **00 11 28.0 +2.6**
MATE Matera 3.19 288 ⇓P **Pn** **00 10 48.6 +0.7**
MATE ⇑S **Sn** **00 11 24.4 -0.9**
KOME Kolasin 3.23 344 *e*Pn **Pn** **00 10 50.0 +1.5**
KOME *i* Sn **Sn** **00 11 28.8 +2.3**
NKME Niksic 3.29 337 ⇑*i*Pn **Pn** **00 10 50.7 +1.3**
NKME *i* Sn **Sn** **00 11 30.3 +2.3**
VTS Vitosha 3.45 33 ⇑P **Pn** **00 10 54.5 +2.8**
VTS Vitosha 3.45 33 Pn **Pn** **00 10 53.8 +2.1**
VTS Vitosha 3.45 33 P **Pn** **00 10 53.8 +2.1**
VTS Vitosha 3.45 33 ⇓P **Pn** **00 10 54.1 +2.4**
SELS Selova 3.48 5 *e*Pn **Pn** **00 10 54.5 +2.5**
SJES Sjenica 3.55 351 *e*Pn **Pn** **00 10 55.9 +2.8**
UPM Unac-Piva 3.71 339 *e*Pn **Pn** **00 10 57.6 +2.0**
UPM Unac-Piva 3.71 339 *e*Pn **Pn** **00 10 56.5 +1.3**
UPM *i* Sn **Sn** **00 11 40.3 +1.8**
PLE Pljevlja 3.71 345 *e*Pn **Pn** **00 10 56.7 +1.5**
PLE *i* Sn **Sn** **00 11 40.7 +2.2**
CUC Castrocucco 3.76 275 Pn **Pn** **00 10 56.6 +0.7**
ZAPS Zavoj 3.81 22 *e*Pn **Pn** **00 10 59.5 +2.9**
PLD Plovdiv 3.84 51 P **Pn** **00 10 59.9 +3.0**
STON Ston 3.85 325 ⇑*i*Pn **Pn** **00 10 56.2 -0.8**
RDO Rodhopi 3.95 68 Pn **Pn** **00 10 59.4 +1.0**
RDO Rodhopi 3.95 68 ⇑P **Pn** **00 10 60.0 +1.6**
BOVS Bovan 3.96 11 ⇑P **Pn** **00 11 01.2 +2.7**
BOVS Bovan 3.96 11 *e*Pn **Pn** **00 11 00.0 +1.5**
BOVS *e*Sn **Sn** **00 11 47.1 +2.7**
RUDO Rudo 3.99 346 ⇑*i*Pn **Pn** **00 11 00.3 +1.3**
CEL Celeste 4.02 250 **Pn** **00 10 59.9 +0.4**
CEL Celeste 4.02 250 ⇑P **Pn** **00 11 00.5 +1.0**
KDZ Kurdzhali 4.06 61 P **Pn** **00 11 01.4 +1.4**
GRUS Gruza 4.14 0 *e*Pn **Pn** **00 11 02.9 +1.9**
BLKB Belogradchik 4.15 20 ⇓P **Pn** **00 11 04.5 +3.4**
ZAGS Zajecar 4.22 15 *e*Pn **Pn** **00 11 04.5 +2.4**
BBLS Lazići 4.23 347 ⇑*i*Pn **Pn** **00 11 03.7 +1.4**
BBLS Lazići 4.23 347 *e*Pn **Pn** **00 11 03.7 +1.4**
ALN Alexandroupoli 4.25 73 **Pn** **00 11 04.0 +1.5**
ALN Alexandroupoli 4.25 73 P **Pn** **00 11 04.0 +1.5**
ALN Alexandroupoli 4.25 73 ⇑P **Pn** **00 11 04.7 +2.2**
SGRT San Giovanni R 4.26 300 **Pn** **00 11 03.3 +0.5**
EZN Ezine 4.34 87 P **Pn** **00 11 07.0 +3.3**
DIVS Divibare 4.38 353 Pn **Pn** **00 11 05.9 +1.5**
DIVS Divibare 4.38 353 ⇑*i*Pn **Pn** **00 11 06.0 +1.5**
DIVS Divibare 4.38 353 *e*Pn **Pn** **00 11 05.8 +1.4**
DIVS Divibare 4.38 353 ⇑P **Pn** **00 11 05.9 +1.5**
TRUS Trudelj 4.48 357 *e*Pn **Pn** **00 11 07.4 +1.7**
HAPS Han Pijesak,BI 4.53 344 ⇑*i*Pn **Pn** **00 11 07.7 +1.3**
APE Apeiranthos 4.64 124 ⇓P **Pn** **00 11 11.3 +3.3**
APE Apeiranthos 4.64 124 *i* P **Pb** **00 11 8.6 -4.1**
BAIL Bailesti 4.71 24 ⇑P **Pn** **00 11 12.1 +3.3**
KUBS Kucevo 4.72 9 *e*Pn **Pn** **00 11 10.1 +1.1**
PUNG Punghina 4.82 19 ⇑P **Pn** **00 11 13.1 +2.7**
PAOL Paolisi 4.85 287 **Pn** **00 11 12.2 +1.3**
DKL Dikili 4.86 96 ⇑P **Pn** **00 11 15.3 +4.4**
TEKS Tekeris 4.88 350 *e*Pn **Pn** **00 11 09.8 -1.4**
TEKS Tekeris 4.88 350 *e*Pn **Pn** **00 11 11.1 -0.1**
SANT Santorini 5.05 130 ⇓P **Pn** **00 11 16.9 +3.4**
SANT Santorini 5.05 130 Pn **Pn** **00 11 15.6 +2.0**
SRKY Kupres RS 5.06 330 ⇑*i*Pn **Pn** **00 11 15.3 +1.6**
BEO Beograd 5.06 358 P **Pn** **00 11 14.2 +0.5**
BEO Beograd 5.06 358 *e*Pn **Pn** **00 11 13.4 -0.3**
VLAD Vladila 5.07 32 ⇑P **Pn** **00 11 16.5 +2.7**
MDVR Moldovita 5.09 8 ⇓P **Pn** **00 11 16.4 +2.3**
DJES Djerdap 5.10 15 ⇑P **Pn** **00 11 18.0 +3.8**
DJES Djerdap 5.10 15 *e*Pn **Pn** **00 11 16.6 +2.4**
BLJ Bijeljina 5.14 349 *e*Pn **Pn** **00 11 14.3 -0.5**
SRE Strehaia 5.25 20 ⇑P **Pn** **00 11 19.6 +3.2**
SRE Strehaia 5.25 20 P **Pn** **00 11 19.5 +3.2**
HERR Herculane 5.29 13 ⇓P **Pn** **00 11 19.3 +2.5**
DOB Doboj 5.34 340 *e*Pn **Pn** **00 11 17.3 -0.2**
MGRS Mrkonjic Grad 5.38 331 ⇑*i*Pn **Pn** **00 11 19.9 +1.8**
VAE Valguarnera 5.42 247 Pn **Pn** **00 11 19.9 +1.2**
comp=E,2.8nm,0.3s,baz=68,slow=7.4,SNR=11
VAE Sn **Sn** **00 12 20.1 -0.4**
comp=E,14nm,0.3s,baz=360,slow=21,SNR=6.0
comp=E,8.3nm,0.4s
FRGS Fruska Gora 5.45 353 ⇑P **Pn** **00 11 20.6 +1.6**
FRGS Fruska Gora 5.45 353 ⇑*i*Pn **Pn** **00 11 20.0 +1.0**
FRGS Fruska Gora 5.45 353 *e*Pn **Pn** **00 11 19.8 +0.8**
EDC Edincik 5.53 81 P **Pn** **00 11 24.4 +4.2**
IDI Anoyia 5.56 142 ⇑P **Pn** **00 11 23.6 +3.0**
IDI Anoyia 5.56 142 Pn **Pn** **00 11 21.3 +0.7**
comp=E,2.3nm,0.3s,baz=257,slow=7.2,SNR=26
IDI Sn **Sn** **00 12 25.4 +1.3**
comp=E,23nm,0.3s,baz=328,slow=19,SNR=8.4
IDI LR LR 00 14 14.9
comp=E,842nm,21.1s,baz=329,slow=45
comp=E,7.8nm,0.4s
IDI Anoyia 5.56 142 **Pn** **00 11 20.9 +0.2**
IDI Anoyia 5.56 142 ⇑P **Pn** **00 11 21.9 +1.3**
RAFF Raffo Rosso 5.57 245 **Pn** **00 11 20.2 -0.5**
INTR Introdacqua 5.62 296 **Pn** **00 11 23.2 +1.7**
BLY Banja Luka 5.64 334 ⇑*i*Pn **Pn** **00 11 22.5 +0.9**
BLY Banja Luka 5.64 334 ⇑P **Pn** **00 11 22.4 +0.8**
BANR Banloc 5.64 3 ⇓P **Pn** **00 11 24.3 +2.7**
HUMR Humele 5.74 32 ⇑P **Pn** **00 11 25.7 +2.7**
RAZG Razgrad 5.79 47 ⇑P **Pn** **00 11 26.9 +3.3**
A052A Srbac 5.85 337 ⇑*i*Pn **Pn** **00 11 24.7 +0.3**
GZR Gura Zlata 5.85 15 ⇑P **Pn** **00 11 27.2 +2.6**
GZR Gura Zlata 5.85 15 P **Pn** **00 11 27.1 +2.6**
BZS Buzias 5.91 6 ⇓P **Pn** **00 11 27.9 +2.7**
BZS Buzias 5.91 6 P **Pn** **00 11 27.0 +1.7**
BZS pmax pmax
comp=Z,126nm,1.0s
SGRR Singureni 5.96 40 ⇑P **Pn** **00 11 28.9 +3.0**
A051A Mrakovica 5.96 333 ⇑*i*Pn **Pn** **00 11 26.8 +0.7**
TIM Timisoara 6.00 4 ⇓P **Pn** **00 11 29.1 +2.6**
TIM Timisoara 6.00 4 P **Pn** **00 11 29.1 +2.6**
PRIJ Prijedor 6.00 332 ⇑*i*Pn **Pn** **00 11 27.1 +0.6**
AQU L'Aquila 6.10 298 **Pn** **00 11 29.6 +1.7**
AQU L'Aquila 6.10 298 P **Pn** **00 11 29.6 +1.7**
AQU L'Aquila 6.10 298 ⇑P **Pn** **00 11 29.7 +1.7**
LOT Lotru 6.13 21 ⇑P **Pn** **00 11 31.2 +2.7**
CAMP Campotosto 6.17 299 **Pn** **00 11 30.2 +1.3**
MANT Manisa 6.24 99 Pn **Pn** **00 11 32.4 +2.2**
WDD Wied Dalam 6.25 233 **Pn** **00 11 29.2 -0.9**
ARR Arges 6.32 26 ⇓P **Pn** **00 11 33.6 +2.5**
DEV Deva 6.34 14 ⇑P **Pn** **00 11 35.2 +3.9**
DEV Deva 6.34 14 P **Pn** **00 11 35.1 +3.9**
MTUR Matau 6.36 29 ⇑P **Pn** **00 11 35.7 +4.1**
SULR 6.43 38 ⇓P **Pn** **00 11 35.4 +3.0**
NRCA Norcia 6.49 301 Pn **Pn** **00 11 34.6 +1.2**
ISK Istanbul-Kandi 6.52 76 P **Pn** **00 11 38.1 +4.4**
VOIR 6.53 28 ⇓P **Pn** **00 11 36.5 +2.5**
VOIR 6.53 28 P **Pn** **00 11 36.4 +2.5**
SIRR Siria 6.55 6 ⇓P **Pn** **00 11 36.9 +2.7**
LEHL Lehliu 6.56 42 ⇓P **Pn** **00 11 37.6 +3.4**
AMBH Ambrzfalva 6.60 0 ⇓P **Pn** **00 11 36.9 +2.1**
AMBH Ambrzfalva 6.60 0 P **Pn** **00 11 36.6 +1.8**
SECR 6.61 35 ⇑P **Pn** **00 11 38.9 +3.9**
KOVH Kovagotottos 6.62 344 P **Pn** **00 11 35.7 +0.7**
KARP Karpathos 6.62 127 Pn **Pn** **00 11 38.4 +3.2**
MORH Mrgy, Hungar 6.64 348 ⇑P **Pn** **00 11 36.2 +0.9**
MORH Mrgy, Hungar 6.64 348 P **Pn** **00 11 35.0 -0.2**
CESX Cesi 6.76 298 **Pn** **00 11 38.5 +1.6**
ARG Arkhangelos 6.85 119 P **Pn** **00 11 41.4 +3.2**
ARG S **Sn** **00 12 58.6 +3.0**
ICOR Ion Corvin 6.86 48 ⇑P **Pn** **00 11 42.4 +4.0**
ISR Istrita 6.89 37 ⇑P **Pn** **00 11 42.8 +3.9**
ISR Istrita 6.89 37 P **Pn** **00 11 42.8 +3.9**
AMRR Amara 6.92 43 ⇓P **Pn** **00 11 42.4 +3.2**
MLR Muntele Rosu 6.92 32 ⇓P **Pn** **00 11 43.2 +3.8**
MLR Muntele Rosu 6.92 32 Pn **Pn** **00 11 42.1 +2.8**
comp=Z,6.5nm,0.3s,baz=214,slow=3.0,SNR=38
MLR Sn **Sn** **00 12 56.7 -0.9**
comp=Z,0.5nm,0.3s,baz=266,slow=16,SNR=1.0
MLR LR LR 00 14 57.3
comp=Z,5µm,19.7s,baz=186,slow=43
comp=Z,23nm,1.0s
MLR Muntele Rosu 6.92 32 **Pn** **00 11 42.6 +3.2**
PGOR Pogoanele 6.95 40 ⇓P **Pn** **00 11 43.7 +4.2**
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn** **00 11 40.8 +0.3**
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn** **00 11 40.9 +0.5**
BOJS *e*Sn **Sn** **00 12 56.7 -2.9**
BOJS IAML 00 14 26.2
comp=Z,934nm,1.7s
MURB Monte Urbino 7.07 302 **Pn** **00 11 42.5 +1.3**
DOPR Dopca 7.11 27 ⇓P **Pn** **00 11 45.8 +4.0**
MGAB Montegabbione 7.19 299 ⇓P **Pn** **00 11 44.3 +1.3**
CRES Cresnjev 7.19 329 ⇑*i*Pn **Pn** **00 11 43.1 +0.1**
CRES Cresnjev 7.19 329 ⇑*i*Pn **Pn** **00 11 43.0 +0.1**
DRGR 7.19 11 ⇓P **Pn** **00 11 46.4 +3.4**
DRGR 7.19 11 P **Pn** **00 11 47.0 +4.0**
DRGR pmax pmax
comp=Z,30nm,1.1s
GBRS Gornja Briga 7.22 325 ⇑*i*Pn **Pn** **00 11 44.1 +0.7**
CJR Cluj-Napoca 7.28 16 ⇓P **Pn** **00 11 48.1 +3.9**
CJR Cluj-Napoca 7.28 16 P **Pn** **00 11 48.1 +3.9**
GRER 7.29 37 ⇑P **Pn** **00 11 48.4 +4.2**
LATE Laterza 7.29 296 **Pn** **00 11 45.8 +1.5**
HARR Harsova 7.29 45 ⇓P **Pn** **00 11 47.3 +3.0**
HARR Harsova 7.29 45 P **Pn** **00 11 47.3 +3.0**
BEHE Becsehely 7.30 338 P **Pn** **00 11 45.3 +0.8**
COVR Voineasa-Covas 7.32 32 ⇑P **Pn** **00 11 48.3 +3.6**
OZUR 7.36 29 ⇑P **Pn** **00 11 48.7 +3.4**
BORR Bors 7.38 6 ⇑P **Pn** **00 11 48.2 +2.7**
TIRR Tirgusor 7.42 48 ⇑P **Pn** **00 11 49.4 +3.3**
TIRR Tirgusor 7.42 48 ⇑P **Pn** **00 11 49.4 +3.3**
TIRR Tirgusor 7.42 48 **Pn** **00 11 49.0 +3.0**
TIRR Tirgusor 7.42 48 P **Pn** **00 11 49.0 +3.0**
TIH Tihany 7.43 345 P **Pn** **00 11 47.5 +1.3**
PLOR Plostina 7.51 34 ⇓P **Pn** **00 11 51.3 +4.0**
PLOR Plostina 7.51 34 P **Pn** **00 11 51.3 +4.0**
BORA Eskisehir 7.51 86 **Pn** **00 11 49.4 +1.9**
VRI Vrincioaia 7.55 34 ⇓P **Pn** **00 11 51.9 +4.0**
VRI Vrincioaia 7.55 34 P **Pn** **00 11 51.9 +4.0**
BSZH Besenyszg 7.56 358 ⇑P **Pn** **00 11 50.6 +2.8**
BSZH Besenyszg 7.56 358 P **Pn** **00 11 50.3 +2.4**
CEY Cerknica 7.56 324 ⇑*i*Pn **Pn** **00 11 48.0 0.0**
MESR Meseseni 7.58 12 ⇓P **Pn** **00 11 50.9 +2.7**
SKDS Skadanscina 7.60 322 ⇑*i*Pn **Pn** **00 11 48.1 -0.5**
SKDS Skadanscina 7.60 322 *i* Pn **Pn** **00 11 48.1 -0.5**
SKDS *e*Sn **Sn** **00 13 09.2 -5.0**
SKDS IAML 00 14 44.8
comp=Z,901nm,1.8s
ODBI Odobesti 7.62 36 ⇓P **Pn** **00 11 52.9 +4.1**
TPGR Topolog 7.67 46 ⇓P **Pn** **00 11 52.4 +2.9**
LTVH Ltavrtes, Hu 7.69 6 ⇑P **Pn** **00 11 52.6 +3.0**
LTVH Ltavrtes, Hu 7.69 6 P **Pn** **00 11 53.0 +3.4**
CFR Carcaliu 7.72 43 ⇑P **Pn** **00 11 53.1 +2.8**
CFR Carcaliu 7.72 43 P **Pn** **00 11 53.0 +2.8**
PANC Panciu 7.74 36 ⇓P **Pn** **00 11 54.2 +3.7**
LJU Ljubljana 7.75 326 ⇑*i*Pn **Pn** **00 11 50.6 +0.1**
MPLH Magyarpolny 7.77 344 P **Pn** **00 11 51.3 +0.5**
ARCR ARCALÍA 7.80 19 ⇓P **Pn** **00 11 54.5 +3.2**
CSKK Cskako 7.81 348 P **Pn** **00 11 52.8 +1.4**
BUD Budapest 7.83 352 P **Pn** **00 11 52.8 +1.2**
ELL Elmali 7.84 110 P **Pn** **00 11 56.6 +4.6**
ELL S **Sn** **00 13 20.9 +0.6**
ISP Isparta 7.91 101 *i* P **Pn** **00 11 56.6 +3.7**
TATR Tatarca 7.97 40 ⇓P **Pn** **00 11 57.6 +4.0**
CASP Castiglione de 8.00 295 **Pn** **00 11 55.1 +1.1**
OSSC Osservatorio P 8.02 301 **Pn** **00 11 53.2 -1.1**
TESR Tescani 8.04 31 ⇑P **Pn** **00 11 57.6 +3.1**
EGYH Egyhazaskeszo 8.04 343 P **Pn** **00 11 56.8 +2.2**
SOKA Soboth 8.06 331 *e*Pn **Pn** **00 11 54.7 -0.3**
comp=Z,21nm,0.3s,SNR=30
SOKA *e*Sn **Sn** **00 13 21.5 -4.1**
comp=Z,44nm,0.7s
MDUB Mudurnu 8.08 82 **Pn** **00 11 56.7 +1.4**
TLCR 8.09 45 ⇓P **Pn** **00 11 59.1 +3.8**
TLCR 8.09 45 P **Pn** **00 11 59.1 +3.8**
OBKA Obir 8.11 328 ⇑*i*Pn **Pn** **00 11 55.1 -0.5**
OBKA Obir 8.11 328 *e*Pn **Pn** **00 11 55.2 -0.5**
comp=Z,15nm,0.2s,SNR=23
OBKA *e*Sn **Sn** **00 13 25.4 -1.5**
comp=Z,86nm,0.6s
VLDR Vladesti 8.16 39 ⇓P **Pn** **00 12 00.6 +4.4**
BMR Baia Mare 8.18 13 ⇑P **Pn** **00 12 00.2 +3.7**
BMR Baia Mare 8.18 13 P **Pn** **00 12 00.1 +3.7**
PSZ Piszkesteto 8.19 356 ⇑P **Pn** **00 11 58.6 +2.0**
PSZ Piszkesteto 8.19 356 **Pn** **00 11 57.4 +0.7**
PSZ Piszkesteto 8.19 356 P **Pn** **00 11 57.4 +0.7**
PSZ Piszkesteto 8.19 356 P **Pn** **00 11 58.3 +1.7**
PSZ S **Sn** **00 13 26.1 -2.5**
SRO Srobarova 8.24 349 *e*P **Pn** **00 11 59.8 +2.5**
BIR Birlad 8.26 36 ⇓P **Pn** **00 12 01.1 +3.6**
BIR Birlad 8.26 36 P **Pn** **00 12 01.1 +3.6**
ARSA Arzberg 8.39 335 *i* Pn **Pn** **00 11 59.1 -0.2**
comp=Z,9.8nm,0.6s,SNR=20
ARSA Arzberg 8.39 335 ⇑P **Pn** **00 11 59.1 -0.2**
SOP Sopron 8.48 341 P **Pn** **00 12 01.9 +1.3**
PRED Cave del Predi 8.48 324 **Pn** **00 12 00.7 +0.1**
TRPA Tarpa 8.48 8 ⇑P **Pn** **00 12 03.1 +2.5**
TRPA Tarpa 8.48 8 P **Pn** **00 12 03.9 +3.3**
BURAR Bucovina Array 8.52 21 ⇑P **Pn** **00 12 05.0 +3.8**
BURAR Bucovina Array 8.52 21 **Pn** **00 12 03.1 +1.9**
BURAR Bucovina Array 8.52 21 P **Pn** **00 12 03.1 +1.9**
BUR08 Bucovina Ar. S 8.54 21 **Pn** **00 12 02.8 +1.2**
PTCC Patocco-Chiusa 8.55 324 ⇓P **Pn** **00 12 01.2 -0.3**
ABAH Abaujker 8.56 2 P **Pn** **00 12 04.6 +3.0**
RONA Rosalia, Austr 8.56 340 *e*Pn **Pn** **00 12 01.7 -0.1**
comp=Z,5.6nm,0.5s,SNR=10
ZCCA Zocca 8.57 306 **Pn** **00 12 01.5 -0.4**
MYKA Terra Mystica 8.59 325 *e*Pn **Pn** **00 12 01.6 -0.6**
comp=Z,24nm,0.6s,SNR=10.0
MYKA *e*Sn **Sn** **00 13 35.8 -2.8**
comp=Z,12nm,0.3s
TEOL Teolo 8.70 313 **Pn** **00 12 02.9 -0.8**
KECS Kecovo 8.73 359 *e*P **Pn** **00 12 07.0 +2.9**
STAL STALIGIAL 8.75 321 **Pn** **00 12 03.6 -0.7**
CLUD Cludinico 8.81 322 **Pn** **00 12 04.7 -0.4**
ZST Bratislava 8.83 344 *e*P **Pn** **00 12 07.0 +1.6**
ZST MLR MLR
comp=Z,5µm,3.6s
VYHS Vyhne 8.85 352 *e*P **Pn** **00 12 07.2 +1.6**
VYHS *e* 00 13 42.7
VLC Villacollemand 8.85 303 **Pn** **00 12 05.8 0.0**
VLC Villacollemand 8.85 303 ⇑P **Pn** **00 12 05.8 0.0**
CONA Conrad Observa 8.89 338 *i* Pn **Pn** **00 12 06.1 -0.2**
comp=Z,3.1nm,0.3s,SNR=6.6
UZH Uzhgorod 8.96 7 *e*P **Pn** **00 12 09.0 +1.9**
UZH *e*S **Sn** **00 13 49.1 +1.7**
UZH MLR MLR
comp=N,490nm,13.0s
UZH MLR MLR
comp=E,350nm,13.0s
UZH MLR MLR
comp=Z,300nm,13.0s
MODS Modra-Piesok 8.97 345 *e*P **Pn** **00 12 08.5 +1.2**
MODS MLR MLR
comp=Z,3µm,3.6s
SLUM Salum 9.02 155 P **Pn** **00 12 07.2 -0.8**
baz=157
KBA Koelnbreinsper 9.07 326 P **Pn** **00 12 09.0 +0.2**
KBA Koelnbreinsper 9.07 326 *e*Pn **Pn** **00 12 08.5 -0.3**
comp=Z,7.8nm,0.3s,SNR=23
KBA *e*Sn **Sn** **00 13 45.1 -5.3**
comp=Z,13nm,0.6s
KBA Koelnbreinsper 9.07 326 ⇑P **Pn** **00 12 08.3 -0.5**
CTI Castel Tesino 9.14 316 **Pn** **00 12 09.1 -0.7**
CTI Castel Tesino 9.14 316 P **Pn** **00 12 09.1 -0.7**
CRVS Cervenica-Dubn 9.17 3 *e*P **Pn** **00 12 13.5 +3.5**
PRMA PARMA 9.18 306 **Pn** **00 12 10.6 +0.4**
ABTA Abfaltersbach 9.19 322 *e*Pn **Pn** **00 12 09.7 -0.7**
comp=Z,11nm,0.3s,SNR=24
KOLS Kolonicke sedl 9.25 6 *e*P **Pn** **00 12 15.3 +4.1**
PGF Pioggiola 9.26 291 *e*P **Pn** **00 12 12.5 +1.2**
PGF *e*Sn Sn 00 13 40.3 -15
comp=Z,28nm,0.8s
PGF Pioggiola 9.26 291 P **Pn** **00 12 12.7 +1.4**
MILM Milestii Mici 9.29 37 ⇑P **Pn** **00 12 15.6 +4.0**
MILM Milestii Mici 9.29 37 ⇑*i*P **Pn** **00 12 13.8 +2.2**
comp=Z,100nm,1.5s
MILM Milestii Mici 9.29 37 *i* PP Pn 00 12 23.0 +11
MILM M M 00 12 25.0
comp=Z,260nm,2.3s
MILM *e*S **Sn** **00 14 01.8 +6.2**
MILM *e*L L 00 15 37.0
MILM LqM 00 16 13.0
comp=Z,2µm,10.5s
MILM LRM MLR 00 16 43.0
comp=Z,2µm,11.0s
MILM Milestii Mici 9.29 37 *c i*P **Pn** **00 12 13.8 +2.2**
MILM *e*S **Sn** **00 14 02.0 +6.4**
MILM pmax pmax
comp=Z,100nm,1.5s
MILM MLR MLR
comp=Z,3µm,12.0s
MILM MLR MLR
comp=E,2µm,11.0s
MOA Molln 9.33 332 *e*Pn **Pn** **00 12 12.6 +0.2**
comp=E,12nm,0.2s,SNR=22
MOA *e*Sn **Sn** **00 13 54.7 -2.1**
comp=E,17nm,0.6s
KIS Kishinev 9.35 37 *e*P **Pn** **00 12 16.0 +3.5**
comp=E,60nm,1.6s
KIS *e*Lq LQ 00 15 22.0
KIS LRM MLR 00 16 46.0
comp=E,1µm,12.0s
KIS Kishinev 9.35 37 *e*P **Pn** **00 12 16.0 +3.5**
KIS pmax pmax
comp=Z,60nm,1.6s
KIS MLR MLR
comp=E,1µm,12.0s
KIS MLR MLR
comp=Z,1µm,12.0s
JAVC Velka Javorina 9.36 348 *e*PN **Pn** **00 12 14.5 +1.8**
BIOA Bad Ischl, Aus 9.44 330 *e*Pn **Pn** **00 12 13.8 0.0**
comp=Z,27nm,0.4s,SNR=60
BIOA *e*Sn **Sn** **00 13 57.4 -1.9**
comp=Z,42nm,0.8s
MSSA Maissana 9.48 302 **Pn** **00 12 14.8 +0.4**
SALO Salr 9.51 311 Pn **Pn** **00 12 14.1 -0.7**
SALO Salr 9.51 311 ⇓P **Pn** **00 12 14.1 -0.7**
STHS Stebnicka Huta 9.68 2 *e*P **Pn** **00 12 19.5 +2.5**
KRUC Moravsky 9.81 343 *e*PN **Pn** **00 12 18.8 +0.1**
MAUC Maruska 9.83 349 *e*Pn **Pn** **00 12 19.6 +0.5**
MAUC AMS AMS 00 17 10.0
comp=Z,5µm,12.5s
KEST Kesra 9.84 250 Pn **Pn** **00 12 21.2 +1.9**
comp=Z,0.5nm,0.3s,baz=27,slow=6.5,SNR=14
KEST Sn **Sn** **00 14 10.3 +1.0**
comp=Z,0.4nm,0.3s,baz=72,slow=20,SNR=1.2
comp=Z,10nm,0.8s
KEST Kesra 9.84 250 **Pn** **00 12 21.1 +1.8**
MATC Matruh 9.93 146 P **Pn** **00 12 19.3 -1.2**
baz=147
BR131 Keskin Array S 9.97 86 **Pn** **00 12 23.7 +2.5**
BR131 Keskin Array S 9.97 86 P **Pn** **00 12 23.7 +2.5**
BRTR Keskin Array B 9.97 86 Pn **Pn** **00 12 25.2 +4.0**
comp=Z,0.5nm,0.3s,baz=266,slow=12,SNR=16
BRTR Sn **Sn** **00 14 14.1 +1.5**
comp=Z,0.1nm,0.3s,baz=264,slow=22,SNR=1.4
BRTR LR LR 00 16 51.6
comp=Z,1µm,20.1s,baz=278,slow=41
comp=Z,2.6nm,0.6s
BRTR Keskin Array B 9.97 86 **Pn** **00 12 24.3 +3.1**
BRTR Keskin Array B 9.97 86 P **Pn** **00 12 24.3 +3.1**
WTTA Wattenberg 9.98 322 P **Pn** **00 12 21.1 -0.2**
WTTA Wattenberg 9.98 322 *e*Pn **Pn** **00 12 21.2 -0.1**
comp=Z,38nm,0.6s,SNR=50
WTTA *e*Sn **Sn** **00 14 09.3 -3.6**
comp=Z,81nm,0.6s
VRAC Vranov 10.00 344 ⇓P **Pn** **00 12 22.2 +0.8**
VRAC Vranov 10.00 344 Pn **Pn** **00 12 21.7 +0.3**
comp=Z,0.4nm,0.3s,baz=174,slow=13,SNR=19
VRAC LR LR 00 17 08.5
comp=Z,2µm,19.4s,baz=170,slow=43
comp=Z,8.4nm,0.9s
VRAC Vranov 10.00 344 *e*PN **Pn** **00 12 21.6 +0.3**
WATA Walderalm 10.06 322 *e*Pn **Pn** **00 12 22.3 -0.1**
comp=Z,58nm,0.5s,SNR=70
WATA *e*Sn **Sn** **00 14 10.9 -3.9**
comp=Z,41nm,0.6s
CKRC Cesky Krumlov 10.15 335 *e*PN **Pn** **00 12 23.2 -0.4**
SQTA Sankt Quirin 10.16 320 *e*Pn **Pn** **00 12 24.3 +0.6**
comp=Z,19nm,0.2s,SNR=25
SQTA *e*Sn **Sn** **00 14 13.4 -3.7**
comp=Z,41nm,0.6s
PCP Piancastagn 10.21 302 P **Pn** **00 12 26.1 +1.7**
TREC Trest 10.24 340 AMS AMS 00 16 40.0
comp=Z,4µm,12.1s
OKC Ostrava-Krasne 10.25 351 *e*P **Pn** **00 12 26.0 +1.2**
OKC MLR MLR
comp=Z,2µm,18.9s
OKC Ostrava-Krasne 10.25 351 *e*PN **Pn** **00 12 26.0 +1.2**
OKC AMS AMS 00 16 50.0
comp=Z,2µm,18.9s
FUORN Ofenpass-Fuorn 10.25 315 **Pn** **00 12 25.1 0.0**
FETA Feichten 10.26 318 *e*Pn **Pn** **00 12 24.7 -0.5**
comp=Z,18nm,0.9s,SNR=9.4
MORC Moravsky Berou 10.28 348 ⇑P **Pn** **00 12 27.2 +1.9**
MORC Moravsky Berou 10.28 348 **Pn** **00 12 25.9 +0.7**
MORC Moravsky Berou 10.28 348 P **Pn** **00 12 25.9 +0.7**
MORC Moravsky Berou 10.28 348 *e*PN **Pn** **00 12 25.9 +0.7**
MOTA Moosalm 10.30 321 *e*Pn **Pn** **00 12 25.8 +0.2**
comp=Z,37nm,0.5s,SNR=57
MOTA Sn **Sn** **00 14 15.5 -5.1**
comp=Z,50nm,0.7s
BZK Bozkurt 10.32 73 Pn **Pn** **00 12 26.6 +0.7**
LVV L'vov 10.35 12 *e*P **Pn** **00 12 29.8 +3.7**
LVV *e*S **Sn** **00 14 26.8 +5.3**
LVV pmax pmax
comp=Z,520nm,2.5s
LVV MLR MLR
comp=E,600nm,7.3s
LVV MLR MLR
comp=N,1µm,8.8s
LVV MLR MLR
comp=Z,1µm,9.5s
GEC2 GERESS Array S 10.38 333 **Pn** **00 12 26.6 -0.1**
GERES GERESS Array B 10.38 333 Pn **Pn** **00 12 26.4 -0.4**
comp=Z,1.3nm,0.3s,baz=162,slow=12,SNR=47
GERES Sn **Sn** **00 14 20.0 -2.5**
comp=Z,1.9nm,0.3s,baz=154,slow=25,SNR=5.3
GERES LR LR 00 17 22.2
comp=Z,3µm,18.4s,baz=145,slow=43
comp=Z,2.8nm,0.4s
OJC Ojcow 10.49 357 *e*P **Pn** **00 12 28.2 +0.1**
OJC *e*L L 00 17 18.9
comp=Z,4µm,14.7s
OJC Ojcow 10.49 357 **Pn** **00 12 29.1 +1.0**
OJC Ojcow 10.49 357 P **Pn** **00 12 29.2 +1.0**
OJC Ojcow 10.49 357 ⇑P **Pn** **00 12 29.0 +0.9**
DAVOX Davos/Dischmat 10.56 315 Pn **Pn** **00 12 29.3 +0.1**
comp=Z,38nm,0.7s
DAVOX Sn **Sn** **00 14 24.0 -3.0**
comp=Z,2.5nm,0.3s,baz=165,slow=20,SNR=1.7
DAVOX LR LR 00 17 15.6
comp=Z,595nm,21.9s,baz=120,slow=41
RETA Reutte 10.56 320 *i* Pn **Pn** **00 12 29.0 -0.1**
comp=Z,4.1nm,0.3s,SNR=6.9
RETA *e*Sn **Sn** **00 14 23.1 -3.9**
comp=Z,17nm,0.4s
KHC Kasperske Hory 10.67 334 **Pn** **00 12 30.2 -0.4**
KHC Kasperske Hory 10.67 334 *e*P **Pn** **00 12 30.0 -0.6**
KHC *e* 00 14 28.4
KHC MLR MLR
comp=Z,4µm,6.1s
KHC Kasperske Hory 10.67 334 *e*PN **Pn** **00 12 30.0 -0.6**
KHC *e*SN **Sn** **00 14 28.4 -1.0**
KHC AMS AMS 00 17 00.0
comp=Z,4µm,6.1s
KHC Kasperske Hory 10.67 334 ⇑P **Pn** **00 12 30.5 -0.1**
TUE Stuetta 10.67 313 **Pn** **00 12 30.8 0.0**
TUE Stuetta 10.67 313 ⇑P **Pn

DAVA Damuels 10.88 317 ⇓P **Pn 00 12 33.9 +0.3**
GOPC GO Pecny, Ondr 10.99 340 *e*P **Pn 00 12 35.1 +0.1**
GOPC MLR MLR
comp=Z,3μm,12.1s
GOPC GO Pecny, Ondr 10.99 340 *e*PN **Pn 00 12 35.1 +0.1**
GOPC AMS AMS 00 17 10.0
comp=Z,3μm,12.1s
DPC Dobruska-Polom 11.04 345 *e*P **Pn 00 12 35.8 +0.1**
DPC MLR MLR
comp=Z,4μm,11.7s
DPC Dobruska-Polom 11.04 345 *e*PN **Pn 00 12 35.8 +0.1**
DPC AMS AMS 00 17 20.0
comp=Z,4μm,11.7s
LLS Linth-Limmern 11.08 314 P **Pn 00 12 38.1 +1.8**
PRU Pruhonice 11.13 339 *e*P **Pn 00 12 36.7 -0.1**
PRU MLR MLR
comp=Z,3μm,14.5s
PRU Pruhonice 11.13 339 *e*PN **Pn 00 12 36.7 -0.1**
PRU AMS AMS 00 17 10.0
comp=Z,3μm,14.5s
CSS Mathiatis 11.13 111 Pn **Pn 00 12 39.9 +3.0**
SWA2 11.19 158 P **Pn 00 12 36.2 -1.5**
baz=160
SIM Simferopol' 11.21 58 *e*P **Pn 00 12 40.1 +2.2**
SIM pmax pmax
comp=Z,25nm,1.0s
LMR La Mourre 11.22 293 *e*P **Pn 00 12 40.4 +2.3**
LMR *e*Sn Sn 00 14 27.9 -15
LMR La Mourre 11.22 293 P **Pn 00 12 38.3 +0.2**
UPC Upice 11.25 345 *e*P **Pn 00 12 38.9 +0.3**
UPC MLR MLR
comp=Z,3μm,13.1s
UPC Upice 11.25 345 *e*PN **Pn 00 12 38.9 +0.3**
UPC AMS AMS 00 17 30.0
comp=Z,3μm,13.1s
MMK Mattmark 11.26 308 P **Pn 00 12 38.4 -0.5**
OSTC Ostas 11.26 345 *e*PN **Pn 00 12 39.4 +0.7**
OSTC AMS AMS 00 17 30.0
comp=Z,3μm,12.2s
CHVC Chvalec 11.32 345 *e*PN **Pn 00 12 39.6 +0.1**
CHVC AMS AMS 00 17 30.0
comp=Z,3μm,12.2s
MBDF Montbardon 11.45 300 *e*P **Pn 00 12 42.3 +0.8**
MBDF *e*Sn Sn 00 14 34.8 -14
comp=Z,33nm,0.6s
MBDF Montbardon 11.45 300 P **Pn 00 12 41.6 +0.1**
LSD Lago del Serru 11.50 304 P **Pn 00 12 42.9 +0.7**
RRL Rocca Remolon 11.51 301 P **Pn 00 12 43.5 +1.2**
KSP Ksiaz 11.52 346 *e*P Pn 00 12 50.0 +7.8
PVCC Panska Ves 11.61 340 *e*P **Pn 00 12 43.7 +0.3**
PVCC MLR MLR
comp=Z,3μm,11.6s
PVCC Panska Ves 11.61 340 *e*PN **Pn 00 12 43.7 +0.3**
PVCC AMS AMS 00 17 30.0
comp=Z,3μm,11.6s
BNI Bardonecchia 11.63 302 **Pn 00 12 44.1 +0.1**
BNI Bardonecchia 11.63 302 P **Pn 00 12 44.1 +0.1**
BNI Bardonecchia 11.63 302 ⇑P **Pn 00 12 47.4 +3.5**
LPG La Plagne 11.76 304 *e*Pn **Pn 00 12 43.7 -2.1**
LPG La Plagne 11.76 304 *e*P **Pn 00 12 49.7 +3.9**
LPG *e*Sn Sn 00 14 42.6 -14
comp=Z,63nm,0.6s
LPG La Plagne 11.76 304 P **Pn 00 12 44.8 -1.0**
LPL La Plagne 11.78 304 *e*Pn **Pn 00 12 44.1 -1.9**
LPL La Plagne 11.78 304 *e*P **Pn 00 12 49.0 +3.0**
LPL *e*Sn Sn 00 14 41.8 -15
comp=Z,67nm,0.6s
LPL La Plagne 11.78 304 P **Pn 00 12 45.1 -0.9**
SENIN Lac Senin/Sane 11.81 308 **Pn 00 12 45.8 -0.7**
SLE Schleitheim 11.91 316 P **Pn 00 12 47.8 +0.2**
RSL Roselend 11.92 304 P **Pn 00 12 48.9 +1.0**
NKC Novy Kostel 11.99 334 *e*P **Pn 00 12 49.0 +0.3**
NKC MLR MLR
comp=Z,3μm,12.9s
NKC Novy Kostel 11.99 334 *e*PN **Pn 00 12 49.0 +0.3**
NKC AMS AMS 00 17 50.0
comp=Z,3μm,12.9s
GRFO Grafenberg 12.00 329 **Pn 00 12 48.4 -0.4**
GRFO Grafenberg 12.00 329 P **Pn 00 12 48.4 -0.4**
SMRF Simiane la Rot 12.04 295 *e*P **Pn 00 12 51.3 +2.0**
SMRF *e*Sn Sn 00 14 48.8 -14
comp=Z,14nm,1.0s
BEL Belsk 12.09 0 *e*P Pn 00 12 55.5 +5.5
BEL *e*L L 00 18 32.2
comp=Z,4μm,13.9s
ORIF Oris-en-Rattie 12.12 300 *e*P **Pn 00 12 53.0 +2.5**
ORIF *e*Sn Sn 00 14 51.3 -14
comp=Z,36nm,0.7s
ORIF Oris-en-Rattie 12.12 300 P **Pn 00 12 49.7 -0.8**
TOKA Tokat 12.12 82 Pn **Pn 00 12 50.3 -0.2**
STU Stuttgart 12.21 321 **Pn 00 12 50.2 -1.4**
STU Stuttgart 12.21 321 P **Pn 00 12 50.2 -1.4**
BFO Black Forest 12.35 318 **Pn 00 12 52.2 -1.3**
BFO Black Forest 12.35 318 P **Pn 00 12 52.3 -1.3**
BFO Black Forest 12.35 318 ⇑P **Pn 00 12 52.5 -1.0**
AKASG Malin Array Be 12.48 26 Pn **Pn 00 12 56.3 +0.9**
comp=Z,0.9nm,0.3s,baz=212,slow=12,SNR=15
AKASG LR LR 00 18 45.0
comp=Z,1μm,20.5s,baz=204,slow=42
comp=Z,2.9nm,0.7s
AKASG Malin Array Be 12.48 26 Pn **Pn 00 12 55.8 +0.4**
AKASG Malin Array Be 12.48 26 P **Pn 00 12 55.8 +0.4**
AKBB Malin Array Si 12.48 26 **Pn 00 12 56.0 +0.6**
AKBB Malin Array Si 12.48 26 *ce*P **Pn 00 12 57.6 +2.3**
CABF La Chapelle 12.67 308 *e*Pn **Pn 00 12 55.8 -2.2**
CABF *e*Sn Sn 00 15 06.8 -12
comp=Z,102nm,0.9s
CABF La Chapelle 12.67 308 P **Pn 00 12 56.8 -1.2**
CLL Collm 12.75 338 **Pn 00 12 59.0 +0.1**
CLL Collm 12.75 338 P **Pn 00 12 59.0 +0.1**
CLL Collm 12.75 338 *e*P **Pn 00 13 01.0 +2.1**
CLL *e*PP **P 00 13 09.0 -1.0**
CLL *i* sPP 00 13 11.4
CLL *es*PPP 00 13 19.0
CLL *ex* x 00 15 06.0
CLL Lm MLR 00 18 00.0
comp=N,2μm,18.9s
CLL Lm MLR 00 18 00.0
comp=E,400nm,20.6s
CLL Lmax 00 19 00.0
HINF Hinteralfeld 12.84 313 *e*Pn **Pn 00 12 58.6 -1.6**
HINF *e*Sn Sn 00 15 11.4 -11
comp=E,36nm,0.6s
HINF Hinteralfeld 12.84 313 P **Pn 00 12 57.8 -2.4**
ECH Echery 12.90 315 **Pn 00 12 59.2 -1.8**
ECH Echery 12.90 315 P **Pn 00 12 59.2 -1.8**
ECH Echery 12.90 315 ⇑P **Pn 00 13 00.1 -0.9**
VIVF Saint-Julien-I 12.91 298 *e*P **Pn 00 13 03.2 +2.0**
VIVF *e*Sn Sn 00 15 11.9 -12
comp=E,5.4nm,0.4s
VIVF Saint-Julien-I 12.91 298 P **Pn 00 13 01.3 +0.1**
HMYD Mayadein 12.93 137 P **Pn 00 12 59.4 -2.3**
baz=138
CDF Champ du Feu 12.95 316 *e*Pn **Pn 00 13 01.1 -0.7**
CDF *e*Sn Sn 00 15 16.6 -8.8
comp=E,42nm,1.0s
CDF Champ du Feu 12.95 316 P **Pn 00 13 01.2 -0.6**
SSB Saint Sauveur 13.13 300 Pn **Pn 00 13 03.3 -0.9**
SSB Saint Sauveur 13.13 300 P **Pn 00 13 03.3 -0.9**
SSB Saint Sauveur 13.13 300 ⇑P **Pn 00 13 04.9 +0.6**
HAU Haudompre 13.22 313 *e*Pn **Pn 00 13 04.0 -1.5**
HAU *e*Sn Sn 00 15 21.7 -10
comp=E,61nm,0.5s
HAU Haudompre 13.22 313 P **Pn 00 13 05.7 +0.2**
RYAN Fayoum 13.25 141 P **Pn 00 13 03.2 -2.7**
baz=142
LASF Ste Croix 13.26 294 *e*P **Pn 00 13 06.3 +0.2**
ANN Anapa 13.38 62 *e*P **Pn 00 13 07.3 -0.3**
ANN *e*S **Sn 00 15 34.9 -0.8**
ANN pmax pmax
comp=Z,25nm,0.8s
ANN MLR MLR
comp=Z,258nm,9.0s
ANN MLR MLR
comp=N,213nm,11.0s
ANN MLR MLR
comp=E,208nm,11.0s
GLL Jalalah 13.59 135 P **Pn 00 13 07.7 -3.0**
baz=136
MMAI Mount Meron Ar 13.61 115 Pn **Pn 00 13 11.1 +0.2**
comp=E,1.4nm,0.3s,baz=306,slow=10.0,SNR=16
MMAI Sn **Sn 00 15 38.0 -3.7**
comp=E,0.5nm,0.3s,baz=309,slow=18,SNR=1.1
MMAI LR LR 00 19 36.6
comp=E,665nm,19.6s,baz=167,slow=42
comp=E,0.6nm,0.2s
GEM Giv'at Ha'Em 13.69 114 Pn **Pn 00 13 13.0 +1.1**
NATI Neve Ativ 13.71 113 Pn **Pn 00 13 13.0 +0.8**
PAGF Fort de Pagny 13.87 314 *e*Pn **Pn 00 13 13.7 -0.6**
baz=132
PAGF *e*Sn Sn 00 15 37.0 -11
comp=E,15nm,0.5s
MMLI Mount Malkishu 13.95 117 Pn **Pn 00 13 15.7 +0.1**
SUZ Suez 14.03 131 P **Pn 00 13 15.9 -0.6**
baz=132
SFTF Sexfontaines 14.07 312 *e*Pn **Pn 00 13 16.9 -0.2**
baz=127
SFTF *e*Sn Sn 00 15 40.5 -12
comp=E,4.6nm,0.3s
HFRF Wahat Farafira 14.07 151 P **Pn 00 13 14.0 -3.2**
baz=152
SMF Signal de Mont 14.08 305 *e*Pn **Pn 00 13 14.9 -2.3**
SMF *e*Sn Sn 00 15 39.3 -14
comp=E,41nm,0.7s
SMF Signal de Mont 14.08 305 P **Pn 00 13 15.2 -2.0**
HMDT Nahal Hemdat 14.13 117 Pn **Pn 00 13 18.8 +0.8**
AMAZ Amatzia 14.16 121 Pn **Pn 00 13 18.8 +0.4**
MEZF Maizieres J'vi 14.22 313 *e*Pn **Pn 00 13 18.6 -0.5**
baz=135
MEZF *e*Sn Sn 00 15 45.7 -11
comp=E,26nm,0.8s
SAVF Savonnieres en 14.24 314 *e*Pn **Pn 00 13 18.8 -0.6**
baz=133
SAVF *e*Sn Sn 00 15 46.3 -10
comp=E,30nm,0.9s
MTLF Montolieu 14.29 291 *e*P **Pn 00 13 21.1 +1.0**
WLF Walferdange 14.30 319 **Pn 00 13 20.8 +0.6**
WLF Walferdange 14.30 319 P **Pn 00 13 20.8 +0.6**
WLF Walferdange 14.30 319 *dx* **Pn 00 13 24.0 +3.8**
WLF *dx* **P 00 13 28.0 +0.7**
LOR Lormes 14.33 307 *e*Pn **Pn 00 13 18.5 -2.1**
baz=127
LOR *e*Sn Sn 00 15 46.3 -13
comp=E,25nm,0.3s
YTIR Yattir 14.40 121 Pn **Pn 00 13 21.5 -0.2**
AVF Avril sur Loir 14.45 305 *e*Pn **Pn 00 13 19.5 -2.7**
AVF *e*Sn Sn 00 15 47.8 -14
comp=E,37nm,1.0s
AVF Avril sur Loir 14.45 305 P **Pn 00 13 20.9 -1.3**
DSI Dead Sea 14.45 120 Pn **Pn 00 13 22.9 +0.6**
SSF Saint Saulge 14.46 306 *e*Pn **Pn 00 13 20.3 -2.1**
SSF *e*Sn Sn 00 15 46.7 -15
comp=E,27nm,0.6s
BGF Bois d'Agland 14.68 303 *e*Pn **Pn 00 13 24.9 -0.5**
BGF *e*Sn Sn 00 15 53.3 -14
comp=E,29nm,0.5s
CAF Calviac 14.71 297 *e*P **Pn 00 13 26.5 +0.7**
CAF Calviac 14.71 297 P **Pn 00 13 27.7 +1.9**
SOC Sochi 14.72 69 *e*P **Pn 00 13 26.5 +0.5**
SOC *e* 00 16 09.5
SOC pmax pmax
comp=Z,13nm,0.8s
SOC MLR MLR
comp=Z,89nm,11.0s
TAMRE El Minia 14.72 142 P **Pn 00 13 24.1 -2.0**
baz=143
GHAJ Ghor Haditha 14.74 120 **Pn 00 13 27.1 +0.9**
GHAJ Ghor Haditha 14.74 120 Pn **Pn 00 13 26.9 +0.7**
BHOU Houvegnez 14.81 321 *d*P **Pn 00 13 26.0 -1.1**
BHOU *dx* **P 00 13 35.9 +2.9**
BTNL Ternell 14.90 321 *d*P **Pn 00 13 27.4 -1.0**
BTNL *dx* x 00 13 44.2
KRMI Paran Flat 14.97 126 Pn **Pn 00 13 28.2 -1.3**
MEM Membach 14.98 321 *d*P **Pn 00 13 28.6 -0.7**
comp=Z,41nm,0.9s
MEM *d*PP **PnPn 00 13 36.5 -0.8**
PRNI Paran 14.99 124 Pn **Pn 00 13 29.6 -0.1**
TCF Toulx Ste Croi 15.00 302 *e*Pn **Pn 00 13 27.2 -2.6**
TCF *e*Sn Sn 00 16 00.7 -15
comp=Z,5.8nm,0.5s
RCHB Rochefort 15.07 319 *d*P **Pn 00 13 30.8 +0.1**
RCHB *dx* **P 00 13 36.4 +0.6**
RCHB *dx* x 00 13 48.2
HYF Humbligny 15.08 306 *e*P **P 00 13 33.8 -2.2**
HYF *e*Sn Sn 00 16 03.4 -14
ASF Jabal al Asfar 15.13 115 Pn **Pn 00 13 33.2 +1.6**
comp=Z,0.2nm,0.3s,baz=270,slow=8.0,SNR=3.7
comp=Z,1.2nm,0.4s
BSTI Sart Tilman 15.17 321 *dx* **P 00 13 39.2 +2.2**
GRB Gharib 15.20 135 P **Pn 00 13 31.4 -1.1**
baz=136
BCLA Clavier 15.20 320 *d*PP **P 00 13 39.3 +2.1**
KOPT Kop Dagi 15.21 83 **Pn 00 13 33.0 +0.2**
HRFI Mount Harif 15.22 125 Pn **Pn 00 13 32.2 -0.6**
GIVF Givet 15.25 318 *e*Pn **Pn 00 13 34.4 +1.4**
BGES Gesves 15.29 319 *d*P **Pn 00 13 33.2 -0.3**
BGES *d*PP **PnPn 00 13 40.9 -0.7**
MBRI Mt Berech 15.31 126 Pn **Pn 00 13 33.0 -1.0**
DOU Dourbes 15.37 318 *d*P **Pn 00 13 35.6 +1.1**
comp=Z,19nm,1.1s
DOU *dx* **P 00 13 40.5 +1.5**
BMRD Maredsous 15.40 318 *d*P **P 00 13 38.1 -1.3**
EIL Elat 15.43 126 Pn **Pn 00 13 34.9 -0.5**
comp=Z,0.7nm,0.3s,baz=318,slow=9.4,SNR=13
EIL Sn **Sn 00 16 18.8 -7.0**
comp=Z,0.6nm,0.3s,baz=311,slow=18,SNR=1.3
EIL LR LR 00 22 19.3
comp=Z,228nm,19.6s,baz=272,slow=48
comp=Z,2.0nm,0.3s
EIL Elat 15.43 126 Pn **Pn 00 13 35.5 +0.1**
MNK Minsk 15.54 16 *i* P **Pn 00 13 35.3 -1.3**
MNK *i* S **Sn 00 16 24.8 -3.3**
MNK pmax pmax
comp=Z,91nm,0.8s
MNK pmax pmax
comp=N,150nm,1.3s
MNK pmax pmax
comp=E,8.0nm,1.3s
MNK MLR MLR
comp=E,147nm,12.0s
MNK MLR MLR
comp=Z,1μm,16.0s
MNK MLR MLR
comp=N,732nm,12.0s
MNK Minsk 15.54 16 *i* P **Pn 00 13 35.4 -1.3**
comp=E,8.0nm,1.3s
MNK *i* P **Pn 00 13 35.4 -1.3**
comp=N,150nm,1.3s
MNK *i* P **Pn 00 13 35.4 -1.3**
comp=Z,91nm,0.8s,baz=202
MNK *i* PP **PnPn 00 13 43.7 -1.3**
MNK *i* S **Sn 00 16 24.9 -3.3**
MNK *i* SS **SnSn 00 16 38.7 -2.3**
MNK *i* LQ LQ 00 17 58.5
MNK *i* LR LR 00 18 56.8
MNK *i* LRM MLR 00 19 49.5
comp=E,147nm,12.1s
MNK *i* LRM MLR 00 19 53.7
comp=Z,1μm,15.7s
MNK *i* LRM MLR 00 20 43.2
comp=N,732nm,12.2s
BAIF Baives 15.55 317 *e*P **P 00 13 42.8 +1.7**
BAIF *e*Sn **Sn 00 16 19.9 -8.6**
comp=N,13nm,0.9s
HBST Basata 15.61 128 P **Pn 00 13 35.5 -2.4**
baz=129
EPF Esparros 15.62 289 *e*P **Pn 00 13 38.0 +0.1**
CLF Chambon-Foret 15.63 308 **Pn 00 13 37.8 -0.1**
CLF IAmb IAmb 00 13 46.3
comp=Z,160nm,1.5s
LFF La Frestale 15.63 296 *e*Pn **Pn 00 13 34.0 -4.0**
TR2 Tor 2 15.63 133 P **Pn 00 13 35.5 -2.6**
baz=134
HKAT Jabal Katrina 15.68 132 P **Pn 00 13 37.2 -1.7**
baz=132
NACGM Naroch 15.71 13 *e*P **Pn 00 13 39.5 +0.7**
SNF Seneffe 15.77 318 *dx* **P 00 13 45.3 +1.7**
MARD Mardin 15.90 92 P **Pn 00 13 43.5 +1.8**
PABE Paberze 15.92 7 **Pn 00 13 41.6 0.0**
PABE IAmb IAmb 00 13 52.0
comp=Z,115nm,0.9s
PABE Paberze 15.92 7 *e*P **Pn 00 13 41.4 -0.2**
HDK1 Dakhla 15.94 150 P **Pn 00 13 40.2 -1.9**
baz=151
IIGN Ignalina 16.04 11 *e*P **Pn 00 13 44.1 +0.9**
TR1 Tor 1 16.05 133 P **Pn 00 13 41.3 -2.2**
baz=134
ISAL Salakas 16.24 11 *e*P **Pn 00 13 46.2 +0.5**
ETSF Etsaut 16.27 288 *e*P **P 00 13 48.2 -1.0**
PBUR Paburge 16.31 2 *e*P **Pn 00 13 44.5 -2.0**
VSVD Vaisvydziai 16.39 6 *e*P **Pn 00 13 47.9 +0.4**
AKRG Al Kharijah 16.41 147 P **Pn 00 13 47.2 -0.9**
baz=148
HHRG Al Ghardaqah 16.45 136 P **Pn 00 13 49.4 +0.7**
baz=137
GURO Guroymak-BITLI 16.59 87 P **Pn 00 13 51.5 +1.0**
MFF Saint Martin d 16.65 301 *e*Pn **Pn 00 13 51.5 +0.5**
SJPF Ste Jean 16.77 289 *e*P **Pn 00 13 52.9 +0.3**
SJPF Ste Jean 16.77 289 P **P 00 13 55.2 +0.5**
SHA1 Shidzhatmaz 16.86 69 *i* P **P 00 13 58.5 +2.6**
NEY Neytrino 16.86 71 *i* P **P 00 13 57.2 +1.3**
KIV Kislovodsk 16.90 68 P **Pn 00 13 54.9 +0.5**
KIV Kislovodsk 16.90 68 *e*P **P 00 13 58.6 +2.3**
KIV *e*S **Sn 00 17 06.4 +4.7**
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,83nm,13.0s
KIV Kislovodsk 16.90 68 ⇓P **P 00 13 57.6 +1.3**
KVAR Kislovodsk Arr 16.91 68 Pn **Pn 00 13 55.4 +0.9**
baz=255,slow=20
comp=Z,2.8nm,0.9s
KBZ Khabaz 17.03 69 P **P 00 13 59.4 +1.8**
comp=Z,5.5nm,0.7s,baz=265,slow=14,SNR=11
KBZ Khabaz 17.03 69 *ce*P **P 00 13 59.8 +2.3**
KBZ pmax pmax
comp=Z,25nm,1.6s
VSR Storozhevoye 17.25 42 *e*P **Pn 00 13 57.5 -0.9**
VSR pmax pmax
comp=Z,20nm,0.7s
VSR MLR MLR
comp=Z,2μm,12.0s
LDF La Druitiere 17.31 308 *e*Pn **Pn 00 13 59.7 +0.4**
LDF La Druitiere 17.31 308 P **Pn 00 14 00.0 +0.7**
GOF Gofitskoye 17.32 65⇑*e*P **P 00 14 04.0 +3.3**
ONI Oni 17.36 73 **Pn 00 14 00.2 +0.2**
ONI Oni 17.36 73 P **Pn 00 14 00.3 +0.2**
ONI pmax pmax
comp=Z,30nm,1.4s
GEVA Gevas 17.43 88 **P 00 14 02.8 +0.6**
VORR Voronezh 17.53 41 *e*P **P 00 14 03.5 +0.5**
VORR pmax pmax
comp=Z,30nm,0.4s
FLN La Foliniere 17.60 308 *e*Pn **Pn 00 14 03.4 +0.5**
baz=129
FLN *e*Sn Sn 00 17 04.4 -14
comp=Z,8.8nm,0.7s
FLN La Foliniere 17.60 308 P **Pn 00 14 03.0 +0.1**
GRR Gorron 17.69 306 *e*Pn **Pn 00 14 03.9 -0.1**
GRR *e*Sn Sn 00 17 05.9 -15
comp=Z,2.1nm,0.4s
LPSR Galich'ya Gora 17.95 38 *e*P **Pn 00 14 06.2 -1.0**
LPSR pmax pmax
comp=Z,80nm,1.1s
LPSR MLR MLR
comp=Z,670nm,15.0s
GNI Garni 18.43 81 P **Pn 00 14 15.6 +2.2**
comp=Z,13nm,1.1s,baz=297,slow=18,SNR=10
GNI LR LR 00 21 33.7
comp=Z,420nm,19.5s,baz=266,slow=38
GNI Garni 18.43 81 P **Pn 00 14 14.3 +0.9**
GNI Garni 18.43 81 *ce*P **Pn 00 14 15.7 +2.3**
GNI pmax pmax
comp=Z,49nm,1.7s
GNI Garni 18.43 81 ⇑P **Pn 00 14 16.2 +2.8**
VRH Novokhopyorsk 18.60 45 *e*P **Pn 00 14 15.4 +0.3**
VRH pmax pmax
comp=Z,50nm,1.2s
VRH MLR MLR
comp=Z,2μm,14.0s
OBN Obninsk 18.68 29 P **Pn 00 14 16.4 +0.4**
comp=Z,0.9nm,0.3s,baz=218,slow=13,SNR=15
OBN LR LR 00 22 26.7
comp=Z,562nm,18.1s,baz=190,slow=40
comp=Z,7.0nm,0.5s
OBN Obninsk 18.68 29 P **P 00 14 15.7 +0.1**
OBN Obninsk 18.68 29 *ce*P **P 00 14 15.0 -0.6**
OBN *e*S **Sn 00 17 41.7 -2.6**
OBN pmax pmax
comp=Z,130nm,1.7s
OBN MLR MLR
comp=Z,2μm,17.0s
SGMF Saint Gilles 18.71 305 *e*Pn **P 00 14 16.1 +0.1**
ESBB Sonseca Array 18.96 278 P **P 00 14 18.6 -0.3**
ESDC Sonseca Array 18.96 278 P **Pn 00 14 19.7 0.0**
comp=Z,0.5nm,0.3s,baz=73,slow=11,SNR=76
ESDC LR LR 00 21 36.5
comp=Z,416nm,18.4s,baz=74,slow=37
comp=Z,9.0nm,0.9s
ESDC Sonseca Array 18.96 278 P **P 00 14 18.7 -0.2**
QUIF Quistinic 19.00 303 *e*Pn **Pn 00 14 20.3 +0.3**
MTSE Matsula 19.09 5 *e*P **P 00 14 19.9 -0.2**
GROC Groznyy 19.10 71 *e*P **Pn 00 14 22.9 +1.6**
GROC *e*S **S 00 17 57.6 +1.4**
GROC pmax pmax
comp=Z,26nm,0.6s
GROC MLR MLR
comp=Z,300nm,11.0s
VSU Vasula 19.13 10 *i* P **P 00 14 19.5 -1.0**
VSU Vasula 19.13 10 *e*P **P 00 14 20.8 +0.3**
ROSF Rostrenen 19.19 304 *e*Pn **Pn 00 14 23.0 +0.7**
PAB San Pablo 19.27 277 P **P 00 14 22.4 0.0**
PAB IAmb IAmb 00 14 25.7
comp=Z,73nm,1.3s
PAB San Pablo 19.27 277 P **P 00 14 22.4 0.0**
PAB pmax pmax
comp=Z,73nm,1.3s
PAB San Pablo 19.27 277 ⇓P **Pn 00 14 24.2 +0.7**
MOS Moscow 19.55 29 *e*P **P 00 14 22.3 -2.8**
MOS *e*S **S 00 18 00.9 -4.1**
MOS pmax pmax
comp=Z,300nm,1.7s
MOS pmax pmax
comp=Z,99nm,1.1s
MOS MLR MLR
comp=N,1μm,16.0s
MOS MLR MLR
comp=E,1μm,16.0s
MOS MLR MLR
comp=Z,2μm,16.0s
UPP Uppsala 20.23 356 *e*P **P 00 14 32.4 -0.1**
MAK Makhachkala 20.35 72 *e*P **P 00 14 33.3 -0.7**
MAK *e*S **S 00 18 19.8 -1.4**
MAK pmax pmax
comp=Z,208nm,0.9s
MAK MLR MLR
comp=Z,377nm,16.0s
MCH1 Michaelchurch 20.44 315 ⇓P **P 00 14 35.5 +0.6**
SNART Snartemo 20.53 339 *e*P Pn 00 14 37.4 -0.6
SNART IAmb IAmb 00 14 40.6
comp=Z,4μm,3.3s
MEF Metsahovi 20.62 5 *e*P **P 00 14 36.2 -0.6**
PBRG Braganca 20.85 285 *e*P **P 00 14 40.7 +1.2**
PBRG *e*S Sn 00 18 52.4 +16
HFS Hagfors 20.88 350 P **P 00 14 38.8 -0.7**
comp=Z,24nm,0.7s,baz=155,slow=11,SNR=62
HFS LR LR 00 23 47.4
comp=Z,526nm,18.6s,baz=166,slow=40
comp=Z,24nm,0.7s
PUL Pulkovo 20.95 14 *ce*P **P 00 14 39.3 -1.0**
PUL pmax pmax
comp=Z,120nm,1.0s
MVO Moncorvo 21.11 283 *e*P **P 00 14 42.8 +0.4**
comp=Z,48nm,1.4s
MVO *e*S **S 00 18 38.1 +1.6**
MVO A A 00 23 43.4
comp=Z,178nm,18.0s
KONO Kongsberg 21.12 344 P **P 00 14 41.5 -0.7**
KONO IAmb IAmb 00 14 45.5
comp=Z,48nm,1.1s
KONO Kongsberg 21.12 344 *ce*P **P 00 14 40.8 -1.4**
KONO pmax pmax
comp=Z,78nm,1.7s
KONO Kongsberg 21.12 344 *e*P **P 00 14 41.0 -1.2**
KONO IAmb IAmb 00 14 45.0
comp=Z,28nm,0.7s
OSL Oslo 21.16 346 IAmb IAmb 00 14 42.5
comp=Z,96nm,1.1s
OSL *e*P **P 00 14 42.7 +0.1**
TAM Tamanrasset 21.25 222 P **P 00 14 43.5 -0.6**
TAM Tamanrasset 21.25 222 P **P 00 14 43.5 -0.6**
TAM pmax pmax
comp=Z,21nm,1.2s
TAM Tamanrasset 21.25 222 ⇑P **P 00 14 47.0 +2.9**

RAF Rauma 21.31 1 *eP* **P 00 14 43.9 -0.3**
MDT Midelt 21.50 259 P **P 00 14 46.5 -0.1**
comp=Z,8.2nm,0.9s,baz=88,slow=12,SNR=14
MDT LR LR 00 23 01.6
comp=Z,151nm,18.8s,baz=76,slow=36
comp=Z,8.2nm,0.9s
MTE Manteigas 21.59 281 *eP* **P 00 14 47.8 +0.3**
comp=Z,83nm,1.9s
MTE *eS* Sn 00 19 17.5 +23
MTE A A 00 23 50.6
comp=Z,416nm,18.0s
MTE Manteigas 21.59 281 P **P 00 14 46.9 -0.6**
MTE IAmb IAmb 00 14 49.7
comp=Z,73nm,1.3s
PBAR Barrancos 21.59 275 *eP* **P 00 14 47.9 +0.4**
comp=Z,118nm,1.9s
PBAR *eS* **S 00 18 50.2 +4.3**
PCBR Castelo Branco 21.62 279 *eP* **P 00 14 48.6 +0.9**
comp=Z,41nm,1.5s
PMRV Marv??o 21.62 278 *eP* **P 00 14 48.6 +0.9**
comp=Z,59nm,1.6s
PMRV *eS* **S 00 18 45.2 -1.2**
PMRV A A 00 23 31.9
comp=Z,327nm,18.0s
BLS5 Blasjo 21.66 340 *eP* **P 00 14 49.2 +1.1**
BLS5 IAmb IAmb 00 14 51.5
comp=Z,158nm,1.5s
POLO Lamas de Olo 21.67 284 *eP* **P 00 14 49.4 +1.0**
NC602 NORSAR Array S 21.77 348 P **P 00 14 48.2 -1.0**
NC602 NORSAR Array S 21.77 348 *eP* **P 00 14 48.6 -0.5**
NC602 IAmb IAmb 00 14 59.4
comp=Z,63nm,1.0s
NORES NORESS Array B 21.77 348 P **P 00 14 48.5 -0.7**
PVIS Viseu 21.81 282 *eP* **P 00 14 50.5 +0.6**
comp=Z,54nm,1.7s
PESTR Estremoz 21.87 277 *eP* **P 00 14 50.9 +0.4**
comp=Z,27nm,1.4s
PESTR *eS* Sn 00 19 21.2 +20
PESTR Estremoz 21.87 277 P **P 00 14 50.1 -0.4**
FINES FINESS Array B 21.98 7 P **P 00 14 50.2 -1.1**
comp=Z,8.5nm,0.4s,baz=174,slow=12,SNR=151
FINES PcP **PcP 00 18 48.9 -0.4**
comp=Z,5.5nm,0.9s,baz=169,slow=1.4,SNR=3.2
comp=Z,8.5nm,0.4s
FINES FINESS Array B 21.98 7 P **P 00 14 50.4 -0.9**
FIA1 FINESS Array S 21.98 7 P **P 00 14 50.4 -0.9**
FIA1 IAmb IAmb 00 15 03.3
comp=Z,41nm,0.8s
PGAV Gavieira, Arco 21.98 285 *eS* Sn 00 19 26.1 +22
NAO01 NORSAR Array S 21.98 347 P **P 00 14 50.8 -0.6**
NAO01 NORSAR Array S 21.98 347 *eP* **P 00 14 50.9 -0.6**
NC405 NORSAR Array S 22.10 348 P **P 00 14 52.1 -0.6**
NB2 NORSAR Subarra 22.11 348 P **P 00 14 52.2 -0.7**
comp=Z,178nm,1.2s,baz=160,slow=11
NB2 NORSAR Subarra 22.11 348 P **P 00 14 52.2 -0.7**
baz=160,slow=11
NOA NORSAR Array B 22.11 348 P **P 00 14 51.8 -1.0**
comp=Z,44nm,1.0s,baz=164,slow=10,SNR=68
NOA LR LR 00 24 07.8
comp=Z,442nm,21.3s,baz=165,slow=38
comp=Z,44nm,1.0s
EKA Eskdalemuir Ar 22.25 322 P **P 00 14 54.1 -0.2**
comp=Z,30nm,0.9s,baz=122,slow=10,SNR=45
EKA LR LR 00 25 04.3
comp=Z,471nm,18.1s,baz=122,slow=41
comp=Z,30nm,0.9s
ESK Eskdalemuir 22.26 322 P **P 00 14 53.9 -0.6**
ESK IAmb IAmb 00 14 57.1
comp=Z,123nm,1.4s
ESK Eskdalemuir 22.26 322 P **P 00 14 53.9 -0.6**
ESK pmax pmax
comp=Z,123nm,1.4s
ESK Eskdalemuir 22.26 322 ⇓P **P 00 14 54.5 +0.1**
PBEJ Beja 22.26 275 *eP* **P 00 14 54.6 -0.1**
comp=Z,58nm,1.8s
EVO Evora 22.26 276 *eP* **P 00 14 54.2 -0.5**
comp=Z,37nm,1.7s
PVAQ Vaqueiros 22.30 273 *eP* **P 00 14 54.7 -0.4**
comp=Z,87nm,1.5s
PVAQ *eS* **S 00 18 59.9 +0.4**
PVAQ Vaqueiros 22.30 273 P **P 00 14 54.4 -0.7**
PVAQ Vaqueiros 22.30 273 ⇓P **P 00 14 54.5 -0.5**
PMTG Montargil 22.32 278 *eP* **P 00 14 55.2 -0.1**
comp=Z,32nm,2.2s
SKAR Skarslia 22.33 344 *eP* **P 00 14 56.2 +1.0**
SKAR IAmb IAmb 00 15 04.7
comp=Z,194nm,2.1s
PCAS Casmilo, Conde 22.36 280 *eP* **P 00 14 56.7 +1.0**
PCAS *eS* Sn 00 19 14.3 +1.2
NC204 NORSAR Array S 22.41 347 *eP* **P 00 14 55.9 -0.2**
PCVE Castro Verde 22.49 274 *eP* **P 00 14 56.5 -0.6**
comp=Z,52nm,1.9s
PCVE *eS* **S 00 19 09.4 +6.4**
MESJ Messejana 22.58 274 *eP* **P 00 14 57.8 -0.2**
comp=Z,70nm,1.6s
MESJ Messejana 22.58 274 ⇑P **P 00 14 57.9 -0.1**
PSBE So Bento 22.67 279 *eP* **P 00 14 59.5 +0.4**
PSBE *eS* **S 00 19 08.0 +1.6**
PNCL Nicolau / Gran 22.75 275 *eP* **P 00 15 00.1 +0.2**
comp=Z,60nm,1.7s
PNCL *eS* S 00 18 55.5 -12
BER Bergen 22.78 340 *eP* **P 00 15 00.5 +0.6**
BER IAmb IAmb 00 15 01.5
comp=Z,41nm,0.9s
DSB Dublin 22.84 315 P **P 00 15 00.1 -0.5**
DSB IAmb IAmb 00 15 02.5
comp=Z,53nm,1.1s
PACT Alcochete 22.84 277 *eP* **P 00 15 03.6 +2.8**
PTEO Sao Teotonio 23.04 274 *eP* **P 00 15 03.4 +0.6**
comp=Z,72nm,1.7s
PMAFR Mafra 23.15 278 *eS* **S 00 19 16.0 +1.4**
PFVI Vila Bisbo 23.23 273 *eP* **P 00 15 04.7 0.0**
comp=Z,73nm,2.1s
PFVI *eS* Sn 00 19 59.9 +26
PFVI Vila Bisbo 23.23 273 P **P 00 15 04.2 -0.6**
PFVI IAmb IAmb 00 15 05.0
comp=Z,36nm,1.1s
HYA Hoyanger 23.24 342 *eP* **P 00 15 04.7 +0.1**
DOMB Dombas 23.42 346 *eP* **P 00 15 06.7 +0.2**
DOMB IAmb IAmb 00 15 08.4
comp=Z,80nm,1.2s
KLMR Klimovskoe 24.14 23 *eP* **P 00 15 11.2 -2.0**
KLMR S **S 00 19 30.9 +0.9**
KLMR pmax pmax
comp=Z,53nm,1.2s
KLMR MLR MLR
comp=Z,488nm,10.0s
KLMR Klimovskoe 24.14 23 *eP* **P 00 15 11.3 -2.0**
KLMR *eP* **P 00 15 11.3 -2.0**
KLMR *eP* **P 00 15 11.3 -2.0**
KLMR AMP 00 15 13.5
comp=Z,53nm,1.2s
KLMR S **S 00 19 31.0 +0.9**
KLMR S **S 00 19 31.0 +0.9**
KLMR LR LR 00 24 45.8
KLMR AMP 00 25 55.6
comp=Z,488nm,10.4s
TBLU Trondheim 24.35 349 *eP* **P 00 15 16.0 +0.7**
NSS Namsos 25.34 351 *eP* **P 00 15 23.6 -0.6**
NSS IAmb IAmb 00 15 34.3
comp=Z,93nm,1.5s
OUL Oulu 25.56 5 P **P 00 15 25.2 -0.9**
OUL pmax pmax
comp=Z,43nm,1.1s
KIRV Kirov 26.28 35 P **P 00 15 33.0 +0.3**
comp=Z,13nm,0.8s,baz=249,slow=9.0,SNR=4.9
KIRV LR LR 00 26 55.2
comp=Z,1μm,18.1s,baz=249,slow=39
comp=Z,13nm,0.8s
KIRV Kirov 26.28 35 *ceP* **P 00 15 32.5 -0.2**
RAYN Ar Rayn 26.48 120 P **P 00 15 35.5 +0.5**
RAYN Ar Rayn 26.48 120 P **P 00 15 35.5 +0.5**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
RAYN Ar Rayn 26.48 120 ⇓P **P 00 15 36.0 +1.1**
MSF Maaselka 26.64 8 P **P 00 15 35.2 -0.8**
MSF pmax pmax
comp=Z,39nm,1.1s
PRGR Permogore 26.69 27 *eP* **P 00 15 35.1 -1.4**
PRGR pmax pmax
comp=Z,30nm,0.8s
MOR8 Moi Rana 26.71 354 *eP* **P 00 15 40.1 +3.5**
MOR8 IAmb IAmb 00 15 45.1
comp=Z,16nm,0.9s
KONS Konsvik 27.14 353 *eP* **P 00 15 40.0 -0.4**
KONS IAmb IAmb 00 16 05.2
comp=Z,41nm,1.3s
AKTO Aktyubinsk 28.15 55 P **P 00 15 49.5 -0.2**
comp=Z,2.7nm,0.4s,baz=236,slow=10,SNR=11
AKTO LR LR 00 29 02.1
comp=Z,450nm,19.9s,baz=284,slow=40
comp=Z,2.7nm,0.4s
GEYT Alibeck 29.07 81 P **P 00 15 58.9 +0.8**
comp=Z,4.4nm,0.6s,baz=260,slow=7.4,SNR=13
comp=Z,4.4nm,0.6s
GEYT Alibeck 29.07 81 P **P 00 15 58.3 +0.2**
GEYT IAmb IAmb 00 16 00.4
comp=Z,36nm,1.6s
GYA0B ALIBECK ARRAY 29.07 81 P **P 00 15 58.2 +0.2**
GYA0B IAmb IAmb 00 16 00.3
comp=Z,34nm,1.6s
LVZ Lovozero 29.23 11 P **P 00 15 59.0 -0.2**
LVZ Lovozero 29.23 11 P **P 00 15 59.0 -0.2**
LVZ pmax pmax
comp=Z,75nm,1.5s
ABKAR Abkulak array 29.27 58 P **P 00 15 59.3 -0.3**
ABKAR Abkulak array 29.27 58 P **P 00 15 59.6 -0.1**
ABKAR IAmb IAmb 00 16 57.3
comp=Z,4.5nm,1.0s
ARU Arti 29.81 43 P **P 00 16 04.3 0.0**
comp=Z,3.0nm,0.3s,baz=270,slow=7.6,SNR=11
ARU LR LR 00 29 54.8
comp=Z,216nm,21.9s,baz=246,slow=40
comp=Z,3.0nm,0.3s
ARU Arti 29.81 43 P **P 00 16 03.9 -0.4**
ARU Arti 29.81 43 *c iP* **P 00 16 03.5 -0.8**
ARU 00 16 58.3
ARU 00 19 02.8
ARU S **S 00 20 57.5 -2.4**
ARU pmax pmax
comp=Z,17nm,1.6s
ARU MLR MLR
comp=Z,664nm,15.0s
ARU Arti 29.81 43 ⇓P **P 00 16 04.1 -0.3**
ARCES ARCESS Array B 29.96 3 P **P 00 16 04.5 -1.1**
comp=Z,4.7nm,0.5s,baz=186,slow=9.8,SNR=14
ARCES LR LR 00 29 00.6
comp=Z,726nm,18.4s,baz=177,slow=38
comp=Z,4.7nm,0.5s
ARCES ARCESS Array B 29.96 3 P **P 00 16 04.5 -1.1**
ARCES IAmb IAmb 00 16 51.0
comp=Z,43nm,1.4s
ARCES ARCESS Array B 29.96 3 P **P 00 16 04.5 -1.1**
ARCES pmax pmax
comp=Z,43nm,1.5s
SVE Sverdlovsk 31.02 43 *eP* **P 00 16 14.8 -0.3**
SVE pmax pmax
comp=Z,28nm,1.1s
SVE MLR MLR
comp=Z,675nm,14.0s
TOA0 Torodi Ar. Sit 31.34 218 P **P 00 16 18.7 +0.5**
TOA0 IAmb IAmb 00 16 32.8
comp=Z,18nm,0.9s
TORD Torodi Ar. Bea 31.34 218 P **P 00 16 19.0 +0.8**
comp=Z,6.9nm,0.5s,baz=33,slow=9.2,SNR=87
TORD LR LR 00 30 15.1
comp=Z,293nm,19.5s,baz=60,slow=39
comp=Z,6.9nm,0.5s
TORD Torodi Ar. Bea 31.34 218 P **P 00 16 18.6 +0.4**
TORD IAmb IAmb 00 16 32.8
comp=Z,15nm,1.0s
KOWA Kowa 33.20 228 P **P 00 16 34.9 +0.4**
comp=Z,1.7nm,0.6s,baz=25,slow=9.6,SNR=9.7
KOWA LR LR 00 31 37.2
comp=Z,388nm,19.1s,baz=32,slow=39
comp=Z,1.7nm,0.6s
KOWA Kowa 33.20 228 P **P 00 16 34.7 +0.2**
KOWA IAmb IAmb 00 16 54.0
comp=Z,29nm,1.8s
KOWA Kowa 33.20 228 ⇓P **P 00 16 35.4 +0.9**
HRA Herat 33.36 86 P **P 00 16 36.2 +0.2**
FURI Furi 34.67 148 P **P 00 16 48.2 +0.6**
FURI IAmb IAmb 00 17 02.3
comp=Z,17nm,1.0s
JMIC Jan Mayen 34.69 344 LR LR 00 32 26.5
comp=Z,66nm,18.1s,baz=119,slow=39
BORG Borgarnes 34.82 330 LR LR 00 33 16.8
comp=Z,218nm,18.3s,baz=124,slow=40
BRVK Borovoye 35.96 52 P **P 00 16 57.9 -0.1**
BRVK Borovoye 35.96 52 P **P 00 16 58.0 -0.1**
BRVK IAmb IAmb 00 17 13.7
comp=Z,9.1nm,1.0s
BRVK Borovoye 35.96 52 *ceP* **P 00 16 58.1 +0.1**
BRVK pmax pmax
comp=Z,15nm,1.7s
WSAR Wadi Sarin 35.98 106 LR LR 00 35 35.4
comp=Z,106nm,20.7s,baz=337,slow=43
BVAR Borovoye Array 36.02 52 P **P 00 16 59.0 +0.4**
comp=Z,0.9nm,0.6s,baz=289,slow=4.5,SNR=7.7
comp=Z,0.9nm,0.6s
BVAR Borovoye Array 36.02 52 P **P 00 16 59.0 +0.4**
IUG luzhnay 36.93 70 *eP* **P 00 17 06.2 -0.4**
IUG luzhnay 36.93 70 *eP* **P 00 17 06.2 -0.4**
baz=70
KK31 Karatay Array 37.06 68 P **P 00 17 07.5 -0.1**
KK31 IAmb IAmb 00 17 09.8
comp=Z,54nm,1.8s
KK31 Karatay Array 37.06 68 P **P 00 17 07.6 -0.1**
KK31 pmax pmax
comp=Z,54nm,1.8s
KKAR Karatay Array 37.06 68 P **P 00 17 07.7 0.0**
KKAR Karatay Array 37.06 68 P **P 00 17 07.5 -0.1**
KKAR IAmb IAmb 00 17 09.8
comp=Z,54nm,1.8s
KKAR Karatay Array 37.06 68 P **P 00 17 07.7 0.0**
KKAR pmax pmax
comp=Z,54nm,1.8s
KKAR Karatay Array 37.06 68 ⇑P **P 00 17 07.8 +0.2**
CHGR Chuyangaron 37.21 76 P **P 00 17 09.4 +0.4**
CHGR IAmb IAmb 00 17 21.5
comp=Z,27nm,0.8s
CHGR Chuyangaron 37.21 76 P **P 00 17 09.4 +0.4**
CHGR pmax pmax
comp=Z,27nm,0.8s
BRZS Berezniki 37.54 57 *eP* **P 00 17 09.6 -1.9**
BRZS Berezniki 37.54 57 *eP* **P 00 17 09.7 -1.9**
baz=57
DZA Taraz 37.70 68 *eP* **P 00 17 12.6 -0.4**
DZA Taraz 37.70 68 *eP* **P 00 17 12.7 -0.4**
baz=69
GAR Garm 37.97 75 P **P 00 17 15.8 +0.3**
BTK Batken 38.03 73 P **P 00 17 15.9 -0.1**
BTK IAmb IAmb 00 17 17.5
comp=Z,58nm,1.8s
BTK Batken 38.03 73 P **P 00 17 15.9 -0.1**
BTK pmax pmax
comp=Z,58nm,1.8s
KBL Kabul 38.52 82 P **P 00 17 20.0 -0.2**
KBL Kabul 38.52 82 P **P 00 17 20.0 -0.2**
KBL pmax pmax
comp=Z,3.0nm,0.9s
LODK Lodwar 38.53 156 P **P 00 17 20.9 +0.6**
SPITS Spitsbergen Ar 38.58 359 P **P 00 17 18.4 -1.6**
comp=Z,12nm,1.0s,baz=153,slow=16,SNR=4.2
SPITS LR LR 00 35 06.9
comp=Z,577nm,19.0s,baz=146,slow=39
comp=Z,12nm,1.0s
SPITS Spitsbergen Ar 38.58 359 P **P 00 17 18.4 -1.6**
SPITS 00 17 20.8
SPITS pmax pmax
comp=Z,157nm,1.7s
SGDS Sogindy 39.92 67 *eP* **P 00 17 30.8 -0.8**
SGDS Sogindy 39.92 67 *eP* **P 00 17 30.9 -0.8**
baz=67
AAK Ala-Archa 40.02 68 P **P 00 17 33.4 +0.8**
comp=Z,4.2nm,0.6s,baz=264,slow=7.9,SNR=22
AAK LR LR 00 38 47.1
comp=Z,243nm,18.4s,baz=286,slow=43
comp=Z,4.2nm,0.6s
AAK Ala-Archa 40.02 68 P **P 00 17 33.2 +0.6**
AAK IAmb IAmb 00 17 36.6
comp=Z,45nm,1.6s
AAK Ala-Archa 40.02 68 *ceP* **P 00 17 33.3 +0.6**
AAK pmax pmax
comp=Z,35nm,1.7s
AAK Ala-Archa 40.02 68 ⇑P **P 00 17 33.3 +0.6**
DBIC Dimbokro 40.15 222 P **P 00 17 34.1 +0.4**
comp=Z,2.7nm,0.4s,baz=270,slow=24,SNR=7.5
DBIC LR LR 00 35 22.5
comp=Z,394nm,20.1s,baz=0.0,slow=38
comp=Z,2.7nm,0.4s
DBIC Dimbokro 40.15 222 P **P 00 17 33.8 +0.1**
DBIC Dimbokro 40.15 222 P **P 00 17 33.8 +0.1**
DBIC pmax pmax
comp=Z,26nm,1.5s
DAG Danmarks Havn 40.80 347 P **P 00 17 38.7 +0.3**
DAG pmax pmax
comp=Z,10.0nm,1.2s
DAG Danmarks Havn 40.80 347 *i* P **P 00 17 37.0 -1.4**
DAG IAmb IAmb 00 17 38.5
comp=Z,7.4nm,1.0s
KUU Kurty 41.01 65 *eP* **P 00 17 39.8 -0.8**
KUU pmax pmax
comp=Z,40nm,1.5s
KUU Kurty 41.01 65 *eP* **P 00 17 39.9 -0.8**
comp=Z,40nm,1.5s,baz=66
BOOM Boomskoye usch 41.09 68 P **P 00 17 42.1 +0.6**
BOOM Boomskoye usch 41.09 68 P **P 00 17 42.1 +0.6**
BOOM pmax pmax
comp=Z,10.0nm,0.8s
MBAR Mbarara 41.20 165 P **P 00 17 42.5 -0.1**
comp=Z,1.9nm,0.2s,baz=303,slow=17,SNR=4.2
MBAR LR LR 00 37 33.9
comp=Z,178nm,19.3s,baz=336,slow=40
comp=Z,1.9nm,0.2s
MBAR Mbarara 41.20 165 P **P 00 17 42.3 -0.2**
MBAR Mbarara 41.20 165 P **P 00 17 42.3 -0.2**
MBAR pmax pmax
comp=Z,16nm,1.6s
KURBB Kurchatov Arra 41.20 55 P **P 00 17 41.5 -0.6**
comp=Z,3.2nm,0.9s,baz=279,slow=8.6,SNR=25
KURBB LR LR 00 38 18.0
comp=Z,172nm,18.2s,baz=262,slow=41
comp=Z,3.2nm,0.9s
KURK Kurchatov 41.25 55 P **P 00 17 41.9 -0.5**
KURK Kurchatov 41.25 55 *ceP* **P 00 17 42.4 0.0**
KURK pmax pmax
comp=Z,18nm,1.7s
KURK Kurchatov 41.25 55 ⇑P **P 00 17 41.9 -0.5**
NRN Naryn 41.42 69 P **P 00 17 44.7 +0.2**
NRN IAmb IAmb 00 17 47.4
comp=Z,44nm,1.7s
NRN Naryn 41.42 69 P **P 00 17 44.7 +0.2**
NRN pmax pmax
comp=Z,44nm,1.7s
CHKK Chushkaly 41.48 65 *i* P **P 00 17 43.8 -0.7**
CHKK Chushkaly 41.48 65 *i* P **P 00 17 43.8 -0.7**
baz=66
AAA Alma-Ata 41.59 66 *eP* **P 00 17 45.4 -0.1**
AAA Alma-Ata 41.59 66 *eP* **P 00 17 45.5 -0.1**
baz=66
TNSS Tian-Shan 41.66 67 *eP* **P 00 17 46.0 -0.4**
TNSS Tian-Shan 41.66 67 *eP* **P 00 17 46.1 -0.4**
baz=67
MDOK Medeo 41.70 66 *eP* **P 00 17 45.5 -0.9**
MDOK Medeo 41.70 66 *eP* **P 00 17 45.6 -0.9**
baz=67
NIL Nilore 42.08 81 P **P 00 17 49.4 -0.1**
NIL Nilore 42.08 81 P **P 00 17 49.4 -0.1**
NIL pmax pmax
comp=Z,10.0nm,0.9s
TDK Taldyqorghan 42.18 63 *eP* **P 00 17 49.7 -0.5**
TDK pmax pmax
comp=Z,32nm,1.4s
TDK Taldyqorghan 42.18 63 *eP* **P 00 17 49.8 -0.5**
comp=Z,32nm,1.4s,baz=64
TARG Taragay, Kyrgy 42.63 68 P **P 00 17 53.4 -1.0**
TARG Taragay, Kyrgy 42.63 68 P **P 00 17 53.4 -1.0**
TARG pmax pmax
comp=Z,14nm,0.9s
SATY Saty 42.68 66 *eP* **P 00 17 54.1 -0.4**
SATY pmax pmax
comp=Z,19nm,1.5s
SATY Saty 42.68 66 *eP* **P 00 17 54.1 -0.4**
comp=Z,19nm,1.5s,baz=66
KPKS Kokpek 42.77 65 *eP* **P 00 17 53.7 -1.4**
KPKS Kokpek 42.77 65 *eP* **P 00 17 53.7 -1.4**
baz=66
UZB Uzynbulak 43.09 66 *eP* **P 00 17 56.9 -0.9**
UZB Uzynbulak 43.09 66 *eP* **P 00 17 57.0 -0.9**
baz=66
SHLS Shalkode 43.40 66 *eP* **P 00 18 01.8 +1.6**
SHLS Shalkode 43.40 66 *eP* **P 00 18 01.9 +1.6**
baz=66
KMBO Kilima Mbogo 43.41 156 P **P 00 17 59.5 -1.2**
comp=Z,0.1nm,0.4s,baz=62,slow=24,SNR=3.4
KMBO Kilima Mbogo 43.41 156 P **P 00 18 01.9 +1.2**
NOR Nord 43.94 353 P **P 00 18 03.8 -0.2**
NOR pmax pmax
comp=Z,17nm,1.2s
NOR Nord 43.94 353 *i* P **P 00 18 02.5 -1.5**
NOR IAmb IAmb 00 18 04.6
comp=Z,22nm,1.2s
MAKZ Makanchi 44.17 60 P **P 00 18 06.3 +0.1**
MAKZ IAmb IAmb 00 18 07.4
comp=Z,23nm,1.2s
MAKZ Makanchi 44.17 60 P **P 00 18 06.4 +0.1**
MAKZ pmax pmax
comp=Z,23nm,1.2s
MK31 Makanchi Array 44.38 60 P **P 00 18 08.0 +0.1**
MK31 Makanchi Array 44.38 60 *c iP* **P 00 18 07.7 -0.3**
MKAR Makanchi Array 44.38 60 P **P 00 18 07.6 -0.3**
comp=Z,14nm,0.5s,baz=273,slow=7.6,SNR=190
MKAR LR LR 00 38 52.7
comp=Z,302nm,20.2s,baz=281,slow=39
comp=Z,14nm,0.5s
ZAA0 Zalesovo Array 44.55 49 P **P 00 18 08.6 -0.6**
ZAA0 IAmb IAmb 00 18 10.0
comp=Z,9.6nm,0.5s
ZALV Zalesovo Beam 44.55 49 P **P 00 18 08.8 -0.4**
comp=Z,9.0nm,0.5s,baz=278,slow=8.5,SNR=51
ZALV LR LR 00 38 51.5
comp=Z,410nm,18.2s,baz=280,slow=39
comp=Z,9.0nm,0.5s
ZALV Zalesovo Beam 44.55 49 P **P 00 18 08.5 -0.7**
ZALV Zalesovo Beam 44.55 49 P **P 00 18 08.5 -0.7**
NRIK Noril'sk 45.34 27 P **P 00 18 16.6 +1.3**
comp=Z,8.0nm,0.7s,baz=254,slow=7.9,SNR=9.6
NRIK LR LR 00 39 42.8
comp=Z,762nm,20.0s,baz=272,slow=39
comp=Z,8.0nm,0.7s
NRIK Noril'sk 45.34 27 P **P 00 18 16.2 +1.0**
NRIK Noril'sk 45.34 27 ⇑*eP* **P 00 18 16.2 +1.0**
NRIK pmax pmax
comp=Z,43nm,1.6s
ZSN Zaisan 45.92 58 *eP* **P 00 18 19.5 -0.6**
ZSN pmax pmax
comp=Z,12nm,1.0s
ZSN Zaisan 45.92 58 *eP* **P 00 18 19.5 -0.6**
comp=Z,12nm,1.0s,baz=58
SFJD Kangerlussuaq 46.95 329 LR LR 00 38 38.6
comp=Z,378nm,22.0s,baz=86,slow=37
DGZ Jazzator, Alta 46.99 55 *c iP* **P 00 18 28.8 +0.1**
DGZ pmax pmax
comp=Z,13nm,0.7s
NEEM North Greenlan 47.61 344 *i* P **P 00 18 31.3 -2.0**
NEEM IAmb IAmb 00 18 33.9
comp=Z,61nm,1.8s
WMQ Urumqi 48.89 62 *eP* **P 00 18 44.3 +0.9**
WMQ pP sP 00 18 51.3 -0.5
WMQ pmax pmax
comp=Z,27nm,0.7s
WMQ LR LR
comp=Z,290nm,17.3s
WMQ LR LR
comp=Z,230nm,16.7s
WMQ LR LR
comp=Z,170nm,18.5s
DANN Dangsing 52.51 82 *eP* **P 00 19 09.5 -1.7**
comp=Z,14nm,0.6s
KOLN Koldanda 52.67 83 *eP* **P 00 19 10.2 -2.1**
KOLN Koldanda 52.67 83 *eP* **P 00 19 10.5 -1.8**
comp=Z,1.6nm,0.6s
GKN Gorkha 53.35 82 *eP* **P 00 19 15.5 -1.7**
EUNU Eureka 54.00 348 P **P 00 19 21.5 +0.3**
EUNU IAmb IAmb 00 19 22.1
comp=Z,10nm,1.0s
PKIN Phulchoki 54.15 82 *eP* **P 00 19 20.5 -2.7**
comp=Z,6.2nm,0.5s
PKI Pulchoki 54.16 82 *eP* **P 00 19 21.3 -2.0**
DRLN Deer Lake 54.24 308 P **P 00 19 23.1 -0.1**
GUN Gumba 54.34 81 *eP* **P 00 19 22.4 -2.3**
comp=Z,3.4nm,0.3s
HYBB Hyderabad (bro 54.47 97 *eP* **P 00 19 25.5 +0.1**
JIRN Jiri 54.71 81 *eP* **P 00 19 25.7 -1.7**
comp=Z,6.8nm,0.4s
FRB Frobisher Bay 54.90 327 LR LR 00 43 46.0

comp=Z,318nm,19.9s,baz=36,slow=37
RAMN Ramite 55.39 82 *e*P **P 00 19 30.2 -2.0**
comp=Z,11nm,0.6s
TAPN Taplejung 56.02 81 *e*P **P 00 19 35.6 -1.2**
comp=Z,15nm,0.8s
ZAK Zakamensk 56.43 50 *e*P **P 00 19 38.7 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.4s
SCHQ Schefferville 57.41 317 P **P 00 19 45.1 -0.8**
comp=Z,4.2nm,0.5s,baz=58,slow=8.0,SNR=9.6
SCHQ LR LR 00 45 40.9
comp=Z,90nm,18.0s,baz=74,slow=37
comp=Z,4.2nm,0.5s
SCHQ Schefferville 57.41 317 P **P 00 19 45.7 -0.2**
SCHQ IAmb IAmb 00 19 46.2
comp=Z,24nm,1.2s
TIXI Tiksi 58.14 21 P **P 00 19 51.0 +0.4**
TIXI IAmb IAmb 00 19 52.5
comp=Z,32nm,1.5s
TIXI Tiksi 58.14 21 *ce*P **P 00 19 51.0 +0.4**
TIXI pmax pmax
comp=Z,28nm,1.7s
TIXI Tiksi 58.14 21 ⇑P **P 00 19 51.1 +0.4**
RES Resolute Bay 58.30 344 LR LR 00 46 43.6
comp=Z,138nm,18.2s,baz=18,slow=38
GTA Gaotai 58.97 63 *e*P **P 00 19 56.8 -0.4**
GTA pP pP 00 20 03.5 0.0
GTA pmax pmax
comp=Z,12nm,1.2s
GTA pmax pmax
comp=Z,64nm,5.1s
GTA LR LR
comp=Z,130nm,19.6s
GTA LR LR
comp=Z,160nm,20.4s
GTA LR LR
comp=Z,200nm,20.0s
BOD Bodaibo 59.06 39 *e*P **P 00 19 56.4 -0.9**
BOD pmax pmax
comp=Z,16nm,2.1s
SONM Songino Array 59.37 51 P **P 00 19 59.8 0.0**
comp=Z,7.0nm,0.8s,baz=288,slow=7.5,SNR=36
SONM LR LR 00 48 17.5
comp=Z,299nm,19.2s,baz=260,slow=39
comp=Z,7.0nm,0.8s
SONM Songino Array 59.37 51 P **P 00 19 59.3 -0.5**
SONM IAmb IAmb 00 20 01.1
comp=Z,26nm,1.4s
SONM Songino Array 59.37 51 P **P 00 19 59.3 -0.5**
SONM pmax pmax
comp=Z,26nm,1.4s
ULN Ulaanbaatar 59.75 51 P **P 00 20 02.2 -0.2**
ULN IAmb IAmb 00 20 03.7
comp=Z,20nm,1.4s
ULN Ulaanbaatar 59.75 51 *ce*P **P 00 20 02.3 -0.2**
ULN pmax pmax
comp=Z,19nm,1.7s
ULN Ulaanbaatar 59.75 51 P **P 00 20 02.4 -0.1**
comp=Z,44nm,1.4s
BATG Bathurst New B 60.26 308 P **P 00 20 05.7 -0.1**
BATG IAmb IAmb 00 20 07.2
comp=Z,15nm,1.0s
PALK Pallekele 62.46 104 LR LR 00 50 16.5
comp=Z,69nm,19.3s,baz=53,slow=39
PKME Peaks-Kenny Pk 63.19 308 P **P 00 20 25.9 +0.3**
baz=60
LZH Lanzhou 63.39 64 ⇑P **P 00 20 28.3 +1.1**
LZH pP sP 00 20 35.3 -0.4
LZH sP pP 00 20 40.4 +6.8
LZH pmax pmax
comp=Z,19nm,1.4s
LZH LR LR
comp=Z,180nm,15.8s
LZH LR LR
comp=Z,200nm,18.2s
LZH LR LR
comp=Z,240nm,20.3s
YAK Yakutsk 63.68 30 LR LR 00 51 34.2
comp=Z,495nm,18.7s,baz=268,slow=39
YAK Yakutsk 63.68 30 P **P 00 20 28.2 -0.3**
YAK Yakutsk 63.68 30 *e*P **P 00 20 26.9 -1.6**
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.0s
LBTB Lobatse 64.59 175 P **P 00 20 35.0 +0.1**
LBTB Lobatse 64.59 175 P **P 00 20 35.0 +0.1**
LBTB pmax pmax
comp=Z,40nm,1.8s
LBNH Lisbon 65.33 308 P **P 00 20 40.0 +0.4**
baz=58
HRV Adam Dziewonsk 66.03 306 P **P 00 20 43.4 -0.7**
baz=57
HHC Hu-ho-hao-te 66.04 56 *e*P **P 00 20 44.8 +0.4**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,110nm,6.2s
HHC LR LR
comp=Z,250nm,12.1s
HHC LR LR
comp=Z,470nm,12.7s
HHC LR LR
comp=Z,480nm,13.3s
CD2 Chengdu 66.07 69 *e*P **P 00 20 43.0 -1.7**
HIA Hailar 66.31 45 P **P 00 20 46.3 +0.4**
HIA IAmb IAmb 00 20 54.5
comp=Z,7.5nm,0.8s
HIA Hailar 66.31 45 P **P 00 20 46.3 +0.4**
HIA pmax pmax
comp=Z,8.0nm,0.8s
LONY Lake Ozonia 66.72 309 P **P 00 20 47.9 -0.7**
baz=57
L61B Northampton 66.75 306 P **P 00 20 48.8 0.0**
baz=57
PZH PanZhiHua 67.03 74 P **P 00 20 51.4 +0.4**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,120nm,4.7s
XLT XiLinHaoTe 67.19 51 *e*P **P 00 20 52.0 +0.4**
XLT pP sP 00 20 59.3 -0.8
XLT sP pP 00 21 01.4 +3.4
XLT pmax pmax
comp=Z,10.0nm,0.9s
XLT pmax pmax
comp=Z,100nm,4.6s
ZEA Zeya 67.56 38 *e*P **P 00 20 54.6 +0.9**
ZEA pmax pmax
comp=Z,10.0nm,1.6s
XAN Xi'an 68.00 64 ⇑P **P 00 20 56.3 -0.6**
XAN pP pP 00 21 01.6 -1.6
XAN pmax pmax
comp=Z,11nm,1.1s
BOSA Boshof 68.14 176 P **P 00 20 59.0 +1.4**
comp=Z,3.1nm,0.8s,baz=334,slow=8.0,SNR=4.6
comp=Z,3.1nm,0.8s
BOSA Boshof 68.14 176 P **P 00 20 58.5 +0.8**
BOSA Boshof 68.14 176 P **P 00 20 58.5 +0.8**
BOSA pmax pmax
comp=Z,49nm,1.8s
C36M Paulatuk 68.16 347 P **P 00 20 57.1 0.0**
baz=29
PAL Palisades 68.32 306 P **P 00 20 58.8 +0.1**
baz=56
BINY Binghamton 68.93 308 P **P 00 21 02.2 -0.3**
baz=55
BJI Beijing 69.42 55 P **P 00 21 05.1 -0.4**
BJI pmax pmax
comp=Z,8.0nm,1.1s
BJI LR LR
comp=Z,60nm,18.5s
BJI LR LR
comp=Z,250nm,18.1s
BJI LR LR
comp=Z,390nm,19.4s
BILL Bilibino 69.46 13 *e*P **P 00 21 05.1 -0.2**
BILL *e*PPP PPP 00 25 19.9
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,149nm,19.0s
CMAR Chiang Mai Arr 69.55 83 P **P 00 21 05.4 -1.3**
comp=Z,1.3nm,0.3s,baz=300,slow=7.1,SNR=4.7
comp=Z,1.3nm,0.3s
C27K Jago River 70.34 354 P **P 00 21 10.3 -0.5**
baz=13
ENH Enshi 70.52 67 P **P 00 21 11.4 -1.1**
INK Inuvik 70.54 350 P **P 00 21 12.1 +0.2**
baz=21
C23K Itkillik River 70.54 357 P **P 00 21 11.7 -0.3**
baz=7.1
C24K Franklin Bluff 70.57 356 P **P 00 21 11.9 -0.2**
baz=8.6
SEY Seymchan 70.62 21 *ce*P **P 00 21 12.6 +0.1**
SEY pmax pmax
comp=Z,19nm,2.5s
D25K Kavik River 70.83 355 P **P 00 21 13.0 -0.7**
baz=10
SSPA Standing Stone 71.00 307 P **P 00 21 15.0 -0.2**
baz=54
D24K Happy Valley 71.14 356 P **P 00 21 16.4 +0.8**
baz=8.5
F31M Tsiigehtchic 71.39 350 P **P 00 21 17.2 +0.1**
baz=20
D23K Nanushuk River 71.42 357 P **P 00 21 18.6 +1.4**
baz=7.0
E27K Coleen River 71.57 353 P **P 00 21 18.1 -0.2**
baz=14
TOLK Toolik Lake Re 71.69 356 P **P 00 21 19.1 +0.2**
baz=7.9
SUR Sutherland 71.77 180 P **P 00 21 21.1 +1.2**
E25K Arctic Village 71.96 355 P **P 00 21 21.4 +0.8**
baz=11
YKA Yellowknife Ar 71.96 340 P **P 00 21 20.9 +0.3**
comp=Z,5.3nm,1.0s,baz=38,slow=6.6,SNR=5.7
comp=Z,5.3nm,1.0s
CBN Corbin Frederi 72.12 305 P **P 00 21 22.3 +0.3**
baz=53
SRDT SRDT 72.14 86 P **P 00 21 20.1 -2.3**
G30M tAoh Zraii Nji 72.14 351 P **P 00 21 21.5 -0.2**
baz=18
E24K Your Creek 72.19 356 P **P 00 21 22.3 +0.2**
baz=8.7
M53A WI Miller and 72.20 309 P **P 00 21 21.9 -0.6**
baz=52
F26K Sheenjek River 72.27 354 P **P 00 21 23.0 +0.5**
baz=12
E23K Chandalar 72.27 356 P **P 00 21 21.9 -0.6**
baz=7.8
E22K Anaktuvuk Pass 72.29 357 P **P 00 21 22.3 -0.3**
baz=6.0
F25K Christian Rive 72.48 355 P **P 00 21 23.2 -0.6**
baz=11
BMAR Burnt Mountain 72.56 354 P **P 00 21 25.1 +0.9**
KLR Kul'dur 72.58 40 LR LR 00 57 13.7
comp=Z,269nm,18.2s,baz=308,slow=39
KLR Kul'dur 72.58 40 *ce*P **P 00 21 24.6 0.0**
KLR pmax pmax
comp=Z,19nm,2.5s
F24K Squaw Lake 72.71 355 P **P 00 21 24.4 -0.7**
baz=9.2
CN2 Changchun 72.72 47 P **P 00 21 25.3 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,400nm,15.0s
MCWV Mont Chateau 72.78 307 P **P 00 21 25.9 -0.1**
baz=52
EPYK Eagle Plains 72.79 351 P **P 00 21 25.5 -0.1**
baz=18
MA2 Magadan 72.81 24 *i*P **P 00 21 26.3 +0.6**
MA2 pmax pmax
comp=Z,46nm,1.4s
G27K Doyon Strip 72.91 353 P **P 00 21 25.6 -0.8**
baz=14
F22K John River 72.93 357 P **P 00 21 26.1 -0.3**
baz=5.7
G26K Porcupine Rive 72.97 354 P **P 00 21 26.7 +0.1**
baz=12
COLD Coldfoot 73.13 356 P **P 00 21 28.1 +0.6**
COLD IAmb IAmb 00 21 38.9
comp=Z,9.4nm,1.2s
COLD Coldfoot 73.13 356 P **P 00 21 27.7 +0.2**
baz=7.3
O53A New Philadelph 73.25 309 P **P 00 21 29.3 +0.5**
baz=52
F21K Alatna River 73.27 358 P **P 00 21 28.8 +0.4**
baz=4.7,SNR=5.0
G25K Bearman Lake 73.33 355 P **P 00 21 28.8 +0.1**
baz=11
AAM Ann Arbor 73.42 311 P **P 00 21 29.8 +0.1**
baz=51
WRGLY Wrigley 73.45 344 P **P 00 21 29.7 +0.2**
baz=28
H27K Steamboat Moun 73.46 353 P **P 00 21 30.1 +0.5**
baz=14
G22K Bettles 73.49 357 P **P 00 21 29.4 -0.2**
baz=6.2
G24K Hadweenzic Riv 73.49 355 P **P 00 21 30.6 +0.9**
baz=9.5
G23K Bananza Creek 73.63 356 P **P 00 21 30.8 +0.2**
baz=7.4
GRNR Gornyy 73.77 37 ⇑*i*P **P 00 21 31.9 +0.3**
GRNR pmax pmax
comp=Z,7.0nm,1.0s
GRNR MLR MLR
comp=Z,460nm,16.0s
H25K Birch Creek 73.80 354 P **P 00 21 31.4 -0.1**
baz=11
I29M Ogilvie Camp, 73.95 351 P **P 00 21 32.5 0.0**
baz=17
G21K Allakaket 73.97 358 P **P 00 21 32.7 +0.2**
baz=4.6,SNR=5.4
EYMN Ely 74.00 320 P **P 00 21 33.0 0.0**
baz=48
I27K Kandik River 74.08 352 P **P 00 21 33.1 -0.1**
baz=14
P52A Corning 74.19 309 P **P 00 21 34.6 +0.3**
baz=51
CNNC Cliffs of the 74.24 303 P **P 00 21 34.6 0.0**
baz=52
ACSO Alum Creek Sta 74.33 309 P **P 00 21 35.2 +0.2**
baz=51
H24K Noodor Dome 74.38 355 P **P 00 21 34.8 -0.1**
baz=9.1
H23K Yukon River 74.49 356 P **P 00 21 35.3 -0.3**
baz=7.8
H22K Ishtalitna Cre 74.51 357 P **P 00 21 35.4 -0.3**
baz=6.3,SNR=5.5
IMAR Indian Mountai 74.51 358 P **P 00 21 36.7 +1.1**
ULM Lac du Bonnet 74.52 323 P **P 00 21 35.1 -0.8**
comp=Z,3.9nm,0.5s,baz=28,slow=6.6,SNR=3.9
comp=Z,3.9nm,0.5s
PRP Porcupine Dome 74.52 354 P **P 00 21 35.7 -0.2**
baz=11
I26K Coal Creek Min 74.52 353 P **P 00 21 35.3 -0.4**
baz=13
BLA Blacksburg 74.64 306 P **P 00 21 37.6 +0.6**
baz=52
H21K Melozitna Rive 74.81 357 P **P 00 21 38.5 +1.1**
H21K IAmb IAmb 00 21 40.4
comp=Z,19nm,1.1s
H21K Melozitna Rive 74.81 357 P **P 00 21 38.4 +1.0**
baz=5.2,SNR=10
POKR Poker Plat Res 75.06 355 P **P 00 21 39.5 +0.6**
baz=9.4
I23K Minto, Yukon-K 75.15 356 P **P 00 21 40.0 +0.7**
baz=7.9
I21K Tanana 75.25 357 P **P 00 21 40.2 +0.3**
baz=5.8
MDM Murphy Dome 75.27 355 P **P 00 21 40.8 +0.7**
MDM IAmb IAmb 00 21 51.3
comp=Z,28nm,1.5s
K29M Barlow Dome 75.31 350 P **P 00 21 40.8 +0.3**
baz=17
DAWY Dawson 75.33 351 P **P 00 21 40.7 +0.2**
DAWY IAmb IAmb 00 21 42.0
comp=Z,12nm,1.0s
DAWY Dawson 75.33 351 P **P 00 21 41.2 +0.7**
baz=16,SNR=7.8
MLY Manley 75.34 356 P **P 00 21 41.3 +0.8**
baz=6.8
J26L Joseph Creek 75.35 353 P **P 00 21 41.3 +0.6**
J26L IAmb IAmb 00 21 42.4
comp=Z,13nm,1.3s
J26L Joseph Creek 75.35 353 P **P 00 21 41.4 +0.8**
baz=12,SNR=5.9
ILAR Eielson Array 75.36 355 P **P 00 21 40.1 -0.5**
comp=Z,1.2nm,0.7s,baz=358,slow=4.0,SNR=9.6
J25K Salcha River, 75.40 354 P **P 00 21 41.7 +0.8**
baz=11
MMPY Sheldon Lake, 75.52 347 P **P 00 21 42.4 +0.8**
baz=22,SNR=7.8
O48B Farmland 75.59 311 P **P 00 21 42.3 0.0**
baz=50
K27K Chicken 75.67 352 P **P 00 21 42.4 +0.1**
baz=14
NEA2 Nenana 75.69 355 P **P 00 21 41.9 -0.5**
baz=8.1,SNR=5.4
HDA Harding Lake 75.72 354 P **P 00 21 43.0 +0.4**
HDA IAmb IAmb 00 21 50.5
comp=Z,7.9nm,0.9s
HDA Harding Lake 75.72 354 P **P 00 21 42.3 -0.4**
baz=9.8,SNR=5.5
P49A Miami Univ. Ec 75.80 310 P **P 00 21 43.5 0.0**
baz=50
SCRK Sand Creek 75.90 353 P **P 00 21 44.8 +0.9**
SCRK IAmb IAmb 00 21 55.6
comp=Z,22nm,1.6s
SCRK Sand Creek 75.90 353 P **P 00 21 43.7 -0.2**
baz=12
NJ2 Nanjing 75.91 60 *e*P **P 00 21 46.5 +2.2**
NJ2 pmax pmax
comp=Z,11nm,0.6s
L29M L29M 76.09 350 P **P 00 21 45.1 +0.2**
baz=17
RIDG Independent Ri 76.22 353 P **P 00 21 45.4 -0.2**
RIDG IAmb IAmb 00 22 03.2
comp=Z,14nm,1.2s
RIDG Independent Ri 76.22 353 P **P 00 21 46.2 +0.7**
baz=11
FARO Faro, Yukon 76.23 348 P **P 00 21 46.3 +0.7**
baz=20
K24K Donnelly Dome 76.23 354 P **P 00 21 45.9 +0.2**
baz=11
BPAW Bear Paw Mtn. 76.28 356 P **P 00 21 45.1 -0.8**
baz=6.6
J20K Nowinta River 76.34 358 P **P 00 21 46.9 +0.7**
J20K Nowinta River 76.34 358 P **P 00 21 46.0 -0.2**
baz=4.1
KOTAN Kotaneelee Air 76.34 343 P **P 00 21 45.5 -0.8**
baz=27
M31M Drury Creek, Y 76.42 348 P **P 00 21 46.6 -0.1**
baz=20
KMSC Kings Mountain 76.51 304 P **P 00 21 48.2 +0.5**
baz=51
MCK McKinley 76.53 355 P **P 00 21 47.5 +0.1**
baz=8.2,SNR=5.1
BCAR Beaver Creek A 76.57 352 P **P 00 21 48.7 +1.1**
L27K Beaver Creek, 76.58 352 P **P 00 21 48.4 +0.8**
L27K IAmb IAmb 00 21 50.2
comp=Z,13nm,1.2s
L27K Beaver Creek, 76.58 352 P **P 00 21 48.1 +0.4**
baz=14
JFWS Jewell Farm 76.72 315 P **P 00 21 48.9 +0.2**
baz=48
L26K Log Cabin Wild 76.78 353 P **P 00 21 49.2 +0.5**
baz=12
M29M Somme Creek 76.78 350 P **P 00 21 49.6 +0.8**
baz=16,SNR=8.4
TRF Thorofare Moun 76.89 356 P **P 00 21 49.0 -0.5**
baz=7.1
TZTN Tazewell 77.01 307 P **P 00 21 50.5 0.0**
baz=50
CAST Castle Rocks 77.02 357 P **P 00 21 50.3 +0.2**
baz=5.7
PAX Paxson 77.03 354 P **P 00 21 49.8 -0.4**
baz=11
NHSC New Hope 77.05 302 P **P 00 21 51.1 +0.5**
baz=51
DHY Denali Highway 77.08 354 P **P 00 21 50.9 +0.3**
DHY IAmb IAmb 00 21 51.7
comp=Z,9.0nm,0.8s
DHY Denali Highway 77.08 354 P **P 00 21 50.7 +0.2**
baz=9.4,SNR=5.1
BVCY Beaver Creek 77.10 351 P **P 00 21 50.2 -0.4**
baz=14
K20K Telida 77.15 358 P **P 00 21 50.8 0.0**
baz=4.1
N32M Quiet Lake 77.20 347 P **P 00 21 51.1 0.0**
baz=20
M27K Edge Creek, AK 77.28 352 P **P 00 21 51.3 -0.4**
baz=14
N31M Braeburn, Yuko 77.32 349 P **P 00 21 52.3 +0.5**
baz=18
M26K Nabesna, AK 77.35 352 P **P 00 21 51.6 -0.4**
baz=13
WTLY Watson Lake, Y 77.37 345 P **P 00 21 51.9 -0.3**
baz=24
WAT1 Susitna Watana 77.40 355 P **P 00 21 51.7 -0.6**
baz=8.4
N30M Aishikik Lake 77.54 349 P **P 00 21 53.2 +0.2**
baz=17
PPLA Purkeypile 77.54 357 P **P 00 21 53.9 +0.8**
PPLA IAmb IAmb 00 22 38.4
comp=Z,30nm,1.4s
PPLA Purkeypile 77.54 357 P **P 00 21 53.1 0.0**
baz=5.6
WCI Wyandotte Cave 77.58 310 P **P 00 21 54.2 +0.6**
baz=49
YUK3 Moose Creek 77.68 351 P **P 00 21 53.9 -0.1**
baz=15,SNR=5.4
M24K Tolsona, Glenn 77.94 354 P **P 00 21 55.2 -0.1**
baz=10
WHY Whitehorse 77.96 348 P **P 00 21 55.6 +0.1**
baz=19
P33M Teslin, Yukon 78.04 347 P **P 00 21 55.9 0.0**
baz=20
O30N Mendenhall 78.05 349 P **P 00 21 56.4 +0.5**
baz=18
KS19 Wonju Array Si 78.17 51 P **P 00 21 56.6 -0.3**
HYT Haines Junctio 78.20 349 P **P 00 21 56.5 -0.4**
baz=17
YUK6 Outpost Mounta 78.21 350 P **P 00 21 57.0 -0.1**
baz=16
KSAR Wonju Array Be 78.22 51 P **P 00 21 56.8 -0.3**
KSAR Wonju Array Be 78.22 51 P **P 00 21 56.8 -0.3**
KSRS Korea Array 78.23 51 P **P 00 21 57.0 -0.2**
comp=Z,5.5nm,0.6s,baz=311,slow=4.8,SNR=23
comp=Z,5.5nm,0.6s
N25K Chitina, Valde 78.29 353 P **P 00 21 57.0 -0.3**
baz=12
SCM Sheep Creek Mo 78.30 354 P **P 00 21 57.8 +0.5**
SCM Sheep Creek Mo 78.30 354 P **P 00 21 57.8 +0.5**
SCM pmax pmax
comp=Z,42nm,1.5s
SCM Sheep Creek Mo 78.30 354 P **P 00 21 56.8 -0.5**
baz=9.4
L19K White Mountain 78.36 358 P **P 00 21 57.0 -0.6**
baz=3.5
M23K Glacier View 78.37 354 P **P 00 21 57.5 -0.1**
baz=9.1
SML Sawmill 78.40 355 P **P 00 21 56.8 -1.1**
baz=8.6
SKT Skwentna 78.43 356 P **P 00 21 57.3 -0.6**
SKT IAmb IAmb 00 22 09.0
comp=Z,18nm,1.4s
SKT Skwentna 78.43 356 P **P 00 21 57.1 -0.8**
baz=6.1
R33M Jennings River 78.46 346 P **P 00 21 57.9 -0.4**
baz=22
KLU Klutina 78.53 353 P **P 00 21 58.2 -0.3**
baz=10
CTG Chitna Glacier 78.57 351 P **P 00 21 58.3 -0.6**
baz=14
M22K Willow 78.58 356 P **P 00 21 58.5 -0.1**
baz=7.2
M20K Styx River 78.60 357 P **P 00 21 58.4 -0.5**
baz=4.8
O28M Mount Upton 78.62 351 P **P 00 21 59.0 -0.4**
baz=15
M19K Big River Lodg 78.62 358 P **P 00 21 59.2 +0.2**
baz=3.8
PMR Palmer 78.67 355 P **P 00 21 58.9 -0.3**
baz=8.0
P32M Atlin 78.78 347 P **P 00 22 00.2 +0.3**
baz=20
P30M Million Dollar 78.80 349 P **P 00 22 00.3 +0.3**
baz=17
KNK Knik Glacier 78.80 355 P **P 00 22 00.2 +0.2**
baz=8.5
O29M Mount Kennedy 78.86 350 P **P 00 22 00.7 +0.2**
baz=16
SUA Susitna One 78.90 356 P **P 00 21 59.7 -0.9**
baz=6.7
KULM Kulim 78.92 92 P **P 00 22 00.6 -0.7**

KULM			IAmb	IAmb	00 22 49.1
	comp=Z,22nm,1.3s				
GOGA	**Godfrey**	**78.97 304**	P	**P**	**00 22 00.8 -0.6**
	baz=50				
Y52A	**Lilburn**	**79.06 305**	P	**P**	**00 22 02.2 +0.3**
Y52A			IAmb	IAmb	00 22 03.8
	comp=Z,24nm,1.2s				
DLBC	**Dease Lake**	**79.17 345**	P	**P**	**00 22 01.9 -0.2**
	baz=22				
RC01	**Rabbit Creek A**	**79.21 355**	P	**P**	**00 22 01.2 -1.0**
	baz=7.5				
GLI	**Glacier Island**	**79.23 354**	P	**P**	**00 22 01.4 -0.9**
	baz=9.5				
N20K	**Mount Spurr**	**79.24 357**	P	**P**	**00 22 01.5 -1.0**
	baz=5.5				
SPCR	**Spurr Chakacha**	**79.24 357**	P	**P**	**00 22 01.1 -1.3**
	baz=5.5				
PINM	**Pinnacle**	**79.28 350**	P	**P**	**00 22 01.3 -1.5**
	baz=15				
PLBC	**Pleasant Camp**	**79.34 348**	P	**P**	**00 22 01.6 -1.3**
	baz=18				
PWL	**Port Wells**	**79.34 355**	P	**P**	**00 22 01.5 -1.5**
	baz=8.6				
P29M	**Windy Craggy**	**79.39 349**	P	**P**	**00 22 01.8 -1.4**
	baz=17				
YSS	**Yuzh-Sakhalins**	**79.42 36**	P	**P**	**00 22 04.0 +0.5**
YSS	**Yuzh-Sakhalins**	**79.42 36**	*eP*	**P**	**00 22 04.2 +0.6**
YSS			*e*		00 22 11.2
YSS			*e*		00 22 16.5
YSS			pmax	pmax	
	comp=Z,50nm,1.4s				
YSS			MLR	MLR	
	comp=Z,700nm,12.0s				
YSS			MLR	MLR	
	comp=N,400nm,16.0s				
EYAK	**Cordova Ski Ar**	**79.44 353**	P	**P**	**00 22 02.0 -1.4**
	baz=11				
ECSD	**EROS Data Cent**	**79.50 319**	P	**P**	**00 22 04.1 0.0**
ECSD	**EROS Data Cent**	**79.50 319**	P	**P**	**00 22 03.0 -1.1**
	baz=44				
PNL	**Peninsula**	**79.58 350**	P	**P**	**00 22 03.6 -0.7**
	baz=15				
BGLC	**Bering Glacier**	**79.62 352**	P	**P**	**00 22 03.0 -1.4**
	baz=12				
N19K	**Bonanza Creek**	**79.72 358**	P	**P**	**00 22 03.4 -1.7**
	baz=3.8				
N18K	**Kilae Creek**	**79.89 358**	P	**P**	**00 22 04.2 -1.7**
	baz=2.6				
N16K	**Nishlik Lake**	**80.13 360**	P	**P**	**00 22 06.0 -1.3**
	baz=0.4				
PETK	**Petropavlovsk-**	**80.32 25**	P	**P**	**00 22 07.6 -0.8**
	comp=N,2.5nm,0.8s,baz=349,slow=15,SNR=3.9				
	comp=N,2.5nm,0.8s				
TIGA	**Tifton**	**80.33 303**	P	**P**	**00 22 07.5 -1.3**
	baz=49				
T35M	**Bob Quinn**	**80.56 344**	P	**P**	**00 22 08.5 -1.2**
	baz=22				
CCM	**Cathedral Cave**	**80.59 312**	P	**P**	**00 22 10.1 0.0**
CCM	**Cathedral Cave**	**80.59 312**	P	**P**	**00 22 10.1 0.0**
CCM			pmax	pmax	
	comp=Z,5.0nm,0.7s				
CCM	**Cathedral Cave**	**80.59 312**	P	**P**	**00 22 10.0 -0.1**
	baz=46				
O18K	**Koktuh Hills**	**80.70 358**	P	**P**	**00 22 10.9 +0.6**
O18K	**Koktuh Hills**	**80.70 358**	P	**P**	**00 22 09.7 -0.6**
	baz=3.2				
O17K	**Koliganek Bris**	**80.82 359**	P	**P**	**00 22 10.1 -0.8**
	baz=1.7				
O16K	**Kokwok River B**	**81.01 359**	P	**P**	**00 22 10.8 -1.1**
	baz=0.9				
P18K	**Big Mountain,**	**81.16 358**	P	**P**	**00 22 12.0 -0.8**
	baz=3.2				
LRAL	**Lakeview Retre**	**81.45 306**	P	**P**	**00 22 15.2 +0.4**
LRAL			IAmb	IAmb	00 22 16.5
	comp=Z,22nm,1.2s				
LRAL	**Lakeview Retre**	**81.45 306**	P	**P**	**00 22 14.2 -0.5**
	baz=48				
SIT	**Sitka**	**81.46 347**	P	**P**	**00 22 13.3 -1.0**
	baz=18				
LAO	**LASA Array**	**81.77 326**	P	**P**	**00 22 17.3 +1.0**
LAO			IAmb	IAmb	00 22 18.4
	comp=Z,12nm,0.9s				
LAO	**LASA Array**	**81.77 326**	P	**P**	**00 22 16.5 +0.1**
	baz=38				
EGMT	**Eagleton**	**82.17 329**	P	**P**	**00 22 19.3 +0.9**
EGMT	**Eagleton**	**82.17 329**	P	**P**	**00 22 18.9 +0.5**
	baz=36				
Q17K	**Contact Creek**	**82.31 358**	P	**P**	**00 22 18.4 -0.5**
	baz=2.6				
V35K	**Ketchikan**	**82.39 344**	P	**P**	**00 22 19.3 0.0**
	baz=21				
KDAK	**Kodiak Island**	**82.67 356**	P	**P**	**00 22 21.5 +0.8**
KDAK	**Kodiak Island**	**82.67 356**	P	**P**	**00 22 21.5 +0.8**
KDAK			pmax	pmax	
	comp=Z,61nm,1.7s				
KDAK	**Kodiak Island**	**82.67 356**	P	**P**	**00 22 20.3 -0.4**
	baz=5.2				
BRAL	**Brewton**	**82.73 305**	P	**P**	**00 22 20.8 -0.7**
	baz=48				
RSSD	**Black Hills**	**82.79 323**	P	**P**	**00 22 22.2 +0.3**
RSSD			IAmb	IAmb	00 22 23.9
	comp=Z,22nm,1.7s				
RSSD	**Black Hills**	**82.79 323**	P	**P**	**00 22 22.2 +0.3**
RSSD			pmax	pmax	
	comp=Z,22nm,1.7s				
RSSD	**Black Hills**	**82.79 323**	P	**P**	**00 22 21.5 -0.4**
	baz=40				
KSU1	**Kansas State U**	**82.83 316**	P	**P**	**00 22 21.8 -0.1**
KSU1			IAmb	IAmb	00 22 23.5
	comp=Z,10nm,0.9s				
KSU1	**Kansas State U**	**82.83 316**	P	**P**	**00 22 21.4 -0.5**
	baz=44				
WALA	**Waterton Lakes**	**82.90 332**	P	**P**	**00 22 22.5 +0.2**
WALA			IAmb	IAmb	00 22 57.8
	comp=Z,21nm,1.6s				
OHAK	**Old Harbor**	**83.26 357**	P	**P**	**00 22 23.7 -0.1**
	baz=4.6				
GCMT	**Greycliff**	**83.94 328**	P	**P**	**00 22 27.8 +0.1**
JTMT	**Jette**	**84.14 331**	P	**P**	**00 22 29.3 +0.6**
JTMT			IAmb	IAmb	00 22 30.2
	comp=Z,14nm,1.0s				
RLMT	**Red Lodge**	**84.31 327**	P	**P**	**00 22 30.6 +1.0**
RLMT	**Red Lodge**	**84.31 327**	P	**P**	**00 22 29.8 +0.1**
	baz=36				
BDFB	**Brasilia**	**84.31 244**	P	**P**	**00 22 30.7 +0.9**
	comp=Z,3.8nm,0.7s,baz=59,slow=9.2,SNR=6.4				
	comp=Z,3.8nm,0.7s				
BDFB	**Brasilia**	**84.31 244**	P	**P**	**00 22 30.8 +0.9**
BDFB			IAmb	IAmb	00 22 41.5
	comp=Z,10nm,1.1s				
MIAR	**Mount Ida**	**84.38 311**	P	**P**	**00 22 30.7 +0.7**
	baz=45				
R32A	**Long Quarter,**	**84.44 317**	P	**P**	**00 22 30.4 +0.1**
TUL1	**Leonard**	**84.68 313**	P	**P**	**00 22 31.6 +0.2**
	baz=44				
CBKS	**Cedar Bluff**	**84.69 317**	P	**P**	**00 22 31.6 +0.1**
	baz=42				
NEW	**Newport**	**84.72 333**	P	**P**	**00 22 31.2 -0.2**
	baz=31				
CHIR	**Chirikof Islan**	**84.75 358**	P	**P**	**00 22 31.6 +0.2**
	baz=2.8				
MSO	**Missoula**	**84.77 331**	P	**P**	**00 22 32.1 +0.2**
	baz=33				
MJAR	**Matsushiro Arr**	**84.80 46**	P	**P**	**00 22 32.1 +0.1**
	comp=Z,5.1nm,0.6s,baz=322,slow=4.5,SNR=14				
	comp=Z,5.1nm,0.6s				
BOZ	**Bozeman (W)**	**84.89 329**	P	**P**	**00 22 32.8 +0.2**
	baz=35				
K22A	**Casper**	**85.07 324**	P	**P**	**00 22 33.7 +0.1**
K22A			IAmb	IAmb	00 22 34.6
	comp=Z,16nm,1.2s				
K22A	**Casper**	**85.07 324**	P	**P**	**00 22 33.3 -0.3**
	baz=38				
YHH	**Holmes Hill**	**85.24 328**	P	**P**	**00 22 34.9 +0.4**
SDPT	**Sand Point**	**85.27 1**	P	**P**	**00 22 34.1 +0.1**
	baz=359				
YHL	**Hebgen Lake**	**85.32 328**	P	**P**	**00 22 35.7 +0.8**
YHL			IAmb	IAmb	00 22 37.6
	comp=Z,13nm,1.1s				
SDV	**Santo Domingo**	**85.41 278**	P	**P**	**00 22 34.9 -0.8**
H17A	**Grant Village**	**85.44 327**	P	**P**	**00 22 35.3 -0.2**
	baz=35				
BW06	**Boulder Array**	**86.33 326**	P	**P**	**00 22 38.9 -0.9**
BW06	**Boulder Array**	**86.33 326**	P	**P**	**00 22 39.4 -0.5**
	baz=36				
PD31	**Pinedale Array**	**86.33 326**	P	**P**	**00 22 39.8 0.0**
PDAR	**Pinedale Array**	**86.33 326**	P	**P**	**00 22 40.0 +0.1**
	comp=Z,1.1nm,1.0s,baz=57,slow=6.6,SNR=6.9				
	comp=Z,1.1nm,1.0s				
PDAR	**Pinedale Array**	**86.33 326**	P	**P**	**00 22 39.6 -0.2**
WMOK	**Wichita Mounta**	**87.20 314**	P	**P**	**00 22 44.7 +0.7**
WMOK			IAmb	IAmb	00 22 45.6
	comp=Z,11nm,1.3s				
WMOK	**Wichita Mounta**	**87.20 314**	P	**P**	**00 22 44.7 +0.7**
WMOK			pmax	pmax	
	comp=Z,11nm,1.3s				
WMOK	**Wichita Mounta**	**87.20 314**	P	**P**	**00 22 44.0 0.0**
	baz=42				
O20A	**White River Ci**	**87.86 323**	P	**P**	**00 22 46.7 -0.5**
	baz=37				
RDMU	**Red Mountain**	**88.11 324**	P	**P**	**00 22 48.3 -0.2**
HWUT	**Hardware Ranch**	**88.14 326**	P	**P**	**00 22 48.4 -0.2**
HWUT			IAmb	IAmb	00 22 49.8
	comp=Z,7.1nm,1.1s				
T25A	**Trinidad**	**88.36 319**	P	**P**	**00 22 49.4 -0.4**
	baz=39				
SDCO	**Great Sand Dun**	**88.44 320**	P	**P**	**00 22 49.7 -0.5**
	baz=38				
WHTX	**Lake Whitney,**	**88.47 311**	P	**P**	**00 22 50.5 +0.4**
	baz=43				
S22A	**4UR Ranch, Cre**	**89.08 321**	P	**P**	**00 22 52.7 -0.5**
	baz=38				
ABTX	**Abilene, Hawle**	**89.25 313**	P	**P**	**00 22 54.2 +0.4**
ABTX			IAmb	IAmb	00 22 55.3
	comp=Z,7.0nm,0.9s				
ABTX	**Abilene, Hawle**	**89.25 313**	P	**P**	**00 22 54.2 +0.4**
	baz=42				
PV11	**David Mesa, Pa**	**89.62 323**	P	**P**	**00 22 55.4 -0.2**
DUG	**Dugway, Tooele**	**89.84 326**	P	**P**	**00 22 54.6 -1.9**
DUG			pmax	pmax	
	comp=Z,6.0nm,1.1s				
DUG	**Dugway, Tooele**	**89.84 326**	P	**P**	**00 22 56.7 +0.1**
	baz=34				
MVCO	**Mesa Verde**	**90.31 322**	P	**P**	**00 22 58.7 -0.2**
	baz=37				
JCT	**Junction City**	**90.94 312**	P	**P**	**00 23 01.7 0.0**
	baz=42				
833A	**Chaparral WMA,**	**92.30 310**	P	**P**	**00 23 08.4 +0.5**
	baz=42				
R11A	**Troy Canyon, C**	**92.56 327**	P	**P**	**00 23 08.5 -0.7**
	baz=32				
WUAZ	**Wupatki**	**93.04 323**	P	**P**	**00 23 11.5 0.0**
	baz=35				
121A	**Cookes Peak, D**	**93.69 318**	P	**P**	**00 23 14.3 -0.3**
	baz=37				
TX32	**Lajitas Array**	**93.99 314**	P	**P**	**00 23 16.6 +0.7**
TX32			IAmb	IAmb	00 23 18.0
	comp=Z,6.0nm,1.1s				
TXAR	**Lajitas Array**	**93.99 314**	P	**P**	**00 23 15.9 0.0**
	comp=Z,2.1nm,0.8s,baz=62,slow=4.7,SNR=18				
	comp=Z,2.1nm,0.8s				
TXAR	**Lajitas Array**	**93.99 314**	P	**P**	**00 23 16.4 +0.5**
MPMC	**Manual Prospec**	**95.30 327**	P	**P**	**00 23 20.9 -1.0**
	baz=31				
PDMCI	**Parker Dam,Lak**	**95.32 324**	P	**P**	**00 23 21.7 0.0**
	baz=33				
TUC	**Tucson**	**95.37 320**	P	**P**	**00 23 21.0 -1.1**
	baz=35				
ISA	**Isabella, Lake**	**96.05 328**	P	**P**	**00 23 24.1 -1.1**
	baz=30				
WRA	**Warramunga Arr**	**120.45 91**	PKP	**PKPdf**	**00 28 48.2 -1.1**
	comp=Z,0.7nm,0.6s,baz=319,slow=1.8,SNR=11				
ASAR	**Alice Springs**	**122.19 95**	PKP	**PKPdf**	**00 28 51.4 -1.2**
	comp=Z,1.5nm,0.5s,baz=307,slow=1.6,SNR=22				
DZM	**Mont Dzumac**	**146.00 69**	PKPbc	**PKPab**	**00 29 38.9 +0.7**
	comp=Z,20nm,1.0s,baz=298,slow=15,SNR=3.5				
MSVF	**Nonsavu**	**150.57 48**	PKPbc	**PKPbc**	**00 29 50.3 +0.4**
	comp=Z,5.6nm,0.9s,baz=196,slow=19,SNR=6.1				

TAP ***16*** *00:29:42.5,23°.40N×122°.06E,h39km,ML3.0,C*
JMA ***16*** *00:29:58.5±0.4,24°.N±2°.×123°.3E±0°.9,h50km±3km,*
MV1.6/7,NEAR ISHIGAKIJIMA ISLAND
ISC 16 00:29:43.4±1.3,**23°.38N**±0°.03×**122°.00E**±0°.03,**h34**km±3km,
n73,σ1§**19**/93,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.51**	**263**	*eP*	**Pb**	**00 29 52.6**	**-1.7**
	baz=254						
ECBN				*e*S	**Sb**	**00 30 00.7**	**-1.1**
	baz=254						
TEGC	**Jichi Village**	**0.53**	**307**	P	**Pb**	**00 29 53.6**	**-1.1**
	baz=303						
TEGC				*i* S	**Sb**	**00 30 02.3**	**-0.1**
	baz=303						
HGSD	**Ruisui**	**0.54**	**282**	*eP*	**Pn**	**00 29 53.5**	**-1.2**
	baz=279						
HGSD				*e*S	**Sb**	**00 30 01.7**	**-0.9**
	baz=279						
EGFH	**Guangfu**	**0.60**	**298**	*eP*	**Pn**	**00 29 55.3**	**-0.2**
	baz=304						
TEYL	**Yanliau Villag**	**0.61**	**322**	*i* P	**Pn**	**00 29 54.8**	**-0.8**
	baz=329						
EYUL	**Yuli**	**0.63**	**267**	P	**Pn**	**00 29 55.2**	**-0.7**
	baz=261						
EYUL				*e*S	**Sb**	**00 30 05.6**	**+0.7**
	baz=261						
EHY	**Hungye**	**0.64**	**281**	*i* P	**Pn**	**00 29 55.2**	**-0.8**
	baz=279						
EHY				*i* S	**Sn**	**00 30 04.8**	**-0.1**
	baz=279						
YULB	**Yu-li**	**0.65**	**271**	*eP*	**Pn**	**00 29 55.4**	**-0.8**
	baz=265						
TWF1	**Yuli**	**0.65**	**267**	*i* P	**Pn**	**00 29 55.4**	**-0.8**
	baz=262						
ESL	**Shilin**	**0.68**	**309**	P	**Pn**	**00 29 55.0**	**-1.5**
	baz=306						
ETM	**Tongmen**	**0.74**	**321**	*i* P	**Pn**	**00 29 56.4**	**-1.2**
	baz=322						
EDH	**Donghe**	**0.76**	**238**	*i* P	**Pn**	**00 29 56.5**	**-1.2**
	baz=235						
EDH				*e*S	**Sn**	**00 30 06.9**	**-1.1**
	baz=235						
TWD	**Chiawan**	**0.79**	**332**	*eP*	**Pn**	**00 29 56.4**	**-1.7**
	baz=329						
ETL	**Fush Village**	**0.85**	**336**	*eP*	**Pn**	**00 29 57.3**	**-1.7**
	baz=332						
LDUT	**Ludao**	**0.86**	**215**	*i* P	**Pn**	**00 29 58.0**	**-1.2**
	baz=217						
NACB	**Ninganchiao**	**0.87**	**335**	*eP*	**Pn**	**00 29 57.5**	**-1.8**
	baz=331						
NACB				*e*S	**Sn**	**00 30 08.7**	**-2.0**
	baz=331						
VWDT	**VWDT**	**0.87**	**295**	*eP*	**Pn**	**00 29 58.9**	**-0.3**
	baz=293						
VWDT				*e*S	**Sn**	**00 30 11.0**	**+0.3**
	baz=293						
ELDTW	**Lidau**	**0.93**	**258**	*i* P	**Pn**	**00 29 59.2**	**-1.0**
	baz=258						
LONT	**Longtian**	**0.93**	**240**	*eP*	**Pn**	**00 29 59.7**	**-0.4**
	baz=250						
ETLH	**Xiulin Townshi**	**0.95**	**330**	*eP*	**Pn**	**00 29 58.9**	**-1.5**
	baz=327						
ETLH				*e*S	**Sn**	**00 30 11.2**	**-1.6**
	baz=327						
OWD	**Renai**	**0.95**	**307**	*eP*	**Pn**	**00 29 59.7**	**-0.8**
	baz=305						
YUS	**Yu-Shan**	**0.97**	**276**	P	**Pn**	**00 30 00.9**	**-0.2**
	baz=275						
YUS				*i* S	**Sn**	**00 30 13.7**	**-0.2**
	baz=275						
WUSB	**Renai**	**1.01**	**307**	P	**Pn**	**00 30 00.8**	**-0.5**
	baz=305						
CHGB	**Renai**	**1.01**	**312**	*eP*	**Pn**	**00 30 00.8**	**-0.7**
	baz=309						
CHGB				S	**Sn**	**00 30 14.0**	**-0.7**
	baz=309						
WHF	**Hehuan Shan**	**1.02**	**318**	*i* P	**Pn**	**00 30 00.5**	**-1.1**
	baz=316						
TWG	**Pinlang**	**1.02**	**237**	*i* P	**Pn**	**00 30 00.7**	**-0.7**
	baz=232						
TWG				*e*S	**Sn**	**00 30 14.3**	**-0.3**
	baz=232						
SSLB	**Suanglung**	**1.04**	**293**	*eP*	**Pn**	**00 30 01.6**	**-0.1**
	baz=291						
EWUT	**Wuta**	**1.08**	**349**	*eP*	**Pn**	**00 29 60.0**	**-2.1**
	baz=346						
WHYT	**Xinyi Township**	**1.10**	**287**	*eP*	**Pn**	**00 30 02.7**	**+0.3**
	baz=285						
FUSS	**Fushou**	**1.11**	**321**	*i* P	**Pn**	**00 30 02.0**	**-0.7**
	baz=319						
FUSS				*e*S	**Sn**	**00 30 15.8**	**-1.2**
	baz=319						
ALS	**Alishan**	**1.11**	**277**	*eP*	**Pn**	**00 30 03.2**	**+0.4**
	baz=275						
ALS				*e*S	**Sn**	**00 30 17.9**	**+0.9**
	baz=275						
SMLT	**Sun Moon Lake**	**1.13**	**296**	*eP*	**Pn**	**00 30 03.2**	**+0.3**
	baz=294						
SMLT				*e*S	**Sn**	**00 30 18.1**	**+0.8**
	baz=294						
TWT	**Tachien**	**1.15**	**319**	*e*S	**Sn**	**00 30 17.1**	**-0.8**
	baz=316						
TDCB	**Techi**	**1.16**	**318**	*eP*	**Pn**	**00 30 03.7**	**+0.3**
	baz=316						
STYT	**Tauyuan**	**1.17**	**259**	*eP*	**Pn**	**00 30 03.6**	**+0.2**
	baz=254						
STYT				*e*S	**Sn**	**00 30 19.1**	**+0.9**
	baz=254						
DPDB	**Guoxing**	**1.18**	**303**	*eP*	**Pn**	**00 30 04.4**	**+0.8**
	baz=302						
NNSB	**Datong**	**1.19**	**331**	*eP*	**Pn**	**00 30 02.9**	**-0.8**
	baz=320						
NNSB				S	**Sn**	**00 30 17.6**	**-1.1**
	baz=320						
WCS	**Beigang Elemen**	**1.20**	**304**	*eP*	**Pn**	**00 30 04.5**	**+0.6**
	baz=312						
LATG	**Datong**	**1.23**	**339**	*eP*	**Pn**	**00 30 03.4**	**-0.9**
	baz=337						
TWC	**Suao**	**1.23**	**353**	*eP*	**Pn**	**00 30 03.6**	**-0.6**
	baz=2.0						
ECL	**Taimali**	**1.25**	**231**	*eP*	**Pn**	**00 30 03.4**	**-1.0**
	baz=242						
ECL				*e*S	**Sn**	**00 30 18.9**	**-1.0**
	baz=242						
WJS	**Zhushan**	**1.25**	**291**	*eP*	**Pn**	**00 30 05.7**	**+1.2**
	baz=289						
TPUB	**Ta-pu**	**1.27**	**267**	*eP*	**Pn**	**00 30 05.9**	**+1.2**
	baz=270						
TPUB				*e*S	**Sn**	**00 30 23.1**	**+2.6**
	baz=270						
WTP	**Ta-pu**	**1.28**	**264**	*eP*	**Pn**	**00 30 05.9**	**+0.9**
	baz=264						
WCKO	**Fanlu**	**1.29**	**273**	*eP*	**Pn**	**00 30 05.3**	**+0.3**
	baz=280						
WCKO				*e*S	**Sn**	**00 30 22.5**	**+1.4**
	baz=280						
NDT	**Datong Townshi**	**1.29**	**340**	*eP*	Pn	00 30 02.7	-2.4
	baz=338						
ENTT	**Nioudou**	**1.31**	**342**	*eP*	**Pn**	**00 30 03.8**	**-1.6**
	baz=331						
WHP	**Taichung City**	**1.31**	**313**	*eP*	**Pn**	**00 30 06.8**	**+1.3**
	baz=311						
SGST	**Jiashian**	**1.34**	**257**	*eP*	**Pn**	**00 30 06.2**	**+0.5**
	baz=257						
WWF	**Wufeng**	**1.36**	**299**	*eP*	**Pn**	**00 30 06.8**	**+0.8**
	baz=298						
JYNG	**Yonagunijimaku**	**1.37 39**		*eP*	**Pb**	**00 30 13.1**	**+4.6**
JYNG				S	**Sn**	**00 30 24.1**	**+1.0**
CHN1	**Nanshi**	**1.37**	**262**	*eP*	**Pn**	**00 30 07.6**	**+1.4**
	baz=262						
WDLH	**Douliu**	**1.38**	**283**	*eP*	**Pn**	**00 30 08.0**	**+1.7**
	baz=282						
TWK	**Hsinying**	**1.40**	**266**	*eP*	**Pn**	**00 30 07.8**	**+1.2**
	baz=265						
YHNB	**Yeheng**	**1.40**	**336**	*eP*	**Pn**	**00 30 06.3**	**-0.4**
	baz=343						
FUSB	**Fushanzhiwuyua**	**1.42**	**345**	*eP*	**Pn**	**00 30 06.4**	**-0.5**
	baz=333						
TSMG	**Majia**	**1.42**	**242**	*eP*	**Pn**	**00 30 07.1**	**+0.2**
	baz=238						
SCST	**Cishan**	**1.48**	**251**	*eP*	**Pn**	**00 30 09.5**	**+2.0**
	baz=244						
MASBT	**Mashibuluo**	**1.48**	**239**	*eP*	**Pn**	**00 30 07.8**	**+0.1**
	baz=235						
TWQ1	**Liyutan**	**1.48**	**311**	*eP*	**Pn**	**00 30 09.2**	**+1.6**
	baz=309						
NFF	**Wufeng Townshi**	**1.48**	**327**	*eP*	**Pn**	**00 30 08.0**	**+0.2**
	baz=325						
WCHH	**Zhanghua**	**1.50**	**298**	*eP*	**Pn**	**00 30 09.6**	**+1.8**
	baz=296						
LIOB	**Emei**	**1.55**	**324**	*eP*	**Pn**	**00 30 09.6**	**+1.0**
	baz=307						
WRL	**Guolierlin Hig**	**1.58**	**289**	*eP*	**Pn**	**00 30 09.9**	**+0.9**
	baz=288						
TIPB	**Shuangxi**	**1.59**	**354**	*eP*	**Pn**	**00 30 09.6**	**+0.4**
SLIU	**Shizi**	**1.61**	**224**	*eP*	**Pn**	**00 30 08.8**	**-0.6**
	baz=224						
SCZT	**Fangliau**	**1.63**	**232**	*eP*	**Pn**	**00 30 10.1**	**+0.4**
	baz=227						
SXI1	**Grass Mountain**	**1.71**	**356**	*eP*	**Pn**	**00 30 10.7**	**-0.2**
	baz=8.0						
SMST	**Manzhou Townsh**	**1.73**	**219**	*eP*	**Pn**	**00 30 11.7**	**+0.6**
	baz=226						
HATJ	**Hateruma jima**	**1.78 68**		*eP*	**Pn**	**00 30 09.8**	**-2.0**
IRIF	**Iriomote-Funau**	**1.84 59**		P	**Pn**	**00 30 11.5**	**-1.1**
JIJ	**Ishigaki jima**	**2.19 63**		*eP*	**Pn**	**00 30 15.9**	**-1.5**
JTJ	**Tarama**	**2.77 63**		P	**Pn**	**00 30 24.0**	**-1.3**

HLW ***16*** *00:41:10.4,39°.74N×21°.07E,h10km±72km,Md5.3*
BJI ***16*** *00:41:12.2±0.0,39°.79N×20°.59E,h18km,mb5.0/56,*
mB5.1/28,Ms5.0/35,Ms7 4.9/34
MOS ***16*** *00:41:12.0±1.3,39°.72N×20°.59E,h14km,mb5.2/54,*
MS4.6/24,Error ellipse: s-maj=3.6km s-min=2.3km
az=84.4
LDG ***16*** *00:41:13.6±0.2,39°.79N×20°.56E,h10km,Ml4.4/38,Error*
ellipse: s-maj=7.8km s-min=4.4km az=20.0
TIR ***16*** *00:41:13.7,39°.77N×20°.76E,h4km±2km,Ml5.1*
BEO ***16*** *00:41:13.2±0.7,39°.55N×20°.55E,h19km±5km,ML5.0/8*
IDC ***16*** *00:41:13.7±3.1,39°.76N×20°.67E,h16km±19km,mb4.6/33,*
mbtmp4.6/49,ML4.1/15,MS4.6/79,Error ellipse:
s-maj=8.3km s-min=7.9km az=163.0
MED_RC ***16*** *00:41:13.0±0.2,39°.67N×20°.67E,h29km,MW5.2/25,*
Moment Tensor Solution. Body waves: s3,c3;Mantle
waves: s25,c43; Duration: 1s3 Moment tensor: Scale
10^{16}Nm; M_{rr}6.57±.28; $M_{\theta\theta}$-4.31±.18; $M_{\phi\phi}$-2.26±.18;
$M_{r\theta}$2.19±.22; $M_{\theta\phi}$4.79±.09; $M_{\phi r}$-0.24±.26; Best double
couple: $M_0$7.74000×10^{16} NP1:ϕ_s117.00000°,δ53.00000°,
λ75.00000°. NP2:ϕ_s322.00000°,δ39.00000°,λ109.00000°.
Principal axes: T 7.0600, Plg76.0000°, Azm338.0000°;
N 1.3600, Plg12.0000°, Azm127.0000°; P -8.4200,
Plg7.0000°, Azm218.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=40s.
PDG ***16*** *00:41:13.1±0.1,39°.74N×20°.64E,h12km,MD5.1/12,*
ML5.0/11 Error ellipse: s-maj=0.6km s-min=0.2km
az=90.0
ATH ***16*** *00:41:13.9,39°.78N×20°.66E,h14km±2km,ML4.8/14,Error*
ellipse: s-maj=2.4km s-min=1.2km az=323.0
NEIC ***16*** *00:41:14.4±1.9,39°.82N±0°.05×20°.59E±0°.06,h13km±3km,*
mb5.1/140,Mww5.2,ML4.8(ATH),ML4.8(THE),Error
ellipse: s-maj=7.2km s-min=6.0km az=203.0
THE ***16*** *00:41:15.7,39°.79N×20°.63E,h0km±2km,ML4.8/12,Error*
ellipse: s-maj=2.8km s-min=0.9km az=315.0
ROM ***16*** *00:41:15.5,39°.77N×20°.62E,h17km,mb4.8/35,*
Mwp5.3/14,Error ellipse: s-maj=2.0km s-min=1.8km
az=230.0
GCMT ***16*** *00:41:18.3±0.1,39°.60N±0°.01×20°.65E±0°.01,h27km,*
MW5.2/134,Moment Tensor Solution. s87,c131;
s134,c234; Duration: 1s0 Moment tensor: Scale 10^{17}
Nm; M_{rr}0.68±.02; $M_{\theta\theta}$-0.42±.01; $M_{\phi\phi}$-0.25±.01;
$M_{r\theta}$0.34±.02; $M_{\theta\phi}$0.44±.01; $M_{\phi r}$0.13±.02; Best double
couple: $M_0$0.82200×10^{17} NP1:ϕ_s107.00000°,δ56.00000°,
λ62.00000°. NP2:ϕ_s331.00000°,δ43.00000°,λ125.00000°.
*Principal axes: T 0.8350, Plg66.0000°,

Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
JAN	**Janina**	**0.18**	**126**	P	**Pg**	**00 41 17.3**		**-1.7**
JAN				S	**Sg**	**00 41 21.9**		**-0.1**
JAN	**Janina**	**0.18**	**126**	P	**Pg**	**00 41 17.4**		**-1.7**
JAN				S	**Sg**	**00 41 21.9**		**-0.1**
JAN				AML	AML	00 41 24.5		
JAN				AML	AML	00 41 25.2		
IGT	**Igoumenitsa**	**0.34**	**228**		**Pg**	**00 41 21.1**		**-0.5**
IGT					**Sg**	**00 41 26.7**		**+0.2**
IGT	**Igoumenitsa**	**0.34**	**228**	P	**Pg**	**00 41 21.1**		**-0.5**
IGT				S	**Sb**	**00 41 28.5**		**+1.1**
	144μm,0.4s							
IGT	**Igoumenitsa**	**0.34**	**228**	P	**Pg**	**00 41 21.0**		**-0.5**
IGT				S	**Sg**	**00 41 26.6**		**+0.2**
IGT	**Igoumenitsa**	**0.34**	**228**	P	**Pg**	**00 41 21.5**		**-0.1**
	baz=235							
IGT				S	**Sb**	**00 41 29.0**		**+1.6**
	baz=235							
IGT	**Igoumenitsa**	**0.34**	**228**	P	**Pg**	**00 41 21.1**		**-0.5**
IGT				S	**Sg**	**00 41 26.7**		**+0.2**
IGT				AML	AML	00 41 31.9		
IGT				AML	AML	00 41 32.9		
LSK	**Leskovik**	**0.39**	**353**	P	**Pg**	**00 41 22.4**		**-0.1**
LSK	**Leskovik**	**0.39**	**353**	P	**Pg**	**00 41 22.4**		**-0.1**
	baz=342							
LSK				S	**Sb**	**00 41 30.3**		**+1.5**
	baz=342							
LSK				AMP				
	comp=N,1μm,0.6s,baz=342							
SRN	**Sarande**	**0.52**	**283**	P	**Pb**	**00 41 25.6**		**+0.4**
SRN	**Sarande**	**0.52**	**283**	P	**Pg**	**00 41 24.5**		**-0.3**
	baz=281							
SRN				S	**Sn**	**00 41 34.5**		**-1.2**
	baz=281							
SRN				AMP				
	comp=N,384nm,0.6s,baz=281							
KASA	**Kassiopi**	**0.56**	**268**		**Pg**	**00 41 25.0**		**-0.5**
KASA					**Sg**	**00 41 31.9**		**-1.0**
KASA	**Kassiopi**	**0.56**	**268**	P	**Pg**	**00 41 25.0**		**-0.5**
KASA				S	**Sg**	**00 41 31.9**		**-1.0**
KASA				AML	AML	00 41 38.8		
KASA				AML	AML	00 41 39.0		
PENT	**Pentalofos**	**0.57**	**40**		**Pg**	**00 41 24.8**		**-1.0**
PENT					**Sg**	**00 41 32.3**		**-1.0**
PENT	**Pentalofos**	**0.57**	**40**	P	**Pg**	**00 41 24.2**		**-1.6**
PENT	**Pentalofos**	**0.57**	**40**	P	**Pg**	**00 41 24.8**		**-1.0**
PENT				S	**Sg**	**00 41 32.3**		**-1.0**
PENT				AML	AML	00 41 40.4		
	comp=N,38097μm,0.5s							
PENT				AML	AML	00 41 43.8		
KEK	**Kerkira**	**0.67**	**266**	Pg	**Pg**	**00 41 26.4**		**-1.1**
KEK	**Kerkira**	**0.67**	**266**	P	**Pg**	**00 41 27.4**		**-0.1**
KEK				S	**Sn**	**00 41 38.5**		**-0.8**
	comp=N,71μm,0.6s							
KEK	**Kerkira**	**0.67**	**266**	⇓P	**Pg**	**00 41 26.8**		**-0.8**
KEK	**Kerkira**	**0.67**	**266**	P	**Pg**	**00 41 26.6**		**-1.0**
KEK				AML	AML	00 41 46.2		
KEK				AML	AML	00 41 51.7		
	comp=N,95228μm,0.5s							
NEST	**Nestorio**	**0.72**	**25**	P	**Pg**	**00 41 28.3**		**-0.2**
NEST	**Nestorio**	**0.72**	**25**	P	**Pg**	**00 41 27.7**		**-0.8**
NEST				AML	AML	00 41 44.7		
NEST				AML	AML	00 41 51.9		
	comp=N,99351μm,0.6s							
KBN	**Korca**	**0.86**	**7**		**Pb**	**00 41 30.1**		**-1.1**
KBN	**Korca**	**0.86**	**7**	P	**Pb**	**00 41 31.1**		**-0.1**
KBN	**Korca**	**0.86**	**7**	P	**Pb**	**00 41 30.1**		**-1.1**
KBN	**Korca**	**0.86**	**7**	P	**Pb**	**00 41 30.4**		**-0.7**
	baz=1.0							
KBN				S	**Sg**	**00 41 43.2**		**+0.4**
	baz=1.0							
KBN				AMP				
	comp=E,233nm,0.6s,baz=1.0							
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pn**	**00 41 32.9**		**-0.1**
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pb**	**00 41 31.6**		**-0.7**
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pb**	**00 41 32.9**		**-0.1**
LKD2				S	**Sn**	**00 41 50.2**		**+3.2**
	comp=E,64μm,0.6s							
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pg**	**00 41 33.4**		**0.0**
	baz=185							
LKD2				S	**Sn**	**00 41 48.1**		**+1.1**
	baz=185							
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pb**	**00 41 32.4**		**-0.6**
LKD2				AML	AML	00 41 57.7		
	comp=E,98844μm,0.8s							
LKD2				AML	AML	00 42 02.7		
KZN	**Kozani**	**1.01**	**57**	P	**Pg**	**00 41 34.3**		**+0.2**
KZN				S	**Sn**	**00 41 50.2**		**+2.2**
	comp=E,53μm,0.8s							
KZN	**Kozani**	**1.01**	**57**	P	**Pb**	**00 41 32.3**		**-1.3**
KZN	**Kozani**	**1.01**	**57**	P	**Pb**	**00 41 32.4**		**-1.3**
KZN				AML	AML	00 41 52.9		
KZN				AML	AML	00 41 54.2		
	comp=N,86502μm,0.7s							
NYDR	**Nydri-Lefkada**	**1.05**	**178**	P	**Pb**	**00 41 34.3**		**+0.1**
NYDR				S	**Sn**	**00 41 52.5**		**+3.7**
	comp=N,44μm,0.5s							
THL	**Klokotos Trika**	**1.06**	**100**	P	**Pg**	**00 41 36.6**		**+1.5**
THL	**Klokotos Trika**	**1.06**	**100**	P	**Pb**	**00 41 32.8**		**-1.7**
THL				AML	AML	00 41 57.6		
	comp=N,59945μm,0.7s							
THL				AML	AML	00 41 57.8		
	comp=E,75755μm,0.7s							
DRAG	**Dragano-Lefkad**	**1.08**	**183**	P	**Pb**	**00 41 34.7**		**-0.1**
DRAG				S	**Sn**	**00 41 52.5**		**+2.9**
	comp=E,471μm,0.4s							
VLO	**Vlora**	**1.14**	**309**		**Pg**	**00 41 36.6**		**+0.2**
VLO	**Vlora**	**1.14**	**309**	P	**Pg**	**00 41 37.9**		**+1.5**
VLO	**Vlora**	**1.14**	**309**	P	**Pg**	**00 41 36.6**		**+0.2**
VLO	**Vlora**	**1.14**	**309**	P	**Pg**	**00 41 37.3**		**+0.9**
	baz=307							
VLO				S	**Sg**	**00 41 55.4**		**+4.1**
	baz=307							
EVGI	**Lefkada island**	**1.14**	**180**	P	**Pg**	**00 41 37.0**		**+0.5**
EVGI	**Lefkada island**	**1.14**	**180**	P	**Pn**	**00 41 34.7**		**-1.0**
TYRN	**Tyrnavos**	**1.22**	**92**	P	**Pg**	**00 41 38.8**		**+0.9**
EVR	**Evrytania**	**1.23**	**133**	P	**Pg**	**00 41 39.8**		**+1.6**
EVR	**Evrytania**	**1.23**	**133**	P	**Pn**	**00 41 36.4**		**-0.7**
EVR				AML	AML	00 42 03.4		
	comp=E,70176μm,0.5s							
EVR				AML	AML	00 42 06.0		
	comp=N,62910μm,0.5s							
FSK	**Fiskardo**	**1.30**	**183**	P	**Pg**	**00 41 40.2**		**+0.6**
FSK				S	**Sg**	**00 41 59.7**		**+3.1**
	comp=N,35μm,0.4s							
PVO	**Paravola**	**1.33**	**149**	P	**Pg**	**00 41 41.6**		**+1.5**
LRSO	**Larissa Observ**	**1.34**	**93**	P	**Pg**	**00 41 40.4**		**+0.1**
LRSO				S	**Sg**	**00 42 00.8**		**+3.1**
	comp=N,74μm,1.0s							
OHR	**Ohrid**	**1.35**	**4**	P	**Pb**	**00 41 39.8**		**+0.4**
OHR	**Ohrid**	**1.35**	**4**	*e*Pg	**Pg**	**00 41 41.3**		**+0.8**
OHR				*e*Sg	**Sg**	**00 42 03.4**		**+5.3**
OHR	**Ohrid**	**1.35**	**4**	*i* Pn	**Pg**	**00 41 40.0**		**-0.5**
MAKR	**Makrakomi, Fth**	**1.36**	**123**	P	**Pg**	**00 41 42.5**		**+1.7**
MAKR	**Makrakomi, Fth**	**1.36**	**123**	P	**Pn**	**00 41 39.1**		**+0.2**
MAKR				AML	AML	00 42 05.8		
MAKR				AML	AML	00 42 07.0		
LIT	**Litokhoron**	**1.45**	**76**		**Pn**	**00 41 40.3**		**+0.3**
LIT	**Litokhoron**	**1.45**	**76**	P	**Pb**	**00 41 41.6**		**+0.5**
LIT				S	**Sg**	**00 42 04.2**		**+3.0**
	comp=N,41μm,1.0s							
LIT	**Litokhoron**	**1.45**	**76**	P	**Pn**	**00 41 40.3**		**+0.3**
LIT	**Litokhoron**	**1.45**	**76**	⇓P	**Pn**	**00 41 39.8**		**-0.2**
KEF4	**Livadi, Kephal**	**1.51**	**187**	P	**Pb**	**00 41 42.0**		**-0.2**
DMLN	**Damoulianata-K**	**1.54**	**188**	P	**Pg**	**00 41 43.4**		**-0.7**
VLS	**Valsamata**	**1.58**	**182**	P	**Pb**	**00 41 42.9**		**-0.5**
VLS	**Valsamata**	**1.58**	**182**	P	**Pn**	**00 41 41.9**		**0.0**
VLS	**Valsamata**	**1.58**	**182**	P	**Pn**	**00 41 41.9**		**0.0**
VLS				AML	AML	00 42 09.8		
	comp=E,50781μm,0.9s							
VLS				AML	AML	00 42 10.3		
	comp=N,70492μm,0.5s							
PSDA	**Pessada-Kefalo**	**1.65**	**182**	P	**Pb**	**00 41 44.3**		**-0.1**
EFP	**Efpalio**	**1.65**	**144**	P	**Pg**	**00 41 47.0**		**+0.8**
TIR	**Tirane**	**1.69**	**339**	⇓P	**Pb**	**00 41 45.6**		**+0.3**
TIR				⇑S	**Sg**	**00 42 10.3**		**+1.3**
TIR	**Tirane**	**1.69**	**339**	Pn	**Pn**	**00 41 44.3**		**+0.9**
TIR	**Tirane**	**1.69**	**339**	P	**Pb**	**00 41 45.7**		**+0.4**
TIR	**Tirane**	**1.69**	**339**	P	**Pn**	**00 41 44.3**		**+0.9**
TIR	**Tirane**	**1.69**	**339**	*e*Pn	**Pb**	**00 41 45.7**		**+0.4**
TIR				*e*Sn	**Sg**	**00 42 07.9**		**-1.2**
TIR	**Tirane**	**1.69**	**339**	P	**Pb**	**00 41 45.3**		**0.0**
	baz=337							
TIR				S	**Sg**	**00 42 11.3**		**+2.2**
	baz=337							
TIR				AMP				
	comp=E,82nm,0.8s,baz=337							
SCTE	**Santa Cesarea**	**1.71**	**281**	Pn	**Pn**	**00 41 43.6**		**0.0**
SERG	**Sergoula**	**1.73**	**141**	P	**Pg**	**00 41 49.3**		**+1.5**
GRG	**Griva**	**1.79**	**48**	P	**Pg**	**00 41 48.4**		**-0.4**
RLS	**Riolos of Patr**	**1.82**	**159**	P	**Pg**	**00 41 48.9**		**-0.4**
LAKA	**Lakka**	**1.84**	**146**	P	**Pg**	**00 41 48.9**		**-0.8**
LAKA	**Lakka**	**1.84**	**146**	P	**Pb**	**00 41 47.3**		**-0.4**
LAKA				AML	AML	00 42 31.8		
	comp=N,86028μm,1.0s							
LAKA				AML	AML	00 42 33.6		
	comp=E,88659μm,0.9s							
AXAR	**Agios Charalam**	**1.84**	**122**	P	**Pg**	**00 41 49.8**		**-0.1**
AXAR	**Agios Charalam**	**1.84**	**122**	P	**Pb**	**00 41 47.6**		**-0.3**
AXAR				AML	AML	00 42 23.2		
	comp=E,48546μm,0.6s							
AXAR				AML	AML	00 42 25.2		
	comp=N,74377μm,0.9s							
ALIK	**Aliki, Aigiali**	**1.88**	**143**	P	**Pg**	**00 41 50.7**		**+0.1**
PHP	**Peshkopia**	**1.93**	**355**	P	**Pb**	**00 41 48.8**		**-0.5**
PHP	**Peshkopia**	**1.93**	**355**	P	**Pb**	**00 41 49.5**		**+0.3**
	baz=353							
THE	**Thessaloniki**	**1.97**	**63**	P	**Pb**	**00 41 49.8**		**-0.1**
THE	**Thessaloniki**	**1.97**	**63**	P	**Pn**	**00 41 47.9**		**+0.8**
THE	**Thessaloniki**	**1.97**	**63**	P	**Pb**	**00 41 50.3**		**+0.4**
	baz=62							
THE				S	**Sg**	**00 42 17.1**		**-0.8**
	baz=62							
DRO	**Drossia**	**1.99**	**155**	P	**Pb**	**00 41 51.1**		**+0.9**
XOR	**Xorichti**	**2.00**	**101**	P	**Pb**	**00 41 51.6**		**+1.2**
NEO	**Neokhori**	**2.04**	**102**	P	**Pb**	**00 41 50.7**		**-0.4**
NEO				S	**Sg**	**00 42 19.7**		**-0.2**
	comp=N,17μm,0.8s							
HORT	**Hortiatis**	**2.05**	**65**	P	**Pb**	**00 41 50.2**		**-1.1**
KLV	**Kalavryta, Ach**	**2.07**	**145**	P	**Pb**	**00 41 52.5**		**+0.7**
LKR	**Lokris**	**2.13**	**121**	P	**Pb**	**00 41 52.5**		**-0.2**
VAY	**Valandovo**	**2.13**	**42**	P	**Pn**	**00 41 49.9**		**+0.5**
VAY	**Valandovo**	**2.13**	**42**	*e*Pn	**Pn**	**00 41 50.2**		**+0.8**
VAY				*e*Sn	**Sb**	**00 42 19.3**		**+0.4**
VAY	**Valandovo**	**2.13**	**42**	*i* Pn	**Pn**	**00 41 49.9**		**+0.5**
KNT	**Kendrikon**	**2.21**	**50**	P	**Pn**	**00 41 51.1**		**+0.6**
KNT	**Kendrikon**	**2.21**	**50**	P	**Pn**	**00 41 50.6**		**+0.1**
STIP	**Stip**	**2.25**	**31**	*i* Pn	**Pb**	**00 41 53.8**		**-1.0**
SKO	**Skopje**	**2.29**	**15**	*e*Pn	**Pb**	**00 41 54.1**		**-1.2**
SKO				*e*Sn	**Sb**	**00 42 23.5**		**+0.2**
SKO	**Skopje**	**2.29**	**15**	*i* Pn	**Pb**	**00 41 53.8**		**-1.5**
SOH	**Sokhos**	**2.32**	**62**	P	**Pn**	**00 41 52.5**		**+0.6**
SOH	**Sokhos**	**2.32**	**62**	P	**Pn**	**00 41 52.6**		**+0.6**
ULC	**Ulcinj**	**2.45**	**334**	⇑*i*Pn	**Pn**	**00 41 54.2**		**+0.4**
ULC				*i* Sn	**Sb**	**00 42 26.3**		**-1.7**
LOUT	**Loutraki**	**2.53**	**134**	P	**Pb**	**00 41 58.5**		**-1.0**
SRS	**Serrai**	**2.62**	**58**	P	**Pn**	**00 41 57.5**		**+1.4**
SRS	**Serrai**	**2.62**	**58**	P	**Pn**	**00 41 56.0**		**-0.1**
SRS	**Serrai**	**2.62**	**58**	*e*Pn	**Pn**	**00 41 56.6**		**+0.5**
SRS				*e*Sn	**Sb**	**00 42 31.2**		**-1.7**
DRME	**Dracevica, Mon**	**2.67**	**336**	*e*Pn	**Pn**	**00 41 57.8**		**+1.0**
DRME	**Dracevica, Mon**	**2.67**	**336**	*e*Pn	**Pn**	**00 41 57.4**		**+0.6**
DRME				*i* Sn	**Sb**	**00 42 31.6**		**-2.7**
KOKK	**Kokkinochori,**	**2.76**	**67**	P	**Pn**	**00 41 58.9**		**+0.8**
KOKK				S	**Sb**	**00 42 37.0**		**-0.1**
	comp=N,2μm,0.6s							
ITM	**Ithomi**	**2.77**	**159**	Pn	**Pn**	**00 41 59.8**		**+1.7**
ITM	**Ithomi**	**2.77**	**159**	P	**Pn**	**00 42 00.5**		**+2.4**
ITM	**Ithomi**	**2.77**	**159**	⇑P	**Pn**	**00 41 59.7**		**+1.5**
BUM	**Brajici-Budva**	**2.87**	**333**	⇓*i*Pn	**Pn**	**00 42 00.1**		**+0.5**
BUM				*i* Sn	**Sn**	**00 42 36.3**		**+2.6**
PDG	**Podgorica**	**2.87**	**339**	⇑P	**Pn**	**00 42 01.9**		**+2.4**
PDG	**Podgorica**	**2.87**	**339**	Pn	**Pn**	**00 42 00.4**		**+0.8**
PDG	**Podgorica**	**2.87**	**339**	⇑P	**Pn**	**00 42 00.3**		**+0.8**
TTG	**Podgorica**	**2.87**	**339**	⇓*i*Pn	**Pn**	**00 42 00.2**		**+0.7**
TTG				*i* Sn	**Sn**	**00 42 36.4**		**+2.7**
PVY	**Plav**	**2.88**	**350**	*e*Pn	**Pn**	**00 42 00.4**		**+0.6**
PVY				*i* Sn	**Sn**	**00 42 36.6**		**+2.5**
KYMI	**Kymi, Euboea I**	**2.90**	**112**	P	**Pb**	**00 42 04.4**		**-1.4**
ATH	**Athens Observa**	**2.98**	**126**	P	**Pn**	**00 42 03.5**		**+2.4**
ATHU	**Athens Univers**	**3.03**	**125**	P	**Pb**	**00 42 05.7**		**-2.3**
DION	**Dionisos Attik**	**3.06**	**122**	P	**Pb**	**00 42 05.7**		**-2.8**
TIP	**Timpagrande**	**3.08**	**260**	⇓P	**Pn**	**00 42 02.2**		**-0.2**
TIP				⇓S	**Sn**	**00 42 39.8**		**+0.9**
TIP	**Timpagrande**	**3.08**	**260**	Pn	**Pn**	**00 42 02.3**		**-0.2**
TIP	**Timpagrande**	**3.08**	**260**	⇓P	**Pn**	**00 42 02.0**		**-0.4**
CEME	**Cevo**	**3.08**	**335**	⇑*i*Pn	**Pn**	**00 42 03.0**		**+0.6**
CEME				*i* Sn	**Sn**	**00 42 41.3**		**+2.4**
KRND	**KRANIDI**	**3.08**	**140**	P	**Pb**	**00 42 05.7**		**-3.1**
HCY	**Herceg Novi**	**3.14**	**329**	⇑*i*Pn	**Pn**	**00 42 03.0**		**-0.3**
HCY	**Herceg Novi**	**3.14**	**329**	⇑*i*Pn	**Pn**	**00 42 03.9**		**+0.6**
HCY				*i* Sn	**Sn**	**00 42 42.8**		**+2.4**
MATE	**Matera**	**3.15**	**288**	⇓P	**Pn**	**00 42 03.2**		**-0.3**
MATE				⇑S	**Sn**	**00 42 42.9**		**+2.1**
IVA	**Berane**	**3.16**	**350**	*e*Pn	**Pn**	**00 42 04.3**		**+0.7**
IVA				*i* Sn	**Sn**	**00 42 43.4**		**+2.4**
BARS	**Barje**	**3.17**	**16**	*e*Pn	**Pn**	**00 42 05.7**		**+2.0**
KAVA	**Kavala**	**3.19**	**66**	P	**Pn**	**00 42 06.1**		**+2.1**
KOME	**Kolasin**	**3.20**	**345**	⇑*i*Pn	**Pn**	**00 42 04.8**		**+0.6**
KOME				*i* Sn	**Sn**	**00 42 44.4**		**+2.3**
NKME	**Niksic**	**3.27**	**337**	⇓*i*Pn	**Pn**	**00 42 05.7**		**+0.7**
NKME				*i* Sn	**Sn**	**00 42 45.9**		**+2.3**
VTS	**Vitosha**	**3.45**	**33**	⇑P	**Pn**	**00 42 10.5**		**+2.8**
VTS	**Vitosha**	**3.45**	**33**	Pn	**Pn**	**00 42 08.8**		**+1.1**
VTS	**Vitosha**	**3.45**	**33**	P	**Pn**	**00 42 08.8**		**+1.1**
VTS	**Vitosha**	**3.45**	**33**	⇓P	**Pn**	**00 42 08.8**		**+1.1**
SELS	**Selova**	**3.47**	**6**	*e*Pn	**Pn**	**00 42 09.6**		**+1.8**
SJES	**Sjenica**	**3.53**	**352**	*e*Pn	**Pn**	**00 42 11.0**		**+2.2**
UPM	**Unac-Piva**	**3.68**	**340**	*e*Pn	**Pn**	**00 42 12.4**		**+1.5**
UPM	**Unac-Piva**	**3.68**	**340**	⇑*i*Pn	**Pn**	**00 42 11.5**		**+0.6**
UPM				*i* Sn	**Sn**	**00 42 55.9**		**+1.9**
PLE	**Pljevlja**	**3.69**	**345**	⇑*i*Pn	**Pn**	**00 42 11.6**		**+0.7**
PLE				*i* Sn	**Sn**	**00 42 56.1**		**+2.0**
CUC	**Castrocucco**	**3.73**	**275**	Pn	**Pn**	**00 42 12.1**		**+0.6**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**	**00 42 15.0**		**+2.5**
STON	**Ston**	**3.82**	**325**	⇑*i*Pn	**Pn**	**00 42 10.8**		**-1.8**
BOVS	**Bovan**	**3.95**	**11**	⇓P	**Pn**	**00 42 16.2**		**+1.8**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn	**Pn**	**00 42 15.6**		**+1.2**
BOVS				*e*Sn	**Sn**	**00 43 01.2**		**+0.9**
RDO	**Rodhopi**	**3.97**	**68**	Pn	**Pn**	**00 42 14.9**		**+0.3**
RDO	**Rodhopi**	**3.97**	**68**	P	**Pn**	**00 42 19.0**		**+4.3**
RDO	**Rodhopi**	**3.97**	**68**	⇑P	**Pn**	**00 42 14.8**		**+0.1**
RUDO	**Rudo**	**3.97**	**346**	⇑*i*Pn	**Pn**	**00 42 14.7**		**0.0**
CEL	**Celeste**	**4.00**	**249**		**Pn**	**00 42 14.7**		**-0.5**
CEL	**Celeste**	**4.00**	**249**	⇑P	**Pn**	**00 42 15.1**		**-0.1**
SIGR	**SIGRI**	**4.06**	**96**	P	**Pn**	**00 42 19.9**		**+4.0**
GRUS	**Gruza**	**4.12**	**1**	*e*Pn	**Pn**	**00 42 18.1**		**+1.3**
BLKB	**Belogradchik**	**4.14**	**21**	⇑P	**Pn**	**00 42 20.0**		**+2.9**
BBLS	**Lazi?i**	**4.21**	**348**	⇑*i*Pn	**Pn**	**00 42 20.8**		**+2.8**
BBLS	**Lazi?i**	**4.21**	**348**	*e*Pn	**Pn**	**00 42 19.1**		**+1.1**
ZAGS	**Zajecar**	**4.21**	**16**	*e*Pn	**Pn**	**00 42 19.4**		**+1.4**
SGRT	**San Giovanni R**	**4.23**	**300**	Pn	**Pn**	**00 42 18.1**		**-0.2**
ALN	**Alexandroupoli**	**4.27**	**73**	Pn	**Pn**	**00 42 19.6**		**+0.8**
ALN	**Alexandroupoli**	**4.27**	**73**	P	**Pn**	**00 42 21.2**		**+2.4**
ALN	**Alexandroupoli**	**4.27**	**73**	P	**Pn**	**00 42 19.6**		**+0.8**
ALN	**Alexandroupoli**	**4.27**	**73**	⇓P	**Pn**	**00 42 19.6**		**+0.8**
DIVS	**Divibare**	**4.36**	**354**	Pn	**Pn**	**00 42 20.9**		**+0.8**
DIVS	**Divibare**	**4.36**	**354**	⇑*i*Pn	**Pn**	**00 42 20.5**		**+0.4**
DIVS	**Divibare**	**4.36**	**354**	*e*Pn	**Pn**	**00 42 21.2**		**+1.1**
DIVS				*e*Sn	**Sn**	**00 43 12.1**		**+1.5**
DIVS	**Divibare**	**4.36**	**354**	⇑P	**Pn**	**00 42 20.5**		**+0.4**
PRK	**Paraskevi**	**4.37**	**95**	P	Pn	00 42 25.4		+5.2
ANKY	**Antikythira Is**	**4.42**	**151**	P	**Pn**	**00 42 22.6**		**+1.8**
ANKY				S	**Sn**	**00 43 16.0**		**+4.1**
	comp=N,3μm,0.4s							
CHOS	**Chios island**	**4.42**	**106**	P	Pn	00 42 25.8		+4.9
TRUS	**Trudelj**	**4.46**	**358**	*e*Pn	**Pn**	**00 42 22.8**		**+1.4**
HAPS	**Han Pijesak,BI**	**4.50**	**344**	⇑*i*Pn	**Pn**	**00 42 22.1**		**0.0**
APE	**Apeiranthos**	**4.68**	**124**	⇓P	**Pn**	**00 42 26.1**		**+1.7**
APE	**Apeiranthos**	**4.68**	**124**	*i* P	**Pn**	**00 42 28.2**		**+3.8**
BAIL	**Bailesti**	**4.70**	**24**	⇑P	**Pn**	**00 42 28.1**		**+3.4**
KUBS	**Kucevo**	**4.71**	**9**	*e*Pn	**Pn**	**00 42 25.4**		**+0.6**
PUNG	**Punghina**	**4.82**	**20**	⇑P	**Pn**	**00 42 30.4**		**+4.1**
PAOL	**Paolisi**	**4.82**	**287**		**Pn**	**00 42 27.4**		**+1.0**
TEKS	**Tekeris**	**4.86**	**350**	*e*Pn	**Pn**	**00 42 26.0**		**-0.9**
TEKS	**Tekeris**	**4.86**	**350**	*e*Pn	**Pn**	**00 42 26.5**		**-0.4**
SRKY	**Kupres RS**	**5.03**	**330**	⇑*i*Pn	**Pn**	**00 42 29.9**		**+0.6**
BEO	**Beograd**	**5.04**	**358**	P	**Pn**	**00 42 30.7**		**+1.3**
BEO	**Beograd**	**5.04**	**358**	*e*Pn	**Pn**	**00 42 27.7**		**-1.7**
VLAD	**Vladila**	**5.07**	**32**	⇓P	**Pn**	**00 42 33.5**		**+3.8**
MDVR	**Moldovita**	**5.08**	**9**	⇓P	**Pn**	**00 42 32.5**		**+2.6**
SANT	**Santorini**	**5.08**	**130**	⇓P	**Pn**	**00 42 32.2**		**+2.2**
SANT	**Santorini**	**5.08**	**130**	Pn	**Pn**	**00 42 31.3**		**+1.3**
DJES	**Djerdap**	**5.09**	**15**	⇑P	**Pn**	**00 42 33.3**		**+3.3**
DJES	**Djerdap**	**5.09**	**15**	*e*Pn	**Pn**	**00 42 32.5**		**+2.4**
BLJ	**Bljeljina**	**5.12**	**349**	*e*Pn	**Pn**	**00 42 30.5**		**0.0**
SRE	**Strehaia**	**5.25**	**20**	⇓P	**Pn**	**00 42 35.0**		**+2.8**
SRE	**Strehaia**	**5.25**	**20**	P	**Pn**	**00 42 35.0**		**+2.8**
HERR	**Herculane**	**5.28**	**14**	⇑P	**Pn**	**00 42 35.7**		**+3.1**
DOB	**Doboj**	**5.32**	**340**	*e*Pn	**Pn**	**00 42 32.4**		**-0.8**
MGRS	**Mrkonjic Grad**	**5.36**	**331**	⇑*i*Pn	**Pn**	**00 42 34.4**		**+0.7**
VAE	**Valguarnera**	**5.40**	**247**	Pn	**Pn**	**00 42 35.0**		**+0.6**
	comp=N,3.2nm,0.3s,baz=155,slow=14,SNR=15							
VAE				Sn	**Sn**	**00 43 35.5**		**-0.6**
	comp=N,14nm,0.3s,baz=103,slow=15,SNR=3.6							
	comp=N,13nm,0.5s							
FRGS	**Fruska Gora**	**5.43**	**354**	⇑P	**Pn**	**00 42 35.5**		**+0.8**
FRGS	**Fruska Gora**	**5.43**	**354**	⇑*i*Pn	**Pn**	**00 42 34.5**		**-0.2**
FRGS	**Fruska Gora**	**5.43**	**354**	*e*Pn	**Pn**	**00 42 35.1**		**+0.4**
COPA	**Copaceanca**	**5.53**	**36**	⇑P	**Pn**	**00 42 39.1**		**+2.9**
INTR	**Introdacqua**	**5.59**	**296**	Pn	**Pn**	**00 42 37.8**		**+0.8**
IDI	**Anoyia**	**5.59**	**142**	⇑P	**Pn**	**00 42 38.1**		**+1.1**
IDI	**Anoyia**	**5.59**	**142**	Pn	**Pn**	**00 42 35.8**		**-1.3**
	comp=N,3.6nm,0.3s,baz=261,slow=10.0,SNR=29							
IDI				Sn	**Sn**	**00 43 41.5**		**+0.5**
	comp=N,65nm,0.3s,baz=330,slow=20,SNR=11							
IDI				LR	LR	00 45 30.4		
	comp=N,3μm,19.5s,baz=322,slow=46							
	comp=N,12nm,0.3s							
IDI	**Anoyia**	**5.59**	**142**	Pn	**Pn**	**00 42 38.1**		**+1.1**
IDI	**Anoyia**	**5.59**	**142**	⇑P	**Pn**	**00 42 37.9**		**+0.8**
BLY	**Banja Luka**	**5.61**	**334**	⇑*i*Pn	**Pn**	**00 42 37.2**		**0.0**
BLY	**Banja Luka**	**5.61**	**334**	⇑P	**Pn**	**00 42 37.2**		**0.0**
BANR	**Banloc**	**5.63**	**3**	⇑P	**Pn**	**00 42 40.5**		**+3.1**
HUMR	**Humele**	**5.74**	**33**	⇑P	**Pn**	**00 42 40.5

OBKA	Obir	8.09	328	*i* Pn		Pn	00 43 10.5 -0.8
	comp=Z,5.7nm,0.2s,SNR=29						
OBKA				Sn		Sn	00 44 42.7 +0.4
	comp=Z,162nm,0.5s						
TLCR		8.10	45	⇓P		Pn	00 43 15.0 +3.6
TLCR		8.10	45	P		Pn	00 43 14.9 +3.6
MDUB	Mudurnu	8.11	82			Pn	00 43 13.6 +2.0
VLDR	Vladesti	8.16	39	⇓P		Pn	00 43 15.0 +2.8
BMR	Baia Mare	8.17	14	⇑P		Pn	00 43 16.0 +3.7
BMR	Baia Mare	8.17	14	P		Pn	00 43 16.0 +3.7
PSZ	Piszkesteto	8.17	356	⇓P		Pn	00 43 14.4 +2.0
PSZ	Piszkesteto	8.17	356			Pn	00 43 12.8 +0.4
PSZ	Piszkesteto	8.17	356	P		Pn	00 43 12.8 +0.4
PSZ	Piszkesteto	8.17	356	P		Pn	00 43 13.7 +1.3
PSZ				S		Sn	00 44 41.8 -2.6
SRO	Srobarova	8.22	349	*e*P		Pn	00 43 16.1 +3.1
BIR	Birlad	8.26	36	⇑P		Pn	00 43 16.9 +3.3
BIR	Birlad	8.26	36	P		Pn	00 43 16.9 +3.3
KDZE	Karadeniz Ereo	8.36	76	⇓P		Pn	00 43 17.2 +2.3
ARSA	Arzberg	8.36	335	*e*Pn		Pn	00 43 13.7 -1.2
	comp=Z,27nm,0.5s,SNR=40						
ARSA	Arzberg	8.36	335	⇓P		Pn	00 43 14.1 -0.9
PRED	Cave del Predi	8.45	324			Pn	00 43 15.8 -0.5
SOP	Sopron	8.45	341	P		Pn	00 43 17.8 +1.6
SOP				pmax		pmax	
	comp=Z,81nm,1.2s						
SOP	Sopron	8.45	341	P		Pn	00 43 17.3 +1.1
TRPA	Tarpa	8.47	9	⇓P		Pn	00 43 19.7 +3.2
TRPA	Tarpa	8.47	9	P		Pn	00 43 19.2 +2.8
BURAR	Bucovina Array	8.51	21	⇑P		Pn	00 43 21.1 +4.0
BURAR	Bucovina Array	8.51	21	Pn		Pn	00 43 19.3 +2.2
BURAR	Bucovina Array	8.51	21	P		Pn	00 43 19.3 +2.2
PTCC	Patocco-Chiusa	8.52	324	⇓P		Pn	00 43 15.8 -1.3
BUR08	Bucovina Ar. S	8.54	21			Pn	00 43 19.8 +2.3
ZCCA	Zocca	8.54	306			Pn	00 43 17.7 +0.3
RONA	Rosalia, Austr	8.54	340	*e*Pn		Pn	00 43 16.8 -0.6
	comp=Z,5.8nm,0.4s,SNR=16						
ABAH	Abaujker	8.54	3	P		Pn	00 43 20.2 +2.8
MYKA	Terra Mystica	8.56	326	*e*Pn		Pn	00 43 16.9 -0.9
	comp=Z,30nm,0.5s,SNR=11						
MYKA				*e*Sn		Sn	00 44 51.9 -2.1
	comp=Z,35nm,0.3s						
TEOL	Teolo	8.67	313			Pn	00 43 17.8 -1.4
LEOM	Leova	8.70	37	⇓P		Pn	00 43 23.7 +4.2
STAL	STALIGIAL	8.72	321			Pn	00 43 18.3 -1.6
KECS	Kecovo	8.72	359	*e*P		Pn	00 43 21.7 +1.9
KECS				*e*			00 44 59.0
CLUD	Cludinico	8.78	322			Pn	00 43 19.2 -1.4
ZST	Bratislava	8.81	344	*e*P		Pn	00 43 23.2 +2.1
ZST				*e*			00 44 57.0
ZST				MLR		MLR	
	comp=Z,5μm,3.2s						
VLC	Villacollemand	8.82	303			Pn	00 43 20.1 -1.1
VLC	Villacollemand	8.82	303	⇑P		Pn	00 43 21.8 +0.5
VYHS	Vyhne	8.83	352	*e*P		Pn	00 43 22.3 +1.0
VYHS				*e*			00 44 57.5
CONA	Conrad Observa	8.87	339	*e*Pn		Pn	00 43 22.4 +0.4
	comp=Z,3.2nm,0.3s,SNR=13						
UZH	Uzhgorod	8.94	7	*e*P		Pn	00 43 25.0 +2.1
UZH				*e*S		Sn	00 45 06.8 +3.6
UZH				MLR		MLR	
	comp=N,1μm,13.0s						
UZH				MLR		MLR	
	comp=E,1μm,13.0s						
UZH				MLR		MLR	
	comp=Z,840nm,13.0s						
MODS	Modra-Piesok	8.94	345	*e*P		Pn	00 43 25.7 +2.7
MODS				MLR		MLR	
	comp=Z,4μm,3.5s						
KBA	Koelnbreinsper	9.04	326	P		Pn	00 43 24.2 -0.2
KBA				pmax		pmax	
	comp=Z,137nm,1.1s						
KBA	Koelnbreinsper	9.04	326	*e*Pn		Pn	00 43 24.2 -0.2
	comp=Z,16nm,0.3s,SNR=24						
KBA	Koelnbreinsper	9.04	326	⇑P		Pn	00 43 24.0 -0.4
SLUM	Salum	9.05	154	P		Pn	00 43 21.8 -2.5
	baz=156						
CTI	Castel Tesino	9.11	316			Pn	00 43 24.1 -1.3
CTI	Castel Tesino	9.11	316	P		Pn	00 43 24.1 -1.3
PRMA	PARMA	9.15	306			Pn	00 43 25.5 -0.3
CRVS	Cervenica-Dubn	9.15	3	*e*P		Pn	00 43 28.0 +2.2
CRVS				MLR		MLR	
	comp=Z,1μm,2.4s						
ABTA	Abfaltersbach	9.16	322	*i* Pn		Pn	00 43 24.9 -1.2
	comp=Z,5.4nm,0.2s,SNR=19						
ABTA				Sn		Sn	00 45 06.6 -2.2
	comp=Z,94nm,0.6s						
PGF	Pioggiola	9.22	291	*e*P		Pn	00 43 27.0 +0.1
PGF				*e*Sn		Sn	00 44 56.8 -14
	comp=Z,19nm,0.7s						
PGF	Pioggiola	9.22	291	P		Pn	00 43 29.5 +2.6
PGF				pmax		pmax	
	comp=Z,65nm,1.0s						
KOLS	Kolonicke sedl	9.24	7	*e*P		Pn	00 43 30.8 +3.8
MILM	Milestii Mici	9.29	37	⇑P		Pn	00 43 32.0 +4.3
MILM	Milestii Mici	9.29	37	*e*P		Pn	00 43 30.0 +2.3
	comp=Z,110nm,1.6s						
MILM	Milestii Mici	9.29	37	*e*PP		Pn	00 43 38.0 +10
MILM				*e*S		Sn	00 45 15.0 +3.2
MILM				*e*L		L	00 46 38.0
MILM				LRM		MLR	00 47 59.0
	comp=Z,10μm,12.0s						
MILM	Milestii Mici	9.29	37	*e*P		Pn	00 43 30.0 +2.3
MILM				*e*S		Sn	00 45 15.0 +3.2
MILM				pmax		pmax	
	comp=Z,110nm,1.6s						
MILM				MLR		MLR	
	comp=E,6μm,12.0s						
MILM				MLR		MLR	
	comp=Z,10μm,12.0s						
MOA	Molln	9.31	332	*e*Pn		Pn	00 43 27.6 -0.3
	comp=Z,8.8nm,0.2s,SNR=22						
MOA				*e*Sn		Sn	00 45 10.2 -2.1
	comp=Z,36nm,0.5s						
BR231	Keskin MP Arra	9.33	86	Pn		Pn	00 43 29.5 +1.1
ANTO	Ankara	9.34	85	Pn		Pn	00 43 30.5 +2.0
ANTO	Ankara	9.34	85	P		Pn	00 43 30.5 +2.0
JAVC	Velka Javorina	9.34	348	*e*PN		Pn	00 43 29.3 +0.9
KIS	Kishinev	9.35	37	*e*P		Pn	00 43 31.0 +2.5
	comp=Z,80nm,1.5s						
KIS	Kishinev	9.35	37	*e*PP		Pn	00 43 40.0 +11
KIS				*e*S		Sn	00 45 17.0 +3.7
KIS				*e*L		L	00 46 01.0
KIS				LqM			00 47 37.0
	comp=Z,2μm,16.0s						
KIS				LRM		MLR	00 48 00.0
	comp=Z,3μm,13.0s						
KIS	Kishinev	9.35	37	*e*P		Pn	00 43 31.0 +2.5
KIS				*e*S		Sn	00 45 17.0 +3.7
KIS				pmax		pmax	
	comp=Z,80nm,1.5s						
KIS				MLR		MLR	
	comp=Z,4μm,12.0s						
KIS				MLR		MLR	
	comp=E,3μm,13.0s						
BIOA	Bad Ischl, Aus	9.41	330	*e*Pn		Pn	00 43 28.5 -0.9
	comp=E,40nm,0.4s,SNR=68						
BIOA				*e*Sn		Sn	00 45 14.4 -0.4
	comp=E,59nm,0.5s						
MSSA	Maissana	9.45	302	Pn		Pn	00 43 30.3 +0.3
SALO	Salr	9.48	311			Pn	00 43 29.1 -1.2
SALO	Salr	9.48	311	⇑P		Pn	00 43 28.9 -1.3
STHS	Stebnicka Huta	9.66	2	*e*P		Pn	00 43 36.5 +3.7
STHS				*e*			00 45 26.5
KRUC	Moravsky	9.78	343	P		Pn	00 43 36.5 +2.1
KRUC				pmax		pmax	
	comp=Z,21nm,0.9s						
KRUC	Moravsky	9.78	343	*e*PN		Pn	00 43 35.6 +1.2
MAUC	Maruska	9.81	349	*e*PN		Pn	00 43 34.8 0.0
MAUC				*e*SN		Sn	00 45 24.0 -0.6
MAUC				AMS		AMS	00 48 30.0
	comp=Z,14μm,12.4s						
KEST	Kesra	9.82	249	Pn		Pn	00 43 35.5 +0.4
	comp=Z,1.0nm,0.3s,baz=293,slow=2.1,SNR=30						
KEST				Sn		Sn	00 45 23.7 -1.3
	comp=Z,0.9nm,0.3s,baz=45,slow=17,SNR=1.2						
	comp=Z,19nm,0.9s						
KEST	Kesra	9.82	249			Pn	00 43 35.7 +0.7
WTTA	Wattenberg	9.95	322	P		Pn	00 43 36.9 0.0
WTTA				pmax		pmax	
	comp=Z,103nm,1.1s						
WTTA	Wattenberg	9.95	322	*i* Pn		Pn	00 43 36.3 -0.6
	comp=Z,16nm,0.3s,SNR=58						
MATC	Matruh	9.96	146	P		Pn	00 43 33.6 -3.3
	baz=147						
VRAC	Vranov	9.97	344	⇑P		Pn	00 43 39.1 +2.1
VRAC	Vranov	9.97	344	Pn		Pn	00 43 37.2 +0.1
	comp=Z,0.7nm,0.3s,baz=174,slow=13,SNR=23						
	comp=Z,12nm,0.8s						
VRAC	Vranov	9.97	344	*e*PN		Pn	00 43 36.9 -0.1
BR131	Keskin Array S	10.00	86			Pn	00 43 41.3 +3.8
BR131	Keskin Array S	10.00	86	*i* P		Pn	00 43 42.8 +5.2
BRTR	Keskin Array B	10.00	86	Pn		Pn	00 43 39.4 +1.8
	comp=Z,1.0nm,0.3s,baz=266,slow=10,SNR=42						
BRTR				Sn		Sn	00 45 28.6 -0.8
	baz=275,slow=22,SNR=1.1						
BRTR				LR		LR	00 48 08.0
	comp=Z,4μm,20.0s,baz=278,slow=42						
	comp=Z,4.0nm,0.5s						
BRTR	Keskin Array B	10.00	86			Pn	00 43 41.0 +3.4
WATA	Walderalm	10.03	322	*i* Pn		Pn	00 43 37.7 -0.3
	comp=Z,27nm,0.3s,SNR=72						
WATA				*e*Sn		Sn	00 45 28.5 -1.7
	comp=Z,22nm,0.3s						
SQTA	Sankt Quirin	10.13	320	*i* Pn		Pn	00 43 39.2 0.0
	comp=Z,17nm,0.3s,SNR=46						
SQTA				*e*Sn		Sn	00 45 30.9 -1.7
	comp=Z,46nm,0.4s						
CKRC	Cesky Krumlov	10.13	335	*e*PN		Pn	00 43 39.8 +0.6
TREC	Trest	10.22	341	*e*P		Pn	00 43 42.3 +1.9
TREC				MLR		MLR	
	comp=Z,11μm,13.0s						
TREC	Trest	10.22	341	*e*PN		Pn	00 43 42.3 +1.9
TREC				AMS		AMS	00 48 00.0
	comp=Z,11μm,13.0s						
FUORN	Ofenpass-Fuorn	10.22	315			Pn	00 43 40.3 -0.4
OKC	Ostrava-Krasne	10.23	351	*e*P		Pn	00 43 40.8 +0.3
OKC				*e*			00 45 34.5
OKC				MLR		MLR	
	comp=Z,5μm,18.0s						
OKC	Ostrava-Krasne	10.23	351	*e*PN		Pn	00 43 40.8 +0.3
OKC				*e*SN		Sn	00 45 34.5 -0.3
OKC				AMS		AMS	00 48 00.0
	comp=Z,5μm,18.0s						
FETA	Feichten	10.23	318	*e*Pn		Pn	00 43 41.0 +0.3
	comp=Z,16nm,0.5s,SNR=16						
FETA				*e*Sn		Sn	00 45 32.7 -2.5
	comp=Z,20nm,0.4s						
MORC	Moravsky Berou	10.25	349	⇓P		Pn	00 43 43.1 +2.2
MORC	Moravsky Berou	10.25	349			Pn	00 43 41.6 +0.7
MORC	Moravsky Berou	10.25	349	P		Pn	00 43 41.6 +0.7
MORC	Moravsky Berou	10.25	349	*e*PN		Pn	00 43 41.3 +0.4
MOTA	Moosalm	10.27	321	*e*Pn		Pn	00 43 40.3 -0.8
	comp=Z,28nm,0.5s,SNR=59						
MOTA				*e*Sn		Sn	00 45 34.3 -1.7
	comp=Z,47nm,0.6s						
LVV	L'vov	10.34	12	*e*P		Pn	00 43 46.9 +4.9
LVV				*e*S		Sn	00 45 43.0 +5.6
LVV				pmax		pmax	
	comp=Z,620nm,2.7s						
LVV				MLR		MLR	
	comp=E,1μm,8.2s						
LVV				MLR		MLR	
	comp=N,2μm,9.9s						
LVV				MLR		MLR	
	comp=Z,3μm,9.9s						
BZK	Bozkurt	10.35	73	Pn		Pn	00 43 42.8 +0.7
GEC2	GERESS Array S	10.35	334	Pn		Pn	00 43 43.0 +0.7
GERES	GERESS Array B	10.35	334	Pn		Pn	00 43 41.7 -0.7
	comp=Z,1.4nm,0.3s,baz=156,slow=14,SNR=41						
GERES				Sn		Sn	00 45 36.6 -1.4
	comp=Z,5.8nm,0.3s,baz=153,slow=24,SNR=7.8						
	comp=Z,3.6nm,0.5s						
GERES	GERESS Array B	10.35	334			Pn	00 43 43.0 +0.7
GERES	GERESS Array B	10.35	334	P		Pn	00 43 43.0 +0.7
OJC	Ojcow	10.47	357	*e*P		Pn	00 43 45.0 +1.2
OJC				*e*L		L	00 48 35.9
	comp=Z,13μm,14.9s						
OJC	Ojcow	10.47	357	Pn		Pn	00 43 42.3 -1.6
OJC	Ojcow	10.47	357	P		Pn	00 43 42.3 -1.6
OJC	Ojcow	10.47	357	⇑P		Pn	00 43 45.1 +1.2
DAVOX	Davos/Dischmat	10.53	315	Pn		Pn	00 43 44.4 -0.4
	comp=Z,2.3nm,0.3s,baz=149,slow=15,SNR=49						
DAVOX				Sn		Sn	00 45 40.5 -1.9
	comp=Z,5.4nm,0.3s,baz=162,slow=20,SNR=2.0						
DAVOX				LR		LR	00 49 28.2
	comp=Z,749nm,22.0s,baz=120,slow=47						
	comp=Z,43nm,0.6s						
RETA	Reutte	10.53	320	*i* Pn		Pn	00 43 43.9 -0.8
	comp=Z,12nm,0.5s,SNR=13						
RETA				*e*Sn		Sn	00 45 40.9 -1.5
	comp=Z,50nm,0.6s						
TUE	Stuetta	10.64	313			Pn	00 43 45.9 -0.4
TUE	Stuetta	10.64	313	⇑P		Pn	00 43 48.5 +2.2
KHC	Kasperske Hory	10.64	334			Pn	00 43 46.2 0.0
KHC	Kasperske Hory	10.64	334	*e*P		Pn	00 43 46.5 +0.3
KHC				*e*			00 45 43.8
KHC				MLR		MLR	
	comp=Z,10μm,21.3s						
KHC	Kasperske Hory	10.64	334	*e*PN		Pn	00 43 46.5 +0.3
KHC				*e*SN		Sn	00 45 43.8 -1.2
KHC				AMS		AMS	00 48 20.0
	comp=Z,10μm,21.3s						
KHC	Kasperske Hory	10.64	334	⇓P		Pn	00 43 46.2 0.0
SAOF	Saorge	10.64	298	P		Pn	00 43 50.0 +3.8
SAOF				pmax		pmax	
	comp=Z,31nm,0.7s						
KRLC	Kraliky	10.67	346	*e*P		Pn	00 43 47.0 +0.4
KRLC				*e*			00 45 44.1
KRLC				MLR		MLR	
	comp=Z,7μm,13.9s						
KRLC	Kraliky	10.67	346	*e*PN		Pn	00 43 47.0 +0.4
KRLC				*e*SN		Sn	00 45 44.1 -1.6
KRLC				AMS		AMS	00 48 40.0
	comp=Z,7μm,13.9s						
SBF	Sospel	10.69	297	*e*P		Pn	00 43 47.9 +1.0
SBF				*e*Sn		Sn	00 45 31.8 -14
	comp=Z,26nm,0.3s						
FUR	Furstenfeldbru	10.78	324	P		Pn	00 43 47.3 -0.7
FUR				pmax		pmax	
	comp=Z,64nm,0.7s						
MONC	Moncucco Torin	10.80	304	⇓P		Pn	00 43 49.3 +0.9
DAVA	Damuels	10.85	317	*e*Pn		Pn	00 43 49.6 +0.5
	comp=Z,8.0nm,0.2s,SNR=17						
DAVA	Damuels	10.85	317	⇑P		Pn	00 43 49.8 +0.7
WET	Wettzell	10.90	332	P		Pn	00 43 50.1 +0.4
WET				pmax		pmax	
	comp=Z,48nm,1.2s						
GOPC	GO Pecny, Ondr	10.97	340	*e*P		Pn	00 43 52.4 +1.7
GOPC				MLR		MLR	
	comp=Z,8μm,13.5s						
GOPC	GO Pecny, Ondr	10.97	340	*e*PN		Pn	00 43 52.4 +1.7
GOPC				AMS		AMS	00 48 30.0
	comp=Z,8μm,13.5s						
DPC	Dobruska-Polom	11.02	345	*e*P		Pn	00 43 51.3 -0.1
DPC				MLR		MLR	
	comp=Z,11μm,12.4s						
DPC	Dobruska-Polom	11.02	345	*e*PN		Pn	00 43 51.3 -0.1
DPC				AMS		AMS	00 48 40.0
	comp=Z,11μm,12.4s						
PRU	Pruhonice	11.10	339	*e*P		Pn	00 43 53.2 +0.7
PRU				MLR		MLR	
	comp=Z,8μm,13.4s						
PRU	Pruhonice	11.10	339	*e*PN		Pn	00 43 53.2 +0.7
PRU				AMS		AMS	00 48 30.0
	comp=Z,8μm,13.4s						
CSS	Mathiatis	11.16	111			Pn	00 43 55.6 +2.2
LMR	La Mourre	11.19	293	*e*P		Pn	00 43 54.6 +0.9
LMR				*e*Sn		Sn	00 45 42.4 -16
	comp=Z,11nm,0.5s						
SWA2		11.21	158	P		Pn	00 43 51.3 -2.7
	baz=159						
SIM	Simferopol'	11.22	58	*e*P		Pn	00 43 59.0 +4.9
SIM				pmax		pmax	
	comp=Z,43nm,1.1s						
SIM				MLR		MLR	
	comp=Z,2μm,16.5s						
UPC	Upice	11.23	345	*e*P		Pn	00 43 55.9 +1.7
UPC				MLR		MLR	
	comp=Z,9μm,13.7s						
UPC	Upice	11.23	345	*e*PN		Pn	00 43 55.9 +1.7
UPC				AMS		AMS	00 48 50.0
	comp=Z,9μm,13.7s						
OSTC	Ostas	11.24	345	*e*PN		Pn	00 43 55.8 +1.5
OSTC				AMS		AMS	00 48 50.0
	comp=Z,10μm,12.8s						
CHVC	Chvalec	11.30	345	*e*PN		Pn	00 43 55.9 +0.7
CHVC				AMS		AMS	00 48 50.0
	comp=Z,9μm,13.0s						
MBDF	Montbardon	11.42	300	*e*P		Pn	00 43 58.0 +1.0
MBDF				*e*Sn		Sn	00 45 50.1 -14
	comp=Z,52nm,0.7s						
KSP	Ksiaz	11.49	346	*e*P		Pn	00 43 59.1 +1.3
KSP				*e*L		L	00 49 12.8
	comp=Z,9μm,17.2s						
KSP	Ksiaz	11.49	346	P		Pn	00 43 59.6 +1.8
KSP				pmax		pmax	
	comp=Z,27nm,1.3s						
KSP	Ksiaz	11.49	346	⇑P		Pn	00 44 00.5 +2.7
PVCC	Panska Ves	11.59	340	*e*P		Pn	00 44 00.4 +1.3
PVCC				MLR		MLR	
	comp=Z,8μm,12.8s						
PVCC	Panska Ves	11.59	340	*e*PN		Pn	00 44 00.4 +1.3
PVCC				AMS		AMS	00 48 50.0
	comp=Z,8μm,12.8s						
BNI	Bardonecchia	11.60	302	P		Pn	00 43 59.7 +0.2
BNI				S		Sn	00 46 05.6 -3.1
BNI	Bardonecchia	11.60	302	⇑P		Pn	00 44 00.9 +1.4
LPG	La Plagne	11.73	304	*e*Pn		Pn	00 43 58.7 -2.7
LPG				*e*Sn		Sn	00 45 58.2 -14
	comp=Z,90nm,0.5s						
LPL	La Plagne	11.75	304	*e*Pn		Pn	00 43 59.7 -1.9
LPL	La Plagne	11.75	304	*e*P		Pn	00 44 04.4 +2.8
LPL				*e*Sn		Sn	00 45 57.4 -15
	comp=Z,74nm,0.4s						
SENIN	Lac Senin/Sane	11.78	308			Pn	00 44 00.6 -1.4
BNN	Bunyan	11.80	90			Pn	00 44 04.3 +2.0
SLE	Schleitheim	11.88	316	P		Pn	00 44 03.8 +0.7
SLE				pmax		pmax	
	comp=Z,32nm,0.7s						
NKC	Novy Kostel	11.96	334	*e*P		Pn	00 44 05.5 +1.2
NKC				MLR		MLR	
	comp=Z,9μm,14.4s						
NKC	Novy Kostel	11.96	334	*e*PN		Pn	00 44 05.5 +1.2
NKC				AMS		AMS	00 49 00.0
	comp=Z,9μm,14.4s						
GRFO	Grafenberg	11.97	329			Pn	00 44 03.6 -0.8
GRFO	Grafenberg	11.97	329	P		Pn	00 44 03.6 -0.8
SMRF	Simiane la Rot	12.01	295	*e*P		Pn	00 44 07.1 +2.2
SMRF				*e*Sn		Sn	00 46 02.3 -16
	comp=Z,7.6nm,0.5s						
BEL	Belsk	12.07	0	*e*P		Pn	00 44 10.7 +4.9
BEL				*e*L		L	00 49 49.7
	comp=Z,13μm,14.0s						
ORIF	Oris-en-Rattie	12.08	300	*e*P		Pn	00 44 07.0 +1.0
ORIF				*e*Sn		Sn	00 46 05.7 -15
	comp=Z,63nm,0.7s						
ORIF	Oris-en-Rattie	12.08	300	P		Pn	00 44 10.2 +4.2
ORIF				pmax		pmax	
	comp=Z,37nm,1.0s						
TOKA	Tokat	12.14	82			Pn	00 44 09.3 +2.5
STU	Stuttgart	12.18	321			Pn	00 44 05.7 -1.5
STU	Stuttgart	12.18	321	P		Pn	00 44 05.7 -1.5
BFO	Black Forest	12.32	318			Pn	00 44 08.2 -0.9
BFO	Black Forest	12.32	318	P		Pn	00 44 08.2 -0.9
BFO	Black Forest	12.32	318	⇑P		Pn	00 44 07.1 -2.0
AKASG	Malin Array Be	12.48	26	Pn		Pn	00 44 11.5 +0.2
	comp=Z,0.9nm,0.3s,baz=212,slow=12,SNR=16						
	comp=Z,3.6nm,0.7s						
AKASG	Malin Array Be	12.48	26	Pn		Pn	00 44 12.2 +0.9
AKASG	Malin Array Be	12.48	26	P		Pn	00 44 12.2 +0.9
AKBB	Malin Array Si	12.48	26			Pn	00 44 12.4 +1.1
AKBB	Malin Array Si	12.48	26	*ce*P		Pn	00 44 15.1 +3.8
MOX	Moxa	12.60	333	P		Pn	00 44 13.0 +0.1
MOX				pmax		pmax	
	comp=Z,41nm,0.9s						
CABF	La Chapelle	12.63	308	*e*Pn		Pn	00 44 10.4 -3.1
CABF				*e*Sn		Sn	00 46 21.3 -13
	comp=Z,148nm,0.9s						
CLL	Collm	12.72	338			Pn	00 44 15.1 +0.5
CLL	Collm	12.72	338	P		Pn	00 44 15.1 +0.5
CLL	Collm	12.72	338	*e*P		Pn	00 44 13.0 -1.6
CLL				*i* sP		P	00 44 18.2 -7.5
CLL				*e*(PP)			00 44 26.0
CLL				*i* sPP			00 44 28.2
CLL				*ex*		x	00 44 47.0
CLL				*ex*		x	00 46 08.0
CLL				Lm		MLR	00 49 00.0
	comp=N,6μm,19.2s						
CLL				Lm		MLR	00 49 00.0
	comp=E,2μm,19.6s						
CLL				Lm		MLR	00 49 00.0
	comp=Z,7μm,18.2s						
CLL				Lmax			00 50 00.0
HINF	Hinteralfeld	12.80	313	*e*Pn		Pn	00 44 13.1 -2.7
HINF				*e*Sn		Sn	00 46 26.2 -12
	comp=Z,56nm,0.5s						
ECH	Echery	12.87	315			Pn	00 44 15.1 -1.5
ECH	Echery	12.87	315	P		Pn	00 44 15.1 -1.5
ECH	Echery	12.87	315	⇑P		Pn	00 44 15.8 -0.8
VIVF	Saint-Julien-l	12.88	298	*e*P		Pn	00 44 17.8 +1.0
VIVF				*e*Sn		Sn	00 46 26.4 -13
	comp=Z,8.8nm,0.5s						
CDF	Champ du Feu	12.92	316	*e*Pn		Pn	00 44 15.8 -1.6
CDF	Champ du Feu	12.92	316	*e*P		Pn	00 44 21.6 +4.2
CDF				*e*Sn		Sn	00 46 30.8 -10
	comp=Z,67nm,1.0s						
HMYD	Mayadein	12.96	137	P		Pn	00 44 16.3 -1.8
	baz=138						
HNAT	Natroun	13.00	138	P		Pn	00 44 16.6 -1.9
	baz=139						
SSB	Saint Sauveur	13.10	300			Pn	00 44 18.9 -0.9
SSB	Saint Sauveur	13.10	300	P		Pn	00 44 18.9 -0.9
HAU	Haudompre	13.19	313	*e*Pn		Pn	00 44 18.7 -2.3
HAU	Haudompre	13.19	313	*e*P		Pn	00 44 25.1 +4.1
HAU				*e*Sn		Sn	00 46 36.4 -11
	comp=Z,142nm,0.6s						
LASF	Ste Croix	13.23	294	*e*P		Pn	00 44 22.7 +1.1
LASF				*e*Sn		Sn	00 46 31.5 -17
	comp=Z,6.3nm,0.7s						
RYAN	Fayoum	13.28	140	P		Pn	00 44 19.1 -3.2
	baz=141						
ANN	Anapa	13.40	62	*e*P		Pn	00 44 21.9 -1.9
ANN				*e*S		Sn	00 46 50.7 -1.6

baz=132
SAVF *e*Sn Sn 00 47 00.1 -12
comp=Z,12nm,0.5s
MTLF Montolieu 14.26 290 *e*P **Pn 00 44 38.3 +2.6**
MTLF Montolieu 14.26 290 P **Pn 00 44 38.0 +2.3**
MTLF pmax pmax
comp=Z,49nm,1.1s
WLF Walferdange 14.27 319 Pn 00 44 35.8 0.0
WLF Walferdange 14.27 319 P **Pn 00 44 35.8 0.0**
WLF Walferdange 14.27 319 *d*P **Pn 00 44 35.3 -0.4**
LOR Lormes 14.29 307 *e*Pn **Pn 00 44 33.3 -2.8**
baz=117
LOR *e*Sn Sn 00 47 01.1 -13
comp=Z,97nm,0.7s
AVF Avril sur Loir 14.41 305 *e*Pn **Pn 00 44 33.9 -3.8**
AVF *e*Sn Sn 00 47 02.9 -14
comp=Z,34nm,0.8s
SSF Saint Saulge 14.43 306 *e*Pn **Pn 00 44 34.7 -3.2**
SSF *e*Sn Sn 00 47 01.5 -16
comp=Z,34nm,0.6s
YTIR Yattir 14.43 121 Pn **Pn 00 44 38.1 -0.1**
DSI Dead Sea 14.48 120 Pn **Pn 00 44 39.6 +0.9**
BGF Bois d'Agland 14.65 303 *e*Pn **Pn 00 44 39.5 -1.5**
BGF *e*Sn Sn 00 47 08.0 -15
comp=Z,37nm,0.4s
CAF Calviac 14.68 297 *e*P **Pn 00 44 41.0 -0.4**
CAF *e*Sn Sn 00 47 06.0 -18
comp=Z,0.3nm,0.3s
SOC Sochi 14.74 69 *e*P **Pn 00 44 44.0 +1.8**
SOC *e* 00 47 30.8
SOC MLR MLR
comp=Z,377nm,12.0s
TAMRE El Minia 14.75 142 P **Pn 00 44 40.1 -2.3**
baz=143
GHAJ Ghor Haditha 14.77 120 Pn 00 44 44.0 +1.4
BTNL Ternell 14.87 321 *d*P **Pn 00 44 45.8 +1.8**
MEM Membach 14.95 321 P **P 00 44 50.3 -0.1**
MEM pmax pmax
comp=Z,110nm,1.0s
MEM Membach 14.95 321 *d*P **Pn 00 44 45.9 +1.0**
TCF Toulx Ste Croi 14.97 302 *e*Pn **Pn 00 44 42.0 -3.3**
TCF *e*Sn Sn 00 47 15.1 -16
comp=Z,14nm,0.5s
KRMI Paran Flat 15.01 126 Pn **Pn 00 44 43.2 -2.7**
PRNI Paran 15.02 124 Pn **Pn 00 44 44.5 -1.6**
PRNI Sn **Sn 00 47 25.3 -6.9**
RCHB Rochefort 15.04 319 *dx* **P 00 44 53.6 +2.1**
HYF Humbligny 15.05 306 *e*P **Pn 00 44 47.7 +1.3**
HYF *e*Sn Sn 00 47 18.7 -14
RJF Les Rejaudoux 15.15 298 *e*P **Pn 00 44 48.9 +1.2**
RJF *e*Sn Sn 00 47 18.2 -17
comp=Z,1.0nm,0.4s
ASF Jabal al Asfar 15.16 115 Pn **Pn 00 44 47.4 -0.7**
comp=Z,0.4nm,0.3s,baz=264,slow=2.3,SNR=7.6
ASF LR LR 00 51 50.6
comp=Z,2μm,18.9s,baz=310,slow=42
comp=Z,2.5nm,0.5s
BCLA Clavier 15.17 320 *d*P **Pn 00 44 48.5 +0.6**
BCLA *dx* x 00 45 04.4
GIVF Givet 15.22 318 *e*Pn **Pn 00 44 48.5 -0.1**
GIVF *e*Sn Sn 00 47 25.9 -11
comp=Z,1.4nm,0.3s
GRB Gharib 15.23 135 P **Pn 00 44 46.3 -2.6**
baz=136
KOPT Kop Dagi 15.23 83 Pn 00 44 51.1 +1.9
BGES Gesves 15.26 319 *d*P **Pn 00 44 49.5 +0.4**
BGES *d*PP **PbPb 00 45 35.1 -4.3**
HRFI Mount Harif 15.26 125 Pn **Pn 00 44 47.3 -1.9**
ASUT 15.30 140 P **Pn 00 44 47.8 -2.0**
baz=141
DOU Dourbes 15.33 318 P **Pn 00 44 50.9 +0.8**
DOU Dourbes 15.33 318 *d*P **Pn 00 44 50.8 +0.7**
DOU *dx* x 00 45 04.8
MBRI Mt Berech 15.35 126 Pn **Pn 00 44 48.4 -2.1**
EIL Elat 15.46 126 Pn **Pn 00 44 50.6 -1.2**
comp=Z,0.9nm,0.3s,baz=319,slow=1.8,SNR=19
EIL Sn **Sn 00 47 34.2 -8.5**
comp=Z,4.6nm,0.3s,baz=283,slow=20,SNR=2.4
EIL LR LR 00 53 35.3
comp=Z,933nm,19.2s,baz=296,slow=48
comp=Z,3.8nm,0.4s
EIL Elat 15.46 126 Pn **Pn 00 44 50.6 -1.2**
BAIF Baives 15.52 317 *e*P **P 00 44 56.6 -0.1**
BAIF *e*Sn Sn 00 47 32.9 -11
comp=Z,1.6nm,0.3s
MNK Minsk 15.53 16 *i* P **Pn 00 44 52.1 -0.4**
MNK *i* S **Sn 00 47 45.5 +1.4**
MNK pmax pmax
comp=Z,252nm,0.9s
MNK pmax pmax
comp=N,228nm,1.1s
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK MLR MLR
comp=Z,3μm,14.0s
MNK MLR MLR
comp=E,373nm,11.0s
MNK MLR MLR
comp=N,1μm,11.0s
MNK Minsk 15.53 16 *i* P **Pn 00 44 52.1 -0.4**
comp=E,10.0nm,0.8s
MNK *i* P **Pn 00 44 52.1 -0.4**
comp=N,228nm,1.1s
MNK *i* P **Pn 00 44 52.1 -0.4**
comp=Z,252nm,0.8s,baz=202
MNK *i* S **Sn 00 47 45.5 +1.4**
MNK *i* SS **S 00 47 58.7 -1.0**
MNK *i* LQ LQ 00 49 27.8
MNK *i* LR LR 00 50 13.2
MNK *i* LRM MLR 00 51 10.7
comp=Z,3μm,13.6s
MNK *i* LRM MLR 00 51 12.0
comp=E,373nm,11.2s
MNK *i* LRM MLR 00 51 15.8
comp=N,1μm,11.4s
EPF Esparros 15.59 289 *e*P **Pn 00 44 53.6 +0.1**
CLF Chambon-Foret 15.60 308 Pn 00 44 54.7 +1.2
CLF Chambon-Foret 15.60 308 ⇓p **P 00 45 00.3 +2.6**
HBST Basata 15.64 128 P **Pn 00 44 51.5 -2.7**
baz=129
TR2 Tor 2 15.66 132 P **Pn 00 44 50.4 -4.1**
baz=133
NACGM Naroch 15.70 13 *e*P **Pn 00 44 55.9 +1.2**
HKAT Jabal Katrina 15.71 131 P **Pn 00 44 52.3 -3.0**
baz=132
SNF Seneffe 15.74 318 *dx* **P 00 44 58.8 -0.4**
SNF *dx* x 00 45 02.5
BSEG Bad Segeberg 15.82 337 P **P 00 45 01.9 +1.8**
BSEG pmax pmax
comp=Z,35nm,1.5s
PABE Paberze 15.90 7 Pn **Pn 00 44 57.0 -0.4**
PABE IAmb IAmb 00 45 04.3
comp=Z,124nm,0.9s
PABE Paberze 15.90 7 *e*P **Pn 00 44 58.2 +0.8**
HDHB Dhahab 15.93 129 P **Pn 00 44 57.1 -0.8**
baz=130
MARD Mardin 15.93 92 P 00 44 59.9 -1.8
HDK1 Dakhla 15.96 150 P **Pn 00 44 56.9 -1.6**
baz=151
IIGN Ignalina 16.03 12 *e*P **Pn 00 45 00.3 +1.3**
ISAL Salakas 16.23 11 *e*P **Pn 00 45 03.1 +1.5**
ETSF Etsaut 16.24 288 *e*P **Pn 00 45 02.5 +0.6**
VSVD Vaisvydziai 16.37 7 *e*P **Pn 00 45 04.4 +1.0**
AKRG Al Kharijah 16.44 147 P **Pn 00 45 03.2 -1.3**
baz=148
HHRG Al Ghardaqah 16.48 135 P **Pn 00 45 03.8 -1.3**
baz=137
LUNU Lund 16.59 346 *i* P **P 00 45 09.0 +0.4**
MFF Saint Martin d 16.62 301 *e*P **Pn 00 45 07.5 +0.9**
MFF *e*Sn Sn 00 47 55.6 -15
comp=Z,2.7nm,0.3s
GURO Guroymak-BITLI 16.62 87 P **P 00 45 08.5 -0.8**
SJPF Ste Jean 16.74 289 *e*P **P 00 45 09.5 -0.9**
BLEU Blekinge 16.86 351 *i* P **P 00 45 12.2 +0.6**
SHA1 Shidzhatmaz 16.88 69 *i* P **P 00 45 13.8 +1.6**
NEY Neytrino 16.88 71 *i* P **P 00 45 14.9 +2.7**
KIV Kislovodsk 16.92 69 P **P 00 45 13.0 +0.4**
KIV Kislovodsk 16.92 69 *e*P **P 00 45 14.7 +2.2**
KIV *e*S **S 00 48 25.4 -3.1**
KIV pmax pmax
comp=Z,32nm,1.0s
KIV MLR MLR
comp=Z,290nm,14.0s
KIV Kislovodsk 16.92 69 *i* P **P 00 45 15.2 +2.6**
SNR=5.9

KVAR Kislovodsk Arr 16.93 69 Pn **P 00 45 12.5 -0.1**
baz=270,slow=20
comp=Z,4.5nm,1.1s
KBZ Khabaz 17.05 69 P **P 00 45 14.7 +0.9**
comp=Z,11nm,1.0s,baz=261,slow=6.7,SNR=11
KARS Kars 17.15 80 Pn 00 45 14.3 +0.8
KARS Kars 17.15 80 P **Pn 00 45 14.3 +0.8**
KARS pmax pmax
comp=Z,38nm,1.2s
VSR Storozhevoye 17.25 42 *e*P **P 00 45 16.0 0.0**
VSR pmax pmax
comp=Z,60nm,0.8s
VSR MLR MLR
comp=Z,7μm,12.0s
LDF La Druitiere 17.28 308 *e*P **P 00 45 17.0 +0.7**
LDF *e*Sn Sn 00 48 12.0 -15
DEL Delary 17.31 347 *i* P **P 00 45 18.0 +1.5**
GOF Gofitskoye 17.34 65⇑*e*P **P 00 45 18.8 +1.8**
GOF pmax pmax
comp=Z,40nm,0.9s
ONI Oni 17.38 73 P **P 00 45 17.7 +0.1**
ONI Oni 17.38 73 P **P 00 45 17.7 +0.1**
ONI pmax pmax
comp=Z,7.0nm,1.0s
GEVA Gevas 17.46 88 Pn **Pn 00 45 16.8 -0.7**
VORR Voronezh 17.53 41 *e*P **P 00 45 19.8 +0.7**
VORR pmax pmax
comp=Z,60nm,0.6s
FLN La Foliniere 17.57 308 *e*P **P 00 45 20.6 +1.1**
baz=116
FLN *e*Sn Sn 00 48 20.0 -14
comp=Z,3.0nm,0.4s
GRR Gorron 17.66 306 *e*P **P 00 45 21.9 +1.4**
GRR *e*Sn Sn 00 48 20.5 -15
comp=Z,0.8nm,0.2s
LPSR Galich'ya Gora 17.96 38 *e*P **Pn 00 45 23.4 +0.2**
LPSR pmax pmax
comp=Z,80nm,0.9s
LPSR MLR MLR
comp=Z,2μm,11.0s
FABU Falkenberg 18.02 346 *i* P **P 00 45 26.1 +1.7**
GNI Garni 18.46 81 P **P 00 45 29.2 -0.3**
comp=Z,34nm,1.3s,baz=263,slow=8.1,SNR=14
GNI LR LR 00 52 50.5
comp=Z,2μm,19.7s,baz=266,slow=38
GNI Garni 18.46 81 P **P 00 45 29.3 -0.3**
GNI Garni 18.46 81*ce*P **Pn 00 45 32.4 +2.7**
GNI pmax pmax
comp=Z,88nm,1.7s
GNI Garni 18.46 81 P **Pn 00 45 31.9 +2.2**
GNI Garni 18.46 81 ⇑P **Pn 00 45 32.5 +2.8**
ONAU Onsala 18.54 345 *i* P **Pn 00 45 32.9 +2.5**
BORU Boraas 18.60 347 *i* P **Pn 00 45 33.5 +2.3**
VRH Novokhopyorsk 18.61 45 *e*P **Pn 00 45 33.8 +2.6**
VRH pmax pmax
comp=Z,80nm,1.3s
VRH MLR MLR
comp=Z,6μm,15.0s
SGMF Saint Gilles 18.68 305 *e*Pn **Pn 00 45 35.7 +3.6**
SGMF *e*Sn **Sn 00 48 56.9 -3.7**
comp=Z,1.9nm,0.3s
OBN Obninsk 18.68 29 P **P 00 45 30.7 -0.9**
comp=Z,0.7nm,0.3s,baz=218,slow=6.0,SNR=17
OBN LR LR 00 53 44.1
comp=Z,2μm,18.5s,baz=213,slow=40
comp=Z,16nm,0.8s
OBN Obninsk 18.68 29 P **P 00 45 30.9 -0.7**
OBN IAmb IAmb 00 45 35.0
comp=Z,158nm,1.3s
OBN Obninsk 18.68 29 *e*P **P 00 45 31.2 -0.5**
OBN *i* S **S 00 49 03.4 -0.4**
OBN pmax pmax
comp=Z,124nm,1.3s
OBN MLR MLR
comp=Z,7μm,18.0s
VIKU Vikbolandet 18.93 354 *e*P **Pn 00 45 35.6 +0.5**
ESBB Sonseca Array 18.93 278 P **P 00 45 34.4 -0.3**
ESDC Sonseca Array 18.93 278 P **P 00 45 34.5 -0.2**
comp=Z,0.3nm,0.3s,baz=72,slow=9.6,SNR=37
ESDC LR LR 00 52 54.2
comp=Z,2μm,19.1s,baz=76,slow=37
comp=Z,11nm,0.9s
ESDC Sonseca Array 18.93 278 P **P 00 45 33.2 -1.4**
GUD Guadarrama 18.96 281 P **Pn 00 45 36.5 +0.7**
QUIF Quistinic 18.96 303 *e*Pn **Pn 00 45 36.5 +0.9**
QUIF *e*Sn **Sn 00 49 01.4 -6.1**
comp=Z,0.5nm,0.2s
MTSE Matsula 19.08 5 *e*P **Pn 00 45 36.9 +0.1**
VSU Vasula 19.12 10 *i* P **P 00 45 35.5 -0.9**
VSU Vasula 19.12 10 *e*P **Pn 00 45 37.7 +0.4**
GROC Groznyy 19.12 71 *e*P **Pn 00 45 40.2 +2.7**
GROC pmax pmax
comp=Z,18nm,0.6s
ROSF Rostrenen 19.16 304 *e*Pn **Pn 00 45 39.8 +1.9**
ROSF *e*Sn **Sn 00 49 06.8 -5.4**
comp=Z,1.0nm,0.3s
PAB San Pablo 19.24 277 P **P 00 45 36.6 -1.5**
PAB IAmb IAmb 00 45 42.6
comp=Z,122nm,1.4s
PAB San Pablo 19.24 277 P **P 00 45 36.6 -1.5**
PAB pmax pmax
comp=Z,123nm,1.4s
PAB San Pablo 19.24 277 ⇑P **Pn 00 45 39.0 -0.1**
FIGM Figuig 19.28 254 P **Pn 00 45 40.0 +0.3**
JBK JBK 19.29 261 P **Pn 00 45 41.0 +1.1**
HKFR Khafra 19.37 149 P **Pn 00 45 41.0 +0.4**
baz=150
BRNS Bernies 19.51 140 P **Pn 00 45 44.0 +1.6**
baz=141
MOS Moscow 19.55 30 *e*P **P 00 45 39.4 -1.8**
MOS *e*S **S 00 49 17.9 -3.3**
MOS pmax pmax
comp=Z,400nm,1.8s
MOS pmax pmax
comp=Z,202nm,1.3s
MOS MLR MLR
comp=N,4μm,16.0s
MOS MLR MLR
comp=E,4μm,16.0s
MOS MLR MLR
comp=Z,6μm,16.0s
UPP Uppsala 20.21 356 *e*P Pn 00 45 49.4 -0.9
STRU Stroemstad 20.21 346 *i* P Pn 00 45 49.5 -0.8
AKLM AKL 20.21 263 P Pn 00 45 51.0 +0.3
MAK Makhachkala 20.37 72 *e*P **P 00 45 49.4 -0.9**
MAK *e*S **S 00 49 37.6 -0.3**
MAK pmax pmax
comp=Z,318nm,1.5s
MAK MLR MLR
comp=Z,649nm,16.0s
AAL Aland 20.44 359 *e*P **P 00 45 51.0 +0.1**
SNART Snartemo 20.50 339 *e*P Pn 00 45 53.9 +0.2
SNART IAmb IAmb 00 45 55.5
comp=Z,1μm,1.8s
SNART Snartemo 20.50 339 *i* P Pn 00 45 53.8 +0.1
MEF Metsahovi 20.61 5 *e*P **P 00 45 53.2 +0.5**
PBRG Braganca 20.82 285 *e*P Pn 00 45 57.9 +0.2
comp=Z,56nm,1.8s
PBRG *e*S Sn 00 49 53.4 +1.1
HFS Hagfors 20.86 350 P **P 00 45 53.8 -1.6**
comp=Z,36nm,0.6s,baz=155,slow=11,SNR=33
HFS LR LR 00 55 05.7
comp=Z,2μm,19.7s,baz=168,slow=40
comp=Z,36nm,0.6s
PUL Pulkovo 20.94 14*ce*P **P 00 45 56.5 +0.3**
PUL pmax pmax
comp=Z,72nm,0.4s
MVO Moncorvo 21.08 283 *e*P **P 00 46 00.1 +2.0**
comp=Z,64nm,1.4s
MVO *e*S Sn 00 50 01.6 +2.9
KONO Kongsberg 21.10 344 P **P 00 45 57.9 -0.1**
KONO IAmb IAmb 00 46 00.2
comp=Z,104nm,1.2s
KONO Kongsberg 21.10 344*ce*P **P 00 45 58.5 +0.5**
KONO pmax pmax
comp=Z,97nm,1.3s
KONO Kongsberg 21.10 344 *e*P **P 00 45 58.5 +0.5**
KONO IAmb IAmb 00 45 59.9
comp=Z,79nm,1.1s
KONO Kongsberg 21.10 344 ⇓P **P 00 45 58.8 +0.8**
OSL Oslo 21.14 346 *e*P **P 00 45 57.4 -1.0**
OSL IAmb IAmb 00 46 00.1
comp=Z,97nm,1.0s
TAM Tamanrasset 21.25 222 P **P 00 46 00.3 +0.3**
TAM Tamanrasset 21.25 222 P **P 00 46 00.4 +0.3**

TAM pmax pmax
comp=Z,27nm,1.2s
TAM Tamanrasset 21.25 222 ⇑P **P 00 46 01.7 +1.7**
RAF Rauma 21.30 1 *e*P **P 00 46 01.0 +0.9**
MDT Midelt 21.47 259 P **P 00 46 01.5 -0.8**
comp=Z,6.4nm,0.9s,baz=63,slow=4.5,SNR=15
MDT LR LR 00 54 19.3
comp=Z,630nm,19.4s,baz=76,slow=37
comp=Z,6.4nm,0.9s
MDT Midelt 21.47 259 P **P 00 46 04.0 +1.6**
MTE Manteigas 21.56 281 *e*P **P 00 46 04.9 +1.7**
comp=Z,144nm,1.5s
MTE *e*S **S 00 50 03.5 +1.9**
MTE Manteigas 21.56 281 P **P 00 46 02.6 -0.6**
MTE IAmb IAmb 00 46 09.6
comp=Z,101nm,1.4s
PBAR Barrancos 21.56 275 *e*P **P 00 46 03.9 +0.7**
comp=Z,188nm,1.9s
PBAR *e*S **S 00 50 02.8 +1.2**
PCBR Castelo Branco 21.59 279 *e*P **P 00 46 05.6 +2.2**
comp=Z,83nm,1.7s
PMRV Marv??o 21.59 278 *e*P **P 00 46 05.7 +2.2**
comp=Z,71nm,1.7s
PMRV *e*S **S 00 50 01.4 -0.7**
BLS5 Blasjo 21.64 340 *e*P **P 00 46 05.5 +1.7**
BLS5 IAmb IAmb 00 46 06.2
comp=Z,80nm,1.1s
POLO Lamas de Olo 21.64 283 *e*S Sn 00 50 10.2 -1.9
NC602 NORSAR Array S 21.75 348 *e*P **P 00 46 03.4 -1.6**
NC602 IAmb IAmb 00 46 06.8
comp=Z,128nm,1.0s
PVIS Viseu 21.78 282 *e*P **P 00 46 05.7 +0.1**
comp=Z,73nm,1.8s
KMY Karmoy 21.79 338 *e*P **P 00 46 06.7 +1.3**
PESTR Estremoz 21.84 277 *e*P **P 00 46 07.1 +0.9**
comp=Z,43nm,1.6s
PESTR *e*S **S 00 50 06.6 -0.5**
PESTR Estremoz 21.84 277 P **P 00 46 06.2 0.0**
PESTR Estremoz 21.84 277 ⇑P **P 00 46 06.6 +0.4**
PGAV Gavieira, Arco 21.95 285 *e*P **P 00 46 08.7 +1.3**
PGAV *e*S Sn 00 50 16.0 -3.5
FINES FINESS Array B 21.96 7 P **P 00 46 05.4 -1.8**
comp=Z,57nm,0.9s,baz=171,slow=11,SNR=86
FINES PcP **PcP 00 50 04.0 -1.3**
comp=Z,3.9nm,0.6s,baz=188,slow=2.6,SNR=3.0
comp=Z,57nm,0.9s
FIA1 FINESS Array S 21.96 7 P **P 00 46 05.5 -1.7**
FIA1 IAmb IAmb 00 46 08.3
comp=Z,81nm,1.1s
NB2 NORSAR Subarra 22.09 348 P **P 00 46 06.9 -1.8**
comp=Z,173nm,1.2s,baz=160,slow=11
NB2 NORSAR Subarra 22.09 348 P **P 00 46 06.9 -1.8**
baz=160,slow=11
NOA NORSAR Array B 22.09 348 P **P 00 46 06.9 -1.8**
comp=Z,83nm,1.1s,baz=165,slow=11,SNR=90
NOA LR LR 00 55 49.7
comp=Z,1μm,20.7s,baz=165,slow=40
comp=Z,83nm,1.1s
NBO00 NORSAR Array S 22.16 347 P **P 00 46 08.2 -1.2**
NBO00 IAmb IAmb 00 46 21.4
comp=Z,88nm,0.9s
EKA Eskdalemuir Ar 22.22 322 P **P 00 46 08.9 -1.1**
comp=Z,28nm,0.7s,baz=121,slow=10,SNR=39
EKA LR LR 00 56 32.3
comp=Z,1μm,19.2s,baz=122,slow=41
comp=Z,28nm,0.7s
EKA Eskdalemuir Ar 22.22 322 P **P 00 46 09.0 -1.1**
ESK Eskdalemuir 22.23 322 P **P 00 46 09.2 -1.0**
ESK IAmb IAmb 00 46 11.8
comp=Z,46nm,0.8s
ESK Eskdalemuir 22.23 322 P **P 00 46 09.2 -1.0**
ESK pmax pmax
comp=Z,46nm,0.8s
ESK Eskdalemuir 22.23 322 ⇑P **P 00 46 09.4 -0.8**
EVO Evora 22.23 276 *e*P **P 00 46 11.3 +0.9**
comp=Z,30nm,2.0s
PBEJ Beja 22.23 275 *e*P **P 00 46 11.8 +1.4**
comp=Z,93nm,1.9s
COI Coimbra 22.24 281 *e*P **P 00 46 13.0 +2.6**
comp=Z,72nm,1.5s
COI Coimbra 22.24 281 P **P 00 46 10.9 +0.5**
COI IAmb IAmb 00 46 16.6
comp=Z,98nm,1.6s
COI Coimbra 22.24 281 P **P 00 46 10.9 +0.5**
COI pmax pmax
comp=Z,98nm,1.6s
PVAQ Vaqueiros 22.27 273 *e*P **P 00 46 11.6 +0.8**
comp=Z,124nm,1.8s
PVAQ *e*S **S 00 50 14.7 -0.5**
PVAQ Vaqueiros 22.27 273 P **P 00 46 08.9 -1.9**
PVAQ Vaqueiros 22.27 273 P **P 00 46 11.9 +1.1**
PVAQ Vaqueiros 22.27 273 ⇓P **P 00 46 10.0 -0.8**
PMTG Montargil 22.29 278 *e*P **P 00 46 11.8 +0.8**
comp=Z,44nm,1.4s
PMTG *e*S **S 00 50 16.4 +0.9**
SKAR Skarslia 22.31 344 *e*P **P 00 46 11.1 0.0**
SKAR IAmb IAmb 00 46 12.9
comp=Z,78nm,1.4s
PCAS Casmilo, Conde 22.33 280 *e*S **S 00 50 11.3 -5.0**
PCVE Castro Verde 22.46 274 *e*P **P 00 46 13.7 +0.9**
comp=Z,91nm,2.0s
PCVE *e*S **S 00 50 18.9 +0.1**
MESJ Messejana 22.55 274 *e*P **P 00 46 13.5 -0.3**
MESJ IAmb IAmb 00 46 16.1
comp=Z,180nm,1.7s
MESJ *e*S **S 00 50 19.2 -1.2**
MESJ Messejana 22.55 274 *e*P **P 00 46 14.8 +1.0**
comp=Z,100nm,1.9s
MESJ Messejana 22.55 274 *e*P **P 00 46 13.5 -0.3**
MESJ *e*S **S 00 50 19.2 -1.2**
MESJ Messejana 22.55 274 ⇑P **P 00 46 13.1 -0.7**
PSBE So Bento 22.64 279 *e*P **P 00 46 16.2 +1.4**
comp=Z,80nm,1.9s
PSBE *e*S **S 00 50 23.0 +0.9**
PNCL Nicolau / Gran 22.72 275 *e*P **P 00 46 17.2 +1.6**
comp=Z,97nm,1.8s
PNCL *e*S **S 00 50 25.4 +1.9**
BER Bergen 22.75 340 *e*P **P 00 46 17.9 +2.2**
DSB Dublin 22.81 315 P **P 00 46 15.1 -1.3**
DSB IAmb IAmb 00 46 19.6
comp=Z,93nm,1.1s
ASK Askoy 22.88 340 *e*P **P 00 46 17.8 +0.8**
ASK IAmb IAmb 00 46 19.6
comp=Z,85nm,1.1s
PTEO Sao Teotonio 23.01 274 *e*P **P 00 46 19.3 +0.7**
comp=Z,102nm,1.9s
MORF Marmelete 23.02 273 *e*P **P 00 46 18.6 -0.1**
MORF IAmb IAmb 00 46 19.9
comp=Z,109nm,1.7s
MORF *e*S **S 00 50 27.2 -1.5**
MORF Marmelete 23.02 273 *e*P **P 00 46 19.6 +0.9**
comp=Z,73nm,1.9s
MORF *e*S **S 00 50 30.5 +1.8**
MORF Marmelete 23.02 273 *e*P **P 00 46 18.6 -0.1**
MORF *e*S **S 00 50 27.2 -1.5**
PMAFR Mafra 23.12 278 *e*S **S 00 50 32.1 +1.7**
PFVI Vila Bisbo 23.20 273 *e*P **P 00 46 21.3 +0.8**
comp=Z,103nm,1.7s
PFVI *e*S **S 00 50 31.9 +0.2**
PFVI Vila Bisbo 23.20 273 P **P 00 46 19.7 -0.8**
PFVI IAmb IAmb 00 46 22.0
comp=Z,39nm,0.9s
HYA Hoyanger 23.22 342 *e*P **P 00 46 21.5 +1.0**
HYA IAmb IAmb 00 46 22.2
comp=Z,62nm,0.9s
DOMB Dombas 23.40 346 *e*P **P 00 46 22.5 +0.1**
DOMB IAmb IAmb 00 46 25.5
comp=Z,95nm,1.0s
AKN Aaknes 23.93 344 *e*P **P 00 46 27.7 +0.2**
AKN IAmb IAmb 00 46 29.2
comp=Z,24nm,0.8s
KLMR Klimovskoe 24.13 23 *e*P **P 00 46 27.0 -2.3**
KLMR S **S 00 50 43.6 -2.7**
KLMR pmax pmax
comp=Z,74nm,1.2s
KLMR MLR MLR
comp=Z,3μm,20.0s
KLMR Klimovskoe 24.13 23 *e*P **P 00 46 27.1 -2.3**
KLMR *e*P **P 00 46 27.1 -2.3**
KLMR *e*P **P 00 46 27.1 -2.3**
KLMR AMP 00 46 30.5
comp=Z,74nm,1.2s
KLMR S **S 00 50 43.6 -2.7**
KLMR S **S 00 50 43.6 -2.7**
KLMR LQ LQ 00 54 35.9

KLMR LQ LQ 00 54 35.9
KLMR LR LR 00 55 53.7
KLMR AMP 00 57 03.1
comp=Z,3μm,20.1s
MOL Molde 24.18 345 *e*P **P 00 46 30.4 +0.7**
TBLU Trondheim 24.33 349 *e*P **P 00 46 32.9 +1.8**
TBLU IAmb IAmb 00 46 34.4
comp=Z,72nm,1.3s
OUK Oukaimeden 24.67 259 P **P 00 46 39.0 +4.1**
KIRV Kirov 26.28 35 P **P 00 46 48.6 -0.2**
comp=Z,28nm,1.0s,baz=236,slow=13,SNR=9.8
KIRV LR LR 00 58 21.5
comp=Z,4μm,18.2s,baz=244,slow=39
comp=Z,28nm,1.0s
KIRV Kirov 26.28 35*ce*P **P 00 46 49.3 +0.5**
RAYN Ar Rayn 26.51 120 P **P 00 46 52.5 +1.2**
RAYN Ar Rayn 26.51 120 P **P 00 46 52.5 +1.2**
RAYN pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 26.51 120 *i* P **P 00 46 52.8 +1.5**
SNR=13
RAYN Ar Rayn 26.51 120 ⇑P **P 00 46 52.6 +1.2**
MOR8 Moi Rana 26.69 354 *e*P **P 00 46 54.8 +2.3**
PRGR Permogore 26.69 27 *e*P **P 00 46 52.8 +0.3**
PRGR pmax pmax
comp=Z,24nm,0.7s
KONS Konsvik 27.12 353 *e*P **P 00 46 54.8 -1.5**
FAUS Fauske 27.83 356 IAmb IAmb 00 47 05.0
comp=Z,33nm,1.3s
FAUS *e*P **P 00 47 05.0 +2.4**
AKTO Aktyubinsk 28.16 55 P **P 00 47 04.6 -1.3**
comp=Z,3.0nm,0.5s,baz=267,slow=13,SNR=11
AKTO LR LR 01 00 19.0
comp=Z,1μm,19.7s,baz=288,slow=41
comp=Z,3.0nm,0.5s
STEI Steigen 28.38 356 *e*P **P 00 47 05.2 -2.4**
STEI IAmb IAmb 00 47 08.7
comp=Z,118nm,1.8s
LOF Lofoten 28.69 354 *e*P **P 00 47 09.8 -0.5**
LOF IAmb IAmb 00 47 15.6
comp=Z,10nm,0.9s
APA Apatity 28.74 10 ⇓*i*P **P 00 47 06.0 -4.8**
APA pmax pmax
comp=Z,9.0nm,0.9s
GEYT Alibeck 29.10 81 P **P 00 47 13.6 -0.7**
comp=Z,2.4nm,0.4s,baz=282,slow=10,SNR=18
GEYT LR LR 01 01 40.2
comp=Z,576nm,21.1s,baz=290,slow=42
comp=Z,2.4nm,0.4s
GEYT Alibeck 29.10 81 P **P 00 47 14.3 -0.1**
GEYT IAmb IAmb 00 47 17.3
comp=Z,49nm,1.5s
GYA0 ALIBECK ARRAY 29.10 81 P **P 00 47 15.2 +0.9**
GYA0B ALIBECK ARRAY 29.10 81 P **P 00 47 14.1 -0.2**
GYA0B IAmb IAmb 00 47 17.2
comp=Z,51nm,1.6s
LVZ Lovozero 29.22 11 P **P 00 47 14.6 -0.5**
LVZ Lovozero 29.22 11 P **P 00 47 14.6 -0.5**
LVZ pmax pmax
comp=Z,237nm,2.0s
AB31 Akbulak array 29.29 58 *i* P **P 00 47 16.1 +0.3**
ABKAR Akbulak array 29.29 58 P **P 00 47 15.6 -0.2**
ABKAR Akbulak array 29.29 58 P **P 00 47 15.1 -0.8**
ABKAR IAmb IAmb 00 48 14.7
comp=Z,7.3nm,1.0s
ABKAR Akbulak array 29.29 58 ⇓P **P 00 47 16.8 +0.9**
KTK1 Kautokeino 29.34 2 *e*P **P 00 47 15.7 -0.4**
KTK1 IAmb IAmb 00 47 18.9
comp=Z,18nm,0.8s
ARU Arti 29.82 43 P **P 00 47 19.9 -0.6**
comp=Z,3.1nm,0.3s,baz=256,slow=4.7,SNR=12
ARU LR LR 01 01 11.6
comp=Z,876nm,21.3s,baz=248,slow=40
comp=Z,3.1nm,0.3s
ARU Arti 29.82 43 P **P 00 47 19.4 -1.1**
ARU Arti 29.82 43*ce*P **P 00 47 20.8 +0.3**
ARU pmax pmax
comp=Z,19nm,1.7s
ARU Arti 29.82 43 ⇑P **P 00 47 21.1 +0.6**
JETT Jettan, Norway 29.86 360 *e*P **P 00 47 20.9 +0.2**
JETT IAmb IAmb 00 47 21.1
comp=Z,28nm,0.9s
ARA0 ARCESS Array S 29.95 3 *e*P **P 00 47 19.7 -1.8**
ARA0 IAmb IAmb 00 47 22.6
comp=Z,15nm,0.8s
ARCES ARCESS Array B 29.95 3 P **P 00 47 19.5 -1.9**
comp=Z,9.9nm,0.5s,baz=188,slow=9.8,SNR=31
ARCES LR LR 01 00 18.2
comp=Z,2μm,18.9s,baz=182,slow=38
comp=Z,9.9nm,0.5s
ARCES ARCESS Array B 29.95 3 P **P 00 47 19.3 -2.2**
TRO Tromso 29.95 359 *e*P **P 00 47 18.9 -2.5**
TRO IAmb IAmb 00 47 30.7
comp=Z,88nm,1.6s
KEV Kevo 30.24 4 P **P 00 47 22.3 -1.8**
KEV Kevo 30.24 4 P **P 00 47 22.3 -1.8**
KEV pmax pmax
comp=Z,64nm,1.4s
HAMF Hammerfest 30.99 2 *e*P **P 00 47 30.9 +0.3**
SVE Sverdlovsk 31.03 43 ⇑*e*P **P 00 47 32.5 +1.3**
SVE *e*S **S 00 52 38.8 +3.5**
SVE pmax pmax
comp=Z,34nm,1.0s
SVE MLR MLR
comp=Z,2μm,14.0s
TOA0 Torodi Ar. Sit 31.34 217 P **P 00 47 33.7 -0.5**
TOA0 IAmb IAmb 00 47 54.5
comp=Z,24nm,0.9s
TORD Torodi Ar. Bea 31.34 217 P **P 00 47 33.7 -0.5**
comp=Z,13nm,0.7s,baz=31,slow=9.3,SNR=47
TORD LR LR 01 01 40.7
comp=Z,972nm,18.3s,baz=27,slow=39
comp=Z,13nm,0.7s
TORD Torodi Ar. Bea 31.34 217 P **P 00 47 33.5 -0.8**
TORD IAmb IAmb 00 47 54.5
comp=Z,22nm,1.1s
MZR Muzera 32.39 111 *i* P **P 00 47 44.2 +0.7**
SNR=9.7
MACI Morro de la Ar 32.66 261 P **P 00 47 46.1 0.0**
BANOM Banah 32.74 104 P **P 00 47 46.4 -0.2**
NAZ Nazwa, Dubai 32.80 106 *i* P **P 00 47 48.0 +1.0**
SNR=7.5
FAQ Al Faqa, Dubai 32.88 106 P **P 00 47 47.5 -0.3**
KOWA Kowa 33.19 228 LR LR 01 03 03.6
comp=Z,1μm,19.1s,baz=40,slow=40
KOWA Kowa 33.19 228 P **P 00 47 50.1 -0.4**
KOWA IAmb IAmb 00 48 07.2
comp=Z,30nm,1.6s
KOWA Kowa 33.19 228 ⇓P **P 00 47 51.5 +1.1**
UOSS Minazif 33.22 106 P **P 00 47 50.7 -0.1**
UOSS Minazif 33.22 106 P **P 00 47 49.7 -1.1**
UOSS Minazif 33.22 106 ⇓P **P 00 47 51.6 +0.8**
HATD Hatta, Dubai 33.24 106 P **P 00 47 50.2 -0.7**
ASHO Ashiyiah 33.27 106 *i* P **P 00 47 49.5 -1.6**
SNR=6.0
HRA Herat 33.39 86 P **P 00 47 52.3 -0.1**
JMIC Jan Mayen 34.66 344 LR LR 01 02 24.1
comp=Z,305nm,21.4s,baz=132,slow=37
BORG Borgarnes 34.79 330 LR LR 01 04 34.6
comp=Z,694nm,18.4s,baz=124,slow=40
BORG Borgarnes 34.79 330 P **P 00 48 04.3 +0.4**
BORG pmax pmax
comp=Z,87nm,1.7s
BRVK Borovoye 35.97 52 P **P 00 48 14.4 +0.2**
BRVK Borovoye 35.97 52*ce*P **P 00 48 13.8 -0.4**
BRVK pmax pmax
comp=Z,20nm,1.7s
BRVK Borovoye 35.97 52 ⇓P **P 00 48 15.0 +0.8**
WSAR Wadi Sarin 36.02 106 LR LR 01 06 51.4
comp=Z,434nm,20.0s,baz=337,slow=43
BVA0 Borovoye Array 36.03 52 *i* P **P 00 48 14.4 -0.4**
IUG Iuzhnay 36.95 70 *e*P **P 00 48 21.0 -1.8**
IUG Iuzhnay 36.95 70 *e*P **P 00 48 21.0 -1.8**
baz=70
KK31 Karatay Array 37.08 68 P **P 00 48 22.9 -1.0**
KK31 IAmb IAmb 00 48 26.8
comp=Z,20nm,0.8s
KK31 Karatay Array 37.08 68 P **P 00 48 22.9 -1.0**
KK31 pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 37.08 68 P **P 00 48 22.5 -1.4**
KKAR Karatay Array 37.08 68 P **P 00 48 22.6 -1.4**
KKAR IAmb IAmb 00 48 26.9
comp=Z,20nm,0.8s
KKAR Karatay Array 37.08 68 P **P 00 48 22.5 -1.4**
KKAR 00 48 22.6
KKAR pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 37.08 68 ⇓P **P 00 48 22.8 -1.1**
CHGR Chuyangaron 37.23 76 P **P 00 48 24.4 -0.9**
CHGR Chuyangaron 37.23 76 P **P 00 48 24.4 -0.9**
CHGR pmax pmax
comp=Z,37nm,0.8s
BRZS Berezniki 37.56 57 *e*P **P 00 48 25.4 -2.4**
BRZS Berezniki 37.56 57 *e*P **P 00 48 25.5 -2.4**
baz=57
DZA Taraz 37.72 68 *e*P **P 00 48 26.8 -2.4**
DZA Taraz 37.72 68 *e*P **P 00 48 26.9 -2.4**
baz=69
SCO Scoresbysund 37.75 338 IAmb IAmb 00 48 31.7
comp=Z,70nm,1.2s
SCO *i* P **P 00 48 32.0 +2.9**
GAR Garm 37.99 75 P **P 00 48 31.6 -0.1**
BTK Batken 38.06 73 P **P 00 48 31.4 -0.8**
BTK IAmb IAmb 00 48 34.4
comp=Z,31nm,1.1s
BTK Batken 38.06 73 P **P 00 48 31.4 -0.8**
BTK pmax pmax
comp=Z,31nm,1.2s
KBL Kabul 38.54 82 P **P 00 48 36.5 0.0**
KBL Kabul 38.54 82 P **P 00 48 36.5 0.0**
KBL pmax pmax
comp=Z,6.0nm,0.8s
LODK Lodwar 38.55 156 P **P 00 48 37.2 +0.7**
SPITS Spitsbergen Ar 38.57 359 LR LR 01 06 24.3
comp=Z,2μm,18.5s,baz=145,slow=39
DRK Karamyk 38.95 73 P **P 00 48 40.1 +0.1**
DRK IAmb IAmb 00 48 42.6
comp=Z,42nm,1.4s
EKS2 Erkin-Say 39.52 68 P **P 00 48 44.4 -0.2**
SNR=14
AML Almayashu 39.60 69 P **P 00 48 46.0 +0.5**
SNR=8.9
USP Ospenovka 39.89 67 P **P 00 48 48.2 +0.7**
SNR=9.6
SGDS Sogindy 39.94 67 *e*P **P 00 48 45.6 -2.3**
SGDS Sogindy 39.94 67 *e*P **P 00 48 45.6 -2.3**
baz=67
AAK Ala-Archa 40.04 68 P **P 00 48 51.0 +2.1**
SNR=12
AAK Ala-Archa 40.04 68 P **P 00 48 48.5 -0.4**
comp=Z,6.9nm,0.7s,baz=265,slow=8.1,SNR=30
AAK LR LR 01 10 04.0
comp=Z,891nm,18.6s,baz=288,slow=43
comp=Z,6.9nm,0.7s
AAK Ala-Archa 40.04 68 P **P 00 48 48.5 -0.4**
AAK IAmb IAmb 00 48 53.5
comp=Z,48nm,1.4s
AAK Ala-Archa 40.04 68*ce*P **P 00 48 47.9 -1.0**
AAK pmax pmax
comp=Z,52nm,1.7s
AAK Ala-Archa 40.04 68 *i* P **P 00 48 48.0 -1.0**
SNR=9.7
AAK Ala-Archa 40.04 68 ⇓P **P 00 48 50.7 +1.8**
CHMS Chumysh 40.13 67 P **P 00 48 51.0 +1.5**
SNR=7.5
DBIC Dimbokro 40.14 222 P **P 00 48 48.2 -1.5**
comp=Z,3.7nm,0.4s,baz=4.0,slow=8.5,SNR=16
DBIC LR LR 01 06 48.8
comp=Z,1μm,19.4s,baz=0.0,slow=38
comp=Z,3.7nm,0.4s
DBIC Dimbokro 40.14 222 P **P 00 48 49.0 -0.7**
DBIC Dimbokro 40.14 222 P **P 00 48 49.0 -0.7**
DBIC pmax pmax
comp=Z,15nm,1.1s
DBIC Dimbokro 40.14 222 ⇑P **P 00 48 51.1 +1.4**
UCH Uchtor 40.16 68 P **P 00 48 49.8 -0.4**
SNR=16
KBK Karagaybulak 40.36 68 P **P 00 48 53.5 +1.9**
SNR=9.1
TKM2 Tokmak 2 40.75 67 P **P 00 48 57.9 +3.1**
SNR=7.2
TKM2 Tokmak 2 40.75 67 *i* P **P 00 48 54.8 0.0**
TKM2 pmax pmax
comp=Z,9.0nm,1.2s
DAG Danmarks Havn 40.77 347 P **P 00 48 55.2 +0.9**
DAG Danmarks Havn 40.77 347 *i* P **P 00 48 54.0 -0.3**
DAG IAmb IAmb 00 48 55.9
comp=Z,8.2nm,0.9s
KUU Kurty 41.03 65 *e*P **P 00 48 55.2 -1.7**
KUU pmax pmax
comp=Z,44nm,1.2s
KUU Kurty 41.03 65 *e*P **P 00 48 55.3 -1.7**
comp=Z,44nm,1.2s,baz=66
BOOM Boomskoye usch 41.11 68 P **P 00 48 57.5 -0.3**
BOOM Boomskoye usch 41.11 68 P **P 00 48 57.5 -0.3**
BOOM pmax pmax
comp=Z,15nm,0.8s
KURBB Kurchatov Arra 41.22 55 P **P 00 48 56.5 -1.8**
comp=Z,4.0nm,1.0s,baz=280,slow=8.6,SNR=31
KURBB PcP **PcP 00 50 57.8 +0.8**
comp=Z,2.9nm,1.0s,baz=276,slow=4.7,SNR=4.7
KURBB PKiKP **PKiKP 00 58 04.8 +0.2**
comp=Z,1.6nm,0.8s,baz=279,slow=3.8,SNR=4.2
KURBB LR LR 01 09 35.3
comp=Z,612nm,18.3s,baz=261,slow=41
comp=Z,4.0nm,1.0s
MBAR Mbarara 41.22 165 LR LR 01 08 50.2
comp=Z,664nm,19.8s,baz=339,slow=40
MBAR Mbarara 41.22 165 P **P 00 48 58.8 0.0**
MBAR Mbarara 41.22 165 P **P 00 48 58.8 0.0**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
KURK Kurchatov 41.26 55 P **P 00 48 59.0 +0.3**
KURK Kurchatov 41.26 55 *i* P **P 00 48 58.2 -0.4**
KURK pmax pmax
comp=Z,21nm,1.4s
KURK Kurchatov 41.26 55 ⇑P **P 00 48 57.7 -0.9**
ULHL Ulahol 41.39 68 P **P 00 49 02.0 +1.9**
SNR=5.9
NRN Naryn 41.45 69 P **P 00 49 00.4 -0.3**
NRN IAmb IAmb 00 49 03.5
comp=Z,36nm,1.4s
NRN Naryn 41.45 69 P **P 00 49 00.4 -0.3**
NRN pmax pmax
comp=Z,36nm,1.4s
CHKK Chushkaly 41.50 65 *e*P **P 00 48 58.1 -2.6**
CHKK Chushkaly 41.50 65 *e*P **P 00 48 58.1 -2.6**
baz=66
AAA Alma-Ata 41.61 66 *e*P **P 00 48 59.9 -1.8**
AAA Alma-Ata 41.61 66 *e*P **P 00 48 60.0 -1.8**
baz=66
TNSS Tian-Shan 41.68 67 *e*P **P 00 49 01.1 -1.6**
TNSS Tian-Shan 41.68 67 *e*P **P 00 49 01.1 -1.6**
baz=67
MDOK Medeo 41.72 66 *e*P **P 00 49 01.5 -1.2**
MDOK Medeo 41.72 66 *e*P **P 00 49 01.6 -1.2**
baz=67
NIL Nilore 42.10 81 P **P 00 49 05.6 -0.2**
NIL Nilore 42.10 81 P **P 00 49 05.6 -0.2**
NIL pmax pmax
comp=Z,14nm,0.8s
TDK Taldyqorghan 42.20 63 *e*P **P 00 49 04.8 -1.6**
TDK Taldyqorghan 42.20 63 *e*P **P 00 49 04.8 -1.6**
baz=64
TARG Taragay, Kyrgy 42.65 68 P **P 00 49 09.0 -1.7**
TARG IAmb IAmb 00 49 12.1
comp=Z,40nm,1.2s
TARG Taragay, Kyrgy 42.65 68 P **P 00 49 09.0 -1.7**
TARG pmax pmax
comp=Z,41nm,1.2s
SATY Saty 42.70 66 *e*P **P 00 49 09.4 -1.3**
SATY pmax pmax
comp=Z,32nm,1.6s
SATY Saty 42.70 66 *e*P **P 00 49 09.4 -1.3**
comp=Z,32nm,1.6s,baz=66
KPKS Kokpek 42.79 65 *e*P **P 00 49 09.2 -2.1**
KPKS Kokpek 42.79 65 *e*P **P 00 49 09.2 -2.1**
baz=66
ICESG Greenland Ices 42.97 333 *i* P **P 00 49 12.6 -0.2**
ICESG IAmb IAmb 00 49 14.9
comp=Z,34nm,1.2s
UZB Uzynbulak 43.11 66 *e*P **P 00 49 12.6 -1.4**
UZB Uzynbulak 43.11 66 *e*P **P 00 49 12.6 -1.4**
baz=66
PDGK Podgornoye 43.39 65 P **P 00 49 14.8 -1.5**
SHLS Shalkode 43.42 66 *e*P **P 00 49 17.2 +0.7**
SHLS Shalkode 43.42 66 *e*P **P 00 49 17.2 +0.7**
baz=66
KMBO Kilima Mbogo 43.44 155 P **P 00 49 18.0 +1.0**
KMBO Kilima Mbogo 43.44 155 P **P 00 49 18.0 +1.0**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
NOR Nord 43.92 353 *i* P **P 00 49 19.5 -0.4**
NOR IAmb IAmb 00 49 21.5
comp=Z,20nm,1.0s
MAKZ Makanchi 44.18 60 P **P 00 49 21.9 -0.5**
MAKZ IAmb IAmb 00 49 24.4
comp=Z,27nm,0.9s
MAKZ Makanchi 44.18 60 P **P 00 49 21.9 -0.5**
MAKZ pmax pmax
comp=Z,27nm,1.0s
MAKZ Makanchi 44.18 60 ⇑P **P 00 49 21.8 -0.7**
MK31 Makanchi Array 44.40 60 P **P 00 49 23.3 -0.9**
MK31 IAmb IAmb 00 49 26.0
comp=Z,26nm,0.8s
MK31 Makanchi Array 44.40 60 P **P 00 49 23.3 -0.9**
MK31 pmax pmax
comp=Z,27nm,0.8s
MKAR Makanchi Array 44.40 60 P **P 00 49 22.6 -1.6**
comp=Z,24nm,0.6s,baz=280,slow=7.0,SNR=65
MKAR LR LR 01 10 19.2
comp=Z,891nm,19.1s,baz=286,slow=39
comp=Z,24nm,0.6s
MKAR Makanchi Array 44.40 60 P **P 00 49 23.0 -1.2**
ZAA0 Zalesovo Array 44.56 49 P **P 00 49 24.5 -0.9**
ZALV Zalesovo Beam 44.56 49 P **P 00 49 23.8 -1.6**
comp=Z,5.1nm,0.3s,baz=278,slow=8.3,SNR=18
ZALV LR LR 01 10 08.7
comp=Z,1μm,18.2s,baz=277,slow=39
comp=Z,5.1nm,0.3s
ZALV Zalesovo Beam 44.56 49 P **P 00 49 23.3 -2.1**
KIBK Kibwezi 44.84 155 P **P 00 49 28.0 0.0**
DY2G Dye2 45.19 329 *i* P **P 00 49 31.6 +1.1**
DY2G IAmb IAmb 00 49 32.9
comp=Z,72nm,1.2s
NRIK Noril'sk 45.34 27 P **P 00 49 31.4 +0.1**
comp=Z,19nm,0.9s,baz=260,slow=6.7,SNR=19
NRIK LR LR 01 11 00.0
comp=Z,3μm,20.1s,baz=266,slow=39
comp=Z,19nm,0.9s
NRIK Noril'sk 45.34 27 P **P 00 49 31.1 -0.2**
NRIK Noril'sk 45.34 27 *i* P **P 00 49 29.9 -1.4**
NRIK pmax pmax
comp=Z,42nm,1.1s
ZSN Zaisan 45.93 58 *e*P **P 00 49 34.1 -2.2**
ZSN pmax pmax
comp=Z,11nm,0.8s
ZSN Zaisan 45.93 58 *e*P **P 00 49 34.1 -2.2**
comp=Z,11nm,0.8s,baz=58
SFJD Kangerlussuaq 46.92 329 LR LR 01 10 06.9
comp=Z,1μm,21.3s,baz=84,slow=37
DGZ Jazzator, Alta 47.01 55 *i* P **P 00 49 42.6 -2.3**
DGZ pmax pmax
comp=Z,27nm,1.0s
NEEM North Greenlan 47.58 344 *i* P **P 00 49 48.7 -0.5**
NEEM IAmb IAmb 00 49 50.8
comp=Z,73nm,1.8s
NUUG Nuugaatsiaq 47.77 336 *i* P **P 00 49 51.9 +1.6**
WMQ Urumqi 48.91 62 ⇑P **P 00 50 00.9 +1.3**
WMQ pP sP 00 50 09.8 +2.8
WMQ pmax pmax
comp=Z,41nm,0.9s
WMQ LR LR
comp=Z,690nm,17.7s
WMQ LR LR
comp=Z,890nm,16.7s
WMQ LR LR
comp=Z,500nm,20.7s
DANN Dangsing 52.53 82 *e*P **P 00 50 27.0 -0.4**
comp=Z,54nm,1.1s
KOLN Koldanda 52.70 83 *e*P **P 00 50 26.2 -2.4**
GKN Gorkha 53.38 82 *e*P **P 00 50 32.5 -1.0**
comp=Z,7.3nm,0.4s
PKIN Phulchoki 54.17 82 *e*P **P 00 50 38.5 -1.0**
comp=Z,6.1nm,0.5s
PKI Pulchoki 54.18 82 *e*P **P 00 50 38.2 -1.4**
comp=Z,4.6nm,0.5s
GUN Gumba 54.37 81 *e*P **P 00 50 40.5 -0.5**
comp=Z,8.9nm,0.6s
HYBB Hyderabad (bro 54.50 97 *e*P **P 00 50 42.1 +0.4**
HYBB *e*pP **pP 00 50 46.4 -0.6**
JIRN Jiri 54.73 81 *e*P **P 00 50 42.7 -1.0**
comp=Z,7.4nm,0.5s
FRB Frobisher Bay 54.88 327 LR LR 01 15 23.5
comp=Z,1μm,19.3s,baz=46,slow=37
LSZ Lusaka 55.20 171 LR LR 01 17 56.2
comp=Z,353nm,19.1s,baz=356,slow=40
LSZ Lusaka 55.20 171 P **P 00 50 46.8 +0.1**
LSZ IAmb IAmb 00 52 38.6
comp=Z,30nm,1.9s
LSZ Lusaka 55.20 171 P **P 00 50 46.8 +0.1**
LSZ pmax pmax
comp=Z,30nm,1.9s
ZAK Zakamensk 56.44 50 *e*P **P 00 50 55.9 +0.6**
ZAK pmax pmax
comp=Z,13nm,1.4s
ZOMB Zomba 56.55 163 ⇓P **P 00 50 56.0 -0.2**
GOMU GeErMu 56.99 68 P **P 00 51 01.0 +1.3**
GOMU pP sP 00 51 06.4 -0.7
GOMU sP pP 00 51 08.3 +3.2
GOMU S **S 00 58 57.3 +3.6**
GOMU sS sS 00 59 06.4 +3.8
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,54nm,4.4s
GOMU LR LR
comp=Z,220nm,17.1s
GOMU LR LR
comp=Z,400nm,16.7s
GOMU LR LR
comp=Z,230nm,19.8s
PCHI Peechi 57.11 105 *e*P **P 00 50 59.1 -1.3**
PCHI *e*S **S 00 58 54.1 -0.9**
SCHQ Schefferville 57.38 317 P **P 00 51 00.3 -1.4**
comp=Z,6.4nm,0.7s,baz=72,slow=7.0,SNR=8.8
SCHQ LR LR 01 13 26.7
comp=Z,382nm,21.5s,baz=71,slow=34
comp=Z,6.4nm,0.7s
SCHQ Schefferville 57.38 317 P **P 00 51 00.7 -1.0**
SCHQ IAmb IAmb 00 51 18.5
comp=Z,37nm,1.6s
SCHQ Schefferville 57.38 317 ⇑P **P 00 51 03.1 +1.4**
TIXI Tiksi 58.13 21 LR LR 01 20 06.7
comp=Z,2μm,18.2s,baz=356,slow=40
TIXI Tiksi 58.13 21 P **P 00 51 06.3 -0.5**
TIXI IAmb IAmb 00 51 09.5
comp=Z,24nm,1.2s
TIXI Tiksi 58.13 21*c i*P **P 00 51 07.8 +1.1**
TIXI pmax pmax
comp=Z,28nm,1.4s
TIXI Tiksi 58.13 21 ⇑P **P 00 51 08.2 +1.4**
RES Resolute Bay 58.28 344 LR LR 01 18 01.8
comp=Z,461nm,18.5s,baz=32,slow=38
TSUM Tsumeb 58.73 183 LR LR 01 17 25.2
comp=Z,562nm,20.7s,baz=358,slow=37
GTA Gaotai 58.99 63 *e*P **P 00 51 14.3 +0.9**
GTA pP sP 00 51 22.3 +1.5
GTA sP pP 00 51 27.1 +8.3
GTA pmax pmax
comp=Z,17nm,0.9s
GTA pmax pmax
comp=Z,65nm,6.2s
GTA LR LR
comp=Z,320nm,21.4s
GTA LR LR
comp=Z,430nm,22.9s
GTA LR LR
comp=Z,620nm,24.0s
BOD Bodaibo 59.06 39 *e*P **P 00 51 13.6 +0.2**
BOD pmax pmax
comp=Z,19nm,0.8s
SONM Songino Array 59.38 51 P **P 00 51 15.1 -0.9**
comp=Z,17nm,1.0s,baz=289,slow=6.4,SNR=44
SONM LR LR 01 19 34.6
comp=Z,995nm,19.4s,baz=291,slow=39
comp=Z,17nm,1.0s
SONM Songino Array 59.38 51 P **P 00 51 15.1 -0.9**
SONM Songino Array 59.38 51 P **P 00 51 15.1 -0.9**
SONM pmax pmax
comp=Z,27nm,1.1s
ULN Ulaanbaatar 59.76 51 P **P 00 51 17.9 -0.7**
ULN IAmb IAmb 00 51 20.6
comp=Z,16nm,1.0s
ULN Ulaanbaatar 59.76 51 *i* P **P 00 51 17.3 -1.4**
ULN pmax pmax

comp=Z,18nm,1.0s
ULN Ulaanbaatar 59.76 51 P P 00 51 17.2 -1.4
comp=Z,66nm,1.0s
BATG Bathurst New B 60.22 308 P P 00 51 21.4 -0.3
PALK Pallekele 62.49 104 P P 00 51 36.8 -0.6
comp=Z,5.4nm,0.8s,baz=306,slow=17,SNR=1.8
PALK LR LR 01 21 43.4
comp=Z,201nm,20.5s,baz=59,slow=39
comp=Z,5.4nm,0.8s
PALK Pallekele 62.49 104 P P 00 51 37.2 -0.2
PALK Pallekele 62.49 104 P P 00 51 37.2 -0.2
PALK pmax pmax
comp=Z,36nm,1.4s
PKME Peaks-Kenny Pk 63.16 308 P P 00 51 42.9 +1.5
baz=60
LZH Lanzhou 63.41 64 ⇓P P 00 51 44.5 +1.1
LZH pP sP 00 51 50.8 -0.1
LZH sP pP 00 51 53.8 +4.9
LZH pmax pmax
comp=Z,40nm,1.5s
LZH LR LR
comp=Z,340nm,12.4s
LZH LR LR
comp=Z,380nm,15.1s
LZH LR LR
comp=Z,390nm,14.4s
YAK Yakutsk 63.68 30 LR LR 01 22 51.5
comp=Z,2μm,18.6s,baz=272,slow=39
YAK Yakutsk 63.68 30 P P 00 51 44.5 0.0
YAK Yakutsk 63.68 30 *e*P P 00 51 44.5 0.0
YAK pmax pmax
comp=Z,44nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,15nm,1.1s
LBTB Lobatse 64.61 175 LR LR 01 22 39.3
comp=E,899nm,18.2s,baz=360,slow=38
LBTB Lobatse 64.61 175 P P 00 51 51.5 +0.4
LBTB IAmb IAmb 00 51 54.5
comp=Z,19nm,1.2s
LBTB Lobatse 64.61 175 P P 00 51 51.5 +0.4
LBTB pmax pmax
comp=Z,19nm,1.2s
LBNH Lisbon 65.30 308 P P 00 51 56.0 +0.5
baz=58
A36M Sachs Harbour 65.99 349 P P 00 52 00.1 +0.6
baz=28
HRV Adam Dziewonsk 65.99 306 P P 00 52 01.5 +1.5
baz=57
VOI Vohitsoka 66.03 153 P P 00 52 00.2 -0.2
HHC Hu-ho-hao-te 66.06 56 *e*P P 00 52 01.3 +0.7
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.8s
HHC LR LR
comp=Z,740nm,14.6s
HHC LR LR
comp=Z,1μm,14.6s
HHC LR LR
comp=Z,2μm,14.0s
CD2 Chengdu 66.09 69 *e*P P 00 52 00.0 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HIA Hailar 66.32 45 P P 00 52 03.0 +1.0
HIA IAmb IAmb 00 52 04.4
comp=Z,19nm,1.2s
HIA Hailar 66.32 45 P P 00 52 03.0 +1.0
HIA pmax pmax
comp=Z,19nm,1.2s
LONY Lake Ozonia 66.69 309 P P 00 52 05.6 +1.1
baz=57
L61B Northampton 66.72 306 P P 00 52 05.7 +1.0
baz=57
PZH PanZhiHua 67.06 74 P P 00 52 08.3 +1.1
PZH S **S 01 00 58.3 -2.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,160nm,5.3s
PZH LR LR
comp=Z,620nm,22.8s
PZH LR LR
comp=Z,1μm,23.1s
PZH LR LR
comp=Z,1μm,23.3s
XLT XiLinHaoTe 67.20 51 *e*P P 00 52 09.0 +1.2
XLT pP sP 00 52 15.5 +0.2
XLT sP pP 00 52 18.8 +5.6
XLT PcP **PcP 00 52 35.5 -0.2**
XLT S **S 01 01 05.4 +3.6**
XLT sS sS 01 01 16.3 +5.4
XLT ScS **SKSac 01 01 59.8 -4.8**
XLT pmax pmax
comp=Z,21nm,0.8s
XLT LR LR
comp=Z,590nm,17.7s
XLT LR LR
comp=Z,800nm,16.4s
ZEA Zeya 67.56 38 *e*P P 00 52 11.5 +1.7
ZEA pmax pmax
comp=Z,10.0nm,1.1s
XAN Xi'an 68.01 64 ⇑P P 00 52 12.9 -0.2
XAN pP sP 00 52 26.6 +6.0
XAN pmax pmax
comp=Z,17nm,1.3s
XAN LR LR
comp=Z,360nm,15.9s
XAN LR LR
comp=Z,470nm,15.2s
XAN LR LR
comp=Z,610nm,18.7s
C36M Paulatuk 68.14 347 P P 00 52 14.4 +1.2
baz=29
BOSA Boshof 68.16 176 P P 00 52 13.5 -0.4
comp=Z,6.4nm,0.9s,baz=4.9,slow=7.2,SNR=9.5
BOSA LR LR 01 25 05.2
comp=Z,1μm,18.1s,baz=2.5,slow=39
comp=Z,6.4nm,0.9s
BOSA Boshof 68.16 176 P P 00 52 14.2 +0.4
PAL Palisades 68.29 306 P P 00 52 15.7 +1.2
baz=56
BINY Binghamton 68.89 308 P P 00 52 19.3 +0.9
baz=55
RCBR Riachuelo 69.00 243 LR LR 01 22 51.3
comp=Z,579nm,20.3s,baz=186,slow=36
SADO Sadowa 69.29 311 LR LR 01 21 51.2
comp=Z,271nm,20.7s,baz=24,slow=35
BJI Beijing 69.43 55 P P 00 52 22.3 +0.6
BJI pmax pmax
comp=Z,13nm,1.0s
BJI LR LR
comp=Z,88nm,17.3s
BJI LR LR
comp=Z,310nm,15.5s
BJT Baijiatuau 69.44 55 P P 00 52 22.2 +0.4
BJT IAmb IAmb 00 52 23.2
comp=Z,10nm,0.8s
BJT Baijiatuau 69.44 55 P P 00 52 22.2 +0.4
BJT pmax pmax
comp=Z,10.0nm,0.8s
BILL Bilibino 69.45 13 *e*P P 00 52 21.2 -0.2
BILL *e* 00 52 43.2
BILL *e* 00 54 54.1
BILL *e*S **S 01 01 26.2 -1.4**
BILL *e*SS **SS 01 05 55.1 +1.3**
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,187nm,18.0s
CMAR Chiang Mai Arr 69.57 83 P P 00 52 20.2 -2.7
comp=Z,1.1nm,0.5s,baz=300,slow=7.9,SNR=11
CMAR LR LR 01 28 19.2
comp=Z,109nm,21.8s,baz=290,slow=41
comp=Z,1.1nm,0.5s
CMAR Chiang Mai Arr 69.57 83 P P 00 52 22.4 -0.5
CMAR Chiang Mai Arr 69.57 83 P P 00 52 22.4 -0.5
HNS HongShan 70.00 58 ⇓P P 00 52 26.0 +0.7
HNS PP **PP 00 54 58.8 -1.0**
HNS S **S 01 01 32.9 -2.2**
HNS pmax pmax
comp=Z,18nm,1.1s
HNS LR LR
comp=Z,290nm,12.6s
HNS LR LR
comp=Z,470nm,11.9s
HNS LR LR
comp=Z,520nm,15.9s
LYN LuoYang 70.15 61 *e*P P 00 52 26.8 +0.6
LYN SS SS 01 06 05.6 -0.6
LYN LR LR
comp=Z,420nm,14.8s
LYN LR LR
comp=Z,290nm,17.7s
C27K Jago River 70.32 354 P P 00 52 28.1 +1.4
baz=13
INK Inuvik 70.52 350 LR LR 01 25 36.1
comp=Z,280nm,21.4s,baz=16,slow=38
INK Inuvik 70.52 350 P P 00 52 28.6 +0.6
baz=21
C23K Itkillik River 70.53 357 P P 00 52 29.1 +1.1
baz=7.2
ENH Enshi 70.54 67 P P 00 52 28.5 -0.3
C24K Franklin Bluff 70.55 356 P P 00 52 29.1 +1.0
baz=8.7
SEY Seymchan 70.62 21 *i*P P 00 52 26.0 -2.6
SEY pmax pmax
comp=Z,21nm,1.4s
GYA Guiyang 70.70 71 ⇑P P 00 52 30.0 +0.1
GYA pmax pmax
comp=Z,17nm,1.2s
D25K Kavik River 70.81 355 P P 00 52 31.0 +1.2
baz=11
SSPA Standing Stone 70.97 307 P P 00 52 32.5 +1.4
baz=54
D24K Happy Valley 71.12 356 P P 00 52 33.2 +1.7
baz=8.6
ERPA Erie 71.35 309 P P 00 52 34.9 +1.5
baz=53
F31M Tsiigehtchic 71.36 350 P P 00 52 34.0 +1.0
baz=21
D23K Nanushuk River 71.40 357 P P 00 52 35.3 +2.0
baz=7.1
E27K Coleen River 71.55 353 P P 00 52 35.0 +0.8
baz=14
TOLK Toolik Lake Re 71.67 356 P P 00 52 35.8 +0.8
TOLK Toolik Lake Re 71.67 356 P P 00 52 36.9 +1.9
baz=8.0
SUR Sutherland 71.78 180 LR LR 01 26 44.7
comp=Z,1μm,18.0s,baz=359,slow=38
SUR Sutherland 71.78 180 P P 00 52 36.4 +0.2
E25K Arctic Village 71.94 355 P P 00 52 37.6 +1.0
baz=11
YKA Yellowknife Ar 71.94 340 P P 00 52 36.0 -0.6
comp=Z,6.9nm,1.0s,baz=38,slow=6.0,SNR=8.5
YKA LR LR 01 26 18.7
comp=Z,295nm,18.5s,baz=55,slow=38
comp=Z,6.9nm,1.0s
YKA Yellowknife Ar 71.94 340 P P 00 52 36.0 -0.6
CBN Corbin Frederi 72.09 305 P P 00 52 38.6 +0.6
baz=53
G30M tAoh Zraii Nji 72.12 351 P P 00 52 38.5 +0.7
baz=19
E24K Your Creek 72.17 356 P P 00 52 38.8 +0.8
baz=8.8
M53A WI Miller and 72.17 309 P P 00 52 38.9 +0.4
baz=52
F26K Sheenjek River 72.25 354 P P 00 52 39.2 +0.8
baz=12
E23K Chandalar 72.25 356 P P 00 52 39.1 +0.6
baz=7.9
E22K Anaktuvuk Pass 72.28 357 P P 00 52 39.2 +0.5
baz=6.1
GLMI Grayling 72.36 314 P P 00 52 40.1 +0.6
baz=51
F25K Christian Rive 72.46 355 P P 00 52 40.4 +0.6
baz=11
BMAR Burnt Mountain 72.55 354 P P 00 52 40.5 +0.2
KLR Kul'dur 72.59 40 P P 00 52 39.9 -0.8
comp=Z,3.3nm,0.8s,baz=309,slow=6.4,SNR=9.1
KLR LR LR 01 27 23.3
comp=Z,594nm,19.5s,baz=312,slow=38
comp=Z,3.3nm,0.8s
KLR Kul'dur 72.59 40 *i*P P 00 52 41.5 +0.8
KLR pmax pmax
comp=Z,9.0nm,1.4s
BNX BinXian 72.59 45 ⇓P P 00 52 41.4 +0.6
BNX pmax pmax
comp=Z,12nm,0.9s
BNX pmax pmax
comp=Z,140nm,5.9s
F24K Squaw Lake 72.69 355 P P 00 52 42.1 +1.0
baz=9.3
Q56A Snyder Ridge, 72.72 307 P P 00 52 41.3 -0.5
CN2 Changchun 72.73 47 P P 00 52 42.3 +0.7
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,900nm,15.0s
CN2 LR LR
comp=Z,1μm,16.0s
MCWV Mont Chateau 72.75 307 P P 00 52 42.0 +0.1
MCWV Mont Chateau 72.75 307 P P 00 52 42.4 +0.5
baz=52
EPYK Eagle Plains 72.77 351 P P 00 52 41.2 -0.4
EPYK IAmb IAmb 00 53 09.4
comp=Z,27nm,1.3s
EPYK Eagle Plains 72.77 351 P P 00 52 42.1 +0.5
baz=18
MA2 Magadan 72.80 24 LR LR 01 29 15.3
comp=Z,1μm,18.1s,baz=324,slow=40
MA2 Magadan 72.80 24 P P 00 52 41.9 +0.1
MA2 Magadan 72.80 24 *i*P P 00 52 42.0 +0.1
MA2 pmax pmax
comp=Z,53nm,1.1s
G27K Doyon Strip 72.89 353 P P 00 52 43.3 +1.0
baz=14,SNR=6.7
F22K John River 72.92 357 P P 00 52 43.7 +1.3
baz=5.8
G26K Porcupine Rive 72.95 354 P P 00 52 43.8 +1.3
baz=12,SNR=9.4
O53A New Philadelph 73.22 309 P P 00 52 45.5 +0.8
baz=52
F21K Alatna River 73.25 358 P P 00 52 45.3 +0.9
baz=4.8
G25K Bearman Lake 73.31 355 P P 00 52 46.1 +1.4
baz=11
AAM Ann Arbor 73.39 311 P P 00 52 46.6 +1.0
baz=51
WRGLY Wrigley 73.43 344 P P 00 52 46.7 +1.2
baz=28,SNR=5.1
H27K Steamboat Moun 73.44 353 P P 00 52 46.5 +1.0
baz=14,SNR=7.3
G22K Bettles 73.47 357 P P 00 52 46.3 +0.6
baz=6.3
G24K Hadweenzic Riv 73.47 355 P P 00 52 46.7 +1.0
baz=9.6
G23K Bananza Creek 73.61 356 P P 00 52 47.7 +1.1
baz=7.5
GRNR Gornyy 73.78 37 ⇑*i*P P 00 52 48.9 +1.2
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=N,580nm,16.0s
GRNR MLR MLR
comp=Z,1μm,15.0s
GRNR MLR MLR
comp=E,800nm,16.0s
H25K Birch Creek 73.79 354 P P 00 52 49.1 +1.6
baz=11,SNR=6.9
I29M Ogilvie Camp, 73.93 351 P P 00 52 49.6 +1.2
baz=17,SNR=9.3
G21K Allakaket 73.96 358 P P 00 52 49.4 +0.9
baz=4.7,SNR=7.6
EYMN Ely 73.97 320 P P 00 52 49.8 +0.9
baz=48
I27K Kandik River 74.06 352 P P 00 52 50.4 +1.2
baz=14,SNR=8.1
ACSO Alum Creek Sta 74.29 309 P P 00 52 52.0 +1.0
baz=51
H24K Noodor Dome 74.36 355 P P 00 52 51.5 +0.6
baz=9.2
H23K Yukon River 74.47 356 P P 00 52 52.8 +1.2
baz=7.9,SNR=6.1
ULM Lac du Bonnet 74.49 323 P P 00 52 52.6 +0.7
comp=E,10nm,0.8s,baz=36,slow=9.8,SNR=7.5
ULM LR LR 01 25 09.8
comp=E,718nm,22.0s,baz=42,slow=35
comp=E,10nm,0.8s
ULM Lac du Bonnet 74.49 323 P P 00 52 51.9 0.0
ULM IAmb IAmb 00 52 54.1
comp=Z,16nm,0.9s
ULM Lac du Bonnet 74.49 323 P P 00 52 51.9 0.0
ULM pmax pmax
comp=Z,16nm,1.0s
H22K Ishtalitna Cre 74.49 357 P P 00 52 53.3 +1.6
baz=6.4,SNR=11
IMAR Indian Mountai 74.50 358 P P 00 52 51.7 0.0
PRP Porcupine Dome 74.50 354 P P 00 52 52.4 +0.5
baz=11
I26K Coal Creek Min 74.50 353 P P 00 52 51.5 -0.2
I26K Coal Creek Min 74.50 353 P P 00 52 53.1 +1.4
baz=13
BLA Blacksburg 74.61 306 P P 00 52 54.7 +1.8
baz=52
H21K Melozitna Rive 74.79 357 P P 00 52 55.4 +2.0
baz=5.3,SNR=16
J29M Klondike Camp 74.79 351 P P 00 52 53.5 0.0
J29M IAmb IAmb 00 52 56.9
comp=Z,24nm,1.2s
POKR Poker Plat Res 75.04 355 P P 00 52 56.0 +1.2
POKR IAmb IAmb 00 52 58.0
comp=Z,31nm,1.4s
POKR Poker Plat Res 75.04 355 P P 00 52 56.1 +1.2
baz=9.5
O49A Covington 75.12 310 P P 00 52 54.6 -1.1
O49A IAmb IAmb 00 52 57.5
comp=Z,15nm,0.9s
I23K Minto, Yukon-K 75.13 356 P P 00 52 56.6 +1.3
baz=8.0
I21K Tanana 75.23 357 P P 00 52 56.0 0.0
I21K Tanana 75.23 357 P P 00 52 57.8 +1.9
baz=5.9
MDM Murphy Dome 75.25 355 P P 00 52 55.6 -0.5
MDM IAmb IAmb 00 52 59.1
comp=Z,19nm,1.1s
K29M Barlow Dome 75.29 350 P P 00 52 57.4 +0.9
baz=17
DAWY Dawson 75.31 351 P P 00 52 56.0 -0.4
DAWY IAmb IAmb 00 52 59.5
comp=Z,18nm,0.9s
DAWY Dawson 75.31 351 P P 00 52 57.5 +1.0
baz=16,SNR=10.0
DAWY Dawson 75.31 351 ⇑P P 00 52 56.2 -0.2
MLY Manley 75.33 356 P P 00 52 58.3 +1.8
baz=6.9,SNR=6.1
J26L Joseph Creek 75.33 353 P P 00 52 56.0 -0.6
J26L Joseph Creek 75.33 353 P P 00 52 58.4 +1.8
baz=12,SNR=8.5
IL31 75.34 355 P P 00 52 56.2 -0.3
IL31 IAmb IAmb 00 54 57.1
comp=Z,26nm,1.9s
ILAR Eielson Array 75.34 355 P P 00 52 56.6 0.0
comp=Z,2.6nm,0.9s,baz=1.0,slow=5.3,SNR=21
ILAR LR LR 01 27 50.8
comp=Z,300nm,19.9s,baz=352,slow=37
comp=Z,2.6nm,0.9s
ILAR Eielson Array 75.34 355 P P 00 52 56.5 -0.1
J25K Salcha River, 75.38 354 P P 00 52 58.6 +1.7
baz=11
MMPY Sheldon Lake, 75.50 347 P P 00 52 59.6 +2.0
baz=22,SNR=6.9
O48B Farmland 75.56 311 P P 00 52 59.3 +1.0
baz=50
K27K Chicken 75.65 352 P P 00 52 58.8 +0.4
K27K Chicken 75.65 352 P P 00 52 59.4 +1.1
baz=14,SNR=11
NEA2 Nenana 75.67 355 P P 00 52 59.2 +0.8
baz=8.2,SNR=5.5
HDA Harding Lake 75.71 354 P P 00 52 58.0 -0.7
HDA IAmb IAmb 00 53 01.1
comp=Z,16nm,1.0s
HDA Harding Lake 75.71 354 P P 00 52 59.6 +0.9
baz=9.9,SNR=8.3
WRH Wood River Hil 75.72 355 P P 00 52 58.2 -0.6
WRH IAmb IAmb 00 53 01.3
comp=Z,20nm,1.1s
P49A Miami Univ. Ec 75.77 310 P P 00 53 00.2 +0.7
baz=50
GCSA Galena City Sc 75.81 359 P P 00 53 00.6 +1.4
baz=2.0
AGMN Agassiz Nation 75.85 322 P P 00 53 00.2 +0.4
baz=45
SCRK Sand Creek 75.89 353 P P 00 52 59.5 -0.4
SCRK IAmb IAmb 00 53 03.3
comp=Z,34nm,1.8s
SCRK Sand Creek 75.89 353 P P 00 53 00.6 +0.7
baz=12,SNR=6.4
L44A Lake County Fo 75.89 313 P P 00 53 00.4 +0.2
baz=49
ANM Nome 75.90 3 P P 00 53 00.6 +0.8
baz=355
NJ2 Nanjing 75.93 60 *e*P P 00 53 01.8 +1.3
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
TGTN Hyland Airport 75.95 345 P P 00 53 01.0 +0.8
baz=24
USRK Ussuriysk Ar. 76.06 44 P P 00 52 59.7 -1.3
comp=Z,6.3nm,0.8s,baz=296,slow=4.0,SNR=6.3
USRK LR LR 01 30 02.8
comp=Z,645nm,19.5s,baz=316,slow=38
comp=Z,6.3nm,0.8s
USRK Ussuriysk Ar. 76.06 44 P P 00 53 01.2 +0.2
L29M L29M 76.08 350 P P 00 53 02.1 +1.3
baz=17,SNR=6.3
GCPR Guaynabo City 76.08 282 P P 00 53 00.9 -0.7
GCPR IAmb IAmb 00 53 21.1
comp=Z,20nm,1.1s
RIDG Independent Ri 76.20 353 P P 00 53 02.6 +1.0
baz=12,SNR=5.8
FARO Faro, Yukon 76.21 348 P P 00 53 03.3 +1.7
baz=20
K24K Donnelly Dome 76.21 354 P P 00 53 02.7 +1.1
baz=11
DOT Dot Lake 76.21 353 P P 00 53 00.1 -1.5
DOT IAmb IAmb 00 53 04.9
comp=Z,20nm,1.2s
SJG San Juan 76.25 282 LR LR 01 22 45.5
comp=Z,90nm,21.7s,baz=70,slow=33
BPAW Bear Paw Mtn. 76.27 356 P P 00 53 03.0 +1.1
baz=6.7
KOTAN Kotaneelee Air 76.31 343 P P 00 53 03.3 +1.1
baz=27
J20K Nowinta River 76.32 358 P P 00 53 01.3 -0.9
J20K IAmb IAmb 00 53 04.8
comp=Z,11nm,0.9s
J20K Nowinta River 76.32 358 P P 00 53 03.4 +1.3
baz=4.2,SNR=5.5
GAMB Gambell 76.33 6 P P 00 53 03.6 +1.4
baz=350
M31M Drury Creek, Y 76.40 348 P P 00 53 04.2 +1.5
baz=20,SNR=6.1
SPMN Marine on St. 76.48 318 P P 00 53 04.6 +1.2
baz=47
KMSC Kings Mountain 76.48 304 P P 00 53 04.0 +0.4
baz=51
MCK McKinley 76.51 355 P P 00 53 04.7 +1.4
baz=8.3,SNR=7.5
CHUM Lake Minchumin 76.55 357 P P 00 53 05.0 +1.6
baz=5.6
BCAR Beaver Creek A 76.56 352 P P 00 53 03.6 0.0
L27K Beaver Creek, 76.56 352 P P 00 53 03.7 0.0
L27K IAmb IAmb 00 53 07.1
comp=Z,18nm,1.1s
L27K Beaver Creek, 76.56 352 P P 00 53 04.7 +1.0
baz=14,SNR=9.1
SFIN Lafayette 76.61 312 P P 00 53 04.8 +0.6
baz=49
JFWS Jewell Farm 76.69 315 P P 00 53 05.0 +0.3
baz=48
L26K Log Cabin Wild 76.76 353 P P 00 53 05.8 +1.1
baz=13
M29M Somme Creek 76.76 350 P P 00 53 05.8 +0.9
baz=16,SNR=13
TRF Thorofare Moun 76.88 356 P P 00 53 06.6 +1.0
baz=7.2
TZTN Tazewell 76.98 307 P P 00 53 07.6 +1.2
baz=50
CAST Castle Rocks 77.00 357 P P 00 53 05.7 -0.4
CAST IAmb IAmb 00 54 34.5
comp=Z,25nm,1.6s
CAST Castle Rocks 77.00 357 P P 00 53 07.2 +1.2
baz=5.8,SNR=5.3
PAX Paxson 77.01 354 P P 00 53 06.6 +0.4
baz=11
NHSC New Hope 77.02 302 P P 00 53 07.9 +1.3
baz=51
DHY Denali Highway 77.06 354 P P 00 53 05.3 -1.3

DHY			IAmb	IAmb	00 53 09.2
	comp=Z,16nm,0.9s				
DHY	**Denali Highway**	**77.06 354**	P	**P**	**00 53 07.4 +0.8**
	baz=9.5,SNR=8.0				
BVCY	**Beaver Creek**	**77.08 351**	P	**P**	**00 53 07.6 +1.0**
	baz=14,SNR=5.2				
K20K	**Telida**	**77.14 358**	P	**P**	**00 53 07.9 +1.1**
	baz=4.2,SNR=5.0				
N32M	**Quiet Lake**	**77.18 347**	P	**P**	**00 53 08.3 +1.1**
	baz=20				
M27K	**Edge Creek, AK**	**77.25 352**	P	**P**	**00 53 09.1 +1.4**
M27K			IAmb	IAmb	00 53 11.4
	comp=Z,21nm,1.3s				
M27K	**Edge Creek, AK**	**77.25 352**	P	**P**	**00 53 09.0 +1.4**
	baz=14				
N31M	**Braeburn, Yuko**	**77.30 349**	P	**P**	**00 53 09.0 +1.3**
	baz=18				
M26K	**Nabesna, AK**	**77.33 352**	P	**P**	**00 53 08.5 +0.6**
	baz=13,SNR=5.2				
WTLY	**Watson Lake, Y**	**77.35 345**	P	**P**	**00 53 08.4 +0.3**
	baz=24				
N30M	**Aishikik Lake**	**77.52 349**	P	**P**	**00 53 10.6 +1.6**
	baz=17				
PPLA	**Purkeypile**	**77.53 357**	P	**P**	**00 53 08.5 -0.7**
PPLA			IAmb	IAmb	00 53 18.6
	comp=Z,13nm,0.8s				
PPLA	**Purkeypile**	**77.53 357**	P	**P**	**00 53 09.9 +0.7**
	baz=5.7				
WCI	**Wyandotte Cave**	**77.55 310**	P	**P**	**00 53 11.4 +1.8**
WCI			pmax	pmax	
	comp=Z,11nm,0.8s				
WCI	**Wyandotte Cave**	**77.55 310**	P	**P**	**00 53 10.3 +0.7**
	baz=49				
WAT6	**Susitna Watana**	**77.58 355**	P	**P**	**00 53 10.4 +0.9**
	baz=9.2				
TTA	**Tatalina**	**77.62 358**	P	**P**	**00 53 10.8 +1.3**
	baz=2.7				
YUK3	**Moose Creek**	**77.66 351**	P	**P**	**00 53 11.0 +1.0**
	baz=15,SNR=8.7				
TKL	**Tuckaleechee C**	**77.69 306**	LR	LR	01 27 22.1
	comp=Z,319nm,21.2s,baz=54,slow=36				
HDIL	**Hopedale**	**77.75 313**	P	**P**	**00 53 11.7 +1.0**
	baz=48				
YUK4	**Talbot Arm**	**77.84 350**	P	**P**	**00 53 12.2 +1.2**
	baz=16				
CUT	**Chulitna**	**77.92 356**	P	**P**	**00 53 12.3 +1.1**
	baz=7.2				
M24K	**Tolsona, Glenn**	**77.92 354**	P	**P**	**00 53 12.1 +0.8**
	baz=10				
WHY	**Whitehorse**	**77.94 348**	P	**P**	**00 53 12.5 +1.0**
	baz=19				
L20K	**Farewell, AK**	**78.01 357**	P	**P**	**00 53 13.0 +1.3**
	baz=4.3				
P33M	**Teslin, Yukon**	**78.02 347**	P	**P**	**00 53 12.9 +1.1**
	baz=21				
O30N	**Mendenhall**	**78.03 349**	P	**P**	**00 53 12.8 +0.9**
	baz=18				
YUK8	**Steele Glacier**	**78.05 350**	P	**P**	**00 53 12.6 +0.4**
	baz=15				
HYT	**Haines Junctio**	**78.18 349**	P	**P**	**00 53 14.3 +1.5**
HYT			IAmb	IAmb	00 53 16.2
	comp=Z,14nm,1.1s				
HYT	**Haines Junctio**	**78.18 349**	P	**P**	**00 53 13.9 +1.0**
	baz=17				
YUK6	**Outpost Mounta**	**78.19 350**	P	**P**	**00 53 13.7 +0.7**
	baz=16				
KSAR	**Wonju Array Be**	**78.23 51**	P	**P**	**00 53 11.8 -1.5**
KSAR	**Wonju Array Be**	**78.23 51**	P	**P**	**00 53 11.8 -1.5**
KSRS	**Korea Array**	**78.25 51**	P	**P**	**00 53 12.1 -1.3**
	comp=Z,8.2nm,0.8s,baz=315,slow=4.7,SNR=23				
KSRS			LR	LR	01 31 29.1
	comp=Z,585nm,18.1s,baz=300,slow=38				
	comp=Z,8.2nm,0.8s				
N25K	**Chitina, Valde**	**78.27 353**	P	**P**	**00 53 14.2 +1.0**
	baz=12				
SCM	**Sheep Creek Mo**	**78.28 354**	P	**P**	**00 53 13.0 -0.3**
SCM	**Sheep Creek Mo**	**78.28 354**	P	**P**	**00 53 13.0 -0.3**
SCM			pmax	pmax	
	comp=Z,44nm,1.5s				
SCM	**Sheep Creek Mo**	**78.28 354**	P	**P**	**00 53 14.5 +1.2**
	baz=9.5				
MCARA	**McCarthy VSAT**	**78.33 352**	P	**P**	**00 53 15.1 +1.6**
	baz=13				
L19K	**White Mountain**	**78.34 358**	P	**P**	**00 53 14.6 +1.1**
	baz=3.6,SNR=5.1				
M23K	**Glacier View**	**78.36 354**	P	**P**	**00 53 14.9 +1.3**
	baz=9.2				
SML	**Sawmill**	**78.39 355**	P	**P**	**00 53 13.5 -0.3**
SML			IAmb	IAmb	00 53 16.3
	comp=Z,20nm,1.1s				
SML	**Sawmill**	**78.39 355**	P	**P**	**00 53 15.0 +1.1**
	baz=8.7				
SKT	**Skwentna**	**78.41 356**	P	**P**	**00 53 13.8 -0.1**
SKT	**Skwentna**	**78.41 356**	P	**P**	**00 53 14.7 +0.7**
	baz=6.2				
R33M	**Jennings River**	**78.44 346**	P	**P**	**00 53 14.6 +0.3**
	baz=22				
KLU	**Klutina**	**78.50 353**	P	**P**	**00 53 15.0 +0.4**
	baz=11				
CTG	**Chitna Glacier**	**78.55 351**	P	**P**	**00 53 15.2 +0.3**
	baz=14				
M22K	**Willow**	**78.56 356**	P	**P**	**00 53 14.9 +0.2**
	baz=7.3				
M20K	**Styx River**	**78.58 357**	P	**P**	**00 53 13.9 -1.0**
M20K			IAmb	IAmb	00 53 16.6
	comp=Z,13nm,1.1s				
M20K	**Styx River**	**78.58 357**	P	**P**	**00 53 15.2 +0.2**
	baz=4.9				
O28M	**Mount Upton**	**78.60 351**	P	**P**	**00 53 15.1 -0.2**
	baz=15				
M19K	**Big River Lodg**	**78.60 358**	P	**P**	**00 53 15.5 +0.5**
	baz=3.9				
PMR	**Palmer**	**78.65 355**	P	**P**	**00 53 15.3 +0.1**
	baz=8.1				
P32M	**Atlin**	**78.76 347**	P	**P**	**00 53 15.8 -0.2**
	baz=20				
P30M	**Million Dollar**	**78.78 349**	P	**P**	**00 53 16.5 +0.4**
	baz=17				
KNK	**Knik Glacier**	**78.78 355**	P	**P**	**00 53 16.4 +0.4**
	baz=8.6				
O29M	**Mount Kennedy**	**78.84 350**	P	**P**	**00 53 17.0 +0.6**
	baz=16				
BMRM	**Bremner River**	**78.90 353**	P	**P**	**00 53 17.8 +1.1**
	baz=12				
GOGA	**Godfrey**	**78.94 304**	P	**P**	**00 53 18.5 +1.1**
	baz=50				
CLTN	**Cedars of Leba**	**78.98 308**	P	**P**	**00 53 16.7 -0.8**
Q32M	**Nakina River**	**79.09 346**	P	**P**	**00 53 18.9 +0.9**
	baz=21				
DLBC	**Dease Lake**	**79.14 345**	LR	LR	01 30 23.8
	comp=Z,318nm,18.1s,baz=33,slow=37				
DLBC	**Dease Lake**	**79.14 345**	P	**P**	**00 53 18.8 +0.7**
	baz=23				
SKAG	**Skagway**	**79.15 348**	P	**P**	**00 53 18.4 +0.4**
	baz=19				
RC01	**Rabbit Creek A**	**79.19 355**	P	**P**	**00 53 18.1 -0.1**
	baz=7.6				
GLI	**Glacier Island**	**79.21 354**	P	**P**	**00 53 18.2 -0.2**
	baz=9.6				
N20K	**Mount Spurr**	**79.22 356**	P	**P**	**00 53 19.4 +0.9**
	baz=5.6				
SPCR	**Spurr Chakacha**	**79.22 356**	P	**P**	**00 53 18.6 +0.1**
	baz=5.6				
PINM	**Pinnacle**	**79.26 350**	P	**P**	**00 53 19.6 +0.9**
	baz=15				
PLBC	**Pleasant Camp**	**79.32 348**	P	**P**	**00 53 19.3 +0.4**
	baz=18				
PWL	**Port Wells**	**79.33 355**	P	**P**	**00 53 18.8 -0.2**
	baz=8.7				
P29M	**Windy Craggy**	**79.36 349**	P	**P**	**00 53 18.6 -0.6**
	baz=17				
YSS	**Yuzh-Sakhalins**	**79.42 36**	P	**P**	**00 53 20.4 +0.7**
YSS	**Yuzh-Sakhalins**	**79.42 36**	*e*P	**P**	**00 53 19.5 -0.2**
YSS			*e**SP	**PcP**	**00 53 35.3 +7.5**
YSS			*e*S	**S**	**01 03 14.9 -5.0**
YSS			pmax	pmax	
	comp=Z,80nm,1.0s				
YSS			pmax	pmax	
	comp=Z,600nm,3.1s				
YSS			MLR	MLR	
	comp=Z,1μm,14.0s				
YSS			MLR	MLR	
	comp=N,700nm,15.0s				
YSS	**Yuzh-Sakhalins**	**79.42 36**	⇓p	**P**	**00 53 21.6 +1.9**
ECSD	**EROS Data Cent**	**79.47 319**	P	**P**	**00 53 19.6 -0.5**
ECSD	**EROS Data Cent**	**79.47 319**	P	**P**	**00 53 20.1 +0.1**
	baz=44				
DGMT	**Dagmar**	**79.49 326**	P	**P**	**00 53 20.4 +0.3**
	baz=40				
PNL	**Peninsula**	**79.56 350**	P	**P**	**00 53 19.2 -1.1**
	baz=16				
BGLC	**Bering Glacier**	**79.60 352**	P	**P**	**00 53 20.3 -0.1**
	baz=12				
N19K	**Bonanza Creek**	**79.70 358**	P	**P**	**00 53 21.6 +0.5**
	baz=3.9				
O22K	**Cooper Landing**	**79.80 355**	P	**P**	**00 53 21.6 +0.1**
	baz=7.5				
S34M	**Telegraph Cree**	**79.85 345**	P	**P**	**00 53 21.7 -0.2**
	baz=22				
WVT	**Waverly**	**79.86 309**	P	**P**	**00 53 22.2 -0.1**
	baz=48				
N18K	**Kilae Creek**	**79.87 358**	P	**P**	**00 53 21.9 -0.1**
	baz=2.8				
KAIM	**Kayak Island**	**79.91 352**	P	**P**	**00 53 21.5 -0.6**
	baz=12				
N16K	**Nishlik Lake**	**80.12 360**	P	**P**	**00 53 23.0 -0.3**
	baz=0.5				
R32K	**Eaglecrest**	**80.14 347**	P	**P**	**00 53 23.4 0.0**
	baz=19				
PETK	**Petropavlovsk-**	**80.32 25**	P	**P**	**00 53 23.7 -0.8**
	comp=N,6.7nm,0.9s,baz=343,slow=4.5,SNR=8.1				
PETK			LR	LR	01 33 55.2
	comp=N,953nm,18.8s,baz=320,slow=39				
	comp=N,6.7nm,0.9s				
T35M	**Bob Quinn**	**80.54 344**	P	**P**	**00 53 24.9 -0.7**
	baz=22				
CCM	**Cathedral Cave**	**80.56 312**	P	**P**	**00 53 25.0 -1.0**
CCM	**Cathedral Cave**	**80.56 312**	P	**P**	**00 53 25.0 -1.0**
CCM			pmax	pmax	
	comp=Z,6.0nm,0.8s				
CCM	**Cathedral Cave**	**80.56 312**	P	**P**	**00 53 26.0 0.0**
	baz=46				
CCM	**Cathedral Cave**	**80.56 312**	⇑p	**P**	**00 53 27.3 +1.2**
BRSE	**Bradley Lake S**	**80.60 356**	P	**P**	**00 53 25.3 -0.5**
	baz=6.8				
O18K	**Koktuh Hills**	**80.68 358**	P	**P**	**00 53 25.6 -0.7**
O18K			IAmb	IAmb	00 53 29.2
	comp=Z,19nm,0.9s				
O18K	**Koktuh Hills**	**80.68 358**	P	**P**	**00 53 26.0 -0.3**
	baz=3.3				
S31K	**Pelican**	**80.73 348**	P	**P**	**00 53 27.1 +0.5**
	baz=18				
O17K	**Koliganek Bris**	**80.80 359**	P	**P**	**00 53 27.1 +0.2**
	baz=1.8				
P19K	**Oil Pt**	**80.81 357**	P	**P**	**00 53 27.3 +0.2**
	baz=4.8				
S32K	**Killisnoo**	**80.92 347**	P	**P**	**00 53 27.3 -0.3**
	baz=19				
O16K	**Kokwok River B**	**81.00 359**	P	**P**	**00 53 28.1 +0.1**
	baz=1.0				
P18K	**Big Mountain,**	**81.14 358**	P	**P**	**00 53 28.0 -0.8**
	baz=3.2				
P17K	**Kvichak River**	**81.37 358**	P	**P**	**00 53 29.0 -0.9**
	baz=2.3				
LRAL	**Lakeview Retre**	**81.42 306**	P	**P**	**00 53 29.6 -1.1**
LRAL			IAmb	IAmb	00 53 33.4
	comp=Z,21nm,1.1s				
LRAL	**Lakeview Retre**	**81.42 306**	P	**P**	**00 53 31.2 +0.5**
	baz=48,SNR=7.1				
SIT	**Sitka**	**81.44 347**	P	**P**	**00 53 30.3 -0.1**
	baz=18				
Q19K	**Cape Douglas,**	**81.55 357**	P	**P**	**00 53 31.6 +0.6**
	baz=4.5				
P16K	**Nushagak River**	**81.56 359**	P	**P**	**00 53 31.6 +0.7**
	baz=1.1				
LAO	**LASA Array**	**81.74 326**	P	**P**	**00 53 32.7 +0.4**
	baz=38				
Q20K	**Shuyak Island**	**81.82 356**	P	**P**	**00 53 31.9 -0.4**
	baz=5.4				
Q18K	**Katmai Hardscr**	**81.88 358**	P	**P**	**00 53 31.6 -1.2**
	baz=3.4				
OXF	**Oxford**	**81.90 308**	P	**P**	**00 53 32.7 -0.5**
	baz=47				
U33K	**Whale Pass**	**81.93 346**	P	**P**	**00 53 32.4 -0.5**
	baz=20				
BGNE	**Belgrade**	**81.93 318**	P	**P**	**00 53 32.2 -1.1**
	baz=43				
EGMT	**Eagleton**	**82.14 329**	P	**P**	**00 53 36.0 +1.6**
EGMT	**Eagleton**	**82.14 329**	P	**P**	**00 53 34.2 -0.2**
	baz=36,SNR=12				
Q17K	**Contact Creek**	**82.29 358**	P	**P**	**00 53 34.8 -0.2**
	baz=2.7				
KDAK	**Kodiak Island**	**82.65 356**	LR	LR	01 31 33.0
	comp=Z,174nm,20.8s,baz=29,slow=36				
KDAK	**Kodiak Island**	**82.65 356**	P	**P**	**00 53 37.3 +0.6**
	baz=5.3				
RSSD	**Black Hills**	**82.76 323**	P	**P**	**00 53 39.0 +1.1**
RSSD			pmax	pmax	
	comp=Z,6.0nm,0.9s				
RSSD	**Black Hills**	**82.76 323**	P	**P**	**00 53 39.1 +1.2**
	baz=40				
RSSD	**Black Hills**	**82.76 323**	⇓P	**P**	**00 53 40.0 +2.2**
KSU1	**Kansas State U**	**82.80 316**	P	**P**	**00 53 38.1 +0.2**
KSU1	**Kansas State U**	**82.80 316**	P	**P**	**00 53 38.9 +1.0**
	baz=44				
WALA	**Waterton Lakes**	**82.88 332**	P	**P**	**00 53 38.3 0.0**
WALA			IAmb	IAmb	00 53 40.4
	comp=Z,13nm,1.1s				
HRY	**Holter Researc**	**84.03 329**	P	**P**	**00 53 45.1 +0.9**
RLMT	**Red Lodge**	**84.28 327**	P	**P**	**00 53 46.5 +0.9**
	baz=36,SNR=6.1				
BDFB	**Brasilia**	**84.30 244**	P	**P**	**00 53 46.0 +0.1**
	comp=Z,6.1nm,0.8s,baz=58,slow=6.1,SNR=9.3				
BDFB			LR	LR	01 32 47.4
	comp=Z,327nm,19.4s,baz=18,slow=37				
	comp=Z,6.1nm,0.8s				
BDFB	**Brasilia**	**84.30 244**	P	**P**	**00 53 45.5 -0.3**
BDFB			IAmb	IAmb	00 53 49.7
	comp=Z,12nm,1.0s				
BDFB	**Brasilia**	**84.30 244**	P	**P**	**00 53 45.6 -0.3**
BDFB			pmax	pmax	
	comp=Z,12nm,1.0s				
MIAR	**Mount Ida**	**84.35 311**	P	**P**	**00 53 47.3 +1.4**
	baz=45,SNR=5.5				
MIAR	**Mount Ida**	**84.35 311**	⇓P	**P**	**00 53 48.3 +2.4**
BBB	**Bella Bella**	**84.48 341**	LR	LR	01 35 59.2
	comp=Z,259nm,18.4s,baz=30,slow=39				
TUL1	**Leonard**	**84.65 313**	P	**P**	**00 53 48.9 +1.5**
	baz=44				
CBKS	**Cedar Bluff**	**84.66 317**	P	**P**	**00 53 48.3 +0.8**
	baz=42				
NEW	**Newport**	**84.69 333**	LR	LR	01 35 13.3
	comp=Z,305nm,18.5s,baz=24,slow=38				
NEW	**Newport**	**84.69 333**	P	**P**	**00 53 48.8 +1.3**
	baz=31				
MSO	**Missoula**	**84.75 331**	P	**P**	**00 53 48.9 +1.0**
	baz=33				
MAJO	**Matsushiro**	**84.80 46**	P	**P**	**00 53 48.1 -0.1**
MAJO	**Matsushiro**	**84.80 46**	P	**P**	**00 53 48.1 -0.1**
MAJO			pmax	pmax	
	comp=Z,20nm,1.1s				
MJAR	**Matsushiro Arr**	**84.80 46**	P	**P**	**00 53 47.1 -1.1**
	comp=Z,14nm,0.9s,baz=314,slow=4.9,SNR=15				
	comp=Z,14nm,0.9s				
BOZ	**Bozeman (W)**	**84.86 329**	P	**P**	**00 53 48.7 +0.2**
BOZ			IAmb	IAmb	00 53 51.9
	comp=Z,22nm,1.4s				
BOZ	**Bozeman (W)**	**84.86 329**	P	**P**	**00 53 48.7 +0.2**
BOZ			pmax	pmax	
	comp=Z,22nm,1.4s				
BOZ	**Bozeman (W)**	**84.86 329**	P	**P**	**00 53 48.9 +0.4**
	baz=35,SNR=5.9				
OK048	**Pawnee Station**	**84.92 314**	P	**P**	**00 53 48.8 0.0**
SHEM	**Shemya Is, Ala**	**85.04 16**	LR	LR	01 37 01.7
	comp=Z,258nm,18.8s,baz=294,slow=39				
K22A	**Casper**	**85.04 324**	P	**P**	**00 53 49.7 +0.2**
	baz=38,SNR=7.0				
JMM	**Marumori**	**85.23 43**	P	**P**	**00 53 49.9 -0.3**
SDPT	**Sand Point**	**85.25 1**	P	**P**	**00 53 50.5 +0.5**
	baz=359				
SDV	**Santo Domingo**	**85.38 278**	LR	LR	01 27 21.1
	comp=Z,82nm,21.5s,baz=62,slow=32				
SDV	**Santo Domingo**	**85.38 278**	P	**P**	**00 53 52.0 +0.4**
SDV			IAmb	IAmb	00 53 54.6
	comp=Z,13nm,0.8s				
H17A	**Grant Village**	**85.42 327**	P	**P**	**00 53 54.7 +3.2**
	baz=36,SNR=5.6				
JOW	**Kunigami**	**85.55 59**	LR	LR	01 37 21.0
	comp=Z,375nm,19.2s,baz=324,slow=39				
YPP	**Pitchstone Pla**	**85.61 327**	P	**P**	**00 53 53.4 +0.9**
YPP			IAmb	IAmb	00 53 57.9
	comp=Z,21nm,1.3s				
MCMT	**McKenzie Canyo**	**85.99 329**	P	**P**	**00 53 53.4 -0.8**
N23A	**Red Feather La**	**86.16 322**	P	**P**	**00 53 56.1 +0.9**
	baz=38,SNR=5.1				
BW06	**Boulder Array**	**86.30 326**	P	**P**	**00 53 55.9 +0.1**
	baz=36,SNR=6.9				
PD31	**Pinedale Array**	**86.30 326**	P	**P**	**00 53 54.3 -1.5**
PD31			IAmb	IAmb	00 53 57.9
	comp=Z,20nm,1.6s				
PDAR	**Pinedale Array**	**86.30 326**	P	**P**	**00 53 55.0 -0.8**
	comp=Z,1.6nm,0.9s,baz=61,slow=4.2,SNR=12				
PDAR			LR	LR	01 33 03.3
	comp=Z,611nm,20.6s,baz=36,slow=36				
	comp=Z,1.6nm,0.9s				
PDAR	**Pinedale Array**	**86.30 326**	P	**P**	**00 53 54.4 -1.4**
UNV	**Unalaska Valle**	**86.56 4**	P	**P**	**00 53 56.5 0.0**
	baz=354				
WMOK	**Wichita Mounta**	**87.17 314**	P	**P**	**00 54 00.0 +0.1**
	baz=42				
NIKH	**Nikolski High**	**87.27 6**	P	**P**	**00 54 01.1 +1.1**
	baz=353				
HLID	**Hailey**	**87.66 329**	P	**P**	**00 54 03.5 +1.2**
	baz=33				
O20A	**White River Ci**	**87.83 323**	P	**P**	**00 54 03.6 +0.4**
	baz=37				
HWUT	**Hardware Ranch**	**88.11 326**	P	**P**	**00 54 04.7 +0.2**
T25A	**Trinidad**	**88.33 319**	P	**P**	**00 54 06.0 +0.2**
	baz=39				
SDCO	**Great Sand Dun**	**88.41 320**	P	**P**	**00 54 07.0 +0.8**
	baz=38,SNR=5.8				
S22A	**4UR Ranch, Cre**	**89.06 321**	P	**P**	**00 54 09.6 +0.4**
	baz=38				
P18A	**Preston Nutter**	**89.15 324**	P	**P**	**00 54 09.9 +0.3**
P18A			IAmb	IAmb	00 54 11.5
	comp=Z,15nm,1.4s				
ABTX	**Abilene, Hawle**	**89.22 313**	P	**P**	**00 54 10.6 +0.9**
	baz=42				
PV15	**Paradox Valley**	**89.37 322**	P	**P**	**00 54 10.2 -0.4**
PV15			IAmb	IAmb	00 54 12.8
	comp=Z,11nm,1.0s				
435B	**Jarrell**	**89.40 311**	P	**P**	**00 54 11.6 +1.1**
	baz=43				
DUG	**Dugway, Tooele**	**89.81 326**	P	**P**	**00 54 11.4 -1.1**
DUG			IAmb	IAmb	00 54 15.0
	comp=Z,7.6nm,1.0s				
DUG	**Dugway, Tooele**	**89.81 326**	P	**P**	**00 54 11.4 -1.1**
DUG			pmax	pmax	
	comp=Z,8.0nm,1.0s				
DUG	**Dugway, Tooele**	**89.81 326**	P	**P**	**00 54 12.3 -0.2**
	baz=34				
MVCO	**Mesa Verde**	**90.28 322**	P	**P**	**00 54 15.4 +0.6**
	baz=37				
ELK	**Elko**	**90.36 328**	LR	LR	01 36 41.7
	comp=Z,837nm,19.4s,baz=40,slow=37				
ROSC	**El Rosal**	**90.76 277**	LR	LR	01 33 25.9
	comp=Z,176nm,19.3s,baz=58,slow=34				
JCT	**Junction City**	**90.91 312**	P	**P**	**00 54 19.0 +1.3**
	baz=42				
ANMO	**Albuquerque**	**91.08 319**	LR	LR	01 33 39.8
	comp=Z,313nm,21.8s,baz=36,slow=34				
ANMO	**Albuquerque**	**91.08 319**	P	**P**	**00 54 19.7 +1.2**
	baz=38				
833A	**Chaparral WMA,**	**92.27 310**	P	**P**	**00 54 24.5 +0.6**
	baz=42				
YBH	**Yreka Blue Hor**	**92.32 333**	LR	LR	01 37 58.6
	comp=Z,440nm,19.8s,baz=20,slow=37				
R11A	**Troy Canyon, C**	**92.53 327**	P	**P**	**00 54 25.5 +0.3**
	baz=32				
WUAZ	**Wupatki**	**93.01 323**	P	**P**	**00 54 27.7 +0.2**
	baz=35				
NVAR	**Mina Array Bea**	**93.57 329**	LR	LR	01 39 02.3
	comp=Z,866nm,18.9s,baz=47,slow=37				
SIV	**San Ignacio**	**93.89 253**	LR	LR	01 37 32.9
	comp=Z,238nm,20.1s,baz=100,slow=36				
TX32	**Lajitas Array**	**93.96 314**	P	**P**	**00 54 32.4 +0.5**
TX32			IAmb	IAmb	00 54 35.1
	comp=Z,12nm,1.4s				
TXAR	**Lajitas Array**	**93.96 314**	P	**P**	**00 54 31.5 -0.3**
	comp=Z,3.3nm,0.9s,baz=55,slow=4.7,SNR=25				
TXAR			LR	LR	01 39 20.4
	comp=Z,270nm,18.4s,baz=18,slow=37				
	comp=Z,3.3nm,0.9s				
TXAR	**Lajitas Array**	**93.96 314**	P	**P**	**00 54 31.8 0.0**
TPNV	**Topopah Spring**	**93.99 327**	P	**P**	**00 54 32.3 +0.3**
	baz=32				
PDMCI	**Parker Dam,Lak**	**95.29 324**	P	**P**	**00 54 38.2 +0.5**
	baz=33				
TUC	**Tucson**	**95.34 320**	P	**P**	**00 54 40.2 +2.1**
TUC	**Tucson**	**95.34 320**	P	**P**	**00 54 38.4 +0.3**
	baz=35				
GMRC	**Granite Mounta**	**95.57 325**	P	**P**	**00 54 39.4 +0.2**
	baz=32				
GSC	**Goldstone, Bar**	**95.63 326**	P	**P**	**00 54 40.1 +0.7**
	baz=32				
IRM	**Iron Mountain**	**95.87 324**	P	**P**	**00 54 40.4 0.0**
	baz=33				
APG	**El Apazote**	**96.00 295**	LR	LR	01 35 49.3
	comp=Z,112nm,19.0s,baz=90,slow=34				
214A	**Organ Pipe Nat**	**96.62 322**	P	**P**	**00 54 43.3 -0.6**
	baz=34				
PFO	**Pinyon Flats O**	**96.91 325**	LR	LR	01 39 27.2
	comp=Z,480nm,21.8s,baz=22,slow=36				
CMIG	**Matias Romero**	**97.57 299**	LR	LR	01 36 46.7
	comp=Z,128nm,21.2s,baz=39,slow=34				
CPUP	**Villa Florida**	**97.88 242**	LR	LR	01 41 27.2
	comp=Z,460nm,18.7s,baz=47,slow=37				
LPAZ	**La Paz**	**99.32 257**	LR	LR	01 40 30.8
	comp=Z,150nm,20.5s,baz=68,slow=36				
WRA	**Warramunga Arr**	**120.48 91**	PKP	**PKPdf**	**01 00 03.2 -2.3**
	comp=Z,1.4nm,0.8s,baz=327,slow=1.8,SNR=7.3				
ASAR	**Alice Springs**	**122.22 95**	PKP	**PKPdf**	**01 00 06.7 -2.1**
	comp=Z,3.6nm,0.9s,baz=323,slow=1.9,SNR=15				
ASAR	**Alice Springs**	**122.22 95**		**PKPdf**	**01 00 06.8 -1.9**
QSPA	**South Pole Qui**	**129.62 180**	PKP	**PKPdf**	**01 00 21.2 -0.4**
	comp=Z,3.0nm,1.1s,baz=248,slow=1.8,SNR=5.5				
QSPA	**South Pole Qui**	**129.62 180**		**PKiKP**	**01 00 22.3 -0.1**
TAOE	**Nuku Hiva Isla**	**144.77 326**	*e*LR	LR	01 48 18.8
	comp=Z,286nm,24.0s				
DZM	**Mont Dzumac**	**146.02 69**	PKPbc	**PKPdf**	**01 00 53.0 -0.1**
	comp=Z,32nm,1.0s,baz=307,slow=20,SNR=6.9				
PPT2	**Papeete2**	**156.34 336**	*e*LR	LR	01 53 39.4
	comp=Z,296nm,25.5s				
TBI	**Tubuai**	**161.62 330**	*e*LR	LR	01 56 07.0
	comp=Z,289nm,23.2s				

IDC ***16*** *00:47:32.5±1.3, 39°.79N×20°.79E, h0km, mb3.9/7, mbtmp3.9/9, ML3.4/2, Error ellipse: s-maj=27.6km s-min=19.5km az=70.0*

THE ***16*** *00:47:35.9, 39°.76N×20°.68E, h14km±1km, ML3.5/9, Error ellipse: s-maj=1.0km s-min=0.5km az=348.0*

ISC 16 00:47:35.2±0.9, 39°.75N±0°.02×20°.68E±0°.03, h17km±5km, n74, σ1°.02/86, mb3.9/6, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**126**	P	**Pg**	**00 47 39.1**	**-0.5**
JAN				S	**Sg**	**00 47 42.6**	**+0.1**
	55μm,0.3s						
IGT	**Igoumenitsa**	**0.35**	**231**	P	**Pb**	**00 47 43.3**	**+0.4**
IGT				S	**Sb**	**00 47 49.1**	**+1.0**
	12μm,0.4s						
LSK	**Leskovik**	**0.40**	**351**	P	**Pg**	**00 47 43.8**	**+0.2**
LSK				S	**Sb**	**00 47 49.9**	**0.0**
	11μm,0.6s						
SRN	**Sarande**	**0.54**	**284**	P	**Pg**	**00 47 46.2**	**+0.2**
SRN				S	**Sb**	**00 47 54.5**	**+0.8**
	5μm,0.4s						
KPRO	**Kipourio**	**0.56**	**69**	P	**Pg**	**00 47 46.4**	**-0.1**
KPRO				S	**Sb**	**00 47 54.9**	**+0.5**
	10μm,0.6s						
PENT	**Pentalofos**	**0.57**	**38**	P	**Pg**	**00 47 46.6**	**0.0**
PENT				S	**Sb**	**00 47 55.8**	**+1.2**
	1μm,0.4s						
KEK	**Kerkira**	**0.68**	**267**		**Pb**	**00 47 47.4**

DRAG	**Dragano-Lefkad**	**1.07 184**	P		**Pg**	**00 47 56.1**	**+0.2**
DRAG			S		**Sg**	**00 48 10.4**	**+0.5**
VLO	**Vlora**	**1.16 309**			**Pg**	**00 47 58.4**	**+0.8**
LIT	**Litokhoron**	**1.43 75**	Pn		**Pb**	**00 48 01.7**	**+0.2**
TIR	**Tirane**	**1.71 339**			**Pn**	**00 48 05.3**	**+1.1**
SCTE	**Santa Cesarea**	**1.73 281**	Pn		**Pn**	**00 48 05.0**	**+0.4**
ITM	**Ithomi**	**2.75 159**			**Pn**	**00 48 19.9**	**+1.5**
PDG	**Podgorica**	**2.88 339**	Pn		**Pn**	**00 48 19.6**	**-0.7**
TIP	**Timpagrande**	**3.09 261**			**Pn**	**00 48 23.6**	**+0.4**
VTS	**Vitosha**	**3.45 33**	Pn		**Pn**	**00 48 29.9**	**+1.6**
CUC	**Castrocucco**	**3.75 275**			**Pn**	**00 48 34.0**	**+1.6**
RDO	**Rodhopi**	**3.96 68**	Pn		**Pn**	**00 48 35.6**	**+0.5**
CEL	**Celeste**	**4.02 250**	Pn		**Pn**	**00 48 36.4**	**+0.4**
SGRT	**San Giovanni R**	**4.25 300**	Pn		**Pn**	**00 48 39.4**	**+0.2**
ALN	**Alexandroupoli**	**4.26 73**	Pn		**Pn**	**00 48 40.8**	**+1.6**
DIVS	**Divibare**	**4.37 353**	Pn		**Pn**	**00 48 42.3**	**+1.4**
PAOL	**Paolisi**	**4.84 287**	Pn		**Pn**	**00 48 48.8**	**+1.5**
IDI	**Anoyia**	**5.57 142**	Pn		**Pn**	**00 48 56.9**	**-0.4**
	0.4nm,0.3s,baz=55,slow=15,SNR=1.1						
	5.0nm,0.6s						
IDI	**Anoyia**	**5.57 142**	Pn		**Pn**	**00 48 57.4**	**0.0**
INTR	**Introdacqua**	**5.61 296**	Pn		**Pn**	**00 48 59.4**	**+1.5**
AQU	**L'Aquila**	**6.08 298**	Pn		**Pn**	**00 49 05.0**	**+0.6**
CAMP	**Campotosto**	**6.15 299**	Pn		**Pn**	**00 49 06.4**	**+1.0**
NRCA	**Norcia**	**6.48 301**			**Pn**	**00 49 10.6**	**+0.8**
CESX	**Cesi**	**6.75 298**	Pn		**Pn**	**00 49 15.2**	**+1.8**
MLR	**Muntele Rosu**	**6.92 32**	Pn		**Pn**	**00 49 19.2**	**+3.2**
	0.1nm,0.3s,baz=236,slow=7.3,SNR=1.1						
MLR	**Muntele Rosu**	**6.92 32**	Pn		**Pn**	**00 49 18.8**	**+2.8**
MURB	**Monte Urbino**	**7.05 302**	Pn		**Pn**	**00 49 19.1**	**+1.4**
OSSC	**Osservatorio P**	**8.01 301**	Pn		**Pn**	**00 49 30.4**	**-0.4**
PSZ	**Piszkesteto**	**8.19 356**	Pn		**Pn**	**00 49 33.5**	**+0.3**
TEOL	**Teolo**	**8.69 313**	Pn		**Pn**	**00 49 39.4**	**-0.7**
STAL	**STALIGIAL**	**8.74 321**	Pn		**Pn**	**00 49 40.4**	**-0.4**
CLUD	**Cludinico**	**8.80 322**	Pn		**Pn**	**00 49 42.6**	**+1.1**
VLC	**Villacollemand**	**8.84 303**	Pn		**Pn**	**00 49 41.1**	**-1.1**
GERES	**GERESS Array B**	**10.37 334**	Pn		**Pn**	**00 50 04.3**	**+1.2**
	0.2nm,0.3s,baz=155,slow=14,SNR=5.1						
	0.3nm,0.3s						
SENIN	**Lac Senin/Sane**	**11.80 308**	Pn		**Pn**	**00 50 24.1**	**+1.3**
CLL	**Collm**	**12.74 338**	Pn		**Pn**	**00 50 37.0**	**+1.6**
PABE	**Paberze**	**15.91 7**	Pn		**Pn**	**00 51 18.1**	**0.0**
KIV	**Kislovodsk**	**16.91 68**			**P**	**00 51 33.6**	**+0.7**
HFS	**Hagfors**	**20.87 350**	P		**P**	**00 52 15.0**	**-1.1**
	2.6nm,0.7s,baz=171,slow=10,SNR=5.5						
	2.6nm,0.7s						
NC602	**NORSAR Array S**	**21.76 348**	P		**P**	**00 52 24.9**	**-0.8**
FINES	**FINESS Array B**	**21.97 7**	P		**P**	**00 52 27.0**	**-1.0**
	1.7nm,0.6s,baz=181,slow=11,SNR=6.5						
	1.7nm,0.6s						
FINES	**FINESS Array B**	**21.97 7**	P		**P**	**00 52 26.9**	**-1.1**
FIA1	**FINESS Array S**	**21.97 7**	P		**P**	**00 52 27.0**	**-0.9**
NC405	**NORSAR Array S**	**22.09 348**	P		**P**	**00 52 28.5**	**-0.8**
NOA	**NORSAR Array B**	**22.11 348**	P		**P**	**00 52 28.7**	**-0.7**
	7.1nm,1.3s,baz=164,slow=11,SNR=4.1						
	7.1nm,1.3s						
GEYT	**Alibeck**	**29.08 81**	P		**P**	**00 53 33.1**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**29.08 81**	P		**P**	**00 53 33.0**	**-1.8**
ARU	**Arti**	**29.82 43**	P		**P**	**00 53 41.4**	**+0.4**
ARCES	**ARCESS Array B**	**29.96 3**	P		**P**	**00 53 40.4**	**-1.7**
	2.7nm,1.0s,baz=187,slow=9.3,SNR=3.7						
	2.7nm,1.0s						
TOA0	**Torodi Ar. Sit**	**31.34 218**	P		**P**	**00 53 54.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**31.34 218**	P		**P**	**00 53 55.3**	**+0.4**
	0.9nm,0.6s,baz=28,slow=8.5,SNR=4.5						
	0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.34 218**	P		**P**	**00 53 54.5**	**-0.4**
KKAR	**Karatay Array**	**37.07 68**	P		**P**	**00 54 44.6**	**+0.3**
KKAR	**Karatay Array**	**37.07 68**	P		**P**	**00 54 45.0**	**+0.7**
CHGR	**Chuyangaron**	**37.22 76**	P		**P**	**00 54 44.4**	**-1.3**
MK31	**Makanchi Array**	**44.39 60**	P		**P**	**00 55 44.1**	**-0.6**
MKAR	**Makanchi Array**	**44.39 60**	P		**P**	**00 55 44.2**	**-0.5**
	1.8nm,0.5s,baz=281,slow=7.4,SNR=16						
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**44.39 60**	P		**P**	**00 55 44.3**	**-0.3**
ZAA0	**Zalesovo Array**	**44.56 49**	P		**P**	**00 55 45.7**	**-0.1**
ZALV	**Zalesovo Beam**	**44.56 49**	P		**P**	**00 55 45.2**	**-0.7**
	0.5nm,0.3s,baz=290,slow=8.6,SNR=3.1						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**44.56 49**	P		**P**	**00 55 45.4**	**-0.4**
EUNU	**Eureka**	**54.00 348**	P		**P**	**00 56 57.4**	**-0.4**

NEIC ***16*** *00:47:34.8±2.4, 39°.73N±0°.05×20°.64E±0°.07, h10km±1km, mb4.2/15, ML3.5(THE), Error ellipse: s-maj=9.7km s-min=7.3km az=225.0*

BJI ***16*** *00:48:10.6±0.0, 39°.72N×20°.36E, h11km, mb4.8/43, mB5.1/18, Ms5.0/16, Ms7 4.7/16*

MOS ***16*** *00:48:14.7±1.3, 39°.68N×20°.56E, h16km, mb5.0/37, MS4.1/15, Error ellipse: s-maj=3.6km s-min=2.4km az=96.8*

PDG ***16*** *00:48:15.8±0.5, 39°.66N×20°.60E, h9km±1km, MD4.8/10, ML4.7/12, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*

BEO ***16*** *00:48:15.2±0.7, 39°.54N×20°.72E, h10km±4km, ML4.6/7*

NEIC ***16*** *00:48:15.8±1.8, 39°.73N±0°.05×20°.72E±0°.06, h10km±1km, mb4.9/97, ML4.6(THE), Error ellipse: s-maj=8.9km s-min=8.0km az=6.0*

TIR ***16*** *00:48:17.3, 39°.74N×20°.71E, h6km±2km, Md3.8, Ml4.9*

MED_RC ***16*** *00:48:17.0±0.7, 39°.90N×20°.56E, h28km±1km, MW4.8/16, Moment Tensor Solution. Mantle waves: s16,c27; Duration: 1s3 Moment tensor: Scale 10^16^Nm; M_{rr}0.62±.12; $M_{\theta\theta}$0.78±.07; $M_{\phi\phi}$-1.40±.09; $M_{r\theta}$0.88±.11; $M_{\theta\phi}$0.60±.05; $M_{\phi r}$-0.51±.11; Best double couple: M_0=1.69000×10^16^ NP1:ϕs129.00000°, δ75.00000°, λ45.00000°. NP2:ϕs25.00000°, δ47.00000°, λ160.00000°. Principal axes: T 1.5900, Plg41.0000°, Azm357.0000°; N 0.1900, Plg43.0000°, Azm143.0000°; P -1.7900, Plg18.0000°, Azm251.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ATH ***16*** *00:48:17.8, 39°.74N×20°.75E, h10km, Mw4.6, Moment Tensor Solution. s11 Moment tensor: M_{rr}2.42; $M_{\theta\theta}$4.23; $M_{\phi\phi}$-6.65; $M_{r\theta}$5.06; $M_{\theta\phi}$3.17; $M_{\phi r}$-1.81; Fault plane solution: NP1:ϕs125.00000°, δ77.00000°, λ42.00000°. NP2:ϕs24.00000°, δ49.00000°, λ163.00000°.*

LDG ***16*** *00:48:17.9±0.3, 39°.72N×20°.58E, h15km, Ml4.7/27 Error ellipse: s-maj=9.0km s-min=4.5km az=2.0*

THE ***16*** *00:48:18.3, 39°.72N×20°.76E, h0km±2km, ML4.6/15, Error ellipse: s-maj=2.8km s-min=0.8km az=288.0*

IDC ***16*** *00:48:18.9±1.4, 39°.75N×20°.74E, h36km±11km, mb4.4/34, mbtmp4.6/49, ML4.3/14, Error ellipse: s-maj=8.9km s-min=8.1km az=168.0*

ROM ***16*** *00:48:20.4, 39°.79N×20°.66E, h35km, mb4.9/19, Error ellipse: s-maj=5.3km s-min=1.5km az=4.0*

ISC 16 00:48:16.3±0.5, 39°.75N±0°.01×20°.71E±0°.01, h17km±2km, n1125, σ1974/1166, mb4.8/142, MS4.9/9, 103C-70D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**129**	P	**Pg**	**00 48 20.3**	**-0.1**
JAN				S	**Sg**	**00 48 23.4**	**+0.2**
JAN				AML	AML	00 48 23.7	
JAN				AML	AML	00 48 23.8	
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pb**	**00 48 24.8**	**+0.6**
IGT				S	**Sb**	**00 48 31.5**	**+1.9**
	175μm,0.7s						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pb**	**00 48 24.4**	**+0.2**
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pb**	**00 48 24.6**	**+0.4**
	baz=236						
IGT				S	**Sb**	**00 48 30.9**	**+1.3**
	baz=236						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pb**	**00 48 24.6**	**+0.4**
IGT				S	**Sb**	**00 48 31.5**	**+1.9**
IGT				AML	AML	00 48 33.4	
IGT				AML	AML	00 48 34.5	
LSK	**Leskovik**	**0.41**	**348**	P	**Pb**	**00 48 26.3**	**+1.1**
LSK				S	**Sb**	**00 48 34.7**	**+3.5**
	223μm,0.8s						
LSK	**Leskovik**	**0.41**	**348**	P	**Pb**	**00 48 26.2**	**+1.0**
	baz=348						
LSK				S	**Sb**	**00 48 32.4**	**+1.1**
	baz=348						
LSK				AMP			
	comp=N,622nm,0.8s,baz=348						
KPRO	**Kipourio**	**0.55**	**67**	P	**Pb**	**00 48 27.7**	**+0.3**
KPRO				S	**Sn**	**00 48 37.5**	**-0.6**
	comp=N,124μm,0.6s						
PENT	**Pentalofos**	**0.56**	**36**	P	**Pb**	**00 48 28.4**	**+0.7**
PENT				S	**Sb**	**00 48 37.3**	**+1.9**
	comp=N,48μm,0.6s						
PENT	**Pentalofos**	**0.56**	**36**	P	**Pb**	**00 48 28.3**	**+0.6**
PENT				S	**Sb**	**00 48 36.4**	**+1.0**
PENT				AML	AML	00 48 39.7	
	comp=N,46686μm,0.4s						
PENT				AML	AML	00 48 40.3	
SRN	**Sarande**	**0.56**	**284**	P	**Pn**	**00 48 28.6**	**-0.9**
	baz=285						
SRN				S	**Sn**	**00 48 37.5**	**-0.9**
	baz=285						
SRN				AMP			
	comp=N,273nm,0.6s,baz=285						
KASA	**Kassiopi**	**0.60**	**270**	P	**Pb**	**00 48 28.9**	**+0.7**
KASA				S	**Sn**	**00 48 38.8**	**-0.4**
KASA				AML	AML	00 48 39.8	
KASA				AML	AML	00 48 41.3	
KEK	**Kerkira**	**0.70**	**268**	Pn	**Pn**	**00 48 30.9**	**-0.6**
KEK	**Kerkira**	**0.70**	**268**	P	**Pn**	**00 48 31.3**	**-0.1**
KEK	**Kerkira**	**0.70**	**268**	⇑P	**Pn**	**00 48 31.5**	**0.0**
KEK	**Kerkira**	**0.70**	**268**	P	**Pn**	**00 48 30.8**	**-0.6**
KEK				AML	AML	00 48 46.4	
KEK				AML	AML	00 48 46.7	
NEST	**Nestorio**	**0.72**	**21**	P	**Pn**	**00 48 31.9**	**+0.1**
NEST				S	**Sn**	**00 48 43.1**	**+0.7**
	comp=N,53μm,0.6s						
NEST	**Nestorio**	**0.72**	**21**	P	**Pn**	**00 48 31.9**	**+0.1**
NEST				S	**Sn**	**00 48 42.1**	**-0.3**
NEST				AML	AML	00 48 45.3	
NEST				AML	AML	00 48 47.6	
KBN	**Korca**	**0.88**	**4**	Pn	**Pn**	**00 48 34.6**	**+0.6**
KBN	**Korca**	**0.88**	**4**	P	**Pn**	**00 48 34.7**	**+0.7**
KBN	**Korca**	**0.88**	**4**	P	**Pn**	**00 48 34.6**	**+0.6**
KBN	**Korca**	**0.88**	**4**	P	**Pn**	**00 48 34.9**	**+0.9**
	baz=3.0						
KBN				S	**Sn**	**00 48 48.4**	**+2.0**
	baz=3.0						
KBN				AMP			
	comp=N,133nm,0.6s,baz=3.0						
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pn**	**00 48 34.5**	**+0.1**
TSLK				S	**Sn**	**00 48 49.9**	**+2.7**
	comp=N,39μm,0.6s						
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pn**	**00 48 34.5**	**+0.1**
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pn**	**00 48 35.6**	**+0.7**
LKD2				S	**Sn**	**00 48 50.1**	**+2.0**
	comp=N,26μm,0.5s						
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pn**	**00 48 35.1**	**+0.2**
	baz=183						
LKD2				S	**Sn**	**00 48 50.1**	**+2.0**
	baz=183						
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pn**	**00 48 35.7**	**+0.7**
LKD2				AML	AML	00 48 51.4	
	comp=E,43423μm,0.5s						
LKD2				AML	AML	00 48 54.6	
	comp=N,59340μm,0.5s						
KZN	**Kozani**	**0.99**	**55**	P	**Pn**	**00 48 35.9**	**+0.5**
KZN	**Kozani**	**0.99**	**55**	P	**Pn**	**00 48 35.4**	**-0.1**
KZN				AML	AML	00 48 52.9	
	comp=N,38415μm,0.6s						
KZN				AML	AML	00 48 53.4	
	comp=E,80090μm,0.6s						
THL	**Klokotos Trika**	**1.02**	**100**	P	**Pn**	**00 48 36.0**	**+0.2**
THL				S	**Sn**	**00 48 49.6**	**-0.1**
	comp=E,19μm,0.7s						
THL	**Klokotos Trika**	**1.02**	**100**	P	**Pn**	**00 48 36.0**	**+0.2**
THL				AML	AML	00 48 54.9	
	comp=E,29410μm,0.7s						
THL				AML	AML	00 48 55.4	
	comp=N,47857μm,0.8s						
NYDR	**Nydri-Lefkada**	**1.03**	**181**	P	**Pn**	**00 48 36.5**	**+0.6**
NYDR				S	**Sn**	**00 48 53.0**	**+3.1**
	comp=N,23μm,0.6s						
EVGI	**Lefkada island**	**1.12**	**182**	P	**Pn**	**00 48 38.2**	**+1.0**
EVGI	**Lefkada island**	**1.12**	**182**	P	**Pn**	**00 48 38.1**	**+0.9**
TYRN	**Tyrnavos**	**1.17**	**91**	P	**Pg**	**00 48 38.6**	**-0.4**
TYRN				S	**Sn**	**00 48 55.8**	**+2.3**
	comp=N,52μm,0.7s						
VLO	**Vlora**	**1.18**	**308**	Pn	**Pg**	**00 48 40.0**	**+0.9**
VLO	**Vlora**	**1.18**	**308**	P	**Pg**	**00 48 41.9**	**+2.8**
VLO				S	**Sn**	**00 49 00.0**	**+6.4**
	comp=N,92μm,0.5s						
VLO	**Vlora**	**1.18**	**308**	P	**Pg**	**00 48 40.0**	**+0.9**
VLO	**Vlora**	**1.18**	**308**	P	**Pg**	**00 48 40.8**	**+1.7**
	baz=309						
VLO				S	**Sn**	**00 48 58.2**	**+4.6**
	baz=309						
EVR	**Evrytania**	**1.19**	**134**	P	**Pn**	**00 48 39.3**	**+1.1**
EVR	**Evrytania**	**1.19**	**134**	P	**Pn**	**00 48 39.4**	**+1.2**
EVR				AML	AML	00 49 02.6	
	comp=E,31913μm,0.5s						
EVR				AML	AML	00 49 02.6	
	comp=N,32680μm,0.6s						
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**00 48 42.1**	**+0.9**
FSK	**Fiskardo**	**1.29**	**185**	P	**Pg**	**00 48 42.1**	**+0.9**
FSK				AML	AML	00 49 02.3	
	comp=N,35107μm,0.5s						
FSK				AML	AML	00 49 04.2	
	comp=E,44651μm,0.6s						
PVO	**Paravola**	**1.29**	**150**	P	**Pg**	**00 48 41.9**	**+0.6**
PVO				S	**Sg**	**00 49 02.3**	**+4.2**
	comp=E,20μm,0.5s						
PVO	**Paravola**	**1.29**	**150**	P	**Pg**	**00 48 42.0**	**+0.8**
LRSO	**Larissa Observ**	**1.30**	**93**	P	**Pg**	**00 48 40.7**	**-0.6**
LRSO				S	**Sg**	**00 49 01.9**	**+3.6**
	comp=E,40μm,0.7s						
LRSO	**Larissa Observ**	**1.30**	**93**	P	**Pg**	**00 48 40.8**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pg**	**00 48 41.9**	**+0.1**
MAKR				AML	AML	00 49 04.3	
	comp=N,86892μm,0.5s						
MAKR				AML	AML	00 49 07.5	
	comp=E,89524μm,0.9s						
OHR	**Ohrid**	**1.37**	**3**	P	**Pg**	**00 48 44.4**	**+1.7**
OHR	**Ohrid**	**1.37**	**3**	*e*Pg	**Pg**	**00 48 44.1**	**+1.4**
OHR				*e*Sg	**Sg**	**00 49 04.8**	**+4.3**
OHR	**Ohrid**	**1.37**	**3**	*i* Pn	**Pg**	**00 48 43.8**	**+1.1**
LIT	**Litokhoron**	**1.41**	**75**	Pn	**Pg**	**00 48 42.6**	**-1.0**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pg**	**00 48 43.0**	**-0.6**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pg**	**00 48 42.6**	**-1.0**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pg**	**00 48 43.0**	**-0.6**
LIT				AML	AML	00 49 06.7	
	comp=E,35719μm,0.6s						
LIT				AML	AML	00 49 08.1	
	comp=N,34910μm,0.7s						
KEF4	**Livadi, Kephal**	**1.50**	**189**	P	**Pg**	**00 48 44.8**	**-0.4**
DMLN	**Damoulianata-K**	**1.53**	**190**	P	**Pg**	**00 48 45.9**	**+0.2**
VLS	**Valsamata**	**1.57**	**183**	P	**Pg**	**00 48 46.1**	**-0.4**
VLS				S	**Sg**	**00 49 07.2**	**+0.3**
	comp=N,15μm,0.5s						
EFP	**Efpalio**	**1.61**	**144**	P	**Pg**	**00 48 48.3**	**+1.0**
EFP	**Efpalio**	**1.61**	**144**	P	**Pg**	**00 48 47.4**	**+0.1**
TIR	**Tirane**	**1.73**	**338**	⇑P	**Pg**	**00 48 48.7**	**-0.8**
TIR	**Tirane**	**1.73**	**338**	Pn	**Pg**	**00 48 48.9**	**-0.6**
TIR	**Tirane**	**1.73**	**338**	P	**Pg**	**00 48 49.4**	**-0.1**
TIR				S	**Sg**	**00 49 13.9**	**+1.9**
	comp=N,10μm,0.9s						
TIR	**Tirane**	**1.73**	**338**	P	**Pg**	**00 48 48.9**	**-0.6**
TIR	**Tirane**	**1.73**	**338**	*e*Pn	**Pg**	**00 48 49.2**	**-0.3**
TIR				*e*Sn	**Sg**	**00 49 13.0**	**+1.0**
TIR	**Tirane**	**1.73**	**338**	P	**Pg**	**00 48 48.6**	**-0.9**
	baz=339						
TIR				AMP			
	comp=N,47nm,1.3s,baz=339						
SCTE	**Santa Cesarea**	**1.76**	**281**	Pn	**Pb**	**00 48 46.9**	**-1.1**
GRG	**Griva**	**1.77**	**46**	P	**Pg**	**00 48 50.0**	**-0.4**
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pg**	**00 48 51.0**	**+0.4**
THE	**Thessaloniki**	**1.94**	**62**	P	**Pb**	**00 48 51.1**	**-0.1**
THE	**Thessaloniki**	**1.94**	**62**	P	**Pb**	**00 48 51.5**	**+0.3**
PHP	**Peshkopia**	**1.95**	**354**	P	**Pg**	**00 48 53.1**	**-0.7**
PHP	**Peshkopia**	**1.95**	**354**	P	**Pg**	**00 48 52.8**	**-1.0**
	baz=355						
PHP				AMP			
	comp=N,38nm,1.2s,baz=355						
DRO	**Drossia**	**1.95**	**156**	P	**Pg**	**00 48 53.7**	**-0.1**
XOR	**Xorichti**	**1.96**	**100**	P	**Pg**	**00 48 52.4**	**-1.5**
HORT	**Hortiatis**	**2.02**	**64**	P	**Pb**	**00 48 51.7**	**-0.9**
VAY	**Valandovo**	**2.12**	**41**	P	**Pb**	**00 48 54.2**	**0.0**
VAY	**Valandovo**	**2.12**	**41**	*e*Pn	**Pb**	**00 48 52.6**	**-1.6**
VAY				*e*Sn	**Sg**	**00 49 22.4**	**-2.1**
VAY	**Valandovo**	**2.12**	**41**	*i* Pn	**Pb**	**00 48 53.1**	**-1.1**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pb**	**00 48 54.3**	**-1.1**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pb**	**00 48 55.2**	**-0.2**
STIP	**Stip**	**2.25**	**29**	*i* Pn	**Pg**	**00 48 57.7**	**-1.7**
SOH	**Sokhos**	**2.29**	**61**	P	**Pb**	**00 48 56.0**	**-1.2**
SOH	**Sokhos**	**2.29**	**61**	P	**Pb**	**00 48 56.7**	**-0.5**
SKO	**Skopje**	**2.29**	**14**	P	**Pb**	**00 48 57.2**	**0.0**
SKO	**Skopje**	**2.29**	**14**	*e*Pn	**Pb**	**00 48 56.1**	**-1.1**
SKO				*e*Sn	**Sb**	**00 49 26.3**	**+1.1**
SKO	**Skopje**	**2.29**	**14**	*i* Pn	**Pn**	**00 48 55.0**	**+1.7**
ULC	**Ulcinj**	**2.48**	**334**	⇑*i*Pn	**Pn**	**00 48 58.0**	**+2.1**
ULC				*i* Sn	**Sb**	**00 49 30.6**	**0.0**
SRS	**Serrai**	**2.59**	**57**	P	**Pb**	**00 49 00.4**	**-1.9**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pb**	**00 48 58.8**	**+1.4**
SRS				*e*Sn	**Sn**	**00 49 30.5**	**+2.0**
DRME	**Dracevica, Mon**	**2.70**	**335**	⇑*i*Pn	**Pn**	**00 49 01.2**	**+2.3**
DRME	**Dracevica, Mon**	**2.70**	**335**	⇓*i*Pn	**Pn**	**00 49 01.1**	**+2.2**
DRME				*i* Sn	**Sb**	**00 49 36.1**	**-0.8**
KOKK	**Kokkinochori,**	**2.73**	**66**	P	**Pb**	**00 49 02.1**	**-2.6**
KYMI	**Kymi, Euboea I**	**2.86**	**112**	P	**Pb**	**00 49 04.0**	**-2.8**
BUM	**Brajici-Budva**	**2.90**	**332**	*e*Pn	**Pn**	**00 49 03.8**	**+2.1**
BUM				*i* Sn	**Sb**	**00 49 40.8**	**-2.0**
PDG	**Podgorica**	**2.90**	**338**	⇓P	**Pn**	**00 49 04.0**	**+2.3**
PDG	**Podgorica**	**2.90**	**338**		**Pn**	**00 49 03.6**	**+2.0**
PDG	**Podgorica**	**2.90**	**338**	⇓P	**Pn**	**00 49 04.3**	**+2.7**
TTG	**Podgorica**	**2.90**	**338**	⇑*i*Pn	**Pn**	**00 49 03.9**	**+2.3**
TTG				*i* Sn	**Sb**	**00 49 41.0**	**-1.6**
PVY	**Plav**	**2.90**	**349**	*e*Pn	**Pn**	**00 49 04.2**	**+2.4**
PVY				*i* Sn	**Sb**	**00 49 41.6**	**-1.3**
PYL	**PYLOS**	**2.96**	**164**	P	**Pn**	**00 48 59.5**	**-2.9**
ATHU	**Athens Univers**	**2.98**	**126**	P	**Pb**	**00 49 05.7**	**-3.3**
DION	**Dionisos Attik**	**3.02**	**122**	P	**Pb**	**00 49 06.6**	**-2.9**
CEME	**Cevo**	**3.11**	**335**	*e*Pn	**Pn**	**00 49 06.5**	**+1.9**
CEME				*i* Sn	**Sb**	**00 49 45.9**	**-2.9**
TIP	**Timpagrande**	**3.11**	**261**	⇓P	**Pn**	**00 49 03.7**	**-0.9**
TIP				⇓S	**Sn**	**00 49 42.4**	**+1.0**
TIP	**Timpagrande**	**3.11**	**261**	Pn	**Pn**	**00 49 05.4**	**+0.8**
TIP	**Timpagrande**	**3.11**	**261**	⇑P	**Pn**	**00 49 06.5**	**+1.7**
HCY	**Herceg Novi**	**3.18**	**329**	*e*Pn	**Pn**	**00 49 06.6**	**+1.1**
HCY	**Herceg Novi**	**3.18**	**329**	*e*Pn	**Pn**	**00 49 07.2**	**+1.7**
HCY				*i* Sn	**Sn**	**00 49 47.3**	**+4.4**
BARS	**Barje**	**3.18**	**15**	*e*Pn	**Pn**	**00 49 08.6**	**+3.1**
IVA	**Berane**	**3.18**	**349**	*e*Pn	**Pn**	**00 49 08.2**	**+2.6**
IVA				*i* Sn	**Sb**	**00 49 48.4**	**-2.6**
MATE	**Matera**	**3.20**	**288**	⇓P	**Pn**	**00 49 06.7**	**+1.0**
KOME	**Kolasin**	**3.23**	**344**	⇑*i*Pn	**Pn**	**00 49 08.7**	**+2.4**
KOME				*i* Sn	**Sb**	**00 49 49.3**	**-3.0**
NKME	**Niksic**	**3.30**	**337**	⇓*i*Pn	**Pn**	**00 49 09.5**	**+2.4**
NKME				*i* Sn	**Sn**	**00 49 50.6**	**+4.7**
VTS	**Vitosha**	**3.44**	**33**	⇓P	**Pb**	**00 49 13.2**	**-3.7**
VTS	**Vitosha**	**3.44**	**33**	Pn	**Pn**	**00 49 12.4**	**+3.1**
VTS	**Vitosha**	**3.44**	**33**	P	**Pn**	**00 49 12.4**	**+3.1**
VTS	**Vitosha**	**3.44**	**33**	⇑P	**Pn**	**00 49 12.5**	**+3.2**
SELS	**Selova**	**3.48**	**5**	*e*Pn	**Pn**	**00 49 13.0**	**+3.3**
SJES	**Sjenica**	**3.56**	**351**	*e*Pn	**Pn**	**00 49 14.4**	**+3.6**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pn**	**00 49 15.3**	**+2.3**
UPM	**Unac-Piva**	**3.71**	**339**	⇑*i*Pn	**Pn**	**00 49 15.3**	**+2.3**
UPM				*i* Sn	**Sn**	**00 50 00.7**	**+4.3**
PLE	**Pljevlja**	**3.72**	**345**	*e*Pn	**Pn**	**00 49 15.5**	**+2.5**
PLE				*i* Sn	**Sn**	**00 50 01.1**	**+4.7**
CUC	**Castrocucco**	**3.77**	**275**	Pn	**Pn**	**00 49 14.9**	**+1.2**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**	**00 49 16.9**	**+2.7**
PLD	**Plovdiv**	**3.83**	**51**	P	**Pb**	**00 49 19.8**	**-3.7**
STON	**Ston**	**3.86**	**325**	⇑*i*Pn	**Pn**	**00 49 14.4**	**-0.4**
KTHR	**Kythira**	**3.92**	**152**	P	**Pn**	**00 49 18.5**	**+2.8**
RDO	**Rodhopi**	**3.94**	**68**	Pn	**Pn**	**00 49 17.7**	**+1.8**
RDO	**Rodhopi**	**3.94**	**68**	⇑P	**Pn**	**00 49 17.9**	**+2.0**
KTHA	**Kythira Island**	**3.95**	**151**	P	**Pn**	**00 49 19.3**	**+3.3**
BOVS	**Bovan**	**3.96**	**

MANT Manisa 6.23 99 Pn 00 49 49.4 +1.8
WDD Wied Dalam 6.26 233 Pn 00 49 46.3 -1.5
ARR Arges 6.32 26 ⇑P Pn 00 49 51.7 +3.0
DEV Deva 6.34 14 P Pn 00 49 55.1 +6.2
DEV pmax pmax
comp=Z,94nm,0.8s
MTUR Matau 6.35 29 ⇓P Pn 00 49 53.8 +4.7
SULR 6.42 38 ⇑P **Pn 00 49 54.3 +4.4**
NRCA Norcia 6.50 301 Pn 00 49 52.5 +1.3
ISK Istanbul-Kandi 6.51 76 P **Pn 00 49 54.5 +3.3**
VOIR 6.53 28 ⇑P **Pn 00 49 55.2 +3.7**
VOIR 6.53 28 P Pn 00 49 56.4 +4.9
VOIR pmax pmax
comp=Z,135nm,0.8s
RASA Rasa 6.55 45 ⇓P Pn 00 49 56.7 +4.9
LEHL Lehliu 6.55 42 ⇑P **Pn 00 49 55.8 +4.0**
SIRR Siria 6.56 6 ⇑P **Pn 00 49 55.7 +3.8**
AMBH Ambrzfalva 6.60 0 ⇑P **Pn 00 49 55.5 +3.1**
AMBH Ambrzfalva 6.60 0 P **Pn 00 49 55.7 +3.2**
SECR 6.61 35 ⇓P **Pn 00 49 56.8 +4.2**
KARP Karpathos 6.61 127 Pn 00 49 54.1 +1.4
KARP Karpathos 6.61 127 Pn 00 49 55.5 +2.8
KOVH Kovagotottos 6.62 344 P **Pn 00 49 53.9 +1.2**
MORH Mrgy, Hungar 6.64 347 ⇑P **Pn 00 49 54.3 +1.3**
MORH Mrgy, Hungar 6.64 347 P **Pn 00 49 53.6 +0.6**
CESX Cesi 6.77 298 Pn 00 49 56.7 +1.9
ARG Arkhangelos 6.83 119 Pn **Pn 00 49 57.9 +2.2**
ARG Arkhangelos 6.83 119 P **Pn 00 49 57.9 +2.2**
ARG Arkhangelos 6.83 119 ⇑P **Pn 00 49 59.9 +4.2**
ICOR Ion Corvin 6.86 48 ⇑P **Pn 00 50 00.1 +4.2**
ISR Istrita 6.89 37 ⇓P Pn 00 50 01.2 +4.7
ISR Istrita 6.89 37 P Pn 00 50 01.6 +5.1
ISR pmax pmax
comp=Z,592nm,0.9s
AMRR Amara 6.92 43 ⇑P **Pn 00 50 00.4 +3.6**
MLR Muntele Rosu 6.92 32 ⇓P **Pn 00 50 01.4 +4.5**
MLR Muntele Rosu 6.92 32 Pn **Pn 00 50 00.4 +3.4**
comp=Z,9.6nm,0.3s,baz=240,slow=8.1,SNR=27
MLR Sn **Sn 00 51 16.4 +1.1**
baz=180,slow=20
PGOR Pogoanele 6.94 40 ⇓P Pn 00 50 01.7 +4.5
BOJS Bojanci 7.02 327 ⇑*i* Pn **Pn 00 49 59.3 +1.1**
MURB Monte Urbino 7.08 302 Pn 00 50 01.0 +1.9
DOPR Dopca 7.10 27 ⇑P Pn 00 50 04.0 +4.6
DRGR 7.19 11 ⇑P **Pn 00 50 04.0 +3.3**
DRGR 7.19 11 P **Pn 00 50 03.9 +3.3**
CRES Cresnjev 7.20 329 ⇑*i* Pn **Pn 00 50 01.4 +0.7**
CRES Cresnjev 7.20 329 ⇑*i* Pn **Pn 00 50 01.4 +0.7**
MGAB Montegabbione 7.20 299 ⇓P **Pn 00 50 03.2 +2.4**
CJR Cluj-Napoca 7.28 16 ⇓P **Pn 00 50 04.8 +3.0**
CJR Cluj-Napoca 7.28 16 P **Pn 00 50 04.8 +3.0**
GRER 7.29 37 ⇑P Pn 00 50 06.7 +4.8
HARR Harsova 7.29 45 ⇑P **Pn 00 50 05.5 +3.6**
HARR Harsova 7.29 45 P **Pn 00 50 05.5 +3.6**
LATE Laterza 7.30 296 Pn 00 50 03.5 +1.4
BEHE Becsehely 7.31 338 P **Pn 00 50 03.9 +1.7**
COVR Voineasa-Covas 7.31 32 ⇑P **Pn 00 50 06.6 +4.4**
CBBR Cluj-Babes-Bol 7.32 16 ⇓P **Pn 00 50 06.8 +4.4**
OZUR 7.36 29 ⇓P **Pn 00 50 07.3 +4.4**
BORR Bors 7.38 6 ⇑P **Pn 00 50 07.4 +4.2**
TIRR Tirgusor 7.41 48 ⇓P **Pn 00 50 06.8 +3.2**
TIRR Tirgusor 7.41 48 ⇓P **Pn 00 50 06.8 +3.2**
TIRR Tirgusor 7.41 48 Pn 00 50 06.2 +2.6
TIRR Tirgusor 7.41 48 P **Pn 00 50 06.2 +2.6**
TIH Tihany 7.44 345 P **Pn 00 50 05.6 +1.7**
BORA Eskisehir 7.50 86 Pn **Pn 00 50 06.9 +1.9**
PLOR Plostina 7.50 34 ⇓P Pn 00 50 09.5 +4.6
PLOR Plostina 7.50 34 P Pn 00 50 09.4 +4.6
VRI Vrincioaia 7.55 34 ⇓P **Pn 00 50 10.0 +4.5**
VRI Vrincioaia 7.55 34 P Pn 00 50 10.3 +4.8
VRI pmax pmax
comp=Z,523nm,0.9s
BSZH Besenyszg 7.56 358 ⇑P **Pn 00 50 08.5 +3.0**
BSZH Besenyszg 7.56 358 P **Pn 00 50 09.0 +3.4**
CEY Cerknica 7.57 324 ⇑*i* Pn **Pn 00 50 06.6 +0.9**
ODBI Odobesti 7.61 36 ⇑P **Pn 00 50 10.6 +4.3**
SKDS Skadanscina 7.61 322 ⇑*i* Pn **Pn 00 50 06.2 -0.2**
SKDS Skadanscina 7.61 322 *e*Pn **Pn 00 50 06.6 +0.2**
SKDS *e*Sn **Sn 00 51 27.5 -4.7**
SKDS IAML 00 52 55.3
comp=Z,423nm,1.4s
TPGR Topolog 7.66 46 ⇑P **Pn 00 50 10.8 +3.8**
LTVH Ltavrtes, Hu 7.69 6 ⇑P **Pn 00 50 11.2 +3.8**
LTVH Ltavrtes, Hu 7.69 6 P **Pn 00 50 10.5 +3.2**
CFR Carcaliu 7.72 43 ⇑P **Pn 00 50 11.1 +3.4**
CFR Carcaliu 7.72 43 P **Pn 00 50 11.2 +3.4**
CFR pmax pmax
comp=Z,42nm,0.6s
PANC Panciu 7.74 36 ⇑P Pn 00 50 12.9 +4.8
LJU Ljubljana 7.76 326 ⇑*i* Pn **Pn 00 50 09.0 +0.6**
MPLH Magyarpolny 7.77 344 P **Pn 00 50 10.8 +2.3**
IZVR Izvoarele 7.78 40 ⇑P **Pn 00 50 12.6 +3.9**
JOSR Joseni 7.79 25 ⇑P **Pn 00 50 13.2 +4.3**
ARCR ARCALIA 7.80 19 ⇓P **Pn 00 50 13.0 +4.1**
CSKK Cskako 7.82 348 P **Pn 00 50 11.5 +2.3**
ELL Elmali 7.83 110 Pn 00 50 13.3 +3.8
ELL Elmali 7.83 110 P **Pn 00 50 13.3 +3.8**
BUD Budapest 7.83 352 P **Pn 00 50 11.5 +2.2**
BUD pmax pmax
comp=Z,95nm,0.7s
BUD Budapest 7.83 352 P **Pn 00 50 11.1 +1.8**
AKAS Kas 7.85 114 Pn **Pn 00 50 13.8 +4.1**
ISP Isparta 7.90 101 Pn **Pn 00 50 13.4 +3.0**
ISP Isparta 7.90 101 P **Pn 00 50 13.4 +3.0**
TATR Tatarca 7.96 40 ⇓P Pn 00 50 16.1 +5.0
SCTR Scanteiesti 7.99 40 ⇑P **Pn 00 50 15.8 +4.3**
GHRR 8.00 36 ⇓P Pn 00 50 16.2 +4.6
CASP Castiglione de 8.02 295 Pn **Pn 00 50 13.2 +1.3**
OSSC Osservatorio P 8.03 301 Pn **Pn 00 50 11.6 -0.5**
TESR Tescani 8.04 31 ⇓P **Pn 00 50 16.1 +3.9**
MDUB Mudurnu 8.07 81 Pn **Pn 00 50 14.7 +1.9**
SOKA Soboth 8.07 331 *i* Pn **Pn 00 50 13.1 +0.4**
comp=Z,42nm,0.3s,SNR=12
VARL Varlezi 8.08 38 ⇑P Pn 00 50 17.4 +4.7
TLCR 8.09 45 ⇑P **Pn 00 50 17.1 +4.3**
TLCR 8.09 45 P **Pn 00 50 17.1 +4.3**
OBKA Obir 8.12 328 *e*Pn **Pn 00 50 13.7 +0.3**
OBKA Obir 8.12 328 *i* Pn **Pn 00 50 14.3 +0.9**
comp=Z,48nm,0.5s,SNR=10
VLDR Vladesti 8.15 39 ⇑P Pn 00 50 18.3 +4.6
BMR Baia Mare 8.18 13 ⇑P **Pn 00 50 17.7 +3.6**
BMR Baia Mare 8.18 13 P Pn 00 50 19.2 +5.1
BMR pmax pmax
comp=Z,84nm,1.1s
PSZ Piszkesteto 8.19 356 ⇑P **Pn 00 50 16.6 +2.2**
PSZ Piszkesteto 8.19 356 Pn **Pn 00 50 15.2 +0.8**
PSZ Piszkesteto 8.19 356 P **Pn 00 50 15.2 +0.8**
PSZ Piszkesteto 8.19 356 P **Pn 00 50 16.9 +2.5**
BIZ Bicaz 8.19 27 ⇑P **Pn 00 50 18.6 +4.3**
SRO Srobarova 8.25 349 *e*P **Pn 00 50 17.4 +2.3**
SRO *e* 00 51 54.2
KDZE Karadeniz Ereo 8.32 76 ⇓P **Pn 00 50 19.8 +3.7**
ARSA Arzberg 8.39 335 *e*Pn **Pn 00 50 17.4 +0.3**
comp=Z,18nm,0.5s,SNR=7.6
SOP Sopron 8.48 341 P **Pn 00 50 19.1 +0.8**
SOP pmax pmax
comp=Z,44nm,1.3s
SOP Sopron 8.48 341 P **Pn 00 50 20.0 +1.7**
TRPA Tarpa 8.49 8 ⇓P **Pn 00 50 21.7 +3.4**
TRPA Tarpa 8.49 8 P **Pn 00 50 21.9 +3.6**
PRED Cave del Predi 8.49 324 Pn 00 50 19.1 +0.6
BURAR Bucovina Array 8.52 21 ⇓P Pn 00 50 23.8 +5.0
BURAR Bucovina Array 8.52 21 Pn 00 50 22.3 +3.4
BURAR Bucovina Array 8.52 21 P **Pn 00 50 22.3 +3.4**
BUR08 Bucovina Ar. S 8.54 21 Pn 00 50 22.3 +3.2
ABAH Abaujker 8.56 2 P **Pn 00 50 23.1 +3.9**
RONA Rosalia, Austr 8.57 340 *e*Pn **Pn 00 50 20.1 +0.6**
comp=Z,16nm,0.6s
MYKA Terra Mystica 8.60 325 *e*Pn **Pn 00 50 20.4 +0.5**
comp=Z,15nm,0.3s,SNR=6.5
TEOL Teolo 8.71 313 Pn 00 50 21.2 -0.3
KECS Kecovo 8.74 359 *e*P **Pn 00 50 24.9 +3.1**
STAL STALIGIAL 8.76 321 Pn 00 50 22.3 +0.2
CLUD Cludinico 8.82 322 Pn **Pn 00 50 23.1 +0.2**
ZST Bratislava 8.84 344 *e*P **Pn 00 50 25.0 +1.9**
ZST MLR MLR
comp=Z,3μm,3.5s
VYHS Vyhne 8.85 352 *e*P **Pn 00 50 25.7 +2.4**
VYHS *e* 00 52 07.2
VLC Villacollemand 8.87 303 Pn 00 50 24.0 +0.4
CONA Conrad Observa 8.90 338 *e*Pn **Pn 00 50 24.9 +0.9**
comp=Z,11nm,0.5s
UZH Uzhgorod 8.96 7 *e*P **Pn 00 50 28.0 +3.3**
MODS Modra-Piesok 8.97 345 *e*P **Pn 00 50 26.7 +1.7**
MODS MLR MLR
comp=Z,2μm,4.1s
KBA Koelnbreinsper 9.08 326 P **Pn 00 50 27.6 +1.0**
KBA pmax pmax
comp=Z,65nm,1.1s
KBA Koelnbreinsper 9.08 326 *e*Pn **Pn 00 50 27.2 +0.6**
comp=Z,20nm,0.5s,SNR=9.7
KBA Koelnbreinsper 9.08 326 ⇑P **Pn 00 50 27.8 +1.2**
CTI Castel Tesino 9.15 316 Pn **Pn 00 50 27.6 0.0**
CTI Castel Tesino 9.15 316 P **Pn 00 50 27.6 0.0**
CRVS Cervenica-Dubn 9.17 3 *e*P **Pn 00 50 31.6 +3.9**
PRMA PARMA 9.19 306 Pn 00 50 29.1 +1.1
ABTA Abfaltersbach 9.20 322 *i* Pn **Pn 00 50 28.8 +0.5**
comp=Z,22nm,0.3s,SNR=6.1
KOLS Kolonicke sedl 9.26 6 *e*P **Pn 00 50 32.9 +4.0**
PGF Pioggiola 9.27 291 *e*P **Pn 00 50 31.8 +2.6**
PGF *e*Sn Sn 00 52 03.8 -9.2
comp=Z,36nm,0.9s
PGF Pioggiola 9.27 291 P **Pn 00 50 32.2 +3.0**
PGF pmax pmax
comp=Z,28nm,0.8s
MILM Milestii Mici 9.28 37 ⇓P **Pn 00 50 33.4 +4.1**
MILM Milestii Mici 9.28 37 P **Pn 00 50 33.3 +4.1**
BR231 Keskin MP Arra 9.29 86 Pn **Pn 00 50 30.2 +0.7**
ANTO Ankara 9.30 85 Pn **Pn 00 50 31.3 +1.7**
ANTO Ankara 9.30 85 P **Pn 00 50 31.3 +1.7**
MOA Molln 9.34 332 *e*Pn **Pn 00 50 30.8 +0.7**
comp=Z,30nm,0.3s,SNR=7.8
JAVC Velka Javorina 9.37 348 *e*PN **Pn 00 50 32.6 +2.1**
BIOA Bad Ischl, Aus 9.45 330 *i* Pn **Pn 00 50 32.1 +0.6**
comp=Z,27nm,0.3s,SNR=18
MSSA Maissana 9.50 302 Pn 00 50 33.4 +1.2
SALO Salr 9.52 311 Pn **Pn 00 50 32.3 -0.2**
SALO Salr 9.52 311 ⇑P **Pn 00 50 32.8 +0.2**
SALO ⇓S **Sn 00 52 15.4 -3.7**
STHS Stebnicka Huta 9.68 2 *e*P **Pn 00 50 35.9 +1.2**
KRUC Moravsky 9.81 343 *e*PN **Pn 00 50 36.9 +0.4**
MAUC Maruska 9.84 349 *e*PN **Pn 00 50 38.6 +1.7**
MAUC AMS AMS 00 54 50.0
comp=Z,3μm,12.6s
KEST Kesra 9.85 250 Pn **Pn 00 50 39.6 +2.5**
comp=Z,0.9nm,0.3s,baz=45,slow=5.7,SNR=16
KEST Sn **Sn 00 52 25.2 -2.2**
comp=Z,0.2nm,0.3s,baz=302,slow=22,SNR=0.9
comp=Z,33nm,1.1s
KEST Kesra 9.85 250 Pn **Pn 00 50 37.4 +0.3**
BR131 Keskin Array S 9.96 86 Pn 00 50 40.6 +1.9
BR131 Keskin Array S 9.96 86 P **Pn 00 50 40.6 +1.9**
BRTR Keskin Array B 9.96 86 Pn **Pn 00 50 40.3 +1.6**
comp=Z,0.7nm,0.3s,baz=260,slow=10,SNR=15
BRTR Sn **Sn 00 52 31.1 +1.0**
comp=Z,0.1nm,0.3s,baz=270,slow=21,SNR=1.1
comp=Z,3.1nm,0.6s
BRTR Keskin Array B 9.96 86 Pn 00 50 40.6 +1.9
BRTR Keskin Array B 9.96 86 P **Pn 00 50 40.6 +1.9**
WTTA Wattenberg 9.99 322 P **Pn 00 50 40.6 +1.5**
WTTA pmax pmax
comp=Z,102nm,1.2s
WTTA Wattenberg 9.99 322 *e*Pn **Pn 00 50 40.1 +1.0**
comp=Z,23nm,0.3s,SNR=13
VRAC Vranov 10.00 344 ⇑P **Pn 00 50 41.4 +2.3**
VRAC Vranov 10.00 344 Pn **Pn 00 50 40.2 +1.1**
comp=Z,0.5nm,0.3s,baz=175,slow=14,SNR=5.5
comp=Z,9.7nm,0.7s
VRAC Vranov 10.00 344 *e*PN **Pn 00 50 39.8 +0.7**
WATA Walderalm 10.07 322 *e*Pn **Pn 00 50 41.5 +1.3**
comp=Z,93nm,0.8s,SNR=14
CKRC Cesky Krumlov 10.16 335 *e*PN **Pn 00 50 40.8 -0.5**
SQTA Sankt Quirin 10.17 320 *e*Pn **Pn 00 50 42.9 +1.4**
comp=Z,60nm,0.5s,SNR=11
PCP Piancastagn 10.22 302 P **Pn 00 50 44.1 +1.9**
TREC Trest 10.25 340 AMS AMS 00 54 50.0
comp=Z,2μm,23.7s
OKC Ostrava-Krasne 10.25 351 *e*P **Pn 00 50 43.6 +1.1**
OKC MLR MLR
comp=Z,1μm,15.2s
OKC Ostrava-Krasne 10.25 351 *e*PN **Pn 00 50 43.6 +1.1**
OKC AMS AMS 00 55 40.0
comp=Z,1μm,15.2s
FUORN Ofenpass-Fuorn 10.26 315 Pn **Pn 00 50 43.8 +0.9**
FETA Feichten 10.27 318 *e*Pn **Pn 00 50 44.7 +1.8**
comp=Z,40nm,0.8s
MORC Moravsky Berou 10.28 348 ⇑P **Pn 00 50 45.4 +2.4**
MORC Moravsky Berou 10.28 348 Pn **Pn 00 50 44.5 +1.6**
MORC Moravsky Berou 10.28 348 P **Pn 00 50 44.5 +1.6**
MORC Moravsky Berou 10.28 348 *e*PN **Pn 00 50 44.1 +1.2**
MOTA Moosalm 10.30 321 *e*Pn **Pn 00 50 44.0 +0.6**
comp=Z,39nm,0.5s,SNR=9.2
BZK Bozkurt 10.31 73 Pn **Pn 00 50 45.6 +2.3**
LVV L'vov 10.35 12 *e*P **Pn 00 50 47.5 +3.7**
LVV *e*S **Sn 00 52 44.4 +5.2**
LVV pmax pmax
comp=Z,250nm,2.0s
GEC2 GERESS Array S 10.39 333 Pn 00 50 44.5 +0.1
GERES GERESS Array B 10.39 333 Pn **Pn 00 50 44.8 +0.4**
comp=Z,3.8nm,0.3s,baz=161,slow=14,SNR=50
GERES Sn **Sn 00 52 39.2 -1.3**
comp=Z,3.3nm,0.3s,baz=154,slow=23,SNR=8.4
comp=Z,5.8nm,0.3s
GERES GERESS Array B 10.39 333 Pn 00 50 44.5 +0.1
GERES GERESS Array B 10.39 333 P **Pn 00 50 44.5 +0.1**
OJC Ojcow 10.49 357 Pn 00 50 47.1 +1.3
OJC Ojcow 10.49 357 P **Pn 00 50 47.1 +1.3**
DAVOX Davos/Dischmat 10.57 315 Pn **Pn 00 50 48.2 +1.2**
comp=Z,8.6nm,0.3s,baz=134,slow=15,SNR=40
DAVOX Sn **Sn 00 52 39.6 -5.4**
comp=Z,2.2nm,0.3s,baz=305,slow=22,SNR=1.9
comp=Z,40nm,0.5s
RETA Reutte 10.57 320 *i* Pn **Pn 00 50 47.5 +0.5**
comp=Z,17nm,0.5s
KHC Kasperske Hory 10.67 334 Pn **Pn 00 50 48.3 0.0**
KHC Kasperske Hory 10.67 334 P **Pn 00 50 48.3 0.0**
KHC Kasperske Hory 10.67 334 *e*PN **Pn 00 50 48.5 +0.2**
KHC *e*SN **Sn 00 52 45.7 -1.7**
KHC AMS AMS 00 55 30.0
comp=Z,1μm,17.7s
KHC Kasperske Hory 10.67 334 ⇑P **Pn 00 50 50.1 +1.7**
TUE Stuetta 10.68 313 Pn **Pn 00 50 48.8 +0.3**
TUE Stuetta 10.68 313 ⇑P **Pn 00 50 50.4 +1.8**
TUE ⇑S **Sn 00 52 41.7 -6.1**
SAOF Saorge 10.69 298 P **Pn 00 50 53.0 +4.5**
KRLC Kraliky 10.70 346 *e*P **Pn 00 50 49.8 +1.2**
KRLC MLR MLR
comp=Z,2μm,13.0s
KRLC Kraliky 10.70 346 *e*PN **Pn 00 50 49.8 +1.2**
KRLC AMS AMS 00 55 40.0
comp=Z,2μm,13.2s
SBF Sospel 10.73 297 *e*P **Pn 00 50 51.3 +2.2**
SBF *e*Sn Sn 00 52 36.9 -12
comp=Z,36nm,0.6s
SBF Sospel 10.73 297 *e*P **Pn 00 50 50.8 +1.7**
SBF pmax pmax
comp=Z,15nm,0.4s
MONC Moncucco Torin 10.84 304 ⇓P **Pn 00 50 53.0 +2.3**
DAVA Damuels 10.89 317 *e*Pn **Pn 00 50 52.9 +1.5**
comp=Z,15nm,0.3s
DAVA Damuels 10.89 317 ⇑P **Pn 00 50 53.7 +2.3**
WET Wettzell 10.93 332 P **Pn 00 50 52.9 +1.1**
WET pmax pmax
comp=Z,26nm,1.0s
GOPC GO Pecny, Ondr 11.00 340 *e*P **Pn 00 50 53.6 +0.8**
GOPC MLR MLR
comp=Z,2μm,18.0s
GOPC GO Pecny, Ondr 11.00 340 *e*PN **Pn 00 50 53.6 +0.8**
GOPC AMS AMS 00 55 30.0
comp=Z,2μm,18.0s
DPC Dobruska-Polom 11.05 345 *e*P **Pn 00 50 54.7 +1.3**
DPC MLR MLR
comp=Z,3μm,11.2s
DPC Dobruska-Polom 11.05 345 *e*PN **Pn 00 50 54.7 +1.3**
DPC AMS AMS 00 55 40.0
comp=Z,3μm,11.2s
LLS Linth-Limmern 11.09 314 P **Pn 00 50 56.3 +2.2**
CSS Mathiatis 11.12 111 Pn 00 50 55.4 +0.9
PRU Pruhonice 11.13 339 *e*P **Pn 00 50 54.7 +0.1**
PRU MLR MLR
comp=Z,2μm,15.9s
PRU Pruhonice 11.13 339 *e*PN **Pn 00 50 54.7 +0.1**
PRU AMS AMS 00 55 50.0
comp=Z,2μm,15.9s
PZZ Stroppo 11.16 300 P **Pn 00 50 58.8 +3.7**
SIM Simferopol' 11.20 58 *e*P **Pn 00 50 59.2 +3.7**
SIM pmax pmax
comp=Z,54nm,1.2s
LMR La Mourre 11.23 293 *e*P **Pn 00 50 58.3 +2.4**
LMR *e*Sn Sn 00 52 48.3 -13
comp=Z,3.1nm,0.4s
LMR La Mourre 11.23 293 *e*P **Pn 00 50 58.3 +2.4**
LMR pmax pmax
comp=Z,5.0nm,0.5s
UPC Upice 11.26 344 *e*P **Pn 00 50 57.3 +1.0**
UPC MLR MLR
comp=Z,2μm,15.4s
UPC Upice 11.26 344 *e*PN **Pn 00 50 57.3 +1.0**
UPC AMS AMS 00 55 50.0
comp=Z,2μm,15.4s
OSTC Ostas 11.27 345 *e*PN **Pn 00 50 57.8 +1.4**
OSTC AMS AMS 00 55 50.0
comp=Z,2μm,13.1s
MMK Mattmark 11.27 308 P **Pn 00 50 57.9 +1.2**
CHVC Chvalec 11.33 345 *e*PN **Pn 00 50 58.5 +1.3**
CHVC AMS AMS 00 55 50.0
comp=Z,2μm,13.5s
MBDF Montbardon 11.47 300 *e*Pn **Pn 00 50 57.8 -1.5**
MBDF Montbardon 11.47 300 *e*P **Pn 00 51 02.9 +3.6**
MBDF *e*Sn Sn 00 52 52.3 -15
comp=Z,34nm,0.6s
MBDF Montbardon 11.47 300 *e*P **Pn 00 51 00.3 +1.0**
MBDF pmax pmax
comp=Z,10.0nm,0.4s
LSD Lago del Serru 11.52 304 P **Pn 00 50 59.9 -0.1**
RRL Rocca Remolon 11.52 301 P **Pn 00 51 01.6 +1.4**
PVCC Panska Ves 11.62 340 *e*P **Pn 00 51 01.3 +0.1**
PVCC MLR MLR
comp=Z,1μm,21.5s
PVCC Panska Ves 11.62 340 *e*PN **Pn 00 51 01.3 +0.1**
PVCC AMS AMS 00 55 50.0
comp=Z,1μm,21.5s
BNI Bardonecchia 11.65 302 Pn **Pn 00 51 02.2 +0.4**
BNI Bardonecchia 11.65 302 P **Pn 00 51 02.2 +0.4**
BNI Bardonecchia 11.65 302 ⇑P **Pn 00 51 04.5 +2.7**
LPG La Plagne 11.78 304 *e*Pn **Pn 00 51 02.9 -0.7**
LPG La Plagne 11.78 304 *e*P Pn 00 51 08.6 +5.0
LPG *e*Sn Sn 00 53 01.9 -13
comp=Z,99nm,0.6s
LPG La Plagne 11.78 304 *e*P **Pn 00 51 03.3 -0.3**
LPG pmax pmax
comp=Z,12nm,0.4s
LPL La Plagne 11.79 304 *e*Pn **Pn 00 51 03.1 -0.8**
LPL La Plagne 11.79 304 *e*P **Pn 00 51 07.7 +3.8**
LPL *e*Sn Sn 00 53 03.0 -12
comp=Z,66nm,0.5s
LPL La Plagne 11.79 304 *e*P **Pn 00 51 03.8 -0.1**
LPL pmax pmax
comp=Z,12nm,0.4s
SENIN Lac Senin/Sane 11.82 308 Pn **Pn 00 51 04.2 0.0**
SLE Schleitheim 11.92 316 P **Pn 00 51 05.3 0.0**
SLE pmax pmax
comp=Z,24nm,1.0s
RSL Roselend 11.94 304 P **Pn 00 51 06.5 +0.8**
NKC Novy Kostel 12.00 334 *e*P **Pn 00 51 07.3 +0.9**
NKC MLR MLR
comp=Z,2μm,12.2s
NKC Novy Kostel 12.00 334 *e*PN **Pn 00 51 07.3 +0.9**
NKC AMS AMS 00 56 10.0
comp=Z,2μm,12.2s
GRFO Grafenberg 12.01 329 Pn **Pn 00 51 06.5 0.0**
GRFO Grafenberg 12.01 329 P **Pn 00 51 06.5 0.0**
SMRF Simiane la Rot 12.05 295 *e*P **Pn 00 51 10.7 +3.5**
SMRF *e*Sn Sn 00 53 08.1 -13
comp=Z,6.6nm,0.5s
TOKA Tokat 12.10 82 Pn **Pn 00 51 09.5 +1.5**
ORIF Oris-en-Rattie 12.13 300 *e*P **Pn 00 51 10.8 +2.5**
ORIF *e*Sn Sn 00 53 11.0 -12
comp=Z,13nm,0.4s
ORIF Oris-en-Rattie 12.13 300 *e*P **Pn 00 51 10.5 +2.2**
ORIF pmax pmax
comp=Z,12nm,0.6s
STU Stuttgart 12.22 321 Pn 00 51 08.5 -0.9
STU Stuttgart 12.22 321 P **Pn 00 51 08.5 -0.9**
BFO Black Forest 12.36 318 Pn **Pn 00 51 10.6 -0.7**
BFO Black Forest 12.36 318 P **Pn 00 51 10.6 -0.7**
BFO Black Forest 12.36 318 ⇑P **Pn 00 51 11.0 -0.4**
AKASG Malin Array Be 12.48 26 Pn **Pn 00 51 14.2 +1.2**
comp=Z,1.0nm,0.3s,baz=210,slow=12,SNR=13
comp=Z,8.9nm,0.9s
AKASG Malin Array Be 12.48 26 Pn **Pn 00 51 14.6 +1.6**
AKBB Malin Array Si 12.48 26 Pn 00 51 15.3 +2.3
AKBB Malin Array Si 12.48 26 P **Pn 00 51 15.3 +2.3**
MOX Moxa 12.63 333 P **Pn 00 51 16.8 +1.7**
MOX pmax pmax
comp=Z,43nm,0.9s
CABF La Chapelle 12.68 308 *e*Pn **Pn 00 51 14.2 -1.6**
CABF *e*Sn Sn 00 53 26.2 -10
comp=Z,78nm,0.8s
CABF La Chapelle 12.68 308 *e*P **Pn 00 51 14.9 -0.9**
CABF pmax pmax
comp=Z,9.0nm,0.4s
CLL Collm 12.75 338 Pn **Pn 00 51 17.1 +0.4**
CLL Collm 12.75 338 P **Pn 00 51 17.1 +0.4**
CLL Collm 12.75 338 *e*P **Pn 00 51 20.0 +3.3**
CLL *i* sPP 00 51 28.5
CLL *ex* x 00 53 20.0
CLL LmV 00 56 00.0
comp=Z,1μm,21.5s
HINF Hinteralfeld 12.85 313 *e*Pn **Pn 00 51 17.2 -0.8**
HINF *e*Sn Sn 00 53 29.9 -11
comp=Z,46nm,0.7s
HINF Hinteralfeld 12.85 313 *e*P **Pn 00 51 15.8 -2.2**
ECH Echery 12.91 315 Pn **Pn 00 51 18.3 -0.6**
ECH Echery 12.91 315 P **Pn 00 51 18.3 -0.6**
ECH Echery 12.91 315 ⇑P **Pn 00 51 19.2 +0.4**
ECH ⇑S **Sn 00 53 36.0 -5.9**
VIVF Saint-Julien-I 12.92 298 *e*Pn **Pn 00 51 18.1 -0.9**
VIVF *e*Sn Sn 00 53 28.6 -14
comp=Z,8.6nm,0.5s
VIVF Saint-Julien-I 12.92 298 *e*P **Pn 00 51 20.6 +1.6**
VIVF pmax pmax
comp=Z,6.0nm,0.6s
CDF Champ du Feu 12.96 316 *e*Pn **Pn 00 51 19.5 -0.1**
CDF *e*Sn Sn 00 53 32.7 -11
comp=Z,38nm,0.8s
SSB Saint Sauveur 13.14 300 Pn **Pn 00 51 22.6 +0.5**
SSB Saint Sauveur 13.14 300 P **Pn 00 51 22.6 +0.5**
SSB Saint Sauveur 13.14 300 ⇓P **Pn 00 51 23.2 +1.1**
HAU Haudompre 13.23 313 *e*Pn **Pn 00 51 22.4 -0.9**
HAU *e*Sn Sn 00 53 38.8 -11
comp=Z,69nm,0.6s
HAU Haudompre 13.23 313 P **Pn 00 51 22.3 -1.0**
LASF Ste Croix 13.28 294 *e*P **Pn 00 51 27.9 +4.0**
MMAI Mount Meron Ar 13.60 115 Pn **Pn 00 51 27.8 -0.6**
comp=Z,2.7nm,0.3s,baz=302,slow=13,SNR=11
comp=Z,2.7nm,0.4s
PAGF Fort de Pagny 13.88 314 *e*Pn **Pn 00 51 31.7 -0.4**
baz=136
PAGF *e*Sn Sn 00 53 54.8 -11
comp=Z,40nm,0.6s
SFTF Sexfontaines 14.08 312 *e*Pn **Pn 00 51 33.7 -1.2**
baz=111
SFTF *e*Sn Sn 00 53 59.6 -11
comp=Z,38nm,0.7s
SMF Signal de Mont 14.09 305 *e*Pn **Pn 00 51 33.3 -1.8**
SMF *e*Sn Sn 00 54 00.0 -11
comp=Z,42nm,0.5s
SMF Signal de Mont 14.09 305 *e*P **Pn 00 51 33.2 -1.8**
SMF pmax pmax
comp=Z,8.0nm,0.5s
MEZF Maizieres J'vi 14.23 313 *e*Pn **Pn 00 51 36.1 -0.8**
baz=137
MEZF *e*Sn Sn 00 54 03.1 -11
comp=Z,21nm,0.6s
SAVF Savonnieres en 14.25 314 *e*Pn **Pn 00 51 36.9 -0.3**
baz=133
SAVF *e*Sn Sn 00 54 03.4 -11
comp=Z,36nm,0.8s
MTLF Montolieu 14.31 291 *e*P **P 00 51 47.3 +2.3**
WLF Walferdange 14.31 319 Pn **Pn 00 51 39.0 +1.1**
WLF Walferdange 14.31 319 P **Pn 00 51 39.1 +1.1**
WLF Walferdange 14.31 319 *dx* Pn 00 51 42.8 +4.9
WLF *dx* x 00 51 49.9
LOR Lormes 14.34 307 *e*Pn **Pn 00 51 36.6 -1.8**
baz=121
LOR *e*Sn Sn 00 54 03.9 -13
comp=Z,85nm,0.6s
LOR Lormes 14.34 307 P **Pn 00 51 37.2 -1.2**

AVF Avril sur Loir 14.46 305 *e*Pn **Pn 00 51 38.0 -2.0**
AVF *e*Sn Sn 00 54 08.0 -12
comp=Z,31nm,0.8s
AVF Avril sur Loir 14.46 305 P **Pn 00 51 38.9 -1.1**
SSF Saint Saulge 14.47 306 *e*Pn **Pn 00 51 38.1 -2.1**
SSF Saint Saulge 14.47 306 *e*P **P 00 51 46.6 -0.2**
SSF *e*Sn Sn 00 54 07.4 -13
comp=Z,30nm,0.5s
BGF Bois d'Agland 14.69 303 *e*Pn **Pn 00 51 41.8 -1.4**
BGF *e*Sn Sn 00 54 13.3 -12
comp=Z,40nm,0.6s
SOC Sochi 14.71 69 *e*P **Pn 00 51 41.5 -2.0**
SOC *e*SS S 00 54 36.4 -8.2
SOC pmax pmax
comp=Z,15nm,0.7s
SOC MLR MLR
comp=Z,416nm,16.0s
CAF Calviac 14.72 297 *e*P **P 00 51 47.1 -2.6**
CAF Calviac 14.72 297 P **Pn 00 51 46.4 +2.7**
GHAJ Ghor Haditha 14.73 120 Pn 00 51 45.2 +1.5
BHOU Houvegnez 14.82 321 *d*P **Pn 00 51 46.1 +1.2**
BHOU *d*x **P 00 51 53.0 +2.2**
BTNL Ternell 14.91 321 *d*x **P 00 51 54.4 +2.7**
BTNL *d*x x 00 52 00.4
MEM Membach 14.99 321 *d*PP **P 00 51 55.4 +2.9**
MEM *d*x x 00 52 03.2
TCF Toulx Ste Croi 15.01 302 *e*Pn **Pn 00 51 46.1 -1.5**
TCF *e*Sn Sn 00 54 21.5 -12
comp=Z,24nm,0.7s
TCF Toulx Ste Croi 15.01 302 P **Pn 00 51 46.4 -1.2**
RCHB Rochefort 15.09 319 *d*P **Pn 00 51 49.3 +0.8**
comp=Z,14nm,1.1s
HYF Humbligny 15.10 306 *e*P **P 00 51 52.4 -1.4**
ASF Jabal al Asfar 15.12 115 Pn **Pn 00 51 48.4 -0.7**
comp=Z,0.2nm,0.3s,baz=318,slow=17,SNR=3.4
comp=Z,1.5nm,0.6s
BSTI Sart Tilman 15.18 321 *d*x **P 00 51 57.1 +2.4**
BSTI *d*x x 00 52 03.0
RJF Les Rejaudoux 15.19 298 *e*P **P 00 51 54.0 -0.9**
RJF Les Rejaudoux 15.19 298 *e*P **P 00 51 53.1 -1.8**
RJF pmax pmax
comp=Z,91nm,2.1s
BCLA Clavier 15.21 320 *d*x **P 00 51 57.0 +2.0**
GIVF Givet 15.26 318 *e*P **P 00 51 53.8 -1.8**
GIVF *e*Sn **Sn 00 54 31.8 -7.5**
comp=Z,12nm,0.6s
BGES Gesves 15.30 319 *d*x **P 00 51 55.5 -0.5**
DOU Dourbes 15.38 318 *d*x **P 00 51 58.9 +2.1**
BMRD Maredsous 15.41 318 *d*x **P 00 51 58.5 +1.3**
BMRD *d*x x 00 52 03.1
EIL Elat 15.41 126 Pn **Pn 00 51 52.2 -0.7**
comp=Z,1.0nm,0.3s,baz=301,slow=5.9,SNR=6.7
EIL Sn **Sn 00 54 33.6 -10**
comp=Z,0.7nm,0.3s,baz=335,slow=17,SNR=1.9
comp=Z,11nm,0.7s
MNK Minsk 15.54 16 *i* P **Pn 00 51 53.8 -0.5**
MNK *i* S **Sn 00 54 45.6 -0.3**
MNK pmax pmax
comp=Z,139nm,0.8s
MNK pmax pmax
comp=E,9.0nm,1.1s
MNK pmax pmax
comp=N,131nm,0.9s
MNK MLR MLR
comp=Z,701nm,14.0s
MNK MLR MLR
comp=N,562nm,13.0s
MNK MLR MLR
comp=E,57nm,12.0s
MNK Minsk 15.54 16 *i* P **Pn 00 51 53.9 -0.5**
comp=E,9.0nm,1.1s
MNK *i* P **Pn 00 51 53.9 -0.5**
comp=N,131nm,0.9s
MNK *i* P **Pn 00 51 53.9 -0.5**
comp=Z,139nm,0.8s,baz=202
MNK *i* PP **sP 00 52 03.1 -3.0**
MNK *i* S **Sn 00 54 45.7 -0.3**
MNK *i* SS **S 00 55 01.4 +0.1**
MNK *i* LQ LQ 00 56 31.3
MNK *i* LR LR 00 57 42.3
MNK *i* LRM MLR 00 59 04.9
comp=Z,701nm,14.1s
MNK *i* LRM MLR 00 59 07.1
comp=N,562nm,13.4s
MNK *i* LRM MLR 00 59 08.1
comp=E,57nm,11.8s
BAIF Baives 15.56 317 *e*Pn **Pn 00 51 55.1 +0.5**
EPF Esparros 15.63 289 *e*Pn **Pn 00 51 51.9 -3.9**
EPF Esparros 15.63 289 *e*P **P 00 51 59.6 -0.2**
EPF pmax pmax
comp=Z,6.0nm,0.8s
LFF La Frestale 15.64 296 *e*Pn **Pn 00 51 56.4 +0.6**
NACGM Naroch 15.71 13⇑ *e*P **Pn 00 51 57.3 +0.7**
baz=197
MARD Mardin 15.89 92 Pn 00 51 58.3 -0.9
PABE Paberze 15.92 7 IAmb IAmb 00 51 26.9
comp=Z,17nm,1.1s
PABE Paberze 15.92 7 Pn **Pn 00 51 59.6 +0.3**
PABE Paberze 15.92 7 *e*P **Pn 00 51 59.5 +0.3**
IIGN Ignalina 16.04 11 *e*P **Pn 00 52 02.1 +1.2**
ISAL Salakas 16.24 11 *e*P **Pn 00 52 03.5 +0.1**
ETSF Etsaut 16.28 288 *e*P **P 00 52 06.9 -0.1**
ETSF Etsaut 16.28 288 *e*P **P 00 52 07.3 +0.2**
ETSF pmax pmax
comp=Z,10.0nm,0.7s
PBUR Paburge 16.31 2 *e*P **Pn 00 52 02.4 -1.9**
VSVD Vaisvydziai 16.39 6 *e*P **Pn 00 52 05.5 +0.2**
GURO Guroymak-BITLI 16.58 87 P **P 00 52 09.6 -0.9**
MFF Saint Martin d 16.66 301 *e*Pn **Pn 00 52 09.2 +0.4**
MFF Saint Martin d 16.66 301 *e*P **P 00 52 10.2 -0.9**
MFF pmax pmax
comp=Z,33nm,1.3s
SJPF Ste Jean 16.78 289 *e*P **P 00 52 14.4 +1.8**
SJPF Ste Jean 16.78 289 *e*P **P 00 52 13.6 +1.0**
SJPF pmax pmax
comp=Z,37nm,1.5s
SHA1 Shidzhatmaz 16.85 69 *i* P **P 00 52 15.1 +1.6**
NEY Neytrino 16.85 71 *i* P **P 00 52 13.2 -0.3**
KIV Kislovodsk 16.89 68 P **P 00 52 13.7 -0.2**
KIV Kislovodsk 16.89 68 *e*P **P 00 52 14.8 +1.0**
KIV pmax pmax
comp=Z,11nm,1.0s
KBZ Khabaz 17.02 69 Pn **P 00 52 16.9 +1.7**
comp=Z,0.4nm,0.3s,baz=266,slow=11,SNR=7.8
comp=Z,9.4nm,1.0s
KBZ Khabaz 17.02 69 *i* P **P 00 52 16.1 +1.0**
KBZ pmax pmax
comp=Z,30nm,1.3s
KARS Kars 17.11 80 P **Pn 00 52 15.5 +0.8**
KARS Kars 17.11 80 P **Pn 00 52 15.5 +0.8**
KARS pmax pmax
comp=Z,67nm,1.3s
VSR Storozhevoye 17.24 42 *e*P **Pn 00 52 15.6 -0.4**
VSR pmax pmax
comp=Z,20nm,0.9s
GOF Gofitskoye 17.31 65⇑ *e*P P 00 52 25.7 +7.4
GOF pmax pmax
comp=Z,58nm,0.9s
LDF La Druitiere 17.32 308 *e*Pn **Pn 00 52 17.6 +0.5**
LDF *e*Sn Sn 00 55 15.7 -14
LDF La Druitiere 17.32 308 *e*P **Pn 00 52 18.0 +0.9**
LDF pmax pmax
comp=Z,56nm,1.2s
DEL Delary 17.33 347 *i* P **P 00 52 19.0 +0.5**
ONI Oni 17.35 73 P **P 00 52 18.7 -0.2**
ONI Oni 17.35 73 P **P 00 52 18.7 -0.2**
ONI pmax pmax
comp=Z,6.0nm,0.9s
VORR Voronezh 17.52 41 *e*P **Pn 00 52 19.3 -0.3**
VORR pmax pmax
comp=Z,30nm,0.4s
FLN La Foliniere 17.61 308 *e*Pn **P 00 52 21.9 +0.3**
baz=129
GRR Gorron 17.70 306 *e*Pn **Pn 00 52 22.3 +0.5**
GRR *e*Sn Sn 00 55 25.1 -13
LPSR Galich'ya Gora 17.95 38 *e*P **Pn 00 52 25.1 +0.3**
LPSR pmax pmax
comp=Z,40nm,0.8s
GNI Garni 18.42 81 P **Pn 00 52 31.5 +0.6**
comp=Z,12nm,1.1s,baz=315,slow=14,SNR=4.8
GNI Garni 18.42 81 P **Pn 00 52 31.8 +0.9**
ONAU Onsala 18.57 345 *i* P **Pn 00 52 33.8 +1.4**
VRH Novokhopyorsk 18.59 45 *e*P **Pn 00 52 33.9 +1.2**
VRH pmax pmax
comp=Z,20nm,0.7s
BORU Boraas 18.63 347 *i* P **Pn 00 52 33.8 +0.6**
OBN Obninsk 18.68 29 P **P 00 52 33.4 +0.1**
comp=Z,1.2nm,0.3s,baz=223,slow=16,SNR=11
comp=Z,8.0nm,0.5s
OBN Obninsk 18.68 29 P **P 00 52 32.7 -0.6**
OBN IAmb IAmb 00 52 35.8
comp=Z,220nm,1.6s
OBN Obninsk 18.68 29 *e*P **P 00 52 31.7 -1.6**
OBN *e*S **S 00 56 04.6 -0.6**
OBN pmax pmax
comp=Z,140nm,1.5s
OBN MLR MLR
comp=Z,1μm,18.0s
OBN Obninsk 18.68 29 ⇑P **P 00 52 33.0 -0.2**
VIKU Vikbolandet 18.95 354 *e*P **Pn 00 52 36.9 0.0**
ESBB Sonseca Array 18.97 278 P **P 00 52 36.2 -0.5**
ESDC Sonseca Array 18.97 278 P **Pn 00 52 37.9 +0.4**
comp=Z,0.4nm,0.3s,baz=75,slow=11,SNR=44
comp=Z,6.7nm,0.8s
ESDC Sonseca Array 18.97 278 P **P 00 52 36.8 +0.1**
QUIF Quistinic 19.01 303 *e*Pn **Pn 00 52 39.7 +1.9**
QUIF Quistinic 19.01 303 *e*P **Pn 00 52 39.0 +1.2**
QUIF pmax pmax
comp=Z,90nm,1.4s
GROC Groznyy 19.09 71 *e*P **Pn 00 52 40.3 +1.5**
GROC pmax pmax
comp=Z,15nm,0.5s
MTSE Matsula 19.09 5 *e*P **P 00 52 38.0 +0.2**
VSU Vasula 19.13 10 *i* P **P 00 52 38.5 +0.3**
VSU Vasula 19.13 10 *e*P **P 00 52 38.6 +0.3**
ROSF Rostrenen 19.20 304 *e*Pn **Pn 00 52 41.0 +0.9**
ROSF Rostrenen 19.20 304 *e*P **Pn 00 52 40.7 +0.6**
ROSF pmax pmax
comp=Z,107nm,1.6s
PAB San Pablo 19.29 277 P **P 00 52 40.3 +0.1**
PAB San Pablo 19.29 277 P **P 00 52 40.3 +0.1**
PAB pmax pmax
comp=Z,41nm,1.4s
PAB San Pablo 19.29 277 ⇑P **Pn 00 52 42.3 +1.0**
MOS Moscow 19.55 29 *e*P **P 00 52 41.1 -1.7**
MOS *e*S **S 00 56 21.1 -1.6**
MOS pmax pmax
comp=Z,151nm,1.1s
MOS pmax pmax
comp=Z,400nm,1.7s
MOS MLR MLR
comp=Z,1μm,17.0s
HOMB Homborsund 20.14 341 *i* P **P 00 52 49.4 +0.2**
UPP Uppsala 20.23 355 *e*P **P 00 52 50.4 +0.2**
STRU Stroemstad 20.24 346 *i* P **P 00 52 50.3 0.0**
MAK Makhachkala 20.34 72 *e*P **P 00 52 50.1 -1.4**
MAK *e*S **S 00 56 37.1 -1.6**
MAK pmax pmax
comp=Z,159nm,0.9s
MAK MLR MLR
comp=Z,610nm,13.0s
AAL Aland 20.46 359 *e*P **P 00 52 52.4 -0.3**
SNART Snartemo 20.53 339 *e*P Pn 00 52 55.2 -0.5
SNART IAmb IAmb 00 53 03.2
comp=Z,210nm,1.2s
SNART Snartemo 20.53 339 *i* P **P 00 52 54.6 +1.1**
MEF Metsahovi 20.62 5 *e*P **P 00 52 54.6 +0.1**
HFS Hagfors 20.88 350 P **P 00 52 56.9 -0.4**
comp=Z,56nm,0.6s,baz=150,slow=10,SNR=59
comp=Z,56nm,0.6s
PUL Pulkovo 20.95 14 *i* P **P 00 52 56.7 -1.3**
KONO Kongsberg 21.12 344 P **P 00 52 59.5 -0.3**
KONO IAmb IAmb 00 53 00.7
comp=Z,63nm,1.1s
KONO Kongsberg 21.12 344 *ce*P **P 00 53 00.4 +0.5**
KONO pmax pmax
comp=Z,62nm,1.3s
KONO Kongsberg 21.12 344 *e*P **P 00 52 59.6 -0.3**
MVO Moncorvo 21.12 283 *e*P **P 00 53 02.1 +1.9**
comp=Z,33nm,1.5s
OSL Oslo 21.17 346 *e*P **P 00 53 00.2 -0.2**
OSL IAmb IAmb 00 53 00.7
comp=Z,80nm,0.8s
TAM Tamanrasset 21.26 222 P **P 00 53 03.0 +1.2**
TAM Tamanrasset 21.26 222 P **P 00 53 02.0 +0.2**
TAM pmax pmax
comp=Z,11nm,0.9s
RAF Rauma 21.31 1 *e*P **P 00 53 01.6 -0.3**
MDT Midelt 21.51 259 P **P 00 53 04.6 +0.2**
comp=Z,2.4nm,0.8s,baz=85,slow=11,SNR=12
comp=Z,2.4nm,0.8s
MTE Manteigas 21.60 281 *e*P **P 00 53 06.3 +1.0**
comp=Z,50nm,2.0s
MTE Manteigas 21.60 281 P **P 00 53 06.1 +0.9**
PBAR Barrancos 21.61 275 *e*P **P 00 53 05.7 +0.4**
comp=Z,48nm,1.3s
PCBR Castelo Branco 21.63 279 *e*P **P 00 53 07.2 +1.7**
comp=Z,36nm,1.8s
PMRV Marv??o 21.63 278 *e*P **P 00 53 06.6 +1.0**
comp=Z,31nm,1.5s
BLS5 Blasjo 21.67 340 *e*P **P 00 53 06.3 +0.5**
BLS5 IAmb IAmb 00 53 12.7
comp=Z,35nm,0.9s
NC602 NORSAR Array S 21.78 348 P **P 00 53 06.4 -0.5**
NC602 NORSAR Array S 21.78 348 *e*P **P 00 53 06.7 -0.2**
NC602 IAmb IAmb 00 53 07.4
comp=Z,112nm,0.9s
PVIS Viseu 21.82 282 *e*P **P 00 53 07.4 -0.3**
PESTR Estremoz 21.88 277 *e*P **P 00 53 10.8 +2.5**
comp=Z,33nm,1.8s
PESTR Estremoz 21.88 277 P **P 00 53 07.8 -0.5**
FINES FINESS Array B 21.98 7 P **P 00 53 08.8 -0.2**
comp=Z,37nm,0.7s,baz=176,slow=12,SNR=48
comp=Z,37nm,0.7s
FINES FINESS Array B 21.98 7 P **P 00 53 08.4 -0.6**
FINES FINESS Array B 21.98 7 P **P 00 53 08.4 -0.6**
FIA1 FINESS Array S 21.98 7 P **P 00 53 08.6 -0.4**
FIA1 IAmb IAmb 00 53 19.3
comp=Z,66nm,0.8s
NAO01 NORSAR Array S 21.99 347 P **P 00 53 09.1 -0.1**
NC405 NORSAR Array S 22.11 348 IAmb IAmb 00 52 39.2
comp=Z,9.7nm,0.8s
NB2 NORSAR Subarra 22.12 348 P **P 00 53 09.9 -0.7**
comp=Z,108nm,1.0s,baz=160,slow=11
NB2 NORSAR Subarra 22.12 348 P **P 00 53 09.9 -0.7**
baz=160,slow=11
NOA NORSAR Array B 22.12 348 P **P 00 53 10.4 -0.2**
comp=Z,63nm,0.9s,baz=164,slow=10,SNR=90
comp=Z,63nm,0.9s
EKA Eskdalemuir Ar 22.26 322 P **P 00 53 12.1 0.0**
comp=Z,21nm,0.7s,baz=122,slow=10,SNR=55
comp=Z,21nm,0.7s
ESK Eskdalemuir 22.27 322 P **P 00 53 12.3 +0.1**
ESK Eskdalemuir 22.27 322 P **P 00 53 12.3 +0.1**
ESK pmax pmax
comp=Z,158nm,1.6s
ESK Eskdalemuir 22.27 322 ⇓P **P 00 53 12.6 +0.4**
PBEJ Beja 22.27 275 *e*P **P 00 53 12.8 +0.3**
comp=Z,32nm,1.4s
EVO Evora 22.28 276 *e*P **P 00 53 12.2 -0.3**
comp=Z,28nm,1.6s
PVAQ Vaqueiros 22.31 273 *e*P **P 00 53 12.7 -0.2**
comp=Z,50nm,1.6s
PVAQ Vaqueiros 22.31 273 P **P 00 53 11.9 -1.0**
PVAQ Vaqueiros 22.31 273 ⇑P **P 00 53 12.7 -0.2**
PMTG Montargil 22.33 278 *e*P **P 00 53 13.6 +0.5**
comp=Z,44nm,1.3s
SKAR Skarslia 22.34 344 *e*P **P 00 53 13.8 +0.8**
SKAR IAmb IAmb 00 53 23.0
comp=Z,58nm,1.1s
PCAS Casmilo, Conde 22.37 280 *e*P **P 00 53 15.0 +1.5**
PCVE Castro Verde 22.50 274 *e*P **P 00 53 15.0 +0.1**
comp=Z,26nm,1.5s
MESJ Messejana 22.59 274 *e*P **P 00 53 16.3 +0.4**
comp=Z,34nm,1.7s
PSBE So Bento 22.68 279 *e*P **P 00 53 17.1 +0.2**
comp=Z,74nm,1.9s
PNCL Nicolau / Gran 22.76 275 *e*P **P 00 53 18.2 +0.5**
comp=Z,47nm,1.9s
BER Bergen 22.79 340 *e*P **P 00 53 17.3 -0.3**
BER IAmb IAmb 00 53 18.0
comp=Z,24nm,1.0s
DSB Dublin 22.85 315 P **P 00 53 18.1 -0.3**
DSB IAmb IAmb 00 53 32.5
comp=Z,77nm,1.2s
PTEO Sao Teotonio 23.05 274 *e*P **P 00 53 21.3 +0.7**
PFVI Vila Bisbo 23.24 273 *e*P **P 00 53 22.6 0.0**
comp=Z,57nm,1.3s
PFVI Vila Bisbo 23.24 273 P **P 00 53 22.1 -0.4**
PFVI IAmb IAmb 00 53 37.6
comp=Z,127nm,1.9s
HYA Hoyanger 23.25 342 *e*P **P 00 53 22.7 +0.3**
DOMB Dombas 23.43 346 *e*P **P 00 53 24.9 +0.6**
DOMB IAmb IAmb 00 53 26.3
comp=Z,39nm,0.7s
AKN Aaknes 23.96 344 *e*P **P 00 53 28.9 -0.5**
KLMR Klimovskoe 24.14 23 *e*P **P 00 53 30.1 -0.9**
KLMR pmax pmax
comp=Z,44nm,1.1s
KLMR Klimovskoe 24.14 23 *e*P **P 00 53 30.2 -0.8**
KLMR AMP 00 53 38.7
comp=Z,44nm,1.1s
MOL Molde 24.20 345 *e*P **P 00 53 31.0 -0.5**
TBLU Trondheim 24.36 349 *e*P **P 00 53 33.2 +0.1**
TBLU IAmb IAmb 00 53 42.5
comp=Z,34nm,0.8s
KIRV Kirov 26.27 35 P **P 00 53 49.8 -0.6**
comp=Z,17nm,0.8s,baz=245,slow=8.2,SNR=7.3
comp=Z,17nm,0.8s
KIRV Kirov 26.27 35 *i* P **P 00 53 50.2 -0.2**
RAYN Ar Rayn 26.47 120 P **P 00 53 52.8 +0.2**
RAYN Ar Rayn 26.47 120 P **P 00 53 52.8 +0.2**
RAYN pmax pmax
comp=Z,13nm,1.0s
PRGR Permogore 26.69 27 *e*P **P 00 53 52.2 -1.9**
PRGR pmax pmax
comp=Z,25nm,0.8s
MOR8 Moi Rana 26.71 354 *e*P **P 00 53 54.8 +0.5**
MOR8 IAmb IAmb 00 54 08.3
comp=Z,9.1nm,0.8s
FAUS Fauske 27.85 356 *e*P **P 00 54 04.6 +0.1**
FAUS IAmb IAmb 00 54 05.4
comp=Z,11nm,0.9s
AKTO Aktyubinsk 28.14 55 P **P 00 54 06.1 -1.2**
comp=Z,1.9nm,0.4s,baz=251,slow=7.7,SNR=10
comp=Z,1.9nm,0.4s
STEI Steigen 28.40 356 *e*P **P 00 54 09.2 -0.2**
STEI IAmb IAmb 00 54 22.1
comp=Z,22nm,1.1s
APA Apatity 28.75 10⇓ *i*P **P 00 54 09.1 -3.4**
APA pmax pmax
comp=Z,11nm,0.8s
APA MLR MLR
comp=Z,900nm,13.0s
GEYT Alibeck 29.06 81 P **P 00 54 15.9 +0.3**
comp=Z,4.8nm,0.8s,baz=294,slow=12,SNR=9.2
comp=Z,4.8nm,0.8s
GEYT Alibeck 29.06 81 IAmb IAmb 00 53 35.1
comp=Z,5.0nm,1.5s
GEYT Alibeck 29.06 81 P **P 00 54 15.8 +0.1**
GEYT IAmb IAmb 00 54 17.3
comp=Z,32nm,1.6s
GYA0B ALIBECK ARRAY 29.06 81 P **P 00 54 15.8 +0.1**
GYA0B IAmb IAmb 00 54 27.5
comp=Z,17nm,1.2s
LVZ Lovozero 29.23 11 P **P 00 54 16.7 -0.2**
LVZ Lovozero 29.23 11 P **P 00 54 16.7 -0.2**
LVZ pmax pmax
comp=Z,97nm,1.5s
ABKAR Akbulak array 29.26 58 P **P 00 54 17.0 -0.2**
ABKAR Akbulak array 29.26 58 P **P 00 54 16.9 -0.4**
ABKAR IAmb IAmb 00 55 14.0
comp=Z,5.6nm,1.1s
ABKAR Akbulak array 29.26 58 ⇓P **P 00 54 17.2 -0.1**
KTK1 Kautokeino 29.36 2 *e*P **P 00 54 17.7 -0.2**
KTK1 IAmb IAmb 00 54 18.0
comp=Z,32nm,0.8s
ARU Arti 29.80 43 P **P 00 54 21.9 -0.1**
comp=Z,3.2nm,0.4s,baz=223,slow=8.0,SNR=7.8
comp=Z,3.2nm,0.4s
ARU Arti 29.80 43 IAmb IAmb 00 53 42.3
comp=Z,5.5nm,1.2s
ARU Arti 29.80 43 P **P 00 54 21.6 -0.4**
ARU Arti 29.80 43 *d i*P **P 00 54 21.7 -0.3**
ARU 00 55 15.8
ARU S **S 00 59 19.6 +2.0**
ARU SS **SnSn 01 00 53.5 +5.7**
ARU pmax pmax
comp=Z,22nm,2.6s
ARU MLR MLR
comp=Z,528nm,15.0s
JETT Jettan, Norway 29.87 360 *e*P **P 00 54 22.0 -0.6**
JETT IAmb IAmb 00 54 24.5
comp=Z,16nm,0.8s
ARA0 ARCESS Array S 29.96 3 *e*P **P 00 54 22.7 -0.6**
ARA0 IAmb IAmb 00 54 22.8
comp=Z,22nm,0.6s
ARCES ARCESS Array B 29.96 3 P **P 00 54 22.4 -0.8**
comp=Z,17nm,0.6s,baz=188,slow=9.5,SNR=57
comp=Z,17nm,0.6s
ARCES ARCESS Array B 29.96 3 P **P 00 54 22.5 -0.8**
ARCES IAmb IAmb 00 54 22.9
comp=Z,18nm,0.8s
TRO Tromso 29.97 359 *e*P **P 00 54 22.6 -0.7**
TRO IAmb IAmb 00 54 36.5
comp=Z,90nm,1.8s
KEV Kevo 30.26 4 P **P 00 54 25.2 -0.6**
KEV Kevo 30.26 4 P **P 00 54 25.2 -0.6**
KEV pmax pmax
comp=Z,48nm,1.3s
HAMF Hammerfest 31.00 2 *e*P **P 00 54 32.1 -0.3**
SVE Sverdlovsk 31.02 43 *e*P **P 00 54 33.0 +0.3**
SVE pmax pmax
comp=Z,16nm,0.9s
TOA0 Torodi Ar. Sit 31.35 218 IAmb IAmb 00 54 12.1
comp=Z,2.2nm,1.0s
TOA0 Torodi Ar. Sit 31.35 218 P **P 00 54 36.1 +0.1**
TOA0 IAmb IAmb 00 54 43.4
comp=Z,18nm,0.9s
TORD Torodi Ar. Bea 31.35 218 P **P 00 54 36.7 +0.7**
comp=Z,9.5nm,0.7s,baz=33,slow=9.1,SNR=24
comp=Z,9.5nm,0.7s
TORD Torodi Ar. Bea 31.35 218 IAmb IAmb 00 54 08.1
comp=Z,3.6nm,1.5s
TORD Torodi Ar. Bea 31.35 218 P **P 00 54 36.2 +0.3**
TORD IAmb IAmb 00 54 43.3
comp=Z,19nm,1.1s
UOSS Minazif 33.18 106 P **P 00 54 51.8 -0.2**
UOSS IAmb IAmb 00 54 60.0
comp=Z,17nm,1.2s
KOWA Kowa 33.20 228 P **P 00 54 52.8 +0.6**
comp=Z,2.8nm,0.7s,baz=29,slow=13,SNR=6.0
comp=Z,2.8nm,0.7s
KOWA Kowa 33.20 228 P **P 00 54 51.4 -0.9**
HRA Herat 33.35 86 P **P 00 54 53.9 +0.3**
HRA IAmb IAmb 00 54 55.0
comp=Z,18nm,0.8s
BORG Borgarnes 34.83 330 P **P 00 55 07.2 +1.4**
comp=Z,9.0nm,0.9s,baz=116,slow=3.9,SNR=5.1
comp=Z,9.0nm,0.9s
BRVK Borovoye 35.95 52 P **P 00 55 15.3 -0.3**
BRVK IAmb IAmb 00 55 45.2
comp=Z,9.7nm,1.0s
BRVK Borovoye 35.95 52 *c i*P **P 00 55 15.4 -0.3**
BRVK pmax pmax
comp=Z,9.0nm,0.9s
BRVK Borovoye 35.95 52 ⇑P **P 00 55 17.1 +1.4**
IUG luzhnay 36.92 70 *e*P **P 00 55 22.1 -2.1**
IUG luzhnay 36.92 70 *e*P **P 00 55 22.2 -2.1**
baz=70
KK31 Karatay Array 37.05 68 P **P 00 55 25.0 -0.2**
KK31 IAmb IAmb 00 55 27.1
comp=Z,12nm,1.0s
KK31 Karatay Array 37.05 68 P **P 00 55 25.0 -0.2**
KK31 pmax pmax
comp=Z,13nm,1.0s
KKAR Karatay Array 37.05 68 IAmb IAmb 00 55 01.8
comp=Z,1.4nm,1.0s
KKAR Karatay Array 37.05 68 P **P 00 55 25.0 -0.2**
KKAR Karatay Array 37.05 68 P **P 00 55 25.0 -0.2**
KKAR Karatay Array 37.05 68 ⇑P **P 00 55 25.1 -0.1**
CHGR Chuyangaron 37.20 76 P **P 00 55 26.4 -0.2**
CHGR IAmb IAmb 00 55 38.8
comp=Z,31nm,0.9s
CHGR Chuyangaron 37.20 76 P **P 00 55 26.4 -0.2**
CHGR pmax pmax
comp=Z,31nm,0.9s
BRZS Berezniki 37.53 57 *e*P **P 00 55 27.7 -1.5**
BRZS Berezniki 37.53 57 *e*P **P 00 55 27.8 -1.5**
baz=57
GAR Garm 37.96 75 P **P 00 55 34.1 +1.1**
BTK Batken 38.02 73 P **P 00 55 33.5 -0.1**
BTK IAmb IAmb 00 55 46.4
comp=Z,18nm,1.2s
BTK Batken 38.02 73 P **P 00 55 33.5 -0.1**

BTK pmax pmax
comp=Z,18nm,1.2s
KBL Kabul 38.51 82 P **P 00 55 37.6 -0.3**
KBL Kabul 38.51 82 P **P 00 55 37.6 -0.3**
KBL pmax pmax
comp=Z,6.0nm,0.7s
LODK Lodwar 38.52 156 P **P 00 55 38.9 +1.0**
SPITS Spitsbergen Ar 38.59 359 P **P 00 55 37.3 -0.5**
comp=Z,5.4nm,0.6s,baz=153,slow=9.7,SNR=3.1
comp=Z,5.4nm,0.6s
SGDS Sogindy 39.91 67 *e*P **P 00 55 47.1 -2.2**
SGDS Sogindy 39.91 67 *e*P **P 00 55 47.1 -2.2**
baz=67
AAK Ala-Archa 40.01 68 P **P 00 55 50.3 0.0**
AAK IAmb IAmb 00 56 05.6
comp=Z,31nm,1.6s
AAK Ala-Archa 40.01 68*c i*P **P 00 55 50.9 +0.7**
AAK pmax pmax
comp=Z,17nm,1.4s
AAK Ala-Archa 40.01 68 ⇓P **P 00 55 51.0 +0.7**
DBIC Dimbokro 40.15 222 P **P 00 55 51.1 -0.3**
comp=Z,2.7nm,0.5s,baz=13,slow=7.1,SNR=5.1
comp=Z,2.7nm,0.5s
DBIC Dimbokro 40.15 222 P **P 00 55 50.5 -0.9**
DBIC IAmb IAmb 00 55 59.1
comp=Z,28nm,1.2s
DBIC Dimbokro 40.15 222 P **P 00 55 50.5 -0.9**
DBIC pmax pmax
comp=Z,28nm,1.3s
DAG Danmarks Havn 40.80 347 *i*P **P 00 55 56.0 -0.1**
DAG IAmb IAmb 00 55 56.8
comp=Z,8.0nm,0.8s
KUU Kurty 41.00 65 *e*P **P 00 55 56.9 -1.4**
KUU pmax pmax
comp=Z,13nm,0.7s
KUU Kurty 41.00 65 *e*P **P 00 55 56.9 -1.4**
comp=Z,13nm,0.7s,baz=66
BOOM Boomskoye usch 41.08 68 P **P 00 55 58.5 -0.6**
BOOM Boomskoye usch 41.08 68 P **P 00 55 58.5 -0.6**
BOOM pmax pmax
comp=Z,14nm,1.2s
MBAR Mbarara 41.19 165 P **P 00 55 59.3 -0.9**
MBAR Mbarara 41.19 165 P **P 00 55 59.3 -0.9**
MBAR pmax pmax
comp=Z,5.0nm,0.8s
KURBB Kurchatov Arra 41.20 55 P **P 00 55 58.8 -0.9**
comp=Z,5.0nm,0.9s,baz=279,slow=9.1,SNR=18
comp=Z,5.0nm,0.9s
KURK Kurchatov 41.24 55 P **P 00 55 59.9 -0.2**
KURK Kurchatov 41.24 55*c i*P **P 00 55 59.7 -0.4**
KURK pmax pmax
comp=Z,15nm,1.3s
KURK Kurchatov 41.24 55 ⇓P **P 00 56 00.1 0.0**
NRN Naryn 41.41 69 P **P 00 56 02.0 -0.1**
NRN Naryn 41.41 69 P **P 00 56 02.0 -0.1**
NRN pmax pmax
comp=Z,6.0nm,0.8s
CHKK Chushkaly 41.47 65 *e*P **P 00 56 00.1 -2.0**
CHKK Chushkaly 41.47 65 *e*P **P 00 56 00.2 -1.9**
baz=66
TNSS Tian-Shan 41.65 67 *e*P **P 00 56 02.6 -1.5**
TNSS Tian-Shan 41.65 67 *e*P **P 00 56 02.6 -1.5**
baz=67
MDOK Medeo 41.69 66 *e*P **P 00 56 02.4 -1.6**
MDOK Medeo 41.69 66 *e*P **P 00 56 02.5 -1.6**
baz=67
NIL Nilore 42.06 81 P **P 00 56 06.9 -0.2**
NIL IAmb IAmb 00 56 19.7
comp=Z,14nm,0.7s
NIL Nilore 42.06 81 P **P 00 56 06.9 -0.2**
NIL pmax pmax
comp=Z,14nm,0.7s
TDK Taldyqorghan 42.17 63 *e*P **P 00 56 06.3 -1.5**
TDK Taldyqorghan 42.17 63 *e*P **P 00 56 06.3 -1.5**
baz=64
TARG Taragay, Kyrgy 42.62 68 P **P 00 56 11.1 -1.0**
TARG IAmb IAmb 00 56 12.4
comp=Z,17nm,1.2s
TARG Taragay, Kyrgy 42.62 68 P **P 00 56 11.1 -1.0**
TARG pmax pmax
comp=Z,17nm,1.2s
SATY Saty 42.67 66 *e*P **P 00 56 09.6 -2.5**
SATY Saty 42.67 66 *e*P **P 00 56 09.6 -2.5**
baz=66
KPKS Kokpek 42.76 65 *e*P **P 00 56 10.4 -2.3**
KPKS Kokpek 42.76 65 *e*P **P 00 56 10.5 -2.3**
baz=66
UZB Uzynbulak 43.08 66 *e*P **P 00 56 12.6 -2.8**
UZB Uzynbulak 43.08 66 *e*P **P 00 56 12.7 -2.8**
baz=66
SHLS Shalkode 43.39 66 *e*P **P 00 56 18.2 +0.3**
SHLS Shalkode 43.39 66 *e*P **P 00 56 18.2 +0.3**
baz=66
NOR Nord 43.95 353 *i*P **P 00 56 20.5 -1.2**
NOR IAmb IAmb 00 56 22.3
comp=Z,30nm,1.4s
MAKZ Makanchi 44.16 60 P **P 00 56 23.9 0.0**
MAKZ IAmb IAmb 00 56 24.7
comp=Z,20nm,0.9s
MAKZ Makanchi 44.16 60 P **P 00 56 23.9 0.0**
MAKZ pmax pmax
comp=Z,20nm,1.0s
MAKZ Makanchi 44.16 60 ⇓P **P 00 56 24.1 +0.2**
MK31 Makanchi Array 44.37 60 IAmb IAmb 00 55 49.2
comp=Z,4.2nm,1.1s
MK31 Makanchi Array 44.37 60 P **P 00 56 25.5 -0.1**
MK31 IAmb IAmb 00 56 26.3
comp=Z,19nm,0.7s
MK31 Makanchi Array 44.37 60*c i*P **P 00 56 24.9 -0.7**
MKAR Makanchi Array 44.37 60 P **P 00 56 25.4 -0.2**
comp=Z,24nm,0.6s,baz=277,slow=7.4,SNR=71
comp=Z,24nm,0.6s
ZAA0 Zalesovo Array 44.55 49 IAmb IAmb 00 56 05.3
comp=Z,5.3nm,1.4s
ZAA0 Zalesovo Array 44.55 49 P **P 00 56 26.1 -0.7**
ZAA0 IAmb IAmb 00 56 56.2
comp=Z,7.8nm,0.8s
ZALV Zalesovo Beam 44.55 49 P **P 00 56 26.2 -0.6**
comp=Z,8.4nm,0.6s,baz=280,slow=8.6,SNR=22
comp=Z,8.4nm,0.6s
ZALV Zalesovo Beam 44.55 49 P **P 00 56 26.4 -0.5**
ZALV Zalesovo Beam 44.55 49 P **P 00 56 26.4 -0.5**
DY2G Dye2 45.23 329 *i*P **P 00 56 32.4 +0.1**
DY2G IAmb IAmb 00 56 33.8
comp=Z,134nm,1.8s
NRIK Noril'sk 45.33 27 P **P 00 56 33.9 +1.0**
comp=Z,13nm,0.9s,baz=251,slow=5.8,SNR=11
comp=Z,13nm,0.9s
NRIK Noril'sk 45.33 27 P **P 00 56 34.0 +1.1**
NRIK IAmb IAmb 00 56 34.9
comp=Z,17nm,0.9s
NRIK Noril'sk 45.33 27 *i*P **P 00 56 32.9 0.0**
NRIK pmax pmax
comp=Z,29nm,1.4s
ZSN Zaisan 45.91 58 *e*P **P 00 56 35.4 -2.3**
ZSN Zaisan 45.91 58 *e*P **P 00 56 35.5 -2.3**
baz=58
DGZ Jazzator, Alta 46.99 55 *i*P **P 00 56 45.4 -1.0**
DGZ pmax pmax
comp=Z,21nm,0.7s
NEEM North Greenlan 47.61 344 *i*P **P 00 56 50.4 -0.7**
NEEM IAmb IAmb 00 56 51.5
comp=Z,6.4nm,1.1s
NEEM IAML 00 56 51.5
comp=Z,6.4nm,1.1s
NUUG Nuugaatsiaq 47.80 336 *i*P **P 00 56 51.7 -0.5**
WMQ Urumqi 48.88 62 *e*P **P 00 57 01.3 +0.2**
WMQ pP sP 00 57 07.6 -1.5
WMQ sP pP 00 57 10.8 +4.0
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ pmax pmax
comp=Z,130nm,4.5s
WMQ LR LR
comp=Z,700nm,17.5s
WMQ LR LR
comp=Z,900nm,16.1s
WMQ LR LR
comp=Z,430nm,18.9s
EUNU Eureka 54.01 348 P **P 00 57 39.4 +0.5**
EUNU IAmb IAmb 00 58 12.4
comp=Z,9.1nm,1.1s
DRLN Deer Lake 54.25 308 P **P 00 57 41.2 +0.2**
LSZ Lusaka 55.18 171 P **P 00 57 48.5 +0.4**
LSZ IAmb IAmb 00 58 15.4
comp=Z,17nm,1.8s

LSZ Lusaka 55.18 171 P **P 00 57 48.5 +0.4**
ZAK Zakamensk 56.42 50 *e*P **P 00 57 56.4 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
SCHQ Schefferville 57.42 317 P **P 00 58 03.2 -0.4**
comp=Z,4.8nm,0.5s,baz=74,slow=5.7,SNR=15
comp=Z,4.8nm,0.5s
SCHQ Schefferville 57.42 317 P **P 00 58 03.6 0.0**
SCHQ IAmb IAmb 00 58 04.4
comp=Z,18nm,1.1s
TIXI Tiksi 58.13 21 P **P 00 58 08.5 +0.2**
TIXI IAmb IAmb 00 58 10.2
comp=Z,14nm,1.1s
TIXI Tiksi 58.13 21*c i*P **P 00 58 08.1 -0.3**
TIXI pmax pmax
comp=Z,16nm,1.2s
GTA Gaotai 58.96 63 *e*P **P 00 58 14.6 -0.3**
GTA pP sP 00 58 21.0 -2.0
GTA sP pP 00 58 23.1 +2.3
GTA pmax pmax
comp=Z,8.0nm,1.0s
SONM Songino Array 59.36 51 P **P 00 58 17.3 -0.1**
comp=Z,12nm,1.0s,baz=285,slow=8.6,SNR=34
comp=Z,12nm,1.0s
SONM Songino Array 59.36 51 P **P 00 58 16.9 -0.5**
SONM IAmb IAmb 00 58 18.4
comp=Z,15nm,1.1s
ULN Ulaanbaatar 59.74 51 P **P 00 58 19.7 -0.4**
ULN IAmb IAmb 00 58 21.0
comp=Z,9.9nm,0.8s
ULN Ulaanbaatar 59.74 51 *i*P **P 00 58 20.4 +0.3**
ULN pmax pmax
comp=Z,12nm,0.9s
ULN Ulaanbaatar 59.74 51 P **P 00 58 19.7 -0.4**
comp=Z,57nm,1.0s
HAL Halifax 59.96 305 P **P 00 58 21.3 -0.1**
HAL Halifax 59.96 305 P **P 00 58 21.3 -0.1**
HAL pmax pmax
comp=Z,42nm,1.1s
BATG Bathurst New B 60.27 308 P **P 00 58 23.4 -0.1**
BATG IAmb IAmb 00 58 31.7
comp=Z,21nm,1.2s
PQI Presque Isle 61.73 309 P **P 00 58 33.7 +0.2**
PALK Pallekele 62.44 104 P **P 00 58 37.7 -1.0**
comp=Z,5.1nm,0.6s,baz=0.0,slow=2.0
comp=Z,5.1nm,0.6s
PALK Pallekele 62.44 104 P **P 00 58 37.1 -1.7**
PKME Peaks-Kenny Pk 63.20 308 P **P 00 58 43.6 +0.3**
baz=60
LZH Lanzhou 63.38 64 ⇓P **P 00 58 45.0 +0.1**
LZH pP sP 00 58 50.3 -2.6
LZH sP pP 00 58 55.0 +4.2
LZH pmax pmax
comp=Z,16nm,1.4s
YAK Yakutsk 63.68 30 P **P 00 58 45.1 -1.0**
YAK Yakutsk 63.68 30 *e*P **P 00 58 45.8 -0.4**
YAK pmax pmax
comp=Z,28nm,0.8s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,8.0nm,1.0s
LBTB Lobatse 64.58 175 P **P 00 58 53.0 +0.4**
LBTB Lobatse 64.58 175 P **P 00 58 53.0 +0.4**
LBTB pmax pmax
comp=Z,43nm,1.8s
LBNH Lisbon 65.34 308 P **P 00 58 58.4 +1.0**
LBNH Lisbon 65.34 308 P **P 00 58 58.4 +1.0**
LBNH pmax pmax
comp=Z,29nm,1.5s
LBNH Lisbon 65.34 308 P **P 00 58 57.4 0.0**
baz=58
WES Weston 65.95 306 P **P 00 59 01.9 +0.6**
WES Weston 65.95 306 P **P 00 59 02.0 +0.6**
WES pmax pmax
comp=Z,68nm,1.9s
HHC Hu-ho-hao-te 66.03 56 *e*P **P 00 59 01.8 -0.3**
HHC pmax pmax
comp=Z,32nm,0.9s
HHC pmax pmax
comp=Z,180nm,4.9s
HHC LR LR
comp=Z,740nm,14.0s
HHC LR LR
comp=Z,1μm,12.7s
HHC LR LR
comp=Z,2μm,14.6s
HRV Adam Dziewonsk 66.04 306 P **P 00 59 01.9 0.0**
baz=57
HIA Hailar 66.30 45 *i*P **P 00 59 03.5 -0.1**
HIA pmax pmax
comp=Z,8.0nm,1.2s
LONY Lake Ozonia 66.73 309 P **P 00 59 06.9 +0.5**
baz=57
L61B Northampton 66.77 306 P **P 00 59 06.8 +0.2**
baz=57
PZH PanZhiHua 67.02 74 P **P 00 59 12.4 +3.8**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,130nm,4.5s
XLT XiLinHaoTe 67.18 51 *e*P **P 00 59 09.0 -0.3**
XLT pP pP 00 59 12.4 -2.9
XLT sP sP 00 59 16.0 -1.4
XLT ScP 01 03 34.4
XLT pmax pmax
comp=Z,13nm,1.0s
XLT pmax pmax
comp=Z,140nm,5.1s
XLT LR LR
comp=Z,590nm,16.4s
XLT LR LR
comp=Z,800nm,16.4s
POGA Pongola 67.53 169 **P 00 59 11.9 +0.6**
XAN Xi'an 67.99 64 ⇑P **P 00 59 13.6 -0.9**
XAN pP sP 00 59 21.5 -1.1
XAN sP pP 00 59 24.8 +4.3
XAN pmax pmax
comp=Z,8.0nm,1.0s
BOSA Boshof 68.14 176 P **P 00 59 16.0 +0.7**
comp=Z,5.6nm,0.8s,baz=360,slow=6.4,SNR=11
comp=Z,5.6nm,0.8s
BOSA Boshof 68.14 176 P **P 00 59 15.6 +0.3**
BOSA Boshof 68.14 176 P **P 00 59 15.6 +0.3**
BOSA pmax pmax
comp=Z,29nm,1.4s
C36M Paulatuk 68.17 347 P **P 00 59 15.0 +0.1**
baz=29
PAL Palisades 68.33 306 P **P 00 59 16.7 +0.3**
baz=56
BINY Binghamton 68.94 308 P **P 00 59 20.2 -0.1**
baz=55
A21K Barrow 69.22 359 P **P 00 59 21.6 +0.1**
baz=2.2
SADO Sadowa 69.33 311 P **P 00 59 23.6 +1.0**
BJI Beijing 69.41 55 P **P 00 59 22.6 -0.6**
BJI pmax pmax
comp=Z,9.0nm,1.1s
BJI LR LR
comp=Z,190nm,18.8s
BJI LR LR
comp=Z,480nm,19.0s
BJI LR LR
comp=Z,1μm,19.9s
BILL Bilibino 69.46 13 *e*P **P 00 59 22.6 -0.4**
BILL *e*SS SS 01 12 57.1 +1.6
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,612nm,18.0s
CMAR Chiang Mai Arr 69.53 83 P **P 00 59 22.6 -1.7**
comp=Z,1.0nm,0.6s,baz=302,slow=8.3,SNR=6.1
comp=Z,1.0nm,0.6s
HNS HongShan 69.98 58 ⇓P **P 00 59 26.4 -0.3**
HNS pmax pmax
comp=Z,10.0nm,1.0s
C26K Camden Bay 70.14 355 P **P 00 59 26.9 -0.3**
baz=12
C27K Jago River 70.34 354 P **P 00 59 27.9 -0.5**
baz=13
C23K Itkillik River 70.55 357 P **P 00 59 29.3 -0.4**
baz=7.1
INK Inuvik 70.55 350 P **P 00 59 29.4 -0.3**
baz=21
C24K Franklin Bluff 70.57 356 P **P 00 59 29.2 -0.6**
baz=8.6

SEY Seymchan 70.62 21 P **P 00 59 30.6 +0.4**
SEY pmax pmax
comp=Z,10.0nm,1.0s
D25K Kavik River 70.83 355 P **P 00 59 31.0 -0.5**
baz=10
SSPA Standing Stone 71.01 307 P **P 00 59 32.7 -0.3**
baz=54
D24K Happy Valley 71.14 356 P **P 00 59 33.1 -0.2**
baz=8.5
F31M Tsiigehtchic 71.39 350 P **P 00 59 34.8 0.0**
baz=20
ERPA Erie 71.40 310 P **P 00 59 35.9 +0.6**
baz=53
D23K Nanushuk River 71.42 357 P **P 00 59 34.8 -0.2**
baz=7.0,SNR=5.2
E27K Coleen River 71.57 353 P **P 00 59 35.7 -0.3**
baz=14
TOLK Toolik Lake Re 71.69 356 P **P 00 59 36.2 -0.5**
baz=7.9
SUR Sutherland 71.76 180 P **P 00 59 38.5 +0.8**
E25K Arctic Village 71.96 355 P **P 00 59 37.8 -0.5**
baz=11
YKA Yellowknife Ar 71.97 340 P **P 00 59 38.4 0.0**
comp=Z,2.8nm,0.8s,baz=37,slow=6.1,SNR=4.0
comp=Z,2.8nm,0.8s
CBN Corbin Frederi 72.13 305 P **P 00 59 40.2 +0.4**
baz=53
G30M tAoh Zraii Nji 72.15 351 P **P 00 59 39.0 -0.5**
baz=18
E24K Your Creek 72.19 356 P **P 00 59 39.0 -0.7**
baz=8.7
M53A WI Miller and 72.22 309 P **P 00 59 39.1 -1.1**
baz=52
F26K Sheenjek River 72.27 354 P **P 00 59 39.9 -0.3**
baz=12
E23K Chandalar 72.27 356 P **P 00 59 40.2 -0.1**
baz=7.8,SNR=5.4
E22K Anaktuvuk Pass 72.30 357 P **P 00 59 39.4 -1.0**
baz=6.0
GLMI Grayling 72.40 314 P **P 00 59 40.7 -0.6**
baz=51
F25K Christian Rive 72.49 355 P **P 00 59 41.1 -0.4**
baz=11
BMAR Burnt Mountain 72.57 354 P **P 00 59 43.4 +1.4**
KLR Kul'dur 72.58 40 *i*P **P 00 59 40.7 -1.6**
KLR pmax pmax
comp=Z,3.0nm,0.9s
CN2 Changchun 72.71 47 P **P 00 59 42.9 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
F24K Squaw Lake 72.71 355 P **P 00 59 43.5 +0.6**
baz=9.2,SNR=5.5
Q56A Snyder Ridge, 72.77 307 P **P 00 59 44.0 +0.4**
Q56A IAmb IAmb 00 59 46.0
comp=Z,13nm,0.8s
EPYK Eagle Plains 72.79 351 P **P 00 59 43.7 +0.4**
baz=18
MCWV Mont Chateau 72.80 307 P **P 00 59 44.3 +0.6**
baz=52
MA2 Magadan 72.80 24 P **P 00 59 44.2 +0.8**
MA2 Magadan 72.80 24 *i*P **P 00 59 43.2 -0.2**
MA2 pmax pmax
comp=Z,33nm,1.0s
G27K Doyon Strip 72.92 353 P **P 00 59 43.8 -0.3**
baz=14,SNR=5.4
F22K John River 72.94 357 P **P 00 59 44.5 +0.3**
baz=5.7
G26K Porcupine Rive 72.97 354 P **P 00 59 44.0 -0.3**
baz=12,SNR=6.6
O53A New Philadelph 73.27 309 P **P 00 59 46.3 -0.2**
baz=52
F21K Alatna River 73.27 358 P **P 00 59 46.0 -0.1**
baz=4.7
G25K Bearman Lake 73.34 355 P **P 00 59 46.6 +0.2**
baz=11
AAM Ann Arbor 73.44 311 P **P 00 59 47.1 -0.3**
baz=51
WRGLY Wrigley 73.46 344 P **P 00 59 47.6 +0.4**
baz=28
H27K Steamboat Moun 73.47 353 P **P 00 59 47.4 0.0**
baz=14
G22K Bettles 73.50 357 P **P 00 59 47.6 +0.3**
baz=6.2
G24K Hadweenzic Riv 73.50 355 P **P 00 59 47.3 -0.1**
baz=9.5
G23K Bananza Creek 73.64 356 P **P 00 59 47.7 -0.6**
baz=7.4
H25K Birch Creek 73.81 354 P **P 00 59 48.8 -0.4**
baz=11
I29M Ogilvie Camp, 73.96 351 P **P 00 59 50.0 -0.2**
baz=17,SNR=6.9
G21K Allakaket 73.98 358 P **P 00 59 50.6 +0.3**
baz=4.6,SNR=5.2
I27K Kandik River 74.09 352 P **P 00 59 51.8 +0.8**
baz=14
P52A Corning 74.20 309 P **P 00 59 52.3 +0.2**
baz=51
CNNC Cliffs of the 74.25 303 P **P 00 59 52.7 +0.3**
baz=52
ACSO Alum Creek Sta 74.34 309 P **P 00 59 52.7 -0.1**
baz=51
H24K Noodor Dome 74.38 355 P **P 00 59 52.5 -0.2**
baz=9.1
H23K Yukon River 74.49 356 P **P 00 59 53.5 +0.2**
baz=7.8
H22K Ishtalitna Cre 74.52 357 P **P 00 59 53.0 -0.4**
baz=6.3,SNR=5.5
IMAR Indian Mountai 74.52 358 P **P 00 59 54.6 +1.2**
PRP Porcupine Dome 74.53 354 P **P 00 59 53.3 -0.3**
baz=11
I26K Coal Creek Min 74.53 353 P **P 00 59 53.3 -0.1**
baz=13
ULM Lac du Bonnet 74.53 323 P **P 00 59 54.0 +0.3**
comp=Z,5.7nm,0.6s,baz=76,slow=5.0,SNR=5.2
comp=Z,5.7nm,0.6s
H21K Melozitna Rive 74.81 357 P **P 00 59 55.0 -0.1**
baz=5.2,SNR=12
TNA Tin City 74.81 4 P **P 00 59 54.7 -0.4**
baz=353
POKR Poker Plat Res 75.06 355 P **P 00 59 57.3 +0.8**
baz=9.4
I23K Minto, Yukon-K 75.16 356 P **P 00 59 56.6 -0.4**
baz=7.9
I21K Tanana 75.25 357 P **P 00 59 57.3 -0.3**
baz=5.8
MDM Murphy Dome 75.27 355 P **P 00 59 58.3 +0.5**
MDM IAmb IAmb 00 59 59.8
comp=Z,14nm,1.2s
K29M Barlow Dome 75.31 350 P **P 00 59 57.7 -0.5**
baz=17
MAYO Mayo, Yukon 75.33 349 P **P 00 59 57.9 -0.3**
baz=18
DAWY Dawson 75.33 351 P **P 00 59 59.1 +0.9**
DAWY IAmb IAmb 01 00 00.2
comp=Z,7.6nm,0.8s
DAWY Dawson 75.33 351 P **P 00 59 57.9 -0.3**
baz=16,SNR=7.2
MLY Manley 75.35 356 P **P 00 59 58.0 -0.3**
baz=6.8
J26L Joseph Creek 75.36 353 P **P 00 59 58.0 -0.4**
baz=12,SNR=6.2
IL31 75.37 355 P **P 00 59 58.9 +0.6**
IL31 IAmb IAmb 01 00 52.4
comp=Z,9.8nm,1.4s
ILAR Eielson Array 75.37 355 P **P 00 59 58.4 +0.1**
comp=Z,1.6nm,0.7s,baz=357,slow=3.4,SNR=21
comp=Z,1.6nm,0.7s
ILAR Eielson Array 75.37 355 P **P 00 59 58.9 +0.6**
J25K Salcha River, 75.40 354 P **P 00 59 59.1 +0.5**
baz=11
MMPY Sheldon Lake, 75.52 347 P **P 00 59 59.6 +0.2**
baz=22,SNR=5.2
O48B Farmland 75.61 311 P **P 01 00 00.2 +0.1**
baz=50
K27K Chicken 75.67 352 P **P 01 00 00.3 +0.2**
baz=14,SNR=7.5
NEA2 Nenana 75.69 355 P **P 01 00 00.2 0.0**
baz=8.1
HDA Harding Lake 75.73 355 P **P 01 00 01.0 +0.5**
baz=9.8,SNR=6.9
P49A Miami Univ. Ec 75.81 310 P **P 01 00 01.6 +0.2**
baz=50
GCSA Galena City Sc 75.83 359 P **P 01 00 00.6 -0.3**
baz=1.9
NJ2 Nanjing 75.90 60 *e*P **P 01 00 05.1 +3.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
SCRK Sand Creek 75.91 353 P **P 01 00 02.0 +0.4**

	baz=12					
L44A	Lake County Fo	75.94 313	P	P	01 00 02.1	+0.1
	baz=49					
TGTN	Hyland Airport	75.98 345	P	P	01 00 02.2	+0.2
	baz=24					
USRK	Ussuriysk Ar.	76.04 44	P	P	01 00 02.1	-0.5
	comp=Z,5.4nm,0.8s,baz=313,slow=3.8,SNR=6.2					
	comp=Z,5.4nm,0.8s					
USRK	Ussuriysk Ar.	76.04 44	P	P	01 00 01.8	-0.7
USRK	Ussuriysk Ar.	76.04 44	P	P	01 00 01.8	-0.7
L29M	L29M	76.10 350	P	P	01 00 03.1	+0.5
	baz=17					
RIDG	Independent Ri	76.22 353	P	P	01 00 03.6	+0.3
	baz=11					
K24K	Donnelly Dome	76.24 354	P	P	01 00 03.5	+0.1
	baz=11					
FARO	Faro, Yukon	76.24 348	P	P	01 00 03.8	+0.4
	baz=20					
DOT	Dot Lake	76.24 353	P	P	01 00 04.4	+1.1
DOT			IAmb	IAmb	01 00 05.7	
	comp=Z,34nm,1.7s					
BPAW	Bear Paw Mtn.	76.29 356	P	P	01 00 03.8	+0.2
	baz=6.6					
J20K	Nowinta River	76.34 358	P	P	01 00 04.0	+0.1
	baz=4.1					
KOTAN	Kotaneelee Air	76.34 343	P	P	01 00 04.3	+0.3
	baz=27					
M31M	Drury Creek, Y	76.43 348	P	P	01 00 03.7	-0.8
	baz=20					
SPMN	Marine on St.	76.52 318	P	P	01 00 05.8	+0.5
	baz=47					
KMSC	Kings Mountain	76.52 304	P	P	01 00 05.8	+0.4
	baz=51					
MCK	McKinley	76.54 355	P	P	01 00 05.5	+0.5
MCK			IAmb	IAmb	01 00 20.2	
	comp=Z,11nm,1.0s					
MCK	McKinley	76.54 355	P	P	01 00 05.5	+0.5
MCK			pmax	pmax		
	comp=Z,11nm,1.0s					
MCK	McKinley	76.54 355	P	P	01 00 05.0	-0.1
	baz=8.2					
CHUM	Lake Minchumin	76.56 357	P	P	01 00 05.0	-0.1
	baz=5.5					
BCAR	Beaver Creek A	76.58 352	P	P	01 00 06.5	+1.1
L27K	Beaver Creek,	76.59 352	P	P	01 00 05.5	+0.1
	baz=14,SNR=6.5					
SFIN	Lafayette	76.65 312	P	P	01 00 06.6	+0.5
	baz=49					
JFWS	Jewell Farm	76.73 315	P	P	01 00 06.9	+0.4
	baz=48					
L26K	Log Cabin Wild	76.78 353	P	P	01 00 07.0	+0.6
	baz=13					
M29M	Somme Creek	76.78 350	P	P	01 00 06.6	0.0
	baz=16,SNR=8.7					
TRF	Thorofare Moun	76.90 356	P	P	01 00 07.1	-0.1
	baz=7.1					
CAST	Castle Rocks	77.02 357	P	P	01 00 07.7	-0.1
	baz=5.7					
TZTN	Tazewell	77.02 307	P	P	01 00 07.8	-0.4
	baz=50					
NHSC	New Hope	77.06 302	P	P	01 00 08.7	+0.2
	baz=51					
DHY	Denali Highway	77.08 354	P	P	01 00 08.7	+0.4
DHY			IAmb	IAmb	01 00 09.9	
	comp=Z,12nm,0.8s					
DHY	Denali Highway	77.08 354	P	P	01 00 07.9	-0.4
	baz=9.4,SNR=7.7					
BVCY	Beaver Creek	77.11 351	P	P	01 00 08.4	+0.1
	baz=14,SNR=5.8					
K20K	Telida	77.16 358	P	P	01 00 08.2	-0.3
	baz=4.1					
N32M	Quiet Lake	77.21 347	P	P	01 00 08.7	-0.2
	baz=20					
M27K	Edge Creek, AK	77.28 352	P	P	01 00 08.9	-0.5
	baz=14					
N31M	Braeburn, Yuko	77.32 349	P	P	01 00 09.1	-0.4
	baz=18					
M26K	Nabesna, AK	77.36 352	P	P	01 00 09.6	-0.1
	baz=13					
N30M	Aishikik Lake	77.54 349	P	P	01 00 10.6	-0.1
	baz=17					
PPLA	Purkeypile	77.55 357	P	P	01 00 10.4	-0.5
	baz=5.6					
HARP	HAARP	77.57 353	P	P	01 00 10.4	-0.4
	baz=11					
WCI	Wyandotte Cave	77.59 310	P	P	01 00 12.3	+0.9
WCI	Wyandotte Cave	77.59 310	P	P	01 00 11.5	+0.1
	baz=49					
WAT6	Susitna Watana	77.60 355	P	P	01 00 10.9	-0.3
	baz=9.1					
TTA	Tatalina	77.64 358	P	P	01 00 11.5	+0.2
	baz=2.6					
YUK3	Moose Creek	77.68 351	P	P	01 00 10.5	-1.2
	baz=15,SNR=8.0					
TKL	Tuckaleechee C	77.73 306	P	P	01 00 12.2	0.0
TKL			IAmb	IAmb	01 02 06.0	
	comp=Z,20nm,1.4s					
TKL	Tuckaleechee C	77.73 306	P	P	01 00 12.2	0.0
TKL			pmax	pmax		
	comp=Z,20nm,1.4s					
YUK4	Talbot Arm	77.87 350	P	P	01 00 12.2	-0.5
	baz=16					
M24K	Tolsona, Glenn	77.94 354	P	P	01 00 12.7	-0.4
	baz=10					
MDND	Maddock	77.96 324	P	P	01 00 12.6	-0.8
	baz=43					
WHY	Whitehorse	77.97 348	P	P	01 00 13.1	-0.1
	baz=19					
L20K	Farewell, AK	78.03 357	P	P	01 00 13.4	-0.1
	baz=4.3					
P33M	Teslin, Yukon	78.05 347	P	P	01 00 13.1	-0.5
	baz=20					
O30N	Mendenhall	78.05 349	P	P	01 00 13.3	-0.4
	baz=18					
YUK8	Steele Glacier	78.07 351	P	P	01 00 12.9	-1.1
	baz=15					
KS19	Wonju Array Si	78.16 51	P	P	01 00 14.3	-0.3
HYT	Haines Junctio	78.21 349	P	P	01 00 15.7	+1.1
HYT			IAmb	IAmb	01 00 23.1	
	comp=Z,8.0nm,1.0s					
HYT	Haines Junctio	78.21 349	P	P	01 00 13.9	-0.7
	baz=17					
KSAR	Wonju Array Be	78.21 51	P	P	01 00 14.5	-0.3
KSAR	Wonju Array Be	78.21 51	P	P	01 00 14.5	-0.3
YUK6	Outpost Mounta	78.22 350	P	P	01 00 14.2	-0.6
	baz=16					
KSRS	Korea Array	78.22 51	P	P	01 00 14.4	-0.5
	comp=Z,5.6nm,0.7s,baz=311,slow=5.0,SNR=19					
	comp=Z,5.6nm,0.7s					
N25K	Chitina, Valde	78.30 353	P	P	01 00 14.6	-0.4
	baz=12					
SCM	Sheep Creek Mo	78.31 354	P	P	01 00 14.3	-0.7
	baz=9.4					
MCARA	McCarthy VSAT	78.36 352	P	P	01 00 14.5	-0.8
	baz=13					
L19K	White Mountain	78.36 358	P	P	01 00 14.5	-0.8
	baz=3.5					
M23K	Glacier View	78.38 354	P	P	01 00 15.1	-0.3
	baz=9.1					
SML	Sawmill	78.41 355	P	P	01 00 15.3	-0.2
	baz=8.6					
SKT	Skwentna	78.43 356	P	P	01 00 15.7	0.0
	baz=6.1					
R33M	Jennings River	78.47 346	P	P	01 00 14.7	-1.4
	baz=22					
KLU	Klutina	78.53 354	P	P	01 00 15.7	-0.6
	baz=10					
M22K	Willow	78.58 356	P	P	01 00 15.1	-1.3
	baz=7.2					
M20K	Styx River	78.60 357	P	P	01 00 16.2	-0.5
	baz=4.8					
O28M	Mount Upton	78.62 351	P	P	01 00 16.5	-0.5
	baz=15					
M19K	Big River Lodg	78.62 358	P	P	01 00 16.2	-0.5
	baz=3.9					
PMR	Palmer	78.68 355	P	P	01 00 16.8	-0.1
	baz=8.0					
P32M	Atlin	78.79 347	P	P	01 00 17.1	-0.6
	baz=20					
P30M	Million Dollar	78.80 349	P	P	01 00 17.2	-0.6
	baz=17					
KNK	Knik Glacier	78.81 355	P	P	01 00 17.1	-0.7
	baz=8.5					
O29M	Mount Kennedy	78.86 350	P	P	01 00 17.6	-0.6
	baz=16					
SUA	Susitna One	78.90 356	P	P	01 00 17.0	-1.4
	baz=6.7					
BMRM	Bremner River	78.92 353	P	P	01 00 16.9	-1.5
	baz=12					
GOGA	Godfrey	78.98 304	P	P	01 00 18.2	-0.9
	baz=50					
Q32M	Nakina River	79.12 346	P	P	01 00 19.1	-0.7
	baz=21					
DLBC	Dease Lake	79.17 345	P	P	01 00 18.8	-1.1
	baz=22					
SKAG	Skagway	79.18 348	P	P	01 00 18.0	-1.7
	baz=19					
RC01	Rabbit Creek A	79.22 355	P	P	01 00 18.3	-1.7
	baz=7.5					
N20K	Mount Spurr	79.24 357	P	P	01 00 18.5	-1.6
	baz=5.5					
SPCR	Spurr Chakacha	79.24 357	P	P	01 00 18.7	-1.5
	baz=5.5					
PINM	Pinnacle	79.28 350	P	P	01 00 18.8	-1.6
	baz=15					
PLBC	Pleasant Camp	79.35 348	P	P	01 00 18.8	-1.9
	baz=18					
PWL	Port Wells	79.35 355	P	P	01 00 18.0	-2.7
	baz=8.6					
P29M	Windy Craggy	79.39 349	P	P	01 00 20.3	-0.7
	baz=17					
YSS	Yuzh-Sakhalins	79.42 36	*e*P	P	01 00 20.4	-0.9
YSS			*e**SP	PcP	01 00 33.3	+4.0
YSS			*e*S	S	01 10 14.6	-6.7
YSS			pmax	pmax		
	comp=Z,40nm,0.9s					
YSS			MLR	MLR		
	comp=Z,700nm,14.0s					
EYAK	Cordova Ski Ar	79.44 353	P	P	01 00 20.9	-0.3
	baz=11					
ECSD	EROS Data Cent	79.50 319	P	P	01 00 21.9	0.0
	baz=44					
PNL	Peninsula	79.59 350	P	P	01 00 22.3	+0.3
	baz=15					
N19K	Bonanza Creek	79.72 358	P	P	01 00 22.9	0.0
	baz=3.8					
S34M	Telegraph Cree	79.88 345	P	P	01 00 23.7	0.0
	baz=22					
N18K	Kilae Creek	79.89 358	P	P	01 00 23.3	-0.3
	baz=2.7					
WVT	Waverly	79.90 309	P	P	01 00 25.0	+0.8
	baz=48					
P23K	Montague Islan	80.13 354	P	P	01 00 25.3	+0.4
	baz=9.3					
N16K	Nishlik Lake	80.14 360	P	P	01 00 25.2	+0.2
	baz=0.4					
R32K	Eaglecrest	80.17 347	P	P	01 00 25.2	0.0
	baz=19					
SEW	Seward	80.18 355	P	P	01 00 25.2	+0.1
	baz=7.7					
PETK	Petropavlovsk-	80.32 25	P	P	01 00 25.8	-0.3
	comp=Z,4.2nm,0.9s,baz=264,slow=3.9,SNR=5.5					
	comp=Z,4.2nm,0.9s					
TIGA	Tifton	80.34 303	P	P	01 00 26.5	-0.1
	baz=49					
O20K	Slope Mountain	80.38 357	P	P	01 00 25.6	-0.7
	baz=5.2					
T35M	Bob Quinn	80.57 344	P	P	01 00 27.6	+0.2
	baz=22					
CCM	Cathedral Cave	80.60 312	P	P	01 00 28.1	+0.2
CCM			IAmb	IAmb	01 00 29.0	
	comp=Z,5.5nm,0.7s					
CCM	Cathedral Cave	80.60 312	P	P	01 00 28.1	+0.2
CCM			pmax	pmax		
	comp=Z,6.0nm,0.7s					
CCM	Cathedral Cave	80.60 312	P	P	01 00 28.0	+0.1
	baz=46					
Q23K	Middleton Isla	80.60 353	P	P	01 00 27.4	0.0
	baz=10					
BRSE	Bradley Lake S	80.62 356	P	P	01 00 27.8	+0.2
	baz=6.7					
O18K	Kokuh Hills	80.70 358	P	P	01 00 28.1	+0.1
	baz=3.2					
S31K	Pelican	80.75 348	P	P	01 00 28.1	-0.1
	baz=18					
O17K	Koliganek Bris	80.82 359	P	P	01 00 28.8	+0.2
	baz=1.7					
P19K	Oil Pt	80.83 357	P	P	01 00 28.4	-0.4
	baz=4.7					
S32K	Killisnoo	80.94 347	P	P	01 00 29.0	-0.3
	baz=19					
O16K	Kokwok River B	81.01 359	P	P	01 00 29.1	-0.5
	baz=0.9					
P17K	Kvichak River	81.39 359	P	P	01 00 30.5	-1.2
	baz=2.2					
LRAL	Lakeview Retre	81.46 306	P	P	01 00 33.3	+0.8
LRAL			IAmb	IAmb	01 00 33.7	
	comp=Z,9.2nm,0.7s					
LRAL	Lakeview Retre	81.46 306	P	P	01 00 32.2	-0.3
	baz=48					
Q16K	King Salmon	81.91 359	P	P	01 00 34.4	0.0
	baz=2.0					
OXF	Oxford	81.94 308	P	P	01 00 35.0	-0.1
	baz=47					
BGNE	Belgrade	81.97 318	P	P	01 00 35.0	-0.1
	baz=43					
EGMT	Eagleton	82.18 329	P	P	01 00 36.3	+0.1
	baz=36					
Q17K	Contact Creek	82.31 358	P	P	01 00 36.1	-0.6
	baz=2.6					
V35K	Ketchikan	82.39 344	P	P	01 00 36.6	-0.4
	baz=21					
CRAG	Craig	82.56 345	P	P	01 00 38.4	+0.5
	baz=20					
KDAK	Kodiak Island	82.67 356	P	P	01 00 39.1	+0.7
	baz=5.2					
BRAL	Brewton	82.74 305	P	P	01 00 40.2	+0.9
	baz=48					
RSSD	Black Hills	82.80 323	P	P	01 00 40.9	+1.2
RSSD			pmax	pmax		
	comp=Z,8.0nm,1.1s					
RSSD	Black Hills	82.80 323	P	P	01 00 40.4	+0.8
	baz=40					
KSU1	Kansas State U	82.84 316	P	P	01 00 40.0	+0.3
	baz=44					
OHAK	Old Harbor	83.27 357	P	P	01 00 42.0	+0.5
	baz=4.7					
BAUV	El Baul	83.40 276	P	P	01 00 42.6	-0.3
BAUV			IAmb	IAmb	01 00 43.9	
	comp=Z,12nm,0.9s					
RLMT	Red Lodge	84.32 327	P	P	01 00 48.1	+0.6
	baz=36					
BDFB	Brasilia	84.32 244	P	P	01 00 48.6	+1.0
	comp=Z,2.9nm,0.7s,baz=63,slow=9.8,SNR=5.3					
	comp=Z,2.9nm,0.7s					
MIAR	Mount Ida	84.39 311	P	P	01 00 48.5	+0.8
	baz=45					
TUL1	Leonard	84.69 313	P	P	01 00 49.9	+0.6
	baz=44					
CBKS	Cedar Bluff	84.70 317	P	P	01 00 49.5	+0.2
	baz=42					
NEW	Newport	84.72 333	P	P	01 00 50.0	+0.8
	baz=31					
MSO	Missoula	84.78 331	P	P	01 00 50.0	+0.4
	baz=33					
MJAR	Matsushiro Arr	84.79 46	P	P	01 00 49.5	-0.2
	comp=Z,5.5nm,0.7s,baz=329,slow=4.1,SNR=17					
	comp=Z,5.5nm,0.7s					
BOZ	Bozeman (W)	84.90 329	P	P	01 00 51.0	+0.7
	baz=35					
K22A	Casper	85.08 324	P	P	01 00 51.2	-0.1
	baz=38					
SDPT	Sand Point	85.27 1	P	P	01 00 51.8	+0.1
	baz=359					
SDV	Santo Domingo	85.42 278	P	P	01 00 53.6	+0.2
SDV			IAmb	IAmb	01 00 55.2	
	comp=Z,9.4nm,0.7s					
N23A	Red Feather La	86.19 322	P	P	01 00 57.3	+0.3
	baz=38					
PD31	Pinedale Array	86.34 326	P	P	01 00 57.4	-0.2
PD31			IAmb	IAmb	01 00 58.7	
	comp=Z,12nm,1.8s					
PDAR	Pinedale Array	86.34 326	P	P	01 00 57.1	-0.5
	comp=Z,0.9nm,0.8s,baz=62,slow=6.9,SNR=6.1					
	comp=Z,0.9nm,0.8s					
PDAR	Pinedale Array	86.34 326	P	P	01 00 57.5	-0.1
BW06	Boulder Array	86.34 326	P	P	01 00 58.2	+0.6
	baz=36					
UNV	Unalaska Valle	86.58 4	P	P	01 00 58.9	+0.7
	baz=354					
ISCO	Idaho Springs	86.89 322	P	P	01 01 00.6	+0.1
	baz=38					
WMOK	Wichita Mounta	87.21 314	P	P	01 01 02.1	+0.4
	baz=42					
Q24A	Divide	87.32 321	P	P	01 01 03.1	+0.5
	baz=39					
HLID	Hailey	87.70 329	P	P	01 01 04.6	+0.4
	baz=33					
O20A	White River Ci	87.86 323	P	P	01 01 04.5	-0.5
	baz=37					
T25A	Trinidad	88.37 319	P	P	01 01 07.9	+0.4
	baz=39					
SDCO	Great Sand Dun	88.45 320	P	P	01 01 08.0	+0.1
	baz=38					
WHTX	Lake Whitney,	88.48 311	P	P	01 01 07.8	0.0
	baz=43					
S22A	4UR Ranch, Cre	89.09 321	P	P	01 01 10.2	-0.8
	baz=38					
ABTX	Abilene, Hawle	89.26 313	P	P	01 01 11.5	0.0
	baz=42					
DUG	Dugway, Tooele	89.85 326	P	P	01 01 14.9	+0.6
	baz=34					
MSTX	Muleshoe	89.96 316	P	P	01 01 15.5	+0.6
	baz=40					
MVCO	Mesa Verde	90.32 322	P	P	01 01 16.7	0.0
	baz=37					
JCT	Junction City	90.95 312	P	P	01 01 20.4	+0.9
	baz=42					
ANMO	Albuquerque	91.12 319	P	P	01 01 20.2	-0.1
	baz=38					
R11A	Troy Canyon, C	92.56 327	P	P	01 01 27.2	+0.2
	baz=32					
W18A	Petrified Fore	92.60 321	P	P	01 01 27.0	-0.2
	baz=36					
WUAZ	Wupatki	93.05 323	P	P	01 01 28.9	-0.4
	baz=35					
TX32	Lajitas Array	94.00 314	P	P	01 01 34.2	+0.5
TX32			IAmb	IAmb	01 01 35.6	
	comp=Z,3.1nm,0.9s					
TXAR	Lajitas Array	94.00 314	P	P	01 01 34.4	+0.8
	comp=Z,2.5nm,0.8s,baz=72,slow=4.5,SNR=24					
	comp=Z,2.5nm,0.8s					
TXAR	Lajitas Array	94.00 314	P	P	01 01 34.0	+0.4
TXAR	Lajitas Array	94.00 314	P	P	01 01 34.1	+0.4
TPNV	Topopah Spring	94.03 327	P	P	01 01 33.7	0.0
	baz=32					
GRAC	Grapevine Rang	94.46 328	P	P	01 01 36.2	+0.7
	baz=31					
TUC	Tucson	95.38 320	P	P	01 01 39.6	-0.3
	baz=35					
GSC	Goldstone, Bar	95.67 326	P	P	01 01 40.9	-0.3
	baz=31					
ISA	Isabella, Lake	96.06 328	P	P	01 01 43.0	+0.1
	baz=30					
SBC	Santa Barbara	97.62 328	P	P	01 01 49.5	-0.4
	baz=30					
FMP	Fort Macarthur	97.66 327	P	P	01 01 49.9	-0.2
	baz=31					
WRA	Warramunga Arr	120.44 91	PKP	PKPdf	01 07 05.7	-1.3
	comp=Z,0.7nm,0.7s,baz=324,slow=2.1,SNR=6.8					
ASAR	Alice Springs	122.18 95	PKP	PKPdf	01 07 09.2	-1.1
	comp=Z,2.0nm,0.8s,baz=326,slow=1.6,SNR=15					
CTA	Charters Tower	129.69 84	PKP	PKPdf	01 07 24.8	0.0
	comp=Z,4.9nm,0.8s,baz=270,slow=2.0,SNR=3.4					
DZM	Mont Dzumac	145.99 69	PKPbc	PKPab	01 07 56.5	+0.6
	comp=Z,20nm,1.0s,baz=244,slow=1.6,SNR=4.3					

IDC 16 00:57:47.8±3.4, 6°.39S×149°.29E, h0km, mb2.9/1, mbtmp3.4/3, ML3.7/1, MS2.0/1, Error ellipse: s-maj=117.5km s-min=36.8km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.67	215	Pn	Pn	00 58 45.6	-0.3
	11nm,0.3s,baz=31,slow=13,SNR=7.5						
PMG				Sn	Sn	00 59 29.5	-0.4
	8.4nm,0.3s,baz=49,slow=20,SNR=9.2						
PMG				LR	LR	00 59 55.6	
	comp=Z,22nm,21.9s,baz=60,slow=35						
WRA	Warramunga Arr	19.81	226	P	P	01 02 20.4	+0.2
	0.2nm,0.3s,baz=51,slow=11,SNR=9.9						
	1.8nm,0.9s						
ASAR	Alice Springs	22.68	219	P	P	01 02 51.5	+0.4
	0.4nm,0.7s,baz=58,slow=9.7,SNR=4.5						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	147.40	284	PKPbc	PKPbc	01 17 33.8	-0.9
	1.0nm,0.7s,baz=55,slow=1.5,SNR=5.6						

*JMA **16** 00:58:11.7±0.2, 43°.6N±0°.6×14°6E±°, h112km±1km, MV2.5/28, NEMURO REGION*
*SKHL **16** 00:58:12.1±0.4, 43°.50N×146°.00E, h109km±8km, mb4.2/3, msha5.1/2*

ISC 16 00:58:11.5±2.2, 43°.54N±0°.08×146°.00E±0°.08, h112km±12km, n14, σ0°45/26, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.26	226	P	Pn	00 58 27.5	+0.2
NEM2				*e*S	Sn	00 58 39.2	+0.1
NMR	Nemuro--Hokkai	0.26	229	*e*P	Pn	00 58 27.2	-0.1
NMR				AMB	AMB	00 58 27.8	
	60nm,0.2s						
NMR				*e*S	Sn	00 58 38.6	-0.5
NMR				A	A	00 58 39.7	
	380nm,0.3s						
NMR				A	A	00 58 39.7	
	520nm,0.3s						
YUK	Yuzh-Kuril'sk	0.50	349	*e*P	Pn	00 58 28.5	0.0
YUK				AMB	AMB	00 58 29.1	
	80nm,0.2s						
YUK				*i* S	Sn	00 58 40.9	-0.4
YUK				A	A	00 58 42.6	
	170nm,0.4s						
YUK				A	A	00 58 42.6	
	340nm,0.4s						
JRA	Rausu	0.75	302	P	Pn	00 58 30.4	+0.1
JRA				*e*S	Sn	00 58 44.7	+0.1
JNSB	Nemuroshibetsu	0.76	288	*e*P	Pn	00 58 30.8	+0.3
JNSB				*e*S	Sn	00 58 45.4	+0.6
JKHN	Kushirohamanak	0.76	233	*e*P	Pn	00 58 30.9	+0.4
JKHN				*e*S	Sn	00 58 45.2	+0.4
JNK	Nakash	0.93	273	*e*P	Pn	00 58 32.2	+0.1
JNK				*e*S	Sn	00 58 46.9	-0.8
AKK	Akkeshi	0.99	238	*e*P	Pn	00 58 32.8	+0.1
AKK				*e*S	Sn	00 58 48.4	-0.4
JAK	Akkeshi	1.10	241	*e*P	Pn	00 58 34.0	+0.2
JAK				*e*S	Sn	00 58 50.7	+0.1
JTKR	Abashiri--Toko	1.57	286	*e*P	Pn	00 58 39.1	-0.2
JAR	Ashorobuto	1.64	262	*e*P	Pn	00 58 40.6	+0.5
JAR				*e*S	Sn	00 59 02.3	+0.4
JOB	Onbets	1.71	249	*e*P	Pn	00 58 40.9	0.0
JOB				*e*S	Sn	00 59 03.1	-0.1
JCH	Churui	2.14	245	*e*P	Pn	00 58 46.6	+0.3
JCH				*e*S	Sn	00 59 11.7	-1.3
KUR	Kuril'sk	2.16	38	*e*P	Pn	00 58 46.7	+0.2
KUR				AMB	AMB	00 58 48.2	
	30nm,0.5s						

IDC 16 00:59:57.7±2.2, 6°.25S×149°.46E, h0km, mb3.0/2, mbtmp3.3/3, ML1.6/1, Error ellipse: s-maj=53.7km s-min=34.3km az=156.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.88	216	Pn	Pn	01 00 58.9	+0.4
	3.1nm,0.3s,baz=321,slow=6.5,SNR=1.4						
PMG				Sn	Sn	01 01 40.8	-4.0
	12nm,0.3s,baz=182,slow=17,SNR=6.4						
	7.5nm,0.3s						
HNR	Honiara	10.86	108	Pn	Pn	01 02 34.5	-0.1
	329nm,0.3s,baz=158,slow=23,SNR=8.7						
WRA	Warramunga Arr	20.02	226	P	P	01 04 31.6	-0.8
	1.2nm,0.9s,baz=51,slow=11,SNR=1.8						
	1.2nm,0.9s						
ASAR	Alice Springs	22.89	219	P	P	01 05 03.0	-0.1
	0.3nm,0.8s,baz=54,slow=9.0,SNR=2.3						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	147.52	285	PKPbc	PKPbc	01 19 44.5	-0.4
	0.5nm,0.7s,baz=94,slow=4.3,SNR=5.2						

*JMA **16** 01:01:36.8±0.3, 23°N±1°×122°.0E±0°.7, h40km, MV2.6/8, TAIWAN REGION*
*TAP **16** 01:01:37.3, 23°.41N×122°.00E, h36km, ML3.1, C*

ISC 16 01:01:36.8±1.2, 23°.40N±0°.03×122°.01E±0°.03, h28km±11km, n86, σ0°98/114, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin** baz=252	**0.52**	**261**	*e*P	Pb	01 01 46.8	-0.7
ECBN				S	**Sb**	**01 01 54.5**	**-0.3**
TEGC	**Jichi Village** baz=305	**0.53**	**305**	P	**Pb**	**01 01 47.7**	**+0.1**
HGSD	**Ruisui** baz=279	**0.55**	**280**	*e*P	**Pb**	**01 01 47.6**	**-0.3**
HGSD				*e*S	**Sb**	**01 01 55.4**	**-0.1**
EGFH	**Guangfu** baz=303	**0.60**	**296**	*i* P	**Pn**	**01 01 48.6**	**-0.8**
TEYL	**Yanliau Villag** baz=332	**0.60**	**321**	*e*P	**Pn**	**01 01 49.3**	**-0.1**
EYUL	**Yuli** baz=260	**0.64**	**265**	P	**Pn**	**01 01 49.3**	**-0.6**
EHY	**Hungye** baz=274	**0.64**	**279**	*i* P	**Pn**	**01 01 49.3**	**-0.7**
YULB	**Yu-li** baz=264	**0.66**	**269**	*e*P	**Pn**	**01 01 49.5**	**-0.7**
YULB				*e*S	**Sb**	**01 01 59.7**	**+1.1**
TWF1	**Yuli** baz=256	**0.66**	**266**	*i* P	**Pn**	**01 01 49.5**	**-0.7**
ESL	**Shilin** baz=307	**0.67**	**308**	*i* P	**Pn**	**01 01 49.3**	**-1.1**
ESL				*i* S	**Sb**	**01 01 57.9**	**-1.0**
HWA	**Hwalien** baz=328	**0.68**	**327**	*e*P	**Pn**	**01 01 49.9**	**-0.6**
ETM	**Tongmen** baz=324	**0.73**	**320**	*i* P	**Pn**	**01 01 50.6**	**-0.7**
TWD	**Chiawan** baz=331	**0.77**	**331**	*i* P	**Pn**	**01 01 51.0**	**-0.9**
TWD				*e*S	**Sn**	**01 02 00.9**	**-1.6**
EDH	**Donghe** baz=232	**0.78**	**237**	*i* P	**Pn**	**01 01 50.9**	**-1.0**
EDH				*i* S	**Sn**	**01 02 00.7**	**-1.9**
ECS	**Chishang** baz=241	**0.79**	**247**	*i* P	**Pn**	**01 01 51.8**	**-0.2**
ETL	**Fush Village** baz=335	**0.83**	**335**	*i* P	**Pn**	**01 01 51.9**	**-0.8**
NACB	**Ninganchiao** baz=333	**0.86**	**334**	*e*P	**Pn**	**01 01 52.1**	**-0.9**
NACB				*e*S	**Sn**	**01 02 02.7**	**-1.8**
VWDT	**VWDT** baz=293	**0.87**	**294**	*e*P	**Pn**	**01 01 53.1**	**0.0**
VWDT				*e*S	**Sn**	**01 02 04.4**	**-0.5**
LDUT	**Ludao** baz=214	**0.88**	**215**	*e*S	**Sn**	**01 02 03.0**	**-2.1**
ETLH	**Xiulin Townshi** baz=329	**0.94**	**329**	*e*P	**Pn**	**01 01 53.4**	**-0.8**
ETLH				*e*S	**Sn**	**01 02 05.4**	**-1.2**
ELDTW	**Lidau** baz=247	**0.94**	**257**	*i* P	**Pn**	**01 01 53.4**	**-0.8**
ELDTW				*e*S	**Sn**	**01 02 05.4**	**-1.4**
OWD	**Renai** baz=306	**0.94**	**306**	*e*P	**Pn**	**01 01 53.9**	**-0.3**
LONT	**Longtian** baz=248	**0.95**	**239**	*e*P	**Pn**	**01 01 54.0**	**-0.2**
YUS	**Yu-Shan** baz=275	**0.98**	**275**	P	**Pn**	**01 01 55.0**	**-0.1**
WHF	**Hehuan Shan** baz=318	**1.01**	**317**	*i* P	**Pn**	**01 01 54.9**	**-0.5**
WUSB	**Renai** baz=305	**1.01**	**306**	P	**Pn**	**01 01 55.0**	**-0.1**
WUSB				*i* S	**Sn**	**01 02 07.7**	**-0.8**
CHGB	**Renai** baz=310	**1.01**	**311**	*e*P	**Pn**	**01 01 55.1**	**-0.1**
CHGB				*i* S	**Sn**	**01 02 07.6**	**-1.1**
TWG	**Pinlang** baz=248	**1.04**	**236**	P	**Pn**	**01 01 55.0**	**-0.5**
TWG				*e*S	**Sn**	**01 02 08.2**	**-0.9**
SSLB	**Suanglung** baz=291	**1.04**	**292**	*e*P	**Pn**	**01 01 54.6**	**-0.9**
EWUT	**Wuta** baz=348	**1.06**	**348**	*e*P	Pn	01 01 54.4	-1.3
EWUT				*e*S	**Sn**	**01 02 07.9**	**-1.7**
FUSS	**Fushou** baz=320	**1.10**	**320**	*e*P	**Pn**	**01 01 56.7**	**+0.2**
FUSS				*e*S	**Sn**	**01 02 10.0**	**-0.8**
WHYT	**Xinyi Township** baz=279	**1.10**	**286**	*e*P	**Pn**	**01 01 56.9**	**+0.6**
WHYT				*e*S	**Sn**	**01 02 11.4**	**+0.7**
ALS	**Alishan** baz=275	**1.11**	**276**	*e*P	**Pn**	**01 01 57.4**	**+0.6**
ALS				*e*S	**Sn**	**01 02 11.9**	**+0.6**
SMLT	**Sun Moon Lake** baz=295	**1.12**	**295**	*e*P	**Pn**	**01 01 57.1**	**+0.3**
WPL	**Puli Township** baz=302	**1.14**	**302**	*e*P	**Pn**	**01 01 57.2**	**+0.3**
TYC	**Yuchr** baz=295	**1.17**	**295**	*e*P	**Pn**	**01 01 57.8**	**+0.5**
TYC				*e*S	**Sn**	**01 02 13.2**	**+0.9**
NNSB	**Datong** baz=331	**1.17**	**331**	*e*P	**Pn**	**01 01 57.7**	**+0.2**
DPDB	**Guoxing** baz=302	**1.18**	**303**	*e*P	**Pn**	**01 01 57.9**	**+0.5**
STYT	**Tauyuan** baz=252	**1.18**	**259**	*e*P	**Pn**	**01 01 57.8**	**+0.4**
STYT				*e*S	**Sn**	**01 02 12.6**	**0.0**
NNS	**Nan Shan** baz=331	**1.19**	**331**	*e*P	**Pn**	**01 01 57.8**	**+0.2**
NNS				*e*S	**Sn**	**01 02 11.9**	**-1.0**
WCS	**Beigang Elemen** baz=313	**1.20**	**303**	*e*P	**Pn**	**01 01 57.2**	**-0.5**
TWC	**Suao** baz=353	**1.21**	**353**	*e*P	**Pn**	**01 01 58.3**	**+0.5**
TWC				*e*S	**Sn**	**01 02 13.7**	**+0.4**
LATG	**Datong** baz=339	**1.21**	**339**	*e*P	**Pn**	**01 01 58.1**	**+0.1**
WJS	**Zhushan** baz=289	**1.25**	**290**	*e*P	**Pn**	**01 02 00.5**	**+2.1**
ECL	**Taimali** baz=230	**1.26**	**231**	*e*P	**Pn**	**01 01 58.0**	**-0.6**
ECL				*e*S	**Sn**	**01 02 12.8**	**-1.7**
TPUB	**Ta-pu** baz=265	**1.27**	**266**	*e*P	**Pn**	**01 01 59.9**	**+1.2**
NDT	**Datong Townshi** baz=339	**1.28**	**339**	*e*P	Pn	01 01 57.5	-1.3
WCKO	**Fanlu** baz=271	**1.29**	**272**	*e*P	**Pn**	**01 01 59.9**	**+0.9**
WCKO				*e*S	**Sn**	**01 02 16.6**	**+1.2**
WTP	**Ta-pu** baz=263	**1.29**	**263**	*e*P	**Pn**	**01 02 00.2**	**+1.2**
ENTT	**Nioudou** baz=342	**1.30**	**342**	*e*P	**Pn**	**01 01 58.4**	**-0.6**
WNT	**Mingjian** baz=291	**1.31**	**292**	*e*P	**Pn**	**01 02 01.4**	**+2.3**
WHP	**Taichung City** baz=312	**1.31**	**312**	*e*P	**Pn**	**01 02 00.1**	**+0.9**
JYNG	**Yonagunijimaku**	**1.35**	**39**	*e*S	**Sn**	**01 02 16.5**	**-0.2**
TWE	**Neicheng** baz=347	**1.35**	**347**	*e*P	**Pn**	**01 02 00.4**	**+0.7**
SGST	**Jiashian** baz=256	**1.35**	**257**	*e*P	**Pn**	**01 02 00.4**	**+0.6**
WWF	**Wufeng** baz=298	**1.36**	**298**	*e*P	**Pn**	**01 02 00.9**	**+1.0**
CHN1	**Nanshi** baz=260	**1.38**	**261**	*e*P	**Pn**	**01 02 01.9**	**+1.7**
CHN1				*e*S	**Sn**	**01 02 20.5**	**+3.0**
YHNB	**Yeheng** baz=335	**1.39**	**335**	*e*P	**Pn**	**01 02 00.9**	**+0.5**
YHNB				*e*S	**Sn**	**01 02 17.4**	**-0.4**
YOJ	**Yonaguni jima** baz=41	**1.40**	**41**	*e*P	**Pn**	**01 02 00.8**	**+0.4**
YOJ	**Yonaguni jima** baz=41	**1.40**	**41**	*e*S	**Sn**	**01 02 17.9**	**0.0**
NSK	**Sanguang** baz=335	**1.40**	**335**	*e*P	**Pn**	**01 02 00.7**	**+0.2**
NSK				*e*S	**Sn**	**01 02 16.7**	**-1.4**
FUSB	**Fushanzhiwuyua** baz=336	**1.41**	**344**	*e*P	**Pn**	**01 02 01.2**	**+0.6**
TWK	**Hsinying** baz=264	**1.41**	**265**	*e*P	**Pn**	**01 02 02.1**	**+1.5**
LAY	**Lan-yu** baz=188	**1.42**	**197**	*e*P	**Pn**	**01 02 01.6**	**+0.8**
TCU	**Taichung** baz=301	**1.43**	**302**	*e*P	**Pn**	**01 02 01.8**	**+1.0**
TSMG	**Majia** baz=236	**1.44**	**241**	*e*P	**Pn**	**01 02 02.1**	**+1.2**
NFF	**Wufeng Townshi** baz=333	**1.47**	**326**	*e*P	**Pn**	**01 02 02.1**	**+0.6**
TWQ1	**Liyutan** baz=310	**1.47**	**310**	*e*P	**Pn**	**01 02 03.3**	**+1.8**
EAST	**Anshuo** baz=234	**1.48**	**227**	*e*P	**Pn**	**01 02 02.0**	**+0.5**
TAWH	**Dawu Township** baz=232	**1.48**	**225**	*e*P	**Pn**	**01 02 02.3**	**+0.7**
MASBT	**Mashibuluo** baz=233	**1.49**	**238**	*e*P	**Pn**	**01 02 02.0**	**+0.3**
NSTT	**Nanjuang** baz=323	**1.53**	**323**	*e*P	**Pn**	**01 02 03.5**	**+1.3**
NSTT				*e*S	**Sn**	**01 02 21.8**	**+0.6**
LIOB	**Emei** baz=308	**1.54**	**324**	*e*P	**Pn**	**01 02 03.9**	**+1.6**
TIPB	**Shuangxi** baz=6.0	**1.57**	**354**	*e*P	**Pn**	**01 02 03.9**	**+1.1**
TIPB				*e*S	**Sn**	**01 02 23.0**	**+0.7**
WRL	**Guolierlin Hig** baz=288	**1.58**	**289**	*e*P	**Pn**	**01 02 04.0**	**+1.1**
TWB1	**Santiao Chiao**	**1.60**	**359**	*e*P	**Pn**	**01 02 03.8**	**+0.6**
SLIU	**Shizi** baz=230	**1.63**	**224**	*e*P	**Pn**	**01 02 03.8**	**+0.3**
TATO	**Taipei** baz=344	**1.64**	**343**	*e*P	**Pn**	**01 02 04.7**	**+1.0**
SCZT	**Fangliau** baz=226	**1.64**	**232**	*e*P	**Pn**	**01 02 05.1**	**+1.3**
WSL	**Shuilin Townsh** baz=274	**1.64**	**275**	*e*P	**Pn**	**01 02 04.5**	**+0.7**
SXI1	**Grass Mountain** baz=10.0	**1.69**	**356**	*e*P	**Pn**	**01 02 05.4**	**+0.9**
SMST	**Manzhou Townsh** baz=218	**1.75**	**218**	*e*P	**Pn**	**01 02 06.3**	**+1.0**
HATJ	**Hateruma jima**	**1.77**	**68**	S	**Sn**	**01 02 26.6**	**-0.5**
IRIF	**Iriomote-Funau**	**1.83**	**59**	P	**Pn**	**01 02 06.6**	**+0.3**
IRIF				S	**Sn**	**01 02 28.9**	**+0.4**
JKRS	**Kuro-shima**	**2.01**	**65**	P	**Pn**	**01 02 09.2**	**+0.3**
JKRS				*e*S	**Sn**	**01 02 33.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.17**	**63**	P	**Pn**	**01 02 11.4**	**+0.3**
JIJ				S	**Sn**	**01 02 35.2**	**-1.8**

*ATH **16** 01:06:50.2, 39°.88N×20°.64E, h13km±6km, ML3.1/3, Error ellipse: s-maj=6.6km s-min=1.8km az=145.0*
*THE **16** 01:06:52.6, 39°.73N×20°.70E, h16km±1km, ML3.0/5, Error ellipse: s-maj=1.5km s-min=0.6km az=182.0*
ISC 16 01:06:52.0±0.9, 39.79N±0°.04×20.64E±0°.03, h15km±9km, n18, σ1§67/25, 3C-3D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.21**	**129**	P	**Pg**	**01 06 55.9**	**-0.9**
JAN	19μm,0.2s			S	**Sg**	**01 06 59.2**	**-0.9**
JAN	**Janina**	**0.21**	**129**	P	**Pg**	**01 06 55.8**	**-0.9**
JAN				S	**Sg**	**01 06 59.6**	**-0.5**
JAN	comp=N,42236μm,0.2s			AML	AML	01 06 59.8	
JAN	comp=E,35875μm,0.2s			AML	AML	01 07 00.3	
IGT	**Igoumenitsa**	**0.35**	**223**	P	**Pg**	**01 06 59.9**	**+0.7**
IGT	comp=E,2μm,0.2s			S	**Sg**	**01 07 05.1**	**+1.0**
IGT	**Igoumenitsa**	**0.35**	**223**	P	**Pg**	**01 06 59.3**	**+0.1**
IGT				S	**Sg**	**01 07 05.2**	**+1.0**
IGT	comp=E,5088μm,0.2s			AML	AML	01 07 09.1	
IGT	comp=N,4829μm,0.3s			AML	AML	01 07 10.3	
LSK	**Leskovik**	**0.36**	**355**	P	**Pb**	**01 07 01.2**	**+1.0**
LSK	comp=N,4μm,0.6s			S	**Sn**	**01 07 07.8**	**-1.8**
KASA	**Kassiopi**	**0.55**	**266**	P	**Pg**	**01 07 00.2**	**-2.6**
KASA	comp=N,3730μm,0.4s			AML	AML	01 07 14.4	
KASA	comp=E,2732μm,0.3s			AML	AML	01 07 15.5	
PENT	**Pentalofos**	**0.56**	**43**	P	**Pg**	**01 07 03.1**	**+0.1**
PENT				S	**Sb**	**01 07 12.4**	**+1.1**
PENT	**Pentalofos**	**0.56**	**43**	P	**Pg**	**01 07 00.3**	**-2.7**
KEK	**Kerkira**	**0.66**	**264**	P	**Pg**	**01 07 03.3**	**-1.5**
NEST	**Nestorio**	**0.70**	**26**	P	**Pb**	**01 07 06.4**	**+0.5**
NEST	comp=E,505nm,0.3s			S	**Sn**	**01 07 16.9**	**-1.1**
TSLK	**Tsoukalades, L**	**0.96**	**179**	P	**Pb**	**01 07 09.5**	**-0.8**
KZN	**Kozani**	**1.01**	**59**	P	**Pb**	**01 07 11.9**	**+0.7**
KZN	comp=E,620nm,0.4s			S	**Sg**	**01 07 25.7**	**+1.0**
PDG	**Podgorica**	**2.84**	**339**	⇓P	**Pn**	**01 07 38.4**	**+1.7**
VTS	**Vitosha**	**3.44**	**34**	⇓P	**Pn**	**01 07 47.6**	**+2.5**
BOVS	**Bovan**	**3.92**	**11**	⇑P	**Pn**	**01 07 53.9**	**+2.3**
BLKB	**Belogradchik**	**4.12**	**21**	⇑P	**Pn**	**01 07 57.2**	**+2.9**
MDVR	**Moldovita**	**5.05**	**9**	⇓P	**Pn**	**01 08 04.9**	**-2.2**
PLOR	**Plostina**	**7.50**	**34**	⇑P	Pn	01 08 46.1	+5.4

*ATH **16** 01:15:59.7, 39°.77N×20°.70E, h18km±1km, ML3.7/22, Error ellipse: s-maj=1.1km s-min=0.7km az=267.0*
*TIR **16** 01:15:59.5, 39°.75N×20°.71E, h4km±2km, Md4.0, Ml4.3*
*LDG **16** 01:15:59.7±0.3, 39°.72N×20°.61E, h10km, Ml3.8/14, Error ellipse: s-maj=12.5km s-min=6.7km az=30.0*
*NEIC **16** 01:16:00.5±1.6, 39°.77N±0°.05×20°.69E±0°.05, h28km±8km, Error ellipse: s-maj=7.3km s-min=5.0km az=195.0*
*BEO **16** 01:16:00.1±0.8, 39°.63N×20°.63E, h19km±5km, ML3.8/7*
*THE **16** 01:16:00.3, 39°.77N×20°.70E, h0km±2km, ML3.8/16, Error ellipse: s-maj=2.8km s-min=0.8km az=309.0*
*PDG **16** 01:16:00.1±0.5, 39°.79N×20°.61E, h13km±1km, ML3.8/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*ROM **16** 01:16:01.5, 39°.81N×20°.57E, h11km, mb4.3/7, Error ellipse: s-maj=3.1km s-min=1.4km az=6.0*
*IDC **16** 01:16:03.3±1.5, 39°.81N×20°.52E, h52km±18km, mb3.7/11, mbtmp3.8/21, ML3.7/9, MS3.1/3, Error ellipse: s-maj=14.3km s-min=11.1km az=148.0*
ISC 16 01:15:59.7±0.8, 39.77N±0°.01×20.67E±0°.02, h19km±2km, n304, σ1§88/359, mb3.9/16, 43C-15D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**129**	P	**Pg**	**01 16 03.7**	**-0.8**
JAN	73μm,0.4s			S	**Sg**	**01 16 07.0**	**-0.7**
JAN	**Janina**	**0.18**	**129**	P	**Pg**	**01 16 03.7**	**-0.8**
JAN				S	**Sg**	**01 16 07.2**	**-0.4**
JAN				AML	AML	01 16 07.6	
JAN				AML	AML	01 16 07.9	
IGT	**Igoumenitsa**	**0.35**	**228**	P	**Pg**	**01 16 06.9**	**-0.3**
IGT	18μm,0.5s			S	**Sb**	**01 16 13.2**	**+0.6**
IGT	**Igoumenitsa** baz=234	**0.35**	**228**	P	**Pb**	**01 16 07.3**	**-0.1**
IGT				S	**Sb**	**01 16 13.2**	**+0.6**
IGT	**Igoumenitsa**	**0.35**	**228**	P	**Pb**	**01 16 07.3**	**-0.1**
IGT				S	**Sb**	**01 16 13.0**	**+0.4**
IGT	comp=N,35251μm,0.4s			AML	AML	01 16 14.4	
IGT	comp=E,35593μm,0.4s			AML	AML	01 16 17.1	
LSK	**Leskovik**	**0.39**	**352**	P	**Pb**	**01 16 08.4**	**+0.3**
LSK	**Leskovik** baz=349	**0.39**	**352**	P	**Pb**	**01 16 08.2**	**+0.1**
LSK				S	**Sb**	**01 16 14.7**	**+1.0**
LSK				AMP			
SRN	**Sarande**	**0.53**	**282**	P	**Pb**	**01 16 10.4**	**+0.1**
SRN	**Sarande** baz=285	**0.53**	**282**	P	**Pb**	**01 16 10.4**	**+0.1**
SRN				S	**Sn**	**01 16 19.4**	**-1.2**
SRN				AMP			
PENT	**Pentalofos**	**0.56**	**40**	P	**Pb**	**01 16 11.0**	**+0.2**
PENT	**Pentalofos**	**0.56**	**40**	P	**Pb**	**01 16 11.1**	**+0.2**
PENT				S	**Sg**	**01 16 18.2**	**-0.2**
KPRO	**Kipourio**	**0.56**	**70**	P	**Pb**	**01 16 11.1**	**+0.2**
KPRO				S	**Sb**	**01 16 19.8**	**+1.3**
KASA	**Kassiopi**	**0.57**	**268**	P	**Pb**	**01 16 11.1**	**+0.2**
KASA				S	**Sb**	**01 16 20.0**	**+1.5**
KASA				AML	AML	01 16 22.6	
KASA				AML	AML	01 16 23.3	
KEK	**Kerkira**	**0.68**	**266**	Pg	**Pb**	**01 16 13.1**	**+0.3**
KEK	**Kerkira**	**0.68**	**266**	P	**Pg**	**01 16 12.7**	**-0.3**
KEK				S	**Sb**	**01 16 22.8**	**+1.1**
KEK	**Kerkira**	**0.68**	**266**	⇓P	**Pg**	**01 16 12.8**	**-0.3**
KEK	**Kerkira**	**0.68**	**266**	P	**Pg**	**01 16 12.8**	**-0.3**
KEK				AML	AML	01 16 27.9	
KEK				AML	AML	01 16 29.6	
NEST	**Nestorio**	**0.71**	**24**	P	**Pb**	**01 16 13.9**	**+0.5**
NEST	**Nestorio**	**0.71**	**24**	P	**Pb**	**01 16 13.9**	**+0.5**
NEST				S	**Sb**	**01 16 23.4**	**+0.6**
NEST				AML	AML	01 16 29.5	
NEST				AML	AML	01 16 29.7	
KBN	**Korca**	**0.86**	**6**		**Pg**	**01 16 16.4**	**-0.1**
KBN	**Korca**	**0.86**	**6**	P	**Pb**	**01 16 16.2**	**+0.2**
KBN	**Korca** baz=3.0	**0.86**	**6**	P	**Pg**	**01 16 16.4**	**-0.1**
KBN				S	**Sn**	**01 16 30.4**	**+1.5**
KBN				AMP			
TSLK	**Tsoukalades, L**	**0.94**	**181**	P	**Pb**	**01 16 17.6**	**+0.2**
TSLK				S	**Sn**	**01 16 34.0**	**+3.2**
TSLK	**Tsoukalades, L**	**0.94**	**181**	P	**Pb**	**01 16 17.4**	**0.0**
TSLK				AML	AML	01 16 37.9	
TSLK				AML	AML	01 16 38.5	
LKD2	**Lefkada island**	**0.98**	**181**	P	**Pg**	**01 16 18.6**	**-0.1**
LKD2				S	**Sn**	**01 16 34.1**	**+2.4**
LKD2	**Lefkada island** baz=183	**0.98**	**181**	P	**Pg**	**01 16 18.8**	**+0.1**
LKD2				S	**Sn**	**01 16 32.6**	**+0.9**
LKD2	**Lefkada island**	**0.98**	**181**	P	**Pg**	**01 16 18.6**	**-0.1**
LKD2				AML	AML	01 16 41.3	
LKD2				AML	AML	01 16 41.8	
KZN	**Kozani**	**1.00**	**57**	P	**Pb**	**01 16 17.9**	**-0.5**
KZN				S	**Sn**	**01 16 32.8**	**+0.5**
KZN	**Kozani**	**1.00**	**57**	P	**Pb**	**01 16 18.7**	**+0.3**
KZN				S	**Sb**	**01 16 31.5**	**+0.3**
KZN				AML	AML	01 16 36.7	
KZN				AML	AML	01 16 37.4	
NYDR	**Nydri-Lefkada**	**1.05**	**179**	P	**Pn**	**01 16 19.7**	**+0.3**
THL	**Klokotos Trika**	**1.05**	**101**	P	**Pb**	**01 16 19.0**	**-0.2**
THL				S	**Sg**	**01 16 33.7**	**-0.3**
THL	**Klokotos Trika**	**1.05**	**101**	P	**Pb**	**01 16 19.1**	**-0.2**
THL				AML	AML	01 16 39.8	
THL				AML	AML	01 16 40.7	
DRAG	**Dragano-Lefkad**	**1.08**	**184**	P	**Pn**	**01 16 20.1**	**+0.3**
VLO	**Vlora**	**1.14**	**308**		**Pb**	**01 16 21.3**	**+0.5**
VLO	**Vlora**	**1.14**	**308**	P	**Pg**	**01 16 23.1**	**+1.3**
VLO	**Vlora** baz=309	**1.14**	**308**	P	**Pg**	**01 16 23.1**	**+1.3**
VLO				S	**Sg**	**01 16 40.5**	**+3.7**
EVGI	**Lefkada island**	**1.15**	**181**	P	**Pg**	**01 16 21.5**	**-0.4**
EVGI	**Lefkada island**	**1.15**	**181**	P	**Pg**	**01 16 21.7**	**-0.1**
TYRN	**Tyrnavos**	**1.20**	**92**	P	**Pn**	**01 16 21.6**	**+0.2**
TYRN				S	**Sg**	**01 16 39.5**	**+0.8**
EVR	**Evrytania**	**1.22**	**134**	P	**Pn**	**01 16 22.1**	**+0.3**
EVR				S	**Sg**	**01 16 39.9**	**+0.5**
EVR	**Evrytania**	**1.22**	**134**	P	**Pn**	**01 16 21.8**	**0.0**
EVR				AML	AML	01 16 45.1	
EVR				AML	AML	01 16 47.6	
KTI	**Kastanea**	**1.27**	**60**	P	**Pb**	**01 16 23.5**	**+0.4**
FSK	**Fiskardo**	**1.31**	**184**	P	**Pg**	**01 16 25.0**	**0.0**
FSK				S	**Sg**	**01 16 42.6**	**+0.5**
FSK	**Fiskardo**	**1.31**	**184**	P	**Pg**	**01 16 24.8**	**-0.1**
FSK				AML	AML	01 16 48.0	
FSK				AML	AML	01 16 55.5	
PVO	**Paravola**	**1.33**	**150**	P	**Pg**	**01 16 25.1**	**-0.2**
PVO				S	**Sg**	**01 16 44.4**	**+1.8**
PVO	**Paravola**	**1.33**	**150**	P	**Pg**	**01 16 25.3**	**0.0**
LRSO	**Larissa Observ**	**1.33**	**94**	P	**Pg**	**01 16 25.4**	**+0.1**
OHR	**Ohrid**	**1.35**	**4**	*e*Pg	**Pg**	**01 16 26.6**	**+0.9**
OHR				*e*Sg	**Sg**	**01 16 47.3**	**+4.0**
OHR	**Ohrid**	**1.35**	**4**	*i* Pn	**Pg**	**01 16 26.5**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.36**	**123**	P	**Pb**	**01 16 25.1**	**+0.6**
MAKR				S	**Sg**	**01 16 45.4**	**+1.8**
MAKR	**Makrakomi, Fth**	**1.36**	**123**	P	**Pb**	**01 16 24.6**	**+0.2**
MAKR				AML	AML	01 16 50.2	
MAKR				AML	AML	01 16 52.9	
LIT	**Litokhoron**	**1.44**	**76**	Pn	**Pn**	**01 16 25.0**	**+0.3**
LIT	**Litokhoron**	**1.44**	**76**	P	**Pb**	**01 16 25.9**	**+0.1**
LIT				S	**Sg**	**01 16 46.3**	**+0.2**
LIT	**Litokhoron**	**1.44**	**76**	P	**Pb**	**01 16 26.1**	**+0.3**
LIT				AML	AML	01 16 50.9	
LIT				AML	AML	01 16 51.0	
KEF4	**Livadi, Kephal**	**1.52**	**187**	P	**Pb**	**01 16 27.9**	**+0.7**
KEF4	**Livadi, Kephal**	**1.52**	**187**	P	**Pb**	**01 16 27.5**	**+0.3**
DMLN	**Damoulianata-K**	**1.54**	**189**	P	**Pn**	**01 16 26.9**	**+0.7**
VLS	**Valsamata**	**1.59**	**182**	P	**Pb**	**01 16 28.7**	**+0.2**
VLS	**Valsamata**	**1.59**	**182**	P	**Pb**	**01 16 28.6**	**+0.2**
VLS				AML	AML	01 16 54.0	
VLS				AML	AML	01 16 55.3	
EFP	**Efpalio**	**1.65**	**144**	P	**Pg**	**01 16 31.6**	**+0.2**
EFP	**Efpalio**	**1.65**	**144**	P	**Pb**	**01 16 30.3**	**+0.9**
PSDA	**Pessada-Kefalo**	**1.65**	**182**	P	**Pb**	**01 16 30.1**	**+0.6**
TIR	**Tirane**	**1.69**	**339**	⇑P	**Pg**	**01 16 31.4**	**-0.9**
TIR	**Tirane**	**1.69**	**339**	Pn	**Pn**	**01 16 29.0**	**+0.7**
TIR	**Tirane**	**1.69**	**339**	P	**Pg**	**01 16 31.4**	**-0.9**
TIR	**Tirane**	**1.69**	**339**	*e*Pn	**Pg**	**01 16 31.3**	**-1.0**
TIR				*e*Sn	**Sg**	**01 16 53.6**	**-0.8**
TIR	**Tirane** baz=339	**1.69**	**339**	P	**Pg**	**01 16 31.4**	**-0.9**
TIR				AMP			
SCTE	**Santa Cesarea**	**1.72**	**281**	Pn	**Pn**	**01 16 29.3**	**+0.7**
SERG	**Sergoula**	**1.73**	**141**	P	**Pg**	**01 16 33.0**	**+0.1**
SERG	**Sergoula**	**1.73**	**141**	P	**Pb**	**01 16 31.1**	**+0.3**
SERG				AML	AML	01 17 06.8	
SERG				AML	AML	01 17 07.7	

RLS	Riolos of Patr	1.82 160	P	Pb	01 16 33.4 +1.1
LAKA	Lakka	1.83 146	P	Pb	01 16 33.2 +0.7
LAKA	Lakka	1.83 146	P	Pb	01 16 33.3 +0.7
LAKA			AML	AML	01 17 10.4
	comp=E,1150μm,0.9s				
LAKA			AML	AML	01 17 17.0
	comp=N,1480μm,0.8s				
AXAR	Agios Charalam	1.84 122	P	Pb	01 16 33.8 +1.2
AXAR	Agios Charalam	1.84 122	P	Pb	01 16 33.2 +0.6
AXAR			AML	AML	01 17 05.8
	comp=N,6498μm,0.5s				
AXAR			AML	AML	01 17 08.7
	comp=E,3680μm,0.6s				
ALIK	Aliki, Aigiali	1.88 143	P	Pb	01 16 34.4 +1.1
PHP	Peshkopia	1.92 355	P	Pb	01 16 35.1 +1.0
	baz=355				
PHP			AMP		
	comp=N,6.8nm,0.6s,baz=355				
THE	Thessaloniki	1.96 63	P	Pb	01 16 33.7 -0.9
THE	Thessaloniki	1.96 63	P	Pb	01 16 33.4 -1.2
DRO	Drossia	1.98 156	P	Pb	01 16 35.8 +0.6
DRO	Drossia	1.98 156	P	Pb	01 16 34.9 -0.3
DRO			AML	AML	01 17 14.0
	comp=N,2653μm,0.5s				
DRO			AML	AML	01 17 28.8
	comp=E,5288μm,0.7s				
XOR	Xorichti	1.99 101	P	Pb	01 16 34.3 -0.9
XOR			S	Sb	01 16 59.0 -0.6
	comp=E,1μm,0.8s				
XOR	Xorichti	1.99 101	P	Pb	01 16 35.0 -0.2
NEO	Neokhori	2.02 102	P	Pb	01 16 34.9 -0.9
NEO			S	Sb	01 17 01.8 +1.1
	comp=E,2μm,0.7s				
NEO	Neokhori	2.02 102	P	Pb	01 16 35.0 -0.9
NEO			AML	AML	01 17 06.8
	comp=N,3601μm,0.8s				
NEO			AML	AML	01 17 09.4
	comp=E,2697μm,0.6s				
HORT	Hortiatis	2.04 65	P	Pn	01 16 34.4 +1.4
LTHK	Lithakia	2.06 176	P	Pb	01 16 35.5 -0.9
KLV	Kalavryta, Ach	2.07 146	P	Pb	01 16 37.0 +0.3
KLV	Kalavryta, Ach	2.07 146	P	Pb	01 16 36.9 +0.3
KLV			AML	AML	01 17 20.6
	comp=E,1978μm,1.1s				
KLV			AML	AML	01 17 20.6
	comp=N,1188μm,1.0s				
VAY	Valandovo	2.12 42	*e*Pn	Pn	01 16 35.7 +1.6
VAY			*e*Sn	Sb	01 17 03.8 +0.4
VAY	Valandovo	2.12 42	*i* Pn	Pb	01 16 35.9 -1.5
LKR	Lokris	2.12 121	P	Pb	01 16 36.8 -0.7
KNT	Kendrikon	2.19 50	P	Pn	01 16 36.5 +1.4
KNT	Kendrikon	2.19 50	P	Pn	01 16 36.5 +1.4
STIP	Stip	2.24 30	*i* Pn	Pb	01 16 39.9 +0.3
SKO	Skopje	2.28 15	*e*Pn	Pb	01 16 39.7 -0.4
SKO			*e*Sn	Sb	01 17 08.5 +0.6
SKO	Skopje	2.28 15	*i* Pn	Pb	01 16 40.0 -0.1
SOH	Sokhos	2.30 62	P	Pn	01 16 38.7 +2.1
SOH	Sokhos	2.30 62	P	Pb	01 16 38.9 -1.8
THAL	Thalero	2.32 137	P	Pb	01 16 39.3 -1.6
ULC	Ulcinj	2.45 334	*e*Pn	Pn	01 16 40.4 +1.8
ULC			*i* Sn	Sb	01 17 11.4 -1.4
VIL2	Platees	2.55 127	P	Pb	01 16 43.5 -1.3
VIL2			AML	AML	01 17 31.6
	comp=N,719μm,0.9s				
VIL2			AML	AML	01 17 32.1
	comp=E,1780μm,0.7s				
SRS	Serrai	2.60 58	*e*Pn	Pn	01 16 42.3 +1.6
SRS			*e*Sn	Sb	01 17 14.9 -2.4
SRS	Serrai	2.60 58	P	Pn	01 16 42.3 +1.6
DRME	Dracevica, Mon	2.67 335	*e*Pn	Pn	01 16 43.6 +2.0
DRME	Dracevica, Mon	2.67 335	*e*Pn	Pn	01 16 43.5 +2.0
DRME			*i* Sn	Sb	01 17 16.8 -2.3
KOKK	Kokkinochori,	2.75 67	P	Pn	01 16 44.5 +1.8
ITM	Ithomi	2.77 159	Pn	Pn	01 16 41.9 -1.1
ITM	Ithomi	2.77 159	⇑P	Pb	01 16 46.3 -2.1
ITM	Ithomi	2.77 159	P	Pn	01 16 45.7 +2.7
ITM			AML	AML	01 17 42.9
	comp=N,743μm,1.2s				
ITM			AML	AML	01 17 49.0
	comp=E,951μm,1.8s				
BUM	Brajici-Budva	2.87 333	*e*Pn	Pn	01 16 46.2 +1.8
BUM			*i* Sn	Sn	01 17 21.6 +3.2
PDG	Podgorica	2.87 339	⇑P	Pn	01 16 46.3 +2.0
PDG			⇑S	Sb	01 17 21.9 -2.9
PDG	Podgorica	2.87 339	Pn	Pn	01 16 42.9 -1.4
PDG	Podgorica	2.87 339	⇓P	Pn	01 16 46.5 +2.2
TTG	Podgorica	2.87 339	⇑/Pn	Pn	01 16 46.3 +2.0
TTG			*i* Sn	Sn	01 17 21.7 +3.4
PVY	Plav	2.88 349	*e*Pn	Pn	01 16 46.4 +1.8
PVY			*i* Sn	Sn	01 17 22.0 +3.3
ATHU	Athens Univers	3.02 126	P	Pn	01 16 48.6 +2.2
DION	Dionisos Attik	3.05 123	P	Pn	01 16 49.7 +2.8
KRND	KRANIDI	3.07 140	P	Pn	01 16 49.4 +2.2
CEME	Cevo	3.08 335	*e*Pn	Pn	01 16 48.7 +1.4
CEME			*i* Sn	Sn	01 17 26.5 +2.9
TIP	Timpagrande	3.09 260	⇓P	Pn	01 16 48.3 +0.8
TIP			⇑S	Sn	01 17 25.7 +1.9
TIP	Timpagrande	3.09 260	Pn	Pn	01 16 47.8 +0.3
TIP	Timpagrande	3.09 260	⇑P	Pn	01 16 48.1 +0.7
HCY	Herceg Novi	3.14 329	*e*Pn	Pn	01 16 48.8 +0.7
HCY	Herceg Novi	3.14 329	*e*Pn	Pn	01 16 49.5 +1.4
HCY			*i* Sn	Sn	01 17 26.9 +1.8
IVA	Berane	3.16 350	⇓*i*Pn	Pn	01 16 50.4 +2.0
IVA			*i* Sn	Sn	01 17 28.9 +3.3
MATE	Matera	3.16 287	⇓P	Pn	01 16 49.2 +0.8
BARS	Barje	3.17 15	*e*Pn	Pn	01 16 51.4 +3.0
KAVA	Kavala	3.18 66	P	Pn	01 16 49.8 +1.1
KOME	Kolasin	3.20 345	*e*Pn	Pn	01 16 51.0 +2.0
KOME			*i* Sn	Sn	01 17 29.9 +3.2
NKME	Niksic	3.27 337	⇓*i*Pn	Pn	01 16 51.7 +1.8
NKME			*i* Sn	Sn	01 17 31.0 +2.8
VTS	Vitosha	3.44 33	⇑P	Pn	01 16 55.2 +2.8
VTS	Vitosha	3.44 33	Pn	Pn	01 16 52.2 -0.2
VTS	Vitosha	3.44 33	⇓P	Pn	01 16 54.7 +2.3
SELS	Selova	3.46 5	*e*Pn	Pn	01 16 55.1 +2.5
SJES	Sjenica	3.53 352	*e*Pn	Pn	01 16 56.7 +3.1
UPM	Unac-Piva	3.68 339	*e*Pn	Pn	01 16 56.9 +1.2
UPM	Unac-Piva	3.68 339	*e*Pn	Pn	01 16 57.5 +1.8
UPM			*i* Sn	Sn	01 17 41.4 +2.8
PLE	Pljevlja	3.69 345	*e*Pn	Pn	01 16 57.7 +2.0
PLE			*i* Sn	Sn	01 17 41.7 +3.0
CUC	Castrocucco	3.75 275	Pn	Pn	01 16 57.1 +0.6
ZAPS	Zavoj	3.80 22	*e*Pn	Pn	01 17 00.7 +3.5
STON	Ston	3.83 325	*e*Pn	Pn	01 16 56.9 -0.6
IVAS	Ivanjica	3.83 354	*e*Pn	Pn	01 16 59.3 +1.7
BOVS	Bovan	3.94 11	⇑P	Pn	01 17 01.7 +2.6
BOVS	Bovan	3.94 11	*e*Pn	Pn	01 17 01.4 +2.3
RDO	Rodhopi	3.96 68		Pn	01 16 59.7 +0.4
RDO	Rodhopi	3.96 68	⇓P	Pn	01 17 01.2 +1.9
RUDO	Rudo	3.97 346	*e*Pn	Pn	01 17 00.8 +1.3
CEL	Celeste	4.02 249		Pn	01 17 00.3 +0.1
CEL	Celeste	4.02 249	⇑P	Pn	01 17 01.1 +1.0
GRUS	Gruza	4.12 0	*e*Pn	Pn	01 17 04.1 +2.6
BLKB	Belogradchik	4.13 21	⇑P	Pn	01 17 05.3 +3.5
BLKB			⇑S	Sn	01 17 53.7 +4.1
BBLS	Lazići	4.20 347	*e*Pn	Pn	01 17 04.5 +1.7
BBLS	Lazići	4.20 347	*e*Pn	Pn	01 17 04.3 +1.5
ZAGS	Zajecar	4.21 16	*e*Pn	Pn	01 17 05.2 +2.5
ZAGS			*e*Sn	Sn	01 17 53.9 +2.6
SGRT	San Giovanni R	4.24 300	Pn	Pn	01 17 03.0 -0.2
ALN	Alexandroupoli	4.26 73	Pn	Pn	01 17 02.8 -0.6
DIVS	Divibare	4.36 354	Pn	Pn	01 17 05.2 +0.3
DIVS	Divibare	4.36 354	⇑*i*Pn	Pn	01 17 06.7 +1.8
DIVS	Divibare	4.36 354	*e*Pn	Pn	01 17 06.9 +2.0
DIVS			*e*Sn	Sn	01 17 56.2 +1.0
DIVS	Divibare	4.36 354	⇓P	Pn	01 17 07.1 +2.2
TRUS	Trudelj	4.46 358	*e*Pn	Pn	01 17 08.6 +2.4
HAPS	Han Pijesak,BI	4.50 344	*e*Pn	Pn	01 17 08.1 +1.2
APE	Apeiranthos	4.67 124	⇓P	Pn	01 17 13.9 +4.7
KUBS	Kucevo	4.70 9	*e*Pn	Pn	01 17 12.4 +2.9
PAOL	Paolisi	4.83 287		Pn	01 17 11.4 +0.1
TEKS	Tekeris	4.85 350	*e*Pn	Pn	01 17 11.4 -0.2
TEKS	Tekeris	4.85 350	*e*Pn	Pn	01 17 11.9 +0.3
DKL	Dikili	4.88 96	⇓P	Pn	01 17 16.7 +4.8
SRKY	Kupres RS	5.03 330	*e*Pn	Pn	01 17 15.9 +1.7
HERR	Herculane	5.27 14	⇑P	Pn	01 17 21.1 +3.8
MGRS	Mrkonjic Grad	5.36 331	*e*Pn	Pn	01 17 20.5 +1.9
VAE	Valguarnera	5.41 247	P	Pn	01 17 21.1 +1.7
	comp=E,5.2nm,0.6s,baz=7.1,slow=8.1,SNR=1.4				
VAE			S	Sn	01 18 18.2 -2.9
	comp=E,10nm,0.7s,baz=336,slow=14,SNR=1.8				
FRGS	Fruska Gora	5.42 354	⇑P	Pn	01 17 21.3 +1.8
FRGS	Fruska Gora	5.42 354	⇑/Pn	Pn	01 17 20.6 +1.1
FRGS	Fruska Gora	5.42 354	*e*Pn	Pn	01 17 21.0 +1.5
IDI	Anoyia	5.59 142	⇑P	Pn	01 17 26.4 +4.6
IDI	Anoyia	5.59 142	P	Pn	01 17 24.4 +2.6
	comp=E,1.3nm,0.3s,baz=312,slow=8.4,SNR=11				
IDI			S	Sn	01 18 22.7 -2.8
	comp=E,12nm,0.4s,baz=283,slow=7.6,SNR=8.9				
	comp=E,3.9nm,0.4s				
INTR	Introdacqua	5.60 296	Pn	Pn	01 17 22.5 +0.6
BLY	Banja Luka	5.61 334	⇑/Pn	Pn	01 17 23.1 +1.1
BLY	Banja Luka	5.61 334	⇑P	Pn	01 17 23.2 +1.2
GZR	Gura Zlata	5.83 15	⇑P	Pn	01 17 28.1 +2.9
BZS	Buzias	5.89 6	⇑P	Pn	01 17 28.6 +2.8
A051A	Mrakovica	5.94 333	⇑/Pn	Pn	01 17 27.4 +0.8
PRIJ	Prijedor	5.97 332	*e*Pn	Pn	01 17 27.9 +0.9
AQU	L'Aquila	6.07 298	⇓P	Pn	01 17 30.6 +2.1
LOT	Lotru	6.12 21	⇓P	Pn	01 17 31.9 +2.8
CAMP	Campotosto	6.14 299		Pn	01 17 29.7 +0.3
ARR	Arges	6.31 26	⇑P	Pn	01 17 34.4 +2.6
VOIR		6.52 28	⇓P	Pn	01 17 37.7 +3.1
SIRR	Siria	6.54 6	⇓P	Pn	01 17 38.5 +3.8
KOVH	Kovagotottos	6.59 344	P	Pn	01 17 36.0 +0.5
KOVH			S	Sn	01 18 46.7 -3.4
MORH	Mrgy, Hungar	6.61 348	⇑P	Pn	01 17 37.0 +1.2
MORH	Mrgy, Hungar	6.61 348	P	Pn	01 17 36.9 +1.2
MLR	Muntele Rosu	6.91 32	⇑P	Pn	01 17 44.5 +4.5
MLR	Muntele Rosu	6.91 32	P	Pn	01 17 43.4 +3.4
	comp=E,0.8nm,0.3s,baz=209,slow=12,SNR=15				
MLR			S	Sn	01 19 01.0 +2.8
	baz=198,slow=20				
MLR			LR	LR	01 21 21.9
	comp=E,172nm,19.6s,baz=176,slow=46				
	comp=E,11nm,0.8s				
MLR	Muntele Rosu	6.91 32	Pn	Pn	01 17 40.4 +0.4
BOJS	Bojanci	6.99 327	⇑/Pn	Pn	01 17 41.5 +0.6
CRES	Cresnjev	7.17 329	⇑/Pn	Pn	01 17 43.8 +0.4
MGAB	Montegabbione	7.17 299	⇑P	Pn	01 17 45.1 +1.7
DRGR		7.18 11	⇑P	Pn	01 17 47.1 +3.5
COVR	Voineasa-Covas	7.31 32	⇑P	Pn	01 17 49.4 +4.0
PLOR	Plostina	7.50 34	⇑P	Pn	01 17 52.1 +4.2
CEY	Cerknica	7.53 324	⇑/Pn	Pn	01 17 49.0 +0.6
VRI	Vrincioaia	7.54 34	⇑P	Pn	01 17 52.8 +4.2
SKDS	Skadanscina	7.58 322	*e*Pn	Pn	01 17 47.8 -1.2
CFR	Carcaliu	7.72 43	⇑P	Pn	01 17 54.9 +3.9
CSKK	Cskako	7.79 348	P	Pn	01 17 53.9 +1.9
CSKK			S	Sn	01 19 20.0 +0.4
TESR	Tescani	8.03 31	⇑P	Pn	01 17 59.0 +3.8
SOKA	Soboth	8.04 331	*e*Pn	Pn	01 17 55.6 +0.2
	comp=E,7.0nm,0.4s,SNR=20				
OBKA	Obir	8.09 328	*e*Pn	Pn	01 17 56.6 +0.5
OBKA	Obir	8.09 328	*e*Pn	Pn	01 17 56.6 +0.5
	comp=E,2.6nm,0.2s,SNR=12				
VLDR	Vladesti	8.15 39	⇑P	Pn	01 18 01.2 +4.3
PSZ	Piszkesteto	8.17 356	⇑P	Pn	01 17 59.5 +2.3
PSZ	Piszkesteto	8.17 356	Pn	Pn	01 17 56.7 -0.4
PSZ	Piszkesteto	8.17 356	P	Pn	01 17 59.7 +2.5
PSZ			S	Sn	01 19 25.6 -3.3
ARSA	Arzberg	8.36 335	*e*Pn	Pn	01 17 60.0 +0.2
	comp=E,1.5nm,0.3s,SNR=4.7				
ARSA	Arzberg	8.36 335	⇑P	Pn	01 18 00.5 +0.7
TRPA	Tarpa	8.47 9	⇑P	Pn	01 18 04.6 +3.4
TRPA	Tarpa	8.47 9	P	Pn	01 18 04.5 +3.4
BURAR	Bucovina Array	8.51 21	⇑P	Pn	01 18 06.3 +4.4
BURAR	Bucovina Array	8.51 21	Pn	Pn	01 18 01.5 -0.3
PTCC	Patocco-Chiusa	8.52 323	⇑P	Pn	01 18 02.1 +0.1
KBA	Koelnbreinsper	9.04 326	*e*Pn	Pn	01 18 09.9 +0.6
	comp=E,2.4nm,0.5s,SNR=4.8				
KBA	Koelnbreinsper	9.04 326	⇑P	Pn	01 18 10.7 +1.4
ABTA	Abfaltersbach	9.17 322	*e*Pn	Pn	01 18 10.9 0.0
	comp=E,1.1nm,0.2s,SNR=6.7				
PGF	Pioggiola	9.23 291	*e*P	Pn	01 18 12.9 +1.1
MOA	Molln	9.31 332	*e*Pn	Pn	01 18 14.6 +1.8
	comp=E,1.5nm,0.2s,SNR=8.7				
BIOA	Bad Ischl, Aus	9.41 330	*e*Pn	Pn	01 18 14.4 +0.2
	comp=E,3.1nm,0.4s,SNR=6.7				
KEST	Kesra	9.83 249	P	Pn	01 18 20.2 +0.2
	comp=E,0.3nm,0.3s,baz=34,slow=7.3,SNR=7.2				
KEST			S	Sn	01 20 06.0 -3.9
	comp=E,1.9nm,1.0s,baz=30,slow=20,SNR=1.4				
KEST			LR	LR	01 23 04.3
	comp=E,100nm,21.2s,baz=282,slow=43				
	comp=E,3.6nm,0.6s				
WTTA	Wattenberg	9.96 322	*e*Pn	Pn	01 18 22.4 +0.6
	comp=E,3.9nm,0.4s,SNR=13				
VRAC	Vranov	9.97 344	LR	LR	01 22 29.8
	comp=E,106nm,19.4s,baz=140,slow=39				
BRTR	Keskin Array B	9.99 86	P	Pn	01 18 25.5 +3.3
	comp=E,0.1nm,0.3s,baz=269,slow=12,SNR=3.4				
	comp=E,0.4nm,0.5s				
WATA	Walderalm	10.04 322	*e*Pn	Pn	01 18 23.8 +0.9
	comp=E,3.4nm,0.2s,SNR=13				
CKRC	Cesky Krumlov	10.13 335	*e*PN	Pn	01 18 23.2 -0.8
SQTA	Sankt Quirin	10.13 320	*e*Pn	Pn	01 18 25.6 +1.5
	comp=E,3.5nm,0.3s,SNR=14				
FUORN	Ofenpass-Fuorn	10.22 315		Pn	01 18 25.6 0.0
FETA	Feichten	10.24 318	*e*Pn	Pn	01 18 26.8 +1.2
	comp=E,1.1nm,0.4s,SNR=4.4				
MOTA	Moosalm	10.27 321	*e*Pn	Pn	01 18 26.6 +0.6
	comp=E,4.9nm,0.4s,SNR=12				
GERES	GERESS Array B	10.35 334	P	Pn	01 18 28.6 +1.5
	comp=E,0.3nm,0.3s,baz=158,slow=14,SNR=13				
GERES			S	Sn	01 20 14.4 -8.3
	comp=E,0.9nm,0.8s,baz=145,slow=25,SNR=2.0				
	comp=E,0.5nm,0.4s				
GERES	GERESS Array B	10.35 334	Pn	Pn	01 18 25.5 -1.7
DAVOX	Davos/Dischmat	10.53 315	P	Pn	01 18 30.6 +0.9
	comp=E,0.9nm,0.3s,baz=154,slow=14,SNR=18				
DAVOX			S	Sn	01 20 24.6 -2.6
	comp=E,1.6nm,0.4s,baz=300,slow=17,SNR=2.0				
	comp=E,4.5nm,0.6s				
RETA	Reutte	10.54 320	*e*Pn	Pn	01 18 30.1 +0.5
	comp=E,1.3nm,0.3s				
KHC	Kasperske Hory	10.64 334	*e*PN	Pn	01 18 30.2 -0.8
KHC			*e*SN	Sn	01 20 26.2 -3.4
KHC	Kasperske Hory	10.64 334	⇑P	Pn	01 18 33.6 +2.6
KRLC	Kraliky	10.67 346	*e*PN	Pn	01 18 32.4 +1.0
SBF	Sospel	10.69 297	*e*P	Pn	01 18 34.7 +2.9
SBF			*e*Sn	Sn	01 20 19.1 -12
	comp=E,7.5nm,0.8s				
LMR	La Mourre	11.20 293	*e*P	Pn	01 18 41.0 +2.4
LMR			*e*Sn	Sn	01 20 27.9 -15
	comp=E,2.7nm,0.4s				
MBDF	Montbardon	11.43 300	*e*Pn	Pn	01 18 41.4 -0.5
MBDF	Montbardon	11.43 300	*e*P	Pn	01 18 45.1 +3.2
MBDF			*e*Sn	Sn	01 20 35.0 -14
	comp=E,4.3nm,0.6s				
LPG	La Plagne	11.74 304	*e*Pn	Pn	01 18 46.0 -0.3
LPG			*e*Sn	Sn	01 20 45.5 -11
	comp=E,6.9nm,0.6s				
LPL	La Plagne	11.76 304	*e*Pn	Pn	01 18 46.0 -0.5
LPL	La Plagne	11.76 304	*e*P	Pn	01 18 50.9 +4.4
LPL			*e*Sn	Sn	01 20 46.7 -11
	comp=E,7.9nm,0.5s				
SMRF	Simiane la Rot	12.01 295	*e*P	Pn	01 18 54.8 +5.0
ORIF	Oris-en-Rattie	12.09 300	*e*P	Pn	01 18 52.9 +2.0
ORIF			*e*Sn	Sn	01 20 54.4 -11
	comp=E,3.2nm,0.6s				
AKASG	Malin Array Be	12.47 26	P	Pn	01 18 58.4 +2.4
	comp=E,0.2nm,0.3s,baz=208,slow=13,SNR=2.1				
	comp=E,0.5nm,0.5s				
CABF	La Chapelle	12.64 308	*e*Pn	Pn	01 18 57.7 -0.7
CABF			*e*Sn	Sn	01 21 09.8 -8.9
HINF	Hinteralfeld	12.81 313	*e*Pn	Pn	01 19 00.0 -0.7
HINF			*e*Sn	Sn	01 21 13.3 -9.4
	comp=E,2.0nm,0.3s				
CDF	Champ du Feu	12.92 316	*e*Pn	Pn	01 19 02.6 +0.3
HAU	Haudompre	13.20 313	*e*Pn	Pn	01 19 05.6 -0.3
HAU			*e*Sn	Sn	01 21 19.6 -12
	comp=E,8.6nm,0.9s				
MMAI	Mount Meron Ar	13.64 115	P	Pn	01 19 15.6 +3.6
	comp=E,0.8nm,0.3s,baz=300,slow=11,SNR=1.7				
	comp=E,2.7nm,0.8s				
PAGF	Fort de Pagny	13.85 314	*e*Sn	Sn	01 21 38.4 -10
	comp=E,0.8nm,0.2s				
SMF	Signal de Mont	14.06 305	*e*Pn	Pn	01 19 17.1 -0.6
SMF			*e*Sn	Sn	01 21 43.5 -10
	comp=E,3.3nm,0.5s				
LOR	Lormes	14.30 307	*e*Pn	Pn	01 19 20.2 -0.8
	baz=116				
LOR			*e*Sn	Sn	01 21 47.3 -12
	comp=E,2.8nm,0.5s				
AVF	Avril sur Loir	14.42 305	*e*Pn	Pn	01 19 21.7 -1.0
SSF	Saint Saulge	14.43 306	*e*Pn	Pn	01 19 22.7 -0.1
SSF			*e*Sn	Sn	01 21 51.2 -11
	comp=E,0.8nm,0.3s				
NACGM	Naroch	15.69 13	*e*P	Pn	01 19 41.3 +1.9
	baz=198				
VIKU	Vikbolandet	18.92 354	*e*P	P	01 20 13.0 -6.0
ESBB	Sonseca Array	18.94 278	P	P	01 20 19.4 -0.2
ESDC	Sonseca Array	18.94 278	P	P	01 20 19.8 +0.2
	comp=E,0.1nm,0.3s,baz=73,slow=11,SNR=16				
	comp=E,1.0nm,0.7s				
ESDC	Sonseca Array	18.94 278	P	P	01 20 18.0 -1.5
VSU	Vasula	19.11 10	*e*P	P	01 20 13.3 -7.8
UPP	Uppsala	20.20 356	*e*P	P	01 20 31.0 -2.1
AAL	Aland	20.44 359	*e*P	P	01 20 31.8 -3.7
MEF	Metsahovi	20.61 5	*e*P	P	01 20 31.7 -5.6
HFS	Hagfors	20.85 350	P	P	01 20 39.7 -0.4
	comp=E,2.4nm,0.5s,baz=155,slow=11,SNR=11				
	comp=E,2.4nm,0.5s				
TAM	Tamanrasset	21.26 222	P	P	01 20 45.7 +0.8
TAM			IAmb	IAmb	01 20 55.7
	comp=Z,8.7nm,1.5s				
RAF	Rauma	21.29 1	*e*P	P	01 20 40.5 -4.3
MDT	Midelt	21.48 259	P	P	01 20 47.2 0.0
	comp=Z,2.5nm,0.9s,baz=68,slow=9.3,SNR=6.7				
	comp=Z,2.5nm,0.9s				
NC602	NORSAR Array S	21.75 348	P	P	01 20 49.6 -0.1
FINES	FINESS Array B	21.96 7	P	P	01 20 51.8 -0.1
	comp=Z,3.9nm,0.8s,baz=176,slow=12,SNR=15				
	comp=Z,3.9nm,0.8s				
FINES	FINESS Array B	21.96 7	P	P	01 20 50.7 -1.2
FIA1	FINESS Array S	21.96 7	P	P	01 20 50.7 -1.2
FIA1			IAmb	IAmb	01 21 15.9
	comp=Z,25nm,1.4s				
NAO01	NORSAR Array S	21.96 347	P	P	01 20 52.2 +0.2
NB2	NORSAR Subarra	22.09 348	P	P	01 20 53.0 -0.4
	comp=Z,4.4nm,0.8s,baz=164,slow=11				
NOA	NORSAR Array B	22.09 348	P	P	01 20 53.4 0.0
	comp=Z,2.3nm,0.7s,baz=159,slow=10.0,SNR=9.3				
	comp=Z,2.3nm,0.7s				
EKA	Eskdalemuir Ar	22.22 322	P	P	01 20 53.2 -1.7
	comp=Z,3.2nm,0.7s,baz=121,slow=10,SNR=11				
	comp=Z,3.2nm,0.7s				
PVAQ	Vaqueiros	22.28 273	P	P	01 20 55.8 +0.1
PVAQ			IAmb	IAmb	01 21 12.5
	comp=Z,10nm,1.5s				
GEYT	Alibeck	29.08 82	P	P	01 22 00.2 +1.3
	comp=Z,0.8nm,0.6s,baz=249,slow=7.6,SNR=2.7				
	comp=Z,0.8nm,0.6s				
ABKAR	Akbulak array	29.27 58	P	P	01 21 57.7 -2.8
ARCES	ARCESS Array B	29.94 3	P	P	01 22 05.7 -0.5
	comp=Z,2.5nm,0.9s,baz=182,slow=9.9,SNR=6.3				
	comp=Z,2.5nm,0.9s				
TOA0	Torodi Ar. Sit	31.35 218	P	P	01 22 19.2 +0.2
TOA0			IAmb	IAmb	01 22 20.1
	comp=Z,3.5nm,0.8s				
TORD	Torodi Ar. Bea	31.35 218	P	P	01 22 19.3 +0.2
	comp=Z,2.9nm,0.7s,baz=32,slow=9.6,SNR=20				
	comp=Z,2.9nm,0.7s				
TORD	Torodi Ar. Bea	31.35 218	P	P	01 22 19.0 -0.1
TORD			IAmb	IAmb	01 22 20.0
	comp=Z,2.5nm,0.9s				
KK31	Karatay Array	37.07 68	P	P	01 23 07.7 -0.8
KK31			IAmb	IAmb	01 23 12.8
	comp=Z,1.5nm,0.8s				
KKAR	Karatay Array	37.07 68	P	P	01 23 06.7 -1.8
GAR	Garm	37.98 75	P	P	01 23 15.1 -1.2
AAK	Ala-Archa	40.03 68	P	P	01 23 31.8 -1.7
MK31	Makanchi Array	44.38 60	P	P	01 24 06.0 -2.8
MK31			IAmb	IAmb	01 24 25.4
	comp=Z,6.3nm,1.4s				
MKAR	Makanchi Array	44.38 60	P	P	01 24 09.1 +0.3
	comp=Z,2.0nm,0.5s,baz=276,slow=7.6,SNR=28				
	comp=Z,2.0nm,0.5s				
MKAR	Makanchi Array	44.38 60	P	P	01 24 07.0 -1.7
ZALV	Zalesovo Beam	44.55 49	P	P	01 24 09.7 -0.3
	comp=Z,0.7nm,0.4s,baz=284,slow=7.6,SNR=4.9				
	comp=Z,0.7nm,0.4s				
ZALV	Zalesovo Beam	44.55 49	P	P	01 24 09.2 -0.8
SONM	Songino Array	59.37 51	P	P	01 25 59.6 -1.0
	comp=Z,0.3nm,0.4s,baz=292,slow=7.6,SNR=1.9				
	comp=Z,0.3nm,0.4s				

IDC ***16*** *01:23:19.9±3.2,2˚93S×126˚68E,h27km±21km,mb4.3/21, mbtmp4.5/24,ML4.9/3,MS3.8/16,Error ellipse: s-maj=16.4km s-min=9.0km az=69.0*

NEIC ***16*** *01:23:21.0±1.9,2˚77S±0˚06×126˚69E±0˚07,h32km±4km, mb4.9/49,Error ellipse: s-maj=10.2km s-min=8.8km az=53.0*

GCMT ***16*** *01:23:21.0±0.3,2˚65S±0˚02×126˚69E±0˚03,h17km±1km, MW4.9/82,Moment Tensor Solution. s26,c28; s82,c103; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}2.50±.16; $M_{\theta\theta}$-1.26±.09; $M_{\phi\phi}$-1.25±.11; $M_{r\theta}$-0.73±.23; $M_{\phi\phi}$1.16±.06; $M_{\theta r}$-0.

RKPI	Ransiki, Papua	7.64	80	P	Pn	01 25 10.0 +0.8
	1.2nm126nm,0.6s					
MTN	Manton Dam	10.91	156	Pn	Pn	01 25 59.0 +5.1
MYLDM	Lahad Datu	11.37	314	Pn	Pn	01 25 57.2 -3.0
MYLDM	Lahad Datu	11.37	314	P	Pn	01 26 02.6 +2.4
	64nm,0.7s					
KNRA	Kununurra	12.95	171		P	01 26 27.4 -4.8
KNRA	Kununurra	12.95	171	P	P	01 26 29.1 -3.1
SBUM	Sibu	15.33	290	Pn	Pn	01 26 51.6 -2.6
SMRI	Semarang	16.67	255	Pn	Pn	01 27 11.5 +0.1
KSM	Kuching	16.87	284	Pn	Pn	01 27 13.8 -0.1
WRAB	Tennant Creek	18.60	157	P	Pn	01 27 35.3 0.0
WRAB				IAmb	IAmb	01 27 38.6
	comp=Z,30nm,0.5s					
WRAB	Tennant Creek	18.60	157	P	Pn	01 27 35.2 -0.1
WRA	Warramunga Arr	18.61	157	Pn	P	01 27 34.9 -0.1
	comp=Z,5.9nm,0.3s,baz=338,slow=11,SNR=97					
WRA				Sn	Sn	01 31 02.7 -0.2
	comp=Z,0.2nm,0.3s,baz=331,slow=20,SNR=2.2					
WRA				LR	LR	01 35 43.1
	comp=Z,200nm,19.2s,baz=310,slow=40					
	comp=Z,14nm,0.4s					
WRA	Warramunga Arr	18.61	157	P	P	01 27 34.1 -0.9
WB2	Warramunga Arr	18.61	157		P	01 27 35.1 +0.1
WB2				IAmb	IAmb	01 27 38.7
	comp=Z,26nm,0.6s					
MBWA	Marble Bar	19.43	200	P	Pn	01 27 45.8 +0.5
COEN	Coen	19.73	125	P	P	01 27 47.3 0.0
PSA00	Pilbara Seismi	19.78	199	P	Pn	01 27 50.0 +0.6
PMG	Port Moresby	21.42	109	P	P	01 28 06.5 +0.9
	comp=Z,19nm,0.7s,baz=291,slow=8.6,SNR=4.3					
PMG				LR	LR	01 38 38.5
	comp=Z,248nm,20.9s,baz=306,slow=43					
	comp=Z,19nm,0.7s					
QIS	Mount Isa	21.70	145	P	P	01 28 08.8 +0.2
AS31	Alice Springs	21.89	162	P	P	01 28 10.4 -0.2
ASAR	Alice Springs	21.89	162	P	P	01 28 10.3 -0.2
	comp=Z,13nm,0.3s,baz=343,slow=12,SNR=172					
ASAR				S	S	01 32 09.6 -1.8
	comp=Z,4.8nm,0.9s,baz=348,slow=22,SNR=7.9					
ASAR				ScP	ScP	01 35 45.3 -0.3
	comp=Z,0.4nm,0.9s,baz=347,slow=3.8,SNR=1.5					
	comp=Z,13nm,0.3s					
ASAR	Alice Springs	21.89	162	P	P	01 28 09.9 -0.7
AS01	Alice Springs	21.90	162	P	P	01 28 10.2 -0.5
	comp=Z,36nm,0.7s					
WRKA	Warakurna	22.15	176	P	P	01 28 14.0 +0.6
GUMO	Guam	24.35	48	LR	LR	01 36 57.4
	comp=Z,122nm,21.1s,baz=261,slow=34					
MEEK	Meekatharra	24.90	197	P	P	01 28 39.9 -0.5
TV1H	Townsville Har	25.61	131	P	P	01 28 50.1 +3.3
	comp=Z,25nm,0.7s					
CTA	Charters Tower	25.71	133	P	P	01 28 48.5 +0.6
	comp=Z,11nm,0.7s,baz=318,slow=11,SNR=12					
	comp=Z,11nm,0.7s					
CTA	Charters Tower	25.71	133	P	P	01 28 49.1 +1.3
CTAO	Charters Tower	25.71	133	P	P	01 28 45.7 -2.1
CTAO				IAmb	IAmb	01 28 50.1
	comp=Z,21nm,1.0s					
CTAO	Charters Tower	25.71	133	P	P	01 28 49.5 +1.7
OOD	Oodnadatta	26.30	162	P	P	01 28 52.9 -0.1
FORT	Forrest	27.84	177	P	P	01 29 05.2 -1.6
FORT				IAmb	IAmb	01 29 07.1
	comp=Z,36nm,0.7s					
FORT	Forrest	27.84	177	P	P	01 29 05.1 -1.8
MULG	Mulgathing	28.21	166	P	P	01 29 09.9 -0.2
BLDU	Ballidu	29.20	198	P	P	01 29 18.7 -0.3
LCRK	Leigh Creek	29.59	159	P	P	01 29 23.4 +1.0
KLBR	Kellerberrin	29.82	195	P	P	01 29 24.7 +0.2
RK1H	Rockhampton Ha	30.84	134	P	P	01 29 35.5 +1.9
BBOO	Buckleboo	31.12	165	P	P	01 29 36.1 +0.2
NWAO	Narrogin (SRO)	31.22	195	P	P	01 29 35.1 -1.8
	comp=Z,4.8nm,0.4s,baz=315,slow=19,SNR=9.8					
NWAO				LR	LR	01 43 53.7
	comp=Z,325nm,18.8s,baz=192,slow=40					
	comp=Z,4.8nm,0.4s					
NWAO	Narrogin (SRO)	31.22	195	P	P	01 29 36.8 -0.1
STKA	Stephens Creek	32.15	156	P	P	01 29 43.5 -1.5
	comp=Z,10.0nm,0.9s,baz=322,slow=9.6,SNR=11					
STKA				PcP	PcP	01 32 33.3 -0.5
	comp=Z,1.5nm,0.5s,baz=314,slow=3.5,SNR=4.6					
STKA				LR	LR	01 44 20.6
	comp=Z,201nm,18.7s,baz=317,slow=39					
	comp=Z,10.0nm,0.9s					
STKA	Stephens Creek	32.15	156	P	P	01 29 44.8 -0.2
STKA	Stephens Creek	32.15	156	P	P	01 29 44.9 -0.2
HTT	Hallett	32.55	161	P	P	01 29 49.1 +0.5
HNR	Honiara	33.74	103	LR	LR	01 45 37.5
	comp=Z,761nm,21.8s,baz=330,slow=40					
CMSA	Cobar Meteorol	33.74	150	P	P	01 29 59.1 +0.1
CM31	Chiang Mai Arr	34.50	309	P	P	01 30 04.6 -1.1
CM31				IAmb	IAmb	01 30 16.3
	comp=Z,8.1nm,0.9s					
CMAR	Chiang Mai Arr	34.50	309	P	P	01 30 08.3 +2.6
	comp=Z,1.2nm,0.6s,baz=141,slow=7.4,SNR=11					
CMAR				PcP	PcP	01 32 42.6 +2.0
	comp=Z,0.7nm,0.3s,baz=158,slow=3.6,SNR=5.3					
CMAR				LR	LR	01 46 17.3
	comp=Z,62nm,20.0s,baz=125,slow=40					
	comp=Z,1.2nm,0.6s					
CMAR	Chiang Mai Arr	34.50	309	P	P	01 30 07.0 +1.3
NJ2	Nanjing	35.46	349	eP	P	01 30 16.9 +3.2
NJ2				pmax	pmax	
	comp=Z,14nm,0.8s					
ARMA	Armidale	36.23	142	P	P	01 30 21.1 +0.5
	comp=Z,11nm,1.5s					
ARPS	Mount Arapiles	36.58	159	P	P	01 30 23.9 +0.6
PZH	PanZhiHua	37.80	322	P	P	01 30 35.8 +1.9
PZH				pmax	pmax	
	comp=Z,10.0nm,0.5s					
PZH				pmax	pmax	
	comp=Z,130nm,5.2s					
JHJ	Hachijo jima 2	37.84	18	LR	LR	01 44 38.6
	comp=Z,200nm,21.4s,baz=283,slow=34					
MGCD	Mangrove Creek	37.93	146	P	P	01 30 36.6 +1.7
	comp=Z,14nm,0.9s					
CAN	Canberra	38.42	150	P	P	01 30 39.0 0.0
CAN	Canberra	38.42	150	P	P	01 30 40.4 +1.4
	comp=Z,27nm,0.9s					
CAN	Canberra	38.42	150	P	P	01 30 39.7 +0.7
CAN				pP	sP	01 30 48.5 -0.5
KSAR	Wonju Array Be	40.07	2	P	P	01 30 51.9 -0.8
KSRS	Korea Array	40.08	2	P	P	01 30 54.0 +1.3
	comp=Z,2.2nm,0.7s,baz=179,slow=8.7,SNR=9.8					
KSRS				LR	LR	01 46 20.7
	comp=Z,126nm,21.6s,baz=180,slow=34					
	comp=Z,2.2nm,0.7s					
XAN	Xi'an	40.28	337	⇑P	P	01 30 56.4 +1.9
XAN				pP	pwP	01 31 04.8 -1.0
XAN				pmax	pmax	
	comp=Z,7.0nm,0.8s					
MJAR	Matsushiro Arr	40.62	14	P	P	01 30 56.4 -0.9
	comp=Z,0.9nm,0.6s,baz=181,slow=8.7,SNR=2.4					
MJAR				LR	LR	01 45 44.3
	comp=Z,356nm,21.2s,baz=264,slow=33					
	comp=Z,0.9nm,0.6s					
HNS	HongShan	41.52	346	⇑P	P	01 31 07.4 +2.8
HNS				pmax	pmax	
	comp=Z,13nm,1.0s					
BJI	Beijing	43.72	348	P	P	01 31 23.6 +1.2
BJI				pmax	pmax	
	comp=Z,8.0nm,0.9s					
LZH	Lanzhou	44.17	333	⇑P	P	01 31 30.6 +4.2
LZH				pP	pwP	01 31 41.3 +3.5
LZH				sP	sP	01 31 47.0 +11
LZH				pmax	pmax	
	comp=Z,22nm,1.4s					
LZH				LR	LR	
	comp=Z,270nm,14.5s					
LZH				LR	LR	
	comp=Z,240nm,17.2s					
LZH				LR	LR	
	comp=Z,220nm,16.4s					
USA0B	Ussuriysk Arra	47.05	5	P	P	01 31 48.7 -0.1
USA0B				IAmb	IAmb	01 31 58.3
	comp=Z,20nm,0.9s					
USRK	Ussuriysk Ar.	47.05	5	P	P	01 31 48.9 +0.1
	comp=Z,2.8nm,0.6s,baz=216,slow=10,SNR=4.4					
	comp=Z,2.8nm,0.6s					
XLT	XiLinHaoTe	47.46	350	eP	P	01 31 54.3 +2.2
XLT				pP	pwP	01 32 06.5 +2.9
XLT				sP	sP	01 32 10.9 +10
XLT				pmax	pmax	
	comp=Z,18nm,0.9s					
XLT				pmax	pmax	
	comp=Z,170nm,5.6s					
ODAN	Odare	48.01	310	eP	P	01 32 00.2 +3.4
TAPN	Taplejung	48.02	311	eP	P	01 32 00.9 +3.9
RAMN	Ramite	48.66	310	eP	P	01 32 04.2 +2.3
	comp=Z,73nm,0.9s					
GTA	Gaotai	48.73	332	eP	P	01 32 04.5 +2.5
GTA				pP	sP	01 32 12.0 +0.7
GTA				sP	pwP	01 32 15.5 +1.9
GTA				pmax	pmax	
	comp=Z,10.0nm,1.8s					
GTA				pmax	pmax	
	comp=Z,50nm,3.8s					
GTA				LR	LR	
	comp=Z,81nm,14.5s					
GTA				LR	LR	
	comp=Z,140nm,16.7s					
GTA				LR	LR	
	comp=Z,120nm,16.4s					
GOMU	GeErMu	48.87	326	P	P	01 32 07.1 +3.6
GOMU				pmax	pmax	
	comp=Z,6.0nm,0.5s					
JIRN	Jiri	49.33	311	eP	P	01 32 09.2 +2.0
	comp=Z,33nm,0.8s					
GUN	Gumba	49.70	311	eP	P	01 32 12.1 +2.1
	comp=Z,45nm,0.7s					
PKI	Pulchoki	49.88	310	eP	P	01 32 12.8 +1.5
PKIN	Phulchoki	49.90	310	eP	P	01 32 13.0 +1.6
	comp=Z,53nm,1.0s					
KKN	Kakani	50.09	310	eP	P	01 32 14.8 +2.0
	comp=Z,13nm,1.3s					
GKN	Gorkha	50.69	310	eP	P	01 32 19.1 +1.9
	comp=Z,46nm,0.9s					
KOLN	Koldanda	51.37	309	eP	P	01 32 23.2 +0.8
	comp=Z,21nm,1.1s					
DANN	Dangsing	51.53	310	eP	P	01 32 25.6 +1.9
	comp=Z,80nm,0.8s					
KLR	Kul'dur	52.03	4	LR	LR	01 56 48.1
	comp=Z,46nm,19.7s,baz=102,slow=38					
MSVF	Nonsavu	52.52	110	P	P	01 32 33.4 +2.4
ULN	Ulaanbaatar	53.31	344	P	P	01 32 37.1 +0.7
ULN				IAmb	IAmb	01 32 46.4
	comp=Z,13nm,1.0s					
ULN	Ulaanbaatar	53.31	344	P	P	01 32 37.8 +1.4
ULN				pP	sP	01 32 45.5 -0.2
SONM	Songino Array	53.47	343	P	P	01 32 39.1 +1.6
	comp=Z,3.0nm,0.8s,baz=154,slow=8.1,SNR=14					
	comp=Z,3.0nm,0.8s					
SONM	Songino Array	53.47	343	P	P	01 32 37.7 +0.2
BKZ	Black Stump Fm	57.91	135	P	P	01 33 09.0 -0.5
WMQ	Urumqi	58.09	328	eP	P	01 33 13.5 +2.8
WMQ				pP	pwP	01 33 26.8 +4.3
WMQ				pmax	pmax	
	comp=Z,31nm,0.9s					
WMQ				LR	LR	
	comp=Z,110nm,18.7s					
WMQ	Urumqi	58.09	328	P	P	01 33 08.6 -2.1
PETK	Petropavlovsk-	61.52	21	P	P	01 33 35.9 +1.8
	comp=Z,2.7nm,0.8s,baz=216,slow=12,SNR=4.2					
PETK				LR	LR	01 57 13.9
	comp=Z,30nm,20.3s,baz=309,slow=33					
	comp=Z,2.7nm,0.8s					
NIL	Nilore	61.97	311	P	P	01 33 37.3 -0.1
NIL	Nilore	61.97	311	P	P	01 33 39.0 +1.6
NIL				pP	sP	01 33 46.8 -0.2
ZSN	Zaisan	61.98	329	eP	P	01 33 37.4 +0.1
	baz=329					
SHLS	Shalkode	62.38	323	eP	P	01 33 39.1 -1.1
	baz=323					
TARG	Taragay, Kyrgy	62.63	321	IAmb	IAmb	01 33 59.0
	comp=Z,7.5nm,0.8s					
UZB	Uzynbulak	62.65	323	eP	P	01 33 40.4 -1.6
	baz=322					
MK31	Makanchi Array	62.92	327	P	P	01 33 44.5 +1.0
MKAR	Makanchi Array	62.92	327	P	P	01 33 45.2 +1.7
	comp=Z,12nm,0.7s,baz=128,slow=8.0,SNR=57					
	comp=Z,12nm,0.7s					
MKAR	Makanchi Array	62.92	327	P	P	01 33 44.9 +1.4
SATY	Saty	62.97	322	eP	P	01 33 43.8 -0.3
	baz=322					
KPKS	Kokpek	63.03	323	eP	P	01 33 44.2 -0.2
	baz=323					
MAKZ	Makanchi	63.09	327	P	P	01 33 45.4 +0.7
MAKZ	Makanchi	63.09	327	P	P	01 33 46.2 +1.5
MAKZ				pP	pwP	01 33 53.9 -2.8
NRN	Naryn	63.63	320	P	P	01 33 49.1 +0.3
NRN				IAmb	IAmb	01 33 59.1
	comp=Z,9.1nm,0.9s					
TNSS	Tian-Shan	63.86	321	eP	P	01 33 51.1 +0.7
	baz=322					
MDOK	Medeo	63.87	322	eP	P	01 33 50.3 +0.2
	baz=322					
TDK	Taldyqorghan	64.05	324	eP	P	01 33 51.2 +0.1
	baz=324					
BOOM	Boomskoye usch	64.21	321	P	P	01 33 52.8 +0.4
BOOM				IAmb	IAmb	01 34 03.2
	comp=Z,13nm,1.0s					
CHKK	Chushkaly	64.27	322	eP	P	01 33 52.4 -0.2
	baz=322					
DRV	Dumont d'Urvil	64.41	174	P	P	01 33 51.4 -1.6
DRV				pP	pP	01 34 00.4 0.0
TKM2	Tokmak 2	64.65	321	P	P	01 33 57.3 +2.1
	SNR=13					
KUU	Kurty	64.69	322	eP	P	01 33 55.7 +0.4
	baz=322					
YAK	Yakutsk	64.71	2	P	P	01 33 54.6 -0.4
UCH	Uchtor	64.99	320	P	P	01 34 00.6 +2.8
	SNR=6.5					
AAK	Ala-Archa	65.21	320	P	P	01 33 59.7 +0.8
AAK				IAmb	IAmb	01 34 09.8
	comp=Z,14nm,1.0s					
AAK	Ala-Archa	65.21	320	P	P	01 34 01.0 +2.2
AAK				pP	pwP	01 34 09.3 +0.4
AML	Almayashu	65.48	319	P	P	01 34 03.1 +2.2
	SNR=9.0					
USP	Ospenovka	65.52	321	P	P	01 34 02.6 +1.9
	SNR=13					
KBL	Kabul	65.52	310	P	P	01 34 01.7 +0.6
KBL				IAmb	IAmb	01 34 11.4
	comp=Z,16nm,1.1s					
SGDS	Sogindy	65.53	321	eP	P	01 33 60.0 -0.9
	baz=321					
DRK	Karamyk	65.53	316	P	P	01 34 01.1 -0.1
EKS2	Erkin-Say	65.68	320	P	P	01 34 04.2 +2.4
	SNR=6.1					
GAR	Garm	66.36	315	P	P	01 34 06.1 -0.2
ZAA0	Zalesovo Array	66.38	335	IAmb	IAmb	01 34 15.0
	comp=Z,15nm,0.9s					
ZALV	Zalesovo Beam	66.38	335	P	P	01 34 06.3 +0.3
	comp=Z,5.5nm,0.8s,baz=117,slow=5.5,SNR=19					
	comp=Z,5.5nm,0.8s					
ZALV	Zalesovo Beam	66.38	335	P	P	01 34 06.1 +0.1
SIMJ	Simiganj	67.15	314	P	P	01 34 12.5 +1.1
SIMJ				pP	sP	01 34 20.7 -0.8
KURK	Kurchatov	67.23	329	P	P	01 34 12.1 +0.6
KURK	Kurchatov	67.23	329	P	P	01 34 12.7 +1.3
KURK				pP	sP	01 34 20.5 -1.1
IUG	Iuzhnay	67.90	318	eP	P	01 34 15.6 -0.4
	baz=318					
KK31	Karatay Array	68.01	319	P	P	01 34 17.5 +0.9
KK31				IAmb	IAmb	01 34 26.7
	comp=Z,11nm,1.1s					
KKAR	Karatay Array	68.01	319	P	P	01 34 17.2 +0.6
KKAR				IAmb	IAmb	01 34 26.7
	comp=Z,11nm,1.1s					
TAS	Tashkent	68.05	317	P	P	01 34 17.2 +0.3
SEY	Seymchan	68.40	12	P	P	01 34 19.6 +1.1
	comp=Z,5.0nm,0.9s,baz=225,slow=3.8,SNR=9.1					
	comp=Z,5.0nm,0.9s					
BRZS	Berezniki	70.00	326	eP	P	01 34 27.9 -0.9
	baz=326					
HRA	Herat	70.76	308	P	P	01 34 34.3 +0.2
HRA				IAmb	IAmb	01 34 44.1
	comp=Z,5.8nm,1.1s					
WSAR	Wadi Sarin	71.04	296	P	P	01 34 36.4 +0.7
	comp=Z,17nm,1.3s,baz=49,slow=9.3,SNR=2.2					
	comp=Z,17nm,1.3s					
BRVK	Borovoye	72.84	328	P	P	01 34 46.1 +0.3
BRVK				IAmb	IAmb	01 34 55.6
	comp=Z,17nm,1.0s					
TIXI	Tiksi	74.35	1	P	P	01 34 54.8 +0.5
TIXI				IAmb	IAmb	01 35 03.4
	comp=Z,12nm,1.4s					
GEYT	Alibeck	74.97	310	P	P	01 34 59.3 +0.6
	comp=Z,2.0nm,0.8s,baz=128,slow=6.4,SNR=4.8					
	comp=Z,2.0nm,0.8s					
GEYT	Alibeck	74.97	310	P	P	01 34 59.5 +0.8
GEYT				IAmb	IAmb	01 35 04.7
	comp=Z,11nm,1.4s					
GYA0B	ALIBECK ARRAY	74.97	310	P	P	01 34 59.2 +0.4
NRIK	Noril'sk	76.73	347	P	P	01 35 07.9 -0.1
	comp=Z,5.1nm,0.8s,baz=119,slow=8.0,SNR=6.0					
	comp=Z,5.1nm,0.8s					
NRIK	Noril'sk	76.73	347	IAmb	IAmb	01 35 18.3
	comp=Z,19nm,1.3s					
VNDA	Vanda	76.99	173	P	P	01 35 07.3 -2.1
	comp=Z,1.9nm,0.6s,baz=320,slow=6.8,SNR=23					
	comp=Z,1.9nm,0.6s					
VNDA	Vanda	76.99	173	P	P	01 35 08.3 -1.1
ABKAR	Akbulak array	77.17	322	P	P	01 35 10.4 -0.6
ABKAR				IAmb	IAmb	01 35 20.4
	comp=Z,7.3nm,1.1s					
MAW	Mawson	77.63	201	LR	LR	02 06 43.4
	comp=Z,73nm,20.2s,baz=42,slow=34					
AKTO	Aktyubinsk	78.74	323	P	P	01 35 19.6 0.0
	comp=Z,2.5nm,0.8s,baz=110,slow=6.4,SNR=7.5					
	comp=Z,2.5nm,0.8s					
ARU	Arti	80.41	328	P	P	01 35 28.6 0.0
	comp=Z,1.4nm,0.5s,baz=150,slow=20,SNR=4.1					
	comp=Z,1.4nm,0.5s					
ARU	Arti	80.41	328	P	P	01 35 28.9 +0.3
RAYN	Ar Rayn	83.00	294	P	P	01 35 42.7 -0.4
ONI	Oni	86.87	313	P	P	01 36 01.4 -0.7
ONI				IAmb	IAmb	01 36 20.2
	comp=Z,23nm,1.6s					
QSPA	South Pole Qui	87.13	180	P	P	01 36 02.1 -0.9
QSPA				IAmb	IAmb	01 36 05.1
	comp=Z,21nm,1.9s					
KDAK	Kodiak Island	87.45	32	LR	LR	02 09 32.5
	comp=Z,78nm,20.5s,baz=276,slow=32					
ILAR	Eielson Array	91.02	25	P	P	01 36 19.8 -1.4
	comp=Z,0.6nm,0.8s,baz=303,slow=5.0,SNR=4.1					
	comp=Z,0.6nm,0.8s					
MNK	Minsk	97.37	324	*i* P	P	01 36 47.4 -3.1
	comp=E,5.0nm,1.4s					
MNK				*i* P	P	01 36 47.4 -3.1
	comp=N,30nm,0.9s					
MNK				*i* P	P	01 36 47.4 -3.1
	comp=Z,12nm,0.9s,baz=84					
MNK				*i* pP	pwP	01 37 02.1 +1.0
MNK				*i* PP	PP	01 40 44.7 -2.7
MNK				*i* PPP	PPP	01 42 51.3
MNK				*i* S	SKSac	01 47 20.1 -6.0
MNK				*i* sS	SKKSac	01 47 46.2 -7.3
MNK				*i* SS	SS	01 54 48.0 -3.6
MNK				*i* SSS	SSS	01 58 34.4
MNK				*i* LQ	LQ	02 14 46.3
MNK				*i* LR	LR	02 19 29.4
MNK				*i* LRM	MLR	02 22 30.5
	comp=Z,51nm,12.5s					
MNK				*i* LRM	MLR	02 22 32.5
	comp=E,6.0nm,19.7s					
MNK				*i* LRM	MLR	02 22 33.9
	comp=N,552nm,12.5s					
SNAA	Sanae	98.89	194	LR	LR	02 20 34.8
	comp=N,41nm,18.6s,baz=138,slow=35					
TORD	Torodi Ar. Bea	124.63	284	PKP	PKiKP	01 42 18.4 +0.4
	comp=N,1.8nm,0.7s,baz=58,slow=1.6,SNR=6.8					
TXAR	Lajitas Array	125.51	56	PKP	PKiKP	01 42 20.6 +1.0
	comp=N,0.4nm,0.7s,baz=258,slow=1.7,SNR=6.6					
AC05	El Transito	144.59	154	PKPdf	PKPbc	01 42 53.9 +0.6
PLTB	Pedras Altas	145.61	180	PKPbc	PKPdf	01 42 56.2 0.0
MATN	Matagalpa	146.26	71	PKPbc	PKPdf	01 42 57.2 -0.6
JTS	Las Juntas de	147.78	75	PKPbc	PKPdf	01 42 58.7 -1.6
CPUP	Villa Florida	150.77	173	PKPbc	PKPbc	01 43 10.1 -0.2
	comp=N,5.1nm,0.6s,baz=196,slow=0.7,SNR=18					
LPAZ	La Paz	156.05	143	PKP	PKPdf	01 43 14.6 +1.2
	comp=N,0.8nm,0.7s,baz=233,slow=10,SNR=3.9					
LPAZ				PKPab	PKPab	01 43 41.1 +0.6
	comp=N,4.4nm,0.6s,baz=199,slow=2.7,SNR=15					

*THE **16** 01:27:37.1, 39°.76N±20°.70E, h8km±1km, ML3.2/12, Error ellipse: s-maj=1.2km s-min=0.5km az=302.0*
*ATH **16** 01:27:37.3, 39°.75N±20°.71E, h5km±2km, ML3.2/7, Error ellipse: s-maj=2.7km s-min=0.6km az=324.0*
*IDC **16** 01:27:39.4±2.1, 39°.77N±20°.58E, h50km±27km, mb3.6/4, mbtmp3.6/9, ML3.3/4, Error ellipse: s-maj=21.4km s-min=15.5km az=131.0*
ISC 16 01:27:36.6±0.8, 39.74N±0°.02×20.70E±0°.02, h17km±5km, n75, σ1.9 31/103, mb3.8/5, 13C-4D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.14	125	P	Pg	01 27 40.0	-0.6
JAN				S	Sg	01 27 43.4	+0.1
	23μm,0.3s						
JAN	Janina	0.14	125	P	Pg	01 27 40.0	-0.6
JAN				S	Sg	01 27 42.6	-0.7
JAN				AML	AML	01 27 43.7	
	comp=E,55667μm,0.3s						
JAN				AML	AML	01 27 44.1	
	comp=N,33957μm,0.3s						
IGT	Igoumenitsa	0.35	235	P	Pg	01 27 43.9	0.0
IGT				S	Sb	01 27 50.0	+0.3
	comp=N,7μm,0.6s						
IGT	Igoumenitsa	0.35	235	P	Pg	01 27 44.2	+0.3
IGT				S	Sg	01 27 49.6	+0.8
IGT				AML	AML	01 27 51.5	
	comp=N,11149μm,0.7s						
IGT				AML	AML	01 27 52.4	
	comp=E,14905μm,0.5s						
LSK	Leskovik	0.42	349	P	Pg	01 27 44.9	-0.3
LSK				S	Sg	01 27 51.2	+0.2
	comp=E,5μm,0.5s						
KPRO	Kipourio	0.55	67	P	Pg	01 27 47.4	-0.2
KPRO				S	Sg	01 27 56.1	+1.0
	comp=E,4μm,0.5s						
SRN	Sarande	0.56	285	P	Pg	01 27 47.3	-0.4
SRN				S	Sg	01 27 56.2	+1.0
	comp=E,4μm,0.4s						
PENT	Pentalofos	0.57	36	P	Pg	01 27 47.4	-0.5
PENT				S	Sg	01 27 56.4	+0.8
PENT	Pentalofos	0.57	36	P	Pg	01 27 47.7	-0.2
PENT				S	Sg	01 27 55.4	-0.1
KASA	Kassiopi	0.59	271	P	Pg	01 27 48.2	-0.1
KASA				S	Sg	01 27 57.0	+0.8
KASA				AML	AML	01 27 58.6	
	comp=N,5514μm,0.3s						
KASA				AML	AML	01 27 59.6	
	comp=E,3766μm,0.4s						
KEK	Kerkira	0.70	268	P	Pg	01 27 49.3	-1.0
KEK				S	Sg	01 28 00.5	+1.0
	comp=E,2μm,0.5s						
KEK	Kerkira	0.70	268	P	Pg	01 27 50.5	+0.2
KEK				S	Sg	01 28 00.6	+1.1
KEK				AML	AML	01 28 04.6	
	comp=E,4170μm,0.5s						
KEK				AML	AML	01 28 04.7	
	comp=N,3154μm,0.5s						
NEST	Nestorio	0.73	21	P	Pg	01 27 50.5	-0.4
NEST				S	Sg	01 28 01.0	+0.5
	comp=N,830nm,0.4s						
NEST	Nestorio	0.73	21	P	Pg	01 27 50.8	-0.1
TSLK	Tsoukalades, L	0.91	182	P	Pb	01 27 54.3	+0.3
TSLK				S	Sn	01 28 08.8	+1.4
	comp=N,2μm,0.5s						
TSLK	Tsoukalades, L	0.91

EVGI	**Lefkada island**	**1.11 182**	P	**Pn**	**01 27 58.1**	**+0.6**
EVGI	**Lefkada island**	**1.11 182**	P	**Pg**	**01 27 58.3**	**+0.1**
VLO	**Vlora**	**1.18 309**	P	**Pb**	**01 28 00.0**	**+1.5**
TYRN	**Tyrnavos**	**1.18 91**	P	**Pn**	**01 27 58.5**	**+0.1**
EVR	**Evrytania**	**1.19 133**	P	**Pn**	**01 27 59.4**	**+0.8**
KTI	**Kastanea**	**1.27 58**	P	**Pn**	**01 28 00.1**	**+0.4**
FSK	**Fiskardo**	**1.28 185**	P	**Pg**	**01 28 01.4**	**+0.1**
FSK			S	**Sg**	**01 28 19.9**	**+1.9**
comp=E,852nm,0.3s						
FSK	**Fiskardo**	**1.28 185**	P	**Pg**	**01 28 01.7**	**+0.4**
PVO	**Paravola**	**1.29 150**	P	**Pg**	**01 28 01.8**	**+0.3**
LRSO	**Larissa Observ**	**1.30 92**	P	**Pn**	**01 28 00.7**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.32 123**	P	**Pb**	**01 28 01.7**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.32 123**	P	**Pg**	**01 28 02.0**	**-0.1**
MAKR			S	**Sg**	**01 28 19.8**	**+0.4**
MAKR			AML	AML	01 28 25.4	
comp=N,2761μm,0.6s						
MAKR			AML	AML	01 28 25.9	
comp=E,4726μm,0.4s						
LIT	**Litokhoron**	**1.42 75**	P	**Pn**	**01 28 02.3**	**+0.6**
LIT			S	**Sb**	**01 28 21.9**	**+1.3**
comp=E,765nm,0.5s						
KEF4	**Livadi, Kephal**	**1.49 188**	P	**Pg**	**01 28 05.0**	**-0.3**
TIR	**Tirane**	**1.73 339**	⇑P	**Pn**	**01 28 07.3**	**+1.4**
AXAR	**Agios Charalam**	**1.80 122**	P	**Pb**	**01 28 10.0**	**+0.9**
XOR	**Xorichti**	**1.96 100**	P	**Pb**	**01 28 11.6**	**-0.3**
XOR			S	**Sb**	**01 28 35.9**	**-0.2**
comp=E,288nm,0.7s						
PDG	**Podgorica**	**2.90 338**	⇑P	**Pn**	**01 28 23.4**	**+1.3**
TIP	**Timpagrande**	**3.10 261**	⇑P	**Pn**	**01 28 25.2**	**+0.3**
MATE	**Matera**	**3.19 288**	⇑P	**Pn**	**01 28 26.4**	**+0.4**
VTS	**Vitosha**	**3.46 33**	⇓P	**Pn**	**01 28 31.5**	**+1.7**
VTS			⇑S	**Sn**	**01 29 13.4**	**+3.0**
BOVS	**Bovan**	**3.97 11**	⇑P	**Pn**	**01 28 38.5**	**+1.9**
BLKB	**Belogradchik**	**4.15 20**	⇑P	**Pn**	**01 28 41.6**	**+2.3**
HERR	**Herculane**	**5.29 13**	⇑P	**Pn**	**01 28 56.5**	**+1.5**
VAE	**Valguarnera**	**5.42 247**	P	**Pn**	**01 28 57.7**	**+1.0**
comp=E,7.5nm,1.0s,baz=6.7,slow=17,SNR=1.3						
VAE			S	**Sn**	**01 29 58.0**	**-0.7**
comp=E,5.4nm,0.6s,baz=192,slow=14,SNR=1.8						
FRGS	**Fruska Gora**	**5.46 353**	⇑P	**Pn**	**01 28 57.8**	**+0.6**
IDI	**Anoyia**	**5.55 142**	⇑P	**Pn**	**01 29 02.0**	**+3.5**
IDI	**Anoyia**	**5.55 142**	P	**Pn**	**01 28 58.6**	**+0.1**
comp=E,0.3nm,0.3s,baz=304,slow=11,SNR=3.2						
IDI			S	**Sn**	**01 29 58.8**	**-3.2**
comp=E,7.0nm,0.5s,baz=311,slow=20,SNR=8.1						
comp=E,27nm,1.1s						
GZR	**Gura Zlata**	**5.86 14**	⇑P	**Pn**	**01 29 05.7**	**+3.0**
BZS	**Buzias**	**5.92 6**	⇑P	**Pn**	**01 29 06.3**	**+2.9**
ARR	**Arges**	**6.33 26**	⇓P	**Pn**	**01 29 12.4**	**+3.2**
VOIR		**6.54 28**	⇓P	**Pn**	**01 29 14.8**	**+2.8**
MLR	**Muntele Rosu**	**6.93 32**	⇓P	**Pn**	**01 29 20.6**	**+3.1**
MLR	**Muntele Rosu**	**6.93 32**	P	**Pn**	**01 29 20.7**	**+3.2**
comp=E,0.3nm,0.3s,baz=270,slow=20,SNR=7.6						
comp=E,1.8nm,0.5s						
VRI	**Vrincioaia**	**7.56 34**	⇑P	**Pn**	**01 29 29.3**	**+3.3**
SOKA	**Soboth**	**8.08 331**	*e*Pn	**Pn**	**01 29 32.2**	**-1.0**
comp=E,1.3nm,0.3s						
OBKA	**Obir**	**8.12 328**	*e*Pn	**Pn**	**01 29 34.1**	**+0.3**
comp=E,0.6nm,0.2s						
ABTA	**Abfaltersbach**	**9.21 322**	*e*Pn	**Pn**	**01 29 47.7**	**-1.0**
comp=E,0.9nm,0.3s						
MOA	**Molln**	**9.35 332**	*i* Pn	**Pn**	**01 29 51.9**	**+1.4**
comp=E,0.8nm,0.3s						
BIOA	**Bad Ischl, Aus**	**9.45 330**	*e*Pn	**Pn**	**01 29 52.4**	**+0.5**
comp=E,1.3nm,0.4s						
WTTA	**Wattenberg**	**9.99 322**	*i* Pn	**Pn**	**01 29 59.8**	**+0.3**
comp=E,1.0nm,0.3s						
WATA	**Walderalm**	**10.07 322**	*e*Pn	**Pn**	**01 30 01.0**	**+0.4**
comp=E,0.6nm,0.2s						
SQTA	**Sankt Quirin**	**10.17 320**	*e*Pn	**Pn**	**01 30 02.2**	**+0.3**
comp=E,1.2nm,0.3s						
MOTA	**Moosalm**	**10.31 321**	*e*Pn	**Pn**	**01 30 03.7**	**-0.1**
comp=E,0.3nm,0.2s						
GERES	**GERESS Array B**	**10.39 333**	P	**Pn**	**01 30 05.4**	**+0.5**
comp=E,0.1nm,0.3s,baz=156,slow=15,SNR=4.8						
comp=E,0.2nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.57 315**	P	**Pn**	**01 30 08.5**	**+1.1**
comp=E,0.3nm,0.3s,baz=156,slow=21,SNR=2.4						
DAVOX			S	**Sn**	**01 32 02.8**	**-2.7**
comp=E,1.3nm,0.8s,baz=350,slow=18,SNR=1.9						
comp=E,0.7nm,0.5s						
FINES	**FINESS Array B**	**21.98 7**	P	**P**	**01 32 28.0**	**-1.5**
comp=E,1.5nm,0.8s,baz=181,slow=11,SNR=7.4						
comp=E,1.5nm,0.8s						
NB2	**NORSAR Subarra**	**22.12 348**	P	**P**	**01 32 30.0**	**-1.1**
comp=Z,3.9nm,1.0s,baz=165,slow=11						
ARCES	**ARCESS Array B**	**29.97 3**	P	**P**	**01 33 41.4**	**-2.3**
comp=Z,2.7nm,0.9s,baz=192,slow=11,SNR=4.2						
comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.34 218**	P	**P**	**01 33 56.1**	**-0.2**
comp=Z,0.6nm,0.8s,baz=27,slow=9.5,SNR=4.4						
comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**44.38 60**	P	**P**	**01 35 45.4**	**-0.7**
comp=Z,0.8nm,0.4s,baz=272,slow=8.3,SNR=7.5						
comp=Z,0.8nm,0.4s						

BJI ***16*** *01:31:59.6±0.0, 39°.87N×20°.31E, h10km, mb4.8/39, mB5.0/20, Ms4.5/9, Ms7 4.2/12*
BEO ***16*** *01:32:03.9±0.7, 39°.58N×20°.63E, h12km±4km, ML4.6/10*
MOS ***16*** *01:32:03.9±1.2, 39°.73N×20°.53E, h23km, mb4.9/33, MS4.0/19, Error ellipse: s-maj=3.9km s-min=2.3km az=84.6*
HLW ***16*** *01:32:04.9, 39°.60N×21°.52E, h10km±73km, Md5.1*
TIR ***16*** *01:32:04.2, 39°.76N×20°.70E, h2km±1km, Ml5.0*
ROM ***16*** *01:32:06.0, 39°.81N×20°.64E, h12km, mb4.7/23, Mwp4.7/11, Error ellipse: s-maj=1.5km s-min=0.6km az=20.0*
ATH ***16*** *01:32:05.0, 39°.76N×20°.67E, h18km, Mw4.5, Moment Tensor Solution. s11 Moment tensor: Mrr5.66; Mθθ-0.60; Mφφ-5.05; Mrθ3.08; Mφθ4.11; Mφr-0.28; Fault plane solution: NP1:φs126.00000°, δ58.00000°, λ60.00000°. NP2:φs353.00000°, δ43.00000°, λ128.00000°.*
PDG ***16*** *01:32:05.2±0.6, 39°.72N×20°.58E, h17km±1km, MD4.8/10, ML4.6/12 Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
LDG ***16*** *01:32:05.7±0.2, 39°.77N×20°.67E, h10km, Ml4.3/28, Error ellipse: s-maj=6.5km s-min=3.9km az=2.0*
THE ***16*** *01:32:06.0, 39°.76N×20°.68E, h0km±1km, ML4.5/7, Error ellipse: s-maj=1.9km s-min=0.6km az=311.0*
NEIC ***16*** *01:32:06.2±1.9, 39°.78N±0°.05×20°.60E±0°.06, h20km±5km, mb4.8/70, ML4.4(ATH), Error ellipse: s-maj=7.2km s-min=6.2km az=203.0*
MED_RC ***16*** *01:32:06.0±0.2, 39°.75N×20°.63E, h29km, MW4.8/23, Moment Tensor Solution. Mantle waves: s23, c40; Duration: 1s1 Moment tensor: Scale 10^16 Nm; Mrr1.45±.09; Mθθ-0.28±.05; Mφφ-1.16±.06; Mrθ0.31±.05; Mθφ1.05±.03; Mφr0.13±.05; Best double couple: M0 1.70000×10^16 NP1:φs131.00000°, δ48.00000°, λ68.00000°. NP2:φs342.00000°, δ46.00000°, λ113.00000°. Principal axes: T 1.5500, Plg74.0000°, Azm330.0000°; N 0.3200, Plg16.0000°, Azm146.0000°; P -1.8600, Plg1.0000°, Azm236.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
IDC ***16*** *01:32:07.0±1.8, 39°.78N×20°.64E, h32km±13km, mb4.4/35, mbtmp4.5/49, ML4.2/13, MS4.0/53 Error ellipse: s-maj=8.0km s-min=7.7km az=145.0*
GII ***16*** *01:32:10.0±0.0, 38°.62N×20°.65E, h16km*
ISC 16 01:32:05.1±0.8,**39°.74N**±0°.02×**20°.68E**±0°.02,**h18**km±4km, **n805**,σt**1989**/851,**mb4.7**/125,**MS4.1**/54,**115C-57D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**123**	P	**Pg**	**01 32 09.3**	**-0.2**
JAN				S	**Sb**	**01 32 13.0**	**+0.9**
JAN				AML	AML	01 32 13.5	
JAN				AML	AML	01 32 13.7	
IGT	**Igoumenitsa**	**0.34**	**232**	P	**Pg**	**01 32 12.4**	**+0.1**
IGT				S	**Sb**	**01 32 19.8**	**+2.0**
91μm,0.4s							
IGT	**Igoumenitsa**	**0.34**	**232**	P	**Pg**	**01 32 12.0**	**-0.3**
IGT	**Igoumenitsa**	**0.34**	**232**	P	**Pg**	**01 32 12.5**	**+0.1**
baz=233							
IGT				S	**Sb**	**01 32 18.6**	**+0.8**
baz=233							
IGT	**Igoumenitsa**	**0.34**	**232**	P	**Pg**	**01 32 12.1**	**-0.3**
IGT				S	**Sg**	**01 32 17.0**	**-0.2**
IGT				AML	AML	01 32 22.4	
IGT				AML	AML	01 32 22.6	
LSK	**Leskovik**	**0.41**	**351**	P	**Pb**	**01 32 13.8**	**-0.2**
LSK				S	**Sb**	**01 32 20.3**	**+0.4**
316μm,0.7s							
LSK	**Leskovik**	**0.41**	**351**	P	**Pb**	**01 32 13.8**	**-0.2**
baz=349							
LSK				S	**Sb**	**01 32 19.7**	**-0.2**
baz=349							
LSK				AMP			
comp=N,1μm,0.5s,baz=349							
SRN	**Sarande**	**0.54**	**285**	P	**Pg**	**01 32 15.8**	**-0.1**
SRN	**Sarande**	**0.54**	**285**	P	**Pg**	**01 32 15.8**	**-0.1**
baz=284							
SRN				S	**Sb**	**01 32 24.7**	**+1.2**
baz=284							
SRN				AMP			
comp=E,516nm,0.5s,baz=284							
KPRO	**Kipourio**	**0.57**	**68**	P	**Pb**	**01 32 16.7**	**+0.2**
KPRO				S	**Sb**	**01 32 25.6**	**+1.3**
comp=E,75μm,0.4s							
PENT	**Pentalofos**	**0.57**	**38**	P	**Pb**	**01 32 16.6**	**-0.1**
PENT	**Pentalofos**	**0.57**	**38**	P	**Pb**	**01 32 16.6**	**-0.1**
PENT				AML	AML	01 32 30.0	
comp=E,45541μm,0.3s							
PENT				AML	AML	01 32 32.9	
comp=N,14721μm,0.7s							
KASA	**Kassiopi**	**0.57**	**271**	P	**Pg**	**01 32 15.9**	**-0.6**
KASA				S	**Sb**	**01 32 24.8**	**+0.4**
KASA				AML	AML	01 32 28.1	
KASA				AML	AML	01 32 28.3	
KEK	**Kerkira**	**0.68**	**268**	P	**Pg**	**01 32 18.0**	**-0.5**
KEK	**Kerkira**	**0.68**	**268**	P	**Pg**	**01 32 18.0**	**-0.5**
KEK				S	**Sb**	**01 32 28.3**	**+0.8**
comp=N,50μm,0.6s							
KEK	**Kerkira**	**0.68**	**268**	⇓P	**Pg**	**01 32 18.0**	**-0.5**
KEK	**Kerkira**	**0.68**	**268**	P	**Pg**	**01 32 17.9**	**-0.6**
KEK				AML	AML	01 32 37.9	
KEK				AML	AML	01 32 38.1	
comp=N,83046μm,0.5s							
NEST	**Nestorio**	**0.73**	**23**	P	**Pb**	**01 32 19.6**	**+0.3**
NEST	**Nestorio**	**0.73**	**23**	P	**Pb**	**01 32 19.4**	**+0.1**
NEST				AML	AML	01 32 39.1	
comp=E,54225μm,0.4s							
NEST				AML	AML	01 32 41.5	
comp=N,45402μm,0.4s							
KBN	**Korca**	**0.88**	**5**		**Pb**	**01 32 20.9**	**-1.1**
KBN	**Korca**	**0.88**	**5**	P	**Pb**	**01 32 21.6**	**-0.4**
KBN	**Korca**	**0.88**	**5**	P	**Pb**	**01 32 20.9**	**-1.1**
KBN	**Korca**	**0.88**	**5**	P	**Pb**	**01 32 21.8**	**-0.2**
baz=4.0							
KBN				S	**Sn**	**01 32 35.4**	**+0.2**
baz=4.0							
KBN				AMP			
comp=E,100nm,0.9s,baz=4.0							
TSLK	**Tsoukalades, L**	**0.92**	**181**	P	**Pn**	**01 32 23.2**	**+0.1**
LKD2	**Lefkada island**	**0.95**	**181**	P	**Pn**	**01 32 24.5**	**+0.9**
LKD2				S	**Sn**	**01 32 39.6**	**+2.8**
comp=E,22μm,0.3s							
LKD2	**Lefkada island**	**0.95**	**181**	P	**Pg**	**01 32 23.7**	**+0.1**
baz=183							
LKD2				S	**Sn**	**01 32 38.7**	**+2.0**
baz=183							
LKD2	**Lefkada island**	**0.95**	**181**	P	**Pb**	**01 32 23.4**	**+0.3**
LKD2				AML	AML	01 32 41.3	
comp=E,44253μm,0.2s							
LKD2				AML	AML	01 32 44.2	
comp=N,45100μm,0.4s							
KZN	**Kozani**	**1.01**	**56**	P	**Pb**	**01 32 23.9**	**-0.2**
KZN				S	**Sn**	**01 32 41.0**	**+2.8**
comp=N,28μm,0.5s							
KZN	**Kozani**	**1.01**	**56**	P	**Pb**	**01 32 23.7**	**-0.4**
KZN				AML	AML	01 32 43.9	
comp=E,59305μm,0.6s							
KZN				AML	AML	01 32 44.3	
comp=N,54345μm,0.5s							
NYDR	**Nydri-Lefkada**	**1.03**	**179**	P	**Pn**	**01 32 24.7**	**+0.1**
NYDR				S	**Sn**	**01 32 41.7**	**+3.1**
comp=N,18μm,0.5s							
THL	**Klokotos Trika**	**1.04**	**99**	P	**Pb**	**01 32 24.2**	**-0.4**
THL	**Klokotos Trika**	**1.04**	**99**	P	**Pb**	**01 32 24.5**	**-0.1**
THL				AML	AML	01 32 45.1	
comp=E,19074μm,0.7s							
THL				AML	AML	01 32 46.5	
comp=N,24281μm,0.4s							
DRAG	**Dragano-Lefkad**	**1.06**	**185**	P	**Pg**	**01 32 25.7**	**+0.1**
DRAG				S	**Sg**	**01 32 42.9**	**+3.3**
EVGI	**Lefkada island**	**1.12**	**181**	P	**Pg**	**01 32 28.5**	**-0.3**
EVGI				S	**Sg**	**01 32 44.8**	**+3.4**
EVGI	**Lefkada island**	**1.12**	**181**	P	**Pn**	**01 32 25.8**	**-0.1**
VLO	**Vlora**	**1.16**	**309**		**Pg**	**01 32 27.4**	**-0.2**
VLO	**Vlora**	**1.16**	**309**	P	**Pg**	**01 32 27.4**	**-0.2**
VLO	**Vlora**	**1.16**	**309**	P	**Pg**	**01 32 29.1**	**+1.5**
baz=308							
VLO				S	**Sg**	**01 32 45.4**	**+2.6**
baz=308							
EVR	**Evrytania**	**1.20**	**133**	P	**Pg**	**01 32 28.2**	**-0.2**
EVR				AML	AML	01 32 54.4	
comp=E,30821μm,0.6s							
EVR				AML	AML	01 32 56.5	
comp=N,37341μm,0.8s							
FSK	**Fiskardo**	**1.28**	**184**	P	**Pg**	**01 32 29.9**	**0.0**
FSK				AML	AML	01 32 50.9	
comp=N,37424μm,0.4s							
FSK				AML	AML	01 32 51.4	
comp=E,53612μm,0.3s							
PVO	**Paravola**	**1.30**	**149**	P	**Pg**	**01 32 30.8**	**+0.6**
LRSO	**Larissa Observ**	**1.32**	**93**	P	**Pb**	**01 32 29.8**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.34**	**123**	P	**Pg**	**01 32 30.6**	**-0.4**
MAKR				AML	AML	01 32 55.9	
comp=E,63525μm,0.6s							
MAKR				AML	AML	01 32 56.5	
comp=N,59389μm,0.6s							
OHR	**Ohrid**	**1.37**	**4**	P	**Pg**	**01 32 31.3**	**-0.2**
OHR	**Ohrid**	**1.37**	**4**	*e*Pg	**Pg**	**01 32 31.6**	**+0.1**
OHR				*e*Sg	**Sg**	**01 32 52.7**	**+3.3**
OHR	**Ohrid**	**1.37**	**4**	*i* Pn	**Pg**	**01 32 31.6**	**+0.1**
LIT	**Litokhoron**	**1.44**	**75**	Pn	**Pg**	**01 32 32.7**	**-0.1**
LIT	**Litokhoron**	**1.44**	**75**	P	**Pg**	**01 32 32.7**	**-0.1**
KEF4	**Livadi, Kephal**	**1.50**	**188**	P	**Pb**	**01 32 32.2**	**-0.1**
VLS	**Valsamata**	**1.56**	**183**	P	**Pb**	**01 32 33.4**	**-0.1**
VLS				AML	AML	01 32 57.6	
comp=E,22210μm,0.4s							
VLS				AML	AML	01 32 59.3	
comp=N,28207μm,0.5s							
EFP	**Efpalio**	**1.62**	**144**	P	**Pg**	**01 32 36.3**	**0.0**
PSDA	**Pessada-Kefalo**	**1.63**	**183**	P	**Pb**	**01 32 34.4**	**-0.2**
SERG	**Sergoula**	**1.71**	**141**	P	**Pb**	**01 32 37.0**	**+1.1**
SERG				AML	AML	01 33 08.8	
comp=E,17798μm,0.5s							
SERG				AML	AML	01 33 14.7	
comp=N,13521μm,0.5s							
TIR	**Tirane**	**1.72**	**339**	⇑P	**Pb**	**01 32 36.3**	**+0.1**
TIR	**Tirane**	**1.72**	**339**		**Pb**	**01 32 36.6**	**+0.4**
TIR	**Tirane**	**1.72**	**339**	P	**Pb**	**01 32 36.6**	**+0.4**
TIR	**Tirane**	**1.72**	**339**	*e*Pn	**Pb**	**01 32 36.6**	**+0.4**
TIR				*e*Sn	**Sg**	**01 33 00.5**	**0.0**
TIR	**Tirane**	**1.72**	**339**	P	**Pb**	**01 32 37.0**	**+0.9**
baz=339							
TIR				AMP			
comp=E,36nm,0.7s,baz=339							
TIR	**Tirane**	**1.72**	**339**	⇑P	**Pb**	**01 32 36.8**	**+0.6**
SCTE	**Santa Cesarea**	**1.73**	**282**	Pn	**Pn**	**01 32 35.1**	**+0.8**
GRG	**Griva**	**1.79**	**47**	P	**Pb**	**01 32 36.3**	**-1.0**
GRG	**Griva**	**1.79**	**47**	P	**Pb**	**01 32 36.4**	**-1.0**
RLS	**Riolos of Patr**	**1.79**	**160**	P	**Pb**	**01 32 37.8**	**+0.4**
RLS				AML	AML	01 33 12.9	
comp=E,4034μm,0.8s							
RLS				AML	AML	01 33 23.6	
comp=N,8749μm,1.0s							
LAKA	**Lakka**	**1.81**	**146**	P	**Pb**	**01 32 38.5**	**+0.8**
LAKA				AML	AML	01 33 15.8	
comp=N,5168μm,1.0s							
LAKA				AML	AML	01 33 20.2	
comp=E,7814μm,0.8s							
AXAR	**Agios Charalam**	**1.82**	**122**	P	**Pb**	**01 32 38.9**	**+1.0**
AXAR				AML	AML	01 33 12.7	
comp=E,23882μm,0.4s							
AXAR				AML	AML	01 33 24.4	
comp=N,29328μm,0.7s							
DLFA	**Delphi**	**1.89**	**131**	P	**Pb**	**01 32 40.0**	**+0.9**
DLFA				AML	AML	01 33 17.5	
comp=E,9046μm,0.6s							
DLFA				AML	AML	01 33 18.4	
comp=N,11141μm,0.8s							
PHP	**Peshkopia**	**1.95**	**355**	P	**Pb**	**01 32 39.9**	**-0.2**
PHP	**Peshkopia**	**1.95**	**355**	P	**Pb**	**01 32 40.6**	**+0.6**
baz=355							
PHP				AMP			
comp=N,43nm,1.1s,baz=355							
DRO	**Drossia**	**1.96**	**155**	P	**Pb**	**01 32 40.1**	**-0.2**
THE	**Thessaloniki**	**1.96**	**62**	P	**Pn**	**01 32 38.8**	**+1.3**
THE	**Thessaloniki**	**1.96**	**62**	P	**Pb**	**01 32 39.9**	**-0.4**
baz=62							
NEO	**Neokhori**	**2.01**	**102**	P	**Pb**	**01 32 40.3**	**-0.9**
NEO				AML	AML	01 33 12.7	
comp=N,18105μm,0.7s							
NEO				AML	AML	01 33 13.9	
comp=E,9941μm,0.8s							
KLV	**Kalavryta, Ach**	**2.05**	**145**	P	**Pb**	**01 32 41.9**	**+0.1**
KLV				AML	AML	01 33 27.3	
comp=N,5833μm,0.7s							
KLV				AML	AML	01 33 32.9	
comp=E,6421μm,1.1s							
VAY	**Valandovo**	**2.13**	**42**	P	**Pn**	**01 32 41.1**	**+1.3**
VAY	**Valandovo**	**2.13**	**42**	*e*Pn	**Pn**	**01 32 41.3**	**+1.5**
VAY				*e*Sn	**Sb**	**01 33 09.5**	**+0.1**
VAY	**Valandovo**	**2.13**	**42**	*i* Pn	**Pn**	**01 32 41.5**	**+1.6**
KNT	**Kendrikon**	**2.21**	**49**	P	**Pn**	**01 32 42.0**	**+1.1**
STIP	**Stip**	**2.26**	**30**	*i* Pn	**Pb**	**01 32 45.4**	**0.0**
SKO	**Skopje**	**2.30**	**14**	*e*Pn	**Pb**	**01 32 45.5**	**-0.5**
SKO				*e*Sn	**Sb**	**01 33 15.0**	**+0.8**
SKO	**Skopje**	**2.30**	**14**	*i* Pn	**Pb**	**01 32 45.6**	**-0.5**
THAL	**Thalero**	**2.30**	**137**	P	**Pb**	**01 32 44.9**	**-1.2**
SOH	**Sokhos**	**2.31**	**61**	P	**Pn**	**01 32 44.0**	**+1.7**
ULC	**Ulcinj**	**2.47**	**334**	*e*Pn	**Pn**	**01 32 45.7**	**+1.2**
ULC				*i* Sn	**Sb**	**01 33 17.0**	**-2.1**
VIL2	**Platees**	**2.53**	**126**	P	**Pb**	**01 32 49.1**	**-0.9**
VIL2				AML	AML	01 33 33.5	
comp=N,4358μm,0.8s							
VIL2				AML	AML	01 33 43.1	
comp=E,9158μm,0.8s							
SRS	**Serrai**	**2.61**	**57**	P	**Pn**	**01 32 47.8**	**+1.4**
SRS	**Serrai**	**2.61**	**57**	*e*Pn	**Pn**	**01 32 48.0**	**+1.6**
SRS				*e*Sn	**Sn**	**01 33 20.5**	**+2.8**
DRME	**Dracevica, Mon**	**2.69**	**336**	⇑*i*Pn	**Pn**	**01 32 49.1**	**+1.6**
DRME	**Dracevica, Mon**	**2.69**	**336**	*e*Pn	**Pn**	**01 32 48.7**	**+1.2**
DRME				*i* Sn	**Sn**	**01 33 22.3**	**+2.6**
ITM	**Ithomi**	**2.74**	**159**	Pn	**Pn**	**01 32 50.4**	**+2.2**
ITM	**Ithomi**	**2.74**	**159**	⇓P	**Pb**	**01 32 51.2**	**-2.4**
ITM	**Ithomi**	**2.74**	**159**	P	**Pn**	**01 32 50.9**	**+2.7**
ITM				AML	AML	01 33 53.3	
comp=E,3760μm,0.9s							
ITM				AML	AML	01 33 57.5	
comp=N,3836μm,0.7s							
BUM	**Brajici-Budva**	**2.89**	**333**	⇑*i*Pn	**Pn**	**01 32 51.4**	**+1.1**
BUM				*i* Sn	**Sn**	**01 33 27.0**	**+2.3**
PDG	**Podgorica**	**2.89**	**339**	⇑P	**Pn**	**01 32 51.9**	**+1.6**
PDG	**Podgorica**	**2.89**	**339**	Pn	**Pn**	**01 32 50.6**	**+0.3**
PDG	**Podgorica**	**2.89**	**339**	⇑P	**Pn**	**01 32 51.6**	**+1.4**
TTG	**Podgorica**	**2.89**	**339**	⇓*i*Pn	**Pn**	**01 32 51.5**	**+1.2**
TTG				*i* Sn	**Sn**	**01 33 27.2**	**+2.6**
PVY	**Plav**	**2.90**	**349**	*e*Pn	**Pn**	**01 32 51.9**	**+1.4**
PVY				*i* Sn	**Sn**	**01 33 27.9**	**+2.9**
ATHU	**Athens Univers**	**3.00**	**125**	P	**Pn**	**01 32 54.7**	**+2.9**
ATHU				AML	AML	01 33 41.8	
comp=E,994μm,0.5s							
ATHU				AML	AML	01 33 51.2	
comp=N,1303μm,0.6s							
VLY	**Voula,Athens**	**3.08**	**127**	P	**Pn**	**01 32 55.4**	**+2.5**
TIP	**Timpagrande**	**3.09**	**261**	⇓S	**Sn**	**01 33 28.1**	**-1.5**
TIP	**Timpagrande**	**3.09**	**261**	Pn	**Pn**	**01 32 53.5**	**+0.5**
TIP	**Timpagrande**	**3.09**	**261**	⇓P	**Pn**	**01 32 53.4**	**+0.3**
CEME	**Cevo**	**3.10**	**335**	*e*Pn	**Pn**	**01 32 54.4**	**+1.2**
CEME				*i* Sn	**Sn**	**01 33 32.2**	**+2.3**
HCY	**Herceg Novi**	**3.17**	**329**	⇑*i*Pn	**Pn**	**01 32 54.3**	**+0.2**
HCY	**Herceg Novi**	**3.17**	**329**	*e*Pn	**Pn**	**01 32 54.4**	**+0.3**
HCY				*i* Sn	**Sn**	**01 33 33.6**	**+2.2**
MATE	**Matera**	**3.18**	**288**	⇓P	**Pn**	**01 32 54.2**	**0.0**
MATE				⇑S	**Sn**	**01 33 29.6**	**-1.9**
IVA	**Berane**	**3.18**	**350**	*e*Pn	**Pn**	**01 32 55.8**	**+1.5**
IVA				*i* Sn	**Sn**	**01 33 34.6**	**+2.7**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**01 32 56.8**	**+2.5**
KOME	**Kolasin**	**3.23**	**345**	*e*Pn	**Pn**	**01 32 56.3**	**+1.3**
KOME				*i* Sn	**Sn**	**01 33 35.5**	**+2.5**
NKME	**Niksic**	**3.29**	**337**	⇑*i*Pn	**Pn**	**01 32 57.0**	**+1.2**
NKME				*i* Sn	**Sn**	**01 33 36.9**	**+2.4**
VTS	**Vitosha**	**3.46**	**33**	⇓P	**Pn**	**01 33 00.6**	**+2.4**
VTS	**Vitosha**	**3.46**	**33**	Pn	**Pn**	**01 33 00.1**	**+1.9**
VTS	**Vitosha**	**3.46**	**33**	P	**Pn**	**01 33 00.1**	**+1.9**
VTS	**Vitosha**	**3.46**	**33**	⇓P	**Pn**	**01 33 00.3**	**+2.1**
SELS	**Selova**	**3.49**	**5**	*e*Pn	**Pn**	**01 33 00.6**	**+2.1**
SJES	**Sjenica**	**3.56**	**352**	*e*Pn	**Pn**	**01 33 02.0**	**+2.5**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pn**	**01 33 03.7**	**+2.1**
UPM	**

IDI Lg Lg 01 35 06.0
baz=204,slow=21
IDI LR LR 01 36 20.4
comp=Z,639nm,19.1s,baz=288,slow=45
comp=Z,11nm,0.3s
IDI Anoyia 5.56 142 ⇑P Pn 01 33 27.4 +0.3
INTR Introdacqua 5.61 296 Pn **Pn 01 33 28.2 +0.4**
BLY Banja Luka 5.63 334 ⇑*i*Pn **Pn 01 33 28.4 +0.5**
BLY Banja Luka 5.63 334 ⇑P **Pn 01 33 28.6 +0.7**
BANR Banloc 5.65 3 ⇓P **Pn 01 33 30.5 +2.5**
HUMR Humele 5.75 32 ⇑P **Pn 01 33 31.9 +2.4**
A052A Srbac 5.85 337 ⇑*i*Pn **Pn 01 33 30.8 0.0**
GZR Gura Zlata 5.86 15 ⇓P **Pn 01 33 33.8 +2.8**
GZR Gura Zlata 5.86 15 P **Pn 01 33 33.8 +2.8**
BZS Buzias 5.91 6 ⇑P **Pn 01 33 33.8 +2.1**
BZS Buzias 5.91 6 P **Pn 01 33 33.3 +1.6**
BZS pmax pmax
comp=Z,29nm,0.9s
A051A Mrakovica 5.96 333 ⇑*i*Pn **Pn 01 33 32.9 +0.4**
SGRR Singureni 5.96 40 ⇑P **Pn 01 33 35.2 +2.7**
PRIJ Prijedor 6.00 332 ⇑*i*Pn **Pn 01 33 33.4 +0.5**
TIM Timisoara 6.00 4 ⇓P **Pn 01 33 36.1 +3.1**
TIM Timisoara 6.00 4 P **Pn 01 33 36.0 +3.1**
STFAR Stefanesti-Arg 6.02 30 ⇑P **Pn 01 33 36.6 +3.4**
BUC1 Bucharest 6.08 39 ⇑P **Pn 01 33 38.4 +4.3**
BUC1 Bucharest 6.08 39 P **Pn 01 33 38.4 +4.3**
AQU L'Aquila 6.09 298 P **Pn 01 33 36.6 +2.4**
AQU pmax pmax
comp=Z,211nm,1.5s
AQU L'Aquila 6.09 298 ⇑P **Pn 01 33 35.8 +1.6**
LOT Lotru 6.14 21 ⇓P **Pn 01 33 37.5 +2.5**
WDD Wied Dalam 6.24 233 Pn **Pn 01 33 35.9 -0.4**
ARR Arges 6.33 26 ⇑P **Pn 01 33 39.9 +2.3**
DEV Deva 6.35 14 ⇓P **Pn 01 33 41.3 +3.5**
DEV Deva 6.35 14 P **Pn 01 33 41.2 +3.5**
MTUR Matau 6.36 29 ⇓P **Pn 01 33 42.1 +4.1**
MTUR Matau 6.36 29 P **Pn 01 33 42.1 +4.1**
SULR 6.44 38 ⇑P **Pn 01 33 42.0 +3.1**
PLAR PLOIESTI 6.51 36 ⇓P **Pn 01 33 44.2 +4.3**
VOIR 6.54 28 ⇓P **Pn 01 33 43.0 +2.5**
VOIR 6.54 28 P **Pn 01 33 42.9 +2.5**
SIRR Siria 6.56 6 ⇓P **Pn 01 33 42.8 +2.1**
LEHL Lehliu 6.57 42 ⇑P **Pn 01 33 43.4 +2.6**
RASA Rasa 6.57 45 ⇓P **Pn 01 33 44.1 +3.3**
AMBH Ambrzfalva 6.60 0 ⇓P **Pn 01 33 43.2 +1.9**
AMBH Ambrzfalva 6.60 0 P **Pn 01 33 43.1 +1.9**
KOVH Kovagotottos 6.62 344 P **Pn 01 33 41.8 +0.4**
KOVH S **Sn 01 34 54.2 -2.2**
SECR 6.62 35 ⇓P **Pn 01 33 44.9 +3.4**
MORH Mrgy, Hungar 6.64 348 ⇑P **Pn 01 33 42.5 +0.8**
MORH Mrgy, Hungar 6.64 348 P **Pn 01 33 41.8 +0.1**
ICOR Ion Corvin 6.88 48 ⇑P **Pn 01 33 49.2 +4.3**
ISR Istrita 6.90 37 ⇓P **Pn 01 33 48.9 +3.4**
ISR Istrita 6.90 37 P **Pn 01 33 48.8 +3.4**
MLR Muntele Rosu 6.93 32 ⇑P **Pn 01 33 49.2 +3.4**
MLR Muntele Rosu 6.93 32 Pn **Pn 01 33 48.6 +2.7**
comp=Z,8.0nm,0.3s,baz=200,slow=8.1,SNR=38
MLR Sn **Sn 01 35 06.1 +1.8**
baz=9.5,slow=24
MLR Lg Lg 01 35 45.1
comp=Z,1.5nm,0.3s,baz=229,slow=9.0,SNR=1.6
comp=Z,28nm,0.7s
MLR Muntele Rosu 6.93 32 Pn **Pn 01 33 47.2 +1.3**
MLR Muntele Rosu 6.93 32 P **Pn 01 33 47.2 +1.3**
AMRR Amara 6.93 43 ⇑P **Pn 01 33 48.8 +3.1**
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn 01 33 47.0 +0.2**
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn 01 33 47.1 +0.2**
BOJS *e*Sn **Sn 01 35 02.6 -3.4**
BOJS IAML 01 36 16.8
comp=Z,1μm,2.4s
DOPR Dopca 7.12 28 ⇓P **Pn 01 33 52.4 +4.1**
MGAB Montegabbione 7.18 299 ⇑P **Pn 01 33 50.6 +1.3**
CRES Cresnjev 7.19 329 ⇑*i*Pn **Pn 01 33 49.1 -0.2**
CRES Cresnjev 7.19 329 ⇑*i*Pn **Pn 01 33 49.2 -0.1**
DRGR 7.20 11 ⇑P **Pn 01 33 52.1 +2.6**
DRGR 7.20 11 P **Pn 01 33 53.1 +3.6**
DRGR pmax pmax
comp=Z,12nm,0.8s
CJR Cluj-Napoca 7.29 16 ⇓P **Pn 01 33 54.4 +3.8**
CJR Cluj-Napoca 7.29 16 P **Pn 01 33 54.4 +3.8**
GRER 7.30 37 ⇓P **Pn 01 33 54.6 +3.8**
BEHE Becsehely 7.30 338 P **Pn 01 33 51.1 +0.2**
HARR Harsova 7.30 45 ⇑P **Pn 01 33 53.7 +2.9**
HARR Harsova 7.30 45 P **Pn 01 33 53.7 +2.9**
COVR Voineasa-Covas 7.33 32 ⇑P **Pn 01 33 54.5 +3.3**
CBBR Cluj-Babes-Bol 7.33 16 ⇑P **Pn 01 33 55.0 +3.8**
OZUR 7.37 29 ⇓P **Pn 01 33 55.0 +3.2**
BORR Bors 7.39 6 ⇑P **Pn 01 33 54.3 +2.3**
TIRR Tirgusor 7.43 48 ⇓P **Pn 01 33 55.5 +2.9**
TIRR Tirgusor 7.43 48 ⇓P **Pn 01 33 55.5 +2.9**
TIRR Tirgusor 7.43 48 Pn **Pn 01 33 53.5 +0.9**
TIRR Tirgusor 7.43 48 P **Pn 01 33 53.5 +0.9**
TIH Tihany 7.44 345 P **Pn 01 33 53.8 +1.2**
PLOR Plostina 7.52 34 ⇓P **Pn 01 33 57.4 +3.5**
PLOR Plostina 7.52 34 P **Pn 01 33 57.3 +3.5**
BORA Eskisehir 7.53 86 Pn **Pn 01 33 54.5 +0.5**
CEY Cerknica 7.55 325 ⇑*i*Pn **Pn 01 33 54.3 0.0**
BSZH Besenyszg 7.56 358 ⇑P **Pn 01 33 56.7 +2.3**
BSZH Besenyszg 7.56 358 P **Pn 01 33 56.4 +2.1**
VRI Vrincioaia 7.56 34 ⇓P **Pn 01 33 57.6 +3.2**
VRI Vrincioaia 7.56 34 P **Pn 01 33 57.6 +3.2**
SKDS Skadanscina 7.60 322 ⇑*i*Pn **Pn 01 33 54.1 -0.8**
ODBI Odobesti 7.63 36 ⇑P **Pn 01 33 59.0 +3.8**
TPGR Topolog 7.68 46 ⇑P **Pn 01 33 58.6 +2.6**
LTVH Ltavrtes, Hu 7.69 6 ⇓P **Pn 01 33 59.7 +3.5**
LTVH Ltavrtes, Hu 7.69 6 P **Pn 01 33 59.6 +3.5**
CFR Carcaliu 7.74 43 ⇑P **Pn 01 33 59.6 +2.8**
CFR Carcaliu 7.74 43 P **Pn 01 33 59.5 +2.8**
LJU Ljubljana 7.75 326 ⇑*i*Pn **Pn 01 33 56.8 -0.1**
PANC Panciu 7.75 36 ⇓P **Pn 01 34 00.8 +3.8**
MPLH Magyarpolny 7.77 344 P **Pn 01 33 57.6 +0.4**
IZVR Izvoarele 7.80 40 ⇓P **Pn 01 34 01.2 +3.5**
ARCR ARCALIA 7.81 19 ⇑P **Pn 01 34 00.7 +2.9**
CSKK Cskako 7.82 348 P **Pn 01 33 59.2 +1.3**
BUD Budapest 7.83 352 P **Pn 01 33 59.1 +1.0**
BUD pmax pmax
comp=Z,68nm,0.7s
BUD Budapest 7.83 352 P **Pn 01 33 59.2 +1.2**
AKAS Kas 7.87 114 **Pn 01 34 01.7 +3.0**
ISP Isparta 7.92 101 **Pn 01 34 01.1 +1.7**
ISP Isparta 7.92 101 *i* P **Pn 01 34 04.1 +4.6**
CASP Castiglione de 8.00 296 Pn **Pn 01 34 00.0 -0.3**
GHRR 8.01 36 ⇓P **Pn 01 34 04.5 +3.9**
EGYH Egyhazaskeszo 8.05 344 P **Pn 01 34 02.1 +1.1**
TESR Tescani 8.05 31 ⇓P **Pn 01 34 04.1 +3.0**
SOKA Soboth 8.06 331 *i* Pn **Pn 01 34 00.8 -0.5**
comp=Z,24nm,0.3s,SNR=23
VARL Varlezi 8.10 38 ⇑P **Pn 01 34 05.7 +4.0**
TLCR 8.11 45 ⇑P **Pn 01 34 04.6 +2.8**
TLCR 8.11 45 P **Pn 01 34 04.6 +2.8**
OBKA Obir 8.11 328 ⇑*i*Pn **Pn 01 34 01.1 -0.9**
OBKA Obir 8.11 328 *e*Pn **Pn 01 34 02.1 +0.1**
comp=Z,19nm,0.3s,SNR=11
VLDR Vladesti 8.17 39 ⇑P **Pn 01 34 06.0 +3.3**
BMR Baia Mare 8.19 13 ⇑P **Pn 01 34 05.8 +2.9**
BMR Baia Mare 8.19 13 P **Pn 01 34 05.8 +2.9**
PSZ Piszkesteto 8.19 356 ⇑P **Pn 01 34 05.0 +1.9**
PSZ Piszkesteto 8.19 356 P **Pn 01 34 04.6 +1.5**
PSZ Piszkesteto 8.19 356 P **Pn 01 34 04.6 +1.5**
PSZ S **Sn 01 35 33.4 -1.8**
SRO Srobarova 8.25 349 *e*P **Pn 01 34 06.2 +2.4**
SRO *e* 01 35 36.9
KDZE Karadeniz Ereo 8.35 76 ⇓P **Pn 01 34 08.5 +3.4**
ARSA Arzberg 8.39 335 *e*Pn **Pn 01 34 05.3 -0.5**
comp=Z,9.9nm,0.3s,SNR=12
ARSA Arzberg 8.39 335 ⇑P **Pn 01 34 05.2 -0.5**
SOP Sopron 8.48 341 P **Pn 01 34 09.2 +2.2**
SOP pmax pmax
comp=Z,22nm,1.6s
SOP Sopron 8.48 341 P **Pn 01 34 08.0 +1.1**
TRPA Tarpa 8.49 8 ⇑P **Pn 01 34 10.1 +3.0**
TRPA Tarpa 8.49 8 P **Pn 01 34 09.9 +2.8**
BUR01 Bucovina Ar. S 8.53 21 ⇑P **Pn 01 34 11.0 +3.3**
BURAR Bucovina Array 8.53 21 Pn **Pn 01 34 09.6 +1.9**
PTCC Patocco-Chiusa 8.55 324 ⇑P **Pn 01 34 07.4 -0.5**
ABAH Abaujker 8.56 3 P **Pn 01 34 10.1 +2.1**
RONA Rosalia, Austr 8.56 340 *e*Pn **Pn 01 34 08.1 -0.1**
comp=Z,2.6nm,0.2s,SNR=10.0
MYKA Terra Mystica 8.59 326 *i* Pn **Pn 01 34 08.0 -0.5**
comp=Z,7.4nm,0.3s,SNR=7.0
VASR Vaslui 8.63 35 ⇑P **Pn 01 34 12.3 +3.3**

LEOM Leova 8.71 37 ⇑P **Pn 01 34 13.0 +2.9**
LEOM Leova 8.71 37 P **Pn 01 34 12.9 +2.9**
KECS Kecovo 8.74 359 *e*P **Pn 01 34 13.3 +2.8**
ZST Bratislava 8.83 344 *e*P **Pn 01 34 14.3 +2.5**
ZST *e* 01 35 46.5
ZST MLR MLR
comp=Z,4μm,3.8s
VLC Villacollemand 8.85 303 ⇑P **Pn 01 34 12.6 +0.5**
VYHS Vyhne 8.85 352 *e*P **Pn 01 34 13.5 +1.5**
VYHS *e* 01 35 49.8
CONA Conrad Observa 8.89 339 *e*Pn **Pn 01 34 12.2 -0.5**
comp=Z,2.1nm,0.3s
UZH Uzhgorod 8.96 7 ⇑*i*P **Pn 01 34 16.0 +2.5**
UZH *e*S **Sn 01 35 56.3 +2.3**
UZH MLR MLR
comp=N,270nm,13.0s
UZH MLR MLR
comp=E,300nm,13.0s
UZH MLR MLR
comp=Z,160nm,13.0s
MODS Modra-Piesok 8.97 345 *e*P **Pn 01 34 14.8 +1.1**
SLUM Salum 9.02 155 P **Pn 01 34 13.0 -1.4**
baz=158
SLUM S Sn 01 35 40.9 -15
baz=158
KBA Koelnbreinsper 9.07 326 P **Pn 01 34 15.2 0.0**
KBA Koelnbreinsper 9.07 326 *e*Pn **Pn 01 34 14.6 -0.6**
comp=Z,8.5nm,0.3s,SNR=13
KBA Koelnbreinsper 9.07 326 ⇓P **Pn 01 34 15.1 -0.1**
CRVS Cervenica-Dubn 9.17 3 *e*P **Pn 01 34 19.6 +3.1**
ABTA Abfaltersbach 9.19 322 *i* Pn **Pn 01 34 16.4 -0.4**
comp=Z,23nm,0.5s,SNR=11
PGF Pioggiola 9.25 291 *e*Pn **Pn 01 34 17.0 -0.6**
PGF *e*Sn Sn 01 35 51.6 -10
comp=Z,13nm,0.8s
KOLS Kolonicke sedl 9.26 7 *e*P **Pn 01 34 21.8 +4.1**
MILM Milestii Mici 9.30 37 ⇑P **Pn 01 34 21.6 +3.5**
MILM Milestii Mici 9.30 37 *e*P **Pn 01 34 20.0 +1.8**
comp=Z,80nm,2.1s
MILM Milestii Mici 9.30 37 *i* PP Pn 01 34 28.0 +10
comp=Z,160nm,1.7s
MILM *e*S **Sn 01 36 07.0 +4.7**
MILM *e*L L 01 37 37.0
MILM LqM 01 38 18.0
comp=Z,2μm,13.6s
MILM LRM MLR 01 38 52.0
comp=Z,2μm,12.0s
MILM Milestii Mici 9.30 37 *e*P **Pn 01 34 20.0 +1.8**
MILM *e*S **Sn 01 36 07.0 +4.7**
MILM pmax pmax
comp=Z,80nm,2.1s
MILM MLR MLR
comp=Z,2μm,12.0s
MILM MLR MLR
comp=E,2μm,11.0s
MOA Molln 9.33 332 *i* Pn **Pn 01 34 18.8 +0.1**
comp=E,12nm,0.2s,SNR=10
KIS Kishinev 9.36 37 *e*P **Pn 01 34 22.0 +3.0**
comp=E,14nm,0.4s
KIS Kishinev 9.36 37 *e*PP Pn 01 34 29.0 +10
KIS *e*S **Sn 01 36 12.0 +8.2**
KIS *e*L L 01 37 42.0
comp=E,750nm,11.5s
KIS LRM MLR 01 38 52.0
comp=E,800nm,11.0s
KIS Kishinev 9.36 37 *e*P **Pn 01 34 22.0 +3.0**
KIS *e*S **Sn 01 36 12.0 +8.2**
KIS pmax pmax
comp=Z,14nm,0.4s
KIS MLR MLR
comp=Z,800nm,11.0s
KIS MLR MLR
comp=E,700nm,12.0s
JAVC Velka Javorina 9.37 348 *e*PN **Pn 01 34 20.7 +1.5**
BIOA Bad Ischl, Aus 9.44 330 *e*Pn **Pn 01 34 20.0 -0.1**
comp=E,16nm,0.3s,SNR=39
MSSA Maissana 9.48 302 Pn **Pn 01 34 19.8 -0.9**
SALO Salr 9.50 311 Pn **Pn 01 34 20.2 -0.9**
SALO Salr 9.50 311 ⇑P **Pn 01 34 20.1 -0.9**
STHS Stebnicka Huta 9.68 2 *e*P **Pn 01 34 26.1 +2.7**
KRUC Moravsky 9.81 343 *e*PN **Pn 01 34 24.9 -0.2**
KEST Kesra 9.83 250 Pn **Pn 01 34 27.8 +2.2**
comp=E,0.7nm,0.3s,baz=40,slow=9.7,SNR=16
KEST Sn **Sn 01 36 09.8 -5.7**
comp=E,0.4nm,0.3s,baz=102,slow=18,SNR=1.0
comp=E,9.1nm,0.6s
KEST Kesra 9.83 250 Pn **Pn 01 34 25.8 +0.2**
MAUC Maruska 9.83 349 *e*PN **Pn 01 34 26.5 +1.0**
MAUC AMS AMS 01 39 20.0
comp=E,3μm,13.9s
MATC Matruh 9.93 146 P **Pn 01 34 25.1 -1.8**
baz=148
WTTA Wattenberg 9.98 322 P **Pn 01 34 28.3 +0.6**
WTTA Wattenberg 9.98 322 *e*Pn **Pn 01 34 27.8 +0.2**
comp=E,15nm,0.3s,SNR=28
BR131 Keskin Array S 9.98 86 **Pn 01 34 29.6 +1.9**
BR131 Keskin Array S 9.98 86 *i* P **Pn 01 34 32.0 +4.2**
BRTR Keskin Array B 9.98 86 Pn **Pn 01 34 31.4 +3.7**
comp=E,1.3nm,0.3s,baz=268,slow=11,SNR=62
BRTR Sn **Sn 01 36 19.8 +0.4**
comp=E,0.1nm,0.3s,baz=253,slow=14,SNR=1.5
BRTR Lg Lg 01 37 18.9
baz=222,slow=4.8
comp=E,3.2nm,0.4s
BRTR Keskin Array B 9.98 86 Pn **Pn 01 34 30.0 +2.2**
VRAC Vranov 10.00 344 ⇓P **Pn 01 34 28.5 +0.8**
VRAC Vranov 10.00 344 Pn **Pn 01 34 27.8 0.0**
comp=E,0.4nm,0.3s,baz=177,slow=13,SNR=7.0
VRAC Sn **Sn 01 36 20.3 +0.8**
comp=E,0.2nm,0.3s,baz=144,slow=11,SNR=1.5
VRAC Lg Lg 01 37 18.1
comp=E,0.2nm,0.3s,baz=79,slow=11,SNR=1.7
VRAC LR LR 01 39 15.0
comp=E,1μm,19.4s,baz=176,slow=43
comp=E,3.0nm,0.7s
VRAC Vranov 10.00 344 *e*PN **Pn 01 34 27.8 0.0**
ILGA Ilgaz 10.03 78 Pn **Pn 01 34 29.4 +1.0**
WATA Walderalm 10.06 322 *e*Pn **Pn 01 34 29.1 +0.4**
comp=E,15nm,0.3s,SNR=36
SQTA Sankt Quirin 10.15 320 *e*Pn **Pn 01 34 30.6 +0.6**
comp=E,17nm,0.2s,SNR=24
CKRC Cesky Krumlov 10.15 335 *e*PN **Pn 01 34 29.5 -0.4**
TREC Trest 10.24 341 *e*P **Pn 01 34 31.3 +0.2**
TREC MLR MLR
comp=Z,2μm,12.9s
TREC Trest 10.24 341 *e*PN **Pn 01 34 31.3 +0.2**
TREC AMS AMS 01 38 50.0
comp=Z,2μm,12.9s
FUORN Ofenpass-Fuorn 10.25 316 Pn **Pn 01 34 31.5 0.0**
OKC Ostrava-Krasne 10.25 351 *e*P **Pn 01 34 32.3 +1.1**
OKC MLR MLR
comp=Z,1μm,12.9s
OKC Ostrava-Krasne 10.25 351 *e*PN **Pn 01 34 32.3 +1.1**
OKC AMS AMS 01 38 50.0
comp=Z,1μm,12.9s
FETA Feichten 10.26 318 *e*Pn **Pn 01 34 32.0 +0.5**
comp=Z,3.1nm,0.3s
MORC Moravsky Berou 10.28 349 ⇑P **Pn 01 34 33.1 +1.5**
MORC Moravsky Berou 10.28 349 Pn **Pn 01 34 32.0 +0.4**
MORC Moravsky Berou 10.28 349 P **Pn 01 34 32.0 +0.4**
MORC Moravsky Berou 10.28 349 *e*PN **Pn 01 34 32.4 +0.8**
MOTA Moosalm 10.29 321 *e*Pn **Pn 01 34 31.9 0.0**
comp=Z,27nm,0.6s,SNR=24
LVV L'vov 10.35 12 *e*P **Pn 01 34 37.0 +4.4**
LVV *e*S **Sn 01 36 35.4 +7.3**
LVV pmax pmax
comp=Z,80nm,1.8s
LVV MLR MLR
comp=N,600nm,11.0s
LVV MLR MLR
comp=E,500nm,11.0s
LVV MLR MLR
comp=Z,700nm,11.0s
GEC2 GERESS Array S 10.38 334 Pn **Pn 01 34 32.4 -0.7**
GERES GERESS Array B 10.38 334 Pn **Pn 01 34 32.5 -0.5**
comp=Z,1.4nm,0.3s,baz=146,slow=13,SNR=48
GERES Sn **Sn 01 36 28.7 -0.3**
comp=Z,2.2nm,0.3s,baz=154,slow=24,SNR=5.9
GERES LR LR 01 39 27.9
comp=Z,1μm,18.6s,baz=140,slow=43
comp=Z,2.9nm,0.4s
OJC Ojcow 10.49 357 Pn **Pn 01 34 34.6 0.0**
OJC Ojcow 10.49 357 P **Pn 01 34 34.6 0.0**
DAVOX Davos/Dischmat 10.55 315 Pn **Pn 01 34 35.7 +0.1**
comp=Z,3.3nm,0.3s,baz=133,slow=13,SNR=34

DAVOX Sn **Sn 01 36 32.3 -1.1**
comp=Z,2.6nm,0.3s,baz=305,slow=23,SNR=3.6
DAVOX Lg Lg 01 37 39.5
baz=326,slow=20
DAVOX LR LR 01 39 19.4
comp=Z,633nm,19.1s,baz=120,slow=41
comp=Z,13nm,0.5s
RETA Reutte 10.56 320 *e*Pn **Pn 01 34 35.4 -0.2**
comp=Z,1.8nm,0.2s
KHC Kasperske Hory 10.66 334 Pn **Pn 01 34 37.1 +0.2**
KHC Kasperske Hory 10.66 334 P **Pn 01 34 37.1 +0.2**
KHC Kasperske Hory 10.66 334 *e*PN **Pn 01 34 35.9 -1.0**
KHC *e*SN **Sn 01 36 32.3 -3.6**
KHC AMS AMS 01 39 10.0
comp=Z,2μm,11.0s
KHC Kasperske Hory 10.66 334 ⇑P **Pn 01 34 37.0 0.0**
SAOF Saorge 10.67 298 P **Pn 01 34 40.9 +3.9**
KRLC Kraliky 10.69 346 *e*P **Pn 01 34 37.6 +0.3**
KRLC MLR MLR
comp=Z,1μm,10.4s
KRLC Kraliky 10.69 346 *e*PN **Pn 01 34 37.6 +0.3**
KRLC AMS AMS 01 39 30.0
comp=Z,1μm,10.4s
SBF Sospel 10.71 297 *e*P **Pn 01 34 41.8 +4.2**
SBF *e*Sn Sn 01 36 27.1 -10
comp=Z,18nm,0.4s
SBF Sospel 10.71 297 *e*P **Pn 01 34 39.5 +1.9**
SBF pmax pmax
comp=Z,8.0nm,0.4s
MONC Moncucco Torin 10.83 304 ⇑P **Pn 01 34 40.4 +1.2**
DAVA Damuels 10.87 317 *e*Pn **Pn 01 34 40.8 +0.9**
comp=Z,7.3nm,0.3s
DAVA Damuels 10.87 317 ⇑P **Pn 01 34 41.5 +1.6**
GOPC GO Pecny, Ondr 10.99 340 AMS AMS 01 39 10.0
comp=Z,2μm,12.1s
DPC Dobruska-Polom 11.04 345 *e*P **Pn 01 34 42.0 -0.1**
DPC MLR MLR
comp=Z,2μm,11.5s
DPC Dobruska-Polom 11.04 345 *e*PN **Pn 01 34 42.0 -0.1**
DPC AMS AMS 01 39 20.0
comp=Z,2μm,11.5s
PRU Pruhonice 11.13 339 *e*P **Pn 01 34 42.5 -0.7**
PRU MLR MLR
comp=Z,2μm,12.9s
PRU Pruhonice 11.13 339 *e*PN **Pn 01 34 42.5 -0.7**
PRU AMS AMS 01 39 20.0
comp=Z,2μm,12.9s
PZZ Stroppo 11.14 300 P Pn 01 34 48.4 +4.9
SWA2 11.19 158 P **Pn 01 34 42.0 -2.2**
baz=161
LMR La Mourre 11.21 293 *e*P **Pn 01 34 48.5 +4.1**
LMR *e*Sn Sn 01 36 38.7 -11
comp=Z,1.6nm,0.3s
LMR La Mourre 11.21 293 *e*P **Pn 01 34 45.9 +1.5**
LMR pmax pmax
comp=Z,4.0nm,0.4s
SIM Simferopol' 11.22 58 *e*P Pn 01 34 49.9 +5.4
SIM pmax pmax
comp=Z,19nm,1.0s
MMK Mattmark 11.25 308 P **Pn 01 34 44.7 -0.5**
UPC Upice 11.25 345 AMS AMS 01 39 40.0
comp=Z,2μm,16.8s
OSTC Ostas 11.26 345 *e*PN **Pn 01 34 44.5 -0.6**
OSTC AMS AMS 01 39 30.0
comp=Z,2μm,11.6s
CHVC Chvalec 11.32 345 *e*PN **Pn 01 34 46.1 +0.2**
CHVC AMS AMS 01 39 40.0
comp=Z,2μm,12.5s
MBDF Montbardon 11.45 300 *e*Pn **Pn 01 34 47.0 -0.8**
MBDF *e*Sn Sn 01 36 44.5 -11
comp=Z,39nm,0.8s
MBDF Montbardon 11.45 300 *e*P **Pn 01 34 48.2 +0.4**
MBDF pmax pmax
comp=Z,4.0nm,0.4s
LSD Lago del Serru 11.50 304 P **Pn 01 34 47.4 -1.1**
RRL Rocca Remolon 11.51 301 P **Pn 01 34 49.9 +1.3**
PVCC Panska Ves 11.61 340 AMS AMS 01 39 40.0
comp=Z,2μm,11.6s
BNI Bardonecchia 11.63 302 ⇑P **Pn 01 34 53.3 +3.0**
LPG La Plagne 11.76 304 *e*Pn **Pn 01 34 51.6 -0.5**
LPG *e*Sn Sn 01 36 50.5 -13
comp=Z,78nm,0.8s
LPG La Plagne 11.76 304 *e*P **Pn 01 34 50.8 -1.3**
LPG pmax pmax
comp=Z,8.0nm,0.4s
LPL La Plagne 11.78 304 *e*Pn **Pn 01 34 51.4 -0.9**
LPL La Plagne 11.78 304 *e*P Pn 01 34 57.6 +5.3
LPL *e*Sn Sn 01 36 51.9 -12
comp=Z,53nm,0.6s
LPL La Plagne 11.78 304 *e*P **Pn 01 34 51.7 -0.6**
LPL pmax pmax
comp=Z,8.0nm,0.3s
SENIN Lac Senin/Sane 11.81 308 Pn **Pn 01 34 51.5 -1.3**
RSL Roselend 11.92 304 P **Pn 01 34 55.2 +1.0**
NKC Novy Kostel 11.99 334 *e*P **Pn 01 34 54.2 -0.8**
NKC MLR MLR
comp=Z,2μm,22.8s
NKC Novy Kostel 11.99 334 *e*PN **Pn 01 34 54.2 -0.8**
NKC AMS AMS 01 40 00.0
comp=Z,2μm,22.8s
GRFO Grafenberg 12.00 329 **Pn 01 34 53.9 -1.2**
GRFO Grafenberg 12.00 329 P **Pn 01 34 53.9 -1.2**
SMRF Simiane la Rot 12.03 295 *e*Pn **Pn 01 34 55.2 -0.4**
SMRF *e*Sn Sn 01 36 58.5 -11
ORIF Oris-en-Rattie 12.11 300 *e*P **Pn 01 34 59.3 +2.5**
ORIF *e*Sn Sn 01 36 59.4 -12
comp=Z,36nm,0.8s
ORIF Oris-en-Rattie 12.11 300 *e*P **Pn 01 34 57.9 +1.1**
ORIF pmax pmax
comp=Z,49nm,1.6s
TOKA Tokat 12.13 82 Pn **Pn 01 34 59.5 +2.5**
BFO Black Forest 12.34 318 Pn **Pn 01 34 58.3 -1.6**
BFO Black Forest 12.34 318 P **Pn 01 34 58.3 -1.6**
BFO Black Forest 12.34 318 ⇑P **Pn 01 34 58.8 -1.1**
AKASG Malin Array Be 12.49 26 Pn **Pn 01 35 03.5 +1.6**
comp=Z,1.2nm,0.3s,baz=210,slow=12,SNR=13
AKASG Lg Lg 01 38 56.4
baz=50,slow=2.5
AKASG LR LR 01 41 00.6
comp=Z,751nm,18.6s,baz=216,slow=43
comp=Z,2.7nm,0.8s
AKASG Malin Array Be 12.49 26 Pn **Pn 01 35 03.3 +1.4**
AKBB Malin Array Si 12.49 26 Pn **Pn 01 35 02.4 +0.6**
AKBB Malin Array Si 12.49 26 *ce*P **Pn 01 35 04.5 +2.6**
CABF La Chapelle 12.66 308 *e*Pn **Pn 01 35 02.4 -1.9**
CABF *e*Sn Sn 01 37 14.2 -11
comp=Z,76nm,0.9s
CABF La Chapelle 12.66 308 *e*P **Pn 01 35 03.6 -0.7**
CABF pmax pmax
comp=Z,7.0nm,0.4s
CLL Collm 12.75 338 *e*P **Pn 01 35 06.0 +0.7**
CLL Collm 12.75 338 *e*P **Pn 01 35 06.0 +0.7**
CLL *i* sPP 01 35 17.7
comp=Z,23nm,1.2s
CLL *i* sPPP 01 35 26.0
CLL *i* x x 01 35 30.8
CLL *i* x x 01 35 46.7
CLL *e*x x 01 37 06.0
CLL LmV 01 40 00.0
comp=N,700nm,19.3s
CLL LmV 01 40 00.0
comp=E,500nm,20.9s
CLL Lmax 01 41 00.0
HINF Hinteralfeld 12.83 313 *e*Pn **Pn 01 35 04.8 -1.7**
HINF *e*Sn Sn 01 37 18.3 -11
comp=E,31nm,0.6s
ECH Echery 12.89 315 **Pn 01 35 06.3 -1.0**
ECH Echery 12.89 315 P **Pn 01 35 07.3 -0.1**
ECH Echery 12.89 315 ⇑P **Pn 01 35 06.4 -1.0**
VIVF Saint-Julien-l 12.90 299 *e*Pn **Pn 01 35 06.6 -0.9**
VIVF Saint-Julien-l 12.90 299 *e*P **Pn 01 35 10.7 +3.2**
VIVF Saint-Julien-l 12.90 299 *e*P **Pn 01 35 08.6 +1.1**
VIVF pmax pmax
comp=Z,14nm,1.1s
HMYD Mayadein 12.94 137 P **Pn 01 35 05.3 -2.8**
baz=139
CDF Champ du Feu 12.95 316 *e*Pn **Pn 01 35 07.6 -0.6**
CDF *e*Sn Sn 01 37 21.4 -10
comp=Z,3.6nm,0.3s
HAU Haudompre 13.22 313 *e*Pn **Pn 01 35 10.7 -1.1**
HAU *e*Sn Sn 01 37 27.3 -11
comp=Z,47nm,0.6s
RYAN Fayoum 13.25 140 P **Pn 01 35 08.6 -3.8**
baz=143
LASF Ste Croix 13.26 295 *e*Pn **Pn 01 35 12.5 +0.2**

ANN Anapa 13.39 62 *eP* Pn 01 35 08.7 -5.4
ANN *eS* **Sn 01 37 37.4 -5.0**
ANN pmax pmax
comp=Z,43nm,1.3s
ANN MLR MLR
comp=Z,247nm,9.0s
ANN MLR MLR
comp=N,165nm,10.0s
ANN MLR MLR
comp=E,58nm,6.0s
HNTI Hanita 13.42 115 Pn **Pn 01 35 15.5 +0.8**
HSAF As Saff 13.48 135 P **Pn 01 35 13.0 -2.5**
baz=137
GLL Jalalah 13.60 135 P **Pn 01 35 12.8 -4.3**
baz=137
MMAI Mount Meron Ar 13.62 115 Pn **Pn 01 35 16.9 -0.5**
comp=E,2.6nm,0.3s,baz=295,slow=13,SNR=14
MMAI Sn **Sn 01 37 40.7 -7.6**
comp=E,0.7nm,0.3s,baz=288,slow=11,SNR=1.4
MMAI LR LR 01 41 42.9
comp=E,455nm,19.2s,baz=170,slow=42
comp=E,1.6nm,0.3s
GEM Giv'at Ha'Em 13.70 114 Pn **Pn 01 35 18.2 -0.2**
NATI Neve Ativ 13.72 113 Pn **Pn 01 35 19.3 +0.6**
PAGF Fort de Pagny 13.87 314 *ePn* **Pn 01 35 21.0 +0.3**
baz=133
PAGF *eSn* Sn 01 37 43.7 -10
comp=E,8.2nm,0.4s
MMLI Mount Malkishu 13.96 117 Pn **Pn 01 35 21.4 -0.7**
SALP Salfit 14.02 119 Pn **Pn 01 35 21.1 -1.8**
SFTF Sexfontaines 14.07 312 *ePn* **Pn 01 35 21.8 -1.6**
baz=130
SFTF *eSn* Sn 01 37 48.4 -11
comp=E,9.0nm,0.4s
HFRF Wahat Farafira 14.07 151 P **Pn 01 35 20.0 -3.6**
baz=153
SMF Signal de Mont 14.07 305 *ePn* **Pn 01 35 22.2 -1.3**
SMF *eSn* Sn 01 37 48.4 -11
comp=E,26nm,0.6s
NBNS Bani Suef 14.14 138 P **Pn 01 35 21.7 -2.8**
baz=140
HMDT Nahal Hemdat 14.14 117 Pn **Pn 01 35 23.5 -1.0**
MEZF Maizieres J'vi 14.21 313 *ePn* **Pn 01 35 24.1 -1.3**
baz=135
MEZF *eSn* Sn 01 37 52.0 -11
comp=E,10nm,0.6s
SAVF Savonnieres en 14.23 314 *ePn* **Pn 01 35 25.4 -0.3**
baz=135
SAVF *eSn* Sn 01 37 52.2 -11
comp=E,10nm,0.6s
MTLF Montolieu 14.29 291 *ePn* **Pn 01 35 27.5 +1.1**
WLF Walferdange 14.30 319 Pn **Pn 01 35 25.6 -0.9**
WLF Walferdange 14.30 319 P **Pn 01 35 25.6 -0.9**
WLF Walferdange 14.30 319 *dP* **P 01 35 31.0 -2.7**
LOR Lormes 14.32 307 *ePn* **Pn 01 35 25.2 -1.7**
baz=115
LOR *eSn* Sn 01 37 52.8 -12
comp=E,16nm,0.3s
YTIR Yattir 14.41 121 Pn **Pn 01 35 26.7 -1.5**
AVF Avril sur Loir 14.44 305 *ePn* **Pn 01 35 25.9 -2.6**
AVF *eSn* Sn 01 37 56.3 -12
comp=E,14nm,0.7s
SSF Saint Saulge 14.45 306 *ePn* **Pn 01 35 26.9 -1.8**
SSF *eSn* Sn 01 37 56.0 -12
comp=E,17nm,0.6s
BGF Bois d'Agland 14.68 303 *ePn* **Pn 01 35 31.0 -0.7**
BGF *eSn* Sn 01 38 01.5 -12
comp=E,11nm,0.3s
CAF Calviac 14.70 297 *ePn* **Pn 01 35 31.3 -0.8**
CAF Calviac 14.70 297 *eP* **Pn 01 35 34.9 +2.8**
CAF pmax pmax
comp=Z,26nm,1.6s
TAMRE El Minia 14.72 142 P **Pn 01 35 29.1 -3.4**
baz=144
SOC Sochi 14.73 69 *eP* **P 01 35 38.5 0.0**
SOC pmax pmax
comp=Z,13nm,0.7s
GHAJ Ghor Haditha 14.74 120 Pn **Pn 01 35 34.2 +1.5**
BTNL Ternell 14.90 321 *dx* **P 01 35 42.5 +2.2**
MEM Membach 14.97 321 *dx* **P 01 35 42.6 +1.5**
MEM *dx* x 01 35 50.5
KRMI Paran Flat 14.98 126 Pn **Pn 01 35 32.6 -3.3**
TCF Toulx Ste Croi 15.00 302 *ePn* **Pn 01 35 35.7 -0.4**
TCF *eSn* Sn 01 38 10.5 -11
comp=Z,7.3nm,0.6s
PRNI Paran 15.00 124 Pn **Pn 01 35 34.2 -2.0**
HYF Humbligny 15.08 306 *ePn* **Pn 01 35 36.1 -1.0**
HYF Humbligny 15.08 306 *eP* **P 01 35 41.4 -0.9**
HYF *eSn* Sn 01 38 11.9 -12
ASF Jabal al Asfar 15.14 115 Pn **Pn 01 35 38.9 +0.8**
comp=Z,0.5nm,0.3s,baz=328,slow=15,SNR=6.0
ASF Sn **Sn 01 38 26.7 +1.3**
comp=Z,0.1nm,0.3s,baz=98,slow=9.5,SNR=1.3
comp=Z,1.0nm,0.3s
BSTI Sart Tilman 15.17 321 *dP* **Pn 01 35 38.2 -0.1**
BSTI *dx* **P 01 35 45.8 +2.5**
RJF Les Rejaudoux 15.17 298 *ePn* **Pn 01 35 36.8 -1.6**
BCLA Clavier 15.20 320 *dx* x 01 35 54.2
GRB Gharib 15.20 135 P **Pn 01 35 36.3 -2.6**
baz=137
HRFI Mount Harif 15.23 125 Pn **Pn 01 35 37.8 -1.5**
HRFI Sn **Sn 01 38 18.7 -8.9**
GIVF Givet 15.25 318 *ePn* **Pn 01 35 40.2 +0.9**
MBRI Mt Berech 15.32 126 Pn **Pn 01 35 37.4 -3.1**
DOU Dourbes 15.36 318 *dP* **Pn 01 35 42.5 +1.6**
DOU *dx* **P 01 35 46.9 +1.4**
EIL Elat 15.43 126 Pn **Pn 01 35 39.6 -2.2**
comp=Z,1.3nm,0.3s,baz=322,slow=3.0,SNR=10
EIL Sn Sn 01 38 20.4 -12
comp=Z,1.0nm,0.3s,baz=47,slow=13,SNR=1.6
BAIF Baives 15.54 317 *ePn* **Pn 01 35 44.1 +0.9**
BAIF Baives 15.54 317 *eP* **P 01 35 49.8 +2.4**
BAIF *eSn* Sn 01 38 20.7 -14
comp=Z,4.2nm,0.7s
MNK Minsk 15.54 16 *i* P **Pn 01 35 42.4 -0.8**
MNK *i* S **Sn 01 38 37.2 +2.4**
MNK pmax pmax
comp=Z,66nm,0.8s
MNK pmax pmax
comp=E,5.0nm,1.2s
MNK pmax pmax
comp=N,99nm,1.5s
MNK MLR MLR
comp=E,57nm,15.0s
MNK MLR MLR
comp=N,460nm,13.0s
MNK MLR MLR
comp=Z,528nm,12.0s
MNK Minsk 15.54 16 *i* P **Pn 01 35 42.4 -0.8**
comp=E,5.0nm,1.2s
MNK *i* P **Pn 01 35 42.4 -0.8**
comp=N,99nm,1.5s
MNK *i* P **Pn 01 35 42.4 -0.8**
comp=Z,66nm,0.8s,baz=202
MNK *i* PP **PnPn 01 35 49.7 -1.8**
MNK *i* S **Sn 01 38 37.2 +2.4**
MNK *i* SS **S 01 38 50.3 +0.1**
MNK *i* LQ LQ 01 40 22.2
MNK *i* LR LR 01 41 31.4
MNK *i* LRM MLR 01 42 34.4
comp=E,57nm,14.8s
MNK *i* LRM MLR 01 42 43.3
comp=N,460nm,13.3s
MNK *i* LRM MLR 01 42 46.7
comp=Z,528nm,11.9s
EPF Esparros 15.61 289 *ePn* **Pn 01 35 44.6 +0.4**
EPF Esparros 15.61 289 *eP* **P 01 35 47.9 -0.4**
EPF pmax pmax
comp=Z,9.0nm,1.2s
LFF La Frestale 15.62 296 *ePn* **Pn 01 35 43.7 -0.5**
CLF Chambon-Foret 15.62 308 Pn **Pn 01 35 42.9 -1.3**
CLF IAmb IAmb 01 35 55.3
comp=Z,107nm,1.5s
TR2 Tor 2 15.64 132 P **Pn 01 35 40.0 -4.6**
baz=134
HKAT Jabal Katrina 15.69 131 P **Pn 01 35 41.2 -4.2**
baz=133
NACGM Naroch 15.71 13⇑ *eP* **Pn 01 35 45.9 +0.5**
baz=198
HDHB Dhahab 15.91 129 P **Pn 01 35 45.4 -2.7**
baz=131
MARD Mardin 15.91 92 Pn **Pn 01 35 48.4 +0.2**
PABE Paberze 15.92 7 Pn **Pn 01 35 46.9 -1.2**
PABE Paberze 15.92 7 *eP* **Pn 01 35 48.8 +0.8**
HDK1 Dakhla 15.94 150 P **Pn 01 35 45.3 -3.2**
baz=152
IIGN Ignalina 16.05 12 *eP* **P 01 35 52.4 -0.6**
TR1 Tor 1 16.06 133 P **Pn 01 35 46.7 -3.3**
baz=134
ISAL Salakas 16.25 11 *eP* **Pn 01 35 52.4 +0.2**
ETSF Etsaut 16.26 288 *eP* **P 01 35 55.2 -0.3**
ETSF *eSn* Sn 01 38 41.6 -11
comp=Z,1.1nm,0.5s
ETSF Etsaut 16.26 288 *eP* **P 01 35 55.3 -0.3**
ETSF pmax pmax
comp=Z,6.0nm,0.6s
VSVD Vaisvydziai 16.39 6 *eP* **Pn 01 35 54.2 +0.2**
GTR Jabal at Tayr 16.43 147 P **Pn 01 35 51.7 -3.1**
baz=149
HHRG Al Ghardaqah 16.46 135 P **Pn 01 35 53.3 -1.8**
baz=137
GURO Guroymak-BITLI 16.61 87 Pn **Pn 01 35 55.0 -2.1**
LUNU Lund 16.61 346 *i* P **P 01 35 59.3 +0.1**
MFF Saint Martin d 16.64 301 *ePn* **Pn 01 35 57.6 +0.3**
MFF Saint Martin d 16.64 301 *eP* **P 01 36 01.2 +1.5**
MFF pmax pmax
comp=Z,99nm,1.9s
SJPF Ste Jean 16.76 289 *eP* **P 01 36 02.7 +1.6**
SJPF Ste Jean 16.76 289 *eP* **P 01 36 02.3 +1.2**
SJPF pmax pmax
comp=Z,47nm,1.6s
SHA1 Shidzhatmaz 16.87 69 *i* P **P 01 36 04.1 +1.6**
NEY Neytrino 16.87 71 *i* P **P 01 36 05.1 +2.7**
BLEU Blekinge 16.88 351 *i* P **P 01 36 02.1 -0.1**
KIV Kislovodsk 16.91 68 Pn **P 01 36 02.0 -0.8**
KIV Kislovodsk 16.91 68 *eP* **P 01 36 04.6 +1.8**
KIV pmax pmax
comp=Z,21nm,1.1s
KBZ Khabaz 17.04 69 Pn **P 01 36 06.8 +2.8**
comp=Z,0.3nm,0.3s,baz=267,slow=9.1,SNR=8.7
comp=Z,5.5nm,0.9s
KBZ Khabaz 17.04 69 *ceP* **P 01 36 07.7 +3.6**
KBZ pmax pmax
comp=Z,18nm,1.3s
BJUU Bjuv 17.11 345 *i* P **P 01 36 06.0 +1.2**
VSR Storozhevoye 17.25 42 *eP* **P 01 36 06.4 0.0**
VSR pmax pmax
comp=Z,20nm,1.0s
VSR MLR MLR
comp=Z,2μm,13.0s
LDF La Druitiere 17.31 308 *ePn* **Pn 01 36 06.0 +0.3**
LDF *eSn* Sn 01 39 04.9 -13
comp=Z,1.2nm,0.4s
DEL Delary 17.33 347 *i* P **P 01 36 08.0 +0.8**
DEL IAmb IAmb 01 36 43.4
comp=Z,10nm,1.0s
GOF Gofitskoye 17.33 65⇑ *eP* **P 01 36 09.7 +2.4**
VORR Voronezh 17.54 41 *eP* **P 01 36 09.2 -0.3**
VORR pmax pmax
comp=Z,20nm,0.5s
FLN La Foliniere 17.59 308 *ePn* **P 01 36 10.7 +0.6**
baz=120
FLN La Foliniere 17.59 308 *eP* **P 01 36 10.5 +0.4**
FLN pmax pmax
comp=Z,51nm,1.4s
GRR Gorron 17.68 306 *ePn* **P 01 36 10.9 -0.2**
GRR *eSn* Sn 01 39 13.9 -13
comp=Z,1.8nm,0.4s
GRR Gorron 17.68 306 *eP* **P 01 36 13.0 +1.9**
GRR pmax pmax
comp=Z,92nm,1.6s
LPSR Galich'ya Gora 17.96 38 *eP* **Pn 01 36 13.2 -0.5**
LPSR pmax pmax
comp=Z,20nm,0.8s
LPSR MLR MLR
comp=Z,300nm,11.0s
FABU Falkenberg 18.04 346 *i* P **P 01 36 17.3 +2.3**
GNI Garni 18.45 81 Pn **Pn 01 36 22.5 +2.6**
comp=Z,6.2nm,0.6s,baz=324,slow=19,SNR=5.5
GNI Garni 18.45 81 P **Pn 01 36 22.0 +2.1**
GNI Garni 18.45 81 *ceP* **Pn 01 36 21.8 +1.9**
GNI pmax pmax
comp=Z,25nm,1.7s
GNI Garni 18.45 81 P **Pn 01 36 22.6 +2.7**
ONAU Onsala 18.57 345 *i* P **Pn 01 36 22.3 +1.3**
VRH Novokhopyorsk 18.61 45 *eP* **Pn 01 36 22.3 +0.7**
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH MLR MLR
comp=Z,960nm,14.0s
BORU Boraas 18.63 347 *i* P **Pn 01 36 22.6 +0.8**
OBN Obninsk 18.69 29 Pn **P 01 36 22.1 0.0**
comp=Z,1.6nm,0.3s,baz=214,slow=11,SNR=9.8
OBN LR LR 01 44 24.1
comp=Z,292nm,18.9s,baz=210,slow=40
OBN Obninsk 18.69 29 P **P 01 36 21.7 -0.4**
OBN IAmb IAmb 01 36 32.5
comp=Z,178nm,1.7s
OBN Obninsk 18.69 29 *eP* **P 01 36 20.8 -1.3**
OBN pmax pmax
comp=Z,67nm,1.3s
OBN MLR MLR
comp=Z,1μm,17.0s
OBN Obninsk 18.69 29 ⇑P **P 01 36 22.1 0.0**
ESBB Sonseca Array 18.95 278 P **P 01 36 23.6 -1.6**
ESDC Sonseca Array 18.95 278 P **P 01 36 25.4 +0.2**
comp=Z,0.4nm,0.3s,baz=76,slow=11,SNR=51
ESDC LR LR 01 43 34.2
comp=Z,251nm,21.0s,baz=76,slow=36
comp=Z,6.1nm,1.1s
ESDC Sonseca Array 18.95 278 P **P 01 36 25.2 -0.1**
QUIF Quistinic 18.99 303 *ePn* **Pn 01 36 26.8 +0.5**
MTSE Matsula 19.09 5 *eP* **P 01 36 26.5 0.0**
GROC Groznyy 19.11 71 *eP* **Pn 01 36 27.6 -0.2**
GROC pmax pmax
comp=Z,25nm,0.6s
VSU Vasula 19.14 10 *c i* P **P 01 36 26.8 -0.2**
VSU Vasula 19.14 10 *eP* **P 01 36 27.2 +0.2**
ROSF Rostrenen 19.18 304 *ePn* **Pn 01 36 28.4 -0.2**
TJOU Tjoern 19.22 345 *i* P **P 01 36 27.5 -0.4**
PAB San Pablo 19.26 277 **P 01 36 29.0 +0.3**
PAB San Pablo 19.26 277 P **P 01 36 29.0 +0.3**
PAB pmax pmax
comp=Z,25nm,1.1s
PAB San Pablo 19.26 277 ⇓P **Pn 01 36 30.3 +0.5**
MOS Moscow 19.56 29 *eP* **P 01 36 29.1 -2.6**
MOS *eS* **S 01 40 08.1 -3.5**
MOS pmax pmax
comp=Z,80nm,1.0s
MOS pmax pmax
comp=Z,200nm,1.6s
MOS MLR MLR
comp=N,800nm,17.0s
MOS MLR MLR
comp=E,800nm,17.0s
MOS MLR MLR
comp=Z,1μm,17.0s
UPP Uppsala 20.23 356 *eP* **P 01 36 38.6 -0.3**
STRU Stroemstad 20.24 346 *i* P **P 01 36 38.6 -0.4**
MAK Makhachkala 20.36 72 *eP* **P 01 36 40.0 -0.5**
MAK *eS* **S 01 40 29.7 +1.8**
MAK pmax pmax
comp=Z,272nm,1.3s
MAK MLR MLR
comp=Z,134nm,14.0s
AAL Aland 20.46 359 *eP* **P 01 36 41.0 -0.5**
SNART Snartemo 20.53 339 *eP* Pn 01 36 43.5 -0.9
SNART IAmb IAmb 01 36 50.0
comp=Z,2μm,2.6s
SNART Snartemo 20.53 339 *i* P **P 01 36 42.9 +0.7**
MEF Metsahovi 20.63 5 *eP* **P 01 36 42.9 -0.4**
PBRG Braganca 20.84 285 *eP* **P 01 36 47.0 +1.2**
HFS Hagfors 20.88 350 P **P 01 36 45.0 -1.0**
comp=Z,14nm,0.5s,baz=164,slow=12,SNR=112
HFS LR LR 01 45 30.1
comp=Z,311nm,19.7s,baz=170,slow=38
comp=Z,14nm,0.5s
HFS Hagfors 20.88 350 P **P 01 36 45.0 -1.0**
MVO Moncorvo 21.10 283 *eP* **P 01 36 50.2 +1.5**
comp=Z,29nm,1.5s
MVO A A 01 45 50.5
comp=Z,176nm,18.0s
KONO Kongsberg 21.12 344 *ceP* **P 01 36 47.3 -1.3**
KONO pmax pmax
comp=Z,25nm,1.3s
KONO Kongsberg 21.12 344 *eP* **P 01 36 48.1 -0.5**
KONO IAmb IAmb 01 36 48.6
comp=Z,83nm,1.4s
OSL Oslo 21.16 346 *eP* **P 01 36 48.9 -0.1**
OSL IAmb IAmb 01 36 59.4
comp=Z,46nm,0.9s
TAM Tamanrasset 21.24 222 P **P 01 36 51.4 +1.0**
TAM Tamanrasset 21.24 222 P **P 01 36 51.4 +1.0**
TAM pmax pmax
comp=Z,21nm,1.3s
TAM Tamanrasset 21.24 222 ⇑P **P 01 36 55.1 +4.8**
RAF Rauma 21.32 1 *eP* **P 01 36 50.5 -0.2**
SFS San Fernando 21.38 270 P **P 01 36 51.9 +0.3**
SFS pmax pmax
comp=Z,67nm,0.9s
MDT Midelt 21.49 259 P **P 01 36 52.7 -0.2**
comp=Z,2.4nm,0.9s,baz=66,slow=14,SNR=7.5
MDT LR LR 01 44 57.9
comp=Z,134nm,19.6s,baz=73,slow=36
comp=Z,2.4nm,0.9s
MTE Manteigas 21.58 281 *eS* **S 01 40 56.5 +4.3**
MTE A A 01 45 58.4
comp=Z,344nm,18.0s
PBAR Barrancos 21.58 275 *eP* **P 01 36 53.8 0.0**
comp=Z,60nm,1.5s
PCBR Castelo Branco 21.61 279 *eP* **P 01 36 55.6 +1.6**
comp=Z,39nm,2.2s
PMRV Marv??o 21.61 278 *eP* **P 01 36 54.5 +0.5**
comp=Z,39nm,1.8s
PMRV A A 01 46 04.3
comp=Z,249nm,16.0s
BLS5 Blasjo 21.66 340 *eP* **P 01 36 54.6 +0.2**
BLS5 IAmb IAmb 01 37 06.1
comp=Z,172nm,1.7s
NC602 NORSAR Array S 21.77 348 *eP* **P 01 36 54.7 -0.8**
NC602 IAmb IAmb 01 37 06.1
comp=Z,30nm,0.6s
NORES NORESS Array B 21.77 348 P **P 01 36 54.7 -0.9**
NORES pmax pmax
comp=Z,1.0nm,0.3s
PVIS Viseu 21.80 282 *eP* **P 01 36 55.7 -0.5**
comp=Z,47nm,1.7s
PESTR Estremoz 21.86 277 *eP* **P 01 36 56.7 -0.1**
comp=Z,24nm,2.2s
PESTR *eS* **S 01 40 58.0 +0.3**
PGAV Gavieira, Arco 21.97 285 *eP* **P 01 37 00.3 +2.3**
comp=Z,84nm,1.8s
PGAV A A 01 45 47.4
comp=Z,161nm,18.0s
FINES FINESS Array B 21.98 7 P **P 01 36 56.0 -1.8**
comp=Z,9.6nm,0.3s,baz=174,slow=12,SNR=212
FINES LR LR 01 45 51.8
comp=Z,272nm,18.4s,baz=190,slow=38
comp=Z,9.6nm,0.3s
FINES FINESS Array B 21.98 7 P **P 01 36 56.5 -1.3**
FINES FINESS Array B 21.98 7 P **P 01 36 56.5 -1.3**
FIA1 FINESS Array S 21.98 7 P **P 01 36 56.4 -1.4**
FIA1 IAmb IAmb 01 37 06.9
comp=Z,61nm,0.9s
NAO01 NORSAR Array S 21.98 347 P **P 01 36 56.7 -1.2**
NB2 NORSAR Subarra 22.11 348 P **P 01 36 58.4 -0.9**
comp=Z,12nm,0.6s,baz=164,slow=11
NB2 NORSAR Subarra 22.11 348 P **P 01 36 58.4 -0.9**
baz=164,slow=11
NOA NORSAR Array B 22.11 348 P **P 01 36 58.2 -1.1**
comp=Z,38nm,1.2s,baz=163,slow=11,SNR=59
NOA LR LR 01 46 14.0
comp=Z,256nm,21.6s,baz=165,slow=38
comp=Z,38nm,1.2s
EKA Eskdalemuir Ar 22.24 322 P **P 01 37 00.1 -0.7**
comp=Z,7.2nm,0.5s,baz=116,slow=10.0,SNR=53
EKA LR LR 01 47 28.2
comp=Z,198nm,18.1s,baz=127,slow=42
comp=Z,7.2nm,0.5s
PBEJ Beja 22.25 275 *eP* **P 01 37 00.8 -0.2**
comp=Z,46nm,1.9s
EVO Evora 22.25 276 *eP* **P 01 37 02.1 +1.1**
comp=Z,24nm,1.4s
ESK Eskdalemuir 22.26 322 P **P 01 37 00.6 -0.3**
ESK IAmb IAmb 01 37 06.8
comp=Z,63nm,1.3s
ESK Eskdalemuir 22.26 322 P **P 01 37 00.6 -0.3**
ESK pmax pmax
comp=Z,63nm,1.3s
ESK Eskdalemuir 22.26 322 ⇓P **P 01 37 00.5 -0.3**
PVAQ Vaqueiros 22.29 273 *eP* **P 01 37 00.9 -0.5**
comp=Z,58nm,1.7s
PVAQ *eS* Sn 01 41 11.9 -6.0
PVAQ A A 01 41 55.6
comp=Z,132nm,18.0s
PVAQ Vaqueiros 22.29 273 P **P 01 37 00.6 -0.8**
PVAQ Vaqueiros 22.29 273 ⇑P **P 01 37 00.8 -0.5**
PMTG Montargil 22.31 278 *eP* **P 01 37 01.1 -0.5**
comp=Z,21nm,1.4s
PMTG *eS* **S 01 41 11.7 +5.6**
SKAR Skarslia 22.33 344 *eP* **P 01 37 02.5 +0.8**
SKAR IAmb IAmb 01 37 12.7
comp=Z,52nm,1.5s
NC204 NORSAR Array S 22.41 347 P **P 01 37 01.6 -1.0**
PCVE Castro Verde 22.48 274 *eP* **P 01 37 03.3 -0.1**
comp=Z,38nm,1.7s
MESJ Messejana 22.57 274 *eP* **P 01 37 04.1 -0.2**
comp=Z,40nm,1.3s
PNCL Nicolau / Gran 22.74 275 *eP* **P 01 37 06.1 -0.1**
comp=Z,34nm,2.0s
PNCL *eS* **S 01 41 19.1 +5.1**
BER Bergen 22.78 340 P **P 01 37 06.8 +0.5**
BER pmax pmax
comp=Z,50nm,2.9s
BER Bergen 22.78 340 *eP* **P 01 37 06.4 0.0**
ASK Askoy 22.90 340 *eP* **P 01 37 08.6 +1.0**
PTEO Sao Teotonio 23.03 274 *eP* **P 01 37 10.9 +1.8**
comp=Z,44nm,3.0s
MORF Marmelete 23.04 273 *eS* **S 01 41 21.9 +2.7**
PMST Lisbon--Monsan 23.11 277 *eP* **P 01 37 10.1 +0.1**
comp=Z,103nm,1.6s
PMAFR Mafra 23.14 278 *eS* **S 01 41 22.7 +1.8**
PFVI Vila Bisbo 23.21 273 *eP* **P 01 37 12.8 +1.7**
comp=Z,46nm,1.7s
PFVI *eS* **S 01 41 25.3 +3.1**
DOMB Dombas 23.43 346 *eP* **P 01 37 12.9 -0.1**
DOMB IAmb IAmb 01 37 15.0
comp=Z,24nm,0.8s
AKN Aaknes 23.96 344 *eP* **P 01 37 18.9 +0.8**
AKN IAmb IAmb 01 37 26.7
comp=Z,56nm,1.4s
KLMR Klimovskoe 24.14 23 *eP* **P 01 37 18.7 -1.1**
KLMR S **S 01 41 41.1 +4.4**
KLMR pmax pmax
comp=Z,50nm,1.0s
KLMR MLR MLR
comp=Z,661nm,19.0s
KLMR Klimovskoe 24.14 23 *eP* **P 01 37 18.7 -1.1**
KLMR *eP* **P 01 37 18.7 -1.1**
KLMR *eP* **P 01 37 18.7 -1.1**
KLMR AMP 01 37 31.9
comp=Z,50nm,1.0s
KLMR S **S 01 41 41.1 +4.4**
KLMR S **S 01 41 41.1 +4.4**
KLMR LR LR 01 47 10.0
KLMR AMP 01 47 51.8
comp=Z,661nm,19.3s
NSS Namsos 25.35 351 *eP* **P 01 37 29.6 -1.0**
OUL Oulu 25.56 5 P **P 01 37 31.0 -1.6**
OUL pmax pmax
comp=Z,26nm,1.4s
KIRV Kirov 26.29 35 P **P 01 37 39.6 +0.3**
comp=Z,5.5nm,0.4s,baz=243,slow=14,SNR=4.4
KIRV LR LR 01 49 01.3
comp=Z,683nm,18.1s,baz=239,slow=39
comp=Z,5.5nm,0.4s
KIRV Kirov 26.29 35 *i* P **P 01 37 38.6 -0.6**
RAYN Ar Rayn 26.48 120 P **P 01 37 42.0 +0.6**
RAYN Ar Rayn 26.48 120 P **P 01 37 42.0 +0.6**
RAYN pmax pmax
comp=Z,19nm,1.8s
RAYN Ar Rayn 26.48 120 P **P 01 37 41.1 -0.4**
RAYN Ar Rayn 26.48 120 ⇓P **P 01 37 43.2 +1.8**
MSF Maaselka 26.65 8 P **P 01 37 42.1 -0.3**
MSF pmax pmax
comp=Z,22nm,1.6s
PRGR Permogore 26.70 27 *eP* **P 01 37 42.4 -0.6**
PRGR pmax pmax
comp=Z,18nm,1.1s
MOR8 Moi Rana 26.71 354 *eP* **P 01 37 42.6 -0.5**
FAUS Fauske 27.85 356 *eP* **P 01 37 52.0 -1.3**
FAUS IAmb IAmb 01 38 05.3
comp=Z,26nm,1.4s
SGF Sodankyl 27.94 5 P **P 01 37 53.2 -0.8**
SGF pmax pmax
comp=Z,21nm,1.6s

AKTO Aktyubinsk 28.16 55 P **P 01 37 55.5 -0.7**
comp=Z,5.1nm,0.4s,baz=252,slow=5.8,SNR=30
comp=Z,5.1nm,0.4s
STEI Steigen 28.40 356 *e*P **P 01 37 56.8 -1.3**
STEI IAmb IAmb 01 37 57.7
comp=Z,165nm,2.5s
GEYT Alibeck 29.08 81 P **P 01 38 05.0 +0.4**
comp=Z,5.4nm,0.8s,baz=280,slow=8.9,SNR=9.7
comp=Z,5.4nm,0.8s
GEYT Alibeck 29.08 81 P **P 01 38 05.4 +0.9**
GYA0 ALIBECK ARRAY 29.08 81 P **P 01 38 05.5 +0.9**
GYA0 pmax pmax
comp=Z,8.0nm,0.9s
GYA0B ALIBECK ARRAY 29.08 81 P **P 01 38 05.5 +0.9**
ABKAR Akbulak array 29.28 58 P **P 01 38 06.9 +0.7**
ABKAR Akbulak array 29.28 58 ⇑P **P 01 38 06.2 +0.1**
KTK1 Kautokeino 29.36 2 *e*P **P 01 38 05.7 -1.0**
KTK1 IAmb IAmb 01 38 09.2
comp=Z,94nm,1.9s
ARU Arti 29.82 43 P **P 01 38 10.0 -0.9**
comp=Z,5.4nm,0.4s,baz=250,slow=9.1,SNR=17
ARU LR LR 01 50 52.3
comp=Z,313nm,21.4s,baz=250,slow=38
comp=Z,5.4nm,0.4s
ARU Arti 29.82 43 P **P 01 38 10.0 -0.9**
ARU IAmb IAmb 01 38 11.7
comp=Z,5.9nm,0.5s
ARU Arti 29.82 43*d i*P **P 01 38 08.6 -2.3**
ARU 01 39 04.7
ARU S **S 01 43 05.8 -0.8**
ARU SS **SnSn 01 44 37.7 +0.7**
ARU pmax pmax
comp=Z,14nm,1.7s
ARU MLR MLR
comp=Z,496nm,15.0s
ARU Arti 29.82 43 ⇑P **P 01 38 10.8 -0.1**
JETT Jettan, Norway 29.88 360 *e*P **P 01 38 09.0 -2.2**
JETT IAmb IAmb 01 38 29.4
comp=Z,52nm,1.4s
ARA0 ARCESS Array S 29.96 3 *e*P **P 01 38 10.7 -1.3**
ARCES ARCESS Array B 29.96 3 P **P 01 38 10.6 -1.4**
comp=Z,4.9nm,0.5s,baz=188,slow=10.0,SNR=76
ARCES LR LR 01 50 40.3
comp=Z,257nm,18.1s,baz=168,slow=37
comp=Z,4.9nm,0.5s
TRO Tromso 29.97 359 *e*P **P 01 38 11.1 -0.8**
TRO IAmb IAmb 01 38 17.4
comp=Z,51nm,1.3s
KEV Kevo 30.26 4 P **P 01 38 13.3 -1.3**
KEV pmax pmax
comp=Z,36nm,2.2s
SVE Sverdlovsk 31.04 43 *e*P **P 01 38 21.7 +0.1**
SVE pmax pmax
comp=Z,14nm,0.6s
SVE MLR MLR
comp=Z,507nm,14.0s
TOA0 Torodi Ar. Sit 31.34 218 P **P 01 38 25.1 +0.5**
TOA0 IAmb IAmb 01 38 32.1
comp=Z,9.3nm,0.8s
TORD Torodi Ar. Bea 31.34 218 P **P 01 38 25.1 +0.5**
comp=Z,8.9nm,0.6s,baz=32,slow=9.7,SNR=95
TORD LR LR 01 53 18.9
comp=Z,206nm,18.2s,baz=347,slow=41
comp=Z,8.9nm,0.6s
TORD Torodi Ar. Bea 31.34 218 P **P 01 38 25.0 +0.5**
TORD IAmb IAmb 01 38 32.1
comp=Z,7.5nm,0.8s
MZR Muzera 32.37 111 P **P 01 38 32.7 -1.0**
BANOM Banah 32.72 104 P **P 01 38 34.4 -2.4**
KOWA Kowa 33.19 228 P **P 01 38 41.0 +0.2**
comp=Z,3.3nm,0.6s,baz=37,slow=8.3,SNR=17
KOWA LR LR 01 53 52.6
comp=Z,239nm,18.9s,baz=58,slow=39
comp=Z,3.3nm,0.6s
UOSS Minazif 33.20 106 P **P 01 38 39.7 -1.2**
HATD Hatta, Dubai 33.22 106 P **P 01 38 40.0 -1.1**
ASHO Ashiyiah 33.24 106 P **P 01 38 38.8 -2.6**
HRA Herat 33.37 86 P **P 01 38 42.8 +0.2**
HRA IAmb IAmb 01 38 44.0
comp=Z,13nm,0.8s
JMIC Jan Mayen 34.69 344 LR LR 01 52 35.6
comp=Z,84nm,21.6s,baz=77,slow=36
BORG Borgarnes 34.81 330 LR LR 01 55 32.6
comp=Z,99nm,19.3s,baz=122,slow=40
CMLA Cha da Macela 35.78 282 P **P 01 39 01.7 -1.5**
CMLA pmax pmax
comp=Z,150nm,2.2s
BRVK Borovoye 35.97 52 P **P 01 39 05.2 +0.6**
BRVK Borovoye 35.97 52*ce*P **P 01 39 04.2 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BRVK Borovoye 35.97 52 ⇑P **P 01 39 05.7 +1.1**
WSAR Wadi Sarin 35.99 106 LR LR 01 57 31.4
comp=Z,73nm,21.9s,baz=334,slow=42
BVAR Borovoye Array 36.03 52 LR LR 01 56 08.3
comp=Z,121nm,18.1s,baz=268,slow=40
KK31 Karatay Array 37.08 68 P **P 01 39 14.2 0.0**
KK31 IAmb IAmb 01 39 16.0
comp=Z,12nm,0.8s
KK31 Karatay Array 37.08 68 P **P 01 39 14.2 0.0**
KK31 pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 37.08 68 P **P 01 39 14.2 0.0**
KKAR IAmb IAmb 01 39 16.0
comp=Z,12nm,0.8s
KKAR Karatay Array 37.08 68 P **P 01 39 14.2 0.0**
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 37.08 68 ⇑P **P 01 39 14.1 0.0**
GAR Garm 37.98 75 P **P 01 39 22.0 0.0**
BTK Batken 38.05 73 IAmb IAmb 01 39 34.5
comp=Z,10nm,0.8s
BTK Batken 38.05 73 P **P 01 39 22.6 +0.1**
BTK pmax pmax
comp=Z,16nm,1.2s
LODK Lodwar 38.53 156 P **P 01 39 28.2 +1.5**
SPITS Spitsbergen Ar 38.59 359 P **P 01 39 26.5 0.0**
comp=Z,4.9nm,0.6s,baz=289,slow=4.4,SNR=5.5
SPITS LR LR 01 57 13.0
comp=Z,341nm,19.0s,baz=146,slow=39
comp=Z,4.9nm,0.6s
EKS2 Erkin-Say 39.51 68 P **P 01 39 35.5 +0.7**
SNR=21
AML Almayashu 39.59 69 P **P 01 39 37.6 +1.9**
SNR=6.2
USP Ospenovka 39.88 67 P **P 01 39 37.1 -0.7**
SNR=7.2
AAK Ala-Archa 40.03 68 P **P 01 39 39.8 +0.7**
SNR=8.6
AAK Ala-Archa 40.03 68 P **P 01 39 39.6 +0.5**
comp=Z,6.1nm,0.6s,baz=259,slow=5.1,SNR=23
AAK LR LR 02 00 53.2
comp=Z,172nm,18.6s,baz=278,slow=43
comp=Z,6.1nm,0.6s
AAK Ala-Archa 40.03 68 P **P 01 39 39.3 +0.2**
AAK IAmb IAmb 01 39 42.6
comp=Z,32nm,1.6s
AAK Ala-Archa 40.03 68 P **P 01 39 39.3 +0.2**
AAK Ala-Archa 40.03 68 ⇑P **P 01 39 39.9 +0.7**
ARLS Aral 40.11 69 P **P 01 39 40.1 +0.3**
ARLS pmax pmax
comp=Z,19nm,0.6s
DBIC Dimbokro 40.13 222 P **P 01 39 40.3 +0.3**
comp=Z,2.3nm,0.4s,baz=9.9,slow=9.2,SNR=10
DBIC LR LR 01 57 37.7
comp=Z,252nm,18.8s,baz=12,slow=38
comp=Z,2.3nm,0.4s
UCH Uchtor 40.15 68 P **P 01 39 41.0 +0.5**
SNR=7.7
DAG Danmarks Havn 40.80 347 P **P 01 39 44.1 -0.7**
DAG pmax pmax
comp=Z,4.0nm,1.1s
BOOM Boomskoye usch 41.10 68 P **P 01 39 48.5 +0.5**
BOOM IAmb IAmb 01 39 50.3
comp=Z,12nm,0.6s
BOOM Boomskoye usch 41.10 68 P **P 01 39 48.5 +0.5**
BOOM pmax pmax
comp=Z,13nm,0.6s
MBAR Mbarara 41.19 165 P **P 01 39 49.9 +1.0**
comp=Z,2.3nm,0.2s,baz=24,slow=20,SNR=1.9
MBAR LR LR 01 59 48.5
comp=Z,96nm,18.8s,baz=348,slow=40
comp=Z,2.3nm,0.2s
KURBB Kurchatov Arra 41.21 55 LR LR 02 00 51.9
comp=Z,150nm,18.4s,baz=270,slow=42
KURK Kurchatov 41.26 55 P **P 01 39 49.1 +0.1**
KURK IAmb IAmb 01 40 02.5
comp=Z,26nm,1.9s
KURK Kurchatov 41.26 55*ce*P **P 01 39 48.6 -0.4**
KURK pmax pmax
comp=Z,10.0nm,1.7s
KSH Kashi 42.00 72 P **P 01 39 54.4 -1.0**
KSH sP sP 01 40 02.8 -0.5
KSH pmax pmax
comp=Z,9.0nm,1.1s
NIL Nilore 42.09 81 P **P 01 39 55.9 -0.1**
NIL IAmb IAmb 01 40 07.8
comp=Z,9.3nm,0.7s
NIL Nilore 42.09 81 P **P 01 39 55.9 -0.1**
NIL pmax pmax
comp=Z,9.0nm,0.7s
KMBO Kilima Mbogo 43.41 155 P **P 01 40 08.4 +1.3**
KMBO Kilima Mbogo 43.41 155 P **P 01 40 08.4 +1.3**
KMBO pmax pmax
comp=Z,3.0nm,1.0s
NOR Nord 43.95 353 P **P 01 40 09.7 -0.7**
NOR pmax pmax
comp=Z,10.0nm,1.5s
MAKZ Makanchi 44.18 60 P **P 01 40 12.8 +0.1**
MAKZ IAmb IAmb 01 40 13.6
comp=Z,12nm,0.8s
MAKZ Makanchi 44.18 60 P **P 01 40 12.9 +0.1**
MAKZ pmax pmax
comp=Z,12nm,0.8s
MK31 Makanchi Array 44.39 60 *i* P **P 01 40 13.8 -0.7**
MKAR Makanchi Array 44.39 60 P **P 01 40 14.5 0.0**
comp=Z,25nm,0.5s,baz=276,slow=7.4,SNR=273
MKAR PcP **PP 01 41 57.7 -0.2**
comp=Z,0.8nm,0.5s,baz=317,slow=2.2,SNR=1.3
comp=Z,25nm,0.5s
MKAR Makanchi Array 44.39 60 P **P 01 40 14.2 -0.3**
ZAA0 Zalesovo Array 44.56 49 P **P 01 40 15.2 -0.5**
ZAA0 IAmb IAmb 01 40 16.2
comp=Z,8.4nm,0.4s
ZALV Zalesovo Beam 44.56 49 P **P 01 40 15.1 -0.6**
comp=Z,8.7nm,0.4s,baz=281,slow=8.6,SNR=41
ZALV LR LR 02 01 16.7
comp=Z,170nm,18.7s,baz=276,slow=39
comp=Z,8.7nm,0.4s
NRIK Noril'sk 45.35 27 P **P 01 40 23.0 +1.3**
comp=Z,7.7nm,0.6s,baz=235,slow=2.3,SNR=9.3
NRIK LR LR 02 01 49.1
comp=Z,484nm,20.0s,baz=262,slow=39
comp=Z,7.7nm,0.6s
NRIK Noril'sk 45.35 27 P **P 01 40 22.6 +0.9**
NRIK IAmb IAmb 01 40 32.2
comp=Z,21nm,1.3s
NRIK Noril'sk 45.35 27⇑*e*P **P 01 40 18.5 -3.2**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
SFJD Kangerlussuaq 46.95 329 LR LR 02 00 21.4
comp=Z,217nm,21.4s,baz=80,slow=36
DGZ Jazzator, Alta 47.01 55*c i*P **P 01 40 35.1 -0.2**
DGZ pmax pmax
comp=Z,12nm,0.7s
WMQ Urumqi 48.90 62 *e*P **P 01 40 50.5 +0.6**
WMQ pP pP 01 40 55.8 0.0
WMQ sP sP 01 40 59.3 +1.2
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ LR LR
comp=Z,110nm,20.5s
FRB Frobisher Bay 54.90 327 LR LR 02 06 11.6
comp=Z,194nm,18.7s,baz=18,slow=37
GOMU GeErMu 56.98 68 P **P 01 41 51.1 +1.1**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,53nm,3.9s
SCHQ Schefferville 57.40 317 P **P 01 41 51.9 -0.4**
comp=Z,3.8nm,0.5s,baz=72,slow=4.5,SNR=19
comp=Z,3.8nm,0.5s
TIXI Tiksi 58.14 21 LR LR 02 11 05.5
comp=Z,365nm,19.0s,baz=359,slow=40
TIXI Tiksi 58.14 21 P **P 01 41 57.4 +0.3**
TIXI IAmb IAmb 01 41 59.7
comp=Z,12nm,1.3s
TIXI Tiksi 58.14 21*ce*P **P 01 41 55.6 -1.6**
TIXI pmax pmax
comp=Z,15nm,1.7s
TSUM Tsumeb 58.71 183 LR LR 02 09 27.5
comp=Z,84nm,18.8s,baz=345,slow=38
GTA Gaotai 58.98 63 *e*P **P 01 42 03.1 -0.6**
GTA pP pP 01 42 09.3 -0.4
GTA sP sP 01 42 11.8 -0.1
GTA pmax pmax
comp=Z,10.0nm,0.7s
GTA pmax pmax
comp=Z,52nm,5.8s
GTA LR LR
comp=Z,72nm,18.5s
GTA LR LR
comp=Z,140nm,15.6s
GTA LR LR
comp=Z,150nm,16.7s
SONM Songino Array 59.38 51 P **P 01 42 06.1 -0.2**
comp=Z,5.0nm,0.8s,baz=286,slow=8.4,SNR=24
SONM PcP **PcP 01 42 53.1 -1.0**
comp=Z,1.6nm,0.8s,baz=281,slow=6.0,SNR=1.5
SONM LR LR 02 10 24.6
comp=Z,206nm,20.3s,baz=6.5,slow=39
comp=Z,5.0nm,0.8s
SONM Songino Array 59.38 51 P **P 01 42 05.8 -0.5**
SONM IAmb IAmb 01 42 07.2
comp=Z,10nm,1.2s
ULN Ulaanbaatar 59.76 51 P **P 01 42 08.1 -0.9**
ULN IAmb IAmb 01 42 09.3
comp=Z,5.3nm,0.8s
ULN Ulaanbaatar 59.76 51*ce*P **P 01 42 07.8 -1.2**
ULN pmax pmax
comp=Z,12nm,1.7s
LZH Lanzhou 63.40 64 ⇑P **P 01 42 32.1 -1.6**
LZH pP pP 01 42 37.8 -1.9
LZH sP sP 01 42 40.9 -1.1
LZH pmax pmax
comp=Z,13nm,1.4s
LZH LR LR
comp=Z,240nm,18.5s
LZH LR LR
comp=Z,240nm,15.6s
LZH LR LR
comp=Z,210nm,16.7s
YAK Yakutsk 63.69 30 LR LR 02 13 40.2
comp=Z,344nm,18.7s,baz=268,slow=39
YAK Yakutsk 63.69 30*ce*P **P 01 42 34.0 -1.0**
YAK pmax pmax
comp=Z,25nm,0.6s
HHC Hu-ho-hao-te 66.05 56 *e*P **P 01 42 51.6 +0.7**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,210nm,6.8s
HIA Hailar 66.32 45 P **P 01 42 54.5 +2.1**
HIA IAmb IAmb 01 42 59.4
comp=Z,9.4nm,1.0s
HIA Hailar 66.32 45 P **P 01 42 54.5 +2.1**
HIA pmax pmax
comp=Z,9.0nm,1.0s
PZH PanZhiHua 67.05 74 P **P 01 42 58.9 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,70nm,4.1s
XLT XiLinHaoTe 67.20 51 *e*P **P 01 42 58.3 +0.2**
XLT pP pP 01 43 01.8 -2.3
XLT sP sP 01 43 05.1 -1.3
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax
comp=Z,200nm,5.5s
XAN Xi'an 68.01 64 ⇑P **P 01 43 02.5 -0.9**
XAN pP pP 01 43 09.4 +0.1
XAN sP sP 01 43 12.5 +0.9
XAN pmax pmax
comp=Z,12nm,0.9s
BOSA Boshof 68.14 176 P **P 01 43 04.1 +0.1**
comp=Z,2.8nm,0.7s,baz=353,slow=5.8,SNR=9.0
comp=Z,2.8nm,0.7s
RCBR Riachuelo 69.01 243 LR LR 02 13 39.8
comp=Z,116nm,20.2s,baz=151,slow=36
BJI Beijing 69.43 55 P **P 01 43 11.6 -0.4**
BJI PP **PP 01 45 42.0 -3.1**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,51nm,18.0s
BJI LR LR
comp=Z,110nm,16.6s
BJI LR LR
comp=Z,320nm,17.1s
BILL Bilibino 69.47 13 *e*P **P 01 43 09.3 -2.5**
BILL *e* 01 43 36.2
BILL *e* 01 45 50.9
BILL *e*PPP PPP 01 47 25.3
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,152nm,19.0s
CMAR Chiang Mai Arr 69.56 83 P **P 01 43 11.2 -2.0**
comp=Z,1.2nm,0.6s,baz=298,slow=8.4,SNR=7.6
CMAR LR LR 02 17 24.6
comp=Z,34nm,20.8s,baz=260,slow=39
HNS HongShan 70.00 58 ⇓P **P 01 43 15.3 -0.3**
HNS pmax pmax
comp=Z,10.0nm,0.6s
INK Inuvik 70.55 350 P **P 01 43 18.2 -0.2**
comp=Z,1.4nm,0.5s,baz=353,slow=7.4,SNR=10
comp=Z,1.4nm,0.5s
SEY Seymchan 70.63 21 P **P 01 43 19.1 0.0**
comp=Z,2.5nm,0.6s,baz=299,slow=5.6,SNR=9.4
comp=Z,2.5nm,0.6s
SEY Seymchan 70.63 21*ce*P **P 01 43 19.0 0.0**
SEY pmax pmax
comp=Z,4.0nm,0.9s
SUR Sutherland 71.76 180 LR LR 02 17 34.7
comp=Z,210nm,18.4s,baz=359,slow=38
YKA Yellowknife Ar 71.96 340 P **P 01 43 27.1 0.0**
comp=Z,1.8nm,0.8s,baz=45,slow=5.1,SNR=2.1
YKA LR LR 02 15 16.7
comp=Z,20nm,21.7s,baz=355,slow=36
comp=Z,1.8nm,0.8s
CBN Corbin Frederi 72.11 305 P **P 01 43 29.3 +0.8**
KLR Kul'dur 72.59 40 LR LR 02 18 12.5
comp=Z,106nm,18.5s,baz=334,slow=38
KLR Kul'dur 72.59 40 *i* P **P 01 43 27.0 -4.1**
KLR pmax pmax
comp=Z,9.0nm,1.7s
MA2 Magadan 72.81 24 P **P 01 43 32.8 +0.6**
comp=Z,5.6nm,0.4s,baz=265,slow=20,SNR=2.1
MA2 LR LR 02 20 04.2
comp=Z,210nm,18.0s,baz=308,slow=40
comp=Z,5.6nm,0.4s
H23K Yukon River 74.49 356 IAmb IAmb 01 43 43.9
comp=Z,6.7nm,1.1s
IMAR Indian Mountai 74.52 358 P **P 01 43 43.1 +0.9**
ULM Lac du Bonnet 74.52 323 P **P 01 43 42.1 -0.2**
comp=Z,3.5nm,0.5s,baz=54,slow=3.5,SNR=7.5
comp=Z,3.5nm,0.5s
H21K Melozitna Rive 74.81 357 IAmb IAmb 01 43 56.9
comp=Z,9.0nm,0.9s
MDM Murphy Dome 75.27 355 IAmb IAmb 01 43 58.6
comp=Z,8.6nm,1.0s
DAWY Dawson 75.33 351 IAmb IAmb 01 44 00.8
comp=Z,6.2nm,0.7s
J26L Joseph Creek 75.35 353 P **P 01 43 47.5 +0.4**
J26L IAmb IAmb 01 43 48.9
comp=Z,21nm,1.6s
ILAR Eielson Array 75.36 355 P **P 01 43 47.1 +0.1**
comp=Z,0.8nm,0.7s,baz=358,slow=3.3,SNR=8.3
comp=Z,0.8nm,0.7s
ILAR Eielson Array 75.36 355 P **P 01 43 48.4 +1.4**
HDA Harding Lake 75.73 354 P **P 01 43 49.5 +0.4**
NJ2 Nanjing 75.92 60 *e*P **P 01 43 52.4 +1.6**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
USRK Ussuriysk Ar. 76.06 44 P **P 01 43 51.0 -0.3**
comp=Z,2.9nm,0.6s,baz=335,slow=3.8,SNR=4.2
USRK LR LR 02 21 00.4
comp=Z,197nm,18.3s,baz=314,slow=39
comp=Z,2.9nm,0.6s
L27K Beaver Creek, 76.58 352 IAmb IAmb 01 43 56.2
comp=Z,15nm,1.7s
KS19 Wonju Array Si 78.18 51 P **P 01 44 03.5 +0.1**
KSAR Wonju Array Be 78.23 51 P **P 01 44 02.9 -0.7**
KSAR Wonju Array Be 78.23 51 P **P 01 44 02.9 -0.7**
KSRS Korea Array 78.24 51 P **P 01 44 02.9 -0.8**
comp=Z,5.4nm,0.5s,baz=309,slow=4.8,SNR=26
KSRS LR LR 02 22 09.5
comp=Z,142nm,18.0s,baz=305,slow=38
comp=Z,5.4nm,0.5s
MESA MESA 79.41 351 P **P 01 44 11.1 +1.1**
YSS Yuzh-Sakhalins 79.43 36 *e*P **P 01 44 10.0 -0.1**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,800nm,15.0s
PETK Petropavlovsk- 80.33 25 P **P 01 44 14.0 -0.9**
comp=Z,1.3nm,0.6s,baz=11,slow=1.5,SNR=2.8
PETK LR LR 02 24 02.9
comp=Z,166nm,19.9s,baz=319,slow=39
comp=Z,1.3nm,0.6s
PETK Petropavlovsk- 80.33 25 P **P 01 44 14.0 -0.9**
LRAL Lakeview Retre 81.44 306 P **P 01 44 21.3 +0.2**
LRAL IAmb IAmb 01 44 22.3
comp=Z,23nm,1.4s
BDFB Brasilia 84.30 244 P **P 01 44 37.5 +1.2**
comp=Z,3.3nm,0.6s,baz=64,slow=7.2,SNR=6.8
comp=Z,3.3nm,0.6s
RLMT Red Lodge 84.31 327 IAmb IAmb 01 44 38.5
comp=Z,12nm,1.3s
MJAR Matsushiro Arr 84.81 46 P **P 01 44 38.0 -0.5**
comp=Z,6.3nm,0.8s,baz=335,slow=3.6,SNR=16
comp=Z,6.3nm,0.8s
MJAR Matsushiro Arr 84.81 46 P **P 01 44 38.0 -0.5**
SHEM Shemya Is, Ala 85.06 16 LR LR 02 27 48.9
comp=Z,56nm,18.8s,baz=142,slow=39
PD31 Pinedale Array 86.33 326 P **P 01 44 45.1 -1.2**
PD31 IAmb IAmb 01 45 02.6
comp=Z,6.1nm,1.6s
PDAR Pinedale Array 86.33 326 P **P 01 44 45.9 -0.4**
comp=Z,0.5nm,0.6s,baz=47,slow=5.4,SNR=4.8
PDAR LR LR 02 23 50.6
comp=Z,141nm,20.1s,baz=24,slow=36
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 86.33 326 P **P 01 44 45.6 -0.7**
HWUT Hardware Ranch 88.14 326 IAmb IAmb 01 44 55.4
comp=Z,3.1nm,0.8s
BGU Big Grassy Mou 89.32 327 P **P 01 45 01.0 +0.4**
BGU IAmb IAmb 01 45 11.3
comp=Z,6.8nm,1.3s
ELK Elko 90.39 328 LR LR 02 27 30.0
comp=Z,170nm,19.4s,baz=56,slow=37
ROSC El Rosal 90.78 277 LR LR 02 24 33.8
comp=Z,52nm,21.3s,baz=61,slow=35
ANMO Albuquerque 91.11 319 LR LR 02 27 17.8
comp=Z,54nm,19.1s,baz=4.5,slow=36
NVAR Mina Array Bea 93.60 329 LR LR 02 29 31.1
comp=Z,137nm,18.3s,baz=70,slow=37
TX31 Lajitas Ar. Si 93.98 314 P **P 01 45 23.2 +1.0**
TX31 IAmb IAmb 01 45 23.4
comp=Z,5.7nm,0.9s
TX32 Lajitas Array 93.98 314 P **P 01 45 22.7 +0.4**
TXAR Lajitas Array 93.98 314 P **P 01 45 22.6 +0.4**
comp=Z,0.9nm,0.6s,baz=58,slow=5.8,SNR=15
TXAR LR LR 02 27 53.4
comp=Z,73nm,18.4s,baz=314,slow=36
comp=Z,0.9nm,0.6s
PFO Pinyon Flats O 96.94 325 LR LR 02 31 59.4
comp=Z,128nm,18.3s,baz=8.5,slow=37
LPAZ La Paz 99.33 257 LR LR 02 32 30.1
comp=Z,31nm,18.7s,baz=82,slow=36
WRA Warramunga Arr 120.46 91 PKP **PKPdf 01 50 54.5 -1.3**
comp=Z,0.7nm,0.8s,baz=319,slow=2.1,SNR=9.2
ASAR Alice Springs 122.20 95 PKP **PKPdf 01 50 57.7 -1.4**
comp=Z,1.4nm,0.6s,baz=320,slow=1.4,SNR=22

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*IDC **16** 01:46:43.9±3.1, 37°.41N×71°.72E, h84km±27km, mb3.6/10, mbtmp4.0/17, Error ellipse: s-maj=34.5km s-min=20.0km az=133.0*
*NEIC **16** 01:46:47.1±2.2, 37°.59N±0°.06×71°.67E±0°.04, h99km±8km, mb4.0/6, Error ellipse: s-maj=9.9km s-min=2.0km az=159.0*
*NNC **16** 01:46:51.1±2.1, 37°.88N×71°.68E, h155km±30km, mb3.3, mpv3.9, Error ellipse: s-maj=19.7km s-min=12.3km az=5.0*
ISC 16 01:46:44.8±0.5, **37°.52N**±0°.04×**71.73E**±0°.05, **h100**km, **n71**, σ**2**º**51**/79, **mb3.9**/13, **4C-2D, Afghanistan-Tajikistan**

border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**1.85**	**324**	Pn	**Pn**	**01 47 17.9**	**+2.2**
DRK	**Karamyk**	**1.96**	**2**		**Pn**	**01 47 18.8**	**+1.6**
CHGR	**Chuyangaron**	**2.33**	**300**	Pn	**Pn**	**01 47 22.4**	**+0.7**
BTK	**Batken**	**2.64**	**345**		**Pn**	**01 47 28.2**	**+2.4**
KBL	**Kabul**	**3.68**	**217**	Pn	**Pn**	**01 47 43.7**	**+3.8**
CEP	**Cherat**	**3.69**	**178**	P	**Pn**	**01 47 44.0**	**+4.1**
CHCP	**Chirah Chowk**	**4.05**	**162**	P	**Pn**	**01 47 48.2**	**+3.5**
NIL	**Nilore**	**4.05**	**162**		**Pn**	**01 47 47.7**	**+3.0**
TAS	**Tashkent**	**4.25**	**334**	Pn	**Pn**	**01 47 48.2**	**+0.9**
AML	**Almayashu**	**4.85**	**18**	P	**Pn**	**01 47 58.1**	**+2.3**
	SNR=235						
NRN	**Naryn**	**5.12**	**39**	Pn	**Pn**	**01 48 00.9**	**+1.5**
UCH	**Uchtor**	**5.17**	**24**	P	**Pn**	**01 48 02.8**	**+2.5**
	SNR=15						
EKS2	**Erkin-Say**	**5.37**	**16**	P	**Pn**	**01 48 05.8**	**+3.1**
	SNR=12						
JMU	**Jammu**	**5.45**	**151**	*i* Sg	**Sn**	**01 49 02.2**	**-2.8**
AAK	**Ala-Archa**	**5.54**	**22**	P	**Pn**	**01 48 08.0**	**+3.0**
	SNR=14						
AAK	**Ala-Archa**	**5.54**	**22**	P	**Pn**	**01 48 07.3**	**+2.3**
	12nm,0.3s,baz=207,slow=8.3,SNR=32						
AAK				S	**Sn**	**01 49 07.6**	**+0.3**
	14nm,0.5s,baz=154,slow=22,SNR=14						
AAK	**Ala-Archa**	**5.54**	**22**	Pn	**Pn**	**01 48 07.1**	**+2.1**
KK31	**Karatay Array**	**5.66**	**351**	Pn	**Pn**	**01 48 08.3**	**+1.9**
KK31	**Karatay Array**	**5.66**	**351**	P	**Pn**	**01 48 08.3**	**+1.9**
	11nm,0.3s,baz=171,slow=12,SNR=358						
KK31				S	**Sn**	**01 49 09.5**	**-0.5**
	26nm,0.3s,baz=173,slow=23,SNR=14						
KKAR	**Karatay Array**	**5.66**	**351**		**Pn**	**01 48 08.3**	**+1.9**
CHMS	**Chumysh**	**5.94**	**22**	P	**Pn**	**01 48 13.1**	**+2.7**
	SNR=9.2						
CHMS	**Chumysh**	**5.94**	**22**	⇓P	**Pn**	**01 48 13.0**	**+2.7**
	7.7nm,0.5s						
CHMS				⇑S	**Sn**	**01 49 17.1**	**+0.1**
	27nm,0.7s						
THN	**Thein Dam**	**6.04**	**146**	*e*P	**Pn**	**01 48 13.4**	**+1.9**
THN				*e*S	**Sn**	**01 49 16.5**	**-2.8**
THN				*e*S	**Sn**	**01 49 16.5**	**-2.8**
USP	**Ospenovka**	**6.12**	**19**	P	**Pn**	**01 48 14.8**	**+2.0**
	SNR=10						
TKM2	**Tokmak 2**	**6.16**	**28**	P	**Pn**	**01 48 16.1**	**+2.7**
	SNR=11						
TKM2	**Tokmak 2**	**6.16**	**28**	⇑P	**Pn**	**01 48 16.0**	**+2.7**
	1.7nm,0.3s						
TKM2				⇓S	**Sn**	**01 49 22.8**	**+0.3**
	11nm,0.9s						
TARG	**Taragay, Kyrgy**	**6.30**	**46**		**Pn**	**01 48 16.7**	**+1.2**
BHK	**Bhakra**	**7.21**	**146**	*e*S	**Sn**	**01 49 43.9**	**-4.1**
SMLA	**Simla**	**7.80**	**143**	*e*P	**Pn**	**01 48 35.3**	**-0.2**
SMLA				*e*S	Sn	01 49 54.9	-7.2
SMLA				IAML		01 50 01.3	
	comp=E,134nm,0.4s						
SMLA				IAML		01 50 04.2	
	comp=N,130nm,0.2s						
NDI	**New Delhi**	**9.94**	**151**	*e*P	Pn	01 49 03.0	-1.6
NDI				*ex*	**Sn**	**01 50 50.0**	**-4.3**
GEYT	**Alibeck**	**10.79**	**276**	P	**Pn**	**01 49 14.9**	**-1.4**
	comp=N,4.9nm,0.3s,baz=126,slow=9.5,SNR=52						
GEYT				S	**Sn**	**01 51 08.9**	**-6.1**
	comp=N,8.4nm,0.5s,baz=127,slow=22,SNR=9.8						
MKAR	**Makanchi Array**	**12.13**	**37**	P	**Pn**	**01 49 34.4**	**+0.3**
	comp=N,0.8nm,0.7s,baz=231,slow=18,SNR=3.6						
DANN	**Dangsing**	**13.61**	**129**	*e*P	Pn	01 49 51.2	-2.8
	comp=N,11nm,0.2s						
KOLN	**Koldanda**	**13.93**	**131**	*e*P	Pn	01 49 55.9	-2.2
	comp=N,0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**13.98**	**18**	P	**Pn**	**01 49 58.0**	**-0.2**
	comp=N,0.5nm,0.2s,baz=210,slow=12,SNR=4.4						
KURBB				S	**Sn**	**01 52 30.9**	**-1.0**
	comp=N,0.5nm,0.3s,baz=203,slow=35,SNR=1.8						
GKN	**Gorkha**	**14.41**	**127**	*e*P	Pn	01 50 01.7	-2.4
	comp=N,13nm,0.3s						
AB31	**Akbulak array**	**14.51**	**328**	⇑P	**Pn**	**01 50 03.0**	**-2.1**
	comp=N,0.9nm,0.4s,baz=143,slow=12,SNR=39						
ABKAR	**Akbulak array**	**14.51**	**328**	Pn	**Pn**	**01 50 03.9**	**-1.2**
DMN	**Daman**	**14.98**	**127**	*e*P	**Pn**	**01 50 08.6**	**-2.9**
	comp=N,6.3nm,0.3s						
BHPL	**Bhopal**	**15.05**	**159**	*e*P	**Pn**	**01 50 15.6**	**+3.4**
PKIN	**Phulchoki**	**15.18**	**127**	*e*P	**Pn**	**01 50 12.6**	**-1.5**
	comp=N,5.6nm,0.3s						
PKI	**Pulchoki**	**15.20**	**127**	*e*P	**Pn**	**01 50 12.0**	**-2.3**
	comp=N,3.4nm,0.2s						
GUN	**Gumba**	**15.27**	**125**	*e*P	**Pn**	**01 50 12.1**	**-3.2**
	comp=N,13nm,0.6s						
BVA0	**Borovoye Array**	**15.54**	**357**	P	**Pn**	**01 50 17.9**	**-0.2**
	comp=N,5.7nm,0.8s,baz=157,slow=11,SNR=19						
BVAR	**Borovoye Array**	**15.54**	**357**	P	**Pn**	**01 50 17.5**	**-0.6**
	comp=N,0.8nm,0.6s,baz=162,slow=13,SNR=11						
BVAR				S	**Sn**	**01 53 03.9**	**-5.8**
	comp=N,0.5nm,0.4s,baz=166,slow=24,SNR=3.6						
BRVK	**Borovoye**	**15.58**	**357**	Pn	**Pn**	**01 50 18.5**	**0.0**
BRVK				IAmb	IAmb	01 50 24.0	
	comp=Z,5.8nm,0.7s						
JIRN	**Jiri**	**15.64**	**125**	*e*P	**Pn**	**01 50 17.0**	**-2.9**
	comp=Z,11nm,0.3s						
AKTO	**Aktyubinsk**	**16.22**	**327**	P	**Pn**	**01 50 26.1**	**-0.4**
	comp=Z,13nm,0.5s,baz=132,slow=12,SNR=33						
AKTO				S	**Sn**	**01 53 16.6**	**-10**
	comp=Z,2.2nm,0.6s,baz=147,slow=18,SNR=3.9						
AKTO	**Aktyubinsk**	**16.22**	**327**	⇑P	**Pn**	**01 50 27.2**	**+0.6**
	comp=Z,19nm,0.7s						
RAMN	**Ramite**	**16.39**	**126**	*e*P	**Pn**	**01 50 27.1**	**-2.0**
	comp=Z,6.0nm,0.3s						
ZAA0	**Zalesovo Array**	**18.75**	**25**	P	**P**	**01 50 55.4**	**-0.2**
ZALV	**Zalesovo Beam**	**18.75**	**25**	P	**P**	**01 50 56.8**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=213,slow=11,SNR=16						
ZALV	**Zalesovo Beam**	**18.75**	**25**	P	**P**	**01 50 55.1**	**-0.5**
ARU	**Arti**	**20.88**	**339**	P	**P**	**01 51 20.4**	**+1.7**
	comp=Z,5.9nm,0.6s,baz=171,slow=8.3,SNR=12						
	comp=Z,5.9nm,0.6s						
ARU	**Arti**	**20.88**	**339**	P	**P**	**01 51 18.3**	**-0.3**
ARU				IAmb	IAmb	01 51 23.8	
	comp=Z,7.4nm,0.8s						
GNI	**Garni**	**21.16**	**286**	P	**P**	**01 51 24.8**	**+2.8**
	comp=Z,6.4nm,0.6s,baz=86,slow=0.7,SNR=9.8						
KBZ	**Khabaz**	**22.68**	**295**	P	**P**	**01 51 37.7**	**0.0**
	comp=Z,1.9nm,0.9s,baz=101,slow=10,SNR=2.7						
	comp=Z,1.9nm,0.9s						
BRTR	**Keskin Array B**	**29.70**	**286**	P	**P**	**01 52 43.6**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=90,slow=8.4,SNR=8.2						
	comp=Z,0.7nm,0.6s						
AKASG	**Malin Array Be**	**32.78**	**307**	P	**P**	**01 53 09.3**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=110,slow=8.3,SNR=10						
	comp=Z,1.1nm,0.5s						
AKBB	**Malin Array Si**	**32.78**	**307**	P	**P**	**01 53 08.9**	**+0.8**
AKBB				IAmb	IAmb	01 53 11.0	
	comp=Z,3.6nm,0.7s						
MLR	**Muntele Rosu**	**34.81**	**298**	P	**P**	**01 53 28.1**	**+2.2**
BURAR	**Bucovina Array**	**35.24**	**302**	P	**P**	**01 53 31.0**	**+1.4**
BURAR				IAmb	IAmb	01 53 33.3	
	comp=Z,1.6nm,0.9s						
FINES	**FINESS Array B**	**36.98**	**325**	P	**P**	**01 53 44.9**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=119,slow=8.6,SNR=21						
	comp=Z,1.6nm,0.4s						
ARCES	**ARCESS Array B**	**40.44**	**337**	P	**P**	**01 54 14.4**	**+1.5**
	comp=Z,9.8nm,1.1s,baz=125,slow=7.8,SNR=12						
	comp=Z,9.8nm,1.1s						
GERES	**GERESS Array B**	**42.83**	**304**	P	**P**	**01 54 35.0**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=88,slow=8.9,SNR=2.4						
	comp=Z,0.2nm,0.6s						
CLL	**Collm**	**43.02**	**308**	*i* P	**P**	**01 54 36.1**	**+2.0**
CLL				*i* pP	**pP**	**01 54 59.0**	**+0.6**
NB2	**NORSAR Subarra**	**43.93**	**322**	P	**P**	**01 54 42.8**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**43.93**	**322**	P	**P**	**01 54 42.2**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=93,slow=7.7,SNR=9.4						
	comp=Z,2.1nm,0.7s						
KMBO	**Kilima Mbogo**	**49.95**	**228**	P	**P**	**01 55 29.0**	**0.0**
	comp=Z,0.1nm,0.6s,baz=39,slow=19,SNR=3.2						
ESDC	**Sonseca Array**	**57.50**	**298**	P	**P**	**01 56 24.6**	**+1.0**
	comp=Z,1.0nm,0.9s,baz=55,slow=7.6,SNR=8.7						
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**66.33**	**269**	P	**P**	**01 57 23.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=49,slow=5.6,SNR=9.7						
	comp=Z,0.5nm,0.5s						

RSNC 16 01:46:45.9±1.0, 6°.81N×73°.15W, h147km±4km, ML3.3, Mw3.6, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**189**	⇓*i*P	Pn	01 47 05.8	-0.4
BARC				*e*S	Sn	01 47 20.5	-1.1
BARC				*i*		01 47 21.6	
	comp=Z,656nm,0.3s						
BRRC	**Barranca, Sant**	**0.63**	**298**	⇑*i*P	Pn	01 47 07.5	-0.1
BRRC				*e*S	Sn	01 47 24.6	+0.4
BRRC				*i*		01 47 27.5	
	comp=Z,453nm,0.4s						
PAMC	**Pamplona, Colo**	**0.69**	**40**	*e*P	Pn	01 47 08.7	+0.1
PAMC				*e*S	Sn	01 47 25.7	-0.1
PAMC				*i*		01 47 28.4	
	comp=Z,191nm,0.5s						
RUSC	**La Rusia**	**0.92**	**176**	*e*P	Pn	01 47 09.8	-0.4
RUSC				*e*S	Sn	01 47 28.3	-0.5
RUSC				*i*		01 47 30.3	
	comp=Z,165nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*e*P	Pn	01 47 12.2	-1.2
PTBC				*e*S	Sn	01 47 33.5	-1.0
PTBC				*i*		01 47 34.5	
	comp=Z,209nm,0.2s						
TAMC	**Tame, Arauca**	**1.40**	**105**	⇓*i*P	Pn	01 47 14.2	0.0
TAMC				*e*S	Sn	01 47 35.7	-0.1
OCAC	**Ocana**	**1.43**	**353**	*e*P	Pn	01 47 13.9	-0.8
OCAC				*e*S	Sn	01 47 35.8	-0.9
OCAC				*i*		01 47 40.4	
	comp=Z,645nm,0.3s						
SPBC	**San Pablo de B**	**1.47**	**219**	*e*P	Pn	01 47 14.6	-0.4
SPBC				*e*S	Sn	01 47 36.6	-0.7
SPBC				*i*		01 47 39.3	
	comp=Z,318nm,0.2s						
NORC	**Norcasia**	**2.11**	**234**	*e*P	Pn	01 47 21.9	-0.3
NORC				*e*S	Sn	01 47 49.4	-0.8
NORC				*i*		01 47 55.7	
	comp=Z,183nm,0.5s						
CHIC	**Chingaza**	**2.24**	**195**	*e*P	Pn	01 47 24.2	0.0
CHIC				*e*S	Sn	01 47 53.9	+0.3
CHIC				*i*		01 47 58.0	
	comp=Z,97nm,0.3s						
ROSC	**El Rosal**	**2.28**	**211**	*e*P	Pn	01 47 25.7	+1.1
ROSC				*e*S	Sn	01 47 56.8	+2.5
ROSC				*i*		01 48 02.7	
	comp=Z,192nm,0.3s						
HELC	**Santa Helena**	**2.45**	**256**	*e*P	Pn	01 47 26.4	-0.2
HELC				*e*S	Sn	01 47 57.5	-0.3
HELC				*i*		01 48 06.1	
	comp=Z,99nm,0.3s						
SOCV	**Socops**	**2.70**	**57**	*e*P	Pn	01 47 28.6	-0.8
SOCV				*e*S	Sn	01 48 01.1	-1.9
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*e*P	Pn	01 47 30.2	+0.2
GUY2C				*e*S	Sn	01 48 04.1	+0.2
GUY2C				*i*		01 48 14.2	
	comp=Z,124nm,0.5s						
VILC	**Villavicencio,**	**2.74**	**191**	*e*P	Pn	01 47 29.5	-0.5
VILC				*e*S	Sn	01 48 03.2	-0.8
VILC				*i*		01 48 14.3	
	comp=Z,131nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.78**	**159**	*e*P	Pn	01 47 29.1	-1.4
PTGC				*e*S	Sn	01 48 02.6	-2.3
PTGC				*i*		01 48 04.7	
	comp=Z,54nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*e*P	Pn	01 47 34.3	+1.0
CBOC				*e*S	Sn	01 48 09.5	-0.4
CBOC				*i*		01 48 19.3	
	comp=Z,37nm,0.7s						
DBBC	**Dabeiba**	**3.05**	**274**	*e*P	Pn	01 47 34.0	+0.2
DBBC				*e*S	Sn	01 48 07.1	-3.8
ANIL	**Santa Ana**	**3.22**	**224**	*e*P	Pn	01 47 37.5	+1.2
ANIL				*e*S	Sn	01 48 16.2	+1.1
ANIL				*i*		01 48 20.3	
	comp=Z,218nm,0.3s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	Pn	01 47 35.6	-0.4
ARGC				*e*S	Sn	01 48 14.1	-0.7
ARGC				*i*		01 48 25.7	
	comp=Z,25nm,0.2s						
PRAC	**Prado**	**3.53**	**209**	*e*P	Pn	01 47 36.5	-3.6
PRAC				*e*S	Sn	01 48 18.0	-4.0
PRAC				*i*		01 48 23.4	
	comp=Z,110nm,0.5s						
PLMC	**San Jos del P**	**3.65**	**239**	*e*P	Pn	01 47 41.4	-0.2
PLMC				*e*S	Sn	01 48 24.6	-0.2
PLMC				*i*		01 48 29.8	
	comp=Z,40nm,0.2s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P	Pn	01 47 39.9	-2.0
SJCC				*e*S	Sn	01 48 20.7	-4.5
SJCC				*i*		01 48 35.8	
	comp=Z,44nm,0.6s						
LCBC	**Los crdobas,**	**3.78**	**303**	*e*S	Sn	01 48 27.9	+0.1
LCBC				*i*		01 48 31.5	
	comp=Z,53nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.19**	**4**	*e*P	Pn	01 47 46.1	-2.6
CRJC				*e*S	Sn	01 48 34.6	-3.0
CRJC				*i*		01 48 44.6	
	comp=Z,31nm,0.2s						
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	Pn	01 47 48.5	-1.2
GUVC				*e*S	Sn	01 48 36.8	-2.5
GUVC				*i*		01 48 41.7	
	comp=Z,29nm,0.3s						
GARC	**Garzon, Huila**	**5.15**	**207**	*e*P	Pn	01 48 00.2	-1.4
GARC				*e*S	Sn	01 48 56.0	-4.6
GARC				*i*		01 49 01.6	
	comp=Z,25nm,0.2s						

TIR ***16*** *02:18:43.7, 39°.74N×20°.75E, h10km±1km, Ml4.1*
THE ***16*** *02:18:44.8, 39°.74N×20°.73E, h0km±2km, ML3.8/10, Error ellipse: s-maj=2.6km s-min=0.6km az=242.0*
ATH ***16*** *02:18:44.5, 39°.75N×20°.70E, h15km±2km, ML4.0/18, Error ellipse: s-maj=2.1km s-min=1.0km az=305.0*
ROM ***16*** *02:18:45.6, 39°.82N×20°.64E, h10km, mb4.4/11, Mwp4.3/3, Error ellipse: s-maj=2.0km s-min=1.7km az=206.0*
NEIC ***16*** *02:18:46.9±1.4, 39°.79N±0°.05×20°.64E±0°.04, h42km±11km, Error ellipse: s-maj=7.9km s-min=3.9km az=205.0*
IDC ***16*** *02:18:48.3±1.7, 39°.85N×20°.64E, h57km±17km, mb4.0/21, mbtmp4.1/31, ML3.7/9, Error ellipse: s-maj=13.5km s-min=11.6km az=160.0*
ISC 16 02:18:43.9±0.7, 39°.73N±0°.02×20°.72E±0°.02, h19km±2km, n292, σ1$80/322, mb4.3/29, 33C-29D, Greece-Albania

border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.12**	**128**	P	**Pg**	**02 18 47.8**	**-0.2**
JAN				S	**Sg**	**02 18 51.1**	**+0.3**
	120μm,0.5s						
JAN	**Janina**	**0.12**	**128**	P	**Pg**	**02 18 47.8**	**-0.2**
JAN				S	**Sg**	**02 18 51.1**	**+0.3**
JAN				AML	AML	02 18 51.3	
JAN				AML	AML	02 18 51.4	
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**02 18 51.5**	**-0.1**
IGT				S	**Sb**	**02 18 58.1**	**+0.9**
	32μm,0.6s						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**02 18 51.8**	**+0.1**
	baz=239						
IGT				S	**Sb**	**02 18 57.9**	**+0.6**
	baz=239						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**02 18 51.2**	**-0.4**
IGT				S	**Sg**	**02 18 57.2**	**+0.4**
IGT				AML	AML	02 18 59.9	
	comp=N,59344μm,0.3s						
IGT				AML	AML	02 19 01.7	
	comp=E,82103μm,0.6s						
LSK	**Leskovik**	**0.43**	**347**	P	**Pb**	**02 18 53.2**	**+0.2**
LSK	**Leskovik**	**0.43**	**347**	P	**Pb**	**02 18 53.3**	**+0.3**
	baz=345						
LSK				S	**Sg**	**02 18 59.2**	**+0.5**
	baz=345						
LSK				AMP			
	comp=E,113nm,1.0s,baz=345						
KPRO	**Kipourio**	**0.54**	**66**	P	**Pb**	**02 18 55.3**	**+0.5**
KPRO				S	**Sb**	**02 19 03.9**	**+1.7**
	comp=E,23μm,0.4s						
PENT	**Pentalofos**	**0.56**	**35**	P	**Pb**	**02 18 55.6**	**+0.4**
PENT				S	**Sn**	**02 19 05.0**	**-0.9**
PENT	**Pentalofos**	**0.56**	**35**	P	**Pb**	**02 18 55.6**	**+0.4**
PENT				S	**Sg**	**02 19 02.8**	**0.0**
PENT				AML	AML	02 19 08.2	
	comp=E,20694μm,0.7s						
PENT				AML	AML	02 19 12.3	
	comp=N,4860μm,0.5s						
SRN	**Sarande**	**0.58**	**285**	P	**Pg**	**02 18 55.3**	**-0.1**
SRN				S	**Sb**	**02 19 04.5**	**+1.4**
	comp=N,13μm,0.5s						
SRN	**Sarande**	**0.58**	**285**	P	**Pg**	**02 18 55.5**	**0.0**
	baz=285						
SRN				S	**Sb**	**02 19 04.4**	**+1.4**
	baz=285						
SRN				AMP			
	comp=N,46nm,0.6s,baz=285						
KASA	**Kassiopi**	**0.61**	**271**	P	**Pb**	**02 18 55.8**	**-0.1**
KASA				S	**Sg**	**02 19 04.4**	**+0.3**
KASA				AML	AML	02 19 06.8	
	comp=E,33753μm,0.4s						
KASA				AML	AML	02 19 07.0	
	comp=N,40155μm,0.4s						
KEK	**Kerkira**	**0.71**	**269**	Pg	**Pb**	**02 18 57.2**	**-0.4**
KEK	**Kerkira**	**0.71**	**269**	P	**Pb**	**02 18 57.3**	**-0.4**
KEK	**Kerkira**	**0.71**	**269**	⇓P	**Pb**	**02 18 57.3**	**-0.4**
KEK	**Kerkira**	**0.71**	**269**	P	**Pb**	**02 18 57.5**	**-0.3**
KEK				AML	AML	02 19 13.1	
	comp=N,23457μm,0.7s						
KEK				AML	AML	02 19 15.6	
	comp=E,26822μm,0.5s						
NEST	**Nestorio**	**0.72**	**20**	P	**Pg**	**02 18 58.5**	**+0.3**
NEST				S	**Sn**	**02 19 09.3**	**-0.6**
	comp=E,6μm,0.7s						
NEST	**Nestorio**	**0.72**	**20**	P	**Pg**	**02 18 58.5**	**+0.3**
NEST				AML	AML	02 19 14.9	
	comp=E,16948μm,0.9s						
NEST				AML	AML	02 19 20.4	
	comp=N,15911μm,0.4s						
KBN	**Korca**	**0.89**	**3**		**Pb**	**02 19 00.9**	**+0.1**
KBN	**Korca**	**0.89**	**3**	P	**Pb**	**02 19 01.0**	**+0.1**
KBN				S	**Sn**	**02 19 15.8**	**+1.8**
	comp=N,5μm,0.5s						
KBN	**Korca**	**0.89**	**3**	P	**Pb**	**02 19 01.3**	**+0.4**
	baz=1.0						
KBN				S	**Sn**	**02 19 14.6**	**+0.6**
	baz=1.0						
KBN				AMP			
	comp=N,20nm,0.5s,baz=1.0						
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pg**	**02 19 02.0**	**+0.3**
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pg**	**02 19 01.9**	**+0.3**
LKD2	**Lefkada island**	**0.94**	**183**	P	**Pg**	**02 19 02.4**	**+0.1**
LKD2				S	**Sn**	**02 19 17.3**	**+2.1**
	comp=N,7μm,0.7s						
LKD2	**Lefkada island**	**0.94**	**183**	P	**Pn**	**02 19 02.8**	**+0.6**
	baz=185						
LKD2				S	**Sn**	**02 19 16.3**	**+1.1**
	baz=185						
LKD2	**Lefkada island**	**0.94**	**183**	P	**Pg**	**02 19 02.5**	**+0.1**
LKD2				AML	AML	02 19 24.7	
	comp=N,15710μm,0.8s						
LKD2				AML	AML	02 19 29.4	
	comp=E,12595μm,0.7s						
KZN	**Kozani**	**0.99**	**54**	P	**Pb**	**02 19 02.6**	**+0.1**
KZN				S	**Sn**	**02 19 18.0**	**+1.7**
	comp=E,6μm,0.5s						
KZN	**Kozani**	**0.99**	**54**	P	**Pb**	**02 19 02.9**	**+0.4**
KZN				AML	AML	02 19 21.4	
	comp=N,9551μm,0.6s						
KZN				AML	AML	02 19 22.1	
	comp=E,15055μm,0.4s						
THL	**Klokotos Trika**	**1.01**	**99**	P	**Pb**	**02 19 02.7**	**-0.1**
THL				S	**Sg**	**02 19 16.7**	**-0.2**
	comp=E,5μm,0.7s						
THL	**Klokotos Trika**	**1.01**	**99**	P	**Pb**	**02 19 02.8**	**-0.1**
THL				AML	AML	02 19 23.4	
	comp=E,9069μm,0.6s						
THL				AML	AML	02 19 24.4	
	comp=N,9544μm,0.8s						
NYDR	**Nydri-Lefkada**	**1.02**	**181**	P	**Pb**	**02 19 03.4**	**+0.4**
NYDR				S	**Sn**	**02 19 19.5**	**+2.5**
	comp=N,5μm,0.6s						
DRAG	**Dragano-Lefkad**	**1.05**	**186**	P	**Pb**	**02 19 03.7**	**+0.1**
EVGI	**Lefkada island**	**1.11**	**183**	P	**Pb**	**02 19 05.1**	**+0.5**
EVGI	**Lefkada island**	**1.11**	**183**	P	**Pb**	**02 19 05.1**	**+0.5**
TYRN	**Tyrnavos**	**1.16**	**91**	P	**Pn**	**02 19 05.5**	**+0.3**
EVR	**Evrytania**	**1.17**	**134**	P	**Pb**	**02 19 06.3**	**+0.6**
EVR	**Evrytania**	**1.17**	**134**	P	**Pb**	**02 19 06.3**	**+0.6**
VLO	**Vlora**	**1.19**	**308**		**Pn**	**02 19 06.1**	**+0.5**
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**02 19 07.8**	**+0.8**
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**02 19 08.5**	**+1.4**
	baz=308						
VLO				S	**Sg**	**02 19 25.3**	**+2.6**
	baz=308						
VLO				AMP			
	comp=N,46nm,0.4s,baz=308						
KTI	**Kastanea**	**1.25**	**58**	P	**Pb**	**02 19 07.7**	**+0.6**
PVO	**Paravola**	**1.28**	**151**	P	**Pg**	**02 19 09.9**	**+1.3**
PVO	**Paravola**	**1.28**	**151**	P	**Pg**	**02 19 08.9**	**+0.3**
FSK	**Fiskardo**	**1.28**	**186**	P	**Pg**	**02 19 09.0**	**+0.3**
FSK	**Fiskardo**	**1.28**	**186**	P	**Pg**	**02 19 08.7**	**0.0**
FSK				AML	AML	02 19 29.9	
	comp=N,6581μm,0.7s						
FSK				AML	AML	02 19 30.1	
	comp=E,11545μm,0.8s						
LRSO	**Larissa Observ**	**1.29**	**92**	P	**Pb**	**02 19 08.1**	**+0.6**
LRSO	**Larissa Observ**	**1.29**	**92**	P	**Pb**	**02 19 08.5**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pg**	**02 19 09.2**	**0.0**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pg**	**02 19 09.2**	**0.0**
MAKR				AML	AML	02 19 34.1	
	comp=N,17836μm,0.4s						
MAKR				AML	AML	02 19 36.8	
	comp=E,20671μm,0.5s						
LIT	**Litokhoron**	**1.41**	**74**	Pn	**Pg**	**02 19 11.1**	**0.0**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pb**	**02 19 09.6**	**0.0**
**

PHP Peshkopia 1.96 354 P Pb 02 19 19.9 +0.8
baz=354
PHP S **Sg** 02 19 45.9 -1.2
baz=354
PHP AMP
comp=N,6.0nm,0.8s,baz=354
NEO Neokhori 1.98 102 P **Pb** 02 19 18.5 -0.9
NEO Neokhori 1.98 102 P **Pb** 02 19 18.7 -0.7
HORT Hortiatis 2.02 64 P **Pb** 02 19 18.9 -1.1
HORT Hortiatis 2.02 64 P **Pb** 02 19 18.9 -1.1
KLV Kalavryta, Ach 2.02 146 P **Pb** 02 19 20.6 +0.5
LTHK Lithakia 2.02 177 P **Pb** 02 19 19.6 -0.5
LKR Lokris 2.07 121 P **Pb** 02 19 20.4 -0.5
KNT Kendrikon 2.19 49 P **Pb** 02 19 21.1 +1.8
THAL Thalero 2.27 138 P **Pb** 02 19 23.4 -0.9
SOH Sokhos 2.29 61 P **Pb** 02 19 23.3 -1.3
LOUT Loutraki 2.48 134 P **Pb** 02 19 26.1 -1.7
VILL Villia 2.56 127 P **Pb** 02 19 27.6 -1.6
OUR Ouranopolis 2.57 75 P **Pn** 02 19 26.6 +2.0
SRS Serrai 2.59 57 P **Pn** 02 19 26.8 +2.0
ITM Ithomi 2.72 159 Pn **Pn** 02 19 28.7 +2.0
ITM Ithomi 2.72 159 ⇓P **Pb** 02 19 29.9 -2.0
KOKK Kokkinochori, 2.73 66 P **Pn** 02 19 28.8 +2.1
KYMI Kymi, Euboea I 2.84 112 P **Pb** 02 19 32.0 -2.1
NVR Nevrokopi 2.88 55 P **Pn** 02 19 31.1 +2.2
PDG Podgorica 2.91 338 ⇓P **Pn** 02 19 31.6 +2.4
PDG Podgorica 2.91 338 Pn **Pn** 02 19 29.6 +0.3
PDG Podgorica 2.91 338 ⇑P **Pn** 02 19 30.9 +1.7
ATH Athens Observa 2.92 126 P **Pn** 02 19 32.6 +3.2
PYL PYLOS 2.94 164 P **Pn** 02 19 31.8 +2.1
ATHU Athens Univers 2.97 125 P **Pn** 02 19 32.9 +2.8
PTL Penteli 2.97 123 P **Pn** 02 19 33.4 +3.3
DION Dionisos Attik 3.00 122 P **Pn** 02 19 33.8 +3.3
KRND KRANIDI 3.02 140 P **Pn** 02 19 33.1 +2.4
VLY Voula,Athens 3.05 127 P **Pn** 02 19 33.9 +2.8
TIP Timpagrande 3.12 261 ⇓P **Pn** 02 19 32.5 +0.4
TIP Timpagrande 3.12 261 Pn **Pn** 02 19 32.2 +0.1
TIP Timpagrande 3.12 261 ⇑P **Pn** 02 19 33.0 +0.8
KAVA Kavala 3.16 65 P **Pn** 02 19 34.6 +2.0
MATE Matera 3.21 288 ⇓P **Pn** 02 19 34.2 +0.9
VTS Vitosha 3.45 33 Pn **Pn** 02 19 38.6 +1.8
VTS Vitosha 3.45 33 ⇓P **Pn** 02 19 39.4 +2.6
VLI Veliai 3.48 149 P **Pn** 02 19 39.5 +2.5
CUC Castrocucco 3.79 275 Pn **Pn** 02 19 42.7 +1.4
KTHR Kythira 3.91 152 P **Pn** 02 19 46.5 +3.5
RDO Rodhopi 3.94 67 **Pn** 02 19 44.9 +1.6
RDO Rodhopi 3.94 67 P **Pn** 02 19 45.2 +1.9
RDO Rodhopi 3.94 67 ⇓P **Pn** 02 19 45.2 +1.9
CEL Celeste 4.04 250 **Pn** 02 19 44.7 -0.1
CEL Celeste 4.04 250 ⇑P **Pn** 02 19 45.6 +0.8
BLKB Belogradchik 4.15 20 ⇓P **Pn** 02 19 49.7 +3.4
ALN Alexandroupoli 4.23 72 Pn **Pn** 02 19 49.4 +2.0
ALN Alexandroupoli 4.23 72 P **Pn** 02 19 49.2 +1.8
ALN Alexandroupoli 4.23 72 ⇓P **Pn** 02 19 49.5 +2.1
SGRT San Giovanni R 4.29 300 **Pn** 02 19 48.7 +0.5
PRK Paraskevi 4.32 95 P Pn 02 19 53.6 +5.0
DIVS Divibare 4.39 353 Pn **Pn** 02 19 50.5 +0.8
DIVS Divibare 4.39 353 ⇑P **Pn** 02 19 51.1 +1.4
APE Apeiranthos 4.62 124 ⇓P **Pn** 02 19 56.4 +3.6
DKL Dikili 4.83 96 ⇑P **Pn** 02 19 59.8 +4.2
PAOL Paolisi 4.88 287 **Pn** 02 19 56.3 0.0
HERR Herculane 5.29 13 ⇓P **Pn** 02 20 05.2 +3.2
VAE Valguarnera 5.43 247 P **Pn** 02 20 05.5 +1.5
comp=N,6.7nm,0.7s,baz=168,slow=9.3,SNR=2.1
VAE S **Sn** 02 21 03.8 -2.2
comp=N,20nm,0.4s,baz=359,slow=21,SNR=4.1
FRGS Fruska Gora 5.46 353 ⇓P **Pn** 02 20 06.2 +1.9
IDI Anoyia 5.54 142 ⇓P **Pn** 02 20 08.1 +2.7
IDI Anoyia 5.54 142 P **Pn** 02 20 05.3 -0.1
comp=N,4.0nm,0.3s,baz=270,slow=23,SNR=18
IDI S **Sn** 02 21 05.9 -2.7
comp=N,13nm,0.3s,baz=85,slow=21,SNR=8.0
INTR Introdacqua 5.65 296 Pn **Pn** 02 20 07.7 +0.8
BLY Banja Luka 5.66 333 ⇑P **Pn** 02 20 07.9 +0.9
HUMR Humele 5.74 32 ⇑P **Pn** 02 20 11.5 +3.4
GZR Gura Zlata 5.86 14 ⇑P **Pn** 02 20 12.6 +2.9
BZS Buzias 5.92 6 ⇓P **Pn** 02 20 13.2 +2.7
SGRR Singureni 5.95 39 ⇑P Pn 02 20 15.9 +4.9
AQU L'Aquila 6.12 298 **Pn** 02 20 14.4 +1.0
AQU L'Aquila 6.12 298 ⇑P **Pn** 02 20 15.4 +2.0
LOT Lotru 6.14 20 ⇑P **Pn** 02 20 16.9 +3.2
ARR Arges 6.33 26 ⇑P **Pn** 02 20 19.3 +3.0
VOIR 6.53 28 ⇑P **Pn** 02 20 22.7 +3.7
SIRR Siria 6.57 6 ⇓P **Pn** 02 20 22.4 +3.0
SECR 6.61 35 ⇑P **Pn** 02 20 24.5 +4.5
AMBH Ambrzfalva 6.61 0 P Pb 02 20 32.3 -6.0
KOVH Kovagotottos 6.64 344 P **Pn** 02 20 21.5 +1.1
KOVH S **Sn** 02 21 33.2 -2.3
MORH Mrgy, Hungar 6.65 347 ⇑P **Pn** 02 20 21.5 +0.9
MORH Mrgy, Hungar 6.65 347 P **Pn** 02 20 21.6 +0.9
MORH S **Sn** 02 21 33.0 -2.9
CESX Cesi 6.78 298 **Pn** 02 20 22.4 0.0
ISR Istrita 6.89 37 ⇓P **Pn** 02 20 27.8 +3.8
MLR Muntele Rosu 6.92 32 ⇓P **Pn** 02 20 28.8 +4.4
MLR Muntele Rosu 6.92 32 P **Pn** 02 20 29.2 +4.8
comp=N,20nm,0.7s,baz=354,slow=7.9,SNR=38
MLR S **Sn** 02 21 48.1 +5.4
comp=N,4.3nm,0.4s,baz=322,slow=19,SNR=0.8
MLR Muntele Rosu 6.92 32 Pn **Pn** 02 20 27.1 +2.6
MURB Monte Urbino 7.09 302 **Pn** 02 20 27.2 +0.5
DOPR Dopca 7.11 27 ⇓P **Pn** 02 20 30.7 +3.7
DRGR 7.20 11 ⇑P **Pn** 02 20 31.8 +3.5
MGAB Montegabbione 7.22 299 ⇓P **Pn** 02 20 30.2 +1.8
CJR Cluj-Napoca 7.28 16 ⇑P **Pn** 02 20 33.1 +3.8
GRER 7.29 37 ⇓P **Pn** 02 20 34.0 +4.6
HARR Harsova 7.29 45 ⇓P **Pn** 02 20 32.8 +3.5
COVR Voineasa-Covas 7.32 32 ⇓P **Pn** 02 20 33.8 +4.1
BEHE Becsehely 7.33 338 P **Pn** 02 20 31.0 +1.1
OZUR 7.36 29 ⇑P **Pn** 02 20 35.2 +4.8
TIH Tihany 7.45 345 P **Pn** 02 20 33.0 +1.4
BORA Eskisehir 7.49 86 Pn **Pn** 02 20 31.8 -0.5
PLOR Plostina 7.51 34 ⇑P **Pn** 02 20 36.9 +4.5
VRI Vrincioaia 7.55 34 ⇓P **Pn** 02 20 37.2 +4.3
ODBI Odobesti 7.62 36 ⇓P **Pn** 02 20 38.2 +4.4
CFR Carcaliu 7.72 43 ⇑P **Pn** 02 20 39.1 +3.9
MPLH Magyarpolny 7.79 344 P **Pn** 02 20 38.4 +2.3
ARCR ARCALIA 7.81 19 ⇑P **Pn** 02 20 40.3 +3.8
ELL Elmali 7.82 110 **Pn** 02 20 38.2 +1.4
CSKK Cskako 7.83 348 P **Pn** 02 20 38.6 +1.8
TESR Tescani 8.04 31 ⇓P **Pn** 02 20 43.7 +4.1
SOKA Soboth 8.09 331 *i* Pn **Pn** 02 20 40.5 +0.1
comp=N,6.9nm,0.3s,SNR=37
OBKA Obir 8.14 328 *e*Pn **Pn** 02 20 41.7 +0.6
comp=N,9.4nm,0.4s,SNR=19
VLDR Vladesti 8.15 39 ⇑P **Pn** 02 20 46.0 +4.8
PSZ Piszkesteto 8.20 356 ⇓P **Pn** 02 20 44.1 +2.1
PSZ Piszkesteto 8.20 356 Pn **Pn** 02 20 42.6 +0.6
PSZ Piszkesteto 8.20 356 P **Pn** 02 20 45.3 +3.3
ARSA Arzberg 8.41 335 *i* Pn **Pn** 02 20 45.2 +0.5
comp=N,3.1nm,0.3s,SNR=12
ARSA Arzberg 8.41 335 ⇓P **Pn** 02 20 44.9 +0.2
TRPA Tarpa 8.49 8 ⇑P **Pn** 02 20 48.5 +2.7
TRPA Tarpa 8.49 8 P **Pn** 02 20 48.8 +3.0
BUR01 Bucovina Ar. S 8.52 21 ⇑P **Pn** 02 20 50.8 +4.4
BURAR Bucovina Array 8.52 21 ⇑P **Pn** 02 20 51.1 +4.8
BUR08 Bucovina Ar. S 8.54 21 **Pn** 02 20 45.8 -0.9
ABAH Abaujker 8.57 2 P **Pn** 02 20 50.1 +3.2
PTCC Patocco-Chiusa 8.57 323 ⇑P **Pn** 02 20 46.8 -0.3
RONA Rosalia, Austr 8.58 340 *e*Pn **Pn** 02 20 49.0 +1.9
comp=N,0.3nm,0.2s
CONA Conrad Observa 8.91 338 *e*Pn **Pn** 02 20 53.5 +1.8
comp=N,0.4nm,0.2s
KBA Koelnbreinsper 9.09 326 *e*Pn **Pn** 02 20 54.8 +0.6
comp=N,6.6nm,0.6s,SNR=6.6
KBA Koelnbreinsper 9.09 326 ⇑P **Pn** 02 20 55.2 +1.0
ABTA Abfaltersbach 9.22 322 *e*Pn **Pn** 02 20 55.9 0.0
comp=N,3.9nm,0.3s,SNR=18
MOA Molln 9.36 332 *e*Pn **Pn** 02 20 58.5 +0.8
comp=N,5.8nm,0.3s,SNR=21
JAVC Velka Javorina 9.38 348 *e*PN **Pn** 02 21 01.0 +2.9
BIOA Bad Ischl, Aus 9.46 330 *i* Pn **Pn** 02 21 00.1 +1.0
comp=N,5.7nm,0.3s,SNR=14
SALO Salr 9.54 311 ⇓P **Pn** 02 21 00.2 0.0
MAUC Maruska 9.85 349 *e*PN **Pn** 02 21 04.6 +0.1
KEST Kesra 9.86 250 P **Pn** 02 21 07.4 +2.7
comp=N,0.4nm,0.3s,baz=334,slow=4.0,SNR=12
KEST S **Sn** 02 22 53.4 -1.5
comp=N,5.4nm,1.2s,baz=38,slow=19,SNR=1.4
comp=N,4.8nm,0.7s
BR131 Keskin Array S 9.95 86 **Pn** 02 21 07.1 +1.1
BRTR Keskin Array B 9.95 86 P **Pn** 02 21 10.1 +4.0
comp=N,0.3nm,0.3s,baz=259,slow=12,SNR=18
BRTR S **Sn** 02 22 58.1 +0.8
comp=N,0.7nm,0.7s,baz=274,slow=23,SNR=0.9
comp=N,1.0nm,0.5s
WTTA Wattenberg 10.01 322 *i* Pn **Pn** 02 21 07.0 +0.3
comp=N,6.2nm,0.3s,SNR=25
WATA Walderalm 10.09 322 *i* Pn **Pn** 02 21 08.7 +0.9
comp=N,4.8nm,0.2s,SNR=21
CKRC Cesky Krumlov 10.18 335 *e*PN **Pn** 02 21 10.2 +1.2
SQTA Sankt Quirin 10.18 320 *i* Pn **Pn** 02 21 10.0 +0.9
comp=N,6.8nm,0.3s,SNR=17
FUORN Ofenpass-Fuorn 10.28 315 Pn **Pn** 02 21 09.8 -0.7
FETA Feichten 10.29 318 *e*Pn **Pn** 02 21 11.5 +0.9
comp=N,1.4nm,0.3s
MORC Moravsky Berou 10.29 348 **Pn** 02 21 11.2 +0.6
MORC Moravsky Berou 10.29 348 *e*PN **Pn** 02 21 11.4 +0.9
MOTA Moosalm 10.32 321 *i* Pn **Pn** 02 21 11.5 +0.5
comp=N,6.0nm,0.4s,SNR=15
GEC2 GERESS Array S 10.40 333 **Pn** 02 21 11.0 -1.1
GERES GERESS Array B 10.40 333 P **Pn** 02 21 11.8 -0.3
comp=N,0.8nm,0.3s,baz=157,slow=14,SNR=33
GERES S **Sn** 02 23 05.9 -2.2
comp=N,1.0nm,0.4s,baz=148,slow=25,SNR=5.1
comp=N,1.4nm,0.3s
DAVOX Davos/Dischmat 10.58 315 P **Pn** 02 21 15.8 +1.1
comp=N,1.4nm,0.3s,baz=141,slow=13,SNR=26
DAVOX S **Sn** 02 23 08.8 -3.9
comp=N,2.7nm,0.5s,baz=324,slow=23,SNR=2.1
comp=N,4.5nm,0.4s
RETA Reutte 10.59 320 *e*Pn **Pn** 02 21 14.3 -0.3
comp=N,3.2nm,0.5s
KHC Kasperske Hory 10.69 334 **Pn** 02 21 16.5 +0.6
KHC Kasperske Hory 10.69 334 *e*PN **Pn** 02 21 16.2 +0.2
KHC *e*SN **Sn** 02 23 12.1 -3.0
KHC Kasperske Hory 10.69 334 ⇓P **Pn** 02 21 17.0 +1.1
KRLC Kraliky 10.71 346 *e*PN **Pn** 02 21 17.5 +1.2
MONC Moncucco Torin 10.86 304 ⇑P **Pn** 02 21 20.5 +2.2
DAVA Damuels 10.90 317 *e*Pn **Pn** 02 21 20.3 +1.3
comp=N,1.9nm,0.4s
SENIN Lac Senin/Sane 11.84 308 Pn **Pn** 02 21 31.7 -0.2
BFO Black Forest 12.37 318 ⇑P **Pn** 02 21 38.5 -0.5
AKASG Malin Array Be 12.49 26 P **Pn** 02 21 41.7 +1.2
comp=N,0.3nm,0.3s,baz=210,slow=12,SNR=1.9
comp=N,0.4nm,0.5s
MMAI Mount Meron Ar 13.59 115 P **Pn** 02 21 55.3 -0.4
comp=N,0.7nm,0.4s,baz=302,slow=11,SNR=3.0
ASF Jabal al Asfar 15.10 115 P **P** 02 22 19.8 -1.7
comp=N,0.1nm,0.3s,baz=297,slow=4.5,SNR=2.9
comp=N,2.5nm,0.9s
EIL Elat 15.40 126 P **P** 02 22 24.7 0.0
comp=N,0.2nm,0.3s,baz=336,slow=18,SNR=1.9
comp=N,2.1nm,0.5s
NACGM Naroch 15.71 13 *e*P **Pn** 02 22 23.4 -0.7
baz=197
PABE Paberze 15.93 7 Pn **Pn** 02 22 25.3 -1.5
PABE IAmb IAmb 02 22 36.6
comp=Z,27nm,0.9s
KBZ Khabaz 17.01 69 P **P** 02 22 43.7 +1.2
comp=Z,0.1nm,0.3s,baz=79,slow=17,SNR=1.7
comp=Z,0.8nm,0.7s
ESDC Sonseca Array 18.98 278 P **Pn** 02 23 05.3 +0.2
comp=Z,0.1nm,0.3s,baz=73,slow=11,SNR=12
comp=Z,1.0nm,0.8s
HFS Hagfors 20.89 350 P **P** 02 23 24.3 -0.5
comp=Z,7.4nm,0.5s,baz=163,slow=11,SNR=28
comp=Z,7.4nm,0.5s
OSL Oslo 21.18 346 *e*P **P** 02 23 28.0 +0.1
OSL IAmb IAmb 02 23 30.1
comp=Z,14nm,0.8s
TAM Tamanrasset 21.26 222 P **P** 02 23 27.1 -2.1
TAM Tamanrasset 21.26 222 ⇑P **P** 02 23 34.7 +5.5
MDT Midelt 21.52 259 P **P** 02 23 32.0 +0.1
comp=Z,1.0nm,0.8s,baz=56,slow=5.5,SNR=3.6
comp=Z,1.0nm,0.8s
NC602 NORSAR Array S 21.79 348 *e*P **P** 02 23 34.4 -0.1
NC602 IAmb IAmb 02 23 34.5
comp=Z,30nm,1.1s
FINES FINESS Array B 21.98 7 P **P** 02 23 35.3 -1.2
comp=Z,4.0nm,0.4s,baz=174,slow=12,SNR=68
comp=Z,4.0nm,0.4s
FIA1 FINESS Array S 21.99 7 P **P** 02 23 36.3 -0.2
NB2 NORSAR Subarra 22.13 348 P **P** 02 23 37.6 -0.6
comp=Z,7.0nm,0.7s,baz=160,slow=11
NB2 NORSAR Subarra 22.13 348 P **P** 02 23 37.6 -0.6
baz=160,slow=11
NOA NORSAR Array B 22.13 348 P **P** 02 23 37.7 -0.4
comp=Z,11nm,1.0s,baz=233,slow=3.7,SNR=26
comp=Z,11nm,1.0s
EKA Eskdalemuir Ar 22.27 322 P **P** 02 23 39.1 -0.5
comp=Z,3.3nm,0.7s,baz=123,slow=9.7,SNR=10.0
comp=Z,3.3nm,0.7s
DOMB Dombas 23.44 346 *e*P **P** 02 23 52.1 +0.3
NSS Namsos 25.36 351 *e*P **P** 02 24 09.0 -0.5
RAYN Ar Rayn 26.45 120 P **P** 02 24 21.0 +1.2
AKTO Aktyubinsk 28.14 55 P **P** 02 24 34.5 -0.2
comp=Z,0.9nm,0.4s,baz=245,slow=8.8,SNR=4.3
comp=Z,0.9nm,0.4s
GEYT Alibeck 29.05 81 P **P** 02 24 43.0 +0.1
comp=Z,1.0nm,0.4s,baz=289,slow=8.8,SNR=3.3
comp=Z,1.0nm,0.4s
GEYT Alibeck 29.05 81 P **P** 02 24 43.4 +0.4
KTK1 Kautokeino 29.37 2 *e*P **P** 02 24 45.5 +0.1
KTK1 IAmb IAmb 02 24 53.7
comp=Z,84nm,2.1s
ARU Arti 29.80 43 P **P** 02 24 49.1 -0.2
comp=Z,1.5nm,0.3s,baz=252,slow=19,SNR=4.7
comp=Z,1.5nm,0.3s
ARA0 ARCESS Array S 29.97 3 *e*P **P** 02 24 50.1 -0.6
ARCES ARCESS Array B 29.97 3 P **P** 02 24 49.7 -1.0
comp=Z,3.4nm,0.5s,baz=189,slow=10,SNR=45
comp=Z,3.4nm,0.5s
TRO Tromso 29.98 359 *e*P **P** 02 24 50.5 -0.2
TOA0 Torodi Ar. Sit 31.35 218 P **P** 02 25 03.2 -0.1
TOA0 IAmb IAmb 02 25 07.8
comp=Z,3.5nm,0.7s
TORD Torodi Ar. Bea 31.35 218 P **P** 02 25 04.2 +0.8
comp=Z,2.8nm,0.6s,baz=31,slow=9.3,SNR=22
comp=Z,2.8nm,0.6s
TORD Torodi Ar. Bea 31.35 218 P **P** 02 25 03.8 +0.4
TORD IAmb IAmb 02 25 11.1
comp=Z,3.3nm,0.9s
HRA Herat 33.34 86 P **P** 02 25 20.6 -0.4
HRA IAmb IAmb 02 25 22.5
comp=Z,6.4nm,1.0s
KK31 Karatay Array 37.05 68 P **P** 02 25 53.3 +0.7
KK31 IAmb IAmb 02 25 54.6
comp=Z,4.4nm,1.1s
KKAR Karatay Array 37.05 68 P **P** 02 25 52.5 -0.1
KKAR IAmb IAmb 02 25 54.6
comp=Z,4.4nm,1.1s
SPITS Spitsbergen Ar 38.60 359 P **P** 02 26 05.0 -0.3
comp=Z,19nm,1.1s,baz=115,slow=8.4,SNR=1.5
comp=Z,19nm,1.1s
AAK Ala-Archa 40.00 68 P **P** 02 26 18.5 +0.9
comp=Z,1.9nm,0.7s,baz=228,slow=7.9,SNR=5.3
comp=Z,1.9nm,0.7s
NIL Nilore 42.06 81 P **P** 02 26 34.4 -0.1
NIL IAmb IAmb 02 26 49.1
comp=Z,4.2nm,0.9s
TARG Taragay, Kyrgy 42.62 68 P **P** 02 26 38.5 -0.9
MK31 Makanchi Array 44.37 60 P **P** 02 26 52.9 -0.1
MKAR Makanchi Array 44.37 60 P **P** 02 26 53.0 +0.1
comp=Z,6.4nm,0.5s,baz=278,slow=7.1,SNR=34
comp=Z,6.4nm,0.5s
MKAR Makanchi Array 44.37 60 P **P** 02 26 52.9 -0.1
ZAA0 Zalesovo Array 44.55 49 P **P** 02 26 54.0 -0.2
ZAA0 IAmb IAmb 02 26 55.4
comp=Z,3.6nm,1.0s
ZALV Zalesovo Beam 44.55 49 P **P** 02 26 53.9 -0.3
comp=Z,2.3nm,0.4s,baz=273,slow=8.8,SNR=9.1
comp=Z,2.3nm,0.4s
ZALV Zalesovo Beam 44.55 49 P **P** 02 26 53.5 -0.8
SCHQ Schefferville 57.43 317 P **P** 02 28 30.9 -0.3
comp=Z,1.8nm,0.5s,baz=141,slow=6.5,SNR=2.1
comp=Z,1.8nm,0.5s
SONM Songino Array 59.36 51 P **P** 02 28 44.5 -0.3
comp=Z,2.1nm,0.8s,baz=290,slow=7.9,SNR=9.4
comp=Z,2.1nm,0.8s
SONM Songino Array 59.36 51 P **P** 02 28 44.4 -0.5
BOSA Boshof 68.13 176 P **P** 02 29 43.3 +0.6
comp=Z,2.0nm,0.8s,baz=6.3,slow=9.2,SNR=1.6
comp=Z,2.0nm,0.8s
ILAR Eielson Array 75.38 355 P **P** 02 30 24.7 -1.1
comp=Z,0.5nm,0.7s,baz=12,slow=4.6,SNR=4.6
comp=Z,0.5nm,0.7s
KSRS Korea Array 78.22 51 P **P** 02 30 40.6 -1.7
comp=Z,2.0nm,0.6s,baz=314,slow=5.2,SNR=7.0
comp=Z,2.0nm,0.6s
MJAR Matsushiro Arr 84.79 46 P **P** 02 31 17.0 -0.1
comp=Z,1.4nm,0.4s,baz=344,slow=3.5,SNR=7.2
comp=Z,1.4nm,0.4s
TXAR Lajitas Array 94.01 314 P **P** 02 32 00.6 -0.5
comp=Z,0.5nm,0.8s,baz=60,slow=3.6,SNR=6.9
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 120.43 91 PKP **PKPdf** 02 37 32.2 -2.2
comp=Z,0.3nm,0.6s,baz=321,slow=1.8,SNR=1.6
ASAR Alice Springs 122.17 95 PKP **PKPdf** 02 37 35.1 -2.6
comp=Z,0.4nm,0.5s,baz=354,slow=1.9,SNR=3.9

IDC ***16*** *02:20:42.7±2.9, 2°.74S×138°.19E, h0km, mb3.9/2, mbtmp4.1/5, ML4.0/2, MS3.6/6, Error ellipse: s-maj=59.9km s-min=22.7km az=116.0*
NEIC ***16*** *02:20:51.1±0.6, 2°.8S±0°.1×138°.0E±0°.2, h53km±7km, mb4.2/12, Error ellipse: s-maj=24.9km s-min=19.0km az=70.0*
ISC 16 02:20:47.7±0.9, 2°.70S±0°.09×138°.2E±0°.1, h35km, n25, σ1§47/23, mb4.2/6, MS3.4/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**5.99**	**268**			**Pn**	**P**	**02 22 14.1**	**+0.2**
SIJI	**Sorong**	**7.21**	**285**		LR	LR		02 25 58.7	
comp=Z,424nm,20.1s,baz=218,slow=44									
PMG	**Port Moresby**	**11.09**	**127**		Pn	**Pn**	**P**	**02 23 23.5**	**-0.3**
11nm,0.8s,baz=35,slow=12,SNR=2.3									
PMG					LR	LR		02 28 59.2	
comp=Z,359nm,20.0s,baz=328,slow=45									
MTN	**Manton Dam**	**12.29**	**215**			**Pn**	**P**	**02 23 40.8**	**+0.5**
SOEI	**Soe**	**15.55**	**243**		Pn	**Pn**	**P**	**02 24 24.5**	**-0.1**
KNRA	**Kununurra**	**15.92**	**215**		Pn	**Pn**	**P**	**02 24 27.9**	**-1.3**
KNRA					IAmb	IAmb		02 24 53.1	
comp=Z,15nm,0.8s									
WB0	**Warramunga Arr**	**17.37**	**192**				**P**	**02 24 48.1**	**-0.5**
WB2	**Warramunga Arr**	**17.55**	**192**				**P**	**02 24 50.7**	**+0.1**
WRA	**Warramunga Arr**	**17.55**	**192**			**Pn**	**P**	**02 24 49.4**	**-0.3**
comp=Z,0.6nm,0.3s,baz=15,slow=13,SNR=19									
WRA					S	**Sn**		**02 28 00.1**	**-4.2**
comp=Z,5.0nm,0.9s,baz=13,slow=21,SNR=6.3									
comp=Z,2.6nm,0.6s									
WRA	**Warramunga Arr**	**17.55**	**192**				**P**	**02 24 50.9**	**+0.3**
KAPI	**Kappang**	**18.59**	**262**		LR	LR		02 33 48.0	
comp=Z,62nm,19.1s,baz=90,slow=42									
CTA	**Charters Tower**	**18.97**	**156**		P		**P**	**02 25 05.6**	**-0.5**
comp=Z,0.3nm,0.3s,baz=343,slow=9.4,SNR=2.2									
comp=Z,5.0nm,0.9s									
CTAO	**Charters Tower**	**18.97**	**156**		P	**Pn**	**P**	**02 25 07.9**	**+0.9**
CTAO					IAmb	IAmb		02 25 24.6	
comp=Z,30nm,1.4s									
AS31	**Alice Springs**	**21.26**	**191**				**P**	**02 25 31.4**	**+0.4**
AS31					IAmb	IAmb		02 25 49.7	
comp=Z,6.8nm,0.8s									
ASAR	**Alice Springs**	**21.26**	**191**		P		**P**	**02 25 32.0**	**+0.9**
comp=Z,6.6nm,0.8s,baz=22,slow=9.6,SNR=15									
ASAR					S		**S**	**02 29 29.5**	**+3.9**
comp=Z,2.7nm,1.0s,baz=5.0,slow=22,SNR=6.1									
ASAR					LR	LR		02 33 57.4	
comp=Z,166nm,21.0s,baz=356,slow=38									
comp=Z,2.6nm,0.8s									
ASAR	**Alice Springs**	**21.26**	**191**				**P**	**02 25 31.8**	**+0.7**
HNR	**Honiara**	**22.58**	**108**		LR	LR		02 35 10.9	
comp=Z,1μm,20.0s,baz=105,slow=38									
EIDS	**Eidsvold**	**25.70**	**152**		P		**P**	**02 26 15.9**	**+1.1**
STKA	**Stephens Creek**	**29.19**	**174**		P		**P**	**02 26 46.3**	**+0.3**
comp=Z,1.8nm,0.8s,baz=350,slow=9.5,SNR=3.2									
comp=Z,1.8nm,0.8s									
KSRS	**Korea Array**	**41.09**	**347**		LR	LR		02 44 57.6	
comp=Z,31nm,19.5s,baz=320,slow=35									
KBL	**Kabul**	**74.55**	**307**		P		**P**	**02 32 22.9**	**-0.6**
KK31	**Karatay Array**	**75.80**	**316**		P		**P**	**02 32 31.1**	**+0.8**
KK31					IAmb	IAmb		02 32 36.9	
comp=Z,3.7nm,1.4s									
KKAR	**Karatay Array**	**75.80**	**316**		P		**P**	**02 32 30.6**	**+0.3**
KKAR					IAmb	IAmb		02 32 36.9	
comp=Z,3.7nm,1.4s									
BRVK	**Borovoye**	**79.11**	**325**		P		**P**	**02 32 48.3**	**-0.3**
BRVK					IAmb	IAmb		02 32 59.2	
comp=Z,3.1nm,0.9s									
LPAZ	**La Paz**	**147.82**	**127**		PKPbc	**PKPbc**		**02 40 29.1**	**-1.6**
comp=Z,0.8nm,0.8s,baz=225,slow=2.9,SNR=2.1									

MOS ***16*** *02:21:00.3±1.4, 39°.72N×20°.55E, h13km, mb5.1/42, MS4.5/23, Error ellipse: s-maj=3.2km s-min=2.1km az=89.5*
BJI ***16*** *02:21:00.3±0.0, 40°.13N×20°.83E, h5km, mb4.8/48, mB5.0/26, Ms4.8/27, Ms7 4.5/27*
TIR ***16*** *02:21:01.9, 39°.73N×20°.73E, h5km±1km, Md4.2, Ml5.3*
BEO ***16*** *02:21:01.7±0.7, 39°.56N×20°.63E, h14km±4km, ML5.0/7*
ATH ***16*** *02:21:02.9, 39°.77N×20°.67E, h16km, Mw4.8, Moment Tensor Solution. s10 Moment tensor: Mrr1.57; Mθθ-1.05; Mφφ-0.52; Mrθ0.62; Mrφ1.33; Mθφ0.57; Fault plane solution: NP1:φs103.00000°, δ54.00000°, λ52.00000°. NP2:φs336.00000°, δ50.00000°, λ130.00000°.*
MED_RC ***16*** *02:21:02.0±0.2, 39°.75N×20°.69E, h28km, MWS.0/26, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s26,c47; Duration: 1§2 Moment tensor: Scale 10^16Nm; Mrr3.20±.16; Mθθ-2.73±.12; Mφφ-0.47±.10; Mrθ0.10±.12; Mθφ3.10±.06; Mφr1.14±.12; Best double couple: M0=4.33000×10^16 NP1:φs328.00000°, δ54.00000°, λ123.00000°. NP2:φs100.00000°, δ47.00000°, λ53.00000°. Principal axes: T 3.7200, Plg64.0000°, Azm297.0000°; N 1.2200, Plg26.0000°, Azm128.0000°; P -4.9400, Plg4.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
PDG ***16*** *02:21:03.1±0.7, 39°.77N×20°.60E, h12km±1km, MD5.1/11, ML5.0/11 Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
LDG ***16*** *02:21:03.2±0.2, 39°.76N×20°.56E, h10km, Ml4.9/27, Error ellipse: s-maj=6.8km s-min=4.4km az=32.0*
THE ***16*** *02:21:03.8, 39°.75N×20°.69E, h0km±1km, ML4.8/22, Error ellipse: s-maj=1.9km s-min=0.6km az=313.0*
NEIC ***16*** *02:21:04.0±1.6, 39°.79N±0°.05×20°.61E±0°.06, h19km±2km, mb5.0/201, Mww5.0, ML4.8(ATH), Error ellipse: s-maj=7.6km s-min=6.2km az=209.0*
IDC ***16*** *02:21:05.8±1.1, 39°.78N×20°.62E, h45km±10km, mb4.4/34, mbtmp4.6/46, ML4.4/12, MS4.3/44, Error ellipse: s-maj=9.4km s-min=7.5km az=134.0*
GCMT ***16*** *02:21:06.0±0.2, 39°.68N±0°.01×20°.59E±0°.02, h23km, MW5.0/110, Moment Tensor Solution. s45,c55; s110,c164; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.02±.16; Mθθ-2.03±.10; Mφφ-0.98±.10; Mrθ0.32±.13; Mθφ2.58±.07; Mφr1.42±.15; Best double couple: M0=3.96300×10^16 NP1:φs333.00000°, δ56.00000°, λ122.00000°. NP2:φs105.00000°, δ46.00000°, λ52.00000°. Principal axes: T 3.7260, Plg63.0000°, Azm300.0000°; N 0.4810, Plg26.0000°, Azm133.0000°; P -4.2010, Plg5.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ROM ***16*** *02:21:06.5, 39°.78N×20°.52E, h35km, mb4.9/30, Mwp5.0/14, Mwpd5.4/1 Error ellipse: s-maj=2.6km s-min=1.8km az=9.0*
NEIC ***16*** *02:21:06, 39°.75N×20°.63E, h24km, Moment Tensor Solution. Duration: 8§0 Mo

JAN AML AML 02 21 10.7
IGT Igoumenitsa 0.33 233 P **Pb** **02 21 10.3 -0.1**
IGT S **Sb** **02 21 17.0 +1.5**
186μm,0.6s
IGT Igoumenitsa 0.33 233 P **Pg** **02 21 10.1 +0.2**
IGT Igoumenitsa 0.33 233 P **Pg** **02 21 10.1 +0.2**
baz=237
IGT S **Sb** **02 21 16.1 +0.6**
baz=237
IGT Igoumenitsa 0.33 233 P **Pb** **02 21 10.3 -0.1**
IGT S **Sb** **02 21 16.1 +0.6**
IGT AML AML 02 21 18.1
IGT AML AML 02 21 21.7
LSK Leskovik 0.42 352 P **Pb** **02 21 11.7 -0.3**
LSK S **Sb** **02 21 18.6 +0.5**
588μm,0.6s
LSK Leskovik 0.42 352 P **Pb** **02 21 11.7 -0.3**
baz=347
LSK S **Sb** **02 21 17.7 -0.4**
baz=347
LSK AMP
comp=N,3μm,0.6s,baz=347
SRN Sarande 0.54 286 P **Pg** **02 21 13.6 -0.1**
baz=285
SRN S **Sb** **02 21 22.8 +1.3**
baz=285
SRN AMP
comp=N,861nm,0.4s,baz=285
KASA Kassiopi 0.57 271 P **Pg** **02 21 14.1 -0.1**
KASA S **Sg** **02 21 21.3 -0.5**
KASA AML AML 02 21 26.0
KASA AML AML 02 21 26.5
KPRO Kipourio 0.57 67 P **Pb** **02 21 14.3 -0.3**
KPRO S **Sb** **02 21 23.1 +0.5**
comp=N,188μm,0.5s
PENT Pentalofos 0.58 38 P **Pg** **02 21 14.2 -0.4**
PENT Pentalofos 0.58 38 P **Pg** **02 21 14.1 -0.5**
PENT S **Sg** **02 21 21.4 -1.0**
PENT AML AML 02 21 28.7
comp=N,40226μm,0.6s
PENT AML AML 02 21 30.6
KEK Kerkira 0.68 268 Pg **Pg** **02 21 15.6 -0.6**
KEK Kerkira 0.68 268 P **Pg** **02 21 15.8 -0.4**
KEK S **Sb** **02 21 26.3 +0.9**
comp=N,82μm,0.5s
KEK Kerkira 0.68 268 ⇑P **Pg** **02 21 16.2 0.0**
KEK Kerkira 0.68 268 P **Pg** **02 21 15.6 -0.6**
KEK AML AML 02 21 31.3
KEK AML AML 02 21 33.0
NEST Nestorio 0.74 23 P **Pb** **02 21 17.4 0.0**
NEST S **Sb** **02 21 28.9 +1.6**
comp=N,46μm,0.5s
NEST Nestorio 0.74 23 P **Pg** **02 21 16.8 -0.6**
NEST AML AML 02 21 34.6
comp=E,82841μm,0.6s
NEST AML AML 02 21 35.3
KBN Korca 0.89 6 Pg **Pg** **02 21 19.6 -0.8**
KBN Korca 0.89 6 P **Pg** **02 21 19.6 -0.8**
KBN Korca 0.89 6 P **Pg** **02 21 19.6 -0.8**
KBN Korca 0.89 6 P **Pg** **02 21 19.5 -0.8**
baz=3.0
KBN S **Sn** **02 21 33.8 +0.4**
baz=3.0
KBN AMP
comp=N,237nm,0.7s,baz=3.0
TSLK Tsoukalades, L 0.91 181 P **Pb** **02 21 20.8 +0.6**
TSLK Tsoukalades, L 0.91 181 P **Pg** **02 21 20.6 0.0**
LKD2 Lefkada island 0.94 181 P **Pg** **02 21 20.9 -0.4**
LKD2 Lefkada island 0.94 181 P **Pb** **02 21 21.6 +0.8**
baz=184
LKD2 S **Sb** **02 21 35.0 +1.9**
baz=184
LKD2 Lefkada island 0.94 181 P **Pg** **02 21 21.2 -0.1**
LKD2 S **Sg** **02 21 33.9 +0.2**
LKD2 AML AML 02 21 40.2
comp=N,89999μm,0.6s
LKD2 AML AML 02 21 46.4
comp=E,68082μm,0.6s
KZN Kozani 1.02 55 P **Pg** **02 21 21.7 -1.0**
KZN S **Sn** **02 21 36.8 +0.3**
comp=E,39μm,0.7s
KZN Kozani 1.02 55 P **Pg** **02 21 22.0 -0.7**
KZN Kozani 1.02 55 P **Pg** **02 21 21.6 -1.1**
KZN AML AML 02 21 39.9
comp=E,80627μm,0.4s
KZN AML AML 02 21 42.0
comp=N,75241μm,1.0s
NYDR Nydri-Lefkada 1.02 179 P **Pg** **02 21 22.5 -0.2**
NYDR S **Sn** **02 21 39.1 +2.8**
comp=N,33μm,0.6s
THL Klokotos Trika 1.05 99 P **Pg** **02 21 22.1 -1.2**
THL Klokotos Trika 1.05 99 P **Pg** **02 21 21.9 -1.4**
THL AML AML 02 21 45.4
comp=N,48181μm,0.7s
THL AML AML 02 21 45.6
comp=E,50610μm,0.4s
DRAG Dragano-Lefkad 1.05 184 P **Pg** **02 21 22.8 -0.5**
DRAG S **Sn** **02 21 39.1 +1.9**
comp=E,309μm,0.4s
EVGI Lefkada island 1.11 181 P **Pn** **02 21 24.6 +0.9**
EVGI S **Sn** **02 21 43.0 +4.3**
comp=E,46μm,0.5s
EVGI Lefkada island 1.11 181 P **Pb** **02 21 23.9 +0.2**
VLO Vlora 1.16 309 P **Pg** **02 21 26.5 +1.1**
VLO Vlora 1.16 309 P **Pg** **02 21 26.1 +0.6**
baz=309
VLO S **Sn** **02 21 43.6 +3.6**
baz=309
EVR Evrytania 1.20 132 P **Pg** **02 21 25.9 -0.3**
EVR S **Sn** **02 21 42.5 +1.5**
comp=E,33μm,0.5s
EVR Evrytania 1.20 132 P **Pb** **02 21 25.3 0.0**
EVR AML AML 02 21 47.0
comp=E,65042μm,0.5s
EVR AML AML 02 21 48.0
comp=N,68242μm,0.6s
TYRN Tyrnavos 1.20 91 P **Pb** **02 21 24.8 -0.5**
TYRN S **Sn** **02 21 44.3 +3.4**
comp=N,83μm,0.5s
FSK Fiskardo 1.28 184 P **Pg** **02 21 27.9 +0.3**
FSK S **Sg** **02 21 47.0 +2.8**
FSK Fiskardo 1.28 184 P **Pg** **02 21 27.7 +0.1**
FSK AML AML 02 21 55.2
comp=E,58470μm,0.7s
FSK AML AML 02 21 57.6
comp=N,50402μm,0.8s
PVO Paravola 1.30 149 P **Pg** **02 21 27.8 -0.2**
PVO Paravola 1.30 149 P **Pg** **02 21 27.9 -0.1**
LRSO Larissa Observ 1.33 92 P **Pn** **02 21 27.4 +0.7**
LRSO S **Sg** **02 21 48.4 +2.6**
comp=N,82μm,0.5s
LRSO Larissa Observ 1.33 92 P **Pn** **02 21 27.1 +0.4**
MAKR Makrakomi, Fth 1.34 122 P **Pg** **02 21 28.6 -0.2**
MAKR Makrakomi, Fth 1.34 122 P **Pb** **02 21 28.3 +0.7**
MAKR AML AML 02 21 53.6
MAKR AML AML 02 21 54.1
OHR Ohrid 1.38 4 P **Pg** **02 21 30.3 +0.8**
OHR Ohrid 1.38 4 *e*Pg **Pg** **02 21 29.8 +0.2**
OHR *e*Sg **Sg** **02 21 50.7 +3.2**
OHR Ohrid 1.38 4 *i* Pn **Pn** **02 21 28.9 -0.6**
LIT Litokhoron 1.44 75 Pn **Pn** **02 21 29.1 +0.8**
LIT Litokhoron 1.44 75 P **Pn** **02 21 28.9 +0.5**
LIT S **Sg** **02 21 51.1 +1.5**
comp=N,32μm,1.0s
LIT Litokhoron 1.44 75 P **Pn** **02 21 29.1 +0.8**
LIT Litokhoron 1.44 75 P **Pn** **02 21 28.7 +0.4**
LIT AML AML 02 21 51.2
comp=N,67694μm,1.7s
LIT AML AML 02 21 55.0
comp=E,58437μm,0.4s
KEF4 Livadi, Kephal 1.49 188 P **Pn** **02 21 29.9 +1.0**
KEF4 S **Sg** **02 21 53.0 +2.1**
comp=E,142μm,0.7s
KEF4 Livadi, Kephal 1.49 188 P **Pn** **02 21 29.8 +1.0**
DMLN Damoulianata-K 1.51 189 P **Pn** **02 21 30.3 +1.0**
DMLN S **Sg** **02 21 53.9 +2.2**
comp=E,40μm,0.6s
VLS Valsamata 1.56 182 P **Pn** **02 21 30.7 +0.8**
VLS Valsamata 1.56 182 P **Pb** **02 21 32.3 +1.0**
VLS Valsamata 1.56 182 P **Pn** **02 21 30.7 +0.8**
PSDA Pessada-Kefalo 1.62 182 P **Pn** **02 21 31.7 +1.0**
PSDA S **Sg** **02 21 55.0 -0.1**
comp=E,25μm,0.6s
PSDA Pessada-Kefalo 1.62 182 P **Pn** **02 21 31.5 +0.8**

EFP Efpalio 1.62 143 P **Pg** **02 21 33.9 -0.2**
EFP Efpalio 1.62 143 P **Pb** **02 21 33.1 +0.7**
EFP AML AML 02 22 09.7
comp=E,33367μm,0.5s
EFP AML AML 02 22 17.5
comp=N,43658μm,1.0s
UPR University Cam 1.69 149 P **Pg** **02 21 35.1 -0.3**
SERG Sergoula 1.70 140 P **Pg** **02 21 35.8 +0.1**
SERG Sergoula 1.70 140 P **Pb** **02 21 34.4 +0.6**
SERG AML AML 02 22 06.1
comp=N,52828μm,0.5s
SERG AML AML 02 22 07.6
comp=E,31294μm,0.6s
TIR Tirane 1.73 339 ⇑P **Pb** **02 21 34.7 +0.5**
TIR Tirane 1.73 339 Pn **Pb** **02 21 34.5 +0.3**
TIR Tirane 1.73 339 P **Pb** **02 21 34.5 +0.3**
TIR S **Sg** **02 21 59.7 +1.1**
comp=E,19μm,0.6s
TIR Tirane 1.73 339 P **Pb** **02 21 34.5 +0.3**
TIR Tirane 1.73 339 *e*Pn **Pb** **02 21 34.5 +0.3**
TIR *e*Sn **Sb** **02 21 56.9 +1.3**
TIR Tirane 1.73 339 P **Pb** **02 21 34.7 +0.5**
baz=339
TIR AMP
comp=E,72nm,0.6s,baz=339
TIR Tirane 1.73 339 ⇑P **Pb** **02 21 34.9 +0.7**
SCTE Santa Cesarea 1.73 282 **Pn** **02 21 32.8 +0.5**
SCTE Santa Cesarea 1.73 282 P **Pn** **02 21 33.1 +0.9**
TRIZ Trizonia 1.75 141 P **Pg** **02 21 37.3 +0.8**
RLS Riolos of Patr 1.79 159 P **Pb** **02 21 35.9 +0.7**
RLS Riolos of Patr 1.79 159 P **Pb** **02 21 35.2 0.0**
RLS AML AML 02 22 16.1
comp=E,7282μm,0.6s
RLS AML AML 02 22 21.2
comp=N,17677μm,0.8s
LAKA Lakka 1.81 145 P **Pb** **02 21 36.3 +0.8**
LAKA Lakka 1.81 145 P **Pb** **02 21 36.4 +0.8**
LAKA AML AML 02 22 16.5
comp=E,84421μm,0.6s
LAKA AML AML 02 22 19.9
comp=N,70022μm,1.8s
AXAR Agios Charalam 1.82 121 P **Pb** **02 21 36.9 +1.1**
AXAR Agios Charalam 1.82 121 P **Pb** **02 21 36.3 +0.5**
AXAR AML AML 02 22 10.7
comp=N,63807μm,0.6s
AXAR AML AML 02 22 17.0
comp=E,57763μm,0.6s
ALIK Aliki, Aigiali 1.85 142 P **Pg** **02 21 37.6 -0.9**
DRO Drossia 1.96 155 P **Pb** **02 21 37.9 -0.2**
DRO Drossia 1.96 155 P **Pb** **02 21 37.7 -0.5**
DRO AML AML 02 22 15.1
comp=N,36022μm,0.5s
DRO AML AML 02 22 29.2
comp=E,38878μm,0.7s
PHP Peshkopia 1.96 355 P **Pb** **02 21 38.4 +0.2**
PHP Peshkopia 1.96 355 P **Pb** **02 21 38.9 +0.7**
PHP Peshkopia 1.96 355 P **Pb** **02 21 38.8 +0.7**
baz=354
PHP AMP
comp=N,100nm,0.5s,baz=354
THE Thessaloniki 1.97 62 P **Pn** **02 21 36.2 +0.6**
THE Thessaloniki 1.97 62 P **Pn** **02 21 36.6 +1.0**
THE Thessaloniki 1.97 62 P **Pn** **02 21 36.6 +1.0**
XOR Xorichti 1.98 100 P **Pn** **02 21 37.2 +1.5**
XOR Xorichti 1.98 100 P **Pn** **02 21 37.2 +1.5**
NEO Neokhori 2.02 101 P **Pn** **02 21 37.9 +1.7**
NEO Neokhori 2.02 101 P **Pn** **02 21 37.6 +1.3**
KLV Kalavryta, Ach 2.04 145 P **Pb** **02 21 40.3 +0.6**
KLV Kalavryta, Ach 2.04 145 P **Pb** **02 21 39.3 -0.3**
KLV AML AML 02 22 18.9
comp=E,16228μm,0.9s
KLV AML AML 02 22 22.6
comp=N,12193μm,0.7s
HORT Hortiatis 2.05 64 P **Pn** **02 21 37.5 +0.8**
HORT S **Sb** **02 22 06.8 +1.8**
comp=N,4μm,1.0s
LKR Lokris 2.11 120 P **Pn** **02 21 39.2 +1.8**
VAY Valandovo 2.15 42 P **Pb** **02 21 41.7 +0.4**
VAY Valandovo 2.15 42 *e*Pn **Pn** **02 21 39.2 +1.3**
VAY *e*Sn **Sb** **02 22 08.7 +1.0**
VAY Valandovo 2.15 42 *i* Pn **Pn** **02 21 39.2 +1.3**
KNT Kendrikon 2.22 49 P **Pn** **02 21 39.9 +0.9**
KNT Kendrikon 2.22 49 P **Pn** **02 21 40.2 +1.2**
STIP Stip 2.27 30 *i* Pn **Pb** **02 21 43.2 -0.3**
THAL Thalero 2.30 137 P **Pb** **02 21 42.9 -1.0**
THAL Thalero 2.30 137 P **Pb** **02 21 42.7 -1.2**
SKO Skopje 2.31 14 *e*Pn **Pb** **02 21 42.9 -1.2**
SKO *e*Sn **Sb** **02 22 13.1 +0.7**
SKO Skopje 2.31 14 *i* Pn **Pb** **02 21 42.9 -1.2**
SOH Sokhos 2.32 61 P **Pn** **02 21 42.3 +1.9**
SOH S **Sb** **02 22 12.0 -0.8**
comp=N,6μm,0.9s
SOH Sokhos 2.32 61 P **Pn** **02 21 42.3 +1.9**
ULC Ulcinj 2.48 335 ⇑*i*Pn **Pn** **02 21 43.7 +1.1**
ULC *i* Sn **Sn** **02 22 15.4 +3.0**
LOUT Loutraki 2.50 133 P **Pn** **02 21 45.2 +2.3**
VILL Villia 2.59 126 P **Pn** **02 21 46.8 +2.7**
SRS Serrai 2.62 57 P **Pn** **02 21 45.1 +0.6**
SRS Serrai 2.62 57 P **Pn** **02 21 46.4 +1.9**
SRS Serrai 2.62 57 *e*Pn **Pn** **02 21 45.2 +0.7**
SRS *e*Sn **Sn** **02 22 17.1 +1.1**
DRME Dracevica, Mon 2.70 336 ⇑*i*Pn **Pn** **02 21 47.0 +1.4**
DRME Dracevica, Mon 2.70 336 ⇓*i*Pn **Pn** **02 21 46.9 +1.4**
DRME *i* Sn **Sn** **02 22 20.8 +3.0**
ITM Ithomi 2.73 159 Pn **Pn** **02 21 49.0 +2.9**
ITM Ithomi 2.73 159 P **Pn** **02 21 49.2 +3.1**
ITM Ithomi 2.73 159 ⇑P **Pn** **02 21 49.4 +3.3**
KOKK Kokkinochori, 2.77 66 P **Pn** **02 21 47.7 +1.2**
KOKK S **Sn** **02 22 22.6 +3.1**
comp=N,2μm,0.8s
KYMI Kymi, Euboea I 2.88 111 P **Pn** **02 21 50.5 +2.4**
BUM Brajici-Budva 2.90 333 ⇑*i*Pn **Pn** **02 21 49.3 +0.9**
BUM *i* Sn **Sn** **02 22 25.5 +2.7**
PDG Podgorica 2.90 339 ⇑P **Pn** **02 21 49.6 +1.3**
PDG ⇑S **Sn** **02 22 25.4 +2.6**
PDG Podgorica 2.90 339 Pn **Pn** **02 21 49.5 +1.2**
PDG Podgorica 2.90 339 ⇑P **Pn** **02 21 49.8 +1.4**
TTG Podgorica 2.90 339 ⇑*i*Pn **Pn** **02 21 49.6 +1.3**
TTG *i* Sn **Sn** **02 22 25.7 +2.9**
PVY Plav 2.91 350 ⇑*i*Pn **Pn** **02 21 49.9 +1.3**
PVY *i* Sn **Sn** **02 22 26.0 +2.8**
NVR Nevrokopi 2.92 55 P **Pn** **02 21 49.9 +1.3**
ATH Athens Observa 2.96 126 P **Pn** **02 21 51.8 +2.7**
PYL PYLOS 2.96 163 P **Pn** **02 21 50.7 +1.6**
ATHU Athens Univers 3.00 125 P **Pn** **02 21 52.4 +2.6**
PTL Penteli 3.00 123 P **Pn** **02 21 52.4 +2.6**
DION Dionisos Attik 3.03 122 P **Pn** **02 21 53.0 +2.8**
KRND KRANIDI 3.05 140 P **Pn** **02 21 52.3 +2.0**
VLY Voula,Athens 3.08 127 P **Pn** **02 21 53.2 +2.4**
TIP Timpagrande 3.08 261 ⇑P **Pn** **02 21 51.3 +0.4**
TIP ⇑S **Sn** **02 22 27.1 -0.2**
TIP Timpagrande 3.08 261 Pn **Pn** **02 21 50.7 -0.2**
TIP Timpagrande 3.08 261 ⇑P **Pn** **02 21 51.4 +0.4**
CEME Cevo 3.11 335 ⇓*i*Pn **Pn** **02 21 52.0 +0.7**
CEME *i* Sn **Sn** **02 22 29.6 +1.6**
HCY Herceg Novi 3.17 329 ⇑*i*Pn **Pn** **02 21 52.2 +0.1**
HCY Herceg Novi 3.17 329 ⇑*i*Pn **Pn** **02 21 52.2 +0.1**
HCY *i* Sn **Sn** **02 22 29.3 -0.2**
MATE Matera 3.17 288 ⇓P **Pn** **02 21 52.7 +0.6**
MATE ⇓S **Sn** **02 22 29.7 +0.2**
IVA Berane 3.19 350 ⇓*i*Pn **Pn** **02 21 53.9 +1.5**
IVA *i* Sn **Sn** **02 22 32.9 +2.8**
KAVA Kavala 3.19 66 P **Pn** **02 21 53.1 +0.7**
BARS Barje 3.20 15 *e*Pn **Pn** **02 21 54.8 +2.4**
KOME Kolasin 3.23 345 ⇓*i*Pn **Pn** **02 21 54.4 +1.4**
KOME *i* Sn **Sn** **02 22 33.8 +2.6**
NKME Niksic 3.30 337 ⇑*i*Pn **Pn** **02 21 54.8 +1.0**
NKME *i* Sn **Sn** **02 22 34.2 +1.5**
VTS Vitosha 3.47 33 ⇓P **Pn** **02 21 58.2 +1.9**
VTS Vitosha 3.47 33 Pn **Pn** **02 21 57.2 +0.9**
VTS Vitosha 3.47 33 P **Pn** **02 21 57.2 +0.9**
VTS Vitosha 3.47 33 ⇑P **Pn** **02 21 59.3 +3.0**
SELS Selova 3.50 5 *e*Pn **Pn** **02 21 58.4 +1.8**
VLI Veliai 3.50 149 P **Pn** **02 21 58.5 +1.9**
SJES Sjenica 3.56 352 *e*Pn **Pn** **02 21 59.9 +2.3**
UPM Unac-Piva 3.71 340 ⇑*i*Pn **Pn** **02 22 01.9 +2.2**
UPM Unac-Piva 3.71 340 ⇑*i*Pn **Pn** **02 22 01.0 +1.3**
UPM *i* Sn **Sn** **02 22 45.4 +2.3**
PLE Pljevlja 3.72 345 ⇓*i*Pn **Pn** **02 22 01.2 +1.5**
PLE *i* Sn **Sn** **02 22 45.8 +2.6**
ZAPS Zavoj 3.83 22 *e*Pn **Pn** **02 22 03.3 +2.1**
IVAS Ivanjica 3.86 354 *e*Pn **Pn** **02 22 02.5 +0.9**

PLD Plovdiv 3.86 51 P **Pn** 02 22 06.1 +4.5
KTHR Kythira 3.93 151 P **Pn** **02 22 05.5 +3.0**
KTHA Kythira Island 3.95 151 P **Pn** **02 22 05.9 +3.1**
RDO Rodhopi 3.97 68 Pn **Pn** **02 22 04.4 +1.3**
RDO Rodhopi 3.97 68 P **Pn** **02 22 03.8 +0.8**
RDO Rodhopi 3.97 68 ⇑P **Pn** **02 22 04.2 +1.2**
BOVS Bovan 3.97 11 ⇓P **Pn** **02 22 05.1 +2.0**
BOVS Bovan 3.97 11 *e*Pn **Pn** **02 22 04.5 +1.4**
RUDO Rudo 4.00 346 ⇑*i*Pn **Pn** **02 22 04.2 +0.7**
CEL Celeste 4.00 250 Pn **Pn** **02 22 03.8 +0.2**
CEL Celeste 4.00 250 ⇓P **Pn** **02 22 04.0 +0.4**
SIGR SIGRI 4.04 96 P **Pn** **02 22 06.5 +2.5**
GRUS Gruza 4.15 0 *e*Pn **Pn** **02 22 07.7 +2.2**
BLKB Belogradchik 4.16 20 ⇓P **Pn** **02 22 08.4 +2.6**
BBLS Lazići 4.24 347 ⇑*i*Pn **Pn** **02 22 07.7 +0.9**
BBLS Lazići 4.24 347 *e*Pn **Pn** **02 22 07.5 +0.7**
ZAGS Zajecar 4.24 15 *e*Pn **Pn** **02 22 08.3 +1.6**
ZAGS *e*Sn **Sn** **02 22 56.9 +1.1**
ALN Alexandroupoli 4.27 72 Pn **Pn** **02 22 08.3 +1.2**
ALN Alexandroupoli 4.27 72 P **Pn** **02 22 08.6 +1.5**
ALN Alexandroupoli 4.27 72 P **Pn** **02 22 08.3 +1.2**
ALN Alexandroupoli 4.27 72 ⇑P **Pn** **02 22 08.7 +1.5**
EZN Ezine 4.36 87 P **Pn** **02 22 10.5 +2.2**
EZN Ezine 4.36 87 P **Pn** **02 22 11.7 +3.4**
PRK Paraskevi 4.36 95 P **Pn** **02 22 11.3 +2.9**
PRK Paraskevi 4.36 95 P **Pn** **02 22 12.4 +4.0**
ANKY Antikythira Is 4.38 151 P **Pn** **02 22 11.4 +2.6**
ANKY S **Sn** **02 23 02.9 +3.5**
comp=N,2μm,0.5s
DIVS Divibare 4.39 354 Pn **Pn** **02 22 08.7 -0.2**
DIVS Divibare 4.39 354 ⇑*i*Pn **Pn** **02 22 10.0 +1.1**
DIVS Divibare 4.39 354 *e*Pn **Pn** **02 22 09.8 +0.9**
DIVS *e*Sn **Sn** **02 23 01.3 +1.6**
DIVS Divibare 4.39 354 ⇑P **Pn** **02 22 10.1 +1.2**
CHOS Chios island 4.40 106 P **Pn** **02 22 11.8 +2.8**
TRUS Trudelj 4.49 358 *e*Pn **Pn** **02 22 11.7 +1.5**
HAPS Han Pijesak,BI 4.54 344 ⇑*i*Pn **Pn** **02 22 11.7 +0.8**
APE Apeiranthos 4.65 123 ⇓P **Pn** **02 22 15.0 +2.5**
APE Apeiranthos 4.65 123 P **Pn** **02 22 14.9 +2.5**
APE Apeiranthos 4.65 123 *i* P **Pn** **02 22 15.1 +2.6**
KUBS Kucevo 4.73 9 *e*Pn **Pn** **02 22 14.7 +1.1**
RODP Rodopos 4.83 149 P **Pn** **02 22 16.4 +1.5**
PAOL Paolisi 4.84 287 Pn **Pn** **02 22 15.2 +0.1**
PUNG Punghina 4.84 20 ⇑P **Pn** **02 22 18.4 +3.4**
DKL Dikili 4.87 96 ⇓P **Pn** **02 22 19.2 +3.8**
TEKS Tekeris 4.89 350 ⇑*i*Pn **Pn** **02 22 15.5 -0.2**
TEKS Tekeris 4.89 350 *e*Pn **Pn** **02 22 15.2 -0.5**
IMMV Iera Moni Meta 5.01 147 P **Pn** **02 22 18.4 +1.1**
THR6 Thira Island, 5.03 131 P **Pn** **02 22 20.0 +2.4**
SANT Santorini 5.05 130 ⇑P **Pn** **02 22 20.2 +2.2**
SANT Santorini 5.05 130 Pn **Pn** **02 22 17.9 -0.1**
SRKY Kupres RS 5.06 330 ⇑*i*Pn **Pn** **02 22 19.2 +1.1**
BEO Beograd 5.07 358 P **Pn** **02 22 18.4 +0.2**
BEO Beograd 5.07 358 *e*Pn **Pn** **02 22 17.5 -0.7**
VLAD Vladila 5.09 32 ⇑P **Pn** **02 22 20.9 +2.5**
KNDR Palaiochora Ch 5.09 151 P **Pn** **02 22 19.1 +0.7**
MDVR Moldovita 5.10 8 ⇑P **Pn** **02 22 21.5 +2.9**
DJES Djerdap 5.12 15 ⇑P **Pn** **02 22 22.1 +3.3**
DJES Djerdap 5.12 15 *e*Pn **Pn** **02 22 20.7 +1.9**
BLCB Balcova 5.14 103 P **Pn** **02 22 22.8 +3.7**
BLJ Bijeljina 5.15 349 *e*Pn **Pn** **02 22 18.5 -0.8**
SMG Samos 5.23 111 P **Pn** **02 22 23.7 +3.4**
SRE Strehaia 5.27 20 ⇑P **Pn** **02 22 23.1 +2.1**
SRE Strehaia 5.27 20 P **Pn** **02 22 23.0 +2.1**
HERR Herculane 5.30 14 ⇑P **Pn** **02 22 23.4 +2.0**
PRNS Prinses Rethymn 5.32 144 P **Pn** **02 22 21.6 +0.1**
DOB Doboj 5.35 340 ⇑*i*Pn **Pn** **02 22 21.8 -0.2**
MGRS Mrkonjic Grad 5.39 331 ⇑*i*Pn **Pn** **02 22 23.8 +1.2**
VAE Valguarnera 5.40 247 P **Pn** **02 22 24.1 +1.4**
comp=N,11nm,0.3s,baz=169,slow=20,SNR=11
VAE S **Sn** **02 23 24.8 +0.3**
comp=N,118nm,0.4s,baz=199,slow=15,SNR=6.5
comp=N,14nm,0.4s
FRGS Fruska Gora 5.46 354 ⇑*i*Pn **Pn** **02 22 23.9 +0.4**
FRGS Fruska Gora 5.46 354 *e*Pn **Pn** **02 22 24.0 +0.4**
IDI Anoyia 5.56 142 P **Pn** **02 22 26.0 +1.0**
comp=N,12nm,0.3s,baz=328,slow=17,SNR=4.1
IDI S **Sn** **02 23 28.0 -0.5**
comp=N,138nm,0.5s,baz=196,slow=13,SNR=7.5
IDI LR LR 02 24 44.2
comp=N,2μm,18.9s,baz=320,slow=39
comp=N,22nm,0.3s
IDI Anoyia 5.56 142 Pn **Pn** **02 22 27.0 +2.0**
GVDS Gavdos 5.59 150 P **Pn** **02 22 25.7 +0.4**
GVD Gavdhos 5.59 150 P **Pn** **02 22 26.2 +0.8**
INTR Introdacqua 5.61 296 Pn **Pn** **02 22 25.8 +0.1**
BLY Banja Luka 5.64 334 ⇑*i*Pn **Pn** **02 22 26.4 +0.4**
HRKL Herakleio 5.64 140 P **Pn** **02 22 26.4 +0.3**
BANR Banloc 5.66 3 ⇓P **Pn** **02 22 28.6 +2.5**
HUMR Humele 5.76 32 ⇑P **Pn** **02 22 29.7 +2.0**
A052A Srbac 5.85 337 ⇑*i*Pn **Pn** **02 22 28.7 -0.2**
BODT Bodrum 5.86 115 P **Pn** **02 22 31.6 +2.6**
GZR Gura Zlata 5.87 15 ⇑P **Pn** **02 22 31.1 +2.0**
BZS Buzias 5.92 6 ⇑P **Pn** **02 22 31.9 +2.1**
BZS Buzias 5.92 6 P **Pn** **02 22 32.0 +2.1**
BZS pmax pmax
comp=Z,165nm,0.8s
A051A Mrakovica 5.97 333 ⇑*i*Pn **Pn** **02 22 30.8 +0.3**
SGRR Singureni 5.98 40 ⇑P **Pn** **02 22 32.8 +2.2**
PRIJ Prijedor 6.00 332 ⇑*i*Pn **Pn** **02 22 31.3 +0.4**
AQU L'Aquila 6.09 298 P **Pn** **02 22 33.8 +1.6**
AQU pmax pmax
comp=Z,695nm,1.1s
AQU L'Aquila 6.09 298 ⇑P **Pn** **02 22 33.5 +1.2**
LOT Lotru 6.15 21 ⇑P **Pn** **02 22 35.6 +2.5**
CAMP Campotosto 6.16 299 Pn **Pn** **02 22 32.7 -0.5**
WDD Wied Dalam 6.23 233 Pn **Pn** **02 22 33.5 -0.6**
MANT Manisa 6.26 99 **Pn** **02 22 37.0 +2.3**
ARR Arges 6.34 26 ⇑P **Pn** **02 22 37.7 +2.0**
DEV Deva 6.36 14 P Pn 02 22 40.3 +4.4
DEV pmax pmax
comp=Z,218nm,1.1s
MTUR Matau 6.38 29 ⇑P **Pn** **02 22 40.1 +4.0**
MTUR Matau 6.38 29 P **Pn** **02 22 40.1 +4.0**
SULR 6.45 38 ⇑P **Pn** **02 22 40.4 +3.4**
ISK Istanbul-Kandi 6.54 76 P **Pn** **02 22 41.0 +2.7**
VOIR 6.55 28 ⇑P **Pn** **02 22 40.9 +2.3**
VOIR 6.55 28 P Pn 02 22 43.3 +4.7
VOIR pmax pmax
comp=Z,346nm,1.0s
SIRR Siria 6.57 6 ⇑P **Pn** **02 22 42.1 +3.3**
LEHL Lehliu 6.58 42 ⇑P **Pn** **02 22 41.7 +2.8**
AMBH Ambrzfalva 6.61 0 ⇑P **Pn** **02 22 42.0 +2.7**
AMBH Ambrzfalva 6.61 0 P **Pn** **02 22 42.3 +3.0**
KOVH Kovagotottos 6.62 344 P **Pn** **02 22 40.1 +0.6**
KOVH S **Sn** **02 23 50.3 -4.3**
SECR 6.63 35 ⇑P **Pn** **02 22 43.2 +3.5**
MORH Mrgy, Hungar 6.65 348 P **Pn** **02 22 40.1 +0.3**
MORH S **Sn** **02 23 50.9 -4.2**
CESX Cesi 6.75 298 Pn **Pn** **02 22 41.3 +0.1**
ARG Arkhangelos 6.85 118 Pn **Pn** **02 22 45.5 +2.8**
ARG Arkhangelos 6.85 118 P **Pn** **02 22 45.5 +2.8**
ARG Arkhangelos 6.85 118 ⇓P Pn 02 22 47.7 +5.0
ISR Istrita 6.91 37 ⇑P **Pn** **02 22 46.8 +3.2**
ISR Istrita 6.91 37 P **Pn** **02 22 46.7 +3.2**
ISR pmax pmax
comp=Z,692nm,1.0s
MLR Muntele Rosu 6.94 32 P **Pn** **02 22 45.9 +1.9**
comp=Z,5.7nm,0.3s,baz=218,slow=4.1,SNR=20
MLR S **Sn** **02 24 04.4 +1.8**
comp=Z,94nm,1.0s,baz=33,slow=3.8,SNR=3.1
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn** **02 22 44.8 -0.1**
BOJS Bojanci 7.01 327 ⇑*i*Pn **Pn** **02 22 45.0 +0.1**
BOJS *e*Sn **Sn** **02 24 00.0 -4.2**
BOJS IAML 02 25 15.9
comp=Z,4μm,2.9s
DOPR Dopca 7.13 28 ⇑P Pn 02 22 51.0 +4.6
MGAB Montegabbione 7.18 299 ⇓P **Pn** **02 22 48.6 +1.4**
CRES Cresnjev 7.20 329 ⇑*i*Pn **Pn** **02 22 46.9 -0.4**
CRES Cresnjev 7.20 329 ⇑*i*Pn **Pn** **02 22 47.1 -0.2**
DRGR 7.21 11 ⇑P **Pn** **02 22 50.0 +2.4**
LATE Laterza 7.28 296 **Pn** **02 22 49.2 +0.6**
CJR Cluj-Napoca 7.29 16 ⇑P **Pn** **02 22 51.0 +2.2**
CJR Cluj-Napoca 7.29 16 P **Pn** **02 22 50.9 +2.2**
GRER 7.31 37 ⇑P Pn 02 22 53.3 +4.4
BEHE Becsehely 7.31 338 P **Pn** **02 22 49.3 +0.4**
BEHE S **Sn** **02 24 09.4 -2.1**
HARR Harsova 7.32 45 ⇑P **Pn** **02 22 51.6 +2.7**
HARR Harsova 7.32 45 P **Pn** **02 22 51.6 +2.7**
COVR Voineasa-Covas 7.34 32 ⇑P **Pn** **02 22 52.6 +3.3**
OZUR 7.38 29 ⇓P **Pn** **02 22 53.7 +3.7**

BORR	**Bors**	**7.40**	**6**	⇑P	**Pn**	**02 22 52.8**	**+2.7**
TIRR	**Tirgusor**	**7.44**	**48**	⇑P	**Pn**	**02 22 53.0**	**+2.3**
TIRR	**Tirgusor**	**7.44**	**48**	⇑P	**Pn**	**02 22 53.0**	**+2.3**
TIRR	**Tirgusor**	**7.44**	**48**	Pn	**Pn**	**02 22 52.8**	**+2.1**
TIRR	**Tirgusor**	**7.44**	**48**	P	**Pn**	**02 22 52.8**	**+2.1**
TIH	**Tihany**	**7.44**	**345**	P	**Pn**	**02 22 51.6**	**+0.9**
PLOR	**Plostina**	**7.53**	**34**	⇑P	**Pn**	**02 22 55.5**	**+3.6**
PLOR	**Plostina**	**7.53**	**34**	P	**Pn**	**02 22 55.5**	**+3.6**
BORA	**Eskisehir**	**7.53**	**86**	Pn	**Pn**	**02 22 53.7**	**+1.7**
CEY	**Cerknica**	**7.56**	**325**	⇑*i*Pn	**Pn**	**02 22 52.3**	**0.0**
BSZH	**Besenyszg**	**7.57**	**358**	⇓P	**Pn**	**02 22 54.6**	**+2.1**
BSZH	**Besenyszg**	**7.57**	**358**	P	**Pn**	**02 22 54.5**	**+2.1**
VRI	**Vrincioaia**	**7.57**	**34**	⇑P	**Pn**	**02 22 56.0**	**+3.5**
VRI	**Vrincioaia**	**7.57**	**34**	P	**Pn**	**02 22 56.0**	**+3.5**
VRI				pmax	pmax		
	comp=Z,415nm,1.0s						
SKDS	**Skadanscina**	**7.60**	**322**	⇑*i*Pn	**Pn**	**02 22 52.0**	**-1.0**
ODBI	**Odobesti**	**7.64**	**36**	⇑P	**Pn**	**02 22 57.7**	**+4.3**
TPGR	**Topolog**	**7.69**	**46**	⇑P	**Pn**	**02 22 57.8**	**+3.6**
LTVH	**Ltavrtes, Hu**	**7.70**	**6**	⇑P	**Pn**	**02 22 57.6**	**+3.4**
LTVH	**Ltavrtes, Hu**	**7.70**	**6**	P	**Pn**	**02 22 57.6**	**+3.4**
CFR	**Carcaliu**	**7.75**	**43**	⇑P	**Pn**	**02 22 58.8**	**+3.9**
CFR	**Carcaliu**	**7.75**	**43**	P	**Pn**	**02 22 56.4**	**+1.5**
CFR				pmax	pmax		
	comp=Z,142nm,0.8s						
LJU	**Ljubljana**	**7.75**	**326**	⇑*i*Pn	**Pn**	**02 22 54.6**	**-0.4**
MPLH	**Magyarpolny**	**7.77**	**344**	P	**Pn**	**02 22 55.8**	**+0.5**
CSKK	**Cskako**	**7.82**	**348**	P	**Pn**	**02 22 57.2**	**+1.2**
BUD	**Budapest**	**7.84**	**352**	P	**Pn**	**02 22 57.1**	**+1.0**
BUD				pmax	pmax		
	comp=Z,202nm,1.0s						
BUD	**Budapest**	**7.84**	**352**	P	**Pn**	**02 22 57.2**	**+1.0**
ISP	**Isparta**	**7.93**	**101**	Pn	**Pn**	**02 22 58.5**	**+1.0**
ISP	**Isparta**	**7.93**	**101**	*i* P	**Pn**	**02 23 01.5**	**+4.0**
CASP	**Castiglione de**	**7.99**	**296**	Pn	**Pn**	**02 22 58.4**	**+0.1**
OSSC	**Osservatorio P**	**8.01**	**301**	Pn	**Pn**	**02 22 56.5**	**-2.1**
SCTR	**Scanteiesti**	**8.02**	**40**	⇓P	**Pn**	**02 23 01.1**	**+2.5**
GHRR		**8.02**	**36**	⇑P	**Pn**	**02 23 02.9**	**+4.2**
EGYH	**Egyhazaskeszo**	**8.05**	**344**	P	**Pn**	**02 23 00.0**	**+0.9**
TESR	**Tescani**	**8.06**	**31**	⇑P	**Pn**	**02 23 01.6**	**+2.4**
SOKA	**Soboth**	**8.07**	**331**	*i* Pn	**Pn**	**02 22 58.6**	**-0.8**
	comp=Z,45nm,0.3s,SNR=16						
SOKA				*e*Sn	**Sn**	**02 24 27.0**	**-3.3**
	comp=Z,45nm,0.6s						
MDUB	**Mudurnu**	**8.10**	**81**	⇓P	**Pn**	**02 23 04.0**	**+4.1**
VARL	**Varlezi**	**8.11**	**38**	⇑P	**Pn**	**02 23 03.2**	**+3.4**
OBKA	**Obir**	**8.12**	**329**	⇑*i*Pn	**Pn**	**02 22 59.2**	**-0.9**
OBKA	**Obir**	**8.12**	**329**	*e*Pn	**Pn**	**02 22 59.6**	**-0.5**
	comp=Z,52nm,0.4s,SNR=8.5						
TLCR		**8.12**	**45**	⇑P	**Pn**	**02 23 02.5**	**+2.6**
TLCR		**8.12**	**45**	P	**Pn**	**02 23 02.5**	**+2.6**
VLDR	**Vladesti**	**8.18**	**39**	⇑P	**Pn**	**02 23 04.7**	**+3.9**
BMR	**Baia Mare**	**8.20**	**14**	P	**Pn**	**02 23 04.2**	**+3.2**
BMR				pmax	pmax		
	comp=Z,129nm,1.2s						
PSZ	**Piszkesteto**	**8.20**	**356**	⇑P	**Pn**	**02 23 02.8**	**+1.6**
PSZ	**Piszkesteto**	**8.20**	**356**	Pn	**Pn**	**02 23 01.8**	**+0.6**
PSZ	**Piszkesteto**	**8.20**	**356**	P	**Pn**	**02 23 01.8**	**+0.6**
PSZ	**Piszkesteto**	**8.20**	**356**	P	**Pn**	**02 23 02.4**	**+1.2**
SRO	**Srobarova**	**8.26**	**349**	*e*P	**Pn**	**02 23 03.7**	**+1.9**
SRO				*e*		02 24 34.8	
BIR	**Birlad**	**8.28**	**36**	⇑P	**Pn**	**02 23 04.9**	**+2.7**
BIR	**Birlad**	**8.28**	**36**	P	**Pn**	**02 23 04.9**	**+2.7**
ARSA	**Arzberg**	**8.39**	**335**	*e*Pn	**Pn**	**02 23 02.8**	**-1.0**
	comp=Z,16nm,0.3s,SNR=15						
ARSA	**Arzberg**	**8.39**	**335**	⇑P	**Pn**	**02 23 03.2**	**-0.6**
PRED	**Cave del Predi**	**8.48**	**325**		**Pn**	**02 23 04.5**	**-0.6**
SOP	**Sopron**	**8.48**	**341**	P	**Pn**	**02 23 05.8**	**+0.8**
SOP				pmax	pmax		
	comp=Z,106nm,1.2s						
SOP	**Sopron**	**8.48**	**341**	P	**Pn**	**02 23 05.4**	**+0.4**
TRPA	**Tarpa**	**8.50**	**8**	⇑P	**Pn**	**02 23 08.4**	**+3.2**
TRPA	**Tarpa**	**8.50**	**8**	P	**Pn**	**02 23 08.1**	**+2.9**
BURAR	**Bucovina Array**	**8.54**	**21**	⇑P	**Pn**	**02 23 10.1**	**+4.2**
BURAR	**Bucovina Array**	**8.54**	**21**	Pn	**Pn**	**02 23 08.9**	**+3.1**
BURAR	**Bucovina Array**	**8.54**	**21**	P	**Pn**	**02 23 10.0**	**+4.2**
PTCC	**Patocco-Chiusa**	**8.55**	**324**	⇑P	**Pn**	**02 23 05.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**8.56**	**21**		**Pn**	**02 23 10.3**	**+4.2**
ZCCA	**Zocca**	**8.56**	**306**		**Pn**	**02 23 06.1**	**0.0**
RONA	**Rosalia, Austr**	**8.57**	**340**	*e*Pn	**Pn**	**02 23 06.1**	**-0.1**
	comp=Z,4.9nm,0.3s,SNR=8.3						
ABAH	**Abaujker**	**8.57**	**3**	P	**Pn**	**02 23 08.4**	**+2.3**
MYKA	**Terra Mystica**	**8.59**	**326**	*e*Pn	**Pn**	**02 23 05.2**	**-1.3**
	comp=Z,20nm,0.4s,SNR=5.7						
TEOL	**Teolo**	**8.70**	**313**	Pn	**Pn**	**02 23 07.5**	**-0.5**
KECS	**Kecovo**	**8.75**	**359**	*e*P	**Pn**	**02 23 11.0**	**+2.4**
ZST	**Bratislava**	**8.84**	**344**	*e*P	**Pn**	**02 23 11.0**	**+1.1**
ZST				*e*		02 24 44.5	
ZST				MLR	MLR		
	comp=Z,7μm,3.2s						
VLC	**Villacollemand**	**8.85**	**303**		**Pn**	**02 23 10.1**	**0.0**
VLC	**Villacollemand**	**8.85**	**303**	⇑P	**Pn**	**02 23 10.8**	**+0.8**
VYHS	**Vyhne**	**8.86**	**352**	*e*P	**Pn**	**02 23 11.4**	**+1.3**
VYHS				*e*		02 24 47.4	
CONA	**Conrad Observa**	**8.90**	**339**	*e*Pn	**Pn**	**02 23 11.2**	**+0.4**
	comp=Z,28nm,0.9s						
UZH	**Uzhgorod**	**8.97**	**7**	*e*P	**Pn**	**02 23 13.0**	**+1.4**
UZH				*e*S	**Sn**	**02 24 53.2**	**+1.0**
UZH				MLR	MLR		
	comp=N,800nm,13.0s						
UZH				MLR	MLR		
	comp=E,750nm,13.0s						
UZH				MLR	MLR		
	comp=Z,500nm,13.0s						
IAS	**Iasi**	**8.97**	**32**	P	**Pn**	**02 23 12.7**	**+1.0**
IAS				pmax	pmax		
	comp=Z,239nm,0.9s						
MODS	**Modra-Piesok**	**8.97**	**345**	*e*P	**Pn**	**02 23 13.1**	**+1.3**
MODS				MLR	MLR		
	comp=Z,4μm,4.1s						
KBA	**Koelnbreinsper**	**9.07**	**326**	P	**Pn**	**02 23 13.1**	**-0.1**
KBA				pmax	pmax		
	comp=Z,105nm,0.9s						
KBA	**Koelnbreinsper**	**9.07**	**326**	*i* Pn	**Pn**	**02 23 12.5**	**-0.7**
	comp=Z,29nm,0.5s,SNR=10						
KBA	**Koelnbreinsper**	**9.07**	**326**	⇓P	**Pn**	**02 23 13.0**	**-0.2**
PRMA	**PARMA**	**9.18**	**307**		**Pn**	**02 23 13.8**	**-0.7**
CRVS	**Cervenica-Dubn**	**9.18**	**3**	*e*P	**Pn**	**02 23 17.4**	**+2.8**
ABTA	**Abfaltersbach**	**9.19**	**322**	*e*Pn	**Pn**	**02 23 14.2**	**-0.6**
	comp=Z,20nm,0.4s,SNR=6.4						
ABTA				*e*Sn	**Sn**	**02 24 56.7**	**-1.2**
	comp=Z,170nm,0.6s						
PGF	**Pioggiola**	**9.24**	**291**	*e*P	**Pn**	**02 23 17.0**	**+1.4**
PGF	**Pioggiola**	**9.24**	**291**	P	**Pn**	**02 23 16.6**	**+1.0**
PGF				pmax	pmax		
	comp=Z,63nm,1.0s						
KOLS	**Kolonicke sedl**	**9.27**	**7**	*e*P	**Pn**	**02 23 19.6**	**+3.8**
MILM	**Milestii Mici**	**9.31**	**37**	⇑P	**Pn**	**02 23 19.8**	**+3.5**
MILM	**Milestii Mici**	**9.31**	**37**	*e*P	**Pn**	**02 23 18.5**	**+2.2**
	comp=Z,100nm,1.1s						
MILM	**Milestii Mici**	**9.31**	**37**	*i* PP	Pn	02 23 28.0	+12
MILM				*e*S	**Sn**	**02 25 06.0**	**+5.5**
MILM				*e*L	L	02 26 42.0	
MILM				LRM	MLR	02 27 50.0	
	comp=Z,6μm,12.0s						
MILM	**Milestii Mici**	**9.31**	**37**	*e*P	**Pn**	**02 23 18.5**	**+2.2**
MILM				*e*S	**Sn**	**02 25 06.0**	**+5.5**
MILM				pmax	pmax		
	comp=Z,100nm,1.1s						
MILM				MLR	MLR		
	comp=Z,6μm,12.0s						
MILM				MLR	MLR		
	comp=E,4μm,10.3s						
ANTO	**Ankara**	**9.33**	**85**	Pn	**Pn**	**02 23 18.9**	**+2.2**
ANTO	**Ankara**	**9.33**	**85**	P	**Pn**	**02 23 18.9**	**+2.2**
MOA	**Molln**	**9.34**	**332**	*e*Pn	**Pn**	**02 23 16.6**	**-0.1**
	comp=E,34nm,0.3s,SNR=15						
MOA				*e*Sn	**Sn**	**02 24 59.7**	**-1.6**
	comp=E,47nm,0.4s						
KIS	**Kishinev**	**9.37**	**37**	*e*P	**Pn**	**02 23 18.0**	**+0.9**
	comp=E,100nm,2.6s						
KIS	**Kishinev**	**9.37**	**37**	*e*PP	Pn	02 23 28.0	+11
KIS				*e*S	**Sn**	**02 25 10.0**	**+7.9**
KIS				*e*Lq	LQ	02 26 31.0	
KIS				*e*L	L	02 27 10.0	
	comp=E,2μm,10.5s						
KIS				LRM	MLR	02 27 50.0	
	comp=E,2μm,12.0s						
KIS	**Kishinev**	**9.37**	**37**	*e*P	**Pn**	**02 23 18.0**	**+0.9**
KIS				*e*S	**Sn**	**02 25 10.0**	**+7.9**
KIS				pmax	pmax		
	comp=Z,100nm,2.6s						
KIS				MLR	MLR		
	comp=Z,2μm,12.0s						
KIS				MLR	MLR		
	comp=E,2μm,10.0s						
JAVC	**Velka Javorina**	**9.37**	**348**	*e*PN	**Pn**	**02 23 18.2**	**+1.0**
BIOA	**Bad Ischl, Aus**	**9.44**	**330**	*e*Pn	**Pn**	**02 23 17.9**	**-0.3**
	comp=E,37nm,0.4s,SNR=29						
MSSA	**Maissana**	**9.48**	**302**	Pn	**Pn**	**02 23 18.2**	**-0.5**
SALO	**Salr**	**9.51**	**312**	Pn	**Pn**	**02 23 18.0**	**-1.0**
SALO	**Salr**	**9.51**	**312**	⇑S	**Sn**	**02 25 03.3**	**-2.2**
STHS	**Stebnicka Huta**	**9.69**	**2**	*e*P	**Pn**	**02 23 23.3**	**+1.8**
KRUC	**Moravsky**	**9.81**	**343**	P	**Pn**	**02 23 23.5**	**+0.3**
KRUC	**Moravsky**	**9.81**	**343**	*e*PN	**Pn**	**02 23 21.6**	**-1.6**
KEST	**Kesra**	**9.82**	**250**	P	**Pn**	**02 23 25.9**	**+2.5**
	comp=E,1.5nm,0.3s,baz=1.9,slow=3.5,SNR=32						
KEST				S	**Sn**	**02 25 11.6**	**-1.8**
	comp=E,8.3nm,0.8s,baz=323,slow=20,SNR=1.1						
KEST				LR	LR	02 28 16.4	
	comp=E,2μm,19.4s,baz=14,slow=44						
	comp=E,53nm,0.9s						
KEST	**Kesra**	**9.82**	**250**	Pn	**Pn**	**02 23 24.4**	**+1.0**
MAUC	**Maruska**	**9.84**	**349**	*e*PN	**Pn**	**02 23 23.9**	**+0.3**
MAUC				AMS	AMS	02 28 10.0	
	comp=E,8μm,16.5s						
WTTA	**Wattenberg**	**9.98**	**322**	P	**Pn**	**02 23 25.7**	**0.0**
WTTA				pmax	pmax		
	comp=Z,212nm,1.0s						
WTTA	**Wattenberg**	**9.98**	**322**	*e*PN	**Pn**	**02 23 25.7**	**0.0**
	comp=Z,36nm,0.3s,SNR=13						
WTTA				*e*Sn	**Sn**	**02 25 14.4**	**-2.9**
	comp=Z,150nm,0.7s						
BR131	**Keskin Array S**	**9.99**	**86**		**Pn**	**02 23 27.7**	**+1.9**
BR131	**Keskin Array S**	**9.99**	**86**	*i* P	**Pn**	**02 23 28.4**	**+2.6**
BRTR	**Keskin Array B**	**9.99**	**86**	P	**Pn**	**02 23 28.4**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=264,slow=12,SNR=20						
BRTR				S	**Sn**	**02 25 18.7**	**+1.2**
	comp=Z,3.2nm,1.0s,baz=283,slow=15,SNR=0.9						
BRTR				LR	LR	02 27 39.8	
	comp=Z,2μm,21.8s,baz=278,slow=39						
	comp=Z,3.8nm,0.5s						
BRTR	**Keskin Array B**	**9.99**	**86**	Pn	**Pn**	**02 23 28.7**	**+2.9**
BRTR	**Keskin Array B**	**9.99**	**86**	P	**Pn**	**02 23 28.7**	**+2.9**
VRAC	**Vranov**	**10.00**	**344**	P	**Pn**	**02 23 25.4**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=171,slow=14,SNR=8.9						
VRAC				S	**Sn**	**02 25 16.1**	**-1.5**
	comp=Z,11nm,0.6s,baz=188,slow=19,SNR=1.9						
VRAC				LR	LR	02 27 34.0	
	comp=Z,3μm,19.2s,baz=168,slow=39						
	comp=Z,7.2nm,0.8s						
VRAC	**Vranov**	**10.00**	**344**	P	**Pn**	**02 23 26.1**	**+0.3**
VRAC				pmax	pmax		
	comp=Z,35nm,1.0s						
VRAC	**Vranov**	**10.00**	**344**	*e*PN	**Pn**	**02 23 25.5**	**-0.4**
ILGA	**Ilgaz**	**10.04**	**78**		**Pn**	**02 23 30.4**	**+3.8**
WATA	**Walderalm**	**10.06**	**322**	*e*Pn	**Pn**	**02 23 26.7**	**-0.1**
	comp=Z,36nm,0.3s,SNR=19						
SQTA	**Sankt Quirin**	**10.16**	**321**	*e*Pn	**Pn**	**02 23 27.6**	**-0.5**
	comp=Z,44nm,0.4s,SNR=16						
SQTA				*e*Sn	**Sn**	**02 25 20.1**	**-1.5**
	comp=Z,120nm,0.7s						
CKRC	**Cesky Krumlov**	**10.16**	**335**	*e*PN	**Pn**	**02 23 26.9**	**-1.1**
TREC	**Trest**	**10.25**	**341**	*e*P	**Pn**	**02 23 28.9**	**-0.3**
TREC				MLR	MLR		
	comp=Z,5μm,11.6s						
TREC	**Trest**	**10.25**	**341**	*e*PN	**Pn**	**02 23 28.9**	**-0.3**
TREC				AMS	AMS	02 27 50.0	
	comp=Z,5μm,11.6s						
OKC	**Ostrava-Krasne**	**10.26**	**351**	*e*P	**Pn**	**02 23 30.1**	**+0.8**
OKC				*e*		02 25 23.1	
OKC				MLR	MLR		
	comp=Z,3μm,9.5s						
OKC	**Ostrava-Krasne**	**10.26**	**351**	*e*PN	**Pn**	**02 23 30.1**	**+0.8**
OKC				*e*SN	**Sn**	**02 25 23.1**	**-0.8**
OKC				AMS	AMS	02 27 50.0	
	comp=Z,3μm,9.5s						
FETA	**Feichten**	**10.26**	**318**	*e*Pn	**Pn**	**02 23 29.9**	**+0.4**
	comp=Z,7.8nm,0.4s						
MORC	**Moravsky Berou**	**10.28**	**349**	⇑P	**Pn**	**02 23 31.2**	**+1.5**
MORC	**Moravsky Berou**	**10.28**	**349**	P	**Pn**	**02 23 30.9**	**+1.2**
MORC				pmax	pmax		
	comp=Z,34nm,1.0s						
MORC	**Moravsky Berou**	**10.28**	**349**	*e*PN	**Pn**	**02 23 28.7**	**-1.0**
MOTA	**Moosalm**	**10.29**	**321**	*e*Pn	**Pn**	**02 23 29.4**	**-0.6**
	comp=Z,81nm,0.6s,SNR=15						
MOTA				*e*Sn	**Sn**	**02 25 20.4**	**-4.6**
	comp=Z,116nm,0.8s						
LVV	**L'vov**	**10.36**	**12**	*e*P	Pn	02 23 35.1	+4.4
LVV				*e*S	**Sn**	**02 25 33.0**	**+6.6**
LVV				pmax	pmax		
	comp=Z,180nm,1.4s						
LVV				MLR	MLR		
	comp=E,1μm,12.0s						
LVV				MLR	MLR		
	comp=N,2μm,10.0s						
LVV				MLR	MLR		
	comp=Z,2μm,11.0s						
GERES	**GERESS Array B**	**10.38**	**334**	P	**Pn**	**02 23 30.7**	**-0.4**
	comp=Z,3.3nm,0.3s,baz=159,slow=14,SNR=41						
GERES				S	**Sn**	**02 25 22.4**	**-4.7**
	comp=Z,14nm,0.4s,baz=155,slow=24,SNR=7.3						
GERES				LR	LR	02 28 26.4	
	comp=Z,4μm,18.7s,baz=145,slow=43						
	comp=Z,5.5nm,0.3s						
GERES	**GERESS Array B**	**10.38**	**334**		**Pn**	**02 23 30.5**	**-0.6**
OJC	**Ojcow**	**10.50**	**357**	*e*P	**Pn**	**02 23 32.9**	**+0.3**
OJC				*e*L	L	02 28 22.1	
	comp=Z,7μm,14.5s						
OJC	**Ojcow**	**10.50**	**357**		**Pn**	**02 23 32.8**	**+0.1**
OJC	**Ojcow**	**10.50**	**357**	P	**Pn**	**02 23 32.8**	**+0.1**
OJC	**Ojcow**	**10.50**	**357**	⇑P	**Pn**	**02 23 33.9**	**+1.2**
DAVOX	**Davos/Dischmat**	**10.56**	**315**	P	**Pn**	**02 23 33.5**	**-0.1**
	comp=Z,8.7nm,0.3s,baz=155,slow=15,SNR=24						
DAVOX				S	**Sn**	**02 25 25.7**	**-5.8**
	comp=Z,16nm,0.4s,baz=360,slow=19,SNR=1.7						
DAVOX				LR	LR	02 28 19.2	
	comp=Z,1μm,20.9s,baz=118,slow=41						
	comp=Z,52nm,0.6s						
RETA	**Reutte**	**10.56**	**320**	*e*Pn	**Pn**	**02 23 33.8**	**+0.3**
	comp=Z,23nm,0.5s						
RETA				Sn	**Sn**	**02 25 26.8**	**-4.6**
	comp=Z,51nm,0.4s						
SAOF	**Saorge**	**10.66**	**298**	P	**Pn**	**02 23 37.1**	**+2.2**
SAOF				pmax	pmax		
	comp=Z,40nm,0.8s						
KHC	**Kasperske Hory**	**10.67**	**334**	Pn	**Pn**	**02 23 34.7**	**-0.3**
KHC	**Kasperske Hory**	**10.67**	**334**	P	**Pn**	**02 23 34.7**	**-0.3**
KHC	**Kasperske Hory**	**10.67**	**334**	*e*PN	**Pn**	**02 23 34.7**	**-0.3**
KHC				*e*SN	**Sn**	**02 25 30.7**	**-3.3**
KHC				AMS	AMS	02 28 10.0	
	comp=Z,5μm,11.6s						
KHC	**Kasperske Hory**	**10.67**	**334**	⇑P	**Pn**	**02 23 35.0**	**0.0**
KRLC	**Kraliky**	**10.70**	**346**	*e*P	**Pn**	**02 23 35.2**	**-0.2**
KRLC				MLR	MLR		
	comp=Z,4μm,11.4s						
KRLC	**Kraliky**	**10.70**	**346**	*e*PN	**Pn**	**02 23 35.2**	**-0.2**
KRLC				AMS	AMS	02 28 20.0	
	comp=Z,4μm,11.4s						
SBF	**Sospel**	**10.71**	**297**	*e*P	**Pn**	**02 23 36.9**	**+1.3**
SBF				*e*Sn	Sn	02 25 23.6	-11
	comp=Z,43nm,0.5s						
FUR	**Furstenfeldbru**	**10.80**	**324**	P	**Pn**	**02 23 36.2**	**-0.6**
FUR				pmax	pmax		
	comp=Z,95nm,0.7s						
MONC	**Moncucco Torin**	**10.83**	**304**	⇓P	**Pn**	**02 23 38.6**	**+1.5**
DAVA	**Damuels**	**10.87**	**317**	*e*Pn	**Pn**	**02 23 38.2**	**+0.3**
	comp=Z,33nm,0.5s						
DAVA				*e*Sn	**Sn**	**02 25 35.3**	**-3.9**
	comp=Z,91nm,0.7s						
DAVA	**Damuels**	**10.87**	**317**	⇓P	**Pn**	**02 23 39.1**	**+1.2**
WET	**Wettzell**	**10.93**	**332**	P	**Pn**	**02 23 37.2**	**-1.3**
WET				pmax	pmax		
	comp=Z,45nm,1.0s						
GOPC	**GO Pecny, Ondr**	**11.00**	**340**	*e*P	**Pn**	**02 23 39.4**	**-0.1**
GOPC				MLR	MLR		
	comp=Z,4μm,12.4s						
GOPC	**GO Pecny, Ondr**	**11.00**	**340**	*e*PN	**Pn**	**02 23 39.4**	**-0.1**
GOPC				AMS	AMS	02 28 10.0	
	comp=Z,4μm,12.4s						
DPC	**Dobruska-Polom**	**11.05**	**345**	*e*P	**Pn**	**02 23 39.4**	**-0.8**
DPC				MLR	MLR		
	comp=Z,6μm,11.4s						
DPC	**Dobruska-Polom**	**11.05**	**345**	*e*PN	**Pn**	**02 23 39.4**	**-0.8**
DPC				AMS	AMS	02 28 20.0	
	comp=Z,6μm,11.4s						
LLS	**Linth-Limmern**	**11.07**	**314**	P	**Pn**	**02 23 43.1**	**+2.4**
LLS				pmax	pmax		
	comp=Z,97nm,1.1s						
PRU	**Pruhonice**	**11.13**	**339**	*e*P	**Pn**	**02 23 41.2**	**-0.1**
PRU				MLR	MLR		
	comp=Z,4μm,12.7s						
PRU	**Pruhonice**	**11.13**	**339**	*e*PN	**Pn**	**02 23 41.2**	**-0.1**
PRU				AMS	AMS	02 28 20.0	
	comp=Z,4μm,12.7s						
PZZ	**Stroppo**	**11.14**	**300**	P	**Pn**	**02 23 44.1**	**+2.6**
PZZ				pmax	pmax		
	comp=Z,31nm,0.6s						
CSS	**Mathiatis**	**11.14**	**111**		**Pn**	**02 23 42.3**	**+0.8**
LMR	**La Mourre**	**11.21**	**293**	*e*P	**Pn**	**02 23 43.9**	**+1.6**
LMR				*e*Sn	Sn	02 25 34.9	-12
LMR	**La Mourre**	**11.21**	**293**	P	**Pn**	**02 23 42.3**	**0.0**
SIM	**Simferopol'**	**11.23**	**58**	*e*P	**Pn**	**02 23 46.3**	**+3.7**
SIM				pmax	pmax		
	comp=Z,37nm,1.0s						
SIM				MLR	MLR		
	comp=Z,900nm,16.2s						
MMK	**Mattmark**	**11.25**	**308**	P	**Pn**	**02 23 43.1**	**0.0**
MMK				pmax	pmax		
	comp=Z,29nm,0.9s						
UPC	**Upice**	**11.26**	**345**	*e*P	**Pn**	**02 23 43.3**	**+0.3**
UPC				MLR	MLR		
	comp=Z,4μm,13.0s						
UPC	**Upice**	**11.26**	**345**	*e*PN	**Pn**	**02 23 43.3**	**+0.3**
UPC				AMS	AMS	02 28 30.0	
	comp=Z,4μm,13.0s						
OSTC	**Ostas**	**11.27**	**345**	*e*PN	**Pn**	**02 23 43.5**	**+0.4**
OSTC				AMS	AMS	02 28 30.0	
	comp=Z,5μm,11.4s						
CHVC	**Chvalec**	**11.33**	**345**	*e*PN	**Pn**	**02 23 44.4**	**+0.4**
CHVC				AMS	AMS	02 28 30.0	
	comp=Z,4μm,11.6s						
MBDF	**Montbardon**	**11.45**	**300**	*e*P	**Pn**	**02 23 48.6**	**+2.9**
MBDF				*e*Sn	Sn	02 25 41.3	-12
	comp=Z,30nm,0.5s						
MBDF	**Montbardon**	**11.45**	**300**	P	**Pn**	**02 23 45.3**	**-0.4**
RRL	**Rocca Remolon**	**11.51**	**301**	P	**Pn**	**02 23 47.5**	**+0.9**
RRL				pmax	pmax		
	comp=Z,35nm,1.1s						
KSP	**Ksiaz**	**11.53**	**346**	*e*P	Pn	02 23 55.0	+8.4
KSP	**Ksiaz**	**11.53**	**346**	P	**Pn**	**02 23 47.4**	**+0.8**
KSP				pmax	pmax		
	comp=Z,21nm,1.1s						
PVCC	**Panska Ves**	**11.62**	**340**	*e*P	**Pn**	**02 23 47.2**	**-0.7**
PVCC				MLR	MLR		
	comp=Z,4μm,11.3s						
PVCC	**Panska Ves**	**11.62**	**340**	*e*PN	**Pn**	**02 23 47.2**	**-0.7**
PVCC				AMS	AMS	02 28 40.0	
	comp=Z,4μm,11.3s						
BNI	**Bardonecchia**	**11.63**	**302**		**Pn**	**02 23 48.5**	**+0.3**
BNI	**Bardonecchia**	**11.63**	**302**	P	**Pn**	**02 23 48.5**	**+0.3**
LPG	**La Plagne**	**11.76**	**304**	*e*Pn	**Pn**	**02 23 47.4**	**-2.7**
LPG	**La Plagne**	**11.76**	**304**	*e*P	**Pn**	**02 23 53.4**	**+3.3**
LPG				*e*Sn	Sn	02 25 48.1	-13
	comp=Z,97nm,0.5s						
LPG	**La Plagne**	**11.76**	**304**	P	**Pn**	**02 23 49.3**	**-0.8**
LPL	**La Plagne**	**11.78**	**304**	*e*P	**Pn**	**02 23 53.7**	**+3.4**
LPL				*e*Sn	Sn	02 25 48.8	-13
	comp=Z,134nm,0.7s						
LPL	**La Plagne**	**11.78**	**304**	P	**Pn**	**02 23 50.1**	**-0.2**
SENIN	**Lac Senin/Sane**	**11.81**	**308**	Pn	**Pn**	**02 23 50.7**	**0.0**
SLE	**Schleitheim**	**11.91**	**316**	P	**Pn**	**02 23 51.7**	**-0.2**
SLE				pmax	pmax		
	comp=Z,37nm,0.6s						
RSL	**Roselend**	**11.92**	**305**	P	**Pn**	**02 23 52.8**	**+0.6**
RSL				pmax	pmax		
	comp=Z,71nm,0.9s						
NKC	**Novy Kostel**	**11.99**	**334**	*e*P	**Pn**	**02 23 52.4**	**-0.7**
NKC				MLR	MLR		
	comp=Z,5μm,22.0s						
NKC	**Novy Kostel**	**11.99**	**334**	*e*PN	**Pn**	**02 23 52.4**	**-0.7**
NKC				AMS	AMS	02 28 50

SFTF *e*Sn Sn 02 26 45.0 -12
comp=Z,11nm,0.4s
SMF Signal de Mont 14.07 305 *e*Pn **Pn 02 24 18.6 -2.9**
SMF *e*Sn Sn 02 26 44.7 -13
comp=Z,71nm,0.6s
HMDT Nahal Hemdat 14.14 117 Pn **Pn 02 24 23.2 +0.7**
AMAZ Amatzia 14.17 121 Pn **Pn 02 24 23.0 +0.1**
MEZF Maizieres J'vi 14.22 313 *e*Pn **Pn 02 24 21.0 -2.4**
baz=133
MEZF *e*Sn Sn 02 26 49.3 -11
comp=Z,20nm,0.6s
SAVF Savonnieres en 14.24 314 *e*Pn **Pn 02 24 22.3 -1.4**
baz=134
SAVF *e*Sn Sn 02 26 48.7 -12
comp=Z,138nm,1.5s
MTLF Montolieu 14.28 291 *e*P **Pn 02 24 26.0 +1.6**
MTLF Montolieu 14.28 291 P **Pn 02 24 27.0 +2.6**
MTLF pmax pmax
comp=Z,58nm,1.0s
WLF Walferdange 14.30 319 Pn **Pn 02 24 24.4 -0.1**
WLF Walferdange 14.30 319 P **Pn 02 24 24.4 -0.1**
WLF Walferdange 14.30 319 *d*P **Pn 02 24 25.2 +0.6**
WLF *d*x x 02 24 39.4
LOR Lormes 14.32 307 *e*Pn **Pn 02 24 22.3 -2.6**
baz=128
LOR Lormes 14.32 307 *e*P **Pn 02 24 27.0 +2.1**
LOR *e*Sn Sn 02 26 49.7 -14
comp=Z,41nm,0.3s
LOR Lormes 14.32 307 P **Pn 02 24 23.8 -1.1**
YTIR Yattir 14.41 121 Pn **Pn 02 24 24.6 -1.6**
AVF Avril sur Loir 14.44 305 *e*Pn **Pn 02 24 23.9 -2.6**
AVF *e*Sn Sn 02 26 53.2 -13
comp=Z,34nm,0.7s
AVF Avril sur Loir 14.44 305 P **Pn 02 24 24.2 -2.3**
SSF Saint Saulge 14.45 306 *e*Pn **Pn 02 24 23.8 -2.9**
SSF *e*Sn Sn 02 26 52.5 -14
comp=Z,22nm,0.4s
DSI Dead Sea 14.46 120 Pn **Pn 02 24 26.2 -0.6**
DSI Sn **Sn 02 27 01.9 -4.7**
BGF Bois d'Agland 14.68 304 *e*Pn **Pn 02 24 27.6 -2.1**
BGF *e*Sn Sn 02 26 58.0 -14
comp=Z,41nm,0.5s
BGF Bois d'Agland 14.68 304 P **Pn 02 24 28.4 -1.3**
CAF Calviac 14.70 297 *e*P **Pn 02 24 33.0 +2.9**
SOC Sochi 14.74 69 *e*P **Pn 02 24 31.6 +1.0**
SOC *e* 02 27 18.5
SOC pmax pmax
comp=Z,4.0nm,0.4s
SOC MLR MLR
comp=Z,343nm,16.0s
GHAJ Ghor Haditha 14.74 120 Pn **Pn 02 24 32.8 +2.1**
BHOU Houvegnez 14.81 321 *d*P **Pn 02 24 30.3 -1.2**
BHOU *d*x x 02 24 38.8
BTNL Ternell 14.90 322 *d*x x 02 24 39.4
BTNL *d*x x 02 24 48.0
BUG Bochum--Univer 14.97 326 P **Pn 02 24 35.5 +1.9**
BUG pmax pmax
comp=Z,61nm,1.4s
MEM Membach 14.98 321 *d*P **Pn 02 24 34.2 +0.5**
MEM *d*x x 02 24 40.9
KRMI Paran Flat 14.98 126 Pn **Pn 02 24 31.1 -2.8**
KRMI Sn Sn 02 27 09.2 -10
TCF Toulx Ste Croi 15.00 302 *e*Pn **Pn 02 24 31.5 -2.5**
TCF *e*Sn Sn 02 27 07.2 -12
comp=Z,21nm,0.6s
TCF Toulx Ste Croi 15.00 302 P **Pn 02 24 30.9 -3.1**
PRNI Paran 15.00 124 Pn **Pn 02 24 31.6 -2.5**
RCHB Rochefort 15.07 319 *d*P **Pn 02 24 34.3 -0.7**
RCHB *d*x x 02 24 41.1
HYF Humbligny 15.08 306 *e*Pn **Pn 02 24 32.8 -2.3**
HYF Humbligny 15.08 306 *e*P **Pn 02 24 37.3 +2.2**
HYF *e*Sn Sn 02 27 08.2 -13
comp=Z,105nm,0.5s
ASF Jabal al Asfar 15.14 115 P **Pn 02 24 36.2 +0.1**
comp=Z,0.4nm,0.3s,baz=282,slow=7.6,SNR=3.2
ASF LR LR 02 31 36.2
comp=Z,872nm,18.5s,baz=301,slow=42
comp=Z,1.2nm,0.3s
RJF Les Rejaudoux 15.17 298 *e*P **Pn 02 24 38.4 +2.0**
RJF *e*Sn Sn 02 27 10.2 -14
comp=Z,6.3nm,0.6s
BSTI Sart Tilman 15.17 321 *d*P **Pn 02 24 37.2 +0.9**
BSTI *d*x x 02 24 43.1
BSTI *d*x x 02 24 52.0
BCLA Clavier 15.20 320 *d*P **Pn 02 24 37.9 +1.2**
BCLA *d*x x 02 24 42.8
KOPT Kop Dagi 15.23 83 IAmb IAmb 02 24 52.5
comp=Z,158nm,1.7s
HRFI Mount Harif 15.23 125 Pn **Pn 02 24 35.3 -2.0**
GIVF Givet 15.25 318 *e*P **Pn 02 24 39.3 +2.0**
BEBN Eben Emael 15.26 321 *d*x x 02 24 40.2
BGES Gesves 15.29 319 *d*P **Pn 02 24 37.6 -0.2**
BGES *d*x x 02 24 43.7
MBRI Mt Berech 15.32 126 Pn **Pn 02 24 34.9 -3.6**
MBRI Sn **Sn 02 27 18.7 -9.1**
DOU Dourbes 15.36 318 P **Pn 02 24 39.3 +0.5**
DOU Dourbes 15.36 318 *d*P **Pn 02 24 39.3 +0.5**
DOU *d*x x 02 24 44.8
BMRD Maredsous 15.40 319 *d*P **Pn 02 24 37.1 -2.2**
BMRD *d*x x 02 24 54.7
EIL Elat 15.43 126 P **Pn 02 24 38.1 -1.7**
comp=Z,7.1nm,0.4s,baz=193,slow=7.5,SNR=12
EIL S Sn 02 27 20.5 -10
comp=Z,6.7nm,0.4s,baz=26,slow=1.0,SNR=6.1
EIL LR LR 02 33 21.5
comp=Z,368nm,18.8s,baz=298,slow=48
EIL Elat 15.43 126 Pn **Pn 02 24 38.4 -1.4**
BAIF Baives 15.54 317 *e*P **P 02 24 47.1 +1.7**
MNK Minsk 15.55 16 *i*P **Pn 02 24 38.4 -2.8**
MNK *i*S **Sn 02 27 30.6 -2.5**
MNK pmax pmax
comp=Z,76nm,1.2s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=N,98nm,1.2s
MNK MLR MLR
comp=E,345nm,13.0s
MNK MLR MLR
comp=Z,2μm,16.0s
MNK MLR MLR
comp=N,677nm,13.0s
MNK Minsk 15.55 16 *i*P **Pn 02 24 38.5 -2.8**
comp=E,4.0nm,0.9s
MNK *i*P **Pn 02 24 38.5 -2.8**
comp=N,98nm,1.2s
MNK *i*P **Pn 02 24 38.5 -2.8**
comp=Z,76nm,1.2s,baz=202
MNK *i*PP **P 02 24 47.0 +1.5**
MNK *i*S **Sn 02 27 30.6 -2.5**
MNK *i*SS **SnSn 02 27 45.3 -0.6**
MNK *i*LQ LQ 02 29 11.1
MNK *i*LR LR 02 29 52.6
MNK *i*LRM MLR 02 30 53.2
comp=E,345nm,13.3s
MNK *i*LRM MLR 02 30 56.4
comp=Z,2μm,16.3s
MNK *i*LRM MLR 02 31 09.7
comp=N,677nm,13.3s
EPF Esparros 15.61 289 *e*P **Pn 02 24 44.0 +1.8**
NACGM Naroch 15.72 13⇑ *e*P **Pn 02 24 44.2 +0.8**
SNF Seneffe 15.77 318 *d*P **Pn 02 24 43.0 -1.1**
BSEG Bad Segeberg 15.85 337 P **P 02 24 48.4 -0.4**
BSEG pmax pmax
comp=Z,33nm,1.4s
BSD Bornholm Skovb 15.86 348 *i*P **P 02 24 53.6 +4.7**
MARD Mardin 15.92 92 Pn **Pn 02 24 46.0 -0.3**
PABE Paberze 15.93 7 Pn **Pn 02 24 45.7 -0.5**
PABE Paberze 15.93 7 *e*P **Pn 02 24 46.5 +0.4**
IIGN Ignalina 16.06 12 *e*P **Pn 02 24 49.8 +2.0**
ISAL Salakas 16.26 11 *e*P **Pn 02 24 51.4 +1.1**
ETSF Etsaut 16.26 288 *e*P **P 02 24 54.1 +0.6**
PBUR Paburge 16.32 3 *e*P **Pn 02 24 51.3 +0.2**
VSVD Vaisvydziai 16.40 6 *e*P **Pn 02 24 52.5 +0.3**
GURO Guroymak-BITLI 16.61 87 Pn **Pn 02 24 53.9 -1.2**
LUNU Lund 16.62 346 *i*P **P 02 25 03.2 +5.9**
MFF Saint Martin d 16.64 301 *e*P **P 02 24 57.3 -0.3**
SJPF Ste Jean 16.76 289 *e*Pn **Pn 02 24 55.2 -1.6**
SJPF Ste Jean 16.76 289 *e*P **P 02 24 59.6 +0.6**
SHA1 Shidzhatmaz 16.88 69 *i*P **P 02 25 00.6 +0.1**
NEY Neytrino 16.88 71 *i*P **P 02 25 03.6 +3.1**
BLEU Blekinge 16.89 351 *i*P **Pn 02 24 58.4 +0.1**
KIV Kislovodsk 16.92 68 Pn **Pn 02 24 56.7 -2.3**

KIV Kislovodsk 16.92 68 *e*P **P 02 25 01.3 +0.4**
KIV *e*S **Sn 02 28 12.3 +5.7**
KIV pmax pmax
comp=Z,55nm,1.1s
KIV MLR MLR
comp=Z,178nm,14.0s
KIV Kislovodsk 16.92 68 P **Pn 02 25 00.3 +1.3**
KIV Kislovodsk 16.92 68 ⇑P **P 02 25 02.3 +1.4**
KBZ Khabaz 17.05 69 P **P 02 25 04.0 +1.9**
comp=Z,14nm,1.0s,baz=220,slow=7.2,SNR=14
KBZ Khabaz 17.05 69*ce*P **P 02 25 04.1 +1.9**
KBZ pmax pmax
comp=Z,28nm,1.3s
BJUU Bjuv 17.12 345 *i*P **Pn 02 25 02.0 +0.8**
KARS Kars 17.14 80 Pn **Pn 02 25 01.2 -0.6**
KARS IAmb IAmb 02 25 15.4
comp=Z,264nm,1.7s
KARS Kars 17.14 80 P **Pn 02 25 01.2 -0.6**
KARS pmax pmax
comp=Z,264nm,1.7s
VSR Storozhevoye 17.27 42 *e*P **Pn 02 25 03.7 +0.6**
VSR *e*S **Sn 02 28 15.7 +1.0**
VSR pmax pmax
comp=Z,100nm,1.0s
VSR smax smax
comp=N,100nm,8.3s
VSR MLR MLR
comp=Z,4μm,13.0s
LDF La Druitiere 17.31 308 *e*Pn **Pn 02 25 02.6 -1.0**
LDF *e*Sn Sn 02 28 01.9 -14
comp=Z,281nm,1.9s
DEL Delary 17.34 347 *i*P **Pn 02 25 04.0 +0.1**
DEL IAmb IAmb 02 25 15.4
comp=Z,209nm,2.1s
GOF Gofitskoye 17.34 65⇑ *e*P **P 02 25 07.2 +1.8**
GOF pmax pmax
comp=Z,103nm,1.4s
ONI Oni 17.38 73 P **P 02 25 09.8 +3.9**
ONI Oni 17.38 73 P **P 02 25 09.8 +3.9**
ONI pmax pmax
comp=Z,52nm,1.4s
VORR Voronezh 17.55 41 *e*P **Pn 02 25 07.4 +0.8**
VORR *e*S **S 02 28 28.6 -0.6**
VORR pmax pmax
comp=Z,101nm,1.4s
FLN La Foliniere 17.59 308 *e*Pn **Pn 02 25 06.6 -0.6**
baz=128
FLN La Foliniere 17.59 308 P **Pn 02 25 07.4 +0.2**
GRR Gorron 17.68 306 *e*Pn **Pn 02 25 07.2 -1.1**
GRR *e*Sn Sn 02 28 10.7 -14
comp=Z,431nm,2.1s
SLIT Slitere, Latvi 17.94 3 *e*P **P 02 25 12.3 +0.4**
LPSR Galich'ya Gora 17.97 38 *e*P **P 02 25 12.9 +0.6**
LPSR *e*S **Sn 02 28 32.8 +1.1**
LPSR pmax pmax
comp=Z,130nm,1.0s
LPSR smax smax
comp=N,190nm,9.3s
LPSR MLR MLR
comp=Z,990nm,16.0s
FABU Falkenberg 18.05 346 *i*P **Pn 02 25 12.2 -0.5**
MUD Monsted U'grnd 18.37 339 *i*P P 02 25 23.5 +7.0
MUD IAmb IAmb 02 25 33.9
comp=Z,20nm,1.0s
GNI Garni 18.45 81 P **Pn 02 25 19.9 +1.9**
comp=Z,9.2nm,0.9s,baz=1.0,slow=1.9,SNR=10
GNI LR LR 02 32 46.0
comp=Z,983nm,19.1s,baz=256,slow=38
GNI Garni 18.45 81 P **Pn 02 25 19.5 +1.5**
GNI Garni 18.45 81*ce*P **Pn 02 25 19.1 +1.1**
GNI pmax pmax
comp=Z,54nm,1.7s
GNI Garni 18.45 81 P **Pn 02 25 19.4 +1.5**
GNI Garni 18.45 81 ⇑P **Pn 02 25 21.8 +3.8**
VRH Novokhopyorsk 18.62 45 *e*P **Pn 02 25 21.1 +1.4**
VRH *e*S **Sn 02 28 44.2 -3.2**
VRH pmax pmax
comp=Z,110nm,1.2s
VRH smax smax
comp=N,150nm,10.1s
VRH MLR MLR
comp=Z,3μm,14.0s
BORU Boraas 18.64 347 *i*P **P 02 25 17.6 -2.0**
OBN Obninsk 18.70 29 P **P 02 25 20.1 -0.1**
comp=Z,2.2nm,0.3s,baz=220,slow=6.4,SNR=19
OBN LR LR 02 33 29.7
comp=Z,999nm,18.0s,baz=207,slow=40
comp=Z,8.4nm,0.4s
OBN Obninsk 18.70 29 **Pn 02 25 21.5 +0.8**
OBN Obninsk 18.70 29⇓*e*P **P 02 25 19.8 -0.4**
OBN pmax pmax
comp=Z,128nm,1.3s
OBN MLR MLR
comp=Z,3μm,17.0s
SGMF Saint Gilles 18.70 305 *e*Pn **Pn 02 25 22.1 +1.3**
ESBB Sonseca Array 18.95 278 **P 02 25 23.5 +0.3**
ESBB IAmb IAmb 02 25 25.2
comp=Z,135nm,1.6s
ESDC Sonseca Array 18.95 278 P **P 02 25 22.3 -0.9**
comp=Z,0.6nm,0.3s,baz=73,slow=9.5,SNR=63
ESDC LR LR 02 32 42.3
comp=Z,901nm,18.7s,baz=80,slow=37
comp=Z,20nm,1.0s
ESDC Sonseca Array 18.95 278 P **P 02 25 22.8 -0.4**
VIKU Vikbolandet 18.96 354 *e*P **P 02 25 22.2 -0.8**
GUD Guadarrama 18.98 281 P **P 02 25 24.4 +0.8**
QUIF Quistinic 18.99 303 *e*Pn **Pn 02 25 25.6 +1.3**
TAF Taforalt 19.00 262 P **P 02 25 25.0 +1.1**
MTSE Matsula 19.10 5 *e*P **Pn 02 25 26.8 +1.3**
GROC Groznyy 19.12 71 *e*P **Pn 02 25 28.3 +2.4**
GROC pmax pmax
comp=Z,32nm,0.5s
VSU Vasula 19.14 10*c i*P **P 02 25 24.2 -0.9**
VSU Vasula 19.14 10 *e*P **P 02 25 24.9 -0.2**
ROSF Rostrenen 19.18 304 *e*Pn **P 02 25 26.8 +1.1**
TJOU Tjoern 19.22 345 *i*P **P 02 25 23.5 -2.4**
PAB San Pablo 19.26 277 P **P 02 25 27.1 +0.5**
PAB IAmb IAmb 02 25 28.8
comp=Z,101nm,1.1s
PAB San Pablo 19.26 277 P **P 02 25 27.1 +0.5**
PAB pmax pmax
comp=Z,101nm,1.1s
PAB San Pablo 19.26 277 P **P 02 25 27.2 +0.5**
PAB San Pablo 19.26 277 ⇑P **P 02 25 27.2 +0.5**
FIGM Figuig 19.29 254 P **P 02 25 27.0 -0.1**
JBK JBK 19.30 261 P **P 02 25 28.0 +0.7**
MOS Moscow 19.57 29 *e*P **P 02 25 27.5 -2.3**
MOS *e*S **Sn 02 29 04.8 -5.4**
MOS pmax pmax
comp=Z,166nm,1.3s
MOS pmax pmax
comp=Z,300nm,1.4s
MOS MLR MLR
comp=N,3μm,17.0s
MOS MLR MLR
comp=E,2μm,17.0s
MOS MLR MLR
comp=Z,3μm,17.0s
PALE Palemas 20.03 265 P **P 02 25 35.0 0.0**
HOMB Homborsund 20.14 341 *i*P **P 02 25 33.1 -2.8**
AKLM AKL 20.22 263 P **P 02 25 37.1 0.0**
UPP Uppsala 20.24 356 *e*P **P 02 25 36.5 -0.5**
STRU Stroemstad 20.24 346 *i*P **P 02 25 35.5 -1.6**
MAK Makhachkala 20.37 72 *e*P **P 02 25 38.3 -0.3**
MAK *e*S **S 02 29 28.0 +1.9**
MAK pmax pmax
comp=Z,142nm,0.9s
MCH1 Michaelchurch 20.44 315 ⇑P **P 02 25 39.2 -0.1**
AAL Aland 20.47 359 *e*P **P 02 25 38.6 -0.9**
SNART Snartemo 20.53 340 *e*P **P 02 25 41.2 +1.0**
SNART IAmb IAmb 02 25 53.5
comp=Z,756nm,1.8s
SNART Snartemo 20.53 340 *i*P **P 02 25 40.0 -0.2**
MEF Metsahovi 20.64 5 *e*P **P 02 25 41.0 -0.3**
PBRG Braganca 20.84 285 *e*P **P 02 25 43.4 -0.4**
comp=Z,60nm,1.6s
PBRG *e*S Sn 02 29 39.8 -1.3
HFS Hagfors 20.89 350 P **P 02 25 43.1 -1.0**
comp=Z,25nm,0.5s,baz=162,slow=10,SNR=39
HFS LR LR 02 34 28.0
comp=Z,776nm,19.2s,baz=168,slow=38
comp=Z,25nm,0.5s
PUL Pulkovo 20.96 14*ce*P **P 02 25 44.2 -0.7**
PUL pmax pmax
comp=Z,138nm,0.6s

MVO Moncorvo 21.10 283 *e*P **P 02 25 46.5 -0.1**
comp=Z,69nm,1.3s
MVO *e*S Sn 02 29 56.9 +9.4
MVO A A 02 34 49.9
comp=Z,466nm,16.0s
KONO Kongsberg 21.13 344 P **P 02 25 45.8 -0.9**
KONO IAmb IAmb 02 25 47.3
comp=Z,189nm,1.8s
KONO Kongsberg 21.13 344*ce*P **P 02 25 44.5 -2.2**
KONO pmax pmax
comp=Z,94nm,1.7s
KONO Kongsberg 21.13 344 *e*P **P 02 25 45.7 -1.0**
OSL Oslo 21.17 346 *e*P **P 02 25 46.6 -0.5**
OSL IAmb IAmb 02 25 54.7
comp=Z,48nm,0.7s
TAM Tamanrasset 21.23 222 P **P 02 25 48.5 +0.3**
TAM IAmb IAmb 02 26 02.1
comp=Z,76nm,1.2s
TAM Tamanrasset 21.23 222 P **P 02 25 48.5 +0.3**
TAM pmax pmax
comp=Z,76nm,1.2s
TAM Tamanrasset 21.23 222 ⇑P **P 02 25 49.5 +1.3**
RAF Rauma 21.32 1 *e*P **P 02 25 48.0 -0.7**
MDT Midelt 21.48 259 P **P 02 25 50.2 -0.5**
comp=Z,27nm,0.9s,baz=90,slow=11,SNR=31
MDT LR LR 02 34 07.7
comp=Z,327nm,18.9s,baz=74,slow=36
comp=Z,27nm,0.9s
MDT Midelt 21.48 259 P **P 02 25 50.2 -0.5**
MTE Manteigas 21.57 281 *e*P **P 02 25 51.3 -0.4**
comp=Z,123nm,1.3s
MTE *e*S Sn 02 30 04.7 +5.9
MTE A A 02 34 57.3
comp=Z,900nm,18.0s
MTE Manteigas 21.57 281 P **P 02 25 51.2 -0.5**
MTE IAmb IAmb 02 25 55.7
comp=Z,143nm,1.4s
PBAR Barrancos 21.58 275 *e*P **P 02 25 51.5 -0.2**
comp=Z,217nm,1.8s
PBAR *e*S Sn 02 29 57.2 -1.7
PCBR Castelo Branco 21.60 279 *e*P **P 02 25 52.2 +0.3**
comp=Z,86nm,1.5s
PMRV Marv??o 21.60 278 *e*P **P 02 25 52.2 +0.2**
comp=Z,109nm,1.7s
PMRV *e*S **S 02 29 52.6 +1.9**
PMRV A A 02 34 37.9
comp=Z,686nm,18.0s
PVRL Vila Real 21.61 283 *e*P **P 02 25 52.8 +0.8**
POLO Lamas de Olo 21.66 284 *e*P **P 02 25 53.8 +1.2**
comp=Z,31nm,1.5s
POLO *e*S **S 02 29 57.6 +5.8**
BLS5 Blasjo 21.67 340 *e*P **P 02 25 53.1 +0.7**
BLS5 IAmb IAmb 02 26 04.6
comp=Z,69nm,1.1s
NC602 NORSAR Array S 21.78 348 *e*P **P 02 25 52.6 -1.1**
NC602 IAmb IAmb 02 25 56.8
comp=Z,52nm,0.7s
PVIS Viseu 21.80 282 *e*P **P 02 25 53.3 -0.8**
comp=Z,92nm,1.6s
KMY Karmoy 21.82 338 *e*P **P 02 25 53.8 -0.3**
PESTR Estremoz 21.86 277 *e*P **P 02 25 54.2 -0.6**
comp=Z,63nm,2.0s
PESTR *e*S Sn 02 30 03.5 -2.1
PESTR Estremoz 21.86 277 P **P 02 25 54.3 -0.4**
PESTR Estremoz 21.86 277 P **P 02 25 54.3 -0.4**
PESTR Estremoz 21.86 277 ⇓P **P 02 25 54.1 -0.6**
PGAV Gavieira, Arco 21.96 285 A A 02 37 09.6
comp=Z,450nm,20.0s
FINES FINESS Array B 21.99 7 P **P 02 25 54.7 -1.2**
comp=Z,23nm,0.5s,baz=178,slow=11,SNR=33
FINES S **S 02 29 56.7 -1.1**
comp=Z,9.4nm,0.9s,baz=186,slow=26,SNR=3.6
comp=Z,23nm,0.5s
FINES FINESS Array B 21.99 7 P **P 02 25 54.6 -1.3**
FIA1 FINESS Array S 21.99 7 P **P 02 25 55.1 -0.7**
NAO01 NORSAR Array S 21.99 347 P **P 02 25 55.0 -0.9**
ODD1 Odda 22.05 341 *e*P **P 02 25 57.0 +0.5**
ODD1 IAmb IAmb 02 26 01.0
comp=Z,28nm,1.0s
NB2 NORSAR Subarra 22.12 348 P **P 02 25 56.2 -1.2**
comp=Z,157nm,1.4s,baz=160,slow=11
NB2 NORSAR Subarra 22.12 348 P **P 02 25 56.2 -1.2**
baz=160,slow=11
NOA NORSAR Array B 22.12 348 P **P 02 25 56.3 -1.2**
comp=Z,36nm,0.8s,baz=164,slow=11,SNR=43
NOA LR LR 02 35 10.7
comp=Z,709nm,20.1s,baz=165,slow=38
comp=Z,36nm,0.8s
PBEJ Beja 22.25 275 *e*P **P 02 25 57.9 -1.0**
comp=Z,119nm,1.5s
EKA Eskdalemuir Ar 22.25 322 P **P 02 25 57.9 -0.8**
comp=Z,22nm,0.6s,baz=122,slow=10,SNR=63
EKA LR LR 02 36 09.4
comp=Z,828nm,18.2s,baz=120,slow=41
comp=Z,22nm,0.6s
EVO Evora 22.25 276 *e*P **P 02 25 58.0 -0.9**
comp=Z,46nm,1.6s
ESK Eskdalemuir 22.26 322 P **P 02 25 57.4 -1.5**
ESK Eskdalemuir 22.26 322 P **P 02 25 57.4 -1.5**
ESK pmax pmax
comp=Z,314nm,1.7s
ESK Eskdalemuir 22.26 322 ⇑P **P 02 25 58.1 -0.7**
PVAQ Vaqueiros 22.28 273 *e*P **P 02 25 58.1 -1.2**
comp=Z,159nm,1.4s
PVAQ *e*S **S 02 30 03.5 -0.2**
PVAQ Vaqueiros 22.28 273 P **P 02 25 57.1 -2.2**
PVAQ IAmb IAmb 02 25 59.1
comp=Z,68nm,1.2s
PVAQ Vaqueiros 22.28 273 P **P 02 25 58.7 -0.6**
PVAQ Vaqueiros 22.28 273 ⇑P **P 02 25 57.7 -1.6**
PMTG Montargil 22.30 278 *e*P **P 02 25 58.7 -0.8**
comp=Z,88nm,1.4s
PMTG *e*S **S 02 30 06.0 +1.9**
SKAR Skarslia 22.34 344 *e*P **P 02 25 59.5 -0.2**
SKAR IAmb IAmb 02 26 12.0
comp=Z,94nm,1.4s
PCAS Casmilo, Conde 22.34 280 *e*P **P 02 25 59.4 -0.5**
comp=Z,70nm,1.9s
PCAS *e*S **S 02 30 08.1 +3.2**
PCVE Castro Verde 22.47 274 *e*P **P 02 26 00.4 -0.9**
comp=Z,93nm,1.9s
PCVE *e*S **S 02 30 13.3 +6.0**
MESJ Messejana 22.56 274 *e*P **P 02 26 01.3 -1.0**
comp=Z,133nm,1.6s
MESJ Messejana 22.56 274 ⇑P **P 02 26 01.3 -1.0**
PSBE So Bento 22.66 279 *e*P **P 02 26 03.0 -0.3**
comp=Z,73nm,1.7s
PSBE *e*S **S 02 30 08.6 -2.1**
PNCL Nicolau / Gran 22.74 275 *e*P **P 02 26 03.7 -0.4**
comp=Z,131nm,1.5s
PNCL *e*S **S 02 30 13.3 +1.3**
BER Bergen 22.79 340 *e*P **P 02 26 04.1 -0.2**
BER IAmb IAmb 02 26 05.5
comp=Z,48nm,1.1s
DSB Dublin 22.84 315 P **P 02 26 04.5 -0.5**
DSB IAmb IAmb 02 26 17.0
comp=Z,107nm,1.3s
PTEO Sao Teotonio 23.02 274 *e*P **P 02 26 06.5 -0.6**
comp=Z,131nm,1.2s
MORF Marmelete 23.03 273 *e*P **P 02 26 05.8 -1.4**
comp=Z,90nm,1.8s
MORF *e*S **S 02 30 21.7 +4.5**
MORF Marmelete 23.03 273 ⇑P **P 02 26 05.5 -1.7**
PMST Lisbon--Monsan 23.10 277 *e*P **P 02 26 09.9 +2.0**
PMAFR Mafra 23.13 278 *e*S **S 02 30 27.0 +8.1**
PFVI Vila Bisbo 23.21 273 *e*P **P 02 26 08.2 -0.8**
comp=Z,121nm,2.1s
PFVI *e*S **S 02 30 22.8 +2.7**
PFVI Vila Bisbo 23.21 273 P **P 02 26 07.8 -1.2**
PFVI IAmb IAmb 02 26 08.9
comp=Z,68nm,1.0s
HYA Hoyanger 23.25 342 *e*P **P 02 26 08.8 -0.4**
HYA IAmb IAmb 02 26 20.2
comp=Z,44nm,0.9s
AVE Averroes 23.41 263 P **P 02 26 10.5 -0.6**
DOMB Dombas 23.43 346 *e*P **P 02 26 10.5 -0.5**
DOMB IAmb IAmb 02 26 21.2
comp=Z,52nm,0.6s
AKN Aaknes 23.96 344 *e*P **P 02 26 17.4 +1.2**
AKN IAmb IAmb 02 26 29.6
comp=Z,30nm,0.9s
SRHM Skhour des Reh 24.13 261 P **P 02 26 20.0 +1.9**
KLMR Klimovskoe 24.16 23 *e*P **P 02 26 15.9 -2.0**
KLMR S **S 02 30 33.5 -1.3**
KLMR pmax pmax

comp=Z,133nm,1.2s
KLMR MLR MLR
comp=Z,1μm,14.0s
KLMR Klimovskoe 24.16 23 *e*P **P** **02 26 15.9 -2.0**
KLMR *e*P **P** **02 26 15.9 -2.0**
KLMR *e*P **P** **02 26 15.9 -2.0**
KLMR AMP 02 26 29.2
comp=Z,133nm,1.2s
KLMR S **S** **02 30 33.6 -1.3**
KLMR S **S** **02 30 33.6 -1.3**
KLMR LQ LQ 02 33 56.8
KLMR LQ LQ 02 33 56.8
KLMR LR LR 02 34 28.4
KLMR AMP 02 36 41.0
comp=Z,1μm,14.0s
TBLU Trondheim 24.36 349 *e*P **P** **02 26 20.0 +0.2**
NSS Namsos 25.35 351 *e*P **P** **02 26 27.6 -1.1**
NSS IAmb IAmb 02 26 35.6
comp=Z,41nm,1.1s
KIRV Kirov 26.30 35 P **P** **02 26 35.4 -2.0**
comp=Z,4.2nm,0.5s,baz=248,slow=19,SNR=2.2
KIRV LR LR 02 37 42.8
comp=Z,2μm,18.4s,baz=244,slow=38
comp=Z,4.2nm,0.5s
KIRV Kirov 26.30 35 *i*P **P** **02 26 39.7 +2.4**
RAYN Ar Rayn 26.49 120 P **P** **02 26 39.8 +0.4**
RAYN Ar Rayn 26.49 120 P **P** **02 26 39.8 +0.4**
RAYN pmax pmax
comp=Z,9.0nm,0.7s
RAYN Ar Rayn 26.49 120 P **P** **02 26 39.4 0.0**
PRGR Permogore 26.71 27 *e*P **P** **02 26 41.7 +0.7**
PRGR pmax pmax
comp=Z,39nm,0.8s
MOR8 Moi Rana 26.72 354 *e*P **P** **02 26 40.4 -0.7**
MOR8 IAmb IAmb 02 26 56.5
comp=Z,19nm,1.2s
FAUS Fauske 27.86 356 *e*P **P** **02 26 48.5 -2.8**
FAUS IAmb IAmb 02 26 51.0
comp=Z,17nm,1.1s
AKTO Aktyubinsk 28.17 55 P **P** **02 26 53.1 -1.2**
comp=Z,2.6nm,0.4s,baz=271,slow=5.3,SNR=12
comp=Z,2.6nm,0.4s
AKTO Aktyubinsk 28.17 55 *i*P **P** **02 26 53.3 -1.0**
AKTO pmax pmax
comp=Z,16nm,1.1s
STEI Steigen 28.41 356 *e*P **P** **02 26 55.2 -0.9**
STEI IAmb IAmb 02 27 08.0
comp=Z,31nm,1.2s
LOF Lofoten 28.72 354 *e*P **P** **02 26 59.0 +0.1**
APA Apatity 28.77 10 ⇓*i*P P 02 26 54.5 -4.9
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,1μm,13.0s
GEYT Alibeck 29.09 81 P **P** **02 27 02.5 -0.2**
comp=Z,3.5nm,0.5s,baz=282,slow=9.0,SNR=8.1
GEYT LR LR 02 41 24.6
comp=Z,443nm,20.9s,baz=293,slow=42
comp=Z,3.5nm,0.5s
GEYT Alibeck 29.09 81 P **P** **02 27 03.0 +0.4**
GEYT IAmb IAmb 02 27 09.0
comp=Z,47nm,1.5s
GYA0 ALIBECK ARRAY 29.09 81 P **P** **02 27 02.3 -0.3**
GYA0B ALIBECK ARRAY 29.09 81 P **P** **02 27 04.0 +1.3**
GYA0B IAmb IAmb 02 27 22.8
comp=Z,17nm,0.8s
AB31 Akbulak array 29.29 58 *i*P **P** **02 27 03.8 -0.4**
ABKAR Akbulak array 29.29 58 P **P** **02 27 04.0 -0.2**
ABKAR Akbulak array 29.29 58 ⇑P **P** **02 27 04.4 +0.2**
KTK1 Kautokeino 29.37 2 *e*P **P** **02 27 03.6 -1.1**
KTK1 IAmb IAmb 02 27 06.8
comp=Z,16nm,0.9s
ARU Arti 29.83 43 P **P** **02 27 08.0 -0.9**
comp=Z,3.3nm,0.4s,baz=263,slow=10,SNR=9.5
ARU LR LR 02 40 21.5
comp=Z,252nm,19.4s,baz=236,slow=39
comp=Z,3.3nm,0.4s
ARU Arti 29.83 43 P **P** **02 27 09.1 +0.2**
ARU IAmb IAmb 02 27 21.6
comp=Z,33nm,1.4s
ARU Arti 29.83 43*d i*P **P** **02 27 06.8 -2.1**
ARU 02 28 01.4
ARU 02 30 07.9
ARU S **S** **02 32 04.5 -0.3**
ARU SS **SnSn** **02 33 35.6 +0.4**
ARU pmax pmax
comp=Z,12nm,1.2s
ARU MLR MLR
comp=Z,1μm,14.0s
ARU Arti 29.83 43 ⇑P **P** **02 27 09.2 +0.2**
JETT Jettan, Norway 29.89 360 *e*P **P** **02 27 07.9 -1.5**
JETT IAmb IAmb 02 27 20.6
comp=Z,33nm,1.2s
ARA0 ARCESS Array S 29.97 3 *e*P **P** **02 27 08.6 -1.5**
ARCES ARCESS Array B 29.97 3 P **P** **02 27 08.0 -2.1**
comp=Z,6.3nm,0.5s,baz=187,slow=10,SNR=31
ARCES LR LR 02 40 26.2
comp=Z,738nm,22.0s,baz=181,slow=39
comp=Z,6.3nm,0.5s
ARCES ARCESS Array B 29.97 3 P **P** **02 27 08.0 -2.1**
TRO Tromso 29.98 359 *e*P **P** **02 27 08.1 -1.9**
TRO IAmb IAmb 02 27 10.2
comp=Z,48nm,1.5s
SVE Sverdlovsk 31.05 43 *e*P **P** **02 27 20.0 +0.3**
SVE *e*S **S** **02 32 26.4 +2.6**
SVE pmax pmax
comp=Z,39nm,1.4s
SVE MLR MLR
comp=Z,1μm,14.0s
TOA0 Torodi Ar. Sit 31.32 218 P **P** **02 27 22.5 0.0**
TORD Torodi Ar. Bea 31.32 218 P **P** **02 27 22.2 -0.3**
comp=Z,31nm,0.8s,baz=33,slow=9.1,SNR=102
TORD LR LR 02 42 18.5
comp=Z,584nm,19.1s,baz=24,slow=41
comp=Z,31nm,0.8s
MZR Muzera 32.37 111 P **P** **02 27 31.4 -0.2**
BANOM Banah 32.73 104 P **P** **02 27 34.3 -0.5**
NAZ Nazwa, Dubai 32.78 106 P **P** **02 27 34.6 -0.6**
MSFE Esma-Masafi 32.94 105 P **P** **02 27 34.6 -2.1**
KOWA Kowa 33.18 228 LR LR 02 42 42.1
comp=Z,758nm,18.8s,baz=42,slow=39
KOWA Kowa 33.18 228 P **P** **02 27 38.7 0.0**
KOWA Kowa 33.18 228 P **P** **02 27 38.8 0.0**
KOWA Kowa 33.18 228 ⇑P **P** **02 27 38.7 0.0**
UOSS Minazif 33.20 106 P **P** **02 27 36.0 -3.0**
HATD Hatta, Dubai 33.22 106 P **P** **02 27 38.0 -1.1**
ASHO Ashiyiah 33.25 106 P **P** **02 27 37.6 -1.7**
HRA Herat 33.38 86 P **P** **02 27 40.9 +0.3**
HRA IAmb IAmb 02 27 46.8
comp=Z,32nm,1.1s
FURI Furi 34.67 148 P **P** **02 27 52.9 +0.9**
FURI IAmb IAmb 02 28 06.6
comp=Z,26nm,0.9s
JMIC Jan Mayen 34.70 344 LR LR 02 42 51.1
comp=Z,86nm,19.1s,baz=158,slow=38
BORG Borgarnes 34.82 330 LR LR 02 44 30.5
comp=Z,315nm,18.4s,baz=127,slow=40
BRVK Borovoye 35.98 51 P **P** **02 28 03.0 +0.4**
BRVK Borovoye 35.98 51*ce*P **P** **02 28 01.7 -0.9**
BRVK pmax pmax
comp=Z,18nm,1.7s
BRVK Borovoye 35.98 51 ⇑P **P** **02 28 03.5 +0.8**
WSAR Wadi Sarin 36.00 106 P **P** **02 28 03.0 -0.1**
comp=Z,2.2nm,0.7s,baz=252,slow=9.6,SNR=1.0
WSAR LR LR 02 46 26.8
comp=Z,280nm,20.9s,baz=334,slow=42
comp=Z,2.2nm,0.7s
BVA0 Borovoye Array 36.04 52 *i*P **P** **02 28 03.3 +0.1**
BVAR Borovoye Array 36.04 52 LR LR 02 45 16.2
comp=Z,243nm,20.7s,baz=268,slow=40
IUG Iuzhnay 36.95 70 *e*P **P** **02 28 10.5 -0.7**
IUG Iuzhnay 36.95 70 *e*P **P** **02 28 10.6 -0.7**
baz=70
KK31 Karatay Array 37.08 68 P **P** **02 28 12.0 -0.2**
KK31 IAmb IAmb 02 28 20.5
comp=Z,15nm,0.8s
KK31 Karatay Array 37.08 68 P **P** **02 28 12.0 -0.2**
KK31 pmax pmax
comp=Z,15nm,0.8s
KKAR Karatay Array 37.08 68 P **P** **02 28 12.0 -0.2**
KKAR IAmb IAmb 02 28 20.5
comp=Z,15nm,0.8s
KKAR Karatay Array 37.08 68 P **P** **02 28 12.0 -0.2**
KKAR pmax pmax
comp=Z,15nm,0.8s
KKAR Karatay Array 37.08 68 ⇑P **P** **02 28 12.2 0.0**
BRZS Berezniki 37.56 57 *e*P **P** **02 28 14.4 -1.8**
BRZS Berezniki 37.56 57 *e*P **P** **02 28 14.4 -1.8**
baz=57
GAR Garm 37.99 75 P **P** **02 28 21.7 +1.6**
BTK Batken 38.05 73 IAmb IAmb 02 28 28.1
comp=Z,20nm,1.0s
LODK Lodwar 38.52 156 P **P** **02 28 24.9 +0.3**
KBL Kabul 38.53 82 P **P** **02 28 24.7 -0.1**
KBL Kabul 38.53 82 P **P** **02 28 24.7 -0.1**
KBL pmax pmax
comp=Z,14nm,1.4s
SPITS Spitsbergen Ar 38.60 359 P **P** **02 28 22.1 -2.5**
comp=Z,7.8nm,0.8s,baz=165,slow=12,SNR=5.9
comp=Z,7.8nm,0.8s
BTLS Baital 39.18 64 *e*P **P** **02 28 28.2 -1.6**
BTLS Baital 39.18 64 *e*P **P** **02 28 28.3 -1.6**
baz=64
SGDS Sogindy 39.94 67 *e*P **P** **02 28 34.3 -2.0**
SGDS Sogindy 39.94 67 *e*P **P** **02 28 34.4 -1.9**
baz=66
AAK Ala-Archa 40.04 68 P **P** **02 28 37.2 0.0**
comp=Z,6.0nm,0.6s,baz=267,slow=7.3,SNR=20
AAK LR LR 02 49 19.1
comp=Z,498nm,18.9s,baz=288,slow=42
comp=Z,6.0nm,0.6s
AAK Ala-Archa 40.04 68 P **P** **02 28 37.6 +0.4**
AAK IAmb IAmb 02 28 42.3
comp=Z,77nm,1.8s
AAK Ala-Archa 40.04 68*ce*P **P** **02 28 36.3 -0.9**
AAK pmax pmax
comp=Z,44nm,1.7s
AAK Ala-Archa 40.04 68 P **P** **02 28 37.4 +0.1**
AAK Ala-Archa 40.04 68 ⇑P **P** **02 28 37.3 0.0**
DBIC Dimbokro 40.12 222 P **P** **02 28 37.2 -0.8**
comp=Z,13nm,0.9s,baz=8.8,slow=9.3,SNR=14
DBIC LR LR 02 46 27.3
comp=Z,791nm,19.8s,baz=3.5,slow=38
comp=Z,13nm,0.9s
DBIC Dimbokro 40.12 222 P **P** **02 28 37.8 -0.2**
DBIC Dimbokro 40.12 222 P **P** **02 28 37.8 -0.2**
DBIC pmax pmax
comp=Z,24nm,1.1s
DBIC Dimbokro 40.12 222 ⇑P **P** **02 28 37.6 -0.3**
TKM2 Tokmak 2 40.75 67 *i*P **P** **02 28 41.1 -2.1**
TKM2 pmax pmax
comp=Z,5.0nm,1.1s
DAG Danmarks Havn 40.80 347 *i*P **P** **02 28 41.0 -1.9**
DAG IAmb IAmb 02 28 42.8
comp=Z,5.4nm,0.8s
KUU Kurty 41.03 65 *e*P **P** **02 28 43.4 -1.8**
KUU Kurty 41.03 65 *e*P **P** **02 28 43.5 -1.8**
baz=65
BOOM Boomskoye usch 41.11 68 P **P** **02 28 47.3 +1.2**
BOOM IAmb IAmb 02 28 52.5
comp=Z,37nm,1.5s
BOOM Boomskoye usch 41.11 68 P **P** **02 28 47.3 +1.2**
BOOM pmax pmax
comp=Z,37nm,1.5s
MBAR Mbarara 41.19 165 P **P** **02 28 46.8 -0.1**
comp=Z,2.7nm,0.2s,baz=347,slow=2.1,SNR=5.9
MBAR LR LR 02 48 27.5
comp=Z,392nm,19.6s,baz=336,slow=40
comp=Z,2.7nm,0.2s
MBAR Mbarara 41.19 165 P **P** **02 28 47.6 +0.7**
MBAR Mbarara 41.19 165*c i*P **P** **02 28 47.8 +0.9**
MBAR pmax pmax
comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra 41.22 55 LR LR 02 49 56.0
comp=Z,340nm,18.6s,baz=264,slow=42
KURK Kurchatov 41.27 55 P **P** **02 28 46.8 -0.3**
KURK Kurchatov 41.27 55*ce*P **P** **02 28 46.0 -1.0**
KURK pmax pmax
comp=Z,17nm,1.7s
KURK Kurchatov 41.27 55 ⇑P **P** **02 28 46.7 -0.3**
CHKK Chushkaly 41.50 65 *e*P **P** **02 28 47.8 -1.3**
CHKK Chushkaly 41.50 65 *e*P **P** **02 28 47.8 -1.3**
baz=65
AAA Alma-Ata 41.61 66 *e*P **P** **02 28 49.5 -0.6**
AAA Alma-Ata 41.61 66 *e*P **P** **02 28 49.5 -0.6**
baz=66
MDOK Medeo 41.72 66 *e*P **P** **02 28 49.5 -1.5**
MDOK Medeo 41.72 66 *e*P **P** **02 28 49.6 -1.5**
baz=66
KSH Kashi 42.01 72 P **P** **02 28 52.4 -1.0**
KSH sP sP 02 29 02.8 +1.8
KSH pmax pmax
comp=Z,12nm,1.3s
KSH LR LR
comp=Z,320nm,11.3s
KSH LR LR
comp=Z,300nm,13.1s
KSH LR LR
comp=Z,350nm,11.7s
NIL Nilore 42.09 81 pP 02 28 57.7 -1.9
TDK Taldyqorghan 42.20 63 *e*P **P** **02 28 53.1 -1.7**
TDK Taldyqorghan 42.20 63 *e*P **P** **02 28 53.2 -1.7**
baz=63
SATY Saty 42.70 66 *e*P **P** **02 28 57.8 -1.2**
SATY Saty 42.70 66 *e*P **P** **02 28 57.9 -1.2**
baz=66
KPKS Kokpek 42.79 65 *e*P **P** **02 28 58.0 -1.7**
KPKS Kokpek 42.79 65 *e*P **P** **02 28 58.0 -1.7**
baz=65
ICESG Greenland Ices 43.00 333 *i*P P 02 28 57.4 -4.0
ICESG IAmb IAmb 02 29 08.7
comp=Z,29nm,1.2s
UZB Uzynbulak 43.11 66 *e*P **P** **02 29 00.2 -2.2**
UZB Uzynbulak 43.11 66 *e*P **P** **02 29 00.2 -2.2**
baz=66
PDGK Podgornoye 43.39 65 P **P** **02 29 03.6 -1.0**
KMBO Kilima Mbogo 43.41 155 P **P** **02 29 05.3 +0.3**
comp=Z,0.1nm,0.3s,baz=38,slow=19,SNR=1.8
KMBO Kilima Mbogo 43.41 155 P **P** **02 29 06.0 +0.9**
KMBO Kilima Mbogo 43.41 155 P **P** **02 29 06.0 +0.9**
KMBO pmax pmax
comp=Z,10.0nm,1.2s
KMBO Kilima Mbogo 43.41 155 P **P** **02 29 06.2 +1.1**
SHLS Shalkode 43.42 66 *e*P **P** **02 29 05.5 +0.7**
SHLS Shalkode 43.42 66 *e*P **P** **02 29 05.5 +0.7**
baz=65
NOR Nord 43.95 353 *i*P **P** **02 29 06.3 -2.2**
NOR IAmb IAmb 02 29 15.9
comp=Z,27nm,1.2s
MAKZ Makanchi 44.19 60 P **P** **02 29 10.6 -0.3**
MAKZ Makanchi 44.19 60 P **P** **02 29 10.6 -0.3**
MAKZ pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 44.19 60 ⇑P **P** **02 29 09.4 -1.4**
MK31 Makanchi Array 44.40 60 P **P** **02 29 12.1 -0.4**
MK31 IAmb IAmb 02 29 18.7
comp=Z,36nm,1.4s
MK31 Makanchi Array 44.40 60 *i*P **P** **02 29 11.4 -1.2**
MK31 pmax pmax
comp=Z,13nm,0.6s
MKAR Makanchi Array 44.40 60 P **P** **02 29 12.1 -0.5**
comp=Z,11nm,0.4s,baz=277,slow=7.4,SNR=95
MKAR ScP **ScP** **02 34 43.9 -3.5**
comp=Z,2.5nm,1.0s,baz=335,slow=2.1,SNR=4.5
MKAR LR LR 02 50 04.3
comp=Z,509nm,18.1s,baz=280,slow=39
comp=Z,11nm,0.4s
ZAA0 Zalesovo Array 44.58 49 P **P** **02 29 13.0 -0.8**
ZALV Zalesovo Beam 44.58 49 P **P** **02 29 12.9 -0.9**
comp=Z,5.1nm,0.4s,baz=283,slow=8.0,SNR=18
ZALV LR LR 02 49 54.7
comp=Z,763nm,18.2s,baz=276,slow=39
comp=Z,5.1nm,0.4s
KIBK Kibwezi 44.80 155 P **P** **02 29 16.4 +0.3**
DY2G Dye2 45.22 329 *i*P **P** **02 29 20.3 +1.2**
DY2G IAmb IAmb 02 29 21.5
comp=Z,316nm,2.4s
NRIK Noril'sk 45.36 27 P **P** **02 29 19.8 0.0**
comp=Z,5.6nm,0.5s,baz=267,slow=9.9,SNR=7.7
comp=Z,5.6nm,0.5s
NRIK Noril'sk 45.36 27 P **P** **02 29 20.4 +0.7**
NRIK Noril'sk 45.36 27 *i*P **P** **02 29 20.5 +0.7**
NRIK pmax pmax
comp=Z,33nm,1.4s
ZSN Zaisan 45.94 58 *e*P **P** **02 29 23.2 -1.5**
ZSN Zaisan 45.94 58 *e*P **P** **02 29 23.3 -1.5**
baz=58
SFJD Kangerlussuaq 46.95 329 LR LR 02 49 53.3
comp=Z,640nm,21.4s,baz=85,slow=37
DGZ Jazzator, Alta 47.02 55 *i*P **P** **02 29 32.7 -0.6**
DGZ pmax pmax
comp=Z,12nm,0.7s
NEEM North Greenlan 47.61 344 *i*P **P** **02 29 35.2 -2.6**
NEEM IAmb IAmb 02 29 45.4
comp=Z,16nm,1.0s
WMQ Urumqi 48.91 62 *e*P **P** **02 29 48.1 +0.1**
WMQ pP sP 02 29 53.3 -2.4
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ LR LR
comp=Z,360nm,17.3s
WMQ LR LR
comp=Z,300nm,19.3s
WMQ LR LR
comp=Z,290nm,21.5s
DRLN Deer Lake 54.23 308 P **P** **02 30 27.4 -0.2**
DRLN Deer Lake 54.23 308 ⇓P **P** **02 30 27.2 -0.3**
HYBB Hyderabad (bro 54.49 97 *e*P **P** **02 30 30.6 +0.7**
HYBB *es*P **sP** **02 30 39.4 +1.8**
FRB Frobisher Bay 54.91 327 LR LR 02 55 09.9
comp=Z,594nm,19.1s,baz=36,slow=37
LSZ Lusaka 55.17 171 LR LR 02 57 33.4
comp=Z,217nm,18.5s,baz=350,slow=40
LSZ Lusaka 55.17 171 P **P** **02 30 35.3 +0.5**
LSZ Lusaka 55.17 171 P **P** **02 30 35.3 +0.5**
LSZ pmax pmax
comp=Z,6.0nm,0.8s
ZAK Zakamensk 56.45 50 *e*P **P** **02 30 42.5 -1.2**
ZAK pmax pmax
comp=Z,8.0nm,1.7s
GOMU GeErMu 56.99 68 P **P** **02 30 49.3 +1.2**
GOMU pP sP 02 30 54.8 -1.0
GOMU S **S** **02 38 41.0 -1.0**
GOMU pmax pmax
comp=Z,2.0nm,0.6s
GOMU pmax pmax
comp=Z,110nm,4.0s
GOMU LR LR
comp=Z,190nm,18.6s
GOMU LR LR
comp=Z,160nm,16.4s
GOMU LR LR
comp=Z,220nm,16.7s
PCHI Peechi 57.10 105 *e*P **P** **02 30 47.7 -0.9**
SCHQ Schefferville 57.40 317 P **P** **02 30 49.6 -0.7**
comp=Z,4.4nm,0.4s,baz=65,slow=4.9,SNR=13
comp=Z,4.4nm,0.4s
LSA Lhasa 57.45 77 P **P** **02 30 51.9 +0.4**
LSA Lhasa 57.45 77 P **P** **02 30 51.9 +0.4**
LSA pmax pmax
comp=Z,6.0nm,0.7s
TIXI Tiksi 58.15 21 P **P** **02 30 55.2 0.0**
TIXI IAmb IAmb 02 31 04.3
comp=Z,20nm,1.2s
TIXI Tiksi 58.15 21 *i*P **P** **02 30 54.1 -1.1**
TIXI pmax pmax
comp=Z,31nm,1.8s
GTA Gaotai 58.99 63 *e*P **P** **02 31 00.8 -1.0**
GTA pP pP 02 31 06.1 -1.3
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,99nm,6.5s
GTA LR LR
comp=Z,160nm,17.8s
GTA LR LR
comp=Z,190nm,20.4s
GTA LR LR
comp=Z,320nm,22.2s
BOD Bodaibo 59.08 39 *e*P **P** **02 31 00.5 -1.4**
BOD pmax pmax
comp=Z,13nm,1.7s
SONM Songino Array 59.39 51 P **P** **02 31 03.3 -1.0**
comp=Z,5.6nm,0.9s,baz=289,slow=9.1,SNR=19
SONM LR LR 02 59 20.3
comp=Z,626nm,19.1s,baz=296,slow=39
comp=Z,5.6nm,0.9s
SONM Songino Array 59.39 51 P **P** **02 31 03.6 -0.8**
SONM IAmb IAmb 02 31 10.8
comp=Z,17nm,1.1s
SONM Songino Array 59.39 51 P **P** **02 31 03.6 -0.8**
SONM pmax pmax
comp=Z,17nm,1.1s
ULN Ulaanbaatar 59.77 51 P **P** **02 31 06.7 -0.3**
ULN IAmb IAmb 02 31 13.4
comp=Z,13nm,1.0s
ULN Ulaanbaatar 59.77 51 *i*P P 02 31 02.7 -4.3
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 59.77 51 P **P** **02 31 06.2 -0.8**
comp=Z,52nm,0.9s
MATP Matopo 60.29 172 *i*P **P** **02 31 11.6 +0.9**
MATP Matopo 60.29 172 *i*P **P** **02 31 11.6 +0.9**
PQI Presque Isle 61.72 309 P **P** **02 31 20.1 0.0**
PQI IAmb IAmb 02 31 20.4
comp=Z,16nm,1.0s
MUSN Musina, Limpop 62.29 170 *i*P **P** **02 31 24.2 0.0**
MUSN Musina, Limpop 62.29 170 *i*P **P** **02 31 24.2 0.0**
PKME Peaks-Kenny Pk 63.19 308 P **P** **02 31 28.6 -1.3**
baz=60
LZH Lanzhou 63.41 64 ⇓P P 02 31 38.0 +6.2
LZH pP sP 02 31 41.8 +2.2
LZH sP pP 02 31 43.8 +6.3
YAK Yakutsk 63.70 30 P **P** **02 31 31.8 -1.3**
YAK Yakutsk 63.70 30 *e*P **P** **02 31 31.3 -1.7**
YAK pmax pmax
comp=Z,18nm,0.6s
YAK pmax pmax
comp=E,9.0nm,1.1s
MOPA Mopani 63.72 169 *i*P **P** **02 31 34.1 +0.5**
MOPA Mopani 63.72 169 *i*P **P** **02 31 34.1 +0.5**
LBTB Lobatse 64.58 175 *i*P **P** **02 31 40.4 +1.1**
LBTB Lobatse 64.58 175 *i*P **P** **02 31 40.4 +1.1**
LBNH Lisbon 65.32 308 P **P** **02 31 43.7 -0.3**
baz=58
HRV Adam Dziewonsk 66.02 306 P **P** **02 31 48.0 -0.5**
baz=57
HHC Hu-ho-hao-te 66.06 56 *e*P **P** **02 31 48.0 -1.0**
HHC pmax pmax
comp=E,25nm,0.8s
HHC pmax pmax
comp=E,100nm,5.6s
CD2 Chengdu 66.09 69 *e*P **P** **02 31 48.0 -1.3**
CD2 pmax pmax
comp=E,10.0nm,0.5s
HIA Hailar 66.33 45 P **P** **02 31 51.6 +1.1**
HIA IAmb IAmb 02 31 57.7
comp=Z,23nm,1.3s
HIA Hailar 66.33 45 P **P** **02 31 51.6 +1.1**
HIA pmax pmax
comp=Z,23nm,1.3s
LONY Lake Ozonia 66.72 309 P **P** **02 31 52.6 -0.4**
baz=57
L61B Northampton 66.75 306 P **P** **02 31 52.8 -0.4**
baz=57
PZH PanZhiHua 67.05 74 P **P** **02 31 55.4 -0.1**
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,90nm,4.1s
XLT XiLinHaoTe 67.21 51 *e*P **P** **02 31 54.1 -2.1**
XLT pP pP 02 31 58.8 -3.1
XLT sP sP 02 32 00.8 -3.3
XLT ScP 02 36 22.6
XLT S S 02 40 38.0 -12
XLT sS pS 02 40 54.6 -2.6
XLT pmax pmax
comp=Z,15nm,0.9s
XLT pmax pmax
comp=Z,120nm,4.5s
XLT LR LR
comp=Z,480nm,14.7s
XLT LR LR
comp=Z,430nm,19.8s
XAN Xi'an 68.02 64 ⇑P P 02 32 06.3 +4.9
XAN pP sP 02 32 11.9 +2.7
XAN pmax pmax
comp=Z,19nm,1.3s
XAN LR LR
comp=Z,250nm,16.2s
XAN LR LR
comp=Z,270nm,17.1s
XAN LR LR
comp=Z,260nm,17.8s
BOSA Boshof 68.13 176 P **P** **02 32 01.2 -0.8**
comp=Z,7.2nm,0.7s,baz=9.9,slow=7.2,SNR=11
comp=Z,7.2nm,0.7s

BOSA	Boshof	68.13 176	P	P	02 32 02.4	+0.4
BOSA			IAmb	IAmb	02 32 03.4	
	comp=Z,18nm,1.1s					
BOSA	Boshof	68.13 176	P	P	02 32 02.4	+0.4
BOSA			pmax	pmax		
	comp=Z,18nm,1.1s					
BOSA	Boshof	68.13 176	*i* P	P	02 32 02.8	+0.8
BOSA	Boshof	68.13 176	*i* P	P	02 32 02.8	+0.8
C36M	Paulatuk	68.17 347	P	P	02 32 00.9	-0.8
	baz=29					
PAL	Palisades	68.31 306	P	P	02 32 03.1	0.0
	baz=56					
BINY	Binghamton	68.92 308	P	P	02 32 07.1	+0.1
	baz=55					
BJI	Beijing	69.44 55	P	P	02 32 08.8	-1.3
BJI			PcP	PcP	02 32 31.4	-2.0
BJI			pmax	pmax		
	comp=Z,7.0nm,1.5s					
BJI			LR	LR		
	comp=Z,100nm,19.2s					
BJI			LR	LR		
	comp=Z,300nm,19.0s					
BJI			LR	LR		
	comp=Z,650nm,21.2s					
BJT	Baijiatuau	69.45 55	P	P	02 32 10.5	+0.3
BJT			IAmb	IAmb	02 32 24.4	
	comp=Z,5.8nm,0.6s					
BJT	Baijiatuau	69.45 55	P	P	02 32 10.5	+0.3
BJT			pmax	pmax		
	comp=Z,6.0nm,0.6s					
CMAR	Chiang Mai Arr	69.56 83	P	P	02 32 07.5	-3.7
	comp=Z,0.5nm,0.3s,baz=305,slow=7.3,SNR=4.5					
CMAR			LR	LR	03 08 04.2	
	comp=Z,63nm,20.7s,baz=285,slow=40					
HNS	HongShan	70.01 58	⇓P	P	02 32 14.8	+1.1
HNS			S	S	02 41 25.0	+1.6
HNS			pmax	pmax		
	comp=Z,12nm,1.2s					
HNS			LR	LR		
	comp=Z,210nm,17.2s					
HNS			LR	LR		
	comp=Z,230nm,13.9s					
C26K	Camden Bay	70.15 355	P	P	02 32 13.7	-0.3
	baz=12					
C27K	Jago River	70.35 354	P	P	02 32 14.9	-0.4
	baz=13					
ENH	Enshi	70.54 67	P	P	02 32 18.3	+1.2
INK	Inuvik	70.55 350	P	P	02 32 18.1	+1.6
INK			IAmb	IAmb	02 32 25.3	
	comp=Z,15nm,1.1s					
INK	Inuvik	70.55 350	P	P	02 32 18.1	+1.6
INK			pmax	pmax		
	comp=Z,15nm,1.2s					
INK	Inuvik	70.55 350	P	P	02 32 16.0	-0.4
	baz=21					
C23K	Itkillik River	70.56 357	P	P	02 32 15.4	-1.0
	baz=7.1					
C24K	Franklin Bluff	70.58 356	P	P	02 32 15.3	-1.3
	baz=8.7					
SEY	Seymchan	70.64 21	*i* P	P	02 32 14.7	-2.4
SEY			pmax	pmax		
	comp=Z,12nm,1.0s					
D25K	Kavik River	70.84 355	P	P	02 32 18.3	0.0
	baz=11					
SSPA	Standing Stone	70.99 307	P	P	02 32 19.3	-0.4
SSPA	Standing Stone	70.99 307	P	P	02 32 19.6	0.0
	baz=54					
D24K	Happy Valley	71.15 356	P	P	02 32 19.6	-0.5
	baz=8.6					
ERPA	Erie	71.38 310	P	P	02 32 22.1	+0.1
	baz=53					
F31M	Tsiigehtchic	71.40 350	P	P	02 32 20.8	-0.8
	baz=21					
D23K	Nanushuk River	71.43 357	P	P	02 32 21.9	+0.1
	baz=7.0					
E27K	Coleen River	71.58 353	P	P	02 32 22.5	-0.2
	baz=14					
TOLK	Toolik Lake Re	71.70 356	P	P	02 32 22.9	-0.6
	baz=7.9					
SUR	Sutherland	71.75 180	LR	LR	03 06 32.6	
	comp=Z,740nm,18.2s,baz=356,slow=38					
P57A	Homestead Farm	71.75 306	IAmb	IAmb	02 32 25.3	
	comp=Z,8.7nm,0.7s					
E25K	Arctic Village	71.97 355	P	P	02 32 24.2	-0.9
	baz=11					
YKA	Yellowknife Ar	71.97 340	P	P	02 32 22.6	-2.5
	comp=Z,2.3nm,0.7s,baz=28,slow=9.4,SNR=4.6					
	comp=Z,2.3nm,0.7s					
CBN	Corbin Frederi	72.11 305	P	P	02 32 26.2	-0.2
	baz=53					
G30M	tAoh Zraii Nji	72.16 351	P	P	02 32 25.6	-0.7
	baz=19					
M53A	WI Miller and	72.20 309	P	P	02 32 26.5	-0.4
	baz=52					
E24K	Your Creek	72.20 356	P	P	02 32 25.7	-0.8
	baz=8.8					
F26K	Sheenjek River	72.28 354	P	P	02 32 26.3	-0.7
	baz=12					
E23K	Chandalar	72.28 356	P	P	02 32 26.0	-1.1
	baz=7.9,SNR=5.6					
E22K	Anaktuvuk Pass	72.31 357	P	P	02 32 26.5	-0.7
	baz=6.1					
GLMI	Grayling	72.39 314	P	P	02 32 26.8	-1.2
	baz=51					
F25K	Christian Rive	72.49 355	P	P	02 32 28.4	+0.2
	baz=11					
KLR	Kul'dur	72.60 40	P	P	02 32 27.7	-1.4
	comp=Z,2.0nm,0.8s,baz=327,slow=9.5,SNR=3.7					
	comp=Z,2.0nm,0.8s					
KLR	Kul'dur	72.60 40	*i* P	P	02 32 27.4	-1.8
KLR			pmax	pmax		
	comp=Z,12nm,1.5s					
F24K	Squaw Lake	72.72 355	P	P	02 32 28.4	-1.2
	baz=9.2,SNR=5.2					
CN2	Changchun	72.74 47	P	P	02 32 29.4	-0.7
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
CN2			LR	LR		
	comp=Z,400nm,14.0s					
CN2			LR	LR		
	comp=Z,500nm,14.0s					
CN2			LR	LR		
	comp=Z,800nm,14.0s					
MCWV	Mont Chateau	72.78 307	P	P	02 32 29.3	-1.1
	baz=52					
EPYK	Eagle Plains	72.80 351	P	P	02 32 28.3	-1.8
	baz=18					
MA2	Magadan	72.82 24	P	P	02 32 30.0	-0.3
MA2	Magadan	72.82 24	*i* P	P	02 32 28.9	-1.4
MA2			pmax	pmax		
	comp=Z,51nm,1.1s					
G27K	Doyon Strip	72.92 353	P	P	02 32 30.6	-0.3
	baz=14					
F22K	John River	72.95 357	P	P	02 32 30.3	-0.6
	baz=5.8					
G26K	Porcupine Rive	72.98 354	P	P	02 32 30.9	-0.1
	baz=12,SNR=5.7					
O53A	New Philadelph	73.25 309	P	P	02 32 33.4	+0.2
	baz=52					
F21K	Alatna River	73.28 358	P	P	02 32 32.8	-0.1
	baz=4.7					
G25K	Bearman Lake	73.34 355	P	P	02 32 33.7	+0.5
	baz=11					
AAM	Ann Arbor	73.42 311	P	P	02 32 34.1	0.0
	baz=51					
WRGLY	Wrigley	73.46 344	P	P	02 32 34.2	+0.2
	baz=28					
H27K	Steamboat Moun	73.47 353	P	P	02 32 33.5	-0.6
	baz=14,SNR=7.8					
G22K	Bettles	73.50 357	P	P	02 32 34.0	-0.2
	baz=6.3					
G24K	Hadweenzic Riv	73.50 355	P	P	02 32 33.3	-0.9
	baz=9.5					
G23K	Bananza Creek	73.64 356	P	P	02 32 35.3	+0.2
	baz=7.5					
GRNR	Gornyy	73.79 37	*e*P	P	02 32 32.6	-3.6
H25K	Birch Creek	73.82 354	P	P	02 32 35.2	-0.8
	baz=11					
I29M	Ogilvie Camp,	73.96 351	IAmb	IAmb	02 32 46.7	
	comp=Z,16nm,0.9s					
I29M	Ogilvie Camp,	73.96 351	P	P	02 32 36.3	-0.7
	baz=17,SNR=7.1					
G21K	Allakaket	73.98 358	P	P	02 32 37.1	0.0
	baz=4.7					
EYMN	Ely	74.00 320	P	P	02 32 37.3	-0.1
	baz=48					
I27K	Kandik River	74.09 352	P	P	02 32 37.7	-0.1
	baz=14					
P52A	Corning	74.19 308	P	P	02 32 38.7	0.0
	baz=51					
H24K	Noodor Dome	74.39 355	P	P	02 32 39.2	-0.3
	baz=9.2					
H23K	Yukon River	74.50 356	IAmb	IAmb	02 32 51.0	
	comp=Z,14nm,1.1s					
H23K	Yukon River	74.50 356	P	P	02 32 40.4	+0.4
	baz=7.8,SNR=5.3					
ULM	Lac du Bonnet	74.52 323	P	P	02 32 39.4	-1.0
	comp=Z,9.2nm,0.7s,baz=63,slow=5.7,SNR=6.5					
	comp=Z,9.2nm,0.7s					
H22K	Ishtalitna Cre	74.52 357	P	P	02 32 41.0	+0.8
	baz=6.4,SNR=6.2					
PRP	Porcupine Dome	74.53 354	P	P	02 32 39.6	-0.8
	baz=11					
I26K	Coal Creek Min	74.53 353	P	P	02 32 39.8	-0.4
	baz=13					
BLA	Blacksburg	74.64 306	P	P	02 32 41.1	-0.3
	baz=52					
H21K	Melozitna Rive	74.82 357	IAmb	IAmb	02 32 51.4	
	comp=Z,15nm,0.9s					
H21K	Melozitna Rive	74.82 357	P	P	02 32 42.1	+0.1
	baz=5.2,SNR=11					
EGAK	Eagle	74.85 352	P	P	02 32 41.4	-0.6
	baz=14					
POKR	Poker Plat Res	75.07 355	P	P	02 32 42.8	-0.5
	baz=9.5					
U56A	King	75.15 305	IAmb	IAmb	02 32 45.7	
	comp=Z,13nm,0.9s					
I23K	Minto, Yukon-K	75.16 356	IAmb	IAmb	02 32 53.8	
	comp=Z,15nm,1.2s					
I23K	Minto, Yukon-K	75.16 356	P	P	02 32 43.1	-0.7
	baz=8.0					
I21K	Tanana	75.26 357	P	P	02 32 44.0	-0.4
	baz=5.9					
MDM	Murphy Dome	75.28 355	IAmb	IAmb	02 32 56.5	
	comp=Z,13nm,1.1s					
Q51A	Peebles	75.30 309	IAmb	IAmb	02 32 46.0	
	comp=Z,25nm,1.2s					
K29M	Barlow Dome	75.32 350	P	P	02 32 44.5	-0.5
	baz=17					
MAYO	Mayo, Yukon	75.33 349	P	P	02 32 44.3	-0.6
	baz=18					
DAWY	Dawson	75.34 351	IAmb	IAmb	02 32 54.1	
	comp=Z,26nm,1.2s					
DAWY	Dawson	75.34 351	P	P	02 32 44.7	-0.3
	baz=16,SNR=8.8					
MLY	Manley	75.36 356	P	P	02 32 44.9	-0.1
MLY			IAmb	IAmb	02 32 46.9	
	comp=Z,38nm,2.0s					
MLY	Manley	75.36 356	P	P	02 32 44.2	-0.8
	baz=6.8					
J26L	Joseph Creek	75.36 353	P	P	02 32 44.5	-0.7
	baz=12,SNR=6.0					
ILAR	Eielson Array	75.37 355	P	P	02 32 44.8	-0.3
	comp=Z,1.9nm,0.9s,baz=1.0,slow=4.6,SNR=12					
	comp=Z,1.9nm,0.9s					
J25K	Salcha River,	75.41 354	P	P	02 32 45.1	-0.3
	baz=11					
MMPY	Sheldon Lake,	75.53 347	P	P	02 32 46.4	+0.3
	baz=22					
O48B	Farmland	75.59 311	P	P	02 32 46.3	-0.4
	baz=50					
K27K	Chicken	75.68 352	IAmb	IAmb	02 32 57.1	
	comp=Z,28nm,1.3s					
K27K	Chicken	75.68 352	P	P	02 32 46.1	-0.8
	baz=14					
NEA2	Nenana	75.70 355	IAmb	IAmb	02 32 48.1	
	comp=Z,30nm,1.7s					
NEA2	Nenana	75.70 355	P	P	02 32 46.3	-0.7
	baz=8.2					
HDA	Harding Lake	75.74 354	IAmb	IAmb	02 32 55.7	
	comp=Z,17nm,1.2s					
HDA	Harding Lake	75.74 354	P	P	02 32 46.3	-0.9
	baz=9.8,SNR=5.8					
WRH	Wood River Hil	75.75 355	IAmb	IAmb	02 32 56.6	
	comp=Z,28nm,1.5s					
P49A	Miami Univ. Ec	75.80 310	P	P	02 32 47.0	-1.0
	baz=50					
GCSA	Galena City Sc	75.84 359	P	P	02 32 47.6	-0.2
	baz=2.0					
SCRK	Sand Creek	75.92 353	P	P	02 32 49.1	+0.8
SCRK	Sand Creek	75.92 353	P	P	02 32 47.8	-0.6
	baz=12					
NJ2	Nanjing	75.93 60	*e*P	P	02 32 49.9	+1.1
NJ2			pmax	pmax		
	comp=Z,13nm,0.6s					
V55A	Taylorsville	75.98 305	IAmb	IAmb	02 32 50.6	
	comp=Z,19nm,1.1s					
USRK	Ussuriysk Ar.	76.07 44	P	P	02 32 47.4	-2.0
	comp=Z,3.5nm,0.8s,baz=295,slow=5.7,SNR=6.1					
	comp=Z,3.5nm,0.8s					
USRK	Ussuriysk Ar.	76.07 44	P	P	02 32 48.4	-1.0
USRK	Ussuriysk Ar.	76.07 44	P	P	02 32 48.4	-1.0
L29M	L29M	76.11 350	P	P	02 32 49.7	+0.3
	baz=17					
RIDG	Independent Ri	76.23 353	IAmb	IAmb	02 32 58.3	
	comp=Z,26nm,1.4s					
RIDG	Independent Ri	76.23 353	P	P	02 32 50.2	+0.1
	baz=12					
FARO	Faro, Yukon	76.24 348	IAmb	IAmb	02 33 00.9	
	comp=Z,23nm,1.3s					
FARO	Faro, Yukon	76.24 348	P	P	02 32 50.3	+0.1
	baz=20					
K24K	Donnelly Dome	76.24 354	P	P	02 32 49.8	-0.4
	baz=11					
DOT	Dot Lake	76.25 353	IAmb	IAmb	02 33 00.2	
	comp=Z,19nm,1.3s					
BPAW	Bear Paw Mtn.	76.30 356	P	P	02 32 50.3	-0.1
	baz=6.6					
KOTAN	Kotaneelee Air	76.35 343	P	P	02 32 50.7	-0.1
	baz=27					
J20K	Nowinta River	76.35 358	P	P	02 32 50.2	-0.4
	baz=4.1					
GAMB	Gambell	76.36 6	P	P	02 32 50.3	-0.4
	baz=350					
M31M	Drury Creek, Y	76.43 348	P	P	02 32 51.4	+0.1
	baz=20					
KMSC	Kings Mountain	76.50 304	P	P	02 32 52.2	+0.1
	baz=51					
SPMN	Marine on St.	76.50 318	P	P	02 32 51.8	-0.1
	baz=47					
MCK	McKinley	76.54 355	P	P	02 32 51.8	0.0
MCK			IAmb	IAmb	02 33 01.5	
	comp=Z,17nm,1.1s					
MCK	McKinley	76.54 355	P	P	02 32 51.8	0.0
MCK			pmax	pmax		
	comp=Z,17nm,1.1s					
MCK	McKinley	76.54 355	P	P	02 32 51.4	-0.5
	baz=8.2,SNR=5.6					
CHUM	Lake Minchumin	76.57 357	P	P	02 32 51.7	-0.2
	baz=5.6					
L27K	Beaver Creek,	76.59 352	P	P	02 32 52.4	+0.3
	baz=14,SNR=8.3					
JFWS	Jewell Farm	76.72 315	P	P	02 32 52.6	-0.6
	baz=48					
L26K	Log Cabin Wild	76.79 353	IAmb	IAmb	02 33 03.3	
	comp=Z,18nm,1.4s					
L26K	Log Cabin Wild	76.79 353	P	P	02 32 52.3	-0.9
	baz=13					
M29M	Somme Creek	76.79 350	P	P	02 32 52.9	-0.5
	baz=16,SNR=9.7					
TRF	Thorofare Moun	76.91 356	P	P	02 32 53.4	-0.6
	baz=7.2					
CAST	Castle Rocks	77.03 357	P	P	02 32 53.2	-1.3
	baz=5.8					
PAX	Paxson	77.04 354	P	P	02 32 53.1	-1.6
	baz=11					
NHSC	New Hope	77.04 302	P	P	02 32 54.6	-0.5
	baz=51					
DHY	Denali Highway	77.09 354	IAmb	IAmb	02 33 02.1	
	comp=Z,20nm,1.2s					
DHY	Denali Highway	77.09 354	P	P	02 32 54.1	-1.0
	baz=9.4,SNR=5.6					
BVCY	Beaver Creek	77.11 351	P	P	02 32 54.2	-0.8
	baz=14					
K20K	Telida	77.17 358	P	P	02 32 54.5	-0.8
	baz=4.2,SNR=5.1					
N32M	Quiet Lake	77.21 347	P	P	02 32 54.7	-1.0
	baz=20					
M27K	Edge Creek, AK	77.28 352	P	P	02 32 55.0	-1.2
	baz=14					
N31M	Braeburn, Yuko	77.33 349	P	P	02 32 54.6	-1.6
	baz=18					
M26K	Nabesna, AK	77.36 352	P	P	02 32 56.1	-0.4
	baz=13					
WTLY	Watson Lake, Y	77.38 345	IAmb	IAmb	02 33 07.0	
	comp=Z,19nm,1.2s					
WTLY	Watson Lake, Y	77.38 345	P	P	02 32 55.8	-0.9
	baz=24					
WAT1	Susitna Watana	77.42 355	P	P	02 32 56.4	-0.4
	baz=8.5					
MANA	Manning	77.54 338	IAmb	IAmb	02 33 10.5	
	comp=Z,13nm,0.8s					
N30M	Aishikik Lake	77.55 349	P	P	02 32 56.5	-1.0
	baz=17					
PPLA	Purkeypile	77.56 357	IAmb	IAmb	02 32 58.1	
	comp=Z,14nm,1.0s					
PPLA	Purkeypile	77.56 357	P	P	02 32 55.8	-1.9
	baz=5.7					
HARP	HAARP	77.57 353	P	P	02 32 56.9	-0.7
	baz=11					
WCI	Wyandotte Cave	77.58 310	P	P	02 32 58.2	+0.1
WCI			IAmb	IAmb	02 32 58.9	
	comp=Z,14nm,1.1s					
WCI	Wyandotte Cave	77.58 310	P	P	02 32 58.2	+0.1
WCI			pmax	pmax		
	comp=Z,14nm,1.1s					
WCI	Wyandotte Cave	77.58 310	P	P	02 32 57.4	-0.6
	baz=49					
WAT6	Susitna Watana	77.61 355	P	P	02 32 57.3	-0.7
	baz=9.1					
TTA	Tatalina	77.65 358	P	P	02 32 57.6	-0.5
	baz=2.6					
YUK3	Moose Creek	77.69 351	P	P	02 32 57.6	-1.0
	baz=15					
YUK4	Talbot Arm	77.87 350	P	P	02 32 58.0	-1.5
	baz=16					
CUT	Chulitna	77.95 356	P	P	02 32 58.8	-0.8
	baz=7.2					
M24K	Tolsona, Glenn	77.95 354	P	P	02 32 58.8	-1.0
	baz=10					
MDND	Maddock	77.95 324	P	P	02 32 59.2	-0.8
	baz=43					
WHY	Whitehorse	77.97 348	P	P	02 32 59.4	-0.6
	baz=19					
L20K	Farewell, AK	78.04 357	P	P	02 32 59.4	-0.8
	baz=4.3					
P33M	Teslin, Yukon	78.05 347	P	P	02 32 59.4	-1.0
	baz=21					
O30N	Mendenhall	78.06 349	P	P	02 32 58.3	-2.1
	baz=18					
YUK8	Steele Glacier	78.08 350	P	P	02 32 59.7	-1.0
	baz=15					
HYT	Haines Junctio	78.21 349	IAmb	IAmb	02 33 10.7	
	comp=Z,20nm,1.2s					
HYT	Haines Junctio	78.21 349	P	P	02 32 59.6	-1.8
	baz=17					
YUK6	Outpost Mounta	78.22 350	P	P	02 33 01.0	-0.6
	baz=16					
KSAR	Wonju Array Be	78.24 51	P	P	02 33 00.4	-1.3
KSAR	Wonju Array Be	78.24 51	P	P	02 33 00.4	-1.3
KSRS	Korea Array	78.25 51	P	P	02 33 00.8	-1.0
	comp=Z,3.8nm,0.6s,baz=313,slow=4.8,SNR=12					
	comp=Z,3.8nm,0.6s					
N25K	Chitina, Valde	78.30 353	P	P	02 33 01.8	0.0
	baz=12					
SCM	Sheep Creek Mo	78.31 354	P	P	02 33 01.1	-0.8
	baz=9.4					
L19K	White Mountain	78.37 358	IAmb	IAmb	02 33 12.5	
	comp=Z,20nm,1.1s					
L19K	White Mountain	78.37 358	P	P	02 33 01.5	-0.6
	baz=3.5					
M23K	Glacier View	78.39 354	P	P	02 33 00.9	-1.3
	baz=9.1					
U49A	Red Boiling Sp	78.39 308	IAmb	IAmb	02 33 03.2	
	comp=Z,14nm,1.1s					
SML	Sawmill	78.42 355	P	P	02 33 01.6	-0.7
	baz=8.7					
SKT	Skwentna	78.44 356	IAmb	IAmb	02 33 11.0	
	comp=Z,20nm,1.2s					
SKT	Skwentna	78.44 356	P	P	02 33 02.3	-0.1
	baz=6.2					
R33M	Jennings River	78.47 346	P	P	02 33 02.6	-0.2
	baz=22					
KLU	Klutina	78.54 353	P	P	02 33 02.5	-0.6
	baz=10					
CTG	Chitna Glacier	78.58 351	P	P	02 33 02.9	-0.4
	baz=14					
M22K	Willow	78.59 356	P	P	02 33 02.6	-0.6
	baz=7.2					
M20K	Styx River	78.61 357	P	P	02 33 02.9	-0.6
	baz=4.9					
O28M	Mount Upton	78.63 351	P	P	02 33 03.2	-0.6
	baz=15					
M19K	Big River Lodg	78.63 358	IAmb	IAmb	02 33 12.3	
	comp=Z,21nm,1.3s					
M19K	Big River Lodg	78.63 358	P	P	02 33 03.2	-0.3
	baz=3.9					
PMR	Palmer	78.68 355	P	P	02 33 02.7	-1.1
	baz=8.0					
P32M	Atlin	78.79 347	P	P	02 33 04.1	-0.3
	baz=20					
P30M	Million Dollar	78.81 349	P	P	02 33 03.6	-1.0
	baz=17					
KNK	Knik Glacier	78.82 355	P	P	02 33 03.6	-0.9
	baz=8.5					
O29M	Mount Kennedy	78.87 350	P	P	02 33 03.9	-1.1
	baz=16					
T47A	Sharon Grove	78.88 309	IAmb	IAmb	02 33 05.6	
	comp=Z,14nm,0.8s					
SUA	Susitna One	78.91 356	P	P	02 33 04.1	-1.0
	baz=6.8					
BMRM	Bremner River	78.93 353	P	P	02 33 04.4	-0.8
	baz=12					
W50A	Signal Mountai	78.96 307	IAmb	IAmb	02 33 07.1	
	comp=Z,14nm,0.8s					
GOGA	Godfrey	78.97 304	P	P	02 33 05.3	-0.6
	baz=50					
Y52A	Lilburn	79.05 305	IAmb	IAmb	02 33 07.7	
	comp=Z,18nm,1.1s					
Q32M	Nakina River	79.12 346	P	P	02 33 05.9	-0.6
	baz=21					
DLBC	Dease Lake	79.18 345	LR	LR	03 08 24.0	
	comp=Z,192nm,20.6s,baz=52,slow=36					
DLBC	Dease Lake	79.18 345	P	P	02 33 05.8	-0.8
	baz=23					
PSI	Prapat	79.18 95	LR	LR	03 12 18.9	
	comp=Z,125nm,18.9s,baz=291,slow=39					
SKAG	Skagway	79.18 348	P	P	02 33 05.6	-0.9
	baz=19					
RC01	Rabbit Creek A	79.22 355	P	P	02 33 05.5	-1.2
	baz=7.5					
GLI	Glacier Island	79.24 354	P	P	02 33 05.7	-1.1
	baz=9.6					
N20K	Mount Spurr	79.25 356	P	P	02 33 05.5	-1.5
	baz=5.6					
SPCR	Spurr Chakacha	79.25 356	P	P	02 33 05.7	-1.2
	baz=5.6					
PINM	Pinnacle	79.29 350	P	P	02 33 05.7	-1.5
	baz=15					
PLBC	Pleasant Camp	79.35 348	P	P	02 33 06.1	-1.4
	baz=18					
PWL	Port Wells	79.36 355	P	P	02 33 05.6	-1.8
	baz=8.6					
P29M	Windy Craggy	79.39 349	P	P	02 33 06.1	-1.7
	baz=17					
MESA	MESA	79.42 351	P	P	02 33 06.3	-1.8
	baz=14					
YSS	Yuzh-Sakhalins	79.44 36	P	P	02 33 08.3	+0.2
YSS	Yuzh-Sakhalins	79.44 36	⇓*e*P	P	02 33 06.4	-1.7
YSS			*e**SP	PcP	02 33 22.7	+6.5
YSS			*e*S	S	02 43 00.7	-7.7
YSS			pmax	pmax		
	comp=Z,60nm,1.1s					
YSS			MLR	MLR		
	comp=E,400nm,15.0s					
WAPA	Wapiti River	79.45 338	IAmb	IAmb	02 33 18.0	
	comp=Z,32nm,1.4s					
EYAK	Cordova Ski Ar	79.45 353	P	P	02 33 06.6	-1.3
	baz=11					
ECSD	EROS Data Cent	79.49 319	P	P	02 33 08.3	-0.2
ECSD	EROS Data Cent	79.49 319	P	P	02 33 07.0	-1.5
	baz=44					
SDDR	Presa de Saban	79.58 286	P	P	02 33 09.8	+0.3
SDDR			IAmb	IAmb	02 33 11.4	
	comp=Z,15nm,0.9s					
N19K	Bonanza Creek	79.73 358	P	P	02 33 07.9	-1.7
	baz=3.8					
S34M	Telegraph Cree	79.88 345	P	P	02 33 08.6	-1.7
	baz=22					
WVT	Waverly	79.88 309	P	P	02 33 09.7	-1.0
	baz=48					
N18K	Kilae Creek	79.90 358	P	P	02 33 08.8	-1.6
	baz=2.7					

KAIM	Kayak Island	79.94	352	P	P	02 33 09.0	-1.6
	baz=12						
N16K	Nishlik Lake	80.14	360	P	P	02 33 10.3	-1.5
	baz=0.5						
SEW	Seward	80.19	355	P	P	02 33 10.8	-1.1
	baz=7.7						
152A	Waverly Hall	80.25	304	IAmb	IAmb	02 33 13.9	
	comp=Z,15nm,1.0s						
PETK	Petropavlovsk-	80.34	25	P	P	02 33 11.4	-1.5
	comp=Z,5.4nm,1.0s,baz=270,slow=0.6,SNR=5.5						
	comp=Z,5.4nm,1.0s						
X48A	Hartselle	80.53	307	IAmb	IAmb	02 33 14.7	
	comp=Z,15nm,0.9s						
T35M	Bob Quinn	80.57	344	P	P	02 33 12.5	-1.7
	baz=22						
CCM	Cathedral Cave	80.58	312	P	P	02 33 13.2	-1.3
	baz=46						
Q23K	Middleton Isla	80.61	353	P	P	02 33 12.5	-1.7
	baz=10						
BRSE	Bradley Lake S	80.63	356	P	P	02 33 13.2	-1.1
	baz=6.7						
O18K	Koktuh Hills	80.71	358	IAmb	IAmb	02 33 24.6	
	comp=Z,25nm,1.1s						
O18K	Koktuh Hills	80.71	358	P	P	02 33 13.1	-1.7
	baz=3.2						
S31K	Pelican	80.76	348	P	P	02 33 13.7	-1.3
	baz=18						
P38A	Dawn	80.78	314	IAmb	IAmb	02 33 15.9	
	comp=Z,9.5nm,0.7s						
O17K	Koliganek Bris	80.83	359	P	P	02 33 14.3	-1.1
	baz=1.8						
O16K	Kokwok River B	81.02	359	P	P	02 33 15.3	-1.1
	baz=1.0						
LRAL	Lakeview Retre	81.44	306	IAmb	IAmb	02 33 19.7	
	comp=Z,14nm,0.7s						
LRAL	Lakeview Retre	81.44	306	P	P	02 33 18.2	-0.9
	baz=48						
WRAK	Wrangell Islan	81.52	345	P	P	02 33 17.8	-1.4
	baz=21						
Q19K	Cape Douglas,	81.58	357	P	P	02 33 18.0	-1.5
	baz=4.5						
P16K	Nushagak River	81.59	359	P	P	02 33 18.1	-1.3
	baz=1.1						
LAO	LASA Array	81.77	326	P	P	02 33 21.0	+0.2
	baz=38						
MGMO	Mountain Grove	81.79	312	IAmb	IAmb	02 33 22.6	
	comp=Z,18nm,1.4s						
OXF	Oxford	81.93	308	P	P	02 33 20.9	-0.8
	baz=47						
BGNE	Belgrade	81.96	318	P	P	02 33 21.3	-0.5
	baz=43						
EGMT	Eagleton	82.17	329	P	P	02 33 22.7	-0.2
	baz=36,SNR=6.9						
Q17K	Contact Creek	82.32	358	P	P	02 33 22.3	-1.2
	baz=2.7						
V35K	Ketchikan	82.39	344	P	P	02 33 23.3	-0.5
	baz=21						
FCAR	Ozark Folk Cen	82.59	311	IAmb	IAmb	02 33 26.3	
	comp=Z,11nm,1.1s						
KDAK	Kodiak Island	82.68	356	P	P	02 33 24.7	-0.4
	baz=5.3						
RSSD	Black Hills	82.79	323	P	P	02 33 26.3	0.0
RSSD	Black Hills	82.79	323	P	P	02 33 26.3	0.0
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
RSSD	Black Hills	82.79	323	P	P	02 33 25.1	-1.2
	baz=40						
KSU1	Kansas State U	82.83	316	P	P	02 33 25.7	-0.7
	baz=44						
WALA	Waterton Lakes	82.91	332	IAmb	IAmb	02 33 45.4	
	comp=Z,28nm,1.6s						
WHAR	Wooly Hollow	83.10	311	IAmb	IAmb	02 33 29.1	
	comp=Z,17nm,1.1s						
OHAK	Old Harbor	83.27	357	P	P	02 33 26.1	-2.2
	baz=4.7						
OGNE	Ogallala	84.26	320	P	P	02 33 32.5	-1.3
	baz=41						
BDFB	Brasilia	84.29	244	P	P	02 33 34.8	+0.6
	comp=Z,9.5nm,0.8s,baz=37,slow=6.0,SNR=14						
BDFB				LR	LR	03 12 36.0	
	comp=Z,183nm,19.4s,baz=59,slow=37						
	comp=Z,9.5nm,0.8s						
BDFB	Brasilia	84.29	244	P	P	02 33 35.4	+1.2
BDFB				IAmb	IAmb	02 33 36.4	
	comp=Z,12nm,0.9s						
RLMT	Red Lodge	84.31	327	IAmb	IAmb	02 33 35.4	
	comp=Z,20nm,1.4s						
RLMT	Red Lodge	84.31	327	P	P	02 33 33.0	-1.1
	baz=36,SNR=7.5						
CHGN	Chignik	84.33	359	P	P	02 33 32.3	-1.3
	baz=0.7						
MIAR	Mount Ida	84.38	311	IAmb	IAmb	02 33 35.4	
	comp=Z,9.9nm,1.0s						
MIAR	Mount Ida	84.38	311	P	P	02 33 34.4	0.0
	baz=45						
BBB	Bella Bella	84.51	341	LR	LR	03 15 09.8	
	comp=Z,192nm,18.2s,baz=38,slow=38						
TUL1	Leonard	84.67	313	P	P	02 33 35.2	-0.7
	baz=44						
CBKS	Cedar Bluff	84.69	317	P	P	02 33 35.2	-0.8
	baz=42						
NEW	Newport	84.72	333	P	P	02 33 35.6	-0.3
	comp=Z,2.4nm,0.9s,baz=120,slow=8.3,SNR=3.5						
	comp=Z,2.4nm,0.9s						
NEW	Newport	84.72	333	P	P	02 33 35.5	-0.4
	baz=31						
CHIR	Chirikof Islan	84.76	358	P	P	02 33 34.3	-1.6
	baz=2.9						
MSO	Missoula	84.78	331	P	P	02 33 35.0	-1.3
	baz=33						
MJB9	Matsu-Tunnel	84.81	46	P	P	02 33 37.3	+0.7
MJB9				IAmb	IAmb	02 33 43.4	
	comp=Z,14nm,1.0s						
MAJO	Matsushiro	84.81	46	P	P	02 33 36.2	-0.4
MAJO				IAmb	IAmb	02 33 42.4	
	comp=Z,14nm,1.0s						
MAJO	Matsushiro	84.81	46	P	P	02 33 36.2	-0.4
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MJAR	Matsushiro Arr	84.82	46	P	P	02 33 35.6	-1.0
	comp=Z,7.3nm,0.9s,baz=334,slow=4.5,SNR=13						
	comp=Z,7.3nm,0.9s						
BOZ	Bozeman (W)	84.89	329	IAmb	IAmb	02 33 52.9	
	comp=Z,16nm,1.4s						
BOZ	Bozeman (W)	84.89	329	P	P	02 33 35.7	-1.3
	baz=35,SNR=6.7						
K22A	Casper	85.07	324	P	P	02 33 37.4	-0.6
	baz=38,SNR=6.1						
OK034	N. Norfolk Rd.	85.12	314		P	02 33 38.4	+0.2
YHH	Holmes Hill	85.24	328	IAmb	IAmb	02 33 40.9	
	comp=Z,17nm,1.5s						
SDPT	Sand Point	85.28	1	P	P	02 33 37.7	-0.8
	baz=359						
YHL	Hebgen Lake	85.33	328	IAmb	IAmb	02 33 55.6	
	comp=Z,13nm,1.0s						
YMR	Madison River	85.38	328	P	P	02 33 39.6	0.0
SDV	Santo Domingo	85.39	278	P	P	02 33 40.1	+0.1
YHB	Horse Butte	85.41	328	IAmb	IAmb	02 33 41.8	
	comp=Z,7.1nm,0.9s						
H17A	Grant Village	85.44	327		pP	02 33 43.1	-2.6
H17A	Grant Village	85.44	327	P	P	02 33 39.4	-0.5
	baz=36,SNR=7.0						
YFT	Old Faithful	85.51	327		pP	02 33 43.4	-2.6
C09A	Chrisman Ranch	85.52	334	IAmb	IAmb	02 33 41.4	
	comp=Z,14nm,0.9s						
PHWY	Pilot Hill	85.64	322	IAmb	IAmb	02 33 42.4	
	comp=Z,13nm,1.2s						
YPP	Pitchstone Pla	85.64	327	IAmb	IAmb	02 33 44.2	
	comp=Z,15nm,1.2s						
N23A	Red Feather La	86.19	322	P	P	02 33 42.8	-0.9
	baz=38						
BW06	Boulder Array	86.33	326	P	P	02 33 43.7	-0.6
	baz=36						
PDAR	Pinedale Array	86.33	326	P	P	02 33 42.6	-1.7
	comp=Z,1.1nm,0.8s,baz=60,slow=3.9,SNR=8.5						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	86.33	326	P	P	02 33 43.5	-0.9
UNV	Unalaska Valle	86.59	4	P	P	02 33 44.8	-0.2
	baz=354						
ISCO	Idaho Springs	86.89	322	P	P	02 33 46.7	-0.5
	baz=38						
WMOK	Wichita Mounta	87.20	314	P	P	02 33 48.1	-0.3
	baz=42						
BMO	Blue Mountains	87.70	332	IAmb	IAmb	02 33 51.1	
	comp=Z,23nm,1.8s						
O20A	White River Ci	87.86	323	P	P	02 33 51.4	-0.4
	baz=37						
HWUT	Hardware Ranch	88.14	326	IAmb	IAmb	02 33 53.1	
	comp=Z,9.1nm,1.0s						
T25A	Trinidad	88.36	319	P	P	02 33 53.0	-1.2
	baz=39						
SDCO	Great Sand Dun	88.44	320	P	P	02 33 54.2	-0.5
	baz=38						
WHTX	Lake Whitney,	88.47	311	P	P	02 33 54.4	-0.1
	baz=43						
HVU	Hansel Valley	88.51	327	IAmb	IAmb	02 33 55.8	
	comp=Z,9.7nm,1.4s						
S22A	4UR Ranch, Cre	89.08	321	P	P	02 33 56.8	-0.9
	baz=38						
ABTX	Abilene, Hawle	89.25	313	P	P	02 33 58.5	+0.3
ABTX	Abilene, Hawle	89.25	313	P	P	02 33 58.3	+0.1
	baz=42						
BGU	Big Grassy Mou	89.33	327	IAmb	IAmb	02 33 59.7	
	comp=Z,9.9nm,1.2s						
435B	Jarrell	89.42	311	P	P	02 33 59.1	0.0
	baz=43						
DUG	Dugway, Tooele	89.84	326	IAmb	IAmb	02 34 01.9	
	comp=Z,9.2nm,1.1s						
DUG	Dugway, Tooele	89.84	326	P	P	02 34 00.7	-0.3
	baz=34						
MSTX	Muleshoe	89.95	316	P	P	02 34 01.1	-0.4
	baz=40						
Q16A	Castle Valley	90.17	324	IAmb	IAmb	02 34 03.3	
	comp=Z,12nm,1.4s						
MVCO	Mesa Verde	90.31	322	P	P	02 34 03.2	-0.2
	baz=37						
JCT	Junction City	90.93	312	IAmb	IAmb	02 34 07.9	
	comp=Z,17nm,1.4s						
JCT	Junction City	90.93	312	P	P	02 34 06.5	+0.3
	baz=42						
ANMO	Albuquerque	91.11	319	P	P	02 34 07.2	+0.1
	baz=38						
PSUT	Pine Spring	91.67	326	IAmb	IAmb	02 34 11.2	
	comp=Z,9.4nm,1.3s						
BNM	Baen Site	91.82	319	P	P	02 34 09.9	-0.5
833A	Chaparral WMA,	92.30	310	P	P	02 34 12.8	+0.4
	baz=42						
R11A	Troy Canyon, C	92.56	327	P	P	02 34 13.1	-0.6
	baz=32						
W18A	Petrified Fore	92.59	321	P	P	02 34 12.9	-1.0
	baz=36						
WUAZ	Wupatki	93.04	323	P	P	02 34 15.8	-0.2
	baz=35						
TX32	Lajitas Array	93.99	314	IAmb	IAmb	02 34 21.9	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	93.99	314	P	P	02 34 20.4	+0.1
	comp=Z,3.6nm,0.9s,baz=66,slow=4.0,SNR=28						
	comp=Z,3.6nm,0.9s						
TXAR	Lajitas Array	93.99	314	P	P	02 34 20.5	+0.2
GWY	Greenwater Val	94.85	327	IAmb	IAmb	02 34 25.7	
	comp=Z,13nm,1.4s						
MPMC	Manual Prospec	95.30	327	P	P	02 34 26.1	-0.3
	baz=31						
PDMCI	Parker Dam,Lak	95.32	324	P	P	02 34 25.8	-0.4
	baz=33						
TUC	Tucson	95.37	320	P	P	02 34 27.1	+0.5
TUC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TUC	Tucson	95.37	320	P	P	02 34 25.9	-0.7
	baz=35						
GMRC	Granite Mounta	95.60	325	P	P	02 34 26.6	-1.0
	baz=32						
GSC	Goldstone, Bar	95.66	326	P	P	02 34 26.6	-1.2
	baz=32						
HEC	Hector,Ludlow	95.86	326	P	P	02 34 28.9	+0.1
	baz=32						
LRMC	Laurel Mtn Rad	95.88	327	P	P	02 34 29.1	+0.2
	baz=31						
IRM	Iron Mountain	95.90	324	P	P	02 34 27.5	-1.4
	baz=33						
APG	El Apazote	96.02	295	LR	LR	03 15 37.5	
	comp=Z,73nm,18.6s,baz=88,slow=34						
ISA	Isabella, Lake	96.05	328	P	P	02 34 29.2	-0.4
	baz=30						
BELC	Belle Mtn. Jos	96.41	325	P	P	02 34 31.0	-0.4
	baz=32						
PFO	Pinyon Flats O	96.94	325	P	P	02 34 32.5	-1.3
	baz=32						
TPFO	Pinon Flats	96.94	325	P	P	02 34 32.5	-1.3
	baz=32						
IKP	In-Ko-Pah, Jac	97.60	324	P	P	02 34 35.4	-1.3
	baz=32						
LPAZ	La Paz	99.32	257	LR	LR	03 20 07.7	
	comp=Z,85nm,20.5s,baz=50,slow=36						
WRA	Warramunga Arr	120.47	91	PKP	PKPdf	02 39 50.3	-3.5
	comp=Z,0.8nm,0.8s,baz=307,slow=1.6,SNR=7.0						
ASAR	Alice Springs	122.21	95	PKP	PKPdf	02 39 55.0	-2.1
	comp=Z,2.5nm,0.8s,baz=334,slow=1.7,SNR=16						

*ATH **16** 02:36:20.5, 39°.78N×20°.66E, h13km±4km, ML3.2/5, Error ellipse: s-maj=4.6km s-min=1.1km az=149.0*
*TIR **16** 02:36:21.3, 39°.78N×20°.63E, h7km±24km, Md3.4, Ml3.3*
*THE **16** 02:36:21.1, 39°.78N×20°.67E, h0km±1km, ML3.1/10, Error ellipse: s-maj=1.8km s-min=0.5km az=251.0*
*IDC **16** 02:36:25.1±1.7, 39°.64N×20°.84E, h65km±24km, mb3.1/4, mbtmp3.3/10, Error ellipse: s-maj=20.8km s-min=14.3km az=61.0*

ISC 16 02:36:21.2±0.8, 39°.77N±0°.02×20°.69E±0°.02, h11km±6km, n57, σ1§69/81, mb3.3/4, 10C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.17	133	P	Pg	02 36 24.4	-0.6
JAN				S	Sg	02 36 28.1	+0.4
	91μm,0.4s						
JAN	Janina	0.17	133	P	Pg	02 36 24.4	-0.6
JAN				S	Sg	02 36 28.3	+0.6
JAN				AML	AML	02 36 28.5	
JAN				AML	AML	02 36 28.6	
IGT	Igoumenitsa	0.37	229	P	Pg	02 36 27.4	-1.1
IGT				S	Sg	02 36 33.8	+0.4
	2μm,0.3s						
IGT	Igoumenitsa	0.37	229	P	Pg	02 36 27.2	-1.3
	baz=224						
IGT				S	Sg	02 36 33.6	+0.2
	baz=224						
IGT	Igoumenitsa	0.37	229	P	Pg	02 36 27.5	-1.1
IGT				S	Sg	02 36 33.0	-0.3
IGT				AML	AML	02 36 35.2	
	comp=E,4548μm,0.3s						
IGT				AML	AML	02 36 36.3	
	comp=N,4208μm,0.2s						
LSK	Leskovik	0.38	350	P	Pb	02 36 28.4	-1.6
LSK				S	Sb	02 36 34.2	-1.8
	comp=N,7μm,0.7s						
LSK	Leskovik	0.38	350	P	Pb	02 36 28.6	-1.5
	baz=356						
LSK				S	Sb	02 36 35.0	-1.0
	baz=356						
LSK				AMP			
	comp=N,24nm,0.7s,baz=356						
SRN	Sarande	0.54	282	P	Pg	02 36 30.5	-1.2
SRN				S	Sg	02 36 38.8	-0.1
	comp=N,978nm,0.8s						
SRN	Sarande	0.54	282	P	Pg	02 36 31.4	-0.4
	baz=282						
SRN				S	Sg	02 36 38.8	-0.1
	baz=282						
SRN				AMP			
	comp=N,4.8nm,0.3s,baz=282						
PENT	Pentalofos	0.55	39	P	Pb	02 36 31.4	-1.4
PENT				S	Sb	02 36 39.7	-1.0
	comp=N,1μm,0.4s						
PENT	Pentalofos	0.55	39	P	Pb	02 36 31.5	-1.4
PENT				S	Sb	02 36 39.7	-1.0
KPRO	Kipourio	0.55	71	P	Pg	02 36 31.6	-0.4
KPRO				S	Sb	02 36 40.5	-0.3
	comp=N,4μm,0.3s						
KASA	Kassiopi	0.58	267	P	Pg	02 36 31.0	-1.5
KASA				AML	AML	02 36 41.3	
	comp=E,2602μm,0.3s						
KASA				AML	AML	02 36 42.1	
	comp=N,3373μm,0.4s						
KEK	Kerkira	0.69	265	P	Pg	02 36 33.8	-0.8
NEST	Nestorio	0.70	23	P	Pb	02 36 34.3	-1.1
NEST	Nestorio	0.70	23	P	Pb	02 36 34.3	-1.1
NEST				AML	AML	02 36 47.2	
	comp=E,3126μm,0.6s						
NEST				AML	AML	02 36 51.1	
	comp=N,2873μm,0.9s						
KBN	Korca	0.85	5	P	Pn	02 36 38.5	-0.7
	baz=7.0						
KBN				S	Sn	02 36 50.2	-1.5
	baz=7.0						
KBN				AMP			
	comp=N,3.0nm,0.6s,baz=7.0						
TSLK	Tsoukalades, L	0.95	182	P	Pg	02 36 39.3	-0.2
TSLK	Tsoukalades, L	0.95	182	P	Pb	02 36 40.2	+0.6
LKD2	Lefkada island	0.98	181	P	Pg	02 36 40.0	-0.2
LKD2	Lefkada island	0.98	181	P	Pn	02 36 41.1	+0.2
	baz=178						
LKD2	Lefkada island	0.98	181	P	Pg	02 36 40.2	0.0
KZN	Kozani	0.99	57	P	Pb	02 36 39.6	-0.7
KZN	Kozani	0.99	57	P	Pg	02 36 39.3	-0.9
THL	Klokotos Trika	1.04	101	P	Pg	02 36 40.4	-0.9
THL				S	Sn	02 36 56.2	-0.1
	comp=N,660nm,0.5s						
THL	Klokotos Trika	1.04	101	P	Pg	02 36 40.3	-0.9
NYDR	Nydri-Lefkada	1.06	180	P	Pg	02 36 41.3	-0.3
NYDR				S	Sb	02 36 56.9	+1.6
	comp=N,935nm,0.5s						
VLO	Vlora	1.15	308	P	Pn	02 36 43.1	0.0
	baz=309						
VLO				S	Sn	02 37 00.1	+1.3
	baz=309						
VLO				AMP			
	comp=N,5.1nm,0.3s,baz=309						
TYRN	Tyrnavos	1.19	93	P	Pg	02 36 43.1	-1.0
TYRN				S	Sn	02 37 01.3	+1.4
	comp=N,3μm,0.6s						
EVR	Evrytania	1.22	134	P	Pg	02 36 43.8	-0.9
EVR	Evrytania	1.22	134	P	Pg	02 36 43.7	-1.0
EVR				AML	AML	02 37 07.0	
	comp=N,3036μm,0.4s						
EVR				AML	AML	02 37 07.5	
	comp=E,2322μm,0.6s						
FSK	Fiskardo	1.32	184	P	Pg	02 36 46.6	+0.1
PVO	Paravola	1.33	150	P	Pg	02 36 46.4	-0.3
MAKR	Makrakomi, Fth	1.35	124	P	Pg	02 36 46.6	-0.5
LIT	Litokhoron	1.42	76	P	Pg	02 36 48.4	-0.1
LIT				S	Sn	02 37 08.0	+2.3
	comp=E,592nm,0.5s						
LIT	Litokhoron	1.42	76	P	Pg	02 36 48.1	-0.4
TIR	Tirane	1.69	339	⇑P	Pg	02 36 54.6	+1.0
TIR				⇓S	Sg	02 37 17.7	+2.1
PHP	Peshkopia	1.92	354	P	Pb	02 36 56.1	-0.1
	baz=356						
PDG	Podgorica	2.87	338	⇓P	Pb	02 37 11.5	-0.8
PDG				⇓S	Sb	02 37 44.0	-3.4
MATE	Matera	3.17	287	⇑P	Pb	02 37 17.4	-0.1
MATE				⇑S	Sg	02 37 59.4	-3.7
VTS	Vitosha	3.43	33	⇓P	Pn	02 37 17.2	+2.5
VTS				⇑S	Sn	02 37 57.2	+1.8
BLKB	Belogradchik	4.12	20	⇓P	Pn	02 37 26.3	+2.2
BLKB				⇑S	Sn	02 38 14.9	+2.6
VAE	Valguarnera	5.42	247	P	Pn	02 37 46.2	+4.2
	comp=E,8.6nm,1.0s,baz=11,slow=16,SNR=1.0						
IDI	Anoyia	5.58	142	P	Pn	02 37 42.9	-1.3
	comp=E,7.4nm,0.9s,baz=323,slow=20,SNR=1.3						
IDI				S	Sn	02 38 44.1	-4.3
	comp=E,7.0nm,0.3s,baz=161,slow=17,SNR=9.3						
VOIR		6.51	28	⇑P	Pn	02 37 59.9	+3.0
SIRR	Siria	6.53	6	⇑P	Pn	02 37 59.8	+2.6
MLR	Muntele Rosu	6.90	32	⇑P	Pn	02 38 04.8	+2.5
MLR	Muntele Rosu	6.90	32	P	Pn	02 38 05.2	+2.9
	comp=E,1.5nm,0.5s,baz=223,slow=15,SNR=3.1						
PLOR	Plostina	7.49	34	⇑P	Pn	02 38 14.2	+3.9
VRI	Vrincioaia	7.53	34	⇑P	Pn	02 38 13.1	+2.2
BRTR	Keskin Array B	9.98	86	P	Pn	02 38 45.5	+1.0
	comp=E,0.2nm,0.4s,baz=271,slow=13,SNR=6.0						
GERES	GERESS Array B	10.35	333	P	Pn	02 38 51.5	+1.9
	comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=3.5						
DAVOX	Davos/Dischmat	10.54	315	P	Pn	02 38 55.3	+3.1
	comp=E,0.9nm,0.6s,baz=150,slow=18,SNR=2.0						
FINES	FINESS Array B	21.95	7	P	P	02 41 13.3	-1.2
	comp=E,1.9nm,0.9s,baz=176,slow=11,SNR=3.4						
	comp=E,1.9nm,0.9s						
NOA	NORSAR Array B	22.08	348	P	P	02 41 16.8	+0.7
	comp=E,0.5nm,0.7s,baz=163,slow=11,SNR=2.5						
	comp=E,0.5nm,0.7s						
TORD	Torodi Ar. Bea	31.36	218	P	P	02 42 39.3	-2.6
	comp=E,0.2nm,0.7s,baz=32,slow=8.9,SNR=2.5						
	comp=E,0.2nm,0.7s						
MKAR	Makanchi Array	44.37	60	P	P	02 44 28.8	-2.6
	comp=E,1.5nm,1.1s,baz=281,slow=7.6,SNR=4.0						
	comp=E,1.5nm,1.1s						

*IDC **16** 02:40:11.8±1.0, 39°.86N×20°.70E, h0km, mb3.4/7, mbtmp3.4/16, ML3.0/9, MS3.0/1, Error ellipse: s-maj=16.3km s-min=15.2km az=176.0*
*TIR **16** 02:40:13.3, 39°.78N×20°.75E, h3km±1km, Md3.4, Ml3.8*
*ATH **16** 02:40:14.3, 39°.76N×20°.70E, h20km±1km, ML3.2/12, Error ellipse: s-maj=1.3km s-min=0.7km az=182.0*
*BEO **16** 02:40:14.6±0.8, 39°.68N×20°.68E, h11km±4km, ML3.3/5*
*THE **16** 02:40:15.3, 39°.77N×20°.69E, h2km±1km, ML3.3/17, Error ellipse: s-maj=1.6km s-min=0.5km az=298.0*

ISC 16 02:40:14.7±0.8, 39°.78N±0°.02×20°.67E±0°.02, h16km±5km, n142, σ1§50/192, mb3.5/6, 18C-3D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.18	130	P	Pg	02 40 18.5	-0.8
JAN				S	Sg	02 40 21.4	-1.0
	14μm,0.1s						
JAN	Janina	0.18	130	P	Pg	02 40 18.5	-0.8
JAN				S	Sg	02 40 22.2	-0.1
JAN				AML	AML	02 40 22.6	
	comp=E,34397μm,0.2s						
JAN				AML	AML	02 40 23.8	
	comp=N,22481μm,0.2s						
IGT	Igoumenitsa	0.35	227	P	Pg	02 40 21.8	-0.2
IGT				S	Sg	02 40 28.4	+1.3
	comp=N,5μm,0.5s						
IGT	Igoumenitsa	0.35	227	P	Pg	02 40 21.9	-0.2
	baz=234						
IGT				S	Sb	02 40 28.9	+1.0
	baz=234						
IGT	Igoumenitsa	0.35	227	P	Pg	02 40 21.8	-0.2
IGT				S	Sg	02 40 27.9	+0.8
IGT				AML	AML	02 40 31.1	
	comp=N,8680μm,0.3s						
IGT				AML	AML	02 40 31.4	
	comp=E,6955μm,0.2s						
LSK	Leskovik	0.38	352	P	Pb	02 40 22.9	-0.2
LSK				S	Sb	02 40 29.0	+0.3
	comp=E,17μm,0.3s						
LSK	Leskovik	0.38	352	P	Pb	02 40 22.8	-0.3
	baz=344						
LSK				S	Sb	02 40 28.8	+0.1
	baz=344						
LSK				AMP			
	comp=E,46nm,0.4s,baz=344						
SRN	Sarande	0.52	282	P	Pg	02 40 25.0	-0.1
SRN				S	Sb	02 40 33.7	+0.9
	comp=E,5μm,0.4s						
SRN	Sarande	0.52	282	P	Pg	02 40 25.0	-0.1
	baz=281						
SRN				S	Sb	02 40 34.7	+1.9
	baz=281						
SRN				AMP			
	comp=N,27nm,0.5s,baz=281						
PENT	Pentalofos	0.55	41	P	Pg	02 40 25.7	-0.1
PENT				S	Sb	02 40 34.4	+0.6
PENT	Pentalofos	0.55	41	P	Pg	02 40 25.6	-0.1
PENT				S	Sb	02 40 33.4	-0.4
KPRO	Kipourio	0.56	71	P	Pg	02 40 25.8	-0.1
KPRO				S	Sb	02 40 34.2	+0.1
	comp=N,11μm,0.5s						
KASA	Kassiopi	0.56	267	P	Pg	02 40 25.5	-0.4
KASA				S	Sb	02 40 34.8	+0.8
KASA

NEST S **Sb** **02 40 38.6 +0.5**
comp=E,2μm,0.4s
NEST Nestorio 0.70 25 P **Pb** **02 40 28.5 -0.1**
NEST AML AML 02 40 42.8
comp=E,4933μm,0.3s
NEST AML AML 02 40 42.9
comp=N,4603μm,0.3s
KBN Korca 0.85 6 P **Pg** **02 40 30.7 -0.6**
KBN S **Sn** **02 40 44.6 +0.4**
comp=N,1μm,0.6s
KBN Korca 0.85 6 P **Pg** **02 40 30.9 -0.4**
baz=2.0
KBN S **Sb** **02 40 43.6 +1.3**
baz=2.0
KBN AMP
comp=N,5.7nm,0.4s,baz=2.0
TSLK Tsoukalades, L 0.95 181 P **Pg** **02 40 32.4 -0.7**
TSLK S **Sb** **02 40 47.6 +2.5**
TSLK Tsoukalades, L 0.95 181 P **Pg** **02 40 32.2 -0.9**
LKD2 Lefkada island 0.99 180 P **Pg** **02 40 33.3 -0.5**
LKD2 S **Sn** **02 40 49.0 +1.5**
comp=N,880nm,0.5s
LKD2 Lefkada island 0.99 180 P **Pg** **02 40 33.2 -0.6**
baz=185
LKD2 S **Sn** **02 40 49.1 +1.7**
baz=185
LKD2 Lefkada island 0.99 180 P **Pg** **02 40 32.0 -1.9**
KZN Kozani 1.00 58 P **Pg** **02 40 33.5 -0.6**
KZN S **Sn** **02 40 48.6 +0.7**
comp=N,1μm,0.5s
KZN Kozani 1.00 58 P **Pg** **02 40 33.2 -0.9**
KZN AML AML 02 40 51.3
comp=N,2216μm,0.5s
KZN AML AML 02 40 51.7
comp=E,2927μm,0.6s
THL Klokotos Trika 1.06 101 P **Pg** **02 40 34.0 -1.2**
THL S **Sb** **02 40 49.7 +1.4**
comp=E,790nm,0.6s
THL Klokotos Trika 1.06 101 P **Pg** **02 40 33.7 -1.5**
THL S **Sg** **02 40 48.2 -0.9**
THL AML AML 02 40 52.5
comp=N,1991μm,0.9s
THL AML AML 02 40 54.6
comp=E,1834μm,0.7s
NYDR Nydri-Lefkada 1.06 179 P **Pg** **02 40 34.7 -0.5**
NYDR S **Sb** **02 40 50.5 +2.2**
comp=E,688nm,0.5s
DRAG Dragano-Lefkad 1.09 184 P **Pg** **02 40 35.8 0.0**
DRAG S **Sn** **02 40 52.4 +2.3**
VLO Vlora 1.13 308 P **Pn** **02 40 37.8 +1.9**
VLO Vlora 1.13 308 P **Pn** **02 40 38.1 +2.3**
baz=307
VLO S **Sn** **02 40 55.6 +4.5**
baz=307
EVGI Lefkada island 1.15 180 P **Pg** **02 40 36.5 -0.5**
TYRN Tyrnavos 1.21 93 P **Pg** **02 40 37.1 -0.9**
TYRN S **Sn** **02 40 55.2 +2.3**
comp=E,3μm,0.7s
EVR Evrytania 1.23 134 P **Pg** **02 40 37.5 -1.0**
EVR S **Sn** **02 40 56.3 +2.6**
comp=E,800nm,0.6s
EVR Evrytania 1.23 134 P **Pg** **02 40 37.3 -1.2**
EVR AML AML 02 41 00.6
comp=E,1780μm,0.6s
EVR AML AML 02 41 04.8
comp=N,1355μm,0.6s
KTI Kastanea 1.27 61 P **Pg** **02 40 38.5 -0.7**
FSK Fiskardo 1.32 184 P **Pn** **02 40 39.7 +1.3**
OHR Ohrid 1.34 4 *e*Pg **Pg** **02 40 40.8 +0.3**
OHR *e*Sg **Sn** **02 40 59.8 +3.6**
OHR Ohrid 1.34 4 *i* Pn **Pg** **02 40 40.8 +0.3**
PVO Paravola 1.34 150 P **Pn** **02 40 40.1 +1.4**
PVO S **Sn** **02 40 59.4 +3.3**
comp=N,715nm,0.6s
PVO Paravola 1.34 150 P **Pn** **02 40 39.5 +0.9**
MAKR Makrakomi, Fth 1.37 123 P **Pn** **02 40 40.2 +1.1**
MAKR S **Sn** **02 41 00.0 +3.1**
comp=N,2μm,0.7s
LIT Litokhoron 1.44 76 P **Pn** **02 40 41.3 +1.2**
LIT S **Sg** **02 41 01.3 +0.2**
comp=N,1μm,0.7s
LIT Litokhoron 1.44 76 P **Pn** **02 40 40.4 +0.3**
LIT S **Sg** **02 41 01.2 +0.1**
LIT AML AML 02 41 03.6
comp=N,2563μm,0.6s
LIT AML AML 02 41 05.8
comp=E,2662μm,0.7s
KEF4 Livadi, Kephal 1.53 187 P **Pn** **02 40 42.4 +1.1**
VLS Valsamata 1.60 182 P **Pn** **02 40 44.0 +1.8**
EFP Efpalio 1.66 144 P **Pb** **02 40 45.2 +0.4**
TIR Tirane 1.68 339 ⇑P **Pb** **02 40 45.6 +0.4**
TIR ⇓S **Sb** **02 41 07.1 +0.8**
TIR Tirane 1.68 339 *e*Pn **Pb** **02 40 46.0 +0.7**
TIR *e*Sn **Sg** **02 41 08.3 -0.7**
TIR Tirane 1.68 339 P **Pb** **02 40 45.9 +0.7**
baz=338
TIR AMP
comp=N,1.6nm,0.6s,baz=338
SERG Sergoula 1.74 141 P **Pb** **02 40 46.4 +0.2**
SERG AML AML 02 41 19.4
comp=N,1133μm,0.4s
SERG AML AML 02 41 19.7
comp=E,1085μm,0.5s
PHP Peshkopia 1.91 355 P **Pb** **02 40 49.8 +0.5**
baz=354
PHP AMP
comp=N,baz=354
DRO Drossia 2.00 156 P **Pn** **02 40 50.0 +2.3**
NEO Neokhori 2.03 103 P **Pb** **02 40 51.0 -0.2**
HORT Hortiatis 2.04 65 P **Pn** **02 40 49.1 +0.8**
KLV Kalavryta, Ach 2.08 146 P **Pn** **02 40 51.1 +2.2**
VAY Valandovo 2.12 43 *e*Pn **Pn** **02 40 50.5 +1.1**
VAY *e*Sn **Sb** **02 41 18.4 -0.3**
VAY Valandovo 2.12 43 *i* Pn **Pn** **02 40 50.4 +1.0**
KNT Kendrikon 2.19 50 P **Pn** **02 40 51.1 +0.7**
STIP Stip 2.24 31 *i* Pn **Pb** **02 40 54.5 -0.2**
SKO Skopje 2.27 15 *e*Pn **Pb** **02 40 54.1 -1.2**
SKO *e*Sn **Sb** **02 41 23.3 +0.2**
SKO Skopje 2.27 15 *i* Pn **Pb** **02 40 54.2 -1.1**
SOH Sokhos 2.30 62 P **Pn** **02 40 53.6 +1.6**
SRS Serrai 2.60 58 *e*Pn **Pn** **02 40 56.8 +0.7**
SRS *e*Sn **Sn** **02 41 28.9 +1.5**
SRS Serrai 2.60 58 P **Pn** **02 40 57.0 +0.9**
SRS AML AML 02 41 31.1
comp=E,184μm,0.7s
SRS AML AML 02 41 32.6
comp=N,205μm,0.3s
DRME Dracevica, Mon 2.66 335 *e*Pn **Pn** **02 40 57.6 +0.8**
KOKK Kokkinochori, 2.75 67 P **Pn** **02 40 59.3 +1.2**
KOKK AML AML 02 41 38.2
comp=E,306μm,0.3s
KOKK AML AML 02 41 38.7
comp=N,359μm,0.5s
NVR Nevrokopi 2.90 56 P **Pn** **02 41 01.4 +1.2**
TIP Timpagrande 3.08 260 ⇑P **Pn** **02 41 02.6 -0.1**
TIP ⇑S **Sn** **02 41 38.7 -0.6**
HCY Herceg Novi 3.13 329 *e*Pn **Pn** **02 41 02.8 -0.6**
MATE Matera 3.16 287 ⇑P **Pn** **02 41 03.5 -0.1**
BARS Barje 3.16 16 *e*Pn **Pn** **02 41 06.1 +2.4**
BARS *e*Sn **Sn** **02 41 43.8 +2.8**
VTS Vitosha 3.44 33 ⇑P **Pn** **02 41 09.7 +2.0**
VTS ⇓S **Sn** **02 41 52.1 +4.0**
SELS Selova 3.46 5 *e*Pn **Pn** **02 41 09.6 +1.8**
SJES Sjenica 3.52 352 *e*Pn **Pn** **02 41 11.4 +2.6**
UPM Unac-Piva 3.67 339 *e*Pn **Pn** **02 41 12.3 +1.4**
ZAPS Zavoj 3.79 22 *e*Pn **Pn** **02 41 14.8 +2.3**
IVAS Ivanjica 3.82 354 *e*Pn **Pn** **02 41 14.0 +1.2**
BOVS Bovan 3.93 11 ⇓P **Pn** **02 41 16.4 +2.1**
BOVS Bovan 3.93 11 *e*Pn **Pn** **02 41 16.1 +1.8**
RUDO Rudo 3.96 346 *e*Pn **Pn** **02 41 15.6 +0.9**
GRUS Gruza 4.11 0 *e*Pn **Pn** **02 41 18.5 +1.7**
BLKB Belogradchik 4.13 21 ⇑P **Pn** **02 41 19.8 +2.7**
BLKB ⇑S **Sn** **02 42 08.1 +3.2**
BBLS Lazići 4.19 347 *e*Pn **Pn** **02 41 19.2 +1.2**
BBLS Lazići 4.19 347 *e*Pn **Pn** **02 41 19.6 +1.6**
ZAGS Zajecar 4.20 16 *e*Pn **Pn** **02 41 19.5 +1.5**
DIVS Divibare 4.35 354 *e*Pn **Pn** **02 41 20.8 +0.7**
DIVS Divibare 4.35 354 *e*Pn **Pn** **02 41 21.7 +1.6**
DIVS *e*Sn **Sn** **02 42 11.1 +0.6**
TRUS Trudelj 4.45 358 *e*Pn **Pn** **02 41 22.4 +1.0**
HAPS Han Pijesak,BI 4.49 344 *e*Pn **Pn** **02 41 22.7 +0.5**
TEKS Tekeris 4.84 350 *e*Pn **Pn** **02 41 23.6 -3.3**
SRKY Kupres RS 5.02 330 *e*Pn **Pn** **02 41 30.2 +0.8**

HERR Herculane 5.26 14 ⇑P **Pn** **02 41 35.4 +2.8**
HERR ⇑S **Sn** **02 42 35.6 +2.7**
MGRS Mrkonjic Grad 5.35 331 *e*Pn **Pn** **02 41 34.8 +1.0**
VAE Valguarnera 5.41 247 Pn **Pn** **02 41 34.4 -0.3**
comp=N,0.3nm,0.3s,baz=162,slow=19,SNR=1.3
VAE Sn **Sn** **02 42 34.7 -1.9**
comp=N,0.9nm,0.3s,baz=22,slow=5.4,SNR=2.2
comp=N,4.6nm,0.8s
FRGS Fruska Gora 5.42 354 ⇑P **Pn** **02 41 35.6 +0.9**
FRGS Fruska Gora 5.42 354 *e*Pn **Pn** **02 41 35.3 +0.6**
FRGS Fruska Gora 5.42 354 *e*Pn **Pn** **02 41 35.5 +0.8**
IDI Anoyia 5.60 142 Pn **Pn** **02 41 37.4 +0.1**
comp=N,0.3nm,0.3s,baz=343,slow=19,SNR=1.9
IDI Sn **Sn** **02 42 38.0 -3.3**
comp=N,0.8nm,0.3s,baz=150,slow=20,SNR=1.9
IDI LR LR 02 44 16.5
comp=N,133nm,19.1s,baz=160,slow=43
comp=N,13nm,1.1s
BLY Banja Luka 5.60 334 *e*Pn **Pn** **02 41 37.2 0.0**
GZR Gura Zlata 5.83 15 ⇑P **Pn** **02 41 43.0 +2.6**
BZS Buzias 5.88 7 ⇑P **Pn** **02 41 42.8 +1.8**
A051A Mrakovica 5.93 333 *e*Pn **Pn** **02 41 41.7 -0.1**
ARR Arges 6.31 26 ⇑P **Pn** **02 41 48.9 +1.9**
VOIR 6.51 28 ⇑P **Pn** **02 41 52.5 +2.7**
SIRR Siria 6.53 6 ⇑P **Pn** **02 41 52.7 +2.7**
MORH Mrgy, Hungar 6.60 348 ⇑P **Pn** **02 41 51.2 +0.2**
MLR Muntele Rosu 6.91 33 Pn **Pn** **02 41 53.9 -1.4**
baz=137,slow=19,SNR=1.3
MLR Sn **Sn** **02 43 17.2 +3.6**
comp=N,0.2nm,0.3s,baz=202,slow=21,SNR=1.6
comp=N,0.9nm,0.9s
BOJS Bojanci 6.98 327 *e*Pn **Pn** **02 41 55.3 -0.8**
CRES Cresnjev 7.16 329 *e*Pn **Pn** **02 41 58.0 -0.6**
PLOR Plostina 7.49 34 ⇑P **Pn** **02 42 06.8 +3.5**
CEY Cerknica 7.52 324 *e*Pn **Pn** **02 42 03.4 -0.2**
VRI Vrincioaia 7.54 34 ⇑P **Pn** **02 42 07.3 +3.4**
SKDS Skadanscina 7.57 322 *e*Pn **Pn** **02 42 03.0 -1.3**
SOKA Soboth 8.03 331 *i* Pn **Pn** **02 42 10.1 -0.6**
comp=N,1.8nm,0.2s,SNR=10
OBKA Obir 8.08 328 *e*Pn **Pn** **02 42 11.2 -0.1**
OBKA Obir 8.08 328 *e*Pn **Pn** **02 42 11.0 -0.3**
comp=N,1.5nm,0.2s,SNR=6.1
ARSA Arzberg 8.35 335 *e*Pn **Pn** **02 42 14.1 -0.9**
comp=N,0.7nm,0.3s
KBA Koelnbreinsper 9.03 326 *e*Pn **Pn** **02 42 23.6 -0.9**
comp=N,0.9nm,0.3s
ABTA Abfaltersbach 9.16 322 *i* Pn **Pn** **02 42 25.3 -0.9**
comp=N,0.7nm,0.2s
MOA Molln 9.30 332 *i* Pn **Pn** **02 42 28.6 +0.6**
comp=N,0.9nm,0.2s,SNR=6.3
BIOA Bad Ischl, Aus 9.40 330 *e*Pn **Pn** **02 42 28.9 -0.5**
comp=N,1.4nm,0.3s
KEST Kesra 9.83 249 Pn **Pn** **02 42 36.2 +0.8**
comp=N,0.1nm,0.3s,baz=57,slow=18,SNR=1.9
comp=N,2.3nm,0.9s
WTTA Wattenberg 9.95 322 *e*Pn **Pn** **02 42 36.3 -0.8**
comp=N,1.5nm,0.2s,SNR=5.5
BRTR Keskin Array B 9.99 86 Pn **Pn** **02 42 38.6 +0.9**
comp=N,0.1nm,0.3s,baz=266,slow=12,SNR=2.0
comp=N,0.1nm,0.4s
WATA Walderalm 10.03 322 *e*Pn **Pn** **02 42 37.8 -0.3**
comp=N,1.3nm,0.2s,SNR=4.9
SQTA Sankt Quirin 10.12 320 *i* Pn **Pn** **02 42 39.5 +0.1**
comp=N,2.3nm,0.2s,SNR=6.1
MOTA Moosalm 10.26 321 *i* Pn **Pn** **02 42 41.7 +0.4**
comp=N,0.6nm,0.2s,SNR=4.9
GERES GERESS Array B 10.34 334 Pn **Pn** **02 42 42.1 -0.3**
comp=N,0.2nm,0.3s,baz=161,slow=14,SNR=6.7
GERES Sn **Sn** **02 44 35.1 -2.8**
comp=N,0.2nm,0.3s,baz=158,slow=23,SNR=3.8
comp=N,0.2nm,0.4s
DAVOX Davos/Dischmat 10.52 315 Pn **Pn** **02 42 43.8 -1.1**
comp=N,0.3nm,0.3s,baz=148,slow=18,SNR=3.8
DAVOX Sn **Sn** **02 44 39.4 -3.1**
comp=N,0.2nm,0.3s,baz=198,slow=20,SNR=2.4
comp=N,1.1nm,0.4s
MMAI Mount Meron Ar 13.64 115 Pn **Pn** **02 43 29.1 +1.5**
comp=N,0.4nm,0.3s,baz=309,slow=6.9,SNR=1.3
comp=N,0.2nm,0.3s
ESDC Sonseca Array 18.94 278 P **P** **02 44 35.1 +0.2**
baz=75,slow=10,SNR=5.5
comp=N,0.6nm,1.1s
HFS Hagfors 20.84 350 P **P** **02 44 54.4 -1.0**
comp=N,2.7nm,0.8s,baz=161,slow=9.2,SNR=2.2
comp=N,2.7nm,0.8s
FINES FINESS Array B 21.95 7 P **P** **02 45 06.1 -1.1**
comp=N,0.6nm,0.4s,baz=190,slow=9.7,SNR=8.0
comp=N,0.6nm,0.4s
NB2 NORSAR Subarra 22.08 348 P **P** **02 45 11.6 +2.9**
comp=Z,0.8nm,0.8s,baz=160,slow=11
NB2 NORSAR Subarra 22.08 348 P **P** **02 45 09.6 +0.8**
comp=Z,0.8nm,0.8s,baz=160,slow=11
NOA NORSAR Array B 22.08 348 P **P** **02 45 07.4 -1.4**
comp=Z,0.4nm,0.8s,baz=165,slow=11,SNR=3.4
comp=Z,0.4nm,0.8s
EKA Eskdalemuir Ar 22.21 322 P **P** **02 45 08.2 -2.0**
comp=Z,0.5nm,0.5s,baz=126,slow=3.6,SNR=3.5
comp=Z,0.5nm,0.5s
TORD Torodi Ar. Bea 31.36 217 P **P** **02 46 34.1 -0.5**
comp=Z,0.7nm,0.8s,baz=29,slow=9.3,SNR=7.0
comp=Z,0.7nm,0.8s
MKAR Makanchi Array 44.38 60 P **P** **02 48 23.6 -0.6**
comp=Z,0.7nm,0.5s,baz=282,slow=6.1,SNR=12
comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam 44.55 49 P **P** **02 48 24.4 -1.0**
comp=Z,0.4nm,0.3s,baz=289,slow=7.4,SNR=2.2
comp=Z,0.4nm,0.3s

IDC ***16*** *02:43:35.0±1.0, 39°.82N×20°.90E, h0km, mb3.8/8, mbtmp3.6/15, ML2.9/7, Error ellipse: s-maj=16.4km s-min=14.7km az=60.0*
TIR ***16*** *02:43:37.8, 39°.73N×20°.77E, h4km±2km, Ml3.5*
BEO ***16*** *02:43:38.5±0.8, 39°.61N×20°.72E, h16km±5km, ML3.3/6*
ATH ***16*** *02:43:39.1, 39°.78N×20°.71E, h7km±2km, ML3.3/9, Error ellipse: s-maj=2.4km s-min=0.7km az=294.0*
THE ***16*** *02:43:39.0, 39°.75N×20°.72E, h0km±2km, ML3.5/12, Error ellipse: s-maj=2.2km s-min=0.5km az=293.0*
ISC 16 02:43:38.2±0.8, 39°.74N±0°.02×20°.71E±0°.02, h17km±5km, n126, σ1§64/166, mb3.7/7, 12C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**127**	P	**Pg**	**02 43 41.6**	**-0.5**
JAN				S	**Sg**	**02 43 44.6**	**-0.1**
43μm,0.4s							
JAN	**Janina**	**0.14**	**127**	P	**Pg**	**02 43 42.0**	**-0.2**
JAN				S	**Sg**	**02 43 44.7**	**0.0**
JAN				AML	AML	02 43 45.3	
JAN				AML	AML	02 43 45.6	
comp=N,49700μm,0.4s							
IGT	**Igoumenitsa**	**0.36**	**235**	P	**Pb**	**02 43 45.9**	**-0.2**
IGT				S	**Sb**	**02 43 52.3**	**+0.8**
comp=N,6μm,0.5s							
IGT	**Igoumenitsa**	**0.36**	**235**	P	**Pb**	**02 43 46.0**	**-0.2**
baz=240							
IGT				S	**Sb**	**02 43 52.5**	**+1.0**
baz=240							
IGT	**Igoumenitsa**	**0.36**	**235**	P	**Pb**	**02 43 46.5**	**+0.3**
IGT				S	**Sb**	**02 43 51.5**	**0.0**
IGT				AML	AML	02 43 53.6	
comp=E,13806μm,0.4s							
IGT				AML	AML	02 43 55.4	
comp=N,9426μm,0.4s							
LSK	**Leskovik**	**0.42**	**348**	P	**Pg**	**02 43 47.2**	**+0.5**
LSK	**Leskovik**	**0.42**	**348**	P	**Pg**	**02 43 47.3**	**+0.6**
baz=343							
LSK				S	**Sg**	**02 43 53.4**	**+0.8**
baz=343							
LSK				AMP			
comp=E,22nm,0.6s,baz=343							
KPRO	**Kipourio**	**0.55**	**67**	P	**Pg**	**02 43 49.2**	**+0.1**
KPRO				S	**Sg**	**02 43 57.4**	**+1.0**
comp=E,8μm,0.4s							
PENT	**Pentalofos**	**0.56**	**36**	P	**Pg**	**02 43 49.3**	**-0.1**
PENT				S	**Sg**	**02 43 58.2**	**+1.3**
PENT	**Pentalofos**	**0.56**	**36**	P	**Pg**	**02 43 49.3**	**-0.1**
PENT				S	**Sg**	**02 43 56.4**	**-0.6**
PENT				AML	AML	02 44 00.2	
comp=N,1436μm,0.4s							
PENT				AML	AML	02 44 02.3	
comp=E,6250μm,0.3s							
SRN	**Sarande**	**0.56**	**285**	P	**Pg**	**02 43 49.1**	**-0.3**
baz=285							
SRN				S	**Sn**	**02 43 59.0**	**-1.5**
baz=285							
SRN				AMP			
comp=E,12nm,0.3s,baz=285							
KASA Kassiopi 0.60 271				P	**Pb**	**02 43 50.1**	**-0.1**
KASA				S	**Sb**	**02 43 58.9**	**+0.5**
KASA				AML	AML	02 44 00.8	
comp=N,6659μm,0.5s							
KASA				AML	AML	02 44 00.9	
comp=E,5022μm,0.3s							
KEK Kerkira 0.70 268				P	**Pb**	**02 43 52.6**	**+0.6**
KEK				S	**Sb**	**02 44 02.0**	**+0.5**
KEK				AML	AML	02 44 08.3	
comp=N,3732μm,0.5s							
KEK				AML	AML	02 44 09.3	
comp=E,4367μm,0.5s							
NEST Nestorio 0.72 21				P	**Pg**	**02 43 52.5**	**+0.1**
NEST				S	**Sb**	**02 44 03.4**	**+1.3**
comp=E,1μm,0.5s							
NEST Nestorio 0.72 21				P	**Pg**	**02 43 52.0**	**-0.4**
NEST				S	**Sg**	**02 44 01.2**	**-0.8**
NEST				AML	AML	02 44 06.2	
comp=N,3600μm,0.6s							
NEST				AML	AML	02 44 08.0	
comp=E,3672μm,0.5s							
KBN Korca 0.89 4				P	**Pb**	**02 43 55.1**	**-0.1**
baz=0.0							
KBN				S	**Sn**	**02 44 08.8**	**+0.3**
baz=0.0							
KBN				AMP			
comp=N,4.2nm,0.4s,baz=0.0							
TSLK Tsoukalades, L 0.91 183				P	**Pg**	**02 43 55.7**	**-0.2**
TSLK Tsoukalades, L 0.91 183				P	**Pn**	**02 43 56.6**	**+0.3**
TSLK				S	**Sn**	**02 44 09.8**	**+0.7**
TSLK				AML	AML	02 44 14.9	
comp=E,5429μm,0.6s							
TSLK				AML	AML	02 44 15.1	
comp=N,4449μm,0.5s							
LKD2 Lefkada island 0.95 182				P	**Pb**	**02 43 55.8**	**-0.4**
baz=186							
LKD2				S	**Sn**	**02 44 11.2**	**+1.1**
baz=186							
LKD2 Lefkada island 0.95 182				P	**Pn**	**02 43 57.6**	**+0.8**
LKD2				S	**Sn**	**02 44 11.0**	**+1.0**
LKD2				AML	AML	02 44 15.5	
comp=E,4218μm,0.5s							
LKD2				AML	AML	02 44 17.4	
comp=N,3966μm,0.6s							
KZN Kozani 0.99 55				P	**Pb**	**02 43 57.0**	**0.0**
KZN				S	**Sn**	**02 44 12.2**	**+1.0**
comp=N,2μm,0.5s							
KZN Kozani 0.99 55				P	**Pb**	**02 43 57.1**	**+0.1**
THL Klokotos Trika 1.02 99				P	**Pb**	**02 43 57.5**	**+0.1**
THL				S	**Sn**	**02 44 12.7**	**+0.9**
comp=N,1μm,0.6s							
THL Klokotos Trika 1.02 99				P	**Pb**	**02 43 58.1**	**+0.7**
THL				S	**Sn**	**02 44 12.6**	**+0.9**
THL				AML	AML	02 44 18.1	
comp=N,2350μm,0.9s							
THL				AML	AML	02 44 18.3	
comp=E,2706μm,0.4s							
NYDR Nydri-Lefkada 1.02 180				P	**Pn**	**02 43 58.1**	**+0.3**
NYDR				S	**Sn**	**02 44 13.3**	**+1.5**
comp=E,1μm,0.7s							
EVGI Lefkada island 1.12 182				P	**Pg**	**02 44 00.2**	**+0.4**
TYRN Tyrnavos 1.18 91				P	**Pn**	**02 44 00.5**	**+0.6**
TYRN				S	**Sg**	**02 44 18.4**	**+2.2**
comp=E,4μm,0.6s							
VLO Vlora 1.18 308				P	**Pg**	**02 44 02.3**	**+1.3**
baz=308							
VLO				S	**Sg**	**02 44 20.3**	**+3.8**
baz=308							
VLO				AMP			
comp=E,14nm,0.5s,baz=308							
EVR Evrytania 1.18 134				P	**Pb**	**02 44 00.8**	**+0.5**
EVR Evrytania 1.18 134				P	**Pg**	**02 44 01.4**	**+0.3**
KTI Kastanea 1.26 58				P	**Pn**	**02 44 02.0**	**+0.8**
FSK Fiskardo 1.28 185				P	**Pg**	**02 44 04.0**	**+1.1**
FSK				S	**Sg**	**02 44 21.9**	**+2.2**
comp=E,1μm,0.5s							
FSK Fiskardo 1.28 185				P	**Pg**	**02 44 03.7**	**+0.8**
PVO Paravola 1.29 150				P	**Pg**	**02 44 03.8**	**+0.8**
PVO				S	**Sg**	**02 44 22.4**	**+2.6**
comp=E,2μm,0.7s							
PVO Paravola 1.29 150				P	**Pg**	**02 44 03.4**	**+0.3**
LRSO Larissa Observ 1.30 92				P	**Pn**	**02 44 02.5**	**+0.9**
LRSO				S	**Sg**	**02 44 21.7**	**+1.5**
comp=E,3μm,0.5s							
LRSO Larissa Observ 1.30 92				P	**Pg**	**02 44 03.5**	**+0.3**
MAKR Makrakomi, Fth 1.32 123				P	**Pb**	**02 44 03.3**	**+0.8**
MAKR				S	**Sg**	**02 44 23.6**	**+2.8**
comp=E,3μm,0.7s							
MAKR Makrakomi, Fth 1.32 123				P	**Pg**	**02 44 04.1**	**+0.4**
OHR Ohrid 1.37 3				*e*Pg	**Pg**	**02 44 05.4**	**+0.8**
OHR				*e*Sg	**Sg**	**02 44 26.2**	**+3.7**
OHR Ohrid 1.37 3				*i* Pn	**Pg**	**02 44 05.3**	**+0.6**
LIT Litokhoron 1.42 75				P	**Pn**	**02 44 04.2**	**+1.0**
LIT Litokhoron 1.42 75				P	**Pb**	**02 44 05.1**	**+0.9**
VLS Valsamata 1.56 183				P	**Pg**	**02 44 08.2**	**0.0**
TIR Tirane 1.73 338				⇑P	**Pb**	**02 44 09.9**	**+0.4**
TIR Tirane 1.73 338				*e*Pn	**Pb**	**02 44 10.1**	**+0.6**
TIR				*e*Sn	**Sg**	**02 44 34.0**	**+0.1**
TIR Tirane 1.73 338				P	**Pb**	**02 44 10.1**	**+0.6**
baz=338							
TIR				AMP			
comp=E,1.0nm,0.6s,baz=338							
AXAR Agios Charalam 1.80 122				P	**Pg**	**02 44 12.1**	**-0.6**
PHP Peshkopia 1.95 354				P	**Pb**	**02 44 13.7**	**+0.3**
baz=353							
PHP				AMP			
comp=N,1.4nm,0.7s,baz=353							
VAY Valandovo 2.12 41				*e*Pn	**Pn**	**02 44 14.4**	**+1.5**
VAY				*e*Sn	**Sb**	**02 44 42.1**	**-0.2**
VAY Valandovo 2.12 41				*i* Pn	**Pn**	**02 44 14.4**	**+1.5**
STIP Stip 2.25 29				*i* Pn	**Pb**	**02 44 18.8**	**+0.4**
SKO Skopje 2.30 14				*e*Pn	**Pb**	**02 44 18.3**	**-0.9**
SKO				*e*Sn	**Sn**	**02 44 45.9**	**+2.6**
SKO Skopje 2.30 14				*i* Pn	**Pb**	**02 44 18.4**	**-0.9**
SRS Serrai 2.59 57				*e*Pn	**Pn**	**02 44 20.8**	**+1.4**
SRS				*e*Sn	**Sn**	**02 44 52.5**	**+1.9**
DRME Dracevica, Mon 2.70 335				*e*Pn	**Pn**	**02 44 22.2**	**+1.3**
PDG Podgorica 2.90 338				⇑P	**Pn**	**02 44 25.5**	**+1.8**
TIP Timpagrande 3.11 261				⇑P	**Pn**	**02 44 27.0**	**+0.4**
TIP				⇓S	**Sn**	**02 45 02.7**	**-0.7**
HCY Herceg Novi 3.18 329				*e*Pn	**Pn**	**02 44 26.4**	**-1.1**
BARS Barje 3.19 15				*e*Pn	**Pn**	**02 44 30.3**	**+2.7**
BARS				*e*Sn	**Sn**	**02 45 07.9**	**+2.7**
VTS Vitosha 3.45 33				⇑P	**Pn**	**02 44 34.5**	**+3.2**
SELS Selova 3.49 5				*e*Pn	**Pn**	**02 44 33.2**	**+1.4**
SJES Sjenica 3.56 351				*e*Pn	**Pn**	**02 44 35.7**	**+2.9**
ZAPS Zavoj 3.81 22				*e*Pn	**Pn**	**02 44 39.4**	**+3.2**
IVAS Ivanjica 3.86 354				*e*Pn	**Pn**	**02 44 38.4**	**+1.6**
BOVS Bovan 3.96 11				*e*Pn	**Pn**	**02 44 39.4**	**+1.2**
BOVS				*e*Sn	**Sn**	**02 45 25.8**	**+1.5**
RUDO Rudo 4.00 346				*e*Pn	**Pn**	**02 44 39.7**	**+0.9**
GRUS Gruza 4.15 0				*e*Pn	**Pn**	**02 44 42.7**	**+2.0**
BLKB Belogradchik 4.15 20				P	**Pn**	**02 44 44.0**	**+3.2**
ZAGS Zajecar 4.23 15				*e*Pn	**Pn**	**02 44 43.5**	**+1.7**
BBLS Lazići 4.24 347				*e*Pn	**Pn**	**02 44 43.6**	**+1.5**
BBLS Lazići 4.24 347				*e*Pn	**Pn**	**02 44 43.5**	**+1.5**
BBLS Lazići 4.24 347				*e*Pn	**Pn**	**02 44 44.0**	**+1.9**
DIVS Divibare 4.39 353				*e*Pn	**Pn**	**02 44 45.0**	**+0.8**
DIVS Divibare 4.39 353				*e*Pn	**Pn**	**02 44 45.0**	**+0.8**
TRUS Trudelj 4.49 357				*e*Pn	**Pn**	**02 44 47.5**	**+2.1**
HAPS Han Pijesak,BI 4.54 344				*e*Pn	**Pn**	**02 44 46.9**	**+0.7**
TEKS Tekeris 4.89 350				*e*Pn	**Pn**	**02 44 49.6**	**-1.3**
TEKS Tekeris 4.89 350				*e*Pn	**Pn**	**02 44 51.2**	**+0.3**
SRKY Kupres RS 5.07 330				*e*Pn	**Pn**	**02 44 54.3**	**+0.8**
HERR Herculane 5.29 13				⇓P	**Pn**	**02 44 59.5**	**+3.0**
MGRS Mrkonjic Grad 5.40 331				*e*Pn	**Pn**	**02 44 58.2**	**+0.3**
VAE Valguarnera 5.42 247				Pn	**Pn**	**02 44 59.1**	**+0.8**
comp=N,0.6nm,0.3s,baz=90,slow=6.1,SNR=1.8							
VAE				Sn	**Sn**	**02 46 01.3**	**+0.8**
comp=N,1.4nm,0.3s,baz=131,slow=11,SNR=2.1							
comp=N,6.0nm,0.9s							
FRGS Fruska Gora 5.46 353				⇑P	**Pn**	**02 44 59.8**	**+1.1**
**FR

BZS	Buzias	5.91	6	⇑P	Pn	02 45 06.7	+1.7
VOIR		6.53	28	⇑P	Pn	02 45 17.3	+3.7
SIRR	Siria	6.56	6	⇑P	Pn	02 45 16.1	+2.2
MORH	Mrgy, Hungar	6.65	348	⇑P	Pn	02 45 15.4	+0.4
ISR	Istrita	6.89	37	⇑P	Pn	02 45 23.3	+4.8
MLR	Muntele Rosu	6.92	32	⇓P	Pn	02 45 23.6	+4.6
MLR	Muntele Rosu	6.92	32	Pn	Pn	02 45 15.9	-3.1
	baz=246,slow=20,SNR=1.1						
MLR				Sn	Sn	02 46 32.8	-4.6
	baz=202,slow=20 comp=N,1.6nm,1.0s						
BOJS	Bojanci	7.03	327	*e*Pn	Pn	02 45 20.0	-0.3
CRES	Cresnjev	7.21	329	*e*Pn	Pn	02 45 21.8	-0.9
COVR	Voineasa-Covas	7.32	32	⇑P	Pn	02 45 28.9	+4.6
PLOR	Plostina	7.51	34	⇑P	Pn	02 45 31.7	+4.7
VRI	Vrincioaia	7.55	34	⇓P	Pn	02 45 32.1	+4.6
CEY	Cerknica	7.57	324	*e*Pn	Pn	02 45 27.2	-0.6
SKDS	Skadanscina	7.62	322	*e*Pn	Pn	02 45 26.8	-1.6
SOKA	Soboth	8.08	331	*e*Pn	Pn	02 45 35.3	+0.5
	comp=N,1.2nm,0.3s,SNR=4.3						
OBKA	Obir	8.13	328	*e*Pn	Pn	02 45 35.5	0.0
OBKA	Obir	8.13	328	*e*Pn	Pn	02 45 36.0	+0.5
	comp=N,1.3nm,0.2s						
ARSA	Arzberg	8.40	335	*e*Pn	Pn	02 45 39.6	+0.5
	comp=N,0.8nm,0.3s						
ABTA	Abfaltersbach	9.21	322	*e*Pn	Pn	02 45 50.5	+0.2
	comp=N,0.4nm,0.2s						
MOA	Molln	9.35	332	*e*Pn	Pn	02 45 53.2	+1.1
	comp=N,1.5nm,0.3s,SNR=6.1						
BIOA	Bad Ischl, Aus	9.45	330	*e*Pn	Pn	02 45 54.5	+0.9
	comp=N,1.3nm,0.3s						
KEST	Kesra	9.85	250	Pn	Pn	02 46 00.5	+1.4
	comp=N,0.1nm,0.3s,baz=45,slow=17,SNR=1.8 comp=N,2.0nm,0.8s						
BRTR	Keskin Array B	9.96	86	Pn	Pn	02 45 58.1	-2.5
	baz=260,slow=12,SNR=1.7 comp=N,0.2nm,0.6s						
WTTA	Wattenberg	9.99	322	*e*Pn	Pn	02 46 01.3	+0.1
	comp=N,1.1nm,0.2s						
WATA	Walderalm	10.07	322	*e*Pn	Pn	02 46 02.9	+0.7
	comp=N,1.0nm,0.2s,SNR=4.8						
MOTA	Moosalm	10.31	321	*e*Pn	Pn	02 46 05.9	+0.5
	comp=N,1.2nm,0.4s						
GERES	GERESS Array B	10.39	333	Pn	Pn	02 46 06.5	0.0
	comp=N,0.1nm,0.3s,baz=160,slow=14,SNR=4.9						
GERES				Sn	Sn	02 48 00.2	-2.4
	comp=N,0.1nm,0.3s,baz=156,slow=23,SNR=3.0 comp=N,0.2nm,0.3s						
DAVOX	Davos/Dischmat	10.57	315	Pn	Pn	02 46 09.6	+0.5
	comp=N,0.3nm,0.3s,baz=200,slow=11,SNR=1.8						
DAVOX				Sn	Sn	02 48 04.5	-2.7
	comp=N,0.2nm,0.3s,baz=330,slow=20,SNR=1.7 comp=N,1.5nm,0.8s						
HFS	Hagfors	20.89	350	P	P	02 48 18.1	-1.3
	comp=N,5.6nm,0.9s,baz=170,slow=10,SNR=6.8 comp=N,5.6nm,0.9s						
FINES	FINESS Array B	21.98	7	P	P	02 48 29.0	-2.1
	comp=N,2.2nm,0.7s,baz=180,slow=12,SNR=14 comp=N,2.2nm,0.7s						
NB2	NORSAR Subarra	22.12	348	P	P	02 48 31.2	-1.5
	comp=Z,3.2nm,0.8s,baz=164,slow=11						
NOA	NORSAR Array B	22.12	348	P	P	02 48 31.6	-1.1
	comp=Z,1.9nm,0.8s,baz=164,slow=11,SNR=5.9 comp=Z,1.9nm,0.8s						
EKA	Eskdalemuir Ar	22.26	322	P	P	02 48 33.5	-0.6
	comp=Z,1.8nm,0.8s,baz=125,slow=9.7,SNR=2.5 comp=Z,1.8nm,0.8s						
ARCES	ARCESS Array B	29.97	3	P	P	02 49 43.6	-1.7
	comp=Z,1.8nm,0.7s,baz=188,slow=11,SNR=10.0 comp=Z,1.8nm,0.7s						
TORD	Torodi Ar. Bea	31.35	218	P	P	02 49 58.3	+0.3
	comp=Z,0.7nm,0.7s,baz=34,slow=8.6,SNR=7.5 comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	44.37	60	P	P	02 51 46.8	-0.8
	comp=Z,1.7nm,0.4s,baz=278,slow=7.5,SNR=19 comp=Z,1.7nm,0.4s						
ZALV	Zalesovo Beam	44.55	49	P	P	02 51 48.3	-0.6
	comp=Z,0.5nm,0.3s,baz=286,slow=7.3,SNR=2.6 comp=Z,0.5nm,0.3s						

*KRNET **16** 02:55:22.1±0.1, 39°.25N×75°.48E, mb3.5*
*SOME **16** 02:55:22.9, 39°.35N×75°.32E, h10km*
*NNC **16** 02:55:24.8±2.6, 39°.37N×75°.39E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=19.1km s-min=10.1km az=166.0*

ISC 16 02:55:31.5±2.0, 39°.69N±0°.09×75°.36E±0°.04, h10km, n44, σ1§13/71, 13C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.81	16	⇓*i*P	Pn	02 56 02.3	-0.8
	baz=10.0						
NRN				⇓*i*S	Sg	02 56 31.5	+1.8
	baz=10.0						
ARLS	Aral	2.31	340	⇓*i*P	Pn	02 56 09.6	-0.2
	baz=42						
ARLS				⇓*i*S	Sg	02 56 44.7	-0.9
	baz=42						
UCH	Uchtor	2.61	346	P	Pn	02 56 14.9	+0.6
	SNR=13						
UCH	Uchtor	2.61	346	⇑*i*P	Pn	02 56 14.6	+0.3
	baz=46						
UCH				⇑*i*S	Sb	02 56 52.6	+1.5
	baz=46						
ULHL	Ulahol	2.64	14	P	Pb	02 56 17.8	-1.3
	SNR=11						
ULHL	Ulahol	2.64	14	⇑*i*P	Pn	02 56 13.9	-0.5
	baz=11						
ULHL				⇑*i*S	Sb	02 56 51.9	+0.3
	baz=11						
AML	Almayashu	2.74	333	P	Pn	02 56 17.5	+1.5
	SNR=15						
TARG	Taragay, Kyrgy	2.76	42	⇓*i*P	Pn	02 56 14.2	-2.0
	baz=35						
TARG				⇓*i*S	Sn	02 56 52.1	+2.3
	baz=35						
BOOM	Boomskoye usch	2.83	9	⇑*i*P	Pn	02 56 17.1	+0.1
	baz=6.0						
BOOM				⇑*i*S	Sb	02 56 57.1	0.0
	baz=6.0						
KBK	Karagaybulak	2.98	354	P	Pn	02 56 20.6	+1.6
	SNR=15						
KBK	Karagaybulak	2.98	354	⇓*i*P	Pn	02 56 19.1	+0.1
	baz=53						
KBK				⇓*i*S	Sb	02 57 00.9	-0.4
	baz=53						
AAK	Ala-Archa	3.02	348	P	Pn	02 56 21.1	+1.6
	SNR=7.4						
TKM2	Tokmak 2	3.23	3	P	Pn	02 56 23.8	+1.2
	SNR=32						
TKM2	Tokmak 2	3.23	3	⇑*i*P	Pn	02 56 22.7	+0.2
	baz=1.0						
TKM2				⇑*i*S	Sb	02 57 07.0	-1.6
	baz=1.0						
TKM2	Tokmak 2	3.23	3	⇑Pn	Pn	02 56 23.6	+1.1
	13nm,0.5s						
TKM2				⇓Sn	Sb	02 57 08.1	-0.5
	17nm,0.7s						
KST	Kastek	3.38	8	*e*P	Pb	02 56 31.8	+0.1
	11nm,0.4s						
KST				*e*S	Sg	02 57 21.3	+1.2
	29nm,0.7s						
IZV	Izvestkoviy	3.47	15	*e*P	Pb	02 56 33.3	+0.1
	8.5nm,0.4s						
IZV				*e*S	Sg	02 57 24.2	+1.1
	28nm,0.7s						
IZV	Izvestkoviy	3.47	15	Pg	Pb	02 56 33.3	+0.1
	8.5nm,0.4s						
IZV				Lg	Lg	02 57 24.9	
	28nm,0.7s						
MTBS	Maitube	3.53	13	*e*P	Pb	02 56 33.0	-1.1
	5.9nm,0.3s						
MTBS				*e*S	Sg	02 57 24.0	-0.9
	10nm,0.5s						
TNSS	Tian-Shan	3.55	19	*e*P	Pb	02 56 33.5	-1.2
	7.7nm,0.4s						
TNSS				*e*S	Sg	02 57 24.4	-1.2
	5.2nm,0.5s						
TNSS	Tian-Shan	3.55	19	Pg	Pb	02 56 33.5	-1.2
	7.7nm,0.4s						
TNSS				Lg	Lg	02 57 24.4	
	5.2nm,0.5s						
USP	Ospenovka	3.63	350	P	Pn	02 56 28.7	+0.8
	SNR=5.1						
MDOK	Medeo	3.69	20	*e*P	Pb	02 56 35.8	-1.2
	3.3nm,0.2s						
MDOK				*e*S	Sg	02 57 28.2	-2.0
	9.3nm,0.8s						
MDOK	Medeo	3.69	20	Pg	Pb	02 56 35.8	-1.2
	3.3nm,0.2s						
MDOK				⇑Pg	Pg	02 56 37.1	-5.3
	4.7nm,0.5s						
MDOK				Lg	Lg	02 57 28.8	
	9.3nm,0.8s						
MDOK				⇓Lg	Lg	02 57 30.1	
	15nm,0.7s						
KOTS	Kotyrbulak	3.78	20	*e*P	Pb	02 56 38.1	-0.3
	5.6nm,0.4s						
KOTS				*e*S	Sg	02 57 32.7	-0.2
	38nm,0.7s						
KOTS	Kotyrbulak	3.78	20	Pg	Pb	02 56 38.1	-0.3
	5.6nm,0.4s						
KOTS				Lg	Lg	02 57 32.7	
	38nm,0.7s						
SGDS	Sogindy	3.80	352	*e*P	Pb	02 56 37.6	-1.1
	3.6nm,0.6s						
SGDS				*e*S	Sg	02 57 31.8	-1.7
	4.9nm,0.9s						
SATY	Saty	4.07	33	*e*P	Pb	02 56 43.6	+0.1
	6.9nm,0.7s						
SATY				*e*S	Sg	02 57 41.5	-0.8
	10nm,1.1s						
KTBS	Karatobe	4.14	13	*e*P	Pb	02 56 44.5	+0.1
	2.4nm,0.4s						
KTBS				*e*S	Sg	02 57 43.5	-0.9
	17nm,0.6s						
KTBS	Karatobe	4.14	13	Pg	Pb	02 56 44.5	+0.1
	2.4nm,0.4s						
KTBS				Lg	Lg	02 57 43.9	
	17nm,0.6s						
ZHN	Zhinishke	4.17	33	*e*P	Pb	02 56 46.1	+1.0
	3.5nm,0.2s						
ZHN				*e*S	Sg	02 57 45.9	+0.3
	10nm,0.4s						
KUU	Kurty	4.26	10	*e*P	Pb	02 56 45.9	-0.7
	4.2nm,0.5s						
KUU				*e*S	Sg	02 57 46.1	-2.3
	14nm,0.8s						
CHKK	Chushkaly	4.33	16	*e*P	Pb	02 56 47.7	-0.2
	1.7nm,0.0s						
CHKK				*e*S	Sg	02 57 48.5	-2.2
	9.1nm,0.5s						
KURS	Kuram	4.34	28	*e*P	Pb	02 56 48.8	+0.9
	6.4nm,0.6s						
KURS				*e*S	Sg	02 57 50.7	-0.2
	12nm,1.2s						
KURS	Kuram	4.34	28	Pg	Pb	02 56 48.8	+0.9
	6.4nm,0.6s						
KURS				Lg	Lg	02 57 50.7	
	12nm,1.2s						
UZB	Uzynbulak	4.42	37	*e*P	Pb	02 56 49.2	-0.1
	3.5nm,0.4s						
UZB				*e*S	Sg	02 57 51.7	-1.7
	8.6nm,0.9s						
UZB	Uzynbulak	4.42	37	Pg	Pb	02 56 49.2	-0.1
	3.5nm,0.4s						
UZB				Lg	Lg	02 57 52.1	
	8.6nm,0.9s						
KPKS	Kokpek	4.52	32	*e*P	Pb	02 56 51.7	+0.7
	2.4nm,0.2s						
KPKS				*e*S	Sg	02 57 56.0	-0.7
	10nm,0.5s						
KPKS	Kokpek	4.52	32	Pg	Pb	02 56 51.7	+0.7
	2.4nm,0.2s						
KPKS				Lg	Lg	02 57 56.0	
	10nm,0.5s						
IUG	Iuzhnay	4.72	303	*e*P	Pb	02 56 54.3	-0.2
	123nm,0.3s						
IUG				*e*S	Sg	02 58 00.0	-3.1
	14nm,0.4s						
IUG	Iuzhnay	4.72	303	Pg	Pb	02 56 54.3	-0.2
	123nm,0.3s						
IUG				Lg	Lg	02 58 00.0	
	14nm,0.4s						
PDGK	Podgornoye	4.78	39	⇓Pg	Pb	02 56 55.5	0.0
	8.7nm,1.0s						
PDGK				⇑Lg	Lg	02 58 04.6	
	17nm,0.9s						
BLB	Baldybastay	4.98	27	*e*P	Pb	02 56 59.6	+0.7
	10nm,0.7s						
BLB				*e*S	Sg	02 58 09.5	-1.9
	8.5nm,0.5s						
KK31	Karatay Array	4.99	315	Pg	Pb	02 56 59.6	+0.7
	1.6nm,0.7s,baz=135,slow=16,SNR=7.2						
KK31				⇑Sn	Sn	02 57 45.3	+1.1
	0.8nm,0.4s						
KK31				⇑Lg	Lg	02 58 07.2	
	2.2nm,0.5s,baz=140,slow=30,SNR=3.7						

*IDC **16** 03:12:44.2±1.4, 39°.97N×20°.87E, h0km, mb3.3/5, mbtmp3.3/8, ML2.9/2, Error ellipse: s-maj=24.8km s-min=19.8km az=96.0*
*TIR **16** 03:12:44.9, 39°.74N×20°.73E, h4km±1km, Ml3.2*
*THE **16** 03:12:45.7, 39°.76N×20°.70E, h0km±3km, ML2.8/5, Error ellipse: s-maj=3.0km s-min=0.7km az=166.0*
*ATH **16** 03:12:45.2, 39°.78N×20°.68E, h9km±5km, ML2.9/4, Error ellipse: s-maj=5.8km s-min=1.4km az=162.0*

ISC 16 03:12:45.1±0.8, 39°.74N±0°.02×20°.70E±0°.02, h10km±6km, n79, σ1§27/102, mb3.2/4, 6C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.15	126	P	Pg	03 12 48.5	-0.1
JAN				S	Sg	03 12 51.9	+1.0
JAN	Janina	0.15	126	P	Pg	03 12 48.4	-0.1
JAN				S	Sg	03 12 51.9	+1.0
JAN				AML	AML	03 12 52.2	
	comp=E,41234μm,0.2s						
JAN				AML	AML	03 12 52.5	
	comp=N,33793μm,0.2s						
IGT	Igoumenitsa	0.35	233	P	Pg	03 12 52.1	0.0
IGT				S	Sb	03 12 59.0	0.0
	comp=N,3μm,0.5s						
IGT	Igoumenitsa	0.35	233	P	Pg	03 12 52.2	+0.1
	baz=236						
IGT				S	Sb	03 12 59.0	0.0
	baz=236						
IGT	Igoumenitsa	0.35	233	P	Pg	03 12 52.0	-0.1
IGT				S	Sb	03 12 58.3	-0.7
IGT				AML	AML	03 13 02.0	
	comp=N,5313μm,0.4s						
IGT				AML	AML	03 13 02.9	
	comp=E,4706μm,0.3s						
LSK	Leskovik	0.41	350	P	Pg	03 12 53.6	+0.3
LSK				S	Sb	03 13 00.2	-0.8
	comp=E,2μm,0.6s						
LSK	Leskovik	0.41	350	P	Pg	03 12 53.8	+0.5
	baz=347						
LSK				S	Sb	03 13 00.1	-0.9
	baz=347						
LSK				AMP			
	comp=N,10.0nm,0.5s,baz=347						
SRN	Sarande	0.55	285	P	Pg	03 12 55.6	-0.3
SRN				S	Sb	03 13 04.7	-0.1
	comp=N,1μm,0.4s						
SRN	Sarande	0.55	285	P	Pg	03 12 55.6	-0.3
	baz=284						
SRN				S	Sb	03 13 05.1	+0.3
	baz=284						
SRN				AMP			
	comp=E,7.4nm,0.4s,baz=284						
KPRO	Kipourio	0.56	67	P	Pg	03 12 56.1	+0.1
KPRO				S	Sb	03 13 05.2	+0.2
	comp=E,2μm,0.4s						
PENT	Pentalofos	0.57	37	P	Pg	03 12 56.2	+0.1
PENT				S	Sb	03 13 05.4	0.0
PENT	Pentalofos	0.57	37	P	Pg	03 12 56.3	+0.1
KASA	Kassiopi	0.59	271	P	Pg	03 12 56.2	-0.4
KASA				S	Sg	03 13 04.0	-0.2
KASA				AML	AML	03 13 08.4	
	comp=N,1539μm,0.4s						
KASA				AML	AML	03 13 12.1	
	comp=E,2242μm,0.4s						
KEK	Kerkira	0.69	268	P	Pg	03 12 57.7	-0.9
KEK				S	Sb	03 13 08.6	-0.3
KEK	Kerkira	0.69	268	P	Pg	03 12 57.6	-0.9
NEST	Nestorio	0.72	22	P	Pb	03 12 59.6	-0.3
NEST				S	Sb	03 13 09.2	-0.7
	comp=E,340nm,0.4s						
KBN	Korca	0.88	5	P	Pg	03 13 02.1	-0.1
KBN				S	Sb	03 13 14.2	-0.2
KBN	Korca	0.88	5	P	Pg	03 13 02.1	-0.1
	baz=2.0						
TSLK	Tsoukalades, L	0.92	182	P	Pg	03 13 02.8	0.0
LKD2	Lefkada island	0.95	182	P	Pb	03 13 03.7	0.0
LKD2	Lefkada island	0.95	182	P	Pn	03 13 04.1	-0.4
	baz=184						
KZN	Kozani	1.00	55	P	Pg	03 13 04.0	-0.4
KZN	Kozani	1.00	55	P	Pg	03 13 03.7	-0.7
KZN				AML	AML	03 13 21.8	
	comp=N,628μm,0.5s						
KZN				AML	AML	03 13 30.0	
	comp=E,1052μm,0.4s						
NYDR	Nydri-Lefkada	1.03	180	P	Pb	03 13 04.3	-0.7
THL	Klokotos Trika	1.03	99	P	Pb	03 13 04.5	-0.6
THL				S	Sn	03 13 19.6	-0.5
DRAG	Dragano-Lefkad	1.06	185	P	Pg	03 13 05.7	+0.2
EVGI	Lefkada island	1.12	182	P	Pb	03 13 06.5	-0.1
VLO	Vlora	1.17	309	P	Pg	03 13 09.1	+1.4
VLO				S	Sn	03 13 25.6	+2.1
VLO	Vlora	1.17	309	P	Pg	03 13 08.8	+1.1
	baz=308						
VLO				S	Sn	03 13 26.4	+2.8
	baz=308						
VLO				AMP			
	comp=E,4.0nm,0.4s,baz=308						
TYRN	Tyrnavos	1.19	91	P	Pb	03 13 06.6	-1.1
EVR	Evrytania	1.19	133	P	Pg	03 13 07.9	-0.2
EVR	Evrytania	1.19	133	P	Pg	03 13 07.9	-0.2
KTI	Kastanea	1.27	59	P	Pb	03 13 08.8	-0.4
FSK	Fiskardo	1.29	185	P	Pg	03 13 10.8	+1.0
PVO	Paravola	1.30	150	P	Pg	03 13 10.9	+0.9
OHR	Ohrid	1.37	3	*i* Pn	Pg	03 13 13.1	+1.6
LIT	Litokhoron	1.43	75	P	Pb	03 13 11.5	-0.3
KEF4	Livadi, Kephal	1.50	188	P	Pb	03 13 13.4	+0.4
DMLN	Damoulianata-K	1.52	190	P	Pb	03 13 13.2	-0.2
VLS	Valsamata	1.56	183	P	Pb	03 13 14.2	0.0
EFP	Efpalio	1.62	144	P	Pg	03 13 16.1	0.0
PSDA	Pessada-Kefalo	1.63	183	P	Pb	03 13 15.4	+0.2
SERG	Sergoula	1.70	141	P	Pg	03 13 17.3	-0.4
TIR	Tirane	1.72	339	⇑P	Pg	03 13 17.5	-0.7
TIR	Tirane	1.72	339	P	Pb	03 13 16.3	-0.6
TIR	Tirane	1.72	339	P	Pb	03 13 16.6	-0.3
	baz=338						
GRG	Griva	1.78	47	P	Pb	03 13 17.2	-0.6
LAKA	Lakka	1.80	146	P	Pb	03 13 18.7	+0.5
AXAR	Agios Charalam	1.81	122	P	Pb	03 13 18.9	+0.6
PHP	Peshkopia	1.95	354	P	Pb	03 13 20.2	-0.6
PHP	Peshkopia	1.95	354	P	Pb	03 13 20.4	-0.4
	baz=354						
DRO	Drossia	1.96	156	P	Pb	03 13 20.9	+0.1
NEO	Neokhori	2.00	102	P	Pb	03 13 21.2	-0.4
KLV	Kalavryta, Ach	2.04	146	P	Pb	03 13 21.6	-0.7
LKR	Lokris	2.10	121	P	Pn	03 13 20.6	+0.4
VAY	Valandovo	2.13	42	*i* Pn	Pn	03 13 20.3	-0.4
KNT	Kendrikon	2.20	49	P	Pn	03 13 21.7	0.0
STIP	Stip	2.25	30	*i* Pn	Pb	03 13 25.6	-0.3
PDG	Podgorica	2.90	338	⇑P	Pb	03 13 34.5	-2.3
PDG				⇑S	Sb	03 14 14.4	+2.1
NVR	Nevrokopi	2.90	55	P	Pn	03 13 32.5	+1.2
TIP	Timpagrande	3.10	261	⇑P	Pn	03 13 35.1	+1.0
MATE	Matera	3.19	288	⇓P	Pb	03 13 38.8	-3.0
MATE				⇓S	Sb	03 14 23.7	+3.1
VTS	Vitosha	3.45	33	⇑P	Pn	03 13 37.3	-1.8
VTS				⇑S	Sn	03 14 22.0	+1.9
BOVS	Bovan	3.96	11	⇓P	Pn	03 13 46.2	+0.3
BLKB	Belogradchik	4.15	20	⇓P	Pn	03 13 48.2	-0.4
BLKB				⇓S	Sn	03 14 42.0	+4.9
IDI	Anoyia	5.56	142	Pn	Pn	03 14 08.0	+0.1
	comp=E,0.2nm,0.3s,baz=287,slow=17,SNR=1.8						
IDI				Sn	Sn	03 15 08.8	-3.0
	comp=E,0.2nm,0.3s,baz=293,slow=15,SNR=2.5 comp=E,11nm,1.0s						
MLR	Muntele Rosu	6.93	32	Pn	Pn	03 14 25.6	-1.2
	comp=E,0.4nm,0.3s,baz=280,slow=17						
SOKA	Soboth	8.07	331	*e*Pn	Pn	03 14 41.0	-1.4
	comp=E,0.6nm,0.3s						
OBKA	Obir	8.12	328	*e*Pn	Pn	03 14 41.8	-1.3
	comp=E,0.5nm,0.2s						
ABTA	Abfaltersbach	9.20	322	*e*Pn	Pn	03 14 55.9	-1.9
	comp=E,0.3nm,0.2s						
MOA	Molln	9.34	332	*e*Pn	Pn	03 14 59.9	+0.2
	comp=E,0.5nm,0.3s						
WTTA	Wattenberg	9.99	322	*e*Pn	Pn	03 15 06.6	-2.1
	comp=E,0.3nm,0.2s						
WATA	Walderalm	10.06	322	*e*Pn	Pn	03 15 07.0	-2.8
	comp=E,0.4nm,0.2s						
GERES	GERESS Array B	10.38	333	Pn	Pn	03 15 12.8	-1.2
	comp=E,0.1nm,0.3s,baz=153,slow=15,SNR=1.3 comp=E,0.1nm,0.4s						
HFS	Hagfors	20.88	350	P	P	03 17 25.6	-1.5
	comp=E,5.1nm,1.1s,baz=153,slow=13,SNR=2.5 comp=E,5.1nm,1.1s						
FINES	FINESS Array B	21.98	7	P	P	03 17 36.2	-2.7
	comp=E,0.8nm,0.5s,baz=168,slow=9.8,SNR=4.2 comp=E,0.8nm,0.5s						
NOA	NORSAR Array B	22.12	348	P	P	03 17 38.8	-1.7
	comp=E,0.6nm,0.8s,baz=164,slow=11,SNR=1.5 comp=E,0.6nm,0.8s						
TORD	Torodi Ar. Bea	31.34	218	P	P	03 19 09.9	+4.1
	comp=E,0.2nm,0.8s,baz=38,slow=8.6,SNR=1.6 comp=E,0.2nm,0.8s						
MKAR	Makanchi Array	44.38	60	P	P	03 20 53.8	-1.8
	comp=E,0.2nm,0.4s,baz=274,slow=7.8,SNR=5.6 comp=E,0.2nm,0.4s						

*IDC **16** 03:20:13.6±1.5, 39°.81N×20°.63E, h0km, mb3.4/5, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=38.4km s-min=24.4km az=90.0*
*ATH **16** 03:20:17.7, 39°.76N×20°.70E, h11km±4km, ML2.8/7, Error ellipse: s-maj=4.4km s-min=0.7km az=156.0*
*THE **16** 03:20:18.3, 39°.75N×20°.72E, h0km±2km, ML2.9/16, Error ellipse: s-maj=2.5km s-min=0.6km az=118.0*
*VIE **16** 03:20:38.2±2.8, 41°.13N×19°.68E, h8km, mb3.0/3, ms3.5/2, Error ellipse: s-maj=31.5km s-min=28.2km az=110.0 26 km SE of Durres*

ISC 16 03:20:17.4±0.8, 39°.74N±0°.02×20°.69E±0°.02, h15km±5km, n65, σ1§12/91, mb3.5/4, 4C-6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.15	125	P	Pg	03 20 20.9	-0.4
JAN				S	Sg	03 20 24.3	+0.4
	11μm,0.3s						
JAN	Janina	0.15	125	P	Pg	03 20 20.9	-0.4
JAN				S	Sg	03 20 24.1	+0.2
JAN				AML	AML	03 20 24.9	
	comp=N,16770μm,0.3s						
JAN				AML	AML	03 20 25.1	
	comp=E,28142μm,0.3s						
IGT	Igoumenitsa	0.35	233	P	Pb	03 20 24.9	-0.4
IGT				S	Sb	03 20 31.4	+0.8
	comp=E,4μm,0.3s						
IGT	Igoumenitsa	0.35	233	P	Pb	03 20 24.9	-0.4
IGT				S	Sb	03 20 30.5	-0.1
IGT				AML	AML	03 20 32.9	
	comp=N,8530μm,0.3s						
IGT				AML	AML	03 20 33.5	
	comp=E,7648μm,0.3s						
LSK	Leskovik	0.41	350	P	Pg	03 20 26.0	+0.2
LSK				S	Sb	03 20 33.5	+0.9
	comp=E,2μm,0.4s						
SRN	Sarande	0.55	285	P	Pb	03 20 28.3	-0.4

comp=N,1828μm,0.7s
KEK AML AML 03 20 46.0
comp=E,1907μm,0.5s
NEST Nestorio 0.73 22 P **Pg 03 20 31.7 +0.1**
NEST S **Sb 03 20 42.1 +0.5**
comp=E,322nm,0.3s
NEST Nestorio 0.73 22 P **Pg 03 20 31.5 -0.1**
NEST S **Sg 03 20 41.4 +0.2**
NEST AML AML 03 20 47.9
comp=N,860μm,0.4s
NEST AML AML 03 20 49.3
comp=E,815μm,0.3s
KBN Korca 0.89 5 P **Pb 03 20 34.5 0.0**
KBN S **Sn 03 20 48.0 0.0**
comp=E,295nm,0.8s
TSLK Tsoukalades, L 0.92 182 P **Pb 03 20 35.2 +0.3**
TSLK S **Sn 03 20 50.3 +1.7**
comp=E,778nm,0.4s
TSLK Tsoukalades, L 0.92 182 P **Pg 03 20 35.5 +0.4**
LKD2 Lefkada island 0.95 182 P **Pn 03 20 36.4 +0.2**
LKD2 S **Sn 03 20 50.0 +0.5**
comp=E,635nm,0.5s
LKD2 Lefkada island 0.95 182 P **Pb 03 20 35.8 +0.3**
KZN Kozani 1.00 55 P **Pb 03 20 36.6 +0.1**
KZN S **Sg 03 20 50.8 +0.9**
comp=E,438nm,0.5s
KZN Kozani 1.00 55 P **Pb 03 20 36.5 +0.1**
KZN S **Sg 03 20 50.6 +0.7**
KZN AML AML 03 20 53.6
comp=N,845μm,0.5s
KZN AML AML 03 20 55.1
comp=E,900μm,0.4s
NYDR Nydri-Lefkada 1.03 180 P **Pg 03 20 37.3 +0.1**
NYDR S **Sn 03 20 54.0 +2.7**
comp=E,562nm,0.5s
THL Klokotos Trika 1.03 99 P **Pb 03 20 37.0 0.0**
THL S **Sg 03 20 51.8 +0.9**
comp=E,290nm,0.5s
THL Klokotos Trika 1.03 99 P **Pb 03 20 37.1 +0.2**
THL S **Sg 03 20 51.8 +0.9**
THL AML AML 03 20 53.7
comp=N,477μm,0.6s
THL AML AML 03 20 56.5
comp=E,594μm,0.5s
DRAG Dragano-Lefkad 1.06 185 P **Pg 03 20 38.5 +0.7**
DRAG S **Sn 03 20 53.6 +1.4**
comp=E,7μm,0.4s
EVGI Lefkada island 1.12 182 P **Pg 03 20 39.4 +0.5**
VLO Vlora 1.17 309 P **Pg 03 20 41.3 +1.3**
VLO S **Sg 03 20 58.7 +3.4**
comp=E,1μm,0.5s
TYRN Tyrnavos 1.19 91 P **Pn 03 20 39.5 +0.1**
TYRN S **Sg 03 20 56.3 +0.6**
comp=E,1μm,0.5s
EVR Evrytania 1.19 133 P **Pn 03 20 40.1 +0.5**
KTI Kastanea 1.27 59 P **Pn 03 20 41.0 +0.3**
FSK Fiskardo 1.28 185 P **Pg 03 20 43.6 +1.5**
PVO Paravola 1.30 150 P **Pg 03 20 43.4 +1.1**
PVO Paravola 1.30 150 P Pg 03 20 42.6 +0.3
MAKR Makrakomi, Fth 1.33 123 P **Pg 03 20 44.2 +1.2**
LIT Litokhoron 1.43 75 P **Pb 03 20 44.4 +0.7**
DMLN Damoulianata-K 1.52 190 P **Pg 03 20 46.6 0.0**
VLS Valsamata 1.56 183 P **Pb 03 20 46.8 +0.8**
EFP Efpalio 1.62 144 P **Pg 03 20 48.5 +0.1**
PSDA Pessada-Kefalo 1.63 183 P **Pg 03 20 48.3 -0.3**
SERG Sergoula 1.70 141 P **Pb 03 20 49.4 +1.1**
TIR Tirane 1.73 339 ⇑P **Pb 03 20 49.2 +0.4**
TIR ⇑S **Sg 03 21 14.1 +1.2**
TIR Tirane 1.73 339 P **Pb 03 20 48.8 +0.1**
GRG Griva 1.78 47 P **Pn 03 20 48.5 +0.8**
PHP Peshkopia 1.95 354 P **Pb 03 20 52.7 +0.1**
DRO Drossia 1.95 156 P **Pb 03 20 51.8 -0.9**
NEO Neokhori 2.00 102 P **Pb 03 20 53.8 +0.3**
KLV Kalavryta, Ach 2.04 146 P **Pb 03 20 53.7 -0.5**
LKR Lokris 2.10 121 P **Pb 03 20 54.2 -0.9**
KNT Kendrikon 2.20 49 P **Pn 03 20 53.6 +0.2**
PDG Podgorica 2.90 338 ⇑P **Pg 03 21 13.4 +0.5**
TIP Timpagrande 3.10 261 ⇓P **Pn 03 21 05.5 -0.2**
TIP ⇑S **Sn 03 21 42.8 +0.3**
VTS Vitosha 3.46 33 ⇓P **Pn 03 21 14.0 +3.3**
BOVS Bovan 3.96 11 ⇓P **Pn 03 21 19.1 +1.5**
BLKB Belogradchik 4.15 20 ⇓P **Pn 03 21 22.9 +2.7**
IDI Anoyia 5.56 142 Pn **Pn 03 21 37.8 -1.7**
comp=E,0.2nm,0.3s,baz=320,slow=17,SNR=1.8
comp=E,9.2nm,0.9s
BZS Buzias 5.91 6 ⇓P **Pn 03 21 47.3 +2.9**
VRI Vrincioaia 7.56 34 ⇓P **Pn 03 22 05.7 -1.3**
SOKA Soboth 8.07 331 *e*Pn **Pn 03 22 13.2 -0.9**
comp=E,0.3nm,0.2s
OBKA Obir 8.12 328 *e*Pn **Pn 03 22 15.1 +0.4**
comp=E,0.4nm,0.2s
MOA Molln 9.34 332 *e*Pn **Pn 03 22 32.7 +1.3**
comp=E,0.2nm,0.2s
HFS Hagfors 20.88 350 P **P 03 24 57.0 -1.7**
comp=E,2.7nm,0.9s,baz=155,slow=14,SNR=1.6
comp=E,2.7nm,0.9s
FINES FINESS Array B 21.98 7 P **P 03 25 08.5 -2.0**
comp=E,3.0nm,1.1s,baz=192,slow=10.0,SNR=1.7
comp=E,3.0nm,1.1s
NOA NORSAR Array B 22.12 348 P **P 03 25 08.2 -3.8**
comp=E,0.8nm,0.9s,baz=170,slow=11,SNR=1.1
comp=E,0.8nm,0.9s
TORD Torodi Ar. Bea 31.34 218 P **P 03 26 36.4 -0.9**
comp=E,0.4nm,0.8s,baz=28,slow=8.5,SNR=1.8
comp=E,0.4nm,0.8s
MKAR Makanchi Array 44.38 60 P **P 03 28 25.9 -1.2**
comp=E,0.6nm,0.7s,baz=277,slow=8.8,SNR=4.3
comp=E,0.6nm,0.7s

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*IDC **16** 03:21:10.4±1.4, 39°.63N×20°.41E, h0km, mb3.6/6, mbtmp3.5/9, ML3.3/3, MS2.5/2, Error ellipse: s-maj=25.6km s-min=20.1km az=89.0*
*TIR **16** 03:21:14.3, 39°.74N×20°.66E, h5km±2km, Ml3.2*
*ATH **16** 03:21:14.5, 39°.76N×20°.67E, h11km±3km, ML3.1/11, Error ellipse: s-maj=3.4km s-min=0.7km az=205.0*
*THE **16** 03:21:15.3, 39°.75N×20°.68E, h0km±2km, ML3.1/13, Error ellipse: s-maj=2.5km s-min=0.6km az=131.0*
*VIE **16** 03:21:20.6±0.8, 40°.49N×20°.91E, h8km, mb3.1/3, ms3.6/3, Error ellipse: s-maj=37.6km s-min=6.1km az=52.0 130 km SE of Tirana*

ISC 16 03:21:14.3±0.8, 39°.76N±0°.02×20°.68E±0°.02, h15km±5km, n71, σ1§26/104, mb3.6/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**126**	P	**Pg**	**03 21 17.6**	**-0.8**
JAN				S	**Sg**	**03 21 21.3**	**+0.1**
JAN	**Janina**	**0.17**	**126**	P	**Pg**	**03 21 17.7**	**-0.7**
JAN				S	**Sg**	**03 21 21.2**	**0.0**
JAN				AML	AML	03 21 21.5	
JAN				AML	AML	03 21 21.8	
	comp=N,57565μm,0.2s						
IGT	**Igoumenitsa**	**0.35**	**230**	P	**Pg**	**03 21 21.5**	**+0.1**
IGT				S	**Sg**	**03 21 27.2**	**+1.0**
	comp=N,8μm,0.7s						
IGT	**Igoumenitsa**	**0.35**	**230**	P	**Pg**	**03 21 21.3**	**0.0**
IGT	baz=231			S	**Sg**	**03 21 27.4**	**+1.2**
	baz=231						
IGT	**Igoumenitsa**	**0.35**	**230**	P	**Pg**	**03 21 21.5**	**+0.1**
IGT				S	**Sg**	**03 21 26.6**	**+0.4**
IGT				AML	AML	03 21 30.5	
	comp=N,13853μm,0.3s						
IGT				AML	AML	03 21 30.7	
	comp=E,15561μm,0.4s						
LSK	**Leskovik**	**0.40**	**352**	P	**Pg**	**03 21 22.9**	**+0.5**
LSK				S	**Sb**	**03 21 29.3**	**+0.2**
	comp=E,6μm,0.7s						
LSK	**Leskovik**	**0.40**	**352**	P	**Pg**	**03 21 22.9**	**+0.5**
LSK	baz=354			S	**Sb**	**03 21 30.1**	**+1.0**
	baz=354						
LSK				AMP			
	comp=E,22nm,0.8s,baz=354						
SRN	**Sarande**	**0.54**	**284**	P	**Pg**	**03 21 24.8**	**-0.1**
SRN				S	**Sb**	**03 21 33.6**	**+0.7**
	comp=E,3μm,0.4s						
SRN	**Sarande**	**0.54**	**284**	P	**Pg**	**03 21 24.7**	**-0.1**
SRN	baz=286			S	**Sb**	**03 21 33.5**	**+0.6**
	baz=286						
SRN				AMP			
	comp=N,9.3nm,0.4s,baz=286						
KPRO	**Kipourio**	**0.56**	**69**	P	**Pg**	**03 21 25.3**	**-0.1**
KPRO				S	**Sb**	**03 21 34.7**	**+0.8**
	comp=N,5μm,0.3s						
PENT	**Pentalofos**	**0.57**	**39**	P	**Pg**	**03 21 25.3**	**-0.2**
PENT				S	**Sb**	**03 21 34.6**	**+0.7**
PENT	**Pentalofos**	**0.57**	**39**	P	**Pg**	**03 21 25.7**	**+0.2**
PENT				S	**Sg**	**03 21 33.0**	**0.0**
KASA	**Kassiopi**	**0.57**	**269**	P	**Pg**	**03 21 25.1**	**-0.4**
KASA				S	**Sg**	**03 21 33.8**	**+0.6**
KASA				AML	AML	03 21 36.8	
	comp=N,5750μm,0.4s						
KASA				AML	AML	03 21 38.5	
	comp=E,4886μm,0.3s						
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	**03 21 26.6**	**-0.9**
KEK				S	**Sb**	**03 21 37.8**	**+0.8**
	comp=E,2μm,0.6s						
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	**03 21 27.0**	**-0.6**
KEK				S	**Sg**	**03 21 36.9**	**+0.4**
KEK				AML	AML	03 21 39.2	
	comp=E,2502μm,0.4s						
KEK				AML	AML	03 21 39.7	
	comp=N,2482μm,0.3s						
NEST	**Nestorio**	**0.72**	**23**	P	**Pb**	**03 21 28.8**	**+0.2**
NEST				S	**Sn**	**03 21 40.2**	**-0.7**
	comp=N,1μm,0.5s						
NEST	**Nestorio**	**0.72**	**23**	P	**Pb**	**03 21 28.7**	**+0.1**
NEST				S	**Sg**	**03 21 38.5**	**+0.6**
NEST				AML	AML	03 21 43.9	
	comp=E,2982μm,0.6s						
NEST				AML	AML	03 21 44.5	
	comp=N,2205μm,0.4s						
KBN	**Korca**	**0.87**	**6**	P	**Pb**	**03 21 30.9**	**-0.3**
KBN				S	**Sn**	**03 21 44.8**	**+0.2**
	comp=N,512nm,0.8s						
KBN	**Korca**	**0.87**	**6**	P	**Pg**	**03 21 32.4**	**+1.1**
KBN	baz=6.0			S	**Sn**	**03 21 45.3**	**+0.7**
	baz=6.0						
KBN				AMP			
	comp=E,1.6nm,0.7s,baz=6.0						
TSLK	**Tsoukalades, L**	**0.93**	**181**	P	**Pb**	**03 21 32.2**	**+0.1**
TSLK				S	**Sn**	**03 21 46.7**	**+0.8**
	comp=E,2μm,0.6s						
TSLK	**Tsoukalades, L**	**0.93**	**181**	P	**Pb**	**03 21 32.6**	**+0.5**
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pb**	**03 21 32.9**	**+0.2**
LKD2				S	**Sn**	**03 21 48.5**	**+1.7**
	comp=E,1μm,0.4s						
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pn**	**03 21 34.0**	**+0.7**
LKD2	baz=181			S	**Sn**	**03 21 47.5**	**+0.7**
	baz=181						
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pb**	**03 21 33.3**	**+0.6**
LKD2				S	**Sb**	**03 21 46.5**	**+1.2**
LKD2				AML	AML	03 21 50.5	
	comp=E,2533μm,0.3s						
LKD2				AML	AML	03 21 56.4	
	comp=N,1944μm,0.5s						
KZN	**Kozani**	**1.00**	**56**	P	**Pb**	**03 21 33.3**	**-0.1**
KZN				S	**Sn**	**03 21 49.5**	**+1.6**
	comp=N,932nm,0.4s						
KZN	**Kozani**	**1.00**	**56**	P	**Pb**	**03 21 33.5**	**0.0**
KZN				S	**Sb**	**03 21 47.6**	**+1.0**
KZN				AML	AML	03 21 52.7	
	comp=N,1701μm,0.4s						
KZN				AML	AML	03 21 54.5	
	comp=E,2027μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.04**	**179**	P	**Pb**	**03 21 34.6**	**+0.6**
NYDR				S	**Sg**	**03 21 50.7**	**+2.8**
	comp=E,900nm,0.8s						
THL	**Klokotos Trika**	**1.05**	**100**	P	**Pb**	**03 21 34.1**	**-0.1**
THL				S	**Sg**	**03 21 50.0**	**+1.7**
	comp=E,512nm,0.6s						
THL	**Klokotos Trika**	**1.05**	**100**	P	**Pb**	**03 21 34.3**	**+0.2**
THL				S	**Sn**	**03 21 49.1**	**+0.3**
THL				AML	AML	03 21 52.7	
	comp=N,1135μm,0.6s						
THL				AML	AML	03 21 55.8	
	comp=E,904μm,0.4s						
DRAG	**Dragano-Lefkad**	**1.07**	**184**	P	**Pb**	**03 21 35.5**	**+1.0**
DRAG				S	**Sg**	**03 21 50.6**	**+1.6**
	comp=E,10μm,0.3s						
EVGI	**Lefkada island**	**1.13**	**181**	P	**Pb**	**03 21 36.9**	**+1.3**
VLO	**Vlora**	**1.15**	**309**	P	**Pg**	**03 21 38.5**	**+2.0**
VLO				S	**Sg**	**03 21 54.0**	**+2.4**
VLO	**Vlora**	**1.15**	**309**	P	**Pg**	**03 21 38.4**	**+1.8**
	baz=310						
TYRN	**Tyrnavos**	**1.20**	**92**	P	**Pn**	**03 21 36.0**	**-0.5**
EVR	**Evrytania**	**1.21**	**133**	P	**Pn**	**03 21 37.0**	**+0.2**
EVR	**Evrytania**	**1.21**	**133**	P	**Pn**	**03 21 37.2**	**+0.4**
EVR				S	**Sn**	**03 21 54.0**	**+1.0**
EVR				AML	AML	03 22 03.6	
	comp=E,1341μm,0.5s						
EVR				AML	AML	03 22 04.1	
	comp=N,2001μm,0.4s						
KTI	**Kastanea**	**1.28**	**60**	P	**Pb**	**03 21 38.7**	**+0.6**
FSK	**Fiskardo**	**1.30**	**184**	P	**Pb**	**03 21 39.6**	**+1.2**
FSK	**Fiskardo**	**1.30**	**184**	P	**Pb**	**03 21 39.4**	**+1.1**
FSK				S	**Sg**	**03 21 56.7**	**+0.6**
FSK				AML	AML	03 21 59.7	
	comp=E,2794μm,0.2s						
FSK				AML	AML	03 21 59.8	
	comp=N,1395μm,0.3s						
PVO	**Paravola**	**1.31**	**150**	P	**Pb**	**03 21 39.9**	**+1.2**
PVO	**Paravola**	**1.31**	**150**	P	**Pb**	**03 21 39.5**	**+0.8**
LRSO	**Larissa Observ**	**1.33**	**93**	P	**Pn**	**03 21 38.7**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.35**	**123**	P	**Pg**	**03 21 41.1**	**+0.8**
LIT	**Litokhoron**	**1.44**	**76**	P	**Pb**	**03 21 41.8**	**+1.0**
LIT	**Litokhoron**	**1.44**	**76**	P	**Pb**	**03 21 41.6**	**+0.8**
LIT				S	**Sg**	**03 22 01.3**	**+0.7**
LIT				AML	AML	03 22 07.4	
	comp=E,1394μm,0.3s						
LIT				AML	AML	03 22 07.9	
	comp=N,1519μm,0.6s						
KEF4	**Livadi, Kephal**	**1.51**	**188**	P	**Pb**	**03 21 42.4**	**+0.5**
DMLN	**Damoulianata-K**	**1.53**	**189**	P	**Pb**	**03 21 43.9**	**+1.5**
VLS	**Valsamata**	**1.58**	**182**	P	**Pb**	**03 21 43.7**	**+0.5**
VLS	**Valsamata**	**1.58**	**182**	P	**Pb**	**03 21 44.0**	**+0.9**
PSDA	**Pessada-Kefalo**	**1.64**	**183**	P	**Pb**	**03 21 45.0**	**+0.8**
TIR	**Tirane**	**1.71**	**339**	P	**Pb**	**03 21 45.2**	**-0.2**
SERG	**Sergoula**	**1.72**	**141**	P	**Pb**	**03 21 46.2**	**+0.6**
GRG	**Griva**	**1.78**	**47**	P	**Pb**	**03 21 47.3**	**+0.6**
PHP	**Peshkopia**	**1.94**	**355**	P	**Pb**	**03 21 49.5**	**+0.2**
NEO	**Neokhori**	**2.02**	**102**	P	**Pn**	**03 21 49.6**	**+1.8**
KNT	**Kendrikon**	**2.20**	**50**	P	**Pn**	**03 21 51.6**	**+1.3**
SOH	**Sokhos**	**2.31**	**62**	P	**Pn**	**03 21 54.2**	**+2.4**
VAE	**Valguarnera**	**5.41**	**247**	Sn	**Sn**	**03 23 32.4**	**-4.0**
	comp=N,0.1nm,0.3s,baz=166,slow=12,SNR=1.1						
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**03 22 36.0**	**-0.8**
	comp=N,0.3nm,0.3s,baz=66,slow=9.5,SNR=1.6						
IDI				Sn	**Sn**	**03 23 34.5**	**-6.1**
	comp=N,0.9nm,0.3s,baz=198,slow=22,SNR=1.7						
IDI				LR	LR	03 25 01.5	
	comp=N,25nm,19.3s,baz=342,slow=41						
	comp=N,15nm,1.0s						
MLR	**Muntele Rosu**	**6.92**	**32**	Pn	**Pn**	**03 22 59.0**	**+3.7**
	comp=N,0.4nm,0.3s,baz=337,slow=7.1,SNR=5.6						
	comp=N,2.0nm,0.6s						
SOKA	**Soboth**	**8.05**	**331**	*e*Pn	**Pn**	**03 23 09.9**	**-0.9**
	comp=N,0.6nm,0.3s						
OBKA	**Obir**	**8.10**	**328**	*e*Pn	**Pn**	**03 23 11.8**	**+0.4**
	comp=N,1.3nm,0.3s						
OBKA				*e*Sn	**Sn**	**03 24 40.8**	**-2.0**
	comp=N,1.8nm,0.3s						
MOA	**Molln**	**9.32**	**332**	*e*Pn	**Pn**	**03 23 28.6**	**+0.5**
	comp=N,1.0nm,0.3s						
KEST	**Kesra**	**9.83**	**249**	LR	LR	03 27 21.6	
	comp=N,49nm,19.5s,baz=324,slow=39						
GERES	**GERESS Array B**	**10.37**	**334**	Pn	**Pn**	**03 23 42.3**	**-0.1**
	comp=N,0.1nm,0.3s,baz=156,slow=15,SNR=1.9						
	comp=N,0.1nm,0.3s						
HFS	**Hagfors**	**20.87**	**350**	P	**P**	**03 25 54.3**	**-1.1**
	comp=N,3.2nm,0.9s,baz=166,slow=9.3,SNR=5.9						
	comp=N,3.2nm,0.9s						
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**03 26 06.4**	**-0.9**
	comp=N,1.2nm,0.5s,baz=179,slow=11,SNR=13						
	comp=N,1.2nm,0.5s						
NOA	**NORSAR Array B**	**22.10**	**348**	P	**P**	**03 26 08.2**	**-0.6**
	comp=N,0.5nm,0.6s,baz=147,slow=11,SNR=5.0						
	comp=N,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**29.95**	**3**	P	**P**	**03 27 19.1**	**-2.4**
	comp=N,1.9nm,0.9s,baz=193,slow=10,SNR=1.1						
	comp=N,1.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	P	03 27 31.2	-3.1
	comp=N,0.2nm,0.5s,baz=30,slow=9.3,SNR=1.3						
	comp=N,0.2nm,0.5s						
MKAR	**Makanchi Array**	**44.39**	**60**	P	**P**	**03 29 23.4**	**-0.7**
	comp=N,0.6nm,0.4s,baz=274,slow=7.9,SNR=7.4						
	comp=N,0.6nm,0.4s						

IDC 16 03:21:28.9±2.4, 6°.95S×129°.31E, h0km, mb3.6/1, mbtmp3.6/3, ML3.8/2, MS3.3/1, Error ellipse: s-maj=149.1km s-min=33.3km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.81**	**160**	Pn	Pn	03 24 46.3	+0.3
	0.7nm,0.3s,baz=342,slow=13,SNR=23						
WRA				Sn	Sn	03 27 07.0	-13
	0.6nm,0.3s,baz=345,slow=21,SNR=6.9						
	0.7nm,0.2s						
ASAR	**Alice Springs**	**17.20**	**166**	P	Pn	03 25 30.5	-0.2
	0.2nm,0.3s,baz=350,slow=9.8,SNR=10						
ASAR				S	Sn	03 28 29.4	-13
	0.4nm,0.7s,baz=344,slow=26,SNR=2.4						
ASAR				LR	LR	03 33 11.0	
	comp=Z,92nm,19.0s,baz=342,slow=41						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.81**	**327**	P	P	03 32 28.8	0.0
	0.3nm,0.5s,baz=116,slow=7.9,SNR=1.8						
	0.3nm,0.5s						

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*IDC **16** 03:22:46.7±1.5, 39°.85N×20°.70E, h0km, mb3.4/5, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=37.1km s-min=20.5km az=129.0*
*THE **16** 03:22:50.8, 39°.77N×20°.71E, h0km±1km, ML3.0/20, Error ellipse: s-maj=1.4km s-min=0.4km az=305.0*

ISC 16 03:22:50.0±0.9, 39°.81N±0°.02×20°.71E±0°.02, h15km±6km, n34, σ1§24/58, mb3.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**144**	P	**Pg**	**03 22 54.0**	**-0.5**
JAN				S	**Sg**	**03 22 56.9**	**-0.6**
	12μm,0.2s						
LSK	**Leskovik**	**0.35**	**346**	P	**Pb**	**03 22 58.5**	**+0.4**
LSK				S	**Sb**	**03 23 04.2**	**+0.7**
	4μm,0.6s						
IGT	**Igoumenitsa**	**0.40**	**227**	P	**Pg**	**03 22 57.8**	**-0.4**
IGT				S	**Sg**	**03 23 03.9**	**+0.2**
	3μm,0.3s						
PENT	**Pentalofos**	**0.51**	**40**	P	**Pb**	**03 23 01.1**	**+0.4**
PENT				S	**Sb**	**03 23 09.8**	**+1.8**
KPRO	**Kipourio**	**0.52**	**73**	P	**Pb**	**03 23 01.2**	**+0.3**
KPRO				S	**Sb**	**03 23 09.7**	**+1.4**
	4μm,0.5s						
SRN	**Sarande**	**0.55**	**278**	P	**Pg**	**03 23 00.9**	**-0.1**
SRN				S	**Sb**	**03 23 10.3**	**+1.2**
	2μm,0.4s						
NEST	**Nestorio**	**0.66**	**23**	P	**Pb**	**03 23 03.7**	**+0.4**
NEST				S	**Sn**	**03 23 14.6**	**-0.5**
	560nm,0.5s						
KEK	**Kerkira**	**0.71**	**263**	P	**Pg**	**03 23 03.2**	**-0.7**
KEK				S	**Sg**	**03 23 14.1**	**+0.8**
	992nm,0.4s						
KBN	**Korca**	**0.82**	**4**	P	**Pb**	**03 23 06.8**	**+0.8**
KBN				S	**Sn**	**03 23 19.8**	**+0.8**
	358nm,0.5s						
KZN	**Kozani**	**0.95**	**58**	P	**Pn**	**03 23 09.1**	**+0.2**
KZN				S	**Sn**	**03 23 22.9**	**+0.6**
	535nm,0.6s						
TSLK	**Tsoukalades, L**	**0.98**	**183**	P	**Pg**	**03 23 08.6**	**-0.4**
TSLK				S	**Sb**	**03 23 22.7**	**+1.3**
	985nm,0.4s						
LKD2	**Lefkada island**	**1.02**	**182**	P	**Pb**	**03 23 09.7**	**+0.4**
LKD2				S	**Sb**	**03 23 24.1**	**+1.6**
	942nm,0.4s						
THL	**Klokotos Trika**	**1.03**	**103**	P	**Pg**	**03 23 09.5**	**-0.5**
THL				S	**Sn**	**03 23 24.4**	**+0.3**
	405nm,0.6s						
NYDR	**Nydri-Lefkada**	**1.09**	**181**	P	**Pb**	**03 23 10.5**	**-0.1**
NYDR				S	**Sn**	**03 23 27.0**	**+1.5**
	580nm,0.3s						
DRAG	**Dragano-Lefkad**	**1.12**	**185**	P	**Pb**	**03 23 11.7**	**+0.5**
DRAG				S	**Sb**	**03 23 26.7**	**+1.1**
VLO	**Vlora**	**1.14**	**306**	P	**Pg**	**03 23 12.8**	**+0.7**
VLO				S	**Sn**	**03 23 29.2**	**+2.4**
	1μm,0.4s						
TYRN	**Tyrnavos**	**1.18**	**94**	P	**Pg**	**03 23 12.3**	**-0.4**
TYRN				S	**Sn**	**03 23 30.2**	**+2.6**
	1μm,0.5s						
EVGI	**Lefkada island**	**1.18**	**182**	P	**Pn**	**03 23 12.4**	**+0.4**
EVGI				S	**Sn**	**03 23 29.9**	**+2.1**
	925nm,0.3s						
KTI	**Kastanea**	**1.23**	**61**	P	**Pg**	**03 23 14.3**	**+0.6**
EVR	**Evrytania**	**1.23**	**136**	P	**Pn**	**03 23 12.9**	**+0.2**
EVR				S	**Sn**	**03 23 30.9**	**+1.8**
	340nm,0.4s						
PVO	**Paravola**	**1.34**	**152**	P	**Pb**	**03 23 15.7**	**+0.8**
PVO				S	**Sg**	**03 23 35.2**	**+1.7**
	395nm,0.6s						
FSK	**Fiskardo**	**1.35**	**185**	P	**Pb**	**03 23 15.6**	**+0.6**
FSK				S	**Sg**	**03 23 34.3**	**+0.7**
	505nm,0.2s						
MAKR	**Makrakomi, Fth**	**1.35**	**125**	P	**Pg**	**03 23 15.8**	**-0.3**
MAKR				S	**Sg**	**03 23 35.6**	**+1.8**
	790nm,0.4s						
LIT	**Litokhoron**	**1.40**	**77**	P	**Pg**	**03 23 16.6**	**-0.4**
LIT				S	**Sg**	**03 23 36.8**	**+1.6**
VLS	**Valsamata**	**1.63**	**183**	P	**Pb**	**03 23 20.3**	**+0.5**
VLS				S	**Sb**	**03 23 41.7**	**+1.6**
GRG	**Griva**	**1.73**	**48**	P	**Pb**	**03 23 21.6**	**+0.1**
IDI	**Anoyia**	**5.60**	**142**	Sn	**Sn**	**03 25 12.7**	**-4.1**
	0.7nm,0.3s,baz=64,slow=17,SNR=1.3						
MLR	**Muntele Rosu**	**6.87**	**32**	Pn	**Pn**	**03 24 29.8**	**-0.4**
	0.1nm,0.3s,baz=214,slow=18,SNR=1.0						
	0.7nm,0.5s						
ESDC	**Sonseca Array**	**18.97**	**278**	P	**P**	**03 27 09.7**	**-1.0**
	baz=69,slow=11,SNR=1.4						
	0.3nm,0.8s						
HFS	**Hagfors**	**20.82**	**350**	P	**P**	**03 27 28.9**	**-1.7**
	3.9nm,1.0s,baz=171,slow=13,SNR=1.7						
	3.9nm,1.0s						
FINES	**FINESS Array B**	**21.91**	**7**	P	**P**	**03 27 41.6**	**-0.8**
	2.0nm,0.9s,baz=179,slow=11,SNR=2.0						
	2.0nm,0.9s						
NOA	**NORSAR Array B**	**22.06**	**348**	P	**P**	**03 27 41.8**	**-2.2**
	0.4nm,0.7s,baz=154,slow=10,SNR=1.1						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**31.40**	**218**	P	**P**	**03 29 09.5**	**-1.0**
	0.4nm,0.7s,baz=25,slow=9.5,SNR=4.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**44.34**	**60**	P	**P**	**03 30 58.5**	**-0.9**
	0.3nm,0.4s,baz=270,slow=7.6,SNR=4.4						
	0.3nm,0.4s						

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*NNC **16** 03:25:56.8±1.1, 42°.53N×78°.66E, h0km, mb2.8, mpv3.0, Error ellipse: s-maj=8.7km s-min=3.7km az=161.0*
*KRNET **16** 03:25:56.1±0.1, 42°.31N×78°.67E, mb2.3*
*SOME **16** 03:25:57.0, 42°.48N×78°.62E, h15km*

ISC 16 03:25:56.1±0.9, 42°.45N±0°.03×78°.68E±0°.03, h10km, n40, σ1§62/72, 13C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHN	**Zhinishke**	**0.74**	**346**	*e*P	**Pb**	**03 26 09.8**	**-1.4**
	8.3nm,0.2s						
ZHN				*e*S	**Sg**	**03 26 19.0**	**-1.1**
	28nm,0.2s		

	5.2nm,0.1s							
KPKS				*e*S		**Sg**	03 26 27.3	-1.6
	28nm,0.4s							
KPKS	**Kokpek**	**1.02**	**0**	P		**Pb**	03 26 14.7	-1.1
	5.2nm,0.1s							
KPKS				S		**Sg**	03 26 27.3	-1.6
	28nm,0.4s							
PDGK	**Podgornoye**	**1.06**	**34**	⇓P		**Pg**	03 26 12.8	-3.7
	1.4nm,0.5s							
PDGK				⇑S		**Sb**	03 26 29.5	-1.2
	7.7nm,0.5s							
KOTS	**Kotyrbulak**	**1.39**	**305**	*e*P		**Pg**	03 26 21.9	-0.9
	1.4nm,0.1s							
KOTS				*e*S		**Sg**	03 26 39.6	-1.3
	10nm,0.2s							
KOTS	**Kotyrbulak**	**1.39**	**305**	P		**Pg**	03 26 21.9	-0.9
	1.4nm,0.1s							
KOTS				S		**Sg**	03 26 39.6	-1.3
	10nm,0.2s							
MDOK	**Medeo**	**1.40**	**301**	*e*P		**Pg**	03 26 21.9	-1.0
	3.2nm,0.2s							
MDOK				*e*S		**Sg**	03 26 39.7	-1.2
	12nm,0.2s							
MDOK	**Medeo**	**1.40**	**301**	⇓P		**Pg**	03 26 21.7	-1.2
	2.1nm,0.4s							
MDOK				Pg		**Pg**	03 26 21.9	-1.0
	3.2nm,0.2s							
MDOK				Lg		Lg	03 26 39.7	
	12nm,0.2s							
MDOK				S		**Sg**	03 26 39.8	-1.2
	5.8nm,0.6s							
TNSS	**Tian-Shan**	**1.40**	**295**	*e*P		**Pg**	03 26 22.0	-1.0
	3.6nm,0.1s							
TNSS				*e*S		**Sg**	03 26 40.1	-1.1
	7.7nm,0.2s							
TNSS	**Tian-Shan**	**1.40**	**295**	P		**Pg**	03 26 22.0	-1.0
	3.6nm,0.1s							
TNSS				S		**Sg**	03 26 40.2	-1.1
	7.7nm,0.2s							
KTMS	**Ketmen**	**1.58**	**50**	*e*P		**Pg**	03 26 25.5	-1.0
	5.5nm,0.1s							
KTMS				*e*S		**Sg**	03 26 45.9	-1.1
	8.8nm,0.4s							
KTMS	**Ketmen**	**1.58**	**50**	P		**Pg**	03 26 25.5	-1.0
	5.5nm,0.1s							
KTMS				S		**Sg**	03 26 45.9	-1.1
	8.8nm,0.4s							
IZV	**Izvestkoviy**	**1.63**	**292**	*e*P		**Pg**	03 26 26.4	-1.0
	1.8nm,0.2s							
IZV				*e*S		**Sg**	03 26 47.3	-1.2
	13nm,0.1s							
IZV	**Izvestkoviy**	**1.63**	**292**	P		**Pg**	03 26 26.4	-1.0
	1.8nm,0.2s							
IZV				S		**Sg**	03 26 47.3	-1.2
	13nm,0.1s							
BLB	**Baldybastay**	**1.65**	**355**	*e*P		**Pg**	03 26 27.1	-0.8
	15nm,0.2s							
BLB				*e*S		**Sg**	03 26 48.4	-0.9
	22nm,0.3s							
MTBS	**Maitube**	**1.79**	**293**	*e*P		**Pg**	03 26 29.6	-0.8
	2.8nm,0.1s							
MTBS				*e*S		**Sg**	03 26 52.8	-0.8
	12nm,0.2s							
MTBS	**Maitube**	**1.79**	**293**	P		**Pg**	03 26 29.5	-0.8
	2.8nm,0.1s							
MTBS				S		**Sg**	03 26 52.8	-0.8
	12nm,0.2s							
ULHL	**Ulahol**	**1.82**	**264**	⇑*i*P		**Pg**	03 26 29.8	-1.1
	baz=69							
ULHL				⇑*i*S		**Sg**	03 26 54.0	-0.5
	baz=69							
CHKK	**Chushkaly**	**1.87**	**319**	*e*P		**Pg**	03 26 30.4	-1.6
	8.0nm,0.2s							
CHKK				*e*S		**Sg**	03 26 54.2	-2.0
	16nm,0.2s							
CHKK	**Chushkaly**	**1.87**	**319**	P		**Pg**	03 26 30.4	-1.6
	8.0nm,0.2s							
CHKK				S		**Sg**	03 26 54.2	-2.0
	16nm,0.2s							
KTBS	**Karatobe**	**1.93**	**311**	*e*P		**Pg**	03 26 31.9	-1.2
	5.6nm,0.4s							
KTBS				*e*S		**Sg**	03 26 56.7	-1.4
	33nm,0.9s							
BOOM	**Boomskoye usch**	**2.02**	**272**	⇑*i*P		**Pg**	03 26 33.0	-1.9
	baz=76							
BOOM				⇑*i*S		**Sg**	03 27 00.2	-1.0
	baz=76							
DJR	**Jarkent**	**2.05**	**23**	*e*P		**Pg**	03 26 34.1	-1.3
	5.8nm,0.1s							
DJR				*e*S		**Sg**	03 27 00.6	-1.4
	53nm,0.4s							
DJR	**Jarkent**	**2.05**	**23**	Pg		**Pg**	03 26 34.1	-1.3
	5.8nm,0.1s							
DJR				Lg		Lg	03 27 00.6	
	53nm,0.4s							
KST	**Kastek**	**2.08**	**287**	*e*P		**Pg**	03 26 34.5	-1.6
	2.7nm,0.2s							
KST				*e*S		**Sg**	03 27 01.6	-1.5
	24nm,0.5s							
KST	**Kastek**	**2.08**	**287**	Pg		**Pg**	03 26 34.5	-1.6
	2.7nm,0.2s							
KST				Lg		Lg	03 27 01.6	
	24nm,0.5s							
KUU	**Kurty**	**2.24**	**311**	*e*P		**Pg**	03 26 36.8	-2.2
	3.9nm,0.2s							
KUU				*e*S		**Sg**	03 27 05.2	-2.7
	20nm,0.4s							
KUU	**Kurty**	**2.24**	**311**	Pg		**Pg**	03 26 36.8	-2.2
	3.9nm,0.2s							
KUU				Lg		Lg	03 27 05.2	
	20nm,0.4s							
NRN	**Naryn**	**2.24**	**244**	⇑*i*P		**Pb**	03 26 36.0	-0.8
	baz=47							
NRN				⇑*i*S		**Sb**	03 27 04.8	+0.1
	baz=47							
TKM2	**Tokmak 2**	**2.32**	**283**	⇑*i*P		**Pb**	03 26 37.8	-0.3
	baz=86							
TKM2				⇑*i*S		**Sg**	03 27 08.3	-2.3
	baz=86							
TKM2	**Tokmak 2**	**2.32**	**283**	⇓Pg		**Pg**	03 26 39.1	-1.5
	1.0nm,0.3s							
TKM2				⇑Lg		Lg	03 27 08.8	
	10nm,0.3s							
SGDS	**Sogindy**	**3.13**	**290**	*e*P		**Pb**	03 26 52.5	+0.5
	0.8nm,0.2s							
SGDS				*e*S		**Sb**	03 27 32.1	+1.9
	4.5nm,0.3s							
SGDS	**Sogindy**	**3.13**	**290**	Pg		**Pb**	03 26 52.5	+0.5
	0.8nm,0.2s							
SGDS				Lg		Lg	03 27 32.1	
	4.5nm,0.3s							
MK31	**Makanchi Array**	**5.05**	**29**	⇓Lg		Lg	03 28 30.3	
	1.7nm,0.8s							
KK31	**Karatay Array**	**6.04**	**279**	⇑Lg		Lg	03 29 04.2	
	0.3nm,0.5s,baz=86,slow=28							

*IDC **16** 03:26:14.9±1.5, 39°.97N×20°.55E, h0km, mb3.3/5, mbtmp3.4/6, ML2.7/1, Error ellipse: s-maj=39.6km s-min=24.4km az=90.0*
*THE **16** 03:26:15.5, 39°.71N×20°.69E, h8km±4km, ML2.0/3, Error ellipse: s-maj=4.5km s-min=0.7km az=147.0*
*ATH **16** 03:26:15.3, 39°.77N×20°.68E, h6km±2km, ML2.7/7, Error ellipse: s-maj=2.9km s-min=0.8km az=287.0*
ISC 16 03:26:15.3±0.9, 39°.75N±0°.02×20°.68E±0°.02, h8km±7km, n40, σ1°.23/57, mb3.3/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**125**	P	**Pg**	03 26 18.7	0.0
JAN				S	**Sg**	03 26 20.3	-0.7
	900nm,0.1s						
JAN	**Janina**	**0.16**	**125**	P	**Pg**	03 26 18.7	0.0
JAN				S	**Sg**	03 26 21.3	+0.3
JAN				AML	AML	03 26 22.7	
	comp=N,15953μm,0.2s						
JAN				AML	AML	03 26 22.9	
	comp=E,17171μm,0.1s						
IGT	**Igoumenitsa**	**0.34**	**231**	P	**Pg**	03 26 22.2	+0.1
IGT				S	**Sg**	03 26 26.6	0.0
	comp=E,390nm,0.2s						
IGT	**Igoumenitsa**	**0.34**	**231**	P	**Pg**	03 26 22.5	+0.4
IGT				S	**Sg**	03 26 26.8	+0.2
IGT				AML	AML	03 26 33.9	
	comp=E,4976μm,0.4s						
IGT				AML	AML	03 26 34.8	
	comp=N,3401μm,0.4s						
LSK	**Leskovik**	**0.41**	**351**	P	**Pb**	03 26 23.7	-1.1
LSK				S	**Sb**	03 26 30.9	-0.3
	comp=N,608nm,0.4s						
SRN	**Sarande**	**0.54**	**284**	P	**Pg**	03 26 25.7	0.0
SRN				S	**Sb**	03 26 34.6	-0.3
KPRO	**Kipourio**	**0.56**	**68**	P	**Pg**	03 26 26.2	-0.1
KPRO				S	**Sb**	03 26 35.7	-0.1
PENT	**Pentalofos**	**0.57**	**38**	P	**Pg**	03 26 26.3	0.0
PENT	**Pentalofos**	**0.57**	**38**	P	**Pg**	03 26 26.1	-0.2
PENT				S	**Sg**	03 26 33.4	-0.5
KASA	**Kassiopi**	**0.57**	**270**	P	**Pg**	03 26 26.0	-0.4
KASA				S	**Sg**	03 26 33.3	-0.6
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	03 26 27.9	-0.5
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	03 26 27.9	-0.5
KEK				S	**Sb**	03 26 38.5	-0.5
KEK				AML	AML	03 26 42.5	
	comp=N,1195μm,0.2s						
KEK				AML	AML	03 26 44.1	
	comp=E,1701μm,0.2s						
NEST	**Nestorio**	**0.72**	**23**	P	**Pg**	03 26 29.3	0.0
NEST				S	**Sb**	03 26 41.3	+0.9
NEST	**Nestorio**	**0.72**	**23**	P	**Pb**	03 26 29.4	-0.8
NEST				S	**Sg**	03 26 38.2	-0.5
NEST				AML	AML	03 26 50.5	
	comp=N,700μm,0.6s						
NEST				AML	AML	03 26 51.4	
	comp=E,1076μm,0.5s						
TSLK	**Tsoukalades, L**	**0.92**	**181**	P	**Pg**	03 26 32.7	-0.3
TSLK	**Tsoukalades, L**	**0.92**	**181**	P	**Pg**	03 26 33.0	0.0
TSLK				S	**Sg**	03 26 45.5	+0.5
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pg**	03 26 33.9	+0.2
KZN	**Kozani**	**1.01**	**56**	P	**Pg**	03 26 34.0	-0.6
KZN	**Kozani**	**1.01**	**56**	P	**Pg**	03 26 33.7	-1.0
KZN				S	**Sg**	03 26 47.1	-0.6
KZN				AML	AML	03 26 56.1	
	comp=E,832μm,0.5s						
KZN				AML	AML	03 26 56.6	
	comp=N,549μm,0.5s						
THL	**Klokotos Trika**	**1.05**	**100**	P	**Pg**	03 26 34.8	-0.6
THL				S	**Sg**	03 26 49.1	+0.1
THL				AML	AML	03 26 56.2	
	comp=N,416μm,0.5s						
THL				AML	AML	03 26 57.5	
	comp=E,523μm,0.4s						
EVGI	**Lefkada island**	**1.13**	**181**	P	**Pg**	03 26 36.9	-0.1
EVR	**Evrytania**	**1.21**	**133**	P	**Pg**	03 26 37.8	-0.7
FSK	**Fiskardo**	**1.29**	**184**	P	**Pn**	03 26 39.8	+0.2
PVO	**Paravola**	**1.31**	**150**	P	**Pn**	03 26 40.3	+0.5
MAKR	**Makrakomi, Fth**	**1.34**	**123**	P	**Pn**	03 26 40.6	+0.1
MAKR				S	**Sn**	03 26 59.6	+1.1
MAKR				AML	AML	03 27 07.8	
	comp=N,1019μm,0.4s						
MAKR				AML	AML	03 27 12.6	
	comp=E,1313μm,0.3s						
OHR	**Ohrid**	**1.36**	**4**	*i* Pn	**Pg**	03 26 42.2	+0.8
LIT	**Litokhoron**	**1.44**	**75**	P	**Pn**	03 26 41.0	-0.7
GRG	**Griva**	**1.79**	**47**	P	**Pn**	03 26 47.0	+0.5
VAY	**Valandovo**	**2.13**	**42**	*i* Pn	**Pb**	03 26 54.1	-0.1
STIP	**Stip**	**2.25**	**30**	*i* Pn	**Pb**	03 26 56.2	-0.1
KKB	**Krupnik**	**2.79**	**40**	P	**Pn**	03 27 02.0	+1.7
MMB	**Musomiste**	**2.96**	**51**	*e*P	**Pn**	03 27 04.9	+2.3
VTS	**Vitosha**	**3.45**	**33**	*e*P	**Pn**	03 27 11.3	+1.8
RZN	**Rozhen**	**3.63**	**56**	*e*P	**Pn**	03 27 15.1	+3.1
IDI	**Anoyia**	**5.57**	**142**	Pn	**Pn**	03 27 41.9	+3.3
	comp=E,0.2nm,0.3s,baz=255,slow=1.5,SNR=1.8						
IDI				Sn	**Sn**	03 28 38.1	-4.7
	comp=E,0.2nm,0.3s,baz=308,slow=16,SNR=1.4						
	comp=E,11nm,1.0s						
HFS	**Hagfors**	**20.87**	**350**	P	**P**	03 30 56.3	-1.2
	comp=E,2.4nm,1.0s,baz=174,slow=14,SNR=1.3						
	comp=E,2.4nm,1.0s						
FINES	**FINESS Array B**	**21.98**	**7**	P	**P**	03 31 07.2	-2.2
	comp=E,1.3nm,0.9s,baz=186,slow=11,SNR=1.3						
	comp=E,1.3nm,0.9s						
NOA	**NORSAR Array B**	**22.11**	**348**	P	**P**	03 31 08.7	-2.1
	comp=E,0.7nm,1.0s,baz=156,slow=10,SNR=1.2						
	comp=E,0.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	03 32 38.1	+1.8
	comp=E,0.2nm,0.6s,baz=26,slow=10,SNR=1.8						
	comp=E,0.2nm,0.6s						
MKAR	**Makanchi Array**	**44.39**	**60**	P	**P**	03 34 27.1	+0.9
	comp=E,0.7nm,0.8s,baz=295,slow=4.1,SNR=2.4						
	comp=E,0.7nm,0.8s						

*PGC **16** 03:27:53.0±0.0, 57°.18N×122°.72W, h6km, ML3.5/20, 154km Wnw of Fort St. John, Bc British Columbia, Canada*
*IDC **16** 03:27:58.5±1.7, 57°.44N×121°.62W, h0km, mbtmp3.2/3, ML3.5/3, Error ellipse: s-maj=23.0km s-min=16.4km az=113.0*
ISC 16 03:27:50.7±1.3, 57°.23N±0°.02×122°.19W±0°.03, h4km±10km, n35, σ3°.05/59, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBC5	**NorthernBC 5**	**0.39**	**318**	P	**Pb**	03 27 59.1	-1.2
NBC5				S	**Sb**	03 28 03.9	-2.8
NBC6	**NorthernBC 6**	**1.43**	**18**	Pn	Pg	03 28 21.5	+3.4
NBC6				Sg	**Sn**	03 28 42.8	+6.3
FNBB	**Fort Nelson**	**1.72**	**346**	Pn	**Pg**	03 28 22.0	-1.6
FNBB				Pg	**Pb**	03 28 24.1	+1.4
FNBB				Sg	**Sg**	03 28 46.2	+0.4
NBC4	**NorthernBC 4**	**1.77**	**151**	Pn	**Pg**	03 28 25.1	+0.6
NBC4				Sn	**Sg**	03 28 49.2	+1.9
WTMTA	**White Mountain**	**2.25**	**132**	Pn	**Pg**	03 28 32.9	-0.9
WTMTA				Sn	**Sg**	03 29 02.7	-0.1
NBC2	**NorthernBC 2**	**2.56**	**357**	Pn	**Pb**	03 28 35.1	-2.0
NBC2				Sn	**Sb**	03 29 07.0	-1.8
FSB	**Fort Saint Jam**	**3.02**	**204**	Pn	**Pn**	03 28 39.0	-0.2
FSB				Pg	**Pb**	03 28 45.0	+0.1
FSB				Sg	**Sb**	03 29 21.4	-0.6
FSJB	**Fort St James**	**3.03**	**204**	Pn	**Pn**	03 28 39.1	-0.3
FSJB				Pg	**Pb**	03 28 45.1	0.0
FSJB				Sg	**Sb**	03 29 23.0	+0.7
BDMTA	**Bald Mountain**	**3.04**	**142**	Pn	**Pb**	03 28 43.1	-2.3
BDMTA				Sn	**Sb**	03 29 20.4	-2.5
FLDN	**Fort Liard**	**3.09**	**348**	Sn	**Sb**	03 29 18.8	-5.2
SWHSA	**Sweathouse Loo**	**3.84**	**125**	Pn	**Pb**	03 28 54.7	-4.3
SWHSA				Sn	**Sn**	03 29 39.9	+3.8
STPRA	**Salt Prairie L**	**3.86**	**111**	Pn	**Pb**	03 28 55.5	-3.8
STPRA				Sn	**Sb**	03 29 42.8	-3.6
BRLDA	**Berland Lookou**	**4.15**	**137**	Pn	**Pn**	03 28 58.9	+4.0
BRLDA				Sn	**Sn**	03 29 47.2	+3.4
DLBC	**Dease Lake**	**4.36**	**289**	Pn	**Pn**	03 28 54.9	-2.8
DLBC				Sg	**Sb**	03 30 00.9	+0.1
T35M	**Bob Quinn**	**4.41**	**270**	Sg	**Sb**	03 30 00.9	-1.0
UBRB	**Upper Baezaeko**	**4.49**	**195**	Pn	**Pn**	03 28 59.1	-0.3
UBRB				Sg	**Sb**	03 30 07.8	+3.3
WTLY	**Watson Lake, Y**	**4.50**	**313**	Pn	**Pn**	03 28 57.4	-2.1
KITB	**Kitimat**	**4.83**	**232**	Pn	**Pn**	03 29 01.8	-2.2
KITB				Sn	**Sn**	03 29 54.0	-6.4
S34M	**Telegraph Cree**	**4.86**	**282**	Pn	**Pn**	03 29 01.8	-2.7
R33M	**Jennings River**	**5.11**	**299**	Pn	**Pn**	03 29 05.2	-2.8
R33M				Pg	**Pb**	03 29 20.8	+0.1
R33M				Sg	**Sb**	03 30 25.0	+2.6
RUBB	**Prince Rupert**	**5.41**	**241**	Pn	**Pn**	03 29 09.1	-2.8
MNB	**Mounoet Dainar**	**5.51**	**155**	Pn	**Pn**	03 29 16.0	+2.4
MNB				Sn	**Sn**	03 30 18.6	+1.2
GRNB	**Grenville Isla**	**5.57**	**236**	Pn	**Pn**	03 29 11.7	-2.5
BNKB	**Banks Island**	**5.89**	**232**	Pn	**Pn**	03 29 16.2	-2.4
BBB	**Bella Bella**	**6.11**	**217**	Pn	**Pn**	03 29 19.7	-2.0
BBB				Sn	**Sn**	03 30 25.0	-7.0
EDM	**Edmonton**	**6.46**	**125**	Pn	**Pn**	03 29 30.7	+4.3
EDM				Sn	**Sn**	03 30 41.1	+0.7
YKA	**Yellowknife Ar**	**6.51**	**33**	Pn	**Pn**	03 29 28.9	+1.8
	0.7nm,0.3s,baz=218,slow=13,SNR=14						
YKA				Pg	Pg	03 29 48.4	-6.8
	0.9nm,0.3s,baz=219,slow=13,SNR=2.7						
YKA				Sn	**Sn**	03 30 40.2	-1.4
	0.8nm,0.3s,baz=218,slow=22,SNR=2.3						
YKA				Lg	Lg	03 31 11.6	
	0.9nm,0.3s,baz=214,slow=26,SNR=1.9						
	1.2nm,0.5s						
SLEB	**Sale Mountain**	**6.53**	**157**	Pn	**Pn**	03 29 31.1	+3.6
LLLB	**Lillooet**	**6.64**	**178**	Pn	**Pn**	03 29 28.9	0.0
N32M	**Quiet Lake**	**6.83**	**310**	Pn	**Pn**	03 29 29.3	-2.3
MMPY	**Sheldon Lake,**	**7.06**	**324**	Pn	**Pn**	03 29 33.8	-1.0
MMPY				Sn	**Sn**	03 30 49.8	-5.6
WHY	**Whitehorse**	**7.41**	**303**	Sg	**Sb**	03 31 35.1	+6.8
MAYB	**Maynard**	**7.45**	**205**	Pn	**Pn**	03 29 39.6	-0.5
ILAR	**Eielson Array**	**14.08**	**313**	Pn	**P**	03 31 19.4	+0.9
	0.1nm,0.3s,baz=116,slow=10,SNR=4.1						
ILAR				Lg	Lg	03 35 14.9	
	0.1nm,0.3s,baz=111,slow=27,SNR=2.1						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**16.56**	**146**	Pn	**P**	03 31 51.5	+5.0
	0.1nm,0.3s,baz=347,slow=6.1,SNR=5.4						
	0.7nm,0.9s						

*IDC **16** 03:30:55.5±1.2, 39°.78N×20°.81E, h0km, mb3.5/6, mbtmp3.3/8, ML3.2/3, Error ellipse: s-maj=25.0km s-min=20.6km az=66.0*
*ATH **16** 03:30:58.0, 39°.77N×20°.69E, h16km±1km, ML3.0/9, Error ellipse: s-maj=1.7km s-min=0.8km az=306.0*
*THE **16** 03:30:58.4, 39°.76N×20°.68E, h14km, ML3.2/7, Error ellipse: s-maj=0.9km s-min=0.4km az=331.0*
*VIE **16** 03:31:16.4±1.8, 40°.39N×18°.27E, h8km, mb3.0/3, ms3.3/2, Error ellipse: s-maj=71.8km s-min=13.5km az=62.0 143 km SE of Bari*
ISC 16 03:30:58.2±0.8, 39°.76N±0°.03×20°.68E±0°.02, h16km±6km, n58, σ0°.98/72, mb3.5/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**129**	P	**Pg**	03 31 01.9	-0.7
JAN				S	**Sg**	03 31 05.4	0.0
	33μm,0.3s						
JAN	**Janina**	**0.17**	**129**	P	**Pg**	03 31 01.8	-0.7
JAN				S	**Sg**	03 31 05.4	0.0
JAN				AML	AML	03 31 05.6	
	comp=N,74737μm,0.3s						
JAN				AML	AML	03 31 06.0	
	comp=E,42396μm,0.2s						
IGT	**Igoumenitsa**	**0.35**	**229**	P	**Pg**	03 31 05.3	-0.2
IGT				S	**Sg**	03 31 11.1	+0.6
	comp=E,4μm,0.4s						
IGT	**Igoumenitsa**	**0.35**	**229**	P	**Pg**	03 31 05.3	-0.2
IGT				S	**Sg**	03 31 11.4	+0.9
IGT				AML	AML	03 31 14.6	
	comp=N,9748μm,0.5s						
IGT				AML	AML	03 31 16.9	
	comp=E,7432μm,0.4s						
LSK	**Leskovik**	**0.39**	**351**	P	**Pg**	03 31 06.4	+0.2
LSK				S	**Sb**	03 31 12.4	-0.3
	comp=E,8μm,0.6s						
SRN	**Sarande**	**0.54**	**283**	P	**Pg**	03 31 08.5	-0.3
SRN				S	**Sb**	03 31 17.0	+0.2
	comp=E,2μm,0.3s						
PENT	**Pentalofos**	**0.56**	**39**	P	**Pg**	03 31 09.3	0.0
PENT				S	**Sb**	03 31 17.3	-0.2
	comp=E,518nm,0.3s						
PENT	**Pentalofos**	**0.56**	**39**	P	**Pg**	03 31 09.2	-0.1
PENT				S	**Sg**	03 31 16.2	-0.6
PENT				AML	AML	03 31 20.7	
	comp=N,474μm,0.4s						
PENT				AML	AML	03 31 21.2	
	comp=E,1610μm,0.3s						
KPRO	**Kipourio**	**0.56**	**70**	P	**Pg**	03 31 09.3	0.0
KPRO				S	**Sb**	03 31 17.7	+0.2
	comp=E,4μm,0.3s						
KASA	**Kassiopi**	**0.57**	**268**	P	**Pg**	03 31 09.0	-0.5
KASA				S	**Sb**	03 31 18.1	+0.2
KASA				AML	AML	03 31 19.2	
	comp=E,5944μm,0.4s						
KASA				AML	AML	03 31 19.2	
	comp=N,6948μm,0.4s						
KEK	**Kerkira**	**0.68**	**266**	P	**Pg**	03 31 10.6	-1.0
KEK				S	**Sb**	03 31 21.3	+0.3
	comp=N,1μm,0.3s						
KEK	**Kerkira**	**0.68**	**266**	P	**Pg**	03 31 10.6	-1.0
KEK				S	**Sg**	03 31 20.7	+0.1
KEK				AML	AML	03 31 23.9	
	comp=N,3134μm,0.3s						
KEK				AML	AML	03 31 24.4	
	comp=E,2708μm,0.3s						
NEST	**Nestorio**	**0.71**	**23**	P	**Pg**	03 31 12.2	0.0
NEST	**Nestorio**	**0.71**	**23**	P	**Pg**	03 31 12.1	0.0
NEST				S	**Sg**	03 31 21.5	-0.1
NEST				AML	AML	03 31 25.9	
	comp=N,1249μm,0.5s						
NEST				AML	AML	03 31 28.5	
	comp=E,1861μm,0.5s						
KBN	**Korca**	**0.86**	**5**	P	**Pg**	03 31 14.4	-0.6
TSLK	**Tsoukalades, L**	**0.94**	**181**	P	**Pb**	03 31 15.9	-0.2
TSLK	**Tsoukalades, L**	**0.94**	**181**	P	**Pb**	03 31 15.8	-0.4
LKD2	**Lefkada island**	**0.97**	**181**	P	**Pb**	03 31 17.0	+0.3
KZN	**Kozani**	**1.00**	**57**	P	**Pb**	03 31 17.1	-0.1
KZN	**Kozani**	**1.00**	**57**	P	**Pb**	03 31 16.9	-0.4
KZN				S	**Sg**	03 31 30.7	+0.1
KZN				AML	AML	03 31 36.3	
	comp=N,1623μm,0.4s						
KZN				AML	AML	03 31 37.4	
	comp=E,2043μm,0.4s						
NYDR	**Nydri-Lefkada**	**1.05**	**179**	P	**Pb**	03 31 17.6	-0.4
THL	**Klokotos Trika**	**1.05**	**101**	P	**Pb**	03 31 18.0	0.0
THL	**Klokotos Trika**	**1.05**	**101**	P	**Pb**	03 31 17.3	-0.8
THL				AML	AML	03 31 35.9	
	comp=N,1914μm,0.5s						
THL				AML	AML	03 31 41.4	
	comp=E,793μm,0.3s						
DRAG	**Dragano-Lefkad**	**1.08**	**184**	P	**Pb**	03 31 18.4	-0.2
EVGI	**Lefkada island**	**1.14**	**181**	P	**Pb**	03 31 19.9	+0.3
EVR	**Evrytania**	**1.22**	**134**	P	**Pn**	03 31 20.7	0.0
EVR				AML	AML	03 31 42.2	
	comp=E,1093μm,0.5s						
EVR				AML	AML	03 31 52.3	
	comp=N,1234μm,0.5s						
FSK	**Fiskardo**	**1.31**	**184**	P	**Pb**	03 31 23.2	+0.8
PVO	**Paravola**	**1.32**	**150**	P	**Pb**	03 31 23.3	+0.6
MAKR	**Makrakomi, Fth**	**1.35**	**123**	P	**Pb**	03 31 23.5	+0.2
LIT	**Litokhoron**	**1.43**	**76**	P	**Pn**	03 31 24.2	+0.6
KEF4	**Livadi, Kephal**	**1.52**	**188**	P	**Pb**	03 31 26.4	+0.4
VLS	**Valsamata**	**1.59**	**183**	P	**Pb**	03 31 27.2	0.0
EFP	**Efpalio**	**1.64**	**144**	P	**Pb**	03 31 29.1	+1.0
LAKA	**Lakka**	**1.83**	**146**	P

ISC 16 03:40:02.4±0.9, 39°.7N±0°.1×20°.6E±0°.1, h9km, n9, σ1§84/9, mb3.6/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**5.58**	**141**	**Pn**	**Pn**	**03 41 25.5**	**-0.2**
	0.2nm,0.3s,baz=273,slow=1.7,SNR=3.3						
	24nm,1.2s						
MLR	**Muntele Rosu**	**7.01**	**33**	Pn	**Pn**	**03 41 48.2**	**+2.8**
	0.3nm,0.3s,baz=248,slow=5.1,SNR=9.2						
	2.0nm,0.6s						
GERES	**GERESS Array B**	**10.38**	**334**	Pn	**Pn**	**03 42 32.6**	**+1.1**
	0.1nm,0.3s,baz=163,slow=14,SNR=4.7						
	0.1nm,0.3s						
ESDC	**Sonseca Array**	**18.87**	**278**	P	**Pn**	**03 44 23.9**	**+0.4**
	baz=80,slow=9.9,SNR=1.6						
	0.2nm,0.6s						
HFS	**Hagfors**	**20.91**	**350**	P	**P**	**03 44 43.8**	**-1.1**
	4.5nm,1.1s,baz=158,slow=8.9,SNR=1.6						
	4.5nm,1.1s						
FINES	**FINESS Array B**	**22.04**	**7**	P	**P**	**03 44 55.1**	**-1.8**
	3.3nm,0.9s,baz=170,slow=12,SNR=4.9						
	3.3nm,0.9s						
NOA	**NORSAR Array B**	**22.14**	**348**	P	**P**	**03 44 56.9**	**-1.3**
	0.4nm,0.7s,baz=154,slow=10.0,SNR=2.1						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**31.25**	**217**	P	**P**	**03 46 23.4**	**+0.9**
	0.3nm,0.5s,baz=34,slow=9.4,SNR=3.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**44.49**	**60**	P	**P**	**03 48 11.9**	**-2.0**
	0.7nm,0.5s,baz=283,slow=7.6,SNR=5.9						
	0.7nm,0.5s						

HLW ***16*** *03:40:14.4, 39°.93N×21°.23E, h10km±73km, Md5.6, Ml5.5*
BJI ***16*** *03:40:14.4±0.0, 39°.66N×20°.37E, h9km, mb5.0/58, mB5.0/32, Ms4.7/24, Ms7 4.5/24*
BEO ***16*** *03:40:17.7±0.6, 39°.53N×20°.75E, h0km, ML4.9/7*
MOS ***16*** *03:40:18.1±1.2, 39°.72N×20°.62E, h17km, mb5.2/54, MS4.3/24, Error ellipse: s-maj=3.2km s-min=2.3km az=89.8*
PDG ***16*** *03:40:19.1±0.7, 39°.70N×20°.55E, h9km±1km, MD4.9/11, ML4.7/11, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
TIR ***16*** *03:40:20.6, 39°.76N×20°.72E, h14km±1km, Ml5.1*
MED_RC ***16*** *03:40:20.0±0.4, 39°.71N×20°.67E, h27km, MW4.8/22, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s22,c25; Duration: 1§4 Moment tensor: Scale 10^{16}Nm; M_{rr}2.05±.15; $M_{\theta\theta}$-1.46±.10; $M_{\phi\phi}$-0.59±.08; $M_{r\theta}$0.37±.13; $M_{\theta\phi}$1.20±.04; $M_{\phi r}$0.53±.11; Best double couple: $M_0$2.28000×10^{16} NP1:ϕ_s322.00000°,δ48.00000°, λ115.00000°. NP2:ϕ_s108.00000°,δ48.00000°,λ65.00000°. Principal axes: T 2.2600, Plg72.0000°, Azm305.0000°; N 0.0400, Plg18.0000°, Azm125.0000°; P -2.3000, Plg0.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
ATH ***16*** *03:40:20.3, 39°.79N×20°.69E, h20km±1km, ML4.9/15 Error ellipse: s-maj=1.0km s-min=0.6km az=291.0*
THE ***16*** *03:40:21.6, 39°.77N×20°.70E, h10km±1km, ML4.8/10, Error ellipse: s-maj=1.0km s-min=0.3km az=337.0*
LDG ***16*** *03:40:22.9±0.4, 39°.92N×20°.55E, h10km, Ml4.1/41, Error ellipse: s-maj=12.2km s-min=7.2km az=10.0*
IDC ***16*** *03:40:22.9±1.1, 39°.80N×20°.67E, h37km±10km, mb4.6/40, mbtmp4.7/56, ML4.3/14, MS4.3/26, Error ellipse: s-maj=8.1km s-min=7.5km az=154.0*
ROM ***16*** *03:40:22.1, 39°.77N×20°.62E, h20km, mb4.9/34, Mwp4.8/9, Error ellipse: s-maj=3.4km s-min=0.7km az=205.0*
NEIC ***16*** *03:40:22.6±1.6, 39°.78N±0°.05×20°.65E±0°.06, h30km, Error ellipse: s-maj=7.6km s-min=7.2km az=173.0*
NEIC ***16*** *03:40:24, 39°.79N×20°.73E, h30km, Moment Tensor Solution. Duration: 9§8 Moment tensor: Scale 10^{16}Nm; M_{rr}1.94; $M_{\theta\theta}$-1.44; $M_{\phi\phi}$-0.50; $M_{r\theta}$0.24; $M_{\theta\phi}$1.26; $M_{\phi r}$0.59; Fault plane solution: $M_0$2.25000×10^{16} NP1: ϕ_s106.00000°,δ46.00000°,λ63.00000°. NP2: ϕ_s323.00000°,δ50.00000°,λ116.00000°. Principal axes: T 2.1630, Plg71.0000°, Azm300.0000°; N 0.1581, Plg19.0000°, Azm126.0000°; P -2.3210, Plg2.0000°, Azm35.0000°;*
GCMT ***16*** *03:40:24.0±0.3, 39°.67N±0°.02×20°.64E±0°.03, h28km, MW4.9/87, Moment Tensor Solution. s38,c41; s87,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.67±.16; $M_{\theta\theta}$-1.83±.12; $M_{\phi\phi}$-0.83±.12; $M_{r\theta}$0.42±.14; $M_{\theta\phi}$1.38±.06; $M_{\phi r}$0.77±.15; Best double couple: $M_0$2.87300×10^{16} NP1:ϕ_s322.00000°,δ49.00000°,λ113.00000°. NP2: ϕ_s109.00000°,δ46.00000°,λ66.00000°. Principal axes: T 2.9440, Plg73.0000°, Azm302.0000°; N -0.1380, Plg17.0000°, Azm126.0000°; P -2.8010, Plg1.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
GII ***16*** *03:40:25.2±0.0, 38°.43N×20°.75E, h1km*

ISC 16 03:40:20.3±0.5, 39°.77N±0°.01×20°.71E±0°.01, h20km±2km, n1361, σ1§92/1371, mb5.0/240, MS4.5/38, 114C-95D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**136**	P	**Pg**	**03 40 24.8**	**-0.1**
JAN				S	**Sg**	**03 40 27.9**	**-0.1**
JAN	**Janina**	**0.16**	**136**	P	**Pg**	**03 40 24.7**	**-0.2**
JAN				S	**Sg**	**03 40 28.5**	**+0.4**
JAN				AML	AML	03 40 29.2	
JAN				AML	AML	03 40 29.8	
IGT	**Igoumenitsa**	**0.37**	**230**	P	**Pb**	**03 40 28.6**	**+0.3**
IGT				S	**Sb**	**03 40 34.4**	**+0.7**
	264µm,0.7s						
IGT	**Igoumenitsa**	**0.37**	**230**	P	**Pb**	**03 40 28.5**	**+0.3**
	baz=233						
IGT				S	**Sb**	**03 40 34.6**	**+0.9**
	baz=233						
IGT	**Igoumenitsa**	**0.37**	**230**	P	**Pb**	**03 40 28.4**	**+0.1**
IGT				S	**Sb**	**03 40 34.8**	**+1.1**
IGT				AML	AML	03 40 37.0	
IGT				AML	AML	03 40 37.2	
LSK	**Leskovik**	**0.39**	**348**	P	**Pb**	**03 40 29.5**	**+0.9**
LSK				S	**Sb**	**03 40 35.2**	**+1.0**
	263µm,0.6s						
LSK	**Leskovik**	**0.39**	**348**	P	**Pb**	**03 40 29.0**	**+0.4**
	baz=348						
LSK				S	**Sb**	**03 40 35.7**	**+1.5**
	baz=348						
LSK				AMP			
	comp=N,1µm,0.6s,baz=348						
KPRO	**Kipourio**	**0.54**	**70**	P	**Pb**	**03 40 32.0**	**+0.9**
KPRO				S	**Sn**	**03 40 40.4**	**-1.0**
	comp=N,262µm,0.5s						
PENT	**Pentalofos**	**0.54**	**38**	P	**Pb**	**03 40 31.8**	**+0.7**
PENT				S	**Sn**	**03 40 40.4**	**-1.1**
	comp=N,30µm,0.5s						
PENT	**Pentalofos**	**0.54**	**38**	P	**Pb**	**03 40 31.6**	**+0.5**
PENT				S	**Sg**	**03 40 38.2**	**-0.3**
PENT				AML	AML	03 40 41.8	
	comp=N,29750µm,0.7s						
PENT				AML	AML	03 40 44.4	
	comp=E,90417µm,0.5s						
SRN	**Sarande**	**0.55**	**282**	P	**Pb**	**03 40 31.9**	**+0.7**
SRN				S	**Sn**	**03 40 40.6**	**-1.1**
	comp=E,139µm,0.6s						
SRN	**Sarande**	**0.55**	**282**	P	**Pb**	**03 40 31.7**	**+0.5**
	baz=283						
SRN				S	**Sn**	**03 40 40.6**	**-1.1**
	baz=283						
SRN				AMP			
	comp=N,399nm,0.5s,baz=283						
KASA	**Kassiopi**	**0.59**	**268**	P	**Pg**	**03 40 32.2**	**+0.1**
KASA				S	**Sb**	**03 40 40.4**	**+0.5**
KASA				AML	AML	03 40 43.6	
KASA				AML	AML	03 40 43.7	
NEST	**Nestorio**	**0.69**	**22**	P	**Pn**	**03 40 35.3**	**+0.2**
NEST				S	**Sn**	**03 40 45.0**	**-0.3**
	comp=N,33µm,0.6s						
NEST	**Nestorio**	**0.69**	**22**	P	**Pg**	**03 40 33.9**	**-0.1**
NEST				S	**Sb**	**03 40 42.8**	**-0.2**
NEST				AML	AML	03 40 52.9	
	comp=E,91786µm,0.6s						
NEST				AML	AML	03 40 56.5	
	comp=N,80786µm,0.5s						
KEK	**Kerkira**	**0.70**	**265**	P	**Pg**	**03 40 34.2**	**+0.1**
KEK				S	**Sn**	**03 40 45.0**	**-0.4**
	comp=N,83µm,0.6s						
KEK	**Kerkira**	**0.70**	**265**	P	**Pg**	**03 40 34.0**	**-0.1**
KEK				S	**Sg**	**03 40 43.4**	**-0.1**
KEK				AML	AML	03 40 49.3	
KEK				AML	AML	03 40 50.2	
KBN	**Korca**	**0.85**	**4**	Pn	**Pb**	**03 40 36.2**	**-0.3**
KBN	**Korca**	**0.85**	**4**	P	**Pn**	**03 40 37.6**	**+0.3**
KBN				S	**Sn**	**03 40 50.3**	**+1.1**
	comp=N,30µm,1.1s						
KBN	**Korca**	**0.85**	**4**	P	**Pb**	**03 40 36.2**	**-0.3**
KBN	**Korca**	**0.85**	**4**	P	**Pn**	**03 40 37.2**	**0.0**
	baz=3.0						
KBN				S	**Sn**	**03 40 50.8**	**+1.6**
	baz=3.0						
KBN				AMP			
	comp=N,107nm,1.7s,baz=3.0						
TSLK	**Tsoukalades, L**	**0.95**	**182**	P	**Pg**	**03 40 39.5**	**+0.8**
TSLK				S	**Sn**	**03 40 53.2**	**+1.8**
	comp=N,98µm,0.6s						
TSLK	**Tsoukalades, L**	**0.95**	**182**	P	**Pb**	**03 40 38.1**	**+0.1**
TSLK				S	**Sn**	**03 40 52.3**	**+0.9**
KZN	**Kozani**	**0.98**	**57**	P	**Pg**	**03 40 40.0**	**+0.7**
KZN				S	**Sn**	**03 40 54.4**	**+2.1**
	comp=N,51µm,0.6s						
KZN	**Kozani**	**0.98**	**57**	P	**Pg**	**03 40 39.8**	**+0.5**
KZN	**Kozani**	**0.98**	**57**	P	**Pg**	**03 40 39.8**	**+0.5**
KZN				S	**Sn**	**03 40 52.5**	**+0.3**
KZN				AML	AML	03 40 57.8	
KZN				AML	AML	03 40 59.3	
	comp=N,99869µm,0.6s						
LKD2	**Lefkada island**	**0.98**	**182**	P	**Pg**	**03 40 39.8**	**+0.4**
LKD2	**Lefkada island**	**0.98**	**182**	P	**Pg**	**03 40 39.7**	**+0.4**
	baz=183						
LKD2				S	**Sn**	**03 40 54.0**	**+1.7**
	baz=183						
LKD2	**Lefkada island**	**0.98**	**182**	P	**Pb**	**03 40 38.6**	**0.0**
LKD2				S	**Sn**	**03 40 53.2**	**+0.9**
THL	**Klokotos Trika**	**1.03**	**101**	P	**Pg**	**03 40 40.6**	**+0.3**
THL	**Klokotos Trika**	**1.03**	**101**	P	**Pg**	**03 40 40.1**	**-0.2**
THL				S	**Sg**	**03 40 54.8**	**+0.9**
THL				AML	AML	03 40 56.6	
	comp=N,66533µm,1.0s						
THL				AML	AML	03 41 00.2	
	comp=E,70216µm,0.6s						
NYDR	**Nydri-Lefkada**	**1.06**	**180**	P	**Pg**	**03 40 41.1**	**+0.3**
DRAG	**Dragano-Lefkad**	**1.09**	**185**	P	**Pg**	**03 40 42.0**	**+0.6**
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pg**	**03 40 43.0**	**+0.4**
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pg**	**03 40 42.4**	**-0.1**
EVGI				S	**Sg**	**03 40 59.3**	**+1.6**
VLO	**Vlora**	**1.16**	**307**	Pn	**Pg**	**03 40 42.0**	**-0.8**
VLO	**Vlora**	**1.16**	**307**	P	**Pg**	**03 40 42.0**	**-0.8**
VLO	**Vlora**	**1.16**	**307**	P	**Pg**	**03 40 44.2**	**+1.5**
	baz=308						
VLO				S	**Sg**	**03 41 02.6**	**+4.6**
	baz=308						
TYRN	**Tyrnavos**	**1.18**	**92**	P	**Pg**	**03 40 43.4**	**+0.3**
EVR	**Evrytania**	**1.21**	**135**	P	**Pg**	**03 40 43.7**	**0.0**
EVR	**Evrytania**	**1.21**	**135**	P	**Pb**	**03 40 43.2**	**+0.7**
EVR				AML	AML	03 41 06.8	
	comp=N,71664µm,0.7s						
EVR				AML	AML	03 41 08.0	
	comp=E,57163µm,0.7s						
LRSO	**Larissa Observ**	**1.30**	**94**	P	**Pg**	**03 40 45.1**	**-0.4**
LRSO				S	**Sg**	**03 41 04.2**	**+1.7**
FSK	**Fiskardo**	**1.31**	**185**	P	**Pg**	**03 40 45.6**	**-0.1**
FSK				S	**Sg**	**03 41 03.5**	**+0.6**
FSK				AML	AML	03 41 08.6	
	comp=N,73958µm,0.6s						
FSK				AML	AML	03 41 09.1	
	comp=E,96880µm,0.5s						
PVO	**Paravola**	**1.32**	**151**	P	**Pg**	**03 40 46.2**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.34**	**124**	P	**Pg**	**03 40 45.9**	**-0.2**
MAKR				AML	AML	03 41 10.9	
MAKR				AML	AML	03 41 11.8	
OHR	**Ohrid**	**1.34**	**3**	*e*Pg	**Pg**	**03 40 46.9**	**+0.7**
OHR				*e*Sg	**Sg**	**03 41 07.2**	**+3.5**
OHR	**Ohrid**	**1.34**	**3**	*i* Pn	**Pg**	**03 40 47.0**	**+0.7**
LIT	**Litokhoron**	**1.41**	**76**		**Pb**	**03 40 45.7**	**-0.2**
LIT	**Litokhoron**	**1.41**	**76**	P	**Pb**	**03 40 45.7**	**-0.2**
LIT	**Litokhoron**	**1.41**	**76**	P	**Pb**	**03 40 46.7**	**+0.7**
KEF4	**Livadi, Kephal**	**1.53**	**188**	P	**Pb**	**03 40 48.6**	**+0.7**
VLS	**Valsamata**	**1.59**	**183**	P	**Pb**	**03 40 50.0**	**+1.0**
VLS				S	**Sg**	**03 41 11.0**	**-0.8**
VLS				AML	AML	03 41 15.5	
	comp=N,65339µm,0.5s						
VLS				AML	AML	03 41 15.5	
	comp=E,57240µm,0.5s						
EFP	**Efpalio**	**1.64**	**145**	P	**Pg**	**03 40 51.0**	**-0.7**
TIR	**Tirane**	**1.70**	**338**	⇑P	**Pg**	**03 40 52.4**	**-0.6**
TIR	**Tirane**	**1.70**	**338**	Pn	**Pb**	**03 40 50.7**	**-0.1**
TIR	**Tirane**	**1.70**	**338**	P	**Pb**	**03 40 50.7**	**-0.1**
TIR	**Tirane**	**1.70**	**338**	*e*Pn	**Pg**	**03 40 52.2**	**-0.8**
TIR				*e*Sn	**Sg**	**03 41 18.1**	**+3.0**
TIR	**Tirane**	**1.70**	**338**	P	**Pg**	**03 40 52.3**	**-0.8**
	baz=339						
TIR				AMP			
	comp=N,57nm,1.1s,baz=339						
SERG	**Sergoula**	**1.72**	**142**	P	**Pb**	**03 40 50.7**	**-0.5**
SCTE	**Santa Cesarea**	**1.75**	**281**	Pn	**Pn**	**03 40 49.6**	**+0.1**
SCTE	**Santa Cesarea**	**1.75**	**281**	P	**Pn**	**03 40 50.4**	**+1.0**
GRG	**Griva**	**1.75**	**47**	P	**Pb**	**03 40 51.9**	**+0.1**
RLS	**Riolos of Patr**	**1.81**	**161**	P	**Pb**	**03 40 52.6**	**-0.1**
AXAR	**Agios Charalam**	**1.82**	**123**	P	**Pb**	**03 40 53.6**	**+0.7**
AXAR				AML	AML	03 41 29.2	
	comp=E,85561µm,0.7s						
AXAR				AML	AML	03 41 33.6	
	comp=N,74765µm,0.6s						
LAKA	**Lakka**	**1.82**	**147**	P	**Pb**	**03 40 53.4**	**+0.4**
LAKA				AML	AML	03 41 28.3	
LAKA				AML	AML	03 41 35.8	
	comp=N,86044µm,1.1s						
DLFA	**Delphi**	**1.90**	**132**	P	**Pb**	**03 40 55.1**	**+0.8**
PHP	**Peshkopia**	**1.92**	**354**	P	**Pg**	**03 40 56.5**	**-0.8**
	baz=354						
PHP				AMP			
	comp=N,57nm,0.8s,baz=354						
THE	**Thessaloniki**	**1.93**	**63**	P	**Pb**	**03 40 53.9**	**-0.9**
DRO	**Drossia**	**1.98**	**156**	P	**Pb**	**03 40 54.6**	**-1.0**
NEO	**Neokhori**	**2.00**	**103**	P	**Pb**	**03 40 55.5**	**-0.5**
NEO				AML	AML	03 41 27.4	
	comp=N,46230µm,0.4s						
NEO				AML	AML	03 41 30.0	
	comp=E,22749µm,0.5s						
KLV	**Kalavryta, Ach**	**2.06**	**146**	P	**Pn**	**03 40 55.3**	**+1.5**
VAY	**Valandovo**	**2.10**	**42**	*e*Pn	**Pb**	**03 40 56.5**	**-1.2**
VAY				*e*Sn	**Sb**	**03 41 24.7**	**+1.4**
VAY	**Valandovo**	**2.10**	**42**	*i* Pn	**Pb**	**03 40 56.7**	**-0.9**
LKR	**Lokris**	**2.10**	**121**	P	**Pn**	**03 40 56.3**	**+2.0**
KNT	**Kendrikon**	**2.17**	**50**	P	**Pn**	**03 40 57.1**	**+1.8**
KNT	**Kendrikon**	**2.17**	**50**	P	**Pb**	**03 40 57.4**	**-1.6**
STIP	**Stip**	**2.23**	**30**	*i* Pn	**Pb**	**03 41 00.6**	**+0.7**
SKO	**Skopje**	**2.27**	**14**	*e*Pn	**Pb**	**03 41 00.3**	**-0.2**
SKO				*e*Sn	**Sg**	**03 41 31.1**	**-2.2**
SKO	**Skopje**	**2.27**	**14**	*i* Pn	**Pb**	**03 41 00.3**	**-0.2**
SOH	**Sokhos**	**2.28**	**62**	P	**Pb**	**03 40 59.0**	**-1.8**
THAL	**Thalero**	**2.31**	**138**	P	**Pb**	**03 40 59.7**	**-1.5**
ULC	**Ulcinj**	**2.45**	**334**	⇓*i*Pn	**Pn**	**03 41 00.7**	**+1.5**
ULC				*i* Sn	**Sb**	**03 41 32.5**	**-1.0**
LOUT	**Loutraki**	**2.51**	**134**	P	**Pn**	**03 41 01.5**	**+1.5**
ALNA	**Alonissos**	**2.52**	**103**	P	**Pb**	**03 41 02.9**	**-2.0**
VIL2	**Platees**	**2.53**	**127**	P	**Pb**	**03 41 03.9**	**-1.2**
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**03 41 02.9**	**+2.0**
SRS	**Serrai**	**2.58**	**58**	*e*Pn	**Pn**	**03 41 02.8**	**+1.9**
SRS				*e*Sn	**Sb**	**03 41 34.9**	**-2.3**
BCI	**Bajram Curri**	**2.64**	**350**	P	**Pb**	**03 41 05.9**	**-1.0**
	baz=350						
DRME	**Dracevica, Mon**	**2.67**	**335**	⇑*i*Pn	**Pn**	**03 41 04.4**	**+2.2**
DRME	**Dracevica, Mon**	**2.67**	**335**	⇓*i*Pn	**Pn**	**03 41 03.8**	**+1.6**
DRME				*i* Sn	**Sb**	**03 41 38.0**	**-1.8**
KOKK	**Kokkinochori,**	**2.73**	**66**	P	**Pn**	**03 41 05.3**	**+2.4**
ITM	**Ithomi**	**2.76**	**159**	Pn	**Pn**	**03 41 05.0**	**+1.5**
ITM	**Ithomi**	**2.76**	**159**	⇑P	**Pn**	**03 41 05.3**	**+1.9**
KYMI	**Kymi, Euboea I**	**2.87**	**112**	P	**Pn**	**03 41 07.7**	**+2.8**
PDG	**Podgorica**	**2.87**	**338**	⇓P	**Pn**	**03 41 07.6**	**+2.7**
PDG	**Podgorica**	**2.87**	**338**	Pn	**Pn**	**03 41 06.6**	**+1.6**
PDG	**Podgorica**	**2.87**	**338**	⇑P	**Pn**	**03 41 07.1**	**+2.2**
TTG	**Podgorica**	**2.87**	**338**	⇓*i*Pn	**Pn**	**03 41 06.7**	**+1.8**
TTG				*i* Sn	**Sb**	**03 41 43.0**	**-2.5**
BUM	**Brajici-Budva**	**2.87**	**332**	⇓*i*Pn	**Pn**	**03 41 06.5**	**+1.5**
BUM				*i* Sn	**Sb**	**03 41 42.7**	**-3.0**
PVY	**Plav**	**2.88**	**349**	*e*Pn	**Pn**	**03 41 07.1**	**+2.0**
PVY				*i* Sn	**Sb**	**03 41 43.7**	**-2.1**
ATH	**Athens Observa**	**2.96**	**126**	P	**Pn**	**03 41 09.4**	**+3.3**
ATHU	**Athens Univers**	**3.00**	**126**	P	**Pn**	**03 41 08.2**	**+1.5**
PTL	**Penteli**	**3.01**	**124**	P	**Pn**	**03 41 10.2**	**+3.4**
DION	**Dionisos Attik**	**3.03**	**123**	P	**Pn**	**03 41 09.7**	**+2.5**
KVLA	**Kavala**	**3.04**	**66**	P	**Pn**	**03 41 09.3**	**+2.0**
VLY	**Voula,Athens**	**3.08**	**127**	P	**Pn**	**03 41 10.6**	**+2.8**
CEME	**Cevo**	**3.08**	**335**	⇓*i*Pn	**Pn**	**03 41 09.4**	**+1.5**
CEME				*i* Sn	**Sn**	**03 41 47.8**	**+3.6**
TIP	**Timpagrande**	**3.11**	**260**	⇑P	**Pn**	**03 41 08.8**	**+0.5**
TIP				⇑S	**Sn**	**03 41 43.2**	**-1.7**
TIP	**Timpagrande**	**3.11**	**260**		**Pn**	**03 41 08.0**	**-0.2**
HCY	**Herceg Novi**	**3.15**	**329**	⇑*i*Pn	**Pn**	**03 41 09.9**	**+1.1**
HCY	**Herceg Novi**	**3.15**	**329**	*e*Pn	**Pn**	**03 41 09.8**	**+1.0**
HCY				*i* Sn	**Sn**	**03 41 49.2**	**+3.4**
BARS	**Barje**	**3.15**	**15**	*e*Pn	**Pb**	**03 41 12.3**	**-3.4**
KAVA	**Kavala**	**3.16**	**66**	P	**Pn**	**03 41 10.8**	**+2.0**
IVA	**Berane**	**3.16**	**349**	⇑*i*Pn	**Pn**	**03 41 10.9**	**+2.0**
IVA				*i* Sn	**Sb**	**03 41 50.5**	**-3.3**
MATE	**Matera**	**3.19**	**287**	⇓P	**Pn**	**03 41 09.9**	**+0.7**
MATE				⇓S	**Sn**	**03 41 47.5**	**+0.9**
KOME	**Kolasin**	**3.20**	**344**	*e*Pn	**Pn**	**03 41 11.5**	**+1.9**
KOME				*i* Sn	**Sb**	**03 41 51.4**	**-3.8**
NKME	**Niksic**	**3.27**	**337**	⇓*i*Pn	**Pn**	**03 41 12.2**	**+1.7**
NKME				*i* Sn	**Sn**	**03 41 52.5**	**+3.7**
VTS	**Vitosha**	**3.42**	**33**	⇑P	**Pn**	**03 41 15.8**	**+3.1**
VTS	**Vitosha**	**3.42**	**33**	Pn	**Pn**	**03 41 14.7**	**+2.0**
VTS	**Vitosha**	**3.42**	**33**	P	**Pn**	**03 41 14.7**	**+2.0**
VTS	**Vitosha**	**3.42**	**33**	⇓P	**Pn**	**03 41 15.5**	**+2.8**
SELS	**Selova**	**3.46**	**5**	*e*Pn	**Pn**	**03 41 16.3**	**+3.3**
SJES	**Sjenica**	**3.53**	**351**	*e*Pn	**Pn**	**03 41 17.6**	**+3.5**
UPM	**Unac-Piva**	**3.69**	**339**	*e*Pn	**Pn**	**03 41 18.4**	**+2.1**
UPM	**Unac-Piva**	**3.69**	**339**	⇓*i*Pn	**Pn**	**03 41 17.9**	**+1.6**
UPM				*i* Sn	**Sn**	**03 42 02.8**	**+3.6**
PLE	**Pljevlja**	**3.69**	**345**	*e*Pn	**Pn**	**03 41 18.2**	**+1.9**
PLE				*i* Sn	**Sn**	**03 42 03.2**	**+3.9**
CUC	**Castrocucco**	**3.77**	**275**	Pn	**Pn**	**03 41 17.4**	**+0.1**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**03 41 21.1**	**+3.6**
PLD	**Plovdiv**	**3.82**	**51**	P	**Pn**	**03 41 17.1**	**-0.9**
IVAS	**Ivanjica**	**3.82**	**354**	*e*Pn	**Pn**	**03 41 20.7**	**+2.6**
STON	**Ston**	**3.84**	**325**	⇑*i*Pn	**Pn**	**03 41 17.9**	**-0.2**
BOVS	**Bovan**	**3.93**	**11**	⇑P	**Pn**	**03 41 23.1**	**+3.6**
BOVS	**Bovan**	**3.93**	**11**	*e*Pn	**Pn**	**03 41 21.9**	**+2.4**
RDO	**Rodhopi**	**3.93**	**68**		**Pn**	**03 41 21.4**	**+1.8**
RDO	**Rodhopi**	**3.93**	**68**	⇑P	**Pn**	**03 41 19.9**	**+0.4**
RUDO	**Rudo**	**3.97**	**346**	⇑*i*Pn	**Pn**	**03 41 21.8**	**+1.8**
CEL	**Celeste**	**4.04**	**250**		**Pn**	**03 41 20.4**	**-0.6**
CEL	**Celeste**	**4.04**	**250**	⇓P	**Pn**	**03 41 20.9**	**-0.2**
KDZ	**Kurdzhali**	**4.04**	**61**	P	**Pn**	**03 41 23.1**	**+2.1**
GRUS	**Gruza**	**4.11**	**0**	*e*Pn	**Pn**	**03 41 25.0**	**+3.0**
BLKB	**Belogradchik**	**4.12**	**20**	⇓P	**Pn**	**03 41 26.0**	**+3.8**
BLKB				⇑S	**Sb**	**03 42 17.2**	**-4.3**
ZAGS	**Zajecar**	**4.20**	**15**	*e*Pn	**Pn**	**03 41 25.8**	**+2.7**
BBLS	**Lazići**	**4.21**	**347**	⇑*i*Pn	**Pn**	**03 41 25.3**	**+2.0**
BBLS	**Lazići**	**4.21**	**347**	*e*Pn	**Pn**	**03 41 24.8**	**+1.5**
ALN	**Alexandroupoli**	**4.23**	**73**	Pn	**Pn**	**03 41 24.6**	**+1.0**
ALN	**Alexandroupoli**	**4.23**	**73**	P	**Pn**	**03 41 24.6**	**+1.0**
ALN	**Alexandroupoli**	**4.23**	**73**	⇓P	**Pn**	**03 41 25.4**	**+1.8**
SGRT	**San Giovanni R**	**4.26**	**299**		**Pn**	**03 41 24.0**	**0.0**
EZN	**Ezine**	**4.33**	**87**	P	**Pn**	**03 41 28.2**	**+3.3**
DIVS	**Divibare**	**4.36**	**353**	Pn	**Pn**	**03 41 26.2**	**+0.8**
DIVS	**Divibare**	**4.36**	**353**	⇑*i*Pn	**Pn**	**03 41 27.6**	**+2.2**
DIVS	**Divibare**	**4.36**	**353**	*e*Pn	**Pn**	**03 41 27.6**	**+2.2**
DIVS				*e*Sn	**Sn**	**03 42 21.1**	**+5.5**
DIVS	**Divibare**	**4.36**	**353**	⇓P	**Pn**	**03 41 26.6**	**+1.2**
TRUS	**Trudelj**	**4.45**	**357**	*e*Pn	**Pn**	**03 41 29.4**	**+2.7**
HAPS	**Han Pijesak,BI**	**4.50**	**344**	⇑*i*Pn	**Pn**	**03 41 29.3**	**+1.8**
APE	**Apeiranthos**	**4.65**	**124**	⇓P	**Pn**	**03 41 31.5**	**+2.0**
APE	**Apeiranthos**	**4.65**	**124**	*i* P	**Pn**	**03 41 32.2**	**+2.8**
BAIL	**Bailesti**	**4.68**	**24**	⇓P	**Pn**	**03 41 34.4**	**+4.7**
KUBS	**Kucevo**	**4.69**	**9**	*e*Pn	**Pn**	**03 41 32.2**	**+2.2**
PUNG	**Punghina**	**4.80**	**19**	⇑P	**Pn**	**03 41 34.9**	**+3.6**

ARG	Arkhangelos	6.85	119	P		Pn	03 41 58.2	-1.4
ARG	Arkhangelos	6.85	119	⇓P		Pn	03 42 04.2	+4.6
ISR	Istrita	6.87	37	⇑P		Pn	03 42 04.0	+4.2
ISR	Istrita	6.87	37	P		Pn	03 42 04.0	+4.2
MLR	Muntele Rosu	6.90	32	⇓P		Pn	03 42 05.2	+4.8
MLR	Muntele Rosu	6.90	32	Pn		Pn	03 42 04.0	+3.7
	comp=Z,3.5nm,0.3s,baz=254,slow=7.1,SNR=38							
MLR				LR		LR	03 45 35.9	
	comp=Z,5μm,18.9s,baz=191,slow=46							
	comp=Z,56nm,0.5s							
AMRR	Amara	6.90	43	⇓P		Pn	03 42 03.6	+3.4
PGOR	Pogoanele	6.92	40	⇓P		Pn	03 42 04.7	+4.2
BOJS	Bojanci	7.00	327	⇑i/Pn		Pn	03 42 02.5	+0.9
BOJS	Bojanci	7.00	327	⇑i/Pn		Pn	03 42 02.5	+0.9
BOJS				eSn		Sn	03 43 16.9	-3.7
BOJS				IAML			03 44 35.0	
	comp=Z,1μm,2.6s							
DOPR	Dopca	7.08	28	⇑P		Pn	03 42 07.0	+4.2
DRGR		7.17	11	⇑P		Pn	03 42 07.7	+3.7
CRES	Cresnjev	7.17	329	⇑i/Pn		Pn	03 42 04.6	+0.6
CRES	Cresnjev	7.17	329	⇑i/Pn		Pn	03 42 04.6	+0.6
CJR	Cluj-Napoca	7.25	16	⇑P		Pn	03 42 08.7	+3.5
CJR	Cluj-Napoca	7.25	16	P		Pn	03 42 08.6	+3.5
GRER		7.27	37	⇓P		Pn	03 42 10.0	+4.8
HARR	Harsova	7.27	45	⇑P		Pn	03 42 09.1	+3.8
BEHE	Becsehely	7.29	338	P		Pn	03 42 06.9	+1.4
COVR	Voineasa-Covas	7.29	32	⇓P		Pn	03 42 09.6	+3.9
CBBR	Cluj-Babes-Bol	7.29	16	⇓P		Pn	03 42 09.4	+3.7
OZUR		7.34	29	⇓P		Pn	03 42 10.3	+4.0
BORR	Bors	7.36	6	⇑P		Pn	03 42 10.4	+3.9
TIRR	Tirgusor	7.40	48	⇓P		Pn	03 42 11.3	+4.3
TIRR	Tirgusor	7.40	48	⇓P		Pn	03 42 11.3	+4.3
TIRR	Tirgusor	7.40	48			Pn	03 42 06.1	-0.9
TIRR	Tirgusor	7.40	48	P		Pn	03 42 06.1	-0.9
TIH	Tihany	7.41	345	P		Pn	03 42 09.1	+1.8
PLOR	Plostina	7.48	34	⇑P		Pn	03 42 12.3	+4.0
PLOR	Plostina	7.48	34	P		Pn	03 42 12.2	+4.0
BORA	Eskisehir	7.50	86	Pn		Pn	03 42 11.2	+2.5
VRI	Vrincioaia	7.53	34	⇑P		Pn	03 42 13.5	+4.6
VRI	Vrincioaia	7.53	34	P		Pn	03 42 13.5	+4.6
BSZH	Besenyszg	7.53	358	⇓P		Pn	03 42 11.8	+2.9
BSZH	Besenyszg	7.53	358	P		Pn	03 42 12.1	+3.2
CEY	Cerknica	7.54	324	⇑i/Pn		Pn	03 42 09.8	+0.7
MESR	Meseseni	7.55	12	⇑P		Pn	03 42 13.0	+3.8
SKDS	Skadamscina	7.59	322	⇑i/Pn		Pn	03 42 09.7	0.0
ODBI	Odobesti	7.59	36	⇑P		Pn	03 42 14.3	+4.6
TPGR	Topolog	7.65	46	⇓P		Pn	03 42 15.1	+4.6
CFR	Carcaliu	7.70	43	⇓P		Pn	03 42 14.6	+3.3
CFR	Carcaliu	7.70	43	P		Pn	03 42 14.5	+3.3
PANC	Panciu	7.72	36	⇓P		Pn	03 42 16.1	+4.7
LJU	Ljubljana	7.73	326	⇑i/Pn		Pn	03 42 12.2	+0.5
MPLH	Magyarpolny	7.75	344	P		Pn	03 42 13.6	+1.7
IZVR	Izvoarele	7.77	40	⇓P		Pn	03 42 16.8	+4.7
ARCR	ARCALIA	7.78	19	⇓P		Pn	03 42 16.5	+4.2
CSKK	Cskako	7.79	348	P		Pn	03 42 14.2	+1.7
BUD	Budapest	7.80	352	P		Pn	03 42 14.6	+2.0
BUD	Budapest	7.80	352	P		Pn	03 42 14.6	+2.0
AKAS	Kas	7.86	114			Pn	03 42 15.8	+2.2
ISP	Isparta	7.91	101	i P		Pn	03 42 14.8	+0.6
TATR	Tatarca	7.95	40	⇑P		Pn	03 42 18.9	+4.3
SCTR	Scanteiesti	7.97	40	⇑P		Pn	03 42 18.2	+3.3
GHRR		7.98	36	⇓P		Pn	03 42 18.7	+3.7
CASP	Castiglione de	8.00	295	Pn		Pn	03 42 16.4	+1.0
TESR	Tescani	8.01	31	⇑P		Pn	03 42 19.0	+3.5
EGYH	Egyhazaskeszo	8.02	343	P		Pn	03 42 18.0	+2.3
SOKA	Soboth	8.05	331	ePn		Pn	03 42 16.3	+0.2
	comp=Z,50nm,0.6s,SNR=30							
VARL	Varlezi	8.06	38	⇓P		Pn	03 42 20.8	+4.6
MDUB	Mudurnu	8.07	82	Pn		Pn	03 42 18.6	+2.1
TLCR		8.07	45	⇓P		Pn	03 42 19.9	+3.6
TLCR		8.07	45	P		Pn	03 42 19.9	+3.6
OBKA	Obir	8.10	328	⇑i/Pn		Pn	03 42 16.6	-0.2
OBKA	Obir	8.10	328	ePn		Pn	03 42 16.8	+0.1
	comp=Z,48nm,0.5s,SNR=25							
OBKA				eSn		Sn	03 43 49.1	+1.4
	comp=Z,62nm,0.5s							
VLDR	Vladesti	8.13	39	⇓P		Pn	03 42 21.0	+3.8
BMR	Baia Mare	8.15	13	⇓P		Pn	03 42 21.5	+4.1
BMR	Baia Mare	8.15	13	P		Pn	03 42 21.5	+4.1
PSZ	Piszkesteto	8.16	356	⇓P		Pn	03 42 21.1	+3.4
PSZ	Piszkesteto	8.16	356	Pn		Pn	03 42 19.4	+1.7
PSZ	Piszkesteto	8.16	356	P		Pn	03 42 19.4	+1.7
PSZ	Piszkesteto	8.16	356	P		Pn	03 42 20.0	+2.4
PSZ				S		Sn	03 43 48.1	-1.3
SRO	Srobarova	8.22	349	eP		Pn	03 42 21.2	+2.8
BIR	Birlad	8.23	36	⇑P		Pn	03 42 21.6	+3.1
BIR	Birlad	8.23	36	P		Pn	03 42 21.6	+3.1
KDZE	Karadeniz Ereo	8.32	76	⇓P		Pn	03 42 22.5	+2.8
ARSA	Arzberg	8.37	335	ePn		Pn	03 42 20.6	+0.2
	comp=Z,16nm,0.5s,SNR=16							
ARSA	Arzberg	8.37	335	⇑P		Pn	03 42 20.6	+0.2
SOP	Sopron	8.46	341	P		Pn	03 42 23.8	+2.2
SOP				pmax		pmax		
	comp=Z,44nm,1.0s							
SOP	Sopron	8.46	341	P		Pn	03 42 23.1	+1.5
TRPA	Tarpa	8.46	8	⇓P		Pn	03 42 25.6	+4.0
TRPA	Tarpa	8.46	8	P		Pn	03 42 25.2	+3.6
PRED	Cave del Predi	8.47	324			Pn	03 42 22.2	+0.4
BURAR	Bucovina Array	8.49	21	⇓P		Pn	03 42 27.4	+5.2
BURAR	Bucovina Array	8.49	21	Pn		Pn	03 42 24.7	+2.5
BURAR	Bucovina Array	8.49	21	P		Pn	03 42 24.7	+2.5
BUR08	Bucovina Ar. S	8.51	21			Pn	03 42 26.1	+3.6
ABAH	Abaujker	8.53	2	P		Pn	03 42 26.3	+3.7
PTCC	Patocco-Chiusa	8.53	323	⇓P		Pn	03 42 22.8	+0.1
RONA	Rosalia, Austr	8.54	340	ePn		Pn	03 42 23.1	+0.3
	comp=Z,34nm,0.9s,SNR=11							
MYKA	Terra Mystica	8.58	325	ePn		Pn	03 42 23.4	+0.1
	comp=Z,7.8nm,0.3s,SNR=9.7							
LEOM	Leova	8.67	37	⇓P		Pn	03 42 28.1	+3.5
LEOM	Leova	8.67	37	P		Pn	03 42 28.0	+3.5
KECS	Kecovo	8.71	359	eP		Pn	03 42 28.7	+3.6
STAL	STALIGIAL	8.73	321			Pn	03 42 25.1	-0.3
CLUD	Cludinico	8.79	322	Pn		Pn	03 42 25.7	-0.5
ZST	Bratislava	8.81	344	eP		Pn	03 42 28.4	+1.9
ZST				MLR		MLR		
	comp=Z,5μm,3.5s							
VYHS	Vyhne	8.82	352	eP		Pn	03 42 29.0	+2.4
VYHS				e			03 44 04.4	
VLC	Villacollemand	8.85	303			Pn	03 42 26.9	-0.1
VLC	Villacollemand	8.85	303	⇑P		Pn	03 42 27.4	+0.5
CONA	Conrad Observa	8.87	338	ePn		Pn	03 42 27.4	+0.1
	comp=Z,2.2nm,0.3s							
UZH	Uzhgorod	8.93	7	⇑i P		Pn	03 42 31.0	+2.9
UZH				eS		Sn	03 44 17.3	+9.3
UZH				MLR		MLR		
	comp=N,430nm,14.0s							
UZH				MLR		MLR		
	comp=E,350nm,14.0s							
UZH				MLR		MLR		
	comp=Z,250nm,14.0s							
MODS	Modra-Piesok	8.95	345	eP		Pn	03 42 29.8	+1.5
MODS				MLR		MLR		
	comp=Z,3μm,4.3s							
SLUM	Salum	9.04	155	P		Pn	03 42 28.2	-1.4
	baz=157							
KBA	Koelnbreinsper	9.05	326	P		Pn	03 42 30.0	+0.1
KBA	Koelnbreinsper	9.05	326	i Pn		Pn	03 42 30.0	+0.1
	comp=Z,19nm,0.5s,SNR=19							
KBA	Koelnbreinsper	9.05	326	⇓P		Pn	03 42 30.3	+0.4
CRVS	Cervenica-Dubn	9.14	3	eP		Pn	03 42 35.0	+4.0
ABTA	Abfaltersbach	9.18	322	ePn		Pn	03 42 31.7	+0.1
	comp=Z,21nm,0.4s,SNR=17							
KOLS	Kolonicke sedl	9.23	6	eP		Pn	03 42 37.3	+5.1
PGF	Pioggiola	9.26	291	ePn		Pn	03 42 33.7	+1.0
PGF				eSn		Sn	03 44 06.7	-10
	comp=Z,85nm,1.3s							
PGF	Pioggiola	9.26	291	P		Pn	03 42 35.1	+2.4
PGF				pmax		pmax		
	comp=Z,51nm,0.9s							
MILM	Milestii Mici	9.26	37	⇓P		Pn	03 42 37.4	+4.8
MILM	Milestii Mici	9.26	37	⇑i P		Pn	03 42 36.0	+3.4
	comp=Z,105nm,1.1s							
MILM	Milestii Mici	9.26	37	ePP		Pn	03 42 44.0	+11
MILM				eS		Sn	03 44 23.0	+6.8
MILM				eL		L	03 45 59.0	
MILM				LqM			03 46 23.0	
	comp=Z,3μm,13.0s							
MILM				LRM		MLR	03 47 07.0	
	comp=Z,3μm,12.0s							
MILM	Milestii Mici	9.26	37	c i P		Pn	03 42 36.0	+3.4
MILM				eS		Sn	03 44 23.0	+6.8
MILM				pmax		pmax		
	comp=Z,110nm,1.2s							
MILM				MLR		MLR		
	comp=Z,3μm,12.0s							
MILM				MLR		MLR		
	comp=E,2μm,10.0s							
ANTO	Ankara	9.30	86	⇓P		Pn	03 42 36.4	+3.1
ANTO	Ankara	9.30	86	Pn		Pn	03 42 35.2	+1.9
ANTO	Ankara	9.30	86	P		Pn	03 42 35.2	+1.9
MOA	Molln	9.32	332	ePn		Pn	03 42 34.0	+0.6
	comp=E,13nm,0.2s,SNR=17							
MOA				eSn		Sn	03 44 19.1	+1.5
	comp=E,29nm,0.6s							
KIS	Kishinev	9.32	37	⇑i P		Pn	03 42 37.0	+3.5
	comp=E,20nm,0.4s							
KIS	Kishinev	9.32	37	ePP		Pn	03 42 46.0	+13
KIS				eL		L	03 46 01.0	
KIS				LRM		MLR	03 47 04.0	
	comp=E,1μm,12.0s							
KIS	Kishinev	9.32	37	eP		Pn	03 42 37.0	+3.5
KIS				e			03 44 22.0	
KIS				pmax		pmax		
	comp=Z,20nm,0.4s							
KIS				MLR		MLR		
	comp=E,1μm,12.0s							
KIS				MLR		MLR		
	comp=Z,1μm,12.0s							
JAVC	Velka Javorina	9.34	348	ePG		Pn	03 42 35.6	+1.8
BIOA	Bad Ischl, Aus	9.42	329	ePn		Pn	03 42 35.4	+0.6
	comp=Z,40nm,0.6s,SNR=43							
MSSA	Maissana	9.48	302	Pn		Pn	03 42 35.8	+0.1
SALO	Salr	9.50	311	Pn		Pn	03 42 35.7	-0.3
SALO	Salr	9.50	311	⇓P		Pn	03 42 35.6	-0.3
STHS	Stebnicka Huta	9.65	2	eP		Pn	03 42 43.7	+5.7
KRUC	Moravsky	9.79	343	ePG		Pn	03 42 40.4	+0.6
MAUC	Maruska	9.81	349	ePN		Pn	03 42 42.0	+1.8
MAUC				AMS		AMS	03 47 30.0	
	comp=Z,5μm,14.7s							
KEST	Kesra	9.86	249	Pn		Pn	03 42 41.9	+1.0
	comp=Z,1.5nm,0.3s,baz=36,slow=4.6,SNR=30							
KEST				Sn		Sn	03 44 27.5	-3.5
	baz=47,slow=19							
	comp=Z,31nm,0.9s							
KEST	Kesra	9.86	249	Pn		Pn	03 42 41.5	+0.6
MATC	Matruh	9.94	146	P		Pn	03 42 39.8	-2.2
	baz=148							
MATC				S		Sn	03 44 23.9	-9.1
	baz=148							
BR131	Keskin Array S	9.96	86			Pn	03 42 45.8	+3.4
BR131	Keskin Array S	9.96	86	P		Pn	03 42 45.8	+3.4
BRTR	Keskin Array B	9.96	86	Pn		Pn	03 42 44.8	+2.4
	comp=Z,0.9nm,0.3s,baz=270,slow=12,SNR=26							
BRTR				Sn		Sn	03 44 33.9	+0.2
	comp=Z,0.1nm,0.3s,baz=268,slow=23,SNR=0.7							
	comp=Z,3.1nm,0.5s							
BRTR	Keskin Array B	9.96	86	Pn		Pn	03 42 45.6	+3.2
BRTR	Keskin Array B	9.96	86	P		Pn	03 42 45.6	+3.2
WTTA	Wattenberg	9.97	322	P		Pn	03 42 43.2	+0.7
WTTA	Wattenberg	9.97	322	ePn		Pn	03 42 43.0	+0.5
	comp=Z,22nm,0.3s,SNR=34							
WTTA				eSn		Sn	03 44 31.0	-2.8
	comp=Z,38nm,0.6s							
VRAC	Vranov	9.97	344	⇓P		Pn	03 42 44.0	+1.6
VRAC	Vranov	9.97	344	Pn		Pn	03 42 43.4	+1.0
	comp=Z,0.6nm,0.3s,baz=183,slow=14,SNR=14							
	comp=Z,9.4nm,0.8s							
VRAC	Vranov	9.97	344	ePG		Pn	03 42 43.1	+0.7
WATA	Walderalm	10.05	322	ePn		Pn	03 42 44.4	+0.9
	comp=Z,32nm,0.3s,SNR=50							
WATA				eSn		Sn	03 44 33.1	-2.6
	comp=Z,105nm,1.2s							
CKRC	Cesky Krumlov	10.14	335	ePN		Pn	03 42 44.8	+0.2
SQTA	Sankt Quirin	10.14	320	i Pn		Pn	03 42 46.1	+1.3
	comp=Z,22nm,0.3s,SNR=30							
TREC	Trest	10.22	340	eP		Pn	03 42 46.8	+1.0
TREC				MLR		MLR		
	comp=Z,4μm,12.0s							
TREC	Trest	10.22	340	ePN		Pn	03 42 46.8	+1.0
TREC				AMS		AMS	03 47 10.0	
	comp=Z,4μm,12.0s							
OKC	Ostrava-Krasne	10.23	351	AMS		AMS	03 47 10.0	
	comp=Z,2μm,11.4s							
FETA	Feichten	10.25	318	ePn		Pn	03 42 47.1	+0.8
	comp=Z,15nm,0.7s,SNR=11							
MORC	Moravsky Berou	10.25	348	⇑P		Pn	03 42 48.7	+2.4
MORC	Moravsky Berou	10.25	348	ePG		Pn	03 42 47.1	+0.9
MOTA	Moosalm	10.28	321	ePn		Pn	03 42 47.2	+0.5
	comp=Z,101nm,1.0s,SNR=39							
MOTA				eSn		Sn	03 44 39.0	-2.5
	comp=Z,82nm,0.9s							
LVV	L'vov	10.32	12	eP		Pn	03 42 51.9	+4.8
LVV				eS		Sn	03 44 49.0	+6.9
LVV				pmax		pmax		
	comp=Z,140nm,1.4s							
LVV				MLR		MLR		
	comp=E,600nm,11.0s							
LVV				MLR		MLR		
	comp=N,900nm,10.0s							
LVV				MLR		MLR		
	comp=Z,1μm,11.0s							
GERES	GERESS Array B	10.36	333	Pn		Pn	03 42 48.0	+0.2
	comp=Z,2.4nm,0.3s,baz=160,slow=13,SNR=77							
GERES				Sn		Sn	03 44 39.8	-3.6
	comp=Z,0.5nm,0.3s,baz=153,slow=24,SNR=2.4							
	comp=Z,4.0nm,0.4s							
OJC	Ojcow	10.47	357	eP		Pn	03 42 49.6	+0.4
OJC	Ojcow	10.47	357	⇓P		Pn	03 42 50.2	+1.0
DAVOX	Davos/Dischmat	10.55	315	Pn		Pn	03 42 51.5	+1.1
	comp=Z,6.3nm,0.3s,baz=151,slow=15,SNR=71							
DAVOX				Sn		Sn	03 44 45.0	-3.0
	comp=Z,1.6nm,0.3s,baz=142,slow=18,SNR=1.6							
	comp=Z,43nm,0.6s							
RETA	Reutte	10.55	320	ePn		Pn	03 42 50.8	+0.5
	comp=Z,16nm,0.6s,SNR=7.7							
RETA				eSn		Sn	03 44 44.6	-3.3
	comp=Z,21nm,0.5s							
KHC	Kasperske Hory	10.65	334	Pn		Pn	03 42 51.7	+0.1
KHC	Kasperske Hory	10.65	334	eP		Pn	03 42 51.4	-0.2
KHC				e			03 44 49.2	
KHC	Kasperske Hory	10.65	334	ePN		Pn	03 42 51.4	-0.2
KHC				eSN		Sn	03 44 49.2	-1.1
KHC				AMS		AMS	03 47 30.0	
	comp=Z,5μm,35.1s							
KHC	Kasperske Hory	10.65	334	⇓P		Pn	03 42 51.7	+0.1
SAOF	Saorge	10.67	298	P		Pn	03 42 55.0	+3.0
SAOF				pmax		pmax		
	comp=Z,35nm,0.8s							
KRLC	Kraliky	10.67	346	eP		Pn	03 42 52.7	+0.8
KRLC				MLR		MLR		
	comp=Z,3μm,11.9s							
KRLC	Kraliky	10.67	346	ePN		Pn	03 42 52.7	+0.8
KRLC				AMS		AMS	03 47 40.0	
	comp=Z,3μm,11.9s							
SBF	Sospel	10.71	297	ePn		Pn	03 42 53.1	+0.5
SBF				eSn		Sn	03 44 41.4	-11
	comp=Z,17nm,0.6s							
SBF	Sospel	10.71	297	P		Pn	03 42 53.1	+0.5
MONC	Moncucco Torin	10.83	303	⇑P		Pn	03 42 55.4	+1.3
DAVA	Damuels	10.86	317	ePn		Pn	03 42 55.8	+1.1
	comp=Z,17nm,0.6s,SNR=9.5							
DAVA	Damuels	10.86	317	⇑P		Pn	03 42 56.1	+1.4
GOPC	GO Pecny, Ondr	10.97	340	eP		Pn	03 42 55.6	-0.5
GOPC				MLR		MLR		
	comp=Z,3μm,12.1s							
GOPC	GO Pecny, Ondr	10.97	340	ePN		Pn	03 42 55.6	-0.5
GOPC				AMS		AMS	03 47 30.0	
	comp=Z,3μm,12.1s							
DPC	Dobruska-Polom	11.02	345	eP		Pn	03 42 57.2	+0.5
DPC				MLR		MLR		
	comp=Z,4μm,11.3s							
DPC	Dobruska-Polom	11.02	345	ePN		Pn	03 42 57.2	+0.5
DPC				AMS		AMS	03 47 40.0	
	comp=Z,4μm,11.3s							
LLS	Linth-Limmern	11.07	314	P		Pn	03 42 58.7	+1.2
LLS				pmax		pmax		
	comp=Z,56nm,1.0s							
ISO	Isola	11.08	298	P		Pn	03 43 02.2	+4.6
ISO				pmax		pmax		
	comp=Z,24nm,0.9s							
PRU	Pruhonice	11.11	339	eP		Pn	03 42 58.3	+0.4
PRU				MLR		MLR		
	comp=Z,3μm,11.4s							
PRU	Pruhonice	11.11	339	ePN		Pn	03 42 58.3	+0.4
PRU				AMS		AMS	03 47 40.0	
	comp=Z,3μm,11.4s							
CSS	Mathiatis	11.13	112	Pn		Pn	03 42 59.8	+1.5
PZZ	Stroppo	11.14	300	P		Pn	03 43 00.8	+2.3
PZZ				pmax		pmax		
	comp=Z,26nm,0.5s							
SIM	Simferopol'	11.19	58	eP		Pn	03 42 59.9	+0.9
SIM				pmax		pmax		
	comp=Z,39nm,1.2s							
SIM				MLR		MLR		
	comp=Z,540nm,16.5s							
SWA2		11.21	158	P		Pn	03 42 57.1	-2.2
	baz=160							
SWA2				S		Sn	03 44 52.9	-11
	baz=160							
LMR	La Mourre	11.22	293	ePn		Pn	03 43 00.3	+0.9
LMR				eSn		Sn	03 44 54.7	-9.5
	comp=Z,12nm,1.0s							
LMR	La Mourre	11.22	293	eP		Pn	03 43 01.4	+2.0
LMR				pmax		pmax		
	comp=Z,8.0nm,0.6s							
UPC	Upice	11.23	344	eP		Pn	03 43 00.8	+1.2
UPC				MLR		MLR		
	comp=Z,3μm,12.8s							
UPC	Upice	11.23	344	ePN		Pn	03 43 00.8	+1.2
UPC				AMS		AMS	03 47 50.0	
	comp=Z,3μm,12.8s							
OSTC	Ostas	11.24	345	ePN		Pn	03 43 00.7	+1.0
OSTC				AMS		AMS	03 47 50.0	
	comp=Z,3μm,11.8s							
MMK	Mattmark	11.25	308	P		Pn	03 43 02.8	+2.7
MMK				pmax		pmax		
	comp=Z,27nm,0.9s							
CHVC	Chvalec	11.30	345	ePN		Pn	03 43 00.8	+0.3
CHVC				AMS		AMS	03 47 50.0	
	comp=Z,3μm,11.9s							
MBDF	Montbardon	11.45	300	ePn		Pn	03 43 04.6	+1.9
MBDF				eSn		Sn	03 44 56.3	-14
	comp=Z,56nm,0.9s							
MBDF	Montbardon	11.45	300	eP		Pn	03 43 01.3	-1.4
MBDF				pmax		pmax		
	comp=Z,22nm,0.8s							
KSP	Ksiaz	11.50	346	eP		Pn	03 43 04.0	+0.8
LSD	Lago del Serru	11.50	304	P		Pn	03 43 08.0	+4.5
LSD				pmax		pmax		
	comp=Z,22nm,0.7s							
PVCC	Panska Ves	11.59	340	eP		Pn	03 43 04.5	0.0
PVCC				MLR		MLR		
	comp=Z,3μm,11.1s							
PVCC	Panska Ves	11.59	340	ePN		Pn	03 43 04.5	0.0
PVCC				AMS		AMS	03 48 00.0	
	comp=Z,3μm,11.1s							
ZUR	Degenried	11.61	315	P		Pn	03 43 05.3	+0.5
ZUR				pmax		pmax		
	comp=Z,41nm,1.1s							
BNI	Bardonecchia	11.63	302	⇑P		Pn	03 43 06.1	+0.9
LPG	La Plagne	11.76	304	ePn		Pn	03 43 06.3	-0.8
LPG				eSn		Sn	03 45 03.2	-15
	comp=Z,59nm,0.8s							
LPG	La Plagne	11.76	304	eP		Pn	03 43 05.6	-1.5
LPG				pmax		pmax		
	comp=Z,20nm,0.5s							
LPL	La Plagne	11.78	304	ePn		Pn	03 43 06.6	-0.7
LPL				eSn		Sn	03 45 03.9	-14
	comp=Z,34nm,0.4s							
LPL	La Plagne	11.78	304	eP		Pn	03 43 05.9	-1.4
LPL				pmax		pmax		
	comp=Z,14nm,0.4s							
SLE	Schleitheim	11.90	316	P		Pn	03 43 09.5	+0.8
SLE				pmax		pmax		
	comp=Z,24nm,0.6s							
RSL	Roselend	11.92	304	P		Pn	03 43 11.9	+2.8
RSL				pmax		pmax		
	comp=Z,56nm,1.0s							
NKC	Novy Kostel	11.97	334	eP		Pn	03 43 08.7	-1.0
NKC				MLR		MLR		
	comp=Z,3μm,20.5s							
NKC	Novy Kostel	11.97	334	ePN		Pn	03 43 08.7	-1.0
NKC				AMS		AMS	03 48 10.0	
	comp=Z,3μm,20.5s							
GRFO	Grafenberg	11.98	329			Pn	03 43 10.5	+0.6
GRFO	Grafenberg	11.98	329	P		Pn	03 43 10.5	+0.6
SMRF	Simiane la Rot	12.03	295	ePn		Pn	03 43 12.2	+1.6
SMRF				eSn		Sn	03 45 12.5	-12
	comp=Z,94nm,1.7s							
BEL	Belsk	12.07	0	eP		P	03 43 24.3	+0.6
TOKA	Tokat	12.11	82			Pn	03 43 12.7	+1.1
ORIF	Oris-en-Rattie	12.11	300	ePn		Pn	03 43 11.7	0.0
ORIF				eSn		Sn	03 45 13.1	-13
	comp=Z,4.5nm,0.3s							
ORIF	Oris-en-Rattie	12.11	300	eP		Pn	03 43 12.3	+0.6
ORIF				pmax		pmax		
	comp=Z,8.0nm,0.5s							
STU	Stuttgart	12.19	321			Pn	03 43 11.7	-1.0
STU	Stuttgart	12.19	321	P		Pn	03 43 11.7	-1.0
BFO	Black Forest	12.33	318	Pn		Pn	03 43 13.4	-1.3
BFO	Black Forest	12.33

comp=Z,3.6nm,0.3s,baz=306,slow=11,SNR=11
MMAI Sn **Sn** 03 45 56.8 -6.3
comp=Z,2.3nm,0.3s,baz=291,slow=12,SNR=2.1
comp=Z,5.5nm,0.5s
GEM Giv'at Ha'Em 13.69 114 Pn **Pn** 03 43 33.4 +0.1
NATI Neve Ativ 13.72 114 Pn **Pn** 03 43 34.6 +1.0
SLTI Sal'it 13.81 119 Pn **Pn** 03 43 34.3 -0.7
PAGF Fort de Pagny 13.86 314 *e*Pn **Pn** 03 43 34.8 -0.7
PAGF *e*Sn Sn 03 45 53.5 -15
comp=Z,12nm,0.6s
SUZ Suez 14.04 131 P **Pn** 03 43 36.2 -1.8
baz=133
SFTF Sexfontaines 14.06 312 *e*Pn **Pn** 03 43 37.2 -1.0
baz=130
SFTF *e*Sn Sn 03 45 58.6 -15
comp=Z,5.2nm,0.4s
SMF Signal de Mont 14.07 305 *e*Pn **Pn** 03 43 36.6 -1.8
SMF *e*Sn Sn 03 45 58.4 -16
comp=Z,32nm,0.7s
SMF Signal de Mont 14.07 305 *e*P **Pn** 03 43 36.6 -1.8
SMF pmax pmax
comp=Z,10.0nm,0.5s
HFRF Wahat Farafira 14.09 151 P **Pn** 03 43 35.0 -3.8
baz=153
NBNS Bani Suef 14.14 139 P **Pn** 03 43 37.1 -2.4
baz=140
MEZF Maizieres J'vi 14.21 313 *e*Pn **Pn** 03 43 38.7 -1.6
MEZF *e*Sn Sn 03 46 03.9 -13
comp=Z,3.5nm,0.5s
SAVF Savonnieres en 14.23 314 *e*Pn **Pn** 03 43 40.4 -0.1
SAVF *e*Sn Sn 03 46 03.5 -14
comp=Z,8.8nm,0.8s
WLF Walferdange 14.29 319 Pn **Pn** 03 43 41.5 +0.2
WLF Walferdange 14.29 319 P **Pn** 03 43 41.5 +0.2
WLF Walferdange 14.29 319 *d*P **Pn** 03 43 44.0 +2.7
MTLF Montolieu 14.29 290 *e*P **P** 03 43 47.5 -1.0
MTLF *e*Sn Sn 03 46 06.2 -13
comp=Z,1.3nm,0.5s
LOR Lormes 14.32 307 *e*Pn **Pn** 03 43 41.7 -0.1
baz=120
LOR *e*Sn Sn 03 46 03.4 -17
comp=Z,36nm,0.6s
LOR Lormes 14.32 307 P **Pn** 03 43 41.7 -0.1
YTIR Yattir 14.41 121 Pn **Pn** 03 43 40.5 -2.7
AVF Avril sur Loir 14.44 305 *e*Pn **Pn** 03 43 41.2 -2.2
AVF *e*Sn Sn 03 46 07.3 -16
comp=Z,2.7nm,0.4s
AVF Avril sur Loir 14.44 305 P **Pn** 03 43 41.2 -2.2
SSF Saint Saulge 14.45 306 *e*Pn **Pn** 03 43 41.2 -2.4
SSF *e*Sn Sn 03 46 05.9 -17
comp=Z,27nm,0.7s
BGF Bois d'Agland 14.68 303 *e*Pn **Pn** 03 43 45.9 -0.8
BGF *e*Sn Sn 03 46 12.8 -16
comp=Z,9.0nm,0.3s
BGF Bois d'Agland 14.68 303 P **Pn** 03 43 45.9 -0.8
CAF Calviac 14.71 297 *e*Pn **Pn** 03 43 48.7 +1.6
CAF Calviac 14.71 297 *e*P **P** 03 43 50.2 -2.9
CAF pmax pmax
comp=Z,73nm,1.8s
SOC Sochi 14.71 69 *e*P **Pn** 03 43 47.0 -0.1
SOC *e* 03 46 30.2
SOC MLR MLR
comp=Z,156nm,14.0s
TAMRE El Minia 14.74 142 P **Pn** 03 43 45.3 -2.3
baz=144
GHAJ Ghor Haditha 14.74 120 Pn **Pn** 03 43 48.1 +0.5
KLNR Kaliningrad 14.84 359 *i* P **Pn** 03 43 48.4 -0.4
BTNL Ternell 14.89 321 *d*P **Pn** 03 43 49.7 +0.2
BTNL *d*PP **PnPn** 03 43 57.4 -0.1
BTNL *dx* x 03 44 03.5
MEM Membach 14.96 321 *d*P **Pn** 03 43 51.3 +0.8
MEM *d*PP **PnPn** 03 43 58.4 -0.1
MEM *dx* x 03 44 07.6
ZFRI Zfri 14.97 123 Pn **Pn** 03 43 49.3 -1.4
KRMI Paran Flat 14.98 126 Pn **Pn** 03 43 47.0 -3.9
PRNI Paran 15.00 124 Pn **Pn** 03 43 48.7 -2.4
TCF Toulx Ste Croi 15.00 302 *e*Pn **Pn** 03 43 50.9 -0.1
TCF *e*Sn Sn 03 46 20.3 -16
comp=Z,2.6nm,0.4s
TCF Toulx Ste Croi 15.00 302 P **Pn** 03 43 50.9 -0.1
RCHB Rochefort 15.06 319 *d*P **Pn** 03 43 52.2 +0.4
RCHB *d*PP **PnPn** 03 43 58.9 -0.9
HYF Humbligny 15.08 306 *e*Pn **Pn** 03 43 51.7 -0.3
HYF *e*Sn Sn 03 46 22.7 -16
ASF Jabal al Asfar 15.13 115 Pn **Pn** 03 43 54.3 +1.4
comp=Z,1.2nm,0.3s,baz=295,slow=7.4,SNR=8.5
ASF Sn **Sn** 03 46 35.0 -5.0
comp=Z,0.1nm,0.3s,baz=308,slow=19,SNR=1.2
comp=Z,4.1nm,0.8s
BSTI Sart Tilman 15.16 320 *d*PP **P** 03 44 00.8 +2.7
BSTI *dx* x 03 44 09.5
RJF Les Rejaudoux 15.18 298 *e*Pn **P** 03 43 56.3 -2.0
RJF *e*Sn Sn 03 46 27.1 -14
comp=Z,1.6nm,0.5s
BCLA Clavier 15.19 320 *d*P **Pn** 03 43 52.2 -1.3
BCLA *d*PP **PnPn** 03 44 00.1 -1.4
KOPT Kop Dagi 15.20 83 **Pn** 03 43 56.3 +2.3
GRB Gharib 15.21 135 P **Pn** 03 43 49.7 -4.2
baz=137
HRFI Mount Harif 15.23 125 Pn **Pn** 03 43 52.2 -2.0
GIVF Givet 15.24 318 *e*Pn **Pn** 03 43 54.6 +0.5
BGES Gesves 15.27 319 *d*PP **P** 03 44 03.0 +3.6
ASUT 15.29 141 P **Pn** 03 43 52.1 -2.8
baz=142
MBRI Mt Berech 15.32 126 Pn **Pn** 03 43 52.5 -3.0
MBRI Sn **Sn** 03 46 35.1 -10
DOU Dourbes 15.35 318 *dx* **Pn** 03 43 58.1 +2.5
DOU *d*PP **PnPn** 03 44 02.4 -1.4
BMRD Maredsous 15.39 318 *dx* **Pn** 03 43 59.0 +2.9
BMRD *d*PP **PnPn** 03 44 02.5 -1.7
EIL Elat 15.43 126 Pn **Pn** 03 43 54.2 -2.6
comp=Z,1.8nm,0.3s,baz=266,slow=2.0,SNR=15
EIL Sn Sn 03 46 34.4 -13
comp=Z,2.3nm,0.3s,baz=94,slow=18,SNR=2.5
EIL Elat 15.43 126 Pn **Pn** 03 43 54.1 -2.7
MNK Minsk 15.51 16 *i* P **Pn** 03 43 58.2 +0.5
MNK *i* S **Sn** 03 46 50.2 +1.4
MNK pmax pmax
comp=N,115nm,1.2s
MNK pmax pmax
comp=E,8.0nm,1.2s
MNK pmax pmax
comp=Z,101nm,0.7s
MNK MLR MLR
comp=E,135nm,11.0s
MNK MLR MLR
comp=Z,1μm,15.0s
MNK MLR MLR
comp=N,682nm,16.0s
MNK Minsk 15.51 16 *i* P **Pn** 03 43 58.2 +0.5
comp=E,8.0nm,1.2s
MNK *i* P **Pn** 03 43 58.2 +0.5
comp=N,115nm,1.2s
MNK *i* P **Pn** 03 43 58.2 +0.5
comp=Z,101nm,0.7s,baz=202
MNK *i* PP **pP** 03 44 06.8 -1.0
MNK *i* S **Sn** 03 46 50.2 +1.4
MNK *i* SS **S** 03 47 04.0 -0.3
MNK *i* LQ LQ 03 48 34.4
MNK *i* LR LR 03 49 28.1
MNK *i* LRM MLR 03 50 10.8
comp=E,135nm,10.9s
MNK *i* LRM MLR 03 50 14.0
comp=Z,1μm,14.6s
MNK *i* LRM MLR 03 50 18.1
comp=N,682nm,16.3s
BAIF Baives 15.53 317 *e*Pn **Pn** 03 43 59.4 +1.4
BAIF *e*Sn Sn 03 46 33.5 -16
comp=N,2.2nm,0.4s
BAIF Baives 15.53 317 P **Pn** 03 43 59.4 +1.4
CLF Chambon-Foret 15.62 308 IAmb IAmb 03 44 07.7
comp=Z,130nm,1.3s
CLF Chambon-Foret 15.62 308 ⇑P **P** 03 44 01.6 -1.5
HBST Basata 15.62 128 P **Pn** 03 43 56.2 -3.0
baz=130
EPF Esparros 15.62 289 *e*Pn **P** 03 44 02.3 -1.0
LFF La Frestale 15.62 296 *e*Pn **Pn** 03 43 59.2 0.0
TR2 Tor 2 15.64 133 P **Pn** 03 43 55.0 -4.5
baz=134
NACGM Naroch 15.68 13 *e*P **Pn** 03 44 00.5 +0.7
HKAT Jabal Katrina 15.69 132 P **Pn** 03 43 56.1 -4.3
baz=133
NUB Nuweibaa 15.71 129 P **Pn** 03 43 57.8 -2.5
baz=130
SNF Seneffe 15.76 318 *d*PP **P** 03 44 06.8 +2.1
SNF *dx* x 03 44 17.9
PABE Paberze 15.89 7 Pn **Pn** 03 44 03.2 +0.6
PABE IAmb IAmb 03 44 13.4
comp=Z,154nm,0.9s
PABE Paberze 15.89 7 *e*P **Pn** 03 44 03.6 +1.1
HDK1 Dakhla 15.95 150 P **Pn** 03 44 01.0 -2.6
baz=152
IIGN Ignalina 16.02 11 *e*P **Pn** 03 44 05.7 +1.5
TR1 Tor 1 16.06 133 P **Pn** 03 44 00.9 -4.0
baz=134
ISAL Salakas 16.21 11 *e*P **Pn** 03 44 08.0 +1.2
ETSF Etsaut 16.27 288 *e*Pn **P** 03 44 09.2 -1.3
ETSF Etsaut 16.27 288 *e*P **P** 03 44 13.4 +2.9
ETSF Etsaut 16.27 288 *e*P **Pn** 03 44 08.9 +1.3
ETSF pmax pmax
comp=Z,17nm,0.7s
PBUR Paburge 16.28 2 *e*P **P** 03 44 10.2 -0.3
VSVD Vaisvydziai 16.36 6 *e*P **Pn** 03 44 09.4 +0.8
AKRG Al Kharijah 16.43 147 P **Pn** 03 44 06.5 -3.1
baz=149
GTR Jabal at Tayr 16.45 147 P **Pn** 03 44 08.8 -1.1
baz=149
HHRG Al Ghardaqah 16.46 136 P **Pn** 03 44 08.4 -1.7
baz=137
LUNU Lund 16.59 345 *i* P **P** 03 44 19.1 +5.3
MFF Saint Martin d 16.64 301 *e*Pn **P** 03 44 14.2 -0.4
MFF *e*Sn Sn 03 47 01.5 -15
comp=Z,1.8nm,0.7s
MFF Saint Martin d 16.64 301 *e*P **P** 03 44 14.6 0.0
MFF pmax pmax
comp=Z,31nm,1.2s
SJPF Ste Jean 16.77 289 *e*Pn **P** 03 44 15.2 -0.8
SJPF *e*Sn Sn 03 47 06.0 -14
comp=Z,0.4nm,0.2s
SJPF Ste Jean 16.77 289 *e*P **P** 03 44 16.8 +0.8
SJPF pmax pmax
comp=Z,51nm,1.3s
SHA1 Shidzhatmaz 16.84 69 *i* P **P** 03 44 18.1 +1.0
NEY Neytrino 16.84 71 *i* P **Pn** 03 44 13.5 -1.5
BLEU Blekinge 16.86 351 *i* P **P** 03 44 18.1 +1.3
KIV Kislovodsk 16.89 69 P **P** 03 44 18.4 +1.0
KIV Kislovodsk 16.89 69 *e*P **P** 03 44 18.8 +1.4
KIV *e*S **Sn** 03 47 27.0 +4.5
KIV pmax pmax
comp=Z,31nm,1.1s
KIV MLR MLR
comp=Z,103nm,13.0s
KIV Kislovodsk 16.89 69 P **P** 03 44 20.1 +2.7
KIV Kislovodsk 16.89 69 ⇑P **P** 03 44 19.9 +2.5
KVAR Kislovodsk Arr 16.89 69 Pn **P** 03 44 18.3 +0.8
comp=Z,5.2nm,1.0s,baz=255,slow=19,SNR=2.3
KBZ Khabaz 17.01 69 P **P** 03 44 19.8 +1.1
comp=Z,0.5nm,0.3s,baz=265,slow=9.7,SNR=15
comp=Z,4.9nm,0.7s
KBZ Khabaz 17.01 69 *ce*P **P** 03 44 18.7 0.0
BJUU Bjuv 17.09 345 *i* P **P** 03 44 25.0 +5.7
VSR Storozhevoye 17.22 42 *e*P **P** 03 44 20.7 -0.2
VSR pmax pmax
comp=Z,80nm,1.1s
VSR MLR MLR
comp=Z,2μm,13.0s
GOF Gofitskoye 17.30 65 ⇑*e*P **P** 03 44 24.7 +2.8
LDF La Druitiere 17.30 307 *e*Pn **Pn** 03 44 20.9 +0.4
LDF *e*Sn Sn 03 47 15.4 -17
comp=Z,6.2nm,0.5s
DEL Delary 17.31 347 *i* P **P** 03 44 23.2 +1.4
DEL IAmb IAmb 03 44 33.2
comp=Z,47nm,1.1s
ONI Oni 17.35 73 Pn **Pn** 03 44 20.3 -0.9
ONI Oni 17.35 73 P **Pn** 03 44 20.3 -0.9
ONI pmax pmax
comp=Z,46nm,1.4s
VORR Voronezh 17.50 41 *e*P **P** 03 44 24.6 +0.6
VORR pmax pmax
comp=Z,62nm,1.3s
FLN La Foliniere 17.59 308 *e*Pn **P** 03 44 25.0 0.0
FLN *e*Sn Sn 03 47 22.7 -17
comp=Z,0.2nm,0.2s
FLN La Foliniere 17.59 308 P **P** 03 44 25.2 +0.2
GRR Gorron 17.68 306 *e*Pn **P** 03 44 27.2 +1.2
GRR *e*Sn Sn 03 47 22.7 -19
comp=Z,3.4nm,0.4s
GRR Gorron 17.68 306 *e*P **P** 03 44 25.9 -0.1
GRR pmax pmax
comp=Z,162nm,1.7s
LPSR Galich'ya Gora 17.93 38 *e*P **P** 03 44 28.7 0.0
LPSR pmax pmax
comp=Z,80nm,0.9s
LPSR MLR MLR
comp=Z,600nm,14.0s
GNI Garni 18.42 81 P **Pn** 03 44 35.8 +1.3
comp=Z,25nm,1.1s,baz=188,slow=0.9,SNR=16
GNI Garni 18.42 81 P **Pn** 03 44 35.9 +1.4
GNI Garni 18.42 81 *ce*P **Pn** 03 44 36.8 +2.2
GNI pmax pmax
comp=Z,74nm,1.7s
GNI Garni 18.42 81 P **Pn** 03 44 37.5 +2.9
GNI Garni 18.42 81 ⇓P **Pn** 03 44 37.5 +2.9
VRH Novokhopyorsk 18.57 45 *e*P **Pn** 03 44 37.9 +1.8
VRH pmax pmax
comp=Z,70nm,1.3s
VRH MLR MLR
comp=Z,1μm,13.0s
BORU Boraas 18.60 347 *i* P **Pn** 03 44 37.9 +1.5
OBN Obninsk 18.66 29 P **Pn** 03 44 37.0 0.0
comp=Z,1.2nm,0.3s,baz=210,slow=9.8,SNR=18
comp=Z,9.0nm,0.6s
OBN Obninsk 18.66 29 P **Pn** 03 44 37.0 0.0
OBN Obninsk 18.66 29 ⇓*i* P **Pn** 03 44 37.1 0.0
OBN *e*S **Sn** 03 47 59.8 -5.1
OBN pmax pmax
comp=Z,119nm,1.5s
OBN MLR MLR
comp=Z,2μm,18.0s
OBN Obninsk 18.66 29 ⇑P **Pn** 03 44 37.4 +0.3
SGMF Saint Gilles 18.70 305 *e*Pn **Pn** 03 44 42.0 +4.3
SGMF *e*Sn Sn 03 47 48.0 -18
comp=Z,1.2nm,0.2s
VIKU Vikbolandet 18.92 354 *e*P **Pn** 03 44 40.2 0.0
ESBB Sonseca Array 18.96 278 **P** 03 44 40.0 -0.2
ESDC Sonseca Array 18.97 278 P **Pn** 03 44 41.0 0.0
comp=Z,0.8nm,0.3s,baz=73,slow=11,SNR=96
comp=Z,14nm,1.0s
ESDC Sonseca Array 18.97 278 P **Pn** 03 44 40.9 -0.2
QUIF Quistinic 18.99 303 *e*Pn **Pn** 03 44 42.6 +1.4
QUIF *e*Sn **Sn** 03 48 08.1 -5.1
comp=Z,2.2nm,0.4s
QUIF Quistinic 18.99 303 *e*P **Pn** 03 44 42.0 +0.8
QUIF pmax pmax
comp=Z,45nm,1.0s
MTSE Matsula 19.07 5 *e*P **Pn** 03 44 41.9 -0.1
GROC Groznyy 19.09 71 *e*P **Pn** 03 44 43.5 +1.1
GROC S **S** 03 48 22.1 +5.0
GROC pmax pmax
comp=Z,27nm,0.5s
VSU Vasula 19.10 10 *c* *i*P **P** 03 44 42.0 +0.4
VSU pmax pmax
comp=Z,323nm,0.8s
VSU Vasula 19.10 10 *e*P **Pn** 03 44 42.3 -0.2
ROSF Rostrenen 19.18 304 *e*Pn **Pn** 03 44 45.0 +1.5
ROSF *e*Sn **Sn** 03 48 14.6 -3.3
comp=Z,4.0nm,0.5s
ROSF Rostrenen 19.18 304 *e*P **Pn** 03 44 43.2 -0.3
ROSF pmax pmax
comp=Z,563nm,2.5s
TJOU Tjoern 19.19 345 *i* P **Pn** 03 44 46.9 +3.3
PAB San Pablo 19.28 277 P **Pn** 03 44 44.6 -0.2
PAB IAmb IAmb 03 44 47.1
comp=Z,96nm,1.2s
PAB San Pablo 19.28 277 P **Pn** 03 44 44.6 -0.2
PAB pmax pmax
comp=Z,95nm,1.2s
PAB San Pablo 19.28 277 P **Pn** 03 44 45.4 +0.6
PAB San Pablo 19.28 277 ⇓P **Pn** 03 44 45.4 +0.6
FIGM Figuig 19.32 254 P **P** 03 44 45.0 +0.7
JBK JBK 19.33 261 P **Pn** 03 44 46.0 +0.4
MOS Moscow 19.52 30 *e*P **P** 03 44 45.1 -1.1
MOS *e*S **S** 03 48 22.1 -3.6
MOS pmax pmax
comp=Z,300nm,1.5s
MOS pmax pmax
comp=Z,182nm,1.4s
MOS MLR MLR
comp=E,1μm,15.0s
MOS MLR MLR
comp=Z,2μm,15.0s
MOS MLR MLR
comp=N,2μm,18.0s
PALE Palemas 20.05 265 P **P** 03 44 53.0 +0.8
UPP Uppsala 20.20 355 *e*P **P** 03 44 54.0 +0.5
STRU Stroemstad 20.21 346 *i* P **P** 03 44 54.6 +1.0
AKLM AKL 20.25 263 P Pn 03 44 56.0 -0.5
MAK Makhachkala 20.33 72 *e*P **P** 03 44 55.8 +0.7
MAK *e*S **S** 03 48 43.8 +1.7
MAK pmax pmax
comp=Z,198nm,0.8s
MAK MLR MLR
comp=Z,177nm,13.0s
MCH1 Michaelchurch 20.43 315 ⇑P **P** 03 44 56.8 +0.7
AAL Aland 20.43 359 *e*P **P** 03 44 55.8 -0.2
SNART Snartemo 20.51 339 *e*P **P** 03 44 57.6 +0.8
SNART IAmb IAmb 03 44 57.9
comp=Z,2μm,2.4s
SNART Snartemo 20.51 339 *i* P Pn 03 45 00.2 +1.1
MEF Metsahovi 20.60 5 *e*P **P** 03 44 57.5 -0.3
PBRG Braganca 20.85 284 *e*P **P** 03 45 01.9 +1.1
comp=Z,48nm,1.7s
PBRG *e*S Sn 03 49 06.4 +8.2
HFS Hagfors 20.85 350 P **P** 03 45 00.6 0.0
comp=Z,26nm,0.6s,baz=153,slow=10.0,SNR=65
comp=Z,26nm,0.6s
PUL Pulkovo 20.92 14 *ce*P **P** 03 45 01.7 +0.4
PUL pmax pmax
comp=Z,93nm,0.7s
KONO Kongsberg 21.10 344 P **P** 03 45 03.8 +0.6
KONO Kongsberg 21.10 344 *ce*P **P** 03 45 04.0 +0.8
KONO pmax pmax
comp=Z,51nm,1.0s
KONO Kongsberg 21.10 344 *e*P **P** 03 45 03.1 -0.1
KONO Kongsberg 21.10 344 ⇑P **P** 03 45 03.8 +0.6
MVO Moncorvo 21.12 283 *e*P **P** 03 45 04.2 +0.5
comp=Z,68nm,1.3s
MVO A A 03 56 37.1
comp=Z,230nm,20.0s
OSL Oslo 21.14 346 *e*P **P** 03 45 04.1 +0.4
OSL IAmb IAmb 03 45 14.9
comp=Z,78nm,0.9s
TAM Tamanrasset 21.27 222 P **P** 03 45 06.8 +1.2
TAM Tamanrasset 21.27 222 P **P** 03 45 06.8 +1.2
TAM pmax pmax
comp=Z,47nm,1.2s
TAM Tamanrasset 21.27 222 ⇑P **P** 03 45 07.4 +1.8
RAF Rauma 21.29 1 *e*P **P** 03 45 05.5 +0.3
MDT Midelt 21.51 259 P **P** 03 45 08.1 0.0
comp=Z,23nm,0.8s,baz=85,slow=12,SNR=36
comp=Z,23nm,0.8s
MDT Midelt 21.51 259 P **P** 03 45 08.9 +0.8
MTE Manteigas 21.59 281 *e*P **P** 03 45 09.4 +0.6
comp=Z,118nm,1.5s
MTE A A 03 54 13.7
comp=Z,462nm,16.0s
MTE Manteigas 21.59 281 P **P** 03 45 08.6 -0.2
MTE IAmb IAmb 03 45 11.1
comp=Z,108nm,1.3s
PBAR Barrancos 21.60 275 *e*P **P** 03 45 09.2 +0.4
comp=Z,153nm,2.0s
PBAR *e*S Sn 03 49 15.5 -0.7
PCBR Castelo Branco 21.62 279 *e*P **P** 03 45 10.1 +1.1
comp=Z,67nm,1.8s
PVRL Vila Real 21.62 283 *e*P **P** 03 45 10.6 +1.5
comp=Z,48nm,1.6s
PMRV Marv??o 21.62 278 *e*P **P** 03 45 09.8 +0.7
comp=Z,73nm,1.6s
PMRV A A 03 53 53.8
comp=Z,379nm,20.0s
BLS5 Blasjo 21.64 340 *e*P **P** 03 45 10.5 +1.4
BLS5 IAmb IAmb 03 45 12.9
comp=Z,95nm,1.3s
NC602 NORSAR Array S 21.75 348 *e*P **P** 03 45 09.9 -0.4
NC602 IAmb IAmb 03 45 19.8
comp=Z,112nm,0.9s
PVIS Viseu 21.82 282 *e*P **P** 03 45 10.9 -0.3
comp=Z,56nm,1.5s
PESTR Estremoz 21.88 277 *e*P **P** 03 45 11.8 0.0
comp=Z,38nm,1.8s
PESTR *e*S Sn 03 49 22.5 -0.3
PESTR Estremoz 21.88 277 P **P** 03 45 11.4 -0.5
PESTR Estremoz 21.88 277 ⇓P **P** 03 45 11.8 0.0
FINES FINESS Array B 21.95 7 P **P** 03 45 12.3 -0.1
comp=Z,28nm,0.8s,baz=173,slow=12,SNR=64
comp=Z,28nm,0.8s
FINES FINESS Array B 21.95 7 P **P** 03 45 11.9 -0.4
FIA1 FINESS Array S 21.95 7 P **P** 03 45 12.0 -0.3
FIA1 IAmb IAmb 03 45 25.1
comp=Z,74nm,0.8s
NAO01 NORSAR Array S 21.96 347 P **P** 03 45 11.6 -0.9
PGAV Gavieira, Arco 21.98 285 *e*P **P** 03 45 13.7 +0.7
comp=Z,106nm,1.7s
PGAV A A 03 56 59.8
comp=Z,211nm,18.0s
NB2 NORSAR Subarra 22.09 348 P **P** 03 45 13.6 -0.3
comp=Z,236nm,1.1s,baz=164,slow=11
NB2 NORSAR Subarra 22.09 348 P **P** 03 45 13.6 -0.3
baz=164,slow=11
NOA NORSAR Array B 22.09 348 P **P** 03 45 13.8 -0.1
comp=Z,47nm,1.0s,baz=165,slow=10,SNR=70
comp=Z,47nm,1.0s
EKA Eskdalemuir Ar 22.23 322 P **P** 03 45 15.5 0.0
comp=Z,23nm,0.7s,baz=123,slow=10,SNR=67
comp=Z,23nm,0.7s
ESK Eskdalemuir 22.25 322 P **P** 03 45 15.5 -0.1
ESK IAmb IAmb 03 45 30.0
comp=Z,69nm,0.8s
ESK Eskdalemuir 22.25 322 P **P** 03 45 15.5 -0.1
ESK pmax pmax
comp=Z,69nm,0.9s
ESK Eskdalemuir 22.25 322 ⇓P **P** 03 45 15.9 +0.3
EVO Evora 22.27 276 *e*P **P** 03 45 15.6 -0.4
comp=Z,33nm,2.1s
PBEJ Beja 22.27 275 *e*P **P** 03 45 16.0 0.0
comp=Z,87nm,1.4s
PVAQ Vaqueiros 22.31 273 *e*P **P** 03 45 15.9 -0.5
comp=Z,123nm,1.5s
PVAQ A A 03 50 12.3
comp=Z,156nm,18.0s
PVAQ Vaqueiros 22.31 273 P **P** 03 45 15.5 -1.0
PVAQ Vaqueiros 22.31 273 P **P** 03 45 16.4 -0.1
PVAQ Vaqueiros 22.31 273 ⇓P **P** 03 45 15.9 -0.5
SKAR Skarslia 22.31 344 *e*P **P** 03 45 16.6 +0.3
SKAR IAmb IAmb 03 45 26.2
comp=Z,213nm,1.8s
PMTG Montargil 22.32 278 *e*P **P** 03 45 15.7 -0.9
comp=Z,41nm,1.2s
PMTG *e*S **S** 03 49 23.7 +2.6
PCAS Casmilo, Conde 22.36 280 *e*P **P** 03 45 16.7 -0.3
comp=Z,95nm,1.5s
PCAS *e*S **S** 03 49 24.7 +2.8
PCVE Castro Verde 22.50 274 *e*P **P** 03 45 18.1 -0.4
comp=Z,63nm,1.5s
MESJ Messejana 22.59 274 *e*P **P** 03 45 18.9 -0.5
comp=Z,85nm,1.6s
MESJ Messejana 22.59 274 ⇑P **P** 03 45 19.0 -0.4
PSBE So Bento 22.68 279 *e*P **P** 03 45 20.8 +0.4
comp=Z,86nm,1.9s
BER Bergen 22.76 340 *e*P **P** 03 45 21.3 +0.3
BER IAmb IAmb 03 45 31.4
comp=Z,49nm,0.9s
PNCL Nicolau / Gran 22.76 275 *e*P **P** 03 45 20.8 -0.4
comp=Z,102nm,1.7s
PNCL *e*S **S** 03 49 32.2 +3.2
ASK Askoy 22.88 340 *e*P **P** 03 45 22.4 +0.1
ASK IAmb IAmb 03 45 32.5
comp=Z,115nm,1.1s
PTEO Sao Teotonio 23.05 274 *e*P **P** 03 45 24.2 0.0
comp=Z,103nm,1.3s
MORF Marmelete 23.05 273 *e*P **P** 03 45 23.8 -0.6
comp=Z,75nm,1.8s
PMAFR Mafra 23.15 278 *e*S **S** 03 49 40.2 +4.4
HYA Hoyanger 23.22 342 *e*P **P** 03 45 26.4 +0.6
HYA IAmb IAmb 03 45 35.5
comp=Z,65nm,1.0s
PFVI Vila Bisbo 23.23 273 *e*P **P** 03 45 25.9 -0.2
comp=Z,71nm,1.8s
PFVI *e*S **S** 03 49 39.8 +2.7
PFVI Vila Bisbo 23.23 273 P **P** 03 45 25.9 -0.2
PFVI IAmb IAmb 03 45 35.1
comp=Z,41nm,0.9s
DOMB Dombas 23.40 346 *e*P **P** 03 45 28.2 +0.6
DOMB IAmb IAmb 03 45 38.4
comp=Z,60nm,0.9s
AKN Aaknes 23.94 344 *e*P **P** 03 45 33.3 +0.6

AKN IAmb IAmb 03 45 35.0
comp=Z,45nm,1.1s
KLMR Klimovskoe 24.11 23 *e*P **P 03 45 34.3 -0.1**
KLMR S **S 03 49 48.5 -2.3**
KLMR pmax pmax
comp=Z,86nm,1.4s
KLMR MLR MLR
comp=Z,295nm,8.0s
KLMR Klimovskoe 24.11 23 *e*P **P 03 45 34.3 -0.1**
KLMR *e*P **P 03 45 34.3 -0.1**
KLMR *e*P **P 03 45 34.3 -0.1**
KLMR AMP 03 45 51.6
comp=Z,86nm,1.4s
KLMR S **S 03 49 48.5 -2.3**
KLMR S **S 03 49 48.5 -2.3**
KLMR LQ LQ 03 53 38.6
KLMR LQ LQ 03 53 38.6
KLMR LR LR 03 55 07.4
KLMR AMP 03 56 04.5
comp=Z,295nm,7.7s
TBLU Trondheim 24.33 349 *e*P **P 03 45 37.6 +1.3**
TBLU IAmb IAmb 03 45 47.1
comp=Z,91nm,1.0s
OUK Oukaimeden 24.70 259 P **P 03 45 43.0 +2.5**
NSS Namsos 25.32 351 *e*P **P 03 45 44.9 -0.4**
NSS IAmb IAmb 03 45 56.0
comp=Z,56nm,1.1s
TTIG Tnine Tigouga, 25.45 258 P **P 03 45 50.0 +3.0**
OUL Oulu 25.53 5 P **P 03 45 46.7 -0.5**
OUL pmax pmax
comp=Z,52nm,1.1s
KIRV Kirov 26.25 35 P **P 03 45 53.7 -0.1**
comp=Z,12nm,0.5s,baz=330,slow=1.4,SNR=2.0
comp=Z,12nm,0.5s
KIRV Kirov 26.25 35 *ce*P **P 03 45 53.0 -0.8**
RAYN Ar Rayn 26.48 120 P **P 03 45 57.3 +1.0**
RAYN Ar Rayn 26.48 120 P **P 03 45 57.3 +1.0**
RAYN pmax pmax
comp=Z,19nm,1.0s
RAYN Ar Rayn 26.48 120 P **P 03 45 56.5 +0.2**
MSF Maaselka 26.62 8 P **P 03 45 57.1 +0.1**
MSF pmax pmax
comp=Z,50nm,1.1s
PRGR Permogore 26.67 27 *e*P **P 03 45 56.6 -0.9**
PRGR pmax pmax
comp=Z,34nm,0.8s
MOR8 Moi Rana 26.69 354 *e*P **P 03 45 58.1 +0.4**
MOR8 IAmb IAmb 03 46 12.2
comp=Z,41nm,1.5s
FAUS Fauske 27.83 356 *e*P **P 03 46 07.7 -0.2**
FAUS IAmb IAmb 03 46 25.8
comp=Z,27nm,1.3s
SGF Sodankyl 27.91 5 P **P 03 46 08.6 0.0**
SGF pmax pmax
comp=Z,23nm,0.8s
AKTO Aktyubinsk 28.13 55 P **P 03 46 11.1 +0.2**
comp=Z,4.9nm,0.4s,baz=262,slow=10,SNR=12
comp=Z,4.9nm,0.4s
STEI Steigen 28.37 356 *e*P **P 03 46 12.5 -0.2**
STEI IAmb IAmb 03 46 13.6
comp=Z,29nm,1.1s
LOF Lofoten 28.68 354 *e*P **P 03 46 14.7 -0.8**
LOF IAmb IAmb 03 46 15.3
comp=Z,14nm,1.0s
APA Apatity 28.73 10⇓ *i*P P 03 46 10.0 -5.9
APA pmax pmax
comp=Z,8.0nm,1.4s
GEYT Alibeck 29.06 82 P **P 03 46 20.2 +1.0**
comp=Z,6.1nm,0.5s,baz=278,slow=10,SNR=16
GEYT PcP **PcP 03 49 26.8 -0.2**
comp=Z,2.0nm,0.5s,baz=276,slow=3.9,SNR=3.2
comp=Z,6.1nm,0.5s
GEYT Alibeck 29.06 82 P **P 03 46 20.2 +1.0**
GEYT IAmb IAmb 03 46 21.5
comp=Z,61nm,1.6s
GYA0 ALIBECK ARRAY 29.06 82 P **P 03 46 20.2 +1.0**
GYA0 pmax pmax
comp=Z,16nm,0.7s
GYA0B ALIBECK ARRAY 29.06 82 P **P 03 46 20.2 +0.9**
AB31 Akbulak array 29.25 58 *e*P **P 03 46 20.8 0.0**
ABKAR Akbulak array 29.25 58 P **P 03 46 20.8 0.0**
ABKAR Akbulak array 29.25 58⇓ P **P 03 46 21.1 +0.4**
KTK1 Kautokeino 29.33 2 *e*P **P 03 46 21.7 +0.5**
KTK1 IAmb IAmb 03 46 24.2
comp=Z,38nm,1.2s
ARU Arti 29.79 43 P **P 03 46 25.2 -0.3**
comp=Z,6.4nm,0.4s,baz=273,slow=12,SNR=10
comp=Z,6.4nm,0.4s
ARU Arti 29.79 43 P **P 03 46 25.2 -0.3**
ARU Arti 29.79 43 *ce*P **P 03 46 25.0 -0.4**
ARU pmax pmax
comp=Z,25nm,1.8s
JETT Jettan, Norway 29.85 360 *e*P **P 03 46 25.6 -0.3**
JETT IAmb IAmb 03 46 27.9
comp=Z,34nm,1.1s
ARA0 ARCESS Array S 29.93 3 *e*P **P 03 46 26.2 -0.4**
ARA0 IAmb IAmb 03 46 35.6
comp=Z,27nm,1.1s
ARCES ARCESS Array B 29.93 3 P **P 03 46 26.0 -0.6**
comp=Z,8.9nm,0.6s,baz=188,slow=9.6,SNR=62
comp=Z,8.9nm,0.6s
ARCES ARCESS Array B 29.93 3 P **P 03 46 26.3 -0.3**
ARCES ARCESS Array B 29.93 3 P **P 03 46 26.3 -0.3**
ARCES pmax pmax
comp=Z,106nm,2.0s
TRO Tromso 29.94 359 *e*P **P 03 46 26.5 -0.1**
TRO IAmb IAmb 03 46 28.9
comp=Z,39nm,1.2s
KEV Kevo 30.23 4 P **P 03 46 28.9 -0.3**
KEV pmax pmax
comp=Z,28nm,1.9s
HAMF Hammerfest 30.98 2 *e*P **P 03 46 35.9 +0.1**
HAMF IAmb IAmb 03 46 38.6
comp=Z,82nm,1.3s
SVE Sverdlovsk 31.00 43 *e*P **P 03 46 37.1 +1.0**
SVE *e*S **S 03 51 43.7 +4.0**
SVE pmax pmax
comp=Z,31nm,0.8s
SVE MLR MLR
comp=Z,831nm,14.0s
TOA0 Torodi Ar. Sit 31.37 218 P **P 03 46 39.4 -0.4**
TORD Torodi Ar. Bea 31.37 218 P **P 03 46 40.2 +0.5**
comp=Z,35nm,0.7s,baz=33,slow=9.3,SNR=170
TORD PcP **PcP 03 49 31.6 -1.7**
comp=Z,1.5nm,0.8s,baz=23,slow=3.6,SNR=2.5
comp=Z,35nm,0.7s
TORD Torodi Ar. Bea 31.37 218 P **P 03 46 40.2 +0.5**
TORD IAmb IAmb 03 46 41.3
comp=Z,29nm,0.9s
SHME Shamm 32.52 104 P **P 03 46 49.8 0.0**
BANOM Banah 32.71 104 P **P 03 46 50.6 -1.0**
ASUD Al Ashush, Dub 32.73 107 P **P 03 46 51.2 -0.5**
NAZ Nazwa, Dubai 32.76 106 P **P 03 46 51.6 -0.4**
FAQ Al Faqa, Dubai 32.85 107 P **P 03 46 52.3 -0.4**
MSFE Esma-Masafi 32.92 105 P **P 03 46 53.0 -0.4**
UOSS Minazif 33.19 106 P **P 03 46 54.5 -1.2**
HATD Hatta, Dubai 33.21 106 P **P 03 46 54.9 -1.0**
KOWA Kowa 33.22 228 P **P 03 46 56.6 +0.6**
comp=Z,12nm,0.7s,baz=32,slow=9.5,SNR=41
comp=Z,12nm,0.7s
KOWA Kowa 33.22 228 P **P 03 46 56.3 +0.3**
KOWA Kowa 33.22 228⇑ P **P 03 46 56.6 +0.6**
ASHO Ashiyiah 33.23 106 P **P 03 46 55.4 -0.7**
HRA Herat 33.35 86 P **P 03 46 58.0 +0.7**
HRA IAmb IAmb 03 46 59.2
comp=Z,33nm,0.9s
ATD Arta Tunnel 34.29 139 P **P 03 47 06.2 +0.8**
comp=Z,3.5nm,0.3s,baz=270,slow=20,SNR=1.7
comp=Z,3.5nm,0.3s
FURI Furi 34.69 148 P **P 03 47 11.3 +2.2**
BORG Borgarnes 34.80 330 P **P 03 47 10.8 +1.6**
comp=Z,5.8nm,0.7s,baz=90,slow=6.1,SNR=3.5
comp=Z,5.8nm,0.7s
BRVK Borovoye 35.94 52 P **P 03 47 20.3 +1.2**
BRVK IAmb IAmb 03 47 35.9
comp=Z,22nm,1.1s
BRVK Borovoye 35.94 52 *ce*P **P 03 47 19.9 +0.7**
BRVK pmax pmax
comp=Z,17nm,1.0s
BRVK Borovoye 35.94 52⇓ P **P 03 47 20.3 +1.2**
WSAR Wadi Sarin 35.98 106 P **P 03 47 19.9 0.0**
comp=Z,1.9nm,0.3s,baz=41,slow=11,SNR=2.2
comp=Z,1.9nm,0.3s
BVA0 Borovoye Array 36.00 52 *e*P **P 03 47 19.9 +0.2**
IUG Iuzhnay 36.91 70 *e*P **P 03 47 27.8 0.0**

IUG Iuzhnay 36.91 70 *e*P **P 03 47 27.8 0.0**
baz=70
KK31 Karatay Array 37.05 68 P **P 03 47 28.9 +0.1**
KK31 IAmb IAmb 03 47 31.2
comp=Z,27nm,1.1s
KK31 Karatay Array 37.05 68 *i*P **P 03 47 29.2 +0.4**
KKAR Karatay Array 37.05 68 P **P 03 47 28.9 +0.1**
KKAR IAmb IAmb 03 47 31.2
comp=Z,27nm,1.1s
KKAR Karatay Array 37.05 68 P **P 03 47 28.9 +0.1**
KKAR pmax pmax
comp=Z,27nm,1.1s
KKAR Karatay Array 37.05 68⇑ P **P 03 47 29.2 +0.4**
CHGR Chuyangaron 37.19 76 P **P 03 47 30.9 +0.7**
CHGR pmax pmax
comp=Z,74nm,0.9s
BRZS Berezniki 37.52 57 *e*P **P 03 47 31.3 -1.4**
BRZS Berezniki 37.52 57 *e*P **P 03 47 31.4 -1.4**
baz=57
DZA Taraz 37.68 68 *e*P **P 03 47 33.6 -0.6**
DZA Taraz 37.68 68 *e*P **P 03 47 33.6 -0.6**
baz=68
BTK Batken 38.02 73 IAmb IAmb 03 47 53.1
comp=Z,22nm,0.8s
KBL Kabul 38.51 82 P **P 03 47 43.5 +2.1**
KBL Kabul 38.51 82 P **P 03 47 43.5 +2.1**
KBL pmax pmax
comp=Z,11nm,0.7s
LODK Lodwar 38.55 156 P **P 03 47 42.6 +0.9**
SPITS Spitsbergen Ar 38.56 359 P **P 03 47 42.0 +0.9**
comp=Z,33nm,1.1s,baz=165,slow=11,SNR=2.3
comp=Z,33nm,1.1s
BTLS Baital 39.14 64 *e*P **P 03 47 45.3 -1.1**
BTLS Baital 39.14 64 *e*P **P 03 47 45.3 -1.1**
baz=64
SGDS Sogindy 39.90 67 *e*P **P 03 47 51.5 -1.3**
SGDS Sogindy 39.90 67 *e*P **P 03 47 51.5 -1.3**
baz=67
AAK Ala-Archa 40.00 68 P **P 03 47 54.9 +1.1**
comp=Z,5.5nm,0.7s,baz=266,slow=6.1,SNR=24
comp=Z,5.5nm,0.7s
AAK Ala-Archa 40.00 68 P **P 03 47 54.8 +1.0**
AAK IAmb IAmb 03 47 57.0
comp=Z,55nm,1.6s
AAK Ala-Archa 40.00 68 P **P 03 47 54.5 +0.7**
AAK Ala-Archa 40.00 68⇑ P **P 03 47 54.8 +1.0**
CHMS Chumysh 40.10 67 *i*P **P 03 47 54.3 -0.1**
CHMS pmax pmax
comp=Z,25nm,1.3s
DBIC Dimbokro 40.17 222 P **P 03 47 55.5 +0.3**
comp=Z,7.4nm,0.4s,baz=4.7,slow=8.6,SNR=36
comp=Z,7.4nm,0.4s
DBIC Dimbokro 40.17 222 P **P 03 47 55.3 +0.2**
DBIC Dimbokro 40.17 222⇑ P **P 03 47 55.4 +0.2**
TKM2 Tokmak 2 40.72 67 *i*P **P 03 47 59.6 -0.2**
TKM2 pmax pmax
comp=Z,11nm,1.3s
DAG Danmarks Havn 40.77 347 P **P 03 48 00.3 +0.8**
DAG pmax pmax
comp=Z,11nm,0.8s
DAG Danmarks Havn 40.77 347 *i*P **P 03 47 59.0 -0.5**
DAG IAmb IAmb 03 48 00.4
comp=Z,5.4nm,0.7s
KUU Kurty 41.00 65 *e*P **P 03 48 00.4 -1.4**
KUU Kurty 41.00 65 *e*P **P 03 48 00.5 -1.4**
baz=66
BBTS Babate 41.05 243 P **P 03 48 02.5 +0.1**
comp=Z,13nm,0.8s,baz=128,slow=19,SNR=2.6
comp=Z,13nm,0.8s
BOOM Boomskoye usch 41.07 68 P **P 03 48 04.0 +1.3**
BOOM IAmb IAmb 03 48 05.5
comp=Z,64nm,1.7s
BOOM Boomskoye usch 41.07 68 P **P 03 48 04.0 +1.3**
BOOM pmax pmax
comp=Z,64nm,1.7s
MBAR Mbarara 41.22 165 P **P 03 48 05.2 +1.2**
comp=Z,2.6nm,0.4s,baz=331,slow=16,SNR=5.1
comp=Z,2.6nm,0.4s
MBAR Mbarara 41.22 165 P **P 03 48 05.0 +1.0**
MBAR Mbarara 41.22 165 *ce*P P 03 48 11.9 +7.9
MBAR pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 41.23 55 P **P 03 48 04.1 +0.5**
KURK Kurchatov 41.23 55 *ce*P **P 03 48 03.6 0.0**
KURK pmax pmax
comp=Z,29nm,1.4s
CHKK Chushkaly 41.46 65 *e*P **P 03 48 04.7 -0.9**
CHKK Chushkaly 41.46 65 *e*P **P 03 48 04.7 -0.9**
baz=65
TNSS Tian-Shan 41.64 67 *e*P **P 03 48 07.2 -0.4**
TNSS Tian-Shan 41.64 67 *e*P **P 03 48 07.3 -0.4**
baz=67
MDOK Medeo 41.68 66 *e*P **P 03 48 06.9 -0.7**
MDOK Medeo 41.68 66 *e*P **P 03 48 06.9 -0.7**
baz=66
KSH Kashi 41.97 72 P **P 03 48 09.6 -0.4**
KSH sP pP 03 48 16.3 -0.1
KSH pmax pmax
comp=Z,13nm,1.1s
KSH LR LR
comp=Z,190nm,15.5s
KSH LR LR
comp=Z,240nm,15.5s
KSH LR LR
comp=Z,200nm,11.0s
NIL Nilore 42.06 81 P **P 03 48 11.8 +1.1**
NIL IAmb IAmb 03 48 23.4
comp=Z,21nm,0.8s
NIL Nilore 42.06 81 P **P 03 48 11.8 +1.1**
NIL pmax pmax
comp=Z,21nm,0.8s
TDK Taldyqorghan 42.16 63 *e*P **P 03 48 10.5 -0.8**
TDK Taldyqorghan 42.16 63 *e*P **P 03 48 10.6 -0.8**
baz=63
SATY Saty 42.67 66 *e*P **P 03 48 15.6 0.0**
SATY Saty 42.67 66 *e*P **P 03 48 15.7 0.0**
baz=66
KPKS Kokpek 42.75 65 *e*P **P 03 48 14.8 -1.4**
KPKS Kokpek 42.75 65 *e*P **P 03 48 14.8 -1.4**
baz=66
ICESG Greenland Ices 42.98 333 *i*P **P 03 48 18.5 +0.4**
ICESG IAmb IAmb 03 48 18.8
comp=Z,18nm,1.0s
UZB Uzynbulak 43.08 66 *e*P **P 03 48 18.0 -1.0**
UZB Uzynbulak 43.08 66 *e*P **P 03 48 18.0 -1.0**
baz=66
SHLS Shalkode 43.38 66 *e*P **P 03 48 22.5 +1.1**
SHLS Shalkode 43.38 66 *e*P **P 03 48 22.6 +1.1**
baz=66
KMBO Kilima Mbogo 43.43 156 P **P 03 48 23.6 +1.5**
comp=Z,0.1nm,0.6s,baz=356,slow=23,SNR=3.3
KMBO Kilima Mbogo 43.43 156 P **P 03 48 23.6 +1.5**
KMBO Kilima Mbogo 43.43 156 P **P 03 48 20.6 -1.5**
NOR Nord 43.92 353 *i*P **P 03 48 25.1 0.0**
NOR IAmb IAmb 03 48 26.0
comp=Z,22nm,1.2s
MAKZ Makanchi 44.15 60 P **P 03 48 28.2 +0.8**
MAKZ IAmb IAmb 03 48 28.8
comp=Z,30nm,0.9s
MAKZ Makanchi 44.15 60 P **P 03 48 28.2 +0.8**
MAKZ pmax pmax
comp=Z,30nm,1.0s
MAKZ Makanchi 44.15 60⇑ P **P 03 48 27.5 +0.1**
MK31 Makanchi Array 44.36 60 P **P 03 48 29.5 +0.4**
MK31 Makanchi Array 44.36 60 *i*P **P 03 48 29.2 +0.1**
MK31 pmax pmax
comp=Z,24nm,0.5s
MKAR Makanchi Array 44.36 60 P **P 03 48 29.3 +0.2**
comp=Z,34nm,0.5s,baz=279,slow=7.4,SNR=259
MKAR PcP **PP 03 50 12.8 +0.3**
comp=Z,2.9nm,0.6s,baz=286,slow=2.3,SNR=1.8
MKAR ScP **ScP 03 54 02.1 -1.6**
comp=Z,1.4nm,0.8s,baz=252,slow=3.8,SNR=3.9
comp=Z,34nm,0.5s
ZAA0 Zalesovo Array 44.53 49 P **P 03 48 30.2 -0.1**
ZALV Zalesovo Beam 44.53 49 P **P 03 48 30.3 0.0**
comp=Z,8.2nm,0.4s,baz=284,slow=8.1,SNR=40
comp=Z,8.2nm,0.4s
KIBK Kibwezi 44.83 155 P **P 03 48 34.2 +1.0**
DY2G Dye2 45.20 329 *i*P **P 03 48 36.2 +0.4**
DY2G IAmb IAmb 03 48 36.9
comp=Z,38nm,1.0s
NRIK Noril'sk 45.31 27 P **P 03 48 37.3 +1.0**
comp=Z,21nm,1.0s,baz=247,slow=3.6,SNR=12
NRIK LR LR 04 10 03.5
comp=Z,827nm,20.2s,baz=269,slow=39

comp=Z,21nm,1.0s
NRIK Noril'sk 45.31 27 P **P 03 48 38.1 +1.8**
NRIK Noril'sk 45.31 27 *ce*P **P 03 48 37.1 +0.8**
NRIK pmax pmax
comp=Z,14nm,0.8s
ZSN Zaisan 45.90 58 *e*P **P 03 48 40.2 -1.1**
ZSN Zaisan 45.90 58 *e*P **P 03 48 40.3 -1.1**
baz=58
DGZ Jazzator, Alta 46.97 55 *i*P **P 03 48 50.3 +0.4**
DGZ pmax pmax
comp=Z,31nm,0.8s
NEEM North Greenlan 47.59 344 *i*P **P 03 48 53.6 -0.8**
NEEM IAmb IAmb 03 48 55.3
comp=Z,71nm,1.9s
WMQ Urumqi 48.87 62 *e*P **P 03 49 05.5 +0.9**
WMQ sP sP 03 49 13.8 +0.2
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,140nm,6.5s
WMQ LR LR
comp=Z,320nm,17.5s
WMQ LR LR
comp=Z,370nm,17.7s
WMQ LR LR
comp=Z,200nm,22.9s
DANN Dangsing 52.50 82 *e*P **P 03 49 31.7 -0.7**
comp=Z,27nm,0.6s
KOLN Koldanda 52.66 83 *e*P **P 03 49 32.4 -1.1**
comp=Z,5.0nm,1.1s
GKN Gorkha 53.34 82 *e*P **P 03 49 37.0 -1.4**
comp=Z,25nm,0.8s
DMN Daman 53.90 82 *e*P **P 03 49 41.1 -1.5**
comp=Z,22nm,0.8s
PKIN Phulchoki 54.13 82 *e*P **P 03 49 42.7 -1.7**
comp=Z,7.7nm,0.6s
PKI Pulchoki 54.15 82 *e*P **P 03 49 43.1 -1.5**
comp=Z,9.0nm,0.7s
DRLN Deer Lake 54.23 308 P **P 03 49 45.0 +0.6**
GUN Gumba 54.33 81 *e*P **P 03 49 44.8 -1.1**
comp=Z,13nm,0.6s
HYBB Hyderabad (bro 54.47 97 *e*P **P 03 49 46.0 -0.6**
HYBB *ep*P **pP 03 49 52.5 -0.6**
JIRN Jiri 54.70 81 *e*P **P 03 49 47.5 -1.1**
comp=Z,10nm,0.4s
FRB Frobisher Bay 54.89 327 P **P 03 49 49.3 +0.4**
FRB pmax pmax
comp=Z,28nm,1.8s
LSZ Lusaka 55.20 171 P **P 03 49 53.0 +1.1**
LSZ IAmb IAmb 03 50 00.3
comp=Z,9.9nm,0.8s
LSZ Lusaka 55.20 171 P **P 03 49 53.0 +1.1**
LSZ pmax pmax
comp=Z,10.0nm,0.8s
ZAK Zakamensk 56.41 50 *e*P **P 03 49 59.5 -0.8**
ZAK pmax pmax
comp=Z,12nm,1.4s
GOMU GeErMu 56.95 68 P **P 03 50 06.0 +1.3**
GOMU pP pP 03 50 10.8 -0.4
GOMU sP sP 03 50 11.8 -1.9
GOMU S **S 03 58 01.0 +3.0**
GOMU sS pS 03 58 06.0 -0.2
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,110nm,4.8s
GOMU LR LR
comp=Z,78nm,14.4s
GOMU LR LR
comp=Z,100nm,14.7s
GOMU LR LR
comp=Z,88nm,17.3s
PCHI Peechi 57.08 105 *e*P **P 03 50 05.4 +0.1**
SCHQ Schefferville 57.39 317 P **P 03 50 06.5 -0.5**
comp=Z,8.5nm,0.7s,baz=75,slow=5.9,SNR=16
comp=Z,8.5nm,0.7s
TIXI Tiksi 58.11 21 LR LR 04 19 10.3
comp=Z,679nm,18.3s,baz=271,slow=40
TIXI Tiksi 58.11 21 P **P 03 50 12.7 +0.9**
TIXI IAmb IAmb 03 50 22.9
comp=Z,16nm,1.0s
TIXI Tiksi 58.11 21 *i*P **P 03 50 13.0 +1.2**
TIXI pmax pmax
comp=Z,28nm,1.6s
RES Resolute Bay 58.28 344 P **P 03 50 13.6 +0.7**
RES pmax pmax
comp=Z,9.0nm,1.0s
TSUM Tsumeb 58.74 183 P **P 03 50 17.3 +0.5**
GTA Gaotai 58.95 63⇑ P **P 03 50 18.3 -0.1**
GTA pP pP 03 50 25.0 0.0
GTA sP sP 03 50 29.1 +1.7
GTA pmax pmax
comp=Z,15nm,0.9s
GTA pmax pmax
comp=Z,37nm,5.5s
GTA LR LR
comp=Z,130nm,16.7s
GTA LR LR
comp=Z,150nm,16.7s
GTA LR LR
comp=Z,190nm,18.9s
BOD Bodaibo 59.03 39 *e*P **P 03 50 18.1 -0.3**
BOD pmax pmax
comp=Z,19nm,1.6s
SONM Songino Array 59.34 51 P **P 03 50 20.9 -0.1**
comp=Z,15nm,1.0s,baz=288,slow=8.0,SNR=51
comp=Z,15nm,1.0s
SONM Songino Array 59.34 51 P **P 03 50 21.1 +0.2**
SONM IAmb IAmb 03 50 22.4
comp=Z,26nm,1.2s
SONM Songino Array 59.34 51 P **P 03 50 21.1 +0.2**
SONM pmax pmax
comp=Z,26nm,1.2s
ULN Ulaanbaatar 59.73 51 P **P 03 50 23.9 +0.3**
ULN IAmb IAmb 03 50 24.9
comp=Z,14nm,0.9s
ULN Ulaanbaatar 59.73 51 *i*P **P 03 50 23.7 +0.1**
ULN pmax pmax
comp=Z,17nm,1.0s
ULN Ulaanbaatar 59.73 51 P **P 03 50 23.8 +0.1**
comp=Z,65nm,1.7s
ULN pP **pP 03 50 30.5 +0.3**
comp=Z,65nm,1.7s
BATG Bathurst New B 60.25 308 P **P 03 50 27.4 +0.5**
BATG IAmb IAmb 03 50 28.2
comp=Z,24nm,1.1s
MATP Matopo 60.32 172 *i*P **P 03 50 30.0 +2.2**
MATP Matopo 60.32 172 *i*P **P 03 50 30.0 +2.2**
MUSN Musina, Limpop 62.33 170 *i*P **P 03 50 38.3 -2.9**
MUSN Musina, Limpop 62.33 170 *i*P **P 03 50 38.3 -2.9**
PALK Pallekele 62.45 104 P **P 03 50 41.4 -1.0**
PALK pmax pmax
comp=Z,19nm,1.2s
PKME Peaks-Kenny Pk 63.18 308 P **P 03 50 46.1 -0.6**
baz=60
LZH Lanzhou 63.37 64 *e*P **P 03 50 48.8 +0.4**
LZH pP pP 03 50 53.4 -1.6
LZH sP sP 03 50 55.4 -2.1
LZH pmax pmax
comp=Z,31nm,1.4s
LZH LR LR
comp=Z,220nm,16.5s
LZH LR LR
comp=Z,180nm,13.7s
LZH LR LR
comp=Z,210nm,13.4s
YAK Yakutsk 63.66 30 LR LR 04 21 55.0
comp=Z,549nm,18.8s,baz=269,slow=39
YAK Yakutsk 63.66 30 P **P 03 50 50.0 +0.4**
YAK Yakutsk 63.66 30 *e*P **P 03 50 49.0 -0.6**
YAK pmax pmax
comp=Z,35nm,0.6s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,12nm,0.9s
MOPA Mopani 63.75 169 *i*P P 03 50 44.6 -6.0
MOPA Mopani 63.75 169 *i*P P 03 50 44.6 -6.0
LBTB Lobatse 64.61 175 P **P 03 50 57.4 +1.0**
LBTB Lobatse 64.61 175 P **P 03 50 57.4 +1.0**
LBTB pmax pmax
comp=Z,21nm,0.9s
BTO Baotou 65.16 57 *e*P **P 03 50 58.8 -1.2**
LBNH Lisbon 65.32 308 P **P 03 51 00.2 -0.7**
baz=58
A36M Sachs Harbour 65.99 349 P **P 03 51 04.0 -0.6**

baz=28
HRV Adam Dziewonsk 66.02 306 P P 03 51 06.5 +1.1
HRV pmax pmax
comp=Z,13nm,1.2s
HRV Adam Dziewonsk 66.02 306 P P 03 51 04.8 -0.5
baz=57
HHC Hu-ho-hao-te 66.02 56 *e*P **P 03 51 05.8 +0.2**
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,200nm,4.6s
HHC LR LR
comp=Z,360nm,13.3s
HHC LR LR
comp=Z,430nm,14.6s
HHC LR LR
comp=Z,540nm,15.2s
CD2 Chengdu 66.06 69 *e*P **P 03 51 06.4 +0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HIA Hailar 66.29 45 P P 03 51 07.8 +0.8
HIA IAmb IAmb 03 51 08.7
comp=Z,14nm,1.0s
HIA Hailar 66.29 45 P P 03 51 07.8 +0.8
HIA pmax pmax
comp=Z,14nm,1.0s
LONY Lake Ozonia 66.72 309 P P 03 51 09.0 -0.8
baz=57
L61B Northampton 66.75 306 P P 03 51 08.6 -1.4
baz=57
PZH PanZhiHua 67.02 74 P P 03 51 16.0 +3.8
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,80nm,5.2s
XLT XiLinHaoTe 67.16 51 *e*P **P 03 51 17.4 +4.6**
XLT S **S 04 00 15.1 +8.9**
XLT SKS **ScS 04 01 10.9 +1.4**
XLT pmax pmax
comp=Z,20nm,1.1s
XLT pmax pmax
comp=Z,130nm,5.0s
XLT LR LR
comp=Z,420nm,21.5s
XLT LR LR
comp=Z,250nm,19.4s
ZEA Zeya 67.53 38 *e*P **P 03 51 16.2 +1.4**
ZEA pmax pmax
comp=Z,10.0nm,1.5s
XAN Xi'an 67.98 64 ⇑P **P 03 51 17.6 -0.4**
XAN pP pP 03 51 24.8 +0.1
XAN pmax pmax
comp=Z,24nm,1.1s
C36M Paulatuk 68.14 347 P P 03 51 17.1 -1.2
baz=29
BOSA Boshof 68.17 176 P P 03 51 20.2 +1.1
comp=Z,9.6nm,0.7s,baz=359,slow=7.1,SNR=20
BOSA LR LR 04 24 01.2
comp=Z,355nm,18.0s,baz=4.5,slow=38
comp=Z,9.6nm,0.7s
BOSA Boshof 68.17 176 P P 03 51 20.1 +1.1
BOSA Boshof 68.17 176 P P 03 51 20.2 +1.1
BOSA pmax pmax
comp=Z,21nm,0.8s
BOSA Boshof 68.17 176 *i* P **P 03 51 20.0 +0.9**
BOSA Boshof 68.17 176 *i* P **P 03 51 20.0 +0.9**
PAL Palisades 68.31 306 P P 03 51 18.8 -1.2
baz=56
KMI Kunming 68.54 75 ⇑P **P 03 51 20.3 -1.6**
KMI pmax pmax
comp=Z,14nm,0.5s
BINY Binghamton 68.92 308 P P 03 51 23.0 -0.8
baz=55
RCBR Riachuelo 69.04 243 P P 03 51 26.2 +1.4
comp=Z,16nm,0.9s,baz=308,slow=3.2,SNR=2.3
comp=Z,16nm,0.9s
A21K Barrow 69.20 359 P P 03 51 24.9 0.0
baz=2.3
BJI Beijing 69.40 55 P P 03 51 26.5 -0.2
BJI pmax pmax
comp=Z,11nm,0.8s
BJI LR LR
comp=Z,67nm,20.7s
BJI LR LR
comp=Z,210nm,21.5s
BJI LR LR
comp=Z,460nm,22.7s
BJT Baijiatuau 69.40 55 P P 03 51 26.2 -0.6
BJT IAmb IAmb 03 51 27.6
comp=Z,11nm,1.0s
BJT Baijiatuau 69.40 55 P P 03 51 26.2 -0.6
BJT pmax pmax
comp=Z,11nm,1.0s
BILL Bilibino 69.43 13 *e*P **P 03 51 26.9 +0.4**
BILL *e* 03 51 34.2
BILL *e* 03 51 50.2
BILL *e* 03 53 58.3
BILL *e*S **S 04 00 30.6 -1.7**
BILL *e*SS **SS 04 04 58.2 -0.3**
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,67nm,17.0s
CMAR Chiang Mai Arr 69.53 83 P P 03 51 26.5 -1.4
comp=Z,2.1nm,0.7s,baz=306,slow=7.4,SNR=14
comp=Z,2.1nm,0.7s
CMAR Chiang Mai Arr 69.53 83 P P 03 51 27.6 -0.2
CMAR Chiang Mai Arr 69.53 83 P P 03 51 27.7 -0.2
HNS HongShan 69.97 58 ⇓P **P 03 51 30.3 0.0**
HNS pmax pmax
comp=Z,13nm,1.1s
LYN LuoYang 70.11 61 ⇑*i*P **P 03 51 30.8 -0.4**
M57A Sunshine Farm, 70.11 308 IAmb IAmb 03 51 33.1
comp=Z,12nm,0.8s
C26K Camden Bay 70.12 355 P P 03 51 30.4 -0.2
baz=12
C27K Jago River 70.31 354 P P 03 51 31.5 -0.3
baz=13
ENH Enshi 70.50 67 IAmb IAmb 03 51 33.8
comp=Z,13nm,0.8s
C23K Itkillik River 70.52 357 P P 03 51 32.2 -0.8
baz=7.2
INK Inuvik 70.52 350 P P 03 51 32.1 -1.0
baz=21
C24K Franklin Bluff 70.55 356 P P 03 51 32.4 -0.8
baz=8.7
SEY Seymchan 70.60 21 *i* P **P 03 51 34.8 +1.1**
SEY pmax pmax
comp=Z,19nm,1.2s
GYA Guiyang 70.67 71 ⇑P **P 03 51 34.5 -0.4**
GYA pmax pmax
comp=Z,15nm,1.1s
D25K Kavik River 70.80 355 P P 03 51 34.5 -0.4
baz=11
SSPA Standing Stone 70.99 307 P P 03 51 36.8 +0.3
SSPA IAmb IAmb 03 51 51.5
comp=Z,29nm,1.4s
SSPA Standing Stone 70.99 307 P P 03 51 35.8 -0.7
baz=54
D24K Happy Valley 71.11 356 P P 03 51 36.0 -0.8
baz=8.6
F31M Tsiigehtchic 71.36 350 P P 03 51 37.3 -0.9
baz=21
ERPA Erie 71.38 310 P P 03 51 37.5 -1.3
baz=53
D23K Nanushuk River 71.39 357 P P 03 51 37.0 -1.5
baz=7.1
E27K Coleen River 71.54 353 P P 03 51 38.6 -0.7
baz=14
TOLK Toolik Lake Re 71.66 356 IAmb IAmb 03 51 52.8
comp=Z,30nm,1.4s
TOLK Toolik Lake Re 71.66 356 P P 03 51 39.7 -0.4
baz=8.0
SUR Sutherland 71.79 180 P P 03 51 42.3 +1.0
comp=Z,8.3nm,0.8s,baz=356,slow=2.7,SNR=3.0
SUR LR LR 04 25 50.2
comp=Z,375nm,18.1s,baz=353,slow=38
comp=Z,8.3nm,0.8s
E25K Arctic Village 71.93 355 P P 03 51 41.1 -0.6
baz=11
YKA Yellowknife Ar 71.94 340 P P 03 51 42.4 +0.6
comp=Z,7.9nm,1.1s,baz=41,slow=5.2,SNR=6.4
comp=Z,7.9nm,1.1s
CBN Corbin Frederi 72.11 305 P P 03 51 42.0 -1.2
baz=53
G30M tAoh Zraii Nji 72.12 351 P P 03 51 42.0 -0.9
baz=19

E24K Your Creek 72.17 356 P P 03 51 42.4 -0.8
baz=8.8
M53A WI Miller and 72.19 309 P P 03 51 41.3 -2.5
baz=52
F26K Sheenjek River 72.24 354 P P 03 51 42.6 -1.0
baz=12
E23K Chandalar 72.25 356 P P 03 51 41.6 -2.1
baz=7.9
E22K Anaktuvuk Pass 72.27 357 P P 03 51 42.8 -1.0
baz=6.1
GLMI Grayling 72.38 314 P P 03 51 43.3 -1.5
baz=51
F25K Christian Rive 72.46 355 P P 03 51 44.9 0.0
baz=11
BNX BinXian 72.56 45 ⇑P **P 03 51 45.4 -0.4**
BNX pmax pmax
comp=Z,12nm,0.7s
BNX pmax pmax
comp=Z,110nm,5.5s
R58B Mineral 72.58 305 IAmb IAmb 03 51 48.1
comp=Z,17nm,1.0s
R58B Mineral 72.58 305 P P 03 51 47.5 +1.4
baz=53,SNR=5.2
R58B P **P 03 51 47.5 +1.4**
baz=53,SNR=5.2
F24K Squaw Lake 72.68 355 P P 03 51 46.0 -0.2
baz=9.3
CN2 Changchun 72.69 47 P P 03 51 46.9 +0.3
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,400nm,14.0s
Q56A Snyder Ridge, 72.75 307 P P 03 51 48.1 +1.1
baz=53,SNR=9.1
Q56A P **P 03 51 48.1 +1.1**
baz=53,SNR=9.1
EPYK Eagle Plains 72.77 351 P P 03 51 46.0 -0.8
baz=18
MCWV Mont Chateau 72.78 307 IAmb IAmb 03 51 49.1
comp=Z,15nm,0.8s
MCWV Mont Chateau 72.78 307 P P 03 51 46.8 -0.4
baz=52
MA2 Magadan 72.78 24 LR LR 04 28 18.9
comp=Z,314nm,18.0s,baz=320,slow=40
MA2 Magadan 72.78 24 P P 03 51 48.2 +1.3
MA2 Magadan 72.78 24 P P 03 51 48.2 +1.3
MA2 pmax pmax
comp=Z,40nm,0.9s
G27K Doyon Strip 72.89 353 P P 03 51 47.5 0.0
baz=14
F22K John River 72.91 357 P P 03 51 47.4 -0.2
baz=5.8
G26K Porcupine Rive 72.94 354 P P 03 51 47.5 -0.2
baz=12
COLD Coldfoot 73.10 356 IAmb IAmb 03 51 51.0
comp=Z,16nm,1.0s
COLD Coldfoot 73.10 356 P P 03 51 48.2 -0.4
baz=7.4
F21K Alatna River 73.24 358 P P 03 51 47.8 -1.7
baz=4.8
O53A New Philadelph 73.25 309 P P 03 51 47.0 -3.0
baz=52
AAM Ann Arbor 73.42 311 P P 03 51 49.5 -1.4
baz=51
WRGLY Wrigley 73.43 344 P P 03 51 49.1 -1.5
baz=28,SNR=5.6
H27K Steamboat Moun 73.44 353 P P 03 51 49.2 -1.5
baz=14,SNR=10
G22K Bettles 73.47 357 P P 03 51 49.9 -0.9
baz=6.3
G24K Hadweenzic Riv 73.47 355 P P 03 51 49.1 -1.7
baz=9.6
U59A Littleton 73.49 304 P P 03 51 52.6 +1.1
baz=53
U59A P **P 03 51 52.6 +1.1**
baz=53
G23K Bananza Creek 73.61 356 P P 03 51 50.2 -1.5
baz=7.5
O52A Adamsville 73.70 309 IAmb IAmb 03 52 04.1
comp=Z,18nm,1.1s
GRNR Gornyy 73.75 37 ⇑*i*P **P 03 51 53.3 +0.5**
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,180nm,14.0s
GRNR MLR MLR
comp=Z,380nm,14.0s
GRNR MLR MLR
comp=N,240nm,16.0s
R55A Marlinton 73.79 306 IAmb IAmb 03 51 55.5
comp=Z,19nm,0.9s
Q54A Coxs Mills 73.80 307 IAmb IAmb 03 51 55.1
comp=Z,18nm,1.0s
Q54A Coxs Mills 73.80 307 P P 03 51 53.8 +0.6
baz=52
Q54A P **P 03 51 53.8 +0.6**
baz=52
I29M Ogilvie Camp, 73.93 351 IAmb IAmb 03 51 55.3
comp=Z,25nm,1.1s
I29M Ogilvie Camp, 73.93 351 P P 03 51 52.1 -1.5
baz=17,SNR=15
G21K Allakaket 73.95 358 P P 03 51 52.2 -1.5
baz=4.7,SNR=6.2
EYMN Ely 73.98 320 P P 03 51 53.0 -1.2
baz=48
I27K Kandik River 74.06 352 P P 03 51 53.1 -1.3
baz=14
P52A Corning 74.18 309 P P 03 51 54.3 -1.2
baz=51
CNNC Cliffs of the 74.23 303 P P 03 51 53.2 -2.6
baz=52
ACSO Alum Creek Sta 74.32 309 P P 03 51 54.8 -1.4
baz=51
H24K Noodor Dome 74.35 355 P P 03 51 53.0 -3.1
baz=9.2
H23K Yukon River 74.46 356 IAmb IAmb 03 52 09.7
comp=Z,18nm,1.1s
H23K Yukon River 74.46 356 P P 03 51 55.0 -1.8
baz=7.9,SNR=6.9
H22K Ishtalitna Cre 74.49 357 P P 03 51 55.6 -1.2
baz=6.4,SNR=5.5
PRP Porcupine Dome 74.50 354 P P 03 51 55.6 -1.4
baz=11
I26K Coal Creek Min 74.50 353 IAmb IAmb 03 52 08.8
comp=Z,22nm,1.5s
I26K Coal Creek Min 74.50 353 P P 03 51 56.4 -0.5
baz=13
ULM Lac du Bonnet 74.50 323 P P 03 51 57.6 +0.4
comp=Z,11nm,0.7s,baz=63,slow=5.3,SNR=8.8
comp=Z,11nm,0.7s
ULM Lac du Bonnet 74.50 323 IAmb IAmb 03 51 58.5
comp=Z,21nm,1.1s
BLA Blacksburg 74.64 306 P P 03 51 55.7 -2.5
baz=52
V58A Windy Hill, Pi 74.68 304 IAmb IAmb 03 52 00.4
comp=Z,18nm,1.1s
H21K Melozitna Rive 74.78 357 IAmb IAmb 03 52 01.7
comp=Z,21nm,0.9s
H21K Melozitna Rive 74.78 357 P P 03 51 57.8 -0.7
baz=5.3,SNR=15
TNA Tin City 74.79 4 P P 03 51 57.9 -0.6
baz=353
EGAK Eagle 74.82 352 P P 03 51 57.7 -1.0
baz=14
R53A Hurricane 74.89 307 IAmb IAmb 03 52 11.1
comp=Z,28nm,1.2s
R53A Hurricane 74.89 307 P P 03 52 00.6 +1.0
baz=51
R53A P **P 03 52 00.6 +1.0**
baz=51
POKR Poker Plat Res 75.03 355 IAmb IAmb 03 52 08.9
comp=Z,14nm,0.9s
POKR Poker Plat Res 75.03 355 P P 03 51 59.5 -0.5
baz=9.5
I23K Minto, Yukon-K 75.13 356 P P 03 51 59.0 -1.4
baz=8.0
O49A Covington 75.15 310 IAmb IAmb 03 52 02.0
comp=Z,13nm,0.7s
O49A Covington 75.15 310 P P 03 52 01.7 +0.6
baz=50
O49A P **P 03 52 01.7 +0.6**
baz=50
U56A King 75.15 305 IAmb IAmb 03 52 03.3
comp=Z,18nm,1.0s

I21K Tanana 75.23 357 IAmb IAmb 03 52 10.4
comp=Z,20nm,1.2s
I21K Tanana 75.23 357 P P 03 51 58.4 -2.7
baz=5.9
MDM Murphy Dome 75.25 355 IAmb IAmb 03 52 12.8
comp=Z,34nm,1.4s
K29M Barlow Dome 75.29 350 P P 03 51 59.2 -2.4
baz=17
Q51A Peebles 75.30 309 IAmb IAmb 03 52 03.5
comp=Z,18nm,1.1s
MAYO Mayo, Yukon 75.30 349 P P 03 51 58.3 -3.3
baz=18
COLA College 75.31 355 P P 03 51 57.8 -3.7
baz=9.2
TCOL CIGO, UAF Yank 75.31 355 P P 03 51 59.1 -2.5
baz=9.2
DAWY Dawson 75.31 351 IAmb IAmb 03 52 14.5
comp=Z,21nm,1.1s
DAWY Dawson 75.31 351 P P 03 51 58.5 -3.1
baz=16,SNR=16
MLY Manley 75.32 356 IAmb IAmb 03 52 10.7
comp=Z,13nm,1.0s
MLY Manley 75.32 356 P P 03 52 00.2 -1.5
baz=6.9
J26L Joseph Creek 75.33 353 IAmb IAmb 03 52 13.9
comp=Z,10nm,0.8s
J26L Joseph Creek 75.33 353 P P 03 51 59.9 -1.9
baz=12,SNR=10
ILAR Eielson Array 75.34 355 P P 03 52 02.9 +1.1
comp=Z,2.9nm,0.8s,baz=1.3,slow=4.6,SNR=22
comp=Z,2.9nm,0.8s
J25K Salcha River, 75.38 354 P P 03 52 00.5 -1.6
baz=11
MMPY Sheldon Lake, 75.50 347 P P 03 51 59.9 -2.9
baz=22,SNR=6.2
O48B Farmland 75.58 311 P P 03 52 03.9 +0.3
baz=50
O48B Farmland 75.58 311 P P 03 52 01.9 -1.7
baz=50
K27K Chicken 75.64 352 IAmb IAmb 03 52 12.7
comp=Z,23nm,1.1s
K27K Chicken 75.64 352 P P 03 52 02.8 -0.7
baz=14
NEA2 Nenana 75.66 355 P P 03 52 02.6 -1.0
baz=8.2,SNR=5.6
HDA Harding Lake 75.70 355 IAmb IAmb 03 52 05.5
comp=Z,16nm,0.9s
HDA Harding Lake 75.70 355 P P 03 52 02.1 -1.7
baz=9.9,SNR=8.1
WRH Wood River Hil 75.72 355 IAmb IAmb 03 52 05.7
comp=Z,13nm,0.9s
P49A Miami Univ. Ec 75.79 310 P P 03 52 04.4 -0.3
baz=50
GCSA Galena City Sc 75.80 359 P P 03 52 03.2 -1.1
baz=2.0
AGMN Agassiz Nation 75.87 322 P P 03 52 03.9 -1.2
baz=45
SCRK Sand Creek 75.88 353 P P 03 52 04.4 -0.6
baz=12
ANM Nome 75.89 3 P P 03 52 03.5 -1.4
baz=355
NJ2 Nanjing 75.89 60 *e*P **P 03 52 07.3 +1.8**
NJ2 pmax pmax
comp=Z,11nm,0.6s
U54A Nelsons Funny 75.94 306 IAmb IAmb 03 52 13.9
comp=Z,19nm,0.9s
V55A Taylorsville 75.98 305 IAmb IAmb 03 52 08.1
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 76.03 44 P P 03 52 06.0 0.0
comp=Z,6.8nm,0.8s,baz=286,slow=5.7,SNR=11
comp=Z,6.8nm,0.8s
USRK Ussuriysk Ar. 76.03 44 P P 03 52 05.2 -0.8
L29M L29M 76.07 350 P P 03 52 05.2 -0.8
baz=17,SNR=5.8
FLDN Fort Liard 76.09 342 P P 03 52 04.5 -1.6
baz=28
RIDG Independent Ri 76.19 353 IAmb IAmb 03 52 19.3
comp=Z,28nm,1.2s
RIDG Independent Ri 76.19 353 P P 03 52 04.9 -1.8
baz=12,SNR=5.2
K24K Donnelly Dome 76.21 354 P P 03 52 05.0 -1.8
baz=11
FARO Faro, Yukon 76.21 348 IAmb IAmb 03 52 10.0
comp=Z,14nm,1.1s
FARO Faro, Yukon 76.21 348 P P 03 52 05.5 -1.3
baz=20,SNR=5.6
DOT Dot Lake 76.21 353 IAmb IAmb 03 52 20.6
comp=Z,20nm,1.2s
BPAW Bear Paw Mtn. 76.26 356 IAmb IAmb 03 52 08.0
comp=Z,9.5nm,0.7s
BPAW Bear Paw Mtn. 76.26 356 P P 03 52 05.5 -1.5
baz=6.7
J20K Nowinta River 76.31 358 P P 03 52 07.1 -0.2
baz=4.2,SNR=5.7
KOTAN Kotaneelee Air 76.32 343 P P 03 52 06.3 -1.1
baz=27
GAMB Gambell 76.32 6 P P 03 52 07.2 -0.1
baz=350
M31M Drury Creek, Y 76.40 348 P P 03 52 06.8 -1.1
baz=20
SPMN Marine on St. 76.49 318 P P 03 52 08.0 -0.7
baz=47
KMSC Kings Mountain 76.50 304 P P 03 52 07.8 -1.1
baz=51
MCK McKinley 76.51 355 IAmb IAmb 03 52 10.1
comp=Z,14nm,0.9s
MCK McKinley 76.51 355 P P 03 52 07.7 -0.8
baz=8.3,SNR=6.3
CHUM Lake Minchumin 76.54 357 P P 03 52 08.6 +0.1
baz=5.6
L27K Beaver Creek, 76.56 352 IAmb IAmb 03 52 11.6
comp=Z,15nm,1.1s
L27K Beaver Creek, 76.56 352 P P 03 52 08.7 0.0
baz=14,SNR=8.0
SFIN Lafayette 76.63 312 P P 03 52 08.6 -0.9
baz=49
JFWS Jewell Farm 76.71 315 P P 03 52 08.3 -1.7
baz=48
L26K Log Cabin Wild 76.75 353 IAmb IAmb 03 52 22.0
comp=Z,20nm,1.4s
L26K Log Cabin Wild 76.75 353 P P 03 52 09.1 -0.8
baz=13,SNR=5.2
M29M Somme Creek 76.76 350 P P 03 52 08.1 -1.9
baz=16,SNR=15
TRF Thorofare Moun 76.87 356 P P 03 52 09.3 -1.4
baz=7.2
CAST Castle Rocks 76.99 357 P P 03 52 09.2 -2.0
baz=5.8,SNR=7.3
TZTN Tazewell 77.00 307 P P 03 52 09.5 -2.2
baz=50
PAX Paxson 77.00 354 P P 03 52 09.2 -2.1
baz=11
NHSC New Hope 77.04 302 P P 03 52 09.6 -2.3
baz=51
DHY Denali Highway 77.05 354 IAmb IAmb 03 52 13.6
comp=Z,16nm,0.8s
DHY Denali Highway 77.05 354 P P 03 52 09.5 -2.2
baz=9.5,SNR=12
BVCY Beaver Creek 77.08 351 P P 03 52 09.9 -1.8
baz=14,SNR=11
K20K Telida 77.13 358 IAmb IAmb 03 52 14.3
comp=Z,14nm,0.9s
K20K Telida 77.13 358 P P 03 52 10.2 -1.7
baz=4.2
N32M Quiet Lake 77.18 347 P P 03 52 10.2 -2.1
baz=20
M27K Edge Creek, AK 77.25 352 IAmb IAmb 03 52 15.8
comp=Z,23nm,1.4s
M27K Edge Creek, AK 77.25 352 P P 03 52 10.1 -2.7
baz=14
N31M Braeburn, Yuko 77.30 349 P P 03 52 11.4 -1.6
baz=18
M26K Nabesna, AK 77.33 352 P P 03 52 11.8 -1.3
baz=13
WTLY Watson Lake, Y 77.35 345 IAmb IAmb 03 52 15.6
comp=Z,14nm,1.1s
WTLY Watson Lake, Y 77.35 345 P P 03 52 11.9 -1.4
baz=24,SNR=5.4
WAT1 Susitna Watana 77.38 355 P P 03 52 11.6 -1.8
baz=8.5
LIRD Liard River Hi 77.42 343 P P 03 52 12.6 -1.1
baz=26
T50A Nancy 77.48 308 P P 03 52 15.4 +1.0
baz=49
T50A P **P 03 52 15.4 +1.0**
baz=49
N30M Aishikik Lake 77.51 349 P P 03 52 12.8 -1.4
baz=17

PPLA	Purkeypile baz=5.7	77.52 357	P	P	03 52 12.4 -1.9
HARP	HAARP baz=11	77.54 353	P	P	03 52 12.5 -1.8
WAT6	Susitna Watana baz=9.2	77.57 355	P	P	03 52 12.4 -2.2
WCI	Wyandotte Cave baz=49	77.57 310	P	P	03 52 15.5 +0.6
WCI	Wyandotte Cave baz=49	77.57 310	P	P	03 52 13.0 -1.9
YUK3	Moose Creek baz=15,SNR=9.5	77.65 351	P	P	03 52 13.1 -2.1
YUK4	Talbot Arm baz=16	77.84 350	P	P	03 52 13.8 -2.4
M24K	Tolsona, Glenn baz=10	77.92 354	P	P	03 52 16.6 +0.2
WHY	Whitehorse baz=19	77.94 348	P	P	03 52 17.0 +0.3
L20K	Farewell, AK baz=4.3	78.00 357	P	P	03 52 15.6 -1.3
P33M	Teslin, Yukon baz=21	78.02 347	P	P	03 52 15.9 -1.2
O30N	Mendenhall baz=18	78.03 349	P	P	03 52 15.7 -1.4
YUK8	Steele Glacier baz=15	78.04 351	P	P	03 52 15.3 -2.1
KS19	Wonju Array Si comp=Z,26nm,1.3s	78.15 51	IAmb	IAmb	03 52 24.3
HYT	Haines Junctio baz=17	78.18 349	P	P	03 52 16.6 -1.5
YUK6	Outpost Mounta baz=16	78.19 350	P	P	03 52 16.6 -1.6
KSAR	Wonju Array Be	78.20 51	P	P	03 52 17.9 -0.4
KSAR	Wonju Array Be	78.20 51	P	P	03 52 17.9 -0.4
KSRS	Korea Array comp=Z,9.1nm,0.7s,baz=313,slow=4.8,SNR=38 comp=Z,9.1nm,0.7s	78.21 51	P	P	03 52 18.4 -0.1
N25K	Chitina, Valde baz=12	78.27 353	P	P	03 52 16.8 -1.6
SCM	Sheep Creek Mo baz=9.5	78.28 354	P	P	03 52 16.9 -1.6
MCARA	McCarthy VSAT baz=13	78.33 352	P	P	03 52 16.6 -2.0
L19K	White Mountain comp=Z,23nm,1.1s	78.33 358	IAmb	IAmb	03 52 21.1
L19K	White Mountain baz=3.6	78.33 358	P	P	03 52 16.4 -2.3
M23K	Glacier View baz=9.2	78.35 354	P	P	03 52 16.5 -2.3
SML	Sawmill baz=8.7	78.38 355	P	P	03 52 16.4 -2.6
U49A	Red Boiling Sp comp=Z,22nm,1.1s	78.39 308	IAmb	IAmb	03 52 21.3
U49A	Red Boiling Sp baz=49,SNR=5.8	78.39 308	P	P	03 52 20.6 +1.1
SKT	Skwentna comp=Z,9.4nm,0.7s	78.40 356	IAmb	IAmb	03 52 19.6
SKT	Skwentna baz=6.2,SNR=5.8	78.40 356	P	P	03 52 15.8 -3.3
R33M	Jennings River baz=22	78.44 346	P	P	03 52 16.7 -2.8
KLU	Klutina baz=10	78.50 353	P	P	03 52 17.1 -2.6
CTG	Chitna Glacier baz=14	78.55 351	P	P	03 52 17.6 -2.5
M22K	Willow baz=7.3	78.55 356	P	P	03 52 18.1 -1.7
M20K	Styx River baz=4.9	78.57 357	P	P	03 52 18.2 -1.9
O28M	Mount Upton baz=15	78.59 351	P	P	03 52 18.6 -1.9
M19K	Big River Lodg baz=3.9	78.60 358	P	P	03 52 18.6 -1.5
PMR	Palmer baz=8.0	78.65 355	P	P	03 52 18.9 -1.5
P32M	Atlin baz=20	78.76 347	P	P	03 52 19.0 -2.1
P30M	Million Dollar baz=17	78.78 349	P	P	03 52 19.8 -1.4
KNK	Knik Glacier baz=8.6	78.78 355	P	P	03 52 18.4 -2.8
O29M	Mount Kennedy baz=16	78.83 350	P	P	03 52 19.7 -2.0
T47A	Sharon Grove comp=Z,16nm,0.8s	78.87 309	IAmb	IAmb	03 52 23.2
T47A	Sharon Grove baz=48,SNR=6.8	78.87 309	P	P	03 52 22.7 +0.6
SUA	Susitna One baz=6.8	78.88 356	P	P	03 52 19.9 -1.9
BMRM	Bremner River baz=12	78.90 353	P	P	03 52 20.3 -1.6
W50A	Signal Mountai comp=Z,17nm,0.8s	78.96 307	IAmb	IAmb	03 52 24.8
W50A	Signal Mountai baz=49,SNR=6.6	78.96 307	P	P	03 52 23.6 +1.0
GOGA	Godfrey baz=50	78.97 304	P	P	03 52 21.8 -0.8
CLTN	Cedars of Leba comp=Z,18nm,1.2s	79.00 308	IAmb	IAmb	03 52 24.5
SCIA	State Center baz=46	79.00 316	P	P	03 52 21.8 -0.9
Y52A	Lilburn comp=Z,25nm,1.0s	79.05 305	IAmb	IAmb	03 52 25.2
Y52A	Lilburn baz=49,SNR=5.6	79.05 305	P	P	03 52 24.2 +1.1
Y52A	baz=49,SNR=5.6		P	P	03 52 24.2 +1.1
Q32M	Nakina River baz=21	79.09 346	P	P	03 52 21.8 -1.3
DLBC	Dease Lake baz=23	79.15 345	P	P	03 52 23.4 +0.1
SKAG	Skagway baz=19	79.15 348	P	P	03 52 22.2 -1.0
RC01	Rabbit Creek A baz=7.5	79.19 355	P	P	03 52 22.6 -0.7
GLI	Glacier Island baz=9.6	79.21 354	P	P	03 52 22.5 -1.0
N20K	Mount Spurr baz=5.6	79.21 357	P	P	03 52 23.0 -0.6
SPCR	Spurr Chakacha baz=5.6	79.21 357	P	P	03 52 23.9 +0.3
PINM	Pinnacle baz=15	79.26 350	P	P	03 52 23.8 -0.1
PLBC	Pleasant Camp baz=18	79.32 348	P	P	03 52 24.9 +0.8
PWL	Port Wells comp=Z,18nm,1.0s	79.32 355	IAmb	IAmb	03 52 25.9
PWL	Port Wells baz=8.6	79.32 355	P	P	03 52 23.6 -0.5
P29M	Windy Craggy baz=17	79.36 349	P	P	03 52 24.3 -0.1
MESA	MESA baz=14	79.39 351	P	P	03 52 25.0 +0.2
YSS	Yuzh-Sakhalins	79.39 36	P	P	03 52 25.3 +0.6
YSS	Yuzh-Sakhalins	79.39 36	*ce*P	P	03 52 23.1 -1.6
YSS			*e*		03 52 31.9
YSS			*e*S	S	04 02 17.7 -6.7
YSS	comp=Z,600nm,2.5s		pmax	pmax	
YSS	comp=Z,90nm,0.9s		pmax	pmax	
YSS	comp=N,400nm,14.0s		MLR	MLR	
YSS	comp=Z,600nm,14.0s		MLR	MLR	
WAPA	Wapiti River comp=Z,21nm,1.2s	79.42 338	IAmb	IAmb	03 52 26.7
ECSD	EROS Data Cent baz=44	79.48 319	P	P	03 52 24.4 -0.9
DGMT	Dagmar baz=40	79.51 326	P	P	03 52 25.7 +0.3
BGLC	Bering Glacier baz=12	79.59 352	P	P	03 52 24.6 -1.0
N19K	Bonanza Creek baz=3.8	79.69 358	P	P	03 52 25.9 -0.3
O22K	Cooper Landing baz=7.5	79.79 355	P	P	03 52 27.8 +1.1
S34M	Telegraph Cree baz=22	79.85 345	P	P	03 52 28.0 +1.0
N18K	Kilae Creek baz=2.7	79.86 358	P	P	03 52 26.8 -0.2
WVT	Waverly baz=48	79.88 309	P	P	03 52 27.3 -0.3
KAIM	Kayak Island baz=12	79.90 352	P	P	03 52 28.3 +1.0
N16K	Nishlik Lake baz=0.5	80.11 360	P	P	03 52 28.9 +0.5
SUSD	Miller baz=43	80.13 321	P	P	03 52 29.5 +0.6
R32K	Eaglecrest baz=19	80.14 347	P	P	03 52 28.6 -0.1
SEW	Seward baz=7.8	80.15 355	P	P	03 52 28.6 +0.1
152A	Waverly Hall comp=Z,16nm,0.9s	80.25 304	IAmb	IAmb	03 52 31.4
152A	Waverly Hall baz=49,SNR=5.9	80.25 304	P	P	03 52 30.9 +1.2
PEA0B	Petropavlovsk- comp=Z,25nm,1.1s	80.30 25	IAmb	IAmb	03 52 41.4
PETK	Petropavlovsk- comp=Z,4.5nm,0.9s,baz=220,slow=9.1,SNR=6.7	80.30 25	P	P	03 52 28.0 -1.5
PETK	comp=Z,317nm,19.0s,baz=318,slow=39 comp=Z,4.5nm,0.9s		LR	LR	04 32 58.9
PETK	Petropavlovsk-	80.30 25	P	P	03 52 28.0 -1.5
O20K	Slope Mountain baz=5.3	80.35 357	P	P	03 52 29.2 -0.6
X48A	Hartselle comp=Z,18nm,0.9s	80.52 307	IAmb	IAmb	03 52 32.8
X48A	Hartselle baz=48,SNR=8.1	80.52 307	P	P	03 52 31.9 +0.9
T35M	Bob Quinn baz=22	80.54 344	P	P	03 52 30.6 -0.2
CCM	Cathedral Cave	80.58 312	P	P	03 52 31.9 +0.6
CCM	Cathedral Cave	80.58 312	P	P	03 52 31.9 +0.6
CCM	comp=Z,8.0nm,0.8s		pmax	pmax	
CCM	Cathedral Cave baz=46,SNR=5.9	80.58 312	P	P	03 52 31.9 +0.6
CCM	Cathedral Cave baz=46	80.58 312	P	P	03 52 31.2 -0.1
BRSE	Bradley Lake S baz=6.7	80.59 356	P	P	03 52 30.5 -0.6
L34A	Svendsen Farm, comp=Z,15nm,0.8s	80.63 318	IAmb	IAmb	03 52 32.4
O18K	Koktuh Hills comp=Z,21nm,0.8s	80.67 358	IAmb	IAmb	03 52 33.7
O18K				sP	03 52 39.6 -1.1
O18K	Koktuh Hills baz=3.3	80.67 358	P	P	03 52 32.5 +1.0
HOM	Homer baz=6.0	80.72 356	P	P	03 52 31.5 -0.2
S31K	Pelican baz=18	80.73 348	P	P	03 52 32.1 +0.4
P38A	Dawn baz=45,SNR=6.3	80.77 314	P	P	03 52 33.2 +0.8
O17K	Koliganek Bris baz=1.8	80.80 359	P	P	03 52 31.1 -0.9
P19K	Oil Pt baz=4.8	80.81 357	P	P	03 52 30.1 -2.1
S32K	Killisnoo baz=19	80.92 347	P	P	03 52 32.6 -0.1
O16K	Kokwok River B baz=1.0	80.99 359	P	P	03 52 32.6 -0.4
R40A	Maddies Statio comp=Z,10.0nm,0.8s	81.00 313	IAmb	IAmb	03 52 34.8
R40A	Maddies Statio baz=46,SNR=7.5	81.00 313	P	P	03 52 34.4 +0.8
P18K	Big Mountain, baz=3.2	81.14 358	P	P	03 52 32.7 -1.3
LRAL	Lakeview Retre baz=48,SNR=10	81.44 306	P	P	03 52 37.0 +1.0
LRAL	Lakeview Retre baz=48	81.44 306	P	P	03 52 34.1 -1.9
Q19K	Cape Douglas, baz=4.5	81.55 357	P	P	03 52 35.5 -0.7
LAO	LASA Array baz=38,SNR=9.3	81.75 326	P	P	03 52 39.0 +1.5
LAO	LASA Array baz=38	81.75 326	P	P	03 52 35.8 -1.8
MGMO	Mountain Grove comp=Z,17nm,1.3s	81.79 312	IAmb	IAmb	03 52 40.2
Q20K	Shuyak Island baz=5.4	81.81 356	P	P	03 52 36.0 -1.5
Q18K	Katmai Hardscr baz=3.4	81.88 358	P	P	03 52 37.5 -0.4
Q16K	King Salmon baz=2.1	81.89 359	P	P	03 52 36.9 -0.9
OXF	Oxford baz=47	81.92 308	P	P	03 52 35.4 -3.1
U33K	Whale Pass baz=20	81.93 346	P	P	03 52 36.8 -1.3
BGNE	Belgrade baz=43	81.95 318	P	P	03 52 37.1 -1.5
EGMT	Eagleton baz=36	82.15 329	P	P	03 52 37.6 -2.0
Q17K	Contact Creek baz=2.7	82.28 358	P	P	03 52 39.8 -0.3
V35K	Ketchikan baz=21	82.36 344	P	P	03 52 37.1 -3.3
Y45A	Yeager Farm, C baz=47,SNR=5.5	82.44 308	P	P	03 52 41.0 -0.2
CRAG	Craig baz=20	82.53 345	P	P	03 52 38.7 -2.6
KDAK	Kodiak Island baz=5.3	82.64 356	P	P	03 52 40.1 -1.7
RSSD	Black Hills	82.78 323	P	P	03 52 43.3 +0.2
RSSD	Black Hills	82.78 323	P	P	03 52 43.3 +0.2
RSSD	comp=Z,5.0nm,1.0s		pmax	pmax	
RSSD	Black Hills baz=40	82.78 323	P	P	03 52 41.4 -1.7
KSU1	Kansas State U comp=Z,19nm,0.8s	82.82 316	IAmb	IAmb	03 52 44.9
KSU1	Kansas State U baz=44	82.82 316	P	P	03 52 41.7 -1.4
SPIA	Saint Paul Isl baz=352	82.97 6	P	P	03 52 41.6 -1.9
WHAR	Wooly Hollow comp=Z,16nm,1.1s	83.10 311	IAmb	IAmb	03 52 46.1
OHAK	Old Harbor baz=4.7	83.24 357	P	P	03 52 43.7 -1.2
U38A	Gravette comp=Z,7.2nm,0.7s	83.50 313	IAmb	IAmb	03 52 47.8
U38A	Gravette baz=44,SNR=5.2	83.50 313	P	P	03 52 47.4 +0.7
SII	Sitkinak Islan baz=4.0	83.94 357	P	P	03 52 47.5 -1.1
VBMS	Vicksburg baz=46	84.17 307	P	P	03 52 49.4 -0.8
OGNE	Ogallala baz=41	84.25 320	P	P	03 52 48.3 -2.3
RLMT	Red Lodge baz=36	84.29 327	P	P	03 52 49.2 -1.7
BDFB	Brasilia comp=Z,13nm,0.8s,baz=50,slow=5.9,SNR=20	84.33 244	P	P	03 52 51.1 -0.1
BDFB	comp=Z,90nm,19.8s,baz=333,slow=37 comp=Z,13nm,0.8s		LR	LR	04 31 52.6
BDFB	Brasilia comp=Z,15nm,0.9s	84.33 244	IAmb	IAmb	03 52 54.0
T35B	Sooner Cattle baz=44,SNR=7.8	84.34 314	P	P	03 52 52.4 +1.4
MIAR	Mount Ida comp=Z,10nm,0.9s	84.37 311	IAmb	IAmb	03 52 53.0
MIAR	Mount Ida	84.37 311	P	P	03 52 52.6 +1.4
MIAR	comp=Z,16nm,1.7s		pmax	pmax	
MIAR	Mount Ida baz=45,SNR=5.4	84.37 311	P	P	03 52 52.3 +1.1
MIAR	Mount Ida baz=45	84.37 311	P	P	03 52 50.3 -0.9
R32A	Long Quarter, baz=42,SNR=7.4	84.43 317	P	P	03 52 52.0 +0.5
BBB	Bella Bella comp=Z,48nm,19.9s,baz=42,slow=38	84.48 341	LR	LR	04 34 17.2
TUL1	Leonard comp=Z,11nm,0.8s	84.67 313	IAmb	IAmb	03 52 54.1
TUL1	Leonard baz=44	84.67 313	P	P	03 52 53.4 +0.8
TUL1	Leonard baz=44	84.67 313	P	P	03 52 50.3 -2.4
CBKS	Cedar Bluff baz=42,SNR=6.3	84.68 317	P	P	03 52 53.9 +1.1
CBKS	Cedar Bluff baz=42	84.68 317	P	P	03 52 50.8 -2.0
NEW	Newport comp=Z,126nm,19.8s,baz=23,slow=38	84.70 333	LR	LR	04 34 27.0
NEW	Newport comp=Z,20nm,1.5s	84.70 333	IAmb	IAmb	03 52 55.9
NEW	Newport baz=31	84.70 333	P	P	03 52 50.9 -1.7
MSO	Missoula comp=Z,24nm,1.4s	84.76 331	IAmb	IAmb	03 52 54.8
MSO	Missoula baz=33	84.76 331	P	P	03 52 51.5 -1.6
MJB9	Matsu-Tunnel	84.77 46	P	P	03 52 54.2 +1.0
MJB9	comp=Z,18nm,1.1s		IAmb	IAmb	03 52 54.9
MAJO	Matsushiro	84.77 46	P	P	03 52 53.2 0.0
MAJO	comp=Z,18nm,1.1s		IAmb	IAmb	03 52 54.0
MAJO	Matsushiro	84.77 46	P	P	03 52 53.2 0.0
MJAR	Matsushiro Arr comp=Z,14nm,0.8s,baz=322,slow=4.3,SNR=37	84.77 46	P	P	03 52 53.5 +0.3
MJAR	comp=Z,88nm,21.0s,baz=326,slow=37 comp=Z,14nm,0.8s		LR	LR	04 32 14.6
BOZ	Bozeman (W) comp=Z,16nm,1.2s	84.88 329	IAmb	IAmb	03 52 56.3
BOZ	Bozeman (W) baz=35	84.88 329	P	P	03 52 51.6 -2.1
SHEM	Shemya Is, Ala comp=Z,68nm,19.1s,baz=304,slow=39	85.02 16	LR	LR	04 36 05.8
K22A	Casper baz=38,SNR=8.4	85.06 324	P	P	03 52 54.8 +0.1
K22A	Casper baz=38	85.06 324	P	P	03 52 51.6 -3.2
YHL	Hebgen Lake comp=Z,16nm,1.2s	85.31 328	IAmb	IAmb	03 52 58.9
YMR	Madison River comp=Z,21nm,1.1s	85.36 328	IAmb	IAmb	03 52 59.3
X37A	Clayton baz=44,SNR=5.0	85.38 312	P	P	03 52 56.3 +0.1
YHB	Horse Butte comp=Z,16nm,1.2s	85.39 328	IAmb	IAmb	03 52 59.4
SDV	Santo Domingo	85.41 278	P	P	03 52 57.5 +0.5
H17A	Grant Village comp=Z,15nm,1.1s	85.43 327	IAmb	IAmb	03 53 01.4
H17A	Grant Village baz=36	85.43 327	P	P	03 52 53.9 -2.8
JOW	Kunigami comp=Z,118nm,18.5s,baz=74,slow=39	85.52 59	LR	LR	04 36 24.0
PHWY	Pilot Hill comp=Z,10nm,1.1s	85.62 322	IAmb	IAmb	03 52 59.9
YPP	Pitchstone Pla comp=Z,18nm,1.3s	85.62 327	IAmb	IAmb	03 53 01.7
SOCV	Socops	85.96 277	*e*P	P	03 52 58.5 -0.9
N23A	Red Feather La baz=38	86.17 322	P	P	03 52 57.6 -2.8
BW06	Boulder Array comp=Z,13nm,1.5s	86.31 326	IAmb	IAmb	03 53 02.4
BW06	Boulder Array baz=36	86.31 326	P	P	03 52 58.6 -2.5
PD31	Pinedale Array comp=Z,19nm,1.8s	86.31 326	IAmb	IAmb	03 53 02.4
PDAR	Pinedale Array comp=Z,1.7nm,0.9s,baz=48,slow=4.4,SNR=11	86.31 326	P	P	03 53 01.1 0.0
PDAR	comp=Z,180nm,21.1s,baz=38,slow=36 comp=Z,1.7nm,0.9s		LR	LR	04 31 57.1
PDAR	Pinedale Array	86.31 326	P	P	03 53 01.2 +0.2
TPAW	Teton Pass comp=Z,22nm,1.9s	86.32 327	IAmb	IAmb	03 53 14.0
UNV	Unalaska Valle baz=354	86.55 4	P	P	03 52 59.2 -2.5
E09A	Wood Farm, Sta comp=Z,14nm,1.1s	86.56 333	IAmb	IAmb	03 53 03.6
ISCO	Idaho Springs baz=38	86.87 322	P	P	03 53 00.8 -3.1
WMOK	Wichita Mounta comp=Z,9.2nm,1.0s	87.19 314	IAmb	IAmb	03 53 07.6
WMOK	Wichita Mounta	87.19 314	P	P	03 53 06.5 +1.3
WMOK	comp=Z,11nm,1.2s		pmax	pmax	
WMOK	Wichita Mounta baz=42	87.19 314	P	P	03 53 06.5 +1.3
WMOK	Wichita Mounta baz=42	87.19 314	P	P	03 53 02.5 -2.7
HLID	Hailey baz=33	87.67 329	P	P	03 53 04.2 -3.4
O20A	White River Ci baz=37	87.84 323	P	P	03 53 04.8 -3.7
HWUT	Hardware Ranch comp=Z,13nm,1.1s	88.12 326	IAmb	IAmb	03 53 11.2
SJCC	San Jacinto, C	88.23 281	*e*P	P	03 53 12.4 +1.9
T25A	Trinidad baz=39	88.35 319	P	P	03 53 06.5 -4.5
SDCO	Great Sand Dun baz=38	88.42 320	P	P	03 53 11.3 -0.1
SDCO	Great Sand Dun baz=38	88.42 320	P	P	03 53 08.6 -2.8
WHTX	Lake Whitney, baz=43	88.46 311	P	P	03 53 08.9 -2.4
S22A	4UR Ranch, Cre baz=38	89.07 321	P	P	03 53 13.2 -1.3
ABTX	Abilene, Hawle comp=Z,10nm,0.8s	89.24 313	IAmb	IAmb	03 53 16.8
ABTX	Abilene, Hawle baz=42	89.24 313	P	P	03 53 13.1 -1.9
BGU	Big Grassy Mou comp=Z,9.9nm,1.1s	89.31 327	IAmb	IAmb	03 53 17.2
435B	Jarrell baz=43	89.42 311	P	P	03 53 14.5 -1.4
PTGC	Puerto Gaitan,	89.53 275	*e*P	P	03 53 16.6 0.0
DUG	Dugway, Tooele comp=Z,8.4nm,1.1s	89.82 326	IAmb	IAmb	03 53 19.4
DUG	Dugway, Tooele	89.82 326	P	P	03 53 18.6 +0.9
DUG	comp=Z,11nm,1.2s		pmax	pmax	
DUG	Dugway, Tooele baz=34	89.82 326	P	P	03 53 15.6 -2.1
MSTX	Muleshoe baz=40	89.94 316	P	P	03 53 15.3 -3.1
SPBC	San Pablo de B	90.09 277	*e*P	P	03 53 19.3 +0.1
MVCO	Mesa Verde	90.30 322	P	P	03 53 21.3 +1.1
MVCO	comp=Z,16nm,1.4s		IAmb	IAmb	03 53 21.7
MVCO	Mesa Verde baz=37	90.30 322	P	P	03 53 17.7 -2.5
ELK	Elko comp=Z,278nm,19.2s,baz=41,slow=37	90.38 328	LR	LR	04 35 36.1
NORC	Norcasia	90.75 278	*e*P	P	03 53 22.8 +0.5
ROSC	El Rosal comp=Z,4.1nm,0.3s,baz=350,slow=18,SNR=2.3 comp=Z,4.1nm,0.3s	90.80 277	P	P	03 53 21.9 -1.0
JCT	Junction City comp=Z,20nm,1.4s	90.93 312	IAmb	IAmb	03 53 25.4
JCT	Junction City baz=42	90.93 312	P	P	03 53 20.2 -2.7
ANMO	Albuquerque comp=Z,85nm,21.8s,baz=40,slow=34	91.10 319	LR	LR	04 32 34.1
ANMO	Albuquerque baz=38	91.10 319	P	P	03 53 20.1 -3.7
CBOC	Ciudad Bolivar	91.43 279	*e*P	P	03 53 26.3 +0.6
PRAC	Prado	91.94 276	*e*P	P	03 53 28.3 +0.4
Y22D	IRIS PASSCAL I baz=38	92.02 319	P	P	03 53 25.4 -2.6
Y22F	Passcal Instru baz=38	92.02 319	P	P	03 53 24.4 -3.7
CCUT	Cedar City comp=Z,9.5nm,1.4s	92.25 325	IAmb	IAmb	03 53 31.6
833A	Chaparral WMA, baz=42	92.29 310	P	P	03 53 25.8 -3.4
YBH	Yreka Blue Hor comp=Z,177nm,18.9s,baz=20,slow=37	92.33 333	LR	LR	04 37 13.4
R11A	Troy Canyon, C baz=32	92.54 327	P	P	03 53 28.5 -2.0
U15A	North Rim comp=Z,11nm,1.2s	92.70 324	IAmb	IAmb	03 53 32.9
YOTC	Yotoco, Valle	92.89 278	*e*P	P	03 53 32.2 -0.1
WUAZ	Wupatki baz=35	93.03 323	P	P	03 53 30.0 -2.7
NVAR	Mina Array Bea comp=Z,274nm,20.1s,baz=28,slow=37	93.58 329	LR	LR	04 38 07.7
121A	Cookes Peak, D baz=37	93.68 319	P	P	03 53 33.6 -2.2
SIV	San Ignacio comp=Z,70nm,20.4s,baz=17,slow=36	93.92 253	LR	LR	04 36 28.6
TX32	Lajitas Array comp=Z,10nm,1.1s	93.98 314	IAmb	IAmb	03 53 39.3
TXAR	Lajitas Array comp=Z,4.3nm,0.9s,baz=66,slow=4.1,SNR=39	93.98 314	P	P	03 53 38.2 +1.1
TXAR	comp=Z,69nm,20.2s,baz=13,slow=37 comp=Z,4.3nm,0.9s		LR	LR	04 38 15.7
CWC	Cottonwood Cre baz=31	95.20 328	P	P	03 53 40.9 -1.8
MPMC	Manual Prospec baz=31	95.28 327	P	P	03 53 41.1 -2.1
PDMCI	Parker Dam,Lak baz=33	95.31 324	P	P	03 53 41.2 -1.8
TUC	Tucson baz=35	95.36 320	P	P	03 53 41.0 -2.4

GMRC	Granite Mounta	95.58	325	P	P	03 53 42.2	-2.2
	baz=32						
GSC	Goldstone, Bar	95.64	326	P	P	03 53 41.9	-2.7
	baz=32						
IRM	Iron Mountain	95.88	325	P	P	03 53 43.5	-2.1
	baz=33						
ISA	Isabella, Lake	96.03	328	P	P	03 53 44.2	-2.2
	baz=30						
BC3	Big Chuckawall	96.44	324	P	P	03 53 46.6	-1.7
	baz=32						
214A	Organ Pipe Nat	96.63	322	P	P	03 53 49.5	+0.4
	baz=34						
DAV	Davao City (W)	96.80	75	LR	LR	04 44 55.0	
	comp=Z,55nm,18.5s,baz=344,slow=40						
PFO	Pinyon Flats O	96.92	325	LR	LR	04 39 56.9	
	comp=Z,156nm,18.5s,baz=18,slow=37						
CPUP	Villa Florida	97.92	242	LR	LR	04 40 32.7	
	comp=Z,129nm,18.6s,baz=40,slow=37						
LPAZ	La Paz	99.36	257	LR	LR	04 39 47.0	
	comp=Z,45nm,20.4s,baz=108,slow=36						
WRA	Warramunga Arr	120.44	91	PKP	PKPdf	03 59 09.7	-0.9
	comp=Z,2.0nm,0.8s,baz=300,slow=1.7,SNR=10						
WRA				PKKPbc	PKKPbc	04 09 15.3	-0.1
	comp=Z,0.5nm,0.6s,baz=122,slow=3.4,SNR=5.6						
ASAR	Alice Springs	122.19	95	PKP	PKPdf	03 59 13.2	-0.7
	comp=Z,4.6nm,0.8s,baz=318,slow=1.4,SNR=43						
QSPA	South Pole Qui	129.62	180	PKP	PKPdf	03 59 25.9	-0.8
	comp=Z,5.5nm,1.1s,baz=267,slow=2.0,SNR=4.7						
STKA	Stephens Creek	132.18	100	PKP	PKPdf	03 59 31.9	-0.7
	comp=Z,1.2nm,0.6s,baz=313,slow=10,SNR=3.8						
DZM	Mont Dzumac	145.99	69	PKPbc	PKPdf	03 59 57.8	-0.4
	comp=Z,25nm,0.9s,baz=179,slow=17,SNR=5.9						
URZ	Urewera	161.61	93	PKPab	PKPab	04 01 02.9	-1.7
	comp=Z,4.7nm,0.7s,baz=127,slow=1.9,SNR=5.0						

*IDC **16** 03:46:24.2±1.6, 39.°86N×20.°13E, h0km, mb3.4/5, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=28.7km s-min=23.4km az=114.0*
*THE **16** 03:46:27.9, 39.°74N×20.°68E, h14km, ML3.0/9, Error ellipse: s-maj=0.9km s-min=0.4km az=286.0*

ISC 16 03:46:26.7±0.9, 39.°75N±0.°03×20.°66E±0.°03, h18km±3km, n21, σ1§24/29, mb3.4/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.17	122	P	Pb	03 46 31.1	+0.4
JAN				S	Sg	03 46 34.6	+0.2
	31μm,0.3s						
IGT	Igoumenitsa	0.34	230	P	Pb	03 46 34.9	+0.8
IGT				S	Sb	03 46 40.4	+1.3
	5μm,0.6s						
LSK	Leskovik	0.40	353	P	Pb	03 46 36.5	+1.1
LSK				S	Sb	03 46 42.2	+0.9
	5μm,0.6s						
SRN	Sarande	0.53	285	P	Pb	03 46 38.3	+1.0
SRN				S	Sb	03 46 46.1	+1.5
	2μm,0.3s						
KPRO	Kipourio	0.58	69	P	Pg	03 46 38.9	+0.7
KPRO				S	Sg	03 46 47.0	+1.0
	2μm,0.5s						
PENT	Pentalofos	0.58	39	P	Pg	03 46 39.1	+0.9
PENT				S	Sg	03 46 47.2	+1.2
	640nm,0.3s						
KEK	Kerkira	0.67	267	P	Pg	03 46 40.5	+0.6
KEK				S	Sn	03 46 51.0	-0.2
	1μm,0.4s						
NEST	Nestorio	0.73	24	P	Pn	03 46 42.1	0.0
NEST				S	Sn	03 46 52.4	-0.5
	745nm,0.4s						
KBN	Korca	0.88	6	P	Pn	03 46 44.8	+0.6
TSLK	Tsoukalades, L	0.92	180	P	Pn	03 46 44.9	+0.2
LKD2	Lefkada island	0.96	180	P	Pg	03 46 45.8	+0.5
KZN	Kozani	1.02	56	P	Pg	03 46 46.6	+0.2
KZN				S	Sn	03 47 00.9	+1.0
	645nm,0.5s						
THL	Klokotos Trika	1.06	100	P	Pb	03 46 46.8	+0.4
TYRN	Tyrnavos	1.21	91	P	Pb	03 46 49.6	+0.6
MLR	Muntele Rosu	6.93	32	Pn	Pn	03 48 12.9	+5.4
	0.3nm,0.3s,baz=179,slow=19,SNR=2.0						
	4.8nm,0.8s						
GERES	GERESS Array B	10.37	334	Pn	Pn	03 48 51.2	-3.3
	1.2nm,1.1s,baz=152,slow=15,SNR=1.2						
HFS	Hagfors	20.87	350	P	P	03 51 06.1	-1.3
	2.0nm,0.8s,baz=180,slow=9.7,SNR=1.1						
	2.0nm,0.8s						
FINES	FINESS Array B	21.98	7	P	P	03 51 19.1	-0.2
	0.8nm,0.5s,baz=178,slow=12,SNR=6.4						
	0.8nm,0.5s						
NOA	NORSAR Array B	22.11	348	P	P	03 51 17.4	-3.4
	0.5nm,0.8s,baz=166,slow=11,SNR=1.6						
	0.5nm,0.8s						
TORD	Torodi Ar. Bea	31.33	218	P	P	03 52 46.1	+0.1
	0.3nm,0.6s,baz=28,slow=10,SNR=1.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	44.40	60	P	P	03 54 36.8	+0.7
	0.9nm,0.6s,baz=270,slow=8.3,SNR=6.4						
	0.9nm,0.6s						

*IDC **16** 03:49:13.5±0.9, 60.°52S×24.°58W, h0km, mb4.2/6, mbtmp4.3/7, ML4.3/1, MS3.1/6, Error ellipse: s-maj=36.3km s-min=22.3km az=8.0*

ISC 16 03:49:15.3±0.7, 60.°4S±0.°1×24.°4W±0.°1, h10km, n20, σ1§51/17, mb4.3/8, MS3.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.22	154	P	Pn	03 52 08.0	-1.1
VNA3	Neumayer Olymp	12.40	158	P	Pn	03 52 10.2	-1.5
VNA2	Neumayer--Watz	12.62	154	P	Pn	03 52 12.6	-2.0
	baz=311,slow=13						
SNAA	Sanae	14.19	152	P	Pn	03 52 34.1	-1.9
SNAA	Sanae	14.19	152	Pn	Pn	03 52 34.3	-1.8
	1.3nm,0.3s,baz=319,slow=12,SNR=29						
SNAA				Sn	Sn	03 54 56.0	-17
	0.2nm,0.3s,baz=164,slow=21,SNR=2.3						
SNAA				LR	LR	03 57 43.9	
	comp=Z,16nm,18.1s,baz=277,slow=36						
	17nm,0.7s						
TROLL	Troll, Antarti	15.72	149	P	Pn	03 52 55.4	-1.2
QSPA	South Pole Qui	29.86	180	P	P	03 55 24.5	+2.0
	7.0nm,0.9s,baz=206,slow=3.2,SNR=18						
PLCA	Paso Flores	34.35	284	P	P	03 56 00.8	-1.2
	2.9nm,0.9s,baz=132,slow=8.5,SNR=6.8						
PLCA				LR	LR	04 08 14.9	
	comp=Z,52nm,21.6s,baz=151,slow=33						
	2.9nm,0.9s						
MAW	Mawson	35.83	139	LR	LR	04 08 44.8	
	comp=Z,54nm,21.6s,baz=228,slow=33						
CPUP	Villa Florida	40.80	312	LR	LR	04 16 03.5	
	comp=Z,33nm,18.1s,baz=206,slow=39						
VNDA	Vanda	42.30	182	P	P	03 57 10.8	+2.5
	2.1nm,1.1s,baz=190,slow=5.6,SNR=8.8						
VNDA				LR	LR	04 15 18.6	
	comp=Z,40nm,20.8s,baz=22,slow=37						
BOSA	Boshof	45.87	69	P	P	03 57 38.0	+0.3
	1.8nm,0.6s,baz=191,slow=6.4,SNR=5.2						
	1.8nm,0.6s						
LVC	Limon Verde	48.78	301	LR	LR	04 17 51.0	
	comp=Z,29nm,21.8s,baz=134,slow=35						
LPAZ	La Paz	54.09	305	P	P	03 58 40.1	-0.6
	1.2nm,0.4s,baz=145,slow=5.3,SNR=14						
	1.2nm,0.4s						
LSZ	Lusaka	58.76	64	P	P	03 59 13.5	0.0
	2.7nm,0.7s,baz=183,slow=6.4,SNR=8.2						
	2.7nm,0.7s						
TORD	Torodi Ar. Bea	76.20	26	P	P	04 01 04.7	+1.3
	1.6nm,0.5s,baz=198,slow=6.5,SNR=25						
	1.6nm,0.5s						
ASAR	Alice Springs	94.40	160	P	P	04 02 34.2	-1.1
	0.6nm,0.8s,baz=193,slow=6.7,SNR=2.6						
	0.6nm,0.8s						
FINES	FINESS Array B	127.53	28	PKP	PKiKP	04 08 19.0	-0.3
	3.5nm,0.9s,baz=158,slow=1.5,SNR=9.0						
SONM	Songino Array	149.31	92	PKPbc	PKiKP	04 09 03.5	-0.9
	1.9nm,0.8s,baz=222,slow=2.3,SNR=10						
ILAR	Eielson Array	153.97	305	PKPbc	PKiKP	04 09 13.6	+0.2
	1.8nm,1.1s,baz=136,slow=1.4,SNR=6.9						

*IDC **16** 03:52:03.1±1.1, 0.°63S×24.°55W, h0km, mb3.8/6, mbtmp4.0/7, ML4.4/1, MS3.5/7, Error ellipse: s-maj=66.3km s-min=19.9km az=155.0*

ISC 16 03:52:04.2±1.0, 0.8S±0.°4×24.°5W±0.°2, h10km, n20, σ0§74/8, mb3.9/5, MS3.6/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	12.21	125	T	T	04 06 58.5	
	baz=304,slow=74,SNR=137						
H10N2	ASCENSION HYDR	12.21	125	T	T	04 06 57.8	
	baz=304,slow=74,SNR=175						
H10N1	ASCENSION HYDR	12.23	125	T	T	04 06 58.5	
	baz=304,slow=74,SNR=213						
RCBR	Riachuelo	12.41	246	Pn	Pn	03 55 00.3	-0.9
	2.3nm,0.3s,baz=186,slow=18,SNR=41						
RCBR				Sn	Sn	03 57 08.3	-11
	0.5nm,0.3s,baz=141,slow=4.9,SNR=2.6						
	12nm,0.5s						
H10S3	ASCENSION HYDR	12.74	130	T	T	04 07 44.7	
	baz=308,slow=74,SNR=61						
H10S2	ASCENSION HYDR	12.76	130	T	T	04 07 46.1	
	baz=272,slow=74,SNR=23						
DBIC	Dimbokro	20.98	69	P	P	03 56 46.9	-0.9
	6.3nm,1.0s,baz=263,slow=12,SNR=3.5						
	6.3nm,1.0s						
KOWA	Kowa	25.34	52	P	P	03 57 31.4	-0.2
	6.1nm,1.1s,baz=196,slow=5.1,SNR=5.3						
	6.1nm,1.1s						
BDFB	Brasilia	27.49	236	LR	LR	04 07 31.2	
	comp=Z,105nm,19.8s,baz=138,slow=34						
TORD	Torodi Ar. Bea	29.45	61	P	P	03 58 08.7	+0.2
	2.1nm,1.1s,baz=256,slow=9.1,SNR=5.1						
	2.1nm,1.1s						
MDT	Midelt	38.34	28	LR	LR	04 14 17.3	
	comp=Z,91nm,18.8s,baz=57,slow=35						
LPAZ	La Paz	45.65	248	P	P	04 00 26.9	+0.8
	0.8nm,0.6s,baz=48,slow=11,SNR=6.7						
	0.8nm,0.6s						
DAVOX	Davos/Dischmat	56.14	28	LR	LR	04 22 57.7	
	comp=Z,21nm,21.3s,baz=264,slow=33						
MLR	Muntele Rosu	64.02	37	LR	LR	04 31 54.2	
	comp=Z,51nm,18.6s,baz=163,slow=37						
AKASG	Malin Array Be	68.56	33	P	P	04 03 07.0	-0.1
	0.6nm,0.9s,baz=239,slow=5.3,SNR=1.4						
	0.6nm,0.9s						
CMIG	Matias Romero	71.49	288	LR	LR	04 34 08.9	
	comp=Z,42nm,21.8s,baz=45,slow=35						
TXAR	Lajitas Array	80.92	300	P	P	04 04 19.6	+0.2
	0.3nm,0.8s,baz=108,slow=5.8,SNR=2.3						
	0.3nm,0.8s						
AKTO	Aktyubinsk	85.83	39	LR	LR	04 43 59.3	
	comp=Z,8.8nm,21.7s,baz=320,slow=36						
LPIG	La Paz	86.46	294	LR	LR	04 40 10.1	
	comp=Z,76nm,19.0s,baz=352,slow=33						
ASAR	Alice Springs	147.91	141	PKPbc	PKPbc	04 11 51.3	+0.6
	0.5nm,0.8s,baz=224,slow=2.6,SNR=3.0						

*SOME **16** 04:12:13.7, 39.°38N×73.°88E, h0km*
*NNC **16** 04:12:19.0±5.9, 39.°57N×73.°86E, h0km, mb3.1, mpv3.1, Error ellipse: s-maj=47.4km s-min=21.9km az=162.0*
*KRNET **16** 04:12:19.3±0.1, 39.°52N×73.°56E, mb3.0*
*ISU **16** 04:12:22, 40.°61N×73.°77E, h30km*

ISC 16 04:12:19.7±1.4, 39.°61N±0.°07×73.°79E±0.°04, h10km, n27, σ1§56/45, 11C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	1.20	320	⇓iP	Pn	04 12 41.6	-1.0
	baz=30						
OHH				⇓iS	Sb	04 12 57.7	-0.4
	baz=30						
TSTA	Tashata	1.40	314	P	Sg	04 13 03.7	-1.0
ANR	Andizhan	1.58	317	P	Sn	04 13 10.4	+1.9
FRG	Fergana	1.72	297	P	Pn	04 12 50.1	+0.3
FRG				S	Sn	04 13 12.0	+0.2
CHMI	Chimion	1.86	291	P	Pn	04 12 51.2	-0.6
CHMI				S	Sn	04 13 15.8	+0.4
ARLS	Aral	2.28	10	⇑iP	Pb	04 13 01.9	+0.8
	baz=14						
ARLS				⇑iS	Sg	04 13 33.0	-0.1
	baz=14						
MINT	Mingtut	2.33	292	P	Sb	04 13 32.2	+1.6
BTK	Batken	2.33	282	⇑iP	Pn	04 12 58.8	+0.5
	baz=85						
BTK				⇑iS	Sn	04 13 27.6	+0.6
	baz=85						
BTK	Batken	2.33	282	P	Pn	04 12 57.7	-0.6
BTK				S	Sn	04 13 29.1	+2.1
ARK	Arkit	2.59	328	⇑eP	Pb	04 13 04.4	-1.9
	baz=33						
ARK				⇑iS	Sb	04 13 37.6	-0.6
	baz=33						
UCH	Uchtor	2.67	12	⇑eP	Pb	04 13 07.5	-0.4
	baz=15						
UCH				⇑iS	Sb	04 13 42.5	+1.6
	baz=15						
GAR	Garm	2.77	258	⇓iP	Pn	04 13 04.3	+0.1
	baz=59						
GAR				⇓iS	Sn	04 13 37.2	-0.6
	baz=59						
TKM2	Tokmak 2	3.57	22	⇑Pg	Pb	04 13 23.4	+0.3
	2.1nm,0.8s						
TKM2				⇓Lg	Lg	04 14 14.0	
	3.7nm,0.7s						
KST	Kastek	3.80	25	eP	Pb	04 13 28.4	+1.5
	2.2nm,0.5s						
KST				eS	Sg	04 14 23.3	+1.6
	6.0nm,0.7s						
KST	Kastek	3.80	25	Pg	Pb	04 13 28.4	+1.5
	2.2nm,0.5s						
KST				Lg	Lg	04 14 23.3	
	6.0nm,0.7s						
IUG	Iuzhnay	3.81	313	eP	Pb	04 13 29.2	+2.0
	81nm,0.1s						
IUG				eS	Sg	04 14 24.0	+1.8
	14nm,0.4s						
IUG	Iuzhnay	3.81	313	Pg	Pb	04 13 29.2	+2.0
	81nm,0.1s						
IUG				Lg	Lg	04 14 24.0	
	14nm,0.4s						
SGDS	Sogindy	3.89	9	eP	Pb	04 13 30.4	+2.0
	1.6nm,0.3s						
SGDS				eS	Sg	04 14 26.1	+1.5
	2.6nm,0.6s						
SGDS	Sogindy	3.89	9	Pg	Pb	04 13 30.4	+2.0
	1.6nm,0.3s						
SGDS				Lg	Lg	04 14 26.1	
	2.6nm,0.6s						
IZV	Izvestkoviy	4.03	31	eP	Pb	04 13 32.3	+1.5
	0.1nm,0.1s						
IZV				eS	Sg	04 14 29.5	+0.5
	3.5nm,0.3s						
IZV	Izvestkoviy	4.03	31	Pg	Pb	04 13 32.3	+1.5
	0.1nm,0.1s						
IZV				Lg	Lg	04 14 29.5	
	3.5nm,0.3s						
TNSS	Tian-Shan	4.17	34	eP	Pg	04 13 35.8	-3.7
	1.8nm,0.5s						
TNSS				eS	Sg	04 14 35.0	+1.5
	1.9nm,0.6s						
TNSS	Tian-Shan	4.17	34	Pg	Pg	04 13 35.8	-3.7
	1.8nm,0.5s						
TNSS				Lg	Lg	04 14 35.0	
	1.9nm,0.6s						
KK31	Karatay Array	4.27	326	Pn	Pn	04 13 25.8	+1.0
	0.2nm,0.3s,baz=130,slow=13,SNR=14						
KK31				⇑Pg	Pb	04 13 35.4	+0.5
	0.3nm,0.3s,baz=134,slow=16,SNR=4.1						
KK31				⇑Lg	Lg	04 14 31.0	
	1.5nm,0.4s,baz=136,slow=24,SNR=5.2						
MDOK	Medeo	4.31	34	eP	Pb	04 13 38.0	+2.3
	3.0nm,0.2s						
MDOK				eS	Sg	04 14 38.6	+0.4
	6.1nm,0.2s						
KOTS	Kotyrbulak	4.39	34	eP	Pb	04 13 39.5	+2.4
	1.9nm,0.3s						
KOTS				eS	Sg	04 14 41.2	+0.3
	12nm,0.6s						
KUU	Kurty	4.68	23	eP	Pb	04 13 43.6	+1.7
	1.5nm,0.4s						
KUU				eS	Sg	04 14 48.6	-1.4
	3.1nm,0.5s						

*NOU **16** 04:15:14.7, 38.°49S×178.°15E, h12km, MLv3.5/6, Off E. Coast of N. Island, N.Z.*
*WEL **16** 04:15:15.5, 39.°S±3.°×17.°8E±.°, h35km±4km, M3.4/58, ML3.9/23, MLv3.4/58, Error ellipse: s-maj=0.0km s-min=0.0km az=80.1*

ISC 16 04:15:15.7±1.2, 38.°53S±0.°03×178.°20E±0.°04, h34km±2km, n67, σ1§13/80, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.04	6	P	Pb	04 15 21.6	+0.3
CNGZ				S	Sb	04 15 27.5	+2.4
TKGZ	Te Karaka	0.29	288	P	Pb	04 15 22.3	-1.1
TKGZ				S	Sb	04 15 27.8	-0.8
RIGZ	Rimuhau	0.39	243	P	Pb	04 15 24.4	-0.3
RIGZ				S	Sn	04 15 32.0	+1.0
TWGZ	Tauwhareparae	0.39	334	P	Pb	04 15 24.2	-0.6
TWGZ				S	Sb	04 15 31.2	+0.2
PUZ	Puketiti	0.46	5	P	Pb	04 15 25.3	-0.4
PUZ				S	Sn	04 15 33.5	+0.6
MWZ	Matawai	0.56	290	P	Pb	04 15 26.1	-1.3
MWZ				S	Sb	04 15 34.1	-1.3
RAGZ	Rawiri	0.62	273	P	Pb	04 15 27.2	-1.1
RAGZ				S	Sb	04 15 36.7	-0.2
KNZ	Kokohu	0.64	220	P	Pn	04 15 27.7	-0.6
PKGZ	Pakihiroa	0.65	351	P	Pn	04 15 28.2	-0.2
PKGZ				S	Sb	04 15 38.2	+0.6
MHGZ	Mahia Peninsul	0.67	200	P	Pn	04 15 28.9	+0.3
RUGZ	Raukumara Rang	0.70	324	P	Pn	04 15 28.1	-1.2
RUGZ				S	Sb	04 15 37.6	-1.4
SNGZ	Shannon Statio	0.72	249	P	Pn	04 15 28.9	-0.6
WMGZ	Waiomatatini S	0.73	13	P	Pn	04 15 29.4	-0.1
WMGZ				S	Sb	04 15 41.1	+1.4
HAZ	Te Kaha	0.84	337	P	Pn	04 15 30.3	-0.7
HAZ				S	Sn	04 15 41.6	-0.6
URZ	Urewera	0.90	287	P	Pn	04 15 31.0	-0.9
URZ				S	Sn	04 15 42.8	-0.9
URZ	Urewera	0.90	287	P	Pn	04 15 31.3	-0.6
WHHZ	Waihua	0.93	234	P	Pn	04 15 32.1	-0.3
RAHZ	Arahi	0.95	246	P	Pn	04 15 32.1	-0.6
RTZ	Ruatahuna	0.96	264	P	Pn	04 15 31.1	-1.7
MXZ	Matakaoa Point	0.97	5	P	Pn	04 15 32.7	-0.1
MXZ	Matakaoa Point	0.97	5	P	Pn	04 15 32.8	-0.1
MTHZ	Maungataniwha	1.11	253	P	Pn	04 15 34.3	-0.7
MTHZ				S	Sn	04 15 48.7	-0.4
MUGZ	Murupara	1.12	272	P	Pn	04 15 34.6	-0.4
WHRZ	Whale Island	1.18	304	P	Pn	04 15 35.7	-0.1
ARHZ	Aropaoanui	1.19	232	P	Pn	04 15 35.8	-0.1
EDRZ	Edgecumbe	1.23	290	P	Pn	04 15 36.1	-0.4
NMHZ	Naumai	1.23	242	P	Pn	04 15 36.2	-0.4
WIZ	White Island	1.28	321	P	Pn	04 15 36.6	-0.6
MARZ	Manawahe	1.32	294	P	Pn	04 15 38.2	+0.4
RRRZ	Republican Roa	1.34	278	P	Pn	04 15 38.0	0.0
TARZ	Mount Tarawera	1.36	282	P	Pn	04 15 38.3	-0.1
PRRZ	Plateau Road	1.42	271	P	Pn	04 15 39.2	+0.1
CKHZ	Cape Kidnapper	1.43	217	P	Pn	04 15 38.2	-1.0
MRHZ	Matea Rd	1.43	257	P	Pb	04 15 41.6	-0.2
ALRZ	Allen Road	1.46	268	P	Pn	04 15 39.7	+0.1
OPRZ	Ohinepanea	1.47	297	P	Pn	04 15 38.6	-1.1
BKZ	Black Stump Fm	1.48	244	P	Pn	04 15 39.6	-0.3
BKZ	Black Stump Fm	1.48	244	P	Pn	04 15 39.7	-0.3
HLRZ	Highlands Stat	1.48	280	P	Pb	04 15 44.9	+2.3
MCHZ	McNeill Hill	1.49	232	P	Pn	04 15 39.6	-0.5
OMRZ	Omania	1.50	286	P	Pn	04 15 38.9	-1.4
HRRZ	Handcock Road	1.51	275	P	Pn	04 15 40.3	-0.1
HSRZ	Hossack Road	1.55	277	P	Pn	04 15 41.0	+0.1
WPRZ	Whakapapatarin	1.60	270	P	Pb	04 15 46.8	+2.1
KARZ	Kaharoa	1.62	288	P	Pn	04 15 41.6	-0.3
KAHZ	Kahuranaki	1.63	219	P	Pn	04 15 40.8	-1.2
TGRZ	Tauranga	1.73	297	P	Pn	04 15 42.7	-0.6
PXZ	Pawanui	1.83	214	P	Pn	04 15 43.3	-1.4
RITZ	Rihia Road	1.89	256	P	Pb	04 15 51.4	+1.9
TMVZ	Te Maari	2.04	252	P	Pn	04 15 48.9	+1.2
ETVZ	East Tongariro	2.04	252	P	Pn	04 15 49.3	+1.5
PNHZ	Pukenui	2.08	228	P	Pn	04 15 47.1	-1.1
MOVZ	Moawhango	2.10	245	P	Pn	04 15 48.1	-0.5
NNVZ	North Ngauruho	2.11	253	P	Pb	04 15 54.4	+1.0
TUVZ	Tukino	2.12	249	P	Pn	04 15 50.9	+2.1
NGZ	Ngauruhoe	2.13	252	P	Pn	04 15 50.8	+1.8
FWVZ	Far West T-bar	2.19	250	P	Pn	04 15 52.5	+2.6
TSZ	Takapari Road	2.31	228	P	Pn	04 15 49.9	-1.6
HIZ	Hauiti	2.62	269	P	Pn	04 15 57.1	+1.4
BFZ	Birch Farm	2.63	214	P	Pn	04 15 53.6	-2.2
KUZ	Kuaotunu	2.65	311	P	Pn	04 15 54.3	-1.7
KUZ	Kuaotunu	2.65	311	P	Pn	04 15 55.7	-0.4
MRZ	Mangatainoka R	2.94	223	P	Pn	04 15 57.6	-2.4
HOWZ	Holdsworth Sta	3.15	220	P	Pn	04 16 00.7	-2.2
NEZ	North Egmont	3.29	256	P	Pn	04 16 06.0	+1.1
KHEZ	Kahui Hut	3.35	256	P	Pn	04 16 06.7	+1.0
KHEZ	Kahui Hut	3.35	256	P	Pn	04 16 07.2	+1.4

*TIR **16** 04:22:41.2, 39.°67N×20.°90E, h9km, Md3.6*
*IDC **16** 04:22:41.0±1.6, 39.°72N×20.°77E, h0km, mb3.4/4, mbtmp3.3/6, ML3.1/2, Error ellipse: s-maj=29.3km s-min=25.5km az=107.0*
*THE **16** 04:22:43.8, 39.°76N×20.°71E, h12km±1km, ML3.2/13, Error ellipse: s-maj=1.3km s-min=0.7km az=313.0*

ISC 16 04:22:43.3±0.8, 39.°76N±0.°02×20.°78E±0.°02, h14km±6km, n39, σ1§53/60, mb3.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.11	152	P	Pg	04 22 47.0	+0.4
JAN				S	Sg	04 22 50.2	+1.3
	20μm,0.2s						
IGT	Igoumenitsa	0.41	238	P	Pg	04 22 50.5	-1.1
IGT				S	Sg	04 22 56.6	-0.6
	6μm,0.4s						
IGT	Igoumenitsa	0.41	238	P	Pg	04 22 50.7	-0.9
	baz=254						
IGT				S	Sg	04 22 57.4	+0.2
	baz=254						
LSK	Leskovik	0.42	340	P	Pb	04 22 52.2	-0.4
LSK				S	Sb	04 22 58.5	-0.4
	5μm,0.5s						
LSK	Leskovik	0.42	340	P	Pb	04 22 52.2	-0.4
	baz=335						
LSK				S	Sb	04 22 59.6	+0.8
	baz=335						
KPRO	Kipourio	0.49	66	P	Pn	04 22 54.6	-1.4
KPRO				S	Sb	04 23 01.4	+0.5
	2μm,0.5s						
PENT	Pentalofos	0.52	32	P	Pn	04 22 54.8	-1.6
SRN	Sarande	0.62	282	P	Pg	04 22 54.2	-1.1
SRN				S	Sg	04 23 02.0	-1.5
	2μm,0.5s						
SRN	Sarande	0.62	282	P	Pg	04 22 54

```
LIT                                    S    Sg   04 23 27.1  0.0
    620nm,0.6s
TIR  Tirane          1.74 337  P      Pg   04 23 15.9 -0.8
    baz=336
TIR                                    S    Sg   04 23 43.6 +4.3
    baz=336
PHP  Peshkopia       1.95 352  P      Pg   04 23 19.6 -1.1
    baz=351
PHP                                    S    Sg   04 23 46.8 +0.9
    baz=351
VAY  Valandovo       2.08  40 i Pn     Pg   04 23 22.6 -0.5
STIP Stip            2.21  28 i Pn     Pg   04 23 24.3 -1.5
BCI  Bajram Curri    2.67 349  P      Pb   04 23 30.1 -0.8
    baz=348
BCI                                    S    Sg   04 24 04.7 -4.2
    baz=348
MMB  Musomiste       2.89  50 eP      Pb   04 23 33.0 -1.8
VTS  Vitosha         3.41  32  P      Pn   04 23 38.9 +2.7
RZN  Rozhen          3.56  56  P      Pb   04 23 43.4 -2.8
GERES GERESS Array B 10.40 333 Pn      Pn   04 25 12.2  0.0
    0.1nm,0.3s,baz=154,slow=14,SNR=2.3
    0.1nm,0.5s
ESDC Sonseca Array  19.03 278  P      Pn   04 27 05.6  0.0
    baz=97,slow=10,SNR=2.5
    0.3nm,1.0s
FINES FINESS Array B 21.96  7  P      P    04 27 36.4 +0.1
    1.7nm,0.9s,baz=178,slow=11,SNR=4.6
    1.7nm,0.9s
NOA  NORSAR Array B 22.12 348  P      P    04 27 39.0 +0.8
    0.7nm,0.8s,baz=155,slow=9.5,SNR=1.6
    0.7nm,0.8s
TORD Torodi Ar. Bea 31.39 218  P      P    04 29 03.0 -0.9
    0.6nm,0.8s,baz=30,slow=8.9,SNR=3.0
    0.6nm,0.8s
MKAR Makanchi Array 44.32  60  P      P    04 30 52.8 +0.1
    0.6nm,0.6s,baz=277,slow=6.8,SNR=7.9
    0.6nm,0.6s
```

*IDC **16** 04:51:31.4±1.5, 39°.78N×20°.68E, h0km, mb3.5/4, mbtmp3.4/6, ML3.2/2, MS2.8/1, Error ellipse: s-maj=28.0km s-min=23.9km az=101.0*
*TIR **16** 04:51:33.5, 39°.68N×20°.84E, h16km, Md3.5*
*THE **16** 04:51:35.3, 39°.77N×20°.69E, h0km±2km, ML3.2/10, Error ellipse: s-maj=2.0km s-min=0.5km az=210.0*
*BEO **16** 04:51:35.5±0.8, 39°.67N×20°.72E, h17km±5km, ML3.0/7*
*VIE **16** 04:51:39.8±0.9, 40°.27N×20°.65E, h10km, mb3.3/7, ms3.6/6, Error ellipse: s-maj=12.2km s-min=4.4km az=8.0 137 km SSE of Tirana*

ISC 16 04:51:35.0±0°.02×20°.70E±0°.02, h17km±6km, n80, σ1°.22/104, mb3.5/4, 7C-2D, Greece-Albania border region

```
Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
JAN   Janina              0.15 129   P     Pg                04 51 38.8 -0.4
JAN                                  S     Sb                04 51 42.4 +0.1
    14μm,0.3s
IGT   Igoumenitsa         0.36 233   P     Pg                04 51 42.3 -0.2
IGT                                  S     Sb                04 51 48.8 +0.5
    4μm,0.3s
IGT   Igoumenitsa         0.36 233   P     Pg                04 51 42.4 -0.2
    baz=250
IGT                                  S     Sb                04 51 49.8 +1.5
    baz=250
LSK   Leskovik            0.41 349   P     Pg                04 51 43.0 -0.4
LSK                                  S     Sg                04 51 49.3 +0.2
    6μm,0.7s
LSK   Leskovik            0.41 349   P     Pg                04 51 43.2 -0.3
    baz=339
LSK                                  S     Sb                04 51 51.6 +1.8
    baz=339
KPRO  Kipourio            0.55  68   P     Pg                04 51 45.8 -0.2
KPRO                                 S     Sg                04 51 53.1 -0.2
    6μm,0.5s
PENT  Pentalofos          0.56  37   P     Pg                04 51 45.7 -0.5
PENT                                 S     Sb                04 51 54.7 +0.6
SRN   Sarande             0.56 284   P     Pg                04 51 45.5 -0.6
SRN                                  S     Sb                04 51 54.2 +0.2
    3μm,0.4s
SRN   Sarande             0.56 284   P     Pg                04 51 45.6 -0.6
    baz=288
SRN                                  S     Sb                04 51 55.1 +1.1
    baz=288
KEK   Kerkira             0.70 267   P     Pg                04 51 47.6 -1.2
KEK                                  S     Sb                04 51 58.5 +0.4
    2μm,0.3s
NEST  Nestorio            0.71  22   P     Pg                04 51 48.9 -0.2
KBN   Korca               0.88   4   P     Pb                04 51 51.0 -0.8
KBN   Korca               0.88   4   P     Pb                04 51 51.4 -0.4
    baz=358
KBN                                  S     Sn                04 52 06.7 +1.7
    baz=358
TSLK  Tsoukalades, L      0.93 182   P     Pg                04 51 52.9 -0.1
LKD2  Lefkada island      0.96 182   P     Pn                04 51 53.8  0.0
LKD2                                 S     Sn                04 52 08.3 +1.2
    1μm,0.3s
KZN   Kozani              0.99  56   P     Pb                04 51 53.7 -0.1
KZN                                  S     Sn                04 52 09.2 +1.3
    988nm,0.6s
THL   Klokotos Trika      1.03 100   P     Pb                04 51 53.8 -0.6
DRAG  Dragano-Lefkad      1.07 185   P     Pg                04 51 55.7 -0.1
EVGI  Lefkada island      1.13 182   P     Pg                04 51 56.7 -0.2
VLO   Vlora               1.17 308   P     Pg                04 51 59.3 +1.6
    baz=308
VLO                                  S     Sg                04 52 17.0 +4.0
    baz=308
TYRN  Tyrnavos            1.18  91   P     Pb                04 51 56.9 -0.1
TYRN                                 S     Sg                04 52 14.9 +1.6
    1μm,0.5s
EVR   Evrytania           1.20 134   P     Pg                04 51 57.9 -0.2
FSK   Fiskardo            1.29 185   P     Pg                04 51 59.9 -0.1
PVO   Paravola            1.30 150   P     Pg                04 52 00.8 +0.7
OHR   Ohrid               1.36   3 ePg     Pg                04 52 01.3  0.0
OHR                                  eSg   Sg                04 52 21.7 +2.6
OHR   Ohrid               1.36   3 i Pn    Pg                04 52 01.0 -0.3
LIT   Litokhoron          1.42  75   P     Pb                04 52 01.6 +0.6
LIT                                  S     Sg                04 52 22.0 +1.1
    640nm,0.3s
KEF4  Livadi, Kephal      1.51 188   P     Pb                04 52 02.7 +0.2
DMLN  Damoulianata-K      1.53 190   P     Pb                04 52 03.2 +0.2
TIR   Tirane              1.72 338 ⇑P      Pb                04 52 05.4 -0.8
TIR   Tirane              1.72 338 ePn     Pb                04 52 06.3 +0.1
TIR                                  eSn   Sb                04 52 28.4 +0.9
TIR   Tirane              1.72 338   P     Pb                04 52 06.1  0.0
    baz=337
TIR                                  S     Sg                04 52 31.4 +1.0
    baz=337
GRG   Griva               1.77  47   P     Pb                04 52 06.3 -0.8
PHP   Peshkopia           1.94 354   P     Pb                04 52 10.1 +0.1
    baz=352
PHP                                  S     Sg                04 52 36.0 -1.6
    baz=352
DRO   Drossia             1.96 156   P     Pb                04 52 10.4 +0.1
KLV   Kalavryta, Ach      2.04 146   P     Pb                04 52 11.6 -0.1
LKR   Lokris              2.10 121   P     Pb                04 52 11.7 -0.9
VAY   Valandovo           2.12  42 ePn     Pn                04 52 10.7 +1.1
VAY                                  eSn   Sb                04 52 38.1 -0.9
VAY   Valandovo           2.12  42 i Pn    Pn                04 52 10.8 +1.1
KNT   Kendrikon           2.19  49   P     Pn                04 52 11.8 +1.1
STIP  Stip                2.25  30 i Pn    Pb                04 52 14.6 -0.5
SKO   Skopje              2.29  14 ePn     Pb                04 52 14.6 -1.3
SKO                                  eSn   Sn                04 52 41.5 +1.7
SRS   Serrai              2.59  57 ePn     Pn                04 52 17.0 +0.8
SRS                                  eSn   Sn                04 52 48.5 +1.2
BCI   Bajram Curri        2.66 350   P     Pb                04 52 20.1 -2.1
    baz=349
BCI                                  S     Sn                04 52 51.2 +2.2
    baz=349
PDG   Podgorica           2.89 338 ⇑P      Pn                04 52 21.3 +1.0
TIP   Timpagrande         3.11 261 ⇑P      Pn                04 52 20.5 -2.9
BARS  Barje               3.18  15 ePn     Pn                04 52 25.6 +1.4
BARS                                 eSn   Sn                04 53 04.2 +2.5
MATE  Matera              3.19 288 ⇑P      Pn                04 52 25.7 +1.3
SELS  Selova              3.48   5 ePn     Pb                04 52 30.0 +1.6
SJES  Sjenica             3.55 351 ePn     Pn                04 52 31.7 +2.2
ZAPS  Zavoj               3.81  22 ePn     Pn                04 52 34.9 +2.0
BOVS  Bovan               3.95  11 ePn     Pn                04 52 35.8 +0.9
BOVS                                 eSn   Sn                04 53 22.9 +2.1
GRUS  Gruza               4.13   0 ePn     Pn                04 52 39.0 +1.6
BLKB  Belogradchik        4.14  20 ⇓S      Sn                04 53 26.0 +0.5
ZAGS  Zajecar             4.22  15 ePn     Pn                04 52 40.2 +1.7
BBLS  Lazi&#263;i         4.22 347 ePn     Pn                04 52 40.2 +1.5
DIVS  Divibare            4.38 353 ePn     Pn                04 52 41.6 +0.8
DIVS                                 eSn   Sn                04 53 31.3 -0.1
TRUS  Trudelj             4.47 357 ePn     Pn                04 52 44.4 +2.3
HERR  Herculane           5.28  13 ⇑P      Pn                04 52 43.8 -9.4
FRGS  Fruska Gora         5.44 353 ⇑P      Pn                04 52 52.9 -2.5
FRGS  Fruska Gora         5.44 353 ePn     Pn                04 52 55.5 +0.1
BZS   Buzias              5.90   6 ⇓P      Pn                04 52 53.6 -8.0
MORH  Mrgy, Hungar        6.63 348 ⇑P      Pn                04 53 10.0 -1.7
MLR   Muntele Rosu        6.92  32  LR     LR                04 56 31.9
    comp=Z,70nm,18.6s,baz=38,slow=44
SOKA  Soboth              8.07 331 ePn     Pn                04 53 30.3 -1.2
    1.0nm,0.2s
OBKA  Obir                8.12 328 i Pn    Pn                04 53 32.0 -0.1
    1.0nm,0.2s
ARSA  Arzberg             8.39 335 ePn     Pn                04 53 34.1 -1.6
    0.7nm,0.3s
ABTA  Abfaltersbach       9.20 322 ePn     Pn                04 53 46.0 -0.9
    0.2nm,0.1s
MOA   Molln               9.34 332 ePn     Pn                04 53 48.4 -0.3
    0.8nm,0.3s
WTTA  Wattenberg          9.98 322 ePn     Pn                04 53 57.1 -0.7
    1.0nm,0.3s
WATA  Walderalm          10.06 322 ePn     Pn                04 53 58.8 -0.1
    0.9nm,0.2s
SQTA  Sankt Quirin       10.16 320 ePn     Pn                04 54 00.2  0.0
    1.3nm,0.2s
MOTA  Moosalm            10.30 321 ePn     Pn                04 54 02.2 +0.1
    0.6nm,0.2s
GERES GERESS Array B     10.38 333 Pn      Pn                04 54 01.8 -1.3
    0.1nm,0.3s,baz=160,slow=14,SNR=4.4
    0.2nm,0.3s
ESDC Sonseca Array       18.97 278  P      P    04 55 55.3 -0.2
    baz=71,slow=11,SNR=3.0
    0.6nm,1.0s
FINES FINESS Array B     21.97   7  P      P    04 56 25.9 -1.9
    0.5nm,0.3s,baz=176,slow=12,SNR=8.9
    0.5nm,0.3s
NB2  NORSAR Subarra      22.11 348  P      P    04 56 28.6 -0.7
    comp=Z,4.2nm,1.2s,baz=160,slow=11
NOA  NORSAR Array B      22.11 348  P      P    04 56 28.0 -1.3
    comp=Z,1.4nm,1.0s,baz=165,slow=11,SNR=2.2
    comp=Z,1.4nm,1.0s
TORD Torodi Ar. Bea      31.35 218  P      P    04 57 53.3 -1.5
    comp=Z,0.2nm,0.5s,baz=40,slow=10.0,SNR=4.3
    comp=Z,0.5s
MKAR Makanchi Array      44.37  60  P      P    04 59 43.6 -0.8
    comp=Z,0.8nm,0.4s,baz=278,slow=7.9,SNR=11
    comp=Z,0.8nm,0.4s
```

IDC 16 04:51:42.4±13.0, 4°.97S×12°.06W, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=449.5km s-min=115.7km az=148.0, North of Ascension Island

```
Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
H10N2 ASCENSION HYDR     3.73 220    T     T                 04 56 34.7
    baz=53,slow=74,SNR=88
H10N1 ASCENSION HYDR     3.74 220    T     T                 04 56 35.1
    baz=53,slow=74,SNR=106
H10N3 ASCENSION HYDR     3.75 220    T     T                 04 56 33.0
    baz=53,slow=74,SNR=74
TORD Torodi Ar. Bea     22.59  37   P     P                 04 56 44.8  0.0
    1.4nm,0.9s,baz=216,slow=11,SNR=4.9
    1.4nm,0.9s
GERES GERESS Array B    58.12  20   P     P                 05 01 37.7 -0.2
    0.3nm,0.6s,baz=200,slow=11,SNR=4.1
    0.3nm,0.6s
AKASG Malin Array Be    65.81  27   P     P                 05 02 29.6 +0.1
    0.7nm,0.6s,baz=224,slow=6.3,SNR=3.4
    0.7nm,0.6s
```

JMA 16 04:52:42.4±0.0, 32°.2N±0°.1×130°.4E±0°.2, h6km, MV0.3/11, AMAKUSA REGION, Kyushu

```
Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
JZO  Okuchi              0.23 110 eP      Pg                04 52 47.1 +0.1
JZO                                  eS    Sg                04 52 50.2 +0.2
```

JMA 16 04:52:56.3±0.0, 32°.7N±0°.1×130°.7E±0°.1, h11km, MV1.7/20, NW KUMAMOTO PREF, Kyushu

```
Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
JIU3 Izumi3              0.17 130    S     Pg                04 53 00.2 +0.1
JIU3 Izumi3              0.17 130    P     Pg                04 53 00.1  0.0
JIU3                                 S     Sg                04 53 02.9 +0.2
JTA  Tamana              0.32 341    P     Pg                04 53 03.0 +0.1
JTA                                  eS    Sg                04 53 07.3 +0.1
JZO  Okuchi              0.52 186 i P     Pg                04 53 06.4  0.0
JZO                                  S     Sg                04 53 13.3  0.0
JTZ  Takazaki            0.84 154    P     Pb                04 53 12.9 +0.1
JTZ                                  S     Sg                04 53 23.7 +0.3
```

*IDC **16** 04:55:08.4±2.2, 4°.39S×154°.34E, h448km±27km, mb3.3/12, mbtmp4.1/13, Error ellipse: s-maj=18.8km s-min=11.9km az=79.0*

ISC 16 04:55:08.2±0.7, 4°.38S±0°.10×154°.4E±0°.2, h446km, n13, σ0°.75/14, mb3.6/12, Bougainville-Solomon Islands region

```
Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
CTA  Charters Tower     17.50 206    P     P                 04 58 46.0 +0.1
    12nm,0.7s,baz=39,slow=7.7,SNR=11
DZM  Mont Dzumac        21.13 147    P     P                 04 59 20.3 +0.1
    9.3nm,0.5s,baz=260,slow=5.9,SNR=21
    9.3nm,0.5s
WRA  Warramunga Arr     24.90 230    P     P                 04 59 54.0 -0.1
    3.2nm,0.4s,baz=54,slow=9.3,SNR=50
WRA                                  ScP   ScP               05 06 11.1 -0.8
    0.4nm,0.9s,baz=53,slow=3.4,SNR=2.4
    3.2nm,0.4s
ASAR Alice Springs      27.52 224    P     P                 05 00 16.6 -0.7
    1.9nm,0.4s,baz=54,slow=9.1,SNR=30
    1.9nm,0.4s
STKA Stephens Creek     29.86 202    P     P                 05 00 37.2 -0.5
    1.9nm,0.3s,baz=54,slow=12,SNR=4.1
    1.9nm,0.3s
URZ  Urewera            39.59 151    P     P                 05 02 00.4 +1.0
    3.1nm,0.6s,baz=338,slow=5.4,SNR=3.9
    3.1nm,0.6s
MJAR Matsushiro Arr     43.42 341    P     P                 05 02 29.3 -0.7
    0.7nm,0.4s,baz=171,slow=7.7,SNR=4.6
    0.7nm,0.4s
KSRS Korea Array        48.35 332    P     P                 05 03 08.1 +0.4
    0.9nm,0.5s,baz=132,slow=6.7,SNR=3.6
    0.9nm,0.5s
PETK Petropavlovsk-     57.34   2    P     P                 05 04 12.0 -0.2
    1.5nm,0.6s,baz=189,slow=6.2,SNR=2.6
    1.5nm,0.6s
SONM Songino Array      66.81 327    P     P                 05 05 15.7 +1.3
    0.7nm,0.5s,baz=140,slow=5.5,SNR=5.3
    0.7nm,0.5s
VNDA Vanda              73.20 178    P     P                 05 05 51.8 -0.1
    0.7nm,0.7s,baz=332,slow=6.9,SNR=7.6
    0.7nm,0.7s
MKAR Makanchi Array     81.04 319    P     P                 05 06 36.0 +0.5
    0.3nm,0.4s,baz=94,slow=7.9,SNR=8.5
    0.3nm,0.4s
ILAR Eielson Array      81.19  22    P     P                 05 06 34.7 -1.2
    0.6nm,0.5s,baz=243,slow=5.0,SNR=10
    0.6nm,0.5s
```

*UCR **16** 04:59:54.8±1.8, 11°.14N×86°.65W, h15km, ML4.1, MW4.8, mb4.6(NEIC)*
*INET **16** 04:59:56.2±0.6, 11°.18N×86°.58W, h15km±5km, MW4.5*
*SNET **16** 04:59:58.4±1.4, 11°.42N×86°.44W, h33km±999km, ML4.4*
*NEIC **16** 04:59:58.6±1.4, 11°.28N±0°.06×86°.42W±0°.07, h57km±5km, mb4.6/102, Error ellipse: s-maj=11.4km s-min=5.2km az=52.0*
*IDC **16** 04:59:58.8±2.6, 11°.42N×86°.28W, h62km±24km, mb3.9/14, mbtmp4.2/16, ML4.0/2, MS3.5/19, Error ellipse: s-maj=26.0km s-min=11.7km az=54.0*

ISC 16 04:59:57.5±0.8, 11°.23N±0°.04×86°.57W±0°.05, h56km±8km, n204, σ1°.31/173, mb4.5/62, MS3.5/15, 4C-1D, Near coast of Nicaragua

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Code  Station Name        Δ°   AZ°   Phase ID                Time      Res
                                     Op    ISC               h m s     ISC
CRUN El Crucero          0.79  19 eP      Pn                05 00 09.9 -3.0
MASN Masaya              0.86  28 eP      Pn                05 00 12.6 -1.0
COPN Copaltepe           0.95 358 eP      Pn                05 00 14.2 -0.6
MGAN Managua             0.96  19 eP      Pn                05 00 14.4 -0.6
WILN Americas 2          1.00  22 eP      Pn                05 00 14.8 -0.6
HZTE Horizontes, Gu      1.08 118           Pn                05 00 15.0 -1.5
HZTE Horizontes, Gu      1.08 118 eP      Pn                05 00 15.2 -1.3
HUEN                     1.17  19 eP      Pn                05 00 17.3 -0.4
MOMN Momotombo           1.17   1 eP      Pn                05 00 17.0 -0.8
MOMN                                 eS    Sn                05 00 32.7 -0.1
GBS3 Finca Las Img       1.18 112 eP      Pn                05 00 16.2 -1.7
GBS3                                 eS    Sn                05 00 36.2 +3.3
LAPC Finca la Perla      1.20 112 eP      Pn                05 00 16.2 -1.9
LAPC                                 eS    Sn                05 00 34.0 +0.5
BUEV Buena Vista         1.21 111 eP      Pn                05 00 16.7 -1.6
BUEV                                 eS    Sn                05 00 34.4 +0.5
VRLE La Escondida,       1.26 110 eP      Pn                05 00 17.3 -1.6
BUAI Buenos Aires        1.26 106⇓eP      Pn                05 00 17.6 -1.4
GPS3 Bodega del ICE      1.27 112 eP      Pn                05 00 17.6 -1.5
GPS3                                 eS    Sn                05 00 37.1 +1.9
CNGN Cerro Negro         1.27 354 Pn      Pn                05 00 17.5 -1.6
CNGN Cerro Negro         1.27 354 eP      Pn                05 00 17.3 -1.8
CNGN Cerro Negro         1.27 354 eP      Pn                05 00 17.5 -1.6
CNGN Cerro Negro         1.27 354 eP      Pn                05 00 17.6 -1.6
CNGN                                 eS    Sn                05 00 34.2 -1.0
GPS1 Guardaparques       1.27 111 eP      Pn                05 00 17.9 -1.3
GPS1                                 eS    Sn                05 00 34.8 -0.6
GPS2 Hotel Rincn d       1.28 112 eP      Pn                05 00 18.0 -1.3
GPS2                                 eS    Sn                05 00 38.5 +3.0
TEL3 Telica 3            1.36 348 eP      Pn                05 00 20.0 -0.3
ORTG Ortega, Santa       1.39 128           Pn                05 00 18.9 -1.8
TELN Telica              1.39 349 eP      Pn                05 00 20.6 -0.2
LIM1 Limonal             1.39 112 eP      Pn                05 00 19.8 -1.0
LIM1                                 eS    Sn                05 00 39.5 +1.3
GUAB Guayabo de Bag      1.41 111 eP      Pn                05 00 20.0 -1.0
HORNC Hornillas          1.46 111 eP      Pn                05 00 20.8 -0.8
VMAR Armenia, Volca      1.48 106 eP      Pn                05 00 20.8 -1.1
BRAN Las Pilas           1.50   8 eP      Pn                05 00 14.5 -7.7
BOAB BOACO BROADBAN.50  36  Pn            Pn                05 00 21.6 -0.6
BOAB BOACO BROADBAN.50  36 eP            Pn                05 00 21.5 -0.6
CRIN San Cristobal       1.54 342           Pn                05 00 22.3 -0.4
CRIN San Cristobal       1.54 342 eP      Pn                05 00 22.6 -0.1
CRIN San Cristobal       1.54 342 eP      Pn                05 00 22.3 -0.4
ACON Acoyapa             1.55  62           Pn                05 00 21.7 -1.1
ACON Acoyapa             1.55  62 eP      Pn                05 00 21.6 -1.1
ACON Acoyapa             1.55  62 eP      Pn                05 00 21.8 -1.1
ACON Acoyapa             1.55  62 eP      Pn                05 00 21.7 -1.1
DUNO Dulce Nombre,       1.55 137 Pn      Pn                05 00 23.0 +0.1
GRZA Playa Garza         1.59 145 eP      Pn                05 00 20.5 -3.0
ACAL Aguas Claras        1.61 111⇑eP      Pn                05 00 23.4 -0.4
PTEN Parque Tenorio      1.63 108⇑eP      Pn                05 00 23.6 -0.4
INDI Punta indio, G      1.71 142 eP      Pn                05 00 22.3 -2.7
MATN Matagalpa           1.80  20           Pn                05 00 26.0 -0.4
MATN Matagalpa           1.80  20 eP      Pn                05 00 26.0 -0.4
MATN Matagalpa           1.80  20 eP      Pn                05 00 25.9 -0.4
JTS Las Juntas de        1.84 120 Pn      Pn                05 00 25.9 -0.9
JTS Las Juntas de        1.84 120 eP      Pn                05 00 27.1 +0.3
JTS Las Juntas de        1.84 120 eP      Pn                05 00 24.8 -1.9
JTS Las Juntas de        1.84 120 eP      Pn                05 00 25.6 -1.1
CASO Castillo            1.96 114⇑eP      Pn                05 00 27.7 -0.8
CEDE Laguna Cedeo        1.97 112 eP      Pn                05 00 28.3 -0.3
VACR Volcan Arenal       2.00 112 eP      Pn                05 00 28.4 -0.6
FORC Fortuna             2.01 112 eP      Pn                05 00 28.7 -0.4
COVE Coope Vega, Sa      2.18 103           Pn                05 00 30.4 -1.0
COVE Coope Vega, Sa      2.18 103 eP      Pn                05 00 30.1 -1.4
RCON San Juan de Ri      2.28  10⇑eP      Pn                05 00 34.9 +2.0
CNCH Conchagua           2.38 329 eP      Pn                05 00 34.1 -0.2
CNCH                                 eS    Sn                05 01 02.6 +0.2
CNCH Conchagua           2.38 329 eP      Pn                05 00 34.1 -0.2
CNCH                                 eS    Sn                05 01 02.6 +0.2
ESPN Las Esperanzas      2.42  66 Pn      Pn                05 00 34.4 -0.3
ESPN Las Esperanzas      2.42  66 eP      Pn                05 00 34.3 -0.3
ESPN Las Esperanzas      2.42  66 eP      Pn                05 00 34.3 -0.3
JACO JACO, Garabito      2.44 130 Pn      Pn                05 00 34.7 -0.2
HDC  Heredia             2.70 117           Pn                05 00 38.4 -0.3
PACA Pacayal             2.81 323 eP      Pn                05 00 40.8 +0.6
PACA Pacayal             2.81 323 eP      Pn                05 00 40.8 +0.6
TGUH Tegucigalpa,Un      2.90 346 Pn      Pn                05 00 42.1 +0.8
TGUH Tegucigalpa,Un      2.90 346 eP      Pn                05 00 41.9 +0.6
COEB Comit de Eme        2.96 320 eP      Pn                05 00 42.7 +0.5
COEB                                 IAML                   05 01 32.1
    comp=Z,1μm,0.4s
COEB Comit de Eme        2.96 320 eP      Pn                05 00 42.7 +0.5
COEB                                 IAML                   05 01 32.1
    comp=Z,1μm,0.4s
RIMA Rio Macho           3.03 118           Pn                05 00 42.6 -0.6
PQSS Presa 15 de Se      3.08 321 eP      Pn                05 00 44.7 +1.0
PQSS Presa 15 de Se      3.08 321 eP      Pn                05 00 44.7 +1.0
SCLA Alcaldia de Sa      3.24 320 eP      Pn                05 00 47.0 +1.0
SCLA Alcaldia de Sa      3.24 320 eP      Pn                05 00 47.0 +1.0
COEG Centro de Oper      3.28 317 eP      Pn                05 00 47.3 +0.7
COEG                                 IAML                   05 01 39.5
    comp=Z,967nm,0.4s
COEG Centro de Oper      3.28 317 eP      Pn                05 00 47.3 +0.7
COEG                                 IAML                   05 01 39.5
    comp=Z,967nm,0.4s
SJTE Alcalda de S        3.36 315 eP      Pn                05 00 47.8 +0.1
SJTE Alcalda de S        3.36 315 eP      Pn                05 00 47.8 +0.1
PAVA Las Pavas           3.39 317 eP      Pn                05 00 50.5 +2.4
SRBA San Rafael, Bu      3.73 122           Pn                05 00 52.8 +0.1
NUBE Las Nubes           4.11 311 eP      Pn                05 00 58.7 +0.7
MTO3 Montecristo         4.17 319 Pn      Pn                05 01 00.2 +1.4
CDITO Canoas             4.49 126 Pn      Pn                05 01 03.6 +0.5
BRU2 Volcan              4.52 122 eP      Pn                05 01 04.1 +0.5
APG  El Apazote          5.34 315   P     Pn                05 01 18.1 +3.2
    comp=Z,1.9nm,0.3s,baz=138,slow=6.4,SNR=8.4
    comp=Z,8.1nm,0.5s
PETF Flores              6.50 331           Pn                05 01 34.0 +3.4
BCIP Isla Barro Col      6.93 107 Pn      Pn                05 01 35.3 -1.2
BCIP Isla Barro Col      6.93 107 eP      Pn                05 01 35.8 -0.7
CCIG Comitan             7.38 313 Pn      Pn                05 01 47.1 +4.2
CMIG Matias Romero       9.95 307   P     Pn                05 02 19.8 +1.9
    comp=Z,3.1nm,0.3s,baz=140,slow=8.9,SNR=36
CMIG                                 S     Sn                05 04 03.5 -4.6
    comp=Z,2.8nm,0.6s,baz=94,slow=16,SNR=1.6
CMIG                                 LR    LR                05 06 35.6
    comp=Z,275nm,19.0s,baz=142,slow=39
    comp=Z,6.6nm,0.3s
SJCC San Jacinto, C     11.27  96 eP      Pn                05 02 35.9 -0.1
TLIG Tlapa              13.22 300 Pn      Pn                05 03 05.1 +2.5
SPBC San Pablo de B     13.54 113 eP      P                 05 03 15.3 +0.9
ROSC El Rosal           13.68 117   P     P                 05 03 18.9 +2.6
    comp=Z,19nm,0.7s,baz=294,slow=2.8,SNR=8.0
ROSC                                 LR    LR                05 09 02.8
    comp=Z,146nm,18.7s,baz=249,slow=40
ROSC El Rosal           13.68 117 eP      P                 05 03 20.3 +4.0
SLOR San Lorenzo -      14.33 145 Pn      Pn                05 03 17.5 -0.5
RUSC La Rusia           14.34 111 eP      P                 05 03 24.2 +0.4
SDV  Santo Domingo      15.86  97   P     P                 05 03 39.2 -1.1
    comp=Z,14nm,0.8s,baz=256,slow=5.3,SNR=7.6
SDV                                 LR    LR                05 10 25.8
    comp=Z,96nm,19.1s,baz=280,slow=40
SDV  Santo Domingo      15.86  97 Pn      Pn                05 03 35.0 -2.5
PTGC Puerto Gaitan,     15.91 115 eP      P                 05 03 40.0 -0.7
BOSC San Juan Bosco     16.39 150 Pn      P                 05 03 44.4 -1.7
BAUV El Baul            18.38  95           P                 05 04 05.8 -2.2
ZAIG Zacatecas          19.11 309   P     Pn                05 04 17.7 +0.1
ATAH Atahualpa          19.97 156          LR                05 11 22.2
    comp=Z,176nm,19.4s,baz=336,slow=34
344A Westbrook Farm     20.49 350   P     Pn                05 04 32.7 -0.8
HKT  Hockley            20.53 337   P     Pn                05 04 32.6 -1.3
833A Chaparral WMA,     20.82 327   P     P                 05 04 35.4 +0.8
833A                                 IAmb  IAmb              05 04 48.3
    comp=Z,24nm,0.9s
SJG  San Juan           20.89  68          LR                05 11 40.6
    comp=Z,111nm,21.8s,baz=253,slow=34
VBMS Vicksburg          21.20 351   P     P                 05 04 39.8 +1.3
VBMS                                 IAmb  IAmb              05 04 43.0
    comp=Z,18nm,0.7s
152A Waverly Hall       21.41   4   P     P                 05 04 40.0 -0.7
152A                                 IAmb  IAmb              05 04 56.3
    comp=Z,17nm,0.8s
PCRV Puerto La Cruz     21.57  91   P     P                 05 04 42.5 -0.2
    comp=Z,7.2nm,0.5s,baz=258,slow=3.4,SNR=10
    comp=Z,7.2nm,0.5s
LRAL Lakeview Retre     21.71 359   P     P                 05 04 45.6 +1.6
435B Jarrell            21.98 334   P     P                 05 04 47.0 +0.1
435B                                 IAmb  IAmb              05 04 58.6
    comp=Z,23nm,1.0s
Y49A Blount Mountai     22.52   0   P     P                 05 04 52.3 -0.4
Y49A                                 IAmb  IAmb              05 04 56.1
    comp=Z,9.8nm,0.6s
Y52A Lilburn            22.65   5   P     P                 05 04 55.3 +1.3
Y52A                                 IAmb  IAmb              05 05 10.2
```

comp=Z,16nm,1.0s
WHTX Lake Whitney, 22.98 336 P **P 05 04 57.5 +0.1**
WHTX IAmb IAmb 05 05 00.1
comp=Z,18nm,0.9s
CCAR Cane Creek 23.08 349 IAmb IAmb 05 05 00.5
comp=Z,18nm,0.7s
X48A Hartselle 23.12 359 P **P 05 04 59.2 +0.3**
WLAR White Oak Lake 23.14 346 P **P 05 04 59.8 +0.7**
WLAR IAmb IAmb 05 05 01.3
comp=Z,18nm,0.8s
OXF Oxford 23.32 354 IAmb IAmb 05 05 13.8
comp=Z,15nm,0.8s
HPIG 23.82 314 P **P 05 05 07.9 +2.2**
SWET Sewanee 23.89 1 IAmb IAmb 05 05 07.8
comp=Z,9.7nm,0.5s
W50A Signal Mountai 23.89 3 IAmb IAmb 05 05 18.2
comp=Z,32nm,1.4s
W45A Hickory Valley 23.94 355 IAmb IAmb 05 05 08.7
comp=Z,26nm,0.9s
TXAR Lajitas Array 24.06 321 P **P 05 05 09.1 +1.2**
comp=Z,4.0nm,0.7s,baz=145,slow=9.2,SNR=5.4
TXAR PcP **PcP 05 08 50.1 +1.8**
comp=Z,2.0nm,0.9s,baz=134,slow=5.4,SNR=7.2
comp=Z,4.0nm,0.7s
MIAR Mount Ida 24.08 346 IAmb IAmb 05 05 08.6
comp=Z,13nm,0.6s
Z35A Perchaven, San 24.09 338 IAmb IAmb 05 05 10.6
comp=Z,19nm,0.7s
CPCT Cooper Cave 24.18 4 P **P 05 05 10.1 +1.4**
CPCT IAmb IAmb 05 05 22.4
comp=Z,15nm,0.7s
TKL Tuckaleechee C 24.45 5 P **P 05 05 11.4 +0.2**
comp=Z,7.1nm,0.9s,baz=170,slow=10,SNR=8.0
comp=Z,7.1nm,0.9s
WHAR Wooly Hollow 24.51 349 IAmb IAmb 05 05 12.4
comp=Z,18nm,0.7s
V51A Loudon 24.55 4 P **P 05 05 12.3 +0.3**
V51A IAmb IAmb 05 05 25.3
comp=Z,12nm,0.8s
V53A Saluda 24.57 7 IAmb IAmb 05 05 29.2
comp=Z,17nm,1.1s
CLTN Cedars of Leba 24.75 0 IAmb IAmb 05 05 26.9
comp=Z,10nm,0.7s
FCAR Ozark Folk Cen 25.06 349 P **P 05 05 16.3 -0.4**
FCAR IAmb IAmb 05 05 17.4
comp=Z,11nm,0.6s
LCAR Lake Charles 25.08 351 IAmb IAmb 05 05 17.2
comp=Z,11nm,0.7s
X34A Smith Ranch, M 25.43 338 IAmb IAmb 05 05 23.7
comp=Z,28nm,1.1s
PARMO Parma 25.49 354 P **P 05 05 20.3 -0.2**
S51A Beattyville 26.43 5 IAmb IAmb 05 05 30.8
comp=Z,17nm,1.2s
S44A Carbondale 26.46 355 P **P 05 05 29.6 +0.3**
S39A Bolivar 27.04 348 IAmb IAmb 05 05 35.3
comp=Z,14nm,0.7s
CCM Cathedral Cave 27.04 352 P **P 05 05 34.7 +0.1**
CCM IAmb IAmb 05 05 35.3
comp=Z,8.3nm,0.7s
MSTX Muleshoe 27.06 329 IAmb IAmb 05 05 48.6
comp=Z,12nm,0.8s
AMTX Amarillo 27.27 332 P **P 05 05 37.2 +0.4**
AMTX IAmb IAmb 05 05 51.4
comp=Z,14nm,0.8s
R40A Maddies Statio 27.43 350 IAmb IAmb 05 05 37.9
comp=Z,8.5nm,0.6s
Q51A Peebles 27.83 5 IAmb IAmb 05 05 43.9
comp=Z,13nm,0.8s
P48A Milroy 28.14 2 IAmb IAmb 05 05 45.5
comp=Z,10.0nm,0.9s
P53A Whipple 28.52 8 IAmb IAmb 05 05 49.8
comp=Z,12nm,0.9s
P52A Corning 28.56 7 IAmb IAmb 05 05 60.0
comp=Z,14nm,0.8s
KSU1 Kansas State U 29.16 344 IAmb IAmb 05 05 53.6
comp=Z,20nm,1.2s
O53A New Philadelph 29.29 8 IAmb IAmb 05 05 55.6
comp=Z,11nm,0.6s
HDIL Hopedale 29.31 356 P **P 05 05 54.8 0.0**
N49A Columbus Grove 29.65 4 P **P 05 05 56.5 -1.2**
N49A IAmb IAmb 05 05 59.3
comp=Z,12nm,0.7s
ANMO Albuquerque 29.75 326 P **P 05 05 59.8 +0.8**
comp=Z,1.1nm,0.5s,baz=158,slow=6.9,SNR=4.5
comp=Z,1.1nm,0.5s
ANMO Albuquerque 29.75 326 P **P 05 05 59.6 +0.6**
N53A Lisbon 29.89 9 IAmb IAmb 05 06 11.7
comp=Z,13nm,0.9s
N58A Sunbury 30.75 15 IAmb IAmb 05 06 20.8
comp=Z,12nm,0.9s
L40A Anamosa 30.99 353 IAmb IAmb 05 06 10.5
comp=Z,9.7nm,0.8s
LPAZ La Paz 32.87 146 P **P 05 06 28.1 +1.1**
comp=Z,1.0nm,0.8s,baz=338,slow=0.8,SNR=4.6
LPAZ LR LR 05 18 35.7
comp=Z,46nm,20.9s,baz=332,slow=34
comp=Z,1.0nm,0.8s
K31A O'Neill 33.03 343 P **P 05 06 27.3 -0.3**
ECSD EROS Data Cent 33.53 347 IAmb IAmb 05 06 31.4
comp=Z,6.6nm,0.8s
PB16 IPOC Station P 33.86 150 IAmb IAmb 05 06 42.2
comp=Z,4.5nm,0.8s
SADO Sadowa 34.03 9 LR LR 05 20 17.1
comp=Z,96nm,20.9s,baz=202,slow=36
SPMN Marine on St. 34.30 352 P **P 05 06 37.1 -1.4**
F36A Milaca 35.02 352 IAmb IAmb 05 06 44.8
comp=Z,8.8nm,0.8s
PFO Pinyon Flats O 35.27 314 LR LR 05 23 02.4
comp=Z,100nm,19.1s,baz=164,slow=39
P17A Butcher Ranch, 35.38 327 IAmb IAmb 05 07 01.0
comp=Z,8.5nm,0.9s
SIV San Ignacio 36.99 137 LR LR 05 23 08.8
comp=Z,57nm,19.1s,baz=278,slow=38
PDAR Pinedale Array 37.25 332 P **P 05 07 03.9 -0.3**
comp=Z,1.3nm,0.7s,baz=129,slow=9.5,SNR=14
PDAR PcP **PcP 05 09 23.5 +0.6**
comp=Z,0.8nm,0.7s,baz=126,slow=4.1,SNR=5.2
PDAR LR LR 05 25 13.3
comp=Z,74nm,19.2s,baz=136,slow=41
comp=Z,1.3nm,0.7s
HWUT Hardware Ranch 37.36 329 P **P 05 07 04.9 -0.2**
HWUT IAmb IAmb 05 07 06.7
comp=Z,6.8nm,0.9s
TPAW Teton Pass 38.46 331 IAmb IAmb 05 07 19.9
comp=Z,8.5nm,1.2s
ELK Elko 38.76 324 LR LR 05 27 42.9
comp=Z,40nm,19.4s,baz=220,slow=43
ELK Elko 38.76 324 P **P 05 07 18.8 +2.0**
NVAR Mina Array Bea 39.19 319 P **P 05 07 22.6 +2.1**
comp=Z,1.0nm,0.7s,baz=147,slow=7.4,SNR=5.5
NVAR PcP **PcP 05 09 30.8 +1.8**
comp=Z,3.1nm,1.0s,baz=144,slow=5.0,SNR=8.4
comp=Z,1.0nm,0.7s
ULM Lac du Bonnet 39.66 351 P **P 05 07 21.9 -2.0**
comp=Z,6.3nm,0.4s,baz=173,slow=8.4,SNR=9.7
comp=Z,6.3nm,0.4s
ULM Lac du Bonnet 39.66 351 IAmb IAmb 05 07 22.8
comp=Z,13nm,1.1s
DGMT Dagmar 39.95 342 P **P 05 07 26.2 -0.2**
MCMT McKenzie Canyo 40.37 331 P **P 05 07 31.9 +1.7**
AQDB Aquidauana 43.75 136 P **P 05 07 58.0 +0.3**
YBH Yreka Blue Hor 43.84 320 LR LR 05 28 51.4
comp=Z,66nm,19.9s,baz=166,slow=40
RPN Rapa Nui 44.07 210 LR LR 05 21 41.7
comp=Z,74nm,19.1s,baz=40,slow=29
NEW Newport 44.89 331 LR LR 05 32 03.5
comp=Z,55nm,18.2s,baz=159,slow=43
SCHQ Schefferville 46.20 16 P **P 05 08 15.0 -1.8**
comp=Z,3.9nm,0.4s,baz=218,slow=7.6,SNR=20
SCHQ LR LR 05 28 10.1
comp=Z,118nm,18.2s,baz=198,slow=37
comp=Z,3.9nm,0.4s
BDFB Brasilia 46.58 124 P **P 05 08 19.5 -0.9**
comp=Z,6.8nm,0.8s,baz=287,slow=10.0,SNR=8.9
comp=Z,6.8nm,0.8s
CPUP Villa Florida 46.92 143 P **P 05 08 22.7 -0.1**
comp=Z,6.2nm,0.9s,baz=334,slow=9.6,SNR=7.9
CPUP PcP **PcP 05 09 55.4 +0.7**
comp=Z,1.4nm,0.6s,baz=356,slow=5.2,SNR=4.5
CPUP LR LR 05 27 19.7
comp=Z,20nm,18.9s,baz=27,slow=35
comp=Z,6.2nm,0.9s
CPUP Villa Florida 46.92 143 P **P 05 08 22.1 -0.6**
CPUP IAmb IAmb 05 08 23.8
comp=Z,9.3nm,1.1s
EDM Edmonton 47.06 338 P **P 05 08 23.0 -0.5**
RCBR Riachuelo 53.19 106 LR LR 05 32 49.4
comp=Z,88nm,20.4s,baz=130,slow=37
PLCA Paso Flores 53.78 165 P **P 05 09 15.1 +0.7**
comp=Z,2.1nm,0.8s,baz=360,slow=4.5,SNR=5.2
comp=Z,2.1nm,0.8s
FRB Frobisher Bay 53.97 10 LR LR 05 31 59.4
comp=Z,127nm,21.8s,baz=185,slow=36
YKA Yellowknife Ar 55.01 345 P **P 05 09 21.6 -1.4**
comp=Z,2.5nm,0.8s,baz=280,slow=26,SNR=3.8
comp=Z,2.5nm,0.8s
BCAR Beaver Creek A 64.72 336 P **P 05 10 30.1 +0.4**
DOT Dot Lake 65.89 336 P **P 05 10 38.3 +1.0**
DOT IAmb IAmb 05 10 38.5
comp=Z,2.9nm,0.6s
I26K Coal Creek Min 66.27 337 IAmb IAmb 05 10 40.2
comp=Z,4.3nm,0.6s
ILAR Eielson Array 67.48 336 P **P 05 10 46.9 -0.4**
comp=Z,1.3nm,0.6s,baz=138,slow=5.1,SNR=20
comp=Z,1.3nm,0.6s
ILAR Eielson Array 67.48 336 P **P 05 10 46.5 -0.8**
MLY Manley 69.11 336 P **P 05 10 57.6 0.0**
MLY IAmb IAmb 05 10 58.0
comp=Z,5.0nm,0.7s
MDT Midelt 77.30 59 LR LR 05 41 13.7
comp=Z,68nm,20.6s,baz=308,slow=32
TORD Torodi Ar. Bea 85.83 77 P **P 05 12 30.6 -1.2**
comp=Z,0.2nm,0.8s,baz=281,slow=6.0,SNR=1.4
SONM Songino Array 120.08 350 PKP **PKiKP 05 18 41.9 -0.6**
comp=Z,0.5nm,0.4s,baz=52,slow=2.4,SNR=4.9
MKAR Makanchi Array 121.39 9 PKP **PKPdf 05 18 43.7 -1.1**
comp=Z,0.3nm,0.4s,baz=310,slow=2.6,SNR=1.5
ASAR Alice Springs 139.60 247 PKhKP PKPpre 05 19 12.8
comp=Z,0.3nm,0.5s,baz=108,slow=3.8,SNR=4.7
ASAR PKP **PKiKP 05 19 21.2 -0.9**
comp=Z,1.2nm,0.8s,baz=97,slow=1.9,SNR=11
WRA Warramunga Arr 139.75 252 PKhKP PKPpre 05 19 14.0
comp=Z,0.2nm,0.4s,baz=54,slow=1.0,SNR=5.2
WRA PKP **PKiKP 05 19 21.0 -1.5**
comp=Z,1.1nm,0.5s,baz=92,slow=2.5,SNR=20
CMAR Chiang Mai Arr 150.01 350 PKP **PKPdf 05 19 37.0 -0.8**
comp=Z,0.5nm,0.4s,baz=302,slow=2.0,SNR=2.9
CMAR PKPbc **PKPbc 05 19 42.5 -0.2**
comp=Z,2.6nm,0.8s,baz=340,slow=3.6,SNR=5.3

IDC ***16*** *05:06:31.3±0.5,39°.77N×20°.63E,h0km,mb4.2/22, mbtmp4.1/34,ML3.9/11,MS3.7/61,Error ellipse: s-maj=10.5km s-min=9.0km az=122.0*
MOS ***16*** *05:06:32.4±1.2,39°.71N×20°.54E,h17km,mb4.7/12,Error ellipse: s-maj=4.3km s-min=2.6km az=92.2*
BEO ***16*** *05:06:33.8±0.7,39°.59N×20°.62E,h15km±4km,ML4.4/7*
TIR ***16*** *05:06:33.6,39°.76N×20°.71E,h10km±1km,Ml4.5*
NEIC ***16*** *05:06:33.5±2.0,39°.74N±0°.05×20°.72E±0°.05,h10km±1km, mb4.5/34,ML4.0(ATH),ML4.5(TIR),Error ellipse: s-maj=8.9km s-min=6.5km az=185.0*
MED_RC ***16*** *05:06:34.0±0.4,39°.71N×20°.68E,h32km,MW4.6/17, Moment Tensor Solution.Mantle waves: s17,c30; Duration: 1!0 Moment tensor: Scale 10^16^Nm; M_{rr}0.91±.07; $M_{\theta\theta}$-0.60±.04; $M_{\phi\phi}$-0.32±.04; $M_{r\theta}$0.06±.03; $M_{\theta\phi}$0.59±.03; $M_{\phi r}$0.03±.03; Best double couple: $M_0$0.99000×10^16^ NP1:ϕ_s124.00000°,δ46.00000°, λ84.00000°. NP2:ϕ_s313.00000°,δ44.00000°,λ96.00000°. Principal axes: T 0.9200, Plg86.0000°, Azm320.0000°; N 0.1400, Plg4.0000°, Azm128.0000°; P -1.0600, Plg1.0000°, Azm218.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
THE ***16*** *05:06:34.8,39°.76N×20°.67E,h14km,ML4.1/9 Error ellipse: s-maj=0.8km s-min=0.4km az=317.0*
PDG ***16*** *05:06:34.4±0.6,39°.76N×20°.59E,h16km±1km,MD4.7/9, ML4.5/12,Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
LDG ***16*** *05:06:35.4±0.5,39°.85N×20°.67E,h10km,Ml4.0/29,Error ellipse: s-maj=14.5km s-min=10.1km az=27.0*
ATH ***16*** *05:06:35.3,39°.78N×20°.68E,h5km±2km,ML4.0/8,Error ellipse: s-maj=2.7km s-min=0.6km az=292.0*
ISC 16 05:06:34.4±0.6,39°.77N±0°.01×20°.66E±0°.01,h19km±1km, n525,σ1$78/559,mb4.4/48,MS3.8/51,45C-17D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**126**	P	**Pb**		**05 06 38.6**	**+0.2**
JAN				S	**Sg**		**05 06 42.0**	**-0.6**
112μm,0.2s								
JAN	**Janina**	**0.18**	**126**	P	**Pb**		**05 06 38.1**	**-0.3**
JAN	**Janina**	**0.18**	**126**	P	**Pb**		**05 06 38.6**	**+0.2**
JAN				S	**Sb**		**05 06 41.7**	**+0.8**
JAN				AML	AML		05 06 42.6	
JAN				AML	AML		05 06 43.1	
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pg**		**05 06 41.7**	**0.0**
IGT				S	**Sb**		**05 06 47.6**	**+0.6**
23μm,0.4s								
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pg**		**05 06 41.8**	**0.0**
IGT				S	**Sb**		**05 06 47.9**	**+0.9**
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pb**		**05 06 41.9**	**-0.1**
baz=233								
IGT				S	**Sb**		**05 06 47.9**	**+0.9**
baz=233								
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pb**		**05 06 42.4**	**+0.4**
IGT				S	**Sb**		**05 06 47.7**	**+0.7**
IGT				AML	AML		05 06 51.5	
comp=E,45497μm,0.6s								
IGT				AML	AML		05 06 52.4	
comp=N,47008μm,0.3s								
LSK	**Leskovik**	**0.39**	**354**	P	**Pb**		**05 06 42.9**	**0.0**
LSK				S	**Sb**		**05 06 49.3**	**+0.7**
comp=N,174μm,0.7s								
LSK	**Leskovik**	**0.39**	**354**	P	**Pb**		**05 06 42.9**	**0.0**
baz=348								
LSK				S	**Sb**		**05 06 49.2**	**+0.7**
baz=348								
SRN	**Sarande**	**0.52**	**283**	P	**Pb**		**05 06 45.3**	**+0.4**
SRN				S	**Sb**		**05 06 52.9**	**+0.9**
comp=N,25μm,0.4s								
SRN	**Sarande**	**0.52**	**283**	P	**Pb**		**05 06 45.2**	**+0.4**
baz=283								
SRN				S	**Sn**		**05 06 54.1**	**-1.0**
baz=283								
SRN				AMP				
comp=N,79nm,0.3s,baz=283								
KASA	**Kassiopi**	**0.56**	**268**	P	**Pg**		**05 06 46.0**	**+0.4**
KASA				S	**Sb**		**05 06 54.0**	**+1.0**
KASA				AML	AML		05 06 56.8	
comp=E,37457μm,0.4s								
KASA				AML	AML		05 06 58.0	
comp=N,65502μm,0.5s								
PENT	**Pentalofos**	**0.57**	**41**	P	**Pb**		**05 06 45.7**	**0.0**
PENT				S	**Sb**		**05 06 53.8**	**+0.3**
comp=N,10μm,0.5s								
PENT	**Pentalofos**	**0.57**	**41**	P	**Pb**		**05 06 45.8**	**0.0**
PENT				S	**Sg**		**05 06 53.3**	**-0.3**
PENT				AML	AML		05 07 00.8	
comp=N,7899μm,0.5s								
PENT				AML	AML		05 07 01.0	
comp=E,31401μm,0.4s								
KPRO	**Kipourio**	**0.58**	**71**	P	**Pb**		**05 06 45.9**	**0.0**
KPRO				S	**Sg**		**05 06 54.0**	**+0.2**
comp=E,32μm,0.4s								
KEK	**Kerkira**	**0.66**	**266**	Pg	**Pb**		**05 06 47.1**	**-0.2**
KEK				Sg	**Sg**		**05 06 57.5**	**+1.0**
KEK	**Kerkira**	**0.66**	**266**	P	**Pb**		**05 06 47.2**	**-0.2**
KEK				S	**Sg**		**05 06 57.5**	**+1.0**
comp=E,15μm,0.3s								
KEK	**Kerkira**	**0.66**	**266**	P	**Pg**		**05 06 47.8**	**+0.2**
KEK				S	**Sg**		**05 06 57.4**	**+1.0**
KEK				AML	AML		05 07 00.1	
comp=N,31804μm,0.3s								
KEK				AML	AML		05 07 00.8	
comp=E,23579μm,0.4s								
NEST	**Nestorio**	**0.71**	**25**	P	**Pg**		**05 06 48.5**	**-0.1**
NEST				S	**Sg**		**05 06 59.0**	**+0.8**
comp=E,17μm,0.5s								
NEST	**Nestorio**	**0.71**	**25**	P	**Pg**		**05 06 48.5**	**-0.1**
NEST				S	**Sb**		**05 06 57.8**	**0.0**
NEST				AML	AML		05 07 03.1	
comp=E,46678μm,0.4s								
NEST				AML	AML		05 07 03.3	
comp=N,36192μm,0.4s								
KBN	**Korca**	**0.86**	**7**		**Pb**		**05 06 50.6**	**-0.3**
KBN	**Korca**	**0.86**	**7**	P	**Pb**		**05 06 50.9**	**0.0**
KBN	**Korca**	**0.86**	**7**	P	**Pb**		**05 06 50.6**	**-0.3**
KBN	**Korca**	**0.86**	**7**	P	**Pb**		**05 06 50.8**	**0.0**
baz=3.0								
KBN				S	**Sn**		**05 07 04.4**	**+0.6**
baz=3.0								
KBN				AMP				
comp=N,41nm,0.9s,baz=3.0								
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pg**		**05 06 53.1**	**+0.4**
TSLK				S	**Sn**		**05 07 06.2**	**+0.7**
TSLK				AML	AML		05 07 11.7	
comp=N,12986μm,0.8s								
TSLK				AML	AML		05 07 12.4	
comp=E,15291μm,0.6s								
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pb**		**05 06 52.9**	**+0.2**
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pb**		**05 06 52.9**	**+0.2**
baz=183								
LKD2				S	**Sn**		**05 07 08.2**	**+1.8**
baz=183								
LKD2	**Lefkada island**	**0.97**	**180**	P	**Pg**		**05 06 53.8**	**+0.4**
LKD2				S	**Sn**		**05 07 07.5**	**+1.1**
KZN	**Kozani**	**1.01**	**57**	P	**Pb**		**05 06 53.3**	**-0.1**
KZN				S	**Sn**		**05 07 08.2**	**+0.8**
comp=E,9μm,0.5s								
KZN	**Kozani**	**1.01**	**57**	P	**Pb**		**05 06 53.3**	**-0.1**
KZN	**Kozani**	**1.01**	**57**	P	**Pn**		**05 06 53.7**	**+0.1**
KZN				S	**Sg**		**05 07 07.2**	**-0.3**
KZN				AML	AML		05 07 11.2	
comp=E,17605μm,0.6s								
KZN				AML	AML		05 07 12.6	
comp=N,18604μm,0.5s								
NYDR	**Nydri-Lefkada**	**1.05**	**178**	P	**Pb**		**05 06 53.8**	**-0.2**
THL	**Klokotos Trika**	**1.07**	**100**	P	**Pb**		**05 06 54.1**	**-0.2**
THL	**Klokotos Trika**	**1.07**	**100**	P	**Pg**		**05 06 54.8**	**-0.3**
DRAG	**Dragano-Lefkad**	**1.08**	**183**	P	**Pb**		**05 06 54.4**	**-0.1**
VLO	**Vlora**	**1.13**	**309**		**Pg**		**05 06 56.0**	**-0.4**
VLO	**Vlora**	**1.13**	**309**	P	**Pg**		**05 06 56.0**	**-0.4**
VLO	**Vlora**	**1.13**	**309**	P	**Pg**		**05 06 57.9**	**+1.5**
baz=308								
VLO				S	**Sg**		**05 07 14.9**	**+3.6**
baz=308								
EVGl	**Lefkada island**	**1.14**	**180**	P	**Pn**		**05 06 55.5**	**+0.1**
EVGl	**Lefkada island**	**1.14**	**180**	P	**Pg**		**05 06 56.9**	**+0.3**
TYRN	**Tyrnavos**	**1.22**	**92**	P	**Pn**		**05 06 56.6**	**+0.2**
EVR	**Evrytania**	**1.23**	**133**	P	**Pb**		**05 06 57.0**	**-0.1**
EVR	**Evrytania**	**1.23**	**133**	P	**Pg**		**05 06 58.2**	**-0.1**
FSK	**Fiskardo**	**1.31**	**183**	P	**Pg**		**05 07 00.1**	**+0.4**
PVO	**Paravola**	**1.33**	**149**	P	**Pg**		**05 07 00.3**	**+0.2**
OHR	**Ohrid**	**1.35**	**5**	P	**Pg**		**05 07 00.1**	**-0.4**
OHR	**Ohrid**	**1.35**	**5**	*e*Pg	**Pg**		**05 07 01.1**	**+0.6**
OHR				*e*Sg	**Sg**		**05 07 22.3**	**+4.1**
OHR	**Ohrid**	**1.35**	**5**	*i* Pn	**Pg**		**05 07 00.6**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.37**	**123**	P	**Pg**		**05 07 00.9**	**0.0**
LIT	**Litokhoron**	**1.45**	**76**	P	**Pg**		**05 07 01.7**	**-0.7**
VLS	**Valsamata**	**1.59**	**182**	P	**Pb**		**05 07 02.6**	**-0.5**
VLS	**Valsamata**	**1.59**	**182**	P	**Pg**		**05 07 04.5**	**-0.5**
TIR	**Tirane**	**1.69**	**339**	Pn	**Pb**		**05 07 05.6**	**+0.7**
TIR	**Tirane**	**1.69**	**339**	P	**Pb**		**05 07 05.6**	**+0.7**
TIR	**Tirane**	**1.69**	**339**	*e*Pn	**Pg**		**05 07 06.1**	**-0.9**
TIR				*e*Sn	**Sg**		**05 07 29.1**	**0.0**
TIR	**Tirane**	**1.69**	**339**	P	**Pg**		**05 07 06.1**	**-0.9**
baz=339								
TIR				AMP				
comp=N,23nm,0.5s,baz=339								
SCTE	**Santa Cesarea**	**1.71**	**281**	Pn	**Pb**		**05 07 04.3**	**-0.9**
GRG	**Griva**	**1.79**	**48**	P	**Pb**		**05 07 07.1**	**+0.5**
AXAR	**Agios Charalam**	**1.85**	**122**	P	**Pb**		**05 07 08.7**	**+1.1**
PHP	**Peshkopia**	**1.93**	**355**	P	**Pb**		**05 07 09.8**	**+0.9**
PHP	**Peshkopia**	**1.93**	**355**	P	**Pb**		**05 07 09.9**	**+0.9**
baz=354								
PHP				AMP				
comp=N,34nm,0.6s,baz=354								
THE	**Thessaloniki**	**1.97**	**63**	P	**Pb**		**05 07 08.6**	**-1.0**
NEO	**Neokhori**	**2.04**	**102**	P	**Pb**		**05 07 11.3**	**+0.4**
VAY	**Valandovo**	**2.13**	**43**	P	**Pn**		**05 07 10.4**	**+1.5**
VAY	**Valandovo**	**2.13**	**43**	*e*Pn	**Pn**		**05 07 10.5**	**+1.5**
VAY				*e*Sn	**Sb**		**05 07 39.8**	**+1.3**
VAY	**Valandovo**	**2.13**	**43**	*i* Pn	**Pn**		**05 07 10.5**	**+1.5**
KNT	**Kendrikon**	**2.21**	**50**	P	**Pn**		**05 07 11.2**	**+1.1**
STIP	**Stip**	**2.25**	**31**	*i* Pn	**Pb**		**05 07 14.4**	**-0.1**
SKO	**Skopje**	**2.28**	**15**	*e*Pn	**Pb**		**05 07 14.4**	**-0.6**
SKO				*e*Sn	**Sb**		**05 07 42.5**	**-0.4**
SKO	**Skopje**	**2.28**	**15**	*i* Pn	**Pb**		**05 07 14.4**	**-0.6**
SOH	**Sokhos**	**2.32**	**62**	P	**Pn**		**05 07 13.3**	**+1.7**
ULC	**Ulcinj**	**2.44**	**334⇑**	*i* Pn	**Pn**		**05 07 14.5**	**+1.2**
ULC				*i* Sn	**Sb**		**05 07 45.6**	**-1.9**
SRS	**Serrai**	**2.62**	**58**	P	**Pn**		**05 07 17.1**	**+1.4**
SRS	**Serrai**	**2.62**	**58**	*e*Pn	**Pn**		**05 07 17.1**	**+1.4**
SRS				*e*Sn	**Sn**		**05 07 49.6**	**+2.7**
DRME	**Dracevica, Mon**	**2.66**	**336⇑**	*i* Pn	**Pn**		**05 07 18.1**	**+1.8**
DRME	**Dracevica, Mon**	**2.66**	**336**	*e*Pn	**Pn**		**05 07 17.6**	**+1.3**
DRME				*i* Sn	**Sn**		**05 07 51.0**	**+2.9**
ITM	**Ithomi**	**2.77**	**158**		**Pn**		**05 07 20.5**	**+2.7**
BUM	**Brajici-Budva**	**2.86**	**333⇑**	*i* Pn	**Pn**		**05 07 20.4**	**+1.3**
BUM				*i* Sn	**Sn**		**05 07 55.8**	**+2.7**
PDG	**Podgorica**	**2.87**	**339⇑**	P	**Pn**		**05 07 21.0**	**+1.9**
PDG	**Podgorica**	**2.87**	**339**	Pn	**Pn**		**05 07 20.9**	**+1.8**
TTG	**Podgorica**	**2.87**	**339**	*e*Pn	**Pn**		**05 07 20.5**	**+1.4**
TTG				*i* Sn	**Sn**		**05 07 56.0**	**+3.0**
PVY	**Plav**	**2.88**	**350**	*e*Pn	**Pn**		**05 07 20.7**	**+1.3**
PVY				*i* Sn	**Sn**		**05 07 56.5**	**+3.0**
CEME	**Cevo**	**3.07**	**335⇑**	*i* Pn	**Pn**		**05 07 23.3**	**+1.3**
CEME				*i* Sn	**Sn**		**05 08 00.8**	**+2.5**
TIP	**Timpagrande**	**3.07**	**260⇑**	P	**Pn**		**05 07 21.9**	**-0.1**
TIP	**Timpagrande**	**3.07**	**260**	Pn	**Pn**		**05 07 22.7**	**+0.7**
HCY	**Herceg Novi**	**3.14**	**329⇑**	*i* Pn	**Pn**		**05 07 23.3**	**+0.5**
HCY	**Herceg Novi**	**3.14**	**329**	*e*Pn	**Pn**		**05 07 24.0**	**+1.2**
HCY				*i* Sn	**Sn**		**05 08 02.3**	**+2.5**
MATE	**Matera**	**3.15**	**288⇓**	P	**Pn**		**05 07 23.6**	**+0.6**
IVA	**Berane**	**3.16**	**350**	*e*Pn	**Pn**		**05 07 24.6**	**+1.4**
IVA				*i* Sn	**Sn**		**05 08 03.3**	**+2.9**
BARS	**Barje**	**3.17**	**16**	*e*Pn	**Pn**		**05 07 26.1**	**+2.8**
KOME	**Kolasin**	**3.20**	**345**	*e*Pn	**Pn**		**05 07 25.1**	**+1.3**
KOME				*i* Sn	**Sn**		**05 08 04.1**	**+2.7**
NKME	**Niksic**	**3.26**	**337⇑**	*i* Pn	**Pn**		**05 07 25.9**	**+1.3**
NKME				*i* Sn	**Sn**		**05 08 05.5**	**+2.6**
VTS	**Vitosha**	**3.45**	**33⇓**	P	**Pn**		**05 07 29.5**	**+2.2**
VTS	**Vitosha**	**3.45**	**33**	Pn	**Pn**		**05 07 29.3**	**+2.0**
VTS	**Vitosha**	**3.45**	**33**	P	**Pn**		**05 07 29.3**	**+2.0**
SELS	**Selova**	**3.47**	**6**	*e*Pn	**Pn**		**05 07 29.9**	**+2.5**
BRY	**Bratogost**	**3.52**	**334**	*e*Pn	**Pn**		**05 07 29.2**	**+1.0**
SJES	**Sjenica**	**3.53**	**352**	*e*Pn	**Pn**		**05 07 31.4**	**+3.1**
UPM	**Unac-Piva**	**3.68**	**340**	*e*Pn	**Pn**		**05 07 33.0**	**+2.6**
UPM	**Unac-Piva**	**3.68**	**340**	*e*Pn	**Pn**		**05 07 31.7**	**+1.3**
UPM				*i* Sn	**Sn**		**05 08 15.7**	**+2.3**
PLE	**Pljevlja**	**3.69**	**345**	*e*Pn	**Pn**		**05 07 31.9**	**+1.4**
PLE				*i* Sn	**Sn**		**05 08 16.0**	**+2.5**
CUC	**Castrocucco**	**3.73**	**275**	Pn	**Pn**		**05 07 32.0**	**+1.0**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**		**05 07 35.4**	**+3.3**
STON	**Ston**	**3.82**	**325⇑**	*i* Pn	**Pn**		**05 07 31.3**	**-0.9**
PLD	**Plovdiv**	**3.85**	**51**	P	**Pn**		**05 07 37.0**	**+4.3**
BOVS	**Bovan**	**3.95**	**11⇑**	P	**Pn**		**05 07 35.5**	**+1.6**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn	**Pn**		**05 07 35.5**	**+1.6**
BOVS				*e*Sn	**Sn**		**05 08 22.2**	**+2.5**

HERR Herculane 5.28 14 ⇓P Pn 05 07 54.4 +2.2
HERR ⇑S Sn 05 08 54.9 +2.4
DOB Doboj 5.31 340 *e*Pn **Pn 05 07 52.4 -0.3**
MGRS Mrkonjic Grad 5.35 331 ⇑*i*Pn **Pn 05 07 54.8 +1.5**
VAE Valguarnera 5.40 247 Pn **Pn 05 07 55.1 +1.2**
comp=N,5.1nm,0.4s,baz=117,slow=18,SNR=1.8
VAE Sn **Sn 05 08 53.7 -1.8**
comp=N,2.7nm,0.3s,baz=75,slow=16,SNR=1.9
FRGS Fruska Gora 5.42 354 ⇓P **Pn 05 07 55.5 +1.2**
FRGS Fruska Gora 5.42 354 ⇑*i*Pn **Pn 05 07 55.1 +0.8**
FRGS Fruska Gora 5.42 354 *e*Pn **Pn 05 07 55.1 +0.8**
COPA Copaceanca 5.53 36 ⇓P **Pn 05 07 58.1 +2.4**
RAFF Raffo Rosso 5.55 245 Pn **Pn 05 07 55.3 -0.7**
INTR Introdacqua 5.59 296 **Pn 05 07 57.7 +1.1**
IDI Anoyia 5.59 142 ⇓P **Pn 05 07 58.1 +1.4**
IDI Anoyia 5.59 142 Pn **Pn 05 07 56.9 +0.2**
comp=N,2.1nm,0.3s,baz=330,slow=10,SNR=16
IDI Sn **Sn 05 08 57.3 -3.1**
comp=N,4.4nm,0.3s,baz=278,slow=22,SNR=2.5
IDI LR LR 05 10 50.6
comp=N,305nm,21.1s,baz=330,slow=46
comp=N,5.6nm,0.3s
IDI Anoyia 5.59 142 Pn **Pn 05 07 56.6 -0.1**
GZR Gura Zlata 5.84 15 ⇓P **Pn 05 08 02.2 +2.2**
GZR ⇑S **Sn 05 09 09.9 +3.4**
GZR Gura Zlata 5.84 15 P **Pn 05 08 02.2 +2.2**
GZR S **Sn 05 09 09.8 +3.4**
BZS Buzias 5.89 7 ⇑P **Pn 05 08 02.1 +1.5**
BZS Buzias 5.89 7 P **Pn 05 08 02.2 +1.5**
BZS pmax pmax
comp=Z,86nm,1.4s
A051A Mrakovica 5.93 333 ⇑*i*Pn **Pn 05 08 01.8 +0.5**
PRIJ Prijedor 5.97 332 *e*Pn **Pn 05 08 02.3 +0.6**
AQU L'Aquila 6.06 298 **Pn 05 08 04.3 +1.3**
AQU L'Aquila 6.06 298 P **Pn 05 08 04.4 +1.3**
LOT Lotru 6.13 21 ⇑P **Pn 05 08 05.7 +1.7**
CAMP Campotosto 6.13 299 **Pn 05 08 05.2 +1.1**
WDD Wied Dalam 6.24 233 Pn **Pn 05 08 06.1 -0.4**
ARR Arges 6.32 26 ⇑P **Pn 05 08 08.8 +2.1**
ARR ⇑S **Sn 05 09 23.0 +4.7**
DEV Deva 6.33 14 P **Pn 05 08 11.2 +4.5**
DEV pmax pmax
comp=Z,83nm,1.1s
NRCA Norcia 6.45 301 **Pn 05 08 09.8 +1.3**
VOIR 6.53 28 ⇑P **Pn 05 08 12.4 +2.9**
VOIR 6.53 28 P **Pn 05 08 13.7 +4.2**
VOIR pmax pmax
comp=Z,58nm,1.2s
SIRR Siria 6.54 6 ⇑P **Pn 05 08 12.4 +2.8**
KOVH Kovagotottos 6.59 344 P **Pn 05 08 11.0 +0.8**
KOVH S **Sn 05 09 22.2 -2.6**
CESX Cesi 6.72 298 **Pn 05 08 13.1 +1.0**
ISR Istrita 6.90 37 ⇑P **Pn 05 08 17.2 +2.7**
ISR Istrita 6.90 37 P Pn 05 08 19.6 +5.1
ISR pmax pmax
comp=Z,135nm,1.1s
MLR Muntele Rosu 6.92 33 ⇓P **Pn 05 08 18.0 +3.1**
MLR Muntele Rosu 6.92 33 Pn **Pn 05 08 17.9 +2.9**
comp=Z,1.2nm,0.3s,baz=233,slow=6.8,SNR=14
MLR Sn **Sn 05 09 36.0 +2.8**
comp=Z,1.4nm,0.3s,baz=135,slow=11,SNR=3.4
MLR LR LR 05 11 50.4
comp=Z,1μm,19.8s,baz=182,slow=46
comp=Z,24nm,1.1s
MLR Muntele Rosu 6.92 33 Pn Pn 05 08 19.8 +4.8
BOJS Bojanci 6.98 327 ⇑*i*Pn **Pn 05 08 16.0 +0.4**
BOJS Bojanci 6.98 327 ⇑*i*Pn **Pn 05 08 16.1 +0.4**
BOJS *e*Sn **Sn 05 09 31.2 -3.2**
BOJS IAML 05 09 35.7
comp=Z,142nm,0.7s
MURB Monte Urbino 7.03 302 **Pn 05 08 18.2 +1.8**
CRES Cresnjev 7.16 329 ⇑*i*Pn **Pn 05 08 18.3 +0.2**
CRES Cresnjev 7.16 329 ⇑*i*Pn **Pn 05 08 18.3 +0.2**
DRGR 7.18 11 ⇑P **Pn 05 08 20.1 +1.7**
DRGR 7.18 11 P **Pn 05 08 21.9 +3.5**
DRGR pmax pmax
comp=Z,27nm,1.3s
LATE Laterza 7.26 296 **Pn 05 08 20.9 +1.4**
CJR Cluj-Napoca 7.27 16 ⇓P **Pn 05 08 22.2 +2.5**
CJR Cluj-Napoca 7.27 16 P **Pn 05 08 22.1 +2.5**
BEHE Becsehely 7.28 338 P **Pn 05 08 20.6 +0.9**
COVR Voineasa-Covas 7.32 32 ⇑P **Pn 05 08 23.1 +2.8**
TIH Tihany 7.41 345 P **Pn 05 08 23.0 +1.5**
PLOR Plostina 7.51 34 ⇑P **Pn 05 08 25.7 +2.7**
PLOR Plostina 7.51 34 P **Pn 05 08 25.6 +2.7**
CEY Cerknica 7.53 325 ⇑*i*Pn **Pn 05 08 23.3 +0.2**
VRI Vrincioaia 7.55 34 ⇑P **Pn 05 08 26.2 +2.7**
VRI Vrincioaia 7.55 34 P **Pn 05 08 27.4 +3.9**
VRI pmax pmax
comp=Z,73nm,0.7s
SKDS Skadanscina 7.57 322 ⇑*i*Pn **Pn 05 08 23.3 -0.4**
TPGR Topolog 7.68 46 ⇓P **Pn 05 08 28.5 +3.3**
LJU Ljubljana 7.72 326 ⇑*i*Pn **Pn 05 08 25.8 0.0**
CFR Carcaliu 7.73 43 ⇑P **Pn 05 08 28.5 +2.6**
CFR Carcaliu 7.73 43 P **Pn 05 08 29.5 +3.6**
CFR pmax pmax
comp=Z,20nm,0.8s
MPLH Magyarpolny 7.74 344 P **Pn 05 08 27.7 +1.7**
CSKK Cskako 7.79 348 P **Pn 05 08 28.5 +1.7**
BUD Budapest 7.81 352 P **Pn 05 08 27.8 +0.9**
BUD pmax pmax
comp=Z,47nm,0.6s
BUD Budapest 7.81 352 P **Pn 05 08 28.6 +1.7**
CASP Castiglione de 7.97 295 Pn **Pn 05 08 30.8 +1.6**
EGYH Egyhazaskeszo 8.02 344 P **Pn 05 08 32.1 +2.2**
SOKA Soboth 8.04 331 *i* Pn **Pn 05 08 29.9 -0.3**
comp=Z,7.8nm,0.3s,SNR=11
SOKA *e*Sn **Sn 05 09 57.0 -3.5**
comp=Z,15nm,0.6s
TESR Tescani 8.04 31 ⇓P **Pn 05 08 32.9 +2.8**
OBKA Obir 8.08 328 *e*Pn **Pn 05 08 31.5 +0.7**
OBKA Obir 8.08 328 *e*Pn **Pn 05 08 31.4 +0.6**
comp=Z,4.1nm,0.2s,SNR=32
OBKA *e*Sn **Sn 05 10 02.8 +1.2**
comp=Z,77nm,0.6s
PSZ Piszkesteto 8.17 356 **Pn 05 08 32.5 +0.5**
PSZ Piszkesteto 8.17 356 P **Pn 05 08 32.5 +0.5**
SRO Srobarova 8.22 349 *e*P **Pn 05 08 35.6 +3.0**
SRO *e* 05 10 05.1
ARSA Arzberg 8.36 335 *e*Pn **Pn 05 08 34.3 -0.2**
comp=Z,8.3nm,0.3s,SNR=24
TRPA Tarpa 8.47 9 ⇓P **Pn 05 08 38.8 +2.8**
BURAR Bucovina Array 8.51 21 ⇓P **Pn 05 08 38.5 +1.8**
BURAR Bucovina Array 8.51 21 **Pn 05 08 38.3 +1.6**
BURAR Bucovina Array 8.51 21 P **Pn 05 08 38.3 +1.6**
RONA Rosalia, Austr 8.54 340 *e*Pn **Pn 05 08 37.3 +0.4**
comp=Z,1.5nm,0.2s
ABAH Abaujker 8.54 3 P **Pn 05 08 40.0 +3.1**
MYKA Terra Mystica 8.56 326 *i* Pn **Pn 05 08 37.3 0.0**
comp=Z,4.9nm,0.3s,SNR=4.4
MYKA *e*Sn **Sn 05 10 09.2 -4.2**
comp=Z,6.4nm,0.3s
TEOL Teolo 8.67 313 **Pn 05 08 38.2 -0.6**
STAL STALIGIAL 8.71 321 **Pn 05 08 38.8 -0.7**
KECS Kecovo 8.72 359 *e*P **Pn 05 08 40.9 +1.5**
ZST Bratislava 8.81 344 *e*P **Pn 05 08 43.5 +2.9**
ZST *e* 05 10 13.8
ZST MLR MLR
comp=Z,2μm,3.7s
VLC Villacollemand 8.82 303 Pn **Pn 05 08 41.5 +0.6**
VYHS Vyhne 8.82 352 *e*P **Pn 05 08 42.4 +1.5**
VYHS *e* 05 10 15.7
CONA Conrad Observa 8.86 339 *e*Pn **Pn 05 08 40.6 -0.9**
comp=Z,1.6nm,0.4s
UZH Uzhgorod 8.94 7 *e*P **Pn 05 08 44.4 +1.9**
UZH *e*S **Sn 05 10 24.4 +1.8**
UZH MLR MLR
comp=N,190nm,14.0s
UZH MLR MLR
comp=E,130nm,14.0s
UZH MLR MLR
comp=Z,100nm,14.0s
MODS Modra-Piesok 8.94 345 *e*P **Pn 05 08 44.6 +2.1**
KBA Koelnbreinsper 9.04 326 P **Pn 05 08 44.3 +0.3**
KBA pmax pmax
comp=Z,36nm,1.3s
KBA Koelnbreinsper 9.04 326 *e*Pn **Pn 05 08 44.3 +0.3**
comp=Z,4.7nm,0.3s,SNR=8.8
KBA *e*Sn **Sn 05 10 20.3 -4.9**
comp=Z,9.4nm,0.4s
CTI Castel Tesino 9.11 316 **Pn 05 08 44.4 -0.5**
CTI Castel Tesino 9.11 316 P **Pn 05 08 44.4 -0.5**
PRMA PARMA 9.15 306 Pn **Pn 05 08 45.9 +0.6**

CRVS Cervenica-Dubn 9.15 3 *e*P **Pn 05 08 48.5 +3.1**
ABTA Abfaltersbach 9.16 322 *i* Pn **Pn 05 08 45.4 -0.2**
comp=Z,6.7nm,0.3s,SNR=15
ABTA *e*Sn **Sn 05 10 24.5 -3.6**
comp=Z,18nm,0.5s
PGF Pioggiola 9.22 291 *e*Pn **Pn 05 08 47.8 +1.3**
PGF *e*Sn **Sn 05 10 21.1 -8.6**
comp=Z,2.9nm,0.7s
KOLS Kolonicke sedl 9.24 7 *e*P **Pn 05 08 50.8 +4.2**
MILM Milestii Mici 9.29 37 *e*P **Pn 05 08 51.0 +3.7**
comp=Z,50nm,1.5s
MILM Milestii Mici 9.29 37 *e*P **Pn 05 08 51.0 +3.7**
MILM *e*S Sn 05 10 41.0 +10
MILM pmax pmax
comp=Z,50nm,1.5s
MILM MLR MLR
comp=Z,1μm,12.0s
MILM MLR MLR
comp=E,800nm,10.5s
MOA Molln 9.30 332 *e*Pn **Pn 05 08 48.0 +0.5**
comp=E,7.3nm,0.3s,SNR=9.2
MOA *e*Sn **Sn 05 10 28.5 -3.1**
comp=E,12nm,0.5s
JAVC Velka Javorina 9.34 348 *e*PN **Pn 05 08 49.3 +1.3**
BIOA Bad Ischl, Aus 9.41 330 *e*Pn **Pn 05 08 49.0 +0.1**
comp=E,4.4nm,0.2s,SNR=15
BIOA *e*Sn **Sn 05 10 34.2 +0.1**
comp=E,21nm,0.5s
MSSA Maissana 9.45 302 **Pn 05 08 51.5 +1.9**
SALO Salr 9.48 311 **Pn 05 08 49.8 -0.1**
KRUC Moravsky 9.78 343 *e*PN **Pn 05 08 53.7 -0.3**
MAUC Maruska 9.81 349 *e*PN **Pn 05 08 55.0 +0.6**
MAUC AMS AMS 05 13 50.0
comp=E,2μm,15.2s
KEST Kesra 9.82 249 Pn **Pn 05 08 55.6 +1.0**
comp=E,0.4nm,0.3s,baz=332,slow=7.1,SNR=7.1
KEST Sn **Sn 05 10 42.8 -1.6**
comp=E,0.1nm,0.3s,baz=230,slow=14,SNR=1.8
KEST LR LR 05 13 46.3
comp=E,398nm,19.8s,baz=22,slow=44
comp=E,6.7nm,0.9s
WTTA Wattenberg 9.95 322 P **Pn 05 08 57.9 +1.4**
WTTA pmax pmax
comp=Z,27nm,0.5s
WTTA Wattenberg 9.95 322 *i* Pn **Pn 05 08 57.0 +0.5**
comp=Z,9.6nm,0.3s,SNR=30
VRAC Vranov 9.97 344 Pn **Pn 05 08 57.2 +0.6**
comp=Z,0.3nm,0.3s,baz=190,slow=9.4,SNR=4.2
VRAC Sn **Sn 05 10 45.7 -2.2**
comp=Z,0.4nm,0.3s,baz=85,slow=23,SNR=1.5
VRAC LR LR 05 13 43.2
comp=Z,692nm,20.1s,baz=170,slow=43
comp=Z,1.6nm,0.5s
VRAC Vranov 9.97 344 *e*PN **Pn 05 08 56.5 -0.1**
BR131 Keskin Array S 10.00 86 *i* P **Pn 05 09 01.0 +3.8**
BRTR Keskin Array B 10.00 86 Pn **Pn 05 08 59.2 +2.0**
comp=Z,0.1nm,0.3s,baz=266,slow=11,SNR=3.6
BRTR Sn **Sn 05 10 48.5 -0.4**
comp=Z,0.1nm,0.3s,baz=266,slow=15,SNR=0.8
BRTR LR LR 05 13 27.0
comp=Z,416nm,20.3s,baz=278,slow=42
comp=Z,0.5nm,0.4s
WATA Walderalm 10.03 322 *e*Pn **Pn 05 08 58.4 +0.9**
comp=Z,9.3nm,0.2s,SNR=15
SQTA Sankt Quirin 10.12 320 *e*Pn **Pn 05 08 59.4 +0.5**
comp=Z,8.2nm,0.2s,SNR=26
SQTA *e*Sn **Sn 05 10 48.0 -3.9**
comp=Z,21nm,0.6s
CKRC Cesky Krumlov 10.13 335 *e*PN **Pn 05 08 58.8 0.0**
PCP Piancastagn 10.18 302 P **Pn 05 09 02.6 +3.1**
PCP pmax pmax
comp=Z,9.0nm,0.9s
TREC Trest 10.21 341 AMS AMS 05 13 20.0
comp=Z,1μm,11.9s
FUORN Ofenpass-Fuorn 10.22 315 **Pn 05 09 01.2 +1.0**
OKC Ostrava-Krasne 10.23 351 P **Pn 05 09 02.0 +1.9**
OKC pmax pmax
comp=Z,14nm,0.9s
OKC Ostrava-Krasne 10.23 351 AMS AMS 05 13 20.0
comp=Z,600nm,14.5s
FETA Feichten 10.23 318 *e*Pn **Pn 05 09 01.2 +0.9**
comp=Z,4.7nm,0.5s,SNR=6.1
MORC Moravsky Berou 10.25 349 ⇑P **Pn 05 09 01.6 +1.1**
MORC Moravsky Berou 10.25 349 **Pn 05 09 01.7 +1.2**
MORC Moravsky Berou 10.25 349 P **Pn 05 09 01.7 +1.2**
MORC Moravsky Berou 10.25 349 *e*PN **Pn 05 09 00.7 +0.2**
MOTA Moosalm 10.26 321 *e*Pn **Pn 05 09 01.0 +0.2**
comp=Z,17nm,0.6s,SNR=17
MOTA *e*Sn **Sn 05 10 52.1 -3.1**
comp=Z,32nm,0.8s
GEC2 GERESS Array S 10.35 334 **Pn 05 09 03.3 +1.4**
GERES GERESS Array B 10.35 334 Pn **Pn 05 09 02.9 +1.0**
comp=Z,0.9nm,0.3s,baz=157,slow=14,SNR=29
GERES Sn **Sn 05 10 52.9 -4.4**
comp=Z,1.7nm,0.3s,baz=149,slow=23,SNR=6.6
GERES LR LR 05 13 56.8
comp=Z,934nm,18.3s,baz=142,slow=43
comp=Z,1.6nm,0.4s
GERES GERESS Array B 10.35 334 **Pn 05 09 01.9 0.0**
GERES GERESS Array B 10.35 334 P **Pn 05 09 01.9 0.0**
OJC Ojcow 10.47 357 P **Pn 05 09 04.7 +1.3**
OJC pmax pmax
comp=Z,13nm,0.8s
DAVOX Davos/Dischmat 10.52 315 Pn **Pn 05 09 05.6 +1.3**
comp=Z,7.3nm,0.5s,baz=150,slow=16
DAVOX Sn **Sn 05 10 58.4 -3.4**
comp=Z,1.8nm,0.3s,baz=134,slow=24,SNR=2.0
DAVOX LR LR 05 13 27.4
comp=Z,217nm,21.9s,baz=118,slow=40
RETA Reutte 10.53 320 *e*Pn **Pn 05 09 04.7 +0.3**
comp=Z,3.2nm,0.3s
KHC Kasperske Hory 10.64 334 **Pn 05 09 06.8 +1.1**
KHC Kasperske Hory 10.64 334 *e*P **Pn 05 09 05.2 -0.6**
KHC *e* 05 11 01.5
KHC MLR MLR
comp=Z,1μm,12.6s
KHC Kasperske Hory 10.64 334 *e*PN **Pn 05 09 05.2 -0.6**
KHC *e*SN **Sn 05 11 01.5 -2.8**
KHC AMS AMS 05 13 40.0
comp=Z,1μm,12.6s
KRLC Kraliky 10.67 346 *e*P **Pn 05 09 07.4 +1.2**
KRLC *e* 05 11 02.1
KRLC MLR MLR
comp=Z,900nm,12.1s
KRLC Kraliky 10.67 346 *e*PN **Pn 05 09 07.4 +1.2**
KRLC *e*SN **Sn 05 11 02.1 -2.9**
KRLC AMS AMS 05 13 50.0
comp=Z,900nm,12.1s
SBF Sospel 10.68 297 *e*Pn **Pn 05 09 07.8 +1.4**
SBF *e*Sn Sn 05 10 55.6 -10
comp=Z,7.4nm,0.5s
SBF Sospel 10.68 297 P **Pn 05 09 09.8 +3.4**
FUR Furstenfeldbru 10.77 324 P **Pn 05 09 08.9 +1.3**
FUR pmax pmax
comp=Z,27nm,0.7s
DAVA Damuels 10.84 317 *e*Pn **Pn 05 09 10.0 +1.3**
comp=Z,2.5nm,0.2s
WET Wettzell 10.89 332 P **Pn 05 09 09.8 +0.5**
WET pmax pmax
comp=Z,10.0nm,0.9s
GOPC GO Pecny, Ondr 10.96 340 AMS AMS 05 13 50.0
comp=Z,900nm,14.9s
DPC Dobruska-Polom 11.02 345 *e*P **Pn 05 09 12.4 +1.5**
DPC MLR MLR
comp=Z,1μm,14.4s
DPC Dobruska-Polom 11.02 345 *e*PN **Pn 05 09 12.4 +1.5**
DPC AMS AMS 05 14 00.0
comp=Z,1μm,14.4s
PRU Pruhonice 11.10 339 *e*P **Pn 05 09 12.9 +0.9**
PRU MLR MLR
comp=Z,900nm,13.0s
PRU Pruhonice 11.10 339 *e*PN **Pn 05 09 12.9 +0.9**
PRU AMS AMS 05 13 50.0
comp=Z,900nm,13.0s
LMR La Mourre 11.19 293 *e*Pn **Pn 05 09 14.5 +1.3**
LMR *e*Sn **Sn 05 11 09.6 -8.1**
comp=Z,1.0nm,0.3s
LMR La Mourre 11.19 293 *e*P **Pn 05 09 15.1 +1.9**
LMR pmax pmax
comp=Z,15nm,1.3s
MMK Mattmark 11.22 308 P **Pn 05 09 15.0 +1.0**
MMK pmax pmax
comp=Z,11nm,1.2s
UPC Upice 11.23 345 AMS AMS 05 14 00.0
comp=Z,1μm,13.8s
OSTC Ostas 11.23 345 *e*PN **Pn 05 09 14.6 +0.7**

OSTC AMS AMS 05 14 10.0
comp=Z,1μm,12.2s
CHVC Chvalec 11.30 345 AMS AMS 05 14 10.0
comp=Z,1μm,11.9s
MBDF Montbardon 11.42 300 *e*Pn **Pn 05 09 16.8 +0.2**
MBDF *e*Sn Sn 05 11 12.6 -11
comp=Z,18nm,0.6s
MBDF Montbardon 11.42 300 *e*P **Pn 05 09 17.3 +0.7**
MBDF pmax pmax
comp=Z,5.0nm,0.6s
RRL Rocca Remolon 11.48 301 P **Pn 05 09 21.2 +3.8**
RRL pmax pmax
comp=Z,11nm,1.5s
PVCC Panska Ves 11.58 340 AMS AMS 05 14 10.0
comp=Z,1μm,11.8s
BNI Bardonecchia 11.60 302 Pn **Pn 05 09 19.4 +0.4**
BNI Bardonecchia 11.60 302 P **Pn 05 09 19.4 +0.4**
LPG La Plagne 11.73 304 *e*Pn **Pn 05 09 19.8 -1.1**
LPG *e*Sn Sn 05 11 17.4 -14
comp=Z,36nm,0.5s
LPG La Plagne 11.73 304 *e*P **Pn 05 09 19.8 -1.1**
LPG pmax pmax
comp=Z,8.0nm,0.5s
LPL La Plagne 11.75 304 *e*Pn **Pn 05 09 21.2 0.0**
LPL *e*Sn Sn 05 11 17.6 -14
comp=Z,58nm,0.8s
LPL La Plagne 11.75 304 *e*P **Pn 05 09 20.9 -0.3**
LPL pmax pmax
comp=Z,5.0nm,0.4s
SENIN Lac Senin/Sane 11.78 308 **Pn 05 09 21.2 -0.3**
SLE Schleitheim 11.88 316 P **Pn 05 09 24.4 +1.7**
SLE pmax pmax
comp=Z,7.0nm,1.1s
RSL Roselend 11.89 304 P **Pn 05 09 24.4 +1.4**
RSL pmax pmax
comp=Z,8.0nm,0.6s
NKC Novy Kostel 11.96 334 AMS AMS 05 14 30.0
comp=Z,1μm,22.1s
SMRF Simiane la Rot 12.00 295 *e*Pn **Pn 05 09 26.5 +2.0**
ORIF Oris-en-Rattie 12.08 300 *e*Pn **Pn 05 09 27.3 +1.7**
ORIF *e*Sn Sn 05 11 25.1 -15
comp=Z,6.4nm,0.4s
STU Stuttgart 12.18 321 **Pn 05 09 27.2 +0.5**
STU Stuttgart 12.18 321 P **Pn 05 09 27.2 +0.5**
BFO Black Forest 12.31 318 **Pn 05 09 28.1 -0.6**
BFO Black Forest 12.31 318 P **Pn 05 09 28.1 -0.6**
AKASG Malin Array Be 12.48 26 Pn **Pn 05 09 31.1 +0.2**
comp=Z,0.4nm,0.3s,baz=212,slow=12,SNR=5.7
AKASG LR LR 05 15 29.2
comp=Z,415nm,18.7s,baz=203,slow=43
AKBB Malin Array Si 12.48 26 Pn P 05 09 37.4 -5.2
AKBB Malin Array Si 12.48 26 *i* P **Pn 05 09 28.6 -2.3**
MOX Moxa 12.60 333 P **Pn 05 09 32.7 +0.2**
MOX pmax pmax
comp=Z,11nm,0.9s
CABF La Chapelle 12.63 308 *e*Pn **Pn 05 09 32.2 -0.9**
CABF *e*Sn Sn 05 11 38.9 -14
comp=Z,4.4nm,0.4s
CABF La Chapelle 12.63 308 *e*P **Pn 05 09 33.0 -0.1**
CABF pmax pmax
comp=Z,80nm,1.7s
CLL Collm 12.72 338 *e*P **P 05 09 42.0 -3.2**
CLL Collm 12.72 338 *e*PP **P 05 09 42.0 -3.2**
CLL *i* sPP 05 09 46.4
CLL LmV 05 15 00.0
comp=N,600nm,18.9s
CLL LmV 05 15 00.0
comp=E,100nm,21.3s
CLL Lmax 05 15 00.0
HINF Hinteralfeld 12.80 313 *e*Pn **Pn 05 09 33.3 -2.0**
HINF *e*Sn Sn 05 11 43.3 -14
comp=E,19nm,0.7s
HINF Hinteralfeld 12.80 313 *e*P **Pn 05 09 33.5 -1.8**
HINF pmax pmax
comp=Z,5.0nm,0.5s
ECH Echery 12.86 315 Pn **Pn 05 09 35.7 -0.4**
ECH Echery 12.86 315 P **Pn 05 09 35.7 -0.4**
VIVF Saint-Julien-l 12.87 298 *e*Pn **Pn 05 09 38.7 +2.4**
VIVF *e*Sn Sn 05 11 46.7 -12
comp=Z,2.0nm,0.6s
CDF Champ du Feu 12.92 316 *e*Pn **Pn 05 09 37.2 +0.2**
CDF *e*Sn Sn 05 11 46.5 -14
comp=Z,2.1nm,0.4s
CDF Champ du Feu 12.92 316 P **Pn 05 09 37.2 +0.2**
SSB Saint Sauveur 13.10 300 Pn **Pn 05 09 39.5 +0.1**
SSB Saint Sauveur 13.10 300 P **Pn 05 09 39.5 +0.1**
HAU Haudompre 13.19 313 *e*Pn **Pn 05 09 41.3 +0.7**
HAU *e*Sn Sn 05 11 52.1 -15
comp=Z,18nm,0.4s
HAU Haudompre 13.19 313 *e*P **Pn 05 09 39.6 -1.0**
HAU pmax pmax
comp=Z,7.0nm,0.4s
LASF Ste Croix 13.23 294 *e*Pn **Pn 05 09 45.1 +3.9**
LASF *e*Sn Sn 05 11 55.9 -12
comp=Z,3.0nm,0.5s
MMAI Mount Meron Ar 13.65 115 Pn **Pn 05 09 48.1 +1.1**
comp=Z,1.5nm,0.3s,baz=306,slow=10,SNR=2.5
MMAI LR LR 05 16 12.0
comp=Z,240nm,18.9s,baz=126,slow=42
comp=Z,0.4nm,0.3s
PAGF Fort de Pagny 13.84 314 *e*Pn **Pn 05 09 50.3 +0.8**
PAGF *e*Sn Sn 05 12 07.0 -16
comp=Z,2.1nm,0.3s
SFTF Sexfontaines 14.04 312 *e*Pn **Pn 05 09 51.3 -0.9**
SFTF *e*Sn Sn 05 12 14.3 -13
comp=Z,0.7nm,0.3s
SMF Signal de Mont 14.05 305 *e*Pn **Pn 05 09 50.4 -1.9**
SMF *e*Sn Sn 05 12 13.4 -14
comp=Z,5.7nm,0.3s
MEZF Maizieres J'vi 14.19 313 *e*Pn **Pn 05 09 53.0 -1.2**
MEZF *e*Sn Sn 05 12 15.6 -15
comp=Z,2.6nm,0.3s
SAVF Savonnieres en 14.21 314 *e*Pn **Pn 05 09 53.9 -0.6**
SAVF *e*Sn Sn 05 12 17.4 -14
comp=Z,1.0nm,0.3s
LOR Lormes 14.29 307 *e*Pn **Pn 05 09 54.4 -1.3**
baz=120
LOR *e*Sn Sn 05 12 18.3 -15
comp=Z,9.4nm,0.4s
LOR Lormes 14.29 307 P **Pn 05 09 54.4 -1.3**
AVF Avril sur Loir 14.41 305 *e*Pn **Pn 05 09 55.7 -1.6**
AVF *e*Sn Sn 05 12 22.7 -14
comp=Z,0.3nm,0.3s
AVF Avril sur Loir 14.41 305 *e*P **P 05 10 07.9 +3.8**
AVF pmax pmax
comp=Z,33nm,1.4s
SSF Saint Saulge 14.42 306 *e*Pn **Pn 05 09 55.9 -1.6**
SSF *e*Sn Sn 05 12 19.9 -17
comp=Z,6.4nm,0.4s
SSF Saint Saulge 14.42 306 *e*P **P 05 10 05.0 +0.8**
SSF pmax pmax
comp=Z,25nm,1.1s
BGF Bois d'Agland 14.65 303 *e*Pn **Pn 05 09 58.7 -1.8**
BGF *e*Sn Sn 05 12 27.7 -15
comp=Z,5.6nm,0.3s
BGF Bois d'Agland 14.65 303 *e*P **P 05 10 10.6 +3.9**
BGF pmax pmax
comp=Z,29nm,1.4s
BUG Bochum--Univer 14.94 326 P **Pn 05 10 07.1 +2.7**
BUG pmax pmax
comp=Z,23nm,2.3s
TCF Toulx Ste Croi 14.97 302 *e*Pn **Pn 05 10 04.6 -0.3**
TCF *e*Sn Sn 05 12 35.7 -14
comp=Z,1.0nm,0.3s
EIL Elat 15.46 126 LR LR 05 18 55.0
comp=Z,83nm,19.1s,baz=118,slow=48
BAIF Baives 15.51 317 *e*Pn **P 05 10 14.9 -1.4**
BAIF Baives 15.51 317 *e*P **P 05 10 17.2 +0.9**
BAIF pmax pmax
comp=Z,58nm,1.9s
MNK Minsk 15.53 16 *i* P **Pn 05 10 09.9 -2.2**
MNK *i* S **Sn 05 13 00.1 -3.4**
MNK pmax pmax
comp=Z,37nm,0.8s
MNK pmax pmax
comp=N,66nm,1.1s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK MLR MLR
comp=E,34nm,14.0s
MNK MLR MLR
comp=N,221nm,16.0s
MNK MLR MLR
comp=Z,324nm,15.0s
MNK Minsk 15.53 16 *i* P **Pn 05 10 10.0 -2.2**

comp=E,1.0nm,0.8s
MNK *i* P **Pn** **05 10 10.0 -2.2**
comp=N,66nm,1.1s
MNK *i* P **Pn** **05 10 10.0 -2.2**
comp=Z,37nm,0.8s,baz=202
MNK *i* PP **PnPn** **05 10 18.7 -1.7**
MNK *i* S **Sn** **05 13 00.1 -3.4**
MNK *i* SS **SnSn** **05 13 13.5 -2.8**
MNK *i* LQ LQ 05 14 44.9
MNK *i* LR LR 05 15 53.6
MNK *i* LRM MLR 05 16 42.6
comp=E,34nm,14.2s
MNK *i* LRM MLR 05 16 45.0
comp=N,221nm,15.9s
MNK *i* LRM MLR 05 16 46.2
comp=Z,324nm,15.1s
EPF Esparros 15.59 289 *e*Pn **P** **05 10 17.6 +0.4**
NACGM Naroch 15.69 13||*e*P **P** **05 10 20.1 +1.8**
baz=198
PABE Paberze 15.90 7 **Pn** **05 10 17.4 +0.4**
PABE IAmb IAmb 05 10 28.8
comp=Z,59nm,1.3s
PABE Paberze 15.90 7 *e*P **Pn** **05 10 17.4 +0.4**
IIGN Ignalina 16.03 12 *e*P **Pn** **05 10 20.3 +1.7**
ISAL Salakas 16.23 11 *e*P **Pn** **05 10 20.9 -0.3**
ETSF Etsaut 16.24 288 *e*Pn **P** **05 10 24.5 +0.1**
VSVD Vaisvydziai 16.37 7 *e*P **Pn** **05 10 22.1 -0.9**
MFF Saint Martin d 16.61 301 *e*Pn **P** **05 10 28.6 +0.1**
SJPF Ste Jean 16.74 289 *e*Pn **P** **05 10 30.1 +0.2**
KIV Kislovodsk 16.93 69 *e*P **Pn** **05 10 30.6 +0.4**
KIV *e*S **Sn** **05 13 39.4 +1.7**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,36nm,14.0s
KBZ Khabaz 17.05 69 P **P** **05 10 33.0 -0.3**
comp=Z,0.1nm,0.3s,baz=296,slow=16,SNR=3.1
comp=Z,0.8nm,0.4s
KBZ Khabaz 17.05 69 *i* P **Pn** **05 10 32.3 +0.7**
KBZ pmax pmax
comp=Z,12nm,2.0s
VSR Storozhevoye 17.25 42 *e*P **P** **05 10 35.1 -0.4**
VSR pmax pmax
comp=Z,20nm,1.1s
LDF La Druitiere 17.28 308 *e*Pn **P** **05 10 37.4 +1.6**
LDF *e*Sn Sn 05 13 29.5 -17
comp=Z,1.0nm,0.2s
VORR Voronezh 17.53 41 *e*P **P** **05 10 39.6 +1.0**
VORR pmax pmax
comp=Z,40nm,0.4s
FLN La Foliniere 17.56 308 *e*Pn **P** **05 10 39.2 +0.2**
FLN *e*Sn Sn 05 13 35.7 -17
comp=Z,2.6nm,0.3s
GRR Gorron 17.66 306 *e*Pn **P** **05 10 43.6 +3.6**
LPSR Galich'ya Gora 17.96 38 *e*P **Pn** **05 10 41.7 -1.1**
LPSR pmax pmax
comp=Z,30nm,1.6s
GNI Garni 18.46 81 LR LR 05 18 09.0
comp=Z,146nm,20.1s,baz=259,slow=38
VRH Novokhopyorsk 18.61 45 *e*P **Pn** **05 10 52.2 +1.4**
VRH pmax pmax
comp=Z,10.0nm,0.4s
OBN Obninsk 18.68 29 P **Pn** **05 10 51.9 +0.3**
comp=Z,1.0nm,0.3s,baz=211,slow=10,SNR=7.4
OBN LR LR 05 19 01.6
comp=Z,194nm,18.4s,baz=198,slow=40
comp=Z,3.8nm,0.5s
OBN Obninsk 18.68 29 P **P** **05 10 50.9 -0.3**
OBN IAmb IAmb 05 10 54.2
comp=Z,71nm,1.4s
OBN Obninsk 18.68 29 *e*P **P** **05 10 49.1 -2.1**
OBN *e*S **Sn** **05 14 20.2 +0.4**
OBN pmax pmax
comp=Z,26nm,1.1s
OBN MLR MLR
comp=Z,685nm,18.0s
ESBB Sonseca Array 18.93 278 P **P** **05 10 53.7 -0.5**
ESDC Sonseca Array 18.93 278 P **Pn** **05 10 54.8 -0.1**
comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=16
ESDC LR LR 05 18 10.8
comp=Z,148nm,18.3s,baz=78,slow=37
comp=Z,5.6nm,1.2s
ESDC Sonseca Array 18.93 278 P **Pn** **05 10 55.1 +0.2**
QUIF Quistinic 18.96 303 *e*Pn **Pn** **05 10 56.9 +1.8**
MTSE Matsula 19.07 5 *e*P **P** **05 10 55.8 +0.3**
VSU Vasula 19.12 10 *i* P **P** **05 10 53.2 -2.8**
VSU pmax pmax
comp=Z,67nm,0.7s
VSU Vasula 19.12 10 *e*P **P** **05 10 55.8 -0.2**
GROC Groznyy 19.12 71 *e*P **Pn** **05 10 57.7 +0.6**
GROC pmax pmax
comp=Z,44nm,0.4s
ROSF Rostrenen 19.16 304 *e*Pn **Pn** **05 10 57.1 -0.4**
PAB San Pablo 19.24 277 P **Pn** **05 10 58.5 -0.2**
PAB IAmb IAmb 05 11 00.1
comp=Z,22nm,1.3s
PAB San Pablo 19.24 277 P **Pn** **05 10 58.5 -0.2**
PAB pmax pmax
comp=Z,22nm,1.3s
MOS Moscow 19.55 30 *e*P **P** **05 10 59.4 -1.3**
MOS *e*S **S** **05 14 35.9 -4.6**
MOS pmax pmax
comp=Z,57nm,1.2s
MOS pmax pmax
comp=Z,100nm,1.9s
MAK Makhachkala 20.37 72 *e*P **P** **05 11 07.7 -2.1**
MAK *e*S **S** **05 14 55.9 -1.2**
MAK pmax pmax
comp=Z,162nm,1.1s
MAK MLR MLR
comp=Z,116nm,19.0s
MEF Metsahovi 20.61 5 *e*P **P** **05 11 10.3 -1.9**
HFS Hagfors 20.85 350 P **P** **05 11 14.4 -0.5**
comp=Z,7.3nm,0.6s,baz=170,slow=11,SNR=26
HFS LR LR 05 20 22.3
comp=Z,179nm,18.2s,baz=166,slow=40
comp=Z,7.3nm,0.6s
KONO Kongsberg 21.09 344 *e*P **P** **05 11 19.5 +2.1**
OSL Oslo 21.14 346 *e*P **P** **05 11 19.3 +1.4**
TAM Tamanrasset 21.25 222 P **P** **05 11 19.6 +0.1**
TAM Tamanrasset 21.25 222 P **P** **05 11 19.6 +0.1**
TAM pmax pmax
comp=Z,11nm,1.5s
RAF Rauma 21.30 1 *e*P **P** **05 11 17.6 -2.0**
MDT Midelt 21.47 259 P **P** **05 11 21.6 -0.3**
comp=Z,2.3nm,0.8s,baz=83,slow=13,SNR=6.5
MDT LR LR 05 19 26.8
comp=Z,77nm,21.1s,baz=87,slow=36
comp=Z,2.3nm,0.8s
PBAR Barrancos 21.56 275 *e*P **P** **05 11 23.2 +0.5**
comp=Z,48nm,1.9s
BLS5 Blasjo 21.63 340 *e*P **P** **05 11 26.0 +2.7**
NC602 NORSAR Array S 21.75 348 P **P** **05 11 24.1 -0.4**
NC602 NORSAR Array S 21.75 348 *e*P **P** **05 11 24.1 -0.4**
NC602 IAmb IAmb 05 11 24.5
comp=Z,53nm,1.2s
NORES NORESS Array B 21.75 348 P **P** **05 11 23.8 -0.7**
PESTR Estremoz 21.84 277 P **P** **05 11 25.6 -0.1**
FINES FINESS Array B 21.96 7 P **P** **05 11 26.1 -0.6**
comp=Z,2.9nm,0.4s,baz=171,slow=12,SNR=47
FINES LR LR 05 21 59.9
comp=Z,127nm,18.7s,baz=192,slow=42
comp=Z,2.9nm,0.4s
FINES FINESS Array B 21.96 7 P **P** **05 11 26.2 -0.5**
FIA1 FINESS Array S 21.96 7 P **P** **05 11 25.8 -0.9**
FIA1 IAmb IAmb 05 11 38.0
comp=Z,37nm,1.2s
NB2 NORSAR Subarra 22.09 348 P **P** **05 11 27.4 -0.8**
comp=Z,42nm,1.2s,baz=164,slow=11
NB2 NORSAR Subarra 22.09 348 P **P** **05 11 27.4 -0.8**
baz=164,slow=11
NOA NORSAR Array B 22.09 348 P **P** **05 11 27.8 -0.4**
comp=Z,18nm,1.1s,baz=165,slow=11,SNR=20
NOA LR LR 05 20 42.2
comp=Z,168nm,20.8s,baz=165,slow=38
comp=Z,18nm,1.1s
EKA Eskdalemuir Ar 22.21 322 P **P** **05 11 28.8 -0.8**
comp=Z,7.2nm,0.7s,baz=121,slow=10.0,SNR=16
EKA LR LR 05 21 38.7
comp=Z,169nm,18.3s,baz=151,slow=41
comp=Z,7.2nm,0.7s
ESK Eskdalemuir 22.23 322 P **P** **05 11 29.1 -0.6**
ESK IAmb IAmb 05 11 32.2
comp=Z,65nm,1.4s
ESK Eskdalemuir 22.23 322 P **P** **05 11 29.1 -0.6**
ESK pmax pmax
comp=Z,65nm,1.4s
PVAQ Vaqueiros 22.27 273 *e*P **P** **05 11 29.7 -0.6**
comp=Z,30nm,1.9s
SKAR Skarslia 22.31 344 *e*P **P** **05 11 35.0 +4.5**
NC204 NORSAR Array S 22.39 347 P **P** **05 11 31.8 +0.4**
MESJ Messejana 22.55 274 *e*P **P** **05 11 33.1 -0.2**
comp=Z,27nm,2.0s
PNCL Nicolau / Gran 22.72 275 *e*P **P** **05 11 36.9 +1.8**
comp=Z,42nm,1.8s
DOMB Dombas 23.40 346 *e*P **P** **05 11 42.9 +1.0**
KLMR Klimovskoe 24.13 23 *e*P P 05 11 40.2 -8.6
KLMR pmax pmax
comp=Z,24nm,1.5s
KLMR MLR MLR
comp=Z,279nm,15.0s
KLMR Klimovskoe 24.13 23 *e*P P 05 11 40.3 -8.5
KLMR AMP 05 12 01.1
comp=Z,24nm,1.5s
KLMR LR LR 05 21 15.6
KLMR AMP 05 22 29.3
comp=Z,279nm,15.4s
NSS Namsos 25.32 351 *e*P **P** **05 12 00.5 +0.9**
KIRV Kirov 26.28 35 LR LR 05 23 38.9
comp=Z,460nm,18.1s,baz=259,slow=39
MOR8 Moi Rana 26.69 354 *e*P **P** **05 12 14.8 +2.8**
PRGR Permogore 26.69 27 P **P** **05 12 13.8 +1.8**
PRGR pmax pmax
comp=Z,11nm,0.9s
FAUS Fauske 27.83 356 *e*P **P** **05 12 23.4 +1.2**
AKTO Aktyubinsk 28.17 55 P **P** **05 12 25.0 -0.4**
comp=Z,0.7nm,0.3s,baz=277,slow=12,SNR=2.8
AKTO LR LR 05 25 36.9
comp=Z,172nm,19.5s,baz=282,slow=41
comp=Z,0.7nm,0.3s
AKTO Aktyubinsk 28.17 55 P **P** **05 12 25.0 -0.4**
GEYT Alibeck 29.10 81 P **P** **05 12 34.6 +0.8**
comp=Z,1.8nm,0.6s,baz=292,slow=7.8,SNR=3.6
GEYT LR LR 05 26 58.7
comp=Z,65nm,20.0s,baz=291,slow=42
comp=Z,1.8nm,0.6s
ABKAR Akbulak array 29.29 58 P **P** **05 12 36.0 +0.7**
KTK1 Kautokeino 29.34 2 *e*P **P** **05 12 36.0 +0.4**
ARU Arti 29.82 43 LR LR 05 24 43.9
comp=Z,80nm,21.5s,baz=250,slow=37
ARU Arti 29.82 43 *d i*P **P** **05 12 37.8 -2.2**
ARU 05 13 32.3
ARU S **S** **05 17 33.9 -1.6**
ARU pmax pmax
comp=Z,7.0nm,1.3s
ARU MLR MLR
comp=Z,251nm,15.0s
ARA0 ARCESS Array S 29.94 3 *e*P **P** **05 12 39.9 -1.1**
ARCES ARCESS Array B 29.94 3 P **P** **05 12 39.6 -1.4**
comp=Z,4.2nm,0.8s,baz=191,slow=8.9,SNR=15
ARCES LR LR 05 25 35.9
comp=Z,242nm,19.9s,baz=169,slow=38
comp=Z,4.2nm,0.8s
ARCES ARCESS Array B 29.94 3 P **P** **05 12 40.1 -0.9**
ARCES IAmb IAmb 05 12 52.4
comp=Z,22nm,1.4s
ARCES ARCESS Array B 29.94 3 P **P** **05 12 40.1 -0.9**
ARCES pmax pmax
comp=Z,22nm,1.4s
TRO Tromso 29.95 359 *e*P **P** **05 12 42.3 +1.4**
HAMF Hammerfest 30.99 2 *e*P **P** **05 12 51.7 +1.6**
SVE Sverdlovsk 31.03 43 *e*P **P** **05 12 51.5 +0.8**
TOA0 Torodi Ar. Sit 31.34 217 P **P** **05 12 54.3 +0.5**
TOA0 IAmb IAmb 05 13 10.5
comp=Z,4.8nm,0.9s
TORD Torodi Ar. Bea 31.34 217 P **P** **05 12 54.1 +0.4**
comp=Z,2.0nm,0.6s,baz=35,slow=9.2,SNR=24
comp=Z,2.0nm,0.6s
TORD Torodi Ar. Bea 31.34 217 P **P** **05 12 54.4 +0.7**
KOWA Kowa 33.19 228 P **P** **05 13 09.9 -0.1**
comp=Z,1.5nm,0.6s,baz=44,slow=9.0,SNR=4.6
KOWA LR LR 05 28 22.4
comp=Z,139nm,19.2s,baz=45,slow=40
comp=Z,1.5nm,0.6s
JMIC Jan Mayen 34.66 344 LR LR 05 27 29.9
comp=Z,34nm,21.2s,baz=132,slow=36
BORG Borgarnes 34.79 330 LR LR 05 29 10.5
comp=Z,84nm,18.8s,baz=134,slow=39
BRVK Borovoye 35.97 52 *i* P **P** **05 13 33.0 -0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
WSAR Wadi Sarin 36.02 106 LR LR 05 31 58.2
comp=Z,39nm,19.7s,baz=342,slow=42
BVAR Borovoye Array 36.03 52 LR LR 05 30 37.3
comp=Z,47nm,18.6s,baz=270,slow=40
KK31 Karatay Array 37.09 68 P **P** **05 13 44.1 +0.8**
KK31 Karatay Array 37.09 68 P **P** **05 13 44.2 +0.8**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 37.09 68 P **P** **05 13 43.0 -0.4**
KKAR Karatay Array 37.09 68 IAmb IAmb 05 13 45.9
comp=Z,3.8nm,0.8s
KKAR Karatay Array 37.09 68 P **P** **05 13 43.0 -0.4**
GAR Garm 37.99 75 IAmb IAmb 05 13 53.2
comp=Z,34nm,1.5s
BTK Batken 38.06 73 IAmb IAmb 05 13 53.6
comp=Z,10nm,1.3s
SPITS Spitsbergen Ar 38.56 359 P **P** **05 13 53.9 -1.5**
comp=Z,7.7nm,0.9s,baz=159,slow=10,SNR=1.1
SPITS LR LR 05 31 41.4
comp=Z,198nm,18.7s,baz=140,slow=39
comp=Z,7.7nm,0.9s
AAK Ala-Archa 40.04 68 LR LR 05 35 40.5
comp=Z,63nm,19.6s,baz=296,slow=44
AAK Ala-Archa 40.04 68 P **P** **05 14 08.1 -0.3**
AAK IAmb IAmb 05 14 11.9
comp=Z,14nm,1.5s
AAK Ala-Archa 40.04 68 P **P** **05 14 08.1 -0.3**
AAK pmax pmax
comp=Z,14nm,1.5s
DBIC Dimbokro 40.14 222 P **P** **05 14 08.2 -1.0**
comp=Z,3.7nm,1.0s,baz=1.0,slow=8.4,SNR=4.4
DBIC LR LR 05 32 07.9
comp=Z,159nm,19.1s,baz=11,slow=38
comp=Z,3.7nm,1.0s
BBTS Babate 41.02 243 LR LR 05 34 17.0
comp=Z,139nm,18.8s,baz=46,slow=41
KURBB Kurchatov Arra 41.22 55 LR LR 05 32 46.1
comp=Z,69nm,20.2s,baz=267,slow=38
MBAR Mbarara 41.22 165 LR LR 05 33 39.3
comp=Z,55nm,19.3s,baz=334,slow=40
KURK Kurchatov 41.26 55 P **P** **05 14 18.2 +0.1**
KURK Kurchatov 41.26 55 *i* P **P** **05 14 15.0 -3.1**
KURK pmax pmax
comp=Z,7.0nm,1.6s
NRN Naryn 41.45 69 IAmb IAmb 05 14 22.7
comp=Z,12nm,1.4s
KSH Kashi 42.01 72 P **P** **05 14 23.8 -0.8**
TARG Taragay, Kyrgy 42.66 68 IAmb IAmb 05 14 31.3
comp=Z,8.5nm,1.1s
MK31 Makanchi Array 44.40 60 P **P** **05 14 43.4 -0.2**
MK31 IAmb IAmb 05 14 45.1
comp=Z,6.0nm,0.8s
MK31 Makanchi Array 44.40 60 P **P** **05 14 43.4 -0.2**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 44.40 60 P **P** **05 14 43.4 -0.2**
comp=Z,6.3nm,0.6s,baz=285,slow=7.5,SNR=47
MKAR LR LR 05 35 37.1
comp=Z,100nm,18.6s,baz=256,slow=39
comp=Z,6.3nm,0.6s
ZAA0 Zalesovo Array 44.56 49 P **P** **05 14 43.7 -1.1**
ZAA0 IAmb IAmb 05 14 45.3
comp=Z,3.2nm,0.8s
ZALV Zalesovo Beam 44.56 49 P **P** **05 14 44.0 -0.8**
comp=Z,2.3nm,0.3s,baz=285,slow=7.3,SNR=8.0
ZALV LR LR 05 35 26.5
comp=Z,150nm,18.0s,baz=282,slow=39
comp=Z,2.3nm,0.3s
ZALV Zalesovo Beam 44.56 49 P **P** **05 14 44.0 -0.8**
NRIK Noril'sk 45.34 27 LR LR 05 36 17.6
comp=Z,272nm,20.1s,baz=258,slow=39
DGZ Jazzator, Alta 47.01 55 *i* P **P** **05 15 04.1 -0.3**
DGZ pmax pmax
comp=Z,6.0nm,1.1s
WMQ Urumqi 48.91 62 *e*P **P** **05 15 22.0 +2.9**
SCHQ Schefferville 57.37 317 P **P** **05 16 19.3 -1.9**
comp=Z,2.6nm,0.7s,baz=30,slow=20,SNR=1.9
comp=Z,2.6nm,0.7s
TIXI Tiksi 58.13 21 LR LR 05 45 24.3
comp=Z,201nm,18.6s,baz=358,slow=40
TIXI Tiksi 58.13 21 P **P** **05 16 25.8 -0.4**
TIXI IAmb IAmb 05 16 35.7
comp=Z,3.8nm,1.0s
TIXI Tiksi 58.13 21 P **P** **05 16 25.8 -0.4**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
RES Resolute Bay 58.28 344 LR LR 05 43 35.8
comp=Z,67nm,18.1s,baz=33,slow=38
TSUM Tsumeb 58.73 183 LR LR 05 43 59.0
comp=Z,55nm,19.0s,baz=323,slow=38
GTA Gaotai 58.99 63 *e*P **P** **05 16 32.4 -0.5**
GTA sP pP 05 16 39.0 -0.3
SONM Songino Array 59.38 51 P **P** **05 16 34.9 -0.6**
comp=Z,3.5nm,1.0s,baz=284,slow=7.6,SNR=14
SONM LR LR 05 44 52.6
comp=Z,118nm,19.9s,baz=304,slow=39
comp=Z,3.5nm,1.0s
SONM Songino Array 59.38 51 P **P** **05 16 35.1 -0.3**
SONM IAmb IAmb 05 16 37.2
comp=Z,9.4nm,1.4s
ULN Ulaanbaatar 59.76 51 *i* P **P** **05 16 34.0 -4.1**
ULN pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 63.68 30 LR LR 05 47 59.6
comp=Z,180nm,18.9s,baz=268,slow=39
LBTB Lobatse 64.61 175 LR LR 05 47 31.4
comp=Z,91nm,18.1s,baz=352,slow=38
HHC Hu-ho-hao-te 66.06 56 *e*P **P** **05 17 19.4 -0.7**
PZH PanZhiHua 67.06 74 P **P** **05 17 26.6 -0.1**
XLT XiLinHaoTe 67.20 51 *e*P **P** **05 17 27.3 0.0**
XLT pP pP 05 17 31.6 -2.1
XLT sP sP 05 17 33.6 -2.4
XAN Xi'an 68.02 64 ⇑P **P** **05 17 32.6 +0.1**
BOSA Boshof 68.16 176 P **P** **05 17 33.6 +0.3**
comp=Z,2.2nm,0.9s,baz=174,slow=8.9,SNR=1.9
BOSA LR LR 05 50 24.4
comp=Z,117nm,18.3s,baz=7.5,slow=39
comp=Z,2.2nm,0.9s
SADO Sadowa 69.28 311 LR LR 05 47 06.6
comp=Z,42nm,18.4s,baz=168,slow=35
CMAR Chiang Mai Arr 69.57 83 LR LR 05 53 36.4
comp=Z,18nm,19.6s,baz=225,slow=41
YKA Yellowknife Ar 71.94 340 P **P** **05 17 56.3 +0.2**
comp=Z,2.3nm,1.0s,baz=38,slow=4.8,SNR=1.6
YKA LR LR 05 50 27.1
comp=Z,20nm,19.1s,baz=38,slow=37
comp=Z,2.3nm,1.0s
KLR Kul'dur 72.59 40 LR LR 05 53 48.6
comp=Z,104nm,18.3s,baz=288,slow=39
CN2 Changchun 72.73 47 P **P** **05 18 00.3 -0.8**
MA2 Magadan 72.80 24 LR LR 05 54 24.1
comp=Z,116nm,18.3s,baz=321,slow=39
COLA College 75.31 355 P **P** **05 18 14.0 -1.8**
COLA pmax pmax
comp=Z,22nm,0.3s
DAWY Dawson 75.31 351 P **P** **05 18 16.5 +0.6**
DAWY IAmb IAmb 05 18 17.9
comp=Z,4.8nm,1.1s
SJG San Juan 76.25 282 LR LR 05 48 26.2
comp=Z,9.1nm,20.1s,baz=61,slow=33
QIZ Qiongzhong 77.48 76 P **P** **05 18 27.0 -1.9**
TKL Tuckaleechee C 77.68 306 LR LR 05 52 59.0
comp=Z,61nm,18.3s,baz=45,slow=36
KSRS Korea Array 78.25 51 P **P** **05 18 32.5 -0.4**
comp=Z,2.1nm,0.7s,baz=314,slow=5.0,SNR=7.6
KSRS LR LR 05 56 47.6
comp=Z,53nm,18.9s,baz=305,slow=38
comp=Z,2.1nm,0.7s
YSS Yuzh-Sakhalins 79.42 36 *e*P P 05 18 32.0 -7.2
YSS MLR MLR
comp=Z,400nm,14.0s
KDAK Kodiak Island 82.65 356 LR LR 05 58 28.4
comp=Z,23nm,18.6s,baz=63,slow=38
NEW Newport 84.69 333 LR LR 06 02 31.8
comp=Z,44nm,18.1s,baz=31,slow=40
MJAR Matsushiro Arr 84.80 46 P **P** **05 19 07.0 -0.6**
comp=Z,1.6nm,0.7s,baz=298,slow=6.0,SNR=6.0
comp=Z,1.6nm,0.7s
SHEM Shemya Is, Ala 85.04 16 LR LR 06 04 16.4
comp=Z,12nm,18.1s,baz=180,slow=41
PDAR Pinedale Array 86.30 326 P **P** **05 19 16.7 +1.4**
comp=Z,0.7nm,1.0s,baz=39,slow=7.2,SNR=2.2
comp=Z,0.7nm,1.0s
ELK Elko 90.36 328 LR LR 06 02 57.0
comp=Z,61nm,19.2s,baz=52,slow=38
ROSC El Rosal 90.76 277 LR LR 05 58 46.4
comp=Z,36nm,19.8s,baz=57,slow=34
ANMO Albuquerque 91.08 319 LR LR 05 59 55.2
comp=Z,37nm,20.8s,baz=22,slow=35
NVAR Mina Array Bea 93.57 329 LR LR 06 05 01.3
comp=Z,119nm,20.3s,baz=37,slow=38
SIV San Ignacio 93.89 253 LR LR 06 02 29.6
comp=Z,33nm,19.8s,baz=298,slow=36
TXAR Lajitas Array 93.95 314 P **P** **05 19 51.4 +0.1**
comp=Z,0.8nm,1.0s,baz=66,slow=4.3,SNR=5.1
comp=Z,0.8nm,1.0s
CPUP Villa Florida 97.88 242 LR LR 06 06 37.1
comp=Z,45nm,18.4s,baz=39,slow=37
WRA Warramunga Arr 120.48 91 PKP **PKPdf** **05 25 23.1 -1.8**
comp=Z,0.7nm,0.9s,baz=294,slow=1.8,SNR=3.3
ASAR Alice Springs 122.22 95 PKP **PKPdf** **05 25 26.8 -1.4**
comp=Z,0.5nm,0.7s,baz=326,slow=1.3,SNR=5.2

IDC 16 05:09:43.2±1.8, 0.72N×123.90E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=172.8km s-min=26.7km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.94**	**154**	P	P	05 14 49.0	-0.2
	1.7nm,0.8s,baz=330,slow=11,SNR=12						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**26.12**	**159**	P	P	05 15 19.5	+0.4
	0.8nm,0.7s,baz=351,slow=15,SNR=8.5						
	0.8nm,0.7s						
STKA	**Stephens Creek**	**36.49**	**154**	P	P	05 16 50.0	-0.3
	0.8nm,0.4s,baz=323,slow=15,SNR=1.6						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**58.48**	**328**	P	P	05 19 41.1	-0.1
	0.5nm,0.7s,baz=122,slow=7.5,SNR=2.3						
	0.5nm,0.7s						

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*IDC **16** 05:09:53.7±1.2, 39.75N×20.57E, h0km, mb3.6/6, mbtmp3.6/10, ML2.9/2, Error ellipse: s-maj=21.7km s-min=16.2km az=122.0*
*TIR **16** 05:09:55.9, 39.69N×20.78E, h14km, Md3.2*
*ATH **16** 05:09:56.6, 39.77N×20.68E, h15km±1km, ML3.3/10, Error ellipse: s-maj=1.3km s-min=0.7km az=288.0*
*THE **16** 05:09:57.7, 39.77N×20.70E, h7km±2km, ML3.5/13, Error ellipse: s-maj=2.3km s-min=0.8km az=275.0*

ISC 16 05:09:56.8±0.8, 39.75N±0.02×20.71E±0.02, h16km±5km, n77, σ1.913/109, mb3.8/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**130**	P	**Pg**	**05 10 00.5**	**-0.2**
JAN				S	**Sg**	**05 10 03.5**	**+0.1**
	32μm,0.3s						
JAN	**Janina**	**0.14**	**130**	P	**Pg**	**05 10 00.5**	**-0.2**
JAN				S	**Sb**	**05 10 03.8**	**-0.1**
JAN				AML	AML	05 10 04.3	
	comp=E,79318μm,0.3s						
JAN				AML	AML	05 10 05.3	
	comp=N,48611μm,0.2s						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pg**	**05 10 04.0**	**-0.2**
IGT				S	**Sb**	**05 10 10.5**	**+0.3**
	comp=N,9μm,0.3s						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pg**	**05 10 04.1**	**-0.1**
	baz=246						
IGT				S	**Sb**	**05 10 10.7**	**+0.5**
	baz=246						
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pg**	**05 10 04.1**	**-0.1**
IGT				S	**Sg**	**05 10 09.7**	**+0.4**
IGT				AML	AML	05 10 11.3	
	comp=N,14891μm,0.3s						
IGT				AML	AML	05 10 12.2	
	comp=E,19152μm,0.3s						
LSK	**Leskovik**	**0.41**	**348**	P	**Pb**	**05 10 05.1**	**-0.6**
LSK				S	**Sb**	**05 10 10.9**	**-0.8**
	comp=E,11μm,0.7s						
LSK	**Leskovik**	**0.41**	**348**	P	**Pb**	**05 10 05.2**	**-0.5**
	baz=344						
LSK				S	**Sb**	**05 10 13.0**	**+1.3**
	baz=344						
KPRO	**Kipourio**	**0.54**	**67**	P	**Pb**	**05 10 07.9**	**0.0**
KPRO				S	**Sb**	**05 10 16.3**	**+0.8**
	comp=E,9μm,0.5s						

PENT	**Pentalofos**	**0.56 36**	P	**Pb**	**05 10 08.1**	**-0.1**
PENT	**Pentalofos**	**0.56 36**	P	**Pb**	**05 10 07.8**	**-0.4**
PENT			S	**Sb**	**05 10 15.6**	**-0.3**
PENT			AML	AML	05 10 17.9	
	comp=E,3434μm,0.3s					
PENT			AML	AML	05 10 21.6	
	comp=N,1144μm,0.4s					
SRN	**Sarande**	**0.56 284**	P	**Pg**	**05 10 07.3**	**-0.6**
SRN			S	**Sb**	**05 10 16.2**	**+0.3**
	comp=N,9μm,0.3s					
SRN	**Sarande**	**0.56 284**	P	**Pg**	**05 10 07.6**	**-0.3**
	baz=288					
SRN			S	**Sb**	**05 10 17.2**	**+1.3**
	baz=288					
KASA	**Kassiopi**	**0.60 270**	P	**Pg**	**05 10 08.0**	**-0.6**
KASA			S	**Sg**	**05 10 15.7**	**-0.8**
KASA			AML	AML	05 10 19.8	
	comp=E,8501μm,0.2s					
KASA			AML	AML	05 10 20.0	
	comp=N,8150μm,0.3s					
KEK	**Kerkira**	**0.70 267**	P	**Pg**	**05 10 09.5**	**-1.0**
KEK			S	**Sb**	**05 10 20.6**	**+0.6**
	comp=N,3μm,0.4s					
KEK	**Kerkira**	**0.70 267**	P	**Pg**	**05 10 09.5**	**-1.0**
KEK			S	**Sg**	**05 10 19.6**	**-0.2**
KEK			AML	AML	05 10 22.7	
	comp=E,5288μm,0.3s					
KEK			AML	AML	05 10 25.4	
	comp=N,5421μm,0.4s					
NEST	**Nestorio**	**0.71 21**	P	**Pb**	**05 10 10.7**	**-0.2**
NEST			S	**Sb**	**05 10 21.1**	**+0.6**
	comp=N,1μm,0.4s					
NEST	**Nestorio**	**0.71 21**	P	**Pg**	**05 10 10.2**	**-0.6**
NEST			S	**Sg**	**05 10 19.6**	**-0.7**
NEST			AML	AML	05 10 25.4	
	comp=E,3898μm,0.5s					
NEST			AML	AML	05 10 31.2	
	comp=N,3864μm,0.4s					
KBN	**Korca**	**0.88 4**	P	**Pb**	**05 10 13.4**	**-0.2**
KBN			S	**Sn**	**05 10 27.5**	**+0.6**
	comp=N,1μm,0.4s					
KBN	**Korca**	**0.88 4**	P	**Pb**	**05 10 13.8**	**+0.2**
	baz=0.0					
KBN			S	**Sn**	**05 10 27.9**	**+1.0**
	baz=0.0					
TSLK	**Tsoukalades, L**	**0.92 183**	P	**Pn**	**05 10 15.1**	**+0.1**
TSLK			S	**Sn**	**05 10 30.8**	**+2.9**
	comp=N,3μm,0.7s					
TSLK	**Tsoukalades, L**	**0.92 183**	P	**Pb**	**05 10 14.2**	**-0.2**
TSLK			S	**Sg**	**05 10 27.2**	**+0.4**
TSLK			AML	AML	05 10 34.3	
	comp=E,6847μm,0.6s					
TSLK			AML	AML	05 10 34.5	
	comp=N,4198μm,0.5s					
LKD2	**Lefkada island**	**0.96 182**	P	**Pg**	**05 10 15.3**	**0.0**
KZN	**Kozani**	**0.99 55**	P	**Pb**	**05 10 15.3**	**-0.2**
KZN			S	**Sn**	**05 10 30.5**	**+0.9**
	comp=N,2μm,0.5s					
KZN	**Kozani**	**0.99 55**	P	**Pb**	**05 10 15.4**	**-0.1**
KZN			S	**Sn**	**05 10 29.4**	**-0.3**
KZN			AML	AML	05 10 33.4	
	comp=N,2923μm,0.6s					
KZN			AML	AML	05 10 34.1	
	comp=E,2877μm,0.8s					
THL	**Klokotos Trika**	**1.02 100**	P	**Pn**	**05 10 17.1**	**+0.7**
THL	**Klokotos Trika**	**1.02 100**	P	**Pn**	**05 10 16.9**	**+0.5**
THL			S	**Sn**	**05 10 31.6**	**+1.2**
EVGI	**Lefkada island**	**1.13 182**	P	**Pb**	**05 10 17.5**	**-0.3**
TYRN	**Tyrnavos**	**1.18 91**	P	**Pb**	**05 10 18.8**	**+0.2**
TYRN			S	**Sg**	**05 10 35.5**	**+0.7**
	comp=E,3μm,0.6s					
VLO	**Vlora**	**1.18 308**	P	**Pg**	**05 10 20.6**	**+1.1**
VLO			S	**Sg**	**05 10 36.9**	**+2.0**
	comp=E,5μm,0.3s					
VLO	**Vlora**	**1.18 308**	P	**Pg**	**05 10 21.2**	**+1.7**
	baz=309					
VLO			S	**Sg**	**05 10 38.4**	**+3.5**
	baz=309					
EVR	**Evrytania**	**1.19 134**	P	**Pg**	**05 10 19.5**	**-0.2**
EVR	**Evrytania**	**1.19 134**	P	**Pg**	**05 10 19.5**	**-0.2**
KTI	**Kastanea**	**1.26 59**	P	**Pb**	**05 10 20.3**	**+0.2**
FSK	**Fiskardo**	**1.29 185**	P	**Pb**	**05 10 21.2**	**+0.6**
FSK			S	**Sg**	**05 10 39.7**	**+1.2**
FSK			AML	AML	05 10 43.6	
	comp=E,2667μm,0.3s					
FSK			AML	AML	05 10 48.9	
	comp=N,1560μm,0.5s					
PVO	**Paravola**	**1.29 150**	P	**Pg**	**05 10 23.0**	**+1.3**
PVO	**Paravola**	**1.29 150**	P	**Pg**	**05 10 21.7**	**0.0**
LRSO	**Larissa Observ**	**1.30 93**	P	**Pg**	**05 10 21.5**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.32 123**	P	**Pg**	**05 10 22.8**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.32 123**	P	**Pg**	**05 10 22.5**	**+0.2**
LIT	**Litokhoron**	**1.41 75**	P	**Pb**	**05 10 23.0**	**+0.3**
LIT			S	**Sg**	**05 10 43.3**	**+0.9**
	comp=N,1μm,0.4s					
LIT	**Litokhoron**	**1.41 75**	P	**Pb**	**05 10 22.7**	**0.0**
KEF4	**Livadi, Kephal**	**1.50 189**	P	**Pb**	**05 10 24.4**	**+0.2**
VLS	**Valsamata**	**1.57 183**	P	**Pb**	**05 10 25.8**	**+0.4**
VLS			AML	AML	05 10 50.0	
	comp=E,1323μm,0.3s					
VLS			AML	AML	05 10 50.7	
	comp=N,2056μm,0.4s					
EFP	**Efpalio**	**1.61 144**	P	**Pg**	**05 10 27.6**	**-0.2**
PSDA	**Pessada-Kefalo**	**1.63 183**	P	**Pg**	**05 10 27.6**	**-0.5**
SERG	**Sergoula**	**1.69 141**	P	**Pb**	**05 10 28.5**	**+1.0**
TIR	**Tirane**	**1.72 338**	P	**Pb**	**05 10 28.2**	**+0.2**
TIR	**Tirane**	**1.72 338**	P	**Pb**	**05 10 28.4**	**+0.4**
	baz=338					
TIR			S	**Sg**	**05 10 53.2**	**+0.9**
	baz=338					
GRG	**Griva**	**1.77 46**	P	**Pb**	**05 10 28.4**	**-0.4**
RLS	**Riolos of Patr**	**1.79 160**	P	**Pb**	**05 10 30.2**	**+1.2**
LAKA	**Lakka**	**1.80 146**	P	**Pb**	**05 10 30.2**	**+0.8**
PHP	**Peshkopia**	**1.95 354**	P	**Pb**	**05 10 32.2**	**+0.4**
PHP	**Peshkopia**	**1.95 354**	P	**Pb**	**05 10 32.5**	**+0.6**
	baz=353					
PHP			S	**Sg**	**05 10 58.7**	**-0.7**
	baz=353					
DRO	**Drossia**	**1.96 156**	P	**Pb**	**05 10 32.7**	**+0.7**
XOR	**Xorichti**	**1.96 100**	P	**Pb**	**05 10 31.8**	**-0.2**
NEO	**Neokhori**	**1.99 102**	P	**Pb**	**05 10 32.9**	**+0.3**
HORT	**Hortiatis**	**2.02 64**	P	**Pb**	**05 10 32.0**	**-1.1**
KLV	**Kalavryta, Ach**	**2.04 146**	P	**Pb**	**05 10 33.9**	**+0.5**
LKR	**Lokris**	**2.09 121**	P	**Pb**	**05 10 33.8**	**-0.5**
KNT	**Kendrikon**	**2.19 49**	P	**Pn**	**05 10 33.6**	**+1.2**
SOH	**Sokhos**	**2.29 61**	P	**Pn**	**05 10 35.4**	**+1.5**
OUR	**Ouranopolis**	**2.58 76**	P	**Pn**	**05 10 39.7**	**+1.9**
SRS	**Serrai**	**2.59 57**	P	**Pn**	**05 10 39.8**	**+1.9**
BCI	**Bajram Curri**	**2.66 350**	P	**Pb**	**05 10 42.2**	**-1.8**
	baz=349					
KOKK	**Kokkinochori,**	**2.73 66**	P	**Pn**	**05 10 41.4**	**+1.4**
VAE	**Valguarnera**	**5.43 247**	Sn	**Sn**	**05 12 18.5**	**-0.6**
	comp=N,1.4nm,0.3s,baz=345,slow=4.8,SNR=2.1					
IDI	**Anoyia**	**5.55 142**	Pn	**Pn**	**05 11 18.5**	**-0.3**
	comp=N,4.9nm,0.8s,baz=58,slow=12,SNR=1.0					
IDI			Sn	**Sn**	**05 12 18.4**	**-3.9**
	comp=N,1.0nm,0.3s,baz=110,slow=16,SNR=1.4					
MLR	**Muntele Rosu**	**6.92 32**	Pn	**Pn**	**05 11 40.3**	**+2.8**
	baz=286,slow=20,SNR=0.7					
MLR			Sn	**Sn**	**05 12 58.5**	**+2.7**
	comp=N,0.1nm,0.3s,baz=81,slow=19,SNR=0.7					
	comp=N,8.6nm,1.0s					
KIS	**Kishinev**	**9.34 36**	*e*	**Pn**	**05 12 15.0**	**+4.4**
KIS			*e*L	L	05 12 44.0	
KIS			LRM	MLR	05 13 22.0	
	comp=N,400nm,12.0s					
GERES	**GERESS Array B**	**10.38 333**	Pn	**Pn**	**05 12 24.0**	**-0.9**
	comp=N,2.3nm,0.8s,baz=157,slow=14,SNR=2.0					
ESDC	**Sonseca Array**	**18.97 278**	P	**P**	**05 14 16.7**	**-0.6**
	baz=72,slow=12,SNR=1.5					
	comp=N,0.3nm,0.8s					
HFS	**Hagfors**	**20.88 350**	P	**P**	**05 14 36.2**	**-1.7**
	comp=N,1.8nm,0.7s,baz=163,slow=12,SNR=1.5					
	comp=N,1.8nm,0.7s					
FINES	**FINESS Array B**	**21.97 7**	P	**P**	**05 14 48.4**	**-1.2**
	comp=N,3.6nm,0.9s,baz=177,slow=11,SNR=6.3					
	comp=N,3.6nm,0.9s					
NOA	**NORSAR Array B**	**22.11 348**	P	**P**	**05 14 49.3**	**-1.9**
	comp=N,0.2nm,0.4s,baz=165,slow=11,SNR=3.1					
	comp=N,0.2nm,0.4s					
TORD	**Torodi Ar. Bea**	**31.35 218**	P	**P**	**05 16 16.3**	**-0.2**
	comp=N,0.8nm,0.7s,baz=39,slow=8.4,SNR=4.2					
	comp=N,0.8nm,0.7s					
MKAR	**Makanchi Array**	**44.37 60**	P	**P**	**05 18 05.7**	**-0.5**
	comp=N,1.2nm,0.4s,baz=284,slow=7.4,SNR=8.7					
	comp=N,1.2nm,0.4s					
ZALV	**Zalesovo Beam**	**44.55 49**	P	**P**	**05 18 06.3**	**-1.1**
	comp=N,0.5nm,0.3s,baz=282,slow=6.3,SNR=2.2					
	comp=N,0.5nm,0.3s					

NOU 16 05:17:08.6, 16.38S×167.58E, h0km, MLv4.3/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.62**	**150**	P	Pn	05 17 37.8	-0.6
MARNC	**Mare, Loyalty**	**5.09**	**175**	P	Pn	05 18 25.6	-0.6
	1.1nm,1.5s						
KOUNC	**Koumac, New Ca**	**5.19**	**216**	P	Pn	05 18 27.0	-0.6
	52nm,0.8s						
YATNC	**Mamie plateau,**	**5.69**	**186**	P	Pn	05 18 33.6	-0.8
	22nm,0.9s						
DZM	**Mont Dzumac**	**5.76**	**191**	P	Pn	05 18 34.4	-1.1
NOUC	**Port Laguerre**	**5.82**	**192**	P	Pn	05 18 36.4	+0.2

*IDC **16** 05:35:13.9±1.6, 39.84N×20.31E, h0km, mb3.5/5, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=40.8km s-min=23.1km az=121.0*
*ATH **16** 05:35:16.9, 39.76N×20.73E, h16km±1km, ML3.0/9, Error ellipse: s-maj=1.4km s-min=0.8km az=294.0*
*TIR **16** 05:35:16.0, 39.72N×20.83E, h10km, Md3.2*
*THE **16** 05:35:17.5, 39.75N×20.69E, h9km±1km, ML3.0/9, Error ellipse: s-maj=1.7km s-min=0.5km az=137.0*
*VIE **16** 05:35:53.4±2.0, 41.60N×17.72E, h8km, mb2.8/2, ml2.4/2, Error ellipse: s-maj=60.7km s-min=11.8km az=55.0 89 km NE of Bari*

ISC 16 05:35:17.2±0.8, 39.74N±0.02×20.74E±0.02, h16km±6km, n71, σ1.13/96, mb3.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.12**	**134**	P	**Pg**	**05 35 20.9**	**0.0**
JAN				S	**Sb**	**05 35 23.8**	**+0.1**
	8μm,0.2s						
JAN	**Janina**	**0.12**	**134**	P	**Pg**	**05 35 20.5**	**-0.4**
JAN				S	**Sb**	**05 35 23.9**	**+0.2**
JAN				AML	AML	05 35 24.7	
	comp=E,37734μm,0.2s						
JAN				AML	AML	05 35 24.8	
	comp=N,30656μm,0.2s						
IGT	**Igoumenitsa**	**0.38**	**237**	P	**Pg**	**05 35 24.7**	**-0.2**
IGT				S	**Sg**	**05 35 29.5**	**-0.7**
	comp=N,4μm,0.3s						
IGT	**Igoumenitsa**	**0.38**	**237**	P	**Pg**	**05 35 24.7**	**-0.2**
	baz=245						
IGT				S	**Sb**	**05 35 31.8**	**+0.7**
	baz=245						
IGT	**Igoumenitsa**	**0.38**	**237**	P	**Pg**	**05 35 24.8**	**-0.2**
IGT				S	**Sg**	**05 35 30.4**	**+0.2**
IGT				AML	AML	05 35 33.4	
	comp=E,7595μm,0.3s						
IGT				AML	AML	05 35 34.3	
	comp=N,6356μm,0.3s						
LSK	**Leskovik**	**0.42**	**345**	P	**Pg**	**05 35 25.6**	**-0.2**
LSK	**Leskovik**	**0.42**	**345**	P	**Pg**	**05 35 25.7**	**-0.1**
	baz=338						
LSK				S	**Sb**	**05 35 32.5**	**0.0**
	baz=338						
KPRO	**Kipourio**	**0.53**	**66**	P	**Pb**	**05 35 28.0**	**-0.1**
KPRO				S	**Sb**	**05 35 36.5**	**+1.1**
	comp=N,5μm,0.5s						
PENT	**Pentalofos**	**0.55**	**34**	P	**Pg**	**05 35 28.1**	**0.0**
PENT				S	**Sb**	**05 35 36.9**	**+0.8**
	comp=N,722nm,0.4s						
PENT	**Pentalofos**	**0.55**	**34**	P	**Pg**	**05 35 27.4**	**-0.7**
PENT				S	**Sb**	**05 35 35.8**	**-0.4**
PENT				AML	AML	05 35 38.8	
	comp=N,462μm,0.5s						
PENT				AML	AML	05 35 40.9	
	comp=E,2262μm,0.3s						
SRN	**Sarande**	**0.59**	**284**	P	**Pg**	**05 35 27.7**	**-1.1**
	baz=285						
SRN				S	**Sb**	**05 35 38.2**	**+1.1**
	baz=285						
KASA	**Kassiopi**	**0.62**	**271**	P	**Pg**	**05 35 28.6**	**-0.8**
KASA				S	**Sg**	**05 35 37.9**	**+0.2**
KASA				AML	AML	05 35 41.3	
	comp=N,3274μm,0.5s						
KASA				AML	AML	05 35 43.9	
	comp=E,2716μm,0.3s						
NEST	**Nestorio**	**0.71**	**19**	P	**Pg**	**05 35 30.7**	**-0.5**
NEST				S	**Sb**	**05 35 41.8**	**+0.9**
	comp=E,658nm,0.4s						
NEST	**Nestorio**	**0.71**	**19**	P	**Pb**	**05 35 31.1**	**-0.2**
KEK	**Kerkira**	**0.73**	**268**	P	**Pg**	**05 35 30.0**	**-1.4**
KEK				S	**Sg**	**05 35 41.0**	**0.0**
	comp=E,925nm,0.5s						
KEK	**Kerkira**	**0.73**	**268**	P	**Pg**	**05 35 30.2**	**-1.2**
KEK				S	**Sg**	**05 35 41.1**	**0.0**
KEK				AML	AML	05 35 45.3	
	comp=E,2005μm,0.3s						
KEK				AML	AML	05 35 45.6	
	comp=N,1540μm,0.3s						
KBN	**Korca**	**0.88**	**2**	P	**Pb**	**05 35 33.5**	**-0.7**
KBN	**Korca**	**0.88**	**2**	P	**Pb**	**05 35 33.7**	**-0.5**
	baz=359						
KBN				S	**Sn**	**05 35 48.3**	**+0.8**
	baz=359						
TSLK	**Tsoukalades, L**	**0.92**	**184**	P	**Pb**	**05 35 34.9**	**+0.2**
TSLK				S	**Sn**	**05 35 49.0**	**+0.8**
	comp=N,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.92**	**184**	P	**Pb**	**05 35 34.9**	**+0.2**
TSLK				S	**Sn**	**05 35 48.4**	**+0.2**
LKD2	**Lefkada island**	**0.95**	**184**	P	**Pb**	**05 35 35.4**	**+0.1**
LKD2	**Lefkada island**	**0.95**	**184**	P	**Pb**	**05 35 35.4**	**+0.1**
LKD2				S	**Sg**	**05 35 49.0**	**+0.8**
LKD2				AML	AML	05 35 55.1	
	comp=E,2362μm,0.4s						
LKD2				AML	AML	05 35 57.4	
	comp=N,1956μm,0.5s						
KZN	**Kozani**	**0.97**	**54**	P	**Pg**	**05 35 36.1**	**0.0**
KZN				S	**Sn**	**05 35 50.6**	**+0.9**
	comp=N,950nm,0.6s						
KZN	**Kozani**	**0.97**	**54**	P	**Pb**	**05 35 35.5**	**-0.2**
KZN				S	**Sg**	**05 35 48.6**	**-0.2**
KZN				AML	AML	05 35 53.2	
	comp=N,1850μm,0.6s						
KZN				AML	AML	05 35 54.6	
	comp=E,1510μm,0.5s						
THL	**Klokotos Trika**	**1.00**	**100**	P	**Pb**	**05 35 36.3**	**+0.2**
THL				S	**Sn**	**05 35 51.3**	**+1.1**
	comp=E,785nm,0.6s						
THL	**Klokotos Trika**	**1.00**	**100**	P	**Pb**	**05 35 35.4**	**-0.7**
THL				S	**Sg**	**05 35 49.9**	**+0.3**
THL				AML	AML	05 35 52.3	
	comp=N,1166μm,0.8s						
THL				AML	AML	05 35 55.7	
	comp=E,1719μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.03**	**182**	P	**Pb**	**05 35 36.6**	**+0.1**
EVGI	**Lefkada island**	**1.12**	**183**	P	**Pn**	**05 35 38.7**	**+0.5**
EVGI	**Lefkada island**	**1.12**	**183**	P	**Pb**	**05 35 38.3**	**+0.1**
EVR	**Evrytania**	**1.17**	**134**	P	**Pn**	**05 35 39.2**	**+0.3**
VLO	**Vlora**	**1.20**	**308**	P	**Pg**	**05 35 42.5**	**+2.1**
	baz=307						
VLO				S	**Sg**	**05 35 60.0**	**+3.9**
	baz=307						
PVO	**Paravola**	**1.28**	**151**	P	**Pg**	**05 35 42.2**	**+0.4**
FSK	**Fiskardo**	**1.29**	**186**	P	**Pg**	**05 35 42.0**	**0.0**
FSK				AML	AML	05 36 03.5	
	comp=E,1628μm,0.3s						
FSK				AML	AML	05 36 10.9	
	comp=N,1197μm,0.8s						
MAKR	**Makrakomi, Fth**	**1.30**	**124**	P	**Pg**	**05 35 42.0**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.30**	**124**	P	**Pg**	**05 35 42.1**	**-0.1**
LIT	**Litokhoron**	**1.39**	**74**	P	**Pb**	**05 35 42.6**	**-0.3**
LIT	**Litokhoron**	**1.39**	**74**	P	**Pb**	**05 35 42.5**	**-0.3**
KEF4	**Livadi, Kephal**	**1.50**	**190**	P	**Pg**	**05 35 46.5**	**-0.4**
VLS	**Valsamata**	**1.56**	**184**	P	**Pb**	**05 35 46.3**	**+0.5**
EFP	**Efpalio**	**1.59**	**145**	P	**Pg**	**05 35 47.5**	**-0.3**
PSDA	**Pessada-Kefalo**	**1.63**	**184**	P	**Pb**	**05 35 47.3**	**+0.5**
SERG	**Sergoula**	**1.68**	**142**	P	**Pg**	**05 35 48.9**	**-0.5**
TIR	**Tirane**	**1.74**	**338**	P	**Pg**	**05 35 51.8**	**+1.2**
	baz=337						
TIR				S	**Sg**	**05 36 14.3**	**+1.1**
	baz=337						
RLS	**Riolos of Patr**	**1.77**	**161**	P	**Pb**	**05 35 49.3**	**0.0**
AXAR	**Agios Charalam**	**1.78**	**123**	P	**Pg**	**05 35 50.8**	**-0.6**
LAKA	**Lakka**	**1.78**	**147**	P	**Pb**	**05 35 49.5**	**0.0**
XOR	**Xorichti**	**1.93**	**100**	P	**Pb**	**05 35 51.3**	**-0.7**
DRO	**Drossia**	**1.94**	**157**	P	**Pb**	**05 35 51.3**	**-0.8**
PHP	**Peshkopia**	**1.96**	**353**	P	**Pg**	**05 35 53.8**	**-1.0**
	baz=352						
PHP				S	**Sg**	**05 36 20.2**	**+0.1**
	baz=352						
NEO	**Neokhori**	**1.97**	**102**	P	**Pn**	**05 35 51.0**	**+1.1**
HORT	**Hortiatis**	**2.00**	**64**	P	**Pn**	**05 35 51.8**	**+1.5**
KLV	**Kalavryta, Ach**	**2.02**	**147**	P	**Pb**	**05 35 53.3**	**-0.3**
LKR	**Lokris**	**2.06**	**121**	P	**Pb**	**05 35 54.4**	**+0.1**
KNT	**Kendrikon**	**2.17**	**49**	P	**Pn**	**05 35 53.8**	**+1.1**
VIL2	**Platees**	**2.49**	**127**	P	**Pb**	**05 35 59.8**	**-1.7**
OUR	**Ouranopolis**	**2.56**	**76**	P	**Pn**	**05 35 59.4**	**+1.5**
BCI	**Bajram Curri**	**2.67**	**349**	P	**Pb**	**05 36 03.3**	**-1.3**
	baz=349						
KKB	**Krupnik**	**2.77**	**39**	*e*P	**Pb**	**05 36 04.3**	**-2.0**
MMB	**Musomiste**	**2.93**	**50**	*e*P	**Pb**	**05 36 09.9**	**+0.9**
ATHU	**Athens Univers**	**2.96**	**126**	P	**Pn**	**05 36 05.1**	**+1.5**
DION	**Dionisos Attik**	**2.99**	**123**	P	**Pn**	**05 36 06.5**	**+2.6**
VTS	**Vitosha**	**3.44**	**32**	*e*P	**Pn**	**05 36 12.2**	**+2.0**
MLR	**Muntele Rosu**	**6.91**	**32**	Pn	**Pn**	**05 37 01.4**	**+3.5**
	comp=N,0.1nm,0.3s,baz=211,slow=12,SNR=2.6						
	comp=N,1.6nm,0.7s						
SOKA	**Soboth**	**8.09**	**331**	*e*Pn	**Pn**	**05 37 14.0**	**0.0**
	comp=N,0.4nm,0.4s						
OBKA	**Obir**	**8.14**	**328**	*e*Pn	**Pn**	**05 37 14.3**	**-0.3**
	comp=N,0.2nm,0.1s						
MOA	**Molln**	**9.36**	**332**	*e*Pn	**Pn**	**05 37 32.5**	**+1.2**
	comp=N,0.2nm,0.2s						
HFS	**Hagfors**	**20.89**	**350**	P	**P**	**05 39 54.4**	**-4.0**
	comp=N,3.8nm,0.9s,baz=178,slow=14,SNR=2.6						
	comp=N,3.8nm,0.9s						
FINES	**FINESS Array B**	**21.98**	**7**	P	**P**	**05 40 08.7**	**-1.4**
	comp=N,1.6nm,0.8s,baz=175,slow=9.0,SNR=3.8						
	comp=N,1.6nm,0.8s						
NOA	**NORSAR Array B**	**22.13**	**348**	P	**P**	**05 40 08.3**	**-3.4**
	comp=N,0.9nm,0.9s,baz=157,slow=10,SNR=1.7						
	comp=N,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.36**	**218**	P	**P**	**05 41 36.3**	**-0.8**
	comp=N,0.4nm,0.7s,baz=36,slow=8.3,SNR=3.6						
	comp=N,0.4nm,0.7s						
MKAR	**Makanchi Array**	**44.35**	**60**	P	**P**	**05 43 26.0**	**-0.5**
	comp=N,0.8nm,0.5s,baz=278,slow=7.3,SNR=10						
	comp=N,0.8nm,0.5s						

*IDC **16** 05:36:09.1±1.4, 39.71N×20.59E, h0km, mb3.5/5, mbtmp3.5/8, ML3.0/2, Error ellipse: s-maj=29.1km s-min=21.5km az=102.0*
*THE **16** 05:36:12.9, 39.74N×20.70E, h12km±1km, ML3.2/5, Error ellipse: s-maj=1.3km s-min=0.6km az=335.0*
*ATH **16** 05:36:12.8, 39.76N×20.66E, h10km±31km, ML3.0/8, Error ellipse: s-maj=31.6km s-min=0.8km az=0.0*

ISC 16 05:36:12.0±0.8, 39.74N±0.02×20.66E±0.02, h19km±2km, n46, σ0.86/60, mb3.3/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**120**	P	**Pb**	**05 36 15.8**	**+0.2**
JAN				S	**Sg**	**05 36 19.2**	**-0.6**
	34μm,0.2s						
JAN	**Janina**	**0.17**	**120**	P	**Pb**	**05 36 15.8**	**+0.2**
JAN				S	**Sg**	**05 36 19.2**	**-0.6**
JAN				AML	AML	05 36 19.4	
	comp=E,67856μm,0.2s						
JAN				AML	AML	05 36 19.7	
	comp=N,66879μm,0.2s						
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pb**	**05 36 19.5**	**+0.2**
IGT				S	**Sn**	**05 36 25.7**	**-2.3**
	comp=N,5μm,0.2s						
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pb**	**05 36 19.6**	**+0.2**
IGT				S	**Sb**	**05 36 24.1**	**-0.1**
IGT				AML	AML	05 36 27.0	
	comp=E,11644μm,0.2s						
IGT				AML	AML	05 36 28.4	
	comp=N,9892μm,0.3s						
LSK	**Leskovik**	**0.41**	**354**	P	**Pb**	**05 36 21.2**	**+0.3**
LSK				S	**Sb**	**05 36 27.9**	**+1.1**
	comp=N,4μm,0.3s						
SRN	**Sarande**	**0.53**	**285**	P	**Pb**	**05 36 23.1**	**+0.5**
SRN				S	**Sn**	**05 36 32.2**	**-0.7**
	comp=N,3μm,0.4s						
KASA	**Kassiopi**	**0.56**	**271**	P	**Pg**	**05 36 23.6**	**+0.4**
KASA				S	**Sg**	**05 36 31.5**	**+0.7**
KASA				AML	AML	05 36 35.5	
	comp=E,3961μm,0.2s						
KASA				AML	AML	05 36 35.9	
	comp=N,3479μm,0.2s						
KPRO	**Kipourio**	**0.58**	**68**	P	**Pb**	**05 36 23.4**	**-0.2**
KPRO				S	**Sg**	**05 36 32.1**	**+0.5**
	comp=N,3μm,0.3s						
PENT	**Pentalofos**	**0.58**	**39**	P	**Pg**	**05 36 23.9**	**+0.1**
PENT	**Pentalofos**	**0.58**	**39**	P	**Pg**	**05 36 23.9**	**+0.1**
PENT				S	**Sb**	**05 36 31.6**	**+0.1**
PENT				AML	AML	05 36 36.5	
	comp=N,682μm,0.4s						
PENT				AML	AML	05 36 37.4	
	comp=E,1546μm,0.5s						
KEK	**Kerkira**	**0.66**	**268**	P	**Pg**	**05 36 25.1**	**-0.1**
KEK	**Kerkira**	**0.66**	**268**	P	**Pg**	**05 36 25.3**	**+0.1**
KEK				S	**Sn**	**05 36 35.3**	**-1.1**
KEK				AML	AML	05 36 42.8	
	comp=E,4036μm,0.2s						
KEK				AML	AML	05 36 43.9	
	comp=N,2023μm,0.5s						
NEST	**Nestorio**	**0.74**	**24**	P	**Pg**	**05 36 26.7**	**+0.2**
NEST	**Nestorio**	**0.74**	**24**	P	**Pg**	**05 36 27.0**	**+0.4**
NEST				S	**Sb**	**05 36 36.4**	**+0.4**
NEST				AML	AML	05 36 41.4	
	comp=N,1637μm,0.4s						
NEST				AML	AML	05 36 43.6	
	comp=E,2290μm,0.6s						
KBN	**Korca**	**0.89**	**6**	P	**Pg**	**05 36 29.3**	**-0.1**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pn**	**05 36 30.4**	**+0.5**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pn**	**05 36 30.2**	**+0.3**
TSLK				S	**Sn**	**05

comp=E,1.3nm,1.1s,baz=157,slow=10,SNR=0.9
comp=E,1.3nm,1.1s
TORD Torodi Ar. Bea 31.32 218 P **P 05 42 31.0 -0.3**
comp=E,0.2nm,0.6s,baz=28,slow=9.1,SNR=1.7
comp=E,0.2nm,0.6s
MKAR Makanchi Array 44.41 60 P **P 05 44 20.9 -0.5**
comp=E,0.6nm,0.4s,baz=276,slow=8.4,SNR=6.9
comp=E,0.6nm,0.4s

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*IDC **16** 05:39:22.5±1.0, 39°.76N×20°.72E, h0km, mb3.7/7, mbtmp3.6/11, ML3.2/4, MS2.7/1, Error ellipse: s-maj=24.4km s-min=16.2km az=123.0*
*NEIC **16** 05:39:25.5±2.1, 39°.75N±0°.05×20°.65E±0°.06, h10km±1km, mb4.2/9, ML3.3(TIR), ML3.3(ATH), Error ellipse: s-maj=9.4km s-min=7.3km az=199.0*
*TIR **16** 05:39:25.6, 39°.77N×20°.68E, h3km, Md3.3*
*BEO **16** 05:39:25.5±0.8, 39°.63N×20°.79E, h12km±4km, ML3.2/6*
*ATH **16** 05:39:26.6, 39°.80N×20°.65E, h5km±2km, ML3.3/10, Error ellipse: s-maj=2.2km s-min=0.6km az=284.0*
*THE **16** 05:39:26.0, 39°.78N×20°.68E, h15km, ML3.3/9, Error ellipse: s-maj=0.8km s-min=0.4km az=308.0*
*VIE **16** 05:39:32.0±1.3, 40°.30N×20°.46E, h8km, mb3.1/5, ms3.6/3, Error ellipse: s-maj=62.7km s-min=11.1km az=53.0 127 km SSE of Tirana*

ISC 16 05:39:25.9±0.8, 39°.76N±0°.01×20°.67E±0°.02, h16km±5km, n127, σ1$24/162, mb4.0/11, 4D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**126**	P		**Pg**	**05 39 29.8**	**-0.5**
JAN				S		**Sg**	**05 39 33.6**	**+0.3**
	64μm,0.3s							
JAN	**Janina**	**0.17**	**126**	P		**Pg**	**05 39 30.2**	**-0.1**
JAN				S		**Sg**	**05 39 33.5**	**+0.2**
JAN				AML		AML	05 39 33.8	
JAN				AML		AML	05 39 33.9	
	comp=N,94886μm,0.2s							
IGT	**Igoumenitsa**	**0.34**	**229**	P		**Pg**	**05 39 33.3**	**+0.3**
IGT				S		**Sb**	**05 39 38.9**	**+0.1**
	comp=N,8μm,0.3s							
IGT	**Igoumenitsa**	**0.34**	**229**	P		**Pg**	**05 39 33.1**	**+0.1**
	baz=230							
IGT				S		**Sb**	**05 39 39.8**	**+1.0**
	baz=230							
IGT	**Igoumenitsa**	**0.34**	**229**	P		**Pb**	**05 39 33.6**	**0.0**
IGT				S		**Sb**	**05 39 38.8**	**0.0**
IGT				AML		AML	05 39 41.3	
	comp=E,17574μm,0.2s							
IGT				AML		AML	05 39 41.9	
	comp=N,13734μm,0.3s							
LSK	**Leskovik**	**0.39**	**352**	P		**Pg**	**05 39 33.9**	**-0.1**
LSK	**Leskovik**	**0.39**	**352**	P		**Pg**	**05 39 33.6**	**-0.4**
	baz=351							
LSK				S		**Sb**	**05 39 39.9**	**-0.5**
	baz=351							
SRN	**Sarande**	**0.53**	**283**	P		**Pg**	**05 39 36.1**	**-0.3**
SRN				S		**Sb**	**05 39 44.2**	**+0.1**
	comp=N,4μm,0.4s							
SRN	**Sarande**	**0.53**	**283**	P		**Pg**	**05 39 36.1**	**-0.3**
	baz=283							
SRN				S		**Sb**	**05 39 45.6**	**+1.6**
	baz=283							
KASA	**Kassiopi**	**0.56**	**269**	P		**Pg**	**05 39 36.9**	**-0.1**
KASA				S		**Sg**	**05 39 44.5**	**-0.1**
KASA				AML		AML	05 39 48.1	
	comp=N,7953μm,0.4s							
KASA				AML		AML	05 39 48.3	
	comp=E,7647μm,0.3s							
PENT	**Pentalofos**	**0.57**	**40**	P		**Pg**	**05 39 36.9**	**-0.3**
PENT				S		**Sg**	**05 39 44.7**	**-0.1**
	comp=E,1μm,0.4s							
PENT	**Pentalofos**	**0.57**	**40**	P		**Pg**	**05 39 37.0**	**-0.2**
PENT				S		**Sg**	**05 39 44.3**	**-0.5**
PENT				AML		AML	05 39 48.4	
	comp=N,1040μm,0.4s							
PENT				AML		AML	05 39 49.7	
	comp=E,3790μm,0.7s							
KPRO	**Kipourio**	**0.57**	**70**	P		**Pg**	**05 39 37.0**	**-0.2**
KPRO				S		**Sg**	**05 39 45.0**	**+0.2**
	comp=E,7μm,0.4s							
KEK	**Kerkira**	**0.67**	**266**	Pg		**Pg**	**05 39 38.2**	**-0.8**
KEK	**Kerkira**	**0.67**	**266**	P		**Pg**	**05 39 38.5**	**-0.6**
KEK	**Kerkira**	**0.67**	**266**	P		**Pg**	**05 39 38.7**	**-0.4**
KEK				S		**Sb**	**05 39 48.4**	**+0.2**
KEK				AML		AML	05 39 53.2	
	comp=E,5082μm,0.2s							
KEK				AML		AML	05 39 55.2	
	comp=N,4431μm,0.4s							
NEST	**Nestorio**	**0.72**	**24**	P		**Pg**	**05 39 39.7**	**-0.3**
NEST				S		**Sg**	**05 39 49.4**	**-0.1**
	comp=N,1μm,0.6s							
NEST	**Nestorio**	**0.72**	**24**	P		**Pg**	**05 39 39.7**	**-0.3**
KBN	**Korca**	**0.87**	**6**			**Pb**	**05 39 42.0**	**-0.6**
KBN	**Korca**	**0.87**	**6**	P		**Pb**	**05 39 41.8**	**-0.8**
KBN	**Korca**	**0.87**	**6**	P		**Pg**	**05 39 42.9**	**+0.1**
	baz=5.0							
KBN				S		**Sn**	**05 39 56.0**	**+0.1**
	baz=5.0							
TSLK	**Tsoukalades, L**	**0.93**	**181**	P		**Pb**	**05 39 43.7**	**+0.1**
TSLK				S		**Sn**	**05 39 57.6**	**+0.3**
	comp=N,3μm,0.6s							
TSLK	**Tsoukalades, L**	**0.93**	**181**	P		**Pn**	**05 39 44.7**	**+0.4**
TSLK				S		**Sn**	**05 39 58.1**	**+0.8**
TSLK				AML		AML	05 40 03.7	
	comp=E,5049μm,0.4s							
TSLK				AML		AML	05 40 04.8	
	comp=N,6663μm,0.7s							
LKD2	**Lefkada island**	**0.97**	**180**	P		**Pb**	**05 39 44.4**	**+0.1**
LKD2	**Lefkada island**	**0.97**	**180**	P		**Pn**	**05 39 45.8**	**+1.0**
	baz=182							
LKD2				S		**Sn**	**05 40 01.1**	**+2.9**
	baz=182							
LKD2	**Lefkada island**	**0.97**	**180**	P		**Pn**	**05 39 45.5**	**+0.8**
LKD2				S		**Sn**	**05 39 59.2**	**+1.0**
LKD2				AML		AML	05 40 04.4	
	comp=N,3408μm,0.3s							
LKD2				AML		AML	05 40 04.5	
	comp=E,3320μm,0.3s							
KZN	**Kozani**	**1.01**	**57**	P		**Pb**	**05 39 44.4**	**-0.6**
KZN				S		**Sg**	**05 39 58.5**	**-0.2**
	comp=E,2μm,0.6s							
KZN	**Kozani**	**1.01**	**57**	P		**Pb**	**05 39 45.1**	**+0.1**
KZN				S		**Sn**	**05 39 59.3**	**+0.1**
KZN				AML		AML	05 40 04.0	
	comp=E,3436μm,0.7s							
KZN				AML		AML	05 40 04.4	
	comp=N,4024μm,0.5s							
THL	**Klokotos Trika**	**1.06**	**100**	P		**Pb**	**05 39 45.0**	**-0.8**
THL				S		**Sg**	**05 40 00.3**	**+0.1**
	comp=N,1μm,0.4s							
THL	**Klokotos Trika**	**1.06**	**100**	P		**Pg**	**05 39 46.4**	**+0.1**
THL				S		**Sn**	**05 40 01.4**	**+1.1**
THL				AML		AML	05 40 06.0	
	comp=N,1907μm,0.4s							
THL				AML		AML	05 40 07.7	
	comp=E,2292μm,0.4s							
EVGI	**Lefkada island**	**1.14**	**180**	P		**Pg**	**05 39 48.8**	**+0.9**
EVGI				S		**Sg**	**05 40 04.7**	**+2.0**
VLO	**Vlora**	**1.15**	**309**			**Pg**	**05 39 48.5**	**+0.5**
VLO	**Vlora**	**1.15**	**309**	P		**Pg**	**05 39 49.4**	**+1.4**
	baz=309							
VLO				S		**Sg**	**05 40 07.6**	**+4.7**
	baz=309							
EVR	**Evrytania**	**1.22**	**133**	P		**Pg**	**05 39 50.0**	**+0.5**
EVR				S		**Sg**	**05 40 07.5**	**+2.1**
EVR				AML		AML	05 40 10.6	
	comp=N,4152μm,0.6s							
EVR				AML		AML	05 40 12.1	
	comp=E,3246μm,0.4s							
FSK	**Fiskardo**	**1.30**	**184**	P		**Pg**	**05 39 51.3**	**+0.4**
PVO	**Paravola**	**1.32**	**149**	P		**Pg**	**05 39 51.7**	**+0.3**
LRSO	**Larissa Observ**	**1.33**	**93**	P		**Pg**	**05 39 51.4**	**-0.1**
OHR	**Ohrid**	**1.35**	**4**	*e*Pg		**Pg**	**05 39 52.2**	**+0.2**
OHR				*e*Sg		**Sg**	**05 40 12.3**	**+2.6**
OHR	**Ohrid**	**1.35**	**4**	*i* Pn		**Pg**	**05 39 52.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.36**	**123**	P		**Pg**	**05 39 52.0**	**0.0**
LIT	**Litokhoron**	**1.44**	**76**	Pn		**Pb**	**05 39 52.4**	**0.0**
LIT	**Litokhoron**	**1.44**	**76**	P		**Pb**	**05 39 52.9**	**+0.6**
EFP	**Efpalio**	**1.64**	**144**	P		**Pg**	**05 39 57.1**	**-0.3**
TIR	**Tirane**	**1.70**	**339**	⇓P		**Pg**	**05 39 57.7**	**-0.8**
TIR	**Tirane**	**1.70**	**339**	Pn		**Pb**	**05 39 56.0**	**-0.7**
TIR	**Tirane**	**1.70**	**339**	*e*Pn		**Pb**	**05 39 56.6**	**-0.1**
TIR				*e*Sn		**Sg**	**05 40 21.3**	**+0.6**
TIR	**Tirane**	**1.70**	**339**	P		**Pg**	**05 39 57.8**	**-0.8**
	baz=339							
TIR				S		**Sg**	**05 40 24.6**	**+3.9**
	baz=339							
SERG	**Sergoula**	**1.73**	**141**	P		**Pg**	**05 39 58.7**	**-0.3**
GRG	**Griva**	**1.79**	**47**	P		**Pb**	**05 39 58.5**	**+0.3**
AXAR	**Agios Charalam**	**1.84**	**122**	P		**Pb**	**05 40 00.2**	**+1.1**
PHP	**Peshkopia**	**1.93**	**355**	P		**Pg**	**05 40 04.0**	**+1.0**
	baz=355							
PHP				S		**Sg**	**05 40 32.7**	**+4.6**
	baz=355							
THE	**Thessaloniki**	**1.96**	**63**	P		**Pb**	**05 40 01.8**	**+0.6**
XOR	**Xorichti**	**1.99**	**101**	P		**Pb**	**05 40 02.9**	**+1.2**
NEO	**Neokhori**	**2.03**	**102**	P		**Pb**	**05 40 03.1**	**+0.8**
VAY	**Valandovo**	**2.13**	**42**	*e*Pn		**Pn**	**05 40 01.5**	**+0.8**
VAY				*e*Sn		**Sn**	**05 40 27.8**	**+1.0**
VAY	**Valandovo**	**2.13**	**42**	*i* Pn		**Pn**	**05 40 01.8**	**+1.1**
STIP	**Stip**	**2.25**	**30**	*i* Pn		**Pb**	**05 40 06.1**	**-0.1**
SKO	**Skopje**	**2.29**	**15**	*e*Pn		**Pb**	**05 40 05.9**	**-0.8**
SKO				*e*Sn		**Sb**	**05 40 34.3**	**-0.5**
SRS	**Serrai**	**2.61**	**58**	*e*Pn		**Pn**	**05 40 08.2**	**+0.8**
SRS				*e*Sn		**Sn**	**05 40 38.3**	**-0.5**
KKB	**Krupnik**	**2.79**	**40**	P		**Pb**	**05 40 13.0**	**-2.4**
PDG	**Podgorica**	**2.87**	**339**	⇓P		**Pn**	**05 40 08.4**	**-2.6**
PDG	**Podgorica**	**2.87**	**339**			**Pn**	**05 40 12.1**	**+1.2**
MMB	**Musomiste**	**2.96**	**51**	P		**Pn**	**05 40 14.9**	**+2.7**
TIP	**Timpagrande**	**3.08**	**260**	⇓P		**Pn**	**05 40 14.0**	**+0.1**
TIP	**Timpagrande**	**3.08**	**260**	Pn		**Pn**	**05 40 14.1**	**+0.1**
MATE	**Matera**	**3.16**	**288**	⇓P		**Pn**	**05 40 15.4**	**+0.5**
BARS	**Barje**	**3.17**	**15**	*e*Pn		**Pn**	**05 40 17.5**	**+2.4**
VTS	**Vitosha**	**3.45**	**33**	Pn		**Pn**	**05 40 20.7**	**+1.6**
VTS	**Vitosha**	**3.45**	**33**	*e*P		**Pn**	**05 40 21.9**	**+2.8**
SELS	**Selova**	**3.47**	**5**	*e*Pn		**Pn**	**05 40 20.4**	**+1.1**
SJES	**Sjenica**	**3.54**	**352**	*e*Pn		**Pn**	**05 40 22.5**	**+2.3**
RZN	**Rozhen**	**3.63**	**57**	P		**Pn**	**05 40 22.1**	**+0.6**
CUC	**Castrocucco**	**3.74**	**275**	Pn		**Pn**	**05 40 24.7**	**+1.8**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn		**Pn**	**05 40 25.9**	**+2.0**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn		**Pn**	**05 40 26.9**	**+1.1**
BOVS				*e*Sn		**Sn**	**05 41 12.8**	**+1.1**
RDO	**Rodhopi**	**3.97**	**68**	Pn		**Pn**	**05 40 27.1**	**+1.2**
CEL	**Celeste**	**4.01**	**250**	Pn		**Pn**	**05 40 26.3**	**-0.3**
KDZ	**Kurdzhali**	**4.07**	**61**	P		**Pn**	**05 40 29.3**	**+1.8**
GRUS	**Gruza**	**4.13**	**0**	*e*Pn		**Pn**	**05 40 29.4**	**+1.2**
BBLS	**Lazići**	**4.21**	**347**	*e*Pn		**Pn**	**05 40 30.8**	**+1.4**
ZAGS	**Zajecar**	**4.22**	**16**	*e*Pn		**Pn**	**05 40 31.6**	**+2.2**
SGRT	**San Giovanni R**	**4.24**	**300**	Pn		**Pn**	**05 40 29.8**	**0.0**
ALN	**Alexandroupoli**	**4.26**	**73**	Pn		**Pn**	**05 40 31.2**	**+1.2**
DIVS	**Divibare**	**4.37**	**354**	Pn		**Pn**	**05 40 32.9**	**+1.4**
DIVS	**Divibare**	**4.37**	**354**	*e*Pn		**Pn**	**05 40 31.8**	**+0.3**
PAOL	**Paolisi**	**4.83**	**287**			**Pn**	**05 40 39.2**	**+1.4**
SANT	**Santorini**	**5.07**	**130**	Pn		**Pn**	**05 40 42.6**	**+1.3**
VAE	**Valguarnera**	**5.40**	**247**	Sn		**Sn**	**05 41 43.9**	**-3.7**
	comp=E,1.1nm,0.3s,baz=181,slow=3.9,SNR=2.0							
FRGS	**Fruska Gora**	**5.43**	**354**	*e*Pn		**Pn**	**05 40 46.7**	**+0.6**
RAFF	**Raffo Rosso**	**5.56**	**245**	Pn		**Pn**	**05 40 46.8**	**-1.0**
IDI	**Anoyia**	**5.58**	**142**	Pn		**Pn**	**05 40 46.9**	**-1.4**
	comp=E,0.7nm,0.3s,baz=65,slow=12,SNR=1.6							
IDI				Sn		**Sn**	**05 41 48.5**	**-3.6**
	comp=E,1.4nm,0.3s,baz=45,slow=18,SNR=3.1							
	comp=E,3.6nm,0.5s							
IDI	**Anoyia**	**5.58**	**142**	Pn		**Pn**	**05 40 47.2**	**-1.1**
CAMP	**Campotosto**	**6.14**	**299**			**Pn**	**05 40 57.0**	**+1.0**
MLR	**Muntele Rosu**	**6.92**	**32**	Pn		**Pn**	**05 41 07.2**	**+0.4**
	comp=E,0.3nm,0.3s,baz=185,slow=12,SNR=2.4							
MLR				LR		LR	05 44 48.6	
	comp=E,68nm,21.4s,baz=271,slow=47							
	comp=E,2.0nm,1.0s							
MURB	**Monte Urbino**	**7.04**	**302**	Pn		**Pn**	**05 41 08.9**	**+0.6**
SOKA	**Soboth**	**8.04**	**331**	*e*Pn		**Pn**	**05 41 21.3**	**-0.8**
	comp=E,0.3nm,0.2s							
OBKA	**Obir**	**8.09**	**328**	*e*Pn		**Pn**	**05 41 23.2**	**+0.5**
	comp=E,0.8nm,0.2s							
TEOL	**Teolo**	**8.68**	**313**	Pn		**Pn**	**05 41 29.2**	**-1.5**
STAL	**STALIGIAL**	**8.72**	**321**	Pn		**Pn**	**05 41 30.2**	**-1.2**
CLUD	**Cludinico**	**8.79**	**322**	Pn		**Pn**	**05 41 31.9**	**-0.2**
CTI	**Castel Tesino**	**9.12**	**316**	Pn		**Pn**	**05 41 36.4**	**-0.5**
ABTA	**Abfaltersbach**	**9.17**	**322**	*e*Pn		**Pn**	**05 41 37.0**	**-0.5**
	comp=E,0.7nm,0.4s							
MOA	**Molln**	**9.31**	**332**	*e*Pn		**Pn**	**05 41 40.3**	**+0.9**
	comp=E,0.9nm,0.3s							
WTTA	**Wattenberg**	**9.96**	**322**	*e*Pn		**Pn**	**05 41 48.3**	**-0.1**
	comp=E,1.0nm,0.3s							
DAVOX	**Davos/Dischmat**	**10.54**	**315**	Pn		**Pn**	**05 41 55.7**	**-0.5**
	comp=E,0.1nm,0.3s,baz=2.6,slow=20,SNR=1.2							
	comp=E,0.3nm,0.3s							
ESDC	**Sonseca Array**	**18.94**	**278**	P		**P**	**05 43 46.3**	**+0.2**
	baz=91,slow=9.2,SNR=2.1							
	comp=E,0.3nm,0.8s							
HFS	**Hagfors**	**20.86**	**350**	P		**P**	**05 44 04.3**	**-2.5**
	comp=E,2.7nm,0.9s,baz=161,slow=9.2,SNR=1.8							
	comp=E,2.7nm,0.9s							
FINES	**FINESS Array B**	**21.97**	**7**	P		**P**	**05 44 17.2**	**-1.4**
	comp=E,1.7nm,0.8s,baz=169,slow=11,SNR=7.4							
	comp=E,1.7nm,0.8s							
FINES	**FINESS Array B**	**21.97**	**7**	P		**P**	**05 44 17.9**	**-0.7**
FIA1	**FINESS Array S**	**21.97**	**7**	P		**P**	**05 44 18.2**	**-0.4**
FIA1				IAmb		IAmb	05 44 28.8	
	comp=Z,13nm,1.3s							
NB2	**NORSAR Subarra**	**22.10**	**348**	P		**P**	**05 44 18.9**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=164,slow=11							
NOA	**NORSAR Array B**	**22.10**	**348**	P		**P**	**05 44 19.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=164,slow=11,SNR=2.0							
	comp=Z,0.6nm,0.7s							
TOA0	**Torodi Ar. Sit**	**31.34**	**218**	P		**P**	**05 45 45.8**	**+0.1**
TOA0				IAmb		IAmb	05 46 01.0	
	comp=Z,2.5nm,1.2s							
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P		**P**	**05 45 44.8**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=32,slow=9.4,SNR=5.9							
	comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P		**P**	**05 45 45.9**	**+0.3**
BRVK	**Borovoye**	**35.97**	**52**	P		**P**	**05 46 26.7**	**+1.2**
BRVK				IAmb		IAmb	05 46 36.8	
	comp=Z,2.0nm,0.8s							
KK31	**Karatay Array**	**37.08**	**68**	P		**P**	**05 46 35.3**	**+0.1**
KKAR	**Karatay Array**	**37.08**	**68**	P		**P**	**05 46 35.0**	**-0.2**
CHGR	**Chuyangaron**	**37.23**	**76**	P		**P**	**05 46 35.5**	**-1.1**
GAR	**Garm**	**37.99**	**75**	P		**P**	**05 46 43.3**	**+0.2**
DBIC	**Dimbokro**	**40.14**	**222**	P		**P**	**05 47 00.4**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=299,slow=7.2,SNR=4.1							
	comp=Z,2.6nm,0.6s							
MBAR	**Mbarara**	**41.21**	**165**	P		**P**	**05 47 09.6**	**-0.5**
MBAR				IAmb		IAmb	05 47 17.6	
	comp=Z,6.3nm,1.2s							
MK31	**Makanchi Array**	**44.39**	**60**	P		**P**	**05 47 35.0**	**-0.5**
MK31				IAmb		IAmb	05 47 36.1	
	comp=Z,7.2nm,1.4s							
MKAR	**Makanchi Array**	**44.39**	**60**	P		**P**	**05 47 34.6**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=282,slow=7.2,SNR=16							
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**44.39**	**60**	P		**P**	**05 47 35.3**	**-0.2**
ZALV	**Zalesovo Beam**	**44.56**	**49**	P		**P**	**05 47 34.8**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=282,slow=8.7,SNR=3.2							
	comp=Z,0.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**69.56**	**83**	P		**P**	**05 50 34.0**	**-0.3**

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*OSPL **16** 05:40:24.7±3.6, 19°.87N×73°.68W, h5km±26km, ML2.5*
*SSNC **16** 05:40:26.2±1.0, 19°.74N×73°.61W, h19km±7km, MD3.4, ML3.5, MW2.8*

ISC 16 05:40:20.9±1.2, 20°.03N±0°.06×73°.56W±0°.03, h28km±16km, n10, σ2$40/19, Haiti region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**1.47**	**266**	*e*P		**Pb**	**05 40 48.9**	**+1.4**
GTBY				*e*S		**Sb**	**05 41 05.4**	**-0.3**
GTBY				*e*Sg		**Sn**	**05 41 07.7**	**+4.0**
GTBY				IAML			05 41 08.7	
	7μm,0.2s							
GTBY				IAML			05 41 10.3	
	comp=Z,6μm,0.3s							
GTBY	**Guantanamo Bay**	**1.47**	**266**	*i* P		**Pb**	**05 40 49.1**	**+1.6**
GTBY				*e*S		**Sb**	**05 41 05.9**	**+0.2**
GTBY				IAML			05 41 11.0	
	comp=Z,26nm,0.2s							
PAPH	**Port-au-Prince**	**1.91**	**141**	*i* P		**Pb**	**05 40 54.6**	**-0.5**
PAPH				IAML			05 41 25.1	
	comp=Z,40nm,0.3s							
SDDR	**Presa de Saban**	**2.38**	**116**	*i* P		**Pb**	**05 41 02.2**	**-0.9**
SDDR				*e*S		**Sb**	**05 41 29.6**	**-2.5**
SDDR				IAML			05 41 31.8	
	comp=Z,47nm,0.3s							
GRTK	**Grand Turk**	**2.71**	**57**	*i* P		**Pb**	**05 41 09.2**	**+0.5**
GRTK				*e*S		**Sb**	**05 41 41.8**	**+0.4**
SC01	**Santiago de lo**	**2.73**	**102**	*i* P		Pb	05 41 09.8	+0.7
SC01				*e*S		**Sb**	**05 41 43.7**	**+1.6**
LMGC	**Las Mercedes**	**3.24**	**271**	*e*P		**Pb**	**05 41 13.9**	**-3.8**
LMGC				*e*S		**Sn**	**05 41 49.4**	**+1.8**
LMGC				IAML			05 41 55.6	
	comp=E,16nm,0.1s							
LMGC				IAML			05 41 59.1	
	comp=N,24nm,0.1s							
CCCC	**Cccc**	**4.11**	**287**	*e*P		**Pn**	**05 41 21.9**	**0.0**
CCCC				*e*S		**Sn**	**05 42 04.5**	**-4.6**
CCCC				IAML			05 42 10.7	
	comp=N,3.0nm,0.2s							
CCCC				IAML			05 42 10.7	
	comp=E,2.7nm,0.2s							
MTDJ	**Mount Denham**	**4.17**	**245**	*e*P		**Pn**	**05 41 25.1**	**+2.3**
MTDJ				*e*S		**Sn**	**05 42 08.2**	**-2.4**
MTDJ				IAML			05 42 17.0	
	comp=E,908nm,0.4s							
MTDJ				IAML			05 42 17.7	
	comp=E,961nm,0.9s							
MGV	**Manicaragua**	**6.34**	**290**	*e*P		**Pn**	**05 41 53.9**	**+1.3**
MGV				*e*S		**Sn**	**05 43 02.0**	**-2.1**

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*NEIC **16** 05:52:52.1±1.4, 8°.87S±0°.08×74°.75W±0°.08, h136km±4km, mb4.5/49, Error ellipse: s-maj=12.7km s-min=10.2km az=136.0*
*IDC **16** 05:52:55.4±4.2, 8°.84S×74°.56W, h169km±41km, mb3.3/4, mbtmp3.7/6, MS3.1/2, Error ellipse: s-maj=36.5km s-min=23.7km az=63.0*

ISC 16 05:52:52.8±0.5, 8°.85S±0°.07×74°.8W±0°.1, h150km, n67, σ1$22/67, mb4.5/28, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.70**	**213**	Pn		**Pn**	**05 53 47.5**	**-1.8**
BOSC	**San Juan Bosco**	**6.75**	**327**			**Pn**	**05 54 25.9**	**-3.8**
ARNL	**Arenillas**	**7.42**	**315**	Pn		**Pn**	**05 54 37.5**	**-1.1**
COHC	**Cochancay**	**7.74**	**325**	Pn		**Pn**	**05 54 42.1**	**-0.6**
SLOR	**San Lorenzo -**	**8.87**	**335**	Pn		**Pn**	**05 54 57.9**	**-0.4**
LPAZ	**La Paz**	**9.85**	**139**	P		**Pn**	**05 55 11.2**	**-0.2**
	0.4nm,0.3s,baz=310,slow=7.9,SNR=3.0							
LPAZ	**La Paz**	**9.85**	**139**	Pn		**Pn**	**05 55 09.5**	**-1.9**
SIV	**San Ignacio**	**15.17**	**119**	P		**Pn**	**05 56 19.5**	**+0.1**
	1.8nm,0.6s,baz=296,slow=12,SNR=13							
SDV	**Santo Domingo**	**18.11**	**13**			**P**	**05 56 53.3**	**-0.2**
SDV				IAmb		IAmb	05 56 55.5	
	comp=Z,10nm,0.5s							
BCIP	**Isla Barro Col**	**18.59**	**344**	P		**P**	**05 56 58.9**	**+0.3**
BAUV	**El Baul**	**18.92**	**21**	P		**P**	**05 57 01.9**	**-0.2**
SRBA	**San Rafael, Bu**	**19.88**	**334**	P		**P**	**05 57 13.3**	**+0.6**
PCRV	**Puerto La Cruz**	**21.44**	**28**	P		**P**	**05 57 29.7**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=207,slow=4.5,SNR=1.7							
	comp=Z,4.1nm,0.6s							
GRGR	**Grenville**	**24.61**	**32**	P		**P**	**05 57 58.2**	**-1.1**
CELP	**Cerrillos**	**27.96**	**17**	P		**P**	**05 58 29.4**	**0.0**
CELP				IAmb		IAmb	05 58 54.8	
	comp=Z,17nm,1.2s							
SJG	**San Juan**	**28.12**	**18**	P		**P**	**05 58 30.2**	**-0.6**
PLCA	**Paso Flores**	**31.97**	**174**	LR		LR	06 10 45.2	
	comp=Z,30nm,20.3s,baz=58,slow=34							
LRAL	**Lakeview Retre**	**43.24**	**345**	P		**P**	**06 00 39.5**	**+0.3**
X58A	**Rowland**	**43.38**	**355**	P		**P**	**06 00 42.1**	**+1.7**
X58A				IAmb		IAmb	06 00 46.9	
	comp=Z,10.0nm,0.9s							
Y49A	**Blount Mountai**	**43.88**	**346**	P		**P**	**06 00 43.7**	**-0.8**
Y49A				IAmb		IAmb	06 00 44.0	
	comp=Z,22nm,1.4s							
W57A	**Gilead**	**44.04**	**354**	P		**P**	**06 00 46.4**	**+0.8**
W57A				IAmb		IAmb	06 00 54.5	
	comp=Z,11nm,1.1s							
KMSC	**Kings Mountain**	**44.19**	**352**	P		**P**	**06 00 47.4**	**+0.6**
KMSC				IAmb		IAmb	06 01 03.8	
	comp=Z,12nm,1.3s							
V58A	**Windy Hill, Pi**	**44.59**	**355**	P		**P**	**06 00 50.4**	**+0.4**
W50A	**Signal Mountai**	**44.92**	**348**	P		**P**	**06 00 52.8**	**0.0**
W50A				IAmb		IAmb	06 00 53.0	
	comp=Z,18nm,1.4s							
SWET	**Sewanee**	**45.07**	**347**	P		**P**	**06 00 53.5**	**-0.4**

WRA	**Warramunga Arr**	**139.48**	**225**	PKP	**PKPdf**	**06 12 04.3**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=124,slow=2.1,SNR=4.6						
BJI	**Beijing**	**147.43**	**344**	PKPbc	**PKPdf**	**06 12 17.1**	**+0.5**
BJI				pPKP	**pPKPdf**	**06 12 50.6**	**-6.0**
PZH	**PanZhiHua**	**162.14**	**10**	PKP	**PKPdf**	**06 12 37.8**	**+0.5**

IDC ***16*** *05:55:03.3±0.6, 39°.80N×20°.71E, h0km, mb4.0/18, mbtmp4.0/29, ML3.9/10, MS3.2/24, Error ellipse: s-maj=11.6km s-min=11.0km az=58.0*
TIR ***16*** *05:55:05.6, 39°.70N×20°.82E, h22km, Md4.2*
BEO ***16*** *05:55:06.4±0.8, 39°.62N×20°.60E, h17km±5km, ML4.0/6*
ATH ***16*** *05:55:06.6, 39°.77N×20°.68E, h22km±1km, ML4.0/11, Error ellipse: s-maj=1.2km s-min=0.7km az=304.0*
NEIC ***16*** *05:55:06.4±1.5, 39°.82N±0°.03×20°.65E±0°.06, h10km±1km, mb4.3/21, ML4.0(ATH), ML4.2(TIR), Error ellipse: s-maj=7.6km s-min=4.5km az=105.0*
MED_RC ***16*** *05:55:07.0±0.5, 39°.80N×20°.66E, h32km±1km, MW4.2/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.80±.42; $M_{\theta\theta}$-1.03±.30; $M_{\phi\phi}$-0.77±.28; $M_{r\theta}$0.27±.19; $M_{\theta\phi}$1.69±.18; $M_{r\phi}$0.67±.14; Best double couple: $M_0$2.38000×10^{15} NP1:ϕ_s336.00000°, δ54.00000°, λ123.00000°. NP2: ϕ_s108.00000°, δ48.00000°, λ53.00000°. Principal axes: T 2.1500, Plg63.0000°, Azm307.0000°; N 0.4600, Plg26.0000°, Azm135.0000°; P -2.6100, Plg3.0000°, Azm43.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
PDG ***16*** *05:55:07.2±0.6, 39°.77N×20°.61E, h23km±1km, ML3.9/12 Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
THE ***16*** *05:55:07.2, 39°.77N×20°.69E, h14km, ML4.1/9, Error ellipse: s-maj=0.8km s-min=0.3km az=324.0*
LDG ***16*** *05:55:08.2±0.5, 39°.87N×20°.66E, h15km, Ml3.8/15, Error ellipse: s-maj=14.8km s-min=10.0km az=10.0*
ISC 16 05:55:06.7±0.8**, 39°.76N**±0°.01×**20°.70E**±0°.02**, h20**km±3km**, n345**, σ1**§47**/396**, mb4.2**/26**, MS3.3**/15**, 34C-10D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**130**	P	**Pg**	**05 55 10.8**	**-0.4**
JAN				S	**Sg**	**05 55 14.4**	**+0.1**
	116μm,0.4s						
JAN	**Janina**	**0.15**	**130**	P	**Pg**	**05 55 10.8**	**-0.4**
JAN				S	**Sg**	**05 55 15.6**	**+1.3**
JAN				AML	AML	05 55 17.3	
JAN				AML	AML	05 55 20.0	
IGT	**Igoumenitsa**	**0.36**	**232**	P	**Pb**	**05 55 14.5**	**0.0**
IGT				S	**Sb**	**05 55 20.3**	**+0.6**
	38μm,0.3s						
IGT	**Igoumenitsa**	**0.36**	**232**	P	**Pb**	**05 55 14.4**	**0.0**
	baz=246						
IGT				S	**Sb**	**05 55 21.2**	**+1.5**
	baz=246						
IGT	**Igoumenitsa**	**0.36**	**232**	P	**Pb**	**05 55 14.5**	**0.0**
IGT				S	**Sb**	**05 55 20.6**	**+0.9**
IGT				AML	AML	05 55 23.4	
	comp=E,78520μm,0.3s						
IGT				AML	AML	05 55 24.2	
	comp=N,84480μm,0.3s						
LSK	**Leskovik**	**0.40**	**349**	P	**Pg**	**05 55 15.1**	**0.0**
LSK				S	**Sg**	**05 55 20.7**	**-0.2**
	comp=N,52μm,0.5s						
LSK	**Leskovik**	**0.40**	**349**	P	**Pg**	**05 55 15.2**	**0.0**
	baz=340						
LSK				S	**Sb**	**05 55 22.3**	**+1.3**
	baz=340						
KPRO	**Kipourio**	**0.55**	**68**	P	**Pg**	**05 55 17.9**	**+0.1**
KPRO				S	**Sg**	**05 55 26.0**	**+0.7**
	comp=N,53μm,0.5s						
SRN	**Sarande**	**0.55**	**283**	P	**Pg**	**05 55 17.7**	**-0.1**
SRN				S	**Sg**	**05 55 26.0**	**+0.7**
SRN	**Sarande**	**0.55**	**283**	P	**Pg**	**05 55 17.7**	**-0.1**
	baz=287						
SRN				S	**Sn**	**05 55 26.7**	**-1.4**
	baz=287						
PENT	**Pentalofos**	**0.56**	**37**	P	**Pg**	**05 55 17.9**	**-0.1**
PENT				S	**Sg**	**05 55 25.9**	**+0.4**
	comp=N,5μm,0.5s						
PENT	**Pentalofos**	**0.56**	**37**	P	**Pg**	**05 55 17.8**	**-0.1**
PENT				S	**Sg**	**05 55 26.4**	**+0.9**
PENT				AML	AML	05 55 33.7	
	comp=E,15596μm,0.5s						
PENT				AML	AML	05 55 36.3	
	comp=N,5520μm,0.6s						
KASA	**Kassiopi**	**0.59**	**269**	P	**Pb**	**05 55 18.2**	**-0.1**
KASA				S	**Sg**	**05 55 26.7**	**+0.3**
KASA				AML	AML	05 55 28.3	
	comp=E,48835μm,0.3s						
KASA				AML	AML	05 55 29.5	
	comp=N,44495μm,0.3s						
KEK	**Kerkira**	**0.70**	**267**		**Pb**	**05 55 20.0**	**-0.2**
KEK	**Kerkira**	**0.70**	**267**	P	**Pb**	**05 55 19.9**	**-0.2**
KEK				S	**Sg**	**05 55 30.2**	**+0.4**
	comp=N,13μm,0.3s						
KEK	**Kerkira**	**0.70**	**267**	P	**Pb**	**05 55 19.8**	**-0.3**
KEK				S	**Sg**	**05 55 30.2**	**+0.4**
KEK				AML	AML	05 55 31.7	
	comp=E,27282μm,0.2s						
KEK				AML	AML	05 55 33.2	
	comp=N,24796μm,0.4s						
NEST	**Nestorio**	**0.71**	**22**	P	**Pg**	**05 55 20.7**	**-0.1**
NEST				S	**Sg**	**05 55 30.8**	**+0.5**
	comp=N,7μm,0.4s						
NEST	**Nestorio**	**0.71**	**22**	P	**Pb**	**05 55 20.5**	**0.0**
NEST				S	**Sg**	**05 55 30.9**	**+0.6**
NEST				AML	AML	05 55 35.2	
	comp=N,14327μm,0.3s						
NEST				AML	AML	05 55 36.0	
	comp=E,18997μm,0.4s						
KBN	**Korca**	**0.87**	**4**		**Pb**	**05 55 21.6**	**-1.7**
KBN	**Korca**	**0.87**	**4**	P	**Pb**	**05 55 23.2**	**0.0**
KBN	**Korca**	**0.87**	**4**	P	**Pb**	**05 55 22.9**	**-0.3**
	baz=359						
KBN				S	**Sn**	**05 55 37.8**	**+1.7**
	baz=359						
TSLK	**Tsoukalades, L**	**0.93**	**182**	P	**Pg**	**05 55 24.8**	**0.0**
TSLK				S	**Sn**	**05 55 38.6**	**+1.2**
	comp=E,14μm,0.5s						
TSLK	**Tsoukalades, L**	**0.93**	**182**	P	**Pg**	**05 55 24.8**	**0.0**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pg**	**05 55 25.8**	**+0.3**
LKD2	**Lefkada island**	**0.96**	**182**	P	**Pn**	**05 55 25.3**	**+0.1**
LKD2				AML	AML	05 55 44.5	
	comp=N,21475μm,0.4s						
LKD2				AML	AML	05 55 44.7	
	comp=E,18766μm,0.3s						
KZN	**Kozani**	**0.99**	**56**	P	**Pn**	**05 55 25.7**	**+0.2**
KZN				S	**Sg**	**05 55 39.5**	**+0.4**
	comp=E,9μm,0.6s						
KZN	**Kozani**	**0.99**	**56**	P	**Pn**	**05 55 25.8**	**+0.2**
KZN				S	**Sg**	**05 55 39.8**	**+0.7**
KZN				AML	AML	05 55 43.7	
	comp=E,22984μm,0.5s						
KZN				AML	AML	05 55 45.3	
	comp=N,12016μm,0.8s						
THL	**Klokotos Trika**	**1.03**	**100**	P	**Pn**	**05 55 26.1**	**+0.1**
THL	**Klokotos Trika**	**1.03**	**100**	P	**Pn**	**05 55 26.2**	**+0.1**
THL				S	**Sg**	**05 55 41.6**	**+1.2**
THL				AML	AML	05 55 42.7	
	comp=N,6596μm,0.9s						
THL				AML	AML	05 55 46.3	
	comp=E,9328μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.04**	**180**	P	**Pg**	**05 55 26.8**	**-0.1**
DRAG	**Dragano-Lefkad**	**1.07**	**185**	P	**Pn**	**05 55 26.9**	**+0.2**
EVGI	**Lefkada island**	**1.13**	**182**	P	**Pg**	**05 55 28.4**	**-0.3**
EVGI	**Lefkada island**	**1.13**	**182**	P	**Pb**	**05 55 28.0**	**+0.4**
EVGI				S	**Sg**	**05 55 44.8**	**+1.3**
VLO	**Vlora**	**1.17**	**308**		**Pn**	**05 55 26.9**	**-1.0**
VLO	**Vlora**	**1.17**	**308**	P	**Pg**	**05 55 30.3**	**+0.9**
	baz=308						
VLO				S	**Sg**	**05 55 48.1**	**+3.4**
	baz=308						
EVR	**Evrytania**	**1.20**	**134**	P	**Pg**	**05 55 29.5**	**-0.5**
FSK	**Fiskardo**	**1.30**	**185**	P	**Pg**	**05 55 31.9**	**+0.1**
FSK				AML	AML	05 55 53.4	
	comp=E,14084μm,0.4s						
FSK				AML	AML	05 55 56.5	
	comp=N,7081μm,0.4s						
PVO	**Paravola**	**1.30**	**150**	P	**Pg**	**05 55 32.4**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.33**	**123**	P	**Pg**	**05 55 32.2**	**-0.3**
OHR	**Ohrid**	**1.36**	**3**	*e*Pg	**Pg**	**05 55 33.0**	**0.0**
OHR				*e*Sg	**Sg**	**05 55 54.2**	**+3.5**
OHR	**Ohrid**	**1.36**	**3**	*i* Pn	**Pg**	**05 55 32.4**	**-0.6**
LIT	**Litokhoron**	**1.42**	**75**		**Pb**	**05 55 33.0**	**+0.5**
LIT	**Litokhoron**	**1.42**	**75**	P	**Pb**	**05 55 33.1**	**+0.5**
KEF4	**Livadi, Kephal**	**1.51**	**188**	P	**Pb**	**05 55 33.8**	**-0.2**
VLS	**Valsamata**	**1.58**	**183**	P	**Pb**	**05 55 34.9**	**-0.3**
VLS				AML	AML	05 56 00.4	
	comp=E,12046μm,0.3s						
VLS				AML	AML	05 56 02.4	
	comp=N,10515μm,0.5s						
EFP	**Efpalio**	**1.62**	**144**	P	**Pg**	**05 55 37.6**	**-0.4**
PSDA	**Pessada-Kefalo**	**1.64**	**183**	P	**Pb**	**05 55 36.1**	**-0.2**
SERG	**Sergoula**	**1.71**	**141**	P	**Pg**	**05 55 38.5**	**-1.0**
TIR	**Tirane**	**1.71**	**338**		**Pn**	**05 55 36.4**	**+0.9**
TIR	**Tirane**	**1.71**	**338**	*e*Pn	**Pb**	**05 55 37.8**	**+0.3**
TIR				*e*Sn	**Sg**	**05 56 00.6**	**-1.4**
TIR	**Tirane**	**1.71**	**338**	P	**Pb**	**05 55 38.2**	**+0.7**
	baz=337						
TIR				S	**Sg**	**05 56 04.1**	**+2.1**
	baz=337						
SCTE	**Santa Cesarea**	**1.75**	**281**		**Pn**	**05 55 36.6**	**+0.8**
SCTE	**Santa Cesarea**	**1.75**	**281**	P	**Pn**	**05 55 36.6**	**+0.8**
GRG	**Griva**	**1.77**	**47**	P	**Pb**	**05 55 37.8**	**-0.7**
RLS	**Riolos of Patr**	**1.80**	**160**	P	**Pb**	**05 55 39.4**	**+0.4**
LAKA	**Lakka**	**1.81**	**146**	P	**Pb**	**05 55 39.5**	**+0.3**
AXAR	**Agios Charalam**	**1.81**	**122**	P	**Pb**	**05 55 39.9**	**+0.7**
DLFA	**Delphi**	**1.89**	**132**	P	**Pb**	**05 55 41.2**	**+0.6**
PHP	**Peshkopia**	**1.94**	**354**	P	**Pb**	**05 55 42.5**	**+1.1**
	baz=352						
PHP				S	**Sg**	**05 56 08.1**	**-1.1**
	baz=352						
THE	**Thessaloniki**	**1.94**	**62**	P	**Pn**	**05 55 39.9**	**+1.3**
DRO	**Drossia**	**1.96**	**156**	P	**Pb**	**05 55 42.1**	**+0.3**
XOR	**Xorichti**	**1.96**	**101**	P	**Pb**	**05 55 40.8**	**-1.1**
NEO	**Neokhori**	**2.00**	**102**	P	**Pb**	**05 55 41.2**	**-1.3**
HORT	**Hortiatis**	**2.02**	**65**	P	**Pb**	**05 55 41.4**	**-1.4**
KLV	**Kalavryta, Ach**	**2.05**	**146**	P	**Pb**	**05 55 42.9**	**-0.4**
LKR	**Lokris**	**2.10**	**121**	P	**Pb**	**05 55 42.9**	**-1.2**
VAY	**Valandovo**	**2.12**	**42**	*e*Pn	**Pb**	**05 55 42.7**	**-1.7**
VAY				*e*Sn	**Sb**	**05 56 11.6**	**+1.4**
VAY	**Valandovo**	**2.12**	**42**	*i* Pn	**Pb**	**05 55 42.6**	**-1.7**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pn**	**05 55 43.2**	**+1.2**
STIP	**Stip**	**2.24**	**30**	*i* Pn	**Pb**	**05 55 46.6**	**+0.1**
SKO	**Skopje**	**2.29**	**14**	*e*Pn	**Pb**	**05 55 46.3**	**-1.0**
SKO				*e*Sn	**Sb**	**05 56 15.0**	**-0.1**
SKO	**Skopje**	**2.29**	**14**	*i* Pn	**Pb**	**05 55 46.5**	**-0.8**
SOH	**Sokhos**	**2.29**	**61**	P	**Pb**	**05 55 45.7**	**-1.7**
THAL	**Thalero**	**2.30**	**138**	P	**Pb**	**05 55 46.1**	**-1.4**
ULC	**Ulcinj**	**2.47**	**334**	⇓*i*Pn	**Pn**	**05 55 46.6**	**+0.8**
ULC				*i* Sn	**Sn**	**05 56 16.6**	**+1.2**
LOUT	**Loutraki**	**2.50**	**134**	P	**Pb**	**05 55 48.8**	**-2.2**
ALNA	**Alonissos**	**2.53**	**103**	P	**Pb**	**05 55 49.6**	**-1.8**
VIL2	**Platees**	**2.53**	**127**	P	**Pb**	**05 55 50.3**	**-1.0**
OUR	**Ouranopolis**	**2.58**	**76**	P	**Pn**	**05 55 49.0**	**+1.6**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**05 55 49.0**	**+1.4**
SRS				*e*Sn	**Sb**	**05 56 22.0**	**-2.0**
SRS	**Serrai**	**2.59**	**57**	P	**Pn**	**05 55 49.0**	**+1.4**
BCI	**Bajram Curri**	**2.65**	**350**	P	**Pb**	**05 55 52.1**	**-1.4**
	baz=349						
BCI				S	**Sb**	**05 56 25.5**	**-0.2**
	baz=349						
DRME	**Dracevica, Mon**	**2.69**	**335**	⇑*i*Pn	**Pn**	**05 55 50.3**	**+1.5**
DRME	**Dracevica, Mon**	**2.69**	**335**	*e*Pn	**Pn**	**05 55 49.7**	**+0.9**
DRME				*i* Sn	**Sn**	**05 56 21.9**	**+1.1**
KOKK	**Kokkinochori,**	**2.74**	**66**	P	**Pn**	**05 55 51.4**	**+1.9**
ITM	**Ithomi**	**2.75**	**159**		**Pn**	**05 55 52.2**	**+2.5**
KKB	**Krupnik**	**2.78**	**40**	P	**Pn**	**05 55 52.4**	**+2.3**
KYMI	**Kymi, Euboea I**	**2.87**	**112**	P	**Pb**	**05 55 54.7**	**-2.5**
BUM	**Brajici-Budva**	**2.89**	**332**	*e*Pn	**Pn**	**05 55 52.4**	**+0.8**
BUM				*i* Sn	**Sn**	**05 56 26.8**	**+1.0**
PDG	**Podgorica**	**2.89**	**338**	⇑P	**Pn**	**05 55 53.0**	**+1.4**
PDG	**Podgorica**	**2.89**	**338**	Pn	**Pn**	**05 55 52.4**	**+0.9**
TTG	**Podgorica**	**2.89**	**338**	*e*Pn	**Pn**	**05 55 52.5**	**+0.9**
TTG				*i* Sn	**Sn**	**05 56 26.9**	**+1.2**
PVY	**Plav**	**2.89**	**349**	*e*Pn	**Pn**	**05 55 52.7**	**+0.9**
PVY				*i* Sn	**Sn**	**05 56 27.3**	**+1.3**
MMB	**Musomiste**	**2.94**	**51**	P	**Pn**	**05 55 54.5**	**+2.1**
ATH	**Athens Observa**	**2.95**	**126**	P	**Pn**	**05 55 55.4**	**+2.9**
ATHU	**Athens Univers**	**3.00**	**126**	P	**Pn**	**05 55 55.1**	**+2.0**
DION	**Dionisos Attik**	**3.03**	**123**	P	**Pn**	**05 55 56.5**	**+3.0**
CEME	**Cevo**	**3.10**	**335**	⇓*i*Pn	**Pn**	**05 55 55.3**	**+0.8**
CEME				*i* Sn	**Sn**	**05 56 31.8**	**+0.8**
TIP	**Timpagrande**	**3.10**	**261**	⇓P	**Pn**	**05 55 55.2**	**+0.6**
TIP				⇑S	**Sn**	**05 56 31.8**	**+0.6**
TIP	**Timpagrande**	**3.10**	**261**		**Pn**	**05 55 55.2**	**+0.6**
HCY	**Herceg Novi**	**3.16**	**329**	⇑*i*Pn	**Pn**	**05 55 55.8**	**+0.4**
HCY	**Herceg Novi**	**3.16**	**329**	*e*Pn	**Pn**	**05 55 56.2**	**+0.8**
HCY				*i* Sn	**Sn**	**05 56 33.4**	**+0.8**
KAVA	**Kavala**	**3.17**	**66**	P	**Pn**	**05 55 56.8**	**+1.4**
BARS	**Barje**	**3.17**	**15**	*e*Pn	**Pn**	**05 55 58.3**	**+2.8**
IVA	**Berane**	**3.17**	**349**	*e*Pn	**Pn**	**05 55 56.6**	**+1.0**
IVA				*i* Sn	**Sn**	**05 56 34.0**	**+1.1**
MATE	**Matera**	**3.19**	**288**	⇑P	**Pn**	**05 55 56.2**	**+0.6**
MATE				⇑S	**Sg**	**05 56 48.6**	**-0.5**
KOME	**Kolasin**	**3.22**	**344**	*e*Pn	**Pn**	**05 55 57.2**	**+1.0**
KOME				*i* Sn	**Sn**	**05 56 35.0**	**+0.9**
NKME	**Niksic**	**3.29**	**337**	⇓*i*Pn	**Pn**	**05 55 58.0**	**+0.9**
NKME				*i* Sn	**Sn**	**05 56 36.4**	**+0.8**
VTS	**Vitosha**	**3.44**	**33**	⇑P	**Pn**	**05 56 01.9**	**+2.5**
VTS	**Vitosha**	**3.44**	**33**	Pn	**Pn**	**05 56 00.8**	**+1.4**
VTS	**Vitosha**	**3.44**	**33**	P	**Pn**	**05 56 01.8**	**+2.5**
SELS	**Selova**	**3.48**	**5**	*e*Pn	**Pn**	**05 56 02.0**	**+2.3**
BRY	**Bratogost**	**3.54**	**333**	⇑*i*Pn	**Pn**	**05 56 01.8**	**+1.1**
BRY	**Bratogost**	**3.54**	**333**	⇓*i*Pn	**Pn**	**05 56 01.5**	**+0.8**
BRY				*i* Sn	**Sn**	**05 56 42.4**	**+0.4**
SJES	**Sjenica**	**3.55**	**351**	*e*Pn	**Pn**	**05 56 03.5**	**+2.8**
RZN	**Rozhen**	**3.61**	**56**	P	**Pb**	**05 56 06.2**	**-3.8**
UPM	**Unac-Piva**	**3.70**	**339**	*e*Pn	**Pn**	**05 56 03.7**	**+0.8**
UPM				*i* Sn	**Sn**	**05 56 46.5**	**+0.5**
PLE	**Pljevlja**	**3.71**	**345**	*e*Pn	**Pn**	**05 56 03.9**	**+1.0**
PLE				*i* Sn	**Sn**	**05 56 46.7**	**+0.6**
CUC	**Castrocucco**	**3.77**	**275**		**Pn**	**05 56 04.2**	**+0.5**
ZAPS	**Zavoj**	**3.80**	**22**	*e*Pn	**Pn**	**05 56 07.0**	**+2.8**
STON	**Ston**	**3.85**	**325**	*e*Pn	**Pn**	**05 56 04.0**	**-0.7**
RDO	**Rodhopi**	**3.94**	**68**		**Pn**	**05 56 07.2**	**+1.2**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn	**Pn**	**05 56 07.7**	**+1.5**
RUDO	**Rudo**	**3.99**	**346**	⇑*i*Pn	**Pn**	**05 56 07.6**	**+0.9**
CEL	**Celeste**	**4.03**	**250**		**Pn**	**05 56 07.2**	**-0.1**
KDZ	**Kurdzhali**	**4.05**	**61**	P	**Pn**	**05 56 09.5**	**+1.9**
GRUS	**Gruza**	**4.13**	**0**	*e*Pn	**Pn**	**05 56 10.9**	**+2.2**
BLKB	**Belogradchik**	**4.14**	**20**	⇓P	**Pn**	**05 56 11.9**	**+3.1**
ZAGS	**Zajecar**	**4.21**	**15**	*e*Pn	**Pn**	**05 56 11.9**	**+2.1**
BBLS	**Lazići**	**4.22**	**347**	⇑*i*Pn	**Pn**	**05 56 09.1**	**-0.9**
BBLS	**Lazići**	**4.22**	**347**	*e*Pn	**Pn**	**05 56 11.5**	**+1.5**
ALN	**Alexandroupoli**	**4.24**	**73**		**Pn**	**05 56 11.5**	**+1.3**
SGRT	**San Giovanni R**	**4.26**	**300**		**Pn**	**05 56 09.9**	**-0.7**
DIVS	**Divibare**	**4.37**	**353**	Pn	**Pn**	**05 56 13.3**	**+1.2**
DIVS	**Divibare**	**4.37**	**353**	⇑*i*Pn	**Pn**	**05 56 13.3**	**+1.2**
DIVS	**Divibare**	**4.37**	**353**	*e*Pn	**Pn**	**05 56 13.5**	**+1.4**
DIVS				*e*Sn	**Sn**	**05 57 02.5**	**0.0**
TRUS	**Trudelj**	**4.47**	**357**	*e*Pn	**Pn**	**05 56 15.1**	**+1.8**
HAPS	**Han Pijesak,Bl**	**4.52**	**344**	*e*Pn	**Pn**	**05 56 15.1**	**+1.0**
APE	**Apeiranthos**	**4.65**	**124**	⇑P	**Pn**	**05 56 19.2**	**+3.4**
KUBS	**Kucevo**	**4.71**	**9**	*e*Pn	**Pn**	**05 56 18.3**	**+1.7**
PAOL	**Paolisi**	**4.85**	**287**		**Pn**	**05 56 19.6**	**+1.0**
TEKS	**Tekeris**	**4.87**	**350**	⇑*i*Pn	**Pn**	**05 56 18.9**	**+0.1**
TEKS	**Tekeris**	**4.87**	**350**	*e*Pn	**Pn**	**05 56 19.0**	**+0.1**
SANT	**Santorini**	**5.05**	**130**	Pn	**Pn**	**05 56 24.2**	**+2.8**
SRKY	**Kupres RS**	**5.05**	**330**	⇑*i*Pn	**Pn**	**05 56 22.7**	**+1.3**
MDVR	**Moldovita**	**5.08**	**8**	⇓P	**Pn**	**05 56 22.5**	**+0.7**
BLJ	**Bijeljina**	**5.14**	**349**	*e*Pn	**Pn**	**05 56 23.1**	**+0.6**
SRE	**Strehaia**	**5.25**	**20**	⇑P	**Pn**	**05 56 26.4**	**+2.4**
HERR	**Herculane**	**5.28**	**13**	⇓P	**Pn**	**05 56 27.0**	**+2.5**
MGRS	**Mrkonjic Grad**	**5.38**	**331**	⇑*i*Pn	**Pn**	**05 56 26.5**	**+0.7**
VAE	**Valguarnera**	**5.42**	**247**	Pn	**Pn**	**05 56 25.8**	**-0.7**
	comp=N,5.6nm,0.4s,baz=41,slow=21,SNR=3.2						
VAE				Sn	**Sn**	**05 57 24.1**	**-4.3**
	comp=N,3.0nm,0.3s,baz=7.2,slow=19,SNR=2.9						
VAE				LR	LR	05 59 15.0	
	comp=N,66nm,18.7s,baz=51,slow=46						
FRGS	**Fruska Gora**	**5.44**	**353**	⇑P	**Pn**	**05 56 27.8**	**+1.1**
FRGS	**Fruska Gora**	**5.44**	**353**	⇑*i*Pn	**Pn**	**05 56 27.3**	**+0.6**
FRGS	**Fruska Gora**	**5.44**	**353**	*e*Pn	**Pn**	**05 56 27.7**	**+1.1**
IDI	**Anoyia**	**5.56**	**142**	⇑P	**Pn**	**05 56 26.9**	**-1.5**
IDI				⇑S	**Sn**	**05 57 29.9**	**-1.9**
IDI	**Anoyia**	**5.56**	**142**	Pn	**Pn**	**05 56 28.3**	**-0.2**
	comp=N,2.8nm,0.3s,baz=312,slow=18,SNR=7.7						
IDI				Sn	**Sn**	**05 57 29.7**	**-2.2**
	comp=N,4.0nm,0.3s,baz=321,slow=22,SNR=2.3						
	comp=N,4.6nm,0.3s						
IDI	**Anoyia**	**5.56**	**142**	Pn	**Pn**	**05 56 29.9**	**+1.5**
RAFF	**Raffo Rosso**	**5.58**	**245**	Pn	**Pn**	**05 56 27.2**	**-1.4**
INTR	**Introdacqua**	**5.62**	**296**		**Pn**	**05 56 30.5**	**+1.2**
BLY	**Banja Luka**	**5.63**	**334**	⇑*i*Pn	**Pn**	**05 56 29.8**	**+0.5**
GZR	**Gura Zlata**	**5.84**	**15**	⇑P	**Pn**	**05 56 34.6**	**+2.4**
GZR				⇑S	**Sn**	**05 57 35.6**	**-2.9**
A052A	**Srbac**	**5.84**	**337**	*e*Pn	**Pn**	**05 56 32.0**	**-0.1**
BZS	**Buzias**	**5.90**	**6**	⇑P	**Pn**	**05 56 34.5**	**+1.6**
A051A	**Mrakovica**	**5.96**	**333**	⇑*i*Pn	**Pn**	**05 56 34.1**	**+0.3**
AQU	**L'Aquila**	**6.10**	**298**		**Pn**	**05 56 35.4**	**-0.4**
CAMP	**Campotosto**	**6.16**	**299**		**Pn**	**05 56 37.4**	**+0.6**
WDD	**Wied Dalam**	**6.26**	**233**	Pn	**Pn**	**05 56 37.3**	**-0.6**
NRCA	**Norcia**	**6.49**	**301**		**Pn**	**05 56 41.5**	**+0.4**
SIRR	**Siria**	**6.55**	**6**	⇑P	**Pn**	**05 56 43.8**	**+1.9**
KOVH	**Kovagotottos**	**6.61**	**344**	P	**Pn**	**05 56 43.6**	**+0.9**
KARP	**Karpathos**	**6.63**	**127**	Pn	**Pn**	**05 56 45.0**	**+2.0**
MORH	**Mrgy, Hungar**	**6.63**	**348**	⇑P	**Pn**	**05 56 43.2**	**+0.3**
MORH	**Mrgy, Hungar**	**6.63**	**348**	P	**Pn**	**05 56 43.5**	**+0.5**
CESX	**Cesi**	**6.76**	**298**		**Pn**	**05 56 46.4**	**+1.6**
MLR	**Muntele Rosu**	**6.91**	**32**	LR	LR	06 00 20.7	
	comp=N,378nm,18.7s,baz=203,slow=46						
BOJS	**Bojanci**	**7.01**	**327**	⇑*i*Pn	**Pn**	**05 56 48.3**	**+0.1**
BOJS	**Bojanci**	**7.01**	**327**	⇑*e*Pn	**Pn**	**05 56 48.1**	**0.0**
BOJS				*e*Sn	**Sn**	**05 58 03.5**	**-3.8**
BOJS				IAML		05 59 33.5	
	comp=Z,47nm,0.9s						
MURB	**Monte Urbino**	**7.07**	**302**		**Pn**	**05 56 50.5**	**+1.5**
DRGR		**7.18**	**11**	⇑P	**Pn**	**05 56 54.2**	**+3.5**
CRES	**Cresnjev**	**7.19**	**329**	⇑*i*Pn	**Pn**	**05 56 49.4**	**-1.3**
CRES	**Cresnjev**	**7.19**	**329**	*i* Pn	**Pn**	**05 56 50.5**	**-0.1**
LATE	**Laterza**	**7.29**	**296**		**Pn**	**05 56 53.4**	**+1.3**
BEHE	**Becsehely**	**7.30**	**338**	P	**Pn**	**05 56 54.0**	**+1.8**
BORA	**Eskisehir**	**7.51**	**86**		**Pn**	**05 56 55.7**	**+0.5**
CEY	**Cerknica**	**7.55**	**324**	⇑*i*Pn	**Pn**	**05 56 55.6**	**-0.1**
SKDS	**Skadanscina**	**7.60**	**322**	⇑*i*Pn	**Pn**	**05 56 54.5**	**-1.8**
CASP	**Castiglione de**	**8.00**	**295**		**Pn**	**05 57 01.1**	**-0.7**
OSSC	**Osservatorio P**	**8.02**	**301**		**Pn**	**05 57 00.2**	**-1.8**
SOKA	**Soboth**	**8.06**	**331**	*e*Pn	**Pn**	**05 57 02.6**	**-0.1**
	comp=Z,11nm,0.4s,SNR=32						
SOKA				*e*Sn	**Sn**	**05 58 29.0**	**-4.2**
	comp=Z,2.8nm,0.5s						
OBKA	**Obir**	**8.11**	**328**	⇑*i*Pn	**Pn**	**05 57 03.8**	**+0.4**
OBKA	**Obir**	**8.11**	**328**	*e*Pn	**Pn**	**05 57 03.6**	**+0.3**
	comp=Z,5.9nm,0.3s,SNR=22						
OBKA				*e*Sn	**Sn**	**05 58 33.6**	**-0.9**
	comp=Z,11nm,0.4s						
PSZ	**Piszkesteto**	**8.18**	**356**	⇓P	**Pn**	**05 57 06.2**	**+1.9**
PSZ	**Piszkesteto**	**8.18**	**356**	Pn	**Pn**	**05 57 03.6**	**-0.7**
PSZ	**Piszkesteto**	**8.

comp=Z,109nm,19.5s,baz=218,slow=42
comp=Z,0.7nm,0.6s
CABF La Chapelle 12.67 308 *e*Pn **Pn 05 58 04.1 -1.6**
CABF *e*Sn Sn 06 00 07.6 -19
comp=Z,0.4nm,0.2s
HINF Hinteralfeld 12.83 313 *e*Pn **Pn 05 58 05.6 -2.4**
HINF *e*Sn Sn 06 00 15.4 -15
comp=Z,4.1nm,0.3s
VIVF Saint-Julien-l 12.91 298 *e*Pn **Pn 05 58 08.7 -0.3**
CDF Champ du Feu 12.95 316 *e*Pn **Pn 05 58 08.8 -0.8**
HAU Haudompre 13.22 313 *e*Pn **Pn 05 58 12.0 -1.2**
HAU *e*Sn Sn 06 00 23.8 -16
comp=Z,6.4nm,0.4s
MMAI Mount Meron Ar 13.61 115 Pn **Pn 05 58 19.0 +0.3**
comp=Z,1.1nm,0.3s,baz=304,slow=16,SNR=2.0
MMAI LR LR 06 04 41.2
comp=Z,78nm,18.5s,baz=146,slow=42
comp=Z,0.9nm,0.4s
SFTF Sexfontaines 14.07 312 *e*Pn **Pn 05 58 22.2 -2.6**
baz=132
SMF Signal de Mont 14.08 305 *e*Pn **Pn 05 58 22.2 -2.8**
MEZF Maizieres J'vi 14.22 313 *e*Pn **Pn 05 58 25.5 -1.3**
SAVF Savonnieres en 14.24 314 *e*Pn **Pn 05 58 25.7 -1.4**
LOR Lormes 14.33 307 *e*Pn **Pn 05 58 26.0 -2.3**
baz=124
LOR *e*Sn Sn 06 00 50.1 -16
comp=Z,6.0nm,0.4s
AVF Avril sur Loir 14.45 305 *e*Pn **Pn 05 58 28.0 -1.9**
AVF *e*Sn Sn 06 00 52.8 -17
comp=Z,0.4nm,0.2s
SSF Saint Saulge 14.46 306 *e*Sn Sn 06 00 51.1 -19
comp=Z,0.5nm,0.3s
BGF Bois d'Agland 14.68 303 *e*Pn **Pn 05 58 31.2 -2.0**
BGF *e*Sn Sn 06 00 59.0 -16
comp=Z,5.9nm,0.4s
TCF Toulx Ste Croi 15.00 302 *e*Pn **Pn 05 58 36.5 -1.0**
RJF Les Rejaudoux 15.18 298 *e*Pn **Pn 05 58 39.5 -0.4**
EIL Elat 15.43 126 Pn **Pn 05 58 43.6 +0.4**
comp=Z,0.5nm,0.3s,baz=355,slow=17,SNR=2.2
comp=Z,2.0nm,0.4s
BAIF Baives 15.54 317 *e*P **P 05 58 48.3 -0.5**
NACGM Naroch 15.70 13⇓*e*P **P 05 58 49.5 -1.0**
baz=198
IIGN Ignalina 16.03 11 *e*P **P 05 58 53.1 -1.1**
ISAL Salakas 16.23 11 *e*P **Pn 05 58 53.6 +0.2**
ETSF Etsaut 16.27 288 *e*Pn **P 05 58 56.3 -0.7**
VSVD Vaisvydziai 16.38 6 *e*P **Pn 05 58 54.0 -1.2**
KBZ Khabaz 17.02 69 Pn **P 05 59 06.0 +0.8**
comp=Z,0.1nm,0.3s,baz=180,slow=4.0,SNR=2.0
KBZ LR LR 06 08 22.4
comp=Z,30nm,18.2s,baz=270,slow=47
comp=Z,1.4nm,0.7s
GNI Garni 18.43 81 LR LR 06 06 39.3
comp=Z,56nm,19.6s,baz=272,slow=38
ESBB Sonseca Array 18.96 278 P **Pn 05 59 27.7 +0.2**
ESDC Sonseca Array 18.96 278 P **Pn 05 59 27.7 +0.2**
comp=Z,0.3nm,0.3s,baz=73,slow=11,SNR=21
ESDC LR LR 06 06 27.7
comp=Z,49nm,18.2s,baz=79,slow=36
comp=Z,1.0nm,0.4s
ESDC Sonseca Array 18.96 278 P **P 05 59 27.0 +0.3**
MTSE Matsula 19.08 5 *e*P **Pn 05 59 28.9 +0.3**
VSU Vasula 19.12 10 *e*P **P 05 59 28.5 +0.3**
PAB San Pablo 19.28 277 P **Pn 05 59 31.1 -0.1**
UPP Uppsala 20.22 356 *e*P **P 05 59 39.7 -0.5**
MEF Metsahovi 20.62 5 *e*P **P 05 59 44.1 -0.3**
HFS Hagfors 20.87 350 P **P 05 59 46.5 -0.7**
comp=Z,5.1nm,0.6s,baz=159,slow=9.5,SNR=26
HFS LR LR 06 09 18.6
comp=Z,31nm,20.8s,baz=146,slow=41
comp=Z,5.1nm,0.6s
KONO Kongsberg 21.11 344 *e*P **P 05 59 51.3 +1.5**
RAF Rauma 21.30 1 *e*P **P 05 59 51.1 -0.8**
MDT Midelt 21.50 259 P **P 05 59 53.9 -0.5**
comp=Z,3.3nm,0.9s,baz=76,slow=7.0,SNR=9.2
comp=Z,3.3nm,0.9s
NC602 NORSAR Array S 21.76 348 P **P 05 59 56.2 -0.6**
NC602 NORSAR Array S 21.76 348 *e*P **P 05 59 56.2 -0.6**
NC602 IAmb IAmb 06 00 05.6
comp=Z,23nm,0.9s
FINES FINESS Array B 21.97 7 P **P 05 59 58.3 -0.7**
comp=Z,3.2nm,0.5s,baz=176,slow=12,SNR=35
comp=Z,3.2nm,0.5s
FIA1 FINESS Array S 21.97 7 P **P 05 59 58.3 -0.7**
FIA1 IAmb IAmb 06 00 06.6
comp=Z,7.1nm,0.8s
NC405 NORSAR Array S 22.09 348 P **P 06 00 00.1 -0.3**
NB201 NORSAR Array S 22.10 348 P **P 05 59 59.9 -0.6**
NB2 NORSAR Subarra 22.11 348 P **P 05 59 59.7 -0.9**
comp=Z,19nm,1.0s,baz=165,slow=11
NB2 NORSAR Subarra 22.11 348 P **P 05 59 59.7 -0.9**
baz=165,slow=11
NOA NORSAR Array B 22.11 348 P **P 06 00 00.1 -0.5**
comp=Z,5.0nm,1.0s,baz=146,slow=11,SNR=19
NOA LR LR 06 09 13.3
comp=Z,31nm,18.9s,baz=165,slow=38
comp=Z,5.0nm,1.0s
NBO00 NORSAR Array S 22.17 347 P **P 06 00 01.3 +0.1**
EKA Eskdalemuir Ar 22.24 322 P **P 06 00 01.6 -0.4**
comp=Z,4.1nm,0.6s,baz=122,slow=10,SNR=15
EKA LR LR 06 10 21.4
comp=Z,60nm,18.8s,baz=158,slow=41
comp=Z,4.1nm,0.6s
NC303 NORSAR Array S 22.26 348 IAmb IAmb 06 00 15.7
comp=Z,11nm,0.8s
NC204 NORSAR Array S 22.40 347 P **P 06 00 04.2 +0.4**
DOMB Dombas 23.42 346 *e*P **P 06 00 14.4 +0.1**
NSS Namsos 25.34 351 *e*P **P 06 00 30.8 -1.1**
AKTO Aktyubinsk 28.14 55 P **P 06 00 56.4 -1.0**
comp=Z,1.0nm,0.4s,baz=269,slow=5.8,SNR=4.5
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 29.27 58 P **P 06 01 08.0 +0.6**
ARU Arti 29.80 43 P **P 06 01 11.2 -0.8**
ARA0 ARCESS Array S 29.95 3 *e*P **P 06 01 12.1 -1.1**
ARCES ARCESS Array B 29.95 3 P **P 06 01 12.0 -1.2**
comp=Z,1.7nm,0.5s,baz=188,slow=8.9,SNR=18
comp=Z,1.7nm,0.5s
ARCES ARCESS Array B 29.95 3 P **P 06 01 12.1 -1.1**
ARCES IAmb IAmb 06 01 31.4
comp=Z,5.1nm,1.1s
TOA0 Torodi Ar. Sit 31.35 218 P **P 06 01 26.8 +0.7**
TOA0 IAmb IAmb 06 01 27.3
comp=Z,4.3nm,0.7s
TORD Torodi Ar. Bea 31.35 218 P **P 06 01 26.5 +0.5**
comp=Z,4.3nm,0.7s,baz=32,slow=9.3,SNR=35
comp=Z,4.3nm,0.7s
TORD Torodi Ar. Bea 31.35 218 P **P 06 01 26.8 +0.7**
TORD IAmb IAmb 06 01 44.1
comp=Z,4.0nm,1.0s
KOWA Kowa 33.21 228 P **P 06 01 42.4 +0.1**
comp=Z,2.1nm,0.7s,baz=35,slow=8.5,SNR=7.3
comp=Z,2.1nm,0.7s
KOWA Kowa 33.21 228 P **P 06 01 42.8 +0.5**
KOWA IAmb IAmb 06 01 43.3
comp=Z,2.6nm,0.8s
JMIC Jan Mayen 34.68 344 LR LR 06 15 01.3
comp=Z,26nm,21.6s,baz=82,slow=35
BORG Borgarnes 34.81 330 LR LR 06 18 48.6
comp=Z,24nm,19.0s,baz=169,slow=41
KK31 Karatay Array 37.06 68 P **P 06 02 16.2 +0.9**
KK31 IAmb IAmb 06 02 22.8
comp=Z,2.5nm,0.7s
KKAR Karatay Array 37.06 68 P **P 06 02 16.0 +0.7**
KKAR IAmb IAmb 06 02 22.8
comp=Z,2.5nm,0.7s
KKAR Karatay Array 37.06 68 P **P 06 02 16.4 +1.1**
AAK Ala-Archa 40.01 68 LR LR 06 23 28.3
comp=Z,21nm,19.2s,baz=338,slow=43
BBTS Babate 41.04 243 LR LR 06 22 20.6
comp=Z,37nm,18.9s,baz=57,slow=40
MBAR Mbarara 41.20 165 LR LR 06 22 53.2
comp=Z,15nm,21.0s,baz=326,slow=40
MK31 Makanchi Array 44.37 60 P **P 06 03 15.9 +0.3**
MK31 IAmb IAmb 06 03 16.3
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 44.37 60 P **P 06 03 15.6 0.0**
comp=Z,4.4nm,0.5s,baz=279,slow=7.5,SNR=70
comp=Z,4.4nm,0.5s
MKAR Makanchi Array 44.37 60 P **P 06 03 16.0 +0.4**
ZAA0 Zalesovo Array 44.55 49 P **P 06 03 16.9 +0.1**
ZAA0 IAmb IAmb 06 03 29.6
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 44.55 49 P **P 06 03 16.1 -0.8**
comp=Z,1.5nm,0.3s,baz=285,slow=8.2,SNR=11
comp=Z,1.5nm,0.3s
ZALV Zalesovo Beam 44.55 49 P **P 06 03 16.8 -0.1**
WMQ Urumqi 48.89 62 *e*P **P 06 03 54.9 +3.8**

EUNU Eureka 54.00 348 P **P 06 04 29.2 +0.3**
FRB Frobisher Bay 54.90 327 LR LR 06 28 43.7
comp=Z,37nm,20.3s,baz=205,slow=37
SCHQ Schefferville 57.40 317 P **P 06 04 53.5 -0.1**
SCHQ IAmb IAmb 06 04 53.5
comp=Z,1.6nm,0.6s
TSUM Tsumeb 58.72 183 LR LR 06 32 32.8
comp=Z,29nm,19.2s,baz=163,slow=38
SONM Songino Array 59.36 51 P **P 06 05 05.9 -1.6**
comp=Z,0.6nm,0.5s,baz=273,slow=8.8,SNR=5.5
SONM LR LR 06 35 15.7
comp=Z,24nm,18.6s,baz=359,slow=41
comp=Z,0.6nm,0.5s
LZH Lanzhou 63.38 64 *e*P **P 06 05 37.1 +2.2**
LZH sP sP 06 05 44.9 +0.9
YAK Yakutsk 63.67 30 LR LR 06 36 40.8
comp=Z,39nm,19.8s,baz=269,slow=39
LBTB Lobatse 64.59 175 LR LR 06 35 00.1
comp=Z,27nm,19.8s,baz=6.5,slow=37
HHC Hu-ho-te 66.03 56 *e*P **P 06 05 52.3 +0.2**
PZH PanZhiHua 67.03 74 P **P 06 06 01.4 +2.7**
XLT XiLinHaoTe 67.18 51 *e*P **P 06 06 00.1 +0.8**
XLT pP pP 06 06 04.3 -1.7
XLT sP sP 06 06 06.3 -2.2
BOSA Boshof 68.15 176 P **P 06 06 04.7 -0.8**
comp=Z,1.8nm,0.8s,baz=16,slow=18,SNR=1.6
BOSA LR LR 06 38 00.8
comp=Z,32nm,18.8s,baz=13,slow=38
comp=Z,1.8nm,0.8s
ULM Lac du Bonnet 74.52 323 LR LR 06 38 14.4
comp=Z,33nm,21.5s,baz=210,slow=35
ILAR Eielson Array 75.36 355 P **P 06 06 48.0 -0.2**
comp=Z,0.3nm,0.5s,baz=15,slow=3.7,SNR=2.3
comp=Z,0.3nm,0.5s
KSRS Korea Array 78.22 51 P **P 06 07 04.3 -0.6**
comp=Z,1.0nm,0.5s,baz=316,slow=5.4,SNR=4.4
comp=Z,1.0nm,0.5s
MJAR Matsushiro Ar 84.79 46 P **P 06 07 39.1 -0.7**
comp=Z,0.9nm,0.6s,baz=329,slow=2.1,SNR=2.5
comp=Z,0.9nm,0.6s
PDAR Pinedale Array 86.33 326 P **P 06 07 46.7 -0.9**
comp=Z,0.2nm,0.5s,baz=71,slow=5.8,SNR=2.1
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 93.99 314 P **P 06 08 23.8 +0.2**
comp=Z,0.5nm,0.8s,baz=53,slow=4.8,SNR=5.8
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 120.45 91 PKP **PKPdf 06 13 55.1 -2.0**
comp=Z,0.3nm,0.7s,baz=302,slow=2.3,SNR=1.9
ASAR Alice Springs 122.19 95 PKP **PKPdf 06 13 59.1 -1.2**
comp=Z,0.4nm,0.6s,baz=305,slow=1.4,SNR=6.4

BUC 16 05:56:26.7±0.4, 45°48N×26°33E, h126km±3km, ml3.6/27, 57C-72D, Error ellipse: s-maj=2.4km s-min=2.0km az=150.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.27**	**273**	⇑P	Pn	05 56 44.7	+0.2
MLR				⇓S	Sn	05 56 58.6	+0.8
MLR	**Muntele Rosu**	**0.27**	**273**	⇑P	Pn	05 56 44.7	+0.2
MLR	**Muntele Rosu**	**0.27**	**273**		Pn	05 56 44.9	+0.4
MLR	**Muntele Rosu**	**0.27**	**273**	⇓S	Sn	05 56 58.6	+0.8
COVR	**Voineasa-Covas**	**0.38**	**347**	⇓P	Pn	05 56 44.9	+0.1
COVR				⇓S	Sn	05 56 58.0	-0.4
COVR	**Voineasa-Covas**	**0.38**	**347**	⇓P	Pn	05 56 44.9	+0.1
COVR	**Voineasa-Covas**	**0.38**	**347**	⇓S	Sn	05 56 58.0	-0.4
PLOR	**Plostina**	**0.44**	**31**	⇑P	Pn	05 56 45.5	+0.4
PLOR				⇓S	Sn	05 56 58.8	-0.2
PLOR	**Plostina**	**0.44**	**31**	⇑P	Pn	05 56 45.5	+0.4
PLOR	**Plostina**	**0.44**	**31**	⇓S	Sn	05 56 58.8	-0.2
SECR		**0.48**	**203**	⇑P	Pn	05 56 45.9	+0.6
SECR				⇑S	Sn	05 57 00.6	+1.4
SECR		**0.48**	**203**	⇑P	Pn	05 56 45.9	+0.6
SECR		**0.48**	**203**	⇑S	Sn	05 57 00.6	+1.4
VRI	**Vrincioaia**	**0.48**	**35**	⇑P	Pn	05 56 45.8	+0.6
VRI				⇓S	Sn	05 57 00.3	+1.1
VRI	**Vrincioaia**	**0.48**	**35**	⇑P	Pn	05 56 45.8	+0.6
VRI	**Vrincioaia**	**0.48**	**35**	⇓S	Sn	05 57 00.3	+1.1
ODBI	**Odobesti**	**0.58**	**60**	⇓S	Sn	05 57 01.2	+1.0
ODBI	**Odobesti**	**0.58**	**60**	⇓S	Sn	05 57 01.2	+1.0
PLAR	**PLOIESTI**	**0.60**	**201**	⇑P	Pn	05 56 46.5	+0.6
PLAR				⇓S	Sn	05 57 01.8	+1.4
PLAR	**PLOIESTI**	**0.60**	**201**	⇑P	Pn	05 56 46.5	+0.6
PLAR	**PLOIESTI**	**0.60**	**201**	⇓S	Sn	05 57 01.8	+1.4
PANC	**Panciu**	**0.70**	**55**	⇑P	Pn	05 56 47.4	+0.8
PANC				⇓S	Sn	05 57 02.8	+1.1
PANC	**Panciu**	**0.70**	**55**	⇑P	Pn	05 56 47.4	+0.8
PANC	**Panciu**	**0.70**	**55**	⇓S	Sn	05 57 02.8	+1.1
PGOR	**Pogoanele**	**0.73**	**141**	⇓S	Sn	05 57 03.6	+1.4
PGOR	**Pogoanele**	**0.73**	**141**	⇓S	Sn	05 57 03.6	+1.4
SULR		**0.80**	**184**	⇑P	Pn	05 56 47.6	+0.1
SULR				⇑S	Sn	05 57 04.4	+1.3
SULR		**0.80**	**184**	⇑P	Pn	05 56 47.6	+0.1
SULR		**0.80**	**184**	⇑S	Sn	05 57 04.4	+1.3
DOPR	**Dopca**	**0.82**	**307**	⇓P	Pn	05 56 47.5	-0.2
DOPR				⇓S	Sn	05 57 03.4	-0.1
DOPR	**Dopca**	**0.82**	**307**	⇓P	Pn	05 56 47.5	-0.2
DOPR	**Dopca**	**0.82**	**307**	⇓S	Sn	05 57 03.4	-0.1
VOIR		**0.90**	**268**	⇑P	Pn	05 56 48.0	-0.5
VOIR				⇓S	Sn	05 57 04.0	-0.9
VOIR		**0.90**	**268**	⇑P	Pn	05 56 48.0	-0.5
VOIR		**0.90**	**268**	⇓S	Sn	05 57 04.0	-0.9
TUDR		**0.95**	**82**	⇓S	Sn	05 57 06.1	+0.7
TUDR		**0.95**	**82**	⇓S	Sn	05 57 06.1	+0.7
GHRR		**0.95**	**52**	⇑P	Pn	05 56 49.6	+0.8
GHRR				⇓S	Sn	05 57 06.7	+1.2
GHRR		**0.95**	**52**	⇑P	Pn	05 56 49.6	+0.8
GHRR		**0.95**	**52**	⇓S	Sn	05 57 06.7	+1.2
IZVR	**Izvoarele**	**1.01**	**86**	⇓P	Pn	05 56 49.4	+0.1
IZVR				⇑S	Sn	05 57 06.2	-0.2
IZVR	**Izvoarele**	**1.01**	**86**	⇓P	Pn	05 56 49.4	+0.1
IZVR	**Izvoarele**	**1.01**	**86**	⇑S	Sn	05 57 06.2	-0.2
SLCR	**Slobozia Conac**	**1.02**	**83**	⇑S	Sn	05 57 06.4	-0.2
SLCR	**Slobozia Conac**	**1.02**	**83**	⇑S	Sn	05 57 06.4	-0.2
SCHL	**Schela**	**1.05**	**88**	⇑S	Sn	05 57 06.8	-0.4
SCHL	**Schela**	**1.05**	**88**	⇑S	Sn	05 57 06.8	-0.4
TESR	**Tescani**	**1.06**	**12**	⇑P	Pn	05 56 49.9	+0.1
TESR				⇑S	Sn	05 57 07.1	-0.3
TESR	**Tescani**	**1.06**	**12**	⇑P	Pn	05 56 49.9	+0.1
TESR	**Tescani**	**1.06**	**12**	⇑S	Sn	05 57 07.1	-0.3
LEHL	**Lehliu**	**1.06**	**161**	⇓S	Sn	05 57 08.3	+1.0
LEHL	**Lehliu**	**1.06**	**161**	⇓S	Sn	05 57 08.3	+1.0
VARL	**Varlezi**	**1.15**	**68**	⇑S	Sn	05 57 09.7	+0.8
VARL	**Varlezi**	**1.15**	**68**	⇑S	Sn	05 57 09.7	+0.8
BUC1	**Bucharest**	**1.15**	**191**	⇓P	Pn	05 56 50.8	+0.1
BUC1				⇓S	Sn	05 57 08.8	-0.1
BUC1	**Bucharest**	**1.15**	**191**	⇓P	Pn	05 56 50.8	+0.1
BUC1	**Bucharest**	**1.15**	**191**	⇓S	Sn	05 57 08.8	-0.1
SCTR	**Scanteiesti**	**1.19**	**80**	⇓P	Pn	05 56 50.4	-0.7
SCTR				⇑S	Sn	05 57 10.1	+0.6
SCTR	**Scanteiesti**	**1.19**	**80**	⇓P	Pn	05 56 50.4	-0.7
SCTR	**Scanteiesti**	**1.19**	**80**	⇑S	Sn	05 57 10.1	+0.6
ARR	**Arges**	**1.20**	**265**	⇓S	Sn	05 57 09.4	-0.5
ARR	**Arges**	**1.20**	**265**	⇓S	Sn	05 57 09.4	-0.5
BIR	**Birlad**	**1.20**	**48**	⇑P	Pn	05 56 52.0	+0.8
BIR				⇑S	Sn	05 57 09.8	-0.1
BIR	**Birlad**	**1.20**	**48**	⇑P	Pn	05 56 52.0	+0.8
BIR	**Birlad**	**1.20**	**48**	⇑S	Sn	05 57 09.8	-0.1
TATR	**Tatarca**	**1.22**	**84**	⇑P	Pn	05 56 51.8	+0.5
TATR				⇓S	Sn	05 57 11.0	+0.9
TATR	**Tatarca**	**1.22**	**84**	⇑P	Pn	05 56 51.8	+0.5
TATR	**Tatarca**	**1.22**	**84**	⇓S	Sn	05 57 11.0	+0.9
VLDR	**Vladesti**	**1.28**	**73**	⇓P	Pn	05 56 52.9	+0.9
VLDR				⇓S	Sn	05 57 12.2	+0.9
VLDR	**Vladesti**	**1.28**	**73**	⇓P	Pn	05 56 52.9	+0.9
VLDR	**Vladesti**	**1.28**	**73**	⇓S	Sn	05 57 12.2	+0.9
CFR	**Carcaliu**	**1.31**	**103**	⇓P	Pn	05 56 52.6	+0.3
CFR				⇑S	Sn	05 57 11.2	-0.6
CFR	**Carcaliu**	**1.31**	**103**	⇓P	Pn	05 56 52.6	+0.3
CFR	**Carcaliu**	**1.31**	**103**	⇑S	Sn	05 57 11.2	-0.6
GIUM	**Giurgiulesti**	**1.32**	**89**	⇓S	Sn	05 57 13.1	+1.0
GIUM	**Giurgiulesti**	**1.32**	**89**	⇓S	Sn	05 57 13.1	+1.0
BIZ	**Bicaz**	**1.47**	**354**	⇓P	Pn	05 56 55.1	+0.9
BIZ				⇓S	Sn	05 57 15.4	+0.2
BIZ	**Bicaz**	**1.47**	**354**	⇓P	Pn	05 56 55.1	+0.9
BIZ	**Bicaz**	**1.47**	**354**	⇓S	Sn	05 57 15.4	+0.2
VASR	**Vaslui**	**1.55**	**41**	⇓S	Sn	05 57 16.4	-0.2
VASR	**Vaslui**	**1.55**	**41**	⇓S	Sn	05 57 16.4	-0.2
COPA	**Copaceanca**	**1.56**	**211**	⇑S	Sn	05 57 16.2	-0.7
COPA	**Copaceanca**	**1.56**	**211**	⇑S	Sn	05 57 16.2	-0.7
TPGR	**Topolog**	**1.60**	**112**	⇑P	Pn	05 56 55.6	-0.1
TPGR				⇓S	Sn	05 57 17.2	-0.6
TPGR	**Topolog**	**1.60**	**112**	⇑P	Pn	05 56 55.6	-0.1
TPGR	**Topolog**	**1.60**	**112**	⇓S	Sn	05 57 17.2	-0.6
LEOM	**Leova**	**1.67**	**53**	⇓P	Pn	05 56 57.1	+0.7
LEOM				⇑S	Sn	05 57 19.2	+0.1
LEOM	**Leova**	**1.67**	**53**	⇓P	Pn	05 56 57.1	+0.7
LEOM	**Leova**	**1.67**	**53**	⇑S	Sn	05 57 19.2	+0.1
ICOR	**Ion Corvin**	**1.72**	**142**	⇓P	Pn	05 56 57.5	+0.4
ICOR				⇓S	Sn	05 57 19.8	-0.3
ICOR	**Ion Corvin**	**1.72**	**142**	⇓P	Pn	05 56 57.5	+0.4
ICOR	**Ion Corvin**	**1.72**	**142**	⇓S	Sn	05 57 19.8	-0.3
TLCR		**1.78**	**99**	⇑P	Pn	05 56 58.1	+0.4
TLCR				⇑S	Sn	05 57 21.5	+0.2
TLCR		**1.78**	**99**	⇑P	Pn	05 56 58.1	+0.4
TLCR		**1.78**	**99**	⇑S	Sn	05 57 21.5	+0.2
TIRR	**Tirgusor**	**1.79**	**124**	⇓P	Pn	05 56 58.0	+0.1
TIRR				⇓S	Sn	05 57 20.8	-1.0
TIRR	**Tirgusor**	**1.79**	**124**	⇓P	Pn	05 56 58.0	+0.1
TIRR	**Tirgusor**	**1.79**	**124**		Pn	05 56 57.7	-0.3
TIRR	**Tirgusor**	**1.79**	**124**	⇓S	Sn	05 57 20.8	-1.0
MILM	**Milestii Mici**	**2.25**	**49**	⇓P	Pn	05 57 03.6	+0.1
MILM				⇑S	Sn	05 57 30.6	-1.2
MILM	**Milestii Mici**	**2.25**	**49**	⇓P	Pn	05 57 03.6	+0.1
MILM	**Milestii Mici**	**2.25**	**49**	*e*S	Sn	05 57 30.0	-1.7
50nm,0.2s
MILM	**Milestii Mici**	**2.25**	**49**	⇑S	Sn	05 57 30.6	-1.2
MILM	**Milestii Mici**	**2.25**	**49**	⇑*i*P	Pn	05 57 03.5	0.0
20nm,0.1s
BURAR	**Bucovina Array**	**2.27**	**341**	⇓P	Pn	05 57 04.8	+0.9
BURAR	**Bucovina Array**	**2.27**	**341**	⇓P	Pn	05 57 04.8	+0.9
BURAR	**Bucovina Array**	**2.27**	**341**		Pn	05 57 04.9	+0.9
BUR08	**Bucovina Ar. S**	**2.30**	**341**		Pn	05 57 05.3	+1.0

SOME ***16*** *06:08:51.9, 39°10N×73°47E, h15km*
KRNET ***16*** *06:08:56.8±0.1, 39°23N×73°50E, mb3.5*
ISU ***16*** *06:08:58, 39°86N×73°77E, h5km*
NNC ***16*** *06:08:59.5±3.4, 39°29N×73°64E, h0km, mb3.8, mpv3.4,*
Error ellipse: s-maj=28.5km s-min=17.6km az=155.0
ISC 16 06:08:54.4±1.6, 39°22N±0°06×73°65E±0°03, h11km±11km, n35, σ2=26/61, 18C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.46**	**281**	⇑*i*P	Pg	06 09 22.4	0.0
baz=81
DRK				⇑*i*S	Sn	06 09 41.1	+1.0
baz=81
OHH	**Osh**	**1.46**	**333**	⇑*i*P	Pg	06 09 23.1	+0.6
baz=37
OHH				⇑*i*S	Sg	06 09 42.7	+1.3
baz=37
OHH	**Osh**	**1.46**	**333**	P	Pb	06 09 21.7	+0.1
OHH				S	Sn	06 09 36.5	-3.4
ANR	**Andizhan**	**1.82**	**327**	P	Sg	06 09 55.7	+2.6
FRG	**Fergana**	**1.84**	**309**	P	Pg	06 09 28.9	-0.8
FRG				S	Sn	06 09 51.8	+2.6
CHMI	**Chimion**	**1.95**	**303**	P	Pg	06 09 30.5	-1.2
CHMI				S	Sb	06 09 55.1	+1.0
BTK	**Batken**	**2.34**	**292**	⇓*i*P	Pb	06 09 37.1	+0.5
baz=93
BTK				⇓*i*S	Sb	06 10 06.2	+0.6
baz=93
MINT	**Mingtut**	**2.41**	**302**	P	Pg	06 09 39.2	-1.3
MINT				S	Sg	06 10 10.5	-1.2
GAR	**Garm**	**2.60**	**266**	⇑*i*P	Pb	06 09 40.7	-0.4
baz=66
GAR				⇑*i*S	Sb	06 10 12.4	-0.7
baz=66
ARLS	**Aral**	**2.69**	**11**	⇑*i*P	Pb	06 09 43.6	+1.1
baz=13
ARLS				⇑*i*S	Sb	06 10 17.6	+2.1
baz=13
NRN	**Naryn**	**2.85**	**38**	⇑*i*P	Pb	06 09 46.0	+0.6
baz=40
NRN				⇑*i*S	Sb	06 10 22.2	+1.9
baz=40
TRKS	**Terek-Say**	**3.00**	**321**	⇑*i*P	Pb	06 09 45.1	-2.8
baz=22
TRKS				⇑*i*S	Sn	06 10 20.9	+2.9
baz=22
UCH	**Uchtor**	**3.07**	**12**	⇑*i*P	Pb	06 09 49.3	0.0
baz=14
UCH				⇑*i*S	Sb	06 10 27.8	+0.8
baz=14
TKM2	**Tokmak 2**	**3.98**	**21**	⇑Pn	Pb	06 10 04.2	-0.4
1.5nm,0.5s
TKM2				⇓Pg	Pg	06 10 15.8	+5.2
3.0nm,0.5s
TKM2				⇓Sn	Sb	06 10 49.4	-3.4
4.6nm,0.6s
TKM2				⇑Lg	Lg	06 11 06.9	
10nm,0.7s
KST	**Kastek**	**4.20**	**24**	*e*P	Pg	06 10 12.3	-2.4
4.4nm,0.4s
KST				*e*S	Sg	06 11 10.8	+1.6
13nm,0.8s
KST	**Kastek**	**4.20**	**24**	Pg	Pg	06 10 12.4	-2.4
4.4nm,0.4s
KST				Lg	Lg	06 11 10.8	
13nm,0.8s
SGDS	**Sogindy**	**4.29**	**10**	*e*P	Pg	06 10 13.7	-2.9
2.6nm,0.4s
SGDS				*e*S	Sg	06 11 13.0	+0.9
11nm,0.8s
SGDS	**Sogindy**	**4.29**	**10**	Pg	Pg	06 10 13.6	-2.9
2.6nm,0.4s
SGDS				Lg	Lg	06 11 13.0	
11nm,0.8s
MTBS	**Maitube**	**4.43**	**27**	*e*P	Pg	06 10 17.8	-1.5
4.2nm,0.3s
MTBS				*e*S	Sg	06 11 19.7	+3.0
7.4nm,0.4s
MTBS	**Maitube**	**4.43**	**27**	Pg	Pg	06 10 17.8	-1.5
4.2nm,0.3s
MTBS				Lg	Lg	06 11 19.7	
7.4nm,0.4s
KK31	**Karatay Array**	**4.54**	**330**	Pn	Pb	06 10 09.1	-5.0
1.8nm,0.5s,baz=171,slow=16,SNR=18
KK31				⇑Pg	Pg	06 10 20.8	-0.6
2.2nm,0.4s,baz=150,slow=16,SNR=4.8
KK31				⇑Sn	Sb	06 11 04.9	-4.0
2.3nm,0.4s,baz=156,slow=25,SNR=3.7
KK31				⇓Lg	Lg	06 11 17.2	
1.6nm,0.3s,baz=150,slow=26,SNR=3.8
TNSS	**Tian-Shan**	**4.55**	**32**	*e*P	Pg	06 10 20.3	-1.3
7.0nm,0.5s
TNSS				*e*S	Sg	06 11 23.9	+3.4
5.4nm,0.6s
TNSS	**Tian-Shan**	**4.55**	**32**	Pg	Pg	06 10 20.3	-1.3
7.0nm,0.5s
TNSS				Lg	Lg	06 11 23.9	
5.4nm,0.6s
MDOK	**Medeo**	**4.70**	**

1.2nm,0.1s
KPKS eS **Sg** **06 11 58.7 +1.8**
6.8nm,0.6s
KPKS Kokpek 5.68 40 Pg **Pg** **06 10 40.3 -2.9**
1.2nm,0.1s
KPKS Lg Lg 06 11 58.7
6.8nm,0.6s
BLB Baldybastay 6.06 35 *eP* **Pg** **06 10 47.9 -2.5**
3.0nm,0.4s
BLB eS **Sg** **06 12 10.9 +1.9**
5.9nm,0.5s
DJR Jarkent 6.86 40 *eP* **Pg** **06 11 02.0 -3.8**
0.7nm,0.2s
DJR eS **Sg** **06 12 35.1 +0.5**
2.1nm,0.6s

MOS ***16*** *06:14:23.5±1.1,37°.96N×140°.53E,h126km,mb4.4/11, Error ellipse: s-maj=12.1km s-min=7.1km az=79.4*
JMA ***16*** *06:14:25.6±0.1,37°.9N±0°.4×140°.5E±0°.5,h131km, MD4.1/40,MV4.1/40,MID FUKUSHIMA PREF*
JMA Felt I J1 at MID FUKUSHIMA PREF .
NEIC ***16*** *06:14:25.5±1.3,37°.88N±0°.05×140°.51E±0°.09, h131km±4km,mb4.7/22, Error ellipse: s-maj=10.8km s-min=7.4km az=107.0*
NIED ***16*** *06:14:25.6,37°.88N×140°.48E,h131km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-1.57; Mθθ0.00; Mφφ1.57; Mrθ0.53; Mθφ-0.98; Mφr0.27; Fault plane solution: M0 1.94000×10^15 NP1: φs313.00000°,δ49.00000°,λ-122.00000°. NP2: φs176.00000°,δ50.00000°,λ-59.00000°.*
IDC ***16*** *06:14:25.7±0.6,37°.88N×140°.37E,h130km±5km,mb3.7/16, mbtmp4.1/20 Error ellipse: s-maj=13.2km s-min=9.5km az=106.0*

ISC 16 06:14:25.3±0.5,37°.93N±0°.04×140°.52E±0°.04,h130km±3km, h130km:pP-P,n142,σ1°.50/146,mb4.4/36,4C-19D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMM	**Marumori**	**0.23**	**106**	Pn	**Pn**	**06 14 43.6**	**+0.5**
JMM				Sn	**Sn**	**06 14 57.0**	**+0.3**
JMM	**Marumori**	**0.23**	**106**	⇓*iP*	**Pn**	**06 14 43.8**	**+0.5**
JMM				⇓S	**Sn**	**06 14 57.3**	**+0.6**
JMM	**Marumori**	**0.23**	**106**	A	A	06 14 43.8	
	comp=E,17nm,1.5s,comp=E,15nm,0.5s						
JYAR	**Yonezawaarcadi**	**0.29**	**267**	⇓*iP*	**Pn**	**06 14 43.8**	**+0.4**
JYAR				⇓S	**Sn**	**06 14 57.4**	**+0.3**
JYAR	**Yonezawaarcadi**	**0.29**	**267**	A	A	06 14 43.8	
	comp=E,12nm,1.7s,comp=E,16nm,1.4s						
JMST	**Minamisoumatoc**	**0.36**	**124**	A	A	06 14 44.1	
	comp=E,6.0nm,0.3s,comp=E,12nm,0.6s						
JOTO	**OTAMA OYAMA**	**0.40**	**202**	*i P*	**Pn**	**06 14 44.1**	**+0.3**
JOTO				S	**Sn**	**06 14 58.0**	**+0.2**
JOTO	**OTAMA OYAMA**	**0.40**	**202**	A	A	06 14 44.1	
	comp=E,9.0nm,1.5s,comp=E,20nm,0.9s						
JOU	**Okura**	**0.45**	**15**	⇓*iP*	**Pn**	**06 14 45.2**	**+1.1**
JOU				⇓*eS*	**Sn**	**06 14 59.7**	**+1.3**
JOU	**Okura**	**0.45**	**15**	A	A	06 14 45.2	
	comp=E,14nm,1.0s,comp=E,10.0nm,0.6s						
JYS	**Shiratake**	**0.46**	**310**	⇓*iP*	**Pn**	**06 14 44.9**	**+0.8**
JFK	**Kawauchi**	**0.63**	**153**	⇓*iP*	**Pn**	**06 14 45.5**	**+0.3**
JFK				⇓S	**Sn**	**06 14 59.7**	**-0.6**
JFK	**Kawauchi**	**0.63**	**153**	A	A	06 14 45.5	
	comp=E,8.0nm,0.4s,comp=E,11nm,0.5s						
JOFO	**Osakifurukawao**	**0.74**	**25**	A	A	06 14 46.9	
	comp=E,49nm,1.2s,comp=E,17nm,4.2s						
JFY	**Yanaizu**	**0.83**	**231**	*i P*	**Pn**	**06 14 47.0**	**+0.3**
JFY				S	**Sn**	**06 15 02.4**	**-0.5**
JFY	**Yanaizu**	**0.83**	**231**	A	A	06 14 47.0	
	comp=E,4.0nm,1.1s,comp=E,3.0nm,3.4s						
JIKH	**Ishinomakikobu**	**0.84**	**63**	A	A	06 14 47.7	
	comp=E,24nm,0.7s,comp=E,13nm,0.3s						
JIO	**Ouri**	**0.84**	**51**	⇓*iP*	**Pn**	**06 14 47.7**	**+1.0**
JIO				⇓S	**Sn**	**06 15 03.5**	**+0.5**
JIO	**Ouri**	**0.84**	**51**	A	A	06 14 47.7	
	comp=E,30nm,0.4s,comp=E,13nm,0.4s						
JYA	**Atsumi**	**0.92**	**317**	⇓*iP*	**Pn**	**06 14 48.1**	**+0.7**
JYA				⇓*eS*	**Sn**	**06 15 04.9**	**+0.7**
JYA	**Atsumi**	**0.92**	**317**	A	A	06 14 48.1	
	comp=E,6.0nm,1.2s,comp=E,4.0nm,0.7s						
JNS	**Sasagawa**	**0.95**	**264**	⇓P	**Pn**	**06 14 47.9**	**+0.2**
JNS				⇓S	**Sn**	**06 15 04.7**	**-0.1**
JNS	**Sasagawa**	**0.95**	**264**	A	A	06 14 47.9	
	comp=E,11nm,1.6s,comp=E,7.0nm,1.5s						
JYK	**Kaneyama**	**1.00**	**353**	⇓*iP*	**Pn**	**06 14 49.1**	**+1.0**
JYK				⇓S	**Sn**	**06 15 06.5**	**+0.9**
JSB	**Shiboa**	**1.07**	**207**	A	A	06 14 48.9	
	comp=E,7.0nm,4.3s,comp=E,4.0nm,1.2s						
JAW	**Awa shima**	**1.13**	**298**	⇓*iP*	**Pn**	**06 14 49.8**	**+0.4**
JAW				⇓S	**Sn**	**06 15 07.6**	**-0.1**
JKMT	**Kesennumamotoy**	**1.16**	**40**	A	A	06 14 50.8	
	comp=E,11nm,1.5s,comp=E,10.0nm,0.5s						
JMK	**Ichinoseki**	**1.16**	**28**	*i P*	**Pn**	**06 14 50.8**	**+1.1**
JMK				S	**Sn**	**06 15 09.2**	**+0.9**
JMK	**Ichinoseki**	**1.16**	**28**	A	A	06 14 50.8	
	comp=E,9.0nm,1.3s,comp=E,8.0nm,0.4s						
JYYZ	**Yamagatayuza**	**1.18**	**337**	A	A	06 14 50.8	
	comp=E,5.0nm,4.6s,comp=E,7.0nm,2.5s						
JHO	**Hitachi**	**1.31**	**178**	A	A	06 14 51.4	
	comp=E,5.0nm,0.6s,comp=E,4.0nm,0.6s						
JUON	**Uonuma**	**1.36**	**239**	*i P*	**Pn**	**06 14 51.8**	**0.0**
JUON				S	**Sn**	**06 15 11.5**	**-0.6**
OFUJ	**Ofunato**	**1.46**	**38**	A	A	06 14 54.1	
	comp=E,9.0nm,0.5s,comp=E,7.0nm,0.5s						
JRG	**Rokugo**	**1.47**	**4**	A	A	06 14 54.2	
	comp=E,9.0nm,2.5s,comp=E,14nm,0.5s						
JIZZ	**Izumozaki**	**1.49**	**255**	A	A	06 14 53.4	
	comp=E,8.0nm,4.8s,comp=E,6.0nm,4.9s						
JHYU	**Hitachinakayam**	**1.58**	**178**	A	A	06 14 54.5	
	comp=E,9.0nm,0.7s,comp=E,10.0nm,0.5s						
JYW	**Yuwa**	**1.63**	**352**	A	A	06 14 56.0	
	comp=E,6.0nm,1.3s,comp=E,9.0nm,1.5s						
JOM	**Ohasama**	**1.66**	**21**	*i P*	**Pn**	**06 14 56.4**	**+1.2**
JOM				S	**Sn**	**06 15 19.1**	**+1.1**
JOM	**Ohasama**	**1.66**	**21**	A	A	06 14 56.4	
	comp=E,11nm,0.6s,comp=E,10.0nm,0.4s						
JYT	**Yasato**	**1.72**	**189**	Pn	**Pn**	**06 14 54.7**	**-1.1**
JYT				Sn	**Sn**	**06 15 16.5**	**-2.6**
JYT	**Yasato**	**1.72**	**189**	A	A	06 14 55.9	
	comp=E,27nm,0.4s,comp=E,10.0nm,0.4s						
JAG	**Ashikaga**	**1.72**	**210**	*i P*	**Pn**	**06 14 55.9**	**-0.1**
JAG	**Ashikaga**	**1.72**	**210**	A	A	06 14 55.9	
	comp=E,4.0nm,1.7s,comp=E,3.0nm,1.1s						
JSD	**Sado**	**1.79**	**274**	Pn	**Pn**	**06 14 56.3**	**-0.3**
JSD	**Sado**	**1.79**	**274**	*i P*	**Pn**	**06 14 56.4**	**-0.3**
JSD				S	**Sn**	**06 15 18.5**	**-2.1**
JSZI	**Iwateshizukuis**	**1.84**	**11**	A	A	06 14 58.6	
	comp=E,12nm,1.8s,comp=E,10.0nm,2.7s						
JTH	**Tanohata**	**2.27**	**27**	A	A	06 15 03.9	
	comp=E,4.0nm,2.1s,comp=E,5.0nm,1.3s						
MJAR	**Matsushiro Arr**	**2.30**	**234**	P	**Pn**	**06 15 03.0**	**0.0**
	195nm,0.6s,baz=43,slow=11,SNR=569						
MJAR				S	**Sn**	**06 15 30.9**	**-1.0**
	39nm,0.8s,baz=252,slow=24,SNR=1.4						
MJAR	**Matsushiro Arr**	**2.30**	**234**	P	**Pn**	**06 15 03.0**	**0.0**
MJAR				S	**Sn**	**06 15 31.0**	**-1.0**
MAJO	**Matsushiro**	**2.30**	**234**	Pn	**Pn**	**06 15 03.1**	**+0.1**
MAJO	**Matsushiro**	**2.30**	**234**	*c iP*	**Pn**	**06 15 02.9**	**-0.1**
MJB9	**Matsu-Tunnel**	**2.30**	**234**		**Pn**	**06 15 04.0**	**+1.0**
JTM	**Tenmabayashi**	**2.89**	**8**	Pn	**Pn**	**06 15 11.1**	**+0.7**
JGF	**Kuroka**	**3.44**	**228**	Pn	**Pn**	**06 15 17.8**	**+0.2**
INU	**Inuyama**	**3.81**	**229**	Pn	**Pn**	**06 15 22.2**	**-0.3**
ERM	**Erimo**	**4.56**	**26**	Pn	**Pn**	**06 15 31.5**	**-0.9**
ERM	**Erimo**	**4.56**	**26**	*i P*	**Pn**	**06 15 31.3**	**-1.0**
JHJ	**Hachijo jima 2**	**4.83**	**187**	*i P*	**Pn**	**06 15 34.5**	**-1.6**
	121nm,0.3s,baz=328,slow=20,SNR=10						
JHJ				S	**Sn**	**06 16 26.3**	**-5.0**
	409nm,0.3s,baz=253,slow=23,SNR=9.5						
JHJ2	**Mitsune**	**4.84**	**187**	Pn	**Pn**	**06 15 34.9**	**-1.3**
JEW	**Eniwo**	**4.96**	**8**		**Pn**	**06 15 38.4**	**+0.7**
JHS	**Saijyo**	**6.64**	**246**	Pn	**Pn**	**06 16 00.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**6.73**	**34**	⇑*iP*	**Pn**	**06 15 58.7**	**-2.7**
NMR				*eS*	Sn	06 17 07.1	-10
JMN	**Monobe**	**6.83**	**234**	Pn	**Pn**	**06 16 02.2**	**-0.7**
RUSJ	**Misakicho**	**7.13**	**29**	*eP*	**Pn**	**06 16 05.6**	**-1.3**
RUSJ				*eS*	**Sn**	**06 17 18.6**	**-7.8**
YUK	**Yuzh-Kuril'sk**	**7.32**	**32**	*eP*	**Pn**	**06 16 07.4**	**-2.0**
YUK				*eS*	**Sn**	**06 17 23.2**	**-7.7**
YUK				pmax	pmax		
	comp=N,35nm,0.2s						
YUK				pmax	pmax		
	comp=E,54nm,0.2s						
YUK				pmax	pmax		
	comp=Z,413nm,0.2s						
USRK	**Ussuriysk Ar.**	**8.98**	**317**	P	**Pn**	**06 16 33.1**	**+1.3**
	comp=Z,2.0nm,0.4s,baz=119,slow=15,SNR=1.9						
KUR	**Kuril'sk**	**9.14**	**35**	P	**Pn**	**06 16 33.2**	**-0.7**
KUR				S	**Sn**	**06 18 09.8**	**-5.1**
KUR				pmax	pmax		
	comp=E,65nm,0.4s						
KUR				smax	smax		
	comp=N,1μm,0.3s						
YSS	**Yuzh-Sakhalins**	**9.17**	**10**	Pn	**Pn**	**06 16 33.6**	**-0.6**
YSS	**Yuzh-Sakhalins**	**9.17**	**10**	⇑*iP*	**Pn**	**06 16 33.4**	**-0.9**
YSS				*eS*	**Sn**	**06 18 17.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,60nm,0.6s						
KSRS	**Korea Array**	**9.99**	**271**	P	**Pn**	**06 16 47.3**	**+1.9**
	comp=Z,11nm,0.8s,baz=85,slow=14,SNR=23						
KS19	**Wonju Array Si**	**10.03**	**271**		**Pn**	**06 16 47.2**	**+1.2**
PETK	**Petropavlovsk-**	**19.30**	**33**	P	**Pn**	**06 18 41.9**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=216,slow=7.3,SNR=5.2						
YAK	**Yakutsk**	**25.05**	**348**	P	**P**	**06 19 36.7**	**-0.3**
YAK				IAmb	IAmb	06 20 00.1	
	comp=Z,16nm,0.5s						
SONM	**Songino Array**	**26.70**	**303**	P	**P**	**06 19 52.0**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=109,slow=9.6,SNR=7.1						
SONM				PcP	**PcP**	**06 23 11.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=151,slow=3.3,SNR=2.5						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**26.70**	**303**	P	**P**	**06 19 52.1**	**-0.1**
SONM	**Songino Array**	**26.70**	**303**	P	**P**	**06 19 52.1**	**-0.1**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ENH	**Enshi**	**26.72**	**263**	P	**P**	**06 19 51.5**	**-1.0**
ENH				IAmb	IAmb	06 19 53.8	
	comp=Z,17nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**29.22**	**121**	T	T	06 50 58.9	
	baz=316,slow=76,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**29.23**	**121**	T	T	06 50 53.6	
	baz=316,slow=76,SNR=220						
H11N3	**WAKE ISLAND Hy**	**29.24**	**121**	T	T	06 50 54.5	
	baz=316,slow=76,SNR=130						
H11S1	**WAKE ISLAND Hy**	**29.94**	**123**	T	T	06 51 50.7	
	baz=317,slow=76,SNR=66						
H11S3	**WAKE ISLAND Hy**	**29.95**	**123**	T	T	06 51 49.7	
	baz=317,slow=76,SNR=74						
H11S2	**WAKE ISLAND Hy**	**29.96**	**123**	T	T	06 51 52.9	
	baz=317,slow=76,SNR=60						
TIXI	**Tiksi**	**34.32**	**353**	P	**P**	**06 20 58.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=1.8						
	comp=Z,0.7nm,0.3s						
DGZ	**Jazzator, Alta**	**39.29**	**305**	*i P*	**P**	**06 21 39.4**	**-2.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SWI	**Sorong**	**39.53**	**195**	P	**P**	**06 21 44.1**	**+0.6**
SWI				pmax	pmax		
	comp=Z,17nm,0.9s						
ZALV	**Zalesovo Beam**	**40.79**	**312**	P	**P**	**06 21 53.8**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=98,slow=7.3,SNR=7.1						
ZALV				PcP	**PcP**	**06 23 51.1**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=85,slow=3.4,SNR=5.9						
	comp=Z,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**40.79**	**312**	P	**P**	**06 21 51.6**	**-1.8**
MK31	**Makanchi Array**	**43.04**	**301**	P	**P**	**06 22 12.3**	**+0.4**
MK31	**Makanchi Array**	**43.04**	**301**	P	**P**	**06 22 12.3**	**+0.4**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MKAR	**Makanchi Array**	**43.04**	**301**	P	**P**	**06 22 12.2**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=90,slow=9.2,SNR=8.0						
MKAR				pP	**pP**	**06 22 40.8**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=98,slow=8.9,SNR=4.2						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**43.04**	**301**	P	**P**	**06 22 11.6**	**-0.3**
KURK	**Kurchatov**	**44.82**	**307**	P	**P**	**06 22 25.8**	**-0.2**
KURK	**Kurchatov**	**44.82**	**307**	*i P*	**P**	**06 22 25.1**	**-0.9**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KDAK	**Kodiak Island**	**46.92**	**42**	P	**P**	**06 22 42.6**	**+0.4**
KDAK				IAmb	IAmb	06 22 56.8	
	comp=Z,32nm,1.3s						
KDAK	**Kodiak Island**	**46.92**	**42**	P	**P**	**06 22 42.7**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,32nm,1.3s						
ILAR	**Eielson Array**	**49.13**	**33**	P	**P**	**06 23 01.6**	**+2.4**
	comp=Z,0.3nm,0.8s,baz=263,slow=6.3,SNR=2.7						
	comp=Z,0.3nm,0.8s						
MTN	**Manton Dam**	**51.26**	**192**	P	**P**	**06 23 15.7**	**-0.1**
MTN				IAmb	IAmb	06 23 16.4	
	comp=Z,10nm,0.7s						
COEN	**Coen**	**51.67**	**177**	P	**P**	**06 23 20.1**	**+1.3**
COEN				IAmb	IAmb	06 23 45.0	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**54.45**	**194**	P	**P**	**06 23 39.8**	**+0.6**
CHGR	**Chuyangaron**	**54.64**	**295**	P	**P**	**06 23 40.9**	**+0.3**
CHGR				IAmb	IAmb	06 23 41.4	
	comp=Z,10.0nm,0.7s						
CHGR	**Chuyangaron**	**54.64**	**295**	P	**P**	**06 23 40.9**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	**Arti**	**55.22**	**318**	*c iP*	**P**	**06 23 41.6**	**-2.7**
ARU				*PP	**pP**	**06 24 12.0**	**-3.2**
ARU				S	**S**	**06 31 14.3**	**-3.1**
ARU				SS	**SS**	**06 34 59.1**	**-3.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**56.82**	**309**	P	**P**	**06 23 55.5**	**-0.3**
WB0	**Warramunga Arr**	**57.67**	**187**	P	**P**	**06 24 01.7**	**-0.4**
WB0				IAmb	IAmb	06 24 02.1	
	comp=Z,7.7nm,0.6s						
WR0	**Warramunga Arr**	**57.85**	**187**	P	**P**	**06 24 02.9**	**-0.4**
WB2	**Warramunga Arr**	**57.85**	**187**	P	**P**	**06 24 03.1**	**-0.2**
WB2				IAmb	IAmb	06 24 20.3	
	comp=Z,7.8nm,1.1s						
WRA	**Warramunga Arr**	**57.85**	**187**	P	**P**	**06 24 02.9**	**-0.5**
	comp=Z,5.3nm,0.6s,baz=3.0,slow=7.3,SNR=90						
WRA				pP	**pP**	**06 24 33.7**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=1.5,slow=7.2,SNR=2.1						
WRA				PcP	**PcP**	**06 24 54.8**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=360,slow=4.5,SNR=7.3						
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**57.85**	**187**	P	**P**	**06 24 02.8**	**-0.5**
EUNU	**Eureka**	**59.41**	**8**	P	**P**	**06 24 14.1**	**+0.6**
EUNU				IAmb	IAmb	06 24 15.1	
	comp=Z,8.7nm,1.4s						
AS31	**Alice Springs**	**61.58**	**187**	P	**P**	**06 24 28.9**	**+0.1**
ASAR	**Alice Springs**	**61.58**	**187**	P	**P**	**06 24 28.7**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=8.7,slow=4.9,SNR=34						
ASAR				PcP	**PcP**	**06 25 10.0**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=18,slow=4.7,SNR=5.6						
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**61.58**	**187**	P	**P**	**06 24 28.9**	**+0.1**
ASAR	**Alice Springs**	**61.58**	**187**	P	**P**	**06 24 28.9**	**+0.1**
ARCES	**ARCESS Array B**	**62.91**	**339**	P	**P**	**06 24 37.4**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=51,slow=6.4,SNR=6.5						
	comp=Z,3.1nm,0.8s						
ARCES	**ARCESS Array B**	**62.91**	**339**	P	**P**	**06 24 37.5**	**+0.4**
ARCES	**ARCESS Array B**	**62.91**	**339**	P	**P**	**06 24 37.5**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,47nm,1.4s						
WAPA	**Wapiti River**	**65.11**	**38**	P	**P**	**06 24 53.5**	**+1.7**
WAPA				IAmb	IAmb	06 24 54.0	
	comp=Z,6.2nm,0.7s						
GIRL	**Giralia**	**65.12**	**207**	P	**P**	**06 24 52.6**	**+0.5**
FIA1	**FINESS Array S**	**67.69**	**332**	P	**P**	**06 25 08.2**	**+0.2**
FIA1				IAmb	IAmb	06 25 14.0	
	comp=Z,19nm,1.2s						
FINES	**FINESS Array B**	**67.69**	**332**	P	**P**	**06 25 08.1**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=40,slow=8.3,SNR=30						
FINES				pP	**pP**	**06 25 40.0**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=46,slow=8.2,SNR=2.5						
	comp=Z,2.7nm,0.5s						
FORT	**Forrest**	**69.34**	**191**	P	**P**	**06 25 18.9**	**+0.5**
KBZ	**Khabaz**	**69.78**	**310**	P	**P**	**06 25 21.7**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=56,slow=11,SNR=2.9						
	comp=Z,1.9nm,0.7s						
KIV	**Kislovodsk**	**69.78**	**310**	*i P*	**P**	**06 25 23.0**	**+1.6**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NEW	**Newport**	**69.98**	**44**	P	**P**	**06 25 24.3**	**+1.8**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NC405	**NORSAR Array S**	**72.87**	**337**	P	**P**	**06 25 39.6**	**+0.1**
NC405				IAmb	IAmb	06 25 45.5	
	comp=Z,32nm,1.4s						
NB2	**NORSAR Subarra**	**73.09**	**337**	P	**P**	**06 25 40.9**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**73.09**	**337**	P	**P**	**06 25 41.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=38,slow=5.9,SNR=5.6						
	comp=Z,1.4nm,0.7s						
NOA	**NORSAR Array B**	**73.09**	**337**	P	**P**	**06 25 41.0**	**+0.1**
AKASG	**Malin Array Be**	**73.16**	**322**	P	**P**	**06 25 41.2**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=47,slow=5.1,SNR=9.4						
AKASG				pP	**pP**	**06 26 13.3**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=43,slow=7.4,SNR=2.9						
	comp=Z,1.2nm,0.4s						
NVAR	**Mina Array Bea**	**75.02**	**53**	P	**P**	**06 25 55.0**	**+2.3**
	comp=Z,1.3nm,0.7s,baz=306,slow=4.8,SNR=4.9						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**77.55**	**45**	P	**P**	**06 26 08.6**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=242,slow=1.0,SNR=13						
	comp=Z,0.9nm,0.5s						
KSP	**Ksiaz**	**78.97**	**328**	P	**P**	**06 26 14.8**	**+0.5**
DPC	**Dobruska-Polom**	**79.32**	**327**	P	**P**	**06 26 17.1**	**+0.8**
DPC				pmax	pmax		
	comp=Z,5.0nm,2.3s						
KRLC	**Kraliky**	**79.33**	**327**	P	**P**	**06 26 17.0**	**+0.6**
KRLC				pmax	pmax		
	comp=Z,4.0nm,1.7s						
CLL	**Collm**	**79.97**	**330**	*eP*	**P**	**06 26 20.0**	**+0.3**
CLL	**Collm**	**79.97**	**330**	*eP*	**P**	**06 26 20.0**	**+0.3**
GERES	**GERESS Array B**	**81.58**	**328**	P	**P**	**06 26 27.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=43,slow=6.4,SNR=7.6						
GERES				pP	**pP**	**06 27 01.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=44,slow=5.9,SNR=4.1						
	comp=Z,0.4nm,0.4s						
LENM	**Lemitar**	**84.77**	**50**	P	**P**	**06 26 44.9**	**-0.3**
TXAR	**Lajitas Array**	**90.14**	**52**	P	**P**	**06 27 12.5**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=288,slow=3.0,SNR=10						
TXAR				pP	**pP**	**06 27 45.0**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=310,slow=3.3,SNR=4.4						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**127.67**	**180**	PKP	**PKPdf**	**06 33 13.7**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=227,slow=1.3,SNR=20						
LPAZ	**La Paz**	**146.83**	**57**	PKPbc	**PKPbc**	**06 33 53.2**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=287,slow=2.7,SNR=12						

IDC ***16*** *06:24:33.5±0.8,22°.92S×175°.86W,h0km,mb4.0/8, mbtmp4.0/9,ML5.6/2,MS3.6/24, Error ellipse: s-maj=27.5km s-min=19.4km az=129.0*
NEIC ***16*** *06:24:37.2±0.8,23°.16S±0°.07×175°.22W±0°.05,h35km±2km, mb4.5/19, Error ellipse: s-maj=13.4km s-min=4.6km az=30.0*

ISC 16 06:24:36.9±0.5,23°.16S±0°.06×175°.27W±0°.08,h34km,n67, σ2°.02/44,mb4.3/20,MS3.7/25,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.43**	**52**	P	**Pn**	**06 26 07.7**	**-1.5**
RAO	**Raoul Island**	**6.52**	**201**	Pn	**Pn**	**06 26 12.0**	**+1.6**
	177nm,0.3s,baz=319,slow=19,SNR=5.7						
RAO				Sn	**Sn**	**06 27 21.4**	**-2.1**
	187nm,0.3s,baz=121,slow=22,SNR=7.0						
RAO				LR	LR	06 27 28.6	
	comp=Z,144nm,21.6s,baz=251,slow=27						
RAO	**Raoul Island**	**6.52**	**201**	Pn	**Pn**	**06 26 10.2**	**-0.2**
RAO	**Raoul Island**	**6.52**	**201**	P	**Pn**	**06 26 12.0**	**+1.6**
MSVF	**Nonsavu**	**8.27**	**310**	Pn	**Pn**	**06 26 37.6**	**+3.1**
	5.2nm,0.3s,baz=157,slow=13,SNR=27						
MSVF	**Nonsavu**	**8.27**	**310**		**Pn**	**06 26 33.9**	**-0.6**
AFI	**Afiamalu**	**9.78**	**20**	Pn	**Pn**	**06 26 56.2**	**+1.0**
	33nm,0.3s,baz=214,slow=1.7,SNR=38						
AFI				Sn	**Sn**	**06 28 37.5**	**-6.4**
	13nm,0.3s,baz=44,slow=21,SNR=4.3						
AFI	**Afiamalu**	**9.78**	**20**		**Pn**	**06 26 54.6**	**-0.6**
RAR	**Rarotonga**	**14.48**	**85**		**Pn**	**06 27 58.1**	**-1.4**
URZ	**Urewera**	**16.41**	**202**	Pn	**Pn**	**06 28 21.3**	**-3.2**
	1.0nm,0.3s,baz=359,slow=3.7,SNR=8.0						
URZ				Sn	Sn	06 31 09.6	-16
	4.3nm,0.3s,baz=262,slow=19,SNR=10						
DZM	**Mont Dzumac**	**16.92**	**270**	*e*LR	LR	06 32 41.4	
	comp=Z,423nm,27.6s						
DZM	**Mont Dzumac**	**16.92**	**270**	Pn	Pn	06 28 22.8	-8.4
	7.9nm,0.9s,baz=183,slow=7.3,SNR=3.4						
DZM				LR	LR	06 32 26.7	
	comp=Z,62nm,20.6s,baz=149,slow=29			

KAPI Kappang 65.06 275 LR LR 07 03 53.3
comp=Z,19nm,19.2s,baz=104,slow=37
QSPA South Pole Qui 66.92 180 P **P 06 35 29.8 +4.1**
comp=Z,2.0nm,1.0s,baz=27,slow=4.5,SNR=7.0
QSPA LR LR 06 59 29.1
comp=Z,34nm,22.0s,baz=30,slow=31
comp=Z,2.0nm,1.0s
QSPA South Pole Qui 66.92 180 P **P 06 35 26.6 +0.8**
JOW Kunigami 73.81 309 LR LR 07 05 23.8
comp=Z,30nm,19.4s,baz=151,slow=34
MJAR Matsushiro Arr 73.85 323 LR LR 07 01 58.3
comp=Z,30nm,20.6s,baz=150,slow=31
LPIG La Paz 78.63 58 LR LR 07 07 38.0
comp=Z,59nm,19.2s,baz=200,slow=33
PFO Pinyon Flats O 79.50 47 LR LR 07 05 23.7
comp=Z,54nm,19.9s,baz=246,slow=31
PETK Petropavlovsk- 79.50 344 P **P 06 36 40.5 +0.7**
comp=Z,2.5nm,0.7s,baz=132,slow=6.4,SNR=3.8
comp=Z,2.5nm,0.7s
KSRS Korea Array 80.55 318 LR LR 07 07 39.2
comp=Z,22nm,21.3s,baz=120,slow=32
NVAR Mina Array Bea 81.26 42 P **P 06 36 53.7 +3.9**
comp=Z,0.2nm,0.3s,baz=219,slow=7.0,SNR=2.3
NVAR LR LR 07 05 51.7
comp=Z,53nm,18.8s,baz=274,slow=30
comp=Z,0.2nm,0.3s
H03S2 Juan Fernandez 82.41 123 T T 08 08 32.2
baz=247
H03S1 Juan Fernandez 82.42 123 T T 08 08 33.3
baz=247
H03S3 Juan Fernandez 82.42 123 T T 08 08 32.0
baz=247
ELK Elko 84.54 41 LR LR 07 11 29.8
comp=Z,68nm,19.0s,baz=249,slow=33
TXAR Lajitas Array 86.38 56 P **P 06 37 18.5 +2.4**
comp=Z,0.7nm,0.8s,baz=218,slow=8.3,SNR=9.2
TXAR LR LR 07 12 20.8
comp=Z,25nm,18.6s,baz=245,slow=33
comp=Z,0.7nm,0.8s
ANMO Albuquerque 87.12 50 LR LR 07 11 55.8
comp=Z,35nm,19.3s,baz=256,slow=32
NEW Newport 88.07 35 LR LR 07 08 19.4
comp=Z,78nm,20.4s,baz=226,slow=30
PDAR Pinedale Array 89.19 42 LR LR 07 13 31.5
comp=Z,41nm,19.1s,baz=260,slow=33
CMAR Chiang Mai Arr 93.38 289 LR LR 07 20 36.2
comp=Z,17nm,18.1s,baz=135,slow=36
AKASG Malin Array Be 146.55 331 PKPbc **PKPdf 06 44 13.2 +0.2**
comp=Z,0.9nm,0.4s,baz=41,slow=4.0,SNR=4.8
CLL Collm 151.18 349 *e*PKiKP **PKiKP 06 44 29.0 +2.1**
CLL *e*(PKPab) **pPKPbc 06 44 38.0 +2.0**
CLL *ex* x 06 44 46.0

IDC 16 06:42:22.0±2.1, 15°.66S×176°.52W, h0km, mb3.8/3, mbtmp3.9/4, ML3.5/1, MS3.6/19, Error ellipse: s-maj=113.3km s-min=27.6km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.91**	**70**	Pn	Pn	06 43 36.0	-1.2
	2.0nm,0.3s,baz=97,slow=11,SNR=2.4						
AFI				Sn	Sn	06 44 25.0	-10
	0.8nm,0.3s,baz=301,slow=21,SNR=1.4						
AFI				LR	LR	06 45 12.0	
	comp=Z,400nm,19.0s,baz=260,slow=35						
	22nm,0.7s						
MSVF	**Nonsavu**	**5.59**	**248**	LR	LR	06 45 34.8	
	comp=Z,250nm,20.4s,baz=150,slow=34						
DZM	**Mont Dzumac**	**17.33**	**246**	*e*LR	LR	06 50 52.0	
	comp=Z,155nm,26.4s						
DZM	**Mont Dzumac**	**17.33**	**246**	LR	LR	06 51 35.4	
	comp=Z,98nm,21.2s,baz=34,slow=32						
URZ	**Urewera**	**23.20**	**193**	LR	LR	06 55 15.6	
	comp=Z,221nm,20.3s,baz=112,slow=33						
PPT	**Papeete**	**25.89**	**98**	LR	LR	06 55 36.3	
	comp=Z,56nm,21.7s,baz=256,slow=31						
PPT2	**Papeete2**	**25.89**	**98**	*e*LR	LR	06 54 22.0	
	comp=Z,239nm,25.8s						
TBI	**Tubuai**	**26.60**	**111**	*e*LR	LR	06 54 47.5	
	comp=Z,283nm,27.8s						
CTA	**Charters Tower**	**35.65**	**257**	LR	LR	07 01 43.2	
	comp=Z,33nm,20.9s,baz=78,slow=33						
PMG	**Port Moresby**	**35.96**	**276**	LR	LR	07 02 23.4	
	comp=Z,40nm,18.3s,baz=62,slow=33						
H11S2	**WAKE ISLAND Hy**	**37.74**	**333**	T	T	07 28 43.8	
	baz=153,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**37.75**	**333**	T	T	07 28 44.3	
	baz=153,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**37.76**	**333**	T	T	07 28 45.3	
	baz=153,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**38.75**	**335**	T	T	07 29 57.1	
	baz=154,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**38.75**	**335**	T	T	07 29 56.2	
	baz=154,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**38.76**	**335**	T	T	07 29 57.4	
	baz=154,slow=76,SNR=8.6						
WRA	**Warramunga Arr**	**46.85**	**257**	P	P	06 50 54.0	-0.2
	1.0nm,0.9s,baz=89,slow=8.0,SNR=2.1						
WRA				LR	LR	07 08 25.5	
	comp=Z,96nm,21.7s,baz=54,slow=33						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**47.17**	**252**	P	P	06 50 56.0	-0.6
	0.8nm,0.5s,baz=84,slow=8.3,SNR=12						
ASAR				LR	LR	07 09 15.2	
	comp=Z,86nm,18.3s,baz=156,slow=34						
	0.8nm,0.5s						
KAPI	**Kappang**	**63.38**	**272**	LR	LR	07 19 18.2	
	comp=Z,19nm,18.5s,baz=81,slow=35						
SHEM	**Shemya Is, Ala**	**68.59**	**354**	LR	LR	07 18 47.4	
	comp=Z,52nm,20.5s,baz=42,slow=32						
YBH	**Yreka Blue Hor**	**75.65**	**39**	LR	LR	07 18 14.7	
	comp=Z,44nm,20.2s,baz=245,slow=28						
KDAK	**Kodiak Island**	**75.81**	**13**	LR	LR	07 19 04.3	
	comp=Z,68nm,20.8s,baz=207,slow=29						
NVAR	**Mina Array Bea**	**76.56**	**43**	LR	LR	07 18 21.0	
	comp=Z,64nm,20.7s,baz=272,slow=28						
BBB	**Bella Bella**	**79.49**	**28**	LR	LR	07 23 11.9	
	comp=Z,40nm,20.4s,baz=234,slow=31						
DLBC	**Dease Lake**	**83.07**	**23**	LR	LR	07 25 23.6	
	comp=Z,109nm,18.5s,baz=272,slow=31						
ILAR	**Eielson Array**	**83.31**	**12**	P	P	06 54 49.9	-0.4
	1.1nm,1.0s,baz=212,slow=5.0,SNR=4.5						
ILAR				LR	LR	07 23 36.3	
	comp=Z,48nm,20.6s,baz=248,slow=30						
	1.1nm,1.0s						
MAW	**Mawson**	**86.57**	**199**	LR	LR	07 30 24.9	
	comp=Z,51nm,21.9s,baz=114,slow=33						
YKA	**Yellowknife Ar**	**91.55**	**24**	LR	LR	07 29 29.7	
	comp=Z,75nm,20.3s,baz=278,slow=31						
GERES	**GERESS Array B**	**145.86**	**348**	PKPbc	PKPab	07 02 04.6	+0.7
	0.2nm,0.5s,baz=321,slow=1.4,SNR=2.4						

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*IDC **16** 06:50:17.7±0.6, 44°.02S×15°.95W, h0km, mb4.3/13, mbtmp4.3/13, MS3.7/23, Error ellipse: s-maj=22.3km s-min=16.2km az=166.0*
*NEIC **16** 06:50:19.6±0.9, 44°.0S±0°.1×15°.9W±0°.2, h10km±1km, mb4.9/40, Error ellipse: s-maj=20.0km s-min=18.3km az=220.0*
ISC 16 06:50:20.2±0.4, 44°.02S±0°.09×15°.98W±0°.09, h16km, n76, σ0°.73/58, mb4.8/31, MS3.7/23, 3C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**30.91**	**81**	LR	LR	07 05 43.2	
	comp=Z,148nm,21.5s,baz=236,slow=30						
PMSA	**Palmer Station**	**33.67**	**215**	P	**P**	**06 57 00.2**	**+0.4**
	6.5nm,1.0s,baz=81,slow=22,SNR=1.6						
PMSA				LR	LR	07 09 25.5	
	comp=Z,62nm,18.5s,baz=237,slow=34						
	6.5nm,1.0s						
PMSA	**Palmer Station**	**33.67**	**215**	P	**P**	**06 56 59.9**	**0.0**
PMSA				IAmb	IAmb	06 57 16.1	
	comp=Z,24nm,1.2s						
H10S2	**ASCENSION HYDR**	**34.94**	**2**	T	T	07 34 18.1	
	baz=181						
H10S3	**ASCENSION HYDR**	**34.95**	**2**	T	T	07 34 18.3	
	baz=39						
H10N1	**ASCENSION HYDR**	**36.05**	**3**	T	T	07 35 50.0	
	baz=180						
H10N3	**ASCENSION HYDR**	**36.06**	**2**	T	T	07 35 40.8	
	baz=180						
H10N2	**ASCENSION HYDR**	**36.07**	**3**	T	T	07 35 51.7	
	baz=180						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**36.20**	**79**	P	**P**	**06 57 20.6**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=168,slow=19,SNR=1.9						
BOSA				LR	LR	07 08 45.1	
	comp=Z,68nm,20.9s,baz=192,slow=31						
	comp=Z,1.9nm,0.8s						
TSUM	**Tsumeb**	**37.39**	**59**	LR	LR	07 09 04.6	
	comp=Z,132nm,21.2s,baz=151,slow=30						
CPUP	**Villa Florida**	**37.67**	**284**	P	**P**	**06 57 34.7**	**+0.1**
	comp=Z,7.8nm,1.0s,baz=112,slow=8.6,SNR=10						
CPUP				LR	LR	07 12 05.1	
	comp=Z,89nm,18.3s,baz=208,slow=35						
	comp=Z,7.8nm,1.0s						
CPUP	**Villa Florida**	**37.67**	**284**	P	**P**	**06 57 35.4**	**+0.8**
LBTB	**Lobatse**	**38.66**	**75**	P	**P**	**06 57 42.4**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=169,slow=13,SNR=2.7						
LBTB				LR	LR	07 10 38.1	
	comp=Z,137nm,20.2s,baz=226,slow=32						
	comp=Z,3.8nm,0.9s						
BDFB	**Brasilia**	**39.22**	**306**	P	**P**	**06 57 47.5**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=130,slow=12,SNR=5.2						
BDFB				LR	LR	07 11 32.2	
	comp=Z,60nm,18.8s,baz=191,slow=32						
	comp=Z,3.7nm,0.9s						
BDFB	**Brasilia**	**39.22**	**306**	P	**P**	**06 57 48.3**	**+0.5**
PLCA	**Paso Flores**	**39.83**	**255**	P	**P**	**06 57 53.2**	**+0.5**
	comp=Z,2.5nm,1.1s,baz=248,slow=3.5,SNR=2.0						
PLCA				LR	LR	07 11 09.1	
	comp=Z,137nm,20.2s,baz=140,slow=31						
	comp=Z,2.5nm,1.1s						
PLCA	**Paso Flores**	**39.83**	**255**	P	**P**	**06 57 52.3**	**-0.5**
RCBR	**Riachuelo**	**41.87**	**329**	LR	LR	07 12 45.6	
	comp=Z,53nm,18.4s,baz=318,slow=32						
RCBR	**Riachuelo**	**41.87**	**329**	P	**P**	**06 58 09.5**	**-0.1**
BO02	**Sierra Bellavi**	**42.64**	**263**	P	**P**	**06 58 15.6**	**-0.4**
BO02				IAmb	IAmb	06 58 25.6	
	comp=Z,22nm,1.3s						
BO01	**Tunca**	**43.06**	**263**	P	**P**	**06 58 18.8**	**-0.4**
BO01				IAmb	IAmb	06 58 25.2	
	comp=Z,31nm,1.4s						
MT09	**Talagante**	**43.30**	**264**	P	**P**	**06 58 21.0**	**-0.3**
MT09				IAmb	IAmb	06 58 32.7	
	comp=Z,45nm,1.5s						
MT01	**Popeta**	**43.44**	**264**	P	**P**	**06 58 22.0**	**-0.3**
MT01				IAmb	IAmb	06 58 43.2	
	comp=Z,32nm,1.1s						
VA03	**San Esteban**	**43.50**	**266**	P	**P**	**06 58 23.3**	**+0.4**
VA03				IAmb	IAmb	06 58 38.0	
	comp=Z,27nm,1.1s						
MT02	**Curacav**	**43.67**	**265**	P	**P**	**06 58 24.1**	**0.0**
MATP	**Matopo**	**43.69**	**72**	P	**P**	**06 58 24.1**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=243,slow=5.8,SNR=6.8						
	comp=Z,2.7nm,0.6s						
CO03	**El Pedregal**	**44.63**	**268**	P	**P**	**06 58 32.1**	**+0.1**
CO03				IAmb	IAmb	06 58 34.2	
	comp=Z,26nm,1.5s						
CO01	**Juntas del Tor**	**44.67**	**269**	P	**P**	**06 58 33.5**	**+1.0**
CO01				IAmb	IAmb	06 58 40.0	
	comp=Z,24nm,1.4s						
AC05	**El Transito**	**45.44**	**271**	P	**P**	**06 58 38.8**	**+0.4**
AC05				IAmb	IAmb	06 58 45.8	
	comp=Z,16nm,1.0s						
LCO	**Las Campanas**	**45.65**	**270**	P	**P**	**06 58 39.9**	**-0.3**
MAW	**Mawson**	**46.13**	**149**	P	**P**	**06 58 43.3**	**+0.1**
QSPA	**South Pole Qui**	**46.24**	**180**	P	**P**	**06 58 44.9**	**+0.5**
QSPA				IAmb	IAmb	06 58 46.4	
	comp=Z,19nm,1.1s						
AC04	**Llanos de Chal**	**46.38**	**271**	P	**P**	**06 58 45.5**	**-0.2**
AC04				IAmb	IAmb	06 58 52.1	
	comp=Z,7.6nm,0.8s						
LSZ	**Lusaka**	**47.10**	**67**	LR	LR	07 15 27.9	
	comp=Z,130nm,21.6s,baz=236,slow=32						
SIV	**San Ignacio**	**47.20**	**292**	LR	LR	07 16 01.7	
	comp=Z,112nm,21.0s,baz=108,slow=33						
AC01	**Pan de Azucar**	**47.24**	**273**	P	**P**	**06 58 53.0**	**+0.5**
LVC	**Limon Verde**	**48.20**	**278**	LR	LR	07 17 12.7	
	comp=Z,38nm,21.5s,baz=172,slow=34						
PB01	**IPOC Station P**	**49.61**	**280**	P	**P**	**06 59 11.6**	**+0.6**
PB01				IAmb	IAmb	06 59 17.6	
	comp=Z,8.9nm,0.8s						
LIC	**Lamto**	**50.98**	**14⇑**	*i*P	**P**	**06 59 21.9**	**+0.8**
	comp=Z,30nm,1.0s						
KIC	**Kosan Boka**	**51.16**	**14⇑**	*i*P	**P**	**06 59 23.1**	**+0.6**
	comp=Z,6.3nm,0.6s						
TIC	**Toumodi**	**51.39**	**14⇑**	*i*P	**P**	**06 59 24.8**	**+0.6**
	comp=Z,16nm,0.9s						
PB16	**IPOC Station P**	**51.40**	**282**	P	**P**	**06 59 25.4**	**+0.3**
LPAZ	**La Paz**	**51.82**	**285**	P	**P**	**06 59 26.6**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=28,slow=4.9,SNR=4.8						
LPAZ				LR	LR	07 21 10.4	
	comp=Z,178nm,19.1s,baz=79,slow=36						
	comp=Z,0.7nm,0.5s						
LPAZ	**La Paz**	**51.82**	**285**	P	**P**	**06 59 27.0**	**-1.2**
BBTS	**Babate**	**58.39**	**359**	LR	LR	07 20 55.3	
	comp=Z,66nm,18.5s,baz=169,slow=32						
SBA	**Scott Base**	**58.39**	**181**	P	**P**	**07 00 15.2**	**+1.1**
SBA				IAmb	IAmb	07 00 16.1	
	comp=Z,8.1nm,1.0s						
VNDA	**Vanda**	**58.73**	**179**	P	**P**	**07 00 17.0**	**+0.5**
	comp=Z,8.1nm,1.1s,baz=200,slow=7.6,SNR=26						
VNDA				LR	LR	07 23 25.0	
	comp=Z,34nm,18.6s,baz=147,slow=34						
	comp=Z,8.1nm,1.1s						
VNDA	**Vanda**	**58.73**	**179**	P	**P**	**07 00 16.9**	**+0.4**
VNDA				IAmb	IAmb	07 00 18.7	
	comp=Z,17nm,1.2s						
TOA0	**Torodi Ar. Sit**	**59.13**	**20**	P	**P**	**07 00 19.5**	**-0.4**
TOA0				IAmb	IAmb	07 00 27.3	
	comp=Z,8.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**59.13**	**20**	P	**P**	**07 00 20.1**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=197,slow=7.6,SNR=13						
TORD				LR	LR	07 20 38.1	
	comp=Z,31nm,19.8s,baz=213,slow=31						
	comp=Z,4.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**59.13**	**20**	P	**P**	**07 00 20.1**	**+0.1**
TORD				IAmb	IAmb	07 00 21.6	
	comp=Z,8.2nm,1.2s						
KOWA	**Kowa**	**59.24**	**14**	LR	LR	07 20 48.7	
	comp=Z,26nm,20.2s,baz=216,slow=31						
KOWA	**Kowa**	**59.24**	**14**	P	**P**	**07 00 21.1**	**+0.3**
MBAR	**Mbarara**	**59.88**	**57**	LR	LR	07 23 32.0	
	comp=Z,92nm,19.0s,baz=283,slow=33						
NNA	**Nana**	**60.88**	**282**	LR	LR	07 26 35.9	
	comp=Z,67nm,20.4s,baz=145,slow=36						
RER	**Riviere de l'E**	**62.63**	**94**	P	**P**	**07 00 43.1**	**-0.9**
CASY	**Casey**	**62.64**	**159**	P	**P**	**07 00 43.2**	**-0.1**
BOSC	**San Juan Bosco**	**68.27**	**288**	P	**P**	**07 01 20.4**	**-0.3**
BOSC				IAmb	IAmb	07 01 30.6	
	comp=Z,3.9nm,0.7s						
TOSP	**Speyside**	**68.32**	**312**	P	**P**	**07 01 19.6**	**-1.0**
ARNL	**Arenillas**	**69.07**	**286**	P	**P**	**07 01 25.4**	**-0.1**
TULM	**Tulcn-Chalpat**	**70.60**	**291**	P	**P**	**07 01 33.6**	**-1.8**
TULM				IAmb	IAmb	07 01 38.0	
	comp=Z,12nm,1.1s						
BIRV	**Birongo**	**70.83**	**307**	P	**P**	**07 01 35.7**	**-0.5**
ROSC	**El Rosal**	**71.38**	**296**	LR	LR	07 32 10.6	
	comp=Z,132nm,18.3s,baz=206,slow=35						
ATD	**Arta Tunnel**	**76.79**	**59**	LR	LR	07 33 12.2	
	comp=Z,85nm,20.6s,baz=52,slow=34						
KEST	**Kesra**	**82.65**	**21**	P	**P**	**07 02 43.7**	**+1.2**
	comp=Z,5.0nm,1.0s,baz=180,slow=5.1,SNR=3.0						
KEST				LR	LR	07 35 22.5	
	comp=Z,38nm,21.2s,baz=296,slow=33						
	comp=Z,5.0nm,1.0s						
ESDC	**Sonseca Array**	**84.01**	**9**	P	**P**	**07 02 50.7**	**+1.3**
	comp=Z,2.3nm,1.0s,baz=188,slow=4.7,SNR=9.6						
	comp=Z,2.3nm,1.0s						
ESDC	**Sonseca Array**	**84.01**	**9**	P	**P**	**07 02 50.0**	**+0.6**
RAYN	**Ar Rayn**	**87.63**	**54**	P	**P**	**07 03 07.8**	**+0.1**
BRTR	**Keskin Array B**	**94.61**	**36**	P	**P**	**07 03 41.2**	**+1.3**
	comp=Z,1.9nm,1.1s,baz=197,slow=4.5,SNR=1.8						
	comp=Z,1.9nm,1.1s						
WSAR	**Wadi Sarin**	**95.48**	**63**	LR	LR	07 43 12.3	
	comp=Z,50nm,20.7s,baz=205,slow=33						
PDAR	**Pinedale Array**	**120.11**	**302**	PKP	**PKPdf**	**07 09 08.8**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=122,slow=5.4,SNR=3.7						
NVAR	**Mina Array Bea**	**123.34**	**293**	PKP	**PKPdf**	**07 09 16.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=126,slow=2.3,SNR=3.5						
INK	**Inuvik**	**140.07**	**329**	PKP	**PKPdf**	**07 09 46.7**	**+0.2**
	comp=Z,7.2nm,1.1s,baz=352,slow=7.5,SNR=6.2						
ILAR	**Eielson Array**	**145.90**	**325**	PKPbc	**PKPbc**	**07 09 57.5**	**-0.1**
	comp=Z,5.5nm,0.8s,baz=97,slow=2.2,SNR=50						
KSRS	**Korea Array**	**152.03**	**91**	PKPab	**PKPab**	**07 10 24.1**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=243,slow=5.3,SNR=4.9						
MJAR	**Matsushiro Arr**	**159.00**	**102**	PKPab	**PKPab**	**07 10 52.3**	**-1.4**
	comp=Z,2.9nm,1.1s,baz=233,slow=4.2,SNR=5.0						

IDC 16 06:58:55.3±7.8, 6°.06S×147°.06E, h133km±105km, mb3.2/2, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=143.9km s-min=31.0km az=124.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**178**	P	Pn	06 59 46.8	+0.5
	7.8nm,0.5s,baz=33,slow=22,SNR=1.9						
PMG				S	Sn	07 00 26.1	+0.4
	8.8nm,0.4s,baz=192,slow=20,SNR=5.9						
WRA	**Warramunga Arr**	**18.53**	**221**	P	P	07 03 01.1	-0.5
	0.2nm,0.3s,baz=42,slow=12,SNR=8.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**21.61**	**215**	P	P	07 03 35.0	+0.2
	0.4nm,0.5s,baz=47,slow=8.2,SNR=5.0						
	0.4nm,0.5s						
PETK	**Petropavlovsk-**	**59.63**	**7**	P	P	07 08 45.1	0.0
	0.8nm,0.5s,baz=134,slow=4.2,SNR=2.5						
	0.8nm,0.5s						

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*SNET **16** 07:31:12.2±0.9, 12°.47N×87°.85W, h43km±47km, ML3.1*
*INET **16** 07:31:12.6±0.9, 12°.31N×87°.56W, h15km±20km, MW3.0*
ISC 16 07:31:08.8±2.0, 12°.31N±0°.10×87°.77W±0°.05, h29km±15km, n18, σ0°.77/31, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.81**	**61**	*e*P	**Pn**	**07 31 25.8**	**+1.5**
CRIN				*e*S	**Sn**	**07 31 35.3**	**-0.1**
CNCH	**Conchagua**	**0.97**	**356**	*e*P	**Pb**	**07 31 26.9**	**-0.2**
CNCH				*e*S	**Sb**	**07 31 39.6**	**+0.1**
CNCH				IAML		07 31 42.1	
	comp=Z,2μm,0.3s						
CNGN	**Cerro Negro**	**1.07**	**79**	*e*P	**Pn**	**07 31 27.5**	**-0.4**
COPN	**Copaltepe**	**1.16**	**96**	*e*P	**Pn**	**07 31 29.9**	**+0.8**
MOMN	**Momotombo**	**1.21**	**85**	*e*P	**Pb**	**07 31 30.7**	**-0.4**
PACA	**Pacayal**	**1.27**	**335**	*e*P	**Pn**	**07 31 31.8**	**+1.0**
PACA				*e*S	**Sn**	**07 31 46.7**	**-0.3**
PACA				IAML		07 31 51.4	
	comp=Z,2μm,0.2s						
COEB	**Comit de Eme**	**1.40**	**328**	*e*P	**Pn**	**07 31 32.9**	**+0.4**
COEB				*e*S	**Sn**	**07 31 48.9**	**-1.1**
PQSS	**Presa 15 de Se**	**1.52**	**330**	*e*P	**Pn**	**07 31 34.8**	**+0.8**
PQSS				*e*S	**Sn**	**07 31 52.0**	**-0.8**
UESV	**Universidad de**	**1.65**	**323**	*e*P	**Pn**	**07 31 36.5**	**+0.6**
UESV				*e*S	**Sn**	**07 31 55.6**	**-0.6**
UESV				IAML		07 31 57.9	
	comp=Z,91nm,0.1s						
SCLA	**Alcaldia de Sa**	**1.67**	**326**	*e*P	**Pn**	**07 31 37.1**	**+0.9**
SCLA				*e*S	**Sn**	**07 31 56.1**	**-0.6**
COEG	**Centro de Oper**	**1.69**	**321**	*e*P	**Pn**	**07 31 37.2**	**+0.6**
COEG				*e*S	**Sn**	**07 31 56.7**	**-0.6**
SJTE	**Alcalda de S**	**1.77**	**317**	*e*P	**Pn**	**07 31 38.2**	**+0.6**
SJTE				*e*S	**Sn**	**07 31 58.2**	**-1.0**
PAVA	**Las Pavas**	**1.80**	**321**	*e*P	**Pn**	**07 31 39.1**	**+1.1**
PAVA				IAML		07 32 05.4	
	comp=Z,50nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.81**	**16**	*e*P	**Pn**	**07 31 38.6**	**+0.5**
LFRS	**El Faro**	**1.82**	**316**	*e*P	**Pn**	**07 31 39.0**	**+0.7**
LFRS				*e*S	**Sn**	**07 31 60.0**	**-0.4**
P5NO	**Presa 5 de nov**	**1.93**	**330**	*e*P	**Pn**	**07 31 40.4**	**+0.8**
P5NO				*e*S	**Sn**	**07 32 02.2**	**-0.7**
PMON	**Piamonte**	**2.05**	**313**	*e*P	**Pn**	**07 31 42.1**	**+0.7**
PMON				*e*S	**Sn**	**07 32 06.0**	**-0.2**
NUBE	**Las Nubes**	**2.52**	**309**	*e*P	**Pn**	**07 31 49.0**	**+1.0**
NUBE				*e*S	**Sn**	**07 32 17.0**	**-0.8**

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*BJI **16** 07:36:56.3±0.0, 38°.11N×141°.94E, h5km, mb5.1/75, mB5.0/40, Ms4.5/68, Ms7 4.3/66*
*MOS **16** 07:37:02.5±1.0, 38°.39N×141°.51E, h18km, mb5.3/71, Error ellipse: s-maj=6.1km s-min=3.8km az=113.8*
*NEIC **16** 07:37:03.9±1.0, 38°.27N±0°.05×141°.59E±0°.06, h18km±4km, mb5.1/189, Mwr4.6/22, Mww4.7, Error ellipse: s-maj=9.3km s-min=4.0km az=135.0*
*JMA **16** 07:37:04.8±0.1, 38°.3N±0°.3×141°.5E±0°.4, h20km, MD5.2/20, MW4.7/20, KINKAZAN REGION*
JMA Felt IV J1 at KINKAZAN REGION .
*NIED **16** 07:37:04.8, 38°.32N×141°.53E, h20km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.65; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$0.51; $M_{r\theta}$-0.21; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.64; Fault plane solution: $M_0$1.24000×10^{16} NP1:ϕ_s46.00000°, δ56.00000°, λ35.00000°. NP2:ϕ_s295.00000°, δ62.00000°, λ140.00000°.*
*NEIC **16** 07:37:04.6, 38°.29N×141°.53E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.32; $M_{\theta\theta}$-8.70; $M_{\phi\phi}$6.38; $M_{r\theta}$-2.92; $M_{\theta\phi}$-0.77; $M_{\phi r}$3.65; Fault plane solution: $M_0$9.13000×10^{15} NP1:ϕ_s307.77000°, δ78.36000°, λ146.10000°. NP2:ϕ_s45.49000°, δ56.89000°, λ13.94000°. Principal axes: T 8.7928, Plg32.0000°, Azm262.0000°; N 0.6319, Plg54.0000°, Azm111.0000°; P -9.4247, Plg14.0000°, Azm1.0000°;*
*NEIC **16** 07:37:07, 38°.40N×141°.66E, h26km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.56; $M_{\theta\theta}$-1.58; $M_{\phi\phi}$1.02; $M_{r\theta}$-0.48; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.62; Fault plane solution: $M_0$1.62000×10^{16} NP1:ϕ_s44.00000°, δ57.00000°, λ19.00000°. NP2:ϕ_s303.00000°, δ74.00000°, λ145.00000°. Principal axes: T 1.5347, Plg36.0000°, Azm258.0000°; N 0.1600, Plg52.0000°, Azm101.0000°; P -1.6947, Plg11.0000°, Azm356.0000°;*
*GCMT **16** 07:37:07.9±0.4, 38°.32N±0°.02×141°.30E±0°.03, h27km±1km, MW4.8/92, Moment Tensor Solution. s19,c21; s92,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm

JFK Kawauchi 1.11 211 ⇓*i*P **Pb 07 37 23.7 -0.2**
JFK ⇓S **Sb 07 37 38.0 0.0**
JFK Kawauchi 1.11 211 A A 07 37 23.7
comp=E,146nm,1.1s,comp=E,70nm,1.8s
JYK Kaneyama 1.14 302 ⇓*i*P **Pn 07 37 24.3 -0.1**
JYK ⇓S **Sb 07 37 39.2 +0.2**
JYK Kaneyama 1.14 302 A A 07 37 24.3
comp=E,79nm,2.8s,comp=E,57nm,1.3s
JOM Ohasama 1.18 348 ⇓*i*P **Pg 07 37 25.5 -0.5**
JOM ⇓S **Sg 07 37 41.4 0.0**
JOM Ohasama 1.18 348 A A 07 37 25.5
comp=E,135nm,0.4s,comp=E,83nm,0.3s
JYS Shiratake 1.21 266 *i*P **Pb 07 37 25.6 0.0**
JYS S **Sn 07 37 41.4 +0.1**
JYS Shiratake 1.21 266 A A 07 37 25.6
comp=E,92nm,1.5s,comp=E,70nm,1.8s
JYAR Yonezawaarcadi 1.22 251 A A 07 37 25.9
comp=E,324nm,1.2s,comp=E,303nm,1.3s
JOTO OTAMA OYAMA 1.25 233 *i*P **Pb 07 37 26.6 +0.2**
JOTO S **Sb 07 37 42.4 +0.2**
JOTO OTAMA OYAMA 1.25 233 A A 07 37 26.6
comp=E,374nm,0.6s,comp=E,450nm,1.4s
MIYJ Miyakonagasawa 1.27 8 A A 07 37 27.5
comp=E,75nm,0.7s,comp=E,85nm,0.9s
JRG Rokugo 1.32 325 A A 07 37 27.7
comp=E,169nm,0.6s,comp=E,168nm,0.9s
JFFD Fukushimafurud 1.47 214 A A 07 37 30.3
comp=E,141nm,1.7s,comp=E,88nm,1.2s
JYYZ Yamagatayuza 1.48 299 A A 07 37 29.9
comp=E,275nm,2.8s,comp=E,209nm,2.8s
JYA Atsumi 1.51 281 A A 07 37 30.3
comp=E,219nm,1.0s,comp=E,178nm,0.7s
JSZI Iwateshizukuis 1.51 341 A A 07 37 30.8
comp=E,116nm,2.8s,comp=E,129nm,1.5s
JTH Tanohata 1.63 7 A A 07 37 33.1
comp=E,79nm,1.6s,comp=E,57nm,0.6s
JYW Yuwa 1.64 319 A A 07 37 32.5
comp=E,282nm,1.6s,comp=E,281nm,1.5s
JKZ Kuzumaki 1.68 353 A A 07 37 33.6
comp=E,101nm,0.6s,comp=E,92nm,0.8s
JFY Yanaizu 1.75 239 A A 07 37 34.1
comp=E,23nm,1.6s,comp=E,23nm,3.7s
JTB Tobi-shima 1.82 299 A A 07 37 35.1
comp=E,112nm,0.9s,comp=E,58nm,1.3s
JAW Awa shima 1.85 275 A A 07 37 35.5
comp=E,19nm,0.8s,comp=E,20nm,0.7s
JNS Sasagawa 1.87 255 A A 07 37 35.7
comp=E,13nm,1.6s,comp=E,12nm,2.7s
JHO Hitachi 1.89 206 A A 07 37 36.5
comp=E,32nm,1.5s,comp=E,26nm,0.7s
JKEN Kujiedanarisaw 1.89 3 A A 07 37 36.7
comp=E,255nm,1.1s,comp=E,280nm,0.9s
JSB Shiboa 1.89 225 A A 07 37 36.3
comp=E,138nm,1.0s,comp=E,94nm,1.6s
JAH Hinai 2.02 338 A A 07 37 38.3
comp=E,38nm,2.1s,comp=E,42nm,1.1s
JANG Nango 2.06 358 A A 07 37 39.1
comp=E,73nm,1.5s,comp=E,37nm,1.3s
JHYU Hitachinakayam 2.13 203 A A 07 37 40.1
comp=E,32nm,0.6s,comp=E,33nm,0.7s
JNTW Noshirotokiwa 2.25 331 A A 07 37 41.5
comp=E,107nm,1.3s,comp=E,111nm,2.9s
JUON Uonuma 2.30 242 A A 07 37 42.0
comp=E,9.0nm,3.3s,comp=E,10.0nm,6.6s
JYT Yasato 2.37 209 Pn **Pn 07 37 41.2 0.0**
JYT Yasato 2.37 209 A A 07 37 43.4
comp=E,85nm,0.6s,comp=E,41nm,0.4s
JIZZ Izumozaki 2.42 252 A A 07 37 43.7
comp=E,56nm,2.2s,comp=E,54nm,2.1s
JIHU Itakohorinouch 2.50 200 A A 07 37 45.4
comp=E,88nm,2.5s,comp=E,95nm,2.0s
JTM Tenmabayashi 2.50 351 Pn **Pn 07 37 44.9 +1.8**
JTM Tenmabayashi 2.50 351 A A 07 37 45.4
comp=E,27nm,2.5s,comp=E,21nm,2.3s
JHHS Hirosakihyakuz 2.52 338 A A 07 37 45.5
comp=E,45nm,1.2s,comp=E,54nm,2.1s
JOG3 Oga3 2.53 310 A A 07 37 39.6
comp=E,52nm,1.3s,comp=E,41nm,1.9s
JAG Ashikaga 2.55 223 A A 07 37 45.8
comp=E,13nm,1.7s,comp=E,18nm,0.6s
JIW Iwasaki 2.59 332 A A 07 37 46.4
comp=E,37nm,0.8s,comp=E,27nm,1.2s
JSD Sado 2.65 265 Pn **Pn 07 37 45.3 +0.3**
JSD Sado 2.65 265 A A 07 37 46.9
comp=E,8.0nm,4.3s,comp=E,7.0nm,9.5s
CHOJ Chosi 2.67 193 A A 07 37 48.0
comp=E,10.0nm,1.1s,comp=E,12nm,1.4s
JARK Aomorirokkasho 2.69 356 A A 07 37 48.2
comp=E,37nm,2.0s,comp=E,33nm,1.4s
JSMT Sammumatsuo 2.82 199 A A 07 37 50.1
comp=E,34nm,4.5s,comp=E,35nm,4.5s
JSI2 Shiura 2 2.89 342 A A 07 37 50.8
comp=E,25nm,2.5s,comp=E,25nm,0.9s
JGK Kuni 2.94 234 A A 07 37 51.2
comp=E,16nm,2.2s,comp=E,19nm,4.0s
JAHD Aomorihigashid 2.95 356 A A 07 37 51.9
comp=E,94nm,1.0s,comp=E,80nm,1.0s
JJN Nakama 2.98 247 A A 07 37 51.8
comp=E,18nm,2.4s,comp=E,15nm,2.2s
TOK Tokyo 3.01 210 A A 07 37 52.6
comp=E,81nm,1.4s,comp=E,71nm,2.4s
JHU Hanno 3.08 218 A A 07 37 53.4
comp=E,28nm,2.7s,comp=E,49nm,1.8s
JOT Ohata 3.09 352 A A 07 37 53.9
comp=E,21nm,1.2s,comp=E,22nm,0.9s
JCN Nagara 3.10 202 A A 07 37 54.0
comp=E,49nm,3.8s,comp=E,37nm,1.3s
JRY Ryogami san 3.15 224 A A 07 37 54.4
comp=E,16nm,1.5s,comp=E,31nm,5.9s
MJAR Matsushiro Arr 3.23 238 P **Pn 07 37 55.4 +2.4**
5.4nm,0.3s,baz=35,slow=13,SNR=625
MJAR S **Sb 07 38 38.1 -0.9**
388nm,0.7s,baz=322,slow=19,SNR=6.5
66nm,0.4s
MAJO Matsushiro 3.23 238 Pn **Pn 07 37 55.4 +2.3**
MAJO Matsushiro 3.23 238 P **Pn 07 37 55.4 +2.3**
MAJO Matsushiro 3.23 238 P **Pn 07 37 55.9 +2.8**
MJB9 Matsu-Tunnel 3.23 238 Pn 07 37 56.2 +3.1
JSGW Sagamiharawaka 3.32 216 A A 07 37 56.9
comp=E,14nm,0.9s,comp=E,17nm,2.5s
JSR Shiriuchi 3.34 345 A A 07 37 57.2
comp=E,10.0nm,2.9s,comp=E,15nm,2.5s
JKUC kamogawauchiur 3.34 200 A A 07 37 57.5
comp=E,14nm,1.5s,comp=E,11nm,2.1s
JNG Nsakai 3.38 237 A A 07 37 57.5
comp=E,5.0nm,1.1s,comp=E,8.0nm,5.1s
JOMM Oshimamatsumae 3.43 340 A A 07 37 58.5
comp=E,10.0nm,0.9s,comp=E,9.0nm,3.9s
JYO Yokosk 3.45 207 A A 07 37 58.9
comp=E,36nm,6.4s,comp=E,19nm,0.8s
JSZ Suzu 3.46 257 A A 07 37 58.6
comp=E,6.0nm,2.0s,comp=E,4.0nm,2.0s
JKB Kayabe 3.59 353 A A 07 38 01.0
comp=E,17nm,4.3s,comp=E,14nm,3.4s
JOD2 Odawara 2 3.65 214 A A 07 38 01.6
comp=E,22nm,3.0s,comp=E,12nm,4.7s
JHG Hegura jima 3.72 264 A A 07 38 02.2
comp=E,4.0nm,6.1s,comp=E,4.0nm,7.7s
JYN Shimob 3.73 222 A A 07 38 02.6
comp=E,16nm,7.0s,comp=E,18nm,1.9s
JTT Ttatey 3.80 245 A A 07 38 03.4
comp=E,9.0nm,3.7s,comp=E,6.0nm,6.1s
ERM Erimo 3.88 17 Pn **Pn 07 38 02.9 +0.9**
ERM Erimo 3.88 17 P **Pn 07 38 02.9 +0.9**
ERM Erimo 3.88 17 P **Pn 07 38 04.3 +2.3**
JEM Erimo 3.88 17 A A 07 38 05.4
comp=E,6.0nm,7.3s,comp=E,5.0nm,9.1s
JFNN Fujinakano 3.90 218 A A 07 38 05.0
comp=E,21nm,3.1s,comp=E,20nm,3.9s
JYM2 Yakumo 2 3.91 346 A A 07 38 05.4
comp=E,10.0nm,3.2s,comp=E,13nm,1.7s
JHTM Izuhatsuma 3.94 213 A A 07 38 05.8
comp=E,25nm,1.7s,comp=E,21nm,1.4s
JIM2 Oshima 3 3.99 207 A A 07 38 06.5
comp=E,13nm,1.1s,comp=E,17nm,1.6s
JNBK Urakawa-nobuka 4.06 12 A A 07 38 07.8
comp=E,15nm,1.8s,comp=E,13nm,2.5s
JJH Hakui 4.07 252 A A 07 38 07.2
comp=E,4.0nm,5.0s,comp=E,5.0nm,2.1s
JSHD Hidakashinhida 4.14 9 A A 07 38 08.9
comp=E,17nm,2.7s,comp=E,17nm,2.0s
JNB Noboribetsu 4.17 354 A A 07 38 09.2
comp=E,5.0nm,5.0s,comp=E,3.0nm,5.1s
JIZS Izushimoda 4.21 212 A A 07 38 09.5
comp=E,8.0nm,1.6s,comp=E,6.0nm,1.5s
JNY Yasuok 4.21 227 A A 07 38 09.3
comp=E,11nm,1.3s,comp=E,19nm,1.8s

JTHY Toshimahigashi 4.22 207 A A 07 38 09.7
comp=E,10.0nm,2.1s,comp=E,12nm,1.8s
SHZ3 Shizuoka 3 4.24 221 A A 07 38 09.8
comp=E,14nm,3.0s,comp=E,12nm,2.6s
JHST Hiyamasetana 4.31 343 A A 07 38 10.9
comp=E,8.0nm,2.4s,comp=E,11nm,1.5s
JIAM Iburiatsuma 4.31 3 A A 07 38 11.2
comp=E,18nm,1.0s,comp=E,22nm,1.0s
JGF Kuroka 4.34 233 Pn **Pn 07 38 09.5 +1.1**
JGF Kuroka 4.34 233 A A 07 38 11.2
comp=E,5.0nm,4.3s,comp=E,5.0nm,3.9s
JNIO Niijimaoohara 4.37 206 A A 07 38 11.9
comp=E,15nm,2.3s,comp=E,13nm,2.3s
JSKK Shikinejimakit 4.42 207 A A 07 38 12.5
comp=E,9.0nm,2.1s,comp=E,8.0nm,2.1s
JSH Shimam 4.48 345 A A 07 38 13.4
comp=E,4.0nm,4.8s,comp=E,5.0nm,8.3s
JBT2 Biratori 2 4.50 7 A A 07 38 13.9
comp=E,7.0nm,1.8s,comp=E,5.0nm,8.9s
JCH Churui 4.50 17 A A 07 38 14.1
comp=E,6.0nm,3.2s,comp=E,7.0nm,1.6s
JEW Eniwo 4.52 359 Pn **Pn 07 38 12.3 +1.5**
JEW Eniwo 4.52 359 A A 07 38 14.2
comp=E,13nm,1.6s,comp=E,10.0nm,1.0s
JSG Sagara 4.56 218 A A 07 38 14.3
comp=E,17nm,3.3s,comp=E,13nm,3.4s
JMYK Miyake Tsubota 4.56 202 A A 07 38 14.6
comp=E,8.0nm,3.4s,comp=E,8.0nm,5.9s
JKO Kozu shima 4.58 207 A A 07 38 14.7
comp=E,15nm,3.6s,comp=E,10.0nm,2.7s
JKKS Kakegawashinom 4.59 220 A A 07 38 14.9
comp=E,23nm,5.3s,comp=E,14nm,1.7s
JAO Obara 4.62 230 A A 07 38 15.2
comp=E,8.0nm,2.4s,comp=E,10.0nm,3.6s
HMMJ Hamamatsu 2 4.65 223 A A 07 38 15.6
comp=E,5.0nm,7.2s,comp=E,7.0nm,3.5s
INU Inuyama 4.72 233 Pn **Pn 07 38 13.3 -0.2**
INU Inuyama 4.72 233 P **Pn 07 38 17.1 +3.6**
JICN Ichinomiyachia 4.86 233 A A 07 38 18.4
comp=E,10.0nm,7.2s,comp=E,12nm,6.4s
JOB Onbets 4.89 20 A A 07 38 19.6
comp=E,6.0nm,2.8s,comp=E,7.0nm,1.2s
JFR Furan 4.90 9 A A 07 38 19.6
comp=E,5.0nm,3.2s,comp=E,5.0nm,1.7s
JISS Ishikarishitsu 4.96 358 A A 07 38 20.2
comp=E,8.0nm,2.7s,comp=E,9.0nm,1.5s
JAA Atsumi 5.14 226 A A 07 38 22.4
comp=E,6.0nm,2.2s,comp=E,8.0nm,3.9s
JAB Ashibetsu 5.21 5 A A 07 38 23.8
comp=E,7.0nm,1.4s,comp=E,8.0nm,3.5s
JEG Eigenji 5.25 234 A A 07 38 23.9
comp=E,3.0nm,7.6s,comp=E,4.0nm,4.5s
JFM Mihama 5.29 240 A A 07 38 24.4
comp=E,2.0nm,3.6s,comp=E,5.0nm,6.1s
JHJ Hachijo jima 2 5.39 196 P **Pn 07 38 23.8 +1.1**
110nm,0.3s,baz=271,slow=19,SNR=15
JHJ S **Sn 07 39 21.4 -3.0**
493nm,0.3s,baz=76,slow=22,SNR=1.8
184nm,0.3s
JHJ2 Mitsune 5.39 196 Pn **Pn 07 38 23.0 +0.2**
JKHN Kushirohamanak 5.48 28 A A 07 38 27.9
comp=E,7.0nm,2.3s,comp=E,7.0nm,1.3s
JIE Ise 5.56 227 A A 07 38 28.3
comp=E,6.0nm,4.3s,comp=E,10.0nm,3.4s
NMR Nemuro--Hokkai 5.94 30 ⇓*i*P **Pn 07 38 29.7 -0.6**
NMR *e*S **Sn 07 39 33.3 -4.6**
RUSJ Misakicho 6.40 24 ⇓*i*P **Pn 07 38 37.0 +0.4**
RUSJ *e*S **Sn 07 39 45.6 -3.7**
YUK Yuzh-Kuril'sk 6.55 28 ⇓*i*P **Pn 07 38 38.2 -0.5**
YUK *e*S **Sn 07 39 49.1 -3.9**
YUK pmax pmax
comp=N,210nm,0.3s
YUK pmax pmax
comp=E,256nm,0.3s
YUK pmax pmax
comp=Z,1μm,0.3s
JHS Saijyo 7.58 247 Pn **Pn 07 38 55.5 +2.7**
TEY Ternei 7.69 332 *e*P **Pn 07 38 58.2 +4.0**
TEY pmax pmax
comp=N,300nm,1.1s
TEY pmax pmax
comp=E,200nm,1.1s
TEY pmax pmax
comp=Z,200nm,1.1s
TEY pmax pmax
comp=N,290nm,0.9s
TEY pmax pmax
comp=E,180nm,0.9s
TEY pmax pmax
comp=Z,240nm,0.9s
JMN Monobe 7.75 236 Pn **Pn 07 38 56.6 +1.4**
KUR Kuril'sk 8.35 32 *c i*P **Pn 07 39 03.6 +0.3**
KUR *i*S **Sn 07 40 33.2 -3.9**
KUR pmax pmax
comp=E,74nm,0.5s
KUR pmax pmax
comp=Z,272nm,0.5s
KUR pmax pmax
comp=N,55nm,0.6s
KUR smax smax
comp=E,544nm,0.5s
KUR smax smax
comp=N,287nm,0.4s
KUR MLR MLR
comp=Z,600nm,12.0s
YSS Yuzh-Sakhalins 8.68 5 Pn **Pn 07 39 08.9 +1.1**
YSS Yuzh-Sakhalins 8.68 5 *e*P **Pn 07 39 08.9 +1.1**
YSS *e*S **Sn 07 40 43.9 -1.2**
YSS pmax pmax
comp=Z,70nm,1.4s
YSS pmax pmax
comp=Z,200nm,2.9s
YSS smax smax
comp=E,500nm,8.5s
YSS MLR MLR
comp=Z,900nm,11.0s
YSS MLR MLR
comp=N,700nm,12.0s
YSS Yuzh-Sakhalins 8.68 5 P **Pn 07 39 10.1 +2.3**
MSHR Mys Shultsa 9.03 301 ⇑*e*P **Pn 07 39 13.3 +0.7**
USA0B Ussuriysk Arra 9.32 312 **Pn 07 39 18.4 +1.7**
USA0B Ussuriysk Arra 9.32 312 *de*P **Pn 07 39 18.7 +2.0**
USRK Ussuriysk Ar. 9.32 312 P **Pn 07 39 18.6 +1.9**
comp=N,4.3nm,0.3s,baz=123,slow=14,SNR=43
USRK S **Sn 07 40 59.9 -1.1**
comp=N,2.5nm,0.4s,baz=97,slow=20,SNR=0.5
comp=N,42nm,0.8s
JTU Tsushima 10.53 253 Pn **Pn 07 39 38.0 +4.7**
KSRS Korea Array 10.85 270 P **Pn 07 39 42.1 +4.5**
comp=N,14nm,0.7s,baz=74,slow=13,SNR=34
KSRS LR LR 07 43 28.4
comp=N,776nm,19.8s,baz=80,slow=36
KSAR Wonju Array Be 10.88 270 Pn **Pn 07 39 40.6 +2.7**
KSAR Wonju Array Be 10.88 270 P **Pn 07 39 40.7 +2.7**
KS19 Wonju Array Si 10.88 270 **Pn 07 39 38.8 +0.7**
MDJ Mudanjiang 10.98 309 P Pn 07 39 44.5 +5.0
MDJ S **Sn 07 41 44.3 +2.4**
MDJ pmax pmax
comp=N,33nm,1.1s
MDJ pmax pmax
comp=N,220nm,3.7s
MDJ LR LR
comp=N,1μm,14.5s
MDJ LR LR
comp=N,1μm,16.4s
MDJ LR LR
comp=N,2μm,16.1s
JCJ Chichijima 11.20 177 P **Pn 07 39 42.5 0.0**
comp=N,61nm,0.3s,baz=291,slow=18,SNR=5.5
JCJ S Sn 07 41 36.9 -10
comp=N,238nm,0.7s,baz=77,slow=22,SNR=4.9
JCJ Chichijima 11.20 177 Pn **Pn 07 39 41.9 -0.5**
JCJ Chichijima 11.20 177 P **Pn 07 39 42.9 +0.4**
TJN Taejon 11.50 265 Pn **Pn 07 39 47.5 +1.0**
TJN Taejon 11.50 265 ⇓*e*P **Pn 07 39 49.2 +2.7**
TJN Taejon 11.50 265 P **Pn 07 39 48.7 +2.2**
TYV Tymovskoe 12.57 3 *e*P **Pn 07 40 01.3 +0.2**
TYV *e* 07 42 23.5
TYV pmax pmax
comp=Z,200nm,3.6s
TYV pmax pmax
comp=Z,24nm,1.1s
GRNR Gornyy 12.98 345 ⇓*i*P **Pn 07 40 04.6 -2.1**
GRNR pmax pmax
comp=Z,5.0nm,0.7s
GRNR MLR MLR

comp=E,320nm,15.0s
GRNR MLR MLR
comp=N,620nm,14.0s
GRNR MLR MLR
comp=Z,970nm,15.0s
KLR Kul'dur 13.01 330 P **Pn 07 40 08.9 +1.7**
comp=Z,0.1nm,0.3s,baz=351,slow=23,SNR=5.9
KLR LR LR 07 45 08.1
comp=Z,331nm,18.9s,baz=146,slow=37
comp=Z,5.0nm,0.8s
CN2 Changchun 13.36 299 P **Pn 07 40 15.5 +3.6**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=Z,900nm,16.0s
CN2 LR LR
comp=Z,700nm,16.0s
CN2 LR LR
comp=Z,700nm,18.0s
OKH Okha 15.27 3 *de*P Pn 07 40 29.3 -8.4
OKH MLR MLR
comp=Z,400nm,15.0s
OKH MLR MLR
comp=N,300nm,12.0s
OKH MLR MLR
comp=E,900nm,13.0s
DL2 Dalian 15.63 278 P **P 07 40 45.8 -0.8**
DL2 S **Sn 07 43 38.8 +3.6**
DL2 pmax pmax
comp=E,110nm,1.2s
DL2 pmax pmax
comp=E,230nm,4.0s
DL2 LR LR
comp=E,480nm,10.9s
DL2 LR LR
comp=E,580nm,15.7s
DL2 LR LR
comp=E,460nm,19.6s
JOW Kunigami 16.02 228 P **Pn 07 40 46.9 -0.7**
comp=E,1.3nm,0.3s,baz=54,slow=18,SNR=2.7
JOW LR LR 07 47 10.7
comp=E,460nm,20.9s,baz=72,slow=38
comp=E,16nm,0.5s
JOW Kunigami 16.02 228 Pn **Pn 07 40 47.0 -0.7**
SKR Severo-Kuril's 16.09 35 *e*P P 07 41 01.6 +10
SKR *e*S **Sn 07 43 37.5 -8.8**
SKR pmax pmax
comp=Z,200nm,8.4s
SKR MLR MLR
comp=Z,300nm,13.0s
ZEA Zeya 18.31 332 *e*P **Pn 07 41 15.7 -0.4**
ZEA *e* 07 44 45.1
ZEA pmax pmax
comp=N,30nm,0.6s
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA MLR MLR
comp=E,300nm,10.0s
ZEA MLR MLR
comp=Z,300nm,13.0s
PEA0B Petropavlovsk- 18.51 32 P **P 07 41 16.0 -2.4**
PEA0B Petropavlovsk- 18.51 32 ⇑*i*P **P 07 41 16.4 -2.1**
PETK Petropavlovsk- 18.51 32 P **P 07 41 15.7 -2.8**
comp=Z,7.4nm,0.7s,baz=203,slow=11,SNR=13
PETK LR LR 07 49 28.4
comp=Z,270nm,18.0s,baz=221,slow=40
PETK Petropavlovsk- 18.51 32 P **P 07 41 16.1 -2.3**
PETK Petropavlovsk- 18.51 32 P **P 07 41 16.2 -2.3**
PET Petropavlovsk 18.86 33 P **P 07 41 21.4 -0.8**
PET Petropavlovsk 18.86 33 *e*P **P 07 41 21.5 -0.7**
PET *e*S **Sn 07 44 46.9 -6.4**
PET pmax pmax
comp=Z,42nm,0.8s
PET MLR MLR
comp=Z,500nm,16.0s
PET MLR MLR
comp=Z,500nm,18.0s
TIA Tai'an 19.58 271 ⇓P **P 07 41 29.4 -0.9**
TIA pmax pmax
comp=Z,48nm,1.0s
TIA pmax pmax
comp=Z,160nm,3.5s
TIA LR LR
comp=Z,570nm,11.0s
TIA LR LR
comp=Z,590nm,11.2s
TIA LR LR
comp=Z,690nm,14.8s
NJ2 Nanjing 19.59 258 *e*P **Pn 07 41 31.3 -0.5**
NJ2 pmax pmax
comp=Z,24nm,0.9s
NJ2 LR LR
comp=Z,520nm,15.2s
NJ2 LR LR
comp=Z,780nm,17.2s
NJ2 LR LR
comp=Z,1μm,19.1s
BJI Beijing 19.77 283 P **P 07 41 31.1 -1.2**
BJI pmax pmax
comp=Z,24nm,0.9s
BJI pmax pmax
comp=Z,170nm,8.7s
BJI LR LR
comp=Z,120nm,12.8s
BJI LR LR
comp=Z,390nm,13.1s
BJI LR LR
comp=Z,490nm,13.5s
BJT Baijiatuau 19.78 283 P **P 07 41 32.1 -0.3**
BJT Baijiatuau 19.78 283 P **P 07 41 32.1 -0.3**
BJT pmax pmax
comp=Z,29nm,0.7s
XLT XiLinHaoTe 19.98 294 *e*P **P 07 41 31.0 -3.7**
XLT pP Pn 07 41 33.5 -3.0
XLT sP pP 07 41 38.3 -1.3
XLT PP **PnPn 07 41 50.3 -0.3**
XLT S **S 07 45 08.3 -11**
XLT sS Sn 07 45 17.6 -3.2
YOJ Yonaguni jima 20.98 234 P **P 07 41 43.9 -1.7**
YOJ Yonaguni jima 20.98 234 P **P 07 41 43.9 -1.7**
YOJ pmax pmax
comp=Z,219nm,1.4s
HNS HongShan 21.23 276 ⇑P **P 07 41 45.6 -2.6**
HNS S **S 07 45 35.3 -8.2**
HNS pmax pmax
comp=Z,47nm,0.7s
HNS LR LR
comp=Z,350nm,12.6s
HNS LR LR
comp=Z,590nm,14.7s
HNS LR LR
comp=Z,540nm,16.7s
YHNB Yeheng 21.90 237 P **P 07 41 55.0 -0.6**
YHNB IAmb IAmb 07 41 57.1
comp=Z,53nm,0.9s
YHNB Yeheng 21.90 237 P **P 07 41 55.4 -0.1**
MA2 Magadan 22.07 12 P **P 07 41 57.5 +0.5**
comp=Z,42nm,0.6s,baz=197,slow=10,SNR=31
MA2 LR LR 07 51 05.6
comp=Z,349nm,19.3s,baz=197,slow=38
comp=Z,42nm,0.6s
MA2 Magadan 22.07 12 P **P 07 41 58.1 +1.1**
MA2 IAmb IAmb 07 41 59.6
comp=Z,46nm,0.6s
MA2 Magadan 22.07 12 *ce*P **P 07 41 57.8 +0.8**
MA2 pmax pmax
comp=Z,35nm,0.6s
MA2 Magadan 22.07 12 P **P 07 41 58.2 +1.2**
NACB Ninganchiao 22.10 236 P **P 07 41 55.3 -2.3**
SSLB Suanglung 22.79 237 P **P 07 42 03.2 -1.8**
SSLB IAmb IAmb 07 42 13.2
comp=Z,69nm,1.0s
SSLB Suanglung 22.79 237 P **P 07 42 04.9 -0.1**
YULB Yu-li 22.84 235 P **P 07 42 02.7 -2.8**
YULB IAmb IAmb 07 42 13.4
comp=Z,30nm,0.6s
HHC Hu-ho-hao-te 23.24 286 *e*P **P 07 42 06.3 -3.3**
HHC pmax pmax
comp=Z,35nm,1.2s
HHC pmax pmax
comp=Z,210nm,5.1s
HHC LR LR

comp=Z,510nm,12.4s
HHC LR LR
comp=Z,2μm,12.7s
HHC LR LR
comp=Z,2μm,14.6s
TPUB Ta-pu 23.34 236 P **P 07 42 08.5 -2.2**
TWG Pinlang 23.39 235 IAmb IAmb 07 42 14.9
comp=Z,60nm,0.7s
QZH Quanzhou 23.62 242 P **P 07 42 12.1 -1.2**
QZH pmax pmax
comp=Z,37nm,0.7s
LYN LuoYang 23.69 270⇓ *i*P **P 07 42 09.8 -4.2**
LYN sP pP 07 42 16.6 -2.5
LYN S **S 07 46 32.0 +3.8**
LYN pmax pmax
comp=Z,40nm,0.9s
LYN LR LR
comp=Z,620nm,12.7s
LYN LR LR
comp=Z,380nm,15.7s
WHN Wuhan 23.72 259⇑ *i*P **P 07 42 14.9 +0.7**
WHN pmax pmax
comp=Z,150nm,0.6s
WHN LR LR
comp=Z,2μm,14.4s
KNMB Chin-men Tao 24.07 242 P **P 07 42 17.4 -0.1**
BTO Baotou 24.42 285 *e*P **P 07 42 19.0 -1.9**
BTO LR LR
comp=Z,5μm,17.8s
BTO LR LR
comp=Z,2μm,18.0s
GUMO Guam 24.80 172 LR LR 07 51 40.1
comp=Z,57nm,21.2s,baz=327,slow=35
YAK Yakutsk 24.86 347 P **P 07 42 23.7 -0.7**
comp=Z,6.0nm,0.3s,baz=0.8,slow=1.4,SNR=2.0
YAK S **S 07 46 42.2 -4.1**
comp=Z,5.3nm,0.4s,baz=228,slow=3.7,SNR=1.8
YAK LR LR 07 52 32.3
comp=Z,556nm,19.1s,baz=244,slow=37
comp=Z,6.0nm,0.3s
YAK Yakutsk 24.86 347 P **P 07 42 24.0 -0.5**
YAK Yakutsk 24.86 347 *e*P **P 07 42 23.7 -0.7**
YAK *e**PP **sP 07 42 31.2 -0.6**
YAK *e* 07 42 57.2
YAK *e*PPP PPP 07 43 09.3
YAK *e* 07 45 57.8
YAK *e*S **S 07 46 44.5 -1.8**
YAK *e*SSS SSS 07 47 51.1
YAK *e* 07 53 31.3
YAK pmax pmax
comp=Z,26nm,1.0s
YAK pmax pmax
comp=N,13nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,21nm,1.0s
YAK pmax pmax
comp=N,45nm,1.0s
YAK pmax pmax
comp=E,16nm,1.1s
YAK smax smax
comp=N,78nm,1.6s
YAK smax smax
comp=E,87nm,1.8s
SEY Seymchan 25.51 11 P **P 07 42 31.7 +1.4**
comp=E,10nm,0.6s,baz=209,slow=6.9,SNR=30
SEY S **S 07 47 03.5 +6.8**
comp=E,0.5nm,0.3s,baz=55,slow=22,SNR=1.1
comp=E,10nm,0.6s
SEY Seymchan 25.51 11⇑ *e*P **P 07 42 31.8 +1.4**
SEY pmax pmax
comp=Z,17nm,0.8s
CNSH ChangSha 25.93 256 ⇓P **P 07 42 34.8 +0.3**
CNSH S **S 07 47 01.5 -2.4**
CNSH pmax pmax
comp=Z,120nm,0.6s
CNSH LR LR
comp=Z,430nm,18.2s
CNSH LR LR
comp=Z,410nm,15.9s
XAN Xi'an 26.64 271 P **P 07 42 39.8 -1.2**
XAN pP pP 07 42 46.8 +0.6
XAN pmax pmax
comp=Z,16nm,1.0s
XAN LR LR
comp=Z,640nm,16.8s
XAN LR LR
comp=Z,580nm,14.9s
XAN LR LR
comp=Z,700nm,14.9s
SHEM Shemya Is, Ala 26.67 47 LR LR 07 51 57.2
comp=Z,93nm,21.9s,baz=268,slow=33
ULN Ulaanbaatar 26.78 302 P **P 07 42 41.1 -1.1**
ULN Ulaanbaatar 26.78 302⇓ *e*P **P 07 42 42.0 -0.2**
ULN pmax pmax
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 26.78 302 P **P 07 42 41.5 -0.7**
comp=Z,33nm,1.2s
SONM Songino Array 27.21 302 P **P 07 42 46.4 +0.3**
comp=Z,5.6nm,0.6s,baz=102,slow=9.1,SNR=34
SONM LR LR 07 53 55.9
comp=Z,340nm,18.6s,baz=97,slow=37
comp=Z,5.6nm,0.6s
SONM Songino Array 27.21 302 P **P 07 42 45.7 -0.4**
ENH Enshi 27.61 263 P **P 07 42 49.5 -0.3**
H11N2 WAKE ISLAND Hy 28.70 123 T T 08 13 01.2
baz=316,slow=76
H11N1 WAKE ISLAND Hy 28.71 123 T T 08 13 01.9
baz=316,slow=76
H11N3 WAKE ISLAND Hy 28.72 123 T T 08 13 02.6
baz=316,slow=76
GULI GuiLin 29.40 253 ⇑P **P 07 43 03.6 -2.0**
H11S1 WAKE ISLAND Hy 29.45 125 T T 08 13 57.1
baz=318,slow=76
H11S3 WAKE ISLAND Hy 29.45 125 T T 08 13 56.7
baz=318,slow=76
H11S2 WAKE ISLAND Hy 29.47 125 T T 08 13 58.7
baz=318,slow=76,SNR=9201
ZAK Zakamensk 29.61 307 *e*P **P 07 43 04.7 -2.7**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
LZH Lanzhou 30.02 278 ⇓P **P 07 43 10.3 -0.9**
LZH pP pP 07 43 14.6 -1.9
LZH sP sP 07 43 17.3 -1.4
LZH pmax pmax
comp=Z,28nm,1.4s
LZH LR LR
comp=Z,590nm,14.1s
LZH LR LR
comp=Z,440nm,14.4s
LZH LR LR
comp=Z,820nm,14.8s
GYA Guiyang 31.60 258⇑ *i*P **P 07 43 24.5 -0.7**
GYA pP sP 07 43 32.4 -0.2
GYA S **S 07 48 34.3 +0.8**
GYA pmax pmax
comp=Z,190nm,0.8s
GYA pmax pmax
comp=Z,260nm,3.5s
GYA LR LR
comp=Z,510nm,13.8s
GYA LR LR
comp=Z,470nm,11.9s
GYA LR LR
comp=Z,590nm,22.9s
CD2 Chengdu 31.84 268 P **P 07 43 27.1 -0.1**
CD2 S **S 07 48 37.3 +0.3**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 LR LR
comp=Z,440nm,19.1s
CD2 LR LR
comp=Z,370nm,12.2s
CD2 LR LR
comp=Z,510nm,14.2s
GTA Gaotai 32.35 285 *e*P **P 07 43 30.8 -0.9**
GTA pP pP 07 43 37.1 +0.1
GTA sP sP 07 43 40.0 +0.9
GTA PcP **PcP 07 46 20.9 +1.7**
GTA pmax pmax
comp=Z,9.0nm,0.8s
GTA pmax pmax
comp=Z,88nm,5.1s
GTA LR LR
comp=Z,840nm,18.2s
GTA LR LR
comp=Z,650nm,16.7s
GTA LR LR
comp=Z,630nm,17.4s
BILL Bilibino 32.76 17*c* *i*P **P 07 43 33.6 -1.2**
BILL *e* 07 44 46.5
BILL *e*PPP PPP 07 44 54.8
BILL *e*S **S 07 48 53.0 +2.5**
BILL *e*SS **SnSn 07 50 48.5 +2.2**
BILL pmax pmax
comp=Z,28nm,1.7s
QIZ Qiongzhong 33.61 244 P **P 07 43 42.9 +0.2**
QIZ S **S 07 49 07.3 +2.8**
QIZ LR LR
comp=Z,420nm,19.2s
QIZ LR LR
comp=Z,410nm,15.1s
QIZ LR LR
comp=Z,660nm,15.3s
TIXI Tiksi 34.04 353 P **P 07 43 46.7 +0.8**
comp=Z,2.9nm,0.4s,baz=270,slow=23,SNR=3.8
comp=Z,2.9nm,0.4s
TIXI Tiksi 34.04 353 P **P 07 43 46.2 +0.4**
TIXI Tiksi 34.04 353⇓ *e*P **P 07 43 46.8 +1.0**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
KMI Kunming 35.32 260 ⇑P **P 07 43 57.4 -0.3**
KMI pP pP 07 44 00.1 -2.9
KMI sP sP 07 44 05.4 +0.2
KMI pmax pmax
comp=Z,100nm,0.9s
KMI LR LR
comp=Z,540nm,17.6s
KMI LR LR
comp=Z,410nm,16.2s
KMI LR LR
comp=Z,660nm,17.2s
PZH PanZhiHua 35.40 263 P **P 07 43 57.8 -0.5**
PZH S **S 07 49 28.5 -3.9**
PZH pmax pmax
comp=Z,90nm,0.7s
PZH pmax pmax
comp=Z,120nm,5.0s
PZH LR LR
comp=Z,560nm,20.8s
PZH LR LR
comp=Z,790nm,20.2s
PZH LR LR
comp=Z,1μm,20.0s
GOMU GeErMu 36.99 282 P **P 07 44 11.4 -0.7**
GOMU pP pP 07 44 17.3 -0.1
GOMU sP sP 07 44 18.3 -1.3
GOMU PcP **PcP 07 46 33.9 +0.9**
GOMU S **S 07 49 53.4 -3.7**
GOMU pmax pmax
comp=Z,18nm,0.6s
GOMU pmax pmax
comp=Z,82nm,5.3s
GOMU LR LR
comp=Z,250nm,17.2s
GOMU LR LR
comp=Z,200nm,17.8s
GOMU LR LR
comp=Z,89nm,17.2s
MYLDM Lahad Datu 39.10 218 IAmb IAmb 07 44 42.9
comp=Z,42nm,0.8s
DGZ Jazzator, Alta 39.77 305*c* *i*P **P 07 44 35.7 +0.6**
DGZ pmax pmax
comp=Z,52nm,1.2s
SIJI Sorong 40.14 196 P **P 07 44 40.4 +2.2**
comp=Z,39nm,0.7s
WMQ Urumqi 40.41 296 *e*P **P 07 44 42.1 +1.8**
WMQ pP sP 07 44 48.3 +0.5
WMQ pmax pmax
comp=Z,57nm,0.9s
WMQ LR LR
comp=Z,610nm,18.7s
WMQ LR LR
comp=Z,160nm,20.7s
WMQ LR LR
comp=Z,220nm,21.1s
KMSI Cibinong 40.90 208 P **P 07 44 43.1 -1.4**
comp=Z,147nm,0.5s
ZAA0 Zalesovo Array 41.17 311 P **P 07 44 46.8 +0.4**
ZAA0 IAmb IAmb 07 44 55.1
comp=Z,39nm,0.9s
ZALV Zalesovo Beam 41.17 311 P **P 07 44 46.7 +0.3**
comp=Z,28nm,0.8s,baz=82,slow=7.4,SNR=58
ZALV PcP **PcP 07 46 45.7 +0.4**
comp=Z,5.9nm,0.5s,baz=93,slow=1.8,SNR=3.7
ZALV LR LR 08 01 46.0
comp=Z,123nm,18.4s,baz=86,slow=36
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 41.17 311 P **P 07 44 47.0 +0.7**
GTOI Gorontalo 41.20 209 P **P 07 44 46.3 -0.7**
comp=Z,29nm,1.0s
TOLI2 Tolitoli 41.67 212 P **P 07 44 49.9 -0.9**
ZSN Zaisan 41.73 302 *e*P **P 07 44 50.7 -0.4**
ZSN pmax pmax
comp=Z,15nm,0.7s
ZSN Zaisan 41.73 302 *e*P **P 07 44 50.7 -0.4**
comp=Z,15nm,0.7s,baz=302
MRSI Marisa 41.77 210 P **P 07 44 52.7 +1.1**
comp=Z,82nm,1.1s
FAKI Fak Fak 41.93 194 P **P 07 44 52.8 -0.1**
FAKI IAmb IAmb 07 45 03.2
comp=Z,27nm,0.7s
FAKI Fak Fak 41.93 194 P **P 07 44 52.7 -0.3**
comp=Z,36nm,0.7s
FAKI Fak Fak 41.93 194 P **P 07 44 54.1 +1.1**
CM31 Chiang Mai Arr 41.98 254 P **P 07 44 53.4 0.0**
CMAR Chiang Mai Arr 41.98 254 P **P 07 44 53.7 +0.3**
comp=Z,5.0nm,0.7s,baz=42,slow=7.0,SNR=29
CMAR PcP **PcP 07 46 49.5 +0.9**
comp=Z,4.2nm,0.6s,baz=6.0,slow=2.1,SNR=10
CMAR LR LR 08 03 31.5
comp=Z,85nm,21.2s,baz=80,slow=38
comp=Z,5.0nm,0.7s
CMAR Chiang Mai Arr 41.98 254 P **P 07 44 53.1 -0.3**
NRIK Noril'sk 42.17 335 P **P 07 44 56.9 +2.5**
comp=Z,4.3nm,0.6s,baz=123,slow=8.4,SNR=10.0
NRIK LR LR 08 03 26.3
comp=Z,307nm,18.1s,baz=114,slow=38
comp=Z,4.3nm,0.6s
LSA Lhasa 42.26 274 P **P 07 44 56.3 +0.2**
LSA IAmb IAmb 07 45 00.5
comp=Z,44nm,0.7s
LSA Lhasa 42.26 274 P **P 07 44 57.3 +1.2**
LSA pmax pmax
comp=Z,47nm,0.8s
LSA Lhasa 42.26 274 P **P 07 44 56.3 +0.2**
LSA pmax pmax
comp=Z,44nm,0.7s
LSA Lhasa 42.26 274 P **P 07 44 52.4 -3.8**
LSA P **P 07 44 52.4 -3.8**
LSA Lhasa 42.26 274 P **P 07 44 57.3 +1.2**
CHNA Chernabura Isl 42.33 47 P **P 07 44 56.4 +0.6**
baz=272
SANI Sanana 42.68 203 P **P 07 44 59.6 +0.6**
comp=Z,41nm,1.0s
SANI Sanana 42.68 203 P **P 07 44 59.6 +0.6**
MPSI Mapaga 42.74 213 P **P 07 44 59.6 +0.1**
comp=Z,18nm,0.7s
N16K Nishlik Lake 42.83 39 P **P 07 44 57.5 -2.5**
baz=267
O16K Kokwok River B 43.13 40 P **P 07 45 02.8 +0.5**
baz=268
APSI Ampana 43.15 210 P **P 07 45 03.0 +0.1**
P16K Nushagak River 43.17 41 P **P 07 45 01.7 -0.9**
baz=269
KRAI Karang Ratu 43.19 199 P **P 07 45 04.5 +1.3**
comp=Z,109nm,1.2s
MK31 Makanchi Array 43.58 301 P **P 07 45 06.4 +0.3**
MK31 IAmb IAmb 07 45 07.3
comp=Z,31nm,0.8s
MK31 Makanchi Array 43.58 301 *i*P **P 07 45 06.3 +0.2**
MKAR Makanchi Array 43.58 301 P **P 07 45 06.5 +0.3**
comp=Z,25nm,0.7s,baz=87,slow=9.8,SNR=170
MKAR LR LR 08 03 43.6
comp=Z,132nm,18.1s,baz=87,slow=37
comp=Z,25nm,0.7s
MKAR Makanchi Array 43.58 301 P **P 07 45 06.7 +0.6**
MKAR Makanchi Array 43.58 301 P **P 07 45 06.7 +0.6**
O17K Koliganek Bris 43.64 40 P **P 07 45 06.6 +0.2**
baz=269
MAKZ Makanchi 43.78 301 P **P 07 45 07.8 +0.1**
MAKZ IAmb IAmb 07 45 09.1
comp=Z,34nm,0.9s
MAKZ Makanchi 43.78 301 P **P 07 45 07.9 +0.1**
MAKZ pmax pmax
comp=Z,34nm,0.9s
Q16K King Salmon 43.86 42 P **P 07 45 07.2 -0.9**
baz=270
P17K Kvichak River 43.97 41 P **P 07 45 07.9 -1.1**
baz=270
GCSA Galena City Sc 44.06 33 P **P 07 45 07.7 -2.0**
baz=264
N18K Kilae Creek 44.26 39 P **P 07 45 09.5 -1.9**
baz=269
Q17K Contact Creek 44.27 42 P **P 07 45 09.2 -2.4**
baz=272
SRDT SRDT 44.41 249 P **P 07 45 12.9 -0.2**
comp=Z,469nmcomp=Z,26nm,1.0s
CHIR Chirikof Islan 44.54 46 P **P 07 45 09.7 -4.0**
baz=274
P18K Big Mountain, 44.59 41 P P 07 45 08.6 -5.5
baz=271
O18K Koktuh Hills 44.60 40 P **P 07 45 11.2 -2.9**
baz=270
SBUM Sibu 44.68 224 P **P 07 45 14.9 -0.3**
Q18K Katmai Hardscr 44.72 42 P **P 07 45 12.2 -3.0**
baz=272
L19K White Mountain 44.79 37 P **P 07 45 16.4 +0.7**
L19K White Mountain 44.79 37 P P 07 45 10.6 -5.1
baz=268
N19K Bonanza Creek 44.95 39 P P 07 45 12.0 -5.0
baz=270
M19K Big River Lodg 45.01 37 P P 07 45 12.4 -4.9
baz=269
K20K Telida 45.19 35 P **P 07 45 14.6 -4.2**
baz=268
J20K Nowinta River 45.19 34 P **P 07 45 14.8 -3.9**
baz=267
L20K Farewell, AK 45.25 36 P **P 07 45 16.2 -3.1**
baz=269
KURK Kurchatov 45.27 307 P **P 07 45 19.9 +0.3**
KURK Kurchatov 45.27 307*c* *i*P **P 07 45 19.6 +0.1**
KURK pmax pmax
comp=Z,140nm,1.0s
KURK Kurchatov 45.27 307 P **P 07 45 20.4 +0.9**
KURBB Kurchatov Arra 45.34 307 P **P 07 45 20.2 +0.1**
comp=Z,85nm,0.8s,baz=82,slow=8.3,SNR=296
KURBB S **S 07 51 56.2 -3.8**
comp=Z,4.3nm,1.3s,baz=79,slow=15,SNR=9.3
comp=Z,85nm,0.8s
KURBB Kurchatov Arra 45.34 307 P **P 07 45 19.9 -0.2**
M20K Styx River 45.60 37 P **P 07 45 19.9 -2.2**
baz=270
G21K Allakaket 45.62 31 P **P 07 45 19.3 -2.8**
baz=265
F21K Alatna River 45.69 30 P **P 07 45 21.1 -1.6**
baz=265
OHAK Old Harbor 45.72 44 P **P 07 45 22.2 -0.8**
baz=275
H21K Melozitna Rive 45.84 32 P **P 07 45 20.1 -3.8**
baz=267
CHUM Lake Minchumin 45.99 34 P **P 07 45 20.4 -4.7**
baz=269
PPLA Purkeypile 46.04 36 P **P 07 45 21.8 -3.9**
baz=270
KDAK Kodiak Island 46.05 43 P **P 07 45 27.5 +1.9**
comp=Z,9.9nm,0.7s,baz=290,slow=6.1,SNR=14
KDAK LR LR 08 03 49.0
comp=Z,179nm,20.9s,baz=264,slow=35
comp=Z,9.9nm,0.7s
KDAK Kodiak Island 46.05 43 P **P 07 45 27.0 +1.4**
KDAK Kodiak Island 46.05 43 P **P 07 45 27.0 +1.4**
KDAK pmax pmax
comp=Z,64nm,1.5s
KDAK Kodiak Island 46.05 43 P **P 07 45 22.0 -3.6**
baz=275
N20K Mount Spurr 46.05 38 P **P 07 45 22.2 -3.5**
baz=272
SPCR Spurr Chakacha 46.05 38 P **P 07 45 21.3 -4.5**
baz=272
CAST Castle Rocks 46.09 35 P **P 07 45 23.0 -2.9**
baz=270,SNR=5.2
Q20K Shuyak Island 46.09 42 P P 07 45 20.6 -5.3
baz=274
I21K Tanana 46.17 32 P **P 07 45 22.9 -3.6**
baz=268
MTKI Muara Teweh, K 46.17 219 P **P 07 45 26.7 -0.3**
F22K John River 46.22 29 P **P 07 45 23.2 -3.7**
baz=266
PDGK Podgornoye 46.32 297 P **P 07 45 27.9 -0.2**
SKT Skwentna 46.36 37 P P 07 45 22.1 -5.9
baz=272
SHLS Shalkode 46.38 297 *e*P **P 07 45 25.4 -3.2**
SHLS pmax pmax
comp=Z,12nm,0.7s
SHLS Shalkode 46.38 297 *e*P **P 07 45 25.5 -3.2**
comp=Z,12nm,0.7s,baz=296
E22K Anaktuvuk Pass 46.41 28 P **P 07 45 23.8 -4.6**
baz=265
G22K Bettles 46.44 30 P **P 07 45 25.3 -3.2**
baz=267
H22K Ishtalitna Cre 46.44 31 P **P 07 45 26.3 -2.3**
baz=268
ODAN Odare 46.49 272 *e*P **P 07 45 30.3 +0.5**
KSM Kuching 46.55 226 P **P 07 45 30.1 +0.1**
KSM IAmb IAmb 07 45 33.0
comp=Z,19nm,0.6s
KSM Kuching 46.55 226 P **P 07 45 31.8 +1.8**
BPAW Bear Paw Mtn. 46.58 34 P **P 07 45 26.6 -3.1**
baz=270
TDK Taldyqorghan 46.62 299 *e*P **P 07 45 29.5 -0.8**
TDK Taldyqorghan 46.62 299 *e*P **P 07 45 29.6 -0.8**
baz=299
SPSI Sidrap Palu 46.68 211 P **P 07 45 32.0 +1.0**
comp=Z,43nm,0.9s
MLY Manley 46.69 33 P **P 07 45 28.6 -2.0**
baz=269
UZB Uzynbulak 46.70 297 *e*P **P 07 45 30.2 -0.9**
UZB pmax pmax
comp=Z,9.0nm,1.1s
UZB Uzynbulak 46.70 297 *e*P **P 07 45 30.2 -0.9**
comp=Z,8.7nm,1.1s,baz=297
SUA Susitna One 46.75 38 P **P 07 45 26.6 -4.6**
baz=273
KPKS Kokpek 46.84 297 *i*P **P 07 45 31.1 -1.1**
KPKS pmax pmax
comp=Z,16nm,1.0s
KPKS Kokpek 46.84 297 *i*P **P 07 45 31.1 -1.1**
comp=Z,16nm,1.0s,baz=297
BRSE Bradley Lake S 46.86 40 P **P 07 45 28.7 -3.3**
baz=274
D23K Nanushuk River 46.89 27 P **P 07 45 29.2 -2.9**
baz=266
TRF Thorofare Moun 46.89 35 P **P 07 45 30.2 -2.2**
baz=271
CUT Chulitna 46.93 36 P **P 07 45 29.6 -2.8**
baz=272
BNSI Bone 46.94 210 P **P 07 45 34.4 +1.4**
comp=Z,50nm,1.0s
C23K Itkillik River 46.98 26 P **P 07 45 33.3 +0.5**
baz=265
G23K Bananza Creek 47.02 30 P **P 07 45 32.6 -0.5**
baz=268
JIRN Jiri 47.06 274 *e*P **P 07 45 35.0 +0.6**
comp=Z,60nm,0.5s
SATY Saty 47.15 297 *e*P **P 07 45 33.7 -0.9**
SATY pmax pmax
comp=Z,10.0nm,0.7s
SATY Saty 47.15 297 *e*P **P 07 45 33.8 -0.9**
comp=Z,10nm,0.7s,baz=297
GUN Gumba 47.19 275 *e*P **P 07 45 36.0 +0.6**
comp=Z,245nm,0.7s
H23K Yukon River 47.20 32 P **P 07 45 35.1 +0.6**
H23K Yukon River 47.20 32 P **P 07 45 32.7 -1.8**
baz=270,SNR=7.4
E23K Chandalar 47.22 29 P **P 07 45 32.2 -2.6**
baz=268,SNR=7.0
RC01 Rabbit Creek A 47.26 38 P **P 07 45 32.7 -2.4**
baz=274
TOLK Toolik Lake Re 47.27 28 P **P 07 45 34.7 -0.3**
baz=267
I23K Minto, Yukon-K 47.27 32 P **P 07 45 34.3 -0.8**
baz=270
O22K Cooper Landing 47.31 39 P **P 07 45 33.5 -2.0**
baz=274
NEA2 Nenana 47.41 33 P **P 07 45 36.6 +0.4**
baz=271
MCK McKinley 47.49 34 P **P 07 45 37.1 +0.2**

baz=272
PMR Palmer 47.51 37 P **P 07 45 37.1 +0.1**
baz=274
D24K Happy Valley 47.56 27 P **P 07 45 37.2 -0.1**
baz=267
C24K Franklin Bluff 47.64 26 P **P 07 45 38.0 +0.1**
baz=267
KAPI Kappang 47.64 210 LR LR 08 05 57.4
comp=Z,46nm,19.9s,baz=5.5,slow=36
KAPI Kappang 47.64 210 P **P 07 45 38.3 -0.2**
KAPI Kappang 47.64 210 P **P 07 45 38.3 -0.2**
KAPI pmax pmax
comp=Z,49nm,0.7s
KAPI Kappang 47.64 210 P **P 07 45 40.4 +1.9**
KAPI P **P 07 45 40.4 +1.9**
KAPI Kappang 47.64 210 P **P 07 45 40.0 +1.5**
comp=Z,677nmcomp=Z,65nm,1.2s
KAPI Kappang 47.64 210 P **P 07 45 40.2 +1.7**
E24K Your Creek 47.65 29 P **P 07 45 40.3 +2.2**
baz=269,SNR=8.1
WAT1 Susitna Watana 47.71 36 P **P 07 45 37.6 -0.9**
baz=273
KKN Kakani 47.71 275 *e*P **P 07 45 39.7 +0.4**
comp=Z,45nm,1.0s
PKI Pulchoki 47.72 274 *e*P **P 07 45 39.5 0.0**
comp=Z,91nm,0.7s
PKIN Phulchoki 47.72 274 *e*P **P 07 45 39.5 +0.1**
comp=Z,84nm,0.6s
MDM Murphy Dome 47.76 33 IAmb IAmb 07 45 47.8
comp=Z,12nm,1.0s
BKSI Bulukumba 47.78 209 P **P 07 45 39.0 -0.5**
comp=Z,562nmcomp=Z,41nm,1.0s
KNK Knik Glacier 47.85 38 P **P 07 45 41.0 +1.3**
baz=275
F24K Squaw Lake 47.87 29 P **P 07 45 37.9 -1.8**
baz=270
SML Sawmill 47.88 37 P **P 07 45 36.6 -3.4**
baz=274
H24K Noodor Dome 47.88 32 P **P 07 45 38.4 -1.5**
baz=271
CHKK Chushkaly 47.91 298 *e*P **P 07 45 39.4 -1.0**
CHKK Chushkaly 47.91 298 *e*P **P 07 45 39.5 -1.0**
baz=298
COLA College 47.92 33⇑ *e*P **P 07 45 40.6 +0.5**
COLA pmax pmax
comp=Z,11nm,0.9s
DMN Daman 47.94 275 *e*P **P 07 45 41.3 +0.2**
comp=Z,35nm,0.4s
PWL Port Wells 47.96 38 P **P 07 45 39.4 -1.1**
baz=275
TARG Taragay, Kyrgy 47.98 295 P **P 07 45 40.4 -1.0**
TARG Taragay, Kyrgy 47.98 295 P **P 07 45 40.4 -1.0**
TARG pmax pmax
comp=Z,39nm,0.8s
G24K Hadweenzic Riv 48.03 30 P **P 07 45 41.2 +0.2**
baz=271
MDOK Medeo 48.07 297 *e*P **P 07 45 41.7 -0.1**
MDOK Medeo 48.07 297 *e*P **P 07 45 41.8 -0.1**
baz=297
POKR Poker Plat Res 48.09 33 P **P 07 45 42.2 +0.8**
baz=272,SNR=7.4
GKN Gorkha 48.12 275 *e*P **P 07 45 42.7 +0.3**
comp=Z,572nm,1.1s
AAA Alma-Ata 48.15 297 *e*P **P 07 45 41.2 -1.1**
AAA Alma-Ata 48.15 297 *e*P **P 07 45 41.3 -1.1**
baz=297
M23K Glacier View 48.17 37 P **P 07 45 42.9 +0.7**
baz=275
DHY Denali Highway 48.23 35 P **P 07 45 40.7 -2.0**
baz=274
HDA Harding Lake 48.33 33 P **P 07 45 42.8 -0.5**
baz=273
IL31 48.34 33 P **P 07 45 44.5 +1.2**
IL31 IAmb IAmb 07 46 01.9
comp=Z,11nm,0.7s
ILAR Eielson Array 48.34 33 P **P 07 45 45.7 +2.3**
comp=Z,3.7nm,0.8s,baz=264,slow=5.6,SNR=19
comp=Z,3.7nm,0.8s
KUU Kurty 48.35 299*c i*P **P 07 45 43.4 -0.4**
KUU pmax pmax
comp=Z,14nm,0.5s
KUU Kurty 48.35 299⇑ *i*P **P 07 45 43.5 -0.4**
comp=Z,14nm,0.5s,baz=298
SCM Sheep Creek Mo 48.35 37 P **P 07 45 42.8 -0.8**
baz=275
BBKI Banjar Baru 48.39 217 P **P 07 45 45.1 +0.8**
comp=Z,20μmcomp=Z,92nm,0.5s
D25K Kavik River 48.44 27 P **P 07 45 40.7 -3.5**
baz=270
GLI Glacier Island 48.56 38 P **P 07 45 40.9 -4.3**
baz=276
G25K Bearman Lake 48.58 30 P **P 07 45 44.8 -0.3**
baz=272
DANN Dangsing 48.65 276 *e*P **P 07 45 47.4 +0.8**
comp=Z,847nm,0.6s
H25K Birch Creek 48.71 31 P **P 07 45 45.3 -0.9**
baz=273
F25K Christian Rive 48.73 29 P **P 07 45 45.6 -0.8**
baz=272
E25K Arctic Village 48.74 28 P **P 07 45 48.7 +2.2**
baz=271
PRP Porcupine Dome 48.87 32 P **P 07 45 49.0 +1.3**
baz=274,SNR=5.6
K24K Donnelly Dome 48.89 34 P **P 07 45 49.3 +1.6**
baz=275,SNR=5.1
ULHL Ulahol 48.92 296 P **P 07 45 48.7 +0.3**
SNR=8.7
J25K Salcha River, 49.00 33 P **P 07 45 47.5 -1.0**
baz=274
KOLN Koldanda 49.04 276 *e*P **P 07 45 48.9 -0.6**
comp=Z,32nm,1.1s
KLU Klutina 49.05 37 P **P 07 45 49.7 +0.6**
baz=277
BRZS Berezniki 49.14 307*c i*P **P 07 45 49.5 -0.3**
BRZS pmax pmax
comp=Z,7.0nm,0.4s
BRZS Berezniki 49.14 307⇑ *i*P **P 07 45 49.6 -0.3**
comp=Z,6.6nm,0.4s,baz=307
TKM2 Tokmak 2 49.16 297 P **P 07 45 51.2 +0.9**
SNR=65
TKM2 Tokmak 2 49.16 297 *i*P **P 07 45 50.7 +0.4**
TKM2 pmax pmax
comp=Z,42nm,0.7s
F26K Sheenjek River 49.30 29 P **P 07 45 53.5 +2.7**
baz=273,SNR=6.0
RIDG Independent Ri 49.30 34 P **P 07 45 49.0 -1.9**
baz=276
HARP HAARP 49.31 36 P **P 07 45 47.0 -3.9**
baz=277
NRN Naryn 49.35 296 P **P 07 45 51.5 -0.4**
NRN Naryn 49.35 296 P **P 07 45 51.5 -0.4**
NRN pmax pmax
comp=Z,12nm,1.0s
PYUN Piuthan 49.36 276 *e*P **P 07 45 52.5 +0.5**
comp=Z,491nm,0.9s
C27K Jago River 49.38 26 P **P 07 45 49.8 -1.5**
baz=272
G26K Porcupine Rive 49.48 30 P **P 07 45 52.5 +0.4**
baz=274
BTLS Baital 49.58 301*c i*P **P 07 45 52.8 -0.4**
BTLS Baital 49.58 301⇑ *i*P **P 07 45 52.8 -0.4**
baz=300
KULM Kulim 49.60 239 P **P 07 45 52.8 -0.8**
KULM IAmb IAmb 07 45 55.5
comp=Z,42nm,1.3s
SCRK Sand Creek 49.66 34 P **P 07 45 55.0 +1.3**
SCRK IAmb IAmb 07 46 06.1
comp=Z,33nm,1.5s
SCRK Sand Creek 49.66 34 P **P 07 45 52.4 -1.3**
baz=276,SNR=7.4
SGDS Sogindy 49.67 298*c i*P **P 07 45 53.6 -0.3**
SGDS Sogindy 49.67 298⇑ *i*P **P 07 45 53.6 -0.3**
baz=298
N25K Chitina, Valde 49.67 37 P **P 07 45 51.2 -2.5**
baz=278
KBK Karagaybulak 49.70 297 P **P 07 45 55.1 +0.7**
SNR=28
CHMS Chumysh 49.73 298 P **P 07 45 54.9 +0.5**
SNR=5.4
CHMS Chumysh 49.73 298 *i*P **P 07 45 54.4 0.0**
CHMS pmax pmax
comp=Z,13nm,0.8s
BMRM Bremner River 49.75 38 P **P 07 45 53.9 -0.5**
baz=278
J26L Joseph Creek 49.79 33 P **P 07 45 53.2 -1.4**
baz=276
USP Ospenovka 49.81 298 P **P 07 45 55.5 +0.5**
SNR=13
BVA0 Borovoye Array 49.83 312 *i*P **P 07 45 54.4 -0.6**
BVAR Borovoye Array 49.83 312 P **P 07 45 55.1 +0.1**
comp=Z,4.4nm,0.5s,baz=81,slow=9.2,SNR=45
BVAR PcP **PcP 07 47 16.0 +0.6**
comp=Z,4.5nm,0.6s,baz=64,slow=3.4,SNR=4.4
comp=Z,4.4nm,0.5s
BRVK Borovoye 49.88 312 P **P 07 45 55.6 +0.3**
BRVK IAmb IAmb 07 46 04.5
comp=Z,34nm,1.1s
BRVK Borovoye 49.88 312⇓ *e*P **P 07 45 55.2 -0.1**
BRVK pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 49.88 312 P **P 07 45 55.2 -0.1**
BRVK P **P 07 45 55.2 -0.1**
IPM Ipoh 49.94 238 P **P 07 45 56.0 -0.2**
IPM Ipoh 49.94 238 P **P 07 45 56.5 +0.2**
comp=Z,51nm,1.1s
IPM Ipoh 49.94 238 P **P 07 45 56.5 +0.2**
AAK Ala-Archa 50.02 297 P **P 07 45 57.3 +0.5**
SNR=7.0
AAK Ala-Archa 50.02 297 P **P 07 45 57.2 +0.5**
comp=Z,8.4nm,0.6s,baz=128,slow=5.6,SNR=16
AAK LR LR 08 07 49.7
comp=Z,224nm,18.8s,baz=72,slow=37
comp=Z,8.4nm,0.6s
AAK Ala-Archa 50.02 297 P **P 07 45 57.0 +0.3**
AAK Ala-Archa 50.02 297 P **P 07 45 57.0 +0.3**
AAK Ala-Archa 50.02 297 *i*P **P 07 45 57.1 +0.3**
SNR=7.7
KSH Kashi 50.03 293 P **P 07 46 01.3 +4.5**
KSH sP sP 07 46 09.4 +5.0
KSH pmax pmax
comp=Z,22nm,0.9s
KSH LR LR
comp=Z,210nm,13.7s
KSH LR LR
comp=Z,300nm,13.7s
L26K Log Cabin Wild 50.06 35 P P 07 45 51.7 -4.9
baz=278,SNR=8.4
UCH Uchtor 50.14 297 P **P 07 45 58.9 +0.9**
SNR=13
E27K Coleen River 50.22 28 P **P 07 45 57.6 -0.2**
baz=275
M26K Nabesna, AK 50.30 36 P **P 07 45 55.3 -3.2**
baz=278,SNR=6.7
G27K Doyon Strip 50.33 30 P **P 07 45 56.2 -2.5**
baz=276
H27K Steamboat Moun 50.44 31 P **P 07 45 57.9 -1.6**
baz=276
MCARA McCarthy VSAT 50.45 37 P **P 07 45 55.7 -3.8**
baz=279
I27K Kandik River 50.48 32 P P 07 45 53.8 -6.0
baz=277
SOEI Soe 50.49 202 P **P 07 46 00.5 +0.1**
K27K Chicken 50.49 34 P P 07 45 54.4 -5.4
baz=278
EKS2 Erkin-Say 50.51 298 P **P 07 46 00.8 +0.4**
SNR=15
BGLC Bering Glacier 50.53 39 P P 07 45 55.0 -5.2
baz=280
L27K Beaver Creek, 50.74 35 P P 07 45 55.8 -6.0
baz=279,SNR=11
AML Almayashu 50.75 297 P **P 07 46 03.5 +0.9**
SNR=25
EGAK Eagle 50.78 33 P **P 07 45 57.5 -4.5**
baz=278
M27K Edge Creek, AK 50.83 36 P **P 07 45 57.9 -4.7**
baz=279,SNR=5.4
PBA Port Blair 50.88 252 P **P 07 46 01.1 -2.2**
BVCY Beaver Creek 51.28 36 P **P 07 46 01.9 -4.0**
baz=280
CTG Chitna Glacier 51.33 38 P **P 07 46 04.2 -2.1**
baz=281
YUK3 Moose Creek 51.59 36 P **P 07 46 06.0 -2.4**
baz=281
DAWY Dawson 51.65 33 P **P 07 46 08.3 -0.3**
baz=280
MTN Manton Dam 51.83 193 P **P 07 46 09.8 -0.5**
MTN IAmb IAmb 07 46 12.7
comp=Z,24nm,0.8s
I29M Ogilvie Camp, 51.88 32 P **P 07 46 10.9 +0.7**
baz=280,SNR=6.2
PLAI Plampang 51.90 210 P **P 07 46 10.1 -0.8**
COEN Coen 52.02 178 P **P 07 46 11.6 -0.1**
COEN IAmb IAmb 07 46 22.0
comp=Z,35nm,0.9s
COEN Coen 52.02 178 P **P 07 46 13.6 +1.9**
DZA Taraz 52.13 299 *e*P **P 07 46 12.4 0.0**
DZA Taraz 52.13 299 *e*P **P 07 46 12.5 0.0**
baz=299
EPYK Eagle Plains 52.34 30 IAmb IAmb 07 46 56.8
comp=Z,24nm,0.9s
EPYK Eagle Plains 52.34 30 P **P 07 46 14.0 +0.3**
baz=281
M29M Somme Creek 52.37 35 P **P 07 46 09.8 -4.3**
baz=282,SNR=5.8
L29M L29M 52.39 34 P **P 07 46 14.5 +0.4**
baz=282,SNR=11
G30M tAoh Zraii Nji 52.43 29 P **P 07 46 11.8 -2.5**
baz=281
K29M Barlow Dome 52.50 33 P **P 07 46 14.4 -0.6**
baz=282,SNR=6.6
YUK4 Talbot Arm 52.53 37 P **P 07 46 13.0 -2.4**
baz=283
PSI Prapat 52.58 238 LR LR 08 08 07.2
comp=Z,136nm,21.7s,baz=48,slow=35
PSI Prapat 52.58 238 P **P 07 46 16.4 +0.2**
PSI pmax pmax
comp=Z,33nm,0.8s
PSI Prapat 52.58 238 P **P 07 46 16.7 +0.5**
comp=Z,47nm,1.0s
KK31 Karatay Array 52.62 299 P **P 07 46 15.9 -0.2**
KK31 IAmb IAmb 07 46 17.3
comp=Z,20nm,1.1s
KK31 Karatay Array 52.62 299 *i*P **P 07 46 15.7 -0.4**
KKAR Karatay Array 52.62 299 P **P 07 46 16.0 -0.1**
KKAR Karatay Array 52.62 299 P **P 07 46 15.9 -0.2**
KKAR IAmb IAmb 07 46 17.3
comp=Z,20nm,1.1s
KKAR Karatay Array 52.62 299 P **P 07 46 16.0 -0.1**
RPSI Rantau Prapat 52.66 238 P **P 07 46 16.4 -0.3**
RPSI IAmb IAmb 07 46 17.4
comp=Z,33nm,0.8s
O29M Mount Kennedy 52.80 38 P **P 07 46 14.1 -3.2**
baz=284
DRK Karamyk 53.04 295 P **P 07 46 19.6 0.0**
DRK IAmb IAmb 07 46 21.6
comp=Z,19nm,0.9s
INK Inuvik 53.18 28 P **P 07 46 21.8 +2.0**
comp=Z,4.6nm,0.9s,baz=292,slow=6.0,SNR=15
INK LR LR 08 10 03.3
comp=Z,102nm,21.3s,baz=301,slow=37
comp=Z,4.6nm,0.9s
INK Inuvik 53.18 28 P **P 07 46 20.4 +0.7**
INK Inuvik 53.18 28 P **P 07 46 20.4 +0.7**
INK pmax pmax
comp=Z,11nm,0.8s
INK Inuvik 53.18 28 P **P 07 46 17.2 -2.6**
baz=282
HYT Haines Junctio 53.19 37 P **P 07 46 18.4 -1.7**
baz=284,SNR=8.4
F31M Tsiigehtchic 53.28 29 P **P 07 46 16.7 -3.8**
baz=282
P29M Windy Craggy 53.37 39 P **P 07 46 18.9 -2.5**
baz=285
BTK Batken 53.52 296 P **P 07 46 22.8 -0.1**
BTK Batken 53.52 296 P **P 07 46 22.8 -0.1**
BTK pmax pmax
comp=Z,15nm,1.1s
SDSI Sungai Dareh 53.77 233 P **P 07 46 25.7 +0.9**
comp=Z,85nm,1.4s
PWJI Pagerwojo 53.81 218 P **P 07 46 24.8 -0.2**
comp=Z,68nm,0.7s
N31M Braeburn, Yuko 53.83 36 P **P 07 46 24.0 -0.7**
baz=285,SNR=5.3
O30N Mendenhall 53.87 37 P **P 07 46 20.4 -4.6**
baz=285
PLBC Pleasant Camp 54.09 39 P **P 07 46 23.2 -3.4**
baz=286
M31M Drury Creek, Y 54.28 35 P **P 07 46 28.7 +0.8**
baz=286
SVE Sverdlovsk 54.29 318 *e*P **P 07 46 28.8 +0.7**
SVE pmax pmax
comp=Z,41nm,0.9s
SVE MLR MLR
comp=Z,536nm,15.0s
GAR Garm 54.29 295 P **P 07 46 28.4 -0.1**
GAR IAmb IAmb 07 46 37.0
comp=Z,30nm,0.9s
NIL Nilore 54.36 287 P **P 07 46 30.0 +1.0**
NIL Nilore 54.36 287 P **P 07 46 30.0 +1.0**
NIL pmax pmax
comp=Z,51nm,0.8s
WHY Whitehorse 54.47 37 P **P 07 46 28.9 -0.6**
baz=286
GSI Gunungsitoli 54.59 238 P **P 07 46 30.2 -0.6**
GSI Gunungsitoli 54.59 238 P **P 07 46 32.1 +1.3**
comp=Z,189nm,0.9s
GSI Gunungsitoli 54.59 238 P **P 07 46 31.8 +1.0**
FARO Faro, Yukon 54.74 35 P **P 07 46 32.3 +0.9**
baz=286,SNR=5.5
KNRA Kununurra 55.04 195 P **P 07 46 34.1 +0.2**
KNRA Kununurra 55.04 195 P **P 07 46 35.1 +1.2**
N32M Quiet Lake 55.17 36 P **P 07 46 34.9 +0.4**
baz=287
CHGR Chuyangaron 55.26 295 P **P 07 46 35.7 +0.2**
CHGR Chuyangaron 55.26 295 P **P 07 46 35.7 +0.2**
CHGR pmax pmax
comp=Z,63nm,0.8s
P32M Atlin 55.35 38 P **P 07 46 37.2 +1.5**
baz=288
R32K Eaglecrest 55.35 40 P **P 07 46 36.4 +0.6**
baz=288
ARU Arti 55.50 318 P **P 07 46 36.7 -0.2**
comp=Z,16nm,0.7s,baz=71,slow=3.7,SNR=25
ARU LR LR 08 12 29.8
comp=Z,286nm,18.6s,baz=86,slow=38
comp=Z,16nm,0.7s
ARU Arti 55.50 318 P **P 07 46 36.9 +0.1**
ARU Arti 55.50 318*c i*P **P 07 46 37.0 +0.1**
ARU 07 47 35.5
ARU 07 48 41.7
ARU PPP PPP 07 49 55.0
ARU S **S 07 54 24.3 +3.2**
ARU SS **SS 07 58 05.2 -0.2**
ARU pmax pmax
comp=Z,35nm,1.0s
ARU MLR MLR
comp=Z,488nm,16.0s
MMPY Sheldon Lake, 55.55 34 P **P 07 46 38.1 +0.9**
baz=288
P33M Teslin, Yukon 55.58 37 P **P 07 46 37.6 +0.1**
baz=288
R33M Jennings River 56.73 38 P **P 07 46 46.0 +0.2**
baz=290
U33K Whale Pass 56.79 42 P **P 07 46 45.5 -0.5**
baz=290
KBL Kabul 57.10 290 P **P 07 46 48.5 -0.4**
KBL Kabul 57.10 290 P **P 07 46 48.5 -0.4**
KBL pmax pmax
comp=Z,35nm,1.0s
KBL Kabul 57.10 290 P **P 07 46 48.7 -0.2**
SNR=16
S34M Telegraph Cree 57.17 39 P **P 07 46 50.6 +1.9**
baz=291
AB31 Akbulak array 57.23 310 *i*P **P 07 46 48.8 -0.5**
ABKAR Akbulak array 57.23 310 P **P 07 46 49.3 0.0**
ABKAR IAmb IAmb 07 46 57.9
comp=Z,20nm,0.6s
TGTN Hyland Airport 57.24 35 P **P 07 46 51.1 +1.8**
baz=291,SNR=6.0
WTLY Watson Lake, Y 57.51 36 P **P 07 46 53.3 +2.2**
baz=291
DLBC Dease Lake 57.53 39 LR LR 08 13 01.7
comp=Z,38nm,19.2s,baz=271,slow=37
DLBC Dease Lake 57.53 39 P **P 07 46 54.4 +3.1**
baz=291
V35K Ketchikan 57.87 42 P **P 07 46 56.8 +3.2**
baz=292
AKTO Aktyubinsk 57.94 311 P **P 07 46 53.7 -0.6**
T35M Bob Quinn 57.96 40 P **P 07 46 55.6 +1.3**
baz=292
WB0 Warramunga Arr 58.17 188 P **P 07 46 56.0 -0.1**
WRAB Tennant Creek 58.34 188 P **P 07 46 56.2 -1.1**
WRAB IAmb IAmb 07 46 59.2
comp=Z,23nm,0.9s
WRAB Tennant Creek 58.34 188 P **P 07 46 56.2 -1.1**
WRAB pmax pmax
comp=Z,23nm,0.9s
WRAB Tennant Creek 58.34 188 P **P 07 46 57.7 +0.4**
WR0 Warramunga Arr 58.34 188 P **P 07 46 57.0 -0.4**
WB2 Warramunga Arr 58.35 188 P **P 07 46 57.6 +0.2**
WB2 IAmb IAmb 07 46 59.3
comp=Z,20nm,0.8s
WRA Warramunga Arr 58.35 188 P **P 07 46 57.7 +0.3**
comp=Z,14nm,0.8s,baz=5.4,slow=7.1,SNR=221
comp=Z,14nm,0.8s
WRA Warramunga Arr 58.35 188 P **P 07 46 56.9 -0.4**
HYBB Hyderabad (bro 58.39 268 *e*P **P 07 46 58.0 +0.1**
HYBB *es*P **sP 07 47 06.3 +0.7**
HYBB *e*PcP **PcP 07 47 48.5 -0.2**
HYBB *es* **S 07 54 59.4 -0.8**
WRGLY Wrigley 58.68 32 P **P 07 47 00.9 +1.7**
baz=294
EUNU Eureka 58.90 9 IAmb IAmb 07 47 27.8
comp=Z,8.3nm,0.7s
XMI Christmas Isla 58.97 222 P **P 07 47 02.0 +0.1**
comp=Z,86nm,2.3s
LIRD Liard River Hi 59.04 37 P **P 07 47 04.2 +2.4**
baz=294
SPITS Spitsbergen Ar 59.30 349 P **P 07 47 04.1 +0.8**
comp=Z,22nm,1.1s,baz=78,slow=2.1,SNR=2.1
SPITS LR LR 08 13 42.2
comp=Z,89nm,22.0s,baz=5.0,slow=37
comp=Z,22nm,1.1s
KIRV Kirov 59.32 323*c i*P **P 07 47 04.1 +0.4**
PRGR Permogore 59.78 327 *e*P **P 07 47 06.1 -0.7**
PRGR pmax pmax
comp=Z,24nm,1.0s
NOR Nord 59.78 356 *i*P **P 07 47 07.0 +0.4**
NOR IAmb IAmb 07 47 16.0
comp=Z,26nm,1.6s
BBB Bella Bella 61.05 45 LR LR 08 12 04.3
comp=Z,24nm,21.6s,baz=271,slow=34
RES Resolute Bay 61.33 15 LR LR 08 15 01.2
comp=Z,47nm,21.6s,baz=15,slow=37
RES Resolute Bay 61.33 15 P **P 07 47 18.2 +1.0**
RES IAmb IAmb 07 47 24.3
comp=Z,28nm,1.4s
RES Resolute Bay 61.33 15 P **P 07 47 18.2 +1.0**
RES pmax pmax
comp=Z,28nm,1.4s
POO Poona 61.47 272 *e*P P 07 47 14.0 -5.1
APA Apatity 61.58 336⇓ *i*P P 07 47 26.0 +6.9
APA pmax pmax
comp=Z,12nm,0.7s
AS01 Alice Springs 62.07 188 P **P 07 47 23.6 +0.8**
AS31 Alice Springs 62.07 188 P **P 07 47 23.6 +0.7**
ASAR Alice Springs 62.08 188 P **P 07 47 23.6 +0.7**
comp=Z,8.5nm,0.6s,baz=12,slow=5.3,SNR=142
comp=Z,8.5nm,0.6s
ASAR Alice Springs 62.08 188 P **P 07 47 23.4 +0.6**
HRA Herat 62.14 293 P **P 07 47 24.1 +0.5**
HRA IAmb IAmb 07 47 25.5
comp=Z,19nm,0.9s
MBWA Marble Bar 62.62 203 P **P 07 47 27.3 +0.8**
YKA Yellowknife Ar 62.63 31 P **P 07 47 27.9 +1.7**
comp=Z,3.1nm,0.7s,baz=304,slow=6.9,SNR=3.8
comp=Z,3.1nm,0.7s
KLMR Klimovskoe 62.76 327 *e*P **P 07 47 24.2 -2.8**
KLMR *e* 07 49 44.3
KLMR pmax pmax
comp=Z,47nm,1.7s
KLMR Klimovskoe 62.76 327 *e*P **P 07 47 24.2 -2.8**
KLMR AMP 07 47 33.8
comp=Z,47nm,1.7s
KLMR *e*PP **PP 07 49 44.4 -0.2**
PALK Pallekele 62.79 257 LR LR 08 16 39.3
comp=Z,81nm,20.3s,baz=172,slow=38
ARA0 ARCESS Array S 62.85 339 *e*P **P 07 47 28.3 +0.7**
ARA0 IAmb IAmb 07 47 32.0
comp=Z,393nm,2.8s
ARCES ARCESS Array B 62.85 339 P **P 07 47 28.2 +0.7**
comp=Z,8.6nm,0.9s,baz=59,slow=7.9,SNR=17
ARCES LR LR 08 18 43.0
comp=Z,69nm,20.3s,baz=44,slow=40
comp=Z,8.6nm,0.9s
GEYT Alibeck 63.35 298 P **P 07 47 31.6 +0.1**
comp=Z,5.4nm,0.8s,baz=0.0,slow=3.0,SNR=10
GEYT LR LR 08 16 52.8
comp=Z,155nm,20.3s,baz=82,slow=38
comp=Z,5.4nm,0.8s

GYA0B **ALIBECK ARRAY 63.35 298** P **P 07 47 31.3 -0.1**
GYA0B IAmb IAmb 07 47 49.7
comp=Z,8.9nm,0.9s
KTK1 Kautokeino 63.81 339 *e*P **P 07 47 34.8 +0.8**
KTK1 IAmb IAmb 07 47 38.7
comp=Z,123nm,1.7s
PCHI Peechi 64.16 263 *e*P **P 07 47 37.0 +0.1**
JETT Jettan, Norway 64.22 341 *e*P **P 07 47 37.3 +0.6**
JETT IAmb IAmb 07 47 42.2
comp=Z,95nm,2.0s
WRKA Warakurna 64.24 193 P **P 07 47 38.1 +0.9**
NEEM North Greenlan 64.24 3 *i* P **P 07 47 37.5 +0.5**
NEEM IAmb IAmb 07 47 43.9
comp=Z,17nm,0.9s
WAPA Wapiti River 64.27 39 P **P 07 47 38.7 +1.5**
DAG Danmarks Havn 64.51 355 P **P 07 47 38.5 +0.1**
DAG pmax pmax
comp=Z,13nm,0.9s
DAG Danmarks Havn 64.51 355 *i* P **P 07 47 38.0 -0.4**
DAG IAmb IAmb 07 47 44.8
comp=Z,8.8nm,0.9s
TRO Tromso 64.55 341 *e*P **P 07 47 39.5 +0.8**
OOD Oodnadatta 66.00 186 P **P 07 47 49.8 +1.3**
MOS Moscow 66.31 323 *e*P **P 07 47 49.5 -0.8**
MOS *e* 07 47 58.2
VRH Novokhopyorsk 66.73 318 *e*P **P 07 47 51.0 -2.1**
VRH pmax pmax
comp=Z,20nm,0.7s
FAUS Fauske 67.10 340 *e*P **P 07 47 56.0 +0.9**
FAUS IAmb IAmb 07 48 01.8
comp=Z,21nm,0.8s
OBN Obninsk 67.16 323 P **P 07 47 55.7 0.0**
OBN Obninsk 67.16 323 ⇓*i*P **P 07 47 56.2 +0.5**
OBN *e* 07 50 24.4
OBN pmax pmax
comp=Z,14nm,0.9s
OBN MLR MLR
comp=Z,103nm,14.0s
LPSR Galich'ya Gora 67.42 320 *e*P **P 07 47 56.6 -0.8**
LPSR pmax pmax
comp=Z,20nm,0.7s
FIA1 FINESS Array S 67.75 332 P **P 07 47 58.9 -0.5**
FINES FINESS Array B 67.75 332 P **P 07 47 59.5 +0.2**
comp=Z,11nm,0.7s,baz=44,slow=8.1,SNR=32
FINES LR LR 08 20 18.1
comp=Z,199nm,18.6s,baz=38,slow=38
comp=Z,11nm,0.7s
VORR Voronezh 67.79 319 *e*P **P 07 48 01.3 +1.5**
VORR pmax pmax
comp=Z,50nm,0.4s
AFI Afiamalu 67.84 130 LR LR 08 12 48.6
comp=Z,62nm,21.4s,baz=130,slow=32
VSR Storozhevoye 68.07 319 *e*P **P 07 47 59.3 -2.3**
VSR pmax pmax
comp=Z,20nm,0.5s
MOR8 Moi Rana 68.22 340 *e*P **P 07 48 01.5 -0.7**
MOR8 IAmb IAmb 07 48 07.6
comp=Z,16nm,0.7s
LCRK Leigh Creek 68.48 183 P **P 07 48 06.1 +1.9**
MULG Mulgathing 68.61 187 P **P 07 48 06.0 +1.0**
JMIC Jan Mayen 68.91 350 LR LR 08 20 29.4
comp=Z,35nm,18.3s,baz=241,slow=38
NEW Newport 69.11 45 LR LR 08 17 01.9
comp=Z,18nm,20.8s,baz=332,slow=35
NEW Newport 69.11 45 P **P 07 48 09.1 +0.9**
NEW IAmb IAmb 07 48 17.3
comp=Z,18nm,1.1s
NEW Newport 69.11 45 P **P 07 48 09.1 +0.9**
NEW pmax pmax
comp=Z,18nm,1.1s
NEW Newport 69.11 45 P **P 07 48 07.1 -1.1**
baz=304,SNR=8.9
MEF Metsahovi 69.18 332 *e*P **P 07 48 08.6 +0.3**
GOF Gofitskoye 69.35 311⇑*e*P **P 07 48 10.1 +0.4**
VSU Vasula 69.43 329*c i*P **P 07 48 10.2 +0.3**
VSU pmax pmax
comp=Z,50nm,0.8s
VSU Vasula 69.43 329 *e*P **P 07 48 10.7 +0.8**
RAF Rauma 69.59 333 *e*P **P 07 48 11.0 +0.1**
STKA Stephens Creek 69.83 180 P **P 07 48 13.8 +1.2**
comp=Z,5.0nm,0.7s,baz=352,slow=6.7,SNR=6.4
comp=Z,5.0nm,0.7s
STKA Stephens Creek 69.83 180⇓*e*P **P 07 48 13.2 +0.6**
FORT Forrest 69.89 192 P **P 07 48 12.8 -0.1**
FORT Forrest 69.89 192 P **P 07 48 14.2 +1.3**
ZEI Tsey 70.10 309 *e*P **P 07 48 13.2 -1.4**
ZEI pmax pmax
comp=Z,9.0nm,1.1s
NSS Namsos 70.14 339 *e*P **P 07 48 15.7 +1.5**
NSS IAmb IAmb 07 48 30.4
comp=Z,27nm,1.2s
KIV Kislovodsk 70.18 311 ⇑P **P 07 48 15.8 +0.8**
KIV Kislovodsk 70.18 311 P **P 07 48 15.3 +0.4**
KIV Kislovodsk 70.18 311 *e*P **P 07 48 15.6 +0.6**
KIV pmax pmax
comp=Z,30nm,1.0s
KIV MLR MLR
comp=Z,86nm,17.0s
KIV Kislovodsk 70.18 311 P **P 07 48 16.5 +1.5**
KIV P **P 07 48 16.5 +1.5**
KIV Kislovodsk 70.18 311 *i* P **P 07 48 15.5 +0.6**
SNR=6.0
KBZ Khabaz 70.18 310 P **P 07 48 15.7 +0.9**
comp=Z,12nm,0.9s,baz=47,slow=4.6,SNR=16
KBZ LR LR 08 24 16.6
comp=Z,75nm,18.1s,baz=48,slow=40
comp=Z,12nm,0.9s
KBZ Khabaz 70.18 310 *i* P **P 07 48 15.4 +0.6**
KBZ pmax pmax
comp=Z,20nm,0.9s
WALA Waterton Lakes 70.39 43 IAmb IAmb 07 48 24.8
comp=Z,25nm,1.2s
MTSE Matsula 70.41 331 *e*P **P 07 48 16.9 +1.0**
ONI Oni 70.49 309 P **P 07 48 17.3 +0.5**
ONI IAmb IAmb 07 48 45.9
comp=Z,12nm,1.1s
ONI Oni 70.49 309 P **P 07 48 17.3 +0.5**
ONI pmax pmax
comp=Z,12nm,1.1s
WSAR Wadi Sarin 70.68 285 LR LR 08 22 44.1
comp=Z,50nm,19.1s,baz=72,slow=39
WBK Wadi Bani Khal 70.78 284 P **P 07 48 19.6 +0.8**
WBK P **P 07 48 19.6 +0.8**
BIDO Bidbid 70.91 285 P **P 07 48 20.7 +1.1**
BANOM Banah 70.94 288 P **P 07 48 20.2 +0.4**
BANOM Banah 70.94 288 *i* P **P 07 48 20.3 +0.5**
SNR=7.6
BBOO Buckleboo 70.95 185 P **P 07 48 20.5 +1.1**
JTMT Jette 70.97 44 P **P 07 48 20.9 +1.2**
JTMT IAmb IAmb 07 48 28.5
comp=Z,23nm,1.1s
SHME Shamm 70.99 288 P **P 07 48 20.6 +0.6**
SHME Shamm 70.99 288 *i* P **P 07 48 20.4 +0.4**
SNR=6.3
GNI Garni 71.06 306 LR LR 08 22 56.9
comp=Z,106nm,18.1s,baz=108,slow=39
GNI Garni 71.06 306*c i*P **P 07 48 21.4 +0.9**
GNI pmax pmax
comp=Z,32nm,1.8s
GNI Garni 71.06 306 P **P 07 48 21.5 +1.0**
SMDO Samad 71.23 285 P **P 07 48 23.0 +1.4**
SNR=5.2
SMDO P **P 07 48 23.0 +1.4**
SNR=5.2
MASF Masafi 71.36 288 P **P 07 48 23.0 +0.7**
MSFE Esma-Masafi 71.36 288 P **P 07 48 22.9 +0.5**
HOQ Hoqain 71.49 286 P **P 07 48 24.0 +0.8**
SNR=5.6
MNK Minsk 71.52 326 *i* P **P 07 48 23.4 +0.7**
MNK *i* 07 51 00.9
MNK *i* PPP PPP 07 52 43.4
MNK *i* S **S 07 57 42.0 +1.5**
MNK *i* SS **SS 08 02 16.9 +2.3**
MNK pmax pmax
comp=N,21nm,1.0s
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=Z,30nm,1.0s
MNK MLR MLR
comp=Z,389nm,19.0s
MNK MLR MLR
comp=E,66nm,23.0s
MNK MLR MLR
comp=N,325nm,14.0s

MNK Minsk 71.52 326 *i* P **P 07 48 23.4 +0.7**
comp=E,2.0nm,1.0s
MNK *i* P **P 07 48 23.4 +0.7**
comp=N,21nm,1.0s
MNK *i* P **P 07 48 23.4 +0.7**
comp=Z,30nm,1.0s,baz=49
MNK *i* PP **PP 07 51 00.9 0.0**
MNK *i* PPP PPP 07 52 43.4
MNK *i* S **S 07 57 42.1 +1.5**
MNK *i* SS **SS 08 02 16.9 +2.3**
MNK *i* SSS SSS 08 05 37.9
MNK *i* LQ LQ 08 14 32.7
MNK *i* LR LR 08 19 58.1
MNK *i* LRM MLR 08 23 10.2
comp=Z,389nm,19.3s
MNK *i* LRM MLR 08 23 10.9
comp=E,66nm,22.6s
MNK *i* LRM MLR 08 23 41.1
comp=N,325nm,14.2s
UOSS Minazif 71.56 287 P **P 07 48 23.3 -0.2**
UOSS IAmb IAmb 07 48 24.6
comp=Z,23nm,0.8s
UOSS Minazif 71.56 287 P **P 07 48 24.0 +0.4**
UOSS Minazif 71.56 287 *i* P **P 07 48 23.8 +0.2**
SNR=9.6
JMDO Jabal Madar 71.57 284 P **P 07 48 23.9 +0.3**
ISAL Salakas 71.58 327 *e*P **P 07 48 24.2 +1.2**
HATD Hatta, Dubai 71.68 287 P **P 07 48 26.0 +1.7**
SNR=6.3
HATD Hatta, Dubai 71.68 287 *i* P **P 07 48 25.0 +0.7**
SNR=14
IIGN Ignalina 71.68 327 *e*P **P 07 48 24.6 +0.9**
MSO Missoula 71.70 44 P **P 07 48 20.0 -4.1**
baz=307,SNR=5.5
NACGM Naroch 71.74 326⇓*i*P **P 07 48 23.8 -0.3**
baz=49
SOHO SOHO 71.77 287 P **P 07 48 25.4 +0.6**
SOHO SOHO 71.77 287 *i* P **P 07 48 25.2 +0.4**
SNR=8.5
ASHO Ashiyiah 71.82 287 P **P 07 48 25.7 +0.6**
ASHO Ashiyiah 71.82 287 *i* P **P 07 48 25.8 +0.7**
SNR=7.6
BSY Bisya 72.05 285 P **P 07 48 27.6 +1.1**
BSY P **P 07 48 27.6 +1.1**
FAQ Al Faqa, Dubai 72.13 288 P **P 07 48 27.2 +0.3**
FAQ Al Faqa, Dubai 72.13 288 P **P 07 48 27.1 +0.2**
SOC Sochi 72.16 312 *e*P **P 07 48 25.3 -1.5**
SOC *e* 07 51 04.9
SOC *e*PPP PPP 07 52 47.6
SOC *e*S **S 07 57 47.7 -0.6**
SOC *e*SS **SS 08 02 25.4 +0.5**
SOC pmax pmax
comp=Z,24nm,0.7s
SOC MLR MLR
comp=Z,121nm,18.0s
VSVD Vaisvydziai 72.22 328 *e*P **P 07 48 27.5 +0.6**
ARQ Araqi 72.23 286 P **P 07 48 30.0 +2.4**
SNR=5.1
ILULI Ilulissat 72.38 5 *i* P **P 07 48 28.3 +0.7**
ASUD Al Ashush, Dub 72.40 288 *i* P **P 07 48 29.2 +0.7**
SNR=6.3
ALNE Al Ain 72.40 287 P **P 07 48 29.5 +0.9**
SNR=6.1
ALNE P **P 07 48 29.5 +0.9**
SNR=6.1
ALNE Al Ain 72.40 287 *i* P **P 07 48 29.2 +0.6**
SNR=6.2
BLDU Ballidu 72.40 202 P **P 07 48 28.8 +0.6**
MHTO MHTO 72.46 283 P **P 07 48 30.0 +1.1**
SNR=9.5
PABE Paberze 72.53 328 P **P 07 48 29.6 +0.8**
PABE Paberze 72.53 328 *e*P **P 07 48 29.9 +1.1**
MFID Camas Ranch 72.66 48 P **P 07 48 30.5 +0.6**
ANN Anapa 72.75 314 *e*P P 07 48 21.5 -8.8
ANN *e**PP pP 07 48 24.6 -11
ANN pmax pmax
comp=Z,22nm,0.8s
DOMB Dombas 72.91 339 *e*P **P 07 48 31.4 +0.4**
DOMB IAmb IAmb 07 48 37.8
comp=Z,22nm,1.0s
HFS Hagfors 72.98 336 LR LR 08 23 04.4
comp=Z,113nm,19.1s,baz=38,slow=38
PBUR Paburge 73.00 329 *e*P **P 07 48 32.0 +0.4**
NB2 NORSAR Subarra 73.06 337 P **P 07 48 32.6 +0.7**
comp=Z,4.3nm,0.7s,baz=39,slow=6.2
NB2 NORSAR Subarra 73.06 337 P **P 07 48 32.6 +0.7**
baz=39,slow=6.2
NOA NORSAR Array B 73.06 337 P **P 07 48 32.3 +0.4**
comp=Z,5.3nm,0.7s,baz=39,slow=6.1,SNR=20
NOA LR LR 08 23 42.7
comp=Z,63nm,18.1s,baz=45,slow=38
comp=Z,5.3nm,0.7s
VIKU Vikbolandet 73.19 333 *e*P **P 07 48 33.1 +0.5**
NC602 NORSAR Array S 73.20 337 *e*P **P 07 48 34.0 +1.3**
NORES NORESS Array B 73.20 337 P **P 07 48 35.4 +2.7**
EGMT Eagleton 73.21 42 IAmb IAmb 07 48 41.4
comp=Z,34nm,1.1s
EGMT Eagleton 73.21 42 P **P 07 48 33.6 +0.5**
baz=309,SNR=6.1
AKASG Malin Array Be 73.38 322 P **P 07 48 33.9 0.0**
comp=Z,17nm,0.6s,baz=45,slow=6.3,SNR=88
AKASG LR LR 08 22 05.3
comp=Z,62nm,19.7s,baz=76,slow=37
comp=Z,17nm,0.6s
AKASG Malin Array Be 73.38 322 P **P 07 48 33.6 -0.2**
AKASG IAmb IAmb 07 48 34.8
comp=Z,22nm,0.8s
AKBB Malin Array Si 73.38 322 P **P 07 48 33.8 -0.1**
AKBB IAmb IAmb 07 48 34.8
comp=Z,26nm,0.8s
AKBB Malin Array Si 73.38 322*c i*P **P 07 48 34.0 +0.1**
AKBB pmax pmax
comp=Z,26nm,0.8s
DQM DQM 73.39 282 P **P 07 48 35.8 +1.3**
DQM P **P 07 48 35.8 +1.3**
HLID Hailey 73.39 47 P **P 07 48 33.3 -1.1**
baz=307,SNR=7.7
BMN Battle Mountai 73.59 51 IAmb IAmb 07 48 44.8
comp=Z,31nm,1.4s
BOZ Bozeman (W) 73.72 44 IAmb IAmb 07 48 44.9
comp=Z,21nm,1.1s
BOZ Bozeman (W) 73.72 44 P **P 07 48 36.3 0.0**
baz=308,SNR=8.1
KVN Kaiserville 73.87 53 IAmb IAmb 07 48 46.2
comp=Z,27nm,1.3s
NVAR Mina Array Bea 74.11 54 P **P 07 48 40.2 +1.5**
comp=Z,1.3nm,0.8s,baz=290,slow=5.9,SNR=8.3
comp=Z,1.3nm,0.8s
SIM Simferopol' 74.52 315 *e*P **P 07 48 39.7 -1.0**
SIM pmax pmax
comp=Z,36nm,1.0s
SFJD Kangerlussuaq 74.60 5 LR LR 08 21 56.6
comp=Z,73nm,21.9s,baz=350,slow=36
KONO Kongsberg 74.66 337 *e*P **P 07 48 41.4 +0.2**
SUE Sulen 74.91 340 *e*P **P 07 48 43.7 +1.0**
H17A Grant Village 75.06 45 P **P 07 48 43.3 -0.8**
baz=309,SNR=7.8
VES Vestal, Richgr 75.14 56 P **P 07 48 43.0 -1.5**
baz=307
IMW Indian Meadow 75.17 46 IAmb IAmb 07 48 54.4
comp=Z,15nm,1.0s
PKM Mcpherson Peak 75.23 57 P **P 07 48 44.8 -0.4**
baz=307
MARD Mardin 75.23 306 IAmb IAmb 07 48 46.4
comp=Z,13nm,0.8s
ASK Askoy 75.27 339 *e*P **P 07 48 46.2 +1.5**
BER Bergen 75.31 339 *e*P **P 07 48 46.4 +1.5**
RLMT Red Lodge 75.31 44 P **P 07 48 44.6 -1.0**
baz=310,SNR=7.4
DY2G Dye2 75.36 3 *i* P **P 07 48 45.6 +0.1**
DY2G IAmb IAmb 07 48 52.8
comp=Z,14nm,0.7s
TPAW Teton Pass 75.42 46 IAmb IAmb 07 48 57.9
comp=Z,24nm,1.4s
FRB Frobisher Bay 75.49 13 LR LR 08 24 39.0
comp=Z,93nm,19.9s,baz=352,slow=38
REDW Red Top Meadow 75.56 46 IAmb IAmb 07 48 58.5
comp=Z,21nm,1.3s
GRAC Grapevine Rang 75.56 54 P **P 07 48 46.6 -0.3**
baz=307
ISA Isabella, Lake 75.64 56 P **P 07 48 46.8 -0.7**
baz=307
ARVC Arvin 75.73 57 P **P 07 48 46.8 -1.1**
baz=307
DGMT Dagmar 75.75 39 IAmb IAmb 07 48 55.8
comp=Z,22nm,1.1s

DGMT Dagmar 75.75 39 P **P 07 48 47.2 -0.6**
baz=312
BLS5 Blasjo 75.78 338 *e*P **P 07 48 48.9 +1.1**
R11A Troy Canyon, C 75.86 52 IAmb IAmb 07 48 57.8
comp=Z,21nm,1.4s
R11A Troy Canyon, C 75.86 52 P **P 07 48 48.8 0.0**
baz=308,SNR=8.5
LAO LASA Array 75.91 41 IAmb IAmb 07 48 57.5
comp=Z,25nm,0.9s
LAO LASA Array 75.91 41 P **P 07 48 50.3 +1.5**
baz=311
LAO LASA Array 75.91 41 P **P 07 48 50.0 +1.2**
baz=311,SNR=8.0
MPMC Manual Prospec 76.04 55 P **P 07 48 50.0 +0.1**
baz=307,SNR=5.9
FURC Furnace Creek, 76.20 54 P **P 07 48 51.5 +1.1**
baz=308
HWUT Hardware Ranch 76.26 48 IAmb IAmb 07 49 00.1
comp=Z,25nm,1.2s
TPNV Topopah Spring 76.30 54 P **P 07 48 52.8 +1.5**
baz=308,SNR=6.2
DUG Dugway, Tooele 76.41 49 IAmb IAmb 07 49 01.0
comp=Z,26nm,1.4s
DUG Dugway, Tooele 76.41 49 P **P 07 48 51.9 +0.1**
baz=309,SNR=6.9
EDW2 Edwards Air Fo 76.43 56 P **P 07 48 51.4 -0.5**
baz=307
SNART Snartemo 76.45 337 *e*P **P 07 48 52.4 +0.9**
BEL Belsk 76.46 327 *e*P **P 07 48 52.8 +1.2**
GWY Greenwater Val 76.49 55 IAmb IAmb 07 49 02.6
comp=Z,14nm,1.0s
DECC Green Verdugo 76.58 57 P **P 07 48 53.1 +0.3**
baz=307
BW06 Boulder Array 76.67 46 P **P 07 48 52.5 -0.8**
baz=310
PDAR Pinedale Array 76.67 46 P **P 07 48 55.0 +1.6**
comp=Z,2.5nm,0.6s,baz=272,slow=1.7,SNR=32
comp=Z,2.5nm,0.6s
PDAR Pinedale Array 76.67 46 P **P 07 48 54.7 +1.3**
DMTO DMTO 76.67 282 P **P 07 48 53.5 0.0**
DMTO P **P 07 48 53.5 0.0**
DOK Doka 76.77 283 P **P 07 48 54.2 +0.2**
SNR=5.1
DOK P **P 07 48 54.2 +0.2**
SNR=5.1
SHOC Shoshone, Teco 76.92 55 P **P 07 48 54.2 -0.4**
baz=308
GSC Goldstone, Bar 76.94 55 P **P 07 48 53.6 -1.3**
baz=308
BFSC Mount Baldy Ra 77.04 57 P **P 07 48 54.4 -1.1**
baz=308
VLDR Vladesti 77.17 319 ⇑P **P 07 48 56.7 +0.9**
TLCR 77.23 318 ⇑P **P 07 48 55.9 -0.2**
TLCR 77.23 318 P **P 07 48 55.9 -0.2**
BUR08 Bucovina Ar. S 77.39 322 P **P 07 48 57.6 +0.5**
BUR08 IAmb IAmb 07 49 04.4
comp=Z,12nm,0.7s
BURAR Bucovina Array 77.40 322 ⇑P **P 07 48 58.1 +0.8**
BURAR Bucovina Array 77.40 322 P **P 07 48 57.7 +0.5**
BURAR IAmb IAmb 07 49 04.8
comp=Z,13nm,0.7s
BURAR Bucovina Array 77.40 322 P **P 07 48 58.0 +0.8**
BIZ Bicaz 77.43 321 ⇑P **P 07 48 58.2 +1.0**
TUQ Turquoise Moun 77.43 55 P **P 07 48 56.9 -0.8**
baz=308
TESR Tescani 77.45 320 ⇑P **P 07 48 57.9 +0.6**
WHFO Wadi Hawf 77.46 283 P **P 07 48 57.7 -0.2**
HEC Hector,Ludlow 77.54 55 P **P 07 48 58.4 +0.2**
baz=308
CFR Carcaliu 77.59 318 ⇓P **P 07 48 58.8 +0.6**
CFR Carcaliu 77.59 318 P **P 07 48 58.7 +0.6**
PANC Panciu 77.63 319 ⇓P **P 07 48 59.8 +1.4**
TPGR Topolog 77.66 318 ⇑P **P 07 48 58.8 +0.2**
CCUT Cedar City 77.73 52 IAmb IAmb 07 49 08.6
comp=Z,24nm,1.5s
MURC Murrieta 77.73 57 P **P 07 49 01.0 +1.8**
baz=308
ODBI Odobesti 77.75 319 ⇓P **P 07 48 59.9 +0.9**
VRI Vrincioaia 77.85 320 ⇓P **P 07 49 00.7 +1.1**
VRI Vrincioaia 77.85 320 P **P 07 49 00.9 +1.3**
VRI pmax pmax
comp=Z,21nm,1.3s
KOLS Kolonicke sedl 77.87 324 *e*P **P 07 49 00.4 +0.7**
KOLS pmax pmax
comp=Z,7.0nm,0.6s
PLOR Plostina 77.90 320 ⇓P **P 07 49 01.1 +1.1**
PLOR Plostina 77.90 320 P **P 07 49 01.0 +1.1**
GMRC Granite Mounta 78.00 55 P **P 07 49 01.0 +0.2**
baz=308
OJC Ojcow 78.06 326 *e*P **P 07 48 59.9 -0.8**
OJC Ojcow 78.06 326 P **P 07 48 59.6 -1.0**
OJC IAmb IAmb 07 49 06.4
comp=Z,31nm,1.2s
OJC Ojcow 78.06 326 P **P 07 48 59.7 -1.0**
OJC pmax pmax
comp=Z,31nm,1.2s
RDMU Red Mountain 78.08 47 IAmb IAmb 07 49 10.2
comp=Z,34nm,1.1s
P17A Butcher Ranch, 78.10 49 IAmb IAmb 07 49 10.3
comp=Z,35nm,1.3s
BR131 Keskin Array S 78.11 311 P **P 07 49 01.6 +0.2**
BR131 IAmb IAmb 07 49 10.8
comp=Z,26nm,1.4s
BR131 Keskin Array S 78.11 311*c i*P **P 07 49 01.7 +0.3**
BRTR Keskin Array B 78.11 311 P **P 07 49 01.8 +0.3**
comp=Z,4.4nm,0.6s,baz=98,slow=3.3,SNR=24
comp=Z,4.4nm,0.6s
BRTR Keskin Array B 78.11 311 P **P 07 49 01.6 +0.2**
BRTR Keskin Array B 78.11 311 P **P 07 49 01.6 +0.2**
COVR Voineasa-Covas 78.13 320 ⇓P **P 07 49 02.3 +1.1**
LCMT Little Creek M 78.14 52 IAmb IAmb 07 49 10.9
comp=Z,20nm,1.4s
ABTO Aybut 78.15 283 P **P 07 49 01.8 0.0**
OZUR 78.17 320 ⇑P **P 07 49 03.0 +1.6**
ARCR ARCALIA 78.19 322 ⇑P **P 07 49 03.3 +1.8**
PFO Pinyon Flats O 78.21 57 LR LR 08 15 05.7
comp=Z,84nm,20.3s,baz=202,slow=29
PFO Pinyon Flats O 78.21 57 P **P 07 49 03.5 +1.5**
baz=308
TPFO Pinon Flats 78.21 57 P **P 07 49 04.1 +2.0**
baz=308
BELC Belle Mtn. Jos 78.27 56 P **P 07 49 01.8 -0.6**
baz=308
P18A Preston Nutter 78.29 49 IAmb IAmb 07 49 11.7
comp=Z,17nm,1.2s
TRPA Tarpa 78.32 323 ⇑P **P 07 49 03.0 +0.8**
TRPA Tarpa 78.32 323 P **P 07 49 02.8 +0.6**
ULM Lac du Bonnet 78.35 34 P **P 07 49 05.4 +3.1**
comp=Z,7.7nm,1.1s,baz=310,slow=8.8,SNR=3.5
comp=Z,7.7nm,1.1s
MDND Maddock 78.40 37 P **P 07 49 03.2 +0.5**
baz=315
KNB Kanab 78.40 52 IAmb IAmb 07 49 12.6
comp=Z,27nm,1.4s
K22A Casper 78.43 44 P **P 07 49 04.9 +1.8**
baz=312
K22A Casper 78.43 44 P **P 07 49 03.9 +0.7**
baz=312
ISR Istrita 78.45 319 P **P 07 49 04.5 +1.4**
ISR pmax pmax
comp=Z,61nm,0.9s
DOPR Dopca 78.46 320 ⇑P **P 07 49 03.3 +0.3**
ICOR Ion Corvin 78.48 318 ⇓P **P 07 49 04.6 +1.5**
MLR Muntele Rosu 78.50 320 ⇑P **P 07 49 04.0 +0.5**
MLR Muntele Rosu 78.50 320 IAmb IAmb 07 49 11.6
comp=Z,22nm,1.5s
MONP2 Monument Peak 78.68 57 P **P 07 49 04.6 -0.1**
baz=308
IRM Iron Mountain 78.73 55 P **P 07 49 05.4 +0.7**
baz=309,SNR=5.7
SECR 78.76 319 ⇓P **P 07 49 06.2 +1.5**
RSSD Black Hills 78.78 42 P **P 07 49 04.3 -0.8**
baz=313
CBBR Cluj-Babes-Bol 78.81 322 ⇑P **P 07 49 06.8 +1.9**
CJR Cluj-Napoca 78.82 322 ⇑P **P 07 49 07.0 +2.0**
CJR Cluj-Napoca 78.82 322 P **P 07 49 07.0 +2.0**
BC3 Big Chuckawall 78.84 56 P **P 07 49 06.0 +0.6**
baz=309
VOIR 79.00 320 ⇓P **P 07 49 07.1 +1.0**
VOIR 79.00 320 P **P 07 49 07.3 +1.2**
VOIR pmax pmax
comp=Z,8.0nm,0.8s
IKP In-Ko-Pah, Jac 79.03 57 P **P 07 49 07.1 +0.6**
baz=309
MDUB Mudurnu 79.05 313 P **P 07 49 05.6 -0.9**
SWSC Sam W. Stewart 79.05 57 P **P 07 49 07.6 +1.1**

baz=309
KSP Ksiaz 79.09 328 eP P 07 49 07.4 +1.0
KSP Ksiaz 79.09 328 P P 07 49 07.5 +1.1
KSP pmax pmax
comp=Z,20nm,0.7s
O20A White River Ci 79.13 47 P P 07 49 06.9 -0.2
baz=311
DRGR 79.19 322 ⇑P P 07 49 07.4 +0.3
DRGR 79.19 322 P P 07 49 04.6 -2.5
DRGR pmax pmax
comp=Z,5.0nm,0.8s
ARR Arges 79.25 320 ⇓P P 07 49 08.1 +0.7
PDMCI Parker Dam,Lak 79.28 55 P P 07 49 09.4 +1.7
baz=309
OSTC Ostas 79.34 328 eP P 07 49 08.4 +0.6
MORC Moravsky Berou 79.37 327 ⇑P P 07 49 08.8 +0.8
MORC Moravsky Berou 79.37 327 P P 07 49 08.3 +0.3
MORC Moravsky Berou 79.37 327 P P 07 49 08.3 +0.3
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 79.37 327 eP P 07 49 08.8 +0.8
CHVC Chvalec 79.38 328 eP P 07 49 08.2 +0.2
CHVC epP sP 07 49 14.7 -1.1
CHVC ex x 07 57 40.5
DPC Dobruska-Polom 79.45 328 eP P 07 49 09.4 +1.0
DPC e 07 49 15.1
DPC Dobruska-Polom 79.45 328 eP P 07 49 09.4 +1.0
DPC epP sP 07 49 15.1 -1.1
DPC ex x 07 57 38.2
UPC Upice 79.46 328 eP P 07 49 09.2 +0.8
UPC e 07 49 15.3
UPC Upice 79.46 328 eP P 07 49 09.2 +0.8
UPC epP sP 07 49 15.3 -0.9
KRLC Kraliky 79.47 327 eP P 07 49 09.2 +0.7
KRLC e 07 49 14.6
KRLC Kraliky 79.47 327 eP P 07 49 09.2 +0.7
KRLC epP pP 07 49 14.6 +0.4
KRLC ex x 07 57 35.0
MAUC Maruska 79.55 326 eP P 07 49 09.8 +0.8
MAUC ex x 07 57 27.1
PSZ Piszkesteto 79.70 324 ⇑P P 07 49 11.2 +1.4
PSZ Piszkesteto 79.70 324 P P 07 49 10.2 +0.3
PSZ Piszkesteto 79.70 324 P P 07 49 10.2 +0.3
PSZ pmax pmax
comp=Z,11nm,1.0s
PSZ Piszkesteto 79.70 324 P P 07 49 10.7 +0.8
DEV Deva 79.75 321 P P 07 49 11.3 +1.2
DEV pmax pmax
comp=Z,15nm,0.8s
VYHS Vyhne 79.76 325 eP P 07 49 11.1 +1.0
VYHS pmax pmax
comp=Z,36nm,2.2s
AGMN Agassiz Nation 79.80 35 P P 07 49 10.1 -0.2
baz=318
JAVC Velka Javorina 80.00 326 eP P 07 49 13.3 +1.8
PVCC Panska Ves 80.04 329 eP P 07 49 12.9 +1.3
PVCC e 07 49 18.3
PVCC Panska Ves 80.04 329 eP P 07 49 12.9 +1.3
PVCC epP PcP 07 49 18.3 -0.7
CLL Collm 80.06 330 P P 07 49 11.4 -0.2
CLL lAmb lAmb 07 49 12.9
comp=Z,13nm,0.7s
CLL Collm 80.06 330 i P P 07 49 12.0 +0.4
CLL i 07 49 17.2
CLL pmax pmax
comp=Z,15nm,0.8s
CLL Collm 80.06 330 i P P 07 49 12.0 +0.4
comp=Z,15nm,0.8s
CLL i pP pP 07 49 17.2 -0.2
comp=Z,14nm,0.8s
CLL LmV 08 29 00.0
comp=Z,200nm,19.0s
VRAC Vranov 80.13 327 ⇑P P 07 49 13.2 +1.1
VRAC Vranov 80.13 327 eP P 07 49 13.0 +0.9
GZR Gura Zlata 80.16 321 ⇑P P 07 49 13.1 +0.7
GZR Gura Zlata 80.16 321 P P 07 49 13.1 +0.7
WUAZ Wupatki 80.26 52 P P 07 49 14.6 +1.4
baz=310
RAYN Ar Rayn 80.31 292 P P 07 49 13.2 -0.3
RAYN Ar Rayn 80.31 292 P P 07 49 13.2 -0.3
RAYN pmax pmax
comp=Z,14nm,1.1s
RAYN Ar Rayn 80.31 292 i P P 07 49 13.8 +0.3
SNR=8.5
KRUC Moravsky 80.40 327 P P 07 49 14.6 +1.1
KRUC pmax pmax
comp=Z,14nm,0.9s
KRUC Moravsky 80.40 327 eP P 07 49 14.4 +0.9
PRU Pruhonice 80.47 329 eP P 07 49 14.6 +0.7
PRU e 07 49 20.5
PRU Pruhonice 80.47 329 eP P 07 49 14.6 +0.7
PRU epP PcP 07 49 20.5 -0.3
SRO Srobarova 80.50 325 eP P 07 49 15.8 +1.8
MODS Modra-Piesok 80.54 326 eP P 07 49 16.2 +1.9
BZS Buzias 80.57 322 ⇓P P 07 49 15.2 +0.7
BZS Buzias 80.57 322 P P 07 49 14.9 +0.4
BZS pmax pmax
comp=Z,8.0nm,1.1s
TREC Trest 80.61 328 P P 07 49 16.1 +1.4
TREC pmax pmax
comp=Z,55nm,0.9s
HERR Herculane 80.71 321 ⇑P P 07 49 16.0 +0.8
ZST Bratislava 80.75 326 eP P 07 49 16.8 +1.4
MVCO Mesa Verde 80.91 49 lAmb lAmb 07 49 26.3
comp=Z,18nm,1.2s
MVCO Mesa Verde 80.91 49 P P 07 49 17.9 +1.1
baz=312,SNR=7.1
NKC Novy Kostel 81.12 330 eP P 07 49 18.6 +1.2
NKC e 07 49 23.8
NKC Novy Kostel 81.12 330 eP P 07 49 18.6 +1.2
NKC ex x 07 49 23.8
SUSD Miller 81.15 39 P P 07 49 19.3 +1.6
baz=316
MPLH Magyarpolny 81.33 325 P P 07 49 19.4 +0.9
SOP Sopron 81.38 326 P P 07 49 20.5 +1.8
SOP pmax pmax
comp=Z,15nm,0.8s
SOP Sopron 81.38 326 P P 07 49 20.2 +1.4
F33A 5 Mile Ranch, 81.42 37 P P 07 49 20.2 +1.2
baz=318
CKRC Cesky Krumlov 81.47 328 eP P 07 49 19.7 +0.4
CKRC epP PcP 07 49 25.2 -0.1
CKRC ex x 07 57 47.7
RONA Rosalia, Austr 81.48 326 eP P 07 49 20.6 +1.3
comp=Z,5.6nm,0.6s,SNR=8.3
BLKB Belogradchik 81.48 320 ⇑P P 07 49 20.2 +0.8
CONA Conrad Observa 81.49 326 eP P 07 49 20.2 +0.7
comp=Z,3.5nm,0.6s,SNR=9.7
KHC Kasperske Hory 81.53 328 P P 07 49 20.4 +0.8
KHC lAmb lAmb 07 49 27.1
comp=Z,10nm,0.7s
KHC Kasperske Hory 81.53 328 eP P 07 49 20.1 +0.5
KHC e 07 49 25.3
KHC Kasperske Hory 81.53 328 eP P 07 49 20.1 +0.5
KHC epP pP 07 49 25.3 0.0
KHC ex x 07 57 55.0
MORH Mrgy, Hungar 81.54 324 ⇑P P 07 49 19.7 0.0
MORH Mrgy, Hungar 81.54 324 P P 07 49 19.3 -0.3
S22A 4UR Ranch, Cre 81.54 48 P P 07 49 21.7 +1.5
baz=312,SNR=6.0
214A Organ Pipe Nat 81.63 56 P P 07 49 21.7 +1.2
baz=310
Q24A Divide 81.69 46 P P 07 49 21.3 +0.4
baz=313
GERES GERESS Array B 81.70 328 P P 07 49 21.0 +0.4
comp=Z,3.2nm,0.6s,baz=39,slow=5.5,SNR=38
comp=Z,3.2nm,0.6s
FRGS Fruska Gora 81.77 323 ⇓P P 07 49 21.9 +0.9
WET Wettzell 81.81 329 P P 07 49 21.3 +0.2
WET pmax pmax
comp=Z,5.0nm,1.0s
VTS Vitosha 81.91 319 ⇑P P 07 49 22.8 +0.9
VTS Vitosha 81.91 319 lAmb lAmb 07 49 29.6
comp=Z,13nm,0.6s
VTS Vitosha 81.91 319 P P 07 49 23.1 +1.2
VTS pmax pmax
comp=Z,18nm,0.9s
BOVS Bovan 81.96 321 ⇓P P 07 49 21.8 -0.1
EKA Eskdalemuir Ar 81.97 341 P P 07 49 22.7 +0.9
EYMN Ely 81.98 33 P P 07 49 22.6 +0.6
baz=321
GRFO Grafenberg 82.04 330 P P 07 49 22.8 +0.6
GRFO lAmb lAmb 07 49 30.0
comp=Z,12nm,0.8s
GRFO Grafenberg 82.04 330 P P 07 49 22.8 +0.6
GRFO pmax pmax
comp=Z,12nm,0.8s
OGNE Ogallala 82.04 43 P P 07 49 22.2 -0.3
baz=315
ARSA Arzberg 82.16 326 eP P 07 49 23.6 +0.7
comp=Z,1.4nm,0.4s
MOA Molln 82.24 327 eP P 07 49 24.0 +0.7
comp=Z,1.9nm,0.6s
SDCO Great Sand Dun 82.31 47 P P 07 49 27.3 +3.1
baz=313
SDCO Great Sand Dun 82.31 47 P P 07 49 25.0 +0.8
baz=313
BIOA Bad Ischl, Aus 82.63 328 i P P 07 49 26.2 +0.8
comp=Z,4.4nm,0.5s,SNR=4.7
TUC Tucson 82.71 54 P P 07 49 26.9 +0.8
baz=311
SOKA Soboth 82.81 326 eP P 07 49 27.0 +0.5
comp=Z,4.9nm,0.7s,SNR=8.9
ECSD EROS Data Cent 82.82 38 P P 07 49 27.4 +0.9
ECSD EROS Data Cent 82.82 38 P P 07 49 27.5 +1.0
baz=318
ECSD EROS Data Cent 82.82 38 P P 07 49 26.9 +0.5
baz=318
E38A The Farm, Brul 82.99 34 lAmb lAmb 07 49 34.4
comp=Z,15nm,0.9s
OBKA Obir 83.16 326 eP P 07 49 29.1 +0.9
comp=Z,7.9nm,0.9s,SNR=4.6
KBA Koelnbreinsper 83.23 327 P P 07 49 30.0 +1.3
KBA pmax pmax
comp=Z,16nm,0.8s
KBA Koelnbreinsper 83.23 327 eP P 07 49 29.6 +0.9
comp=Z,8.1nm,0.8s,SNR=6.6
T25A Trinidad 83.36 47 P P 07 49 29.6 -0.1
baz=314
MYKA Terra Mystica 83.46 327 eP P 07 49 29.1 -0.6
comp=Z,6.1nm,0.5s,SNR=4.7
SPMN Marine on St. 83.50 35 P P 07 49 29.6 -0.3
baz=320
ANMO Albuquerque 83.65 50 LR LR 08 23 06.0
comp=Z,29nm,20.2s,baz=324,slow=33
ANMO Albuquerque 83.65 50 P P 07 49 33.9 +2.7
ANMO lAmb lAmb 07 49 41.0
comp=Z,12nm,1.1s
ANMO Albuquerque 83.65 50 ⇓eP P 07 49 33.1 +2.0
ANMO pmax pmax
comp=Z,15nm,1.3s
ANMO Albuquerque 83.65 50 P P 07 49 33.8 +2.7
baz=313
WTTA Wattenberg 83.80 328 P P 07 49 32.1 +0.4
WTTA pmax pmax
comp=Z,12nm,0.7s
WTTA Wattenberg 83.80 328 eP P 07 49 32.0 +0.4
comp=Z,8.0nm,0.7s
ABTA Abfaltersbach 83.85 328 eP P 07 49 30.2 -1.6
comp=Z,5.0nm,0.5s,SNR=11
MOTA Moosalm 83.96 329 eP P 07 49 32.7 +0.3
comp=Z,7.8nm,0.9s,SNR=4.9
Y22D IRIS PASSCAL I 83.96 51 P P 07 49 31.8 -0.9
baz=313
Y22F Passcal Instru 83.96 51 P P 07 49 32.3 -0.3
baz=313
RETA Reutte 83.98 329 eP P 07 49 33.0 +0.5
comp=Z,15nm,0.7s,SNR=12
SQTA Sankt Quirin 84.01 329 eP P 07 49 32.9 +0.3
comp=Z,9.1nm,0.7s,SNR=4.3
Y22A Socorro 84.02 51 P P 07 49 35.5 +2.5
baz=313
PDG Podgorica 84.06 321 ⇓P P 07 49 32.8 0.0
SCHQ Schefferville 84.07 16 P P 07 49 33.5 +0.9
comp=Z,6.7nm,0.8s,baz=335,slow=7.3,SNR=6.4
SCHQ LR LR 08 33 50.1
comp=Z,33nm,18.1s,baz=94,slow=40
comp=Z,6.7nm,0.8s
I37B Waseca 84.15 36 P P 07 49 34.7 +1.4
baz=320
BFO Black Forest 84.26 331 P P 07 49 33.8 0.0
BFO lAmb lAmb 07 49 41.5
comp=Z,19nm,1.2s
BFO Black Forest 84.26 331 P P 07 49 33.8 0.0
BFO pmax pmax
comp=Z,19nm,1.2s
FETA Feichten 84.37 329 eP P 07 49 34.9 +0.4
comp=Z,5.5nm,0.6s,SNR=11
121A Cookes Peak, D 84.46 53 lAmb lAmb 07 49 44.4
comp=Z,16nm,1.0s
121A Cookes Peak, D 84.46 53 P P 07 49 35.7 +0.4
baz=312,SNR=5.3
DAVA Damuels 84.50 329 eP P 07 49 35.5 +0.3
comp=Z,8.7nm,0.8s
HSIG 84.76 57 lAmb lAmb 07 49 45.1
comp=Z,17nm,1.2s
ECH Echery 84.80 331 lAmb lAmb 07 49 43.5
comp=Z,9.2nm,0.8s
PPT Papeete 85.08 117 LR LR 08 23 20.7
comp=Z,64nm,21.2s,baz=248,slow=32
PPT2 Papeete2 85.09 117 eLR LR 08 16 29.2
comp=Z,170nm,24.8s
PPT2 Papeete2 85.09 117 eT T 09 23 23.0
comp=Z,19nm,0.3s
PAE Paea 85.14 117 eT T 09 23 26.2
comp=Z,3.7nm,0.3s
TIAR Tiarei 85.23 117 eT T 09 23 32.0
comp=Z,6.0nm,0.2s
TVO Taravao 85.45 117 eT T 09 23 33.8
comp=Z,2.6nm,0.3s
IDI Anoyia 86.23 313 ⇓P P 07 49 44.4 +0.5
KSU1 Kansas State U 86.25 42 lAmb lAmb 07 49 51.2
comp=Z,9.5nm,0.8s
KSU1 Kansas State U 86.25 42 P P 07 49 43.4 -0.5
baz=318
SENIN Lac Senin/Sane 86.28 330 lAmb lAmb 07 49 53.3
comp=Z,7.7nm,0.8s
TAOE Nuku Hiva Isla 86.34 104 eLR LR 08 17 04.6
comp=Z,154nm,23.1s
TAOE Nuku Hiva Isla 86.34 104 eT T 09 25 00.6
comp=Z,49nm,0.2s
JFWS Jewell Farm 86.45 35 P P 07 49 42.8 -2.0
baz=322
AMTX Amarillo 86.52 47 P P 07 49 45.4 +0.1
baz=315
MSTX Muleshoe 86.52 49 lAmb lAmb 07 49 53.5
comp=Z,11nm,1.1s
MSTX Muleshoe 86.52 49 P P 07 49 45.7 +0.2
baz=315
L40A Anamosa 86.67 36 P P 07 49 46.9 +1.1
baz=321
GLMI Grayling 87.34 31 P P 07 49 49.5 +0.4
baz=326
P38A Dawn 87.43 39 lAmb lAmb 07 49 57.6
comp=Z,16nm,0.9s
P38A Dawn 87.43 39 P P 07 49 51.2 +1.6
baz=320
P40A Paris 88.23 39 P P 07 49 54.9 +1.4
baz=321
WMOK Wichita Mounta 88.28 46 lAmb lAmb 07 50 02.0
comp=Z,10nm,1.1s
WMOK Wichita Mounta 88.28 46 P P 07 49 55.0 +1.2
baz=317
WMOK Wichita Mounta 88.28 46 P P 07 49 54.1 +0.3
baz=317
LPIG La Paz 88.42 60 LR LR 08 21 18.9
comp=Z,32nm,19.8s,baz=203,slow=30
HDIL Hopedale 88.75 36 P P 07 49 56.8 +0.9
baz=322
TBI Tubuai 89.06 121 eLR LR 08 18 19.4
comp=Z,86nm,23.2s
TBI Tubuai 89.06 121 eT T 09 28 23.3
comp=Z,631nm,0.3s
TUL1 Leonard 89.06 43 P P 07 49 57.9 +0.5
baz=319
R40A Maddies Statio 89.08 39 lAmb lAmb 07 50 04.7
comp=Z,10.0nm,0.8s
R40A Maddies Statio 89.08 39 P P 07 49 58.2 +0.7
baz=321
TX31 Lajitas Ar. Si 89.22 52 P P 07 50 00.3 +1.9
baz=315
TX32 Lajitas Array 89.22 52 lAmb lAmb 07 50 06.7
comp=Z,5.9nm,0.8s
TXAR Lajitas Array 89.22 52 P P 07 50 00.3 +1.9
comp=Z,3.1nm,0.6s,baz=295,slow=3.3,SNR=35
TXAR PKKPbc PKKPbc 08 07 35.9 +2.2
comp=Z,0.1nm,0.5s,baz=136,slow=6.3,SNR=4.1
TXAR LR LR 08 25 05.1
comp=Z,34nm,20.8s,baz=324,slow=32
comp=Z,3.1nm,0.6s
TXAR Lajitas Array 89.22 52 P P 07 49 59.2 +0.8
TXAR Lajitas Array 89.22 52 P P 07 49 59.2 +0.8
ABTX Abilene, Hawle 89.32 48 P P 07 49 59.4 +0.7
baz=317
U38A Gravette 89.41 42 P P 07 49 59.9 +0.9
U38A lAmb lAmb 07 50 06.8
comp=Z,8.7nm,0.9s
U38A Gravette 89.41 42 P P 07 50 00.2 +1.1
baz=320
SADO Sadowa 89.50 28 LR LR 08 32 34.9
comp=Z,4.5nm,19.3s,baz=354,slow=37
CCM Cathedral Cave 89.77 39 P P 07 50 01.7 +1.0
CCM lAmb lAmb 07 50 08.6
comp=Z,16nm,1.0s
CCM Cathedral Cave 89.77 39 P P 07 50 01.7 +1.0
CCM pmax pmax
comp=Z,16nm,1.0s
CCM Cathedral Cave 89.77 39 P P 07 50 01.3 +0.6
baz=321
CCM Cathedral Cave 89.77 39 P P 07 50 02.1 +1.4
baz=321
MGMO Mountain Grove 89.96 40 lAmb lAmb 07 50 09.1
comp=Z,15nm,1.1s
X37A Clayton 90.28 44 P P 07 50 04.5 +1.4
baz=319
JCT Junction City 90.77 49 lAmb lAmb 07 50 13.0
comp=Z,7.1nm,0.8s
JCT Junction City 90.77 49 P P 07 50 06.6 +1.0
baz=316
O48B Farmland 90.86 34 P P 07 50 05.9 +0.2
baz=325
FCAR Ozark Folk Cen 91.01 41 lAmb lAmb 07 50 14.0
comp=Z,15nm,1.2s
WHTX Lake Whitney, 91.04 47 P P 07 50 08.7 +2.0
baz=318
MIAR Mount Ida 91.28 43 lAmb lAmb 07 50 16.0
comp=Z,10nm,0.8s
MIAR Mount Ida 91.28 43 P P 07 50 09.2 +1.4
baz=320
MIAR Mount Ida 91.28 43 P P 07 50 09.2 +1.4
baz=320
WHAR Wooly Hollow 91.39 41 lAmb lAmb 07 50 15.9
comp=Z,12nm,0.8s
P49A Miami Univ. Ec 91.65 34 P P 07 50 09.2 -0.2
baz=326
ACSO Alum Creek Sta 91.82 33 P P 07 50 09.8 -0.4
baz=327
435B Jarrell 91.86 48 P P 07 50 10.7 +0.1
baz=318
WCI Wyandotte Cave 92.00 36 P P 07 50 11.4 +0.4
baz=324
LBNH Lisbon 92.41 23 P P 07 50 12.0 -0.9
baz=334
833A Chaparral WMA, 92.57 51 P P 07 50 14.2 +0.4
baz=317
P52A Corning 92.67 32 P P 07 50 14.5 +0.3
baz=327
WVT Waverly 92.97 38 P P 07 50 16.4 +0.9
baz=323
OXF Oxford 93.47 40 P P 07 50 18.8 +1.0
baz=322
ZAIG Zacatecas 94.52 56 P P 07 50 23.2 -0.1
ZAIG lAmb lAmb 07 50 32.4
comp=Z,7.0nm,1.0s
TKL Tuckaleechee C 95.26 36 LR LR 08 34 52.2
comp=Z,50nm,21.3s,baz=340,slow=36
ESDC Sonseca Array 96.21 334 P P 07 50 30.3 -0.1
comp=Z,0.7nm,0.8s,baz=19,slow=5.5,SNR=5.2
ESDC LR LR 08 38 04.4
comp=Z,116nm,19.5s,baz=32,slow=38
comp=Z,0.7nm,0.8s
VNDA Vanda 116.24 175 PKP PKiKP 07 55 44.4 +0.2
comp=Z,0.2nm,0.6s,baz=1.8,slow=1.8,SNR=1.4
TORD Torodi Ar. Bea 116.53 315 PKP PKPdf 07 55 46.2 -0.4
comp=Z,0.5nm,0.4s,baz=34,slow=1.4,SNR=8.0
TORD PP PP 07 56 49.1 -3.7
comp=Z,1.9nm,1.0s,baz=31,slow=6.7,SNR=4.9
MAW Mawson 120.76 206 PKP PKPdf 07 55 53.0 0.0
comp=Z,1.4nm,0.8s,baz=25,slow=22,SNR=2.5
MAW Mawson 120.76 206 PKIKP PKPdf 07 55 53.0 0.0
DBIC Dimbokro 125.45 318 PKP PKPdf 07 56 03.8 0.0
comp=Z,3.2nm,0.6s,baz=346,slow=3.8,SNR=6.6
BOSA Boshof 126.95 260 PKP PKiKP 07 56 07.0 +0.2
comp=Z,2.7nm,0.7s,baz=218,slow=2.3,SNR=5.8
TROLL Troll, Antarti 140.49 199 PKPdf PKPdf 07 56 25.2 -5.3
SNAA Sanae 142.01 197 PKPdf PKPdf 07 56 27.8 -5.3
VNA2 Neumayer--Watz 143.59 197 PKPdf PKPbc 07 56 34.1 +0.8
baz=118,slow=4.0
VNA3 Neumayer Olymp 143.84 195 PKPdf PKPbc 07 56 34.0 +0.1
VNA1 Neumayer--Stat 143.99 197 PKPdf PKPbc 07 56 34.9 +0.6
LPAZ La Paz 145.91 58 PKPbc PKPab 07 56 43.7 +0.4
comp=Z,7.8nm,0.5s,baz=335,slow=2.4,SNR=46
PLCA Paso Flores 155.15 106 PKPbc PKPbc 07 57 04.7
comp=Z,0.7nm,0.6s,baz=338,slow=5.4,SNR=3.2
BDFB Brasilia 155.88 23 PKPab PKPab 07 57 25.5 +1.9
comp=Z,2.0nm,0.4s,baz=262,slow=2.2,SNR=4.3
CPUP Villa Florida 160.08 59 PKPab PKPab 07 57 42.4 +0.9
comp=Z,3.5nm,1.0s,baz=239,slow=6.3,SNR=3.1

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*IDC **16** 07:42:49.7±1.0, 55°.75N×110°.21E, h0km, mb3.8/9, mbtmp3.9/15, ML3.7/5, Error ellipse: s-maj=23.6km s-min=19.9km az=55.0*
*BYKL **16** 07:42:51.0±0.1, 55°.74N×110°.19E, h7km±2km*
ISC 16 07:42:50.3±1.1, 55°.84N±0°.03×110°.33E±0°.02, h5km±8km, n52, σ3=02/118, mb3.9/9, 2C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.45**	**262**	⇑*i*Pg	**Pg**	**07 42 58.3**	**-0.7**
NIZ				Pmax		07 42 58.4	
817nm,0.2s							
NIZ				*e*Sg	**Sg**	**07 43 03.6**	**-1.3**
NIZ				Smax		07 43 04.3	
7μm,0.5s							
KMO	**Kumora**	**0.49**	**84**	⇓*i*Pg	**Pb**	**07 43 01.2**	**-0.3**
KMO				Pmax		07 43 02.1	
430nm,0.3s							
KMO				*e*		07 43 02.3	
KMO				*e*Sg	**Sb**	**07 43 08.8**	**-0.2**
KMO				Smax		07 43 11.4	
4μm,1.1s							
YOA	**Uoyan**	**0.84**	**69**	*e*Pg	**Pn**	**07 43 08.3**	**-0.4**
YOA				Pmax		07 43 11.4	
513nm,0.3s							
YOA				*e*Sg	**Sn**	**07 43 20.6**	**-0.8**
YOA				Smax		07 43 31.7	
4μm,0.3s							
SVKR	**Severomuysk**	**1.84**	**80**	*e*Pn	**Pg**	**07 43 25.1**	**-0.4**
SVKR				*e*Pg	**Pb**	**07 43 25.8**	**+1.4**
SVKR				Pmax		07 43 26.3	
477nm,0.4s							
SVKR				*e*Sn	**Sg**	**07 43 48.8**	**-0.4**
SVKR				*e*Sg	**Sb**	**07 43 50.8**	**+3.2**
SVKR				Smax		07 43 54.6	
4μm,0.5s							
SVKR				*e*		07 43 58.2	
UKT	**Uakit**	**1.90**	**99**	⇑*i*Pg	**Pb**	**07 43 25.6**	**+0.1**
UKT				Pmax		07 43 27.1	
526nm,0.7s							
UKT				*e*Sg	**Sg**	**07 43 51.7**	**+0.4**
UKT				Smax		07 43 52.8	
1μm,0.7s							
SYVR	**Suvo**	**2.19**	**185**	*e*Pg	**Pn**	**07 43 28.5**	**+1.1**
SYVR				Pmax		07 43 29.0	
439nm,0.6s							
SYVR				*e*		07 43 34.2	
SYVR				*e*Sg	**Sn**	**07 43 55.6**	**+0.7**
SYVR				*e*		07 43 57.6	
SYVR				max		07 43 59.0	
4μm,0.7s							
OGRR	**Ongureny**	**2.71**	**217**	*e*Pg	**Pn**	**07 43 36.5**	**+2.0**
OGRR				Pmax		07 43 46.5	
61nm,0.5s							
OGRR				*e*		07 44 09.1	
OGRR				*e*Sg	**Sb**	**07 44 12.2**	**-0.6**
OGRR				Smax		07 44 16.5	
511nm,0.5s							
MXMB	**Maximikha**	**2.74**	**200**	*e*Pn	**Pn**	**07 43 34.8**	**-0.1**
MXMB				*e*Pg	**Pb**	**07 43 38.6**	**-1.2**
MXMB				*e*Sn	**Sn**	**07 44 06.5**	**-1.9**
MXMB				*e*Sg	**Sb**	**07 44 13.0**	**-0.7**
BOD	**Bodaibo**	**2.83**	**44**	*e*Pn	**Pb**	**07 43 38.8**	**-2.5**
BOD				*e*Pg	**Pg**	**07 43 43.9**	**-0.6**
BOD				Pmax		07 43 56.8	
78nm,0.8s							
BOD				*e*Sn	**Sb**	**07 44 14.3**	**-1.9**

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BOD                                   eSg     Sg     07 44 22.6 +1.4
BOD                                   Smax           07 44 25.4
     703nm,0.5s
NLYR Nelyaty          3.07  76 ePn     Pn     07 43 41.7 +2.2
NLYR                          ePg     Pg     07 43 47.9 -1.3
NLYR                          e              07 43 53.8
NLYR                          max            07 43 54.0
     124nm,0.8s
NLYR                          eSn     Sn     07 44 19.5 +2.9
NLYR                          eSg     Sg     07 44 28.9 -0.1
NLYR                          Smax           07 44 44.8
     596nm,0.9s
KELR Kotokel          3.36 204 e       Pg     07 43 53.1 -1.5
KELR                          eSn     Sn     07 44 20.1 -3.4
KELR                          eSg     Sb     07 44 31.1 -0.2
ZRHB Zarechye         3.79 211 eSg     Sb     07 44 45.2 +1.6
ZRHB                          Smax           07 45 00.3
     907nm,1.1s
VTMR Vitim            3.80  17 ePn     Pn     07 43 52.6 +3.2
VTMR                          ePg     Pg     07 44 01.7 -1.4
VTMR                          eSn     Sn     07 44 37.4 +2.9
VTMR                          eSg     Sg     07 44 52.4 +0.1
VTMR                          eSgSg   SbSb   07 44 58.3 +9.1
TRG  Tyrgan           3.87 219 ⇓/Pn    Pn     07 43 50.1 -0.3
TRG                           e              07 43 51.3
TRG                           max            07 43 53.4
     67nm,0.7s
TRG                           ePg     Pb     07 43 57.8 -1.2
TRG                           eSn     Sn     07 44 33.8 -2.4
TRG                           eSg     Sb     07 44 46.3 +0.2
TRG                           Smax           07 44 50.7
     397nm,0.8s
TRG                           e              07 45 26.8
CIT  Chita            4.27 152 ePg     Pb     07 44 06.4 +0.5
CIT                           Pmax           07 44 07.4
     224nm,0.6s
CIT                           e              07 44 35.8
CIT                           eSg     Sb     07 45 01.5 +3.8
CIT                           Smax           07 45 08.2
     286nm,0.4s
FFNB Fofonovo         4.34 210 ePn     Pn     07 43 56.0 -0.9
FFNB                          ePg     Pb     07 44 07.1  0.0
FFNB                          eSn     Sn     07 44 45.0 -2.9
FFNB                          eSg     Sb     07 45 01.5 +1.7
STDB Stepnoy Dvoret   4.36 214 ePg     Pb     07 44 06.9 -0.4
STDB                          eSn     Sn     07 44 45.4 -2.8
STDB                          eSg     Sb     07 45 03.0 +2.9
KAB  Kabansk          4.37 211 ePg     Pb     07 44 07.6  0.0
KAB                           Pmax           07 44 22.6
     156nm,0.5s
KAB                           e              07 44 41.2
KAB                           eSg     Sb     07 45 02.2 +1.6
KAB                           Smax           07 45 33.2
     534nm,1.3s
CRS  Chara            4.54  73 ePn     Pn     07 44 02.4 +2.8
CRS                           ePg     Pg     07 44 14.5 -2.7
CRS                           Pmax           07 44 19.3
     116nm,1.1s
CRS                           e              07 44 50.1
CRS                           eSn     Sn     07 44 55.2 +2.5
CRS                           eSg     Sg     07 45 14.0 -2.0
CRS                           Smax           07 45 20.4
     283nm,1.6s
HRMR Khuramsha        4.67 207 ePn     Pn     07 44 01.1 -0.3
HRMR                          ePg     Pb     07 44 12.8 +0.1
HRMR                          Pmax           07 44 17.7
     414nm,0.5s
HRMR                          eSn     Sn     07 44 52.8 -3.2
HRMR                          eSg     Sb     07 45 11.6 +2.4
HRMR                          Smax           07 45 24.5
     3µm,0.7s
BGT  Bolshoye Golou   4.79 219 ePn     Pn     07 44 02.3 -0.7
BGT                           e              07 44 05.7
BGT                           max            07 44 06.2
     56nm,0.7s
BGT                           ePg     Pb     07 44 15.4 +0.8
BGT                           e              07 44 20.6
BGT                           eSn     Sn     07 44 55.3 -3.5
BGT                           eSg     Sb     07 45 15.1 +2.7
BGT                           Smax           07 45 21.3
     234nm,0.7s
IRK  Irkutsk          5.07 227 eSg     Sb     07 45 24.1 +3.4
IRK                           Smax           07 45 30.7
     498nm,0.5s
LSTR Listvyanka       5.14 222 ePn     Pn     07 44 06.9 -0.9
LSTR                          ePg     Pb     07 44 21.6 +1.0
LSTR                          Pmax           07 44 23.2
     21nm,0.8s
LSTR                          eSn     Sn     07 45 02.4 -5.1
LSTR                          eSg     Sb     07 45 26.4 +3.8
LSTR                          Smax           07 45 28.8
     131nm,0.6s
IVK  Ivanovka         5.35 223 ePn     Pn     07 44 09.7 -1.1
IVK                           Pg      Pb     07 44 24.8 +0.6
IVK                           Pmax           07 44 54.0
     25nm,0.8s
IVK                           eSn     Sn     07 45 08.5 -4.2
IVK                           eSg     Sb     07 45 32.1 +3.4
IVK                           Smax           07 45 45.3
     185nm,1.1s
KHNR Khani            5.47  75 eSg     Sg     07 45 43.4 -2.4
TUP  Tupik            5.70 100 ePn     Pn     07 44 16.8 +1.2
TUP                           ePg     Pb     07 44 34.4 +4.2
TUP                           Pmax           07 44 37.4
     33nm,0.7s
TUP                           eSn     Sn     07 45 20.6 -0.7
TUP                           eSg     Sg     07 45 49.3 -3.9
TUP                           e              07 45 52.2
TUP                           max            07 45 52.7
     423nm,0.8s
TLY  Talaya           5.75 226 ePn     Pn     07 44 14.8 -1.5
TLY                           e              07 44 34.1
TLY                           max            07 44 35.0
     18nm,0.6s
TLY                           eSn     Sn     07 45 17.2 -5.4
TLY                           eSg     Sb     07 45 44.7 +4.5
TLY                           Smax           07 45 47.8
     157nm,1.1s
TLY                           e              07 45 50.7
ARS  Arshan           6.10 233 ePn     Pn     07 44 20.2 -1.0
ARS                           ePn     Pn     07 44 20.8 -0.4
     65nm,0.6s
ARS                           eSn     Sn     07 45 25.7 -5.6
ARS                           eSg     Sb     07 45 56.3 +5.9
ARS                           Smax           07 46 02.7
     678nm,0.8s
KPC  Khapcheranga     6.27 168 ePn     Pn     07 44 23.1 -0.3
KPC                           ePg     Pb     07 44 43.2 +3.3
KPC                           Pmax           07 44 44.1
     30nm,0.6s
KPC                           eSn     Sn     07 45 32.5 -2.9
KPC                           eSg     Sb     07 46 03.2 +8.0
KPC                           e              07 46 10.0
KPC                           max            07 46 12.0
     169nm,1.4s
YKLR Yuktali          6.36  79 eSg     Sg     07 46 09.9 -4.5
ZAK  Zakamensk        6.92 221 ePn     Pn     07 44 32.0 -0.3
ZAK                           ePn     Pn     07 44 36.8 +4.5
     13nm,1.3s
ZAK                           e              07 44 47.1
ZAK                           eSg     Sb     07 46 21.1 +7.3
ZAK                           Smax           07 46 31.4
     131nm,1.1s
MOY  Mondy            6.94 237 ePn     Pn     07 44 32.5 -0.1
MOY                           max            07 44 33.7
     93nm,0.9s
MOY                           e              07 44 40.0
MOY                           ePg     Pb     07 44 52.3 +1.1
MOY                           eSn     Sn     07 45 46.5 -5.3
MOY                           eSg     Sb     07 46 21.2 +6.9
MOY                           Smax           07 46 27.0
     263nm,1.4s
ORL  Orlik            7.00 246 ePn     Pn     07 44 33.0 -0.5
ORL                           max            07 44 37.6
     40nm,0.7s
ORL                           e              07 44 41.1
ORL                           ePg     Pb     07 44 55.5 +3.1
ORL                           eSn     Sn     07 45 47.9 -5.6
ORL                           eSg     Sb     07 46 24.1 +7.9
ORL                           Smax           07 46 42.9
     103nm,0.9s
CLNS Chul'man         8.15  77 eSg     Sg     07 47 06.4 -5.4
SONM Songino Array    8.38 199 Pn      Pn     07 44 52.5 +0.1
     0.2nm,0.3s,baz=12,slow=14,SNR=1.5
SONM                           Lg      Lg     07 47 09.3
     2.9nm,0.3s,baz=14,slow=28,SNR=13
     0.6nm,0.3s
KNGR Kungurtug, Tuv   9.30 241 eSg     Sn     07 47 34.8 +45
YAK  Yakutsk         11.73  50 Sn      Sn     07 47 39.3 -10
     0.2nm,0.3s,baz=72,slow=1.9,SNR=1.8
YAK                            Lg      Lg     07 48 56.0
     baz=299,slow=20,SNR=1.2
KLR  Kul'dur         14.58 108 Pn      Pn     07 46 17.7 +0.7
     0.3nm,0.3s,baz=316,slow=15,SNR=1.9
KLR                            Lg      Lg     07 50 25.9
     0.2nm,0.3s,baz=59,slow=15,SNR=3.7
     1.3nm,0.6s
ZALV Zalesovo Beam   14.77 273 Lg      Lg     07 50 27.8
     0.3nm,0.3s,baz=94,slow=33,SNR=2.2
NRIK Noril'sk        16.95 332 Pn      Pn     07 46 48.5 +0.7
     0.9nm,0.3s,baz=126,slow=8.7,SNR=1.6
     3.6nm,0.5s
TIXI Tiksi           17.71  19 P       P      07 46 58.4 +0.2
     3.2nm,0.4s,baz=270,slow=23,SNR=3.0
TIXI                           S       Sn     07 50 04.4 -10
     3.4nm,0.6s,baz=271,slow=24,SNR=4.9
TIXI                           Lg      Lg     07 51 59.4
     11nm,0.3s,baz=90,slow=23,SNR=1.0
MKAR Makanchi Array  19.60 254 P       P      07 47 18.6 -0.6
     0.4nm,0.3s,baz=46,slow=9.3,SNR=3.0
     2.5nm,0.6s
KURBB Kurchatov Arra 19.63 268 P       P      07 47 18.6 -0.7
     0.1nm,0.3s,baz=68,slow=11,SNR=3.2
     2.8nm,0.6s
BVAR Borovoye Array  23.18 280 P       P      07 47 57.3 -0.1
     2.0nm,0.6s,baz=77,slow=11,SNR=1.8
     2.0nm,0.6s
ARCES ARCESS Array B 37.73 325 P       P      07 50 06.2 -0.2
     3.8nm,0.8s,baz=73,slow=8.5,SNR=5.3
     3.8nm,0.8s
FINES FINESS Array B 41.30 314 P       P      07 50 35.9 -0.2
     1.8nm,0.6s,baz=52,slow=9.0,SNR=1.8
     1.8nm,0.6s
ILAR Eielson Array   46.17  35 P       P      07 51 17.1 +1.9
     0.4nm,0.6s,baz=306,slow=9.4,SNR=4.0
     0.4nm,0.6s
HFS  Hagfors         46.98 317 P       P      07 51 20.6 -1.1
     1.7nm,0.5s,baz=46,slow=8.3,SNR=2.7
     1.7nm,0.5s
NOA  NORSAR Array B  47.33 319 P       P      07 51 24.1 -0.3
     0.9nm,0.9s,baz=47,slow=7.2,SNR=2.2
     0.9nm,0.9s
ESDC Sonseca Array   69.76 311 P       P      07 54 03.4 +2.2
     0.4nm,0.7s,baz=24,slow=6.7,SNR=2.3
     0.4nm,0.7s
WRA  Warramunga Arr  78.18 157 P       P      07 54 49.1 -1.3
     0.6nm,1.0s,baz=346,slow=5.2,SNR=2.2
     0.6nm,1.0s
ASAR Alice Springs   81.69 158 P       P      07 55 09.4  0.0
     0.2nm,0.6s,baz=357,slow=5.6,SNR=1.4
     0.2nm,0.6s
```

PRU ***16*** *07:48:09.2±0.0,41.°95N×13.°74E,h0km*
ROM 16 07:48:26.1±0.0,42.°750N±0.°002×13.°176E±0.°004,
h9km,ML3.0/45,29C-13D,Error ellipse: s-maj=0.3km
s-min=0.0km az=63.0,Central Italy

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Code Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op    ISC         h m s     ISC
T1202 Accumoli, Fraz   0.06 142     P     Pg          07 48 28.5 +0.2
T1202                               S     Sg          07 48 30.0 +0.2
T1202                               AML   AML
      comp=E,1400µm,0.9s
T1202                               AML   AML
      comp=N,41750µm,0.8s
NRCA Norcia            0.10 331     ⇑P    Pg          07 48 29.0 +0.3
NRCA                                S     Sg          07 48 30.6 +0.1
NRCA                                AML   AML
      comp=E,96850µm,0.2s
NRCA                                AML   AML
      comp=N,48550µm,0.1s
NRCA                                AML   AML
      comp=N,56350µm,0.1s
NRCA                                AML   AML
      comp=E,96900µm,0.2s
NRCA                                AML   AML
T1245 Castelsantange   0.11   5     ⇓P    Pg          07 48 29.2 +0.3
T1245                               S     Sg          07 48 31.1 +0.2
T1245                               AML   AML
      comp=N,54800µm,0.3s
T1245                               AML   AML
      comp=E,38450µm,1.0s
T1245                               AML   AML
      comp=E,37050µm,1.0s
T1245                               AML   AML
      comp=N,53500µm,0.3s
T1245                               AML   AML
      comp=E,37000µm,1.0s
T1245                               AML   AML
      comp=N,54850µm,0.3s
T1204 Amatrice, Fraz   0.13 125     ⇑P    Pg          07 48 29.8 +0.7
T1204                               S     Sg          07 48 32.3 +1.0
T1204                               AML   AML
      comp=E,9780µm,1.2s
T1204                               AML   AML
      comp=N,6940µm,0.8s
T1204                               AML   AML
      comp=E,9790µm,1.2s
T1204                               AML   AML
      comp=N,6945µm,0.8s
T1204                               AML   AML
      comp=N,6935µm,0.8s
T1204                               AML   AML
      comp=E,9815µm,1.2s
MC2  Monte Cornacci    0.16   4     ⇑P    Pg          07 48 30.3 +0.5
MC2                                 S     Sg          07 48 33.5 +1.2
SMA1 SAN MARTINO       0.17 135     ⇑P    Pg          07 48 30.4 +0.7
SMA1                                S     Sg          07 48 33.4 +1.1
LNSS Leonessa          0.18 214     P     Pg          07 48 30.7 +0.7
LNSS                                S     Sg          07 48 34.0 +1.4
LNSS                                AML   AML
      comp=N,9800µm,1.0s
LNSS                                AML   AML
      comp=E,12550µm,1.0s
T1216 Preci, Frazion   0.18 321     ⇑P    Pg          07 48 30.5 +0.5
T1216                               S     Sg          07 48 33.5 +0.9
T1216                               AML   AML
      comp=N,16250µm,1.6s
T1216                               AML   AML
      comp=E,15050µm,0.7s
T1216                               AML   AML
      comp=N,16300µm,1.6s
T1217 Poggiodomo (PG   0.18 258     P     Pg          07 48 30.8 +0.7
T1217                               AML   AML
      comp=E,4785µm,0.9s
T1217                               AML   AML
      comp=E,5040µm,0.9s
T1217                               AML   AML
      comp=N,5930µm,0.6s
T1217                               AML   AML
      comp=E,4775µm,0.9s
T1217                               AML   AML
      comp=E,4767µm,0.9s
T1217                               AML   AML
      comp=N,5775µm,0.5s
MMO1 Montemonaco       0.19  36     P     Pg          07 48 30.6 +0.5
MMO1                                S     Sg          07 48 33.7 +0.9
T1243 Rocca Santa Ma   0.21 105     P     Pg          07 48 31.0 +0.5
T1243                               S     Sg          07 48 34.4 +1.0
T1241 Roccafluvione,   0.22  60     P     Pg          07 48 31.5 +0.9
T1241                               AML   AML
      comp=N,8605µm,0.6s
T1241                               AML   AML
      comp=N,8600µm,0.6s
T1241                               AML   AML
      comp=E,9060µm,1.0s
FEMA Monte Fema        0.23 336     P     Pg          07 48 31.5 +0.6
T1215 Vallo di Nera,   0.23 283     ⇑P    Pg          07 48 31.6 +0.7
T1215                               S     Sg          07 48 35.6 +1.5
T1215                               AML   AML
      comp=N,3320µm,0.7s
T1215                               AML   AML
      comp=E,4270µm,0.4s
T1215                               AML   AML
      comp=N,3325µm,0.7s
T1215                               AML   AML
      comp=N,3500µm,1.1s
T1215                               AML   AML
      comp=E,4250µm,0.4s
RM33 Pellescritta (    0.24 173     ⇓P    Pg          07 48 31.8 +0.7
RM33                                S     Sg          07 48 35.8 +1.4
RM33                                AML   AML
      comp=E,2835µm,0.7s
RM33                                AML   AML
      comp=N,2860µm,1.0s
RM33                                AML   AML
      comp=E,2755µm,0.7s
RM33                                AML   AML
      comp=N,2765µm,1.0s
RM33                                AML   AML
      comp=E,2830µm,0.7s
RM33                                AML   AML
      comp=E,2750µm,0.7s
RM33                                AML   AML
      comp=N,2770µm,1.0s
AM05 Amandola Campo    0.26  30     P     Pg          07 48 32.1 +0.7
AM05                                S     Sb          07 48 36.6 -1.1
AM05                                AML   AML
      comp=E,3605µm,0.4s
AM05                                AML   AML
      comp=N,3065µm,0.4s
AM05                                AML   AML
      comp=N,12550µm,0.6s
AM05                                AML   AML
      comp=E,3610µm,0.4s
AM05                                AML   AML
      comp=E,11750µm,0.7s
AM05                                AML   AML
      comp=N,3070µm,0.4s
CAMP Campotosto        0.27 141     ⇑P    Pg          07 48 32.2 +0.6
CAMP                                S     Sg          07 48 36.7 +1.3
CAMP                                AML   AML
      comp=N,1740µm,1.0s
CAMP                                AML   AML
      comp=E,2090µm,0.7s
T1211 Morro Reatino    0.32 228     ⇑P    Pg          07 48 33.2 +0.7
T1211                               S     Sb          07 48 38.5 -0.9
T1211                               AML   AML
      comp=E,2545µm,0.8s
T1211                               AML   AML
      comp=N,4655µm,0.3s
T1211                               AML   AML
      comp=E,2540µm,0.8s
T1247 Pizzolo (AQ)     0.32 164     ⇑P    Pb          07 48 33.3 -0.7
T1247                               AML   AML
      comp=N,3255µm,0.7s
T1247                               AML   AML
      comp=E,2805µm,1.0s
CESI CESI - Serrava    0.32 322     ⇑P    Pg          07 48 33.2 +0.6
CESI                                S     Sb          07 48 38.3 -1.1
CESI                                AML   AML
      comp=N,8375µm,0.7s
CESI                                AML   AML
      comp=E,8495µm,0.5s
GUMA Gualdo di Mace    0.33  20     ⇑P    Pb          07 48 33.7 -0.6
GUMA                                AML   AML
      comp=E,28500µm,0.3s
GUMA                                AML   AML
      comp=N,32350µm,0.5s
GUMA                                AML   AML
      comp=E,28550µm,0.3s
GUMA                                AML   AML
      comp=N,32400µm,0.5s
GUMA                                AML   AML
      comp=E,42550µm,0.3s
GUMA                                AML   AML
      comp=N,26300µm,0.6s
TERO Teramo            0.34 112     ⇑P    Pg          07 48 33.2 +0.3
TERO                                S     Sg          07 48 38.6 +1.2
TERO                                AML   AML
      comp=E,2480µm,1.5s
TERO                                AML   AML
      comp=N,3520µm,0.7s
TERO                                AML   AML
      comp=N,3525µm,0.7s
TERO                                AML   AML
      comp=E,2680µm,1.5s
TERO                                AML   AML
      comp=N,3690µm,0.7s
ARRO Arrone            0.35 241     ⇑P    Pg          07 48 33.7 +0.7
ARRO                                AML   AML
      comp=N,1600µm,0.2s
ARRO                                AML   AML
      comp=E,1840µm,0.3s
GIGS Gran Sasso        0.42 136     P     Pg          07 48 34.5 +0.2
GIGS                                AML   AML
      comp=N,425µm,0.8s
GIGS                                AML   AML
      comp=E,438µm,1.0s
GIGS                                AML   AML
      comp=N,424µm,0.8s
OFFI Offida            0.42  64     ⇑P    Pb          07 48 35.7  0.0
OFFI                                AML   AML
      comp=E,5150µm,0.4s
OFFI                                AML   AML
      comp=N,6525µm,0.6s
AQU L'Aquila           0.43 157     P     Pg          07 48 35.1 +0.6
AQU                                 AML   AML
      comp=E,1365µm,1.0s
AQU                                 AML   AML
      comp=N,1258µm,1.2s
AQU                                 AML   AML
      comp=N,1250µm,1.2s
AQU                                 AML   AML
      comp=N,1258µm,1.2s
AQU                                 AML   AML
      comp=E,1300µm,1.0s
SEF1 Sefro             0.43 337     P     Pg          07 48 35.1 +0.5
SEF1                                AML   AML
      comp=E,6120µm,0.2s
SEF1                                AML   AML
      comp=N,5790µm,0.2s
MNTP Montappone        0.44  29     P     Pb          07 48 36.0 -0.1
MNTP                                AML   AML
      comp=E,7405µm,0.2s
MNTP                                AML   AML
      comp=N,5035µm,0.9s
MNTP                                AML   AML
      comp=E,7405µm,0.2s
MNTP                                AML   AML
      comp=N,5035µm,0.9s
CESX Cesi              0.46 253     ⇑P    Pg          07 48 35.5 +0.4
CESX                                AML   AML
      comp=E,2265µm,0.4s
CESX                                AML   AML
      comp=N,2185µm,0.4s
ASSB Assisi San Ben    0.48 308     ⇑P    Pg          07 48 35.8 +0.4
ASSB                                AML   AML
      comp=E,5170µm,0.3s
ASSB                                AML   AML
      comp=N,4700µm,0.2s
FIAM Fiamignano        0.48 185     ⇑P    Pg          07 48 36.0 +0.5
FIAM                                AML   AML
      comp=E,1390µm,0.7s
FIAM                                AML   AML
      comp=N,946µm,1.3s
SNTG Esanatoglia       0.53 341     P     Pg          07 48 36.8 +0.2
SNTG                                AML   AML
      comp=E,1155µm,0.1s
SNTG                                AML   AML
      comp=N,1090µm,0.1s
SNTG                                AML   AML
      comp=N,1050µm,1.5s
SNTG                                AML   AML
      comp=E,1200µm,0.1s
SNTG                                AML   AML
      comp=E,1160µm,0.1s
TRTR Tortoreto Alta    0.55  84     ⇑P    Pb          07 48 38.3 +0.5
TRTR                                AML   AML
      comp=E,4550µm,0.6s
TRTR                                AML   AML
      comp=N,3200µm,0.4s
EL6  Elcito            0.58 355     ⇓P    Pg          07 48 37.9 +0.5
ATCC AVT- Casa Cast    0.59 318     ⇑P    Pg          07 48 37.9 +0.3
ATCC                                AML   AML
      comp=N,2460µm,0.2s
ATCC                                AML   AML
      comp=E,3590µm,0.1s
ATCC                                AML   AML
      comp=N,2465µm,0.2s
VCEL Villa Celiera     0.61 126     ⇓P    Pb          07 48 38.5 -0.4
VCEL                                AML   AML
      comp=E,1665µm,0.9s
VCEL                                AML   AML
      comp=N,2255µm,0.8s
FOSV Fossato di Vic    0.62 331     ⇑P    Pg          07 48 38.4 +0.2
FOSV                                AML   AML
```

*NSSP **16** 07:53:20.8, 40°.12N×47°.92E, h10km, Ms4.3*
ISC 16 07:52:21.2±0.7, 39°.81N±0°.02×48°.03E±0°.02, h33km±4km, n311, σ2φ00/385, mb4.2/43, 32C-21D,
Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SAAT	**Saatly**	**0.31**	**80**	P		**Pb**	**07 52 28.3**	**-0.7**
	SNR=130							
SAAT				S		**Sn**	**07 52 34.1**	**-0.6**
BLQ	**Beylaqan**	**0.37**	**257**	P		**Pn**	**07 52 30.4**	**+0.1**
	SNR=1572							
BLQ				S		**Sn**	**07 52 37.0**	**+0.7**
ZRD	**Zardab**	**0.54**	**331**	P		**Pn**	**07 52 33.1**	**+0.6**
	SNR=66							
ZRD				S		**Sn**	**07 52 42.4**	**+1.9**
KDMR	**Kurdemir**	**0.58**	**12**	P		**Pn**	**07 52 33.5**	**+0.3**
	SNR=47							
KDMR				S		**Sn**	**07 52 43.4**	**+1.9**
GLBA	**Clilabad**	**0.63**	**153**	P		**Pn**	**07 52 35.3**	**+1.5**
	SNR=552							
GLBA				S		**Sn**	**07 52 46.1**	**+3.3**
QRD	**Qoradiz**	**0.64**	**238**	P		**Pn**	**07 52 34.4**	**+0.4**
	SNR=307							
QRD				S		**Sn**	**07 52 44.2**	**+1.1**
AGDM	**Agdam**	**0.77**	**293**	P		**Pn**	**07 52 36.1**	**+0.4**
	SNR=1158							
AGDM				S		**Sn**	**07 52 47.8**	**+1.6**
ALIB	**Äli-Bayra**	**0.77**	**78**	P		**Pn**	**07 52 38.5**	**+2.8**
	SNR=102							
ALIB				S		**Sn**	**07 52 52.0**	**+5.8**
BRDA	**Brd**	**0.79**	**305**	P		**Pn**	**07 52 37.5**	**+1.5**
	SNR=177							
BRDA				S		**Sn**	**07 52 50.1**	**+3.4**
YRD	**Yardimli**	**0.91**	**169**	P		**Pn**	**07 52 39.3**	**+1.5**
	SNR=548							
YRD				S		**Sn**	**07 52 52.3**	**+2.5**
STKZ		**0.98**	**271**	⇑*iP*		**Pn**	**07 52 39.0**	**+0.3**
STKZ				⇓*iS*		**Sb**	**07 52 51.8**	**-0.6**
IML	**Ismayilli**	**0.99**	**7**	P		**Pn**	**07 52 39.8**	**+1.0**
	SNR=143							
IML				S		**Sn**	**07 52 54.4**	**+2.7**
GRMI	**Germi**	**1.00**	**186**	*e*Pg		**Pn**	**07 52 40.5**	**+1.4**
GRMI				*e*Sg		**Sn**	**07 52 54.5**	**+2.4**
GRMI				*e*			07 52 58.7	
	comp=Z,99nm,0.3s							
GBS	**Qobustan**	**1.01**	**44**	P		**Pn**	**07 52 41.9**	**+2.8**
	SNR=210							
GBS				S		**Sn**	**07 52 57.7**	**+5.4**
PQL	**Pirkuli**	**1.07**	**24**	P		**Pb**	**07 52 41.4**	**+0.1**
	SNR=137							
PQL				S		**Sn**	**07 52 56.8**	**+2.9**
QBL	**Gabala**	**1.15**	**353**	P		**Pb**	**07 52 42.0**	**-0.5**
	SNR=60							
QBL				S		**Sn**	**07 52 57.5**	**+1.9**
LRK	**Lerik**	**1.19**	**168**	P		**Pb**	**07 52 43.7**	**+0.4**
	SNR=334							
LRK				S		**Sn**	**07 53 00.6**	**+3.8**
MNGR	**Mingechevir, A**	**1.20**	**324**	P		**Pb**	**07 52 43.3**	**-0.1**
	SNR=27							
MNGR				S		**Sb**	**07 53 00.7**	**+2.1**
LKRN	**Lenkeran, Azer**	**1.24**	**152**	P		**Pb**	**07 52 44.3**	**+0.2**
	SNR=18							
LKRN				S		**Sb**	**07 53 00.8**	**+1.1**
ATGJ	**Altiaghaj**	**1.26**	**33**	P		**Pb**	**07 52 45.4**	**+0.9**
	SNR=149							
ATGJ				S		**Sb**	**07 53 03.9**	**+3.4**
GRS	**Goris**	**1.34**	**257**	⇑*iP*		**Pb**	**07 52 45.1**	**-0.7**
GRS				⇓*iS*		**Sb**	**07 53 02.2**	**-0.6**
XNQ	**Khinaliq**	**1.37**	**4**	Pg		**Pb**	**07 52 44.9**	**-1.4**
	SNR=362							
XNQ				Sg		**Sb**	**07 53 02.3**	**-1.2**
ASTR	**Astara**	**1.38**	**154**	Pn		**Pb**	**07 52 46.3**	**-0.1**
	SNR=218							
ASTR				Sn		**Sb**	**07 53 05.1**	**+1.4**
SIZA	**Siyzn**	**1.43**	**27**	Pn		**Pb**	**07 52 47.7**	**+0.4**
	SNR=205							
SIZA				Sn		**Sb**	**07 53 07.2**	**+1.9**
GOBA	**Gobu**	**1.44**	**65**	Pn		**Pb**	**07 52 49.2**	**+1.8**
	SNR=21							
GOBA				Sn		**Sb**	**07 53 07.9**	**+2.6**
SEKA	**Sheki**	**1.54**	**336**	Pn		**Pn**	**07 52 47.0**	**+0.6**
	SNR=84							
SEKA				Sn		**Sb**	**07 53 08.4**	**+0.2**
GANJ	**Ganja**	**1.55**	**303**	Pn		**Pn**	**07 52 46.9**	**+0.4**
	SNR=104							
GANJ				Sn		**Sb**	**07 53 08.1**	**-0.5**
QUBA	**Quba, Azerbaij**	**1.59**	**13**	Pn		**Pb**	**07 52 49.9**	**-0.1**
	SNR=19							
QUBA				Sn		**Sb**	**07 53 10.3**	**+0.6**
IHRS	**Heris**	**1.67**	**208**	*e*Pn		**Pb**	**07 52 51.5**	**0.0**
IHRS				*e*			07 53 15.0	
	comp=Z,90μm,0.3s							
TVRZ	**Varzaqan**	**1.68**	**219**	*e*Pn		**Pb**	**07 52 51.6**	**+0.1**
AKT	**Akhty**	**1.69**	**352**	*e*P		**Pb**	**07 52 50.7**	**-0.9**
AKT				*e*S		**Sb**	**07 53 12.4**	**-0.1**
AKT				*i* S		**Sn**	**07 53 12.7**	**+3.7**
AKT				pmax		pmax		
	comp=Z,152nm,0.6s							
AKT				smax		smax		
	comp=N,1μm,0.4s							
AKT				smax		smax		
	comp=E,2μm,0.3s							
AKT				smax		smax		
	comp=E,2μm,0.4s							
AKT	**Akhty**	**1.69**	**352**	*e*Pg		**Pb**	**07 52 50.7**	**-0.9**
	comp=E,151nm,0.6s							
AKT				*e*Sg		**Sb**	**07 53 12.5**	**-0.1**
	comp=E,71nm,0.3s							
NDR	**Nardaran**	**1.69**	**62**	Pn		**Pb**	**07 52 51.2**	**-0.4**
	SNR=12							
NDR				Sn		**Sb**	**07 53 15.8**	**+3.3**
QSAR	**Qusar**	**1.72**	**6**	Pn		**Pb**	**07 52 51.7**	**-0.4**
	SNR=74							
QSAR				Sn		**Sb**	**07 53 13.6**	**+0.3**
KSMR	**Kasumkent**	**1.79**	**2**	*e*P		**Pb**	**07 52 52.5**	**-0.9**
KSMR				*e*S		**Sb**	**07 53 16.1**	**+0.5**
KSMR				*i* S		**Sn**	**07 53 16.4**	**+4.8**
KSMR				pmax		pmax		
	comp=Z,2.0nm,0.1s							
KSMR				smax		smax		
	comp=N,26nm,0.3s							
KSMR				smax		smax		
	comp=E,71nm,0.3s							
KSMR				smax		smax		
	comp=E,63nm,0.3s							
KSMR	**Kasumkent**	**1.79**	**2**	*e*Pg		**Pb**	**07 52 52.6**	**-0.9**
	comp=E,2.0nm,0.1s							
KSMR				*e*Sg		**Sb**	**07 53 16.1**	**+0.5**
	comp=E,1μm,0.3s							
ORD	**Ordubad**	**1.80**	**241**	Pn		**Pb**	**07 52 52.4**	**-1.2**
	SNR=69							
ORD				Sn		**Sb**	**07 53 15.3**	**-0.6**
SBZ	**Shahbuz**	**1.95**	**259**	Pn		**Pb**	**07 52 55.0**	**-1.2**
	SNR=198							
SBZ				Sn		**Sb**	**07 53 20.4**	**+0.2**
GDB	**GEDABAY**	**1.96**	**298**	Pn		**Pn**	**07 52 53.5**	**+1.1**
	SNR=143							
GDB				Sn		**Sb**	**07 53 19.2**	**-1.3**
ISRB	**Sarab**	**2.00**	**188**	*e*Pn		**Pb**	**07 52 56.1**	**-0.9**
NAX	**Nakhchivan**	**2.06**	**253**	Pn		**Pb**	**07 52 57.2**	**-0.7**
	SNR=52							
NAX				Sn		**Sb**	**07 53 23.9**	**+0.8**
IMRD	**Marand**	**2.11**	**240**	*e*Pn		**Pb**	**07 52 57.4**	**-1.4**
ZKTA	**Zakatala**	**2.12**	**330**	Pn		**Pn**	**07 52 55.8**	**+1.5**
	SNR=23							
ZKTA				Sn		**Sb**	**07 53 23.6**	**-1.2**
ITBZ	**Tabriz**	**2.15**	**224**	*e*Pn		**Pb**	**07 52 57.6**	**-1.9**
ITBZ				*e*			07 53 28.5	
	comp=Z,15μm,0.4s							
DDFL	**Dedoflistskaro**	**2.19**	**319**	P		**Pb**	**07 53 02.9**	**+2.8**
DDFL				S		Sb	07 53 35.7	+8.9
DDFL	**Dedoflistskaro**	**2.19**	**319**	P		**Pb**	**07 53 02.9**	**+2.8**
DRN	**Derbent**	**2.23**	**6**	*e*P		**Pn**	**07 52 57.5**	**+1.7**
DRN				*e*S		**Sn**	**07 53 24.9**	**+2.7**
DRN				*i* S		**Sb**	**07 53 25.2**	**-2.8**
DRN				pmax		pmax		
	comp=Z,249nm,0.3s							
DRN				smax		smax		
	comp=N,1μm,0.3s							
DRN				smax		smax		
	comp=E,1μm,0.3s							
DRN				smax		smax		
	comp=N,1μm,0.4s							
DRN	**Derbent**	**2.23**	**6**	*e*Pn		**Pn**	**07 52 57.6**	**+1.7**
	comp=N,248nm,0.3s							
DRN				*e*Sn		**Sn**	**07 53 25.0**	**+2.7**
	comp=N,490nm,0.6s							
IBST	**Bostanabad**	**2.28**	**203**	*e*Pn		**Pb**	**07 53 00.0**	**-1.8**
URKR	**Urkarakh**	**2.38**	**353**	*e*P		**Pn**	**07 53 00.3**	**+2.4**
URKR				*e*S		**Sb**	**07 53 30.0**	**-2.2**
URKR				*i* S		**Sn**	**07 53 30.5**	**+4.5**
URKR				pmax		pmax		
	comp=Z,268nm,0.4s							
URKR				smax		smax		
	comp=N,491nm,0.6s							
URKR				smax		smax		
	comp=E,529nm,0.3s							
URKR				smax		smax		
	comp=N,474nm,0.6s							
URKR	**Urkarakh**	**2.38**	**353**	*e*Pn		**Pb**	**07 53 00.4**	**-2.9**
	comp=N,268nm,0.4s							
URKR				*e*Sn		**Sb**	**07 53 30.1**	**-2.2**
	comp=N,416nm,0.4s							
QZX	**Qazax, Azerbai**	**2.38**	**303**	Pn		**Pn**	**07 52 59.9**	**+2.0**
	SNR=64							
QZX				Sn		**Sb**	**07 53 31.1**	**-1.2**
CSN1	**Caspian**	**2.39**	**159**	*e*Pn		**Pn**	**07 53 00.4**	**+2.4**
ISHB	**Shabestar**	**2.42**	**232**	*e*Pn		**Pn**	**07 53 00.9**	**+2.3**
ISHB				*e*			07 53 35.5	
	comp=Z,20μm,0.4s							
LGD	**Lagodekhi**	**2.44**	**327**	P		**Pn**	**07 53 01.0**	**+2.3**
LGD				S		**Sb**	**07 53 34.9**	**+1.0**
LGD	**Lagodekhi**	**2.44**	**327**	P		**Pn**	**07 53 01.0**	**+2.3**
LGD				S		**Sb**	**07 53 34.9**	**+1.0**
HYR	**Heyderabad**	**2.45**	**269**	Pn		**Pb**	**07 53 01.8**	**-2.7**
	SNR=5.4							
HYR				Sg		**Sb**	**07 53 39.2**	**+4.9**
GNI	**Garni**	**2.55**	**279**	Pn		**Pn**	**07 53 02.3**	**+2.0**
	comp=Z,208nm,0.8s,baz=87,slow=3.6,SNR=44							
GNI				Lg		Lg	07 53 38.4	
	comp=Z,53nm,0.3s,baz=228,slow=22,SNR=5.9							
GNI	**Garni**	**2.55**	**279**	⇑*iP*		**Pb**	**07 53 06.0**	**-0.2**
GNI				⇑*iS*		**Sb**	**07 53 41.4**	**+4.1**
IHSH	**Hashtrud**	**2.57**	**194**	*e*Pn		**Pb**	**07 53 03.9**	**-2.9**
IHSH				*e*			07 53 45.0	
	comp=Z,14μm,0.6s							
NRKZ	**NAREK**	**2.59**	**275**	⇑*iP*		**Pb**	**07 53 05.5**	**-1.5**
NRKZ				⇑*iS*		**Sb**	**07 53 39.8**	**+1.2**
DGRG	**David-gareji**	**2.60**	**310**	P		**Pn**	**07 53 03.0**	**+2.0**
DGRG				S		**Sb**	**07 53 39.4**	**+0.7**
DGRG	**David-gareji**	**2.60**	**310**	P		**Pn**	**07 53 03.0**	**+2.0**
DGRG				S		**Sb**	**07 53 39.4**	**+0.7**
MAKU	**Maku**	**2.62**	**261**	*e*			07 53 43.6	
	comp=Z,99nm,0.4s							
MAKU				*e*Pn		**Pb**	**07 53 06.4**	**-1.2**
IAZR	**Azarshahr**	**2.66**	**218**	*e*Pn		**Pb**	**07 53 05.5**	**-2.8**
IAZR				*e*			07 53 54.0	
	comp=Z,31μm,0.5s							
SGKR	**Sergokala**	**2.66**	**354**	*e*P		**Pn**	**07 53 04.3**	**+2.5**
SGKR				*e*S		**Sb**	**07 53 37.3**	**-3.2**
SGKR				*i* S		**Sn**	**07 53 37.8**	**+4.8**
SGKR				pmax		pmax		
	comp=Z,1.0nm,0.2s							
SGKR				smax		smax		
	comp=E,1μm,0.4s							
SGKR				smax		smax		
	comp=N,417nm,0.4s							
SGKR				smax		smax		
	comp=E,877nm,0.4s							
SGKR	**Sergokala**	**2.66**	**354**	*e*Pn		**Pn**	**07 53 04.3**	**+2.5**
	comp=E,1.0nm,0.2s							
SGKR				*e*Sn		**Sb**	**07 53 37.4**	**-3.2**
	comp=E,45nm,0.4s							
IGDI	**IGDIR**	**3.04**	**272**	*e*Pn		**Pb**	**07 53 14.4**	**-0.2**
METS	**Metsamor**	**3.05**	**278**	⇓*iP*		**Pb**	**07 53 14.0**	**-0.8**
METS				⇑*iS*		**Sb**	**07 53 53.6**	**+2.0**
ARUZ	**Aruch**	**3.06**	**280**	⇑*iP*		**Pb**	**07 53 19.1**	**+4.1**
ARUZ				⇓*iS*		**Sb**	**07 53 57.9**	**+6.1**
LHJ2	**Lahijan - Gila**	**3.08**	**148**	*e*Pn		**Pn**	**07 53 09.0**	**+1.5**
BTNK	**Botanikuri**	**3.08**	**308**	P		**Pn**	**07 53 04.8**	**-2.8**
BTNK				S		**Sn**	**07 53 44.8**	**+1.4**
BTNK	**Botanikuri**	**3.08**	**308**	P		**Pn**	**07 53 04.8**	**-2.8**
BTNK				S		**Sn**	**07 53 44.8**	**+1.4**
SEAG	**Tbilisi Sea**	**3.13**	**310**	P		**Pb**	**07 53 18.2**	**+2.1**
SEAG				S		**Sb**	**07 53 55.3**	**+1.4**
SEAG	**Tbilisi Sea**	**3.13**	**310**	P		**Pb**	**07 53 18.2**	**+2.1**
SEAG				S		**Sb**	**07 53 55.3**	**+1.4**
MAK	**Makhachkala**	**3.17**	**353**	*e*P		**Pn**	**07 53 10.3**	**+1.5**
MAK				*e*S		**Sn**	**07 53 49.8**	**+4.3**
MAK				pmax		pmax		
	comp=Z,325nm,0.4s							
MAK				smax		smax		
	comp=E,1μm,0.5s							
MAK				smax		smax		
	comp=E,1μm,0.5s							
MAK				MLR		MLR		
	comp=Z,256nm,11.0s							
ZNJK	**Zanjan**	**3.17**	**170**	*e*Pn		**Pb**	**07 53 14.1**	**-2.9**
KZRT	**Kazreti**	**3.18**	**301**	P		**Pb**	**07 53 19.3**	**+2.3**
KZRT				S		**Sb**	**07 53 53.7**	**-1.6**
KZRT	**Kazreti**	**3.18**	**301**	P		**Pb**	**07 53 19.3**	**+2.3**
KZRT				S		**Sb**	**07 53 53.7**	**-1.6**
GIDE	**GILAN DEYLAMAN**	**3.24**	**152**	*e*Pn		**Pb**	**07 53 15.8**	**-2.3**
VNNZ	**Vanand**	**3.24**	**277**	⇑*iP*		**Pb**	**07 53 17.4**	**-0.7**
VNNZ				⇓*iS*		**Sb**	**07 54 00.6**	**+3.4**
DMNI	**Dmanisi**	**3.29**	**299**	P		**Pb**	**07 53 18.0**	**-0.9**
DMNI				S		**Sb**	**07 53 59.2**	**+0.6**
DMNI	**Dmanisi**	**3.29**	**299**	P		**Pb**	**07 53 18.0**	**-0.9**
DMNI				S		**Sb**	**07 53 59.2**	**+0.6**
JIR1	**Jirandeh**	**3.40**	**155**	*e*Pn		**Pn**	**07 53 14.1**	**+2.1**
QSDN	**Sirdan**	**3.42**	**164**	*e*Pn		**Pn**	**07 53 14.8**	**+2.4**
SHTL	**Shatili**	**3.58**	**324**	P		**Pb**	**07 53 26.9**	**+3.1**
SHTL				S		**Sb**	**07 54 09.0**	**+2.2**
BRNG	**Burnasheti**	**3.67**	**301**	P		**Pb**	**07 53 26.3**	**+0.9**
BRNG				S		**Sb**	**07 54 12.0**	**+2.5**
GUDG	**Gudauri**	**3.77**	**316**	P		**Pn**	**07 53 19.8**	**+2.6**
GUDG				S		**Sn**	**07 54 03.3**	**+2.7**
GUDG	**Gudauri**	**3.77**	**316**	P		**Pn**	**07 53 19.8**	**+2.6**
GUDG				S		**Sn**	**07 54 03.3**	**+2.7**
GROC	**Groznyy**	**3.78**	**334**	*e*P		**Pn**	**07 53 19.8**	**+2.6**
GROC				*e*			07 54 03.5	
GROC				pmax		pmax		
	comp=Z,181nm,0.4s							
GROC				pmax		pmax		
	comp=Z,201nm,0.5s							
GROC				smax		smax		
	comp=N,207nm,0.7s							
GROC				smax		smax		
	comp=N,190nm,0.6s							
GROC				smax		smax		
	comp=E,133nm,0.5s							
GROC				MLR		MLR		
	comp=Z,50nm,2.0s							
AKH	**Akhalkalaki**	**3.80**	**296**	P		**Pb**	**07 53 29.9**	**+2.3**
AKH				S		**Sb**	**07 54 13.0**	**-0.3**
AKH	**Akhalkalaki**	**3.80**	**296**	P		**Pb**	**07 53 30.0**	**+2.3**
AKH				S		**Sb**	**07 54 13.0**	**-0.3**
PNSH	**Pansheti**	**3.82**	**319**	P		**Pn**	**07 53 20.2**	**+2.4**
PNSH				S		**Sn**	**07 54 05.8**	**+4.1**
PNSH	**Pansheti**	**3.82**	**319**	P		**Pn**	**07 53 20.2**	**+2.4**
PNSH				S		**Sn**	**07 54 05.8**	**+4.1**
IGZV	**Ghazvin**	**3.83**	**152**	*e*Pn		**Pn**	**07 53 20.3**	**+2.3**
KARS	**Kars**	**3.87**	**284**	Pn		**Pn**	**07 53 18.4**	**-0.2**
KARS	**Kars**	**3.87**	**284**	P		**Pn**	**07 53 18.4**	**-0.2**
AZMN	**Azmana**	**3.91**	**294**	P		Pb	07 53 37.5	+7.9
AZMN				S		Sb	07 54 26.4	+10
BKRG	**Bakuriani**	**3.94**	**301**	P		**Pb**	**07 53 30.3**	**+0.4**
BKRG				S		**Sb**	**07 54 17.0**	**-0.1**
BKRG	**Bakuriani**	**3.94**	**301**	P		**Pb**	**07 53 30.3**	**+0.4**
BKRG				S		**Sb**	**07 54 17.0**	**-0.1**
QALM	**Alamut, Qazvin**	**3.95**	**148**	*e*Pn		**Pn**	**07 53 20.9**	**+1.1**
QALM				*e*			07 54 07.5	
	comp=Z,3μm,0.4s							
ALIG	**Mtskhetisjvari**	**4.03**	**306**	P		**Pb**	**07 53 27.0**	**-4.5**
ALIG				S		**Sb**	**07 54 20.1**	**+0.4**
KLST	**Kelardasht - M**	**4.06**	**143**	*e*Pn		**Pn**	**07 53 22.3**	**+1.0**
KLST				*e*			07 54 12.2	
	comp=Z,4μm,0.2s							
LACR	**Lac**	**4.12**	**318**	⇑*eP*		**Pn**	**07 53 24.8**	**+2.9**
GEVA	**Gevas**	**4.14**	**250**	Pn		**Pn**	**07 53 25.8**	**+3.5**
QABG	**Abgarm-Qazvin**	**4.27**	**163**	*e*Pn		**Pn**	**07 53 26.2**	**+2.0**
ABS	**Abastumani**	**4.41**	**298**	P		Pb	07 53 42.9	+4.9
ABS				S		**Sb**	**07 54 30.0**	**-0.7**
BTKR	**Batakoyurt**	**4.42**	**325**	⇓*iP*		**Pn**	**07 53 27.1**	**+1.2**
KORR	**Kora**	**4.42**	**319**	⇓*eP*		**Pn**	**07 53 29.4**	**+3.4**
ONI	**Oni**	**4.43**	**310**			**Pn**	**07 53 26.7**	**+0.5**
ONI	**Oni**	**4.43**	**310**	P		**Pn**	**07 53 29.0**	**+2.9**

*IDC **16** 07:52:16.9±0.8, 39°.79N×47°.98E, h0km, mb4.2/19, mbtmp4.2/28, ML3.7/9, MS3.3/4, Error ellipse: s-maj=14.4km s-min=8.6km az=177.0*
*TEH **16** 07:52:19.5, 39°.85N×48°.22E, h16km, ML4.3*
*MOS **16** 07:52:20.2±1.0, 39°.67N×48°.09E, h42km, mb4.4/17, Error ellipse: s-maj=6.6km s-min=4.0km az=122.6*
*AZER **16** 07:52:20.9±0.1, 39°.83N×48°.00E, h20km, Error ellipse: s-maj=1.0km s-min=0.8km az=259.0*
*NEIC **16** 07:52:23.2±2.3, 39°.93N±0°.07×48°.16E±0°.08, h51km±5km, mb4.2/42, Error ellipse: s-maj=10.9km s-min=8.7km az=159.0*
*DRS **16** 07:52:24.0±0.0, 39°.51N×48°.17E, h28km*
*NNC **16** 07:52:26.7±1.5, 40°.30N×49°.00E, h0km, mb4.3, Error ellipse: s-maj=17.4km s-min=9.0km az=59.0*

ONI S **Sb** **07 54 37.1 +5.9**
ONI Oni 4.43 310 P **Pn** **07 53 29.0 +2.9**
DIGR Digorskoe uzhe 4.55 314⇓*e*P **Pn** **07 53 29.1 +1.2**
TKB Tkibuli 4.57 305 P Pb 07 53 44.5 +3.8
TKB S **Sb** **07 54 32.7 -2.6**
CHTH Charan 4.60 147 *e*Pn **Pn** **07 53 31.7 +3.0**
IRAZ Razeghan 4.65 160 *e*Pn **Pn** **07 53 32.0 +2.7**
SNGE Sanandaj 4.74 187 *e*Pn Pn 07 53 35.4 +4.9
GURO Guroymak-BITLI 4.82 257 **Pn** **07 53 34.8 +3.2**
PRTR Priterechnaya 4.83 326⇓*e*P **Pn** **07 53 34.0 +2.4**
IPRN Peran 4.92 135 *e*Pn **Pn** **07 53 34.3 +1.3**
DAMV Damavand 5.21 142 *e*Pn Pn 07 53 43.0 +5.9
IDMV Damavand 5.28 142 *e*Pn **Pn** **07 53 41.4 +3.3**
KBZ Khabaz 5.48 317 Pn **Pn** **07 53 42.6 +2.1**
comp=Z,0.3nm,0.3s,baz=138,slow=8.6,SNR=5.9
KBZ Lg Lg 07 55 12.1
comp=Z,0.9nm,0.3s,baz=310,slow=24,SNR=2.1
KBZ LR LR 07 56 30.6
comp=Z,153nm,19.1s,baz=130,slow=46
comp=Z,2.0nm,0.6s
ASAO Ashtian 5.49 162 *e*Pn Pn 07 53 46.4 +5.6
IFIR Firoozkooh 5.60 136 *e*Pn **Pn** **07 53 45.0 +2.6**
IFIR *e* 07 54 54.5
comp=Z,1μm,0.3s
SHA1 Shidzhatmaz 5.61 316⇑*e*P **Pn** **07 53 46.4 +3.9**
IVRN Varamin 5.63 147 *e*Pn **Pn** **07 53 45.6 +2.9**
IKOM Komasi 5.64 184 *e*Pn **Pn** **07 53 47.4 +4.6**
IGLO Ghaloghah 5.64 124 *e*Pn **Pn** **07 53 43.7 +0.8**
KVAR Kislovodsk Arr 5.74 318 Pn **Pn** **07 53 44.6 +0.4**
baz=71,slow=21
KVAR Lg Lg 07 55 18.1
baz=272,slow=22
comp=Z,1.3nm,0.3s
KIV Kislovodsk 5.75 318 Pn **Pn** **07 53 44.6 +0.3**
ISHM Shahmirzad 5.77 132 *e*Pn **Pn** **07 53 46.2 +1.4**
KOPT Kop Dagi 5.79 274 Pn **Pn** **07 53 48.1 +3.0**
GHVR GHOM 5.92 153 *e*Pn Pn 07 53 51.9 +5.2
IDOB Doab 6.01 179 *e*Pn **Pn** **07 53 51.9 +3.9**
MARD Mardin 6.20 249 **Pn** **07 53 53.5 +3.0**
KHMZ Khomeyn 6.25 165 *e*Pn Pn 07 53 56.0 +4.7
IMND Minoodasht 6.32 111 *e*Pn **Pn** **07 53 52.1 0.0**
IANJ Anjilo 6.37 131 *e*Pn **Pn** **07 53 54.8 +1.8**
IANJ *e* 07 54 07.2
comp=Z,1μm,0.5s
ISFB Sefidab 6.40 147 *e*Pn **Pn** **07 53 56.8 +3.5**
GOF Gofitskoye 6.41 327⇑*e*P Pb 07 54 03.8 -8.1
GOF *e*S **Sn** **07 55 04.8 -0.5**
GOF pmax pmax
comp=Z,15nm,0.4s
GOF smax smax
comp=E,70nm,0.6s
GOF smax smax
comp=N,69nm,0.8s
MRVT Maraveh tapeh 6.66 106 *e*Pn **Pn** **07 53 56.6 -0.2**
KRSH Karshahi 6.69 149 *e*Pn **Pn** **07 54 00.5 +3.2**
NASN Na'in 7.99 150 *e*Pn Pn 07 54 20.8 +5.6
ANAR Anarak 8.04 143 *e*Pn **Pn** **07 54 19.0 +3.2**
GEYT Alibeck 8.09 100 Pn **Pn** **07 54 16.4 -0.1**
comp=N,6.2nm,0.3s,baz=285,slow=16,SNR=56
GEYT Sn Sn 07 55 39.2 -7.6
baz=280,slow=16
comp=N,15nm,0.4s
GEYT Alibeck 8.09 100 Pn **Pn** **07 54 15.8 -0.6**
GYA0 ALIBECK ARRAY 8.09 100 P **Pn** **07 54 15.9 -0.5**
GYA0 S **Sn** **07 55 43.5 -3.3**
GYA0B ALIBECK ARRAY 8.09 100 Pn **Pn** **07 54 16.0 -0.5**
GYA0B ALIBECK ARRAY 8.09 100 ⇑P **Pn** **07 54 15.9 -0.5**
GYA0B ⇑S **Sn** **07 55 43.5 -3.3**
IEMG Emamgholi 8.65 103 *e*Pn **Pn** **07 54 24.3 -0.1**
TNSJ Nastanj 9.01 128 *e*Pn **Pn** **07 54 30.3 +1.2**
IAKL Akhelmad 9.03 107 *e*Pn **Pn** **07 54 29.8 +0.3**
IPAY Payeh 9.27 108 *e*Pn **Pn** **07 54 33.2 +0.5**
IKRD Kardeh 9.53 105 *e*Pn **Pn** **07 54 36.3 0.0**
TKDS Koohdasht(Taba 9.56 127 *e*Pn **Pn** **07 54 38.3 +1.6**
TPRV Parvadeh(Tabas 9.72 131 *e*Pn **Pn** **07 54 41.0 +2.3**
IMYA Miami 10.13 106 *e*Pn **Pn** **07 54 44.5 0.0**
AFRZ Afriz 10.88 122 *e*Pn **Pn** **07 54 56.5 +1.7**
ITEG Tejag 11.05 125 *e*Pn **Pn** **07 54 59.3 +2.2**
BR131 Keskin Array S 11.08 274 Pn **Pn** **07 54 58.2 +0.8**
BR131 Keskin Array S 11.08 274 P **Pn** **07 54 58.2 +0.8**
BRTR Keskin Array B 11.08 274 Pn **Pn** **07 54 58.5 +1.1**
comp=N,0.1nm,0.3s,baz=102,slow=13,SNR=1.4
BRTR LR LR 07 59 49.6
comp=N,266nm,18.3s,baz=82,slow=41
MMAI Mount Meron Ar 12.21 240 LR LR 08 00 39.4
comp=N,167nm,18.7s,baz=222,slow=41
AB31 Akbulak array 12.69 38 P **Pn** **07 55 17.4 -1.8**
AB31 Akbulak array 12.69 38 ⇑P **Pn** **07 55 17.5 -1.8**
comp=N,1.9nm,0.5s,baz=223,slow=13,SNR=63
AB31 ⇑S Sn 07 57 30.6 -8.7
comp=N,5.4nm,0.4s,baz=222,slow=20,SNR=13
ABKAR Akbulak array 12.69 38 Pn **Pn** **07 55 17.3 -2.0**
AKTO Aktyubinsk 12.74 30 Pn **Pn** **07 55 17.9 -2.0**
comp=N,1.5nm,0.3s,baz=207,slow=11,SNR=21
AKTO Sn Sn 07 57 29.9 -11
comp=N,2.4nm,0.3s,baz=317,slow=20,SNR=10
comp=N,3.7nm,0.3s
AKTO Aktyubinsk 12.74 30 *i*P **Pn** **07 55 17.5 -2.4**
AKTO pmax pmax
comp=Z,4.0nm,0.4s
AKTO Aktyubinsk 12.74 30 ⇑P **Pn** **07 55 17.5 -2.4**
comp=Z,3.5nm,0.5s
AKTO ⇓S Sn 07 57 31.2 -9.3
comp=Z,12nm,0.5s
EIL Elat 14.74 231 LR LR 08 02 15.2
comp=Z,92nm,19.9s,baz=56,slow=41
UOSS Minazif 16.34 153 **Pn** **07 56 09.1 +1.0**
RAYN Ar Rayn 16.38 188 Pn **Pn** **07 56 10.0 +1.4**
RAYN Ar Rayn 16.38 188 P **Pn** **07 56 10.0 +1.4**
RAYN pmax pmax
comp=Z,6.0nm,1.2s
CHGR Chuyangaron 16.42 87 Pn **Pn** **07 56 07.9 -1.2**
CHGR IAmb IAmb 07 56 30.9
comp=Z,13nm,0.7s
CHGR Chuyangaron 16.42 87 P **Pn** **07 56 07.9 -1.2**
CHGR pmax pmax
comp=Z,13nm,0.7s
VRI Vrincioaia 16.73 298 ⇑P **P** **07 56 15.6 +0.6**
VRI Vrincioaia 16.73 298 P **P** **07 56 15.5 +0.6**
AKASG Malin Array Be 17.09 316 Pn **Pn** **07 56 16.2 -1.2**
comp=Z,1.5nm,0.3s,baz=122,slow=11,SNR=13
comp=Z,1.3nm,0.4s
AKASG Malin Array Be 17.09 316 P **P** **07 56 18.9 0.0**
AKASG Malin Array Be 17.09 316 *e*P **P** **07 56 19.9 +1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 17.09 316 Pn **Pn** **07 56 18.0 +0.7**
AKBB IAmb IAmb 07 56 29.9
comp=Z,19nm,1.0s
AKBB Malin Array Si 17.09 316⇑*e*P **P** **07 56 19.0 +0.1**
OBN Obninsk 17.12 337 *e*P **Pn** **07 56 18.0 +0.3**
OBN *e*S **Sn** **07 59 28.9 +1.9**
OBN pmax pmax
comp=Z,5.0nm,1.0s
OBN MLR MLR
comp=Z,28nm,10.0s
KK31 Karatay Array 17.17 72 **Pn** **07 56 17.4 -1.0**
KK31 IAmb IAmb 07 56 30.9
comp=Z,8.5nm,0.6s
KK31 Karatay Array 17.17 72 *i*P **Pn** **07 56 16.8 -1.6**
KK31 Karatay Array 17.17 72 P **Pn** **07 56 16.9 -1.6**
comp=Z,5.8nm,0.6s,baz=272,slow=11,SNR=55
KK31 S **Sn** **07 59 22.3 -6.0**
comp=Z,4.6nm,0.6s,baz=275,slow=24,SNR=9.6
KKAR Karatay Array 17.17 72 **Pn** **07 56 17.3 -1.1**
KKAR Karatay Array 17.17 72 P **Pn** **07 56 17.3 -1.1**
KKAR IAmb IAmb 07 56 30.9
comp=Z,8.5nm,0.6s
KKAR Karatay Array 17.17 72 P **Pn** **07 56 17.3 -1.1**
KKAR pmax pmax
comp=Z,9.0nm,0.6s
MLR Muntele Rosu 17.19 297 ⇓P **P** **07 56 21.1 +0.9**
MLR Muntele Rosu 17.19 297 P **P** **07 56 21.0 +0.9**
GAR Garm 17.25 86 **Pn** **07 56 18.9 -0.7**
GAR IAmb IAmb 07 56 26.1
comp=Z,17nm,0.7s
VOIR 17.80 296 ⇓P **P** **07 56 27.6 +0.9**
VOIR 17.80 296 P **P** **07 56 29.0 +2.2**
VOIR pmax pmax
comp=Z,9.0nm,1.4s
ARU Arti 18.02 19 Pn **Pn** **07 56 26.0 -2.8**
baz=224,slow=9.5,SNR=7.3
ARU Sn Sn 07 59 32.4 -16
baz=221,slow=24,SNR=6.2
comp=Z,7.8nm,0.4s
ARU Arti 18.02 19 P **Pn** **07 56 26.1 -2.8**
ARU IAmb IAmb 07 56 41.0
comp=Z,9.7nm,0.6s
ARU Arti 18.02 19⇓*e*P **Pn** **07 56 27.1 -1.7**
ARU pmax pmax
comp=Z,5.0nm,0.5s
BURAR Bucovina Array 18.20 303 ⇑P **P** **07 56 32.8 +1.6**
BURAR Bucovina Array 18.20 303 **Pn** **07 56 31.4 +0.2**
BURAR IAmb IAmb 07 56 33.5
comp=Z,9.4nm,0.7s
BURAR Bucovina Array 18.20 303 P **P** **07 56 32.8 +1.6**
BUR08 Bucovina Ar. S 18.22 303 P **P** **07 56 32.1 +0.6**
DRK Karamyk 18.31 83 P **Pn** **07 56 32.1 -0.7**
LOT Lotru 18.68 295 ⇑P **Pn** **07 56 37.5 +0.3**
KIRV Kirov 18.82 2 P **P** **07 56 37.5 -0.3**
comp=Z,1.7nm,0.3s,baz=186,slow=7.8,SNR=3.6
comp=Z,13nm,0.5s
KIRV Kirov 18.82 2*ce*P **P** **07 56 36.8 -1.0**
IDI Anoyia 18.88 263 P **P** **07 56 38.6 -0.1**
comp=Z,0.3nm,0.3s,baz=9.5,slow=12,SNR=1.8
comp=Z,6.9nm,0.9s
SVE Sverdlovsk 18.93 22 *e*P **P** **07 56 39.6 +0.5**
SVE pmax pmax
comp=Z,17nm,0.6s
GZR Gura Zlata 19.37 295 ⇓P **P** **07 56 44.8 +0.8**
HERR Herculane 19.56 293 ⇑P **Pn** **07 56 47.9 +0.4**
DRGR 19.65 299 ⇑P **Pn** **07 56 49.2 +0.5**
DRGR 19.65 299 P **Pn** **07 56 49.0 +0.3**
DRGR pmax pmax
comp=Z,8.0nm,0.9s
TRPA Tarpa 20.07 303 P **P** **07 56 52.4 +0.8**
AAK Ala-Archa 20.08 73 P **P** **07 56 52.9 +0.9**
comp=Z,5.1nm,0.7s,baz=256,slow=11,SNR=11
comp=Z,5.1nm,0.7s
AAK Ala-Archa 20.08 73 **P** **07 56 51.2 -0.8**
AAK Ala-Archa 20.08 73*de*P Pn 07 56 53.4 -0.5
AAK pmax pmax
comp=Z,7.0nm,0.8s
BRVK Borovoye 20.16 42 **P** **07 56 51.5 -1.0**
BRVK IAmb IAmb 07 57 03.9
comp=Z,14nm,0.8s
BRVK Borovoye 20.16 42*de*P **P** **07 56 53.1 +0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.6s
BRVK Borovoye 20.16 42 ⇑P **P** **07 56 53.1 +0.5**
comp=Z,14nm,0.8s
BVA0 Borovoye Array 20.20 42 *e*P **P** **07 56 53.8 +0.8**
BVA0 Borovoye Array 20.20 42 P **P** **07 56 53.8 +0.8**
comp=Z,12nm,0.7s,baz=251,slow=10,SNR=34
BVAR Borovoye Array 20.20 42 P **P** **07 56 53.8 +0.8**
comp=Z,5.2nm,0.4s,baz=231,slow=11,SNR=35
BVAR S S 08 00 24.0 -14
comp=Z,0.9nm,0.7s,baz=235,slow=40,SNR=2.5
comp=Z,5.2nm,0.4s
SIRR Siria 20.27 297 ⇑P Pn 07 56 55.8 -0.2
UZH Uzhgorod 20.36 304 *e*P **P** **07 56 55.0 +0.2**
UZH *e* 07 57 09.4
KOLS Kolonicke sedl 20.46 305 P Pn 07 57 02.1 +3.9
KOLS pmax pmax
comp=Z,451nm,0.7s
TKM2 Tokmak 2 20.89 72 *i*P **P** **07 57 01.4 +0.7**
TKM2 pmax pmax
comp=Z,8.0nm,0.6s
TKM2 Tokmak 2 20.89 72 ⇑P **P** **07 57 01.5 +0.7**
comp=Z,8.3nm,0.7s
AMBH Ambrzfalva 20.92 297 P Pn 07 57 03.9 +0.4
ABAH Abaujker 20.96 303 P **P** **07 57 02.1 +0.9**
CRVS Cervenica-Dubn 20.97 304 *e*P **P** **07 57 03.0 +1.6**
DIVS Divibare 21.24 291 IAmb IAmb 07 57 09.9
comp=Z,7.6nm,0.8s
NRN Naryn 21.26 77 **P** **07 57 03.8 -1.1**
NRN IAmb IAmb 07 57 11.5
comp=Z,8.9nm,0.9s
NRN Naryn 21.26 77 P **P** **07 57 03.8 -1.1**
NRN pmax pmax
comp=Z,9.0nm,0.9s
FRGS Fruska Gora 21.43 294 ⇓P **P** **07 57 08.3 +2.0**
KSH Kashi 21.49 82 P P 07 57 00.3 -6.8
KLMR Klimovskoe 21.72 349 *e*P **P** **07 57 06.9 -2.3**
KLMR *e* 08 01 03.7
KLMR pmax pmax
comp=Z,29nm,1.1s
KLMR Klimovskoe 21.72 349 *e*P **P** **07 57 07.0 -2.3**
KLMR AMP 07 57 22.9
comp=Z,29nm,1.1s
KLMR *e*PcP **PcP** **08 01 03.7 -5.2**
PSZ Piszkesteto 21.75 301 P **P** **07 57 10.3 +0.5**
PSZ IAmb IAmb 07 57 32.7
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 21.75 301 P **P** **07 57 10.3 +0.5**
PSZ pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 21.75 301 P **P** **07 57 11.5 +1.6**
PRGR Permogore 21.91 357 *e*P **P** **07 57 09.0 -2.2**
PRGR *e*S **S** **08 01 03.6 -7.6**
PRGR pmax pmax
comp=Z,56nm,0.6s
MORH Mrgy, Hungar 22.34 296 ⇓P **P** **07 57 17.5 +1.5**
MORH Mrgy, Hungar 22.34 296 P **P** **07 57 17.8 +1.7**
OJC Ojcow 22.38 307 *e*P **P** **07 57 16.1 -0.4**
OJC Ojcow 22.38 307 P **P** **07 57 15.9 -0.4**
OJC IAmb IAmb 07 57 27.5
comp=Z,13nm,0.8s
OJC Ojcow 22.38 307 P **P** **07 57 16.0 -0.4**
OJC pmax pmax
comp=Z,13nm,0.8s
KOVH Kovagotottos 22.70 296 P **P** **07 57 21.8 +1.9**
VSU Vasula 23.11 331⇓*e*P **P** **07 57 25.3 +1.3**
VSU pmax pmax
comp=Z,93nm,1.9s
MPLH Magyarpolny 23.20 299 P **P** **07 57 26.8 +1.8**
MORC Moravsky Berou 23.67 305 ⇑P **P** **07 57 31.1 +1.5**
MORC Moravsky Berou 23.67 305 P **P** **07 57 30.3 +0.7**
MORC Moravsky Berou 23.67 305 P **P** **07 57 30.3 +0.7**
MORC pmax pmax
comp=Z,3.0nm,0.8s
KLNR Kaliningrad 23.79 318*ce*P **P** **07 57 34.0 +3.4**
KURBB Kurchatov Arra 23.89 53 P **P** **07 57 33.0 +1.4**
comp=Z,1.7nm,0.5s,baz=259,slow=9.6,SNR=36
comp=Z,1.7nm,0.5s
KURBB Kurchatov Arra 23.89 53 P **P** **07 57 32.8 +1.2**
KURBB Kurchatov Arra 23.89 53 ⇓P **P** **07 57 32.8 +1.2**
comp=Z,9.5nm,0.7s
KURK Kurchatov 23.97 53 P **P** **07 57 31.7 -0.6**
KURK IAmb IAmb 07 57 44.9
comp=Z,9.7nm,0.7s
KURK Kurchatov 23.97 53*d i*P **P** **07 57 33.8 +1.4**
KURK pmax pmax
comp=Z,8.0nm,1.3s
VRAC Vranov 24.17 304 P **P** **07 57 34.9 +0.6**
comp=Z,1.9nm,0.7s,baz=142,slow=17,SNR=3.9
comp=Z,1.9nm,0.7s
CONA Conrad Observa 24.43 300 P **P** **07 57 39.1 +2.4**
comp=Z,3.6nm,1.0s
DPC Dobruska-Polom 24.57 306 P **P** **07 57 36.9 -1.0**
DPC pmax pmax
comp=Z,9.0nm,0.8s
ARSA Arzberg 24.58 298 *e*P **P** **07 57 39.6 +1.5**
comp=Z,2.8nm,0.5s,SNR=4.7
UPC Upice 24.80 306 P **P** **07 57 41.6 +1.7**
UPC pmax pmax
comp=Z,9.0nm,1.1s
SOKA Soboth 24.87 297 *e*P **P** **07 57 42.2 +1.5**
comp=Z,4.3nm,0.8s
OBKA Obir 25.19 296 *e*P **P** **07 57 45.7 +2.1**
comp=Z,8.5nm,1.3s
MOA Molln 25.49 300 *e*P **P** **07 57 47.6 +1.3**
comp=Z,2.2nm,0.6s
FINES FINESS Array B 25.51 335 P **P** **07 57 46.7 +0.5**
comp=Z,6.1nm,0.4s,baz=137,slow=9.7,SNR=50
comp=Z,6.1nm,0.4s
FINES FINESS Array B 25.51 335 P **P** **07 57 45.8 -0.4**
MAKZ Makanchi 25.53 63 P **P** **07 57 45.9 -0.8**
MAKZ IAmb IAmb 07 58 00.2
comp=Z,6.5nm,0.8s
MAKZ Makanchi 25.53 63 P **P** **07 57 45.9 -0.8**
MAKZ pmax pmax
comp=Z,7.0nm,0.9s
MK31 Makanchi Array 25.75 63 P **P** **07 57 48.2 -0.4**
MK31 IAmb IAmb 07 58 01.9
comp=Z,8.6nm,0.8s
MK31 Makanchi Array 25.75 63*c i*P **P** **07 57 50.5 +1.9**
MKAR Makanchi Array 25.75 63 P **P** **07 57 50.4 +1.8**
comp=Z,5.6nm,0.8s,baz=268,slow=7.5,SNR=18
comp=Z,5.6nm,0.8s
MKAR Makanchi Array 25.75 63 P **P** **07 57 48.0 -0.7**
GEC2 GERESS Array S 25.98 302 P **P** **07 57 51.2 +0.5**
GEC2 IAmb IAmb 07 57 55.6
comp=Z,11nm,0.9s
GERES GERESS Array B 25.98 302 P **P** **07 57 51.8 +1.0**
comp=Z,5.1nm,0.7s,baz=95,slow=9.7,SNR=26
comp=Z,5.1nm,0.7s
KBA Koelnbreinsper 26.05 298 *e*P **P** **07 57 53.4 +1.9**
comp=Z,6.1nm,0.7s,SNR=5.2
CLL Collm 26.83 307 *e*P **P** **07 58 00.0 +1.7**
CLL *e* 07 58 10.0
CLL Collm 26.83 307 *e*P **P** **07 58 00.0 +1.7**
CLL *e*pP **sP** **07 58 10.0 -1.7**
CLL *e*PPP PPP 07 58 47.0
TEOL Teolo 27.18 294 P **P** **07 58 02.3 +0.8**
WTTA Wattenberg 27.22 298 *e*P **P** **07 58 03.2 +1.0**
comp=Z,1.7nm,0.4s
FETA Feichten 27.83 297 *e*P **P** **07 58 08.8 +1.3**
comp=Z,1.2nm,0.4s
FUORN Ofenpass-Fuorn 28.15 297 P **P** **07 58 11.0 +0.6**
DAVOX Davos/Dischmat 28.41 297 P **P** **07 58 14.1 +1.3**
comp=Z,3.8nm,0.5s,baz=109,slow=5.0,SNR=13
comp=Z,3.8nm,0.5s
ZALV Zalesovo Beam 28.48 48 P **P** **07 58 14.0 +1.0**
comp=Z,0.8nm,0.4s,baz=244,slow=13,SNR=3.5
comp=Z,0.8nm,0.4s
MSSA Maissana 28.76 292 P **P** **07 58 17.1 +1.3**
DGZ Jazzator, Alta 29.38 57⇑*e*P **P** **07 58 22.9 +1.6**
DGZ pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 29.49 325 P **P** **07 58 22.4 +0.5**
comp=Z,2.8nm,0.7s,baz=128,slow=9.3,SNR=3.1
comp=Z,2.8nm,0.7s
SENIN Lac Senin/Sane 30.20 296 P **P** **07 58 29.7 +1.0**
BNI Bardonecchia 30.72 294 P **P** **07 58 34.6 +1.5**
BNI pmax pmax
comp=Z,8.0nm,0.9s
NC405 NORSAR Array S 30.81 326 P **P** **07 58 34.1 +0.5**
NB2 NORSAR Subarra 31.00 326 P **P** **07 58 33.7 -1.6**
comp=Z,1.0nm,0.9s,baz=160,slow=11
NOA NORSAR Array B 31.00 326 P **P** **07 58 35.4 +0.1**
comp=Z,0.6nm,0.7s,baz=125,slow=9.0,SNR=4.0
comp=Z,0.6nm,0.7s
ARCES ARCESS Array B 32.09 345 P **P** **07 58 45.2 +0.4**
comp=Z,3.5nm,0.8s,baz=156,slow=9.1,SNR=5.2
comp=Z,3.5nm,0.8s
ARCES ARCESS Array B 32.09 345 *e*P **P** **07 58 46.7 +1.9**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
SSB Saint Sauveur 32.20 294 P **P** **07 58 46.8 +0.7**
SSB Saint Sauveur 32.20 294 P **P** **07 58 46.8 +0.7**
SSB pmax pmax
comp=Z,12nm,0.5s
EKA Eskdalemuir Ar 36.95 312 P **P** **07 59 26.7 -0.2**
comp=Z,1.2nm,0.5s,baz=101,slow=8.8,SNR=7.4
comp=Z,1.2nm,0.5s
ESDC Sonseca Array 39.50 287 P **P** **07 59 48.8 +0.1**
comp=Z,2.9nm,0.8s,baz=63,slow=8.8,SNR=17
comp=Z,2.9nm,0.8s
SPITS Spitsbergen Ar 40.61 350 P **P** **07 59 57.5 +0.1**
comp=Z,5.4nm,0.7s,baz=150,slow=12,SNR=1.4
comp=Z,5.4nm,0.7s
ULN Ulaanbaatar 42.41 59 P **P** **08 00 10.1 -2.6**
ULN IAmb IAmb 08 00 24.8
comp=Z,7.1nm,1.1s
ULN Ulaanbaatar 42.41 59⇑*e*P **P** **08 00 15.8 +3.2**
ULN pmax pmax
comp=Z,10.0nm,2.5s
PESTR Estremoz 42.43 287 P **P** **08 00 13.2 +0.4**
PESTR IAmb IAmb 08 00 14.1
comp=Z,5.4nm,1.0s
TOA0 Torodi Ar. Sit 48.53 250 P **P** **08 01 01.5 +0.3**
TOA0 IAmb IAmb 08 01 02.7
comp=Z,2.1nm,0.9s
TORD Torodi Ar. Bea 48.53 250 P **P** **08 01 00.8 -0.5**
comp=Z,0.9nm,0.6s,baz=50,slow=7.5,SNR=7.1
comp=Z,0.9nm,0.6s
TORD Torodi Ar. Bea 48.53 250 P **P** **08 01 01.2 0.0**
YAK Yakutsk 52.04 36 P **P** **08 01 26.5 -0.7**
BOSA Boshof 71.30 201 P **P** **08 03 38.1 +0.6**
comp=Z,2.6nm,0.6s,baz=4.1,slow=7.8,SNR=5.8
comp=Z,2.6nm,0.6s
BOSA Boshof 71.30 201 P **P** **08 03 38.0 +0.6**
KDAK Kodiak Island 81.25 11 P **P** **08 04 34.3 +0.8**
comp=Z,4.7nm,0.9s,baz=337,slow=23,SNR=1.6
comp=Z,4.7nm,0.9s
WRA Warramunga Arr 99.77 108 P **Pdif** **08 06 01.9 -0.2**
comp=Z,0.2nm,0.5s,baz=318,slow=3.6,SNR=1.7
comp=Z,0.2nm,0.5s

IDC ***16*** *07:58:35.5±0.8, 38°.28N×141°.47E, h0km, mb4.0/12, mbtmp3.9/15, ML2.3/3, Error ellipse: s-maj=22.7km s-min=17.4km az=77.0*
NIED ***16*** *07:58:39.5, 38°.33N×141°.54E, h18km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.56; $M_{\theta\theta}$-4.20; $M_{\phi\phi}$0.64; $M_{r\theta}$0.51; $M_{r\phi}$2.10; $M_{\theta\phi}$2.18; Fault plane solution: $M_0$4.97000×10^{14} NP1:ϕ_s82.00000°, δ51.00000°, λ47.00000°. NP2:ϕ_s318.00000°, δ55.00000°, λ130.00000°.*
JMA ***16*** *07:58:39.5±0.1, 38°.3N±0°.4×141°.5E±0°.5, h18km±1km, MD4.2/20, MV4.4/20, KINKAZAN REGION*
JMA Felt III J1 at KINKAZAN REGION .
ISC 16 07:58:39.2±1.2, 38°.31N±0°.04×141°.53E±0°.06, h18km±4km, n59, σ0°96/23, mb3.9/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.05**	**275**	P	**Pg**	**07 58 42.8**	**+0.3**
JIKH				S	**Sg**	**07 58 44.9**	**+0.1**
JIKH	**Ishinomakikobu**	**0.05**	**275**	A	A	07 58 42.8	
comp=E,96nm,0.3s,comp=E,49nm,0.3s							
JIO	**Ouri**	**0.21**	**316**	P	**Pg**	**07 58 44.3**	**0.0**
JIO				S	**Sg**	**07 58 47.6**	**-0.1**
JIO	**Ouri**	**0.21**	**316**	A	A	07 58 44.3	
comp=E,17nm,0.3s,comp=E,22nm,0.8s							
JKMT	**Kesennumamotoy**	**0.51**	**355**	P	**Pg**	**07 58 48.8**	**-0.6**
JKMT				S	**Sg**	**07 58 55.7**	**-0.5**
JOFO	**Osakifurukawao**	**0.57**	**301**	P	**Pg**	**07 58 50.8**	**+0.2**
JOFO				*e*S	**Sg**	**07 58 59.0**	**+0.8**
JOFO	**Osakifurukawao**	**0.57**	**301**	A	A	07 58 50.8	
comp=E,41nm,0.7s,comp=E,20nm,0.2s							
JOU	**Okura**	**0.69**	**275**	*e*S	**Sg**	**07 59 02.0**	**+0.1**
JOU	**Okura**	**0.69**	**275**	A	A	07 59 02.0	
comp=E,14nm,0.5s,comp=E,14nm,0.4s							
JMK	**Ichinoseki**	**0.69**	**339**	*e*S	**Sg**	**07 59 01.0**	**-1.0**
JMK	**Ichinoseki**	**0.69**	**339**	A	A	07 59 01.0	
comp=E,10.0nm,0.8s,comp=E,6.0nm,0.3s							
JMM	**Marumori**	**0.73**	**233**	S	**Sg**	**07 59 02.8**	**-0.5**
JMM	**Marumori**	**0.73**	**233**	A	A	07 59 02.8	
comp=E,7.0nm,0.3s,comp=E,10.0nm,0.3s							
JMST	**Minamisoumatoc**	**0.77**	**221**	A	A	07 58 54.5	
comp=E,7.0nm,0.2s,comp=E,11nm,0.5s							
OFUJ	**Ofunato**	**0.78**	**8**	*e*S	**Sg**	**07 59 04.0**	**-0.9**
JFK	**Kawauchi**	**1.07**	**209**	*e*S	**Sg**	**07 59 12.6**	**-1.5**
JFK	**Kawauchi**	**1.07**	**209**	A	A	07 59 12.6	
comp=E,9.0nm,0.4s,comp=E,7.0nm,0.3s							
JYK	**Kaneyama**	**1.10**	**304**	*e*S	**Sg**	**07 59 13.9**	**-1.1**
JYK	**Kaneyama**	**1.10**	**304**	A	A	07 59 13.9	
comp=E,3.0nm,1.0s,comp=E,3.0nm,3.9s							
JYS	**Shirataka**	**1.16**	**266**	S	**Sg**	**07 59 15.4**	**-1.4**
JYS	**Shirataka**	**1.16**	**266**	A	A	07 59 15.4	
comp=E,10.0nm,1.3s,comp=E,8.0nm,1.5s							
JYAR	**Yonezawaarcadi**	**1.16**	**251**	A	A	07 59 00.9	
comp=E,32nm,1.3s,comp=E,30nm,0.6s							
JOM	**Ohasama**	**1.18**	**351**	A	A	07 59 00.6	
comp=E,9.0nm,0.7s,comp=E,11nm,0.3s							
JOTO	**OTAMA OYAMA**	**1.21**	**232**	S	**Sb**	**07 59 16.7**	**0.0**
JOTO	**OTAMA OYAMA**	**1.21**	**232**	A	A	07 59 16.7	
comp=E,44nm,0.4s,comp=E,51nm,0.7s							
JRG	**Rokugo**	**1.29**	**327**	A	A	07 59 02.5	
comp=E,11nm,0.4s,comp=E,11nm,0.9s							
JFFD	**Fukushimafurud**	**1.44**	**213**	A	A	07 59 05.3	
comp=E,5.0nm,1.8s,comp=E,5.0nm,0.9s							
JYYZ	**Yamagatayuza**	**1.44**	**300**	A	A	07 59 04.9	
comp=E,11nm,2.5s,comp=E,7.0nm,1.6s							
JYA	**Atsumi**	**1.46**	**282**	A	A	07 59 05.3	
comp=E,10.0nm,0.9s,comp=E,7.0nm,0.6s							
JSZI	**Iwateshizukuis**	**1.50**	**343**	A	A	07 59 05.6	
comp=E,11nm,2.2s,comp=E,10.0nm,3.0s							
JYW	**Yuwa**	**1.61**	**320**	A	A	07 59 07.3	
comp=E,11nm,1.0s,comp=E,13nm,1.4s							
JTH	**Tanohata**	**1.65**	**9**	A	A	07 59 07.8	

comp=E,7.0nm,0.7s,comp=E,4.0nm,0.5s
JSB Shiboa 1.85 224 A A 07 59 11.4
comp=E,5.0nm,1.2s,comp=E,6.0nm,0.9s
JKEN Kujiedanarisaw 1.90 4 A A 07 59 11.5
comp=E,15nm,0.7s,comp=E,18nm,0.7s
JYT Yasato 2.33 208 A A 07 59 18.4
comp=E,7.0nm,0.4s,comp=E,3.0nm,0.3s
MJAR Matsushiro Arr 3.18 237 Pn Pn 07 59 24.0 -4.3
0.2nm,0.3s,baz=35,slow=14,SNR=7.1
MJAR Sn **Sn 08 00 06.0 +0.3**
1.3nm,0.3s,baz=65,slow=9.9,SNR=6.4
2.1nm,0.3s
JHJ Hachijo jima 2 5.37 196 Sn Sn 08 00 54.7 -5.0
6.8nm,0.3s,baz=74,slow=19,SNR=2.0
USRK Ussuriysk Ar. 9.29 312 Pn **Pn 08 00 51.7 -0.4**
0.1nm,0.3s,baz=122,slow=15,SNR=1.2
0.8nm,0.3s
KSRS Korea Array 10.79 270 Pn **Pn 08 01 12.9 +0.2**
0.1nm,0.3s,baz=95,slow=16,SNR=1.7
0.3nm,0.3s
SEY Seymchan 25.53 12 P **P 08 04 09.0 +2.6**
1.1nm,0.7s,baz=210,slow=16,SNR=1.9
SONM Songino Array 27.17 302 P **P 08 04 21.3 -0.4**
0.6nm,0.6s,baz=109,slow=9.9,SNR=3.6
0.6nm,0.6s
H11N2 WAKE ISLAND Hy 28.74 123 T T 08 34 37.7
baz=316,slow=76,SNR=378
H11N1 WAKE ISLAND Hy 28.75 123 T T 08 34 38.4
baz=316,slow=76,SNR=535
H11N3 WAKE ISLAND Hy 28.76 123 T T 08 34 37.5
baz=316,slow=76,SNR=449
H11S1 WAKE ISLAND Hy 29.49 125 T T 08 35 34.5
baz=318,slow=76,SNR=261
H11S3 WAKE ISLAND Hy 29.49 125 T T 08 35 36.8
baz=318,slow=76,SNR=403
H11S2 WAKE ISLAND Hy 29.51 125 T T 08 35 33.4
baz=318,slow=76,SNR=189
ZALV Zalesovo Beam 41.14 311 P P 08 06 21.0 -1.0
2.3nm,0.6s,baz=85,slow=6.3,SNR=9.1
ZALV PcP **PcP 08 08 19.9 -1.2**
0.9nm,0.5s,baz=27,slow=4.8,SNR=3.0
2.3nm,0.6s
MKAR Makanchi Array 43.53 301 P P 08 06 40.9 -0.8
2.4nm,0.7s,baz=84,slow=9.9,SNR=16
2.4nm,0.7s
KURBB Kurchatov Arra 45.30 307 P P 08 06 54.6 -1.1
6.3nm,0.5s,baz=82,slow=8.3,SNR=47
6.3nm,0.5s
WRA Warramunga Arr 58.33 188 P P 08 08 31.9 -1.2
0.5nm,0.4s,baz=5.2,slow=7.0,SNR=18
0.5nm,0.4s
ASAR Alice Springs 62.06 188 P P 08 08 57.9 -0.7
0.5nm,0.6s,baz=11,slow=5.2,SNR=10
0.5nm,0.6s
FINES FINESS Array B 67.73 332 P P 08 09 33.6 -1.6
2.8nm,0.7s,baz=39,slow=9.0,SNR=4.0
2.8nm,0.7s
HFS Hagfors 72.97 336 P P 08 10 06.8 -0.4
0.9nm,0.4s,baz=52,slow=7.5,SNR=6.4
0.9nm,0.4s
NOA NORSAR Array B 73.05 337 P P 08 10 06.8 -0.9
0.7nm,0.7s,baz=22,slow=5.2,SNR=1.5
0.7nm,0.7s
AKASG Malin Array Be 73.35 322 P P 08 10 07.5 -2.1
1.0nm,0.4s,baz=45,slow=6.2,SNR=12
1.0nm,0.4s
PDAR Pinedale Array 76.71 46 P P 08 10 29.7 +0.2
0.3nm,0.6s,baz=270,slow=0.4,SNR=4.6
0.3nm,0.6s
GERES GERESS Array B 81.68 328 P P 08 10 55.5 -0.8
0.3nm,0.5s,baz=46,slow=7.6,SNR=4.1
0.3nm,0.5s
LPAZ La Paz 145.96 58 PKPbc **PKPdf 08 18 18.2 +0.1**
1.4nm,0.7s,baz=342,slow=3.2,SNR=4.3

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*TIR **16** 08:03:20.1, 39°.70N×20°.72E, h8km, Md3.2*
*ATH **16** 08:03:21.6, 39°.76N×20°.67E, h5km±2km, ML3.4/9, Error ellipse: s-maj=2.8km s-min=0.7km az=340.0*
*BEO **16** 08:03:21.0±0.8, 39°.63N×20°.61E, h11km±4km, ML3.3/6*
*THE **16** 08:03:21.7, 39°.74N×20°.68E, h2km±29km, ML3.3/9, Error ellipse: s-maj=29.0km s-min=0.4km az=0.0*
*IDC **16** 08:03:24.0±1.9, 39°.81N×20°.58E, h52km±20km, mb3.6/12, mbtmp3.7/19, ML3.4/7, MS3.3/5, Error ellipse: s-maj=17.7km s-min=16.4km az=158.0*
ISC 16 08:03:21.0±0.7, 39°.72N±0°.02×20°.68E±0°.02, h17km±5km, n112, σ1§82/145, mb3.9/11, MS3.4/3, 8C-9D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**117**	P	**Pg**	**08 03 24.8**	**-0.3**
JAN				S	**Sg**	**08 03 26.8**	**-1.1**
	113μm,0.4s						
JAN	**Janina**	**0.14**	**117**	P	**Pg**	**08 03 24.7**	**-0.4**
JAN				S	**Sg**	**08 03 27.6**	**-0.2**
JAN				AML	AML	08 03 28.4	
JAN				AML	AML	08 03 28.4	
IGT	**Igoumenitsa**	**0.33**	**235**	P	**Pg**	**08 03 28.4**	**+0.4**
IGT				S	**Sg**	**08 03 33.0**	**+0.3**
	12μm,0.6s						
IGT	**Igoumenitsa**	**0.33**	**235**	P	**Pg**	**08 03 28.2**	**+0.2**
	baz=242						
IGT				S	**Sb**	**08 03 35.1**	**+1.7**
	baz=242						
IGT	**Igoumenitsa**	**0.33**	**235**	P	**Pg**	**08 03 28.4**	**+0.4**
IGT				S	**Sg**	**08 03 33.3**	**+0.5**
IGT				AML	AML	08 03 36.5	
	comp=E,24801μm,0.7s						
IGT				AML	AML	08 03 37.6	
	comp=N,21755μm,0.4s						
LSK	**Leskovik**	**0.43**	**351**	P	**Pg**	**08 03 29.9**	**+0.1**
LSK				S	**Sg**	**08 03 36.2**	**+0.4**
	comp=N,10μm,0.5s						
LSK	**Leskovik**	**0.43**	**351**	P	**Pg**	**08 03 29.9**	**+0.1**
	baz=349						
LSK				S	**Sb**	**08 03 39.5**	**+3.0**
	baz=349						
SRN	**Sarande**	**0.55**	**287**	P	**Pg**	**08 03 31.8**	**-0.1**
SRN				S	**Sg**	**08 03 39.7**	**+0.4**
	comp=N,5μm,0.3s						
SRN	**Sarande**	**0.55**	**287**	P	**Pg**	**08 03 31.8**	**-0.1**
	baz=289						
SRN				S	**Sb**	**08 03 40.6**	**+1.0**
	baz=289						
KPRO	**Kipourio**	**0.57**	**66**	P	**Pg**	**08 03 32.4**	**0.0**
KPRO				S	**Sg**	**08 03 40.6**	**+0.5**
	comp=N,6μm,0.5s						
KASA	**Kassiopi**	**0.58**	**273**	P	**Pg**	**08 03 32.3**	**-0.1**
KASA				S	**Sg**	**08 03 40.1**	**-0.1**
KASA				AML	AML	08 03 42.4	
	comp=N,8283μm,0.3s						
KASA				AML	AML	08 03 42.6	
	comp=E,5327μm,0.3s						
PENT	**Pentalofos**	**0.59**	**36**	P	**Pg**	**08 03 32.6**	**-0.1**
PENT				S	**Sg**	**08 03 40.8**	**+0.2**
	comp=E,2μm,0.4s						
PENT	**Pentalofos**	**0.59**	**36**	P	**Pg**	**08 03 32.5**	**-0.2**
PENT				S	**Sg**	**08 03 40.0**	**-0.6**
PENT				AML	AML	08 03 44.2	
	comp=N,1224μm,0.4s						
PENT				AML	AML	08 03 45.7	
	comp=E,4843μm,0.5s						
KEK	**Kerkira**	**0.68**	**269**	P	**Pg**	**08 03 33.9**	**-0.5**
KEK				S	**Sg**	**08 03 43.8**	**+0.3**
	comp=E,3μm,0.5s						
KEK	**Kerkira**	**0.68**	**269**	P	**Pg**	**08 03 34.0**	**-0.3**
KEK				S	**Sg**	**08 03 43.6**	**+0.1**
KEK				AML	AML	08 03 46.4	
	comp=N,4332μm,0.7s						
KEK				AML	AML	08 03 47.9	
	comp=E,4279μm,0.4s						
NEST	**Nestorio**	**0.75**	**22**	P	**Pg**	**08 03 35.4**	**-0.2**
NEST	**Nestorio**	**0.75**	**22**	P	**Pg**	**08 03 35.4**	**-0.2**
TSLK	**Tsoukalades, L**	**0.90**	**181**	P	**Pg**	**08 03 38.8**	**+0.4**
TSLK	**Tsoukalades, L**	**0.90**	**181**	P	**Pg**	**08 03 38.9**	**+0.4**
TSLK				S	**Sb**	**08 03 52.1**	**+2.4**
TSLK				AML	AML	08 03 56.5	
	comp=E,8266μm,0.5s						
TSLK				AML	AML	08 03 57.6	
	comp=N,11770μm,0.6s						
KBN	**Korca**	**0.90**	**5**	P	**Pg**	**08 03 38.4**	**-0.2**
KBN				S	**Sb**	**08 03 51.0**	**+1.0**
	comp=N,1μm,0.6s						
KBN	**Korca**	**0.90**	**5**	P	**Pb**	**08 03 39.5**	**+1.2**
	baz=3.0						
KBN				S	**Sn**	**08 03 54.9**	**+3.2**
	baz=3.0						
LKD2	**Lefkada island**	**0.93**	**181**	P	**Pg**	**08 03 40.0**	**+0.9**
LKD2	**Lefkada island**	**0.93**	**181**	P	**Pg**	**08 03 39.8**	**+0.7**
LKD2				S	**Sb**	**08 03 53.1**	**+2.3**
LKD2				AML	AML	08 04 01.5	
	comp=N,6996μm,0.5s						
LKD2				AML	AML	08 04 01.6	
	comp=E,7597μm,0.6s						
NYDR	**Nydri-Lefkada**	**1.01**	**179**	P	**Pg**	**08 03 41.1**	**+0.6**
KZN	**Kozani**	**1.02**	**55**	P	**Pg**	**08 03 40.4**	**-0.3**
KZN				S	**Sb**	**08 03 55.3**	**+2.0**
	comp=E,2μm,0.6s						
KZN	**Kozani**	**1.02**	**55**	P	**Pg**	**08 03 40.2**	**-0.6**
KZN				S	**Sg**	**08 03 54.5**	**+0.3**
KZN				AML	AML	08 03 58.0	
	comp=N,3538μm,0.6s						
KZN				AML	AML	08 03 58.5	
	comp=E,3092μm,1.1s						
THL	**Klokotos Trika**	**1.04**	**98**	P	**Pg**	**08 03 41.0**	**-0.1**
EVGI	**Lefkada island**	**1.10**	**181**	P	**Pg**	**08 03 42.6**	**+0.3**
EVGI				S	**Sn**	**08 03 58.6**	**+2.2**
VLO	**Vlora**	**1.18**	**310**	P	**Pg**	**08 03 43.7**	**0.0**
VLO	**Vlora**	**1.18**	**310**	P	**Pn**	**08 03 46.2**	**+3.6**
	baz=310						
VLO				S	**Sn**	**08 04 03.1**	**+4.8**
	baz=310						
EVR	**Evrytania**	**1.19**	**132**	P	**Pb**	**08 03 44.1**	**+1.0**
EVR				S	**Sn**	**08 04 01.3**	**+2.6**
EVR				AML	AML	08 04 06.7	
	comp=N,3998μm,0.6s						
EVR				AML	AML	08 04 06.9	
	comp=E,5037μm,0.5s						
FSK	**Fiskardo**	**1.27**	**184**	P	**Pg**	**08 03 46.1**	**+0.7**
PVO	**Paravola**	**1.28**	**149**	P	**Pb**	**08 03 46.3**	**+1.6**
PVO				S	**Sn**	**08 04 04.0**	**+3.1**
OHR	**Ohrid**	**1.39**	**4**	*e*Pg	**Pg**	**08 03 48.1**	**+0.3**
OHR				*e*Sg	**Sg**	**08 04 08.2**	**+2.3**
OHR	**Ohrid**	**1.39**	**4**	*i* Pn	**Pg**	**08 03 48.6**	**+0.8**
KEF4	**Livadi, Kephal**	**1.48**	**188**	P	**Pb**	**08 03 49.4**	**+1.4**
VLS	**Valsamata**	**1.54**	**183**	P	**Pb**	**08 03 50.4**	**+1.3**
TIR	**Tirane**	**1.74**	**339**	*e*Pn	**Pb**	**08 03 53.2**	**+0.8**
TIR				*e*Sn	**Sb**	**08 04 15.4**	**+1.4**
TIR	**Tirane**	**1.74**	**339**	P	**Pb**	**08 03 53.2**	**+0.8**
	baz=339						
TIR				S	**Sg**	**08 04 21.3**	**+4.3**
	baz=339						
PHP	**Peshkopia**	**1.97**	**355**	P	**Pb**	**08 03 57.5**	**+1.2**
	baz=355						
VAY	**Valandovo**	**2.15**	**41**	*e*Pn	**Pn**	**08 03 58.1**	**+2.1**
VAY				*e*Sn	**Sb**	**08 04 26.6**	**+0.8**
VAY	**Valandovo**	**2.15**	**41**	*i* Pn	**Pn**	**08 03 58.8**	**+2.8**
STIP	**Stip**	**2.28**	**30**	*i* Pn	**Pb**	**08 04 02.5**	**+0.9**
SKO	**Skopje**	**2.32**	**14**	*e*Pn	**Pn**	**08 04 00.1**	**+1.7**
SKO				*e*Sn	**Sn**	**08 04 30.1**	**+3.6**
SKO	**Skopje**	**2.32**	**14**	*i* Pn	**Pn**	**08 04 01.1**	**+2.8**
SRS	**Serrai**	**2.62**	**57**	*e*Pn	**Pn**	**08 04 04.8**	**+2.3**
SRS				*e*Sn	**Sn**	**08 04 37.4**	**+3.5**
BCI	**Bajram Curri**	**2.68**	**350**	P	**Pb**	**08 04 07.4**	**-1.1**
	baz=350						
KKB	**Krupnik**	**2.81**	**40**	P	**Pn**	**08 04 08.4**	**+3.3**
PDG	**Podgorica**	**2.91**	**339**	⇓P	**Pn**	**08 04 06.9**	**+0.4**
MMB	**Musomiste**	**2.97**	**50**	P	**Pn**	**08 04 11.0**	**+3.6**
TIP	**Timpagrande**	**3.09**	**261**	⇓P	**Pn**	**08 04 08.6**	**-0.3**
TIP				⇑S	**Sn**	**08 04 45.0**	**-0.5**
MATE	**Matera**	**3.19**	**288**	⇓P	**Pn**	**08 04 10.0**	**-0.3**
BARS	**Barje**	**3.21**	**15**	*e*Pn	**Pn**	**08 04 12.9**	**+2.3**
VTS	**Vitosha**	**3.48**	**33**	⇓P	**Pn**	**08 04 17.6**	**+3.2**
VTS	**Vitosha**	**3.48**	**33**	P	**Pn**	**08 04 17.3**	**+2.9**
SELS	**Selova**	**3.51**	**5**	*e*Pn	**Pn**	**08 04 16.8**	**+2.1**
SJES	**Sjenica**	**3.58**	**352**	*e*Pn	**Pn**	**08 04 18.0**	**+2.3**
RZN	**Rozhen**	**3.64**	**56**	P	**Pn**	**08 04 19.7**	**+3.0**
ZAPS	**Zavoj**	**3.84**	**22**	*e*Pn	**Pn**	**08 04 21.9**	**+2.6**
BOVS	**Bovan**	**3.98**	**11**	⇑P	**Pn**	**08 04 22.8**	**+1.6**
BOVS	**Bovan**	**3.98**	**11**	*e*Pn	**Pn**	**08 04 22.3**	**+1.1**
BOVS				*e*Sn	**Sn**	**08 05 10.8**	**+3.3**
GRUS	**Gruza**	**4.16**	**0**	*e*Pn	**Pn**	**08 04 25.8**	**+2.1**
BLKB	**Belogradchik**	**4.17**	**20**	⇑P	**Pn**	**08 04 26.7**	**+2.8**
ZAGS	**Zaicar**	**4.25**	**15**	*e*Pn	**Pn**	**08 04 27.2**	**+2.4**
BBLS	**Lazići**	**4.25**	**347**	*e*Pn	**Pn**	**08 04 26.5**	**+1.6**
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	**Pn**	**08 04 28.1**	**+1.0**
TRUS	**Trudelj**	**4.50**	**357**	*e*Pn	**Pn**	**08 04 30.2**	**+1.8**
TEKS	**Tekeris**	**4.90**	**350**	*e*Pn	**Pn**	**08 04 34.1**	**+0.3**
HERR	**Herculane**	**5.31**	**13**	⇑P	**Pn**	**08 04 41.4**	**+2.0**
VAE	**Valguarnera**	**5.40**	**247**	P	Pn	08 04 48.9	+8.2
	comp=E,5.9nm,0.4s,baz=55,slow=18,SNR=1.8						
VAE				S	**Sn**	**08 05 47.0**	**+4.5**
	comp=E,7.9nm,0.4s,baz=37,slow=24,SNR=2.2						
FRGS	**Fruska Gora**	**5.47**	**354**	⇑P	**Pn**	**08 04 42.7**	**+1.0**
FRGS	**Fruska Gora**	**5.47**	**354**	*e*Pn	**Pn**	**08 04 42.6**	**+1.0**
IDI	**Anoyia**	**5.55**	**142**	⇓P	**Pn**	**08 04 43.1**	**+0.4**
IDI	**Anoyia**	**5.55**	**142**	P	**Pn**	**08 04 43.8**	**+1.0**
	comp=E,0.6nm,0.3s,baz=321,slow=17,SNR=1.5						
IDI				S	**Sn**	**08 05 44.2**	**-1.9**
	comp=E,8.2nm,0.4s,baz=72,slow=22,SNR=2.8						
	comp=E,3.0nm,0.5s						
GZR	**Gura Zlata**	**5.87**	**15**	⇓P	**Pn**	**08 04 49.6**	**+2.4**
BZS	**Buzias**	**5.93**	**6**	⇓P	**Pn**	**08 04 49.4**	**+1.5**
VOIR		**6.56**	**28**	⇑P	**Pn**	**08 04 59.4**	**+2.7**
SIRR	**Siria**	**6.58**	**6**	⇑P	**Pn**	**08 04 58.8**	**+1.9**
MLR	**Muntele Rosu**	**6.95**	**32**	⇑P	**Pn**	**08 05 04.3**	**+2.2**
MLR	**Muntele Rosu**	**6.95**	**32**	P	**Pn**	**08 05 04.4**	**+2.4**
	comp=E,0.5nm,0.3s,baz=214,slow=5.2,SNR=10						
MLR				S	**Sn**	**08 06 23.7**	**+3.0**
	comp=E,4.0nm,0.8s,baz=110,slow=20,SNR=1.4						
MLR				LR	LR	08 08 21.7	
	comp=E,301nm,18.6s,baz=162,slow=43						
	comp=E,9.7nm,0.8s						
PLOR	**Plostina**	**7.53**	**34**	⇓P	**Pn**	**08 05 12.8**	**+2.8**
VRI	**Vrincioaia**	**7.58**	**34**	⇓P	**Pn**	**08 05 13.9**	**+3.3**
OBKA	**Obir**	**8.13**	**329**	*e*Pn	**Pn**	**08 05 18.0**	**-0.2**
	comp=E,1.5nm,0.3s						
ARSA	**Arzberg**	**8.41**	**335**	*e*Pn	**Pn**	**08 05 23.1**	**+1.1**
	comp=E,1.9nm,0.4s						
KBA	**Koelnbreinsper**	**9.08**	**326**	*e*Pn	**Pn**	**08 05 32.1**	**+0.7**
	comp=E,0.6nm,0.3s						
ABTA	**Abfaltersbach**	**9.21**	**322**	*e*Pn	**Pn**	**08 05 33.2**	**+0.2**
	comp=E,0.9nm,0.3s						
MOA	**Molln**	**9.35**	**332**	*i* Pn	**Pn**	**08 05 36.1**	**+1.2**
	comp=E,0.8nm,0.2s,SNR=4.6						
KEST	**Kesra**	**9.82**	**250**	P	**Pn**	**08 05 42.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=38,slow=21,SNR=2.0						
	comp=E,2.6nm,0.8s						
BRTR	**Keskin Array B**	**9.98**	**86**	P	**Pn**	**08 05 46.3**	**+2.6**
	comp=E,0.1nm,0.3s,baz=274,slow=16,SNR=2.6						
BRTR				LR	LR	08 10 14.7	
	comp=E,95nm,18.4s,baz=294,slow=41						
	comp=E,0.6nm,0.7s						
WTTA	**Wattenberg**	**9.99**	**322**	*e*Pn	**Pn**	**08 05 44.3**	**+0.5**
	comp=E,0.8nm,0.2s						
WATA	**Walderalm**	**10.07**	**322**	*e*Pn	**Pn**	**08 05 45.3**	**+0.4**
	comp=E,2.0nm,0.2s						
SQTA	**Sankt Quirin**	**10.17**	**321**	*e*Pn	**Pn**	**08 05 46.9**	**+0.7**
	comp=E,0.9nm,0.2s						
MOTA	**Moosalm**	**10.31**	**321**	*e*Pn	**Pn**	**08 05 48.3**	**+0.1**
	comp=E,2.1nm,0.4s						
GERES	**GERESS Array B**	**10.40**	**334**	P	**Pn**	**08 05 47.8**	**-1.5**
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=5.7						
	comp=E,0.3nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.57**	**315**	P	**Pn**	**08 05 50.8**	**-1.0**
	comp=E,0.1nm,0.3s,baz=205,slow=9.6,SNR=3.0						
	comp=E,1.3nm,0.6s						
KHC	**Kasperske Hory**	**10.69**	**334**	*e*PN	**Pn**	**08 05 51.0**	**-2.2**
KHC				*e*SN	**Sn**	**08 07 48.0**	**-4.3**
ESDC	**Sonseca Array**	**18.95**	**278**	P	**P**	**08 07 40.1**	**-1.1**
	comp=E,0.1nm,0.3s,baz=82,slow=10,SNR=4.3						
	comp=E,0.5nm,1.0s						
HFS	**Hagfors**	**20.90**	**350**	P	**P**	**08 08 01.2**	**-1.0**
	comp=E,3.4nm,0.7s,baz=185,slow=12,SNR=6.1						
	comp=E,3.4nm,0.7s						
FINES	**FINESS Array B**	**22.00**	**7**	P	**P**	**08 08 12.7**	**-1.3**
	comp=E,1.2nm,0.4s,baz=176,slow=12,SNR=19						
	comp=E,1.2nm,0.4s						
NB2	**NORSAR Subarra**	**22.13**	**348**	P	**P**	**08 08 14.4**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=165,slow=11						
NOA	**NORSAR Array B**	**22.13**	**348**	P	**P**	**08 08 14.1**	**-1.4**
	comp=Z,2.8nm,1.0s,baz=165,slow=11,SNR=5.9						
	comp=Z,2.8nm,1.0s						
EKA	**Eskdalemuir Ar**	**22.26**	**322**	P	**P**	**08 08 14.4**	**-2.5**
	comp=Z,1.6nm,0.8s,baz=119,slow=9.8,SNR=2.5						
	comp=Z,1.6nm,0.8s						
ARCES	**ARCESS Array B**	**29.98**	**3**	P	**P**	**08 09 26.6**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=186,slow=9.8,SNR=5.0						
	comp=Z,1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**31.32**	**218**	P	**P**	**08 09 40.8**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=33,slow=9.5,SNR=6.8						
	comp=Z,0.9nm,0.5s						
DBIC	**Dimbokro**	**40.12**	**222**	LR	LR	08 29 45.8	
	comp=Z,35nm,18.5s,baz=59,slow=39						
MKAR	**Makanchi Array**	**44.40**	**60**	P	**P**	**08 11 29.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=285,slow=6.7,SNR=17						
	comp=Z,3.8nm,0.8s						
ZALV	**Zalesovo Beam**	**44.58**	**49**	P	**P**	**08 11 31.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=282,slow=7.2,SNR=3.8						
	comp=Z,0.6nm,0.4s						
NRIK	**Noril'sk**	**45.36**	**27**	LR	LR	08 33 05.5	
	comp=Z,51nm,19.5s,baz=186,slow=39						
SONM	**Songino Array**	**59.39**	**51**	P	**P**	**08 13 21.7**	**-0.7**
	comp=Z,1.8nm,1.0s,baz=290,slow=8.7,SNR=4.9						
	comp=Z,1.8nm,1.0s						
KSRS	**Korea Array**	**78.25**	**51**	P	**P**	**08 15 17.2**	**-2.5**
	comp=Z,0.9nm,0.8s,baz=314,slow=5.8,SNR=2.2						
KSRS				LR	LR	08 53 38.1	
	comp=Z,16nm,18.0s,baz=260,slow=38						
	comp=Z,0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**84.82**	**46**	P	P	08 15 51.4	-3.2
	comp=Z,1.2nm,0.8s,baz=348,slow=4.8,SNR=3.5						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**94.00**	**314**	P	**P**	**08 16 35.9**	**-2.4**
	comp=Z,0.2nm,0.9s,baz=18,slow=6.1,SNR=2.0						
	comp=Z,0.2nm,0.9s						

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*IDC **16** 08:05:33.2±0.6, 57°.00S×24°.87W, h0km, mb4.3/9, mbtmp4.3/10, ML4.4/1, MS3.4/7, Error ellipse: s-maj=22.5km s-min=16.7km az=77.0*
*NEIC **16** 08:05:35.0±1.3, 57°.2S±0°.1×25°.2W±0°.2, h10km±1km, mb4.7/44, Error ellipse: s-maj=19.2km s-min=15.9km az=32.0*
ISC 16 08:05:36.5±0.5, 57°.17S±0°.07×25°.08W±0°.08, h22km, n90, σ0§98/77, mb4.6/25, MS3.3/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.06**	**289**	Pn	**Pn**	**08 07 19.3**	**+1.0**
VNA1	**Neumayer--Stat**	**15.32**	**159**	P	**Pn**	**08 09 11.8**	**+0.8**
VNA3	**Neumayer Olymp**	**15.55**	**161**	P	**Pn**	**08 09 13.8**	**-0.2**
VNA2	**Neumayer--Watz**	**15.72**	**158**	P	**Pn**	**08 09 16.4**	**+0.3**
	baz=325,slow=14						
ESPZ	**Base Esperanza**	**16.87**	**235**	Pn	**Pn**	**08 09 30.8**	**0.0**
SNAA	**Sanae**	**17.24**	**156**	P	**Pn**	**08 09 36.4**	**+0.8**
SNAA	**Sanae**	**17.24**	**156**	P	**Pn**	**08 09 36.3**	**+0.8**
	1.3nm,0.3s,baz=311,slow=14,SNR=36						
SNAA				S	**Sn**	**08 12 42.4**	**-4.1**
	0.7nm,0.7s,baz=346,slow=22,SNR=1.4						
	4.2nm,0.4s						
SNAA	**Sanae**	**17.24**	**156**		**P**	**08 09 36.7**	**-0.2**
TROLL	**Troll, Antarti**	**18.72**	**153**	P	**Pn**	**08 09 53.9**	**+0.1**
EFI	**East Falkland**	**19.83**	**272**	P	**P**	**08 10 04.9**	**-0.4**
PMSA	**Palmer Station**	**20.08**	**232**	P	Pn	08 10 10.5	+0.6
	6.6nm,0.6s,baz=89,slow=9.5,SNR=8.2						
PMSA				LR	LR	08 17 13.4	
	comp=Z,137nm,18.0s,baz=91,slow=34						
	6.6nm,0.6s						
PMSA	**Palmer Station**	**20.08**	**232**	P	**P**	**08 10 07.8**	**-0.2**
PMSA				IAmb	IAmb	08 10 33.3	
	comp=Z,57nm,1.4s						
BELA	**Belgrano 2**	**21.06**	**186**	P	**P**	**08 10 19.1**	**+0.5**
SMAI	**San Martin Ant**	**21.70**	**223**	P	**P**	**08 10 25.0**	**-0.4**
MG02	**Cerro Sombrero**	**25.36**	**261**	P	**P**	**08 11 01.1**	**-0.4**
MG05	**Puerto Natales**	**27.66**	**261**	P	**P**	**08 11 21.6**	**-0.7**
MG05				IAmb	IAmb	08 11 46.1	
	comp=Z,30nm,1.4s						
GO09	**Cerro Castillo**	**27.78**	**262**	P	**P**	**08 11 22.9**	**-0.5**
GO09				IAmb	IAmb	08 11 26.4	
	comp=Z,20nm,1.1s						
TRQA	**Tornquist**	**30.83**	**292**	P	**P**	**08 11 50.6**	**0.0**
TRQA				IAmb	IAmb	08 12 17.6	
	comp=Z,8.9nm,1.3s						
AY01	**Puyuhuapi**	**31.97**	**273**	P	**P**	**08 11 59.9**	**-0.6**
AY01				IAmb	IAmb	08 12 02.0	
	comp=Z,6.9nm,0.8s						
PLTB	**Pedras Altas**	**32.11**	**310**	P	**P**	**08 12 00.9**	**-1.0**
PLTB				IAmb	IAmb	08 12 04.6	
	comp=Z,9.4nm,0.9s						
PLTB	**Pedras Altas**	**32.11**	**310**	*e*P	**P**	**08 12 02.8**	**+0.9**
QSPA	**South Pole Qui**	**33.08**	**180**	P	**P**	**08 12 11.7**	**+1.5**
	comp=Z,2.6nm,0.4s,baz=253,slow=19,SNR=73						
	comp=Z,2.6nm,0.4s						
QSPA	**South Pole Qui**	**33.08**	**180**	P	**P**	**08 12 10.2**	**-0.1**
PLCA	**Paso Flores**	**33.34**	**280**	P	**P**	**08 12 12.1**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=214,slow=14,SNR=1.5						
PLCA				LR	LR	08 25 22.9	
	comp=Z,32nm,18.4s,baz=137,slow=36						
	comp=Z,1.7nm,0.9s						
PLCA	**Paso Flores**	**33.34**	**280**	P	**P**	**08 12 11.8**	**-0.9**
LL04	**Puerto Octay**	**34.22**	**278**	P	**P**	**08 12 19.1**	**-1.0**
LL04				IAmb	IAmb	08 12 36.2	
	comp=Z,9.8nm,1.1s						
ITQB	**Itaqui**	**35.21**	**308**	P	**P**	**08 12 28.6**	**-0.2**
ITAB	**Concordia**	**35.54**	**316**	P	**P**	**08 12 31.5**	**-0.2**
ITAB				IAmb	IAmb	08 12 44.8	
	comp=Z,21nm,1.3s						
CPUP	**Villa Florida**	**38.43**	**310**	P	**P**	**08 12 55.9**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=149,slow=8.5,SNR=11						
	comp=Z,2.9n

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	51.97	304	P	P	08 14 45.0	+0.5
LPAZ	La Paz	51.97	304	*e*P	P	08 14 45.4	+0.9
CASY	Casey	52.45	159	P	P	08 14 48.3	+1.6
ETMB	Extrema	56.88	309	*e*P	P	08 15 19.7	+0.3
MALB	Monte Alegre	59.85	326	*e*P	P	08 15 40.9	+0.8
ATAH	Atahualpa	64.76	298	LR	LR	08 46 27.1	
	comp=Z,46nm,19.3s,baz=271,slow=38						
DBIC	Dimbokro	65.73	22	P	P	08 16 17.5	-1.8
	comp=Z,3.2nm,0.7s,baz=140,slow=14,SNR=2.2						
	comp=Z,3.2nm,0.7s						
COHC	Cochancay	69.24	300	P	P	08 16 42.6	+1.1
COHC	Cochancay	69.24	300	*e*P	P	08 16 41.4	-0.1
GARC	Garzon, Huila	71.63	306	*e*P	P	08 16 56.9	+0.5
PTGC	Puerto Gaitan,	71.99	310	*e*P	P	08 16 49.3	-9.0
BBAC	Balboa, Cauca	72.27	304	*e*P	P	08 16 58.2	-2.0
POPC	Popayan, Colom	72.47	305	*e*P	P	08 17 01.9	+0.5
CHIC	Chingaza	73.05	309	*e*P	P	08 17 05.1	0.0
TOA0	Torodi Ar. Sit	73.49	27	P	P	08 17 06.8	-0.2
TOA0				IAmb	IAmb	08 17 07.4	
	comp=Z,4.5nm,0.6s						
TORD	Torodi Ar. Bea	73.49	27	P	P	08 17 06.7	-0.4
	comp=Z,4.6nm,0.6s,baz=199,slow=6.6,SNR=35						
	comp=Z,4.6nm,0.6s						
TORD	Torodi Ar. Bea	73.49	27	P	P	08 17 07.0	-0.1
TORD				IAmb	IAmb	08 17 07.4	
	comp=Z,3.0nm,0.6s						
KOWA	Kowa	73.52	21	P	P	08 17 06.2	-1.0
	comp=Z,1.4nm,0.6s,baz=286,slow=6.7,SNR=2.4						
	comp=Z,1.4nm,0.6s						
PLMC	San Jos del P	74.40	306	*e*P	P	08 17 12.0	-0.6
SOCV	Socops	75.17	313	*e*P	P	08 17 16.5	-0.4
CMAR	Chiang Mai Arr	123.59	109	PKP	PKiKP	08 24 31.4	-0.8
	comp=Z,0.7nm,0.3s,baz=247,slow=3.6,SNR=1.8						
FINES	FINESS Array B	124.84	27	PKP	PKiKP	08 24 33.1	-0.2
	comp=Z,2.9nm,0.9s,baz=173,slow=2.2,SNR=4.4						
PZH	PanZhiHua	131.67	106	PKP	PKPdf	08 24 46.4	-0.9
ZALV	Zalesovo Beam	141.81	64	PKhKP	PKPpre	08 24 59.2	
	comp=Z,0.5nm,0.4s,baz=224,slow=4.0,SNR=2.2						
INK	Inuvik	147.41	319	PKPbc	PKPab	08 25 17.2	-1.6
	comp=Z,2.5nm,0.6s,baz=78,slow=3.1,SNR=7.9						
SONM	Songino Array	149.63	87	PKPbc	PKPbc	08 25 22.7	-0.6
	comp=Z,2.6nm,0.6s,baz=219,slow=2.6,SNR=11						
ILAR	Eielson Array	151.73	310	PKPbc	PKiKP	08 25 27.8	-0.2
	comp=Z,0.8nm,0.4s,baz=118,slow=1.2,SNR=20						

*PDG **16** 08:11:16.6±0.6, 39.°76N×20.°66E, h11km±1km, ML3.6/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*TIR **16** 08:11:16.5, 39.°71N×20.°73E, h20km, Md3.6*
*LDG **16** 08:11:16.0±0.6, 39.°75N×20.°68E, h10km, Ml3.6/9, Error ellipse: s-maj=17.3km s-min=11.2km az=28.0*
*BEO **16** 08:11:16.2±0.8, 39.°60N×20.°68E, h17km±5km, ML3.5/5*
*ATH **16** 08:11:17.1, 39.°76N×20.°71E, h9km±2km, ML3.7/5, Error ellipse: s-maj=2.4km s-min=0.8km az=324.0*
*THE **16** 08:11:17.0, 39.°74N×20.°74E, h0km±2km, ML3.6/21, Error ellipse: s-maj=2.2km s-min=0.7km az=314.0*
*IDC **16** 08:11:18.9±1.5, 39.°77N×20.°77E, h45km±19km, mb3.7/10, mbtmp3.9/17, ML3.5/7, MS2.6/1, Error ellipse: s-maj=17.0km s-min=12.8km az=54.0*
*VIE **16** 08:11:22.5±0.6, 40.°28N×20.°57E, h10km, mb3.3/13, ms3.6/12, Error ellipse: s-maj=7.7km s-min=3.3km az=21.0*
133 km SSE of Tirana

ISC 16 08:11:16.3±0.7, 39.°74N±0.°01×20.°72E±0.°01, h17km±4km, n212, σ1°77/271, mb3.9/9, 12C-13D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.13	129	P	Pg	08 11 19.8	-0.4
JAN				S	Sg	08 11 22.9	+0.1
	88μm,0.3s						
JAN	Janina	0.13	129	P	Pg	08 11 19.9	-0.3
JAN				S	Sg	08 11 23.0	+0.1
JAN				AML	AML	08 11 23.3	
JAN				AML	AML	08 11 23.6	
IGT	Igoumenitsa	0.36	236	P	Pg	08 11 23.7	-0.2
IGT				S	Sb	08 11 30.2	+0.6
	23μm,0.4s						
IGT	Igoumenitsa	0.36	236	P	Pg	08 11 23.9	+0.1
	baz=242						
IGT				S	Sb	08 11 31.0	+1.3
	baz=242						
IGT	Igoumenitsa	0.36	236	P	Pg	08 11 24.2	+0.3
IGT				S	Sg	08 11 29.8	+0.7
IGT				AML	AML	08 11 31.5	
	comp=N,43465μm,0.4s						
IGT				AML	AML	08 11 31.7	
	comp=E,47392μm,0.3s						
LSK	Leskovik	0.42	347	P	Pg	08 11 25.3	+0.3
LSK				S	Sg	08 11 31.3	+0.4
	comp=E,13μm,0.6s						
LSK	Leskovik	0.42	347	P	Pb	08 11 25.8	+0.4
	baz=347						
LSK				S	Sb	08 11 32.7	+1.1
	baz=347						
KPRO	Kipourio	0.54	66	P	Pg	08 11 27.3	+0.2
KPRO				S	Sb	08 11 36.0	+1.2
	comp=E,14μm,0.4s						
PENT	Pentalofos	0.56	35	P	Pg	08 11 27.6	+0.1
PENT				S	Sb	08 11 36.8	+1.4
PENT	Pentalofos	0.56	35	P	Pb	08 11 27.8	+0.1
PENT				S	Sg	08 11 35.2	+0.2
PENT				AML	AML	08 11 37.6	
	comp=N,1731μm,0.3s						
PENT				AML	AML	08 11 39.7	
	comp=E,8400μm,0.4s						
SRN	Sarande	0.57	285	P	Pg	08 11 27.4	-0.3
SRN				S	Sb	08 11 36.6	+0.9
	comp=E,8μm,0.4s						
SRN	Sarande	0.57	285	P	Pg	08 11 27.4	-0.3
	baz=288						
SRN				S	Sb	08 11 36.9	+1.2
	baz=288						
KASA	Kassiopi	0.61	271	P	Pg	08 11 28.1	-0.2
KASA				S	Sg	08 11 36.8	+0.4
KASA				AML	AML	08 11 39.0	
	comp=E,16316μm,0.3s						
KASA				AML	AML	08 11 39.0	
	comp=N,17033μm,0.4s						
KEK	Kerkira	0.71	268	P	Pb	08 11 29.2	-1.0
KEK				S	Sn	08 11 41.4	-0.7
	comp=N,6μm,0.5s						
KEK	Kerkira	0.71	268	P	Pb	08 11 30.0	-0.2
KEK				S	Sg	08 11 40.1	+0.4
KEK				AML	AML	08 11 45.1	
	comp=N,10729μm,0.6s						
KEK				AML	AML	08 11 45.4	
	comp=E,11272μm,0.5s						
NEST	Nestorio	0.72	20	P	Pg	08 11 30.4	-0.1
NEST	Nestorio	0.72	20	P	Pg	08 11 30.6	+0.1
KBN	Korca	0.89	3	P	Pb	08 11 33.2	-0.1
KBN	Korca	0.89	3	P	Pn	08 11 35.5	+1.4
	baz=2.0						
KBN				S	Sn	08 11 48.3	+1.7
	baz=2.0						
TSLK	Tsoukalades, L	0.91	183	P	Pb	08 11 33.8	+0.2
TSLK				S	Sn	08 11 49.8	+2.8
	comp=E,4μm,0.6s						
TSLK	Tsoukalades, L	0.91	183	P	Pg	08 11 34.2	+0.2
LKD2	Lefkada island	0.95	183	P	Pb	08 11 34.4	+0.2
LKD2				S	Sn	08 11 50.0	+2.1
	comp=E,4μm,0.8s						
LKD2	Lefkada island	0.95	183	P	Pg	08 11 35.1	+0.4
KZN	Kozani	0.99	54	P	Pb	08 11 34.6	-0.3
KZN				S	Sn	08 11 49.7	+0.7
	comp=E,3μm,0.6s						
KZN	Kozani	0.99	54	P	Pb	08 11 35.3	+0.3
THL	Klokotos Trika	1.01	99	P	Pb	08 11 34.6	-0.7
THL				S	Sn	08 11 50.0	+0.6
	comp=E,2μm,0.8s						
THL	Klokotos Trika	1.01	99	P	Pg	08 11 36.1	+0.2
NYDR	Nydri-Lefkada	1.02	181	P	Pb	08 11 35.5	0.0
NYDR				S	Sn	08 11 51.2	+1.6
	comp=E,2μm,0.8s						
DRAG	Dragano-Lefkad	1.06	186	P	Pn	08 11 36.8	+0.5
EVGI	Lefkada island	1.11	183	P	Pb	08 11 37.5	+0.4
TYRN	Tyrnavos	1.17	91	P	Pn	08 11 37.7	0.0
TYRN				S	Sn	08 11 53.7	+0.5
	comp=E,5μm,0.6s						
EVR	Evrytania	1.18	134	P	Pn	08 11 38.1	+0.1
EVR	Evrytania	1.18	134	P	Pg	08 11 39.1	+0.1
EVR				S	Sg	08 11 55.6	+1.2
VLO	Vlora	1.19	308	P	Pg	08 11 40.6	+1.3
VLO				S	Sg	08 11 56.8	+1.9
	comp=E,7μm,0.5s						
VLO	Vlora	1.19	308	P	Pg	08 11 41.2	+1.9
	baz=310						
VLO				S	Sg	08 11 58.0	+3.0
	baz=310						
KTI	Kastanea	1.25	58	P	Pn	08 11 39.5	+0.4
FSK	Fiskardo	1.28	186	P	Pb	08 11 40.8	+0.9
FSK				S	Sg	08 11 58.2	+0.5
	comp=E,2μm,0.5s						
FSK	Fiskardo	1.28	186	P	Pg	08 11 41.1	+0.1
PVO	Paravola	1.28	151	P	Pg	08 11 41.2	+0.2
PVO				S	Sg	08 11 59.7	+2.0
	comp=E,3μm,0.5s						
PVO	Paravola	1.28	151	P	Pg	08 11 41.4	+0.4
MAKR	Makrakomi, Fth	1.31	123	P	Pb	08 11 41.0	+0.6
OHR	Ohrid	1.38	2	*e*Pg	Pg	08 11 43.6	+0.8
OHR				*e*Sg	Sg	08 12 04.2	+3.4
OHR	Ohrid	1.38	2	*i* Pn	Pg	08 11 43.6	+0.8
LIT	Litokhoron	1.41	74	P	Pn	08 11 41.7	+0.6
LIT				S	Sg	08 12 02.5	+0.7
	comp=E,3μm,0.5s						
KEF4	Livadi, Kephal	1.49	189	P	Pb	08 11 44.2	+0.7
KEF4				S	Sb	08 12 03.5	+1.3
	comp=E,10μm,0.5s						
DMLN	Damoulianata-K	1.52	190	P	Pb	08 11 44.4	+0.4
VLS	Valsamata	1.56	184	P	Pb	08 11 45.1	+0.4
EFP	Efpalio	1.60	144	P	Pg	08 11 46.7	-0.4
EFP				S	Sg	08 12 09.9	+2.0
	comp=E,2μm,0.6s						
PSDA	Pessada-Kefalo	1.62	184	P	Pb	08 11 45.8	+0.1
PSDA				S	Sg	08 12 07.9	-0.7
	comp=E,2μm,0.4s						
SERG	Sergoula	1.68	141	P	Pg	08 11 48.1	-0.5
TIR	Tirane	1.74	338	P	Pb	08 11 48.2	+0.6
TIR	Tirane	1.74	338	*e*Pn	Pb	08 11 48.3	+0.6
TIR				*e*Sn	Sg	08 12 11.0	-1.3
TIR	Tirane	1.74	338	P	Pb	08 11 48.2	+0.6
	baz=339						
TIR				S	Sg	08 12 13.5	+1.2
	baz=339						
GRG	Griva	1.77	46	P	Pn	08 11 47.3	+1.2
GRG				S	Sg	08 12 13.4	+0.1
	comp=E,1μm,0.8s						
RLS	Riolos of Patr	1.77	161	P	Pb	08 11 49.4	+1.1
LAKA	Lakka	1.79	146	P	Pb	08 11 49.0	+0.5
AXAR	Agios Charalam	1.79	122	P	Pb	08 11 49.2	+0.6
AXAR	Agios Charalam	1.79	122	P	Pg	08 11 49.9	-0.8
ALIK	Aliki, Aigiali	1.83	143	P	Pb	08 11 50.0	+0.8
THE	Thessaloniki	1.94	62	P	Pb	08 11 50.2	-0.9
DRO	Drossia	1.94	156	P	Pb	08 11 51.4	+0.2
XOR	Xorichti	1.94	100	P	Pn	08 11 49.9	+1.4
XOR				S	Sb	08 12 14.3	-0.9
	comp=E,925nm,0.6s						
PHP	Peshkopia	1.96	354	P	Pb	08 11 51.5	0.0
PHP	Peshkopia	1.96	354	P	Pb	08 11 51.9	+0.4
	baz=354						
PHP				S	Sg	08 12 18.3	-1.0
	baz=354						
HORT	Hortiatis	2.02	64	P	Pn	08 11 50.6	+1.1
KLV	Kalavryta, Ach	2.02	146	P	Pb	08 11 53.0	+0.4
LKR	Lokris	2.08	121	P	Pb	08 11 52.2	-1.2
VAY	Valandovo	2.12	41	*e*Pn	Pn	08 11 52.5	+1.6
VAY				*e*Sn	Sb	08 12 20.5	+0.3
VAY	Valandovo	2.12	41	*i* Pn	Pn	08 11 52.7	+1.9
KNT	Kendrikon	2.19	49	P	Pn	08 11 53.2	+1.4
STIP	Stip	2.25	29	*i* Pn	Pb	08 11 57.2	+0.8
SOH	Sokhos	2.29	61	P	Pn	08 11 55.2	+2.0
SKO	Skopje	2.30	13	*e*Pn	Pb	08 11 56.4	-0.9
SKO				*e*Sn	Sb	08 12 23.6	-1.8
SKO	Skopje	2.30	13	*i* Pn	Pb	08 11 57.6	+0.3
ULC	Ulcinj	2.49	334	*e*Pn	Pn	08 11 57.5	+1.5
ULC				*i* Sn	Sb	08 12 29.2	-1.7
VILL	Villia	2.56	127	P	Pb	08 11 59.9	-1.8
OUR	Ouranopolis	2.57	76	P	Pn	08 11 58.6	+1.5
SRS	Serrai	2.59	57	*e*Pn	Pn	08 11 58.6	+1.2
SRS				*e*Sn	Sn	08 12 31.0	+2.6
BCI	Bajram Curri	2.67	350	P	Pb	08 12 03.1	-0.5
	baz=350						
DRME	Dracevica, Mon	2.71	335	*e*Pn	Pn	08 12 00.4	+1.4
DRME	Dracevica, Mon	2.71	335	⇑*i*Pn	Pn	08 12 00.5	+1.4
DRME				*i* Sn	Sn	08 12 34.6	+3.2
KKB	Krupnik	2.78	39	P	Pn	08 12 02.7	+2.7
NVR	Nevrokopi	2.88	55	P	Pn	08 12 02.7	+1.2
PDG	Podgorica	2.91	338	⇑P	Pn	08 12 03.0	+1.2
PDG				⇓S	Sg	08 12 50.9	+1.1
TTG	Podgorica	2.91	338	⇑*i*Pn	Pn	08 12 03.2	+1.4
TTG				*i* Sn	Sn	08 12 39.5	+3.2
BUM	Brajici-Budva	2.91	332	*e*Pn	Pn	08 12 02.7	+0.9
BUM				*i* Sn	Sn	08 12 39.2	+2.8
PVY	Plav	2.91	349	*e*Pn	Pn	08 12 03.5	+1.6
PVY				*i* Sn	Sn	08 12 39.8	+3.2
MMB	Musomiste	2.94	50	P	Pb	08 12 06.1	-2.1
VLY	Voula,Athens	3.05	127	P	Pn	08 12 06.0	+2.3
TIP	Timpagrande	3.12	261	⇑P	Pn	08 12 05.1	+0.4
CEME	Cevo	3.12	335	*e*Pn	Pn	08 12 05.7	+1.0
CEME				*i* Sn	Sn	08 12 44.5	+2.9
BARS	Barje	3.19	15	*e*Pn	Pn	08 12 07.9	+2.3
HCY	Herceg Novi	3.19	329	*e*Pn	Pn	08 12 05.5	-0.1
HCY	Herceg Novi	3.19	329	*e*Pn	Pn	08 12 05.8	+0.2
IVA	Berane	3.19	349	*e*Pn	Pn	08 12 07.3	+1.5
IVA				*i* Sn	Sn	08 12 46.5	+3.0
MATE	Matera	3.21	288	⇓P	Pg	08 12 15.8	-2.0
MATE				⇑P	Sg	08 12 57.6	-1.7
KOME	Kolasin	3.24	344	*e*Pn	Pn	08 12 08.0	+1.6
KOME				*i* Sn	Sn	08 12 47.6	+3.0
NKME	Niksic	3.31	337	*e*Pn	Pn	08 12 08.5	+1.2
NKME				*i* Sn	Sn	08 12 49.1	+2.9
VTS	Vitosha	3.45	33	⇓P	Pn	08 12 11.4	+2.1
VTS				⇑S	Sn	08 12 53.9	+4.1
VTS	Vitosha	3.45	33	P	Pn	08 12 12.5	+3.2
SELS	Selova	3.49	5	*e*Pn	Pn	08 12 11.7	+1.9
BRY	Bratogost	3.56	333	*e*Pn	Pn	08 12 11.6	+0.7
BRY	Bratogost	3.56	333	*e*Pn	Pn	08 12 11.7	+0.8
BRY				*i* Sn	Sn	08 12 55.3	+2.6
SJES	Sjenica	3.57	351	*e*Pn	Pn	08 12 13.3	+2.4
RZN	Rozhen	3.61	56	P	Pn	08 12 14.9	+3.4
UPM	Unac-Piva	3.72	339	*e*Pn	Pn	08 12 15.5	+2.4
UPM	Unac-Piva	3.72	339	*e*Pn	Pn	08 12 14.7	+1.6
UPM				*i* Sn	Sn	08 12 59.2	+2.6
PLE	Pljevlja	3.73	345	*e*Pn	Pn	08 12 14.8	+1.7
PLE				*i* Sn	Sn	08 12 59.4	+2.8
ZAPS	Zavoj	3.81	21	*e*Pn	Pn	08 12 16.5	+2.3
PLD	Plovdiv	3.83	51	*e*P	Pn	08 12 18.1	+3.7
STON	Ston	3.87	325	*e*Pn	Pn	08 12 14.0	-0.9
RDO	Rodhopi	3.94	67	*e*P	Pb	08 12 21.7	-3.4
BOVS	Bovan	3.96	10	*e*Pn	Pn	08 12 17.4	+1.2
GADA	Gvkgeada	4.00	82	*e*P	Pb	08 12 19.1	+2.3
SIGR	SIGRI	4.01	96	*e*P	Pn	08 12 19.9	+3.1
RUDO	Rudo	4.01	346	*e*Pn	Pn	08 12 17.5	+0.6
KDZ	Kurdzhali	4.05	60	*e*P	Pn	08 12 17.9	+0.5
KDZ	Kurdzhali	4.05	60	P	Pn	08 12 19.3	+1.9
BOZC	Bozcaada	4.11	87	*e*P	Pn	08 12 21.5	+3.3
BLKB	Belogradchik	4.15	20	⇑P	Pn	08 12 21.5	+2.7
GRUS	Gruza	4.15	360	*e*Pn	Pn	08 12 20.6	+1.8
ZAGS	Zajecar	4.23	15	*e*Pn	Pn	08 12 21.9	+2.1
ALN	Alexandroupoli	4.23	72	*e*P	Pn	08 12 21.5	+1.6
ALN	Alexandroupoli	4.23	72	P	Pn	08 12 21.1	+1.2
BBLS	Lazići	4.24	347	*e*Pn	Pn	08 12 21.1	+1.0
BBLS	Lazići	4.24	347	*e*Pn	Pn	08 12 21.1	+1.0
EZN	Ezine	4.32	87	*e*P	Pn	08 12 24.4	+3.3
CHOS	Chios island	4.36	106	*e*P	Pn	08 12 25.2	+3.4
ANKY	Antikythira Is	4.37	151	P	Pn	08 12 24.1	+2.3
DIVS	Divibare	4.39	353	*e*Pn	Pn	08 12 23.5	+1.2
DIVS	Divibare	4.39	353	*e*Pn	Pn	08 12 23.4	+1.2
DIVS				*e*Sn	Sn	08 13 14.3	+1.3
GELI	Tayfur-Gelibol	4.46	80	*e*P	Pn	08 12 25.9	+2.8
TRUS	Trudelj	4.49	357	*e*Pn	Pn	08 12 25.1	+1.6
HAPS	Han Pijesak,BI	4.54	344	*e*Pn	Pn	08 12 26.6	+2.3
APE	Apeiranthos	4.62	124	*e*P	Pn	08 12 28.5	+3.2
KUBS	Kucevo	4.73	8	*e*Pn	Pn	08 12 28.2	+1.5
URLA	Izmir	4.77	105	*e*P	Pn	08 12 29.3	+1.9
TEKS	Tekeris	4.89	350	*e*Pn	Pn	08 12 29.1	+0.1
SRKY	Kupres RS	5.08	330	*e*Pn	Pn	08 12 31.8	+0.2
HERR	Herculane	5.29	13	⇑P	Pn	08 12 37.7	+3.2
MGRS	Mrkonjic Grad	5.40	331	*e*Pn	Pn	08 12 36.0	-0.1
VAE	Valguarnera	5.43	247	S	Sn	08 13 42.2	+3.6
	comp=E,18nm,0.5s,baz=25,slow=20,SNR=3.6						
FRGS	Fruska Gora	5.46	353	⇓P	Pn	08 12 37.6	+0.8
FRGS	Fruska Gora	5.46	353	*e*Pn	Pn	08 12 37.1	+0.3
FRGS	Fruska Gora	5.46	353	*e*Pn	Pn	08 12 37.8	+1.0
IDI	Anoyia	5.54	142	P	Pn	08 12 37.9	-0.1
	comp=E,1.2nm,0.3s,baz=311,slow=7.8,SNR=7.3						
IDI				S	Sn	08 13 40.7	-0.6
	comp=E,7.5nm,0.3s,baz=316,slow=19,SNR=7.0						
	comp=E,3.3nm,0.2s						
BLY	Banja Luka	5.66	333	*e*Pn	Pn	08 12 39.7	+0.2
BODT	Bodrum	5.82	115	*e*P	Pn	08 12 42.5	+0.7
GZR	Gura Zlata	5.85	14	⇑P	Pn	08 12 46.1	+3.9
AYDB	Zeytinkoy-Aydi	5.87	105	*e*P	Pn	08 12 46.8	+4.2
BZS	Buzias	5.91	6	⇓P	Pn	08 12 47.2	+4.1
BZS				⇓S	Sn	08 13 49.5	-0.8
A051A	Mrakovica	5.98	333	*e*Pn	Pn	08 12 44.1	+0.1
LOT	Lotru	6.13	20	⇓P	Pn	08 12 47.7	+1.5
VOIR		6.53	28	⇓P	Pn	08 12 55.4	+3.8
KOVH	Kovagotottos	6.63	344	P	Pn	08 12 53.4	+0.5
MORH	Mrgy, Hungar	6.65	347	⇑P	Pn	08 12 53.5	+0.4
MORH	Mrgy, Hungar	6.65	347	P	Pn	08 12 53.5	+0.4
ISR	Istrita	6.89	37	⇓P	Pn	08 13 01.3	+4.8
MLR	Muntele Rosu	6.92	32	⇑P	Pn	08 13 01.6	+4.7
MLR	Muntele Rosu	6.92	32	P	Pn	08 12 59.1	+2.1
	comp=E,0.2nm,0.3s,baz=207,slow=9.5,SNR=7.4						
MLR				S	Sn	08 14 21.8	+6.5
	comp=E,2.8nm,0.8s,baz=104,slow=23,SNR=0.9						
	comp=E,6.3nm,0.5s						
BOJS	Bojanci	7.03	327	*e*Pn	Pn	08 12 57.8	-0.6
DRGR		7.20	11	⇓P	Pb	08 13 12.8	-8.0
CRES	Cresnjev	7.21	329	*e*Pn	Pn	08 13 00.4	-0.5
COVR	Voineasa-Covas	7.32	32	⇓P	Pn	08 13 06.6	+4.3
PLOR	Plostina	7.50	34	⇑P	Pn	08 13 09.0	+4.1
VRI	Vrincioaia	7.55	34	⇓P	Pn	08 13 09.4	+3.9
CEY	Cerknica	7.58	324	*e*Pn	Pn	08 13 05.1	-0.8
SKDS	Skadanscina	7.62	322	*e*Pn	Pn	08 13 05.5	-1.0
SOKA	Soboth	8.09	331	*i* Pn	Pn	08 13 12.6	-0.3
	comp=E,2.7nm,0.4s,SNR=11						
SOKA				*i* Sn	Sn	08 14 38.9	-5.0
	comp=E,2.3nm,0.5s						
OBKA	Obir	8.13	328	*e*Pn	Pn	08 13 13.9	+0.3
OBKA	Obir	8.13	328	*e*Pn	Pn	08 13 14.0	+0.4
	comp=E,2.4nm,0.3s						
PSZ	Piszkesteto	8.20	356	P	Pn	08 13 16.2	+1.7
ARSA	Arzberg	8.41	335	*e*Pn	Pn	08 13 16.8	-0.4
	comp=E,2.6nm,0.6s						
BURAR	Bucovina Array	8.52	21	⇓P	Pn	08 13 29.4	+11
KBA	Koelnbreinsper	9.09	326	*e*Pn	Pn	08 13 26.8	+0.1
	comp=E,2.3nm,0.6s						
ABTA	Abfaltersbach	9.21	322	*e*Pn	Pn	08 13 27.9	-0.5
	comp=E,1.2nm,0.3s,SNR=5.1						
ABTA				*e*Sn	Sn	08 15 08.2	-3.5
	comp=E,6.1nm,0.7s						
PGF	Pioggiola	9.28	291	*e*Pn	Pn	08 13 29.1	-0.2
MOA	Molln	9.35	332	*i* Pn	Pn	08 13 30.7	+0.4
	comp=E,2.7nm,0.3s,SNR=6.9						
MOA				*e*Sn	Sn	08 15 11.2	-3.7
	comp=E,2.4nm,0.4s						
BIOA	Bad Ischl, Aus	9.46	330	*e*Pn	Pn	08 13 32.6	+0.9
	comp=E,2.4nm,0.3s						
KEST	Kesra	9.86	250	P	Pn	08 13 39.7	+2.5
	comp=E,0.3nm,0.3s,baz=14,slow=19,SNR=2.7						
	comp=E,3.8nm,0.6s						
BRTR	Keskin Array B	9.95	86	P	Pn	08 13 40.5	+1.9
	comp=E,0.2nm,0.3s,baz=300,slow=13,SNR=2.9						
	comp=E,0.5nm,0.5s						
WTTA	Wattenberg	10.00	322	*e*Pn	Pn	08 13 39.1	-0.2
	comp=E,2.8nm,0.4s						
WATA	Walderalm	10.08	322	*e*Pn	Pn	08 13 40.3	-0.1
	comp=E,1.7nm,0.2s,SNR=4.0						
SQTA	Sankt Quirin	10.18	320	*e*Pn	Pn	08 13 42.0	+0.3
	comp=E,2.9nm,0.3s,SNR=5.2						
FETA	Feichten	10.29	318	*e*Pn	Pn	08 13 43.6	+0.5
	comp=E,0.9nm,0.3s						
MOTA	Moosalm	10.32	321	*e*Pn	Pn	08 13 43.4	-0.2
	comp=E,2.7nm,0.5s,SNR=4.5						
GERES	GERESS Array B	10.40	333	P	Pn	08 13 45.9	+1.2
	comp=E,0.3nm,0.3s,baz=157,slow=14,SNR=9.7						
	comp=E,0.4nm,0.3s						
DAVOX	Davos/Dischmat	10.58	315	P	Pn	08 13 48.0	+0.8
	comp=E,0.5nm,0.3s,baz=152,slow=15,SNR=7.6						
DAVOX				LR	LR	08 18 33.0	
	comp=E,35nm,21.6s,baz=94,slow=41						
	comp=E,1.9nm,0.4s						
RETA	Reutte	10.58	320	*e*Pn	Pn	08

NIUE	**Niue**	**7.86**	**82**	P	**P**	**08 13 26.3**	**-1.7**
NIUE	**Niue**	**7.86**	**82**	P	**P**	**08 13 31.0**	**+3.0**
AFI	**Afiamalu**	**8.86**	**45**	P	**P**	**08 13 34.4**	**-3.8**
	38nm,0.7s,baz=85,slow=4.2,SNR=8.3						
AFI				S	S	08 15 12.0	-10
	31nm,0.6s,baz=30,slow=24,SNR=3.4						
AFI	**Afiamalu**	**8.86**	**45**	P	**P**	**08 13 34.5**	**-3.6**
AFI	**Afiamalu**	**8.86**	**45**	P	**P**	**08 13 34.6**	**-3.6**
MARNC	**Mare, Loyalty**	**12.95**	**263**	P	**P**	**08 14 20.3**	**+0.3**
KOUNC	**Koumac, New Ca**	**16.45**	**266**	P	**P**	**08 14 58.1**	**+2.7**
OUZ	**Omahuta**	**16.48**	**204**	P	**P**	**08 14 55.7**	**+0.3**
OUZ	**Omahuta**	**16.48**	**204**	P	**P**	**08 14 56.1**	**+0.6**
KUZ	**Kuaotunu**	**17.17**	**197**	P	**P**	**08 15 03.4**	**+1.7**
URZ	**Urewera**	**18.29**	**192**	P	**P**	**08 15 07.4**	**-4.5**
	5.4nm,0.3s,baz=352,slow=3.7,SNR=10						
HIZ	**Hauiti**	**19.06**	**197**	P	**P**	**08 15 19.0**	**0.0**
BKZ	**Black Stump Fm**	**19.29**	**193**	P	**P**	**08 15 19.1**	**-2.0**
BKZ	**Black Stump Fm**	**19.29**	**193**	P	**P**	**08 15 19.1**	**-2.0**
THZ	**Tophouse**	**22.63**	**198**	P	**P**	**08 15 48.7**	**-2.5**
KHZ	**Kahutara**	**23.07**	**196**	P	**P**	**08 15 52.4**	**-2.6**
JCZ	**Jackson Bay**	**26.02**	**202**	P	**P**	**08 16 19.5**	**-1.8**
EIDS	**Eidsvold**	**28.73**	**254**	P	**P**	**08 16 45.6**	**+0.3**
EIDS				IAmb	IAmb	08 16 49.1	
	comp=Z,24nm,1.5s						
ARMA	**Armidale**	**28.99**	**244**	P	**P**	**08 16 48.0**	**+0.5**
ARMA				IAmb	IAmb	08 17 10.1	
	comp=Z,16nm,1.1s						
CTA	**Charters Tower**	**33.35**	**264**	P	**P**	**08 17 24.7**	**-0.1**
	comp=Z,9.3nm,0.6s						
	comp=Z,9.3nm,0.6s						
CTAO	**Charters Tower**	**33.35**	**264**	P	**P**	**08 17 25.1**	**+0.3**
COEN	**Coen**	**37.42**	**274**	P	**P**	**08 17 58.9**	**+0.2**
COEN				IAmb	IAmb	08 18 10.4	
	comp=Z,21nm,1.4s						
BBOO	**Buckleboo**	**42.47**	**243**	P	**P**	**08 18 38.7**	**-0.1**
WR0	**Warramunga Arr**	**44.28**	**262**	P	**P**	**08 18 52.7**	**-0.3**
WR0				IAmb	IAmb	08 18 53.9	
	comp=Z,7.0nm,1.0s						
AS31	**Alice Springs**	**44.40**	**257**	P	**P**	**08 18 54.0**	**0.0**
AS31				IAmb	IAmb	08 18 54.4	
	comp=Z,3.2nm,0.7s						
ASAR	**Alice Springs**	**44.40**	**257**	P	**P**	**08 18 53.7**	**-0.3**
	comp=Z,10nm,0.6s,baz=98,slow=7.6,SNR=148						
ASAR				PcP	**PcP**	**08 20 24.9**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=104,slow=3.5,SNR=6.6						
ASAR				S	**S**	**08 24 47.9**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=93,slow=17,SNR=6.0						
	comp=Z,10nm,0.6s						
WB0	**Warramunga Arr**	**44.45**	**262**	P	**P**	**08 18 54.0**	**-0.3**
WB0				IAmb	IAmb	08 18 54.3	
	comp=Z,10nm,0.6s						
WB2	**Warramunga Arr**	**44.46**	**262**	P	**P**	**08 18 54.0**	**-0.4**
WB2				IAmb	IAmb	08 18 54.5	
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	**44.46**	**262**	P	**P**	**08 18 54.1**	**-0.4**
WRAB				IAmb	IAmb	08 18 54.5	
	comp=Z,7.8nm,0.9s						
WRA	**Warramunga Arr**	**44.47**	**262**	P	**P**	**08 18 53.5**	**-1.0**
	comp=Z,5.0nm,0.5s,baz=97,slow=7.6,SNR=162						
WRA				PcP	**PcP**	**08 20 24.7**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=101,slow=2.9,SNR=2.0						
WRA				S	**S**	**08 24 45.8**	**-4.3**
	comp=Z,0.4nm,1.0s,baz=113,slow=14,SNR=1.9						
	comp=Z,5.0nm,0.5s						
WRA	**Warramunga Arr**	**44.47**	**262**	P	**P**	**08 18 54.1**	**-0.4**
MTN	**Manton Dam**	**49.01**	**270**	P	**P**	**08 19 28.6**	**-0.2**
MTN				IAmb	IAmb	08 19 29.3	
	comp=Z,13nm,0.8s						
PSA00	**Pilbara Seismi**	**57.55**	**257**	P	**P**	**08 20 28.6**	**-0.8**
PSA00				IAmb	IAmb	08 20 29.1	
	comp=Z,15nm,1.0s						
MBWA	**Marble Bar**	**57.73**	**257**	P	**P**	**08 20 30.1**	**-0.5**
MBWA				IAmb	IAmb	08 20 39.5	
	comp=Z,42nm,1.5s						
SBA	**Scott Base**	**57.99**	**184**	P	**P**	**08 20 33.1**	**+1.8**
VNDA	**Vanda**	**58.02**	**185**	P	**P**	**08 20 31.8**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=332,slow=7.7,SNR=5.8						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**58.02**	**185**	P	**P**	**08 20 32.3**	**+0.7**
QSPA	**South Pole Qui**	**69.69**	**180**	P	**P**	**08 21 46.4**	**+0.2**
MJAR	**Matsushiro Arr**	**70.02**	**324**	P	**P**	**08 21 48.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=161,slow=5.9,SNR=5.8						
	comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-**	**76.11**	**345**	P	**P**	**08 22 22.8**	**0.0**
	comp=Z,3.6nm,0.7s,baz=92,slow=4.5,SNR=9.9						
	comp=Z,3.6nm,0.7s						
KSRS	**Korea Array**	**76.69**	**319**	P	**P**	**08 22 26.9**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=152,slow=44,SNR=6.0						
	comp=Z,0.9nm,0.5s						
USRK	**Ussuriysk Ar.**	**78.77**	**326**	P	**P**	**08 22 39.1**	**+1.6**
	comp=Z,3.3nm,0.7s,baz=151,slow=3.3,SNR=4.3						
	comp=Z,3.3nm,0.7s						
NVAR	**Mina Array Bea**	**81.04**	**43**	P	**P**	**08 22 51.1**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=221,slow=9.2,SNR=9.0						
	comp=Z,1.6nm,0.8s						
BMN	**Battle Mountai**	**82.86**	**42**	P	**P**	**08 22 59.8**	**+0.9**
TUC	**Tucson**	**83.02**	**52**	P	**P**	**08 23 00.1**	**+0.3**
SEY	**Seymchan**	**86.22**	**347**	P	**P**	**08 23 15.2**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=148,slow=5.3,SNR=11						
	comp=Z,3.4nm,0.7s						
TRF	**Thorofare Moun**	**86.36**	**12**	P	**P**	**08 23 15.4**	**0.0**
TRF				IAmb	IAmb	08 23 15.9	
	comp=Z,9.1nm,0.9s						
TXAR	**Lajitas Array**	**87.11**	**57**	P	**P**	**08 23 21.1**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=217,slow=7.3,SNR=11						
	comp=Z,0.9nm,0.8s						
HDA	**Harding Lake**	**87.89**	**13**	P	**P**	**08 23 22.6**	**+0.3**
HDA				IAmb	IAmb	08 23 23.4	
	comp=Z,4.9nm,0.6s						
ILAR	**Eielson Array**	**88.22**	**13**	P	**P**	**08 23 23.6**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=213,slow=5.4,SNR=14						
	comp=Z,1.8nm,0.6s						
PDAR	**Pinedale Array**	**88.97**	**43**	P	**P**	**08 23 28.8**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=202,slow=3.7,SNR=12						
	comp=Z,1.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.93**	**290**	P	**P**	**08 23 33.5**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=120,slow=3.0,SNR=14						
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**95.56**	**319**	P	**P**	**08 23 58.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=109,slow=1.2,SNR=1.9						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**111.00**	**313**	PKiKP	**PKiKP**	**08 29 01.5**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=75,slow=3.7,SNR=4.7						
AKTO	**Aktyubinsk**	**126.87**	**318**	PKP	**PKPdf**	**08 29 32.1**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=127,slow=2.4,SNR=3.6						
ARCES	**ARCESS Array B**	**128.77**	**350**	PKP	**PKPdf**	**08 29 35.9**	**-0.2**
	comp=Z,5.5nm,1.0s,baz=35,slow=2.2,SNR=5.7						
FINES	**FINESS Array B**	**135.61**	**344**	PKhKP	PKPpre	08 29 42.2	
	comp=Z,3.0nm,1.0s,baz=66,slow=7.7,SNR=2.8						
HFS	**Hagfors**	**139.39**	**351**	PKhKP	PKPpre	08 29 48.0	
	comp=Z,1.0nm,0.3s,baz=70,slow=8.4,SNR=10						
AKASG	**Malin Array Be**	**142.83**	**331**	PKhKP	PKPpre	08 29 59.5	
	comp=Z,4.5nm,0.5s,baz=43,slow=4.5,SNR=28						
LODK	**Lodwar**	**143.25**	**247**		**PKPdf**	**08 30 03.6**	**-0.9**
EKA	**Eskdalemuir Ar**	**144.89**	**5**	PKP	**PKPdf**	**08 30 05.9**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=347,slow=2.4,SNR=8.2						
ASF	**Jabal al Asfar**	**146.58**	**298**	PKPbc	**PKPbc**	**08 30 12.0**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=178,slow=2.1,SNR=6.0						
BR131	**Keskin Array S**	**146.64**	**312**	PKPbc	**PKPbc**	**08 30 12.2**	**-0.1**
BRTR	**Keskin Array B**	**146.64**	**312**	PKPbc	**PKPbc**	**08 30 11.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=107,slow=5.0,SNR=7.6						
MMAI	**Mount Meron Ar**	**147.62**	**300**	PKPbc	**PKPbc**	**08 30 15.4**	**+0.5**
	comp=Z,3.5nm,0.5s,baz=72,slow=4.7,SNR=7.3						
OSTC	**Ostas**	**147.80**	**343**↑	*e*PKP	**PKiKP**	**08 30 15.7**	**-0.5**
OSTC				*e*PKPAB	**PKPab**	**08 30 20.8**	**+1.6**
CLL	**Collm**	**147.90**	**347**		**PKPbc**	**08 30 15.4**	**+0.5**
CLL	**Collm**	**147.90**	**347**	*i* PKPab	**PKPab**	**08 30 19.7**	**+0.2**
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	**147.90**	**347**	↓↓*i* PKPbc	**PKPbc**	**08 30 15.3**	**+0.4**
	comp=Z,12nm,0.9s						
UPC	**Upice**	**147.90**	**343**↑	*e*PKP	**PKPbc**	**08 30 15.7**	**+0.7**
DPC	**Dobruska-Polom**	**147.96**	**342**↑	*e*PKP	**PKPbc**	**08 30 15.6**	**+0.4**
DPC				*e*PKPAB	**PKPab**	**08 30 20.9**	**+1.0**
KRLC	**Kraliky**	**148.07**	**342**↑	*e*PKP	**PKPbc**	**08 30 15.4**	**-0.1**
KRLC				*e*PKPAB	**PKPab**	**08 30 21.1**	**+0.8**
MAUC	**Maruska**	**148.37**	**340**↑	*e*PKP	**PKPbc**	**08 30 16.7**	**+0.4**
PRU	**Pruhonice**	**148.77**	**344**↑	*e*PKP	**PKPbc**	**08 30 17.3**	**+0.1**
PRU				*e*PKPAB	**PKPab**	**08 30 23.6**	**+0.5**
GOPC	**GO Pecny, Ondr**	**148.77**	**344**↑	*e*PKP	**PKPbc**	**08 30 17.5**	**+0.3**
ISP	**Isparta**	**149.67**	**311**		**PKPbc**	**08 30 19.3**	**-0.6**
KHC	**Kasperske Hory**	**149.80**	**345**		**PKiKP**	**08 30 20.6**	**+0.2**
KHC	**Kasperske Hory**	**149.80**	**345**↑	*e*PKP	**PKPbc**	**08 30 19.7**	**0.0**
KHC				*e*PKPAB	**PKPab**	**08 30 28.0**	**+0.5**
CKRC	**Cesky Krumlov**	**149.90**	**343**↑	*e*PKP	**PKPbc**	**08 30 19.9**	**0.0**
GERES	**GERESS Array B**	**150.04**	**344**	PKPbc	**PKPbc**	**08 30 20.4**	**0.0**
	comp=Z,1.7nm,0.7s,baz=35,slow=2.4,SNR=16						
GERES				PKPab	**PKPab**	**08 30 28.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=31,slow=6.1,SNR=4.7						
AKAS	**Kas**	**151.03**	**309**		**PKPbc**	**08 30 22.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**172.81**	**179**	PKP	**PKPdf**	**08 30 36.6**	**-2.1**
	comp=Z,0.4nm,1.0s,baz=225,slow=1.8,SNR=3.4						

IDC 16 08:21:58.9±1.9, 3°.64S×149°.78E, h0km, mb3.7/3, mbtmp3.7/3, MS3.3/10, Error ellipse: s-maj=136.3km s-min=28.4km az=122.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.30**	**204**	LR	LR	08 26 13.2	
	comp=Z,256nm,19.0s,baz=68,slow=40						
HNR	**Honiara**	**11.62**	**120**	LR	LR	08 29 03.1	
	comp=Z,1μm,19.4s,baz=316,slow=36						
CTA	**Charters Tower**	**16.71**	**192**	LR	LR	08 31 27.4	
	comp=Z,130nm,18.7s,baz=68,slow=34						
SIJI	**Sorong**	**18.70**	**278**	LR	LR	08 32 51.5	
	comp=Z,80nm,19.2s,baz=347,slow=35						
WRA	**Warramunga Arr**	**22.13**	**222**	P	P	08 26 56.2	-0.1
	2.3nm,1.1s,baz=46,slow=11,SNR=8.6						
	2.3nm,1.1s						
DZM	**Mont Dzumac**	**24.44**	**140**	LR	LR	08 35 50.1	
	comp=Z,28nm,20.0s,baz=72,slow=34						
ASAR	**Alice Springs**	**25.14**	**216**	P	P	08 27 25.9	-0.1
	1.8nm,1.0s,baz=50,slow=8.0,SNR=9.7						
	1.8nm,1.0s						
DAV	**Davao City (W)**	**26.39**	**294**	LR	LR	08 38 12.8	
	comp=Z,33nm,18.1s,baz=116,slow=37						
MJAR	**Matsushiro Arr**	**41.41**	**346**	LR	LR	08 43 20.0	
	comp=Z,44nm,21.5s,baz=182,slow=31						
NWAO	**Narrogin (SRO)**	**42.13**	**222**	LR	LR	08 49 31.0	
	comp=Z,80nm,19.2s,baz=47,slow=39						
SHEM	**Shemya Is, Ala**	**59.80**	**17**	LR	LR	08 53 57.5	
	comp=Z,14nm,19.4s,baz=251,slow=32						
MA2	**Magadan**	**63.02**	**1**	LR	LR	08 59 01.9	
	comp=Z,19nm,19.6s,baz=246,slow=35						
ILAR	**Eielson Array**	**82.24**	**23**	P	P	08 34 21.7	-0.2
	0.6nm,0.7s,baz=263,slow=4.6,SNR=5.4						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**147.09**	**289**	PKPbc	PKPbc	08 41 44.6	-0.4
	0.5nm,0.7s,baz=66,slow=1.7,SNR=3.3						

*INMG **16** 08:24:38.2±1.1, 36°.87N×4°.07W, h66km±4km, ML1.7, Error ellipse: s-maj=2.7km s-min=1.8km az=180.0*
*MDD **16** 08:24:38.6±0.6, 36°.86N×4°.07W, h68km±7km, Mb2.3/12, Error ellipse: s-maj=5.5km s-min=2.8km az=167.0*
*SFS **16** 08:24:38.0, 36°.85N×4°.04W, h67km, ML2.5, NE. VELEZ-MALAGA (MALAGA)*

ISC 16 08:24:38.5±1.1, 36°.89N±0°.05×4°.08W±0°.03, h64km±7km, n35, σ1°53/64, 19C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGOR	**Sierra Gorda,**	**0.22**	**353**	Pg	**Pn**	**08 24 48.5**	**-0.3**
EGOR				Sg	**Sn**	**08 24 56.7**	**+0.5**
EMAL	**Malaga-Limoner**	**0.31**	**246**	P	**Pn**	**08 24 49.0**	**-0.1**
EMAL				S	**Sn**	**08 24 56.3**	**-0.6**
ELGU	**Los Guajares,**	**0.36**	**93**	↑↑Pg	**Pn**	**08 24 48.7**	**-1.0**
ELGU				↑↑*i*Vmb_V		08 24 49.1	
	853nm,SNR=13						
ELGU				Sg	**Sn**	**08 24 56.4**	**-1.4**
EQUE	**Quentar**	**0.60**	**58**	Pg	**Pn**	**08 24 51.6**	**-0.4**
EQUE				↑↑*i*Vmb_V		08 24 52.2	
	217nm,SNR=4.1						
EQUE				Sg	**Sn**	**08 25 01.8**	**-0.1**
EMIJ	**Mijas**	**0.65**	**240**	Pg	**Pn**	**08 24 51.8**	**-0.6**
EMIJ				↑↑*i*Vmb_V		08 24 54.1	
	129nm,SNR=3.4						
EMIJ				Sg	**Sn**	**08 25 01.7**	**-0.9**
EBER	**Berja**	**0.95**	**89**	Pg	**Pn**	**08 24 55.3**	**-1.0**
EBER				↑↑*i*Vmb_V		08 24 56.2	
	91nm,SNR=1.2						
EBER				Sg	**Sn**	**08 25 08.2**	**-1.3**
EQES	**Quesada**	**1.21**	**41**	Pg	**Pn**	**08 24 59.2**	**-0.4**
EQES				↑↑*i*Vmb_V		08 25 01.3	
	142nm,SNR=2.3						
EQES				Sg	**Sn**	**08 25 14.8**	**-0.5**
EADA	**Adamuz**	**1.33**	**343**	Pg	**Pn**	**08 25 01.3**	**+0.1**
EADA				↑↑*i*Vmb_V		08 25 01.7	
	164nm,SNR=1.9						
EADA				Sg	**Sn**	**08 25 17.6**	**-0.4**
ECAB	**El Cabril**	**1.59**	**318**	Pg	**Pn**	**08 25 04.2**	**-0.4**
ECAB				↑↑*i*Vmb_V		08 25 04.9	
	74nm,SNR=1.1						
ECAB				Sg	**Sn**	**08 25 23.2**	**-1.0**
EMIN	**Mina Concepcio**	**2.25**	**294**	Pn	**Pn**	**08 25 12.6**	**-0.8**
EMIN				↑↑*i*Vmb_V		08 25 14.3	
	125nm,SNR=2.2						
EMIN				Sn	**Sn**	**08 25 38.4**	**-1.5**
PAB	**San Pablo**	**2.66**	**355**	Pn	**Pn**	**08 25 19.2**	**+0.2**
PAB				↑↑*i*Vmb_V		08 25 21.6	
	83nm,SNR=1.4						
PAB				Sn	**Sn**	**08 25 48.3**	**-1.9**
ETOB	**Tobarra**	**2.66**	**48**	Pn	**Pn**	**08 25 18.4**	**-0.7**
ETOB				↑↑*i*Vmb_V		08 25 18.5	
	150nm,SNR=1.6						
ETOB				Sn	**Sn**	**08 25 47.0**	**-3.3**
PBAR	**Barrancos**	**2.68**	**299**	*e*P	**Pn**	**08 25 19.1**	**-0.1**
PBAR				*e*S	**Sn**	**08 25 49.5**	**-1.1**
PBAR				A	A	08 25 52.1	
	1.0nm,0.2s						
EGRO	**El Granado**	**2.79**	**284**	Pn	**Pn**	**08 25 20.3**	**-0.5**
EGRO				↑↑*i*Vmb_V		08 25 21.0	
	105nm,SNR=1.8						
EGRO				Sn	**Sn**	**08 25 51.0**	**-2.4**
PVAQ	**Vaqueiros**	**2.95**	**281**	*e*P	**Pn**	**08 25 22.4**	**-0.6**
PVAQ				*e*S	**Sn**	**08 25 54.8**	**-2.4**
PVAQ				A	A	08 25 56.7	
	4.0nm,0.4s						
EBAD	**Badajoz**	**2.98**	**310**	Pn	**Pn**	**08 25 23.2**	**-0.1**
EBAD				Sn	**Sn**	**08 25 56.5**	**-1.4**
PCVE	**Castro Verde**	**3.25**	**284**	*e*P	**Pn**	**08 25 26.9**	**-0.1**
PCVE				*e*S	**Sn**	**08 26 02.9**	**-1.5**
PCVE				A	A	08 26 04.3	
	1.8nm,0.6s						
PESTR	**Estremoz**	**3.41**	**306**	*e*P	**Pn**	**08 25 29.5**	**+0.3**
PESTR				*e*S	**Sn**	**08 26 06.5**	**-1.9**
PESTR				A	A	08 26 08.6	
	0.5nm,0.2s						
MESJ	**Messejana**	**3.43**	**287**↑↑	*i*P	**Pn**	**08 25 29.7**	**+0.2**
MESJ				*e*S	**Sn**	**08 26 07.0**	**-2.0**
EVO	**Evora**	**3.52**	**299**	P	**Pn**	**08 25 31.0**	**+0.3**
EVO				S	**Sn**	**08 26 08.6**	**-2.6**
EVO	**Evora**	**3.52**	**299**	*e*P	**Pn**	**08 25 31.1**	**+0.3**
EVO				*e*S	**Sn**	**08 26 09.4**	**-1.8**
PMRV	**Marv??o**	**3.64**	**315**↑↑	*e*P	**Pn**	**08 25 32.9**	**+0.6**
PMRV				*e*S	**Sn**	**08 26 12.6**	**-1.4**
MORF	**Marmelete**	**3.68**	**278**	*e*P	**Pn**	**08 25 33.5**	**+0.6**
MORF				*e*S	**Sn**	**08 26 13.5**	**-1.6**
MORF				A	A	08 26 16.8	
	2.0nm,0.1s						
PNCL	**Nicolau / Gran**	**3.74**	**290**	*e*P	**Pn**	**08 25 33.8**	**+0.1**
PNCL				*e*S	**Sn**	**08 26 14.8**	**-1.8**
PTEO	**Sao Teotonio**	**3.77**	**281**	*e*P	**Pn**	**08 25 34.2**	**+0.1**
PTEO				*e*S	**Sn**	**08 26 16.2**	**-0.9**
PTEO				A	A	08 26 17.1	
	3.9nm,0.8s						
PFVI	**Vila Bisbo**	**3.81**	**275**	*e*P	**Pn**	**08 25 34.1**	**-0.5**
PFVI				*e*S	**Sn**	**08 26 16.8**	**-1.4**
PMTG	**Montargil**	**3.93**	**305**	*e*P	**Pn**	**08 25 36.3**	**0.0**
PMTG				*e*S	**Sn**	**08 26 19.8**	**-1.4**
ETOR	**Torete**	**4.23**	**21**	Pn	**Pn**	**08 25 40.3**	**-0.1**
ETOR				Sn	**Sn**	**08 26 24.8**	**-3.8**
MVO	**Moncorvo**	**4.85**	**333**	*e*P	**Pn**	**08 25 50.2**	**+1.3**
MVO				*e*S	**Sn**	**08 26 41.7**	**-2.0**
ARR	**Arges**	**23.13**	**60**	↑↑P	**P**	**08 29 41.9**	**+2.8**
VOIR		**23.43**	**60**	↑↑P	**P**	**08 29 44.0**	**+2.0**
COVR	**Voineasa-Covas**	**24.30**	**59**	↑↑P	**P**	**08 29 53.4**	**+3.6**
ISR	**Istrita**	**24.41**	**61**	↓↓P	**P**	**08 29 49.6**	**-1.3**
PLOR	**Plostina**	**24.61**	**59**	↑↑P	**P**	**08 29 55.6**	**+3.0**
VRI	**Vrincioaia**	**24.67**	**59**	↑↑P	**P**	**08 29 56.0**	**+2.8**

ROM 16 08:28:11.2±0.2, 42°.880N±0°.005×13°.229E±0°.005, h8km, ML1.0/2, 2C-2D, Error ellipse: s-maj=0.5km s-min=0.3km az=181.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**232**	P	Pg	08 28 13.0	+0.1
T1245				S	Sg	08 28 14.0	-0.2
T1245				AML	AML		
	comp=E,360μm,0.3s						
T1245				AML	AML		
	comp=N,364μm,0.8s						
T1245				AML	AML		
	comp=N,244μm,0.3s						
T1245				AML	AML		
	comp=E,341μm,0.3s						
MC2	**Monte Cornacci**	**0.04**	**320**	↓↓P	Pg	08 28 13.3	+0.2
MC2				S	Sg	08 28 14.5	+0.2
MMO1	**Montemonaco**	**0.07**	**75**	↑↑P	Pg	08 28 13.5	+0.3
MMO1				S	Sg	08 28 15.0	+0.3
NRCA	**Norcia**	**0.10**	**241**	↑↑P	Pg	08 28 14.0	+0.5
NRCA				S	Sg	08 28 15.8	+0.6
NRCA				AML	AML		
	comp=E,148μm,0.2s						
NRCA				AML	AML		
	comp=N,93μm,0.1s						
AM05	**Amandola Campo**	**0.13**	**43**	S	Sg	08 28 21.0	+4.9
T1202	**Accumoli, Fraz**	**0.18**	**181**	↓↓P	Pg	08 28 15.6	+0.7
T1202				S	Sg	08 28 18.9	+1.5
T1243	**Rocca Santa Ma**	**0.24**	**138**	P	Pg	08 28 16.9	+0.8
T1243				S	Sg	08 28 20.6	+1.3
T1215	**Vallo di Nera,**	**0.28**	**254**	P	Pg	08 28 17.3	+0.6
T1215				S	Sb	08 28 22.0	-1.3

*IDC **16** 08:28:10.8±0.7, 39°.77N×20°.81E, h0km, mb3.9/16, mbtmp3.8/23, ML3.4/7, MS3.2/3, Error ellipse: s-maj=14.9km s-min=12.9km az=156.0*
*TIR **16** 08:28:13.7, 39°.75N×20°.76E, h12km, Md3.6*
*ATH **16** 08:28:14.7, 39°.79N×20°.66E, h10km±2km, ML3.8/8, Error ellipse: s-maj=2.1km s-min=0.7km az=304.0*
*PDG **16** 08:28:14.2±0.5, 39°.77N×20°.65E, h15km, ML3.8/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BEO **16** 08:28:14.8±0.8, 39°.69N×20°.73E, h16km±5km, ML3.6/8*
*THE **16** 08:28:14.6, 39°.76N×20°.68E, h1km±1km, ML3.8/9, Error ellipse: s-maj=1.5km s-min=0.3km az=169.0*
*LDG **16** 08:28:14.1±0.6, 39°.83N×20°.70E, h10km, Ml3.7/10, Error ellipse: s-maj=27.0km s-min=12.6km az=29.0*
*NEIC **16** 08:28:14.1±2.4, 39°.81N±0°.04×20°.66E±0°.04, h10km±1km, mb4.3/8, ML3.8(ATH), ML3.6(TIR), Error ellipse: s-maj=7.8km s-min=4.9km az=209.0*

ISC 16 08:28:14.0±0.8, 39°.77N±0°.02×20°.69E±0°.02, h17km±5km, n233, σ1°49/280, mb3.9/18, 21C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**133**	P	**Pg**	**08 28 18.2**	**-0.1**
JAN				S	**Sg**	**08 28 20.4**	**-0.9**
	104μm,0.3s						
JAN	**Janina**	**0.17**	**133**	P	**Pg**	**08 28 18.3**	**-0.1**
JAN				S	**Sg**	**08 28 21.8**	**+0.5**
JAN				AML	AML	08 28 22.4	
JAN				AML	AML	08 28 23.3	
IGT	**Igoumenitsa**	**0.36**	**229**	P	**Pg**	**08 28 21.5**	**0.0**
IGT				S	**Sg**	**08 28 26.5**	**-0.2**
	31μm,0.3s						
IGT	**Igoumenitsa**	**0.36**	**229**	P	**Pg**	**08 28 21.6**	**0.0**
	baz=238						
IGT				S	**Sb**	**08 28 28.4**	**+0.9**
	baz=238						
IGT	**Igoumenitsa**	**0.36**	**229**	P	**Pg**	**08 28 21.8**	**+0.2**
IGT				S	**Sg**	**08 28 26.9**	**+0.2**
IGT				AML	AML	08 28 29.9	
	comp=E,48413μm,0.3s						
IGT				AML	AML	08 28 30.9	
	comp=N,75541μm,0.4s						
LSK	**Leskovik**	**0.39**	**350**	P	**Pb**	**08 28 22.5**	**0.0**
LSK				S	**Sb**	**08 28 28.6**	**+0.4**
	comp=N,36μm,0.6s						
LSK	**Leskovik**	**0.39**	**350**	P	**Pg**	**08 28 22.4**	**+0.4**
	baz=344						
LSK				S	**Sb**	**08 28 28.7**	**+0.5**
	baz=344						
SRN	**Sarande**	**0

LIT	Litokhoron	1.42	76	P	Pb	08 28 40.9 +0.7
KEF4	Livadi, Kephal	1.52	188	P	Pb	08 28 42.9 +1.0
VLS	Valsamata	1.59	183	P	Pb	08 28 43.7 +0.7
EFP	Efpalio	1.64	144	P	Pg	08 28 45.1 -0.5
TIR	Tirane	1.70	339		Pb	08 28 44.9 +0.1
TIR	Tirane	1.70	339	*e*Pn	Pb	08 28 45.4 +0.6
TIR				*e*Sn	Sg	08 29 09.0 +0.3
TIR	Tirane	1.70	339	P	Pg	08 28 46.3 -0.3
	baz=338					
TIR				S	Sg	08 29 10.3 +1.6
	baz=338					
SCTE	Santa Cesarea	1.74	281		Pn	08 28 43.8 +0.4
AXAR	Agios Charalam	1.83	123	P	Pb	08 28 48.1 +1.0
PHP	Peshkopia	1.92	354	P	Pb	08 28 49.6 +1.0
	baz=353					
PHP				S	Sg	08 29 17.4 +1.5
	baz=353					
VAY	Valandovo	2.11	42	*e*Pn	Pn	08 28 49.4 +0.8
VAY				*e*Sn	Sn	08 29 16.5 +2.1
VAY	Valandovo	2.11	42	*i* Pn	Pn	08 28 50.0 +1.4
STIP	Stip	2.23	30	*i* Pn	Pb	08 28 54.2 +0.2
SKO	Skopje	2.27	14	*e*Pn	Pb	08 28 53.7 -0.9
SKO				*e*Sn	Sn	08 29 21.5 +3.0
SKO	Skopje	2.27	14	*i* Pn	Pb	08 28 53.9 -0.8
ULC	Ulcinj	2.45	334	*e*Pn	Pn	08 28 54.5 +1.2
ULC				*i* Sn	Sn	08 29 25.8 +2.9
SRS	Serrai	2.59	58	*e*Pn	Pn	08 28 56.4 +1.2
SRS				*e*Sn	Sn	08 29 28.1 +1.7
BCI	Bajram Curri	2.64	350	P	Pb	08 28 59.5 -1.4
	baz=349					
BCI				S	Sb	08 29 33.0 +0.1
	baz=349					
DRME	Dracevica, Mon	2.67	335	*e*Pn	Pn	08 28 57.7 +1.4
DRME	Dracevica, Mon	2.67	335	*e*Pn	Pn	08 28 57.6 +1.3
DRME				*i* Sn	Sn	08 29 31.2 +2.9
ITM	Ithomi	2.76	159		Pn	08 28 59.5 +1.9
KKB	Krupnik	2.77	40	P	Pn	08 28 59.9 +2.2
BUM	Brajlici-Budva	2.87	332	*e*Pn	Pn	08 29 00.4 +1.3
BUM				*i* Sn	Sn	08 29 35.9 +2.6
PDG	Podgorica	2.87	338	⇓P	Pn	08 29 00.8 +1.8
PDG	Podgorica	2.87	338	⇑Pn	Pn	08 29 00.5 +1.5
TTG	Podgorica	2.87	338	⇑*i*Pn	Pn	08 29 00.4 +1.4
TTG				*i* Sn	Sn	08 29 36.0 +2.8
PVY	Plav	2.88	349	*e*Pn	Pn	08 29 00.6 +1.4
PVY				*i* Sn	Sn	08 29 36.3 +2.8
MMB	Musomiste	2.94	51	P	Pn	08 29 03.0 +3.0
CEME	Cevo	3.08	335	*e*Pn	Pn	08 29 03.3 +1.3
CEME				*i* Sn	Sn	08 29 41.1 +2.6
TIP	Timpagrande	3.10	260	⇓P	Pn	08 28 59.8 -2.5
TIP				⇓S	Sn	08 29 38.3 -0.7
TIP	Timpagrande	3.10	260	Pn	Pn	08 29 02.6 +0.3
HCY	Herceg Novi	3.15	329	*e*Pn	Pn	08 29 03.0 +0.2
HCY	Herceg Novi	3.15	329	⇓*i*Pn	Pn	08 29 03.1 +0.2
HCY				*i* Sn	Sn	08 29 41.9 +1.8
IVA	Berane	3.16	349	⇓*i*Pn	Pn	08 29 04.6 +1.5
IVA				*i* Sn	Sn	08 29 43.1 +2.7
BARS	Barje	3.16	15	*e*Pn	Pn	08 29 05.5 +2.5
MATE	Matera	3.18	287	⇑P	Pn	08 29 00.3 -3.0
KOME	Kolasin	3.20	344	*e*Pn	Pn	08 29 05.2 +1.5
KOME				*i* Sn	Sn	08 29 44.2 +2.7
NKME	Niksic	3.27	337	*e*Pn	Pn	08 29 05.8 +1.2
NKME				*i* Sn	Sn	08 29 45.1 +2.0
VTS	Vitosha	3.43	33	⇓P	Pn	08 29 09.1 +2.2
VTS	Vitosha	3.43	33	Pn	Pn	08 29 09.0 +2.1
VTS	Vitosha	3.43	33	P	Pn	08 29 10.5 +3.6
SELS	Selova	3.46	5	*e*Pn	Pn	08 29 09.2 +2.0
BRY	Bratogost	3.52	333	*e*Pn	Pn	08 29 08.7 +0.6
BRY	Bratogost	3.52	333	*e*Pn	Pn	08 29 08.8 +0.6
BRY				*i* Sn	Sn	08 29 51.6 +2.1
SJES	Sjenica	3.53	351	*e*Pn	Pn	08 29 10.6 +2.4
UPM	Unac-Piva	3.68	339	*e*Pn	Pn	08 29 12.3 +1.9
UPM	Unac-Piva	3.68	339	⇑*i*Pn	Pn	08 29 11.7 +1.3
UPM				*i* Sn	Sn	08 29 55.5 +2.0
PLE	Pljevlja	3.69	345	⇓*i*Pn	Pn	08 29 11.8 +1.4
PLE				*i* Sn	Sn	08 29 55.8 +2.2
CUC	Castrocucco	3.76	275	Pn	Pn	08 29 12.2 +0.9
ZAPS	Zavoj	3.79	22	*e*Pn	Pn	08 29 14.2 +2.4
STON	Ston	3.83	325	⇑*i*Pn	Pn	08 29 10.5 -1.7
BOVS	Bovan	3.94	11	⇑P	Pn	08 29 14.0 +0.3
BOVS	Bovan	3.94	11	*e*Pn	Pn	08 29 15.1 +1.4
BOVS				*e*Sn	Sn	08 29 59.5 0.0
RDO	Rodhopi	3.94	68		Pn	08 29 15.4 +1.6
RUDO	Rudo	3.97	346	*e*Pn	Pn	08 29 14.3 +0.1
CEL	Celeste	4.03	250		Pn	08 29 15.1 0.0
KDZ	Kurdzhali	4.05	61	P	Pn	08 29 16.5 +1.2
GRUS	Gruza	4.12	0	*e*Pn	Pn	08 29 18.3 +2.1
BLKB	Belogradchik	4.13	20	⇓P	Pn	08 29 17.0 +0.7
ZAGS	Zajecar	4.20	15	*e*Pn	Pn	08 29 19.4 +2.1
BBLS	Lazići	4.20	347	*e*Pn	Pn	08 29 18.6 +1.2
BBLS	Lazići	4.20	347	*e*Pn	Pn	08 29 19.0 +1.6
ALN	Alexandroupoli	4.25	73	Pn	Pn	08 29 19.9 +1.9
SGNT	San Giovanni R	4.25	299	Pn	Pn	08 29 18.0 0.0
MPEP	Malo Peshtene	4.25	32	P	Pn	08 29 21.9 +3.9
DIVS	Divibare	4.36	353	Pn	Pn	08 29 21.1 +1.5
DIVS	Divibare	4.36	353	*e*Pn	Pn	08 29 20.9 +1.4
DIVS	Divibare	4.36	353	*e*Pn	Pn	08 29 20.8 +1.3
DIVS				*e*Sn	Sn	08 30 10.4 +0.4
TRUS	Trudelj	4.46	357	*e*Pn	Pn	08 29 22.7 +1.9
HAPS	Han Pijesak,BI	4.50	344	*e*Pn	Pn	08 29 22.5 +0.9
APE	Apeiranthos	4.66	124	⇑P	Pn	08 29 27.8 +4.1
KUBS	Kucevo	4.70	9	*e*Pn	Pn	08 29 26.0 +1.9
PAOL	Paolisi	4.84	287		Pn	08 29 27.5 +1.3
TEKS	Tekeris	4.85	350	*e*Pn	Pn	08 29 26.0 -0.3
TEKS	Tekeris	4.85	350	*e*Pn	Pn	08 29 26.8 +0.5
MDVR	Moldovita	5.07	8	⇑P	Pn	08 29 25.5 -3.8
SANT	Santorini	5.07	131	Pn	Pn	08 29 31.8 +2.5
SRE	Strehaia	5.23	20	⇑P	Pn	08 29 29.7 -1.8
HERR	Herculane	5.26	13	⇑P	Pn	08 29 28.7 -3.2
MGRS	Mrkonjic Grad	5.36	331	*e*Pn	Pn	08 29 34.6 +1.3
FRGS	Fruska Gora	5.42	353	⇑*i*Pn	Pn	08 29 34.8 +0.6
FRGS	Fruska Gora	5.42	353	*e*Pn	Pn	08 29 34.7 +0.6
VAE	Valguarnera	5.42	247	Pn	Pn	08 29 34.9 +0.7
	comp=N,1.1nm,0.3s,baz=204,slow=20,SNR=1.3					
VAE				Sn	Sn	08 30 39.5 +3.2
	comp=N,6.3nm,0.3s,baz=126,slow=11,SNR=2.8					
	comp=N,8.0nm,0.5s					
IDI	Anoyia	5.58	142	⇑P	Pn	08 29 36.6 +0.2
IDI	Anoyia	5.58	142	Pn	Pn	08 29 35.6 -0.8
	comp=N,1.4nm,0.3s,baz=47,slow=14,SNR=2.0					
IDI				Sn	Sn	08 30 36.8 -3.4
	comp=N,5.5nm,0.3s,baz=119,slow=21,SNR=7.2					
	comp=N,2.7nm,0.3s					
IDI	Anoyia	5.58	142	Pn	Pn	08 29 37.6 +1.2
INTR	Introdacqua	5.61	296	Pn	Pn	08 29 37.9 +1.1
BLY	Banja Luka	5.61	334	⇑*i*Pn	Pn	08 29 37.1 +0.4
GZR	Gura Zlata	5.83	15	⇓P	Pn	08 29 34.9 -4.8
BZS	Buzias	5.88	6	⇓P	Pn	08 29 33.9 -6.5
A051A	Mrakovica	5.94	333	⇑*i*Pn	Pn	08 29 41.5 +0.2
AQU	L'Aquila	6.08	297		Pn	08 29 44.6 +1.3
LOT	Lotru	6.11	21	⇓P	Pn	08 29 38.9 -4.8
CAMP	Campotosto	6.15	299		Pn	08 29 45.3 +1.0
WDD	Wied Dalam	6.26	233	Pn	Pn	08 29 44.7 -1.0
NRCA	Norcia	6.47	301		Pn	08 29 49.5 +0.8
SIRR	Siria	6.53	6	⇓P	Pn	08 29 40.4 -8.9
KOVH	Kovagotottos	6.59	344	P	Pn	08 29 50.7 +0.5
KOVH				S	Sn	08 31 01.3 -3.7
MORH	Mrgy, Hungar	6.61	348	P	Pn	08 29 51.4 +1.0
MORH				S	Sn	08 31 02.3 -3.1
KARP	Karpathos	6.64	127	Pn	Pn	08 29 51.7 +0.8
MLR	Muntele Rosu	6.90	32	⇑P	Pn	08 29 50.2 -4.4
MLR	Muntele Rosu	6.90	32	Pn	Pn	08 29 57.5 +3.0
	comp=N,1.4nm,0.3s,baz=354,slow=8.2,SNR=14					
MLR				Sn	Sn	08 31 15.2 +2.4
	comp=N,0.6nm,0.3s,baz=287,slow=23,SNR=1.5					
MLR				LR	LR	08 33 09.5
	comp=N,309nm,20.2s,baz=171,slow=44					
BOJS	Bojanci	6.99	327	⇑*i*Pn	Pn	08 29 55.5 -0.2
MURB	Monte Urbino	7.05	302		Pn	08 29 57.5 +1.0
CRES	Cresnjev	7.17	329	⇑*i*Pn	Pn	08 29 57.8 -0.3
DRGR		7.17	11	⇑P	Pn	08 29 49.7 -8.4
LATE	Laterza	7.28	296	Pn	Pn	08 30 00.2 +0.5
BORA	Eskisehir	7.52	86		Pn	08 30 06.0 +3.0
CEY	Cerknica	7.54	324	⇑*i*Pn	Pn	08 30 02.9 -0.3
SKDS	Skadanscina	7.58	322	⇑*i*Pn	Pn	08 30 02.9 -0.9
MPLH	Magyarpolny	7.74	344	P	Pn	08 30 09.4 +3.4
CASP	Castiglione de	7.99	295	Pn	Pn	08 30 09.8 +0.4
OSSC	Osservatorio P	8.00	301	Pn	Pn	08 30 09.0 -0.6
TESR	Tescani	8.02	31	⇑P	Pn	08 30 02.6 -7.2
SOKA	Soboth	8.04	331	*e*Pn	Pn	08 30 09.9 -0.2
	comp=N,2.5nm,0.2s,SNR=10					
SOKA				*e*Sn	Sn	08 31 35.8 -4.9
	comp=N,2.7nm,0.6s					
OBKA	Obir	8.09	328	*e*Pn	Pn	08 30 11.2 +0.4
OBKA	Obir	8.09	328	*i* Pn	Pn	08 30 11.2 +0.4
	comp=N,1.8nm,0.2s,SNR=5.6					
OBKA				*e*Sn	Sn	08 31 41.7 -0.2
	comp=N,14nm,0.5s					
PSZ	Piszkesteto	8.17	356		Pn	08 30 12.4 +0.5
ARSA	Arzberg	8.36	335	*e*Pn	Pn	08 30 14.4 -0.1
	comp=N,3.3nm,0.5s					
BURAR	Bucovina Array	8.50	21	⇑P	Pn	08 30 06.7 -10
BUR08	Bucovina Ar. S	8.52	21		Pn	08 30 13.5 -3.2
ABAH	Abaujker	8.53	2	P	Pn	08 30 16.4 -0.4
RONA	Rosalia, Austr	8.54	340	*e*Pn	Pn	08 30 19.4 +2.5
	comp=N,3.7nm,0.4s					
MYKA	Terra Mystica	8.57	325	*e*Pn	Pn	08 30 17.5 +0.2
	comp=N,0.4nm,0.1s					
TEOL	Teolo	8.69	313		Pn	08 30 18.2 -0.7
CLUD	Cludinico	8.79	322		Pn	08 30 21.0 +0.7
CONA	Conrad Observa	8.87	338	*e*Pn	Pn	08 30 21.3 -0.1
	comp=N,2.3nm,0.5s,SNR=6.8					
KBA	Koelnbreinsper	9.05	326	*e*Pn	Pn	08 30 24.2 +0.2
	comp=N,2.2nm,0.6s					
CTI	Castel Tesino	9.13	316		Pn	08 30 23.9 -1.2
ABTA	Abfaltersbach	9.17	322	*e*Pn	Pn	08 30 24.8 -0.9
	comp=N,2.2nm,0.5s					
PGF	Pioggiola	9.24	291	*e*Pn	Pn	08 30 27.3 +0.6
MOA	Molln	9.31	332	*e*Pn	Pn	08 30 28.4 +0.9
	comp=N,1.4nm,0.2s					
BIOA	Bad Ischl, Aus	9.42	330	*e*Pn	Pn	08 30 29.6 +0.7
	comp=N,2.2nm,0.4s					
MSSA	Maissana	9.47	302	Pn	Pn	08 30 29.4 -0.3
SALO	Salr	9.49	311	Pn	Pn	08 30 29.5 -0.5
KEST	Kesra	9.85	249	Pn	Pn	08 30 36.3 +1.4
	comp=N,0.3nm,0.3s,baz=254,slow=4.9,SNR=5.5					
	comp=N,4.1nm,0.6s					
WTTA	Wattenberg	9.96	322	*e*Pn	Pn	08 30 36.1 -0.4
	comp=N,1.8nm,0.2s,SNR=6.5					
BRTR	Keskin Array B	9.97	86	Pn	Pn	08 30 35.8 -0.9
	baz=263,slow=13,SNR=1.2					
BRTR				LR	LR	08 34 51.0
	comp=N,103nm,21.6s,baz=314,slow=40					
	comp=N,0.3nm,0.5s					
WATA	Walderalm	10.04	322	*e*Pn	Pn	08 30 37.5 -0.1
	comp=N,2.4nm,0.2s,SNR=6.4					
SQTA	Sankt Quirin	10.14	320	*e*Pn	Pn	08 30 39.4 +0.5
	comp=N,2.3nm,0.3s,SNR=4.8					
FETA	Feichten	10.24	318	*e*Pn	Pn	08 30 40.0 -0.4
	comp=N,0.5nm,0.3s					
MOTA	Moosalm	10.28	321	*e*Pn	Pn	08 30 41.1 +0.3
	comp=N,1.0nm,0.2s,SNR=6.0					
GERES	GERESS Array B	10.36	333	Pn	Pn	08 30 41.6 -0.3
	comp=N,0.2nm,0.3s,baz=152,slow=15,SNR=5.7					
	comp=N,0.3nm,0.4s					
GERES	GERESS Array B	10.36	333	Pn	Pn	08 30 42.6 +0.7
DAVOX	Davos/Dischmat	10.54	315	Pn	Pn	08 30 44.8 +0.4
	comp=N,0.6nm,0.3s,baz=152,slow=15,SNR=8.0					
	comp=N,3.1nm,0.5s					
RETA	Reutte	10.54	320	*e*Pn	Pn	08 30 44.9 +0.5
	comp=N,0.6nm,0.2s					
KHC	Kasperske Hory	10.64	334	*e*PN	Pn	08 30 45.4 -0.3
KHC				*e*SN	Sn	08 32 41.2 -3.3
SBF	Sospel	10.70	297	*e*Pn	Pn	08 30 46.7 +0.1
DAVA	Damuels	10.86	317	*e*Pn	Pn	08 30 49.8 +1.0
	comp=N,0.4nm,0.2s					
LMR	La Mourre	11.21	293	*e*Pn	Pn	08 30 54.5 +1.1
MBDF	Montbardon	11.44	300	*e*Pn	Pn	08 30 56.6 -0.2
MBDF				*e*Sn	Sn	08 32 47.7 -17
	comp=N,1.2nm,0.5s					
LPG	La Plagne	11.75	304	*e*Pn	Pn	08 30 59.6 -1.5
LPG				*e*Sn	Sn	08 32 55.9 -16
	comp=N,7.2nm,0.7s					
SENIN	Lac Senin/Sane	11.80	308	Pn	Pn	08 31 00.2 -1.4
ORIF	Oris-en-Rattie	12.10	300	*e*Pn	Pn	08 31 06.3 +0.6
BFO	Black Forest	12.33	318	Pn	Pn	08 31 07.4 -1.3
AKASG	Malin Array Be	12.46	26	LR	LR	08 36 45.6
	comp=N,82nm,19.8s,baz=236,slow=41					
CABF	La Chapelle	12.65	307	*e*Pn	Pn	08 31 11.5 -1.7
CABF				*e*Sn	Sn	08 33 16.6 -17
	comp=N,4.1nm,0.7s					
HINF	Hinteralfeld	12.82	313	*e*Pn	Pn	08 31 13.4 -2.0
HINF				*e*Sn	Sn	08 33 23.2 -14
	comp=N,2.4nm,0.4s					
ECH	Echery	12.88	315	Pn	Pn	08 31 15.7 -0.5
CDF	Champ du Feu	12.93	316	*e*Pn	Pn	08 31 15.8 -1.2
HAU	Haudompre	13.20	313	*e*Pn	Pn	08 31 18.7 -2.0
HAU				*e*Sn	Sn	08 33 31.1 -16
	comp=N,2.1nm,0.3s					
SMF	Signal de Mont	14.06	305	*e*Pn	Pn	08 31 30.4 -2.1
SMF				*e*Sn	Sn	08 33 53.1 -15
	comp=N,0.8nm,0.3s					
SAVF	Savonnieres en	14.22	314	*e*Pn	Pn	08 31 32.5 -2.1
LOR	Lormes	14.31	307	*e*Pn	Pn	08 31 34.7 -1.1
LOR				*e*Sn	Sn	08 33 56.0 -18
	comp=N,1.8nm,0.4s					
BAIF	Baives	15.53	317	*e*Pn	Pn	08 31 51.7 -0.4
BAIF				*e*Sn	Sn	08 34 24.1 -20
	comp=N,2.0nm,0.3s					
ESDC	Sonseca Array	18.95	278	P	P	08 32 34.3 -0.1
	comp=N,0.1nm,0.3s,baz=76,slow=12,SNR=6.4					
	comp=N,1.1nm,0.8s					
HFS	Hagfors	20.85	350	P	P	08 32 54.4 -0.4
	comp=N,2.7nm,0.6s,baz=168,slow=9.1,SNR=9.6					
	comp=N,2.7nm,0.6s					
MDT	Midelt	21.50	259	P	P	08 33 01.1 -1.0
	comp=N,1.3nm,0.7s,baz=75,slow=8.2,SNR=8.2					
	comp=N,1.3nm,0.7s					
NC602	NORSAR Array S	21.75	348	P	P	08 33 03.6 -0.8
FINES	FINESS Array B	21.95	7	P	P	08 33 05.6 -1.0
	comp=N,1.9nm,0.4s,baz=178,slow=12,SNR=14					
	comp=N,1.9nm,0.4s					
NC405	NORSAR Array S	22.08	348	P	P	08 33 07.3 -0.7
NB2	NORSAR Subarra	22.09	348	P	P	08 33 07.7 -0.5
	comp=Z,4.3nm,0.8s,baz=165,slow=11					
NOA	NORSAR Array B	22.09	348	P	P	08 33 07.6 -0.6
	comp=Z,3.1nm,0.8s,baz=164,slow=11,SNR=7.8					
	comp=Z,3.1nm,0.8s					
EKA	Eskdalemuir Ar	22.23	322	P	P	08 33 08.6 -1.0
	comp=Z,2.3nm,0.7s,baz=120,slow=9.3,SNR=5.8					
	comp=Z,2.3nm,0.7s					
GEYT	Allbeck	29.07	82	P	P	08 34 11.2 -2.4
	comp=Z,0.6nm,0.4s,baz=280,slow=12,SNR=2.3					
	comp=Z,0.6nm,0.4s					
ARCES	ARCESS Array B	29.94	3	P	P	08 34 20.6 -0.3
	comp=Z,4.1nm,0.9s,baz=185,slow=9.6,SNR=5.7					
	comp=Z,4.1nm,0.9s					
TOA0	Torodi Ar. Sit	31.36	218	P	P	08 34 34.4 +0.5
TOA0				IAmb	IAmb	08 34 34.7
	comp=Z,3.3nm,0.7s					
TORD	Torodi Ar. Bea	31.36	218	P	P	08 34 33.8 -0.1
	comp=Z,3.4nm,0.7s,baz=32,slow=9.2,SNR=20					
	comp=Z,3.4nm,0.7s					
TORD	Torodi Ar. Bea	31.36	218	P	P	08 34 34.4 +0.5
TORD				IAmb	IAmb	08 34 34.7
	comp=Z,2.4nm,0.8s					
KKAR	Karatay Array	37.06	68	P	P	08 35 24.0 +0.8
DBIC	Dimbokro	40.16	222	P	P	08 35 48.8 -0.5
	comp=Z,1.9nm,0.7s,baz=18,slow=8.1,SNR=1.4					
	comp=Z,1.9nm,0.7s					
MK31	Makanchi Array	44.37	60	P	P	08 36 23.5 0.0
MKAR	Makanchi Array	44.37	60	P	P	08 36 22.4 -1.0
	comp=Z,1.7nm,0.5s,baz=282,slow=7.3,SNR=23					
	comp=Z,1.7nm,0.5s					
MKAR	Makanchi Array	44.37	60	P	P	08 36 23.6 +0.1
ZAA0	Zalesovo Array	44.54	49	P	P	08 36 24.1 -0.5
ZALV	Zalesovo Beam	44.54	49	P	P	08 36 22.3 -2.3
	comp=Z,1.0nm,0.5s,baz=288,slow=9.0,SNR=4.9					
	comp=Z,1.0nm,0.5s					
ZALV	Zalesovo Beam	44.54	49	P	P	08 36 24.2 -0.4
EUNU	Eureka	53.98	348	P	P	08 37 37.3 +0.7
EUNU				IAmb	IAmb	08 37 43.3
	comp=Z,3.1nm,1.2s					
TIXI	Tiksi	58.12	21	P	P	08 38 08.2 +2.1
TIXI				IAmb	IAmb	08 38 26.6
	comp=Z,4.3nm,1.3s					
SONM	Songino Array	59.35	51	P	P	08 38 14.0 -1.2
	comp=Z,0.4nm,0.4s,baz=290,slow=6.0,SNR=5.6					
	comp=Z,0.4nm,0.4s					
ILAR	Eielson Array	75.34	355	P	P	08 39 56.4 +0.3
	comp=Z,0.1nm,0.3s,baz=357,slow=5.3,SNR=1.9					
	comp=Z,0.1nm,0.3s					
KSRS	Korea Array	78.22	51	P	P	08 40 12.1 -0.6
	comp=Z,0.7nm,0.6s,baz=322,slow=5.1,SNR=2.1					
	comp=Z,0.7nm,0.6s					
MJAR	Matsushiro Arr	84.78	46	P	P	08 40 47.0 -0.6
	comp=Z,0.5nm,0.6s,baz=300,slow=2.4,SNR=1.8					
	comp=Z,0.5nm,0.6s					
TXAR	Lajitas Array	93.97	314	P	P	08 41 31.7 +0.4
	comp=Z,0.1nm,0.6s,baz=57,slow=3.3,SNR=1.9					
	comp=Z,0.1nm,0.6s					
ASAR	Alice Springs	122.20	95	PKP	PKPdf	08 47 07.0 -1.2
	comp=Z,0.2nm,0.7s,baz=286,slow=1.6,SNR=2.1					

TAP ***16*** *08:30:22.9,24.'15N×122.'43E,h32km±1km,ML2.6,D*
JMA ***16*** *08:30:23.1±0.2,24.'N±2.'×122.'4E±0.'6,h32km±4km,*
MV2.1/8,NW OFF ISHIGAKIJIMA IS
ISC 16 08:30:22.6±1.0**,24.'08N**±0.'04×**122.'43E**±0.'02**,h29**km±12km**,**
n39,σ0°**67/75,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.60**	**52**	P	**Pb**	**08 30 34.5**	**-0.1**
JYNG				*e*S	**Sb**	**08 30 42.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.65**	**55**	*i* P	**Pb**	**08 30 35.3**	**-0.2**
	baz=66						
YOJ				S	**Sn**	**08 30 44.4**	**-0.9**
	baz=66						
YOJ	**Yonaguni jima**	**0.65**	**55**	P	**Pb**	**08 30 35.4**	**-0.1**
YOJ				*e*S	**Sb**	**08 30 43.9**	**-0.3**
EWUT	**Wuta**	**0.69**	**302**	P	**Pb**	**08 30 35.5**	**-0.7**
	baz=297						
EWUT				S	**Sb**	**08 30 44.1**	**-1.3**
	baz=297						
ETL	**Fush Village**	**0.74**	**276**	*e*P	**Pn**	**08 30 36.7**	**-0.4**
	baz=257						
ETL				*e*S	**Sn**	**08 30 47.4**	**-0.1**
	baz=257						
TWC	**Suao**	**0.74**	**315**	*i* P	**Pn**	**08 30 36.3**	**-0.8**
	baz=303						
TWC				*i* S	**Sb**	**08 30 46.0**	**-0.9**
	baz=303						
TWD	**Chiawan**	**0.76**	**270**	*e*P	**Pb**	**08 30 37.9**	**+0.7**
	baz=252						
TWD				*e*S	**Sn**	**08 30 48.7**	**+0.9**
	baz=252						
NACB	**Ninganchiao**	**0.77**	**277**	P	**Pn**	**08 30 36.8**	**-0.7**
	baz=258						
NACB				*e*S	**Sn**	**08 30 48.1**	**0.0**
	baz=258						
ETLH	**Xiulin Townshi**	**0.87**	**278**	P	**Pn**	**08 30 38.6**	**-0.4**
	baz=275						
ETLH				S	**Sb**	**08 30 51.0**	**+0.4**
	baz=275						
EGS		**0.88**	**329**	P	**Pb**	**08 30 39.7**	**+0.4**
	baz=327						
LATG	**Datong**	**0.94**	**299**	*e*P	**Pb**	**08 30 40.5**	**+0.2**
	baz=296						
LATG				*e*S	**Sb**	**08 30 53.9**	**+1.4**
	baz=296						
TWE	**Neicheng**	**0.94**	**313**	P	**Pb**	**08 30 40.4**	**+0.1**
	baz=310						
TWE				*e*S	**Sb**	**08 30 53.4**	**+1.0**
	baz=310						
ESL	**Shilin**	**0.95**	**254**	P	**Pn**	**08 30 39.9**	**-0.1**
	baz=251						
ESL				S	**Sn**	**08 30 51.9**	**-0.6**
	baz=251						
ENTT	**Nioudou**	**0.96**	**305**	*i* P	**Pb**	**08 30 40.4**	**-0.3**
	baz=302						
ENTT				S	**Sb**	**08 30 53.0**	**-0.1**
	baz=302						
NDT	**Datong Townshi**	**0.98**	**302**	*e*P	**Pn**	**08 30 40.1**	**-0.3**
	baz=299						
NDT				*e*S	**Sb**	**08 30 52.7**	**-0.9**
	baz=299						
NNSB	**Datong**	**1.01**	**290**	P	**Pb**	**08 30 41.2**	**-0.4**
	baz=287						
NNSB				*e*S	**Sb**	**08 30 54.5**	**-0.1**
	baz=287						
FUSB	**Fushanzhiwuyua**	**1.02**	**312**	*e*P	**Pb**	**08 30 42.0**	**+0.3**
	baz=309						
FUSB				*e*S	**Sb**	**08 30 56.2**	**+1.5**
	baz=309						
NNS	**Nan Shan**	**1.03**	**291**	P	**Pn**	**08 30 41.2**	**0.0**
	baz=287						
NNS				S	**Sb**	**08 30 54.4**	**-0.6**
	baz=287						
TIPB	**Shuangxi**	**1.04**	**328**	*e*P	**Pb**	**08 30 42.2**	**+0.1**
	baz=316						
TIPB				*e*S	**Sb**	**08 30 55.7**	**+0.4**
	baz=316			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.07**	**138**		**Pb**	**08 37 55.9**	**+0.3**
CO06	**Fray Jorge**	**0.07**	**138**	*e*P	**Pb**	**08 37 55.7**	**0.0**
CO06				*e*S	**Sb**	**08 37 59.3**	**-0.2**
CO06				IAML		08 38 00.3	
	comp=N,77μm,0.2s						
CO05	**La Serena**	**0.80**	**29**		**Pn**	**08 38 05.1**	**0.0**
CO05	**La Serena**	**0.80**	**29**	*e*P	**Pn**	**08 38 05.2**	**0.0**
CO05				*e*S	**Sn**	**08 38 16.2**	**+0.2**
CO05				IAML		08 38 20.9	
	comp=E,7μm,0.4s						
CO02	**Combarbal**	**0.83**	**135**		**Pn**	**08 38 05.0**	**-0.7**
CO02					**Sb**	**08 38 15.8**	**-1.3**
CO02	**Combarbal**	**0.83**	**135**	⇓*i*P	**Pn**	**08 38 05.0**	**-0.7**
CO02				*e*S	**Sb**	**08 38 15.4**	**-1.7**
CO02				IAML		08 38 17.8	
	comp=N,14μm,0.2s						
CO03	**El Pedregal**	**0.89**	**104**		**Pn**	**08 38 05.8**	**-0.7**
CO03					**Sb**	**08 38 17.3**	**-1.4**
CO03	**El Pedregal**	**0.89**	**104**	⇓*i*P	**Pn**	**08 38 05.9**	**-0.6**
CO03				*e*S	**Sb**	**08 38 17.5**	**-1.2**
CO03				IAML		08 38 17.8	
	comp=N,5μm,0.4s						
GO04	**Tololo Observa**	**0.89**	**60**		**Pn**	**08 38 06.6**	**-0.1**
GO04	**Tololo Observa**	**0.89**	**60**	*e*P	**Pn**	**08 38 06.5**	**-0.1**
GO04				*i* S	**Sb**	**08 38 19.2**	**+0.3**
CO01	**Juntas del Tor**	**1.52**	**65**		**Pb**	**08 38 16.4**	**-1.5**
CO01	**Juntas del Tor**	**1.52**	**65**	*e*P	**Pn**	**08 38 15.8**	**+0.5**
CO01				*e*S	**Sb**	**08 38 36.5**	**-0.4**
LCO	**Las Campanas**	**1.82**	**28**		**Pn**	**08 38 20.2**	**+0.9**
LCO					**Pb**	**08 38 20.4**	**-2.5**
LCO	**Las Campanas**	**1.82**	**28**	*e*P	**Pn**	**08 38 20.4**	**+0.9**
LCO				*e*S	**Sn**	**08 38 43.3**	**+1.7**
VA06	**Catapilco**	**1.96**	**170**	Pn	**Pn**	**08 38 21.7**	**+0.5**
VA06	**Catapilco**	**1.96**	**170**	*e*P	**Pn**	**08 38 21.5**	**+0.4**
VA06				*e*S	**Sn**	**08 38 44.5**	**-0.2**
VA06				IAML		08 38 54.9	
	comp=E,2μm,0.5s						
AC05	**El Transito**	**2.16**	**35**	⇑*i*P	**Pn**	**08 38 26.0**	**+2.0**
AC05				*e*S	**Sb**	**08 38 53.7**	**-1.5**
VA03	**San Esteban**	**2.34**	**156**	Pn	**Pn**	**08 38 27.9**	**+1.4**
VA03	**San Esteban**	**2.34**	**156**	*e*P	**Pn**	**08 38 28.0**	**+1.5**
VA03				*i* S	**Sb**	**08 38 58.1**	**-2.3**
VA03				IAML		08 39 06.6	
	comp=E,1μm,0.5s						
ROCH	**El Roble**	**2.41**	**166**	*e*P	**Pn**	**08 38 28.3**	**+0.8**
ROCH				IAML		08 39 11.7	
	comp=N,1μm,0.4s						
ROC1	**El Roble**	**2.42**	**166**		**Pn**	**08 38 28.8**	**+1.2**
AC04	**Llanos de Chal**	**2.47**	**13**	Pn	**Pn**	**08 38 28.6**	**+0.5**
MT02	**Curacav**	**2.67**	**170**		**Pn**	**08 38 32.7**	**+1.8**
MT05	**Renca**	**2.88**	**164**	Pn	**Pn**	**08 38 35.0**	**+1.2**
MT03	**Universidad Ad**	**3.03**	**161**	Pn	**Pn**	**08 38 37.4**	**+1.4**
MT09	**Talagante**	**3.20**	**170**		**Pn**	**08 38 39.4**	**+1.1**
MT01	**Popeta**	**3.25**	**174**		**Pn**	**08 38 39.7**	**+0.8**
AC06	**Mina Casimiro**	**3.46**	**20**		**Pn**	**08 38 42.3**	**+0.6**
BO04	**La Punta**	**3.48**	**165**		**Pn**	**08 38 43.2**	**+1.2**
BO02	**Sierra Bellavi**	**4.23**	**170**		**Pn**	**08 38 53.4**	**+1.0**
AC02	**Maricunga**	**4.39**	**31**	Pn	**Pn**	**08 38 56.5**	**+1.5**
AC01	**Pan de Azucar**	**4.56**	**12**		**Pn**	**08 38 55.7**	**-1.2**
H03N1	**Juan Fernandez**	**6.75**	**244**	Pn	**Pn**	**08 39 26.2**	**-0.4**
	baz=24,slow=19						
H03N1				T	T	08 46 21.1	
	baz=72,slow=72,SNR=2987						
H03N3	**Juan Fernandez**	**6.76**	**243**	Pn	**Pn**	**08 39 25.9**	**-1.0**
	baz=24,slow=19						
H03N3				T	T	08 46 20.5	
	baz=72,slow=72,SNR=2376						
H03N2	**Juan Fernandez**	**6.76**	**244**	Pn	**Pn**	**08 39 26.2**	**-0.6**
	baz=24,slow=19						
H03N2				T	T	08 46 16.9	
	baz=72,slow=72,SNR=3143						
H03S3	**Juan Fernandez**	**6.90**	**241**	Pn	**Pn**	**08 39 27.3**	**-1.5**
	baz=228,slow=78						
H03S1	**Juan Fernandez**	**6.91**	**240**	Pn	**Pn**	**08 39 27.1**	**-1.8**
	baz=228,slow=78						
H03S2	**Juan Fernandez**	**6.92**	**241**	Pn	**Pn**	**08 39 27.3**	**-1.7**
	baz=228,slow=78						
LVC	**Limon Verde**	**8.36**	**18**	Pn	**Pn**	**08 39 48.1**	**-1.3**
	comp=N,0.5nm,0.3s,baz=19,slow=18,SNR=1.8						
	comp=N,1.5nm,0.6s						
PB03	**IPOC Station P**	**8.71**	**12**	Pn	**Pn**	**08 39 52.6**	**-1.5**
GO06	**Curarrehue**	**8.94**	**179**	Pn	**Pn**	**08 39 57.8**	**+0.7**
LR04	**Corral**	**9.35**	**188**	Pn	**Pn**	**08 40 02.9**	**+0.4**
PATCX	**Punta Patache**	**9.86**	**8**	Pn	**Pn**	**08 40 08.2**	**-1.5**
PLCA	**Paso Flores**	**10.13**	**175**	Pn	**Pn**	**08 40 11.1**	**-2.3**
	comp=N,0.1nm,0.3s,baz=333,slow=13,SNR=1.5						
	comp=N,1.3nm,0.9s						
PLCA	**Paso Flores**	**10.13**	**175**	Pn	**Pn**	**08 40 11.6**	**-1.7**
TRQA	**Tornquist**	**10.92**	**135**	Pn	**Pn**	**08 40 25.2**	**+1.0**
CPUP	**Villa Florida**	**13.33**	**75**	Pn	**Pn**	**08 40 56.6**	**-0.5**
	comp=N,0.2nm,0.3s,baz=239,slow=10,SNR=5.0						
CPUP				Sn	**Sn**	**08 43 27.9**	**+3.7**
	comp=N,0.1nm,0.3s,baz=251,slow=8.0,SNR=2.8						
	comp=N,0.5nm,0.4s						
LPAZ	**La Paz**	**14.64**	**14**	Pn	**Pn**	**08 41 17.4**	**+1.9**
	comp=N,0.1nm,0.3s,baz=197,slow=7.6,SNR=7.4						
	comp=N,0.8nm,0.6s						
PLTB	**Pedras Altas**	**15.52**	**99**	Pn	**Pn**	**08 41 25.0**	**-1.6**
PLTB				IAmb	IAmb	08 42 03.0	
	comp=Z,20nm,1.4s						
ITAB	**Concordia**	**17.45**	**84**	P	**Pn**	**08 41 50.1**	**-0.9**
ITAB				IAmb	IAmb	08 42 33.0	
	comp=Z,40nm,1.5s						
SIV	**San Ignacio**	**17.51**	**36**	P	**Pn**	**08 41 52.4**	**+0.5**
	baz=213,slow=8.7,SNR=6.0						
	comp=Z,1.2nm,0.9s						
BDFB	**Brasilia**	**26.31**	**61**	P	**P**	**08 43 22.2**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=249,slow=11,SNR=4.4						
	comp=Z,1.8nm,0.5s						
BDFB	**Brasilia**	**26.31**	**61**	P	**P**	**08 43 22.4**	**-0.7**
SNAA	**Sanae**	**54.60**	**159**	P	**P**	**08 47 15.4**	**+0.3**
SNAA				IAmb	IAmb	08 47 56.5	
	comp=Z,4.8nm,1.5s						
QSPA	**South Pole Qui**	**59.60**	**180**	P	**P**	**08 47 51.4**	**+0.7**
QSPA				IAmb	IAmb	08 47 55.6	
	comp=Z,2.7nm,1.4s						
TXAR	**Lajitas Array**	**66.95**	**330**	P	**P**	**08 48 41.1**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=146,slow=6.6,SNR=4.1						
	comp=Z,0.4nm,0.8s						
MIAR	**Mount Ida**	**68.03**	**341**	P	**P**	**08 48 46.5**	**+0.3**
DBIC	**Dimbokro**	**73.83**	**72**	P	**P**	**08 49 21.9**	**0.0**
	comp=Z,2.8nm,0.6s,baz=156,slow=6.3,SNR=3.1						
	comp=Z,2.8nm,0.6s						
MAW	**Mawson**	**76.33**	**164**	P	**P**	**08 49 36.0**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=207,slow=9.0,SNR=1.8						
	comp=Z,0.7nm,0.5s						
PDAR	**Pinedale Array**	**80.90**	**333**	P	**P**	**08 50 02.3**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=126,slow=7.0,SNR=1.7						
	comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**123.84**	**210**	PKP	**PKPdf**	**08 56 44.3**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=168,slow=1.5,SNR=6.1						
H11S2	**WAKE ISLAND Hyl**	**26.05**	**271**	T	T	11 15 29.9	
	baz=115,slow=75,SNR=47						
H11S1	**WAKE ISLAND Hyl**	**26.06**	**271**	T	T	11 15 30.7	
	baz=115,slow=75,SNR=43						
H11S3	**WAKE ISLAND Hyl**	**26.07**	**271**	T	T	11 15 31.1	
	baz=115,slow=75,SNR=49						
ZALV	**Zalesovo Beam**	**151.18**	**29**	PKPbc	**PKPbc**	**08 57 39.8**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=298,slow=3.1,SNR=5.7						
ZALV				PKPab	**sPKPdf**	**08 57 49.2**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=302,slow=2.7,SNR=4.6						

MOS ***16*** *08:40:18.9±1.4, 39°.75N×20°.59E, h16km, mb4.5/16, Error ellipse: s-maj=5.7km s-min=3.7km az=76.9*
BEO ***16*** *08:40:19.4±0.8, 39.57N×20°.79E, h7km±4km, ML3.9/7*
TIR ***16*** *08:40:20.5, 39°.73N×20°.78E, h10km, Md3.7*
PDG ***16*** *08:40:20.8±0.6, 39°.75N×20°.66E, h11km±1km, ML4.0/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
NEIC ***16*** *08:40:20.3±1.8, 39°.78N±0°.05×20°.72E±0°.06, h10km±1km, mb4.5/25, ML4.1(ATH), ML3.7(TIR), Error ellipse: s-maj=8.4km s-min=7.4km az=24.0*
ATH ***16*** *08:40:21.4, 39°.77N×20°.71E, h4km, Mw4.2, Moment Tensor Solution. s6 Moment tensor: Mrr2.43; Mθθ-1.50; Mφφ-0.93; Mrθ0.07; Mθφ1.40; Mφr-0.93; Fault plane solution: NP1:φs144.00000°, δ54.00000°, λ108.00000°. NP2:φs295.00000°, δ40.00000°, λ67.00000°.*
LDG ***16*** *08:40:21.3±0.6, 39°.79N×20°.76E, h10km, Ml3.9/18 Error ellipse: s-maj=21.3km s-min=11.1km az=36.0*
THE ***16*** *08:40:21.1, 39°.74N×20°.72E, h10km, ML4.2/14, Error*

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ellipse: s-maj=1.0km s-min=0.5km az=318.0
IDC ***16*** *08:40:22.8±1.3, 39°.74N×20°.70E, h41km±14km, mb3.9/15, mbtmp4.0/27, ML3.8/12, MS3.5/35, Error ellipse: s-maj=11.2km s-min=10.7km az=46.0*
ISC 16 08:40:20.9±0.7, 39.74N±0°.01×20.72E±0°.02, h17km±4km, n426, σt1.9±74/457, mb4.4/37, MS3.5/29, 37C-23D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.13**	**128**	P	**Pg**	**08 40 24.3**	**-0.6**
JAN				S	**Sg**	**08 40 27.2**	**-0.4**
	165μm,0.3s						
JAN	**Janina**	**0.13**	**128**	P	**Pg**	**08 40 23.8**	**-1.1**
JAN	**Janina**	**0.13**	**128**	P	**Pg**	**08 40 24.3**	**-0.6**
JAN				S	**Sg**	**08 40 26.8**	**-0.8**
JAN				AML	AML	08 40 28.6	
JAN				AML	AML	08 40 29.3	
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**08 40 28.1**	**-0.4**
IGT				S	**Sg**	**08 40 33.9**	**+0.3**
	52μm,0.3s						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**08 40 27.6**	**-0.9**
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**08 40 28.2**	**-0.3**
	baz=241						
IGT				S	**Sb**	**08 40 35.4**	**+1.2**
	baz=241						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**08 40 28.5**	**+0.1**
IGT				S	**Sg**	**08 40 33.8**	**+0.3**
IGT				AML	AML	08 40 36.7	
	comp=N,80448μm,0.2s						
IGT				AML	AML	08 40 37.1	
LSK	**Leskovik**	**0.42**	**348**	P	**Pg**	**08 40 29.4**	**-0.3**
LSK				S	**Sg**	**08 40 34.5**	**-1.0**
	comp=N,48μm,0.5s						
LSK	**Leskovik**	**0.42**	**348**	P	**Pg**	**08 40 29.3**	**-0.3**
	baz=342						
LSK				S	**Sb**	**08 40 36.5**	**+0.4**
	baz=342						
KPRO	**Kipourio**	**0.54**	**66**	P	**Pg**	**08 40 31.6**	**-0.2**
KPRO				S	**Sb**	**08 40 40.0**	**+0.4**
	comp=N,42μm,0.6s						
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**08 40 31.8**	**-0.4**
PENT				S	**Sb**	**08 40 40.4**	**+0.3**
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**08 40 31.9**	**-0.3**
PENT				S	**Sg**	**08 40 39.2**	**-0.6**
PENT				AML	AML	08 40 43.4	
	comp=N,5666μm,0.4s						
PENT				AML	AML	08 40 44.3	
	comp=E,26627μm,0.3s						
SRN	**Sarande**	**0.57**	**285**	P	**Pg**	**08 40 31.7**	**-0.6**
SRN				S	**Sb**	**08 40 40.9**	**+0.7**
	comp=E,29μm,0.4s						
SRN	**Sarande**	**0.57**	**285**	P	**Pg**	**08 40 31.8**	**-0.5**
	baz=285						
SRN				S	**Sb**	**08 40 41.6**	**+1.3**
	baz=285						
KASA	**Kassiopi**	**0.60**	**271**	P	**Pg**	**08 40 32.4**	**-0.5**
KASA				S	**Sg**	**08 40 41.1**	**+0.1**
KASA				AML	AML	08 40 45.5	
	comp=E,53559μm,0.4s						
KASA				AML	AML	08 40 45.5	
	comp=N,54661μm,0.5s						
KEK	**Kerkira**	**0.71**	**268**		**Pg**	**08 40 33.8**	**-1.0**
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**08 40 33.7**	**-1.2**
KEK				S	**Sb**	**08 40 45.7**	**+1.4**
	comp=N,16μm,0.4s						
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**08 40 34.2**	**-0.7**
KEK				S	**Sb**	**08 40 44.4**	**+0.1**
KEK				AML	AML	08 40 48.5	
	comp=E,32598μm,0.3s						
KEK				AML	AML	08 40 48.9	
	comp=N,30784μm,0.4s						
NEST	**Nestorio**	**0.72**	**20**	P	**Pg**	**08 40 34.7**	**-0.5**
NEST	**Nestorio**	**0.72**	**20**	P	**Pg**	**08 40 34.8**	**-0.3**
NEST				S	**Sg**	**08 40 44.0**	**-0.9**
NEST				AML	AML	08 40 48.1	
	comp=E,13214μm,0.6s						
NEST				AML	AML	08 40 52.4	
	comp=N,13525μm,0.3s						
KBN	**Korca**	**0.89**	**3**		**Pg**	**08 40 37.0**	**-1.3**
KBN	**Korca**	**0.89**	**3**	P	**Pg**	**08 40 37.3**	**-1.0**
KBN	**Korca**	**0.89**	**3**	P	**Pg**	**08 40 37.0**	**-1.3**
KBN	**Korca**	**0.89**	**3**	P	**Pb**	**08 40 38.0**	**+0.1**
	baz=0.0						
KBN				S	**Sn**	**08 40 52.1**	**+0.9**
	baz=0.0						
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pg**	**08 40 38.3**	**-0.4**
TSLK	**Tsoukalades, L**	**0.91**	**183**	P	**Pg**	**08 40 38.6**	**0.0**
TSLK				S	**Sb**	**08 40 51.8**	**+1.8**
TSLK				AML	AML	08 40 57.7	
	comp=E,36429μm,0.6s						
TSLK				AML	AML	08 41 01.1	
	comp=N,63433μm,0.9s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pg**	**08 40 38.8**	**-0.6**
LKD2				S	**Sn**	**08 40 53.2**	**+0.6**
	comp=N,15μm,0.7s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pb**	**08 40 39.4**	**+0.5**
	baz=186						
LKD2				S	**Sn**	**08 40 53.7**	**+1.1**
	baz=186						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pg**	**08 40 39.3**	**0.0**
LKD2				S	**Sn**	**08 40 53.1**	**+0.6**
LKD2				AML	AML	08 40 59.6	
	comp=N,24068μm,0.7s						
LKD2				AML	AML	08 41 00.2	
	comp=E,26420μm,0.6s						
KZN	**Kozani**	**0.99**	**55**	P	**Pg**	**08 40 39.0**	**-1.1**
KZN				S	**Sn**	**08 40 54.5**	**+0.8**
	comp=E,7μm,0.8s						
KZN	**Kozani**	**0.99**	**55**	P	**Pg**	**08 40 39.1**	**-1.1**
KZN	**Kozani**	**0.99**	**55**	P	**Pg**	**08 40 39.5**	**-0.7**
KZN				S	**Sb**	**08 40 53.0**	**+0.5**
KZN				AML	AML	08 40 57.1	
	comp=N,13925μm,0.7s						
KZN				AML	AML	08 40 57.9	
	comp=E,13877μm,0.7s						
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pg**	**08 40 39.1**	**-1.5**
THL	**Klokotos Trika**	**1.02**	**99**	P	**Pg**	**08 40 40.2**	**-0.4**
NYDR	**Nydri-Lefkada**	**1.02**	**181**	P	**Pg**	**08 40 39.8**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.06**	**186**	P	**Pg**	**08 40 40.1**	**-1.3**
DRAG				S	**Sn**	**08 40 56.1**	**+0.9**
	comp=E,115μm,0.4s						
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pb**	**08 40 41.8**	**+0.1**
EVGI				S	**Sn**	**08 40 58.7**	**+2.0**
	comp=E,15μm,0.6s						
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pn**	**08 40 42.6**	**+0.8**
TYRN	**Tyrnavos**	**1.17**	**91**	P	**Pb**	**08 40 41.9**	**-0.7**
TYRN				S	**Sn**	**08 40 59.2**	**+1.2**
	comp=E,33μm,0.7s						
EVR	**Evrytania**	**1.18**	**134**	P	**Pb**	**08 40 42.8**	**-0.1**
EVR				S	**Sn**	**08 40 59.6**	**+1.2**
	comp=E,8μm,0.8s						
EVR	**Evrytania**	**1.18**	**134**	P	**Pb**	**08 40 43.5**	**+0.6**
EVR				S	**Sn**	**08 41 00.2**	**+1.9**
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**08 40 44.2**	**+0.3**
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**08 40 44.2**	**+0.3**
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**08 40 45.9**	**+2.0**
	baz=308						
VLO				S	**Sn**	**08 41 03.3**	**+4.9**
	baz=308						
KTI	**Kastanea**	**1.26**	**58**	P	**Pn**	**08 40 44.4**	**+0.6**
FSK	**Fiskardo**	**1.28**	**185**	P	**Pn**	**08 40 44.6**	**+0.6**
FSK				S	**Sg**	**08 41 02.7**	**+0.3**
	comp=E,9μm,0.4s						
FSK	**Fiskardo**	**1.28**	**185**	P	**Pg**	**08 40 46.0**	**+0.3**
PVO	**Paravola**	**1.28**	**150**	P	**Pg**	**08 40 45.9**	**+0.2**
LRSO	**Larissa Observ**	**1.29**	**92**	P	**Pb**	**08 40 45.3**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pg**	**08 40 46.1**	**-0.2**
OHR	**Ohrid**	**1.38**	**3**	P	**Pg**	**08 40 47.1**	**-0.4**
OHR	**Ohrid**	**1.38**	**3**	*e*Pg	**Pg**	**08 40 47.3**	**-0.2**
OHR				*e*Sg	**Sg**	**08 41 08.3**	**+2.9**
OHR	**Ohrid**	**1.38**	**3**	*i* Pn	**Pg**	**08 40 47.6**	**+0.2**
LIT	**Litokhoron**	**1.41**	**74**		**Pn**	**08 40 46.6**	**+0.8**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pn**	**08 40 46.1**	**+0.3**
LIT				S	**Sg**	**08 41 06.2**	**-0.4**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pn**	**08 40 46.6**	**+0.8**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pb**	**08 40 47.1**	**+0.3**
KEF4	**Livadi, Kephal**	**1.49**	**189**	P	**Pg**	**08 40 49.2**	**-0.5**
DMLN	**Damoulianata-K**	**1.52**	**190**	P	**Pn**	**08 40 48.1**	**+0.8**
DMLN				S	**Sn**	**08 41 08.1**	**+1.4**
	comp=E,10μm,0.4s						
VLS	**Valsamata**	**1.56**	**184**	P	**Pn**	**08 40 48.4**	**+0.5**
VLS	**Valsamata**	**1.56**	**184**	P	**Pb**	**08 40 49.7**	**+0.4**
VLS	**Valsamata**	**1.56**	**184**	P	**Pb**	**08 40 50.4**	**+1.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**1.60**	**144**	P	**Pg**	**08 40 51.4**	**-0.4**
SERG	**Sergoula**	**1.68**	**141**	P	**Pb**	**08 40 52.5**	**+1.1**
TIR	**Tirane**	**1.74**	**338**		**Pn**	**08 40 51.5**	**+1.2**
TIR	**Tirane**	**1.74**	**338**	P	**Pn**	**08 40 51.5**	**+1.2**
TIR	**Tirane**	**1.74**	**338**	*e*Pn	**Pb**	**08 40 52.6**	**+0.3**
TIR				*e*Sn	**Sg**	**08 41 18.5**	**+1.6**
TIR	**Tirane**	**1.74**	**338**	P	**Pb**	**08 40 53.0**	**+0.7**
	baz=337						
TIR				S	**Sg**	**08 41 19.5**	**+2.6**
	baz=337						
SCTE	**Santa Cesarea**	**1.76**	**282**		**Pn**	**08 40 51.2**	**+0.6**
GRG	**Griva**	**1.77**	**46**	P	**Pn**	**08 40 51.7**	**+0.9**
AXAR	**Agios Charalam**	**1.79**	**122**	P	**Pg**	**08 40 54.6**	**-0.8**
DLFA	**Delphi**	**1.87**	**132**	P	**Pb**	**08 40 55.5**	**+0.9**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**08 40 57.0**	**+0.9**
	baz=353						
PHP				S	**Sg**	**08 41 23.1**	**-0.9**
	baz=353						
HORT	**Hortiatis**	**2.02**	**64**	P	**Pn**	**08 40 54.6**	**+0.4**
VAY	**Valandovo**	**2.12**	**41**	P	**Pn**	**08 40 56.6**	**+1.0**
VAY	**Valandovo**	**2.12**	**41**	*e*Pn	**Pn**	**08 40 56.7**	**+1.1**
VAY				*e*Sn	**Sb**	**08 41 25.1**	**+0.2**
VAY	**Valandovo**	**2.12**	**41**	*i* Pn	**Pn**	**08 40 56.7**	**+1.1**
STIP	**Stip**	**2.25**	**29**	*i* Pn	**Pb**	**08 41 00.7**	**-0.4**
SKO	**Skopje**	**2.30**	**14**	*e*Pn	**Pb**	**08 41 00.6**	**-1.3**
SKO				*e*Sn	**Sb**	**08 41 29.9**	**-0.2**
SKO	**Skopje**	**2.30**	**14**	*i* Pn	**Pb**	**08 41 00.6**	**-1.3**
ULC	**Ulcinj**	**2.49**	**334**	*e*Pn	**Pn**	**08 41 01.4**	**+0.7**
ULC				*i* Sn	**Sn**	**08 41 33.6**	**+3.0**
SRS	**Serrai**	**2.59**	**57**	P	**Pn**	**08 41 02.9**	**+0.9**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**08 41 03.0**	**+0.9**
SRS				*e*Sn	**Sn**	**08 41 34.2**	**+1.1**
BCI	**Bajram Curri**	**2.67**	**350**	P	**Pb**	**08 41 06.5**	**-1.8**
	baz=349						
BCI				S	**Sb**	**08 41 42.6**	**+1.8**
	baz=349						
DRME	**Dracevica, Mon**	**2.71**	**335**	⇑*i*Pn	**Pn**	**08 41 04.6**	**+0.9**
DRME	**Dracevica, Mon**	**2.71**	**335**	*e*Pn	**Pn**	**08 41 05.0**	**+1.3**
DRME				*i* Sn	**Sn**	**08 41 38.9**	**+2.9**
ITM	**Ithomi**	**2.72**	**159**		**Pn**	**08 41 05.8**	**+2.0**
KKB	**Krupnik**	**2.79**	**39**	P	**Pb**	**08 41 08.4**	**-1.8**
PDG	**Podgorica**	**2.91**	**338**	⇓P	**Pn**	**08 41 07.8**	**+1.4**
PDG	**Podgorica**	**2.91**	**338**		**Pn**	**08 41 07.4**	**+1.0**
TTG	**Podgorica**	**2.91**	**338**	*e*Pn	**Pn**	**08 41 07.8**	**+1.4**
TTG				*i* Sn	**Sn**	**08 41 43.8**	**+2.9**
BUM	**Brajici-Budva**	**2.91**	**332**	*e*Pn	**Pn**	**08 41 07.8**	**+1.3**
BUM				*i* Sn	**Sn**	**08 41 43.7**	**+2.6**
PVY	**Plav**	**2.91**	**349**	*e*Pn	**Pn**	**08 41 08.0**	**+1.4**
PVY				*i* Sn	**Sn**	**08 41 44.1**	**+2.9**
MMB	**Musomiste**	**2.94**	**50**	P	**Pb**	**08 41 11.0**	**-2.0**
TIP	**Timpagrande**	**3.12**	**261**	⇑P	**Pn**	**08 41 09.5**	**+0.2**
TIP				⇑S	**Sn**	**08 41 46.9**	**+0.8**
TIP	**Timpagrande**	**3.12**	**261**		**Pn**	**08 41 09.6**	**+0.3**
CEME	**Cevo**	**3.12**	**335**	*e*Pn	**Pn**	**08 41 09.9**	**+0.5**
CEME				*i* Sn	**Sn**	**08 41 48.8**	**+2.6**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**08 41 12.2**	**+2.0**
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	**Pn**	**08 41 09.6**	**-0.6**
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	**Pn**	**08 41 10.2**	**0.0**
IVA	**Berane**	**3.19**	**349**	*e*Pn	**Pn**	**08 41 11.8**	**+1.4**
IVA				*i* Sn	**Sn**	**08 41 50.9**	**+2.8**
MATE	**Matera**	**3.21**	**288**	⇑P	**Pn**	**08 41 10.6**	**+0.2**
KOME	**Kolasin**	**3.24**	**344**	*e*Pn	**Pn**	**08 41 12.5**	**+1.5**
KOME				*i* Sn	**Sn**	**08 41 52.0**	**+2.8**
NKME	**Niksic**	**3.31**	**337**	*e*Pn	**Pn**	**08 41 13.3**	**+1.4**
NKME				*i* Sn	**Sn**	**08 41 53.5**	**+2.7**
VTS	**Vitosha**	**3.45**	**33**	⇑P	**Pn**	**08 41 15.8**	**+1.8**
VTS				⇓S	**Sn**	**08 41 57.1**	**+2.6**
VTS	**Vitosha**	**3.45**	**33**		**Pn**	**08 41 15.0**	**+1.0**
VTS	**Vitosha**	**3.45**	**33**	P	**Pn**	**08 41 15.0**	**+1.0**
VTS	**Vitosha**	**3.45**	**33**	P	**Pn**	**08 41 17.3**	**+3.3**
SELS	**Selova**	**3.49**	**5**	*e*Pn	**Pn**	**08 41 16.2**	**+1.7**
BRY	**

CESX Cesi 6.78 298 Pn 08 42 00.5 +1.0
ISR Istrita 6.89 37 ⇓P Pn 08 42 03.7 +2.5
MLR Muntele Rosu 6.92 32 ⇑P Pn 08 42 03.7 +2.1
MLR Muntele Rosu 6.92 32 P Pn 08 42 03.0 +1.3
comp=Z,1.6nm,0.3s,baz=162,slow=4.4,SNR=18
comp=Z,3.6nm,0.4s
MLR Muntele Rosu 6.92 32 Pn 08 42 03.6 +2.0
MLR Muntele Rosu 6.92 32 P Pn 08 42 03.6 +2.0
BOJS Bojanci 7.03 327 *e*Pn **Pn 08 42 02.2 -0.8**
MURB Monte Urbino 7.09 302 Pn 08 42 05.1 +1.2
DRGR 7.20 11 ⇓P Pn 08 42 08.3 +2.9
CRES Cresnjev 7.21 329 *i*⇑*i*Pn **Pn 08 42 04.6 -0.9**
COVR Voineasa-Covas 7.32 32 ⇓P Pn 08 42 09.2 +2.2
BORA Eskisehir 7.50 86 Pn 08 42 13.3 +3.8
PLOR Plostina 7.51 34 ⇑P Pn 08 42 12.4 +2.8
VRI Vrincioaia 7.55 34 ⇓P Pn 08 42 12.4 +2.2
CEY Cerknica 7.58 324 *i*⇑*i*Pn **Pn 08 42 10.0 -0.5**
SKDS Skadanscina 7.62 322 *e*Pn **Pn 08 42 09.0 -2.1**
CFR Carcaliu 7.72 43 ⇓P Pn 08 42 14.2 +1.7
MPLH Magyarpolny 7.78 344 P Pn 08 42 18.2 +4.9
AKAS Kas 7.84 114 Pn 08 42 15.8 +1.5
ISP Isparta 7.89 101 Pn 08 42 15.8 +0.9
ISP Isparta 7.89 101 *de*P Pn 08 42 20.2 +5.2
TESR Tescani 8.04 31 ⇑P Pn 08 42 19.5 +2.6
SOKA Soboth 8.08 331 *e*Pn **Pn 08 42 16.9 -0.6**
comp=Z,4.5nm,0.4s,SNR=9.8
OBKA Obir 8.13 328 ⇑*i*Pn **Pn 08 42 18.1 -0.1**
OBKA Obir 8.13 328 *e*Pn **Pn 08 42 18.2 0.0**
comp=Z,2.6nm,0.2s,SNR=9.2
PSZ Piszkesteto 8.20 356 ⇑P **Pn 08 42 20.4 +1.3**
PSZ Piszkesteto 8.20 356 Pn **Pn 08 42 19.0 -0.1**
PSZ Piszkesteto 8.20 356 P **Pn 08 42 19.0 -0.1**
PSZ Piszkesteto 8.20 356 P **Pn 08 42 22.2 +3.0**
ARSA Arzberg 8.40 335 *e*Pn **Pn 08 42 21.3 -0.6**
comp=Z,1.6nm,0.3s
TRPA Tarpa 8.49 8 P **Pn 08 42 26.7 +3.7**
BURAR Bucovina Array 8.52 21 ⇑P **Pn 08 42 26.8 +3.3**
BURAR Bucovina Array 8.52 21 Pn **Pn 08 42 23.0 -0.5**
BUR08 Bucovina Ar. S 8.54 21 Pn 08 42 22.4 -1.5
ABAH Abaujker 8.57 2 P **Pn 08 42 27.3 +3.2**
RONA Rosalia, Austr 8.58 340 *e*Pn **Pn 08 42 25.2 +0.9**
comp=Z,0.7nm,0.2s
TEOL Teolo 8.72 313 Pn 08 42 25.3 -1.0
KECS Kecovo 8.75 359 *e*P **Pn 08 42 29.6 +3.1**
STAL STALIGIAL 8.77 321 Pn 08 42 25.9 -1.0
CLUD Cludinico 8.83 322 Pn 08 42 27.3 -0.3
VYHS Vyhne 8.86 352 *e*P **Pn 08 42 30.9 +2.8**
VYHS *e* 08 44 04.2
VLC Villacollemand 8.87 303 Pn **Pn 08 42 27.9 -0.4**
CONA Conrad Observa 8.91 338 *e*Pn **Pn 08 42 29.2 +0.4**
comp=Z,0.4nm,0.2s
KBA Koelnbreinsper 9.09 326 *e*Pn **Pn 08 42 30.3 -1.1**
comp=Z,0.7nm,0.2s
CTI Castel Tesino 9.16 316 Pn 08 42 31.4 -0.9
CTI Castel Tesino 9.16 316 P **Pn 08 42 31.5 -0.9**
CRVS Cervenica-Dubn 9.18 3 *e*P Pn 08 42 39.1 +6.6
ABTA Abfaltersbach 9.21 322 *i* Pn **Pn 08 42 32.0 -1.0**
comp=Z,2.0nm,0.3s,SNR=6.7
ABTA *e*Sn **Sn 08 44 11.2 -5.0**
comp=Z,3.3nm,0.2s
KOLS Kolonicke sedl 9.26 6 *e*P **Pn 08 42 37.2 +3.6**
PGF Pioggiola 9.28 291 *e*Pn **Pn 08 42 37.2 +3.3**
MOA Molln 9.35 332 *e*Pn **Pn 08 42 35.7 +0.8**
comp=Z,1.9nm,0.3s,SNR=8.9
MOA *e*Sn **Sn 08 44 17.9 -1.7**
comp=Z,3.2nm,0.5s
JAVC Velka Javorina 9.38 348 *e*PN Pn 08 42 42.2 +7.0
BIOA Bad Ischl, Aus 9.46 330 *e*Pn **Pn 08 42 36.0 -0.3**
comp=Z,2.8nm,0.3s
MSSA Maissana 9.51 302 Pn **Pn 08 42 38.3 +1.3**
SALO Salr 9.53 311 Pn **Pn 08 42 35.8 -1.5**
KRUC Moravsky 9.82 343 *e*PN Pn 08 42 47.4 +6.2
MAUC Maruska 9.85 349 AMS AMS 08 47 30.0
comp=Z,800nm,14.0s
KEST Kesra 9.85 250 P **Pn 08 42 43.2 +1.4**
comp=Z,0.5nm,0.3s,baz=44,slow=9.0,SNR=4.2
KEST S **Sn 08 44 27.1 -4.9**
comp=Z,1.1nm,0.5s,baz=79,slow=20,SNR=0.9
comp=Z,3.1nm,0.7s
BR131 Keskin Array S 9.96 86 ⇓*e*P **Pn 08 42 47.9 +4.6**
BRTR Keskin Array B 9.96 86 P **Pn 08 42 44.0 +0.7**
comp=Z,0.3nm,0.3s,baz=270,slow=11,SNR=6.9
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 9.96 86 *e*P **Pn 08 42 47.4 +4.1**
WTTA Wattenberg 10.00 322 *e*Pn **Pn 08 42 43.9 +0.1**
comp=Z,3.0nm,0.3s,SNR=6.9
WTTA *e*Sn **Sn 08 44 31.2 -4.6**
comp=Z,11nm,0.5s
VRAC Vranov 10.01 344 P **Pn 08 42 43.2 -0.7**
comp=Z,0.2nm,0.3s,baz=131,slow=17,SNR=1.2
comp=Z,1.0nm,0.4s
VRAC Vranov 10.01 344 *e*PN Pn 08 42 50.9 +7.0
WATA Walderalm 10.08 322 *i* Pn **Pn 08 42 45.3 +0.3**
comp=Z,2.2nm,0.2s,SNR=8.3
SQTA Sankt Quirin 10.18 320 *e*Pn **Pn 08 42 46.1 -0.1**
comp=Z,2.6nm,0.2s
SQTA *e*Sn **Sn 08 44 35.2 -4.7**
comp=Z,9.7nm,0.5s
TREC Trest 10.26 340 AMS AMS 08 47 10.0
comp=Z,700nm,11.2s
OKC Ostrava-Krasne 10.26 351 AMS AMS 08 47 00.0
comp=Z,400nm,10.5s
FUORN Ofenpass-Fuorn 10.27 315 Pn 08 42 47.1 -0.5
FETA Feichten 10.28 318 *e*Pn **Pn 08 42 48.1 +0.4**
comp=Z,0.9nm,0.3s
MORC Moravsky Berou 10.29 348 *e*PN Pn 08 42 53.3 +5.6
MOTA Moosalm 10.31 321 *e*Pn **Pn 08 42 48.1 0.0**
comp=Z,7.7nm,0.5s
MOTA *e*Sn **Sn 08 44 39.0 -4.4**
comp=Z,12nm,0.8s
LVV L'vov 10.35 12 *e*P Pn 08 42 57.3 +8.8
GERES GERESS Array B 10.40 333 P **Pn 08 42 49.9 +0.7**
comp=Z,0.3nm,0.3s,baz=161,slow=14,SNR=8.3
GERES S **Sn 08 44 44.2 -1.1**
comp=Z,1.0nm,0.4s,baz=150,slow=24,SNR=5.6
comp=Z,0.5nm,0.3s
GERES GERESS Array B 10.40 333 Pn 08 42 48.7 -0.6
GERES GERESS Array B 10.40 333 *e*P **Pn 08 42 50.2 +1.0**
DAVOX Davos/Dischmat 10.58 315 P **Pn 08 42 52.3 +0.5**
comp=Z,0.6nm,0.3s,baz=139,slow=15,SNR=9.4
DAVOX S **Sn 08 44 45.0 -4.9**
comp=Z,1.7nm,0.3s,baz=147,slow=20,SNR=1.4
DAVOX LR LR 08 47 35.8
comp=Z,212nm,21.3s,baz=116,slow=41
comp=Z,2.4nm,0.5s
RETA Reutte 10.58 320 *e*Pn **Pn 08 42 50.8 -1.0**
comp=Z,0.6nm,0.2s
RETA *e*Sn **Sn 08 44 45.5 -4.3**
comp=Z,3.2nm,0.5s
KHC Kasperske Hory 10.68 334 *e*P **Pn 08 42 53.3 +0.2**
KHC *e* 08 44 49.2
KHC MLR MLR
comp=Z,600nm,16.7s
KHC Kasperske Hory 10.68 334 *e*PN **Pn 08 42 53.3 +0.2**
KHC *e*SN **Sn 08 44 49.2 -3.0**
KHC AMS AMS 08 47 30.0
comp=Z,600nm,16.7s
KRLC Kraliky 10.71 346 *e*P **Pn 08 42 52.1 -1.3**
KRLC MLR MLR
comp=Z,500nm,13.6s
KRLC Kraliky 10.71 346 *e*PN **Pn 08 42 52.1 -1.3**
KRLC AMS AMS 08 47 40.0
comp=Z,500nm,13.6s
SBF Sospel 10.74 297 *e*Pn **Pn 08 42 56.9 +3.0**
SBF *e*Sn **Sn 08 44 46.6 -7.0**
comp=Z,2.3nm,0.3s
DAVA Damuels 10.89 317 *e*Sn **Sn 08 44 55.3 -2.3**
comp=Z,4.7nm,0.6s
GOPC GO Pecny, Ondr 11.01 340 AMS AMS 08 47 30.0
comp=Z,600nm,14.1s
DPC Dobruska-Polom 11.06 345 AMS AMS 08 47 40.0
comp=Z,600nm,11.2s
PRU Pruhonice 11.14 339 AMS AMS 08 47 40.0
comp=Z,600nm,14.5s
LMR La Mourre 11.24 293 *e*Pn **Pn 08 43 05.3 +4.6**
LMR *e*Sn **Sn 08 45 00.3 -5.5**
comp=Z,1.8nm,0.6s
UPC Upice 11.27 344 AMS AMS 08 47 50.0
comp=Z,500nm,17.2s
OSTC Ostas 11.27 345 AMS AMS 08 47 50.0
comp=Z,600nm,12.6s
CHVC Chvalec 11.34 345 AMS AMS 08 48 00.0
comp=Z,500nm,15.6s
MBDF Montbardon 11.47 300 *e*Pn **Pn 08 43 05.1 +1.1**
MBDF *e*Sn Sn 08 45 00.4 -11
comp=Z,3.6nm,0.6s
PVCC Panska Ves 11.63 340 AMS AMS 08 48 00.0
comp=Z,500nm,12.5s
LPG La Plagne 11.78 304 *e*Pn **Pn 08 43 07.6 -0.8**
LPG *e*Sn Sn 08 45 05.7 -14
comp=Z,7.5nm,0.5s
LPL La Plagne 11.80 304 *e*Pn **Pn 08 43 10.2 +1.6**
LPL *e*Sn Sn 08 45 05.3 -15
comp=Z,9.6nm,0.4s
SENIN Lac Senin/Sane 11.83 308 Pn 08 43 08.8 -0.2
NKC Novy Kostel 12.01 334 AMS AMS 08 48 10.0
comp=Z,700nm,22.2s
SMRF Simiane la Rot 12.06 295 *e*Pn Pn 08 43 17.5 +5.6
ORIF Oris-en-Rattie 12.14 300 *e*Pn Pn 08 43 08.7 -4.3
ORIF *e*Sn Sn 08 45 18.8 -9.1
comp=Z,1.7nm,0.4s
AKASG Malin Array Be 12.49 26 P **Pn 08 43 18.8 +1.2**
comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=2.8
AKASG LR LR 08 49 45.6
comp=Z,104nm,19.0s,baz=219,slow=45
comp=Z,1.3nm,0.7s
AKBB Malin Array Si 12.49 26⇑*e*P **Pn 08 43 19.2 +1.5**
AKBB pmax pmax
comp=Z,8.0nm,1.4s
CABF La Chapelle 12.69 308 *e*Pn **Pn 08 43 19.7 -0.9**
CABF *e*Sn Sn 08 45 26.2 -15
comp=Z,4.6nm,0.6s
CLL Collm 12.76 338 *e*P **P 08 43 34.0 +1.5**
HINF Hinteralfeld 12.86 313 *e*Pn **Pn 08 43 19.8 -3.0**
HINF *e*Sn Sn 08 45 28.5 -17
comp=Z,6.9nm,0.8s
ECH Echery 12.91 315 Pn **Pn 08 43 22.6 -1.0**
ECH Echery 12.91 315 P **Pn 08 43 22.6 -1.0**
VIVF Saint-Julien-l 12.93 299 *e*Pn **Pn 08 43 27.0 +3.2**
CDF Champ du Feu 12.97 316 *e*Pn **Pn 08 43 20.4 -4.0**
CDF *e*Sn Sn 08 45 30.0 -18
comp=Z,1.5nm,0.5s
HAU Haudompre 13.24 313 *e*Pn **Pn 08 43 25.0 -3.1**
HAU *e*Sn Sn 08 45 40.5 -14
comp=Z,4.6nm,0.4s
MMAI Mount Meron Ar 13.59 115 P **Pn 08 43 32.4 -0.5**
comp=Z,1.7nm,0.3s,baz=296,slow=14,SNR=2.1
comp=Z,2.0nm,0.5s
SMF Signal de Mont 14.10 305 *e*Pn **Pn 08 43 40.1 +0.3**
SMF *e*Sn Sn 08 46 01.2 -15
comp=Z,7.4nm,0.7s
MEZF Maizieres J'vi 14.24 313 *e*P **Pn 08 43 43.1 +1.5**
baz=130
MEZF *e*Sn Sn 08 45 56.4 -23
comp=Z,3.0nm,0.5s
LOR Lormes 14.35 307 *e*Pn **Pn 08 43 43.2 0.0**
baz=125
LOR *e*Sn Sn 08 46 06.6 -15
comp=Z,8.3nm,0.5s
AVF Avril sur Loir 14.47 305 *e*Pn **Pn 08 43 45.2 +0.4**
AVF *e*Sn Sn 08 46 13.0 -12
comp=Z,5.9nm,0.8s
SSF Saint Saulge 14.48 306 *e*Pn **Pn 08 43 44.8 -0.1**
SSF *e*Sn Sn 08 46 10.1 -15
comp=Z,1.6nm,0.3s
BGF Bois d'Agland 14.70 303 *e*Pn **Pn 08 43 47.5 -0.5**
BGF *e*Sn Sn 08 46 14.5 -16
comp=Z,5.5nm,0.4s
KLNR Kaliningrad 14.88 359⇑*e*P **Pn 08 43 49.4 -0.9**
KLNR pmax pmax
comp=Z,96nm,0.9s
TCF Toulx Ste Croi 15.02 302 *e*Pn **Pn 08 43 53.0 +0.7**
HYF Humbligny 15.10 306 *e*Pn **Pn 08 43 54.6 +1.2**
ASF Jabal al Asfar 15.11 115 P **Pn 08 43 54.3 +0.7**
comp=Z,0.2nm,0.3s,baz=283,slow=3.6,SNR=4.1
comp=Z,2.8nm,0.8s
GIVF Givet 15.27 318 *e*Pn **Pn 08 43 50.4 -5.1**
EIL Elat 15.40 126 LR LR 08 52 39.6
comp=Z,72nm,19.3s,baz=260,slow=48
NACGM Naroch 15.71 13⇓*e*P **Pn 08 43 59.9 -1.4**
KIV Kislovodsk 16.89 68 *e*P **P 08 44 19.2 +0.7**
KIV *e*S **Sn 08 47 28.2 +4.4**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,19nm,14.0s
KBZ Khabaz 17.02 69⇓*e*P **P 08 44 21.5 +1.8**
KBZ pmax pmax
comp=Z,15nm,1.5s
VSR Storozhevoye 17.24 42 *e*P **P 08 44 23.3 +1.2**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LDF La Druitiere 17.33 308 *e*P **P 08 44 27.7 +4.5**
VORR Voronezh 17.52 41 *e*P **Pn 08 44 23.5 -0.7**
VORR pmax pmax
comp=Z,70nm,0.4s
GRR Gorron 17.71 306 *e*P **P 08 44 33.9 +6.6**
LPSR Galich'ya Gora 17.95 38 *e*P **Pn 08 44 28.6 -0.9**
LPSR pmax pmax
comp=Z,20nm,1.4s
GNI Garni 18.42 81 LR LR 08 51 53.6
comp=Z,91nm,19.8s,baz=246,slow=38
GNI Garni 18.42 81⇑*e*P **Pn 08 44 37.4 +1.9**
GNI pmax pmax
comp=Z,16nm,1.3s
VRH Novokhopyorsk 18.59 45 *e*P **Pn 08 44 41.7 +4.4**
VRH pmax pmax
comp=Z,50nm,1.4s
OBN Obninsk 18.68 29 LR LR 08 52 47.2
comp=Z,114nm,18.2s,baz=164,slow=40
OBN Obninsk 18.68 29 *e*P **P 08 44 38.7 +0.7**
OBN *e*S **Sn 08 48 07.0 +0.3**
OBN pmax pmax
comp=Z,31nm,1.5s
OBN MLR MLR
comp=Z,389nm,18.0s
ESDC Sonseca Array 18.98 278 P **P 08 44 41.4 -0.1**
comp=Z,0.1nm,0.3s,baz=76,slow=11,SNR=6.1
ESDC LR LR 08 51 46.3
comp=Z,86nm,19.6s,baz=84,slow=36
comp=Z,0.6nm,0.5s
VSU Vasula 19.14 10*de*P **P 08 44 43.0 +0.1**
VSU pmax pmax
comp=Z,40nm,0.6s
MOS Moscow 19.55 29 *e*P **P 08 44 45.9 -1.6**
MOS pmax pmax
comp=Z,47nm,1.3s
HFS Hagfors 20.89 350 P **P 08 44 59.5 -2.5**
comp=Z,2.9nm,0.4s,baz=146,slow=12,SNR=15
HFS LR LR 08 53 54.3
comp=Z,115nm,19.5s,baz=164,slow=39
comp=Z,2.9nm,0.4s
BLS5 Blasjo 21.68 340 *e*P **P 08 45 11.2 +0.7**
NC602 NORSAR Array S 21.79 348 P **P 08 45 10.2 -1.4**
NC602 NORSAR Array S 21.79 348 *e*P **P 08 45 10.7 -1.0**
NC602 IAmb IAmb 08 45 11.7
comp=Z,72nm,1.6s
NORES NORESS Array B 21.79 348 P P 08 45 03.7 -7.9
NORES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 21.98 7 P **P 08 45 12.5 -1.2**
comp=Z,4.2nm,0.6s,baz=169,slow=12,SNR=23
FINES LR LR 08 54 40.7
comp=Z,136nm,18.5s,baz=188,slow=39
comp=Z,4.2nm,0.6s
FINES FINESS Array B 21.98 7 *e*P **P 08 45 12.8 -0.9**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FIA1 FINESS Array S 21.98 7 P **P 08 45 11.5 -2.3**
FIA1 IAmb IAmb 08 45 18.7
comp=Z,22nm,1.0s
NC405 NORSAR Array S 22.11 348 P **P 08 45 14.6 -0.6**
NB201 NORSAR Array S 22.12 348 P **P 08 45 15.0 -0.3**
NB2 NORSAR Subarra 22.13 348 P **P 08 45 14.0 -1.4**
comp=Z,24nm,1.1s,baz=164,slow=11
NB2 NORSAR Subarra 22.13 348 P **P 08 45 14.0 -1.4**
baz=164,slow=11
NOA NORSAR Array B 22.13 348 P **P 08 45 14.4 -1.0**
comp=Z,3.8nm,0.9s,baz=153,slow=10,SNR=9.2
NOA LR LR 08 54 28.2
comp=Z,126nm,21.2s,baz=170,slow=38
comp=Z,3.8nm,0.9s
EKA Eskdalemuir Ar 22.27 322 P **P 08 45 15.7 -1.1**
comp=Z,2.7nm,0.6s,baz=122,slow=11,SNR=8.4
EKA LR LR 08 55 04.2
comp=Z,72nm,21.5s,baz=172,slow=40
comp=Z,2.7nm,0.6s
NC303 NORSAR Array S 22.28 348 P **P 08 45 16.0 -0.9**
SKAR Skarslia 22.35 344 *e*P **P 08 45 18.7 +1.0**
BER Bergen 22.79 340 *e*P **P 08 45 24.4 +2.0**
HYA Hoyanger 23.26 342 *e*P **P 08 45 27.9 +0.8**
DOMB Dombas 23.44 346 *e*P **P 08 45 28.2 -0.8**
DOMB IAmb IAmb 08 45 35.4
comp=Z,25nm,1.5s
KLMR Klimovskoe 24.14 23 *e*P **P 08 45 32.4 -3.2**
KLMR *e* 08 49 11.2
KLMR pmax pmax
comp=Z,20nm,1.1s
KLMR Klimovskoe 24.14 23 *e*P **P 08 45 32.5 -3.2**
KLMR AMP 08 45 43.6
comp=Z,20nm,1.1s
KLMR *e*PcP **PcP 08 49 11.3 -4.8**
NSS Namsos 25.36 351 *e*P **P 08 45 46.7 0.0**
KIRV Kirov 26.28 35 LR LR 08 57 34.4
comp=Z,191nm,18.8s,baz=240,slow=39
AKTO Aktyubinsk 28.14 55 P **P 08 46 11.1 -0.9**
comp=Z,1.0nm,0.5s,baz=246,slow=16,SNR=2.7
AKTO LR LR 08 59 22.0
comp=Z,98nm,20.6s,baz=267,slow=40
comp=Z,1.0nm,0.5s
STEI Steigen 28.41 356 *e*P **P 08 46 14.2 +0.1**
GEYT Alibeck 29.06 81 P **P 08 46 20.0 -0.3**
comp=Z,2.7nm,0.9s,baz=266,slow=9.8,SNR=4.3
comp=Z,2.7nm,0.9s
ABKAR Akbulak array 29.26 58 P **P 08 46 23.2 +1.3**
KTK1 Kautokeino 29.37 2 *e*P **P 08 46 20.9 -1.8**
ARU Arti 29.81 43 LR LR 08 58 55.5
comp=Z,71nm,20.8s,baz=274,slow=37
ARA0 ARCESS Array S 29.97 3 *e*P **P 08 46 26.0 -2.0**
ARCES ARCESS Array B 29.97 3 P **P 08 46 26.4 -1.5**
comp=Z,0.9nm,0.4s,baz=193,slow=8.7,SNR=15
ARCES LR LR 08 59 42.7
comp=Z,123nm,21.3s,baz=165,slow=39
comp=Z,0.9nm,0.4s
ARCES ARCESS Array B 29.97 3 P **P 08 46 26.5 -1.5**
ARCES ARCESS Array B 29.97 3 *e*P **P 08 46 26.2 -1.8**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
TRO Tromso 29.97 359 *e*P **P 08 46 28.5 +0.6**
HAMF Hammerfest 31.01 2 *e*P **P 08 46 35.4 -1.7**
TOA0 Torodi Ar. Sit 31.35 218 P **P 08 46 40.4 -0.2**
TOA0 IAmb IAmb 08 46 54.5
comp=Z,5.5nm,1.0s
TORD Torodi Ar. Bea 31.35 218 P **P 08 46 39.8 -0.8**
comp=Z,4.2nm,0.9s,baz=30,slow=9.1,SNR=18
TORD LR LR 09 01 44.0
comp=Z,62nm,18.1s,baz=200,slow=41
comp=Z,4.2nm,0.9s
TORD Torodi Ar. Bea 31.35 218 P **P 08 46 40.4 -0.1**
TORD IAmb IAmb 08 46 41.3
comp=Z,4.6nm,1.1s
MACI Morro de la Ar 32.70 261 P **P 08 46 52.7 0.0**
KOWA Kowa 33.20 228 LR LR 09 01 59.1
comp=Z,107nm,18.5s,baz=20,slow=39
HRA Herat 33.34 86 P **P 08 46 57.6 -0.6**
HRA IAmb IAmb 08 46 58.9
comp=Z,13nm,1.1s
JMIC Jan Mayen 34.70 344 LR LR 09 01 33.9
comp=Z,37nm,19.0s,baz=235,slow=37
BORG Borgarnes 34.84 330 LR LR 09 03 25.6
comp=Z,66nm,19.3s,baz=123,slow=40
BRVK Borovoye 35.95 51⇑*e*P **P 08 47 22.9 +2.6**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
WSAR Wadi Sarin 35.97 106 LR LR 09 05 22.0
comp=Z,51nm,18.2s,baz=286,slow=42
BVAR Borovoye Array 36.01 52 LR LR 09 04 33.2
comp=Z,47nm,20.1s,baz=272,slow=40
KK31 Karatay Array 37.05 68 P **P 08 47 29.7 -0.2**
KK31 Karatay Array 37.05 68 P **P 08 47 29.7 -0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 37.05 68 P **P 08 47 29.3 -0.6**
KKAR Karatay Array 37.05 68 P **P 08 47 29.5 -0.4**
KKAR IAmb IAmb 08 47 31.0
comp=Z,3.5nm,0.7s
KKAR Karatay Array 37.05 68 P **P 08 47 29.5 -0.4**
KKAR pmax pmax
comp=Z,3.0nm,0.7s
CHGR Chuyangaron 37.19 76 P **P 08 47 31.1 -0.1**
CHGR IAmb IAmb 08 47 38.9
comp=Z,16nm,0.9s
CHGR Chuyangaron 37.19 76 P **P 08 47 31.1 -0.1**
CHGR pmax pmax
comp=Z,16nm,0.9s
GAR Garm 37.95 75 P **P 08 47 37.8 +0.1**
GAR IAmb IAmb 08 47 46.6
comp=Z,16nm,1.1s
BTK Batken 38.02 73 P **P 08 47 37.8 -0.4**
BTK IAmb IAmb 08 47 44.7
comp=Z,4.9nm,0.8s
BTK Batken 38.02 73 P **P 08 47 37.8 -0.4**
BTK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 40.01 68 P **P 08 47 54.3 -0.6**
AAK Ala-Archa 40.01 68⇑*e*P **P 08 47 54.7 -0.2**
AAK pmax pmax
comp=Z,9.0nm,1.4s
DBIC Dimbokro 40.15 222 LR LR 09 05 44.4
comp=Z,117nm,18.8s,baz=12,slow=38
KURK Kurchatov 41.24 55 P **P 08 48 04.2 -0.5**
KURK Kurchatov 41.24 55 P **P 08 48 04.2 -0.5**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KMBO Kilima Mbogo 43.40 156 P **P 08 48 22.8 -0.1**
KMBO Kilima Mbogo 43.40 156 P **P 08 48 22.8 -0.1**
KMBO pmax pmax
comp=Z,2.0nm,1.2s
MAKZ Makanchi 44.16 60 P **P 08 48 27.9 -0.6**
MAKZ IAmb IAmb 08 48 28.7
comp=Z,7.2nm,0.9s
MAKZ Makanchi 44.16 60 P **P 08 48 27.9 -0.6**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 44.37 60 P **P 08 48 29.6 -0.7**
MK31 IAmb IAmb 08 48 30.2
comp=Z,5.8nm,0.8s
MK31 Makanchi Array 44.37 60*ce*P **P 08 48 29.1 -1.1**
MKAR Makanchi Array 44.37 60 P **P 08 48 29.4 -0.9**
comp=Z,3.8nm,0.4s,baz=284,slow=7.5,SNR=62
MKAR LR LR 09 09 22.7
comp=Z,73nm,18.5s,baz=277,slow=39
comp=Z,3.8nm,0.4s
ZAA0 Zalesovo Array 44.55 49 P **P 08 48 31.3 -0.2**
ZALV Zalesovo Beam 44.55 49 P **P 08 48 29.7 -1.8**
comp=Z,1.7nm,0.4s,baz=282,slow=9.0,SNR=7.5
comp=Z,1.7nm,0.4s
ZALV Zalesovo Beam 44.55 49 P **P 08 48 30.9 -0.6**
ZALV Zalesovo Beam 44.55 49 *e*P **P 08 48 30.3 -1.2**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
DGZ Jazzator, Alta 46.99 55*de*P **P 08 48 50.9 -0.1**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
WMQ Urumqi 48.88 62 *e*P **P 08 49 08.0 +2.3**
EUNU Eureka 54.02 348 P **P 08 49 43.3 -0.3**
EUNU IAmb IAmb 08 49 51.5
comp=Z,4.5nm,1.4s
FRB Frobisher Bay 54.92 327 LR LR 09 14 27.2
comp=Z,79nm,18.1s,baz=22,slow=37
TIXI Tiksi 58.14 21⇓*i*P **P 08 50 14.3 +1.3**
TIXI pmax pmax
comp=Z,10.0nm,1.9s
RES Resolute Bay 58.32 344 LR LR 09 16 55.4
comp=Z,28nm,20.7s,baz=44,slow=38
TSUM Tsumeb 58.70 183 LR LR 09 17 32.4
comp=Z,46nm,19.8s,baz=323,slow=38
SONM Songino Array 59.36 51 P **P 08 50 21.2 -0.9**
comp=Z,3.1nm,0.9s,baz=289,slow=9.3,SNR=13
SONM LR LR 09 19 03.1
comp=Z,58nm,18.7s,baz=290,slow=39
comp=Z,3.1nm,0.9s
SONM Songino Array 59.36 51 P **P 08 50 21.4 -0.7**
SONM IAmb IAmb 08 50 22.3
comp=Z,5.4nm,1.1s
SONM Songino Array 59.36 51 *e*P **P 08 50 21.4 -0.7**
SONM pmax pmax
comp=Z,3.0nm,0.9s
ULN Ulaanbaatar 59.74 51 P **P 08 50 23.9 -0.8**
ULN IAmb IAmb 08 50 24.9
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 59.74 51⇓*i*P **P 08 50 24.3 -0.5**
ULN pmax pmax
comp=Z,5.0nm,1.1s
YAK Yakutsk 63.68 30 LR LR 09 21 55.3
comp=Z,123nm,18.9s,baz=268,slow=39
LBTB Lobatse 64.58 175 LR LR 09 21 09.2

comp=Z,59nm,19.8s,baz=3.5,slow=38
HHC Hu-ho-hao-te 66.03 56 *e*P **P 08 51 06.4 -0.3**
PZH PanZhiHua 67.02 74 P **P 08 51 15.8 +2.6**
ZEA Zeya 67.55 38 ⇑P **P 08 51 16.2 +0.2**
BOSA Boshof 68.13 176 P **P 08 51 19.9 -0.1**
comp=Z,4.7nm,1.0s,baz=42,slow=6.2,SNR=3.2
comp=Z,4.7nm,1.0s
BJI Beijing 69.41 55 P **P 08 51 26.8 -1.0**
BILL Biiibino 69.47 13 *e*P **P 08 51 21.7 -0.6**
BILL *e* 08 51 48.7
BILL pmax pmax
comp=Z,6.0nm,1.1s
CMAR Chiang Mai Arr 69.53 83 LR LR 09 29 34.0
comp=Z,19nm,18.1s,baz=175,slow=42
KLR Kul'dur 72.58 40 LR LR 09 27 51.8
comp=Z,61nm,18.4s,baz=339,slow=39
MA2 Magadan 72.81 24 LR LR 09 27 20.0
comp=Z,58nm,19.2s,baz=312,slow=39
KSRS Korea Array 78.23 51 P **P 08 52 18.0 -1.6**
comp=Z,0.8nm,0.6s,baz=316,slow=4.8,SNR=5.0
KSRS LR LR 09 30 23.8
comp=Z,44nm,18.3s,baz=145,slow=38
comp=Z,0.8nm,0.6s
KSRS Korea Array 78.23 51 *e*P **P 08 52 21.9 +2.4**
KSRS pmax pmax
comp=Z,1.0nm,0.7s
YSS Yuzh-Sakhalins 79.42 36⇓*e*P **P 08 52 25.8 -0.1**
YSS pmax pmax
comp=Z,88nm,2.7s
PETK Petropavlovsk- 80.32 25 LR LR 09 33 07.5
comp=Z,62nm,18.1s,baz=305,slow=39
KDAK Kodiak Island 82.68 356 LR LR 09 31 58.4
comp=Z,20nm,18.3s,baz=146,slow=37
MJAR Matsushiro Arr 84.79 46 P **P 08 52 52.4 -1.9**
comp=Z,2.6nm,0.9s,baz=308,slow=5.4,SNR=6.0
comp=Z,2.6nm,0.9s
MJA0 Matsu Arr-Jizo 84.81 46 *e*P **P 08 52 54.4 -0.1**
MJA0 pmax pmax
comp=Z,2.0nm,0.9s
TXAR Lajitas Array 94.01 314 P **P 08 53 36.4 -1.9**
comp=Z,0.4nm,0.8s,baz=70,slow=4.4,SNR=4.5
comp=Z,0.4nm,0.8s
DAV Davao City (W) 96.80 75 LR LR 09 42 53.9
comp=Z,27nm,18.4s,baz=50,slow=39
WRA Warramunga Arr 120.44 91 PKP **PKPdf 08 59 08.9 -2.8**
comp=Z,0.5nm,0.9s,baz=318,slow=1.9,SNR=2.1
ASAR Alice Springs 122.18 95 PKP **PKPdf 08 59 12.7 -2.2**
comp=Z,1.0nm,1.0s,baz=321,slow=1.8,SNR=4.6

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*ATH **16** 08:43:50.0,39.˚77N×20.˚67E,h18km±1km,ML3.5/10,Error ellipse: s-maj=1.3km s-min=0.7km az=298.0*
*BEO **16** 08:43:50.6±0.8,39.˚65N×20.˚70E,h15km±5km,ML3.3/7*
*THE **16** 08:43:50.6,39.˚75N×20.˚68E,h4km±1km,ML3.5/12,Error ellipse: s-maj=1.7km s-min=0.5km az=2.0*
*IDC **16** 08:43:53.1±2.3,39.˚80N×20.˚70E,h41km±29km,mb3.5/7, mbtmp3.7/10,ML3.3/3,Error ellipse: s-maj=27.0km s-min=13.9km az=61.0*
ISC 16 08:43:50.1±0.8,**39.˚73N**±0.˚02×**20.˚68E**±0.˚02,**h15**km±6km, **n108**,σ1$**27**/138,**mb3.7**/6,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**120**	P		**Pb**	**08 43 54.1**	**-0.6**
JAN				S		**Sg**	**08 43 57.1**	**+0.4**
144μm,0.4s								
JAN	**Janina**	**0.15**	**120**	P		**Pb**	**08 43 54.1**	**-0.6**
JAN				S		**Sg**	**08 43 57.8**	**+1.1**
JAN				AML		AML	08 43 58.0	
JAN				AML		AML	08 43 58.4	
IGT	**Igoumenitsa**	**0.34**	**233**	P		**Pb**	**08 43 57.2**	**-0.6**
IGT				S		**Sb**	**08 44 03.0**	**+0.1**
12μm,0.3s								
IGT	**Igoumenitsa**	**0.34**	**233**	P		**Pb**	**08 43 57.0**	**-0.7**
IGT				S		**Sb**	**08 44 03.3**	**+0.3**
IGT				AML		AML	08 44 05.1	
comp=E,26091μm,0.4s								
IGT				AML		AML	08 44 08.2	
comp=N,19891μm,0.3s								
LSK	**Leskovik**	**0.42**	**352**	P		**Pb**	**08 43 58.6**	**-0.7**
LSK				S		**Sb**	**08 44 04.9**	**-0.6**
comp=N,15μm,0.7s								
SRN	**Sarande**	**0.54**	**286**	P		**Pg**	**08 44 00.5**	**-0.3**
SRN				S		**Sb**	**08 44 08.4**	**-0.5**
comp=N,5μm,0.6s								
KPRO	**Kipourio**	**0.57**	**67**	P		**Pb**	**08 44 01.5**	**-0.3**
KPRO				S		**Sb**	**08 44 09.5**	**-0.3**
comp=N,8μm,0.5s								
KASA	**Kassiopi**	**0.57**	**272**	P		**Pg**	**08 44 01.1**	**-0.3**
KASA				S		**Sb**	**08 44 09.7**	**-0.1**
KASA				AML		AML	08 44 11.7	
comp=E,10902μm,0.4s								
KASA				AML		AML	08 44 12.2	
comp=N,24686μm,0.4s								
PENT	**Pentalofos**	**0.58**	**37**	P		**Pb**	**08 44 01.4**	**-0.6**
PENT	**Pentalofos**	**0.58**	**37**	P		**Pb**	**08 44 01.5**	**-0.6**
PENT				S		**Sb**	**08 44 09.5**	**-0.6**
PENT				AML		AML	08 44 12.3	
comp=E,6510μm,0.3s								
PENT				AML		AML	08 44 12.9	
comp=N,1640μm,0.3s								
KEK	**Kerkira**	**0.68**	**269**	P		**Pg**	**08 44 02.5**	**-0.8**
KEK				S		**Sb**	**08 44 13.7**	**+0.8**
comp=N,4μm,0.3s								
KEK	**Kerkira**	**0.68**	**269**	P		**Pg**	**08 44 02.6**	**-0.8**
KEK				S		**Sb**	**08 44 12.7**	**-0.2**
KEK				AML		AML	08 44 15.4	
comp=N,7562μm,0.3s								
KEK				AML		AML	08 44 19.5	
comp=E,9223μm,0.3s								
NEST	**Nestorio**	**0.74**	**22**	P		**Pb**	**08 44 04.4**	**-0.3**
NEST	**Nestorio**	**0.74**	**22**	P		**Pb**	**08 44 04.2**	**-0.5**
NEST				S		**Sb**	**08 44 14.4**	**-0.3**
NEST				AML		AML	08 44 18.1	
comp=N,4536μm,0.3s								
NEST				AML		AML	08 44 18.7	
comp=E,5466μm,0.3s								
KBN	**Korca**	**0.89**	**5**	P		**Pg**	**08 44 06.7**	**-0.7**
KBN				S		**Sn**	**08 44 20.4**	**-0.5**
comp=E,1μm,0.6s								
TSLK	**Tsoukalades, L**	**0.91**	**181**	P		**Pn**	**08 44 07.8**	**-0.5**
TSLK	**Tsoukalades, L**	**0.91**	**181**	P		**Pn**	**08 44 08.0**	**-0.3**
TSLK				S		**Sn**	**08 44 21.3**	**+0.2**
LKD2	**Lefkada island**	**0.94**	**181**	P		**Pn**	**08 44 08.6**	**-0.2**
LKD2	**Lefkada island**	**0.94**	**181**	P		**Pn**	**08 44 08.7**	**-0.2**
LKD2				S		**Sn**	**08 44 22.5**	**+0.5**
LKD2				AML		AML	08 44 26.0	
comp=E,5297μm,0.2s								
LKD2				AML		AML	08 44 30.2	
comp=N,4586μm,0.3s								
KZN	**Kozani**	**1.01**	**55**	P		**Pg**	**08 44 09.0**	**-0.7**
KZN				S		**Sn**	**08 44 23.7**	**-0.2**
comp=N,2μm,0.5s								
KZN	**Kozani**	**1.01**	**55**	P		**Pg**	**08 44 09.0**	**-0.7**
KZN				AML		AML	08 44 27.4	
comp=N,4506μm,0.6s								
KZN				AML		AML	08 44 28.8	
comp=E,5130μm,0.4s								
NYDR	**Nydri-Lefkada**	**1.02**	**179**	P		**Pn**	**08 44 09.5**	**-0.3**
THL	**Klokotos Trika**	**1.04**	**99**	P		**Pb**	**08 44 09.5**	**-0.4**
THL	**Klokotos Trika**	**1.04**	**99**	P		**Pb**	**08 44 09.4**	**-0.4**
THL				S		**Sn**	**08 44 24.5**	**+0.1**
THL				AML		AML	08 44 31.2	
comp=N,2943μm,0.7s								
THL				AML		AML	08 44 31.6	
comp=E,2685μm,0.5s								
DRAG	**Dragano-Lefkad**	**1.05**	**185**	P		**Pn**	**08 44 10.1**	**-0.2**
DRAG				S		**Sn**	**08 44 27.2**	**+2.5**
comp=E,29μm,0.4s								
EVGI	**Lefkada island**	**1.11**	**181**	P		**Pn**	**08 44 12.2**	**+1.1**
EVGI				S		**Sn**	**08 44 27.6**	**+1.5**
comp=E,3μm,0.2s								
EVGI	**Lefkada island**	**1.11**	**181**	P		**Pn**	**08 44 11.9**	**+0.8**
EVR	**Evrytania**	**1.20**	**133**	P		**Pg**	**08 44 12.9**	**-0.3**
TYRN	**Tyrnavos**	**1.20**	**91**	P		**Pb**	**08 44 12.1**	**-0.3**
TYRN				S		**Sn**	**08 44 30.7**	**+2.5**
comp=E,5μm,0.5s								
FSK	**Fiskardo**	**1.28**	**184**	P		**Pg**	**08 44 15.0**	**+0.3**
FSK				S		**Sn**	**08 44 33.2**	**+3.0**
comp=E,2μm,0.3s								
FSK	**Fiskardo**	**1.28**	**184**	P		**Pg**	**08 44 15.2**	**+0.5**
FSK				S		**Sn**	**08 44 33.1**	**+3.0**
FSK				AML		AML	08 44 35.5	
comp=N,4158μm,0.3s								
FSK				AML		AML	08 44 38.5	
comp=E,5740μm,0.2s								
PVO	**Paravola**	**1.29**	**149**	P		**Pg**	**08 44 15.7**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.33**	**122**	P		**Pg**	**08 44 15.9**	**+0.1**
OHR	**Ohrid**	**1.38**	**4**	*e*Pg		**Pg**	**08 44 17.0**	**+0.4**
OHR				*e*Sg		**Sg**	**08 44 37.4**	**+2.8**
OHR	**Ohrid**	**1.38**	**4**	*i* Pn		**Pg**	**08 44 16.8**	**+0.2**
LIT	**Litokhoron**	**1.44**	**75**	P		**Pb**	**08 44 16.4**	**-0.2**
LIT	**Litokhoron**	**1.44**	**75**	P		**Pb**	**08 44 16.5**	**-0.1**
KEF4	**Livadi, Kephal**	**1.49**	**188**	P		**Pg**	**08 44 17.9**	**-0.8**
KEF4	**Livadi, Kephal**	**1.49**	**188**	P		**Pg**	**08 44 18.4**	**-0.3**
DMLN	**Damoulianata-K**	**1.51**	**189**	P		**Pg**	**08 44 18.4**	**-0.8**
VLS	**Valsamata**	**1.56**	**183**	P		**Pb**	**08 44 18.3**	**-0.3**
VLS	**Valsamata**	**1.56**	**183**	P		**Pb**	**08 44 18.8**	**-1.1**
EFP	**Efpalio**	**1.62**	**143**	P		**Pg**	**08 44 21.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**1.62**	**183**	P		**Pb**	**08 44 19.2**	**-0.4**
PSDA	**Pessada-Kefalo**	**1.62**	**183**	P		**Pg**	**08 44 19.8**	**-1.4**
SERG	**Sergoula**	**1.70**	**140**	P		**Pg**	**08 44 22.2**	**-0.5**
TIR	**Tirane**	**1.73**	**339**	*e*Pn		**Pb**	**08 44 21.9**	**+0.4**
TIR				*e*Sn		**Sg**	**08 44 45.8**	**+0.1**
SCTE	**Santa Cesarea**	**1.74**	**282**	P		**Pn**	**08 44 20.1**	**+0.5**
RLS	**Riolos of Patr**	**1.78**	**160**	P		**Pg**	**08 44 23.2**	**-1.1**
GRG	**Griva**	**1.79**	**47**	P		**Pn**	**08 44 21.4**	**+0.9**
LAKA	**Lakka**	**1.80**	**145**	P		**Pg**	**08 44 23.8**	**-0.9**
AXAR	**Agios Charalam**	**1.81**	**122**	P		**Pg**	**08 44 23.7**	**-1.2**
DRO	**Drossia**	**1.95**	**155**	P		**Pg**	**08 44 26.0**	**-1.6**
THE	**Thessaloniki**	**1.97**	**62**	P		**Pn**	**08 44 23.8**	**+1.0**
XOR	**Xorichti**	**1.98**	**100**	P		**Pb**	**08 44 25.1**	**-0.6**
KLV	**Kalavryta, Ach**	**2.04**	**145**	P		**Pb**	**08 44 27.2**	**+0.4**
HORT	**Hortiatis**	**2.04**	**64**	P		**Pn**	**08 44 25.0**	**+1.0**
LKR	**Lokris**	**2.10**	**120**	P		**Pb**	**08 44 26.9**	**-0.9**
VAY	**Valandovo**	**2.14**	**42**	*e*Pn		**Pn**	**08 44 26.6**	**+1.3**
VAY				*e*Sn		**Sb**	**08 44 53.9**	**-1.0**
VAY	**Valandovo**	**2.14**	**42**	*i* Pn		**Pn**	**08 44 26.4**	**+1.1**
KNT	**Kendrikon**	**2.21**	**49**	P		**Pn**	**08 44 27.2**	**+0.9**
STIP	**Stip**	**2.27**	**30**	*i* Pn		**Pb**	**08 44 30.4**	**-0.4**
SKO	**Skopje**	**2.31**	**14**	*e*Pn		**Pb**	**08 44 30.0**	**-1.4**
SKO				*e*Sn		**Sn**	**08 44 57.7**	**+2.0**
SKO	**Skopje**	**2.31**	**14**	*i* Pn		**Pb**	**08 44 30.2**	**-1.3**
SOH	**Sokhos**	**2.32**	**61**	P		**Pn**	**08 44 29.4**	**+1.7**
LOUT	**Loutraki**	**2.50**	**134**	P		**Pb**	**08 44 32.4**	**-2.3**
VIL2	**Platees**	**2.52**	**126**	P		**Pb**	**08 44 33.9**	**-1.2**
OUR	**Ouranopolis**	**2.60**	**76**	P		**Pn**	**08 44 33.2**	**+1.6**
SRS	**Serrai**	**2.62**	**57**	*e*Pn		**Pn**	**08 44 33.4**	**+1.6**
SRS				*e*Sn		**Sn**	**08 45 05.1**	**+1.8**
KKB	**Krupnik**	**2.81**	**40**	*e*P		**Pn**	**08 44 36.9**	**+2.5**
MMB	**Musomiste**	**2.97**	**50**	*e*P		**Pb**	**08 44 41.0**	**-1.7**
ATHU	**Athens Univers**	**3.00**	**125**	P		**Pb**	**08 44 39.9**	**-3.3**
BARS	**Barje**	**3.20**	**15**	*e*Pn		**Pb**	**08 44 42.0**	**+2.2**
VTS	**Vitosha**	**3.47**	**33**	P		**Pn**	**08 44 46.8**	**+3.2**
SELS	**Selova**	**3.50**	**5**	*e*Pn		**Pn**	**08 44 45.7**	**+1.8**
SJES	**Sjenica**	**3.56**	**352**	*e*Pn		**Pn**	**08 44 47.4**	**+2.5**
RZN	**Rozhen**	**3.63**	**56**	*e*P		**Pn**	**08 44 49.8**	**+3.8**
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn		**Pn**	**08 44 51.6**	**+3.1**
BOVS	**Bovan**	**3.97**	**11**	*e*Pn		**Pn**	**08 44 51.4**	**+1.0**
BOVS				*e*Sn		**Sn**	**08 45 37.0**	**+0.3**
GRUS	**Gruza**	**4.15**	**0**	*e*Pn		**Pn**	**08 44 54.6**	**+1.7**
BBLS	**Lazići**	**4.24**	**347**	*e*Pn		**Pn**	**08 44 55.8**	**+1.7**
ZAGS	**Zajecar**	**4.24**	**15**	*e*Pn		**Pn**	**08 44 55.6**	**+1.5**
DIVS	**Divibare**	**4.39**	**354**	*e*Pn		**Pn**	**08 44 57.5**	**+1.2**
TRUS	**Trudelj**	**4.49**	**357**	*e*Pn		**Pn**	**08 44 59.0**	**+1.4**
KUBS	**Kucevo**	**4.73**	**9**	*e*Pn		**Pn**	**08 45 00.8**	**-0.1**
TEKS	**Tekeris**	**4.89**	**350**	*e*Pn		**Pn**	**08 45 01.9**	**-1.1**
VAE	**Valguarnera**	**5.40**	**247**	S		**Sn**	**08 46 13.1**	**+1.0**
comp=E,7.5nm,0.4s,baz=195,slow=14,SNR=2.3								
FRGS	**Fruska Gora**	**5.46**	**354**	*e*Pn		**Pn**	**08 45 11.4**	**+0.5**
IDI	**Anoyia**	**5.56**	**142**	P		**Pn**	**08 45 14.3**	**+2.0**
comp=E,0.1nm,0.3s,baz=113,slow=18,SNR=1.1								
IDI				S		**Sn**	**08 46 16.8**	**+0.9**
comp=E,6.6nm,0.3s,baz=131,slow=21,SNR=6.5								
comp=E,3.0nm,0.3s								
MLR	**Muntele Rosu**	**6.94**	**32**	P		**Pn**	**08 45 35.0**	**+3.7**
comp=E,10nm,1.1s,baz=258,slow=6.1,SNR=1.5								
MLR				S		**Sn**	**08 46 50.0**	**0.0**
comp=E,1.2nm,0.5s,baz=301,slow=23,SNR=0.6								
SOKA	**Soboth**	**8.07**	**331**	*e*Pn		**Pn**	**08 45 45.8**	**-0.9**
comp=E,3.6nm,0.4s								
OBKA	**Obir**	**8.12**	**329**	*e*Pn		**Pn**	**08 45 47.1**	**-0.3**
comp=E,2.0nm,0.3s								
ARSA	**Arzberg**	**8.39**	**335**	*e*Pn		**Pn**	**08 45 49.4**	**-1.7**
comp=E,1.2nm,0.3s								
KBA	**Koelnbreinsper**	**9.07**	**326**	*e*Pn		**Pn**	**08 45 59.9**	**-0.7**
comp=E,1.7nm,0.3s								
ABTA	**Abfaltersbach**	**9.20**	**322**	*e*Pn		**Pn**	**08 46 00.9**	**-1.3**
comp=E,1.0nm,0.2s								
MOA	**Molln**	**9.34**	**332**	*e*Pn		**Pn**	**08 46 04.4**	**+0.3**
comp=E,1.6nm,0.2s								
WTTA	**Wattenberg**	**9.98**	**322**	*e*Pn		**Pn**	**08 46 12.4**	**-0.7**
comp=E,2.0nm,0.2s								
VRAC	**Vranov**	**10.01**	**344**	P		**Pn**	**08 46 14.2**	**+1.0**
comp=E,0.1nm,0.3s,baz=74,slow=5.5,SNR=1.4								
comp=E,1.1nm,0.5s								
WATA	**Walderalm**	**10.06**	**322**	*e*Pn		**Pn**	**08 46 13.7**	**-0.4**
comp=E,2.6nm,0.3s								
SQTA	**Sankt Quirin**	**10.16**	**321**	*e*Pn		**Pn**	**08 46 14.6**	**-0.9**
comp=E,1.9nm,0.2s								
GERES	**GERESS Array B**	**10.39**	**334**	P		**Pn**	**08 46 19.3**	**+0.8**
comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=1.3								
comp=E,0.3nm,0.3s								
HFS	**Hagfors**	**20.89**	**350**	P		**P**	**08 48 30.1**	**-1.3**
comp=E,4.6nm,0.8s,baz=167,slow=11,SNR=7.5								
comp=E,4.6nm,0.8s								
FINES	**FINESS Array B**	**21.99**	**7**	P		**P**	**08 48 42.1**	**-1.1**
comp=E,1.1nm,0.3s,baz=180,slow=11,SNR=12								
comp=E,1.1nm,0.3s								
NOA	**NORSAR Array B**	**22.12**	**348**	P		**P**	**08 48 43.9**	**-0.9**
comp=E,0.4nm,0.5s,baz=165,slow=11,SNR=4.9								
comp=E,0.4nm,0.5s								
EKA	**Eskdalemuir Ar**	**22.25**	**322**	P		**P**	**08 48 45.5**	**-0.7**
comp=E,1.3nm,0.6s,baz=118,slow=10,SNR=4.4								
comp=E,1.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**31.33**	**218**	P		**P**	**08 50 10.3**	**+0.3**
comp=E,0.8nm,0.7s,baz=23,slow=9.0,SNR=2.8								
comp=E,0.8nm,0.7s								
MKAR	**Makanchi Array**	**44.40**	**60**	P		**P**	**08 51 59.4**	**-0.6**
comp=E,1.5nm,0.4s,baz=284,slow=7.4,SNR=13								
comp=E,1.5nm,0.4s								
ZALV	**Zalesovo Beam**	**44.57**	**49**	P		**P**	**08 52 00.2**	**-0.9**
comp=E,0.7nm,0.3s,baz=284,slow=9.2,SNR=3.2								
comp=E,0.7nm,0.3s								

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*IDC **16** 09:03:18.3±0.5,24.˚12S×64.˚24W,h0km,mb4.5/11, mbtmp4.5/18,ML4.2/7,MS3.9/25,Error ellipse: s-maj=16.5km s-min=13.3km az=47.0*
*SJA **16** 09:03:19.6±0.8,24.˚21S×64.˚44W,h13km±5km,ML4.8, MW4.8*
*NEIC **16** 09:03:21.3±1.8,24.˚19S±0.˚07×64.˚31W±0.˚07,h18km±5km, Error ellipse: s-maj=9.9km s-min=9.4km az=55.0*
*VAO **16** 09:03:22.3±0.2,23.˚99S×64.˚17W,h10km,mb4.7*
ISC 16 09:03:19.8±0.3,**24.˚15S**±0.˚03×**64.˚37W**±0.˚04,**h10**km,**n141**, σ1$**25**/127,**mb4.8**/17,**MS4.0**/22,**1D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASTB	**Santa Barbara**	**0.22**	**340**	*e*P		**Pg**	**09 03 25.6**	**+1.2**
ALOL	**LOMAS DE OLMED**	**0.49**	**47**	*e*P		**Pb**	**09 03 31.0**	**+0.4**
AZAP	**Zapla**	**0.64**	**264**	*e*P		**Pg**	**09 03 32.0**	**-0.2**
AZAP				*e*S		**Sg**	**09 03 40.0**	**-0.6**
AZAP				IAML			09 03 47.9	
comp=Z,45μm,0.5s								
SLA	**San Lorenzo**	**1.18**	**241**	*e*P		**Pb**	**09 03 42.0**	**-0.3**
SLA				IAML			09 04 03.0	
comp=Z,20μm,0.7s								
HJA	**Humahuaca**	**1.34**	**315**	*e*P		**Pg**	**09 03 46.0**	**+0.5**
HJA				IAML			09 04 08.1	
comp=Z,21μm,0.6s								
YJA	**Yavi**	**2.23**	**332**	*e*P		**Pb**	**09 03 59.9**	**-0.6**
YJA				*e*S		**Sb**	**09 04 29.9**	**+1.5**
YJA				IAML			09 04 34.8	
comp=Z,4μm,0.4s								
AF01	**San Pedro de A**	**3.69**	**288**			**Pn**	**09 04 18.9**	**+1.6**
LVC	**Limon Verde**	**4.44**	**289**	Pn		**Pn**	**09 04 30.6**	**+3.0**
comp=Z,6.2nm,0.3s,baz=110,slow=6.2,SNR=18								
comp=Z,18nm,0.4s								
LVC	**Limon Verde**	**4.44**	**289**	Pn		**Pn**	**09 04 29.8**	**+2.2**
LVC	**Limon Verde**	**4.44**	**289**	*e*P		**Pn**	**09 04 31.1**	**+3.4**
CYA	**Choya**	**4.46**	**196**	*e*P		**Pn**	**09 04 28.5**	**+0.9**
CYA				*e*S		**Sb**	**09 05 34.4**	**+2.2**
CYA				IAML			09 05 44.9	
comp=Z,2μm,0.5s								
PB15	**IPOC Station P**	**4.77**	**280**			**Pn**	**09 04 33.6**	**+1.6**
GO02	**Mina Guanaco**	**4.85**	**257**	Pn		**Pn**	**09 04 36.0**	**+2.8**
PB06	**IPOC Station P**	**4.99**	**286**	Pn		**Pn**	**09 04 37.3**	**+2.4**
AC02	**Maricunga**	**5.06**	**237**	Pn		**Pn**	**09 04 37.5**	**+1.2**
AC01	**Pan de Azucar**	**5.98**	**249**	Pn		**Pn**	**09 04 47.6**	**-0.8**
PATCX	**Punta Patache**	**6.29**	**301**			**Pn**	**09 04 51.4**	**-1.3**
GO01	**Chusmiza**	**6.32**	**314**	Pn		**Pn**	**09 04 53.0**	**-0.5**
TA01	**Diego Aracena**	**6.45**	**302**	Pn		**Pn**	**09 04 55.0**	**+0.1**
CPUP	**Villa Florida**	**6.74**	**110**	Pn		**Pn**	**09 04 58.4**	**-0.4**
comp=Z,3.8nm,0.3s,baz=286,slow=12,SNR=62								
CPUP				Lg		Lg	09 06 50.8	
comp=Z,66nm,0.3s,baz=198,slow=19,SNR=3.4								
comp=Z,60nm,0.7s								
CPUP	**Villa Florida**	**6.74**	**110**	Pn		**Pn**	**09 04 57.9**	**-0.9**
CPUP	**Villa Florida**	**6.74**	**110**	*e*P		**Pn**	**09 04 59.0**	**+0.2**
LCO	**Las Campanas**	**7.45**	**228**	Pn		**Pn**	**09 05 08.0**	**-0.8**
LPAZ	**La Paz**	**8.58**	**335**	Pn		**Pn**	**09 05 25.9**	**+1.2**
comp=Z,2.0nm,0.3s,baz=126,slow=10,SNR=56								
LPAZ				Sn		**Sn**	**09 06 59.5**	**-2.5**
comp=Z,1.0nm,0.3s,baz=133,slow=19,SNR=3.5								
LPAZ				LR		LR	09 09 19.8	
comp=Z,831nm,20.6s,baz=160,slow=42								
comp=Z,3.7nm,0.3s								
LPAZ	**La Paz**	**8.58**	**335**	Pn		**Pn**	**09 05 24.5**	**-0.2**
LPAZ	**La Paz**	**8.58**	**335**	*e*P		**Pn**	**09 05 26.5**	**+1.8**
SIV	**San Ignacio**	**8.69**	**21**	Pn		**Pn**	**09 05 24.8**	**-0.9**
comp=Z,0.5nm,0.3s,baz=207,slow=13,SNR=193								
SIV				Sn		**Sn**	**09 07 02.4**	**-1.5**
comp=Z,1.1nm,0.3s,baz=107,slow=20,SNR=1.6								
SIV				Lg		Lg	09 07 51.6	
comp=Z,1.4nm,0.3s,baz=109,slow=22,SNR=3.1								
comp=Z,18nm,0.6s								
AQDB	**Aquidauana**	**8.82**	**67**	Pn		**Pn**	**09 05 27.1**	**-0.3**
AQDB	**Aquidauana**	**8.82**	**67**	*e*P		**Pn**	**09 05 26.9**	**-0.6**
ITQB	**Itaqui**	**8.83**	**130**	Pn		**Pn**	**09 05 27.3**	**-0.2**
ITQB	**Itaqui**	**8.83**	**130**	*e*P		**Pn**	**09 05 28.9**	**+1.3**
PTLB	**Pontes e Lacer**	**9.96**	**31**	*e*P		**Pn**	**09 05 42.2**	**-0.8**
TRCB	**Terra Rica**	**10.86**	**85**			**Pn**	**09 05 53.1**	**-2.3**
TRCB	**Terra Rica**	**10.86**	**85**	*e*P		**Pn**	**09 05 54.4**	**-1.0**
LMEL	**Las Melosas**	**10.92**	**207**			**Pn**	**09 05 54.5**	**-1.9**
PTGB	**Pitanga**	**11.23**	**95**	*e*P		**Pn**	**09 06 00.1**	**-0.4**
ITAB	**Concordia**	**11.46**	**108**			**Pn**	**09 06 03.1**	**-0.4**
ITAB	**Concordia**	**11.46**	**108**	*e*P		**Pn**	**09 06 06.0**	**+2.5**
SALV	**Santo Antonio**	**11.57**	**46**	*e*P		**Pn**	**09 06 02.3**	**-2.8**
VILB	**Vilhena**	**11.82**	**20**	*e*P		**Pn**	**09 06 08.2**	**-0.4**
LPA	**La Plata**	**12.09**	**154**	*de*P		**Pn**	**09 06 07.9**	**-4.2**
LPA				PPP		PPP	09 06 54.6	
LPA				S		**Sn**	**09 08 27.1**	**0.0**
LPA				SSS		SSS	09 09 35.5	
PLTB	**Pedras Altas**	**12.16**	**131**	*e*P		**Pn**	**09 06 14.7**	**+1.5**
PCMB	**Pacaembu**	**12.35**	**81**	*e*P		**Pn**	**09 06 14.9**	**-0.9**
CNLB	**Canela**	**13.13**	**116**	*e*P		**Pn**	**09 06 25.9**	**-0.5**
FRTB	**Fartura**	**13.59**	**90**	*e*P		**Pn**	**09 06 33.3**	**+0.6**
TIJ01	**Guaruva-PR**	**14.01**	**98**	*e*P		**Pn**	**09 06 39.6**	**+1.0**
TER01	**Tubaro-SC**	**14.34**	**111**	*e*P		**Pn**	**09 06 42.6**	**-0.4**
BB19B	**Bebedouro**	**14.95**	**81**	*e*P		**Pn**	**09 06 50.8**	**-0.5**
RCLB	**Rio Claro- Sao**	**15.57**	**87**	*e*P		**Pn**	**09 06 59.5**	**-0.1**
PET01	**Itanhaem-SP**	**15.60**	**94**	*e*P		**Pn**	**09 07 00.3**	**+0.4**
IPMB	**Ipameri, GO**	**16.28**	**71**	*e*P		**Pn**	**09 07 08.9**	**+0.2**
NNA	**Nana**	**16.92**	**313**	Pn		**P**	**09 07 19.7**	**+0.8**
comp=Z,0.8nm,0.3s,baz=169,slow=15,SNR=2.4								
NNA				LR		LR	09 14 00.8	
comp=Z,272nm,21.8s,baz=126,slow=38								
comp=Z,13nm,0.9s								
PARB	**Paraibuna**	**17.19**	**91**	*e*P		**Pn**	**09 07 20.3**	**+0.1**
PLCA	**Paso Flores**	**17.33**	**196**	P		**P**	**09 07 23.7**	**+0.5**
com

comp=Z,35nm,19.3s,baz=122,slow=38
SDCO Great Sand Dun 72.70 327 P **P 09 14 48.8 +0.5**
SDCO IAmb IAmb 09 14 50.5
comp=Z,12nm,0.9s
TOA0 Torodi Ar. St 74.39 68 P **P 09 14 57.6 -0.8**
TOA0 IAmb IAmb 09 15 05.5
comp=Z,21nm,0.8s
TORD Torodi Ar. Bea 74.39 68 P **P 09 14 57.7 -0.7**
comp=Z,19nm,0.9s,baz=252,slow=5.6,SNR=63
comp=Z,19nm,0.9s
TORD Torodi Ar. Bea 74.39 68 P **P 09 14 57.4 -1.0**
TORD IAmb IAmb 09 14 58.9
comp=Z,23nm,0.9s
VNDA Vanda 74.95 189 P **P 09 15 01.9 +1.3**
comp=Z,0.6nm,0.9s,baz=132,slow=5.3,SNR=2.8
comp=Z,0.6nm,0.9s
BOSA Boshof 78.52 116 P **P 09 15 20.8 -1.0**
comp=Z,7.6nm,1.0s,baz=243,slow=5.7,SNR=6.4
BOSA LR LR 09 47 47.9
comp=Z,41nm,18.0s,baz=200,slow=34
comp=Z,7.6nm,1.0s
PDAR Pinedale Array 78.53 328 P **P 09 15 21.6 0.0**
comp=Z,2.8nm,0.9s,baz=154,slow=7.6,SNR=17
comp=Z,2.8nm,0.9s
PPT Papeete 78.76 256 LR LR 09 43 01.1
comp=Z,47nm,21.4s,baz=94,slow=30
ULM Lac du Bonnet 79.16 340 LR LR 09 54 52.4
comp=Z,56nm,18.9s,baz=98,slow=39
NVAR Mina Array Bea 80.18 320 P **P 09 15 31.6 +0.9**
comp=Z,7.5nm,1.1s,baz=146,slow=6.1,SNR=25
comp=Z,7.5nm,1.1s
ESDC Sonseca Array 84.87 42 P **P 09 15 55.0 +0.1**
comp=Z,5.6nm,1.1s,baz=237,slow=4.7,SNR=18
comp=Z,5.6nm,1.1s
NEW Newport 86.17 328 LR LR 10 02 00.8
comp=Z,52nm,18.1s,baz=104,slow=41
RAR Rarotonga 86.21 249 LR LR 09 46 57.2
comp=Z,91nm,18.0s,baz=224,slow=30
KEST Kesra 91.62 51 LR LR 09 57 01.9
comp=Z,196nm,20.9s,baz=237,slow=35
BBB Bella Bella 94.12 326 LR LR 10 07 08.8
comp=Z,42nm,18.1s,baz=100,slow=41
MBAR Mbarara 94.42 93 LR LR 09 58 23.1
comp=Z,80nm,18.4s,baz=119,slow=35
BORG Borgarnes 94.66 17 LR LR 09 57 46.4
comp=Z,53nm,18.4s,baz=210,slow=35
URZ Urewera 95.30 224 LR LR 09 52 35.2
comp=Z,79nm,18.2s,baz=236,slow=31
DAVOX Davos/Dischmat 97.19 42 LR LR 09 58 44.1
comp=Z,122nm,20.3s,baz=260,slow=34
DLBC Dease Lake 98.51 331 LR LR 10 05 20.1
comp=Z,40nm,22.0s,baz=96,slow=38
ASAR Alice Springs 129.26 202 PKP **PKPdf 09 22 28.9 -0.2**
comp=Z,2.3nm,0.7s,baz=138,slow=2.1,SNR=29
WRA Warramunga Arr 132.53 204 PKP **PKPdf 09 22 34.8 -0.6**
comp=Z,1.5nm,0.6s,baz=163,slow=1.8,SNR=27
SEY Seymchan 134.16 338 PKP **PKPdf 09 22 37.4 +0.3**
comp=Z,0.4nm,0.3s,baz=101,slow=12,SNR=4.3
ZALV Zalesovo Beam 142.37 30 PKP **PKPdf 09 22 52.6 +0.2**
comp=Z,0.9nm,0.5s,baz=298,slow=3.2,SNR=4.1
KSH Kashi 143.31 56 PKP PKPab 09 22 51.1 +0.5
HYBB Hyderabad (bro 144.77 94 ePKiKP **PKiKP 09 23 00.8 -0.7**
MKAR Makanchi Array 145.08 41 PKP **PKPbc 09 22 56.7 -0.2**
comp=Z,8.6nm,0.9s,baz=316,slow=3.3,SNR=37
SIJI Sorong 150.86 214 PKPbc **PKPbc 09 23 13.6 +0.1**
comp=Z,14nm,0.7s,baz=117,slow=9.0,SNR=6.9
KLR Kul'dur 151.95 337 PKPbc **PKPbc 09 23 14.7 -0.3**
comp=Z,1.3nm,0.7s,baz=83,slow=2.8,SNR=5.3
SONM Songino Array 155.25 15 PKPab **PKPab 09 23 37.2 -1.2**
comp=Z,0.6nm,0.4s,baz=314,slow=4.1,SNR=3.1
KSRS Korea Array 163.07 324 PKPab **PKPab 09 24 13.2 +0.8**
comp=Z,1.3nm,0.9s,baz=59,slow=3.3,SNR=3.4
CMAR Chiang Mai Arr 163.46 107 PKPab **PKPab 09 24 14.4 -0.4**
comp=Z,1.9nm,0.7s,baz=250,slow=5.1,SNR=7.6

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*IDC **16** 09:21:12.5±3.1, 4°.26S×152°.75E, h34km±22km, mb3.9/9, mbtmp4.1/10, ML3.8/1, MS3.5/9, Error ellipse: s-maj=30.3km s-min=19.7km az=103.0*
*NEIC **16** 09:21:13.8±2.3, 4°.19S±0°.06×152°.89E±0°.09, h49km±10km, mb4.5/23, Error ellipse: s-maj=13.3km s-min=8.6km az=85.0*
ISC 16 09:21:12.5±0.6, **4°.18S**±0°.08×**152°.82E**±0°.09, **h35**km, **n59, σ1°39/58, mb4.3/20, MS3.5/6, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.66**	**269**	Pn	**Pn**	**09 21 25.3**	**0.0**
MANU	**Manus Island**	**5.84**	**291**	Pn	Pn	09 22 41.9	+5.2
PMG	**Port Moresby**	**7.65**	**227**	Pn	**Pn**	**09 23 04.8**	**+3.3**
	3.5nm,0.3s,baz=55,slow=7.3,SNR=7.9						
PMG				Sn	**Sn**	**09 24 27.8**	**+0.7**
	2.9nm,0.3s,baz=154,slow=18,SNR=2.3						
PMG	**Port Moresby**	**7.65**	**227**	Pn	**Pn**	**09 23 05.5**	**+3.9**
PMG	**Port Moresby**	**7.65**	**227**	P	**Pn**	**09 23 05.6**	**+4.1**
HNR	**Honiara**	**8.79**	**127**	LR	LR	09 26 54.6	
	comp=Z,2μm,19.1s,baz=301,slow=39						
PATS	**Pohnpei**	**12.24**	**27**		**Pn**	**09 24 05.6**	**+1.2**
MTSU	**Mount Surprise**	**16.18**	**210**	P	**P**	**09 25 01.5**	**+1.4**
CTA	**Charters Tower**	**17.06**	**201**	Pn	**P**	**09 25 09.1**	**-0.8**
	0.2nm,0.3s,baz=15,slow=12,SNR=1.8						
CTA				LR	LR	09 31 03.7	
	comp=Z,57nm,20.6s,baz=77,slow=35						
	2.1nm,0.7s						
CTAO	**Charters Tower**	**17.06**	**201**	P	**P**	**09 25 09.2**	**-0.6**
GUMO	**Guam**	**19.34**	**336**	LR	LR	09 32 32.0	
	comp=Z,30nm,19.9s,baz=161,slow=35						
KOUNC	**Koumac, New Ca**	**19.73**	**147**	P	**P**	**09 25 36.6**	**-2.7**
QIS	**Mount Isa**	**20.75**	**217**	P	**P**	**09 25 50.9**	**+0.5**
EIDS	**Eidsvold**	**21.14**	**184**	P	**P**	**09 25 55.0**	**+0.5**
EIDS				IAmb	IAmb	09 25 59.1	
	comp=Z,12nm,0.8s						
SIJI	**Sorong**	**21.78**	**278**	LR	LR	09 33 24.5	
	comp=Z,92nm,21.8s,baz=74,slow=34						
DZM	**Mont Dzumac**	**22.15**	**145**	P	**P**	**09 26 04.7**	**-0.8**
	comp=Z,3.7nm,0.4s,baz=345,slow=17,SNR=10						
DZM				LR	LR	09 34 22.6	
	comp=Z,89nm,19.4s,baz=24,slow=36						
	comp=Z,3.7nm,0.4s						
DZM	**Mont Dzumac**	**22.15**	**145**	P	**P**	**09 26 05.0**	**-0.5**
DZM				IAmb	IAmb	09 26 17.4	
	comp=Z,25nm,1.1s						
DZM	**Mont Dzumac**	**22.15**	**145**	P	**P**	**09 26 05.5**	**0.0**
WB0	**Warramunga Arr**	**23.72**	**228**	P	**P**	**09 26 20.9**	**-0.6**
WB0				IAmb	IAmb	09 26 28.3	
	comp=Z,7.3nm,0.8s						
WR0	**Warramunga Arr**	**23.73**	**227**	P	**P**	**09 26 21.5**	**-0.1**
WR0				IAmb	IAmb	09 26 38.4	
	comp=Z,7.8nm,0.9s						
WRAB	**Tennant Creek**	**23.86**	**227**	P	**P**	**09 26 21.6**	**-1.2**
WRAB				IAmb	IAmb	09 26 30.3	
	comp=Z,31nm,1.5s						
WRAB	**Tennant Creek**	**23.86**	**227**	P	**P**	**09 26 21.8**	**-1.0**
WB2	**Warramunga Arr**	**23.86**	**227**	P	**P**	**09 26 22.1**	**-0.7**
WB2				IAmb	IAmb	09 26 29.3	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**23.87**	**227**	P	**P**	**09 26 21.7**	**-1.3**
	comp=Z,4.6nm,0.5s,baz=55,slow=10,SNR=76						
WRA				PcP	**PcP**	**09 30 05.1**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=54,slow=2.6,SNR=2.3						
WRA				S	**S**	**09 30 32.6**	**-4.3**
	comp=Z,0.6nm,0.7s,baz=52,slow=15,SNR=3.1						
WRA				ScP	**ScP**	**09 33 40.9**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=49,slow=2.5,SNR=5.5						
	comp=Z,4.6nm,0.5s						
WRA	**Warramunga Arr**	**23.87**	**227**	P	**P**	**09 26 22.0**	**-1.0**
ARMA	**Armidale**	**26.12**	**182**	P	**P**	**09 26 44.4**	**+1.0**
ARMA				IAmb	IAmb	09 27 03.5	
	comp=Z,21nm,1.4s						
KNRA	**Kununurra**	**26.27**	**243**	P	**P**	**09 26 45.6**	**+0.8**
KNRA				IAmb	IAmb	09 26 53.0	
	comp=Z,17nm,0.6s						
KNRA	**Kununurra**	**26.27**	**243**	P	**P**	**09 26 46.2**	**+1.4**
AS01	**Alice Springs**	**26.59**	**221**	P	**P**	**09 26 47.3**	**-0.4**
AS31	**Alice Springs**	**26.62**	**222**	P	**P**	**09 26 47.2**	**-0.8**
ASAR	**Alice Springs**	**26.62**	**222**	P	**P**	**09 26 46.9**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=56,slow=9.1,SNR=20						
ASAR				PcP	**PcP**	**09 30 12.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=57,slow=3.4,SNR=3.1						
ASAR				ScP	**ScP**	**09 33 48.4**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=58,slow=3.6,SNR=7.1						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**26.62**	**222**	P	**P**	**09 26 46.3**	**-1.6**
STKA	**Stephens Creek**	**29.50**	**200**	P	**P**	**09 27 12.3**	**-1.2**
	comp=Z,1.7nm,0.5s,baz=37,slow=12,SNR=5.5						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**29.50**	**200**	P	**P**	**09 27 12.4**	**-1.1**
STKA	**Stephens Creek**	**29.50**	**200**	P	**P**	**09 27 14.6**	**+1.1**
	comp=Z,1.5nm,2.2s						
WRKA	**Warakurna**	**31.40**	**226**	P	**P**	**09 27 29.9**	**-0.5**
MULG	**Mulgathing**	**31.43**	**212**	P	**P**	**09 27 30.0**	**-0.6**
FORT	**Forrest**	**35.28**	**219**	P	**P**	**09 28 03.1**	**-1.0**
MBWA	**Marble Bar**	**36.30**	**239**	P	**P**	**09 28 11.7**	**-1.3**
TAU	**Tasmania Unive**	**38.88**	**186**	P	**P**	**09 28 35.1**	**+0.7**
BKZ	**Black Stump Fm**	**40.92**	**152**	P	**P**	**09 28 51.6**	**0.0**
BKZ				IAmb	IAmb	09 28 54.0	
	comp=Z,27nm,1.4s						
TUWZ	**Tuamarina**	**41.64**	**156**	P	**P**	**09 28 57.6**	**+0.2**
LTZ	**Lake Taylor**	**42.15**	**159**	P	**P**	**09 29 02.0**	**+0.4**
LTZ				IAmb	IAmb	09 29 33.1	
	comp=Z,25nm,1.2s						
KHZ	**Kahutara**	**42.31**	**157**	P	**P**	**09 29 01.6**	**-1.2**
RPZ	**Rata Peaks**	**42.55**	**160**	P	**P**	**09 29 05.2**	**+0.4**
	comp=Z,11nm,1.0s,baz=346,slow=8.3,SNR=2.5						
	comp=Z,11nm,1.0s						
MORW	**Morawa**	**42.75**	**231**	P	**P**	**09 29 05.0**	**-1.7**
PETK	**Petropavlovsk-**	**57.22**	**3**	P	**P**	**09 30 57.6**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=168,slow=7.4,SNR=1.8						
PETK				LR	LR	09 50 39.2	
	comp=Z,12nm,21.1s,baz=81,slow=31						
	comp=Z,1.0nm,0.6s						
CASY	**Casey**	**68.61**	**197**	P	**P**	**09 32 10.9**	**-0.7**
CASY				IAmb	IAmb	09 32 11.9	
	comp=Z,3.7nm,1.2s						
VNDA	**Vanda**	**73.45**	**178**	P	**P**	**09 32 40.8**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=336,slow=7.0,SNR=12						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**73.45**	**178**	P	**P**	**09 32 40.6**	**-0.2**
VNDA				IAmb	IAmb	09 32 53.5	
	comp=Z,2.5nm,0.9s						
ILAR	**Eielson Array**	**81.58**	**22**	P	**P**	**09 33 25.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=245,slow=4.8,SNR=4.4						
	comp=Z,0.5nm,0.8s						
QSPA	**South Pole Qui**	**85.78**	**180**	P	**P**	**09 33 47.8**	**-0.3**
QSPA				IAmb	IAmb	09 34 00.9	
	comp=Z,8.1nm,1.1s						
MAW	**Mawson**	**86.15**	**203**	P	**P**	**09 33 49.3**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=88,slow=7.7,SNR=8.0						
	comp=Z,1.5nm,0.6s						
MAW	**Mawson**	**86.15**	**203**	P	**P**	**09 33 49.7**	**0.0**
INK	**Inuvik**	**87.87**	**21**	LR	LR	10 09 44.2	
	comp=Z,51nm,20.6s,baz=303,slow=33						
ARU	**Arti**	**95.82**	**326**	LR	LR	10 20 03.4	
	comp=Z,40nm,19.4s,baz=290,slow=37						
AKTO	**Aktyubinsk**	**96.26**	**320**	LR	LR	10 19 05.1	
	comp=Z,38nm,20.0s,baz=290,slow=36						
GERES	**GERESS Array B**	**123.54**	**329**	PKP	**PKiKP**	**09 40 07.0**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=57,slow=3.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**150.13**	**289**	PKPbc	**PKPbc**	**09 41 00.4**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=79,slow=2.6,SNR=47						

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*IDC **16** 09:31:35.7±1.5, 37°.13N×140°.68E, h0km, mb3.5/4, mbtmp3.6/6, ML3.1/2, MS2.9/2, Error ellipse: s-maj=28.2km s-min=24.7km az=86.0*
*NIED **16** 09:31:38.5, 37°.09N×140°.59E, h14km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.37; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.39; $M_{r\theta}$1.03; $M_{r\phi}$-0.71; $M_{\theta\phi}$0.46; Fault plane solution: $M_0$1.92000×10^{14} NP1: ϕ_s179.00000°, δ36.00000°, λ48.00000°. NP2:ϕ_s46.00000°, δ64.00000°, λ116.00000°.*
*JMA **16** 09:31:38.5±0.0, 37°.1N±0°.1×140°.6E±0°.2, h14km, MV3.6/20, MID FUKUSHIMA PREF*
JMA Felt II J1 at MID FUKUSHIMA PREF .
ISC 16 09:31:38.1±0.9, **37°.10N**±0°.04×**140°.61E**±0°.04, **h14**km±5km, **n20, σ0°72/21, mb3.4/4, 4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.04**	**253**	*i* P	**Pg**	**09 31 40.9**	**+0.1**
JFFD				S	**Sg**	**09 31 42.4**	**-0.1**
JFK	**Kawauchi**	**0.34**	**39**	P	**Pb**	**09 31 45.7**	**-0.2**
JFK				S	**Sb**	**09 31 50.7**	**-0.4**
JHO	**Hitachi**	**0.49**	**184**	P	**Pb**	**09 31 47.6**	**-0.9**
JHO				S	**Sg**	**09 31 54.2**	**-0.2**
JOTO	**OTAMA OYAMA**	**0.51**	**334**	P	**Pb**	**09 31 48.8**	**0.0**
JOTO				S	**Sb**	**09 31 55.8**	**-0.2**
JSB	**Shiboa**	**0.57**	**256**	⇓P	**Pb**	**09 31 49.7**	**-0.1**
JSB				⇓S	**Sb**	**09 31 57.6**	**-0.2**
JMM	**Marumori**	**0.77**	**11**	P	**Pb**	**09 31 53.0**	**-0.2**
JFY	**Yanaizu**	**0.79**	**293**	⇓P	**Pb**	**09 31 53.2**	**-0.3**
JFY				⇓S	**Sg**	**09 32 03.2**	**-0.4**
MJAR	**Matsushiro Arr**	**2.01**	**255**	Pn	**Pn**	**09 32 12.7**	**+1.2**
	1.8nm,0.3s,baz=75,slow=18,SNR=41						
MJAR				Sn	**Sb**	**09 32 38.8**	**-0.4**
	2.6nm,0.3s,baz=99,slow=24,SNR=4.1						
MJAR				LR	LR	09 32 52.2	
	comp=Z,48nm,18.4s,baz=328,slow=37						
	18nm,0.5s						
JHJ	**Hachijo jima 2**	**4.03**	**190**	Pn	**Pn**	**09 32 40.8**	**+1.4**
	12nm,0.3s,baz=349,slow=18,SNR=2.0						
JHJ				Sn	**Sn**	**09 33 27.2**	**+0.9**
	10.0nm,0.3s,baz=59,slow=23,SNR=2.0						
	158nm,0.7s						
SONM	**Songino Array**	**27.21**	**304**	P	**P**	**09 37 21.7**	**+0.3**
	0.5nm,0.7s,baz=85,slow=8.8,SNR=2.9						
	0.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.74**	**120**	T	T	10 07 26.3	
	baz=313,slow=75,SNR=216						
H11N1	**WAKE ISLAND Hy**	**28.74**	**120**	T	T	10 07 25.8	
	baz=313,slow=75,SNR=262						
H11N3	**WAKE ISLAND Hy**	**28.75**	**120**	T	T	10 07 27.7	
	baz=313,slow=75,SNR=139						
H11S1	**WAKE ISLAND Hy**	**29.44**	**122**	T	T	10 08 19.8	
	baz=314,slow=75,SNR=284						
H11S3	**WAKE ISLAND Hy**	**29.44**	**122**	T	T	10 08 19.9	
	baz=314,slow=75,SNR=221						
H11S2	**WAKE ISLAND Hy**	**29.45**	**122**	T	T	10 08 21.1	
	baz=314,slow=75,SNR=193						
MKAR	**Makanchi Array**	**43.54**	**302**	P	**P**	**09 39 39.8**	**-1.4**
	0.3nm,0.6s,baz=79,slow=7.5,SNR=2.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**57.05**	**187**	P	**P**	**09 41 22.9**	**-0.7**
	0.9nm,0.7s,baz=5.9,slow=7.4,SNR=2.7						
	0.9nm,0.7s						
AFI	**Afiamalu**	**67.67**	**129**	LR	LR	10 05 04.6	
	comp=Z,48nm,21.3s,baz=150,slow=30						
TXAR	**Lajitas Array**	**90.58**	**52**	P	**P**	**09 44 40.8**	**+0.7**
	0.1nm,0.4s,baz=328,slow=3.2,SNR=1.9						
	0.1nm,0.4s						

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*BGR **16** 09:32:35.6±0.9, 42°.53N×13°.52E, h10km, ML4.2/16, Error ellipse: s-maj=18.9km s-min=13.3km az=101.0*
*ROM **16** 09:32:35.5±0.0, 42°.748N±0°.001×13°.176E±0°.002, h9km, ML4.1/137, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.1km az=68.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.24; $M_{\theta\theta}$0.13; $M_{\phi\phi}$1.11; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.26; $M_{r\phi}$0.17; Fault plane solution: $M_0$1.22075×10^{15} NP1:ϕ_s345.00000°, δ41.00000°, λ-92.00000°. NP2:ϕ_s167.00000°, δ49.00000°, λ-88.00000°.*
*IDC **16** 09:32:35.9±0.6, 42°.85N×13°.14E, h0km, mb4.1/19, mbtmp4.1/27, ML3.6/8, MS3.4/31 Error ellipse: s-maj=13.4km s-min=9.7km az=98.0*
*LDG **16** 09:32:36.4±0.2, 42°.74N×13°.11E, h13km, Ml3.4/35, Error ellipse: s-maj=4.7km s-min=2.7km az=3.0*
*MOS **16** 09:32:36.4±1.1, 42°.79N×13°.18E, h13km, mb4.5/19, Error ellipse: s-maj=4.4km s-min=3.0km az=99.7*
*PDG **16** 09:32:37.7±0.8, 42°.69N×13°.20E, h22km±2km, ML4.2/12, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*
*NEIC **16** 09:32:37.2±2.4, 42°.74N±0°.04×13°.08E±0°.06, h10km±1km, mb4.3/9, Error ellipse: s-maj=10.7km s-min=2.9km az=224.0*
*MED_RC **16** 09:32:38.0±0.4, 42°.74N×13°.19E, h11km±1km, MW4.2/20, Moment Tensor Solution. Mantle waves: s20, c26; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.28±.38; $M_{\theta\theta}$-0.49±.22; $M_{\phi\phi}$2.77±.27; $M_{r\theta}$1.12±.52; $M_{\theta\phi}$-0.29±.15; $M_{r\phi}$-0.42±.38; Best double couple: $M_0$2.84000×10^{15} NP1:ϕ_s332.00000°, δ56.00000°, λ-120.00000°. NP2:ϕ_s198.00000°, δ44.00000°, λ-54.00000°. Principal axes: T 2.8500, Plg6.0000°, Azm83.0000°; N -0.0200, Plg25.0000°, Azm350.0000°; P -2.8300, Plg65.0000°, Azm186.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*STR **16** 09:32:38.3±0.8, 43°N±6°×1°3E±°, h9km, MLv4.2/50 Error ellipse: s-maj=0.0km s-min=0.0km az=97.8, preliminary*
*PRU **16** 09:32:38.5±0.0, 42°.90N×13°.21E, h0km, M4.3*
*BEO **16** 09:32:47.4±0.8, 43°.16N×14°.17E, h0km, ML4.2/3*
ISC 16 09:32:37.0±0.7, **42°.75N**±0°.01×**13°.18E**±0°.01, **h6**km±4km, **n605, σ1°53/675, mb4.2/35, MS3.4/23, 74C-19D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.05**	**143**	⇑P	**Pg**	**09 32 37.8**	**-0.8**
T1202				S	**Sg**	**09 32 39.5**	**-0.2**
NRCA	**Norcia**	**0.10**	**331**		**Pg**	**09 32 37.6**	**-1.6**
NRCA	**Norcia**	**0.10**	**331**	⇑P	**Pg**	**09 32 38.2**	**-1.1**
NRCA				S	**Sg**	**09 32 39.9**	**-0.9**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1201	**Domo (RI)**	**0.10**	**150**	⇑P	**Pg**	**09 32 38.8**	**-0.5**
T1201				S	**Sg**	**09 32 41.4**	**+0.6**
T1245	**Castelsantange**	**0.11**	**3**	⇑P	**Pg**	**09 32 38.5**	**-0.9**
T1245				S	**Sg**	**09 32 40.6**	**-0.6**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1204	**Amatrice, Fraz**	**0.12**	**125**	⇑P	**Pg**	**09 32 39.0**	**-0.6**
T1204				S	**Sg**	**09 32 41.4**	**0.0**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
SMA1	**SAN MARTINO**	**0.16**	**135**	⇑P	**Pg**	**09 32 39.9**	**-0.5**
SMA1				S	**Sg**	**09 32 42.8**	**+0.3**
SMA1				AML	AML		
SMA1				AML	AML		
MC2	**Monte Cornacci**	**0.17**	**2**	⇑P	**Pg**	**09 32 39.6**	**-0.9**
MC2				S	**Sg**	**09 32 42.5**	**-0.3**
LNSS	**Leonessa**	**0.18**	**216**	⇑P	**Pg**	**09 32 39.9**	**-0.7**
LNSS				S	**Sg**	**09 32 43.4**	**+0.4**
LNSS				AML	AML		
LNSS				AML	AML		
T1217	**Poggiodomo (PG**	**0.19**	**260**	⇑P	**Pg**	**09 32 40.0**	**-0.8**
T1217				S	**Sg**	**09 32 43.4**	**+0.1**
T1217				AML	AML		
	comp=E,90950μm,0.4s						
T1217				AML	AML		
	comp=N,96100μm,0.5s						
T1217				AML	AML		
	comp=N,95550μm,0.5s						
T1217				AML	AML		
	comp=N,95750μm,0.5s						
T1217				AML	AML		
	comp=E,86100μm,0.4s						
T1217				AML	AML		
	comp=N,95600μm,0.5s						
T1216	**Preci, Frazion**	**0.19**	**321**	⇑P	**Pg**	**09 32 39.9**	**-0.9**
T1216				S	**Sg**	**09 32 42.9**	**-0.4**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1243	**Rocca Santa Ma**	**0.20**	**104**	⇑P	**Pg**	**09 32 40.2**	**-0.9**
T1243				S	**Sg**	**09 32 43.7**	**-0.1**
T1241	**Roccafluvione,**	**0.21**	**59**	⇑P	**Pg**	**09 32 40.4**	**-0.9**
T1241				S	**Sg**	**09 32 44.2**	**0.0**
FEMA	**Monte Fema**	**0.24**	**336**	⇑P	**Pg**	**09 32 40.9**	**-0.8**
FEMA				S	**Sg**	**09 32 44.7**	**-0.2**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,92000μm,1.1s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,92150μm,1.1s						
FEMA				AML	AML		
	comp=N,91950μm,1.1s						
T1215	**Vallo di Nera,**	**0.24**	**284**	⇑P	**Pg**	**09 32 40.8**	**-0.9**
T1215				S	**Sg**	**09 32 44.9**	**+0.1**
T1215				AML	AML		
	comp=E,62950μm,1.3s						
T1215				AML	AML		
	comp=N,56800μm,0.8s						
T1215				AML	AML		
	comp=E,62900μm,1.3s						
T1215				AML	AML		
	comp=N,59850μm,1.5s						
T1215				AML	AML		
	comp=E,67900μm,1.3s						
T1215				AML	AML		
	comp=N,56850μm,0.8s						
T1215				AML	AML		
	comp=E,62900μm,1.3s						
T1215				AML	AML		
	comp=N,59800μm,1.5s						
T1215				AML	AML		
	comp=N,56850μm,0.8s						
T1215				AML	AML		
	comp=E,67950μm,1.3s						
RM33	**Pellescritta (**	**0.24**	**174**	⇓P	**Pg**	**09 32 41.3**	**-0.5**
RM33				S	**Sg**	**09 32 45.2**	**+0.3**
RM33				AML	AML		
	comp=N,95300μm,0.4s						
RM33				AML	AML		
RM33				AML	AML		
	comp=N,93400μm,0.4s						
RM33				AML	AML		
	comp=N,95400μm,0.4s						
RM33				AML	AML		
	comp=N,93300μm,0.4s						
RM33				AML	AML		
	comp=N,93350μm,0.4s						
RM33				AML	AML		
	comp=N,95450μm,0.4s						
RM33				AML	AML		
RM33				AML	AML		
AM05	**Amandola Campo**	**0.26**	**29**	⇑P	**Pg**	**09 32 41.3**	**-0.9**
AM05				S	**Sg**	**09 32 46.0**	**+0.3**
AM05				AML	AML		
	comp=E,19800μm,0.4s						
AM05				AML	AML		
	comp=E,19850μm,0.4s						
AM05				AML	AML		
	comp=E,92250μm,0.9s						
AM05				AML	AML		
	comp=N,70900μm,0.6s						
AM05				AML	AML		
	comp=N,18550μm,1.0s						
CAMP	**Campotosto**	**0.27**	**141**		**Pg**	**09 32 41.4**	**-1.0**
CAMP	**Campotosto**	**0.27**	**141**	⇑P	**Pg**	**09 32 41.6**	**-0.7**
CAMP				S	**Sg**	**09 32 46.0**	**+0.1**
CAMP				AML	AML		
	comp=E,70400μm,0.2s						
CAMP				AML	AML		
T1246	**Crognaleto (TE**	**0.28**	**125**	⇑P	**Pg**	**09 32 41.9**	**-0.7**
T1246				S	**Sg**	**09 32 46.4**	**+0.1**

TERO				AML	AML		
TERO				AML	AML		
	comp=E,49400µm,0.8s						
TERO				AML	AML		
	comp=E,52100µm,0.3s						
GUMA	**Gualdo di Mace**	**0.34**	**20**	⇑P	**Pg**	**09 32 42.8**	**-0.8**
GUMA				S	**Sg**	**09 32 48.9**	**+0.8**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.35**	**3**	⇑P	**Pg**	**09 32 42.7**	**-1.1**
CSP1				S	**Sg**	**09 32 48.4**	**0.0**
CSP1				AML	AML		
	comp=N,78000µm,0.4s						
CSP1				AML	AML		
	comp=E,53950µm,1.3s						
ARRO	**Arrone**	**0.35**	**242**	⇑P	**Pg**	**09 32 42.9**	**-1.0**
ARRO				S	**Sg**	**09 32 48.7**	**+0.3**
ARRO				AML	AML		
	comp=N,42050µm,1.0s						
ARRO				AML	AML		
	comp=E,49400µm,0.4s						
GIGS	**Gran Sasso**	**0.41**	**136**	⇑P	**Pg**	**09 32 43.8**	**-1.2**
GIGS				S	**Sg**	**09 32 50.1**	**-0.3**
GIGS				AML	AML		
	comp=E,19850µm,0.3s						
GIGS				AML	AML		
	comp=N,16400µm,1.1s						
OFFI	**Offida**	**0.42**	**63**	⇑P	**Pg**	**09 32 45.0**	**-0.1**
OFFI				S	**Sb**	**09 32 53.0**	**-0.5**
AQU	**L'Aquila**	**0.42**	**157**		**Pg**	**09 32 44.2**	**-1.0**
AQU	**L'Aquila**	**0.42**	**157**	P	**Pg**	**09 32 44.2**	**-1.0**
AQU	**L'Aquila**	**0.42**	**157**	⇓P	**Pg**	**09 32 44.4**	**-0.8**
AQU				S	**Sg**	**09 32 51.3**	**+0.5**
AQU				AML	AML		
	comp=N,48400µm,0.9s						
AQU				AML	AML		
	comp=N,50400µm,0.9s						
AQU				AML	AML		
	comp=E,40400µm,1.1s						
AQU				AML	AML		
	comp=E,41100µm,1.1s						
SEF1	**Sefro**	**0.44**	**337**	P	**Pg**	**09 32 44.4**	**-1.1**
SEF1				S	**Sg**	**09 32 51.3**	**+0.1**
SEF1				AML	AML		
	comp=N,32750µm,1.3s						
SEF1				AML	AML		
	comp=E,39200µm,0.3s						
MDAR	**Monte D'Aria**	**0.45**	**356**	P	**Pg**	**09 32 44.7**	**-1.1**
MDAR				S	**Sg**	**09 32 51.8**	**+0.2**
MDAR				AML	AML		
	comp=E,22900µm,0.3s						
MDAR				AML	AML		
	comp=N,20550µm,0.4s						
MDAR				AML	AML		
	comp=E,22950µm,0.3s						
PIO1	**Pioraco**	**0.46**	**342**	P	**Pg**	**09 32 44.6**	**-1.2**
PIO1				S	**Sg**	**09 32 52.1**	**+0.3**
PIO1				AML	AML		
	comp=E,18050µm,0.4s						
PIO1				AML	AML		
	comp=N,29750µm,0.6s						
PIO1				AML	AML		
	comp=N,29800µm,0.7s						
PIO1				AML	AML		
	comp=E,18050µm,0.4s						
CESX	**Cesi**	**0.46**	**253**	Pg	**Pg**	**09 32 44.5**	**-1.5**
CESX	**Cesi**	**0.46**	**253**	⇑P	**Pg**	**09 32 44.8**	**-1.2**
CESX				S	**Sg**	**09 32 52.4**	**+0.4**
CESX				AML	AML		
	comp=E,41850µm,0.6s						
CESX				AML	AML		
	comp=N,26300µm,0.5s						
FIU1	**Fiuminata**	**0.48**	**338**	P	**Pg**	**09 32 45.3**	**-1.0**
FIU1				S	**Sg**	**09 32 52.7**	**+0.2**
FIU1				AML	AML		
	comp=E,13550µm,0.6s						
FIU1				AML	AML		
	comp=N,15450µm,0.3s						
FIU1				AML	AML		
	comp=N,15450µm,0.3s						
FIU1				AML	AML		
	comp=E,13550µm,0.7s						
FIAM	**Fiamignano**	**0.48**	**186**	P	**Pg**	**09 32 45.2**	**-1.1**
FIAM				S	**Sg**	**09 32 52.6**	**+0.1**
FIAM				AML	AML		
	comp=E,42150µm,0.7s						
FIAM				AML	AML		
	comp=N,33200µm,0.4s						
SSM1	**San Severino M**	**0.48**	**360**	P	**Pg**	**09 32 45.3**	**-1.1**
SSM1				S	**Sg**	**09 32 53.1**	**+0.4**
ASSB	**Assisi San Ben**	**0.48**	**308**	P	**Pg**	**09 32 45.2**	**-1.2**
ASSB				S	**Sg**	**09 32 52.7**	**0.0**
GAG1	**Gagliole**	**0.50**	**350**	P	**Pg**	**09 32 45.7**	**-1.0**
GAG1				S	**Sg**	**09 32 53.6**	**+0.4**
GAG1				AML	AML		
	comp=E,47950µm,0.4s						
GAG1				AML	AML		
	comp=N,63000µm,0.6s						
GAG1				AML	AML		
	comp=E,47950µm,0.5s						
GAG1				AML	AML		
	comp=N,63000µm,0.6s						
MTL1	**Matelica**	**0.53**	**346**	P	**Pg**	**09 32 46.1**	**-1.0**
SNTG	**Esanatoglia**	**0.54**	**341**	⇑P	**Pg**	**09 32 46.0**	**-1.4**
SNTG				AML	AML		
	comp=E,10950µm,0.8s						
SNTG				AML	AML		
	comp=N,9785µm,0.7s						
SNTG				AML	AML		
	comp=E,10650µm,0.6s						
SNTG				AML	AML		
	comp=N,10860µm,0.7s						
SNTG				AML	AML		
	comp=N,9780µm,0.7s						
TRTR	**Tortoreto Alta**	**0.54**	**83**	⇑P	**Pg**	**09 32 47.5**	**0.0**
TRTR				AML	AML		
TRTR				AML	AML		
	comp=N,86150µm,1.2s						
TRE1	**Treia**	**0.57**	**10**	P	**Pg**	**09 32 47.3**	**-0.8**
TRE1				AML	AML		
	comp=E,48050µm,0.4s						
TRE1				AML	AML		
	comp=N,61350µm,0.8s						
TRE1				AML	AML		
	comp=E,48050µm,0.4s						
EL6	**Elcito**	**0.59**	**354**	P	**Pg**	**09 32 47.1**	**-1.2**
EL6				S	**Sg**	**09 32 56.4**	**+0.4**
EL6				AML	AML		
	comp=E,23800µm,1.4s						
EL6				AML	AML		
	comp=N,25150µm,0.9s						
EL6				AML	AML		
	comp=N,25200µm,0.9s						
EL6				AML	AML		
	comp=E,23850µm,1.4s						
ATCC	**AVT- Casa Cast**	**0.59**	**318**	⇑P	**Pg**	**09 32 47.0**	**-1.4**
ATCC				AML	AML		
	comp=E,24250µm,0.8s						
ATCC				AML	AML		
	comp=E,24300µm,0.8s						
ATCC				AML	AML		
	comp=N,24750µm,0.3s						
VCEL	**Villa Celiera**	**0.60**	**126**	⇑P	**Pg**	**09 32 47.6**	**-1.0**
VCEL				AML	AML		
	comp=N,91500µm,0.9s						
VCEL				AML	AML		
	comp=N,91550µm,0.9s						
VCEL				AML	AML		
	comp=E,89450µm,0.5s						
FOSV	**Fossato di Vic**	**0.63**	**331**	⇑P	**Pg**	**09 32 47.7**	**-1.4**
FOSV				AML	AML		
	comp=E,11725µm,0.6s						
FOSV				AML	AML		
	comp=N,13450µm,0.8s						
FOSV				AML	AML		
	comp=E,11755µm,0.6s						
CING	**Cingoli**	**0.63**	**1**	⇑P	**Pg**	**09 32 47.7**	**-1.4**
CING				AML	AML		
	comp=E,15300µm,0.7s						
CING				AML	AML		
	comp=N,12300µm,0.5s						
T0110	**Collepietro**	**0.68**	**139**	⇓P	**Pg**	**09 32 48.6**	**-1.5**
T0110				AML	AML		
	comp=N,82750µm,0.4s						
T0110				AML	AML		
	comp=E,87500µm,0.5s						
PP3	**Marolino**	**0.70**	**26**	⇑P	**Pg**	**09 32 50.1**	**-0.5**
PP3				AML	AML		
	comp=N,93350µm,0.4s						
PP3				AML	AML		
	comp=N,97600µm,0.4s						
PP3				AML	AML		
PP3				AML	AML		
	comp=N,93400µm,0.4s						
PP3				AML	AML		
PP3				AML	AML		
	comp=N,97850µm,0.4s						
MURB	**Monte Urbino**	**0.71**	**317**		**Pg**	**09 32 49.1**	**-1.4**
MURB	**Monte Urbino**	**0.71**	**317**	P	**Pg**	**09 32 49.2**	**-1.4**
MURB				AML	AML		
	comp=E,40150µm,1.0s						
MURB				AML	AML		
	comp=N,35850µm,1.3s						
MURB				AML	AML		
	comp=N,35000µm,1.3s						
MURB				AML	AML		
	comp=E,40200µm,1.0s						
MURB				AML	AML		
	comp=E,39250µm,1.0s						
MURB				AML	AML		
	comp=N,35837µm,1.3s						
MMUR	**Monte Murano**	**0.71**	**349**	P	**Pg**	**09 32 49.4**	**-1.2**
MMUR				AML	AML		
	comp=E,21600µm,0.4s						
MMUR				AML	AML		
	comp=N,17450µm,0.4s						
MMUR				AML	AML		
	comp=N,17500µm,0.4s						
SRES	**S.Oreste - Sor**	**0.71**	**225**	⇑P	**Pg**	**09 32 49.2**	**-1.5**
SRES				AML	AML		
	comp=E,12050µm,0.6s						
SRES				AML	AML		
	comp=N,14150µm,0.5s						
PTQR	**Pietraquaria**	**0.74**	**167**	P	**Pg**	**09 32 49.4**	**-1.9**
PTQR				AML	AML		
	comp=N,7385µm,1.1s						
PTQR				AML	AML		
	comp=E,7355µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.76**	**307**	⇑P	**Pg**	**09 32 50.0**	**-1.6**
ATTE				AML	AML		
	comp=N,8725µm,0.7s						
ATTE				AML	AML		
	comp=E,7955µm,1.5s						
ATFO	**Monte Foce - G**	**0.77**	**324**	⇑P	**Pg**	**09 32 50.0**	**-1.7**
ATFO				AML	AML		
	comp=N,9730µm,0.6s						
ATFO				AML	AML		
	comp=E,10615µm,1.2s						
ARVD	**Arcevia**	**0.77**	**347**	⇑P	**Pg**	**09 32 50.2**	**-1.7**
ARVD				AML	AML		
	comp=E,7450µm,1.0s						
ARVD				AML	AML		
	comp=N,8565µm,1.0s						
MTCE	**Montecelio**	**0.79**	**204**	P	**Pg**	**09 32 50.4**	**-1.9**
MTCE				AML	AML		
	comp=N,15600µm,0.6s						
MTCE				AML	AML		
	comp=E,22000µm,1.1s						
MGAB	**Montegabbione**	**0.80**	**282**	P	**Pg**	**09 32 51.0**	**-1.4**
MGAB				AML	AML		
	comp=E,23100µm,0.6s						
MGAB				AML	AML		
	comp=N,25250µm,1.2s						
CERT	**Cerreto**	**0.81**	**191**	P	**Pg**	**09 32 50.7**	**-1.9**
CERT				AML	AML		
	comp=E,22250µm,0.4s						
CERT				AML	AML		
	comp=N,14750µm,0.9s						
FRON	**Frontone**	**0.84**	**337**	P	**Pg**	**09 32 51.4**	**-1.7**
FRON				AML	AML		
	comp=E,6645µm,0.4s						
FRON				AML	AML		
	comp=N,11650µm,0.5s						
ATVO	**AVT- Monte Val**	**0.85**	**319**	⇑P	**Pg**	**09 32 51.6**	**-1.8**
ATVO				AML	AML		
	comp=N,7205µm,0.9s						
ATVO				AML	AML		
	comp=E,10945µm,1.4s						
AOI	**Ancona**	**0.86**	**21**	⇑P	**Pg**	**09 32 52.1**	**-1.5**
AOI				AML	AML		
	comp=E,12120µm,0.3s						
AOI				AML	AML		
	comp=N,13150µm,0.5s						
ATMI	**Monte Miggiano**	**0.89**	**312**	P	**Pg**	**09 32 52.9**	**-1.3**
ATMI				AML	AML		
	comp=N,24750µm,1.0s						
ATMI				AML	AML		
	comp=E,20100µm,0.4s						
COR1	**Corinaldo**	**0.90**	**352**	P	**Pg**	**09 32 53.0**	**-1.3**
COR1				AML	AML		
	comp=E,13450µm,0.6s						
COR1				AML	AML		
	comp=N,27850µm,1.5s						
COR1				AML	AML		
	comp=N,27100µm,1.5s						
COR1				AML	AML		
	comp=E,25850µm,0.6s						
ATPI	**Pietralunga -**	**0.91**	**321**	⇑P	**Pg**	**09 32 52.6**	**-1.8**
ATPI				AML	AML		
	comp=E,7005µm,1.0s						
ATPI				AML	AML		
	comp=N,8355µm,0.9s						
INTR	**Introdacqua**	**0.91**	**144**		**Pg**	**09 32 52.3**	**-2.2**
INTR	**Introdacqua**	**0.91**	**144**	P	**Pg**	**09 32 52.4**	**-2.1**
INTR				AML	AML		
	comp=E,13µm,0.6s						
INTR				AML	AML		
	comp=N,20µm,0.6s						
INTR				AML	AML		
	comp=N,29350µm,0.6s						
INTR				AML	AML		
	comp=E,13µm,0.6s						
INTR				AML	AML		
	comp=N,20µm,0.6s						
INTR				AML	AML		
	comp=E,13225µm,0.6s						
RCAV	**Rocca di Cave**	**0.92**	**191**	P	**Pg**	**09 32 52.9**	**-1.6**
RCAV				AML	AML		
	comp=E,24850µm,1.6s						
RCAV				AML	AML		
	comp=N,26650µm,0.5s						
VVLD	**Villa Vallelon**	**0.93**	**159**	P	**Pg**	**09 32 53.3**	**-1.7**
VVLD				AML	AML		
	comp=E,10800µm,0.9s						
VVLD				AML	AML		
	comp=N,16000µm,0.6s						
MPAG	**Monte Paganucc**	**0.94**	**341**	⇑P	**Pg**	**09 32 53.2**	**-1.8**
MPAG				AML	AML		
	comp=E,6785µm,0.4s						
MPAG				AML	AML		
	comp=N,8670µm,1.5s						
MPAG				AML	AML		
	comp=N,8375µm,1.5s						
MPAG				AML	AML		
	comp=E,6630µm,0.4s						
SACS	**San Casciano d**	**0.94**	**277**	⇑P	**Pg**	**09 32 53.6**	**-1.5**
SACS				AML	AML		
	comp=E,12895µm,0.6s						
SACS				AML	AML		
	comp=N,11235µm,1.0s						
SACS				AML	AML		
	comp=N,11675µm,1.0s						
SACS				AML	AML		
	comp=E,12670µm,0.6s						
SACS				AML	AML		
	comp=N,11215µm,1.0s						
SACS				AML	AML		
	comp=E,12850µm,0.6s						
GUAR	**Guarcino**	**0.96**	**174**	P	**Pg**	**09 32 54.5**	**-0.8**
GUAR				AML	AML		
	comp=N,15050µm,0.9s						
GUAR				AML	AML		
	comp=E,16150µm,1.0s						
FSSB	**Fossombrone**	**0.99**	**343**	⇑P	**Pg**	**09 32 54.2**	**-1.9**
FSSB				AML	AML		
	comp=E,15400µm,0.4s						
FSSB				AML	AML		
	comp=N,19450µm,0.4s						
CAFR	**Castel Frentan**	**1.01**	**121**	P	**Pg**	**09 32 54.7**	**-1.6**
CAFR				AML	AML		
	comp=E,12450µm,0.4s						
CAFR				AML	AML		
	comp=N,12800µm,0.5s						
LPEL	**Lama dei Pelig**	**1.02**	**133**	P	**Pg**	**09 32 54.2**	**-2.4**
LPEL				AML	AML		
	comp=N,10760µm,0.5s						
LPEL				AML	AML		
	comp=E,17350µm,0.7s						
LATE	**Laterza**	**1.02**	**263**		**Pg**	**09 32 55.0**	**-1.7**
LATE	**Laterza**	**1.02**	**263**	⇑P	**Pg**	**09 32 54.9**	**-1.8**
BADI	**Badiali**	**1.03**	**318**	P	**Pg**	**09 32 54.4**	**-2.3**
RDP	**Rocca di Papa**	**1.04**	**199**	P	**Pg**	**09 32 56.1**	**-0.9**
RDP				AML	AML		
	comp=E,39800µm,0.5s						
RDP				AML	AML		
	comp=N,54850µm,0.8s						
MA9	**Marino**	**1.05**	**202**	P	**Pg**	**09 32 56.0**	**-1.1**
MA9				AML	AML		
	comp=E,32250µm,0.6s						
MA9				AML	AML		
	comp=N,19450µm,0.6s						
CAFI	**Castiglion Fio**	**1.06**	**304**	⇑P	**Pg**	**09 32 55.6**	**-1.9**
CAFI				AML	AML		
	comp=N,5465µm,1.0s						
CAFI				AML	AML		
	comp=N,5320µm,1.0s						
CAFI				AML	AML		
	comp=E,6000µm,1.6s						
CAFI				AML	AML		
	comp=E,6180µm,1.6s						
PE3	**Peglio**	**1.07**	**332**	P	**Pg**	**09 32 56.1**	**-1.6**
PE3				AML	AML		
	comp=N,32µm,1.3s						
PE3				AML	AML		
	comp=E,36µm,1.3s						
POFI	**Posta Fibreno**	**1.10**	**159**	P	**Pg**	**09 32 56.4**	**-1.7**
POFI				AML	AML		
	comp=N,6665µm,0.7s						
POFI				AML	AML		
	comp=E,8645µm,1.1s						
POFI				AML	AML		
	comp=E,8345µm,1.1s						
POFI				AML	AML		
	comp=N,6625µm,0.7s						
MCIV	**Monte Civitell**	**1.11**	**272**	⇑P	**Pg**	**09 32 56.3**	**-2.0**
MCIV				AML	AML		
	comp=E,4315µm,0.9s						
MCIV				AML	AML		
	comp=N,4400µm,1.1s						
TOLF	**Tolfa**	**1.11**	**232**	⇑P	**Pg**	**09 32 56.4**	**-1.9**
TOLF				AML	AML		
	comp=N,8435µm,0.5s						
TOLF				AML	AML		
	comp=E,11405µm,0.8s						
SF04	**Casetta**	**1.12**	**275**	P	**Pg**	**09 32 57.0**	**-1.5**
SF04				AML	AML		
	comp=E,5160µm,0.4s						
SF04				AML	AML		
	comp=N,5685µm,1.4s						
LRP	**Arpino**	**1.14**	**165**	P	**Pg**	**09 32 58.3**	**-0.6**
LRP				AML	AML		
	comp=N,6635µm,0.7s						
LRP				AML	AML		
	comp=E,5125µm,0.9s						
GIUL	**Giuliano Di Ro**	**1.19**	**177**	P	**Pg**	**09 32 58.4**	**-1.4**
GIUL				AML	AML		
	comp=N,8635µm,0.7s						
GIUL				AML	AML		
	comp=E,5975µm,0.6s						
SF01	**Poggio Pratacc**	**1.19**	**274**	P	**Pg**	**09 32 58.6**	**-1.3**
SF01				AML	AML		
	comp=E,7435µm,0.9s						
SF01				AML	AML		
	comp=N,5895µm,0.7s						
CPGN	**Carpegna, Ital**	**1.23**	**330**	P	**Pg**	**09 32 59.4**	**-1.2**
CRE	**Caprese Michel**	**1.25**	**315**	P	**Pg**	**09 32 59.2**	**-1.9**
CRE				AML	AML		
	comp=N,3470µm,0.3s						
CRE				AML	AML		
	comp=E,3570µm,1.3s						
ARCI	**Arcidosso**	**1.26**	**275**	P	**Pg**	**09 32 59.1**	**-2.1**
ARCI				AML	AML		
	comp=N,2230µm,0.7s						
ARCI				AML	AML		
	comp=E,1570µm,1.3s						
RNI2	**Rionero Sannit**	**1.27**	**145**	P	**Pg**	**09 33 00.1**	**-1.3**
RNI2				AML	AML		
	comp=E,14000µm,1.4s						
RNI2				AML	AML		
	comp=N,11500µm,0.6s						
RNI2				AML	AML		
	comp=E,13500µm,1.4s						
RNI2				AML	AML		
	comp=N,11215µm,0.6s						
CERA	**Filignano**	**1.30**	**151**	P	**Pn**	**09 32 59.9**	**-2.0**
CERA				AML	AML		
	comp=E,12060µm,0.7s						
CERA				AML	AML		
	comp=N,10180µm,0.7s						
CERA				AML	AML		
	comp=N,9875µm,0.7s						
CERA				AML	AML		
	comp=E,11675µm,0.7s						
FRES	**Fresagrandinar**	**1.35**	**124**	P	**Pn**	**09 33 02.5**	**+0.1**
FRES				AML	AML		
	comp=E,7360µm,0.6s						
FRES				AML	AML		
	comp=N,4830µm,0.6s						
TRIV	**Trivento**	**1.41**	**133**	P	**Pn**	**09 33 02.5**	**-0.8**
ASQU	**Asqua**	**1.46**	**316**	P	**Pn**	**09 33 02.7**	**-1.4**
ASQU				AML	AML		
	comp=E,2770µm,0.8s						
ASQU				AML	AML		
	comp=N,2715µm,0.8s						
VAGA	**Valle Agricola**	**1.54**	**149**	P	**Pn**	**09 33 04.0**	**-1.2**
VAGA				AML	AML		
	comp=E,2635µm,0.6s						
VAGA				AML	AML		
	comp=N,4085µm,0.6s						
VAGA				AML	AML		
	comp=N,4230µm,0.6s						
VAGA				AML	AML		
	comp=E,2730µm,0.7s						
MAON	**Monte Argentar**	**1.55**	**259**	⇑P	**Pn**	**09 33 03.3**	**-1.8**
MAON				AML	AML		
	comp=E,1680µm,0.7s						
MAON				AML	AML		
	comp=N,1485µm,1.1s						
CSNT	**Castellina Chi**	**1.56**	**298**	⇑P	**Pn**	**09 33 03.8**	**-1.6**
CSNT				AML	AML		
	comp=E,1130µm,1.4s						
CSNT				AML	AML		
	comp=N,1260µm,0.8s						
BSSO	**Busso**	**1.59**	**138**	P	**Pb**	**09 33 07.2**	**+0.2**
BSSO				AML	AML		
	comp=E,1610µm,0.7s						
BSSO				AML	AML		
	comp=N,1580µm,0.7s						
BSSO				AML	AML		
	comp=N,4030µm,0.7s						
BSSO				AML	AML		
	comp=E,3555µm,0.7s						
OSSC	**Osservatorio P**	**1.62**	**299**		**Pn**	**09 33 01.8**	**-4.3**
RUFI	**Rufina**	**1.64**	**312**	P	**Pn**	**09 33 05.2**	**-1.2**
RUFI				AML	AML		
	comp=E,1548µm,1.0s						
RUFI				AML	AML		
	comp=N,2235µm,1.5s						
MODR	**Mondragone**	**1.68**	**162**	⇓P	**Pn**	**09 33 06.2**	**-0.9**
MODR				AML	AML		
	comp=E,2335µm,1.1s						
MODR				AML	AML		
	comp=N,2765µm,0.7s						
CIGN	**Sant'Elia a Pi**	**1.68**	**130**	P	**Pn**	**09 33 07.5**	**+0.5**
CIGN				AML	AML		
	comp=E,3095µm,1.2s						
CIGN				AML	AML		
	comp=N,2970µm,0.7s						
CASP	**Castiglione de**	**1.71**	**272**		**Pn**	**09 33 05.6**	**-1.8**
CASP	**Castiglione de**	**1.71**	**272**	⇑P	**Pn**	**09 33 05.6**	**-1.8**
CASP				AML	AML		
	comp=E,890µm,0.8s						
CASP				AML	AML		
	comp=N,688µm,0.5s						
TRIF	**Trifonti**	**1.71**	**283**	⇑P	**Pn**	**09 33 06.0**	**-1.5**

TRIF AML AML
comp=N,1455µm,0.8s
TRIF AML AML
comp=E,1315µm,0.8s
PIGN Pignataro Magg 1.71 154 P Pn 09 33 07.2 -0.3
PIGN AML AML
comp=N,1850µm,0.7s
PIGN AML AML
comp=N,1790µm,0.6s
PIGN AML AML
comp=E,1800µm,0.9s
PIGN AML AML
comp=E,1830µm,0.9s
MELA Melanico ??? S 1.78 125 P Pn 09 33 08.6 +0.2
MELA AML AML
comp=N,10850µm,0.9s
MELA AML AML
comp=E,10525µm,0.9s
MELA AML AML
comp=E,10160µm,0.9s
MELA AML AML
comp=N,11150µm,0.9s
TREM Isole Tremiti 1.83 109 P Pn 09 33 09.3 +0.2
TREM AML AML
comp=E,14450µm,0.8s
TREM AML AML
comp=N,11750µm,0.8s
BRIS BRISIGHELLA 1.86 320 P Pb 09 33 11.0 -0.4
BRIS AML AML
comp=N,3175µm,1.3s
BRIS AML AML
comp=E,3775µm,1.1s
IMOL Imola, Italy 1.92 328 P Pb 09 33 12.9 +0.4
PAOL Paolisi 2.00 148 Pn 09 33 11.0 -0.4
APRC Apricena 2.01 119 P Pn 09 33 11.1 -0.5
APRC AML AML
comp=E,5225µm,0.7s
APRC AML AML
comp=N,5990µm,0.7s
MRB1 Monte Rocchett 2.10 140 P Pb 09 33 14.4 -1.2
SGRT San Giovanni R 2.15 117 Pn Pn 09 33 13.3 -0.2
SGRT San Giovanni R 2.15 117 P Pn 09 33 13.4 -0.1
SGRT AML AML
comp=E,3245µm,0.6s
SGRT AML AML
comp=N,3620µm,0.7s
CELB S.Piero in Cam 2.19 271 ⇑P Pn 09 33 12.2 -1.8
CELB AML AML
comp=E,318µm,0.4s
CELB AML AML
comp=N,384µm,0.9s
BRJN Brijuni 2.20 11 P Pn 09 33 12.6 -1.5
MAIM Mastiano 2.28 302 P Pn 09 33 14.4 -0.9
MAIM AML AML
comp=E,612µm,0.7s
MAIM AML AML
comp=N,560µm,0.4s
SGTA Sant Agata di 2.29 134 P Pn 09 33 16.3 +0.8
SGTA AML AML
comp=N,1735µm,0.8s
SGTA AML AML
comp=N,1790µm,0.8s
SGTA AML AML
comp=E,2270µm,0.7s
SGTA AML AML
comp=E,2290µm,0.7s
BDI Bagni Di Lucca 2.30 306 P Pn 09 33 14.0 -1.6
BDI AML AML
comp=N,844µm,0.8s
BDI AML AML
comp=N,400µm,0.8s
BDI AML AML
comp=E,381µm,1.6s
BDI AML AML
comp=E,1005µm,0.6s
SNAL S. Angelo Dei 2.37 140 P Pn 09 33 17.4 +0.9
SNAL AML AML
comp=N,2745µm,0.8s
SNAL AML AML
comp=E,2335µm,1.3s
HVAR Hvar 2.44 79 P Pn 09 33 16.6 -0.8
GSCL Gusciola 2.48 311 P Pn 09 33 17.2 -0.8
GSCL AML AML
comp=N,873µm,0.8s
GSCL AML AML
comp=E,1009µm,0.7s
VLC Villacollemand 2.48 306 Pn 09 33 16.3 -1.7
GROG Isola di Gorgo 2.50 287 P Pn 09 33 17.5 -0.8
GROG AML AML
comp=E,251µm,1.3s
GROG AML AML
comp=N,202µm,1.1s
CAPA Cerignola FG 2.53 128 P Pn 09 33 18.7 +0.1
CAPA AML AML
comp=E,6370µm,0.8s
CAPA AML AML
comp=N,4300µm,1.1s
VULT Monte Vulture 2.55 134 P Pn 09 33 19.9 +0.8
VULT AML AML
comp=E,3450µm,0.6s
VULT AML AML
comp=N,3875µm,0.6s
VULT AML AML
comp=E,3250µm,0.5s
VULT AML AML
comp=N,3600µm,0.6s
EQUI Equi 2.62 304 P Pn 09 33 19.0 -1.0
EQUI AML AML
comp=E,413µm,1.3s
EQUI AML AML
comp=N,498µm,1.2s
RIY Rijeka 2.74 20 *e*Pn Pn 09 33 20.8 -0.8
RIY *e*Sg **Sn 09 33 56.4 +1.3**
PALZ Palazzo San Ge 2.75 130 P Pn 09 33 20.7 -1.0
PALZ AML AML
comp=N,2855µm,1.1s
PALZ AML AML
comp=E,4570µm,0.7s
MORSI Morsiglia 2.81 276 P Pn 09 33 21.4 -1.2
MORSI S **Sn 09 33 56.3 -0.5**
TEOL Teolo 2.83 338 Pn 09 33 22.5 -0.3
TEOL Teolo 2.83 338 P Pn 09 33 22.8 -0.1
TEOL AML AML
comp=N,2255µm,1.0s
TEOL AML AML
comp=E,2890µm,1.0s
ACER Acerenza 2.85 133 P Pn 09 33 23.7 +0.7
ACER AML AML
comp=N,2220µm,0.8s
ACER AML AML
comp=E,1890µm,0.7s
ACER AML AML
comp=N,2280µm,0.8s
ACER AML AML
comp=E,1800µm,0.7s
SKDS Skadanscina 2.86 12 *e*Pn Pn 09 33 21.5 -1.8
SKDS Skadanscina 2.86 12 *i* Pn Pn 09 33 21.7 -1.6
SKDS *i* Sn **Sn 09 33 56.5 -1.6**
SKDS IAML 09 34 18.2
comp=Z,417nm,0.7s
PRMA PARMA 2.90 315 Pn 09 33 21.9 -1.8
SMPL Sampolo 2.96 259 P Pn 09 33 23.1 -1.5
SMPL AML AML
comp=E,176µm,0.7s
SMPL AML AML
comp=N,134µm,0.5s
SMPL Sampolo 2.96 259 P Pn 09 33 23.6 -1.0
CORF Corte 3.01 263 P Pn 09 33 24.3 -1.1
CORF S **Sn 09 34 01.1 -0.7**
PGF Pioggiola 3.09 268 *e*P Pn 09 33 25.4 -1.1
PGF *e*Sn **Sn 09 33 56.2 -7.6**
PGF Pioggiola 3.09 268 P Pn 09 33 26.6 +0.1
PGF Pioggiola 3.09 268 AML AML
comp=E,134µm,1.4s
PGF AML AML
comp=N,178µm,0.9s
PGF Pioggiola 3.09 268 P Pn 09 33 25.9 -0.6
MSSA Maissana 3.09 302 Pn Pn 09 33 24.5 -2.0
MSSA Maissana 3.09 302 P Pn 09 33 25.5 -1.0
CEY Cerknica 3.12 16 *e*Pn Pn 09 33 25.0 -1.9
BOJS Bojanci 3.13 28 *e*Pn Pn 09 33 26.7 -0.3
BOJS Bojanci 3.13 28 P Pn 09 33 26.6 -0.3
BOJS AML AML
comp=E,1605µm,1.1s
BOJS AML AML
comp=N,1745µm,0.8s

AMUR Altamura 3.15 125 P Pn 09 33 27.3 +0.1
AMUR AML AML
comp=N,1275µm,0.5s
AMUR AML AML
comp=E,963µm,0.5s
SABO M.te Sabotino 3.25 5 P Pn 09 33 27.3 -1.3
SABO AML AML
comp=E,5310µm,0.6s
SABO AML AML
comp=N,6115µm,1.3s
SABO AML AML
comp=N,1545µm,0.5s
SABO AML AML
comp=E,1420µm,1.6s
SIRI Monte Sirino - 3.26 141 P Pn 09 33 29.9 +1.0
SIRI AML AML
comp=E,414µm,0.4s
SIRI AML AML
comp=N,355µm,0.6s
SIRI AML AML
comp=E,410µm,0.4s
SIRI AML AML
comp=N,338µm,0.6s
ROVR Rover Verones 3.27 333 P Pn 09 33 28.4 -0.7
CGRP Cima Grappa 3.29 343 P Pn 09 33 28.6 -0.7
CGRP AML AML
comp=E,1410µm,0.7s
CGRP AML AML
comp=N,1310µm,0.6s
CGRP AML AML
comp=N,1305µm,0.6s
CGRP AML AML
comp=E,1400µm,0.7s
MGRS Mrkonjic Grad 3.29 58 *e*Pn Pn 09 33 30.1 +0.9
STON Ston 3.33 86 *e*Pn Pn 09 33 27.7 -1.9
STON Ston 3.33 86 *e*Pn Pn 09 33 28.2 -1.4
STON *e*Sg **Sn 09 34 07.8 -1.7**
STON Ston 3.33 86 AML AML
comp=N,478µm,1.1s
STON AML AML
comp=E,400µm,0.8s
VARN Col Varnada, M 3.34 347 P Pn 09 33 29.3 -0.6
VARN AML AML
comp=E,1380µm,1.6s
VARN AML AML
comp=N,1046µm,0.8s
VARN AML AML
comp=E,1385µm,1.6s
VARN AML AML
comp=N,1056µm,0.9s
MATE Matera 3.37 127 P Pn 09 33 30.8 +0.6
MATE AML AML
comp=N,1039µm,0.7s
MATE AML AML
comp=E,989µm,0.7s
AJAC Base Areonaval 3.38 257 ⇑P Pn 09 33 29.6 -0.6
AJAC AML AML
comp=E,278µm,0.7s
AJAC AML AML
comp=N,444µm,1.5s
AJAC Base Areonaval 3.38 257 P Pn 09 33 30.1 -0.2
CUC Castrocucco 3.39 143 Pn Pn 09 33 31.6 +1.0
PRIJ Prijedor 3.39 48 *e*Pn Pb 09 33 38.1 +0.6
LJU Ljubljana 3.44 16 P Pn 09 33 31.0 -0.1
LJU AML AML
comp=E,4010µm,0.7s
LJU AML AML
comp=N,5650µm,0.7s
DOSS Dosso del Somm 3.44 336 P Pn 09 33 31.4 0.0
DOSS AML AML
comp=N,610µm,0.8s
DOSS AML AML
comp=E,618µm,0.6s
DOSS AML AML
comp=N,755µm,0.6s
DOSS AML AML
comp=E,746µm,0.8s
SALO Salr 3.45 327 Pn Pn 09 33 31.7 +0.4
SALO Salr 3.45 327 P Pn 09 33 31.7 +0.4
SALO AML AML
comp=N,1265µm,0.9s
SALO AML AML
comp=E,890µm,0.8s
LTRZ Laterza 3.46 127 P Pn 09 33 31.7 +0.2
LTRZ AML AML
comp=N,1205µm,0.8s
LTRZ AML AML
comp=E,748µm,0.6s
LTRZ AML AML
comp=N,900µm,1.6s
LTRZ AML AML
comp=E,900µm,0.6s
CTI Castel Tesino 3.48 342 Pn 09 33 31.7 -0.2
CTI Castel Tesino 3.48 342 P Pn 09 33 31.7 -0.2
CTI Castel Tesino 3.48 342 P Pn 09 33 31.7 -0.2
CTI AML AML
comp=E,719µm,0.5s
CTI AML AML
comp=N,696µm,0.4s
CRES Cresnjev 3.49 27 *e*Pn Pn 09 33 30.4 -1.4
MPRI Monte Prat 3.50 358 ⇓P Pn 09 33 31.5 -0.6
MPRI AML AML
comp=N,1205µm,0.5s
MPRI AML AML
comp=E,1355µm,1.1s
NOCI Noci 3.50 123 P Pn 09 33 32.3 +0.2
A051A Mrakovica 3.52 49 *e*Pn Pn 09 33 31.2 -1.2
BLY Banja Luka 3.52 54 *e*Pn Pn 09 33 32.6 +0.2
BLY Banja Luka 3.52 54 *e*Pn Pn 09 33 34.5 +2.1
STAL STALIGIAL 3.53 355 Pn Pn 09 33 31.3 -1.1
LUSI Trento, Gardas 3.59 334 P Pn 09 33 33.0 -0.3
LUSI AML AML
comp=E,749µm,0.7s
LUSI AML AML
comp=N,667µm,1.1s
CIMO Cimolais 3.60 352 P Pn 09 33 32.2 -1.3
CIMO AML AML
comp=E,314µm,0.9s
CIMO AML AML
comp=N,294µm,0.7s
CIMO AML AML
comp=E,318µm,0.9s
CIMO AML AML
comp=N,304µm,0.7s
PTCC Patocco-Chiusa 3.66 2 ⇓P Pn 09 33 33.1 -1.2
PTCC AML AML
comp=N,498µm,1.1s
PTCC AML AML
comp=E,452µm,0.7s
GAGG Gaggia 3.70 335 P Pn 09 33 34.4 -0.5
GAGG AML AML
comp=E,840µm,0.8s
GAGG AML AML
comp=N,910µm,0.9s
PRED Cave del Predi 3.71 4 Pn 09 33 35.0 +0.1
CLUD Cludinico 3.72 357 Pn Pn 09 33 34.4 -0.6
ZONE Zone 3.73 325 P Pn 09 33 35.2 -0.1
TAR1 Taranto 3.79 124 AML AML
comp=E,773µm,1.6s
TAR1 AML AML
comp=N,1006µm,0.9s
ACOM Acomizza, Ital 3.81 3 P Pn 09 33 35.6 -0.8
ACOM AML AML
comp=E,866µm,1.1s
ACOM AML AML
comp=N,756µm,0.6s
ACOM AML AML
comp=N,662µm,0.6s
ACOM AML AML
comp=E,829µm,1.1s
PCP Piancastagn 3.81 300 P Pn 09 33 37.5 +1.1
MABI Malga Bissina 3.82 331 P Pn 09 33 36.6 0.0
MABI AML AML
comp=N,253µm,0.3s
MABI AML AML
comp=E,249µm,1.0s
OBKA Obir 3.89 14 *e*Pn Pn 09 33 36.7 -0.8
OBKA Obir 3.89 14 *e*Pn Pn 09 33 36.7 -0.8
comp=E,9.3nm,0.2s,SNR=12
OBKA Obir 3.89 14 *e*Pn Pn 09 33 37.0 -0.4
MYKA Terra Mystica 3.90 5 *e*Pn Pn 09 33 37.2 -0.4
comp=E,18nm,0.4s,SNR=16
A052A Srbac 3.92 52 *e*Pn Pn 09 33 36.0 -1.7
MDI Monti di Nese 3.92 322 P Pn 09 33 37.8 -0.1
MDI Monti di Nese 3.92 322 P Pn 09 33 37.0 -0.9
MDI AML AML
comp=E,286µm,0.8s
MDI AML AML
comp=N,298µm,1.3s
KOSI Kohlern 3.93 342 P Pn 09 33 38.3 +0.2
KOSI AML AML
comp=E,792µm,1.2s
KOSI AML AML
comp=N,609µm,0.8s
HCY Herceg Novi 3.93 93 *e*Pn Pn 09 33 37.7 -0.3
HCY Herceg Novi 3.93 93 *e*Pn Pn 09 33 37.9 -0.1
HCY *i* Sn **Sn 09 34 23.2 -1.3**
BRY Bratogost 3.94 86 *e*Pn Pn 09 33 37.8 -0.5
BRY Bratogost 3.94 86 *e*Pn Pn 09 33 37.8 -0.5
BRY *i* Sn **Sn 09 34 23.6 -1.3**
APPI Appiano 3.98 340 P Pn 09 33 39.0 +0.2
APPI AML AML
comp=N,509µm,0.7s
APPI AML AML
comp=E,487µm,0.5s
ABTA Abfaltersbach 4.03 353 *i* Pn Pn 09 33 39.3 -0.1
comp=E,68nm,0.4s,SNR=81
DOB Doboj 4.08 59 *e*Pn Pn 09 33 40.3 +0.3
MGRO Montegrosso 4.12 290 P Pn 09 33 40.0 -0.8
SOKA Soboth 4.15 18 *e*Pn Pn 09 33 40.6 -0.4
comp=E,6.1nm,0.3s
UPM Unac-Piva 4.22 82 *e*Pn Pn 09 33 43.0 +0.8
UPM Unac-Piva 4.22 82 *e*Pn Pn 09 33 42.5 +0.3
UPM *i* Sn **Sn 09 34 30.4 -1.5**
CEME Cevo 4.24 91 *e*Pn Pn 09 33 42.5 +0.3
CEME *i* Sn **Sn 09 34 30.4 -1.6**
BUM Brajici-Budva 4.25 94 *e*Pn Pn 09 33 42.6 +0.3
BUM *i* Sn **Sn 09 34 30.6 -1.7**
NKME Niksic 4.25 88 ⇑*i* Pn Pn 09 33 42.7 +0.3
NKME *i* Sn **Sn 09 34 30.9 -1.5**
RISI Rein 4.27 350 P Pn 09 33 43.3 +0.5
RISI AML AML
comp=E,1138µm,0.4s
RISI AML AML
comp=N,760µm,0.4s
SAOF Saorge 4.29 289 P Pn 09 33 44.4 +1.6
SAOF Saorge 4.29 289 P Pn 09 33 42.5 -0.4
SAOF AML AML
comp=E,119µm,0.8s
SAOF AML AML
comp=N,124µm,1.1s
SAOF Saorge 4.29 289 P Pn 09 33 42.5 -0.4
KOGS Kog 4.30 30 P Pn 09 33 41.7 -1.3
KOGS AML AML
comp=E,3640µm,1.0s
KOGS AML AML
comp=N,3220µm,1.1s
KBA Koelnbreinsper 4.33 1 P Pn 09 33 43.6 -0.1
KBA Koelnbreinsper 4.33 1 *i* Pn Pn 09 33 43.5 -0.1
comp=N,34nm,0.6s,SNR=26
KBA Koelnbreinsper 4.33 1 *e*Pn Pn 09 33 43.5 -0.1
VSL Villasalto 4.33 223 P Pn 09 33 43.2 -0.3
VSL AML AML
comp=E,290µm,0.7s
VSL AML AML
comp=N,234µm,0.6s
SBF Sospel 4.34 287 *e*P Pn 09 33 42.2 -1.4
SBF *e*Sn **Sn 09 34 25.7 -8.9**
comp=N,97nm,0.5s
SBF Sospel 4.34 287 P Pn 09 33 42.8 -0.8
MUGIO Muggio 4.35 318 P Pn 09 33 42.5 -1.3
ROSI Rosskopf 4.37 344 P Pn 09 33 44.5 +0.4
ESCA l'Escarene 4.38 286 P Pn 09 33 43.6 -0.5
TURF col de Turini 4.40 288 P Pn 09 33 44.2 -0.3
FUORN Ofenpass-Fuorn 4.40 333 Pn 09 33 46.0 +1.5
VARE Varese 4.45 316 P Pn 09 33 45.3 +0.2
DRME Dracevica, Mon 4.48 95 *e*Pn Pn 09 33 45.2 -0.2
DRME Dracevica, Mon 4.48 95 ⇑*i* Pn Pn 09 33 45.7 +0.3
DRME *i* Sn **Sn 09 34 36.1 -1.7**
TIP Timpagrande 4.48 142 Pn Pn 09 33 48.7 +3.2
CGL Cagliari Serpe 4.48 222 ⇑P Pn 09 33 45.6 +0.1
PDG Podgorica 4.50 92 ⇑S Sn 09 34 40.1 +1.8
PDG Podgorica 4.50 92 Pn Pn 09 33 45.9 +0.2
TTG Podgorica 4.50 92 *e*Pn Pn 09 33 46.0 +0.3
TTG *i* Sn **Sn 09 34 36.6 -1.7**
EILF Villa Eilenroc 4.50 282 P Pn 09 33 44.3 -1.4
BEHE Becsehely 4.52 33 P Pn 09 33 48.9 +2.9
SPIF crte de Spivo 4.53 289 P Pn 09 33 46.6 +0.4
MVIF Mont Vial 4.55 287 P Pn 09 33 46.1 -0.5
ULC Ulcinj 4.56 98 *e*Pn Pn 09 33 46.8 +0.2
ULC *i* Sn **Sn 09 34 38.1 -1.9**
PLE Pljevlja 4.59 81 *e*Pn Pn 09 33 47.5 +0.4
PLE *i* Sn **Sn 09 34 39.2 -1.6**
VDL Val di Lei 4.59 326 P Pn 09 33 48.6 +1.4
RUDO Rudo 4.61 77 *e*Pn Pn 09 33 47.0 -0.3
RUDO Rudo 4.61 77 *e*Pn Pn 09 33 47.2 -0.1
FETA Feichten 4.62 339 *i* Pn Pn 09 33 48.3 +0.8
comp=N,16nm,0.4s,SNR=20
WTTA Wattenberg 4.65 347 P Pn 09 33 48.9 +0.9
WTTA Wattenberg 4.65 347 *e*Pn Pn 09 33 48.8 +0.8
comp=N,29nm,0.4s,SNR=14
WTTA *e*Sn **Sn 09 34 46.6 +4.3**
comp=N,74nm,0.4s
WTTA Wattenberg 4.65 347 *e*Pn Pn 09 33 48.9 +0.9
WTTA Wattenberg 4.65 347 P Pn 09 33 48.8 +0.9
KOME Kolasin 4.66 87 *e*Pn Pn 09 33 48.5 +0.4
KOME *i* Sn **Sn 09 34 40.8 -1.8**
DAVOX Davos/Dischmat 4.67 331 Pn Pn 09 33 48.4 +0.1
comp=N,12nm,0.3s,baz=140,slow=14,SNR=69
DAVOX Sn **Sn 09 34 37.3 -5.5**
comp=N,4.4nm,0.3s,baz=151,slow=19,SNR=1.6
comp=N,54nm,0.4s
DAVOX Davos/Dischmat 4.67 331 P Pn 09 33 49.4 +1.1
BBLS Lazići 4.68 74 *e*Pn Pn 09 33 49.3 +1.0
BBLS Lazići 4.68 74 *e*Pn Pn 09 33 49.8 +1.5
CALF Calern 4.68 285 P Pn 09 33 47.9 -0.5
ISO Isola 4.69 290 P Pn 09 33 50.9 +2.5
ISO Isola 4.69 290 P Pn 09 33 50.2 +1.7
SQTA Sankt Quirin 4.69 343 Pn 09 33 49.3 +0.8
SQTA Sankt Quirin 4.69 343 P Pn 09 33 49.3 +0.8
SQTA Sankt Quirin 4.69 343 *e*Pn Pn 09 33 49.3 +0.8
comp=N,32nm,0.3s,SNR=29
WATA Walderalm 4.73 347 Pn 09 33 50.4 +1.4
WATA **Sn 09 34 48.2 +3.9**
WATA Walderalm 4.73 347 P Pn 09 33 50.4 +1.4
WATA 09 34 48.2
WATA Walderalm 4.73 347 *e*Pn Pn 09 33 50.4 +1.4
comp=N,18nm,0.3s,SNR=21
WATA *e*Sn **Sn 09 34 48.2 +3.9**
comp=N,61nm,0.3s
PZZ Stroppo 4.74 294 P Pn 09 33 49.0 -0.2
PZZ Stroppo 4.74 294 P Pn 09 33 48.6 -0.6
SCTE Santa Cesarea 4.79 122 Pn Pn 09 33 50.1 +0.3
ARSA Arzberg 4.80 19 *e*Pn Pn 09 33 48.8 -1.1
comp=N,5.9nm,0.3s,SNR=8.0
ARSA *e*Sn **Sn 09 34 42.7 -3.2**
comp=N,23nm,0.5s
ARSA Arzberg 4.80 19 *e*Pn Pn 09 33 48.9 -1.1
MOTA Moosalm 4.83 343 Pn 09 33 51.5 +1.1
MOTA Moosalm 4.83 343 P Pn 09 33 51.5 +1.1
MOTA Moosalm 4.83 343 *e*Pn Pn 09 33 51.5 +1.1
comp=N,26nm,0.6s,SNR=21
BLJ Bijeljina 4.86 63 *e*Pn Pn 09 33 48.3 -2.3
FUSIO Fusio 4.92 321 P Pn 09 33 51.5 -0.1
ZUGS Zugspitze, Sch 4.92 342 *e*Pn Pn 09 33 53.7 +1.9
LMR La Mourre 4.92 279 *e*P Pn 09 33 50.0 -1.6
LMR *e*Sn Sn 09 34 39.7 -9.2
comp=N,16nm,0.6s
LMR La Mourre 4.92 279 P Pn 09 33 51.3 -0.3
CEL Celeste 4.94 154 Pn 09 33 53.3 +1.5
SURF Saint Ours 4.94 293 P Pn 09 33 52.7 +0.7
IVA Berane 4.94 86 *e*Pn Pn 09 33 52.3 +0.4
IVA *i* Sn **Sn 09 34 47.4 -2.0**
TEKS Tekeris 4.95 66 *e*Pn Pn 09 33 50.5 -1.4
TEKS Tekeris 4.95 66 *e*Pn Pn 09 33 52.4 +0.5
BIOA Bad Ischl, Aus 4.96 4 Pn 09 33 51.7 -0.4
BIOA **Sn 09 34 53.0 +3.3**
BIOA Bad Ischl, Aus 4.96 4 *e*Pn Pn 09 33 51.7 -0.4
comp=N,22nm,0.3s,SNR=25
BIOA *e*Sn **Sn 09 34 53.0 +3.3**
comp=N,51nm,0.4s
JAUF Jausiers 4.96 292 P Pn 09 33 52.8 +0.5
PART Garmisch-Parte 4.97 344 *e*Pn Pn 09 33 53.8 +1.6
MMK Mattmark 4.99 313 P Pn 09 33 57.3 +4.6
MMK pmax pmax
comp=Z,29nm,1.0s
RJOB Jochberg 5.00 357 *e*Pn Pn 09 33 53.0 +0.3
RJOB *e*Sn **Sn 09 34 51.5 +0.7**
PVY Plav 5.00 89 *e*Pn Pn 09 33 53.1 +0.3

PVY *i* Sn **Sn** 09 34 48.7 -2.2
SJES Sjenica 5.01 82 *e*Pn **Pn** 09 33 53.9 +1.0
RETA Reutte 5.04 341 *e*Pn **Pn** 09 33 54.4 +1.1
comp=Z,21nm,0.4s,SNR=14
MBDF Montbardon 5.05 295 *e*P **Pn** 09 33 53.3 -0.1
MBDF *e*Sn Sn 09 34 42.8 -9.4
comp=Z,31nm,0.6s
MBDF Montbardon 5.05 295 P **Pn** 09 33 52.3 -1.1
LLS Linth-Limmern 5.06 326 P **Pn** 09 33 55.2 +1.5
LLS pmax pmax
comp=Z,89nm,0.9s
CREF Crivoux 5.09 293 P **Pn** 09 33 54.6 +0.5
OBER Oberstdorf 5.09 337 *e*Pn **Pn** 09 33 54.8 +0.9
DAVA Damuels 5.11 334 *i* Pn **Pn** 09 33 55.5 +1.2
comp=Z,38nm,0.5s,SNR=21
DAVA *e*Sn **Sn** 09 34 57.8 +4.1
comp=Z,54nm,0.7s
DAVA Damuels 5.11 334 *e*Pn **Pn** 09 33 55.5 +1.2
RRL Rocca Remolon 5.11 297 P **Pn** 09 33 55.9 +1.6
RRL pmax pmax
comp=Z,44nm,0.8s
FLAF Flassans-sur-I 5.11 279 P **Pn** 09 33 53.4 -0.8
OGAG Argentiere 5.12 292 P **Pn** 09 33 57.4 +3.1
DIVS Divibare 5.14 72 Pn **Pn** 09 33 54.7 0.0
DIVS Divibare 5.14 72 *e*Pn **Pn** 09 33 54.6 0.0
DIVS Divibare 5.14 72 *e*Pn **Pn** 09 33 55.1 +0.4
MOA Molln 5.16 8 *e*Pn **Pn** 09 33 54.7 -0.2
comp=Z,13nm,0.5s,SNR=9.2
MOA *e*Sn **Sn** 09 34 55.3 +0.6
comp=Z,34nm,0.4s
MOA Molln 5.16 8 *e*Pn **Pn** 09 33 54.7 -0.2
TIR Tirane 5.17 103 ⇑S **Sn** 09 34 54.9 0.0
TIR Tirane 5.17 103 **Pn** 09 33 55.1 +0.2
TIR Tirane 5.17 103 P **Pn** 09 33 55.1 +0.2
OGDI Digne 5.19 288 P **Pn** 09 33 57.0 +1.6
MORH Mrgy, Hungar 5.22 47 P **Pn** 09 33 58.4 +2.7
BNI Bardonecchia 5.23 298 P **Pn** 09 33 57.7 +1.7
BNI pmax pmax
comp=Z,28nm,1.1s
VLO Vlora 5.25 114 **Pn** 09 33 57.9 +1.8
VLO Vlora 5.25 114 P **Pn** 09 33 57.9 +1.8
DIX Grande Dixence 5.31 311 P **Pn** 09 33 58.5 +1.3
BLAF les Blancs 5.34 285 P **Pn** 09 33 57.9 +0.5
FRGS Fruska Gora 5.36 61 *e*Pn **Pn** 09 33 56.7 -0.9
FRGS Fruska Gora 5.36 61 *e*Pn **Pn** 09 33 56.9 -0.7
LPG La Plagne 5.38 303 *e*P **Pn** 09 33 57.3 -0.9
LPG *e*Sn Sn 09 34 50.9 -10
comp=Z,7.9nm,0.3s
LPG La Plagne 5.38 303 P **Pn** 09 33 58.7 +0.5
UBR Ueberruh 5.39 337 *e*Pn **Pn** 09 33 58.6 +0.6
MPLH Magyarpolny 5.40 33 P **Pn** 09 34 00.4 +2.4
LPL La Plagne 5.41 303 *e*P **Pn** 09 33 57.3 -1.1
LPL *e*Sn Sn 09 34 51.4 -10
comp=Z,13nm,0.4s
LPL La Plagne 5.41 303 P **Pn** 09 33 57.3 -1.1
RONA Rosalia, Austr 5.42 23 **Pn** 09 33 58.0 -0.4
RONA Rosalia, Austr 5.42 23 *i* Pn **Pn** 09 33 58.0 -0.4
comp=Z,8.9nm,0.2s,SNR=11
ARTF Artigues 5.46 281 P **Pn** 09 33 58.9 -0.1
TRUS Trudelj 5.46 72 *e*Pn **Pn** 09 33 59.7 +0.7
SOP Sopron 5.48 25 P **Pn** 09 33 59.7 +0.4
SOP pmax pmax
comp=Z,26nm,0.9s
SOP Sopron 5.48 25 P **Pn** 09 33 59.9 +0.6
CONA Conrad Observa 5.52 19 *i* Pn **Pn** 09 33 59.2 -0.6
comp=Z,11nm,0.3s,SNR=15
EGYH Egyhazaskeszo 5.52 31 P **Pn** 09 34 01.4 +1.7
SENIN Lac Senin/Sane 5.54 313 Pn **Pn** 09 34 01.9 +1.6
MLYF Mely 5.55 285 P **Pn** 09 34 01.2 +1.0
RSL Roselend 5.55 304 P **Pn** 09 34 03.6 +3.2
RSL pmax pmax
comp=Z,31nm,0.7s
RSL Roselend 5.55 304 P **Pn** 09 34 00.7 +0.3
FUR Furstenfeldbru 5.58 347 P **Pn** 09 34 01.9 +1.2
FUR pmax pmax
comp=Z,72nm,1.0s
BSTF la Bastide-des 5.61 284 P **Pn** 09 34 01.2 +0.1
GRUS Gruza 5.61 76 *e*Pn **Pn** 09 34 01.1 0.0
ZUR Degenried 5.66 326 P **Pn** 09 34 03.9 +2.2
ZUR pmax pmax
comp=Z,35nm,0.7s
OGSI Sixt 5.67 308 P **Pn** 09 34 02.9 +1.0
SMRF Simiane la Rot 5.68 285 *e*P **Pn** 09 34 01.7 -0.3
SMRF *e*Sn Sn 09 34 57.7 -10
comp=Z,9.7nm,0.5s
ORIF Oris-en-Rattie 5.71 295 *e*P **Pn** 09 34 01.8 -0.7
ORIF *e*Sn Sn 09 34 58.3 -10
comp=Z,15nm,0.5s
ORIF Oris-en-Rattie 5.71 295 P **Pn** 09 34 05.1 +2.6
ORIF pmax pmax
comp=Z,42nm,1.1s
ORIF Oris-en-Rattie 5.71 295 P **Pn** 09 34 04.1 +1.6
AIGLE Aigle 5.72 311 P **Pn** 09 34 03.8 +1.2
RUSF Rustrel 5.74 285 P **Pn** 09 34 03.3 +0.5
ARBF Arbois 5.79 280 P **Pn** 09 34 03.5 0.0
KEK Kerkira 5.84 119 Pn **Pn** 09 34 05.3 +1.1
SELS Selova 5.84 83 *e*Pn **Pn** 09 34 04.1 -0.1
CSKK Cskako 5.85 36 P **Pn** 09 34 07.1 +2.8
OHR Ohrid 5.91 103 *e*Pn **Pn** 09 34 06.4 +1.2
OHR Ohrid 5.91 103 *i* Pn **Pn** 09 34 06.0 +0.8
GRN Grenoble 5.92 297 P **Pn** 09 34 07.5 +2.2
SULZ Cheisacher 5.97 325 P **Pn** 09 34 05.9 -0.1
SAUF chteau de Sau 6.01 284 P **Pn** 09 34 06.8 +0.3
SLE Schleitheim 6.01 328 P **Pn** 09 34 07.4 +0.9
SLE pmax pmax
comp=Z,33nm,0.9s
SLE Schleitheim 6.01 328 P **Pn** 09 34 05.7 -0.8
BALST Balsthal 6.01 322 P **Pn** 09 34 06.2 -0.4
KBN Korca 6.08 108 **Pn** 09 34 08.6 +1.1
KBN Korca 6.08 108 P **Pn** 09 34 08.6 +1.1
OGSM Saint Maurice 6.09 301 P **Pn** 09 34 09.2 +1.5
ZST Bratislava 6.11 25 *e*P **Pn** 09 34 06.9 -0.9
ZST *e* 09 35 13.9
GEC2 GERESS Array S 6.11 3 Pn **Pn** 09 34 07.2 -0.8
GEC2 GERESS Array S 6.11 3 *e*Pn **Pn** 09 34 06.8 -1.2
GERES GERESS Array B 6.11 3 Pn **Pn** 09 34 06.3 -1.7
comp=Z,1.1nm,0.3s,baz=190,slow=14,SNR=32
GERES Sn **Sn** 09 35 15.6 -2.7
comp=Z,8.8nm,0.3s,baz=175,slow=24,SNR=9.5
comp=Z,2.8nm,0.4s
GERES GERESS Array B 6.11 3 **Pn** 09 34 06.5 -1.5
CKRC Cesky Krumlov 6.13 7 *e*PN **Pn** 09 34 06.5 -1.6
CKRC *e*SN **Sn** 09 35 14.2 -4.3
SKO Skopje 6.17 94 *i* Pn **Pn** 09 34 08.7 0.0
GIMEL St. Georges / 6.22 310 P **Pn** 09 34 10.2 +0.8
BOURR Bourrignon 6.27 320 P **Pn** 09 34 09.8 -0.4
BOVS Bovan 6.29 79 *e*Pn **Pn** 09 34 10.1 -0.3
FELD Feldberg im Sc 6.29 326 P **Pn** 09 34 10.0 -0.5
MODS Modra-Piesok 6.32 26 *e*P **Pn** 09 34 12.2 +1.4
MODS *e* 09 35 19.5
BRANT Les Verrieres 6.35 314 P **Pn** 09 34 11.4 +0.2
BARS Barje 6.35 86 *e*Pn **Pn** 09 34 11.4 +0.2
CABF La Chapelle 6.36 310 *e*P **Pn** 09 34 11.3 -0.1
CABF *e*Sn Sn 09 35 14.1 -10
comp=Z,3.2nm,0.3s
OG35 Corcelles 6.37 304 P **Pn** 09 34 10.9 -0.7
KHC Kasperske Hory 6.39 2 Pn **Pn** 09 34 10.3 -1.5
KHC Kasperske Hory 6.39 2 *e*P **Pn** 09 34 11.1 -0.7
KHC *e* 09 35 20.5
KHC MLR MLR
comp=Z,400nm,5.9s
KHC Kasperske Hory 6.39 2 *e*PN **Pn** 09 34 11.1 -0.7
KHC *e*SN **Sn** 09 35 20.5 -4.6
KHC AMS AMS 09 37 20.0
comp=Z,400nm,5.9s
KIZ Kirchzarten 6.39 326 P **Pn** 09 34 10.8 -1.0
WET Wettzell 6.40 358 P **Pn** 09 34 12.2 +0.3
WET pmax pmax
comp=Z,17nm,0.7s
WET Wettzell 6.40 358 *e*Pn **Pn** 09 34 10.4 -1.5
WET *e*Sn **Sn** 09 35 22.5 -2.8
CHMF Charmoille 6.46 316 P **Pn** 09 34 12.2 -0.5
VIVF Saint-Julien-l 6.51 292 *e*P **Pn** 09 34 12.8 -0.6
VIVF *e*Sn Sn 09 35 16.6 -11
comp=Z,0.9nm,0.3s
VIVF Saint-Julien-l 6.51 292 P **Pn** 09 34 12.4 -1.0
BFO Black Forest 6.54 330 Pn **Pn** 09 34 12.9 -0.9
BFO Black Forest 6.54 330 P **Pn** 09 34 12.9 -0.9
BFO Black Forest 6.54 330 *e*Pn **Pn** 09 34 14.6 +0.8
RIVEL MONT RIVEL 6.54 310 P **Pn** 09 34 13.4 -0.5
VOGT Vogtsburg - To 6.59 326 P **Pn** 09 34 13.8 -0.7
MOF Molkenrain 6.65 322 P **Pn** 09 34 14.4 -1.0

BOUC Bouclans 6.66 315 P **Pn** 09 34 15.0 -0.5
ZAGS Zajecar 6.69 78 *e*Pn **Pn** 09 34 16.3 +0.4
KRUC Moravsky 6.70 18 P **Pn** 09 34 17.4 +1.4
KRUC pmax pmax
comp=Z,12nm,0.8s
KRUC Moravsky 6.70 18 *e*PN **Pn** 09 34 14.1 -1.9
KRUC *e*SN **Sn** 09 35 28.2 -4.5
BZS Buzias 6.71 62 P **Pn** 09 34 17.0 +0.9
BZS pmax pmax
comp=Z,17nm,0.8s
SSB Saint Sauveur 6.72 295 Pn **Pn** 09 34 17.1 +0.7
SSB Saint Sauveur 6.72 295 P **Pn** 09 34 17.1 +0.7
SSB Saint Sauveur 6.72 295 P **Pn** 09 34 16.6 +0.3
TREC Trest 6.74 13 P **Pn** 09 34 15.0 -1.6
TREC pmax pmax
comp=Z,45nm,0.7s
TREC Trest 6.74 13 AMS AMS 09 36 50.0
comp=Z,300nm,9.6s
HINF Hinteralfeld 6.75 321 *e*P **Pn** 09 34 15.7 -1.1
HINF *e*Sn Sn 09 35 23.5 -10
comp=Z,19nm,0.4s
HINF Hinteralfeld 6.75 321 P **Pn** 09 34 15.7 -1.1
STIP Stip 6.77 96 *i* Pn **Pn** 09 34 18.8 +1.9
RONF Ronchamp 6.78 319 P **Pn** 09 34 16.7 -0.3
JAVC Velka Javorina 6.87 26 *e*PN **Pn** 09 34 17.5 -0.9
ECH Echery 6.92 324 Pn **Pn** 09 34 18.1 -0.9
ECH Echery 6.92 324 P **Pn** 09 34 18.1 -0.9
ECH Echery 6.92 324 P **Pn** 09 34 17.9 -1.1
LASF Ste Croix 6.92 284 *e*P **Pn** 09 34 18.2 -0.8
LASF *e*Sn Sn 09 35 27.4 -11
comp=Z,0.5nm,0.2s
LASF *e*Sg **Sb** 09 36 03.9 +3.4
comp=Z,4.5nm,0.6s
ZAPS Zavoj 6.95 82 *e*Pn **Pn** 09 34 20.7 +1.2
VRAC Vranov 6.98 19 Pn **Pn** 09 34 18.4 -1.4
comp=Z,1.1nm,0.3s,baz=206,slow=16,SNR=6.4
VRAC Sn **Sn** 09 35 32.4 -7.1
comp=Z,0.5nm,0.3s,baz=299,slow=19,SNR=1.9
VRAC LR LR 09 37 15.7
comp=Z,104nm,19.1s,baz=208,slow=41
comp=Z,3.1nm,0.3s
VRAC Vranov 6.98 19 *e*PN **Pn** 09 34 19.2 -0.6
VRAC *e*SN **Sn** 09 35 35.2 -4.3
VYHS Vyhne 6.98 33 *e*P **Pn** 09 34 19.9 +0.1
BLKB Belogradchik 7.00 80 ⇑P **Pn** 09 34 19.8 -0.3
BLKB ⇑S **Sn** 09 35 38.6 -1.3
PSZ Piszkesteto 7.01 40 P **Pn** 09 34 24.5 +4.2
PSZ Piszkesteto 7.01 40 P **Pn** 09 34 22.9 +2.6
SIRR Siria 7.01 57 ⇓P **Pn** 09 34 19.8 -0.4
CDF Champ du Feu 7.02 326 *e*P **Pn** 09 34 19.4 -1.0
CDF *e*Sn Sn 09 35 30.2 -10
comp=Z,3.4nm,0.3s
CDF Champ du Feu 7.02 326 P **Pn** 09 34 19.4 -1.0
ROTZ Rotzenmuhle 7.05 355 *e*Pn **Pn** 09 34 19.9 -0.9
ROTZ *e*Sn **Sn** 09 35 36.3 -5.1
HAU Haudompre 7.13 320 *e*P **Pn** 09 34 21.2 -0.6
HAU *e*Sn Sn 09 35 32.7 -10
comp=Z,74nm,0.6s
HAU Haudompre 7.13 320 P **Pn** 09 34 20.9 -0.9
VAY Valandovo 7.13 98 *e*Pn **Pn** 09 34 22.3 +0.4
VAY Valandovo 7.13 98 *i* Pn **Pn** 09 34 22.1 +0.1
GOPC GO Pecny, Ondr 7.26 8 *e*P **Pn** 09 34 23.0 -0.6
GOPC *e* 09 35 41.1
GOPC GO Pecny, Ondr 7.26 8 *e*PN **Pn** 09 34 23.0 -0.6
GOPC *e*SN **Sn** 09 35 41.1 -5.2
PRU Pruhonice 7.30 7 *e*P **Pn** 09 34 23.1 -1.2
PRU *e* 09 35 42.0
PRU MLR MLR
comp=Z,300nm,5.9s
PRU Pruhonice 7.30 7 *e*PN **Pn** 09 34 23.1 -1.2
PRU *e*SN **Sn** 09 35 42.0 -5.5
PRU AMS AMS 09 39 10.0
comp=Z,300nm,5.9s
CIEL Dossenheim-sur 7.32 328 P **Pn** 09 34 23.8 -0.6
CIEL S **Sn** 09 35 47.5 -0.4
KKB Krupnik 7.39 93 P **Pn** 09 34 26.1 +0.6
GZR Gura Zlata 7.40 66 ⇑P **Pn** 09 34 26.0 +0.4
VTS Vitosha 7.41 88 ⇑P **Pn** 09 34 26.2 +0.3
VTS ⇑S **Sn** 09 35 49.4 -0.9
VTS Vitosha 7.41 88 Pn **Pn** 09 34 26.2 +0.3
VTS Vitosha 7.41 88 P **Pn** 09 34 26.2 +0.3
KNT Kendrikon 7.41 99 P **Pn** 09 34 27.0 +1.2
KNT pmax pmax
comp=Z,20nm,0.7s
LIT Litokhoron 7.48 108 Pn **Pn** 09 34 25.6 -1.1
LIT Litokhoron 7.48 108 P **Pn** 09 34 25.6 -1.1
NKC Novy Kostel 7.51 356 *e*P **Pn** 09 34 26.1 -1.0
NKC *e* 09 35 47.3
NKC MLR MLR
comp=Z,300nm,15.4s
NKC Novy Kostel 7.51 356 *e*PN **Pn** 09 34 26.1 -1.0
NKC *e*SN **Sn** 09 35 47.3 -5.2
NKC AMS AMS 09 38 10.0
comp=Z,300nm,15.4s
KEST Kesra 7.61 204 Pn **Pn** 09 34 30.9 +2.3
comp=Z,1.0nm,0.3s,baz=41,slow=9.3,SNR=11
KEST Sn **Sn** 09 35 55.5 +0.4
baz=48,slow=22
KEST LR LR 09 37 37.1
comp=Z,268nm,18.1s,baz=170,slow=39
comp=Z,8.9nm,0.7s
MORC Moravsky Berou 7.65 22 ⇓P **Pn** 09 34 28.7 -0.4
MORC Moravsky Berou 7.65 22 P **Pn** 09 34 31.3 +2.2
MORC pmax pmax
comp=Z,12nm,1.1s
MORC Moravsky Berou 7.65 22 *e*PN **Pn** 09 34 30.1 +1.0
SMF Signal de Mont 7.71 304 *e*P **Pn** 09 34 29.5 -0.4
SMF *e*Sn Sn 09 35 46.5 -11
comp=Z,12nm,0.4s
SMF Signal de Mont 7.71 304 P **Pn** 09 34 28.4 -1.5
KRLC Kraliky 7.74 17 *e*P **Pn** 09 34 30.0 -0.3
KRLC MLR MLR
comp=Z,200nm,12.9s
KRLC Kraliky 7.74 17 *e*PN **Pn** 09 34 30.0 -0.3
KRLC AMS AMS 09 37 40.0
comp=Z,200nm,12.9s
PAGF Fort de Pagny 7.81 321 *e*P **Pn** 09 34 30.8 -0.4
PAGF *e*Sn Sn 09 35 48.6 -11
comp=Z,9.0nm,0.3s
FILF Fillols 7.83 272 P **Pn** 09 34 32.5 +0.9
SOH Sokhos 7.84 101 P **Pn** 09 34 32.5 +0.8
SOH pmax pmax
comp=Z,19nm,0.9s
DRGR 7.89 56 ⇓P **Pn** 09 34 32.8 +0.4
DRGR 7.89 56 P **Pn** 09 34 35.2 +2.8
DRGR pmax pmax
comp=Z,11nm,0.8s
SFTF Sexfontaines 7.91 316 *e*P **Pn** 09 34 32.3 -0.2
SFTF *e*Sn Sn 09 35 51.1 -11
comp=Z,1.3nm,0.2s
DPC Dobruska-Polom 7.91 15 *e*P **Pn** 09 34 30.6 -2.0
DPC MLR MLR
comp=Z,200nm,8.8s
DPC Dobruska-Polom 7.91 15 *e*PN **Pn** 09 34 30.6 -2.0
DPC AMS AMS 09 37 40.0
comp=Z,200nm,8.8s
MMB Musomiste 7.92 95 P **Pn** 09 34 33.3 +0.5
SRS Serrai 7.93 98 P **Pn** 09 34 33.2 +0.3
SRS pmax pmax
comp=Z,32nm,0.8s
MOX Moxa 7.97 353 P **Pn** 09 34 34.5 +1.0
MOX pmax pmax
comp=Z,13nm,0.7s
MOX Moxa 7.97 353 *e*Pn **Pn** 09 34 32.1 -1.3
MOX *e*Sn **Sn** 09 35 59.4 -4.5
LOR Lormes 8.00 308 *e*P **Pn** 09 34 33.5 -0.4
baz=124
LOR *e*Sn Sn 09 35 53.3 -11
comp=Z,12nm,0.4s
LOR Lormes 8.00 308 P **Pn** 09 34 30.7 -3.2
LOR Lormes 8.00 308 P **Pn** 09 34 33.0 -0.9
UPC Upice 8.00 13 P **Pn** 09 34 35.9 +2.0
UPC pmax pmax
comp=Z,9.0nm,1.0s
UPC Upice 8.00 13 *e*PN **Pn** 09 34 33.2 -0.7
UPC AMS AMS 09 37 30.0
comp=Z,300nm,11.0s
MTLF Montolieu 8.05 278 *e*P **Pn** 09 34 34.5 -0.1
MTLF *e*Sn Sn 09 35 54.5 -11
comp=Z,0.3nm,0.2s
MTLF Montolieu 8.05 278 P **Pn** 09 34 35.0 +0.4
AVF Avril sur Loir 8.08 303 *e*P **Pn** 09 34 33.8 -1.0
AVF *e*Sn Sn 09 35 54.2 -12
comp=Z,5.7nm,0.5s

AVF Avril sur Loir 8.08 303 P **Pn** 09 34 35.0 +0.2
LOT Lotru 8.09 67 ⇓P **Pn** 09 34 34.3 -0.8
OSTC Ostas 8.09 14 *e*PN **Pn** 09 34 34.0 -1.0
CHVC Chvalec 8.09 13 *e*PN **Pn** 09 34 34.5 -0.5
MEZF Maizieres J'vi 8.10 318 *e*P **Pn** 09 34 35.1 0.0
MEZF *e*Sn Sn 09 35 55.3 -12
comp=Z,24nm,0.7s
SSF Saint Saulge 8.11 305 *e*P **Pn** 09 34 34.7 -0.6
SSF *e*Sn Sn 09 35 55.5 -12
comp=Z,4.4nm,0.3s
ABH Alteburg 8.13 333 P **Pn** 09 34 36.4 +0.8
SAVF Savonnieres en 8.14 319 *e*P **Pn** 09 34 35.5 -0.2
SAVF *e*Sn Sn 09 35 56.6 -11
comp=Z,11nm,0.6s
TNS Taunus Mts 8.16 338 P **Pn** 09 34 34.6 -1.4
TNS pmax pmax
comp=Z,15nm,0.6s
TNS Taunus Mts 8.16 338 *e*Pn **Pn** 09 34 37.7 +1.7
MESR Meseseni 8.21 54 ⇓P **Pn** 09 34 37.3 +0.6
BGF Bois d'Agland 8.29 301 *e*P **Pn** 09 34 37.4 -0.4
BGF *e*Sn Sn 09 36 00.1 -12
comp=Z,5.1nm,0.3s
CAF Calviac 8.33 289 *e*P **Pn** 09 34 38.4 +0.1
CAF *e*Sn Sn 09 36 01.2 -12
comp=Z,5.8nm,0.8s
WLF Walferdange 8.46 327 *e*Pn **Pn** 09 34 40.7 +0.6
CLL Collm 8.57 359 Pn **Pn** 09 34 42.0 +0.5
CLL Collm 8.57 359 P **Pn** 09 34 42.0 +0.5
CLL Collm 8.57 359 *e*Pn **Pn** 09 34 42.0 +0.5
CLL *ex* x 09 34 53.0
CLL *e*Sn Sn 09 36 00.0 -18
CLL *ex* x 09 36 22.0
CLL *ex* x 09 36 30.0
CLL *ex* x 09 36 37.0
CLL Lm MLR 09 37 00.0
comp=N,100nm,18.7s
CLL Lm MLR 09 37 00.0
comp=E,200nm,18.6s
CLL Lm MLR 09 37 00.0
comp=Z,100nm,18.0s
CLL *e*Sg **Sg** 09 37 15.0 +3.2
comp=Z,64nm,1.2s
TCF Toulx Ste Croi 8.60 298 *e*P **Pn** 09 34 42.0 -0.1
TCF *e*Sn Sn 09 36 08.4 -11
comp=Z,2.6nm,0.5s
RZN Rozhen 8.63 93 P **Pn** 09 34 43.1 +0.5
ITM Ithomi 8.71 127 **Pn** 09 34 43.8 +0.1
HYF Humbligny 8.73 305 *e*P **Pn** 09 34 43.4 -0.4
HYF *e*Sn Sn 09 36 10.6 -12
RJF Les Rejaudoux 8.79 291 *e*P **Pn** 09 34 44.2 -0.4
RJF *e*Sn Sn 09 36 12.0 -12
comp=Z,2.3nm,0.5s
RJF Les Rejaudoux 8.79 291 P **Pn** 09 34 45.3 +0.7
MONQ Montcuq 8.86 285 P **Pn** 09 34 45.5 -0.1
LFF La Frestale 9.26 288 *e*P **Pn** 09 34 50.9 -0.1
GIVF Givet 9.35 325 *e*P **Pn** 09 34 51.8 -0.4
GIVF *e*Sn Sn 09 36 25.1 -13
comp=Z,2.5nm,0.3s
RDO Rodhopi 9.35 96 Pn **Pn** 09 34 51.9 -0.3
EPF Esparros 9.43 276 *e*P **Pn** 09 34 54.0 +0.5
BAIF Baives 9.58 323 *e*P **Pn** 09 34 55.2 -0.3
BAIF *e*Sn Sn 09 36 30.7 -13
comp=Z,0.4nm,0.1s
MLR Muntele Rosu 9.58 69 LR LR 09 39 28.4
comp=Z,592nm,20.1s,baz=254,slow=43
BURAR Bucovina Array 9.79 56 ⇑Pn **Pn** 09 34 58.3 -0.1
BURAR Bucovina Array 9.79 56 Pn **Pn** 09 35 00.9 +2.4
BUR08 Bucovina Ar. S 9.79 56 Pn **Pn** 09 35 01.5 +3.1
ETSF Etsaut 10.10 276 *e*P **Pn** 09 35 02.9 +0.2
ETSF *e*Sn Sn 09 36 43.6 -13
comp=Z,0.3nm,0.2s
MFF Saint Martin d 10.24 297 *e*P **Pn** 09 35 03.7 -0.9
FLN La Foliniere 11.28 307 *e*P **Pn** 09 35 18.6 -0.1
FLN *e*Sn Sn 09 37 11.2 -14
comp=Z,1.1nm,0.2s
FLN La Foliniere 11.28 307 P **Pn** 09 35 15.6 -3.1
IDI Anoyia 11.76 125 Pn **Pn** 09 35 25.6 +0.2
comp=Z,0.8nm,0.3s,baz=335,slow=14,SNR=2.2
IDI Sn Sn 09 37 27.1 -10
comp=Z,0.6nm,0.3s,baz=95,slow=24,SNR=2.2
IDI LR LR 09 41 13.2
comp=Z,51nm,19.4s,baz=283,slow=44
comp=Z,4.0nm,0.5s
SGMF Saint Gilles 12.33 302 *e*P **Pn** 09 35 32.9 -0.2
QUIF Quistinic 12.61 300 *e*P **Pn** 09 35 36.3 -0.5
ESDC Sonseca Array 13.27 262 Pn **Pn** 09 35 44.8 -1.2
comp=Z,0.1nm,0.3s,baz=66,slow=14,SNR=12
ESDC LR LR 09 40 45.9
comp=Z,175nm,20.0s,baz=46,slow=37
comp=Z,1.5nm,0.7s
AKASG Malin Array Be 13.56 49 Pn **Pn** 09 35 48.2 -1.6
baz=238,slow=13
AKASG LR LR 09 41 45.7
comp=Z,106nm,19.4s,baz=238,slow=41
AKBB Malin Array Si 13.56 49⇑*e*P **Pn** 09 35 52.8 +3.0
AKBB pmax pmax
comp=Z,4.0nm,1.2s
NACGM Naroch 15.07 31⇓*e*P **Pn** 09 36 12.4 +2.0
baz=221
BR131 Keskin Array S 15.68 94⇑*e*P **P** 09 36 22.1 -0.7
BRTR Keskin Array B 15.68 94 Pn **Pn** 09 36 19.5 +0.8
comp=Z,0.1nm,0.3s,baz=291,slow=9.1,SNR=2.7
BRTR LR LR 09 43 25.7
comp=Z,253nm,19.3s,baz=298,slow=41
comp=Z,0.6nm,0.7s
EKA Eskdalemuir Ar 16.48 325 Pn **P** 09 36 30.4 -1.0
baz=138,slow=14
HFS Hagfors 17.42 1 LR LR 09 43 40.9
comp=Z,50nm,19.0s,baz=184,slow=38
ANN Anapa 17.62 75 *e*P **Pn** 09 36 37.7 -5.4
ANN *e*S **Sn** 09 39 50.0 -10
ANN pmax pmax
comp=Z,46nm,1.4s
VSU Vasula 17.87 24⇑*e*P **P** 09 36 46.8 0.0
VSU pmax pmax
comp=Z,39nm,1.0s
NB2 NORSAR Subarra 18.36 357 P **Pn** 09 36 52.0 -0.1
comp=Z,2.7nm,0.8s,baz=175,slow=11
NOA NORSAR Array B 18.36 357 P **Pn** 09 36 51.6 -0.5
baz=176,slow=12,SNR=4.1
NOA LR LR 09 44 42.7
comp=Z,58nm,19.4s,baz=175,slow=40
comp=Z,1.0nm,0.7s
VSR Storozhevoye 19.57 55 *e*P **P** 09 37 04.4 -1.1
VSR pmax pmax
comp=Z,5.0nm,0.4s
OBN Obninsk 19.61 43 *e*P **P** 09 37 05.5 -0.4
OBN pmax pmax
comp=Z,10.0nm,0.7s
OBN MLR MLR
comp=Z,103nm,19.0s
VORR Voronezh 19.72 54 *e*P **P** 09 37 07.3 +0.2
VORR pmax pmax
comp=Z,70nm,0.5s
LPSR Galich'ya Gora 19.84 51 *e*P **P** 09 37 07.8 -0.7
LPSR pmax pmax
comp=Z,9.0nm,0.6s
MMAI Mount Meron Ar 20.00 112 P **P** 09 37 10.6 +0.2
comp=Z,16nm,0.9s,baz=324,slow=9.5,SNR=10.0
MMAI LR LR 09 46 46.4
comp=Z,76nm,19.1s,baz=266,slow=42
comp=Z,16nm,0.9s
FINES FINESS Array B 20.26 18 P **P** 09 37 12.1 -0.8
comp=Z,3.8nm,0.7s,baz=196,slow=9.5,SNR=9.9
comp=Z,3.8nm,0.7s
FINES FINESS Array B 20.26 18 P **P** 09 37 11.7 -1.2
FIA1 FINESS Array S 20.26 18 P **P** 09 37 12.3 -0.6
FIA1 IAmb IAmb 09 37 19.7
comp=Z,10.0nm,0.8s
KIV Kislovodsk 21.44 77 *e*P **P** 09 37 27.5 +1.5
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,35nm,14.0s
ASF Jabal al Asfar 21.52 112 P **P** 09 37 28.4 +1.6
comp=Z,5.9nm,0.9s,baz=269,slow=4.3,SNR=9.3
comp=Z,5.9nm,0.9s
KBZ Khabaz 21.62 77 P **P** 09 37 28.7 +0.9
comp=Z,7.0nm,0.9s,baz=299,slow=8.8,SNR=10
KBZ LR LR 09 48 31.8
comp=Z,65nm,18.1s,baz=272,slow=44
comp=Z,7.0nm,0.9s
KBZ Khabaz 21.62 77⇓*e*P **P** 09 37 29.2 +1.4
EIL Elat 21.80 120 LR LR 09 47 39.8
comp=Z,43nm,20.8s,baz=27,slow=41
ZEI Tsey 22.50 79 *e*P **P** 09 37 39.9 +2.5

ZEI				pmax	pmax		
	comp=Z,10.0nm,1.8s						
GNI	**Garni**	**23.73**	**86**⇑	*e*P	**P**	**09 37 49.8**	**-0.2**
GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
KLMR	**Klimovskoe**	**24.09**	**32**	*e*P	**P**	**09 37 56.3**	**+3.2**
KLMR				*e*		09 38 22.1	
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
KLMR	**Klimovskoe**	**24.09**	**32**	*e*P	**P**	**09 37 56.3**	**+3.2**
KLMR				AMP		09 37 59.3	
	comp=Z,13nm,1.1s						
KLMR				*e*PP	**PnPn**	**09 38 22.1**	**+0.3**
KIRV	**Kirov**	**27.46**	**42**	LR	LR	09 50 24.5	
	comp=Z,114nm,18.2s,baz=245,slow=39						
TOA0	**Torodi Ar. Sit**	**31.12**	**202**	P	**P**	**09 38 56.3**	**-0.1**
TOA0				IAmb	IAmb	09 38 58.0	
	comp=Z,4.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P	**P**	**09 38 55.9**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=16,slow=8.8,SNR=21						
	comp=Z,4.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P	**P**	**09 38 55.5**	**-0.9**
TORD				IAmb	IAmb	09 38 57.9	
	comp=Z,3.2nm,0.8s						
AKTO	**Aktyubinsk**	**31.35**	**60**	LR	LR	09 53 15.7	
	comp=Z,76nm,18.9s,baz=282,slow=40						
ARU	**Arti**	**31.81**	**49**	LR	LR	09 51 35.7	
	comp=Z,53nm,18.4s,baz=274,slow=36						
ARU	**Arti**	**31.81**	**49**	P	**P**	**09 39 00.8**	**-1.4**
ARU	**Arti**	**31.81**	**49**	*c i*P	**P**	**09 39 01.5**	**-0.7**
ARU						09 40 02.0	
ARU						09 41 49.0	
ARU				S	**S**	**09 44 12.4**	**-0.3**
ARU				SS	**SnSn**	**09 45 57.4**	**-2.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	**Akbulak array**	**32.70**	**62**	P	**P**	**09 39 10.2**	**+0.2**
SVE	**Sverdlovsk**	**32.99**	**48**	*e*P	**P**	**09 39 14.6**	**+2.1**
SVE				pmax	pmax		
	comp=Z,11nm,1.0s						
GEYT	**Alibeck**	**34.28**	**83**	P	**P**	**09 39 24.5**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=303,slow=12,SNR=3.9						
GEYT				LR	LR	09 57 44.1	
	comp=Z,35nm,18.6s,baz=323,slow=44						
	comp=Z,2.6nm,0.8s						
BBTS	**Babate**	**37.88**	**231**	LR	LR	09 55 34.2	
	comp=Z,83nm,18.5s,baz=26,slow=36						
BRVK	**Borovoye**	**38.67**	**54**	P	**P**	**09 40 01.1**	**-0.2**
BRVK				IAmb	IAmb	09 40 04.0	
	comp=Z,6.6nm,0.7s						
BRVK	**Borovoye**	**38.67**	**54**⇓	*e*P	**P**	**09 40 01.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BVAR	**Borovoye Array**	**38.74**	**54**	LR	LR	09 57 17.6	
	comp=Z,73nm,20.6s,baz=286,slow=38						
DBIC	**Dimbokro**	**39.30**	**209**	P	**P**	**09 40 07.2**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=14,slow=8.3,SNR=3.6						
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**41.26**	**69**	P	**P**	**09 40 24.0**	**+1.0**
KK31	**Karatay Array**	**41.26**	**69**	P	**P**	**09 40 24.0**	**+1.0**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KKAR	**Karatay Array**	**41.26**	**69**	P	**P**	**09 40 23.9**	**+1.0**
KKAR	**Karatay Array**	**41.26**	**69**	P	**P**	**09 40 23.3**	**+0.4**
KKAR	**Karatay Array**	**41.26**	**69**	P	**P**	**09 40 23.9**	**+1.0**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WSAR	**Wadi Sarin**	**42.21**	**103**	LR	LR	10 02 22.6	
	comp=Z,38nm,18.5s,baz=330,slow=42						
AAK	**Ala-Archa**	**44.16**	**68**	LR	LR	10 02 29.0	
	comp=Z,80nm,18.9s,baz=306,slow=41						
AAK	**Ala-Archa**	**44.16**	**68**⇓	*e*P	**P**	**09 40 48.9**	**+2.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KURK	**Kurchatov**	**44.22**	**56**⇑	*e*P	**P**	**09 40 46.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KSH	**Kashi**	**46.44**	**72**	P	**P**	**09 41 04.6**	**-0.1**
ZALV	**Zalesovo Beam**	**46.95**	**50**	P	**P**	**09 41 07.9**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=290,slow=8.8,SNR=3.8						
ZALV				LR	LR	10 02 33.7	
	comp=Z,57nm,20.1s,baz=273,slow=38						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**46.95**	**50**	*e*P	**P**	**09 41 09.3**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**47.79**	**60**	P	**P**	**09 41 15.5**	**+0.5**
MK31				IAmb	IAmb	09 41 16.7	
	comp=Z,2.2nm,0.8s						
MK31	**Makanchi Array**	**47.79**	**60**⇓	*e*P	**P**	**09 41 15.1**	**0.0**
MKAR	**Makanchi Array**	**47.79**	**60**	P	**P**	**09 41 14.2**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=290,slow=4.8,SNR=17						
MKAR				LR	LR	10 05 35.1	
	comp=Z,62nm,19.7s,baz=256,slow=41						
	comp=Z,3.3nm,0.8s						
MKAR	**Makanchi Array**	**47.79**	**60**	P	**P**	**09 41 14.8**	**-0.2**
MKAR	**Makanchi Array**	**47.79**	**60**	*e*P	**P**	**09 41 14.8**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EUNU	**Eureka**	**49.86**	**347**	P	**P**	**09 41 30.4**	**-0.1**
DGZ	**Jazzator, Alta**	**49.90**	**55**⇓	*e*P	**P**	**09 41 32.2**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**61.84**	**50**	P	**P**	**09 42 57.2**	**+0.2**
	comp=Z,3.6nm,0.9s,baz=291,slow=6.9,SNR=15						
	comp=Z,3.6nm,0.9s						
ULN	**Ulaanbaatar**	**62.19**	**49**⇑	*e*P	**P**	**09 43 00.5**	**+1.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
YAK	**Yakutsk**	**63.80**	**28**⇑	*e*P	**P**	**09 43 09.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BILL	**Bilibino**	**67.69**	**11**	*e*P	**P**	**09 43 37.4**	**+2.8**
BILL				*e*		09 44 04.8	
BILL				*e*		09 46 04.4	
BILL				*e*PPP	PPP	09 47 39.1	
BILL				pmax	pmax		
	comp=Z,33nm,2.5s						
PALK	**Pallekele**	**68.62**	**100**	LR	LR	10 20 03.4	
	comp=Z,38nm,18.4s,baz=345,slow=42						
ULM	**Lac du Bonnet**	**68.65**	**319**	P	**P**	**09 43 40.4**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=76,slow=3.8,SNR=2.2						
	comp=Z,2.8nm,0.6s						
SEY	**Seymchan**	**69.74**	**19**⇑	*e*P	**P**	**09 43 51.1**	**+3.7**
SEY				pmax	pmax		
	comp=Z,11nm,1.9s						
SJG	**San Juan**	**70.20**	**277**	LR	LR	10 09 50.8	
	comp=Z,17nm,20.7s,baz=40,slow=32						
TKL	**Tuckaleechee C**	**71.35**	**301**	LR	LR	10 14 56.4	
	comp=Z,21nm,18.2s,baz=86,slow=36						
ILAR	**Eielson Array**	**71.69**	**351**	P	**P**	**09 43 58.5**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=16,slow=6.8,SNR=5.5						
	comp=Z,0.9nm,0.9s						
ILAR	**Eielson Array**	**71.69**	**351**	*e*P	**P**	**09 44 00.8**	**+1.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BOSA	**Boshof**	**71.87**	**169**	P	**P**	**09 44 00.0**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=0.0,slow=9.1,SNR=3.2						
BOSA				LR	LR	10 18 34.2	
	comp=Z,13nm,19.4s,baz=10.0,slow=38						
	comp=Z,1.8nm,0.8s						
KLR	**Kul'dur**	**73.75**	**37**⇓	*e*P	**P**	**09 44 14.9**	**+3.1**
KLR				pmax	pmax		
	comp=Z,9.0nm,2.0s						
CMAR	**Chiang Mai Arr**	**74.66**	**79**	P	**P**	**09 44 17.1**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=307,slow=6.1,SNR=2.2						
	comp=Z,1.4nm,0.8s						
KSRS	**Korea Array**	**80.55**	**47**	P	**P**	**09 44 49.7**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=325,slow=6.2,SNR=2.3						
	comp=Z,1.4nm,0.9s						
PDAR	**Pinedale Array**	**80.55**	**321**	P	**P**	**09 44 49.2**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=52,slow=5.8,SNR=4.6						
PDAR				LR	LR	10 20 23.8	
	comp=Z,28nm,18.5s,baz=56,slow=36						
	comp=Z,0.5nm,0.7s						
BDFB	**Brasilia**	**80.75**	**239**	P	**P**	**09 44 52.0**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=56,slow=3.0,SNR=6.0						
	comp=Z,3.6nm,0.8s						
ROSC	**El Rosal**	**84.91**	**272**	LR	LR	10 19 30.7	
	comp=Z,40nm,19.7s,baz=54,slow=33						
ANMO	**Albuquerque**	**85.05**	**314**	*c e*P	**P**	**09 45 16.9**	**+3.0**
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
MJAR	**Matsushiro Arr**	**86.54**	**41**	P	**P**	**09 45 20.7**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=306,slow=4.9,SNR=2.3						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**87.76**	**309**	P	**P**	**09 45 27.2**	**0.0**
	comp=Z,0.3nm,0.8s,baz=64,slow=5.7,SNR=4.5						
TXAR				LR	LR	10 21 57.7	
	comp=Z,32nm,18.2s,baz=346,slow=34						
	comp=Z,0.3nm,0.8s						
CPUP	**Villa Florida**	**94.46**	**238**	LR	LR	10 25 47.9	
	comp=Z,15nm,21.7s,baz=46,slow=34						
NNA	**Nana**	**98.04**	**261**	LR	LR	10 28 55.7	
	comp=Z,11nm,18.7s,baz=34,slow=34						

BUC 16 09:34:18.5±0.4, 45°.38N×26°.36E, h11km±4km, ml1.5/9, 22C-8D, Error ellipse: s-maj=3.0km s-min=2.2km az=121.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISR	**Istrita**	**0.29**	**154**	⇓S	Sg	09 34 28.3	-0.1
ISR	**Istrita**	**0.29**	**154**	⇓S	Sg	09 34 28.3	-0.1
MLR	**Muntele Rosu**	**0.31**	**291**	⇓P	Pg	09 34 24.5	-0.3
MLR				⇑S	Sg	09 34 30.0	+1.0
MLR	**Muntele Rosu**	**0.31**	**291**	⇓P	Pg	09 34 24.5	-0.3
MLR				⇑S	Sg	09 34 30.0	+1.0
SECR		**0.40**	**211**	⇑S	Sb	09 34 32.8	-1.0
SECR		**0.40**	**211**	⇑S	Sb	09 34 32.8	-1.0
COVR	**Voineasa-Covas**	**0.48**	**347**	⇑P	Pg	09 34 27.4	-0.4
COVR				⇓S	Sg	09 34 33.5	-0.6
COVR	**Voineasa-Covas**	**0.48**	**347**	⇑P	Pg	09 34 27.4	-0.4
COVR				⇓S	Sg	09 34 33.5	-0.6
PLOR	**Plostina**	**0.51**	**23**	⇑P	Pg	09 34 28.3	-0.2
PLOR				⇓S	Sb	09 34 37.4	+0.4
PLOR	**Plostina**	**0.51**	**23**	⇑P	Pg	09 34 28.3	-0.2
PLOR				⇓S	Sb	09 34 37.4	+0.4
VRI	**Vrincioaia**	**0.55**	**28**	⇑P	Pg	09 34 28.8	-0.4
VRI				⇑S	Sb	09 34 37.6	-0.4
VRI	**Vrincioaia**	**0.55**	**28**	⇑P	Pg	09 34 28.8	-0.4
VRI				⇑S	Sb	09 34 37.6	-0.4
DOPR	**Dopca**	**0.90**	**311**	⇑P	Pg	09 34 35.5	-0.2
DOPR	**Dopca**	**0.90**	**311**	⇑P	Pg	09 34 35.5	-0.2
VOIR		**0.92**	**274**	⇑P	Pg	09 34 36.1	-0.2
VOIR				⇑S	Sb	09 34 49.3	+0.5
VOIR		**0.92**	**274**	⇑P	Pg	09 34 36.1	-0.2
VOIR				⇑S	Sb	09 34 49.3	+0.5
VOIR		**0.92**	**274**	P	Sb	09 34 49.0	+0.1
VOIR		**0.92**	**274**	pmax	pmax		
	comp=Z,18nm,0.8s						
TESR	**Tescani**	**1.15**	**10**	⇑P	Pb	09 34 39.8	-0.5
TESR	**Tescani**	**1.15**	**10**	⇑P	Pb	09 34 39.8	-0.5
ARR	**Arges**	**1.22**	**270**	⇑P	Pg	09 34 42.3	+0.4
ARR	**Arges**	**1.22**	**270**	⇑P	Pg	09 34 42.3	+0.4

*JMA **16** 09:50:48.3±0.2, 24°.N±1°.×122°.1E±0°.7, h32km±4km, MV2.8/8, TAIWAN REGION*
*TAP **16** 09:50:48.8, 23°.95N×122°.11E, h41km, ML3.4, D*
ISC 16 09:50:47.2±0.9, 23°.87N±0°.02×122°.16E±0°.02, h20km±8km, n101, σ0°.72/177, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.52**	**270**	*i* P	**Pn**	**09 50 58.9**	**-0.6**
	baz=259						
TEYL				S	**Sn**	**09 51 06.8**	**-0.9**
	baz=259						
HWA	**Hwalien**	**0.52**	**282**	P	**Pn**	**09 50 59.2**	**-0.3**
	baz=268						
HWA				*e*S	**Sn**	**09 51 07.5**	**-0.2**
	baz=268						
TWD	**Chiawan**	**0.56**	**292**	*i* P	**Pb**	**09 50 59.0**	**+0.7**
	baz=286						
TWD				S	**Sb**	**09 51 06.4**	**+0.5**
	baz=286						
ETL	**Fush Village**	**0.57**	**300**	*i* P	**Pb**	**09 50 59.2**	**+0.7**
	baz=295						
ETL				S	**Sb**	**09 51 07.0**	**+0.7**
	baz=295						
TEGC	**Jichi Village**	**0.59**	**254**	*e*P	**Pn**	**09 51 00.2**	**-0.3**
	baz=238						
NACB	**Ninganchiao**	**0.60**	**300**	P	**Pb**	**09 50 59.5**	**+0.5**
	baz=290						
NACB				S	**Sb**	**09 51 07.7**	**+0.6**
	baz=290						
ETM	**Tongmen**	**0.62**	**279**	P	**Pb**	**09 51 00.1**	**+0.7**
	baz=272						
ETM				*e*S	**Sb**	**09 51 08.1**	**+0.4**
	baz=272						
ESL	**Shilin**	**0.67**	**265**	P	**Pb**	**09 51 00.6**	**+0.3**
	baz=251						
ESL				*e*S	**Sb**	**09 51 09.5**	**+0.3**
	baz=251						
EWUT	**Wuta**	**0.67**	**329**	*e*P	**Pb**	**09 51 00.2**	**-0.1**
	baz=336						
EWUT				S	**Sb**	**09 51 09.7**	**+0.5**
	baz=336						
EGFH	**Guangfu**	**0.70**	**253**	*i* P	**Pn**	**09 51 01.5**	**-0.5**
	baz=246						
EGFH				S	**Sn**	**09 51 11.4**	**-0.9**
	baz=246						
ETLH	**Xiulin Townshi**	**0.70**	**298**	*e*P	**Pb**	**09 51 01.1**	**+0.2**
	baz=295						
ETLH				*e*S	**Sb**	**09 51 10.6**	**+0.4**
	baz=295						
HGSD	**Ruisui**	**0.78**	**241**	*i* P	**Pb**	**09 51 02.5**	**+0.5**
	baz=234						
TWC	**Suao**	**0.79**	**339**	*e*P	**Pb**	**09 51 02.7**	**+0.5**
	baz=349						
EHY	**Hungye**	**0.85**	**245**	P	**Pb**	**09 51 03.5**	**+0.2**
	baz=251						
EHY				*e*S	**Sb**	**09 51 14.8**	**+0.5**
	baz=251						
WHF	**Hehuan Shan**	**0.86**	**289**	P	**Pb**	**09 51 03.8**	**0.0**
	baz=276						
WHF				*e*S	**Sb**	**09 51 15.0**	**-0.1**
	baz=276						
LATG	**Datong**	**0.88**	**319**	P	**Pb**	**09 51 04.0**	**+0.1**
	baz=318						
LATG				*e*S	**Sb**	**09 51 15.1**	**-0.1**
	baz=318						
NNSB	**Datong**	**0.90**	**308**	*e*P	**Pb**	**09 51 04.4**	**+0.1**
	baz=306						
NNSB				*e*S	**Sb**	**09 51 15.2**	**-0.7**
	baz=306						
OWD	**Renai**	**0.91**	**275**	P	**Pb**	**09 51 04.5**	**+0.2**
	baz=271						
OWD				S	**Sb**	**09 51 15.8**	**-0.2**
	baz=271						
NNS	**Nan Shan**	**0.92**	**308**	*e*P	**Pb**	**09 51 03.7**	**-0.8**
	baz=307						
NNS				*e*S	**Sb**	**09 51 15.3**	**-1.1**
	baz=307						
FUSS	**Fushou**	**0.92**	**294**	P	**Pb**	**09 51 04.8**	**+0.2**
	baz=291						
FUSS				S	**Sb**	**09 51 16.6**	**+0.1**
	baz=291						
JYNG	**Yonagunijimaku**	**0.92**	**51**	P	**Pn**	**09 51 05.6**	**+0.6**
JYNG				*e*S	**Sn**	**09 51 17.6**	**0.0**
CHGB	**Renai**	**0.92**	**282**	*e*P	**Pb**	**09 51 04.8**	**+0.2**
	baz=278						
CHGB				S	**Sb**	**09 51 16.6**	**0.0**
	baz=278						
YULB	**Yu-li**	**0.93**	**239**	P	**Pb**	**09 51 04.8**	**+0.2**
	baz=246						
YULB				*e*S	**Sb**	**09 51 16.6**	**+0.1**
	baz=246						
EYUL	**Yuli**	**0.93**	**236**	P	**Pn**	**09 51 05.2**	**+0.1**
	baz=223						
EYUL				*e*S	**Sn**	**09 51 17.5**	**-0.5**
	baz=223						
ENTT	**Nioudou**	**0.94**	**325**	*e*P	**Pb**	**09 51 04.2**	**-0.6**
	baz=325						
ENTT				*e*S	**Sb**	**09 51 15.9**	**-1.0**
	baz=325						
NDT	**Datong Townshi**	**0.94**	**321**	*e*P	**Pb**	**09 51 03.8**	**-1.1**
	baz=320						
NDT				*e*S	**Sb**	**09 51 15.5**	**-1.3**
	baz=320						
VWDT	**VWDT**	**0.94**	**263**	*e*P	**Pn**	**09 51 05.4**	**+0.1**
	baz=249						
VWDT				S	**Sb**	**09 51 17.2**	**+0.3**
	baz=249						
TWF1	**Yuli**	**0.95**	**237**	P	**Pn**	**09 51 05.3**	**-0.1**
	baz=224						
TWF1				S	**Sn**	**09 51 17.9**	**-0.5**
	baz=224						
TWE	**Neicheng**	**0.96**	**332**	P	**Pn**	**09 51 05.5**	**-0.1**
	baz=333						
TWE				S	**Sb**	**09 51 17.3**	**-0.1**
	baz=333						
WUSB	**Renai**	**0.96**	**277**	P	**Pb**	**09 51 05.5**	**+0.2**
	baz=273						
WUSB				*e*S	**Sb**	**09 51 18.1**	**+0.5**
	baz=273						
ILA	**Ilan**	**0.97**	**337**	*e*S	**Sn**	**09 51 18.8**	**0.0**
	baz=338						
YOJ	**Yonaguni jima**	**0.97**	**53**	*i* P	**Pn**	**09 51 06.6**	**+0.8**
	baz=57						
YOJ				*i* S	**Sn**	**09 51 19.5**	**+0.5**
	baz=57						
YOJ	**Yonaguni jima**	**0.97**	**53**	P	**Pn**	**09 51 06.4**	**+0.6**
YOJ				S	**Sn**	**09 51 19.4**	**+0.5**
TWT	**Tachien**	**0.98**	**293**	*e*S	**Sb**	**09 51 17.8**	**-0.3**
	baz=289						
TDCB	**Techi**	**0.99**	**293**	P	**Pb**	**09 51 05.7**	**-0.2**
	baz=282						
TDCB				S	**Sb**	**09 51 17.9**	**-0.7**
	baz=282						
FUSB	**Fushanzhiwuyua**	**1.03**	**329**	*e*P	**Pb**	**09 51 06.2**	**-0.2**
	baz=330						
FUSB				S	**Sb**	**09 51 19.8**	**+0.4**
	baz=330						
YHNB	**Yeheng**	**1.07**	**318**	P	**Pn**	**09 51 07.0**	**-0.2**
	baz=306						
YHNB				S	**Sb**	**09 51 19.7**	**-1.1**
	baz=306						
NSK	**Sanguang**	**1.09**	**318**	*e*P	**Pn**	**09 51 06.1**	**-1.2**
	baz=306						
NSK				*e*S	**Sb**	**09 51 18.8**	**-2.4**
	baz=306						
SSLB	**Suanglung**	**1.11**	**266**	P	**Pn**	**09 51 07.5**	**-0.1**
	baz=262						
SSLB				*e*S	**Sb**	**09 51 20.4**	**-1.4**
	baz=262						
WPL	**Puli Township**	**1.11**	**277**	P	**Pb**	**09 51 07.8**	**0.0**
	baz=268						
WPL				*e*S	**Sb**	**09 51 21.8**	**0.0**
	baz=268						
TIPB	**Shuangxi**	**1.14**	**344**	*e*P	**Pb**	**09 51 08.5**	**+0.2**
	baz=356						
TIPB				*e*S	**Sb**	**09 51 21.9**	**-0.7**
	baz=356						
TWB1	**Santiao Chiao**	**1.14**	**352**	*e*S	**Sb**	**09 51 21.4**	**-1.3**
	baz=354						
SMLT	**Sun Moon Lake**	**1.16**	**271**	P	**Pn**	**09 51 08.5**	**+0.1**
	baz=267						
SMLT				*e*S	**Sb**	**09 51 22.6**	**-0.6**
	baz=267						
YUS	**Yu-Shan**	**1.17**	**251**	P	**Pb**	**09 51 09.2**	**+0.1**
	baz=247						
YUS				*e*S	**Sb**	**09 51 24.0**	**-0.1**
	baz=247						
WHP	**Taichung City**	**1.18**	**290**	*e*P	**Pb**	**09 51 10.3**	**+1.3**
	baz=288						
WHP				*e*S	**Sb**	**09 51 24.1**	**+0.2**
	baz=288						
EDH	**Donghe**	**1.19**	**222**	*e*P	**Pn**	**09 51 08.2**	**-0.6**
	baz=211						
EDH				*e*S	**Sb**	**09 51 22.3**	**-1.8**
	baz=211						
TYC	**Yuchr**	**1.20**	**272**	P	**Pb**	**09 51 09.0**	**-0.1**
	baz=268						
TYC				*e*S	**Sb**	**09 51 23.8**	**-0.4**
	baz=268						
WHYT	**Xinyi Township**	**1.21**	**262**	*e*P	**Pb**	**09 51 09.5**	**0.0**
	baz=249						
WHYT				*e*S	**Sb**	**09 51 24.5**	**-0.2**
	baz=249						
NFF	**Wufeng Townshi**	**1.22**	**309**	*e*P	**Pn**	**09 51 08.8**	**-0.4**
	baz=299						
NFF				*e*S	**Sb**	**09 51 23.0**	**-1.9**
	baz=299						
TWA	**Mucha**	**1.22**	**335**	*e*P	**Pb**	**09 51 10.1**	**+0.4**
	baz=335						
TWA				S	**Sb**	**09 51 24.7**	**-0.3**
	baz=335						
NHDH	**Xindian Distri**	**1.23**	**332**	*e*S	**Sn**	**09 51 25.2**	**-0.1**
	baz=321						
NWF	**Wu-fen Shan**	**1.24**	**344**	*e*P	**Pb**	**09 51 10.7**	**+0.7**
NWF				*e*S	**Sn**	**09 51 24.5**	**-1.2**
SXI1	**Grass Mountain**	**1.25**	**348**	P	**Pn**	**09 51 09.6**	**+0.1**
	baz=3.0						
SXI1				*e*S	**Sn**	**09 51 24.0**	**-1.8**
	baz=3.0						
ELDTW	**Lidau**	**1.25**	**237**	P	**Pn**	**09 51 09.3**	**-0.4**
	baz=224						
ELDTW				*e*S	**Sn**	**09 51 24.2**	**-1.8**
	baz=224						
TATO	**Taipei**	**1.26**	**331**	P	**Pb**	**09 51 10.5**	**+0.2**
	baz=321						
TATO				S	**Sn**	**09 51 25.5**	**-0.5**
	baz=321						
ALS	**Alishan**	**1.29**	**254**	*e*P	**Pb**	**09 51 11.2**	**+0.2**
	baz=250						
LIOB	**Emei**	**1.30**	**307**	*e*P	**Pb**	**09 51 11.4**	**+0.4**
	baz=297						
LIOB				*e*S	**Sn**	**09 51 27.1**	**+0.1**
	baz=297						
NSTT	**Nanjuang**	**1.30**	**306**	*e*P	**Pb**	**09 51 11.0**	**0.0**
	baz=296						
NSTT				*e*S	**Sn**	**09 51 26.9**	**-0.2**
	baz=296						
WJS	**Zhushan**	**1.31**	**268**	*e*P	**Pb**	**09 51 12.1**	**+0.9**
	baz=265						
WJS				*e*S	**Sb**	**09 51 28.4**	**+0.7**
	baz=265						
LONT	**Longtian**	**1.35**	**225**	*e*P	**Pn**	**09 51 10.7**	**-0.2**
	baz=215						
LONT				*e*S	**Sn**	**09 51 28.2**	**-0.1**
	baz=215						
WWF	**Wufeng**	**1.35**	**278**	P	**Pb**	**09 51 11.8**	**0.0**
	baz=274						
WNT	**Mingjian**	**1.35**	**271**	*e*P	**Pb**	**09 51 12.5**	**+0.7**
	baz=267						
TWQ1	**Liyutan**	**1.35**	**291**	*e*P	**Pb**	**09 51 12.3**	**+0.4**
	baz=289						
TWQ1				*e*S	**Sb**	**09 51 29.8**	**+0.9**
	baz=289						
WNT1	**Nantou City**	**1.36**	**272**	*e*P	**Pb**	**09 51 12.9**	**+0.9**
	baz=268						
YM01	**YM01**	**1.38**	**337**	*e*P	**Pb**	**09 51 12.8**	**+0.5**
	baz=338						
YM01				*e*S	**Sn**	**09 51 28.8**	**-0.2**
	baz=338						
TCU	**Taichung**	**1.39**	**282**	*e*S	**Sb**	**09 51 30.5**	**+0.8**
	baz=279						
NSY	**Sanyi**	**1.39**	**293**	*e*S	**Sb**	**09 51 30.9**	**+1.0**
	baz=291						
NCUH	**Zhongli**	**1.41**	**321**	*e*P	**Pb**	**09 51 12.7**	**-0.1**
	baz=321						
NCUH				*e*S	**Sn**	**09 51 30.0**	**+0.2**
	baz=321						
SBCB	**Hsinchu**	**1.41**	**311**	*e*S	**Sb**	**09 51 31.3**	**+0.9**
	baz=310						
NMLH	**Miaoli**	**1.42**	**298**	*e*S	**Sb**	**09 51 31.6**	**+1.0**
	baz=296						
HSN	**Hsinchu**	**1.43**

	baz=243								
WRL	**Guolierlin Hig**	**1.63**	**271**	*e*P		**Pn**	**09 51 15.2**	**+0.3**	
	baz=269								
WRL				*e*S		**Sn**	**09 51 35.5**	**+0.3**	
	baz=269								
CHY	**Chiayi**	**1.64**	**257**	*e*P		**Pb**	**09 51 16.7**	**0.0**	
	baz=253								
CHN1	**Nanshi**	**1.65**	**246**	*e*P		**Pb**	**09 51 16.9**	**0.0**	
	baz=242								
CHN1				*e*S		**Sb**	**09 51 38.0**	**+0.7**	
	baz=242								
SGST	**Jiashian**	**1.65**	**242**	*e*P		**Pb**	**09 51 16.3**	**-0.6**	
	baz=238								
SGST				*e*S		**Sb**	**09 51 37.2**	**-0.1**	
	baz=238								
TWK	**Hsinying**	**1.65**	**249**	*e*P		**Pb**	**09 51 16.9**	**-0.1**	
	baz=245								
TWK				*e*S		**Sb**	**09 51 37.2**	**-0.2**	
	baz=245								
ECL	**Taimali**	**1.69**	**221**	*e*P		Pn	09 51 14.9	-0.7	
	baz=218								
ECL				*e*S		**Sn**	**09 51 34.7**	**-1.9**	
	baz=218								
JKRS	**Kuro-shima**	**1.73**	**77**	P		**Pb**	**09 51 17.7**	**-0.6**	
JKRS				S		**Sb**	**09 51 39.2**	**-0.4**	
ICHU	**Yijhu**	**1.80**	**254**	*e*P		**Pb**	**09 51 18.5**	**-1.0**	
	baz=250								
WSL	**Shuilin Townsh**	**1.81**	**259**	*e*P		**Pn**	**09 51 17.4**	**+0.2**	
	baz=244								
WSL				*e*S		**Sn**	**09 51 39.6**	**+0.1**	
	baz=244								
SCST	**Cishan**	**1.82**	**238**	*e*P		**Pb**	**09 51 20.1**	**+0.2**	
	baz=247								
SCST				*e*S		**Sb**	**09 51 44.9**	**+2.7**	
	baz=247								
JIJ	**Ishigaki jima**	**1.88**	**74**	P		**Pn**	**09 51 18.8**	**+0.6**	
JIJ				S		**Sn**	**09 51 41.2**	**-0.1**	
MASBT	**Mashibuluo**	**1.88**	**229**	*e*P		**Pn**	**09 51 18.6**	**+0.4**	
	baz=223								
MASBT				*e*S		**Sn**	**09 51 41.4**	**-0.1**	
	baz=223								
TWM1	**Shoushan**	**1.91**	**237**	*e*P		**Pb**	**09 51 22.2**	**+0.8**	
	baz=234								
TWM1				*e*S		**Sb**	**09 51 47.0**	**+2.1**	
	baz=234								
TAWH	**Dawu Township**	**1.92**	**218**	*e*S		**Sn**	**09 51 40.1**	**-2.3**	
	baz=215								
TSCK	**Chigu Township**	**2.04**	**250**	*e*P		**Pn**	**09 51 20.9**	**+0.5**	
	baz=247								
TSCK				*e*S		**Sn**	**09 51 45.2**	**-0.1**	
	baz=247								
SCZT	**Fangliau**	**2.06**	**224**	*e*P		**Pb**	**09 51 23.7**	**-0.3**	
	baz=218								
SCZT				*e*S		**Sb**	**09 51 48.8**	**-0.3**	
	baz=218								
SLIU	**Shizi**	**2.07**	**218**	*e*P		**Pn**	**09 51 20.6**	**-0.2**	
	baz=215								
SMST	**Manzhou Townsh**	**2.21**	**214**	*e*P		**Pn**	**09 51 22.9**	**+0.1**	
	baz=211								
SMST				*e*S		**Sn**	**09 51 48.3**	**-1.2**	
	baz=211								
WDGT	**Dungji**	**2.38**	**256**	P		**Pn**	**09 51 25.6**	**+0.6**	
	baz=252								
PHUB	**P'eng-hu**	**2.40**	**262**	P		**Pn**	**09 51 25.8**	**+0.5**	
	baz=260								
PHUB				S		**Sn**	**09 51 53.6**	**-0.5**	
	baz=260								
PNG	**Penghu**	**2.41**	**263**	P		**Pn**	**09 51 26.1**	**+0.6**	
	baz=261								
PNG				S		**Sn**	**09 51 54.0**	**-0.4**	
	baz=261								

*IDC **16** 09:51:27.7±1.3, 39°.82N×20°.75E, h0km, mb3.6/6, mbtmp3.6/8, ML2.7/2, Error ellipse: s-maj=28.8km s-min=20.6km az=71.0*
*THE **16** 09:51:30.7, 39°.77N×20°.66E, h7km±1km, ML3.3/8, Error ellipse: s-maj=1.4km s-min=0.3km az=297.0*
*PDG **16** 09:51:30.6±0.7, 39°.88N×20°.65E, h9km±3km, ML3.3/7, Error ellipse: s-maj=4.6km s-min=2.4km az=90.0*
*ATH **16** 09:51:31.0, 39°.79N×20°.67E, h5km±2km, ML3.3/9, Error ellipse: s-maj=2.5km s-min=0.7km az=310.0*
*BEO **16** 09:51:31.6±0.4, 39°.69N×20°.52E, h28km±4km, ML3.0/5*

ISC 16 09:51:30.5±0.8, 39°.77N±0°.02×20°.65E±0°.02, h15km±6km, n96, σ1°33/134, mb3.7/5, 10C-21D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.20**	**125**	P	**Pg**	**09 51 34.7**	**-0.4**
JAN				S	**Sg**	**09 51 37.4**	**-0.7**
	41μm,0.3s						
JAN	**Janina**	**0.20**	**125**	P	**Pg**	**09 51 34.6**	**-0.4**
JAN				S	**Sg**	**09 51 37.4**	**-0.7**
JAN				AML	AML	09 51 38.7	
	comp=E,92399μm,0.4s						
JAN				AML	AML	09 51 38.8	
	comp=N,69422μm,0.2s						
IGT	**Igoumenitsa**	**0.34**	**226**	P	**Pg**	**09 51 37.5**	**0.0**
IGT				S	**Sg**	**09 51 42.2**	**0.0**
	comp=N,7μm,0.4s						
IGT	**Igoumenitsa**	**0.34**	**226**	*e*Pg	**Pg**	**09 51 38.3**	**+0.8**
IGT				*e*Sg	**Sb**	**09 51 44.6**	**+1.1**
IGT	**Igoumenitsa**	**0.34**	**226**	P	**Pg**	**09 51 38.1**	**+0.6**
IGT				S	**Sg**	**09 51 43.2**	**+1.0**
IGT				AML	AML	09 51 46.4	
	comp=E,14852μm,0.4s						
IGT				AML	AML	09 51 46.5	
	comp=N,14374μm,0.4s						
LSK	**Leskovik**	**0.38**	**355**	P	**Pg**	**09 51 38.6**	**+0.3**
LSK				S	**Sb**	**09 51 44.2**	**-0.7**
	comp=N,8μm,0.5s						
KASA	**Kassiopi**	**0.55**	**268**	P	**Pg**	**09 51 41.5**	**+0.2**
KASA				S	**Sg**	**09 51 49.7**	**+1.1**
KASA				AML	AML	09 51 52.4	
	comp=E,5428μm,0.3s						
KASA				AML	AML	09 51 52.8	
	comp=N,6819μm,0.2s						
PENT	**Pentalofos**	**0.57**	**42**	P	**Pg**	**09 51 41.5**	**-0.3**
PENT				S	**Sg**	**09 51 49.5**	**+0.1**
	comp=N,768nm,0.3s						
PENT	**Pentalofos**	**0.57**	**42**	P	**Pg**	**09 51 41.5**	**-0.3**
PENT				S	**Sg**	**09 51 49.0**	**-0.4**
KPRO	**Kipourio**	**0.58**	**71**	P	**Pg**	**09 51 41.7**	**-0.3**
KPRO				S	**Sg**	**09 51 49.6**	**-0.2**
	comp=N,6μm,0.5s						
KEK	**Kerkira**	**0.66**	**265**	P	**Pg**	**09 51 43.1**	**-0.2**
KEK				S	**Sg**	**09 51 52.9**	**+0.9**
	comp=N,2μm,0.2s						
KEK	**Kerkira**	**0.66**	**265**	P	**Pg**	**09 51 43.2**	**-0.1**
KEK				S	**Sb**	**09 51 53.4**	**+0.7**
KEK				AML	AML	09 51 55.7	
	comp=N,3022μm,0.3s						
KEK				AML	AML	09 51 55.9	
	comp=E,3187μm,0.3s						
NEST	**Nestorio**	**0.71**	**26**	P	**Pg**	**09 51 44.4**	**-0.1**
NEST	**Nestorio**	**0.71**	**26**	P	**Pg**	**09 51 44.4**	**-0.1**
KBN	**Korca**	**0.86**	**7**	P	**Pg**	**09 51 46.6**	**-0.6**
KBN				S	**Sb**	**09 51 59.5**	**+0.9**
	comp=E,762nm,0.5s						
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pg**	**09 51 48.6**	**-0.2**
TSLK				S	**Sg**	**09 52 02.0**	**+0.9**
	comp=E,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pg**	**09 51 48.7**	**0.0**
TSLK				S	**Sb**	**09 52 02.3**	**+1.3**
TSLK				AML	AML	09 52 06.7	
	comp=N,3936μm,0.5s						
TSLK				AML	AML	09 52 09.2	
	comp=E,4901μm,0.5s						
LKD2	**Lefkada island**	**0.98**	**179**	P	**Pg**	**09 51 48.8**	**-0.7**
LKD2	**Lefkada island**	**0.98**	**179**	P	**Pg**	**09 51 49.7**	**+0.3**
LKD2				S	**Sb**	**09 52 03.4**	**+1.4**
LKD2				AML	AML	09 52 10.4	
	comp=E,2921μm,0.4s						
LKD2				AML	AML	09 52 10.4	
	comp=N,3627μm,0.4s						
KZN	**Kozani**	**1.02**	**58**	P	**Pg**	**09 51 49.5**	**-0.7**
KZN				S	**Sb**	**09 52 04.3**	**+1.1**
KZN	**Kozani**	**1.02**	**58**	P	**Pg**	**09 51 49.4**	**-0.7**
KZN				S	**Sg**	**09 52 03.2**	**-0.3**
KZN				AML	AML	09 52 07.0	
	comp=N,1556μm,0.4s						
KZN				AML	AML	09 52 07.6	
	comp=E,2349μm,0.8s						
NYDR	**Nydri-Lefkada**	**1.06**	**178**	P	**Pg**	**09 51 50.2**	**-0.7**

THL	**Klokotos Trika**	**1.08**	**101**	P		**Pg**	**09 51 50.5**	**-0.8**	
THL	**Klokotos Trika**	**1.08**	**101**	P		**Pg**	**09 51 50.4**	**-0.9**	
DRAG	**Dragano-Lefkad**	**1.09**	**183**	P		**Pg**	**09 51 50.6**	**-0.9**	
TYRN	**Tyrnavos**	**1.23**	**92**	P		**Pb**	**09 51 53.0**	**-0.4**	
EVR	**Evrytania**	**1.24**	**133**	P		**Pb**	**09 51 53.6**	**-0.1**	
EVR	**Evrytania**	**1.24**	**133**	P		**Pb**	**09 51 53.8**	**0.0**	
EVR				S		**Sb**	**09 52 11.0**	**+1.3**	
EVR				AML		AML	09 52 16.4		
	comp=N,2294μm,0.4s								
EVR				AML		AML	09 52 16.7		
	comp=E,1971μm,0.4s								
FSK	**Fiskardo**	**1.31**	**183**	P		**Pb**	**09 51 55.9**	**+1.0**	
PVO	**Paravola**	**1.34**	**149**	P		**Pb**	**09 51 56.2**	**+0.8**	
OHR	**Ohrid**	**1.34**	**5**	*e*Pg		**Pg**	**09 51 56.7**	**+0.3**	
OHR				*e*Sg		**Sn**	**09 52 17.8**	**+5.2**	
OHR	**Ohrid**	**1.34**	**5**	*i* Pn		**Pg**	**09 51 56.5**	**+0.1**	
MAKR	**Makrakomi, Fth**	**1.38**	**123**	P		**Pb**	**09 51 56.6**	**+0.6**	
MAKR				S		**Sg**	**09 52 15.0**	**0.0**	
MAKR				AML		AML	09 52 20.9		
	comp=E,3648μm,0.4s								
MAKR				AML		AML	09 52 20.9		
	comp=N,4151μm,0.4s								
LIT	**Litokhoron**	**1.46**	**76**	P		**Pn**	**09 51 57.2**	**+0.9**	
KEF4	**Livadi, Kephal**	**1.52**	**187**	P		**Pb**	**09 51 59.2**	**+0.7**	
VLS	**Valsamata**	**1.59**	**182**	P		**Pb**	**09 52 00.2**	**+0.5**	
EFP	**Efpalio**	**1.66**	**143**	P		**Pb**	**09 52 01.8**	**+0.9**	
TIR	**Tirane**	**1.68**	**340**	⇓P		**Pn**	**09 51 59.8**	**+0.3**	
SERG	**Sergoula**	**1.74**	**141**	P		**Pb**	**09 52 03.0**	**+0.7**	
AXAR	**Agios Charalam**	**1.86**	**122**	P		**Pb**	**09 52 04.6**	**+0.4**	
VAY	**Valandovo**	**2.13**	**43**	*e*Pn		**Pn**	**09 52 06.6**	**+1.0**	
VAY	**Valandovo**	**2.13**	**43**	*i* Pn		**Pn**	**09 52 06.6**	**+1.0**	
STIP	**Stip**	**2.25**	**31**	*i* Pn		**Pb**	**09 52 10.3**	**-0.6**	
SKO	**Skopje**	**2.28**	**15**	*e*Pn		**Pb**	**09 52 11.1**	**-0.3**	
ULC	**Ulcinj**	**2.44**	**335**	⇓*i*Pn		**Pn**	**09 52 10.4**	**+0.6**	
ULC				*e*Sn		**Sn**	**09 52 40.7**	**+1.3**	
SRS	**Serrai**	**2.62**	**58**	*e*Pn		**Pn**	**09 52 13.4**	**+1.0**	
DRME	**Dracevica, Mon**	**2.66**	**336**	⇑*i*Pn		**Pn**	**09 52 14.1**	**+1.3**	
DRME				*e*Sn		**Sn**	**09 52 46.2**	**+1.4**	
KKB	**Krupnik**	**2.79**	**41**	P		**Pn**	**09 52 16.2**	**+1.4**	
BUM	**Brajici-Budva**	**2.85**	**333**	⇑*i*Pn		**Pn**	**09 52 16.1**	**+0.5**	
BUM				*e*Sn		**Sn**	**09 52 49.8**	**0.0**	
PDG	**Podgorica**	**2.86**	**339**	⇑P		**Pn**	**09 52 14.9**	**-0.7**	
PDG				⇓S		**Sn**	**09 52 51.9**	**+2.1**	
TTG	**Podgorica**	**2.86**	**339**	⇑*i*Pn		**Pn**	**09 52 16.5**	**+0.9**	
TTG				*e*Sn		**Sn**	**09 52 51.5**	**+1.8**	
MMB	**Musomiste**	**2.97**	**51**	P		**Pn**	**09 52 19.3**	**+2.2**	
CEME	**Cevo**	**3.06**	**335**	⇑*i*Pn		**Pn**	**09 52 19.1**	**+0.6**	
CEME				*e*Sn		**Sn**	**09 52 55.5**	**+0.5**	
TIP	**Timpagrande**	**3.07**	**260**	⇓P		**Pn**	**09 52 18.2**	**-0.3**	
TIP				⇑S		**Sn**	**09 52 54.8**	**-0.2**	
HCY	**Herceg Novi**	**3.13**	**329**	⇓*i*Pn		**Pn**	**09 52 19.2**	**-0.2**	
HCY				*e*Sn		**Sn**	**09 52 55.3**	**-1.2**	
MATE	**Matera**	**3.14**	**287**	⇓P		**Pn**	**09 52 19.5**	**0.0**	
MATE				⇓S		**Sn**	**09 52 54.9**	**-1.8**	
IVA	**Berane**	**3.15**	**350**	⇓*i*Pn		**Pn**	**09 52 21.0**	**+1.3**	
BARS	**Barje**	**3.17**	**16**	*e*Pn		**Pn**	**09 52 22.0**	**+2.1**	
KOME	**Kolasin**	**3.19**	**345**	⇓*i*Pn		**Pn**	**09 52 21.0**	**+0.7**	
KOME				*e*Sn		**Sn**	**09 52 58.6**	**+0.4**	
NKME	**Niksic**	**3.25**	**337**	⇓*i*Pn		**Pn**	**09 52 21.6**	**+0.5**	
NKME				*e*Sn		**Sn**	**09 53 00.7**	**+1.1**	
VTS	**Vitosha**	**3.45**	**34**	⇑P		**Pn**	**09 52 25.1**	**+1.1**	
VTS	**Vitosha**	**3.45**	**34**	P		**Pn**	**09 52 26.3**	**+2.4**	
SELS	**Selova**	**3.46**	**6**	*e*Pn		**Pn**	**09 52 21.7**	**-2.3**	
BRY	**Bratogost**	**3.51**	**334**	⇓*i*Pn		**Pn**	**09 52 24.7**	**0.0**	
BRY				*e*Sn		**Sn**	**09 53 05.3**	**-0.7**	
SJES	**Sjenica**	**3.52**	**352**	*e*Pn		**Pn**	**09 52 27.2**	**+2.3**	
RZN	**Rozhen**	**3.64**	**57**	P		**Pn**	**09 52 29.2**	**+2.7**	
UPM	**Unac-Piva**	**3.67**	**340**	⇓*i*Pn		**Pn**	**09 52 28.0**	**+1.0**	
UPM				*e*Sn		**Sn**	**09 53 11.3**	**+1.2**	
PLE	**Pljevlja**	**3.68**	**346**	⇓*i*Pn		**Pn**	**09 52 28.8**	**+1.8**	
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn		**Pn**	**09 52 30.9**	**+2.2**	
STON	**Ston**	**3.81**	**325**	*e*Pn		**Pn**	**09 52 27.2**	**-1.5**	
BOVS	**Bovan**	**3.94**	**11**	⇓P		**Pn**	**09 52 32.0**	**+1.4**	
BOVS				S		**Sn**	**09 53 20.4**	**+3.8**	
BOVS	**Bovan**	**3.94**	**11**	*e*Pn		**Pn**	**09 52 31.9**	**+1.4**	
GRUS	**Gruza**	**4.12**	**1**	*e*Pn		**Pn**	**09 52 34.4**	**+1.5**	
BLKB	**Belogradchik**	**4.14**	**21**	⇑P		**Pn**	**09 52 34.8**	**+1.5**	
BLKB				⇓S		**Sn**	**09 53 24.1**	**+2.7**	
BBLS	**Lazići**	**4.20**	**348**	*e*Pn		**Pn**	**09 52 34.5**	**+0.4**	
ZAGS	**Zajecar**	**4.21**	**16**	*e*Pn		**Pn**	**09 52 35.9**	**+1.7**	
DIVS	**Divibare**	**4.35**	**354**	*e*Pn		**Pn**	**09 52 37.4**	**+1.2**	
FRGS	**Fruska Gora**	**5.42**	**354**	⇓P		**Pn**	**09 52 51.0**	**+0.2**	
IDI	**Anoyia**	**5.60**	**142**	⇑P		**Pn**	**09 52 56.5**	**+3.1**	
IDI	**Anoyia**	**5.60**	**142**	Pn		**Pn**	**09 52 53.0**	**-0.4**	
	comp=N,0.3nm,0.3s,baz=335,slow=21,SNR=2.5								
IDI				Sn		**Sn**	**09 53 52.8**	**-4.8**	
	comp=N,1.3nm,0.3s,baz=120,slow=22,SNR=1.6								
	comp=N,10.0nm,1.0s								
GZR	**Gura Zlata**	**5.84**	**15**	⇓P		**Pn**	**09 52 57.9**	**+1.3**	
GZR				⇑S		**Sn**	**09 54 05.5**	**+2.2**	
BZS	**Buzias**	**5.89**	**7**	⇓P		**Pn**	**09 52 58.5**	**+1.3**	
VOIR		**6.53**	**28**	⇓P		**Pn**	**09 53 08.2**	**+2.1**	
MORH	**Mrgy, Hungar**	**6.61**	**348**	⇓P		**Pn**	**09 53 07.5**	**+0.4**	
VRI	**Vrincioaia**	**7.55**	**34**	⇓P		**Pn**	**09 53 21.9**	**+1.7**	
SOKA	**Soboth**	**8.03**	**331**	*e*Pn		**Pn**	**09 53 26.1**	**-0.6**	
	comp=N,0.8nm,0.2s								
OBKA	**Obir**	**8.07**	**329**	*e*Pn		**Pn**	**09 53 26.9**	**-0.4**	
	comp=N,1.1nm,0.2s								
ABTA	**Abfaltersbach**	**9.15**	**322**	*e*Pn		**Pn**	**09 53 41.4**	**-0.7**	
	comp=N,0.6nm,0.3s								
MOA	**Molln**	**9.30**	**332**	*i* Pn		**Pn**	**09 53 45.1**	**+1.1**	
	comp=N,0.6nm,0.2s								
GERES	**GERESS Array B**	**10.34**	**334**	Pn		**Pn**	**09 53 59.1**	**+0.7**	
	baz=153,slow=13,SNR=1.7								
	comp=N,0.1nm,0.3s								
HFS	**Hagfors**	**20.85**	**350**	P		**P**	**09 56 09.8**	**-1.7**	
	comp=N,1.7nm,0.7s,baz=165,slow=12,SNR=1.7								
	comp=N,1.7nm,0.7s								
FINES	**FINESS Array B**	**21.96**	**7**	P		**P**	**09 56 21.1**	**-2.3**	
	comp=N,2.4nm,0.7s,baz=176,slow=12,SNR=5.6								
	comp=N,2.4nm,0.7s								
NOA	**NORSAR Array B**	**22.08**	**348**	P		**P**	**09 56 23.0**	**-1.9**	
	comp=N,0.8nm,0.8s,baz=165,slow=11,SNR=3.3								
	comp=N,0.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**31.34**	**217**	P		**P**	**09 57 50.4**	**-0.2**	
	comp=N,0.4nm,0.6s,baz=29,slow=9.9,SNR=3.7								
	comp=N,0.4nm,0.6s								
MKAR	**Makanchi Array**	**44.40**	**60**	P		**P**	**09 59 39.3**	**-1.2**	
	comp=N,1.2nm,0.5s,baz=283,slow=7.4,SNR=12								
	comp=N,1.2nm,0.5s								
ZALV	**Zalesovo Beam**	**44.57**	**49**	P		**P**	**09 59 40.2**	**-1.5**	
	comp=N,0.5nm,0.4s,baz=292,slow=9.1,SNR=3.1								
	comp=N,0.5nm,0.4s								

*NOU **16** 10:07:24.7, 37°.37S×177°.63E, h0km, MLv3.6/8, Off E. Coast of N. Island, N.Z.*
*WEL **16** 10:07:25.9±0.5, 37°.5±3°×17°.8E±°, h29km±4km, M3.3/61, ML3.5/47, MLv3.3/61, Error ellipse: s-maj=0.0km s-min=0.0km az=48.8*

ISC 16 10:07:25.2±1.5, 37°.44S±0°.04×177°.79E±0°.03, h7km±11km, n86, σ1°85/92, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.32**	**181**	P	**Pb**	**10 07 35.0**	**+1.8**
HAZ				S	**Sb**	**10 07 42.6**	**+4.0**
MXZ	**Matakaoa Point**	**0.43**	**107**	P	**Pb**	**10 07 35.6**	**+0.6**
MXZ				S	**Sb**	**10 07 44.5**	**+2.8**
MXZ	**Matakaoa Point**	**0.43**	**107**	P	**Pb**	**10 07 35.8**	**+0.7**
WIZ	**White Island**	**0.49**	**259**	P	**Pb**	**10 07 37.1**	**+1.0**
WSRZ	**White Island S**	**0.49**	**260**	P	**Pb**	**10 07 37.7**	**+1.5**
PKGZ	**Pakihiroa**	**0.51**	**153**	P	**Pb**	**10 07 37.1**	**+0.6**
RUGZ	**Raukumara Rang**	**0.54**	**190**	P	**Pg**	**10 07 37.1**	**+1.5**
RUGZ				S	**Sb**	**10 07 46.1**	**+1.1**
WMGZ	**Waiomatatini S**	**0.63**	**128**	P	**Pb**	**10 07 38.9**	**+0.5**
WMGZ				S	**Sn**	**10 07 50.8**	**+0.1**
PUZ	**Puketiti**	**0.73**	**150**	P	**Pg**	**10 07 40.1**	**+0.8**
PUZ				S	**Sn**	**10 07 53.0**	**-0.5**
TWGZ	**Tauwhareparae**	**0.76**	**169**	P	**Pb**	**10 07 41.3**	**+0.6**
TWGZ				S	**Sn**	**10 07 55.7**	**+1.8**
WHRZ	**Whale Island**	**0.77**	**237**	P	**Pg**	**10 07 40.8**	**+0.8**
WHRZ				S	**Sb**	**10 07 53.3**	**+1.7**
MWZ	**Matawai**	**0.92**	**193**	P	**Pg**	**10 07 42.4**	**-0.5**
MWZ				S	**Sg**	**10 07 54.9**	**0.0**
URZ	**Urewera**	**0.98**	**213**	P	**Pg**	**10 07 43.2**	**-0.9**
URZ				S	**Sg**	**10 07 56.6**	**-0.3**
URZ	**Urewera**	**0.98**	**213**	P	**Pg**	**10 07 43.2**	**-0.9**
TKGZ	**Te Karaka**	**1.00**	**177**	P	**Pg**	**10 07 44.2**	**-0.2**
TKGZ				S	**Sb**	**10 07 59.8**	**+1.5**
OPRZ	**Ohinepanea**	**1.06**	**247**	P	**Pg**	**10 07 44.2**	**-1.4**
EDRZ	**Edgecumbe**	**1.07**	**231**	P	**Pg**	**10 07 44.7**	**-1.0**

CNGZ	**Carnagh Statio**	**1.10**	**163**	P		**Pb**	**10 07 45.0**	**-1.5**	
CNGZ				S		**Sn**	**10 08 02.7**	**+0.3**	
RAGZ	**Rawiri**	**1.10**	**196**	P		**Pb**	**10 07 45.5**	**-1.0**	
MYRZ	**Mayor Island**	**1.24**	**277**	P		**Pn**	**10 07 46.9**	**-2.0**	
TGRZ	**Tauranga**	**1.25**	**256**	P		**Pn**	**10 07 47.0**	**-2.1**	
RIGZ	**Rimuhau**	**1.27**	**181**	P		**Pn**	**10 07 47.4**	**-1.9**	
MUGZ	**Murupara**	**1.32**	**217**	P		**Pn**	**10 07 47.7**	**-2.3**	
RTZ	**Ruatahuna**	**1.34**	**208**	P		**Pn**	**10 07 48.1**	**-2.3**	
RRRZ	**Republican Roa**	**1.35**	**228**	P		**Pn**	**10 07 48.6**	**-1.9**	
KARZ	**Kaharoa**	**1.36**	**244**	P		**Pn**	**10 07 48.7**	**-1.8**	
SNGZ	**Shannon Statio**	**1.39**	**195**	P		**Pn**	**10 07 50.0**	**-1.0**	
HRRZ	**Handcock Road**	**1.53**	**231**	P		**Pn**	**10 07 53.2**	**+0.3**	
PRRZ	**Plateau Road**	**1.53**	**226**	P		**Pn**	**10 07 50.9**	**-2.0**	
RAHZ	**Arahi**	**1.58**	**200**	P		**Pn**	**10 07 52.5**	**-1.1**	
MZHZ	**Maungataniwha**	**1.60**	**208**	P		**Pn**	**10 07 51.7**	**-2.2**	
ALRZ	**Allen Road**	**1.60**	**225**	P		**Pn**	**10 07 52.1**	**-1.8**	
MHGZ	**Mahia Peninsul**	**1.72**	**177**	P		**Pn**	**10 07 52.8**	**-2.7**	
MRHZ	**Matea Rd**	**1.77**	**217**	P		**Pn**	**10 07 54.0**	**-2.2**	
KUZ	**Kuaotunu**	**1.79**	**292**	P		**Pn**	**10 07 53.9**	**-2.5**	
KUZ	**Kuaotunu**	**1.79**	**292**	P		**Pn**	**10 07 54.0**	**-2.5**	
NMHZ	**Naumai**	**1.83**	**205**	P		**Pn**	**10 07 56.2**	**-0.9**	
TOZ	**Tahuroa Road**	**1.84**	**260**	P		**Pn**	**10 07 55.1**	**-2.1**	
ARHZ	**Aropaoanui**	**1.93**	**199**	P		**Pn**	**10 07 56.8**	**-1.6**	
BKZ	**Black Stump Fm**	**2.01**	**210**	P		**Pn**	**10 07 58.0**	**-1.5**	
BKZ	**Black Stump Fm**	**2.01**	**210**	P		**Pn**	**10 07 59.3**	**-0.2**	
MKAZ	**Moumakai**	**2.12**	**278**	P		**Pn**	**10 07 59.1**	**-1.9**	
MCHZ	**McNeill Hill**	**2.18**	**203**	P		**Pn**	**10 08 01.0**	**-0.8**	
GRZ	**Great Barrier**	**2.21**	**302**	P		**Pn**	**10 07 60.0**	**-2.3**	
WIAZ	**Waiheke Island**	**2.22**	**286**	P		**Pn**	**10 08 00.5**	**-1.9**	
CKHZ	**Cape Kidnapper**	**2.29**	**194**	P		**Pn**	**10 08 00.5**	**-2.8**	
ETAZ	**East Tamaki Re**	**2.34**	**281**	P		**Pn**	**10 08 02.4**	**-1.6**	
TMVZ	**Te Maari**	**2.35**	**224**	P		**Pn**	**10 08 02.7**	**-1.6**	
ETVZ	**East Tongariro**	**2.36**	**223**	P		**Pn**	**10 08 02.7**	**-1.7**	
MBAZ	**Motutapu North**	**2.41**	**285**	P		**Pn**	**10 08 03.2**	**-1.7**	
NNVZ	**North Ngauruho**	**2.41**	**225**	P		**Pn**	**10 08 03.8**	**-1.4**	
NGZ	**Ngauruhoe**	**2.45**	**224**	P		**Pn**	**10 08 04.7**	**-0.9**	
KAHZ	**Kahuranaki**	**2.46**	**197**	P		**Pn**	**10 08 02.9**	**-2.8**	
TUVZ	**Tukino**	**2.48**	**222**	P		**Pn**	**10 08 06.0**	**-0.2**	
EPAZ	**Eden Park BICE**	**2.50**	**282**	P		**Pn**	**10 08 05.2**	**-1.0**	
ABAZ	**Army Bay**	**2.51**	**289**	P		**Pn**	**10 08 04.8**	**-1.5**	
FWVZ	**Far West T-bar**	**2.53**	**223**	P		**Pn**	**10 08 07.5**	**+0.6**	
MOVZ	**Moawhango**	**2.54**	**218**	P		**Pn**	**10 08 04.7**	**-2.1**	
AWAZ	**Awhitu Peninsu**	**2.54**	**277**	P		**Pn**	**10 08 06.1**	**-0.7**	
HIZ	**Hauiti**	**2.56**	**244**	P		**Pn**	**10 08 05.9**	**-1.0**	
HIZ	**Hauiti**	**2.56**	**244**	P		**Pn**	**10 08 06.0**	**-1.0**	
WNVZ	**Wahianoa**	**2.56**	**222**	P		**Pn**	**10 08 06.2**	**-0.9**	
RVAZ	**Riverhead Bore**	**2.65**	**284**	P		**Pn**	**10 08 07.2**	**-1.1**	
MTVZ	**Mangateitei**	**2.67**	**222**	P		**Pn**	**10 08 07.2**	**-1.4**	
PKVZ	**Pokaka**	**2.67**	**225**	P		**Pn**	**10 08 08.1**	**-0.5**	
PXZ	**Paw

JNSB	Nemuroshibetsu	0.38	355	*i* P		Pn	10 29 35.8	0.0
JNSB				*e*S		Sn	10 29 46.7	+0.7
AKK	Akkeshi	0.41	202	*e*P		Pn	10 29 35.9	-0.1
AKK				*e*S		Sn	10 29 46.5	+0.2
JAK	Akkeshi	0.48	213	*i* P		Pn	10 29 36.5	0.0
JAK				*e*S		Sn	10 29 47.4	+0.3
NMR	Nemuro--Hokkai	0.49	93	*e*P		Pn	10 29 36.2	-0.4
NMR				AMB		AMB	10 29 37.7	
	150nm,0.3s							
NMR				*e*S		Sn	10 29 47.0	-0.4
NEM2	Nemuro 2	0.51	93	P		Pn	10 29 36.4	-0.2
NEM2				*e*S		Sn	10 29 47.3	-0.3
JRA	Rausu	0.54	5	*i* P		Pn	10 29 36.8	-0.2
JRA				*e*S		Sn	10 29 48.1	0.0
YUK	Yuzh-Kuril'sk	0.87	42	*e*P		Pn	10 29 40.1	0.0
YUK				AMB		AMB	10 29 42.0	
	160nm,0.2s							
YUK				*e*S		Sn	10 29 54.0	+0.3
YUK				A		A	10 29 59.0	
	460nm,0.4s							
YUK				A		A	10 29 59.0	
	810nm,0.4s							
JAR	Ashorobuto	0.94	264	*e*P		Pn	10 29 41.1	+0.1
JAR				*e*S		Sn	10 29 55.3	+0.2
JTKR	Abashiri--Toko	1.01	305	P		Pn	10 29 41.5	-0.2
JOB	Onbets	1.02	241	P		Pn	10 29 42.0	+0.2
JOB				*e*S		Sn	10 29 56.9	+0.3
JMP	Maruseppu	1.37	297	*i* P		Pn	10 29 45.8	-0.3
JCH	Churui	1.47	238	P		Pn	10 29 47.0	-0.3
JCH				*e*S		Sn	10 30 05.7	-0.6
JKK2	Kamakawa 2	1.74	287	P		Pn	10 29 50.9	+0.1
KUR	Kuril'sk	2.73	47	*e*P		Pn	10 30 03.9	+0.1
KUR				AMB		AMB	10 30 07.0	
	40nm,0.4s							
KUR				*e*S		Sn	10 30 36.2	+0.2
KUR				A		A	10 30 47.4	
	90nm,0.3s							
KUR				A		A	10 30 47.4	
	80nm,0.3s							

*IDC **16** 10:30:50.7±4.5,3°.39S×139°.31E,h56km±40km,mb4.0/9, mbtmp4.3/11,ML4.5/2,MS3.3/13,Error ellipse: s-maj=34.1km s-min=19.8km az=82.0*
*NEIC **16** 10:30:51.6±1.6,3°.47S±0°.09×139°.3E±0°.1,h60km±6km, mb4.7/37,Error ellipse: s-maj=17.1km s-min=12.4km az=60.0*
*DJA **16** 10:30:53.0±0.3,3°.S±3°.×13°.9E±°,h59km±5km,M4.8/12, mB5.0/3,mb4.7/12,MLv4.9/5,Mw(mB)4.4/3*
ISC 16 10:30:50.4±0.4,3°.54S±0°.05×139°.21E±0°.06,h50km,n84, σ1°64/81,mb4.6/20,MS3.4/9,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	Wamena	0.60	235	P	Pn	10 31 11.3	+8.4
GENI	Genyem	1.34	46	P	Pn	10 31 14.8	+2.0
GENI				S	Sn	10 31 31.3	+1.8
SMPI	Sarmi	1.61	342	P	Pn	10 31 17.7	+1.2
SRPI	Serui, Papua	3.39	299	P	Pn	10 31 43.3	+2.4
SRPI				S	Sn	10 32 18.8	-1.1
MWPI	Manokwari, Pap	5.77	297	P	Pn	10 32 16.1	+2.5
	0.7nm43nm,0.5s						
FAKI	Fak Fak	6.97	275	Pn	Pn	10 32 31.2	+1.2
SIJI	Sorong	8.36	288	P	Pn	10 32 51.4	+2.2
	2.2nm,0.3s,baz=139,slow=20,SNR=4.4						
SIJI				S	Sn	10 34 19.3	-3.0
	7.2nm,0.5s,baz=148,slow=22,SNR=4.6						
SIJI				LR	LR	10 36 53.3	
	comp=Z,106nm,20.2s,baz=58,slow=43						
	5.5nm,0.3s						
COEN	Coen	11.07	160	Pn	Pn	10 33 27.8	+1.6
MTN	Manton Dam	12.22	220		Pn	10 33 43.5	+1.6
SGSI	Sangihe	15.44	298	P	P	10 34 28.2	-0.6
KMSI	Cibinong	15.75	285	P	P	10 34 32.4	+0.1
	121nm,1.0s						
KNRA	Kununurra	15.85	220		Pn	10 34 31.3	+0.9
SOEI	Soe	16.07	247	P	P	10 34 35.3	-0.6
SOEI				IAmb	IAmb	10 35 10.2	
	comp=Z,62nm,1.0s						
SOEI	Soe	16.07	247	P	P	10 34 36.6	+0.7
	comp=Z,56nm,1.0s						
WB0	Warramunga Arr	16.80	196	P	Pn	10 34 42.6	+0.2
WR0	Warramunga Arr	16.95	195	P	Pn	10 34 44.5	+0.3
WRAB	Tennant Creek	16.97	196	P	Pn	10 34 45.5	+1.0
WRAB				IAmb	IAmb	10 34 49.7	
	comp=Z,42nm,0.6s						
WB2	Warramunga Arr	16.98	196	P	P	10 34 45.8	-0.1
WB2				IAmb	IAmb	10 34 49.8	
	comp=Z,52nm,0.6s						
WRA	Warramunga Arr	16.98	196	P	Pn	10 34 44.8	+0.2
	comp=Z,2.6nm,0.3s,baz=17,slow=13,SNR=110						
WRA				S	Sn	10 37 45.0	-7.7
	comp=Z,3.4nm,0.6s,baz=7.9,slow=23,SNR=4.0						
WRA				LR	LR	10 41 56.5	
	comp=Z,205nm,18.7s,baz=355,slow=39						
	comp=Z,27nm,0.6s						
WRA	Warramunga Arr	16.98	196	P	Pn	10 34 44.8	+0.2
DAV	Davao City (W)	17.20	308	LR	LR	10 41 37.1	
	comp=Z,38nm,20.2s,baz=129,slow=38						
MRSI	Marisa	17.71	283	P	P	10 34 55.5	+1.5
	comp=Z,24nm,0.9s						
CTA	Charters Tower	17.83	158	LR	LR	10 41 32.7	
	comp=Z,120nm,20.0s,baz=359,slow=36						
TOLI2	Tolitoli	18.98	284		Pn	10 35 09.4	+0.3
TOLI2				IAmb	IAmb	10 35 11.9	
	comp=Z,52nm,1.4s						
TTSI	Tana Toraja	19.36	271	P	Pn	10 35 15.8	+2.2
	comp=Z,15nm,0.9s						
AS31	Alice Springs	20.66	194		P	10 35 27.8	+1.6
AS31				IAmb	IAmb	10 35 30.8	
	comp=Z,17nm,0.5s						
ASAR	Alice Springs	20.66	194	P	P	10 35 27.8	+1.6
	comp=Z,19nm,0.5s,baz=26,slow=9.3,SNR=279						
ASAR				S	S	10 39 15.0	+0.5
	comp=Z,2.5nm,0.7s,baz=13,slow=26,SNR=3.3						
ASAR				LR	LR	10 44 11.9	
	comp=Z,181nm,20.4s,baz=342,slow=38						
	comp=Z,19nm,0.5s						
ASAR	Alice Springs	20.66	194		P	10 35 27.1	+0.9
MYLDM	Lahad Datu	22.42	293	P	P	10 35 47.5	+2.4
MYLDM	Lahad Datu	22.42	293	P	P	10 35 49.0	+3.8
	comp=Z,57nm,1.4s						
KKM	Kota Kinabalu	24.85	292	P	P	10 36 08.5	-0.1
KKM				IAmb	IAmb	10 36 11.1	
	comp=Z,16nm,0.8s						
MBWA	Marble Bar	25.80	226	P	P	10 36 17.4	+0.4
MBWA				IAmb	IAmb	10 37 00.9	
	comp=Z,22nm,1.1s						
PSA00	Pilbara Seismi	25.99	225	P	P	10 36 20.1	+1.4
STKA	Stephens Creek	28.28	176	LR	LR	10 49 13.6	
	comp=Z,109nm,18.6s,baz=17,slow=39						
STKA	Stephens Creek	28.28	176	P	P	10 36 38.7	-0.5
BBOO	Buckleboo	29.27	185	P	P	10 36 48.2	+0.2
MORW	Morawa	33.60	218	P	P	10 37 26.9	+0.8
MORW				IAmb	IAmb	10 37 52.5	
	comp=Z,21nm,1.2s						
NWAO	Narrogin (SRO)	35.75	213	LR	LR	10 53 49.3	
	comp=Z,126nm,20.4s,baz=233,slow=38						
JHS	Saijyo	38.75	352	P	P	10 38 09.0	-1.1
MJAR	Matsushiro Arr	39.88	359	LR	LR	10 53 19.9	
	comp=Z,23nm,20.6s,baz=208,slow=34						
KSRS	Korea Array	42.11	347	P	P	10 38 36.7	-1.0
	comp=Z,1.3nm,0.7s,baz=153,slow=8.3,SNR=7.0						
KSRS				LR	LR	10 53 12.7	
	comp=Z,9.2nm,21.9s,baz=150,slow=32						
	comp=Z,1.3nm,0.7s						
SRDT	SRDT	43.53	295	P	P	10 38 49.2	-0.4
CM31	Chiang Mai Arr	45.28	300	P	P	10 39 01.9	-1.6
CM31				IAmb	IAmb	10 39 04.1	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	45.28	300	P	P	10 39 03.1	-0.4
	comp=Z,7.1nm,0.8s,baz=122,slow=6.3,SNR=42						
CMAR				PcP	PcP	10 40 43.8	+0.9
	comp=Z,1.5nm,0.9s,baz=144,slow=2.0,SNR=6.1						
	comp=Z,7.1nm,0.8s						
CMAR	Chiang Mai Arr	45.28	300	P	P	10 39 02.9	-0.6
PZH	PanZhiHua	46.94	312	P	P	10 39 19.1	+2.5
USRK	Ussuriysk Ar.	47.96	353	P	P	10 39 23.5	-0.6
	comp=Z,1.1nm,0.6s,baz=186,slow=5.8,SNR=2.8						
	comp=Z,1.1nm,0.6s						
USRK	Ussuriysk Ar.	47.96	353	P	P	10 39 23.3	-0.8
LTZ	Lake Taylor	48.91	148	P	P	10 39 31.7	+0.2
TUWZ	Tuamarina	48.92	145	P	P	10 39 31.1	-0.5
HHC	Hu-ho-hao-te	50.89	333	*e*P	P	10 39 48.3	+1.7
PEA0B	Petropavlovsk-	58.55	13	P	P	10 40 40.6	-1.1
PETK	Petropavlovsk-	58.55	13	P	P	10 40 40.7	-1.0
	comp=Z,2.2nm,0.7s,baz=175,slow=6.8,SNR=6.9						
PETK				LR	LR	11 02 42.3	
	comp=Z,9.0nm,21.4s,baz=183,slow=33						
	comp=Z,2.2nm,0.7s						
PETK	Petropavlovsk-	58.55	13	P	P	10 40 40.6	-1.1
SONM	Songino Array	58.67	335	P	P	10 40 41.2	-1.7
	comp=Z,0.4nm,0.6s,baz=158,slow=5.4,SNR=2.0						
	comp=Z,0.4nm,0.6s						
CASY	Casey	65.78	192	P	P	10 41 30.1	+0.1
WMQ	Urumqi	65.96	322	*e*P	P	10 41 34.9	+3.2
MK31	Makanchi Array	70.74	322	P	P	10 42 00.4	-1.0
MKAR	Makanchi Array	70.74	322	P	P	10 42 00.6	-0.8
	comp=Z,1.2nm,0.5s,baz=126,slow=6.8,SNR=7.4						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	70.74	322	P	P	10 42 00.3	-1.2
KSH	Kashi	72.01	313	P	P	10 42 10.5	+1.1
KSH				pP	PcP	10 42 26.3	-1.4
AAK	Ala-Archa	74.14	316	P	P	10 42 21.5	-0.5
AAK				IAmb	IAmb	10 42 24.7	
	comp=Z,7.3nm,1.4s						
VNDA	Vanda	74.92	175	LR	LR	11 14 03.4	
	comp=Z,21nm,20.5s,baz=339,slow=34						
VNDA	Vanda	74.92	175	P	P	10 42 26.0	+0.3
GAR	Garm	76.01	311	P	P	10 42 32.3	-0.5
CHGR	Chuyangaron	76.79	311	P	P	10 42 36.4	-0.7
KKAR	Karatay Array	77.06	316	P	P	10 42 37.1	-1.4
BRVK	Borovoye	80.34	325	P	P	10 42 55.3	-1.0
MAW	Mawson	81.55	202	LR	LR	11 16 54.4	
	comp=Z,15nm,20.1s,baz=205,slow=34						
RC01	Rabbit Creek A	84.03	28	P	P	10 43 13.6	-1.8
RC01				IAmb	IAmb	10 43 24.6	
	comp=Z,15nm,1.1s						
GEYT	Alibeck	85.14	308	P	P	10 43 20.9	-0.7
	comp=Z,6.5nm,0.8s,baz=117,slow=1.7,SNR=7.7						
	comp=Z,6.5nm,0.8s						
GEYT	Alibeck	85.14	308	P	P	10 43 22.0	+0.4
GEYT				IAmb	IAmb	10 43 22.6	
	comp=Z,11nm,1.1s						
GYA0B	ALIBECK ARRAY	85.14	308	P	P	10 43 21.4	-0.2
GYA0B				IAmb	IAmb	10 43 22.6	
	comp=Z,10nm,1.1s						
ABKAR	Akbulak array	85.67	320	P	P	10 43 21.8	-2.1
ABKAR				IAmb	IAmb	10 43 23.7	
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	86.37	24	P	P	10 43 24.2	-2.9
	comp=Z,1.8nm,0.7s,baz=260,slow=4.6,SNR=16						
	comp=Z,1.8nm,0.7s						
QSPA	South Pole Qui	86.42	180	LR	LR	11 20 60.0	
	comp=Z,32nm,20.6s,baz=350,slow=35						
QSPA	South Pole Qui	86.42	180	P	P	10 43 28.6	+1.2
QSPA				IAmb	IAmb	10 43 49.8	
	comp=Z,3.3nm,0.8s						
GLB	Gilahina Butte	86.89	28	P	P	10 43 28.7	-1.0
GLB				IAmb	IAmb	10 43 54.9	
	comp=Z,5.8nm,1.1s						
VRDI	Verde Repeater	87.01	28	P	P	10 43 28.7	-1.8
VRDI				IAmb	IAmb	10 43 37.9	
	comp=Z,12nm,1.3s						
BMAR	Burnt Mountain	87.98	22	P	P	10 43 34.4	-0.5
LOGN	Logan Glacier	88.09	29	P	P	10 43 34.9	-0.8
TORD	Torodi Ar. Bea	136.96	285	PKP	PKPdf	10 50 07.3	-1.5
	comp=Z,1.0nm,0.7s,baz=65,slow=0.8,SNR=5.6						
DBIC	Dimbokro	144.08	276	PKP	PKPab	10 50 19.4	+0.1
	comp=Z,3.2nm,0.6s,baz=123,slow=4.6,SNR=4.2						
LPAZ	La Paz	146.56	127	PKPbc	PKPab	10 50 28.6	-0.6
	comp=Z,3.0nm,0.8s,baz=266,slow=2.1,SNR=15						

*ISU **16** 10:36:34,39°.52N×73°.71E,h2km*
*IDC **16** 10:36:35.7±1.4,39°.12N×73°.38E,h0km,mb3.7/7, mbtmp3.7/8,ML2.9/1,MS2.8/2,Error ellipse: s-maj=38.4km s-min=26.5km az=18.0*
*KRNET **16** 10:36:36.5±0.1,39°.45N×73°.61E,mb3.9*
*SOME **16** 10:36:37.5,39°.45N×73°.53E,h15km*
*NNC **16** 10:36:42.3±1.8,39°.65N×73°.58E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=16.1km s-min=9.4km az=158.0*
ISC 16 10:36:39.2±1.5,39°.28N±0°.05×73°.34E±0°.03,h12km±10km, n67,σ2°19/89,mb3.6/7,14C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	1.31	341	⇑*i*P	Pn	10 37 00.1	-3.3
	baz=30						
OHH				⇑*i*S	Sb	10 37 17.6	-3.0
	baz=30						
OHH	Osh	1.31	341	P	Pn	10 36 59.3	-4.1
OHH				S	Sb	10 37 17.9	-2.7
TSTA	Tashata	1.46	333	P	Pn	10 37 03.0	-2.3
TSTA				S	Sn	10 37 23.1	-1.2
FRG	Fergana	1.62	313	P	Pn	10 37 08.2	+0.7
FRG				S	Sb	10 37 31.2	+1.8
ANR	Andizhan	1.65	333	P	Sg	10 37 31.5	-0.9
CHMI	Chimion	1.71	306	P	Pn	10 37 09.9	+1.1
CHMI				S	Sg	10 37 34.7	+0.4
BTK	Batken	2.09	293	⇓*i*P	Pn	10 37 16.8	+2.7
	baz=87						
BTK				⇓*i*S	Sg	10 37 46.2	-0.3
	baz=87						
GAR	Garm	2.37	264	⇑*e*P	Pn	10 37 21.7	+3.8
	baz=61						
GAR				⇑*i*S	Sg	10 37 55.0	-0.2
	baz=61						
ARLS	Aral	2.69	16	⇑*i*P	Pn	10 37 20.0	-2.3
	baz=13						
ARLS				⇑*i*S	Sn	10 37 51.9	-2.9
	baz=13						
ARK	Arkit	2.72	338	P	Pn	10 37 21.7	-1.1
ARK				S	Sn	10 37 58.8	+3.1
AML	Almayashu	2.86	5	P	Pn	10 37 24.7	-0.2
	SNR=65						
NRN	Naryn	2.96	43	⇑*i*P	Pn	10 37 22.6	-3.6
	baz=42						
NRN				⇑*i*S	Sn	10 37 56.3	-5.5
	baz=42						
UCH	Uchtor	3.08	16	P	Pn	10 37 27.5	-0.5
	SNR=20						
UCH	Uchtor	3.08	16	⇓*i*P	Pn	10 37 26.3	-1.7
	baz=14						
UCH				⇓*i*S	Sn	10 38 01.4	-3.5
	baz=14						
EKS2	Erkin-Say	3.39	5	P	Pn	10 37 33.0	+1.0
	SNR=11						
AAK	Ala-Archa	3.47	14	P	Pn	10 37 34.0	+0.9
	SNR=20						
AAK	Ala-Archa	3.47	14	LR	LR	10 38 52.1	
	comp=Z,34nm,18.2s,baz=274,slow=38						
YBZ	Yangibazar	3.51	306	P	Sb	10 38 23.4	-0.4
KBK	Karagaybulak	3.59	19	P	Pn	10 37 36.0	+1.3
	SNR=10						
TGS	TashGRES	3.62	307	P	Sb	10 38 29.2	+2.3
ULHL	Ulahol	3.69	36	P	Pn	10 37 42.0	+5.7
	SNR=18						
NZBK	Nazarbek	3.77	302	P	Sb	10 38 29.3	-1.8
TKM2	Tokmak 2	4.02	24	⇑Pn	Pn	10 37 41.4	+0.8
	2.0nm,0.6s						
TKM2				⇑Pg	Pb	10 37 50.1	+0.1
	14nm,0.9s						
TKM2				⇓Lg	Lg	10 38 37.2	
	18nm,0.6s						
USP	Ospenovka	4.08	12	P	Pn	10 37 42.6	+1.2
	SNR=7.2						
SGDS	Sogindy	4.28	13	*e*P	Pb	10 37 51.6	-2.7
	5.7nm,0.6s						
SGDS				*e*S	Sb	10 38 45.3	-0.6
	37nm,0.8s						
SGDS	Sogindy	4.28	13	Pg	Pb	10 37 51.6	-2.7
	5.7nm,0.6s						
SGDS				Lg	Lg	10 38 45.3	
	37nm,0.8s						
DGS	Degeres	4.36	24	*e*P	Pb	10 37 54.3	-1.5
	12nm,0.9s						
DGS				*e*S	Sb	10 38 49.9	+1.5
	72nm,1.1s						
DGS	Degeres	4.36	24	Pg	Pb	10 37 54.3	-1.5
	12nm,0.9s						
DGS				Lg	Lg	10 38 49.9	
	72nm,1.1s						
KK31	Karatay Array	4.37	332	⇑Pn	Pn	10 37 47.0	+1.6
	1.3nm,0.3s,baz=124,slow=12,SNR=35						
KK31				⇑Pg	Pb	10 37 57.7	+1.7
	3.7nm,0.5s,baz=161,slow=18,SNR=7.0						
KK31				⇑Lg	Lg	10 38 53.9	
	6.1nm,0.3s,baz=128,slow=26,SNR=2.8						
IZV	Izvestkoviy	4.49	32	*e*P	Pb	10 37 56.2	-1.8
	0.1nm,0.1s						
IZV				*e*S	Sb	10 38 52.6	+0.4
	72nm,0.7s						
MTBS	Maitube	4.50	30	*e*P	Pb	10 37 55.9	-2.2
	9.1nm,0.5s						
MTBS				*e*S	Sb	10 38 52.2	-0.1
	16nm,0.4s						
MTBS	Maitube	4.50	30	Pg	Pb	10 37 55.9	-2.2
	9.1nm,0.5s						
MTBS				Lg	Lg	10 38 52.7	
	16nm,0.4s						
TNSS	Tian-Shan	4.64	35	*e*P	Pb	10 37 58.9	-1.7
	4.7nm,0.5s						
TNSS				*e*S	Sb	10 38 57.3	+0.8
	35nm,0.8s						
TNSS	Tian-Shan	4.64	35	Pg	Pb	10 37 58.9	-1.7
	4.7nm,0.5s						
TNSS				Lg	Lg	10 38 57.3	
	35nm,0.8s						
MDOK	Medeo	4.78	35	*e*P	Pb	10 38 01.5	-1.4
	7.5nm,0.6s						
MDOK				*e*S	Sb	10 39 02.1	+1.6
	29nm,0.9s						
MDOK	Medeo	4.78	35	Pg	Pb	10 38 01.5	-1.4
	7.5nm,0.6s						
MDOK				Lg	Lg	10 39 02.1	
	29nm,0.9s						
KOTS	Kotyrbulak	4.87	35	*e*P	Pb	10 38 03.3	-1.1
	12nm,0.5s						
KOTS				*e*S	Sb	10 39 04.7	+1.8
	87nm,0.8s						
KUU	Kurty	5.13	25	*e*P	Pb	10 38 07.0	-1.7
	4.7nm,0.3s						
KUU				*e*S	Sb	10 39 11.7	+1.4
	40nm,0.8s						
KUU	Kurty	5.13	25	Pg	Pb	10 38 07.0	-1.7
	4.7nm,0.3s						
KUU				Lg	Lg	10 39 11.7	
	40nm,0.8s						
CHKK	Chushkaly	5.33	30	*e*P	Pb	10 38 10.5	-1.7
	2.9nm,0.5s						
CHKK				*e*S	Sb	10 39 17.4	+1.4
	20nm,0.5s						
CHKK	Chushkaly	5.33	30	Pg	Pb	10 38 10.5	-1.7
	2.9nm,0.5s						
CHKK				Lg	Lg	10 39 18.2	
	20nm,0.5s						
SATY	Saty	5.37	44	*e*P	Pb	10 38 11.8	-1.2
	2.3nm,0.5s						
SATY				*e*S	Sb	10 39 19.8	+2.4
	18nm,0.6s						
SATY	Saty	5.37	44	Pg	Pb	10 38 11.8	-1.2
SATY				Lg	Lg	10 39 19.8	
ZHN	Zhinishke	5.46	43	*e*P	Pb	10 38 14.4	-0.2
	3.7nm,0.2s						
ZHN				*e*S	Sb	10 39 23.6	+3.6
	9.6nm,0.3s						
KURS	Kuram	5.56	39	*e*P	Pb	10 38 17.7	+1.6
	6.1nm,0.7s						
KURS				*e*S	Sb	10 39 29.8	+7.1
	10nm,1.0s						
KURS	Kuram	5.56	39	Pg	Pb	10 38 17.7	+1.6
	6.1nm,0.7s						
KURS				Lg	Lg	10 39 29.8	
	10nm,1.0s						
CEP	Cherat	5.57	192	P	Pn	10 38 09.0	+7.1
CEP				S	Sb	10 39 22.0	-1.1
CHCP	Chirah Chowk	5.61	181	P	Pn	10 38 08.7	+6.3
UZB	Uzynbulak	5.77	46	*e*P	Pb	10 38 19.1	-0.6
	1.7nm,0.5s						
UZB				*e*S	Sb	10 39 32.0	+3.1
	9.0nm,1.0s						
UZB	Uzynbulak	5.77	46	Pg	Pb	10 38 19.1	-0.6
UZB				Lg	Lg	10 39 32.0	
BTLS	Baital	5.78	5	*e*P	Pb	10 38 19.6	-0.3
	5.2nm,0.7s						
BTLS				*e*S	Sb	10 39 32.5	+3.4
	11nm,1.1s						
KPKS	Kokpek	5.80	42	*e*P	Pb	10 38 19.0	-1.3
	1.7nm,0.5s						
KPKS				*e*S	Sb	10 39 32.1	+2.3
	14nm,0.5s						
KPKS	Kokpek	5.80	42	Pg	Pb	10 38 19.0	-1.3
	1.7nm,0.5s						
KPKS				Lg	Lg	10 39 32.1	
	14nm,0.5s						
PDGK	Podgornoye	6.15	47	⇓Pg	Pb	10 38 30.3	+4.1
	7.1nm,0.9s						
PDGK				⇑Lg	Lg	10 39 46.9	
	15nm,0.9s						
BLB	Baldybastay	6.16	37	*e*P	Pb	10 38 26.4	0.0
	9.2nm,0.6s						
BLB				*e*S	Sb	10 39 44.4	+4.3
	15nm,0.6s						
BLB	Baldybastay	6.16	37	Pg	Pb	10 38 26.4	0.0
	9.2nm,0.6s						
BLB				Lg	Lg	10 39 45.7	
	15nm,0.6s						
KTMS	Ketmen	6.72	49	*e*P	Pb	10 38 37.5	+1.5
	0.5nm,0.4s						
KTMS				*e*S	Sb	10 40 03.3	+7.1
	2.6nm,0.7s						
DJR	Jarkent	6.98	42	*e*P	Pb	10 38 42.7	+2.4
	1.2nm,0.2s						
DJR				*e*S	Sb	10 40 12.3	+8.7
	9.1nm,1.1s						
ZALV	Zalesovo Beam	16.62	24	Pn	Pn	10 40 30.9	-0.9
	0.2nm,0.3s,baz=209,slow=13,SNR=5.1						
	1.1nm,0.5s						
SONM	Songino Array	25.28	59	P	P	10 42 04.1	-1.2
	0.6nm,0.8s,baz=262,slow=10.0,SNR=2.5						
	0.6nm,0.8s						
AKASG	Malin Array Be	32.75	305	P	P	10 43 11.0	-0.6
	0.2nm,0.4s,baz=78,slow=7.1,SNR=2.3						
	0.2nm,0.4s						
FINES	FINESS Array B	36.28	323	P	P	10 43 41.5	-0.6
	0.3nm,0.3s,baz=102,slow=10,SNR=7.3						
	0.3nm,0.3s						
ATD	Arta Tunnel	38.67	233	LR	LR	11 01 37.1	
	comp=Z,42nm,18.6s,baz=30,slow=39						
ARCES	ARCESS Array B	39.33	336	P	P	10 44 09.1	+1.4
	9.1nm,1.1s,baz=104,slow=7.6,SNR=1.9						
	9.1nm,1.1s						
NOA	NORSAR Array B	43.33	321	P	P	10 44 39.2	-1.5
	0.5nm,0.5s,baz=91,slow=7.6,SNR=2.3						
	0.5nm,0.5s						
TORD	Torodi Ar. Bea	67.63	269	P	P	10 47 34.9	-1.2
	0.4nm,0.7s,baz=46,slow=6.2,SNR=3.0						
	0.4nm,0.7s						
WRA	Warramunga Arr	81.94	124	P	P	10 48 57.0	-1.9
	0.6nm,0.8s,baz=325,slow=4.1,SNR=2.7						
	0.6nm,0.8s						

*IDC

OUENC	**Ouen Island, N**	**7.91**	**183**	P	**Pn**	**10 41 17.3 +3.5**
HNR	**Honiara**	**8.79**	**304**	Pn	Pn	10 41 30.8 +5.2
HNR	**Honiara**	**8.79**	**304**	P	**Pn**	**10 41 25.2 -0.4**
MSVF	**Nonsavu**	**10.80**	**109**	P	**Pn**	**10 41 52.6 +0.7**
RK1H	**Rockhampton Ha**	**18.21**	**238**	P	**Pn**	**10 43 24.8 +0.9**
EIDS	**Eidsvold**	**18.71**	**232**	P	**Pn**	**10 43 29.4 -0.3**
EIDS				IAmb	IAmb	10 43 34.7
	comp=Z,16nm,1.1s					
EIDS	**Eidsvold**	**18.71**	**232**	P	**Pn**	**10 43 30.5 +0.8**
AFI	**Afiamalu**	**20.26**	**91**	P	Pn	10 43 48.0 -0.3
	comp=Z,66nm,0.9s,baz=196,slow=7.4,SNR=6.9					
AFI	**Afiamalu**	**20.26**	**91**	P	Pn	10 43 48.0 -0.4
CTA	**Charters Tower**	**20.88**	**252**	P	Pn	10 43 53.4 -2.5
	comp=Z,4.8nm,0.7s,baz=32,slow=11,SNR=2.6					
RMQ	**Roma**	**21.07**	**233**	P	**P**	**10 43 55.4 +2.7**
ARMA	**Armidale**	**21.46**	**220**	P	**P**	**10 43 58.2 +1.3**
ARMA				IAmb	IAmb	10 43 60.0
	comp=Z,18nm,1.0s					
ARMA	**Armidale**	**21.46**	**220**	P	**P**	**10 43 59.0 +2.1**
NIUE	**Niue**	**22.24**	**105**	P	**P**	**10 44 06.8 +2.0**
NIUE	**Niue**	**22.24**	**105**	P	**P**	**10 44 05.0 +0.2**
COEN	**Coen**	**23.42**	**268**	P	**P**	**10 44 17.5 +1.8**
COEN				IAmb	IAmb	10 44 39.9
	comp=Z,29nm,1.4s					
QLP	**Quilpie**	**24.70**	**237**	P	**P**	**10 44 28.8 +1.6**
URZ	**Urewera**	**25.22**	**162**	P	**P**	**10 44 30.6 -1.1**
	comp=Z,3.7nm,0.6s,baz=284,slow=4.2,SNR=1.6					
	comp=Z,3.7nm,0.6s					
BKZ	**Black Stump Fm**	**25.88**	**164**	P	**P**	**10 44 37.1 -0.7**
BKZ				IAmb	IAmb	10 45 00.0
	comp=Z,32nm,1.3s					
BKZ	**Black Stump Fm**	**25.88**	**164**	P	**P**	**10 44 37.0 -0.7**
CMSA	**Cobar Meteorol**	**26.09**	**226**	P	**P**	**10 44 41.0 +1.3**
CNB	**Canberra Magne**	**26.30**	**215**	P	**P**	**10 44 42.9 +1.3**
CAN	**Canberra**	**26.50**	**215**	P	**P**	**10 44 43.8 +0.4**
CAN				IAmb	IAmb	10 44 58.4
	comp=Z,31nm,1.5s					
THZ	**Tophouse**	**27.61**	**171**	P	**P**	**10 44 52.8 -0.4**
MSWZ	**Moikau Station**	**27.71**	**167**	P	**P**	**10 44 53.1 -0.9**
MILA	**Mila**	**27.71**	**212**	P	**P**	**10 44 55.8 +1.7**
INKA	**Innaminka**	**28.02**	**238**	P	**P**	**10 44 57.5 +0.6**
KHZ	**Kahutara**	**28.35**	**170**	P	**P**	**10 44 59.0 -0.6**
KHZ	**Kahutara**	**28.35**	**170**	P	**P**	**10 44 59.7 +0.1**
	comp=Z,24nm,1.5s					
LTZ	**Lake Taylor**	**28.52**	**172**	P	**P**	**10 45 00.8 -0.4**
LTZ				IAmb	IAmb	10 45 09.6
	comp=Z,20nm,1.1s					
STKA	**Stephens Creek**	**29.20**	**229**	P	**P**	**10 45 08.8 +1.4**
	comp=Z,21nm,0.5s,baz=54,slow=9.2,SNR=53					
STKA				PcP	**PcP**	**10 48 10.5 0.0**
	comp=Z,4.3nm,0.5s,baz=100,slow=3.9,SNR=6.7					
	comp=Z,21nm,0.5s					
STKA	**Stephens Creek**	**29.20**	**229**	P	**P**	**10 45 08.8 +1.4**
STKA	**Stephens Creek**	**29.20**	**229**	P	**P**	**10 45 08.9 +1.5**
RPZ	**Rata Peaks**	**29.31**	**174**	P	**P**	**10 45 08.0 -0.2**
	comp=Z,8.6nm,0.8s,baz=0.0,slow=2.0,SNR=2.3					
	comp=Z,8.6nm,0.8s					
LBZ	**Lake Benmore**	**29.91**	**176**	P	**P**	**10 45 13.2 -0.2**
TOO	**Toolangi**	**30.09**	**216**	P	**P**	**10 45 16.3 +1.1**
TOO				IAmb	IAmb	10 45 17.2
	comp=Z,16nm,0.9s					
TOO	**Toolangi**	**30.09**	**216**	P	**P**	**10 45 16.3 +1.1**
LCRK	**Leigh Creek**	**31.12**	**234**	P	**P**	**10 45 25.2 +0.9**
WR0	**Warramunga Arr**	**31.76**	**255**	P	**P**	**10 45 29.2 -0.9**
WR0				IAmb	IAmb	10 45 43.9
	comp=Z,13nm,1.5s					
ARPS	**Mount Arapiles**	**31.77**	**221**	P	**P**	**10 45 31.1 +1.2**
WB0	**Warramunga Arr**	**31.88**	**256**	P	**P**	**10 45 30.4 -0.7**
WB0				IAmb	IAmb	10 45 30.9
	comp=Z,14nm,0.5s					
HTT	**Hallett**	**31.93**	**229**	P	**P**	**10 45 33.1 +1.7**
WB2	**Warramunga Arr**	**31.93**	**256**	P	**P**	**10 45 30.7 -0.9**
WB2				IAmb	IAmb	10 45 31.4
	comp=Z,5.5nm,0.6s					
WRAB	**Tennant Creek**	**31.93**	**256**	P	**P**	**10 45 30.8 -0.8**
WRAB				IAmb	IAmb	10 45 31.4
	comp=Z,5.9nm,0.5s					
WRAB	**Tennant Creek**	**31.93**	**256**	P	**P**	**10 45 31.2 -0.4**
WRA	**Warramunga Arr**	**31.94**	**256**	P	**P**	**10 45 30.6 -1.1**
	comp=Z,4.1nm,0.5s,baz=86,slow=9.4,SNR=49					
WRA				PcP	**PcP**	**10 48 17.4 -0.5**
	comp=Z,1.1nm,0.8s,baz=84,slow=3.1,SNR=4.8					
WRA				S	**S**	**10 50 25.0 -5.6**
	comp=Z,1.4nm,0.9s,baz=85,slow=14,SNR=6.2					
WRA				LR	LR	10 57 41.3
	comp=Z,57nm,19.0s,baz=16,slow=34					
	comp=Z,4.1nm,0.5s					
WRA	**Warramunga Arr**	**31.94**	**256**	P	**P**	**10 45 30.2 -1.5**
OOD	**Oodnadatta**	**32.24**	**241**	P	**P**	**10 45 34.8 +0.7**
AS01	**Alice Springs**	**32.77**	**249**	P	**P**	**10 45 38.2 -0.7**
AS31	**Alice Springs**	**32.82**	**249**	P	**P**	**10 45 38.6 -0.7**
AS31				IAmb	IAmb	10 45 39.9
	comp=Z,6.7nm,0.4s					
ASAR	**Alice Springs**	**32.82**	**249**	P	**P**	**10 45 38.5 -0.7**
	comp=Z,9.4nm,0.5s,baz=78,slow=9.3,SNR=190					
ASAR				pP	**pP**	**10 46 13.7 +0.4**
	comp=Z,0.6nm,0.5s,baz=72,slow=8.9,SNR=1.3					
ASAR				PcP	**PcP**	**10 48 19.6 -0.7**
	comp=Z,1.0nm,0.6s,baz=88,slow=2.2,SNR=4.3					
ASAR				S	**S**	**10 50 37.9 -6.2**
	comp=Z,0.7nm,0.8s,baz=80,slow=15,SNR=5.2					
	comp=Z,9.4nm,0.5s					
MOO	**Moorlands**	**32.84**	**208**	P	**P**	**10 45 40.8 +1.7**
TAU	**Tasmania Unive**	**33.15**	**207**	P	**P**	**10 45 42.6 +0.8**
TAU	**Tasmania Unive**	**33.15**	**207**	P	**P**	**10 45 42.5 +0.7**
	comp=Z,36nm,2.1s					
BBOO	**Buckleboo**	**33.78**	**232**	P	**P**	**10 45 48.2 +0.7**
BBOO	**Buckleboo**	**33.78**	**232**	P	**P**	**10 45 48.2 +0.7**
MULG	**Mulgathing**	**34.39**	**237**	P	**P**	**10 45 52.8 0.0**
MTN	**Manton Dam**	**35.19**	**268**	P	**P**	**10 46 00.3 +0.5**
MTN				IAmb	IAmb	10 46 02.9
	comp=Z,9.5nm,0.6s					
FAKI	**Fak Fak**	**36.47**	**285**	P	**P**	**10 46 11.1 +0.4**
FAKI				IAmb	IAmb	10 46 12.7
	comp=Z,12nm,0.9s					
FAKI	**Fak Fak**	**36.47**	**285**	P	**P**	**10 46 11.2 +0.5**
KNRA	**Kununurra**	**37.23**	**263**	P	**P**	**10 46 16.5 -0.5**
KNRA				IAmb	IAmb	10 46 18.0
	comp=Z,23nm,0.8s					
KNRA	**Kununurra**	**37.23**	**263**	P	**P**	**10 46 16.6 -0.5**
WRKA	**Warakurna**	**38.09**	**248**	P	**P**	**10 46 24.3 +0.1**
SIJI	**Sorong**	**38.13**	**288**	P	**P**	**10 46 25.0 +0.4**
	comp=Z,14nm,0.6s,baz=84,slow=11,SNR=10					
	comp=Z,14nm,0.6s					
FORT	**Forrest**	**39.48**	**239**	P	**P**	**10 46 35.8 +0.2**
FORT	**Forrest**	**39.48**	**239**	P	**P**	**10 46 36.1 +0.4**
PSA00	**Pilbara Seismi**	**45.56**	**254**	P	**P**	**10 47 25.5 +0.6**
MBWA	**Marble Bar**	**45.67**	**254**	P	**P**	**10 47 25.8 +0.1**
MBWA				IAmb	IAmb	10 47 26.4
	comp=Z,16nm,0.7s					
MBWA	**Marble Bar**	**45.67**	**254**	P	**P**	**10 47 26.6 +0.9**
KLBR	**Kellerberrin**	**48.28**	**241**	P	**P**	**10 47 45.5 -0.3**
TOLI2	**Tolitoli**	**48.60**	**285**	P	**P**	**10 47 47.9 -0.7**
PLAI	**Plampang**	**48.78**	**271**	P	**P**	**10 47 50.5 +0.6**
NWAO	**Narrogin (SRO)**	**48.93**	**239**	P	**P**	**10 47 50.2 -0.5**
	comp=Z,13nm,0.6s,baz=360,slow=5.2,SNR=13					
	comp=Z,13nm,0.6s					
NWAO	**Narrogin (SRO)**	**48.93**	**239**	P	**P**	**10 47 50.0 -0.8**
NWAO				IAmb	IAmb	10 47 51.6
	comp=Z,25nm,0.8s					
NWAO	**Narrogin (SRO)**	**48.93**	**239**	P	**P**	**10 47 50.3 -0.5**
BLDU	**Ballidu**	**49.03**	**242**	P	**P**	**10 47 50.7 -0.9**
	comp=Z,21nm,1.9s					
MORW	**Morawa**	**49.43**	**244**	P	**P**	**10 47 54.4 -0.2**
MORW				IAmb	IAmb	10 47 55.2
	comp=Z,19nm,0.7s					
MORW	**Morawa**	**49.43**	**244**	P	**P**	**10 47 54.4 -0.2**
MUN	**Mundaring**	**49.64**	**240**	P	**P**	**10 47 56.2 0.0**
GIRL	**Giralia**	**50.77**	**252**	P	**P**	**10 48 06.0 +1.3**
GIRL	**Giralia**	**50.77**	**252**	P	**P**	**10 48 06.1 +1.3**
	comp=Z,140nm,2.1s					
UGM	**Wanagama**	**55.99**	**270**	P	**P**	**10 48 43.3 +0.2**
JGF	**Kuroka**	**57.33**	**331**	P	**P**	**10 48 52.0 -0.1**
JGF				IAmb	IAmb	10 49 26.3
	comp=Z,15nm,1.4s					
MJAR	**Matsushiro Arr**	**57.71**	**332**	P	**P**	**10 48 54.0 -0.7**
	comp=Z,1.5nm,0.5s,baz=172,slow=7.3,SNR=7.0					
	comp=Z,1.5nm,0.5s					
MAJO	**Matsushiro**	**57.71**	**332**	P	**P**	**10 48 54.4 -0.3**
MJB9	**Matsu-Tunnel**	**57.72**	**332**	P	**P**	**10 48 54.9 +0.2**
LEM	**Lembang**	**59.04**	**271**	P	**P**	**10 49 05.0 +0.5**
	comp=Z,20nm,0.6s,baz=349,slow=21,SNR=4.2					
	comp=Z,20nm,0.6s					
TPUB	**Ta-pu**	**59.13**	**309**	P	**P**	**10 49 04.3 -0.5**
VNDA	**Vanda**	**63.11**	**181**	P	**P**	**10 49 30.4 -0.3**
	comp=Z,1.8nm,0.7s,baz=355,slow=7.7,SNR=18					
	comp=Z,1.8nm,0.7s					
VNDA	**Vanda**	**63.11**	**181**	P	**P**	**10 49 30.8 +0.1**
SBA	**Scott Base**	**63.38**	**180**	P	**P**	**10 49 33.5 +1.1**
SBA				IAmb	IAmb	10 49 34.5
	comp=Z,11nm,1.0s					
KSRS	**Korea Array**	**63.57**	**326**	P	**P**	**10 49 34.9 +0.7**
	comp=Z,1.0nm,0.8s,baz=131,slow=6.9,SNR=3.7					
	comp=Z,1.0nm,0.8s					
CASY	**Casey**	**63.78**	**202**	P	**P**	**10 49 35.6 +0.4**
CASY				IAmb	IAmb	10 49 36.1
	comp=Z,8.4nm,0.7s					
USRK	**Ussuriysk Ar.**	**66.69**	**333**	P	**P**	**10 49 54.8 +0.6**
	comp=Z,1.8nm,0.6s,baz=126,slow=9.7,SNR=4.4					
	comp=Z,1.8nm,0.6s					
PEA0B	**Petropavlovsk-**	**67.82**	**354**	P	**P**	**10 50 02.3 +1.2**
PEA0B				IAmb	IAmb	10 50 40.3
	comp=Z,29nm,1.4s					
PETK	**Petropavlovsk-**	**67.82**	**354**	P	**P**	**10 50 01.8 +0.7**
	comp=Z,5.5nm,0.9s,baz=151,slow=9.7,SNR=6.6					
	comp=Z,5.5nm,0.9s					
PETK	**Petropavlovsk-**	**67.82**	**354**	P	**P**	**10 50 02.3 +1.2**
KMI	**Kunming**	**74.23**	**302**	⇑P	**P**	**10 50 40.1 -0.5**
CMAR	**Chiang Mai Arr**	**74.90**	**294**	P	**P**	**10 50 45.4 +1.1**
	comp=Z,1.7nm,0.7s,baz=128,slow=4.4,SNR=12					
	comp=Z,1.7nm,0.7s					
CMAR	**Chiang Mai Arr**	**74.90**	**294**	P	**P**	**10 50 44.9 +0.6**
HHC	**Hu-ho-hao-te**	**75.44**	**320**	*e*P	**P**	**10 50 49.3 +2.2**
QSPA	**South Pole Qui**	**75.55**	**180**	P	**P**	**10 50 46.9 -0.4**
PZH	**PanZhiHua**	**75.61**	**303**	P	**P**	**10 50 51.5 +3.1**
YAK	**Yakutsk**	**81.81**	**343**	P	**P**	**10 51 21.0 -0.2**
YAK				IAmb	IAmb	10 51 22.1
	comp=Z,18nm,0.7s					
ULN	**Ulaanbaatar**	**81.97**	**324**	P	**P**	**10 51 23.1 +0.4**
MAW	**Mawson**	**82.14**	**202**	P	**P**	**10 51 23.2 +0.2**
	comp=Z,7.3nm,0.7s,baz=108,slow=5.8,SNR=26					
	comp=Z,7.3nm,0.7s					
MAW	**Mawson**	**82.14**	**202**	P	**P**	**10 51 23.0 0.0**
SONM	**Songino Array**	**82.33**	**324**	P	**P**	**10 51 24.4 -0.1**
	comp=Z,1.1nm,0.5s,baz=140,slow=3.7,SNR=10					
	comp=Z,1.1nm,0.5s					
SONM	**Songino Array**	**82.33**	**324**	P	**P**	**10 51 25.1 +0.6**
GTA	**Gaotai**	**82.54**	**314**	*e*P	**P**	**10 51 27.6 +1.8**
GTA				pP	pwP	10 52 12.4 +2.7
GTA				sP	sP	10 52 31.3 +6.5
SUA	**Susitna One**	**82.64**	**19**	P	**P**	**10 51 25.9 +0.1**
ILAR	**Eielson Array**	**86.27**	**18**	P	**P**	**10 51 42.3 -1.5**
	comp=Z,1.1nm,0.8s,baz=246,slow=4.8,SNR=11					
	comp=Z,1.1nm,0.8s					
BELA	**Belgrano 2**	**86.97**	**175**	P	**P**	**10 51 45.3 -1.8**
NVAR	**Mina Array Bea**	**87.06**	**49**	P	**P**	**10 51 48.2 -0.4**
	comp=Z,0.4nm,0.6s,baz=229,slow=5.5,SNR=3.7					
	comp=Z,0.4nm,0.6s					
WMQ	**Urumqi**	**92.60**	**315**	*e*P	**P**	**10 52 16.3 +2.2**
TROLL	**Troll, Antarti**	**93.11**	**185**	P	**P**	**10 52 15.1 -0.9**
SNAA	**Sanae**	**93.80**	**183**	P	**P**	**10 52 17.8 -1.3**
SNAA	**Sanae**	**93.80**	**183**	P	**P**	**10 52 17.6 -1.5**
SNAA				IAmb	IAmb	10 52 19.7
	comp=Z,3.4nm,1.0s					
VNA3	**Neumayer Olymp**	**94.46**	**181**	P	**P**	**10 52 20.6 -1.5**
VNA2	**Neumayer-Watz**	**94.73**	**182**	P	**P**	**10 52 20.5 -2.8**
	baz=179,slow=6.0					
TXAR	**Lajitas Array**	**96.11**	**61**	P	**P**	**10 52 29.9 -0.6**
	comp=Z,0.1nm,0.7s,baz=230,slow=5.6,SNR=2.0					
	comp=Z,0.1nm,0.7s					
MKAR	**Makanchi Array**	**97.06**	**316**	P	**P**	**10 52 33.9 -0.5**
	comp=Z,2.4nm,0.7s,baz=90,slow=6.4,SNR=13					
	comp=Z,2.4nm,0.7s					
ZALV	**Zalesovo Beam**	**97.23**	**324**	P	**P**	**10 52 33.0 -1.8**
	comp=Z,2.2nm,0.7s,baz=131,slow=6.2,SNR=7.1					
	comp=Z,2.2nm,0.7s					
ARCES	**ARCESS Array B**	**120.03**	**345**	PKP	**PKPdf**	**10 57 50.9 -0.6**
	comp=Z,4.9nm,0.7s,baz=68,slow=2.4,SNR=19					
BOSA	**Boshof**	**123.60**	**220**	PKP	**PKPdf**	**10 57 59.2 -0.6**
	comp=Z,3.2nm,0.8s,baz=178,slow=3.2,SNR=4.8					
FINES	**FINESS Array B**	**125.52**	**338**	PKP	**PKPdf**	**10 58 01.5 -0.7**
	comp=Z,5.4nm,0.9s,baz=27,slow=4.7,SNR=8.2					
NB2	**NORSAR Subarra**	**130.40**	**345**	PKPdf	**PKPdf**	**10 58 10.3 -1.3**
	comp=Z,0.5nm,0.7s,baz=31,slow=1.9					
NOA	**NORSAR Array B**	**130.40**	**345**	PKP	**PKPdf**	**10 58 10.3 -1.3**
	comp=Z,0.8nm,0.7s,baz=32,slow=2.0,SNR=4.1					
NOA				SKPbc	**SKPab**	**11 01 19.4 +0.2**
	comp=Z,2.0nm,0.7s,baz=33,slow=2.9,SNR=12					
AKASG	**Malin Array Be**	**130.56**	**326**	PKP	**PKPdf**	**10 58 11.4 -0.7**
	comp=Z,0.7nm,0.4s,baz=54,slow=2.6,SNR=6.0					
AKASG				SKPbc	**SKPbc**	**11 01 19.6 -0.4**
	comp=Z,2.0nm,0.7s,baz=45,slow=4.8,SNR=9.0					
BRTR	**Keskin Array B**	**132.39**	**311**	PKP	**PKPdf**	**10 58 15.6 -0.6**
	comp=Z,1.2nm,0.7s,baz=98,slow=2.4,SNR=5.0					
CHVC	**Chvalec**	**137.13**	**333**	*e*PKPDF	**PKPdf**	**10 58 24.7 +0.2**
KRLC	**Kraliky**	**137.18**	**332**	*e*PKPDF	**PKPdf**	**10 58 24.8 +0.1**
DPC	**Dobruska-Polom**	**137.19**	**333**	*e*PKPDF	**PKiKP**	**10 58 26.9 +0.3**
CLL	**Collm**	**137.85**	**336**	*e*PKPdf	**PKiKP**	**10 58 27.8 0.0**
RONA	**Rosalia, Austr**	**139.08**	**330**	*e*P	**PKiKP**	**10 58 30.7 +0.2**
	comp=Z,3.4nm,0.6s					
CONA	**Conrad Observa**	**139.13**	**331**	*i* P	**PKiKP**	**10 58 30.6 -0.1**
	comp=Z,2.1nm,0.6s					
CKRC	**Cesky Krumlov**	**139.20**	**333**	*e*PKPDF	**PKPdf**	**10 58 28.4 0.0**
KHC	**Kaspr Kke Hory**	**139.29**	**334**	*e*PKPDF	**PKPdf**	**10 58 28.8 +0.2**
GERES	**GERESS Array B**	**139.45**	**333**	PKP	**PKPdf**	**10 58 29.2 +0.3**
	comp=Z,1.4nm,0.8s,baz=31,slow=0.8,SNR=9.8					
MOA	**Molln**	**139.94**	**332**	*i* P	**PKiKP**	**10 58 31.8 -0.4**
	comp=Z,0.9nm,0.5s					
KBA	**Koelnbreinsper**	**140.93**	**332**	*e*P	**PKiKP**	**10 58 33.6 -0.9**
	comp=Z,2.2nm,0.7s					
WTTA	**Wattenberg**	**141.55**	**333**	*e*P	**PKPdf**	**10 58 30.9 -2.0**
	comp=Z,2.5nm,0.7s					
ABTA	**Abfaltersbach**	**141.55**	**332**	*e*P	**PKPdf**	**10 58 31.4 -1.4**
	comp=Z,2.3nm,0.6s					
MOTA	**Moosalm**	**141.72**	**334**	*e*P	**PKPdf**	**10 58 30.9 -2.3**
	comp=Z,5.3nm,1.2s					
SQTA	**Sankt Quirin**	**141.77**	**334**	*e*P	**PKiKP**	**10 58 36.0 -0.2**
	comp=Z,6.4nm,1.2s					
FETA	**Feichten**	**142.13**	**334**	*e*P	**PKPdf**	**10 58 31.4 -2.5**
	comp=Z,4.0nm,1.1s					
KEST	**Kesra**	**151.06**	**321**	PKPbc	**PKiKP**	**10 58 55.5 -0.1**
	comp=Z,16nm,0.7s,baz=111,slow=2.6,SNR=18					
ESDC	**Sonseca Array**	**153.76**	**345**	PKPbc	**PKPbc**	**10 59 00.8 -0.1**
	comp=Z,1.4nm,0.9s,baz=13,slow=2.3,SNR=8.9					
ESDC				PKPab	**PKPab**	**10 59 14.9 +0.5**
	comp=Z,1.2nm,0.8s,baz=24,slow=4.2,SNR=6.4					
TORD	**Torodi Ar. Bea**	**165.99**	**266**	PKP	**PKPdf**	**10 59 06.3 -0.9**
	comp=Z,0.6nm,0.8s,baz=34,slow=0.5,SNR=3.0					
TORD				PKPab	**PKPab**	**11 00 07.5 -0.9**
	comp=Z,2.3nm,0.9s,baz=96,slow=2.4,SNR=9.5					

*IDC **16** 11:04:02.6±1.3, 23°.28N×142°.30E, h0km, mb3.7/5, mbtmp3.7/6, ML4.1/1, MS2.7/5, Error ellipse: s-maj=48.8km s-min=24.2km az=99.0*

ISC 16 11:04:07.8±1.2, 23°.3N±0°.1×142°.3E±0°.3, h35km, n16, σ0°77/7, mb3.6/5, MS2.6/3, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.75**	**359**	Pn	**Pn**	**11 05 03.7**	**+0.4**
	14nm,0.3s,baz=148,slow=9.5,SNR=1.6						
JCJ				Sn	**Sn**	**11 05 45.2**	**-0.9**
	18nm,0.3s,baz=108,slow=23,SNR=1.9						
	68nm,0.6s						
JHJ	**Hachijo jima 2**	**10.00**	**348**	LR	LR	11 10 30.3	
	comp=Z,28nm,19.0s,baz=316,slow=39						
KSRS	**Korea Array**	**18.71**	**322**	LR	LR	11 15 23.2	
	comp=Z,27nm,18.1s,baz=5.0,slow=36						
DAV	**Davao City (W)**	**22.78**	**227**	LR	LR	11 18 12.4	
	comp=Z,23nm,19.2s,baz=216,slow=37						
H11N1	**WAKE ISLAND Hy**	**23.17**	**94**	T	T	11 33 15.8	
	baz=283,slow=75,SNR=70						
H11N2	**WAKE ISLAND Hy**	**23.18**	**94**	T	T	11 33 15.8	
	baz=283,slow=75,SNR=125						
H11N3	**WAKE ISLAND Hy**	**23.19**	**94**	T	T	11 33 17.0	
	baz=283,slow=75,SNR=97						
H11S3	**WAKE ISLAND Hy**	**23.30**	**97**	T	T	11 33 26.6	
	baz=287,slow=74						
H11S1	**WAKE ISLAND Hy**	**23.30**	**97**	T	T	11 33 27.7	
	baz=287,slow=74						
H11S2	**WAKE ISLAND Hy**	**23.31**	**97**	T	T	11 33 22.1	
	baz=287						
SIJI	**Sorong**	**26.33**	**205**	LR	LR	11 18 10.5	
	comp=Z,27nm,19.3s,baz=222,slow=32						
CMAR	**Chiang Mai Arr**	**40.66**	**272**	P	**P**	**11 11 45.2**	**+0.2**
	0.8nm,0.5s,baz=58,slow=8.6,SNR=2.6						
CMAR				LR	LR	11 27 14.2	
	comp=Z,9.1nm,21.3s,baz=190,slow=34						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**43.70**	**191**	P	**P**	**11 12 08.6**	**-1.0**
	0.9nm,0.9s,baz=9.4,slow=7.9,SNR=4.5						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**47.42**	**190**	P	**P**	**11 12 39.3**	**+0.3**
	0.3nm,0.8s,baz=18,slow=9.5,SNR=2.1						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**60.98**	**28**	P	**P**	**11 14 17.6**	**+0.3**
	0.5nm,0.9s,baz=268,slow=5.4,SNR=3.1						
	0.5nm,0.9s						
FINES	**FINESS Array B**	**81.35**	**334**	P	**P**	**11 16 20.6**	**0.0**
	2.3nm,1.0s,baz=54,slow=7.1,SNR=1.9						
	2.3nm,1.0s						

*ISK **16** 11:10:38.5, 39°.95N×39°.09E, h5km, ML2.9/5*

DDA 16 11:10:34.7±0.0, 39°.86N×39°.17E, h7km±4km, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.30**	**13**	P	Pg	11 10 41.3	+0.7
KELT				S	Sg	11 10 44.8	+0.2
KELT				*i* AML	AML	11 10 45.0	
	comp=N,227nm,0.3s						
KELT				*i* AML	AML	11 10 45.0	
	comp=E,286nm,0.3s						
REFA	**Refahiye_ERZN**	**0.32**	**279**	P	Pb	11 10 42.2	-0.6
REFA				S	Sg	11 10 46.2	+1.1
REFA				*i* AML	AML	11 10 52.0	
	comp=N,81nm,0.5s						
EUZM	**Uzumlu**	**0.43**	**110**	P	Pb	11 10 45.7	+0.9
EUZM				S	Sg	11 10 49.4	+0.5
ALUC	**Giresun/Alucra**	**0.57**	**328**	P	Pg	11 10 46.4	+0.6
ALUC				S	Sg	11 10 53.7	+0.3
ALUC				*i* AML	AML	11 10 54.0	
	comp=E,106nm,0.1s						
ALUC				*i* AML	AML	11 10 57.0	
	comp=N,356nm,0.3s						
GUMT	**Gumushane**	**0.65**	**22**	PG	Pn	11 10 50.9	+0.5
GUMT				SG	Sb	11 10 58.5	+0.8
SUSE	**Susehri**	**0.82**	**295**	P	Pg	11 10 49.7	-0.8
BAYT	**Aydintepe-Bayb**	**0.92**	**54**	PG	Pn	11 10 56.6	+2.4
BAYB	**BAYBURT**	**0.93**	**64**	P	Pg	11 10 52.4	-0.1
BAYB				S	Sg	11 10 57.3	-7.3
PTK	**Pertek**	**0.98**	**170**	PG	Pn	11 10 59.6	+4.5
PTK				SG	Sn	11 11 14.8	+5.5
ARPR	**Arapgir-MALATY**	**1.00**	**220**	PG	Pn	11 10 58.7	+3.4
ARPR				SG	Sn	11 11 13.4	+3.6
CHOM	**Cayeli-Rize**	**1.73**	**44**	PN	Pg	11 11 10.1	+2.2
CHOM				SN	Sg	11 11 32.8	+2.4

*JMA **16** 11:21:39.4±0.2, 25°.N±1°.×122°.5E±0°.5, h98km±1km, MV3.0/14, NW OFF ISHIGAKIJIMA IS*

*TAP **16** 11:21:39.8, 24°.60N×122°.47E, h94km±1km, ML3.6, D*

ISC 16 11:21:39.6±1.3, 24°.60N±0°.03×122°.48E±0°.02, h98km±6km, n117, σ0°87/215, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.45**	**110**	P	**Pn**	**11 21 55.0**	**+0.3**
JYNG				S	**Sn**	**11 22 06.2**	**0.0**
YOJ	**Yonaguni jima**	**0.50**	**106**	P	**Pn**	**11 21 55.5**	**+0.4**
	baz=104						
YOJ				S	**Sn**	**11 22 07.0**	**+0.2**
	baz=104						
YOJ	**Yonaguni jima**	**0.50**	**106**	P	**Pn**	**11 21 55.4**	**+0.2**
YOJ				S	**Sn**	**11 22 06.6**	**-0.2**
EGS		**0.55**	**296**	*e*P	**Pn**	**11 21 56.1**	**+0.6**
	baz=297						
EGS				*e*S	**Sn**	**11 22 07.3**	**-0.2**
	baz=297						
TWC	**Suao**	**0.58**	**271**	*i* P	**Pn**	**11 21 55.5**	**-0.3**
	baz=271						
TWC				*i* S	**Sn**	**11 22 07.

NSK	baz=274		*i* S	Sn	11 22 14.8	-1.0
TWY	baz=274 **Chenhua**	**1.04 310**	P	Pn	11 22 00.7	+0.3
TWY	baz=310		S	Sn	11 22 16.6	+0.6
ANP	baz=310 **Anpu**	**1.05 304**	*e*P	Pn	11 22 01.1	+0.6
ANP	baz=304		*e*S	Sn	11 22 15.7	-0.5
TWS1	baz=304 **Kuangyinshan**	**1.09 297**	*i* P	Pn	11 22 01.0	+0.2
TWS1	baz=297		*i* S	Sn	11 22 16.7	-0.1
NTST	baz=297 **Danshui**	**1.09 301**	*e*P	Pn	11 22 01.1	+0.2
NTST	baz=301		*e*S	Sn	11 22 16.8	-0.1
IRIF	baz=301 **Iriomote-Funau**	**1.17 103**	*i* P	Pn	11 22 01.9	+0.1
IRIF			S	Sn	11 22 18.0	-0.5
FUSS	**Fushou**	**1.18 253**	*i* P	Pn	11 22 03.0	+0.8
FUSS	baz=252		*i* S	Sn	11 22 19.4	+0.2
WHF	baz=252 **Hehuan Shan**	**1.20 248**	*i* P	Pn	11 22 02.7	+0.1
WHF	baz=247		*i* S	Sn	11 22 19.6	-0.3
NCU	baz=247 **National Centr**	**1.23 287**	P	Pn	11 22 03.0	+0.5
NCU	baz=287		*i* S	Sn	11 22 20.9	+1.0
NCUH	baz=287 **Zhongli**	**1.23 287**	P	Pn	11 22 03.2	+0.6
NCUH	baz=287		*e*S	Sn	11 22 19.2	-0.6
ESL	**Shilin**	**1.24 231**	*i* P	Pn	11 22 02.3	-0.3
ESL	baz=230		*i* S	Sn	11 22 18.8	-1.2
TWT	baz=230 **Tachien**	**1.24 254**	*i* P	Pn	11 22 03.9	+1.1
TWT	baz=253		*i* S	Sn	11 22 21.0	+0.7
NFF	baz=253 **Wufeng Townshi**	**1.24 272**	P	Pn	11 22 02.5	-0.2
NFF	baz=271		S	Sn	11 22 19.7	-0.4
CHGB	baz=271 **Renai**	**1.31 246**	P	Pn	11 22 04.4	+0.7
CHGB	baz=245		S	Sn	11 22 21.7	-0.1
HATJ	baz=245 **Hateruma jima**	**1.32 114**	*e*S	Sn	11 22 21.9	+0.2
LIOB	**Emei**	**1.33 272**	*i* P	Pn	11 22 04.2	+0.4
LIOB	baz=272		*i* S	Sn	11 22 22.6	+0.5
EGFH	baz=272 **Guangfu**	**1.34 226**	*i* P	Pn	11 22 03.7	-0.1
EGFH	baz=225		S	Sn	11 22 21.8	-0.3
NSTT	baz=225 **Nanjuang**	**1.35 271**	*i* P	Pn	11 22 04.6	+0.7
NSTT	baz=271		*i* S	Sn	11 22 22.2	-0.1
OWD	baz=271 **Renai**	**1.36 242**	*i* P	Pn	11 22 04.6	+0.5
OWD	baz=241		S	Sn	11 22 22.2	-0.5
SBCB	baz=241 **Hsinchu**	**1.37 278**	*e*P	Pn	11 22 05.2	+1.0
SBCB	baz=278		S	Sn	11 22 23.1	+0.2
WUSB	baz=278 **Renai**	**1.39 244**	P	Pn	11 22 05.0	+0.5
WUSB	baz=243		S	Sn	11 22 23.1	-0.2
HSN	baz=243 **Hsinchu**	**1.39 278**	P	Pn	11 22 04.5	+0.2
HSN	baz=279		S	Sn	11 22 22.0	-1.2
WHP	baz=279 **Taichung City**	**1.44 257**	P	Pn	11 22 06.3	+1.3
WHP	baz=257		S	Sn	11 22 25.4	+1.0
JKRS	baz=257 **Kuro-shima**	**1.44 104**	P	Pn	11 22 05.6	+0.6
JKRS			*e*S	Sn	11 22 24.7	+0.4
HGSD	**Ruisui**	**1.47 221**	P	Pn	11 22 05.2	-0.2
HGSD	baz=221		S	Sn	11 22 25.1	+0.2
VWDT	baz=221 **VWDT**	**1.49 236**	P	Pn	11 22 06.0	+0.4
VWDT	baz=235		S	Sn	11 22 25.3	0.0
EHY	baz=235 **Hungye**	**1.52 224**	*i* P	Pn	11 22 05.5	-0.6
EHY	baz=223		S	Sn	11 22 25.6	-0.6
WCS	baz=223 **Beigang Elemen**	**1.53 250**	*e*P	Pn	11 22 05.9	-0.3
WCS	baz=249		S	Sn	11 22 27.0	+0.7
JIJ	baz=249 **Ishigaki jima**	**1.53 99**	*i* P	Pn	11 22 06.1	0.0
JIJ			S	Sn	11 22 25.7	-0.6
NMLH	**Miaoli**	**1.54 268**	*e*P	Pn	11 22 07.3	+1.1
NMLH	baz=267		*e*S	Sn	11 22 26.5	0.0
TWQ1	baz=267 **Liyutan**	**1.58 261**	P	Pn	11 22 08.5	+1.7
TWQ1	baz=260		*i* S	Sn	11 22 27.9	+0.5
NSY	baz=260 **Sanyi**	**1.58 264**	*i* P	Pn	11 22 07.8	+1.0
NSY	baz=263		*i* S	Sn	11 22 28.5	+1.1
SMLT	baz=263 **Sun Moon Lake**	**1.61 244**	P	Pn	11 22 08.4	+1.1
SMLT	baz=243		*e*S	Sn	11 22 28.5	+0.2
SSLB	baz=243 **Suanglung**	**1.61 240**	P	Pn	11 22 07.3	+0.1
SSLB	baz=239		S	Sn	11 22 28.5	+0.3
YULB	baz=239 **Yu-li**	**1.62 222**	P	Pn	11 22 06.6	-0.7
YULB	baz=221		S	Sn	11 22 26.8	-1.5
TYC	baz=221 **Yuchr**	**1.64 245**	*i* P	Pn	11 22 09.0	+1.5
TYC	baz=244		S	Sn	11 22 29.3	+0.7
EYUL	baz=244 **Yuli**	**1.64 221**	*e*P	Pn	11 22 07.3	-0.3
EYUL	baz=220		*e*S	Sn	11 22 29.5	+0.7
WDJ	baz=220 **Dajia District**	**1.70 262**	*e*S	Sn	11 22 31.3	+1.3
TCU	baz=261 **Taichung**	**1.71 255**	*e*S	Sn	11 22 32.2	+2.0
WHYT	baz=254 **Xinyi Township**	**1.74 239**	*e*P	Pn	11 22 10.8	+1.9
WHYT	baz=238		*e*S	Sn	11 22 32.3	+1.3
WJS	baz=238 **Zhushan**	**1.78 244**	*e*P	Pn	11 22 10.9	+1.6
YUS	baz=244 **Yu-Shan**	**1.79 232**	*i* P	Pn	11 22 10.5	+0.7
YUS	baz=231		S	Sn	11 22 32.3	-0.4
WCHH	baz=231 **Zhanghua**	**1.83 254**	*e*S	Sn	11 22 33.3	+0.3
EHD	baz=253 **Haiduan**	**1.86 219**	S	Sn	11 22 32.1	-1.6
ALS	baz=218 **Alishan**	**1.88 235**	P	Pn	11 22 12.1	+1.2
ALS	baz=234		S	Sn	11 22 35.5	+0.9
CHN5	baz=234 **Tsauling**	**1.93 239**	*e*S	Sn	11 22 36.4	+1.0
ELDTW	baz=238 **Lidau**	**1.94 224**	P	Pn	11 22 11.0	-0.5
ELDTW	baz=223		S	Sn	11 22 35.3	-0.5
EDH	baz=223 **Donghe**	**1.95 214**	*e*P	Pn	11 22 10.9	-0.5
EDH	baz=213		S	Sn	11 22 35.0	-0.8
WDLH	baz=213 **Douliu**	**2.00 243**	*e*S	Sn	11 22 38.8	+2.0
JTJ	baz=242 **Tarama**	**2.02 89**	P	Pn	11 22 13.0	+0.7
JTJ			S	Sn	11 22 37.8	+0.4
WRL	**Guolierlin Hig**	**2.04 250**	*e*P	Pn	11 22 12.3	-0.4
WRL	baz=250		*e*S	Sn	11 22 36.3	-1.6
WCKO	baz=250 **Fanlu**	**2.07 236**	*e*P	Pn	11 22 13.8	+0.7
WCKO	baz=235		S	Sn	11 22 40.2	+1.6
LONT	baz=235 **Longtian**	**2.10 217**	*e*P	Pn	11 22 12.8	-0.6
LONT	baz=216		*e*S	Sn	11 22 38.3	-0.9
STYH	baz=216 **Taoyuan**	**2.12 228**	*e*P	Pn	11 22 14.0	+0.4
STYH	baz=227		*e*S	Sn	11 22 39.8	+0.2
CHN2	baz=227 **Minshiung**	**2.12 240**	*e*S	Sn	11 22 40.2	+0.5
LDUT	baz=239 **Ludao**	**2.13 206**	*e*P	Pn	11 22 14.2	+0.3
LDUT	baz=205		*e*S	Sn	11 22 38.3	-1.7
TPUB	baz=205 **Ta-pu**	**2.13 233**	*e*P	Pn	11 22 15.1	+1.2
WTCT	baz=232 **Ta-ch'eng**	**2.14 250**	*e*S	Sn	11 22 40.7	+0.5
WTP	baz=249 **Ta-pu**	**2.18 232**	P	Pn	11 22 16.5	+2.0
WTP	baz=231		*e*S	Sn	11 22 41.2	0.0
CHY	baz=231 **Chiayi**	**2.18 240**	*e*P	Pn	11 22 16.1	+1.7
CHY	baz=239		*e*S	Sn	11 22 42.4	+1.3
TWG	baz=239 **Pinlang**	**2.20 216**	*e*P	Pn	11 22 13.8	-0.8
TWG	baz=215		*e*S	Sn	11 22 39.7	-1.8
TWK	baz=215 **Hsinying**	**2.26 234**	P	Pn	11 22 17.1	+1.5
TWK	baz=233		*e*S	Sn	11 22 42.0	-1.0
WSF	baz=233 **Szhu**	**2.28 245**	*e*S	Sn	11 22 44.4	+1.1
CHN1	baz=244 **Nanshi**	**2.28 232**	P	Pn	11 22 17.7	+1.9
CHN1	baz=231		*e*S	Sn	11 22 45.0	+1.5
SGST	baz=231 **Jiashian**	**2.31 229**	*e*P	Pn	11 22 16.8	+0.7
SGST	baz=228		*e*S	Sn	11 22 45.3	+1.2
WSL	baz=228 **Shuilin Townsh**	**2.32 243**	*e*P	Pn	11 22 16.4	+0.1
WSL	baz=242		*e*S	Sn	11 22 43.8	-0.7
ICHU	baz=242 **Yijhu**	**2.36 239**	*e*P	Pn	11 22 17.8	+0.9
ICHU	baz=238		*e*S	Sn	11 22 45.1	-0.3
CHN8	baz=238 **Yiju**	**2.42 239**	*e*S	Sn	11 22 47.6	+0.8
ECL	baz=238 **Taimali**	**2.44 215**	*e*P	Pn	11 22 19.4	+1.5
ECL	baz=214		S	Sn	11 22 45.9	-1.3
JIRB	baz=214 **Irabujima**	**2.46 84**	P	Pn	11 22 18.4	+0.3
JIRB			S	Sn	11 22 46.5	-1.1
SCST	**Cishan**	**2.50 227**	*e*P	Pn	11 22 20.6	+1.9
SSD	baz=226 **Sandimen**	**2.51 223**	*e*P	Pn	11 22 20.4	+1.6
SSD	baz=222		*e*S	Sn	11 22 50.2	+1.3
TSMG	baz=222 **Majia**	**2.53 222**	*e*P	Pn	11 22 20.9	+1.8
TSMG	baz=221		*e*S	Sn	11 22 50.9	+1.5
JIKM	baz=221 **Ikemajima**	**2.54 82**	P	Pn	11 22 18.9	-0.2
JIKM			S	Sn	11 22 50.1	+0.7
JMJ2	**Miyako jima3**	**2.59 86**	P	Pn	11 22 20.6	+0.8
JMJ2			S	Sn	11 22 50.6	-0.2
MASBT	**Mashibuluo**	**2.61 221**	*e*P	Pn	11 22 21.4	+1.3
MASBT	baz=220		*e*S	Sn	11 22 52.6	+1.3
TSCK	baz=220 **Chigu Township**	**2.63 237**	*e*P	Pn	11 22 20.0	-0.4
TSCK	baz=236		*e*S	Sn	11 22 49.9	-1.8
JOGS	baz=236 **Gusukube**	**2.67 86**	P	Pn	11 22 21.7	+0.8
EAST	**Anshuo**	**2.67 214**	*e*P	Pn	11 22 22.0	+1.0
EAST	baz=213		S	Sn	11 22 52.2	-0.6
LAY	baz=213 **Lan-yu**	**2.69 199**	*e*P	Pn	11 22 20.5	-0.8
LAY	baz=198		*e*S	Sn	11 22 52.2	-1.0
MATB	baz=198 **Ma-tsu**	**2.76 304**	*e*P	Pn	11 22 21.8	-0.3
VWUC	baz=303 **VWUC**	**2.78 279**	*e*P	Pn	11 22 22.1	-0.3
SCZT	baz=278 **Fangliau**	**2.80 218**	*e*P	Pn	11 22 23.8	+1.1
SLIU	baz=217 **Shizi**	**2.83 213**	*e*P	Pn	11 22 23.2	+0.1
SLIU	baz=212		*e*S	Sn	11 22 54.9	-1.8
PNG	baz=212 **Penghu**	**2.87 249**	*e*P	Pn	11 22 22.5	-1.0
PNG	baz=248		*e*S	Sn	11 22 55.6	-1.7
PHUB	baz=248 **P'eng-hu**	**2.87 248**	*e*P	Pn	11 22 23.1	-0.5
PHUB	baz=247		*e*S	Sn	11 22 55.2	-2.3
WDGT	baz=247 **Dungji**	**2.91 243**	*e*P	Pn	11 22 24.0	-0.1
WDGT	baz=242		*e*S	Sn	11 22 57.3	-1.1
PTMZ	baz=242 **Houxiangcun**	**3.08 279**	*e*P	Pn	11 22 26.6	+0.2
PTMZ	baz=278		*e*S	Sn	11 23 00.5	-2.0
XPSS	baz=278 **Dashiqiu**	**3.10 319**	*e*P	Pn	11 22 25.8	-0.9
	baz=318					

MEX ***16*** *11:25:32.7±0.6, 32°.44N×115°.13W, h36km±5km, MD3.8*
PAS ***16*** *11:25:32.6±2.4, 32°.30N±0°.01×115°.35W±0°.01, h3km±6km, ML3.1/78, ML2.9/42(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=152.0*
ANF ***16*** *11:25:32.1±0.5, 32°.32N×115°.32W, h23km±4km, ML3.0/13, Error ellipse: s-maj=4.5km s-min=2.3km az=10.0*
NEIC ***16*** *11:25:32.4±2.1, 32°.27N±0°.02×115°.34W±0°.02, h19km±3km, Error ellipse: s-maj=3.3km s-min=1.6km az=199.0*
ECX ***16*** *11:25:33.4±0.8, 32°.29N×115°.35W, h10km±10km, MD3.0, ML3.2, Fault plane solution: NP1:φs159.00000°, δ31.00000°, λ-102.00000°.*

ISC 16 11:25:32.0±0.8, 32°.28N±0°.02×115°.34W±0°.02, h16km±5km, n97, σ0°85/130, 17C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.14**	**13**		**Pg**	**11 25 35.7**	**-0.3**
CPBX	**Cerro Prieto**	**0.14**	**13**		**Sg**	**11 25 39.1**	**+0.5**
CPBX	**Cerro Prieto**	**0.14**	**13**	IAML		11 25 38.3	
CPBX	comp=N,5μm,0.3s			IAML		11 25 38.4	
	comp=E,6μm,0.4s						
CPBX	**Cerro Prieto**	**0.14**	**13**	⇓*e*P	**Pg**	**11 25 35.7**	**-0.3**
CPBX	comp=E,28μm,0.4s			IAML		11 25 53.3	
CPBX	comp=N,19μm,0.3s			IAML		11 25 56.1	
RHX	**Rio Hardy**	**0.15**	**161**	*i* P	**Pg**	**11 25 35.7**	**-0.4**
RHX				*e*S	**Sg**	**11 25 38.0**	**-0.7**
MBIG	**Mexicali**	**0.17**	**44**	*e*P	**Pg**	**11 25 35.6**	**-0.8**
MBIG				*e*P	**Pg**	**11 25 36.9**	**+0.5**
MBIG				*e*S	**Sg**	**11 25 39.4**	**+0.1**
MBIG				*i* S	**Sb**	**11 25 41.2**	**+1.1**
MBIG	**Mexicali**	**0.17**	**44**	⇓*i*P	**Pg**	**11 25 36.9**	**+0.5**
MBIG				*e*S	**Sb**	**11 25 41.2**	**+1.1**
GUVIX	**Guadalupe Vict**	**0.23**	**84**		**Pg**	**11 25 37.9**	**+0.7**
GUVIX					**Sb**	**11 25 42.4**	**+0.8**
GUVIX	**Guadalupe Vict**	**0.23**	**84**	IAML		11 25 42.8	
GUVIX	comp=E,15μm,0.5s			IAML		11 25 42.9	
	comp=N,6μm,0.4s						
GUVIX	**Guadalupe Vict**	**0.23**	**84**	⇑*i*P	**Pg**	**11 25 37.9**	**+0.7**
GUVIX				*e*S	**Sb**	**11 25 42.4**	**+0.8**
RITX	**Riito Sonora**	**0.34**	**109**	⇑*e*P	**Pb**	**11 25 40.2**	**+0.5**
RITX				*e*S	**Sb**	**11 25 46.2**	**+1.3**
UABX	**UABC, Campus M**	**0.36**	**347**		**Pb**	**11 25 40.3**	**+0.2**
UABX					**Sb**	**11 25 46.5**	**+1.0**
UABX	**UABC, Campus M**	**0.36**	**347**	IAML		11 25 47.2	
UABX	comp=E,18μm,0.4s			IAML		11 25 47.4	
	comp=N,15μm,0.4s						
UABX	**UABC, Campus M**	**0.36**	**347**	⇓*i*P	**Pb**	**11 25 40.3**	**+0.2**
UABX				*e*S	**Sb**	**11 25 46.7**	**+1.2**
YUCAX	**Ej. Yucat¡n**	**0.39**	**33**	⇑*e*P	**Pb**	**11 25 41.0**	**+0.5**
YUCAX				*e*S	**Sb**	**11 25 47.7**	**+1.5**
ALAMX	**Rancho Alamar**	**0.41**	**229**	⇑*e*P	**Pg**	**11 25 40.9**	**+0.5**
SGL	**Mount Signal**	**0.49**	**319**		**Pg**	**11 25 42.0**	**+0.2**
SGL					**Sg**	**11 25 49.1**	**+0.6**
DREC	**Desert Rsrch C**	**0.53**	**350**		**Pb**	**11 25 43.3**	**+0.4**
DREC					**Sn**	**11 25 52.3**	**-1.3**
DREC	**Desert Rsrch C**	**0.53**	**350**	⇓*e*P	**Pb**	**11 25 43.3**	**+0.4**
DREC				*e*S	**Sn**	**11 25 52.4**	**-1.3**
EMSC	**East Mesa**	**0.55**	**33**		**Pg**	**11 25 43.3**	**+0.4**
EMSC					**Sb**	**11 25 52.2**	**+1.3**
WESC	**Westside Schoo**	**0.58**	**325**		**Pg**	**11 25 44.0**	**+0.5**
WESC					**Sb**	**11 25 52.6**	**+0.8**
WESC	**Westside Schoo**	**0.58**	**325**	⇑*e*P	**Pg**	**11 25 44.1**	**+0.5**
WESC				*e*S	**Sb**	**11 25 52.9**	**+1.1**
ESJX	**Sierra Juarez**	**0.58**	**242**		**Pg**	**11 25 43.9**	**+0.3**
ESJX					**Sb**	**11 25 52.6**	**+0.5**
ESJX	**Sierra Juarez**	**0.58**	**242**	IAML		11 25 53.7	
ESJX	comp=N,940nm,0.3s			IAML		11 25 55.1	
	comp=E,543nm,0.1s						
SNR	**Schaffner Ranc**	**0.58**	**352**		**Pg**	**11 25 44.2**	**+0.6**
SNR					**Sb**	**11 25 53.8**	**+1.8**
COA	**Coachella**	**0.61**	**18**		**Pg**	**11 25 44.2**	**+0.2**
COA					**Sb**	**11 25 54.1**	**+1.4**
YUH	**Yuha Desert**	**0.61**	**307**		**Pg**	**11 25 43.9**	**-0.3**
YUH2	**Yuha Desert**	**0.61**	**307**	⇑*i*P	**Pg**	**11 25 43.9**	**-0.2**
COK2	**Cook Ranch 2**	**0.66**	**330**		**Pg**	**11 25 45.1**	**+0.2**
RMX	**La Rumorosa**	**0.70**	**297**		**Pg**	**11 25 44.8**	**-1.0**
RMX					**Sg**	**11 25 53.5**	**-1.6**
RMX	**La Rumorosa**	**0.70**	**297**	IAML		11 25 54.1	
RMX	comp=E,623nm,0.9s			IAML		11 25 55.5	
	comp=N,700nm,0.6s						
RMX	**La Rumorosa**	**0.70**	**297**	⇑*e*P	**Pg**	**11 25 44.6**	**-1.2**
RMX				IAML		11 25 55.6	
	comp=N,591nm,0.2s						
SJX	**San Joaquin**	**0.74**	**226**	⇑*e*P	**Pb**	**11 25 43.9**	**-2.5**
SJX				IAML		11 25 53.8	
	comp=N,1μm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.75**	**300**		**Pb**	**11 25 46.4**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.75**	**300**	P	**Pb**	**11 25 46.3**	**-0.3**
IKP	baz=118,SNR=73			S	**Sb**	**11 25 56.5**	**-0.2**
	baz=118						
IKP	**In-Ko-Pah, Jac**	**0.75**	**300**	⇑*e*P	**Pb**	**11 25 46.5**	**-0.3**
RUN	**Ruthven**	**0.76**	**24**		**Pb**	**11 25 46.0**	**-0.8**
RUN					**Sb**	**11 25 56.0**	**-0.9**
SWSC	**Sam W. Stewart**	**0.77**	**330**		**Pb**	**11 25 46.5**	**-0.5**
SWSC	**Sam W. Stewart**	**0.77**	**330**	P	**Pb**	**11 25 46.4**	**-0.7**
SWSC	baz=149,SNR=30			S	**Sb**	**11 25 57.0**	**-0.2**
	baz=149						
SWSC	**Sam W. Stewart**	**0.77**	**330**	⇑*e*P	**Pb**	**11 25 46.5**	**-0.5**
CRR	**Carrizo Plain**	**0.80**	**319**		**Pb**	**11 25 47.3**	**-0.4**
ECBX	**El Chinero**	**0.84**	**163**	⇓*e*P	**Pb**	**11 25 48.0**	**-0.2**
ECBX				IAML		11 26 00.8	
	comp=E,1μm,0.3s						
ECBX				IAML		11 26 00.9	
	comp=N,1μm,0.3s						
GLA	**Glamis**	**0.88**	**29**		**Pb**	**11 25 48.1**	**-0.9**
GLA	**Glamis**	**0.88**	**29**		**Pb**	**11 25 48.5**	**-0.5**
GLA				IAML		11 26 06.8	
	comp=N,392nm,0.4s						
GLA				IAML		11 26 09.2	
	comp=E,378nm,0.9s						
GLA	**Glamis**	**0.88**	**29**	P	**Pb**	**11 25 48.1**	**-0.9**
GLA	baz=210,SNR=36			S	**Sb**	**11 26 00.1**	**-0.5**
	baz=210						
GLA	**Glamis**	**0.88**	**29**	⇑*e*P	**Pb**	**11 25 48.2**	**-0.9**
VTX	**Valle De La Tr**	**0.96**	**203**	⇓*e*P	**Pb**	**11 25 50.6**	**+0.3**
MONP2	**Monument Peak**	**1.10**	**304**	P	**Pb**	**11 25 52.1**	**-0.7**
MONP2	baz=123,SNR=44			S	**Sb**	**11 26 07.1**	**+0.2**
	baz=123						
MONP2	**Monument Peak**	**1.10**	**304**	⇑*e*P	**Pb**	**11 25 52.8**	**0.0**
TKX	**Tecate**	**1.11**	**285**		**Pb**	**11 25 52.7**	**-0.1**
TKX				IAML		11 26 08.0	
	comp=N,326nm,0.5s						
TKX				IAML		11 26 08.5	
	comp=E,239nm,0.6s						
TKX	**Tecate**	**1.11**	**285**	⇑*e*P	**Pb**	**11 25 52.9**	**0.0**
CBX	**Cerro Bola**	**1.12**	**272**	Pg	**Pb**	**11 25 53.2**	**+0.1**
CBX				IAML		11 26 10.0	
	comp=N,238nm,0.5s						
CBX				IAML		11 26 16.8	
	comp=E,192nm,0.6s						
CBX	**Cerro Bola**	**1.12**	**272**		**Sn**	**11 26 08.5**	**+0.2**
CBX	**Cerro Bola**	**1.12**	**272**	*e*P	**Pb**	**11 25 53.1**	**0.0**
CBX				*e*S	**Sn**	**11 26 08.0**	**-0.3**
CBX	**Cerro Bola**	**1.12**	**272**	⇑*e*P	**Pb**	**11 25 53.1**	**0.0**
TJIG	**Tijuana**	**1.14**	**278**	*e*P	**Pn**	**11 25 53.2**	**-0.1**
TJIG				*e*S	**Sb**	**11 26 07.9**	**0.0**
TJIG	**Tijuana**	**1.14**	**278**	⇑*e*P	**Pn**	**11 25 53.3**	**-0.1**
BAR	**Barrett**	**1.19**	**290**		**Pn**	**11 25 53.9**	**-0.2**
BAR				IAML		11 26 12.1	
	comp=N,322nm,0.6s						
BAR				IAML		11 26 13.4	
	comp=E,185nm,0.2s						
BAR	**Barrett**	**1.19**	**290**		**Sn**	**11 26 10.3**	**+0.3**
BAR	**Barrett**	**1.19**	**290**	⇓*e*P	**Pn**	**11 25 53.9**	**-0.2**
BAR				IAML		11 26 12.1	
	comp=N,298nm,0.2s						
CCX	**Cicese**	**1.20**	**250**		**Pg**	**11 25 55.4**	**+0.3**
CCX	**Cicese**	**1.20**	**250**	*e*P	**Pb**	**11 25 54.8**	**+0.5**
SPIG	**San Pedro Mart**	**1.23**	**185**	*e*P	**Pn**	**11 25 54.5**	**-0.4**
SPIG				*e*S	**Sg**	**11 26 12.0**	**-0.1**
SPIG	**San Pedro Mart**	**1.23**	**185**	⇓*e*P	**Pn**	**11 25 54.6**	**-0.3**
SFX	**San Felipe**	**1.31**	**161**	Pg	**Pb**	**11 25 56.6**	**+0.3**
SFX				IAML		11 26 14.9	
	comp=E,228nm,0.4s						
SFX				IAML		11 26 17.2	
	comp=N,210nm,0.6s						
SFX	**San Felipe**	**1.31**	**161**	*e*P	**Pn**	**11 25 54.3**	**-1.3**
SFX				*e*S	**Sb**	**11 26 13.6**	**+0.9**
SFX	**San Felipe**	**1.31**	**161**	*e*P	**Pb**	**11 25 56.5**	**+0.3**
SFX				IAML		11 26 15.2	
	comp=N,262nm,0.2s						
BORC	**Borrego Spring**	**1.34**	**318**		**Pn**	**11 25 55.1**	**-1.0**
BORC					**Sg**	**11 26 14.9**	**-0.4**
BC3	**Big Chuckawall**	**1.37**	**356**	P	**Pn**	**11 25 55.6**	**-1.0**
BC3	baz=176,SNR=8.9			S	**Sn**	**11 26 13.1**	**-1.5**
	baz=176						
OLP	**Otay Lakes Par**	**1.38**	**284**	*e*P	**Pb**	**11 25 57.3**	**-0.2**
EML	**El Monte Cty P**	**1.41**	**296**		**Pb**	**11 25 58.0**	**+0.1**
EML	**El Monte Cty P**	**1.41**	**296**	⇑*e*P	**Pn**	**11 25 56.6**	**-0.4**
113A	**Mohawk Valley,**	**1.42**	**69**	Pn	**Pn**	**11 25 56.5**	**-0.6**
SDRC	**San Diego Road**	**1.43**	**289**		**Pb**	**11 25 58.2**	**0.0**
SDRC					**Sb**	**11 26 17.0**	**+0.8**
SDRC	**San Diego Road**	**1.43**	**289**	⇑*e*P	**Pn**	**11 25 57.2**	**-0.1**
MATG	**Mataguay Scout**	**1.43**	**310**		**Sg**	**11 26 17.8**	**-0.5**
MATG	**Mataguay Scout**	**1.43**	**310**	⇓*e*P	**Pn**	**11 25 57.2**	**-0.3**
TJX	**Tijuana**	**1.47**	**279**		**Pb**	**11 25 59.2**	**+0.2**
109C	**Camp Elliot, M**	**1.61**	**293**		**Pn**	**11 25 59.9**	**+0.2**
109C	**Camp Elliot, M**	**1.61**	**293**	P	**Pn**	**11 25 59.7**	**-0.1**
109C	baz=111,SNR=20			S	**Sn**	**11 26 20.5**	**+0.3**
	baz=111						

CPE	**Camp Elliot**	1.61 293			Pn	11 26 00.0	+0.2
FRD	**Ford Ranch, An**	1.61 319			Sn	11 26 21.1	+0.7
BLYC	**Blythe**	1.62 25			Pb	11 26 02.5	+0.9
PFO	**Pinyon Flats O**	1.63 325	Pn		Pn	11 25 59.3	-0.8
PFO	**Pinyon Flats O**	1.63 325	P		Pn	11 25 59.0	-1.1
	baz=144						
PFO			S		Sn	11 26 19.2	-1.6
	baz=144						
PIX	**Pinacate**	1.75 114			Pb	11 26 03.5	-0.4
SQX	**San Quintin**	1.76 195	ℹ eP		Pn	11 26 02.5	+0.7
IRM	**Iron Mountain**	1.88 5	Sb		Sb	11 26 29.9	+0.6
	baz=185						
POB	**Polly Butte**	1.93 317			Pb	11 26 07.5	+0.6
MURC	**Murrieta**	2.04 311	Sb		Sb	11 26 35.9	+2.0
	baz=130						
214A	**Organ Pipe Nat**	2.17 98	Pn		Pn	11 26 05.9	-1.6
214A			IAML			11 26 48.9	
	comp=N,84nm,0.5s						
214A			IAML			11 26 51.5	
	comp=E,80nm,0.4s						
214A	**Organ Pipe Nat**	2.17 98	eP		Pn	11 26 06.3	-1.2
214A			i S		Sn	11 26 33.7	-0.4
214A	**Organ Pipe Nat**	2.17 98	P		Pn	11 26 06.4	-1.2
	baz=280						
214A			Sb		Sb	11 26 39.3	+1.6
	baz=280						
ELS	**Elsinore Mount**	2.22 308			Pn	11 26 09.5	+1.3
ELS			IAML			11 26 41.2	
	comp=N,87nm,0.6s						
ELS			IAML			11 26 46.6	
	comp=E,58nm,0.7s						
BFSC	**Mount Baldy Ra**	2.75 316	Pb		Pb	11 26 21.5	+0.5
BFSC			Sb		Sb	11 26 56.5	+1.9
	baz=134						
CIS	**Catalina Islan**	2.82 294	Sb		Sb	11 26 58.0	+1.7
	baz=112						
DECC	**Green Verdugo**	3.19 309	Sb		Sb	11 27 09.3	+2.4
	baz=127						

*MOS **16** 11:42:34.9±1.2, 44°.58N×146°.81E, h162km, mb4.0/1, Error ellipse: s-maj=25.6km s-min=19.1km az=61.9*
*SKHL **16** 11:42:35.9±0.0, 44°.30N×147°.10E, h146km±4km, mb4.6/3, msha5.3/3*
*JMA **16** 11:42:36.6±0.3, 44°N±1°×14°7E±°, h154km±3km, MV3.7/34, NEAR ETOROFU ISLAND*
*IDC **16** 11:42:38.6±4.9, 44°.71N×146°.67E, h176km±47km, mb3.2/8, mbtmp3.7/9, Error ellipse: s-maj=67.8km s-min=21.4km az=175.0*
ISC 16 11:42:35.1±0.8, **44°.38N**±0°.07×**147°.01E**±0°.07, **h156**km±6km, **n40**, σ0°**94**/51, **mb3.5**/8, **3C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.89**	**247**	*c i* PN	**Pn**	**11 43 00.0**	**+0.5**
YUK				*e* S	**Sn**	**11 43 18.2**	**+0.1**
YUK				pmax	pmax		
	comp=N,202nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=E,203nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,787nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.89**	**247**	*i* P	**Pn**	**11 42 59.9**	**+0.5**
YUK				AMB	AMB	11 43 01.3	
	comp=E,280nm,0.3s						
YUK				*e* S	**Sn**	**11 43 17.9**	**-0.2**
YUK				A	A	11 43 22.9	
	comp=E,2μm,0.5s						
YUK				A	A	11 43 22.9	
	comp=E,1μm,0.5s						
KUR	**Kuril'sk**	**1.05**	**35**	*e* PN	**Pn**	**11 43 01.0**	**+0.3**
KUR				*e* S	**Sn**	**11 43 19.0**	**-1.4**
KUR				smax	smax		
	comp=N,92nm,0.3s						
KUR	**Kuril'sk**	**1.05**	**35**	*e* P	**Pn**	**11 43 01.0**	**+0.3**
KUR				AMB	AMB	11 43 04.8	
	comp=N,90nm,0.5s						
KUR				*e* S	**Sn**	**11 43 19.9**	**-0.5**
KUR				A	A	11 43 24.1	
	comp=N,220nm,0.3s						
KUR				A	A	11 43 24.1	
	comp=N,170nm,0.3s						
RUSJ	**Misakicho**	**1.29**	**258**	⇑ *i* PN	**Pn**	**11 43 03.8**	**+0.9**
RUSJ				*e* S	**Sn**	**11 43 23.8**	**-0.5**
NEM2	**Nemuro 2**	**1.37**	**222**	*i* P	**Pn**	**11 43 04.1**	**+0.5**
NEM2				*e* S	**Sn**	**11 43 24.7**	**-0.8**
NMR	**Nemuro--Hokkai**	**1.37**	**223**	⇑ *i* PN	**Pn**	**11 43 04.1**	**+0.4**
NMR				*e* S	**Sn**	**11 43 24.7**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.37**	**223**	*i* P	**Pn**	**11 43 04.2**	**+0.5**
NMR				AMB	AMB	11 43 04.7	
	comp=N,300nm,0.3s						
NMR				*e* S	**Sn**	**11 43 24.7**	**-0.9**
NMR				A	A	11 43 26.4	
	comp=N,350nm,0.3s						
NMR				A	A	11 43 26.4	
	comp=N,440nm,0.3s						
NMR				A	A	11 43 26.4	
	comp=N,350nm,0.3s						
JRA	**Rausu**	**1.43**	**252**	*e* P	**Pn**	**11 43 04.9**	**+0.7**
JNSB	**Nemuroshibetsu**	**1.56**	**248**	P	**Pn**	**11 43 06.8**	**+1.2**
JNSB				*e* S	**Sn**	**11 43 29.9**	**+0.7**
JNK	**Nakash**	**1.83**	**245**	P	**Pn**	**11 43 09.5**	**+0.9**
JNK				*e* S	**Sn**	**11 43 35.0**	**+0.6**
JKHN	**Kushirohamanak**	**1.86**	**226**	P	**Pn**	**11 43 09.7**	**+0.7**
JKHN				*e* S	**Sn**	**11 43 33.9**	**-1.0**
AKK	**Akkeshi**	**2.08**	**230**	*e* P	**Pn**	**11 43 11.8**	**+0.4**
AKK				*e* S	**Sn**	**11 43 38.1**	**-1.3**
JAK	**Akkeshi**	**2.17**	**231**	*e* P	**Pn**	**11 43 13.2**	**+0.7**
JAK				*e* S	**Sn**	**11 43 40.8**	**-0.6**
JTKR	**Abashiri--Toko**	**2.27**	**261**	*e* P	**Pn**	**11 43 14.2**	**+0.7**
JTKR				*e* S	**Sn**	**11 43 42.6**	**-0.6**
JAR	**Ashorobuto**	**2.58**	**246**	*e* P	**Pn**	**11 43 18.8**	**+1.4**
JAR				*e* S	**Sn**	**11 43 51.1**	**+1.0**
JOB	**Onbets**	**2.74**	**238**	P	**Pn**	**11 43 20.6**	**+1.3**
JOB				*e* S	**Sn**	**11 43 53.1**	**-0.4**
JKK2	**Kamakawa 2**	**3.11**	**262**	*e* P	**Pn**	**11 43 25.1**	**+1.1**
ASAJ	**Asahikawa**	**3.18**	**267**	P	**Pn**	**11 43 26.0**	**+1.1**
JCH	**Churui**	**3.19**	**238**	P	**Pn**	**11 43 25.6**	**+0.6**
JCH				*e* S	**Sn**	**11 44 01.4**	**-2.3**
JSE	**Soyaes**	**3.21**	**282**	*e* P	**Pn**	**11 43 25.5**	**+0.3**
JNBK	**Urakawa-nobuka**	**3.75**	**237**	*e* P	**Pn**	**11 43 32.0**	**-0.1**
JWK2	**Keihoku**	**3.75**	**286**	*e* P	**Pn**	**11 43 33.7**	**+1.5**
JRBN	**Rebuntou**	**4.35**	**286**	*e* P	**Pn**	**11 43 40.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**10.77**	**274**	P	**Pn**	**11 45 04.7**	**-0.3**
	comp=N,4.6nm,0.8s,baz=75,slow=12,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**29.65**	**140**	T	T	12 19 41.8	
	baz=329,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**29.66**	**140**	T	T	12 19 43.5	
	baz=329,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**29.67**	**140**	T	T	12 19 45.2	
	baz=329,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**30.62**	**141**	T	T	12 20 56.3	
	baz=331,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**30.63**	**141**	T	T	12 20 50.5	
	baz=331,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**30.64**	**141**	T	T	12 20 51.2	
	baz=331,slow=76,SNR=22						
ILAR	**Eielson Array**	**41.04**	**37**	P	**P**	**11 50 03.2**	**+0.6**
	comp=N,0.8nm,0.5s,baz=276,slow=9.8,SNR=11						
	comp=N,0.8nm,0.5s						
KURK	**Kurchatov**	**45.09**	**303**	P	**P**	**11 50 35.0**	**-0.3**
KURBB	**Kurchatov Arra**	**45.18**	**303**	P	**P**	**11 50 35.0**	**-1.0**
	comp=N,0.1nm,0.4s,baz=77,slow=8.6,SNR=2.4						
	comp=N,0.1nm,0.4s						
INK	**Inuvik**	**45.91**	**31**	P	**P**	**11 50 41.7**	**+0.3**
	comp=N,1.1nm,0.3s,baz=300,slow=6.5,SNR=44						
	comp=N,1.1nm,0.3s						
FINES	**FINESS Array B**	**64.26**	**333**	P	**P**	**11 52 51.7**	**-1.3**
	comp=N,1.4nm,0.6s,baz=39,slow=7.1,SNR=9.5						
	comp=N,1.4nm,0.6s						
NVAR	**Mina Array Bea**	**67.33**	**58**	P	**P**	**11 53 14.5**	**+1.1**
	comp=N,0.2nm,0.5s,baz=280,slow=5.4,SNR=2.0						
	comp=N,0.2nm,0.5s						
NOA	**NORSAR Array B**	**68.97**	**339**	P	**P**	**11 53 22.0**	**-1.0**
	comp=N,1.0nm,1.0s,baz=40,slow=6.9,SNR=4.0						
	comp=N,1.0nm,1.0s						
AKASG	**Malin Array Be**	**71.01**	**323**	P	**P**	**11 53 34.2**	**-1.4**
	comp=N,0.3nm,0.3s,baz=39,slow=6.8,SNR=2.9						
	comp=N,0.3nm,0.3s						
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**11 54 41.7**	**+1.8**
	comp=N,0.2nm,0.6s,baz=316,slow=5.0,SNR=2.8						
	comp=N,0.2nm,0.6s						

*NEIC **16** 11:43:22.7±2.1, 6°.8S±0°.2×127°.38E±0°.09, h370km±18km, mb4.3/4, Error ellipse: s-maj=25.0km s-min=7.5km az=152.0*
*IDC **16** 11:43:26.7±3.9, 6°.73S×128°.21E, h391km±51km, mb3.2/3, mbtmp4.0/6, Error ellipse: s-maj=80.8km s-min=13.1km az=76.0*
ISC 16 11:43:22.7±0.9, **6°.87S**±0°.07×**127°.6E**±0°.1, **h350**km, **n20**, σ1**§42**/22, **mb3.7**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.33**	**228**	Pn	**Pn**	**11 44 34.5**	**-0.8**
FAKI	**Fak Fak**	**6.11**	**50**	Pn	**Pn**	**11 44 55.6**	**+0.7**
MTN	**Manton Dam**	**6.90**	**150**	Pn	**Pn**	**11 45 04.9**	**+0.9**
SIJI	**Sorong**	**7.02**	**32**	P	**Pn**	**11 45 06.2**	**+0.7**
	2.2nm,0.2s,baz=240,slow=20,SNR=1.9						
SIJI				S	**S**	**11 46 25.4**	**-3.5**
	2.4nm,0.4s,baz=316,slow=23,SNR=2.2						
KNRA	**Kununurra**	**8.83**	**172**	Pn	**Pn**	**11 45 26.7**	**0.0**
WB0	**Warramunga Arr**	**14.44**	**153**	P	**P**	**11 46 31.9**	**+0.7**
WRAB	**Tennant Creek**	**14.56**	**154**	P	**P**	**11 46 33.7**	**+1.0**
WRA	**Warramunga Arr**	**14.57**	**154**	P	**P**	**11 46 33.3**	**+0.6**
	3.3nm,0.4s,baz=329,slow=12,SNR=120						
WRA				S	**S**	**11 49 07.2**	**-3.0**
	0.9nm,0.8s,baz=332,slow=22,SNR=3.9						
WRA	**Warramunga Arr**	**14.57**	**154**	P	**P**	**11 46 32.2**	**-0.5**
WB2	**Warramunga Arr**	**14.57**	**154**	P	**P**	**11 46 33.8**	**+1.0**
WR0	**Warramunga Arr**	**14.67**	**153**	P	**P**	**11 46 34.8**	**+0.9**
PSA00	**Pilbara Seismi**	**16.40**	**206**	P	**P**	**11 46 51.3**	**-1.3**
COEN	**Coen**	**16.89**	**116**	P	**P**	**11 46 58.5**	**+0.4**
COEN				IAmb	IAmb	11 47 34.8	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**17.78**	**161**	P	**P**	**11 47 08.9**	**+1.4**
ASAR	**Alice Springs**	**17.78**	**161**	P	**P**	**11 47 08.7**	**+1.3**
	comp=Z,5.3nm,0.7s,baz=336,slow=10,SNR=83						
ASAR				S	**S**	**11 50 13.3**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=351,slow=22,SNR=2.7						
ASAR	**Alice Springs**	**17.78**	**161**	P	**P**	**11 47 08.2**	**+0.8**
MKAR	**Makanchi Array**	**66.81**	**328**	P	**P**	**11 53 39.0**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=122,slow=7.0,SNR=6.3						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**70.42**	**335**	P	**P**	**11 54 00.3**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=133,slow=6.1,SNR=3.8						
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**71.15**	**329**	P	**P**	**11 54 05.4**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=140,slow=5.4,SNR=8.0						
	comp=Z,0.7nm,0.5s						
QSPA	**South Pole Qui**	**83.10**	**180**	P	**P**	11 55 03.8	-6.1
QSPA				IAmb	IAmb	11 55 43.2	
	comp=Z,7.4nm,1.4s						

*IDC **16** 11:55:13.8±0.9, 23°.16S×66°.60W, h194km±8km, mb3.6/9, mbtmp4.2/16, Error ellipse: s-maj=18.4km s-min=12.1km az=12.0*
*NEIC **16** 11:55:14.8±1.4, 23°.16S±0°.07×66°.7W±0°.1, h204km±7km, mb4.3/22, Error ellipse: s-maj=15.2km s-min=9.8km az=81.0*
*SJA **16** 11:55:14.8±1.0, 23°.14S×66°.74W, h200km, ML4.6, MW4.3*
*GUC **16** 11:55:14.7±0.5, 23°.14S×66°.98W, h242km±4km, ML4.5*
ISC 16 11:55:14.5±0.6, **23°.13S**±0°.04×**66°.70W**±0°.04, **h205**km±5km, **n109**, σ1**§36**/148, **mb4.1**/18, **14C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.19**	**94**	*e* P	**Pn**	**11 55 48.2**	**+1.6**
AF01	**San Pedro de A**	**1.38**	**277**		**Pn**	**11 55 48.8**	**+0.8**
AF01	**San Pedro de A**	**1.38**	**277**	⇑ *i* P	**Pn**	**11 55 49.4**	**+1.4**
AF01				*e* S	**S**	**11 56 15.6**	**+2.0**
AF01				IAML		11 56 37.3	
	comp=N,1μm,0.9s						
YJA	**Yavi**	**1.45**	**49**	*e* P	**Pn**	**11 55 50.4**	**+1.6**
YJA				*e* S	**S**	**11 56 11.7**	**-3.2**
AZAP	**Zapla**	**1.85**	**126**	*e* P	**Pn**	**11 55 53.2**	**+1.0**
SLA	**San Lorenzo**	**1.93**	**146**	*e* P	**Pn**	**11 55 54.0**	**+1.2**
LVC	**Limon Verde**	**2.11**	**284**	P	**Pn**	**11 55 55.2**	**+0.3**
	comp=N,334nm,0.4s,baz=138,slow=3.7,SNR=967						
LVC				S	**S**	**11 56 25.6**	**-0.2**
	comp=N,98nm,0.2s,baz=333,slow=19,SNR=8.4						
LVC	**Limon Verde**	**2.11**	**284**		**Pn**	**11 55 54.8**	**-0.1**
LVC	**Limon Verde**	**2.11**	**284**	⇑ *i* P	**Pn**	**11 55 55.3**	**+0.4**
LVC				*e* S	**S**	**11 56 26.4**	**+0.6**
LVC	**Limon Verde**	**2.11**	**284**	*e* P	**Pn**	**11 55 55.4**	**+0.5**
LVC				*e* S	**S**	**11 56 30.9**	**+5.2**
ASTB	**Santa Barbara**	**2.21**	**112**	*e* P	**Pn**	**11 55 56.9**	**+1.1**
PB15	**IPOC Station P**	**2.56**	**268**		**Pn**	**11 55 59.4**	**-0.2**
PB15	**IPOC Station P**	**2.56**	**268**	⇑ *i* P	**Pn**	**11 55 59.9**	**+0.3**
PB15				*e* S	**S**	**11 56 34.2**	**+0.1**
PB15	**IPOC Station P**	**2.56**	**268**	*e* P	**Pn**	**11 55 59.8**	**+0.3**
PB15				*e* S	**S**	**11 56 34.6**	**+0.5**
PB15				IAML		11 56 38.1	
	comp=Z,4μm,0.1s						
ALOL	**LOMAS DE OLMED**	**2.58**	**106**	*e* P	**Pn**	**11 56 00.4**	**+0.7**
PB06	**IPOC Station P**	**2.69**	**278**		**Pn**	**11 56 00.5**	**-0.5**
PB06	**IPOC Station P**	**2.69**	**278**	⇑ *i* P	**Pn**	**11 56 01.1**	**+0.1**
PB06				*e* S	**S**	**11 56 36.0**	**-0.6**
PB06				IAML		11 56 38.1	
	comp=E,2μm,0.1s						
PB06	**IPOC Station P**	**2.69**	**278**	*e* P	**Pn**	**11 56 01.1**	**+0.1**
PB06				*e* S	**S**	**11 56 36.1**	**-0.6**
PB06				IAML		11 56 41.1	
	comp=Z,655nm,0.2s						
PB09	**IPOC Station P**	**2.70**	**299**		**Pn**	**11 56 01.1**	**-0.1**
PB09	**IPOC Station P**	**2.70**	**299**	⇑ *i* P	**Pn**	**11 56 02.0**	**+0.8**
PB09				*e* S	**S**	**11 56 37.3**	**+0.2**
PB09				IAML		11 56 39.6	
	comp=E,554nm,0.7s						
PB09	**IPOC Station P**	**2.70**	**299**	*e* P	**Pn**	**11 56 01.0**	**-0.2**
PB09				*e* S	**S**	**11 56 38.9**	**+1.8**
PB03	**IPOC Station P**	**3.02**	**290**		**Pn**	**11 56 04.0**	**-0.9**
PB03	**IPOC Station P**	**3.02**	**290**	⇑ *i* P	**Pn**	**11 56 04.7**	**-0.2**
PB03				*e* S	**S**	**11 56 41.9**	**-1.8**
PB03				IAML		11 56 43.9	
	comp=E,1μm,0.1s						
PB03	**IPOC Station P**	**3.02**	**290**	*e* P	**Pn**	**11 56 04.7**	**-0.2**
PB03				*e* S	**S**	**11 56 42.9**	**-0.8**
PB03				IAML		11 56 44.9	
	comp=Z,1μm,0.3s						
PB07	**IPOC Station P**	**3.27**	**295**		**Pn**	**11 56 07.0**	**-0.7**
PB07	**IPOC Station P**	**3.27**	**295**	⇑ *i* P	**Pn**	**11 56 07.6**	**-0.2**
PB07				*e* S	**S**	**11 56 46.5**	**-2.3**
PB07	**IPOC Station P**	**3.27**	**295**	*e* P	**Pn**	**11 56 07.5**	**-0.2**
PB07				*e* S	**S**	**11 56 47.2**	**-1.6**
PB07				IAML		11 56 49.7	
	comp=Z,838nm,0.2s						
PB04	**IPOC Station P**	**3.29**	**283**		**Pn**	**11 56 07.7**	**-0.3**
PB04	**IPOC Station P**	**3.29**	**283**	⇑ *i* P	**Pn**	**11 56 07.6**	**-0.4**
PB04				*e* S	**S**	**11 56 47.3**	**-2.0**
PB04	**IPOC Station P**	**3.29**	**283**	*e* P	**Pn**	**11 56 07.7**	**-0.3**
PB04				*e* S	**S**	**11 56 48.3**	**-0.9**
PB04				IAML		11 56 50.6	
	comp=Z,667nm,0.3s						
PB01	**IPOC Station P**	**3.32**	**308**		**Pn**	**11 56 08.0**	**-0.3**
PB01	**IPOC Station P**	**3.32**	**308**	⇑ *i* P	**Pn**	**11 56 08.3**	**0.0**
PB01				*e* S	**S**	**11 56 49.0**	**-0.9**
PB01	**IPOC Station P**	**3.32**	**308**	*e* P	**Pn**	**11 56 08.0**	**-0.3**
PB01				*e* S	**S**	**11 56 48.9**	**-0.9**
PB01				IAML		11 56 52.5	
	comp=Z,864nm,0.2s						
GO02	**Mina Guanaco**	**3.33**	**232**	Pn	**Pn**	**11 56 08.0**	**-0.7**
GO02	**Mina Guanaco**	**3.33**	**232**	⇑ *i* P	**Pn**	**11 56 08.6**	**0.0**
GO02				*e* S	**S**	**11 56 50.3**	**-0.2**
GO02	**Mina Guanaco**	**3.33**	**232**	*e* P	**Pn**	**11 56 08.7**	**0.0**
GO02				*e* S	**S**	**11 56 50.8**	**+0.3**
PB02	**IPOC Station P**	**3.47**	**301**		**Pn**	**11 56 09.6**	**-0.6**
PB02	**IPOC Station P**	**3.47**	**301**	⇑ *i* P	**Pn**	**11 56 09.7**	**-0.4**
PB02				*i* S	**S**	**11 56 51.5**	**-1.6**
PB02	**IPOC Station P**	**3.47**	**301**	*e* P	**Pn**	**11 56 09.8**	**-0.3**
PB02				*e* S	**S**	**11 56 51.8**	**-1.3**
PB02				IAML		11 56 54.5	
	comp=Z,1μm,0.4s						
PB10	**IPOC Station P**	**3.57**	**263**	Pn	**Pn**	**11 56 10.4**	**-0.8**
PB10	**IPOC Station P**	**3.57**	**263**	⇑ *i* P	**Pn**	**11 56 10.9**	**-0.3**
PB10				*e* S	**S**	**11 56 52.5**	**-2.5**
PB10	**IPOC Station P**	**3.57**	**263**	*e* P	**Pn**	**11 56 10.9**	**-0.3**
PB10				*e* S	**S**	**11 56 53.1**	**-2.0**
PB14	**IPOC Station P**	**3.71**	**246**	Pn	**Pn**	**11 56 12.2**	**-1.0**
PB14	**IPOC Station P**	**3.71**	**246**	⇑ *i* P	**Pn**	**11 56 12.6**	**-0.6**
PB14				*e* S	**S**	**11 56 56.1**	**-2.6**
PB14	**IPOC Station P**	**3.71**	**246**	*e* P	**Pn**	**11 56 13.1**	**-0.1**
PB14				*e* S	**S**	**11 56 57.2**	**-1.5**
PB14				IAML		11 56 59.5	
	comp=Z,787nm,0.2s						
PB08	**IPOC Station P**	**3.75**	**322**		**Pn**	**11 56 14.3**	**+0.5**
PB08	**IPOC Station P**	**3.75**	**322**	⇑ *i* P	**Pn**	**11 56 14.8**	**+1.0**
PB08				*e* S	**S**	**11 56 59.5**	**-0.3**
PATCX	**Punta Patache**	**3.94**	**305**		**Pn**	**11 56 14.9**	**-1.1**
PATCX	**Punta Patache**	**3.94**	**305**	*e* P	**Pn**	**11 56 15.0**	**-0.9**
PATCX				*e* S	**S**	**11 57 00.3**	**-3.4**
PATCX	**Punta Patache**	**3.94**	**305**	*e* P	**Pn**	**11 56 15.3**	**-0.7**
PATCX				*e* S	**S**	**11 57 01.0**	**-2.6**
PATCX				IAML		11 57 04.8	
	comp=Z,347nm,0.3s						
TA01	**Diego Aracena**	**4.12**	**308**		**Pn**	**11 56 16.5**	**-1.5**
TA01	**Diego Aracena**	**4.12**	**308**	*e* P	**Pn**	**11 56 17.1**	**-0.9**
TA01				*e* S	**S**	**11 57 03.9**	**-3.5**
GO01	**Chusmiza**	**4.16**	**325**	*e* P	**Pn**	**11 56 20.2**	**+1.2**
GO01				*e* S	**S**	**11 57 09.5**	**+0.4**
TA02	**Huaiquique**	**4.28**	**311**		**Pn**	**11 56 19.5**	**-0.5**
TA02	**Huaiquique**	**4.28**	**311**	*e* P	**Pn**	**11 56 18.6**	**-1.4**
TA02				*e* S	**S**	**11 57 08.4**	**-2.5**
TA02	**Huaiquique**	**4.28**	**311**	*e* P	**Pn**	**11 56 19.0**	**-1.0**
TA02				*e* S	**S**	**11 57 08.8**	**-2.1**
TA02				IAML		11 57 11.1	
	comp=Z,518nm,0.1s						
AC02	**Maricunga**	**4.30**	**210**	Pn	**Pn**	**11 56 20.3**	**-0.4**
AC02	**Maricunga**	**4.30**	**210**	*e* P	**Pn**	**11 56 20.9**	**+0.2**
AC02				*e* S	**S**	**11 57 11.2**	**-1.1**
AC01	**Pan de Azucar**	**4.65**	**229**	Pn	**Pn**	**11 56 22.6**	**-2.0**
AC01	**Pan de Azucar**	**4.65**	**229**	*e* P	**Pn**	**11 56 24.3**	**-0.3**
AC01				*e* S	**S**	**11 57 16.8**	**-2.8**
CYA	**Choya**	**5.35**	**172**	*e* P	**Pn**	**11 56 33.9**	**+0.3**
CYA				*e* S	**S**	**11 57 32.4**	**-3.4**
AC06	**Mina Casimiro**	**5.36**	**217**		**Pn**	**11 56 31.3**	**-2.3**
AC04	**Llanos de Chal**	**6.42**	**217**		**Pn**	**11 56 45.8**	**-1.4**
AC05	**El Transito**	**6.53**	**209**		**Pn**	**11 56 46.3**	**-2.5**
LPAZ	**La Paz**	**6.94**	**349**	P	**Pn**	**11 56 55.4**	**+0.7**
	comp=Z,14nm,0.3s,baz=144,slow=4.7,SNR=94						
LPAZ				S	**S**	**11 58 10.9**	**-3.0**
	comp=Z,7.7nm,0.8s,baz=45,slow=22,SNR=6.4						
LPAZ	**La Paz**	**6.94**	**349**	Pn	**Pn**	**11 56 55.0**	**+0.3**
CO01	**Juntas del Tor**	**7.47**	**203**		**Pn**	**11 57 00.6**	**-0.4**
SIV	**San Ignacio**	**8.86**	**38**	P	**Pn**	**11 57 17.3**	**-1.8**
	comp=Z,11nm,0.8s,baz=214,slow=12,SNR=53						
SIV				S	S	11 58 50.0	-8.7
	comp=Z,3.9nm,0.8s,baz=218,slow=15,SNR=1.7						
CPUP	**Villa Florida**	**9.09**	**112**	P	**Pn**	**11 57 20.1**	**-1.8**
	comp=Z,5.7nm,1.0s,baz=296,slow=11,SNR=5.9						
ITAB	**Concordia**	**13.80**	**110**	P	**P**	**11 58 24.4**	**+0.6**
PLTB	**Pedras Altas**	**14.45**	**129**	P	**P**	**11 58 31.4**	**+0.4**
NNA	**Nana**	**14.70**	**317**	P	**P**	**11 58 35.3**	**+1.4**
	comp=Z,3.4nm,0.3s,baz=186,slow=8.6,SNR=5.2						
PLCA	**Paso Flores**	**17.85**	**190**	P	**P**	**11 59 08.9**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=7.4,slow=9.3,SNR=8.1						
PLCA	**Paso Flores**	**17.85**	**190**		**P**	**11 59 07.7**	**-0.7**
LL04	**Puerto Octay**	**18.37**	**194**	P	**P**	**11 59 13.6**	**-0.3**
LL04				IAmb	IAmb	11 59 50.5	
	comp=Z,19nm,1.1s						
BDFB	**Brasilia**	**19.12**	**70**	P	**P**	**11 59 22.7**	**+0.3**
	comp=Z,52nm,0.9s,baz=241,slow=11,SNR=50						
BDFB	**Brasilia**	**19.12**	**70**	P	**P**	**11 59 22.8**	**+0.4**
TEIG	**Tepich**	**47.96**	**332**		**P**	**12 03 32.3**	**-0.4**
SNAA	**Sanae**	**60.08**	**161**	P	**P**	**12 05 00.6**	**+0.9**
833A	**Chaparral WMA,**	**60.09**	**327**	P	**P**	**12 05 01.1**	**+0.9**
TXAR	**Lajitas Array**	**63.14**	**324**	P	**P**	**12 05 21.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=158,slow=7.0,SNR=8.1						
	comp=Z,0.4nm,0.6s						
CCM	**Cathedral Cave**	**65.08**	**339**	P	**P**	**12 05 32.8**	**-0.3**
CCM				IAmb	IAmb	12 05 33.5	
	comp=Z,7.3nm,0.8s						
QSPA	**South Pole Qui**	**67.07**	**180**	P	**P**	**12 05 47.0**	**+1.4**
QSPA				IAmb	IAmb	12 06 03.7	
	comp=Z,7.0nm,1.5s						
DBIC	**Dimbokro**	**67.26**	**72**	P	**P**	**12 05 47.0**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=224,slow=9.1,SNR=2.1						
	comp=Z,1.8nm,0.6s					

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GSTD                                                  Sn     12 01 25.5 +0.5
ADK   Adak                1.71 292                    Pn     12 01 09.2 -0.7
ADK                                                   Sn     12 01 30.4 -0.1
KIWB  Kanaga Island       1.98 289                    Pn     12 01 13.5  0.0
KIMD  Kanaga Island       2.00 286                    Pn     12 01 13.6 -0.4
TAPA  Tanaga Point A      2.36 285                    Pn     12 01 19.4 +0.5
TAFP  Tanaga Falls P      2.49 286                    Pn     12 01 20.1 -0.5
TASE  Tanaga Southea      2.50 285                    Pn     12 01 21.6 +0.7
GANE  Gareloi Northe      2.95 283                    Pn     12 01 27.7 +0.7
AMKA  Amchitka            4.12 274                    Pn     12 01 40.8 -2.2
UNV   Unalaska Valle      5.32  58   Pn               Pn     12 01 57.5 -2.0
KDAK  Kodiak Island      14.07  54   Pn               Pn     12 03 56.8 -2.4
      0.2nm,0.3s,baz=204,slow=4.5,SNR=9.5
KDAK                                                  Sn     12 06 42.9 +8.9
      0.1nm,0.3s,baz=326,slow=21,SNR=2.0
KDAK  Kodiak Island      14.07  54   P                P      12 04 07.0 +0.5
CNPM  China Poot         15.35  49   P                P      12 04 19.3 -1.4
BRLK  Bradley Lake       15.60  48   P                Pn     12 04 21.4 +1.7
PETK  Petropavlovsk-     17.33 287   LR               LR     12 10 00.7
      comp=Z,18nm,19.5s,baz=101,slow=33
ILAR  Eielson Array      19.56  36   P                P      12 05 06.6 -0.4
      0.3nm,0.3s,baz=231,slow=9.0,SNR=11
      0.6nm,0.4s
J25K  Salcha River,      20.05  37   P                P      12 05 11.5 -0.9
M26K  Nabesna, AK        20.13  44   P                P      12 05 14.0 +0.6
M26K                                  IAmb             IAmb   12 05 15.4
      comp=Z,3.3nm,0.6s
SCRK  Sand Creek         20.30  40   P                P      12 05 14.9 -0.4
SCRK                                  IAmb             IAmb   12 05 15.2
      comp=Z,3.3nm,0.5s
J26L  Joseph Creek       20.69  39   P                P      12 05 18.7 -0.8
J26L                                  IAmb             IAmb   12 05 38.7
      comp=Z,5.1nm,0.8s
TOLK  Toolik Lake Re     21.05  25   P                P      12 05 23.9 +0.6
TOLK                                  IAmb             IAmb   12 05 34.5
      comp=Z,13nm,1.1s
MA2   Magadan            21.36 307   LR               LR     12 13 31.9
      comp=Z,33nm,18.7s,baz=104,slow=36
EGAK  Eagle              21.75  39   P                P      12 05 31.2 +0.5
EGAK                                  IAmb             IAmb   12 05 51.0
      comp=Z,19nm,1.4s
DAWY  Dawson             22.22  42   P                P      12 05 35.2 -0.6
INK   Inuvik             25.90  34   P                P      12 06 10.5 -0.3
      comp=Z,1.5nm,0.7s,baz=239,slow=7.8,SNR=3.7
      comp=Z,1.5nm,0.7s
YAK   Yakutsk            31.69 312   LR               LR     12 20 04.2
      comp=Z,32nm,19.2s,baz=90,slow=37
H11N2 WAKE ISLAND Hy     34.84 212   T                T      12 45 30.7
      baz=21
H11N3 WAKE ISLAND Hy     34.84 212   T                T      12 45 31.8
      baz=21
H11N1 WAKE ISLAND Hy     34.85 212   T                T      12 45 29.0
      baz=21
H11S1 WAKE ISLAND Hy     36.04 212   T                T      12 46 44.7
      baz=16,slow=76
H11S2 WAKE ISLAND Hy     36.05 212   T                T      12 46 42.9
      baz=16,slow=76
H11S3 WAKE ISLAND Hy     36.06 212   T                T      12 46 47.0
      baz=16,slow=76
NVAR  Mina Array Bea     40.65  86   P                P      12 08 21.3 +1.9
      comp=Z,0.4nm,0.8s,baz=287,slow=9.3,SNR=2.5
      comp=Z,0.4nm,0.8s
PDAR  Pinedale Array     43.53  75   P                P      12 08 44.3 +1.4
      comp=Z,0.3nm,0.5s,baz=331,slow=3.6,SNR=5.6
      comp=Z,0.3nm,0.5s
TXAR  Lajitas Array      55.76  85   P                P      12 10 16.5 +0.5
      comp=Z,0.1nm,0.6s,baz=318,slow=5.2,SNR=2.0
      comp=Z,0.1nm,0.6s
ARCES ARCESS Array B     58.66 352   P                P      12 10 35.0 -0.8
      comp=Z,11nm,1.3s,baz=15,slow=7.7,SNR=1.4
KURBB Kurchatov Arra     61.28 316   P                P      12 10 53.6 -0.4
      comp=Z,0.3nm,0.5s,baz=43,slow=6.6,SNR=4.1
      comp=Z,0.3nm,0.5s
MKAR  Makanchi Array     62.36 311   P                P      12 11 01.6 +0.3
      comp=Z,0.5nm,0.8s,baz=60,slow=8.5,SNR=2.0
      comp=Z,0.5nm,0.8s
BVAR  Borovoye Array     62.82 322   P                P      12 11 03.5 -0.9
      comp=Z,0.3nm,0.6s,baz=46,slow=6.2,SNR=2.6
      comp=Z,0.3nm,0.6s
TKL   Tuckaleechee C     63.36  66   LR               LR     12 37 33.3
      comp=Z,11nm,20.7s,baz=134,slow=35
HFS   Hagfors            68.78 356   P                P      12 11 41.9 -0.6
      comp=Z,2.5nm,1.0s,baz=20,slow=4.6,SNR=5.3
      comp=Z,2.5nm,1.0s
GERES GERESS Array B     80.04 355   P                P      12 12 48.6 +0.2
      comp=Z,0.1nm,0.4s,baz=350,slow=5.2,SNR=2.2
GERES                                 LR               LR     12 49 06.6
      comp=Z,35nm,21.2s,baz=233,slow=36
      comp=Z,0.1nm,0.4s
WRA   Warramunga Arr     84.03 228   P                P      12 13 09.7 +0.3
      comp=Z,0.3nm,0.7s,baz=33,slow=5.6,SNR=1.9
      comp=Z,0.3nm,0.7s
ASAR  Alice Springs      87.45 226   P                P      12 13 26.6 +0.3
      comp=Z,0.5nm,0.8s,baz=20,slow=5.9,SNR=2.6
      comp=Z,0.5nm,0.8s
H03N2 Juan Fernandez    118.31 109   T                T      14 29 11.9
      baz=319
H03N1 Juan Fernandez    118.33 109   T                T      14 29 28.2
      baz=319
H03N3 Juan Fernandez    118.33 109   T                T      14 29 34.3
      baz=319
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IDC ***16*** *12:02:57.4±1.0,39°.73N×20°.71E,h0km,mb3.7/8, mbtmp3.6/16,ML3.2/8,MS2.9/4,Error ellipse: s-maj=17.6km s-min=13.7km az=137.0*
BEO ***16*** *12:02:57.9±0.6,39°.54N×21°.04E,h0km,ML3.5/4*
PDG ***16*** *12:02:59.9±0.7,39°.76N×20°.66E,h9km±3km,ML3.6/13, Error ellipse: s-maj=2.6km s-min=1.7km az=90.0*
ROM ***16*** *12:02:59.8±0.3,39°.70N±0°.02×20°.73E±0°.02,h10km, ML3.6/21,Error ellipse: s-maj=2.2km s-min=1.9km az=229.0*
THE ***16*** *12:03:00.7,39°.74N×20°.71E,h4km×2km,ML3.4/10,Error ellipse: s-maj=2.0km s-min=0.4km az=282.0*
ATH ***16*** *12:03:00.7,39°.74N×20°.71E,h11km±2km,ML3.5/12,Error ellipse: s-maj=2.3km s-min=0.8km az=276.0*
ISC 16 12:03:00.1±0.8,39.73N±0°.02×20.70E±0°.02,h14km±5km, n179,σ1≥50/226,mb3.7/7,30C-29D,Greece-Albania border region

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Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                  Op    ISC       h m s     ISC
JAN   Janina            0.14 123  P     Pg        12 03 03.6 -0.2
JAN                               S     Sg        12 03 05.5 -0.7
      21μm,0.2s
JAN   Janina            0.14 123  P     Pg        12 03 03.5 -0.3
JAN                               S     Sg        12 03 06.5 +0.3
JAN                               AML   AML       12 03 07.5
      comp=E,49807μm,0.2s
JAN                               AML   AML       12 03 10.3
      comp=N,39870μm,0.3s
IGT   Igoumenitsa       0.35 235  P     Pg        12 03 07.7 +0.5
IGT                               S     Sg        12 03 12.8 +0.8
      comp=N,6μm,0.4s
IGT   Igoumenitsa       0.35 235  ePg   Pb        12 03 08.2 +0.2
IGT                               eSg   Sb        12 03 14.1 +0.8
IGT   Igoumenitsa       0.35 235  P     Pg        12 03 07.5 +0.4
IGT                               S     Sb        12 03 13.4  0.0
IGT                               AML   AML       12 03 16.2
      comp=E,10629μm,0.3s
IGT                               AML   AML       12 03 17.0
      comp=N,13499μm,0.3s
LSK   Leskovik          0.43 349  P     Pb        12 03 09.2 -0.2
LSK                               S     Sg        12 03 14.7 +0.2
      comp=N,20μm,0.7s
KPRO  Kipourio          0.56  66  P     Pb        12 03 11.2 -0.4
KPRO                              S     Sb        12 03 19.1 -0.4
      comp=N,10μm,0.5s
SRN   Sarande           0.56 286  P     Pg        12 03 11.4 +0.3
SRN                               S     Sb        12 03 19.4 -0.1
      comp=N,5μm,0.7s
SRN   Sarande           0.56 286  ⇓eP   Pg        12 03 11.2 +0.2
SRN                               S     Sb        12 03 20.6 +1.1
SRN                               AML   AML
      comp=N,6200μm,0.6s
SRN                               AML   AML
      comp=N,6205μm,0.6s
SRN                               AML   AML
      comp=E,5530μm,0.9s
PENT  Pentalofos        0.57  36  P     Pb        12 03 11.6 -0.3
PENT                              S     Sb        12 03 19.3 -0.7
      comp=E,2μm,0.4s
PENT  Pentalofos        0.57  36  P     Pg        12 03 11.4  0.0
PENT                              S     Sb        12 03 19.3 -0.7
KASA  Kassiopi          0.59 272  P     Pg        12 03 11.8 +0.1
KASA                              S     Sb        12 03 20.4  0.0
KASA                              AML   AML       12 03 22.5
      comp=N,12115μm,0.6s
KASA                              AML   AML       12 03 23.0
      comp=E,12048μm,0.4s
KEK   Kerkira           0.70 269  P     Pg        12 03 13.6 -0.1
KEK                               S     Sb        12 03 24.1 +0.7
      comp=E,4μm,0.3s
KEK   Kerkira           0.70 269  ⇓eP   Pg        12 03 13.2 -0.5
KEK                               AML   AML
      comp=N,863μm,1.5s
KEK                               AML   AML
      comp=E,1031μm,0.4s
KEK   Kerkira           0.70 269  P     Pg        12 03 13.5 -0.2
KEK                               S     Sg        12 03 23.3 +0.5
KEK                               AML   AML       12 03 30.1
      comp=E,7760μm,0.3s
KEK                               AML   AML       12 03 32.5
      comp=N,6372μm,0.3s
NEST  Nestorio          0.73  21  P     Pb        12 03 14.4 -0.2
NEST                              S     Sb        12 03 25.1 +0.5
      comp=N,3μm,0.5s
NEST  Nestorio          0.73  21  P     Pb        12 03 14.5 -0.2
NEST                              S     Sb        12 03 24.6  0.0
NEST                              AML   AML       12 03 27.5
      comp=E,9170μm,0.4s
NEST                              AML   AML       12 03 30.2
      comp=N,5600μm,0.5s
KBN   Korca             0.89   4  P     Pb        12 03 17.6 +0.2
KBN                               S     Sb        12 03 29.7 +0.5
      comp=N,2μm,0.6s
KBN   Korca             0.89   4  eP    Pg        12 03 17.2 -0.2
TSLK  Tsoukalades, L    0.91 182  P     Pb        12 03 17.9 +0.4
TSLK  Tsoukalades, L    0.91 182  P     Pb        12 03 18.2 +0.7
TSLK                              S     Sb        12 03 31.0 +1.6
TSLK                              AML   AML       12 03 39.4
      comp=N,12547μm,0.8s
TSLK                              AML   AML       12 03 44.0
      comp=E,5788μm,1.0s
LKD2  Lefkada island    0.94 182  P     Pb        12 03 18.8 +0.7
LKD2  Lefkada island    0.94 182  P     Pb        12 03 18.6 +0.5
LKD2                              S     Sb        12 03 31.8 +1.3
LKD2                              AML   AML       12 03 36.4
      comp=E,5510μm,0.4s
LKD2                              AML   AML       12 03 40.3
      comp=N,6763μm,0.5s
KZN   Kozani            1.00  55  P     Pg        12 03 19.0 -0.5
KZN                               S     Sb        12 03 33.3 +1.0
      comp=N,3μm,0.5s
KZN   Kozani            1.00  55  P     Pb        12 03 19.3 +0.1
KZN                               S     Sn        12 03 34.0 +0.3
KZN                               AML   AML       12 03 38.1
      comp=N,4442μm,0.5s
KZN                               AML   AML       12 03 42.3
      comp=E,7332μm,0.5s
NYDR  Nydri-Lefkada     1.02 180  P     Pb        12 03 20.1 +0.7
THL   Klokotos Trika    1.03  99  P     Pg        12 03 19.4 -0.5
THL   Klokotos Trika    1.03  99  ⇑P    Pb        12 03 19.8 +0.2
THL                               AML   AML
      comp=E,734μm,0.6s
THL                               AML   AML
      comp=N,674μm,0.4s
THL   Klokotos Trika    1.03  99  P     Pb        12 03 19.7 +0.2
THL                               S     Sb        12 03 33.4 +0.5
THL                               AML   AML       12 03 37.2
      comp=E,5807μm,0.6s
THL                               AML   AML       12 03 38.1
      comp=N,5289μm,0.4s
DRAG  Dragano-Lefkad    1.05 185  P     Pb        12 03 20.6 +0.6
EVGI  Lefkada island    1.11 182  P     Pb        12 03 21.5 +0.5
EVR   Evrytania         1.18 133  P     Pb        12 03 22.3  0.0
EVR   Evrytania         1.18 133  P     Pb        12 03 22.1 -0.2
EVR                               S     Sn        12 03 39.1 +1.0
EVR                               AML   AML       12 03 46.9
      comp=E,4286μm,0.5s
EVR                               AML   AML       12 03 47.4
      comp=N,5464μm,0.4s
VLO   Vlora             1.18 309  P     Pn        12 03 22.6 +0.5
VLO                               AML   AML
      comp=N,10810μm,0.4s
VLO                               AML   AML
      comp=E,7295μm,0.5s
VLO                               AML   AML
      comp=N,10815μm,0.4s
FSK   Fiskardo          1.27 185  P     Pg        12 03 24.9 +0.3
FSK                               AML   AML       12 03 46.0
      comp=N,3169μm,0.6s
FSK                               AML   AML       12 03 46.9
      comp=E,6690μm,0.3s
MAKR  Makrakomi, Fth    1.32 122  P     Pg        12 03 25.1 -0.4
OHR   Ohrid             1.38   3  ePg   Pg        12 03 27.6 +0.9
OHR                               eSg   Sg        12 03 48.4 +3.8
OHR   Ohrid             1.38   3  i Pn  Pg        12 03 27.1 +0.4
LIT   Litokhoron        1.42  74  P     Pn        12 03 26.1 +0.6
LIT   Litokhoron        1.42  74  P     Pn        12 03 25.9 +0.4
LIT                               AML   AML       12 03 51.7
      comp=E,4624μm,0.6s
LIT                               AML   AML       12 03 53.1
      comp=N,6848μm,0.5s
VLS   Valsamata         1.55 183  eP    Pn        12 03 28.3 +1.0
TIR   Tirane            1.74 339  P     Pb        12 03 31.9 +0.2
TIR   Tirane            1.74 339  ⇓S    Sb        12 03 54.2 +0.9
SCTE  Santa Cesarea     1.75 282  P     Pn        12 03 30.6 +0.7
SCTE                              AML   AML
      comp=N,1321μm,1.2s
SCTE                              AML   AML
      comp=E,1860μm,0.5s
KLV   Kalavryta, Ach    2.03 146  P     Pb        12 03 37.2 +0.5
KLV                               AML   AML
      comp=E,510μm,1.2s
KLV                               AML   AML
      comp=N,417μm,1.4s
VAY   Valandovo         2.13  41  ePg   Pn        12 03 36.7 +1.5
VAY                               eSg   Sb        12 04 04.4 -0.4
VAY   Valandovo         2.13  41  i Pn  Pn        12 03 36.6 +1.4
ULC   Ulcinj            2.49 334  ePn   Pn        12 03 41.6 +1.4
ULC                               i Sn  Sn        12 04 12.3 +2.0
SRS   Serrai            2.60  57  ePg   Pn        12 03 42.9 +1.2
SRS                               eSg   Sn        12 04 15.4 +2.2
DRME  Dracevica, Mon    2.71 335  ePn   Pn        12 03 44.9 +1.8
DRME  Dracevica, Mon    2.71 335  ⇑iPn  Pn        12 03 44.6 +1.5
DRME                              i Sn  Sn        12 04 17.6 +1.9
KKB   Krupnik           2.80  40  P     Pn        12 03 46.6 +2.2
BUM   Brajici-Budva     2.91 333  ePn   Pn        12 03 47.4 +1.4
BUM                               i Sn  Sn        12 04 22.3 +1.6
PDG   Podgorica         2.91 338  ⇓P    Pn        12 03 48.1 +2.2
TTG   Podgorica         2.91 338  ⇓iPn  Pn        12 03 47.5 +1.6
TTG                               i Sn  Sn        12 04 22.5 +1.9
PVY   Plav              2.92 349  ⇓iPn  Pn        12 03 47.6 +1.5
PVY                               i Sn  Sn        12 04 22.8 +1.8
MMB   Musomiste         2.96  50  P     Pb        12 03 50.0 -2.5
NOCI  Noci              2.98 292  ⇑P    Pn        12 03 47.3 +0.5
NOCI                              AML   AML
      comp=E,831μm,0.4s
NOCI                              AML   AML
      comp=N,678μm,0.9s
LTRZ  Laterza           3.10 288  P     Pn        12 03 49.0 +0.4
TIP   Timpagrande       3.10 261  ⇓P    Pn        12 03 49.0 +0.4
TIP                               ⇓S    Sn        12 04 26.1 +0.6
TIP   Timpagrande       3.10 261  P     Pn        12 03 48.7 +0.1
TIP                               AML   AML
      comp=E,182μm,0.5s
TIP                               AML   AML
      comp=N,194μm,0.6s
TIP                               AML   AML
      comp=N,142μm,0.5s
TIP                               AML   AML
      comp=E,207μm,0.5s
CEME  Cevo              3.12 335  ePn   Pn        12 03 50.3 +1.5
CEME                              i Sn  Sn        12 04 27.5 +1.6
HCY   Herceg Novi       3.19 329  ePn   Pn        12 03 48.8 -0.9
HCY   Herceg Novi       3.19 329  ePn   Pn        12 03 51.0 +1.3
HCY                               eSn   Sn        12 04 28.7 +1.2
BARS  Barje             3.19  15  ePn   Pn        12 03 52.2 +2.4
MATE  Matera            3.20 288  ⇓P    Pn        12 03 50.2 +0.4
MATE                              ⇓S    Sn        12 04 28.6 +0.9
MATE  Matera            3.20 288  P     Pn        12 03 50.6 +0.8
MATE                              AML   AML
      comp=N,460μm,0.9s
MATE                              AML   AML
      comp=E,454μm,0.8s
IVA   Berane            3.20 349  ePn   Pn        12 03 51.5 +1.6
IVA                               i Sn  Sn        12 04 29.6 +1.7
KOME  Kolasin           3.24 344  ⇑iPn  Pn        12 03 52.1 +1.5
KOME                              i Sn  Sn        12 04 30.6 +1.6
CELI  Celico            3.26 266  P     Pn        12 03 51.2 +0.5
CELI                              AML   AML
      comp=E,402μm,0.6s
CELI                              AML   AML
      comp=N,528μm,1.3s
NKME  Niksic            3.31 337  ⇓iPn  Pn        12 03 52.9 +1.5
NKME                              i Sn  Sn        12 04 32.1 +1.6
AMUR  Altamura          3.35 292  P     Pn        12 03 52.6 +0.6
AMUR                              AML   AML
      comp=E,440μm,0.5s
AMUR                              AML   AML
      comp=N,319μm,0.4s
SALB  San Lorenzo Be    3.36 274  P     Pn        12 03 52.1 -0.1
SALB                              S     Sn        12 04 32.0 +0.1
VTS   Vitosha           3.46  33  ⇑P    Pn        12 03 55.1 +1.5
VTS                               ⇓S    Sn        12 04 36.7 +2.2
VTS   Vitosha           3.46  33  P     Pb        12 03 57.8 -3.4
VTS   Vitosha           3.46  33  ⇓P    Pn        12 03 55.4 +1.8
VTS                               S     Sn        12 04 38.0 +3.5
VTS                               AML   AML
      comp=E,93μm,0.8s
VTS                               AML   AML
      comp=N,78μm,0.8s
SELS  Selova            3.50   5  ePn   Pn        12 03 56.7 +2.7
CAR1  CAROLEI           3.51 264  ⇓P    Pn        12 03 55.7 +1.5
CAR1                              AML   AML
      comp=N,476μm,0.7s
CAR1                              AML   AML
      comp=E,511μm,0.5s
BRY   Bratogost         3.56 333  ePn   Pn        12 03 55.3 +0.3
BRY   Bratogost         3.56 333  ePn   Pn        12 03 56.0 +1.0
BRY                               i Sn  Sn        12 04 38.1 +1.2
SJES  Sjenica           3.57 351  ePn   Pn        12 03 58.2 +3.1
SCHR  S. Chirico Rap    3.58 279  ⇓P    Pn        12 03 57.5 +2.2
SCHR                              AML   AML
      comp=N,179μm,1.6s
SCHR                              AML   AML
      comp=E,167μm,0.6s
RZN   Rozhen            3.62  56  P     Pn        12 03 59.3 +3.4
AG11  Viggiano (PZ)     3.69 281  ⇓P    Pn        12 04 01.2 +4.5
UPM   Unac-Piva         3.72 339  ePn   Pn        12 03 59.2 +2.0
UPM   Unac-Piva         3.72 339  ePn   Pn        12 03 58.7 +1.5
UPM                               i Sn  Sn        12 04 42.2 +1.2
PLE   Pljevlja          3.73 345  ⇓iPn  Pn        12 03 58.8 +1.5
PLE                               i Sn  Sn        12 04 42.4 +1.4
ZAPS  Zavoj             3.83  22  ePn   Pn        12 04 01.4 +2.9
MTSN  Montesano sull    3.84 280  ⇑P    Pn        12 04 00.8 +2.0
MTSN                              AML   AML
      comp=N,186μm,0.3s
MTSN                              AML   AML
      comp=E,253μm,0.6s
STON  Ston              3.87 325  ePn   Pn        12 03 57.6 -1.4
STON  Ston              3.87 325  ⇓P    Pn        12 03 56.8 -2.2
STON                              AML   AML
      comp=E,144μm,0.5s
STON                              AML   AML
      comp=N,133μm,1.2s
RDO   Rodhopi           3.95  67  P     Pn        12 03 59.7 -0.5
RDO                               AML   AML
      comp=E,25μm,0.9s
RDO                               AML   AML
      comp=N,34μm,0.9s
BOVS  Bovan             3.97  11  ⇓P    Pn        12 04 02.6 +2.1
BOVS                              ⇑S    Sn        12 04 48.4 +1.5
BOVS  Bovan             3.97  11  ePn   Pn        12 04 02.3 +1.8
RUDO  Rudo              4.01 346  ePn   Pn        12 04 01.8 +0.8
KDZ   Kurdzhali         4.07  60  P     Pn        12 04 03.0 +1.2
GRUS  Gruza             4.16   0  ePn   Pn        12 04 03.1 +0.1
BLKB  Belogradchik      4.16  20  ⇓P    Pn        12 04 05.4 +2.3
BLKB                              ⇑S    Sn        12 04 53.1 +1.6
CMPR  Campora           4.19 280  ⇑P    Pn        12 04 07.0 +3.4
CMPR                              AML   AML
      comp=E,110μm,1.1s
CMPR                              AML   AML
      comp=N,112μm,0.9s
CDRU  Civita di Ruta    4.21 282  ⇑P    Pn        12 04 07.2 +3.4
CDRU                              AML   AML
      comp=E,117μm,0.6s
CDRU                              AML   AML
      comp=N,78μm,0.7s
ZAGS  Zajecar           4.24  15  ePn   Pn        12 04 04.7 +0.6
BBLS  Lazi&#263;i       4.24 347  ePn   Pn        12 04 05.5 +1.2
BBLS  Lazi&#263;i       4.24 347  ePn   Pn        12 04 06.0 +1.7
SGRT  San Giovanni R    4.27 300  S     Sn        12 04 52.0 -2.4
MSRU  Castanea          4.30 252  ⇓P    Pn        12 04 05.8 +0.8
MSRU                              AML   AML
      comp=E,212μm,0.4s
MSRU                              AML   AML
      comp=N,188μm,0.4s
SNAL  S. Angelo Dei     4.36 288  ⇓P    Pn        12 04 09.0 +3.0
DIVS  Divibare          4.40 353  ePn   Pn        12 04 07.9 +1.5
DIVS  Divibare          4.40 353  ePn   Pn        12 04 08.1 +1.7
APRC  Apricena          4.41 299  ⇓P    Pn        12 04 07.1 +0.5
TRUS  Trudelj           4.50 357  ePn   Pn        12 04 09.0 +1.3
APE   Apeiranthos       4.63 123  ⇑P    Pn        12 04 09.8 +0.2
MELA  Melanico ??? S    4.67 297  P     Pn        12 04 12.4 +2.3
MELA                              AML   AML
      comp=N,504μm,0.8s
MELA                              AML   AML
      comp=N,513μm,0.8s
MELA                              AML   AML
      comp=E,459μm,1.0s
MELA                              AML   AML
      comp=E,448μm,0.8s
KUBS  Kucevo            4.73   8  ePn   Pn        12 04 13.3 +2.3
TEKS  Tekeris           4.89 350  ePn   Pn        12 04 13.7 +0.5
TEKS  Tekeris           4.89 350  ePn   Pn        12 04 13.7 +0.5
MDVR  Moldovita         5.10   8  ⇑P    Pn        12 04 18.5 +2.4
HLNI  Lentini           5.15 244  ⇑P    Pn        12 04 14.2 -2.5
HERR  Herculane         5.30  13  ⇑P    Pn        12 04 20.2 +1.5
HERR                              ⇑S    Sn        12 05 21.2 +1.6
RNI2  Rionero Sannit    5.35 294  ⇑P    Pn        12 04 23.4 +3.9
MGRS  Mrkonjic Grad     5.40 331  ePn   Pn        12 04 21.2 +1.0
HMDC  Modica            5.41 241  ⇑P    Pn        12 04 18.3 -2.0
VAE   Valguarnera       5.42 247  Pn    Pn        12 04 21.2 +0.8
      comp=E,1.3nm,0.3s,baz=97,slow=18,SNR=1.5
VAE                               Sn    Sn        12 05 21.3 -1.2
      comp=E,2.0nm,0.3s,baz=49,slow=20,SNR=1.7
      comp=E,4.7nm,0.3s
FRGS  Fruska Gora       5.46 353  ⇑P    Pn        12 04 21.9 +0.9
FRGS  Fruska Gora       5.46 353  ePn   Pn        12 04 20.5 -0.5
FRGS  Fruska Gora       5.46 353  ePn   Pn        12 04 22.1 +1.1
IDI   Anoyia            5.54 142  ⇑P    Pn        12 04 21.4 -0.8
IDI   Anoyia            5.54 142  Pn    Pn        12 04 21.6 -0.6
      comp=E,1.2nm,0.3s,baz=311,slow=11,SNR=9.2
IDI                               Sn    Sn        12 05 22.1 -3.6
      comp=E,4.5nm,0.3s,baz=293,slow=18,SNR=8.7
      comp=E,4.3nm,0.6s
BLY   Banja Luka        5.65 334  ePn   Pn        12 04 22.3 -1.3
VVLD  Villa Vallelon    5.78 294  P     Pn        12 04 29.5 +4.0
VCEL  Villa Celiera     5.83 299  P     Pb        12 04 42.9 +1.4
GZR   Gura Zlata        5.86  14  ⇓P    Pn        12 04 27.9 +1.4
BZS   Buzias            5.92   6  ⇑P    Pn        12 04 28.7 +1.5
A051A Mrakovica         5.98 333  ePn   Pn        12 04 28.6 +0.5
TERO  Teramo            6.08 301  ⇑P    Pg        12 04 51.8 -4.7
T1243 Rocca Santa Ma    6.22 301  P     Pn        12 04 33.1 +1.7
T1243                             ⇑P    Pb        12 04 49.6 +1.4
T1204 Amatrice, Fraz    6.30 300  P     Pb        12 04 48.4 -1.2
T1202 Accumoli, Fraz    6.37 300  ⇓P    Pn        12 04 32.8 -0.8
LNSS  Leonessa          6.45 299  ⇓P    Pn        12 04 37.4 +2.7
T1245 Castelsantange    6.46 301  ⇓P    Pn        12 04 37.2 +2.4
MC2   Monte Cornacci    6.49 302  ⇑P    Pn        12 04 37.6 +2.4
VOIR                    6.54  28  ⇑P    Pn        12 04 37.3 +1.4
SIRR  Siria             6.57   6  ⇑P    Pn        12 04 37.0 +0.8
T1215 Vallo di Nera,    6.65 300  P     Pn        12 04 40.4 +3.0
MORH  Mrgy, Hungar      6.65 348  ⇑P    Pn        12 04 38.5 +1.2
EL6   Elcito            6.74 305  ⇑P    Pn        12 04 39.7 +1.1
ASSB  Assisi San Ben    6.89 301  P     Pn        12 04 49.2 +8.6
MLR   Muntele Rosu      6.93  32  ⇓P    Pn        12 04 41.5 +0.2
MLR   Muntele Rosu      6.93  32  Pn    Pn        12 04 41.7 +0.4
      comp=E,0.1nm,0.3s,baz=133,slow=12,SNR=2.1
MLR                               Sn    Sn        12 06 01.8 +1.8
      comp=E,0.2nm,0.3s,baz=221,slow=20,SNR=1.6
      comp=E,1.1nm,0.5s
FOSV  Fossato di Vic    6.94 303  P     Pn        12 04 41.1 -0.2
BOJS  Bojanci           7.03 327  ePn   Pn        12 04 42.3 -0.2
ATFO  Monte Foce - G    7.10 303  ⇑P    Pn        12 04 45.3 +1.8
CRES  Cresnjev          7.21 329  ePn   Pn        12 04 44.7 -0.3
PLOR  Plostina          7.52  34  ⇑P    Pn        12 04 51.0 +1.8
VRI   Vrincioaia        7.56  34  ⇓P    Pn        12 04 49.9 +0.1
CEY   Cerknica          7.57 324  ePn   Pn        12 04 49.9 -0.1
SKDS  Skadanscina       7.62 322  ePn   Pn        12 04 49.5 -1.1
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LJU	**Ljubljana**	7.77 326	⇑P	Pn	12 04 54.8 +2.2
OBKA	**Obir**	8.13 328	*e*Pn	Pn	12 04 58.7 +1.0
OBKA	**Obir**	8.13 328	*e*Pn	Pn	12 04 57.8 +0.1
	comp=E,1.4nm,0.2s				
ABTA	**Abfaltersbach**	9.21 322	*e*Pn	Pn	12 05 12.5 +0.1
	comp=E,0.2nm,0.2s				
MOA	**Molln**	9.35 332	*e*Pn	Pn	12 05 15.7 +1.3
	comp=E,1.4nm,0.3s				
KEST	**Kesra**	9.84 250	Pn	Pn	12 05 21.5 +0.4
	comp=E,0.3nm,0.3s,baz=72,slow=20,SNR=4.4				
	comp=E,3.2nm,0.7s				
BRTR	**Keskin Array B**	9.97 86	Pn	Pn	12 05 23.1 +0.2
	baz=273,slow=13,SNR=1.2				
	comp=E,0.2nm,0.4s				
MOTA	**Moosalm**	10.31 321	*e*Pn	Pn	12 05 28.3 +0.7
	comp=E,0.4nm,0.2s				
GERES	**GERESS Array B**	10.40 334	Pn	Pn	12 05 28.5 -0.2
	comp=E,0.1nm,0.3s,baz=159,slow=14,SNR=1.8				
	comp=E,0.2nm,0.2s				
DAVOX	**Davos/Dischmat**	10.57 315	Pn	Pn	12 05 29.5 -1.8
	comp=E,0.1nm,0.3s,baz=131,slow=19,SNR=1.6				
DAVOX			LR	LR	12 10 14.2
	comp=E,46nm,18.4s,baz=80,slow=41				
	comp=E,0.5nm,0.3s				
MMAI	**Mount Meron Ar**	13.60 115	LR	LR	12 12 39.4
	comp=E,49nm,20.2s,baz=206,slow=43				
ESDC	**Sonseca Array**	18.97 278	P	P	12 07 20.2 -0.7
	comp=E,0.1nm,0.3s,baz=69,slow=9.9,SNR=1.7				
	comp=E,0.3nm,0.6s				
HFS	**Hagfors**	20.89 350	P	P	12 07 40.2 -1.5
	comp=E,1.2nm,0.6s,baz=162,slow=11,SNR=1.5				
	comp=E,1.2nm,0.6s				
FINES	**FINESS Array B**	21.99 7	P	P	12 07 53.0 -0.4
	comp=E,1.9nm,0.7s,baz=170,slow=12,SNR=6.1				
	comp=E,1.9nm,0.7s				
NB2	**NORSAR Subarra**	22.13 348	P	P	12 07 54.6 -0.3
	comp=Z,5.1nm,1.1s,baz=164,slow=11				
NOA	**NORSAR Array B**	22.13 348	P	P	12 07 54.4 -0.5
	comp=Z,1.0nm,0.7s,baz=163,slow=11,SNR=3.7				
	comp=Z,1.0nm,0.7s				
EKA	**Eskdalemuir Ar**	22.26 322	P	P	12 07 55.7 -0.7
	comp=Z,1.1nm,0.7s,baz=116,slow=13,SNR=1.7				
	comp=Z,1.1nm,0.7s				
KIRV	**Kirov**	26.29 35	LR	LR	12 20 12.6
	comp=Z,37nm,21.6s,baz=234,slow=39				
ARU	**Arti**	29.82 43	LR	LR	12 21 34.2
	comp=Z,18nm,21.1s,baz=312,slow=38				
TORD	**Torodi Ar. Bea**	31.34 218	P	P	12 09 19.8 -0.2
	comp=Z,0.8nm,0.7s,baz=28,slow=8.9,SNR=4.6				
	comp=Z,0.8nm,0.7s				
SPITS	**Spitsbergen Ar**	38.60 359	P	P	12 10 21.9 -0.2
	comp=Z,4.7nm,0.7s,baz=185,slow=7.2,SNR=1.5				
	comp=Z,4.7nm,0.7s				
MKAR	**Makanchi Array**	44.38 60	P	P	12 11 09.3 -0.6
	comp=Z,1.4nm,0.5s,baz=282,slow=6.8,SNR=8.9				
	comp=Z,1.4nm,0.5s				
ZALV	**Zalesovo Beam**	44.56 49	P	P	12 11 10.2 -1.0
	comp=Z,0.6nm,0.3s,baz=269,slow=8.3,SNR=2.9				
	comp=Z,0.6nm,0.3s				

NNC 16 12:16:05.0±2.7, 36°.82N×69°.79E, h0^{km}, mb4.2, mpv3.4, 3C, Error ellipse: s-maj=28.6km s-min=18.8km az=136.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.30	5	P	Pn	12 17 39.1	+0.1
	1.2nm,0.3s,baz=184,slow=14,SNR=17						
KK31				⇑S	Sn	12 18 52.9	+1.2
	3.1nm,0.6s,baz=186,slow=21,SNR=7.4						
AB31	**Akbulak array**	14.34	333	⇑P	Pn	12 19 28.8	-0.4
	4.8nm,0.5s,baz=156,slow=12,SNR=126						
AKTO	**Aktyubinsk**	16.03	332	⇑P	Pn	12 19 51.9	+0.3
	5.1nm,0.8s						

*IDC **16** 12:31:33.2±6.4, 14°.80S×167°.25E, h170^{km}±70^{km}, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=61.9km s-min=28.5km az=153.0*

ISC 16 12:31:31.3±1.1, 14°.67S±0°.10×167°.2E±0°.3, h150^{km}, n7, σ0^{s}70/8, mb3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	7.39 186		P	Pn	12 33 17.1	+0.4
	2.6nm,0.3s,baz=7.6,slow=18,SNR=19						
DZM				S	Sn	12 34 39.3	-0.2
	4.9nm,0.5s,baz=307,slow=20,SNR=6.0						
WRA	**Warramunga Arr**	31.79 256		P	P	12 37 41.4	-0.4
	0.2nm,0.6s,baz=84,slow=8.4,SNR=6.4						
	0.2nm,0.6s						
ASAR	**Alice Springs**	32.65 249		P	P	12 37 49.2	-0.1
	0.7nm,0.5s,baz=79,slow=9.4,SNR=19						
	0.7nm,0.5s						
PETK	**Petropavlovsk-**	68.00 354		P	P	12 42 15.0	+1.0
	1.6nm,0.8s,baz=156,slow=7.4,SNR=1.9						
	1.6nm,0.8s						
ILAR	**Eielson Array**	86.49 18		P	P	12 43 55.7	-1.0
	0.4nm,0.8s,baz=218,slow=5.7,SNR=2.6						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	97.13 316		P	P	12 44 46.9	+0.3
	0.6nm,0.9s,baz=57,slow=5.3,SNR=2.5						
	0.6nm,0.9s						
ARCES	**ARCESS Array B**	120.19 345		PKP	PKPdf	12 50 03.7	-0.1
	5.9nm,1.1s,baz=33,slow=3.7,SNR=7.2						

*BEO **16** 12:41:05.5±0.5, 39°.60N×20°.85E, h8^{km}±3^{km}, ML3.2/7*
*ATH **16** 12:41:06.2, 39°.75N×20°.70E, h11^{km}±2^{km}, ML3.3/9, Error ellipse: s-maj=2.4km s-min=0.8km az=241.0*
*THE **16** 12:41:06.5, 39°.76N×20°.71E, h2^{km}±65^{km}, ML3.4/10, Error ellipse: s-maj=65.7km s-min=0.9km az=0.0*
*IDC **16** 12:41:10.2±1.5, 39°.65N×20°.89E, h61^{km}±20^{km}, mb3.4/6, mbtmp3.5/13, MS2.6/2, Error ellipse: s-maj=13.5km s-min=12.5km az=137.0*

ISC 16 12:41:06.1±0.8, 39°.72N±0°.02×20°.74E±0°.02, h14^{km}±5^{km}, n80, σ1^{s}67/112, mb3.6/5, 6C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	0.11 127		P	Pg	12 41 09.2	-0.2
JAN				S	Sg	12 41 12.2	+0.6
	20μm,0.3s						
JAN	**Janina**	0.11 127		P	Pg	12 41 09.2	-0.2
JAN				S	Sg	12 41 12.1	+0.6
JAN				AML	AML	12 41 13.3	
	comp=E,59453μm,0.4s						
JAN				AML	AML	12 41 15.5	
	comp=N,25558μm,0.3s						
IGT	**Igoumenitsa**	0.37 239		P	Pg	12 41 13.2	-0.3
IGT				S	Sb	12 41 19.9	0.0
	comp=N,10μm,0.4s						
IGT	**Igoumenitsa**	0.37 239		*e*Pg	Pg	12 41 13.4	-0.2
IGT				*e*Sg	Sb	12 41 20.0	0.0
IGT	**Igoumenitsa**	0.37 239		P	Pg	12 41 13.3	-0.2
IGT				S	Sg	12 41 18.1	-0.5
IGT				AML	AML	12 41 20.9	
	comp=N,15331μm,0.4s						
IGT				AML	AML	12 41 22.0	
	comp=E,22889μm,0.6s						
LSK	**Leskovik**	0.44 346		P	Pg	12 41 14.5	-0.5
LSK				S	Sg	12 41 20.4	-0.5
	comp=E,10μm,0.5s						
KPRO	**Kipourio**	0.53 64		P	Pb	12 41 16.7	-0.6
KPRO				S	Sb	12 41 25.1	+0.2
	comp=E,6μm,0.6s						
PENT	**Pentalofos**	0.56 33		P	Pg	12 41 16.9	-0.3
PENT				S	Sg	12 41 25.6	+0.8
PENT	**Pentalofos**	0.56 33		P	Pg	12 41 17.0	-0.2
SRN	**Sarande**	0.59 286		P	Pg	12 41 16.8	-0.9
SRN				S	Sg	12 41 26.0	+0.4
	comp=E,4μm,0.6s						
KASA	**Kassiopi**	0.62 273		P	Pg	12 41 17.4	-0.9
KASA				S	Sg	12 41 26.0	-0.5
KASA				AML	AML	12 41 30.0	
	comp=E,10417μm,0.3s						
KASA				AML	AML	12 41 30.7	
	comp=N,9533μm,0.4s						
KEK	**Kerkira**	0.73 270		P	Pg	12 41 18.9	-1.3
KEK				S	Sg	12 41 29.8	0.0
KEK	**Kerkira**	0.73 270		P	Pg	12 41 18.9	-1.3
KEK				S	Sg	12 41 29.1	-0.7
KEK				AML	AML	12 41 34.8	
	comp=N,6095μm,0.4s						
KEK				AML	AML	12 41 39.5	
	comp=E,6200μm,0.7s						
NEST	**Nestorio**	0.73 19		P	Pg	12 41 19.9	-0.5
NEST	**Nestorio**	0.73 19		P	Pg	12 41 19.9	-0.5
NEST				S	Sg	12 41 30.0	0.0
NEST				AML	AML	12 41 33.4	
	comp=E,2897μm,0.4s						
NEST				AML	AML	12 41 37.2	
	comp=N,4086μm,0.6s						
TSLK	**Tsoukalades, L**	0.90 184		P	Pb	12 41 23.5	0.0
TSLK				S	Sn	12 41 36.6	-0.4
TSLK				AML	AML	12 41 43.5	
	comp=E,5933μm,0.5s						
TSLK				AML	AML	12 41 45.8	
	comp=N,6158μm,0.5s						
LKD2	**Lefkada island**	0.93 184		P	Pb	12 41 24.1	0.0
LKD2				S	Sn	12 41 38.7	+0.7
	comp=N,3μm,0.6s						
LKD2	**Lefkada island**	0.93 184		P	Pn	12 41 24.2	-0.6
LKD2				AML	AML	12 41 41.6	
	comp=E,4690μm,0.5s						
LKD2				AML	AML	12 41 42.1	
	comp=N,5604μm,0.4s						
KZN	**Kozani**	0.98 53		P	Pg	12 41 24.3	-0.8
KZN				S	Sb	12 41 38.0	+0.1
	comp=N,1μm,0.5s						
KZN	**Kozani**	0.98 53		P	Pg	12 41 24.5	-0.7
KZN				S	Sb	12 41 39.0	+1.1
KZN				AML	AML	12 41 44.3	
	comp=N,2017μm,0.5s						
KZN				AML	AML	12 41 44.7	
	comp=E,2455μm,0.4s						
NYDR	**Nydri-Lefkada**	1.01 182		P	Pn	12 41 25.3	-0.5
NYDR				S	Sn	12 41 41.1	+1.4
	comp=E,3μm,0.5s						
EVR	**Evrytania**	1.15 134		P	Pn	12 41 28.2	+0.3
EVR				S	Sn	12 41 44.2	+0.7
EVR				AML	AML	12 41 49.0	
	comp=E,1687μm,0.7s						
EVR				AML	AML	12 41 49.6	
	comp=N,2393μm,0.5s						
PVO	**Paravola**	1.26 151		P	Pg	12 41 31.2	+0.8
PVO				S	Sn	12 41 51.9	+5.9
	comp=N,1μm,0.6s						
FSK	**Fiskardo**	1.27 186		P	Pg	12 41 31.9	+1.4
FSK				S	Sn	12 41 48.1	+1.9
	comp=N,2μm,0.3s						
OHR	**Ohrid**	1.39 2		*e*Pg	Pn	12 41 32.5	+1.4
OHR				*e*Sg	Sg	12 41 53.1	+2.2
OHR	**Ohrid**	1.39 2		*i* Pn	Pg	12 41 33.3	+0.5
TIR	**Tirane**	1.76 338		⇓S	Sn	12 41 58.5	+0.2
TIR	**Tirane**	1.76 338		*e*Pn	Pb	12 41 38.8	+0.7
TIR				*e*Sn	Sb	12 42 02.4	+2.4
VAY	**Valandovo**	2.12 41		*e*Pn	Pn	12 41 41.0	-0.1
VAY				*e*Sn	Sb	12 42 09.7	-0.8
VAY	**Valandovo**	2.12 41		*i* Pn	Pn	12 41 42.1	+1.0
STIP	**Stip**	2.26 29		*i* Pn	Pb	12 41 45.5	-1.2
SKO	**Skopje**	2.31 13		*e*Pn	Pn	12 41 45.8	+2.0
SKO				*e*Sn	Sb	12 42 15.6	-0.4
SRS	**Serrai**	2.59 56		*e*Pn	Pn	12 41 46.8	-0.7
SRS	**Serrai**	2.59 56		*e*Pn	Pn	12 41 47.2	-0.3
SRS				*e*Sn	Sn	12 42 19.9	+1.1
KKB	**Krupnik**	2.79 39		P	Pn	12 41 50.3	0.0
PDG	**Podgorica**	2.93 338		⇓P	Pn	12 41 50.8	-1.5
MMB	**Musomiste**	2.94 50		P	Pn	12 41 55.6	+3.1
TIP	**Timpagrande**	3.13 261		⇓P	Pn	12 41 53.5	-1.6
TIP				⇑S	Sn	12 42 32.2	-0.1
BARS	**Barje**	3.20 14		*e*Pn	Pn	12 41 57.5	+1.6
MATE	**Matera**	3.23 288		⇓P	Pn	12 41 55.1	-1.3
VTS	**Vitosha**	3.45 32		⇓P	Pn	12 41 57.3	-2.3
VTS				⇑S	Sn	12 42 40.7	+0.4
VTS	**Vitosha**	3.45 32		P	Pn	12 42 02.6	+3.0
SELS	**Selova**	3.51 5		*e*Pn	Pn	12 42 02.0	+1.8
SJES	**Sjenica**	3.58 351		*e*Pn	Pn	12 42 03.2	+1.8
ZAPS	**Zavoj**	3.82 21		*e*Pn	Pn	12 42 06.3	+1.7
BOVS	**Bovan**	3.98 10		⇓P	Pn	12 42 05.4	-1.2
BOVS	**Bovan**	3.98 10		*e*Pn	Pn	12 42 07.4	+0.8
BOVS				*e*Sn	Sn	12 42 53.3	+0.2
BLKB	**Belogradchik**	4.16 20		⇓P	Pn	12 42 07.6	-1.6
GRUS	**Gruza**	4.16 360		*e*Pn	Pn	12 42 10.4	+1.2
ZAGS	**Zajecar**	4.24 15		*e*Pn	Pn	12 42 11.2	+1.0
ZAGS				*e*Sn	Sn	12 43 01.6	+2.1
BBLS	**Lazići**	4.26 347		*e*Pn	Pn	12 42 12.1	+1.5
DIVS	**Divibare**	4.41 353		*e*Pn	Pn	12 42 13.5	+0.8
DIVS				*e*Sn	Sn	12 43 04.9	+1.0
TRUS	**Trudelj**	4.51 357		*e*Pn	Pn	12 42 14.9	+1.0
APE	**Apeiranthos**	4.60 124		⇓P	Pn	12 42 13.1	-2.2
MDVR	**Moldovita**	5.11 8		⇓P	Pn	12 42 19.7	-2.5
HERR	**Herculane**	5.30 13		⇓P	Pn	12 42 22.1	-2.7
VAE	**Valguarnera**	5.44 248		P	Pn	12 42 30.8	+4.0
	comp=N,4.0nm,0.4s,baz=63,slow=9.0,SNR=1.5						
VAE				S	Sn	12 43 34.8	+5.6
	comp=N,9.1nm,0.4s,baz=17,slow=21,SNR=3.5						
FRGS	**Fruska Gora**	5.48 353		⇓P	Pn	12 42 25.1	-2.2
FRGS	**Fruska Gora**	5.48 353		*e*Pn	Pn	12 42 27.1	-0.2
IDI	**Anoyia**	5.52 142		⇑P	Pn	12 42 25.5	-2.5
IDI	**Anoyia**	5.52 142		P	Pn	12 42 27.6	-0.3
	comp=N,2.4nm,0.3s,baz=317,slow=16,SNR=8.9						
IDI				S	Sn	12 43 28.0	-3.2
	comp=N,4.3nm,0.3s,baz=45,slow=23,SNR=2.2						
BZS	**Buzias**	5.93 6		⇓P	Pn	12 42 30.6	-2.8
VOIR		6.54 28		⇑P	Pn	12 42 39.1	-2.8
MLR	**Muntele Rosu**	6.93 32		⇑P	Pn	12 42 45.0	-2.2
MLR	**Muntele Rosu**	6.93 32		P	Pn	12 42 50.8	+3.6
	comp=N,2.3nm,0.5s,baz=207,slow=9.0,SNR=3.8						
MLR				S	Sn	12 44 07.9	+2.0
	comp=N,1.4nm,0.5s,baz=144,slow=19,SNR=1.1						
VRI	**Vrincioaia**	7.55 34		⇑P	Pn	12 42 52.9	-2.9
MOA	**Molln**	9.37 332		*i* Pn	Pn	12 43 22.2	+1.5
	comp=N,0.9nm,0.3s						
KEST	**Kesra**	9.86 250		LR	LR	12 48 05.8	
	comp=N,33nm,20.9s,baz=288,slow=42						
BRTR	**Keskin Array B**	9.94 86		P	Pn	12 43 29.4	+0.8
	comp=N,0.3nm,0.4s,baz=258,slow=11,SNR=2.0						
GERES	**GERESS Array B**	10.42 333		P	Pn	12 43 38.4	+3.3
	comp=N,0.2nm,0.3s,baz=153,slow=12,SNR=2.5						
DAVOX	**Davos/Dischmat**	10.60 315		P	Pn	12 43 40.4	+2.7
	comp=N,0.9nm,0.5s,baz=123,slow=14,SNR=2.4						
ESDC	**Sonseca Array**	19.00 278		P	P	12 45 28.1	+0.7
	comp=N,0.2nm,0.7s,baz=72,slow=12,SNR=1.8						
HFS	**Hagfors**	20.91 350		P	P	12 45 48.5	+0.6
	comp=N,2.2nm,0.7s,baz=163,slow=10,SNR=1.8						
	comp=N,2.2nm,0.7s						
FINES	**FINESS Array B**	22.00 7		P	P	12 45 58.4	-1.1
	comp=N,1.6nm,0.7s,baz=192,slow=13,SNR=1.8						
	comp=N,1.6nm,0.7s						
NB2	**NORSAR Subarra**	22.14 348		P	P	12 46 02.3	+1.1
	comp=Z,13nm,1.4s,baz=160,slow=11						
NOA	**NORSAR Array B**	22.14 348		P	P	12 46 00.7	-0.6
	comp=Z,0.3nm,0.6s,baz=166,slow=11,SNR=3.0						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	29.98 3		P	P	12 47 11.5	-2.3
	comp=Z,3.5nm,1.0s,baz=184,slow=11,SNR=1.4						
	comp=Z,3.5nm,1.0s						
TORD	**Torodi Ar. Bea**	31.34 218		P	P	12 47 25.4	-0.9
	comp=Z,0.6nm,0.7s,baz=33,slow=9.2,SNR=4.4						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	44.36 60		P	P	12 49 14.8	-1.0
	comp=Z,1.0nm,0.4s,baz=278,slow=7.3,SNR=18						
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	78.22 51		LR	LR	13 33 05.0	
	comp=Z,4.4nm,19.2s,baz=250,slow=40						

*BJI **16** 12:43:40.4±0.0, 42°.17N×143°.26E, h79^{km}, mb4.5/18, mB4.9/7, Ms4.0/1, Ms7 3.8/1*
*MOS **16** 12:43:40.9±1.0, 42°.27N×143°.16E, h69^{km}, mb4.6/18, Error ellipse: s-maj=8.4km s-min=5.2km az=90.9*
*IDC **16** 12:43:41.9±1.9, 42°.39N×143°.08E, h56^{km}±17^{km}, mb3.9/31, mbtmp4.2/38, ML2.8/5, MS3.2/12, Error ellipse: s-maj=13.5km s-min=11.3km az=118.0*
*SKHL **16** 12:43:42.2±0.5, 42°.30N×143°.20E, h69^{km}±2^{km}, mb5.1/4*
*NEIC **16** 12:43:42.9±1.4, 42°.25N±0°.06×143°.1E±0°.1, h65^{km}±8^{km}, mb4.5/6, Mwr4.1/11, Error ellipse: s-maj=14.6km s-min=8.9km az=83.0*
*NEIC **16** 12:43:42.9, 42°.25N×143°.14E, h55^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.24; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-0.59; $M_{r\theta}$-0.42; $M_{\theta\phi}$-1.29; $M_{\phi r}$0.91; Fault plane solution: $M_0$1.96000×10^{15} NP1:ϕ_s256.23000°, δ49.30000°, λ140.05000°. NP2:ϕ_s14.87000°, δ60.87000°, λ48.29000°. Principal axes: T 1.9625, Plg54.0000°, Azm232.0000°; N -0.0129, Plg36.0000°, Azm38.0000°; P -1.9497, Plg7.0000°, Azm133.0000°;*
*NIED **16** 12:43:42.8, 42°.36N×143°.11E, h50^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.39; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-0.74; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.72; $M_{\phi r}$1.15; Fault plane solution: $M_0$1.83000×10^{15} NP1: ϕ_s239.00000°, δ29.00000°, λ120.00000°. NP2: ϕ_s25.00000°, δ65.00000°, λ75.00000°.*
*JMA **16** 12:43:42.8±0.1, 42°.4N±0°.4×143°.1E±0°.5, h50^{km}±1^{km}, MD4.2/40, MV4.2/40, HIDAKA MOUNTAINS REGION*
JMA Felt II J1 at HIDAKA MOUNTAINS REGION .

ISC 16 12:43:42.2±0.6, 42°.31N±0°.04×143°.17E±0°.04, h62^{km}±5^{km}, n182, σ1^{s}14/174, mb4.3/53, 11C-19D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTHR	**Tokachihiroo**	0.10 100		*i* P	Pn	12 43 50.9	-0.6
JTHR	**Tokachihiroo**	0.10 100		A	A	12 43 50.9	
	comp=E,14nm,0.3s,comp=E,28nm,0.4s						
ERM	**Erimo**	0.29 182		Pn	Pn	12 43 52.6	+0.1
ERM	**Erimo**	0.29 182		*c iP*N	Pn	12 43 52.5	0.0
JEM	**Erimo**	0.29 182		*i* P	Pn	12 43 52.6	+0.1
JEM	**Erimo**	0.29 182		A	A	12 43 52.6	
	comp=E,29nm,0.9s,comp=E,16nm,1.9s						
JNBK	**Urakawa-nobuka**	0.31 265		⇓*i*P	Pn	12 43 51.7	-0.9
JNBK				⇓*e*S	Sn	12 43 58.9	-1.3
JNBK	**Urakawa-nobuka**	0.31 265		A	A	12 43 51.7	
	comp=E,65nm,0.4s,comp=E,131nm,0.4s						
JCH	**Churui**	0.34 25		*i* P	Pn	12 43 51.9	-1.0
JCH				*e*S	Sn	12 43 59.2	-1.4
JCH	**Churui**	0.34 25		A	A	12 43 51.9	
	comp=E,10.0nm,0.9s,comp=E,16nm,1.7s						
JSHD	**Hidakashinhida**	0.53 281		⇓*i*P	Pn	12 43 54.1	-0.6
JSHD	**Hidakashinhida**	0.53 281		A	A	12 43 54.1	
	comp=E,48nm,0.9s,comp=E,33nm,1.5s						
JBT2	**Biratori 2**	0.76 308		⇓*i*P	Pn	12 43 56.7	-0.7
JBT2	**Biratori 2**	0.76 308		A	A	12 43 56.7	
	comp=E,9.0nm,1.0s,comp=E,10.0nm,2.3s						
JOB	**Onbets**	0.77 39		P	Pn	12 43 58.0	+0.6
JOB	**Onbets**	0.77 39		A	A	12 43 58.0	
	comp=E,27nm,0.7s,comp=E,21nm,1.3s						
JFR	**Furan**	0.96 334		⇓P	Pn	12 43 58.0	-1.8
JIAM	**Iburiatsuma**	0.98 289		⇓P	Pn	12 44 00.8	+0.7
JIAM	**Iburiatsuma**	0.98 289		A	A	12 44 00.8	
	comp=E,25nm,0.7s,comp=E,23nm,0.9s						
JAR	**Ashorobuto**	1.08 24		P	Pn	12 44 01.1	-0.3
JAR				*e*S	Sn	12 44 14.7	-1.0
JAR	**Ashorobuto**	1.08 24		A	A	12 44 01.1	
	comp=E,11nm,0.7s,comp=E,8.0nm,0.7s						
JAK	**Akkeshi**	1.32 58		⇓P	Pn	12 44 04.5	0.0
JAK				⇓*e*S	Sn	12 44 22.0	+0.8
JAK	**Akkeshi**	1.32 58		A	A	12 44 04.5	
	comp=E,11nm,0.9s,comp=E,12nm,0.9s						
JEW	**Eniwo**	1.38 293		Pn	Pn	12 44 05.3	0.0
JEW	**Eniwo**	1.38 293		⇓P	Pn	12 44 05.4	0.0
JEW	**Eniwo**	1.38 293		A	A	12 44 05.4	
	comp=E,10.0nm,2.0s,comp=E,6.0nm,1.1s						
JAB	**Ashibetsu**	1.39 330		⇓P	Pn	12 44 05.5	+0.1
AKK	**Akkeshi**	1.42 59		*e*P	Pn	12 44 05.9	0.0
AKK				*e*S	Sn	12 44 24.2	+0.5
JISS	**Ishikarishitsu**	1.61 307		A	A	12 44 08.5	
	comp=E,8.0nm,0.5s,comp=E,10.0nm,1.7s						
JKB	**Kayabe**	1.65 256		A	A	12 44 09.5	
	comp=E,8.0nm,0.9s,comp=E,5.0nm,1.7s						
JAHD	**Aomorihigashid**	1.72 233		A	A	12 44 11.0	
	comp=E,13nm,0.9s,comp=E,16nm,1.2s						
JHR	**Hokuryu**	1.79 324		A	A	12 44 10.9	
	comp=E,7.0nm,2.8s,comp=E,4.0nm,1.8s						
JNSB	**Nemuroshibetsu**	1.99 42		A	A	12 44 14.7	
	comp=E,5.0nm,0.8s,comp=E,6.0nm,0.6s						
NMR	**Nemuro--Hokkai**	2.16 60		*e*PN	Pn	12 44 15.0	-0.8
NMR				*e*S	Sn	12 44 39.2	-2.2
NMR	**Nemuro--Hokkai**	2.16 60		*e*P	Pn	12 44 15.0	-0.8
NMR				AMB	AMB	12 44 17.6	
	100nm,0.2s						
NMR				*e*S	Sn	12 44 39.3	-2.2
NMR				A	A	12 44 47.8	
	610nm,0.4s						
NMR				A	A	12 44 47.8	
	990nm,0.4s						
JTM	**Tenmabayashi**	2.19 227		Pn	Pn	12 44 16.4	+0.1
RUSJ	**Misakicho**	2.35 39		⇑*i*PN	Pn	12 44 19.8	+1.3
RUSJ				*e*S	Sn	12 44 48.0	+1.8
JSI2	**Shiura 2**	2.42 240		A	A	12 44 20.7	
	comp=E,3.0nm,0.9s,comp=E,3.0nm,1.2s						
YUK	**Yuzh-Kuril'sk**	2.62 48		*e*PN	Pn	12 44 22.9	+0.8
YUK				*e*S	Sn	12 44 53.1	+0.4
YUK				pmax	pmax		
	comp=Z,940nm,0.3s						
YUK				pmax	pmax		
	comp=E,187nm,0.2s						
YUK				pmax	pmax		
	comp=N,344nm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	2.62 48		*e*P	Pn	12 44 22.9	+0.8
YUK				AMB	AMB	12 44 25.1	
	comp=N,850nm,0.4s						
YUK				*e*S	Sn	12 44 53.2	+0.5
YUK				A	A	12 45 00.0	
	comp=N,2μm,0.6s						
YUK				A	A

comp=Z,10.0nm,0.8s
TYV smax smax
comp=E,11nm,1.4s
TYV smax smax
comp=N,100nm,4.0s
TYV smax smax
comp=E,200nm,4.0s
TYV Tymovskoe 8.57 358 *e*P **Pn 12 45 45.5 +2.1**
TYV AMB AMB 12 45 46.0
comp=E,100nm,3.0s
TYV AMB AMB 12 45 46.6
comp=E,10.0nm,0.8s
TYV *e*S **Sn 12 47 18.0 -0.4**
TYV A A 12 47 25.1
comp=E,10.0nm,1.0s
TYV A A 12 47 30.9
comp=E,100nm,4.0s
TYV A A 12 47 30.9
comp=E,200nm,4.0s
JHJ Hachijo jima 2 9.56 197 P **Pn 12 45 56.3 -0.8**
comp=E,136nm,0.8s,baz=343,slow=8.5,SNR=1.9
JHJ S Sn 12 47 32.9 -10
comp=E,120nm,0.7s,baz=32,slow=19,SNR=1.8
GRNR Gornyy 9.65 334⇓*i*PN **Pn 12 46 01.1 +2.8**
GRNR pmax pmax
comp=N,10.0nm,0.7s
GRNR pmax pmax
comp=E,10.0nm,0.7s
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR MLR MLR
comp=E,70nm,13.0s
GRNR MLR MLR
comp=N,60nm,16.0s
GRNR Gornyy 9.65 334 *e*P **Pn 12 46 01.1 +2.8**
GRNR AMB AMB 12 46 01.8
comp=N,10.0nm,0.6s
KLR Kul'dur 10.56 315 P **Pn 12 46 10.3 -0.3**
baz=118,slow=14,SNR=5.0
KLR LR LR 12 50 17.7
comp=N,86nm,19.9s,baz=152,slow=38
comp=N,2.6nm,0.8s
KLR Kul'dur 10.56 315⇓*e*PN **Pn 12 46 13.2 +2.6**
KLR pmax pmax
comp=Z,8.0nm,1.4s
KLR Kul'dur 10.56 315 *e*P **Pn 12 46 11.7 +1.1**
JHS Saijyo 10.72 230 Pn **Pn 12 46 15.0 +2.0**
BNX BinXian 11.86 292⇑P **Pn 12 46 30.0 +1.6**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,130nm,6.2s
KSRS Korea Array 12.67 253 P **Pn 12 46 40.2 +0.6**
comp=Z,0.1nm,0.3s,baz=68,slow=12,SNR=8.3
KSRS LR LR 12 51 02.1
comp=Z,61nm,21.8s,baz=60,slow=35
comp=Z,3.6nm,0.9s
CN2 Changchun 13.05 283 *e*P **Pn 12 46 44.9 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
TJN Taejon 13.59 249*c i*P **Pn 12 46 52.5 +0.6**
PETK Petropavlovsk- 14.54 37 P **Pn 12 47 03.3 -1.2**
comp=Z,0.2nm,0.3s,baz=219,slow=9.7,SNR=8.5
comp=Z,0.8nm,0.4s
ZEA Zeya 15.59 323 *e*P **P 12 47 19.8 -1.2**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA Zeya 15.59 323 *e*P **Pn 12 47 15.6 -2.3**
ZEA AMB AMB 12 47 21.4
comp=Z,30nm,0.7s
MA2 Magadan 17.92 13 P **P 12 47 45.6 -1.1**
comp=Z,5.9nm,0.7s,baz=192,slow=10.0,SNR=4.5
MA2 LR LR 12 54 58.6
comp=Z,23nm,18.4s,baz=193,slow=38
YAK Yakutsk 21.33 342 P **P 12 48 22.0 -1.7**
comp=Z,3.2nm,0.4s,baz=159,slow=3.7,SNR=2.4
comp=Z,3.2nm,0.4s
YAK Yakutsk 21.33 342⇓*e*P **P 12 48 22.4 -1.3**
YAK pmax pmax
comp=Z,9.0nm,0.8s
SEY Seymchan 21.36 12 P **P 12 48 21.6 -2.4**
comp=Z,3.5nm,0.6s,baz=180,slow=7.1,SNR=12
comp=Z,3.5nm,0.6s
SEY Seymchan 21.36 12⇓*e*P **P 12 48 21.9 -2.1**
SEY pmax pmax
comp=Z,4.0nm,0.7s
NJ2 Nanjing 21.85 250 *e*P **P 12 48 29.4 -0.1**
NJ2 pmax pmax
comp=Z,13nm,0.5s
SHEM Shemya Is, Ala 23.17 53 LR LR 12 58 14.2
comp=Z,16nm,19.9s,baz=112,slow=38
ULN Ulaanbaatar 25.93 295⇓*e*P **P 12 49 08.6 -0.1**
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 25.93 295 *e*P **P 12 49 08.6 -0.1**
SONM Songino Array 26.38 295 P **P 12 49 12.5 -0.2**
comp=Z,3.3nm,0.7s,baz=75,slow=8.6,SNR=21
SONM LR LR 13 00 09.2
comp=Z,54nm,18.3s,baz=94,slow=38
comp=Z,3.3nm,0.7s
SONM Songino Array 26.38 295 P **P 12 49 12.5 -0.2**
SONM Songino Array 26.38 295 P **P 12 49 12.5 -0.2**
SONM pmax pmax
comp=Z,4.0nm,0.9s
BILL Bilibino 28.59 18 *e*P **P 12 49 32.3 +0.2**
BILL pmax pmax
comp=Z,3.0nm,1.1s
H11N2 WAKE ISLAND Hy 30.14 131 T T 13 21 16.3
baz=324,slow=75,SNR=428
H11N1 WAKE ISLAND Hy 30.15 131 T T 13 21 18.3
baz=324,slow=75,SNR=430
H11N3 WAKE ISLAND Hy 30.16 131 T T 13 21 17.6
baz=324,slow=75,SNR=380
H11S1 WAKE ISLAND Hy 31.02 133 T T 13 22 25.6
baz=325,slow=76,SNR=361
H11S3 WAKE ISLAND Hy 31.02 133 T T 13 22 21.4
baz=325,slow=76,SNR=480
H11S2 WAKE ISLAND Hy 31.04 133 T T 13 22 24.3
baz=325,slow=76,SNR=285
GTA Gaotai 32.66 280⇑P **P 12 50 08.3 -0.1**
GTA pmax pmax
comp=Z,5.0nm,0.9s
DGZ Jazzator, Alta 38.63 301*d i*P **P 12 51 00.5 +1.0**
DGZ pmax pmax
comp=Z,10.0nm,1.0s
NRIK Noril'sk 39.14 332 P **P 12 51 02.8 -0.5**
comp=Z,1.3nm,0.3s,baz=82,slow=7.1,SNR=2.3
comp=Z,1.3nm,0.3s
ZAA0 Zalesovo Array 39.56 308 P **P 12 51 06.7 -0.2**
ZAA0 IAmb IAmb 12 51 07.8
comp=Z,7.1nm,0.8s
ZALV Zalesovo Beam 39.56 308 P **P 12 51 06.4 -0.5**
comp=Z,8.6nm,0.8s,baz=87,slow=7.6,SNR=35
ZALV PcP **PcP 12 53 13.7 +0.6**
comp=Z,2.1nm,0.6s,baz=80,slow=3.3,SNR=7.9
comp=Z,8.6nm,0.8s
ZALV Zalesovo Beam 39.56 308 P **P 12 51 07.1 +0.2**
ZALV Zalesovo Beam 39.56 308 P **P 12 51 07.1 +0.2**
IMAR Indian Mountai 41.47 33 P **P 12 51 23.7 +1.2**
KDAK Kodiak Island 42.36 46 P **P 12 51 30.4 +0.5**
comp=Z,6.8nm,1.1s,baz=196,slow=7.4,SNR=1.6
comp=Z,6.8nm,1.1s
MK31 Makanchi Array 42.67 298 P **P 12 51 32.6 0.0**
MK31 IAmb IAmb 12 51 33.2
comp=Z,4.6nm,0.7s
MK31 Makanchi Array 42.67 298*c i*P **P 12 51 31.9 -0.7**
MKAR Makanchi Array 42.67 298 P **P 12 51 32.4 -0.2**
comp=Z,5.4nm,0.8s,baz=82,slow=9.5,SNR=29
MKAR PcP **PcP 12 53 23.2 -0.3**
comp=Z,1.2nm,0.8s,baz=65,slow=1.8,SNR=4.0
comp=Z,5.4nm,0.8s
MKAR Makanchi Array 42.67 298 P **P 12 51 32.6 0.0**
MKAR Makanchi Array 42.67 298 P **P 12 51 32.6 0.0**
MAKZ Makanchi 42.87 298 P **P 12 51 33.4 -0.9**
MAKZ IAmb IAmb 12 51 34.9
comp=Z,5.0nm,0.8s
MAKZ Makanchi 42.87 298 P **P 12 51 33.4 -0.9**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
KURK Kurchatov 43.92 304 P **P 12 51 42.5 -0.1**
KURK IAmb IAmb 12 51 43.5
comp=Z,13nm,0.8s
KURK Kurchatov 43.92 304 P **P 12 51 42.8 +0.2**
KURK 12 53 27.6
KURK Kurchatov 43.92 304 *e*P **P 12 51 42.8 +0.2**

COLA College 43.94 35⇑*e*P **P 12 51 44.1 +1.6**
COLA pmax pmax
comp=Z,4.0nm,0.8s
KNK Knik Glacier 43.99 40 P **P 12 51 43.2 +0.2**
KURBB Kurchatov Arra 44.00 304 P **P 12 51 42.8 -0.4**
comp=Z,11nm,0.7s,baz=76,slow=8.8,SNR=76
KURBB PcP **PcP 12 53 27.6 -0.2**
comp=Z,0.9nm,0.7s,baz=85,slow=4.2,SNR=4.2
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 44.31 251 P **P 12 51 46.4 +0.3**
comp=Z,1.0nm,0.6s,baz=42,slow=7.1,SNR=9.4
CMAR LR LR 13 11 30.9
comp=Z,21nm,18.5s,baz=180,slow=38
comp=Z,1.0nm,0.6s
ILAR Eielson Array 44.36 35 P **P 12 51 46.5 +0.5**
comp=Z,1.9nm,1.0s,baz=256,slow=5.6,SNR=12
comp=Z,1.9nm,1.0s
JIRN Jiri 48.07 271 *e*P **P 12 52 15.9 -0.1**
comp=Z,3.5nm,0.3s
BVAR Borovoye Array 48.16 309 LR LR 13 14 02.6
comp=Z,30nm,18.9s,baz=28,slow=38
RAMN Ramite 48.16 270 *e*P **P 12 52 16.4 -0.1**
comp=Z,19nm,0.7s
GUN Gumba 48.16 272 *e*P **P 12 52 16.8 +0.1**
comp=Z,22nm,0.4s
BRVK Borovoye 48.21 309⇓*e*P **P 12 52 15.8 -0.5**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 48.21 309 *e*P **P 12 52 15.8 -0.5**
PKI Pulchoki 48.70 272 *e*P **P 12 52 20.6 -0.2**
comp=Z,3.5nm,0.4s
INK Inuvik 49.10 29 P **P 12 52 23.3 +0.5**
comp=Z,1.2nm,0.7s,baz=275,slow=8.2,SNR=6.8
comp=Z,1.2nm,0.7s
AAK Ala-Archa 49.34 295 LR LR 13 15 16.5
comp=Z,40nm,18.6s,baz=78,slow=38
DANN Daqsing 49.50 274 *e*P **P 12 52 27.1 +0.3**
comp=Z,51nm,0.7s
KOLN Koldanda 49.93 273 *e*P **P 12 52 29.4 -0.6**
PYUN Piuthan 50.20 274 *e*P **P 12 52 32.0 -0.1**
comp=Z,17nm,0.8s
SVE Sverdlovsk 52.18 316 *e*P **P 12 52 46.5 +0.3**
SVE pmax pmax
comp=Z,15nm,0.7s
ARU Arti 53.39 316 P **P 12 52 54.7 -0.5**
comp=Z,6.3nm,0.6s,baz=59,slow=5.2,SNR=9.9
ARU LR LR 13 18 39.8
comp=Z,33nm,18.0s,baz=56,slow=39
comp=Z,6.3nm,0.6s
ARU Arti 53.39 316*c i*P **P 12 52 54.2 -1.0**
ARU *PP **pP 12 53 12.8 +1.1**
ARU 12 54 53.4
ARU S **S 13 00 23.7 +1.3**
ARU pmax pmax
comp=Z,8.0nm,0.7s
HNR Honiara 53.73 159 LR LR 13 12 55.6
comp=Z,215nm,21.0s,baz=172,slow=33
AKTO Aktyubinsk 56.25 310 P **P 12 53 15.4 -0.5**
comp=Z,3.1nm,0.8s,baz=65,slow=13,SNR=8.7
AKTO LR LR 13 19 11.5
comp=Z,23nm,19.0s,baz=21,slow=38
comp=Z,3.1nm,0.8s
KIRV Kirov 56.92 321 P **P 12 53 20.1 -0.4**
comp=Z,8.3nm,0.7s,baz=89,slow=11,SNR=2.0
comp=Z,8.3nm,0.7s
KIRV Kirov 56.92 321*de*P **P 12 53 19.5 -1.0**
RES Resolute Bay 57.16 16 P **P 12 53 21.1 -0.9**
RES pmax pmax
comp=Z,9.0nm,2.1s
ARCES ARCESS Array B 59.56 339 P **P 12 53 39.1 +0.3**
comp=Z,3.4nm,0.9s,baz=35,slow=9.9,SNR=3.7
comp=Z,3.4nm,0.9s
WRA Warramunga Arr 62.47 189 P **P 12 53 59.0 -0.1**
comp=Z,1.0nm,0.7s,baz=6.7,slow=6.8,SNR=12
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 62.47 189 P **P 12 53 59.0 -0.1**
GEYT Alibeck 62.54 297 P **P 12 53 59.1 -0.4**
comp=Z,3.4nm,0.6s,baz=35,slow=5.3,SNR=8.2
comp=Z,3.4nm,0.6s
OBN Obninsk 64.72 322 *e*P **P 12 54 12.8 -0.7**
OBN *e* 12 54 47.2
OBN *e* 12 56 37.6
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN Obninsk 64.72 322 *e*P **P 12 54 12.8 -0.7**
FINES FINESS Array B 64.80 332 P **P 12 54 13.0 -0.9**
comp=Z,2.7nm,0.5s,baz=56,slow=6.3,SNR=37
comp=Z,2.7nm,0.5s
ASAR Alice Springs 66.20 189 P **P 12 54 24.1 +0.8**
comp=Z,0.6nm,0.8s,baz=8.0,slow=4.7,SNR=6.3
comp=Z,0.6nm,0.8s
VSU Vasula 66.61 329⇑*e*P **P 12 54 25.7 +0.1**
KIV Kislovodsk 68.51 310 *e*P **P 12 54 39.0 +1.0**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,18nm,17.0s
KIV Kislovodsk 68.51 310 *e*P **P 12 54 39.0 +1.0**
KBZ Khabaz 68.53 310 P **P 12 54 37.8 -0.2**
comp=Z,3.1nm,0.7s,baz=69,slow=7.1,SNR=6.8
comp=Z,3.1nm,0.7s
KBZ Khabaz 68.53 310*de*P **P 12 54 38.6 +0.6**
KBZ pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 68.53 310 *e*P **P 12 54 38.6 +0.6**
HFS Hagfors 69.85 336 P **P 12 54 45.0 -0.9**
comp=Z,2.2nm,0.5s,baz=21,slow=8.4,SNR=16
HFS LR LR 13 27 24.4
comp=Z,23nm,20.9s,baz=1.5,slow=38
comp=Z,2.2nm,0.5s
HFS Hagfors 69.85 336 P **P 12 54 45.0 -0.9**
NB2 NORSAR Subarra 69.85 337 P **P 12 54 45.1 -0.9**
comp=Z,0.4nm,0.5s,baz=34,slow=6.5
NOA NORSAR Array B 69.85 337 P **P 12 54 45.0 -0.9**
comp=Z,0.8nm,0.6s,baz=38,slow=6.2,SNR=5.4
comp=Z,0.8nm,0.6s
NVAR Mina Array Bea 70.81 55 P **P 12 54 53.5 +1.1**
comp=Z,0.6nm,0.7s,baz=293,slow=6.3,SNR=4.8
comp=Z,0.6nm,0.7s
AKASG Malin Array Be 70.97 322 P **P 12 54 52.4 -0.4**
comp=Z,1.1nm,0.5s,baz=38,slow=6.0,SNR=7.9
comp=Z,1.1nm,0.5s
AKBB Malin Array Si 70.97 322⇑*e*P **P 12 54 52.0 -0.8**
AKBB pmax pmax
comp=Z,12nm,2.3s
PDAR Pinedale Array 73.05 47 P **P 12 55 06.0 +0.2**
comp=Z,0.3nm,0.5s,baz=320,slow=2.7,SNR=2.3
comp=Z,0.3nm,0.5s
ULM Lac du Bonnet 74.38 35 P **P 12 55 13.8 +0.7**
comp=Z,1.8nm,0.5s,baz=28,slow=11,SNR=2.1
comp=Z,1.8nm,0.5s
OJC Ojcow 75.41 326 P **P 12 55 17.1 -2.0**
OJC pmax pmax
comp=Z,6.0nm,0.8s
KSP Ksiaz 76.33 329 P **P 12 55 24.2 -0.1**
KSP pmax pmax
comp=Z,5.0nm,1.6s
BRTR Keskin Array B 76.37 312 P **P 12 55 25.1 +0.1**
comp=Z,1.1nm,0.7s,baz=76,slow=3.0,SNR=5.1
comp=Z,1.1nm,0.7s
MORC Moravsky Berou 76.68 327 P **P 12 55 26.2 -0.1**
MORC pmax pmax
comp=Z,3.0nm,1.0s
DPC Dobruska-Polom 76.71 328 P **P 12 55 27.0 +0.5**
DPC pmax pmax
comp=Z,4.0nm,2.0s
VYHS Vyhne 77.15 326 *e*P **P 12 55 27.8 -1.2**
CLL Collm 77.19 331 *e*P **P 12 55 25.0 -4.1**
CLL Collm 77.19 331 *i* P **P 12 55 29.0 -0.1**
comp=Z,4.0nm,0.8s
CLL *ex* x 12 55 34.0
KRUC Moravsky 77.70 327 P **P 12 55 32.2 +0.2**
KRUC pmax pmax
comp=Z,4.0nm,2.3s
EKA Eskdalemuir Ar 78.60 341 P **P 12 55 37.0 +0.1**
comp=Z,1.0nm,0.7s,baz=81,slow=11,SNR=1.5
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 78.60 341 P **P 12 55 37.0 +0.1**
CKRC Cesky Krumlov 78.72 328 *e*P **P 12 55 38.0 +0.3**
KHC Kasperske Hory 78.75 329 *e*P **P 12 55 38.4 +0.5**
KHC Kasperske Hory 78.75 329 *e*P **P 12 55 38.4 +0.5**
GERES GERESS Array B 78.93 329 P **P 12 55 38.6 -0.3**
comp=Z,0.4nm,0.5s,baz=46,slow=5.8,SNR=5.5
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 85.86 54 P **P 12 56 16.7 +1.2**
comp=Z,0.9nm,0.6s,baz=296,slow=3.8,SNR=16
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 93.12 335 P **P 12 56 49.1 -0.3**
comp=Z,0.6nm,0.9s,baz=17,slow=5.4,SNR=2.7
comp=Z,0.6nm,0.9s
TROLL Troll, Antarti 144.65 200 PKPdf **PKPdf 13 03 10.2 -0.4**
H03N2 Juan Fernandez 145.90 89 T T 15 46 12.8
baz=300,slow=77,SNR=80
H03N3 Juan Fernandez 145.91 89 T T 15 46 13.8
baz=300,slow=77,SNR=104
H03N1 Juan Fernandez 145.91 89 T T 15 46 14.1
baz=300,slow=77,SNR=59
SNAA Sanae 146.18 199 PKPdf **PKPab 13 03 14.5 -0.6**
SIV San Ignacio 146.53 46 PKPbc **PKPab 13 03 17.1 -0.8**
baz=292,slow=5.2

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*KRNET **16** 12:48:01.4±0.1,39°.34N×72°.14E,h24km,mb2.5*
ISC 16 12:48:02.6±1.7,39°.43N±0°.08×72°.09E±0°.07,h33km,n5,
σ1°72/10,6C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.23**	**283**	⇑*e*P		**Pb**		**12 48 08.5**	**-1.4**
DRK	baz=99			⇑*i*S		**Sn**		**12 48 13.0**	**-0.4**
BTK	**Batken**	**1.17**	**303**	⇓*i*P		**Pb**		**12 48 24.6**	**+0.3**
BTK	baz=5.0			⇓*i*S		**Sb**		**12 48 41.3**	**+2.1**
OHH	**Osh**	**1.22**	**26**	⇑*i*P		**Pn**		**12 48 24.8**	**+1.3**
OHH	baz=22			⇑*i*S		**Sb**		**12 48 42.0**	**+1.3**
GAR	**Garm**	**1.44**	**253**	⇓*i*P		**Pb**		**12 48 28.2**	**-0.8**
GAR	baz=57			⇓*e*S		**Sb**		**12 48 46.9**	**-0.2**
KK31	**Karatay Array**	**3.86**	**343**	⇑Pn		**Pb**		**12 49 06.9**	**-3.1**
KK31	0.1nm,0.3s,baz=177,slow=12,SNR=4.8			⇑Sn		**Sb**		**12 49 56.5**	**+0.2**
KK31	0.7nm,0.4s,baz=172,slow=22			⇓Lg		Lg		12 50 10.0	
KK31	0.7nm,0.4s,baz=170,slow=28,SNR=3.9								

IDC 16 12:53:49.7±3.4,32°.73S×178°.58W,h0km,mb3.4/2,
mbtmp3.5/3,ML3.1/1,Error ellipse: s-maj=75.8km
s-min=49.7km az=117.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.54**	**211**		Pn		Pn	12 55 26.6	-0.6
URZ	0.4nm,0.3s,baz=28,slow=15,SNR=1.8				Sn		Sn	12 56 31.0	-11
ASAR	**Alice Springs**	**42.55**	**270**		P		P	13 01 47.5	+0.1
	0.7nm,0.3s,baz=72,slow=20,SNR=2.0								
	0.2nm,0.5s,baz=112,slow=7.7,SNR=6.2								
	9.9nm,1.0s								
WRA	**Warramunga Arr**	**43.75**	**275**		P		P	13 01 57.0	-0.2
	0.2nm,0.5s								
	0.3nm,0.4s,baz=114,slow=7.9,SNR=12								
FINES	**FINESS Array B**	**147.14**	**338**		PKPbc		PKPbc	13 13 33.2	-0.8
	0.3nm,0.4s								
	0.8nm,0.7s,baz=33,slow=3.3,SNR=1.4								

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*ARE **16** 13:04:22±2.1,7°.10S±0°.06×80°.42W±0°.07,h26km±4km,*
Error ellipse: s-maj=11.0km s-min=6.3km az=54.0
*NEIC **16** 13:04:26.7±1.6,7°.01S±0°.06×80°.13W±0°.09,h41km±5km,*
mb5.0/184,ML5.4(ARE),Error ellipse: s-maj=12.9km
s-min=7.9km az=68.0
*IDC **16** 13:04:28.2±2.3,6°.96S×80°.17W,h56km±21km,mb4.3/25,*
mbtmp4.6/29,ML4.0/4,MS4.0/55,Error ellipse:
s-maj=18.2km s-min=11.0km az=57.0
*GCMT **16** 13:04:28.7±0.3,6°.89S±0°.02×80°.49W±0°.03,h46km±1km,*
MW4.9/64,Moment Tensor Solution. s44,c49; s64,c81;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.76±.16;
$M_{\theta\theta}$-0.13±.10; $M_{\phi\phi}$-2.63±.10; $M_{r\theta}$0.41±.08; $M_{r\phi}$0.65±.10;
$M_{\theta\phi}$~1.72±.11; Best double couple: $M_0$3.29000×10^{16}
NP1:ϕ_s166.00000°,δ61.00000°,λ90.00000°. NP2:
ϕ_s346.00000°,δ29.00000°,λ90.00000°. Principal axes: T
3.2760, Plg74.0000°, Azm77.0000°; N 0.0230, Plg0.0000°,
Azm346.0000°; P -3.3030, Plg16.0000°, Azm256.0000°;
nsta1 refers to body waves, cutoff=40s. nsta2 refers to
surface waves, cutoff=50s. Triangular moment-rate
function
*BJI **16** 13:04:29.0±0.0,7°.00S×80°.10W,h52km,mB5.1/4,Ms5.3/1,*
Ms7 4.8/1
ISC 16 13:04:26.2±0.5,7°.01S±0°.05×80°.21W±0°.06,h40km±3km,
h40km:pP-P,n627,σ0°88/604,mb5.0/112,MS4.1/54,1C-1D,
Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**1.81**	**94**		P		**Pn**	**13 04 57.8**	**+2.6**
	801nm,0.4s,baz=285,slow=19,SNR=446								
ATAH					S		**Sn**	**13 05 21.4**	**+4.3**
	5μm,0.7s,baz=158,slow=17,SNR=14								
ATAH					LR		LR	13 05 52.7	
	comp=Z,10μm,18.7s,baz=252,slow=48								
ARNL	**Arenillas**	**3.44**	**2**				**Pn**	**13 05 17.8**	**+0.4**
BOSC	**San Juan Bosco**	**4.20**	**24**				**Pn**	**13 05 29.0**	**+1.1**
COHC	**Cochancay**	**4.61**	**12**				**Pn**	**13 05 34.9**	**+1.5**
NNA	**Nana**	**5.96**	**146**		P		**Pn**	**13 05 52.8**	**+0.8**
	18nm,0.3s,baz=299,slow=11,SNR=18								
NNA					S		**Sn**	**13 06 56.8**	**-2.3**
	144nm,0.5s,baz=215,slow=22,SNR=1.7								
NNA					LR		LR	13 08 53.6	
	comp=Z,633nm,21.2s,baz=316,slow=44								
	43nm,0.4s								
NNA	**Nana**	**5.96**	**146**		Pn		**Pn**	**13 05 52.2**	**+0.2**
SLOR	**San Lorenzo -**	**6.47**	**15**				**Pn**	**13 06 00.1**	**+0.7**
PULU	**Pululahua**	**7.19**	**14**				**Pn**	**13 06 10.0**	**+0.8**
PAC1	**Pacto, Paraso**	**7.36**	**11**	*e*P			**Pn**	**13 06 13.5**	**+2.1**
CUSE	**Cuicocha Este**	**7.49**	**14**	*e*P			**Pn**	**13 06 15.8**	**+2.4**
TULM	**Tulcn-Chalpat**	**8.05**	**18**				**Pn**	**13 06 20.3**	**-0.8**
TULM	**Tulcn-Chalpat**	**8.05**	**18**	*e*P			**Pn**	**13 06 24.4**	**+3.3**
GCUF	**Volcan Galeras**	**8.67**	**19**	*e*P			**Pn**	**13 06 31.0**	**+1.4**
PTLC	**Puerto Leguiza**	**8.95**	**37**	*e*P			**Pn**	**13 06 31.0**	**-2.0**
BBAC	**Balboa, Cauca**	**9.45**	**18**	*e*P			**Pn**	**13 06 44.2**	**+4.2**
FLOC	**Florencia**	**9.67**	**28**	*e*P			**Pn**	**13 06 44.6**	**+1.6**
POPC	**Popayan, Colom**	**10.12**	**21**	*e*P			**Pn**	**13 06 53.6**	**+4.2**
GARC	**Garzon, Huila**	**10.28**	**27**	*e*P			**Pn**	**13 06 53.1**	**+1.6**
TBTG	**Tabatinga, AM**	**10.63**	**75**	*e*P			**Pn**	**13 06 54.8**	**-1.3**
YOTC	**Yotoco, Valle**	**11.58**	**20**	*e*P			**Pn**	**13 07 08.5**	**-0.7**
PAYG	**Puerto Ayora**	**11.86**	**302**		Pn		**Pn**	**13 07 15.4**	**+2.5**
ROSC	**El Rosal**	**13.16**	**27**		P		**P**	**13 07 36.4**	**-3.9**
	5.1nm,0.4s,baz=240,slow=16,SNR=1.4								
ROSC					LR		LR	13 12 37.4	
	comp=Z,1μm,20.6s,baz=204,slow=37								
CHIC	**Chingaza**	**13.25**	**29**	*e*P			**Pn**	**13 07 34.8**	**+2.5**
NORC	**Norcasia**	**13.58**	**23**	*e*P			**P**	**13 07 40.8**	**-3.9**
RUSC	**La Rusia**	**14.66**	**29**	*e*P			**Pn**	**13 07 52.2**	**+0.8**
LPAZ	**La Paz**	**14.99**	**129**		P		**Pn**	**13 07 55.9**	**-0.2**
	0.5nm,0.3s,baz=299,slow=9.4,SNR=24								
LPAZ					LR		LR	13 15 03.7	
	comp=Z,647nm,19.4s,baz=312,slow=42								
	5.2nm,0.7s								
LPAZ	**La Paz**	**14.99**	**129**		Pn		**Pn**	**13 07 55.5**	**-0.5**
PB12	**IPOC Station P**	**15.02**	**141**		Pn		**Pn**	**13 07 56.6**	**+0.7**
PB16	**IPOC Station P**	**15.34**	**138**		Pn		**Pn**	**13 08 01.1**	**+0.5**
GO01	**Chusmiza**	**16.52**	**141**				**Pn**	**13 08 15.9**	**+0.4**
TA01	**Diego Aracena**	**16.61**	**145**				**Pn**	**13 08 17.2**	**+1.0**
OCAC	**Ocana**	**16.63**	**25**	*e*P			**Pn**	**13 08 12.4**	**-4.3**
PB02	**IPOC Station P**	**17.37**	**146**		P		**Pn**	**13 08 26.6**	**+0.7**
SJCC	**San Jacinto, C**	**17.53**	**17**	*e*P			**P**	**13 08 28.6**	**+0.1**
PB07	**IPOC Station P**	**17.71**	**147**		P		**Pn**	**13 08 30.7**	**+0.6**
SOCV	**Socops**	**17.83**	**32**	*e*P			**Pn**	**13 08 31.2**	**-0.3**
SDV	**Santo Domingo**	**18.45**	**31**		P		**Pn**	**13 08 39.1**	**-0.1**
	0.5nm,0.3s,baz=227,slow=10.0,SNR=8.2								
SDV					LR		LR	13 16 49.3	
	comp=Z,1μm,21.9s,baz=203,slow=40								
	18nm,1.0s								
SDV	**Santo Domingo**	**18.45**	**31**		P		**P**	**13 08 39.0**	**+0.1**
PB10	**IPOC Station P**	**18.85**	**152**		P		**P**	**13 08 43.4**	**+0.4**
LVC	**Limon Verde**	**18.95**	**146**		P		**P**	**13 08 45.4**	**+1.0**
	0.4nm,0.3s,baz=310,slow=8.7,SNR=8.0								
LVC					LR		LR	13 15 57.3	
	comp=Z,226nm,21.4s,baz=322,slow=36								
	11nm,0.8s								
LVC	**Limon Verde**	**18.95**	**146**		P		**P**	**13 08 44.7**	**+0.2**
ACON	**Acoyapa**	**19.49**	**345**		P		**P**	**13 08 50.6**	**+0.6**
BAUV	**El Baul**	**19.95**	**38**		P		**P**	**13 08 54.9**	**-0.2**
MATN	**Matagalpa**	**20.61**	**344**		P		**P**	**13 09 03.7**	**+1.4**

GO02	Mina Guanaco	20.71	152	Pn	P	13 09 04.9	+1.3
GO02				IAmb	IAmb	13 09 10.0	
comp=Z,39nm,0.8s							
CRIN	San Cristobal	20.73	341	Pn	Pn	13 09 05.4	-0.7
CRIN				IAmb	IAmb	13 09 18.7	
comp=Z,95nm,1.0s							
SIV	San Ignacio	20.75	117	P	P	13 09 04.2	+0.4
comp=Z,11nm,0.4s,baz=291,slow=9.4,SNR=64							
SIV				LR	LR	13 17 32.6	
comp=Z,1µm,18.4s,baz=284,slow=38							
comp=Z,11nm,0.4s							
AC01	Pan de Azucar	21.12	155	P	P	13 09 07.6	-0.1
TGUH	Tegucigalpa,Un	22.07	341	P	P	13 09 19.1	+1.0
TGUH				IAmb	IAmb	13 09 22.4	
comp=Z,66nm,1.0s							
AC06	Mina Casimiro	22.30	156	P	P	13 09 20.0	-0.3
AC06				IAmb	IAmb	13 09 23.0	
comp=Z,44nm,1.0s							
PCRV	Puerto La Cruz	23.07	42	P	P	13 09 28.1	-0.4
comp=Z,46nm,0.8s,baz=190,slow=7.8,SNR=15							
PCRV				LR	LR	13 20 03.7	
comp=Z,1µm,19.2s,slow=41							
comp=Z,46nm,0.8s							
AC05	El Transito	23.65	158	P	P	13 09 35.3	+1.1
APG	El Apazote	24.12	335	P	P	13 09 38.2	-0.5
comp=Z,6.6nm,0.7s,baz=164,slow=8.2,SNR=6.8							
APG				LR	LR	13 17 22.5	
comp=Z,307nm,20.6s,baz=136,slow=32							
comp=Z,6.6nm,0.7s							
GO04	Tololo Observa	24.68	160	P	P	13 09 44.4	+0.6
H03N2	Juan Fernandez	26.33	178	T	T	13 37 35.1	
baz=356,slow=76,SNR=25							
H03N1	Juan Fernandez	26.33	178	T	T	13 37 28.0	
baz=356,slow=76,SNR=74							
H03N3	Juan Fernandez	26.34	178	T	T	13 37 33.5	
baz=356,slow=76,SNR=23							
ZON	Zonda	26.68	158	P	P	13 10 02.6	+0.9
TOSP	Speyside	26.72	47	P	P	13 10 02.2	+0.1
TOSP				IAmb	IAmb	13 10 08.5	
comp=Z,44nm,1.0s							
AQDB	Aquidauana	27.26	122	P	P	13 10 06.7	-0.2
CMIG	Matias Romero	28.00	329	LR	LR	13 19 10.5	
comp=Z,236nm,20.1s,baz=168,slow=32							
PRSN	Puerto Rico Se	28.19	27	P	P	13 10 15.7	+0.5
PRSN				IAmb	IAmb	13 10 16.9	
comp=Z,32nm,0.8s							
AOPR	Arecibo Observ	28.48	28	P	P	13 10 17.7	-0.1
SJG	San Juan	28.56	29	P	P	13 10 18.8	+0.3
comp=Z,43nm,0.9s,baz=225,slow=7.1,SNR=22							
SJG				LR	LR	13 22 53.7	
comp=Z,297nm,21.9s,baz=214,slow=39							
comp=Z,43nm,0.9s							
SJG	San Juan	28.56	29	P	P	13 10 18.3	-0.2
SJG				IAmb	IAmb	13 10 19.7	
comp=Z,38nm,0.8s							
GCPR	Guaynabo City	28.76	29	P	P	13 10 20.4	+0.1
GCPR				IAmb	IAmb	13 10 25.8	
comp=Z,39nm,1.0s							
CPUP	Villa Florida	29.05	134	P	P	13 10 23.9	+1.0
comp=Z,3.4nm,0.9s,baz=320,slow=11,SNR=5.2							
CPUP				LR	LR	13 24 45.0	
comp=Z,452nm,18.6s,baz=316,slow=42							
comp=Z,3.4nm,0.9s							
CPUP	Villa Florida	29.05	134	P	P	13 10 23.2	+0.3
CUPR	Culebra, Puert	29.15	30	P	P	13 10 22.7	-1.1
MDP	Montagnes des	30.03	67	P	P	13 10 32.0	+0.3
comp=Z,5.7nm,0.6s,baz=272,slow=8.2,SNR=7.5							
MDP				LR	LR	13 23 19.1	
comp=Z,742nm,19.3s,baz=286,slow=38							
comp=Z,5.7nm,0.6s							
SMRT	St. Maarten	30.10	34	P	P	13 10 30.6	-1.7
SMRT				IAmb	IAmb	13 10 32.1	
comp=Z,23nm,0.9s							
BDFB	Brasilia	32.67	108	P	P	13 10 55.1	0.0
comp=Z,6.8nm,0.9s,baz=271,slow=11,SNR=6.7							
BDFB				LR	LR	13 24 57.8	
comp=Z,1µm,20.6s,baz=307,slow=38							
comp=Z,6.8nm,0.9s							
RPN	Rapa Nui	34.13	231	LR	LR	13 21 13.7	
comp=Z,675nm,20.9s,baz=71,slow=29							
PLCA	Paso Flores	34.67	167	P	P	13 11 12.9	+0.8
comp=Z,7.3nm,0.9s,baz=337,slow=12,SNR=12							
PLCA				LR	LR	13 22 26.6	
comp=Z,142nm,20.3s,baz=354,slow=31							
comp=Z,7.3nm,0.9s							
PLCA	Paso Flores	34.67	167	P	P	13 11 13.0	+0.8
PLCA				IAmb	IAmb	13 11 13.9	
comp=Z,13nm,1.0s							
PLCA	Paso Flores	34.67	167	P	P	13 11 12.4	+0.3
PLCA				sP	sP	13 11 27.1	-1.0
PLTB	Pedras Altas	34.97	138	P	P	13 11 14.8	+0.1
TIGA	Tifton	38.37	355	P	P	13 11 44.2	+0.6
baz=174							
COYC	Coyhaique	39.06	171	P	P	13 11 50.1	+0.8
COYC				IAmb	IAmb	13 11 51.8	
comp=Z,15nm,0.9s							
COYC	Coyhaique	39.06	171	P	P	13 11 50.7	+1.5
833A	Chaparral WMA,	39.71	333	P	P	13 11 55.7	+0.8
baz=149							
NHSC	New Hope	39.89	0	P	P	13 11 57.1	+0.8
baz=180							
146A	Union	40.32	348	P	P	13 12 00.1	+0.3
146A				IAmb	IAmb	13 12 01.4	
comp=Z,42nm,1.4s							
GOGA	Godfrey	40.32	356	P	P	13 11 59.6	-0.2
baz=175							
LRAL	Lakeview Retre	40.34	351	P	P	13 11 59.8	-0.2
LRAL	Lakeview Retre	40.34	351	P	P	13 12 00.0	0.0
baz=170							
LRAL	Lakeview Retre	40.34	351	P	P	13 12 00.4	+0.3
baz=170							
NATX	Nacogdoches	40.95	341	P	P	13 12 05.5	+0.5
baz=158							
435B	Jarrell	41.10	337	P	P	13 12 06.5	+0.2
baz=153							
Y45A	Yeager Farm, C	41.60	348	P	P	13 12 10.5	+0.1
Y45A	Yeager Farm, C	41.60	348	P	P	13 12 11.5	+1.1
baz=166,SNR=7.1							
JCT	Junction City	41.74	334	P	P	13 12 12.0	+0.3
baz=150							
KMSC	Kings Mountain	41.94	359	P	P	13 12 12.4	-0.7
KMSC	Kings Mountain	41.94	359	P	P	13 12 12.9	-0.2
baz=178							
CNNC	Cliffs of the	42.08	3	P	P	13 12 13.7	-0.6
baz=183							
WHTX	Lake Whitney,	42.13	338	P	P	13 12 14.5	-0.3
baz=154							
OXF	Oxford	42.20	349	P	P	13 12 14.6	-0.7
baz=166							
PLAL	Pickwick Lake	42.42	350	P	P	13 12 15.6	-1.4
TKL	Tuckaleechee C	42.57	356	LR	LR	13 29 02.4	
comp=Z,112nm,20.6s,baz=184,slow=35							
TXAR	Lajitas Array	42.61	329	P	P	13 12 19.6	+0.8
comp=Z,0.9nm,0.8s,baz=149,slow=9.7,SNR=11							
TXAR				LR	LR	13 28 17.8	
comp=Z,95nm,20.8s,baz=135,slow=34							
comp=Z,0.9nm,0.8s							
TXAR	Lajitas Array	42.61	329	P	P	13 12 18.9	+0.1
TX31	Lajitas Ar. Si	42.61	329	P	P	13 12 18.9	+0.1
V52A	Sevierville	42.74	356	P	P	13 12 19.1	-0.5
V52A				IAmb	IAmb	13 12 19.9	
comp=Z,64nm,1.6s							
V52A	Sevierville	42.74	356	P	P	13 12 19.3	-0.4
baz=175							
V48A	Smith Brothers	42.97	352	P	P	13 12 20.4	-1.2
V48A	Smith Brothers	42.97	352	P	P	13 12 20.8	-0.7
baz=170							
MIAR	Mount Ida	43.22	344	P	P	13 12 23.3	-0.2
MIAR	Mount Ida	43.22	344	P	P	13 12 24.3	+0.7
baz=160,SNR=9.4							
MIAR	Mount Ida	43.22	344	P	P	13 12 23.4	-0.2
baz=160							
Z35A	Perchaven, San	43.26	339	P	P	13 12 23.6	-0.3
Z35A				IAmb	IAmb	13 12 36.5	
comp=Z,20nm,0.9s							
WVT	Waverly	43.50	351	P	P	13 12 24.1	-1.7
WVT	Waverly	43.50	351	P	P	13 12 24.6	-1.2
baz=169							
WVT	Waverly	43.50	351	P	P	13 12 24.2	-1.6
WVT				pP	pP	13 12 34.7	-2.5
ABTX	Abilene, Hawle	43.54	336	P	P	13 12 26.5	+0.3
ABTX	Abilene, Hawle	43.54	336	P	P	13 12 25.6	-0.7
baz=151							
WHAR	Wooly Hollow	43.59	346	P	P	13 12 26.1	-0.4
WHAR				IAmb	IAmb	13 12 38.4	
comp=Z,18nm,0.9s							
X37A	Clayton	43.79	342	P	P	13 12 29.0	+0.9
X37A				IAmb	IAmb	13 12 40.9	
comp=Z,20nm,0.8s							
X37A	Clayton	43.79	342	P	P	13 12 29.5	+1.4
baz=158,SNR=8.2							
RCBR	Riachuelo	44.03	91	LR	LR	13 32 19.9	
comp=Z,779nm,18.4s,baz=62,slow=38							
LCAR	Lake Charles	44.07	347	P	P	13 12 29.8	-0.5
LCAR				IAmb	IAmb	13 12 31.4	
comp=Z,27nm,1.1s							
FCAR	Ozark Folk Cen	44.12	346	P	P	13 12 30.6	-0.1
FCAR				IAmb	IAmb	13 12 46.5	
comp=Z,23nm,0.8s							
S54A	Dingess, Beckl	44.59	359	P	P	13 12 33.2	-1.4
S54A				IAmb	IAmb	13 12 45.4	
comp=Z,52nm,1.7s							
X34A	Smith Ranch, M	44.61	339		P	13 12 35.3	+0.5
HHAR	Hobbs	44.95	344	P	P	13 12 38.0	+0.5
baz=160							
CBN	Corbin Frederi	45.06	3	P	P	13 12 37.5	-0.7
baz=184							
WMOK	Wichita Mounta	45.08	338		P	13 12 38.4	-0.1
WMOK	Wichita Mounta	45.08	338	P	P	13 12 39.0	+0.5
baz=154,SNR=5.4							
WMOK	Wichita Mounta	45.08	338	P	P	13 12 38.8	+0.3
baz=154							
TUL1	Leonard	45.14	342		P	13 12 38.7	-0.2
TUL1				IAmb	IAmb	13 12 50.8	
comp=Z,20nm,0.8s							
TUL1	Leonard	45.14	342	P	P	13 12 40.0	+1.1
baz=158							
TUL1	Leonard	45.14	342	P	P	13 12 39.4	+0.5
baz=158							
CLN7	Carlsbad 7	45.19	331	P	P	13 12 39.8	+0.2
U38A	Gravette	45.22	344	P	P	13 12 39.2	-0.4
U38A				IAmb	IAmb	13 12 55.1	
comp=Z,16nm,1.0s							
U38A	Gravette	45.22	344	P	P	13 12 40.4	+0.8
baz=160,SNR=5.3							
S44A	Carbondale	45.27	350	P	P	13 12 39.4	-0.5
OK025	Westminster Rd	45.33	340	P	P	13 12 40.0	-0.5
OK025				IAmb	IAmb	13 12 51.9	
comp=Z,23nm,0.8s							
MGMO	Mountain Grove	45.36	346	P	P	13 12 40.4	-0.3
MGMO				IAmb	IAmb	13 12 42.2	
comp=Z,33nm,1.1s							
OK029	Liberty Lake	45.57	340	P	P	13 12 42.0	-0.3
OK044	Pawnee Station	45.88	341	P	P	13 12 45.5	+0.7
OK044				IAmb	IAmb	13 12 56.6	
comp=Z,12nm,0.9s							
Q51A	Peebles	45.89	357	P	P	13 12 43.5	-1.3
Q51A				IAmb	IAmb	13 12 44.7	
comp=Z,13nm,1.0s							
CCM	Cathedral Cave	46.00	348	P	P	13 12 45.5	-0.1
CCM				IAmb	IAmb	13 12 57.8	
comp=Z,14nm,0.8s							
CCM	Cathedral Cave	46.00	348	P	P	13 12 46.5	+0.9
baz=165,SNR=7.9							
CCM	Cathedral Cave	46.00	348	P	P	13 12 46.2	+0.6
baz=165							
CCM	Cathedral Cave	46.00	348	P	P	13 12 45.1	-0.5
CCM				pP	pP	13 12 55.6	-1.5
CCM				sP	sP	13 13 00.3	-1.5
MSTX	Muleshoe	46.02	334	P	P	13 12 46.7	+0.6
MSTX				IAmb	IAmb	13 12 58.9	
comp=Z,29nm,1.2s							
MSTX	Muleshoe	46.02	334	P	P	13 12 47.5	+1.5
baz=148,SNR=5.6							
MSTX	Muleshoe	46.02	334	P	P	13 12 46.1	0.0
baz=148							
S39A	Bolivar	46.12	346	P	P	13 12 46.3	-0.4
S39A				IAmb	IAmb	13 12 58.5	
comp=Z,21nm,0.8s							
S39A	Bolivar	46.12	346	P	P	13 12 47.3	+0.7
baz=162,SNR=5.4							
T35A	Sooner Cattle	46.29	342	P	P	13 12 48.3	+0.4
T35A				IAmb	IAmb	13 13 00.8	
comp=Z,29nm,1.0s							
T35B	Sooner Cattle	46.29	342	P	P	13 12 48.7	+0.7
baz=157							
AMTX	Amarillo	46.34	335	P	P	13 12 49.4	+0.9
baz=150							
P52A	Corning	46.44	358	P	P	13 12 47.9	-1.2
baz=177							
R40A	Maddies Statio	46.45	347	P	P	13 12 48.4	-0.8
R40A				IAmb	IAmb	13 13 00.5	
comp=Z,13nm,0.8s							
R40A	Maddies Statio	46.45	347	P	P	13 12 48.6	-0.5
baz=163,SNR=9.8							
P49A	Miami Univ. Ec	46.50	355	P	P	13 12 48.2	-1.4
baz=174							
O53A	New Philadelph	47.03	359	P	P	13 12 52.3	-1.4
baz=178							
ACSO	Alum Creek Sta	47.08	357	P	P	13 12 53.1	-0.9
baz=176							
O48B	Farmland	47.25	355	P	P	13 12 54.6	-0.8
baz=173							
SSPA	Standing Stone	47.46	2	P	P	13 12 55.8	-1.2
baz=183							
SFIN	Lafayette	47.58	353	P	P	13 12 57.1	-0.9
baz=171							
CRNM	Carthage	47.87	330	P	P	13 13 00.9	+0.4
P38A	Dawn	48.01	346	P	P	13 13 01.3	0.0
baz=162,SNR=9.8							
HDIL	Hopedale	48.06	351	P	P	13 13 00.7	-1.0
baz=168							
SBM	South Baldy	48.11	330	P	P	13 13 01.5	-1.2
PAL	Palisades	48.13	6	P	P	13 13 01.5	-0.7
baz=188							
TRNY	Table Rock, Ra	48.23	6	P	P	13 13 01.9	-1.1
KSU1	Kansas State U	48.33	343	P	P	13 13 02.7	-1.1
KSU1	Kansas State U	48.33	343	P	P	13 13 04.1	+0.3
baz=158							
KSU1	Kansas State U	48.33	343	P	P	13 13 03.6	-0.3
baz=158							
ANMO	Albuquerque	48.53	331	LR	LR	13 32 24.1	
comp=Z,71nm,20.5s,baz=146,slow=35							
ANMO	Albuquerque	48.53	331	P	P	13 13 06.0	+0.4
ANMO	Albuquerque	48.53	331	P	P	13 13 06.7	+1.0
baz=144,SNR=10							
ANMO	Albuquerque	48.53	331	P	P	13 13 05.3	-0.4
baz=144							
ANMO	Albuquerque	48.53	331	P	P	13 13 06.5	+0.9
ANMO				pP	pP	13 13 16.5	-0.7
TUC	Tucson	48.76	325	P	P	13 13 07.2	-0.2
baz=138							
TUC	Tucson	48.76	325	P	P	13 13 08.1	+0.7
TUC				pP	pP	13 13 18.1	-0.8
N38A	Joes South For	49.05	347	P	P	13 13 08.8	-0.5
N38A	Joes South For	49.05	347	P	P	13 13 09.8	+0.4
baz=163,SNR=7.4							
CBKS	Cedar Bluff	49.06	340	P	P	13 13 10.2	+0.6
baz=154							
BINY	Binghamton	49.12	4	P	P	13 13 10.5	+0.7
baz=185							
AAM	Ann Arbor	49.17	357	P	P	13 13 10.8	+0.6
baz=175							
T25A	Trinidad	49.41	334	P	P	13 13 12.7	+0.2
baz=148							
L42A	Oliver, Polo	49.54	351	P	P	13 13 12.1	-0.9
L42A	Oliver, Polo	49.54	351	P	P	13 13 12.2	-0.8
baz=168,SNR=5.6							
K50A	Casco	49.59	358	P	P	13 13 12.3	-1.2
214A	Organ Pipe Nat	49.69	323	P	P	13 13 14.7	+0.3
baz=136							
L61B	Northampton	49.70	7	P	P	13 13 14.5	+0.3
baz=190							
HCNY	Howe Caverns	49.75	6	P	P	13 13 15.0	+0.3
baz=187,SNR=5.7							
TRY	Troy	49.86	6	P	P	13 13 14.7	-0.8
L40A	Anamosa	49.86	349	P	P	13 13 14.3	-1.2
baz=166,SNR=6.1							
MEDO	Medina	49.96	2	P	P	13 13 14.7	-1.5
K43A	Burlington	50.03	352	P	P	13 13 15.6	-1.1
SCIA	State Center	50.11	347	P	P	13 13 16.3	-1.1
SCIA	State Center	50.11	347	P	P	13 13 17.5	+0.1
baz=163							
J47A	Sunmer	50.18	356	P	P	13 13 16.5	-1.4
J47A				IAmb	IAmb	13 13 17.6	
comp=Z,22nm,0.9s							
W18A	Petrified Fore	50.31	328	P	P	13 13 20.0	+0.7
baz=141							
SDCO	Great Sand Dun	50.39	334	P	P	13 13 20.2	+0.2
SDCO	Great Sand Dun	50.39	334	P	P	13 13 20.8	+0.9
baz=147,SNR=5.7							
SDCO	Great Sand Dun	50.39	334	P	P	13 13 21.2	+1.3
baz=147							
ACCN	Adirondack Com	50.51	6	P	P	13 13 20.5	+0.1
K38A	Parkersburg	50.73	348	P	P	13 13 21.4	-0.7
L34A	Svendsen Farm,	50.93	344	P	P	13 13 23.0	-0.6
L34A				IAmb	IAmb	13 13 24.1	
comp=Z,22nm,1.1s							
S22A	4UR Ranch, Cre	50.98	333	P	P	13 13 25.0	+0.6
baz=145							
MCVT	Middlebury Col	51.14	7	P	P	13 13 25.2	+0.1
baz=189							
Q24A	Divide	51.26	335	P	P	13 13 27.6	+1.0
baz=148							
I42A	Draeger Farm,	51.27	352	P	P	13 13 24.8	-1.3
I42A				IAmb	IAmb	13 13 26.2	
comp=Z,12nm,0.8s							
MVCO	Mesa Verde	51.33	331	P	P	13 13 27.9	+1.0
baz=143							
WUAZ	Wupatki	51.48	327	P	P	13 13 28.6	+0.6
baz=139							
SADO	Sadowa	51.55	1	LR	LR	13 38 23.6	
comp=Z,43nm,18.3s,baz=176,slow=40							
LBNH	Lisbon	51.56	8	P	P	13 13 28.0	-0.2
LBNH				IAmb	IAmb	13 13 29.7	
comp=Z,23nm,1.1s							
LBNH	Lisbon	51.56	8	P	P	13 13 28.2	-0.1
baz=190							
LONY	Lake Ozonia	51.64	5	P	P	13 13 28.4	-0.5
baz=187							
GLA	Glamis	51.66	323	P	P	13 13 29.2	-0.1
baz=134							
GLMI	Grayling	51.75	356	P	P	13 13 30.1	+0.4
baz=174							
OGNE	Ogallala	51.76	339	P	P	13 13 29.9	-0.1
baz=152							
FRNY	Flat Rock	51.95	6	P	P	13 13 30.6	-0.5
FRNY				IAmb	IAmb	13 13 31.9	
comp=Z,19nm,1.1s							
FRNY	Flat Rock	51.95	6	P	P	13 13 30.9	-0.2
baz=188							
H62A	Milan	51.99	8	P	P	13 13 31.2	-0.3
H62A				IAmb	IAmb	13 13 33.4	
comp=Z,14nm,0.9s							
H62A	Milan	51.99	8	P	P	13 13 31.9	+0.5
baz=191							
H62A				P	P	13 13 31.9	+0.5
baz=191							
PDMCI	Parker Dam,Lak	52.14	324	P	P	13 13 33.0	+0.3
baz=136							
I37A	Lemond, Waseca	52.17	348	P	P	13 13 31.7	-1.1
I37A				IAmb	IAmb	13 13 33.1	
comp=Z,13nm,0.7s							
PV15	Paradox Valley	52.23	332	P	P	13 13 33.6	0.0
PV15				IAmb	IAmb	13 13 48.3	
comp=Z,15nm,1.1s							
PV13	Radium Mtn., P	52.24	331	P	P	13 13 34.1	+0.4
PV13				IAmb	IAmb	13 13 35.7	
comp=Z,14nm,1.1s							
BC3	Big Chuckawall	52.46	323	P	P	13 13 35.3	0.0
baz=134							
MNTQ	Montreal, Queb	52.60	6	P	P	13 13 35.2	-0.7
MNTQ				IAmb	IAmb	13 13 37.1	
comp=Z,22nm,1.2s							
IRM	Iron Mountain	52.62	323	P	P	13 13 36.3	-0.2
baz=134							
ECSD	EROS Data Cent	52.65	345	P	P	13 13 34.7	-1.7
baz=159,SNR=5.5							
ECSD	EROS Data Cent	52.65	345	P	P	13 13 36.0	-0.4
baz=159,SNR=5.5							
G62A	West of Eustis	52.71	9	P	P	13 13 37.1	+0.3
G62A	West of Eustis	52.71	9	P	P	13 13 37.9	+1.1
baz=192,SNR=7.9							
G62A				P	P	13 13 37.9	+1.1
baz=192,SNR=7.9							
PKME	Peaks-Kenny Pk	52.95	10	P	P	13 13 38.7	+0.1
PKME				IAmb	IAmb	13 14 45.0	
comp=Z,31nm,1.4s							
PKME	Peaks-Kenny Pk	52.95	10	P	P	13 13 38.7	+0.1
baz=194							
109C	Camp Elliot, M	52.96	321	P	P	13 13 39.3	+0.4
baz=132							
TPFO	Pinon Flats	53.03	322	P	P	13 13 39.2	-0.4
baz=133							
PFO	Pinyon Flats O	53.04	322	LR	LR	13 33 10.5	
comp=Z,95nm,18.2s,baz=196,slow=32							
PFO	Pinyon Flats O	53.04	322	P	P	13 13 39.2	-0.4
baz=133							
SPMN	Marine on St.	53.21	349	P	P	13 13 39.6	-0.9
SPMN				IAmb	IAmb	13 13 40.7	
comp=Z,19nm,0.9s							
SPMN	Marine on St.	53.21	349	P	P	13 13 40.0	-0.4
baz=164,SNR=6.1							
SPMN	Marine on St.	53.21	349	P	P	13 13 40.2	-0.3
baz=164							
N23A	Red Feather La	53.22	336	P	P	13 13 40.4	-0.6
baz=147							
GMRC	Granite Mounta	53.37	323	P	P	13 13 43.1	+1.1
baz=134							
MURC	Murrieta	53.49	321	P	P	13 13 43.8	+1.0
baz=132							
O20A	White River Ci	53.57	333	P	P	13 13 43.6	+0.1
baz=145							
F36A	Milaca	53.97	349	P	P	13 13 44.9	-1.2
F36A				IAmb	IAmb	13 13 46.9	
comp=Z,16nm,0.9s							
F36A	Milaca	53.97	349	P	P	13 13 45.7	-0.3
baz=164,SNR=9.7							
TUQ	Turquoise Moun	53.97	324	P	P	13 13 46.5	+0.1
baz=134							
CIS	Catalina Islan	54.12	320	P	P	13 13 48.0	+0.6
baz=131							
BFSC	Mount Baldy Ra	54.20	322	P	P	13 13 49.3	+1.1
baz=132							
E62A	Clayton Lake	54.23	9	P	P	13 13 48.0	+0.1
E62A	Clayton Lake	54.23	9	P	P	13 13 48.4	+0.5
baz=193							
E62A				P	P	13 13 48.4	+0.5
baz=193							
SHPR	Sheep Range	54.29	325	P	P	13 13 49.2	+0.5
E38A	The Farm, Brul	54.33	350	P	P	13 13 48.2	-0.4
GSC	Goldstone, Bar	54.40	323	P	P	13 13 50.5	+1.0
baz=133							
SHOC	Shoshone, Teco	54.50	324	P	P	13 13 51.3	+1.1
baz=134							
RDMU	Red Mountain	54.52	333	P	P	13 13 50.5	+0.1
D62A	Allapoint, All	54.76	9	P	P	13 13 51.7	0.0
D62A	Allapoint, All	54.76	9	P	P	13 13 51.8	0.0
baz=194							
D62A				P	P	13 13 51.8	0.0
baz=194							
K22A	Casper	54.93	336	P	P	13 13 54.3	+1.0
baz=148							
OSI	Osito Audit: C	55.11	321	P	P	13 13 55.7	+1.1
baz=131							
TPNV	Topopah Spring	55.22	325	P	P	13 13 55.9	+0.4
baz=135							
FURC	Furnace Creek,	55.24	324	P	P	13 13 56.7	+1.3
baz=134							
RSSD	Black Hills	55.26	339	P	P	13 13 55.4	-0.3
RSSD				IAmb	IAmb	13 14 08.6	
comp=Z,11nm,1.1s							
RSSD	Black Hills	55.26	339	P	P	13 13 56.3	+0.6
baz=151,SNR=5.7							
RSSD	Black Hills	55.26	339	P	P	13 13 56.0	+0.3
baz=151							
RSSD	Black Hills	55.26	339	P	P	13 13 56.5	+0.8
RSSD				pP	pP	13 14 07.2	-0.2
MPMC	Manual Prospec	55.32	323	P	P	13 13 55.7	-0.6
baz=133							
JLU	Jordanelle	55.42	331	P	P	13

VES Vestal, Richgr 56.14 322 P P 13 14 02.3 +0.4
baz=131
HWUT Hardware Ranch 56.26 332 P P 13 14 02.7 -0.1
HWUT IAmb IAmb 13 14 04.3
comp=Z,18nm,1.1s
BW06 Boulder Array 56.28 334 P P 13 14 02.9 -0.2
baz=144
PD31 Pinedale Array 56.28 334 P P 13 14 03.0 -0.1
PDAR Pinedale Array 56.28 334 P P 13 14 02.8 -0.3
comp=Z,3.0nm,0.9s,baz=134,slow=8.5,SNR=14
PDAR LR LR 13 38 05.6
comp=Z,102nm,18.5s,baz=140,slow=36
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 56.28 334 P P 13 14 02.6 -0.5
SMMC Simmler 56.35 321 P P 13 14 03.2 -0.4
baz=130
E28A Huff 56.38 343 P P 13 14 03.4 -0.1
B35A Bob, Littlefor 56.40 349 P P 13 14 02.7 -0.9
B35A IAmb IAmb 13 14 04.0
comp=Z,15nm,0.8s
B35A Bob, Littlefor 56.40 349 P P 13 14 02.6 -0.9
baz=164
TPH Tonopah 56.56 325 P P 13 14 05.1 0.0
TPH IAmb IAmb 13 14 07.2
comp=Z,21nm,1.1s
AGMN Agassiz Nation 56.77 348 P P 13 14 05.8 -0.4
AGMN Agassiz Nation 56.77 348 P P 13 14 05.9 -0.3
baz=161,SNR=5.6
AGMN Agassiz Nation 56.77 348 P P 13 14 06.6 +0.4
baz=161
HVU Hansel Valley 56.96 331 P P 13 14 07.3 -0.5
MLAC Mammoth, Mammo 57.18 324 P P 13 14 09.3 -0.3
baz=132
MDND Maddock 57.24 345 P P 13 14 09.5 -0.1
MDND Maddock 57.24 345 P P 13 14 10.3 +0.7
baz=157
ELK Elko 57.40 329 P P 13 14 11.8 +0.7
comp=Z,5.6nm,0.9s,baz=127,slow=4.3,SNR=24
ELK LR LR 13 37 32.9
comp=Z,148nm,19.8s,baz=144,slow=35
comp=Z,5.6nm,0.9s
ELK Elko 57.40 329 P P 13 14 11.5 +0.4
NVAR Mina Array Bea 57.42 325 P P 13 14 12.5 +1.3
comp=Z,3.9nm,1.0s,baz=143,slow=6.2,SNR=18
NVAR PcP **PcP 13 15 04.7 -0.1**
comp=Z,1.4nm,0.8s,baz=135,slow=7.2,SNR=3.6
NVAR LR LR 13 36 32.8
comp=Z,89nm,18.7s,baz=98,slow=34
comp=Z,3.9nm,1.0s
NVAR Mina Array Bea 57.42 325 P P 13 14 12.0 +0.8
FXWY Fox Creek 57.62 334 P P 13 14 13.0 +0.5
RYN Ryan 57.68 325 P P 13 14 13.1 +0.1
RYN IAmb IAmb 13 15 29.3
comp=Z,19nm,1.9s
H17A Grant Village 58.03 335 P P 13 14 15.5 0.0
baz=144
BMN Battle Mountai 58.22 327 P P 13 14 17.0 +0.3
LAO LASA Array 58.25 339 P P 13 14 17.1 +0.4
baz=149
ULM Lac du Bonnet 58.62 348 P P 13 14 18.4 -0.8
comp=Z,19nm,0.9s,baz=169,slow=6.7,SNR=16
comp=Z,19nm,0.9s
ULM Lac du Bonnet 58.62 348 P P 13 14 18.2 -0.9
YHL Hebgen Lake 58.66 335 P P 13 14 19.8 0.0
GCMT Greycliff 58.79 336 P P 13 14 20.8 +0.1
HLID Hailey 59.10 332 P P 13 14 23.5 +0.7
HLID IAmb IAmb 13 14 24.9
comp=Z,7.6nm,0.9s
HLID Hailey 59.10 332 P P 13 14 23.5 +0.7
baz=139
DGMT Dagmar 59.13 342 P P 13 14 23.4 +0.7
baz=152
AFDM Forest Hills D 59.31 324 P P 13 14 24.1 -0.1
AFDM IAmb IAmb 13 14 25.8
comp=Z,9.5nm,1.2s
TAOE Nuku Hiva Isla 59.34 264 *e*S **S 13 22 31.4 +0.1**
comp=Z,99nm,28.6s
TAOE *e*LR LR 13 31 58.4
comp=Z,340nm,26.0s
MCMT McKenzie Canyo 59.36 334 P P 13 14 25.1 +0.4
BOZ Bozeman (W) 59.44 335 P P 13 14 24.9 -0.3
BOZ IAmb IAmb 13 14 26.7
comp=Z,8.9nm,0.9s
BOZ Bozeman (W) 59.44 335 P P 13 14 25.6 +0.5
baz=143
DRLN Deer Lake 59.44 17 P P 13 14 24.4 -0.5
BEKR Beckworth 59.56 325 P P 13 14 26.6 +0.4
MFID Camas Ranch 59.67 331 P P 13 14 27.3 +0.6
MFID IAmb IAmb 13 14 28.8
comp=Z,17nm,1.0s
LRM Limekiln Ridge 59.97 334 P P 13 14 28.6 -0.3
ORV Oroville 60.02 324 P P 13 14 29.6 +0.6
ORV IAmb IAmb 13 14 31.3
comp=Z,14nm,1.1s
WVOR Wild Horse Val 60.38 328 P P 13 14 31.3 -0.3
WVOR IAmb IAmb 13 14 33.8
comp=Z,8.8nm,1.1s
HRY Holter Researc 60.42 335 P P 13 14 31.3 -0.5
EGMT Eagleton 60.67 338 P P 13 14 33.3 -0.1
EGMT IAmb IAmb 13 14 46.0
comp=Z,19nm,1.1s
EGMT Eagleton 60.67 338 P P 13 14 34.0 +0.6
baz=146,SNR=5.1
MOD Modoc Plateau 60.91 327 P P 13 14 35.4 +0.2
MOD IAmb IAmb 13 14 37.0
comp=Z,15nm,1.0s
PLID Pearl Lake 61.00 332 P P 13 14 36.0 +0.1
MSO Missoula 61.40 334 P P 13 14 38.7 +0.3
MSO IAmb IAmb 13 14 40.2
comp=Z,13nm,0.9s
MSO Missoula 61.40 334 P P 13 14 39.2 +0.8
baz=141
BMO Blue Mountains 61.45 331 P P 13 14 37.8 -1.0
YBH Yreka Blue Hor 62.14 325 P P 13 14 42.7 -0.8
comp=Z,5.3nm,0.9s,baz=72,slow=4.8,SNR=5.7
YBH LR LR 13 40 52.8
comp=Z,64nm,18.6s,baz=138,slow=35
comp=Z,5.3nm,0.9s
JTMT Jette 62.26 335 P P 13 14 44.5 +0.3
JTMT IAmb IAmb 13 15 09.4
comp=Z,32nm,1.9s
G08A Pilot Rock 62.57 330 P P 13 14 46.8 +0.4
G08A IAmb IAmb 13 14 48.2
comp=Z,13nm,1.0s
SCHQ Schefferville 62.62 9 P P 13 14 45.7 -0.6
comp=Z,5.1nm,0.8s,baz=147,slow=6.0,SNR=3.6
SCHQ LR LR 13 41 56.7
comp=Z,57nm,21.9s,baz=216,slow=36
comp=Z,5.1nm,0.8s
E09A Wood Farm, Sta 63.06 332 P P 13 14 50.0 +0.6
E09A IAmb IAmb 13 14 50.7
comp=Z,11nm,0.9s
WALA Waterton Lakes 63.13 336 P P 13 14 50.5 +0.5
WALA IAmb IAmb 13 14 51.6
comp=Z,14nm,0.8s
NEW Newport 63.89 333 P P 13 14 55.1 +0.2
comp=Z,7.3nm,0.9s,baz=149,slow=6.1,SNR=12
NEW LR LR 13 42 42.7
comp=Z,54nm,18.1s,baz=134,slow=36
comp=Z,7.3nm,0.9s
NEW Newport 63.89 333 P P 13 14 54.8 -0.1
NEW Newport 63.89 333 P P 13 14 55.7 +0.8
baz=138
LTY Liberty 64.81 331 P P 13 15 01.1 +0.1
B08A Colville Reser 64.96 332 P P 13 15 01.8 -0.1
B08A IAmb IAmb 13 15 39.8
comp=Z,29nm,2.0s
EDM Edmonton 66.24 339 P P 13 15 09.3 -0.7
BBTS Babate 66.70 71 LR LR 13 42 43.9
comp=Z,254nm,20.8s,baz=248,slow=34
TBI Tubuai 68.22 248 *e*S **S 13 24 21.3 +0.1**
comp=Z,52nm,27.8s
TBI Tubuai 68.22 248 *e*LR LR 13 36 04.9
comp=Z,253nm,26.8s
TBI Tubuai 68.22 248 *e*T T 14 29 11.7
comp=Z,9.4nm,0.3s
PPT Papeete 68.28 254 LR LR 13 36 57.8
comp=Z,279nm,19.4s,baz=63,slow=28
PPT2 Papeete2 68.28 254 *e*S **S 13 24 22.4 +0.2**
comp=Z,67nm,25.2s
PPT2 Papeete2 68.28 254 *e*LR LR 13 36 06.4
comp=Z,441nm,25.2s
BRLDA Berland Lookou 68.42 337 P P 13 15 23.4 -0.5
FRB Frobisher Bay 71.11 5 LR LR 13 48 46.5
comp=Z,28nm,19.7s,baz=212,slow=37
YKA Yellowknife Ar 74.16 344 P P 13 15 58.2 -0.1
comp=Z,5.0nm,0.8s,baz=141,slow=6.0,SNR=5.1
YKA LR LR 13 51 28.1
comp=Z,34nm,19.0s,baz=274,slow=38
comp=Z,5.0nm,0.8s
DIB Dawson Inlet, 74.42 330 P P 13 16 01.2 +1.3
FLDN Fort Liard 75.19 339 P P 13 16 05.3 +0.9
baz=135
V35K Ketchikan 75.26 332 P P 13 16 05.6 +0.8
baz=127
KOTAN Kotaneelee Air 75.32 339 P P 13 16 05.0 -0.1
baz=135
LIRD Liard River Hi 75.57 338 P P 13 16 07.3 +0.8
baz=133
T35M Bob Quinn 75.67 334 P P 13 16 08.4 +1.2
baz=128
WRAK Wrangell Islan 76.25 333 P P 13 16 11.6 +1.2
baz=126
DBIC Dimbokro 76.39 81 P P 13 16 12.3 +0.2
comp=Z,12nm,0.8s,baz=205,slow=5.6,SNR=12
comp=Z,12nm,0.8s
DBIC Dimbokro 76.39 81 P P 13 16 11.8 -0.4
DBIC IAmb IAmb 13 16 13.5
comp=Z,18nm,0.9s
U33K Whale Pass 76.42 333 P P 13 16 12.4 +1.1
baz=125
DLBC Dease Lake 76.48 336 P P 13 16 12.6 +0.8
comp=Z,12nm,0.9s,baz=146,slow=6.1,SNR=17
DLBC LR LR 13 52 44.8
comp=Z,43nm,18.2s,baz=133,slow=38
comp=Z,12nm,0.9s
DLBC Dease Lake 76.48 336 P P 13 16 12.2 +0.4
DLBC IAmb IAmb 13 16 13.9
comp=Z,13nm,0.9s
DLBC Dease Lake 76.48 336 P P 13 16 12.5 +0.8
baz=129,SNR=6.8
S34M Telegraph Cree 76.61 335 P P 13 16 13.8 +1.3
baz=128
SFJD Kangerlussuaq 76.83 11 LR LR 13 49 37.6
comp=Z,48nm,21.9s,baz=188,slow=35
WTLY Watson Lake, Y 77.06 337 P P 13 16 15.8 +0.8
baz=130
VNA3 Neumayer Olymp 77.19 162 P P 13 16 16.1 +0.5
WRGLY Wrigley 77.33 341 P P 13 16 17.1 +0.7
baz=136
R33M Jennings River 77.46 336 P P 13 16 18.4 +1.0
baz=128
Q32M Nakina River 77.73 335 P P 13 16 20.0 +1.0
baz=127
TGTN Hyland Airport 77.79 339 P P 13 16 19.8 +0.8
baz=131
RAR Rarotonga 77.80 250 LR LR 13 44 33.6
comp=Z,61nm,18.3s,baz=114,slow=31
S32K Killisnoo 77.85 333 P P 13 16 20.4 +1.0
baz=124
R32K Eaglecrest 78.28 334 P P 13 16 22.1 +0.3
baz=124
KOWA Kowa 78.50 74 LR LR 13 50 55.3
comp=Z,360nm,18.6s,baz=203,slow=36
KOWA Kowa 78.50 74 P P 13 16 23.8 -0.1
KOWA IAmb IAmb 13 16 25.5
comp=Z,11nm,0.8s
P32M Atlin 78.70 335 P P 13 16 24.8 +0.7
baz=126
P33M Teslin, Yukon 78.70 336 P P 13 16 24.0 -0.1
baz=126
N32M Quiet Lake 79.36 337 P P 13 16 28.3 +0.6
baz=126
SNAA Sanae 79.42 162 P P 13 16 27.3 -0.7
SNAA Sanae 79.42 162 P P 13 16 27.6 -0.4
MMPY Sheldon Lake, 79.57 339 P P 13 16 29.8 +0.9
baz=128
PFVI Vila Bisbo 79.61 50 *e*P **P 13 16 31.4 +1.9**
PLBC Pleasant Camp 79.74 334 P P 13 16 29.7 -0.1
baz=123
MORF Marmelete 79.79 50 *e*P **P 13 16 32.2 +1.6**
comp=Z,29nm,1.7s
PTEO Sao Teotonio 79.81 50 *e*P **P 13 16 32.3 +1.7**
FARO Faro, Yukon 80.11 338 P P 13 16 31.7 -0.1
baz=126
PNCL Nicolau / Gran 80.12 49 *e*P **P 13 16 33.6 +1.3**
PSBE So Bento 80.33 48 *e*P **P 13 16 34.4 +0.9**
O30N Mendenhall 80.35 336 P P 13 16 32.8 -0.3
baz=124
PCVE Castro Verde 80.35 50 *e*P **P 13 16 34.9 +1.3**
comp=Z,29nm,1.2s
P30M Million Dollar 80.35 335 P P 13 16 33.4 +0.3
baz=123
M31M Drury Creek, Y 80.49 337 P P 13 16 33.3 -0.5
baz=125
PVAQ Vaqueiros 80.53 50 *e*P **P 13 16 36.1 +1.6**
comp=Z,20nm,1.7s
PBEJ Beja 80.60 50 *e*P **P 13 16 36.4 +1.5**
N31M Braeburn, Yuko 80.62 336 P P 13 16 34.9 +0.3
N31M IAmb IAmb 13 16 36.7
comp=Z,20nm,1.1s
N31M Braeburn, Yuko 80.62 336 P P 13 16 34.2 -0.4
baz=124
PMTG Montargil 80.62 49 *e*P **P 13 16 35.7 +0.7**
comp=Z,24nm,1.1s
EVO Evora 80.63 49 *e*P **P 13 16 35.9 +0.9**
PCAS Casmilo, Conde 80.71 48 *e*P **P 13 16 36.6 +1.1**
HYT Haines Junctio 80.96 335 P P 13 16 36.2 -0.3
baz=122
PESTR Estremoz 81.04 49 *e*P **P 13 16 38.3 +1.0**
TROLL Troll, Antarti 81.13 162 P P 13 16 36.7 -0.5
N30M Aishikik Lake 81.13 336 P P 13 16 37.3 0.0
baz=123,SNR=6.7
O29M Mount Kennedy 81.14 335 P P 13 16 37.4 0.0
baz=121
PNL Peninsula 81.16 334 P P 13 16 37.3 -0.2
baz=120
PVIS Viseu 81.35 47 *e*P **P 13 16 39.6 +0.7**
comp=Z,40nm,1.4s
YUK6 Outpost Mounta 81.38 335 P P 13 16 38.7 -0.1
baz=121
PCBR Castelo Branco 81.40 48 *e*P **P 13 16 39.7 +0.6**
comp=Z,23nm,1.7s
MTE Manteigas 81.51 47 *e*P **P 13 16 40.3 +0.5**
comp=Z,49nm,1.8s
POLO Lamas de Olo 81.61 46 *e*P **P 13 16 39.3 -1.0**
comp=Z,23nm,1.8s
PVRL Vila Real 81.64 47 *e*P **P 13 16 40.9 +0.5**
comp=Z,47nm,1.7s
YUK4 Talbot Arm 81.71 335 P P 13 16 40.7 +0.2
baz=121
MDT Midelt 81.81 55 LR LR 13 53 00.9
comp=Z,86nm,18.1s,baz=282,slow=36
RES Resolute Bay 82.05 356 P P 13 16 40.8 -1.0
comp=Z,4.5nm,1.0s,baz=244,slow=5.5,SNR=3.3
comp=Z,4.5nm,1.0s
O28M Mount Upton 82.06 335 P P 13 16 43.1 +0.6
baz=120
MVO Moncorvo 82.11 47 *e*P **P 13 16 43.5 +0.6**
comp=Z,31nm,1.7s
YUK8 Steele Glacier 82.14 335 P P 13 16 42.9 +0.1
baz=120
M29M Somme Creek 82.21 336 P P 13 16 43.8 +0.8
baz=122,SNR=10
L29M L29M 82.43 337 P P 13 16 44.5 +0.4
baz=122,SNR=12
MESA MESA 82.54 334 P P 13 16 43.6 -1.3
baz=118
K29M Barlow Dome 82.59 338 P P 13 16 45.3 +0.3
baz=122
CTG Chitna Glacier 82.65 334 P P 13 16 45.9 +0.5
baz=119
YUK3 Moose Creek 82.67 335 P P 13 16 46.2 +0.6
baz=120,SNR=6.6
WAX Waxell Ridge 83.06 334 P P 13 16 48.6 +1.2
QSPA South Pole Qui 83.09 180 LR LR 13 49 37.3
comp=Z,72nm,18.9s,baz=142,slow=33
QSPA South Pole Qui 83.09 180 P P 13 16 47.9 +0.3
QSPA IAmb IAmb 13 16 49.4
comp=Z,22nm,1.1s
BGLC Bering Glacier 83.10 333 P P 13 16 47.7 +0.2
baz=117
BVCY Beaver Creek 83.15 336 P P 13 16 49.0 +1.1
baz=119
F31M Tsiigehtchic 83.35 342 P P 13 16 48.8 +0.2
baz=126
DAWY Dawson 83.41 338 P P 13 16 49.0 -0.2
DAWY Dawson 83.41 338 P P 13 16 49.5 +0.3
baz=121
M27K Edge Creek, AK 83.54 336 P P 13 16 50.3 +0.3
M27K IAmb IAmb 13 16 51.6
comp=Z,13nm,1.1s
M27K Edge Creek, AK 83.54 336 P P 13 16 50.3 +0.3
baz=118,SNR=5.5
MCARA McCarthy VSAT 83.56 334 P P 13 16 50.6 +0.7
baz=117
PAB San Pablo 83.65 49 P P 13 16 51.2 +0.2
PAB IAmb IAmb 13 16 52.8
comp=Z,22nm,1.2s
BORG Borgarnes 83.65 22 LR LR 13 53 21.4
comp=Z,32nm,19.8s,baz=244,slow=35
VRDI Verde Repeater 83.68 334 P P 13 16 50.8 +0.1
VRDI IAmb IAmb 13 16 52.1
comp=Z,12nm,1.0s
I29M Ogilvie Camp, 83.69 339 P P 13 16 50.7 +0.1
baz=122
EPYK Eagle Plains 83.69 340 P P 13 16 50.5 0.0
EPYK IAmb IAmb 13 16 51.9
comp=Z,18nm,1.1s
EPYK Eagle Plains 83.69 340 P P 13 16 50.8 +0.3
baz=124
TOA0 Torodi Ar. Sit 83.76 76 P P 13 16 51.2 -0.7
TOA0 IAmb IAmb 13 16 52.8
comp=Z,9.6nm,0.9s
TORD Torodi Ar. Bea 83.76 76 P P 13 16 51.7 -0.2
comp=Z,10nm,0.9s,baz=278,slow=5.1,SNR=43
TORD LR LR 13 52 35.8
comp=Z,258nm,21.3s,baz=220,slow=34
comp=Z,10nm,0.9s
TORD Torodi Ar. Bea 83.76 76 P P 13 16 51.0 -0.9
TORD IAmb IAmb 13 16 53.3
comp=Z,9.8nm,0.9s
INK Inuvik 83.80 343 LR LR 13 57 26.8
comp=Z,79nm,18.7s,baz=29,slow=38
INK Inuvik 83.80 343 P P 13 16 51.5 +0.5
baz=127
BCAR Beaver Creek A 83.84 336 P P 13 16 51.6 +0.2
L27K Beaver Creek, 83.86 336 P P 13 16 51.6 +0.2
L27K IAmb IAmb 13 16 53.5
comp=Z,8.0nm,0.9s
L27K Beaver Creek, 83.86 336 P P 13 16 52.0 +0.5
baz=118,SNR=7.7
GLB Gilahina Butte 83.93 334 P P 13 16 51.4 -0.4
GLB IAmb IAmb 13 17 25.7
comp=Z,28nm,1.8s
ESDC Sonseca Array 83.97 49 P P 13 16 53.2 +0.6
comp=Z,13nm,0.9s,baz=270,slow=5.1,SNR=68
ESDC LR LR 13 52 00.7
comp=Z,79nm,20.4s,baz=246,slow=34
comp=Z,13nm,0.9s
ESDC Sonseca Array 83.97 49 P P 13 16 52.7 +0.1
ESDC IAmb IAmb 13 16 54.5
comp=Z,17nm,1.1s
ESBB Sonseca Array 83.97 49 P P 13 16 53.0 +0.4
M26K Nabesna, AK 84.02 335 P P 13 16 52.2 -0.1
baz=117
BMRM Bremner River 84.06 334 P P 13 16 52.4 -0.1
baz=116
A36M Sachs Harbour 84.09 347 P P 13 16 52.1 -0.3
baz=135
Q23K Middleton Isla 84.20 332 P P 13 16 53.5 +0.3
baz=114
K27K Chicken 84.42 337 P P 13 16 54.5 +0.2
baz=118
EGAK Eagle 84.43 338 P P 13 16 54.2 0.0
EGAK Eagle 84.43 338 P P 13 16 54.5 +0.3
baz=119,SNR=12
L26K Log Cabin Wild 84.45 336 P P 13 16 54.5 +0.1
baz=117
KLU Klutina 84.86 334 P P 13 16 56.6 -0.1
baz=115
P23K Montague Islan 84.92 332 P P 13 16 57.1 +0.3
baz=113
HARP HAARP 84.92 335 P P 13 16 56.1 -0.8
baz=115
I27K Kandik River 85.01 339 P P 13 16 57.4 +0.2
baz=119
GLI Glacier Island 85.13 333 P P 13 16 57.8 -0.1
baz=114
SCRK Sand Creek 85.14 337 P P 13 16 58.1 0.0
baz=117
J26L Joseph Creek 85.22 337 P P 13 16 58.2 -0.1
J26L IAmb IAmb 13 16 59.6
comp=Z,9.3nm,0.9s
J26L Joseph Creek 85.22 337 P P 13 16 58.2 -0.1
baz=117,SNR=7.1
M24K Tolsona, Glenn 85.23 334 P P 13 16 58.4 0.0
baz=114
H27K Steamboat Moun 85.28 339 P P 13 16 59.0 +0.4
baz=119
PAX Paxson 85.30 335 P P 13 16 58.8 0.0
PAX IAmb IAmb 13 16 59.6
comp=Z,9.6nm,1.1s
PAX Paxson 85.30 335 P P 13 16 58.9 +0.2
baz=115
RIDG Independent Ri 85.38 336 P P 13 16 59.3 +0.1
RIDG IAmb IAmb 13 17 00.4
comp=Z,17nm,1.2s
RIDG Independent Ri 85.38 336 P P 13 16 59.1 0.0
baz=116
I26K Coal Creek Min 85.43 338 P P 13 16 59.0 -0.2
baz=118
G27K Doyon Strip 85.61 340 P P 13 16 59.9 -0.3
baz=119
SCM Sheep Creek Mo 85.62 334 P P 13 17 00.4 0.0
baz=113
PWL Port Wells 85.68 333 P P 13 16 59.9 -0.7
baz=112
M23K Glacier View 85.77 334 P P 13 17 01.1 0.0
baz=113
K24K Donnelly Dome 85.78 336 P P 13 17 01.4 +0.3
baz=115
SEW Seward 85.91 332 P P 13 17 03.0 +1.3
baz=111
KNK Knik Glacier 85.95 333 P P 13 17 02.2 +0.2
baz=112
J25K Salcha River, 85.96 337 P P 13 17 01.7 -0.3
J25K IAmb IAmb 13 17 03.2
comp=Z,7.3nm,1.1s
J25K Salcha River, 85.96 337 P P 13 17 01.8 -0.3
baz=115
SML Sawmill 86.05 334 P P 13 17 02.3 -0.2
baz=112
WAT6 Susitna Watana 86.09 335 P P 13 17 03.1 +0.3
baz=113
DHY Denali Highway 86.13 335 P P 13 17 03.2 +0.2
baz=114
E27K Coleen River 86.26 341 P P 13 17 03.9 +0.5
baz=119
PMR Palmer 86.32 333 P P 13 17 04.3 +0.6
baz=112
BRSE Bradley Lake S 86.39 331 P P 13 17 04.2 0.0
baz=110
PRP Porcupine Dome 86.41 338 P P 13 17 05.2 +0.9
baz=115
G26K Porcupine Rive 86.42 339 P P 13 17 03.4 -0.7
baz=117
HDA Harding Lake 86.50 336 P P 13 17 04.8 +0.2
baz=114
WAT1 Susitna Watana 86.53 335 P P 13 17 04.9 +0.1
baz=112
ILAR Eielson Array 86.62 337 P P 13 17 04.9 -0.3
comp=Z,2.9nm,0.9s,baz=152,slow=3.8,SNR=19
ILAR PP **PP 13 20 29.5 +1.9**
comp=Z,0.2nm,0.6s,baz=112,slow=6.9,SNR=2.2
ILAR LR LR 14 01 39.4
comp=Z,28nm,18.6s,baz=95,slow=40
comp=Z,2.9nm,0.9s
ILAR Eielson Array 86.62 337 P P 13 17 04.3 -0.9
KDAK Kodiak Island 86.64 329 LR LR 13 52 48.5
comp=Z,42nm,20.8s,baz=118,slow=34
KDAK Kodiak Island 86.64 329 P P 13 17 05.7 +0.4
baz=109
HOM Homer 86.79 331 P P 13 17 06.8 +0.8
baz=110
M22K Willow 86.81 333 P P 13 17 05.8 -0.3
baz=111
OHAK Old Harbor 86.82 329 P P 13 17 06.4 +0.2
baz=108
H25K Birch Creek 86.84 338 P P 13 17 07.4 +1.2
baz=115,SNR=6.1
F26K Sheenjek River 86.88 340 P P 13 17 07.0 +0.6
baz=117
RND Reindeer 86.88 335 P P 13 17 06.8 +0.2
RND IAmb IAmb 13 17 07.8
comp=Z,13nm,1.0s
BMAR Burnt Mountain 86.91 340 P P 13 17 06.8 +0.2
POKR Poker Plat Res 86.98 337 P P 13 17 07.4 +0.5
baz=114
WRH Wood River Hil 86.98 336 P P 13 17 07.4 +0.5
WRH IAmb IAmb 13 18 19.0
comp=Z,7.2nm,0.9s

MCK	McKinley	87.04 335	P	P	13 17 07.5 +0.3
	baz=112				
COLA	College	87.04 337	P	P	13 17 07.9 +0.8
	baz=113				
SII	Sitkinak Islan	87.09 328	P	P	13 17 07.5 -0.2
	baz=107				
CUT	Chulitna	87.11 334	P	P	13 17 08.1 +0.6
	baz=111				
G25K	Bearman Lake	87.16 339	P	P	13 17 08.7 +1.0
	baz=115				
MDM	Murphy Dome	87.22 337	P	P	13 17 07.9 -0.2
F25K	Christian Rive	87.35 340	P	P	13 17 09.1 +0.4
	baz=115				
O20K	Slope Mountain	87.39 331	P	P	13 17 09.3 +0.2
	baz=109				
NEA2	Nenana	87.42 336	P	P	13 17 08.7 -0.3
NEA2	Nenana	87.42 336	P	P	13 17 09.6 +0.5
	baz=112				
H24K	Noodor Dome	87.43 338	P	P	13 17 09.8 +0.6
	baz=113,SNR=5.3				
TRF	Thorofare Moun	87.50 335	P	P	13 17 09.7 +0.1
	baz=111				
SKT	Skwentna	87.52 333	P	P	13 17 09.3 -0.3
SKT	Skwentna	87.52 333	P	P	13 17 10.3 +0.7
	baz=110				
E25K	Arctic Village	87.55 340	P	P	13 17 10.5 +0.9
	baz=115				
N20K	Mount Spurr	87.56 333	P	P	13 17 10.5 +0.6
	baz=109				
SPCR	Spurr Chakacha	87.57 333	P	P	13 17 10.8 +0.8
	baz=109				
C27K	Jago River	87.62 342	P	P	13 17 11.2 +1.3
	baz=117				
G24K	Hadweenzic Riv	87.63 338	P	P	13 17 10.9 +0.9
	baz=114,SNR=6.0				
I23K	Minto, Yukon-K	87.74 337	P	P	13 17 10.3 -0.2
	baz=112				
BPAW	Bear Paw Mtn.	88.02 335	P	P	13 17 11.2 -0.7
BPAW	Bear Paw Mtn.	88.02 335	P	P	13 17 11.5 -0.4
	baz=110				
H23K	Yukon River	88.06 337	P	P	13 17 12.3 +0.1
H23K			IAmb	IAmb	13 17 38.3
	comp=Z,18nm,1.6s				
H23K	Yukon River	88.06 337	P	P	13 17 11.7 -0.4
	baz=112				
F24K	Squaw Lake	88.10 339	P	P	13 17 13.3 +1.0
	baz=113				
PPLA	Purkeypile	88.11 334	P	P	13 17 12.7 +0.1
PPLA	Purkeypile	88.11 334	P	P	13 17 12.4 -0.2
	baz=109				
C26K	Camden Bay	88.12 342	P	P	13 17 12.8 +0.5
	baz=116				
Q18K	Katmai Hardscr	88.12 330	P	P	13 17 12.1 -0.5
	baz=106				
M20K	Styx River	88.20 333	P	P	13 17 12.8 -0.1
	baz=108				
MLY	Manley	88.24 336	P	P	13 17 12.4 -0.7
MLY	Manley	88.24 336	P	P	13 17 13.1 +0.1
	baz=110				
CAST	Castle Rocks	88.24 335	P	P	13 17 12.4 -0.7
CAST	Castle Rocks	88.24 335	P	P	13 17 12.8 -0.2
	baz=109				
D25K	Kavik River	88.33 341	P	P	13 17 13.8 +0.4
	baz=115				
EKA	Eskdalemuir Ar	88.42 34	LR	LR	13 55 12.3
	comp=Z,84nm,18.6s,baz=191,slow=34				
P18K	Big Mountain,	88.44 330	P	P	13 17 14.3 +0.2
	baz=106				
Q17K	Contact Creek	88.46 329	P	P	13 17 14.4 +0.1
	baz=106				
CHUM	Lake Minchumin	88.49 335	P	P	13 17 13.7 -0.4
	baz=109				
N19K	Bonanza Creek	88.50 332	P	P	13 17 14.0 -0.4
	baz=107				
E24K	Your Creek	88.53 340	P	P	13 17 15.4 +1.0
	baz=113				
O18K	Koktuh Hills	88.56 331	P	P	13 17 14.8 +0.2
	baz=106				
G23K	Bananza Creek	88.57 338	P	P	13 17 15.8 +1.2
	baz=111,SNR=10.0				
L20K	Farewell, AK	88.72 334	P	P	13 17 14.9 -0.4
	baz=108				
M19K	Big River Lodg	88.78 333	P	P	13 17 15.8 +0.2
	baz=107				
I21K	Tanana	88.79 336	P	P	13 17 15.1 -0.4
	baz=109				
H22K	Ishtalitna Cre	88.79 337	P	P	13 17 15.2 -0.3
	baz=110				
COLD	Coldfoot	88.82 339	P	P	13 17 16.4 +0.8
	baz=111				
E23K	Chandalar	88.92 339	P	P	13 17 17.1 +0.9
	baz=112				
Q16K	King Salmon	88.96 329	P	P	13 17 16.5 +0.1
	baz=105				
VNDA	Vanda	89.02 191	P	P	13 17 17.1 +0.6
	comp=Z,2.1nm,0.8s,baz=134,slow=4.2,SNR=19				
VNDA			LR	LR	13 49 16.4
	comp=Z,77nm,20.4s,baz=102,slow=30				
	comp=Z,2.1nm,0.8s				
VNDA	Vanda	89.02 191	P	P	13 17 17.0 +0.5
D24K	Happy Valley	89.06 341	P	P	13 17 17.3 +0.6
	baz=112				
L19K	White Mountain	89.07 333	P	P	13 17 17.3 +0.4
	baz=107				
K20K	Telida	89.07 334	P	P	13 17 16.0 -0.9
K20K	Telida	89.07 334	P	P	13 17 16.8 -0.1
	baz=108				
TOLK	Toolik Lake Re	89.12 340	P	P	13 17 17.2 +0.1
TOLK	Toolik Lake Re	89.12 340	P	P	13 17 17.8 +0.7
	baz=112				
N18K	Kilae Creek	89.12 332	P	P	13 17 16.8 -0.4
N18K	Kilae Creek	89.12 332	P	P	13 17 17.3 0.0
	baz=106				
R16K	Pilot Point	89.15 328	P	P	13 17 18.1 +0.7
	baz=104				
G22K	Bettles	89.19 338	P	P	13 17 17.7 +0.3
	baz=110				
C24K	Franklin Bluff	89.24 341	P	P	13 17 18.0 +0.5
	baz=112				
H21K	Melozitna Rive	89.27 337	P	P	13 17 17.2 -0.6
H21K			IAmb	IAmb	13 17 30.1
	comp=Z,6.4nm,1.0s				
H21K	Melozitna Rive	89.27 337	P	P	13 17 17.7 -0.1
	baz=109				
CHGN	Chignik	89.29 327	P	P	13 17 18.4 +0.4
	baz=104				
J20K	Nowinta River	89.35 335	P	P	13 17 17.4 -0.8
J20K	Nowinta River	89.35 335	P	P	13 17 17.7 -0.4
	baz=107				
O17K	Koliganek Bris	89.46 330	P	P	13 17 18.8 +0.1
	baz=105				
CHNA	Chernabura Isl	89.60 325	P	P	13 17 20.4 +0.9
	baz=103				
F22K	John River	89.64 339	P	P	13 17 20.0 +0.5
	baz=109				
E22K	Anaktuvuk Pass	89.72 339	P	P	13 17 20.1 +0.2
	baz=110				
IMAR	Indian Mountai	89.74 337	P	P	13 17 19.8 -0.2
G21K	Allakaket	89.81 337	P	P	13 17 20.6 +0.2
	baz=108				
AFI	Afiamalu	89.85 256	LR	LR	13 49 16.0
	comp=Z,83nm,18.6s,baz=146,slow=30				
C23K	Itkillik River	89.90 341	P	P	13 17 20.7 +0.1
	baz=111				
O16K	Kokwok River B	89.91 330	P	P	13 17 21.0 +0.2
	baz=104				
GCSA	Galena City Sc	90.65 335	P	P	13 17 25.2 +1.0
	baz=105				
JMIC	Jan Mayen	90.71 18	LR	LR	13 54 17.7
	comp=Z,16nm,20.2s,baz=232,slow=33				
FALS	False Pass	91.78 325	P	P	13 17 30.5 +0.8
	baz=100				
RAO	Raoul Island	93.29 240	LR	LR	13 49 52.9
	comp=Z,73nm,20.6s,baz=103,slow=29				
UNV	Unalaska Valle	93.42 324	P	P	13 17 37.6 +0.4
	baz=97				
ANM	Nome	94.20 334	P	P	13 17 40.9 +0.3
	baz=97				
NIKH	Nikolski High	94.72 323	P	P	13 17 42.9 -0.4
	baz=95				
TSUM	Tsumeb	95.02 110	LR	LR	13 59 33.4
	comp=Z,260nm,18.7s,baz=116,slow=35				
DAVOX	Davos/Dischmat	95.11 44	P	P	13 17 44.5 -1.1
	comp=Z,0.7nm,0.5s,baz=302,slow=9.5,SNR=3.1				
DAVOX			LR	LR	14 00 17.6
	comp=Z,35nm,18.0s,baz=263,slow=35				
	comp=Z,0.7nm,0.5s				
TNA	Tin City	95.38 335	P	P	13 17 45.6 -0.4
	baz=95				
SUR	Sutherland	95.51 123	LR	LR	13 59 35.0
	comp=Z,129nm,18.3s,baz=248,slow=35				
URZ	Urewera	95.55 231	LR	LR	13 52 14.5
	comp=Z,202nm,20.0s,baz=223,slow=30				
SPIA	Saint Paul Isl	95.86 327	P	P	13 17 47.9 -0.5
	baz=94				
NOA	NORSAR Array B	96.77 29	LR	LR	13 58 42.1
	comp=Z,37nm,21.0s,baz=260,slow=34				
HFS	Hagfors	97.98 30	LR	LR	13 59 48.7
	comp=Z,70nm,19.8s,baz=260,slow=34				
SPITS	Spitsbergen Ar	98.17 12	LR	LR	14 06 28.2
	comp=Z,26nm,18.1s,baz=242,slow=38				
DZM	Mont Dzumac	108.64 244	eLR	LR	13 54 48.6
	comp=Z,320nm,29.4s				
H11S2	WAKE ISLAND Hyl	14.05 287	T	T	15 26 32.1
	baz=90,slow=75,SNR=9.6				
H11S1	WAKE ISLAND Hyl	14.06 287	T	T	15 26 35.2
	baz=90,slow=75,SNR=9.1				
H11S3	WAKE ISLAND Hyl	14.07 287	T	T	15 26 34.9
	baz=90,slow=75,SNR=6.7				
ZAA0	Zalesovo Array	131.65 12	PKPdf	PKPdf	13 23 33.7 -1.1
ZALV	Zalesovo Beam	131.65 12	PKP	PKPdf	13 23 34.4 -0.3
	comp=Z,10nm,1.0s,baz=318,slow=2.0,SNR=25				
ZALV	Zalesovo Beam	131.65 12	PKPdf	PKPdf	13 23 33.8 -1.0
ASAR	Alice Springs	134.84 226	PKhKP	PKPpre	13 23 34.4
	comp=Z,0.3nm,0.9s,baz=129,slow=2.5,SNR=5.2				
ASAR		PKP		PKPdf	13 23 41.0 -0.7
	comp=Z,0.5nm,0.7s,baz=110,slow=1.6,SNR=7.3				
WRA	Warramunga Arr	136.72 231	PKP	PKPdf	13 23 44.4 -0.9
	comp=Z,1.9nm,1.0s,baz=134,slow=1.7,SNR=10				
WRA	Warramunga Arr	136.72 231	PKPdf	PKPdf	13 23 44.0 -1.3
MKAR	Makanchi Array	137.60 18	PKhKP	PKPpre	13 23 37.5
	comp=Z,0.2nm,0.7s,baz=350,slow=1.6,SNR=1.8				
MKAR		PKP		PKPdf	13 23 45.4 -0.8
	comp=Z,2.7nm,0.9s,baz=343,slow=0.9,SNR=12				
SONM	Songino Array	138.93 353	PKhKP	PKPpre	13 23 39.1
	comp=Z,0.4nm,0.6s,baz=352,slow=2.9,SNR=4.5				
SONM		PKP		PKPdf	13 23 48.1 -0.6
	comp=Z,2.2nm,0.8s,baz=352,slow=0.9,SNR=13				
KSRS	Korea Array	140.36 324	PKhKP	PKPpre	13 23 46.2
	comp=Z,0.4nm,0.5s,baz=44,slow=1.6,SNR=3.8				
KSRS		PKP		PKPdf	13 23 51.4 0.0
	comp=Z,1.9nm,0.8s,baz=58,slow=0.4,SNR=8.1				
WMQ	Urumqi	141.83 14	ePKP	PKPdf	13 23 54.4 +0.4
HHC	Hu-ho-hao-te	144.70 344	ePKP	PKPdf	13 23 59.6 +0.4
BTO	Baotou	145.32 346	ePKPbc	PKPbc	13 23 58.8 -1.2
HNS	HongShan	146.84 338	PKPbc	PKPbc	13 24 04.3 -0.3
GTA	Gaotai	147.74 360	ePKPbc	PKPdf	13 24 04.8 +0.4
NJ2	Nanjing	149.40 327	ePKPbc	PKPdf	13 24 08.0 +0.9
LZH	Lanzhou	150.82 353	⇓PKPbc	PKPdf	13 24 12.1 +2.6
LZH		sPKP			13 24 28.8
XAN	Xi'an	151.81 344	⇑PKPbc	PKPbc	13 24 16.3 -1.0
XAN		PKPab		sPKPdf	13 24 30.0 +1.9
CD2	Chengdu	155.93 352	PKP	PKPdf	13 24 15.0 -1.9
HYBB	Hyderabad (bro	156.84 62	ePKPdf	PKPdf	13 24 16.4 -1.9
PZH	PanZhiHua	160.52 355	PKP	PKPdf	13 24 19.4 -3.2
CMAR	Chiang Mai Arr	168.59 4	PKPab	PKPab	13 25 38.2 -0.9
	comp=Z,2.8nm,0.9s,baz=334,slow=5.4,SNR=13				

*NEIC **16** 13:18:01.7±2.5, 39.°79N±0.°06×20.°66E±0.°06, h10km±1km, mb4.3/7, Error ellipse: s-maj=10.3km s-min=7.4km az=23.0*

*THE **16** 13:18:02.6, 39.°75N×20.°70E, h0km±3km, ML3.8/10, Error ellipse: s-maj=3.0km s-min=0.9km az=287.0*

*PDG **16** 13:18:02.3±0.5, 39.°78N×20.°59E, h16km, ML3.7/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*IDC **16** 13:18:02.7±4.6, 39.°78N×20.°76E, h26km±33km, mb3.8/13, mbtmp3.8/20, ML3.4/5, MS3.4/9, Error ellipse: s-maj=15.9km s-min=13.5km az=151.0*

*ATH **16** 13:18:02.6, 39.°75N×20.°69E, h12km±2km, ML3.6/11, Error ellipse: s-maj=2.1km s-min=0.8km az=312.0*

*BEO **16** 13:18:02.7±0.4, 39.°60N×20.°62E, h24km±3km, ML3.4/8*

*LDG **16** 13:18:02.8±0.6, 39.°78N×20.°75E, h10km, Ml3.8/12, Error ellipse: s-maj=16.8km s-min=10.9km az=26.0*

ISC 16 13:18:02.2±0.7, 39.75N±0.02×20.69E±0.02, h17km±5km, n248, σ1≟44/294, mb4.0/16, MS4.0/7, 13C-20D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAN	Janina	0.16	126	P		Pg		13 18 05.9	-0.6
JAN				S		Sg		13 18 09.2	-0.2
	62μm,0.4s								
JAN	Janina	0.16	126	P		Pg		13 18 05.9	-0.6
JAN				S		Sg		13 18 09.1	-0.3
JAN				AML		AML		13 18 09.6	
JAN				AML		AML		13 18 14.6	
	comp=N,64960μm,0.4s								
IGT	Igoumenitsa	0.35	232	P		Pg		13 18 09.3	-0.2
IGT				S		Sg		13 18 15.5	+1.1
	comp=N,18μm,0.6s								
IGT	Igoumenitsa	0.35	232	ePg		Pg		13 18 09.7	+0.2
IGT				eSg		Sb		13 18 16.2	+1.1
IGT	Igoumenitsa	0.35	232	P		Pg		13 18 09.4	-0.1
IGT				S		Sg		13 18 15.0	+0.6
IGT				AML		AML		13 18 18.4	
	comp=N,31813μm,0.2s								
IGT				AML		AML		13 18 18.6	
	comp=E,40614μm,0.4s								
LSK	Leskovik	0.41	351	P		Pb		13 18 10.8	-0.2
LSK				S		Sb		13 18 16.4	-0.5
	comp=E,20μm,0.8s								
SRN	Sarande	0.54	284	P		Pg		13 18 12.9	-0.1
SRN				S		Sb		13 18 21.5	+0.8
	comp=E,17μm,0.4s								
KPRO	Kipourio	0.56	68	P		Pg		13 18 13.3	-0.1
KPRO				S		Sb		13 18 21.8	+0.5
	comp=E,15μm,0.5s								
PENT	Pentalofos	0.57	38	P		Pg		13 18 13.3	-0.2
PENT	Pentalofos	0.57	38	P		Pg		13 18 13.3	-0.2
PENT				S		Sb		13 18 21.9	+0.3
KASA	Kassiopi	0.58	270	P		Pg		13 18 13.4	-0.2
KASA				S		Sg		13 18 22.2	+0.8
KASA				AML		AML		13 18 24.2	
	comp=N,17843μm,0.3s								
KASA				AML		AML		13 18 25.3	
	comp=E,16617μm,0.5s								
KEK	Kerkira	0.68	267	Pg		Pg		13 18 14.7	-0.9
KEK	Kerkira	0.68	267	P		Pg		13 18 15.0	-0.6
KEK	Kerkira	0.68	267	P		Pg		13 18 15.0	-0.6
KEK				S		Sg		13 18 25.1	+0.4
KEK				AML		AML		13 18 30.5	
	comp=E,13258μm,0.4s								
KEK				AML		AML		13 18 30.9	
	comp=N,13310μm,0.4s								
NEST	Nestorio	0.72	23	P		Pg		13 18 16.2	-0.2
NEST	Nestorio	0.72	23	P		Pg		13 18 16.2	-0.2
NEST				S		Sb		13 18 27.1	+1.1
NEST				AML		AML		13 18 31.3	
	comp=E,5795μm,0.3s								
NEST				AML		AML		13 18 32.1	
	comp=N,5409μm,0.5s								
KBN	Korca	0.88	5			Pg		13 18 18.3	-1.0
KBN	Korca	0.88	5	P		Pg		13 18 18.6	-0.7
TSLK	Tsoukalades, L	0.92	181	P		Pg		13 18 19.6	-0.5
TSLK	Tsoukalades, L	0.92	181	P		Pg		13 18 20.0	-0.1
TSLK				S		Sg		13 18 32.6	+0.3
TSLK				AML		AML		13 18 40.0	
	comp=E,12802μm,0.6s								
TSLK				AML		AML		13 18 40.5	
	comp=N,10019μm,0.8s								
LKD2	Lefkada island	0.96	181	P		Pb		13 18 20.3	0.0
LKD2	Lefkada island	0.96	181	P		Pb		13 18 20.7	+0.3
LKD2				S		Sg		13 18 34.2	+0.8
LKD2				AML		AML		13 18 39.9	
	comp=E,5398μm,0.5s								
LKD2				AML		AML		13 18 45.8	
	comp=N,6977μm,0.5s								
KZN	Kozani	1.00	56	P		Pg		13 18 20.5	-1.2
KZN	Kozani	1.00	56	P		Pg		13 18 20.9	-0.7
KZN				S		Sn		13 18 35.5	+0.2
KZN				AML		AML		13 18 38.8	
	comp=N,4996μm,0.6s								
KZN				AML		AML		13 18 39.6	
	comp=E,5315μm,0.7s								
NYDR	Nydri-Lefkada	1.03	179	P		Pb		13 18 21.2	-0.4
DRAG	Dragano-Lefkad	1.07	185	P		Pb		13 18 22.0	-0.2
EVGI	Lefkada island	1.13	181	P		Pb		13 18 23.2	0.0
VLO	Vlora	1.16	309			Pg		13 18 25.4	+0.8
VLO	Vlora	1.16	309	P		Pg		13 18 26.2	+1.6
TYRN	Tyrnavos	1.19	91	P		Pn		13 18 23.7	-0.4
TYRN				S		Sb		13 18 40.6	+1.1
	comp=E,6μm,0.6s								
EVR	Evrytania	1.20	133	P		Pn		13 18 24.4	+0.1
EVR	Evrytania	1.20	133	P		Pn		13 18 24.9	+0.6
EVR				AML		AML		13 18 50.8	
	comp=E,2970μm,0.5s								
EVR				AML		AML		13 18 50.8	
	comp=N,3256μm,0.6s								
KTI	Kastanea	1.27	59	P		Pn		13 18 25.7	+0.4
FSK	Fiskardo	1.29	184	P		Pb		13 18 27.1	+1.1
FSK				S		Sb		13 18 43.9	+1.7
	comp=N,2μm,0.3s								
PVO	Paravola	1.31	150	P		Pb		13 18 27.5	+1.3
PVO				S		Sg		13 18 47.5	+3.1
	comp=N,2μm,0.6s								
MAKR	Makrakomi, Fth	1.34	123	P		Pn		13 18 27.4	+1.3
MAKR				S		Sg		13 18 49.1	+3.6
	comp=N,4μm,0.6s								
MAKR	Makrakomi, Fth	1.34	123	P		Pn		13 18 27.4	+1.3
MAKR				AML		AML		13 18 52.6	
	comp=N,7231μm,0.6s								
MAKR				AML		AML		13 18 54.6	
	comp=E,8964μm,0.5s								
OHR	Ohrid	1.36	4	ePg		Pg		13 18 28.7	+0.2
OHR				eSg		Sg		13 18 50.9	+4.6
OHR	Ohrid	1.36	4	i Pn		Pg		13 18 28.8	+0.3
LIT	Litokhoron	1.43	75	Pn		Pn		13 18 27.5	+0.1
LIT	Litokhoron	1.43	75	P		Pn		13 18 28.1	+0.7
LIT				S		Sg		13 18 49.8	+1.3
	comp=E,2μm,0.6s								
LIT	Litokhoron	1.43	75	P		Pn		13 18 28.1	+0.7
LIT				AML		AML		13 18 52.6	
	comp=N,2600μm,0.4s								
LIT				AML		AML		13 18 54.4	
	comp=E,3985μm,0.4s								
KEF4	Livadi, Kephal	1.50	188	P		Pn		13 18 30.0	+1.7
DMLN	Damoulianata-K	1.53	189	P		Pn		13 18 30.2	+1.5
VLS	Valsamata	1.57	183	P		Pn		13 18 31.0	+1.7
EFP	Efpalio	1.63	144	P		Pb		13 18 32.9	+1.2
PSDA	Pessada-Kefalo	1.63	183	P		Pn		13 18 32.2	+2.1
TIR	Tirane	1.71	339	⇓P		Pb		13 18 33.5	+0.3
TIR	Tirane	1.71	339			Pb		13 18 33.0	-0.2
TIR	Tirane	1.71	339	P		Pb		13 18 33.6	+0.3
TIR	Tirane	1.71	339	ePn		Pb		13 18 33.7	+0.5
TIR				eSn		Sb		13 18 55.2	+0.7
SCTE	Santa Cesarea	1.74	281			Pn		13 18 32.3	+0.8
PHP	Peshkopia	1.94	355	P		Pb		13 18 37.2	+0.1
VAY	Valandovo	2.13	42	ePn		Pn		13 18 37.9	+1.0
VAY				eSn		Sb		13 19 06.6	+0.2
VAY	Valandovo	2.13	42	i Pn		Pn		13 18 38.4	+1.4
STIP	Stip	2.25	30	i Pn		Pb		13 18 42.7	+0.3
SKO	Skopje	2.29	14	ePn		Pn		13 18 41.1	+1.9
SKO				eSn		Sb		13 19 11.9	+0.8
SKO	Skopje	2.29	14	i Pn		Pb		13 18 41.8	-1.3
ULC	Ulcinj	2.47	334	ePn		Pn		13 18 42.3	+0.7
ULC				i Sn		Sn		13 19 13.2	+1.9
SRS	Serrai	2.61	57	ePn		Pn		13 18 44.5	+1.0
SRS				eSn		Sb		13 19 18.9	-1.2
DRME	Dracevica, Mon	2.69	335	ePn		Pn		13 18 45.7	+1.1
DRME	Dracevica, Mon	2.69	335	ePn		Pn		13 18 45.4	+0.8
DRME				i Sn		Sn		13 19 18.6	+1.9
ITM	Ithomi	2.74	159	Pn		Pn		13 18 48.2	+2.8
KKB	Krupnik	2.79	40	P		Pn		13 18 48.1	+2.0
BUM	Brajlici-Budva	2.89	333	ePn		Pn		13 18 48.1	+0.7
BUM				i Sn		Sn		13 19 23.3	+1.5
PDG	Podgorica	2.89	339	⇑P		Pn		13 18 48.3	+1.2
PDG	Podgorica	2.89	339	Pn		Pn		13 18 48.6	+1.2
TTG	Podgorica	2.89	339	ePn		Pn		13 18 48.2	+0.9
TTG				i Sn		Sn		13 19 23.5	+1.8
PVY	Plav	2.90	349	⇓i Pn		Pn		13 18 48.4	+0.8
PVY				i Sn		Sn		13 19 24.0	+2.0
MMB	Musomiste	2.96	51	P		Pn		13 18 51.4	+3.1
TIP	Timpagrande	3.09	261	⇑P		Pn		13 18 50.8	+0.6
TIP				⇓S		Sn		13 19 27.5	+0.7
TIP	Timpagrande	3.09	261	Pn		Pn		13 18 50.5	+0.3
CEME	Cevo	3.10	335	ePn		Pn		13 18 51.0	+0.7
CEME				i Sn		Sn		13 19 28.5	+1.6
HCY	Herceg Novi	3.16	329	ePn		Pn		13 18 51.3	+0.1
HCY	Herceg Novi	3.16	329	ePn		Pn		13 18 51.8	+0.6
HCY				i Sn		Sn		13 19 29.9	+1.4
IVA	Berane	3.18	349	ePn		Pn		13 18 52.3	+0.9
IVA				i Sn		Sn		13 19 30.8	+1.9
MATE	Matera	3.18	288	⇓P		Pn		13 18 51.8	+0.5
BARS	Barje	3.18	15	ePn		Pn		13 18 53.7	+2.3
KOME	Kolasin	3.22	345	ePn		Pn		13 18 52.9	+0.9
KOME				i Sn		Sn		13 19 31.8	+1.8
NKME	Niksic	3.29	337	⇓i Pn		Pn		13 18 53.6	+0.7
NKME				i Sn		Sn		13 19 33.1	+1.5
VTS	Vitosha	3.45	33	⇑P		Pn		13 18 57.4	+2.2
VTS				⇓S		Sn		13 19 37.5	+1.7
VTS	Vitosha	3.45	33	Pn		Pn		13 18 57.0	+1.8
VTS	Vitosha	3.45	33	P		Pn		13 18 58.2	+2.9
SELS	Selova	3.48	5	ePn		Pn		13 18 57.4	+1.8
BRY	Bratogost	3.54	334	ePn		Pn		13 18 56.8	+0.3
BRY	Bratogost	3.54	334	⇑i Pn		Pn		13 18 57.1	+0.6
BRY				i Sn		Sn		13 19 39.2	+1.2
SJES	Sjenica	3.55	352	ePn		Pn		13 18 59.3	+2.7
RZN	Rozhen	3.62	56	eP		Pn		13 19 01.0	+3.3
UPM	Unac-Piva	3.70	339	ePn		Pn		13 18 59.9	+1.2
UPM	Unac-Piva	3.70	339	⇓i Pn		Pn		13 18 59.4	+0.7
UPM				i Sn		Sn		13 19 43.3	+1.3
PLE	Pljevlja	3.71	345	ePn		Pn		13 18 59.6	+0.9
PLE				i Sn		Sn		13 19 43.7	+1.6
CUC	Castrocucco	3.75	275	Pn		Pn		13 19 00.2	+0.9
ZAPS	Zavoj	3.81	22	ePn		Pn		13 19 02.9	+2.8
STON	Ston	3.84	325	ePn		Pn		13 18 59.4	-1.1
PLD	Plovdiv	3.85	51	eP		Pn		13 19 03.5	+3.0
RDO	Rodhopi	3.96	68	eP		Pn		13 19 03.9	+1.9
RDO	Rodhopi	3.96	68			Pn		13 19 03.5	+1.4
BOVS	Bovan	3.96	11	⇑P		Pn		13 19 03.4	+1.3
BOVS	Bovan	3.96	11	ePn		Pn		13 19 03.2	+1.1
BOVS				eSn		Sn		13 19 50.9	+2.9
RUDO	Rudo	3.99	346	ePn		Pn		13 19 02.6	+0.1
CEL	Celeste	4.02	250			Pn		13 19 03.4	+0.5
GADA	Gvkgeada	4.03	82	eP		Pn		13 19 03.9	+0.8
SIGR	SIGRI	4.04	96	eP		Pn		13 19 04.4	+1.3
KDZ	Kurdzhali	4.07	61	eP		Pn		13 19 04.9	+1.3
KDZ	Kurdzhali	4.07	61	eP		Pn		13 19 05.8	+2.2
BOZC	Bozcaada	4.14	87	eP		Pn		13 19 05.3	+0.8
GRUS	Gruza

comp=E,4.3nm,0.6s
IDI Anoyia 5.57 142 Pn Pn 13 19 24.1 -0.1
INTR Introdacqua 5.61 296 Pn Pn 13 19 25.7 +0.8
BLY Banja Luka 5.63 334 *e*Pn Pn 13 19 24.2 -0.8
A052A Srbac 5.84 337 *e*Pn Pn 13 19 32.4 +4.5
GZR Gura Zlata 5.85 15 ⇑P Pn 13 19 29.6 +1.5
GZR ⇓S Sn 13 20 36.3 +1.6
BZS Buzias 5.91 6 ⇓P Pn 13 19 30.5 +1.7
BZS ⇓S Sn 13 20 36.8 +0.7
A051A Mrakovica 5.96 333 *e*Pn Pn 13 19 29.5 -0.1
AQU L'Aquila 6.09 298 Pn Pn 13 19 32.6 +1.2
LOT Lotru 6.13 21 ⇑P Pn 13 19 33.6 +1.5
CAMP Campotosto 6.16 299 Pn 13 19 33.4 +1.0
ARR Arges 6.33 26 ⇑P Pn 13 19 36.7 +2.0
NRCA Norcia 6.48 301 Pn 13 19 37.8 +1.0
VOIR 6.53 28 ⇑P Pn 13 19 39.7 +2.2
KOVH Kovagotottos 6.61 344 P Pn 13 19 38.5 0.0
KOVH S Sn 13 20 49.7 -3.8
MORH Mrgy, Hungar 6.63 348 ⇓P Pn 13 19 39.2 +0.4
MORH Mrgy, Hungar 6.63 348 P Pn 13 19 39.2 +0.4
CESX Cesi 6.75 298 Pn 13 19 40.5 +0.1
MLR Muntele Rosu 6.92 32 ⇓P Pn 13 19 44.2 +1.3
MLR Muntele Rosu 6.92 32 Pn Pn 13 19 42.9 0.0
comp=E,1.2nm,0.6s,baz=156,slow=18
MLR Sn Sn 13 21 06.2 +4.8
comp=E,0.4nm,0.3s,baz=175,slow=21,SNR=3.1
MLR Muntele Rosu 6.92 32 Pn Pn 13 19 45.2 +2.2
BOJS Bojanci 7.01 327 *e*Pn Pn 13 19 43.9 0.0
BOJS Bojanci 7.01 327 *i* Pn Pn 13 19 44.0 +0.1
MURB Monte Urbino 7.06 302 Pn 13 19 45.8 +1.1
CRES Cresnjev 7.19 329 *e*Pn Pn 13 19 46.1 -0.3
CRES Cresnjev 7.19 329 *i* Pn Pn 13 19 46.2 -0.3
DRGR 7.19 11 ⇓P Pn 13 19 48.3 +1.7
GBRS Gornja Briga 7.22 325 *i* Pn Pn 13 19 47.3 +0.4
LATE Laterza 7.28 296 Pn Pn 13 19 49.2 +1.4
COVR Voineasa-Covas 7.32 32 ⇑P Pn 13 19 49.9 +1.6
PLOR Plostina 7.51 34 ⇓P Pn 13 19 52.8 +2.0
CEY Cerknica 7.55 324 *e*Pn Pn 13 19 51.3 -0.1
VRI Vrincioaia 7.55 34 ⇓P Pn 13 19 53.7 +2.3
SKDS Skadanscina 7.60 322 *e*Pn Pn 13 19 50.7 -1.4
SOKA Soboth 8.06 331 *e*Pn Pn 13 19 57.8 -0.7
comp=E,4.4nm,0.3s
OBKA Obir 8.11 328 *e*Pn Pn 13 19 59.4 +0.3
OBKA Obir 8.11 328 *e*Pn Pn 13 19 58.3 -0.9
comp=E,1.9nm,0.2s,SNR=6.5
PSZ Piszkesteto 8.19 356 Pn Pn 13 20 00.0 -0.2
ARSA Arzberg 8.38 335 *e*Pn Pn 13 20 02.7 -0.2
comp=E,1.4nm,0.3s,SNR=4.6
PRED Cave del Predi 8.48 324 Pn Pn 13 20 03.3 -0.8
BUR08 Bucovina Ar. S 8.54 21 Pn Pn 13 20 04.3 -0.8
TEOL Teolo 8.70 313 Pn 13 20 05.9 -1.2
STAL STALIGIAL 8.74 321 Pn 13 20 06.8 -0.9
CLUD Cludinico 8.80 322 Pn Pn 13 20 07.6 -1.0
VLC Villacollemand 8.85 303 Pn Pn 13 20 08.5 -0.7
KBA Koelnbreinsper 9.06 326 *e*Pn Pn 13 20 12.3 0.0
comp=E,2.5nm,0.3s,SNR=4.7
CTI Castel Tesino 9.14 316 Pn 13 20 12.5 -0.8
ABTA Abfaltersbach 9.19 322 *e*Pn Pn 13 20 13.4 -0.5
comp=E,1.6nm,0.2s,SNR=7.7
PGF Pioggiola 9.25 291 *e*Pn Pn 13 20 18.3 +3.5
PGF *e*Sn Sn 13 21 53.9 -4.5
comp=E,0.6nm,0.3s
MOA Molln 9.33 332 *e*Pn Pn 13 20 15.6 -0.2
comp=E,2.1nm,0.2s
BIOA Bad Ischl, Aus 9.43 330 *e*Pn Pn 13 20 17.9 +0.7
comp=E,3.6nm,0.3s,SNR=4.5
MSSA Maissana 9.48 302 Pn Pn 13 20 18.6 +0.8
SALO Salr 9.50 311 Pn Pn 13 20 17.7 -0.5
KEST Kesra 9.83 249 Pn Pn 13 20 22.6 -0.2
comp=E,1.3nm,0.5s,baz=72,slow=9.6,SNR=1.3
WTTA Wattenberg 9.97 322 *e*Pn Pn 13 20 24.8 0.0
comp=E,3.6nm,0.3s,SNR=10
BRTR Keskin Array B 9.98 86 Pn Pn 13 20 24.6 -0.3
baz=265,slow=13,SNR=1.7
comp=E,0.2nm,0.4s
VRAC Vranov 9.99 344 LR LR 13 24 23.0
comp=E,43nm,20.8s,baz=156,slow=38
WATA Walderalm 10.05 322 *e*Pn Pn 13 20 26.7 +0.8
comp=E,3.0nm,0.3s,SNR=4.8
SQTA Sankt Quirin 10.15 320 *e*Pn Pn 13 20 27.4 +0.2
comp=E,5.4nm,0.3s,SNR=7.5
FUORN Ofenpass-Fuorn 10.24 315 Pn Pn 13 20 28.8 +0.2
FETA Feichten 10.26 318 *e*Pn Pn 13 20 29.3 +0.7
comp=E,0.8nm,0.3s
MOTA Moosalm 10.29 321 *i* Pn Pn 13 20 29.4 +0.3
comp=E,4.0nm,0.4s,SNR=5.2
GERES GERESS Array B 10.38 334 Pn Pn 13 20 30.9 +0.7
comp=E,0.4nm,0.3s,baz=161,slow=14,SNR=12
comp=E,0.6nm,0.3s
GERES GERESS Array B 10.38 334 Pn Pn 13 20 30.5 +0.3
RETA Reutte 10.55 320 *e*Pn Pn 13 20 32.4 -0.3
comp=E,0.8nm,0.2s
KHC Kasperske Hory 10.66 334 *e*PN Pn 13 20 35.6 +1.6
KHC *e*SN Sn 13 22 28.9 -4.1
SBF Sospel 10.71 297 *e*Pn Pn 13 20 37.0 +2.3
LMR La Mourre 11.21 293 *e*Pn Pn 13 20 44.4 +2.9
MBDF Montbardon 11.45 300 *e*Pn Pn 13 20 46.2 +1.3
MBDF *e*Sn Sn 13 22 43.4 -9.0
comp=E,2.3nm,0.4s
LPG La Plagne 11.76 304 *e*Pn Pn 13 20 49.1 -0.2
LPG *e*Sn Sn 13 22 46.5 -14
comp=E,4.4nm,0.4s
LPL La Plagne 11.78 304 *e*Pn Pn 13 20 51.6 +2.1
LPL *e*Sn Sn 13 22 46.5 -14
comp=E,6.8nm,0.5s
ORIF Oris-en-Rattie 12.11 300 *e*Pn Pn 13 20 51.3 -2.6
ORIF *e*Sn Sn 13 22 59.3 -9.2
comp=E,2.4nm,0.4s
BFO Black Forest 12.34 318 Pn Pn 13 20 55.6 -1.4
AKASG Malin Array Be 12.49 26 LR LR 13 26 47.9
comp=E,57nm,19.2s,baz=206,slow=42
CABF La Chapelle 12.66 308 *e*Pn Pn 13 21 01.0 -0.4
CABF *e*Sn Sn 13 23 10.2 -12
comp=E,1.1nm,0.4s
HINF Hinteralfeld 12.83 313 *e*Pn Pn 13 21 01.3 -2.4
HINF *e*Sn Sn 13 23 12.8 -13
comp=E,4.9nm,0.5s
CDF Champ du Feu 12.94 316 *e*Pn Pn 13 21 04.1 -1.2
HAU Haudompre 13.22 313 *e*Pn Pn 13 21 08.2 -0.7
HAU *e*Sn Sn 13 23 21.9 -14
comp=E,4.0nm,0.4s
SMF Signal de Mont 14.07 305 *e*Pn Pn 13 21 21.6 +0.9
SMF *e*Sn Sn 13 23 44.6 -12
comp=E,3.5nm,0.6s
LOR Lormes 14.32 307 *e*Pn Pn 13 21 24.8 +0.8
LOR *e*Sn Sn 13 23 50.5 -12
comp=E,2.2nm,0.3s
AVF Avril sur Loir 14.44 305 *e*Pn Pn 13 21 25.5 -0.1
ESDC Sonseca Array 18.95 278 P P 13 22 22.9 +0.4
comp=E,0.1nm,0.3s,baz=78,slow=11,SNR=4.2
comp=E,0.3nm,0.4s
HFS Hagfors 20.87 350 P P 13 22 42.1 -1.0
comp=E,3.7nm,0.7s,baz=169,slow=9.8,SNR=11
comp=E,3.7nm,0.7s
NC602 NORSAR Array S 21.77 348 P P 13 22 51.9 -0.8
NC602 IAmb IAmb 13 23 29.9
comp=Z,31nm,1.4s
FINES FINESS Array B 21.98 7 P P 13 22 52.8 -2.1
comp=Z,1.5nm,0.4s,baz=172,slow=11,SNR=22
comp=Z,1.5nm,0.4s
FINES FINESS Array B 21.98 7 P P 13 22 53.8 -1.1
FIA1 FINESS Array S 21.98 7 P P 13 22 53.6 -1.3
FIA1 IAmb IAmb 13 23 13.3
comp=Z,17nm,1.1s
NB201 NORSAR Array S 22.11 348 P P 13 22 55.3 -1.0
NB2 NORSAR Subarra 22.11 348 P P 13 22 55.4 -1.0
comp=Z,1.2nm,0.5s,baz=165,slow=11
NOA NORSAR Array B 22.11 348 P P 13 22 55.2 -1.2
comp=Z,3.2nm,0.9s,baz=150,slow=11,SNR=8.0
comp=Z,3.2nm,0.9s
EKA Eskdalemuir Ar 22.24 322 P P 13 22 57.0 -0.8
comp=Z,2.0nm,0.7s,baz=120,slow=9.9,SNR=4.9
comp=Z,2.0nm,0.7s
KIRV Kirov 26.28 35 P P 13 23 35.4 -0.9
comp=Z,7.0nm,0.5s,baz=292,slow=11,SNR=2.9
KIRV LR LR 13 33 31.3
comp=Z,32nm,18.5s,baz=268,slow=35
comp=Z,7.0nm,0.5s
ARU Arti 29.82 43 LR LR 13 37 07.3
comp=Z,21nm,19.9s,baz=36,slow=38
ARCES ARCESS Array B 29.96 3 P P 13 24 07.5 -1.7
comp=Z,1.1nm,0.6s,baz=189,slow=11,SNR=10
comp=Z,1.1nm,0.6s
TOA0 Torodi Ar. Sit 31.34 218 P P 13 24 21.6 -0.2
TOA0 IAmb IAmb 13 24 28.9
comp=Z,3.0nm,1.0s
TORD Torodi Ar. Bea 31.34 218 P P 13 24 21.2 -0.6
comp=Z,1.0nm,0.6s,baz=30,slow=9.2,SNR=7.9
comp=Z,1.0nm,0.6s
KKAR Karatay Array 37.07 68 P P 13 25 11.8 +0.5
MK31 Makanchi Array 44.39 60 P P 13 26 10.9 -0.7
MKAR Makanchi Array 44.39 60 P P 13 26 11.1 -0.5
comp=Z,2.2nm,0.4s,baz=280,slow=7.4,SNR=37
comp=Z,2.2nm,0.4s
ZALV Zalesovo Beam 44.56 49 P P 13 26 11.8 -1.1
comp=Z,0.8nm,0.3s,baz=283,slow=8.3,SNR=4.5
ZALV LR LR 13 46 54.6
comp=Z,25nm,18.3s,baz=110,slow=39
comp=Z,0.8nm,0.3s
WMQ Urumqi 48.90 62 *e*P P 13 26 50.1 +3.0
EUNU Eureka 54.00 348 P P 13 27 24.6 -0.2
EUNU IAmb IAmb 13 27 50.9
comp=Z,5.6nm,1.5s
SONM Songino Array 59.37 51 P P 13 28 02.1 -1.3
comp=Z,0.4nm,0.4s,baz=312,slow=8.7,SNR=4.3
comp=Z,0.4nm,0.4s
LBTB Lobatse 64.59 175 LR LR 14 00 51.5
comp=Z,166nm,20.8s,baz=248,slow=40
HHC Hu-ho-hao-te 66.05 56 *e*P P 13 28 47.0 -1.0
PZH PanZhiHua 67.04 74 P P 13 28 55.1 +0.5
BOSA Boshof 68.14 176 LR LR 14 01 16.5
comp=Z,140nm,19.6s,baz=202,slow=38
ILAR Eielson Array 75.36 355 P P 13 29 43.5 -0.7
comp=Z,0.5nm,1.0s,baz=19,slow=3.9,SNR=2.4
comp=Z,0.5nm,1.0s
KSRS Korea Array 78.24 51 P P 13 29 59.8 -1.1
comp=Z,0.8nm,0.6s,baz=286,slow=4.4,SNR=4.8
comp=Z,0.8nm,0.6s
MJAR Matsuhiro Arr 84.80 46 P P 13 30 34.1 -1.6
comp=Z,0.8nm,0.8s,baz=301,slow=1.7,SNR=2.4
MJAR LR LR 14 11 03.2
comp=Z,75nm,21.1s,baz=70,slow=38
comp=Z,0.8nm,0.8s
DAV Davao City (W) 96.82 75 LR LR 14 21 51.4
comp=Z,72nm,18.5s,baz=115,slow=40

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*IDC **16** 13:24:59.3±1.0,23°.17N×121°.43E,h0km,mb3.7/5,*
mbtmp3.6/7,ML3.2/2,MS3.2/2,Error ellipse: s-maj=32.7km
s-min=19.6km az=70.0
*JMA **16** 13:25:02.5±0.6,23°N±2°×12°2E±°,h4km±3km,MV3.6/13,*
TAIWAN REGION
*TAP **16** 13:25:03.4,23°.21N×121°.36E,h17km,ML4.1,C*
ISC 16 13:25:02.9±0.7,23°.17N±0°.01×121°.43E±0°.02,h20km±2km,
n150,σ1°36/225,mb3.5/5,15C-20D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung** baz=164	**0.10**	**221**	⇑P	**Pg**	**13 25 06.8**	**0.0**
CHKT				S	**Sg**	**13 25 09.5**	**+0.1**
ECBN	**Changbin** baz=47	**0.15**	**6**	⇑*i*P	**Pg**	**13 25 06.9**	**-0.4**
ECBN				S	**Sg**	**13 25 10.0**	**-0.4**
EYUL	**Yuli** baz=339	**0.20**	**329**	⇓*i*P	**Pg**	**13 25 08.2**	**+0.1**
EYUL				*i* S	**Sg**	**13 25 12.4**	**+0.7**
EHD	**Haiduan** baz=258	**0.21**	**264**	⇓*i*P	**Pb**	**13 25 05.6**	**-2.6**
EHD				*i* S	**Sb**	**13 25 08.7**	**-3.1**
ECS	**Chishang** baz=239	**0.21**	**249**	⇓*i*P	**Pg**	**13 25 08.7**	**+0.5**
ECS				S	**Sg**	**13 25 13.0**	**+1.2**
TWF1	**Yuli** baz=335	**0.22**	**325**	⇓*i*P	**Pb**	**13 25 08.1**	**-0.2**
TWF1				*i* S	**Sb**	**13 25 11.7**	**-0.3**
EDH	**Donghe** baz=186	**0.23**	**211**	P	**Pg**	**13 25 09.1**	**+0.6**
EDH				S	**Sg**	**13 25 13.4**	**+1.1**
YULB	**Yu-li** baz=338	**0.25**	**331**	⇓*i*P	**Pb**	**13 25 08.6**	**-0.3**
YULB				S	**Sb**	**13 25 12.3**	**-0.6**
HGSD	**Ruisui** baz=21	**0.32**	**358**	⇑P	**Pb**	**13 25 10.2**	**+0.3**
HGSD				S	**Sn**	**13 25 17.6**	**-0.9**
EHY	**Hungye** baz=342	**0.35**	**343**	⇓*i*P	**Pg**	**13 25 10.3**	**-0.1**
EHY				*i* S	**Sg**	**13 25 15.4**	**-0.1**
ELDTW	**Lidau** baz=266	**0.38**	**273**	⇓*i*P	**Pg**	**13 25 10.1**	**-1.0**
ELDTW				*i* S	**Sg**	**13 25 14.5**	**-2.1**
LONT	**Longtian** baz=215	**0.38**	**227**	⇑*i*P	**Pb**	**13 25 11.3**	**+0.3**
LONT				*i* S	**Sb**	**13 25 17.5**	**+1.1**
TWG	**Pinlang** baz=213	**0.48**	**224**	⇑*i*P	**Pg**	**13 25 12.5**	**-0.2**
TWG				*i* S	**Sg**	**13 25 19.6**	**+0.2**
EGFH	**Guangfu** baz=354	**0.50**	**359**	P	**Pg**	**13 25 13.0**	**+0.1**
EGFH				*e*S	**Sg**	**13 25 19.5**	**-0.3**
LDUT	**Ludao** baz=170	**0.50**	**176**	P	**Pb**	**13 25 13.8**	**+0.9**
LDUT				S	**Sn**	**13 25 22.2**	**-0.6**
YUS	**Yu-Shan** baz=300	**0.54**	**306**	⇓*i*P	**Pb**	**13 25 13.3**	**-0.8**
YUS				*i* S	**Sb**	**13 25 19.8**	**-1.8**
TEGC	**Jichi Village** baz=30	**0.55**	**10**	*e*P	**Pg**	**13 25 14.4**	**+0.7**
TEGC				*e*S	**Sn**	**13 25 24.2**	**+0.1**
STYH	**Taoyuan** baz=264	**0.60**	**270**	⇓P	**Pb**	**13 25 13.2**	**-1.5**
STYH				S	**Sb**	**13 25 20.5**	**-2.4**
STYT	**Tauyuan** baz=263	**0.62**	**269**	⇓*i*P	**Pb**	**13 25 14.5**	**-0.6**
STYT				*i* S	**Sb**	**13 25 22.0**	**-1.5**
VWDT	**VWDT** baz=339	**0.64**	**335**	⇓*i*P	**Pb**	**13 25 15.3**	**-0.1**
VWDT				*i* S	**Sb**	**13 25 23.0**	**-0.9**
ESL	**Shilin** baz=6.0	**0.64**	**360**	⇓P	**Pb**	**13 25 14.9**	**-0.5**
ALS	**Alishan** baz=292	**0.67**	**300**	⇓*i*P	**Pb**	**13 25 15.7**	**-0.4**
ALS				S	**Sb**	**13 25 23.9**	**-1.1**
ECL	**Taimali** baz=211	**0.72**	**218**	⇑*i*P	**Pb**	**13 25 15.7**	**-1.1**
ECL				*e*S	**Sb**	**13 25 26.1**	**-0.1**
WHYT	**Xinyi Township** baz=316	**0.75**	**315**	P	**Pb**	**13 25 17.1**	**-0.2**
WHYT				S	**Sb**	**13 25 26.2**	**-0.8**
TPUB	**Ta-pu** baz=277	**0.75**	**280**	⇓P	**Pb**	**13 25 17.3**	**0.0**
TPUB				S	**Sb**	**13 25 27.1**	**0.0**
SSLB	**Suanglung** baz=335	**0.76**	**324**	⇓*i*P	**Pb**	**13 25 16.9**	**-0.5**
SSLB				S	**Sb**	**13 25 25.2**	**-2.0**
WTP	**Ta-pu** baz=272	**0.76**	**276**	⇓*i*P	**Pb**	**13 25 17.6**	**+0.1**
WTP				*i* S	**Sb**	**13 25 27.4**	**+0.1**
SGST	**Jiashian** baz=254	**0.79**	**264**	⇑*i*P	**Pb**	**13 25 17.1**	**-0.8**
SGST				S	**Sb**	**13 25 27.3**	**-0.8**
WCKO	**Fanlu** baz=287	**0.81**	**289**	P	**Pb**	**13 25 17.5**	**-0.7**
WCKO				S	**Sb**	**13 25 28.1**	**-0.6**
CHN5	**Tsauling** baz=301	**0.81**	**302**	*e*P	**Pb**	**13 25 17.0**	**-1.4**
OWD	**Renai** baz=347	**0.81**	**343**	P	**Pb**	**13 25 18.1**	**-0.4**
OWD				*e*S	**Sb**	**13 25 27.8**	**-1.3**
HWA	**Hwalien** baz=3.0	**0.82**	**11**	*e*P	**Pn**	**13 25 20.0**	**+0.7**
HWA				*e*S	**Sn**	**13 25 33.0**	**+2.2**
CHN1	**Nanshi** baz=263	**0.83**	**271**	⇑*i*P	**Pb**	**13 25 19.1**	**+0.4**
CHN1				*i* S	**Sg**	**13 25 30.5**	**+1.0**
SSD	**Sandimen** baz=230	**0.85**	**240**	⇑*i*P	**Pb**	**13 25 18.2**	**-0.7**
SSD				S	**Sb**	**13 25 27.9**	**-2.1**
SMLT	**Sun Moon Lake** baz=334	**0.86**	**325**	⇓*i*P	**Pb**	**13 25 19.1**	**-0.2**
SMLT				S	**Sb**	**13 25 29.7**	**-0.7**
TSMG	**Majia** baz=228	**0.86**	**238**	P	**Pb**	**13 25 18.4**	**-0.7**
TSMG				*e*S	**Sb**	**13 25 27.8**	**-2.5**
SNST	**Tainan City** baz=269	**0.86**	**273**	*e*P	**Pn**	**13 25 20.5**	**+0.6**
SNST				*e*S	**Sg**	**13 25 32.0**	**+1.7**
WUSB	**Renai** baz=344	**0.87**	**341**	⇓*i*P	**Pb**	**13 25 19.1**	**-0.3**
WUSB				S	**Sb**	**13 25 29.1**	**-1.5**
TWK	**Hsinying** baz=273	**0.88**	**276**	⇑P	**Pb**	**13 25 19.5**	**+0.1**
TWK				S	**Sb**	**13 25 31.5**	**+0.8**
TYC	**Yuchr** baz=339	**0.90**	**324**	P	**Pb**	**13 25 19.7**	**-0.2**
TYC				*e*S	**Sb**	**13 25 32.2**	**+0.8**
SCST	**Cishan** baz=247	**0.91**	**252**	*e*P	**Pn**	**13 25 20.7**	**+0.1**
SCST				*e*S	**Sn**	**13 25 34.5**	**+1.5**
WJS	**Zhushan** baz=315	**0.92**	**315**	P	**Pn**	**13 25 20.9**	**+0.2**
WJS				S	**Sg**	**13 25 33.1**	**+1.2**
CHGB	**Renai** baz=348	**0.92**	**345**	P	**Pb**	**13 25 19.7**	**-0.5**
CHGB				S	**Sb**	**13 25 31.0**	**-1.1**
TWD	**Chiawan** baz=3.0	**0.92**	**9**	P	**Pb**	**13 25 19.4**	**-0.7**
TWD				*e*S	**Sn**	**13 25 34.6**	**+1.4**
MASBT	**Mashibuluo** baz=224	**0.92**	**233**	⇑*i*P	**Pb**	**13 25 19.6**	**-0.6**
MASBT				S	**Sb**	**13 25 30.4**	**-1.7**
TAW	**Tawu** baz=211	**0.95**	**212**	P	**Pb**	**13 25 19.4**	**-1.3**
CHN2	**Minshiung** baz=280	**0.95**	**292**	P	**Pg**	**13 25 21.7**	**+1.0**
CHN2				S	**Sn**	**13 25 34.7**	**+0.6**
EAST	**Anshuo** baz=213	**0.95**	**215**	⇑*i*P	**Pb**	**13 25 19.7**	**-1.1**
TAWH	**Dawu Township** baz=211	**0.97**	**211**	⇓*i*P	**Pb**	**13 25 18.9**	**-2.0**
WDLH	**Douliu** baz=300	**0.97**	**302**	P	**Pg**	**13 25 22.0**	**+1.0**
WDLH				S	**Sn**	**13 25 35.5**	**+0.9**
WHF	**Hehuan Shan** baz=8.0	**0.98**	**351**	P	**Pb**	**13 25 21.1**	**-0.4**
WHF				*e*S	**Sb**	**13 25 33.0**	**-1.2**
CHY	**Chiayi** baz=277	**0.98**	**290**	P	**Pn**	**13 25 21.9**	**+0.3**
CHY				S	**Sn**	**13 25 35.2**	**+0.4**
WNT	**Mingjian** baz=316	**0.98**	**316**	⇓*i*P	**Pg**	**13 25 22.2**	**+1.0**
WNT				*i* S	**Sg**	**13 25 35.5**	**+1.7**
CHN3	**Shinhua** baz=270	**0.99**	**265**	P	**Pg**	**13 25 23.2**	**+1.9**
CHN3				S	**Sg**	**13 25 38.0**	**+4.1**
TWM1	**Shoushan** baz=248	**0.99**	**250**	⇑*i*P	**Pg**	**13 25 22.8**	**+1.4**
ETL	**Fush Village** baz=358	**1.00**	**10**	*e*P	**Pb**	**13 25 20.8**	**-0.8**
WCS	**Beigang Elemen** baz=342	**1.00**	**332**	*e*P	**Pb**	**13 25 20.7**	**-0.9**
WCS				*e*S	**Sb**	**13 25 34.5**	**+0.2**
NACB	**Ninganchiao** baz=13	**1.01**	**8**	*e*P	**Pb**	**13 25 20.7**	**-1.0**
NACB				*e*S	**Sn**	**13 25 35.5**	**0.0**
SHHT	**Tainan City** baz=257	**1.01**	**262**	P	**Pg**	**13 25 22.8**	**+1.2**
SHHT				S	**Sg**	**13 25 38.1**	**+3.5**
ETLH	**Xiulin Townshi** baz=3.0	**1.03**	**2**	*e*P	**Pb**	**13 25 21.0**	**-1.2**
SSHA	**Shanhua** baz=273	**1.05**	**268**	*e*P	**Pg**	**13 25 24.2**	**+1.8**
SSHA				*e*S	**Sg**	**13 25 40.1**	**+4.3**
ICHU	**Yijhu** baz=277	**1.08**	**280**	P	**Pb**	**13 25 23.6**	**+0.8**
ICHU				S	**Sg**	**13 25 38.6**	**+2.2**
FUSS	**Fushou** baz=354	**1.09**	**351**	*e*P	**Pb**	**13 25 22.7**	**-0.4**
FUSS				*e*S	**Sb**	**13 25 36.4**	**-0.6**
SCZT	**Fangliau** baz=214	**1.09**	**224**	⇑*i*P	**Pn**	**13 25 22.5**	**-0.5**
SCZT				*e*S	**Sn**	**13 25 37.9**	**+0.3**
TWT	**Tachien** baz=347	**1.10**	**348**	*e*P	**Pn**	**13 25 23.3**	**-0.1**
TDCB	**Techi** baz=346	**1.11**	**347**	*e*P	**Pn**	**13 25 23.4**	**0.0**
TAI1	**Yung-k'ang** baz=270	**1.12**	**264**	*e*P	**Pn**	**13 25 23.5**	**+0.2**
TAI1				*e*S	**Sg**	**13 25 41.6**	**+4.1**
LAY	**Lan-yu** baz=164	**1.13**	**174**	*e*P	**Pn**	**13 25 23.5**	**-0.1**
LAY				*e*S	**Sb**	**13 25 38.0**	**-0.1**
CHN8	**Yiju** baz=276	**1.14**	**279**	P	**Pb**	**13 25 24.4**	**+0.5**
CHN8				S	**Sg**	**13 25 40.3**	**+2.2**
SCLT	**Jiali** baz=266	**1.14**	**270**	*e*P	**Pg**	**13 25 24.8**	**+1.2**
SCLT				S	**Sg**	**13 25 41.3**	**+3.1**
WSL	**Shuilin Townsh** baz=285	**1.16**	**288**	*e*P	**Pn**	**13 25 23.5**	**-0.5**
WSL				*e*S	**Sb**	**13 25 39.2**	**+0.3**
LYUB	**Lan-yu** baz=163	**1.17**	**173**	P	**Pn**	**13 25 22.3**	**-1.8**
LYUB				*e*S	**Sb**	**13 25 38.7**	**-0.5**
WHP	**Taichung City** baz=343	**1.19**	**338**	P	**Pg**	**13 25 26.6**	**+2.1**
WSSB	**Gushan** baz=242	**1.20**	**244**	P	**Pg**	**13 25 26.9**	**+2.3**
WSSB				S	**Sg**	**13 25 45.2**	**+5.3**
WSF	**Szhu** baz=290	**1.21**	**293**	*e*P	**Pb**	**13 25 25.3**	**+0.2**
WSF				*e*S	**Sg**	**13 25 41.8**	**+1.9**
WCHH	**Zhanghua** baz=317	**1.21**	**319**	*e*P	**Pg**	**13 25 26.4**	**+1.7**
WCHH				*e*S	**Sg**	**13 25 42.6**	**+2.5**
WRL	**Guolierlin Hig** baz=305	**1.21**	**307**	*e*P	**Pn**	**13 25 24.7**	**0.0**

WRL *eS* **Sb** **13 25 40.9 +0.5**
baz=305
TSCK Chigu Township 1.24 269 *eP* **Pn** **13 25 24.9 -0.1**
baz=265
TSCK *eS* **Sb** **13 25 41.6 +0.4**
baz=265
NNSB Datong 1.25 358 *eP* **Pn** **13 25 25.0 -0.4**
baz=10.0
NNS Nan Shan 1.27 358 *eP* **Pn** **13 25 25.1 -0.5**
baz=10.0
WLCH Liuqiu 1.27 230 *eP* **Pg** **13 25 29.7 +4.2**
baz=215
SMST Manzhou Townsh 1.27 206 *eP* **Pn** **13 25 25.0 -0.5**
baz=197
EWUT Wuta 1.31 14 *eP* **Pn** **13 25 25.7 -0.3**
baz=1.0
TWQ1 Liyutan 1.32 333 *eP* **Pg** **13 25 28.2 +2.0**
baz=333
TWQ1 *eS* **Sg** **13 25 45.9 +2.9**
baz=333
HEN Hengchun 1.33 209 *eP* **Pg** **13 25 28.7 +2.4**
baz=201
TWK1 Hengchun 1.35 206 *eP* **Pb** **13 25 27.5 0.0**
baz=197
TWKBT Hengchun 1.35 205 *eP* **Pn** **13 25 26.5 -0.1**
baz=197
TSEB Hengchuen, Pin 1.36 201 *eP* **Pg** **13 25 30.0 +3.3**
baz=195
LATG Datong 1.36 4 *eP* **Pn** **13 25 26.9 0.0**
baz=2.0
WDJ Dajia District 1.38 328 *eP* **Pg** **13 25 29.4 +2.4**
baz=341
WDJ *eS* **Sg** **13 25 48.1 +3.5**
baz=341
NSY Sanyi 1.38 334 P **Pg** **13 25 29.4 +2.3**
baz=334
NSY S **Sg** **13 25 48.7 +4.0**
baz=334
NDT Datong Townshi 1.43 3 *eP* **Pn** **13 25 27.0 -0.7**
baz=12
ENTT Nioudou 1.47 5 P **Pn** **13 25 27.5 -0.8**
baz=3.0
NDS Dongshan 1.48 10 *eP* **Pn** **13 25 26.4 -2.0**
baz=8.0
NMLH Miaoli 1.48 337 *eP* **Pb** **13 25 30.5 +0.7**
baz=336
NMLH *eS* **Sg** **13 25 50.7 +3.5**
baz=336
TWC Suao 1.48 15 *eP* **Pn** **13 25 29.3 +0.9**
baz=360
NFF Wufeng Townshi 1.48 349 *eP* **Pb** **13 25 29.6 -0.2**
baz=356
YHNB Yeheng 1.49 358 *eP* **Pn** **13 25 29.4 +0.8**
baz=9.0
NSK Sanguang 1.50 357 ⇑P **Pn** **13 25 28.5 -0.3**
baz=14
NSK *eS* **Sn** **13 25 47.0 -0.8**
baz=14
NSTT Nanjuang 1.51 345 *eP* **Pb** **13 25 30.7 +0.5**
baz=345
NSTT *eS* **Sb** **13 25 50.4 +1.5**
baz=345
LIOB Emei 1.52 345 *eP* **Pb** **13 25 30.9 +0.5**
baz=345
TWE Neicheng 1.56 8 *eP* **Pn** **13 25 30.0 +0.5**
baz=6.0
FUSB Fushanzhiwuyua 1.59 5 *eP* **Pn** **13 25 30.4 +0.5**
baz=16
WDGT Dungji 1.63 273 P **Pn** **13 25 30.9 +0.4**
baz=269
WDGT *eS* **Sn** **13 25 50.9 0.0**
baz=269
PHUB P'eng-hu 1.74 282 *eP* **Pn** **13 25 32.2 +0.2**
baz=278
PHUB *eS* **Sn** **13 25 52.7 -0.9**
baz=278
PNG Penghu 1.77 283 P **Pn** **13 25 32.8 +0.4**
baz=283
NHDH Xindian Distri 1.79 3 *eP* **Pb** **13 25 34.1 -0.8**
baz=12
NCUH Zhongli 1.80 353 *eP* **Pb** **13 25 35.1 -0.2**
baz=333
TWA Mucha 1.81 4 *eP* **Pn** **13 25 33.3 +0.4**
baz=13
TIPB Shuangxi 1.83 11 *eP* **Pn** **13 25 34.5 +1.3**
baz=7.0
VCHM Qimei 1.84 272 *eP* **Pn** **13 25 33.6 +0.2**
baz=268
VCHM *eS* **Sn** **13 25 57.3 +1.1**
baz=268
NWF Wu-fen Shan 1.92 9 *eP* **Pb** **13 25 36.6 -0.7**
baz=4.0
YOJ Yonaguni jima 1.93 48 *eP* **Pn** **13 25 35.8 +1.2**
baz=45
YOJ Yonaguni jima 1.93 48 P **Pn** **13 25 35.5 +0.8**
SXI1 Grass Mountain 1.96 12 *eP* **Pn** **13 25 36.5 +1.5**
baz=6.0
YM01 YM01 1.97 4 *eP* **Pb** **13 25 37.1 -1.0**
baz=358
ANP Anpu 2.01 2 *eP* **Pb** **13 25 38.9 +0.2**
baz=14
HATJ Hateruma jima 2.35 67 *eS* **Sn** **13 26 09.1 +0.6**
IRIF Iriomote-Funau 2.40 61 P **Pn** **13 25 41.9 +0.8**
IRIF *eS* **Sn** **13 26 10.8 +0.8**
VWUC VWUC 2.56 315 *eP* **Pn** **13 25 43.6 +0.3**
baz=315
JKRS Kuro-shima 2.59 65 P **Pn** **13 25 44.8 +1.2**
JKRS *eS* **Sn** **13 26 15.2 +0.7**
JIJ Ishigaki jima 2.75 64 P **Pn** **13 25 46.7 +0.8**
JIJ *eS* **Sn** **13 26 17.9 -0.6**
PTMZ Houxiangcun 2.82 312 P **Pn** **13 25 47.4 +0.6**
baz=309
PTMZ *eS* **Sn** **13 26 19.2 -1.0**
baz=309
KNM Kinmen 3.02 295 *eP* **Pn** **13 25 51.4 +1.9**
baz=294
KNMB Chin-men Tao 3.07 295 *eP* **Pn** **13 25 50.5 +0.3**
baz=296
JTJ Tarama 3.33 63 P **Pn** **13 25 52.6 -1.2**
JTJ S **Sn** **13 26 33.9 +1.1**
ZPLA Ao Xicun 3.46 283 *eP* **Pn** **13 25 55.8 +0.1**
baz=283
AXDP Jialang 3.60 299 *eP* **Pn** **13 25 57.9 +0.3**
baz=300
MHZQ Yeshan 3.65 324 *eP* **Pn** **13 25 59.2 +1.0**
baz=326
LYJJ Jianjiangzhen 3.69 336 *eP* **Pn** **13 25 59.4 +0.6**
baz=334
DSXP Dongshan 3.72 279 *eP* **Pn** **13 25 59.4 +0.2**
baz=278
JIRB Irabujima 3.80 63 P **Pn** **13 26 00.9 +0.7**
JMJ2 Miyako jima3 3.89 66 P **Pn** **13 26 02.7 +1.1**
JIKM Ikemajima 3.90 63 P **Pn** **13 26 02.2 +0.5**
XPSS Dashiqiu 3.91 343 *eP* **Pn** **13 26 02.1 +0.3**
baz=341
JOW Kunigami 7.20 58 Pn **Pn** **13 26 45.9 -1.1**
1.1nm,0.3s,baz=184,slow=21,SNR=1.9
JOW Sn **Sn** **13 28 08.2 0.0**
0.9nm,0.3s,baz=154,slow=28,SNR=1.7
6.7nm,0.6s
KSRS Korea Array 15.29 20 Pn **Pn** **13 28 38.0 +0.4**
0.1nm,0.3s,baz=171,slow=16,SNR=2.2
0.6nm,0.8s
CMAR Chiang Mai Arr 21.53 262 LR LR 13 38 55.1
comp=Z,23nm,20.2s,baz=85,slow=39
MKAR Makanchi Array 39.23 317 P **P** **13 32 28.9 -0.9**
0.7nm,0.8s,baz=110,slow=7.2,SNR=4.8
0.7nm,0.8s
ZALV Zalesovo Beam 41.22 328 P **P** **13 32 46.0 -0.2**
0.7nm,0.4s,baz=124,slow=8.0,SNR=4.3
0.7nm,0.4s
H11N1 WAKE ISLAND Hy 42.33 86 T T 14 18 05.5
baz=283,slow=74,SNR=96
H11N2 WAKE ISLAND Hy 42.33 86 T T 14 18 09.7
baz=283,slow=74,SNR=120
H11N3 WAKE ISLAND Hy 42.34 86 T T 14 18 08.4
baz=283,slow=74,SNR=119
H11S3 WAKE ISLAND Hy 42.42 88 T T 14 18 15.9
baz=285,slow=75,SNR=158
H11S1 WAKE ISLAND Hy 42.43 88 T T 14 18 14.3
baz=285,slow=75,SNR=126
H11S2 WAKE ISLAND Hy 42.44 88 T T 14 18 15.0
baz=285,slow=75,SNR=137
WRA Warramunga Arr 44.66 163 P **P** **13 33 13.5 -1.0**
0.4nm,0.5s,baz=345,slow=8.7,SNR=11
0.4nm,0.5s
ASAR Alice Springs 48.11 165 P **P** **13 33 41.5 +0.1**
0.1nm,0.3s,baz=338,slow=6.8,SNR=16
ASAR PcP **PcP** **13 35 08.2 -0.8**
0.2nm,0.4s,baz=343,slow=4.0,SNR=1.5
0.1nm,0.3s
DZM Mont Dzumac 62.78 132 LR LR 14 00 36.7
comp=Z,52nm,18.6s,baz=188,slow=34
FINES FINESS Array B 72.43 330 P **P** **13 36 27.2 -0.3**
1.7nm,0.9s,baz=56,slow=3.5,SNR=1.4
1.7nm,0.9s

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*NEIC **16** 13:58:50.9±1.9, 31°.54N±0°.07×114°.46W±0°.05, h14km±9km, ML3.1/34, Error ellipse: s-maj=10.1km s-min=5.9km az=190.0*
*ECX **16** 13:58:52.7±0.5, 31°.58N×114°.43W, h15km±4km, MD3.2, ML3.4*
ISC 16 13:58:50.9±0.9, 31°.59N±0°.04×114°.44W±0°.03, h11km, n27, σ0s60/31, 2C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.54**	**258**	*eP*		**Pb**	**13 59 02.7**	**+0.4**
ECBX				*eS*		**Sb**	**13 59 10.1**	**0.0**
SFX	**San Felipe**	**0.65**	**213**	Pg		**Pb**	**13 59 04.2**	**-0.1**
SFX				IAML			13 59 13.5	
comp=N,2μm,0.4s								
SFX	**San Felipe**	**0.65**	**213**	*eP*		**Pb**	**13 59 04.3**	**+0.1**
SFX				*eS*		**Sb**	**13 59 13.0**	**-0.3**
SFX				⇑*e*			13 59 13.6	
SFX				IAML			13 59 13.6	
comp=N,3μm,0.2s								
SFX				⇓*e*			13 59 13.7	
SFX				IAML			13 59 13.7	
comp=E,3μm,0.3s								
PIX	**Pinacate**	**0.84**	**92**	Pg		**Pg**	**13 59 06.8**	**-0.3**
PIX				IAML			13 59 19.6	
comp=N,493nm,0.4s								
PIX				IAML			13 59 19.7	
comp=E,537nm,0.6s								
PIX	**Pinacate**	**0.84**	**92**	*eP*		**Pg**	**13 59 07.4**	**+0.3**
PIX				*eS*		**Sg**	**13 59 18.2**	**+0.2**
GUVIX	**Guadalupe Vict**	**0.90**	**323**	Pg		**Pg**	**13 59 08.1**	**-0.1**
RHX	**Rio Hardy**	**0.90**	**307**	*eP*		**Pg**	**13 59 08.7**	**+0.3**
RHX				⇓*e*			13 59 25.1	
RHX				IAML			13 59 25.1	
comp=N,657nm,0.6s								
SPIG	**San Pedro Mart**	**1.03**	**239**	*eP*		**Pb**	**13 59 11.3**	**+0.3**
SPIG				*eS*		**Sn**	**13 59 25.6**	**-0.6**
CPBX	**Cerro Prieto**	**1.11**	**319**	Pn		**Pb**	**13 59 11.6**	**-0.5**
CPBX	**Cerro Prieto**	**1.11**	**319**	*eP*		**Pb**	**13 59 11.7**	**-0.4**
CPBX				*e*			13 59 36.0	
CPBX				IAML			13 59 36.0	
comp=N,1μm,0.3s								
CPBX				IAML			13 59 50.7	
comp=E,2μm,0.6s								
CPBX				⇑*e*			13 59 50.7	
VTX	**Valle De La Tr**	**1.17**	**261**	*eP*		**Pb**	**13 59 13.2**	**0.0**
SJX	**San Joaquin**	**1.31**	**278**	*eP*		**Pn**	**13 59 15.8**	**+0.6**
UABX	**UABC, Campus M**	**1.34**	**321**	Pn		**Pn**	**13 59 15.3**	**-0.3**
ESJX	**Sierra Juarez**	**1.35**	**288**			**Pn**	**13 59 14.4**	**-1.5**
GLA	**Glamis**	**1.50**	**347**	Pn		**Pn**	**13 59 17.6**	**-0.2**
GLA				IAML			13 59 39.3	
comp=N,512nm,0.4s								
GLA				IAML			13 59 50.4	
comp=E,535nm,0.8s								
GLA	**Glamis**	**1.50**	**347**	*eP*		**Pn**	**13 59 18.6**	**+0.8**
SQX	**San Quintin**	**1.59**	**231**	*eP*		**Pn**	**13 59 19.1**	**+0.1**
SQX				IAML			13 59 43.1	
comp=E,600nm,0.3s								
SQX				*e*			13 59 43.1	
SQX				IAML			13 59 50.9	
comp=N,396nm,0.3s								
SQX				⇓*e*			13 59 50.9	
YUH	**Yuha Desert**	**1.65**	**310**	Pn		**Pn**	**13 59 19.0**	**-0.8**
CBX	**Cerro Bola**	**2.02**	**292**			**Pn**	**13 59 24.8**	**-0.4**
CBX				IAML			14 00 08.6	
comp=N,134nm,0.6s								
CBX				IAML			14 00 17.2	
comp=E,131nm,0.7s								
CBX	**Cerro Bola**	**2.02**	**292**	*eP*		**Pn**	**13 59 26.2**	**+1.1**
BLYC	**Blythe**	**2.16**	**358**			**Pn**	**13 59 27.6**	**+0.7**
BLYC				IAML			14 00 06.1	
comp=N,94nm,0.7s								
BLYC				IAML			14 00 11.5	
comp=E,111nm,0.7s								
BAR	**Barrett**	**2.19**	**301**			**Pn**	**13 59 27.5**	**+0.2**
BAR				IAML			14 00 04.6	
comp=E,91nm,0.3s								
BAR				IAML			14 00 04.7	
comp=N,174nm,0.3s								
109C	**Camp Elliot, M**	**2.61**	**301**	Pn		**Pn**	**13 59 33.4**	**+0.4**
109C				IAML			14 00 15.7	
comp=E,72nm,0.3s								
109C				IAML			14 00 18.0	
comp=N,97nm,0.4s								
Y14A	**Wickenburg**	**2.64**	**27**	Pn		**Pn**	**13 59 32.9**	**-0.7**
Y14A				IAML			14 00 18.3	
comp=E,160nm,0.5s								
TUC	**Tucson**	**3.19**	**76**			**Pn**	**13 59 40.9**	**-0.2**
TUC				IAML			14 00 43.0	
comp=E,31nm,0.7s								
W13A	**Hualapai Mount**	**3.53**	**7**	Pn		**Pn**	**13 59 46.8**	**+0.8**
W13A				IAML			14 00 52.5	
comp=E,26nm,0.9s								
V12A	**Nelson**	**4.14**	**355**	Pn		**Pn**	**13 59 55.3**	**+1.0**

IDC 16 14:00:04.8±10.0, 15°.29S×163°.91E, h0km, mb4.2/3, mbtmp4.2/4, ML2.9/1, Error ellipse: s-maj=183.0km s-min=33.5km az=45.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.16**	**161**	Pn		Pn	14 01 51.1	+0.2
0.2nm,0.3s,baz=336,slow=20,SNR=1.5								
DZM				Sn		Sn	14 03 13.7	+0.6
0.1nm,0.3s,baz=18,slow=20,SNR=2.0								
11nm,1.2s								
STKA	**Stephens Creek**	**26.19**	**227**	P		P	14 05 41.2	-0.1
3.3nm,0.4s,baz=56,slow=9.4,SNR=11								
3.3nm,0.4s								
WRA	**Warramunga Arr**	**28.54**	**256**	P		P	14 06 02.4	-0.1
0.8nm,0.4s,baz=86,slow=9.0,SNR=27								
0.8nm,0.4s								
ASAR	**Alice Springs**	**29.44**	**249**	P		P	14 06 10.7	+0.2
1.2nm,0.4s,baz=77,slow=9.3,SNR=64								
1.2nm,0.4s								

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*MEX **16** 14:02:19.1±0.3, 31°.57N×114°.28W, h10km, MD2.9*
*ECX **16** 14:02:20.2±0.6, 31°.55N×114°.42W, h6km±8km, MD2.3, ML2.5*
ISC 16 14:02:17.5±1.5, 31°.57N±0°.06×114°.35W±0°.04, h19km±4km, n10, σ0s97/16, 1C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.61**	**261**	*eP*		**Pg**	**14 02 29.6**	**0.0**
ECBX				*eS*		**Sb**	**14 02 37.0**	**-0.6**
ECBX				IAML			14 02 37.6	
comp=E,224nm,0.3s								
ECBX				⇓*e*			14 02 37.6	
SFX	**San Felipe**	**0.68**	**219**	*eP*		**Pg**	**14 02 31.3**	**+0.3**
SFX				*eS*		**Sb**	**14 02 39.5**	**-0.2**
SFX	**San Felipe**	**0.68**	**219**	*eP*		**Pn**	**14 02 31.7**	**-0.4**
SFX				*eS*		**Sb**	**14 02 39.9**	**+0.1**
SFX				⇑*e*			14 02 40.3	
SFX				IAML			14 02 40.3	
comp=N,306nm,0.2s								
SFX				IAML			14 02 40.4	
comp=E,384nm,0.3s								
SFX				*e*			14 02 40.4	
PIX	**Pinacate**	**0.76**	**91**	*eP*		**Pn**	**14 02 34.3**	**+1.0**
PIX				*eS*		**Sn**	**14 02 45.7**	**+1.4**
RHX	**Rio Hardy**	**0.97**	**306**	*eP*		**Pg**	**14 02 37.1**	**+0.6**
SPIG	**San Pedro Mart**	**1.09**	**242**	*eP*		**Pg**	**14 02 38.6**	**-0.2**
SPIG				*eS*		**Sb**	**14 02 52.1**	**+0.2**
SPIG	**San Pedro Mart**	**1.09**	**242**	*eP*		**Pg**	**14 02 38.5**	**-0.2**
SPIG				*eS*		**Sb**	**14 02 52.1**	**+0.2**
CPBX	**Cerro Prieto**	**1.17**	**317**	IAML			14 03 01.1	
comp=N,270nm,0.2s								
CPBX				⇓*e*			14 03 01.1	
214A	**Organ Pipe Nat**	**1.37**	**73**	*e*		**Pn**	**14 02 39.0**	**-2.6**
214A				*e*			14 02 59.5	
CBX	**Cerro Bola**	**2.10**	**291**	*eP*		**Pn**	**14 02 52.0**	**+0.1**
CBX				*eS*		**Sn**	**14 03 17.6**	**+0.1**

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*IDC **16** 14:11:23.3±0.9, 40°.95N×30°.98E, h0km, mb3.5/4, mbtmp3.5/8, ML3.5/4, MS2.6/1, Error ellipse: s-maj=19.3km s-min=7.8km az=45.0*
*DDA **16** 14:11:24.4±0.0, 40°.90N×30°.92E, h10km, MW3.6*
*ISK **16** 14:11:24.2, 40°.90N×30°.91E, h3km, ML3.8/41*
*NEIC **16** 14:11:25.8±2.3, 40°.87N±0°.04×30°.91E±0°.07, h10km±2km, mb4.3/4, Error ellipse: s-maj=9.0km s-min=5.8km az=69.0*
*CFUSG **16** 14:11:26.0, 41°.15N×31°.07E, h0km, mb3.3/5, Northern Turkey Magtype MSH 3.0 from 5 stations*
ISC 16 14:11:24.9±0.8, 40°.91N±0°.02×30°.93E±0°.01, h8km±6km, n162, σ1s06/204, mb3.7/4, 27C-21D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAHE	**Sakarya_HENDEK**	**0.08**	**226**	P		**Pg**	**14 11 27.1**	**+0.1**
SAHE				S		**Sg**	**14 11 28.7**	**+0.1**
SAHE				*i* AML		AML	14 11 29.0	
comp=N,6μm,0.3s								
BTAS	**Taskesti**	**0.34**	**171**	P		**Pg**	**14 11 31.2**	**-0.5**
BTAS				S		**Sg**	**14 11 34.8**	**-1.3**
BTAS				*i* AML		AML	14 11 36.0	
comp=N,1μm,0.3s								
BTAS				*i* AML		AML	14 11 36.0	
comp=E,1μm,0.2s								
YIGI	**Dzce**	**0.40**	**82**	P		**Pg**	**14 11 32.9**	**+0.2**
YIGI				*i* AML		AML	14 11 38.0	
comp=N,3μm,0.3s								
YIGI				S		**Sg**	**14 11 38.1**	**+0.1**
KAYN	**Sakarya, Kayna**	**0.45**	**278**	P		**Pg**	**14 11 33.8**	**+0.1**
KAYN				S		**Sg**	**14 11 40.2**	**+0.6**
KAYN				*i* AML		AML	14 11 41.0	
comp=N,3μm,0.2s								
KAYN				*i* AML		AML	14 11 41.0	
comp=E,2μm,0.3s								
MDUB	**Mudurnu**	**0.48**	**155**	PG		**Pg**	**14 11 33.3**	**-1.0**
MDUB	**Mudurnu**	**0.48**	**155**	Pg		**Pg**	**14 11 33.1**	**-1.2**
MDUB				Sg		**Sg**	**14 11 39.9**	**-0.7**
SAUV	**Serdivan-Sakar**	**0.49**	**250**	PG		**Pg**	**14 11 34.4**	**+0.1**
SAUV				SG		**Sg**	**14 11 41.1**	**+0.4**
KDZE	**Karadeniz Ereo**	**0.56**	**44**	⇑P		**Pb**	**14 11 36.4**	**-0.7**
KDZE				⇓S		**Sb**	**14 11 44.5**	**-0.8**
KDZE	**Karadeniz Ereo**	**0.56**	**44**	PG		**Pg**	**14 11 36.0**	**+0.2**
GULT	**Gulveren**	**0.57**	**214**	PG		**Pg**	**14 11 35.8**	**-0.1**
GULT				SG		**Sb**	**14 11 44.3**	**-1.1**
KAND	**Kocaeli-Kandir**	**0.59**	**289**	P		**Pb**	**14 11 36.5**	**-0.9**
KAND				S		**Sg**	**14 11 44.2**	**+0.2**
KAND				*i* AML		AML	14 11 45.0	
comp=E,2μm,0.2s								
KAND				*i* AML		AML	14 11 46.0	
comp=N,2μm,0.3s								
GEYV	**SAKARYA_Geyve**	**0.64**	**229**	P		**Pb**	**14 11 37.3**	**-1.0**
GEYV				S		**Sg**	**14 11 44.6**	**-1.0**
GEYV				*i* AML		AML	14 11 46.0	
comp=E,2μm,0.4s								
YUVA	**Yuva-Kibriscik**	**0.77**	**131**	PG		**Pb**	**14 11 40.0**	**-0.7**
YUVA				SG		**Sb**	**14 11 51.2**	**-0.2**
GPA	**Golpazari**	**0.78**	**218**	PG		**Pg**	**14 11 39.5**	**-0.4**
GPA				SG		**Sb**	**14 11 50.5**	**-0.9**
DEVR	**Zonguldak/Devr**	**0.82**	**73**	P		**Pg**	**14 11 39.6**	**-1.1**
KIBS	**BOLU**	**0.85**	**124**	P		**Pg**	**14 11 41.3**	**0.0**
BCAM	**Yenicaga**	**0.87**	**96**	P		**Pg**	**14 11 41.2**	**-0.4**
BCAM				S		**Sg**	**14 11 51.3**	**-1.6**
BCAM				*i* AML		AML	14 11 55.0	
comp=N,477nm,0.3s								
BCAM				*i* AML		AML	14 11 59.0	
comp=E,388nm,0.5s								
SRCK	**Saricakaya, Es**	**0.90**	**195**	PG		**Pg**	**14 11 41.8**	**-0.3**
HRT	**Hereke**	**0.96**	**265**	PG		**Pg**	**14 11 43.1**	**-0.3**
SILT	**Sile**	**1.00**	**285**	PG		**Pg**	**14 11 43.8**	**-0.4**
ADVT	**Abdulvahap**	**1.02**	**243**	PG		**Pg**	**14 11 43.8**	**-0.7**
CAVI	**Cavuskoy**	**1.09**	**230**	PG		**Pb**	**14 11 45.6**	**-0.3**
BORA	**Eskisehir**	**1.09**	**200**	PG		**Pg**	**14 11 45.4**	**-0.4**
BORA	**Eskisehir**	**1.09**	**200**			**Pg**	**14 11 44.7**	**-1.1**
BORA	**Eskisehir**	**1.09**	**200**	P		**Pg**	**14 11 45.1**	**-0.7**
BORA				S		**Sg**	**14 11 59.5**	**-0.5**
BORA				*i* AML		AML	14 12 04.0	
comp=N,2μm,0.3s								
BORA				*i* AML		AML	14 12 05.0	
comp=E,2μm,0.2s								
BILE	**Bilecik/Merkez**	**1.09**	**227**	P		**Pg**	**14 11 45.4**	**-0.5**
AUMIH	**MIHALICIK**	**1.12**	**158**	PN		**Pb**	**14 11 46.3**	**-0.3**
AUMIH	**MIHALICIK**	**1.12**	**158**	P		**Pb**	**14 11 46.2**	**-0.4**
AUMIH				S		**Sb**	**14 12 01.2**	**-0.2**
AUMIH				*i* AML		AML	14 12 04.0	
comp=N,1μm,0.4s								
AUMIH				*i* AML		AML	14 12 05.0	
comp=E,2μm,0.4s								
AUBOZ	**BOZOYUK**	**1.21**	**215**	PN		**Pg**	**14 11 46.6**	**-1.4**
AUBOZ	**BOZOYUK**	**1.21**	**215**	P		**Pg**	**14 11 46.7**	**-1.4**
YLV	**Yalova**	**1.23**	**254**	PN		**Pg**	**14 11 47.5**	**-1.0**
BTIN	**Bartın**	**1.23**	**53**	P		**Pg**	**14 11 47.7**	**-0.9**
BTIN				S		**Sg**	**14 12 03.5**	**-1.2**
BTIN				*i* AML		AML	14 12 08.0	
comp=E,953nm,0.5s								
CMDR	**Camlidere-ANKA**	**1.25**	**109**	P		**Pb**	**14 11 48.5**	**-0.2**
KBUK	**KARABUK-Merkez**	**1.33**	**75**	P		**Pn**	**14 11 48.9**	**-0.9**
KURT	**Yalova, Merkez**	**1.34**	**257**	P		**Pn**	**14 11 49.4**	**-0.6**
KURT				P		**Pg**	**14 11 49.6**	**-1.1**
KURT				S		**Sb**	**14 12 07.5**	**-0.2**
KURT				*i* AML		AML	14 12 10.0	
comp=N,1μm,0.5s								
KURT				*i* AML		AML	14 12 10.0	
comp=E,875nm,0.4s								
KURT				*i* AML		AML	14 12 10.0	
comp=N,903nm,0.3s								
KURT				*i* AML		AML	14 12 11.0	
comp=E,806nm,0.4s								
SAFT	**Safranbolu**	**1.37**	**75**	PN		**Pg**	**14 11 51.4**	**+0.2**
SGAZ	**Eskisehir, Sey**	**1.38**	**183**	P		**Pb**	**14 11 50.9**	**-0.1**
SGAZ				S		**Sn**	**14 12 09.2**	**+0.3**
SGAZ				*i* AML		AML	14 12 12.0	
comp=N,519nm,0.3s								
ESKT	**Eskisehir**	**1.39**	**182**	PN		**Pb**	**14 11 51.0**	**-0.1**
KAVV	**Kandilli-Istan**	**1.42**	**277**	PN		**Pb**	**14 11 51.5**	**-0.2**
ISK	**Istanbul-Kandi**	**1.42**	**277**	PN		**Pb**	**14 11 51.5**	**-0.2**
IGD	**Bursa**	**1.46**	**245**	P		**Pn**	**14 11 51.0**	**-0.6**
IGD				S		**Sb**	**14 12 09.5**	**-1.6**
IGD				*i* AML		AML	14 12 17.0	
comp=N,479nm,0.8s								
KLYT	**Kilyos**	**1.47**	**284**	PN		**Pb**	**14 11 52.2**	**-0.2**
ESNK	**Esenkıy**	**1.51**	**260**	P		**Pn**	**14 11 52.5**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.53**	**162**	PN		**Pb**	**14 11 53.4**	**-0.1**
AUSIV	**SIVRIHISAR**	**1.54**	**162**	PN		**Pb**	**14 11 53.4**	**-0.3**
AUSIV	**SIVRIHISAR**	**1.54**	**162**	P		**Pn**	**14 11 52.9**	**+0.2**
AUSIV				S		**Sg**	**14 12 14.7**	**+0.3**
AUSIV				*i* AML		AML	14 12 16.0	
comp=N,215nm,0.6s								
CIFT	**Cifteler, Eski**	**1.55**	**176**	PN		**Pb**	**14 11 53.3**	**-0.5**
ULDT	**Uludag**	**1.56**	**241**	P		**Pn**	**14 11 52.9**	**-0.2**
ULDT				S		**Sg**	**14 12 15.0**	**-0.2**
ULDT				*i* AML		AML	14 12 16.0	
comp=E,347nm,0.4s								
ULDT				*i* AML		AML	14 12 17.0	
comp=N,570nm,0.5s								
ANDZ	**Kutahya, Merke**	**1.60**	**210**	P		**Pn**	**14 11 53.3**	**-0.3**
ARMT	**Armutlu**	**1.61**	**258**	PN		**Pn**	**14 11 54.0**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.65**	**252**	PN		**Pn**	**14 11 54.6**	**+0.5**
BGKT	**Bogazkoy**	**1.65**	**280**	PN		**Pb**	**14 11 54.9**	**-0.7**
AVCI	**Avcilar-stanb**	**1.67**	**274**	PN		**Pn**	**14 11 54.9**	**+0.4**
LOD	**Lodumlu**	**1.73**	**125**	PN		**Pn**	**14 11 56.1**	**+0.7**
ANTO	**Ankara**	**1.76**	**125**	⇑P		**Pg**	**14 11 58.4**	**-0.3**
ANTO	**Ankara**	**1.76**	**125**	PN		**Pn**	**14 11 56.6**	**+0.8**
ANTO	**Ankara**	**1.76**	**125**			**Pg**	**14 11 58.0**	**-0.8**
BR231	**Keskin MP Arra**	**1.77**	**126**			**Pg**	**14 11 58.4**	**-0.4**
ORLT	**Orhaneli**	**1.77**	**242**	PN		**Pn**	**14 11 56.3**	**+0.4**
CIDE	**Kastamonu/Cide**	**1.81**	**57**	P		**Pn**	**14 11 57.0**	**+0.7**
TVSB	**Tavsanli**	**1.84**	**218**	PN		**Pn**	**14 11 57.6**	**+0.7**
PELI	**Kastamonı-Ara**	**1.84**	**77**	P		**Pb**	**14 11 58.9**	**0.0**
CTKS	**Kestanelik-??a**	**1.86**	**281**	PN		**Pn**	**14 11 57.9**	**+0.9**
ELBA	**Catalca**	**1.90**	**278**	P		**Pn**	**14 11 57.7**	**0.0**
ELBA				S		**Sn**	**14 12 21.5**	**-0.3**
ELBA				*i* AML		AML	14 12 27.0	
comp=E,445nm,0.2s								
**ELDT

KIZT	Kizilcal	2.15	160	PN	Pn	14 12 02.1 +0.9
AFYO	Afyonkarahisar	2.17	193	P	Pg	14 12 05.3 -1.2
DST	Dursunbey	2.19	234	PN	Pn	14 12 02.6 +0.9
GEDZ	Gediz	2.20	213	PN	Pn	14 12 02.3 +0.6
DURS	Dursunbey	2.29	236	P	Pn	14 12 01.9 -1.1
KKUL	Konya-Kulu	2.31	138	P	Pg	14 12 08.9 -0.3
SHUT	Suhut-Afyon	2.37	187	PN	Pn	14 12 05.5 +1.3
BR131	Keskin Array S	2.38	119		Pn	14 12 04.9 +0.5
BRTR	Keskin Array B	2.38	119	Pn	Pn	14 12 04.9 +0.5
	4.2nm,0.3s,baz=291,slow=14,SNR=32					
BRTR				Sn	Sn	14 12 33.4 -0.6
	2.7nm,0.3s,baz=293,slow=25,SNR=1.7					
BRTR				Lg	Lg	14 12 40.5
	8.1nm,0.3s,baz=29,slow=22,SNR=9.9					
BRTR				LR	LR	14 13 16.4
	comp=Z,114nm,19.5s,baz=326,slow=48 4.7nm,0.4s					
BRTR	Keskin Array B	2.38	119	PN	Pn	14 12 05.3 +0.9
EDC	Edincik	2.40	258	PN	Pn	14 12 05.4 +0.9
VIZE	Kirklareli, Vi	2.42	287	P	Pn	14 12 05.2 +0.3
DELI	KIRIKKALE	2.46	111	P	Pn	14 12 05.9 +0.5
BZK	Bozkurt	2.54	65	⇑P	Pn	14 12 06.4 0.0
BZK	Bozkurt	2.54	65	Pn	Pn	14 12 06.4 0.0
MRMT	Marmara Adasi	2.55	264	PN	Pn	14 12 06.6 0.0
GONE	Gonen-Balikesi	2.62	252	PN	Pn	14 12 08.1 +0.6
KAMT	Kaman	2.63	125	PN	Pn	14 12 08.9 +1.2
PHSR	Pinarhisar	2.67	287	PN	Pn	14 12 09.3 +1.2
RKY	Sarkoy-Tekirda	2.85	267	PN	Pn	14 12 11.9 +1.1
STEP	BALIKESIR_Sava	2.90	239	P	Pn	14 12 11.6 +0.3
KIRS	Kirsehir-Merke	2.90	127	P	Pn	14 12 13.0 +1.6
LADK	Ladik-KONYA	2.92	157	PN	Pn	14 12 12.9 +1.1
CDAG	Cicekdag	2.93	115	P	Pn	14 12 13.1 +1.2
KIRK	Kırklareli	3.01	288	P	Pn	14 12 13.4 +0.5
MANT	Manisa	3.03	218	P	Pb	14 12 20.2 +1.0
ISP	Isparta	3.10	186	Pn	Pn	14 12 14.8 +0.6
DIKM	Dikmen	3.35	76	⇓P	Pn	14 12 18.5 +1.0
MANR	Mangalia	3.39	330	⇑P	Pn	14 12 18.6 +0.6
MANR				⇓S	Sn	14 12 57.2 -1.1
PSN	Preselentsi	3.44	325	eP	Pn	14 12 19.5 +0.7
PRD	Provadia	3.49	312	eP	Pn	14 12 19.5 +0.1
ALN	Alexandroupoli	3.70	271	Pn	Pn	14 12 22.6 +0.2
ICOR	Ion Corvin	3.95	325	⇑P	Pn	14 12 26.7 +0.9
ICOR				⇓S	Sn	14 13 10.7 -1.6
TIRR	Tirgusor	4.00	333	⇓P	Pn	14 12 27.7 +1.2
TIRR				⇓S	Sn	14 13 12.1 -1.5
TIRR	Tirgusor	4.00	333	Pn	Pn	14 12 27.4 +0.9
CVDA	Cernavoda	4.03	329	⇑P	Pn	14 12 27.9 +1.0
CVDA				⇑S	Sn	14 13 13.6 -0.7
RDO	Rodhopi	4.08	275		Pn	14 12 27.7 0.0
SEV	Sevastopol'	4.16	28	eP	Pn	14 12 29.7 +1.1
SEV				Pm		14 12 34.8
	comp=Z,3.0nm,0.2s					
SEV				eS	Sn	14 13 15.7 -1.7
SEV				Sm		14 13 23.2
	comp=N,3.0nm,0.3s					
SEV				Sm		14 13 23.2
	comp=E,8.0nm,0.2s					
TLBR	Topalu	4.21	331	⇑P	Pn	14 12 30.3 +1.0
TLBR				⇑S	Sn	14 13 18.8 +0.1
DIM	Dimitrovgrad	4.21	288	eP	Pn	14 12 29.7 +0.3
KDZ	Kurdzhali	4.22	282	eP	Pn	14 12 30.4 +0.9
YAL	Yalta	4.30	33	⇓iP	Pn	14 12 31.6 +1.1
YAL				Pm		14 12 34.7
	comp=Z,18nm,0.2s					
YAL				iS	Sn	14 13 19.5 -1.3
YAL				Sm		14 13 22.5
	comp=N,44nm,0.3s					
YAL				Sm		14 13 22.5
	comp=E,30nm,0.2s					
TPGR	Topolog	4.36	336	⇑P	Pn	14 12 31.7 +0.4
TPGR				⇑S	Sn	14 13 20.7 -1.6
HARR	Harsova	4.38	331	⇑P	Pn	14 12 32.8 +1.1
SZH	Strazhica	4.40	304	eP	Pn	14 12 30.6 -1.4
ALU	Alushta	4.56	33	eP	Pn	14 12 34.4 +0.3
ALU				Pm		14 12 38.2
	comp=Z,12nm,0.2s					
ALU				eS	Sn	14 13 25.2 -2.0
ALU				Sm		14 13 28.7
	comp=E,2.0nm,0.1s					
ALU				Sm		14 13 28.8
	comp=N,17nm,0.2s					
SIM	Simferopol'	4.67	29	⇓iP	Pn	14 12 36.0 +0.3
SIM				Pm		14 12 40.0
	comp=Z,80nm,0.2s					
SIM				eS	Sn	14 13 27.9 -2.1
SIM				Sm		14 13 31.1
	comp=N,17nm,0.2s					
SIM				Sm		14 13 31.1
	comp=E,32nm,0.3s					
CFR	Carcaliu	4.73	335	⇓P	Pn	14 12 37.1 +0.6
CFR				⇓S	Sn	14 13 31.3 -0.2
RZN	Rozhen	4.74	281	eP	Pn	14 12 37.3 +0.4
PVL	Pavlikeni	4.76	301	eP	Pn	14 12 37.8 +0.9
SUDU	Sudak	4.98	36	⇓iP	Pn	14 12 41.2 +1.3
SUDU				Pm		14 12 44.6
	comp=Z,75nm,0.2s					
SUDU				iS	Sn	14 13 37.2 -0.4
SUDU				Sm		14 13 42.2
	comp=E,2.0nm,0.1s					
SUDU				Sm		14 13 42.3
	comp=N,29nm,0.4s					
ARG	Arkhangelos	5.17	206	Pn	Pn	14 12 43.6 +1.0
VLDR	Vladesti	5.35	338	⇓P	Pn	14 12 46.2 +1.1
VLDR				⇑S	Sn	14 13 46.0 -0.9
MMB	Musomiste	5.47	280	eP	Pn	14 12 47.2 +0.5
ODBI	Odobesti	5.62	331	⇓P	Pn	14 12 48.3 -0.3
GHRR		5.75	335	⇑P	Pn	14 12 51.2 +0.7
VRI	Vrincioaia	5.82	330	⇑P	Pn	14 12 52.4 +0.8
VRI				⇑S	Sn	14 13 57.3 -1.2
PLOR	Plostina	5.84	329	⇓P	Pn	14 12 53.0 +1.2
MLR	Muntele Rosu	5.85	323	⇑P	Pn	14 12 53.4 +1.3
MLR				⇑S	Sn	14 13 57.9 -1.4
MLR	Muntele Rosu	5.85	323	Pn	Pn	14 12 52.5 +0.4
	comp=N,1.1nm,0.3s,baz=58,slow=2.1,SNR=15					
MLR				Sn	Sn	14 13 58.9 -0.5
	comp=N,1.1nm,0.3s,baz=146,slow=15,SNR=1.9 comp=N,2.2nm,0.3s					
MLR	Muntele Rosu	5.85	323	Pn	Pn	14 12 52.9 +0.8
VTS	Vitosha	6.00	289	⇑P	Pn	14 12 54.9 +0.8
VTS	Vitosha	6.00	289		Pn	14 12 54.7 +0.6
VTS	Vitosha	6.00	289	eP	Pn	14 12 55.0 +0.9
MILM	Milestii Mici	6.20	346	⇑P	Pn	14 12 57.2 +0.5
VOIR		6.24	318	⇑P	Pn	14 12 58.6 +1.2
TESR	Tescani	6.40	332	⇓P	Pn	14 13 00.4 +1.0
TESR				⇑S	Sn	14 14 11.7 -1.0
ARR	Arges	6.41	316	⇓P	Pn	14 13 00.2 +0.6
DOPR	Dopca	6.47	323	⇑P	Pn	14 13 01.7 +1.3
BLKB	Belogradchik	6.70	297	⇑P	Pn	14 13 03.7 +0.2
LOT	Lotru	6.92	313	⇓P	Pn	14 13 07.4 +0.7
MDB	Medias	7.07	320	⇓P	Pn	14 13 09.7 +1.0
BOVS	Bovan	7.36	295	⇑P	Pn	14 13 13.2 +0.6
HERR	Herculane	7.40	305	⇓P	Pn	14 13 12.0 -1.2
GZR	Gura Zlata	7.46	310	⇑P	Pn	14 13 13.8 -0.2
MDVR	Moldovita	7.80	303	⇓P	Pn	14 13 18.7 +0.1
BURAR	Bucovina Array	7.86	330	Pn	Pn	14 13 21.1 +1.6
BUR08	Bucovina Ar. S	7.89	331	Pn	Pn	14 13 20.6 +0.7
BZS	Buzias	8.26	308	⇓P	Pn	14 13 24.3 -0.7
DRGR		8.36	317	⇑P	Pn	14 13 27.3 +1.0
AKASG	Malin Array Be	9.87	354	Pn	Pn	14 13 44.2 -2.7
	comp=N,1.3nm,0.3s,baz=163,slow=12,SNR=2.4					
AKASG				Sn	Sn	14 15 29.9 -7.9
	comp=N,2.0nm,0.3s,baz=190,slow=22,SNR=4.2 comp=N,0.3nm,0.2s					
DAVOX	Davos/Dischmat	16.26	298	Pn	Pn	14 15 14.1 +0.4
	baz=19,slow=18,SNR=2.1 comp=N,0.4nm,0.4s					
FINES	FINESS Array B	20.78	353	P	P	14 16 06.8 +0.8
	comp=N,0.8nm,0.5s,baz=146,slow=12,SNR=4.8 comp=N,0.8nm,0.5s					
GEYT	Alibeck	21.18	89	P	P	14 16 10.5 -0.2
	comp=N,1.0nm,0.6s,baz=330,slow=5.5,SNR=1.7 comp=N,1.0nm,0.6s					
NC602	NORSAR Array S	23.16	335	P	P	14 16 31.3 -0.1
MKAR	Makanchi Array	36.95	63	P	P	14 18 33.4 -1.0
	comp=N,0.3nm,0.7s,baz=280,slow=6.6,SNR=4.1 comp=N,0.3nm,0.7s					
TOA0	Torodi Ar. Sit	37.65	231	P	P	14 18 40.4 -0.1
TOA0				IAmb	IAmb	14 18 41.0
	comp=Z,8.3nm,1.5s					
TORD	Torodi Ar. Bea	37.65	231	P	P	14 18 39.5 -1.0
	comp=Z,1.7nm,0.5s,baz=39,slow=9.4,SNR=14 comp=Z,1.7nm,0.5s					
TORD	Torodi Ar. Bea	37.65	231	P	P	14 18 40.4 -0.1
WMQ	Urumqi	41.34	66	eP	P	14 19 14.1 +2.9
HHC	Hu-ho-hao-te	58.76	61	eP	P	14 21 23.8 +0.3
PZH	PanZhiHua	59.15	80	P	P	14 21 29.9 +3.5

*MEX **16** 14:13:34.8±0.3,31°.59N×114°.30W,h10km,MD3.1*
*ECX **16** 14:13:35.1±0.6,31°.57N×114°.43W,h10km±52km,MD2.7, ML2.9*

ISC 16 14:13:33.1±1.3,31°.60N±0°.06×114°.40W±0°.04, h16km±12km,n12,σ0°.54/18,2C-2D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	0.57	257	⇑eP	Pg	14 13 44.8	+0.4
ECBX				eS	Sg	14 13 52.4	+0.4
SFX	San Felipe	0.68	215	eP	Pg	14 13 46.5	+0.1
SFX				eS	Sg	14 13 54.9	-0.5
SFX	San Felipe	0.68	215	eP	Pg	14 13 46.6	+0.1
SFX				eS	Sg	14 13 54.9	-0.5
SFX				e		14 13 55.7	
SFX				IAML		14 13 55.7	
	comp=E,730nm,0.3s						
PIX	Pinacate	0.80	92	eP	Pb	14 13 49.3	+0.6
PIX				eS	Sn	14 14 01.2	-0.3
RHX	Rio Hardy	0.92	306	eP	Pg	14 13 50.6	-0.4
SPIG	San Pedro Mart	1.06	239	eP	Pg	14 13 53.2	-0.6
SPIG				iS	Sg	14 14 07.5	-0.3
SPIG	San Pedro Mart	1.06	239	eP	Pg	14 13 53.6	-0.2
CPBX	Cerro Prieto	1.12	317	IAML		14 14 32.6	
	comp=N,642nm,0.5s						
CPBX				⇓e		14 14 32.6	
CPBX				IAML		14 14 32.9	
	comp=E,782nm,0.3s						
CPBX				⇓e		14 14 32.9	
214A	Organ Pipe Nat	1.40	75	eP	Pn	14 13 58.6	+0.5
214A				eS	Sb	14 14 15.4	-1.2
SQX	San Quintin	1.62	232	⇑e		14 14 32.4	
SQX				IAML		14 14 32.4	
	comp=E,155nm,0.3s						
CBX	Cerro Bola	2.05	291	eP	Pn	14 14 07.4	+0.3
CBX				eS	Sn	14 14 32.9	+0.5
TJIG	Tijuana	2.10	294	eP	Pn	14 14 07.8	+0.1
TJIG				eS	Sn	14 14 33.2	-0.3

*IDC **16** 14:19:10.8±0.8,35°.80N×70°.92E,h0km,mb4.1/14, mbtmp4.0/20,ML3.7/6,MS3.5/2,Error ellipse: s-maj=17.8km s-min=16.4km az=88.0*
*BJI **16** 14:19:20.1±0.0,36°.13N×70°.81E,h93km,mb4.7/10, mB4.7/3*
*NNC **16** 14:19:22.6±3.1,36°.55N×70°.76E,h0km,mb4.5,mpv4.4, Error ellipse: s-maj=33.9km s-min=21.1km az=146.0*
*NEIC **16** 14:19:23.7±1.2,36°.25N±0°.07×70°.8E±0°.1,h107km±6km, mb4.1/7,Error ellipse: s-maj=13.3km s-min=8.1km az=126.0*

ISC 16 14:19:22.2±0.5,36°.12N±0°.05×70°.85E±0°.05,h102km,n85, σ2°.29/96,mb4.1/17,7C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.16	224	Pn	Pn	14 19 59.5	+2.5
CEP	Cherat	2.45	159	P	Pn	14 20 03.5	+2.6
CEP				S	Sn	14 20 33.0	+2.5
CHGR	Chuyangaron	2.87	333	Pn	Pn	14 20 06.3	+0.1
GAR	Garm	2.90	352	Pn	Pn	14 20 07.2	+0.4
CHCP	Chirah Chowk	3.16	140	P	Pn	14 20 11.5	+1.3
BTK	Batken	3.93	360	Pn	Pn	14 20 21.1	+0.6
SARP	Sargodha	4.46	160	P	Pn	14 20 28.2	+0.7
JMU	Jammu	4.77	134	eP	Pn	14 20 31.7	-0.1
JMU				eS	Sn	14 21 22.4	-3.5
KSH	Kashi	5.29	49	P	Pn	14 20 35.3	-3.6
KSH				S	Sn	14 21 28.5	-10
THN	Thein Dam	5.46	131	eP	Pn	14 20 41.3	+0.2
THN				eP	Pn	14 20 42.0	+0.9
THN				eS	Sn	14 21 40.0	-2.6
THN				eS	Sn	14 21 40.3	-2.3
AML	Almayashu	6.40	19	P	Pn	14 20 54.6	+0.5
	SNR=119						
BHK	Bhakra	6.60	134	eP	Pn	14 20 56.5	-0.1
BHK				eS	Sn	14 22 07.2	-3.2
NRN	Naryn	6.66	36	Pn	Pn	14 20 56.5	-1.1
UCH	Uchtor	6.73	24	P	Pn	14 20 59.1	+0.4
	SNR=49						
EKS2	Erkin-Say	6.91	18	P	Pn	14 21 01.7	+0.8
	SNR=28						
KK31	Karatay Array	6.98	358	Pn	Pn	14 21 01.5	-0.2
KK31	Karatay Array	6.98	358	⇓P	Pn	14 21 01.8	+0.2
	8.0nm,0.3s,baz=181,slow=12,SNR=442						
KK31				⇑S	Sn	14 22 17.3	-2.1
	35nm,0.6s,baz=183,slow=29,SNR=3.6						
KKAR	Karatay Array	6.98	358	Pn	Pn	14 21 01.2	-0.5
KKAR	Karatay Array	6.98	358		Pn	14 21 01.5	-0.1
AAK	Ala-Archa	7.09	22	P	Pn	14 21 04.0	+0.6
	SNR=43						
AAK	Ala-Archa	7.09	22	Pn	Pn	14 21 03.8	+0.4
	11nm,0.3s,baz=193,slow=6.7,SNR=92						
AAK				Sn	Sn	14 22 20.7	-1.8
	1.6nm,0.3s,baz=180,slow=20,SNR=1.4 24nm,0.4s						
AAK	Ala-Archa	7.09	22		Pn	14 21 03.5	+0.2
SMLA	Simla	7.25	132	eP	Pn	14 21 04.0	-1.4
SMLA				eS	Sn	14 22 20.6	-5.6
SMLA				IAML		14 22 25.4	
	comp=E,142nm,0.6s						
SMLA				IAML		14 22 25.7	
	comp=N,131nm,0.2s						
KBK	Karagaybulak	7.26	25	P	Pn	14 21 06.5	+0.9
	SNR=14						
ULHL	Ulahol	7.41	33	P	Pn	14 21 08.4	+0.6
	SNR=21						
CHMS	Chumysh	7.50	23	P	Pn	14 21 09.6	+0.7
	SNR=21						
CHMS	Chumysh	7.50	23	⇑P	Pn	14 21 09.5	+0.7
	comp=N,9.3nm,0.3s						
CHMS				⇑S	Sn	14 22 30.6	-1.6
	comp=N,9.0nm,0.7s						
USP	Ospenovka	7.67	20	P	Pn	14 21 11.2	+0.1
	SNR=14						
TKM2	Tokmak 2	7.72	27	P	Pn	14 21 12.2	+0.3
	SNR=33						
TKM2	Tokmak 2	7.72	27	⇑P	Pn	14 21 12.0	+0.1
	comp=N,11nm,0.5s						
TKM2				⇓S	Sn	14 22 37.2	-0.5
	comp=N,7.0nm,0.7s						
PDGK	Podgornoye	9.80	40	⇑P	Pn	14 21 39.5	-0.7
	comp=N,6.7nm,0.8s						
GEYT	Alibeck	10.34	284	Pn	Pn	14 21 44.2	-3.2
	comp=N,0.6nm,0.3s,baz=107,slow=8.3,SNR=8.7						
GEYT				Sn	Sn	14 23 34.6	-6.6
	comp=N,0.8nm,0.3s,baz=105,slow=11,SNR=2.1 comp=N,1.0nm,0.4s						
GEYT	Alibeck	10.34	284	Pn	Pn	14 21 46.3	-1.1
GYA0B	ALIBECK ARRAY	10.34	284	Pn	Pn	14 21 46.4	-1.0
PYUN	Piuthan	13.03	124	eP	Pn	14 22 19.4	-4.1
	comp=N,16nm,0.4s						
DANN	Dangsing	13.39	122	eP	Pn	14 22 25.2	-3.2
	comp=N,12nm,0.3s						
MAKZ	Makanchi	13.54	35	Pn	Pn	14 22 28.5	-1.3
KOLN	Koldanda	13.65	124	eP	Pn	14 22 27.3	-4.4
	comp=N,1.1nm,0.4s						
MK31	Makanchi Array	13.67	35	Pn	Pn	14 22 30.3	-1.3
MKAR	Makanchi Array	13.67	35	Pn	Pn	14 22 30.2	-1.4
	comp=N,0.2nm,0.3s,baz=212,slow=13,SNR=7.0 comp=N,1.5nm,0.9s						
MKAR	Makanchi Array	13.67	35		Pn	14 22 30.6	-1.0
BHPL	Bhopal	14.05	154	eP	Pn	14 22 33.4	-3.2
BHPL				eS	Sn	14 25 02.2	-9.2
GKN	Gorkha	14.21	121	eP	Pn	14 22 35.5	-3.4
	comp=N,10nm,0.3s						
PKIN	Phulchoki	15.00	121	eP	Pn	14 22 46.3	-2.8
	comp=N,11nm,0.4s						
PKI	Pulchoki	15.02	121	eP	Pn	14 22 46.2	-3.1
	comp=N,7.4nm,0.4s						
WMQ	Urumqi	15.02	54	eP	P	14 22 51.3	-0.6
AB31	Akbulak array	15.36	332	P	Pn	14 22 52.3	-0.8
	comp=N,5.1nm,0.6s,baz=150,slow=13,SNR=76						
ABKAR	Akbulak array	15.36	332	Pn	Pn	14 22 52.1	-1.0
ABKAR	Akbulak array	15.36	332	Pn	Pn	14 22 51.9	-1.2
ABKAR				IAmb	IAmb	14 22 54.3	
	comp=Z,6.5nm,0.6s						
JIRN	Jiri	15.51	119	eP	Pn	14 22 53.7	-1.9
	comp=Z,1.5nm,0.4s						
KURBB	Kurchatov Arra	15.52	19	Pn	Pn	14 22 52.6	-2.5
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=1.8 comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	15.52	19	⇑P	P	14 22 58.1	+0.8
	comp=Z,2.8nm,0.6s						
RAMN	Ramite	16.23	120	eP	Pn	14 23 01.9	-2.5
	comp=Z,7.9nm,0.4s						
TAPN	Taplejung	16.78	117	eP	Pn	14 23 09.9	-1.4
	comp=Z,21nm,0.6s						
BVAR	Borovoye Array	16.90	359	P	P	14 23 12.7	0.0
	comp=Z,0.4nm,0.3s,baz=165,slow=12,SNR=7.4 comp=Z,1.5nm,0.8s						
BRVK	Borovoye	16.94	359		P	14 23 12.8	-0.1
AKTO	Aktyubinsk	17.05	331	P	Pn	14 23 13.6	-0.4
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=9.4						
AKTO				S	Sn	14 26 13.1	-10
	comp=Z,0.7nm,0.4s,baz=174,slow=23,SNR=1.6 comp=Z,3.8nm,0.7s						
AKTO	Aktyubinsk	17.05	331	⇑P	P	14 23 16.2	+1.9
	comp=Z,8.9nm,0.7s						
HYBB	Hyderabad (bro	19.84	158	eP	Pn	14 23 47.8	+0.2
ZAA0	Zalesovo Array	20.31	24	P	P	14 23 49.7	0.0
ZAA0				IAmb	IAmb	14 23 51.4	
	comp=Z,5.9nm,0.8s						
ZALV	Zalesovo Beam	20.31	24	P	P	14 23 50.5	+0.8
	comp=Z,4.4nm,0.3s,baz=224,slow=11,SNR=20 comp=Z,4.4nm,0.3s						
ZALV	Zalesovo Beam	20.31	24	P	P	14 23 49.7	0.0
ARU	Arti	21.95	342	P	P	14 24 10.2	+2.9
	comp=Z,2.4nm,0.3s,baz=168,slow=10,SNR=6.1 comp=Z,2.4nm,0.3s						
KIV	Kislovodsk	22.86	299	P	P	14 24 15.6	-1.3
KIV				IAmb	IAmb	14 24 16.7	
	comp=Z,6.5nm,0.9s						
PZH	PanZhiHua	27.99	101	P	P	14 25 04.9	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,150nm,5.4s						
SONM	Songino Array	28.65	55	P	P	14 25 10.7	+1.4
	comp=Z,0.3nm,0.4s,baz=282,slow=7.2,SNR=1.8 comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	29.43	288	P	P	14 25 14.2	-2.0
HHC	Hu-ho-hao-te	32.01	69	eP	P	14 25 39.8	+0.9
AKASG	Malin Array Be	33.09	309	P	P	14 25 49.8	+1.8
	comp=Z,0.4nm,0.3s,baz=79,slow=7.5,SNR=5.4 comp=Z,0.4nm,0.3s						
NRIK	Noril'sk	34.52	10	P	P	14 26 03.5	+3.3
	comp=Z,3.6nm,0.5s,baz=124,slow=1.7,SNR=5.7 comp=Z,3.6nm,0.5s						
FINES	FINESS Array B	37.73	326	P	P	14 26 30.6	+3.0
	comp=Z,1.4nm,0.4s,baz=113,slow=7.9,SNR=9.7 comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	41.45	338	P	P	14 27 02.3	+4.0
	comp=Z,3.0nm,0.6s,baz=108,slow=7.9,SNR=14 comp=Z,3.0nm,0.6s						
HFS	Hagfors	43.29	322	P	P	14 27 15.7	+2.4
	comp=Z,3.1nm,0.5s,baz=98,slow=11,SNR=17 comp=Z,3.1nm,0.5s						
NB2	NORSAR Subarra	44.61	323	P	P	14 27 26.5	+2.5
	comp=Z,1.9nm,0.6s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.61	323	P	P	14 27 26.5	+2.5
	comp=Z,1.7nm,0.5s,baz=97,slow=7.8,SNR=11 comp=Z,1.7nm,0.5s						
MA2	Magadan	54.74	38	LR	LR	14 52 16.1	
	comp=Z,112nm,18.9s,baz=280,slow=36						
TORD	Torodi Ar. Bea	65.58	269	P	P	14 29 56.3	+0.9
	comp=Z,0.9nm,0.6s,baz=48,slow=5.8,SNR=6.6 comp=Z,0.9nm,0.6s						
BOSA	Boshof	77.38	220	P	P	14 31 07.7	+1.7
	comp=Z,2.5nm,0.7s,baz=6.4,slow=6.2,SNR=6.1 comp=Z,2.5nm,0.7s						
YKA	Yellowknife Ar	81.63	3	P	P	14 31 30.7	+2.2
	comp=Z,1.4nm,0.6s,baz=349,slow=5.3,SNR=1.9 comp=Z,1.4nm,0.6s						
WRA	Warramunga Arr	81.90	122	P	P	14 31 31.0	+0.5
	comp=Z,0.5nm,0.7s,baz=325,slow=4.9,SNR=9.0 comp=Z,0.5nm,0.7s						
WRAB	Tennant Creek	81.90	122	P	P	14 31 31.5	+1.0
WB2	Warramunga Arr	81.91	122	P	P	14 31 31.5	+0.9
WB2				IAmb	IAmb	14 31 51.6	
	comp=Z,7.7nm,1.3s						
WR0	Warramunga Arr	82.05	122	P	P	14 31 32.1	+0.8
WR0				IAmb	IAmb	14 31 57.8	
	comp=Z,9.8nm,1.4s						
SUR	Sutherland	82.69	221	LR	LR	15 08 47.2	
	comp=Z,12nm,20.0s,baz=100,slow=36						
ASAR	Alice Springs	84.14	125	P	P	14 31 42.9	+0.9
	comp=Z,0.2nm,0.5s,baz=312,slow=4.9,SNR=11 comp=Z,0.2nm,0.5s						

*AEIC **16** 14:24:37±2.9,61°.16N±0°.02×139°.99W±0°.03,h12km±5km, ML3.3,ML3.3(OTT),Error ellipse: s-maj=2.4km s-min=2.2km az=173.0*
*ANF **16** 14:24:37.8±0.1,61°.14N×139°.98W,h0km,ML3.7/49,Error ellipse: s-maj=1.3km s-min=1.1km az=31.0*
*NEIC **16** 14:24:38.7±1.9,61°.138N±0°.006×139°.97W±0°.02, h1km±9km,Error ellipse: s-maj=1.8km s-min=0.5km az=65.0*
*PGC **16** 14:24:39.0±0.0,61°.15N×139°.98W,h1km,ML3.3,ML3.3/13, 139km west of Haines Jct., Yt Southern Yukon Territory, Canada*

ISC 16 14:24:38.6±0.9,61°.16N±0°.01×139°.97W±0°.01,h9km±7km, n226,σ1°.51/310,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	Steele Glacier	0.16	39	P	Pg	14 24 42.0	-0.2
YUK8				S	Sg	14 24 44.6	-0.2
YUK8	Steele Glacier	0.16	39	P	Pg	14 24 42.0	-0.2
	baz=220,SNR=1000						
YUK8				S	Sg	14 24 44.6	-0.2
	baz=220						
O28M	Mount Upton	0.40	195		Pg	14 24 46.0	-0.6
O28M					Sg	14 24 51.7	-0.3
O28M	Mount Upton	0.40	195	P	Pg	14 24 46.2	-0.5
O28M				S	Sg	14 24 51.6	-0.3

YUK5			S	Sg	14 25 11.3	-0.3
PCA	**Pinnacle**	**1.08 188**		**Pg**	**14 24 59.0**	**-0.3**
PCA	**Pinnacle**	**1.08 188**	P	**Pg**	**14 24 59.0**	**-0.3**
PCA			S	Sg	14 25 11.4	-1.8
PINM	**Pinnacle**	**1.08 187**	P	**Pg**	**14 24 58.7**	**-0.6**
	baz=6.8,SNR=40					
PINM			Sb	**Sb**	**14 25 14.9**	**+1.2**
	baz=6.8					
YUK7	**Dusty Glacier**	**1.10 124**		**Pg**	**14 24 59.0**	**-0.8**
YUK7	**Dusty Glacier**	**1.10 124**	P	**Pg**	**14 24 58.9**	**-0.8**
YUK7			S	Sg	14 25 13.9	0.0
O29M	**Mount Kennedy**	**1.10 141**		**Pg**	**14 24 58.5**	**-1.3**
O29M	**Mount Kennedy**	**1.10 141**	P	**Pg**	**14 24 58.5**	**-1.3**
O29M			S	Sg	14 25 13.7	-0.3
O29M	**Mount Kennedy**	**1.10 141**	P	**Pg**	**14 24 58.5**	**-1.3**
	baz=322,SNR=90					
O29M			S	Sg	14 25 13.9	-0.1
	baz=322					
SAMH	**Samovar Hills**	**1.11 201**		**Pg**	**14 24 59.8**	**-0.1**
SAMH	**Samovar Hills**	**1.11 201**	P	**Pg**	**14 24 59.1**	**-0.8**
BALM	**Baldy**	**1.16 265**		**Pg**	**14 24 59.5**	**-1.4**
BALM				Sg	14 25 15.0	-1.0
BALM	**Baldy**	**1.16 265**	P	**Pg**	**14 24 59.3**	**-1.5**
BALM			S	Sg	14 25 14.9	-1.0
YAH	**Yahtse**	**1.18 228**		**Pg**	**14 25 00.0**	**-1.3**
KIAG	**Kiagna River**	**1.19 260**		**Pg**	**14 24 60.0**	**-1.4**
KIAG				Sg	14 25 17.1	+0.4
KIAG	**Kiagna River**	**1.19 260**	P	**Pg**	**14 24 59.7**	**-1.7**
KIAG			S	Sg	14 25 15.5	-1.2
PTPK	**Patty Peak**	**1.21 272**		**Pg**	**14 25 00.3**	**-1.6**
PTPK	**Patty Peak**	**1.21 272**	P	**Pg**	**14 25 00.2**	**-1.6**
PTPK			S	Sg	14 25 17.1	-0.4
BCPM	**Bancas Point**	**1.22 172**		**Pg**	**14 25 00.5**	**-1.5**
BAGL	**Bagley Icefiel**	**1.24 238**		**Pg**	**14 25 00.7**	**-1.7**
CHX	**Chaix Hills**	**1.24 208**		**Pg**	**14 25 01.9**	**-0.4**
HYT	**Haines Junctio**	**1.25 105**		**Pg**	**14 25 01.0**	**-1.5**
HYT	**Haines Junctio**	**1.25 105**	P	**Pg**	**14 25 01.1**	**-1.5**
HYT			S	Sg	14 25 18.7	-0.1
HYT	**Haines Junctio**	**1.25 105**	P	**Pg**	**14 25 01.2**	**-1.4**
	baz=286,SNR=89					
HYT			S	Sg	14 25 18.9	+0.1
	baz=286					
ISLE	**Juniper Island**	**1.29 245**		**Pg**	**14 25 01.6**	**-1.7**
BVCY	**Beaver Creek**	**1.33 342**		**Pg**	**14 25 02.9**	**-1.2**
BVCY	**Beaver Creek**	**1.33 342**	P	**Pg**	**14 25 02.8**	**-1.3**
BVCY			S	Sg	14 25 21.3	0.0
BVCY	**Beaver Creek**	**1.33 342**	P	**Pg**	**14 25 02.8**	**-1.3**
	baz=162					
BVCY			S	Sg	14 25 21.8	+0.5
	baz=162					
MESA	**MESA**	**1.39 226**		**Pg**	**14 25 04.5**	**-0.7**
MESA	**MESA**	**1.39 226**	Pn	**Pg**	**14 25 04.5**	**-0.7**
MESA			Sg	Sg	14 25 22.7	-0.5
MESA	**MESA**	**1.39 226**	P	**Pg**	**14 25 04.3**	**-0.9**
	baz=44,SNR=65					
MESA			S	Sg	14 25 23.0	-0.1
	baz=44					
N30M	**Aishikik Lake**	**1.42 77**		**Pn**	**14 25 04.8**	**+0.1**
N30M	**Aishikik Lake**	**1.42 77**	Pn	**Pn**	**14 25 04.7**	**0.0**
N30M			Sg	Sg	14 25 23.5	-0.8
N30M	**Aishikik Lake**	**1.42 77**	P	**Pn**	**14 25 04.8**	**+0.1**
	baz=259,SNR=86					
N30M			S	Sg	14 25 24.1	-0.3
	baz=259					
BARK	**Barkley Ridge**	**1.45 240**		**Pn**	**14 25 04.5**	**-0.7**
TGL	**Tana Glacier**	**1.45 255**		**Pn**	**14 25 04.3**	**-0.8**
M29M	**Somme Creek**	**1.47 28**		**Pn**	**14 25 06.0**	**+0.5**
M29M	**Somme Creek**	**1.47 28**	Pn	**Pn**	**14 25 06.0**	**+0.5**
M29M			Sg	Sg	14 25 25.5	-0.5
M29M	**Somme Creek**	**1.47 28**	P	**Pn**	**14 25 05.9**	**+0.5**
	baz=210,SNR=180					
M29M			S	Sg	14 25 25.7	-0.4
	baz=210					
MCARA	**McCarthy VSAT**	**1.49 280**		**Pn**	**14 25 05.2**	**-0.4**
MCARA	**McCarthy VSAT**	**1.49 280**	P	**Pn**	**14 25 05.2**	**-0.4**
	baz=98,SNR=85					
MCARA			S	Sg	14 25 25.8	-0.8
	baz=98					
M27K	**Edge Creek, AK**	**1.51 324**		**Pn**	**14 25 05.6**	**-0.4**
M27K	**Edge Creek, AK**	**1.51 324**	Pn	**Pn**	**14 25 05.5**	**-0.4**
M27K			Sg	Sg	14 25 26.2	-0.8
M27K	**Edge Creek, AK**	**1.51 324**	P	**Pn**	**14 25 05.6**	**-0.4**
	baz=142,SNR=158					
M27K			S	Sg	14 25 26.2	-0.8
	baz=142					
PNL	**Peninsula**	**1.52 169**		**Pn**	**14 25 06.7**	**+0.6**
PNL	**Peninsula**	**1.52 169**	Pn	**Pn**	**14 25 06.8**	**+0.8**
PNL			Sg	Sb	14 25 26.7	+0.2
PNL	**Peninsula**	**1.52 169**	P	**Pn**	**14 25 06.3**	**+0.3**
	baz=349,SNR=16					
PNL			S	Sb	14 25 27.3	+0.8
	baz=349					
CYK	**Cape Yakataga**	**1.64 230**		**Pn**	**14 25 09.0**	**+1.3**
VRDI	**Verde Repeater**	**1.69 274**		**Pn**	**14 25 08.5**	**0.0**
SNH	**Sunshine Point**	**1.72 236**		**Pn**	**14 25 10.0**	**+1.2**
KHIT	**Khitrov Hills**	**1.76 247**		**Pn**	**14 25 09.7**	**+0.3**
P30M	**Million Dollar**	**1.81 124**		**Pn**	**14 25 11.2**	**+1.1**
P30M	**Million Dollar**	**1.81 124**	Pn	**Pn**	**14 25 11.2**	**+1.1**
P30M			Sg	Sn	14 25 34.9	+1.7
P30M	**Million Dollar**	**1.81 124**	Pb	**Pn**	**14 25 11.2**	**+1.1**
	baz=306					
P30M			Sb	Sg	14 25 36.6	-0.3
	baz=306					
GRIN	**Grindle Hills**	**1.87 243**		**Pn**	**14 25 12.6**	**+1.8**
GLB	**Gilahina Butte**	**1.87 280**		**Pn**	**14 25 11.8**	**+0.9**
P29M	**Windy Craggy**	**1.89 143**		**Pn**	**14 25 12.5**	**+1.3**
P29M	**Windy Craggy**	**1.89 143**	Pn	**Pn**	**14 25 12.5**	**+1.3**
P29M			Sg	Sg	14 25 38.8	-0.7
P29M	**Windy Craggy**	**1.89 143**	Pb	**Pn**	**14 25 12.4**	**+1.3**
	baz=325,SNR=60					
P29M			Sg	Sg	14 25 39.8	+0.4
	baz=325					
M26K	**Nabesna, AK**	**1.90 312**		**Pn**	**14 25 12.4**	**+1.1**
M26K	**Nabesna, AK**	**1.90 312**	Pb	**Pn**	**14 25 12.6**	**+1.3**
	baz=130,SNR=215					
M26K			Sb	Sg	14 25 39.6	-0.1
	baz=130					
O30N	**Mendenhall**	**1.93 100**		**Pn**	**14 25 12.7**	**+1.0**
O30N	**Mendenhall**	**1.93 100**	P	**Pn**	**14 25 12.1**	**+0.4**
	baz=283,SNR=70					
O30N			Sg	Sb	14 25 39.5	+1.2
	baz=283					
BGLC	**Bering Glacier**	**1.94 239**		**Pn**	**14 25 12.5**	**+0.9**
BGLC	**Bering Glacier**	**1.94 239**	Pb	**Pb**	**14 25 13.7**	**-0.3**
	baz=56					
BGLC			Sg	Sg	14 25 42.6	+1.9
	baz=56					
BERG	**Berg Lake**	**1.98 249**		**Pn**	**14 25 14.2**	**+1.8**
N31M	**Braeburn, Yuko**	**2.05 79**		**Pn**	**14 25 14.7**	**+1.4**
N31M	**Braeburn, Yuko**	**2.05 79**	Pn	**Pn**	**14 25 14.3**	**+1.0**
N31M			Sg	Sb	14 25 41.9	+0.3
N31M	**Braeburn, Yuko**	**2.05 79**	P	**Pn**	**14 25 13.5**	**+0.2**
	baz=263,SNR=35					
N31M			Sb	Sn	14 25 41.3	+2.3
	baz=263					
BC03		**2.09 337**		**Pn**	**14 25 14.3**	**+0.5**
L27K	**Beaver Creek,**	**2.10 336**	Pn	**Pn**	**14 25 14.3**	**+0.3**
L27K			Sg	Sb	14 25 43.4	+0.3
L27K	**Beaver Creek,**	**2.10 336**	P	**Pn**	**14 25 14.5**	**+0.5**
	baz=155,SNR=137					
L27K			Sb	Sb	14 25 44.5	+1.5
	baz=155					
L29M	**L29M**	**2.14 23**		**Pn**	**14 25 16.7**	**+2.1**
L29M	**L29M**	**2.14 23**	P	**Pn**	**14 25 15.6**	**+1.0**
	baz=205					
L29M			Sb	Sg	14 25 46.6	-0.7
	baz=205					
WASW	**Wrangell South**	**2.15 293**		**Pb**	**14 25 17.4**	**-0.5**
SUCK	**Suckling Hills**	**2.17 241**		**Pb**	**14 25 17.9**	**-0.2**
NICHA	**Nichawak Mount**	**2.17 247**		**Pb**	**14 25 17.7**	**-0.4**
BMRM	**Bremner River**	**2.26 267**		**Pn**	**14 25 17.6**	**+1.4**
BMRM	**Bremner River**	**2.26 267**	Pb	**Pn**	**14 25 18.7**	**+2.4**
	baz=83					
BMRM			Sb	Sb	14 25 48.8	+1.1
	baz=83					
N25K	**Chitina, Valde**	**2.27 283**		**Pn**	**14 25 18.6**	**+2.2**
N25K	**Chitina, Valde**	**2.27 283**	Pb	**Pn**	**14 25 18.8**	**+2.4**
	baz=100					
N25K			Sb	Sb	14 25 49.6	+1.6
	baz=100					
GOAT	**Goat Mountain**	**2.40 258**		**Pb**	**14 25 21.0**	**-0.9**
RAGM	**Ragged Mountai**	**2.43 253**		**Pb**	**14 25 21.8**	**-0.8**
L26K	**Log Cabin Wild**	**2.46 321**		**Pn**	**14 25 20.1**	**+1.2**
L26K	**Log Cabin Wild**	**2.46 321**	P	**Pn**	**14 25 19.9**	**+1.0**
	baz=138,SNR=146					
PLBC	**Pleasant Camp**	**2.48 132**	Pb	**Pb**	**14 25 22.6**	**-0.7**
	baz=315					
PLBC			Sb	**Sb**	**14 25 55.8**	**+1.9**
	baz=315					
KAIM	**Kayak Island**	**2.52 243**	Pb	**Pb**	**14 25 23.2**	**-0.8**
	baz=59					
KAIM			Sb	**Sb**	**14 25 56.4**	**+1.2**
	baz=59					
WHY	**Whitehorse**	**2.54 99**		**Pn**	**14 25 21.1**	**+1.0**
WHY	**Whitehorse**	**2.54 99**	Pn	**Pn**	**14 25 21.4**	**+1.3**
WHY			Sg	**Sb**	**14 25 57.9**	**+2.2**
WHY	**Whitehorse**	**2.54 99**	P	**Pn**	**14 25 20.4**	**+0.3**
	baz=284,SNR=46					
WHY			Sb	**Sb**	**14 25 57.6**	**+1.9**
	baz=284					
HARP	**HAARP**	**2.76 299**		**Pn**	**14 25 25.5**	**+2.5**
HARP	**HAARP**	**2.76 299**	Pb	**Pb**	**14 25 27.9**	**-0.2**
	baz=115					
HARP			Sb	**Sb**	**14 26 03.8**	**+1.8**
	baz=115					
DIV	**Divide**	**2.81 272**		**Pn**	**14 25 26.1**	**+2.3**
DIV	**Divide**	**2.81 272**	Pg	**Pb**	**14 25 28.4**	**-0.6**
DIV			Sg	**Sb**	**14 26 05.1**	**+1.6**
M31M	**Drury Creek, Y**	**2.86 66**		**Pn**	**14 25 27.0**	**+2.6**
M31M	**Drury Creek, Y**	**2.86 66**	Sg	**Sb**	**14 26 07.7**	**+2.8**
M31M	**Drury Creek, Y**	**2.86 66**	Pb	**Pb**	**14 25 28.8**	**-1.0**
	baz=251					
M31M			Sb	**Sb**	**14 26 07.0**	**+2.2**
	baz=251					
SKAG	**Skagway**	**2.87 124**	Pb	**Pb**	**14 25 29.7**	**-0.3**
	baz=308					
SKAG			Sb	**Sb**	**14 26 07.0**	**+1.9**
	baz=308					
KLU	**Klutina**	**2.89 279**		**Pn**	**14 25 28.0**	**+3.2**
KLU	**Klutina**	**2.89 279**	Pb	**Pn**	**14 25 28.4**	**+3.5**
	baz=94					
KLU			Sb	**Sb**	**14 26 06.1**	**+0.3**
	baz=94					
EYAK	**Cordova Ski Ar**	**2.89 260**		**Pn**	**14 25 27.8**	**+2.9**
EYAK	**Cordova Ski Ar**	**2.89 260**	Pb	**Pb**	**14 25 28.5**	**-1.9**
	baz=75					
EYAK			Sb	**Sb**	**14 26 07.6**	**+1.8**
	baz=75					
K29M	**Barlow Dome**	**2.92 22**		**Pn**	**14 25 26.9**	**+1.5**
K29M	**Barlow Dome**	**2.92 22**	Pn	**Pn**	**14 25 27.0**	**+1.6**
K29M			Sg	**Sb**	**14 26 09.7**	**+2.9**
K29M	**Barlow Dome**	**2.92 22**	P	**Pn**	**14 25 26.8**	**+1.4**
	baz=204,SNR=41					
DAWY	**Dawson**	**2.93 5**		**Pn**	**14 25 26.6**	**+1.1**
DAWY	**Dawson**	**2.93 5**	Pn	**Pn**	**14 25 26.5**	**+1.1**
DAWY			Sg	**Sb**	**14 26 09.6**	**+2.7**
DAWY	**Dawson**	**2.93 5**	P	**Pn**	**14 25 26.5**	**+1.1**
	baz=186,SNR=13					
K27K	**Chicken**	**3.04 342**		**Pn**	**14 25 27.8**	**+1.0**
K27K	**Chicken**	**3.04 342**	Pn	**Pn**	**14 25 27.7**	**+0.8**
K27K			Sg	**Sb**	**14 26 13.2**	**+3.2**
K27K	**Chicken**	**3.04 342**	P	**Pn**	**14 25 27.7**	**+0.8**
	baz=161					
MAYO	**Mayo, Yukon**	**3.10 36**	Sg	Sg	14 26 15.7	-2.3
M24K	**Tolsona, Glenn**	**3.11 290**		**Pn**	**14 25 31.1**	**+3.2**
M24K	**Tolsona, Glenn**	**3.11 290**	Pb	**Pb**	**14 25 32.3**	**-1.8**
	baz=105					
DOT	**Dot Lake**	**3.14 324**		**Pn**	**14 25 29.0**	**+0.7**
DOT	**Dot Lake**	**3.14 324**	Pn	**Pn**	**14 25 28.9**	**+0.6**
DOT			Sn	**Sn**	**14 26 06.0**	**+0.1**
DOT			Sg	**Sg**	**14 26 17.5**	**-1.9**
PAX	**Paxson**	**3.16 307**		**Pn**	**14 25 30.4**	**+1.8**
PAX	**Paxson**	**3.16 307**	P	**Pn**	**14 25 29.8**	**+1.1**
	baz=123					
FID	**Port Fidalgo**	**3.20 265**		**Pn**	**14 25 31.9**	**+2.8**
HIN	**Hinchinbrook I**	**3.29 259**		**Pn**	**14 25 31.5**	**+1.1**
FARO	**Faro, Yukon**	**3.33 68**	Pn	**Pn**	**14 25 32.3**	**+1.4**
FARO			Sg	**Sg**	**14 26 23.1**	**-2.5**
FARO	**Faro, Yukon**	**3.33 68**	P	**Pn**	**14 25 31.8**	**+0.9**
	baz=254					
N32M	**Quiet Lake**	**3.34 87**		**Pn**	**14 25 32.0**	**+1.0**
N32M	**Quiet Lake**	**3.34 87**	Pn	**Pn**	**14 25 32.1**	**+1.0**
N32M			Sg	**Sg**	**14 26 23.9**	**-1.9**
N32M	**Quiet Lake**	**3.34 87**	P	**Pn**	**14 25 31.7**	**+0.7**
	baz=273					
SCRK	**Sand Creek**	**3.38 328**		**Pn**	**14 25 32.4**	**+0.7**
SCRK	**Sand Creek**	**3.38 328**	P	**Pn**	**14 25 32.2**	**+0.5**
	baz=145,SNR=16					
J29M	**Klondike Camp**	**3.40 13**	Sg	**Sb**	**14 26 24.6**	**+4.1**
RIDG	**Independent Ri**	**3.44 321**	P	**Pn**	**14 25 32.9**	**+0.5**
	baz=137,SNR=7.3					
GLI	**Glacier Island**	**3.48 268**		**Pn**	**14 25 34.8**	**+1.9**
P32M	**Atlin**	**3.48 114**	Pg	**Pb**	**14 25 41.2**	**+0.7**
P32M	**Atlin**	**3.48 114**	Pb	**Pb**	**14 25 41.0**	**+0.5**
	baz=300					
SCM	**Sheep Creek Mo**	**3.59 284**		**Pn**	**14 25 36.7**	**+2.2**
P33M	**Teslin, Yukon**	**3.65 102**		**Pn**	**14 25 36.2**	**+1.0**
P33M	**Teslin, Yukon**	**3.65 102**	Pn	**Pn**	**14 25 36.1**	**+0.8**
P33M			Sg	**Sg**	**14 26 32.3**	**-3.3**
P33M	**Teslin, Yukon**	**3.65 102**	P	**Pn**	**14 25 36.1**	**+0.8**
	baz=288					
BESE	**Bessie Mountai**	**3.65 133**	Pn	**Pn**	**14 25 36.8**	**+1.4**
BESE			Sg	**Sb**	**14 26 31.3**	**+3.6**
EGAK	**Eagle**	**3.67 352**		**Pn**	**14 25 37.0**	**+1.5**
EGAK	**Eagle**	**3.67 352**	P	**Pn**	**14 25 37.3**	**+1.8**
	baz=171,SNR=44					
J26L	**Joseph Creek**	**3.74 335**		**Pn**	**14 25 37.5**	**+1.0**
J26L	**Joseph Creek**	**3.74 335**	P	**Pn**	**14 25 37.6**	**+1.0**
	baz=152,SNR=14					
DHY	**Denali Highway**	**3.97 302**		**Pn**	**14 25 42.0**	**+2.2**
JIS	**Juneau Island**	**4.05 133**		**Pn**	**14 25 42.1**	**+1.5**
PWL	**Port Wells**	**4.08 269**		**Pn**	**14 25 43.3**	**+2.1**
KNK	**Knik Glacier**	**4.10 277**		**Pn**	**14 25 44.3**	**+2.8**
J25K	**Salcha River,**	**4.25 327**		**Pn**	**14 25 44.3**	**+0.7**
J25K	**Salcha River,**	**4.25 327**	P	**Pn**	**14 25 44.4**	**+0.7**
	baz=142,SNR=21					
I29M	**Ogilvie Camp,**	**4.28 9**	Pn	**Pn**	**14 25 45.5**	**+1.5**
I29M			Sn	**Sn**	**14 26 34.3**	**+0.3**
MMPY	**Sheldon Lake,**	**4.37 67**	Pn	**Pn**	**14 25 46.2**	**+0.9**
MMPY			Sg	**Sg**	**14 26 55.6**	**-3.3**
MMPY	**Sheldon Lake,**	**4.37 67**	P	**Pn**	**14 25 46.4**	**+1.2**
	baz=254					
I26K	**Coal Creek Min**	**4.40 342**		**Pn**	**14 25 47.3**	**+1.6**
I26K	**Coal Creek Min**	**4.40 342**	P	**Pn**	**14 25 47.2**	**+1.6**
	baz=160					
Q32M	**Nakina River**	**4.45 116**	P	**Pn**	**14 25 47.8**	**+1.4**
	baz=303					
I27K	**Kandik River**	**4.52 351**		**Pn**	**14 25 48.7**	**+1.4**
I27K	**Kandik River**	**4.52 351**	Pn	**Pn**	**14 25 48.6**	**+1.4**
I27K			Sg	**Sg**	**14 27 00.7**	**-3.0**
I27K	**Kandik River**	**4.52 351**	P	**Pn**	**14 25 48.3**	**+1.0**
	baz=170,SNR=6.3					
S32K	**Killisnoo**	**4.62 141**		**Pn**	**14 25 49.7**	**+1.1**
S32K	**Killisnoo**	**4.62 141**	P	**Pn**	**14 25 50.0**	**+1.5**
	baz=326					
SEW	**Seward**	**4.79 261**	P	**Pn**	**14 25 52.2**	**+1.4**
	baz=73					
IL31		**4.80 322**		**Pn**	**14 25 51.0**	**0.0**
ILAR	**Eielson Array**	**4.80 322**		**Pn**	**14 25 49.6**	**-1.5**
R33M	**Jennings River**	**4.82 108**	Pg	**Pb**	**14 26 05.3**	**+2.0**
R33M			Sg	**Sg**	**14 27 09.7**	**-3.5**
R33M	**Jennings River**	**4.82 108**	P	**Pn**	**14 25 53.1**	**+1.6**
	baz=295					
O22K	**Cooper Landing**	**4.82 266**	P	**Pn**	**14 25 52.0**	**+0.7**
	baz=78					
MCK	**McKinley**	**4.90 306**	Pn	**Pn**	**14 25 49.8**	**-2.6**
H27K	**Steamboat Moun**	**5.14 353**	Pn	**Pn**	**14 25 56.9**	**+1.2**
H27K	**Steamboat Moun**	**5.14 353**	P	**Pn**	**14 25 56.7**	**+1.0**
	baz=172,SNR=6.3					
POKR	**Poker Plat Res**	**5.21 323**	P	**Pn**	**14 25 57.3**	**+0.5**
	baz=136					
TRF	**Thorofare Moun**	**5.33 300**		**Pn**	**14 25 58.3**	**-0.2**
EPYK	**Eagle Plains**	**5.43 14**	Sg	**Sg**	**14 27 28.0**	**-4.6**
S34M	**Telegraph Cree**	**5.55 122**	Sg	**Sg**	**14 27 30.6**	**-6.1**
TGTN	**Hyland Airport**	**5.64 81**	Sg	**Sg**	**14 27 35.7**	**-3.9**
DLBC	**Dease Lake**	**5.71 114**	Sg	**Sg**	**14 27 36.6**	**-5.3**
G27K	**Doyon Strip**	**5.72 353**	Pn	**Pn**	**14 26 04.8**	**+1.2**
G27K	**Doyon Strip**	**5.72 353**	P	**Pn**	**14 26 04.7**	**+1.0**
	baz=172					
H24K	**Noodor Dome**	**5.88 326**	P	**Pn**	**14 26 05.8**	**0.0**
	baz=140					
G26K	**Porcupine Rive**	**6.05 346**	P	**Pn**	**14 26 09.1**	**+1.0**
	baz=162					
G30M	**tAoh Zraii Nji**	**6.07 14**		**Pn**	**14 26 09.6**	**+1.1**
G30M	**tAoh Zraii Nji**	**6.07 14**	P	**Pn**	**14 26 09.0**	**+0.5**
	baz=198					
CAST	**Castle Rocks**	**6.09 297**	P	**Pn**	**14 26 08.9**	**+0.2**
	baz=106					
G25K	**Bearman Lake**	**6.24 337**	P	**Pn**	**14 26 11.6**	**+0.9**
	baz=152					
H23K	**Yukon River**	**6.34 322**	P	**Pn**	**14 26 13.2**	**+1.0**
	baz=133					
G24K	**Hadweenzic Riv**	**6.47 333**		**Pn**	**14 26 15.3**	**+1.4**
G24K	**Hadweenzic Riv**	**6.47 333**	P	**Pn**	**14 26 15.1**	**+1.2**
	baz=146					
T35M	**Bob Quinn**	**6.53 126**	Sg	**Sg**	**14 28 02.4**	**-5.6**
BM03	**Burnt Mountain**	**6.60 344**		**Pn**	**14 26 17.4**	**+1.6**
F31M	**Tsiigehtchic**	**6.86 21**	P	**Pn**	**14 26 20.3**	**+1.1**
	baz=206					
H22K	**Ishtalitna Cre**	**6.96 318**	P	**Pn**	**14 26 21.6**	**+0.9**
	baz=128					
F24K	**Squaw Lake**	**7.24 335**		**Pn**	**14 26 26.5**	**+1.9**
F24K	**Squaw Lake**	**7.24 335**	P	**Pn**	**14 26 26.0**	**+1.4**
	baz=148					
V35K	**Ketchikan**	**7.32 139**	P	**Pn**	**14 26 27.0**	**+1.5**
	baz=326					
E25K	**Arctic Village**	**7.39 343**	P	**Pn**	**14 26 28.0**	**+1.5**
	baz=158					
COLD	**Coldfoot**	**7.54 328**	Pn	**Pn**	**14 26 29.0**	**+0.4**
COLD	**Coldfoot**	**7.54 328**	P	**Pn**	**14 26 29.6**	**+1.0**
	baz=139					
INK	**Inuvik**	**7.68 18**	Pn	**Pn**	**14 26 29.8**	**-0.7**
INK			Sn	**Sn**	**14 27 52.4**	**-5.1**
IM03		**7.81 314**		**Pn**	**14 26 34.0**	**+1.7**
E24K	**Your Creek**	**7.84 336**		**Pn**	**14 26 34.6**	**+1.8**
E24K	**Your Creek**	**7.84 336**	P	**Pn**	**14 26 34.7**	**+2.0**
	baz=148,SNR=16					
G21K	**Allakaket**	**8.03 318**	P	**Pn**	**14 26 36.9**	**+1.6**
	baz=126					
E23K	**Chandalar**	**8.06 333**	P	**Pn**	**14 26 37.3**	**+1.5**
	baz=145					
F22K	**John River**	**8.27 326**	P	**Pn**	**14 26 39.6**	**+0.9**
	baz=135					
NBC2	**NorthernBC 2**	**8.74 91**	Sg	Sg	14 29 09.3	-10

NOU 16 14:32:08.4, 19.15S×169.61E, h272km, MLv3.7/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.75	212	P	Pn	14 32 59.9	+0.2
LIFNC	LIFOU	2.75	234	P	Pn	14 32 59.3	-0.4
KOUNC	Koumac, New Ca	5.20	254	P	Pn	14 33 27.4	+0.1

*NEIC **16** 14:48:52.6±2.1, 29.05S±0.10×61.3E±0.2, h10km±1km, mb4.3/4, Error ellipse: s-maj=32.7km s-min=16.1km az=264.0*
*IDC **16** 14:48:52.4±0.9, 29.20S×61.21E, h0km, mb3.8/8, mbtmp3.8/8, MS3.2/9, Error ellipse: s-maj=36.1km s-min=23.8km az=47.0*

ISC 16 14:48:53.5±0.7, 29.15S±0.1×61.1E±0.1, h10km, n30, σ1.92/16, mb4.0/9, MS3.3/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.30	327	Pn	Pn	14 51 06.0	-1.8
VOI	Vohitsoka	14.80	296	Pn	Pn	14 52 23.1	0.0
ABPO	Ambohimpanom	16.18	305	P	P	14 52 44.8	+0.3
H08S1	Diego Carcia H	23.88	29	T	T	15 18 51.1	
	baz=204,slow=76,SNR=5.7						
H08S2	Diego Garcia H	23.89	29	T	T	15 18 52.6	
	baz=204,slow=76,SNR=5.0						
H08S3	Diego Garcia H	23.90	29	T	T	15 18 51.7	
	baz=204,slow=76,SNR=11						
BOSA	Boshof	31.35	262	LR	LR	15 05 49.9	
	comp=Z,30nm,20.6s,baz=18,slow=32						
LSZ	Lusaka	33.34	287	LR	LR	15 09 07.4	
	comp=Z,26nm,18.3s,baz=90,slow=36						
MAW	Mawson	38.53	179	LR	LR	15 07 34.2	
	comp=Z,44nm,21.9s,baz=336,slow=29						
MBAR	Mbarara	40.56	309	LR	LR	15 12 09.4	
	comp=Z,28nm,20.6s,baz=86,slow=34						
ATD	Arta Tunnel	44.10	334	LR	LR	15 12 16.1	
	comp=Z,41nm,21.5s,baz=34,slow=32						
H01W2	Cape Leeuwin H	44.88	112	T	T	15 44 51.2	
	baz=262,slow=75,SNR=13						
H01W3	Cape Leeuwin H	44.88	112	T	T	15 44 47.1	
	baz=262,slow=75,SNR=13						
H01W1	Cape Leeuwin H	44.90	112	T	T	15 44 45.1	
	baz=262,slow=75,SNR=12						
CMAR	Chiang Mai Arr	59.74	42	P	P	14 58 59.6	+0.8
	0.4nm,0.7s,baz=228,slow=7.5,SNR=3.0						
	0.4nm,0.7s						
QSPA	South Pole Qui	61.04	180	LR	LR	15 23 57.1	
	comp=Z,28nm,18.2s,baz=285,slow=34						
QSPA	South Pole Qui	61.04	180	P	P	14 59 06.1	-1.1
EIL	Elat	63.58	335	LR	LR	15 23 22.1	
	comp=Z,23nm,19.4s,baz=270,slow=32						
VNDA	Vanda	64.08	166	P	P	14 59 27.3	+0.1
	0.5nm,0.7s,baz=278,slow=7.1,SNR=6.6						
VNDA				LR	LR	15 25 30.0	
	comp=Z,27nm,18.6s,baz=266,slow=34						
	0.5nm,0.7s						
VNDA	Vanda	64.08	166	P	P	14 59 25.9	-1.3
VNDA		

ISC 16 15:23:22.5±0.9, 17°2S±0°2×178°7W±0°1, h600km, n24, σ1§10/25, mb4.3/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.20**	**259**	P	**P**	**15 24 41.4**	**-1.5**
	28nm,0.7s,baz=96,slow=9.1,SNR=15						
MSVF	**Nonsavu**	**3.20**	**259**	P	**P**	**15 24 42.3**	**-0.6**
AFI	**Afiamalu**	**7.37**	**65**	P	**P**	**15 25 15.6**	**-0.4**
	26nm,0.7s,baz=225,slow=7.1,SNR=4.1						
AFI	**Afiamalu**	**7.37**	**65**	P	**P**	**15 25 15.0**	**-1.0**
NIUE	**Niue**	**8.51**	**104**	P	**P**	**15 25 27.3**	**+0.6**
DZM	**Mont Dzumac**	**14.87**	**248**	P	**P**	**15 26 26.9**	**-2.6**
	4.5nm,0.8s,baz=48,slow=18,SNR=1.5						
CTA	**Charters Tower**	**33.35**	**259**	P	**P**	**15 29 13.2**	**+0.4**
	1.4nm,0.6s,baz=77,slow=14,SNR=1.2						
	1.4nm,0.6s						
CTAO	**Charters Tower**	**33.35**	**259**	P	**P**	**15 29 13.2**	**+0.4**
CTAO				IAmb	IAmb	15 29 29.2	
	comp=Z,15nm,1.2s						
COEN	**Coen**	**36.88**	**269**	P	**P**	**15 29 43.9**	**+1.8**
COEN				IAmb	IAmb	15 29 50.0	
	comp=Z,16nm,1.2s						
TOO	**Toolangi**	**37.47**	**230**	P	**P**	**15 29 47.1**	**+0.6**
TOO				IAmb	IAmb	15 30 29.9	
	comp=Z,24nm,1.4s						
STKA	**Stephens Creek**	**38.80**	**240**	P	**P**	**15 29 57.6**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=83,slow=9.8,SNR=12						
	comp=Z,2.2nm,0.5s						
STKA	**Stephens Creek**	**38.80**	**240**	P	**P**	**15 29 58.0**	**+0.6**
BBOO	**Buckleboo**	**43.57**	**240**	P	**P**	**15 30 35.4**	**+0.5**
WB0	**Warramunga Arr**	**44.51**	**259**	P	**P**	**15 30 42.7**	**+0.3**
WB0				IAmb	IAmb	15 31 18.8	
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	**44.54**	**259**	P	**P**	**15 30 43.0**	**+0.4**
WB2				IAmb	IAmb	15 31 04.3	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**44.55**	**259**	P	**P**	**15 30 42.6**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=96,slow=6.7,SNR=22						
	comp=Z,1.2nm,0.5s						
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**15 30 45.2**	**+0.8**
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**15 30 44.8**	**+0.4**
	comp=Z,9.1nm,0.4s,baz=90,slow=7.7,SNR=417						
ASAR				PcP	**PcP**	**15 32 15.6**	**+2.3**
	comp=Z,0.2nm,0.8s,baz=100,slow=5.1,SNR=1.2						
	comp=Z,9.1nm,0.4s						
MTN	**Manton Dam**	**48.59**	**268**	P	**P**	**15 31 14.2**	**+1.1**
MTN				IAmb	IAmb	15 31 28.7	
	comp=Z,14nm,1.3s						
FORT	**Forrest**	**50.12**	**244**	P	**P**	**15 31 24.1**	**0.0**
KNRA	**Kununurra**	**50.34**	**264**	P	**P**	**15 31 26.8**	**+0.9**
PSA00	**Pilbara Seismi**	**57.88**	**255**	P	**P**	**15 32 17.9**	**-0.8**
PSA00				IAmb	IAmb	15 32 37.8	
	comp=Z,32nm,1.5s						
MBWA	**Marble Bar**	**58.04**	**255**	P	**P**	**15 32 20.6**	**+0.9**
MBWA				IAmb	IAmb	15 32 47.4	
	comp=Z,27nm,1.4s						
CASY	**Casey**	**66.72**	**205**	P	**P**	**15 33 13.8**	**-0.9**

*IDC **16** 15:47:50.6±1.1, 39°80N×20°66E, h0km, mb3.7/7, mbtmp3.6/13, ML3.2/6, MS2.7/6, Error ellipse: s-maj=17.2km s-min=15.5km az=99.0*
*NEIC **16** 15:47:54.2±1.4, 39°75N±0°05×20°72E±0°06, h12km±7km, mb4.1/6, Error ellipse: s-maj=7.8km s-min=5.6km az=212.0*
*PDG **16** 15:47:55.2±0.8, 39°75N×20°63E, h27km±2km, ML3.3/12, Error ellipse: s-maj=1.2km s-min=1.2km az=0.0*
*THE **16** 15:47:55.4, 39°77N×20°73E, h6km±1km, ML3.4/14, Error ellipse: s-maj=1.8km s-min=0.7km az=311.0*
*ATH **16** 15:47:55.1, 39°78N×20°72E, h16km±1km, ML3.4/12, Error ellipse: s-maj=1.6km s-min=0.9km az=280.0*
*BEO **16** 15:47:56.9±0.8, 39°76N×20°87E, h24km±5km, ML3.2/7*

ISC 16 15:47:54.3±0.8, 39°77N±0°02×20°72E±0°02, h18km±3km, n151, σ1§29/206, mb3.9/9, 14C-16D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**137**	P	**Pg**	**15 47 58.5**	**-0.1**
JAN				S	**Sg**	**15 48 02.3**	**+0.7**
	43μm,0.3s						
JAN	**Janina**	**0.15**	**137**	P	**Pg**	**15 47 58.5**	**-0.1**
JAN				S	**Sg**	**15 48 01.8**	**+0.2**
JAN				AML	AML	15 48 02.6	
	comp=N,86947μm,0.4s						
JAN				AML	AML	15 48 02.6	
	comp=E,83008μm,0.2s						
IGT	**Igoumenitsa**	**0.38**	**232**	P	**Pg**	**15 48 02.3**	**+0.1**
IGT				S	**Sb**	**15 48 09.9**	**+1.8**
	comp=E,6μm,0.8s						
IGT	**Igoumenitsa**	**0.38**	**232**	P	**Pg**	**15 48 02.4**	**+0.2**
IGT				S	**Sb**	**15 48 09.1**	**+1.0**
IGT				AML	AML	15 48 12.4	
	comp=E,10198μm,0.6s						
IGT				AML	AML	15 48 13.6	
	comp=N,9586μm,0.7s						
LSK	**Leskovik**	**0.39**	**347**	P	**Pb**	**15 48 03.4**	**+0.6**
LSK				S	**Sb**	**15 48 09.8**	**+1.2**
	comp=N,8μm,0.6s						
KPRO	**Kipourio**	**0.53**	**69**	P	**Pg**	**15 48 05.3**	**+0.3**
KPRO				S	**Sb**	**15 48 14.0**	**+1.5**
	comp=N,14μm,0.8s						
PENT	**Pentalofos**	**0.54**	**37**	P	**Pg**	**15 48 05.4**	**+0.3**
PENT				S	**Sb**	**15 48 14.7**	**+2.1**
	comp=N,2μm,0.4s						
PENT	**Pentalofos**	**0.54**	**37**	P	**Pg**	**15 48 05.3**	**+0.3**
PENT				S	**Sb**	**15 48 13.4**	**+0.8**
SRN	**Sarande**	**0.56**	**282**	P	**Pg**	**15 48 05.7**	**+0.2**
SRN				S	**Sb**	**15 48 15.0**	**+1.8**
KASA	**Kassiopi**	**0.60**	**268**	P	**Pg**	**15 48 06.4**	**+0.1**
KASA				S	**Sb**	**15 48 15.7**	**+1.3**
KASA				AML	AML	15 48 18.9	
	comp=N,4071μm,0.4s						
KASA				AML	AML	15 48 21.5	
	comp=E,2997μm,0.3s						
NEST	**Nestorio**	**0.69**	**21**	P	**Pg**	**15 48 08.4**	**+0.4**
NEST	**Nestorio**	**0.69**	**21**	P	**Pg**	**15 48 08.6**	**+0.6**
NEST				S	**Sg**	**15 48 17.7**	**+0.5**
NEST				AML	AML	15 48 25.2	
	comp=N,3894μm,0.9s						
NEST				AML	AML	15 48 26.8	
	comp=E,3140μm,0.5s						
KEK	**Kerkira**	**0.71**	**266**	Pg	**Pg**	**15 48 07.6**	**-0.7**
KEK	**Kerkira**	**0.71**	**266**	P	**Pg**	**15 48 07.9**	**-0.3**
KEK				S	**Sb**	**15 48 19.0**	**+1.4**
	comp=E,1μm,0.4s						
KEK	**Kerkira**	**0.71**	**266**	P	**Pg**	**15 48 08.0**	**-0.3**
KEK				S	**Sg**	**15 48 18.3**	**+0.6**
KEK				AML	AML	15 48 24.0	
	comp=N,2021μm,0.2s						
KEK				AML	AML	15 48 25.5	
	comp=E,3416μm,0.3s						
KBN	**Korca**	**0.85**	**4**		**Pb**	**15 48 11.1**	**+0.3**
KBN	**Korca**	**0.85**	**4**	P	**Pb**	**15 48 11.0**	**+0.3**
TSLK	**Tsoukalades, L**	**0.94**	**183**	P	**Pb**	**15 48 12.8**	**+0.7**
TSLK	**Tsoukalades, L**	**0.94**	**183**	P	**Pb**	**15 48 12.7**	**+0.5**
TSLK				S	**Sb**	**15 48 25.7**	**+1.4**
TSLK				AML	AML	15 48 32.6	
	comp=E,4227μm,0.4s						
TSLK				AML	AML	15 48 37.6	
	comp=N,5808μm,0.4s						
KZN	**Kozani**	**0.97**	**56**	P	**Pb**	**15 48 12.7**	**0.0**
KZN				S	**Sn**	**15 48 27.2**	**+0.7**
	comp=N,2μm,0.6s						
KZN	**Kozani**	**0.97**	**56**	P	**Pb**	**15 48 12.5**	**-0.2**
KZN				AML	AML	15 48 30.2	
	comp=N,3752μm,0.5s						
KZN				AML	AML	15 48 30.5	
	comp=E,5395μm,0.7s						
LKD2	**Lefkada island**	**0.98**	**183**	P	**Pb**	**15 48 13.2**	**+0.4**
LKD2				S	**Sn**	**15 48 29.5**	**+2.9**
	comp=E,2μm,0.6s						
LKD2	**Lefkada island**	**0.98**	**183**	P	**Pb**	**15 48 13.1**	**+0.4**
LKD2				S	**Sg**	**15 48 27.1**	**+0.8**
LKD2				AML	AML	15 48 33.2	
	comp=E,3963μm,0.6s						
LKD2				AML	AML	15 48 39.6	
	comp=N,4044μm,0.6s						
THL	**Klokotos Trika**	**1.02**	**101**	P	**Pb**	**15 48 13.2**	**-0.3**
THL	**Klokotos Trika**	**1.02**	**101**	P	**Pb**	**15 48 13.4**	**-0.1**
THL				S	**Sb**	**15 48 27.7**	**+1.2**
THL				AML	AML	15 48 31.3	
	comp=E,3106μm,0.5s						
THL				AML	AML	15 48 37.6	
	comp=N,2567μm,0.7s						
NYDR	**Nydri-Lefkada**	**1.05**	**181**	P	**Pb**	**15 48 14.4**	**+0.4**
NYDR				S	**Sn**	**15 48 31.1**	**+2.7**
	comp=N,1μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.09**	**186**	P	**Pn**	**15 48 15.8**	**+1.1**
DRAG				S	**Sg**	**15 48 31.8**	**+2.1**
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pn**	**15 48 16.3**	**+0.8**
EVGI				S	**Sg**	**15 48 33.8**	**+2.2**
	comp=N,2μm,0.5s						
VLO	**Vlora**	**1.17**	**307**	Pn	**Pg**	**15 48 18.2**	**+1.3**
TYRN	**Tyrnavos**	**1.17**	**92**	P	**Pn**	**15 48 15.8**	**0.0**
TYRN				S	**Sg**	**15 48 33.2**	**+0.9**
EVR	**Evrytania**	**1.20**	**135**	P	**Pn**	**15 48 16.4**	**+0.1**
EVR				S	**Sg**	**15 48 34.4**	**+1.1**
	comp=N,1μm,0.6s						
EVR	**Evrytania**	**1.20**	**135**	P	**Pn**	**15 48 16.8**	**+0.5**
EVR				AML	AML	15 48 39.8	
	comp=N,2686μm,0.7s						
EVR				AML	AML	15 48 41.5	
	comp=E,3262μm,0.6s						
PVO	**Paravola**	**1.31**	**151**	P	**Pb**	**15 48 19.2**	**+0.8**
FSK	**Fiskardo**	**1.31**	**185**	P	**Pb**	**15 48 19.7**	**+1.3**
FSK				S	**Sg**	**15 48 37.5**	**+0.7**
	comp=E,1μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.33**	**124**	P	**Pb**	**15 48 19.6**	**+0.8**
MAKR				S	**Sg**	**15 48 38.3**	**+0.9**
	comp=E,4μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.33**	**124**	P	**Pb**	**15 48 19.6**	**+0.8**
MAKR				AML	AML	15 48 42.9	
	comp=N,7443μm,0.5s						
MAKR				AML	AML	15 48 44.3	
	comp=E,8805μm,0.5s						
OHR	**Ohrid**	**1.34**	**3**	*e*Pg	**Pg**	**15 48 21.1**	**+0.8**
OHR				*e*Sg	**Sg**	**15 48 40.0**	**+2.2**
OHR	**Ohrid**	**1.34**	**3**	*i* Pn	**Pg**	**15 48 21.0**	**+0.8**
LIT	**Litokhoron**	**1.40**	**76**		**Pn**	**15 48 20.3**	**+1.3**
LIT	**Litokhoron**	**1.40**	**76**	P	**Pn**	**15 48 20.2**	**+1.1**
LIT	**Litokhoron**	**1.40**	**76**	P	**Pn**	**15 48 20.1**	**+1.1**
LIT				AML	AML	15 48 43.6	
	comp=N,2849μm,0.5s						
LIT				AML	AML	15 48 47.2	
	comp=E,5060μm,0.7s						
DMLN	**Damoulianata-K**	**1.55**	**190**	P	**Pb**	**15 48 23.1**	**+0.6**
VLS	**Valsamata**	**1.59**	**184**	P	**Pn**	**15 48 22.4**	**+0.8**
EFP	**Efpalio**	**1.63**	**145**	P	**Pb**	**15 48 25.2**	**+1.4**
PSDA	**Pessada-Kefalo**	**1.66**	**184**	P	**Pb**	**15 48 25.0**	**+0.7**
TIR	**Tirane**	**1.71**	**338**	⇓P	**Pb**	**15 48 25.8**	**+0.6**
TIR				⇓S	**Sb**	**15 48 48.4**	**+2.1**
TIR	**Tirane**	**1.71**	**338**		**Pn**	**15 48 24.9**	**+1.8**
TIR	**Tirane**	**1.71**	**338**	*e*Pn	**Pb**	**15 48 25.4**	**+0.3**
TIR				*e*Sn	**Sb**	**15 48 47.3**	**+1.1**
SERG	**Sergoula**	**1.71**	**142**	P	**Pb**	**15 48 26.1**	**+0.9**
SCTE	**Santa Cesarea**	**1.76**	**281**	Pn	**Pn**	**15 48 24.5**	**+0.7**
AXAR	**Agios Charalam**	**1.81**	**123**	P	**Pb**	**15 48 28.1**	**+1.2**
LAKA	**Lakka**	**1.82**	**147**	P	**Pb**	**15 48 27.6**	**+0.6**
NEO	**Neokhori**	**1.99**	**103**	P	**Pn**	**15 48 29.2**	**+2.1**
HORT	**Hortiatis**	**2.00**	**65**	P	**Pn**	**15 48 28.2**	**+0.9**
KLV	**Kalavryta, Ach**	**2.05**	**147**	P	**Pb**	**15 48 30.9**	**-0.2**
VAY	**Valandovo**	**2.10**	**42**	*e*Pn	**Pn**	**15 48 29.8**	**+1.3**
VAY				*e*Sn	**Sn**	**15 48 54.8**	**+0.7**
VAY	**Valandovo**	**2.10**	**42**	*i* Pn	**Pn**	**15 48 30.3**	**+1.8**
KNT	**Kendrikon**	**2.17**	**49**	P	**Pn**	**15 48 30.8**	**+1.3**
KNT				S	**Sb**	**15 48 59.9**	**+0.3**
	comp=E,150nm,0.7s						
STIP	**Stip**	**2.22**	**30**	*i* Pn	**Pb**	**15 48 34.6**	**+0.6**
SKO	**Skopje**	**2.27**	**14**	*e*Pn	**Pn**	**15 48 33.4**	**+2.5**
SKO				*e*Sn	**Sn**	**15 48 58.7**	**+0.3**
SOH	**Sokhos**	**2.27**	**62**	P	**Pn**	**15 48 32.7**	**+1.7**
ULC	**Ulcinj**	**2.46**	**333**	⇑*i*Pn	**Pn**	**15 48 34.5**	**+0.9**
ULC				*i* Sn	**Sn**	**15 49 04.3**	**+1.1**
SRS	**Serrai**	**2.58**	**58**	*e*Pn	**Pn**	**15 48 35.8**	**+0.7**
SRS				*e*Sn	**Sn**	**15 49 04.6**	**-1.4**
DRME	**Dracevica, Mon**	**2.68**	**335**	*e*Pn	**Pn**	**15 48 37.6**	**+1.1**
DRME				*i* Sn	**Sn**	**15 49 09.6**	**+1.1**
KOKK	**Kokkinochori,**	**2.72**	**66**	P	**Pn**	**15 48 38.4**	**+1.3**
ITM	**Ithomi**	**2.75**	**159**	Pn	**Pn**	**15 48 38.4**	**+0.8**
ITM	**Ithomi**	**2.75**	**159**	P	**Pn**	**15 48 40.1**	**+2.5**
PDG	**Podgorica**	**2.88**	**338**	⇑P	**Pn**	**15 48 41.2**	**+2.0**
PDG				⇑S	**Sn**	**15 49 16.6**	**+3.2**
PDG	**Podgorica**	**2.88**	**338**	Pn	**Pn**	**15 48 41.2**	**+2.0**
TTG	**Podgorica**	**2.88**	**338**	*e*Pn	**Pn**	**15 48 40.4**	**+1.1**
TTG				*i* Sn	**Sn**	**15 49 14.4**	**+1.0**
BUM	**Brajici-Budva**	**2.88**	**332**	⇓*i*Pn	**Pn**	**15 48 40.3**	**+0.9**
BUM				*i* Sn	**Sn**	**15 49 14.4**	**+0.8**
PVY	**Plav**	**2.88**	**349**	*e*Pn	**Pn**	**15 48 40.5**	**+1.1**
PVY				*i* Sn	**Sn**	**15 49 14.6**	**+0.9**
CEME	**Cevo**	**3.09**	**335**	⇑*i*Pn	**Pn**	**15 48 43.2**	**+1.0**
CEME				*i* Sn	**Sn**	**15 49 19.5**	**+0.8**
TIP	**Timpagrande**	**3.12**	**260**	⇓P	**Pn**	**15 48 42.9**	**+0.3**
TIP				⇓S	**Sn**	**15 49 20.1**	**+0.6**
TIP	**Timpagrande**	**3.12**	**260**	Pn	**Pn**	**15 48 43.3**	**+0.7**
BARS	**Barje**	**3.15**	**15**	*e*Pn	**Pn**	**15 48 45.5**	**+2.4**
BARS				*e*Sn	**Sn**	**15 49 21.2**	**+0.9**
HCY	**Herceg Novi**	**3.16**	**329**	⇓*i*Pn	**Pn**	**15 48 44.1**	**+1.0**
HCY				*i* Sn	**Sn**	**15 49 20.9**	**+0.5**
IVA	**Berane**	**3.16**	**349**	*e*Pn	**Pn**	**15 48 44.4**	**+1.1**
IVA				*i* Sn	**Sn**	**15 49 21.5**	**+1.0**
MATE	**Matera**	**3.19**	**287**	⇓P	**Pn**	**15 48 44.4**	**+0.8**
MATE				⇓S	**Sn**	**15 49 22.2**	**+1.0**
KOME	**Kolasin**	**3.21**	**344**	*e*Pn	**Pn**	**15 48 45.0**	**+1.1**
KOME				*i* Sn	**Sn**	**15 49 22.4**	**+0.7**
VTS	**Vitosha**	**3.42**	**33**	⇑P	**Pn**	**15 48 48.0**	**+1.1**
VTS				⇓S	**Sn**	**15 49 29.1**	**+2.0**
VTS	**Vitosha**	**3.42**	**33**	Pn	**Pn**	**15 48 48.2**	**+1.3**
SELS	**Selova**	**3.46**	**5**	*e*Pn	**Pn**	**15 48 49.4**	**+2.1**
BRY	**Bratogost**	**3.53**	**333**	*e*Pn	**Pn**	**15 48 49.4**	**+1.0**
BRY				*i* Sn	**Sn**	**15 49 30.0**	**+0.2**
SJES	**Sjenica**	**3.53**	**351**	*e*Pn	**Pn**	**15 48 51.5**	**+3.1**
UPM	**Unac-Piva**	**3.69**	**339**	*e*Pn	**Pn**	**15 48 51.7**	**+1.1**
UPM				*i* Sn	**Sn**	**15 49 34.0**	**+0.3**
PLE	**Pljevlja**	**3.69**	**345**	*e*Pn	**Pn**	**15 48 51.8**	**+1.2**
PLE				*i* Sn	**Sn**	**15 49 34.2**	**+0.5**
CUC	**Castrocucco**	**3.78**	**275**	Pn	**Pn**	**15 48 53.1**	**+1.5**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**15 48 55.2**	**+3.4**
RDO	**Rodhopi**	**3.93**	**68**		**Pn**	**15 48 54.3**	**+0.6**
BOVS	**Bovan**	**3.93**	**11**	⇓P	**Pn**	**15 48 55.2**	**+1.5**
BOVS				⇑S	**Sn**	**15 49 41.6**	**+2.2**
BOVS	**Bovan**	**3.93**	**11**	*e*Pn	**Pn**	**15 48 55.3**	**+1.5**
BOVS				*e*Sn	**Sn**	**15 49 41.0**	**+1.6**
CEL	**Celeste**	**4.05**	**250**	Pn	**Pn**	**15 48 55.9**	**+0.5**
GRUS	**Gruza**	**4.12**	**360**	*e*Pn	**Pn**	**15 48 58.7**	**+2.4**
BLKB	**Belogradchik**	**4.12**	**20**	⇑P	**Pn**	**15 48 58.1**	**+1.7**
BLKB				⇓S	**Sn**	**15 49 47.2**	**+3.1**
ZAGS	**Zajecar**	**4.20**	**15**	*e*Pn	**Pn**	**15 48 59.1**	**+1.7**
ALN	**Alexandroupoli**	**4.23**	**73**	Pn	**Pn**	**15 48 58.2**	**+0.5**
SGRT	**San Giovanni R**	**4.26**	**299**	Pn	**Pn**	**15 48 59.1**	**0.7**
DIVS	**Divibare**	**4.36**	**353**	Pn	**Pn**	**15 49 00.9**	**+1.2**
DIVS	**Divibare**	**4.36**	**353**	*e*Pn	**Pn**	**15 49 01.1**	**+1.4**
DIVS				*e*Sn	**Sn**	**15 49 50.9**	**+0.8**
TRUS	**Trudelj**	**4.46**	**357**	*e*Pn	**Pn**	**15 49 03.8**	**+2.8**
PAOL	**Paolisi**	**4.86**	**287**	Pn	**Pn**	**15 49 07.8**	**+1.2**
FRGS	**Fruska Gora**	**5.43**	**353**	⇑P	**Pn**	**15 49 15.4**	**+1.1**
FRGS	**Fruska Gora**	**5.43**	**353**	*e*Pn	**Pn**	**15 49 15.4**	**+1.1**
IDI	**Anoyia**	**5.57**	**142**	⇑P	**Pn**	**15 49 15.5**	**-0.8**
IDI	**Anoyia**	**5.57**	**142**	Pn	**Pn**	**15 49 15.8**	**-0.6**
	comp=E,0.8nm,0.3s,baz=328,slow=9.8,SNR=8.7						
IDI				Sn	**Sn**	**15 50 17.5**	**-2.3**
	comp=E,3.5nm,0.3s,baz=294,slow=18,SNR=9.5						
	comp=E,2.2nm,0.3s						
RAFF	**Raffo Rosso**	**5.59**	**245**	Pn	**Pn**	**15 49 15.8**	**-0.9**
INTR	**Introdacqua**	**5.63**	**296**	Pn	**Pn**	**15 49 18.1**	**+0.9**
GZR	**Gura Zlata**	**5.82**	**14**	⇓P	**Pn**	**15 49 21.3**	**+1.5**
GZR				⇓S	**Sn**	**15 50 28.1**	**+2.0**
BZS	**Buzias**	**5.88**	**6**	⇑P	**Pn**	**15 49 22.3**	**+1.7**
BZS				⇑S	**Sn**	**15 50 29.8**	**+2.3**
CAMP	**Campotosto**	**6.17**	**299**		**Pn**	**15 49 25.6**	**+1.0**
ARR	**Arges**	**6.30**	**26**	⇓P	**Pn**	**15 49 27.2**	**+0.9**
NRCA	**Norcia**	**6.49**	**301**		**Pn**	**15 49 29.9**	**+0.9**
VOIR		**6.50**	**28**	⇓P	**Pn**	**15 49 31.1**	**+1.9**
MORH	**Mrgy, Hungar**	**6.62**	**347**	⇑P	**Pn**	**15 49 31.1**	**+0.5**
MLR	**Muntele Rosu**	**6.89**	**32**	⇑P	**Pn**	**15 49 35.4**	**+0.9**
MLR	**Muntele Rosu**	**6.89**	**32**	Pn	**Pn**	**15 49 35.4**	**+0.9**
	comp=E,0.1nm,0.3s,baz=119,slow=22,SNR=1.1						
MLR				Sn	**Sn**	**15 50 53.2**	**+0.6**
	comp=E,0.1nm,0.3s,baz=186,slow=19,SNR=1.3						
	comp=E,1.6nm,0.5s						
PLOR	**Plostina**	**7.48**	**34**	⇓P	**Pn**	**15 49 43.9**	**+1.4**
VRI	**Vrincioaia**	**7.52**	**34**	⇑P	**Pn**	**15 49 45.0**	**+1.9**
SOKA	**Soboth**	**8.05**	**331**	*e*Pn	**Pn**	**15 49 50.6**	**+0.2**
	comp=E,1.5nm,0.4s						
OBKA	**Obir**	**8.10**	**328**	*e*Pn	**Pn**	**15 49 52.3**	**+1.2**
	comp=E,0.9nm,0.2s						
TEOL	**Teolo**	**8.70**	**313**	Pn	**Pn**	**15 49 58.5**	**-0.7**
CLUD	**Cludinico**	**8.80**	**322**	Pn	**Pn**	**15 50 01.2**	**+0.6**
KBA	**Koelnbreinsper**	**9.06**	**326**	*e*Pn	**Pn**	**15 50 06.7**	**+2.4**
	comp=E,0.4nm,0.2s						
CTI	**Castel Tesino**	**9.14**	**316**	Pn	**Pn**	**15 50 04.9**	**-0.4**
MOA	**Molln**	**9.32**	**332**	*e*Pn	**Pn**	**15 50 09.3**	**+1.6**
	comp=E,0.2nm,0.1s						
KEST	**Kesra**	**9.86**	**249**	LR	LR	15 54 21.5	
	comp=E,69nm,20.2s,baz=194,slow=40						
BRTR	**Keskin Array B**	**9.96**	**86**	Pn	**Pn**	**15 50 17.7**	**+1.2**
	comp=E,0.1nm,0.3s,baz=273,slow=14,SNR=2.0						
BRTR				LR	LR	15 55 01.2	
	comp=E,39nm,21.3s,baz=326,slow=43						
	comp=E,0.4nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**10.25**	**315**	Pn	**Pn**	**15 50 21.8**	**+1.2**
GERES	**GERESS Array B**	**10.37**	**333**	Pn	**Pn**	**15 50 21.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=167,slow=14,SNR=2.2						
	comp=E,0.1nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.55**	**315**	Pn	**Pn**	**15 50 24.5**	**-0.3**
	comp=E,0.2nm,0.3s,baz=168,slow=19,SNR=2.1						
DAVOX				Sn	**Sn**	**15 52 20.9**	**-1.7**
	comp=E,0.1nm,0.3s,baz=90,slow=20,SNR=2.8						
	comp=E,0.9nm,0.5s						
AKASG	**Malin Array Be**	**12.46**	**26**	LR	LR	15 56 24.3	
	comp=E,29nm,19.8s,baz=174,slow=41						
CLL	**Collm**	**12.73**	**338**	*e*PP	**P**	**15 51 04.0**	**-1.4**
CLL				*es*PP		15 51 09.5	
CLL				*ex*	x	15 51 13.0	
MMAI	**Mount Meron Ar**	**13.61**	**115**	Pn	**Pn**	**15 51 06.6**	**+0.2**
	comp=E,0.4nm,0.3s,baz=255,slow=10,SNR=1.5						
MMAI				LR	LR	15 57 54.0	
	comp=E,17nm,19.1s,baz=116,slow=44						
	comp=E,1.9nm,0.8s						
HFS	**Hagfors**	**20.86**	**350**	P	**P**	**15 52 33.2**	**-1.7**
	comp=E,2.8nm,0.8s,baz=128,slow=12,SNR=4.7						
	comp=E,2.8nm,0.8s						
NC602	**NORSAR Array S**	**21.75**	**348**	P	**P**	**15 52 44.2**	**-0.3**
NC602				IAmb	IAmb	15 52 49.4	
	comp=Z,16nm,1.1s						
FINES	**FINESS Array B**	**21.95**	**7**	P	**P**	**15 52 44.7**	**-1.9**
	comp=Z,1.9nm,0.9s,baz=156,slow=14,SNR=6.1						
	comp=Z,1.9nm,0.9s						
FINES	**FINESS Array B**	**21.95**	**7**	P	**P**	**15 52 47.4**	**+0.7**
NC405	**NORSAR Array S**	**22.08**	**348**	P	**P**	**15 52 47.4**	**-0.7**
NB2	**NORSAR Subarra**	**22.09**	**348**	P	**P**	**15 52 47.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=169,slow=11						
NOA	**NORSAR Array B**	**22.09**	**348**	P	**P**	**15 52 45.7**	**-2.6**
	comp=Z,1.4nm,0.8s,baz=163,slow=11,SNR=3.6						
NOA				LR	LR	16 02 42.3	
	comp=Z,18nm,20.3s,baz=335,slow=40						
	comp=Z,1.4nm,0.8s						
TOA0	**Torodi Ar. Sit**	**31.37**	**218**	P	**P**	**15 54 14.2**	**+0.1**
TOA0				IAmb	IAmb	15 54 22.9	
	comp=Z,3.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**15 54 13.6**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=31,slow=9.4,SNR=10.0						
	comp=Z,1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**15 54 14.3**	**+0.2**
TORD				IAmb	IAmb	15 54 29.7	
	comp=Z,3.8nm,1.5s						
ATD	**Arta Tunnel**	**34.28**	**139**	LR	LR	16 08 41.2	
	comp=Z,35nm,18.9s,baz=13,slow=36						
MK31	**Makanchi Array**	**44.35**	**60**	P	**P**	**15 56 02.7**	**-0.7**
MKAR	**Makanchi Array**	**44.35**	**60**	P	**P**	**15 56 02.3**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=281,slow=7.0,SNR=

AP01 *i* S **Sb** **15 58 23.5 -1.3**
AP01 IAML 15 58 31.4
comp=N,1μm,0.5s
PB03 IPOC Station P 2.03 160 *i* P **Pn** **15 58 04.0 -0.2**
PB03 *i* S **Sn** **15 58 29.9 +0.9**
PB03 IAML 15 58 40.2
comp=E,208nm,0.8s
PB09 IPOC Station P 2.03 144⇑ *i* P **Pn** **15 58 05.6 +1.3**
PB09 *i* S **Sb** **15 58 31.3 -1.2**
PB09 IAML 15 58 44.9
comp=N,322nm,0.6s
PB16 IPOC Station P 2.03 28⇑ *i* P **Pn** **15 58 05.5 +0.8**
PB16 *i* S **Sb** **15 58 31.2 -1.6**
PB16 IAML 15 58 37.7
comp=E,287nm,0.4s
PB04 IPOC Station P 2.21 171 IAML 15 58 47.4
comp=E,201nm,0.4s
PB06 IPOC Station P 2.70 161 *e* P **Pn** **15 58 12.8 -0.8**
PB06 IAML 15 58 59.3
comp=N,132nm,0.6s
LVC Limon Verde 2.88 149 Pn **Pn** **15 58 17.0 +0.9**
comp=N,5.2nm,0.3s,baz=343,slow=11,SNR=40
LVC Sn **Sn** **15 58 51.1 +0.9**
comp=N,13nm,0.3s,baz=292,slow=19,SNR=8.8
comp=N,14nm,0.3s
LPAZ La Paz 4.45 31 Pn Pn 15 58 43.6 +5.6
comp=N,0.9nm,0.3s,baz=203,slow=8.8,SNR=15
LPAZ Sn **Sn** **15 59 33.3 +3.9**
comp=N,0.3nm,0.3s,baz=350,slow=11,SNR=1.3
LPAZ Lg Lg 15 59 52.0
comp=N,0.4nm,0.3s,baz=200,slow=15,SNR=1.4
LPAZ LR LR 16 00 50.9
comp=N,38nm,19.9s,baz=260,slow=46
comp=N,2.7nm,0.4s
SIV San Ignacio 9.88 67 Pn **Pn** **15 59 49.8 -2.3**
baz=238,slow=12,SNR=7.6
comp=N,1.2nm,0.5s
H03N1 Juan Fernandez 15.21 208 T T 16 17 21.5
baz=33,slow=72,SNR=38
H03N2 Juan Fernandez 15.22 208 T T 16 17 14.0
baz=33,slow=72,SNR=32
H03N3 Juan Fernandez 15.23 208 T T 16 17 13.6
baz=33,slow=72,SNR=26
TKL Tuckaleechee C 56.90 347 LR LR 16 32 41.4
comp=N,13nm,19.9s,baz=104,slow=37
TORD Torodi Ar. Bea 78.33 71 P P 16 09 37.1 +6.8
comp=N,0.6nm,0.8s,baz=241,slow=4.8,SNR=2.9
comp=N,0.6nm,0.8s
RAR Rarotonga 82.27 250 LR LR 16 39 22.1
comp=N,97nm,18.8s,baz=246,slow=30
MKAR Makanchi Array 145.38 34 PKPbc **PKiKP** **16 17 12.6 +1.2**
comp=N,0.2nm,0.7s,baz=337,slow=4.7,SNR=1.8

*IDC **16** 16:10:25.9±3.5, 8°.68S×112°.19E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=203.0km s-min=25.7km az=49.0*
*DJA **16** 16:10:32.6±1.2, 9°S±4°×11°2E±°, h20km±10km, M4.2/13, mb4.7/2, MLv3.9/13*
ISC 16 16:10:35.0±1.2, 8°.8S±0°.1×112°.15E±0°.04, h69km±13km, n21, σ0°87/26, mb3.3/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.72**	**25**	P	**Pn**	**16 10 50.2**	**+0.1**
PWJI	**Pagerwojo**	**0.86**	**337**	P	**Pn**	**16 10 51.8**	**+0.1**
PWJI				S	**Sn**	**16 11 03.8**	**-0.3**
PCJI	**Pacitan**	**1.14**	**303**	P	**Pn**	**16 10 55.2**	**0.0**
PCJI				S	**Sn**	**16 11 09.6**	**-0.8**
NGJI	**Ngawi**	**1.59**	**335**	P	**Pn**	**16 11 01.7**	**+0.5**
UGM	**Wanagama**	**1.84**	**299**	P	**Pn**	**16 11 04.9**	**+0.4**
UGM				S	**Sn**	**16 11 27.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.01**	**80**	P	**Pn**	**16 11 07.1**	**+0.3**
JAGI				S	**Sn**	**16 11 30.8**	**-0.2**
YOGI	**Yogyakarta**	**2.09**	**298**	P	**Pn**	**16 11 08.2**	**+0.4**
YOGI				S	**Sn**	**16 11 33.8**	**+1.0**
ABJI	**Asem Bagus**	**2.30**	**64**	P	**Pn**	**16 11 11.6**	**+0.9**
KMMI	**Kalianget**	**2.52**	**46**	P	**Pn**	**16 11 14.1**	**+0.5**
RTBI	**Rangdo, Negare**	**2.79**	**83**	P	**Pn**	**16 11 18.4**	**+1.1**
IGBI	**Denpasar**	**2.96**	**90**	P	**Pn**	**16 11 20.8**	**+1.2**
BWJI	**Bawean**	**2.99**	**10**	P	**Pn**	**16 11 20.9**	**+0.8**
SRBI	**Singaraja**	**3.12**	**77**	P	**Pn**	**16 11 22.9**	**+1.1**
KLNI	**Mataram**	**3.92**	**85**	P	**Pn**	**16 11 32.3**	**-0.5**
TWSI	**Taliwang, Sumb**	**4.68**	**89**	P	**Pn**	**16 11 43.9**	**+0.8**
LEM	**Lembang**	**4.91**	**293**	Sn	**Sn**	**16 12 44.0**	**+2.0**
	0.7nm,0.3s,baz=338,slow=23,SNR=1.5						
PLAI	**Plampang**	**5.56**	**91**	P	**Pn**	**16 11 55.5**	**+0.3**
	0.1nm30nm,1.0s						
WRA	**Warramunga Arr**	**24.14**	**120**	P	**P**	**16 15 45.1**	**+0.4**
	0.6nm,0.9s,baz=294,slow=11,SNR=2.7						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**25.52**	**128**	P	**P**	**16 15 56.0**	**-1.3**
	0.4nm,0.8s,baz=302,slow=7.7,SNR=2.1						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**61.43**	**337**	P	**P**	**16 20 43.5**	**-0.5**
	0.2nm,0.4s,baz=146,slow=6.8,SNR=4.1						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**66.66**	**343**	P	**P**	**16 21 17.2**	**-1.0**
	0.8nm,0.5s,baz=133,slow=6.1,SNR=4.1						
	0.8nm,0.5s						

*IDC **16** 16:13:28.0±1.2, 29°.5S×60°.93E, h0km, mb3.6/6, mbtmp3.6/6, MS3.0/5, Error ellipse: s-maj=44.8km s-min=29.8km az=49.0*
ISC 16 16:13:29.6±1.1, 29°.5S±0°.3×60°.9E±0°.3, h10km, n10, σ1°86/6, mb3.8/6, MS3.0/5, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**34.34**	**255**	LR	LR	16 32 20.6	
	comp=Z,22nm,19.3s,baz=350,slow=33						
MAW	**Mawson**	**38.16**	**179**	LR	LR	16 33 12.1	
	comp=Z,34nm,21.6s,baz=22,slow=31						
TSUM	**Tsumeb**	**40.54**	**275**	LR	LR	16 36 44.5	
	comp=Z,15nm,19.6s,baz=343,slow=34						
CMAR	**Chiang Mai Arr**	**60.18**	**42**	LR	LR	16 45 28.1	
	comp=Z,13nm,21.6s,baz=235,slow=32						
VNDA	**Vanda**	**63.77**	**166**	P	**P**	**16 24 02.4**	**+1.2**
	0.7nm,0.8s,baz=258,slow=7.5,SNR=4.2						
VNDA				LR	LR	16 48 02.5	
	comp=Z,16nm,21.5s,baz=264,slow=32						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**64.61**	**104**	P	**P**	**16 24 07.0**	**-0.6**
	0.6nm,0.7s,baz=245,slow=6.2,SNR=8.2						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**66.46**	**100**	P	**P**	**16 24 17.7**	**-1.9**
	0.6nm,0.9s,baz=251,slow=8.3,SNR=1.5						
	0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.06**	**298**	P	**P**	**16 24 47.1**	**-1.2**
	0.7nm,0.9s,baz=128,slow=4.9,SNR=2.5						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**78.36**	**15**	P	**P**	**16 25 31.6**	**+1.7**
	0.4nm,0.8s,baz=202,slow=3.1,SNR=2.5						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**81.28**	**11**	P	**P**	**16 25 46.4**	**+0.8**
	0.2nm,0.7s,baz=214,slow=4.5,SNR=2.7						
	0.2nm,0.7s						

MAN 16 16:13:40.1, 8°.97N×122°.66E, h28km, mb4.3, ML3.1, MS2.8, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.68**	**57⇓**	*i* P	Pn	16 13 53.9	-0.1
SNPH				*i* S	Sn	16 14 03.9	+0.2
CNOP	**Candoni, Negro**	**0.85**	**359⇑**	*e* P	Pn	16 13 55.6	-0.7
CNOP				*i* S	Sn	16 14 09.7	+1.8
LSIP	**Lazi, Siquijor**	**0.97**	**80⇓**	*i* P	Pn	16 13 57.6	-0.3
LSIP				*i* S	Sb	16 14 11.6	+0.7
PAGZ	**Pagadian**	**1.32**	**147⇓**	*e* P	Pn	16 14 02.8	0.0
PAGZ				*e* S	Sn	16 14 19.0	-0.5
TABP	**Talibon, Bohol**	**1.99**	**56⇑**	*e* P	Pn	16 14 12.8	+0.8
TABP				*e* S	Sn	16 14 36.8	+0.8
SGCP	**Gonzaga**	**9.24**	**356⇑**	*e* P	Pn	16 15 58.5	+6.9

*OSPL **16** 16:21:30.3±4.8, 18°.21N×74°.42W, h0km±81km, ML2.8*
ISC 16 16:21:30.3±1.6, 18°.5N±0°.1×74°.14W±0°.07, h10km, n6, σ0°98/12, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**1.70**	**328**	*i* P	**Pb**	**16 22 02.1**	**+0.4**
GTBY				*e* S	**Sb**	**16 22 23.8**	**+0.6**
GTBY				IAML		16 23 40.4	
	comp=Z,16nm,0.8s						
PAPH	**Port-au-Prince**	**1.75**	**88**	*i* P	**Pb**	**16 22 02.8**	**+0.3**
PAPH				*e* S	**Sg**	**16 22 26.1**	**-0.5**
PAPH				IAML		16 22 30.1	
	comp=Z,112nm,0.2s						
LOPE2	**Hotel El Peder**	**2.32**	**101**	*i* P	**Pb**	**16 22 11.9**	**-0.3**
LOPE2				*e* S	**Sb**	**16 22 42.0**	**+1.0**
LOPE2				IAML		16 22 42.5	
	comp=Z,59nm,0.7s						
SDDR	**Presa de Saban**	**2.75**	**79**	*i* P	**Pb**	**16 22 19.6**	**+0.1**
SDDR				*e* S	**Sb**	**16 22 53.4**	**-0.1**
SDDR				IAML		16 23 02.9	
	comp=Z,22nm,0.8s						
LMGC	**Las Mercedes**	**3.13**	**301**	*e* P	**Pn**	**16 22 20.6**	**+0.9**
LMGC				*e* S	**Sn**	**16 22 55.7**	**-1.4**
LMGC				IAML		16 23 00.5	
	comp=N,11nm,0.1s						
LMGC				IAML		16 23 00.7	
	comp=E,6.1nm,0.1s						
CCCC	**Cccc**	**4.35**	**309**	*e* P	**Pn**	**16 22 37.0**	**+0.5**
CCCC				*e* S	**Sn**	**16 23 25.4**	**-1.9**
CCCC				IAML		16 23 28.1	
	comp=E,0.6nm,0.2s						
CCCC				IAML		16 23 28.8	
	comp=N,1.7nm,0.3s						

*IDC **16** 16:31:51.5±18.0, 22°.03S×178°.30W, h270km±98km, mb3.3/5, mbtmp3.9/6, MS3.3/2, Error ellipse: s-maj=248.6km s-min=35.9km az=127.0*
ISC 16 16:31:47.7±3.1, 22°.2S±0°.2×178°.0W±0°.4, h250km, n7, σ1°40/6, mb3.5/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.83**	**319**	P	**Pn**	**16 33 13.7**	**-0.2**
	7.9nm,0.7s,baz=140,slow=18,SNR=5.4						
RPZ	**Rata Peaks**	**23.27**	**200**	LR	LR	16 45 21.6	
	comp=Z,106nm,18.7s,baz=360,slow=35						
CTA	**Charters Tower**	**33.38**	**267**	P	**P**	**16 38 04.3**	**+1.4**
	2.0nm,0.4s,baz=96,slow=10,SNR=8.5						
	2.0nm,0.4s						
ASAR	**Alice Springs**	**44.17**	**258**	P	**P**	**16 39 30.8**	**-1.4**
	0.6nm,0.6s,baz=93,slow=7.2,SNR=10.0						
ASAR				LR	LR	16 55 54.3	
	comp=Z,25nm,20.2s,baz=150,slow=33						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**44.41**	**264**	P	**P**	**16 39 33.0**	**-1.1**
	0.4nm,0.4s,baz=92,slow=8.3,SNR=14						
	0.4nm,0.4s						
USRK	**Ussuriysk Ar.**	**80.40**	**326**	P	**P**	**16 43 31.0**	**-0.3**
	1.1nm,0.7s,baz=134,slow=4.2,SNR=3.9						
	1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**90.71**	**290**	P	**P**	**16 44 23.4**	**+0.7**
	0.5nm,0.7s,baz=120,slow=3.6,SNR=6.3						
	0.5nm,0.7s						

DJA 16 16:34:36.8±0.6, 2°N±4°×12°7E±°, h111km±7km, M3.9/15, mb4.2/7, mB4.8/1, MLv3.8/15, Mw(mB)4.0/1, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.55**	**77**	P	Pn	16 34 54.8	+0.7
GAMI				S	Sn	16 35 10.1	+3.0
TNTI	**Ternate**	**0.94**	**173**	P	Pn	16 34 58.1	+0.6
LBMI	**Labuha**	**2.35**	**174**	P	Pn	16 35 14.9	+0.6
SGSI	**Sangihe**	**2.61**	**319**	P	Pn	16 35 17.0	-0.7
KMSI	**Cibinong**	**3.46**	**251**	P	Pn	16 35 29.4	+0.5
KMSI				S	Sn	16 36 10.2	+1.0
SANI	**Sanana**	**3.94**	**199**	P	Pn	16 35 33.6	-1.8
GTOI	**Gorontalo**	**4.37**	**256**	P	Pn	16 35 42.6	+1.4
NLAI	**Namlea**	**4.92**	**182**	P	Pn	16 35 48.3	-0.3
KRAI	**Karang Ratu**	**5.12**	**167**	P	Pn	16 35 52.1	+0.7
	0.1nm1μm9.9nm,0.4s						
LUWI	**Luwuk**	**5.25**	**239**	P	Pn	16 35 53.3	+0.3
	0.3nm28nm,0.7s						
AAI	**Ambon**	**5.44**	**170**	P	Pn	16 35 56.4	+0.7
	0.1nm16nm,0.5s						
MRSI	**Marisa**	**5.45**	**257**	P	Pn	16 35 56.0	+0.3
	0.1nm25nm,0.6s						
APSI	**Ampana**	**6.18**	**245**	P	Pn	16 36 06.3	+0.7

*IDC **16** 16:36:16.8±19.0, 37°.51N×72°.72E, h392km±215km, mb2.9/1, mbtmp3.4/4, Error ellipse: s-maj=308.3km s-min=125.6km az=152.0*
ISC 16 16:36:03.8±6.2, 37°.7N±0°.4×72°.4E±0°.4, h150km, n5, σ0°52/5, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.59**	**346**	P	**Pn**	**16 37 24.9**	**-0.1**
	0.4nm,0.3s,baz=178,slow=13,SNR=13						
KK31				S	**Sn**	**16 38 28.5**	**0.0**
	4.2nm,0.5s,baz=170,slow=22,SNR=23						
MKAR	**Makanchi Array**	**11.67**	**36**	P	**P**	**16 38 53.0**	**+0.1**
	0.2nm,0.4s,baz=211,slow=10,SNR=2.2						
KURBB	**Kurchatov Arra**	**13.65**	**17**	P	**P**	**16 39 15.2**	**+0.4**
	0.6nm,0.6s,baz=206,slow=11,SNR=2.4						
ZALV	**Zalesovo Beam**	**18.37**	**24**	P	**P**	**16 40 06.2**	**-0.6**
	1.5nm,0.7s,baz=215,slow=11,SNR=5.4						
NOA	**NORSAR Array B**	**44.12**	**322**	P	P	16 43 50.0	-6.8
	0.8nm,0.8s,baz=90,slow=7.5,SNR=3.4						
	0.8nm,0.8s						

*IDC **16** 16:36:46.4±7.7, 6°.79S×129°.50E, h119km±99km, mb3.0/1, mbtmp3.6/4, ML3.8/3, Error ellipse: s-maj=160.4km s-min=20.7km az=85.0*
*NEIC **16** 16:36:49.1±1.5, 6°.75S±0°.09×129°.53E±0°.06, h148km±11km, mb4.2/5, Error ellipse: s-maj=13.2km s-min=8.1km az=161.0*
ISC 16 16:36:48.0±0.7, 6°.75S±0°.07×129°.55E±0°.08, h139km, n29, σ1°51/30, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.12**	**125**	Pn	**Pn**	**16 37 26.2**	**+2.2**
SAUI	**Saumlaki**	**2.12**	**125**	P	**Pn**	**16 37 26.7**	**+2.7**
FAKI	**Fak Fak**	**4.66**	**35**	Pn	**Pn**	**16 37 57.3**	**+0.5**
FAKI	**Fak Fak**	**4.66**	**35**	P	**Pn**	**16 37 57.4**	**+0.6**
SOEI	**Soe**	**6.02**	**240**		**Pn**	**16 38 16.2**	**+1.1**
SOEI	**Soe**	**6.02**	**240**	P	**Pn**	**16 38 16.7**	**+1.7**
SIJI	**Sorong**	**6.09**	**16**	P	**Pn**	**16 38 16.7**	**+0.8**
	3.0nm,0.3s,baz=210,slow=20,SNR=43						
SIJI				S	**Sn**	**16 39 22.9**	**-1.6**
	14nm,0.2s,baz=127,slow=20,SNR=14						
	5.6nm,0.3s						
MTN	**Manton Dam**	**6.25**	**166**		**Pn**	**16 38 17.4**	**-0.7**
MTN	**Manton Dam**	**6.25**	**166**	P	**Pn**	**16 38 17.8**	**-0.2**
KDU	**Kakadu**	**6.56**	**154**	P	**Pn**	**16 38 21.8**	**-0.4**
KNRA	**Kununurra**	**8.90**	**185**		**Pn**	**16 38 51.4**	**-2.2**
KNRA	**Kununurra**	**8.90**	**185**	P	**Pn**	**16 38 51.9**	**-1.7**
PLAI	**Plampang**	**11.85**	**259**	P	**Pn**	**16 39 34.6**	**+1.9**
WB0	**Warramunga Arr**	**13.77**	**160**	Pn	**Pn**	**16 39 55.7**	**-1.8**
WRA	**Warramunga Arr**	**13.91**	**161**	P	**Pn**	**16 39 56.5**	**-2.9**
	0.6nm,0.3s,baz=333,slow=14,SNR=11						
WRA				S	Sn	16 42 22.6	-11
	2.8nm,0.7s,baz=328,slow=23,SNR=7.2						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**13.91**	**161**	Pn	**Pn**	**16 39 56.9**	**-2.5**
WB2	**Warramunga Arr**	**13.92**	**161**	Pn	**Pn**	**16 39 57.2**	**-2.2**
COEN	**Coen**	**15.19**	**119**	P	**P**	**16 40 17.3**	**+0.1**
COEN				IAmb	IAmb	16 40 38.2	
	comp=Z,27nm,1.2s						
COEN	**Coen**	**15.19**	**119**	P	**P**	**16 40 18.3**	**+1.1**
JAGI	**Jajag, Banyuwa**	**15.36**	**263**	Pn	**Pn**	**16 40 16.2**	**-1.3**
JAGI	**Jajag, Banyuwa**	**15.36**	**263**	P	**Pn**	**16 40 17.1**	**-0.4**
AS31	**Alice Springs**	**17.33**	**166**		**P**	**16 40 41.1**	**+0.2**
ASAR	**Alice Springs**	**17.33**	**166**	P	**P**	**16 40 41.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=335,slow=9.3,SNR=13						
ASAR				S	S	16 43 43.1	-11
	comp=Z,0.4nm,0.5s,baz=343,slow=25,SNR=2.7						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**17.33**	**166**		**P**	**16 40 41.2**	**+0.3**
AS01	**Alice Springs**	**17.34**	**166**	P	**Pn**	**16 40 42.7**	**+1.0**
PSA00	**Pilbara Seismi**	**17.47**	**212**	P	**P**	**16 40 41.9**	**-0.4**
PSA00				IAmb	IAmb	16 41 11.9	
	comp=Z,15nm,1.1s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**16 47 31.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=118,slow=7.8,SNR=1.8						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**16 47 31.2**	**+0.4**
MAKZ	**Makanchi**	**67.95**	**327**	P	**P**	**16 47 30.9**	**-1.0**
MAKZ				IAmb	IAmb	16 48 10.0	
	comp=Z,1.5nm,0.9s						

*IDC **16** 16:37:08.3±4.3, 36°.91N×70°.85E, h139km±31km, mb3.3/3, mbtmp3.6/9, Error ellipse: s-maj=47.8km s-min=18.3km az=153.0*
ISC 16 16:37:00.6±0.7, 36°.35N±0°.07×71°.27E±0°.07, h100km, n21, σ1°78/25, mb3.9/3, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.36**	**135**	*e* P	**Pn**	**16 38 20.0**	**+1.9**
THN				*e* S	**Sn**	**16 39 18.5**	**-0.1**
AAK	**Ala-Archa**	**6.76**	**21**	P	**Pn**	**16 38 39.9**	**+2.7**
	1.9nm,0.3s,baz=203,slow=14,SNR=5.8						
AAK				S	**Sn**	**16 39 51.6**	**-1.2**
	1.6nm,0.5s,baz=222,slow=23,SNR=1.4						
KK31	**Karatay Array**	**6.77**	**355**	P	**Pn**	**16 38 40.2**	**+2.9**
	1.0nm,0.2s,baz=181,slow=14,SNR=15						
KK31				⇑S	**Sn**	**16 39 50.9**	**-2.0**
	1.0nm,0.3s,baz=181,slow=24						
GEYT	**Alibeck**	**10.62**	**282**	P	**Pn**	**16 39 30.9**	**+1.2**
	2.7nm,0.4s,baz=102,slow=11,SNR=16						
GEYT				S	**Sn**	**16 41 24.9**	**-1.7**
	0.8nm,0.3s,baz=138,slow=11,SNR=2.3						
PYUN	**Piuthan**	**12.88**	**126**	*e* P	**Pn**	**16 39 58.5**	**-1.5**
	7.6nm,0.3s						
DANN	**Dangsing**	**13.22**	**124**	*e* P	**Pn**	**16 40 03.4**	**-1.2**
	8.6nm,0.3s						
MKAR	**Makanchi Array**	**13.29**	**35**	P	**Pn**	**16 40 06.4**	**+1.3**
	0.1nm,0.5s,baz=218,slow=14,SNR=1.2						
KOLN	**Koldanda**	**13.50**	**126**	*e* P	**Pn**	**16 40 06.9**	**-1.2**
GKN	**Gorkha**	**14.04**	**123**	*e* P	**Pn**	**16 40 13.6**	**-1.5**
	12nm,0.4s						
DMN	**Daman**	**14.61**	**123**	*e* P	**Pn**	**16 40 21.8**	**-0.7**
	7.0nm,0.4s						
PKIN	**Phulchoki**	**14.82**	**122**	*e* P	**Pn**	**16 40 24.0**	**-1.3**
	7.3nm,0.3s						
PKI	**Pulchoki**	**14.84**	**122**	*e* P	**Pn**	**16 40 23.8**	**-1.7**
	3.4nm,0.2s						
KURBB	**Kurchatov Arra**	**15.20**	**18**	P	**Pn**	**16 40 31.1**	**+1.5**
	0.2nm,0.6s,baz=206,slow=11,SNR=2.7						
JIRN	**Jiri**	**15.32**	**120**	*e* P	**Pn**	**16 40 30.1**	**-1.6**
	13nm,0.4s						
RAMN	**Ramite**	**16.05**	**121**	*e* P	**Pn**	**16 40 38.8**	**-1.9**
	3.5nm,0.4s						
AKTO	**Aktyubinsk**	**17.02**	**330**	P	**Pn**	**16 40 51.4**	**-0.9**
	0.6nm,0.4s,baz=228,slow=8.7,SNR=1.6						
ZALV	**Zalesovo Beam**	**19.96**	**24**	P	**Pn**	**16 41 26.9**	**-0.3**
	1.5nm,0.3s,baz=216,slow=9.0,SNR=6.5						
FINES	**FINESS Array B**	**37.73**	**326**	P	**P**	**16 44 02.8**	**-3.4**
	2.5nm,1.1s,baz=145,slow=10,SNR=1.7						
	2.5nm,1.1s						
HFS	**Hagfors**	**43.32**	**322**	P	**P**	**16 44 51.5**	**-0.8**
	1.8nm,0.9s,baz=92,slow=7.5,SNR=1.6						
	1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.93**	**269**	P	**P**	**16 47 37.4**	**+1.2**
	0.2nm,0.5s,baz=70,slow=4.0,SNR=1.7						
	0.2nm,0.5s						
PLCA	**Paso Flores**	**149.98**	**250**	PKPbc	**PKiKP**	**16 56 41.8**	**+1.7**
	3.5nm,1.1s,baz=52,slow=1.6,SNR=3.1						

*IDC **16** 16:37:43.1±1.5, 18°.06N×103°.54W, h0km, mb3.4/3, mbtmp3.6/8, ML3.8/5, MS3.4/5, Error ellipse: s-maj=38.5km s-min=21.1km az=31.0*
*MEX **16** 16:37:48.2±0.7, 18°.17N×103°.44W, h30km±5km, MD4.3*
ISC 16 16:37:46.4±1.2, 18°.14N±0°.06×103°.48W±0°.05, h27km±7km, n48, σ2°04/68, mb3.2/3, 1D, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.20**	**40**	*e* P	**Pb**	**16 37 52.5**	**+0.2**
MMIG				*e* S	**Sb**	**16 37 56.0**	**-0.2**
CDAR	**Ciudad de Arme**	**0.94**	**328**	*e* P	**Pn**	**16 38 02.7**	**-1.2**
CDAR				*i* S	**Sb**	**16 38 14.2**	**-2.1**
COIG	**Colima**	**1.05**	**349**	*e* P	**Pn**	**16 38 04.2**	**-1.3**
COIG				*e* S	**Sn**	**16 38 16.2**	**-3.2**
R15V		**1.13**	**335**	*i* P	**Pn**	**16 38 05.7**	**-0.8**
R15V				*i* S	**Sn**	**16 38 18.7**	**-2.5**
MNGA	**Volcan de Coli**	**1.33**	**354**	*e* P	**Pn**	**16 38 08.7**	**-0.7**
MNGA				*i* S	**Sn**	**16 38 23.8**	**-2.5**
EZ5V		**1.34**	**355**	*i* P	**Pn**	**16 38 09.0**	**-0.6**
EZ5V				*e* S	**Sn**	**16 38 24.9**	**-1.8**
JUBC	**Volcan de Coli**	**1.37**	**356**	*i* P	**Pn**	**16 38 09.4**	**-0.6**
JUBC				*e* S	**Sn**	**16 38 24.8**	**-2.7**
INCO	**Volcan de Coli**	**1.39**	**355**	*e* P	**Pn**	**16 38 08.8**	**-1.6**
INCO				*i* S	**Sn**	**16 38 25.7**	**-2.3**
ZIIG	**Zihuatanejo**	**1.99**	**105**	*e* P	**Pn**	**16 38 17.1**	**-1.2**
ZIIG				*e* S	**Sn**	**16 38 37.9**	**-4.5**
CJM	**Chamela**	**2.01**	**313**	*e* P	**Pn**	**16 38 18.4**	**-0.1**
CJM				*i* S	**Sn**	**16 38 40.3**	**-2.5**
MOIG	**Morelia**	**2.65**	**54**	*e* P	**Pn**	**16 38 27.1**	**-0.5**
MOIG				*e* S	**Sn**	**16 38 55.5**	**-3.5**
ARIG	**Puente Sto Nin**	**2.98**	**87**	*e* P	**Pn**	**16 38 31.6**	**-0.4**
ARIG				*e* S	**Sn**	**16 39 02.6**	**-4.2**
ANIG	**Ahuacatlan**	**3.06**	**341**	*e* P	**Pn**	**16 38 33.5**	**+0.3**
CAIG	**El Cayaco**	**3.25**	**109**	*e* P	**Pn**	**16 38 35.1**	**-0.5**
CAIG				*i* S	**Sn**	**16 39 10.7**	**-2.7**
IGIG	**Irapuato, Guan**	**3.30**	**38**	*e*	**Pn**	**16 38 35.2**	**-1.3**
MEIG	**Mezcala**	**3.68**	**93**	*e* P	**Pn**	**16 38 41.9**	**+0.3**
MEIG				*i* S	**Sn**	**16 39 24.2**	**0.0**
PLIG	**Platanillo**	**3.79**	**86**	*e* P	**Pn**	**16 38 42.3**	**-0.8**
PLIG				*i* S	**Sn**	**16 39 24.5**	**-2.4**
ATVM	**ATLACOMULCO**	**3.80**	**64**	*e*	Pn	16 38 39.4	-4.1
ATVM				*i*		16 39 25.3	
JRQG	**Juriquilla Cam**	**3.83**	**48**	*e* P	**Pn**	**16 38 42.3**	**-1.6**
ACIG	**Acambay**	**3.87**	**61**	*e* P	**Pn**	**16 38 45.1**	**+0.9**
ACIG				*e* S	**Sn**	**16 39 30.2**

0.2nm,0.4s
NVAR Mina Array Bea 24.00 330 P P 16 43 00.8 +1.7
0.5nm,0.6s,baz=145,slow=11,SNR=4.6
0.5nm,0.6s
PDAR Pinedale Array 25.09 349 P P 16 43 09.8 +0.8
0.4nm,0.7s,baz=152,slow=4.1,SNR=2.7
0.4nm,0.7s
NEW Newport 32.04 343 LR LR 16 57 06.0
comp=Z,88nm,18.5s,baz=284,slow=36
ILAR Eielson Array 54.85 339 P P 16 47 15.6 +1.5
0.5nm,0.7s,baz=125,slow=7.1,SNR=6.0
ILAR PcP **PcP 16 48 16.0 0.0**
0.3nm,0.6s,baz=151,slow=2.1,SNR=2.3
0.5nm,0.7s
H03N2 Juan Fernandez 56.39 155 T T 17 48 20.5
baz=333,slow=77,SNR=545
H03N1 Juan Fernandez 56.40 155 T T 17 48 21.7
baz=333,slow=77,SNR=484
H03N3 Juan Fernandez 56.41 155 T T 17 48 20.7
baz=333,slow=77,SNR=395
SFJD Kangerlussuaq 59.32 21 LR LR 17 13 25.9
comp=Z,29nm,19.7s,baz=84,slow=36
WRA Warramunga Arr 125.55 258 PKP **PKPdf 16 56 46.4 +0.4**
0.3nm,0.6s,baz=73,slow=2.9,SNR=1.7
ASAR Alice Springs 126.40 254 PKP **PKPdf 16 56 48.0 +0.4**
0.4nm,0.8s,baz=116,slow=2.2,SNR=2.9

IDC 16 16:39:46.8±3.1, 33°.17S×177°.94W, h0km, mb3.8/2, mbtmp3.8/3, ML2.8/1, Error ellipse: s-maj=76.8km s-min=37.2km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.48**	**217**	Pn	Pn	16 41 22.1	-1.4
	0.2nm,0.3s,baz=76,slow=17,SNR=2.0						
URZ				Sn	Sn	16 42 40.2	+2.1
	1.0nm,0.3s,baz=175,slow=24,SNR=7.1						
	6.6nm,0.9s						
ASAR	**Alice Springs**	**43.08**	**270**	P	P	16 47 49.2	+0.4
	0.7nm,0.6s,baz=110,slow=7.3,SNR=7.4						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**44.32**	**275**	P	P	16 47 58.4	-0.4
	0.7nm,0.4s,baz=115,slow=7.8,SNR=8.8						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**147.74**	**339**	PKPbc	PKPbc	16 59 32.0	-0.7
	0.9nm,0.6s,baz=69,slow=4.6,SNR=6.0						

*IDC **16** 16:44:01.4±1.1, 39°.78N×20°.67E, h0km, mb3.6/8, mbtmp3.6/15, ML3.3/7, MS2.6/3, Error ellipse: s-maj=20.8km s-min=12.8km az=52.0*
*ATH **16** 16:44:04.7, 39°.77N×20°.67E, h14km±1km, ML3.6/14, Error ellipse: s-maj=2.0km s-min=0.8km az=301.0*
*NEIC **16** 16:44:04.5±2.1, 39°.77N±0°.05×20°.65E±0°.07, h10km±1km, mb4.5/6, Error ellipse: s-maj=9.5km s-min=7.8km az=217.0*
*BEO **16** 16:44:05.7±0.4, 39°.68N×20°.59E, h20km±4km, ML3.5/8*
*THE **16** 16:44:05.1, 39°.76N×20°.69E, h0km±1km, ML3.6/24, Error ellipse: s-maj=1.6km s-min=0.5km az=319.0*
*LDG **16** 16:44:06.8±0.3, 39°.79N×20°.61E, h10km, Ml3.5/10, Error ellipse: s-maj=11.0km s-min=7.6km az=20.0*
ISC 16 16:44:04.4±0.8, 39°.75N±0°.01×20°.65E±0°.02, h17km±5km, n236, σ1§42/292, mb4.0/11, 13C-14D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**121**	P	**Pg**	**16 44 08.3**	**-0.7**
JAN				S	**Sg**	**16 44 12.1**	**0.0**
JAN	**Janina**	**0.18**	**121**	P	**Pg**	**16 44 08.3**	**-0.7**
JAN				S	**Sg**	**16 44 11.8**	**-0.3**
JAN				AML	AML	16 44 12.2	
JAN				AML	AML	16 44 12.5	
IGT	**Igoumenitsa**	**0.33**	**229**	P	**Pb**	**16 44 11.7**	**-0.1**
IGT				S	**Sb**	**16 44 17.8**	**+1.0**
	10μm,0.5s						
IGT	**Igoumenitsa**	**0.33**	**229**	*e*Pg	**Pb**	**16 44 11.6**	**-0.2**
IGT				*e*Sg	**Sb**	**16 44 18.4**	**+1.6**
IGT	**Igoumenitsa**	**0.33**	**229**	P	**Pb**	**16 44 11.5**	**-0.4**
IGT				S	**Sb**	**16 44 17.4**	**+0.6**
IGT				AML	AML	16 44 21.0	
	comp=N,15296μm,0.5s						
IGT				AML	AML	16 44 21.4	
	comp=E,21089μm,0.4s						
LSK	**Leskovik**	**0.40**	**355**	P	**Pg**	**16 44 13.0**	**+0.3**
LSK				S	**Sg**	**16 44 19.1**	**+0.8**
	comp=E,27μm,0.6s						
SRN	**Sarande**	**0.52**	**285**	P	**Pg**	**16 44 14.9**	**+0.2**
SRN				S	**Sb**	**16 44 24.5**	**+2.2**
	comp=E,5μm,0.4s						
KASA	**Kassiopi**	**0.55**	**270**	P	**Pg**	**16 44 15.4**	**+0.1**
KASA				S	**Sb**	**16 44 23.8**	**+0.5**
KASA				AML	AML	16 44 26.0	
	comp=E,9826μm,0.4s						
KASA				AML	AML	16 44 26.4	
	comp=N,13287μm,0.3s						
PENT	**Pentalofos**	**0.58**	**40**	P	**Pg**	**16 44 15.8**	**-0.2**
PENT				S	**Sg**	**16 44 25.0**	**+1.1**
	comp=N,2μm,0.3s						
PENT	**Pentalofos**	**0.58**	**40**	P	**Pg**	**16 44 15.8**	**-0.2**
KPRO	**Kipourio**	**0.59**	**69**	P	**Pg**	**16 44 15.8**	**-0.3**
KPRO				S	**Sg**	**16 44 24.6**	**+0.7**
	comp=N,12μm,0.4s						
KEK	**Kerkira**	**0.66**	**267**	Pg	**Pg**	**16 44 16.6**	**-0.7**
KEK	**Kerkira**	**0.66**	**267**	P	**Pg**	**16 44 17.0**	**-0.4**
KEK				S	**Sn**	**16 44 28.3**	**-0.7**
	comp=N,4μm,0.5s						
KEK	**Kerkira**	**0.66**	**267**	P	**Pg**	**16 44 17.0**	**-0.4**
KEK				S	**Sb**	**16 44 26.8**	**+0.4**
KEK				AML	AML	16 44 29.8	
	comp=N,7841μm,0.6s						
KEK				AML	AML	16 44 33.6	
	comp=E,7316μm,0.3s						
NEST	**Nestorio**	**0.73**	**25**	P	**Pg**	**16 44 18.6**	**-0.2**
NEST	**Nestorio**	**0.73**	**25**	P	**Pg**	**16 44 18.6**	**-0.2**
NEST				S	**Sg**	**16 44 28.2**	**-0.4**
NEST				AML	AML	16 44 35.5	
	comp=N,6355μm,0.4s						
NEST				AML	AML	16 44 35.8	
	comp=E,8411μm,0.4s						
KBN	**Korca**	**0.88**	**7**	Pg	**Pg**	**16 44 20.5**	**-1.1**
KBN	**Korca**	**0.88**	**7**	P	**Pg**	**16 44 20.9**	**-0.7**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pb**	**16 44 22.0**	**0.0**
TSLK				S	**Sn**	**16 44 37.3**	**+1.8**
	comp=E,4μm,0.8s						
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pb**	**16 44 21.9**	**-0.1**
TSLK				S	**Sb**	**16 44 34.4**	**+0.4**
TSLK				AML	AML	16 44 42.3	
	comp=E,7895μm,0.4s						
TSLK				AML	AML	16 44 42.4	
	comp=N,7363μm,0.5s						
LKD2	**Lefkada island**	**0.96**	**180**	P	**Pb**	**16 44 22.6**	**0.0**
LKD2				S	**Sn**	**16 44 38.9**	**+2.4**
	comp=N,4μm,0.7s						
LKD2	**Lefkada island**	**0.96**	**180**	P	**Pg**	**16 44 23.0**	**0.0**
LKD2				S	**Sn**	**16 44 35.9**	**-0.6**
LKD2				AML	AML	16 44 46.7	
	comp=N,9333μm,0.6s						
LKD2				AML	AML	16 44 46.8	
	comp=E,5796μm,0.6s						
KZN	**Kozani**	**1.02**	**57**	P	**Pb**	**16 44 23.2**	**-0.6**
KZN	**Kozani**	**1.02**	**57**	P	**Pb**	**16 44 23.4**	**-0.4**
KZN				S	**Sb**	**16 44 36.9**	**-0.2**
KZN				AML	AML	16 44 41.6	
	comp=N,5645μm,0.5s						
KZN				AML	AML	16 44 42.2	
	comp=E,7212μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.03**	**178**	P	**Pn**	**16 44 24.5**	**+0.3**
NYDR				S	**Sn**	**16 44 39.7**	**+1.5**
	comp=E,3μm,0.4s						
DRAG	**Dragano-Lefkad**	**1.07**	**183**	P	**Pg**	**16 44 24.7**	**-0.4**
DRAG				S	**Sn**	**16 44 41.2**	**+2.1**
THL	**Klokotos Trika**	**1.07**	**100**	P	**Pb**	**16 44 23.6**	**-0.9**
THL				S	**Sb**	**16 44 38.6**	**+0.4**
	comp=E,2μm,0.4s						
THL	**Klokotos Trika**	**1.07**	**100**	P	**Pb**	**16 44 23.5**	**-0.9**
THL				S	**Sb**	**16 44 38.4**	**+0.2**
THL				AML	AML	16 44 42.4	
	comp=E,2962μm,0.3s						
THL				AML	AML	16 44 42.5	
	comp=N,5278μm,0.6s						
EVGI	**Lefkada island**	**1.13**	**180**	P	**Pn**	**16 44 25.7**	**+0.2**
EVGI				S	**Sn**	**16 44 43.1**	**+2.5**
	comp=N,4μm,0.4s						
VLO	**Vlora**	**1.14**	**309**	P	**Pg**	**16 44 27.6**	**+1.1**
TYRN	**Tyrnavos**	**1.22**	**91**	P	**Pn**	**16 44 26.5**	**-0.2**
TYRN				S	**Sg**	**16 44 44.7**	**+0.7**
EVR	**Evrytania**	**1.23**	**132**	P	**Pn**	**16 44 27.1**	**+0.2**
EVR	**Evrytania**	**1.23**	**132**	P	**Pn**	**16 44 26.5**	**-0.4**
EVR				S	**Sn**	**16 44 43.8**	**+0.7**
EVR				AML	AML	16 44 50.5	
	comp=N,5090μm,0.5s						
EVR				AML	AML	16 44 54.6	
	comp=E,5513μm,0.4s						
FSK	**Fiskardo**	**1.29**	**183**	P	**Pg**	**16 44 29.4**	**+0.1**
FSK				S	**Sg**	**16 44 48.3**	**+2.2**
	comp=E,2μm,0.5s						
FSK	**Fiskardo**	**1.29**	**183**	P	**Pg**	**16 44 29.2**	**-0.1**
FSK				AML	AML	16 44 49.7	
	comp=N,3651μm,0.4s						
FSK				AML	AML	16 44 51.5	
	comp=E,5765μm,0.3s						
PVO	**Paravola**	**1.32**	**149**	P	**Pb**	**16 44 29.1**	**+0.3**
PVO				S	**Sg**	**16 44 50.2**	**+3.1**
	comp=E,3μm,0.5s						
PVO	**Paravola**	**1.32**	**149**	P	**Pg**	**16 44 29.5**	**-0.4**
LRSO	**Larissa Observ**	**1.35**	**93**	P	**Pb**	**16 44 29.7**	**+0.5**
LRSO				S	**Sg**	**16 44 49.4**	**+1.5**
MAKR	**Makrakomi, Fth**	**1.36**	**122**	P	**Pb**	**16 44 29.8**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.36**	**122**	P	**Pb**	**16 44 29.7**	**+0.2**
MAKR				AML	AML	16 44 54.4	
	comp=E,12602μm,0.4s						
MAKR				AML	AML	16 44 56.8	
	comp=N,10920μm,0.5s						
OHR	**Ohrid**	**1.36**	**5**	*e*Pg	**Pb**	**16 44 31.0**	**+1.4**
OHR				*e*Sg	**Sg**	**16 44 51.0**	**+2.4**
OHR	**Ohrid**	**1.36**	**5**	*i* Pn	**Pg**	**16 44 31.1**	**+0.4**
LIT	**Litokhoron**	**1.46**	**75**	*i* Pn	**Pn**	**16 44 30.7**	**+0.7**
LIT	**Litokhoron**	**1.46**	**75**	P	**Pn**	**16 44 30.9**	**+0.9**
LIT				S	**Sg**	**16 44 51.7**	**+0.2**
	comp=N,3μm,0.6s						
LIT	**Litokhoron**	**1.46**	**75**	P	**Pn**	**16 44 30.6**	**+0.5**
LIT				AML	AML	16 44 56.6	
	comp=N,6830μm,0.7s						
LIT				AML	AML	16 44 58.4	
	comp=E,5575μm,0.6s						
KEF4	**Livadi, Kephal**	**1.50**	**187**	P	**Pb**	**16 44 31.3**	**-0.5**
DMLN	**Damoulianata-K**	**1.52**	**188**	P	**Pb**	**16 44 32.6**	**+0.3**
DMLN				S	**Sg**	**16 44 55.2**	**+1.6**
	comp=E,3μm,0.5s						
VLS	**Valsamata**	**1.57**	**182**	P	**Pn**	**16 44 32.1**	**+0.5**
PSDA	**Pessada-Kefalo**	**1.63**	**182**	P	**Pn**	**16 44 33.3**	**+0.9**
PSDA				S	**Sg**	**16 44 56.8**	**-0.3**
	comp=E,2μm,0.4s						
EFP	**Efpalio**	**1.64**	**143**	P	**Pb**	**16 44 35.0**	**+0.7**
TIR	**Tirane**	**1.71**	**340**	⇑P	**Pb**	**16 44 36.0**	**+0.6**
TIR				⇓S	**Sb**	**16 44 58.7**	**+2.2**
TIR	**Tirane**	**1.71**	**340**		**Pn**	**16 44 34.5**	**+1.1**
TIR	**Tirane**	**1.71**	**340**	P	**Pn**	**16 44 35.0**	**+1.6**
TIR	**Tirane**	**1.71**	**340**	*e*Pn	**Pb**	**16 44 36.1**	**+0.8**
TIR				*e*Sn	**Sn**	**16 44 55.7**	**+0.9**
SCTE	**Santa Cesarea**	**1.71**	**282**		**Pn**	**16 44 34.4**	**+1.0**
SERG	**Sergoula**	**1.73**	**140**	P	**Pb**	**16 44 36.2**	**+0.5**
GRG	**Griva**	**1.80**	**47**	P	**Pn**	**16 44 35.7**	**+0.9**
GRG	**Griva**	**1.80**	**47**	P	**Pn**	**16 44 35.7**	**+0.9**
RLS	**Riolos of Patr**	**1.81**	**159**	P	**Pb**	**16 44 37.3**	**+0.3**
LAKA	**Lakka**	**1.83**	**145**	P	**Pb**	**16 44 38.1**	**+0.6**
AXAR	**Agios Charalam**	**1.84**	**122**	P	**Pb**	**16 44 38.2**	**+0.5**
AXAR	**Agios Charalam**	**1.84**	**122**	P	**Pb**	**16 44 38.0**	**+0.3**
AXAR				AML	AML	16 45 13.0	
	comp=E,4788μm,0.5s						
AXAR				AML	AML	16 45 15.6	
	comp=N,4280μm,0.6s						
ALIK	**Aliki, Aigiali**	**1.87**	**142**	P	**Pb**	**16 44 39.3**	**+1.1**
PHP	**Peshkopia**	**1.94**	**355**	P	**Pb**	**16 44 39.8**	**+0.4**
THE	**Thessaloniki**	**1.98**	**63**	P	**Pn**	**16 44 38.5**	**+1.3**
NEO	**Neokhori**	**2.04**	**102**	P	**Pb**	**16 44 40.9**	**-0.1**
NEO				S	**Sb**	**16 45 07.0**	**+0.9**
	comp=N,1μm,0.5s						
HORT	**Hortiatis**	**2.06**	**65**	P	**Pn**	**16 44 39.4**	**+1.0**
HORT				S	**Sn**	**16 45 06.2**	**+2.5**
	comp=N,340nm,0.6s						
KLV	**Kalavryta, Ach**	**2.07**	**145**	P	**Pb**	**16 44 41.0**	**-0.5**
LKR	**Lokris**	**2.13**	**120**	P	**Pn**	**16 44 40.8**	**+1.6**
VAY	**Valandovo**	**2.15**	**42**	*e*Pn	**Pn**	**16 44 40.4**	**+0.9**
VAY				*e*Sn	**Sb**	**16 45 10.3**	**+1.1**
VAY	**Valandovo**	**2.15**	**42**	*i* Pn	**Pn**	**16 44 40.7**	**+1.2**
KNT	**Kendrikon**	**2.22**	**50**	P	**Pn**	**16 44 41.3**	**+0.8**
STIP	**Stip**	**2.27**	**31**	*i* Pn	**Pb**	**16 44 44.5**	**-0.4**
SKO	**Skopje**	**2.30**	**15**	*e*Pn	**Pb**	**16 44 44.7**	**-0.8**
SKO				*e*Sn	**Sn**	**16 45 11.9**	**+2.4**
SKO	**Skopje**	**2.30**	**15**	*i* Pn	**Pb**	**16 44 44.7**	**-0.8**
THAL	**Thalero**	**2.32**	**137**	P	**Pn**	**16 44 44.1**	**+2.2**
SOH	**Sokhos**	**2.33**	**62**	P	**Pn**	**16 44 43.8**	**+1.8**
SOH				S	**Sb**	**16 45 14.4**	**-0.1**
	comp=N,452nm,0.5s						
LOUT	**Loutraki**	**2.53**	**133**	P	**Pn**	**16 44 46.9**	**+2.2**
VILL	**Villia**	**2.61**	**126**	P	**Pn**	**16 44 48.2**	**+2.3**
OUR	**Ouranopolis**	**2.62**	**76**	P	**Pn**	**16 44 47.2**	**+1.2**
SRS	**Serrai**	**2.63**	**58**	P	**Pn**	**16 44 47.1**	**+1.0**
SRS	**Serrai**	**2.63**	**58**	*e*Pn	**Pn**	**16 44 47.2**	**+1.1**
SRS				*e*Sn	**Sn**	**16 45 19.5**	**+1.8**
DRME	**Dracevica, Mon**	**2.67**	**336**	*e*Pn	**Pn**	**16 44 48.2**	**+1.4**
ITM	**Ithomi**	**2.75**	**158**	Pn	**Pn**	**16 44 50.1**	**+2.3**
KOKK	**Kokkinochori,**	**2.78**	**66**	P	**Pn**	**16 44 49.5**	**+1.4**
KOKK				S	**Sn**	**16 45 23.9**	**+2.7**
	comp=N,132nm,0.5s						
PDG	**Podgorica**	**2.88**	**339**	⇓P	**Pn**	**16 44 51.7**	**+2.2**
PDG	**Podgorica**	**2.88**	**339**	Pn	**Pn**	**16 44 50.7**	**+1.2**
KYMI	**Kymi, Euboea I**	**2.90**	**111**	P	**Pn**	**16 44 52.7**	**+2.8**
NVR	**Nevrokopi**	**2.92**	**56**	P	**Pn**	**16 44 51.4**	**+1.2**
NVR				S	**Sn**	**16 45 28.6**	**+3.6**
	comp=N,148nm,0.5s						
PYL	**PYLOS**	**2.98**	**163**	P	**Pn**	**16 44 52.4**	**+1.5**
PYL				S	**Sn**	**16 45 28.1**	**+1.9**
	comp=N,165nm,0.3s						
ATH	**Athens Observa**	**2.98**	**126**	P	**Pn**	**16 44 53.1**	**+2.2**
ATH				S	**Sn**	**16 45 29.9**	**+3.6**
	comp=N,365nm,0.6s						
ATHU	**Athens Univers**	**3.03**	**125**	P	**Pn**	**16 44 53.9**	**+2.3**
PTL	**Penteli**	**3.03**	**123**	P	**Pn**	**16 44 54.0**	**+2.4**
DION	**Dionisos Attik**	**3.06**	**122**	P	**Pn**	**16 44 54.6**	**+2.6**
TIP	**Timpagrande**	**3.06**	**261**	Pn	**Pn**	**16 44 52.7**	**+0.6**
KRND	**KRANIDI**	**3.07**	**140**	P	**Pn**	**16 44 54.0**	**+1.8**
VLY	**Voula,Athens**	**3.10**	**127**	P	**Pn**	**16 44 54.4**	**+1.8**
HCY	**Herceg Novi**	**3.15**	**330**	*e*Pn	**Pn**	**16 44 53.2**	**-0.1**
MATE	**Matera**	**3.15**	**288**	⇓P	**Pn**	**16 44 53.9**	**+0.6**
BARS	**Barje**	**3.19**	**16**	*e*Pn	**Pn**	**16 44 56.4**	**+2.6**
KAVA	**Kavala**	**3.20**	**66**	P	**Pn**	**16 44 54.8**	**+0.8**
VTS	**Vitosha**	**3.47**	**33**	⇓P	**Pn**	**16 44 57.4**	**-0.3**
VTS				⇓S	**Sn**	**16 45 37.7**	**-0.8**
VTS	**Vitosha**	**3.47**	**33**	Pn	**Pn**	**16 44 59.5**	**+1.7**
SELS	**Selova**	**3.48**	**6**	*e*Pn	**Pn**	**16 45 00.0**	**+2.1**
VLI	**Veliai**	**3.52**	**149**	P	**Pn**	**16 44 59.8**	**+1.4**
BRY	**Bratogost**	**3.53**	**334**	*e*Pn	**Pn**	**16 45 00.0**	**+1.4**
SJES	**Sjenica**	**3.54**	**352**	*e*Pn	**Pn**	**16 45 01.2**	**+2.4**
UPM	**Unac-Piva**	**3.69**	**340**	*e*Pn	**Pn**	**16 45 03.0**	**+2.1**
CUC	**Castrocucco**	**3.73**	**275**		**Pn**	**16 45 02.7**	**+1.5**
SMTH	**Samothraki Isl**	**3.81**	**78**	P	**Pn**	**16 45 03.3**	**+0.9**
ZAPS	**Zavoj**	**3.82**	**22**	*e*Pn	**Pn**	**16 45 04.9**	**+2.3**
STON	**Ston**	**3.83**	**325**	*e*Pn	**Pn**	**16 45 01.3**	**-1.3**
KTHR	**Kythira**	**3.95**	**151**	P	**Pn**	**16 45 07.3**	**+3.0**
KTHR				S	**Sn**	**16 45 55.1**	**+4.9**
	comp=N,155nm,0.3s						
BOVS	**Bovan**	**3.96**	**11**	⇑P	**Pn**	**16 45 05.1**	**+0.6**
BOVS				⇑S	**Sn**	**16 45 50.8**	**+0.3**
BOVS	**Bovan**	**3.96**	**11**	*e*Pn	**Pn**	**16 45 05.8**	**+1.4**
BOVS				*e*Sn	**Sn**	**16 45 52.4**	**+1.9**
KTHA	**Kythira Island**	**3.97**	**151**	P	**Pn**	**16 45 07.5**	**+2.9**
RDO	**Rodhopi**	**3.98**	**68**	Pn	**Pn**	**16 45 05.7**	**+1.0**
RDO	**Rodhopi**	**3.98**	**68**	P	**Pn**	**16 45 05.7**	**+1.0**
RUDO	**Rudo**	**3.98**	**346**	*e*Pn	**Pn**	**16 45 05.6**	**+0.9**
CEL	**Celeste**	**3.99**	**250**	Pn	**Pn**	**16 45 05.3**	**+0.4**
SIGR	**SIGRI**	**4.06**	**96**	P	**Pn**	**16 45 09.0**	**+3.2**
GRUS	**Gruza**	**4.14**	**1**	*e*Pn	**Pn**	**16 45 09.0**	**+2.2**
BLKB	**Belogradchik**	**4.16**	**21**	⇓P	**Pn**	**16 45 07.9**	**+0.7**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**16 45 09.6**	**+1.5**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**16 45 09.5**	**+1.5**
ZAGS	**Zajecar**	**4.23**	**16**	*e*Pn	**Pn**	**16 45 10.1**	**+2.0**
ZAGS				*e*Sn	**Sn**	**16 45 59.4**	**+2.3**
SGRT	**San Giovanni R**	**4.23**	**300**	Pn	**Pn**	**16 45 08.8**	**+0.6**
ALN	**Alexandroupoli**	**4.28**	**73**	Pn	**Pn**	**16 45 09.9**	**+1.1**
ALN	**Alexandroupoli**	**4.28**	**73**	P	**Pn**	**16 45 10.1**	**+1.3**
DIVS	**Divibare**	**4.37**	**354**	Pn	**Pn**	**16 45 11.1**	**+0.9**
DIVS	**Divibare**	**4.37**	**354**	*e*Pn	**Pn**	**16 45 10.4**	**+0.2**
DIVS	**Divibare**	**4.37**	**354**	*e*Pn	**Pn**	**16 45 11.5**	**+1.3**
DIVS				*e*Sn	**Sn**	**16 46 01.2**	**+0.4**
ANKY	**Antikythira Is**	**4.41**	**151**	P	**Pn**	**16 45 13.1**	**+2.5**
CHOS	**Chios island**	**4.42**	**106**	P	**Pn**	**16 45 13.7**	**+2.9**
APE	**Apeiranthos**	**4.67**	**123**	⇓P	**Pn**	**16 45 12.5**	**-1.8**
KUBS	**Kucevo**	**4.72**	**9**	*e*Pn	**Pn**	**16 45 16.9**	**+2.0**
PAOL	**Paolisi**	**4.82**	**287**		**Pn**	**16 45 17.7**	**+1.5**
RODP	**Rodopos**	**4.86**	**149**	P	**Pn**	**16 45 17.9**	**+1.2**
TEKS	**Tekeris**	**4.87**	**351**	*e*Pn	**Pn**	**16 45 16.9**	**0.0**
TEKS	**Tekeris**	**4.87**	**351**	*e*Pn	**Pn**	**16 45 17.1**	**+0.2**
SANT	**Santorini**	**5.08**	**130**	Pn	**Pn**	**16 45 22.2**	**+2.4**
HERR	**Herculane**	**5.29**	**14**	⇓P	**Pn**	**16 45 22.9**	**+0.2**
MGRS	**Mrkonjic Grad**	**5.37**	**332**	*e*Pn	**Pn**	**16 45 24.7**	**+1.0**
VAE	**Valguarnera**	**5.38**	**247**	Sn	**Sn**	**16 46 29.2**	**+3.6**
	comp=N,1.7nm,0.3s,baz=227,slow=21,SNR=2.0						
FRGS	**Fruska Gora**	**5.44**	**354**	⇑P	**Pn**	**16 45 25.7**	**+0.9**
FRGS	**Fruska Gora**	**5.44**	**354**	*e*Pn	**Pn**	**16 45 25.2**	**+0.5**
FRGS	**Fruska Gora**	**5.44**	**354**	*e*Pn	**Pn**	**16 45 25.3**	**+0.5**
RAFF	**Raffo Rosso**	**5.54**	**245**	Pn	**Pn**	**16 45 25.3**	**-0.9**
IDI	**Anoyia**	**5.58**	**142**	⇑P	**Pn**	**16 45 26.0**	**-0.8**
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**16 45 26.5**	**-0.3**
	comp=N,1.4nm,0.3s,baz=323,slow=9.2,SNR=16						
IDI				Sn	**Sn**	**16 46 29.2**	**-1.4**
	comp=N,2.6nm,0.3s,baz=348,slow=23,SNR=9.0						
IDI				LR	LR	16 48 09.7	
	comp=N,31nm,21.9s,baz=338,slow=44						
	comp=N,2.9nm,0.3s						
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**16 45 26.3**	**-0.5**
INTR	**Introdacqua**	**5.59**	**296**	Pn	**Pn**	**16 45 28.0**	**+1.1**
BLY	**Banja Luka**	**5.62**	**334**	*e*Pn	**Pn**	**16 45 26.5**	**-0.7**
BZS	**Buzias**	**5.91**	**7**	⇑P	**Pn**	**16 45 31.8**	**+0.7**
BZS				⇑S	**Sn**	**16 46 39.7**	**+1.2**
A051A	**Mrakovica**	**5.94**	**333**	⇑*i*Pn	**Pn**	**16 45 32.0**	**+0.3**
AQU	**L'Aquila**	**6.07**	**298**	Pn	**Pn**	**16 45 34.7**	**+1.3**
CAMP	**Campotosto**	**6.13**	**299**		**Pn**	**16 45 35.5**	**+1.2**
ARR	**Arges**	**6.34**	**26**	⇑P	**Pn**	**16 45 37.8**	**+0.7**
NRCA	**Norcia**	**6.46**	**301**		**Pn**	**16 45 39.7**	**+0.9**
VOIR		**6.54**	**28**	⇑P	**Pn**	**16 45 40.3**	**+0.3**
SIRR	**Siria**	**6.56**	**6**	⇑P	**Pn**	**16 45 41.3**	**+1.2**
KOVH	**Kovagotottos**	**6.61**	**344**	P	**Pn**	**16 45 41.9**	**+1.1**
KOVH				S	**Sn**	**16 46 52.5**	**-3.1**
MORH	**Mrgy, Hungar**	**6.63**	**348**	⇓P	**Pn**	**16 45 42.3**	**+1.4**
MORH	**Mrgy, Hungar**	**6.63**	**348**	P	**Pn**	**16 45 42.4**	**+1.4**
KARP	**Karpathos**	**6.65**	**127**	Pn	**Pn**	**16 45 43.7**	**+2.3**
CESX	**Cesi**	**6.72**	**298**	Pn	**Pn**	**16 45 43.8**	**+1.4**
MLR	**Muntele Rosu**	**6.94**	**33**	⇓P	**Pn**	**16 45 44.2**	**-1.3**
MLR	**Muntele Rosu**	**6.94**	**33**	Pn	**Pn**	**16 45 45.3**	**-0.1**
	comp=N,0.2nm,0.3s,baz=210,slow=19,SNR=1.9						
MLR				Sn	**Sn**	**16 47 08.9**	**+4.8**
	comp=N,0.3nm,0.3s,baz=257,slow=21,SNR=1.1						
	comp=N,4.4nm,1.1s						
BOJS	**Bojanci**	**6.99**	**327**	*e*Pn	**Pn**	**16 45 45.9**	**-0.1**
MURB	**Monte Urbino**	**7.04**	**303**	Pn	**Pn**	**16 45 47.8**	**+1.1**
DOPR	**Dopca**	**7.12**	**28**	⇓P	**Pn**	**16 45 47.7**	**-0.1**
CRES	**Cresnjev**	**7.17**	**330**	⇑*i*Pn	**Pn**	**16 45 47.7**	**-0.8**
DRGR		**7.20**	**11**	⇓P	**Pn**	**16 45 49.5**	**+0.5**
PLOR	**Plostina**	**7.53**	**34**	⇓P	**Pn**	**16 45 52.8**	**-0.6**
CEY	**Cerknica**	**7.53**	**325**	⇑*i*Pn	**Pn**	**16 45 53.4**	**-0.1**
VRI	**Vrincioaia**	**7.57**	**34**	⇓P	**Pn**	**16 45 54.0**	**0.0**
SKDS	**Skadanscina**	**7.58**	**322**	*e*Pn	**Pn**	**16 45 52.9**	**-1.2**
MPLH	**Magyarpolny**	**7.75**	**344**	P	**Pb**	**16 46 15.2**	**-3.1**
CASP	**Castiglione de**	**7.97**	**296**	Pn	**Pn**	**16 46 00.8**	**+1.3**
SOKA	**Soboth**	**8.05**	**331**	*e*Pn	**Pn**	**16 46 00.7**	**+0.1**
	comp=N,2.0nm,0.4s						
OBKA	**Obir**	**8.09**	**329**	*e*Pn	**Pn**	**16 46 01.5**	**+0.3**
OBKA	**Obir**	**8.09**	**329**	*e*Pn	**

comp=Z,0.8nm,0.8s
EKA Eskdalemuir Ar 22.22 322 P **P 16 48 58.9 -1.1**
comp=Z,0.9nm,0.6s,baz=114,slow=10,SNR=4.1
comp=Z,0.9nm,0.6s
NC204 NORSAR Array S 22.40 347 P **P 16 49 02.5 +0.6**
NC204 IAmb IAmb 16 49 23.6
comp=Z,48nm,1.5s
ARCES ARCESS Array B 29.96 3 P **P 16 50 09.8 -1.7**
comp=Z,2.6nm,0.9s,baz=186,slow=7.2,SNR=5.0
comp=Z,2.6nm,0.9s
TORD Torodi Ar. Bea 31.32 217 P **P 16 50 23.5 -0.4**
comp=Z,0.5nm,0.6s,baz=34,slow=9.1,SNR=4.2
comp=Z,0.5nm,0.6s
KK31 Karatay Array 37.10 68 P **P 16 51 13.9 +0.1**
KK31 IAmb IAmb 16 51 26.6
comp=Z,4.0nm,1.4s
KKAR Karatay Array 37.10 68 P **P 16 51 13.7 -0.1**
MK31 Makanchi Array 44.41 60 P **P 16 52 13.2 -0.9**
MKAR Makanchi Array 44.41 60 P **P 16 52 13.8 -0.3**
comp=Z,1.5nm,0.5s,baz=279,slow=7.5,SNR=27
comp=Z,1.5nm,0.5s
MKAR Makanchi Array 44.41 60 P **P 16 52 13.2 -0.9**
ZALV Zalesovo Beam 44.58 49 P **P 16 52 14.3 -1.0**
comp=Z,0.4nm,0.3s,baz=285,slow=8.3,SNR=2.8
comp=Z,0.4nm,0.3s

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*NOU **16** 16:45:21.5, 37.04S×179.07E, h1km, MLv3.6/7, Off E. Coast of N. Island, N.Z.*
*WEL **16** 16:45:22.0±0.8, 37°S±5°×17°9E±°, h20km, M3.3/24, ML3.7/30, MLv3.3/24, Error ellipse: s-maj=0.0km s-min=0.0km az=119.4*
ISC 16 16:45:20.9±2.8, 37.06S±0.09×179.2E±0.1, h10km±10km, n45, σ0s87/60, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.88**	**235**	P	**Pg**	**16 45 37.2**	**-0.6**
MXZ				S	**Sg**	**16 45 48.8**	**-0.4**
MXZ	**Matakaoa Point**	**0.88**	**235**	P	**Pg**	**16 45 36.9**	**-0.9**
WMGZ	**Waiomatatini S**	**0.99**	**219**	P	**Pn**	**16 45 41.5**	**+0.8**
WMGZ				S	**Sn**	**16 45 56.2**	**+1.5**
PKGZ	**Pakihiroa**	**1.22**	**227**	P	**Pn**	**16 45 43.7**	**-0.4**
PKGZ				S	**Sg**	**16 46 01.1**	**+0.9**
PUZ	**Puketiti**	**1.26**	**216**	P	**Pg**	**16 45 45.4**	**+0.2**
PUZ				S	**Sg**	**16 46 02.9**	**+1.4**
HAZ	**Te Kaha**	**1.33**	**238**	P	**Pn**	**16 45 43.8**	**-1.7**
HAZ				S	**Sg**	**16 46 04.7**	**+1.0**
TWGZ	**Tauwhareparae**	**1.48**	**221**	P	**Pb**	**16 45 48.5**	**0.0**
TWGZ				S	**Sg**	**16 46 08.5**	**-0.1**
RUGZ	**Raukumara Rang**	**1.51**	**233**	P	**Pn**	**16 45 48.5**	**+0.4**
CNGZ	**Carnagh Statio**	**1.63**	**209**	P	**Pb**	**16 45 50.9**	**-0.1**
TKGZ	**Te Karaka**	**1.75**	**217**	P	**Pn**	**16 45 51.5**	**+0.2**
TKGZ				S	**Sb**	**16 46 14.4**	**-0.6**
MWZ	**Matawai**	**1.84**	**226**	P	**Pn**	**16 45 53.0**	**+0.4**
WHRZ	**Whale Island**	**1.94**	**245**	P	**Pn**	**16 45 54.8**	**+0.8**
RIGZ	**Rimuhau**	**2.00**	**214**	P	**Pn**	**16 45 54.8**	**+0.1**
RIGZ				S	**Sn**	**16 46 20.5**	**+0.6**
RAGZ	**Rawiri**	**2.02**	**224**	P	**Pn**	**16 45 55.5**	**+0.5**
RAGZ				S	**Sn**	**16 46 20.2**	**-0.1**
URZ	**Urewera**	**2.05**	**234**	P	**Pn**	**16 45 55.8**	**+0.5**
URZ				S	**Sn**	**16 46 21.0**	**0.0**
URZ	**Urewera**	**2.05**	**234**	P	**Pn**	**16 45 56.0**	**+0.7**
SNGZ	**Shannon Statio**	**2.27**	**220**	P	**Pn**	**16 45 58.6**	**+0.2**
SNGZ				S	**Sn**	**16 46 26.7**	**+0.4**
MHGZ	**Mahia Peninsul**	**2.33**	**206**	P	**Pn**	**16 45 59.2**	**0.0**
RTZ	**Ruatahuna**	**2.35**	**228**	P	**Pn**	**16 45 60.0**	**+0.4**
RTZ				S	**Sn**	**16 46 28.1**	**-0.4**
MUGZ	**Murupara**	**2.39**	**233**	P	**Pn**	**16 46 00.3**	**+0.2**
MUGZ				S	**Sn**	**16 46 27.3**	**-2.1**
RAHZ	**Arahi**	**2.50**	**221**	P	**Pn**	**16 46 02.3**	**+0.8**
MTHZ	**Maungataniwha**	**2.59**	**225**	P	**Pn**	**16 46 03.2**	**+0.3**
MTHZ				S	**Sn**	**16 46 34.5**	**+0.2**
NMHZ	**Naumai**	**2.78**	**222**	P	**Pn**	**16 46 05.9**	**+0.4**
ARHZ	**Aropaoanui**	**2.81**	**218**	P	**Pn**	**16 46 05.8**	**0.0**
ARHZ				S	**Sn**	**16 46 39.5**	**-0.1**
KUZ	**Kuaotunu**	**2.81**	**275**	P	**Pn**	**16 46 04.9**	**-0.9**
MRHZ	**Matea Rd**	**2.83**	**230**	P	**Pn**	**16 46 06.3**	**+0.2**
BKZ	**Black Stump Fm**	**3.00**	**225**	P	**Pn**	**16 46 08.2**	**-0.3**
BKZ	**Black Stump Fm**	**3.00**	**225**	P	**Pn**	**16 46 08.8**	**+0.3**
TOZ	**Tahuroa Road**	**3.02**	**256**	P	**Pn**	**16 46 08.4**	**-0.3**
CKHZ	**Cape Kidnapper**	**3.09**	**212**	P	**Pn**	**16 46 08.5**	**-1.1**
MCHZ	**McNeill Hill**	**3.09**	**219**	P	**Pn**	**16 46 09.5**	**-0.3**
KAHZ	**Kahuranaki**	**3.29**	**213**	P	**Pn**	**16 46 11.3**	**-1.2**
TMVZ	**Te Maari**	**3.44**	**232**	P	**Pn**	**16 46 14.9**	**+0.3**
ETVZ	**East Tongariro**	**3.45**	**232**	P	**Pn**	**16 46 15.1**	**+0.3**
MBAZ	**Motutapu North**	**3.46**	**273**	P	**Pn**	**16 46 15.1**	**+0.4**
AWAZ	**Awhitu Peninsu**	**3.65**	**269**	P	**Pn**	**16 46 17.8**	**+0.4**
RVAZ	**Riverhead Bore**	**3.72**	**273**	P	**Pn**	**16 46 19.0**	**+0.7**
HIZ	**Hauiti**	**3.74**	**246**	P	**Pn**	**16 46 19.9**	**+1.4**
HIZ	**Hauiti**	**3.74**	**246**	P	**Pn**	**16 46 20.0**	**+1.4**
TSZ	**Takapari Road**	**3.93**	**219**	P	**Pn**	**16 46 19.4**	**-1.9**
DVHZ	**Dannevirke**	**4.01**	**215**	P	**Pn**	**16 46 22.1**	**-0.3**
VRZ	**Vera Road**	**4.07**	**238**	P	**Pn**	**16 46 23.7**	**+0.6**
BFZ	**Birch Farm**	**4.29**	**212**	P	**Pn**	**16 46 24.4**	**-1.8**
OUZ	**Omahuta**	**4.89**	**290**	P	**Pn**	**16 46 35.2**	**+0.7**
CTZ	**Chatham Island**	**7.39**	**156**	P	**Pn**	**16 47 11.3**	**+2.5**
	60nm,2.3s						

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*NEIC **16** 16:48:58.9±1.2, 40.55N±0.03×112.13W±0.02, h0km±2km, ML2.0/34, Error ellipse: s-maj=4.4km s-min=3.0km az=190.0*
*IDC **16** 16:48:59.4±1.3, 40.49N×112.22W, h0km, mbtmp2.8/1, ML3.3/1, Error ellipse: s-maj=19.6km s-min=6.6km az=156.0*
ISC 16 16:48:57.8±0.9, 40.51N±0.04×112.16W±0.03, h0km, n23, σ0s85/23, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTU	**Camp Tracy**	**0.36**	**60**	Pg	**Pg**	**16 49 05.3**	**+0.5**
JLU	**Jordanelle**	**0.55**	**81**	Pg	**Pg**	**16 49 09.3**	**+0.9**
JLU				IAML		16 49 22.3	
comp=N,65nm,0.7s							
DUG	**Dugway, Tooele**	**0.59**	**238**	Pg	**Pb**	**16 49 10.7**	**-0.4**
DUG				IAML		16 49 25.1	
comp=N,72nm,0.8s							
DUG				IAML		16 49 25.5	
comp=N,96nm,0.8s							
MPU	**Maple Canyon**	**0.64**	**141**	Pg	**Pb**	**16 49 11.4**	**-0.7**
BGU	**Big Grassy Mou**	**0.78**	**302**	Pg	**Pb**	**16 49 14.6**	**+0.3**
SPUT	**South Promonto**	**0.82**	**345**	Pg	**Pb**	**16 49 14.5**	**-0.6**
SPUT				IAML		16 49 29.8	
comp=E,43nm,0.8s							
TCUT	**Toone Canyon**	**0.83**	**43**	Pg	**Pb**	**16 49 14.9**	**-0.5**
HWUT	**Hardware Ranch**	**1.18**	**22**		**Pb**	**16 49 20.8**	**-0.4**
HWUT				IAML		16 49 42.7	
comp=E,51nm,0.8s							
HWUT				IAML		16 49 46.3	
comp=E,32nm,0.7s							
HVU	**Hansel Valley**	**1.35**	**340**	Pg	**Pg**	**16 49 23.7**	**+0.1**
HVU				IAML		16 49 45.3	
comp=E,33nm,0.7s							
TMUT	**Trail Mountain**	**1.42**	**149**	Pn	**Pn**	**16 49 25.5**	**+0.3**
P17A	**Butcher Ranch,**	**1.51**	**133**	Pn	**Pn**	**16 49 26.6**	**+0.3**
P17A				IAML		16 49 55.8	
comp=E,14nm,1.1s							
P17A				IAML		16 49 56.0	
comp=N,12nm,1.6s							
P18A	**Preston Nutter**	**1.72**	**120**	Pn	**Pb**	**16 49 30.2**	**-0.2**
P18A				IAML		16 49 57.8	
comp=N,13nm,3.1s							
P18A				IAML		16 49 58.2	
comp=E,14nm,3.4s							
Q16A	**Castle Valley**	**1.77**	**154**	Pn	**Pn**	**16 49 30.5**	**+0.6**
Q16A				IAML		16 49 57.4	
comp=E,16nm,1.4s							
Q16A				IAML		16 50 08.2	
comp=N,14nm,1.1s							
SRU	**San Rafael Swe**	**1.89**	**137**	Pn	**Pn**	**16 49 32.1**	**+0.6**
SRU				IAML		16 50 08.9	
comp=E,15nm,0.9s							
SRU				IAML		16 50 09.8	
comp=N,13nm,1.0s							
TCRU	**Three Creeks R**	**1.91**	**187**	Pn	**Pn**	**16 49 32.2**	**+0.3**
TCRU				IAML		16 50 09.5	
comp=E,18nm,1.0s							
RDMU	**Red Mountain**	**1.98**	**88**	Pn	**Pn**	**16 49 33.3**	**+0.5**
RDMU				IAML		16 49 44.9	
comp=E,11nm,3.1s							
RDMU				IAML		16 50 23.3	
comp=N,9.0nm,2.0s							
MSU	**Marysvale**	**2.00**	**180**	Pn	**Pn**	**16 49 34.1**	**+1.1**
ELK	**Elko**	**2.35**	**277**	Pg	**Pb**	**16 49 41.6**	**+0.3**
comp=N,0.2nm,0.3s,baz=95,slow=12,SNR=22							
ELK				Lg	Lg	16 50 14.4	
comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=2.5							
AHID	**Auburn Hatcher**	**2.39**	**19**	Pn	**Pn**	**16 49 39.2**	**+0.8**
PDAR	**Pinedale Array**	**2.98**	**40**	Pn	**Pb**	**16 49 51.7**	**-0.2**
comp=N,0.5nm,0.3s,baz=212,slow=14,SNR=27							
PDAR				Sn	**Sb**	**16 50 26.8**	**-2.2**
baz=240,slow=12							
PDAR				Lg	Lg	16 50 33.3	
comp=N,0.5nm,0.3s,baz=221,slow=30,SNR=3.0							
comp=N,4.4nm,0.7s							
NVAR	**Mina Array Bea**	**5.19**	**248**	Pg	**Pb**	**16 50 27.7**	**-1.8**
comp=N,0.1nm,0.3s,baz=58,slow=15,SNR=1.5							
NVAR				Sn	**Sn**	**16 51 18.2**	**+0.7**
comp=N,0.1nm,0.3s,baz=74,slow=26,SNR=1.6							
NVAR				Lg	Lg	16 51 41.4	
comp=N,0.2nm,0.3s,baz=72,slow=30,SNR=3.0							
ANMO	**Albuquerque**	**7.16**	**139**	Pg	Pg	16 51 09.8	-5.3
baz=312,slow=19,SNR=1.5							
TXAR	**Lajitas Array**	**13.14**	**145**	Pg	Pg	16 53 00.5	
baz=332,slow=20,SNR=3.0							

IDC 16 17:03:38.0±59.0, 17.73S×176.38W, h659km±32km, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=1032.0km s-min=131.5km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.31**	**269**	P	P	17 05 16.9	-0.1
9.0nm,0.5s,baz=148,slow=13,SNR=8.1							
STKA	**Stephens Creek**	**40.41**	**241**	P	P	17 10 22.4	+0.2
1.5nm,0.7s,baz=72,slow=6.4,SNR=3.4							
1.5nm,0.7s							
WRA	**Warramunga Arr**	**46.56**	**259**	P	P	17 11 09.5	-0.2
0.6nm,0.3s,baz=96,slow=6.8,SNR=16							
0.6nm,0.3s							
ASAR	**Alice Springs**	**46.70**	**254**	P	P	17 11 11.0	+0.3
1.8nm,0.4s,baz=93,slow=7.6,SNR=96							
1.8nm,0.4s							

IDC 16 17:25:51.9±9.4, 61.62S×158.55E, h0km, mb3.6/2, mbtmp3.5/3, ML2.5/1, MS3.2/4, Error ellipse: s-maj=480.0km s-min=42.6km az=75.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.01**	**177**	Pn	Pn	17 29 38.2	+0.2
baz=5.0,slow=14,SNR=2.9							
0.7nm,1.0s							
RPZ	**Rata Peaks**	**19.41**	**28**	LR	LR	17 36 59.9	
comp=Z,103nm,19.0s,baz=212,slow=34							
URZ	**Urewera**	**26.07**	**35**	LR	LR	17 39 47.0	
comp=Z,38nm,19.0s,baz=276,slow=32							
STKA	**Stephens Creek**	**31.73**	**332**	LR	LR	17 42 05.1	
comp=Z,50nm,19.9s,baz=202,slow=31							
H01W1	**Cape Leeuwin H**	**38.66**	**293**	T	T	18 14 42.9	
baz=146,slow=76,SNR=45							
H01W2	**Cape Leeuwin H**	**38.66**	**293**	T	T	18 14 44.4	
baz=146,slow=76,SNR=55							
H01W3	**Cape Leeuwin H**	**38.67**	**293**	T	T	18 14 48.8	
baz=146,slow=76,SNR=47							
ASAR	**Alice Springs**	**41.51**	**325**	P	P	17 33 40.9	+0.2
1.2nm,0.8s,baz=160,slow=8.1,SNR=13							
1.2nm,0.8s							
WRA	**Warramunga Arr**	**44.94**	**327**	P	P	17 34 07.6	-0.7
0.6nm,0.9s,baz=162,slow=7.0,SNR=3.0							
0.6nm,0.9s							
SNAA	**Sanae**	**46.36**	**188**	LR	LR	17 53 22.6	
comp=Z,32nm,20.4s,baz=192,slow=36							
H03S2	**Juan Fernandez**	**74.15**	**133**	T	T	18 59 26.7	
baz=203,slow=74,SNR=7.5							
H03S1	**Juan Fernandez**	**74.16**	**133**	T	T	18 59 23.4	
baz=203,slow=74,SNR=6.4							
H03S3	**Juan Fernandez**	**74.17**	**133**	T	T	18 59 26.2	
baz=203,slow=74,SNR=5.3							
H08S2	**Diego Garcia H**	**81.45**	**270**	T	T	19 08 33.5	
baz=150							
H08S1	**Diego Carcia H**	**81.46**	**270**	T	T	19 08 24.2	
baz=150							
H08S3	**Diego Garcia H**	**81.47**	**270**	T	T	19 08 39.2	
baz=150							

IDC 16 17:27:19.5±9.5, 33.83S×178.90E, h65km±89km, mb3.6/2, mbtmp3.8/3, ML2.8/1, Error ellipse: s-maj=64.3km s-min=58.5km az=35.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.65**	**198**	P	Pn	17 28 28.8	+1.5
0.5nm,0.3s,baz=340,slow=5.8,SNR=1.8							
URZ				S	Sn	17 29 19.8	-0.1
2.7nm,0.3s,baz=349,slow=6.2,SNR=9.0							
5.0nm,0.7s							
ASAR	**Alice Springs**	**40.45**	**272**	P	P	17 34 52.5	+0.5
1.3nm,0.7s,baz=103,slow=7.3,SNR=15							
1.3nm,0.7s							
WRA	**Warramunga Arr**	**41.77**	**278**	P	P	17 35 01.9	-0.8
1.9nm,0.9s,baz=116,slow=7.6,SNR=11							
1.9nm,0.9s							
FINES	**FINESS Array B**	**147.33**	**336**	PKPbc	PKPbc	17 46 54.1	-0.8
1.7nm,0.9s,baz=20,slow=4.4,SNR=1.8							

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*MDD **16** 17:43:43.9±0.5, 35.60N×3.58W, h0km, mb_Lg2.3/6, Error ellipse: s-maj=3.9km s-min=3.1km az=64.0*
*CNRM **16** 17:43:44.6, 35.48N×3.59W, h26km, ml2.4*
*INMG **16** 17:43:45.9±1.1, 35.57N×3.54W, h15km, ML1.9, Error ellipse: s-maj=3.2km s-min=2.1km az=62.0*
*SFS **16** 17:43:45.0, 35.45N×3.56W, h32km, ML2.5, ALBORAN SUR*
ISC 16 17:43:43.5±1.0, 35.53N±0.02×3.57W±0.03, h15km±9km, n26, σ1s30/52, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.44**	**224**	P	**Pg**	**17 43 52.4**	**0.0**
PALE				S	**Sg**	**17 43 58.2**	**-0.1**
WMELI	**Melilla**	**0.55**	**113**	P	**Pb**	**17 43 55.9**	**+1.1**
WMELI				S	**Sb**	**17 44 03.1**	**+0.7**
EMEL	**Melilla**	**0.55**	**115**	Pg	**Pb**	**17 43 55.9**	**+1.1**
EMEL				Sg	**Sb**	**17 44 03.6**	**+1.1**
GOG	**Mont Gurugu**	**0.56**	**124**	P	**Pb**	**17 43 55.7**	**+0.6**
GOG				S	**Sb**	**17 44 03.0**	**+0.1**
PVLZ	**Peæn de**	**0.70**	**239**	P	**Pb**	**17 43 57.5**	**+0.1**
PVLZ				S	**Sg**	**17 44 05.9**	**-0.5**
CHAS	**Isla Isabel II**	**0.99**	**110**	P	**Pg**	**17 44 02.4**	**-0.3**
CHAS				S	**Sg**	**17 44 14.9**	**-0.8**
AKLM	**AKL**	**1.05**	**193**	P	**Pb**	**17 44 03.8**	**+0.4**
AKLM				S	**Sg**	**17 44 17.0**	**-0.5**
TAF	**Taforalt**	**1.19**	**127**	P	**Pb**	**17 44 05.3**	**-0.4**
TAF				S	**Sb**	**17 44 21.3**	**+0.5**
ELGU	**Los Guajares,**	**1.33**	**358**	Pg	**Pg**	**17 44 08.7**	**-0.5**
ELGU				Sg	**Sb**	**17 44 25.3**	**+0.1**
ELGU				*i* Vmb_Lg		17 44 31.5	
EMAL	**Malaga-Limoner**	**1.41**	**331**	P	**Pn**	**17 44 08.7**	**+0.1**
EMAL				S	**Sn**	**17 44 26.5**	**-0.4**
EMIJ	**Mijas**	**1.42**	**317**	Pg	**Pn**	**17 44 08.8**	**0.0**
EMIJ				Sg	**Sn**	**17 44 26.5**	**-0.7**
EMIJ				*i* Vmb_Lg		17 44 30.7	
JBK	**JBK**	**1.45**	**145**	P	**Pn**	**17 44 08.6**	**-0.7**
JBK				S	**Sn**	**17 44 25.2**	**-3.0**
EBER	**Berja**	**1.47**	**22**	Pg	**Pb**	**17 44 10.9**	**+0.3**
EBER				Sg	**Sn**	**17 44 28.2**	**-0.5**
EBER				*i* Vmb_Lg		17 44 39.0	
CEU	**Ceuta**	**1.52**	**284**	P	**Pn**	**17 44 08.3**	**-1.7**
CEU				S	**Sn**	**17 44 24.3**	**-5.1**
EGOR	**Sierra Gorda,**	**1.63**	**345**	Pn	**Pn**	**17 44 10.9**	**-0.9**
EGOR				Pg	**Pb**	**17 44 12.7**	**-0.8**
EGOR				Sn	**Sn**	**17 44 33.1**	**+0.4**
EGOR				*i* Vmb_Lg		17 44 43.2	
EQES	**Quesada**	**2.30**	**10**	Pg	**Pb**	**17 44 25.5**	**+0.7**
EQES				Sn	**Sn**	**17 44 48.4**	**-0.7**
EQES				Sg	**Sb**	**17 44 53.9**	**+0.9**
EQES				*i* Vmb_Lg		17 44 56.4	
MD31	**MD31**	**2.84**	**201**	P	**Pn**	**17 44 29.2**	**+0.9**
MD31				S	**Sn**	**17 45 01.0**	**-1.2**
MDT	**Midelt**	**2.85**	**198**	P	**Pn**	**17 44 30.2**	**+1.8**
MDT				S	**Sn**	**17 45 01.3**	**-1.2**
ZHG	**ZHG**	**3.28**	**232**	P	**Pn**	**17 44 36.6**	**+2.1**
ZHG				S	**Sn**	**17 45 13.2**	**-0.1**
PVAQ	**Vaqueiros**	**3.83**	**300**	*e*Pn	**Pn**	**17 44 43.3**	**+1.4**
PVAQ				*e*Sn	**Sn**	**17 45 27.0**	**+0.4**
PVAQ				A	A	17 45 29.0	
1.7nm,0.5s							
PVAQ	**Vaqueiros**	**3.83**	**300**	P	**Pn**	**17 44 43.7**	**+1.8**
PVAQ				S	**Sn**	**17 45 25.4**	**-1.2**
PBAR	**Barrancos**	**3.83**	**314**	*e*Pn	**Pn**	**17 44 43.4**	**+1.4**
PBAR				*e*Sn	**Sn**	**17 45 26.9**	**+0.2**
PBAR				A	A	17 45 31.4	
1.3nm,0.3s							
MESJ	**Messejana**	**4.39**	**303**	*e*P	**Pn**	**17 44 50.3**	**+0.7**
MESJ	**Messejana**	**4.39**	**303**	*e*Pn	**Pn**	**17 44 51.8**	**+2.2**
MESJ				*e*Sn	**Sn**	**17 45 40.5**	**0.0**
MESJ				A	A	17 45 44.2	
1.5nm,0.4s							
EVO	**Evora**	**4.65**	**311**	*e*Sn	**Sn**	**17 45 45.6**	**-1.2**
PNCL	**Nicolau / Gran**	**4.74**	**304**	*e*Pn	**Pn**	**17 44 55.9**	**+1.5**
PNCL				*e*Sn	**Sn**	**17 45 48.0**	**-1.0**
PNCL				A	A	17 45 56.2	
1.9nm,0.8s							

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*NEIC **16** 17:45:25.0±2.6, 7.55S±0.1×112.30E±0.04, h166km±8km, mb4.4/26, Error ellipse: s-maj=18.3km s-min=2.9km az=194.0*
*DJA **16** 17:45:25.6±0.2, 8°S±3°×11°2E±°, h164km±2km, M4.6/20, mb4.6/17, mB5.3/7, MLv4.4/20, Mw(mB)4.7/7*
*IDC **16** 17:45:26.9±2.0, 7.54S×112.24E, h186km±18km, mb3.9/18, mbtmp4.4/19, Error ellipse: s-maj=16.0km s-min=9.2km az=56.0*
ISC 16 17:45:25.3±0.5, 7.65S±0.04×112.21E±0.05, h172km±4km, n152, σ1s15/163, mb4.3/29, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.55**	**228**	P	**Pn**	**17 45 49.1**	**-0.3**
PWJI				S	**Sn**	**17 46 07.1**	**-0.8**
KRKI	**Karangkates**	**0.56**	**155**	P	**Pn**	**17 45 48.9**	**-0.5**
TBJI	**Tambak Boyo**	**0.90**	**336**	P	**Pn**	**17 45 52.2**	**+0.7**
TBJI				S	**Sn**	**17 46 12.8**	**+1.1**
PCJI	**Pacitan**	**1.16**	**242**	P	**Pn**	**17 45 53.1**	**-0.4**
PCJI				S	**Sn**	**17 46 14.6**	**-0.6**
UGM	**Wanagama**	**1.69**	**261**	Pn	**Pn**	**17 45 59.0**	**+0.4**
UGM	**Wanagama**	**1.69**	**261**	P	**Pn**	**17 45 59.0**	**+0.4**
UGM	**Wanagama**	**1.69**	**261**	P	**Pn**	**17 45 59.5**	**+0.9**
KMMI	**Kalianget**	**1.84**	**71**	P	**Pn**	**17 45 59.4**	**-0.7**
BWJI	**Bawean**	**1.84**	**14**	P	**Pn**	**17 46 01.0**	**+0.9**
BWJI				S	**Sn**	**17 46 28.5**	**+1.4**
SMRI	**Semarang**	**1.86**	**289**	P	**Pn**	**17 45 59.9**	**-0.4**
SMRI	**Semarang**	**1.86**	**289**	P	**Pn**	**17 46 00.7**	**+0.4**
SMRI				S	**Sn**	**17 46 29.2**	**+1.9**
SMRI	**Semarang**	**1.86**	**289**	P	**Pn**	**17 46 01.6**	**+1.3**
YOGI	**Yogyakarta**	**1.91**	**265**	P	**Pn**	**17 46 01.3**	**+0.5**
YOGI				S	**Sn**	**17 46 29.0**	**+0.7**
ABJI	**Asem Bagus**	**2.01**	**94**	P	**Pn**	**17 46 01.8**	**-0.1**
JAGI	**Jajag, Banyuwa**	**2.09**	**113**		**Pn**	**17 46 01.7**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.09**	**113**	P	**Pn**	**17 46 01.8**	**-1.0**
JAGI	**Jajag, Banyuwa**	**2.09**	**113**	P	**Pn**	**17 46 02.5**	**-0.3**
RTBI	**Rangdo, Negare**	**2.82**	**107**	P	**Pn**	**17 46 10.8**	**-0.6**
SRBI	**Singaraja**	**3.00**	**98**	P	**Pn**	**17 46 13.3**	**-0.3**
IGBI	**Denpasar**	**3.13**	**112**	P	**Pn**	**17 46 14.1**	**-1.0**
DNP	**Denpasar**	**3.14**	**109**	P	**Pn**	**17 46 14.2**	**-1.1**
KLNI	**Mataram**	**3.92**	**102**	P	**Pn**	**17 46 23.6**	**-1.6**
LEM	**Lembang**	**4.63**	**280**	P	**Pn**	**17 46 36.5**	**+2.0**
67nm,0.7s,baz=54,slow=10.0,SNR=24							
LEM	**Lembang**	**4.63**	**280**	P	**Pn**	**17 46 36.5**	**+2.0**
TWSI	**Taliwang, Sumb**	**4.75**	**103**	P	**Pn**	**17 46 35.1**	**-0.7**
BBKI	**Banjar Baru**	**4.92**	**32**	P	**Pn**	**17 46 39.6**	**+1.5**
PBKI	**Pangkalan Bun**	**4.94**	**354**	P	**Pn**	**17 46 39.9**	**+1.5**
1.6nm456nm,1.1s							
CNJI	**Cibinong**	**5.05**	**274**	P	**Pn**	**17 46 42.5**	**+2.7**
0.4nm3μm69nm,1.0s							
CBJI	**Citeko**	**5.46**	**283**	P	**Pn**	**17 46 44.7**	**-0.5**
1.0nm5μm154nm,0.6s							
PLAI	**Plampang**	**5.63**	**102**	P	**Pn**	**17 46 46.8**	**-0.6**
0.7nm2μm77nm,0.9s							
PLAI	**Plampang**	**5.63**	**102**	P	**Pn**	**17 46 47.6**	**+0.2**
SKJI	**Sukabumi**	**5.65**	**276**	P	**Pn**	**17 46 48.9**	**+1.3**
0.9nm4μm140nm,0.5s							
MTKI	**Muara Teweh, K**	**7.18**	**22**	P	**Pn**	**17 47 09.3**	**+1.4**
0.2nm34nm,0.8s							
STKI	**Sintang**	**7.70**	**355**	P	**Pn**	**17 47 16.6**	**+1.8**
0.3nm51nm,1.0s							
KASI	**Kota Agung**	**7.95**	**285**	P	**Pn**	**17 47 19.7**	**+1.6**
3μm79nm,0.6s							
PPBI	**Pangkal Pinang**	**8.15**	**312**	P	**Pn**	**17 47 22.5**	**+1.9**
3μm22nm,1.0s							
LWLI	**Liwa**	**8.52**	**287**	P	**Pn**	**17 47 27.1**	**+1.5**
6μm115nm,0.6s							
MNAI	**Manna**	**9.77**	**289**		**Pn**	**17 47 42.4**	**+0.4**
MNAI	**Manna**	**9.77**	**289**	P	**Pn**	**17 47 43.4**	**+1.4**
13μm401nm,0.7s							
MNAI	**Manna**	**9.77**	**289**	P	**Pn**	**17 47 42.6**	**+0.6**
MMRI	**Maumere**	**9.97**	**96**	Pn	**Pn**	**17 47 41.9**	**-2.8**
MMRI	**Maumere**	**9.97**	**96**	P	**Pn**	**17 47 43.6**	**-1.1**
MASI	**Maura Aman, Be**	**10.89**	**294**	P	**Pn**	**17 47 58.1**	**+1.3**
SOEI	**Soe**	**12.10**	**101**	Pn	**Pn**	**17 48 09.5**	**-3.0**
**

comp=Z,4.5nm,0.7s
QIS Mount Isa 29.44 119 P **P 17 51 14.0 +0.9**
OOD Oodnadatta 29.91 135 P **P 17 51 18.1 +0.9**
MULG Mulgathing 30.43 141 P **P 17 51 22.4 +0.7**
COEN Coen 31.03 104 P **P 17 51 27.1 -0.1**
SSLB Suanglung 32.39 15 P **P 17 51 37.8 -1.2**
comp=Z,23nm,2.9s
MTSU Mount Surprise 32.93 112 P **P 17 51 45.1 +1.3**
LCRK Leigh Creek 33.28 136 P **P 17 51 47.8 +1.2**
BBOO Buckleboo 33.41 142 P **P 17 51 48.0 +0.3**
INKA Innaminka 33.58 130 P **P 17 51 50.6 +1.3**
MANU Manus Island 35.45 83 P **P 17 52 05.8 +0.3**
HTT Hallett 35.61 140 P **P 17 52 07.8 +1.1**
STKA Stephens Creek 36.45 135 P **P 17 52 14.2 +0.4**
comp=Z,7.0nm,0.4s,baz=317,slow=7.9,SNR=57
STKA PcP **PcP 17 54 34.2 +0.1**
comp=Z,2.8nm,0.5s,baz=358,slow=3.5,SNR=5.0
comp=Z,7.0nm,0.4s
STKA Stephens Creek 36.45 135 P **P 17 52 14.7 +0.9**
STKA Stephens Creek 36.45 135 P **P 17 52 14.9 +1.1**
CMSA Cobar Meteorol 39.22 132 P **P 17 52 38.9 +1.9**
RMQ Roma 39.43 123 P **P 17 52 41.4 +2.5**
ARPS Mount Arapiles 39.58 141 P **P 17 52 41.5 +1.6**
ODAN Odare 41.91 326 *eP* **P 17 53 00.3 +1.0**
comp=Z,6.1nm,0.7s
TAPN Taplejung 42.11 327 *eP* **P 17 53 01.7 +0.6**
comp=Z,19nm,0.5s
LSA Lhasa 42.30 332 P **P 17 53 02.6 -0.1**
LSA IAmb IAmb 17 53 08.2
comp=Z,8.6nm,0.9s
TOO Toolangi 42.38 140 P **P 17 53 05.7 +2.9**
RAMN Ramite 42.42 325 *eP* **P 17 53 04.3 +0.8**
comp=Z,10nm,0.3s
JIRN Jiri 43.20 325 *eP* **P 17 53 10.4 +0.5**
comp=Z,43nm,0.4s
CAN Canberra 43.51 135 P **P 17 53 13.6 +1.7**
GUN Gumba 43.56 325 *eP* **P 17 53 13.4 +0.6**
comp=Z,42nm,0.4s
PKI Pulchoki 43.57 324 *eP* **P 17 53 12.8 -0.1**
PKIN Phulchoki 43.59 324 *eP* **P 17 53 12.8 -0.1**
DMN Daman 43.78 324 *eP* **P 17 53 14.4 0.0**
comp=Z,26nm,0.4s
KKN Kakani 43.81 325 *eP* **P 17 53 14.9 +0.3**
GKN Gorkha 44.35 324 *eP* **P 17 53 18.7 -0.1**
comp=Z,39nm,0.3s
KOLN Koldanda 44.78 323 *eP* **P 17 53 21.9 -0.4**
comp=Z,2.2nm,0.3s
DANN Dangsing 45.12 324 *eP* **P 17 53 24.9 -0.2**
comp=Z,24nm,0.3s
PYUN Piuthan 45.39 323 *eP* **P 17 53 26.9 -0.2**
comp=Z,11nm,0.4s
KSRS Korea Array 47.21 17 P **P 17 53 39.6 -1.2**
comp=Z,1.1nm,0.6s,baz=197,slow=8.0,SNR=8.5
comp=Z,1.1nm,0.6s
MJAR Matsushiro Arr 50.28 27 P **P 17 54 03.3 -1.0**
comp=Z,0.8nm,0.6s,baz=191,slow=6.3,SNR=5.3
comp=Z,0.8nm,0.6s
KOUNC Koumac, New Ca 51.90 110 P **P 17 54 17.1 +0.5**
USRK Ussuriysk Ar. 54.62 17 P **P 17 54 35.0 -1.0**
comp=Z,1.6nm,0.6s,baz=216,slow=3.0,SNR=5.4
comp=Z,1.6nm,0.6s
ULN Ulaanbaatar 55.46 356 P **P 17 54 40.8 -1.5**
ULN IAmb IAmb 17 54 43.5
comp=Z,4.9nm,1.0s
ULN Ulaanbaatar 55.46 356 P **P 17 54 42.9 +0.7**
SONM Songino Array 55.48 355 P **P 17 54 42.4 +0.1**
comp=Z,2.9nm,0.6s,baz=176,slow=9.0,SNR=21
SONM PcP **sP 17 55 39.9 -0.7**
comp=Z,1.1nm,0.7s,baz=158,slow=4.3,SNR=4.4
comp=Z,2.9nm,0.6s
NRN Naryn 59.06 329 P **P 17 55 06.6 -1.1**
NRN IAmb IAmb 17 55 09.1
comp=Z,2.2nm,0.6s
MK31 Makanchi Array 60.39 337 P **P 17 55 15.8 -0.5**
MK31 IAmb IAmb 17 55 16.8
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 60.39 337 P **P 17 55 16.0 -0.3**
comp=Z,4.4nm,0.3s,baz=150,slow=7.3,SNR=143
comp=Z,4.4nm,0.3s
MKAR Makanchi Array 60.39 337 P **P 17 55 15.6 -0.8**
AAK Ala-Archa 60.70 329 P **P 17 55 17.9 -0.9**
AAK IAmb IAmb 17 55 20.3
comp=Z,4.2nm,1.1s
KK31 Karatay Array 63.13 327 P **P 17 55 32.9 -1.9**
KKAR Karatay Array 63.13 327 P **P 17 55 33.2 -1.6**
KKAR Karatay Array 63.13 327 P **P 17 55 32.8 -2.0**
KKAR IAmb IAmb 17 55 36.7
comp=Z,1.7nm,0.8s
KURK Kurchatov 64.99 337 P **P 17 55 44.2 -2.4**
KURK IAmb IAmb 17 55 46.8
comp=Z,4.7nm,0.7s
ZAA0 Zalesovo Array 65.57 343 P **P 17 55 49.1 -1.3**
ZALV Zalesovo Beam 65.57 343 P **P 17 55 49.4 -1.0**
comp=Z,8.5nm,0.6s,baz=156,slow=4.8,SNR=43
comp=Z,8.5nm,0.6s
ZALV Zalesovo Beam 65.57 343 P **P 17 55 49.2 -1.2**
MXZ Matakaoa Point 66.45 128 P **P 17 55 57.4 +1.0**
GEYT Alibeck 67.75 316 P **P 17 56 03.8 -0.8**
comp=Z,2.1nm,0.7s,baz=150,slow=6.8,SNR=6.0
comp=Z,2.1nm,0.7s
PETK Petropavlovsk- 71.73 27 P **P 17 56 27.4 -1.1**
comp=Z,1.7nm,0.5s,baz=208,slow=5.9,SNR=9.1
comp=Z,1.7nm,0.5s
ABKAR Akbulak array 72.69 327 P **P 17 56 33.0 -1.3**
VNDA Vanda 74.41 170 P **P 17 56 45.0 +1.1**
comp=Z,1.2nm,0.3s,baz=318,slow=6.0,SNR=36
comp=Z,1.2nm,0.3s
VNDA Vanda 74.41 170 P **P 17 56 45.0 +1.1**
KBZ Khabaz 80.64 317 P **P 17 57 17.6 -1.3**
comp=Z,2.9nm,0.9s,baz=210,slow=5.1,SNR=4.5
comp=Z,2.9nm,0.9s
QSPA South Pole Qui 82.34 180 P **P 17 57 28.6 +0.9**
QSPA IAmb IAmb 17 57 29.4
comp=Z,5.6nm,0.6s
ADK Adak 84.54 36 P **P 17 57 38.1 -0.9**
BRTR Keskin Array B 86.14 311 P **P 17 57 46.7 -0.7**
comp=Z,1.9nm,0.8s,baz=145,slow=8.6,SNR=11
comp=Z,1.9nm,0.8s
TROLL Troll, Antarti 88.74 197 P **P 17 58 00.9 +1.7**
SNAA Sanae 90.42 197 P **P 17 58 08.6 +1.6**
AKASG Malin Array Be 91.44 321 P **P 17 58 09.8 -2.2**
comp=Z,0.5nm,0.4s,baz=84,slow=5.0,SNR=5.8
comp=Z,0.5nm,0.4s
VNA3 Neumayer Olymp 92.53 196 P **P 17 58 18.0 +1.3**
FINES FINESS Array B 94.81 331 P **P 17 58 26.6 -0.6**
comp=Z,1.4nm,0.8s,baz=152,slow=8.6,SNR=2.0
comp=Z,1.4nm,0.8s
TORD Torodi Ar. Bea 111.61 281 PKiKP **PKiKP 18 03 39.7 -0.7**
comp=Z,0.7nm,0.7s,baz=75,slow=1.5,SNR=4.6
ESDC Sonseca Array 114.93 310 PKiKP **PKiKP 18 03 45.4 -0.7**
comp=Z,0.2nm,0.4s,baz=34,slow=2.3,SNR=2.4
NVAR Mina Array Bea 125.23 48 PKP **PKPdf 18 04 07.0 +0.8**
comp=Z,0.2nm,0.3s,baz=264,slow=0.9,SNR=2.1
TXAR Lajitas Array 139.97 53 PKhKP PKPpre 18 04 24.9
comp=Z,0.3nm,0.7s,baz=234,slow=2.3,SNR=5.5
TXAR PKP **PKPdf 18 04 34.2 +0.2**
comp=Z,0.4nm,0.8s,baz=90,slow=0.4,SNR=4.7
CPUP Villa Florida 144.73 196 PKP **PKPab 18 04 42.8 +1.2**
comp=Z,9.1nm,0.6s,baz=163,slow=1.6,SNR=30
BDFB Brasilia 149.68 220 PKPbc **PKPbc 18 04 56.0 +0.2**
comp=Z,6.6nm,0.6s,baz=122,slow=4.0,SNR=10.0

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*IDC **16** 17:45:57.8±3.6, 10°.69N×71°.56W, h17km±23km, mb3.4/7, mbtmp3.8/13, ML3.6/6, MS3.1/4, Error ellipse: s-maj=21.4km s-min=17.0km az=88.0*
*NEIC **16** 17:45:58.7±2.3, 10°.77N±0°.06×71°.75W±0°.04, h35km±2km, mb4.3/1, Mwr4.3(CAR), Error ellipse: s-maj=10.8km s-min=3.1km az=330.0*
*FUNV **16** 17:45:59.2, 10°.67N×71°.72W, h11km, MW4.5*
*RSNC **16** 17:46:00.7±2.3, 10°.66N×71°.73W, h11km, ML4.2, Mw4.2*
*CAR **16** 17:46:59.4±0.0, 10°.66N×71°.73W, h11km, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

ISC 16 17:45:57.0±1.4, 10°.68N±0°.03×71°.68W±0°.02, h16km±9km, n93, σ2.41/139, mb3.4/7, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**1.05**	**234**	*eP*	**Pg**	**17 46 17.7**	**+0.3**
MCQV				*eS*	**Sb**	**17 46 32.3**	**+1.9**
DABV	**Dabajuro**	**1.05**	**77**	*eP*	**Pn**	**17 46 19.5**	**+2.3**
DABV				*eS*	**Sn**	**17 46 35.2**	**+3.6**
DABV	**Dabajuro**	**1.05**	**77**	*eP*	**Pn**	**17 46 19.2**	**+2.0**
DABV				*eS*	**Sn**	**17 46 34.3**	**+2.7**
URIC	**Uribia, Colomb**	**1.06**	**343**	*eP*	**Pn**	**17 46 18.7**	**+1.4**
URIC				*eS*	**Sn**	**17 46 33.3**	**+1.5**
URIC				*i*		17 46 35.5	
	comp=Z,4μm,0.2s						
CRJC	**Cerrejon, Guaj**	**1.23**	**286**	*eP*	**Pn**	**17 46 20.6**	**+0.9**
CRJC				*eS*	**Sb**	**17 46 37.0**	**+1.3**
CRJC				*i*		17 46 39.5	
	comp=Z,5μm,0.2s						
CURV	**Curarigua**	**1.81**	**111**	*eP*	**Pg**	**17 46 32.1**	**+0.2**
CURV				*eS*	**Sb**	**17 46 54.4**	**+1.8**
SIQV	**Siquisique**	**1.84**	**91**	*eP*	**Pb**	**17 46 30.4**	**0.0**
SIQV				*eS*	**Sb**	**17 46 53.6**	**+0.4**
SDV	**Santo Domingo**	**2.06**	**150**	Pn	**Pn**	**17 46 32.2**	**+1.0**
	comp=Z,56nm,0.3s,baz=332,slow=6.7,SNR=70						
SDV				Pg	**Pb**	**17 46 35.0**	**+0.8**
	comp=Z,73nm,0.3s,baz=331,slow=3.3,SNR=56						
SDV				Lg	Lg	17 47 01.4	
	comp=Z,732nm,0.3s,baz=260,slow=23,SNR=41						
SDV				LR	LR	17 47 32.1	
	comp=Z,233nm,21.2s,baz=343,slow=47						
	comp=Z,183nm,0.4s						
LL1C	**La Loma 1 Cana**	**2.17**	**239**	*eP*	**Pn**	**17 46 33.3**	**+0.8**
LL1C				*eS*	**Sb**	**17 47 03.2**	**+0.6**
LL1C				*i*		17 47 06.5	
	comp=Z,12μm,0.6s						
SOCV	**Socops**	**2.51**	**161**	*eP*	**Pn**	**17 46 38.7**	**+1.4**
SOCV				*eS*	**Sb**	**17 47 14.6**	**+2.0**
SOCV				*i*		17 47 18.1	
	comp=Z,18μm,0.3s						
SOCV	**Socops**	**2.51**	**161**	*eP*	**Pn**	**17 46 38.7**	**+1.4**
SOCV				*eS*	**Sn**	**17 47 08.7**	**+1.0**
ARGC	**Ariguani, Magd**	**2.65**	**252**	*eP*	**Pn**	**17 46 40.9**	**+1.6**
ARGC				*eS*	**Sb**	**17 47 19.2**	**+2.5**
ARGC				*i*		17 47 25.4	
	comp=Z,682nm,0.4s						
JACV	**Jacura**	**2.83**	**81**	*eP*	**Pn**	**17 46 44.4**	**+2.7**
JACV				*eS*	**Sn**	**17 47 17.3**	**+1.8**
CAPV	**Capacho**	**2.86**	**193**	*eP*	**Pn**	**17 46 42.8**	**+0.5**
CAPV				*eS*	**Sn**	**17 47 17.4**	**+0.8**
OCAC	**Ocana**	**2.91**	**214**	*eP*	**Pn**	**17 46 44.0**	**+1.1**
HATO	**Hato, Curacao**	**3.06**	**60**	Pn	**Pn**	**17 46 46.6**	**+1.8**
MAPV	**Macapo**	**3.28**	**105**	*eP*	**Pn**	**17 46 50.5**	**+2.6**
MAPV				*eS*	**Sn**	**17 47 27.7**	**+1.0**
PAMC	**Pamplona, Colo**	**3.47**	**197**	*eP*	**Pn**	**17 46 51.6**	**+0.7**
PAMC				*eS*	**Sn**	**17 47 33.3**	**+1.4**
PAMC				*i*		17 47 49.8	
	comp=Z,593nm,0.3s						
SJCC	**San Jacinto, C**	**3.53**	**258**	*eP*	**Pn**	**17 46 53.9**	**+2.5**
SJCC				*eS*	**Sn**	**17 47 35.2**	**+2.3**
SJCC				*i*		17 47 54.5	
	comp=Z,285nm,0.6s						
TURV	**Turiamo**	**3.78**	**93**	*eP*	**Pn**	**17 46 56.0**	**+1.2**
TURV				*eS*	**Sn**	**17 47 39.0**	**0.0**
BAUV	**El Baul**	**3.98**	**115**	Pn	**Pn**	**17 46 57.6**	**+0.2**
BAUV	**El Baul**	**3.98**	**115**	*eP*	**Pn**	**17 46 59.4**	**+2.0**
BAUV				*eS*	**Sn**	**17 47 44.3**	**+0.4**
BENV	**Beln**	**4.08**	**100**	*eP*	**Pn**	**17 47 01.6**	**+2.7**
BENV				*eS*	**Sn**	**17 47 45.7**	**-0.7**
BRRC	**Barranca, Sant**	**4.08**	**210**	*eP*	**Pn**	**17 47 00.3**	**+1.5**
BRRC				*eS*	**Sb**	**17 47 59.8**	**+2.2**
BRRC				*i*		17 48 16.0	
	comp=Z,233nm,0.7s						
TAMC	**Tame, Arauca**	**4.22**	**182**	*eP*	**Pn**	**17 47 01.3**	**+0.5**
TAMC				*eS*	**Sg**	**17 48 10.9**	**-1.7**
TAMC				*i*		17 48 27.0	
	comp=Z,341nm,0.5s						
BARC	**Barichara**	**4.32**	**200**	*eP*	**Pn**	**17 47 04.0**	**+1.6**
BARC				*eS*	**Sb**	**17 48 06.0**	**+1.1**
BARC				*i*		17 48 22.1	
	comp=Z,749nm,0.7s						
TACV	**Tcata**	**4.61**	**96**	*eP*	**Pn**	**17 47 08.3**	**+2.2**
TACV				*eS*	**Sn**	**17 47 59.0**	**-0.5**
CARV	**Caracas**	**4.67**	**92**	*eP*	**Pn**	**17 47 09.2**	**+2.0**
CARV				*eS*	**Sn**	**17 48 00.9**	**-0.3**
FUNV	**FUNVISIS**	**4.79**	**92**	*eP*	**Pn**	**17 47 10.1**	**+1.3**
FUNV				*eS*	**Sn**	**17 48 03.6**	**-0.5**
PTBC	**PUERTO BERRIO,**	**4.94**	**214**	*eP*	**Pn**	**17 47 10.6**	**-0.2**
PTBC				*eS*	**Sn**	**17 48 06.4**	**-1.4**
PTBC				*i*		17 48 29.1	
	comp=Z,160nm,0.5s						
RUSC	**La Rusia**	**4.95**	**196**	*eP*	**Pn**	**17 47 12.7**	**+1.4**
RUSC				*eS*	**Sb**	**17 48 18.9**	**-4.5**
RUSC				*i*		17 48 51.0	
	comp=Z,193nm,0.7s						
LCBC	**Los crdobas,**	**4.96**	**249**	*eP*	**Pn**	**17 47 12.4**	**+1.4**
LCBC				*eS*	**Sn**	**17 48 10.4**	**+2.2**
LCBC				*i*		17 48 25.3	
	comp=Z,111nm,0.4s						
SPBC	**San Pablo de B**	**5.53**	**206**	*eP*	**Pn**	**17 47 19.6**	**+0.8**
SPBC				*eS*	**Sn**	**17 48 21.6**	**-0.6**
SPBC				*i*		17 48 53.3	
	comp=Z,119nm,0.4s						
DBBC	**Dabeiba**	**5.77**	**231**	*eP*	**Pn**	**17 47 24.8**	**+2.6**
DBBC				*eS*	**Sn**	**17 48 26.9**	**-1.2**
HELC	**Santa Helena**	**5.86**	**221**	*eP*	**Pn**	**17 47 26.7**	**+3.0**
HELC				*eS*	**Sn**	**17 48 35.4**	**+4.6**
HELC				*i*		17 49 13.6	
	comp=Z,102nm,0.5s						
CACV	**CAICARA DEL OR**	**5.94**	**121**	*eP*	Pn	17 47 31.5	+7.1
NORC	**Norcasia**	**5.98**	**212**	*eP*	**Pn**	**17 47 25.4**	**+0.4**
NORC				*eS*	**Sn**	**17 48 33.0**	**-0.4**
NORC				*i*		17 48 50.6	
	comp=Z,95nm,0.5s						
ROSC	**El Rosal**	**6.36**	**204**	Pn	**Pn**	**17 47 34.0**	**+3.4**
	comp=Z,10nm,0.3s,baz=186,slow=19,SNR=13						
ROSC				Sn	**Sn**	**17 48 47.0**	**+3.7**
	comp=Z,14nm,0.3s,baz=35,slow=14,SNR=4.5						
	comp=Z,40nm,0.3s						
ROSC	**El Rosal**	**6.36**	**204**	Pn	**Pn**	**17 47 33.0**	**+2.4**
ROSC	**El Rosal**	**6.36**	**204**	*eP*	**Pn**	**17 47 33.3**	**+2.7**
ROSC				*eS*	**Sn**	**17 48 47.1**	**+3.8**
ROSC				*i*		17 49 08.6	
	comp=Z,87nm,0.5s						
CBOC	**Ciudad Bolivar**	**6.42**	**222**	*eP*	**Pn**	**17 47 30.6**	**-0.6**
CBOC				*eS*	**Sb**	**17 49 01.6**	**-3.7**
CBOC				*i*		17 49 32.1	
	comp=Z,44nm,0.6s						
PTGC	**Puerto Gaitan,**	**6.45**	**184**	*eP*	**Pn**	**17 47 30.2**	**-1.3**
PTGC				*eS*	**Sn**	**17 48 39.7**	**-5.2**
PTGC				*i*		17 48 59.8	
	comp=Z,110nm,0.3s						
GUY2C	**Guyana, Caldas**	**6.53**	**214**	*eP*	**Pn**	**17 47 35.1**	**+2.1**
GUY2C				*eS*	**Sn**	**17 48 51.2**	**+3.7**
GUY2C				*i*		17 49 38.7	
	comp=Z,122nm,0.6s						
PAYV	**Puerto Ayacuch**	**6.57**	**142**	*eP*	**Pn**	**17 47 32.9**	**-0.2**
PAYV				*eS*	**Sn**	**17 48 44.2**	**-3.6**
VILC	**Villavicencio,**	**6.82**	**197**	*eP*	**Pn**	**17 47 37.0**	**+0.3**
VILC				*eS*	**Sn**	**17 48 52.4**	**-1.8**
VILC				*i*		17 49 12.0	
	comp=Z,134nm,0.4s						
PCRV	**Puerto La Cruz**	**6.95**	**93**	Pn	**Pn**	**17 47 38.4**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=303,slow=2.8,SNR=50						
	comp=Z,11nm,0.3s						
PCRV	**Puerto La Cruz**	**6.95**	**93**	*eP*	**Pn**	**17 47 40.1**	**+1.8**
ANIL	**Santa Ana**	**7.17**	**211**	*eP*	**Pn**	**17 47 43.8**	**+2.2**
ANIL				*eS*	**Sn**	**17 49 06.8**	**+3.8**
ANIL				*i*		17 49 26.1	
	comp=Z,114nm,0.4s						
PRGV	**PARIAGUAN**	**7.19**	**105**	*eP*	**Pn**	**17 47 42.2**	**+0.6**
PLMC	**San Jos del P**	**7.33**	**219**	*eP*	**Pn**	**17 47 45.8**	**+2.2**
PLMC				*eS*	**Sn**	**17 49 11.8**	**+5.2**
PLMC				*i*		17 50 03.2	
	comp=Z,36nm,0.6s						
PRAC	**Prado**	**7.61**	**205**	*eP*	**Pn**	**17 47 48.3**	**+0.8**
PRAC				*eS*	**Sn**	**17 49 11.9**	**-1.7**
PRAC				*i*		17 50 25.3	
	comp=Z,48nm,0.7s						
COAV	**Cumanacoa**	**7.74**	**93**	*eP*	**Pn**	**17 47 50.9**	**+1.5**
BANI	**BANI**	**7.78**	**9**	Pn	**Pn**	**17 47 46.5**	**-3.2**
YOTC	**Yotoco, Valle**	**8.10**	**215**	*eP*	**Pn**	**17 47 56.5**	**+2.2**
YOTC				*eS*	**Sn**	**17 49 30.3**	**+4.6**
YOTC				*i*		17 49 53.5	
	comp=Z,8.8nm,0.6s						
GUVC	**San Jose del G**	**8.13**	**187**	*eP*	**Pn**	**17 47 52.9**	**-1.7**
GUVC				*eS*	**Sn**	**17 49 20.1**	**-6.2**
GUVC				*i*		17 49 27.1	
	comp=Z,89nm,0.2s						
BCIP	**Isla Barro Col**	**8.18**	**260**	Pn	**Pn**	**17 47 53.2**	**-2.0**
BCIP	**Isla Barro Col**	**8.18**	**260**	*eP*	**Pn**	**17 47 56.9**	**+1.7**
BCIP				*eS*	**Sn**	**17 49 23.1**	**-4.2**
BCIP				*i*		17 49 39.3	
	comp=Z,13nm,0.5s						
SDDR	**Presa de Saban**	**8.27**	**3**	Pn	**Pn**	**17 47 53.1**	**-3.3**
SDDR	**Presa de Saban**	**8.27**	**3**	*eP*	**Pn**	**17 48 00.5**	**+4.1**
SDDR				*eS*	**Sn**	**17 49 30.9**	**+1.3**
SDDR				*i*		17 49 51.6	
	comp=Z,20nm,0.6s						
DR12	**Loma Pena Alta**	**8.36**	**15**	Pn	Pn	17 47 53.3	-4.5
CRPR	**Cabo Rojo, PR**	**8.53**	**31**	Pn	**Pn**	**17 47 59.9**	**0.0**
MLPR	**Magueyes Islan**	**8.53**	**31**	Pn	**Pn**	**17 47 58.6**	**-1.3**
BETC	**Betania**	**8.78**	**205**	*eP*	Pn	17 48 10.0	+6.5
BETC				*eS*	**Sn**	**17 49 49.5**	**+7.3**
BETC				*i*		17 50 00.9	
	comp=Z,22nm,0.5s						
CELP	**Cerrillos**	**8.86**	**33**	Pn	**Pn**	**17 48 03.4**	**-1.2**
AOPR	**Arecibo Observ**	**8.99**	**31**	Pn	**Pn**	**17 48 03.0**	**-3.4**
SJG	**San Juan**	**9.13**	**35**	Pn	**Pn**	**17 48 06.9**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=218,slow=12,SNR=14						
SJG				Sn	**Sn**	**17 49 46.4**	**-4.3**
	comp=Z,2.0nm,0.3s,baz=36,slow=20,SNR=2.4						
	comp=Z,23nm,0.7s						
SJG	**San Juan**	**9.13**	**35**		**Pn**	**17 48 06.6**	**-1.6**
GARC	**Garzon, Huila**	**9.25**	**204**	*eP*	**Pn**	**17 48 10.6**	**+0.5**
GARC				*eS*	**Sn**	**17 49 50.3**	**-3.7**
GARC				*i*		17 50 02.8	
	comp=Z,18nm,0.3s						
GCPR	**Guaynabo City**	**9.32**	**35**		**Pn**	**17 48 09.8**	**-1.1**
MTDJ	**Mount Denham**	**9.40**	**324**	Pn	**Pn**	**17 48 12.0**	**-0.2**
MTDJ	**Mount Denham**	**9.40**	**324**	*eP*	**Pn**	**17 48 14.5**	**+2.4**
MTDJ				*eS*	**Sn**	**17 49 53.4**	**-4.3**
MTDJ				*i*		17 50 04.8	
	comp=Z,24nm,0.7s						
CBYP	**Canovanas**	**9.42**	**36**		Pn	17 48 08.4	-3.9
POPC	**Popayan, Colom**	**9.48**	**212**	*eP*	**Pn**	**17 48 14.0**	**+0.7**
POPC				*eS*	**Sn**	**17 50 08.4**	**+8.5**
GTBY	**Guantanamo Bay**	**9.77**	**341**	Pn	**Pn**	**17 48 19.5**	**+2.4**
FLOC	**Florencia**	**9.86**	**204**	*eP*	**Pn**	**17 48 17.2**	**-1.2**
FLOC				*eS*	**Sn**	**17 50 05.0**	**-3.8**
FLOC				*i*		17 50 19.6	
	comp=Z,10nm,0.6s						
STVI	**Saint Thomas**	**10.03**	**40**	Pn	**Pn**	**17 48 19.6**	**-1.0**
H05S1	**Guadeloupe/Mar**	**11.22**	**69**	T	T	17 56 37.7	
SNR=9.5							
SRBA	**San Rafael, Bu**	**11.60**	**264**	Pn	**Pn**	**17 48 40.2**	**-2.0**
BOAB	**BOACO BROADBAN**	**18.82**	**279**	Pn	**Pn**	**17 49 10.6**	**-1.9**
ATAH	**Atahualpa**	**18.92**	**201**	P	**Pn**	**17 50 20.5**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=343,slow=8.4,SNR=2.0						
ATAH				LR	LR	17 58 21.1	
	comp=Z,92nm,21.4s,baz=356,slow=39						
	comp=Z,6.8nm,1.1s						
MDP	**Montagnes des**	**19.65**	**105**	P	**P**	**17 50 26.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=4.1,slow=24,SNR=1.4						
	comp=Z,2.7nm,0.7s						
NNA	**Nana**	**23.09**	**193**	LR	LR	18 01 48.8	
	comp=Z,82nm,19.3s,baz=14,slow=41						
LPAZ	**La Paz**	**27.02**	**172**	P	**P**	**17 51 38.2**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=57,slow=14,SNR=2.4						
	comp=Z,0.6nm,0.8s						
SIV	**San Ignacio**	**28.50**	**158**	P	**P**	**17 51 51.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=12,slow=14,SNR=2.2						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**35.15**	**307**	P	**P**	**17 52 51.9**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=110,slow=7.2,SNR=3.7						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**45.91**	**321**	P	**P**	**17 54 19.6**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=125,slow=7.8,SNR=2.2						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.61**	**80**	P	**P**	**17 57 18.1**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=295,slow=5.0,SNR=2.6						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**74.11**	**334**	P	**P**	**17 57 32.8**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=125,slow=7.8,SNR=1.9						
	comp=Z,0.3nm,0.8s						
NOA	**NORSAR Array B**	**77.29**	**30**	LR	LR	18 31 12.1	
	comp=Z,5.6nm,19.2s,baz=55,slow=35						
GERES	**GERESS Array B**	**79.02**	**42**	P	**P**	**17 58 01.8**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=251,slow=8.3,SNR=4.7						
	comp=Z,0.3nm,0.6s						
PZH	**PanZhiHua**	**142.49**	**10**	PKP	**PKPdf**	**18 05 28.3**	**-2.0**
ASAR	**Alice Springs**	**152.42**	**239**	PKPbc	**PKPbc**	**18 05 52.9**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=118,slow=3.0,SNR=5.6						
WRA	**Warramunga Arr**	**153.30**	**247**	PKPbc	**PKiKP**	**18 05 57.6**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=99,slow=2.3,SNR=1.7						

TAP 16 18:01:25.5, 24°.17N×121°.05E, h10km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDCB	**Techi**	**0.13**	**52**	P	Pb	18 01 29.6	-0.6
	baz=52						
TDCB				S	Sg	18 01 31.7	+0.7
	baz=52						
WHP	**Taichung City**	**0.14**	**319**	P	Pg	18 01 29.5	+0.7
	baz=319						
WHP				*eS*	Sg	18 01 31.9	+0.8
	baz=319						
TWT	**Tachien**	**0.14**	**56**	P	Pg	18 01 29.7	+0.7
	baz=54						
TWT				S	Sg	18 01 31.8	+0.5
	baz=54						
CHGB	**Renai**	**0.16**	**133**	*eP*	Pb	18 01 30.6	-0.2
	baz=133						
CHGB				S	Sg	18 01 33.2	+1.3
	baz=133						
WCS	**Beigang Elemen**	**0.17**	**227**	*eP*	Pg	18 01 29.0	-0.2
	baz=226						
WCS				*eS*	Sg	18 01 31.5	-0.2
	baz=226						
DPDB	**Guoxing**	**0.17**	**218**	P	Pb	18 01 30.2	-0.7
	baz=218						
DPDB				*eS*	Sg	18 01 32.8	+0.8
	baz=218						
WPL	**Puli Township**	**0.18**	**207**	P	Pb	18 01 30.2	-0.7
	baz=209						
WUSB	**Renai**	**0.19**	**160**	*eP*	Pb	18 01 30.9	-0.3
	baz=159						
WUSB				*eS*	Sg	18 01 33.6	+1.1
	baz=159						
**FUS

baz=197
FUSB Fushanzhiwuyua 0.77 40 *e*P Pb 18 01 41.3 +0.3
baz=40

TAP 16 18:01:30.1, 23°.06N×121°.56E, h15km±1km, ML1.6, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.25**	**250**	⇓*i*P	Pb	18 01 36.5	+0.2
	baz=249						
EDH				*i* S	Sb	18 01 40.6	+0.1
	baz=249						
ECBN	**Changbin**	**0.27**	**339**	S	Sg	18 01 40.5	+0.5
	baz=338						
ECS	**Chishang**	**0.31**	**276**	*e*P	Pb	18 01 38.0	+0.6
	baz=276						
ECS				*e*S	Sb	18 01 43.5	+1.1
	baz=276						
EYUL	**Yuli**	**0.36**	**322**	*e*P	Pb	18 01 38.8	+0.6
	baz=322						
EYUL				*e*S	Sb	18 01 44.3	+0.6
	baz=322						
LDUT	**Ludao**	**0.39**	**192**	P	Pb	18 01 38.5	-0.3
	baz=192						
YULB	**Yu-li**	**0.41**	**324**	*e*P	Pb	18 01 39.2	+0.2
	baz=324						
YULB				*e*S	Sb	18 01 45.6	+0.5
	baz=324						
LONT	**Longtian**	**0.42**	**249**	*e*P	Pb	18 01 39.5	+0.2
	baz=248						
LONT				*e*S	Sb	18 01 46.1	+0.7
	baz=248						
HGSD	**Ruisui**	**0.45**	**344**	*e*P	Pb	18 01 40.4	+0.8
	baz=152						
HGSD	**Ruisui**	**0.45**	**344**	*e*P	Pb	18 01 40.4	+0.8
	baz=343						
EHY	**Hungye**	**0.49**	**334**	*e*P	Pb	18 01 40.5	0.0
	baz=158						
EHY	**Hungye**	**0.49**	**334**	*e*P	Pb	18 01 40.8	+0.3
	baz=334						
EHY				*e*S	Sb	18 01 47.9	+0.4
	baz=334						
TWG	**Pinlang**	**0.51**	**242**	*e*P	Pb	18 01 41.7	+1.0
	baz=241						
TWG				*e*S	Sb	18 01 47.6	-0.2
	baz=241						
ELDTW	**Lidau**	**0.51**	**285**	*e*P	Pg	18 01 40.3	0.0
	baz=284						
EGFH	**Guangfu**	**0.62**	**349**	*e*P	Pb	18 01 42.9	+0.3
	baz=348						
STYT	**Tauyuan**	**0.74**	**278**	*e*P	Pg	18 01 44.5	-0.1
	baz=277						
ALS	**Alishan**	**0.82**	**303**	*e*P	Pb	18 01 46.6	+0.3
	baz=303						

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*PDG **16** 18:10:43.2±0.5, 39°.77N×20°.65E, h16km±1km, ML3.4/12, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*THE **16** 18:10:43.6, 39°.74N×20°.71E, h3km±2km, ML3.3/11, Error ellipse: s-maj=2.2km s-min=0.6km az=307.0*
*ATH **16** 18:10:43.3, 39°.77N×20°.69E, h13km±2km, ML3.2/9, Error ellipse: s-maj=2.4km s-min=1.1km az=302.0*
*BEO **16** 18:10:43.4±0.5, 39°.61N×20°.79E, h15km±3km, ML3.1/10*
*IDC **16** 18:10:45.3±2.2, 39°.72N×20°.69E, h39km±24km, mb3.4/6, mbtmp3.6/11, ML3.4/5, Error ellipse: s-maj=23.2km s-min=17.7km az=71.0*
ISC 16 18:10:43.0±0.8, 39°.73N±0°.02×20°.70E±0°.02, h15km±5km, n140, σ1s21/188, mb3.6/5, 19C-14D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**121**	P	Pg	18 10 46.6	-0.1
JAN				S	Sg	18 10 49.2	0.0
	22μm,0.3s						
JAN	**Janina**	**0.14**	**121**	P	Pg	18 10 46.6	-0.1
JAN				S	Sg	18 10 49.5	+0.3
JAN				AML	AML	18 10 50.6	
	comp=N,31169μm,0.3s						
JAN				AML	AML	18 10 50.8	
	comp=E,56833μm,0.3s						
IGT	**Igoumenitsa**	**0.34**	**236**	P	Pg	18 10 50.4	+0.3
IGT				S	Sb	18 10 56.6	+0.5
	comp=E,8μm,0.5s						
IGT	**Igoumenitsa**	**0.34**	**236**	*e*Pg	Pg	18 10 50.6	+0.5
IGT				*e*Sg	Sb	18 10 57.5	+1.4
IGT	**Igoumenitsa**	**0.34**	**236**	P	Pg	18 10 50.6	+0.5
IGT				S	Sb	18 10 56.9	+0.8
IGT				AML	AML	18 10 58.7	
	comp=N,12783μm,0.4s						
IGT				AML	AML	18 10 59.2	
	comp=E,17976μm,0.5s						
LSK	**Leskovik**	**0.43**	**350**	P	Pg	18 10 51.7	0.0
LSK				S	Sb	18 10 58.9	+0.1
	comp=E,8μm,0.3s						
KPRO	**Kipourio**	**0.56**	**66**	P	Pg	18 10 54.0	-0.1
KPRO				S	Sb	18 11 02.7	+0.2
	comp=E,6μm,0.6s						
SRN	**Sarande**	**0.56**	**286**	P	Pg	18 10 54.0	-0.1
SRN				S	Sg	18 11 01.5	0.0
	comp=E,3μm,0.6s						
PENT	**Pentalofos**	**0.58**	**36**	P	Pg	18 10 54.4	-0.1
PENT	**Pentalofos**	**0.58**	**36**	P	Pg	18 10 54.3	-0.1
KASA	**Kassiopi**	**0.59**	**272**	P	Pg	18 10 54.5	-0.1
KASA				AML	AML	18 11 07.1	
	comp=E,4488μm,0.3s						
KASA				AML	AML	18 11 07.8	
	comp=N,6368μm,0.4s						
KEK	**Kerkira**	**0.69**	**269**	P	Pg	18 10 56.1	-0.5
KEK				S	Sb	18 11 07.0	+0.7
	comp=N,2μm,0.3s						
KEK	**Kerkira**	**0.69**	**269**	P	Pg	18 10 56.2	-0.5
KEK				AML	AML	18 11 11.7	
	comp=E,3345μm,0.2s						
KEK				AML	AML	18 11 12.3	
	comp=N,3580μm,0.2s						
NEST	**Nestorio**	**0.74**	**21**	P	Pg	18 10 57.2	-0.2
NEST				S	Sb	18 11 08.8	+1.2
	comp=N,1μm,0.6s						
NEST	**Nestorio**	**0.74**	**21**	P	Pg	18 10 57.2	-0.2
KBN	**Korca**	**0.90**	**4**	P	Pb	18 10 59.8	-0.6
TSLK	**Tsoukalades, L**	**0.90**	**182**	P	Pb	18 11 00.6	+0.3
TSLK				S	Sn	18 11 14.4	+0.5
	comp=N,2μm,0.9s						
TSLK	**Tsoukalades, L**	**0.90**	**182**	P	Pb	18 11 00.7	+0.4
LKD2	**Lefkada island**	**0.94**	**182**	P	Pb	18 11 01.1	+0.2
LKD2				S	Sn	18 11 15.6	+0.8
	comp=N,2μm,0.4s						
LKD2	**Lefkada island**	**0.94**	**182**	P	Pb	18 11 01.2	+0.2
LKD2				AML	AML	18 11 18.4	
	comp=E,3355μm,0.5s						
LKD2				AML	AML	18 11 19.4	
	comp=N,4274μm,0.3s						
KZN	**Kozani**	**1.01**	**54**	P	Pb	18 11 01.6	-0.6
KZN	**Kozani**	**1.01**	**54**	P	Pb	18 11 01.6	-0.6
KZN				AML	AML	18 11 19.4	
	comp=N,2280μm,0.6s						
KZN				AML	AML	18 11 24.9	
	comp=E,2693μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.01**	**180**	P	Pb	18 11 02.4	+0.2
NYDR				S	Sn	18 11 18.4	+1.8
	comp=E,2μm,0.5s						
THL	**Klokotos Trika**	**1.03**	**99**	P	Pb	18 11 01.8	-0.7
THL				S	Sg	18 11 16.8	+0.5
	comp=E,1μm,0.6s						
THL	**Klokotos Trika**	**1.03**	**99**	P	Pb	18 11 01.8	-0.7
THL				S	Sg	18 11 16.9	+0.5
THL				AML	AML	18 11 22.2	
	comp=E,2259μm,0.5s						
THL				AML	AML	18 11 23.0	
	comp=N,1799μm,0.6s						
DRAG	**Dragano-Lefkad**	**1.04**	**185**	P	Pb	18 11 02.7	-0.1
EVGI	**Lefkada island**	**1.10**	**182**	P	Pb	18 11 04.2	+0.4
EVGI	**Lefkada island**	**1.10**	**182**	P	Pb	18 11 04.0	+0.2
EVR	**Evrytania**	**1.18**	**133**	P	Pn	18 11 05.2	+0.1
EVR	**Evrytania**	**1.18**	**133**	P	Pn	18 11 05.3	+0.1
EVR				AML	AML	18 11 28.2	
	comp=E,1534μm,0.4s						
EVR				AML	AML	18 11 29.2	
	comp=N,1719μm,0.3s						
TYRN	**Tyrnavos**	**1.18**	**90**	P	Pn	18 11 04.4	-0.6
FSK	**Fiskardo**	**1.27**	**185**	P	Pg	18 11 07.9	+0.4
FSK	**Fiskardo**	**1.27**	**185**	P	Pg	18 11 07.8	+0.3
PVO	**Paravola**	**1.28**	**150**	P	Pg	18 11 08.0	+0.3
PVO	**Paravola**	**1.28**	**150**	P	Pg	18 11 08.0	+0.3
MAKR	**Makrakomi, Fth**	**1.32**	**122**	P	Pb	18 11 08.0	+0.5
MAKR	**Makrakomi, Fth**	**1.32**	**122**	P	Pb	18 11 08.0	+0.5
OHR	**Ohrid**	**1.39**	**3**	*e*Pg	Pg	18 11 10.1	+0.4
OHR				*e*Sg	Sg	18 11 31.1	+3.3
OHR	**Ohrid**	**1.39**	**3**	*i* Pn	Pg	18 11 10.1	+0.4
LIT	**Litokhoron**	**1.43**	**74**	P	Pn	18 11 08.7	+0.3
LIT	**Litokhoron**	**1.43**	**74**	P	Pn	18 11 08.8	+0.3
DMLN	**Damoulianata-K**	**1.51**	**190**	P	Pb	18 11 11.0	+0.3
VLS	**Valsamata**	**1.55**	**183**	P	Pn	18 11 10.7	+0.6
VLS	**Valsamata**	**1.55**	**183**	P	Pn	18 11 11.0	+1.0
VLS				AML	AML	18 11 37.6	
	comp=N,2228μm,0.2s						
VLS				AML	AML	18 11 39.7	
	comp=E,1680μm,0.5s						
EFP	**Efpalio**	**1.60**	**144**	P	Pg	18 11 13.7	-0.1
SERG	**Sergoula**	**1.68**	**141**	P	Pb	18 11 13.8	+0.1
SERG	**Sergoula**	**1.68**	**141**	P	Pb	18 11 14.8	+1.1
TIR	**Tirane**	**1.74**	**339**	⇓P	Pb	18 11 14.4	-0.3
TIR				⇓S	Sb	18 11 37.0	+0.6
TIR	**Tirane**	**1.74**	**339**	*e*Pn	Pb	18 11 15.0	+0.3
TIR				*e*Sn	Sg	18 11 39.0	-0.1
SCTE	**Santa Cesarea**	**1.75**	**282**	P	Pn	18 11 13.4	+0.6
RLS	**Riolos of Patr**	**1.77**	**160**	P	Pb	18 11 15.4	+0.2
LAKA	**Lakka**	**1.79**	**146**	P	Pb	18 11 16.2	+0.7
GRG	**Griva**	**1.79**	**46**	P	Pn	18 11 14.3	+0.9
GRG	**Griva**	**1.79**	**46**	P	Pb	18 11 14.9	-0.7
AXAR	**Agios Charalam**	**1.80**	**122**	P	Pb	18 11 16.6	+1.0
THE	**Thessaloniki**	**1.96**	**62**	P	Pb	18 11 17.4	-1.0
NEO	**Neokhori**	**2.00**	**101**	P	Pb	18 11 18.7	-0.4
NEO	**Neokhori**	**2.00**	**101**	P	Pb	18 11 19.0	0.0
LTHK	**Lithakia**	**2.02**	**177**	P	Pb	18 11 20.0	+0.7
HORT	**Hortiatis**	**2.04**	**64**	P	Pn	18 11 17.7	+0.8
HORT	**Hortiatis**	**2.04**	**64**	P	Pn	18 11 18.2	+1.4
VAY	**Valandovo**	**2.14**	**41**	*e*Pn	Pn	18 11 19.4	+1.2
VAY				*e*Sn	Sn	18 11 45.8	+1.3
VAY	**Valandovo**	**2.14**	**41**	*i* Pn	Pn	18 11 19.1	+0.9
STIP	**Stip**	**2.27**	**29**	*i* Pn	Pb	18 11 22.7	-1.0
SKO	**Skopje**	**2.31**	**14**	*e*Pn	Pb	18 11 23.0	-1.5
SKO				*e*Sn	Sb	18 11 52.3	-0.6
SKO	**Skopje**	**2.31**	**14**	*i* Pn	Pb	18 11 23.2	-1.3
ULC	**Ulcinj**	**2.49**	**334**	⇑*i*Pn	Pn	18 11 23.6	+0.5
ULC				*i* Sn	Sn	18 11 54.7	+1.4
SRS	**Serrai**	**2.61**	**57**	*e*Pn	Pn	18 11 25.3	+0.6
SRS				*e*Sn	Sn	18 11 56.4	+0.3
DRME	**Dracevica, Mon**	**2.71**	**335**	*e*Pn	Pn	18 11 27.2	+1.1
DRME	**Dracevica, Mon**	**2.71**	**335**	*e*Pn	Pn	18 11 26.7	+0.6
DRME				*i* Sn	Sn	18 12 00.1	+1.4
BUM	**Brajici-Budva**	**2.91**	**333**	⇑*i*Pn	Pn	18 11 29.4	+0.5
BUM				*i* Sn	Sn	18 12 04.9	+1.2
PDG	**Podgorica**	**2.91**	**338**	⇓P	Pn	18 11 31.1	+2.3
PDG				⇓S	Sn	18 12 06.7	+3.1
TTG	**Podgorica**	**2.91**	**338**	⇑*i*Pn	Pn	18 11 29.5	+0.7
TTG				*i* Sn	Sn	18 12 05.0	+1.4
PVY	**Plav**	**2.92**	**349**	*e*Pn	Pn	18 11 29.7	+0.6
PVY				*i* Sn	Sn	18 12 05.3	+1.3
TIP	**Timpagrande**	**3.10**	**261**	⇓P	Pn	18 11 32.0	+0.5
TIP				⇑S	Sn	18 12 09.1	+0.8
CEME	**Cevo**	**3.12**	**335**	*e*Pn	Pn	18 11 32.4	+0.6
CEME				*i* Sn	Sn	18 12 10.0	+1.1
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	Pn	18 11 32.3	-0.3
HCY	**Herceg Novi**	**3.19**	**329**	*e*Pn	Pn	18 11 32.8	+0.2
HCY				*i* Sn	Sn	18 12 11.6	+1.2
MATE	**Matera**	**3.20**	**288**	⇑P	Pn	18 11 34.4	+1.7
BARS	**Barje**	**3.20**	**15**	*e*Pn	Pn	18 11 34.8	+2.0
BARS				*e*Sn	Sn	18 12 13.1	+2.4
IVA	**Berane**	**3.20**	**349**	*e*Pn	Pn	18 11 33.5	+0.6
IVA				*i* Sn	Sn	18 12 12.1	+1.3
KOME	**Kolasin**	**3.25**	**344**	*e*Pn	Pn	18 11 34.1	+0.6
KOME				*i* Sn	Sn	18 12 13.1	+1.1
NKME	**Niksic**	**3.31**	**337**	*e*Pn	Pn	18 11 35.0	+0.6
NKME				*i* Sn	Sn	18 12 14.5	+1.0
VTS	**Vitosha**	**3.47**	**33**	⇑P	Pn	18 11 38.1	+1.5
VTS				⇑S	Sn	18 12 19.4	+1.9
SELS	**Selova**	**3.50**	**5**	*e*Pn	Pn	18 11 38.5	+1.5
BRY	**Bratogost**	**3.57**	**334**	*e*Pn	Pn	18 11 38.6	+0.6
BRY	**Bratogost**	**3.57**	**334**	⇑*i*Pn	Pn	18 11 38.4	+0.4
BRY				*i* Sn	Sn	18 12 20.7	+0.8
SJES	**Sjenica**	**3.58**	**351**	*e*Pn	Pn	18 11 40.6	+2.6
SJES				*e*Sn	Sn	18 12 22.5	+2.4
UPM	**Unac-Piva**	**3.73**	**339**	*e*Pn	Pn	18 11 39.8	-0.4
UPM	**Unac-Piva**	**3.73**	**339**	⇑*i*Pn	Pn	18 11 40.7	+0.5
UPM				*i* Sn	Sn	18 12 24.7	+0.8
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn	Pn	18 11 43.6	+2.1
STON	**Ston**	**3.87**	**325**	*e*Pn	Pn	18 11 40.3	-1.7
BOVS	**Bovan**	**3.98**	**11**	⇓P	Pn	18 11 45.1	+1.6
BOVS				⇑S	Sn	18 12 31.7	+1.9
BOVS	**Bovan**	**3.98**	**11**	*e*Pn	Pn	18 11 44.6	+1.1
BOVS				*e*Sn	Sn	18 12 31.6	+1.8
RUDO	**Rudo**	**4.01**	**346**	*e*Pn	Pn	18 11 41.4	-2.6
GRUS	**Gruza**	**4.16**	**0**	*e*Pn	Pn	18 11 47.7	+1.7
GRUS				*e*Sn	Sn	18 12 36.0	+1.7
BLKB	**Belogradchik**	**4.17**	**20**	⇑P	Pn	18 11 48.0	+1.9
BLKB				⇓S	Sn	18 12 36.2	+1.6
ZAGS	**Zajecar**	**4.24**	**15**	*e*Pn	Pn	18 11 48.5	+1.4
ZAGS				*e*Sn	Sn	18 12 37.7	+1.4
BBLS	**Lazići**	**4.25**	**347**	*e*Pn	Pn	18 11 48.4	+1.1
BBLS	**Lazići**	**4.25**	**347**	*e*Pn	Pn	18 11 48.8	+1.5
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	Pn	18 11 50.5	+1.2
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	Pn	18 11 50.7	+1.3
DIVS				*e*Sn	Sn	18 12 40.9	+0.5
APE	**Apeiranthos**	**4.63**	**123**	⇓P	Pn	18 11 50.7	-1.7
VAE	**Valguarnera**	**5.41**	**247**	Sn	Sn	18 13 02.8	-2.5
	comp=E,1.3nm,0.3s,baz=218,slow=23,SNR=1.5						
FRGS	**Fruska Gora**	**5.47**	**353**	⇑P	Pn	18 12 03.7	-0.3
FRGS	**Fruska Gora**	**5.47**	**353**	*e*Pn	Pn	18 12 03.7	-0.3
FRGS	**Fruska Gora**	**5.47**	**353**	*e*Pn	Pn	18 12 04.6	+0.6
IDI	**Anoyia**	**5.54**	**142**	⇑P	Pn	18 12 04.7	-0.4
IDI				⇑S	Sn	18 13 06.6	-1.9
IDI	**Anoyia**	**5.54**	**142**	Pn	Pn	18 12 04.6	-0.4
	comp=E,1.1nm,0.3s,baz=313,slow=8.9,SNR=13						
IDI				Sn	Sn	18 13 04.5	-4.0
	comp=E,1.2nm,0.3s,baz=269,slow=16,SNR=2.0						
	comp=E,1.8nm,0.3s						
BLY	**Banja Luka**	**5.66**	**334**	*e*Pn	Pn	18 12 10.3	+3.8
GZR	**Gura Zlata**	**5.87**	**14**	⇓P	Pn	18 12 10.4	+0.9
GZR				⇓S	Sn	18 13 18.7	+2.1
BZS	**Buzias**	**5.93**	**6**	⇑P	Pn	18 12 11.9	+1.7
BZS				⇑S	Sn	18 13 18.8	+1.0
A051A	**Mrakovica**	**5.98**	**333**	*e*Pn	Pn	18 12 11.4	+0.3
ARR	**Arges**	**6.34**	**26**	⇑P	Pn	18 12 17.4	+1.4
VOIR		**6.55**	**28**	⇓P	Pn	18 12 20.0	+1.2
SIRR	**Siria**	**6.58**	**6**	⇑P	Pn	18 12 20.7	+1.5
MORH	**Mrgy, Hungar**	**6.66**	**348**	⇓P	Pn	18 12 21.8	+1.5
MLR	**Muntele Rosu**	**6.94**	**32**	⇑P	Pn	18 12 25.8	+1.6
MLR	**Muntele Rosu**	**6.94**	**32**	Pn	Pn	18 12 26.8	+2.5
	comp=E,0.3nm,0.3s,baz=126,slow=12,SNR=3.0						
	comp=E,1.3nm,0.4s						
BOJS	**Bojanci**	**7.03**	**327**	*e*Pn	Pn	18 12 24.0	-1.4
CRES	**Cresnjev**	**7.21**	**329**	*e*Pn	Pn	18 12 27.0	-0.9
PLOR	**Plostina**	**7.52**	**34**	⇓P	Pn	18 12 33.7	+1.5
VRI	**Vrincioaia**	**7.57**	**34**	⇓P	Pn	18 12 32.9	+0.1
CEY	**Cerknica**	**7.58**	**325**	*e*Pn	Pn	18 12 32.9	0.0
SKDS	**Skadanscina**	**7.62**	**322**	*e*Pn	Pn	18 12 32.3	-1.2
SOKA	**Soboth**	**8.09**	**331**	*e*Pn	Pn	18 12 40.2	+0.2
	comp=E,1.0nm,0.3s						
OBKA	**Obir**	**8.13**	**328**	*e*Pn	Pn	18 12 41.1	+0.5
OBKA	**Obir**	**8.13**	**328**	*i* Pn	Pn	18 12 41.4	+0.8
	comp=E,0.3nm,0.1s						
KBA	**Koelnbreinsper**	**9.09**	**326**	*e*Pn	Pn	18 12 54.7	+0.9
	comp=E,0.5nm,0.3s						
MOA	**Molln**	**9.36**	**332**	*e*Pn	Pn	18 12 58.4	+1.1
	comp=E,0.3nm,0.1s						
GERES	**GERESS Array B**	**10.40**	**334**	Pn	Pn	18 13 13.4	+1.7
	comp=E,0.1nm,0.3s,baz=174,slow=18,SNR=1.9						
	comp=E,0.2nm,0.3s						
MMAI	**Mount Meron Ar**	**13.60**	**115**	Pn	Pn	18 13 54.3	-1.2
	comp=E,0.3nm,0.3s,baz=305,slow=11,SNR=1.3						
	comp=E,0.2nm,0.3s						
EIL	**Elat**	**15.41**	**126**	Pn	Pn	18 14 17.7	-2.2
	comp=E,0.2nm,0.3s,baz=45,slow=11,SNR=1.9						
	comp=E,1.9nm,0.6s						
HFS	**Hagfors**	**20.90**	**350**	P	P	18 15 23.0	-1.6
	comp=E,1.6nm,0.8s,baz=150,slow=10,SNR=4.8						
	comp=E,1.6nm,0.8s						
FINES	**FINESS Array B**	**22.00**	**7**	P	P	18 15 35.1	-1.2
	comp=E,2.0nm,0.9s,baz=165,slow=7.9,SNR=4.7						
	comp=E,2.0nm,0.9s						
NB2	**NORSAR Subarra**	**22.13**	**348**	P	P	18 15 36.3	-1.6
	comp=Z,1.8nm,0.8s,baz=164,slow=11						
NOA	**NORSAR Array B**	**22.13**	**348**	P	P	18 15 35.5	-2.4
	comp=Z,1.0nm,0.9s,baz=165,slow=11,SNR=2.5						
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.33**	**218**	P	P	18 17 02.6	-0.3
	comp=Z,0.8nm,0.8s,baz=20,slow=9.1,SNR=4.3						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**44.39**	**60**	P	P	18 18 51.8	-1.0
	comp=Z,1.2nm,0.4s,baz=281,slow=7.6,SNR=20						
	comp=Z,1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**44.57**	**49**	P	P	18 18 54.4	+0.2
	comp=Z,0.5nm,0.4s,baz=275,slow=7.1,SNR=2.5						
	comp=Z,0.5nm,0.4s						

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*IDC **16** 18:18:04.0±1.4, 29°.47S×60°.95E, h0km, mb3.9/9, mbtmp3.9/9, MS3.3/4, Error ellipse: s-maj=51.3km s-min=23.0km az=33.0*
ISC 16 18:18:06.6±1.5, 29°.4S±0°.3×60°.9E±0°.2, h14km, n18, σ0s88/9, mb4.0/9, MS3.4/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**24.22**	**29**	T	T	18 48 03.3	
	baz=204,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**24.23**	**29**	T	T	18 48 02.8	
	baz=204,slow=76,SNR=9.7						
H08S3	**Diego Garcia H**	**24.24**	**29**	T	T	18 48 04.3	
	baz=204,slow=76,SNR=12						
TSUM	**Tsumeb**	**40.60**	**274**	LR	LR	18 40 46.4	
	comp=Z,20nm,20.4s,baz=104,slow=34						
ATD	**Arta Tunnel**	**44.29**	**334**	LR	LR	18 42 53.4	
	comp=Z,43nm,19.0s,baz=36,slow=34						
H01W2	**Cape Leeuwin H**	**44.93**	**111**	T	T	19 14 00.5	
	baz=262,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**44.93**	**111**	T	T	19 14 00.1	
	baz=262,slow=74,SNR=10						
H01W1	**Cape Leeuwin H**	**44.95**	**111**	T	T	19 14 02.1	
	baz=262,slow=74,SNR=12						
NWAO	**Narrogin (SRO)**	**47.81**	**109**	P	P	18 26 45.1	+1.3
	7.1nm,0.9s,baz=280,slow=13,SNR=1.7						
	7.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**60.08**	**42**	P	P	18 28 13.0	-0.6
	0.6nm,0.7s,baz=230,slow=7.2,SNR=7.6						
CMAR				LR	LR	18 51 18.1	
	comp=Z,22nm,18.5s,baz=175,slow=33						
	0.6nm,0.7s						
VNDA	**Vanda**	**63.83**	**166**	LR	LR	18 54 43.8	
	comp=Z,42nm,18.3s,baz=264,slow=34						
ASAR	**Alice Springs**	**64.57**	**104**	P	P	18 28 42.7	-1.1
	0.9nm,0.7s,baz=244,slow=6.4,SNR=15						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**66.41**	**100**	P	P	18 28 54.8	-0.9
	0.8nm,0.7s,baz=247,slow=5.6,SNR=4.7						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.09**	**298**	P	P	18 29 24.6	-0.2
	1.3nm,0.8s,baz=115,slow=4.9,SNR=6.4						
	1.3nm,0.8s						
BRTR	**Keskin Array B**	**73.33**	**338**	P	P	18 29 37.7	-0.2
	0.7nm,0.8s,baz=155,slow=9.6,SNR=3.9						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**78.27**	**15**	P	P	18 30 06.3	+0.5
	0.5nm,0.7s,baz=176,slow=4.9,SNR=4.5						
	0.5nm,0.7s						
AKTO	**Aktyubinsk**	**79.54**	**358**	P	P	18 30 13.2	+0.6
	0.4nm,0.3s,baz=212,slow=13,SNR=2.0						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**85.56**	**14**	P	P	18 30 44.1	+0.1
	0.5nm,0.5s,baz=270,slow=0.4,SNR=2.4						
	0.5nm,0.5s						

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*FUNV **16** 18:20:29.9, 10°.68N×71°.72W, h5km, MW3.6*
ISC 16 18:20:29.1±1.3, 10°.66N±0°.04×71°.72W±0°.03, h12km±11km, n21, σ0s76/33, 1C, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**1.00**	**233**	*e*P	Pg	18 20 48.6	+0.1
MCQV				*i* S	Sn	18 21 03.0	-0.2
URIC	**Uribia, Colomb**	**1.06**	**346**	⇑*i*P	Pg	18 20 49.5	-0.2
URIC				*e*S	Sn	18 21 04.2	-0.4
URIC				*i*		18 21 04.6	
	comp=Z,407nm,0.2s						
DABV	**Dabajuro**	**1.10**	**76**	*e*P	Pb	18 20 49.9	-0.2
DABV				*e*S	Sn	18 21 05.3	-0.3
DABV	**Dabajuro**	**1.10**	**76**	*e*P	Pg	18 20 50.1	-0.2
DABV				*e*S	Sn	18 21 05.4	-0.1
CRJC	**Cerrejon, Guaj**	**1.19**	**287**	*e*P	Pb	18 20 51.5	-0.2
CRJC				*e*S	Sg	18 21 07.4	-0.2
CRJC				*i*		18 21 08.8	
	comp=Z,440nm,0.2s						
CURV	**Curarigua**	**1.85**	**110**	*e*P	Pb	18 21 03.6	+0.6
CURV				*e*S	Sn	18 21 24.4	+0.2
SIQV	**Siquisique**	**1.88**	**90**	*e*P	Pn	18 21 01.

ellipse: s-maj=4.0km s-min=2.6km az=91.8
TIR **16** *19:01:37.6, 39°.74N±20°.79E, h3km, Md4.2*
NEIC **16** *19:01:38.4±2.6, 39°.78N±0°.02±20°.69E±0°.05, h10km±1km, mb4.6/26, Mwr4.3/36, Error ellipse: s-maj=6.6km s-min=3.6km az=296.0*
ATH **16** *19:01:39.4, 39°.75N±20°.70E, h14km, Mw4.2, Moment Tensor Solution. s8 Moment tensor: Mrr1.96; Mθθ-0.63; Mφφ-1.34; Mrθ1.00; Mrφ1.23; Mθφ-0.49; Fault plane solution: NP1:φs130.00000°, δ59.00000°, λ75.00000°. NP2:φs337.00000°, δ34.00000°, λ113.00000°.*
BEO **16** *19:01:39.4±0.4, 39°.65N±20°.69E, h13km±3km, ML4.1/8*
THE **16** *19:01:39.5, 39°.74N±20°.73E, h0km±1km, ML4.4/19, Error ellipse: s-maj=1.8km s-min=0.5km az=329.0*
ROM **16** *19:01:40.0, 39°.80N±20°.64E, h10km, mb4.4/14, Mwp4.5/8, Error ellipse: s-maj=2.5km s-min=1.4km az=173.0*
IDC **16** *19:01:39.5±2.3, 39°.74N±20°.74E, h28km±16km, mb4.3/28, mbtmp4.3/42, ML3.9/13, MS3.7/51, Error ellipse: s-maj=9.3km s-min=9.0km az=47.0*
PDG **16** *19:01:39.2±0.3, 39°.76N±20°.62E, h22km, MD4.2/1, ML4.2/12, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0*
MED_RC **16** *19:01:40.0±0.3, 39°.70N±20°.68E, h30km±1km, MW4.5/15, Moment Tensor Solution. Mantle waves: s15, c28; Duration: 1±0 Moment tensor: Scale 10^15 Nm; Mrr4.92±.47; Mθθ-2.41±.29; Mφφ-2.51±.29; Mrθ2.28±.26; Mθφ3.71±.16; Mφr-0.29±.22; Best double couple: M=6.06000×10^15 NP1:φs119.00000°, δ56.00000°, λ69.00000°. NP2:φs333.00000°, δ39.00000°, λ118.00000°. Principal axes: T 5.6500, Plg70.0000°, Azm341.0000°; N 0.8100, Plg17.0000°, Azm131.0000°; P -6.4600, Plg9.0000°, Azm224.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC **16** *19:01:41.7, 39°.81N±20°.60E, h23km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr2.18; Mθθ-1.12; Mφφ-1.06; Mrθ-0.81; Mθφ2.13; Mφr0.54; Fault plane solution: M=3.01000×10^15 NP1:φs307.62000°, δ55.22000°, λ80.89000°. NP2:φs143.32000°, δ35.80000°, λ102.84000°. Principal axes: T 2.3703, Plg78.0000°, Azm186.0000°; N 1.0152, Plg7.0000°, Azm313.0000°; P -3.3855, Plg10.0000°, Azm44.0000°;*
LDG **16** *19:01:41.1±0.3, 39°.92N±20°.78E, h10km, Ml3.9/26 Error ellipse: s-maj=9.8km s-min=4.4km az=7.0*
HLW **16** *19:01:42.4, 39°.64N±21°.68E, h25km±37km, Md5.0, Ml5.1*
GII **16** *19:01:47.7±0.0, 38°.45N±20°.68E, h30km*

ISC 16 19:01:38.8±0.6, 39°.74N±0°.01×20°.70E±0°.01, h18km±3km, n609, σ1§94/661, mb4.6/54, MS3.7/45, 62C-52D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**125**	P	**Pg**	**19 01 42.7**	**-0.2**
JAN				S	**Sg**	**19 01 44.6**	**-1.2**
359μm,0.4s							
JAN	**Janina**	**0.14**	**125**	P	**Pg**	**19 01 42.8**	**-0.2**
JAN				S	**Sg**	**19 01 45.7**	**-0.1**
JAN				AML	AML	19 01 46.5	
JAN				AML	AML	19 01 46.9	
IGT	**Igoumenitsa**	**0.35**	**234**	P	**Pg**	**19 01 46.3**	**+0.1**
IGT				S	**Sg**	**19 01 52.7**	**+1.5**
106μm,0.6s							
IGT	**Igoumenitsa**	**0.35**	**234**	P	**Pg**	**19 01 46.4**	**+0.3**
IGT				S	**Sb**	**19 01 53.0**	**+1.3**
IGT	**Igoumenitsa**	**0.35**	**234**	*e*Pg	**Pg**	**19 01 46.5**	**+0.3**
IGT				*e*Sg	**Sb**	**19 01 53.0**	**+1.3**
IGT	**Igoumenitsa**	**0.35**	**234**	P	**Pg**	**19 01 46.5**	**+0.3**
baz=240							
IGT				S	**Sb**	**19 01 53.0**	**+1.3**
baz=240							
IGT	**Igoumenitsa**	**0.35**	**234**	P	**Pg**	**19 01 46.3**	**+0.1**
IGT				S	**Sg**	**19 01 51.4**	**+0.2**
IGT				AML	AML	19 01 55.8	
IGT				AML	AML	19 01 56.2	
LSK	**Leskovik**	**0.42**	**350**	P	**Pg**	**19 01 47.6**	**+0.2**
LSK				S	**Sg**	**19 01 54.3**	**+1.0**
68μm,0.9s							
LSK	**Leskovik**	**0.42**	**350**	P	**Pg**	**19 01 47.7**	**+0.3**
baz=341							
LSK				S	**Sg**	**19 01 54.4**	**+1.1**
baz=341							
KPRO	**Kipourio**	**0.56**	**67**	P	**Pg**	**19 01 50.1**	**+0.2**
KPRO				S	**Sb**	**19 01 58.6**	**+1.0**
58μm,0.5s							
SRN	**Sarande**	**0.56**	**285**	P	**Pg**	**19 01 49.8**	**-0.1**
SRN				S	**Sg**	**19 01 58.9**	**+1.5**
51μm,0.6s							
SRN	**Sarande**	**0.56**	**285**	P	**Pg**	**19 01 49.9**	**0.0**
baz=284							
SRN				S	**Sb**	**19 01 59.6**	**+2.0**
baz=284							
PENT	**Pentalofos**	**0.57**	**36**	P	**Pg**	**19 01 50.2**	**0.0**
PENT	**Pentalofos**	**0.57**	**36**	P	**Pg**	**19 01 50.2**	**0.0**
PENT				S	**Sg**	**19 01 57.8**	**-0.1**
KASA	**Kassiopi**	**0.59**	**271**	P	**Pg**	**19 01 50.4**	**-0.1**
KASA				S	**Sg**	**19 01 59.7**	**+1.3**
KASA				AML	AML	19 02 01.3	
comp=N,58377μm,0.3s							
KASA				AML	AML	19 02 02.4	
comp=E,50802μm,0.4s							
KEK	**Kerkira**	**0.69**	**268**	Pg	**Pg**	**19 01 51.8**	**-0.7**
KEK				Sg	**Sg**	**19 02 03.0**	**+1.3**
KEK	**Kerkira**	**0.69**	**268**	P	**Pg**	**19 01 51.9**	**-0.5**
KEK				S	**Sb**	**19 02 03.4**	**+1.8**
comp=E,22μm,0.5s							
KEK	**Kerkira**	**0.69**	**268**	⇓P	**Pg**	**19 01 51.9**	**-0.5**
KEK	**Kerkira**	**0.69**	**268**	P	**Pg**	**19 01 51.9**	**-0.5**
KEK				S	**Sg**	**19 02 02.5**	**+0.8**
KEK				AML	AML	19 02 07.5	
comp=N,36725μm,0.7s							
KEK				AML	AML	19 02 07.6	
comp=E,47408μm,0.5s							
NEST	**Nestorio**	**0.73**	**22**	P	**Pg**	**19 01 53.1**	**0.0**
NEST	**Nestorio**	**0.73**	**22**	P	**Pg**	**19 01 53.1**	**0.0**
NEST				S	**Sg**	**19 02 02.9**	**+0.2**
NEST				AML	AML	19 02 11.1	
comp=E,23582μm,0.5s							
NEST				AML	AML	19 02 15.2	
comp=N,19079μm,0.7s							
KBN	**Korca**	**0.89**	**4**		**Pg**	**19 01 55.4**	**-0.7**
KBN	**Korca**	**0.89**	**4**	P	**Pg**	**19 01 55.5**	**-0.6**
KBN	**Korca**	**0.89**	**4**	P	**Pg**	**19 01 55.4**	**-0.7**
KBN	**Korca**	**0.89**	**4**	P	**Pg**	**19 01 55.8**	**-0.3**
baz=0.0							
KBN				S	**Sn**	**19 02 10.2**	**+1.3**
baz=0.0							
TSLK	**Tsoukalades, L**	**0.91**	**182**	P	**Pg**	**19 01 56.5**	**0.0**
TSLK				S	**Sn**	**19 02 11.1**	**+1.8**
comp=N,32μm,0.6s							
TSLK	**Tsoukalades, L**	**0.91**	**182**	P	**Pg**	**19 01 56.7**	**+0.1**
TSLK				S	**Sg**	**19 02 08.8**	**+0.3**
TSLK				AML	AML	19 02 16.8	
comp=N,62226μm,0.6s							
TSLK				AML	AML	19 02 16.8	
comp=E,67962μm,0.5s							
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pg**	**19 01 56.9**	**-0.3**
LKD2				S	**Sn**	**19 02 12.7**	**+2.4**
comp=E,20μm,0.4s							
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pb**	**19 01 58.0**	**+1.3**
baz=187							
LKD2				S	**Sn**	**19 02 12.6**	**+2.4**
baz=187							
LKD2	**Lefkada island**	**0.95**	**182**	P	**Pg**	**19 01 57.1**	**-0.1**
LKD2				S	**Sg**	**19 02 10.1**	**+0.4**
LKD2				AML	AML	19 02 16.1	
comp=N,48282μm,0.4s							
LKD2				AML	AML	19 02 17.5	
comp=E,30373μm,0.4s							
KZN	**Kozani**	**1.00**	**55**	P	**Pg**	**19 01 57.5**	**-0.7**
KZN				S	**Sb**	**19 02 12.1**	**+1.6**
comp=E,12μm,0.6s							
KZN	**Kozani**	**1.00**	**55**	P	**Pg**	**19 01 57.2**	**-1.0**
KZN				S	**Sg**	**19 02 11.1**	**-0.3**
KZN				AML	AML	19 02 15.6	
comp=N,21709μm,0.6s							
KZN				AML	AML	19 02 16.4	
comp=E,25991μm,0.7s							
NYDR	**Nydri-Lefkada**	**1.02**	**180**	P	**Pg**	**19 01 58.3**	**-0.3**
NYDR				S	**Sb**	**19 02 13.0**	**+2.0**
comp=E,23μm,0.5s							
THL	**Klokotos Trika**	**1.03**	**99**	P	**Pg**	**19 01 57.5**	**-1.2**
THL				S	**Sb**	**19 02 12.2**	**+1.0**
comp=E,10μm,0.8s							
THL	**Klokotos Trika**	**1.03**	**99**	P	**Pg**	**19 01 57.5**	**-1.2**
THL				S	**Sb**	**19 02 12.3**	**+1.1**
THL				AML	AML	19 02 16.4	
comp=N,20263μm,0.7s							
THL				AML	AML	19 02 19.7	
comp=E,20028μm,0.7s							
DRAG	**Dragano-Lefkad**	**1.06**	**185**	P	**Pg**	**19 01 58.8**	**-0.5**
EVGI	**Lefkada island**	**1.12**	**182**	P	**Pb**	**19 02 00.2**	**+0.7**
EVGI				S	**Sn**	**19 02 16.8**	**+2.4**
comp=E,20μm,0.6s							
VLO	**Vlora**	**1.18**	**309**		**Pb**	**19 02 00.1**	**-0.4**
VLO	**Vlora**	**1.18**	**309**	P	**Pg**	**19 02 03.1**	**+1.6**
VLO				S	**Sn**	**19 02 19.9**	**+4.0**
comp=E,31μm,0.7s							
VLO	**Vlora**	**1.18**	**309**	P	**Pb**	**19 02 00.1**	**-0.4**
VLO	**Vlora**	**1.18**	**309**	P	**Pg**	**19 02 03.3**	**+1.7**
baz=307							
VLO				S	**Sn**	**19 02 22.4**	**+6.5**
baz=307							
TYRN	**Tyrnavos**	**1.18**	**91**	P	**Pb**	**19 02 00.7**	**0.0**
TYRN				S	**Sn**	**19 02 18.7**	**+2.7**
comp=E,35μm,0.6s							
EVR	**Evrytania**	**1.19**	**133**	P	**Pb**	**19 02 01.4**	**+0.6**
EVR				S	**Sn**	**19 02 18.7**	**+2.4**
comp=E,10μm,0.7s							
EVR	**Evrytania**	**1.19**	**133**	P	**Pb**	**19 02 01.2**	**+0.4**
EVR				S	**Sb**	**19 02 17.0**	**+1.1**
EVR				AML	AML	19 02 24.0	
comp=N,21002μm,0.7s							
EVR				AML	AML	19 02 28.5	
comp=E,15586μm,0.4s							
KTI	**Kastanea**	**1.27**	**59**	P	**Pn**	**19 02 02.6**	**+0.9**
FSK	**Fiskardo**	**1.28**	**185**	P	**Pb**	**19 02 03.9**	**+1.6**
FSK				S	**Sg**	**19 02 22.4**	**+2.2**
comp=E,16μm,0.5s							
FSK	**Fiskardo**	**1.28**	**185**	P	**Pn**	**19 02 03.4**	**+1.7**
FSK				AML	AML	19 02 24.8	
comp=N,24685μm,0.5s							
FSK				AML	AML	19 02 27.0	
comp=E,37518μm,0.5s							
PVO	**Paravola**	**1.29**	**150**	P	**Pb**	**19 02 03.9**	**+1.4**
PVO	**Paravola**	**1.29**	**150**	P	**Pn**	**19 02 03.5**	**+1.6**
LRSO	**Larissa Observ**	**1.31**	**92**	P	**Pn**	**19 02 03.1**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pb**	**19 02 04.2**	**+1.1**
MAKR	**Makrakomi, Fth**	**1.32**	**123**	P	**Pb**	**19 02 04.0**	**+0.9**
MAKR				AML	AML	19 02 28.7	
comp=E,59673μm,0.4s							
MAKR				AML	AML	19 02 29.4	
comp=N,43079μm,0.4s							
OHR	**Ohrid**	**1.37**	**3**	P	**Pb**	**19 02 05.0**	**+1.0**
OHR	**Ohrid**	**1.37**	**3**	*e*Pg	**Pb**	**19 02 05.2**	**+1.2**
OHR				*e*Sg	**Sg**	**19 02 26.0**	**+2.8**
OHR	**Ohrid**	**1.37**	**3**	*i* Pn	**Pb**	**19 02 04.9**	**+1.0**
LIT	**Litokhoron**	**1.42**	**75**		**Pn**	**19 02 05.0**	**+1.2**
LIT	**Litokhoron**	**1.42**	**75**	P	**Pn**	**19 02 04.9**	**+1.2**
LIT				S	**Sg**	**19 02 25.0**	**+0.2**
comp=N,11μm,0.9s							
LIT	**Litokhoron**	**1.42**	**75**	P	**Pn**	**19 02 05.0**	**+1.2**
LIT	**Litokhoron**	**1.42**	**75**	P	**Pn**	**19 02 04.4**	**+0.7**
KEF4	**Livadi, Kephal**	**1.49**	**188**	P	**Pn**	**19 02 05.8**	**+1.2**
DMLN	**Damoulianata-K**	**1.52**	**190**	P	**Pn**	**19 02 06.1**	**+1.1**
VLS	**Valsamata**	**1.56**	**183**	P	**Pn**	**19 02 07.6**	**+2.0**
EFP	**Efpalio**	**1.61**	**144**	P	**Pb**	**19 02 09.5**	**+1.5**
EFP	**Efpalio**	**1.61**	**144**	P	**Pb**	**19 02 09.3**	**+1.4**
EFP				AML	AML	19 02 41.4	
comp=E,26248μm,1.0s							
EFP				AML	AML	19 02 42.0	
comp=N,14688μm,0.4s							
PSDA	**Pessada-Kefalo**	**1.62**	**183**	P	**Pn**	**19 02 07.7**	**+1.3**
SERG	**Sergoula**	**1.69**	**141**	P	**Pb**	**19 02 10.5**	**+1.1**
SERG	**Sergoula**	**1.69**	**141**	P	**Pb**	**19 02 10.2**	**+0.8**
SERG				AML	AML	19 02 40.9	
comp=N,15858μm,0.7s							
SERG				AML	AML	19 02 42.6	
comp=E,11840μm,0.7s							
TIR	**Tirane**	**1.73**	**339**	⇓P	**Pn**	**19 02 10.5**	**+2.6**
TIR	**Tirane**	**1.73**	**339**	Pn	**Pn**	**19 02 07.4**	**-0.5**
TIR	**Tirane**	**1.73**	**339**	P	**Pb**	**19 02 10.8**	**+0.8**
TIR	**Tirane**	**1.73**	**339**	P	**Pn**	**19 02 07.4**	**-0.5**
TIR	**Tirane**	**1.73**	**339**	*e*Pn	**Pn**	**19 02 10.5**	**+2.6**
TIR				*e*Sn	**Sg**	**19 02 34.5**	**0.0**
TIR	**Tirane**	**1.73**	**339**	P	**Pb**	**19 02 10.8**	**+0.8**
baz=337							
TIR				S	**Sg**	**19 02 38.7**	**+4.2**
baz=337							
TIR	**Tirane**	**1.73**	**339**	⇑P	**Pn**	**19 02 10.6**	**+2.6**
SCTE	**Santa Cesarea**	**1.75**	**282**	Pn	**Pn**	**19 02 08.7**	**+0.6**
RLS	**Riolos of Patr**	**1.78**	**160**	P	**Pb**	**19 02 11.4**	**+0.5**
RLS				S	**Sb**	**19 02 34.9**	**+2.1**
comp=E,4μm,0.7s							
GRG	**Griva**	**1.78**	**46**	P	**Pn**	**19 02 10.0**	**+1.3**
LAKA	**Lakka**	**1.80**	**146**	P	**Pb**	**19 02 12.0**	**+0.8**
AXAR	**Agios Charalam**	**1.81**	**122**	P	**Pb**	**19 02 12.4**	**+1.1**
AXAR				AML	AML	19 02 47.7	
comp=E,24671μm,1.1s							
AXAR				AML	AML	19 03 03.7	
comp=N,18096μm,0.9s							
THE	**Thessaloniki**	**1.95**	**62**	P	**Pn**	**19 02 13.2**	**+2.2**
THE	**Thessaloniki**	**1.95**	**62**	P	**Pn**	**19 02 12.7**	**+1.7**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**19 02 14.3**	**+0.4**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**19 02 14.4**	**+0.6**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**19 02 14.4**	**+0.6**
baz=353							
PHP				S	**Sg**	**19 02 42.4**	**+0.7**
baz=353							
XOR	**Xorichti**	**1.96**	**100**	P	**Pb**	**19 02 13.8**	**-0.2**
XOR				S	**Sb**	**19 02 39.1**	**+1.0**
comp=N,5μm,1.1s							
NEO	**Neokhori**	**2.00**	**102**	P	**Pn**	**19 02 14.2**	**+2.5**
LTHK	**Lithakia**	**2.03**	**177**	P	**Pn**	**19 02 15.1**	**+3.1**
HORT	**Hortiatis**	**2.03**	**64**	P	**Pn**	**19 02 13.4**	**+1.3**
KLV	**Kalavryta, Ach**	**2.04**	**146**	P	**Pb**	**19 02 15.7**	**+0.5**
VAY	**Valandovo**	**2.13**	**41**	P	**Pn**	**19 02 14.7**	**+1.3**
VAY	**Valandovo**	**2.13**	**41**	*e*Pn	**Pn**	**19 02 15.1**	**+1.7**
VAY				*e*Sn	**Sb**	**19 02 43.6**	**+0.7**
VAY	**Valandovo**	**2.13**	**41**	*i* Pn	**Pn**	**19 02 15.1**	**+1.7**
KNT	**Kendrikon**	**2.20**	**49**	P	**Pn**	**19 02 15.5**	**+1.1**
STIP	**Stip**	**2.26**	**30**	*i* Pn	**Pb**	**19 02 18.9**	**0.0**
SKO	**Skopje**	**2.30**	**14**	*e*Pn	**Pn**	**19 02 19.1**	**+3.3**
SKO				*e*Sn	**Sb**	**19 02 48.0**	**+0.1**
SKO	**Skopje**	**2.30**	**14**	*i* Pn	**Pn**	**19 02 19.1**	**+3.3**
SOH	**Sokhos**	**2.30**	**61**	P	**Pn**	**19 02 18.3**	**+2.5**
SOH	**Sokhos**	**2.30**	**61**	P	**Pn**	**19 02 17.8**	**+2.0**
ULC	**Ulcinj**	**2.48**	**334**	*e*Pn	**Pn**	**19 02 19.1**	**+0.8**
ULC				*i* Sn	**Sn**	**19 02 49.5**	**+1.3**
SRS	**Serrai**	**2.60**	**57**	P	**Pn**	**19 02 21.3**	**+1.3**
SRS	**Serrai**	**2.60**	**57**	P	**Pn**	**19 02 21.6**	**+1.6**
SRS	**Serrai**	**2.60**	**57**	*e*Pn	**Pn**	**19 02 21.4**	**+1.4**
SRS				*e*Sn	**Sb**	**19 02 55.6**	**-0.9**
BCI	**Bajram Curri**	**2.67**	**350**	P	**Pn**	**19 02 24.4**	**+3.6**
baz=349							
DRME	**Dracevica, Mon**	**2.70**	**335**	⇑*i*Pn	**Pn**	**19 02 22.9**	**+1.6**
DRME	**Dracevica, Mon**	**2.70**	**335**	*e*Pn	**Pn**	**19 02 22.2**	**+0.9**
DRME				*i* Sn	**Sn**	**19 02 54.8**	**+1.3**
ITM	**Ithomi**	**2.73**	**159**	Pn	**Pn**	**19 02 24.9**	**+3.2**
NVR	**Nevrokopi**	**2.90**	**55**	P	**Pn**	**19 02 25.6**	**+1.6**
BUM	**Brajici-Budva**	**2.90**	**333**	*e*Pn	**Pn**	**19 02 24.9**	**+0.8**
BUM				*i* Sn	**Sn**	**19 02 59.6**	**+1.0**
PDG	**Podgorica**	**2.90**	**338**	⇓P	**Pn**	**19 02 25.8**	**+1.8**
PDG	**Podgorica**	**2.90**	**338**	Pn	**Pn**	**19 02 25.6**	**+1.5**
PDG	**Podgorica**	**2.90**	**338**	⇑P	**Pn**	**19 02 25.6**	**+1.5**
TTG	**Podgorica**	**2.90**	**338**	*e*Pn	**Pn**	**19 02 25.0**	**+1.0**
TTG				*i* Sn	**Sn**	**19 02 59.7**	**+1.2**
PVY	**Plav**	**2.91**	**349**	*e*Pn	**Pn**	**19 02 25.2**	**+0.9**
PVY				*i* Sn	**Sn**	**19 03 00.1**	**+1.3**
ATH	**Athens Observa**	**2.94**	**126**	P	**Pn**	**19 02 27.8**	**+3.2**
PYL	**PYLOS**	**2.95**	**164**	P	**Pn**	**19 02 26.8**	**+2.0**
PTL	**Penteli**	**2.99**	**123**	P	**Pn**	**19 02 28.2**	**+2.9**
DION	**Dionisos Attik**	**3.02**	**122**	P	**Pn**	**19 02 28.6**	**+2.9**
KRND	**KRANIDI**	**3.04**	**140**	P	**Pn**	**19 02 28.1**	**+2.2**
TIP	**Timpagrande**	**3.10**	**261**	⇓P	**Pn**	**19 02 28.0**	**+1.1**
TIP	**Timpagrande**	**3.10**	**261**	Pn	**Pn**	**19 02 27.6**	**+0.8**
TIP	**Timpagrande**	**3.10**	**261**	⇑P	**Pn**	**19 02 27.6**	**+0.8**
CEME	**Cevo**	**3.11**	**335**	⇓*i*Pn	**Pn**	**19 02 27.8**	**+0.8**
CEME				*i* Sn	**Sn**	**19 03 04.6**	**+0.9**
HCY	**Herceg Novi**	**3.18**	**329**	⇑*i*Pn	**Pn**	**19 02 28.2**	**+0.4**
HCY	**Herceg Novi**	**3.18**	**329**	*e*Pn	**Pn**	**19 02 28.3**	**+0.4**
HCY				*i* Sn	**Sn**	**19 03 06.0**	**+0.7**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**19 02 30.4**	**+2.4**
IVA	**Berane**	**3.19**	**349**	*e*Pn	**Pn**	**19 02 29.1**	**+1.0**
IVA				*i* Sn	**Sn**	**19 03 06.7**	**+1.0**
MATE	**Matera**	**3.19**	**288**	⇑P	**Pn**	**19 02 28.6**	**+0.6**
KOME	**Kolasin**	**3.23**	**344**	*e*Pn	**Pn**	**19 02 29.7**	**+1.0**
KOME				*i* Sn	**Sn**	**19 03 07.8**	**+1.0**
NKME	**Niksic**	**3.30**	**337**	*e*Pn	**Pn**	**19 02 30.4**	**+0.8**
NKME				*i* Sn	**Sn**	**19 03 09.1**	**+0.7**
VTS	**Vitosha**	**3.46**	**33**	⇓P	**Pn**	**19 02 34.1**	**+2.3**
VTS				⇑S	**Sb**	**19 03 18.6**	**-2.6**
VTS	**Vitosha**	**3.46**	**33**	Pn	**Pn**	**19 02 32.7**	**+0.9**
VTS	**Vitosha**	**3.46**	**33**	P	**Pn**	**19 02 32.7**	**+0.9**
VTS	**Vitosha**	**3.46**	**33**	⇑P	**Pn**	**19 02 33.9**	**+2.1**
SELS	**Selova**	**3.49**	**5**	*e*Pn	**Pn**	**19 02 34.5**	**+2.3**
BRY	**Bratogost**	**3.56**	**333**	⇑*i*Pn	**Pn**	**19 02 33.4**	**+0.2**
BRY	**Bratogost**	**3.56**	**333**	⇓*i*Pn	**Pn**	**19 02 33.9**	**+0.7**
BRY				*i* Sn	**Sn**	**19 03 15.2**	**+0.4**
SJES	**Sjenica**	**3.56**	**351**	*e*Pn	**Pn**	**19 02 35.8**	**+2.6**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pn**	**19 02 37.4**	**+2.0**
UPM	**Unac-Piva**	**3.71**	**339**	*e*Pn	**Pn**	**19 02 36.3**	**+0.9**
UPM				*i* Sn	**Sn**	**19 03 19.1**	**+0.3**
PLE	**Pljevlja**	**3.72**	**345**	*e*Pn	**Pn**	**19 02 36.4**	**+1.0**
PLE				*i* Sn	**Sn**	**19 03 19.4**	**+0.6**
CUC	**Castrocucco**	**3.77**	**275**	Pn	**Pn**	**19 02 36.9**	**+0.9**
ZAPS	**Zavoj**	**3.82**	**22**	*e*Pn	**Pn**	**19 02 40.0**	**+3.3**
PLD	**Plovdiv**	**3.85**	**51**	P	**Pn**	**19 02 40.2**	**+3.2**
STON	**Ston**	**3.86**	**325**	⇑*i*Pn	**Pn**	**19 02 36.3**	**-0.9**
RDO	**Rodhopi**	**3.95**	**68**		**Pn**	**19 02 39.6**	**+1.1**
RDO	**Rodhopi**	**3.95**	**68**	P	**Pn**	**19 02 40.0**	**+1.6**
RDO	**Rodhopi**	**3.95**	**68**	⇓P	**Pn**	**19 02 39.6**	**+1.1**
BOVS	**Bovan**	**3.97**	**11**	⇓P	**Pn**	**19 02 40.1**	**+1.5**
BOVS	**Bovan**	**3.97**	**11**	*e*Pn	**Pn**	**19 02 40.3**	**+1.6**
BOVS				*e*Sn	**Sn**	**19 03 27.9**	**+3.2**
RUDO	**Rudo**	**4.00**	**346**	⇑*i*Pn	**Pn**	**19 02 40.3**	**+1.1**
CEL	**Celeste**	**4.02**	**250**	Pn	**Pn**	**19 02 40.0**	**+0.5**
CEL	**Celeste**	**4.02**	**250**	⇑P	**Pn**	**19 02 40.2**	**+0.7**
SIGR	**SIGRI**	**4.03**	**96**	P	**Pn**	**19 02 42.4**	**+2.9**
KDZ	**Kurdzhali**	**4.06**	**60**	P	**Pn**	**19 02 41.7**	**+1.7**
KDZ				S	**Sn**	**19 03 27.1**	**0.0**
GRUS	**Gruza**	**4.15**	**0**	*e*Pn	**Pn**	**19 02 42.7**	**+1.5**
BLKB	**Belogradchik**	**4.15**	**20**	⇓P	**Pn**	**19 02 44.2**	**+2.9**
BLKB				⇑S	**Sn**	**19 03 34.1**	**+4.7**
ZAGS	**Zajecar**	**4.23**	**15**	*e*Pn	**Pn**	**19 02 44.4**	**+2.1**
BBLS	**Lazići**	**4.24**	**347**	⇑*i*Pn	**Pn**	**19 02 43.5**	**+1.0**
BBLS	**Lazići**	**4.24**	**347**	*e*Pn	**Pn**	**19 02 43.3**	**+0.8**
ALN	**Alexandroupoli**	**4.25**	**72**		**Pn**	**19 02 44.2**	**+1.7**
ALN	**Alexandroupoli**	**4.25**	**72**	P	**Pn**	**19 02 44.3**	**+1.7**
ALN	**Alexandroupoli**	**4.25**	**72**	P	**Pn**	**19 02 44.2**	**+1.7**
ALN	**Alexandroupoli**	**4.25**	**72**	⇓P	**Pn**	**19 02 44.2**	**+1.7**
SGRT	**San Giovanni R**	**4.27**	**300**		**Pn**	**19 02 43.1**	**+0.2**
EZN	**Ezine**	**4.34**	**87**	P	**Pn**	**19 02 46.4**	**+2.7**
ANKY	**Antikythira Is**	**4.38**	**151**	P	**Pn**	**19 02 47.2**	**+2.9**
DIVS	**Divibare**	**4.39**	**353**	Pn	**Pn**	**19 02 45.8**	**+1.2**
DIVS	**Divibare**	**4.39**	**353**	⇑*i*Pn	**Pn**	**19 02 45.8**	**+1.2**
DIVS	**Divibare**	**4.39**	**353**	*e*Pn	**Pn**	**19 02 45.8**	**+1.2**
DIVS				*e*Sn	**Sn**	**19 03 37.5**	**+2.2**
DIVS	**Divibare**	**4.39**	**353**	⇑P	**Pn**	**19 02 45.8**	**+1.2**
TRUS	**Trudelj**	**4.49**	**357**	*e*Pn	**Pn**	**19 02 47.8**	**+2.0**
APE	**Apeiranthos**	**4.64**	**124**	⇓P	**Pn**	**19 02 50.4**	**+2.5**
APE	**Apeiranthos**	**4.64**	**124**	⇑*e*P	**Pn**	**19 02 50.7**	**+2.8**
KUBS	**Kucevo**	**4.73**	**9**	*e*Pn	**Pn**	**19 02 50.9**	**+1.8**
PUNG	**Punghina**	**4.83**	**19**	⇑P	**Pn**	**19 02 53.9**	**+3.4**
DKL	**Dikili**	**4.85**	**96**	⇓P	**Pn**	**19 02 55.1**	**+4.3**
PAOL	**Paolisi**	**4.86**	**287**		**Pn**	**19 02 52.5**	**+1.5**
TEKS	**Tekeris**	**4.89**	**350**	⇑*i*Pn	**Pn**	**19 02 51.5**	**+0.1**
TEKS	**Tekeris**	**4.89**	**350**	*e*Pn	**Pn**	**19 02 51.4**	**+0.1**
SANT	**Santorini**	**5.04**	**130**	⇓P	**Pn**	**19 02 56.2**	**+2.8**
SANT	**Santorini**	**5.04**	**130**		**Pn**	**19 02 56.4**	**+2.9**
BEO	**Beograd**	**5.07**	**358**	*e*Pn	**Pn**	**19 02 54.2**	**+0.4**
MDVR	**Moldovita**	**5.10**	**8**	⇓P	**Pn**	**19 02 57.6**	**+3.4**
BLJ	**Bijeljina**	**5.15**	**349**	*e*Pn

CFR Carcaliu 7.73 43 P Pn 19 03 35.9 +5.6
CFR pmax pmax
comp=Z,26nm,0.8s
LJU Ljubljana 7.76 326 *i* Pn **Pn 19 03 30.7 0.0**
MPLH Magyarpolny 7.78 344 P **Pn 19 03 32.1 +1.1**
CSKK Cskako 7.83 348 P **Pn 19 03 32.6 +0.9**
BUD Budapest 7.84 352 P **Pn 19 03 33.2 +1.4**
BUD pmax pmax
comp=Z,36nm,0.6s
BUD Budapest 7.84 352 P **Pn 19 03 33.1 +1.4**
AKAS Kas 7.85 114 Pn Pn 19 03 37.2 +5.0
ISP Isparta 7.91 101 **Pn 19 03 37.4 +4.4**
ISP Isparta 7.91 101 *d i*P Pn 19 03 38.6 +5.7
TATR Tatarca 7.97 40 ⇓P **Pn 19 03 38.1 +4.4**
CASP Castiglione de 8.01 296 Pn **Pn 19 03 35.1 +0.9**
OSSC Osservatorio P 8.03 301 Pn **Pn 19 03 32.2 -2.2**
TESR Tescani 8.05 31 ⇓P **Pn 19 03 38.6 +3.9**
SOKA Soboth 8.07 331 *e*Pn **Pn 19 03 34.5 -0.6**
comp=Z,7.5nm,0.3s,SNR=15
VARL Varlezi 8.09 38 ⇓P **Pn 19 03 39.1 +3.9**
TLCR 8.10 45 ⇓P **Pn 19 03 39.0 +3.6**
TLCR 8.10 45 P **Pn 19 03 38.9 +3.6**
OBKA Obir 8.12 328 *e*Pn **Pn 19 03 34.5 -1.3**
OBKA Obir 8.12 328 *e*Pn **Pn 19 03 36.5 +0.6**
comp=Z,5.3nm,0.2s,SNR=12
VLDR Vladesti 8.16 39 ⇓P **Pn 19 03 40.1 +3.8**
BMR Baia Mare 8.19 13 ⇓P **Pn 19 03 40.4 +3.8**
BMR Baia Mare 8.19 13 P Pn 19 03 42.1 +5.5
BMR pmax pmax
comp=Z,51nm,0.9s
PSZ Piszkesteto 8.20 356 **Pn 19 03 37.6 +0.8**
PSZ Piszkesteto 8.20 356 P **Pn 19 03 37.6 +0.8**
PSZ Piszkesteto 8.20 356 P **Pn 19 03 38.8 +1.9**
ARSA Arzberg 8.40 335 *e*Pn **Pn 19 03 39.1 -0.5**
comp=Z,4.8nm,0.5s
ARSA Arzberg 8.40 335 ⇓P **Pn 19 03 39.3 -0.2**
SOP Sopron 8.49 341 P **Pn 19 03 41.9 +1.2**
SOP pmax pmax
comp=Z,25nm,1.3s
SOP Sopron 8.49 341 P **Pn 19 03 42.0 +1.3**
PRED Cave del Predi 8.49 324 **Pn 19 03 40.6 -0.2**
TRPA Tarpa 8.49 8 ⇓P **Pn 19 03 43.7 +2.9**
TRPA Tarpa 8.49 8 P **Pn 19 03 44.1 +3.3**
BURAR Bucovina Array 8.53 21 **Pn 19 03 45.1 +3.8**
BURAR Bucovina Array 8.53 21 P **Pn 19 03 45.1 +3.8**
BUR08 Bucovina Ar. S 8.55 21 **Pn 19 03 44.2 +2.5**
PTCC Patocco-Chiusa 8.56 324 ⇓P **Pn 19 03 41.1 -0.7**
RONA Rosalia, Austr 8.57 340 *e*Pn **Pn 19 03 41.5 -0.4**
comp=Z,1.5nm,0.2s
MYKA Terra Mystica 8.60 326 *i* Pn **Pn 19 03 42.1 -0.2**
comp=Z,3.2nm,0.3s
TEOL Teolo 8.71 313 **Pn 19 03 42.5 -1.3**
KECS Kecovo 8.74 359 *e*P **Pn 19 03 47.3 +3.1**
STAL STALIGIAL 8.76 321 **Pn 19 03 43.9 -0.5**
CLUD Cludinico 8.82 322 **Pn 19 03 44.7 -0.6**
VYHS Vyhne 8.86 352 *e*P **Pn 19 03 47.3 +1.5**
VLC Villacollemand 8.86 303 **Pn 19 03 47.5 +1.7**
VLC Villacollemand 8.86 303 ⇑P **Pn 19 03 48.0 +2.1**
CONA Conrad Observa 8.90 338 *e*Pn **Pn 19 03 46.1 -0.4**
comp=Z,0.6nm,0.2s
UZH Uzhgorod 8.96 7 *e*P **Pn 19 03 51.4 +4.2**
UZH *e*S **Sn 19 05 32.5 +4.8**
UZH MLR MLR
comp=N,900nm,13.0s
UZH MLR MLR
comp=E,100nm,13.0s
UZH MLR MLR
comp=Z,70nm,13.0s
SLUM Salum 9.01 155 P **Pn 19 03 46.9 -1.0**
baz=159
SLUM S Sn 19 05 16.3 -13
baz=159
KBA Koelnbreinsper 9.08 326 P **Pn 19 03 49.2 +0.2**
KBA pmax pmax
comp=Z,39nm,0.9s
KBA Koelnbreinsper 9.08 326 *e*Pn **Pn 19 03 49.1 +0.2**
comp=Z,7.1nm,0.6s,SNR=7.7
KBA Koelnbreinsper 9.08 326 ⇓P **Pn 19 03 48.9 -0.1**
CTI Castel Tesino 9.15 316 **Pn 19 03 49.5 -0.5**
CTI Castel Tesino 9.15 316 P **Pn 19 03 49.5 -0.5**
CRVS Cervenica-Dubn 9.18 3 *e*P **Pn 19 03 53.3 +3.1**
ABTA Abfaltersbach 9.20 322 *e*Pn **Pn 19 03 50.2 -0.4**
comp=Z,3.8nm,0.2s,SNR=6.3
KOLS Kolonicke sedl 9.26 6 *e*P **Pn 19 03 55.4 +4.0**
PGF Pioggiola 9.26 291 *e*Pn **Pn 19 03 53.1 +1.6**
PGF *e*Sn **Sn 19 05 30.0 -5.2**
comp=Z,3.3nm,0.6s
PGF Pioggiola 9.26 291 P **Pn 19 03 53.2 +1.7**
PGF pmax pmax
comp=Z,14nm,1.5s
MILM Milestii Mici 9.29 37 *e*P Pn 19 04 03.0 +11
comp=Z,80nm,1.3s
MILM *e*S Sn 19 05 55.0 +19
MILM *e*L L 19 07 44.0
MILM LqM 19 07 52.0
comp=Z,700nm,14.0s
MILM LRM MLR 19 08 26.0
comp=Z,900nm,13.0s
MILM Milestii Mici 9.29 37 *e*P Pn 19 04 03.0 +11
MILM *e* 19 05 42.0
MILM pmax pmax
comp=Z,150nm,2.9s
MILM MLR MLR
comp=Z,900nm,13.0s
MOA Molln 9.34 332 *e*Pn **Pn 19 03 52.9 +0.4**
comp=Z,3.7nm,0.2s,SNR=12
JAVC Velka Javorina 9.37 348 *e*PN **Pn 19 03 54.8 +1.9**
BIOA Bad Ischl, Aus 9.45 330 *e*Pn **Pn 19 03 53.6 -0.3**
comp=Z,6.3nm,0.2s,SNR=19
MSSA Maissana 9.49 302 **Pn 19 03 55.7 +1.1**
SALO Salr 9.52 311 **Pn 19 03 53.1 -1.8**
SALO Salr 9.52 311 ⇑P **Pn 19 03 53.5 -1.4**
KRUC Moravsky 9.82 343 *e*PN **Pn 19 03 59.5 +0.6**
KEST Kesra 9.84 250 Pn **Pn 19 04 00.2 +0.8**
comp=Z,0.6nm,0.3s,baz=37,slow=6.7,SNR=16
KEST Sn **Sn 19 05 47.2 -2.2**
comp=Z,0.2nm,0.3s,baz=172,slow=13,SNR=1.1
comp=Z,9.8nm,0.9s
MAUC Maruska 9.84 349 *e*PN **Pn 19 04 00.6 +1.3**
MAUC AMS AMS 19 09 00.0
comp=Z,1µm,12.5s
BR131 Keskin Array S 9.97 86 **Pn 19 04 04.5 +3.3**
BR131 Keskin Array S 9.97 86⇓*e*P **Pn 19 04 05.3 +4.1**
BRTR Keskin Array B 9.97 86 Pn **Pn 19 04 01.8 +0.5**
comp=Z,0.4nm,0.3s,baz=268,slow=11,SNR=12
BRTR Sn **Sn 19 05 51.5 -1.2**
comp=Z,0.1nm,0.3s,baz=309,slow=7.3,SNR=1.2
comp=Z,2.4nm,0.6s
WTTA Wattenberg 9.99 322 P **Pn 19 04 02.3 +0.8**
WTTA pmax pmax
comp=Z,34nm,1.0s
WTTA Wattenberg 9.99 322 *i* Pn **Pn 19 04 01.7 +0.2**
comp=Z,5.3nm,0.2s,SNR=8.5
VRAC Vranov 10.01 344 Pn **Pn 19 04 01.6 +0.1**
comp=Z,0.2nm,0.3s,baz=179,slow=12,SNR=3.7
VRAC LR LR 19 08 49.3
comp=Z,562nm,18.3s,baz=174,slow=43
comp=Z,1.9nm,0.6s
VRAC Vranov 10.01 344 *e*PN **Pn 19 04 01.6 +0.1**
WATA Walderalm 10.07 322 *i* Pn **Pn 19 04 03.1 +0.5**
comp=Z,11nm,0.2s,SNR=18
CKRC Cesky Krumlov 10.16 335 *e*PN **Pn 19 04 03.7 0.0**
SQTA Sankt Quirin 10.17 320 *i* Pn **Pn 19 04 04.5 +0.7**
comp=Z,5.3nm,0.2s,SNR=9.9
TREC Trest 10.25 340 AMS AMS 19 08 20.0
comp=Z,900nm,10.6s
OKC Ostrava-Krasne 10.26 351 *e*P **Pn 19 04 06.5 +1.5**
OKC MLR MLR
comp=Z,500nm,18.1s
OKC Ostrava-Krasne 10.26 351 *e*PN **Pn 19 04 06.5 +1.5**
OKC AMS AMS 19 08 20.0
comp=Z,500nm,18.1s
FUORN Ofenpass-Fuorn 10.26 315 **Pn 19 04 05.4 +0.1**
FETA Feichten 10.27 318 *e*Pn **Pn 19 04 06.3 +0.9**
comp=Z,7.1nm,0.7s
MORC Moravsky Berou 10.29 348 **Pn 19 04 05.4 0.0**
MORC Moravsky Berou 10.29 348 P **Pn 19 04 05.4 0.0**
MORC Moravsky Berou 10.29 348 *e*PN **Pn 19 04 06.7 +1.3**
MOTA Moosalm 10.30 321 *e*Pn **Pn 19 04 06.1 +0.3**
comp=Z,14nm,0.5s,SNR=10
LVV L'vov 10.35 12 *e*P Pn 19 04 11.0 +4.7
GEC2 GERESS Array S 10.39 333 **Pn 19 04 06.5 -0.4**
GERES GERESS Array B 10.39 333 Pn **Pn 19 04 06.5 -0.4**
comp=Z,0.6nm,0.3s,baz=160,slow=14,SNR=25
GERES Sn **Sn 19 05 58.5 -4.3**
comp=Z,0.5nm,0.3s,baz=157,slow=25,SNR=2.6
GERES LR LR 19 09 13.5
comp=Z,465nm,21.5s,baz=146,slow=44
comp=Z,1.1nm,0.3s
GERES GERESS Array B 10.39 333 **Pn 19 04 05.6 -1.3**
DAVOX Davos/Dischmat 10.57 315 Pn **Pn 19 04 10.0 +0.6**
comp=Z,2.0nm,0.3s,baz=151,slow=14,SNR=29
DAVOX Sn **Sn 19 06 02.8 -4.5**
comp=Z,0.7nm,0.3s,baz=142,slow=23,SNR=2.1
DAVOX LR LR 19 08 53.9
comp=Z,190nm,19.2s,baz=112,slow=41
comp=Z,11nm,0.6s
RETA Reutte 10.57 320 *e*Pn **Pn 19 04 09.2 -0.1**
comp=Z,1.6nm,0.2s
KHC Kasperske Hory 10.68 334 **Pn 19 04 11.7 +0.9**
KHC Kasperske Hory 10.68 334 *e*P **Pn 19 04 10.0 -0.7**
KHC *e* 19 06 08.4
KHC MLR MLR
comp=Z,700nm,13.9s
KHC Kasperske Hory 10.68 334 *e*PN **Pn 19 04 10.0 -0.7**
KHC *e*SN **Sn 19 06 08.4 -1.4**
KHC AMS AMS 19 08 40.0
comp=Z,700nm,13.9s
KHC Kasperske Hory 10.68 334 ⇑P **Pn 19 04 11.0 +0.2**
KRLC Kraliky 10.70 346 *e*P **Pn 19 04 12.5 +1.4**
KRLC MLR MLR
comp=Z,600nm,15.1s
KRLC Kraliky 10.70 346 *e*PN **Pn 19 04 12.5 +1.4**
KRLC AMS AMS 19 09 00.0
comp=Z,600nm,15.1s
SBF Sospel 10.72 297 *e*Pn **Pn 19 04 15.9 +4.5**
SBF *e*Sn **Sn 19 06 05.6 -5.4**
comp=Z,5.4nm,0.4s
MONC Moncucco Torin 10.84 304 ⇑P **Pn 19 04 14.8 +1.8**
DAVA Damuels 10.88 317 *i* Pn **Pn 19 04 15.0 +1.3**
comp=Z,1.7nm,0.2s
DAVA Damuels 10.88 317 ⇑P **Pn 19 04 15.4 +1.7**
WET Wettzell 10.93 332 P **Pn 19 04 13.2 -1.0**
WET pmax pmax
comp=Z,13nm,0.9s
GOPC GO Pecny, Ondr 11.00 340 AMS AMS 19 08 40.0
comp=Z,700nm,12.9s
DPC Dobruska-Polom 11.05 345 *e*P **Pn 19 04 16.6 +0.7**
DPC MLR MLR
comp=Z,900nm,12.3s
DPC Dobruska-Polom 11.05 345 *e*PN **Pn 19 04 16.6 +0.7**
DPC AMS AMS 19 09 00.0
comp=Z,900nm,12.3s
LLS Linth-Limmern 11.09 314 P **Pn 19 04 18.3 +1.8**
LLS pmax pmax
comp=Z,16nm,1.0s
CSS Mathiatis 11.12 111 Pn **Pn 19 04 21.0 +4.1**
PRU Pruhonice 11.14 339 *e*P **Pn 19 04 16.1 -0.9**
PRU MLR MLR
comp=Z,700nm,12.1s
PRU Pruhonice 11.14 339 *e*PN **Pn 19 04 16.1 -0.9**
PRU AMS AMS 19 09 00.0
comp=Z,700nm,12.1s
SWA2 11.18 158 P **Pn 19 04 16.0 -1.7**
baz=162
SWA2 S Sn 19 06 09.6 -12
baz=162
LMR La Mourre 11.23 293 *e*Pn **Pn 19 04 20.8 +2.6**
LMR *e*Sn **Sn 19 06 18.8 -4.4**
comp=Z,0.5nm,0.3s
LMR La Mourre 11.23 293 P **Pn 19 04 20.2 +2.0**
UPC Upice 11.26 345 AMS AMS 19 09 10.0
comp=Z,800nm,13.0s
OSTC Ostas 11.27 345 *e*PN **Pn 19 04 18.3 -0.5**
OSTC AMS AMS 19 09 10.0
comp=Z,800nm,12.2s
CHVC Chvalec 11.33 345 *e*PN **Pn 19 04 20.6 +0.9**
CHVC AMS AMS 19 09 20.0
comp=Z,700nm,17.7s
MBDF Montbardon 11.46 300 *e*Pn **Pn 19 04 23.0 +1.4**
MBDF *e*Sn Sn 19 06 22.5 -6.7
comp=Z,7.1nm,0.6s
PVCC Panska Ves 11.62 340 AMS AMS 19 09 10.0
comp=Z,600nm,13.2s
BNI Bardonecchia 11.64 302 Pn **Pn 19 04 25.1 +1.0**
BNI Bardonecchia 11.64 302 P **Pn 19 04 25.0 +1.0**
BNI Bardonecchia 11.64 302 ⇑P **Pn 19 04 27.0 +2.9**
LPG La Plagne 11.77 304 *e*Pn **Pn 19 04 25.1 -0.9**
LPG *e*Sn Sn 19 06 27.9 -9.1
comp=Z,11nm,0.6s
LPG La Plagne 11.77 304 P **Pn 19 04 24.8 -1.2**
LPL La Plagne 11.79 304 *e*Pn **Pn 19 04 25.6 -0.6**
LPL *e*Sn Sn 19 06 29.4 -8.0
comp=Z,13nm,0.4s
LPL La Plagne 11.79 304 P **Pn 19 04 24.8 -1.4**
SENIN Lac Senin/Sane 11.82 308 **Pn 19 04 26.2 -0.4**
SLE Schleitheim 11.92 316 P **Pn 19 04 28.5 +0.8**
SLE pmax pmax
comp=Z,8.0nm,0.6s
NKC Novy Kostel 12.00 334 AMS AMS 19 09 30.0
comp=Z,700nm,13.8s
GRF Grafenberg Arr 12.01 329 P **Pn 19 04 29.2 +0.3**
GRF pmax pmax
comp=Z,11nm,1.1s
SMRF Simiane la Rot 12.04 295 *e*Pn **Pn 19 04 31.4 +1.9**
ORIF Oris-en-Rattie 12.12 300 *e*Pn **Pn 19 04 31.8 +1.2**
ORIF *e*Sn Sn 19 06 37.8 -7.5
comp=Z,6.5nm,0.5s
ORIF Oris-en-Rattie 12.12 300 P **Pn 19 04 31.3 +0.7**
STU Stuttgart 12.22 321 P **Pn 19 04 31.8 0.0**
STU pmax pmax
comp=Z,67nm,0.6s
BFO Black Forest 12.36 318 **Pn 19 04 32.0 -1.7**
BFO Black Forest 12.36 318 P **Pn 19 04 32.0 -1.7**
BFO Black Forest 12.36 318 ⇑P **Pn 19 04 32.8 -0.9**
AKASG Malin Array Be 12.49 26 Pn **Pn 19 04 32.8 -2.7**
comp=Z,0.4nm,0.3s,baz=289,slow=19,SNR=1.9
AKASG LR LR 19 10 25.3
comp=Z,381nm,18.6s,baz=204,slow=42
AKBB Malin Array Si 12.49 26⇑*e*P **Pn 19 04 38.8 +3.3**
MOX Moxa 12.64 333 P **Pn 19 04 38.4 +0.9**
MOX pmax pmax
comp=Z,14nm,0.8s
CABF La Chapelle 12.68 308 *e*Pn **Pn 19 04 36.8 -1.3**
CABF *e*Sn Sn 19 06 49.5 -9.3
comp=Z,2.2nm,0.3s
CABF La Chapelle 12.68 308 P **Pn 19 04 36.8 -1.3**
HINF Hinteralfeld 12.84 313 *e*Pn **Pn 19 04 38.7 -1.7**
HINF *e*Sn Sn 19 06 52.0 -11
comp=Z,4.8nm,0.4s
HINF Hinteralfeld 12.84 313 P **Pn 19 04 38.4 -2.0**
ECH Echery 12.90 315 Pn **Pn 19 04 41.3 +0.1**
ECH Echery 12.90 315 P **Pn 19 04 41.3 +0.1**
ECH Echery 12.90 315 ⇑P **Pn 19 04 41.3 +0.1**
VIVF Saint-Julien-I 12.91 299 *e*Pn **Pn 19 04 43.0 +1.6**
VIVF *e*Sn Sn 19 06 57.6 -7.0
comp=Z,1.1nm,0.4s
CDF Champ du Feu 12.96 316 *e*Pn **Pn 19 04 41.1 -0.9**
CDF *e*Sn Sn 19 06 54.1 -12
comp=Z,13nm,0.8s
CDF Champ du Feu 12.96 316 P **Pn 19 04 41.4 -0.6**
SSB Saint Sauveur 13.14 300 Pn **Pn 19 04 43.9 -0.5**
SSB Saint Sauveur 13.14 300 P **Pn 19 04 43.9 -0.5**
HAU Haudompre 13.23 313 *e*Pn **Pn 19 04 44.7 -0.9**
HAU *e*Sn Sn 19 07 01.6 -11
comp=Z,15nm,0.5s
HAU Haudompre 13.23 313 P Pn 19 04 42.7 -2.9
RYAN Fayoum 13.24 141 P **Pn 19 04 43.7 -2.1**
baz=143
LASF Ste Croix 13.27 295 *e*Pn **Pn 19 04 47.9 +1.7**
ANN Anapa 13.38 62 *e*P **Pn 19 04 44.8 -2.8**
ANN *e*S **Sn 19 07 11.9 -3.9**
ANN pmax pmax
comp=Z,85nm,1.6s
HSAF As Saff 13.47 135 P **Pn 19 04 46.0 -2.9**
baz=138
GLL Jalalah 13.58 135 P Pn 19 04 46.8 -3.7
baz=137
MMAI Mount Meron Ar 13.61 115 Pn **Pn 19 04 49.9 -1.0**
comp=Z,1.3nm,0.3s,baz=293,slow=13,SNR=9.0
MMAI Sn **Sn 19 07 16.2 -5.4**
comp=Z,0.7nm,0.3s,baz=266,slow=39,SNR=1.6
MMAI LR LR 19 11 15.5
comp=Z,160nm,19.3s,baz=174,slow=42
comp=Z,0.4nm,0.2s
GEM Giv'at Ha'Em 13.68 114 Pn **Pn 19 04 53.8 +1.9**
NATI Neve Ativ 13.71 113 Pn **Pn 19 04 53.3 +1.1**
PAGF Fort de Pagny 13.88 314 *e*Pn **Pn 19 04 54.4 -0.1**
PAGF *e*Sn Sn 19 07 16.4 -12
comp=Z,3.1nm,0.5s
SFTF Sexfontaines 14.08 312 *e*Sn Sn 19 07 21.9 -11
comp=Z,4.5nm,0.4s
SMF Signal de Mont 14.09 305 *e*Pn **Pn 19 04 55.4 -2.0**
SMF *e*Sn Sn 19 07 23.9 -9.3
comp=Z,16nm,0.6s
SMF Signal de Mont 14.09 305 P **Pn 19 04 54.9 -2.5**
AMAZ Amatzia 14.15 121 Pn **Pn 19 04 58.7 +0.4**
MEZF Maizieres J'vi 14.23 313 *e*Pn **Pn 19 04 57.9 -1.3**
SAVF Savonnieres en 14.25 314 *e*Sn Sn 19 07 25.2 -12
comp=Z,2.5nm,0.5s
MTLF Montolieu 14.30 291 *e*Pn **Pn 19 05 02.7 +2.4**
LOR Lormes 14.34 307 *e*Pn **Pn 19 05 00.3 -0.4**
baz=116
LOR *e*Sn Sn 19 07 29.0 -10
comp=Z,12nm,0.5s
LOR Lormes 14.34 307 P **Pn 19 04 59.9 -0.8**
YTIR Yattir 14.39 121 Pn **Pn 19 05 03.4 +1.7**
AVF Avril sur Loir 14.46 305 *e*Pn **Pn 19 05 01.9 -0.4**
AVF *e*Sn Sn 19 07 30.5 -12
comp=Z,5.6nm,0.7s
AVF Avril sur Loir 14.46 305 P **Pn 19 05 00.9 -1.4**
SSF Saint Saulge 14.47 306 *e*Pn **Pn 19 05 00.6 -1.9**
SSF *e*Sn Sn 19 07 28.8 -14
comp=Z,7.8nm,0.6s
SSF Saint Saulge 14.47 306 P **Pn 19 05 00.2 -2.3**
BGF Bois d'Agland 14.69 303 *e*Pn **Pn 19 05 05.8 +0.2**
BGF *e*Sn Sn 19 07 38.6 -9.2
comp=Z,5.8nm,0.5s
DAMI2 DAM2 14.73 121 Pn **Pn 19 05 05.4 -0.7**
KRMI Paran Flat 14.96 126 Pn **Pn 19 05 06.8 -2.6**
KRMI Sn Sn 19 07 45.7 -9.0
PRNI Paran 14.98 124 Pn **Pn 19 05 08.7 -0.9**
PRNI Sn Sn 19 07 45.7 -9.4
TCF Toulx Ste Croi 15.01 302 *e*Pn **Pn 19 05 10.2 +0.3**
TCF *e*Sn Sn 19 07 46.7 -8.9
comp=Z,0.8nm,0.3s
ASF Jabal al Asfar 15.12 115 Pn **Pn 19 05 12.2 +0.7**
comp=Z,0.3nm,0.3s,baz=32,slow=5.0,SNR=1.6
ASF LR LR 19 12 15.1
comp=Z,299nm,21.6s,baz=287,slow=42
comp=Z,1.1nm,0.3s
HRFI Mount Harif 15.22 125 Pn **Pn 19 05 10.8 -1.9**
MBRI Mt Berech 15.31 126 Pn **Pn 19 05 11.8 -2.2**
EIL Elat 15.42 126 Pn **Pn 19 05 14.0 -1.4**
comp=Z,0.8nm,0.3s,baz=6.9,slow=3.9,SNR=9.5
EIL Sn Sn 19 07 55.9 -10
comp=Z,0.7nm,0.3s,baz=21,slow=21,SNR=7.1
EIL LR LR 19 13 58.1
comp=Z,78nm,19.1s,baz=254,slow=48
comp=Z,3.9nm,0.7s
EIL Elat 15.42 126 Pn **Pn 19 05 14.3 -1.0**
MNK Minsk 15.54 16 *i* P **Pn 19 05 19.2 +2.4**
MNK *i* S **Sn 19 08 17.7 +9.3**
MNK pmax pmax
comp=Z,81nm,0.9s
MNK pmax pmax
comp=N,68nm,1.1s
MNK pmax pmax
comp=E,4.0nm,1.1s
MNK MLR MLR
comp=N,170nm,12.0s
MNK MLR MLR
comp=Z,187nm,11.0s
MNK MLR MLR
comp=E,16nm,14.0s
MNK Minsk 15.54 16 *i* P **Pn 19 05 19.3 +2.4**
comp=E,4.0nm,1.1s
MNK *i* P **Pn 19 05 19.3 +2.4**
comp=N,68nm,1.1s
MNK *i* P **Pn 19 05 19.3 +2.4**
comp=Z,81nm,0.8s,baz=201
MNK *i* PP **sP 19 05 28.3 -0.5**
MNK *i* S **Sn 19 08 17.8 +9.3**
MNK *i* SS **S 19 08 34.2 +10**
MNK *i* LQ LQ 19 10 04.0
MNK *i* LR LR 19 11 15.4
MNK *i* LRM MLR 19 12 17.6
comp=N,170nm,11.8s
MNK *i* LRM MLR 19 12 20.0
comp=Z,187nm,10.7s
MNK *i* LRM MLR 19 12 46.6
comp=E,16nm,14.0s
NACGM Naroch 15.71 13⇓*e*P **Pn 19 05 19.7 +0.7**
baz=199
PABE Paberze 15.93 7 Pn **Pn 19 05 21.5 -0.3**
PABE IAmb IAmb 19 05 38.1
comp=Z,67nm,1.1s
PABE Paberze 15.93 7 *e*P **Pn 19 05 22.0 +0.3**
IIGN Ignalina 16.05 11 *e*P **Pn 19 05 24.3 +0.9**
ISAL Salakas 16.25 11 *e*P **Pn 19 05 26.1 +0.2**
ETSF Etsaut 16.27 288 *e*Pn **Pn 19 05 29.5 +3.1**
ETSF *e*Sn **Sn 19 08 20.6 -5.9**
comp=Z,0.7nm,0.5s
ETSF Etsaut 16.27 288 P **P 19 05 30.0 +0.7**
VSVD Vaisvydziai 16.39 6 *e*P **Pn 19 05 26.8 -0.9**
KIV Kislovodsk 16.90 68 *e*P **P 19 05 38.9 +2.6**
KIV *e*S **Sn 19 08 47.5 +5.7**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,24nm,14.0s
KBZ Khabaz 17.03 69 P **P 19 05 39.9 +2.3**
comp=Z,2.2nm,0.8s,baz=266,slow=12,SNR=5.1
KBZ Khabaz 17.03 69⇑*e*P **P 19 05 39.7 +2.1**
VSR Storozhevoye 17.25 42 *e*P **P 19 05 41.7 +1.7**
VSR pmax pmax
comp=Z,10.0nm,0.7s
GOF Gofitskoye 17.32 65⇑*e*P P 19 05 49.0 +8.2
LDF La Druitiere 17.32 308 *e*Pn **Pn 19 05 41.7 +2.2**
VORR Voronezh 17.53 41 *e*P **P 19 05 44.3 +1.2**
VORR pmax pmax
comp=Z,45nm,1.7s
FLN La Foliniere 17.61 308 *e*Pn **Pn 19 05 45.1 +2.1**
FLN *e*Sn Sn 19 08 47.2 -11
comp=Z,2.0nm,0.5s
ZEI Tsey 17.70 73 *e*P **P 19 05 47.8 +2.6**
ZEI pmax pmax
comp=Z,10.0nm,1.2s
LPSR Galich'ya Gora 17.96 38 *e*P **Pn 19 05 48.1 +0.8**
LPSR pmax pmax
comp=Z,50nm,0.9s
GNI Garni 18.43 81 P **P 19 05 51.5 -1.8**
comp=Z,6.8nm,1.1s,baz=326,slow=3.6,SNR=2.1
GNI LR LR 19 13 13.1
comp=Z,108nm,20.2s,baz=268,slow=38
GNI Garni 18.43 81⇓*e*P **Pn 19 05 55.7 +2.3**
GNI pmax pmax
comp=Z,37nm,1.7s
VRH Novokhopyorsk 18.60 45 *e*P **Pn 19 06 01.3 +6.1**
VRH pmax pmax
comp=Z,20nm,1.0s
OBN Obninsk 18.69 29 P **P 19 05 55.1 -0.7**
comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=7.1
comp=Z,4.9nm,0.7s
OBN Obninsk 18.69 29*d i*P **P 19 05 56.5 +0.8**
OBN pmax pmax
comp=Z,56nm,1.7s
OBN MLR MLR
comp=Z,490nm,17.0s
SGMF Saint Gilles 18.72 305 *e*Pn **Pn 19 06 01.0 +4.4**
ESBB Sonseca Array 18.96 278 P **P 19 05 58.1 -1.0**
ESDC Sonseca Array 18.96 278 P **P 19 05 59.2 +0.2**
comp=Z,0.2nm,0.3s,baz=72,slow=11,SNR=21
ESDC LR LR 19 13 16.5
comp=Z,100nm,18.8s,baz=74,slow=37
comp=Z,2.5nm,0.7s
ESDC Sonseca Array 18.96 278 P **P 19 05 58.5 -0.6**
QUIF Quistinic 19.00 303 *e*Pn **Pn 19 06 05.4 +5.3**
MTSE Matsula 19.10 5 *e*P **P 19 05 59.8 -0.4**
VSU Vasula 19.14 10*c i*P **P 19 06 00.3 -0.4**
VSU pmax pmax
comp=Z,97nm,0.7s
VSU Vasula 19.14 10 *e*P **P 19 06 00.7 0.0**
PAB San Pablo 19.28 277 P **P 19 06 03.1 +0.6**
PAB IAmb IAmb 19 06 05.3
comp=Z,24nm,1.2s
PAB San Pablo 19.28 277 P **P 19 06 03.1 +0.6**
PAB pmax pmax
comp=Z,24nm,1.2s
PAB San Pablo 19.28 277 ⇑P **P 19 06 04.4 +1.9**
MOS Moscow 19.55 29 *e*P **P 19 06 03.5 -1.8**
MOS *e*S **Sn 19 09 42.9 -2.6**
MOS pmax pmax
comp=Z,61nm,0.9s

UPP Uppsala 20.23 356 *eP* **P 19 06 12.6 0.0**
MAK Makhachkala 20.35 72 *eP* **P 19 06 14.2 +0.2**
MAK *eS* **S 19 10 01.6 +0.3**
MAK pmax pmax
comp=Z,175nm,1.1s
MAK MLR MLR
comp=Z,45nm,14.0s
AAL Aland 20.47 359 *eP* **P 19 06 14.6 -0.5**
MEF Metsahovi 20.63 5 *eP* **P 19 06 16.4 -0.5**
HFS Hagfors 20.89 350 *P* **P 19 06 19.1 -0.7**
comp=Z,13nm,0.6s,baz=153,slow=10.0,SNR=31
HFS LR LR 19 15 05.9
comp=Z,140nm,19.2s,baz=165,slow=39
comp=Z,13nm,0.6s
PUL Pulkovo 20.95 14⇑ *eP* **P 19 06 20.0 -0.4**
PUL pmax pmax
comp=Z,75nm,0.9s
KONO Kongsberg 21.13 344⇓ *iP* **P 19 06 21.6 -0.7**
KONO pmax pmax
comp=Z,23nm,1.3s
KONO Kongsberg 21.13 344 *eP* **P 19 06 21.2 -1.1**
OSL Oslo 21.17 346 *eP* **P 19 06 22.2 -0.5**
OSL IAmb IAmb 19 06 32.8
comp=Z,86nm,1.5s
TAM Tamanrasset 21.25 222 P **P 19 06 26.8 +2.8**
TAM pmax pmax
comp=Z,11nm,1.4s
RAF Rauma 21.32 1 *eP* **P 19 06 22.6 -1.7**
MDT Midelt 21.50 259 P **P 19 06 25.8 -0.8**
comp=Z,1.0nm,0.7s,baz=99,slow=15,SNR=3.5
NC602 NORSAR Array S 21.78 348 P **P 19 06 28.2 -1.1**
NC602 NORSAR Array S 21.78 348 *eP* **P 19 06 28.6 -0.7**
NC602 IAmb IAmb 19 06 28.8
comp=Z,26nm,0.9s
NORES NORESS Array B 21.78 348 P **P 19 06 28.6 -0.7**
FINES FINESS Array B 21.98 7 P **P 19 06 30.1 -1.4**
comp=Z,10.0nm,0.6s,baz=176,slow=12,SNR=41
comp=Z,10.0nm,0.6s
FINES FINESS Array B 21.98 7 P **P 19 06 30.5 -1.0**
FINES FINESS Array B 21.98 7 P **P 19 06 30.5 -1.0**
FIA1 FINESS Array S 21.98 7 P **P 19 06 30.4 -1.1**
FIA1 IAmb IAmb 19 06 41.2
comp=Z,22nm,0.9s
NAO01 NORSAR Array S 21.99 347 P **P 19 06 31.0 -0.6**
NB2 NORSAR Subarra 22.12 348 P **P 19 06 32.3 -0.7**
comp=Z,35nm,1.0s,baz=163,slow=11
NB2 NORSAR Subarra 22.12 348 P **P 19 06 32.3 -0.7**
baz=163,slow=11
NOA NORSAR Array B 22.12 348 P **P 19 06 32.1 -1.0**
comp=Z,18nm,1.0s,baz=164,slow=10,SNR=38
NOA LR LR 19 16 12.1
comp=Z,103nm,19.4s,baz=165,slow=39
comp=Z,18nm,1.0s
NBO00 NORSAR Array S 22.19 347 P **P 19 06 30.6 -3.1**
EKA Eskdalemuir Ar 22.26 322 P **P 19 06 33.9 -0.6**
comp=Z,7.2nm,0.7s,baz=122,slow=11,SNR=23
EKA LR LR 19 16 22.8
comp=Z,111nm,19.5s,baz=148,slow=40
comp=Z,7.2nm,0.7s
ESK Eskdalemuir 22.27 322 P **P 19 06 33.1 -1.5**
ESK IAmb IAmb 19 06 48.6
comp=Z,28nm,0.9s
ESK Eskdalemuir 22.27 322 P **P 19 06 33.1 -1.5**
ESK pmax pmax
comp=Z,28nm,1.0s
NC303 NORSAR Array S 22.27 348 P **P 19 06 33.9 -0.7**
PVAQ Vaqueiros 22.30 273 P **P 19 06 34.5 -0.7**
SKAR Skarslia 22.34 344 *eP* **P 19 06 35.4 0.0**
SKAR IAmb IAmb 19 06 37.4
comp=Z,24nm,1.2s
DOMB Dombas 23.43 346 *eP* **P 19 06 47.0 +0.3**
DOMB IAmb IAmb 19 06 56.5
comp=Z,18nm,0.8s
KLMR Klimovskoe 24.14 23 *eP* **P 19 06 51.1 -2.3**
KLMR *e* 19 10 35.0
KLMR pmax pmax
comp=Z,23nm,0.8s
KLMR MLR MLR
comp=Z,205nm,12.0s
KLMR Klimovskoe 24.14 23 *eP* **P 19 06 51.1 -2.3**
KLMR AMP 19 07 01.9
comp=Z,23nm,0.8s
KLMR *e*PcP **PcP 19 10 35.1 +1.3**
KLMR LR LR 19 15 53.3
KLMR AMP 19 17 18.3
comp=Z,205nm,11.5s
NSS Namsos 25.35 351 *eP* **P 19 07 03.3 -1.0**
KIRV Kirov 26.28 35 LR LR 19 18 11.2
comp=Z,272nm,18.8s,baz=261,slow=38
KIRV Kirov 26.28 35⇓ *eP* **P 19 07 11.4 -1.4**
PRGR Permogore 26.70 27 *eP* **P 19 07 15.7 -0.9**
PRGR pmax pmax
comp=Z,19nm,0.9s
AKTO Aktyubinsk 28.15 55 P **P 19 07 29.2 -0.6**
comp=Z,1.5nm,0.5s,baz=244,slow=19,SNR=5.7
AKTO LR LR 19 20 41.8
comp=Z,106nm,19.4s,baz=284,slow=41
comp=Z,1.5nm,0.5s
STEI Steigen 28.41 356 *eP* **P 19 07 31.1 -0.6**
GEYT Alibeck 29.07 81 P **P 19 07 35.7 -2.4**
comp=Z,3.3nm,0.8s,baz=272,slow=10,SNR=7.2
comp=Z,3.3nm,0.8s
GEYT Alibeck 29.07 81 P **P 19 07 38.8 +0.7**
GEYT IAmb IAmb 19 07 52.3
comp=Z,4.9nm,0.8s
ABKAR Akbulak array 29.27 58 P **P 19 07 39.1 -0.7**
KTK1 Kautokeino 29.37 2 *eP* **P 19 07 39.8 -0.6**
KTK1 IAmb IAmb 19 07 41.0
comp=Z,16nm,1.1s
ARU Arti 29.82 43 P **P 19 07 43.2 -1.2**
comp=Z,1.6nm,0.4s,baz=261,slow=15,SNR=5.5
ARU LR LR 19 20 26.2
comp=Z,109nm,19.8s,baz=256,slow=38
comp=Z,1.6nm,0.4s
ARU Arti 29.82 43 *d iP* **P 19 07 43.8 -0.6**
ARU 19 08 40.3
ARU S **S 19 12 39.9 -0.2**
ARU pmax pmax
comp=Z,12nm,1.8s
ARU MLR MLR
comp=Z,160nm,14.0s
ARA0 ARCESS Array S 29.97 3 *eP* **P 19 07 44.7 -0.9**
ARA0 IAmb IAmb 19 07 45.6
comp=Z,110nm,1.9s
ARCES ARCESS Array B 29.97 3 P **P 19 07 44.0 -1.7**
comp=Z,6.1nm,0.8s,baz=190,slow=9.7,SNR=23
ARCES LR LR 19 20 42.0
comp=Z,144nm,19.5s,baz=164,slow=38
comp=Z,6.1nm,0.8s
ARCES ARCESS Array B 29.97 3 P **P 19 07 44.6 -1.1**
ARCES ARCESS Array B 29.97 3 P **P 19 07 44.6 -1.1**
ARCES pmax pmax
comp=Z,21nm,1.2s
TRO Tromso 29.97 359 *eP* **P 19 07 44.9 -0.8**
SVE Sverdlovsk 31.03 43 *eP* **P 19 07 55.2 +0.1**
SVE MLR MLR
comp=Z,226nm,14.0s
TOA0 Torodi Ar. Sit 31.34 218 P **P 19 07 58.3 +0.1**
TOA0 IAmb IAmb 19 08 06.0
comp=Z,14nm,1.1s
TORD Torodi Ar. Bea 31.34 218 P **P 19 07 58.6 +0.4**
comp=Z,8.5nm,0.7s,baz=32,slow=9.4,SNR=39
comp=Z,8.5nm,0.7s
TORD Torodi Ar. Bea 31.34 218 P **P 19 07 57.1 -1.1**
TORD IAmb IAmb 19 08 06.0
comp=Z,10nm,1.0s
KOWA Kowa 33.19 228 LR LR 19 23 25.7
comp=Z,91nm,19.0s,baz=28,slow=39
KOWA Kowa 33.19 228 P **P 19 08 15.1 +0.5**
KOWA IAmb IAmb 19 08 19.0
comp=Z,3.2nm,0.7s
BORG Borgarnes 34.83 330 LR LR 19 25 06.1
comp=Z,48nm,18.9s,baz=122,slow=40
BRVK Borovoye 35.96 51 P **P 19 08 38.6 +0.5**
BRVK IAmb IAmb 19 08 46.6
comp=Z,3.7nm,0.7s
BRVK Borovoye 35.96 51⇓ *iP* **P 19 08 38.4 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
WSAR Wadi Sarin 35.98 106 LR LR 19 27 13.9
comp=Z,34nm,18.6s,baz=332,slow=43
BVAR Borovoye Array 36.02 52 LR LR 19 23 27.3
comp=Z,51nm,18.8s,baz=282,slow=36
KKAR Karatay Array 37.06 68 P **P 19 08 47.3 -0.4**
KKAR Karatay Array 37.06 68 P **P 19 08 47.3 -0.4**
CHGR Chuyangaron 37.21 76 P **P 19 08 48.2 -0.8**
CHGR IAmb IAmb 19 08 57.2
comp=Z,16nm,1.0s
CHGR Chuyangaron 37.21 76 P **P 19 08 48.3 -0.8**
CHGR pmax pmax
comp=Z,17nm,1.0s
SPITS Spitsbergen Ar 38.59 359 P **P 19 08 59.8 -0.4**
comp=Z,14nm,1.0s,baz=116,slow=9.4,SNR=6.6
SPITS LR LR 19 26 47.4
comp=Z,145nm,18.6s,baz=148,slow=39
comp=Z,14nm,1.0s
AAK Ala-Archa 40.02 68 P **P 19 09 12.4 -0.3**
comp=Z,2.7nm,0.7s,baz=266,slow=6.9,SNR=2.7
AAK LR LR 19 30 35.7
comp=Z,71nm,18.1s,baz=280,slow=43
comp=Z,2.7nm,0.7s
AAK Ala-Archa 40.02 68 P **P 19 09 11.2 -1.6**
AAK Ala-Archa 40.02 68 *c iP* **P 19 09 12.9 +0.2**
AAK pmax pmax
comp=Z,12nm,1.7s
DBIC Dimbokro 40.14 222 P **P 19 09 13.4 -0.2**
comp=Z,3.2nm,0.8s,baz=18,slow=7.7,SNR=4.3
DBIC LR LR 19 27 01.3
comp=Z,114nm,19.2s,baz=9.0,slow=38
comp=Z,3.2nm,0.8s
DBIC Dimbokro 40.14 222 P **P 19 09 13.8 +0.1**
MBAR Mbarara 41.19 165 LR LR 19 29 01.7
comp=Z,47nm,19.0s,baz=337,slow=40
KURBB Kurchatov Arra 41.21 55 P **P 19 09 20.7 -1.4**
comp=Z,2.1nm,0.9s,baz=280,slow=9.0,SNR=15
comp=Z,2.1nm,0.9s
KURK Kurchatov 41.25 55 P **P 19 09 20.7 -1.8**
KSH Kashi 41.99 72 P **P 19 09 27.9 -1.0**
KSH pP pP 19 09 34.5 -0.3
MAKZ Makanchi 44.17 60 P **P 19 09 46.5 +0.2**
MAKZ IAmb IAmb 19 09 47.0
comp=Z,11nm,0.9s
MAKZ Makanchi 44.17 60 P **P 19 09 46.5 +0.2**
MAKZ pmax pmax
comp=Z,11nm,0.9s
MK31 Makanchi Array 44.38 60 P **P 19 09 47.6 -0.5**
MK31 Makanchi Array 44.38 60 *c iP* **P 19 09 47.5 -0.5**
MKAR Makanchi Array 44.38 60 P **P 19 09 47.5 -0.5**
comp=Z,14nm,0.6s,baz=277,slow=7.5,SNR=128
MKAR LR LR 19 30 32.6
comp=Z,77nm,18.1s,baz=296,slow=39
comp=Z,14nm,0.6s
ZAA0 Zalesovo Array 44.56 49 P **P 19 09 48.4 -0.9**
ZAA0 IAmb IAmb 19 10 17.7
comp=Z,4.8nm,0.6s
ZALV Zalesovo Beam 44.56 49 P **P 19 09 48.1 -1.1**
comp=Z,2.2nm,0.3s,baz=275,slow=8.1,SNR=15
ZALV LR LR 19 30 40.6
comp=Z,103nm,18.0s,baz=266,slow=39
comp=Z,2.2nm,0.3s
ZALV Zalesovo Beam 44.56 49 P **P 19 09 48.9 -0.4**
ZALV Zalesovo Beam 44.56 49 P **P 19 09 48.9 -0.4**
NRIK Noril'sk 45.34 27 P **P 19 09 56.1 +0.8**
comp=Z,4.6nm,0.7s,baz=256,slow=4.9,SNR=5.1
NRIK LR LR 19 31 32.3
comp=Z,208nm,18.6s,baz=254,slow=40
comp=Z,4.6nm,0.7s
NRIK Noril'sk 45.34 27 *ceP* **P 19 09 56.3 +1.0**
NRIK pmax pmax
comp=Z,10.0nm,1.4s
SFJD Kangerlussuaq 46.96 329 LR LR 19 30 29.2
comp=Z,97nm,20.1s,baz=93,slow=37
DGZ Jazzator, Alta 47.00 55 *d iP* **P 19 10 09.2 +0.4**
DGZ pmax pmax
comp=Z,11nm,0.7s
WMQ Urumqi 48.89 62 *eP* **P 19 10 23.6 +0.1**
FRB Frobisher Bay 54.91 327 LR LR 19 35 36.1
comp=Z,84nm,18.3s,baz=26,slow=37
TIXI Tiksi 58.14 21 P **P 19 11 29.0 -1.8**
comp=Z,1.5nm,0.6s,baz=270,slow=5.9,SNR=3.4
TIXI LR LR 19 40 29.6
comp=Z,160nm,18.4s,baz=268,slow=40
comp=Z,1.5nm,0.6s
TIXI Tiksi 58.14 21⇓ *iP* **P 19 11 31.3 +0.5**
TIXI pmax pmax
comp=Z,5.0nm,0.9s
TSUM Tsumeb 58.70 183 LR LR 19 42 14.2
comp=Z,52nm,18.4s,baz=347,slow=42
GTA Gaotai 58.97 63 ⇓P **P 19 11 36.9 -0.4**
GTA pP pP 19 11 43.3 -0.1
GTA sP sP 19 11 47.8 +2.2
BOD Bodaibo 59.06 39 *eP* **P 19 11 36.4 -1.0**
BOD pmax pmax
comp=Z,7.0nm,1.8s
SONM Songino Array 59.37 51 P **P 19 11 38.5 -1.3**
comp=Z,5.6nm,0.9s,baz=285,slow=8.4,SNR=27
SONM LR LR 19 39 58.0
comp=Z,83nm,18.6s,baz=252,slow=39
comp=Z,5.6nm,0.9s
ULN Ulaanbaatar 59.75 51 *ceP* **P 19 11 42.2 -0.3**
ULN pmax pmax
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 59.75 51 ⇓P **P 19 11 42.6 0.0**
YAK Yakutsk 63.69 30 P **P 19 12 07.5 -1.0**
comp=Z,8.9nm,0.6s,baz=14,slow=0.3,SNR=13
YAK LR LR 19 43 04.7
comp=Z,120nm,18.9s,baz=269,slow=39
comp=Z,8.9nm,0.6s
YAK Yakutsk 63.69 30 *eP* **P 19 12 07.2 -1.4**
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
LBTB Lobatse 64.58 175 LR LR 19 43 01.3
comp=E,66nm,18.2s,baz=360,slow=38
HHC Hu-ho-hao-te 66.04 56 *eP* **P 19 12 25.0 +0.5**
HIA Hailar 66.31 45 *d iP* **P 19 12 26.3 +0.3**
HIA pmax pmax
comp=Z,6.0nm,1.0s
PZH PanZhiHua 67.03 74 P **P 19 12 31.8 +0.8**
XLT XiLinHaoTe 67.19 51 *eP* **P 19 12 31.5 -0.2**
XLT pP sP 19 12 39.0 -1.0
XLT sP pP 19 12 43.1 +5.2
ZEA Zeya 67.56 38 *eP* P 19 12 38.5 +4.7
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,10.0nm,0.6s
XAN Xi'an 68.00 64 ⇑P **P 19 12 36.8 -0.1**
XAN pP sP 19 12 46.3 +1.0
BOSA Boshof 68.13 176 P **P 19 12 36.3 -1.3**
comp=Z,3.6nm,0.9s,baz=308,slow=5.8,SNR=6.7
BOSA LR LR 19 45 09.5
comp=Z,99nm,18.1s,baz=8.5,slow=38
comp=Z,3.6nm,0.9s
BILL Bilibino 69.47 13 *eP* **P 19 12 43.6 -1.8**
BILL *e* 19 13 08.4
BILL *e* 19 15 20.9
BILL *e*PPP PPP 19 17 03.2
BILL pmax pmax
comp=Z,24nm,1.7s
CMAR Chiang Mai Arr 69.54 83 P **P 19 12 44.3 -2.4**
comp=Z,1.0nm,0.8s,baz=302,slow=7.1,SNR=12
comp=Z,1.0nm,0.8s
SEY Seymchan 70.63 21⇓ *iP* **P 19 12 52.9 +0.2**
SEY pmax pmax
comp=Z,3.0nm,0.8s
SUR Sutherland 71.75 180 LR LR 19 46 57.9
comp=Z,86nm,18.3s,baz=342,slow=38
YKA Yellowknife Ar 71.97 340 LR LR 19 46 20.6
comp=Z,33nm,18.5s,baz=302,slow=37
KLR Kul'dur 72.59 40 P **P 19 13 04.2 -0.5**
comp=Z,1.8nm,0.7s,baz=303,slow=7.4,SNR=6.4
KLR PP **PP 19 15 50.7 +5.1**
comp=Z,0.9nm,0.7s,baz=287,slow=8.9,SNR=3.7
KLR LR LR 19 48 54.5
comp=Z,65nm,18.2s,baz=26,slow=39
comp=Z,1.8nm,0.7s
KLR Kul'dur 72.59 40⇓ *iP* **P 19 13 03.8 -0.9**
KLR pmax pmax
comp=Z,12nm,2.5s
CN2 Changchun 72.72 47 P **P 19 13 05.1 -0.5**
MA2 Magadan 72.81 24 P **P 19 13 06.0 +0.1**
comp=Z,13nm,0.8s,baz=338,slow=5.5,SNR=5.7
MA2 LR LR 19 49 20.6
comp=Z,83nm,18.6s,baz=327,slow=39
comp=Z,13nm,0.8s
MA2 Magadan 72.81 24⇓ *eP* **P 19 13 06.1 +0.3**
MA2 pmax pmax
comp=Z,20nm,0.9s
ILAR Eielson Array 75.37 355 P **P 19 13 19.9 -0.8**
comp=Z,1.0nm,0.8s,baz=3.9,slow=5.1,SNR=8.6
comp=Z,1.0nm,0.8s
SJG San Juan 76.29 282 LR LR 19 42 36.4
comp=Z,8.0nm,21.9s,baz=49,slow=32
TKL Tuckaleechee C 77.72 306 LR LR 19 47 53.9
comp=Z,23nm,18.6s,baz=69,slow=36
KSRS Korea Array 78.24 51 P **P 19 13 36.2 -1.1**
comp=Z,4.0nm,0.7s,baz=314,slow=5.1,SNR=17
KSRS LR LR 19 52 01.2
comp=Z,41nm,18.5s,baz=205,slow=39
comp=Z,4.0nm,0.7s
YSS Yuzh-Sakhalins 79.42 36 *eP* **P 19 13 43.7 0.0**
YSS *e* 19 32 15.3
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,200nm,12.0s
PETK Petropavlovsk- 80.33 25 LR LR 19 54 28.1
comp=Z,78nm,18.3s,baz=306,slow=40
BDFB Brasilia 84.31 244 P **P 19 14 09.5 -0.4**
comp=Z,4.2nm,0.8s,baz=46,slow=9.7,SNR=5.5
comp=Z,4.2nm,0.8s
NEW Newport 84.73 333 LR LR 19 57 33.3
comp=Z,42nm,18.6s,baz=5.0,slow=40
MAJO Matsushiro 84.80 46⇑ *eP* **P 19 14 11.7 -0.4**
MAJO pmax pmax
comp=Z,14nm,1.3s
MJAR Matsushiro Arr 84.80 46 P **P 19 14 11.9 -0.2**
comp=Z,5.4nm,0.8s,baz=318,slow=4.4,SNR=15
MJAR LR LR 19 53 33.0
comp=Z,32nm,20.0s,baz=327,slow=37
comp=Z,5.4nm,0.8s
SHEM Shemya Is, Ala 85.06 16 LR LR 19 56 42.9
comp=Z,14nm,18.0s,baz=30,slow=39
ELK Elko 90.40 328 LR LR 19 56 44.8
comp=Z,58nm,21.0s,baz=30,slow=37
TXAR Lajitas Array 94.00 314 P **P 19 14 55.8 -0.2**
comp=Z,1.4nm,0.8s,baz=62,slow=4.5,SNR=13
TXAR LR LR 19 56 47.3
comp=Z,13nm,18.4s,baz=355,slow=35
comp=Z,1.4nm,0.8s
PFO Pinyon Flats O 96.95 325 LR LR 20 00 12.4
comp=Z,55nm,18.6s,baz=22,slow=36
LPAZ La Paz 99.34 257 LR LR 20 02 21.0
comp=Z,16nm,18.2s,baz=48,slow=37
WRA Warramunga Arr 120.45 91 PKP **PKPdf 19 20 28.3 -1.1**
comp=Z,0.6nm,0.8s,baz=310,slow=2.0,SNR=5.1
ASAR Alice Springs 122.19 95 PKP **PKPdf 19 20 31.2 -1.4**
comp=Z,1.6nm,0.8s,baz=307,slow=1.2,SNR=16

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*MOS **16** 19:10:28.8±1.5, 47°.89N×97°.63E, h11km, mb4.0/5, Error ellipse: s-maj=12.1km s-min=8.3km az=42.1*
*IDC **16** 19:10:30.2±3.7, 47°.93N×97°.81E, h19km±24km, mb3.6/10, mbtmp3.6/16, ML3.0/6, MS3.4/1, Error ellipse: s-maj=31.7km s-min=12.2km az=16.0*
*ASRS **16** 19:10:32.3±0.5, 48°.N±.3°×9°.8E±.°, h5km, MLh4.8/6, Error ellipse: s-maj=6.8km s-min=3.6km az=179.1, confirmed*
ISC 16 19:10:30.3±0.5, **47°.94N**±0°.04×**97°.60E**±0°.03, **h10**km, **n63,**
σ2§**12/82, mb3.8/11, 2C-5D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**2.67**	**359**	⇓Pg	**Pb**	**19 11 18.9**	**+0.6**
KNGR				Sg	**Sg**	**19 11 57.1**	**+0.9**
ERNS	**Erzin**	**2.83**	**326**	P	**Pn**	**19 11 18.2**	**+2.6**
ERNS						19 12 00.2	
ERNS	**Erzin**	**2.83**	**326**	Pn	**Pn**	**19 11 18.3**	**+2.6**
ERNS				Pg	**Pb**	**19 11 21.9**	**+0.9**
ERNS				Sg	**Sg**	**19 12 00.3**	**-0.9**
KZLR	**Kyzyl**	**4.29**	**333**	Pg	**Pg**	**19 11 51.0**	**-1.4**
KZLR				Sg	**Sg**	**19 12 45.5**	**-2.4**
MOY	**Mondy**	**4.33**	**29**	P	**Pn**	**19 11 37.7**	**+1.4**
MOY	**Mondy**	**4.33**	**29**	Pn	**Pn**	**19 11 37.7**	**+1.4**
MOY				Pg	**Pg**	**19 11 51.1**	**-2.1**
MOY				Sg	**Sg**	**19 12 51.1**	**+1.8**
ZAK	**Zakamensk**	**4.46**	**55**	P	**Pn**	**19 11 39.3**	**+1.3**
ZAK	**Zakamensk**	**4.46**	**55**	Pn	**Pn**	**19 11 39.4**	**+1.3**
ZAK				Pg	**Pg**	**19 11 51.3**	**-4.3**
ZAK				Sg	**Sg**	**19 12 51.7**	**-1.8**
SONM	**Songino Array**	**5.92**	**88**	Pn	**Pn**	**19 11 56.9**	**-1.2**
2.0nm,0.3s,baz=273,slow=14,SNR=23							
SONM				Pg	**Pb**	**19 12 15.7**	**+2.1**
5.0nm,0.3s,baz=276,slow=17,SNR=4.8							
SONM				Sn	**Sn**	**19 13 06.4**	**+0.4**
14nm,0.3s,baz=269,slow=24,SNR=8.6							
SONM				Lg	Lg	19 13 32.1	
25nm,0.3s,baz=267,slow=27,SNR=12							
17nm,0.7s							
SONM	**Songino Array**	**5.92**	**88**	*eP*	**Pn**	**19 11 57.3**	**-0.8**
SONM				pmax	pmax		
comp=Z,2.0nm,0.3s							
CERR	**Cheremushki**	**6.31**	**324**	Pn	Pn	19 12 08.5	+5.2
CERR				Pg	**Pg**	**19 12 29.9**	**-1.2**
DJO	**Djoy, Khakassi**	**6.34**	**322**	Pn	**Pn**	**19 12 07.2**	**+3.5**
DJO				Pg	**Pg**	**19 12 28.9**	**-2.7**
DJO				Sg	**Sg**	**19 13 55.0**	**+1.3**
ULN	**Ulaanbaatar**	**6.36**	**87**	*d iP*	**Pn**	**19 12 03.2**	**-0.9**
CUR	**Chagan-Uzun**	**6.46**	**293**	Pn	**Pn**	**19 12 08.5**	**+3.0**
CUR				Pg	**Pg**	**19 12 33.6**	**-0.3**
CUR				Sg	**Sg**	**19 13 58.8**	**+1.3**
ULGR	**Ulagan, Altay**	**6.86**	**297**	P	**Pn**	**19 12 12.7**	**+1.8**
ULGR	**Ulagan, Altay**	**6.86**	**297**	Pn	**Pn**	**19 12 12.8**	**+1.8**
ULGR				Pg	Pg	19 12 37.0	-4.4
ULGR				Sg	**Sg**	**19 14 11.1**	**+0.9**
DGZ	**Jazzator, Alta**	**6.94**	**289⇓**	*eP*	**Pn**	**19 12 14.6**	**+2.4**
DGZ	**Jazzator, Alta**	**6.94**	**289**	Pn	**Pn**	**19 12 14.9**	**+2.8**
DGZ				Pg	Pg	19 12 38.9	-4.3
DGZ				Sg	**Sg**	**19 14 13.2**	**+0.2**
ABNR	**Abakan**	**6.99**	**328⇓**	*eP*	**Pn**	**19 12 12.8**	**+0.2**
CHBI	**Chibit, Altay**	**7.04**	**294**	Pn	**Pn**	**19 12 16.8**	**+3.4**
CHBI				Pg	**Pg**	**19 12 41.5**	**-3.5**
CHBI				Sg	**Sg**	**19 14 11.9**	**-4.2**
MINR	**Mina**	**7.29**	**344**	Pg	**Pg**	**19 12 47.2**	**-2.6**
MINR				Sg	**Sg**	**19 14 29.6**	**+5.5**
ARTR	**Artybash**	**7.71**	**304**	Pn	**Pn**	**19 12 25.1**	**+2.6**
ARTR				Pg	Pg	19 12 51.9	-5.8
ARTR				Sg	**Sg**	**19 14 37.4**	**0.0**
TASR	**Tashtagol**	**7.87**	**311**	Sg	**Sg**	**19 14 37.6**	**-5.0**
LUZB	**Luzhba, Kemero**	**7.95**	**319**	Pg	Pn	19 12 31.5	+5.7
LUZB				Sg	**Sg**	**19 14 40.5**	**-4.7**
GTA	**Gaotai**	**8.67**	**169**	Pn	**Pn**	**19 12 36.3**	**+0.4**
GTA				Pg	Pg	19 13 05.9	-10
GTA				Sn	**Sn**	**19 14 11.8**	**-1.9**
GTA				Sg	Sg	19 14 55.6	-13
GTA	**Gaotai**	**8.67**	**169**	Pn	**Pn**	**19 12 36.3**	**+0.4**
GTA	**Gaotai**	**8.67**	**169**	Pg	Pg	19 13 05.9	-10
GTA	**Gaotai**	**8.67**	**169**	Sn	**Sn**	**19 14 11.8**	**-1.9**
GTA	**Gaotai**	**8.67**	**169**	Sg	Sg	19 14 55.6	-13
ZALV	**Zalesovo Beam**	**10.06**	**312**	Pn	**Pn**	**19 12 54.9**	**+0.2**
comp=Z,0.1nm,0.3s,baz=125,slow=12,SNR=2.4							
ZALV				Pg		19 13 34.2	
comp=Z,0.2nm,0.3s,baz=355,slow=33,SNR=2.4							
ZALV				Lg	Lg	19 15 39.6	
comp=Z,0.2nm,0.3s,baz=70,slow=35,SNR=3.0							
comp=Z,0.3nm,0.3s							
MKAR	**Makanchi Array**	**10.45**	**269**	Pn	**Pn**	**19 13 01.9**	**+1.7**
baz=89,slow=14,SNR=2.2							
MKAR				Lg	Lg	19 15 54.3	
comp=Z,0.4nm,0.3s,baz=55,slow=11,SNR=3.8							
comp=Z,0.3nm,0.6s							
KURK	**Kurchatov**	**12.69**	**290**	P	**Pn**	**19 13 31.9**	**+1.3**
KURBB	**Kurchatov Arra**	**12.74**	**289**	Pn	**Pn**	**19 13 31.9**	**+0.6**
baz=96,slow=13,SNR=4.0							
KURBB				Lg	Lg	19 17 13.7	
baz=90,slow=31,SNR=7.7							
comp=Z,0.5nm,0.7s							
AAK	**Ala-Archa**	**17.07**	**260**	P	**Pn**	**19 14 30.6**	**+1.5**
comp=Z,0.3nm,0.3s,baz=109,slow=8.3,SNR=3.0							
comp=Z,0.9nm,0.4s							
BVAR	**Borovoye Array**	**17.99**	**297**	P	**Pn**	**19 14 40.2**	**-0.1**
comp=Z,0.1nm,0.3s,baz=83,slow=12,SNR=5.6							
BVAR				Lg	Lg	19 19 52.2	
baz=233,slow=44,SNR=1.7							
comp=Z,0.6nm,0.6s							
BRVK	**Borovoye**	**18.06**	**297⇓**	*eP*	**P**	**19 14 44.3**	**+2.8**
BRVK				pmax	pmax		
comp=Z,4.0nm,1.2s							
ZEA	**Zeya**	**19.52**	**62**	*eP*	**Pn**	**19 15 03.8**	**+5.1**
ZEA				*e*		19 18 29.6	
ZEA				pmax	pmax		
comp=Z,10.0nm,1.3s							
KKAR	**Karatay Array**	**19.54**	**266**	P	**Pn**	**19 15 01.0**	**+1.9**
GUN	**Gumba**	**21.98**	**209**	*eP*	**P**	**19 15 25.5**	**+0.8**
comp=Z,28nm,0.5s							
NRIK	**Noril'sk**	**22.03**	**351⇑**	*eP*	**P**	**19 15 26.2**	**+1.6**

NRIK			pmax	pmax		
	comp=Z,5.0nm,1.0s					
DANN	**Dangsing**	**22.31 214**	*e*P	**P**	**19 15 29.1**	**+0.9**
PKIN	**Phulchoki**	**22.44 209**	*e*P	**P**	**19 15 30.3**	**+0.7**
	comp=Z,6.4nm,0.5s					
PKI	**Pulchoki**	**22.45 209**	*e*P	**P**	**19 15 30.4**	**+0.7**
	comp=Z,5.9nm,0.7s					
DMN	**Daman**	**22.51 210**	*e*P	**P**	**19 15 31.6**	**+1.3**
RAMN	**Ramite**	**22.65 206**	*e*P	**P**	**19 15 31.5**	**-0.3**
PYUN	**Piuthan**	**22.83 215**	*e*P	**P**	**19 15 33.8**	**+0.2**
	comp=Z,30nm,0.8s					
KSRS	**Korea Array**	**24.48 104**	P	**P**	**19 15 46.0**	**-3.4**
	comp=Z,1.1nm,0.8s,baz=298,slow=9.4,SNR=1.5					
	comp=Z,1.1nm,0.8s					
KSRS	**Korea Array**	**24.48 104**	*e*P	**P**	**19 15 51.5**	**+2.1**
KSRS			pmax	pmax		
	comp=Z,1.0nm,0.7s					
ARU	**Arti**	**25.10 304**	P	**P**	**19 15 54.8**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=67,slow=7.7,SNR=4.7					
	comp=Z,2.2nm,0.4s					
ARU	**Arti**	**25.10 304**	*c i*P	**P**	**19 15 55.1**	**+0.3**
ARU					19 16 28.2	
ARU			S	**S**	**19 20 20.6**	**+1.5**
ARU			pmax	pmax		
	comp=Z,5.0nm,0.8s					
AKTO	**Aktyubinsk**	**25.78 290**	P	**P**	**19 16 01.2**	**0.0**
	comp=Z,1.9nm,0.8s,baz=65,slow=11,SNR=5.5					
	comp=Z,1.9nm,0.8s					
KIRV	**Kirov**	**30.08 309**	LR	LR	19 29 54.6	
	comp=Z,74nm,20.0s,baz=312,slow=38					
FINES	**FINESS Array B**	**41.28 316**	P	**P**	**19 18 15.0**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=94,slow=9.8,SNR=4.8					
	comp=Z,1.5nm,0.7s					
FINES	**FINESS Array B**	**41.28 316**	*e*P	**P**	**19 18 16.5**	**+1.2**
FINES			pmax	pmax		
	comp=Z,2.0nm,0.7s					
AKASG	**Malin Array Be**	**43.21 300**	P	**P**	**19 18 29.3**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=59,slow=9.5,SNR=4.1					
	comp=Z,0.5nm,0.4s					
AKASG	**Malin Array Be**	**43.21 300**	*e*P	**P**	**19 18 30.8**	**-0.4**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.5s					
BRTR	**Keskin Array B**	**45.67 284**	P	**P**	**19 18 50.4**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=79,slow=7.5,SNR=2.5					
	comp=Z,0.6nm,0.5s					
ILAR	**Eielson Array**	**57.00 27**	P	**P**	**19 20 14.3**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=284,slow=4.8,SNR=1.8					
	comp=Z,0.5nm,0.9s					
WRA	**Warramunga Arr**	**75.17 144**	P	**P**	**19 22 11.4**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=340,slow=6.0,SNR=3.0					
	comp=Z,0.6nm,0.8s					
ASAR	**Alice Springs**	**78.38 146**	P	**P**	**19 22 28.6**	**-2.3**
	comp=Z,0.5nm,0.9s,baz=355,slow=5.6,SNR=4.1					
	comp=Z,0.5nm,0.9s					
ASAR	**Alice Springs**	**78.38 146**	*e*P	**P**	**19 22 31.8**	**+1.0**
ASAR			pmax	pmax		
	comp=Z,2.0nm,1.3s					
TORD	**Torodi Ar. Bea**	**84.27 283**	P	**P**	**19 23 00.2**	**-2.2**
	comp=Z,0.6nm,0.9s,baz=9.9,slow=1.8,SNR=3.2					
	comp=Z,0.6nm,0.9s					
CPUP	**Villa Florida**	**150.83 309**	PKPbc	**PKPbc**	**19 30 21.4**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=78,slow=5.4,SNR=3.8					

*IDC **16** 19:18:18.1±1.5, 39°.80N×20°.80E, h0km, mb3.7/5, mbtmp3.8/5, MS2.6/3, Error ellipse: s-maj=43.5km s-min=25.8km az=113.0*
*BEO **16** 19:18:22.3±0.4, 39°.65N×20°.73E, h19km±4km, ML2.9/7*
*ATH **16** 19:18:22.2, 39°.78N×20°.71E, h14km±2km, ML3.2/20, Error ellipse: s-maj=2.5km s-min=1.1km az=313.0*
*THE **16** 19:18:22.2, 39°.76N×20°.72E, h4km±1km, ML3.1/13, Error ellipse: s-maj=1.9km s-min=0.6km az=337.0*

ISC 16 19:18:21.7±0.8, 39°.76N±0°.02×20°.72E±0°.02, h18km±4km, n98, σ1§25/126, mb3.6/5, 8C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**136**	P	**Pg**	**19 18 25.6**	**-0.4**
JAN				S	**Sg**	**19 18 28.4**	**-0.5**
	20μm,0.3s						
JAN	**Janina**	**0.15**	**136**	P	**Pg**	**19 18 25.6**	**-0.4**
JAN				S	**Sg**	**19 18 29.4**	**+0.6**
JAN				AML	AML	19 18 29.5	
	comp=E,43413μm,0.3s						
JAN				AML	AML	19 18 29.5	
	comp=N,31363μm,0.2s						
IGT	**Igoumenitsa**	**0.38**	**232**	P	**Pg**	**19 18 29.5**	**-0.1**
IGT				S	**Sg**	**19 18 35.9**	**+1.0**
	comp=N,5μm,0.6s						
IGT	**Igoumenitsa**	**0.38**	**232**	*e*Pg	**Pg**	**19 18 29.7**	**+0.2**
IGT				*e*Sg	**Sb**	**19 18 36.4**	**+1.0**
IGT	**Igoumenitsa**	**0.38**	**232**	P	**Pg**	**19 18 29.8**	**+0.2**
IGT				S	**Sg**	**19 18 35.1**	**+0.2**
IGT				AML	AML	19 18 39.0	
	comp=E,10795μm,0.3s						
IGT				AML	AML	19 18 39.6	
	comp=N,6744μm,0.5s						
LSK	**Leskovik**	**0.40**	**347**	P	**Pg**	**19 18 30.1**	**+0.1**
LSK				S	**Sb**	**19 18 36.3**	**+0.2**
	comp=N,4μm,0.5s						
KPRO	**Kipourio**	**0.53**	**69**	P	**Pg**	**19 18 32.5**	**+0.1**
KPRO				S	**Sb**	**19 18 40.6**	**+0.6**
	comp=N,4μm,0.3s						
PENT	**Pentalofos**	**0.54**	**37**	P	**Pg**	**19 18 32.8**	**+0.2**
PENT	**Pentalofos**	**0.54**	**37**	P	**Pg**	**19 18 32.8**	**+0.2**
PENT				S	**Sb**	**19 18 40.3**	**+0.1**
SRN	**Sarande**	**0.56**	**282**	P	**Pg**	**19 18 32.9**	**-0.1**
SRN				S	**Sg**	**19 18 41.2**	**+0.7**
	comp=N,880nm,0.6s						
KASA	**Kassiopi**	**0.60**	**269**	P	**Pg**	**19 18 33.4**	**-0.2**
KASA				S	**Sg**	**19 18 42.4**	**+0.7**
KASA				AML	AML	19 18 43.5	
	comp=E,2013μm,0.5s						
KASA				AML	AML	19 18 45.7	
	comp=N,1885μm,0.4s						
NEST	**Nestorio**	**0.70**	**21**	P	**Pg**	**19 18 35.6**	**+0.1**
NEST				S	**Sg**	**19 18 44.7**	**-0.1**
	comp=N,952nm,0.8s						
NEST	**Nestorio**	**0.70**	**21**	P	**Pb**	**19 18 35.8**	**+0.3**
NEST				AML	AML	19 18 52.8	
	comp=N,2338μm,0.3s						
NEST				AML	AML	19 18 53.0	
	comp=E,2216μm,0.4s						
KEK	**Kerkira**	**0.71**	**266**	P	**Pg**	**19 18 34.9**	**-0.8**
KEK				S	**Sb**	**19 18 46.6**	**+1.6**
	comp=E,842nm,0.6s						
KEK	**Kerkira**	**0.71**	**266**	P	**Pg**	**19 18 35.1**	**-0.6**
KEK				AML	AML	19 18 52.0	
	comp=N,1575μm,0.3s						
KEK				AML	AML	19 18 53.2	
	comp=E,1546μm,0.3s						
TSLK	**Tsoukalades, L**	**0.94**	**183**	P	**Pb**	**19 18 39.8**	**+0.3**
TSLK	**Tsoukalades, L**	**0.94**	**183**	P	**Pb**	**19 18 39.9**	**+0.5**
KZN	**Kozani**	**0.97**	**56**	P	**Pb**	**19 18 40.1**	**0.0**
KZN				S	**Sn**	**19 18 54.5**	**+0.5**
	comp=E,1μm,0.6s						
KZN	**Kozani**	**0.97**	**56**	P	**Pb**	**19 18 40.2**	**0.0**
KZN				AML	AML	19 18 55.3	
	comp=E,3537μm,0.6s						
KZN				AML	AML	19 18 57.4	
	comp=N,2206μm,0.6s						
LKD2	**Lefkada island**	**0.97**	**183**	P	**Pb**	**19 18 40.2**	**+0.1**
LKD2	**Lefkada island**	**0.97**	**183**	P	**Pb**	**19 18 40.1**	**+0.1**
LKD2				AML	AML	19 19 01.6	
	comp=E,2765μm,0.4s						
LKD2				AML	AML	19 19 06.9	
	comp=N,2578μm,0.7s						
THL	**Klokotos Trika**	**1.02**	**101**	P	**Pb**	**19 18 40.5**	**-0.4**
THL				S	**Sn**	**19 18 56.0**	**+1.0**
	comp=N,715nm,0.4s						
THL	**Klokotos Trika**	**1.02**	**101**	P	**Pb**	**19 18 40.4**	**-0.5**
THL				AML	AML	19 19 01.1	
	comp=N,1432μm,0.6s						
THL				AML	AML	19 19 02.1	
	comp=E,1414μm,0.3s						
NYDR	**Nydri-Lefkada**	**1.05**	**181**	P	**Pb**	**19 18 41.5**	**+0.2**
NYDR				S	**Sb**	**19 18 56.0**	**+1.3**
	comp=E,870nm,0.6s						
DRAG	**Dragano-Lefkad**	**1.08**	**186**	P	**Pb**	**19 18 42.1**	**+0.1**
EVGI	**Lefkada island**	**1.14**	**182**	P	**Pn**	**19 18 43.4**	**+0.6**
EVGI	**Lefkada island**	**1.14**	**182**	P	**Pn**	**19 18 43.9**	**+1.1**
TYRN	**Tyrnavos**	**1.17**	**92**	P	**Pn**	**19 18 43.1**	**-0.1**
TYRN				S	**Sg**	**19 19 00.8**	**+1.1**
	comp=E,2μm,0.6s						
EVR	**Evrytania**	**1.20**	**135**	P	**Pn**	**19 18 44.1**	**+0.4**
EVR				S	**Sg**	**19 19 02.9**	**+2.3**
	comp=E,1μm,0.6s						
EVR	**Evrytania**	**1.20**	**135**	P	**Pn**	**19 18 44.2**	**+0.5**
EVR				AML	AML	19 19 05.2	
	comp=N,2074μm,0.6s						
EVR				AML	AML	19 19 08.2	
	comp=E,1982μm,0.3s						
PVO	**Paravola**	**1.31**	**151**	P	**Pb**	**19 18 46.7**	**+1.0**
PVO	**Paravola**	**1.31**	**151**	P	**Pb**	**19 18 47.0**	**+1.3**
FSK	**Fiskardo**	**1.31**	**185**	P	**Pb**	**19 18 46.8**	**+1.0**
FSK	**Fiskardo**	**1.31**	**185**	P	**Pb**	**19 18 46.7**	**+1.0**
FSK				AML	AML	19 19 09.6	
	comp=N,1133μm,0.3s						
FSK				AML	AML	19 19 10.1	
	comp=E,1686μm,0.2s						
MAKR	**Makrakomi, Fth**	**1.33**	**124**	P	**Pb**	**19 18 46.7**	**+0.6**
MAKR				S	**Sg**	**19 19 06.6**	**+1.9**
	comp=E,2μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.33**	**124**	P	**Pn**	**19 18 46.6**	**+1.2**
MAKR				AML	AML	19 19 09.3	
	comp=N,4672μm,0.5s						
MAKR				AML	AML	19 19 12.8	
	comp=E,5212μm,0.6s						
OHR	**Ohrid**	**1.35**	**3**	*e*Pg	**Pg**	**19 18 48.2**	**+0.4**
OHR				*e*Sg	**Sg**	**19 19 08.6**	**+3.2**
LIT	**Litokhoron**	**1.40**	**76**	P	**Pn**	**19 18 47.4**	**+1.0**
LIT	**Litokhoron**	**1.40**	**76**	P	**Pn**	**19 18 47.5**	**+1.0**
LIT				AML	AML	19 19 12.6	
	comp=N,1857μm,0.7s						
LIT				AML	AML	19 19 15.1	
	comp=E,1417μm,0.7s						
KEF4	**Livadi, Kephal**	**1.52**	**189**	P	**Pb**	**19 18 50.0**	**+0.7**
DMLN	**Damoulianata-K**	**1.55**	**190**	P	**Pn**	**19 18 48.7**	**+0.3**
VLS	**Valsamata**	**1.59**	**184**	P	**Pn**	**19 18 49.5**	**+0.5**
VLS	**Valsamata**	**1.59**	**184**	P	**Pn**	**19 18 49.8**	**+0.9**
VLS				AML	AML	19 19 15.7	
	comp=E,979μm,0.3s						
VLS				AML	AML	19 19 23.1	
	comp=N,1603μm,0.5s						
EFP	**Efpalio**	**1.62**	**145**	P	**Pb**	**19 18 52.4**	**+1.2**
EFP				AML	AML	19 19 22.0	
	comp=N,1162μm,0.4s						
EFP				AML	AML	19 19 23.9	
	comp=E,1263μm,0.5s						
PSDA	**Pessada-Kefalo**	**1.65**	**184**	P	**Pn**	**19 18 50.9**	**+1.1**
PSDA	**Pessada-Kefalo**	**1.65**	**184**	P	**Pb**	**19 18 52.9**	**+1.3**
SERG	**Sergoula**	**1.70**	**142**	P	**Pb**	**19 18 53.1**	**+0.6**
SERG				AML	AML	19 19 24.6	
	comp=E,941μm,0.3s						
SERG				AML	AML	19 19 25.8	
	comp=N,1293μm,0.5s						
TIR	**Tirane**	**1.71**	**338**	⇑P	**Pb**	**19 18 52.9**	**+0.2**
TIR				⇓S	**Sg**	**19 19 17.0**	**+0.1**
TIR	**Tirane**	**1.71**	**338**	*e*Pn	**Pb**	**19 18 53.2**	**+0.6**
TIR				*e*Sn	**Sg**	**19 19 16.3**	**-0.6**
RLS	**Riolos of Patr**	**1.80**	**161**	P	**Pb**	**19 18 54.2**	**+0.1**
AXAR	**Agios Charalam**	**1.81**	**123**	P	**Pb**	**19 18 54.8**	**+0.5**
AXAR				AML	AML	19 19 26.3	
	comp=E,1649μm,0.4s						
AXAR				AML	AML	19 19 32.0	
	comp=N,1165μm,0.5s						
LAKA	**Lakka**	**1.81**	**147**	P	**Pb**	**19 18 54.8**	**+0.4**
LAKA				AML	AML	19 19 27.8	
	comp=E,1712μm,0.5s						
LAKA				AML	AML	19 19 32.1	
	comp=N,1347μm,0.5s						
XOR	**Xorichti**	**1.95**	**101**	P	**Pb**	**19 18 56.4**	**-0.4**
XOR				AML	AML	19 19 25.1	
	comp=E,298μm,0.5s						
XOR				AML	AML	19 19 27.9	
	comp=N,931μm,0.5s						
NEO	**Neokhori**	**1.99**	**102**	P	**Pb**	**19 18 57.8**	**+0.4**
NEO				AML	AML	19 19 24.6	
	comp=N,748μm,0.5s						
NEO				AML	AML	19 19 26.0	
	comp=E,678μm,0.3s						
HORT	**Hortiatis**	**2.01**	**65**	P	**Pn**	**19 18 56.8**	**+2.0**
KLV	**Kalavryta, Ach**	**2.05**	**146**	P	**Pb**	**19 18 58.0**	**-0.5**
KLV				AML	AML	19 19 36.3	
	comp=E,325μm,0.5s						
KLV				AML	AML	19 19 42.3	
	comp=N,369μm,0.8s						
LKR	**Lokris**	**2.09**	**121**	P	**Pb**	**19 18 58.8**	**-0.3**
VAY	**Valandovo**	**2.10**	**42**	*e*Pn	**Pn**	**19 18 57.7**	**+1.7**
VAY				*e*Sn	**Sb**	**19 19 24.9**	**-0.1**
SKO	**Skopje**	**2.27**	**14**	*e*Pn	**Pb**	**19 19 01.3**	**-0.9**
SKO				*e*Sn	**Sb**	**19 19 30.6**	**+0.6**
THAL	**Thalero**	**2.30**	**138**	P	**Pb**	**19 19 03.2**	**+0.5**
SRS	**Serrai**	**2.58**	**57**	*e*Pn	**Pn**	**19 19 03.9**	**+1.3**
SRS				*e*Sn	**Sn**	**19 19 35.2**	**+1.7**
PDG	**Podgorica**	**2.88**	**338**	⇓P	**Pn**	**19 19 07.6**	**+0.9**
PDG				⇓S	**Sb**	**19 19 46.9**	**-0.7**
TIP	**Timpagrande**	**3.12**	**260**	⇑P	**Pn**	**19 19 09.3**	**-0.7**
TIP				⇓S	**Sn**	**19 19 46.5**	**-0.4**
BARS	**Barje**	**3.16**	**15**	*e*Pn	**Pn**	**19 19 12.9**	**+2.3**
MATE	**Matera**	**3.20**	**287**	⇑P	**Pn**	**19 19 11.9**	**+0.9**
MATE				⇓S	**Sn**	**19 19 51.2**	**+2.5**
VTS	**Vitosha**	**3.43**	**33**	⇓P	**Pn**	**19 19 16.6**	**+2.2**
VTS				⇓S	**Sb**	**19 19 59.5**	**-3.8**
SELS	**Selova**	**3.47**	**5**	*e*Pn	**Pn**	**19 19 17.3**	**+2.5**
SJES	**Sjenica**	**3.54**	**351**	*e*Pn	**Pn**	**19 19 17.9**	**+2.0**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**19 19 21.7**	**+2.4**
BOVS	**Bovan**	**3.94**	**11**	⇓P	**Pn**	**19 19 22.3**	**+1.1**
BOVS	**Bovan**	**3.94**	**11**	*e*Pn	**Pn**	**19 19 22.7**	**+1.4**
BOVS				*e*Sn	**Sn**	**19 20 10.0**	**+3.0**
GRUS	**Gruza**	**4.12**	**360**	*e*Pn	**Pn**	**19 19 25.6**	**+1.8**
BLKB	**Belogradchik**	**4.12**	**20**	⇑P	**Pn**	**19 19 26.4**	**+2.5**
ZAGS	**Zagorje**	**4.20**	**15**	*e*Pn	**Pn**	**19 19 26.2**	**+1.3**
BBLS	**Lazići**	**4.21**	**347**	*e*Pn	**Pn**	**19 19 26.7**	**+1.6**
DIVS	**Divibare**	**4.37**	**353**	*e*Pn	**Pn**	**19 19 28.4**	**+1.2**
DIVS				*e*Sn	**Sn**	**19 20 18.0**	**+0.3**
TRUS	**Trudelj**	**4.46**	**357**	*e*Pn	**Pn**	**19 19 29.9**	**+1.4**
FRGS	**Fruska Gora**	**5.43**	**353**	⇓P	**Pn**	**19 19 42.9**	**+1.1**
FRGS	**Fruska Gora**	**5.43**	**353**	*e*Pn	**Pn**	**19 19 42.1**	**+0.3**
IDI	**Anoyia**	**5.56**	**142**	⇑P	**Pn**	**19 19 41.4**	**-2.3**
IDI				⇓S	**Sn**	**19 20 43.8**	**-3.4**
GZR	**Gura Zlata**	**5.83**	**14**	⇑P	**Pn**	**19 19 49.4**	**+2.1**
BZS	**Buzias**	**5.89**	**6**	⇑P	**Pn**	**19 19 49.8**	**+1.8**
VOIR		**6.51**	**28**	⇓P	**Pn**	**19 19 58.9**	**+2.3**
MLR	**Muntele Rosu**	**6.90**	**32**	⇓P	**Pn**	**19 20 03.9**	**+1.8**
MLR	**Muntele Rosu**	**6.90**	**32**	LR	LR	19 23 12.9	
	comp=N,39nm,20.0s,baz=12,slow=43						
VRI	**Vrincioaia**	**7.53**	**34**	⇑P	**Pn**	**19 20 11.2**	**+0.6**
SOKA	**Sooth**	**8.06**	**331**	*e*Pn	**Pn**	**19 20 18.4**	**+0.5**
	comp=N,0.6nm,0.2s						
OBKA	**Obir**	**8.11**	**328**	*e*Pn	**Pn**	**19 20 19.3**	**+0.7**
	comp=N,0.6nm,0.2s						
KBA	**Koelnbreinsper**	**9.06**	**326**	*e*Pn	**Pn**	**19 20 32.2**	**+0.4**
	comp=N,0.6nm,0.4s						
MOA	**Molln**	**9.33**	**332**	*i* Pn	**Pn**	**19 20 36.7**	**+1.4**
	comp=N,0.8nm,0.4s						
VRAC	**Vranov**	**9.98**	**344**	LR	LR	19 25 10.2	
	comp=N,37nm,19.6s,baz=152,slow=41						
AKASG	**Malin Array Be**	**12.46**	**26**	LR	LR	19 27 19.8	
	comp=N,32nm,18.9s,baz=176,slow=44						
FINES	**FINESS Array B**	**21.96**	**7**	P	**P**	**19 23 12.7**	**-1.5**
	comp=N,1.9nm,0.8s,baz=167,slow=13,SNR=14						
	comp=N,1.9nm,0.8s						
NB2	**NORSAR Subarra**	**22.10**	**348**	P	**P**	**19 23 15.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=160,slow=11						
NOA	**NORSAR Array B**	**22.10**	**348**	P	**P**	**19 23 15.1**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=163,slow=11,SNR=4.6						
	comp=Z,1.6nm,1.0s						
ARCES	**ARCESS Array B**	**29.94**	**3**	P	**P**	**19 24 26.6**	**-1.8**
	comp=Z,3.4nm,1.0s,baz=195,slow=10,SNR=4.9						
	comp=Z,3.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**19 24 41.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=29,slow=8.9,SNR=4.3						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**44.36**	**60**	P	**P**	**19 26 29.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=278,slow=7.8,SNR=12						
	comp=Z,0.6nm,0.5s						

*IDC **16** 19:34:34.2±1.6, 39°.70N×20°.80E, h0km, mb3.7/3, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=32.5km s-min=26.6km az=95.0*
*THE **16** 19:34:37.4, 39°.74N×20°.70E, h0km±2km, ML3.2/10, Error ellipse: s-maj=2.4km s-min=0.6km az=200.0*
*BEO **16** 19:34:37.5±0.4, 39°.62N×20°.74E, h18km±4km, ML3.1/10*
*ATH **16** 19:34:37.3, 39°.77N×20°.70E, h13km±2km, ML3.1/19, Error ellipse: s-maj=2.6km s-min=1.1km az=309.0*

ISC 16 19:34:37.1±0.8, 39°.73N±0°.02×20°.70E±0°.02, h14km±5km, n100, σ0§93/129, mb3.7/3, 11C-9D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**123**	P	**Pg**	**19 34 40.5**	**-0.2**
JAN				S	**Sg**	**19 34 43.5**	**+0.3**
	19μm,0.2s						
JAN	**Janina**	**0.14**	**123**	P	**Pg**	**19 34 40.5**	**-0.2**
JAN				S	**Sg**	**19 34 43.6**	**+0.3**
JAN				AML	AML	19 34 44.5	
	comp=N,35010μm,0.2s						
JAN				AML	AML	19 34 44.7	
	comp=E,41541μm,0.2s						
IGT	**Igoumenitsa**	**0.35**	**235**	P	**Pg**	**19 34 44.2**	**0.0**
IGT				S	**Sb**	**19 34 50.5**	**0.0**
	comp=E,6μm,0.4s						
IGT	**Igoumenitsa**	**0.35**	**235**	*e*Pg	**Pg**	**19 34 44.6**	**+0.4**
IGT				*e*Sg	**Sb**	**19 34 51.2**	**+0.7**
IGT	**Igoumenitsa**	**0.35**	**235**	P	**Pg**	**19 34 44.5**	**+0.3**
IGT				S	**Sb**	**19 34 50.6**	**+0.2**
IGT				AML	AML	19 34 52.6	
	comp=N,8447μm,0.2s						
IGT				AML	AML	19 34 53.1	
	comp=E,14575μm,0.4s						
LSK	**Leskovik**	**0.42**	**350**	P	**Pg**	**19 34 45.6**	**0.0**
LSK				S	**Sg**	**19 34 51.9**	**+0.5**
	comp=E,6μm,0.2s						
KPRO	**Kipourio**	**0.56**	**66**	P	**Pg**	**19 34 47.9**	**-0.2**
KPRO				S	**Sb**	**19 34 56.8**	**+0.2**
	comp=E,5μm,0.4s						
SRN	**Sarande**	**0.56**	**286**	P	**Pg**	**19 34 47.9**	**-0.2**
SRN				S	**Sb**	**19 34 57.1**	**+0.5**
	comp=E,5μm,0.3s						
PENT	**Pentalofos**	**0.57**	**36**	P	**Pg**	**19 34 48.1**	**-0.3**
PENT	**Pentalofos**	**0.57**	**36**	P	**Pg**	**19 34 48.2**	**-0.3**
PENT				S	**Sg**	**19 34 55.3**	**-0.7**
KASA	**Kassiopi**	**0.59**	**272**	P	**Pg**	**19 34 48.4**	**-0.2**
KASA				AML	AML	19 35 01.0	
	comp=E,5744μm,0.3s						
KASA				AML	AML	19 35 01.6	
	comp=N,6226μm,0.4s						
KEK	**Kerkira**	**0.69**	**269**	P	**Pg**	**19 34 49.9**	**-0.7**
KEK				S	**Sb**	**19 35 00.7**	**+0.2**
	comp=N,2μm,0.4s						
KEK	**Kerkira**	**0.69**	**269**	P	**Pg**	**19 34 50.0**	**-0.7**
KEK				AML	AML	19 35 05.0	
	comp=N,2913μm,0.3s						
KEK				AML	AML	19 35 06.9	
	comp=E,5416μm,0.2s						
NEST	**Nestorio**	**0.73**	**21**	P	**Pg**	**19 34 51.4**	**0.0**
NEST	**Nestorio**	**0.73**	**21**	P	**Pg**	**19 34 51.2**	**-0.2**
NEST				AML	AML	19 35 04.4	
	comp=E,2030μm,0.4s						
NEST				AML	AML	19 35 08.8	
	comp=N,1843μm,0.4s						
KBN	**Korca**	**0.89**	**4**	P	**Pg**	**19 34 53.5**	**-0.9**
TSLK	**Tsoukalades, L**	**0.91**	**182**	P	**Pg**	**19 34 55.0**	**+0.3**
TSLK	**Tsoukalades, L**	**0.91**	**182**	P	**Pg**	**19 34 54.9**	**+0.3**
LKD2	**Lefkada island**	**0.94**	**182**	P	**Pg**	**19 34 55.5**	**+0.2**
LKD2	**Lefkada island**	**0.94**	**182**	P	**Pg**	**19 34 55.5**	**+0.2**
LKD2				AML	AML	19 35 13.3	
	comp=N,1886μm,0.4s						
LKD2				AML	AML	19 35 21.1	
	comp=E,2108μm,0.3s						
KZN	**Kozani**	**1.00**	**55**	P	**Pb**	**19 34 55.8**	**-0.6**
KZN				S	**Sn**	**19 35 11.3**	**+0.4**
	comp=E,952nm,0.7s						
KZN	**Kozani**	**1.00**	**55**	P	**Pb**	**19 34 55.6**	**-0.7**
KZN				AML	AML	19 35 14.6	
	comp=E,1920μm,0.4s						
KZN				AML	AML	19 35 15.4	
	comp=N,1841μm,0.7s						
NYDR	**Nydri-Lefkada**	**1.02**	**180**	P	**Pb**	**19 34 56.2**	**-0.3**
THL	**Klokotos Trika**	**1.03**	**99**	P	**Pb**	**19 34 55.5**	**-1.2**
THL				S	**Sn**	**19 35 11.7**	**+0.3**
	comp=N,642nm,0.6s						
THL	**Klokotos Trika**	**1.03**	**99**	P	**Pb**	**19 34 55.8**	**-1.0**
THL				AML	AML	19 35 17.3	
	comp=E,1256μm,0.7s						
THL				AML	AML	19 35 17.7	
	comp=N,1310μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.05**	**185**	P	**Pb**	**19 34 56.5**	**-0.6**
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pb**	**19 34 58.1**	**0.0**
EVGI	**Lefkada island**	**1.11**	**182**	P	**Pb**	**19 34 58.1**	**0.0**
TYRN	**Tyrnavos**	**1.18**	**91**	P	**Pn**	**19 34 58.5**	**-0.8**
TYRN				S	**Sg**	**19 35 17.1**	**+1.8**
	comp=N,2μm,0.5s						
EVR	**Evrytania**	**1.19**	**133**	P	**Pn**	**19 34 59.2**	**-0.2**
EVR	**Evrytania**	**1.19**	**133**	P	**Pn**	**19 34 59.2**	**-0.2**
EVR				AML	AML	19 35 23.1	
	comp=N,1085μm,0.4s						
EVR				AML	AML	19 35 23.9	
	comp=E,1113μm,0.3s						
KTI	**Kastanea**	**1.27**	**58**	P	**Pb**	**19 35 00.8**	**-0.2**
FSK	**Fiskardo**	**1.28**	**185**	P	**Pg**	**19 35 01.8**	**+0.1**
FSK	**Fiskardo**	**1.28**	**185**	P	**Pg**	**19 35 01.9**	**+0.2**
FSK				AML	AML	19 35 22.8	
	comp=E,2710μm,0.2s						
FSK				AML	AML	19 35 24.2	
	comp=N,1342μm,0.4s						
PVO	**Paravola**	**1.29**	**150**	P	**Pg

VAY	**Valandovo**	**2.13**	**41**	*e*Pn	**Pn**	**19 35 12.9**	**+0.5**
VAY				*e*Sn	**Sb**	**19 35 41.5**	**-0.4**
VAY	**Valandovo**	**2.13**	**41**	*i* Pn	**Pn**	**19 35 13.1**	**+0.7**
STIP	**Stip**	**2.26**	**29**	*i* Pn	**Pb**	**19 35 17.0**	**-0.8**
THAL	**Thalero**	**2.28**	**137**	P	**Pb**	**19 35 17.1**	**-1.0**
SKO	**Skopje**	**2.31**	**14**	*e*Pn	**Pb**	**19 35 17.2**	**-1.3**
SKO				*e*Sn	**Sb**	**19 35 46.3**	**-0.6**
SRS	**Serrai**	**2.61**	**57**	*e*Pn	**Pn**	**19 35 19.3**	**+0.4**
SRS				*e*Sn	**Sn**	**19 35 50.7**	**+0.4**
PDG	**Podgorica**	**2.91**	**338**	⇑P	**Pn**	**19 35 24.1**	**+1.1**
PDG				⇓S	**Sn**	**19 36 00.4**	**+2.7**
TIP	**Timpagrande**	**3.10**	**261**	⇓P	**Pn**	**19 35 25.4**	**-0.3**
TIP				⇑S	**Sn**	**19 36 03.1**	**+0.5**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**19 35 28.8**	**+1.8**
BARS				*e*Sn	**Sn**	**19 36 06.2**	**+1.3**
MATE	**Matera**	**3.19**	**288**	⇑P	**Pn**	**19 35 26.9**	**0.0**
VTS	**Vitosha**	**3.46**	**33**	⇓P	**Pn**	**19 35 31.4**	**+0.7**
VTS				⇓S	**Sn**	**19 36 13.8**	**+2.1**
SELS	**Selova**	**3.50**	**5**	*e*Pn	**Pn**	**19 35 32.6**	**+1.4**
SJES	**Sjenica**	**3.57**	**351**	*e*Pn	**Pn**	**19 35 34.3**	**+2.1**
SJES				*e*Sn	**Sn**	**19 36 16.4**	**+2.2**
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn	**Pn**	**19 35 38.4**	**+2.7**
IVAS	**Ivanjica**	**3.86**	**354**	*e*Pn	**Pn**	**19 35 36.7**	**+0.5**
BOVS	**Bovan**	**3.97**	**11**	⇑P	**Pn**	**19 35 38.4**	**+0.8**
BOVS	**Bovan**	**3.97**	**11**	*e*Pn	**Pn**	**19 35 38.5**	**+0.9**
BOVS				*e*Sn	**Sn**	**19 36 25.2**	**+1.2**
GRUS	**Gruza**	**4.15**	**0**	*e*Pn	**Pn**	**19 35 41.6**	**+1.5**
BLKB	**Belogradchik**	**4.16**	**20**	⇑P	**Pn**	**19 35 42.0**	**+1.8**
ZAGS	**Zajecar**	**4.24**	**15**	*e*Pn	**Pn**	**19 35 41.8**	**+0.6**
ZAGS				*e*Sn	**Sn**	**19 36 30.8**	**+0.3**
BBLS	**Lazići**	**4.24**	**347**	*e*Pn	**Pn**	**19 35 42.6**	**+1.2**
DIVS	**Divibare**	**4.39**	**353**	*e*Pn	**Pn**	**19 35 44.0**	**+0.5**
DIVS				*e*Sn	**Sn**	**19 36 35.2**	**+0.6**
TRUS	**Trudelj**	**4.49**	**357**	*e*Pn	**Pn**	**19 35 46.4**	**+1.6**
FRGS	**Fruska Gora**	**5.46**	**353**	⇓P	**Pn**	**19 35 58.2**	**+0.1**
FRGS	**Fruska Gora**	**5.46**	**353**	*e*Pn	**Pn**	**19 35 58.0**	**-0.1**
FRGS				*e*Sn	**Sn**	**19 37 00.3**	**-0.5**
IDI	**Anoyia**	**5.55**	**142**	⇑P	**Pn**	**19 35 56.9**	**-2.5**
GZR	**Gura Zlata**	**5.86**	**14**	⇑P	**Pn**	**19 36 04.8**	**+1.2**
BZS	**Buzias**	**5.92**	**6**	⇓P	**Pn**	**19 36 06.0**	**+1.6**
VOIR		**6.54**	**28**	⇑P	**Pn**	**19 36 13.8**	**+0.8**
MORH	**Mrgy, Hungar**	**6.65**	**348**	⇑P	**Pn**	**19 36 14.9**	**+0.5**
MLR	**Muntele Rosu**	**6.93**	**32**	⇑P	**Pn**	**19 36 18.9**	**+0.4**
PLOR	**Plostina**	**7.52**	**34**	⇓P	**Pn**	**19 36 27.8**	**+1.5**
VRI	**Vrincioaia**	**7.56**	**34**	⇓P	**Pn**	**19 36 27.8**	**+0.8**
SOKA	**Soboth**	**8.08**	**331**	*e*Pn	**Pn**	**19 36 34.1**	**0.0**
	comp=N,0.6nm,0.2s						
OBKA	**Obir**	**8.13**	**328**	*i* Pn	**Pn**	**19 36 35.0**	**+0.2**
	comp=N,0.5nm,0.1s						
KBA	**Koelnbreinsper**	**9.08**	**326**	*e*Pn	**Pn**	**19 36 48.5**	**+0.6**
	comp=N,0.3nm,0.2s						
ABTA	**Abfaltersbach**	**9.21**	**322**	*i* Pn	**Pn**	**19 36 49.0**	**-0.6**
	comp=N,0.3nm,0.2s						
MOA	**Molln**	**9.35**	**332**	*e*Pn	**Pn**	**19 36 52.3**	**+0.9**
	comp=N,0.6nm,0.3s						
WTTA	**Wattenberg**	**9.99**	**322**	*e*Pn	**Pn**	**19 37 00.7**	**+0.2**
	comp=N,0.8nm,0.2s						
WATA	**Walderalm**	**10.07**	**322**	*e*Pn	**Pn**	**19 37 01.8**	**+0.2**
	comp=N,0.9nm,0.2s						
GERES	**GERESS Array B**	**10.39**	**334**	Pn	**Pn**	**19 37 06.5**	**+0.6**
	comp=N,0.1nm,0.3s,baz=158,slow=14,SNR=1.8						
	comp=N,0.1nm,0.3s						
FINES	**FINESS Array B**	**21.99**	**7**	P	**P**	**19 39 29.4**	**-1.1**
	comp=N,3.0nm,0.9s,baz=173,slow=13,SNR=6.0						
	comp=N,3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	**19 40 56.5**	**-0.7**
	comp=N,0.5nm,0.6s,baz=34,slow=9.3,SNR=3.6						
	comp=N,0.5nm,0.6s						
MKAR	**Makanchi Array**	**44.38**	**60**	P	**P**	**19 42 45.9**	**-1.2**
	comp=N,0.7nm,0.4s,baz=280,slow=7.5,SNR=16						
	comp=N,0.7nm,0.4s						

ZUR 16 19:46:13.1,46°.68N×8°.50E,h4km±2km,MLh0.6/10,3C-1D, Error ellipse: s-maj=4.2km s-min=0.8km az=37.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIMS	**Grimsel Gerste**	**0.16**	**232**	⇑Pg	Pg	19 46 16.7	+0.4
GRIMS				Sg	Sg	19 46 19.0	+0.5
NALPS	**Val Nalps**	**0.19**	**116**	Pg	Pg	19 46 17.5	+0.6
NALPS				Sg	Sg	19 46 20.2	+0.9
BNALP	**Bannalp**	**0.20**	**345**	⇓Pg	Pg	19 46 17.5	+0.4
BNALP				Sg	Sg	19 46 20.5	+0.7
FUSIO	**Fusio**	**0.25**	**153**	Pg	Pg	19 46 18.3	+0.4
FUSIO				Sg	Sg	19 46 21.9	+0.7
HASLI	**Hasliberg/Brie**	**0.25**	**288**	⇑Pg	Pg	19 46 18.4	+0.4
HASLI				Sg	Sg	19 46 21.9	+0.5
FIESA	**Fiescheralp**	**0.36**	**228**	⇑Pg	Pg	19 46 20.4	+0.2
PANIX	**Pigniu (Panix)**	**0.45**	**70**	Pg	Pg	19 46 21.9	+0.2

*SOME **16** 19:46:51.3,42°.28N×80°.47E,h0km*
*KRNET **16** 19:46:51.4±0.1,42°.24N×80°.63E,h16km,mb3.7*
*NNC **16** 19:46:53.1±1.7,42°.34N×80°.55E,h0km,mb3.9,mpv3.7,*
Error ellipse: s-maj=10.5km s-min=8.6km az=140.0
ISC 16 19:46:50.4±2.2,42°.22N±0°.06×80°.47E±0°.07,h6km±11km, n61,σt=93/103,12C-13D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.20**	**322**	*e*P	**Pb**	**19 47 11.7**	**-1.9**
	baz=29						
SHLS				*e*S	**Sg**	**19 47 26.6**	**-2.2**
	baz=29						
SHLS	**Shalkode**	**1.20**	**322**	*e*P	**Pb**	**19 47 11.7**	**-1.9**
	32nm,0.1s						
SHLS				*e*S	**Sg**	**19 47 26.6**	**-2.2**
	302nm,0.3s						
SHLS	**Shalkode**	**1.20**	**322**	P	**Pb**	**19 47 11.7**	**-1.9**
	32nm,0.1s						
SHLS				S	**Sg**	**19 47 26.6**	**-2.2**
	302nm,0.3s						
KTMS	**Ketmen**	**1.23**	**356**	*e*P	**Pn**	**19 47 14.1**	**-0.2**
	baz=50						
KTMS				*e*S	**Sn**	**19 47 30.5**	**-0.8**
	baz=50						
KTMS	**Ketmen**	**1.23**	**356**	*e*P	**Pn**	**19 47 14.1**	**-0.2**
	6.0nm,0.2s						
KTMS				*e*S	**Sn**	**19 47 30.4**	**-0.8**
	39nm,0.4s						
KTMS	**Ketmen**	**1.23**	**356**	P	**Pn**	**19 47 14.1**	**-0.2**
	6.0nm,0.2s						
KTMS				S	**Sn**	**19 47 30.4**	**-0.8**
	39nm,0.4s						
PDGK	**Podgornoye**	**1.32**	**327**	⇑P	**Pg**	**19 47 16.2**	**+0.5**
	8.2nm,0.3s						
PDGK				⇑S	**Sn**	**19 47 34.1**	**+0.6**
	44nm,0.3s						
UZB	**Uzynbulak**	**1.41**	**312**	*e*P	**Pg**	**19 47 18.6**	**+1.1**
	baz=8.0						
UZB				*e*S	**Sg**	**19 47 38.2**	**+2.4**
	baz=8.0						
UZB	**Uzynbulak**	**1.41**	**312**	*e*P	**Pg**	**19 47 18.6**	**+1.1**
	22nm,0.2s						
UZB				*e*S	**Sg**	**19 47 38.2**	**+2.4**
	29nm,0.3s						
UZB	**Uzynbulak**	**1.41**	**312**	P	**Pg**	**19 47 18.6**	**+1.1**
	22nm,0.2s						
UZB				S	**Sg**	**19 47 38.2**	**+2.4**
	29nm,0.3s						
SATY	**Saty**	**1.74**	**300**	*e*P	**Pg**	**19 47 25.2**	**+1.5**
	baz=97						
SATY				*e*S	**Sg**	**19 47 50.2**	**+4.0**
	baz=97						
SATY	**Saty**	**1.74**	**300**	*e*P	**Pg**	**19 47 25.2**	**+1.5**
	45nm,0.3s						
SATY				*e*S	**Sg**	**19 47 50.2**	**+4.0**
	125nm,0.2s						
ZHN	**Zhinishke**	**1.77**	**303**	*e*P	**Pg**	**19 47 26.0**	**+1.6**
	baz=0.0						
ZHN				*e*S	**Sg**	**19 47 51.0**	**+3.6**
	baz=0.0						
ZHN	**Zhinishke**	**1.77**	**303**	*e*P	**Pg**	**19 47 26.0**	**+1.6**
	126nm,0.3s						
ZHN				*e*S	**Sg**	**19 47 51.0**	**+3.6**
	73nm,0.3s						
KPKS	**Kokpek**	**1.81**	**314**	*e*P	**Pg**	**19 47 25.8**	**+0.7**
	baz=11						
KPKS				*e*S	**Sg**	**19 47 51.0**	**+2.5**
	baz=11						
KPKS	**Kokpek**	**1.81**	**314**	*e*P	**Pg**	**19 47 25.8**	**+0.7**
	75nm,0.2s						
KPKS				*e*S	**Sg**	**19 47 51.0**	**+2.5**
	287nm,0.4s						
KPKS	**Kokpek**	**1.81**	**314**	Pg	**Pg**	**19 47 25.8**	**+0.7**
	75nm,0.2s						
KPKS				Lg	Lg	19 47 51.0	
	287nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.04**	**257**	⇓*i*P	**Pb**	**19 47 29.8**	**+1.6**
	baz=57						
TARG				⇓*i*S	**Sg**	**19 47 58.0**	**+1.9**
	baz=57						
KURS	**Kuram**	**2.11**	**308**	*e*P	**Pg**	**19 47 31.4**	**+0.5**
	53nm,0.4s						
KURS				*e*S	**Sg**	**19 48 00.5**	**+2.2**
	26nm,0.5s						
KURS	**Kuram**	**2.11**	**308**	Pg	**Pg**	**19 47 31.4**	**+0.5**
	53nm,0.4s						
KURS				Lg	Lg	19 48 00.5	
	26nm,0.5s						
DJR	**Jarkent**	**2.17**	**347**	*e*P	**Pg**	**19 47 30.9**	**-1.1**
	9.0nm,0.2s						
DJR				*e*S	**Sg**	**19 47 59.3**	**-0.8**
	122nm,0.4s						
DJR	**Jarkent**	**2.17**	**347**	Pg	**Pg**	**19 47 30.9**	**-1.1**
	9.0nm,0.2s						
DJR				Lg	Lg	19 47 59.3	
	122nm,0.4s						
BLB	**Baldybastay**	**2.38**	**323**	*e*P	**Pg**	**19 47 35.1**	**-0.8**
	84nm,0.3s						
BLB				*e*S	**Sg**	**19 48 07.0**	**+0.3**
	245nm,0.3s						
BLB	**Baldybastay**	**2.38**	**323**	Pg	**Pg**	**19 47 35.1**	**-0.8**
	84nm,0.3s						
BLB				Lg	Lg	19 48 07.0	
	245nm,0.3s						
KOTS	**Kotyrbulak**	**2.67**	**293**	*e*P	**Pg**	**19 47 41.1**	**-0.5**
	34nm,0.2s						
KOTS				*e*S	**Sg**	**19 48 17.0**	**+0.8**
	112nm,0.1s						
KOTS	**Kotyrbulak**	**2.67**	**293**	Pg	**Pg**	**19 47 41.1**	**-0.5**
	34nm,0.2s						
KOTS				Lg	Lg	19 48 17.0	
	112nm,0.1s						
MDOK	**Medeo**	**2.69**	**292**	*e*P	**Pg**	**19 47 41.3**	**-0.6**
	28nm,0.3s						
MDOK				*e*S	**Sg**	**19 48 17.9**	**+1.1**
	44nm,0.5s						
MDOK	**Medeo**	**2.69**	**292**	⇑Pn	**Pb**	**19 47 39.6**	**+0.6**
	6.5nm,0.4s						
MDOK				Pg	**Pg**	**19 47 41.3**	**-0.6**
	28nm,0.3s						
MDOK				Lg	Lg	19 48 17.9	
	44nm,0.5s						
MDOK				⇑Sn	**Sg**	**19 48 18.5**	**+1.7**
	39nm,0.6s						
TNSS	**Tian-Shan**	**2.72**	**289**	*e*P	**Pg**	**19 47 42.0**	**-0.5**
	24nm,0.4s						
TNSS				*e*S	**Sg**	**19 48 18.8**	**+0.9**
	19nm,0.4s						
TNSS	**Tian-Shan**	**2.72**	**289**	Pg	**Pg**	**19 47 42.1**	**-0.5**
	24nm,0.4s						
TNSS				Lg	Lg	19 48 18.8	
	19nm,0.4s						
KNDC	**Almaty**	**2.77**	**292**	⇑Pn	**Pb**	**19 47 41.7**	**+1.4**
	62nm,0.6s						
KNDC				⇓Sn	**Sg**	**19 48 22.7**	**+3.5**
	84nm,0.8s						
ARXS	**Arharly**	**2.77**	**317**	*e*P	**Pb**	**19 47 41.8**	**+1.4**
	13nm,0.4s						
ARXS				*e*S	**Sg**	**19 48 18.4**	**-1.0**
	53nm,0.3s						
AAA	**Alma-Ata**	**2.80**	**292**	*e*P	**Pg**	**19 47 43.5**	**-0.6**
	64nm,0.2s						
AAA				*e*S	**Sg**	**19 48 22.0**	**+1.7**
	82nm,0.4s						
AAA	**Alma-Ata**	**2.80**	**292**	Pg	**Pg**	**19 47 43.4**	**-0.6**
	64nm,0.2s						
AAA				Lg	Lg	19 48 22.0	
	82nm,0.4s						
CHKK	**Chushkaly**	**3.03**	**304**	*e*P	**Pg**	**19 47 47.5**	**-0.9**
	4.7nm,0.2s						
CHKK				*e*S	**Sg**	**19 48 27.5**	**-0.2**
	40nm,0.3s						
CHKK	**Chushkaly**	**3.03**	**304**	Pg	**Pg**	**19 47 47.5**	**-0.9**
	4.7nm,0.2s						
CHKK				Lg	Lg	19 48 27.5	
	40nm,0.3s						
MTBS	**Maitube**	**3.11**	**288**	*e*P	**Pg**	**19 47 48.8**	**-1.3**
	11nm,0.2s						
MTBS				*e*S	**Sg**	**19 48 30.3**	**-0.1**
	29nm,0.3s						
MTBS	**Maitube**	**3.11**	**288**	Pg	**Pg**	**19 47 48.8**	**-1.3**
	11nm,0.2s						
MTBS				Lg	Lg	19 48 30.3	
	29nm,0.3s						
ULHL	**Ulahol**	**3.14**	**272**	⇑*i*P	**Pb**	**19 47 45.0**	**-1.7**
	baz=72						
ULHL				⇑*i*S	**Sb**	**19 48 24.1**	**-1.2**
	baz=72						
KTBS	**Karatobe**	**3.15**	**300**	*e*P	**Pb**	**19 47 48.5**	**+1.6**
	6.8nm,0.3s						
KTBS				*e*S	**Sg**	**19 48 30.2**	**-1.5**
	84nm,0.4s						
KTBS	**Karatobe**	**3.15**	**300**	Pg	**Pg**	**19 47 48.5**	**+1.6**
	6.8nm,0.3s						
KTBS				Lg	Lg	19 48 30.2	
	84nm,0.4s						
TDK	**Taldyqorghan**	**3.16**	**332**	*e*P	**Pg**	**19 47 48.7**	**-2.3**
	8.4nm,0.1s						
TDK				*e*S	**Sg**	**19 48 29.6**	**-2.2**
	64nm,0.5s						
TDK	**Taldyqorghan**	**3.16**	**332**	Pg	**Pg**	**19 47 48.7**	**-2.3**
	8.4nm,0.1s						
TDK				Lg	Lg	19 48 29.6	
	64nm,0.5s						
KST	**Kastek**	**3.42**	**285**	*e*P	**Pb**	**19 47 53.6**	**+2.1**
	13nm,0.3s						
KST				*e*S	**Sg**	**19 48 39.2**	**-1.1**
	43nm,0.4s						
KST	**Kastek**	**3.42**	**285**	Pg	**Pb**	**19 47 53.6**	**+2.1**
	13nm,0.3s						
KST				Lg	Lg	19 48 39.2	
	43nm,0.4s						
NRN	**Naryn**	**3.43**	**258**	⇑*e*P	**Pb**	**19 47 49.4**	**-2.3**
	baz=58						
NRN				⇑*i*S	**Sb**	**19 48 31.8**	**-2.0**
	baz=58						
KUU	**Kurty**	**3.46**	**300**	*e*P	**Pb**	**19 47 54.4**	**+2.4**
	4.6nm,0.4s						
KUU				*e*S	**Sg**	**19 48 39.9**	**-1.5**
	20nm,0.4s						
KUU	**Kurty**	**3.46**	**300**	Pg	**Pb**	**19 47 54.4**	**+2.4**
	4.6nm,0.4s						
KUU				Lg	Lg	19 48 39.9	
	20nm,0.4s						
DGS	**Degeres**	**3.61**	**288**	*e*P	**Pg**	**19 47 57.8**	**-1.7**
	9.0nm,0.2s						
DGS				*e*S	**Sg**	**19 48 45.9**	**-0.3**
	18nm,0.2s						
DGS	**Degeres**	**3.61**	**288**	Pg	**Pg**	**19 47 57.8**	**-1.7**
	9.0nm,0.2s						
DGS				Lg	Lg	19 48 45.9	
	18nm,0.2s						
TKM2	**Tokmak 2**	**3.67**	**283**	⇓*i*P	**Pb**	**19 47 52.2**	**-3.5**
	baz=82						
TKM2				⇓*i*S	**Sb**	**19 48 36.6**	**-3.8**
	baz=82						
TKM2	**Tokmak 2**	**3.67**	**283**	⇓Pn	**Pb**	**19 47 53.7**	**-1.9**
	2.9nm,0.4s						
TKM2				⇑Sn	**Sg**	**19 48 47.8**	**-0.3**
	9.3nm,0.3s						
KRBS	**Karabastau**	**3.81**	**294**	*e*P	**Pb**	**19 48 00.7**	**+2.5**
	5.8nm,0.2s						
KRBS				*e*S	**Sg**	**19 48 50.1**	**-2.8**
	8.9nm,0.3s						
KRBS	**Karabastau**	**3.81**	**294**	Pg	**Pb**	**19 48 00.7**	**+2.5**
	5.8nm,0.2s						
KRBS				Lg	Lg	19 48 50.1	
	8.9nm,0.3s						
CHMS	**Chumysh**	**4.29**	**282**	⇓Pn	Pn	19 48 01.3	+5.0
	1.9nm,0.5s						
CHMS				⇓Lg	Lg	19 49 08.5	
	9.0nm,0.8s						
SGDS	**Sogindy**	**4.47**	**288**	*e*P	**Pb**	**19 48 12.6**	**+3.3**
	2.8nm,0.5s						
SGDS				*e*S	**Sg**	**19 49 10.8**	**-3.0**
	9.1nm,0.5s						
MAKZ	**Makanchi**	**4.71**	**13**	⇓Pn	**Pn**	**19 48 03.6**	**+1.6**
	2.6nm,0.6s						
MAKZ				⇑Sn	**Sn**	**19 49 00.9**	**+3.9**
	3.3nm,0.5s						
MK31	**Makanchi Array**	**4.76**	**15**	⇓Pn	**Pn**	**19 48 05.3**	**+2.7**
	0.3nm,0.2s,baz=193,slow=12,SNR=64						
MK31				⇓Sn	**Sn**	**19 49 01.9**	**+3.9**
	3.5nm,0.5s,baz=185,slow=25,SNR=4.3						
BTLS	**Baital**	**5.45**	**303**	*e*P	**Pg**	**19 48 32.3**	**-2.4**
	2.0nm,0.5s						
BTLS				*e*S	**Sg**	**19 49 45.3**	**0.0**
	2.7nm,0.8s						
KK31	**Karatay Array**	**7.39**	**280**	⇓Pg	**Pg**	**19 49 09.2**	**-2.7**
	0.4nm,0.5s,baz=85,slow=16,SNR=5.1						
KK31				⇑Lg	Lg	19 50 45.2	
	0.9nm,0.5s,baz=85,slow=26,SNR=6.0						
KURBB	**Kurchatov Arra**	**8.51**	**352**	⇓Lg	Lg	19 51 19.8	
	6.3nm,0.7s						

ROM 16 19:47:24.4±0.0,42°.862N±0°.002×13°.075E±0°.004, h9km,ML2.3/35,20C-11D,Error ellipse: s-maj=0.3km s-min=0.2km az=88.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**134**	⇓P	Pg	19 47 26.3	+0.1
NRCA				S	Sg	19 47 27.4	-0.1
NRCA				AML	AML		
	comp=E,14000μm,0.1s						
NRCA				AML	AML		
	comp=N,14530μm,0.4s						
NRCA				AML	AML		
	comp=E,15250μm,0.1s						
NRCA				AML	AML		
	comp=N,15450μm,0.4s						
NRCA				AML	AML		
	comp=N,14510μm,0.4s						
T1216	**Preci, Frazion**	**0.05**	**305**	⇑P	Pg	19 47 26.4	+0.1
T1216				S	Sg	19 47 27.5	-0.2
T1216				AML	AML		
	comp=N,22800μm,0.2s						
T1216				AML	AML		
	comp=N,22800μm,0.2s						
T1216				AML	AML		
	comp=E,14450μm,0.3s						
T1245	**Castelsantange**	**0.08**	**94**	⇑P	Pg	19 47 27.0	+0.3
T1245				S	Sg	19 47 28.8	+0.4
T1245				AML	AML		
	comp=E,7580μm,0.3s						
T1245				AML	AML		
	comp=N,6575μm,0.3s						
T1245				AML	AML		
	comp=E,6895μm,0.3s						
T1245				AML	AML		
	comp=N,6920μm,0.3s						
T1245				AML	AML		
	comp=E,7575μm,0.3s						
MC2	**Monte Cornacci**	**0.10**	**59**	⇑P	Pg	19 47 27.3	+0.3
MC2				S	Sg	19 47 29.5	+0.7
FEMA	**Monte Fema**	**0.10**	**350**	P	Pg	19 47 27.3	+0.3
FEMA				S	Sg	19 47 29.1	+0.2
FEMA				AML	AML		
	comp=N,5790μm,0.6s						
FEMA				AML	AML		
	comp=E,8225μm,0.5s						
FEMA				AML	AML		
	comp=N,5790μm,0.6s						
FEMA				AML	AML		
	comp=E,8220μm,0.5s						
T1215	**Vallo di Nera,**	**0.16**	**249**	⇑P	Pg	19 47 28.6	+0.7
T1215				S	Sg	19 47 31.5	+1.2
T1215				AML	AML		
	comp=N,2305μm,0.4s						
T1215				AML	AML		
	comp=E,2505μm,0.3s						
T1215				AML	AML		
	comp=N,2280μm,0.4s						
T1215				AML	AML		
	comp=E,2465μm,0.3s						
T1215				AML	AML		
	comp=N,2305μm,0.4s						
T1215				AML	AML		
	comp=N,2273μm,0.4s						
T1215				AML	AML		
	comp=E,2502μm,0.3s						
T1215				AML	AML		
	comp=N,2273μm,1.6s						
T1215				AML	AML		
	comp=N,2305μm,1.6s						
T1217	**Poggiodomo (PG**	**0.18**	**215**	⇑P	Pg	19 47 29.1	+0.8
T1217				S	Sg	19 47 32.5	+1.6
MMO1	**Montemonaco**	**0.19**	**78**	⇑P	Pg	19 47 28.9	+0.6
MMO1				S	Sg	19 47 32.2	+1.2
CESI	**CESI - Serrava**	**0.19**	**319**	⇓P	Pg	19 47 28.9	+0.6
CESI				S	Sg	19 47 32.1	+1.1
CESI				AML	AML		
	comp=N,2065μm,0.3s						
CESI				AML	AML		
	comp=E,1360μm,0.4s						
CESI				AML	AML		
	comp=E,1360μm,1.6s						
T1202	**Accumoli, Fraz**	**0.19**	**145**	⇑P	Pg	19 47 29.2	+0.7
T1202				AML	AML		
	comp=E,42μm,0.8s						
T1202				AML	AML		
	comp=N,1234μm,1.1s						
T1202				AML	AML		
	comp=N,913μm,0.3s						
AM05	**Amandola Campo**	**0.23**	**60**	⇑P	Pg	19 47 29.9	+0.7
AM05				S	Sg	19 47 33.7	+1.4
AM05				AML	AML		
	comp=E,574μm,0.2s						
AM05				AML	AML		
	comp=E,1935μm,0.8s						
AM05				AML	AML		
	comp=N,514μm,0.8s						
AM05				AML	AML		
	comp=N,2200μm,0.1s						
T1201	**Domo (RI)**	**0.24**	**148**	P	Pg	19 47 30.3	+1.0
T1204	**Amatrice, Fraz**	**0.26**	**136**	P	Pg	19 47 30.4	+0.8
T1204				AML	AML		
	comp=E,591μm,0.3s						
LNSS	**Leonessa**	**0.26**	**186**	⇑P	Pg	19 47 30.3	+0.7
LNSS				S	Sb	19 47 35.0	-1.0
LNSS				AML	AML		
	comp=N,1500μm,0.6s						
LNSS				AML	AML		
	comp=E,1260μm,0.5s						
LNSS				AML	AML		
	comp=N,1500μm,1.4s						
GUMA	**Gualdo di Mace**	**0.28**	**44**	⇑P	Pb	19 47 30.8	-0.8
GUMA				S	Sb	19 47 35.8	-0.7
GUMA				AML	AML		
	comp=E,2345μm,0.3s						
GUMA				AML	AML		
	comp=E,2520μm,0.6s						
GUMA				AML	AML		
	comp=N,3250μm,0.2s						
GUMA				AML	AML		
	comp=E,2345μm,0.3s						
GUMA				AML	AML		
	comp=N,2595μm,0.6s						
GUMA				AML	AML		
	comp=N,3250μm,1.8s						
GUMA				AML	AML		
	comp=E,1930μm,1.1s						
SEF1	**Sefro**	**0.30**	**342**	P	Pg	19 47 31.1	+0.8
SEF1				S	Sb	19 47 35.9	-1.2
SEF1				AML	AML		
	comp=N,2756μm,0.3s						
SEF1				AML	AML		
	comp=E,2487μm,0.3s						
SMA1	**SAN MARTINO**	**0.30**	**140**	⇓P	Pg	19 47 31.1	+0.7
SMA1				AML

ARRO			AML	AML		
	comp=E,564μm,1.7s					
T1211	**Morro Reatino**	**0.37 206**	P	Pg	19 47 32.2	+0.6
T1211			S	Sb	19 47 38.2	-0.8
T1211			AML	AML		
	comp=E,534μm,0.6s					
T1211			AML	AML		
	comp=N,994μm,0.3s					
RM33	**Pellescritta (**	**0.37 164**	⇑P	Pg	19 47 32.2	+0.5
RM33			S	Sb	19 47 38.3	-0.7
RM33			AML	AML		
	comp=E,332μm,1.4s					
RM33			AML	AML		
	comp=N,354μm,0.4s					
RM33			AML	AML		
	comp=E,326μm,0.8s					
RM33			AML	AML		
	comp=N,358μm,1.2s					
RM33			AML	AML		
	comp=E,326μm,0.8s					
RM33			AML	AML		
	comp=N,358μm,1.2s					
RM33			AML	AML		
	comp=N,355μm,0.4s					
RM33			AML	AML		
	comp=E,332μm,1.4s					
RM33			AML	AML		
	comp=N,358μm,0.8s					
SNTG	**Esanatoglia**	**0.41 346**	P	Pg	19 47 32.8	+0.4
SNTG			S	Sb	19 47 39.3	-0.8
SNTG			AML	AML		
	comp=E,796μm,1.1s					
SNTG			AML	AML		
	comp=N,970μm,0.2s					
SNTG			AML	AML		
	comp=E,766μm,1.1s					
SNTG			AML	AML		
	comp=E,796μm,1.1s					
SNTG			AML	AML		
	comp=N,1088μm,0.2s					
SNTG			AML	AML		
	comp=E,766μm,0.9s					
SNTG			AML	AML		
	comp=N,970μm,0.2s					
SNTG			AML	AML		
	comp=E,796μm,0.9s					
CAMP	**Campotosto**	**0.41 143**	P	Pg	19 47 32.8	+0.4
CAMP			AML	AML		
	comp=E,183μm,0.7s					
CAMP			AML	AML		
	comp=N,174μm,0.6s					
CAMP			AML	AML		
	comp=N,138μm,0.5s					
CESX	**Cesi**	**0.44 236**	⇑P	Pg	19 47 33.5	+0.4
CESX			S	Sb	19 47 40.5	-0.7
CESX			AML	AML		
	comp=E,726μm,0.4s					
CESX			AML	AML		
	comp=N,804μm,0.5s					
T1247	**Pizzolo (AQ)**	**0.45 158**	P	Pb	19 47 33.9	-0.6
T1247			AML	AML		
	comp=E,314μm,1.3s					
T1247			AML	AML		
	comp=E,314μm,1.3s					
T1247			AML	AML		
	comp=N,384μm,0.8s					
T1247			AML	AML		
	comp=E,314μm,0.7s					
ATCC	**AVT- Casa Cast**	**0.45 316**	⇓P	Pg	19 47 33.7	+0.4
ATCC			S	Sb	19 47 41.0	-0.6
ATCC			AML	AML		
	comp=N,442μm,0.5s					
ATCC			AML	AML		
	comp=E,618μm,0.9s					
ATCC			AML	AML		
	comp=N,442μm,0.5s					
ATCC			AML	AML		
	comp=E,618μm,1.1s					
OFFI	**Offida**	**0.46 81**	⇑P	Pb	19 47 34.6	0.0
OFFI			S	Sb	19 47 43.4	+1.9
OFFI			AML	AML		
	comp=E,564μm,0.9s					
OFFI			AML	AML		
	comp=E,564μm,1.1s					
OFFI			AML	AML		
	comp=N,664μm,1.6s					
TERO	**Teramo**	**0.46 121**	P	Pg	19 47 33.5	+0.2
TERO			S	Sb	19 47 41.0	-0.6
TERO			AML	AML		
	comp=N,463μm,0.4s					
TERO			AML	AML		
	comp=E,268μm,0.4s					
TERO			AML	AML		
	comp=E,268μm,1.6s					
TERO			AML	AML		
	comp=N,434μm,0.4s					
TERO			AML	AML		
	comp=E,233μm,0.4s					
EL6	**Elcito**	**0.47 2**	⇑P	Pg	19 47 33.8	+0.3
EL6			S	Sb	19 47 41.4	-0.6
FOSV	**Fossato di Vic**	**0.49 332**	P	Pg	19 47 34.4	+0.5
FOSV			S	Sb	19 47 42.2	-0.4
CING	**Cingoli**	**0.52 10**	⇑P	Pg	19 47 34.8	+0.2
CING			S	Sb	19 47 43.1	-0.4
CING			AML	AML		
	comp=N,464μm,1.2s					
CING			AML	AML		
	comp=E,488μm,1.1s					
CING			AML	AML		
	comp=N,464μm,0.8s					
CING			AML	AML		
	comp=E,488μm,0.9s					
GIGS	**Gran Sasso**	**0.55 138**	⇑P	Pg	19 47 35.4	+0.3
GIGS			AML	AML		
	comp=E,67μm,0.5s					
GIGS			AML	AML		
	comp=N,35μm,0.9s					
GIGS			AML	AML		
	comp=E,67μm,1.5s					
GIGS			AML	AML		
	comp=N,35μm,0.9s					
MURB	**Monte Urbino**	**0.57 315**	P	Pg	19 47 35.9	+0.5
MURB			AML	AML		
	comp=E,794μm,0.3s					
MURB			AML	AML		
	comp=N,628μm,0.2s					
MMUR	**Monte Murano**	**0.58 354**	P	Pb	19 47 36.3	-0.5
FIAM	**Fiamignano**	**0.59 177**	P	Pg	19 47 36.0	+0.1
FIAM			AML	AML		
	comp=E,127μm,0.8s					
FIAM			AML	AML		
	comp=N,117μm,0.8s					
FIAM			AML	AML		
	comp=E,126μm,0.8s					
FIAM			AML	AML		
	comp=N,117μm,0.8s					
FIAM			AML	AML		
	comp=N,89μm,0.3s					
FIAM			AML	AML		
	comp=E,114μm,0.4s					
ATFO	**Monte Foce - G**	**0.62 324**	P	Pg	19 47 36.8	+0.3
ATFO			AML	AML		
	comp=E,246μm,0.2s					
ATFO			AML	AML		
	comp=N,240μm,0.2s					
ATFO			AML	AML		
	comp=E,246μm,0.2s					
ATTE	**AVT- Monte Tez**	**0.63 303**	⇓P	Pb	19 47 37.4	-0.2
ATTE			AML	AML		
	comp=N,91μm,0.2s					
ATTE			AML	AML		
	comp=E,164μm,0.4s					
ATTE			AML	AML		
	comp=N,91μm,0.2s					
ARVD	**Arcevia**	**0.64 351**	P	Pg	19 47 36.9	+0.1
ARVD			AML	AML		
	comp=E,422μm,0.2s					
ARVD			AML	AML		
	comp=N,304μm,0.3s					
PP3	**Marolino**	**0.65 37**	⇓P	Pb	19 47 38.1	+0.2
PP3			AML	AML		
	comp=E,644μm,0.5s					
PP3			AML	AML		
	comp=N,473μm,1.6s					
PP3			AML	AML		
	comp=N,460μm,0.2s					
PP3			AML	AML		
	comp=E,573μm,0.6s					
PP3			AML	AML		
	comp=N,460μm,0.2s					
PP3			AML	AML		
	comp=E,573μm,1.4s					
FRON	**Frontone**	**0.70 339**	P	Pg	19 47 37.4	-0.6
FRON			AML	AML		
	comp=N,418μm,0.3s					
FRON			AML	AML		
	comp=E,286μm,0.2s					
MGAB	**Montegabbione**	**0.71 274**	⇓P	Pb	19 47 39.8	+0.8
ATVO	**AVT- Monte Val**	**0.71 317**	⇑P	Pg	19 47 38.2	0.0
ATVO			AML	AML		
	comp=E,112μm,1.6s					
ATVO			AML	AML		
	comp=N,89μm,0.6s					
ATVO			AML	AML		
	comp=E,113μm,1.6s					
ATVO			AML	AML		
	comp=N,89μm,0.6s					
VCEL	**Villa Celiera**	**0.73 129**	⇑P	Pb	19 47 39.5	+0.1
VCEL			AML	AML		
	comp=E,150μm,0.4s					
VCEL			AML	AML		
	comp=N,153μm,0.8s					
ATPI	**Pietralunga -**	**0.77 320**	⇓P	Pg	19 47 39.6	+0.4
ATPI			AML	AML		
	comp=E,134μm,0.5s					
ATPI			AML	AML		
	comp=N,97μm,1.4s					
ATPI			AML	AML		
	comp=N,51μm,0.4s					
ATPI			AML	AML		
	comp=E,114μm,0.6s					
COR1	**Corinaldo**	**0.77 356**	P	Pb	19 47 39.7	-0.3
MPAG	**Monte Paganucc**	**0.80 343**	⇑P	Pb	19 47 40.2	-0.4
MPAG			S	Sn	19 47 53.0	-1.1
MPAG			AML	AML		
	comp=E,280μm,0.3s					
MPAG			AML	AML		
	comp=N,146μm,1.3s					
MPAG			AML	AML		
	comp=N,146μm,0.7s					
T0110	**Collepietro**	**0.82 140**	⇓P	Pg	19 47 40.5	+0.3
T0110			AML	AML		
	comp=N,149μm,0.3s					
T0110			AML	AML		
	comp=E,126μm,0.3s					
FSSB	**Fossombrone**	**0.86 345**	P	Pg	19 47 41.0	+0.1
FSSB			S	Sn	19 47 55.0	-0.5
FSSB			AML	AML		
	comp=N,818μm,0.4s					
FSSB			AML	AML		
	comp=E,570μm,0.3s					
CAFI	**Castiglion Fio**	**0.94 300**	⇓P	Pb	19 47 43.1	+0.2
CAFI			AML	AML		
	comp=E,82μm,0.6s					
CAFI			AML	AML		
	comp=N,84μm,0.7s					
ABTA	**Abfaltersbach**	**3.91 354**	*e*Pn	Pn	19 48 27.1	+2.4
	comp=N,2.2nm,0.5s					
KBA	**Koelnbreinsper**	**4.22 3**	*e*Pn	Pn	19 48 30.0	+1.0
	comp=N,0.7nm,0.4s					
KBA			*e*Sn	Sn	19 49 18.8	+0.2
	comp=N,1.0nm,0.4s					

*IDC **16** 19:55:16.6±1.4, 42°.69N×111°.72W, h0km, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=25.7km s-min=5.8km az=162.0*
*NEIC **16** 19:55:17.6±0.9, 42°.71N±0°.02×111°.73W±0°.04, h6km±9km, ML3.1/62, Error ellipse: s-maj=4.7km s-min=2.7km az=103.0*
ISC 16 19:55:17.7±0.8, 42°.71N±0°.03×111°.71W±0°.04, h9km, n43, σ1§13/46, Eastern Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECR	**Eagle Creek**	**0.43**	**35**	Pg	**Pg**	**19 55 26.9**	**+0.7**
AHID	**Auburn Hatcher**	**0.45**	**82**		**Pg**	**19 55 26.4**	**-0.1**
AHID				Sg	**Sg**	**19 55 33.1**	**+0.5**
REDW	**Red Top Meadow**	**0.91**	**43**		**Pg**	**19 55 34.9**	**-0.4**
REDW				IAML		19 55 50.1	
	971nm,0.5s						
TPAW	**Teton Pass**	**0.96**	**35**		**Pg**	**19 55 36.3**	**+0.1**
TPAW				IAML		19 55 50.8	
	783nm,0.5s						
TPAW				IAML		19 55 51.2	
	888nm,0.4s						
SNOW	**Snow King Moun**	**1.03**	**42**		**Pg**	**19 55 37.8**	**+0.2**
SNOW				IAML		19 55 53.9	
	477nm,0.4s						
SNOW				IAML		19 55 56.0	
	589nm,0.4s						
FXWY	**Fox Creek**	**1.06**	**28**		**Pg**	**19 55 38.2**	**+0.2**
FXWY				Sg	**Sg**	**19 55 49.9**	**-1.9**
FXWY				IAML		19 55 53.3	
	282nm,0.3s						
HWUT	**Hardware Ranch**	**1.10**	**174**		**Pg**	**19 55 38.8**	**0.0**
LOHW	**Long Hollow**	**1.22**	**41**		**Pb**	**19 55 40.6**	**-0.4**
LOHW				IAML		19 56 00.7	
	234nm,0.6s						
HVU	**Hansel Valley**	**1.22**	**221**		**Pb**	**19 55 40.6**	**-0.3**
MOOW	**Moose Ponds**	**1.26**	**34**	Pn	**Pn**	**19 55 41.4**	**-0.3**
IMW	**Indian Meadow**	**1.32**	**25**		**Pn**	**19 55 42.7**	**+0.2**
SPUT	**South Promonto**	**1.50**	**202**		**Pb**	**19 55 45.6**	**-0.2**
SPUT				IAML		19 56 07.3	
	comp=E,267nm,0.3s						
SPUT				IAML		19 56 07.4	
	comp=N,317nm,0.3s						
BW06	**Boulder Array**	**1.59**	**87**		**Pn**	**19 55 46.8**	**+0.6**
BW06				IAML		19 56 10.3	
	comp=N,129nm,0.6s						
PD31	**Pinedale Array**	**1.59**	**87**		**Pn**	**19 55 46.6**	**+0.4**
PDAR	**Pinedale Array**	**1.59**	**87**	Pg	**Pn**	**19 55 46.8**	**+0.6**
	comp=N,21nm,0.3s,baz=265,slow=13,SNR=503						
PDAR				Lg	Lg	19 56 08.2	
	comp=N,29nm,0.3s,baz=266,slow=30,SNR=5.8						
PDAR	**Pinedale Array**	**1.59**	**87**		**Pn**	**19 55 46.5**	**+0.4**
TCUT	**Toone Canyon**	**1.60**	**172**		**Pb**	**19 55 47.3**	**-0.3**
YPP	**Pitchstone Pla**	**1.70**	**22**	Pn	**Pb**	**19 55 49.5**	**+0.2**
YPP				IAML		19 56 17.2	
	comp=N,179nm,0.7s						
YPP				IAML		19 56 17.9	
	comp=E,168nm,0.7s						
H17A	**Grant Village**	**1.88**	**26**	Pn	**Pn**	**19 55 50.0**	**-0.3**
CTU	**Camp Tracy**	**2.01**	**181**		**Pb**	**19 55 53.5**	**-1.0**
CTU				IAML		19 56 25.0	
	comp=E,173nm,0.6s						
CTU				IAML		19 56 31.7	
	comp=N,93nm,0.8s						
BCYI	**Bear Canyon**	**2.02**	**323**		**Pn**	**19 55 51.8**	**-0.4**
BGU	**Big Grassy Mou**	**2.03**	**209**	Pn	**Pn**	**19 55 52.6**	**+0.3**
BGU				IAML		19 56 25.6	
	comp=N,123nm,0.4s						
BGU				IAML		19 56 25.6	
	comp=E,138nm,0.5s						
YMR	**Madison River**	**2.04**	**15**	Pn	**Pn**	**19 55 51.0**	**-1.3**
YMR				IAML		19 56 30.0	
	comp=N,154nm,1.1s						
YMR				IAML		19 56 32.8	
	comp=E,155nm,1.0s						
YHB	**Horse Butte**	**2.08**	**10**	Pg	**Pb**	**19 55 55.6**	**-0.2**
JLU	**Jordanelle**	**2.11**	**175**	Pn	**Pn**	**19 55 52.0**	**-1.4**
JLU				IAML		19 56 28.7	
	comp=E,149nm,0.7s						
JLU				IAML		19 56 29.2	
	comp=N,105nm,0.8s						
YNR	**Norris Junctio**	**2.14**	**20**	Pn	**Pn**	**19 55 51.9**	**-2.0**
HLID	**Hailey**	**2.16**	**294**		**Pb**	**19 55 56.0**	**-1.1**
HLID				IAML		19 56 28.6	
	comp=N,273nm,0.8s						
HLID				IAML		19 56 29.0	
	comp=N,220nm,0.6s						
YHH	**Holmes Hill**	**2.17**	**16**	Pn	**Pn**	**19 55 55.2**	**+0.9**
DUG	**Dugway, Tooele**	**2.64**	**199**		**Pn**	**19 56 01.7**	**+1.1**
DUG				IAML		19 56 47.5	
	comp=N,56nm,0.8s						
DUG				IAML		19 56 50.8	
	comp=N,60nm,1.1s						
RDMU	**Red Mountain**	**2.67**	**142**		**Pn**	**19 56 01.8**	**+0.8**
MPU	**Maple Canyon**	**2.69**	**179**		**Pn**	**19 56 02.8**	**+1.5**
MPU				IAML		19 56 50.8	
	comp=E,45nm,0.6s						
NLU	**North Lily Min**	**2.76**	**186**		**Pn**	**19 56 02.7**	**+0.3**
P18A	**Preston Nutter**	**3.27**	**160**	Pn	**Pn**	**19 56 08.6**	**-0.7**
P18A				IAML		19 56 59.2	
	comp=N,85nm,0.6s						
P18A				IAML		19 57 16.4	
	comp=E,46nm,0.9s						
ELK	**Elko**	**3.29**	**235**	Pn	**Pn**	**19 56 10.4**	**+0.8**
	comp=E,1.9nm,0.3s,baz=56,slow=7.6,SNR=34						
ELK				Pg	**Pg**	**19 56 20.1**	**-0.6**
	comp=E,3.9nm,0.3s,baz=40,slow=15,SNR=15						
ELK				Lg	Lg	19 57 01.1	
	comp=E,5.8nm,0.3s,baz=342,slow=19,SNR=3.5						
	comp=E,6.1nm,0.4s						
ELK	**Elko**	**3.29**	**235**	Pn	**Pn**	**19 56 11.0**	**+1.4**
ELK				IAML		19 57 04.8	
	comp=E,40nm,0.4s						
ELK				IAML		19 57 05.2	
	comp=E,29nm,0.5s						
P17A	**Butcher Ranch,**	**3.31**	**167**		**Pn**	**19 56 10.5**	**+0.6**
P17A				IAML		19 57 01.3	
	comp=N,81nm,0.9s						
P17A				IAML		19 57 01.5	
	comp=E,59nm,0.9s						
RWWY	**Rawlins**	**3.49**	**105**	Pn	**Pn**	**19 56 14.3**	**+1.9**
K22A	**Casper**	**3.82**	**89**	Pn	**Pn**	**19 56 19.7**	**+2.8**
PV13	**Radium Mtn., P**	**5.05**	**153**	Pn	**Pn**	**19 56 30.7**	**-3.1**
NVAR	**Mina Array Bea**	**6.59**	**232**	Pn	**Pn**	**19 56 55.5**	**+0.6**
	comp=E,0.2nm,0.3s,baz=61,slow=13,SNR=2.0						
NVAR				Sn	**Sn**	**19 58 12.3**	**+2.0**
	comp=E,0.2nm,0.3s,baz=55,slow=49,SNR=1.2						
NVAR				Lg	Lg	19 58 42.2	
	comp=E,0.4nm,0.3s,baz=52,slow=22,SNR=1.5						
	comp=E,0.2nm,0.3s						
NEW	**Newport**	**6.74**	**327**	Lg	Lg	19 58 46.7	
	comp=E,0.9nm,0.3s,baz=66,slow=18,SNR=7.0						
ANMO	**Albuquerque**	**8.76**	**150**	Pn	**Pn**	**19 57 22.8**	**-1.9**
	comp=E,0.1nm,0.3s,baz=328,slow=6.2,SNR=3.0						
ANMO				Lg	Lg	19 59 45.5	
	comp=E,0.1nm,0.3s,baz=262,slow=22,SNR=1.3						
	comp=E,0.7nm,0.7s						
TXAR	**Lajitas Array**	**14.83**	**152**	Pn	**Pn**	**19 58 48.4**	**+0.7**
	baz=333,slow=11,SNR=5.4						
	comp=E,0.4nm,0.7s						

*ATH **16** 20:00:12.3, 39°.76N×20°.69E, h7km±3km, ML3.0/5, Error ellipse: s-maj=3.1km s-min=1.2km az=320.0*
*IDC **16** 20:00:13.9±1.0, 39°.72N×20°.81E, h0km, mb3.8/7, mbtmp3.6/14, ML3.2/7, MS2.8/5, Error ellipse: s-maj=17.1km s-min=13.8km az=65.0*
*PDG **16** 20:00:15.7±0.5, 39°.66N×20°.68E, h16km±1km, ML3.6/13, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0*
*BEO **16** 20:00:16.9±0.5, 39°.64N×20°.76E, h9km±3km, ML3.4/8*
*THE **16** 20:00:17.7, 39°.75N×20°.69E, h0km±1km, ML3.6/13, Error ellipse: s-maj=1.9km s-min=0.6km az=268.0*
ISC 16 20:00:14.8±1.1, 39°.73N±0°.02×20°.68E±0°.02, h0km±8km, n145, σ1§78/195, mb3.9/7, 14C-14D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**118**	P	**Pg**	**20 00 20.1**	**+2.4**
JAN				S	**Sg**	**20 00 23.3**	**+3.7**
	34μm,0.5s						
JAN	**Janina**	**0.15**	**118**	P	**Pg**	**20 00 15.1**	**-2.6**
JAN				S	**Sg**	**20 00 18.5**	**-1.1**
JAN				AML	AML	20 00 18.9	
	comp=N,16892μm,0.1s						
JAN				AML	AML	20 00 19.1	
	comp=E,27735μm,0.1s						
IGT	**Igoumenitsa**	**0.33**	**234**	P	**Pb**	**20 00 24.6**	**+1.0**
IGT				S	**Sb**	**20 00 30.3**	**+0.8**
	comp=E,17μm,0.4s						
IGT	**Igoumenitsa**	**0.33**	**234**	*e*Pg	**Pb**	**20 00 24.4**	**+0.8**
IGT				*e*Sg	**Sb**	**20 00 30.3**	**+0.8**
IGT	**Igoumenitsa**	**0.33**	**234**	P	**Pg**	**20 00 19.3**	**-1.9**
IGT				S	**Pb**	**20 00 24.7**	**+1.0**
IGT				AML	AML	20 00 26.9	
	comp=N,4308μm,0.2s						
IGT				AML	AML	20 00 27.3	
	comp=E,11389μm,0.3s						
LSK	**Leskovik**	**0.43**	**352**	P	**Pb**	**20 00 25.7**	**+0.4**
LSK				S	**Sb**	**20 00 32.4**	**+0.1**
	comp=E,18μm,0.6s						
SRN	**Sarande**	**0.55**	**286**	P	**Pb**	**20 00 27.8**	**+0.5**
SRN				S	**Sb**	**20 00 36.3**	**+0.7**
	comp=E,7μm,0.4s						
KPRO	**Kipourio**	**0.57**	**66**	P	**Pb**	**20 00 27.9**	**+0.1**
KPRO				S	**Sb**	**20 00 36.8**	**+0.3**
	comp=E,8μm,0.4s						
KASA	**Kassiopi**	**0.58**	**272**	P	**Pg**	**20 00 22.9**	**-3.0**
PENT	**Pentalofos**	**0.58**	**37**	P	**Pb**	**20 00 27.7**	**-0.3**
PENT	**Pentalofos**	**0.58**	**37**	P	**Pg**	**20 00 23.0**	**-3.1**
PENT				S	**Sg**	**20 00 30.2**	**-3.5**
KEK	**Kerkira**	**0.68**	**269**	P	**Pb**	**20 00 29.9**	**+0.3**
KEK				S	**Sb**	**20 00 40.5**	**+1.0**
	comp=E,5μm,0.4s						
KEK	**Kerkira**	**0.68**	**269**	P	**Pg**	**20 00 24.7**	**-3.2**
NEST	**Nestorio**	**0.74**	**22**	P	**Pb**	**20 00 31.0**	**+0.3**
NEST				S	**Sb**	**20 00 42.5**	**+1.1**
	comp=E,2μm,0.5s						
NEST	**Nestorio**	**0.74**	**22**	P	**Pg**	**20 00 26.2**	**-2.8**
TSLK	**Tsoukalades, L**	**0.90**	**181**	P	**Pn**	**20 00 35.4**	**+0.7**
TSLK				S	**Sn**	**20 00 48.4**	**0.0**
	comp=E,4μm,0.8s						
TSLK	**Tsoukalades, L**	**0.90**	**181**	P	**Pg**	**20 00 29.5**	**-2.6**
LKD2	**Lefkada island**	**0.94**	**181**	P	**Pg**	**20 00 30.7**	**-2.1**
KZN	**Kozani**	**1.02**	**55**	P	**Pb**	**20 00 35.7**	**+0.3**
KZN	**Kozani**	**1.02**	**55**	P	**Pg**	**20 00 31.1**	**-3.2**
KZN				AML	AML	20 00 36.5	
	comp=N,864μm,0.5s						
KZN				AML	AML	20 00 37.5	
	comp=E,1275μm,0.6s						
THL	**Klokotos Trika**	**1.04**	**99**	P	**Pg**	**20 00 30.8**	**-4.0**
EVGI	**Lefkada island**	**1.10**	**181**	P	**Pn**	**20 00 38.9**	**+1.4**
EVGI	**Lefkada island**	**1.10**	**181**	P	**Pg**	**20 00 33.0**	**-3.0**
EVR	**Evrytania**	**1.19**	**132**	P	**Pg**	**20 00 33.7**	**-4.0**
EVR				AML	AML	20 00 42.5	
	comp=E,753μm,0.4s						
EVR				AML	AML	20 00 44.6	
	comp=N,912μm,0.6s						
TYRN	**Tyrnavos**	**1.20**	**90**	P	**Pn**	**20 00 40.0**	**+1.2**
TYRN				S	**Sn**	**20 00 56.9**	**+1.2**
	comp=N,5μm,0.7s						
FSK	**Fiskardo**	**1.27**	**184**	P	**Pn**	**20 00 37.1**	**-2.7**
PVO	**Paravola**	**1.29**	**149**	P	**Pg**	**20 00 43.1**	**+3.6**
PVO				S	**Sn**	**20 01 02.3**	**+4.3**
	comp=N,2μm,0.6s						
PVO	**Paravola**	**1.29**	**149**	P	**Pn**	**20 00 37.2**	**-2.8**
MAKR	**Makrakomi, Fth**	**1.33**	**122**	P	**Pn**	**20 00 36.5**	**-4.2**
OHR	**Ohrid**	**1.39**	**4**	*e*Pg	**Pg**	**20 00 43.6**	**+2.2**
OHR				*e*Sg	**Sg**	**20 01 03.3**	**+3.9**
OHR	**Ohrid**	**1.39**	**4**	*i* Pn	**Pn**	**20 00 40.5**	**-0.9**
LIT	**Litokhoron**	**1.44**	**74**	P	**Pg**	**20 00 44.1**	**+1.7**
LIT				S	**Sg**	**20 01 04.3**	**+3.2**
	comp=N,2μm,0.6s						
LIT	**Litokhoron**	**1.44**	**74**	P	**Pn**	**20 00 38.7**	**-3.4**
KEF4	**Livadi, Kephal**	**1.48**	**188**	P	**Pn**	**20 00 39.5**	**-3.2**
VLS	**Valsamata**	**1.55**	**183**	P	**Pn**	**20 00 41.4**	**-2.2**
EFP	**Efpalio**	**1.61**	**143**	P	**Pg**	**20 00 47.9**	**+2.2**
EFP	**Efpalio**	**1.61**	**143**	P	**Pn**	**20 00 42.1**	**-2.4**
EFP				AML	AML	20 00 49.7	
	comp=N,1063μm,0.3s						
EFP				AML	AML	20 00 52.3	
	comp=E,1064μm,0.5s						
SERG	**Sergoula**	**1.69**	**140**	P	**Pn**	**20 00 44.4**	**-1.2**
TIR	**Tirane**	**1.73**	**339**	⇓P	**Pg**	**20 00 48.6**	**+0.5**
TIR				⇓S	**Sb**	**20 01 09.5**	**-0.3**
TIR	**Tirane**	**1.73**	**339**	*e*Pn	**Pb**	**20 00 48.0**	**+0.5**
TIR				*e*Sn	**Sg**	**20 01 12.9**	**+2.3**
LAKA	**Lakka**	**1.80**	**145**	P	**Pn**	**20 00 44.9**	**-2.1**
GRG	**Griva**	**1.80**	**46**	P	**Pb**	**20 00 49.0**	**+0.3**
AXAR	**Agios Charalam**	**1.81**	**121**	P	**Pn**	**20 00 45.5**	**-1.8**
PHP	**Peshkopia**	**1.96**	**355**	P	**Pb**	**20 00 51.4**	**-0.1**
NEO	**Neokhori**	**2.01**	**101**	P	**Pb**	**20 00 52.5**	**+0.2**
NEO				S	**Sg**	**20 01 19.9**	**+0.5**
	comp=E,875nm,0.7s						
KLV	**Kalavryta, Ach**	**2.04**	**145**	P	**Pn**	**20 00 48.6**	**-1.8**
HORT	**Hortiatis**	**2.05**	**64**	P	**Pb**	**20 00 52.6**	**-0.3**
VAY	**Valandovo**	**2.15**	**42**	*e*Pn	**Pn**	**20 00 52.6**	**+0.7**
VAY				*e*Sn	**Sb**	**20 01 20.8**	**-0.9**
VAY	**Valandovo**	**2.15**	**42**	*i* Pn	**Pn**	**20 00 51.4**	**-0.5**
KNT	**Kendrikon**	**2.22**	**49**	P	**Pn**	**20 00 54.3**	**+1.4**
KNT				S	**Sb**	**20 01 23.1**	**-0.7**

comp=E,138nm,0.6s
STIP Stip 2.27 30 *i* Pn **Pn 20 00 52.3 -1.3**
SKO Skopje 2.31 14 *e*Pn **Pb 20 00 56.5 -0.9**
SKO *e*Sn **Sb 20 01 27.3 +0.7**
SKO Skopje 2.31 14 *i* Pn **Pb 20 00 56.8 -0.7**
ULC Ulcinj 2.48 334⇑ *i*Pn **Pn 20 00 57.6 +1.0**
ULC *i* Sn **Sb 20 01 29.9 -1.6**
SRS Serrai 2.62 57 *e*Pn **Pn 20 00 58.2 -0.2**
SRS *e*Sn **Sb 20 01 32.9 -2.5**
DRME Dracevica, Mon 2.71 336 *e*Pn **Pn 20 01 00.8 +1.2**
DRME Dracevica, Mon 2.71 336⇑ *i*Pn **Pn 20 01 00.7 +1.2**
DRME *i* Sn **Sn 20 01 35.2 +2.2**
BUM Brajici-Budva 2.91 333⇑ *i*Pn **Pn 20 01 03.4 +1.0**
BUM *i* Sn **Sn 20 01 39.9 +1.9**
PDG Podgorica 2.91 339⇑P **Pn 20 01 04.5 +2.2**
PDG ⇓S **Sn 20 01 40.5 +2.5**
TTG Podgorica 2.91 339⇓ *i*Pn **Pn 20 01 03.6 +1.3**
TTG *i* Sn **Sn 20 01 40.0 +2.1**
NVR Nevrokopi 2.92 55 P **Pn 20 01 04.0 +1.5**
PVY Plav 2.92 349 *e*Pn **Pn 20 01 03.7 +1.1**
PVY *i* Sn **Sn 20 01 40.4 +2.0**
ATHU Athens Univers 2.99 125 P **Pn 20 01 05.7 +2.2**
DION Dionisos Attik 3.02 122 P **Pn 20 01 06.4 +2.4**
TIP Timpagrande 3.09 261⇑P **Pn 20 01 05.4 +0.6**
TIP ⇑S **Sn 20 01 40.7 -1.8**
CEME Cevo 3.12 335 *e*Pn **Pn 20 01 06.4 +1.1**
CEME *i* Sn **Sn 20 01 44.6 +1.4**
HCY Herceg Novi 3.18 329 *e*Pn **Pn 20 01 06.0 -0.1**
HCY Herceg Novi 3.18 329 *e*Pn **Pn 20 01 06.8 +0.7**
MATE Matera 3.18 288 ⇓P **Pn 20 01 07.7 +1.6**
MATE ⇑S **Sn 20 01 44.7 0.0**
IVA Berane 3.20 350 *e*Pn **Pn 20 01 07.6 +1.2**
IVA *i* Sn **Sn 20 01 47.1 +1.9**
BARS Barje 3.20 15 *e*Pn **Pn 20 01 08.3 +1.9**
KOME Kolasin 3.24 345 *e*Pn **Pn 20 01 08.2 +1.2**
KOME *i* Sn **Sn 20 01 48.2 +1.9**
NKME Niksic 3.30 337 *e*Pn **Pn 20 01 09.0 +1.2**
NKME *i* Sn **Sn 20 01 49.5 +1.7**
SELS Selova 3.50 5 *e*Pn **Pn 20 01 12.3 +1.7**
BRY Bratogost 3.56 334 *e*Pn **Pn 20 01 12.0 +0.6**
BRY Bratogost 3.56 334 *e*Pn **Pn 20 01 12.4 +1.0**
BRY *i* Sn **Sn 20 01 55.6 +1.4**
SJES Sjenica 3.57 352 *e*Pn **Pn 20 01 13.5 +1.9**
UPM Unac-Piva 3.72 340 *e*Pn **Pn 20 01 14.0 +0.3**
UPM Unac-Piva 3.72 340 *e*Pn **Pn 20 01 14.9 +1.2**
UPM *i* Sn **Sn 20 01 59.5 +1.2**
PLE Pljevlja 3.73 345 *e*Pn **Pn 20 01 14.9 +1.2**
PLE *i* Sn **Sn 20 01 59.7 +1.3**
ZAPS Zavoj 3.83 22 *e*Pn **Pn 20 01 17.4 +2.3**
STON Ston 3.86 325 *e*Pn **Pn 20 01 13.9 -1.5**
BOVS Bovan 3.98 11⇑P **Pn 20 01 18.8 +1.7**
BOVS ⇓S **Sn 20 02 05.1 +0.7**
BOVS Bovan 3.98 11 *e*Pn **Pn 20 01 17.9 +0.9**
BOVS *e*Sn **Sn 20 02 04.6 +0.2**
RUDO Rudo 4.01 346 *e*Pn **Pn 20 01 19.0 +1.5**
GRUS Gruza 4.16 0 *e*Pn **Pn 20 01 21.2 +1.7**
BLKB Belogradchik 4.17 20⇓P **Pn 20 01 22.0 +2.3**
BLKB ⇑S **Sn 20 02 10.5 +1.3**
ZAGS Zajecar 4.24 15 *e*Pn **Pn 20 01 21.9 +1.2**
ZAGS *e*Sn **Sn 20 02 12.8 +1.9**
BBLS Lazići 4.24 347 *e*Pn **Pn 20 01 21.9 +1.1**
BBLS Lazići 4.24 347 *e*Pn **Pn 20 01 22.4 +1.6**
ANKY Antikythira Is 4.38 151 P **Pn 20 01 24.9 +2.4**
DIVS Divibare 4.40 354 *e*Pn **Pn 20 01 21.6 -1.3**
DIVS Divibare 4.40 354 *e*Pn **Pn 20 01 23.6 +0.7**
DIVS *e*Sn **Sn 20 02 15.3 +0.5**
TRUS Trudelj 4.50 357 *e*Pn **Pn 20 01 26.5 +2.3**
TEKS Tekeris 4.89 350 *e*Pn **Pn 20 01 27.9 -1.7**
MGRS Mrkonjic Grad 5.40 331 *e*Pn **Pn 20 01 36.8 +0.2**
VAE Valguarnera 5.40 247 Pn **Pn 20 01 37.6 +1.0**
comp=E,0.5nm,0.3s,baz=58,slow=13,SNR=1.3
VAE Sn **Sn 20 02 41.2 +1.7**
comp=E,2.2nm,0.3s,baz=158,slow=19,SNR=2.2
comp=E,2.9nm,0.4s
FRGS Fruska Gora 5.46 354⇓P **Pn 20 01 38.6 +1.1**
FRGS Fruska Gora 5.46 354 *e*Pn **Pn 20 01 37.3 -0.2**
FRGS Fruska Gora 5.46 354 *e*Pn **Pn 20 01 37.9 +0.4**
IDI Anoyia 5.55 142⇓P **Pn 20 01 38.0 -0.7**
IDI ⇑S **Sn 20 02 42.1 -1.2**
IDI Anoyia 5.55 142 Pn **Pn 20 01 37.5 -1.3**
comp=E,1.0nm,0.3s,baz=311,slow=14,SNR=12
IDI Sn **Sn 20 02 41.2 -2.1**
comp=E,1.2nm,0.3s,baz=252,slow=20,SNR=1.7
comp=E,1.9nm,0.3s
BLY Banja Luka 5.65 334 *e*Pn **Pn 20 01 42.1 +2.1**
GZR Gura Zlata 5.87 15⇓P **Pn 20 01 44.9 +1.8**
GZR ⇑S **Sn 20 02 52.7 +1.6**
BZS Buzias 5.93 6⇓P **Pn 20 01 45.7 +1.9**
A051A Mrakovica 5.97 333 *e*Pn **Pn 20 01 44.1 -0.4**
VOIR 6.55 28⇓P **Pn 20 01 54.5 +2.0**
MORH Mrgy, Hungar 6.65 348⇓P **Pn 20 01 54.7 +0.9**
MLR Muntele Rosu 6.94 32⇑P **Pn 20 01 59.5 +1.6**
MLR Muntele Rosu 6.94 32 Pn **Pn 20 02 02.4 +4.5**
comp=E,1.1nm,0.3s,baz=260,slow=5.5,SNR=11
MLR Sn **Sn 20 03 17.3 -0.4**
comp=E,0.2nm,0.3s,baz=315,slow=19,SNR=1.0
BOJS Bojanci 7.02 327 *e*Pn **Pn 20 01 58.5 -0.4**
CRES Cresnjev 7.20 329 *e*Pn **Pn 20 02 00.6 -0.8**
PLOR Plostina 7.53 34⇑P **Pn 20 02 07.7 +1.8**
CEY Cerknica 7.57 325 *e*Pn **Pn 20 02 04.9 -1.4**
VRI Vrincioaia 7.57 34⇑P **Pn 20 02 08.1 +1.7**
SKDS Skadanscina 7.61 322 *e*Pn **Pn 20 02 04.3 -2.7**
SOKA Soboth 8.08 331 *e*Pn **Pn 20 02 13.1 -0.3**
comp=E,3.5nm,0.5s
OBKA Obir 8.12 329 *e*Pn **Pn 20 02 11.4 -2.7**
OBKA Obir 8.12 329 *e*Pn **Pn 20 02 13.8 -0.3**
comp=E,0.5nm,0.2s
PSZ Piszkesteto 8.21 356⇓P **Pn 20 02 16.9 +1.7**
ARSA Arzberg 8.40 335 *e*Pn **Pn 20 02 20.0 +2.3**
comp=E,2.2nm,0.6s
KBA Koelnbreinsper 9.08 326 *e*Pn **Pn 20 02 27.0 -0.2**
comp=E,1.0nm,0.5s
ABTA Abfaltersbach 9.20 322 *e*Pn **Pn 20 02 28.4 -0.4**
comp=E,2.9nm,0.5s
MOA Molln 9.35 332 *e*Pn **Pn 20 02 32.6 +1.9**
comp=E,0.6nm,0.2s
KEST Kesra 9.82 250 Pn **Pn 20 02 38.4 +1.0**
comp=E,0.2nm,0.3s,baz=7.6,slow=15,SNR=4.3
KEST Sn **Sn 20 04 27.8 -0.6**
comp=E,0.1nm,0.3s,baz=139,slow=20,SNR=2.2
comp=E,2.7nm,0.9s
BRTR Keskin Array B 9.98 86 Pn **Pn 20 02 42.7 +3.1**
comp=E,0.1nm,0.3s,baz=273,slow=13,SNR=1.8
BRTR LR LR 20 07 08.1
comp=E,71nm,18.1s,baz=318,slow=42
WTTA Wattenberg 9.99 322 *e*Pn **Pn 20 02 38.9 -0.8**
comp=E,2.1nm,0.3s
VRAC Vranov 10.01 344 LR LR 20 07 32.6
comp=E,51nm,18.4s,baz=156,slow=44
SQTA Sankt Quirin 10.17 321 *e*Pn **Pn 20 02 43.5 +1.4**
comp=E,3.2nm,0.6s
FETA Feichten 10.27 318 *e*Pn **Pn 20 02 45.0 +1.4**
comp=E,1.9nm,0.7s
MOTA Moosalm 10.30 321 *e*Pn **Pn 20 02 44.0 0.0**
comp=E,2.9nm,0.5s
GERES GERESS Array B 10.39 334 Pn **Pn 20 02 46.4 +1.2**
comp=E,0.1nm,0.3s,baz=150,slow=14,SNR=5.1
GERES Sn **Sn 20 04 41.4 -0.9**
comp=E,0.2nm,0.3s,baz=151,slow=25,SNR=5.1
comp=E,0.3nm,0.5s
DAVOX Davos/Dischmat 10.56 315 Pn **Pn 20 02 48.0 +0.4**
comp=E,0.2nm,0.3s,baz=157,slow=18,SNR=1.9
DAVOX Sn **Sn 20 04 45.2 -1.5**
comp=E,0.2nm,0.3s,baz=152,slow=15,SNR=1.9
DAVOX LR LR 20 07 41.0
comp=E,37nm,19.2s,baz=78,slow=42
comp=E,0.5nm,0.3s
KHC Kasperske Hory 10.68 334 *e*PN **Pn 20 02 50.6 +1.6**
MMAI Mount Meron Ar 13.61 115 Pn **Pn 20 03 28.3 -0.9**
comp=E,0.3nm,0.3s,baz=316,slow=12,SNR=1.9
comp=E,0.3nm,0.3s
ESDC Sonseca Array 18.95 278 P **Pn 20 04 37.9 -0.2**
baz=74,slow=11,SNR=0.8
comp=E,0.1nm,0.5s
HFS Hagfors 20.89 350 P **P 20 04 57.6 -0.8**
comp=E,2.3nm,0.9s,baz=171,slow=11,SNR=1.4
HFS LR LR 20 14 42.5
comp=E,22nm,20.5s,baz=186,slow=42
comp=E,2.3nm,0.9s
FINES FINESS Array B 22.00 7 P **P 20 05 09.0 -1.2**
comp=E,3.9nm,1.0s,baz=183,slow=12,SNR=7.4
comp=E,3.9nm,1.0s
NB2 NORSAR Subarra 22.13 348 P **P 20 05 10.7 -1.0**
comp=Z,12nm,1.4s,baz=162,slow=11
NOA NORSAR Array B 22.13 348 P **P 20 05 11.1 -0.7**
comp=Z,1.8nm,0.8s,baz=164,slow=11,SNR=5.2
NOA LR LR 20 14 23.2
comp=Z,19nm,18.2s,baz=145,slow=38
comp=Z,1.8nm,0.8s
EKA Eskdalemuir Ar 22.26 322 P **P 20 05 15.8 +2.7**
comp=Z,1.1nm,0.6s,baz=116,slow=9.8,SNR=3.4
ARCES ARCESS Array B 29.98 3 P **P 20 06 22.5 -2.0**
comp=Z,1.8nm,0.8s,baz=193,slow=10.0,SNR=4.8
comp=Z,1.8nm,0.8s
TORD Torodi Ar. Bea 31.32 218 P **P 20 06 36.3 -0.6**
comp=Z,1.0nm,0.7s,baz=30,slow=8.3,SNR=6.7
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 44.40 60 P **P 20 08 25.5 -1.5**
comp=Z,2.7nm,0.6s,baz=278,slow=7.3,SNR=35
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 44.58 49 P **P 20 08 26.7 -1.6**
comp=Z,0.5nm,0.4s,baz=277,slow=9.1,SNR=2.8
comp=Z,0.5nm,0.4s

LDG 16 20:21:02.6±0.1, 44°.63N×7°.20E, h2km, Md1.0/1, MI1.0/5,
Error ellipse: s-maj=2.9km s-min=1.5km az=76.0,
Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.32**	**288**	*e*Pg	Pg	20 21 09.4	+0.6
MBDF				*e*Sg	Sg	20 21 14.0	+1.0
	5.0nm,0.2s						
SBF	**Sospel**	**0.79**	**167**	*e*Pg	Pg	20 21 17.8	+0.2
SBF				*e*Sg	Sg	20 21 27.4	-0.4
	1.2nm,0.2s						
LPG	**La Plagne**	**0.92**	**340**	*e*Pg	Pg	20 21 20.5	+0.2
LPG				*e*Sg	Sg	20 21 32.6	+0.3
	0.3nm,0.2s						
LPL	**La Plagne**	**0.95**	**340**	*e*Pg	Pg	20 21 20.2	-0.6
LPL				*e*Sg	Sg	20 21 33.1	+0.1
	0.2nm,0.1s						
ORIF	**Oris-en-Rattie**	**0.98**	**288**	*e*Pg	Pg	20 21 21.3	-0.1
ORIF				*e*Sg	Sg	20 21 33.8	-0.4
	0.4nm,0.2s						
LMR	**La Mourre**	**1.39**	**201**	*e*Pg	Pn	20 21 28.1	-0.9
LMR				*e*Sg	Sg	20 21 46.6	-0.6
	0.3nm,0.2s						

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*DJA **16** 20:22:15.7±2.2, 3°.S±7°.×15°.1E±°, h29km±16km, M4.5/13, mB5.2/3, mb4.6/13, MLv4.4/2, Mw(mB)4.5/3*
*IDC **16** 20:22:16.2±1.0, 3°.27S×150°.72E, h0km, mb4.1/12, mbtmp4.2/14, ML3.8/2, MS3.9/43, Error ellipse: s-maj=32.9km s-min=16.9km az=102.0*
*NEIC **16** 20:22:17.8±2.0, 3°.3S±0°.1×150°.52E±0°.04, h10km±1km, mb4.6/9, Error ellipse: s-maj=21.0km s-min=4.0km az=17.0*
*GCMT **16** 20:22:19.8±0.2, 3°.04S±0°.01×150°.54E±0°.02, h15km±1km, MW4.9/106, Moment Tensor Solution. s29,c32; s106,c150; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}-0.29±.09; $M_{\theta\theta}$2.37±.09; $M_{\phi\phi}$-2.09±.08; $M_{r\theta}$1.02±.29; $M_{\theta\phi}$1.50±.08; $M_{\phi r}$-0.48±.29; Best double couple: $M_0$2.91600×10^16 NP1φs297.00000°, δ88.00000°, λ-23.00000°. NP2φs28.00000°, δ67.00000°, λ-178.00000°. Principal axes: T 3.0440, Plg15.0000°, Azm345.0000°; N -0.2650, Plg67.0000°, Azm112.0000°; P -2.7880, Plg18.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 20:22:21.4±0.6, 3°.36S±0°.08×150°.65E±0°.08, h35km, n107, σ2s=05/50, mb4.3/22, MS3.9/43, 3C, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.73**	**119**		**Pn**	**20 22 47.7**	**-1.3**
MANU	**Manus Island**	**3.53**	**292**	Pn	Pn	20 23 07.6	-6.2
PMG	**Port Moresby**	**6.93**	**210**	Pn	Pn	20 24 05.3	+4.7
	1.0nm,0.3s,baz=95,slow=8.3,SNR=3.9						
PMG				LR	LR	20 26 41.2	
	comp=Z,704nm,20.2s,baz=56,slow=38						
PMG	**Port Moresby**	**6.93**	**210**	Pn	**Pn**	**20 23 58.2**	**-2.4**
PMG	**Port Moresby**	**6.93**	**210**	P	Pn	20 24 04.5	+3.9
	0.2nm74nm,1.2s						
PMG	**Port Moresby**	**6.93**	**210**	P	Pn	20 24 09.9	+9.3
PMG	**Port Moresby**	**6.93**	**210**	P	Pn	20 24 10.0	+9.4
GENI	**Genyem**	**10.49**	**274**	P	**Pn**	**20 24 49.5**	**+0.1**
	46nm,2.0s						
HNR	**Honiara**	**11.03**	**124**	LR	LR	20 29 00.7	
	comp=Z,10μm,19.0s,baz=292,slow=37						
SMPI	**Sarmi**	**12.00**	**276**	P	**Pn**	**20 25 09.8**	**-0.3**
	37nm,1.3s						
MTSU	**Mount Surprise**	**15.94**	**202**	P	**P**	**20 26 10.9**	**+4.5**
CTA	**Charters Tower**	**17.17**	**194**	P	**P**	**20 26 20.7**	**+0.7**
	0.1nm,0.3s,baz=20,slow=14,SNR=2.9						
CTA				LR	LR	20 32 19.6	
	comp=Z,344nm,20.9s,baz=14,slow=35						
	8.8nm,1.2s						
CTA	**Charters Tower**	**17.17**	**194**	P	P	20 26 28.0	+8.0
CTAO	**Charters Tower**	**17.17**	**194**	P	P	20 26 27.1	+7.1
GUMO	**Guam**	**17.79**	**341**	LR	LR	20 31 23.2	
	comp=Z,525nm,20.4s,baz=155,slow=31						
SIJI	**Sorong**	**19.52**	**277**	P	**Pn**	**20 26 47.1**	**-0.4**
	0.6nm,0.3s,baz=77,slow=8.4,SNR=8.7						
	25nm,0.9s						
SIJI	**Sorong**	**19.52**	**277**	P	**P**	**20 26 44.3**	**-1.7**
	25nm,1.0s						
QIS	**Mount Isa**	**20.20**	**211**	P	Pn	20 26 59.9	+4.5
KDU	**Kakadu**	**20.22**	**242**	P	Pn	20 26 59.0	+3.3
MTN	**Manton Dam**	**21.47**	**243**	P	**P**	**20 27 04.9**	**-2.2**
MTN	**Manton Dam**	**21.47**	**243**	P	**P**	**20 27 11.9**	**+4.8**
EIDS	**Eidsvold**	**21.89**	**179**	P	**P**	**20 27 10.6**	**-0.8**
EIDS				IAmb	IAmb	20 27 25.2	
	comp=Z,20nm,1.0s						
EIDS	**Eidsvold**	**21.89**	**179**	P	P	20 27 22.0	+11
WB0	**Warramunga Arr**	**22.75**	**223**	P	**P**	**20 27 19.6**	**-1.2**
WB0				IAmb	IAmb	20 27 28.1	
	comp=Z,18nm,1.1s						
WR0	**Warramunga Arr**	**22.78**	**222**	P	**P**	**20 27 20.1**	**-1.0**
WR0				IAmb	IAmb	20 27 27.1	
	comp=Z,25nm,1.2s						
WRAB	**Tennant Creek**	**22.89**	**223**	P	**P**	**20 27 27.8**	**+5.5**
WB2	**Warramunga Arr**	**22.90**	**223**	P	**P**	**20 27 20.4**	**-1.9**
WB2				IAmb	IAmb	20 27 29.5	
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**22.91**	**223**	P	**P**	**20 27 21.7**	**-0.7**
	comp=Z,8.3nm,0.8s,baz=46,slow=9.7,SNR=33						
WRA				LR	LR	20 37 01.4	
	comp=Z,345nm,18.8s,baz=57,slow=38						
	comp=Z,8.3nm,0.8s						
WRA	**Warramunga Arr**	**22.91**	**223**	P	**P**	**20 27 18.8**	**-3.6**
RMQ	**Roma**	**23.07**	**184**	P	P	20 27 32.1	+8.1
LBMI	**Labuha**	**23.29**	**276**	P	**P**	**20 27 25.3**	**-1.0**
	comp=Z,2μmcomp=Z,78nm,2.2s						
QLP	**Quilpie**	**23.89**	**194**	P	P	20 27 39.6	+7.6
DZM	**Mont Dzumac**	**24.11**	**142**	*e*S	**S**	**20 31 49.4**	**-0.3**
	comp=Z,151nm,25.8s						
DZM				*e*LR	LR	20 33 28.3	
	comp=Z,1μm,23.6s						
DZM	**Mont Dzumac**	**24.11**	**142**	LR	LR	20 35 56.0	
	comp=Z,436nm,21.2s,baz=301,slow=34						
SANI	**Sanana**	**24.66**	**272**	P	**P**	**20 27 36.7**	**-2.5**
	comp=Z,22nm,1.9s						
KNRA	**Kununurra**	**24.77**	**239**	P	**P**	**20 27 38.3**	**-1.8**
AS31	**Alice Springs**	**25.87**	**217**	P	**P**	**20 27 49.5**	**-0.6**
ASAR	**Alice Springs**	**25.87**	**217**	P	**P**	**20 27 50.9**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=51,slow=8.6,SNR=24						
ASAR				PcP	**PcP**	**20 31 20.2**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=38,slow=2.5,SNR=6.0						
ASAR				LR	LR	20 37 57.3	
	comp=Z,163nm,19.0s,baz=51,slow=36						
	comp=Z,4.5nm,0.9s						
INKA	**Innaminka**	**26.02**	**200**	P	P	20 27 58.6	+7.3
H11S3	**WAKE ISLAND Hy**	**26.86**	**35**	T	T	20 55 27.1	
	baz=217,slow=75,SNR=54						
H11S2	**WAKE ISLAND Hy**	**26.86**	**36**	T	T	20 55 16.4	
	baz=217,slow=75,SNR=88						
H11S1	**WAKE ISLAND Hy**	**26.88**	**35**	T	T	20 55 17.3	
	baz=217,slow=75,SNR=64						
SOEI	**Soe**	**26.95**	**255**	P	**P**	**20 28 00.2**	**+0.2**
	comp=Z,954nmcomp=Z,47nm,0.8s						
SOEI	**Soe**	**26.95**	**255**	P	**P**	**20 28 05.0**	**+5.0**
H11N1	**WAKE ISLAND Hy**	**27.94**	**34**	T	T	20 56 39.2	
	baz=218,slow=76,SNR=39						
LUWI	**Luwuk**	**27.95**	**274**	P	**P**	**20 28 07.7**	**-1.1**
	comp=Z,46nm,1.1s						
LUWI	**Luwuk**	**27.95**	**274**	P	P	20 28 15.3	+6.5
H11N3	**WAKE ISLAND Hy**	**27.95**	**34**	T	T	20 56 40.3	
	baz=218,slow=76,SNR=33						
H11N2	**WAKE ISLAND Hy**	**27.96**	**34**	T	T	20 56 37.9	
	baz=218,slow=76,SNR=109						
BBSI	**Bau Bau**	**28.07**	**265**	P	**P**	**20 28 10.0**	**+0.1**
	comp=Z,27nm,1.2s						
STKA	**Stephens Creek**	**29.62**	**196**	LR	LR	20 40 33.4	
	comp=Z,304nm,19.2s,baz=16,slow=37						
KAPI	**Kappang**	**30.85**	**266**	LR	LR	20 42 01.7	
	comp=Z,75nm,18.7s,baz=84,slow=38						
MPSI	**Mapaga**	**30.95**	**276**	P	**P**	**20 28 32.2**	**-3.3**
	comp=Z,12nm,1.1s						
JCJ	**Chichijima**	**31.36**	**345**	LR	LR	20 39 35.1	
	comp=Z,346nm,21.6s,baz=148,slow=33						
JOW	**Kunigami**	**36.99**	**326**	LR	LR	20 41 06.0	
	comp=Z,317nm,20.7s,baz=144,slow=31						
AFI	**Afiamalu**	**38.54**	**108**	LR	LR	20 44 42.2	
	comp=Z,170nm,18.1s,baz=162,slow=35						
MJAR	**Matsushiro Arr**	**41.36**	**345**	P	**P**	**20 30 03.4**	**-0.7**
	comp=Z,3.0nm,1.0s,baz=167,slow=9.1,SNR=4.8						
MJAR				LR	LR	20 45 52.4	
	comp=Z,159nm,20.2s,baz=160,slow=34						
	comp=Z,3.0nm,1.0s						
URZ	**Urewera**	**42.32**	**149**	LR	LR	20 46 13.1	
	comp=Z,164nm,21.7s,baz=51,slow=34						
NWAO	**Narrogin (SRO)**	**42.92**	**223**	LR	LR	20 48 30.3	
	comp=Z,249nm,18.4s,baz=296,slow=37						
LEM	**Lembang**	**42.98**	**264**	LR	LR	20 49 51.3	
	comp=Z,97nm,20.6s,baz=95,slow=38						
RPZ	**Rata Peaks**	**44.07**	**159**	LR	LR	20 46 19.5	
	comp=Z,427nm,21.9s,baz=318,slow=33						
KSRS	**Korea Array**	**45.77**	**335**	P	**P**	**20 30 39.2**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=148,slow=9.1,SNR=5.4						
KSRS				LR	LR	20 48 06.5	
	comp=Z,105nm,22.0s,baz=140,slow=34						
	comp=Z,0.7nm,0.4s						
NJ2	**Nanjing**	**46.39**	**322**	*e*P	**P**	**20 30 43.9**	**-0.6**
HNS	**HongShan**	**52.52**	**324**⇑P	P		20 31 34.4	+3.1
XAN	**Xi'an**	**54.11**	**317**⇑P	**P**		**20 31 46.0**	**+2.9**
XAN				pP	pP	20 31 52.1	-0.8
KMI	**Kunming**	**54.41**	**304**⇑P	**P**		**20 31 46.8**	**+1.2**
KLR	**Kul'dur**	**54.89**	**345**	LR	LR	20 52 05.1	
	comp=Z,99nm,21.2s,baz=189,slow=33						
CMAR	**Chiang Mai Arr**	**55.32**	**295**	P	**P**	**20 31 51.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=122,slow=5.8,SNR=8.9						
CMAR				LR	LR	20 54 39.9	
	comp=Z,30nm,21.1s,baz=135,slow=35						
	comp=Z,0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**55.32**	**295**	P	**P**	**20 31 51.2**	**-0.9**
PZH	**PanZhiHua**	**55.79**	**305**	P	**P**	**20 31 57.6**	**+2.1**
XLT	**XiLinHaoTe**	**56.36**	**330**	*e*P	**P**	**20 32 01.4**	**+2.2**
XLT				pP	pP	20 32 05.6	-3.4
XLT				sP	pwP	20 32 08.8	-3.4
PETK	**Petropavlovsk-**	**56.58**	**5**	P	**P**	**20 31 58.9**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=186,slow=8.1,SNR=1.9						
PETK				LR	LR	20 51 28.3	
	comp=Z,153nm,21.9s,baz=186,slow=31						
	comp=Z,1.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**56.64**	**325**	*e*P	**P**	**20 32 03.8**	**+2.5**
SHEM	**Shemya Is, Ala**	**59.29**	**16**	LR	LR	20 52 60.0	
	comp=Z,64nm,21.6s,baz=242,slow=31						
PPT	**Papeete**	**60.21**	**108**	LR	LR	20 55 53.6	
	comp=Z,22nm,19.2s,baz=305,slow=34						
PPT2	**Papeete2**	**60.21**	**108**	*e*LR	LR	20 50 11.2	
	comp=Z,153nm,29.5s						
TBI	**Tubuai**	**61.11**	**115**	*e*LR	LR	20 50 36.0	
	comp=Z,138nm,31.2s						
MA2	**Magadan**	**62.74**	**0**	LR	LR	20 55 39.9	
	comp=Z,121nm,21.9s,baz=186,slow=32						
GTA	**Gaotai**	**63.15**	**318**	*e*P	**P**	**20 32 46.4**	**+0.3**
GTA				pP	pP	20 32 54.9	-1.2
GTA				sP	sP	20 32 59.1	-0.8
ULN	**Ulaanbaatar**	**63.65**	**329**	P	P	20 32 42.8	-6.5
SONM	**Songino Array**	**63.98**	**328**	P	**P**	**20 32 51.7**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=147,slow=5.9,SNR=4.5						
	comp=Z,1.5nm,0.7s						
YAK	**Yakutsk**	**67.16**	**349**	LR	LR	21 00 06.0	
	comp=Z,71nm,21.7s,baz=89,slow=34						
TAOE	**Nuku Hiva Isla**	**68.95**	**98**	*e*LR	LR	20 54 13.7	
	comp=Z,247nm,26.4s						
WMQ	**Urumqi**	**73.24**	**318**	*e*P	**P**	**20 33 50.0**	**+0.8**
VNDA	**Vanda**	**74.34**	**177**	P	**P**	**20 33 55.9**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=314,slow=5.0,SNR=2.0						
VNDA				LR	LR	21 05 25.2	
	comp=Z,58nm,18.2s,baz=18,slow=35						
	comp=Z,0.7nm,0.9s						
TIXI	**Tiksi**	**76.21**	**353**	LR	LR	21 03 50.2	
	comp=Z,26nm,21.9s,baz=1.0,slow=33						
MKAR	**Makanchi Array**	**77.84**	**319**	P	**P**	**20 34 16.4**	**+1.0**
	comp=Z,1.0nm,0.9s,baz=104,slow=7.6,SNR=10						
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**77.84**	**319**	P	**P**	**20 34 15.2**	**-0.2**
ZALV	**Zalesovo Beam**	**78.77**	**327**	P	**P**	**20 34 20.8**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=105,slow=5.1,SNR=5.1						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**81.65**	**23**	P	**P**	**20 34 34.9**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=249,slow=4.6,SNR=8.6						
ILAR				LR	LR	21 07 05.5	
	comp=Z,74nm,21.5s,baz=254,slow=33						
	comp=Z,1.9nm,1.0s						
AAK	**Ala-Archa**	**82.12**	**314**	LR	LR	21 13 04.1	
	comp=Z,43nm,18.4s,baz=98,slow=37						
NRIK	**Noril'sk**	**83.92**	**341**	P	**P**	**20 34 47.8**	**+0.4**
	comp=Z,10nm,1.1s,baz=98,slow=7.1,SNR=6.7						
NRIK				LR	LR	21 12 12.8	
	comp=Z,41nm,19.9s,baz=150,slow=36						
	comp=Z,10nm,1.1s						
MAW	**Mawson**	**86.06**	**203**	LR	LR	21 10 44.2	
	comp=Z,100nm,21.7s,baz=113,slow=34						
QSPA	**South Pole Qui**	**86.59**	**180**	LR	LR	21 10 49.0	
	comp=Z,32nm,22.0s,baz=9.5,slow=34						
BVAR	**Borovoye Array**	**86.81**	**323**	LR	LR	21 15 34.7	
	comp=Z,72nm,18.9s,baz=84,slow=37						
DLBC	**Dease Lake**

ISC 16 20:30:26.6±0.8, 3°73.N±0°.06×125°.99E±0°.06, h100km, n23, σ1°27/25, mb3.6/5, 2C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.46	265	P	Pn	20 30 39.2	-2.9
GAMI	Galela, Maluku	2.60	136	P	Pn	20 31 05.3	-1.7
TNTI	Ternate	3.24	155	P	Pn	20 31 14.6	-1.0
DAV	Davao City (W)	3.35	353	P	Pn	20 31 11.5	-5.5
KCP	Kidapawan	3.38	345	⇓eP	Pn	20 31 17.5	0.0
KCP				iS	Sn	20 31 57.8	+0.9
KMSI	Cibinong	3.72	213	P	Pn	20 31 22.3	+0.3
CTBH	Cotabato--PC H	3.88	334	⇑iP	Pn	20 31 23.5	-0.7
GTOI	Gorontalo	4.27	224	P	Pn	20 31 29.9	+0.4
GTOI				S	Sn	20 32 16.5	-1.8
LBMI	Labuha	4.59	161	P	Pn	20 31 33.4	-0.4
MRSI	Marisa 1.0nm3μm260nm,0.5s	5.17	231	P	Pn	20 31 42.5	+0.8
LUWI	Luwuk 0.5nm2μm102nm,0.5s	5.72	214	P	Pn	20 31 50.5	+1.3
GHBP	Garcia Hernand	6.09	344	⇓eP	Pn	20 31 53.8	-0.4
APSI	Ampana 0.2nm63nm,0.6s	6.33	223	P	Pn	20 31 58.9	+1.6
TABP	Talibon, Bohol	6.53	346	⇑eP	Pn	20 31 59.1	-1.1
MPSI	Mapaga 0.1nm12nm,1.2s	6.95	241	P	Pn	20 32 05.3	-0.6
SIJI	Sorong 2.2nm,0.3s,baz=341,slow=14,SNR=12	6.98	131	Pn	Pn	20 32 05.8	-0.5
SIJI				Sn	Sn	20 33 23.8	-0.3
	0.6nm,0.3s,baz=204,slow=19,SNR=1.9 8.5nm,0.5s						
SIJI	Sorong 0.0nm7.2nm,0.5s	6.98	131	P	Pn	20 32 05.0	-1.2
NLAI	Namlea	7.01	171	P	Pn	20 32 04.6	-2.0
WRA	Warramunga Arr 2.2nm,0.9s,baz=337,slow=10,SNR=12 2.2nm,0.9s	24.91	161	P	P	20 35 41.4	+0.9
ASAR	Alice Springs 0.4nm,0.7s,baz=349,slow=7.4,SNR=8.0 0.4nm,0.7s	28.30	165	P	P	20 36 12.2	+1.3
KSRS	Korea Array 0.8nm,0.7s,baz=180,slow=9.3,SNR=4.2 0.8nm,0.7s	33.61	3	P	P	20 36 58.3	+0.9
STKA	Stephens Creek 2.0nm,0.7s,baz=325,slow=9.5,SNR=5.2 2.0nm,0.7s	38.39	158	P	P	20 37 39.9	+1.6
MKAR	Makanchi Array 0.2nm,0.4s,baz=124,slow=8.1,SNR=7.9	57.14	326	P	P	20 40 02.1	-0.8
MKAR				PcP	PcP	20 40 56.8	+0.3
	0.6nm,0.6s,baz=106,slow=2.6,SNR=4.4 0.2nm,0.4s						

WEL 16 20:40:55.2, 38°S±13°×17°7E±3°2, h142km±30km, M2.5/19, mB6.1/1, ML2.6/9, MLv2.5/19, Mw(mB)5.8/1, Error ellipse: s-maj=0.0km s-min=0.0km az=92.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUGZ	Murupara	0.44	153	P	Pn	20 41 15.6	+0.3
URZ	Urewera	0.50	110	P	Pn	20 41 15.4	-0.1
RTZ	Ruatahuna	0.64	145	P	Pn	20 41 17.0	+0.4
MRHZ	Matea Rd	0.75	186	P	Pn	20 41 17.6	+0.3
MTHZ	Maungataniwha	0.80	162	P	Pn	20 41 18.4	+0.7
RAGZ	Rawiri	0.81	120	P	Pn	20 41 18.5	+0.7
MWZ	Matawai	0.83	107	P	Pn	20 41 18.0	+0.2
RUGZ	Raukumara Rang	0.92	83	P	Pn	20 41 17.1	-1.6
RAHZ	Arahi	0.94	152	P	Pn	20 41 20.2	+1.5
SNGZ	Shannon Statio	0.95	137	P	Pn	20 41 19.7	+0.9
NMHZ	Naumai	1.03	167	P	Pn	20 41 21.1	+1.5
HAZ	Te Kaha	1.05	72	P	Pn	20 41 17.8	-1.9
BKZ	Black Stump Fm	1.07	181	P	Pn	20 41 20.0	0.0
TKGZ	Te Karaka	1.10	109	P	Pn	20 41 20.6	+0.4
RIGZ	Rimuhau	1.16	123	P	Pn	20 41 21.6	+0.9
TWGZ	Tauwhareparae	1.16	95	P	Pn	20 41 20.8	+0.1
ARHZ	Aropaoanui	1.23	162	P	Pn	20 41 22.6	+1.2
PKGZ	Pakihiroa	1.25	81	P	Pn	20 41 20.6	-1.0
KNZ	Kokohu	1.30	136	P	Pn	20 41 22.6	+0.6
CNGZ	Carnagh Statio	1.39	107	P	Pn	20 41 22.4	-0.5
MXZ	Matakaoa Point	1.51	70	P	Pn	20 41 19.3	-5.0
MHGZ	Mahia Peninsul	1.52	135	P	Pn	20 41 25.1	+0.7
WMGZ	Waiomatatini S	1.52	80	P	Pn	20 41 22.5	-1.9
CKHZ	Cape Kidnapper	1.63	163	P	Pn	20 41 26.1	+0.6
KAHZ	Kahuranaki	1.73	171	P	Pn	20 41 27.0	+0.2
TSZ	Takapari Road	2.01	192	P	Pn	20 41 28.7	-1.3
MRZ	Mangatainoka R	2.67	196	P	Pn	20 41 34.8	-3.3
HOWZ	Holdsworth Sta	2.91	195	P	Pn	20 41 37.9	-3.2
OGWZ	Otaki Gorge	2.92	201	P	Pn	20 41 38.2	-2.9
MTW	Mount Morrison	3.16	194	P	Pn	20 41 40.6	-3.8
CAW	Cannon Point	3.22	200	P	Pn	20 41 41.0	-4.0
MSWZ	Moikau Station	3.46	196	P	Pn	20 41 43.9	-4.3
PLWZ	Palliser	3.61	195	P	Pn	20 41 45.9	-4.3
AKCZ	Akaroa Harbour	6.39	204	P	Pn	20 42 24.8	-2.2

TIF 16 20:41:39.9, 43°.45N×40°.78E, h6km±3km
MOS 16 20:41:43.2±0.0, 43°.41N×40°.99E, h4km, MPVA3.9
ISC 16 20:41:41.9±1.2, 43°.43N±0°.02×40°.90E±0°.02, h1km±10km, n48, σ1°50/89, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARXR	Arkhyz	0.30	63	iPg	Pb	20 41 49.7	-0.6
ARXR				iSg	Sg	20 41 53.2	+1.5
DOMR	Dombai	0.55	104	iPg	Pg	20 41 52.4	+0.1
DOMR				eSg	Sg	20 41 58.7	-0.7
VSLR	Vesyoloye	0.63	273	iPg	Pn	20 41 56.1	-1.9
VSLR				iSg	Sn	20 42 06.2	-2.5
AHMR	Akhmetovskaya	0.74	8	iPg	Pn	20 41 58.9	-0.6
AHMR				eSg	Sn	20 42 09.4	-2.1
GUZR	Guzeripl'	0.80	315	iPg	Pn	20 41 59.7	-0.8
GUZR				iSg	Sn	20 42 11.5	-1.6
SOC	Sochi	0.87	281	ePg	Pn	20 41 59.9	-1.4
SOC				eSg	Sn	20 42 13.4	-1.3
LZRR	Lazarevskoye	1.21	295	iPg	Pn	20 42 08.1	+2.1
LZRR				eSg	Sn	20 42 26.9	+3.8
LABN	Labinsk	1.22	354	iPg	Pn	20 42 09.3	+3.1
LABN				iSg	Sn	20 42 27.8	+4.5
SHA1	Shidzhatmaz	1.31	76	ePg	Pn	20 42 06.8	-0.8
SHA1				eSg	Sg	20 42 23.9	-0.3
NEY	Neytrino	1.34	97	iPg	Pn	20 42 06.7	-1.3
NEY				eSg	Sg	20 42 23.8	-1.2
GOYR	Goytkh	1.37	307	iPg	Pg	20 42 10.7	+2.5
GOYR				eSg	Sn	20 42 31.0	+3.9
KIV	Kislovodsk	1.40	67	iPg	Pg	20 42 08.7	0.0
KIV				eSg	Sn	20 42 27.2	-0.6
KIV0	Kislovodsk Arr	1.41	67	ePg	Pg	20 42 09.0	+0.2
KIV0				iSg	Sn	20 42 27.5	-0.5
KBZ	Khabaz	1.48	78	ePg	Pb	20 42 09.7	-0.6
KBZ				eSg	Sg	20 42 29.5	-0.1
BEYR	Belyy Ugol+	1.51	67	iPg	Pg	20 42 10.9	+0.1
BEYR				iSg	Sg	20 42 30.5	+0.1
KBTC	Kuba-Taba	1.86	77	ePg	Pg	20 42 17.6	0.0
KBTC				eSg	Sg	20 42 41.0	-0.8
TKB	Tkibuli	1.88	124	P	Pb	20 42 17.0	0.0
TKB				S	Sg	20 42 42.6	+0.5
TKB	Tkibuli	1.88	124	ePg	Pb	20 42 17.0	0.0
TKB				eSg	Sg	20 42 42.6	+0.5
BATM	Batumi	1.91	162	P	Pb	20 42 16.5	-1.1
BATM				S	Sg	20 42 42.7	-0.6
BATM	Batumi	1.91	162	ePg	Pb	20 42 16.5	-1.1
BATM				eSg	Sg	20 42 42.7	-0.6
NCK	Nalchik	1.96	87	ePg	Pb	20 42 17.7	-0.8
NCK				eSg	Sb	20 42 43.5	+0.1
ALER	Alexandrovskoy	1.97	47	ePg	Pg	20 42 19.9	+0.2
ALER				eSg	Sg	20 42 44.5	-0.8
GHRG	Ghorjomi	2.00	147	ePg	Pn	20 42 17.1	+0.1
GHRG				eSg	Sb	20 42 44.7	+0.1
DIGR	Digorskoe uzhe	2.03	104	ePg	Pg	20 42 20.0	-0.8
DIGR				eSg	Sg	20 42 46.7	-0.4
ONI	Oni	2.05	113	P	Pb	20 42 20.2	+0.2
ONI				S	Sg	20 42 48.6	+0.9
ONI	Oni	2.05	113	ePg	Pb	20 42 20.2	+0.2
LSNR	Lesken	2.14	93	ePg	Pg	20 42 22.5	-0.4
LSNR				eSg	Sb	20 42 47.8	-0.7
ABS	Abastumani	2.19	139	P	Pb	20 42 20.6	-1.8
ABS				S	Sb	20 42 50.2	+0.2
ABS	Abastumani	2.19	139	ePg	Pb	20 42 20.6	-1.8
ABS				eSg	Sb	20 42 50.2	+0.2
GOF	Gofitskoye	2.24	43	ePg	Pb	20 42 22.1	-1.1
GOF				eSg	Sb	20 42 51.8	+0.3
ZEI	Tsey	2.29	105	ePg	Pb	20 42 23.0	-1.1
ZEI				eSg	Sn	20 42 49.9	0.0
ERBR	Yeremizino-Bor	2.31	353	ePn	Pb	20 42 23.2	-1.1
ERBR				eSn	Sb	20 42 53.6	+0.3
STDR	Stavd-Durt	2.31	90	ePg	Pn	20 42 21.4	+0.3
STDR				eSg	Sb	20 42 51.0	-2.3
KORR	Kora	2.34	97	ePn	Pb	20 42 23.3	-1.6
KORR				eSn	Sb	20 42 52.3	-1.9
ALIG	Mtskhetisjvari	2.42	122	P	Pn	20 42 23.8	+1.2
ALIG				S	Sb	20 42 56.6	0.0
ALIG	Mtskhetisjvari	2.42	122	ePn	Pn	20 42 23.8	+1.2
ALIG				eSn	Sb	20 42 56.6	0.0
SPGR	Shapsug	2.42	304	ePn	Pg	20 42 27.9	-0.4
SPGR				eSn	Sg	20 42 58.4	-1.3
BKRG	Bakuriani	2.55	130	P	Pb	20 42 26.9	-1.7
BKRG				S	Sb	20 43 00.6	0.0
BKRG	Bakuriani	2.55	130	ePn	Pb	20 42 26.9	-1.7
LACR	Lac	2.56	102	ePn	Pb	20 42 27.6	-1.1
LACR				eSn	Sn	20 42 56.4	0.0
AZMN	Azmana	2.75	139	P	Pg	20 42 37.3	+2.7
AZMN				S	Sg	20 43 14.3	+4.0
AKH	Akhalkalaki	2.78	135	ePn	Pb	20 42 29.8	-2.7
GUDG	Gudauri	2.80	109	P	Pb	20 42 32.3	-0.4
BRNG	Burnasheti	2.82	129	P	Pb	20 42 31.1	-1.9
BRNG				S	Sb	20 43 07.8	-0.4
ANN	Anapa	2.85	300	ePn	Pb	20 42 31.4	-2.1
ANN				eSn	Sb	20 43 09.0	+0.1
SHTL	Shatili	3.21	102	P	Pn	20 42 35.7	+2.1
SHTL	Shatili	3.21	102	ePn	Pn	20 42 35.7	+2.1
DGRG	David-gareji	3.85	119	P	Pb	20 42 51.6	+0.9

SNET 16 20:45:15.7±0.8, 13°.43N×90°.90W, h13km±11km, ML3.1
GCG 16 20:45:22.8±0.3, 14°.07N×91°.07W, h59km±10km, MD3.4
ISC 16 20:45:13.3±2.9, 13°.4N±0°.1×90°.94W±0°.09, h8km±13km, n12, σ0°93/18, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	1.04	18	eP	Pn	20 45 34.8	+0.2
FUG	Fuego 3	1.05	5	eP	Pb	20 45 34.6	+0.6
NUBE	Las Nubes	1.23	66	eP	Pb	20 45 36.3	-0.7
NUBE				eS	Sg	20 45 52.6	-0.5
SLOZ	Alcaldia de Sa	1.29	61	eP	Pn	20 45 37.5	-0.2
SLOZ				eS	Sn	20 45 54.7	-0.5
SLOZ				IAML		20 46 09.7	
	comp=Z,92nm,0.6s						
NBG	Las Nubes	1.32	26	eP	Pg	20 45 40.0	+1.2
RTR	El Retiro	1.35	68	eP	Pg	20 45 39.2	-0.1
SBLS	San Blas	1.35	71	eP	Pg	20 45 39.5	+0.1
STG3	Santiaguito 3,	1.45	335	eP	Pn	20 45 38.9	-1.2
PMON	Piamonte	1.61	78	eP	Pn	20 45 42.7	+0.5
PMON				eS	Sg	20 46 05.0	-0.2
LFRS	El Faro	1.84	83	eP	Pb	20 45 46.6	-0.7
LFRS				eS	Sb	20 46 10.1	-0.5
SJTE	Alcalda de S	1.89	83	eP	Pn	20 45 46.5	+0.4
SJTE				eS	Sb	20 46 10.8	-1.3
PACA	Pacayal	2.54	88	eP	Pn	20 45 56.7	+1.6
PACA				eS	Sn	20 46 28.0	+1.6
PACA				IAML		20 46 36.4	
	comp=Z,372nm,0.3s						

NOU 16 21:02:57.0, 37°.37S×177°.44E, h14km, MLv3.3/6, Off E. Coast of N. Island, N.Z.
WEL 16 21:02:59.0±0.7, 37°S±6°×17°7E±°, h5km, M3.2/27, ML3.5/27, MLv3.2/27, Error ellipse: s-maj=0.0km s-min=0.0km az=2.9
ISC 16 21:02:58.3±1.2, 37°.39S±0°.05×177°.42E±0°.03, h16km±9km, n62, σ1°03/67, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.23	234	P	Pg	21 03 03.7	+0.2
WSRZ	White Island S	0.23	237	P	Pg	21 03 03.9	+0.3
HAZ	Te Kaha	0.46	142	P	Pg	21 03 07.1	-0.5
HAZ				S	Sb	21 03 15.6	+1.0
WHRZ	Whale Island	0.58	217	P	Pb	21 03 10.8	+0.6
RUGZ	Raukumara Rang	0.61	161	P	Pg	21 03 09.9	-0.5
PKGZ	Pakihiroa	0.72	134	P	Pg	21 03 11.4	-1.0
MXZ	Matakaoa Point	0.72	104	P	Pg	21 03 11.4	-1.0
MXZ				S	Sg	21 03 21.5	-0.6
MXZ	Matakaoa Point	0.72	104	P	Pg	21 03 11.3	-1.2
OPRZ	Ohinepanea	0.82	237	P	Pb	21 03 14.9	+0.7
MARZ	Manawahe	0.84	225	P	Pg	21 03 13.5	-1.1
MARZ				S	Sg	21 03 24.7	-1.1
WMGZ	Waiomatatini S	0.90	119	P	Pb	21 03 15.6	+0.2
WMGZ				S	Sn	21 03 30.0	+1.1
TWGZ	Tauwhareparae	0.90	151	P	Pb	21 03 15.9	+0.4
URZ	Urewera	0.90	196	P	Pg	21 03 14.7	-1.1
URZ	Urewera	0.90	196	P	Pg	21 03 15.1	-0.7
MWZ	Matawai	0.94	175	P	Pg	21 03 15.2	-1.4
PUZ	Puketiti	0.95	136	P	Pn	21 03 17.4	+0.4
MYRZ	Mayor Island	0.95	276	P	Pn	21 03 17.4	+0.4
LIRZ	Lichensteins R	1.02	233	P	Pn	21 03 19.2	+1.2
OMRZ	Oromania	1.10	229	P	Pn	21 03 21.0	+1.9
TKGZ	Te Karaka	1.10	162	P	Pn	21 03 19.1	+0.1
TARZ	Mount Tarawera	1.11	220	P	Pn	21 03 21.2	+1.9
KARZ	Kaharoa	1.13	236	P	Pn	21 03 20.9	+1.4
MUGZ	Murupara	1.20	205	P	Pb	21 03 19.0	-1.6
NGRZ	Ngongotaha	1.21	234	P	Pg	21 03 22.4	+0.7
CNGZ	Carnagh Statio	1.25	151	P	Pg	21 03 22.7	+0.2
RTZ	Ruatahuna	1.27	196	P	Pn	21 03 20.1	-1.4
RIGZ	Rimuhau	1.34	169	P	Pb	21 03 23.0	0.0
RIGZ				S	Sg	21 03 44.4	+2.8
PRRZ	Plateau Road	1.37	216	P	Pn	21 03 23.3	+0.5
SNGZ	Shannon Statio	1.39	183	P	Pn	21 03 22.6	-0.5
KUZ	Kuaotunu	1.51	295	P	Pn	21 03 22.8	-1.8
MTHZ	Maungataniwha	1.53	197	P	Pn	21 03 24.0	-1.0
KNZ	Kokohu	1.64	173	P	Pn	21 03 26.7	+0.2
MRHZ	Matea Rd	1.64	209	P	Pn	21 03 25.6	-1.0
WHHZ	Waihua	1.69	185	P	Pn	21 03 28.0	+0.9
NMHZ	Naumai	1.77	196	P	Pn	21 03 28.3	0.0
MHGZ	Mahia Peninsul	1.80	168	P	Pn	21 03 29.0	+0.3
ARHZ	Aropaoanui	1.90	190	P	Pn	21 03 30.8	+0.8
BKZ	Black Stump Fm	1.92	202	P	Pn	21 03 29.5	-0.9
BKZ	Black Stump Fm	1.92	202	P	Pn	21 03 29.3	-1.0
KWHZ	Kaweka Forest	2.18	201	P	Pn	21 03 35.3	+1.4
TMVZ	Te Maari	2.19	218	P	Pb	21 03 36.2	-1.4
NNVZ	North Ngauruho	2.25	219	P	Pb	21 03 38.3	-0.3
WTVZ	West Tongariro	2.25	219	P	Pb	21 03 38.3	-0.2
SNVZ	South Ngauruho	2.27	218	P	Pb	21 03 38.2	-0.9
CKHZ	Cape Kidnapper	2.28	187	P	Pn	21 03 35.7	+0.4
NGZ	Ngauruhoe	2.29	218	P	Pb	21 03 38.6	-0.7
TWVZ	Taurewa	2.29	222	P	Pb	21 03 39.1	-0.3
HIZ	Hauiti	2.32	240	P	Pn	21 03 35.3	-0.4
HIZ	Hauiti	2.32	240	P	Pn	21 03 35.0	-0.8
TUVZ	Tukino	2.33	216	P	Pb	21 03 38.7	-1.3
FWVZ	Far West T-bar	2.37	218	P	Pb	21 03 39.6	-1.2
MOVZ	Moawhango	2.40	213	P	Pn	21 03 36.9	-0.1
WNVZ	Wahianoa	2.41	216	P	Pb	21 03 39.4	-1.9
KAHZ	Kahuranaki	2.44	190	P	Pn	21 03 37.7	+0.2
PKVZ	Pokaka	2.50	220	P	Pb	21 03 41.5	-1.4
MTVZ	Mangateitei	2.51	217	P	Pb	21 03 41.4	-1.7
TSZ	Takapari Road	2.90	203	P	Pn	21 03 43.7	-0.1
MRZ	Mangatainoka R	3.57	203	P	Pn	21 03 52.9	0.0
OUZ	Omahuta	3.77	304	P	Pn	21 03 55.3	-0.5
HOWZ	Holdsworth Sta	3.80	202	P	Pn	21 03 54.8	-1.4
OGWZ	Otaki Gorge	3.84	206	P	Pn	21 03 56.3	-0.4
CTZ	Chatham Island	7.79	146	P	Pn	21 04 50.8	-0.1

KRNET 16 21:20:39.7±0.1, 39°.34N×73°.57E, mb3.0
ISU 16 21:20:39, 39°.51N×73°.71E, h3km
SOME 16 21:20:40.3, 39°.77N×73°.15E, h0km
NNC 16 21:20:44.4±2.4, 39°.57N×73°.77E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=19.0km s-min=9.6km az=170.0
ISC 16 21:20:35.6±1.7, 39°.33N±0°.07×73°.80E±0°.04, h13km±11km, n33, σ1°77/58, 16C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh baz=33	1.42	327	⇑iP	Pg	21 21 03.9	+0.9
OHH				⇑iS	Sg	21 21 22.0	+0.5
	baz=33						
OHH	Osh	1.42	327	P	Pg	21 21 03.6	+0.6
OHH				S	Sg	21 21 21.7	+0.2
DRK	Karamyk baz=77	1.55	276	⇑iP	Pg	21 21 05.0	-0.5
DRK				⇑iS	Sn	21 21 23.6	+0.2
	baz=77						
TSTA	Tashata	1.60	321	P	Sg	21 21 27.4	+0.1
ANR	Andizhan	1.80	323	P	Pg	21 21 13.2	+3.0
ANR				S	Sg	21 21 36.2	+2.7
FRG	Fergana	1.86	305	P	Pg	21 21 13.0	+1.6
FRG				S	Sg	21 21 36.6	+1.0
CHMI	Chimion	1.98	299	P	Pg	21 21 14.4	+0.7
CHMI				S	Sg	21 21 40.1	+0.6
BTK	Batken baz=90	2.41	288	⇑iP	Pb	21 21 18.4	-0.5
BTK				⇑iS	Sb	21 21 46.8	-1.7
	baz=90						
BTK	Batken	2.41	288	P	Pg	21 21 22.6	+0.8
BTK				S	Sg	21 21 55.1	+2.1
MINT	Mingtut	2.45	298	P	Pg	21 21 23.3	+0.8
MINT				S	Sg	21 21 55.4	+1.1
ARLS	Aral baz=13	2.56	9	⇑eP	Pg	21 21 23.4	-1.3
ARLS				⇑iS	Sb	21 21 54.9	+2.0
	baz=13						
GAR	Garm baz=63	2.72	264	⇑eP	Pb	21 21 22.7	-1.6
GAR				⇑iS	Sn	21 21 54.1	+2.0
	baz=63						
TRKS	Terek-Say baz=20	2.99	318	⇓iP	Pb	21 21 26.2	-2.6
TRKS				⇓iS	Sn	21 22 00.3	+1.7
	baz=20						
TKM2	Tokmak 2 0.9nm,0.6s	3.84	20	⇑Pn	Pb	21 21 42.8	-0.5
TKM2				⇑Pg	Pg	21 21 52.8	+3.7
	3.1nm,1.1s						
TKM2				⇑Lg	Lg	21 22 38.5	
	2.1nm,0.5s						
IUG	luzhnay 48nm,0.3s	4.01	316	eP	Pb	21 21 43.9	-2.3
IUG				eS	Sn	21 22 29.3	+5.5
	7.6nm,0.4s						
IUG	luzhnay 48nm,0.3s	4.01	316	Pg	Pb	21 21 43.9	-2.3
IUG				Lg	Lg	21 22 30.6	
	7.6nm,0.4s						
KST	Kastek 1.6nm,0.4s	4.05	23	eP	Pg	21 21 53.5	+0.3
KST				eS	Sg	21 22 46.2	+0.4
	8.5nm,0.6s						
KST	Kastek 1.6nm,0.4s	4.05	23	Pg	Pg	21 21 53.5	+0.3
KST				Lg	Lg	21 22 47.2	
	8.5nm,0.6s						
DGS	Degeres 2.3nm,0.7s	4.18	20	eP	Pg	21 21 56.9	+1.2
DGS				eS	Sg	21 22 51.9	+2.0
	3.9nm,0.8s						
TNSS	Tian-Shan 1.6nm,0.2s	4.40	32	eP	Pg	21 22 01.4	+1.5
TNSS				eS	Sg	21 22 59.5	+2.6
	1.9nm,0.6s						
KK31	Karatay Array 0.2nm,0.3s,baz=111,slow=13,SNR=6.9	4.51	328	Pn	Pb	21 21 51.0	-3.7
KK31				⇑Pg	Pg	21 22 00.6	-1.4
	0.6nm,0.5s,baz=150,slow=16						
KK31				⇑Sn	Sb	21 22 44.4	-4.4
	1.2nm,0.6s,baz=144,slow=24						
KK31				⇑Lg	Lg	21 22 57.0	
	0.6nm,0.3s,baz=143,slow=28						
MDOK	Medeo 1.1nm,0.3s	4.55	32	eP	Pg	21 22 03.3	+0.6
MDOK				eS	Sg	21 23 02.6	+1.1
	4.3nm,0.9s						
MDOK	Medeo 1.1nm,0.3s	4.55	32	Pg	Pg	21 22 03.3	+0.6
MDOK				Lg	Lg	21 23 02.6	
	4.3nm,0.9s						
KRBS	Karabastau 1.3nm,0.4s	4.58	17	eP	Pg	21 22 02.6	-0.8
KRBS				eS	Sg	21 23 01.6	-1.2
	2.1nm,0.5s						
KRBS	Karabastau 1.3nm,0.4s	4.58	17	Pg	Pg	21 22 02.6	-0.8
KRBS				Lg	Lg	21 23 02.2	
	2.1nm,0.5s						
KTBS	Karatobe 0.6nm,0.2s	4.88	25	eP	Pg	21 22 09.3	+0.1
KTBS				eS	Sg	21 23 13.3	+0.9
	4.4nm,0.3s						
KTBS	Karatobe 0.6nm,0.2s	4.88	25	Pg	Pg	21 22 09.3	+0.1
KTBS				Lg	Lg	21 23 12.5	
	4.4nm,0.3s						
KUU	Kurty 0.8nm,0.1s	4.94	22	eP	Pg	21 22 09.4	-0.8
KUU				eS	Sg	21 23 13.2	-1.0
	2.4nm,0.5s						
KUU	Kurty 0.8nm,0.1s	4.94	22	Pg	Pg	21 22 09.4	-0.8
KUU				Lg	Lg	21 23 14.1	
	2.4nm,0.5s						
CHKK	Chushkaly 0.6nm,0.3s	5.11	27	eP	Pg	21 22 13.6	+0.1
CHKK				eS	Sg	21 23 20.6	+0.9
	4.0nm,0.6s						
CHKK	Chushkaly 0.6nm,0.3s	5.11	27	Pg	Pg	21 22 13.6	+0.1
CHKK				Lg	Lg	21 23 20.3	
	4.0nm,0.6s						
ARXS	Arharly 1.6nm,0.5s	5.73	30	eP	Pg	21 22 24.4	-1.0
ARXS				eS	Sg	21 23 39.4	-0.2
	1.5nm,0.5s						
ARXS	Arharly 1.6nm,0.5s	5.73	30	Pg	Pg	21 22 24.4	-1.0
ARXS				Lg	Lg	21 23 39.4	
	1.5nm,0.5s						

SKHL 16 21:30:44.5±0.5, 44°.70N×149°.40E, h46km±4km, mb4.2/3
JMA 16 21:30:45.4±0.6, 45°N±3°×14°9E±°, h127km, MV3.5/10, SE OFF ETOROFU
ISC 16 21:30:45.6±4.4, 44°.77N±0°.10×149°.3E±0°.2, h35km, n12, σ1°06/20, Kuril Islands

| Code | Station Name | Δ° | AZ° | Phase

s-maj=0.0km s-min=0.0km az=102.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.67**	**181**	P	Pn	22 28 27.6	-1.1
MXZ				S	Sn	22 29 11.0	-1.1
HAZ	**Te Kaha**	**3.90**	**187**	P	Pn	22 28 33.5	+1.9
HAZ				S	Sn	22 29 18.3	+1.0
WCZ	**Waipu Caves**	**3.92**	**237**	P	Pn	22 28 29.6	-2.4
WMGZ	**Waiomatatini S**	**3.93**	**180**	P	Pn	22 28 31.6	-0.4
WMGZ				S	Sn	22 29 18.3	+0.3
PKGZ	**Pakihiroa**	**4.01**	**184**	P	Pn	22 28 32.7	-0.4
PKGZ				S	Sn	22 29 21.0	+1.0
RUGZ	**Raukumara Rang**	**4.12**	**188**	P	Pn	22 28 35.3	+0.7
RUGZ				S	Sn	22 29 22.7	+0.1
TWGZ	**Tauwhareparae**	**4.30**	**185**	P	Pn	22 28 38.1	+1.2
TWGZ				S	Sn	22 29 27.5	+0.7
URZ	**Urewera**	**4.49**	**193**	P	Pn	22 28 40.7	+1.3
URZ				S	Sn	22 29 32.9	+1.6
MWZ	**Matawai**	**4.50**	**189**	P	Pn	22 28 39.5	-0.1
MWZ				S	Sn	22 29 32.0	+0.5
TKGZ	**Te Karaka**	**4.57**	**186**	P	Pn	22 28 40.3	-0.1
TKGZ				S	Sn	22 29 32.9	-0.2
CNGZ	**Carnagh Statio**	**4.59**	**182**	P	Pn	22 28 39.1	-1.6
RAGZ	**Rawiri**	**4.67**	**190**	P	Pn	22 28 43.2	+1.3
MUGZ	**Murupara**	**4.77**	**196**	P	Pn	22 28 45.5	+2.3
MUGZ				S	Sn	22 29 39.8	+1.9
RIGZ	**Rimuhau**	**4.84**	**186**	P	Pn	22 28 44.2	+0.2
RIGZ				S	Sn	22 29 37.8	-1.8
RTZ	**Ruatahuna**	**4.86**	**193**	P	Pn	22 28 45.0	+0.6
RTZ				S	Sn	22 29 40.3	+0.1
SNGZ	**Shannon Statio**	**4.96**	**190**	P	Pn	22 28 46.2	+0.5
SNGZ				S	Sn	22 29 42.8	+0.2
MTHZ	**Maungataniwha**	**5.12**	**194**	P	Pn	22 28 48.4	+0.6
MTHZ				S	Sn	22 29 47.3	+1.1
KNZ	**Kokohu**	**5.16**	**186**	P	Pn	22 28 46.8	-1.5
WHHZ	**Waihua**	**5.27**	**190**	P	Pn	22 28 49.8	+0.1
WHHZ				S	Sn	22 29 49.0	-0.8
NMHZ	**Naumai**	**5.36**	**194**	P	Pn	22 28 51.5	+0.5
NMHZ				S	Sn	22 29 52.8	+0.7
ARHZ	**Aropaoanui**	**5.49**	**192**	P	Pn	22 28 52.3	-0.3
ARHZ				S	Sn	22 29 54.5	-0.4
BKZ	**Black Stump Fm**	**5.50**	**196**	P	Pn	22 28 53.3	+0.6
CKHZ	**Cape Kidnapper**	**5.86**	**190**	P	Pn	22 28 56.1	-1.5
KAHZ	**Kahuranaki**	**6.03**	**191**	P	Pn	22 28 58.4	-1.5
TSZ	**Takapari Road**	**6.47**	**197**	P	Pn	22 29 04.3	-1.5

KRSC 16 22:43:35.6±0.9, 54°.81N×162°.36E, h44km±13km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.45**	**235**	*e*P	Pn	22 43 46.6	+0.8
MKZ				*e*S	Sn	22 43 53.4	+0.3
TUMR	**Tumrok**	**1.36**	**291**	*e*P	Pn	22 43 59.3	+1.1
TUMR				S	Sn	22 44 16.4	+1.3
KBTR	**Krutoberegovo**	**1.43**	**10**	*e*P	Pn	22 44 01.3	+2.3
KBTR				*e*S	Sn	22 44 19.8	+3.2
KBG	**Krutoberegovo**	**1.46**	**8**	*e*S	Sn	22 44 21.0	+3.6
BZGR	**Bezymyannyi-Gr**	**1.48**	**321**	*e*P	Pn	22 44 01.2	+1.4
BZGR				*e*S	Sn	22 44 19.6	+1.6
KMNR	**Kamenistaya**	**1.54**	**309**	*e*P	Pn	22 44 01.8	+1.1
KMNR				*e*S	Sn	22 44 21.3	+1.8
SMKR	**Semkarok**	**1.85**	**345**	*e*P	Pn	22 44 06.9	+2.0
SMKR				*e*S	Sn	22 44 30.5	+3.5
KII	**Karymskiy**	**1.87**	**247**	S	Sn	22 44 31.3	+3.7
KOZ	**Kozyrevsk**	**1.89**	**312**	S	Sn	22 44 30.6	+2.6
SRKR	**Sorokina**	**1.97**	**340**	*e*P	Pn	22 44 08.3	+1.8
BKI	**Bering**	**2.12**	**78**	*e*P	Pn	22 44 11.2	+2.7
BKI				*e*S	Sn	22 44 35.5	+1.9
SRDR	**Sredinnyy**	**2.13**	**316**	*e*P	Pn	22 44 11.3	+2.6
SPN	**Mys Shipunski**	**2.20**	**220**	*e*P	Pn	22 44 10.9	+1.2
SPN				*e*S	Sn	22 44 35.9	+0.3
ESO	**Esso**	**2.37**	**300**	*e*P	Pn	22 44 13.1	+1.1
NLC	**Nalytchevo**	**2.42**	**229**	*e*S	Sn	22 44 44.6	+3.6
SDLR	**Sedlovina**	**2.56**	**235**	*e*P	Pn	22 44 18.1	+3.4
SDLR				*e*S	Sn	22 44 48.1	+3.5
KRER	**Koryakskii**	**2.61**	**236**	*e*P	Pn	22 44 18.9	+3.5
KRER				*e*S	Sn	22 44 49.5	+3.5
SMAR	**Somma**	**2.61**	**235**	*e*P	Pn	22 44 18.4	+2.9
SMAR				*e*S	Sn	22 44 49.0	+3.0
KRX	**Arik**	**2.62**	**238**	*e*P	Pn	22 44 19.3	+3.7
KRX				*e*S	Sn	22 44 50.2	+3.9
UGLR	**Uglovaya**	**2.63**	**234**	*e*P	Pn	22 44 19.0	+3.3
UGLR				*e*S	Sn	22 44 50.2	+3.8
AVH	**Avacha**	**2.64**	**236**	*e*P	Pn	22 44 19.1	+3.4
AVH				*e*S	Sn	22 44 50.4	+3.9
KOK	**Koryaka**	**2.67**	**237**	*e*P	Pn	22 44 19.7	+3.5
KOK				*e*S	Sn	22 44 53.1	+5.8
DALK	**Dalny**	**2.78**	**232**	*e*P	Pn	22 44 20.7	+3.1
DALK				*e*S	Sn	22 44 53.4	+3.6
GNL	**Ganaly**	**2.82**	**248**	*e*P	Pn	22 44 21.1	+2.8
PET	**Petropavlovsk**	**2.83**	**232**	*e*S	Sn	22 44 54.2	+3.1
KRMR	**Karymshinskiy**	**3.20**	**233**	*e*P	Pn	22 44 26.9	+3.6
KRMR				*e*S	Sn	22 45 04.9	+4.8
RUS	**Russkaya**	**3.30**	**225**	*e*P	Pn	22 44 27.2	+2.4
RUS				*e*S	Sn	22 45 06.4	+3.7
GRL	**Gorelyy**	**3.41**	**230**	*e*P	Pn	22 44 31.3	+5.0
GRL				*e*S	Sn	22 45 09.9	+4.4
ASAK	**Asacha**	**3.60**	**229**	*e*P	Pn	22 44 33.6	+4.7
ASAK				*e*S	Sn	22 45 14.8	+4.6
KDTR	**Khodutka, Kamc**	**3.95**	**222**	*e*S	Sn	22 45 21.3	+2.6

VIE ***16*** *23:16:07.1±0.4, 46°.14N×15°.05E, h10km±8km, ml1.3/3, Error ellipse: s-maj=1.7km s-min=1.0km az=125.0 19 km WSW of Celje*

LJU 16 23:16:07.2, 46°.15N×15°.06E, h7km, ML0.9, 2C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDKS	**Podkum**	**0.10**	**208**	⇓*i*Pg	Pg	23 16 09.4	-0.1
PDKS				*i* Sg	Sg	23 16 11.2	+0.1
PDKS				IAML		23 16 11.9	
	comp=Z,34nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.26**	**260**	⇑*i*Pg	Pg	23 16 12.6	+0.3
VNDS				*i* Sg	Sg	23 16 16.3	+0.6
VNDS				IAML		23 16 18.2	
	comp=Z,7.8nm,0.1s						
LEGS	**Legarje**	**0.27**	**138**	*i* Pg	Pg	23 16 12.6	+0.1
LEGS				*i* Sg	Sg	23 16 16.2	+0.2
DOBS	**Dobrina**	**0.28**	**89**	*i* Pg	Pg	23 16 12.9	+0.1
DOBS				*i* Sg	Sg	23 16 17.6	+1.0
DOBS				IAML		23 16 18.8	
	comp=Z,9.4nm,0.1s						
VISS	**Visnje**	**0.38**	**204**	*i* Pg	Pg	23 16 14.6	+0.1
VISS				IAML		23 16 20.6	
	comp=Z,6.7nm,0.1s						
LJU	**Ljubljana**	**0.39**	**255**	*i* Sg	Sg	23 16 20.9	+1.1
GOLS	**Golise**	**0.41**	**109**	*i* Pg	Pg	23 16 15.5	+0.3
GROS	**Grobnik**	**0.44**	**44**	*i* Pg	Pg	23 16 15.9	+0.2
GROS				*i* Sg	Sg	23 16 22.1	+0.6
MOZS	**Mozjanca**	**0.45**	**289**	⇑*i*Pg	Pg	23 16 16.3	+0.3
MOZS				*i* Sg	Sg	23 16 22.8	+0.8
MOZS				IAML		23 16 24.4	
	comp=Z,3.5nm,0.2s						
GBAS	**Gorenja Brezov**	**0.48**	**244**	*i* Pg	Pg	23 16 16.7	+0.2
GBAS				*i* Sg	Sg	23 16 23.1	+0.3
GBAS				IAML		23 16 26.6	
	comp=Z,2.4nm,0.1s						
PERS	**Pernice**	**0.49**	**4**	*i* Pg	Pg	23 16 16.9	+0.2
PERS				*i* Sg	Sg	23 16 23.2	0.0
PERS				IAML		23 16 24.3	
	comp=Z,5.7nm,0.2s						
OBKA	**Obir**	**0.51**	**316**	*e*Pg	Pg	23 16 17.3	+0.3
	comp=Z,0.7nm,0.1s						
OBKA				*e*Sg	Sb	23 16 25.6	-0.6
	comp=Z,2.7nm,0.2s						
SOKA	**Soboth**	**0.53**	**358**	*e*Pg	Pg	23 16 17.7	+0.2
	comp=Z,0.9nm,0.3s						
SOKA				*e*Sg	Sg	23 16 24.4	-0.1
	comp=Z,2.0nm,0.2s						
CRNS	**Crni Vrh**	**0.56**	**264**	*i* Pg	Pg	23 16 18.3	+0.3
CRNS				IAML		23 16 27.9	
	comp=Z,4.6nm,0.1s						
CEY	**Cerknica**	**0.60**	**228**	*i* Pg	Pg	23 16 19.2	+0.4
CEY				IAML		23 16 29.4	
	comp=Z,1.8nm,0.1s						
OZLJ	**Ozalj**	**0.60**	**152**	Sg	Sg	23 16 27.2	+0.6
GBRS	**Gornja Briga**	**0.64**	**196**	*i* Pg	Pg	23 16 19.4	-0.1
PTJ	**Puntijarka**	**0.68**	**110**	*e*Pg	Pb	23 16 22.1	+0.7
PTJ				Sg	Sb	23 16 31.1	+0.1
LOBO	**Lobor**	**0.70**	**89**	*e*Pg	Pg	23 16 21.1	+0.4
LOBO				Sg	Sb	23 16 31.4	-0.2
JAVS	**Javornik**	**0.74**	**250**	*i* Pg	Pg	23 16 21.5	+0.1
JAVS				*i* Sg	Sb	23 16 32.8	0.0
JAVS				IAML		23 16 34.3	
	comp=Z,1.1nm,0.1s						
KNDS	**Knezji Dol**	**0.78**	**218**	*i* Sg	Sb	23 16 33.5	-0.5
VOJS	**Vojsko**	**0.83**	**262**	*i* Pg	Pg	23 16 22.8	-0.3
VOJS				IAML		23 16 39.9	
	comp=Z,1.0nm,0.1s						
KALN	**Kalnik**	**0.97**	**90**	Sg	Sb	23 16 40.0	+0.6
ARSA	**Arzberg**	**1.15**	**16**	Pg	Pg	23 16 28.4	-0.8
	comp=Z,0.7nm,0.3s						
A253A	**Karojba, Istri**	**1.22**	**226**	*e*Pg	Pn	23 16 31.4	+0.8
A253A				Sg	Sn	23 16 47.4	0.0
SMRN	**Sveta Marina**	**1.28**	**210**	*e*Pg	Pg	23 16 32.4	+0.7
MOSL	**Moslavina**	**1.30**	**114**	*e*Pg	Pg	23 16 32.0	0.0
MOSL				Sg	Sn	23 16 49.7	+0.4
BRJN	**Brijuni**	**1.55**	**217**	*e*Pn	Pg	23 16 36.7	-0.1
BRJN				Sn	Sg	23 16 57.6	+0.8
NVLJ	**Novalja**	**1.59**	**185**	*e*Pn	Pg	23 16 38.0	+0.4
NVLJ				Sn	Sg	23 16 59.1	+0.9

IDC ***16*** *23:16:45.1±1.4, 39°.67N×20°.94E, h0km, mb3.6/6, mbtmp3.5/9, ML3.0/3, Error ellipse: s-maj=27.2km s-min=21.9km az=110.0*
ATH ***16*** *23:16:46.9, 39°.76N×20°.71E, h19km±1km, ML3.3/26, Error ellipse: s-maj=1.4km s-min=0.9km az=319.0*
BEO ***16*** *23:16:47.8±0.5, 39°.66N×20°.81E, h6km±3km, ML2.9/9*
THE ***16*** *23:16:47.7, 39°.77N×20°.70E, h12km±1km, ML3.4/10, Error ellipse: s-maj=1.5km s-min=0.7km az=314.0*
VIE ***16*** *23:16:53.6±1.4, 40°.02N×20°.14E, h8km, mb3.2/7, ms3.6/7, Error ellipse: s-maj=53.8km s-min=14.4km az=57.0 148 km S of Tirana*

ISC 16 23:16:47.7±0.8, 39°.72N±0°.02×20°.71E±0°.02, h14km±5km, n115, σ1§14/145, mb3.4/5, 7C-10D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.12**	**120**	P	**Pg**	**23 16 50.8**	**-0.3**
JAN				S	**Sg**	**23 16 54.0**	**+0.6**
	42μm,0.2s						
JAN	**Janina**	**0.12**	**120**	P	**Pg**	**23 16 50.8**	**-0.3**
JAN				S	**Sg**	**23 16 54.1**	**+0.7**
JAN				AML	AML	23 16 54.4	
	comp=E,82861μm,0.2s						
JAN				AML	AML	23 16 54.6	
	comp=N,59077μm,0.2s						
IGT	**Igoumenitsa**	**0.35**	**238**	P	**Pg**	**23 16 54.5**	**-0.2**
IGT				S	**Sb**	**23 17 00.8**	**-0.2**
	comp=N,8μm,0.6s						
IGT	**Igoumenitsa**	**0.35**	**238**	*e*Pg	**Pg**	**23 16 54.8**	**+0.1**
IGT				*e*Sg	**Sb**	**23 17 01.2**	**+0.2**
IGT	**Igoumenitsa**	**0.35**	**238**	P	**Pg**	**23 16 54.5**	**-0.2**
IGT				S	**Sb**	**23 17 00.7**	**-0.2**
IGT				AML	AML	23 17 04.0	
	comp=N,13903μm,0.3s						
IGT				AML	AML	23 17 04.6	
	comp=E,16920μm,0.5s						
KPRO	**Kipourio**	**0.56**	**65**	P	**Pg**	**23 16 58.3**	**-0.3**
KPRO				S	**Sb**	**23 17 06.8**	**-0.3**
	comp=E,6μm,0.6s						
PENT	**Pentalofos**	**0.58**	**34**	P	**Pg**	**23 16 58.5**	**-0.5**
PENT	**Pentalofos**	**0.58**	**34**	P	**Pg**	**23 16 58.6**	**-0.5**
PENT				S	**Sg**	**23 17 06.1**	**-0.7**
KASA	**Kassiopi**	**0.60**	**273**	P	**Pg**	**23 16 58.7**	**-0.7**
KASA				S	**Sg**	**23 17 07.0**	**-0.3**
KASA				AML	AML	23 17 10.6	
	comp=N,6309μm,0.5s						
KASA				AML	AML	23 17 12.7	
	comp=E,5163μm,0.4s						
KEK	**Kerkira**	**0.70**	**270**	P	**Pg**	**23 17 00.1**	**-1.2**
KEK				S	**Sb**	**23 17 11.6**	**+0.3**
	comp=E,2μm,0.4s						
KEK	**Kerkira**	**0.70**	**270**	P	**Pg**	**23 17 00.2**	**-1.2**
KEK				S	**Sb**	**23 17 11.2**	**-0.1**
KEK				AML	AML	23 17 16.2	
	comp=N,4019μm,0.5s						
KEK				AML	AML	23 17 18.0	
	comp=E,4468μm,0.3s						
NEST	**Nestorio**	**0.74**	**20**	P	**Pg**	**23 17 01.5**	**-0.6**
NEST				S	**Sg**	**23 17 11.8**	**-0.1**
	comp=E,2μm,0.6s						
NEST	**Nestorio**	**0.74**	**20**	P	**Pg**	**23 17 01.4**	**-0.7**
NEST				AML	AML	23 17 14.7	
	comp=E,4910μm,0.4s						
NEST				AML	AML	23 17 23.5	
	comp=N,2681μm,0.4s						
TSLK	**Tsoukalades, L**	**0.89**	**183**	P	**Pb**	**23 17 05.0**	**+0.1**
TSLK				S	**Sn**	**23 17 19.8**	**+1.3**
	comp=N,2μm,0.8s						
TSLK	**Tsoukalades, L**	**0.89**	**183**	P	**Pb**	**23 17 04.9**	**0.0**
LKD2	**Lefkada island**	**0.93**	**183**	P	**Pb**	**23 17 05.4**	**-0.2**
LKD2				S	**Sn**	**23 17 21.1**	**+1.6**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.93**	**183**	P	**Pb**	**23 17 05.3**	**-0.2**
LKD2				AML	AML	23 17 25.1	
	comp=N,4228μm,0.3s						
LKD2				AML	AML	23 17 27.5	
	comp=E,3716μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.00**	**181**	P	**Pb**	**23 17 06.6**	**-0.2**
KZN	**Kozani**	**1.00**	**54**	P	**Pb**	**23 17 05.6**	**-1.3**
KZN	**Kozani**	**1.00**	**54**	P	**Pb**	**23 17 05.7**	**-1.1**
KZN				AML	AML	23 17 27.3	
	comp=N,1737μm,0.4s						
KZN				AML	AML	23 17 27.9	
	comp=E,2511μm,0.4s						
THL	**Klokotos Trika**	**1.02**	**98**	P	**Pb**	**23 17 05.7**	**-1.3**
THL				S	**Sn**	**23 17 22.2**	**+0.6**
	comp=E,1μm,0.7s						
THL	**Klokotos Trika**	**1.02**	**98**	P	**Pb**	**23 17 05.9**	**-1.1**
THL				AML	AML	23 17 24.3	
	comp=E,2279μm,0.5s						
THL				AML	AML	23 17 26.6	
	comp=N,1987μm,0.9s						
DRAG	**Dragano-Lefkad**	**1.04**	**186**	P	**Pb**	**23 17 07.3**	**-0.1**
EVGI	**Lefkada island**	**1.10**	**182**	P	**Pb**	**23 17 08.1**	**-0.3**
EVGI				S	**Sn**	**23 17 25.9**	**+2.4**
	comp=N,2μm,0.6s						
EVGI	**Lefkada island**	**1.10**	**182**	P	**Pb**	**23 17 08.5**	**+0.1**
EVR	**Evrytania**	**1.17**	**133**	P	**Pn**	**23 17 09.4**	**-0.3**
EVR	**Evrytania**	**1.17**	**133**	P	**Pn**	**23 17 09.3**	**-0.3**
EVR				AML	AML	23 17 31.0	
	comp=N,2151μm,0.7s						
EVR				AML	AML	23 17 33.3	
	comp=E,2271μm,0.7s						
TYRN	**Tyrnavos**	**1.17**	**90**	P	**Pn**	**23 17 08.9**	**-0.7**
TYRN				S	**Sg**	**23 17 25.7**	**+0.2**
	comp=E,3μm,0.5s						
FSK	**Fiskardo**	**1.26**	**185**	P	**Pg**	**23 17 12.0**	**+0.1**
FSK				AML	AML	23 17 32.9	
	comp=E,4919μm,0.2s						
FSK				AML	AML	23 17 43.8	
	comp=N,1812μm,0.9s						
PVO	**Paravola**	**1.27**	**150**	P	**Pg**	**23 17 12.1**	**0.0**
PVO	**Paravola**	**1.27**	**150**	P	**Pg**	**23 17 11.9**	**-0.1**
LRSO	**Larissa Observ**	**1.30**	**92**	P	**Pn**	**23 17 11.5**	**+0.2**
LRSO	**Larissa Observ**	**1.30**	**92**	P	**Pn**	**23 17 10.2**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.31**	**122**	P	**Pb**	**23 17 12.1**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.31**	**122**	P	**Pb**	**23 17 12.1**	**+0.1**
MAKR				AML	AML	23 17 35.3	
	comp=E,6988μm,0.6s						
MAKR				AML	AML	23 17 35.8	
	comp=N,6680μm,0.7s						
OHR	**Ohrid**	**1.39**	**3**	*e*Pg	**Pg**	**23 17 14.5**	**0.0**
OHR				*e*Sg	**Sg**	**23 17 33.9**	**+1.3**
OHR	**Ohrid**	**1.39**	**3**	*i* Pn	**Pg**	**23 17 15.0**	**+0.6**
LIT	**Litokhoron**	**1.42**	**74**	P	**Pn**	**23 17 13.1**	**+0.1**
LIT				AML	AML	23 17 40.2	
	comp=N,2491μm,0.4s						
LIT				AML	AML	23 17 40.7	
	comp=E,1731μm,0.4s						
KEF4	**Livadi, Kephal**	**1.48**	**189**	P	**Pb**	**23 17 14.4**	**-0.4**
VLS	**Valsamata**	**1.54**	**184**	P	**Pn**	**23 17 14.9**	**+0.2**
VLS				AML	AML	23 17 38.5	
	comp=E,2620μm,0.4s						
VLS				AML	AML	23 17 43.6	
	comp=N,2450μm,0.4s						
EFP	**Efpalio**	**1.59**	**144**	P	**Pb**	**23 17 17.3**	**+0.5**
EFP				AML	AML	23 17 50.7	
	comp=N,1891μm,0.6s						
EFP				AML	AML	23 17 52.0	
	comp=E,1928μm,0.5s						
PSDA	**Pessada-Kefalo**	**1.60**	**184**	P	**Pn**	**23 17 16.2**	**+0.6**
SERG	**Sergoula**	**1.67**	**141**	P	**Pb**	**23 17 18.4**	**+0.2**
SERG				AML	AML	23 17 50.1	
	comp=N,1558μm,0.4s						
SERG				AML	AML	23 17 51.6	
	comp=E,2168μm,0.5s						
TIR	**Tirane**	**1.75**	**339**	P	**Pb**	**23 17 19.8**	**+0.2**
TIR	**Tirane**	**1.75**	**339**	⇓S	**Sg**	**23 17 44.9**	**+0.9**
TIR	**Tirane**	**1.75**	**339**	*e*Pn	**Pb**	**23 17 20.1**	**+0.5**
TIR				*e*Sn	**Sg**	**23 17 44.2**	**+0.2**
RLS	**Riolos of Patr**	**1.76**	**160**	P	**Pb**	**23 17 19.2**	**-0.5**
RLS				AML	AML	23 17 56.9	
	comp=E,497μm,0.8s						
RLS				AML	AML	23 18 02.8	
	comp=N,620μm,0.6s						
SCTE	**Santa Cesarea**	**1.76**	**282**	P	**Pn**	**23 17 17.6**	**-0.2**
LAKA	**Lakka**	**1.78**	**146**	P	**Pb**	**23 17 20.3**	**+0.3**
LAKA				AML	AML	23 18 03.9	
	comp=E,501μm,1.0s						
LAKA				AML	AML	23 18 06.9	
	comp=N,540μm,0.6s						
AXAR	**Agios Charalam**	**1.79**	**122**	P	**Pb**	**23 17 19.7**	**-0.5**
AXAR				AML	AML	23 17 52.5	
	comp=N,2261μm,0.4s						
AXAR				AML	AML	23 17 53.8	
	comp=E,2524μm,0.7s						
GRG	**Griva**	**1.79**	**46**	P	**Pn**	**23 17 18.5**	**+0.3**
GRG				AML	AML	23 17 51.0	
	comp=E,438μm,0.7s						
GRG				AML	AML	23 17 53.8	
	comp=N,638μm,0.8s						
DRO	**Drossia**	**1.93**	**156**	P	**Pn**	**23 17 21.2**	**+1.2**
DRO				AML	AML	23 18 05.4	
	comp=N,1639μm,0.7s						
DRO				AML	AML	23 18 06.4	
	comp=E,1786μm,0.6s						
XOR	**Xorichti**	**1.95**	**100**	P	**Pb**	**23 17 22.1**	**-0.9**
XOR				AML	AML	23 17 57.7	
	comp=N,1174μm,0.7s						
XOR				AML	AML	23 17 58.9	
	comp=E,618μm,0.6s						
THE	**Thessaloniki**	**1.95**	**61**	P	**Pn**	**23 17 21.0**	**+0.6**
NEO	**Neokhori**	**1.99**	**101**	P	**Pb**	**23 17 22.5**	**-1.0**
NEO				AML	AML	23 17 53.6	
	comp=E,811μm,0.5s						
NEO				AML	AML	23 17 55.0	
	comp=N,1615μm,0.6s						
LTHK	**Lithakia**	**2.01**	**177**	P	**Pn**	**23 17 22.6**	**+1.5**
KLV	**Kalavryta, Ach**	**2.01**	**146**	P	**Pb**	**23 17 23.5**	**-0.6**
HORT	**Hortiatis**	**2.03**	**64**	P	**Pn**	**23 17 22.1**	**+0.5**
HORT				AML	AML	23 17 51.8	
	comp=E,220μm,0.5s						
HORT				AML	AML	23 17 53.6	
	comp=N,218μm,0.3s						
VAY	**Valandovo**	**2.14**	**41**	*e*Pn	**Pn**	**23 17 23.4**	**+0.5**
VAY				*e*Sn	**Sn**	**23 17 50.5**	**+1.2**
VAY	**Valandovo**	**2.14**	**41**	*i* Pn	**Pn**	**23 17 23.6**	**+0.7**
KNT	**Kendrikon**	**2.21**	**48**	P	**Pn**	**23 17 23.9**	**0.0**
THAL	**Thalero**	**2.27**	**137**	P	**Pn**	**23 17 25.8**	**+1.1**
THAL				AML	AML	23 18 07.9	
	comp=E,1102μm,0.5s						
THAL				AML	AML	23 18 09.6	
	comp=N,1140μm,0.5s						
STIP	**Stip**	**2.27**	**29**	*i* Pn	**Pb**	**23 17 27.5**	**-0.9**
SOH	**Sokhos**	**2.30**	**61**	P	**Pn**	**23 17 26.5**	**+1.3**
SOH				AML	AML	23 17 59.1	
	comp=N,520μm,0.5s						
SOH				AML	AML	23 17 59.6	
	comp=E,558μm,0.7s						
SKO	**Skopje**	**2.32**	**14**	*e*Pn	**Pb**	**23 17 27.7**	**-1.5**
SKO				*e*Sn	**Sb**	**23 17 56.3**	**-1.5**
SKO	**Skopje**	**2.32**	**14**	*i* Pn	**Pb**	**23 17 27.6**	**-1.6**
LOUT	**Loutraki**	**2.47**	**134**	P	**Pn**	**23 17 29.2**	**+1.7**
VIL2	**Platees**	**2.50**	**126**	P	**Pb**	**23 17 30.5**	**-1.8**
VIL2				AML	AML	23 18 18.0	
	comp=N,537μm,0.8s						
VIL2				AML	AML	23 18 18.7	
	comp=E,1066μm,1.0s						
SRS	**Serrai**	**2.61**	**57**	*e*Pn	**Pn**	**23 17 29.7**	**+0.3**
SRS				*e*Sn	**Sn**	**23 18 02.3**	**+1.5**
SRS	**Serrai**	**2.61**	**57**	P	**Pn**	**23 17 29.9**	**+0.5**
KOKK	**Kokkinochori,**	**2.75**	**65**	P	**Pn**	**23 17 31.6**	**+0.4**
PDG	**Podgorica**	**2.92**	**338**	⇓P	**Pn**	**23 17 34.6**	**+0.9**
ATHU	**Athens Univers**	**2.97**	**125**	P	**Pn**	**23 17 36.2**	**+1.8**
TIP	**Timpagrande**	**3.11**	**261**	⇑P	**Pn**	**23 17 35.1**	**-1.2**
TIP				⇑S	**Sn**	**23 18 11.0**	**-2.3**
BARS	**Barje**	**3.21**	**15**	*e*Pn	**Pn**	**23 17 39.4**	**+1.8**
BARS				*e*Sn	**Sn**	**23 18 17.3**	**+1.7**
MATE	**Matera**	**3.21**	**288**	⇑P	**Pn**	**23 17 37.2**	**-0.4**
MATE				⇑S	**Sn**	**23 18 17.4**	**+1.8**
VTS	**Vitosha**	**3.47**	**33**	⇑P	**Pn**	**23 17 42.2**	**+0.8**
VTS				⇑S	**Sn**	**23 18 24.4**	**+2.2**
SELS	**Selova**	**3.51**	**5**	*e*Pn	**Pn**	**23 17 43.3**	**+1.5**
SJES	**Sjenica**	**3.58**	**351**	*e*Pn	**Pn**	**23 17 46.0**	**+3.1**
ZAPS	**Zavoj**	**3.83**	**21**	*e*Pn	**Pn**	**23 17 48.1**	**+1.8**
IVAS	**Ivanjica

comp=Z,0.3nm,0.6s,baz=31,slow=8.9,SNR=4.2
comp=Z,0.3nm,0.6s
MKAR Makanchi Array 44.38 60 P P 23 24 56.5 -1.1
comp=Z,0.6nm,0.4s,baz=279,slow=7.7,SNR=14
comp=Z,0.6nm,0.4s

*IDC **16** 23:21:30.4±0.9, 39°.84N×20°.79E, h0km, mb3.9/10, mbtmp3.8/17, ML3.4/6, MS3.1/13, Error ellipse: s-maj=16.9km s-min=15.7km az=154.0*
*MED_RC **16** 23:21:32.0±0.7, 39°.75N×20°.69E, h28km±2km, MW4.0/9, Moment Tensor Solution. Mantle waves: s9,c10; Duration: 1§0 Moment tensor: Scale 10^15Nm; Mrr0.80±.19; Mθθ-0.46±.11; Mφφ-0.35±.18; Mrθ0.59±.13; Mθφ0.59±.08; Mφr-0.25±.12; Best double couple: M0=1.11000×10^15 NP1:φs119.00000°, δ63.00000°, λ76.00000°. NP2: φs328.00000°, δ30.00000°, λ115.00000°. Principal axes: T 1.0300, Plg69.0000°, Azm2.0000°; N 0.1400, Plg12.0000°, Azm126.0000°; P -1.1800, Plg17.0000°, Azm220.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*PDG **16** 23:21:32.9±0.6, 39°.76N×20°.57E, h15km±1km, ML3.5/13 Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*BEO **16** 23:21:33.3±0.5, 39.64N×20.72E, h14km±3km, ML3.4/6*
*NEIC **16** 23:21:33.2±2.9, 39.81N±0.04×20.63E±0.06, h13km±6km, mb4.1/7, ML3.6(ATH), Error ellipse: s-maj=7.3km s-min=6.0km az=65.0*
*ATH **16** 23:21:33.2, 39°.77N×20°.67E, h14km±1km, ML3.6/11, Error ellipse: s-maj=1.8km s-min=0.8km az=311.0*
*THE **16** 23:21:33.1, 39°.76N×20°.67E, h0km±2km, ML3.6/10, Error ellipse: s-maj=2.4km s-min=0.6km az=159.0*

ISC 16 23:21:33.1±0.8, 39°.75N±0°.02×20.66E±0°.02, h16km±5km, n193, σ1§52/233, mb4.0/13, MS3.1/8, 16C-15D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**122**	P	**Pg**	**23 21 37.0**	**-0.5**
JAN				S	**Sg**	**23 21 40.5**	**+0.1**
	132μm,0.4s						
JAN	**Janina**	**0.17**	**122**	P	**Pg**	**23 21 37.0**	**-0.5**
JAN				S	**Sg**	**23 21 40.6**	**+0.2**
JAN				AML	AML	23 21 41.1	
JAN				AML	AML	23 21 41.5	
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pg**	**23 21 40.1**	**0.0**
IGT				S	**Sb**	**23 21 46.1**	**+0.4**
	19μm,0.6s						
IGT	**Igoumenitsa**	**0.33**	**230**	*e*Pg	**Pg**	**23 21 40.4**	**+0.3**
IGT				*e*Sg	**Sb**	**23 21 47.0**	**+1.3**
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pg**	**23 21 40.1**	**0.0**
IGT				S	**Sg**	**23 21 45.5**	**+0.6**
IGT				AML	AML	23 21 49.7	
	comp=E,42570μm,0.5s						
IGT				AML	AML	23 21 49.7	
	comp=N,33822μm,0.3s						
LSK	**Leskovik**	**0.40**	**353**	P	**Pg**	**23 21 41.2**	**-0.1**
LSK				S	**Sg**	**23 21 46.6**	**-0.3**
	comp=N,22μm,0.7s						
SRN	**Sarande**	**0.53**	**285**	P	**Pg**	**23 21 43.3**	**-0.2**
SRN				S	**Sg**	**23 21 50.0**	**-0.6**
	comp=N,5μm,0.5s						
KASA	**Kassiopi**	**0.56**	**270**	P	**Pg**	**23 21 44.0**	**-0.1**
KASA				S	**Sb**	**23 21 52.4**	**+0.2**
KASA				AML	AML	23 21 54.0	
	comp=E,9082μm,0.5s						
KASA				AML	AML	23 21 54.0	
	comp=N,11948μm,0.4s						
PENT	**Pentalofos**	**0.58**	**39**	P	**Pg**	**23 21 44.1**	**-0.4**
PENT				S	**Sb**	**23 21 52.6**	**-0.2**
PENT	**Pentalofos**	**0.58**	**39**	P	**Pg**	**23 21 44.1**	**-0.4**
KPRO	**Kipourio**	**0.58**	**69**	P	**Pg**	**23 21 44.2**	**-0.3**
KPRO				S	**Sg**	**23 21 51.7**	**-0.6**
	comp=N,11μm,0.6s						
KEK	**Kerkira**	**0.67**	**267**	Pg	**Pg**	**23 21 45.6**	**-0.6**
KEK	**Kerkira**	**0.67**	**267**	P	**Pg**	**23 21 45.5**	**-0.6**
KEK				S	**Sb**	**23 21 56.0**	**+0.7**
	comp=N,4μm,0.7s						
KEK	**Kerkira**	**0.67**	**267**	P	**Pg**	**23 21 45.5**	**-0.6**
KEK				S	**Sb**	**23 21 55.8**	**+0.6**
KEK				AML	AML	23 21 58.3	
	comp=N,5968μm,0.4s						
KEK				AML	AML	23 22 02.0	
	comp=E,6124μm,0.2s						
NEST	**Nestorio**	**0.73**	**24**	P	**Pg**	**23 21 47.0**	**-0.3**
NEST				S	**Sb**	**23 21 57.4**	**+0.2**
	comp=E,2μm,1.0s						
NEST	**Nestorio**	**0.73**	**24**	P	**Pg**	**23 21 47.0**	**-0.3**
NEST				S	**Sg**	**23 21 56.5**	**-0.5**
NEST				AML	AML	23 22 05.7	
	comp=E,6388μm,0.9s						
NEST				AML	AML	23 22 10.6	
	comp=N,2984μm,0.8s						
KBN	**Korca**	**0.88**	**6**	Pg	**Pg**	**23 21 48.7**	**-1.4**
KBN	**Korca**	**0.88**	**6**	P	**Pg**	**23 21 49.3**	**-0.9**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pb**	**23 21 50.7**	**+0.1**
TSLK				S	**Sn**	**23 22 04.8**	**+0.6**
	comp=N,6μm,0.6s						
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pb**	**23 21 50.7**	**+0.1**
TSLK				S	**Sb**	**23 22 03.1**	**+0.4**
TSLK				AML	AML	23 22 11.4	
	comp=E,12177μm,0.7s						
TSLK				AML	AML	23 22 16.1	
	comp=N,12150μm,0.5s						
LKD2	**Lefkada island**	**0.96**	**180**	P	**Pb**	**23 21 51.2**	**-0.1**
LKD2	**Lefkada island**	**0.96**	**180**	P	**Pb**	**23 21 51.6**	**+0.3**
LKD2				S	**Sg**	**23 22 04.8**	**+0.5**
LKD2				AML	AML	23 22 09.2	
	comp=E,6092μm,0.4s						
LKD2				AML	AML	23 22 13.6	
	comp=N,9322μm,0.3s						
KZN	**Kozani**	**1.02**	**57**	P	**Pb**	**23 21 51.7**	**-0.6**
KZN				S	**Sn**	**23 22 08.1**	**+1.4**
	comp=N,2μm,0.5s						
KZN	**Kozani**	**1.02**	**57**	P	**Pb**	**23 21 51.6**	**-0.7**
KZN				S	**Sg**	**23 22 05.7**	**-0.5**
KZN				AML	AML	23 22 11.1	
	comp=N,4213μm,0.5s						
KZN				AML	AML	23 22 15.9	
	comp=E,4982μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.03**	**178**	P	**Pb**	**23 21 52.2**	**-0.3**
NYDR				S	**Sn**	**23 22 08.4**	**+1.5**
	comp=E,4μm,0.5s						
THL	**Klokotos Trika**	**1.06**	**100**	P	**Pb**	**23 21 52.2**	**-0.8**
THL	**Klokotos Trika**	**1.06**	**100**	P	**Pb**	**23 21 52.6**	**-0.4**
THL				S	**Sb**	**23 22 07.0**	**+0.4**
THL				AML	AML	23 22 14.0	
	comp=N,3639μm,0.5s						
THL				AML	AML	23 22 14.9	
	comp=E,2650μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.07**	**184**	P	**Pb**	**23 21 52.6**	**-0.5**
EVGI	**Lefkada island**	**1.13**	**180**	P	**Pb**	**23 21 53.9**	**-0.2**
EVGI	**Lefkada island**	**1.13**	**180**	P	**Pb**	**23 21 54.4**	**+0.3**
VLO	**Vlora**	**1.15**	**309**		**Pg**	**23 21 55.1**	**-0.1**
TYRN	**Tyrnavos**	**1.21**	**91**	P	**Pn**	**23 21 54.8**	**-0.5**
EVR	**Evrytania**	**1.22**	**133**	P	**Pn**	**23 21 55.8**	**+0.3**
EVR	**Evrytania**	**1.22**	**133**	P	**Pb**	**23 21 56.2**	**+0.4**
EVR				AML	AML	23 22 23.0	
	comp=E,7371μm,0.5s						
EVR				AML	AML	23 22 23.0	
	comp=N,5674μm,0.5s						
FSK	**Fiskardo**	**1.29**	**183**	P	**Pg**	**23 21 57.9**	**-0.1**
PVO	**Paravola**	**1.32**	**149**	P	**Pg**	**23 21 58.4**	**0.0**
LRSO	**Larissa Observ**	**1.34**	**93**	P	**Pb**	**23 21 57.8**	**+0.1**
OHR	**Ohrid**	**1.36**	**4**	*e*Pg	**Pb**	**23 21 58.6**	**+0.4**
OHR				*e*Sg	**Sg**	**23 22 20.9**	**+3.7**
OHR	**Ohrid**	**1.36**	**4**	*i* Pn	**Pg**	**23 21 59.0**	**-0.4**
LIT	**Litokhoron**	**1.45**	**75**	Pn	**Pn**	**23 21 59.2**	**+0.7**
LIT	**Litokhoron**	**1.45**	**75**	P	**Pb**	**23 21 59.4**	**-0.2**
LIT	**Litokhoron**	**1.45**	**75**	P	**Pn**	**23 21 59.0**	**+0.4**
LIT				AML	AML	23 22 25.1	
	comp=N,5421μm,0.5s						
LIT				AML	AML	23 22 28.8	
	comp=E,3250μm,0.5s						
TIR	**Tirane**	**1.71**	**339**	⇑P	**Pb**	**23 22 04.4**	**+0.3**
TIR				⇑S	**Sg**	**23 22 27.2**	**-0.9**
TIR	**Tirane**	**1.71**	**339**	Pn	**Pb**	**23 22 03.9**	**-0.2**
TIR	**Tirane**	**1.71**	**339**	*e*Pn	**Pb**	**23 22 04.3**	**+0.3**
TIR				*e*Sn	**Sg**	**23 22 29.4**	**+1.3**
SCTE	**Santa Cesarea**	**1.72**	**282**	Pn	**Pn**	**23 22 02.9**	**+0.6**
VAY	**Valandovo**	**2.14**	**42**	*e*Pn	**Pn**	**23 22 09.6**	**+1.6**
VAY				*e*Sn	**Sb**	**23 22 36.9**	**-0.8**
VAY	**Valandovo**	**2.14**	**42**	*i* Pn	**Pn**	**23 22 08.7**	**+0.7**
STIP	**Stip**	**2.26**	**30**	*i* Pn	**Pb**	**23 22 13.6**	**+0.1**
SKO	**Skopje**	**2.30**	**15**	*e*Pn	**Pb**	**23 22 13.2**	**-0.9**
SKO				*e*Sn	**Sb**	**23 22 40.7**	**-1.5**
SKO	**Skopje**	**2.30**	**15**	*i* Pn	**Pb**	**23 22 13.2**	**-0.9**
ULC	**Ulcinj**	**2.46**	**335**	⇑*i* Pn	**Pn**	**23 22 13.1**	**+0.6**
ULC				*i* Sn	**Sn**	**23 22 44.2**	**+2.0**
SRS	**Serrai**	**2.62**	**58**	*e*Pn	**Pn**	**23 22 15.7**	**+1.0**
SRS				*e*Sn	**Sn**	**23 22 48.1**	**+2.0**
DRME	**Dracevica, Mon**	**2.68**	**336**	*e*Pn	**Pn**	**23 22 16.1**	**+0.6**
DRME	**Dracevica, Mon**	**2.68**	**336**	⇓*i*Pn	**Pn**	**23 22 16.2**	**+0.7**
DRME				*i* Sn	**Sn**	**23 22 49.5**	**+1.9**
ITM	**Ithomi**	**2.75**	**158**	Pn	**Pn**	**23 22 19.0**	**+2.5**
BUM	**Brajici-Budva**	**2.88**	**333**	⇑*i* Pn	**Pn**	**23 22 18.8**	**+0.5**
BUM				*i* Sn	**Sn**	**23 22 54.3**	**+1.7**
PDG	**Podgorica**	**2.88**	**339**	⇓P	**Pn**	**23 22 19.4**	**+1.2**
PDG	**Podgorica**	**2.88**	**339**	Pn	**Pn**	**23 22 18.8**	**+0.5**
TTG	**Podgorica**	**2.88**	**339**	*e*Pn	**Pn**	**23 22 18.9**	**+0.7**
TTG				*i* Sn	**Sn**	**23 22 54.6**	**+2.1**
PVY	**Plav**	**2.89**	**350**	*e*Pn	**Pn**	**23 22 19.4**	**+0.9**
PVY				*i* Sn	**Sn**	**23 22 55.2**	**+2.2**
TIP	**Timpagrande**	**3.08**	**261**	⇑P	**Pn**	**23 22 21.2**	**+0.2**
TIP				⇓S	**Sn**	**23 22 57.0**	**-0.5**
TIP	**Timpagrande**	**3.08**	**261**	Pn	**Pn**	**23 22 20.5**	**-0.4**
CEME	**Cevo**	**3.09**	**335**	⇑*i* Pn	**Pn**	**23 22 21.7**	**+0.5**
CEME				*i* Sn	**Sn**	**23 22 59.5**	**+1.7**
HCY	**Herceg Novi**	**3.15**	**329**	*e*Pn	**Pn**	**23 22 22.0**	**0.0**
HCY	**Herceg Novi**	**3.15**	**329**	*e*Pn	**Pn**	**23 22 22.6**	**+0.6**
HCY				*i* Sn	**Sn**	**23 23 00.9**	**+1.6**
MATE	**Matera**	**3.16**	**288**	⇑P	**Pn**	**23 22 22.3**	**+0.2**
MATE				⇓S	**Sn**	**23 22 58.3**	**-1.1**
IVA	**Berane**	**3.17**	**350**	⇓*i*Pn	**Pn**	**23 22 23.2**	**+0.9**
IVA				*i* Sn	**Sn**	**23 23 02.0**	**+2.1**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**23 22 24.1**	**+1.7**
KOME	**Kolasin**	**3.22**	**345**	*e*Pn	**Pn**	**23 22 23.8**	**+0.9**
KOME				*i* Sn	**Sn**	**23 23 02.9**	**+2.0**
NKME	**Niksic**	**3.28**	**337**	*e*Pn	**Pn**	**23 22 24.4**	**+0.6**
NKME				*i* Sn	**Sn**	**23 23 04.1**	**+1.7**
VTS	**Vitosha**	**3.46**	**33**	⇓P	**Pn**	**23 22 29.1**	**+2.7**
VTS	**Vitosha**	**3.46**	**33**	Pn	**Pn**	**23 22 27.7**	**+1.4**
SELS	**Selova**	**3.48**	**6**	*e*Pn	**Pn**	**23 22 28.2**	**+1.6**
BRY	**Bratogost**	**3.53**	**334**	*e*Pn	**Pn**	**23 22 27.4**	**+0.1**
BRY	**Bratogost**	**3.53**	**334**	⇑*i*Pn	**Pn**	**23 22 27.9**	**+0.6**
BRY				*i* Sn	**Sn**	**23 23 10.1**	**+1.3**
SJES	**Sjenica**	**3.55**	**352**	*e*Pn	**Pn**	**23 22 29.6**	**+2.1**
UPM	**Unac-Piva**	**3.69**	**340**	*e*Pn	**Pn**	**23 22 30.6**	**+1.0**
UPM	**Unac-Piva**	**3.69**	**340**	*e*Pn	**Pn**	**23 22 30.3**	**+0.7**
UPM				*i* Sn	**Sn**	**23 23 14.4**	**+1.5**
PLE	**Pljevlja**	**3.70**	**345**	*e*Pn	**Pn**	**23 22 30.6**	**+1.0**
PLE				*i* Sn	**Sn**	**23 23 14.7**	**+1.7**
CUC	**Castrocucco**	**3.74**	**275**	Pn	**Pn**	**23 22 31.7**	**+1.7**
ZAPS	**Zavoj**	**3.82**	**22**	*e*Pn	**Pn**	**23 22 34.2**	**+3.0**
STON	**Ston**	**3.83**	**325**	*e*Pn	**Pn**	**23 22 29.6**	**-1.7**
IVAS	**Ivanjica**	**3.84**	**354**	*e*Pn	**Pn**	**23 22 32.2**	**+0.7**
BOVS	**Bovan**	**3.96**	**11**	⇑P	**Pn**	**23 22 35.3**	**+2.2**
BOVS	**Bovan**	**3.96**	**11**	*e*Pn	**Pn**	**23 22 34.5**	**+1.4**
BOVS				*e*Sn	**Sn**	**23 23 21.2**	**+2.1**
RDO	**Rodhopi**	**3.97**	**68**	Pn	**Pn**	**23 22 33.7**	**+0.4**
RUDO	**Rudo**	**3.98**	**346**	*e*Pn	**Pn**	**23 22 33.9**	**+0.5**
CEL	**Celeste**	**4.00**	**250**	Pn	**Pn**	**23 22 33.6**	**-0.1**
GRUS	**Gruza**	**4.14**	**1**	*e*Pn	**Pn**	**23 22 36.9**	**+1.4**
BLKB	**Belogradchik**	**4.15**	**21**	⇓P	**Pn**	**23 22 38.3**	**+2.5**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**23 22 37.2**	**+0.5**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**23 22 37.7**	**+1.0**
ZAGS	**Zajecar**	**4.23**	**16**	*e*Pn	**Pn**	**23 22 38.8**	**+2.1**
SGRT	**San Giovanni R**	**4.24**	**300**	Pn	**Pn**	**23 22 37.6**	**+0.6**
ALN	**Alexandroupoli**	**4.27**	**73**	Pn	**Pn**	**23 22 38.0**	**+0.6**
DIVS	**Divibare**	**4.37**	**354**		**Pn**	**23 22 39.7**	**+0.8**
DIVS	**Divibare**	**4.37**	**354**	*e*Pn	**Pn**	**23 22 39.2**	**+0.4**
DIVS	**Divibare**	**4.37**	**354**	*e*Pn	**Pn**	**23 22 39.9**	**+1.1**
TRUS	**Trudelj**	**4.47**	**358**	*e*Pn	**Pn**	**23 22 41.4**	**+1.3**
PAOL	**Paolisi**	**4.83**	**287**	Pn	**Pn**	**23 22 46.0**	**+1.0**
TEKS	**Tekeris**	**4.87**	**350**	*e*Pn	**Pn**	**23 22 44.6**	**-1.0**
TEKS	**Tekeris**	**4.87**	**350**	*e*Pn	**Pn**	**23 22 45.5**	**-0.1**
HERR	**Herculane**	**5.29**	**14**	⇓P	**Pn**	**23 22 54.1**	**+2.7**
HERR				⇓S	**Sn**	**23 23 56.2**	**+4.2**
MGRS	**Mrkonjic Grad**	**5.37**	**331**	*e*Pn	**Pn**	**23 22 51.9**	**-0.6**
VAE	**Valguarnera**	**5.39**	**247**	Pn	**Pn**	**23 22 55.4**	**+2.6**
	comp=E,8.4nm,1.2s,baz=117,slow=14,SNR=1.0						
VAE				Sn	**Sn**	**23 24 00.4**	**+5.8**
	comp=E,3.1nm,0.3s,baz=108,slow=4.9,SNR=6.3						
FRGS	**Fruska Gora**	**5.44**	**354**	P	**Pn**	**23 22 54.3**	**+0.9**
FRGS	**Fruska Gora**	**5.44**	**354**	*e*Pn	**Pn**	**23 22 53.1**	**-0.3**
FRGS	**Fruska Gora**	**5.44**	**354**	*e*Pn	**Pn**	**23 22 54.1**	**+0.7**
RAFF	**Raffo Rosso**	**5.55**	**245**	Pn	**Pn**	**23 22 54.2**	**-0.7**
IDI	**Anoyia**	**5.58**	**142**	⇓P	**Pn**	**23 22 57.3**	**+1.9**
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**23 22 55.3**	**-0.1**
	comp=E,0.7nm,0.3s,baz=297,slow=15,SNR=1.7						
IDI				Sn	**Sn**	**23 23 56.2**	**-2.9**
	comp=E,7.6nm,0.3s,baz=69,slow=20,SNR=9.1						
	comp=E,2.0nm,0.4s						
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**23 22 56.4**	**+1.0**
INTR	**Introdacqua**	**5.60**	**296**	Pn	**Pn**	**23 22 56.4**	**+0.7**
BLY	**Banja Luka**	**5.62**	**334**	*e*Pn	**Pn**	**23 22 55.1**	**-0.8**
GZR	**Gura Zlata**	**5.85**	**15**	⇓P	**Pn**	**23 23 02.1**	**+3.0**
GZR				⇑S	**Sn**	**23 24 10.4**	**+4.5**
BZS	**Buzias**	**5.91**	**7**	⇓P	**Pn**	**23 23 02.9**	**+3.2**
A051A	**Mrakovica**	**5.95**	**333**	*e*Pn	**Pn**	**23 23 00.1**	**-0.3**
AQU	**L'Aquila**	**6.07**	**298**	Pn	**Pn**	**23 23 04.0**	**+1.8**
CAMP	**Campotosto**	**6.14**	**299**	Pn	**Pn**	**23 23 04.0**	**+0.8**
ARR	**Arges**	**6.33**	**26**	⇓P	**Pn**	**23 23 09.5**	**+3.7**
NRCA	**Norcia**	**6.46**	**301**	Pn	**Pn**	**23 23 08.0**	**+0.5**
VOIR		**6.54**	**28**	⇓P	**Pn**	**23 23 12.0**	**+3.4**
AMBH	**Ambrzfalva**	**6.60**	**0**	P	Pb	23 23 22.0	-5.3
KOVH	**Kovagotottos**	**6.61**	**344**	P	**Pn**	**23 23 09.6**	**+0.2**
MORH	**Mrgy, Hungar**	**6.63**	**348**	⇑P	**Pn**	**23 23 10.3**	**+0.6**
MORH	**Mrgy, Hungar**	**6.63**	**348**	P	**Pn**	**23 23 09.0**	**-0.7**
CESX	**Cesi**	**6.73**	**298**	Pn	**Pn**	**23 23 11.9**	**+0.7**
MLR	**Muntele Rosu**	**6.93**	**32**	⇑P	**Pn**	**23 23 17.9**	**+3.8**
MLR	**Muntele Rosu**	**6.93**	**32**	Pn	**Pn**	**23 23 18.8**	**+4.7**
	baz=243,slow=6.8						
MLR				LR	LR	23 26 32.2	
	comp=E,256nm,18.2s,baz=231,slow=44						
MLR	**Muntele Rosu**	**6.93**	**32**	Pn	**Pn**	**23 23 18.6**	**+4.5**
BOJS	**Bojanci**	**7.00**	**327**	*e*Pn	**Pn**	**23 23 13.7**	**-1.1**
MURB	**Monte Urbino**	**7.04**	**303**	Pn	**Pn**	**23 23 16.3**	**+0.8**
CRES	**Cresnjev**	**7.18**	**329**	*e*Pn	**Pn**	**23 23 15.8**	**-1.5**
COVR	**Voineasa-Covas**	**7.33**	**32**	⇓P	**Pn**	**23 23 22.9**	**+3.6**
PLOR	**Plostina**	**7.52**	**34**	⇑P	**Pn**	**23 23 25.6**	**+3.6**
CEY	**Cerknica**	**7.54**	**325**	*e*Pn	**Pn**	**23 23 21.7**	**-0.6**
VRI	**Vrincioaia**	**7.56**	**34**	⇑P	**Pn**	**23 23 25.1**	**+2.5**
SKDS	**Skadanscina**	**7.58**	**322**	*e*Pn	**Pn**	**23 23 21.4**	**-1.5**
SOKA	**Soboth**	**8.05**	**331**	*e*Pn	**Pn**	**23 23 28.9**	**-0.4**
	comp=E,1.3nm,0.3s						
OBKA	**Obir**	**8.10**	**329**	*e*Pn	**Pn**	**23 23 29.4**	**-0.6**
OBKA	**Obir**	**8.10**	**329**	*e*Pn	**Pn**	**23 23 30.2**	**+0.3**
	comp=E,1.3nm,0.2s						
BURAR	**Bucovina Array**	**8.53**	**21**	⇑P	**Pn**	**23 23 40.3**	**+4.5**
TEOL	**Teolo**	**8.68**	**313**	Pn	**Pn**	**23 23 36.8**	**-1.2**
STAL	**STALIGIAL**	**8.73**	**321**	Pn	**Pn**	**23 23 38.1**	**-0.4**
CLUD	**Cludinico**	**8.79**	**322**	Pn	**Pn**	**23 23 40.5**	**+1.1**
VLC	**Villacollemand**	**8.83**	**303**	Pn	**Pn**	**23 23 41.3**	**+1.4**
CTI	**Castel Tesino**	**9.13**	**317**	Pn	**Pn**	**23 23 42.9**	**-1.2**
ABTA	**Abfaltersbach**	**9.18**	**322**	*e*Pn	**Pn**	**23 23 44.7**	**0.0**
	comp=E,1.8nm,0.5s						
MOA	**Molln**	**9.32**	**332**	*e*Pn	**Pn**	**23 23 47.0**	**+0.4**
	comp=E,1.1nm,0.4s						
BIOA	**Bad Ischl, Aus**	**9.42**	**330**	*e*Pn	**Pn**	**23 23 48.0**	**0.0**
	comp=E,2.4nm,0.5s						
SALO	**Salr**	**9.49**	**311**	Pn	**Pn**	**23 23 47.9**	**-1.0**
KEST	**Kesra**	**9.82**	**249**	Pn	**Pn**	**23 23 54.9**	**+1.3**
	comp=E,0.2nm,0.3s,baz=47,slow=11,SNR=4.1						
	comp=E,3.1nm,0.7s						
VRAC	**Vranov**	**9.99**	**344**	LR	LR	23 28 18.9	
	comp=E,56nm,21.5s,baz=174,slow=41						
BRTR	**Keskin Array B**	**10.00**	**86**	Pn	**Pn**	**23 23 59.5**	**+3.4**
	comp=E,0.1nm,0.3s,baz=259,slow=12,SNR=4.8						
BRTR				LR	LR	23 28 26.7	
	comp=E,70nm,18.0s,baz=292,slow=42						
SQTA	**Sankt Quirin**	**10.14**	**321**	*e*Pn	**Pn**	**23 23 58.4**	**+0.4**
	comp=E,0.9nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**10.23**	**316**	Pn	**Pn**	**23 23 59.6**	**+0.3**
MOTA	**Moosalm**	**10.28**	**321**	*e*Pn	**Pn**	**23 23 59.1**	**-0.8**
	comp=E,2.4nm,0.6s						
GERES	**GERESS Array B**	**10.37**	**334**	Pn	**Pn**	**23 24 01.2**	**+0.1**
	comp=E,0.1nm,0.3s,baz=149,slow=14,SNR=2.4						
	comp=E,0.7nm,0.9s						
DAVOX	**Davos/Dischmat**	**10.54**	**315**	Pn	**Pn**	**23 24 03.5**	**0.0**
	comp=E,0.2nm,0.3s,baz=145,slow=17,SNR=5.4						
DAVOX				Sn	**Sn**	**23 25 59.6**	**-1.6**
	comp=E,0.2nm,0.3s,baz=192,slow=19,SNR=3.1						
DAVOX				LR	LR	23 28 57.8	
	comp=E,34nm,18.5s,baz=91,slow=42						
	comp=E,1.5nm,0.5s						
RETA	**Reutte**	**10.54**	**320**	*e*Pn	**Pn**	**23 24 04.0**	**+0.6**
	comp=E,0.4nm,0.3s						
KHC	**Kasperske Hory**	**10.65**	**334**	*e*PN	**Pn**	**23 24 09.0**	**+4.1**
SENIN	**Lac Senin/Sane**	**11.79**	**308**	Pn	**Pn**	**23 24 21.1**	**+0.4**
AKASG	**Malin Array Be**	**12.49**	**26**	LR	LR	23 29 47.2	
	comp=E,52nm,18.6s,baz=184,slow=40						
MMAI	**Mount Meron Ar**	**13.64**	**115**	Pn	**Pn**	**23 24 44.8**	**-1.0**
	comp=E,0.5nm,0.3s,baz=297,slow=11,SNR=5.2						
	comp=E,0.2nm,0.3s						
PABE	**Paberze**	**15.92**	**7**	Pn	**Pn**	**23 25 15.5**	**-0.6**
PABE				IAmb	IAmb	23 25 21.3	
	comp=Z,9.8nm,0.7s						
ESDC	**Sonseca Array**	**18.93**	**278**	P	**Pn**	**23 25 54.1**	**+0.2**
	baz=75,slow=10,SNR=6.0						
	comp=Z,0.5nm,0.8s						
HFS	**Hagfors**	**20.87**	**350**	P	**P**	**23 26 12.9**	**-1.1**
	comp=Z,3.8nm,0.8s,baz=163,slow=12,SNR=6.6						
HFS				LR	LR	23 35 09.7	
	comp=Z,43nm,18.0s,baz=178,slow=39						
	comp=Z,3.8nm,0.8s						
FINES	**FINESS Array B**	**21.98**	**7**	P	**P**	**23 26 24.2**	**-1.7**
	comp=Z,2.2nm,0.6s,baz=180,slow=12,SNR=9.2						
	comp=Z,2.2nm,0.6s						
FINES	**FINESS Array B**	**21.98**	**7**	P	**P**	**23 26 23.4**	**-2.5**
FIA1	**FINESS Array S**	**21.98**	**7**	P	**P**	**23 26 23.3**	**-2.6**
FIA1				IAmb	IAmb	23 26 35.1	
	comp=Z,16nm,1.1s						
NC405	**NORSAR Array S**	**22.09**	**348**	P	**P**	**23 26 26.6**	**-0.6**
NOA	**NORSAR Array B**	**22.10**	**348**	P	**P**	**23 26 26.3**	**-1.1**
	comp=Z,2.8nm,1.0s,baz=164,slow=11,SNR=5.6						
NOA				LR	LR	23 35 30.7	
	comp=Z,26nm,18.9s,baz=155,slow=38						
	comp=Z,2.8nm,1.0s						
EKA	**Eskdalemuir Ar**	**22.23**	**322**	P	**P**	**23 26 28.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=120,slow=11,SNR=2.6						
	comp=Z,1.8nm,0.8s						
KIRV	**Kirov**	**26.29**	**35**	LR	LR	23 37 40.1	
	comp=Z,45nm,18.4s,baz=227,slow=37						
ARU	**Arti**	**29.83**	**43**	LR	LR	23 42 04.0	
	comp=Z,13nm,18.4s,baz=298,slow=42						
ARCES	**ARCESS Array B**	**29.96**	**3**	P	**P**	**23 27 38.2**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=186,slow=9.8,SNR=4.1						
	comp=Z,1.5nm,0.8s						
TOA0	**Torodi Ar. Sit**	**31.33**	**218**	P	**P**	**23 27 52.6**	**-0.1**
TOA0				IAmb	IAmb	23 28 08.1	
	comp=Z,3.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**31.33**	**218**	P	**P**	**23 27 53.0**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=34,slow=9.1,SNR=13						
	comp=Z,1.6nm,0.8s						
KOWA	**Kowa**	**33.18**	**228**	LR	LR	23 41 56.2	
	comp=Z,34nm,18.1s,baz=172,slow=37						
KK31	**Karatay Array**	**37.09**

0.1nm34nm,0.7s
LBMI Labuha 6.76 8 P **Pn 23 46 50.1 +0.7**
0.3nm58nm,0.7s
MTN Manton Dam 7.05 141 Pn **Pn 23 46 52.8 +0.1**
MTN Manton Dam 7.05 141 P **Pn 23 46 52.8 +0.1**
BNSI Bone 7.08 294 P **Pn 23 46 52.9 -0.2**
0.1nm15nm,1.0s
KAPI Kappang 7.17 289 P **Pn 23 46 55.2 +1.0**
7.8nm,0.6s,baz=152,slow=10,SNR=5.6
KAPI Kappang 7.17 289 Pn **Pn 23 46 54.0 -0.3**
FAKI Fak Fak 7.19 52 Pn **Pn 23 46 53.1 -1.3**
FAKI Fak Fak 7.19 52 P **Pn 23 46 52.9 -1.5**
0.7nm2μm184nm,0.8s
FAKI Fak Fak 7.19 52 P **Pn 23 46 53.0 -1.5**
LUWI Luwuk 7.35 329 Pn **Pn 23 46 56.0 -0.4**
LUWI Luwuk 7.35 329 P **Pn 23 46 56.4 +0.1**
0.5nm8μm121nm,0.8s
LUWI Luwuk 7.35 329 P **Pn 23 46 56.1 -0.2**
SPSI Sidrap Palu 7.57 296 P **Pn 23 46 58.7 -0.3**
0.1nm13nm,0.7s
KDU Kakadu 7.85 133 P **Pn 23 47 01.9 -0.4**
TTSI Tana Toraja 7.98 302 P **Pn 23 47 04.7 +0.7**
22nm,1.0s
SIJI Sorong 7.99 36 P **Pn 23 47 03.2 -0.9**
106nm,0.4s,baz=202,slow=10,SNR=33
SIJI S **S 23 48 31.8 -4.7**
24nm,0.5s,baz=235,slow=23,SNR=11
SIJI Sorong 7.99 36 P **Pn 23 47 02.7 -1.4**
3μm144nm,1.1s
SWI Sorong 7.99 36 P **Pn 23 47 02.4 -1.7**
3μm165nm,1.0s
APSI Ampana 8.08 322 P **Pn 23 47 06.2 +1.0**
1μm100nm,0.9s
TNTI Ternate 8.14 6 P **Pn 23 47 05.3 -0.6**
29nm,0.4s
KNRA Kununurra 8.52 166 Pn **Pn 23 47 09.6 -0.9**
KNRA Kununurra 8.52 166 P **Pn 23 47 10.4 0.0**
GTOI Gorontalo 8.72 336 P **P 23 47 16.0 -1.0**
600nm82nm,1.0s
PLAI Plampang 8.82 260 P **Pn 23 47 10.9 -3.2**
PLAI Plampang 8.82 260 P **Pn 23 47 11.7 -2.4**
MRSI Marisa 9.07 329 P **Pn 23 47 18.1 +0.9**
1μm169nm,0.9s
RKPI Ransiki, Papua 9.57 53 P **Pn 23 47 22.9 -0.4**
160nm,0.7s
MPSI Mapaga 10.15 319 P **Pn 23 47 31.1 +0.8**
982nm104nm,1.0s
TOLI2 Tolitoli 10.22 325 **Pn 23 47 32.0 +0.8**
TOLI2 Tolitoli 10.22 325 P **P 23 47 33.1 -0.6**
SGSI Sangihe 11.04 355 P **Pn 23 47 40.5 -0.6**
10μ95nm,0.6s
BBKI Banjar Baru 12.30 288 P **P 23 47 59.7 +2.9**
JAGI Jagi, Banyuwa 12.34 264 P **Pn 23 47 55.1 -1.7**
GENI Genyem 14.36 71 P **P 23 48 18.2 -1.3**
WB0 Warramunga Arr 14.46 149 **P 23 48 20.8 +0.2**
WRAB Tennant Creek 14.58 150 P **P 23 48 22.4 +0.6**
WRAB Tennant Creek 14.58 150 P **P 23 48 22.5 +0.6**
WRA Warramunga Arr 14.59 150 P **P 23 48 22.4 +0.5**
14nm,0.4s,baz=325,slow=13,SNR=173
WRA S **S 23 50 57.9 -3.1**
28nm,0.9s,baz=327,slow=20,SNR=18
WRA Warramunga Arr 14.59 150 P **P 23 48 19.8 -2.1**
WB2 Warramunga Arr 14.59 150 P **P 23 48 21.8 -0.2**
WR0 Warramunga Arr 14.70 149 P **P 23 48 23.3 +0.1**
MYLDM Lahad Datu 14.85 327 P **P 23 48 25.5 +0.6**
MBWA Marble Bar 15.21 205 P **Pn 23 48 30.0 -0.6**
MBWA IAmb IAmb 23 49 12.9
comp=Z,31nm,1.2s
MBWA Marble Bar 15.21 205 P **Pn 23 48 30.8 +0.2**
PSA00 Pilbara Seismi 15.53 204 P **P 23 48 32.7 +0.4**
SMRI Semarang 16.00 270 P **P 23 48 37.4 -0.1**
STKI Sintang 16.77 296 P **P 23 48 47.2 +1.4**
KKM Kota Kinabalu 16.87 322 P **P 23 48 48.4 +1.3**
KKM Kota Kinabalu 16.87 322 P **P 23 48 48.3 +1.3**
SBUM Sibu 17.33 304 P **P 23 48 53.5 +1.6**
SBUM Sibu 17.33 304 P **Pn 23 48 53.8 -1.5**
COEN Coen 17.57 113 P **P 23 48 55.6 +1.1**
COEN Coen 17.57 113 P **P 23 48 55.7 +1.2**
WRKA Warakurna 17.64 175 P **P 23 48 56.2 +1.1**
AS31 Alice Springs 17.66 157 P **P 23 48 56.9 +1.5**
ASAR Alice Springs 17.66 157 P **P 23 48 56.9 +1.5**
comp=Z,55nm,0.5s,baz=333,slow=11,SNR=492
ASAR S **S 23 51 59.6 -2.4**
comp=Z,12nm,0.9s,baz=337,slow=20,SNR=11
ASAR Alice Springs 17.66 157 P **P 23 48 57.0 +1.6**
AS01 Alice Springs 17.68 157 P **P 23 48 57.2 +1.7**
QIS Mount Isa 18.19 137 P **P 23 49 02.5 +1.4**
PMG Port Moresby 20.47 97 P **P 23 49 26.4 +1.5**
comp=Z,18nm,0.7s,baz=310,slow=9.3,SNR=3.0
comp=Z,18nm,0.7s
PMG Port Moresby 20.47 97 P **P 23 49 26.2 +1.2**
PMG IAmb IAmb 23 49 37.3
comp=Z,35nm,1.1s
MEEK Meekatharra 20.59 201 P **P 23 49 25.6 -0.4**
MANU Manus Island 21.39 77 P **P 23 49 36.1 +2.6**
OOD Oodnadatta 22.07 158 P **P 23 49 40.9 +1.5**
CTA Charters Tower 22.88 125 P **P 23 49 48.5 +1.5**
comp=Z,12nm,0.9s,baz=300,slow=11,SNR=11
comp=Z,12nm,0.9s
CTAO Charters Tower 22.88 125 P **P 23 49 47.9 +0.9**
CTAO IAmb IAmb 23 49 51.1
comp=Z,13nm,0.9s
FORT Forrest 23.32 177 P **P 23 49 50.7 -0.1**
FORT Forrest 23.32 177 P **P 23 49 51.0 +0.2**
MULG Mulgathing 23.84 164 P **P 23 49 56.3 +0.8**
BBOO Buckleboo 26.80 162 P **P 23 50 22.5 +0.6**
BBOO IAmb IAmb 23 51 02.9
comp=Z,21nm,1.2s
BBOO Buckleboo 26.80 162 P **P 23 50 22.9 +1.0**
IPM Ipoh 28.08 294 P **P 23 50 32.8 -0.8**
IPM IAmb IAmb 23 50 33.8
comp=Z,11nm,0.8s
STKA Stephens Creek 28.11 152 P **P 23 50 34.7 +1.1**
comp=Z,2.2nm,0.3s,baz=346,slow=7.1,SNR=10
comp=Z,2.2nm,0.3s
STKA Stephens Creek 28.11 152 P **P 23 50 34.6 +0.9**
STKA Stephens Creek 28.11 152 P **P 23 50 34.8 +1.1**
HTT Hallett 28.34 158 P **P 23 50 36.6 +1.0**
KULM Kulim 28.76 295 P **P 23 50 38.7 -0.8**
KULM IAmb IAmb 23 50 39.6
comp=Z,12nm,0.6s
CMSA Cobar Meteorol 29.94 146 P **P 23 50 51.1 +1.4**
UBPT Khong Chiam 30.73 317 P **P 23 50 57.0 +0.2**
UBPT IAmb IAmb 23 51 16.1
comp=Z,10nm,0.9s
ARPS Mount Arapiles 32.40 157 P **P 23 51 14.1 +3.0**
comp=Z,18nm,0.8s
TOO Toolangi 34.62 153 P **P 23 51 32.2 +2.1**
TOO IAmb IAmb 23 51 58.8
comp=Z,28nm,1.4s
CM31 Chiang Mai Arr 37.44 314 P **P 23 51 54.2 +0.1**
CMAR Chiang Mai Arr 37.44 314 P **P 23 51 54.3 +0.1**
comp=Z,3.0nm,0.7s,baz=144,slow=6.7,SNR=22
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 37.44 314 P **P 23 51 53.5 -0.7**
PZH PanZhiHua 41.41 325 P **P 23 52 28.8 +2.1**
MJAR Matsushiro Arr 45.04 13 P **P 23 52 54.3 -0.9**
comp=Z,2.5nm,0.6s,baz=173,slow=9.6,SNR=5.7
comp=Z,2.5nm,0.6s
LSA Lhasa 50.18 319 P **P 23 53 34.7 -0.4**
LSA IAmb IAmb 23 53 37.1
comp=Z,5.2nm,0.5s
RAMN Ramite 51.61 313 *eP* **P 23 53 45.5 0.0**
comp=Z,25nm,0.5s
GUN Gumba 52.69 314 *eP* **P 23 53 53.0 -0.4**
comp=Z,9.9nm,0.5s
PKI Pulchoki 52.83 313 *eP* **P 23 53 53.6 -0.9**
comp=Z,14nm,0.5s
PKIN Phulchoki 52.85 313 *eP* **P 23 53 53.5 -1.0**
comp=Z,9.3nm,0.4s
GKN Gorkha 53.64 313 *eP* **P 23 53 59.4 -0.7**
comp=Z,18nm,0.4s
KHZ Kahutara 54.06 138 P **P 23 54 03.4 +0.7**
KHZ IAmb IAmb 23 54 05.1
comp=Z,30nm,1.3s
KOLN Koldanda 54.27 312 *eP* **P 23 54 05.0 +0.3**
comp=Z,2.0nm,0.8s
DANN Dangsing 54.48 313 *eP* **P 23 54 05.6 -0.6**
comp=Z,15nm,0.6s
PYUN Piuthan 54.90 312 *eP* **P 23 54 08.7 -0.5**
comp=Z,8.1nm,0.4s
SONM Songino Array 57.80 344 P **P 23 54 29.5 +0.5**
comp=Z,0.6nm,0.5s,baz=159,slow=7.8,SNR=2.7
comp=Z,0.6nm,0.5s
WMQ Urumqi 61.91 329 *eP* **P 23 54 59.5 +2.7**

NIL Nilore 64.92 312 P **P 23 55 16.3 -0.2**
NIL IAmb IAmb 23 55 16.6
comp=Z,5.5nm,0.6s
PETK Petropavlovsk- 65.80 20 P **P 23 55 22.7 +1.0**
comp=Z,1.5nm,0.5s,baz=187,slow=2.9,SNR=2.3
comp=Z,1.5nm,0.5s
PETK Petropavlovsk- 65.80 20 P **P 23 55 22.9 +1.2**
KSH Kashi 66.04 319 P **P 23 55 24.3 +0.6**
TARG Taragay, Kyrgy 66.12 322 P **P 23 55 23.4 -1.2**
MK31 Makanchi Array 66.72 329 P **P 23 55 28.1 +0.4**
MKAR Makanchi Array 66.72 329 P **P 23 55 28.1 +0.3**
comp=Z,3.0nm,0.8s,baz=128,slow=8.1,SNR=26
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 66.72 329 P **P 23 55 28.0 +0.3**
KBL Kabul 68.43 312 P **P 23 55 39.1 +0.3**
KBL IAmb IAmb 23 55 39.6
comp=Z,4.1nm,0.8s
AAK Ala-Archa 68.67 321 P **P 23 55 40.8 +0.8**
AAK IAmb IAmb 23 55 41.4
comp=Z,3.7nm,0.8s
GAR Garm 69.55 316 P **P 23 55 45.3 -0.1**
GAR IAmb IAmb 23 55 45.8
comp=Z,5.2nm,0.9s
ZAA0 Zalesovo Array 70.46 335 P **P 23 55 50.8 +0.4**
ZALV Zalesovo Beam 70.46 335 P **P 23 55 50.7 +0.3**
comp=Z,2.0nm,0.7s,baz=113,slow=5.6,SNR=8.6
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 70.46 335 P **P 23 55 51.2 +0.8**
KURK Kurchatov 71.11 330 P **P 23 55 54.6 +0.3**
KURK IAmb IAmb 23 55 55.3
comp=Z,4.5nm,1.1s
VNDA Vanda 72.50 172 P **P 23 56 03.6 +1.4**
comp=Z,0.2nm,0.5s,baz=314,slow=7.5,SNR=1.6
comp=Z,0.2nm,0.5s
VNDA Vanda 72.50 172 P **P 23 56 02.7 +0.5**
BRVK Borovoye 76.67 329 P **P 23 56 26.5 +0.1**
BRVK IAmb IAmb 23 56 35.7
comp=Z,2.6nm,0.6s
GEYT Alibeck 77.88 311 P **P 23 56 34.2 +0.7**
comp=Z,0.7nm,0.4s,baz=48,slow=2.1,SNR=3.6
comp=Z,0.7nm,0.4s
ABKAR Akbulak array 80.71 322 P **P 23 56 48.9 +0.6**
ILAR Eielson Array 95.15 25 P **P 23 57 57.9 +0.6**
comp=Z,0.5nm,0.7s,baz=206,slow=3.9,SNR=1.6
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 125.54 281 PKP **PKPdf 00 03 34.3 -0.4**
comp=Z,0.8nm,1.0s,baz=84,slow=2.3,SNR=3.2
TXAR Lajitas Array 128.04 58 PKP **PKPdf 00 03 40.2 +0.8**
comp=Z,0.2nm,0.5s,baz=177,slow=2.8,SNR=4.8
TXAR SKPbc SKPbc 00 06 28.3
comp=Z,0.6nm,0.8s,baz=270,slow=1.9,SNR=7.9
CPUP Villa Florida 146.28 174 PKPbc **PKPbc 00 04 14.3 0.0**
comp=Z,2.0nm,0.7s,baz=141,slow=4.6,SNR=4.6

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*IDC **17** 00:13:53.3±0.5, 63°.47S×62°.06W, h0km, mb4.5/14, mbtmp4.5/14, MS3.8/22, Error ellipse: s-maj=21.3km s-min=12.1km az=94.0*
*NEIC **17** 00:13:56.4±2.1, 63°.59S±0°.05×61°.9W±0°.2, h10km±1km, mb4.9/50, Error ellipse: s-maj=14.3km s-min=4.8km az=303.0*
ISC 17 00:13:56.4±0.3, 63°.52S±0°.05×61°.97W±0°.08, h16km, n112, σ1§49/104, mb4.7/28, MS3.8/22, South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**1.56**	**215**	Pn		**Pn**	**Pn**	**00 14 22.7**	**-0.6**
	445nm,0.3s,baz=47,slow=10,SNR=1722								
PMSA				Sn		**Sn**	**Sn**	**00 14 42.8**	**-0.4**
	1μm,0.3s,baz=68,slow=6.4,SNR=6.9								
PMSA	**Palmer Station**	**1.56**	**215**	Pn		**Pn**	**Pn**	**00 14 22.6**	**-0.8**
PMSA				Sn		**Sn**	**Sn**	**00 14 43.1**	**-0.1**
SMAI	**San Martin Ant**	**5.09**	**202**	Pn		**Pn**	**Pn**	**00 15 13.1**	**+1.3**
SMAI							**Sb**	**00 16 28.0**	**+2.3**
MG02	**Cerro Sombrero**	**11.42**	**337**	Pn		**Pn**	**Pn**	**00 16 41.1**	**+2.5**
EFI	**East Falkland**	**12.05**	**12**	Pn		**Pn**	**Pn**	**00 16 48.9**	**+1.6**
MG05	**Puerto Natales**	**13.12**	**330**	Pn		**Pn**	**Pn**	**00 17 03.2**	**+1.4**
BELA	**Belgrano 2**	**16.69**	**160**	Pn		**Pn**	**Pn**	**00 17 48.9**	**-0.2**
COYC	**Coyhaique**	**18.87**	**338**	P		**Pn**	**Pn**	**00 18 17.1**	**+0.9**
AY01	**Puyuhuapi**	**20.09**	**337**	P		**P**	**P**	**00 18 27.6**	**-1.3**
AY01						IAmb	IAmb	00 18 45.9	
	comp=Z,58nm,1.4s								
VNA3	**Neumayer Olymp**	**20.85**	**134**	P		**P**	**P**	**00 18 38.4**	**+1.3**
LL02	**Futaleuf**	**21.15**	**340**	P		**P**	**P**	**00 18 42.8**	**+2.3**
SNAA	**Sanae**	**22.97**	**136**	P		**P**	**P**	**00 19 00.9**	**+1.2**
SNAA	**Sanae**	**22.97**	**136**	S		**S**	**S**	**00 23 15.7**	**+6.7**
SNAA	**Sanae**	**22.97**	**136**	P		**P**	**P**	**00 19 00.1**	**+0.4**
	comp=Z,10nm,0.8s,baz=275,slow=7.2,SNR=35								
SNAA				LR		LR	LR	00 27 00.4	
	comp=Z,137nm,20.3s,baz=197,slow=34								
	comp=Z,10nm,0.8s								
SNAA	**Sanae**	**22.97**	**136**	P		**P**	**P**	**00 19 00.1**	**+0.4**
PLCA	**Paso Flores**	**23.38**	**343**	P		**P**	**P**	**00 19 04.2**	**+0.1**
	comp=Z,6.9nm,0.9s,baz=168,slow=9.7,SNR=12								
PLCA				PcP		**PcP**	**PcP**	**00 22 49.4**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=308,slow=5.0,SNR=3.3								
PLCA				LR		LR	LR	00 28 21.3	
	comp=Z,293nm,18.2s,baz=164,slow=37								
	comp=Z,6.9nm,0.9s								
PLCA	**Paso Flores**	**23.38**	**343**	P		**P**	**P**	**00 19 05.5**	**+1.4**
LL04	**Puerto Octay**	**23.47**	**340**	P		**P**	**P**	**00 19 06.5**	**+1.6**
TROLL	**Troll, Antarti**	**24.55**	**138**	P		**P**	**P**	**00 19 17.0**	**+2.0**
TROLL	**Troll, Antarti**	**24.55**	**138**	S		S	S	00 23 49.2	+14
GO06	**Curarrehue**	**24.63**	**342**	P		**P**	**P**	**00 19 17.9**	**+2.0**
GO06						IAmb	IAmb	00 19 29.3	
	comp=Z,46nm,1.4s								
LR03	**Panguipulli**	**24.71**	**341**	P		**P**	**P**	**00 19 19.1**	**+2.6**
LR03						IAmb	IAmb	00 19 35.7	
	comp=Z,52nm,1.4s								
QSPA	**South Pole Qui**	**26.70**	**180**	P		**P**	**P**	**00 19 36.1**	**+1.6**
	comp=Z,14nm,0.8s,baz=158,slow=3.5,SNR=50								
QSPA				PcP		**PcP**	**PcP**	**00 22 56.8**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=70,slow=7.1,SNR=3.0								
QSPA				LR		LR	LR	00 31 08.8	
	comp=Z,192nm,19.8s,baz=152,slow=39								
	comp=Z,14nm,0.8s								
QSPA	**South Pole Qui**	**26.70**	**180**	P		**P**	**P**	**00 19 35.5**	**+0.9**
QSPA						IAmb	IAmb	00 19 37.5	
	comp=Z,18nm,0.9s								
BO04	**La Punta**	**30.04**	**346**	P		**P**	**P**	**00 20 06.6**	**+2.2**
BO04						IAmb	IAmb	00 20 09.2	
	comp=Z,16nm,0.8s								
VA03	**San Esteban**	**31.25**	**346**	P		**P**	**P**	**00 20 15.6**	**+0.5**
CO02	**Combarbal**	**32.84**	**346**	P		**P**	**P**	**00 20 29.1**	**+0.1**
CO03	**El Pedregal**	**33.16**	**346**	P		**P**	**P**	**00 20 32.3**	**+0.4**
CO03						IAmb	IAmb	00 20 37.0	
	comp=Z,29nm,0.8s								
GO04	**Tololo Observa**	**33.83**	**346**	P		**P**	**P**	**00 20 41.5**	**+3.6**
CO01	**Juntas del Tor**	**33.95**	**347**	P		**P**	**P**	**00 20 40.1**	**+1.1**
ITQB	**Itaqui**	**34.03**	**8**	P		**P**	**P**	**00 20 39.3**	**0.0**
AC05	**El Transito**	**35.10**	**347**	P		**P**	**P**	**00 20 48.8**	**0.0**
AC05						IAmb	IAmb	00 20 53.8	
	comp=Z,13nm,0.8s								
AC04	**Llanos de Chal**	**35.81**	**346**	P		**P**	**P**	**00 20 57.1**	**+2.4**
SBA	**Scott Base**	**35.81**	**196**	P		**P**	**P**	**00 20 54.4**	**+0.2**
SBA						IAmb	IAmb	00 20 58.4	
	comp=Z,20nm,1.4s								
VNDA	**Vanda**	**36.67**	**195**	P		**P**	**P**	**00 21 03.0**	**+1.4**
	comp=Z,0.9nm,1.0s,baz=173,slow=7.2,SNR=3.7								
VNDA				LR		LR	LR	00 34 58.3	
	comp=Z,135nm,21.8s,baz=148,slow=34								
	comp=Z,0.9nm,1.0s								
VNDA	**Vanda**	**36.67**	**195**	P		**P**	**P**	**00 21 02.6**	**+1.0**
AC02	**Maricunga**	**36.98**	**349**	P		**P**	**P**	**00 21 05.3**	**0.0**
AC02						IAmb	IAmb	00 21 10.6	
	comp=Z,10nm,0.7s								
CPUP	**Villa Florida**	**37.31**	**7**	P		**P**	**P**	**00 21 06.2**	**-1.3**
	comp=Z,8.6nm,0.7s,baz=187,slow=7.7,SNR=6.7								
CPUP				LR		LR	LR	00 37 21.0	
	comp=Z,95nm,18.2s,baz=176,slow=38								
	comp=Z,8.6nm,0.7s								
CPUP	**Villa Florida**	**37.31**	**7**	P		**P**	**P**	**00 21 07.8**	**+0.3**
PB15	**IPOC Station P**	**40.61**	**349**	P		**P**	**P**	**00 21 35.9**	**+0.5**
PB15						IAmb	IAmb	00 21 40.5	
	comp=Z,31nm,0.6s								
AF01	**San Pedro de A**	**40.76**	**351**	P		**P**	**P**	**00 21 38.9**	**+2.1**
AF01						IAmb	IAmb	00 21 45.0	
	comp=Z,36nm,0.9s								
LVC	**Limon Verde**	**41.15**	**350**	P		**P**	**P**	**00 21 40.4**	**+0.3**
	comp=Z,15nm,0.7s,baz=164,slow=1.7,SNR=6.9								
LVC				LR		LR	LR	00 39 30.6	
	comp=Z,249nm,18.7s,baz=198,slow=37								
	comp=Z,15nm,0.7s								
LVC	**Limon Verde**	**41.15**	**350**	P		**P**	**P**	**00 21 41.2**	**+1.1**
LVC						IAmb	IAmb	00 21 45.3	
	comp=Z,16nm,0.9s								
PB07	**IPOC Station P**	**42.11**	**349**	P		**P**	**P**	**00 21 49.9**	**+2.2**
AQDB	**Aquidauana**	**43.22**	**9**	P		**P**	**P**	**00 21 58.2**	**+1.7**
AQDB						IAmb	IAmb	00 21 59.9	
	comp=Z,8.2nm,0.5s								
MAW	**Mawson**	**43.32**	**153**	P		**P**	**P**	**00 21 58.6**	**+1.7**
	comp=Z,7.5nm,0.9s,baz=211,slow=8.9,SNR=11								
MAW				PcP		**PcP**	**PcP**	**00 23 45.6**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=196,slow=3.8,SNR=2.3								
MAW				LR		LR	LR	00 40 27.9	
	comp=Z,172nm,20.2s,baz=213,slow=37								
	comp=Z,7.5nm,0.9s								
MAW	**Mawson**	**43.32**	**153**	P		**P**	**P**	**00 21 57.3**	**+0.5**
PB16	**IPOC Station P**	**45.44**	**350**	P		**P**	**P**	**00 22 16.0**	**+1.0**
PB16						IAmb	IAmb	00 22 20.4	
	comp=Z,5.0nm,0.6s								
LPAZ	**La Paz**	**47.37**	**352**	P		**P**	**P**	**00 22 30.0**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=188,slow=5.4,SNR=10								
LPAZ				LR		LR	LR	00 43 56.1	
	comp=Z,115nm,18.8s,baz=122,slow=38								
	comp=Z,3.5nm,0.7s								
LPAZ	**La Paz**	**47.37**	**352**	P		**P**	**P**	**00 22 31.8**	**+1.7**
RPN	**Rapa Nui**	**47.47**	**297**	LR		LR	LR	00 37 57.0	
	comp=Z,84nm,20.4s,baz=40,slow=30								
SIV	**San Ignacio**	**47.48**	**1**	LR		LR	LR	00 44 44.6	
	comp=Z,237nm,18.1s,baz=102,slow=39								
BDFB	**Brasilia**	**48.80**	**18**	P		**P**	**P**	**00 22 39.7**	**-0.9**
	comp=Z,2.5nm,0.4s,baz=166,slow=6.5,SNR=3.9								
	comp=Z,2.5nm,0.4s								
BDFB	**Brasilia**	**48.80**	**18**	P		**P**	**P**	**00 22 41.1**	**+0.5**
BDFB						IAmb	IAmb	00 22 44.3	
	comp=Z,12nm,1.0s								
NNA	**Nana**	**52.52**	**342**	LR		LR	LR	00 42 08.3	
	comp=Z,53nm,18.4s,baz=172,slow=32								
ATAH	**Atahualpa**	**57.52**	**341**	LR		LR	LR	00 44 58.2	
	comp=Z,51nm,20.8s,baz=191,slow=32								
SUR	**Sutherland**	**58.39**	**100**	LR		LR	LR	00 43 25.5	
	comp=Z,105nm,21.2s,baz=198,slow=30								
SUR	**Sutherland**	**58.39**	**100**	P		**P**	**P**	**00 23 51.2**	**+0.3**
BOSC	**San Juan Bosco**	**61.45**	**341**	P		**P**	**P**	**00 24 12.2**	**+0.2**
BOSC						IAmb	IAmb	00 24 16.4	
	comp=Z,5.7nm,0.9s								
COHC	**Cochancay**	**62.23**	**340**	P		**P**	**P**	**00 24 18.9**	**+1.8**
BOSA	**Boshof**	**63.58**	**101**	P		**P**	**P**	**00 24 26.5**	**+0.3**
	comp=Z,12nm,0.9s,baz=202,slow=7.6,SNR=12								
BOSA				LR		LR	LR	00 46 27.7	
	comp=Z,38nm,21.0s,baz=184,slow=31								
	comp=Z,12nm,0.9s								
BOSA	**Boshof**	**63.58**	**101**	P		**P**	**P**	**00 24 25.9**	**-0.3**
BOSA						IAmb	IAmb	00 24 27.1	
	comp=Z,15nm,0.9s								
LBTB	**Lobatse**	**66.85**	**100**	LR		LR	LR	00 48 35.6	
	comp=Z,84nm,20.8s,baz=204,slow=31								
LBTB	**Lobatse**	**66.85**	**100**	P		**P**	**P**	**00 24 46.7**	**-0.6**
MDP	**Montagnes des**	**68.79**	**10**	LR		LR	LR	00 57 06.8	
	comp=Z,94nm,18.1s,baz=160,slow=38								
BAUV	**El Baul**	**72.40**	**354**	P		**P**	**P**	**00 25 22.9**	**+1.5**
BAUV						IAmb	IAmb	00 25 25.5	
	comp=Z,14nm,0.8s								
SDV	**Santo Domingo**	**72.50**	**351**	LR		LR	LR	01 01 57.4	
	comp=Z,68nm,18.1s,baz=100,slow=40								
LSZ	**Lusaka**	**76.53**	**97**	LR		LR	LR	00 54 39.8	
	comp=Z,63nm,19.9s,baz=187,slow=32								
VOI	**Vohitsoka**	**78.60**	**116**	P		**P**	**P**	**00 25 56.6**	**-0.6**
VOI						IAmb	IAmb	00 25 59.5	
	comp=Z,16nm,0.9s								
SJG	**San Juan**	**81.43**	**356**	LR		LR	LR	01 04 48.5	
	comp=Z,61nm,18.9s,baz=165,slow=38								
DBIC	**Dimbokro**	**82.03**	**57**	LR		LR	LR	00 55 08.6	
	comp=Z,26nm,21.8s,baz=79,slow=30								
BBOO	**Buckleboo**	**82.93**	**195**	P		**P**	**P**	**00 26 19.0**	**-1.1**
STKA	**Stephens Creek**	**83.10**	**200**	P		**P**	**P**	**00 26 20.2**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=142,slow=4.3,SNR=6.3								
	comp=Z,4.2nm,0.8s								
STKA	**Stephens Creek**	**83.10**	**200**	P		**P**	**P**	**00 26 21.3**	**+0.3**
STKA						IAmb	IAmb	00 27 02.9	
	comp=Z,10.0nm,2.0s								
CMIG	**Matias Romero**	**84.33**	**329**	LR		LR	LR	00 58 53.8	
	comp=Z,32nm,18.9s,baz=172,slow=32								
TORD	**Torodi Ar. Bea**	**90.47**	**61**	P		**P**	**P**	**00 26 56.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=204,slow=4.7,SNR=11								
	comp=Z,1.9nm,0.8s								
MBAR	**Mbarara**	**90.68**	**93**	LR		LR	LR	01 03 25.2	
	comp=Z,56nm,20.9s,baz=171,slow=33								
ASAR	**Alice Springs**	**92.21**	**195**	P		**P**	**P**	**00 27 03.6**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=170,slow=4.6,SNR=5.9								
	comp=Z,1.0nm,0.8s								
WRA	**Warramunga Arr**	**95.84**	**195**	P		**P**	**P**	**00 27 19.5**	**-2.4**
	comp=Z,0.7nm,0.8s,baz=175,slow=4.4,SNR=2.1								
	comp=Z,0.7nm,0.8s								
SQTA	**Sankt Quirin**	**124.44**	**52**	*i* P		**PKPdf**	**PKPdf**	**00 32 53.4**	**-0.1**
	comp=Z,0.1nm,0.1s								
RETA	**Reutte**	**124.51**	**52**	*i* P		**PKPdf**	**PKPdf**	**00 32 53.5**	**-0.1**
	comp=Z,0.3nm,0.3s								
GERES	**GERESS Array B**	**126.71**	**53**	PKP		**PKPdf**	**PKPdf**	**00 32 56.5**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=202,slow=1.4,SNR=20								
CONA	**Conrad Observa**	**126.72**	**55**	*eP*		**PKPdf**	**PKPdf**	**00 32 57.2**	**-0.7**
	comp=Z,2.1nm,0.9s								
BRTR	**Keskin Array B**	**127.07**	**74**	PKP		**PKPdf**	**PKPdf**	**00 32 56.3**	**-2.6**
	comp=Z,0.8nm,0.9s,baz=270,slow=2.5,SNR=2.0								
YKA	**Yellowknife Ar**	**131.71**	**330**	PKP		**PKPdf**	**PKPdf**	**00 33 05.4**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=163,slow=2.3,SNR=13								
CMAR	**Chiang Mai Arr**	**133.11**	**155**	PKP		**PKPdf**	**PKPdf**	**00 33 10.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=231,slow=4.2,SNR=4.0								
AKASG	**Malin Array Be**	**134.09**	**62**	PKP		**PKPdf**	**PKPdf**	**00 33 09.6**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=254,slow=1.9,SNR=5.3								
FINES	**FINESS Array B**	**140.95**	**50**	PKhKP		PKPpre	PKPpre	00 33 15.6	
	comp=Z,2.5nm,0.9s,baz=289,slow=5.8,SNR=6.0								
PZH	**PanZhiHua**	**141.48**	**156**	PKP		**PKPdf**	**PKPdf**	**00 33 25.8**	**-

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
PTH				eS	Sg	00 30 55.4	+0.7
LGTI	**Lohaghat**	**0.27**	**199**	eP	Pn	00 30 54.6	-0.5
LGTI				eS	Sn	00 31 02.7	+2.0
DDI	**Dehra Dun**	**2.08**	**288**	eP	Pb	00 31 23.1	-0.3
DDI				eS	Sb	00 31 47.5	-1.4
DDI				IAML		00 31 53.5	
	comp=E,661nm,0.8s						
DDI				IAML		00 31 53.9	
	comp=N,852nm,0.7s						
SMLA	**Simla**	**3.09**	**298**	eP	Pb	00 31 38.8	-1.7
SMLA				eS	Sb	00 32 16.0	-1.9
SMLA				IAML		00 32 21.6	
	comp=N,229nm,0.4s						
SMLA				IAML		00 32 21.6	
	comp=E,278nm,0.5s						
BHK	**Bhakra**	**3.80**	**298**	eP	Pn	00 31 45.1	+1.5
BHK				eS	Sn	00 32 31.5	+3.7
THN	**Thein Dam**	**4.82**	**306**	eP	Pn	00 32 01.7	+4.1
THN				eS	Sn	00 32 54.3	+1.4
AJM	**Ajmer**	**5.98**	**239**	eP	Pn	00 32 15.8	+2.1
AJM				eS	Sn	00 33 22.2	+0.6
JBP	**Jabalpur**	**6.52**	**183**	eP	Pn	00 32 21.9	+0.8
JBP				eS	Sn	00 33 35.5	+0.6
BHPL	**Bhopal**	**6.95**	**203**	eP	Pn	00 32 27.0	0.0
BHPL				eS	Sn	00 33 43.3	-2.3
BOK	**Bokaro**	**7.69**	**139**	eP	Pn	00 32 38.7	+1.5
BOK				eS	Sn	00 34 01.1	-2.7
MKAR	**Makanchi Array**	**17.13**	**5**	P	Pn	00 34 43.9	-0.5
	comp=E,0.4nm,0.3s,baz=188,slow=12,SNR=13						
	comp=E,4.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.30**	**119**	P	Pn	00 35 23.0	-0.1
	comp=E,0.9nm,0.5s,baz=310,slow=8.1,SNR=5.9						
	comp=E,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**20.94**	**357**	P	P	00 35 25.7	-1.9
	comp=E,1.0nm,0.5s,baz=180,slow=10,SNR=13						
	comp=E,1.0nm,0.5s						
BVAR	**Borovoye Array**	**24.42**	**345**	P	P	00 36 02.2	-1.2
	comp=E,0.2nm,0.4s,baz=175,slow=9.0,SNR=2.2						
	comp=E,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**24.44**	**6**	P	P	00 36 01.9	-1.6
	comp=E,4.2nm,0.6s,baz=192,slow=9.6,SNR=23						
	comp=E,4.2nm,0.6s						
SONM	**Songino Array**	**27.00**	**41**	P	P	00 36 29.2	+2.3
	comp=E,1.1nm,0.4s,baz=251,slow=9.7,SNR=4.3						
	comp=E,1.1nm,0.4s						
KSRS	**Korea Array**	**40.04**	**66**	LR	LR	00 56 39.5	
	comp=E,26nm,19.6s,baz=145,slow=39						
FINES	**FINESS Array B**	**47.43**	**328**	P	P	00 39 18.3	-0.8
	comp=E,2.2nm,0.7s,baz=134,slow=8.0,SNR=9.9						
	comp=E,2.2nm,0.7s						
ARCES	**ARCESS Array B**	**50.38**	**338**	P	P	00 39 41.0	-0.7
	comp=E,1.9nm,0.7s,baz=110,slow=11,SNR=7.8						
	comp=E,1.9nm,0.7s						
WRA	**Warramunga Arr**	**71.70**	**127**	P	P	00 42 08.8	+1.7
	comp=E,0.9nm,0.8s,baz=325,slow=6.0,SNR=5.1						
	comp=E,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.85**	**276**	P	P	00 42 20.1	+0.1
	comp=E,0.3nm,0.6s,baz=56,slow=5.2,SNR=2.5						
	comp=E,0.3nm,0.6s						
ASAR	**Alice Springs**	**73.91**	**130**	P	P	00 42 21.6	+1.4
	comp=E,0.3nm,0.6s,baz=316,slow=7.7,SNR=2.6						
	comp=E,0.3nm,0.6s						
ILAR	**Eielson Array**	**78.92**	**19**	P	P	00 42 47.0	-1.0
	comp=E,0.5nm,0.7s,baz=317,slow=5.2,SNR=2.9						
	comp=E,0.5nm,0.7s						
FRB	**Frobisher Bay**	**83.67**	**347**	LR	LR	01 23 41.5	
	comp=E,17nm,19.1s,baz=205,slow=38						

*JMA **17** 00:31:10.7±0.2, 36°.3N±0°.4×142°.6E±0°.9, h83km, MV3.0/21, FAR E OFF KANTO*
*IDC **17** 00:31:41.9±2.3, 36°.52N×139°.59E, h132km±19km, mb3.5/4, mbtmp3.9/4, Error ellipse: s-maj=77.5km s-min=36.4km az=13.0*
ISC 17 00:31:10.9±1.8, 36°.33N±0°.07×142°.5E±0°.1, h10km, n14, σ0=96/17, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**1.56**	**271**	S	Sn	00 31 58.4	-0.4
JHO	**Hitachi**	**1.59**	**281**	P	Pn	00 31 38.1	-1.0
JHO				S	Sn	00 31 59.3	-0.4
JFK	**Kawauchi**	**1.67**	**309**	P	Pn	00 31 39.2	-1.1
JFK				S	Sn	00 32 00.9	-0.8
BSO1	**Boso 1**	**2.09**	**217**	P	Pn	00 31 44.3	-1.2
JOTO	**OTAMA OYAMA**	**2.13**	**306**	P	Pn	00 31 46.3	-0.3
JOTO				S	Sn	00 32 12.9	-0.2
JAG	**Ashikaga**	**2.47**	**273**	P	Pn	00 31 50.9	-0.3
JMK	**Ichinoseki**	**2.81**	**339**	P	Pn	00 31 55.0	-0.9
JMK				S	Sn	00 32 28.7	-1.0
JRY	**Ryogami san**	**2.94**	**265**	P	Pn	00 31 56.9	-0.8
JYN	**Shimob**	**3.33**	**257**	P	Pn	00 32 02.2	-0.8
MJAR	**Matsushiro Arr**	**3.48**	**275**	P	Pn	00 32 05.7	+0.6
	6.7nm,0.6s,baz=92,slow=9.2,SNR=11						
SONM	**Songino Array**	**28.91**	**305**	P	P	00 37 09.9	-0.1
	0.6nm,0.5s,baz=110,slow=8.3,SNR=2.8						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**45.24**	**303**	P	P	00 39 29.7	+1.4
	0.8nm,0.7s,baz=87,slow=9.8,SNR=6.9						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**47.13**	**309**	P	P	00 39 44.6	+1.6
	1.0nm,0.3s,baz=82,slow=8.1,SNR=4.2						
	1.0nm,0.3s						
TXAR	**Lajitas Array**	**89.84**	**53**	P	P	00 44 34.3	+24
	0.5nm,1.0s,baz=304,slow=2.1,SNR=3.2						
	0.5nm,1.0s						

*IDC **17** 00:35:48.9±1.7, 33°.49S×71°.66W, h0km, mb3.5/2, mbtmp3.4/4, ML3.8/2, Error ellipse: s-maj=35.5km s-min=32.1km az=152.0*
*GUC **17** 00:35:53.9±0.8, 33°.71S×71°.57W, h45km±2km, ML4.0*
*NEIC **17** 00:35:54.0±1.2, 33°.705S±0°.010×71°.76W±0°.04, h34km±6km, mb4.0/3, ML4.0(GUC), Error ellipse: s-maj=5.5km s-min=1.0km az=78.0*
ISC 17 00:35:52.6±0.9, 33°.69S±0°.03×71°.90W±0°.03, h36km±1km, n59, σ2=00/82, mb3.6/3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA05	**Santo Domingo**	**0.24**	**83**		Pn	00 36 01.2	+0.7
VA05					Sn	00 36 06.2	-1.2
VA05	**Santo Domingo**	**0.24**	**83**	⇑iP	Pn	00 36 01.3	+0.7
VA05				eS	Sn	00 36 06.3	-1.0
VA05				IAML		00 36 09.8	
	comp=E,26μm,0.3s						
MT01	**Popeta**	**0.57**	**108**	Pn	Pn	00 36 03.9	-0.5
MT01					Sn	00 36 10.8	-1.8
MT09	**Talagante**	**0.77**	**97**	Pn	Pn	00 36 06.1	-1.0
MT09				Sn	Sn	00 36 14.8	-2.7
MT09	**Talagante**	**0.77**	**97**	⇑iP	Pn	00 36 06.1	-1.0
MT09				eS	Sn	00 36 15.0	-2.5
MT09				IAML		00 36 15.7	
	comp=N,20μm,0.1s						
MT02	**Curacav**	**0.77**	**56**	Pn	Pn	00 36 06.9	-0.1
MT02				Sn	Sn	00 36 15.7	-1.7
MT02	**Curacav**	**0.77**	**56**	⇑iP	Pn	00 36 06.9	-0.1
MT02				eS	Sn	00 36 16.1	-1.3
BO01	**Tunca**	**0.98**	**136**	Pn	Pn	00 36 09.8	0.0
BO01				Sn	Sn	00 36 21.5	-1.0
BO01	**Tunca**	**0.98**	**136**	eP	Pn	00 36 09.8	0.0
BO01				eS	Sn	00 36 21.6	-0.9
BO01				IAML		00 36 23.8	
	comp=N,5μm,0.2s						
MT05	**Renca**	**1.02**	**73**	Pn	Pn	00 36 10.2	-0.2
MT05				Sn	Sn	00 36 21.8	-1.7
ROC1	**El Roble**	**1.03**	**47**	Pn	Pn	00 36 11.1	+0.4
ROC1				Sn	Sn	00 36 23.5	-0.5
ROCH	**El Roble**	**1.03**	**47**	eP	Pn	00 36 11.1	+0.3
ROCH				eS	Sn	00 36 24.3	+0.1
ROCH				IAML		00 36 26.0	
	comp=N,7μm,0.3s						
BO04	**La Punta**	**1.12**	**106**	Pn	Pn	00 36 11.1	-0.7
BO04				Sn	Sn	00 36 24.2	-1.9
BO04	**La Punta**	**1.12**	**106**	iP	Pn	00 36 11.2	-0.6
BO04				eS	Sn	00 36 24.1	-1.9
BO04				IAML		00 36 25.1	
	comp=E,14μm,0.2s						
VA06	**Catapilco**	**1.23**	**25**	Pn	Pn	00 36 14.3	+1.0
VA06				Sn	Sn	00 36 29.4	+0.6
GO05	**Huala**	**1.32**	**181**	Pn	Pn	00 36 15.9	+1.3
FCH	**Farellones**	**1.40**	**75**	⇓iP	Pn	00 36 15.7	-0.2
FCH				eS	Sn	00 36 31.8	-1.4
FCH				IAML		00 36 32.7	
	comp=N,10μm,0.2s						
LMEL	**Las Melosas**	**1.43**	**97**	Pn	Pn	00 36 15.6	-0.6
LMEL				Sn	Sn	00 36 32.0	-1.8
LMEL	**Las Melosas**	**1.43**	**97**	⇓iP	Pn	00 36 15.7	-0.5
LMEL				eS	Sn	00 36 31.7	-2.1
LMEL				IAML		00 36 35.1	
	comp=N,8μm,0.1s						
BO02	**Sierra Bellavi**	**1.44**	**140**		Pn	00 36 16.8	+0.5
BO02	**Sierra Bellavi**	**1.44**	**140**	iP	Pn	00 36 16.9	+0.6
BO02				eS	Sn	00 36 33.9	-0.1
BO02				IAML		00 36 38.7	
	comp=N,10μm,0.4s						
VA03	**San Esteban**	**1.46**	**51**	Pn	Pn	00 36 17.1	+0.6
VA03	**San Esteban**	**1.46**	**51**	⇓iP	Pn	00 36 17.2	+0.6
VA03				eS	Sn	00 36 34.5	0.0
VA03				IAML		00 36 37.4	
	comp=E,5μm,0.3s						
ML02	**Panimavida**	**2.11**	**169**	Pn	Pn	00 36 26.6	+1.3
CO02	**Combarbal**	**2.59**	**17**	Pn	Pn	00 36 32.8	+0.6
CO06	**Fray Jorge**	**3.02**	**4**	Pn	Pn	00 36 38.6	+0.8
CO03	**El Pedregal**	**3.02**	**20**	Pn	Pn	00 36 39.4	+1.3
BI05	**Punta Hualpn**	**3.23**	**199**	Pn	Pn	00 36 42.2	+1.4
ZON	**Zonda**	**3.46**	**53**	Pn	Pn	00 36 46.2	+2.2
GO04	**Tololo Observa**	**3.63**	**15**	Pn	Pn	00 36 48.1	+1.5
CO05	**La Serena**	**3.80**	**9**	Pn	Pn	00 36 49.2	+0.5
CO01	**Juntas del Tor**	**4.01**	**23**	Pn	Pn	00 36 53.9	+2.2
LCO	**Las Campanas**	**4.78**	**13**	Pn	Pn	00 37 02.7	+0.4
AC05	**El Transito**	**5.03**	**17**	Pn	Pn	00 37 07.0	+1.2
AC04	**Llanos de Chal**	**5.51**	**8**	Pn	Pn	00 37 13.3	+1.1
VA04	**Juan Fernndez**	**5.78**	**269**	Pn	Pn	00 37 19.3	+3.5
H03S1	**Juan Fernandez**	**5.83**	**267**	Pn	Pn	00 37 19.1	+2.7
	baz=169,slow=74						
H03S1				Sn	Sn	00 38 18.6	-3.3
	baz=167,slow=71						
H03S1				T	T	00 43 26.7	
	baz=87,slow=75,SNR=1215						
H03S3	**Juan Fernandez**	**5.84**	**267**	Pn	Pn	00 37 19.2	+2.8
	baz=11,slow=74						
H03S3				Sn	Sn	00 38 19.1	-2.8
	baz=167,slow=71						
H03S3				T	T	00 43 28.7	
	baz=87,slow=75,SNR=1541						
H03S2	**Juan Fernandez**	**5.85**	**267**	Pn	Pn	00 37 19.5	+2.9
H03S2				Sn	Sn	00 38 18.5	-3.7
	baz=167,slow=71						
H03S2				T	T	00 43 27.5	
	baz=87,slow=75,SNR=1032						
H03N1	**Juan Fernandez**	**5.86**	**270**	Pn	Pn	00 37 20.6	+3.9
	baz=95,slow=14						
H03N1				Sn	Sn	00 38 16.8	-5.5
	baz=155,slow=73						
H03N1				T	T	00 43 37.0	
	baz=98,slow=74,SNR=23						
H03N3	**Juan Fernandez**	**5.86**	**270**	Pn	Pn	00 37 20.6	+3.8
	baz=95,slow=14						
H03N3				Sn	Sn	00 38 16.3	-6.4
	baz=155,slow=73						
H03N3				T	T	00 43 34.0	
	baz=98,slow=74,SNR=18						
H03N2	**Juan Fernandez**	**5.87**	**270**	Pn	Pn	00 37 20.7	+3.9
	baz=95,slow=14						
H03N2				Sn	Sn	00 38 18.2	-4.6
	baz=155,slow=73						
H03N2				T	T	00 43 35.3	
	baz=98,slow=74,SNR=26						
GO06	**Curarrehue**	**5.89**	**177**	Pn	Pn	00 37 19.3	+1.7
LR03	**Panguipulli**	**5.94**	**183**	Pn	Pn	00 37 18.8	+0.7
LR04	**Corral**	**6.30**	**191**	Pn	Pn	00 37 22.7	-0.2
AC06	**Mina Casimiro**	**6.45**	**12**	Pn	Pn	00 37 23.9	-1.3
PLCA	**Paso Flores**	**7.11**	**172**	Pn	Pn	00 37 36.3	+2.1
	comp=E,0.5nm,0.3s,baz=352,slow=17,SNR=16						
	comp=E,1.3nm,0.4s						
PLCA	**Paso Flores**	**7.11**	**172**	Pn	Pn	00 37 35.6	+1.4
LL04	**Puerto Octay**	**7.22**	**183**	Pn	Pn	00 37 38.4	+2.8
AC02	**Maricunga**	**7.24**	**20**	Pn	Pn	00 37 35.5	-0.8
CPUP	**Villa Florida**	**14.59**	**64**	Pn	Pn	00 39 14.6	-1.9
	baz=234,slow=19,SNR=1.6						
	comp=E,0.8nm,0.8s						
CPUP	**Villa Florida**	**14.59**	**64**	P	P	00 39 21.8	-0.7
EFI	**East Falkland**	**20.59**	**155**	P	P	00 40 28.8	+0.5
EFI				IAmb	IAmb	00 40 32.5	
	comp=Z,20nm,1.1s						
SNAA	**Sanae**	**51.83**	**158**	P	P	00 44 58.8	+2.1
SNAA				IAmb	IAmb	00 45 00.7	
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**69.52**	**331**	P	P	00 46 59.0	+1.3
	comp=Z,0.3nm,0.5s,baz=156,slow=9.1,SNR=7.7						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**83.54**	**333**	P	P	00 48 17.8	+0.8
	comp=Z,0.2nm,0.6s,baz=140,slow=5.9,SNR=1.8						
	comp=Z,0.2nm,0.6s						
H11S2	**WAKE ISLAND Hyl**	**25.89**	**269**	T	T	03 13 49.4	
	baz=119,slow=74						
H11S1	**WAKE ISLAND Hyl**	**25.90**	**269**	T	T	03 13 50.1	
	baz=119,slow=74						
H11S3	**WAKE ISLAND Hyl**	**25.90**	**269**	T	T	03 13 51.2	
	baz=119						

*SOME **17** 00:37:09.3, 37°.88N×72°.15E, h5km, MS4.6*
*MOS **17** 00:37:12.8±0.9, 36°.61N×70°.86E, h245km, mb4.7/57, Error ellipse: s-maj=4.5km s-min=3.0km az=91.7*
*BJI **17** 00:37:13.6±0.0, 36°.73N×70°.81E, h253km, mb4.6/45, mB4.6/24*
*NEIC **17** 00:37:14.4±1.5, 36°.62N±0°.06×70°.83E±0°.08, h247km±5km, mb4.6/192, Error ellipse: s-maj=9.4km s-min=8.8km az=77.0*
*NNC **17** 00:37:14.7±2.6, 36°.92N×71°.01E, h0km, mb5.7, mpv5.4, Error ellipse: s-maj=21.0km s-min=19.6km az=121.0*
*IDC **17** 00:37:15.1±1.4, 36°.54N×70°.87E, h256km±13km, mb4.2/39, mbtmp4.8/46, Error ellipse: s-maj=8.8km s-min=6.6km az=167.0*
ISC 17 00:37:13.0±0.4, 36°.58N±0°.03×70°.84E±0°.03, h237km±3km, h237km:pP-P, n856, σ1=29/970, mb4.6/236, 39C-58D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.45**	**350**	Pn	Pn	00 38 00.2	+1.3
CHGR	**Chuyangaron**	**2.47**	**328**	Pn	Pn	00 37 59.8	+0.8
CHGR	**Chuyangaron**	**2.47**	**328**	PN	Pn	00 37 59.8	+0.8
KBL	**Kabul**	**2.50**	**216**	Pn	Pn	00 38 00.9	+1.2
KBL	**Kabul**	**2.50**	**216**	PN	Pn	00 38 00.9	+1.2
KBL	**Kabul**	**2.50**	**216**	P	Pn	00 38 00.9	+1.2
	SNR=233						
CEP	**Cherat**	**2.89**	**162**	⇓P	Pn	00 38 06.6	+2.9
CEP				S	S	00 38 45.0	+1.5
DRK	**Karamyk**	**3.00**	**14**	Pn	Pn	00 38 06.2	+1.3
BTK	**Batken**	**3.47**	**360**	Pn	Pn	00 38 12.1	+2.1
BTK	**Batken**	**3.47**	**360**	PN	Pn	00 38 12.1	+2.1
CHCP	**Chirah Chowk**	**3.53**	**145**	P	Pn	00 38 12.9	+2.1
NIL	**Nilore**	**3.53**	**145**	Pn	Pn	00 38 12.7	+1.9
NIL	**Nilore**	**3.53**	**145**	PN	Pn	00 38 12.7	+1.9
OHH	**Osh**	**4.22**	**21**	PN	Pn	00 38 20.2	+1.3
SARP	**Sargodha**	**4.89**	**161**	⇓P	Pn	00 38 27.9	+0.9
TAS	**Tashkent**	**4.89**	**346**	Pn	Pn	00 38 28.1	+1.1
TAS	**Tashkent**	**4.89**	**346**	PN	Pn	00 38 28.1	+1.1
TRKS	**Terek-Say**	**4.95**	**3**	PN	Pn	00 38 27.8	0.0
KSH	**Kashi**	**5.00**	**53**	P	Pn	00 38 24.9	-3.6
KSH				S	S	00 39 17.9	-11
KSH				pmax	pmax		
	comp=Z,940nm,0.5s						
JMU	**Jammu**	**5.10**	**138**	ex	Pn	00 38 30.6	+0.9
JMU				eS	S	00 39 26.1	-4.4
ARK	**Arkit**	**5.29**	**9**	PN	Pn	00 38 32.3	+0.4
ARK				pmax	pmax		
	comp=Z,552nm,1.1s						
IUG	**Iuzhnay**	**5.60**	**354**	*d*iPN	Pn	00 38 36.8	+1.0
IUG				eS	S	00 39 38.5	-3.2
IUG	**Iuzhnay**	**5.60**	**354**	eP	Pn	00 38 36.8	+1.0
	comp=Z,23μm,0.3s						
IUG				eS	S	00 39 39.6	-2.1
	comp=Z,806nm,0.4s						
IUG	**Iuzhnay**	**5.60**	**354**	⇓iP	Pn	00 38 36.8	+1.0
	baz=353						
IUG				eS	S	00 39 38.6	-3.2
	baz=353						
THN	**Thein Dam**	**5.77**	**134**	eP	Pn	00 38 39.0	+1.0
THN				eP	Pn	00 38 39.6	+1.6
THN				eS	S	00 39 44.5	-1.2
THN				eS	S	00 39 44.8	-1.0
CHM	**Chimkent**	**5.81**	**351**	*e*PN	Pn	00 38 38.9	+0.5
CHM	**Chimkent**	**5.81**	**351**	*e*P	Pn	00 38 38.9	+0.5
	baz=350						
CHM				eS	S	00 39 43.4	-3.1
	baz=350						
ARLS	**Aral**	**5.93**	**26**	PN	Pn	00 38 40.3	+0.3
ARLS				pmax	pmax		
	comp=Z,507nm,1.1s						
AML	**Almayashu**	**5.97**	**21**	P	Pn	00 38 41.0	+0.3
	SNR=610						
NRN	**Naryn**	**6.30**	**38**	Pn	Pn	00 38 44.2	-0.6
NRN	**Naryn**	**6.30**	**38**	PN	Pn	00 38 44.2	-0.6
DZA	**Taraz**	**6.32**	**3**	*d*iPN	Pn	00 38 45.3	+0.5
DZA				eS	S	00 39 55.4	-2.7
DZA	**Taraz**	**6.32**	**3**	eP	Pn	00 38 45.5	+0.7
	comp=Z,2μm,0.6s						
DZA				eS	S	00 39 54.5	-3.6
	comp=Z,1μm,0.5s						
DZA	**Taraz**	**6.32**	**3**	⇓iP	Pn	00 38 45.3	+0.5
	baz=3.1						
DZA				eS	S	00 39 55.5	-2.7
	baz=3.1						
UCH	**Uchtor**	**6.32**	**26**	P	Pn	00 38 45.8	+0.6
	SNR=307						
EKS2	**Erkin-Say**	**6.49**	**20**	P	Pn	00 38 47.4	+0.4
	SNR=290						
KK31	**Karatay Array**	**6.52**	**358**	Pn	Pn	00 38 47.5	+0.2
KK31	**Karatay Array**	**6.52**	**358**	*i* PN	Pn	00 38 47.6	+0.2
KK31				S	S	00 39 59.8	-3.0
KK31	**Karatay Array**	**6.52**	**358**	⇓P	Pn	00 38 47.7	+0.3
	comp=Z,209nm,0.8s,baz=180,slow=11,SNR=859						
KK31				⇓S	S	00 39 59.9	-3.0
	comp=Z,31nm,0.4s,baz=185,slow=25,SNR=5.1						
KKAR	**Karatay Array**	**6.52**	**358**	Pn	Pn	00 38 47.7	+0.4
KKAR	**Karatay Array**	**6.52**	**358**	Pn	Pn	00 38 47.5	+0.2
KKAR	**Karatay Array**	**6.52**	**358**	PN	Pn	00 38 47.7	+0.4
AAK	**Ala-Archa**	**6.68**	**24**	P	Pn	00 38 50.3	+0.8
	SNR=235						
AAK	**Ala-Archa**	**6.68**	**24**	P	Pn	00 38 50.2	+0.8
	comp=Z,165nm,0.5s,baz=211,slow=4.6,SNR=536						
AAK				S	S	00 40 04.6	-2.0
	comp=Z,196nm,0.9s,baz=327,slow=22,SNR=8.4						
AAK	**Ala-Archa**	**6.68**	**24**	*d*iPN	Pn	00 38 49.6	+0.1
AAK				pmax	pmax		
	comp=Z,203nm,0.7s						
AAK	**Ala-Archa**	**6.68**	**24**	P	Pn	00 38 50.6	+1.1
KBK	**Karagaybulak**	**6.85**	**26**	P	Pn	00 38 52.8	+1.1
	SNR=162						
BHK	**Bhakra**	**6.92**	**136**	eP	Pn	00 38 53.5	+0.9
BHK				eS	S	00 40 09.6	-2.8
ULHL	**Ulahol**	**7.04**	**35**	P	Pn	00 38 54.7	+0.6
	SNR=123						
CHMS	**Chumysh**	**7.08**	**24**	P	Pn	00 38 55.4	+0.9
	SNR=17						
CHMS	**Chumysh**	**7.08**	**24**	*i* PN	Pn	00 38 54.2	-0.3
CHMS				pmax	pmax		
	comp=Z,189nm,0.8s						
CHMS	**Chumysh**	**7.08**	**24**	⇑P	Pn	00 38 54.2	-0.3
	comp=Z,189nm,0.8s						
CHMS				⇑S	S	00 40 13.3	-2.5
	comp=Z,303nm,1.1s						
USP	**Ospenovka**	**7.25**	**22**	P	Pn	00 38 56.3	-0.2
	SNR=55						
TKM2	**Tokmak 2**	**7.32**	**29**	P	Pn	00 38 58.2	+0.6
	SNR=8.2						
TKM2	**Tokmak 2**	**7.32**	**29**	*i* PN	Pn	00 38 58.0	+0.4
TKM2				pmax	pmax		
	comp=Z,262nm,0.7s						
TKM2	**Tokmak 2**	**7.32**	**29**	⇑P	Pn	00 38 58.0	+0.4
	comp=Z,262nm,0.7s						
TKM2				⇑S	S	00 40 18.9	-2.6
	comp=Z,274nm,1.3s						
HRA	**Herat**	**7.34**	**255**	Pn	Pn	00 38 58.7	+0.6
SGDS	**Sogindy**	**7.46**	**22**	*d*iPN	Pn	00 38 58.9	-0.3
SGDS				pmax	pmax		
	comp=Z,21nm,0.5s						
SGDS	**Sogindy**	**7.46**	**22**	eP	Pn	00 38 59.0	-0.3
	comp=Z,75nm,0.3s						
SGDS				eS	S	00 40 17.6	-6.9
	comp=Z,58nm,0.7s						
SGDS	**Sogindy**	**7.46**	**22**	⇓iP	Pn	00 38 59.0	-0.3
	comp=Z,21nm,0.5s,baz=22						
SGDS				eS	S	00 40 20.2	-4.3
	baz=22						
TARG	**Taragay, Kyrgy**	**7.46**	**44**	Pn	Pn	00 38 57.8	-1.9
TARG	**Taragay, Kyrgy**	**7.46**	**44**	PN	Pn	00 38 57.8	-1.9
KST	**Kastek**	**7.56**	**30**	eP	Pn	00 39 01.3	+0.6
	comp=Z,95nm,1.4s						
KST				eS	S	00 40 21.6	-5.5
	comp=Z,222nm,1.3s						
SMLA	**Simla**	**7.57**	**134**	eP	Pn	00 39 01.7	+1.0
SMLA				eS	S	00 40 19.8	-7.3
SMLA				IAML		00 40 26.3	
	comp=E,2μm,0.4s						
SMLA				IAML		00 40 28.2	
	comp=N,1μm,0.6s						
DGS	**Degeres**	**7.66**	**28**	eP	Pn	00 39 02.1	+0.2
	comp=N,83nm,0.5s						
DGS				eS	S	00 40 22.9	-6.4
	comp=N,32nm,0.5s						
MTBS	**Maitube**	**7.83**	**32**	eP	Pn	00 39 04.7	+0.7
	comp=N,107nm,0.3s						
MTBS				eS	S	00 40 27.4	-5.7
	comp=N,104nm,0.7s						
TNSS	**Tian-Shan**	**7.98**	**34**	*i* PN	Pn	00 39 06.5	+0.3
TNSS	**Tian-Shan**	**7.98**	**34**	eP	Pn	00 39 06.8	+0.5
	comp=N,44nm,0.3s						
TNSS				eS	S	00 40 30.9	-6.3
	comp=N,36nm,0.6s						
TNSS	**Tian-Shan**	**7.98**	**34**	*i* P	Pn	00 39 06.5	+0.3
	baz=35						
KRBS	**Karabastau**	**8.02**	**26**	eP	Pn	00 39 06.2	-0.2
	com

comp=Z,74nm,0.5s
ARXS eS S 00 41 17.0 +9.4
comp=Z,19nm,0.4s
SHLS Shalkode 9.33 43 *d* iP **Pn 00 39 26.0 +2.8**
SHLS Shalkode 9.33 43⇓ *i* P **Pn 00 39 26.0 +2.8**
baz=45
PDGK Podgornoye 9.46 42 P **Pn 00 39 23.9 -1.0**
BLB Baldybastay 9.51 35 *e* P **P 00 39 37.0 +4.4**
comp=Z,166nm,0.5s
BLB eS S 00 41 23.2 +11
comp=Z,24nm,0.7s
JASL Jaisalmer 9.63 180 *e* P **Pn 00 39 27.4 +0.4**
TDK Taldyqorghan 10.18 32 *e* P **Pn 00 39 33.3 -0.5**
TDK pmax pmax
comp=Z,118nm,0.8s
TDK Taldyqorghan 10.18 32 *e* P **Pn 00 39 33.4 -0.5**
comp=Z,118nm,0.8s,baz=32
GEYT Alibeck 10.23 281 P **Pn 00 39 33.9 -0.7**
comp=Z,14nm,0.5s,baz=97,slow=9.9,SNR=22
GEYT S **S 00 41 23.9 -5.6**
comp=Z,4.5nm,0.6s,baz=153,slow=45,SNR=1.9
GEYT Alibeck 10.23 281 Pn **Pn 00 39 33.3 -1.3**
GYA0 ALIBECK ARRAY 10.23 281 P **Pn 00 39 33.6 -1.0**
GYA0B ALIBECK ARRAY 10.23 281 Pn **Pn 00 39 33.6 -1.0**
PTH Pithoragarh 10.53 129 *e* P **Pn 00 39 37.9 -0.8**
PTH *e* P P 00 39 38.1 -6.2
PTH *e*x S 00 41 26.9 -10
AJM Ajmer 10.58 161⇓ *i* P **Pn 00 39 39.0 -0.1**
AJM *e* P P 00 39 39.1 -5.5
LGTI Lohaghat 10.62 129 *e* P **Pn 00 39 38.1 -1.5**
JHNI Jhansi 12.89 147 *e* P **Pn 00 40 08.4 +0.4**
MAKZ Makanchi 13.17 36 Pn **Pn 00 40 11.2 0.0**
MAKZ Makanchi 13.17 36 P **Pn 00 40 11.2 0.0**
PYUN Piuthan 13.30 126 *e* P **Pn 00 40 12.8 -0.4**
comp=Z,55nm,0.4s
MK31 Makanchi Array 13.30 36 Pn **Pn 00 40 12.6 -0.3**
MK31 Makanchi Array 13.30 36 *i* P **Pn 00 40 12.4 -0.5**
MKAR Makanchi Array 13.30 36 P **Pn 00 40 12.8 -0.1**
comp=Z,41nm,0.6s,baz=223,slow=13,SNR=217
MKAR S **S 00 42 38.4 -1.8**
comp=Z,7.2nm,0.8s,baz=232,slow=23,SNR=4.0
MKAR Makanchi Array 13.30 36 Pn **Pn 00 40 12.4 -0.5**
BRZS Berezniki 13.46 5 *d* iP **Pn 00 40 14.3 -0.5**
BRZS *e*S **S 00 42 43.4 -0.3**
BRZS pmax pmax
comp=Z,25nm,0.7s
BRZS Berezniki 13.46 5⇓ *i* P **Pn 00 40 14.3 -0.5**
comp=Z,25nm,0.7s,baz=5.1
BRZS *e*S **S 00 42 43.5 -0.3**
baz=5.1
DANN Dangsing 13.64 123 *e* P **Pn 00 40 17.9 +0.4**
comp=Z,15nm,0.3s
KOLN Koldanda 13.92 126 *e* P **Pn 00 40 21.0 +0.2**
GKN Gorkha 14.46 122 *e* P **P 00 40 27.7 0.0**
comp=Z,28nm,0.6s
BHPL Bhopal 14.46 155 *e* P **Pn 00 40 26.4 -0.8**
BHPL *i*x **P 00 40 30.3 +2.6**
BHPL *e*x **S 00 43 01.1 -6.3**
ALBI Allahabad 14.64 137 *e* P **Pn 00 40 29.1 -0.3**
WMQ Urumqi 14.76 55⇑ P **P 00 40 32.1 +1.3**
WMQ S **S 00 43 09.9 -4.0**
WMQ pmax pmax
comp=Z,220nm,0.7s
WMQ pmax pmax
comp=Z,360nm,5.1s
AB31 Akbulak array 14.95 331 *i* P **P 00 40 32.0 -0.8**
ABKAR Akbulak array 14.95 331 P **P 00 40 31.8 -1.0**
ABKAR Akbulak array 14.95 331 P **P 00 40 32.1 -0.7**
DMN Daman 15.03 122 *e* P **Pn 00 40 34.7 +0.4**
KKN Kakani 15.03 122 *e* P **Pn 00 40 35.1 +0.8**
ZSN Zaisan 15.03 39 *d* iP **P 00 40 32.7 -1.0**
ZSN *e*S **S 00 43 21.2 +1.4**
ZSN pmax pmax
comp=Z,15nm,0.9s
ZSN Zaisan 15.03 39⇓ *i* P **P 00 40 32.8 -1.0**
comp=Z,15nm,0.9s,baz=40
ZSN *e*S **S 00 43 21.2 +1.4**
baz=40
KURBB Kurchatov Arra 15.09 19 P **P 00 40 34.0 -0.3**
comp=Z,78nm,1.0s,baz=211,slow=11,SNR=89
KURBB S **S 00 43 16.5 -4.4**
comp=Z,8.5nm,1.0s,baz=205,slow=20,SNR=3.4
KURBB Kurchatov Arra 15.09 19 P **P 00 40 33.4 -0.9**
KURK Kurchatov 15.20 19 P **P 00 40 34.9 -0.6**
KURK Kurchatov 15.20 19 P **P 00 40 34.9 -0.6**
KURK pmax pmax
comp=Z,78nm,0.9s
PKIN Phulchoki 15.24 122 *e* P **Pn 00 40 37.5 +0.6**
PKI Pulchoki 15.26 122 *e* P **Pn 00 40 37.5 +0.4**
GUN Gumba 15.37 120 *e* P **Pn 00 40 39.2 +0.7**
SEM Semipalatinsk 15.40 23 *e* P **P 00 40 37.5 -0.4**
SEM Semipalatinsk 15.40 23 *e* P **P 00 40 37.6 -0.4**
baz=23
JBP Jabalpur 15.53 147 *e* P **P 00 40 39.5 +0.1**
JBP IAmb IAmb 00 40 41.4
comp=Z,68nm,0.7s
JIRN Jiri 15.74 120 *e* P **Pn 00 40 44.1 +1.2**
BANOM Banah 16.33 234 P **Pn 00 40 49.6 0.0**
SNR=5.4
BANOM Banah 16.33 234 *i* P **P 00 40 48.4 +0.2**
SNR=21
SHME Shamm 16.35 234 P **Pn 00 40 49.3 -0.4**
SNR=5.1
SHME Shamm 16.35 234 *i* P **Pn 00 40 49.6 -0.1**
SNR=12
BVA0 Borovoye Array 16.45 359 P **Pn 00 40 50.4 -0.3**
BVAR Borovoye Array 16.45 359 P **Pn 00 40 50.5 -0.2**
comp=Z,8.0nm,0.5s,baz=147,slow=11,SNR=62
BVAR S **S 00 43 46.8 -2.2**
comp=Z,8.7nm,0.9s,baz=163,slow=16,SNR=3.8
BRVK Borovoye 16.48 359 P **Pn 00 40 50.4 -0.7**
BRVK Borovoye 16.48 359 *d* iP **Pn 00 40 50.7 -0.4**
BRVK pmax pmax
comp=Z,71nm,1.3s
BRVK Borovoye 16.48 359 P **Pn 00 40 51.1 +0.1**
AKTO Aktyubinsk 16.65 330 P **Pn 00 40 52.9 -0.2**
comp=Z,78nm,0.8s,baz=141,slow=9.8,SNR=186
AKTO S **S 00 43 51.4 -1.6**
comp=Z,9.9nm,0.6s,baz=280,slow=20,SNR=11
AKL Akola 16.71 159 *e* P **Pn 00 40 54.4 +0.3**
MASF Masafi 16.81 232 P **Pn 00 40 56.4 +1.2**
SNR=6.1
MSFE Esma-Masafi 16.82 232 *i* P **P 00 40 54.4 +0.9**
SNR=19
NGP Nagpur 16.96 153 *e* P **Pn 00 40 56.7 -0.3**
WSAR Wadi Sarin 16.97 222 P **Pn 00 40 57.1 0.0**
comp=Z,42nm,0.7s,baz=63,slow=9.5,SNR=23
BIDO Bidbid 17.02 224 P **Pn 00 40 58.4 +0.7**
ODAN Odare 17.07 120 *e* P **Pn 00 40 58.8 +0.3**
UOSS Minazif 17.08 231 P **P 00 40 57.5 +1.1**
UOSS Minazif 17.08 231 P **Pn 00 40 57.9 -0.5**
UOSS Minazif 17.08 231 *i* P **P 00 40 57.5 +1.1**
SNR=19
HATD Hatta, Dubai 17.21 231 P **Pn 00 41 00.6 +0.6**
HATD Hatta, Dubai 17.21 231 *i* P **P 00 40 58.7 +0.8**
SNR=18
WBK Wadi Bani Khal 17.31 220 P **Pn 00 41 01.3 +0.2**
SNR=7.5
ASHO Ashiyiah 17.36 231 P **Pn 00 41 01.2 -0.5**
SNR=11
ASHO Ashiyiah 17.36 231 *i* P **Pn 00 41 00.8 -0.9**
SNR=32
NAZ Nazwa, Dubai 17.39 233 P **Pn 00 41 01.6 -0.4**
SNR=11
NAZ Nazwa, Dubai 17.39 233 *i* P **Pn 00 41 01.4 -0.7**
SNR=6.2
FAQ Al Faqa, Dubai 17.61 232 P **Pn 00 41 06.7 +2.1**
SNR=7.4
DGZ Jazzator, Alta 17.80 37 *d* iP **Pn 00 41 05.7 -1.0**
DGZ pmax pmax
comp=Z,140nm,0.5s
ASUD Al Ashush, Dub 17.86 232 *i* P **Pn 00 41 06.5 -1.1**
SNR=9.7
JMDO Jabal Madar 17.96 221 P **Pn 00 41 08.5 -0.2**
SNR=8.0
ALNE Al Ain 18.01 230 P **P 00 41 07.8 +1.3**
SNR=10
ALNE Al Ain 18.01 230 *i* P **P 00 41 07.6 +1.1**
SNR=9.9
ARQ Araqi 18.08 227 P **Pn 00 41 12.6 +2.4**
SNR=7.1
AJN Ajban 18.13 233 P **P 00 41 09.1 +1.4**
SNR=8.2
BSY Bisya 18.15 224 P **Pn 00 41 10.4 -0.6**
SNR=6.0

POO Poona 18.18 171 *e* P **Pn 00 41 10.6 -0.8**
POO IAmb IAmb 00 41 14.2
comp=Z,51nm,0.8s
POO IAmb IAmb 00 41 16.9
LSA Lhasa 18.32 106 P **Pn 00 41 12.4 -1.0**
LSA IAmb IAmb 00 41 27.5
comp=Z,18nm,0.8s
LSA Lhasa 18.32 106 P **Pn 00 41 13.6 +0.1**
LSA pmax pmax
comp=Z,15nm,0.8s
LSA Lhasa 18.32 106 P **Pn 00 41 12.4 -1.0**
LSA pmax pmax
comp=Z,18nm,0.8s
MAK Makhachkala 19.00 297 *e* P **P 00 41 16.0 -1.0**
MAK *e*S **S 00 44 38.9 -0.9**
MAK pmax pmax
comp=Z,162nm,1.4s
MAK MLR MLR
comp=Z,157nm,12.0s
MHTO MHTO 19.17 219 P **Pn 00 41 21.5 -1.4**
SNR=6.0
JRN Qarnain Island 19.29 238 P **P 00 41 21.3 +1.1**
GOMU GeErMu 19.30 84⇑ *e* P **Pn 00 41 26.8 +2.0**
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU pmax pmax
comp=Z,130nm,4.9s
UMZA Um Al Zommool 19.37 229 P **P 00 41 22.3 +1.2**
MZWR Madinat Zayed 19.41 234 P **P 00 41 23.6 +2.1**
ZAA0 Zalesovo Array 19.90 25 P **P 00 41 26.2 -0.2**
ZALV Zalesovo Beam 19.90 25 P **P 00 41 26.9 +0.5**
comp=Z,41nm,0.7s,baz=218,slow=11,SNR=126
ZALV S **S 00 44 54.4 -2.6**
comp=Z,24nm,0.9s,baz=219,slow=17,SNR=7.0
ZALV Zalesovo Beam 19.90 25 P **P 00 41 26.2 -0.2**
GHWR Ruwais 19.93 236 P **Pn 00 41 31.5 -0.4**
MZR Muzera 20.20 233 P **P 00 41 32.1 +2.0**
SNR=5.7
MZR Muzera 20.20 233 *i* P **P 00 41 29.7 -0.4**
SNR=26
DQM DQM 20.27 219 P **P 00 41 33.0 +2.2**
HYB Hyderabad 20.27 158 *e* P **P 00 41 31.8 +0.9**
HYB IAmb IAmb 00 41 34.1
comp=Z,15nm,0.8s
SAKB Bahrain 20.28 244 P Pn 00 41 35.1 -1.0
GROC Groznyy 20.28 297 P **P 00 41 29.9 -0.8**
GROC *e*S **S 00 45 06.5 +2.2**
GROC pmax pmax
comp=Z,108nm,0.6s
SLWR Sila 20.66 238 P **P 00 41 36.4 +1.6**
GNI Garni 20.74 288 P **P 00 41 37.5 +1.7**
comp=Z,41nm,1.0s,baz=189,slow=10,SNR=14
comp=Z,41nm,1.0s
GNI Garni 20.74 288 P **P 00 41 37.1 +1.2**
GNI Garni 20.74 288 *i* P **P 00 41 37.9 +2.0**
GNI pmax pmax
comp=Z,67nm,1.1s
GNI Garni 20.74 288 P **P 00 41 38.4 +2.5**
SMRA Abu-Samra 20.82 241 P **P 00 41 37.3 +0.7**
SHL Shillong 21.06 115 P **P 00 41 39.8 +0.5**
SHL Shillong 21.06 115 P **P 00 41 39.8 +0.5**
SHL pmax pmax
comp=Z,41nm,0.7s
SVE Sverdlovsk 21.38 345 *e* P **P 00 41 43.0 +1.1**
SVE pmax pmax
comp=Z,35nm,0.9s
ARU Arti 21.52 341 P **P 00 41 44.3 +1.1**
comp=Z,45nm,0.7s,baz=160,slow=5.6,SNR=60
comp=Z,45nm,0.7s
ARU Arti 21.52 341 P **P 00 41 43.6 +0.5**
ARU Arti 21.52 341 *c i* P **P 00 41 43.8 +0.6**
ARU S **S 00 45 26.6 +1.6**
ARU pmax pmax
comp=Z,68nm,0.9s
ZEI Tsey 21.59 295 *e* P **P 00 41 45.6 +1.3**
ZEI pmax pmax
comp=Z,22nm,1.1s
ONI Oni 21.89 294 P **P 00 41 49.2 +2.3**
ONI IAmb IAmb 00 41 53.3
comp=Z,16nm,0.8s
ONI Oni 21.89 294 P **P 00 41 49.2 +2.3**
ONI pmax pmax
comp=Z,16nm,0.8s
NCK Nalchik 21.91 297⇑ *e* P **P 00 41 47.8 +0.7**
NCK pmax pmax
comp=Z,34nm,0.7s
KARS Kars 22.03 289 P **P 00 41 49.8 +1.5**
KARS Kars 22.03 289 P **P 00 41 49.8 +1.5**
KARS pmax pmax
comp=Z,117nm,1.0s
GEVA Gevas 22.09 283 P **P 00 41 49.7 +0.7**
GEVA IAmb IAmb 00 42 14.3
comp=Z,14nm,0.9s
KBZ Khabaz 22.45 297 P **P 00 41 52.7 +0.7**
comp=Z,15nm,0.7s,baz=113,slow=9.3,SNR=36
comp=Z,15nm,0.7s
KBZ Khabaz 22.45 297⇓ *i* P **P 00 41 51.9 0.0**
KBZ pmax pmax
comp=Z,16nm,0.8s
NEY Neytrino 22.50 296⇓ *e* P **P 00 41 54.6 +1.9**
NEY pmax pmax
comp=Z,6.0nm,0.8s
KVAR Kislovodsk Arr 22.63 298 P **P 00 41 55.5 +1.7**
comp=Z,10nm,1.0s,baz=259,slow=22,SNR=4.5
comp=Z,10nm,1.0s
KIV Kislovodsk 22.64 298⇑ P **P 00 41 54.3 +0.5**
KIV Kislovodsk 22.64 298 P **P 00 41 53.6 -0.2**
KIV IAmb IAmb 00 41 58.0
comp=Z,19nm,0.8s
KIV Kislovodsk 22.64 298 *e* P **P 00 41 54.4 +0.6**
KIV *e**PP **pP 00 42 35.0 +0.1**
KIV *e*S **S 00 45 44.9 +1.3**
KIV pmax pmax
comp=Z,26nm,1.0s
KIV MLR MLR
comp=Z,40nm,14.0s
KIV Kislovodsk 22.64 298 *i* P **P 00 41 54.9 +1.1**
SNR=8.4
GURO Guroymak-BITLI 22.88 284 P **P 00 41 57.7 +1.6**
GTA Gaotai 22.97 74⇓ P **P 00 41 59.4 +2.5**
GTA sP sP 00 43 19.1 +8.6
GTA SS SS 00 47 13.3 -21
GTA pmax pmax
comp=Z,9.0nm,1.1s
GTA pmax pmax
comp=Z,81nm,4.7s
GTA LR LR
comp=Z,130nm,10.5s
GTA LR LR
comp=Z,190nm,9.5s
GTA LR LR
comp=Z,120nm,10.5s
DOK Doka 23.16 224 P **P 00 42 00.4 +1.7**
DMTO DMTO 23.45 221 P **P 00 42 03.0 +1.7**
WHFO Wadi Hawf 23.92 224 P **P 00 42 06.7 +1.1**
MARD Mardin 23.99 281 P **P 00 42 07.3 +1.1**
MARD IAmb IAmb 00 42 09.2
comp=Z,14nm,0.7s
KOPT Kop Dagi 24.00 287 P **P 00 42 07.0 +0.6**
ABTO Aybut 24.64 224 P **P 00 42 14.0 +1.9**
SNR=7.0
SOC Sochi 24.72 296 *e* P **P 00 42 11.4 -1.2**
SOC *e**PP **pP 00 42 56.6 -0.7**
SOC *e**SP **sP 00 43 26.4 -0.3**
SOC *e*S **S 00 46 14.7 -1.8**
VRH Novokhopyorsk 25.36 314 *e* P **P 00 42 17.4 -0.8**
VRH pmax pmax
comp=Z,30nm,1.0s
RAYN Ar Rayn 25.41 246 P **P 00 42 19.3 +0.2**
RAYN PcP **PcP 00 45 45.1 +0.5**
RAYN Ar Rayn 25.41 246 P **P 00 42 19.3 +0.2**
RAYN pmax pmax
comp=Z,44nm,1.2s
RAYN Ar Rayn 25.41 246 P **P 00 42 20.2 +1.2**
RAYN Ar Rayn 25.41 246 *i* P **P 00 42 19.7 +0.6**
SNR=6.1
KIRV Kirov 26.11 334 P **P 00 42 26.1 +1.2**
comp=Z,45nm,0.6s,baz=146,slow=4.4,SNR=10
comp=Z,45nm,0.6s
KIRV Kirov 26.11 334 *c i* P **P 00 42 25.9 +1.1**
LZH Lanzhou 26.53 81 *e* P **P 00 42 29.1 0.0**
LZH pP pP 00 43 22.4 +5.2
LZH sP sP 00 43 53.6 +8.2
LZH pmax pmax
comp=Z,20nm,1.5s

LZH pmax pmax
comp=Z,210nm,7.9s
GAZ Gaziantep 26.83 281 P **P 00 42 36.0 +4.4**
GAZ pP **PP 00 43 30.9 -6.3**
VSR Storozhevoye 26.85 313 *e* P **P 00 42 30.3 -1.3**
VSR pmax pmax
comp=Z,30nm,1.1s
VORR Voronezh 26.99 314 *e* P **P 00 42 33.2 +0.4**
VORR pmax pmax
comp=Z,43nm,1.7s
ZAK Zakamensk 27.04 49 *e* P **P 00 42 34.8 +1.4**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
TOKA Tokat 27.07 288 P **P 00 42 34.3 +0.6**
TOKA IAmb IAmb 00 42 36.2
comp=Z,8.7nm,0.5s
LPSR Galich'ya Gora 27.50 316 *e* P **P 00 42 37.2 -0.1**
LPSR pmax pmax
comp=Z,40nm,0.7s
BNN Bunyan 27.67 285 P **P 00 42 38.8 -0.4**
BNN IAmb IAmb 00 42 41.1
comp=Z,18nm,1.0s
PZH PanZhiHua 28.08 102 P **P 00 42 43.5 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,130nm,5.9s
ASF Jabal al Asfar 28.27 271 P **P 00 42 46.4 +2.0**
comp=Z,2.4nm,0.7s,baz=46,slow=11,SNR=4.0
comp=Z,2.4nm,0.7s
SONM Songino Array 28.40 55 P **P 00 42 47.3 +1.8**
comp=Z,3.4nm,0.8s,baz=260,slow=9.9,SNR=10
SONM pP **pP 00 43 38.3 +4.3**
comp=Z,4.2nm,0.9s,baz=262,slow=8.7,SNR=4.6
comp=Z,3.4nm,0.8s
SONM Songino Array 28.40 55 P **P 00 42 47.1 +1.6**
ULN Ulaanbaatar 28.84 56 P **P 00 42 50.1 +0.7**
ULN Ulaanbaatar 28.84 56 *c e* P **P 00 42 51.1 +1.7**
ULN pmax pmax
comp=Z,5.0nm,1.0s
ILGA Ilgaz 29.12 290 P **P 00 42 52.2 +0.2**
MMAI Mount Meron Ar 29.21 274 P **P 00 42 54.3 +1.5**
comp=Z,2.0nm,0.6s,baz=66,slow=8.3,SNR=10
MMAI PcP **PcP 00 45 54.5 +0.9**
comp=Z,7.2nm,0.8s,baz=79,slow=5.4,SNR=7.3
comp=Z,2.0nm,0.6s
BR131 Keskin Array S 29.29 288 P **P 00 42 53.0 -0.4**
BR131 IAmb IAmb 00 42 55.5
comp=Z,12nm,0.7s
BR131 Keskin Array S 29.29 288 *c i* P **P 00 42 54.5 +1.1**
BRTR Keskin Array B 29.29 288 P **P 00 42 54.6 +1.1**
comp=Z,7.0nm,0.7s,baz=102,slow=8.7,SNR=42
BRTR PcP **PcP 00 45 53.6 -0.2**
comp=Z,2.3nm,0.9s,baz=131,slow=3.1,SNR=5.5
comp=Z,7.0nm,0.7s
BRTR Keskin Array B 29.29 288 P **P 00 42 53.7 +0.2**
BRTR PcP **PcP 00 45 52.9 -0.9**
MOS Moscow 29.52 321 *e* P **P 00 42 54.6 -0.5**
MOS *e* 00 43 39.5
MOS *e* 00 44 11.1
MOS pmax pmax
comp=Z,52nm,1.0s
PRGR Permogore 29.65 336⇑ *i* P **P 00 42 56.8 +0.7**
PRGR pmax pmax
comp=Z,45nm,0.8s
OBN Obninsk 29.79 319⇑ P **P 00 42 58.3 +0.8**
OBN Obninsk 29.79 319 P **P 00 42 58.2 +0.8**
comp=Z,9.8nm,0.9s,baz=164,slow=1.9,SNR=14
comp=Z,9.8nm,0.9s
OBN Obninsk 29.79 319 P **P 00 42 57.5 +0.1**
OBN Obninsk 29.79 319 *c i* P **P 00 42 58.0 +0.5**
OBN *e**PP **pP 00 43 44.9 0.0**
OBN *e*S **S 00 47 37.9 +2.0**
OBN pmax pmax
comp=Z,88nm,1.7s
PALK Pallekele 30.53 160 P **P 00 43 04.7 +0.3**
comp=Z,8.2nm,0.9s,baz=138,slow=17,SNR=3.7
comp=Z,8.2nm,0.9s
CM31 Chiang Mai Arr 30.61 119 P **P 00 43 06.5 +1.4**
CM31 IAmb IAmb 00 43 08.2
comp=Z,17nm,1.0s
CMAR Chiang Mai Arr 30.61 119 P **P 00 43 06.1 +1.0**
comp=Z,7.2nm,0.8s,baz=300,slow=8.1,SNR=41
CMAR ScP **ScP 00 49 14.8 -2.3**
comp=Z,2.3nm,0.8s,baz=296,slow=4.7,SNR=7.5
comp=Z,7.2nm,0.8s
CMAR Chiang Mai Arr 30.61 119 P **P 00 43 05.5 +0.4**
EIL Elat 30.70 268 P **P 00 43 07.5 +1.6**
comp=Z,14nm,1.0s,baz=56,slow=1.8,SNR=8.5
EIL PcP **PcP 00 45 57.8 +0.3**
comp=Z,7.3nm,0.9s,baz=32,slow=1.4,SNR=4.5
comp=Z,14nm,1.0s
XAN Xi'an 31.05 83⇑ P **P 00 43 10.5 +1.6**
XAN pmax pmax
comp=Z,8.0nm,0.8s
MDUB Mudurnu 31.07 289 P **P 00 43 09.7 +0.5**
KLMR Klimovskoe 31.35 331 *e* P **P 00 43 09.0 -2.0**
KLMR pmax pmax
comp=Z,55nm,1.2s
KLMR Klimovskoe 31.35 331 *e* P **P 00 43 09.1 -2.0**
KLMR AMP 00 43 12.5
comp=Z,55nm,1.2s
KLMR *e*PP **PnPn 00 44 17.1 -7.6**
HHC Hu-ho-hao-te 31.86 70 *e* P **P 00 43 18.8 +2.8**
HHC pmax pmax
comp=Z,25nm,0.8s
HHC pmax pmax
comp=Z,130nm,5.1s
GYA Guiyang 32.01 98⇓ P **P 00 43 18.8 +1.4**
GYA pmax pmax
comp=Z,22nm,0.9s
ELL Elmali 32.66 283 P **P 00 43 23.5 +0.5**
ELL Elmali 32.66 283 P **P 00 43 23.5 +0.5**
ELL pmax pmax
comp=Z,162nm,0.6s
MILM Milestii Mici 32.66 302⇓ P **P 00 43 23.1 +0.4**
MILM Milestii Mici 32.66 302 P **P 00 43 23.1 +0.4**
AKASG Malin Array Be 32.79 309 P **P 00 43 24.0 +0.2**
comp=Z,9.5nm,0.7s,baz=80,slow=7.2,SNR=60
AKASG PP **PP 00 44 43.8 +0.8**
comp=Z,5.9nm,0.8s,baz=97,slow=12,SNR=8.8
AKASG PcP **PcP 00 46 02.2 -0.6**
comp=Z,2.9nm,0.6s,baz=78,slow=3.2,SNR=9.1
comp=Z,9.5nm,0.7s
AKASG Malin Array Be 32.79 309 P **P 00 43 23.5 -0.3**
AKASG IAmb IAmb 00 43 25.2
comp=Z,11nm,0.9s
AKBB Malin Array Si 32.79 309 P **P 00 43 23.8 0.0**
AKBB IAmb IAmb 00 43 25.1
comp=Z,18nm,0.7s
AKBB PcP **PcP 00 46 02.7 -0.1**
AKBB Malin Array Si 32.79 309 *c i* P **P 00 43 23.9 +0.1**
AKBB pmax pmax
comp=Z,49nm,1.8s
AKAS Kas 33.01 282 P **P 00 43 24.1 -1.9**
AKAS IAmb IAmb 00 43 28.9
comp=Z,19nm,0.8s
CFR Carcaliu 33.09 299⇓ P **P 00 43 27.3 +0.9**
CFR Carcaliu 33.09 299 P **P 00 43 27.2 +0.9**
MANT Manisa 33.37 286 P **P 00 43 30.2 +1.0**
SRDT SRDT 33.58 124 P **P 00 43 31.3 +0.4**
comp=Z,1μmcomp=Z,28nm,1.0s
NRIK Noril'sk 34.07 10 P **P 00 43 36.4 +1.8**
comp=Z,13nm,0.6s,baz=198,slow=4.6,SNR=18
comp=Z,13nm,0.6s
NRIK Noril'sk 34.07 10 P **P 00 43 35.5 +1.0**
NRIK IAmb IAmb 00 43 37.1
comp=Z,16nm,0.8s
NRIK Noril'sk 34.07 10 *c i* P **P 00 43 36.0 +1.4**
NRIK pmax pmax
comp=Z,31nm,1.3s
PLOR Plostina 34.13 300⇑ P **P 00 43 37.4 +1.9**
PLOR Plostina 34.13 300 P **P 00 43 37.3 +1.9**
TESR Tescani 34.13 301⇑ P **P 00 43 36.2 +0.8**
ARG Arkhangelos 34.17 282 P **P 00 43 36.9 +1.0**
ARG Arkhangelos 34.17 282 P **P 00 43 36.9 +1.0**
ARG pmax pmax
comp=Z,42nm,0.9s
MNK Minsk 34.35 315 *i* P **P 00 43 37.9 +0.8**
MNK *i* *PP **pP 00 44 26.3 +1.0**
MNK *i* 00 45 01.1
MNK *i* 00 46 08.0
MNK *i* S **S 00 48 47.6 +1.0**
MNK *i* *SS **sS 00 50 14.9 +1.1**
MNK *i* 00 53 32.9

MNK pmax pmax
comp=N,30nm,0.9s
MNK pmax pmax
comp=Z,33nm,0.8s
MNK pmax pmax
comp=E,6.0nm,1.0s
MNK MLR MLR
comp=Z,60nm,19.0s
MNK MLR MLR
comp=N,268nm,16.0s
MNK MLR MLR
comp=E,7.0nm,19.0s
MNK Minsk 34.35 315 *i* P **P 00 43 37.9 +0.8**
comp=E,6.0nm,1.1s
MNK *i* P **P 00 43 37.9 +0.8**
comp=N,30nm,0.9s
MNK *i* P **P 00 43 37.9 +0.8**
comp=Z,33nm,0.8s,baz=283
MNK *i* pP **pP 00 44 26.4 +1.0**
MNK *i* PP **PP 00 45 01.1 +0.9**
MNK *i* S **S 00 48 47.6 +1.0**
MNK *i* sS **sS 00 50 15.0 +1.1**
MNK *i* SS **SS 00 51 27.2 +1.8**
MNK *i* LR LR 00 57 18.9
MNK *i* LRM MLR 00 59 44.6
comp=Z,60nm,19.4s
MNK *i* LRM MLR 01 00 10.4
comp=N,268nm,16.1s
MNK *i* LRM MLR 01 00 17.5
comp=E,7.0nm,18.7s
COVR Voineasa-Covas 34.44 300 ⇑P **P 00 43 39.7 +1.6**
MLR Muntele Rosu 34.63 299 ⇑P **P 00 43 40.2 +0.4**
MLR Muntele Rosu 34.63 299 P **P 00 43 41.8 +2.0**
comp=E,29nm,0.8s
comp=E,29nm,0.8s
MLR Muntele Rosu 34.63 299 P **P 00 43 41.3 +1.5**
MLR Muntele Rosu 34.63 299 P **P 00 43 41.3 +1.5**
MLR pmax pmax
comp=Z,37nm,0.9s
DOPR Dopca 35.01 300 ⇓P **P 00 43 44.5 +1.5**
NACGM Naroch 35.07 316⇑*e*P **P 00 43 44.1 +0.8**
baz=103
KARP Karpathos 35.10 282 P **P 00 43 43.4 -0.5**
BURAR Bucovina Array 35.13 303 ⇑P **P 00 43 45.3 +1.3**
BURAR Bucovina Array 35.13 303 P **P 00 43 44.4 +0.3**
BURAR PcP **PcP 00 46 11.2 +1.5**
BURAR Bucovina Array 35.13 303 P **P 00 43 44.4 +0.3**
BURAR PCP **PcP 00 46 11.2 +1.5**
BURAR pmax pmax
comp=Z,10.0nm,0.7s
BUR08 Bucovina Ar. S 35.14 303 P **P 00 43 44.5 +0.3**
BUR08 PcP **PcP 00 46 11.1 +1.3**
VOIR 35.26 299 ⇓P **P 00 43 46.1 +0.9**
VOIR 35.26 299 P **P 00 43 46.0 +0.9**
BOD Bodaibo 35.37 39 *e*P **P 00 43 46.7 +0.9**
BOD pmax pmax
comp=Z,11nm,1.3s
IIGN Ignalina 35.48 316 *e*P **P 00 43 48.2 +1.5**
ARR Årges 35.55 299 ⇓P **P 00 43 48.8 +1.2**
ISAL Salakas 35.59 317 *e*P **P 00 43 48.7 +1.0**
ARCR ARCALIA 35.71 302 ⇓P **P 00 43 50.7 +1.8**
LVV L'vov 36.01 307 *e*P **P 00 43 52.1 +0.8**
LVV *e* 00 45 19.4
VSU Vasula 36.04 322*c i*P **P 00 43 51.6 +0.1**
VSU Vasula 36.04 322 *e*P **P 00 43 52.5 +1.0**
LOT Lotru 36.16 299 ⇓P **P 00 43 54.2 +1.4**
CBBR Cluj-Babes-Bol 36.27 301 ⇓P **P 00 43 55.1 +1.5**
BMR Baia Mare 36.30 303 ⇑P **P 00 43 55.0 +1.1**
BMR Baia Mare 36.30 303 P **P 00 43 54.9 +1.1**
PABE Paberze 36.77 316 P **P 00 43 58.0 +0.3**
PABE Paberze 36.77 316 *e*P **P 00 43 59.0 +1.4**
VTS Vitosha 36.78 294 P **P 00 43 58.9 +0.8**
VTS PcP **PcP 00 46 13.9 -1.0**
VTS Vitosha 36.78 294 P **P 00 43 58.9 +0.8**
VTS 00 46 13.9
VTS pmax pmax
comp=Z,4.0nm,0.8s
DRGR 36.84 301 ⇑P **P 00 43 59.7 +1.2**
DRGR 36.84 301 P **P 00 43 59.7 +1.2**
VSVD Vaisvydziai 36.88 317 *e*P **P 00 43 59.9 +1.3**
TRPA Tarpa 36.94 304 ⇑P **P 00 44 00.9 +1.7**
TRPA Tarpa 36.94 304 P **P 00 44 00.9 +1.7**
IDI Anoyia 36.95 282 P **P 00 44 00.1 +0.5**
comp=Z,7.9nm,0.5s,baz=108,slow=11,SNR=4.8
comp=Z,7.9nm,0.5s
IDI Anoyia 36.95 282 P **P 00 43 59.1 -0.5**
IDI IAmb IAmb 00 44 01.3
comp=Z,13nm,0.9s
BLKB Belogradchik 37.08 296 P **P 00 44 01.5 +1.0**
UZH Uzhgorod 37.11 304 *e*P **P 00 44 03.0 +2.4**
KOLS Kolonicke sedl 37.12 305 *e*P **P 00 44 02.4 +1.6**
KOLS pmax pmax
comp=Z,12nm,0.9s
LVZ Lovozero 37.34 338 P **P 00 44 03.0 +0.7**
LVZ IAmb IAmb 00 44 03.9
comp=Z,24nm,0.8s
LVZ Lovozero 37.34 338 P **P 00 44 03.1 +0.7**
LVZ pmax pmax
comp=Z,24nm,0.8s
FIA1 FINESS Array S 37.34 326 P **P 00 44 03.0 +0.6**
FIA1 IAmb IAmb 00 44 04.1
comp=Z,28nm,0.8s
FINES FINESS Array B 37.34 326 P **P 00 44 03.1 +0.7**
comp=Z,20nm,0.7s,baz=108,slow=10,SNR=49
comp=Z,20nm,0.7s
FINES FINESS Array B 37.34 326 P **P 00 44 02.8 +0.4**
UBPT Khong Chiam 37.38 115 P **P 00 44 02.6 -0.7**
UBPT IAmb IAmb 00 44 04.2
comp=Z,19nm,1.0s
MTSE Matsula 37.58 321 *e*P **P 00 44 05.7 +1.3**
BZS Buzias 37.66 300 P **P 00 44 06.2 +0.9**
BZS Buzias 37.66 300 P **P 00 44 06.1 +0.9**
LIT Litokhoron 37.72 290 P **P 00 44 06.0 +0.1**
LIT IAmb IAmb 00 44 33.6
comp=Z,18nm,1.3s
LIT Litokhoron 37.72 290 P **P 00 44 06.0 +0.1**
LIT pmax pmax
comp=Z,18nm,1.3s
MEF Metsahovi 37.72 324 *e*P **P 00 44 06.9 +1.4**
PBUR Paburge 38.00 317 *e*P **P 00 44 08.6 +0.7**
PSZ Piszkesteto 38.72 303 P **P 00 44 14.7 +0.5**
PSZ Piszkesteto 38.72 303 P **P 00 44 14.7 +0.5**
PSZ pmax pmax
comp=Z,7.0nm,0.9s
PSZ Piszkesteto 38.72 303 P **P 00 44 14.9 +0.7**
OJC Ojcow 38.75 307 *e*P **P 00 44 13.2 -1.0**
OJC Ojcow 38.75 307 P **P 00 44 13.3 -1.0**
OJC IAmb IAmb 00 44 14.4
comp=Z,20nm,1.1s
OJC Ojcow 38.75 307 P **P 00 44 13.3 -1.0**
OJC pmax pmax
comp=Z,20nm,1.1s
ITM Ithomi 38.78 286 P **P 00 44 14.1 -0.6**
RAF Rauma 39.19 324 *e*P **P 00 44 18.3 +0.6**
VYHS Vyhne 39.41 304 *e*P **P 00 44 20.7 +1.0**
VYHS pmax pmax
comp=Z,11nm,1.3s
NJ2 Nanjing 39.59 82 *e*P **P 00 44 20.9 -0.6**
NJ2 pmax pmax
comp=Z,11nm,0.7s
MORH Mrgy, Hungar 39.68 301 ⇑P **P 00 44 23.1 +1.1**
MORH Mrgy, Hungar 39.68 301 P **P 00 44 22.9 +0.9**
SRO Srobarova 39.79 303 *e*P **P 00 44 24.8 +1.9**
SRO pmax pmax
comp=Z,23nm,1.1s
OKC Ostrava-Krasne 39.82 306 *e*P P 00 44 37.2 +14
MAUC Maruska 40.04 306 *e*P **P 00 44 26.8 +1.8**
KOVH Kovagotottos 40.07 301 P **P 00 44 25.6 +0.4**
JAVC Velka Javorina 40.16 305 *e*P **P 00 44 27.7 +1.7**
MORC Moravsky Berou 40.21 306 ⇑P **P 00 44 27.7 +1.3**
MORC Moravsky Berou 40.21 306 P **P 00 44 26.8 +0.4**
MORC Moravsky Berou 40.21 306 P **P 00 44 26.8 +0.4**
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 40.21 306 *e*P **P 00 44 27.3 +0.9**
MORC *e* 00 46 05.6
MPLH Magyarpolny 40.36 302 P **P 00 44 27.5 -0.1**
GKP Gorka Klasztor 40.42 312 *e*P **P 00 44 29.1 +1.2**
KEV Kevo 40.68 338 P **P 00 44 30.6 +0.8**
KEV IAmb IAmb 00 44 31.6
comp=Z,33nm,0.9s
KEV Kevo 40.68 338 P **P 00 44 30.6 +0.8**
KEV pmax pmax
comp=Z,33nm,0.9s

KRLC Kraliky 40.69 307 *e*P **P 00 44 31.6 +1.3**
KRLC *e* 00 46 11.8
KRLC Kraliky 40.69 307 *e*P **P 00 44 31.6 +1.3**
KRLC *e*PP **PP 00 46 11.8 +2.5**
VRAC Vranov 40.85 306 ⇑P **P 00 44 32.8 +1.3**
VRAC Vranov 40.85 306 P **P 00 44 32.8 +1.3**
VRAC Vranov 40.85 306 *e*P **P 00 44 32.6 +1.1**
UPP Uppsala 40.93 322 *e*P **P 00 44 32.6 +0.7**
DPC Dobruska-Polom 40.98 307 *e*P **P 00 44 34.2 +1.6**
DPC *e* 00 46 22.1
DPC Dobruska-Polom 40.98 307 *e*P **P 00 44 34.2 +1.6**
DPC *e*PP **PnPn 00 46 22.1 +2.9**
SOP Sopron 40.98 303 P **P 00 44 33.4 +0.8**
KSP Ksiaz 40.98 308 *e*P **P 00 44 33.7 +1.1**
KRUC Moravsky 40.99 305 *e*P **P 00 44 33.5 +0.8**
ARA0 ARCESS Array S 41.02 338 *e*P **P 00 44 33.8 +1.1**
ARA0 IAmb IAmb 00 44 34.9
comp=Z,31nm,0.9s
ARCES ARCESS Array B 41.02 338 P **P 00 44 33.7 +1.1**
comp=Z,22nm,0.7s,baz=109,slow=7.9,SNR=64
comp=Z,22nm,0.7s
ARCES ARCESS Array B 41.02 338 P **P 00 44 33.7 +1.1**
ARCES IAmb IAmb 00 44 34.7
comp=Z,34nm,0.9s
ARCES ARCESS Array B 41.02 338 P **P 00 44 33.7 +1.1**
ARCES pmax pmax
comp=Z,34nm,1.0s
OSTC Ostas 41.04 308 *e*P **P 00 44 34.5 +1.4**
RONA Rosalia, Austr 41.15 303 *e*P **P 00 44 34.8 +0.7**
comp=Z,11nm,1.4s,SNR=5.3
RONA *e*P **PP 00 46 15.2 +1.0**
comp=Z,11nm,1.4s
VIKU Vikbolandet 41.19 320 *e*P **P 00 44 34.7 +0.6**
BLEU Blekinge 41.42 316 *i* P **P 00 44 37.3 +1.2**
KULM Kulim 41.42 132 P **P 00 44 37.4 +0.8**
CONA Conrad Observa 41.43 304 *i* P **P 00 44 37.3 +1.0**
comp=Z,26nm,1.4s,SNR=9.3
KTK1 Kautokeino 41.49 336 *e*P **P 00 44 37.1 +0.6**
KTK1 IAmb IAmb 00 44 37.4
comp=Z,19nm,0.6s
TREC Trest 41.57 306 *e*P **P 00 44 38.8 +1.4**
TREC Trest 41.57 306 *e*P **P 00 44 38.8 +1.4**
CN2 Changchun 41.69 63 *e*P **P 00 44 37.4 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
ARSA Arzberg 41.72 303 *e*P **P 00 44 39.3 +0.7**
comp=Z,7.5nm,1.7s
GROS Grobnik 41.82 301 *i* P **P 00 44 40.2 +0.7**
GROS *i* PcP **PcP 00 46 30.5 -0.3**
PERS Pernice 42.06 302 *i* P **P 00 44 42.4 +0.9**
PERS *i* PcP **PcP 00 46 31.6 +0.1**
PVCC Panska Ves 42.09 308 *e*P **P 00 44 43.0 +1.4**
PVCC Panska Ves 42.09 308 *e*P **P 00 44 43.0 +1.4**
HAMF Hammerfest 42.10 339 *e*P **P 00 44 42.9 +1.5**
HAMF IAmb IAmb 00 44 43.3
comp=Z,54nm,0.8s
ZEA Zeya 42.11 48 *e*P **P 00 44 44.2 +2.5**
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
SOKA Soboth 42.12 302 *e*P **P 00 44 42.9 +1.0**
comp=Z,20nm,1.5s,SNR=9.7
PRU Pruhonice 42.14 307 *e*P **P 00 44 43.3 +1.3**
PRU *e* 00 46 31.8
PRU Pruhonice 42.14 307 *e*P **P 00 44 43.3 +1.3**
PRU *e*PP **PcP 00 46 31.8 +0.2**
TIP Timpagrande 42.24 291 P **P 00 44 44.4 +1.3**
IPM Ipoh 42.29 132 P **P 00 44 44.4 +0.7**
IPM IAmb IAmb 00 44 45.0
comp=Z,35nm,1.0s
IPM Ipoh 42.29 132 P **P 00 44 44.0 +0.4**
comp=Z,49nm,1.3s
CKRC Cesky Krumlov 42.38 305 *e*P **P 00 44 45.2 +1.2**
SGRT San Giovanni R 42.41 295 P **P 00 44 43.1 -1.3**
SGRT IAmb IAmb 00 44 46.3
comp=Z,24nm,1.0s
PSI Prapat 42.43 136 P **P 00 44 45.2 +0.4**
PSI pmax pmax
comp=Z,13nm,0.5s
PSI Prapat 42.43 136 P **P 00 44 45.7 +0.9**
comp=Z,10nm,0.6s,comp=Z,17nm,0.6s
PSI P **P 00 44 45.7 +0.9**
comp=Z,10nm,0.6s,comp=Z,17nm,0.6s
OBKA Obir 42.47 302 *e*P **P 00 44 45.9 +1.1**
comp=Z,14nm,1.4s
MOA Molln 42.50 304 *i* P **P 00 44 45.6 +0.6**
comp=Z,14nm,1.4s,SNR=5.7
MOA *e*P **PcP 00 46 33.1 +0.2**
comp=Z,9.8nm,1.6s
DEL Delary 42.52 316 *e*P **P 00 44 45.0 +0.2**
DEL Delary 42.52 316 *i* P **P 00 44 45.0 +0.2**
DEL IAmb IAmb 00 44 45.9
comp=Z,17nm,0.9s
RPSI Rantau Prapat 42.52 136 P **P 00 44 45.2 -0.1**
RPSI IAmb IAmb 00 44 46.8
comp=Z,13nm,0.5s
LJU Ljubljana 42.55 301 *i* P **P 00 44 46.6 +1.3**
LJU *i* PcP **PcP 00 46 33.2 +0.1**
JETT Jettan, Norway 42.63 336 *e*P **P 00 44 46.6 +0.9**
JETT IAmb IAmb 00 44 47.8
comp=Z,16nm,0.8s
LUNU Lund 42.72 315 *i* P **P 00 44 47.0 +0.5**
CUC Castrocucco 42.75 292 P **P 00 44 47.6 +0.5**
CUC IAmb IAmb 00 44 50.1
comp=Z,20nm,0.8s
GEC2 GERESS Array S 42.78 305 P **P 00 44 47.5 +0.2**
GERES GERESS Array B 42.78 305 P **P 00 44 47.9 +0.6**
comp=Z,3.4nm,1.1s,baz=91,slow=6.8,SNR=14
GERES PcP **PcP 00 46 33.9 0.0**
comp=Z,3.0nm,0.8s,baz=90,slow=5.3,SNR=9.0
GERES ScP **ScP 00 49 59.9 -2.1**
comp=Z,0.3nm,0.6s,baz=108,slow=4.3,SNR=5.9
comp=Z,3.4nm,1.1s
KHC Kasperske Hory 42.83 306 P **P 00 44 47.8 +0.2**
KHC Kasperske Hory 42.83 306 *e*P **P 00 44 48.7 +1.1**
KHC *e* 00 46 30.2
KHC Kasperske Hory 42.83 306 *e*P **P 00 44 48.7 +1.1**
KHC *e*PP **PP 00 46 30.2 -1.9**
GSI Gunungsitoli 42.94 139 P **P 00 44 50.2 +1.4**
BIOA Bad Ischl, Aus 42.94 304 *e*P **P 00 44 49.0 +0.6**
comp=Z,10.0nm,1.2s
BIOA *e*P **PP 00 46 33.3 +0.1**
comp=Z,6.8nm,1.2s
CLL Collm 43.04 309 P **P 00 44 49.3 +0.1**
CLL Collm 43.04 309 *i* P **P 00 44 49.2 +0.1**
CLL pmax pmax
comp=Z,10.0nm,1.1s
CLL Collm 43.04 309 *i* P **P 00 44 49.2 +0.1**
comp=Z,10.0nm,1.1s
CLL *e*PP **PP 00 46 34.0 -0.2**
CLL *e*SS SS 00 54 12.0 -6.1
MYKA Terra Mystica 43.07 302 *e*P **P 00 44 50.3 +0.7**
comp=Z,4.9nm,1.0s
TRO Tromso 43.14 336 *e*P **P 00 44 50.4 +0.7**
TRO IAmb IAmb 00 44 52.4
comp=Z,18nm,0.9s
PRED Cave del Predi 43.15 302 P **P 00 44 50.7 +0.5**
FABU Falkenberg 43.17 317 *i* P **P 00 44 50.5 +0.4**
BORU Boraas 43.18 318 *i* P **P 00 44 50.2 0.0**
COP Copenhagen 43.29 315 *i* P **P 00 44 51.2 +0.2**
COP IAmb IAmb 00 45 16.9
comp=Z,60nm,0.7s
PAOL Paolisi 43.43 294 P **P 00 44 53.2 +0.6**
NKC Novy Kostel 43.47 307 *e*P **P 00 44 54.6 +2.0**
NKC Novy Kostel 43.47 307 *e*P **P 00 44 54.6 +2.0**
CLUD Cludinico 43.62 302 P **P 00 44 53.8 -0.1**
ONAU Onsala 43.63 318 *i* P **P 00 44 54.0 +0.2**
FAUS Fauske 43.67 332 *e*P **P 00 44 54.9 +0.9**
FAUS IAmb IAmb 00 44 55.4
comp=Z,36nm,0.9s
MOR8 Moi Rana 43.68 331 *e*P **P 00 44 54.3 +0.2**
MOR8 IAmb IAmb 00 44 54.7
comp=Z,44nm,0.8s
STAL STALIGIAL 43.76 302 P **P 00 44 54.5 -0.6**
STAL PcP **PcP 00 46 36.9 -0.4**
TJOU Tjoern 43.81 319 *i* P **P 00 44 53.6 -1.5**
ABTA Abfaltersbach 43.83 302 *e*P **P 00 44 55.2 -0.4**
comp=Z,5.8nm,1.2s
ABTA *e*P **PP 00 46 43.0 +0.3**
comp=Z,3.8nm,0.9s
STEI Steigen 43.84 333 *e*P **P 00 44 56.1 +0.8**
STEI IAmb IAmb 00 44 56.3
comp=Z,18nm,0.8s

YAK Yakutsk 43.98 36 P **P 00 44 55.8 -0.7**
comp=Z,12nm,0.5s,baz=108,slow=0.3,SNR=5.4
comp=Z,12nm,0.5s
YAK Yakutsk 43.98 36 *e*P **P 00 44 56.3 -0.1**
YAK *e**PP **pP 00 45 50.0 +2.1**
YAK *e*S **S 00 51 09.1 -0.6**
YAK pmax pmax
comp=Z,28nm,0.8s
YAK smax smax
comp=E,69nm,1.3s
YAK smax smax
comp=N,39nm,1.5s
NC405 NORSAR Array S 44.00 323 P **P 00 44 56.7 0.0**
NC405 IAmb IAmb 00 44 58.1
comp=Z,47nm,0.8s
NC602 NORSAR Array S 44.05 323 P **P 00 44 57.6 +0.5**
NC602 IAmb IAmb 00 45 23.2
comp=Z,62nm,1.4s
NC602 NORSAR Array S 44.05 323 *e*P **P 00 44 57.5 +0.5**
NORES NORESS Array B 44.05 323 P **P 00 44 57.5 +0.4**
STRU Stroemstad 44.10 320 *i* P **P 00 44 56.9 -0.5**
NC303 NORSAR Array S 44.18 323 P **P 00 44 58.6 +0.5**
NC303 IAmb IAmb 00 44 59.4
comp=Z,33nm,0.8s
NB201 NORSAR Array S 44.20 323 P **P 00 44 58.8 +0.5**
NB201 IAmb IAmb 00 44 59.0
comp=Z,33nm,0.8s
NB2 NORSAR Subarra 44.24 323 P **P 00 44 58.3 -0.3**
comp=Z,21nm,0.8s,baz=97,slow=7.9
NB2 NORSAR Subarra 44.24 323 P **P 00 44 58.3 -0.3**
baz=97,slow=7.9
NOA NORSAR Array B 44.24 323 P **P 00 44 58.4 -0.2**
comp=Z,16nm,0.7s,baz=97,slow=7.7,SNR=88
NOA PP **PP 00 46 45.9 -0.9**
comp=Z,3.7nm,0.8s,baz=94,slow=9.6,SNR=3.7
comp=Z,16nm,0.7s
KONS Konsvik 44.28 331 *e*P **P 00 44 59.4 +0.6**
KONS IAmb IAmb 00 45 01.1
comp=Z,24nm,0.9s
GRA1 Grafenberg Arr 44.31 307 P **P 00 44 59.8 +0.5**
GRA1 IAmb IAmb 00 45 02.3
comp=Z,31nm,1.5s
GRF Grafenberg Arr 44.31 307 P **P 00 44 59.8 +0.5**
GRF pmax pmax
comp=Z,31nm,1.5s
GRFO Grafenberg 44.31 307 P **P 00 45 00.7 +1.4**
GRFO Grafenberg 44.31 307 P **P 00 45 00.7 +1.4**
GRFO pmax pmax
comp=Z,30nm,1.5s
WTTA Wattenberg 44.34 303 *e*P **P 00 44 59.8 0.0**
comp=Z,12nm,1.1s
WTTA *i* P **PcP 00 46 39.0 -0.4**
comp=Z,7.0nm,0.7s
NSS Namsos 44.36 328 *e*P **P 00 44 59.4 -0.1**
WATA Walderalm 44.37 303 *e*P **P 00 44 59.7 -0.3**
comp=Z,14nm,1.3s
NAO01 NORSAR Array S 44.38 323 P **P 00 44 58.8 -0.9**
NAO01 IAmb IAmb 00 45 00.0
comp=Z,57nm,1.2s
MURB Monte Urbino 44.43 297 P **P 00 45 01.5 +1.0**
MURB IAmb IAmb 00 45 04.0
comp=Z,37nm,1.0s
MNSI Mandailing Nat 44.45 137 P **P 00 45 01.1 +0.3**
comp=Z,50nm,0.6s
NBO00 NORSAR Array S 44.45 323 P **P 00 44 60.0 -0.3**
NBO00 IAmb IAmb 00 45 00.7
comp=Z,35nm,0.8s
NC204 NORSAR Array S 44.48 323 P **P 00 44 59.8 -0.8**
NC204 IAmb IAmb 00 45 01.8
comp=Z,29nm,0.9s
LOF Lofoten 44.52 333 *e*P **P 00 45 00.7 +0.1**
LOF IAmb IAmb 00 45 03.8
comp=Z,21nm,1.0s
CTI Castel Tesino 44.52 301 P **P 00 45 01.1 -0.1**
CTI PcP **PcP 00 46 39.9 -0.1**
CESX Cesi 44.53 296 P **P 00 45 01.5 +0.4**
TEOL Teolo 44.63 300 P **P 00 45 02.4 +0.5**
SQTA Sankt Quirin 44.64 303 *i* P **P 00 45 01.8 -0.3**
comp=Z,12nm,1.2s
SQTA *i* P **PcP 00 46 40.2 -0.2**
comp=Z,6.0nm,0.7s
MOTA Moosalm 44.69 303 *e*P **P 00 45 02.1 -0.4**
comp=Z,12nm,1.1s
MOTA *i* P **PcP 00 46 40.3 -0.3**
comp=Z,3.3nm,0.6s
RETA Reutte 44.90 304 *i* P **P 00 45 03.8 -0.2**
comp=Z,4.1nm,1.2s
RETA *e*P **PcP 00 46 40.8 -0.4**
comp=Z,3.3nm,0.7s
KONO Kongsberg 44.94 321 P **P 00 45 04.3 +0.2**
KONO Kongsberg 44.94 321 P **P 00 45 04.3 +0.2**
KONO pmax pmax
comp=Z,11nm,0.7s
KONO Kongsberg 44.94 321 *e*P **P 00 45 04.3 +0.2**
KSRS Korea Array 44.98 71 P **P 00 45 05.7 +1.0**
comp=Z,1.9nm,0.6s,baz=273,slow=6.3,SNR=6.8
comp=Z,1.9nm,0.6s
FETA Feichten 44.99 303 *e*P **P 00 45 04.5 -0.4**
comp=Z,8.5nm,1.1s
FETA *i* P **PcP 00 46 41.8 +0.2**
comp=Z,8.5nm,0.7s
LATE Laterza 45.09 297 P **P 00 45 05.7 +0.1**
LATE IAmb IAmb 00 45 07.4
comp=Z,30nm,1.2s
BJO1 Bjornoya 45.15 343 *e*P **P 00 45 05.8 +0.3**
KLR Kul'dur 45.20 54 P **P 00 45 07.4 +1.0**
comp=Z,2.8nm,0.6s,baz=272,slow=8.2,SNR=11
comp=Z,2.8nm,0.6s
KLR Kul'dur 45.20 54*c i*P **P 00 45 07.2 +0.9**
KLR pmax pmax
comp=Z,3.0nm,0.6s
OSSC Osservatorio P 45.29 298 P **P 00 45 05.4 -1.7**
DOMB Dombas 45.35 324 *e*P **P 00 45 09.4 +2.1**
FUORN Ofenpass-Fuorn 45.37 302 P **P 00 45 07.8 -0.3**
SALO Salr 45.38 301 P **P 00 45 08.0 +0.3**
SALO IAmb IAmb 00 45 09.8
comp=Z,24nm,1.0s
DAVA Damuels 45.52 303 *e*P **P 00 45 09.1 0.0**
comp=Z,32nm,1.1s,SNR=7.9
DAVA *e*P **PcP 00 46 43.6 +0.1**
comp=Z,4.6nm,0.6s
SKAR Skarslia 45.63 322 *e*P **P 00 45 11.0 +1.4**
SKAR IAmb IAmb 00 45 19.0
comp=Z,172nm,2.2s
BKNI Bangkinang 45.65 135 P **P 00 45 09.7 -0.5**
BKNI Bangkinang 45.65 135 P **P 00 45 10.5 +0.3**
comp=Z,4µmcomp=Z,68nm,0.7s
STU Stuttgart 45.74 306 P **P 00 45 10.8 +0.2**
STU IAmb IAmb 00 45 12.6
comp=Z,15nm,0.7s
STU Stuttgart 45.74 306 P **P 00 45 10.8 +0.2**
STU pmax pmax
comp=Z,15nm,0.7s
TIXI Tiksi 45.75 22 P **P 00 45 11.0 +0.8**
comp=Z,8.9nm,0.3s,baz=269,slow=23,SNR=31
TIXI PcP **PcP 00 46 42.9 -0.6**
comp=Z,11nm,0.7s,baz=270,slow=23,SNR=6.3
comp=Z,8.9nm,0.3s
TIXI Tiksi 45.75 22 P **P 00 45 10.1 -0.2**
TIXI IAmb IAmb 00 45 11.9
comp=Z,23nm,0.7s
TIXI PcP **PcP 00 46 43.0 -0.6**
TIXI Tiksi 45.75 22*c i*P **P 00 45 10.9 +0.7**
TIXI pmax pmax
comp=Z,31nm,1.0s
VLC Villacollemand 45.76 299 P **P 00 45 10.9 +0.1**
MSHR Mys Shultsa 46.02 63 *e*P **P 00 45 13.5 +0.7**
MSHR pmax pmax
comp=Z,20nm,1.3s
MSSA Maissana 46.34 299 P **P 00 45 14.8 -0.5**
BFO Black Forest 46.38 305 P **P 00 45 15.6 0.0**
BFO Black Forest 46.38 305 P **P 00 45 15.6 0.0**
BFO pmax pmax
comp=Z,6.0nm,1.0s
LODK Lodwar 46.41 233 P **P 00 45 17.4 +1.2**
BER Bergen 47.10 322 *e*P **P 00 45 21.7 +0.8**
BER IAmb IAmb 00 45 24.0
comp=Z,16nm,0.9s
ASK Askoy 47.16 322 *e*P **P 00 45 22.7 +1.3**
ASK IAmb IAmb 00 45 24.5
comp=Z,33nm,0.9s
SPB2 Spitsbergen Ar 47.38 347 P **P 00 45 23.4 +0.5**
SPB2 IAmb IAmb 00 45 40.7
comp=Z,42nm,1.1s
SPITS Spitsbergen Ar 47.39 347 P **P 00 45 24.6 +1.7**
comp=Z,12nm,0.7s,baz=104,slow=10,SNR=8.2

comp=Z,12nm,0.7s
SENIN Lac Senin/Sane 47.43 303 P **P 00 45 23.4 -0.5**
BTNL Ternell 47.44 309 *d*P **P 00 45 24.2 +0.5**
comp=Z,8.8nm,1.0s
MEM Membach 47.51 309 *d*P **P 00 45 25.1 +0.9**
comp=Z,11nm,0.9s
WLF Walferdange 47.57 307 P **P 00 45 25.6 +0.9**
WLF IAmb IAmb 00 45 27.0
comp=Z,22nm,0.9s
WLF Walferdange 47.57 307 P **P 00 45 25.6 +0.9**
WLF pmax pmax
comp=Z,22nm,0.9s
WLF Walferdange 47.57 307 *d*P **P 00 45 26.2 +1.6**
comp=Z,16nm,1.0s
BCLA Clavier 47.99 308 *d*P **P 00 45 29.0 +1.1**
RCHB Rochefort 48.08 308 *d*P **P 00 45 29.1 +0.6**
comp=Z,5.6nm,0.8s
BGES Gesves 48.13 308 *d*PcP **PcP 00 46 51.8 -0.6**
BNI Bardonecchia 48.15 301 P **P 00 45 28.9 -0.4**
BNI pmax pmax
comp=Z,14nm,1.1s
BMRD Maredsous 48.34 308 *d*P **P 00 45 30.8 +0.2**
comp=Z,13nm,1.0s
DOU Dourbes 48.49 308 *d*P **P 00 45 31.4 -0.3**
DOU *d*PcP **PcP 00 46 54.1 +0.3**
KBS Kingsbay 48.51 347 P **P 00 45 31.9 +0.5**
KBS IAmb IAmb 00 45 33.2
comp=Z,34nm,0.9s
KBS Kingsbay 48.51 347*c i*P **P 00 45 32.1 +0.7**
KBS pmax pmax
comp=Z,73nm,2.5s
SNF Seneffe 48.61 309 *d*P **P 00 45 33.1 +0.6**
SNF *d*PcP **PcP 00 46 54.0 -0.2**
KMBO Kilima Mbogo 48.79 227 P **P 00 45 35.2 +0.5**
comp=Z,0.2nm,0.6s,baz=30,slow=23,SNR=9.6
KMBO Kilima Mbogo 48.79 227 P **P 00 45 35.1 +0.5**
KMBO Kilima Mbogo 48.79 227 P **P 00 45 35.2 +0.5**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 48.79 227 P **P 00 45 36.2 +1.5**
KEST Kesra 48.89 288 P **P 00 45 36.0 +1.0**
comp=Z,9.5nm,0.5s,baz=56,slow=0.4,SNR=36
comp=Z,9.5nm,0.5s
KEST Kesra 48.89 288 P **P 00 45 36.1 +1.0**
KEST IAmb IAmb 00 45 37.2
comp=Z,14nm,0.8s
KIBK Kibwezi 49.30 226 P **P 00 45 39.6 +1.2**
SSB Saint Sauveur 49.56 302 P **P 00 45 39.7 -0.2**
SSB Saint Sauveur 49.56 302 P **P 00 45 39.7 -0.2**
KSM Kuching 50.48 125 P **P 00 45 46.8 -0.3**
EKA Eskdalemuir Ar 52.14 316 P **P 00 45 59.0 +0.1**
MBAR Mbarara 52.45 234 P **P 00 46 02.5 +0.6**
MBAR IAmb IAmb 00 46 03.6
comp=Z,25nm,0.7s
MBAR Mbarara 52.45 234 *i*P **P 00 46 02.7 +0.9**
MBAR pmax pmax
comp=Z,27nm,0.8s
YSS Yuzh-Sakhalins 52.89 55 *e*P **P 00 46 05.6 +1.2**
YSS pmax pmax
comp=Z,20nm,1.0s
NOR Nord 53.70 349 *i*P **P 00 46 10.8 +0.9**
NOR IAmb IAmb 00 46 11.0
comp=Z,9.7nm,1.1s
SEY Seymchan 54.43 34⇓*i*P **P 00 46 16.8 +1.5**
SEY pmax pmax
comp=Z,13nm,0.9s
DAG Danmarks Havn 54.62 344 *i*P **P 00 46 17.0 +0.5**
DAG IAmb IAmb 00 46 17.9
comp=Z,22nm,0.8s
CART Cartagena 55.96 294 P **P 00 46 26.2 -0.5**
CART IAmb IAmb 00 46 28.0
comp=Z,22nm,0.8s
BBKI Banjar Baru 57.16 124 P **P 00 46 35.8 +0.5**
comp=Z,7μmcomp=Z,80nm,0.8s
ESBB Sonseca Array 57.30 298 P **P 00 46 35.9 -0.3**
ESBB IAmb IAmb 00 46 37.2
comp=Z,9.6nm,0.8s
ESDC Sonseca Array 57.30 298 P **P 00 46 36.5 +0.4**
comp=Z,9.5nm,0.8s,baz=61,slow=7.1,SNR=73
ESDC PcP **PcP 00 47 27.0 -0.5**
comp=Z,1.8nm,0.8s,baz=50,slow=3.9,SNR=6.8
comp=Z,9.5nm,0.8s
ESDC Sonseca Array 57.30 298 P **P 00 46 36.0 -0.1**
TAM Tamanrasset 57.40 276 P **P 00 46 37.3 +0.1**
TAM Tamanrasset 57.40 276 P **P 00 46 37.3 +0.1**
TAM pmax pmax
comp=Z,8.0nm,1.0s
PAB San Pablo 57.63 298 P **P 00 46 37.5 -1.0**
PAB IAmb IAmb 00 46 39.7
comp=Z,25nm,1.4s
PAB San Pablo 57.63 298 P **P 00 46 37.5 -1.0**
PAB pmax pmax
comp=Z,25nm,1.4s
MPSI Mapaga 57.93 117 P **P 00 46 41.2 +0.4**
comp=Z,5μmcomp=Z,27nm,1.1s
TOLI2 Tolitoli 58.04 116 P **P 00 46 41.6 +0.1**
TOLI2 IAmb IAmb 00 46 42.4
comp=Z,9.0nm,0.8s
FIGM Figuig 58.40 289 P **P 00 46 44.0 0.0**
JBK JBK 58.44 291 P **P 00 46 45.1 +0.8**
BILL Bilibino 58.59 26⇑*e*P **P 00 46 46.1 +1.5**
BILL *e**PP **pP 00 47 37.7 -0.9**
BILL *e* 00 48 59.4
BILL *e*PPP PPP 00 50 24.0
BILL pmax pmax
comp=Z,16nm,0.8s
MVO Moncorvo 58.88 300 *e*P **P 00 46 47.6 +0.5**
comp=Z,24nm,1.6s
RER Riviere de l'E 59.17 196 P **P 00 46 49.3 +0.2**
MRSI Marisa 59.31 115 P **P 00 46 50.8 +0.5**
comp=Z,67nm,1.0s
AKLM AKL 59.33 292 P **P 00 46 51.0 +0.7**
PCAB Cabril 59.35 301 *e*P **P 00 46 50.9 +0.6**
PGAV Gavieira, Arco 59.42 302 *e*P **P 00 46 51.4 +0.6**
comp=Z,63nm,1.9s
MTE Manteigas 59.55 300 *e*P **P 00 46 52.4 +0.8**
comp=Z,38nm,1.3s
MTE Manteigas 59.55 300 P **P 00 46 51.0 -0.6**
MTE IAmb IAmb 00 46 53.4
comp=Z,20nm,0.8s
ABPO Ambohimpanom 59.63 206 P **P 00 46 53.0 +0.6**
ABPO IAmb IAmb 00 46 54.5
comp=Z,8.6nm,0.8s
ABPO Ambohimpanom 59.63 206 P **P 00 46 53.0 +0.6**
ABPO pmax pmax
comp=Z,9.0nm,0.8s
PVIS Viseu 59.66 300 *e*P **P 00 46 53.0 +0.6**
PCBR Castelo Branco 59.73 299 *e*P **P 00 46 53.7 +0.9**
comp=Z,32nm,1.7s
PMRV Marv??o 59.83 299 *e*P **P 00 46 54.1 +0.6**
comp=Z,26nm,1.9s
PETK Petropavlovsk- 60.00 44 P **P 00 46 53.6 -0.8**
comp=Z,3.2nm,0.9s,baz=286,slow=10,SNR=2.8
comp=Z,3.2nm,0.9s
PETK Petropavlovsk- 60.00 44 P **P 00 46 55.0 +0.6**
APSI Ampana 60.05 117 P **P 00 46 55.3 0.0**
comp=Z,54nm,1.5s
PBAR Barrancos 60.10 297 *e*P **P 00 46 55.8 +0.4**
comp=Z,30nm,1.5s
PESTR Estremoz 60.21 298 *e*P **P 00 46 56.4 +0.3**
PESTR Estremoz 60.21 298 P **P 00 46 55.6 -0.5**
PCAS Casmilo, Conde 60.35 300 *e*P **P 00 46 57.6 +0.6**
comp=Z,43nm,1.8s
LCRM LCR 60.44 292 P **P 00 46 59.0 +1.1**
MDT Midelt 60.63 291 P **P 00 46 59.8 +0.6**
EVO Evora 60.65 298 *e*P **P 00 46 59.4 +0.4**
comp=Z,20nm,1.6s
PBEJ Beja 60.76 297 *e*P **P 00 47 00.1 +0.3**
comp=Z,22nm,1.8s
PSBE So Bento 60.79 299 *e*P **P 00 47 00.8 +0.8**
comp=Z,47nm,1.7s
PVAQ Vaqueiros 60.92 297 *e*P **P 00 47 01.2 +0.3**
comp=Z,26nm,1.6s
PVAQ Vaqueiros 60.92 297 P **P 00 47 00.4 -0.5**
MESJ Messejana 61.09 297 *e*P **P 00 47 02.4 +0.4**
comp=Z,21nm,1.0s
PNCL Nicolau / Gran 61.19 298 *e*P **P 00 47 03.2 +0.5**
PMAFR Mafra 61.37 299 *e*P **P 00 47 04.4 +0.5**
comp=Z,108nm,1.9s
PTEO Sao Teotonio 61.58 297 *e*P **P 00 47 05.9 +0.6**
KAPI Kappang 61.61 121 P **P 00 47 04.7 -1.0**
KAPI IAmb IAmb 00 47 07.0
comp=Z,11nm,1.0s
KAPI Kappang 61.61 121 P **P 00 47 04.7 -1.0**
KAPI pmax pmax
comp=Z,11nm,1.0s
PFVI Vila Bisbo 61.83 297 *e*P **P 00 47 07.6 +0.6**
VOI Vohitsoka 62.45 205 P **P 00 47 11.3 +0.1**
AVE Averroes 62.52 292 P **P 00 47 10.6 -1.0**
AVE IAmb IAmb 00 47 12.6
comp=Z,15nm,0.7s
EUNU Eureka 62.92 356 P **P 00 47 14.4 +0.8**
ICESG Greenland Ices 63.09 338 *i*P **P 00 47 15.9 +0.8**
ICESG IAmb IAmb 00 47 19.1
comp=Z,5.1nm,0.8s
TNTI Ternate 63.14 111 P **P 00 47 15.8 -0.1**
OUK Oukaimeden 63.83 291 P **P 00 47 21.3 +0.6**
TTIG Tnine Tigouga, 64.58 290 P **P 00 47 26.0 +0.7**
TOA0 Torodi Ar. Sit 65.59 268 P **P 00 47 30.3 -1.5**
TORD Torodi Ar. Bea 65.59 268 P **P 00 47 30.3 -1.5**
comp=Z,16nm,0.5s,baz=51,slow=6.1,SNR=354
comp=Z,16nm,0.5s
ILULI Ilulissat 66.28 341 P **P 00 47 36.2 +1.0**
ILULI Ilulissat 66.28 341 P **P 00 47 36.3 +1.0**
ILULI pmax pmax
comp=Z,39nm,1.3s
DY2G Dye2 66.66 337 *i*P **P 00 47 38.3 +0.2**
SOEI Soe 68.11 121 P **P 00 47 46.5 -1.2**
SOEI Soe 68.11 121 P **P 00 47 46.7 -1.0**
comp=Z,4μmcomp=Z,3μmcomp=Z,33nm,0.9s
GAMB Gambell 68.49 25 P **P 00 47 48.9 -0.3**
baz=310
KOWA Kowa 69.43 273 P **P 00 47 54.8 -1.0**
KOWA Kowa 69.43 273 P **P 00 47 54.9 -0.9**
C23K Itkillik River 69.68 14 P **P 00 47 57.1 +0.8**
baz=325
C24K Franklin Bluff 70.14 14 P **P 00 47 59.8 +0.6**
baz=327
D23K Nanushuk River 70.38 15 P **P 00 48 00.7 0.0**
baz=326
E22K Anaktuvuk Pass 70.83 16 P **P 00 48 03.3 -0.2**
baz=325
TOLK Toolik Lake Re 70.88 15 P **P 00 48 03.7 0.0**
C27K Jago River 71.12 12 P **P 00 48 04.9 -0.2**
baz=331
A36M Sachs Harbour 71.14 5 P **P 00 48 06.1 +0.9**
A36M Sachs Harbour 71.14 5 P **P 00 48 04.8 -0.4**
baz=346,SNR=6.9
F21K Alatna River 71.20 17 P **P 00 48 05.1 -0.6**
baz=324
F22K John River 71.26 16 P **P 00 48 06.6 +0.5**
baz=325
G21K Allakaket 71.77 17 P **P 00 48 08.9 -0.1**
baz=324
G22K Bettles 71.90 16 P **P 00 48 09.4 -0.3**
baz=325
COLD Coldfoot 71.93 16 P **P 00 48 10.6 +0.6**
COLD IAmb IAmb 00 48 11.8
comp=Z,12nm,0.9s
COLD Coldfoot 71.93 16 P **P 00 48 09.7 -0.2**
baz=326
IMAR Indian Mountai 72.14 18 P **P 00 48 11.0 -0.3**
GCSA Galena City Sc 72.32 19 P **P 00 48 12.3 0.0**
baz=321
G23K Bananza Creek 72.40 16 P **P 00 48 13.2 +0.4**
baz=326
H21K Melozitna Rive 72.63 17 P **P 00 48 14.9 +0.7**
H21K IAmb IAmb 00 48 16.6
comp=Z,21nm,1.4s
H21K Melozitna Rive 72.63 17 P **P 00 48 14.4 +0.2**
baz=324
E27K Coleen River 72.76 12 P **P 00 48 14.4 -0.5**
baz=333
H22K Ishtalitna Cre 72.78 17 P **P 00 48 14.5 -0.5**
baz=326
G24K Hadweenzic Riv 72.95 15 P **P 00 48 16.5 +0.4**
baz=329
G25K Bearman Lake 73.18 14 P **P 00 48 17.2 -0.1**
baz=330
H23K Yukon River 73.25 16 P **P 00 48 18.4 +0.6**
H23K IAmb IAmb 00 48 19.6
comp=Z,8.3nm,0.8s
H23K Yukon River 73.25 16 P **P 00 48 17.7 -0.1**
baz=327,SNR=6.0
POGA Pongola 73.48 216 P **P 00 48 19.5 -0.1**
J20K Nowinta River 73.50 19 P **P 00 48 19.9 +0.7**
J20K IAmb IAmb 00 48 20.7
comp=Z,9.9nm,0.8s
J20K Nowinta River 73.50 19 P **P 00 48 19.5 +0.3**
baz=324,SNR=6.0
FYU Fort Yukon 73.53 14 P **P 00 48 21.1 +1.8**
H24K Noodor Dome 73.61 16 P **P 00 48 20.1 +0.2**
H24K IAmb IAmb 00 48 21.6
comp=Z,6.7nm,0.7s
H24K Noodor Dome 73.61 16 P **P 00 48 19.8 -0.1**
baz=328
MLY Manley 73.64 17 P **P 00 48 19.8 -0.3**
baz=326
H25K Birch Creek 73.67 15 P **P 00 48 19.9 -0.2**
baz=330
C36M Paulatuk 73.81 5 P **P 00 48 20.9 -0.1**
C36M Paulatuk 73.81 5 P **P 00 48 20.7 -0.2**
baz=348,SNR=7.2
INK Inuvik 73.85 9 P **P 00 48 22.1 +0.9**
comp=Z,14nm,0.5s,baz=351,slow=6.9,SNR=63
comp=Z,14nm,0.5s
INK Inuvik 73.85 9 P **P 00 48 21.5 +0.4**
INK Inuvik 73.85 9 P **P 00 48 21.3 +0.1**
baz=340,SNR=18
I23K Minto, Yukon-K 73.86 16 P **P 00 48 22.0 +0.7**
I23K IAmb IAmb 00 48 24.2
comp=Z,8.4nm,1.0s
I23K Minto, Yukon-K 73.86 16 P **P 00 48 21.4 +0.1**
baz=327
G27K Doyon Strip 73.98 13 P **P 00 48 22.4 +0.4**
baz=333,SNR=17
PSA00 Pilbara Seismi 74.06 133 P **P 00 48 22.4 -0.6**
PSA00 IAmb IAmb 00 48 23.6
comp=Z,12nm,0.8s
K20K Telida 74.18 19 P **P 00 48 24.0 +0.8**
K20K IAmb IAmb 00 48 24.7
comp=Z,11nm,0.8s
K20K Telida 74.18 19 P **P 00 48 23.7 +0.5**
baz=324,SNR=7.4
CHUM Lake Minchumin 74.21 18 P **P 00 48 23.0 -0.4**
baz=325
MDM Murphy Dome 74.28 16 P **P 00 48 22.8 -1.0**
MDM IAmb IAmb 00 48 26.3
comp=Z,10.0nm,1.0s
POKR Poker Plat Res 74.32 16 P **P 00 48 24.4 +0.4**
POKR IAmb IAmb 00 48 25.6
comp=Z,12nm,0.7s
POKR Poker Plat Res 74.32 16 **P 00 48 24.8 +0.8**
POKR Poker Plat Res 74.32 16 P **P 00 48 24.1 +0.1**
baz=329
BPAW Bear Paw Mtn. 74.36 18 P **P 00 48 23.7 -0.5**
BPAW IAmb IAmb 00 48 46.4
comp=Z,9.2nm,0.6s
BPAW Bear Paw Mtn. 74.36 18 P **P 00 48 25.0 +0.7**
baz=326
PRP Porcupine Dome 74.38 15 P **P 00 48 25.5 +1.0**
baz=330
NEA2 Nenana 74.40 17 P **P 00 48 24.8 +0.4**
NEA2 IAmb IAmb 00 48 25.4
comp=Z,13nm,0.8s
NEA2 Nenana 74.40 17 P **P 00 48 24.4 -0.1**
baz=328,SNR=7.9
TCOL CIGO, UAF Yank 74.44 16 P **P 00 48 24.4 -0.3**
TCOL CIGO, UAF Yank 74.44 16 P **P 00 48 24.8 +0.2**
baz=329
COLA College 74.44 16 P **P 00 48 25.0 +0.4**
COLA College 74.44 16*ce*P **P 00 48 25.2 +0.6**
COLA pmax pmax
comp=Z,16nm,0.9s
COLA College 74.44 16 P **P 00 48 24.6 0.0**
baz=329
H27K Steamboat Moun 74.52 13 P **P 00 48 25.4 +0.2**
baz=334,SNR=8.4
DBIC Dimbokro 74.57 267 P **P 00 48 25.1 -1.1**
comp=Z,6.1nm,0.6s,baz=44,slow=6.2,SNR=12
comp=Z,6.1nm,0.6s
F31M Tsiigehtchic 74.64 10 P **P 00 48 25.8 +0.1**
baz=340,SNR=6.6
CCB Clear Creek Bu 74.64 16 P **P 00 48 26.2 +0.4**
CAST Castle Rocks 74.65 19 P **P 00 48 25.7 -0.2**
CAST IAmb IAmb 00 48 27.7
comp=Z,22nm,1.0s
CAST Castle Rocks 74.65 19 P **P 00 48 26.0 0.0**
baz=325,SNR=11
LBTB Lobatse 74.65 222 P **P 00 48 26.8 +0.3**
LBTB IAmb IAmb 00 48 28.0
comp=Z,17nm,0.7s
LBTB Lobatse 74.65 222 P **P 00 48 26.8 +0.3**
LBTB pmax pmax
comp=Z,17nm,0.7s
KIC Kosan Boka 74.66 267⇑*e*P **P 00 48 25.7 -1.1**
comp=Z,16nm,0.5s
G30M tAoh Zraii Nji 74.72 11 P **P 00 48 25.1 -1.1**
baz=338,SNR=5.5
TIC Toumodi 74.72 267⇑*e*P **P 00 48 24.3 -2.8**
comp=Z,8.6nm,0.3s
IL31 74.74 16 P **P 00 48 25.9 -0.4**
ILAR Eielson Array 74.74 16 P **P 00 48 26.1 -0.2**
comp=Z,3.4nm,0.9s,baz=344,slow=3.7,SNR=20
comp=Z,3.4nm,0.9s
TSUM Tsumeb 74.86 232 P **P 00 48 27.2 -0.6**
TSUM IAmb IAmb 00 48 30.7
comp=Z,14nm,0.8s
L20K Farewell, AK 74.94 20 P **P 00 48 27.8 +0.1**
baz=324
LIC Lamto 74.97 267⇑*i*P **P 00 48 27.3 -1.2**
comp=Z,33nm,0.7s
HDA Harding Lake 75.04 16 P **P 00 48 27.6 -0.5**
baz=329
I26K Coal Creek Min 75.04 14 P **P 00 48 28.2 +0.1**
I26K IAmb IAmb 00 48 30.9
comp=Z,12nm,1.0s
I26K Coal Creek Min 75.04 14 P **P 00 48 28.7 +0.6**
baz=332,SNR=8.2
PPLA Purkeypile 75.05 19 P **P 00 48 28.4 0.0**
baz=325
I27K Kandik River 75.07 13 P **P 00 48 28.6 +0.2**
baz=334,SNR=7.7
N16K Nishlik Lake 75.10 23 P **P 00 48 28.7 +0.1**
baz=321
MCK McKinley 75.16 17 P **P 00 48 29.5 +0.6**
MCK McKinley 75.16 17 P **P 00 48 29.5 +0.6**
MCK pmax pmax
comp=Z,6.0nm,0.8s
MCK McKinley 75.16 17 P **P 00 48 29.0 +0.1**
baz=328
J25K Salcha River, 75.20 15 P **P 00 48 29.0 -0.1**
J25K IAmb IAmb 00 48 31.3
comp=Z,5.7nm,0.6s
J25K Salcha River, 75.20 15 P **P 00 48 29.4 +0.3**
baz=331,SNR=5.4
EPYK Eagle Plains 75.21 11 P **P 00 48 28.7 -0.3**
EPYK IAmb IAmb 00 48 31.3
comp=Z,20nm,1.3s
EPYK Eagle Plains 75.21 11 P **P 00 48 29.0 -0.1**
baz=337,SNR=5.1
KNRA Kununurra 75.38 122 P **P 00 48 30.2 -0.5**
M20K Styx River 75.64 20 P **P 00 48 31.4 -0.3**
baz=325
J26L Joseph Creek 75.68 15 P **P 00 48 31.7 -0.1**
J26L IAmb IAmb 00 48 34.1
comp=Z,14nm,0.8s
J26L Joseph Creek 75.68 15 P **P 00 48 31.8 -0.1**
baz=332,SNR=11
K24K Donnelly Dome 75.82 16 P **P 00 48 33.0 +0.4**
baz=330,SNR=9.2
I29M Ogilvie Camp, 75.88 12 P **P 00 48 32.3 -0.6**
I29M IAmb IAmb 00 48 35.0
comp=Z,10.0nm,0.8s
I29M Ogilvie Camp, 75.88 12 P **P 00 48 32.9 0.0**
baz=336,SNR=8.2
EGAK Eagle 75.90 14 P **P 00 48 33.2 +0.2**
EGAK IAmb IAmb 00 48 35.5
comp=Z,9.2nm,0.9s
EGAK Eagle 75.90 14 P **P 00 48 33.1 +0.2**
baz=334,SNR=5.0
SKT Skwentna 75.99 19 P **P 00 48 33.3 -0.2**
SKT Skwentna 75.99 19 P **P 00 48 34.3 +0.8**
baz=326
O16K Kokwok River B 76.00 23 P **P 00 48 34.0 +0.4**
baz=321
WAT1 Susitna Watana 76.02 17 P **P 00 48 33.2 -0.5**
baz=328
SCRK Sand Creek 76.05 15 P **P 00 48 34.2 +0.2**
SCRK IAmb IAmb 00 48 35.1
comp=Z,6.5nm,0.6s
SCRK Sand Creek 76.05 15 P **P 00 48 34.0 0.0**
baz=332
RIDG Independent Ri 76.08 16 P **P 00 48 33.8 -0.2**
RIDG IAmb IAmb 00 48 36.1
comp=Z,20nm,1.5s
RIDG Independent Ri 76.08 16 P **P 00 48 33.9 -0.2**
baz=331
DHY Denali Highway 76.09 17 P **P 00 48 34.0 -0.2**
DHY IAmb IAmb 00 48 36.2
comp=Z,11nm,0.8s
DHY Denali Highway 76.09 17 P **P 00 48 34.1 -0.2**
baz=329,SNR=7.1
N19K Bonanza Creek 76.13 21 P **P 00 48 34.8 +0.4**
baz=324
O17K Koliganek Bris 76.18 23 P **P 00 48 35.1 +0.5**
baz=322
DOT Dot Lake 76.33 15 P **P 00 48 35.2 -0.2**
DOT IAmb IAmb 00 48 37.5
comp=Z,6.6nm,0.7s
K27K Chicken 76.40 14 P **P 00 48 36.4 +0.6**
K27K IAmb IAmb 00 48 38.7
comp=Z,9.3nm,0.9s
K27K Chicken 76.40 14 P **P 00 48 35.9 +0.2**
baz=333
P16K Nushagak River 76.48 24 P **P 00 48 36.4 +0.1**
baz=322
PAX Paxson 76.62 16 P **P 00 48 36.7 -0.5**
PAX IAmb IAmb 00 48 39.1
comp=Z,12nm,0.8s
PAX Paxson 76.62 16 P **P 00 48 36.7 -0.5**
PAX pmax pmax
comp=Z,12nm,0.8s
PAX Paxson 76.62 16 P **P 00 48 37.1 -0.1**
baz=331,SNR=7.7
O18K Koktuh Hills 76.69 22 P **P 00 48 37.2 -0.3**
baz=324
DAWY Dawson 76.88 13 P **P 00 48 38.7 +0.2**
DAWY IAmb IAmb 00 48 40.8
comp=Z,14nm,0.9s
DAWY Dawson 76.88 13 P **P 00 48 38.1 -0.4**
baz=336,SNR=8.2
PMR Palmer 76.93 18 P **P 00 48 38.4 -0.4**
baz=328
SML Sawmill 76.95 18 P **P 00 48 38.8 -0.2**
baz=329
L26K Log Cabin Wild 77.03 15 P **P 00 48 40.2 +0.9**
L26K IAmb IAmb 00 48 42.4
comp=Z,14nm,1.4s
L26K Log Cabin Wild 77.03 15 P **P 00 48 39.1 -0.2**
baz=332
M23K Glacier View 77.11 18 P **P 00 48 39.2 -0.7**
baz=329,SNR=5.5
SCM Sheep Creek Mo 77.17 18 P **P 00 48 39.5 -0.8**
baz=329
Q16K King Salmon 77.19 23 P **P 00 48 40.3 +0.1**
baz=323
HARP HAARP 77.19 16 P **P 00 48 39.9 -0.3**
baz=331
M24K Tolsona, Glenn 77.21 17 P **P 00 48 39.0 -1.4**
baz=330,SNR=5.6
KNK Knik Glacier 77.26 18 P **P 00 48 39.7 -0.9**
baz=329
UNV Unalaska Valle 77.26 31 P **P 00 48 41.0 +0.3**
baz=316
L27K Beaver Creek, 77.31 15 P **P 00 48 42.1 +1.1**
L27K IAmb IAmb 00 48 43.8
comp=Z,8.8nm,0.8s
L27K Beaver Creek, 77.31 15 P **P 00 48 41.2 +0.2**
baz=334,SNR=7.5
BCAR Beaver Creek A 77.32 15 P **P 00 48 41.7 +0.7**
K29M Barlow Dome 77.41 12 P **P 00 48 41.5 -0.1**
baz=337,SNR=5.1
M26K Nabesna, AK 77.66 15 P **P 00 48 43.2 +0.3**
baz=333
BOSA Boshof 77.72 220 P **P 00 48 43.6 -0.1**
comp=Z,14nm,0.8s,baz=32,slow=4.4,SNR=20
comp=Z,14nm,0.8s
BOSA Boshof 77.72 220 P **P 00 48 43.6 -0.1**
BOSA IAmb IAmb 00 48 44.6
comp=Z,17nm,0.9s
BOSA Boshof 77.72 220 P **P 00 48 43.6 -0.1**
BOSA pmax pmax
comp=Z,17nm,0.9s
Q18K Katmai Hardscr 77.72 23 P **P 00 48 42.0 -1.4**
baz=324

KLU	**Klutina**	**77.81**	**17**	P	**P**	**00 48 43.9**	**+0.1**
KLU				IAmb	IAmb	00 48 46.2	
	comp=Z,10.0nm,0.9s						
KLU	**Klutina**	**77.81**	**17**	P	**P**	**00 48 43.2**	**-0.6**
	baz=330						
M27K	**Edge Creek, AK**	**77.94**	**15**	P	**P**	**00 48 45.2**	**+0.7**
M27K	**Edge Creek, AK**	**77.94**	**15**	P	**P**	**00 48 44.0**	**-0.5**
	baz=334,SNR=9.7						
L29M	**L29M**	**77.98**	**13**	P	**P**	**00 48 44.2**	**-0.5**
	baz=337,SNR=8.7						
N25K	**Chitina, Valde**	**78.01**	**16**	P	**P**	**00 48 44.6**	**-0.3**
	baz=332						
BVCY	**Beaver Creek**	**78.09**	**14**	P	**P**	**00 48 44.2**	**-1.1**
	baz=334						
M29M	**Somme Creek**	**78.53**	**13**	P	**P**	**00 48 47.4**	**-0.4**
	baz=336,SNR=5.0						
EYAK	**Cordova Ski Ar**	**78.67**	**17**	P	**P**	**00 48 48.0**	**-0.4**
	baz=331						
P23K	**Montague Islan**	**78.74**	**18**	P	**P**	**00 48 47.3**	**-1.4**
	baz=330						
YUK3	**Moose Creek**	**78.75**	**15**	P	**P**	**00 48 47.6**	**-1.5**
	baz=335,SNR=5.4						
KDAK	**Kodiak Island**	**79.17**	**22**	P	**P**	**00 48 50.3**	**-0.9**
	baz=326						
CHNA	**Chernabura Isl**	**79.21**	**27**	P	**P**	**00 48 50.8**	**-0.5**
	baz=321						
CTG	**Chitna Glacier**	**79.31**	**15**	P	**P**	**00 48 52.0**	**0.0**
	baz=334						
YUK8	**Steele Glacier**	**79.34**	**14**	P	**P**	**00 48 51.6**	**-0.8**
	baz=335						
OHAK	**Old Harbor**	**79.42**	**23**	P	**P**	**00 48 51.7**	**-0.8**
	baz=325						
M31M	**Drury Creek, Y**	**79.47**	**12**	P	**P**	**00 48 52.8**	**0.0**
M31M				IAmb	IAmb	00 48 55.2	
	comp=Z,15nm,0.9s						
M31M	**Drury Creek, Y**	**79.47**	**12**	P	**P**	**00 48 52.0**	**-0.7**
	baz=340						
YUK4	**Talbot Arm**	**79.51**	**14**	P	**P**	**00 48 52.1**	**-1.1**
	baz=336						
MMPY	**Sheldon Lake,**	**79.56**	**10**	P	**P**	**00 48 51.9**	**-1.3**
	baz=342						
FARO	**Faro, Yukon**	**79.61**	**11**	P	**P**	**00 48 51.9**	**-1.7**
	baz=340						
SII	**Sitkinak Islan**	**79.68**	**23**	P	**P**	**00 48 53.2**	**-0.7**
	baz=325						
N30M	**Aishikik Lake**	**79.70**	**13**	P	**P**	**00 48 53.2**	**-0.8**
	baz=338						
O28M	**Mount Upton**	**79.72**	**15**	P	**P**	**00 48 53.4**	**-1.1**
	baz=335						
WRGLY	**Wrigley**	**79.88**	**7**	P	**P**	**00 48 53.6**	**-1.2**
	baz=348						
MESA	**MESA**	**79.88**	**16**	P	**P**	**00 48 53.9**	**-1.3**
	baz=334						
N31M	**Braeburn, Yuko**	**79.91**	**13**	P	**P**	**00 48 55.7**	**+0.6**
N31M	**Braeburn, Yuko**	**79.91**	**13**	P	**P**	**00 48 54.2**	**-0.9**
	baz=339						
YUK6	**Outpost Mounta**	**79.93**	**14**	P	**P**	**00 48 54.4**	**-1.1**
	baz=336						
HYT	**Haines Junctio**	**80.21**	**14**	P	**P**	**00 48 57.5**	**+0.7**
HYT				IAmb	IAmb	00 49 00.9	
	comp=Z,16nm,0.9s						
HYT	**Haines Junctio**	**80.21**	**14**	P	**P**	**00 48 55.8**	**-1.0**
	baz=337						
PINM	**Pinnacle**	**80.32**	**15**	P	**P**	**00 48 56.5**	**-0.9**
	baz=335						
O30N	**Mendenhall**	**80.52**	**13**	P	**P**	**00 48 58.2**	**-0.2**
	baz=338						
N32M	**Quiet Lake**	**80.68**	**11**	P	**P**	**00 48 58.5**	**-0.7**
	baz=341						
WHY	**Whitehorse**	**80.84**	**13**	P	**P**	**00 48 59.3**	**-0.9**
	baz=339						
PNL	**Peninsula**	**80.89**	**15**	P	**P**	**00 48 59.8**	**-0.5**
	baz=336						
P30M	**Million Dollar**	**80.96**	**14**	P	**P**	**00 49 00.3**	**-0.5**
	baz=338						
TGTN	**Hyland Airport**	**81.01**	**9**	P	**P**	**00 49 00.7**	**-0.2**
	baz=345						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**00 49 02.0**	**+0.3**
	comp=Z,11nm,0.5s,baz=350,slow=5.2,SNR=38						
	comp=Z,11nm,0.5s						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**00 49 01.4**	**-0.4**
P33M	**Teslin, Yukon**	**81.61**	**12**	P	**P**	**00 49 04.2**	**0.0**
P33M	**Teslin, Yukon**	**81.61**	**12**	P	**P**	**00 49 03.4**	**-0.7**
	baz=341						
PLBC	**Pleasant Camp**	**81.69**	**14**	P	**P**	**00 49 04.0**	**-0.5**
	baz=338						
SKAG	**Skagway**	**81.88**	**13**	P	**P**	**00 49 05.3**	**-0.1**
	baz=339						
SCHQ	**Schefferville**	**81.97**	**337**	P	**P**	**00 49 06.1**	**0.0**
	comp=Z,4.2nm,0.8s,baz=58,slow=8.7,SNR=2.2						
	comp=Z,4.2nm,0.8s						
P32M	**Atlin**	**82.05**	**12**	P	**P**	**00 49 05.8**	**-0.6**
	baz=340						
WB0	**Warramunga Arr**	**82.06**	**122**	P	**P**	**00 49 05.7**	**-1.3**
WB0				IAmb	IAmb	00 49 06.6	
	comp=Z,8.8nm,0.9s						
WRA	**Warramunga Arr**	**82.14**	**122**	P	**P**	**00 49 06.2**	**-1.2**
	comp=Z,7.4nm,0.8s,baz=322,slow=5.2,SNR=39						
WRA				PKKPbc	**PKKPbc**	**01 07 33.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=130,slow=2.6,SNR=7.8						
	comp=Z,7.4nm,0.8s						
WRA	**Warramunga Arr**	**82.14**	**122**	P	**P**	**00 49 06.1**	**-1.3**
WB2	**Warramunga Arr**	**82.15**	**122**	P	**P**	**00 49 06.1**	**-1.3**
WB2				IAmb	IAmb	00 49 07.2	
	comp=Z,21nm,1.1s						
WR0	**Warramunga Arr**	**82.29**	**122**	P	**P**	**00 49 06.9**	**-1.3**
WR0				IAmb	IAmb	00 49 07.8	
	comp=Z,9.3nm,1.1s						
R33M	**Jennings River**	**82.68**	**11**	P	**P**	**00 49 09.2**	**-0.6**
	baz=342						
FLDN	**Fort Liard**	**82.81**	**7**	P	**P**	**00 49 10.4**	**+0.1**
	baz=348						
KOTAN	**Kotaneelee Air**	**82.86**	**7**	P	**P**	**00 49 10.4**	**-0.2**
	baz=348						
Q32M	**Nakina River**	**82.89**	**12**	P	**P**	**00 49 11.1**	**+0.1**
	baz=342						
R32K	**Eaglecrest**	**83.14**	**13**	P	**P**	**00 49 11.9**	**-0.1**
	baz=340						
DLBC	**Dease Lake**	**83.74**	**11**	P	**P**	**00 49 15.4**	**+0.3**
DLBC				IAmb	IAmb	00 49 17.3	
	comp=Z,14nm,0.9s						
DLBC	**Dease Lake**	**83.74**	**11**	P	**P**	**00 49 15.7**	**+0.5**
	baz=343						
S32K	**Killisnoo**	**83.89**	**13**	P	**P**	**00 49 15.4**	**-0.4**
	baz=340						
S34M	**Telegraph Cree**	**84.07**	**12**	P	**P**	**00 49 16.9**	**+0.1**
	baz=342						
SIT	**Sitka**	**84.13**	**14**	P	**P**	**00 49 17.1**	**+0.1**
	baz=339						
AS31	**Alice Springs**	**84.41**	**125**	P	**P**	**00 49 17.7**	**-1.2**
ASAR	**Alice Springs**	**84.41**	**125**	P	**P**	**00 49 17.8**	**-1.1**
	comp=Z,7.0nm,0.7s,baz=318,slow=5.2,SNR=44						
ASAR				PKKPbc	**PKKPbc**	**01 07 29.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=110,slow=3.1,SNR=1.9						
	comp=Z,7.0nm,0.7s						
COEN	**Coen**	**84.56**	**112**	P	**P**	**00 49 18.1**	**-1.7**
COEN				IAmb	IAmb	00 49 44.5	
	comp=Z,18nm,1.2s						
HILA	**High Level**	**84.99**	**4**	P	**P**	**00 49 21.3**	**-0.1**
T35M	**Bob Quinn**	**85.11**	**11**	P	**P**	**00 49 21.8**	**-0.2**
	baz=343						
MANA	**Manning**	**86.65**	**5**	P	**P**	**00 49 28.9**	**-0.6**
EDM	**Edmonton**	**90.49**	**3**	P	**P**	**00 49 47.9**	**+0.2**
EDM	**Edmonton**	**90.49**	**3**	P	**P**	**00 49 47.9**	**+0.2**
EDM				pmax	pmax		
	comp=Z,29nm,0.7s						
LLLB	**Lillooet**	**92.46**	**8**	P	**P**	**00 49 57.0**	**+0.2**
LLLB				IAmb	IAmb	00 49 58.9	
	comp=Z,13nm,1.1s						
ULM	**Lac du Bonnet**	**92.75**	**352**	P	**P**	**00 49 57.9**	**-0.2**
	comp=Z,5.3nm,0.8s,baz=114,slow=2.6,SNR=3.4						
	comp=Z,5.3nm,0.8s						
LONY	**Lake Ozonia**	**93.32**	**336**	P	**P**	**00 50 00.1**	**-0.8**
	baz=27						
WALA	**Waterton Lakes**	**94.63**	**3**	P	**P**	**00 50 06.9**	**0.0**
AGMN	**Agassiz Nation**	**94.67**	**351**	P	**P**	**00 50 07.3**	**+0.4**
	baz=11						
STKA	**Stephens Creek**	**94.94**	**126**	⇓*e*P	**P**	**00 50 10.4**	**+2.1**
B08A	**Colville Reser**	**94.95**	**7**	P	**P**	**00 50 08.8**	**+0.5**
B08A				IAmb	IAmb	00 50 09.7	
	comp=Z,5.1nm,0.9s						
DGMT	**Dagmar**	**95.21**	**357**	P	**P**	**00 50 09.0**	**-0.4**
	baz=4.0						
NEW	**Newport**	**95.23**	**5**	P	**P**	**00 50 10.2**	**+0.6**
NEW	**Newport**	**95.23**	**5**	P	**P**	**00 50 10.2**	**+0.6**
NEW				pmax	pmax		
	comp=Z,12nm,1.4s						
NEW	**Newport**	**95.23**	**5**	P	**P**	**00 50 09.2**	**-0.3**
	baz=354						
EGMT	**Eagleton**	**95.77**	**0**	P	**P**	**00 50 11.6**	**-0.4**
	baz=360						
MSO	**Missoula**	**96.86**	**3**	P	**P**	**00 50 16.5**	**-0.5**
	baz=356						
LAO	**LASA Array**	**97.07**	**358**	P	Pdif	00 50 18.8	+0.8
LAO	**LASA Array**	**97.07**	**358**	P	**P**	**00 50 17.4**	**-0.6**
	baz=2.4						
BOZ	**Bozeman (W)**	**98.17**	**2**	P	**P**	**00 50 21.8**	**-1.2**
	baz=358						
ECSD	**EROS Data Cent**	**99.25**	**351**	P	**Pdif**	**00 50 26.5**	**-1.2**
	baz=10						
O53A	**New Philadelph**	**99.34**	**339**	P	**Pdif**	**00 50 26.6**	**-1.5**
	baz=22						
H17A	**Grant Village**	**99.39**	**1**	P	**Pdif**	**00 50 26.9**	**-1.7**
	baz=359						
RSSD	**Black Hills**	**99.54**	**356**	P	**Pdif**	**00 50 27.7**	**-1.6**
	baz=4.2						
PDAR	**Pinedale Array**	**101.03**	**0**	P	**Pdif**	**00 50 36.8**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=59,slow=3.8,SNR=5.0						
PDAR				PKiKP	**PKiKP**	**00 54 59.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=49,slow=2.7,SNR=2.9						
R11A	**Troy Canyon, C**	**105.21**	**5**	P	**Pdif**	**00 50 52.5**	**-2.0**
	baz=355						
S22A	**4UR Ranch, Cre**	**106.01**	**358**	P	**PKiKP**	**00 55 08.1**	**-1.0**
	baz=1.9						
TIN	**Tinemaha, Big**	**106.25**	**8**	P	**PKiKP**	**00 55 08.4**	**-0.9**
	baz=352						
VES	**Vestal, Richgr**	**107.36**	**8**	P	**PKiKP**	**00 55 09.9**	**-1.3**
	baz=352						
TXAR	**Lajitas Array**	**114.23**	**355**	PKP	**PKiKP**	**00 55 23.9**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=8.5,slow=1.8,SNR=3.7						
TXAR				PKKPbc	**PKKPbc**	**01 06 04.2**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=184,slow=7.0,SNR=5.0						
TROLL	**Troll, Antarti**	**118.13**	**199**	PKPdf	**PKPdf**	**00 55 30.3**	**-0.3**
SNAA	**Sanae**	**119.42**	**200**	PKPdf	**PKPdf**	**00 55 32.2**	**-0.8**
VNA3	**Neumayer Olymp**	**121.23**	**202**	PKPdf	**PKPdf**	**00 55 35.8**	**-0.6**
VNDA	**Vanda**	**125.61**	**164**	PKP	**PKPdf**	**00 55 43.8**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=279,slow=4.8,SNR=3.7						
ROSC	**El Rosal**	**127.49**	**314**	PKP	**PKiKP**	**00 55 51.2**	**-0.1**
	comp=Z,15nm,0.6s,baz=134,slow=4.6,SNR=12						
CPUP	**Villa Florida**	**135.09**	**268**	PKP	**PKPdf**	**00 56 03.7**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=40,slow=1.8,SNR=15						
LPAZ	**La Paz**	**138.46**	**288**	PKP	**PKPdf**	**00 56 11.1**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=42,slow=4.4,SNR=7.2						
PLCA	**Paso Flores**	**149.73**	**250**	PKPbc	**PKPbc**	**00 56 34.9**	**+0.3**
	comp=Z,19nm,0.9s,baz=125,slow=2.0,SNR=22						

BUC 17 00:45:00.9±0.6, 45°54'N×26°52'E, h109km±4km, ml2.6/3, 24C-14D, Error ellipse: s-maj=5.4km s-min=2.5km az=178.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.33**	**16**	⇑P	Pn	00 45 17.1	+0.4
PLOR				⇑S	Sn	00 45 29.4	+0.7
PLOR	**Plostina**	**0.33**	**16**	⇓P	Pn	00 45 17.4	+0.6
PLOR	**Plostina**	**0.33**	**16**	⇓S	Sn	00 45 29.7	+1.0
VRI	**Vrincioaia**	**0.36**	**24**	⇓P	Pn	00 45 17.4	+0.5
VRI				⇑S	Sn	00 45 29.8	+0.9
VRI	**Vrincioaia**	**0.36**	**24**	⇓P	Pn	00 45 17.4	+0.5
VRI				⇑S	Sn	00 45 29.8	+0.9
COVR	**Voineasa-Covas**	**0.38**	**325**	⇑P	Pn	00 45 17.1	+0.1
COVR				⇓S	Sn	00 45 29.0	-0.1
COVR	**Voineasa-Covas**	**0.38**	**325**	⇑P	Pn	00 45 17.1	+0.1
COVR	**Voineasa-Covas**	**0.38**	**325**	⇓S	Sn	00 45 28.5	-0.6
MLR	**Muntele Rosu**	**0.41**	**264**	⇑P	Pn	00 45 18.0	+0.8
MLR				⇑S	Sn	00 45 30.3	+0.8
MLR	**Muntele Rosu**	**0.41**	**264**	⇑P	Pn	00 45 18.0	+0.8
MLR	**Muntele Rosu**	**0.41**	**264**	⇑S	Sn	00 45 30.3	+0.8
PANC	**Panciu**	**0.56**	**53**	⇑P	Pn	00 45 17.8	-0.2
PANC				⇓S	Sn	00 45 31.7	+0.8
PANC	**Panciu**	**0.56**	**53**	⇑P	Pn	00 45 17.8	-0.2
PANC				⇓S	Sn	00 45 31.7	+0.8
TUDR		**0.81**	**86**	⇑S	Sn	00 45 34.5	-0.1
TUDR		**0.81**	**86**	⇑S	Sn	00 45 34.5	-0.1
TESR	**Tescani**	**0.98**	**5**	⇓S	Sn	00 45 37.5	-0.2
TESR	**Tescani**	**0.98**	**5**	⇓S	Sn	00 45 37.1	-0.6
VOIR		**1.04**	**265**	⇑P	Pn	00 45 21.9	-0.6
VOIR				⇓S	Sn	00 45 38.7	-0.1
VOIR		**1.04**	**265**	⇑P	Pn	00 45 21.9	-0.6
VOIR		**1.04**	**265**	⇓S	Sn	00 45 38.7	-0.1
TATR	**Tatarca**	**1.08**	**86**	⇓S	Sn	00 45 39.3	-0.1
TATR	**Tatarca**	**1.08**	**86**	⇑S	Sn	00 45 38.9	-0.5
VLDR	**Vladesti**	**1.14**	**74**	⇑P	Pn	00 45 23.8	+0.4
VLDR				⇑S	Sn	00 45 41.0	+0.5
VLDR	**Vladesti**	**1.14**	**74**	⇑P	Pn	00 45 23.8	+0.4
VLDR				⇑S	Sn	00 45 41.0	+0.5
CFR	**Carcaliu**	**1.20**	**107**	⇑P	Pn	00 45 24.8	+0.7
CFR				⇑S	Sn	00 45 41.5	-0.1
CFR	**Carcaliu**	**1.20**	**107**	⇑P	Pn	00 45 24.8	+0.7
CFR	**Carcaliu**	**1.20**	**107**	⇓S	Sn	00 45 40.4	-1.2
MILM	**Milestii Mici**	**2.11**	**48**	*e*P	Pn	00 45 37.0	+1.8
MILM				*e*S	Sn	00 46 00.0	-1.4
	1.0nm,0.0s						

ROM 17 00:48:33.2±0.0, 42°643'N±0°002×13°329'E±0°004, h11km, ML2.0/21, 14C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=100.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.01**	**159**	P	Pg	00 48 35.6	+0.3
SMA1				S	Sg	00 48 36.9	+0.2
SMA1				AML	AML		
	comp=N,3740μm,0.3s						
SMA1				AML	AML		
	comp=E,3395μm,0.2s						
T1204	**Amatrice, Fraz**	**0.03**	**345**	P	Pg	00 48 35.7	+0.2
T1204				S	Sg	00 48 37.1	0.0
T1204				AML	AML		
	comp=E,6010μm,0.3s						
T1204				AML	AML		
	comp=N,4805μm,0.1s						
T1204				AML	AML		
	comp=E,6005μm,0.3s						
T1202	**Accumoli, Fraz**	**0.10**	**308**	⇓P	Pg	00 48 36.6	+0.6
T1202				AML	AML		
	comp=N,3305μm,0.1s						
T1243	**Rocca Santa Ma**	**0.10**	**59**	P	Pg	00 48 36.5	+0.4
T1243				S	Sg	00 48 38.5	+0.4
CAMP	**Campotosto**	**0.12**	**151**	P	Pg	00 48 36.7	+0.4
CAMP				S	Sg	00 48 39.1	+0.5
CAMP				AML	AML		
	comp=N,552μm,0.3s						
CAMP				AML	AML		
	comp=E,388μm,0.2s						
RM33	**Pellescritta (**	**0.16**	**212**	⇑P	Pg	00 48 37.4	+0.6
RM33				S	Sg	00 48 40.3	+0.9
RM33				AML	AML		
	comp=E,904μm,0.7s						
RM33				AML	AML		
	comp=N,1025μm,0.2s						
RM33				AML	AML		
	comp=E,876μm,0.7s						
RM33				AML	AML		
	comp=N,1007μm,0.2s						
RM33				AML	AML		
	comp=E,903μm,0.7s						
RM33				AML	AML		
	comp=N,1024μm,0.2s						
RM33				AML	AML		
	comp=N,1004μm,0.2s						
RM33				AML	AML		
	comp=N,1023μm,0.2s						
RM33				AML	AML		
	comp=E,879μm,0.7s						
RM33				AML	AML		
	comp=E,904μm,0.7s						
RM33				AML	AML		
	comp=N,1008μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.20**	**186**	⇑P	Pg	00 48 38.2	+0.6
T1247				S	Sg	00 48 41.8	+1.3
T1247				AML	AML		
	comp=E,714μm,0.4s						
T1247				AML	AML		
	comp=N,604μm,0.6s						
T1247				AML	AML		
	comp=E,714μm,1.6s						
T1247				AML	AML		
	comp=N,604μm,1.4s						
LNSS	**Leonessa**	**0.22**	**260**	⇑P	Pg	00 48 38.3	+0.5
LNSS				S	Sg	00 48 42.0	+1.0
LNSS				AML	AML		
	comp=N,502μm,0.7s						
LNSS				AML	AML		
	comp=E,718μm,1.6s						
LNSS				AML	AML		
	comp=N,502μm,0.7s						
LNSS				AML	AML		
	comp=E,718μm,1.6s						
LNSS				AML	AML		
	comp=E,718μm,0.4s						
LNSS				AML	AML		
	comp=N,502μm,1.3s						
T1245	**Castelsantange**	**0.24**	**334**	P	Pg	00 48 38.7	+0.5
T1245				S	Sg	00 48 42.7	+1.0
T1245				AML	AML		
	comp=E,454μm,0.8s						
T1245				AML	AML		
	comp=N,576μm,1.0s						
NRCA	**Norcia**	**0.25**	**320**	P	Pg	00 48 38.8	+0.4
NRCA				S	Sg	00 48 42.8	+1.0
NRCA				AML	AML		
	comp=E,1065μm,0.9s						
NRCA				AML	AML		
	comp=N,956μm,1.3s						
NRCA				AML	AML		
	comp=N,1114μm,1.3s						
NRCA				AML	AML		
	comp=N,1110μm,1.3s						
NRCA				AML	AML		
	comp=N,1110μm,1.3s						
NRCA				AML	AML		
	comp=E,1170μm,0.9s						
NRCA				AML	AML		
	comp=N,1110μm,0.7s						
MMO1	**Montemonaco**	**0.26**	**360**	⇑P	Pg	00 48 39.0	+0.5
MMO1				S	Sb	00 48 43.3	-1.1
GIGS	**Gran Sasso**	**0.26**	**137**	P	Pg	00 48 39.2	+0.6
GIGS				AML	AML		
	comp=E,54μm,0.7s						
GIGS				AML	AML		
	comp=N,60μm,0.3s						
GIGS				AML	AML		
	comp=N,60μm,0.3s						
GIGS				AML	AML		
	comp=E,54μm,1.3s						
MC2	**Monte Cornacci**	**0.29**	**339**	⇑P	Pg	00 48 39.6	+0.4
MC2				S	Sb	00 48 44.4	-1.1
T1217	**Poggiodomo (PG**	**0.30**	**283**	⇑P	Pg	00 48 39.7	+0.3
T1217				S	Sg	00 48 44.5	+1.0
T1217				AML	AML		
	comp=E,312μm,0.3s						
T1216	**Preci, Frazion**	**0.34**	**317**	⇑P	Pg	00 48 40.3	+0.3
T1216				S	Sb	00 48 45.9	-0.8
T1211	**Morro Reatino**	**0.37**	**253**	⇑P	Pg	00 48 40.8	+0.2
T1211				S	Sb	00 48 46.7	-0.9
T1211				AML	AML		
	comp=E,210μm,0.6s						
T1211				AML	AML		
	comp=N,357μm,0.2s						
T1211				AML	AML		
	comp=E,81550μm,1.3s						
T1211				AML	AML		
	comp=N,85000μm,1.0s						
T1211				AML	AML		
	comp=E,210μm,0.6s						
T1211				AML	AML		
	comp=N,357μm,0.2s						
T1215	**Vallo di Nera,**	**0.38**	**295**	⇑P	Pg	00 48 40.9	+0.2
T1215				AML	AML		
	comp=E,125μm,0.8s						
T1215				AML	AML		
	comp=N,178μm,1.3s						
T1215				AML	AML		
	comp=N,131μm,0.3s						
OFFI	**Offida**	**0.39**	**42**	⇑P	Pb	00 48 42.2	0.0
OFFI				AML	AML		
	comp=N,520μm,0.6s						
OFFI				AML	AML		
	comp=E,501μm,0.2s						
FIAM	**Fiamignano**	**0.41**	**203**	⇑P	Pg	00 48 41.5	+0.2
FIAM				S	Sb	00 48 47.8	-0.9
FIAM				AML	AML		
	comp=E,142μm,0.5s						
FIAM				AML	AML		
	comp=N,143μm,0.7s						
FIAM				AML	AML		
	comp=E,142μm,1.5s						
FIAM				AML	AML		
	comp=N,143μm,0.7s						
GUMA	**Gualdo di Mace**	**0.42**	**1**	⇑P	Pb	00 48 42.1	-0.5
GUMA				AML	AML		
	comp=N,504μm,0.3s						
GUMA				AML	AML		
	comp=N,596μm,0.5s						
GUMA				AML	AML		
	comp=N,503μm,0.3s						
GUMA				AML	AML		
	comp=E,586μm,0.3s						
GUMA				AML	AML		
	comp=N,596μm,1.5s						
GUMA				AML	AML		
	comp=E,528μm,0.7s						
ARRO	**Arrone**	**0.42**	**262**	⇑P	Pg	00 48 41.7	+0.2
ARRO				AML	AML		
	comp=E,110μm,0.9s						
ARRO				AML	AML		
	comp=N,160μm,0.2s						
ARRO				AML	AML		
	comp=N,160μm,0.2s						
ARRO				AML	AML		
	comp=E,110μm,0.9s						
ARRO				AML	AML		
	comp=N,160μm,1.8s						
ARRO				AML	AML		
	comp=E,110μm,1.1s						
VCEL	**Villa Celiera**	**0.45**	**123**	⇓P	Pb	00 48 42.8	-0.4
VCEL				AML	AML		
	comp=N,210μm,0.9s						
VCEL				AML	AML		
	comp=E,226μm,0.7s						
VCEL				AML	AML		
	comp=N,210μm,0.9s						
VCEL				AML	AML		
	comp=N,210μm,1.1s						
TRTR	**Tortoreto Alta**	**0.46**	**69**	⇑P	Pb	00 48 43.8	+0.4
T0110	**Collepietro**	**0.53**	**141**	P	Pg	00 48 44.0	+0.3
T0110				AML	AML		
	comp=E,128μm,0.4s						
T0110				AML	AML		
	comp=N,105μm,1.5s						
T0110				AML	AML		
	comp=N,105μm,0.5s						
CESX	**Cesi**	**0.55**	**267**	⇓P	Pg	00 48 43.9	-0.1
CESX				AML	AML		
	comp=E,86μm,0.3s						
CESX				AML	AML		
	comp=N,79μm,0.5s						
ASSB	**Assisi San Ben**	**0.64**	**309**	⇓P	Pg	00 48 46.0	+0.4
ASSB				AML	AML		
	comp=N,67μm,0.1s						
ASSB				AML	AML		
	comp=E,74μm,0.5s						
SNTG	**Esanatoglia**	**0.68**	**335**	⇓P	Pb	00 48 46.9	-0.2
SNTG				S	Sn	00 48 58.0	-1.4
SNTG				AML	AML		
	comp=E,31μm,0.6s						
SNTG				AML	AML		
	comp=N,32μm,0.2s						
SNTG				AML	AML		
	comp=E,31μm,0.6s						
SNTG				AML	AML		
	comp=E,31μm,1.4s						
EL6	**Elcito**	**0.71**	**346**	P	Pg	00 48 47.0	+0.1
EL6				S	Sn	00 48 60.0	-0.2
CING	**Cingoli**	**0.74**	**352**	⇓P	Pg	00 48 47.5	0.0
CING				AML	AML		
	comp=E,120μm,0.1s						
CING				AML	AML		
	comp=N,76μm,1.5s						
CING				AML	AML		
	comp=N,76μm,0.5s						
**

ATCC AML AML
comp=E,41μm,0.2s
FSSB Fossombrone 1.12 339 P Pb 00 48 54.5 -0.2
FSSB AML AML
comp=E,56μm,0.4s
FSSB AML AML
comp=N,70μm,0.4s
FSSB AML AML
comp=N,70μm,0.4s
FSSB AML AML
comp=N,70μm,1.6s

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*SOF **17** 00:49:16.7, 41°.68N×26°.72E, h10km, MD3.0*
*ATH **17** 00:49:18.5, 41°.71N×26°.57E, h22km±1km, ML2.4/4, Error ellipse: s-maj=2.9km s-min=1.6km az=225.0*
*ISK **17** 00:49:19.3, 41°.69N×26°.57E, h8km, ML2.8/32*
*THE **17** 00:49:19.5, 41°.63N×26°.60E, h3km±2km, ML2.3/7, Error ellipse: s-maj=2.3km s-min=0.9km az=323.0*
*DDA **17** 00:49:20.2±0.0, 41°.62N×26°.67E, h7km±2km, ML2.6*
ISC 17 00:49:19.6±0.9, 41°.68N±0°.02×26°.56E±0°.02, h11km±8km, n76, σ0s73/98, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDRB	**Edirne**	**0.22**	**38**	PG	**Pg**	**00 49 24.6**	**+0.4**
EDRB				SG	**Sg**	**00 49 27.3**	**0.0**
EDRB	**Edirne**	**0.22**	**38**	P	**Pg**	**00 49 24.5**	**+0.4**
EDRB				S	**Sg**	**00 49 27.6**	**+0.3**
	1μm,0.1s						
KIRK	**Kırklareli**	**0.41**	**75**	P	**Pg**	**00 49 27.4**	**-0.3**
KIRK				S	**Sg**	**00 49 32.4**	**-0.8**
KIRK				*i* AML	AML	00 49 33.0	
	comp=N,632nm,0.3s						
UKOP	**Uzunkopru-Edir**	**0.55**	**175**	PG	**Pb**	**00 49 30.8**	**-0.5**
ARMN	**Kirklareli, Me**	**0.67**	**74**	P	**Pg**	**00 49 32.3**	**-0.4**
ARMN				S	**Sg**	**00 49 40.4**	**-1.1**
ARMN				*i* AML	AML	00 49 42.0	
	comp=E,313nm,0.1s						
PHSR	**Pinarhisar**	**0.72**	**93**	PG	**Pb**	**00 49 33.7**	**-0.5**
JMB	**Yambol**	**0.79**	**1**	PG	**Pg**	**00 49 34.6**	**-0.2**
JMB	**Yambol**	**0.79**	**1**	*i* P	**Pg**	**00 49 33.0**	**-1.9**
DIM	**Dimitrovgrad**	**0.85**	**296**	*i* P	**Pg**	**00 49 36.0**	**-0.1**
KESN	**Edirne-Kesan**	**0.85**	**174**	P	**Pg**	**00 49 35.8**	**-0.4**
KESN				S	**Sg**	**00 49 45.8**	**-1.6**
KESN				*i* AML	AML	00 49 49.0	
	comp=N,517nm,0.4s						
KESN				*i* AML	AML	00 49 50.0	
	comp=E,475nm,0.2s						
KDZ	**Kurdzhali**	**0.86**	**269**	PG	**Pn**	**00 49 37.5**	**-0.2**
KDZ	**Kurdzhali**	**0.86**	**269**	*i* P	**Pb**	**00 49 37.1**	**+0.5**
ALN	**Alexandroupoli**	**0.87**	**207**	PG	**Pg**	**00 49 36.1**	**-0.3**
ALN	**Alexandroupoli**	**0.87**	**207**	P	**Pg**	**00 49 36.1**	**-0.3**
ALN				S	**Sg**	**00 49 47.9**	**+0.2**
	155nm,0.5s						
ALN	**Alexandroupoli**	**0.87**	**207**	P	**Pg**	**00 49 36.0**	**-0.3**
ALN				S	**Sb**	**00 49 48.4**	**0.0**
ALN				AML	AML	00 49 51.6	
	comp=E,322μm,0.3s						
ALN				AML	AML	00 49 53.1	
	comp=N,271μm,0.4s						
RDO	**Rodhopi**	**0.94**	**236**	PG	**Pb**	**00 49 38.3**	**+0.5**
RDO	**Rodhopi**	**0.94**	**236**	P	**Pg**	**00 49 37.4**	**-0.2**
RDO				S	**Sg**	**00 49 49.5**	**-0.3**
	comp=N,495nm,0.2s						
RDO	**Rodhopi**	**0.94**	**236**	P	**Pg**	**00 49 37.2**	**-0.5**
RDO				S	**Sb**	**00 49 50.4**	**+0.1**
RDO				AML	AML	00 49 53.8	
	comp=N,1245μm,0.2s						
RDO				AML	AML	00 49 53.9	
	comp=E,706μm,0.2s						
VIZE	**Kirklareli, Vi**	**0.96**	**95**	P	**Pg**	**00 49 37.5**	**-0.6**
VIZE				S	**Sg**	**00 49 49.8**	**-0.8**
VIZE				*i* AML	AML	00 49 53.0	
	comp=E,186nm,0.4s						
TKR	**Tekirdag**	**1.00**	**133**	PG	**Pb**	**00 49 38.9**	**-0.1**
CAVK	**Edirne/Enez-Ca**	**1.03**	**197**	P	**Pg**	**00 49 39.1**	**-0.3**
CAVK				S	**Sb**	**00 49 53.0**	**+0.1**
CAVK				*i* AML	AML	00 49 55.0	
	comp=E,181nm,0.2s						
CRLT	**Corlu**	**1.04**	**121**	PG	**Pb**	**00 49 39.7**	**+0.1**
SART	**Tekirdag**	**1.09**	**155**	P	**Pg**	**00 49 40.4**	**-0.2**
SART				S	**Sg**	**00 49 54.0**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.09**	**155**	PN	**Pb**	**00 49 40.6**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.28**	**183**	PN	**Pn**	**00 49 43.3**	**-0.1**
CTYL	**Yalikoy Yolu**	**1.31**	**98**	PN	**Pb**	**00 49 44.2**	**0.0**
SLVT	**Silivri**	**1.31**	**109**	PN	**Pb**	**00 49 44.4**	**+0.1**
MRMT	**Marmara Adasi**	**1.33**	**144**	PN	**Pb**	**00 49 44.6**	**+0.1**
RZN	**Rozhen**	**1.38**	**271**	*i* P	**Pn**	**00 49 44.8**	**-0.3**
SMTH	**Samothraki Isl**	**1.44**	**213**	P	**Pn**	**00 49 44.9**	**-0.7**
SMTH				S	**Sg**	**00 50 05.6**	**-0.2**
	comp=E,98nm,0.3s						
SMTH	**Samothraki Isl**	**1.44**	**213**	P	**Pn**	**00 49 45.4**	**-0.2**
SMTH				S	**Sg**	**00 50 05.8**	**0.0**
SMTH				AML	AML	00 50 10.1	
	comp=N,236μm,0.4s						
SMTH				AML	AML	00 50 12.1	
	comp=E,157μm,0.1s						
PLD	**Plovdiv**	**1.45**	**288**	PN	**Pb**	**00 49 46.5**	**-0.2**
PLD	**Plovdiv**	**1.45**	**288**	*i* P	**Pn**	**00 49 45.8**	**0.0**
CTKS	**Kestanelik-??a**	**1.52**	**106**	PN	**Pn**	**00 49 46.4**	**-0.4**
GOKA	**anakkale-Gk**	**1.57**	**199**	P	**Pb**	**00 49 48.5**	**-0.1**
GOKA				S	**Sg**	**00 50 09.5**	**-0.4**
GOKA				*i* AML	AML	00 50 12.0	
	comp=E,152nm,0.3s						
GOKA				*i* AML	AML	00 50 14.0	
	comp=E,116nm,0.5s						
GADA	**Gvkgeada**	**1.57**	**199**	PN	**Pb**	**00 49 48.2**	**-0.4**
PRD	**Provadia**	**1.64**	**22**	*i* P	**Pn**	**00 49 48.7**	**+0.3**
EDC	**Edincik**	**1.65**	**143**	PN	**Pn**	**00 49 49.3**	**+0.7**
ECEA	**Canakkale, Ece**	**1.66**	**190**	P	**Pb**	**00 49 50.3**	**+0.1**
KAVA	**Kavala**	**1.69**	**247**	P	**Pn**	**00 49 49.1**	**+0.1**
KAVA				S	**Sn**	**00 50 11.1**	**+0.5**
	comp=E,192nm,0.3s						
KAVA	**Kavala**	**1.69**	**247**	P	**Pn**	**00 49 49.2**	**+0.1**
KAVA				S	**Sn**	**00 50 11.6**	**+1.0**
BGKT	**Bogazkoy**	**1.73**	**106**	PN	**Pn**	**00 49 50.5**	**+0.8**
AVCI	**Avcilar-stanb**	**1.76**	**112**	PN	**Pn**	**00 49 50.8**	**+0.8**
KVLA	**Kavala**	**1.80**	**246**	P	**Pn**	**00 49 51.2**	**+0.6**
EZN	**Ezine**	**1.86**	**186**	PN	**Pn**	**00 49 52.5**	**+1.1**
EZN	**Ezine**	**1.86**	**186**	P	**Pn**	**00 49 50.8**	**-0.6**
EZN				S	**Sn**	**00 50 14.0**	**-0.8**
	comp=E,55nm,0.7s						
BOZC	**Bozcaada**	**1.87**	**192**	PN	**Pn**	**00 49 52.8**	**+1.2**
BOZC	**Bozcaada**	**1.87**	**192**	P	**Pb**	**00 49 54.2**	**+0.4**
KLYT	**Kilyos**	**1.91**	**102**	PN	**Pn**	**00 49 52.9**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**1.93**	**180**	P	**Pn**	**00 49 52.4**	**0.0**
BAYC				S	**Sn**	**00 50 15.8**	**-0.9**
ISK	**Istanbul-Kandi**	**1.98**	**107**	PN	**Pn**	**00 49 53.8**	**+0.8**
ISK	**Istanbul-Kandi**	**1.98**	**107**	P	**Pn**	**00 49 52.1**	**-0.9**
KAVV	**Kandilli-Istan**	**1.98**	**107**	PN	**Pn**	**00 49 53.8**	**+0.8**
NVR	**Nevrokopi**	**2.06**	**262**	P	**Pn**	**00 49 55.5**	**+1.4**
NVR				S	**Sb**	**00 50 23.1**	**+0.6**
	comp=E,52nm,0.4s						
NVR	**Nevrokopi**	**2.06**	**262**	P	**Pn**	**00 49 53.9**	**-0.3**
NVR				S	**Sn**	**00 50 20.3**	**+0.5**
NVR				AML	AML	00 50 29.8	
	comp=N,112μm,0.5s						
NVR				AML	AML	00 50 30.8	
	comp=E,96μm,0.2s						
ARMT	**Armutlu**	**2.06**	**122**	PN	**Pn**	**00 49 55.1**	**+0.9**
BALY	**Balya**	**2.09**	**157**	P	**Pn**	**00 49 53.6**	**-1.0**
KOKK	**Kokkinochori,**	**2.12**	**247**	P	**Pn**	**00 49 54.5**	**-0.4**
MDNY	**Mudanya-Bursa**	**2.19**	**126**	PN	**Pn**	**00 49 57.0**	**+1.1**
SRS	**Serrai**	**2.31**	**257**	P	**Pn**	**00 49 57.7**	**+0.2**
SRS	**Serrai**	**2.31**	**257**	P	**Pn**	**00 49 57.8**	**+0.2**
OUR	**Ouranopolis**	**2.37**	**236**	PN	**Pn**	**00 49 59.7**	**+1.3**
SILT	**Sile**	**2.37**	**102**	PN	**Pn**	**00 49 59.7**	**+1.2**
YLV	**Yalova**	**2.39**	**117**	PN	**Pn**	**00 49 59.8**	**+1.0**
PRK	**Paraskevi**	**2.44**	**185**	P	**Pn**	**00 50 00.4**	**+1.0**
PRK				S	**Sn**	**00 50 30.3**	**+1.1**
HRT	**Hereke**	**2.49**	**109**	PN	**Pn**	**00 50 01.3**	**+1.2**
SIGR	**SIGRI**	**2.52**	**193**	PN	**Pn**	**00 50 01.9**	**+1.4**
SIGR	**SIGRI**	**2.52**	**193**	P	**Pn**	**00 50 00.6**	**+0.1**
DKL	**Dikili**	**2.62**	**174**	PN	**Pn**	**00 50 03.3**	**+1.5**
KNT	**Kendrikon**	**2.80**	**261**	PN	**Pn**	**00 50 05.2**	**+0.8**
KNT	**Kendrikon**	**2.80**	**261**	P	**Pn**	**00 50 04.5**	**+0.1**
KNT	**Kendrikon**	**2.80**	**261**	P	**Pn**	**00 50 04.5**	**+0.1**
HORT	**Hortiatis**	**2.83**	**249**	PN	**Pn**	**00 50 06.4**	**+1.6**
SAUV	**Serdivan-Sakar**	**2.99**	**107**	PN	**Pn**	**00 50 08.4**	**+1.5**
VAY	**Valandovo**	**3.02**	**265**	*i* Pn	**Pg**	**00 50 16.9**	**-0.6**
STIP	**Stip**	**3.28**	**272**	*i* Pn	**Pn**	**00 50 09.2**	**-1.7**

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*IDC **17** 01:02:21.2±2.3, 4°.03N×77°.25W, h0km, mb3.1/1, mbtmp3.6/2, ML3.2/1, Error ellipse: s-maj=72.4km s-min=36.1km az=2.0*
*RSNC **17** 01:02:30.9±1.1, 6°.81N×73°.16W, h149km±4km, ML3.3, Mw3.6*
ISC 17 01:02:29.8±1.0, 6°.83N±0°.03×73°.14W±0°.04, h153km±6km, n39, σ1s47/69, 4C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**191**	⇓*i* P	**Pn**	**01 02 50.9**	**0.0**
BARC				*e* S	**Sn**	**01 03 06.0**	**-1.1**
BARC				*i*		01 03 07.3	
	comp=Z,826nm,0.2s						
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑*i* P	**Pn**	**01 02 52.8**	**+0.5**
BRRC				*e* S	**Sn**	**01 03 09.9**	**+0.5**
BRRC				*i*		01 03 12.6	
	comp=Z,410nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	⇑*i* P	**Pn**	**01 02 53.7**	**+0.6**
PAMC				*e* S	**Sn**	**01 03 10.9**	**+0.1**
PAMC				*i*		01 03 13.2	
	comp=Z,606nm,0.5s						
RUSC	**La Rusia**	**0.93**	**177**	⇓*i* P	**Pn**	**01 02 54.8**	**-0.2**
RUSC				*e* S	**Sn**	**01 03 13.5**	**-0.6**
RUSC				*i*		01 03 14.8	
	comp=Z,497nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*e* P	**Pn**	**01 02 57.2**	**-0.8**
PTBC				*e* S	**Sn**	**01 03 18.9**	**-0.8**
PTBC				*i*		01 03 20.6	
	comp=Z,466nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**106**	⇑*i* P	**Pn**	**01 02 59.2**	**+0.6**
TAMC				*e* S	**Sn**	**01 03 21.4**	**+0.9**
TAMC				*i*		01 03 21.6	
	comp=Z,84nm,0.4s						
OCAC	**Ocana**	**1.42**	**353**	*e* P	**Pn**	**01 02 58.8**	**-0.2**
OCAC				*e* S	**Sn**	**01 03 21.1**	**-0.3**
OCAC				*i*		01 03 24.1	
	comp=Z,408nm,0.1s						
SPBC	**San Pablo de B**	**1.49**	**219**	*e* P	**Pn**	**01 02 59.5**	**-0.1**
SPBC				*e* S	**Sn**	**01 03 22.0**	**-0.5**
SPBC				*i*		01 03 28.1	
	comp=Z,551nm,0.2s						
NORC	**Norcasia**	**2.13**	**234**	*e* P	**Pn**	**01 03 06.6**	**-0.2**
NORC				*e* S	**Sn**	**01 03 34.8**	**-0.4**
NORC				*i*		01 03 39.4	
	comp=Z,208nm,0.2s						
CHIC	**Chingaza**	**2.26**	**195**	⇓*i* P	**Pn**	**01 03 08.7**	**0.0**
CHIC				*e* S	**Sn**	**01 03 38.4**	**-0.2**
CHIC				*i*		01 03 43.9	
	comp=Z,124nm,0.3s						
ROSC	**El Rosal**	**2.30**	**211**	Pn	**Pn**	**01 03 10.6**	**+1.5**
	comp=Z,64nm,0.3s,baz=274,slow=19,SNR=204						
ROSC				Sn	**Sn**	**01 03 41.2**	**+1.9**
	comp=Z,65nm,0.3s,baz=23,slow=24,SNR=16						
	comp=Z,142nm,0.3s						
ROSC	**El Rosal**	**2.30**	**211**	⇓*i* P	**Pn**	**01 03 10.4**	**+1.3**
ROSC				*e* S	**Sn**	**01 03 40.0**	**+0.7**
ROSC				*i*		01 03 46.5	
	comp=Z,269nm,0.3s						
HELC	**Santa Helena**	**2.46**	**255**	*e* P	**Pn**	**01 03 11.8**	**+0.8**
HELC				*e* S	**Sn**	**01 03 42.0**	**-0.6**
HELC				*i*		01 03 49.9	
	comp=Z,162nm,0.3s						
SOCV	**Socops**	**2.69**	**57**	*e* P	**Pn**	**01 03 13.5**	**0.0**
SOCV				*e* S	**Sn**	**01 03 45.5**	**-1.7**
GUY2C	**Guyana, Caldas**	**2.73**	**234**	*e* P	**Pn**	**01 03 14.8**	**+0.3**
GUY2C				*e* S	**Sn**	**01 03 49.5**	**+0.7**
GUY2C				*i*		01 03 56.9	
	comp=Z,163nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e* P	**Pn**	**01 03 15.8**	**+1.8**
LL1C				*e* S	**Sn**	**01 03 51.2**	**+3.0**
VILC	**Villavicencio,**	**2.75**	**192**	*e* P	**Pn**	**01 03 14.2**	**-0.3**
VILC				*e* S	**Sn**	**01 03 49.2**	**+0.3**
VILC				*i*		01 03 57.7	
	comp=Z,146nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇑*i* P	**Pn**	**01 03 13.9**	**-0.9**
PTGC				*e* S	**Sn**	**01 03 46.5**	**-3.1**
PTGC				*i*		01 03 52.2	
	comp=Z,119nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.01**	**252**	*e* P	**Pn**	**01 03 18.5**	**+0.8**
CBOC				*e* S	**Sn**	**01 03 53.1**	**-1.6**
CBOC				*i*		01 04 10.6	
	comp=Z,56nm,0.5s						
DBBC	**Dabeiba**	**3.06**	**274**	*e* P	**Pn**	**01 03 19.3**	**+1.1**
DBBC				*e* S	**Sn**	**01 03 54.2**	**-1.4**
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e* P	**Pn**	**01 03 20.8**	**+0.8**
ARGC				*e* S	**Sn**	**01 03 59.5**	**+0.7**
ARGC				*i*		01 04 07.0	
	comp=Z,43nm,0.2s						
ANIL	**Santa Ana**	**3.24**	**224**	*e* P	**Pn**	**01 03 22.0**	**+1.4**
ANIL				*e* S	**Sn**	**01 04 00.2**	**+0.3**
PRAC	**Prado**	**3.55**	**209**	*e* P	**Pn**	**01 03 24.0**	**-0.4**
PRAC				*e* S	**Sn**	**01 04 06.2**	**-0.6**
PRAC				*i*		01 04 14.3	
	comp=Z,93nm,0.4s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*e* P	**Pn**	**01 03 24.5**	**-1.4**
SJCC				*e* S	**Sn**	**01 04 06.3**	**-3.1**
SJCC				*i*		01 04 14.0	
	comp=Z,46nm,0.6s						
PLMC	**San Jos del P**	**3.67**	**239**	*e* P	**Pn**	**01 03 26.4**	**+0.4**
PLMC				*e* S	**Sn**	**01 04 06.3**	**-3.2**
PLMC				*i*		01 04 13.4	
	comp=Z,62nm,0.2s						
LCBC	**Los crdobas,**	**3.79**	**302**	*e* P	**Pn**	**01 03 26.9**	**-0.5**
LCBC				*e* S	**Sn**	**01 04 12.7**	**+0.6**
LCBC				*i*		01 04 17.1	
	comp=Z,38nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e* P	**Pn**	**01 03 31.0**	**-1.5**
CRJC				*e* S	**Sn**	**01 04 18.4**	**-3.0**
CRJC				*i*		01 04 24.4	
	comp=Z,66nm,0.1s						
YOTC	**Yotoco, Valle**	**4.26**	**229**	*e* P	**Pn**	**01 03 33.5**	**-0.3**
YOTC				*e* S	**Sn**	**01 04 21.8**	**-1.7**
PTAC	**Punta Ardita,**	**4.65**	**274**	*e* P	**Pn**	**01 03 38.3**	**-0.4**
PTAC				*e* S	**Sn**	**01 04 30.2**	**-2.1**
MACC	**Macarena, Meta**	**4.70**	**189**	*i*		01 07 41.3	
	comp=Z,19nm,0.6s						
URIC	**Uribia, Colomb**	**4.97**	**13**	*e* P	**Pn**	**01 03 41.2**	**-1.8**
URIC				*e* S	**Sn**	**01 04 35.7**	**-4.4**
URIC				*i*		01 04 45.5	
	comp=Z,12nm,0.3s						
MALC	**Bahia Malaga**	**5.03**	**236**	*e* P	**Pn**	**01 03 45.5**	**+1.7**
GARC	**Garzon, Huila**	**5.17**	**207**	*e* P	**Pn**	**01 03 44.7**	**-1.2**
GARC				*e* S	**Sn**	**01 04 41.7**	**-3.5**
GARC				*i*		01 04 47.8	
	comp=Z,43nm,0.2s						
FLOC	**Florencia**	**5.78**	**206**	*e* P	**Pn**	**01 03 53.4**	**-0.4**
FLOC				*e* S	**Sn**	**01 04 59.6**	**+0.2**
FLOC				*i*		01 05 05.8	
	comp=Z,4.2nm,0.5s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e* P	**Pn**	**01 04 01.7**	**+1.0**
BBAC				*e* S	**Sn**	**01 05 10.6**	**-1.3**
BBAC				*i*		01 05 17.8	
	comp=Z,4.3nm,0.3s						
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**01 09 20.2**	**0.0**
	comp=Z,0.1nm,0.5s,baz=124,slow=8.1,SNR=2.6						
	comp=Z,0.1nm,0.5s						
PPT2	**Papeete2**	**79.25**	**251**	*e*LR	LR	01 13 48.5	
	comp=Z,440nm,26.8s						
TBI	**Tubuai**	**80.26**	**245**	*e*LR	LR	01 14 09.4	
	comp=Z,467nm,29.5s						
WRA	**Warramunga Arr**	**150.32**	**241**	PKPbc	**PKPdf**	**01 22 01.0**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=100,slow=5.2,SNR=2.6						

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*IDC **17** 01:03:07.6±7.9, 18°.40S×173°.67W, h0km, mb4.3/2, mbtmp4.3/2, MS3.6/31, Error ellipse: s-maj=401.2km s-min=39.4km az=142.0*
ISC 17 01:03:07.8±5.3, 19°.S±1°×17°.3W±°, h26km, n39, σ0s55/7, MS3.7/29, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.53**	**11**	LR	LR	01 06 00.1	
	comp=Z,164nm,20.1s,baz=211,slow=36						
MSVF	**Nonsavu**	**8.77**	**279**	LR	LR	01 07 20.4	
	comp=Z,2μm,18.3s,baz=175,slow=32						
DZM	**Mont Dzumac**	**19.54**	**259**	LR	LR	01 13 30.9	
	comp=Z,370nm,20.1s,baz=36,slow=33						
PPT	**Papeete**	**22.16**	**89**	LR	LR	01 15 12.9	
	comp=Z,97nm,20.7s,baz=197,slow=32						
HNR	**Honiara**	**28.09**	**287**	LR	LR	01 17 05.8	
	comp=Z,7μm,21.8s,baz=125,slow=31						

CTA	**Charters Tower**	**38.42**	**262**	LR	LR	01 23 58.3	
	comp=Z,121nm,19.1s,baz=81,slow=33						
PMG	**Port Moresby**	**39.88**	**279**	LR	LR	01 24 34.0	
	comp=Z,84nm,18.8s,baz=93,slow=33						
STKA	**Stephens Creek**	**42.62**	**244**	LR	LR	01 25 53.8	
	comp=Z,71nm,22.0s,baz=25,slow=32						
ASAR	**Alice Springs**	**49.48**	**255**	P	**P**	**01 11 56.5**	**+0.1**
	5.9nm,0.8s,baz=89,slow=7.9,SNR=29						
	5.9nm,0.8s						
WRA	**Warramunga Arr**	**49.55**	**260**	LR	LR	01 30 56.2	
	comp=Z,84nm,21.1s,baz=100,slow=34						
GUMO	**Guam**	**52.97**	**305**	LR	LR	01 31 07.0	
	comp=Z,33nm,21.7s,baz=129,slow=32						
VNDA	**Vanda**	**59.50**	**186**	LR	LR	01 34 36.0	
	comp=Z,8.1nm,21.6s,baz=325,slow=31						
MJAR	**Matsushiro Arr**	**72.30**	**320**	LR	LR	01 44 05.5	
	comp=Z,18nm,18.1s,baz=150,slow=35						
JOW	**Kunigami**	**73.25**	**307**	LR	LR	01 40 57.6	
	comp=Z,30nm,21.3s,baz=8.0,slow=32						
LPIG	**La Paz**	**74.71**	**57**	LR	LR	01 40 44.3	
	comp=Z,68nm,19.1s,baz=214,slow=30						
PFO	**Pinyon Flats O**	**75.27**	**46**	LR	LR	01 39 59.7	
	comp=Z,100nm,20.1s,baz=208,slow=29						
YBH	**Yreka Blue Hor**	**76.46**	**36**	LR	LR	01 40 43.0	
	comp=Z,63nm,18.6s,baz=260,slow=30						
PETK	**Petropavlovsk-**	**76.55**	**342**	LR	LR	01 40 27.5	
	comp=Z,21nm,21.7s,baz=136,slow=30						
NVAR	**Mina Array Bea**	**76.95**	**41**	LR	LR	01 40 07.8	
	comp=Z,67nm,21.9s,baz=274,slow=29						
KSRS	**Korea Array**	**79.35**	**316**	LR	LR	01 45 35.6	
	comp=Z,14nm,19.1s,baz=225,slow=33						
ELK	**Elko**	**80.23**	**41**	LR	LR	01 42 30.6	
	comp=Z,66nm,19.7s,baz=256,slow=30						
USRK	**Ussuriysk Ar.**	**80.86**	**323**	LR	LR	01 42 52.0	
	comp=Z,52nm,21.4s,baz=149,slow=30						
BBB	**Bella Bella**	**81.20**	**26**	LR	LR	01 42 42.7	
	comp=Z,39nm,20.0s,baz=210,slow=29						
TXAR	**Lajitas Array**	**82.41**	**55**	LR	LR	01 44 38.2	
	comp=Z,39nm,20.0s,baz=256,slow=30						
ANMO	**Albuquerque**	**82.97**	**49**	LR	LR	01 44 39.2	
	comp=Z,54nm,19.2s,baz=275,slow=30						
KLR	**Kul'dur**	**84.12**	**327**	LR	LR	01 53 34.4	
	comp=Z,19nm,18.0s,baz=339,slow=36						
MAW	**Mawson**	**84.21**	**199**	LR	LR	01 51 36.3	
	comp=Z,26nm,19.4s,baz=190,slow=34						
CMIG	**Matias Romero**	**84.74**	**70**	LR	LR	01 45 39.5	
	comp=Z,35nm,18.8s,baz=238,slow=30						
PDAR	**Pinedale Array**	**84.88**	**41**	LR	LR	01 46 00.9	
	comp=Z,48nm,19.3s,baz=184,slow=30						
ILAR	**Eielson Array**	**86.23**	**11**	P	**P**	**01 15 47.0**	**+0.4**
	1.6nm,1.1s,baz=220,slow=5.5,SNR=6.7						
	1.6nm,1.1s						
APG	**El Apazote**	**87.94**	**73**	LR	LR	01 47 45.8	
	comp=Z,64nm,21.5s,baz=88,slow=30						
NNA	**Nana**	**91.65**	**103**	LR	LR	01 49 48.1	
	comp=Z,26nm,19.8s,baz=286,slow=30						
CMAR	**Chiang Mai Arr**	**94.33**	**288**	LR	LR	01 53 33.7	
	comp=Z,17nm,21.9s,baz=200,slow=32						
LVC	**Limon Verde**	**94.83**	**116**	LR	LR	01 50 50.8	
	comp=Z,35nm,19.7s,baz=224,slow=30						
MORC	**Moravsky Berou**	**148.55**	**347**	*e*PKP	**PKPab**	**01 22 55.3**	**-0.5**
VRAC	**Vranov**	**149.19**	**348**	*e*PKP	**PKPab**	**01 22 58.6**	**+0.3**
KRUC	**Moravsky**	**149.46**	**348**	*e*PKP	**PKPab**	**01 22 58.6**	**-0.8**
BRTR	**Keskin Array B**	**149.49**	**317**	PKPbc	**PKPbc**	**01 22 55.0**	**-0.2**
	2.4nm,1.1s,baz=38,slow=2.5,SNR=4.3						
GERES	**GERESS Array B**	**150.13**	**351**	PKPbc	**PKiKP**	**01 22 57.1**	**-0.1**
	1.1nm,0.9s,baz=42,slow=2.6,SNR=8.4						

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*IDC **17** 01:28:58.4±8.2, 6°.29S×145°.85E, h95km±76km, mb3.4/1, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=66.7km s-min=58.3km az=158.0*
ISC 17 01:28:59.9±2.6, 6°.3S±0°.2×145°.9E±0°.2, h100km, n12, σ2s40/12, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**158**	P	**Pn**	**01 29 47.2**	**-2.9**
	15nm,0.3s,baz=325,slow=5.9,SNR=5.7						
PMG				S	**Sn**	**01 30 28.9**	**+0.1**
	13nm,0.3s,baz=214,slow=11,SNR=7.9						
COEN	**Coen**	**8.06**	**199**	P	Pn	01 31 02.2	+7.9
CTA	**Charters Tower**	**13.71**	**179**	P	**P**	**01 32 18.8**	**+3.4**
	3.6nm,0.4s,baz=356,slow=13,SNR=12						
CTA	**Charters Tower**	**13.71**	**179**	P	**P**	**01 32 18.8**	**+3.4**
CTAO	**Charters Tower**	**13.71**	**179**	P	**P**	**01 32 18.9**	**+3.5**
KDU	**Kakadu**	**14.67**	**243**	P	**P**	**01 32 26.0**	**-0.1**
WRAB	**Tennant Creek**	**17.59**	**219**	P	**Pn**	**01 32 58.2**	**-0.6**
WRA	**Warramunga Arr**	**17.60**	**219**	P	**P**	**01 32 57.9**	**-0.7**
	0.8nm,0.3s,baz=41,slow

MD4.3/2
HLW ***17*** *01:30:35.3, 37°.64N±27°.00E, h29km±34km, Md4.8, Ml4.5*
BEO ***17*** *01:30:59.3±5.0, 39°.69N±25°.54E, h0km, ML3.8/7*
ISC 17 01:30:31.3±0.6, 37°.94N±0°.01±26°.99E±0°.02, h15km±3km, n470, σ1°56/509, mb4.3/30, MS3.5/33, 25C-28D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**zmir**	**0.14**	**322**	P	**Pg**	**01 30 35.2**	**0.0**
DGB				S	**Sg**	**01 30 37.4**	**-0.3**
SMG	**Samos**	**0.26**	**209**	P	**Pg**	**01 30 36.9**	**-0.1**
SMG				S	**Sg**	**01 30 41.3**	**+0.5**
	191μm,0.3s						
SMG	**Samos**	**0.26**	**209**	P	**Pg**	**01 30 37.0**	**+0.1**
SMG				S	**Sg**	**01 30 40.7**	**-0.1**
SMG				AML	AML	01 30 41.8	
SMG				AML	AML	01 30 42.4	
GCAM	**G?zelcaml?**	**0.30**	**141**	PG	**Pb**	**01 30 38.4**	**0.0**
GCAM				SG	**Sb**	**01 30 43.2**	**0.0**
GCAM	**G?zelcaml?**	**0.30**	**141**	P	**Pb**	**01 30 38.6**	**+0.2**
GCAM				S	**Sb**	**01 30 43.5**	**+0.3**
BLCB	**Balcova**	**0.45**	**5**	PG	**Pb**	**01 30 40.9**	**0.0**
BLCB				SG	**Sb**	**01 30 47.3**	**-0.1**
BLCB	**Balcova**	**0.45**	**5**	P	**Pb**	**01 30 40.9**	**0.0**
BLCB				S	**Sb**	**01 30 47.1**	**-0.3**
ZEYE	**Izmir, Urla-Ze**	**0.49**	**308**	P	**Pg**	**01 30 40.8**	**-0.3**
ZEYE				S	**Sg**	**01 30 47.7**	**0.0**
DDIM	**Aydin, Didim**	**0.52**	**158**	P	**Pb**	**01 30 42.2**	**+0.2**
DDIM				S	**Sb**	**01 30 49.8**	**+0.5**
URLA	**Izmir**	**0.53**	**323**	PG	**Pg**	**01 30 40.4**	**-1.4**
URLA				SG	**Sg**	**01 30 47.9**	**-0.9**
URLA	**Izmir**	**0.53**	**323**	P	**Pg**	**01 30 40.7**	**-1.1**
URLA				S	**Sg**	**01 30 48.1**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**0.71**	**89**	PG	**Pn**	**01 30 46.1**	**-0.8**
AYDN	**Tasoluk**	**0.75**	**111**	P	**Pn**	**01 30 47.0**	**-0.4**
AYDN				S	**Sn**	**01 30 57.5**	**-1.1**
FOCM	**Foa**	**0.80**	**345**	PG	**Pg**	**01 30 46.4**	**-0.5**
CHOS	**Chios island**	**0.87**	**301**	P	**Pb**	**01 30 47.5**	**-0.6**
BODT	**Bodrum**	**0.91**	**164**	PG	**Pb**	**01 30 48.0**	**-0.8**
BODT				SG	**Sg**	**01 31 00.9**	**0.0**
BODT	**Bodrum**	**0.91**	**164**	P	**Pb**	**01 30 47.7**	**-1.1**
BDRM	**Kayabasi**	**0.94**	**158**	P	**Pn**	**01 30 49.8**	**-0.1**
BDRM				S	**Sn**	**01 32 02.6**	**-0.6**
ZEDA	**zmir-Bergama**	**1.03**	**4**	P	**Pb**	**01 30 50.9**	**+0.1**
ZEDA				S	**Sn**	**01 31 05.5**	**+0.2**
GOMA	**Golmarmara-Man**	**1.06**	**43**	PN	**Pn**	**01 30 51.5**	**0.0**
DKL	**Dikili**	**1.13**	**357**	PN	**Pb**	**01 30 52.6**	**0.0**
AKHS	**Akhisar**	**1.14**	**34**	P	**Pb**	**01 30 52.5**	**-0.2**
AKHS				S	**Sg**	**01 31 09.6**	**+1.4**
AKS	**Akhisar**	**1.14**	**34**	PN	**Pg**	**01 30 53.5**	**+0.2**
KOSK	**Kos Island**	**1.18**	**181**	PN	**Pn**	**01 30 52.7**	**-0.6**
KOSK	**Kos Island**	**1.18**	**181**	P	**Pn**	**01 30 52.6**	**-0.7**
KOSK				S	**Sg**	**01 31 10.9**	**+1.3**
	17μm,0.5s						
KOSK	**Kos Island**	**1.18**	**181**	P	**Pn**	**01 30 52.4**	**-0.8**
KOSK				S	**Sb**	**01 31 08.6**	**+0.1**
KOSK				AML	AML	01 31 13.8	
KOSK				AML	AML	01 31 14.7	
	comp=E,94045μm,0.4s						
MULA	**Mugla, Merkez-**	**1.25**	**122**	P	**Pb**	**01 30 54.9**	**+0.2**
MULA				S	**Sg**	**01 31 14.2**	**+2.4**
YER	**Yerkesik**	**1.30**	**128**	PN	**Pb**	**01 30 55.8**	**+0.3**
YER	**Yerkesik**	**1.30**	**128**	P	**Pb**	**01 30 55.6**	**+0.1**
YER				S	**Sg**	**01 31 14.0**	**+0.7**
YER	**Yerkesik**	**1.30**	**128**	P	**Pb**	**01 30 55.6**	**+0.1**
NISR	**Nisiros**	**1.33**	**175**	P	**Pg**	**01 30 56.9**	**0.0**
NISR	**Nisiros**	**1.33**	**175**	P	**Pn**	**01 30 55.2**	**-0.1**
NISR				AML	AML	01 31 21.2	
	comp=N,16226μm,0.9s						
NISR				AML	AML	01 31 27.4	
	comp=E,28009μm,0.8s						
NIS1	**Nisyros Isl.**	**1.34**	**174**	PN	**Pn**	**01 30 55.4**	**-0.1**
NIS1	**Nisyros Isl.**	**1.34**	**174**	P	**Pn**	**01 30 55.0**	**-0.5**
NIS1	**Nisyros Isl.**	**1.34**	**174**	P	**Pn**	**01 30 54.6**	**-0.9**
NIS1				AML	AML	01 31 22.2	
	comp=N,39902μm,0.5s						
NIS1				AML	AML	01 31 24.7	
	comp=E,37094μm,0.6s						
MANT	**Manisa**	**1.35**	**65**		**Pn**	**01 30 56.0**	**+0.2**
MANT				Sn	**Sn**	**01 31 12.9**	**-0.6**
MANT	**Manisa**	**1.35**	**65**	P	**Pn**	**01 30 56.0**	**+0.2**
MANT				S	**Sg**	**01 31 14.6**	**-0.3**
AYVA	**Ayvalik**	**1.39**	**350**	P	**Pn**	**01 30 55.5**	**-0.6**
AYVA				S	**Sg**	**01 31 15.9**	**-0.2**
PRK	**Paraskevi**	**1.42**	**337**	P	**Pb**	**01 30 57.4**	**-0.1**
PRK				S	**Sg**	**01 31 17.7**	**+0.5**
	comp=E,39μm,0.6s						
PRK	**Paraskevi**	**1.42**	**337**	P	**Pb**	**01 30 57.3**	**-0.2**
PRK				S	**Sg**	**01 31 16.9**	**-0.3**
PRK	**Paraskevi**	**1.42**	**337**	P	**Pb**	**01 30 57.4**	**-0.2**
PRK				S	**Sg**	**01 31 17.0**	**-0.3**
PRK				AML	AML	01 31 20.3	
	comp=N,69982μm,0.6s						
PRK				AML	AML	01 31 22.4	
	comp=E,85081μm,0.5s						
APE	**Apeiranthos**	**1.45**	**234**	⇓P	**Pn**	**01 30 56.0**	**-1.0**
APE				⇑S	**Sn**	**01 31 13.5**	**-2.3**
APE	**Apeiranthos**	**1.45**	**234**	PN	**Pn**	**01 30 56.0**	**-1.0**
APE	**Apeiranthos**	**1.45**	**234**	P	**Pn**	**01 30 55.9**	**-1.1**
APE				S	**Sb**	**01 31 16.8**	**+0.5**
	comp=E,12μm,0.6s						
APE	**Apeiranthos**	**1.45**	**234**	*ce*P	**Pn**	**01 30 55.7**	**-1.3**
APE	**Apeiranthos**	**1.45**	**234**	P	**Pn**	**01 30 55.8**	**-1.1**
APE				S	**Sn**	**01 31 15.2**	**-0.6**
APE				AML	AML	01 31 20.9	
	comp=E,24893μm,0.5s						
APE				AML	AML	01 31 22.1	
	comp=N,23456μm,0.7s						
TNSA	**Tinos**	**1.50**	**255**	P	**Pn**	**01 30 56.3**	**-1.4**
TNSA				AML	AML	01 31 18.6	
	comp=N,8928μm,0.4s						
TNSA				AML	AML	01 31 21.2	
	comp=E,15924μm,0.6s						
TURN	**Turunc**	**1.53**	**139**	PN	**Pb**	**01 30 58.7**	**-0.6**
TURN	**Turunc**	**1.53**	**139**	P	**Pn**	**01 30 58.4**	**+0.4**
TURN				S	**Sg**	**01 31 22.7**	**+2.1**
STEP	**BALIKESIR_Sava**	**1.54**	**21**	P	**Pn**	**01 30 58.0**	**-0.3**
STEP				S	**Sg**	**01 31 22.0**	**+0.9**
SIGR	**SIGRI**	**1.55**	**325**	PN	**Pn**	**01 30 58.0**	**-0.3**
SIGR	**SIGRI**	**1.55**	**325**	P	**Pn**	**01 30 58.1**	**-0.3**
SIGR				S	**Sg**	**01 31 20.7**	**-0.7**
	comp=E,15μm,0.5s						
SIGR	**SIGRI**	**1.55**	**325**	P	**Pn**	**01 30 58.0**	**-0.3**
SIGR				S	**Sb**	**01 31 19.7**	**+0.5**
SIGR				AML	AML	01 31 24.1	
	comp=E,25354μm,0.5s						
SIGR				AML	AML	01 31 27.6	
	comp=N,32631μm,0.5s						
BUHA	**Balikesir, Bur**	**1.56**	**2**	P	**Pn**	**01 30 58.5**	**0.0**
BUHA				S	**Sg**	**01 31 22.8**	**+1.1**
TAVA	**DENIZLI_Tavas**	**1.59**	**107**	P	**Pb**	**01 30 59.9**	**-0.6**
TAVA				S	**Sg**	**01 31 26.2**	**+3.5**
GPNR	**Gulpinar-Canak**	**1.66**	**336**	PN	**Pn**	**01 30 59.3**	**-0.5**
KOCA	**Canakkale, Ayv**	**1.70**	**337**	P	**Pn**	**01 31 00.2**	**-0.2**
KOCA				S	**Sg**	**01 31 26.5**	**+0.5**
DALY	**Dalyan (Mula)**	**1.73**	**130**	PN	**Pb**	**01 31 01.9**	**-0.9**
DEMI	**Demirci**	**1.75**	**50**	P	**Pn**	**01 31 01.2**	**+0.2**
DEMI				S	**Sg**	**01 31 27.8**	**+0.3**
USAK	**Uak-Merkez**	**1.77**	**63**	P	**Pn**	**01 31 02.2**	**+0.8**
USAK				S	**Sg**	**01 31 28.6**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.83**	**349**	P	**Pn**	**01 31 01.9**	**-0.4**
BAYC				S	**Sg**	**01 31 29.9**	**-0.4**
BALY	**Balya**	**1.86**	**15**	P	**Pn**	**01 31 01.5**	**-1.2**
BALY				S	**Sg**	**01 31 30.8**	**-0.6**
APMY	**Acipayam-Deniz**	**1.89**	**104**	PN	**Pb**	**01 31 04.6**	**-0.9**
CMBO	**Columbo, Santo**	**1.94**	**221**	P	**Pn**	**01 31 02.8**	**-0.8**
ARG	**Arkhangelos**	**1.94**	**152**	PN	**Pn**	**01 31 04.2**	**+0.5**
ARG	**Arkhangelos**	**1.94**	**152**	Pn	**Pn**	**01 31 02.5**	**-1.2**
ARG	**Arkhangelos**	**1.94**	**152**	P	**Pn**	**01 31 03.9**	**+0.2**
ARG	**Arkhangelos**	**1.94**	**152**	P	**Pn**	**01 31 02.5**	**-1.2**
ARG	**Arkhangelos**	**1.94**	**152**	P	**Pn**	**01 31 03.9**	**+0.2**
ARG				AML	AML	01 31 40.2	
	comp=N,10932μm,0.6s						
ARG				AML	AML	01 31 44.8	
	comp=E,8279μm,0.6s						
SMAA	**Simav-Kutahya**	**1.94**	**53**	PN	**Pb**	**01 31 05.9**	**-0.5**
EZN	**Ezine**	**1.96**	**345**	PN	**Pn**	**01 31 04.8**	**+0.9**
EZN	**Ezine**	**1.96**	**345**	P	**Pn**	**01 31 04.2**	**+0.3**
EZN				S	**Sb**	**01 31 31.3**	**+0.5**
	comp=E,15μm,0.7s						
EZN	**Ezine**	**1.96**	**345**	P	**Pn**	**01 31 04.8**	**+0.9**
THT2	**Imerovigli**	**1.96**	**220**	PN	**Pn**	**01 31 03.9**	**0.0**
THT2	**Imerovigli**	**1.96**	**220**	P	**Pn**	**01 31 03.7**	**-0.2**
SANT	**Santorini**	**1.99**	**219**	⇓P	**Pn**	**01 31 05.1**	**+0.7**
SANT				⇓S	**Sb**	**01 31 31.5**	**-0.2**
SANT	**Santorini**	**1.99**	**219**	PN	**Pn**	**01 31 03.5**	**-0.9**
SANT	**Santorini**	**1.99**	**219**		**Pn**	**01 31 03.0**	**-1.4**
SANT	**Santorini**	**1.99**	**219**	P	**Pn**	**01 31 03.2**	**-1.2**
SANT				AML	AML	01 31 39.2	
	comp=E,18606μm,0.7s						
SANT				AML	AML	01 31 40.1	
	comp=N,11838μm,0.6s						
SAP3	**Santorini-Thir**	**2.00**	**222**	P	**Pn**	**01 31 04.2**	**-0.2**
PASA	**Karahalli, USA**	**2.01**	**77**	P	**Pn**	**01 31 05.6**	**+0.9**
CAEL	**Denizli, Camel**	**2.02**	**113**	P	**Pb**	**01 31 06.4**	**-1.3**
DURS	**Dursunbey**	**2.02**	**34**	P	**Pn**	**01 31 04.8**	**-0.1**
DURS				S	**Sg**	**01 31 35.8**	**-0.7**
KHL	**Karahalli**	**2.03**	**78**	PN	**Pb**	**01 31 07.1**	**-0.8**
BOZC	**Bozcaada**	**2.04**	**339**	P	**Pn**	**01 31 05.3**	**+0.3**
CAME	**Cameli-Denizli**	**2.09**	**118**	PN	**Pb**	**01 31 07.8**	**-1.1**
DST	**Dursunbey**	**2.09**	**37**	PN	**Pb**	**01 31 07.9**	**-1.1**
FETY	**Fethiye**	**2.11**	**127**	PN	**Pn**	**01 31 06.9**	**+0.8**
GOLH	**Golhisar**	**2.16**	**108**	P	**Pb**	**01 31 09.0**	**-1.1**
GEDZ	**Gediz**	**2.19**	**59**	PN	**Pb**	**01 31 09.4**	**-1.3**
ECEA	**Canakkale, Ece**	**2.20**	**343**	P	**Pn**	**01 31 07.9**	**+0.6**
GDZ	**Gediz**	**2.26**	**59**	P	**Pn**	**01 31 07.7**	**-0.6**
KNL	**Balıkesir**	**2.37**	**10**	P	**Pn**	**01 31 09.2**	**-0.3**
KYMI	**Kymi, Euboea I**	**2.38**	**288**	P	**Pn**	**01 31 09.4**	**-0.4**
KYMI	**Kymi, Euboea I**	**2.38**	**288**	P	**Pn**	**01 31 09.4**	**-0.4**
KATP	**Karpathos**	**2.39**	**177**	PN	**Pn**	**01 31 10.3**	**+0.4**
KARP	**Karpathos**	**2.39**	**177**	Pn	**Pn**	**01 31 08.4**	**-1.5**
KARP	**Karpathos**	**2.39**	**177**	P	**Pn**	**01 31 09.5**	**-0.4**
GOKA	**anakkale-Gk**	**2.40**	**340**	P	**Pn**	**01 31 10.1**	**+0.1**
MHLO	**Agia Marina, M**	**2.41**	**240**	P	**Pn**	**01 31 10.9**	**+0.7**
BASM	**Basmaki-Afyon**	**2.42**	**89**	PN	**Pn**	**01 31 11.7**	**+1.4**
DION	**Dionisos Attik**	**2.42**	**274**	P	**Pn**	**01 31 09.9**	**-0.4**
DION	**Dionisos Attik**	**2.42**	**274**	P	**Pn**	**01 31 10.0**	**-0.4**
DION				AML	AML	01 31 58.1	
	comp=E,7220μm,0.8s						
DION				AML	AML	01 32 10.1	
	comp=N,6199μm,0.7s						
BRDR	**BURDUR-Merkez**	**2.44**	**95**	P	**Pn**	**01 31 12.1**	**+1.4**
PTL	**Penteli**	**2.48**	**274**	P	**Pn**	**01 31 10.8**	**-0.3**
PTL	**Penteli**	**2.48**	**274**	P	**Pn**	**01 31 10.7**	**-0.3**
PTL				AML	AML	01 31 56.5	
	comp=N,5975μm,0.7s						
PTL				AML	AML	01 32 00.8	
	comp=E,2827μm,0.7s						
KZIL	**AFYON_Kizioren**	**2.50**	**82**	P	**Pn**	**01 31 13.4**	**+1.9**
VLY	**Voula,Athens**	**2.53**	**269**	P	**Pn**	**01 31 11.4**	**-0.4**
ATH	**Athens Observa**	**2.59**	**272**	P	**Pn**	**01 31 12.4**	**-0.2**
ATH	**Athens Observa**	**2.59**	**272**	P	**Pn**	**01 31 12.4**	**-0.2**
ATH	**Athens Observa**	**2.59**	**272**	P	**Pn**	**01 31 12.5**	**-0.2**
ATH				AML	AML	01 31 59.6	
	comp=E,4681μm,0.6s						
ATH				AML	AML	01 32 08.2	
	comp=N,6141μm,0.8s						
ELL	**Elmali**	**2.61**	**116**	Pn	**Pn**	**01 31 14.4**	**+1.4**
ELL	**Elmali**	**2.61**	**116**	P	**Pn**	**01 31 14.4**	**+1.4**
AKAS	**Kas**	**2.69**	**128**	Pn	**Pn**	**01 31 15.5**	**+1.3**
KSL	**Kastellorizon**	**2.73**	**130**	P	**Pn**	**01 31 17.1**	**+2.5**
SART	**Tekirdag**	**2.75**	**3**	P	**Pn**	**01 31 14.1**	**-0.8**
ANDZ	**Kutahya, Merke**	**2.76**	**54**	P	**Pn**	**01 31 15.8**	**+0.7**
ULDT	**Uludag**	**2.76**	**36**	P	**Pn**	**01 31 14.8**	**-0.4**
SMTH	**Samothraki Isl**	**2.77**	**336**	P	**Pn**	**01 31 15.2**	**0.0**
SMTH	**Samothraki Isl**	**2.77**	**336**	P	**Pn**	**01 31 15.0**	**-0.1**
SMTH				AML	AML	01 32 03.2	
	comp=N,4392μm,0.8s						
SMTH				AML	AML	01 32 07.5	
	comp=E,4894μm,0.8s						
ISP	**Isparta**	**2.79**	**91**	Pn	**Pn**	**01 31 15.2**	**-0.4**
ISP	**Isparta**	**2.79**	**91**	*d iP*	**Pn**	**01 31 17.1**	**+1.6**
CAVK	**Edirne/Enez-Ca**	**2.82**	**347**	P	**Pn**	**01 31 16.0**	**+0.2**
ZKR	**Zakros**	**2.89**	**193**	P	**Pn**	**01 31 16.5**	**-0.2**
ZKR	**Zakros**	**2.89**	**193**	P	**Pn**	**01 31 16.5**	**-0.2**
KESN	**Edirne-Kesan**	**2.90**	**355**	P	**Pn**	**01 31 17.3**	**+0.1**
HRKL	**Herakleio**	**3.03**	**211**	P	**Pn**	**01 31 18.5**	**-0.2**
ALN	**Alexandroupoli**	**3.05**	**346**	Pn	**Pn**	**01 31 19.0**	**+0.1**
ALN	**Alexandroupoli**	**3.05**	**346**	P	**Pn**	**01 31 19.4**	**+0.5**
ALN	**Alexandroupoli**	**3.05**	**346**	P	**Pn**	**01 31 19.0**	**+0.1**
KRND	**KRANIDI**	**3.10**	**261**	P	**Pn**	**01 31 19.1**	**-0.5**
IDI	**Anoyia**	**3.14**	**213**	⇑P	**Pn**	**01 31 21.7**	**+1.4**
IDI	**Anoyia**	**3.14**	**213**	Pn	**Pn**	**01 31 19.7**	**-0.6**
IDI				Pg	**Pb**	**01 31 28.2**	**+1.4**
	comp=E,5.9nm,0.3s,baz=78,slow=9.7,SNR=84						
IDI				Pg	**Pb**		
	comp=E,49nm,0.3s,baz=39,slow=13,SNR=36						
IDI				Lg	Lg	01 32 09.4	
	comp=E,87nm,0.3s,baz=7.5,slow=18,SNR=4.6						
	comp=E,24nm,0.4s						
IDI	**Anoyia**	**3.14**	**213**	Pn	**Pn**	**01 31 18.7**	**-1.5**
IDI	**Anoyia**	**3.14**	**213**	P	**Pn**	**01 31 19.7**	**-0.6**
IDI	**Anoyia**	**3.14**	**213**	P	**Pn**	**01 31 19.4**	**-0.9**
LKR	**Lokris**	**3.22**	**284**	P	**Pn**	**01 31 20.2**	**-1.1**
BORA	**Eskisehir**	**3.32**	**53**	Pn	**Pn**	**01 31 22.4**	**-0.4**
OUR	**Ouranopolis**	**3.35**	**317**	P	**Pn**	**01 31 23.2**	**+0.2**
RDO	**Rodhopi**	**3.40**	**341**	Pn	**Pn**	**01 31 24.1**	**+0.5**
RDO	**Rodhopi**	**3.40**	**341**	P	**Pn**	**01 31 24.0**	**+0.3**
RDO	**Rodhopi**	**3.40**	**341**	P	**Pn**	**01 31 23.9**	**+0.3**
VLI	**Veliai**	**3.46**	**251**	P	**Pn**	**01 31 24.1**	**-0.4**
IMMV	**Iera Moni Meta**	**3.46**	**225**	P	**Pn**	**01 31 25.3**	**+0.7**
RODP	**Rodopos**	**3.52**	**229**	P	**Pn**	**01 31 27.4**	**+2.0**
KAVA	**Kavala**	**3.61**	**329**	P	**Pn**	**01 31 26.8**	**+0.2**
KLV	**Kalavryta, Ach**	**3.83**	**273**	P	**Pn**	**01 31 29.9**	**+0.2**
ALIK	**Aliki, Aigiali**	**3.87**	**276**	P	**Pn**	**01 31 30.9**	**+0.8**
SERG	**Sergoula**	**3.92**	**278**	P	**Pn**	**01 31 31.4**	**+0.5**
KLMT	**Kalamata**	**4.02**	**259**	P	**Pn**	**01 31 33.0**	**+0.7**
SOH	**Sokhos**	**4.03**	**317**	P	**Pn**	**01 31 33.3**	**+0.8**
SOH	**Sokhos**	**4.03**	**317**	P	**Pn**	**01 31 33.4**	**+0.9**
EFP	**Efpalio**	**4.04**	**279**	P	**Pn**	**01 31 33.4**	**+0.9**
ITM	**Ithomi**	**4.10**	**261**	Pn	**Pn**	**01 31 32.1**	**-1.3**
LIT	**Litokhoron**	**4.12**	**303**	Pn	**Pn**	**01 31 33.7**	**0.0**
LIT	**Litokhoron**	**4.12**	**303**	P	**Pn**	**01 31 34.4**	**+0.7**
LIT	**Litokhoron**	**4.12**	**303**	P	**Pn**	**01 31 33.7**	**0.0**
SRS	**Serrai**	**4.12**	**321**	P	**Pn**	**01 31 33.9**	**+0.2**
SRS	**Serrai**	**4.12**	**321**	P	**Pn**	**01 31 34.2**	**+0.5**
SRS	**Serrai**	**4.12**	**321**	*e*Pn	**Pn**	**01 31 34.0**	**+0.2**
THE	**Thessaloniki**	**4.12**	**312**	P	**Pn**	**01 31 34.6**	**+0.9**
MDUB	**Mudurnu**	**4.13**	**51**	Pn	**Pn**	**01 31 32.3**	**-1.6**
NVR	**Nevrokopi**	**4.18**	**326**	P	**Pn**	**01 31 34.9**	**+0.4**
EVR	**Evrytania**	**4.19**	**285**	P	**Pn**	**01 31 35.9**	**+1.2**
PVO	**Paravola**	**4.36**	**281**	P	**Pn**	**01 31 38.4**	**+1.5**
KNT	**Kendrikon**	**4.51**	**317**	P	**Pn**	**01 31 39.8**	**+0.7**
KNT	**Kendrikon**	**4.51**	**317**	P	**Pn**	**01 31 40.0**	**+0.9**
GRG	**Griva**	**4.66**	**312**	P	**Pn**	**01 31 42.8**	**+1.7**
VAY	**Valandovo**	**4.80**	**316**	*e*Pn	**Pn**	**01 31 44.0**	**+1.0**
VAY	**Valandovo**	**4.80**	**316**	*i P*	**Pn**	**01 31 44.0**	**+1.0**
KDZE	**Karadeniz Ereo**	**4.81**	**44**	⇓P	Pb	01 31 49.8	-5.4
BR231	**Keskin MP Arra**	**4.89**	**65**	Pn	**Pn**	**01 31 43.2**	**-1.2**
ANTO	**Ankara**	**4.92**	**65**	⇓P	**Pb**	**01 31 53.1**	**-4.0**
ANTO	**Ankara**	**4.92**	**65**	Pn	**Pn**	**01 31 43.8**	**-0.9**
ANTO	**Ankara**	**4.92**	**65**	P	**Pn**	**01 31 43.8**	**-0.9**
STIP	**Stip**	**5.27**	**317**	*i P*	**Pn**	**01 31 49.6**	**+0.2**
BR131	**Keskin Array S**	**5.49**	**69**	Pn	**Pn**	**01 31 54.5**	**+2.0**
BR131	**Keskin Array S**	**5.49**	**69**	*ce*P	**Pn**	**01 31 54.6**	**+2.0**
BRTR	**Keskin Array B**	**5.49**	**69**	Pn	**Pn**	**01 31 54.9**	**+2.3**
	comp=E,1.7nm,0.3s,baz=246,slow=15,SNR=60						
BRTR				Pg	**Pg**	**01 32 15.3**	**-1.1**
	comp=E,2.7nm,0.3s,baz=249,slow=15,SNR=12						
BRTR				Lg	Lg	01 33 26.4	
	baz=256,slow=24						
BRTR				LR	LR	01 34 32.2	
	comp=E,545nm,19.0s,baz=256,slow=44						
	comp=E,4.7nm,0.3s						
BRTR	**Keskin Array B**	**5.49**	**69**	Pn	**Pn**	**01 31 54.2**	**+1.6**
BRTR	**Keskin Array B**	**5.49**	**69**	P	**Pn**	**01 31 54.2**	**+1.6**
VTS	**Vitosha**	**5.49**	**330**	⇑P	**Pn**	**01 31 53.5**	**+0.9**
VTS	**Vitosha**	**5.49**	**330**	Pn	**Pn**	**01 31 53.5**	**+0.9**
VTS	**Vitosha**	**5.49**	**330**	P	**Pn**	**01 31 53.5**	**+0.9**
KBN	**Korca**	**5.51**	**301**	Pn	**Pn**	**01 31 52.1**	**-0.7**
KBN	**Korca**	**5.51**	**301**	P	**Pn**	**01 31 52.1**	**-0.7**
OHR	**Ohrid**	**5.74**	**305**	*e*Pn	**Pn**	**01 32 00.0**	**+4.0**
OHR	**Ohrid**	**5.74**	**305**	*i P*	**Pn**	**01 31 59.6**	**+3.6**
SKO	**Skopje**	**5.87**	**315**	*e*Pn	**Pn**	**01 31 59.4**	**+1.7**
KEK	**Kerkira**	**5.89**	**290**	Pn	**Pn**	**01 31 56.9**	**-1.1**
CSS	**Mathiatis**	**5.91**	**118**	Pn	**Pn**	**01 31 57.3**	**-1.0**
ICOR	**Ion Corvin**	**6.20**	**5**	⇓P	**Pn**	**01 32 03.4**	**+1.2**
BARS	**Barje**	**6.27**	**323**	*e*Pn	**Pn**	**01 32 04.4**	**+1.1**
ZAPS	**Zavoj**	**6.28**	**329**	*e*Pn	**Pn**	**01 32 05.3**	**+2.0**
TIR	**Tirane**	**6.47**	**304**	Pn	**Pn**	**01 32 03.9**	**-2.1**
TIR	**Tirane**	**6.47**	**304**	P	**Pn**	**01 32 03.9**	**-2.1**
BLKB	**Belogradchik**	**6.56**	**331**	⇑P	**Pn**	**01 32 07.7**	**+0.5**
SLUM	**Salum**	**6.60**	**193**	P	**Pn**	**01 32 07.0**	**-0.7**
	baz=195						
TIRR	**Tirgusor**	**6.60**	**9**	Pn	**Pn**	**01 32 05.8**	**-1.8**
TIRR	**Tirgusor**	**6.60**	**9**	P	**Pn**	**01 32 05.9**	**-1.8**
TLBR	**Topalu**	**6.65**	**7**	⇓P	**Pn**	**01 32 11.2**	**+2.8**
HUMR	**Humele**	**6.76**	**348**	⇓P	**Pn**	**01 32 10.9**	**+1.0**
ZAGS	**Zajecar**	**6.89**	**330**	*e*Pn	**Pn**	**01 32 11.7**	**0.0**
SELS	**Selova**	**6.92**	**322**	*e*Pn	**Pn**	**01 32 12.5**	**+0.4**
BOVS	**Bovan**	**6.96**	**326**	*e*Pn	**Pn**	**01 32 13.4**	**+0.7**
SCTE	**Santa Cesarea**	**6.97**	**290**	Pn	**Pn**	**01 32 13.0**	**+0.1**
BNN	**Bunyan**	**7.01**	**80**	Pn	**Pn**	**01 32 12.4**	**-1.1**
DRME	**Dracevica, Mon**	**7.34**	**308**	*e*Pn	**Pn**	**01 32 20.7**	**+2.8**
TLCR		**7.37**	**10**	⇓P	**Pn**	**01 32 21.3**	**+3.0**
PDG	**Podgorica**	**7.43**	**310**	Pn	**Pn**	**01 32 19.4**	**+0.3**
DJES	**Djerdap**	**7.52**	**335**	⇑P	**Pn**	**01 32 20.3**	**0.0**
SJES	**Sjenica**	**7.54**	**317**	*e*Pn	**Pn**	**01 32 22.9**	**+2.2**
MLR	**Muntele Rosu**	**7.59**	**354**	⇓P	**Pn**	**01 32 23.1**	**+1.7**
MLR	**Muntele Rosu**	**7.59**	**354**	Pn	**Pn**	**01 32 22.9**	**+1.5**
	comp=E,1.1nm,0.3s,baz=280,slow=3.3,SNR=24						
MLR				Lg	Lg	01 34 33.1	
	comp=E,0.6nm,0.3s,baz=79,slow=22,SNR=2.5						
	comp=E,6.9nm,0.4s						
MLR	**Muntele Rosu**	**7.59**	**354**	Pn	**Pn**	**01 32 22.0**	**+0.6**
GRUS	**Gruza**	**7.61**	**323**	*e*Pn	**Pn**	**01 32 22.5**	**+0.9**
KUBS	**Kucevo**	**7.61**	**330**	*e*Pn	**Pn**	**01 32 22.0**	**+0.4**
ARR	**Arges**	**7.63**	**347**	⇓P	**Pn**	**01 32 24.1**	**+2.1**
VOIR		**7.63**	**350**	⇓P	**Pn**	**01 32 23.9**	**+2.0**
VOIR		**7.63**	**350**	P	**Pn**	**01 32 23.7**	**+1.7**
VOIR				pmax	pmax		
	comp=Z,16nm,0.8s						
IVAS	**Ivanjica**	**7.66**	**319**	*e*Pn	**Pn**	**01 32 23.2**	**+0.9**
HERR	**Herculane**	**7.74**	**335**	⇓P	**Pn**	**01 32 24.1**	**+0.7**
TOKA	**Tokat**	**7.75**	**69**	Pn	**Pn**	**01 32 24.2**	**+0.7**
ODBI	**Odobesti**	**7.82**	**0**	⇑P	**Pn**	**01 32 27.3**	**+2.8**
LOT	**Lotru**	**7.88**	**343**	⇑P	**Pn**	**01 32 25.9**	**+0.5**
MDVR	**Moldovita**	**7.91**	**332**	⇑P	**Pn**	**01 32 26

MORH	**Mrgy, Hungar**	**10.34 326**	⇑P	**Pn**	**01 32 59.0**	**+0.1**
MORH	**Mrgy, Hungar**	**10.34 326**	P	**Pn**	**01 32 59.7**	**+0.8**
A051A	**Mrakovica**	**10.35 316**	*e*Pn	**Pn**	**01 33 00.1**	**+0.9**
PRIJ	**Prijedor**	**10.43 316**	*e*Pn	**Pn**	**01 33 02.7**	**+2.5**
MBRI	**Mt Berech**	**10.45 139**	Pn	**Pn**	**01 33 00.6**	**0.0**
KOVH	**Kovagotottos**	**10.49 324**	P	**Pn**	**01 33 02.3**	**+1.3**
EIL	**Elat**	**10.57 139**	Pn	**Pn**	**01 33 01.2**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=290,slow=4.8,SNR=13					
EIL			Sn	**Sn**	**01 34 52.0**	**-8.2**
	comp=Z,0.9nm,0.3s,baz=294,slow=18,SNR=1.3					
	comp=Z,4.6nm,0.5s					
EIL	**Elat**	**10.57 139**	Pn	**Pn**	**01 33 02.0**	**-0.2**
EIL			Sn	**Sn**	**01 34 56.4**	**-3.9**
HFRF	**Wahat Farafira**	**10.82 174**	P	**Pn**	**01 33 04.2**	**-1.4**
	baz=173					
INTR	**Introdacqua**	**10.84 296**	Pn	**Pn**	**01 33 06.0**	**+0.1**
SOC	**Sochi**	**11.17 56**	*e*P	**Pn**	**01 33 10.3**	**-0.1**
SOC			*e*		01 35 15.3	
SOC			MLR	MLR		
	comp=Z,148nm,15.0s					
ASUT		**11.19 159**	P	**Pn**	**01 33 10.2**	**-0.6**
	baz=158					
UZH	**Uzhgorod**	**11.22 344**	*e*P	**Pn**	**01 33 14.9**	**+3.9**
UZH			*e*S	**Sn**	**01 35 21.9**	**+5.8**
UZH			MLR	MLR		
	comp=N,80nm,13.0s					
UZH			MLR	MLR		
	comp=E,280nm,13.0s					
UZH			MLR	MLR		
	comp=Z,40nm,13.0s					
AQU	**L'Aquila**	**11.30 297**	P	**Pn**	**01 33 15.6**	**+3.4**
AQU			pmax	pmax		
	comp=Z,20nm,1.0s					
CAMP	**Campotosto**	**11.35 298**	Pn	**Pn**	**01 33 11.6**	**-1.4**
MPLH	**Magyarpolny**	**11.55 326**	P	**Pn**	**01 33 16.7**	**+1.1**
BOJS	**Bojanci**	**11.57 314**	*e*Pn	**Pn**	**01 33 17.2**	**+1.4**
CRES	**Cresnjev**	**11.65 316**	*e*Pn	**Pn**	**01 33 17.9**	**+0.9**
NRCA	**Norcia**	**11.66 299**	Pn	**Pn**	**01 33 16.4**	**-0.6**
VYHS	**Vyhne**	**12.10 333**	*e*P	**Pn**	**01 33 23.3**	**+0.2**
CEY	**Cerknica**	**12.18 314**	*e*Pn	**Pn**	**01 33 23.3**	**-0.9**
MURB	**Monte Urbino**	**12.21 300**	Pn	**Pn**	**01 33 24.5**	**-0.2**
SKDS	**Skadanscina**	**12.31 312**	*e*Pn	**Pn**	**01 33 25.6**	**-0.3**
SOKA	**Soboth**	**12.42 318**	*i* Pn	**Pn**	**01 33 29.8**	**+2.3**
	comp=Z,0.7nm,0.4s					
ARSA	**Arzberg**	**12.56 321**	*i* Pn	**Pn**	**01 33 32.0**	**+2.6**
	comp=Z,1.3nm,0.4s					
OBKA	**Obir**	**12.57 317**	*e*Pn	**Pn**	**01 33 32.0**	**+2.4**
OBKA	**Obir**	**12.57 317**	*e*Pn	**Pn**	**01 33 31.2**	**+1.6**
	comp=Z,1.2nm,0.7s,SNR=5.4					
AKASG	**Malin Array Be**	**12.86 6**	Pn	**Pn**	**01 33 30.7**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=200,slow=12,SNR=3.6					
AKASG			LR	LR	01 39 22.6	
	comp=Z,117nm,22.0s,baz=191,slow=41					
CONA	**Conrad Observa**	**12.88 324**	*i* Pn	**Pn**	**01 33 36.4**	**+2.7**
	comp=Z,0.3nm,0.3s					
MAUC	**Maruska**	**13.20 333**	AMS	AMS	01 39 00.0	
	comp=Z,500nm,16.0s					
KIV	**Kislovodsk**	**13.29 58**	*e*P	**Pn**	**01 33 39.8**	**+0.4**
KIV			pmax	pmax		
	comp=Z,6.0nm,1.1s					
KIV			MLR	MLR		
	comp=Z,78nm,12.0s					
KVAR	**Kislovodsk Arr**	**13.30 58**	LR	LR	01 39 49.1	
	comp=Z,194nm,18.4s,baz=100,slow=42					
KBZ	**Khabaz**	**13.35 59**	LR	LR	01 39 41.4	
	comp=Z,126nm,19.8s,baz=230,slow=41					
CLUD	**Cludinico**	**13.47 314**	Pn	**Pn**	**01 33 41.5**	**-0.3**
OKC	**Ostrava-Krasne**	**13.48 335**	AMS	AMS	01 39 20.0	
	comp=Z,300nm,14.2s					
KRUC	**Moravsky**	**13.50 329**	*e*PN	**P**	**01 33 53.3**	**+1.9**
VRAC	**Vranov**	**13.62 330**	Pn	**Pn**	**01 33 45.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=225,slow=20,SNR=1.9					
	comp=Z,0.6nm,0.3s					
VRAC	**Vranov**	**13.62 330**	*e*PN	**P**	**01 33 55.1**	**+2.4**
TEOL	**Teolo**	**13.64 308**	Pn	**Pn**	**01 33 40.4**	**-3.7**
ABTA	**Abfaltersbach**	**13.85 314**	*e*Pn	**Pn**	**01 33 47.7**	**+0.7**
	comp=Z,1.2nm,0.6s					
GNI	**Garni**	**13.97 75**	LR	LR	01 39 14.6	
	comp=Z,206nm,18.0s,baz=291,slow=38					
CTI	**Castel Tesino**	**13.98 310**	Pn	**Pn**	**01 33 47.6**	**-1.2**
CTI	**Castel Tesino**	**13.98 310**	P	**Pn**	**01 33 47.6**	**-1.2**
TREC	**Trest**	**14.06 327**	AMS	AMS	01 40 00.0	
	comp=Z,300nm,10.3s					
KRLC	**Kraliky**	**14.17 332**	*e*P	**P**	**01 34 03.2**	**+4.4**
KRLC			MLR	MLR		
	comp=Z,300nm,10.5s					
KRLC	**Kraliky**	**14.17 332**	*e*P	**P**	**01 34 03.2**	**+4.4**
KRLC			AMS	AMS	01 40 20.0	
	comp=Z,300nm,10.5s					
CKRC	**Cesky Krumlov**	**14.24 324**	*e*P	**P**	**01 34 02.1**	**+2.5**
CKRC			AMS	AMS	01 40 00.0	
	comp=Z,300nm,10.0s					
KEST	**Kesra**	**14.31 267**	Pn	**Pn**	**01 33 55.5**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=245,slow=13,SNR=4.1					
KEST			LR	LR	01 40 01.8	
	comp=Z,76nm,19.6s,baz=307,slow=40					
	comp=Z,4.9nm,0.9s					
KEST	**Kesra**	**14.31 267**	Pn	**Pn**	**01 33 51.3**	**-2.0**
GEC2	**GERESS Array S**	**14.54 323**	P	**P**	**01 34 00.6**	**-2.5**
GERES	**GERESS Array B**	**14.54 323**	Pn	**P**	**01 33 59.9**	**-3.2**
	comp=Z,0.3nm,0.3s,baz=149,slow=14,SNR=31					
	comp=Z,0.3nm,0.4s					
DPC	**Dobruska-Polom**	**14.56 332**	*e*P	**P**	**01 34 06.1**	**+2.9**
DPC			MLR	MLR		
	comp=Z,300nm,12.2s					
DPC	**Dobruska-Polom**	**14.56 332**	*e*P	**P**	**01 34 06.1**	**+2.9**
DPC			AMS	AMS	01 40 50.0	
	comp=Z,300nm,12.2s					
WTTA	**Wattenberg**	**14.63 314**	P	**P**	**01 34 02.5**	**-1.6**
WTTA			pmax	pmax		
	comp=Z,9.0nm,0.9s					
WTTA	**Wattenberg**	**14.63 314**	*i* Pn	**Pn**	**01 33 58.3**	**+0.5**
	comp=Z,0.4nm,0.3s					
WATA	**Walderalm**	**14.71 315**	*e*Pn	**P**	**01 34 04.1**	**-0.8**
	comp=Z,3.1nm,0.6s					
OSTC	**Ostas**	**14.77 332**	AMS	AMS	01 40 20.0	
	comp=Z,300nm,13.2s					
KHC	**Kasperske Hory**	**14.80 323**	P	**Pn**	**01 34 02.6**	**+2.6**
KHC	**Kasperske Hory**	**14.80 323**	P	**Pn**	**01 34 02.6**	**+2.6**
KHC	**Kasperske Hory**	**14.80 323**	*e*P	**P**	**01 34 08.0**	**+2.2**
KHC			AMS	AMS	01 40 10.0	
	comp=Z,300nm,11.6s					
UPC	**Upice**	**14.81 332**	AMS	AMS	01 40 10.0	
	comp=Z,300nm,15.5s					
GOPC	**GO Pecny, Ondr**	**14.83 328**	AMS	AMS	01 40 30.0	
	comp=Z,300nm,11.6s					
SQTA	**Sankt Quirin**	**14.85 314**	*e*Pn	**Pn**	**01 34 01.9**	**+1.2**
	comp=Z,0.1nm,0.2s					
CHVC	**Chvalec**	**14.86 332**	*e*P	**P**	**01 34 08.8**	**+2.4**
CHVC			AMS	AMS	01 40 20.0	
	comp=Z,300nm,12.6s					
MOTA	**Moosalm**	**14.98 314**	*i* Pn	**Pn**	**01 34 03.4**	**+0.9**
	comp=Z,0.1nm,0.1s					
PRU	**Pruhonice**	**14.99 327**	AMS	AMS	01 40 30.0	
	comp=Z,300nm,7.2s					
FETA	**Feichten**	**15.02 312**	*i* Pn	**Pn**	**01 34 04.0**	**+1.0**
	comp=Z,0.1nm,0.1s					
FUORN	**Ofenpass-Fuorn**	**15.10 310**		**Pn**	**01 34 02.7**	**-1.5**
FUORN			IAmb	IAmb	01 34 22.2	
	comp=Z,14nm,1.4s					
RETA	**Reutte**	**15.25 314**	*i* Pn	**P**	**01 34 11.1**	**+0.2**
	comp=Z,0.6nm,0.5s					
PVCC	**Panska Ves**	**15.39 329**	AMS	AMS	01 41 20.0	
	comp=Z,200nm,11.3s					
DAVOX	**Davos/Dischmat**	**15.41 310**	Pn	**Pn**	**01 34 10.2**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=105,slow=6.1,SNR=9.1					
DAVOX			LR	LR	01 40 08.8	
	comp=Z,144nm,18.3s,baz=116,slow=38					
	comp=Z,3.3nm,0.8s					
DAVA	**Damuels**	**15.66 312**	*i* Pn	**Pn**	**01 34 12.2**	**+0.8**
	comp=Z,0.4nm,0.3s					
VSR	**Storozhevoye**	**15.83 29**	*e*P	**Pn**	**01 34 11.6**	**-1.8**
VSR			pmax	pmax		
	comp=Z,10.0nm,1.1s					
NKC	**Novy Kostel**	**16.10 324**	P	**P**	**01 34 22.3**	**+2.1**
NKC			pmax	pmax		
	comp=Z,7.0nm,1.1s					
NKC	**Novy Kostel**	**16.10 324**	AMS	AMS	01 41 20.0	
	comp=Z,300nm,7.5s					
VORR	**Voronezh**	**16.21 28**	*e*P	**Pn**	**01 34 11.9**	**-6.3**
VORR			pmax	pmax		
	comp=Z,10.0nm,0.4s					
MAK	**Makhachkala**	**16.39 66**	*e*P	**Pn**	**01 34 20.1**	**-0.5**
MAK			*e*S	**Sn**	**01 37 23.5**	**+1.4**
MAK			pmax	pmax		
	comp=Z,211nm,1.5s					
MAK			MLR	MLR		
	comp=Z,57nm,11.0s					
MNK	**Minsk**	**16.58 2**	*i* P	**Pn**	**01 34 22.4**	**-0.5**
MNK			*i* S	**Sn**	**01 37 26.3**	**-0.3**
MNK			pmax	pmax		
	comp=E,3.0nm,1.0s					
MNK			pmax	pmax		
	comp=N,29nm,0.9s					
MNK			pmax	pmax		
	comp=Z,24nm,1.0s					
MNK			MLR	MLR		
	comp=Z,32nm,14.0s					
MNK			MLR	MLR		
	comp=E,8.0nm,14.0s					
MNK			MLR	MLR		
	comp=N,267nm,17.0s					
MNK	**Minsk**	**16.58 2**	*i* P	**Pn**	**01 34 22.5**	**-0.5**
	comp=E,3.0nm,1.1s					
MNK			*i* P	**Pn**	**01 34 22.5**	**-0.5**
	comp=N,29nm,0.9s					
MNK			*i* P	**Pn**	**01 34 22.5**	**-0.5**
	comp=Z,24nm,1.1s,baz=183					
MNK			*i* PP	**sP**	**01 34 31.9**	**+0.2**
MNK			*i* S	**Sn**	**01 37 26.4**	**-0.3**
MNK			*i* SS	**SnSn**	**01 37 40.9**	**+1.1**
MNK			*i* LQ	LQ	01 39 19.6	
MNK			*i* LR	LR	01 40 25.5	
MNK			*i* LRM	MLR	01 41 43.9	
	comp=Z,32nm,13.5s					
MNK			*i* LRM	MLR	01 41 55.8	
	comp=E,8.0nm,13.5s					
MNK			*i* LRM	MLR	01 42 15.1	
	comp=N,267nm,16.8s					
CLL	**Collm**	**16.63 328**	*e*P	**P**	**01 34 28.0**	**+2.0**
CLL	**Collm**	**16.63 328**	*es*P	**P**	**01 34 28.0**	**+2.0**
CLL			*e*PP	**sP**	**01 34 32.0**	**-0.4**
CLL			*es*PP		01 34 38.0	
CLL			Lm	MLR	01 40 00.0	
	comp=N,300nm,18.8s					
CLL			Lm	MLR	01 40 00.0	
	comp=E,400nm,18.3s					
CLL			Lm	MLR	01 40 00.0	
	comp=Z,100nm,20.8s					
SLE	**Schleitheim**	**16.71 312**	P	**Pn**	**01 34 25.2**	**+0.4**
SLE			pmax	pmax		
	comp=Z,7.0nm,0.8s					
SENIN	**Lac Senin/Sane**	**16.83 306**		**Pn**	**01 34 23.4**	**-3.0**
LPSR	**Galich'ya Gora**	**16.86 26**	*e*P	**Pn**	**01 34 26.3**	**-0.3**
LPSR			pmax	pmax		
	comp=Z,10.0nm,1.0s					
VRH	**Novokhopyorsk**	**16.87 33**	*e*P	**Pn**	**01 34 27.3**	**+0.7**
VRH			pmax	pmax		
	comp=Z,20nm,1.7s					
NACGM	**Naroch**	**16.97 360**	*e*P	**Pn**	**01 34 27.5**	**-0.5**
	baz=179					
BFO	**Black Forest**	**17.09 313**	P	**Pn**	**01 34 28.8**	**-0.7**
BFO	**Black Forest**	**17.09 313**	P	**Pn**	**01 34 28.8**	**-0.7**
BFO			pmax	pmax		
	comp=Z,7.0nm,1.0s					
OBN	**Obninsk**	**18.37 18**	P	**Pn**	**01 34 46.6**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=48,slow=16,SNR=1.8					
OBN			LR	LR	01 42 54.7	
	comp=Z,10nm,20.1s,baz=182,slow=40					
	comp=Z,1.8nm,0.5s					
OBN	**Obninsk**	**18.37 18**	⇑*e*P	**Pn**	**01 34 47.4**	**+2.2**
OBN			pmax	pmax		
	comp=Z,5.0nm,0.5s					
OBN			MLR	MLR		
	comp=Z,61nm,14.0s					
MOS	**Moscow**	**19.19 19**	*e*P	**P**	**01 34 52.9**	**-1.3**
MEM	**Membach**	**19.57 317**	*d*P	**Pn**	**01 35 02.5**	**+2.7**
BCLA	**Clavier**	**19.86 316**	*d*P	**Pn**	**01 35 03.0**	**-0.2**
BGES	**Gesves**	**19.96 316**	*d*P	**Pn**	**01 35 05.2**	**+0.9**
VSU	**Vasula**	**20.54 360**	*de*P	**P**	**01 35 09.7**	**+0.8**
VSU			pmax	pmax		
	comp=Z,39nm,0.9s					
FINES	**FINESS Array B**	**23.54 359**	P	**P**	**01 35 42.1**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=180,slow=8.6,SNR=7.4					
FINES			LR	LR	01 45 59.6	
	comp=Z,73nm,19.4s,baz=150,slow=39					
	comp=Z,1.5nm,0.7s					
FINES	**FINESS Array B**	**23.54 359**	P	**P**	**01 35 38.5**	**-2.1**
FINES	**FINESS Array B**	**23.54 359**	*e*P	**P**	**01 35 42.7**	**+2.1**
FINES			pmax	pmax		
	comp=Z,2.0nm,0.7s					
HFS	**Hagfors**	**23.77 343**	P	**P**	**01 35 43.2**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=152,slow=9.5,SNR=3.0					
HFS			LR	LR	01 45 34.2	
	comp=Z,156nm,19.0s,baz=160,slow=38					
	comp=Z,1.6nm,0.7s					
ESBB	**Sonseca Array**	**24.13 284**	P	**P**	**01 35 46.2**	**-0.4**
ESBB			IAmb	IAmb	01 36 15.0	
	comp=Z,15nm,1.4s					
ESDC	**Sonseca Array**	**24.13 284**	P	**P**	**01 35 46.8**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=74,slow=10,SNR=17					
ESDC			LR	LR	01 45 42.6	
	comp=Z,44nm,18.9s,baz=72,slow=38					
	comp=Z,1.0nm,0.7s					
ESDC	**Sonseca Array**	**24.13 284**	P	**P**	**01 35 44.8**	**-1.8**
KLMR	**Klimovskoe**	**24.26 15**	*e*P	**P**	**01 35 44.7**	**-2.7**
KLMR			pmax	pmax		
	comp=Z,14nm,1.1s					
KLMR	**Klimovskoe**	**24.26 15**	*e*P	**P**	**01 35 44.8**	**-2.7**
KLMR			AMP		01 35 49.6	
	comp=Z,14nm,1.1s					
PAB	**San Pablo**	**24.44 284**	P	**P**	**01 35 48.8**	**-0.7**
PAB			IAmb	IAmb	01 36 08.1	
	comp=Z,15nm,1.5s					
PAB	**San Pablo**	**24.44 284**	P	**P**	**01 35 48.8**	**-0.7**
PAB			pmax	pmax		
	comp=Z,15nm,1.5s					
GEYT	**Alibeck**	**24.49 80**	P	**P**	**01 35 51.5**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=258,slow=6.8,SNR=4.0					
GEYT			LR	LR	01 45 51.7	
	comp=Z,55nm,19.2s,baz=322,slow=38					
	comp=Z,1.5nm,0.7s					
NC602	**NORSAR Array S**	**24.81 342**	P	**P**	**01 35 51.3**	**-1.1**
NAO01	**NORSAR Array S**	**25.07 341**	P	**P**	**01 35 54.9**	**+0.1**
NB2	**NORSAR Subarra**	**25.16 342**	P	**P**	**01 35 56.3**	**+0.6**
	comp=Z,3.3nm,1.0s,baz=162,slow=11					
NOA	**NORSAR Array B**	**25.16 342**	P	**P**	**01 35 57.0**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=157,slow=8.8,SNR=7.2					
NOA			LR	LR	01 46 35.1	
	comp=Z,87nm,18.1s,baz=160,slow=38					
	comp=Z,0.8nm,0.8s					
KIRV	**Kirov**	**25.26 28**	P	**P**	**01 35 57.2**	**+0.7**
	comp=Z,3.4nm,0.5s,baz=46,slow=17,SNR=1.9					
	comp=Z,3.4nm,0.5s					
KIRV	**Kirov**	**25.26 28**	⇓*e*P	**P**	**01 35 56.4**	**-0.1**
AKTO	**Aktyubinsk**	**25.31 50**	P	**P**	**01 35 58.7**	**+1.5**
	comp=Z,6.5nm,0.8s,baz=257,slow=11,SNR=16					
AKTO			LR	LR	01 48 02.6	
	comp=Z,46nm,18.8s,baz=257,slow=42					
	comp=Z,6.5nm,0.8s					
MDT	**Midelt**	**26.20 268**	P	**P**	**01 36 06.6**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=79,slow=12,SNR=11					
MDT			LR	LR	01 48 41.9	
	comp=Z,29nm,18.0s,baz=107,slow=42					
	comp=Z,2.7nm,0.8s					
ABKAR	**Akbulak array**	**26.20 54**	P	**P**	**01 36 03.6**	**-1.6**
ABKAR	**Akbulak array**	**26.20 54**	P	**P**	**01 36 04.6**	**-0.6**
ABKAR			IAmb	IAmb	01 36 11.3	
	comp=Z,3.8nm,1.1s					
PRGR	**Permogore**	**26.40 20**	*e*P	**P**	**01 36 06.3**	**-0.5**
PRGR			pmax	pmax		
	comp=Z,10.0nm,0.9s					
EKA	**Eskdalemuir Ar**	**26.73 320**	P	**P**	**01 36 11.4**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=113,slow=11,SNR=4.9					
EKA			LR	LR	01 47 05.8	
	comp=Z,63nm,18.4s,baz=186,slow=37					
	comp=Z,1.0nm,0.5s					
PVAQ	**Vaqueiros**	**27.39 280**	P	**P**	**01 36 13.9**	**-2.1**
PVAQ			IAmb	IAmb	01 36 19.2	
	comp=Z,7.3nm,1.0s					
ARU	**Arti**	**27.95 38**	P	**P**	**01 36 20.9**	**0.0**
	comp=Z,3.6nm,0.8s,baz=232,slow=7.5,SNR=3.9					
ARU			LR	LR	01 47 15.2	
	comp=Z,52nm,19.7s,baz=258,slow=36					
	comp=Z,3.6nm,0.8s					
ARU	**Arti**	**27.95 38**	*d* P	**P**	**01 36 20.8**	**0.0**
ARU			S	**S**	**01 41 04.2**	**+0.1**
ARU			SS	**SnSn**	**01 42 19.2**	**+1.0**
ARU			pmax	pmax		
	comp=Z,6.0nm,0.9s					
ARCES	**ARCESS Array B**	**31.67 359**	P	**P**	**01 36 55.6**	**+2.0**
	comp=Z,3.2nm,1.1s,baz=200,slow=7.5,SNR=1.4					
ARCES			LR	LR	01 50 20.2	
	comp=Z,96nm,18.9s,baz=239,slow=38					
	comp=Z,3.2nm,1.1s					
CHGR	**Chuyangaron**	**32.89 75**	P	**P**	**01 37 03.4**	**-1.4**
CHGR	**Chuyangaron**	**32.89 75**	P	**P**	**01 37 03.4**	**-1.4**
CHGR			pmax	pmax		
	comp=Z,23nm,0.8s					
KKAR	**Karatay Array**	**33.20 67**	P	**P**	**01 37 04.6**	**-2.7**
KKAR	**Karatay Array**	**33.20 67**	P	**P**	**01 37 04.6**	**-2.7**
BVAR	**Borovoye Array**	**33.39 49**	LR	LR	01 53 50.8	
	comp=Z,47nm,19.7s,baz=220,slow=42					
TOA0	**Torodi Ar. Sit**	**33.41 229**	P	**P**	**01 37 07.7**	**-1.7**
TOA0			IAmb	IAmb	01 37 16.5	
	comp=Z,4.4nm,0.8s					
TORD	**Torodi Ar. Bea**	**33.41 229**	P	**P**	**01 37 10.1**	**+0.7**
	comp=Z,2.8nm,0.6s,baz=38,slow=9.4,SNR=39					
	comp=Z,2.8nm,0.6s					
GAR	**Garm**	**33.70 74**	P	**P**	**01 37 09.0**	**-2.9**
KOWA	**Kowa**	**36.03 238**	LR	LR	01 54 35.3	
	comp=Z,28nm,18.0s,baz=28,slow=40					
KOWA	**Kowa**	**36.03 238**	P	**P**	**01 37 29.3**	**-2.8**
KOWA			IAmb	IAmb	01 37 43.4	
	comp=Z,5.7nm,1.2s					
AAK	**Ala-Archa**	**36.16 67**	LR	LR	01 56 29.3	
	comp=Z,47nm,18.3s,baz=289,slow=43					
KURK	**Kurchatov**	**38.31 54**	⇓*e*P	**P**	**01 37 52.5**	**+1.4**
KURK			pmax	pmax		
	comp=Z,3.0nm,1.7s					
MBAR	**Mbarara**	**38.51 174**	LR	LR	01 54 28.8	
	comp=Z,31nm,19.9s,baz=343,slow=37					
MK31	**Makanchi Array**	**41.05 59**	P	**P**	**01 38 14.1**	**+0.1**
MK31	**Makanchi Array**	**41.05 59**	⇑*i*P	**P**	**01 38 15.1**	**+1.1**
MKAR	**Makanchi Array**	**41.05 59**	P	**P**	**01 38 15.2**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=269,slow=7.9,SNR=8.5					
MKAR			LR	LR	01 56 50.1	
	comp=Z,61nm,21.9s,baz=276,slow=38					
	comp=Z,0.9nm,0.6s					
MKAR	**Makanchi Array**	**41.05 59**	P	**P**	**01 38 13.2**	**-0.7**
ZALV	**Zalesovo Beam**	**42.04 48**	P	**P**	**01 38 22.9**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=259,slow=8.9,SNR=5.8					
	comp=Z,1.7nm,0.7s					
DBIC	**Dimbokro**	**42.46 231**	P	**P**	**01 38 24.8**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=348,slow=9.3,SNR=1.7					
DBIC			LR	LR	01 56 18.0	
	comp=Z,30nm,18.4s,baz=12,slow=36					
	comp=Z,1.5nm,0.6s					
DBIC	**Dimbokro**	**42.46 231**	P	**P**	**01 38 22.7**	**-3.1**
DBIC			IAmb	IAmb	01 38 31.1	
	comp=Z,20nm,1.4s					
DGZ	**Jazzator, Alta**	**44.03 54**	⇓*e*P	**P**	**01 38 39.6**	**+1.2**
DGZ			pmax	pmax		
	comp=Z,5.0nm,1.6s					
BBTS	**Babate**	**44.86 251**	LR	LR	02 00 26.8	
	comp=Z,54nm,18.2s,baz=58,slow=40					
WMQ	**Urumqi**	**45.37 62**	*e*P	**P**	**01 38 50.0**	**+1.0**
WMQ			pP	pP	01 38 56.3	+2.5
WMQ			sP	sP	01 39 04.8	+9.2
SONM	**Songino Array**	**56.60 52**	LR	LR	02 08 03.4	
	comp=Z,58nm,19.2s,baz=40,slow=40					
ULN	**Ulaanbaatar**	**57.01 52**	‖*e*P	**P**	**01 40 18.5**	**+2.1**
ULN			pmax	pmax		
	comp=Z,17nm,4.0s					
PALK	**Pallekele**	**57.23 108**	LR	LR	02 06 24.6	
	comp=Z,37nm,18.2s,baz=42,slow=38					
TSUM	**Tsumeb**	**57.52 191**	LR	LR	02 06 16.5	
	comp=Z,40nm,19.3s,baz=312,slow=37					
SCHQ	**Schefferville**	**62.04 319**	P	**P**	**01 40 53.3**	**+2.5**
	comp=Z,5.0nm,0.9s,baz=51,slow=19,SNR=2.1					
	comp=Z,5.0nm,0.9s					
PZH	**PanZhiHua**	**62.73 77**	P	**P**	**01 40 59.3**	**+3.3**
YAK	**Yakutsk**	**62.74 31**	LR	LR	02 11 37.8	
	comp=Z,25nm,18.7s,baz=264,slow=39					
HHC	**Hu-ho-hao-te**	**62.89 58**	*e*P	**P**	**01 40 58.3**	**+1.4**
CMAR	**Chiang Mai Arr**	**64.83 86**	P	**P**	**01 41 10.8**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=292,slow=4.8,SNR=1.7					
CMAR			LR	LR	02 12 27.2	
	comp=Z,30nm,19.4s,baz=255,slow=39					
	comp=Z,1.1nm,0.3s					
SUR	**Sutherland**	**70.19 186**	LR	LR	02 12 53.6	
	comp=Z,21nm,18.4s,baz=36,slow=36					
KLR	**Kul'dur**	**70.71 42**	LR	LR	02 18 33.6	
	comp=Z,30nm,18.6s,baz=296,slow=41					
MA2	**Magadan**	**72.34 26**	LR	LR	02 15 32.5	
	comp=Z,26nm,18.2s,baz=298,slow=37					
RCBR	**Riachuelo**	**72.74 248**	LR	LR	02 14 00.5	
	comp=Z,33nm,19.7s,baz=350,slow=36					
KSRS	**Korea Array**	**75.44 54**	P	**P**	**01 42 15.6**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=298,slow=5.2,SNR=2.5					
KSRS			LR	LR	02 18 52.7	
	comp=Z,47nm,18.7s,baz=215,slow=38					
	comp=Z,0.8nm,0.5s					
IMAR	**Indian Mountai**	**76.41 0**	P	**P**	**01 42 18.3**	**-1.3**
PETK	**Petropavlovsk-**	**79.77 28**	LR	LR	02 20 49.8	
	comp=Z,22nm,18.7s,baz=333,slow=38					
TKL	**Tuckaleechee C**	**82.70 310**	LR	LR	02 18 36.2	
	comp=Z,33nm,19.8s,baz=76,slow=35					
ECSD	**EROS Data Cent**	**84.00 323**	P	**P**	**01 43 00.1**	**-0.9**
ECSD			IAmb	IAmb	01 43 01.5	
	comp=Z,3.8nm,0.9s					
NEW	**Newport**	**88.43 337**	LR	LR	02 27 07.4	
	comp=Z,21nm,18.3s,baz=328,slow=38					
PDAR	**Pinedale Array**	**90.49 330**	LR	LR	02 29 20.3	
	comp=Z,40nm,20.9s,baz=79,slow=39					
ELK	**Elko**	**94.41 332**	LR	LR	02 28 47.7	
	comp=Z,50nm,18.3s,baz=12,slow=37					
KAPI	**Kappang**	**95.22 92**	LR	LR	02 32 25.1	
	comp=Z,23nm,18.0s,baz=65,slow=39					

1.7nm,0.5s
PDGK ⇑S Sb 01 36 57.6 +0.6
3.1nm,0.6s
UZB Uzynbulak 1.52 310 *e*P Pg 01 36 41.8 -0.4
2.2nm,0.1s
UZB *e*S Sg 01 37 03.1 +1.1
6.8nm,0.1s
SATY Saty 1.85 299 *e*P Pg 01 36 48.0 -0.4
4.1nm,0.2s
SATY *e*S Sg 01 37 14.0 +1.5
18nm,0.1s
KPKS Kokpek 1.92 313 *e*P Pb 01 36 48.4 +0.8
4.2nm,0.0s
KPKS *e*S Sg 01 37 14.2 -0.3
32nm,0.1s
KURS Kuram 2.22 307 *e*P Pb 01 36 54.0 +1.2
4.1nm,0.7s
KURS *e*S Sg 01 37 23.6 -0.8
4.9nm,0.5s
DJR Jarkent 2.23 345 *e*P Pb 01 36 53.8 +0.8
0.5nm,0.1s
DJR *e*S Sg 01 37 23.5 -1.2
12nm,0.2s
BLB Baldybastay 2.47 321 *e*P Pb 01 36 57.9 +0.8
5.5nm,0.1s
BLB *e*S Sg 01 37 30.5 -1.9
21nm,0.3s
KOTS Kotyrbulak 2.79 293 *e*P Pb 01 37 04.3 +1.8
4.0nm,0.1s
KOTS *e*S Sg 01 37 41.5 -1.0
13nm,0.1s
MDOK Medeo 2.81 292 *e*P Pb 01 37 04.1 +1.3
2.3nm,0.6s
MDOK *e*S Sg 01 37 41.3 -1.9
2.2nm,0.4s
TNSS Tian-Shan 2.84 289 *e*P Pb 01 37 05.4 +1.8
1.4nm,0.5s
TNSS *e*S Sg 01 37 43.2 -1.0
2.3nm,0.3s
MTBS Maitube 3.23 288 *e*P Pb 01 37 12.3 +2.3
1.5nm,0.3s
MTBS *e*S Sg 01 37 54.9 -1.8
3.6nm,0.3s
KST Kastek 3.54 286 *e*P Pb 01 37 17.6 +2.3
1.1nm,0.3s
KST *e*S Sg 01 38 04.5 -2.1
3.1nm,0.8s
KUU Kurty 3.57 300 *e*P Pb 01 37 16.9 +1.1
0.6nm,0.3s
KUU *e*S Sb 01 38 03.0 +4.0
2.9nm,0.3s
DGS Degeres 3.72 288 *e*P Pb 01 37 20.1 +1.7
1.5nm,0.2s
DGS *e*S Sg 01 38 08.3 -4.1
1.7nm,0.4s
KRBS Karabastau 3.93 294 *e*P Pb 01 37 22.5 +0.6
0.4nm,0.5s
KRBS *e*S Sb 01 38 12.8 +3.5
1.0nm,0.6s
MK31 Makanchi Array 4.76 14 ⇑Pn Pn 01 37 30.0 +5.9
0.1nm,0.4s,baz=200,slow=14,SNR=12

*IDC **17** 01:47:45.0±1.2,3˝.52N×99˝.79E, h0km, mb3.9/5, mbtmp3.9/5, MS3.0/1, Error ellipse: s-maj=27.1km s-min=12.6km az=125.0*
*DJA **17** 01:47:45.8±1.9,2˝N±5˝×9˝8E±˝, h28km±26km, M3.4/7, MLv3.4/7*
ISC 17 01:47:45.8±1.0,2˝.14N±0˝.05×97˝.79E±0˝.06, h46km, n14, σ0s92/18, mb3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.86**	**195**	P	**Pn**	**01 48 02.1**	**+0.5**
GSI				S	**Sn**	**01 48 14.0**	**+0.9**
TRSI	**Tarutung**	**1.17**	**96**	P	**Pn**	**01 48 07.0**	**+1.1**
TRSI				S	**Sn**	**01 48 21.9**	**+1.0**
PSI	**Prapat**	**1.31**	**60**	Pg	**Pn**	**01 48 08.0**	**+0.2**
	5.9nm,0.3s,baz=310,slow=7.9,SNR=25						
PSI				Lg	Lg	01 48 24.4	
	9.8nm,0.3s,baz=311,slow=9.3,SNR=8.0						
PSI	**Prapat**	**1.31**	**60**	P	**Pn**	**01 48 07.8**	**0.0**
PSI				P	**Pn**	**01 48 07.8**	**0.0**
PSI				S	**Sn**	**01 48 24.3**	**+0.1**
KCSI	**Kotacane, Aceh**	**1.37**	**359**	P	**Pn**	**01 48 09.3**	**+0.7**
KCSI				S	**Sn**	**01 48 27.0**	**+1.4**
MNSI	**Mandailing Nat**	**2.23**	**127**	P	**Pn**	**01 48 21.4**	**+1.1**
IPM	**Ipoh**	**3.98**	**54**	P	**Pn**	**01 48 45.4**	**+1.0**
KULM	**Kulim**	**4.23**	**42**	P	**Pn**	**01 48 48.5**	**+0.6**
KAPI	**Kappang**	**23.06**	**108**	LR	LR	02 00 45.6	
	comp=Z,41nm,20.4s,baz=83,slow=36						
WRA	**Warramunga Arr**	**42.04**	**123**	P	**P**	**01 55 31.5**	**-1.8**
	0.4nm,0.4s,baz=303,slow=9.1,SNR=6.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**46.48**	**345**	P	**P**	**01 56 08.6**	**+0.1**
	0.3nm,0.4s,baz=162,slow=9.1,SNR=7.4						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**50.99**	**344**	P	**P**	**01 56 42.2**	**-0.7**
	1.9nm,0.2s,baz=160,slow=6.9,SNR=1.1						
	1.9nm,0.2s						
ZALV	**Zalesovo Beam**	**52.73**	**350**	P	**P**	**01 56 55.4**	**-0.4**
	0.9nm,0.3s,baz=155,slow=6.6,SNR=4.5						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**55.56**	**340**	P	**P**	**01 57 16.1**	**-0.4**
	0.8nm,0.6s,baz=138,slow=9.3,SNR=4.5						
	0.8nm,0.6s						

*SOME **17** 01:56:26.8, 37˚.83N×72˚.00E, h0km*
*IDC **17** 01:56:27.3±2.8, 36˚.22N×70˚.66E, h172km±24km, mb3.7/13, mbtmp4.3/19, MS3.2/1, Error ellipse: s-maj=19.5km s-min=12.7km az=178.0*
*BJI **17** 01:56:29.8±0.0, 36˚.60N×70˚.63E, h200km, mb4.4/19, mB4.6/9*
*NEIC **17** 01:56:30.6±2.1, 36˚.46N±0˚.04×70˚.6E±0˚.1, h205km±6km, mb4.4/29, Error ellipse: s-maj=12.7km s-min=4.9km az=94.0*
*NNC **17** 01:56:32.9±2.9, 36˚.97N×70˚.87E, h0km, mb5.2, mpv4.9, Error ellipse: s-maj=22.8km s-min=21.6km az=126.0*
ISC 17 01:56:30.7±0.4, 36˚.50N±0˚.04×70˚.70E±0˚.04, h204km, n124, σ2s28/145, mb4.3/26, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.38**	**215**	Pn	**Pn**	**01 57 12.8**	**-0.9**
KBL	**Kabul**	**2.38**	**215**	P	**Pn**	**01 57 12.9**	**-0.9**
	SNR=104						
KBL				S	**S**	**01 57 45.3**	**-1.4**
CHGR	**Chuyangaron**	**2.48**	**331**	Pn	**Pn**	**01 57 13.9**	**-0.8**
GAR	**Garm**	**2.51**	**353**	Pn	**Pn**	**01 57 14.7**	**-0.4**
CEP	**Cherat**	**2.85**	**159**	⇑P	**Pn**	**01 57 19.7**	**+0.7**
CEP				S	**S**	**01 57 55.0**	**-1.1**
DRK	**Karamyk**	**3.10**	**16**		**Pn**	**01 57 21.7**	**-0.2**
CHCP	**Chirah Chowk**	**3.53**	**143**	P	**Pn**	**01 57 27.1**	**+0.1**
BTK	**Batken**	**3.55**	**1**	Pn	**Pn**	**01 57 27.6**	**+0.5**
TAS	**Tashkent**	**4.94**	**348**	Pn	**Pn**	**01 57 44.6**	**+0.2**
JMU	**Jammu**	**5.12**	**136**	*e*S	**S**	**01 58 42.4**	**-4.0**
KSH	**Kashi**	**5.14**	**53**	P	**Pn**	**01 57 42.6**	**-4.4**
KSH				S	S	01 58 36.8	-10
KSH				pmax	pmax		
	comp=Z,110nm,0.5s						
IUG	**Iuzhnay**	**5.66**	**355**	*e*P	**Pn**	**01 57 53.9**	**+0.2**
	3μm,0.8s						
IUG				*e*S	**S**	**01 58 56.1**	**-3.0**
	607nm,0.4s						
THN	**Thein Dam**	**5.80**	**133**	*e*P	Pn	01 58 02.0	+6.5
THN				*e*S	**S**	**01 58 58.5**	**-3.7**
THN				*e*S	S	01 58 59.0	-3.2
AML	**Almayashu**	**6.08**	**22**	P	**Pn**	**01 57 59.1**	**-0.3**
	SNR=303						
DZA	**Taraz**	**6.40**	**4**	*e*P	**Pn**	**01 58 03.5**	**+0.4**
	433nm,0.7s						
DZA				*e*S	**S**	**01 59 12.5**	**-3.7**
	339nm,0.4s						
NRN	**Naryn**	**6.43**	**38**	Pn	**Pn**	**01 58 01.9**	**-1.8**
UCH	**Uchtor**	**6.44**	**26**	P	**Pn**	**01 58 03.9**	**-0.2**
	SNR=146						
EKS2	**Erkin-Say**	**6.59**	**20**	P	**Pn**	**01 58 05.5**	**-0.3**
	SNR=76						
KK31	**Karatay Array**	**6.59**	**359**	Pn	**Pn**	**01 58 05.0**	**-0.6**
KK31	**Karatay Array**	**6.59**	**359**	P	**Pn**	**01 58 05.2**	**-0.5**
	42nm,0.6s,baz=184,slow=12,SNR=405						
KK31				⇓S	**S**	**01 59 16.9**	**-3.9**
	63nm,0.7s,baz=187,slow=22,SNR=12						
KKAR	**Karatay Array**	**6.59**	**359**		**Pn**	**01 58 05.1**	**-0.6**
KKAR	**Karatay Array**	**6.59**	**359**	Pn	**Pn**	**01 58 05.1**	**-0.6**
AAK	**Ala-Archa**	**6.79**	**24**	P	**Pn**	**01 58 08.4**	**0.0**
	SNR=66						
AAK	**Ala-Archa**	**6.79**	**24**	P	**Pn**	**01 58 08.3**	**0.0**
	50nm,0.6s,baz=206,slow=7.4,SNR=155						
AAK				S	**S**	**01 59 22.9**	**-2.8**
	57nm,0.6s,baz=329,slow=23,SNR=24						
AAK	**Ala-Archa**	**6.79**	**24**	Pn	**Pn**	**01 58 08.2**	**-0.2**
BHK	**Bhakra**	**6.95**	**135**	*e*S	**S**	**01 59 24.2**	**-5.1**
KBK	**Karagaybulak**	**6.97**	**27**	P	**Pn**	**01 58 10.9**	**+0.3**
	SNR=45						
ULHL	**Ulahol**	**7.16**	**35**	P	**Pn**	**01 58 13.2**	**0.0**
	SNR=11						
CHMS	**Chumysh**	**7.20**	**24**	P	**Pn**	**01 58 13.6**	**+0.1**
	SNR=6.7						
CHMS	**Chumysh**	**7.20**	**24**	⇑P	**Pn**	**01 58 12.5**	**-1.0**
	47nm,0.6s						
CHMS				⇑S	**S**	**01 59 31.5**	**-3.7**
	83nm,0.8s						
HRA	**Herat**	**7.21**	**255**	Pn	**Pn**	**01 58 11.2**	**-2.7**
USP	**Ospenovka**	**7.36**	**22**	P	**Pn**	**01 58 15.1**	**-0.5**
	SNR=19						
TKM2	**Tokmak 2**	**7.44**	**29**	P	**Pn**	**01 58 16.7**	**-0.1**
	SNR=182						
TKM2	**Tokmak 2**	**7.44**	**29**	⇓P	**Pn**	**01 58 16.5**	**-0.3**
	73nm,0.6s						
TKM2				⇑S	**S**	**01 59 37.5**	**-3.6**
	48nm,0.8s						
SGDS	**Sogindy**	**7.57**	**22**	*e*P	**Pn**	**01 58 17.2**	**-1.1**
	32nm,0.3s						
SGDS				*e*S	**S**	**01 59 36.0**	**-7.9**
	44nm,0.5s						
SMLA	**Simla**	**7.59**	**133**	*e*P	**Pn**	**01 58 17.3**	**-1.4**
SMLA				*e*S	**S**	**01 59 37.7**	**-6.8**
SMLA				IAML		01 59 40.1	
	comp=N,294nm,0.5s						
SMLA				IAML		01 59 40.1	
	comp=E,230nm,0.3s						
KST	**Kastek**	**7.69**	**30**	*e*P	**Pn**	**01 58 19.9**	**0.0**
	comp=E,41nm,0.7s						
KST				*e*S	**S**	**01 59 41.6**	**-5.2**
	comp=E,69nm,1.8s						
DGS	**Degeres**	**7.78**	**29**	*e*P	**Pn**	**01 58 20.5**	**-0.5**
	comp=E,21nm,1.3s						
DGS				*e*S	**S**	**01 59 42.4**	**-6.6**
	comp=E,13nm,1.4s						
MTBS	**Maitube**	**7.95**	**32**	*e*P	**Pn**	**01 58 23.5**	**+0.2**
	comp=E,43nm,0.6s						
MTBS				*e*S	**S**	**01 59 47.5**	**-5.6**
	comp=E,19nm,1.5s						
TNSS	**Tian-Shan**	**8.11**	**34**	*e*P	**Pn**	**01 58 25.7**	**+0.1**
	comp=E,15nm,0.8s						
TNSS				*e*S	**S**	**01 59 51.1**	**-6.0**
	comp=E,6.7nm,1.3s						
KRBS	**Karabastau**	**8.13**	**26**	*e*P	**Pn**	**01 58 29.1**	**+3.4**
	comp=E,5.0nm,0.0s						
KRBS				*e*S	**S**	**01 59 56.8**	**-0.5**
	comp=E,4.9nm,0.9s						
MDOK	**Medeo**	**8.25**	**34**	*e*P	**Pn**	**01 58 27.7**	**+0.4**
	comp=E,18nm,0.8s						
MDOK				*e*S	**S**	**01 59 54.9**	**-5.4**
	comp=E,14nm,1.5s						
KOTS	**Kotyrbulak**	**8.34**	**34**	*e*P	**Pn**	**01 58 29.1**	**+0.7**
	comp=E,47nm,0.4s						
KOTS				*e*S	**S**	**01 59 56.3**	**-6.0**
	comp=E,20nm,0.4s						
BLB	**Baldybastay**	**9.63**	**36**	*e*P	**P**	**01 58 55.4**	**+2.0**
	comp=E,18nm,0.3s						
BLB				*e*S	**S**	**02 00 41.8**	**+8.7**
	comp=E,5.6nm,0.4s						
GEYT	**Alibeck**	**10.14**	**282**	P	**Pn**	**01 58 49.8**	**-1.8**
	comp=E,0.5nm,0.4s,baz=181,slow=8.6,SNR=2.2						
GEYT				S	**S**	**02 00 41.2**	**-4.1**
	comp=E,2.3nm,0.6s,baz=99,slow=9.2,SNR=2.3						
AJM	**Ajmer**	**10.54**	**166**	*e*P	**Pn**	**01 58 55.5**	**-1.4**
MAKZ	**Makanchi**	**13.29**	**36**	Pn	**Pn**	**01 59 31.3**	**-0.3**
PYUN	**Piuthan**	**13.34**	**125**	*e*P	**Pn**	**01 59 30.1**	**-2.5**
	comp=E,10.0nm,0.4s						
MK31	**Makanchi Array**	**13.43**	**36**	Pn	**Pn**	**01 59 33.2**	**-0.1**
MKAR	**Makanchi Array**	**13.43**	**36**	P	**Pn**	**01 59 33.6**	**+0.3**
	comp=E,13nm,0.8s,baz=222,slow=12,SNR=38						
MKAR	**Makanchi Array**	**13.43**	**36**	Pn	**Pn**	**01 59 33.1**	**-0.3**
DANN	**Dangsing**	**13.69**	**123**	*e*P	**Pn**	**01 59 36.2**	**-0.8**
	comp=E,7.1nm,0.4s						
BHPL	**Bhopal**	**14.44**	**154**	*e*P	**P**	**01 59 47.8**	**+0.6**
BHPL				*e*S	S	02 02 15.7	-11
GKN	**Gorkha**	**14.51**	**122**	*e*P	**Pn**	**01 59 46.7**	**-0.3**
	comp=E,13nm,0.3s						
WMQ	**Urumqi**	**14.90**	**55**	*e*P	**P**	**01 59 52.8**	**+0.7**
WMQ				pmax	pmax		
	comp=E,19nm,0.7s						
ABKAR	**Akbulak array**	**14.97**	**332**		**Pn**	**01 59 51.0**	**-1.1**
ABKAR	**Akbulak array**	**14.97**	**332**		**Pn**	**01 59 50.8**	**-1.3**
KURBB	**Kurchatov Arra**	**15.20**	**19**	P	**Pn**	**01 59 55.0**	**+0.1**
	comp=E,2.8nm,0.3s,baz=209,slow=11,SNR=14						
PKIN	**Phulchoki**	**15.30**	**121**	*e*P	**Pn**	**01 59 56.4**	**-0.3**
	comp=E,33nm,0.7s						
PKI	**Pulchoki**	**15.31**	**121**	*e*P	**Pn**	**01 59 56.8**	**-0.1**
	comp=E,37nm,0.7s						
GUN	**Gumba**	**15.43**	**119**	*e*P	**P**	**02 00 00.0**	**+1.5**
BANOM	**Banah**	**16.20**	**233**	P	**Pn**	**02 00 08.1**	**+0.8**
	SNR=7.5						
BVAR	**Borovoye Array**	**16.52**	**359**	P	**Pn**	**02 00 11.7**	**+0.8**
	comp=E,3.0nm,0.4s,baz=161,slow=9.8,SNR=33						
BVAR				S	**S**	**02 03 08.0**	**-4.2**
	comp=E,1.0nm,0.7s,baz=168,slow=14,SNR=3.7						
BRVK	**Borovoye**	**16.56**	**359**	P	**Pn**	**02 00 11.2**	**0.0**
BRVK				IAmb	IAmb	02 00 15.6	
	comp=Z,9.1nm,0.8s						
AKTO	**Aktyubinsk**	**16.66**	**331**	P	**Pn**	**02 00 13.5**	**+1.0**
	comp=Z,21nm,0.8s,baz=141,slow=10,SNR=58						
AKTO				S	**S**	**02 03 11.1**	**-3.9**
	comp=Z,0.9nm,0.6s,baz=301,slow=20,SNR=1.9						
WSAR	**Wadi Sarin**	**16.84**	**222**	P	**Pn**	**02 00 16.1**	**+1.2**
	comp=Z,4.1nm,0.6s,baz=56,slow=8.7,SNR=5.2						
UOSS	**Minazif**	**16.95**	**231**	P	**P**	**02 00 13.4**	**-1.4**
UOSS				IAmb	IAmb	02 00 19.1	
	comp=Z,11nm,0.8s						
UOSS	**Minazif**	**16.95**	**231**	P	**Pn**	**02 00 16.0**	**-0.2**
HATD	**Hatta, Dubai**	**17.08**	**231**	P	**Pn**	**02 00 18.6**	**+0.8**
ASHO	**Ashiyiah**	**17.23**	**231**	P	**Pn**	**02 00 19.3**	**-0.2**
	SNR=9.9						
NAZ	**Nazwa, Dubai**	**17.26**	**233**	P	**Pn**	**02 00 21.5**	**+1.7**
	SNR=7.0						
ZAA0	**Zalesovo Array**	**20.02**	**25**	P	**P**	**02 00 48.5**	**+0.8**
ZALV	**Zalesovo Beam**	**20.02**	**25**	P	**P**	**02 00 48.6**	**+0.9**
	comp=Z,20nm,0.5s,baz=221,slow=11,SNR=84						
ZALV				S	**S**	**02 04 19.8**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=216,slow=19,SNR=2.3						
	comp=Z,20nm,0.5s						
ZALV	**Zalesovo Beam**	**20.02**	**25**	P	**P**	**02 00 48.2**	**+0.5**
ARU	**Arti**	**21.55**	**341**	P	**P**	**02 01 05.4**	**+1.6**
	comp=Z,6.7nm,0.7s,baz=160,slow=9.1,SNR=12						
	comp=Z,6.7nm,0.7s						
ARU	**Arti**	**21.55**	**341**	P	**P**	**02 01 04.6**	**+0.7**
ARU				IAmb	IAmb	02 01 07.4	
	comp=Z,8.0nm,0.8s						
DOK	**Doka**	**23.03**	**224**	P	**P**	**02 01 20.0**	**+2.0**
	SNR=5.8						
GTA	**Gaotai**	**23.10**	**74**	*e*P	**P**	**02 01 21.4**	**+2.8**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WHFO	**Wadi Hawf**	**23.79**	**223**	P	**P**	**02 01 27.3**	**+2.3**
ABTO	**Aybut**	**24.51**	**224**	P	**P**	**02 01 34.5**	**+3.0**
	SNR=8.4						
RAYN	**Ar Rayn**	**25.28**	**246**	P	**P**	**02 01 38.5**	**+0.1**
PZH	**PanZhiHua**	**28.18**	**102**	P	**P**	**02 02 06.0**	**+1.6**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.1s						
SONM	**Songino Array**	**28.53**	**55**	P	**P**	**02 02 09.1**	**+1.8**
	comp=Z,2.1nm,0.8s,baz=255,slow=9.9,SNR=8.0						
	comp=Z,2.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**31.99**	**70**	*e*P	**P**	**02 02 40.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
AKASG	**Malin Array Be**	**32.75**	**309**	P	**P**	**02 02 45.6**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=81,slow=6.9,SNR=12						
	comp=Z,0.7nm,0.5s						
AKBB	**Malin Array Si**	**32.75**	**309**	P	**P**	**02 02 44.4**	**+0.2**
NRIK	**Noril'sk**	**34.17**	**11**	P	**P**	**02 02 58.9**	**+2.8**
	comp=Z,5.5nm,0.6s,baz=192,slow=5.2,SNR=6.8						
	comp=Z,5.5nm,0.6s						
NRIK	**Noril'sk**	**34.17**	**11**	P	**P**	**02 02 58.1**	**+2.0**
NRIK				IAmb	IAmb	02 02 59.5	
	comp=Z,19nm,1.3s						
FIA1	**FINESS Array S**	**37.34**	**326**	P	**P**	**02 03 23.7**	**+0.5**
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**02 03 24.4**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=109,slow=10.0,SNR=13						
	comp=Z,2.8nm,0.6s						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**02 03 22.9**	**-0.3**
ARCES	**ARCESS Array B**	**41.05**	**338**	P	**P**	**02 03 54.5**	**+0.8**
ARCES				IAmb	IAmb	02 04 28.0	
	comp=Z,22nm,1.4s						
CLL	**Collm**	**43.00**	**309**	*e*P	**P**	**02 04 09.0**	**-0.7**
NC303	**NORSAR Array S**	**44.18**	**323**	P	**P**	**02 04 18.3**	**-0.7**
NC303				IAmb	IAmb	02 04 28.9	
	comp=Z,19nm,1.2s						
NB2	**NORSAR Subarra**	**44.23**	**323**	P	**P**	**02 04 20.9**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.23**	**323**	P	**P**	**02 04 20.6**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=97,slow=7.9,SNR=9.4						
	comp=Z,2.5nm,0.7s						
NBO00	**NORSAR Array S**	**44.44**	**323**	P	**P**	**02 04 20.8**	**-0.3**
TIXI	**Tiksi**	**45.86**	**22**	P	**P**	**02 04 33.0**	**+1.0**
TIXI				IAmb	IAmb	02 04 34.5	
	comp=Z,10nm,0.8s						
MJAR	**Matsushiro Arr**	**53.18**	**68**	LR	LR	02 32 02.9	
	comp=Z,23nm,19.0s,baz=247,slow=40						
ESDC	**Sonseca Array**	**57.24**	**298**	P	**P**	**02 05 57.7**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=54,slow=7.6,SNR=6.3						
	comp=Z,0.4nm,0.7s						
TOA0	**Torodi Ar. Sit**	**65.47**	**268**	P	**P**	**02 06 50.9**	**-1.3**
TOA0				IAmb	IAmb	02 06 53.0	
	comp=Z,2.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.47**	**268**	P	**P**	**02 06 51.5**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=48,slow=5.9,SNR=51						
	comp=Z,2.5nm,0.5s						
KOWA	**Kowa**	**69.33**	**273**	P	**P**	**02 07 15.6**	**-0.8**
TOLK	**Toolik Lake Re**	**70.98**	**15**	P	**P**	**02 07 26.7**	**+1.1**
TOLK				IAmb	IAmb	02 07 28.4	
	comp=Z,4.9nm,0.7s						
IMAR	**Indian Mountai**	**72.24**	**18**	P	**P**	**02 07 33.3**	**+0.2**
BMAR	**Burnt Mountain**	**73.00**	**13**	P	**P**	**02 07 37.0**	**-0.6**
C36M	**Paulatuk**	**73.90**	**5**	P	**P**	**02 07 43.1**	**+0.4**
INK	**Inuvik**	**73.94**	**9**	P	**P**	**02 07 43.5**	**+0.5**
INK				IAmb	IAmb	02 07 45.7	
	comp=Z,3.2nm,0.6s						
ILAR	**Eielson Array**	**74.84**	**16**	P	**P**	**02 07 49.1**	**+0.8**
	comp=Z,1.5nm,1.0s,baz=332,slow=5.3,SNR=7.9						
	comp=Z,1.5nm,1.0s						
J25K	**Salcha River,**	**75.31**	**15**	P	**P**	**02 07 50.4**	**-0.7**
KNRA	**Kununurra**	**75.43**	**122**	P	**P**	**02 07 51.1**	**-1.2**
J26L	**Joseph Creek**	**75.78**	**15**	P	**P**	**02 07 55.0**	**+1.2**
J26L				IAmb	IAmb	02 08 28.1	
	comp=Z,11nm,1.4s						
DHY	**Denali Highway**	**76.20**	**17**	P	**P**	**02 07 56.5**	**+0.3**
DHY				IAmb	IAmb	02 08 21.5	
	comp=Z,9.3nm,1.4s						
DAWY	**Dawson**	**76.97**	**13**	P	**P**	**02 08 01.7**	**+1.3**
SML	**Sawmill**	**77.06**	**18**	P	**P**	**02 08 02.2**	**+1.2**
SCM	**Sheep Creek Mo**	**77.28**	**17**	P	**P**	**02 08 01.8**	**-0.4**
M27K	**Edge Creek, AK**	**78.04**	**15**	P	**P**	**02 08 07.0**	**+0.6**
M27K				IAmb	IAmb	02 08 16.2	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**81.25**	**2**	P	**P**	**02 08 25.3**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=345,slow=5.0,SNR=4.4						
	comp=Z,1.9nm,0.7s						
P33M	**Teslin, Yukon**	**81.71**	**12**	P	**P**	**02 08 25.7**	**-0.4**
P33M				IAmb	IAmb	02 08 28.2	
	comp=Z,4.5nm,0.8s						
WRA	**Warramunga Arr**	**82.20**	**122**	P	**P**	**02 08 28.6**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=323,slow=4.9,SNR=11						
	comp=Z,1.5nm,0.7s						
WRA	**Warramunga Arr**	**82.20**	**122**	P	**P**	**02 08 28.4**	**-0.7**
WB2	**Warramunga Arr**	**82.21**	**122**	P	**P**	**02 08 28.3**	**-0.8**
WB2				IAmb	IAmb	02 09 04.4	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**82.35**	**122**	P	**P**	**02 08 29.2**	**-0.6**
ASAR	**Alice Springs**	**84.46**	**125**	P	**P**	**02 08 40.3**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=312,slow=5.2,SNR=8.8						
	comp=Z,1.0nm,0.7s						

*TAP **17** 02:21:38.0, 23˚.20N×121˚.37E, h17km, ML3.5, C*
ISC 17 02:21:37.9±0.8, 23˚.19N±0˚.01×121˚.41E±0˚.02, h17km±5km, n103, σ0s91/155, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.10**	**203**	P	**Pg**	**02 21 41.6**	**+0.2**
	baz=178						
CHKT				S	**Sg**	**02 21 44.5**	**+0.9**
	baz=178						
ECBN	**Changbin**	**0.13**	**18**	P	**Pg**	**02 21 41.8**	**-0.1**
	baz=41						
ECBN				S	**Sb**	**02 21 44.9**	**+0.1**
	baz=41						
EYUL	**Yuli**	**0.18**	**333**	*i* P	**Pb**	**02 21 43.1**	**+0.3**
	baz=336						
EYUL				*i* S	**Sb**	**02 21 47.2**	**+1.2**
	baz=336						
TWF1	**Yuli**	**0.19**	**328**	*i* P	**Pb**	**02 21 42.9**	**-0.1**
	baz=332						
TWF1				S	**Sb**	**02 21 46.8**	**+0.3**
	baz=332						
ECS	**Chishang**	**0.20**	**242**	P	**Pb**	**02 21 43.6**	**+0.5**
	baz=246						
YULB	**Yu-li**	**0.23**	**334**	P	**Pb**	**02 21 43.4**	**-0.3**
	baz=336						
YULB				S	**Sb**	**02 21 47.0**	**-0.5**
	baz=336						
EDH	**Donghe**	**0.23**	**204**	*i* P	**Pb**	**02 21 43.9**	**+0.2**
	baz=189						
EDH				*i* S	**Sb**	**02 21 47.7**	**0.0**
	baz=189						
HGSD	**Ruisui**	**0.30**	**3**	P	**Pb**	**02 21 45.1**	**+0.2**
	baz=12						
EHY	**Hungye**	**0.33**	**346**	*i* P	**Pb**	**02 21 45.1**	**-0.2**
	baz=338						
EHY				*i* S	**Sb**	**02 21 50.6**	**+0.2**
	baz=338						
ELDTW	**Lidau**	**0.36**	**270**	*i* P	**Pg**	**02 21 44.8**	**-0.6**
	baz=268						
ELDTW				S	**Sg**	**02 21 49.8**	**-0.7**
	baz=268						
LONT	**Longtian**	**0.38**	**222**	*i* P	**Pb**	**02 21 46.1**	**-0.2**
	baz=217						
LONT			

TPUB	Ta-pu	0.72	279	P	Pb	02 21 51.9	-0.1
	baz=284						
TPUB				S	Sb	02 22 01.8	+0.1
	baz=284						
SSLB	Suanglung	0.73	325	P	Pg	02 21 51.7	-0.5
SSLB	Suanglung	0.73	325	P	Pg	02 21 51.5	-0.6
	baz=335						
SSLB				S	Sb	02 22 01.8	-0.1
	baz=335						
WTP	Ta-pu	0.73	275	*i* P	Pb	02 21 52.2	0.0
	baz=273						
WTP				*i* S	Sb	02 22 02.1	+0.1
	baz=273						
SGST	Jiashian	0.77	262	*i* P	Pb	02 21 51.7	-1.1
	baz=255						
SGST				*i* S	Sb	02 22 02.9	-0.1
	baz=255						
ETM	Tongmen	0.78	6	P	Pb	02 21 52.4	-0.6
	baz=5.0						
WCKO	Fanlu	0.78	289	P	Pb	02 21 52.4	-0.6
	baz=281						
WCKO				S	Sn	02 22 04.0	-1.5
	baz=281						
CHN5	Tsauling	0.78	301	*i* P	Pb	02 21 52.4	-0.8
	baz=301						
CHN5				*i* S	Sn	02 22 04.7	-1.0
	baz=301						
OWD	Renai	0.79	345	*i* P	Pb	02 21 52.8	-0.6
	baz=344						
HWA	Hwalien	0.81	13	*i* P	Pg	02 21 53.8	+0.2
	baz=359						
CHN1	Nanshi	0.81	270	*i* P	Pn	02 21 53.9	-0.7
	baz=264						
CHN1				*i* S	Sn	02 22 05.1	-1.1
	baz=264						
SMLT	Sun Moon Lake	0.83	326	*i* P	Pg	02 21 53.8	-0.4
	baz=333						
SMLT				*i* S	Sg	02 22 05.2	-0.1
	baz=333						
SNST	Tainan City	0.84	272	*i* P	Pn	02 21 54.2	-0.7
	baz=270						
SNST				S	Sn	02 22 06.1	-0.8
	baz=270						
SSD	Sandimen	0.84	238	*i* P	Pb	02 21 53.4	-0.6
	baz=233						
TWK	Hsinying	0.85	275	*i* P	Pg	02 21 54.2	-0.2
	baz=273						
TWK				*i* S	Sn	02 22 06.1	-1.1
	baz=273						
TSMG	Majia	0.85	236	*i* P	Pb	02 21 54.1	-0.2
	baz=237						
TYC	Yuchr	0.87	325	*i* P	Pg	02 21 54.6	-0.3
	baz=338						
TYC				*i* S	Sn	02 22 07.2	-0.6
	baz=338						
WJS	Zhushan	0.89	315	*i* P	Pn	02 21 55.7	+0.1
	baz=315						
WJS				S	Sn	02 22 08.7	+0.5
	baz=315						
CHGB	Renai	0.89	346	P	Pb	02 21 54.7	-0.5
	baz=346						
SCST	Cishan	0.89	250	*i* P	Pn	02 21 55.4	-0.4
	baz=252						
TWD	Chiawan	0.90	11	*i* P	Pb	02 21 54.4	-0.8
	baz=1.0						
TWD				S	Sb	02 22 07.1	+0.2
	baz=1.0						
MASBT	Mashibuluo	0.92	231	P	Pb	02 21 54.5	-0.8
	baz=223						
CHN2	Minshiung	0.92	292	P	Pn	02 21 57.4	+1.3
	baz=292						
WDLH	Douliu	0.94	302	*i* P	Pn	02 21 56.6	+0.2
	baz=302						
EAST	Anshuo	0.95	213	*i* P	Pb	02 21 54.6	-1.4
	baz=215						
CHY	Chiayi	0.95	289	*i* P	Pn	02 21 56.6	0.0
	baz=278						
CHY				S	Sn	02 22 10.0	+0.2
	baz=278						
WNT	Mingjian	0.95	316	*i* P	Pn	02 21 56.7	+0.1
	baz=316						
WNT				*i* S	Sn	02 22 10.8	+1.0
	baz=316						
WHF	Hehuan Shan	0.96	352	*i* P	Pb	02 21 55.9	-0.6
	baz=7.0						
WHF				S	Sg	02 22 09.2	-0.2
	baz=7.0						
CHN3	Shinhua	0.96	264	P	Pn	02 21 57.3	+0.6
	baz=271						
CHN3				S	Sn	02 22 11.9	+1.8
	baz=271						
TAWH	Dawu Township	0.97	210	P	Pb	02 21 53.8	-2.5
	baz=212						
WCS	Beigang Elemen	0.98	332	P	Pb	02 21 55.3	-1.1
	baz=342						
TWM1	Shoushan	0.98	248	*i* P	Pn	02 21 57.9	+0.9
	baz=250						
ETL	Fush Village	0.99	12	*e*P	Pb	02 21 56.2	-0.4
	baz=357						
SHHT	Tainan City	0.99	261	P	Pn	02 21 57.5	+0.4
	baz=258						
SHHT				S	Sn	02 22 14.1	+3.4
	baz=258						
NACB	Ninganchiao	1.00	10	P	Pb	02 21 55.2	-1.5
	baz=12						
NACB				S	Sb	02 22 09.3	-0.3
	baz=12						
ETLH	Xiulin Townshi	1.02	4	P	Pb	02 21 55.5	-1.7
	baz=2.0						
ICHU	Yijhu	1.05	280	P	Pg	02 21 58.1	-0.1
	baz=278						
ICHU				S	Sn	02 22 13.0	+0.8
	baz=278						
FUSS	Fushou	1.06	352	*i* P	Pb	02 21 57.5	-0.6
	baz=1.0						
TWT	Tachien	1.08	349	P	Pn	02 21 58.3	-0.2
	baz=347						
TDCB	Techi	1.08	348	P	Pb	02 21 58.2	-0.1
	baz=346						
SCZT	Fangliau	1.09	222	*i* P	Pb	02 21 58.1	-0.2
	baz=218						
SLIU	Shizi	1.12	210	*i* P	Pb	02 21 57.4	-1.5
	baz=202						
WSL	Shuilin Townsh	1.13	287	P	Pb	02 21 58.4	-0.7
	baz=288						
LAY	Lan-yu	1.15	173	*i* P	Pn	02 21 58.3	-1.0
	baz=163						
LAY				S	Sb	02 22 13.6	-0.5
	baz=163						
WHP	Taichung City	1.16	339	*i* P	Pg	02 22 00.6	+0.2
	baz=344						
TCU	Taichung	1.17	325	*i* P	Pg	02 22 01.4	+0.9
	baz=324						
TCU				*i* S	Sg	02 22 17.5	+1.7
	baz=324						
WSF	Szhu	1.18	293	S	Sg	02 22 16.8	+0.8
	baz=291						
WCHH	Zhanghua	1.18	319	*i* P	Pg	02 21 60.0	-0.8
	baz=318						
WCHH				S	Sg	02 22 17.9	+1.7
	baz=318						
WRL	Guolierlin Hig	1.18	307	P	Pn	02 21 59.2	-0.5
	baz=305						
WRL				S	Sg	02 22 16.6	+0.3
	baz=305						
WSSB	Gushan	1.19	243	P	Pg	02 22 01.8	+0.9
	baz=243						
WSSB				S	Sg	02 22 19.3	+2.9
	baz=243						
LYUB	Lan-yu	1.19	172	P	Pn	02 21 56.7	-3.1
	baz=162						
LYUB				S	Sb	02 22 15.2	0.0
	baz=162						
TSCK	Chigu Township	1.22	268	P	Pb	02 22 00.0	-0.5
	baz=267						
TSCK				S	Sg	02 22 17.8	+0.5
	baz=267						
NNSB	Datong	1.23	359	P	Pn	02 21 59.4	-1.2
	baz=12						
NNSB				S	Sn	02 22 16.7	-0.2
	baz=12						
NNS	Nan Shan	1.25	359	*i* P	Pn	02 21 59.1	-1.6
	baz=8.0						
WLCH	Liuqiu	1.26	229	P	Pg	02 22 04.6	+2.3
	baz=216						
SMST	Manzhou Townsh	1.28	204	P	Pb	02 22 01.6	+0.1
	baz=198						
TWQ1	Liyutan	1.29	333	*i* P	Pg	02 22 03.1	+0.3
	baz=333						
TWQ1				*i* S	Sg	02 22 21.5	+1.8
	baz=333						
EWUT	Wuta	1.30	15	P	Pn	02 22 01.5	+0.2
	baz=2.0						
EWUT				S	Sn	02 22 19.1	+0.8
	baz=2.0						
HEN	Hengchun	1.33	208	P	Pn	02 22 02.0	+0.3
	baz=202						
LATG	Datong	1.34	5	P	Pn	02 22 01.7	-0.4
	baz=1.0						
WDJ	Dajia District	1.35	329	P	Pg	02 22 03.6	-0.4
	baz=341						
WDJ				*i* S	Sg	02 22 22.7	+1.1
	baz=341						
TWK1	Hengchun	1.36	204	*e*P	Pn	02 22 02.5	+0.4
	baz=198						
TWKBT	Hengchun	1.36	204	P	Pn	02 22 02.5	+0.4
	baz=198						
TSEB	Hengchuen, Pin	1.36	200	P	Pn	02 22 02.5	+0.2
	baz=195						
NDT	Datong Townshi	1.41	4	P	Pn	02 22 02.4	-0.5
	baz=11						
ENTT	Nioudou	1.45	6	P	Pn	02 22 03.7	+0.2
	baz=2.0						
NMLH	Miaoli	1.46	337	P	Pg	02 22 05.5	-0.5
	baz=336						
NMLH				S	Sg	02 22 25.6	+0.6
	baz=336						
NFF	Wufeng Townshi	1.46	350	P	Pb	02 22 04.6	-0.1
	baz=1.0						
NFF				S	Sg	02 22 25.5	+0.4
	baz=1.0						
NDS	Dongshan	1.47	11	P	Pn	02 22 01.5	-2.1
	baz=12						
NDS				S	Sb	02 22 23.0	-0.2
	baz=12						
TWC	Suao	1.47	16	*i* P	Pb	02 22 04.6	-0.3
	baz=359						
YHNB	Yeheng	1.48	359	P	Pb	02 22 04.8	-0.2
YHNB	Yeheng	1.48	359	P	Pn	02 22 04.3	+0.5
	baz=9.0						
NSK	Sanguang	1.48	358	*i* P	Pn	02 22 03.3	-0.6
	baz=8.0						
NSTT	Nanjuang	1.48	346	*i* P	Pb	02 22 04.9	-0.1
	baz=344						
NSTT				*i* S	Sg	02 22 26.0	+0.2
	baz=344						
LIOB	Emei	1.49	346	*i* P	Pb	02 22 05.1	-0.1
	baz=344						
TWE	Neicheng	1.54	9	P	Pn	02 22 05.1	+0.4
	baz=5.0						
FUSB	Fushanzhiwuyua	1.57	6	P	Pn	02 22 05.7	+0.5
	baz=2.0						
WDGT	Dungji	1.61	273	*i* P	Pb	02 22 06.1	-1.1
	baz=274						
YOJ	Yonaguni jima	1.94	49	P	Pn	02 22 11.8	+1.7

IDC 17 02:21:47.3±4.2, 6°.43S×149°.30E, h0km, mb3.1/1, mbtmp3.7/2, ML4.1/1, MS2.4/1, Error ellipse: s-maj=137.5km s-min=52.1km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.63	216	LR	LR	02 24 15.0	
	comp=Z,60nm,21.1s,baz=78,slow=41						
WRA	Warramunga Arr	19.78	226	P	P	02 26 19.3	-0.1
	0.6nm,0.3s,baz=51,slow=11,SNR=32						
	2.7nm,0.4s						
ASAR	Alice Springs	22.64	219	P	P	02 26 50.0	-0.2
	0.6nm,0.7s,baz=54,slow=10,SNR=8.9						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	147.41	284	PKPbc	PKPbc	02 41 33.8	-0.5
	0.2nm,0.5s,baz=77,slow=3.4,SNR=1.7						

NEIC 17 02:50:46.9±0.8, 17°.1S±0°.2×176°.38E±0°.02, h10km±2km, mb4.5/15, Error ellipse: s-maj=27.2km s-min=3.4km az=2.0
IDC 17 02:50:46.3±1.4, 17°.32S×176°.26E, h0km, mb4.5/4, mbtmp4.5/4, MS3.6/34, Error ellipse: s-maj=46.4km s-min=22.3km az=7.0
ISC 17 02:50:49.7±1.2, 17.1S±0°.2×176.36E±0°.08, h35km, n60, σ0.67/27, mb4.5/12, MS3.6/32, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.73	111	Pn	Pn	02 51 17.2	-0.2
	178nm,0.3s,baz=268,slow=15,SNR=376						
MSVF				Sn	Sn	02 51 38.7	+0.4
	103nm,0.3s,baz=210,slow=21,SNR=4.6						
MSVF	Nonsavu	1.73	111		Pn	02 51 17.0	-0.5
MSVF				Sn	Sn	02 51 38.3	-0.1
LIFNC	LIFOU	9.37	246		Pn	02 53 02.0	-0.2
DZM	Mont Dzumac	10.56	241	*e*P	Pn	02 53 12.7	-6.1
	133nm,25.6s						
DZM				*e*LR	LR	02 55 28.0	
	comp=Z,758nm,27.2s						
DZM	Mont Dzumac	10.56	241	LR	LR	02 56 45.9	
	comp=Z,441nm,21.6s,baz=62,slow=35						
AFI	Afiamalu	11.87	76	LR	LR	02 57 32.4	
	comp=Z,346nm,19.9s,baz=244,slow=34						
RAO	Raoul Island	13.18	158	LR	LR	02 57 52.4	
	comp=Z,238nm,21.3s,baz=108,slow=33						
HNR	Honiara	17.69	293	LR	LR	03 00 34.9	
	comp=Z,2μm,20.6s,baz=29,slow=33						
URZ	Urewera	21.08	178	P	P	02 55 31.2	+0.2
	9.6nm,0.7s,baz=350,slow=6.1,SNR=4.1						
URZ				LR	LR	03 02 16.3	
	comp=Z,108nm,18.1s,baz=64,slow=33						
	9.6nm,0.7s						
URZ	Urewera	21.08	178	P	P	02 55 30.1	-0.9
URZ				IAmb	IAmb	02 55 47.3	
	comp=Z,24nm,1.1s						
HIZ	Hauiti	21.36	183	P	P	02 55 33.5	-0.5
BKZ	Black Stump Fm	21.98	180	P	P	02 55 39.8	-0.9
BKZ				IAmb	IAmb	02 55 45.2	
	comp=Z,27nm,1.5s						
RAR	Rarotonga	22.91	104	LR	LR	03 02 43.8	
	comp=Z,76nm,21.2s,baz=273,slow=31						
NNZ	Nelson	24.16	185	P	P	02 56 03.1	+0.6
EIDS	Eidsvold	24.92	246	P	P	02 56 09.8	+0.2
EIDS				IAmb	IAmb	02 56 17.3	
	comp=Z,9.9nm,1.0s						
RPZ	Rata Peaks	26.90	189	LR	LR	03 04 56.1	
	comp=Z,82nm,21.9s,baz=280,slow=32						
CTA	Charters Tower	28.66	259	P	P	02 56 43.8	+0.3
	comp=Z,3.6nm,0.7s,baz=93,slow=12,SNR=4.1						
CTA				LR	LR	03 07 18.4	
	comp=Z,138nm,18.1s,baz=84,slow=35						
	comp=Z,3.6nm,0.7s						
PMG	Port Moresby	29.40	281	LR	LR	03 06 59.2	
	comp=Z,128nm,18.2s,baz=130,slow=33						
PPT2	Papeete2	32.50	96	*e*LR	LR	03 05 50.8	
	comp=Z,330nm,26.0s						
PPT	Papeete	32.50	96	LR	LR	03 07 12.8	
	comp=Z,105nm,21.3s,baz=253,slow=30						
TBI	Tubuai	32.62	107	*e*LR	LR	03 05 52.6	
	comp=Z,148nm,28.0s						
STKA	Stephens Creek	34.71	238	LR	LR	03 11 21.6	
	comp=Z,90nm,19.0s,baz=35,slow=36						
STKA	Stephens Creek	34.71	238	P	P	02 57 36.5	+0.1
H11S2	WAKE ISLAND Hy	36.63	345	T	T	03 37 21.5	
	baz=165						
H11S3	WAKE ISLAND Hy	36.64	345	T	T	03 37 35.7	
	baz=165						
H11S1	WAKE ISLAND Hy	36.65	345	T	T	03 37 26.7	
	baz=165						
BBOO	Buckleboo	39.48	239	P	P	02 58 17.2	+0.3
WR0	Warramunga Arr	39.68	259	P	P	02 58 17.4	-1.4
WR0				IAmb	IAmb	02 58 26.2	
	comp=Z,4.6nm,0.8s						
WB0	Warramunga Arr	39.83	259	P	P	02 58 19.7	-0.3
WB0				IAmb	IAmb	02 58 27.2	
	comp=Z,9.7nm,0.6s						
WB2	Warramunga Arr	39.85	259	P	P	02 58 19.9	-0.4
WB2				IAmb	IAmb	02 58 27.4	
	comp=Z,7.5nm,0.8s						
WRA	Warramunga Arr	39.87	259	P	P	02 58 20.3	-0.1
	comp=Z,4.2nm,0.7s,baz=93,slow=8.9,SNR=43						
WRA				LR	LR	03 13 09.6	
	comp=Z,86nm,20.5s,baz=88,slow=34						
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	39.87	259	P	P	02 58 19.3	-1.0
AS31	Alice Springs	40.21	253	P	P	02 58 23.6	+0.4
ASAR	Alice Springs	40.21	253	P	P	02 58 23.5	+0.3
	comp=Z,12nm,0.8s,baz=83,slow=9.0,SNR=74						
ASAR				PcP	PcP	03 00 28.6	+1.6
	comp=Z,0.5nm,0.8s,baz=75,slow=3.9,SNR=2.5						
ASAR				LR	LR	03 13 41.9	
	comp=Z,154nm,21.1s,baz=156,slow=34						
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	40.21	253	P	P	02 58 23.1	-0.1
KNRA	Kununurra	45.59	265	P	P	02 59 07.0	+0.1
KNRA				IAmb	IAmb	02 59 08.8	
	comp=Z,9.2nm,0.8s						
SIJI	Sorong	47.20	285	LR	LR	03 18 32.4	
	comp=Z,58nm,20.5s,baz=264,slow=35						
PSA00	Pilbara Seismi	53.27	256	P	P	03 00 05.1	-0.3
PSA00				IAmb	IAmb	03 00 14.3	
	comp=Z,7.2nm,1.1s						
NWAO	Narrogin (SRO)	55.18	242	LR	LR	03 24 01.0	
	comp=Z,83nm,18.4s,baz=268,slow=36						
VNDA	Vanda	60.87	184	LR	LR	03 23 46.6	
	comp=Z,36nm,19.0s,baz=4.0,slow=33						
JOW	Kunigami	63.92	312	LR	LR	03 27 34.2	
	comp=Z,20nm,18.4s,baz=111,slow=34						
MJAR	Matsushiro Arr	64.39	327	LR	LR	03 23 26.3	
	comp=Z,21nm,20.5s,baz=156,slow=30						
SHEM	Shemya Is, Ala	69.57	359	LR	LR	03 27 13.9	
	comp=Z,24nm,21.5s,baz=55,slow=31						
KSRS	Korea Array	70.86	321	LR	LR	03 29 54.6	
	comp=Z,12nm,20.6s,baz=215,slow=33						
PETK	Petropavlovsk-	71.76	348	LR	LR	03 28 25.0	
	comp=Z,27nm,21.4s,baz=156,slow=31						
QSPA	South Pole Qui	72.94	180	P	P	03 02 16.3	+0.9
QSPA				IAmb	IAmb	03 02 29.6	
	comp=Z,4.9nm,1.0s						
KLR	Kul'dur	76.97	332	LR	LR	03 30 35.3	
	comp=Z,30nm,20.7s,baz=276,slow=31						
KDAK	Kodiak Island	78.94	16	LR	LR	03 31 11.0	
	comp=Z,40nm,19.9s,baz=239,slow=31						
MA2	Magadan	79.21	347	LR	LR	03 31 25.6	
	comp=Z,20nm,20.4s,baz=45,slow=31						
NVAR	Mina Array Bea	82.39	46	LR	LR	03 33 45.2	
	comp=Z,54nm,18.2s,baz=276,slow=31						
LPIG	La Paz	82.42	62	LR	LR	03 30 35.8	
	comp=Z,37nm,20.5s,baz=210,slow=29						
ELK	Elko	85.57	45	LR	LR	03 35 29.7	
	comp=Z,53nm,19.5s,baz=252,slow=31						
ILAR	Eielson Array	86.32	15	LR	LR	03 35 19.3	
	comp=Z,29nm,19.6s,baz=264,slow=31						
ANMO	Albuquerque	89.57	53	LR	LR	03 38 45.6	
	comp=Z,32nm,19.7s,baz=249,slow=32						
TXAR	Lajitas Array	89.84	59	LR	LR	03 41 09.9	
	comp=Z,30nm,18.3s,baz=272,slow=34						
PDAR	Pinedale Array	90.27	45	LR	LR	03 43 02.1	
	comp=Z,44nm,19.2s,baz=314,slow=35						
CMIG	Matias Romero	93.76	73	LR	LR	03 37 23.3	
	comp=Z,33nm,20.7s,baz=234,slow=30						
TIXI	Tiksi	94.17	346	LR	LR	03 42 07.6	
	comp=Z,33nm,20.9s,baz=277,slow=33						
APG	El Apazote	97.27	77	LR	LR	03 39 37.7	
	comp=Z,24nm,21.4s,baz=7.5,slow=30						
GERES	GERESS Array B	145.34	340	PKPbc	PKiKP	03 10 27.0	-1.0
	comp=Z,0.2nm,0.7s,baz=29,slow=2.2,SNR=2.3						

IDC 17 03:30:49.0±43.0, 16°.09S×172°.96W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=831.4km s-min=180.6km az=79.0
NEIC 17 03:31:07.5±0.9, 15°.6S±0°.2×173°.91W±0°.08, h102km±12km, mb4.4/12, Error ellipse: s-maj=22.6km s-min=9.9km az=165.0
ISC 17 03:31:06.6±1.1, 15.7S±0°.2×173.9W±0°.1, h100km, n22, σ0.58/22, mb4.4/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.72	50		Pn	03 31 49.4	+0.6
MSVF	Nonsavu	7.97	254	Pn	Pn	03 33 01.3	+1.5
FUNA	Funafuti	9.81	316	Pn	Pn	03 33 24.8	0.0
MARNC	Mare, Loyalty	18.05	249	P	P	03 35 10.1	-0.1
ARMA	Armidale	34.77	239	P	P	03 37 47.8	0.0
PATS	Pohnpei	35.47	307	P	P	03 37 53.5	-0.3
CTAO	Charters Tower	38.10	257	P	P	03 38 16.1	0.0
CTAO				IAmb	IAmb	03 38 42.5	
	comp=Z,4.0nm,1.1s						
TOO	Toolangi	41.90	231	P	P	03 38 47.9	+0.6
TOO				IAmb	IAmb	03 39 05.7	
	comp=Z,7.7nm,1.1s						
STKA	Stephens Creek	43.47	240	P	P	03 38 59.4	-0.7
	comp=Z,1.4nm,0.5s,baz=74,slow=7.4,SNR=4.4						
	comp=Z,1.4nm,0.5s						
STKA	Stephens Creek	43.47	240	P	P	03 38 59.9	-0.2
BBOO	Buckleboo	48.24	240	P	P	03 39 37.4	-0.2
WB0	Warramunga Arr	49.26	257	P	P	03 39 45.0	-0.6
WB2	Warramunga Arr	49.29	257	P	P	03 39 45.4	-0.3
WB2				IAmb	IAmb	03 39 46.0	
	comp=Z,5.7nm,1.1s						
WRA	Warramunga Arr	49.30	257	P	P	03 39 45.7	-0.1
	comp=Z,0.7nm,0.5s,baz=96,slow=7.2,SNR=17						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	49.30	257	P	P	03 39 45.8	-0.1
AS31	Alice Springs	49.55	252	P	P	03 39 47.4	-0.3
AS31				IAmb	IAmb	03 39 48.4	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	49.55	252	P	P	03 39 47.8	0.0
	comp=Z,8.6nm,0.6s,baz=88,slow=8.2,SNR=110						
	comp=Z,8.6nm,0.6s						
ASAR	Alice Springs	49.55	252	P	P	03 39 47.3	-0.5
KNRA	Kununurra	55.04	262	P	P	03 40 27.7	-0.7
KNRA				IAmb	IAmb	03 40 30.6	
	comp=Z,3.1nm,0.7s						
PSA00	Pilbara Seismi	62.65	254	P	P	03 41 20.5	-0.5
PSA00				IAmb	IAmb	03 41 25.3	
	comp=Z,4.4nm,1.1s						
GEC2	GERESS Array S	146.36	351	PKPdf	PKPdf	03 50 34.9	+0.3
GERES	GERESS Array B	146.36	351	PKPdf	PKPdf	03 50 33.6	-1.0

ISK 17 03:56:22.6, 38°.83N×27°.70E, h7km, ML2.5/7
DDA 17 03:56:22.5±0.0, 38°.93N×27°.74E, h10km±1km, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.08	131	P	Pg	03 56 25.5	+0.7
AKHS				S	Sg	03 56 26.5	0.0
AKS	Akhisar	0.08	131	PG	Pg	03 56 25.3	+0.5
AKS				SG	Sg	03 56 27.3	+0.8
GOMA	Golmarmara-Man	0.26	148	PG	Pg	03 56 27.9	+0.1
STEP	BALIKESIR_Sava	0.45	358	P	Pg	03 56 31.6	+0.4
STEP				S	Sg	03 56 37.6	+0.5
STEP				*i* AML	AML	03 56 38.0	
	comp=E,121nm,0.4s						
STEP				*i* AML	AML	03 56 39.0	
	comp=N,99nm,0.2s						
ZEDA	zmir-Bergama	0.52	274	P	Pg	03 56 33.0	+0.5
ZEDA				S	Sb	03 56 40.4	-0.8
ZEDA				*i* AML	AML	03 56 41.0	
	comp=E,102nm,0.2s						
DKL	Dikili	0.66	282	PG	Pb	03 56 36.0	-0.2
DKL				SG	Sb	03 56 45.6	+0.2
BUHA	Balikesir, Bur	0.77	318	P	Pb	03 56 38.3	+0.4
BUHA				S	Sb	03 56 47.9	-0.5
BUHA				*i* AML	AML	03 56 51.0	
	comp=E,56nm,0.5s						
DEMI	Demirci	0.77	81	P	Pb	03 56 38.1	0.0
DEMI				S	Sg	03 56 48.0	+0.5
DEMI				*i* AML	AML	03 56 49.0	
	comp=N,66nm,0.3s						
DEMI				*i* AML	AML	03 56 52.0	
	comp=E,72nm,0.3s						
MANT	Manisa	0.78	124	P	Pg	03 56 37.8	+0.3
MANT				S	Sg	03 56 48.0	+0.3
MANT				*i* AML	AML	03 56 50.0	
	comp=E,43nm,0.3s						
BALY	Balya	0.81	354	P	Pg	03 56 37.6	-0.6
BALY				S	Sg	03 56 48.3	-0.5
BALY				*i* AML	AML	03 56 49.0	
	comp=E,80nm,0.4s						
BALY				*i* AML	AML	03 56 51.0	
	comp=N,67nm,0.4s						
FOCM	Foa	0.82	255	PG	Pg	03 56 38.1	-0.1
DURS	Dursunbey	0.88	40	P	Pg	03 56 39.4	-0.1
DURS				S	Sb	03 56 51.7	-0.1
DURS				*i* AML	AML	03 56 55.0	
	comp=N,45nm,0.4s						
AYDB	Zeytinkoy-Aydi	0.99	173

USAK	**Uak-Merkez**	**1.02 102**	P	Pg	03 56 42.2	0.0
URLA	**Izmir**	**1.06 238**	PG	Pg	03 56 41.3	-1.6
GEDZ	**Gediz**	**1.31 85**	PN	Pg	03 56 48.4	+0.8

MAN ***17*** *05:11:28.8, 4°.61N×125°.98E, h112km, mb4.7, ML3.5, MS3.4*
DJA ***17*** *05:11:30.1±0.5, 5°.N±4°.×12°.6E±°, h96km±6km, M4.2/7, mb4.1/5, mB4.5/2, MLv4.2/7, Mw(mB)3.6/2*
IDC ***17*** *05:11:41.2±3.6, 4°.23N×125°.49E, h185km±45km, mb3.1/3, mbtmp3.7/4, Error ellipse: s-maj=151.7km s-min=19.6km az=67.0*
ISC 17 05:11:30.9±1.1, 4°.51N±0°.09×126°.2E±0°.1, h100km, n10, σ1§26/11, mb3.4/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.03 218**		P	**Pn**	**05 11 50.7**	**-1.0**
SGSI				S	**Sn**	**05 12 07.0**	**-0.3**
DAV	**Davao City (W)**	**2.61 347**		P	Pn	05 12 27.9	+16
	206nm,0.3s,baz=103,slow=18,SNR=1.6						
DAV	**Davao City (W)**	**2.61 347**		P	**Pn**	**05 12 10.5**	**-1.0**
GAMI	**Galela, Maluku**	**3.11 148**		P	**Pn**	**05 12 17.2**	**-1.0**
GTOI	**Gorontalo**	**4.97 219**		P	**Pn**	**05 12 42.8**	**-0.4**
	0.1nm264nm17nm,0.6s						
MRSI	**Marisa**	**5.81 227**		P	**Pn**	**05 12 54.4**	**-0.3**
	0.3nm60nm,0.6s						
SANI	**Sanana**	**6.51 181**		P	**Pn**	**05 13 03.1**	**-1.2**
WRA	**Warramunga Arr**	**25.59 162**		P	**P**	**05 16 53.5**	**+2.5**
	0.7nm,0.5s,baz=340,slow=10,SNR=20						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**29.00 165**		P	**P**	**05 17 22.6**	**+1.1**
	0.3nm,0.5s,baz=338,slow=7.1,SNR=4.2						
ASAR				PcP	**PcP**	**05 20 27.1**	**-0.8**
	0.3nm,0.6s,baz=337,slow=2.1,SNR=2.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**56.60 325**		P	**P**	**05 21 03.6**	**+0.2**
	0.4nm,0.6s,baz=135,slow=5.9,SNR=4.5						
	0.4nm,0.6s						

IDC ***17*** *05:25:20.8±2.5, 11°.21S×165°.84E, h0km, mb4.0/6, mbtmp4.0/7, ML3.5/1, MS3.2/7, Error ellipse: s-maj=58.4km s-min=31.5km az=104.0*
ISC 17 05:25:27.0±1.7, 11°.55S±0°.1×165°.9E±0°.3, h50km, n11, σ2§03/8, mb4.0/5, MS3.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.53 177**		Pn	**Pn**	**05 27 57.8**	**+2.4**
	0.4nm,0.3s,baz=356,slow=19,SNR=8.0						
DZM				Sn	**Sn**	**05 29 49.1**	**-2.9**
	0.1nm,0.3s,baz=125,slow=23,SNR=1.8						
DZM				LR	LR	05 31 49.2	
	comp=Z,91nm,20.2s,baz=38,slow=36						
	6.1nm,0.8s						
CTA	**Charters Tower**	**20.77 243**		P	**P**	**05 30 03.5**	**-0.3**
	1.1nm,0.4s,baz=104,slow=8.3,SNR=2.0						
CTA				LR	LR	05 37 03.7	
	comp=Z,49nm,18.7s,baz=85,slow=34						
	1.1nm,0.4s						
RAO	**Raoul Island**	**23.21 142**		LR	LR	05 37 37.3	
	comp=Z,85nm,19.0s,baz=318,slow=31						
STKA	**Stephens Creek**	**30.25 224**		LR	LR	05 42 45.7	
	comp=Z,40nm,19.6s,baz=20,slow=34						
WRA	**Warramunga Arr**	**31.51 251**		P	**P**	**05 31 44.2**	**-0.4**
	2.1nm,0.8s,baz=79,slow=8.7,SNR=11						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**32.77 244**		P	**P**	**05 31 56.1**	**+0.6**
	2.3nm,0.7s,baz=73,slow=9.6,SNR=20						
ASAR				LR	LR	05 44 11.6	
	comp=Z,40nm,18.5s,baz=144,slow=34						
	2.3nm,0.7s						
RAR	**Rarotonga**	**34.22 111**		LR	LR	05 44 22.1	
	comp=Z,26nm,18.6s,baz=248,slow=33						
SIJI	**Sorong**	**36.00 285**		LR	LR	05 47 23.2	
	comp=Z,25nm,18.5s,baz=215,slow=37						
CMAR	**Chiang Mai Arr**	**72.46 294**		P	**P**	**05 36 50.4**	**+1.6**
	0.8nm,0.4s,baz=110,slow=4.2,SNR=4.3						
	0.8nm,0.4s						
SONM	**Songino Array**	**79.14 324**		P	**P**	**05 37 25.6**	**-0.8**
	0.4nm,0.5s,baz=140,slow=5.6,SNR=1.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**93.97 317**		P	**P**	**05 38 38.1**	**-1.5**
	0.9nm,0.7s,baz=95,slow=6.1,SNR=5.4						
	0.9nm,0.7s						

IDC ***17*** *05:28:49.8±1.8, 23°.94S×66°.85W, h192km±24km, mb3.6/1, mbtmp3.9/6, MS3.5/1, Error ellipse: s-maj=33.2km s-min=20.4km az=131.0*
NEIC ***17*** *05:28:50.7±2.2, 24°.06S±0°.07×67°.2W±0°.1, h222km±10km, mb4.3/9, Md4.2(SJA), ML4.3(GUC), Error ellipse: s-maj=19.2km s-min=10.0km az=92.0*
GUC ***17*** *05:28:51.7±0.5, 23°.95S×67°.35W, h244km±9km, ML4.3*
ISC 17 05:28:50.5±0.9, 24°.00S±0°.06×67°.11W±0°.10, h218km±10km, n51, σ1§29/64, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.43 317**			**Pn**	**05 29 26.3**	**+0.6**
AF01				Sn	**S**	**05 29 53.9**	**+1.1**
LVC	**Limon Verde**	**2.16 310**		P	**Pn**	**05 29 32.8**	**+0.4**
	22nm,0.3s,baz=124,slow=3.8,SNR=91						
LVC				S	**S**	**05 30 03.7**	**-1.0**
	105nm,0.3s,baz=271,slow=22,SNR=73						
LVC	**Limon Verde**	**2.16 310**		Pn	**Pn**	**05 29 32.9**	**+0.5**
LVC				Sn	**S**	**05 30 05.7**	**+0.9**
PB15	**IPOC Station P**	**2.30 290**			**Pn**	**05 29 34.5**	**+0.8**
PB15	**IPOC Station P**	**2.30 290**		*e*P	**Pn**	**05 29 34.5**	**+0.8**
PB15				*i* S	**S**	**05 30 07.2**	**0.0**
PB15				IAML		05 30 13.7	
	comp=N,3μm,0.2s						
GO02	**Mina Guanaco**	**2.54 242**		Pn	**Pn**	**05 29 36.3**	**+0.1**
PB06	**IPOC Station P**	**2.60 299**		Pn	**Pn**	**05 29 37.6**	**+0.8**
PB06	**IPOC Station P**	**2.60 299**		*e*P	**Pn**	**05 29 37.8**	**+0.9**
PB06				*i* S	**S**	**05 30 12.3**	**-0.5**
PB06				IAML		05 30 14.7	
	comp=N,546nm,0.1s						
PB09	**IPOC Station P**	**2.94 318**			**Pn**	**05 29 42.0**	**+1.4**
PB09	**IPOC Station P**	**2.94 318**		*e*P	**Pn**	**05 29 42.1**	**+1.4**
PB09				*i* S	**S**	**05 30 20.1**	**+0.4**
PB09				IAML		05 30 23.7	
	comp=E,161nm,0.3s						
PB14	**IPOC Station P**	**3.07 258**		Pn	**Pn**	**05 29 42.3**	**+0.1**
PB03	**IPOC Station P**	**3.11 308**			**Pn**	**05 29 43.1**	**+0.5**
PB03	**IPOC Station P**	**3.11 308**		*e*P	**Pn**	**05 29 43.3**	**+0.7**
PB03				*i* S	**S**	**05 30 22.1**	**-1.1**
PB10	**IPOC Station P**	**3.19 278**		Pn	**Pn**	**05 29 44.1**	**+0.8**
PB10	**IPOC Station P**	**3.19 278**		*e*P	**Pn**	**05 29 43.5**	**+0.2**
PB10				*i* S	**S**	**05 30 23.3**	**-1.2**
PB04	**IPOC Station P**	**3.25 300**			**Pn**	**05 29 44.9**	**+0.6**
PB04	**IPOC Station P**	**3.25 300**		*e*P	**Pn**	**05 29 44.8**	**+0.6**
PB04				*i* S	**S**	**05 30 25.2**	**-0.9**
AC02	**Maricunga**	**3.36 212**		Pn	**Pn**	**05 29 45.4**	**-0.4**
PB07	**IPOC Station P**	**3.42 311**			**Pn**	**05 29 46.1**	**-0.1**
PB07	**IPOC Station P**	**3.42 311**		*e*P	**Pn**	**05 29 46.7**	**+0.5**
PB07				*i* S	**S**	**05 30 28.6**	**-1.0**
PB01	**IPOC Station P**	**3.67 323**			**Pn**	**05 29 49.6**	**+0.5**
PB01	**IPOC Station P**	**3.67 323**		*e*P	**Pn**	**05 29 49.6**	**+0.5**
PB01				*i* S	**S**	**05 30 33.8**	**-1.2**
PB02	**IPOC Station P**	**3.71 316**			**Pn**	**05 29 49.9**	**+0.3**
PB02	**IPOC Station P**	**3.71 316**		*e*P	**Pn**	**05 29 49.9**	**+0.3**
PB02				*i* S	**S**	**05 30 34.1**	**-1.6**
AC01	**Pan de Azucar**	**3.82 235**		Pn	**Pn**	**05 29 49.8**	**-0.9**
PATCX	**Punta Patache**	**4.24 318**		Pn	**Pn**	**05 29 55.3**	**-0.6**
PB08	**IPOC Station P**	**4.28 333**		Pn	**Pn**	**05 29 56.5**	**-0.4**
PB08	**IPOC Station P**	**4.28 333**		*e*P	**Pn**	**05 29 58.1**	**+1.2**
PB08				*i* S	**S**	**05 30 49.6**	**+0.7**
AC06	**Mina Casimiro**	**4.44 221**			**Pn**	**05 29 56.9**	**-1.5**
TA01	**Diego Aracena**	**4.45 320**		Pn	**Pn**	**05 29 57.6**	**-0.9**
TA02	**Huaiquique**	**4.65 322**		Pn	**Pn**	**05 29 59.3**	**-1.8**
GO01	**Chusmiza**	**4.72 335**		Pn	**Pn**	**05 30 02.8**	**+0.3**
AC04	**Llanos de Chal**	**5.50 220**		Pn	**Pn**	**05 30 09.9**	**-1.7**
LCO	**Las Campanas**	**5.94 212**		Pn	**Pn**	**05 30 14.8**	**-2.6**
PB16	**IPOC Station P**	**6.06 338**		Pn	**Pn**	**05 30 20.1**	**+0.6**
PB12	**IPOC Station P**	**6.14 330**		Pn	**Pn**	**05 30 18.5**	**-1.5**
LPAZ	**La Paz**	**7.73 353**		P	**Pn**	**05 30 41.6**	**+0.7**
	comp=E,2.0nm,0.3s,baz=165,slow=7.0,SNR=26						
LPAZ				S	**S**	**05 32 06.9**	**-2.2**
	comp=E,0.7nm,0.7s,baz=245,slow=21,SNR=1.2						
LPAZ	**La Paz**	**7.73 353**		Pn	**Pn**	**05 30 41.8**	**+0.8**
SIV	**San Ignacio**	**9.78 37**		P	**Pn**	**05 31 03.3**	**-3.5**
	comp=E,2.8nm,0.6s,baz=218,slow=11,SNR=17						
SIV				S	S	05 32 39.4	-17
	comp=E,1.0nm,0.9s,baz=230,slow=10,SNR=3.6						
GO06	**Curarrehue**	**15.97 192**		P	**P**	**05 32 20.5**	**-2.5**
PLCA	**Paso Flores**	**16.93 189**		P	**P**	**05 32 34.8**	**+1.3**
	comp=E,0.9nm,0.6s,baz=354,slow=9.3,SNR=6.2						
PLCA	**Paso Flores**	**16.93 189**		P	**P**	**05 32 33.2**	**-0.3**
LL04	**Puerto Octay**	**17.44 194**		P	**P**	**05 32 36.5**	**-2.4**
LL04				IAmb	IAmb	05 32 54.8	
	comp=Z,10nm,1.2s						
LL05	**Los Muermos**	**18.15 196**		P	**P**	**05 32 44.2**	**-2.5**
BDFB	**Brasilia**	**19.78 69**		P	**P**	**05 33 03.4**	**-1.2**
	comp=Z,7.9nm,0.5s,baz=246,slow=9.0,SNR=17						
BDFB	**Brasilia**	**19.78 69**		P	**P**	**05 33 03.6**	**-0.9**
BDFB				IAmb	IAmb	05 33 04.7	
	comp=Z,9.8nm,0.7s						
GO07	**Milladeo Hill,**	**19.82 194**		P	**P**	**05 33 04.6**	**+0.1**
PCRV	**Puerto La Cruz**	**34.05 4**		LR	LR	05 50 43.4	
	comp=Z,76nm,20.3s,slow=39						
QSPA	**South Pole Qui**	**66.20 180**		P	**P**	**05 39 17.9**	**+3.2**
QSPA				IAmb	IAmb	05 39 18.4	
	comp=Z,6.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**76.66 69**		P	**P**	**05 40 18.2**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=260,slow=6.0,SNR=21						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**131.58 207**		PKP	**PKiKP**	**05 47 41.2**	**+2.3**
	comp=Z,0.4nm,1.1s,baz=154,slow=1.8,SNR=1.3						

IDC ***17*** *05:40:01.2±2.7, 36°.91N×71°.87E, h145km±24km, mb3.6/15, mbtmp4.2/21, MS2.6/3, Error ellipse: s-maj=19.8km s-min=13.2km az=164.0*
BJI ***17*** *05:40:01.4±0.0, 37°.30N×71°.68E, h159km, mb4.6/25, mB4.8/14*
NEIC ***17*** *05:40:02.6±2.7, 37°.13N±0°.03×71°.71E±0°.09, h152km±8km, mb4.6/18, Error ellipse: s-maj=10.4km s-min=3.8km az=96.0*
NNC ***17*** *05:40:02.7±10.0, 37°.70N×71°.29E, h0km, mb4.8, mpv4.7, Error ellipse: s-maj=101.2km s-min=63.4km az=153.0*
MOS ***17*** *05:40:02.1±0.8, 37°.12N×71°.90E, h157km, mb4.5/12, Error ellipse: s-maj=9.1km s-min=4.4km az=82.0*
SOME ***17*** *05:40:03.9, 38°.57N×72°.68E, h5km*
ISC 17 05:40:01.6±0.4, 37°.09N±0°.04×71°.85E±0°.04, h142km, n166, σ2§37/198, mb4.3/35, 12C-12D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.26 328**		Pn	**Pn**	**05 40 41.0**	**+1.6**
DRK	**Karamyk**	**2.39 359**		Pn	**Pn**	**05 40 43.9**	**+2.6**
CHGR	**Chuyangaron**	**2.65 307**		Pn	**Pn**	**05 40 45.3**	**+1.1**
CHGR	**Chuyangaron**	**2.65 307**		PN	**Pn**	**05 40 45.3**	**+1.1**
BTK	**Batken**	**3.07 345**		Pn	**Pn**	**05 40 51.6**	**+2.0**
BTK	**Batken**	**3.07 345**		PN	**Pn**	**05 40 51.6**	**+2.0**
CEP	**Cherat**	**3.26 179**		P	**Pn**	**05 40 55.4**	**+3.3**
CEP				S	**Sn**	**05 41 34.0**	**+2.9**
CHCP	**Chirah Chowk**	**3.61 161**		P	**Pn**	**05 40 59.7**	**+3.1**
NIL	**Nilore**	**3.62 161**			**Pn**	**05 40 60.0**	**+3.3**
NIL	**Nilore**	**3.62 161**		PN	**Pn**	**05 41 00.0**	**+3.3**
THW	**Thamme Wali**	**4.29 181**		P	**Pn**	**05 41 07.1**	**+1.7**
TAS	**Tashkent**	**4.67 336**		Pn	**Pn**	**05 41 10.7**	**+0.2**
TAS	**Tashkent**	**4.67 336**		PN	**Pn**	**05 41 10.7**	**+0.2**
JMU	**Jammu**	**5.03 149**		*e*P	**Pn**	**05 41 17.1**	**+1.9**
JMU				*e*S	**Sn**	**05 42 11.4**	**-1.2**
IUG	**Iuzhnay**	**5.24 345**		*e*PN	**Pn**	**05 41 19.6**	**+1.5**
IUG	**Iuzhnay**	**5.24 345**		*e*P	**Pn**	**05 41 19.7**	**+1.5**
	998nm,0.5s						
IUG				*e*S	**Sn**	**05 42 14.6**	**-3.3**
	1μm,0.5s						
NRN	**Naryn**	**5.40 35**			**Pn**	**05 41 20.9**	**+0.4**
NRN	**Naryn**	**5.40 35**		PN	**Pn**	**05 41 20.9**	**+0.4**
UCH	**Uchtor**	**5.53 21**		P	**Pn**	**05 41 23.7**	**+1.4**
	SNR=69						
THN	**Thein Dam**	**5.63 144**		*e*P	**Pn**	**05 41 25.4**	**+2.1**
THN				*e*P	**Pn**	**05 41 25.5**	**+2.3**
THN				*e*S	**Sn**	**05 42 26.0**	**-0.9**
THN				*e*S	**Sn**	**05 42 26.3**	**-0.6**
EKS2	**Erkin-Say**	**5.76 14**		P	**Pn**	**05 41 26.9**	**+1.8**
	SNR=18						
DZA	**Taraz**	**5.81 356**		*e*P	**Pn**	**05 41 27.6**	**+2.0**
	229nm,0.6s						
DZA				*e*S	**Sn**	**05 42 28.4**	**-2.9**
	2μm,0.6s						
AAK	**Ala-Archa**	**5.90 19**		P	**Pn**	**05 41 28.8**	**+1.8**
	SNR=46						
AAK	**Ala-Archa**	**5.90 19**		P	**Pn**	**05 41 28.7**	**+1.7**
	92nm,0.5s,baz=200,slow=8.1,SNR=100						
AAK				S	**Sn**	**05 42 31.8**	**-1.9**
	133nm,0.6s,baz=336,slow=19,SNR=27						
AAK				LR	LR	05 43 42.3	
	comp=Z,23nm,19.4s,baz=238,slow=36						
AAK	**Ala-Archa**	**5.90 19**		Pn	**Pn**	**05 41 27.7**	**+0.7**
AAK	**Ala-Archa**	**5.90 19**	*d*	iPN	**Pn**	**05 41 28.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,70nm,0.6s						
KBK	**Karagaybulak**	**6.05 22**		P	**Pn**	**05 41 30.9**	**+1.9**
	SNR=12						
KK31	**Karatay Array**	**6.09 351**			**Pn**	**05 41 30.5**	**+1.2**
KK31	**Karatay Array**	**6.09 351**		PN	**Pn**	**05 41 30.6**	**+1.2**
KK31	**Karatay Array**	**6.09 351**		Pn	**Pn**	**05 41 30.6**	**+1.2**
	comp=Z,18nm,0.4s,baz=166,slow=12,SNR=59						
KK31				⇑Sn	**Sn**	**05 42 34.3**	**-3.8**
	comp=Z,78nm,0.3s,baz=170,slow=17,SNR=24						
KKAR	**Karatay Array**	**6.09 351**			**Pn**	**05 41 30.5**	**+1.0**
KKAR	**Karatay Array**	**6.09 351**			**Pn**	**05 41 30.4**	**+1.0**
KKAR	**Karatay Array**	**6.09 351**		PN	**Pn**	**05 41 30.4**	**+1.0**
ULHL	**Ulahol**	**6.16 32**		P	**Pn**	**05 41 31.6**	**+1.1**
	SNR=11						
BOOM	**Boomskoye usch**	**6.25 29**			**Pn**	**05 41 32.9**	**+1.3**
BOOM	**Boomskoye usch**	**6.25 29**		PN	**Pn**	**05 41 32.9**	**+1.3**
CHMS	**Chumysh**	**6.31 20**		P	**Pn**	**05 41 33.7**	**+1.4**
	SNR=38						
CHMS	**Chumysh**	**6.31 20**		PN	**Pn**	**05 41 33.5**	**+1.2**
CHMS	**Chumysh**	**6.31 20**		⇓Pn	**Pn**	**05 41 33.5**	**+1.2**
	comp=Z,82nm,0.8s						
CHMS				⇑Sn	**Sn**	**05 42 41.1**	**-2.1**
	comp=Z,125nm,0.7s						
TKM2	**Tokmak 2**	**6.50 25**		P	**Pn**	**05 41 36.3**	**+1.4**
	SNR=17						
TKM2	**Tokmak 2**	**6.50 25**		PN	**Pn**	**05 41 35.9**	**+0.9**
TKM2	**Tokmak 2**	**6.50 25**		⇑Pn	**Pn**	**05 41 35.9**	**+0.9**
	comp=Z,30nm,0.7s						
TKM2				⇑Sn	Sn	05 42 38.8	-9.2
	comp=Z,20nm,0.6s						
USP	**Ospenovka**	**6.50 17**		P	**Pn**	**05 41 35.8**	**+1.0**
	SNR=15						
TARG	**Taragay, Kyrgy**	**6.54 43**			**Pn**	**05 41 35.3**	**-0.4**
TARG	**Taragay, Kyrgy**	**6.54 43**		PN	**Pn**	**05 41 35.3**	**-0.4**
SGDS	**Sogindy**	**6.70 18**		*e*PN	**Pn**	**05 41 37.4**	**-0.2**
SGDS	**Sogindy**	**6.70 18**		*e*P	**Pn**	**05 41 38.0**	**+0.4**
	comp=Z,20nm,0.5s						
SGDS				*e*S	**Sn**	**05 42 46.2**	**-6.5**
	comp=Z,57nm,1.2s						
KST	**Kastek**	**6.73 27**		*e*P	**Pn**	**05 41 39.5**	**+1.4**
	comp=Z,34nm,0.7s						
KST				*e*S	**Sn**	**05 42 49.0**	**-4.5**
	comp=Z,86nm,0.9s						
BHK	**Bhakra**	**6.80 145**		*e*P	**Pn**	**05 41 40.9**	**+1.9**
BHK				*e*S	**Sn**	**05 42 53.2**	**-2.0**
DGS	**Degeres**	**6.84 25**		*e*P	**Pn**	**05 41 40.6**	**+1.1**
	comp=Z,18nm,0.6s						
DGS				*e*S	**Sn**	**05 42 50.9**	**-5.2**
	comp=Z,61nm,0.7s						
TNSS	**Tian-Shan**	**7.11 32**		*e*P	**Pn**	**05 41 44.2**	**+0.8**
	comp=Z,16nm,0.4s						
TNSS				*e*S	**Sn**	**05 42 56.7**	**-6.4**
	comp=Z,12nm,0.8s						
KRBS	**Karabastau**	**7.22 23**		*e*P	**Pn**	**05 41 45.1**	**+0.7**
	comp=Z,16nm,0.8s						
KRBS				*e*S	**Sn**	**05 42 58.4**	**-6.7**
	comp=Z,27nm,0.9s						
MDOK	**Medeo**	**7.26 32**		PN	**Pn**	**05 41 46.4**	**+1.3**
MDOK	**Medeo**	**7.26 32**		⇓P	**Pn**	**05 41 46.4**	**+1.3**
	comp=Z,51nm,0.6s						
SMLA	**Simla**	**7.40 142**		*e*P	**Pn**	**05 41 47.7**	**+0.8**
SMLA				IAML		05 43 11.0	
	comp=E,377nm,0.4s						
SMLA				IAML		05 43 11.5	
	comp=N,358nm,0.2s						
KUU	**Kurty**	**7.61 25**		*e*P	**Pn**	**05 41 54.0**	**+4.3**
	comp=N,3.1nm,0.3s						
KUU				*e*S	**Sn**	**05 43 13.0**	**-1.5**
	comp=N,22nm,0.3s						
CHKK	**Chushkaly**	**7.81 28**		*e*P	**Pn**	**05 41 56.6**	**+4.2**
	comp=N,14nm,0.3s						
CHKK				*e*S	**Sn**	**05 43 17.4**	**-1.9**
	comp=N,14nm,0.4s						
BTLS	**Baital**	**8.12 11**		*e*P	Pn	05 42 08.7	+12
	comp=N,3.0nm,0.2s						
BTLS				*e*S	Sn	05 43 38.5	+12
	comp=N,47nm,0.4s						
UZB	**Uzynbulak**	**8.17 40**		*e*PN	**Pn**	**05 41 57.1**	**-0.2**
KPKS	**Kokpek**	**8.23 37**		*e*PN	**Pn**	**05 41 57.9**	**-0.2**
HRA	**Herat**	**8.26 254**		Pn	**Pn**	**05 41 54.9**	**-3.8**
ARXS	**Arharly**	**8.44 31**		*e*P	Pn	05 42 08.5	+7.6
	comp=N,11nm,0.4s						
ARXS				*e*S	**Sn**	**05 43 37.8**	**+3.2**
	comp=N,11nm,0.4s						
PDGK	**Podgornoye**	**8.54 41**		PN	**Pn**	**05 42 02.6**	**+0.3**
KHET	**Khetri**	**9.59 159**		*e*P	**Pn**	**05 42 15.3**	**-0.9**
PTH	**Pithoragarh**	**10.27 135**		*e*S	**Sn**	**05 44 12.1**	**-6.9**
AJM	**Ajmer**	**10.84 167**		*e*P	**Pn**	**05 42 30.0**	**-2.9**
AJM				*e*P	**Pn**	**05 42 33.6**	**+0.7**
AJM				*i* S	**Sn**	**05 44 24.0**	**-8.7**
AJM				*e*S	**Sn**	**05 44 27.4**	**-5.3**
GEYT	**Alibeck**	**10.94 279**		P	**Pn**	**05 42 33.6**	**-0.6**
	comp=N,5.3nm,0.4s,baz=116,slow=12,SNR=8.3						
GEYT				S	**Sn**	**05 44 27.7**	**-7.4**
	comp=N,6.5nm,0.4s,baz=125,slow=20,SNR=2.6						
GEYT	**Alibeck**	**10.94 279**			**Pn**	**05 42 31.3**	**-2.9**
GYA0	**ALIBECK ARRAY**	**10.94 279**		P	**Pn**	**05 42 34.3**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**10.94 279**		Pn	**Pn**	**05 42 33.3**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**10.94 279**		⇓Pn	**Pn**	**05 42 34.2**	**0.0**
GYA0B				⇑Lg	Lg	05 44 28.1	
MAKZ	**Makanchi**	**12.28 35**			**Pn**	**05 42 51.6**	**0.0**
MAKZ	**Makanchi**	**12.28 35**		P	**Pn**	**05 42 51.6**	**0.0**
MK31	**Makanchi Array**	**12.41 35**		Pn	**Pn**	**05 42 53.0**	**-0.4**
MK31	**Makanchi Array**	**12.41 35**	*c*	iP	**Pn**	**05 42 52.8**	**-0.6**
MKAR	**Makanchi Array**	**12.41 35**		P	**Pn**	**05 42 53.4**	**0.0**
	comp=N,7.5nm,0.6s,baz=223,slow=15,SNR=42						
MKAR				LR	LR	05 47 41.8	
	comp=N,31nm,18.9s,baz=116,slow=37						
MKAR	**Makanchi Array**	**12.41 35**			**Pn**	**05 42 53.1**	**-0.3**
JHNI	**Jhansi**	**12.91 152**		*e*P	**Pn**	**05 42 58.4**	**-1.6**
PYUN	**Piuthan**	**12.97 131**		*e*P	**Pn**	**05 42 58.8**	**-2.1**
	comp=N,24nm,0.4s						
DANN	**Dangsing**	**13.27 128**		*e*P	**Pn**	**05 43 03.4**	**-1.4**
	comp=N,8.0nm,0.2s						
KOLN	**Koldanda**	**13.58 130**		*e*P	**Pn**	**05 43 07.0**	**-1.7**
KOLN	**Koldanda**	**13.58 130**		*e*P	**Pn**	**05 43 07.4**	**-1.3**
	comp=N,2.6nm,0.3s						
WMQ	**Urumqi**	**13.80 56**		*e*P	**P**	**05 43 13.0**	**-2.0**
WMQ				pmax	pmax		
	comp=N,18nm,0.7s						
GKN	**Gorkha**	**14.07 126**		*e*P	**Pn**	**05 43 13.4**	**-1.5**
	comp=N,14nm,0.3s						
KURBB	**Kurchatov Arra**	**14.35 17**		P	**Pn**	**05 43 15.8**	**-2.3**
	comp=N,2.3nm,0.5s,baz=206,slow=12,SNR=19						
KURK	**Kurchatov**	**14.46 17**		Pn	**Pn**	**05 43 16.8**	**-2.6**
KURK	**Kurchatov**	**14.46 17**	*d*	iP	**Pn**	**05 43 18.5**	**-0.9**
BHPL	**Bhopal**	**14.61 159**		*e*P	**P**	**05 43 24.4**	**+0.3**
PKIN	**Phulchoki**	**14.85 126**		*e*P	**Pn**	**05 43 24.3**	**-0.5**
	comp=N,15nm,0.5s						
PKI	**Pulchoki**	**14.86 126**		*e*P	**Pn**	**05 43 24.1**	**-0.9**
AB31	**Akbulak array**	**14.92 328**		P	**Pn**	**05 43 25.9**	**+0.7**
AB31	**Akbulak array**	**14.92 328**		P	**Pn**	**05 43 25.9**	**+0.7**
	comp=N,2.6nm,0.4s,baz=136,slow=14,SNR=29						
AB31				⇑S	Sn	05 45 55.0	-16
	comp=N,13nm,0.5s,baz=149,slow=24,SNR=13						
ABKAR	**Akbulak array**	**14.92 328**		Pn	**Pn**	**05 43 23.0**	**-2.2**
GUN	**Gumba**	**14.95 124**		*e*P	**Pn**	**05 43 25.2**	**-0.9**
	comp=N,9.3nm,0.3s						
JIRN	**Jiri**	**15.32 124**		*e*P	**Pn**	**05 43 29.4**	**-1.3**
	comp=N,21nm,0.4s						
BVAR	**Borovoye Array**	**15.97 357**		P	**Pn**	**05 43 36.9**	**-1.2**
	comp=N,2.4nm,0.4s,baz=166,slow=13,SNR=20						
BVAR				S	**Sn**	**05 46 28.1**	**-7.6**
	comp=N,1.2nm,0.4s,baz=161,slow=24,SNR=3.7						
BRVK	**Borovoye**	**16.01 357**			**Pn**	**05 43 36.2**	**-2.4**
**BRV

comp=Z,7.5nm,0.6s,baz=194,slow=4.8,SNR=9.4
comp=Z,7.5nm,0.6s
NRIK Noril'sk 33.43 10 P **P 05 46 27.9 +1.5**
NRIK IAmb IAmb 05 46 28.6
comp=Z,9.6nm,0.7s
NRIK Noril'sk 33.43 10‖ *eP* **P 05 46 27.6 +1.3**
NRIK pmax pmax
comp=Z,10.0nm,0.7s
XLT XiLinHaoTe 33.99 64 *eP* **P 05 46 32.8 +1.1**
XLT pP pP 05 47 02.9 -0.6
XLT pmax pmax
comp=Z,12nm,0.6s
XLT pmax pmax
comp=Z,58nm,4.1s
MNK Minsk 34.57 314 *i P* **P 05 46 36.2 -0.2**
MNK *i* *PP **pP 05 47 13.9 +5.8**
MNK *i* 05 47 57.6
MNK *i* 05 49 07.6
MNK *i* S **S 05 51 50.9 -3.8**
MNK *i* SS **SnSn 05 54 24.1 +1.1**
MNK *i* 05 56 38.5
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK MLR MLR
comp=N,304nm,19.0s
MNK MLR MLR
comp=Z,31nm,14.0s
MNK MLR MLR
comp=E,79nm,20.0s
MNK Minsk 34.57 314 *i* P **P 05 46 36.2 -0.2**
comp=E,4.0nm,1.0s
MNK *i* P **P 05 46 36.2 -0.2**
comp=N,24nm,0.9s
MNK *i* P **P 05 46 36.2 -0.2**
comp=Z,7.0nm,0.7s,baz=281
MNK *i* pP **pP 05 47 13.9 +5.8**
MNK *i* PP **PP 05 47 57.6 +0.2**
MNK *i* S **S 05 51 51.0 -3.8**
MNK *i* sS sS 05 52 58.2 +8.1
MNK *i* SS **SnSn 05 54 24.2 +1.1**
MNK *i* LRM MLR 06 02 32.0
comp=N,304nm,18.6s
MNK *i* LRM MLR 06 02 55.7
comp=Z,31nm,14.4s
MNK *i* LRM MLR 06 02 57.4
comp=E,79nm,19.5s
FIA1 FINESS Array S 37.38 325 P **P 05 46 58.7 -1.5**
FIA1 IAmb IAmb 05 47 10.9
comp=Z,21nm,1.4s
FINES FINESS Array B 37.38 325 P **P 05 47 00.5 +0.3**
comp=Z,2.0nm,0.9s,baz=128,slow=9.0,SNR=4.7
comp=Z,2.0nm,0.9s
FINES FINESS Array B 37.38 325 P **P 05 46 58.3 -1.9**
FINES FINESS Array B 37.38 325 *eP* **P 05 46 59.9 -0.3**
FINES pmax pmax
comp=Z,1.0nm,0.7s
NJ2 Nanjing 38.72 83 *eP* **P 05 47 12.3 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.7s
ARCES ARCESS Array B 40.87 337 P **P 05 47 30.1 +1.0**
comp=Z,2.5nm,0.8s,baz=110,slow=6.6,SNR=8.9
comp=Z,2.5nm,0.8s
ARCES ARCESS Array B 40.87 337 P **P 05 47 27.9 -1.1**
ARCES IAmb IAmb 05 47 44.7
comp=Z,22nm,1.4s
ARCES ARCESS Array B 40.87 337 *eP* **P 05 47 29.3 +0.2**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
GSI Gunungsitoli 42.80 140 P **P 05 47 45.3 -0.1**
YAK Yakutsk 43.09 36‖ *eP* **P 05 47 47.8 +0.7**
YAK pmax pmax
comp=Z,10.0nm,0.5s
NB201 NORSAR Array S 44.29 323 P **P 05 47 57.1 +0.3**
NB2 NORSAR Subarra 44.33 323 P **P 05 47 57.7 +0.6**
comp=Z,2.6nm,0.7s,baz=97,slow=7.9
NOA NORSAR Array B 44.33 323 P **P 05 47 57.2 +0.1**
comp=Z,1.9nm,0.6s,baz=96,slow=7.7,SNR=2.8
comp=Z,1.9nm,0.6s
NOA NORSAR Array B 44.33 323 *eP* P 05 48 01.8 +4.7
NOA pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 44.97 22 P **P 05 48 02.8 +0.7**
TIXI IAmb IAmb 05 48 03.1
comp=Z,7.1nm,0.7s
TIXI Tiksi 44.97 22⇑ *eP* **P 05 48 02.0 0.0**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
RAFF Raffo Rosso 45.19 288 P **P 05 48 04.0 -0.3**
ESDC Sonseca Array 57.79 298 P **P 05 49 37.8 -0.1**
comp=Z,1.1nm,0.8s,baz=60,slow=7.0,SNR=8.3
comp=Z,1.1nm,0.8s
TOA0 Torodi Ar. Sit 66.41 269 P **P 05 50 35.1 -0.6**
TORD Torodi Ar. Bea 66.41 269 P **P 05 50 34.0 -1.7**
comp=Z,1.2nm,0.5s,baz=50,slow=5.7,SNR=26
comp=Z,1.2nm,0.5s
IMAR Indian Mountai 71.41 18 P **P 05 51 05.7 -0.1**
INK Inuvik 73.21 10 P **P 05 51 16.3 -0.1**
comp=Z,1.8nm,0.5s,baz=326,slow=3.6,SNR=4.6
comp=Z,1.8nm,0.5s
ILAR Eielson Array 74.03 16 P **P 05 51 20.6 -0.6**
comp=Z,0.8nm,0.8s,baz=316,slow=3.8,SNR=7.1
comp=Z,0.8nm,0.8s
ILAR Eielson Array 74.03 16 P **P 05 51 21.0 -0.3**
ILAR Eielson Array 74.03 16 *eP* **P 05 51 20.8 -0.5**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
PPLA Purkeypile 74.31 19 P **P 05 51 23.1 0.0**
PPLA IAmb IAmb 05 51 40.1
comp=Z,19nm,1.4s
SKT Skwentna 75.24 20 P **P 05 51 28.3 0.0**
SKT IAmb IAmb 05 51 35.2
comp=Z,16nm,1.5s
SML Sawmill 76.21 18 P **P 05 51 34.1 +0.2**
SML IAmb IAmb 05 52 08.3
comp=Z,27nm,1.3s
SML Sawmill 76.21 18 P **P 05 51 34.1 +0.2**
SML pmax pmax
comp=Z,27nm,1.3s
SCM Sheep Creek Mo 76.44 18 P **P 05 51 35.4 +0.2**
SCM IAmb IAmb 05 51 51.6
comp=Z,30nm,1.3s
SCM Sheep Creek Mo 76.44 18 P **P 05 51 35.4 +0.2**
SCM pmax pmax
comp=Z,30nm,1.3s
WRA Warramunga Arr 81.72 123 P **P 05 52 03.3 -1.1**
comp=Z,0.3nm,0.8s,baz=318,slow=4.8,SNR=1.4
comp=Z,0.3nm,0.8s
ASAR Alice Springs 84.03 125 P **P 05 52 15.1 -1.2**
comp=Z,0.1nm,0.3s,baz=312,slow=4.5,SNR=1.7
comp=Z,0.1nm,0.3s

FUNV ***17*** *05:45:19.6, 10.°64N×62.°41W, h88km, MW3.4*
TRN ***17*** *05:45:19.1, 10.°66N×62.°48W, h71km, MD3.3*
ISC 17 05:45:17.4±1.5, 10.°63N±0.°07×62.°47W±0.°05, h99km±13km, n15, σ1°37/24, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.75**	**274**	*eP*	**Pn**	**05 45 36.0**	**+0.7**
CRUV				*eS*	**Sn**	**05 45 48.5**	**-0.1**
TRN	**Trinidad (W)**	**1.05**	**89**	*eP*	**Pn**	**05 45 39.1**	**+0.8**
TRN				*eS*	**Sn**	**05 45 52.4**	**-1.6**
GRGR	**Grenville**	**1.70**	**28**	*eP*	**Pn**	**05 45 46.7**	**+0.5**
GRGR				*eS*	**Sn**	**05 46 06.6**	**-1.4**
TOSP	**Speyside**	**2.02**	**70**	*eP*	**Pn**	**05 45 51.4**	**+1.3**
TOSP				*eS*	**Sn**	**05 46 14.3**	**-0.8**
GCMP	**Grenada, Carri**	**2.11**	**29**	*eP*	**Pn**	**05 45 52.1**	**+0.7**
GCMP				*eS*	**Sn**	**05 46 16.7**	**-0.7**
PCRV	**Puerto La Cruz**	**2.18**	**258**	*eP*	**Pn**	**05 45 54.1**	**+1.8**
PCRV				*eS*	**Sn**	**05 46 18.7**	**-0.3**
MCLT	**Moule a Chique**	**3.41**	**26**	*eP*	**Pn**	**05 46 10.2**	**+1.6**
MCLT				*eS*	**Sn**	**05 46 46.7**	**-1.5**
SLBI	**Saint Lucia, B**	**3.68**	**23**	*eP*	**Pn**	**05 46 13.7**	**+1.4**
SLBI				*eS*	**Sn**	**05 46 53.0**	**-1.7**
BIM	**Bigot**	**4.10**	**19**	*eS*	**Sn**	**05 47 04.5**	**-0.5**
MPOM	**Morne Pois Mar**	**4.11**	**22**	*eP*	**Pn**	**05 46 19.2**	**+1.1**
MPOM	**Morne Pois Mar**	**4.11**	**22**	*eS*	**Sn**	**05 47 04.3**	**-0.8**
CACV	**CAICARA DEL OR**	**5.04**	**233**	*eP*	Pn	05 46 26.3	-4.5
CACV				*eS*	Sn	05 47 17.7	-10
BENV	**Beln**	**5.09**	**263**	*eP*	**Pn**	**05 46 32.3**	**+0.8**
BENV				*eS*	**Sn**	**05 47 27.4**	**-1.7**
BAUV	**El Baul**	**5.74**	**254**	*eS*	**Sn**	**05 47 43.1**	**-1.7**
BAUV	**El Baul**	**5.74**	**254**	*eP*	**Pn**	**05 46 41.2**	**+0.9**
BAUV				*eS*	**Sn**	**05 47 42.4**	**-2.4**

JMA ***17*** *05:45:34.9±0.1, 24.°7N±0.°7×122.°5E±0.°3, h32km±1km, MV2.7/9, NW OFF ISHIGAKIJIMA IS*
TAP ***17*** *05:45:34.1, 24.°67N×122.°45E, h14km±1km, ML3.3, D*
ISC 17 05:45:34.3±0.9, 24.°67N±0.°03×122.°48E±0.°02, h17km±8km, n79, σ0°62/154, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.48**	**117**	P	**Pg**	**05 45 44.5**	**+0.5**
JYNG				S	**Sg**	**05 45 51.4**	**+0.9**
EGS		**0.52**	**289**	P	**Pg**	**05 45 44.6**	**-0.2**
EGS	baz=290			*eS*	**Sb**	**05 45 52.1**	**-0.3**
YOJ	**Yonaguni jima**	**0.53**	**113**	P	**Pg**	**05 45 45.3**	**+0.4**
YOJ	baz=111			S	**Sg**	**05 45 52.6**	**+0.6**
YOJ	**Yonaguni jima**	**0.53**	**113**	P	**Pg**	**05 45 45.3**	**+0.4**
YOJ				S	**Sg**	**05 45 52.6**	**+0.6**
TWB1	**Santiao Chiao**	**0.56**	**307**	P	**Pg**	**05 45 45.3**	**0.0**
TWB1	baz=309			S	**Sg**	**05 45 52.0**	**-0.8**
TWC	**Suao**	**0.57**	**264**	P	**Pg**	**05 45 45.3**	**-0.4**
TWC	baz=263			*eS*	**Sb**	**05 45 53.6**	**-0.2**
TIPB	**Shuangxi**	**0.66**	**297**	P	**Pg**	**05 45 47.3**	**0.0**
TIPB	baz=297			*eS*	**Sg**	**05 45 56.0**	**-0.2**
ILA	**Ilan**	**0.67**	**278**	*eS*	**Sb**	**05 45 57.8**	**+1.3**
EWUT	**Wuta**	**0.67**	**251**	*eP*	**Pg**	**05 45 46.8**	**-0.7**
EWUT	baz=250			*eS*	**Sg**	**05 45 55.9**	**-0.6**
SXI1	**Grass Mountain**	**0.69**	**308**	P	**Pg**	**05 45 48.2**	**+0.4**
SXI1	baz=308			S	**Sb**	**05 45 57.4**	**+0.2**
TWE	**Neicheng**	**0.74**	**274**	P	**Pg**	**05 45 48.4**	**-0.3**
TWE	baz=274			*eS*	**Sb**	**05 45 59.5**	**+1.0**
NWF	**Wu-fen Shan**	**0.75**	**302**	P	**Pb**	**05 45 49.3**	**+0.4**
NWF	baz=303			*eS*	**Sb**	**05 45 59.9**	**+1.1**
FUSB	**Fushanzhiwuyua**	**0.81**	**276**	P	**Pg**	**05 45 49.9**	**-0.3**
FUSB	baz=276			S	**Sb**	**05 46 01.0**	**+0.3**
ENTT	**Nioudou**	**0.83**	**268**	*eP*	**Pg**	**05 45 49.4**	**-1.1**
ENTT	baz=267			*eS*	**Sb**	**05 46 01.6**	**+0.4**
TWA	**Mucha**	**0.87**	**291**	*eP*	**Pb**	**05 45 51.4**	**+0.5**
TWA	baz=291			*eS*	**Sb**	**05 46 03.3**	**+1.0**
LATG	**Datong**	**0.87**	**261**	*eP*	**Pg**	**05 45 51.1**	**-0.2**
LATG	baz=261			*eS*	**Sb**	**05 46 02.9**	**+0.4**
NDT	**Datong Townshi**	**0.88**	**266**	*eP*	**Pg**	**05 45 51.1**	**-0.3**
NDT	baz=265			*eS*	**Sb**	**05 46 03.0**	**+0.4**
NHDH	**Xindian Distri**	**0.91**	**289**	*eP*	**Pg**	**05 45 51.9**	**-0.1**
NHDH	baz=289			*eS*	**Sb**	**05 46 04.1**	**+0.6**
ETL	**Fush Village**	**0.93**	**237**	*eP*	**Pb**	**05 45 52.3**	**+0.3**
ETL	baz=236			*eS*	**Sn**	**05 46 05.2**	**-0.4**
NACB	**Ninganchiao**	**0.94**	**239**	P	**Pg**	**05 45 52.2**	**-0.4**
NACB	baz=237			*eS*	**Sb**	**05 46 05.1**	**+0.7**
YM01	**YM01**	**0.95**	**300**	*eP*	**Pg**	**05 45 52.3**	**-0.4**
YM01	baz=300			*eS*	**Sb**	**05 46 05.0**	**+0.4**
TWD	**Chiawan**	**0.99**	**234**	*eP*	**Pg**	**05 45 53.1**	**-0.4**
TWD	baz=232			*eS*	**Sb**	**05 46 06.4**	**+0.6**
TWY	**Chenhua**	**1.00**	**307**	*eP*	**Pg**	**05 45 53.1**	**-0.6**
TWY	baz=308			*eS*	**Sg**	**05 46 06.1**	**-0.6**
YHNB	**Yeheng**	**1.00**	**270**	*eP*	**Pg**	**05 45 53.4**	**-0.3**
YHNB	baz=270			S	**Sb**	**05 46 06.2**	**+0.1**
ETLH	**Xiulin Townshi**	**1.02**	**243**	P	**Pg**	**05 45 53.6**	**-0.4**
ETLH	baz=242			S	**Sb**	**05 46 07.3**	**+0.6**
NSK	**Sanguang**	**1.02**	**271**	P	**Pg**	**05 45 53.2**	**-0.8**
NSK	baz=270			*eS*	**Sg**	**05 46 06.1**	**-1.3**
NNSB	**Datong**	**1.02**	**257**	*eP*	**Pg**	**05 45 53.6**	**-0.5**
NNSB	baz=256			*eS*	**Sb**	**05 46 07.3**	**+0.5**
NNS	**Nan Shan**	**1.03**	**257**	*eP*	**Pg**	**05 45 53.0**	**-1.3**
NNS	baz=256			*eS*	**Sg**	**05 46 06.7**	**-1.1**
TWS1	**Kuangyinshan**	**1.05**	**294**	*eP*	**Pb**	**05 45 53.8**	**-0.2**
TWS1	baz=294			*eS*	**Sb**	**05 46 07.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.19**	**106**	P	**Pn**	**05 45 55.4**	**-0.7**
IRIF				*eS*	**Sb**	**05 46 10.3**	**-1.2**
FUSS	**Fushou**	**1.20**	**250**	*eP*	**Pn**	**05 45 57.1**	**+0.6**
FUSS	baz=249			*eS*	**Sn**	**05 46 12.8**	**+0.2**
WHF	**Hehuan Shan**	**1.22**	**245**	P	**Pn**	**05 45 57.6**	**+0.6**
WHF	baz=244			*eS*	**Sn**	**05 46 13.9**	**+0.6**
NFF	**Wufeng Townshi**	**1.24**	**268**	*eP*	**Pn**	**05 45 56.7**	**-0.2**
NFF	baz=268			*eS*	**Sb**	**05 46 12.7**	**-0.3**
TWT	**Tachien**	**1.25**	**251**	*eP*	**Pg**	**05 45 58.4**	**-0.2**
TWT	baz=250			*eS*	**Sn**	**05 46 15.4**	**+1.6**
TDCB	**Techi**	**1.27**	**251**	*eP*	**Pg**	**05 45 58.4**	**-0.4**
TDCB	baz=250			*eS*	**Sn**	**05 46 15.1**	**+0.9**
ESL	**Shilin**	**1.28**	**228**	*eP*	**Pn**	**05 45 56.9**	**-0.5**
ESL	baz=227			*eS*	**Sb**	**05 46 13.6**	**-0.5**
LIOB	**Emei**	**1.33**	**269**	*eP*	**Pn**	**05 45 58.8**	**+0.7**
LIOB	baz=269			*eS*	**Sn**	**05 46 15.8**	**+0.4**
CHGB	**Renai**	**1.33**	**243**	*eP*	**Pn**	**05 45 58.8**	**+0.5**
CHGB	baz=242			*eS*	**Sg**	**05 46 16.7**	**-0.8**
NSTT	**Nanjuang**	**1.34**	**269**	*eP*	**Pn**	**05 45 58.8**	**+0.6**
NSTT	baz=268			*eS*	**Sg**	**05 46 16.7**	**-1.0**
HATJ	**Hateruma jima**	**1.36**	**116**	*eS*	**Sn**	**05 46 14.8**	**-1.3**
EGFH	**Guangfu**	**1.38**	**224**	*eP*	**Pn**	**05 45 59.6**	**+0.8**
EGFH	baz=223			*eS*	**Sb**	**05 46 16.6**	**-0.5**
OWD	**Renai**	**1.38**	**239**	*eP*	**Pn**	**05 45 59.0**	**+0.1**
OWD	baz=238			*eS*	**Sb**	**05 46 16.9**	**-0.3**
WUSB	**Renai**	**1.41**	**242**	*eP*	**Pb**	**05 46 00.3**	**+0.1**
WUSB	baz=241			*eS*	**Sn**	**05 46 18.2**	**+0.6**
WHP	**Taichung City**	**1.45**	**255**	*eP*	**Pg**	**05 46 01.8**	**-0.4**
WHP	baz=254			*eS*	**Sg**	**05 46 20.6**	**-0.5**
JKRS	**Kuro-shima**	**1.46**	**107**	P	**Pn**	**05 45 59.9**	**0.0**
JKRS				*eS*	**Sn**	**05 46 18.2**	**-0.5**
HGSD	**Ruisui**	**1.52**	**220**	*eP*	**Pn**	**05 46 00.1**	**-0.6**
HGSD	baz=218			*eS*	**Sn**	**05 46 19.7**	**-0.3**
VWDT	**VWDT**	**1.52**	**233**	*eP*	**Pn**	**05 46 00.9**	**+0.2**
VWDT	baz=232			*eS*	**Sn**	**05 46 20.0**	**-0.2**
NMLH	**Miaoli**	**1.54**	**265**	*eP*	**Pb**	**05 46 02.5**	**+0.2**
NMLH	baz=265			*eS*	**Sg**	**05 46 22.6**	**-1.4**
JIJ	**Ishigaki jima**	**1.55**	**101**	*eP*	**Pn**	**05 46 00.4**	**-0.7**
JIJ				*eS*	**Sn**	**05 46 18.7**	**-2.1**
WCS	**Beigang Elemen**	**1.55**	**247**	*eP*	**Pb**	**05 46 02.4**	**-0.1**
WCS	baz=246			*eS*	**Sb**	**05 46 22.6**	**+0.6**
EHY	**Hungye**	**1.57**	**223**	*eP*	**Pn**	**05 46 01.1**	**-0.3**
EHY	baz=221			*eS*	**Sn**	**05 46 20.7**	**-0.6**
NSY	**Sanyi**	**1.58**	**261**	*eP*	**Pn**	**05 46 01.6**	**0.0**
NSY	baz=260			*eS*	**Sn**	**05 46 21.9**	**+0.2**
TWQ1	**Liyutan**	**1.58**	**259**	*eP*	**Pn**	**05 46 01.9**	**+0.3**
TWQ1	baz=258			*eS*	**Sn**	**05 46 22.1**	**+0.4**
SMLT	**Sun Moon Lake**	**1.64**	**242**	*eP*	**Pn**	**05 46 03.5**	**+1.1**
SMLT	baz=240			*eS*	**Sb**	**05 46 24.5**	**-0.1**
SSLB	**Suanglung**	**1.64**	**238**	*eP*	**Pn**	**05 46 03.0**	**+0.5**
SSLB	baz=237			*eS*	**Sn**	**05 46 23.3**	**+0.1**
TYC	**Yuchr**	**1.66**	**243**	*eP*	**Pn**	**05 46 03.7**	**+1.1**
TYC	baz=242			*eS*	**Sb**	**05 46 25.2**	**+0.1**
YULB	**Yu-li**	**1.67**	**220**	*eP*	**Pn**	**05 46 01.9**	**-0.8**
YULB	baz=219			*eS*	**Sn**	**05 46 22.8**	**-1.0**
EYUL	**Yuli**	**1.69**	**219**	*eP*	**Pn**	**05 46 03.2**	**+0.1**
EYUL	baz=218			*eS*	**Sn**	**05 46 24.9**	**+0.6**
WHYT	**Xinyi Township**	**1.77**	**237**	*eP*	**Pn**	**05 46 04.9**	**+0.7**
WHYT	baz=236			*eS*	**Sn**	**05 46 26.8**	**+0.4**
YUS	**Yu-Shan**	**1.82**	**230**	*eP*	**Pn**	**05 46 05.3**	**0.0**
YUS	baz=229			*eS*	**Sn**	**05 46 27.4**	**-0.8**
EHD	**Haiduan**	**1.91**	**218**	*eP*	**Pn**	**05 46 06.5**	**+0.4**
EHD	baz=217			*eS*	**Sn**	**05 46 30.0**	**+0.2**
ALS	**Alishan**	**1.92**	**233**	*eP*	**Pn**	**05 46 06.5**	**+0.1**
ALS	baz=232			*eS*	**Sn**	**05 46 29.9**	**-0.4**
CHN5	**Tsauling**	**1.96**	**237**	*eP*	**Pn**	**05 46 07.2**	**+0.4**
CHN5	baz=236			*eS*	**Sn**	**05 46 30.9**	**-0.1**
ELDTW	**Lidau**	**1.99**	**222**	*eP*	**Pn**	**05 46 07.9**	**+0.6**
ELDTW	baz=221			*eS*	**Sn**	**05 46 31.9**	**0.0**
EDH	**Donghe**	**2.00**	**213**	*eP*	**Pn**	**05 46 07.7**	**+0.3**
EDH	baz=211			*eS*	**Sn**	**05 46 32.0**	**0.0**
WDLH	**Douliu**	**2.02**	**241**	*eS*	**Sn**	**05 46 33.0**	**+0.5**
WRL	**Guolierlin Hig**	**2.06**	**249**	*eP*	**Pn**	**05 46 08.4**	**+0.2**
WRL	baz=248			*eS*	**Sn**	**05 46 34.0**	**+0.5**
WCKO	**Fanlu**	**2.10**	**235**	*eP*	**Pn**	**05 46 08.9**	**+0.2**
WCKO	baz=234			*eS*	**Sn**	**05 46 34.8**	**+0.2**
LONT	**Longtian**	**2.15**	**215**	*eP*	**Pn**	**05 46 10.0**	**+0.7**
LONT	baz=214			*eS*	**Sn**	**05 46 36.0**	**+0.4**
STYH	**Taoyuan**	**2.16**	**227**	*eP*	**Pn**	**05 46 09.7**	**+0.2**
STYH	baz=225			*eS*	**Sn**	**05 46 35.6**	**-0.2**
TPUB	**Ta-pu**	**2.17**	**231**	*eP*	**Pn**	**05 46 10.3**	**+0.6**
TPUB	baz=230			*eS*	**Sn**	**05 46 37.0**	**+0.8**
LDUT	**Ludao**	**2.19**	**205**	*eP*	**Pn**	**05 46 10.4**	**+0.5**
LDUT	baz=204			*eS*	**Sn**	**05 46 37.0**	**+0.3**
TWK	**Hsinying**	**2.29**	**233**	*eP*	**Pn**	**05 46 11.7**	**+0.3**
TWK	baz=231			*eS*	**Sn**	**05 46 39.4**	**+0.1**
CHN1	**Nanshi**	**2.32**	**231**	*eP*	**Pn**	**05 46 12.2**	**+0.5**
CHN1	baz=230			*eS*	**Sn**	**05 46 40.2**	**+0.4**
SGST	**Jiashian**	**2.35**	**228**	*eS*	**Sn**	**05 46 41.2**	**+0.6**
MASBT	**Mashibuluo**	**2.66**	**220**	*eP*	**Pn**	**05 46 17.3**	**+1.0**
MASBT	baz=219			*eS*	**Sn**	**05 46 48.2**	**0.0**
LYUB	**Lan-yu**	**2.78**	**197**	*eP*	**Pn**	**05 46 18.9**	**+0.9**
LYUB	baz=196			*eS*	**Sn**	**05 46 51.9**	**+0.7**
SLIU	**Shizi**	**2.89**	**213**	*eP*	**Pn**	**05 46 20.6**	**+1.1**
SLIU	baz=211			*eS*	**Sn**	**05 46 54.0**	**+0.1**
SMST	**Manzhou Townsh**	**3.04**	**210**	*eP*	**Pn**	**05 46 22.0**	**+0.4**
SMST	baz=209			*eS*	**Sn**	**05 46 58.3**	**+0.7**

TRN ***17*** *05:51:29.1, 18.°38N×64.°74W, h3km*
RSPR ***17*** *05:51:30.9, 19.°13N×64.°54W, h51km±17km, MD3.4/5*
ISC 17 05:51:32.6±1.7, 19.°05N±0.°10×64.°66W±0.°04, h42km, n32, σ0°92/36, 8C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJVI	**Gifft Hill Sch**	**0.72**	**188**‖	*eP*	**Pn**	**05 51 45.6**	**-0.7**
SJVI	**Gifft Hill Sch**	**0.72**	**188**	*eS*	**Sn**	**05 51 57.0**	**+0.8**
SJVI	**Gifft Hill Sch**	**0.72**	**188**		**Pn**	**05 51 45.6**	**-0.7**
SJVI					**Sn**	**05 51 57.0**	**+0.8**
STVI	**Saint Thomas**	**0.74**	**202**⇑	*eP*	**Pn**	**05 51 45.7**	**-0.9**
STVI	**Saint Thomas**	**0.74**	**202**	*eS*	**Sn**	**05 51 57.6**	**+0.7**
STVI	**Saint Thomas**	**0.74**	**202**		**Pn**	**05 51 45.7**	**-0.9**
STVI					**Sn**	**05 51 57.6**	**+0.7**
STVI	**Saint Thomas**	**0.74**	**202**	IAML		05 51 59.8	
	comp=N,181nm,0.2s						
CUPR	**Culebra, Puert**	**0.94**	**219**⇑	*eP*	**Pn**	**05 51 48.6**	**-0.7**
CUPR	**Culebra, Puert**	**0.94**	**219**	*eS*	**Sn**	**05 52 02.4**	**+0.7**
CUPR	**Culebra, Puert**	**0.94**	**219**		**Pn**	**05 51 48.6**	**-0.7**
CUPR	**Culebra, Puert**	**0.94**	**219**		**Sn**	**05 52 02.4**	**+0.7**

CBYP	**Canovanas**	**1.37 236**	⇑*e*P	**Pn**	**05 51 54.2**	**-1.1**
CBYP	**Canovanas**	**1.37 236**	*e*S	**Sn**	**05 52 13.5**	**+1.2**
CBYP	**Canovanas**	**1.37 236**		**Pn**	**05 51 54.2**	**-1.1**
CBYP	**Canovanas**	**1.37 236**		**Sn**	**05 52 13.4**	**+1.2**
GCPR	**Guaynabo City**	**1.54 242**	⇑*e*P	**Pn**	**05 51 56.5**	**-1.0**
GCPR	**Guaynabo City**	**1.54 242**		**Pn**	**05 51 56.3**	**-1.2**
SJG	**San Juan**	**1.69 237**	Pn	**Pn**	**05 51 59.2**	**-0.4**
SJG			IAML		05 52 23.5	
	comp=N,36nm,0.2s					
SJG			IAML		05 52 24.4	
	comp=N,33nm,0.2s					
SMRT	**St. Maarten**	**1.80 123**	*e*P	**Pn**	**05 52 00.4**	**-0.8**
SMRT			*e*S	**Sn**	**05 52 24.2**	**+1.4**
CELP	**Cerrillos**	**2.06 242**	⇑*e*P	**Pn**	**05 52 04.4**	**-0.4**
CELP	**Cerrillos**	**2.06 242**		**Pn**	**05 52 04.4**	**-0.4**
CELP	**Cerrillos**	**2.06 242**	IAML		05 52 33.9	
	comp=E,27nm,0.4s					
AOPR	**Arecibo Observ**	**2.10 251**	⇑*e*P	**Pn**	**05 52 05.0**	**-0.4**
AOPR	**Arecibo Observ**	**2.10 251**		**Pn**	**05 52 04.0**	**-1.3**
AOPR			IAML		05 52 48.3	
	comp=N,68nm,0.5s					
AOPR			IAML		05 52 50.2	
	comp=E,100nm,0.3s					
AOPR	**Arecibo Observ**	**2.10 251**	*e*P	**Pn**	**05 52 05.7**	**+0.4**
AOPR			*e*S	**Sn**	**05 52 30.7**	**+0.5**
PRSN	**Puerto Rico Se**	**2.50 251**	Pn	**Pn**	**05 52 09.4**	**-1.3**
MLPR	**Magueyes Islan**	**2.50 245**	⇑*e*P	**Pn**	**05 52 10.6**	**-0.1**
MLPR	**Magueyes Islan**	**2.50 245**		**Pn**	**05 52 10.5**	**-0.3**
MLPR			IAML		05 52 56.1	
	comp=N,14nm,2.7s					
CRPR	**Cabo Rojo, PR**	**2.54 246**	⇑*e*P	**Pn**	**05 52 11.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.54 246**		**Pn**	**05 52 10.9**	**-0.5**
CRPR			IAML		05 52 46.6	
	comp=E,14nm,1.4s					
CRPR			IAML		05 53 17.5	
	comp=N,19nm,4.6s					
ANWB	**Willy Bob**	**3.06 116**	*e*P	**Pn**	**05 52 18.5**	**+0.1**
ANWB			*e*S	**Sn**	**05 52 55.5**	**+1.8**
ANBD	**Bethesda, Anti**	**3.40 125**	*e*P	**Pn**	**05 52 22.0**	**-1.1**
ANBD			*e*S	**Sn**	**05 53 00.9**	**-1.3**

IDC 17 05:59:16.9±9.0, 9°86S×161°35E, $h0^{km}$, mb3.8/3, mbtmp3.8/3, MS2.9/2, Error ellipse: s-maj=245.7km s-min=45.5km az=116.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**14.00**	**271**	LR	LR	06 07 34.2	
	comp=Z,61nm,20.5s,baz=100,slow=36						
CTA	**Charters Tower**	**17.77**	**233**	LR	LR	06 09 33.4	
	comp=Z,36nm,20.7s,baz=82,slow=35						
WRA	**Warramunga Arr**	**27.92**	**246**	P	P	06 05 09.8	+0.7
	0.9nm,0.7s,baz=75,slow=9.5,SNR=7.7 0.9nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**28.66**	**11**	T	T	06 34 29.5	
	baz=194,slow=76,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**28.66**	**11**	T	T	06 34 27.8	
	baz=194,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**28.67**	**11**	T	T	06 34 28.5	
	baz=194,slow=76,SNR=4.5						
ASAR	**Alice Springs**	**29.58**	**239**	P	P	06 05 23.0	-0.9
	0.3nm,0.5s,baz=66,slow=9.2,SNR=2.6 0.3nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**29.88**	**11**	T	T	06 36 02.6	
	baz=192,slow=76,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**29.89**	**11**	T	T	06 36 04.5	
	baz=192,slow=76,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**29.90**	**11**	T	T	06 36 03.3	
	baz=192,slow=76,SNR=8.8						
SONM	**Songino Array**	**75.19**	**325**	P	P	06 11 01.5	0.0
	0.9nm,0.6s,baz=132,slow=6.0,SNR=2.9 0.9nm,0.6s						

*MOS **17** 06:14:57.0±1.2, 6°.00S×148°.76E, $h53^{km}$, mb6.4/50, MS6.6/61, Error ellipse: s-maj=6.5km s-min=4.5km az=102.0*

*IDC **17** 06:14:57.4±0.9, 6°.03S×148°.80E, $h42^{km}\pm7^{km}$, mb5.8/38, mbtmp6.0/41, ML6.6/3, MS6.4/54, Error ellipse: s-maj=10.3km s-min=7.7km az=67.0*

*NEIC **17** 06:14:58.3±2.3, 6°.00S±0°.04×148°.89E±0°.04, $h42^{km}\pm1^{km}$, mb6.2/396, Ms_20 6.7/359, Mwb6.8/41, Mwc6.8/120, Mww6.8, Error ellipse: s-maj=9.6km s-min=2.8km az=223.0*

*BJI **17** 06:14:58.6±0.0, 5°.93S×148°.83E, $h59^{km}$, mb5.9/90, mB6.6/78, Ms6.6/97, Ms7 6.7/96*

*NEIC **17** 06:14:58.3, 6°.01S×148°.85E, $h45^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}2.09; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.33; $M_{\theta\phi}$-0.19; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.97000×10^{19} NP1:ϕ_s84.25000°, δ49.72000°, λ92.44000°. NP2:ϕ_s260.48000°, δ40.34000°, λ87.12000°. Principal axes: T 2.1172, Plg85.0000°, Azm14.0000°; N -0.3376, Plg2.0000°, Azm263.0000°; P -1.7796, Plg5.0000°, Azm173.0000°;*

*DJA **17** 06:15:02.2±0.3, 6°S±2°×14°9E±°, $h75^{km}\pm3^{km}$, M6.5/94, mB6.7/90, mb6.2/94, MLv6.9/3, Mw(mB)6.5/90, MwMwp6.6/85, Mwp6.5/85*

*KLM **17** 06:15:03, 6°.13S×148°.80E, $h78^{km}$, mb6.4*

*GCMT **17** 06:15:05.3±0.0, 6°.25S×148°.92E, $h52^{km}$, MW6.7/171, Moment Tensor Solution. s171,c452; s170,c800; Duration: 5s7 Moment tensor: Scale 10^{19}Nm; M_{rr}1.53±.01; $M_{\theta\theta}$-1.70±.00; $M_{\phi\phi}$0.17±.00; $M_{r\theta}$0.11±.01; $M_{\theta\phi}$-0.03±.00; $M_{\phi r}$-0.05±.01; Best double couple: $M_0$1.62000×10^{19} NP1:ϕ_s91.00000°, δ47.00000°, λ93.00000°. NP2:ϕ_s267.00000°, δ43.00000°, λ87.00000°. Principal axes: T 1.5360, Plg87.0000°, Azm45.0000°; N 0.1710, Plg2.0000°, Azm269.0000°; P -1.7040, Plg2.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **17** 06:15:06, 6°.05S×148°.96E, $h50^{km}$, Moment Tensor Solution. Duration: 16s0 Moment tensor: Scale 10^{19}Nm; M_{rr}1.76; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$0.01; $M_{r\theta}$1.08; $M_{\theta\phi}$0.06; $M_{\phi r}$-0.58; Fault plane solution: $M_0$2.15000×10^{19} NP1: ϕ_s259.00000°, δ30.00000°, λ66.00000°. NP2: ϕ_s106.00000°, δ62.00000°, λ103.00000°. Principal axes: T 2.2023, Plg70.0000°, Azm44.0000°; N -0.1032, Plg12.0000°, Azm280.0000°; P -2.0991, Plg16.0000°, Azm186.0000°;*

*NEIC **17** 06:15:19.3, 5°.83S×148°.64E, $h50^{km}$, Moment Tensor Solution. Duration: 13s5 Moment tensor: Scale 10^{19}Nm; M_{rr}1.80; $M_{\theta\theta}$-1.82; $M_{\phi\phi}$0.02; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.05; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.82000×10^{19} NP1: ϕ_s267.78000°, δ45.34000°, λ89.23000°. NP2:ϕ_s88.88000°, δ44.67000°, λ90.78000°. Principal axes: T 1.8049, Plg90.0000°, Azm120.0000°; N 0.0206, Plg1.0000°, Azm268.0000°; P -1.8255, Plg0.0000°, Azm358.0000°;*

ISC 17 06:14:58.1±0.2, 6°.04S±0°.02×148°.85E±0°.03, $h52^{km}\pm1^{km}$, $h53^{km}$:pP-P, n2577, σ1982/2760, mb6.2/362, MS6.7/315, 269C-36D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.75**	**206**	P	**Pn**	**06 15 55.6**	**+2.2**
	13μm,0.3s,baz=334,slow=0.2,SNR=2391						
PMG				S	**Sn**	**06 16 37.9**	**+1.6**
	10μm,0.3s,baz=77,slow=22,SNR=1.7						
PMG	**Port Moresby**	**3.75**	**206**		**Pn**	**06 15 55.4**	**+2.0**
PMG	**Port Moresby**	**3.75**	**206**	P	**Pn**	**06 15 55.4**	**+2.0**
PMG	**Port Moresby**	**3.75**	**206**	P	**Pn**	**06 15 55.9**	**+2.5**
PMG	**Port Moresby**	**3.75**	**206**	P	**Pn**	**06 15 57.4**	**+4.0**
RABL	**Rabaul**	**3.77**	**61**		**Pn**	**06 15 54.3**	**+0.5**
RABL	**Rabaul**	**3.77**	**61**	P	**Pn**	**06 15 57.0**	**+3.1**
RABL	**Rabaul**	**3.77**	**61**	⇑P	**Pn**	**06 15 54.6**	**+0.7**
MANU	**Manus Island**	**4.23**	**339**		**Pn**	**06 16 03.7**	**+3.6**
MANU	**Manus Island**	**4.23**	**339**	P	**Pn**	**06 16 04.8**	**+4.7**
MANU	**Manus Island**	**4.23**	**339**	⇓P	**Pn**	**06 16 04.5**	**+4.4**
GENI	**Genyem**	**9.31**	**291**	P	Pn	06 17 15.5	+5.8
	464μm58μm3μm,1.0s						
COEN	**Coen**	**9.65**	**215**	P	**Pn**	**06 17 15.3**	**+0.9**
	baz=9.7,SNR=238						
COEN				S	**Sn**	**06 19 00.8**	**-0.7**
	baz=9.7						
COEN	**Coen**	**9.65**	**215**	Pn	**Pn**	**06 17 15.4**	**+0.9**
COEN	**Coen**	**9.65**	**215**	P	**Pn**	**06 17 17.4**	**+2.9**
COEN	**Coen**	**9.65**	**215**	⇓P	**Pn**	**06 17 15.6**	**+1.1**
AUCSH	**Cairns State H**	**11.23**	**195**	P	**Pn**	**06 17 38.5**	**+2.5**
HNR	**Honiara**	**11.50**	**108**	P	**Pn**	**06 17 40.8**	**+1.1**
	190nm,0.3s,baz=136,slow=7.4,SNR=2.4						
HNR				S	**Sn**	**06 19 42.7**	**-4.1**
	8μm,0.9s,baz=194,slow=20,SNR=1.4						
HNR				LR	LR	06 21 44.6	
	comp=Z,2013μm,21.1s,baz=281,slow=35 5μm,0.7s						
HNR	**Honiara**	**11.50**	**108**		**Pn**	**06 17 37.4**	**-2.4**
HNR	**Honiara**	**11.50**	**108**	P	**Pn**	**06 17 43.4**	**+3.7**
HNR	**Honiara**	**11.50**	**108**	⇑P	**Pn**	**06 17 42.5**	**+2.7**
MTSU	**Mount Surprise**	**12.81**	**200**	P	**Pn**	**06 17 59.1**	**+1.4**
	baz=13,SNR=815						
MTSU	**Mount Surprise**	**12.81**	**200**	P	**Pn**	**06 18 00.7**	**+3.0**
SRPI	**Serui, Papua**	**13.24**	**288**	P	**P**	**06 18 09.1**	**-2.8**
	151μm17μm1μm,0.6s						
TV1H	**Townsville Har**	**13.30**	**188**	P	**Pn**	**06 18 06.6**	**+2.3**
AUAYR	**Ayr State High**	**13.54**	**186**	P	**Pn**	**06 18 09.2**	**+1.7**
	2μm,1.7s						
CTA	**Charters Tower**	**14.20**	**190**	P	**Pn**	**06 18 17.1**	**+0.7**
	146nm,0.8s,baz=10,slow=13,SNR=125						
CTA				S	**Sn**	**06 20 54.6**	**+2.1**
	36nm,0.6s,baz=267,slow=3.4,SNR=0.9						
CTA				LR	LR	06 23 56.0	
	comp=Z,164μm,18.1s,baz=10.0,slow=38						
CTA	**Charters Tower**	**14.20**	**190**	P	**Pn**	**06 18 19.1**	**+2.7**
CTAO	**Charters Tower**	**14.20**	**190**	Pn	**Pn**	**06 18 17.5**	**+1.1**
CTAO	**Charters Tower**	**14.20**	**190**	P	**Pn**	**06 18 17.5**	**+1.1**
CTAO	**Charters Tower**	**14.20**	**190**	P	**Pn**	**06 18 18.8**	**+2.4**
CTAO	**Charters Tower**	**14.20**	**190**	⇓P	**Pn**	**06 18 17.4**	**+0.9**
RKPI	**Ransiki, Papua**	**15.31**	**286**	P	**P**	**06 18 36.7**	**+1.8**
	167μm26μm1μm,1.4s						
MWPI	**Manokwari, Pap**	**15.62**	**288**	P	**Pn**	**06 18 36.7**	**+1.6**
	144μm26μm849nm,1.5s						
PATS	**Pohnpei**	**15.89**	**37**	P	**P**	**06 18 40.5**	**-0.8**
	baz=16,SNR=11						
PATS	**Pohnpei**	**15.89**	**37**		**Pn**	**06 18 36.9**	**-1.6**
PATS				IAmb	IAmb	06 18 45.2	
	comp=Z,2μm,1.7s						
FAKI	**Fak Fak**	**16.84**	**280**	Pn	**Pn**	**06 18 48.3**	**-2.1**
FAKI	**Fak Fak**	**16.84**	**280**	P	**Pn**	**06 18 48.5**	**-1.9**
	comp=Z,239μmcomp=Z,18μmcomp=Z,478nm,1.0s						
FAKI	**Fak Fak**	**16.84**	**280**	P	**P**	**06 18 54.0**	**+2.2**
QIS	**Mount Isa**	**17.00**	**211**	P	**Pn**	**06 18 53.0**	**+0.7**
	baz=17,SNR=161						
QIS	**Mount Isa**	**17.00**	**211**	P	**P**	**06 18 53.8**	**+0.2**
RK1H	**Rockhampton Ha**	**17.32**	**175**	P	**P**	**06 18 58.3**	**+1.2**
KDU	**Kakadu**	**17.45**	**247**	P	**Pn**	**06 18 57.9**	**-0.1**
	baz=18,SNR=441						
KDU	**Kakadu**	**17.45**	**247**	P	**P**	**06 18 59.5**	**+0.9**
KDU	**Kakadu**	**17.45**	**247**	⇑P	**Pn**	**06 18 57.4**	**-0.6**
SAUI	**Saumlaki**	**17.53**	**263**		**Pn**	**06 18 57.5**	**-1.4**
SAUI				IAmb	IAmb	06 19 03.8	
	comp=Z,3μm,1.2s						
SAUI	**Saumlaki**	**17.53**	**263**	P	**P**	**06 19 03.9**	**+4.4**
	comp=Z,215μmcomp=Z,88μmcomp=Z,4μm,0.9s						
SAUI	**Saumlaki**	**17.53**	**263**	P	**P**	**06 19 02.2**	**+2.7**
GD1S	**Gladstone Soft**	**17.84**	**173**	P	**P**	**06 19 06.1**	**+3.2**
SIJI	**Sorong**	**18.28**	**286**	P	**P**	**06 19 06.5**	**-1.3**
	comp=Z,67nm,0.8s,baz=81,slow=7.3,SNR=17						
SIJI				S	**Sn**	**06 22 28.4**	**-3.3**
	comp=Z,25nm,0.6s,baz=83,slow=15,SNR=0.9						
SIJI				LR	LR	06 28 17.0	
	comp=Z,101μm,20.9s,baz=108,slow=44						
SIJI				ScS	**ScS**	**06 30 52.6**	**+1.8**
	comp=Z,3.1nm,0.3s,baz=226,slow=22,SNR=1.1						
SIJI	**Sorong**	**18.28**	**286**	P	**P**	**06 19 05.8**	**-2.0**
	comp=Z,162μmcomp=Z,28μmcomp=Z,789nm,1.3s						
AUMOU	**Moura State Hi**	**18.47**	**177**	P	**Pn**	**06 19 11.7**	**+1.3**
MTN	**Manton Dam**	**18.73**	**248**	P	**Pn**	**06 19 14.8**	**+1.2**
	baz=19,SNR=286						
MTN	**Manton Dam**	**18.73**	**248**	P	**P**	**06 19 13.0**	**+0.3**
MTN				IAmb	IAmb	06 19 25.2	
	comp=Z,588nm,0.6s						
MTN	**Manton Dam**	**18.73**	**248**	P	**Pn**	**06 19 15.6**	**+2.0**
MTN	**Manton Dam**	**18.73**	**248**	⇑P	**P**	**06 19 12.5**	**-0.2**
BNDI	**Bandanaira**	**18.93**	**274**	P	**Pn**	**06 19 17.4**	**+1.5**
	comp=Z,199μmcomp=Z,100μmcomp=Z,3μm,1.7s						
BNDI	**Bandanaira**	**18.93**	**274**	P	**Pn**	**06 19 17.0**	**+1.1**
EIDS	**Eidsvold**	**19.34**	**174**	P	**Pn**	**06 19 21.2**	**+0.4**
	baz=19,SNR=112						
EIDS	**Eidsvold**	**19.34**	**174**	Pn	**Pn**	**06 19 21.2**	**+0.4**
EIDS				IAmb	IAmb	06 19 30.1	
	comp=Z,2μm,1.4s						
EIDS	**Eidsvold**	**19.34**	**174**	P	**Pn**	**06 19 21.2**	**+0.4**
EIDS	**Eidsvold**	**19.34**	**174**	⇓P	**Pn**	**06 19 21.2**	**+0.4**
WB0	**Warramunga Arr**	**19.59**	**225**	P	**Pn**	**06 19 23.1**	**-0.7**
WB0				IAmb	IAmb	06 19 26.0	
	comp=Z,1μm,0.8s						
WR0	**Warramunga Arr**	**19.62**	**224**	P	**P**	**06 19 23.3**	**+0.8**
WR0				IAmb	IAmb	06 19 26.3	
	comp=Z,1μm,0.7s						
WRAB	**Tennant Creek**	**19.73**	**224**	P	**P**	**06 19 24.5**	**+0.8**
WRAB	**Tennant Creek**	**19.73**	**224**	*i* P	**P**	**06 19 24.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,824nm,0.5s						
WRAB				MLR	MLR		
	comp=Z,176μm,15.0s						
WRAB	**Tennant Creek**	**19.73**	**224**	P	**Pn**	**06 19 26.2**	**+0.7**
WB2	**Warramunga Arr**	**19.74**	**224**	P	**Pn**	**06 19 25.1**	**-0.5**
	baz=20						
WB2	**Warramunga Arr**	**19.74**	**224**	P	**P**	**06 19 24.5**	**+0.7**
WRA	**Warramunga Arr**	**19.75**	**224**	P	**P**	**06 19 24.7**	**+0.8**
	comp=Z,211nm,0.3s,baz=51,slow=11,SNR=876						
WRA				S	**S**	**06 22 53.9**	**-10**
	comp=Z,20nm,0.6s,baz=231,slow=20,SNR=1.1						
WRA				PcP	**PcP**	**06 23 42.0**	**+1.1**
	comp=Z,88nm,0.6s,baz=39,slow=1.6,SNR=4.7						
WRA				ScP	**ScP**	**06 27 13.8**	**+1.0**
	comp=Z,70nm,1.1s,baz=50,slow=2.6,SNR=4.5						
WRA				LR	LR	06 28 06.6	
	comp=Z,224μm,18.2s,baz=42,slow=40						
WRA				ScS	**ScS**	**06 30 56.8**	**+1.4**
	comp=Z,13nm,0.9s,baz=265,slow=17,SNR=5.0						
WRA				P3KP		06 54 23.1	
	comp=Z,6.1nm,0.9s,baz=171,slow=3.3,SNR=7.2						
WRA	**Warramunga Arr**	**19.75**	**224**	P	**Pn**	**06 19 24.9**	**-0.8**
GUMO	**Guam**	**19.89**	**349**	P	**Pn**	**06 19 27.1**	**-0.3**
	comp=Z,264nm,0.3s,baz=164,slow=7.0,SNR=85						
GUMO				S	**S**	**06 23 06.5**	**-0.1**
	comp=Z,127nm,1.0s,baz=176,slow=22,SNR=1.3						
GUMO	**Guam**	**19.89**	**349**	P	**P**	**06 19 24.9**	**-0.5**
GUMO	**Guam**	**19.89**	**349**	P	**Pn**	**06 19 29.8**	**+2.4**
GUMO	**Guam**	**19.89**	**349**	⇑P	**Pn**	**06 19 29.5**	**+2.1**
MSAI	**Masohi**	**20.03**	**277**	P	Pn	06 19 33.1	+4.0
	comp=Z,465nmcomp=Z,2μmcomp=Z,104nm,0.6s						
RMQ	**Roma**	**20.34**	**180**	P	Pn	06 19 32.5	-0.1
	baz=20,SNR=225						
RMQ	**Roma**	**20.34**	**180**	P	Pn	06 19 32.6	0.0
KRAI	**Karang Ratu**	**20.56**	**277**	P	**P**	**06 19 32.2**	**-0.5**
	comp=Z,195μmcomp=Z,26μmcomp=Z,790nm,1.0s						
AAI	**Ambon**	**20.71**	**276**	P	Pn	06 19 39.4	+2.3
	comp=Z,242μmcomp=Z,34μmcomp=Z,1μm,1.4s						
KOUNC	**Koumac, New Ca**	**20.80**	**135**	P	**P**	**06 19 35.5**	**+0.3**
KOUNC	**Koumac, New Ca**	**20.80**	**135**	P	Pn	06 19 37.5	-0.6
KOUNC	**Koumac, New Ca**	**20.80**	**135**	⇑P	Pn	06 19 36.9	-1.1
QLP	**Quilpie**	**20.90**	**192**	P	Pn	06 19 37.9	-1.4
	baz=21,SNR=176						
QLP	**Quilpie**	**20.90**	**192**	P	Pn	06 19 38.4	-0.9
QLP	**Quilpie**	**20.90**	**192**	⇓P	**P**	**06 19 37.9**	**+1.6**
AUBSH	**Beerwah State**	**21.07**	**170**	P	**P**	**06 19 39.9**	**+1.8**
NLAI	**Namlea**	**21.86**	**276**	P	**P**	**06 19 49.3**	**+2.7**
	comp=Z,17μmcomp=Z,420nm,1.2s						
KNRA	**Kununurra**	**21.91**	**242**	P	**P**	**06 19 48.1**	**+1.0**
	baz=22,SNR=448						
KNRA	**Kununurra**	**21.91**	**242**	P	**P**	**06 19 48.2**	**+1.0**
KNRA	**Kununurra**	**21.91**	**242**	P	**P**	**06 19 49.3**	**+2.2**
LBMI	**Labuha**	**21.97**	**283**	P	P	06 19 56.2	+8.4
RTV	**Rentapao**	**22.41**	**123**	P	**P**	**06 19 54.5**	**+2.0**
GAMI	**Galela, Maluku**	**22.44**	**290**	P	**P**	**06 19 59.9**	**+7.0**
	comp=Z,172μmcomp=Z,21μmcomp=Z,1μm,1.3s						
GC1S	**Gold Coast 1 S**	**22.45**	**169**	P	**P**	**06 19 55.7**	**+2.9**
	comp=Z,650nm,1.0s						
TNTI	**Ternate**	**22.49**	**287**	P	**P**	**06 19 53.4**	**-0.1**
TNTI	**Ternate**	**22.49**	**287**	P	**P**	**06 20 00.6**	**+7.2**
TNTI	**Ternate**	**22.49**	**287**	P	**P**	**06 19 55.5**	**+2.1**
AS01	**Alice Springs**	**22.64**	**218**	P	**P**	**06 19 57.4**	**+2.4**
AS31	**Alice Springs**	**22.67**	**218**	P	**P**	**06 19 56.6**	**+1.2**
AS31				IAmb	IAmb	06 20 17.9	
	comp=Z,296nm,0.6s						
ASAR	**Alice Springs**	**22.68**	**218**	P	**P**	**06 19 56.2**	**+0.8**
	comp=Z,523nm,0.6s,baz=49,slow=9.3,SNR=1755						
ASAR				PcP	**PcP**	**06 23 47.4**	**+0.9**
	comp=Z,164nm,1.0s,baz=52,slow=3.3,SNR=4.4						
ASAR				S	**S**	**06 24 01.3**	**+1.2**
	comp=Z,281nm,0.8s,baz=27,slow=21,SNR=9.6						
ASAR				ScP	**ScP**	**06 27 21.8**	**+1.8**
	comp=Z,88nm,1.0s,baz=43,slow=3.3,SNR=7.8						
ASAR				LR	LR	06 29 36.4	
	comp=Z,190μm,18.5s,baz=38,slow=39						
ASAR				ScS	**ScS**	**06 31 06.5**	**+0.8**
	comp=Z,11nm,1.0s,baz=28,slow=6.5,SNR=4.2						
ASAR				P3KPbc		06 53 27.4	
	comp=Z,0.4nm,0.8s,baz=214,slow=3.8,SNR=1.6						
ASAR				P3KP		06 54 20.8	
	comp=Z,4.6nm,0.9s,baz=154,slow=3.9,SNR=5.2 comp=Z,523nm,0.6s						
INKA	**Innaminka**	**22.92**	**199**	P	**P**	**06 19 59.4**	**+1.6**
LIFNC	**LIFOU**	**23.08**	**131**	P	**P**	**06 19 59.0**	**-0.5**
LIFNC	**LIFOU**	**23.08**	**131**	P	**P**	**06 20 00.7**	**+1.2**
SANI	**Sanana**	**23.14**	**279**	P	**P**	**06 20 00.5**	**+0.3**
	comp=Z,144μmcomp=Z,19μmcomp=Z,493nm,1.6s						
SANI	**Sanana**	**23.14**	**279**	P	**P**	**06 20 02.3**	**+2.1**
NOUC	**Port Laguerre**	**23.23**	**135**	P	**P**	**06 20 01.6**	**+0.7**
AULRC	**Lightning Ridg**	**23.29**	**182**	P	**P**	**06 20 01.8**	**+0.4**
DZM	**Mont Dzumac**	**23.31**	**135**	*e*Pn	**P**	**06 20 01.4**	**-0.4**
	comp=Z,3μm,1.1s						
DZM				*e*S	**S**	**06 24 09.6**	**-1.1**
	comp=Z,285μm,25.8s						
DZM				*e*LR	LR	06 25 45.3	
	comp=Z,603μm,24.8s						
DZM	**Mont Dzumac**	**23.31**	**135**	P	**P**	**06 20 01.8**	**0.0**
	comp=Z,245nm,0.5s,baz=290,slow=7.2,SNR=187						
DZM				S	**S**	**06 24 10.7**	**0.0**
	comp=Z,36nm,0.9s,baz=204,slow=19,SNR=1.8						
DZM				ScP	**ScP**	**06 27 23.5**	**+1.8**
	comp=Z,38nm,1.0s,baz=52,slow=13,SNR=5.3						
DZM				ScS	**ScS**	**06 31 10.6**	**+2.3**
	comp=Z,28nm,1.4s,baz=316,slow=22,SNR=5.9 comp=Z,245nm,0.5s						
DZM	**Mont Dzumac**	**23.31**	**135**	P	**P**	**06 20 01.8**	**0.0**
DZM				IAmb	IAmb	06 20 16.6	
	comp=Z,1μm,0.9s						
DZM	**Mont Dzumac**	**23.31**	**135**	P	**P**	**06 20 02.6**	**+0.8**
DZM	**Mont Dzumac**	**23.31**	**135**	⇑P	**P**	**06 20 02.0**	**+0.2**
ONTNC	**Ouen Toro**	**23.47**	**135**	P	**P**	**06 20 02.8**	**-0.4**
ONTNC				IAmb	IAmb	06 20 16.1	
	comp=Z,610nm,1.0s						
ONTNC	**Ouen Toro**	**23.47**	**135**	P	**P**	**06 20 04.1**	**+0.9**
ONTNC	**Ouen Toro**	**23.47**	**135**	⇑P	**P**	**06 20 03.2**	**0.0**
YATNC	**Mamie plateau,**	**23.62**	**134**	P	**P**	**06 20 05.7**	**+1.1**
I22FR	**PORTLAGUERRE I**	**23.67**	**134**	I		08 41 20.0	
	baz=312,slow=323,SNR=2.0						
OUENC	**Ouen Island, N**	**23.81**	**135**	P	**P**	**06 20 05.6**	**-0.8**
OUENC				IAmb	IAmb	06 20 34.8	
	comp=Z,505nm,1.1s						
OUENC	**Ouen Island, N**	**23.81**	**135**	P	**P**	**06 20 07.6**	**+1.2**
KWAJ	**Kwajalein Atol**	**23.81**	**52**	P	**P**	**06 20 05.3**	**-1.2**
KWAJ				IAmb	IAmb	06 20 29.7	
	comp=Z,2μm,2.0s						
KWAJ	**Kwajalein Atol**	**23.81**	**52**	P	**P**	**06 20 05.3**	**-1.2**
KWAJ				pmax	pmax		
	comp=Z,2μm,2.0s						
KWAJ				MLR	MLR		
	comp=Z,100μm,20.0s						
MARNC	**Mare, Loyalty**	**24.09**	**131**	P	**P**	**06 20 09.8**	**+0.8**
MARNC	**Mare, Loyalty**	**24.09**	**131**	P	**P**	**06 20 10.2**	**+1.2**
MARNC	**Mare, Loyalty**	**24.09**	**131**	⇑P	**P**	**06 20 09.7**	**+0.8**
ARMA	**Armidale**	**24.40**	**174**	P	**P**	**06 20 13.0**	**+1.3**
	baz=24,SNR=128						
ARMA	**Armidale**	**24.40**	**174**	P	**P**	**06 20 12.6**	**+0.8**
ARMA				IAmb	IAmb	06 20 39.9	
	comp=Z,364nm,0.8s						
ARMA	**Armidale**	**24.40**	**174**	P	**P**	**06 20 13.4**	**+1.6**
ARMA	**Armidale**	**24.40**	**174**	⇑P	**P**	**06 20 12.9**	**+1.1**
SOEI	**Soe**	**24.62**	**260**	P	**P**	**06 20 15.5**	**+1.5**
SOEI	**Soe**	**24.62**	**260**	P	**P**	**06 20 14.8**	**+0.7**
	comp=Z,160μmcomp=Z,57μmcomp=Z,3μm,

CNB	Canberra Magne	29.14 179	P	P	06 20 55.9 +1.5
	baz=29,SNR=7.1				
CNB	Canberra Magne	29.14 179	P	P	06 20 55.8 +1.4
CAN	Canberra	29.14 180	P	P	06 20 54.1 -0.3
CAN	Canberra	29.14 180	P	P	06 20 54.1 -0.3
CAN			pmax	pmax	
	comp=Z,167nm,0.9s				
CAN			MLR	MLR	
	comp=Z,116µm,19.0s				
CAN	Canberra	29.14 180	P	P	06 20 56.2 +1.8
CAN	Canberra	29.14 180	⇑P	P	06 20 55.9 +1.5
BBOO	Buckleboo	29.18 202	P	P	06 20 55.7 +1.0
	baz=29,SNR=49				
BBOO	Buckleboo	29.18 202	P	P	06 20 55.3 +0.6
BBOO			IAmb	IAmb	06 21 50.5
	comp=Z,331nm,0.9s				
BBOO	Buckleboo	29.18 202	P	P	06 20 56.0 +1.3
MPSI	Mapaga	29.59 281	P	P	06 20 58.0 -0.5
	comp=Z,87µmcomp=Z,5µmcomp=Z,88nm,0.9s				
H11S3	WAKE ISLAND Hy 30.06 35		P	P	06 21 03.1 +0.8
	baz=222,slow=7.1,SNR=28				
H11S3			T	T	06 53 29.2
	baz=220,slow=74,SNR=28				
H11S2	WAKE ISLAND Hy 30.07 36		P	P	06 21 03.1 +0.7
	baz=222,slow=7.1,SNR=32				
H11S2			T	T	06 53 30.8
	baz=220,slow=74,SNR=13				
H11S1	WAKE ISLAND Hy 30.08 35		P	P	06 21 03.9 +1.3
	baz=222,slow=7.1,SNR=26				
H11S1			T	T	06 53 29.4
	baz=220,slow=74,SNR=18				
AUMAG	Moama Anglican	30.16 187	P	P	06 21 05.1 +1.9
FUNA	Funafuti	30.20 97	P	P	06 21 02.7 -1.2
FUNA			IAmb	IAmb	06 21 09.3
	comp=Z,399nm,0.8s				
FUNA	Funafuti	30.20 97	P	P	06 21 04.6 +0.7
FUNA	Funafuti	30.20 97	⇑P	P	06 21 04.0 +0.1
FUNA	Funafuti	30.20 97	P	P	06 21 04.0 +0.1
FUNA			pP	pP	06 21 16.1 -1.2
FUNA			sP	sP	06 21 21.2 -2.3
FUNA			ScP	ScP	06 27 45.4 +3.1
AUSMG	Snowy Mountain	30.24 180	P	P	06 21 06.2 +2.1
WAKE	Wake Island	30.67 34	P	P	06 21 07.7 -0.2
WAKE			IAmb	IAmb	06 21 11.7
	comp=Z,353nm,0.9s				
WAKE	Wake Island	30.67 34	P	P	06 21 08.5 +0.6
WAKE	Wake Island	30.67 34	⇑P	P	06 21 07.8 -0.1
WAKE	Wake Island	30.67 34	P	P	06 21 06.8 -1.2
MSVF	Nonsavu	30.79 115	S	S	06 26 07.5 -1.7
	comp=Z,7µm,0.9s,baz=261,slow=0.0,SNR=0.8				
MSVF	Nonsavu	30.79 115	*c iP*	P	06 21 09.3 +0.1
MSVF			pmax	pmax	
	comp=Z,866nm,0.8s				
MSVF			MLR	MLR	
	comp=Z,53µm,22.0s				
MSVF	Nonsavu	30.79 115	P	P	06 21 11.0 +1.8
MSVF	Nonsavu	30.79 115	⇑P	P	06 21 10.6 +1.4
MSVF	Nonsavu	30.79 115	P	P	06 21 10.7 +1.4
MSVF			ScP	ScP	06 27 47.2 +2.9
MILA	Mila	30.88 180	P	P	06 21 11.5 +1.8
PLAI	Plampang	30.93 263	P	P	06 21 08.4 -2.0
	comp=Z,74µmcomp=Z,8µmcomp=Z,842nm,0.8s				
H11N1	WAKE ISLAND Hy 31.14 34		P	P	06 21 13.3 +1.4
	baz=278,slow=71,SNR=7.0				
H11N1			T	T	06 54 40.8
	baz=219,slow=76,SNR=5.1				
H11N3	WAKE ISLAND Hy 31.16 34		P	P	06 21 13.7 +1.7
	baz=278,slow=71,SNR=15				
H11N3			T	T	06 54 46.9
	baz=219,slow=76,SNR=27				
H11N2	WAKE ISLAND Hy 31.16 34		P	P	06 21 13.9 +1.8
	baz=278,slow=71,SNR=7.1				
H11N2			T	T	06 54 43.5
	baz=219,slow=76,SNR=32				
ARPS	Mount Arapiles	31.26 191	P	P	06 21 14.3 +1.4
	baz=31,SNR=18				
ARPS	Mount Arapiles	31.26 191	P	P	06 21 14.4 +1.4
FORT	Forrest	31.42 216	P	P	06 21 15.6 +1.1
	baz=32,SNR=182				
FORT	Forrest	31.42 216	P	P	06 21 15.5 +1.1
FORT	Forrest	31.42 216	P	P	06 21 15.9 +1.4
FORT	Forrest	31.42 216	⇑P	P	06 21 15.5 +1.1
TOO	Toolangi	31.54 185	P	P	06 21 17.3 +1.8
	baz=32,SNR=43				
TOO	Toolangi	31.54 185	P	P	06 21 16.9 +1.5
TOO	Toolangi	31.54 185	P	P	06 21 17.0 +1.5
TOO			pmax	pmax	
	comp=Z,209nm,1.0s				
TOO	Toolangi	31.54 185	P	P	06 21 17.5 +2.0
TOO	Toolangi	31.54 185	⇑P	P	06 21 17.3 +1.8
BRAT	Ballarat	31.69 187	P	P	06 21 18.8 +2.1
TWSI	Taliwang, Sumb	31.81 263	P	P	06 21 17.3 -0.8
	comp=Z,65µmcomp=Z,7µmcomp=Z,290nm,0.9s				
MBWA	Marble Bar	31.96 239	P	P	06 21 19.9 +0.6
MBWA	Marble Bar	31.96 239	IAMs_20	IAMs_20	06 35 41.1
	comp=Z,146µm,19.0s				
MBWA	Marble Bar	31.96 239	P	P	06 21 20.8 +1.4
MBWA			P	P	06 21 20.8 +1.4
MBWA			S	S	06 26 26.5 -0.7
MBWA			S	S	06 26 26.5 -0.7
MBWA	Marble Bar	31.96 239	P	P	06 21 20.5 +1.2
MBWA	Marble Bar	31.96 239	⇓P	P	06 21 20.6 +1.2
MBWA	Marble Bar	31.96 239	P	P	06 21 20.6 +1.2
AUSSC	Sale College,	31.96 183	P	P	06 21 21.8 +2.7
PSA00	Pilbara Seismi	32.03 238	P	P	06 21 21.5 +1.6
PSA00	Pilbara Seismi	32.03 238	P	P	06 21 21.1 +1.1
MYLDM	Lahad Datu	32.28 290	P	P	06 21 20.9 -1.4
MYLDM			IAmb	IAmb	06 22 35.6
	comp=Z,818nm,1.3s				
MYLDM	Lahad Datu	32.28 290	P	P	06 21 26.2 +3.9
	comp=Z,111µmcomp=Z,8µmcomp=Z,359nm,1.3s				
MYLDM	Lahad Datu	32.28 290	⇑P	P	06 21 21.7 -0.6
GEXS	Deakin Univers	32.29 187	P	P	06 21 25.3 +3.3
AUHPC	Hawkesdale P12	32.48 190	P	P	06 21 26.4 +2.8
KLNI	Mataram	32.58 264	P	P	06 21 23.9 -0.9
	comp=Z,67µmcomp=Z,9µmcomp=Z,736nm,1.0s				
SRBI	Singaraja	33.44 264	P	P	06 21 31.9 -0.5
	comp=Z,65µmcomp=Z,8µmcomp=Z,258nm,0.9s				
DNP	Denpasar	33.46 263	P	P	06 21 33.9 +1.4
	comp=Z,67µmcomp=Z,1µm,1.1s				
FUTU	Fugatoga	33.50 107	P	P	06 21 34.8 +2.0
FUTU	Fugatoga	33.50 107	P	P	06 21 34.5 +1.7
FUTU			pP	pP	06 21 45.6 -0.6
IGBI	Denpasar	33.53 263	P	P	06 21 32.6 -0.5
	comp=Z,34µmcomp=Z,9µmcomp=Z,457nm,0.8s				
JCJ	Chichijima	33.56 349	P	P	06 21 32.7 -0.5
	comp=Z,887nm,0.6s,baz=123,slow=6.6,SNR=20				
	comp=Z,887nm,0.6s				
JCJ	Chichijima	33.56 349	P	P	06 21 32.2 -1.0
JCJ	Chichijima	33.56 349	P	P	06 21 34.0 +0.8
JCJ	Chichijima	33.56 349	⇑P	P	06 21 33.5 +0.3
RTBI	Rangdo, Negare	33.72 264	P	P	06 21 34.8 0.0
	comp=Z,60µmcomp=Z,9µmcomp=Z,629nm,0.9s				
BBKI	Banjar Baru	33.98 273	P	P	06 21 39.8 +2.7
	comp=Z,15µmcomp=Z,306nm,0.9s				
SPMM	Sapulut	34.05 264	P	P	06 21 37.0 -0.8
JAGI	Jajag, Banyuwa	34.50 264	P	P	06 21 40.1 -1.5
JAGI	Jajag, Banyuwa	34.50 264	P	P	06 21 40.6 -1.0
	comp=Z,64µmcomp=Z,12µmcomp=Z,923nm,0.8s				
KMMI	Kalianget	34.67 266	P	P	06 21 43.5 +0.5
	comp=Z,72µmcomp=Z,10µmcomp=Z,308nm,1.0s				
KKM	Kota Kinabalu	34.72 290	P	P	06 21 58.2 +15
KKM	Kota Kinabalu	34.72 290	P	P	06 21 45.7 +2.1
KKM	Kota Kinabalu	34.72 290	⇑P	P	06 21 41.2 -2.3
AULHS	Lilydale High	35.09 182	P	P	06 21 48.7 +2.4
CORO	Coronation Par	35.30 182	P	P	06 21 51.2 +3.1
BWJI	Bawean	35.99 268	P	P	06 21 57.6 +3.1
	comp=Z,64µmcomp=Z,23µmcomp=Z,2µm,1.1s				
KRKI	Karangkates	36.17 264	P	P	06 22 03.3 +7.3
MOO	Moorlands	36.28 182	P	P	06 21 58.7 +2.2
	baz=36,SNR=26				
MOO	Moorlands	36.28 182	P	P	06 21 59.2 +2.7
TAU	Tasmania Unive	36.75 182	P	P	06 22 01.3 +0.8
TAU			IAmb	IAmb	06 22 42.7
	comp=Z,706nm,1.6s				
TAU	Tasmania Unive	36.75 182	IAMs_20	IAMs_20	06 37 47.6
	comp=Z,133µm,18.0s				
TAU	Tasmania Unive	36.75 182	P	P	06 22 01.3 +0.8
TAU			pmax	pmax	
	comp=Z,706nm,1.6s				
TAU			MLR	MLR	
	comp=Z,133µm,18.0s				
TAU	Tasmania Unive	36.75 182	P	P	06 22 02.6 +2.1
TAU	Tasmania Unive	36.75 182	⇑P	P	06 22 02.4 +2.0
TAU	Tasmania Unive	36.75 182	P	P	06 22 02.2 +1.7
TAU			ScP	ScP	06 28 06.6 +2.0
AUTAR	Taroona High S	36.78 182	P	P	06 22 02.6 +1.9
PWJI	Pagerwojo	36.81 265	P	P	06 22 00.7 -0.7
	comp=Z,7µmcomp=Z,600nm,1.2s				
OUZ	Omahuta	36.92 145	P	P	06 22 03.1 +1.1
OUZ	Omahuta	36.92 145	⇑P	P	06 22 03.7 +1.7
PBKI	Pangkalan Bun	37.21 273	P	P	06 22 11.9 +7.1
GIRL	Giralia	37.24 240	P	P	06 22 07.4 +2.5
	baz=37,SNR=137				
GIRL	Giralia	37.24 240	P	P	06 22 07.0 +2.0
GIRL	Giralia	37.24 240	P	P	06 22 07.9 +3.0
GIRL	Giralia	37.24 240	⇑P	P	06 22 07.0 +2.0
PCJI	Pacitan	37.44 264	P	P	06 22 06.8 +0.1
	comp=Z,56µmcomp=Z,20µmcomp=Z,1µm,1.6s				
SBUM	Sibu	37.54 282	P	P	06 22 07.6 0.0
SBUM	Sibu	37.54 282	P	P	06 22 10.4 +2.8
	comp=Z,36µmcomp=Z,2µmcomp=Z,48nm,1.5s				
SBUM	Sibu	37.54 282	P	P	06 22 09.0 +1.4
SBUM	Sibu	37.54 282	⇑P	P	06 22 06.3 -1.3
UGM	Wanagama	38.08 265	P	P	06 22 12.7 +0.4
UGM	Wanagama	38.08 265	P	P	06 22 13.4 +1.2
	comp=Z,61µmcomp=Z,24µmcomp=Z,2µm,1.2s				
UGM	Wanagama	38.08 265	P	P	06 22 13.4 +1.2
SMRI	Semarang	38.17 266	P	P	06 22 13.5 +0.6
SMRI	Semarang	38.17 266	P	P	06 22 14.2 +1.3
	comp=Z,70µmcomp=Z,24µmcomp=Z,1µm,2.0s				
SMRI	Semarang	38.17 266	P	P	06 22 14.6 +1.7
JOW	Kunigami	38.27 330	P	P	06 22 14.6 +1.0
	comp=Z,454nm,0.9s,baz=155,slow=8.1,SNR=48				
JOW			LR	LR	06 34 50.4
	comp=Z,139µm,21.7s,baz=140,slow=31				
	comp=Z,454nm,0.9s				
JOW	Kunigami	38.27 330	P	P	06 22 14.8 +1.2
JOW	Kunigami	38.27 330	P	P	06 22 15.8 +2.2
JOW	Kunigami	38.27 330	⇑P	P	06 22 15.5 +1.9
YOGI	Yogyakarta	38.31 265	P	P	06 22 16.1 +2.0
	comp=Z,33µmcomp=Z,19µmcomp=Z,1µm,1.2s				
MORW	Morawa	38.53 230	P	P	06 22 17.3 +1.5
	baz=39,SNR=110				
MORW	Morawa	38.53 230	P	P	06 22 17.4 +1.6
MORW	Morawa	38.53 230	P	P	06 22 17.3 +1.5
MORW	Morawa	38.53 230	⇑P	P	06 22 17.3 +1.5
KLBR	Kellerberrin	38.63 225	P	P	06 22 17.4 +0.8
	baz=39,SNR=213				
KLBR	Kellerberrin	38.63 225	P	P	06 22 17.4 +0.8
BLDU	Ballidu	38.84 227	P	P	06 22 19.6 +1.2
	baz=39,SNR=75				
BLDU	Ballidu	38.84 227	P	P	06 22 19.7 +1.4
RAO	Raoul Island	38.95 130	P	P	06 22 19.7 +0.5
	comp=Z,795nm,0.8s,baz=8.0,slow=6.3,SNR=9.4				
	comp=Z,795nm,0.8s				
RAO	Raoul Island	38.95 130	P	P	06 22 20.7 +1.5
RAO	Raoul Island	38.95 130	P	P	06 22 20.7 +1.5
RAO			pmax	pmax	
	comp=Z,1µm,0.8s				
RAO	Raoul Island	38.95 130	P	P	06 22 21.2 +2.0
RAO	Raoul Island	38.95 130	⇑P	P	06 22 19.8 +0.5
JAM	Amami Oshima	38.95 332	P	P	06 22 21.5 +2.3
KSM	Kuching	39.20 280	P	P	06 22 21.1 -0.4
KSM	Kuching	39.20 280	P	P	06 22 24.0 +2.4
	comp=Z,66µmcomp=Z,4µmcomp=Z,114nm,1.1s				
KSM	Kuching	39.20 280	P	P	06 22 24.0 +2.4
KSM	Kuching	39.20 280	P	P	06 22 23.9 +2.4
KUZ	Kuaotunu	39.21 145	P	P	06 22 22.7 +1.4
YOJ	Yonaguni jima	39.41 321	P	P	06 22 22.9 -0.2
YOJ			IAmb	IAmb	06 22 51.1
	comp=Z,871nm,1.2s				
YOJ	Yonaguni jima	39.41 321	P	P	06 22 22.9 -0.2
YOJ			pmax	pmax	
	comp=Z,871nm,1.2s				
YOJ	Yonaguni jima	39.41 321	P	P	06 22 24.9 +1.8
YOJ	Yonaguni jima	39.41 321	P	P	06 22 24.4 +1.4
YOJ	Yonaguni jima	39.41 321	⇑P	P	06 22 24.4 +1.4
CTJI	Waduk Cacaban	39.41 266	P	P	06 22 25.1 +1.7
	comp=Z,65µmcomp=Z,17µmcomp=Z,421nm,1.0s				
SCJI	Gunung Srandil	39.42 265	P	P	06 22 24.6 +1.2
	comp=Z,48µmcomp=Z,9µmcomp=Z,616nm,1.5s				
TWG	Pinlang	39.50 317	P	P	06 22 23.7 -0.3
TWG			IAmb	IAmb	06 23 17.2
	comp=Z,299nm,1.0s				
AFI	Afiamalu	39.51 104	P	P	06 22 24.4 +0.2
	comp=Z,679nm,0.8s,baz=60,slow=2.4,SNR=30				
AFI			LR	LR	06 36 50.6
	comp=Z,40µm,20.3s,baz=268,slow=33				
	comp=Z,679nm,0.8s				
AFI	Afiamalu	39.51 104	P	P	06 22 25.1 +0.9
AFI			IAmb	IAmb	06 22 29.8
	comp=Z,676nm,0.8s				
AFI	Afiamalu	39.51 104	P	P	06 22 25.1 +0.9
AFI			pmax	pmax	
	comp=Z,676nm,0.8s				
AFI	Afiamalu	39.51 104	P	P	06 22 25.3 +1.1
AFI	Afiamalu	39.51 104	⇑P	P	06 22 25.0 +0.7
AFI	Afiamalu	39.51 104	P	P	06 22 24.9 +0.7
AFI			pP	pP	06 22 34.2 -3.6
YULB	Yu-li	39.75 318	P	P	06 22 25.9 -0.1
YULB			IAmb	IAmb	06 22 52.5
	comp=Z,1µm,1.7s				
YULB			IAMs_20	IAMs_20	06 34 53.3
	comp=Z,102µm,22.0s				
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 25.7 -0.3
	comp=Z,135nm,0.6s,baz=278,slow=7.5,SNR=58				
NWAO			LR	LR	06 40 20.1
	comp=Z,142µm,19.2s,baz=271,slow=38				
	comp=Z,135nm,0.6s				
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 27.1 +1.2
	baz=40,SNR=43				
NWAO			P	P	06 22 27.1 +1.2
	baz=40,SNR=43				
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 27.1 +1.2
NWAO			IAmb	IAmb	06 22 29.9
	comp=Z,240nm,0.8s				
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 27.1 +1.2
NWAO			pmax	pmax	
	comp=Z,240nm,0.8s				
NWAO			MLR	MLR	
	comp=Z,140µm,18.0s				
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 26.9 +1.0
NWAO			P	P	06 22 26.9 +1.0
NWAO			S	S	06 28 26.7 +0.4
NWAO			S	S	06 28 26.7 +0.4
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 27.3 +1.3
NWAO	Narrogin (SRO)	39.76 224	P	P	06 22 27.0 +1.0
TOZ	Tahuroa Road	39.79 146	P	P	06 22 28.2 +2.1
JHJ2	Mitsune	39.87 348	P	P	06 22 26.9 +0.2
JHJ2	Mitsune	39.87 348	P	P	06 22 27.7 +0.9
JHJ2	Mitsune	39.87 348	P	P	06 22 27.0 +0.2
JHJ2	Mitsune	39.87 348	⇑P	P	06 22 27.1 +0.4
JHJ	Hachijo jima 2	39.88 348	LR	LR	06 38 50.6
	comp=Z,43µm,18.1s,baz=170,slow=36				
MUN	Mundaring	39.94 226	P	P	06 22 28.9 +1.4
	baz=40,SNR=50				
MUN	Mundaring	39.94 226	P	P	06 22 29.0 +1.5
HIZ	Hauiti	40.01 148	P	P	06 22 28.1 +0.2
HIZ			IAmb	IAmb	06 23 02.9
	comp=Z,484nm,1.3s				
HIZ			IAMs_20	IAMs_20	06 36 21.0
	comp=Z,109µm,22.0s				
NACB	Ninganchiao	40.10 320	P	P	06 22 29.5 +0.7
NACB			IAmb	IAmb	06 22 57.3
	comp=Z,726nm,1.0s				
NACB			IAMs_20	IAMs_20	06 35 16.6
	comp=Z,118µm,22.0s				
TPUB	Ta-pu	40.13 318	P	P	06 22 28.7 -0.5
TPUB			IAmb	IAmb	06 22 49.4
	comp=Z,340nm,0.8s				
TPUB	Ta-pu	40.13 318	P	P	06 22 29.1 -0.1
MTKN	Mount Kenneth	40.22 226	P	P	06 22 33.1 +3.3
SSLB	Suanglung	40.25 318	P	P	06 22 30.4 +0.2
SSLB			IAmb	IAmb	06 22 53.8
	comp=Z,229nm,0.8s				
SSLB			IAMs_20	IAMs_20	06 36 22.6
	comp=Z,82µm,20.0s				
SSLB	Suanglung	40.25 318	P	P	06 22 30.8 +0.7
JCJI	Jatiwangi	40.33 267	P	P	06 22 32.8 +1.8
	comp=Z,66µmcomp=Z,23µmcomp=Z,1µm,1.4s				
AUALB	St Joseph's Co	40.55 221	P	P	06 22 34.3 +1.8
YHNB	Yeheng	40.59 320	P	P	06 22 33.1 +0.1
YHNB			IAmb	IAmb	06 23 11.4
	comp=Z,1µm,1.2s				
YHNB	Yeheng	40.59 320	P	P	06 22 34.3 +1.3
QRZ	Quartz Range	40.61 152	P	P	06 22 33.1 +0.2
TWVZ	Taurewa	40.72 148	P	P	06 22 36.9 +2.9
TATO	Taipei	40.73 320	P	P	06 22 33.4 -0.7
TATO			IAmb	IAmb	06 22 39.9
	comp=Z,770nm,0.9s				
TATO	Taipei	40.73 320	IAMs_20	IAMs_20	06 36 22.3
	comp=Z,86µm,20.0s				
TATO	Taipei	40.73 320	P	P	06 22 35.4 +1.3
TATO			P	P	06 22 35.4 +1.3
TATO	Taipei	40.73 320	P	P	06 22 35.7 +1.6
TATO	Taipei	40.73 320	P	P	06 22 35.0 +1.0
NNVZ	North Ngauruho	40.86 148	P	P	06 22 38.0 +2.8
TMVZ	Te Maari	40.90 148	P	P	06 22 38.3 +2.9
SNVZ	South Ngauruho	40.91 148	P	P	06 22 38.7 +3.1
RKGY	Rocky Gully	40.92 222	P	P	06 22 37.5 +1.9
	baz=41,SNR=38				
RKGY	Rocky Gully	40.92 222	P	P	06 22 37.7 +2.2
FWVZ	Far West T-bar	40.92 148	P	P	06 22 38.6 +2.9
LEM	Lembang	40.97 267	P	P	06 22 35.8 -0.7
	comp=Z,401nm,0.7s,baz=63,slow=3.9,SNR=28				
LEM			LR	LR	06 44 02.4
	comp=Z,34µm,20.0s,baz=96,slow=43				
	comp=Z,401nm,0.7s				
WNVZ	Wahianoa	40.99 148	P	P	06 22 40.4 +4.1
URZ	Urewera	41.06 145	P	P	06 22 36.1 -0.6
	comp=Z,63nm,0.7s,baz=328,slow=3.8,SNR=33				
URZ			PcP	PcP	06 24 34.5 -1.1
	comp=Z,131nm,0.7s,baz=346,slow=1.0,SNR=4.6				
URZ			LR	LR	06 37 08.4
	comp=Z,86µm,21.7s,baz=38,slow=32				
	comp=Z,63nm,0.7s				
URZ	Urewera	41.06 145	P	P	06 22 36.7 0.0
URZ			IAMs_20	IAMs_20	06 36 45.9
	comp=Z,96µm,22.0s				
URZ	Urewera	41.06 145	P	P	06 22 38.2 +1.6
URZ	Urewera	41.06 145	⇑P	P	06 22 37.1 +0.4
TPI	Tanjungpandan	41.20 273	P	P	06 22 40.1 +2.0
	comp=Z,47µmcomp=Z,5µmcomp=Z,255nm,1.0s				
JSU	Suzuyama	41.26 336	P	P	06 22 39.2 +0.8
JSU			IAmb	IAmb	06 22 42.1
	comp=Z,1µm,1.2s				
JSU	Suzuyama	41.26 336	P	P	06 22 40.0 +1.7
JSU	Suzuyama	41.26 336	⇑P	P	06 22 39.4 +1.0
NNZ	Nelson	41.31 152	P	P	06 22 39.7 +1.1
NNZ			IAmb	IAmb	06 22 46.9
	comp=Z,665nm,1.8s				
MTHZ	Maungataniwha	41.33 146	P	P	06 22 40.1 +1.2
BKZ	Black Stump Fm	41.36 147	P	P	06 22 39.4 +0.2
BKZ	Black Stump Fm	41.36 147	P	P	06 22 40.3 +1.1
RAGZ	Rawiri	41.40 145	P	P	06 22 41.1 +1.6
CNJI	Cibinong	41.45 266	P	P	06 22 39.6 -0.6
	comp=Z,23µmcomp=Z,12µmcomp=Z,1µm,1.1s				
TWGZ	Tauwhareparae	41.50 145	P	P	06 22 42.5 +2.2
THZ	Tophouse	41.52 153	P	P	06 22 41.3 +0.9
THZ			IAmb	IAmb	06 23 02.2
	comp=Z,259nm,0.8s				
PUZ	Puketiti	41.59 144	P	P	06 22 41.4 +0.4
FOZ	Fox Glacier	41.66 157	P	P	06 22 43.1 +1.7
JCZ	Jackson Bay	41.73 158	P	P	06 22 44.0 +1.8
TUWZ	Tuamarina	41.74 151	P	P	06 22 43.0 +0.8
CBJI	Citeko	41.75 267	P	P	06 22 43.0 +0.4
	comp=Z,63µmcomp=Z,14µmcomp=Z,831nm,0.9s				
BSWZ	Blackbirch Sta	41.93 152	P	P	06 22 43.9 +0.1
JMN	Monobe	42.01 341	P	P	06 22 46.6 +2.0
JMN	Monobe	42.01 341	P	P	06 22 47.0 +2.4
JMN	Monobe	42.01 341	⇑P	P	06 22 46.9 +2.4
SNZO	South Karori	42.02 151	P	P	06 22 45.1 +0.7
SNZO			IAmb	IAmb	06 23 24.2
	comp=Z,420nm,1.1s				
SNZO	South Karori	42.02 151	⇑P	P	06 22 45.0 +0.6
SNZO	South Karori	42.02 151	P	P	06 22 47.3 +2.9
SNZO			pP	pP	06 22 59.1 +1.7
SKJI	Sukabumi	42.02 266	P	P	06 22 45.3 +0.4
	comp=Z,8µmcomp=Z,1µm,0.9s				
LTZ	Lake Taylor	42.05 154	P	P	06 22 45.4 +0.6
LTZ			IAMs_20	IAMs_20	06 38 33.1
	comp=Z,109µm,20.0s				
JOD2	Odawara 2	42.09 348	P	P	06 22 46.0 +0.8
CMWZ	Cape Campbell	42.12 151	P	P	06 22 47.3 +2.0
NIUE	Niue	42.15 112	P	P	06 22 47.2 +1.4
	baz=42,SNR=19				
NIUE	Niue	42.15 112	P	P	06 22 46.8 +0.9
NIUE	Niue	42.15 112	P	P	06 22 47.9 +2.1
NIUE	Niue	42.15 112	⇑P	P	06 22 47.2 +1.4
RPZ	Rata Peaks	42.30 156	P	P	06 22 46.2 -0.6
	comp=Z,111nm,0.7s,baz=358,slow=3.0,SNR=28				
RPZ			LR	LR	06 38 07.1
	comp=Z,97µm,21.5s,baz=323,slow=33				
	comp=Z,111nm,0.7s				
RPZ	Rata Peaks	42.30 156	P	P	06 22 47.0 +0.3
RPZ			IAMs_20	IAMs_20	06 37 44.7
	comp=Z,103µm,21.0s				
BFZ	Birch Farm	42.33 149	P	P	06 22 46.6 -0.3
BFZ			IAmb	IAmb	06 22 54.1
	comp=Z,233nm,0.7s				
BFZ			IAMs_20	IAMs_20	06 39 20.3
	comp=Z,126µm,20.0s				
BFZ	Birch Farm	42.33 149	P	P	06 22 48.2 +1.2
KHZ	Kahutara	42.33 153	P	P	06 22 47.7 +0.8
KHZ			IAmb	IAmb	06 23 35.8
	comp=Z,518nm,1.6s				
KHZ	Kahutara	42.33 153	P	P	06 22 47.1 +0.2
KHZ	Kahutara	42.33 153	⇓P	P	06 22 47.0 +0.1
MSWZ	Moikau Station	42.37 150	P	P	06 22 47.1 -0.2
DCZ	Deep Cove	42.38 161	P	P	06 22 47.0 -0.3
OXZ	Oxford	42.39 155	P	P	06 22 47.2 -0.3
OXZ			IAmb	IAmb	06 23 21.3
	comp=Z,229nm,0.7s				
OXZ			IAMs_20	IAMs_20	06 38 51.1
	comp=Z,78µm,20.0s				
KNMB	Chin-men Tao	42.42 317	P	P	06 22 46.5 -1.4
KNMB			IAmb	IAmb	06 23 21.9
	comp=Z,460nm,1.1s				
WKZ	Wanaka	42.46 159	P	P	06 22 46.9 -1.1
PLWZ	Palliser	42.49 150	P	P	06 22 48.1 -0.2
JNU	Nakatsue	42.52 337	P	P	06 22 50.5 +1.9
LBZ	Lake Benmore	42.52 157	P	P	06 22 48.4 -0.1
QZH	Quanzhou	42.60 317	⇑*iP*	P	06 22 50.3 +0.9
QZH			S	S	06 29 08.6 -0.2
QZH			pmax	pmax	
	comp=Z,200nm,1.2s				
QZH			pmax	pmax	
	comp=Z,9µm,8.7s				
QZH			LR	LR	
	comp=Z,30µm,21.2s				
QZH			LR	LR	
	comp=Z,33µm,25.4s				
QZH			LR	LR	
	comp=Z,74µm,25.3s				
MLZ	Mavora Lakes	42.62 160	P	P	06 22 49.0 -0.3
MLZ			IAmb	IAmb	06 23 24.9
	comp=Z,553nm,1.6s			

comp=Z,87nm,0.8s,baz=168,slow=3.2,SNR=4.9
MJAR ScP **ScP** **06 28 31.8 +0.7**
comp=Z,30nm,1.0s,baz=172,slow=4.9,SNR=6.2
MJAR S **S** **06 29 19.4 -2.4**
comp=Z,2.2nm,0.4s,baz=131,slow=42,SNR=1.2
MJAR LR LR 06 40 48.7
comp=Z,43μm,18.4s,baz=177,slow=36
comp=Z,464nm,0.9s
MAJO Matsushiro 43.51 348 P **P** **06 22 57.6 +1.0**
MAJO Matsushiro 43.51 348*c iP* **P** **06 22 57.9 +1.3**
MAJO pmax pmax
comp=Z,2μm,1.4s
MAJO MLR MLR
comp=Z,42μm,18.0s
MAJO Matsushiro 43.51 348 P **P** **06 22 58.3 +1.7**
MAJO Matsushiro 43.51 348 ⇑P **P** **06 22 57.8 +1.2**
MAJO Matsushiro 43.51 348 P **P** **06 22 58.2 +1.6**
MAJO ScP **ScP** **06 28 31.8 +0.7**
MAT Matsushiro 43.51 348 P **P** **06 22 58.0 +1.4**
MJB9 Matsu-Tunnel 43.52 348 P **P** **06 22 58.3 +1.7**
KLI Kotabumi 43.80 269 P **P** **06 23 00.4 +1.1**
comp=Z,64μmcomp=Z,8μmcomp=Z,247nm,1.3s
HKPS Hong Kong Po S 44.12 311 P **P** **06 23 01.9 +0.3**
HKPS IAmb IAmb 06 23 26.6
comp=Z,816nm,1.5s
KASI Kota Agung 44.12 268 P **P** **06 23 01.0 -0.9**
comp=Z,53μmcomp=Z,8μmcomp=Z,639nm,1.0s
JMM Marumori 44.32 351 P **P** **06 23 03.9 +0.9**
JMM IAmb IAmb 06 23 09.2
comp=Z,650nm,1.1s
JMM Marumori 44.32 351 P **P** **06 23 04.8 +1.9**
JMM Marumori 44.32 351 ⇑P **P** **06 23 04.8 +1.9**
JTU Tsushima 44.33 337 P **P** **06 23 04.0 +0.9**
JTU IAmb IAmb 06 23 07.6
comp=Z,396nm,1.1s
JTU Tsushima 44.33 337 ⇑P **P** **06 23 04.5 +1.4**
DSRI Dabo 44.52 275 P **P** **06 23 07.6 +2.5**
comp=Z,69μmcomp=Z,8μmcomp=Z,193nm,1.0s
LWLI Liwa 44.59 269 P **P** **06 23 07.1 +1.4**
comp=Z,59μmcomp=Z,13μmcomp=Z,663nm,0.6s
TPRI Tanjung Pinang 44.79 277 P **P** **06 23 10.5 +3.3**
comp=Z,69μmcomp=Z,10μmcomp=Z,162nm,0.7s
JSD Sado 44.94 348 P **P** **06 23 10.0 +2.0**
JSD IAmb IAmb 06 23 15.8
comp=Z,498nm,0.7s
JSD Sado 44.94 348 P **P** **06 23 09.9 +1.9**
JSD Sado 44.94 348 ⇑P **P** **06 23 09.6 +1.6**
JYA Atsumi 45.20 350 P **P** **06 23 12.9 +2.9**
JMBI JAMBI 45.30 274 P P 06 23 23.9 +13
SSE Sheshan 45.42 326 P **P** **06 23 13.0 +1.1**
SSE S **S** **06 29 50.8 +1.2**
SSE pmax pmax
comp=Z,230nm,1.3s
SSE pmax pmax
comp=Z,4μm,6.1s
SSE Sheshan 45.42 326 P **P** **06 23 13.0 +1.1**
SSE sP **sP** **06 23 29.4 -2.5**
MYKOM Kota Tinggi 45.60 278 P **P** **06 23 14.6 +1.0**
MYKOM Kota Tinggi 45.60 278 P **P** **06 23 16.3 +2.7**
comp=Z,73μmcomp=Z,7μmcomp=Z,98nm,1.4s
BTDF Bukit Timah Da 45.60 278 P **P** **06 23 18.1 +4.4**
comp=Z,43μmcomp=Z,4μmcomp=Z,68nm,1.5s
QIZ Qiongzhong 45.79 304 IAmb IAmb 06 23 39.2
comp=Z,378nm,1.3s
QIZ Qiongzhong 45.79 304 P **P** **06 23 15.8 +0.8**
QIZ S **S** **06 29 55.3 -0.1**
QIZ sS **sS** **06 30 19.9 +1.2**
QIZ LR LR
comp=Z,43μm,28.7s
QIZ Qiongzhong 45.79 304 P **P** **06 23 16.3 +1.3**
JOM Ohasama 45.82 352 P **P** **06 23 16.9 +2.0**
KSI Kapahiang 46.14 271 P **P** **06 23 20.9 +2.9**
comp=Z,59μmcomp=Z,19μmcomp=Z,240nm,0.9s
MASI Maura Aman, Be 46.54 271 P **P** **06 23 21.8 +0.7**
comp=Z,25μmcomp=Z,4μmcomp=Z,258nm,1.1s
TJN Taejon 46.75 336*ceP* **P** **06 23 23.5 +1.2**
TJN Taejon 46.75 336 P **P** **06 23 24.5 +2.2**
JOHN Johnston Islan 46.96 61 IAMs_20 IAMs_20 06 39 27.6
comp=Z,87μm,22.0s
MIDW Midway 47.13 42 P **P** **06 23 24.3 -1.0**
MIDW IAmb IAmb 06 23 33.3
comp=Z,131nm,0.8s
JTM Tenmabayashi 47.14 352 P **P** **06 23 27.0 +1.8**
JTM Tenmabayashi 47.14 352 P **P** **06 23 27.1 +2.0**
JTM Tenmabayashi 47.14 352 ⇑P **P** **06 23 27.1 +2.0**
JRMM Jerantut 47.34 281 P **P** **06 23 26.0 -1.3**
NJ2 Nanjing 47.45 325 ⇑*iP* **P** **06 23 29.3 +1.5**
NJ2 pP **pP** **06 23 39.3 -2.5**
NJ2 PP **PP** **06 25 21.4 +1.7**
NJ2 S **S** **06 30 20.8 +2.2**
NJ2 sS **sS** **06 30 44.5 +2.4**
NJ2 pmax pmax
comp=Z,290nm,1.3s
NJ2 pmax pmax
comp=Z,11μm,7.9s
NJ2 LR LR
comp=Z,74μm,20.4s
NJ2 LR LR
comp=Z,42μm,22.3s
NJ2 LR LR
comp=Z,103μm,24.6s
KSRS Korea Array 47.47 337 P **P** **06 23 29.6 +1.8**
comp=Z,432nm,0.9s,baz=152,slow=8.1,SNR=363
KSRS ScP **ScP** **06 28 48.5 +1.1**
comp=Z,9.6nm,0.9s,baz=145,slow=5.6,SNR=5.2
KSRS S **S** **06 30 17.5 -1.2**
comp=Z,1.4nm,0.7s,baz=170,slow=15,SNR=2.2
comp=Z,432nm,0.9s
KSAR Wonju Array Be 47.47 337 P **P** **06 23 29.8 +1.9**
KSAR Wonju Array Be 47.47 337 P **P** **06 23 29.8 +1.9**
KS19 Wonju Array Si 47.53 337 P **P** **06 23 29.2 +0.9**
SDSI Sungai Dareh 47.59 274 P **P** **06 23 28.5 -0.7**
comp=Z,8μmcomp=Z,175nm,0.8s
JOT Ohata 47.73 352 P **P** **06 23 31.5 +1.7**
UBPT Khong Chiam 47.91 297 P **P** **06 23 32.7 +1.1**
UBPT IAmb IAmb 06 23 57.5
comp=Z,261nm,1.6s
INCN Inchon 48.00 336 P **P** **06 23 33.9 +1.9**
INCN Inchon 48.00 336 IAMs_20 IAMs_20 06 40 11.8
comp=Z,70μm,22.0s
INCN Inchon 48.00 336 P **P** **06 23 33.9 +1.9**
INCN pmax pmax
comp=Z,657nm,0.9s
INCN Inchon 48.00 336 P **P** **06 23 33.9 +1.9**
INCN P **P** **06 23 33.9 +1.9**
INCN S **S** **06 30 28.9 +2.5**
INCN S **S** **06 30 28.9 +2.5**
INCN Inchon 48.00 336 P **P** **06 23 35.0 +3.0**
INCN Inchon 48.00 336 ⇑P **P** **06 23 34.0 +2.0**
INCN Inchon 48.00 336 P **P** **06 23 34.0 +2.0**
INCN sP **sP** **06 23 50.8 -1.3**
ERM Erimo 48.10 354 P **P** **06 23 32.2 -0.4**
ERM IAmb IAmb 06 24 04.0
comp=Z,417nm,0.9s
ERM Erimo 48.10 354 IAMs_20 IAMs_20 06 42 01.4
comp=Z,70μm,21.0s
ERM Erimo 48.10 354*ceP* **P** **06 23 35.0 +2.4**
ERM pmax pmax
comp=Z,596nm,1.2s
ERM MLR MLR
comp=Z,72μm,21.0s
ERM Erimo 48.10 354 P **P** **06 23 35.1 +2.4**
ERM Erimo 48.10 354 ⇑P **P** **06 23 35.2 +2.6**
ERM Erimo 48.10 354 P **P** **06 23 35.3 +2.6**
ERM sP **sP** **06 23 53.2 +0.5**
JEM Erimo 48.10 354 P **P** **06 23 35.4 +2.8**
BKNI Bangkinang 48.14 276 P **P** **06 23 33.8 +0.3**
BKNI Bangkinang 48.14 276 P **P** **06 23 36.4 +2.9**
comp=Z,80μmcomp=Z,9μmcomp=Z,210nm,1.4s
BKNI Bangkinang 48.14 276 P **P** **06 23 35.3 +1.8**
CTZ Chatham Island 48.25 147 P **P** **06 23 35.2 +1.3**
CNSH ChangSha 48.55 316 ⇑P **P** **06 23 37.8 +1.4**
CNSH S **S** **06 30 35.5 +1.1**
CNSH pmax pmax
comp=Z,190nm,1.1s
CNSH LR LR
comp=Z,34μm,24.9s
CNSH LR LR
comp=Z,85μm,33.3s
GULI GuiLin 48.67 311 ⇑P **P** **06 23 36.6 -0.8**
GULI S **S** **06 30 36.9 +0.7**
GULI pmax pmax
comp=Z,120nm,1.5s
GULI LR LR
comp=Z,17μm,19.2s
GULI LR LR
comp=Z,17μm,20.6s
GULI LR LR
comp=Z,33μm,19.5s
HJU Haeju 48.85 336 P **P** **06 23 40.3 +1.8**
HJU pP **sP** **06 23 58.0 -0.6**
HJU S **S** **06 30 41.9 +3.7**
IPM Ipoh 48.88 281 P **P** **06 23 38.0 -1.2**
IPM IAmb IAmb 06 24 28.4
comp=Z,447nm,1.5s
IPM Ipoh 48.88 281 P **P** **06 23 41.4 +2.2**
comp=Z,68μmcomp=Z,6μmcomp=Z,164nm,0.9s
IPM Ipoh 48.88 281 P **P** **06 23 40.0 +0.8**
IPM Ipoh 48.88 281 P **P** **06 23 41.4 +2.2**
MCQ Macquarie Isla 49.01 172 P **P** **06 23 41.9 +2.5**
baz=49,SNR=9.6
MCQ Macquarie Isla 49.01 172 P **P** **06 23 39.7 +0.3**
MCQ IAmb IAmb 06 23 45.4
comp=Z,570nm,1.2s
MCQ Macquarie Isla 49.01 172 P **P** **06 23 39.7 +0.3**
MCQ pmax pmax
comp=Z,570nm,1.3s
MCQ Macquarie Isla 49.01 172 P **P** **06 23 41.4 +2.0**
MCQ Macquarie Isla 49.01 172 ⇓P **P** **06 23 41.9 +2.5**
JSH Shimam 49.10 351 P **P** **06 23 42.4 +2.1**
JEW Eniwo 49.11 353 P **P** **06 23 42.3 +1.9**
JEW Eniwo 49.11 353 ⇑P **P** **06 23 42.6 +2.2**
WHN Wuhan 49.13 320 ⇑P **P** **06 23 41.8 +1.0**
WHN sP **sP** **06 23 59.8 -1.0**
WHN PP **PP** **06 25 37.4 +2.4**
WHN S **S** **06 30 40.5 -2.0**
WHN pmax pmax
comp=Z,540nm,1.2s
WHN pmax pmax
comp=Z,7μm,9.0s
WHN LR LR
comp=Z,69μm,16.9s
WHN LR LR
comp=Z,21μm,14.6s
WHN LR LR
comp=Z,215μm,30.9s
KULM Kulim 49.42 282 P **P** **06 23 43.1 -0.2**
KULM IAmb IAmb 06 24 32.4
comp=Z,319nm,1.3s
KULM Kulim 49.42 282 P **P** **06 23 46.1 +2.8**
comp=Z,71μmcomp=Z,6μmcomp=Z,85nm,0.8s
KULM Kulim 49.42 282 P **P** **06 23 44.0 +0.7**
KULM Kulim 49.42 282 ⇑P **P** **06 23 41.6 -1.7**
MNSI Mandailing Nat 49.65 276 P **P** **06 23 45.0 -0.1**
comp=Z,62μmcomp=Z,6μmcomp=Z,118nm,1.0s
SISI Saibi 49.86 273 P **P** **06 23 49.2 +2.6**
comp=Z,73μmcomp=Z,7μmcomp=Z,162nm,1.3s
YUK Yuzh-Kuril'sk 49.91 357*c iP* **P** **06 23 48.3 +1.9**
JMP Maruseppu 50.06 355 P **P** **06 23 50.1 +2.5**
ASAJ Asahikawa 50.24 354 P **P** **06 23 51.4 +2.5**
RPSI Rantau Prapat 50.60 278 P **P** **06 23 51.0 -1.3**
RPSI IAmb IAmb 06 24 44.3
comp=Z,249nm,1.2s
PSI Prapat 50.62 279 P **P** **06 23 50.8 -1.8**
comp=Z,33nm,0.9s,baz=107,slow=6.3,SNR=20
PSI ScP **ScP** **06 29 02.0 +0.4**
comp=Z,7.7nm,0.4s,baz=138,slow=2.9,SNR=8.6
PSI LR LR 06 51 01.3
comp=Z,12μm,18.8s,baz=140,slow=43
comp=Z,33nm,0.9s
PSI Prapat 50.62 279 P **P** **06 23 51.0 -1.6**
PSI pmax pmax
comp=Z,249nm,1.2s
PSI MLR MLR
comp=Z,23μm,22.0s
PSI Prapat 50.62 279 P **P** **06 23 51.5 -1.1**
comp=Z,47μmcomp=Z,4μmcomp=Z,70nm,0.9s,comp=Z,77μm,0.9s,
comp=Z,7μm,0.9s,comp=Z,114nm,1.4s
PSI P **P** **06 23 51.5 -1.1**
comp=Z,47μmcomp=Z,4μmcomp=Z,70nm,0.9s,comp=Z,77μm,0.9s,
comp=Z,7μm,0.9s,comp=Z,114nm,1.4s
PSI Prapat 50.62 279 P **P** **06 23 52.3 -0.3**
MSHR Mys Shultsa 50.99 343*ceP* **P** **06 23 56.6 +1.9**
MSHR pmax pmax
comp=Z,136nm,0.9s
MSHR MLR MLR
comp=Z,32μm,20.0s
KUR Kuril'sk 51.04 359*c iP* **P** **06 23 57.6 +2.6**
KUR *i* S **S** **06 31 13.3 +4.7**
KUR pmax pmax
comp=N,1μm,1.4s
KUR pmax pmax
comp=E,734nm,1.1s
KUR pmax pmax
comp=Z,24μm,8.0s
TSI Tuntungan 51.10 279 P P 06 24 03.7 +7.7
SUJ Sinuiju 51.10 336 P **P** **06 23 57.2 +1.7**
SUJ pP **sP** **06 24 14.7 -1.1**
SUJ S **S** **06 31 11.5 +1.9**
SRIT Nakonsritamara 51.21 286 P **P** **06 23 55.9 -0.9**
SRIT IAmb IAmb 06 24 25.2
comp=Z,330nm,1.5s
VLA Vladivostok 51.29 344*c iP* **P** **06 24 01.1 +4.2**
VLA pmax pmax
comp=Z,415nm,1.2s
VLA MLR MLR
comp=Z,17μm,17.0s
DL2 Dalian 51.34 333 P **P** **06 23 58.5 +1.2**
DL2 S **S** **06 31 15.4 +2.5**
DL2 SS **SS** **06 34 42.9 -6.5**
DL2 pmax pmax
comp=Z,440nm,1.2s
DL2 pmax pmax
comp=Z,10μm,9.6s
DL2 LR LR
comp=Z,44μm,20.6s
DL2 LR LR
comp=Z,31μm,20.2s
DL2 LR LR
comp=Z,73μm,21.1s
TIA Tai'an 51.49 327 ⇑P **P** **06 23 58.8 +0.3**
TIA PP **PP** **06 26 00.8 +4.5**
TIA S S 06 31 05.4 -10
TIA pmax pmax
comp=Z,270nm,0.7s
TIA pmax pmax
comp=Z,7μm,11.0s
TIA LR LR
comp=Z,58μm,22.9s
TIA LR LR
comp=Z,60μm,19.8s
TIA LR LR
comp=Z,123μm,22.6s
JWK2 Keihoku 51.50 354 P **P** **06 24 00.5 +2.1**
COCO West Island 51.66 259 P **P** **06 24 00.5 +0.4**
COCO West Island 51.66 259 P **P** **06 24 00.5 +0.4**
COCO pmax pmax
comp=Z,4μm,1.8s
COCO MLR MLR
comp=Z,22μm,19.0s
GSI Gunungsitoli 51.71 276 P **P** **06 24 00.1 -0.5**
GSI IAmb IAmb 06 24 41.0
comp=Z,314nm,1.1s
GSI Gunungsitoli 51.71 276 P **P** **06 24 00.1 -0.5**
comp=Z,68μmcomp=Z,242nm,0.8s
GSI Gunungsitoli 51.71 276 P **P** **06 24 00.5 -0.1**
KCSI Kotacane, Aceh 51.88 279 P **P** **06 24 00.8 -1.1**
comp=Z,61μmcomp=Z,4μmcomp=Z,166nm,0.9s
RAR Rarotonga 51.92 112 LR LR 06 42 02.6
comp=Z,8μm,21.4s,baz=278,slow=31
RAR Rarotonga 51.92 112 P **P** **06 24 03.3 +1.3**
RAR IAmb IAmb 06 24 07.0
comp=Z,484nm,1.4s
RAR Rarotonga 51.92 112 P **P** **06 24 03.3 +1.3**
RAR pmax pmax
comp=Z,484nm,1.4s
RAR Rarotonga 51.92 112 P **P** **06 24 03.1 +1.1**
TEY Ternei 52.02 349⇑*eP* **P** **06 24 03.8 +1.6**
TEY *e* 06 31 13.3
TEY pmax pmax
comp=E,20nm,1.1s
TEY pmax pmax
comp=N,30nm,1.6s
TEY pmax pmax
comp=Z,100nm,1.2s
TEY pmax pmax
comp=E,100nm,9.0s
TEY pmax pmax
comp=N,400nm,9.1s
TEY pmax pmax
comp=Z,800nm,9.0s
GYA Guiyang 52.10 310⇓*iP* **P** **06 24 04.4 +1.0**
GYA PcP **PcP** **06 25 18.3 +3.4**
GYA S **S** **06 31 25.6 +1.6**
GYA pmax pmax
comp=Z,78nm,1.4s
GYA LR LR
comp=Z,10μm,19.5s
GYA LR LR
comp=Z,13μm,17.1s
GYA LR LR
comp=Z,15μm,19.2s
ENH Enshi 52.21 316 IAMs_20 IAMs_20 06 43 37.4
comp=Z,55μm,21.0s
ENH Enshi 52.21 316 P **P** **06 24 04.0 0.0**
USA0B Ussuriysk Arra 52.27 345 IAmb IAmb 06 24 11.4
comp=Z,359nm,0.8s
USA0B Ussuriysk Arra 52.27 345*c iP* **P** **06 24 05.5 +1.4**
USRK Ussuriysk Ar. 52.27 345 P **P** **06 24 05.2 +1.1**
comp=Z,277nm,0.9s,baz=173,slow=2.8,SNR=145
USRK ScP **ScP** **06 29 08.2 +0.4**
comp=Z,9.5nm,0.9s,baz=126,slow=3.7,SNR=3.2
USRK S **S** **06 31 24.7 -0.8**
comp=Z,7.8nm,0.8s,baz=138,slow=39,SNR=2.1
USRK LR LR 06 44 05.5
comp=Z,42μm,21.6s,baz=140,slow=34
comp=Z,277nm,0.9s
USRK Ussuriysk Ar. 52.27 345 P **P** **06 24 06.1 +1.9**
USRK Ussuriysk Ar. 52.27 345 P **P** **06 24 06.1 +1.9**
SNY Shenyang 52.93 336 ⇑P **P** **06 24 10.0 +0.9**
SNY S **S** **06 31 37.1 +2.5**
SNY pmax pmax
comp=Z,470nm,2.0s
SNY pmax pmax
comp=Z,19μm,5.9s
SNY LR LR
comp=Z,50μm,15.5s
SNY LR LR
comp=Z,59μm,21.4s
SNY LR LR
comp=Z,154μm,17.9s
LYN LuoYang 52.99 322⇑*iP* **P** **06 24 08.8 -0.9**
LYN S **S** **06 31 28.8 -6.9**
LYN pmax pmax
comp=Z,130nm,1.9s
LYN pmax pmax
comp=Z,7μm,11.4s
LYN LR LR
comp=Z,68μm,21.8s
LYN LR LR
comp=Z,25μm,23.1s
LYN LR LR
comp=Z,106μm,24.3s
YSS Yuzh-Sakhalins 53.03 355 P **P** **06 24 10.3 +0.6**
YSS IAmb IAmb 06 24 21.1
comp=Z,401nm,0.9s
YSS Yuzh-Sakhalins 53.03 355α*iP* **P** **06 24 11.8 +2.1**
YSS *e* 06 26 18.8
YSS *eS* **S** **06 31 36.0 +0.2**
YSS pmax pmax
comp=Z,270nm,1.1s
YSS pmax pmax
comp=Z,13μm,8.0s
YSS pmax pmax
comp=N,5μm,7.8s
YSS pmax pmax
comp=E,1μm,4.0s
YSS Yuzh-Sakhalins 53.03 355 P **P** **06 24 12.1 +2.4**
YSS Yuzh-Sakhalins 53.03 355 ⇑P **P** **06 24 11.6 +1.8**
YSS Yuzh-Sakhalins 53.03 355 P **P** **06 24 11.5 +1.8**
MDJ Mudanjiang 53.31 343 P **P** **06 24 12.9 +1.0**
MDJ IAmb IAmb 06 24 33.6
comp=Z,375nm,1.0s
MDJ Mudanjiang 53.31 343 P **P** **06 24 13.3 +1.4**
MDJ PP **PP** **06 26 15.3 +2.6**
MDJ PcS **PcS** **06 29 16.4 -1.3**
MDJ pmax pmax
comp=Z,340nm,1.8s
MDJ pmax pmax
comp=Z,13μm,10.3s
MDJ LR LR
comp=Z,33μm,24.1s
MDJ LR LR
comp=Z,25μm,24.0s
MDJ LR LR
comp=Z,112μm,24.6s
MDJ Mudanjiang 53.31 343 P **P** **06 24 13.8 +1.9**
MDJ Mudanjiang 53.31 343 P **P** **06 24 13.6 +1.7**
MDJ sP **sP** **06 24 31.1 -1.0**
MLSI Meulaboh, Aceh 53.36 280 P **P** **06 24 15.1 +2.3**
comp=Z,319nm,0.8s
HNS HongShan 53.68 326 ⇑P **P** **06 24 15.3 +0.6**
HNS S **S** **06 31 42.3 -2.6**
HNS SS **SKiKP** **06 35 16.8 -8.2**
HNS pmax pmax
comp=Z,8μm,10.8s
HNS LR LR
comp=Z,44μm,22.7s
HNS LR LR
comp=Z,48μm,21.6s
HNS LR LR
comp=Z,100μm,22.2s
CN2 Changchun 53.93 339 ⇑P **P** **06 24 17.1 +0.7**
CN2 *e*pP pP 06 24 29.0 -1.6
CN2 *eS* **S** **06 31 47.4 -0.7**
CN2 pmax pmax
comp=Z,110nm,1.2s
CN2 pmax pmax
comp=Z,9μm,6.0s
CN2 LR LR
comp=Z,35μm,20.0s
CN2 LR LR
comp=Z,33μm,20.0s
CN2 LR LR
comp=Z,54μm,21.0s
KMI Kunming 54.49 307 ⇑P **P** **06 24 21.8 +0.7**
KMI pP pP 06 24 36.3 +1.0
KMI sP sP 06 24 41.5 +0.2
KMI PP **PP** **06 26 21.8 -2.1**
KMI S **S** **06 31 57.8 +1.1**
KMI sS sS 06 32 23.3 +3.2
KMI SS **SS** **06 35 38.5 -1.5**
KMI pmax pmax
comp=Z,150nm,1.2s
KMI pmax pmax
comp=Z,6μm,8.2s
KMI LR LR
comp=Z,19μm,22.3s
KMI LR LR
comp=Z,24μm,23.8s
KMI LR LR
comp=Z,44μm,23.9s
KMI Kunming 54.49 307 P **P** **06 24 21.8 +0.7**
BJT Baijiatuau 54.83 330 IAmb IAmb 06 24 51.5
comp=Z,794nm,1.7s
BJT Baijiatuau 54.83 330 IAMs_20 IAMs_20 06 47 30.8
comp=Z,55μm,21.0s
BJT Baijiatuau 54.83 330 P **P** **06 24 23.9 +0.8**
BJT sP **sP** **06 24 41.0 -2.4**
BJI Beijing 54.85 330 P **P** **06 24 23.5 +0.4**
BJI S **S** **06 31 59.1 -1.5**
BJI pmax pmax
comp=Z,220nm,1.9s
BJI pmax pmax
comp=Z,11μm,10.8s
BJI LR LR
comp=Z,15μm,21.5s
BJI LR LR
comp=Z,43μm,21.0s
BJI LR LR
comp=Z,108μm,29.0s
XAN Xi'an 54.89 319 ⇑P **P** **06 24 23.6 -0.1**
XAN pP pP 06 24 39.3 +1.4
XAN sP sP 06 24 46.1 +2.2
XAN S **S** **06 31 58.3 -3.3**
XAN pmax pmax
comp=Z,180nm,1.7s
XAN pmax pmax
comp=Z,9μm,7.6s
XAN LR LR
comp=Z,30μm,22.8s
XAN LR LR
comp=Z,40μm,23.5s
XAN LR LR
comp=Z,90μm,25.4s
XAN Xi'an 54.89 319 P **P** **06 24 23.4 -0.3**
XAN sP **pP** **06 24 39.8 +1.8**

CM31	**Chiang Mai Arr**	**54.89 297**	IAmb	IAmb	06 25 29.0	
	comp=Z,176nm,1.1s					
CMAR	**Chiang Mai Arr**	**54.89 297**	P	**P**	**06 24 23.5**	**-0.4**
	comp=Z,25nm,0.8s,baz=119,slow=5.7,SNR=27					
CMAR			S	**S**	**06 31 58.6**	**-3.4**
	comp=Z,1.6nm,0.4s,baz=348,slow=21,SNR=2.0					
CMAR			LR	LR	06 50 14.1	
	comp=Z,6μm,19.6s,baz=110,slow=39					
CMAR			PKPPKP	P'P'df	06 54 25.1	-8.8
	comp=Z,3.0nm,0.5s,baz=262,slow=3.9,SNR=7.7					
CMAR			PKP2bc	**P'P'bc**	**06 54 48.2**	**+0.3**
	comp=Z,28nm,1.1s,baz=288,slow=3.7,SNR=12					
	comp=Z,25nm,0.8s					
BNX	**BinXian**	**54.99 342**	⇑P	**P**	**06 24 24.8**	**+0.7**
BNX			S	**S**	**06 32 05.8**	**+3.5**
BNX			pmax	pmax		
	comp=Z,570nm,1.3s					
BNX			pmax	pmax		
	comp=Z,5μm,3.7s					
BNX			LR	LR		
	comp=Z,12μm,19.0s					
BNX			LR	LR		
	comp=Z,23μm,21.1s					
BNX			LR	LR		
	comp=Z,56μm,32.8s					
TIY	**Taiyuan**	**55.17 325**	⇑P	**P**	**06 24 25.4**	**-0.3**
TIY			S	**S**	**06 32 00.6**	**-4.7**
TIY			SS	**SS**	**06 35 45.3**	**-4.9**
TIY			pmax	pmax		
	comp=Z,66nm,1.2s					
TIY			pmax	pmax		
	comp=Z,7μm,10.6s					
TIY			LR	LR		
	comp=Z,38μm,22.7s					
TIY			LR	LR		
	comp=Z,46μm,25.4s					
TIY			LR	LR		
	comp=Z,89μm,24.7s					
UGL	**Uglegorsk**	**55.20 355**	*c iP*	**P**	**06 24 27.3**	**+1.8**
UGL			*e*S	**S**	**06 32 05.1**	**+0.1**
UGL			pmax	pmax		
	comp=Z,650nm,1.5s					
UGL			pmax	pmax		
	comp=Z,15μm,11.0s					
UGL			smax	smax		
	comp=E,8μm,14.0s					
PZH	**PanZhiHua**	**55.93 308**	P	**P**	**06 24 31.3**	**-0.1**
PZH			sP	**sP**	**06 24 54.4**	**+2.8**
PZH			S	**S**	**06 32 14.6**	**-1.2**
PZH			SS	**SS**	**06 36 00.5**	**-2.1**
PZH			pmax	pmax		
	comp=E,50nm,1.0s					
PZH			pmax	pmax		
	comp=E,5μm,12.0s					
PZH			LR	LR		
	comp=E,20μm,22.2s					
PZH			LR	LR		
	comp=E,18μm,23.2s					
PZH			LR	LR		
	comp=E,27μm,23.0s					
CD2	**Chengdu**	**56.63 313**	⇑P	**P**	**06 24 36.0**	**-0.2**
CD2			S	**S**	**06 32 23.8**	**-1.0**
CD2			sS	sS	06 32 45.9	-2.3
CD2			pmax	pmax		
	comp=E,130nm,0.8s					
CD2			pmax	pmax		
	comp=E,6μm,6.0s					
CD2			LR	LR		
	comp=E,27μm,20.9s					
CD2			LR	LR		
	comp=E,30μm,20.4s					
CD2			LR	LR		
	comp=E,26μm,19.0s					
SKR	**Severo-Kuril's**	**56.84 6**	⇓*iP*	**P**	**06 24 39.6**	**+2.5**
SKR			*i*		06 24 54.1	
SKR			*i* S	**S**	**06 32 31.4**	**+4.7**
SKR			pmax	pmax		
	comp=Z,7μm,8.3s					
SKR			pmax	pmax		
	comp=Z,609nm,1.3s					
SKR			smax	smax		
	comp=E,9μm,11.8s					
SKR			smax	smax		
	comp=N,6μm,11.5s					
TYV	**Tymovskoe**	**56.92 355**	*e*P	**P**	**06 24 39.2**	**+1.4**
TYV			*e*S	**S**	**06 32 32.3**	**+4.5**
TYV			pmax	pmax		
	comp=Z,7μm,4.3s					
TYV			pmax	pmax		
	comp=Z,686nm,1.0s					
TYV			smax	smax		
	comp=N,10μm,8.8s					
TYV			smax	smax		
	comp=E,2μm,8.8s					
KLR	**Kul'dur**	**57.03 347**	P	**P**	**06 24 39.4**	**+0.9**
	comp=E,523nm,1.0s,baz=169,slow=3.7,SNR=363					
KLR			LR	LR	06 47 19.7	
	comp=E,33μm,20.9s,baz=153,slow=34					
	comp=E,523nm,1.0s					
KLR	**Kul'dur**	**57.03 347**	*ce*P	**P**	**06 24 40.1**	**+1.5**
KLR			pmax	pmax		
	comp=Z,1μm,1.1s					
KLR			MLR	MLR		
	comp=Z,30μm,19.0s					
KEKH	**Kekaha**	**57.55 59**	P	**P**	**06 24 42.6**	**-0.2**
KEKH			IAmb	IAmb	06 24 47.8	
	comp=Z,275nm,1.0s					
GRNR	**Gornyy**	**57.59 351**	⇑*iP*	**P**	**06 24 44.6**	**+2.1**
GRNR			*e*S	**S**	**06 32 44.0**	**+7.4**
GRNR			*e*SS	**SS**	**06 36 25.2**	**-2.4**
GRNR			pmax	pmax		
	comp=E,20nm,1.0s					
GRNR			pmax	pmax		
	comp=N,90nm,1.3s					
GRNR			pmax	pmax		
	comp=Z,180nm,1.1s					
GRNR			smax	smax		
	comp=N,6.0nm,0.8s					
XLT	**XiLinHaoTe**	**57.84 332**	⇑*iP*	**P**	**06 24 45.3**	**+0.8**
XLT			pP	pP	06 24 58.0	-0.9
XLT			S	**S**	**06 32 38.9**	**-1.4**
XLT			SS	**SS**	**06 36 34.3**	**+2.4**
XLT			pmax	pmax		
	comp=N,210nm,1.4s					
XLT			pmax	pmax		
	comp=N,9μm,6.8s					
XLT			LR	LR		
	comp=N,4μm,23.1s					
XLT			LR	LR		
	comp=N,40μm,22.6s					
XLT			LR	LR		
	comp=N,90μm,24.7s					
HHC	**Hu-ho-hao-te**	**57.85 327**	*e*P	**P**	**06 24 45.3**	**+0.7**
HHC			pmax	pmax		
	comp=N,150nm,1.6s					
HHC			pmax	pmax		
	comp=N,10μm,7.8s					
HHC			LR	LR		
	comp=N,74μm,19.6s					
HHC			LR	LR		
	comp=N,84μm,22.2s					
HHC			LR	LR		
	comp=N,174μm,22.5s					
PBA	**Port Blair**	**58.51 288**	IAmb	IAmb	06 25 59.3	
	comp=Z,137nm,1.0s					
PBA	**Port Blair**	**58.51 288**	⇑*iP*	**P**	**06 24 45.8**	**-3.8**
BTO	**Baotou**	**58.52 326**	*e*P	**P**	**06 24 50.1**	**+0.7**
BTO			S	**S**	**06 32 52.1**	**+2.7**
BTO			LR	LR		
	comp=Z,121μm,24.9s					
BTO			LR	LR		
	comp=Z,76μm,22.2s					
HON	**Honolulu**	**58.78 61**	P	**P**	**06 24 52.1**	**+0.8**
HON	**Honolulu**	**58.78 61**	P	**P**	**06 24 52.1**	**+0.8**
HON			pmax	pmax		
	comp=Z,521nm,0.9s					
KIP	**Kipapa**	**58.80 61**	P	**P**	**06 24 51.9**	**+0.4**
KIP			IAmb	IAmb	06 24 56.6	
	comp=Z,265nm,0.8s					
KIP	**Kipapa**	**58.80 61**	IAMs_20	IAMs_20	06 45 11.4	
	comp=Z,44μm,21.0s					
KIP	**Kipapa**	**58.80 61**	*ce*P	**P**	**06 24 52.6**	**+1.1**
KIP			pmax	pmax		
	comp=Z,316nm,0.8s					
KIP	**Kipapa**	**58.80 61**	P	**P**	**06 24 52.8**	**+1.3**
KIP	**Kipapa**	**58.80 61**	P	**P**	**06 24 53.0**	**+1.5**
KIP	**Kipapa**	**58.80 61**	P	**P**	**06 24 51.5**	**0.0**
OPA	**Opana**	**58.90 60**	P	**P**	**06 24 52.4**	**+0.2**
OPA	**Opana**	**58.90 60**	P	**P**	**06 24 52.4**	**+0.2**
OPA			pmax	pmax		
	comp=Z,422nm,0.7s					
PEA0B	**Petropavlovsk-**	**59.40 6**	P	**P**	**06 24 56.4**	**+1.4**
PEA0B	**Petropavlovsk-**	**59.40 6**	*ce*P	**P**	**06 24 56.2**	**+1.2**
PETK	**Petropavlovsk-**	**59.40 6**	P	**P**	**06 24 56.4**	**+1.4**
	comp=Z,1μm,1.1s,baz=132,slow=4.2,SNR=249					
PETK			PP	**PP**	**06 27 07.6**	**+0.8**
	comp=Z,34nm,1.0s,baz=159,slow=8.4,SNR=1.2					
PETK			LR	LR	06 47 11.3	
	comp=Z,19μm,21.3s,baz=195,slow=33					
PETK			PKP2bc	**P'P'bc**	**06 54 34.8**	**+0.9**
	comp=Z,12nm,1.0s,baz=63,slow=5.0,SNR=7.1					
	comp=Z,1μm,1.1s					
PETK	**Petropavlovsk-**	**59.40 6**	P	**P**	**06 24 56.2**	**+1.2**
PET	**Petropavlovsk**	**59.42 7**	P	**P**	**06 24 56.0**	**+0.8**
PET	**Petropavlovsk**	**59.42 7**	*c iP*	**P**	**06 24 56.9**	**+1.7**
PET			*e*		06 27 15.0	
PET			*e*S	**S**	**06 33 03.5**	**+3.2**
PET			pmax	pmax		
	comp=Z,1μm,0.9s					
PET			pmax	pmax		
	comp=Z,8μm,13.3s					
PET			pmax	pmax		
	comp=Z,8μm,13.6s					
PET			MLR	MLR		
	comp=Z,32μm,20.0s					
PET	**Petropavlovsk**	**59.42 7**	P	**P**	**06 24 57.8**	**+2.6**
PET	**Petropavlovsk**	**59.42 7**	⇑P	**P**	**06 24 56.2**	**+1.0**
PET	**Petropavlovsk**	**59.42 7**	P	**P**	**06 24 56.6**	**+1.4**
PET			pP	**pP**	**06 25 09.5**	**-0.1**
PET			sP	**sP**	**06 25 14.5**	**-1.1**
LZH	**Lanzhou**	**59.45 318**	⇑P	**P**	**06 24 56.6**	**+0.6**
LZH			S	**S**	**06 33 00.3**	**-1.4**
LZH			SS	**SS**	**06 36 58.8**	**+1.1**
LZH			pmax	pmax		
	comp=Z,140nm,1.6s					
LZH			pmax	pmax		
	comp=Z,8μm,5.8s					
LZH			LR	LR		
	comp=Z,28μm,19.6s					
LZH			LR	LR		
	comp=Z,38μm,17.9s					
LZH			LR	LR		
	comp=Z,82μm,18.2s					
KHLU	**Kahalu`u**	**60.03 63**	P	**P**	**06 25 01.0**	**+0.9**
KHLU			IAmb	IAmb	06 25 05.1	
	comp=Z,352nm,0.9s					
HLK	**Haleakala**	**60.11 62**	P	**P**	**06 25 01.3**	**+0.4**
HLK			IAmb	IAmb	06 25 06.0	
	comp=Z,225nm,0.9s					
HUH	**Hualalai**	**60.11 63**	P	**P**	**06 25 00.6**	**-0.3**
HUH			IAmb	IAmb	06 25 06.0	
	comp=Z,243nm,0.9s					
KHU	**Kahuku**	**60.16 64**	P	**P**	**06 25 00.5**	**-0.8**
KHU	**Kahuku**	**60.16 64**	P	**P**	**06 25 00.5**	**-0.8**
KHU			pmax	pmax		
	comp=Z,360nm,0.8s					
MLOA	**Mauna Loa Obse**	**60.29 64**	IAmb	IAmb	06 25 30.9	
	comp=Z,480nm,1.4s					
AIN	**Ainahou**	**60.34 64**	P	**P**	**06 25 01.8**	**-0.6**
AIN			IAmb	IAmb	06 25 07.5	
	comp=Z,384nm,1.2s					
HPAH	**Hawaii Prepara**	**60.35 63**	IAmb	IAmb	06 25 07.1	
	comp=Z,232nm,0.8s					
HMH	**Humu'ula Sheep**	**60.40 64**	P	**P**	**06 25 02.5**	**-0.5**
POHA	**Pohakuloa**	**60.40 63**	IAMs_20	IAMs_20	06 45 59.8	
	comp=Z,64μm,22.0s					
POHA	**Pohakuloa**	**60.40 63**	P	**P**	**06 25 04.4**	**+1.5**
POHA	**Pohakuloa**	**60.40 63**	⇑P	**P**	**06 25 02.7**	**-0.2**
POHA	**Pohakuloa**	**60.40 63**	P	**P**	**06 25 03.2**	**+0.3**
MLH	**Mauna Loa**	**60.45 64**	P	**P**	**06 25 03.9**	**+0.7**
MLH			IAmb	IAmb	06 25 09.8	
	comp=Z,222nm,1.1s					
PUH	**Pauahi**	**60.56 64**	IAmb	IAmb	06 25 09.1	
	comp=Z,123nm,0.8s					
HIA	**Hailar**	**60.64 339**	P	**P**	**06 25 04.8**	**+1.1**
HIA			sP	**sP**	**06 25 22.9**	**-1.3**
DRV	**Dumont d'Urvil**	**60.84 184**	P	**P**	**06 25 05.8**	**+1.0**
LKP	**Lekhapani**	**61.01 306**	⇑*iP*	**P**	**06 25 05.2**	**-1.4**
PAE	**Paea**	**61.12 107**	*e*P	**P**	**06 25 08.6**	**+1.1**
	comp=Z,75nm,0.8s					
PPT	**Papeete**	**61.12 107**	P	**P**	**06 25 08.8**	**+1.2**
	comp=Z,445nm,0.7s,baz=257,slow=3.7,SNR=31					
PPT			S	**S**	**06 33 24.2**	**+0.8**
	comp=Z,12nm,0.8s,baz=269,slow=22,SNR=2.0					
PPT			LR	LR	06 48 33.6	
	comp=Z,10μm,20.7s,baz=264,slow=33					
	comp=Z,445nm,0.7s					
PPT2	**Papeete2**	**61.12 107**	*e*P	**P**	**06 25 08.8**	**+1.2**
	comp=Z,476nm,0.8s					
PPT2			*e*S	**S**	**06 33 26.0**	**+2.4**
	comp=Z,19μm,27.5s					
PPT2			*e*LQ	LQ	06 40 42.6	
	comp=Z,97μm,33.0s					
PPT2			*e*LR	LR	06 43 17.0	
	comp=Z,57μm,26.5s					
PPTF	**Pamatai, Papee**	**61.13 107**	P	**P**	**06 25 09.9**	**+2.2**
PPTF	**Pamatai, Papee**	**61.13 107**	P	**P**	**06 25 10.0**	**+2.3**
PPTF	**Pamatai, Papee**	**61.13 107**	⇑P	**P**	**06 25 09.6**	**+1.8**
PPTF	**Pamatai, Papee**	**61.13 107**	P	**P**	**06 25 09.7**	**+1.9**
TIAR	**Tiarei**	**61.34 107**	*e*P	**P**	**06 25 09.9**	**+0.8**
	comp=Z,114nm,0.8s					
TVO	**Taravao**	**61.44 107**	*e*P	**P**	**06 25 10.6**	**+0.8**
	comp=Z,172nm,0.8s					
IMP	**Imphal**	**61.58 302**	⇑*iP*	**P**	**06 25 09.0**	**-1.6**
IMP			IAmb	IAmb	06 25 16.7	
	comp=Z,121nm,0.5s					
TBI	**Tubuai**	**61.66 113**	*e*P	**P**	**06 25 11.7**	**+0.6**
	comp=Z,700nm,0.9s					
TBI			*e*S	**S**	**06 33 32.8**	**+2.7**
	comp=Z,17μm,28.5s					
TBI			*e*SS	**SS**	**06 37 35.5**	**+3.1**
	comp=Z,15μm,34.8s					
TBI			*e*LQ	LQ	06 40 56.2	
	comp=Z,52μm,38.0s					
TBI			*e*LR	LR	06 43 31.6	
	comp=Z,94μm,36.0s					
MOKO	**MOKOCHONG**	**61.68 304**	*e*P	**P**	**06 25 09.6**	**-1.8**
KOHI	**KOHIMA**	**61.78 303**	⇑*iP*	**P**	**06 25 10.6**	**-1.5**
DIBR	**DIBRUGARH**	**61.82 305**	⇑*iP*	**P**	**06 25 11.5**	**-0.5**
JORH	**JORHAT**	**62.07 304**	⇑*iP*	**P**	**06 25 12.3**	**-1.5**
JORH			IAmb	IAmb	06 25 17.9	
	comp=Z,326nm,1.0s					
ZEA	**Zeya**	**62.27 346**	*ce*P	**P**	**06 25 16.4**	**+1.9**
ZEA			*e*S	**S**	**06 33 41.7**	**+5.1**
ZEA			*e*SS	**SS**	**06 37 45.6**	**+4.6**
ZEA			pmax	pmax		
	comp=N,1μm,0.9s					
ZEA			pmax	pmax		
	comp=E,380nm,0.9s					
ZEA			pmax	pmax		
	comp=Z,2μm,0.9s					
ZEA			pmax	pmax		
	comp=E,2μm,7.8s					
ZEA			pmax	pmax		
	comp=N,3μm,6.5s					
ZEA			pmax	pmax		
	comp=Z,6μm,7.7s					
ZEA			smax	smax		
	comp=N,8μm,16.0s					
SHEM	**Shemya Is, Ala**	**62.35 17**	P	**P**	**06 25 15.1**	**+0.1**
	comp=N,433nm,0.8s,baz=169,slow=1.5,SNR=34					
SHEM			LR	LR	06 47 03.3	
	comp=N,21μm,20.7s,baz=200,slow=31					
	comp=N,433nm,0.8s					
SILR	**SILCHAR**	**62.52 302**	⇑*iP*	**P**	**06 25 16.4**	**-0.5**
MEH	**Mehetia**	**62.57 107**	*e*P	**P**	**06 25 17.4**	**+0.1**
	comp=N,145nm,0.7s					
ITAN	**ITANAGAR**	**62.66 305**	⇑*iP*	**P**	**06 25 17.6**	**-0.1**
ITAN			IAmb	IAmb	06 25 20.2	
	comp=Z,239nm,1.0s					
ZIRO	**ZIRO**	**62.70 305**	*e*P	**P**	**06 25 17.1**	**-1.1**
ZIRO			IAmb	IAmb	06 25 23.1	
	comp=Z,170nm,0.9s					
AMKA	**Amchitka**	**62.88 21**	P	**P**	**06 25 19.9**	**+1.3**
VAH	**Vaihoa**	**62.92 104**	*e*P	**P**	**06 25 19.8**	**+0.2**
	comp=Z,257nm,0.9s					
TEZP	**TEZPUR**	**63.21 304**	⇑*iP*	**P**	**06 25 20.3**	**-1.1**
TEZP			IAmb	IAmb	06 25 25.1	
	comp=Z,130nm,0.7s					
SHL	**Shillong**	**63.59 302**	P	**P**	**06 25 23.3**	**-0.8**
SHL			IAmb	IAmb	06 26 41.5	
	comp=Z,267nm,1.4s					
SHL	**Shillong**	**63.59 302**	P	**P**	**06 25 23.3**	**-0.8**
SHL			pmax	pmax		
	comp=Z,267nm,1.4s					
SHL	**Shillong**	**63.59 302**	P	**P**	**06 25 24.2**	**+0.1**
	SNR=6.6					
GTA	**Gaotai**	**63.96 319**	⇑P	**P**	**06 25 26.6**	**+0.4**
GTA			pP	pP	06 25 41.6	+0.9
GTA			sP	sP	06 25 47.8	+1.1
GTA			PP	**PP**	**06 27 45.6**	**-1.9**
GTA			S	**S**	**06 33 58.0**	**-0.6**
GTA			sS	sS	06 34 21.6	-1.5
GTA			SS	**SS**	**06 38 10.4**	**+2.3**
GTA			pmax	pmax		
	comp=Z,100nm,1.0s					
GTA			pmax	pmax		
	comp=Z,7μm,11.6s					
GTA			LR	LR		
	comp=Z,16μm,22.9s					
GTA			LR	LR		
	comp=Z,21μm,24.7s					
GTA			LR	LR		
	comp=Z,29μm,24.5s					
ADK	**Adak**	**64.77 23**	P	**P**	**06 25 31.6**	**+0.5**
ADK	**Adak**	**64.77 23**	IAMs_20	IAMs_20	06 49 17.6	
	comp=Z,44μm,22.0s					
ADK	**Adak**	**64.77 23**	P	**P**	**06 25 31.6**	**+0.5**
ADK			pmax	pmax		
	comp=Z,2μm,1.8s					
ADK	**Adak**	**64.77 23**	P	**P**	**06 25 33.0**	**+1.9**
ADK	**Adak**	**64.77 23**	P	**P**	**06 25 31.3**	**+0.3**
ULN	**Ulaanbaatar**	**65.04 330**	P	**P**	**06 25 34.2**	**+1.1**
ULN			IAmb	IAmb	06 25 55.8	
	comp=Z,202nm,1.1s					
ULN	**Ulaanbaatar**	**65.04 330**	IAMs_20	IAMs_20	06 52 56.8	
	comp=Z,56μm,22.0s					
ULN	**Ulaanbaatar**	**65.04 330**	*ce*P	**P**	**06 25 33.9**	**+0.8**
ULN			pmax	pmax		
	comp=Z,246nm,1.3s					
ULN			MLR	MLR		
	comp=Z,50μm,20.0s					
ULN	**Ulaanbaatar**	**65.04 330**	P	**P**	**06 25 33.9**	**+0.8**
ULN			S	**S**	**06 34 14.4**	**+2.7**
ULN	**Ulaanbaatar**	**65.04 330**	P	**P**	**06 25 33.7**	**+0.6**
	comp=Z,285μmcomp=Z,33μmcomp=Z,598nm,0.7s					
ULN	**Ulaanbaatar**	**65.04 330**	⇑P	**P**	**06 25 34.1**	**+1.0**
ULN	**Ulaanbaatar**	**65.04 330**	P	**P**	**06 25 34.2**	**+1.0**
CIT	**Chita**	**65.20 337**	*e*P	**P**	**06 25 34.6**	**+0.6**
CIT			*e*		06 25 50.2	
CIT			*e*		06 26 06.0	
CIT			*e*		06 28 00.6	
CIT			*e*S	**S**	**06 34 13.0**	**-0.2**
CIT			pmax	pmax		
	comp=Z,1μm,2.5s					
DHUB	**DHUBRI**	**65.34 302**	⇑*iP*	**P**	**06 25 34.2**	**-1.1**
DHUB			IAmb	IAmb	06 25 39.4	
	comp=Z,148nm,0.5s					
SONM	**Songino Array**	**65.34 330**	P	**P**	**06 25 35.0**	**-0.1**
	comp=Z,105nm,1.0s,baz=146,slow=6.2,SNR=82					
SONM			S	**S**	**06 34 16.5**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=193,slow=5.9,SNR=1.6					
SONM			LR	LR	06 53 20.0	
	comp=Z,59μm,21.4s,baz=130,slow=35					
SONM			PKP2bc	**P'P'bc**	**06 54 20.8**	**+0.7**
	comp=Z,10nm,1.1s,baz=294,slow=2.2,SNR=11					
	comp=Z,105nm,1.0s					
SONM	**Songino Array**	**65.34 330**	P	**P**	**06 25 35.5**	**+0.4**
SONM			IAmb	IAmb	06 25 42.9	
	comp=Z,123nm,0.6s					
SONM	**Songino Array**	**65.34 330**	P	**P**	**06 25 35.5**	**+0.4**
SONM			pmax	pmax		
	comp=Z,123nm,0.6s					
MA2	**Magadan**	**65.42 1**	P	**P**	**06 25 35.6**	**+0.5**
	comp=Z,495nm,0.9s,baz=165,slow=6.2,SNR=195					
MA2			LR	LR	06 54 56.5	
	comp=Z,20μm,18.8s,baz=193,slow=37					
	comp=Z,495nm,0.9s					
MA2	**Magadan**	**65.42 1**	P	**P**	**06 25 35.8**	**+0.6**
MA2	**Magadan**	**65.42 1**	*ce*P	**P**	**06 25 35.7**	**+0.5**
MA2			pmax	pmax		
	comp=Z,1μm,1.3s					
MA2			MLR	MLR		
	comp=Z,21μm,15.0s					
MA2	**Magadan**	**65.42 1**	P	**P**	**06 25 37.4**	**+2.2**
MA2	**Magadan**	**65.42 1**	⇑P	**P**	**06 25 35.8**	**+0.6**
MA2	**Magadan**	**65.42 1**	P	**P**	**06 25 35.9**	**+0.6**
CASY	**Casey**	**65.72 196**	P	**P**	**06 25 37.5**	**+0.4**
CASY	**Casey**	**65.72 196**	⇑P	**P**	**06 25 37.4**	**+0.4**
CASY	**Casey**	**65.72 196**	P	**P**	**06 25 37.4**	**+0.4**
GOMU	**GeErMu**	**65.73 314**	⇑*eP*	**P**	**06 25 38.0**	**-0.1**
GOMU			pmax	pmax		
	comp=Z,29nm,1.5s					
GOMU			LR	LR		
	comp=Z,16μm,21.6s					
GOMU			LR	LR		
	comp=Z,22μm,21.8s					
GOMU			LR	LR		
	comp=Z,38μm,20.8s					
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.0**	**-0.5**
LSA			IAmb	IAmb	06 25 43.5	
	comp=Z,128nm,0.8s					
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.4**	**0.0**
LSA			S	**S**	**06 34 23.3**	**+1.8**
LSA			pmax	pmax		
	comp=Z,98nm,1.3s					
LSA			LR	LR		
	comp=Z,16μm,27.0s					
LSA			LR	LR		
	comp=Z,24μm,29.9s					
LSA			LR	LR		
	comp=Z,35μm,25.6s					
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.0**	**-0.5**
LSA			pmax	pmax		
	comp=Z,128nm,0.8s					
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.4**	**0.0**
LSA			P	**P**	**06 25 38.4**	**0.0**
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.1**	**-0.3**
LSA	**Lhasa**	**65.74 306**	P	**P**	**06 25 38.5**	**0.0**
GTK	**Tadong**	**66.96 303**	⇑*iP*	**P**	**06 25 44.9**	**-1.0**
GTK			IAmb	IAmb	06 25 51.4	
	comp=Z,123nm,0.6s					
BWNR	**Bhubaneshwar**	**67.22 295**	⇑*iP*	**P**	**06 25 46.7**	**-0.8**
BOK	**Bokaro**	**68.15 298**	⇑*iP*	**P**	**06 25 53.0**	**-0.3**
BOK			IAmb	IAmb	06 25 54.9	
	comp=Z,70nm,1.2s					
RAMN	**Ramite**	**68.52 302**	*e*P	**P**	**06 25 54.8**	**-1.0**
	comp=Z,135nm,0.5s					
ZAK	**Zakamensk**	**68.56 331**	*e*P	**P**	**06 25 55.4**	**-0.1**
ZAK			pmax	pmax		
	comp=Z,212nm,1.4s					
NIKH	**Nikolski High**	**68.79 26**	IAmb	IAmb	06 26 02.9	
	comp=Z,359nm,0.7s					
NIKH	**Nikolski High**	**68.79 26**	P	**P**	**06 25 55.7**	**-1.0**
	baz=226,SNR=9.3					
SEY	**Seymchan**	**68.83 2**	LR	LR	06 56 17.5	
	comp=Z,18μm,19.2s,baz=180,slow=36					
SEY	**Seymchan**	**68.83 2**	*ce*P	**P**	**06 25 57.2**	**+0.5**
SEY			pmax	pmax		
	comp=Z,578nm,1.3s					
SEY			MLR	MLR		
	comp=Z,33μm,20.0s					
RAGD	**RAYAGADA**	**69.08 293**	⇑*iP*	**P**	**06 25 58.5**	**-0.7**
JIRN	**Jiri**	**69.09 302**	*e*P	**P**	**06 25 58.6**	**-0.9**
	comp=Z,259nm,0.7s					
PALK	**Pallekele**	**69.26 280**	LR	LR	06 59 18.0	
	comp=Z,15μm,22.0s,baz=217,slow=38					
PALK	**Pallekele**	**69.26 280**	P	**P**	**06 26 01.4**	**+0.9**
PALK	**Pallekele**	**69.26 280**	P	**P**	**06 26 01.4**	**+0.9**
PALK			pmax	pmax		
	comp=Z,81nm,1.1s					
PALK			MLR	MLR		
	comp=Z,19μm,22.0s					
PALK	**Pallekele**	**69.26 280**	P	**P**	**06 26 02.0**	**+1.5**
PALK			S	**S**	**06 35 00.6**	**-2.8**
PALK	**Pallekele**	**69.26 280**	P	**P**	**06 26 03.3**	**+2.8**
	comp=Z,56μmcomp=Z,4μmcomp=Z,49nm,0.9s					
PALK	**Pallekele**	**69.26 280**	⇑P	**P**	**06 25 60.0**	**-0.5**
PALK	**Pallekele**	**69.26 280**	P	**P**	**06 26 03.1**	**+2.6**
IRK	**Irkutsk**	**69.32 333**	*e*P	**P**	**06 25 59.7**	**-0.3**
IRK			pmax	pmax		
	comp=Z,575nm,1.8s					
GUN	**Gumba**	**69.43 303**	*e*P	**P**	**06 26 00.9**	**-0.7**
	comp=Z,470nm,0.7s					
JHSG	**JHARSUGUGA**	**69.45 296**	⇑*iP*	**P**	**06 26 00.3**	**-1.1**
YAK	**Yakutsk**	**69.47 350**	P	**P**	**06 26 00.6**	**0.0**
	comp=Z,40nm,0.5s,baz=140,slow=1.0,SNR=39					

YAK LR LR 06 58 54.8
comp=Z,13μm,18.5s,baz=158,slow=38
comp=Z,40nm,0.5s
YAK Yakutsk 69.47 350 P **P** **06 26 00.8 +0.2**
YAK IAmb IAmb 06 26 08.6
comp=Z,258nm,0.7s
YAK Yakutsk 69.47 350 *c iP* **P** **06 26 00.6 0.0**
YAK *e* 06 26 17.2
YAK *e*S **S** **06 34 57.2 -6.7**
YAK *e* 06 35 27.4
YAK *e*SS **SS** **06 39 32.2 -0.2**
YAK pmax pmax
comp=Z,426nm,1.3s
YAK pmax pmax
comp=N,129nm,1.1s
YAK pmax pmax
comp=E,30nm,1.2s
YAK smax smax
comp=N,4μm,9.4s
YAK smax smax
comp=E,2μm,9.4s
YAK Yakutsk 69.47 350 ⇑P **P** **06 26 00.9 +0.2**
YAK Yakutsk 69.47 350 P **P** **06 26 01.0 +0.3**
BOD Bodaibo 69.60 341 *e*P **P** **06 26 01.0 -0.6**
BOD pmax pmax
comp=Z,287nm,1.7s
PKI Pulchoki 69.72 302 *e*P **P** **06 26 02.1 -1.3**
comp=Z,83nm,0.6s
PKIN Phulchoki 69.73 302 *e*P **P** **06 26 02.1 -1.3**
KKN Kakani 69.89 302 *e*P **P** **06 26 02.6 -1.7**
DMN Daman 69.98 302 *e*P **P** **06 26 04.0 -0.9**
comp=Z,377nm,0.7s
TAOE Nuku Hiva Isla 70.37 97 *e*P **P** **06 26 07.5 +0.2**
comp=Z,722nm,1.4s
TAOE *e*S **S** **06 35 19.0 +2.4**
comp=Z,12μm,25.5s
TAOE Nuku Hiva Isla 70.37 97 *e*LR LR 06 47 34.3
comp=Z,20μm,28.2s
TAOE Nuku Hiva Isla 70.37 97 P **P** **06 26 07.7 +0.4**
TAOE IAmb IAmb 06 26 11.0
comp=Z,206nm,0.8s
TAOE Nuku Hiva Isla 70.37 97 P **P** **06 26 08.8 +1.5**
TAOE Nuku Hiva Isla 70.37 97 ⇑P **P** **06 26 08.4 +1.0**
TAOE Nuku Hiva Isla 70.37 97 P **P** **06 26 08.5 +1.2**
UNV Unalaska Valle 70.42 26 P **P** **06 26 07.0 +0.3**
UNV Unalaska Valle 70.42 26 P **P** **06 26 05.4 -1.2**
baz=228,SNR=27
UNV Unalaska Valle 70.42 26 P **P** **06 26 08.2 +1.6**
MOY Mondy 70.50 331 *e*P **P** **06 26 07.9 +0.5**
MOY pmax pmax
comp=Z,482nm,3.0s
GKN Gorkha 70.50 302 *e*P **P** **06 26 06.7 -1.3**
comp=Z,346nm,0.7s
CCD Concordia, Ant 70.55 187 P **P** **06 26 08.8 +1.2**
MDRS Chennai 70.73 286 ⇑*i*P **P** **06 26 07.5 -1.9**
MDRS IAmb IAmb 06 26 15.5
comp=Z,58nm,1.2s
AKUT Akutan 70.94 26 ⇑P **P** **06 26 10.1 +0.3**
VLK Valmikinagar 70.94 301 ⇑*e*P **P** **06 26 10.0 -0.4**
BLSP Bilaspur 71.01 296 ⇑*i*P **P** **06 26 09.5 -1.5**
VAR Varanasi 71.09 299 *e*P **P** **06 26 08.7 -2.7**
SPIA Saint Paul Isl 71.23 22 P **P** **06 26 11.8 +0.3**
baz=223
KOLN Koldanda 71.31 302 *e*P **P** **06 26 11.0 -1.9**
comp=Z,56nm,1.0s
DANN Dangsing 71.34 302 *e*P **P** **06 26 11.7 -1.6**
comp=Z,203nm,0.8s
AIS Amsterdam Isla 71.54 232 P **P** **06 26 15.9 +2.0**
VNDA Vanda 71.78 177 P **P** **06 26 14.9 +0.3**
comp=Z,51nm,0.5s,baz=330,slow=6.6,SNR=381
VNDA S S 06 35 19.2 -11
comp=Z,2.6nm,1.1s,baz=338,slow=9.1,SNR=1.6
VNDA LR LR 06 54 07.5
comp=Z,24μm,21.1s,baz=360,slow=33
comp=Z,51nm,0.5s
VNDA Vanda 71.78 177 P **P** **06 26 15.7 +1.1**
VNDA IAmb IAmb 06 26 37.4
comp=Z,210nm,0.9s
VNDA Vanda 71.78 177 P **P** **06 26 15.7 +1.1**
VNDA pmax pmax
comp=Z,210nm,0.9s
VNDA Vanda 71.78 177 P **P** **06 26 15.9 +1.3**
PYUN Piuthan 71.92 302 *e*P **P** **06 26 15.1 -1.5**
comp=Z,439nm,0.8s
ALBI Allahabad 72.14 299 ⇑*e*P **P** **06 26 16.4 -1.3**
SBA Scott Base 72.39 176 P **P** **06 26 20.7 +2.5**
SBA IAmb IAmb 06 26 54.0
comp=Z,530nm,1.6s
SBA Scott Base 72.39 176 P **P** **06 26 20.7 +2.5**
SBA pmax pmax
comp=Z,530nm,1.6s
SALM Salem 72.43 284 ⇑*i*P **P** **06 26 19.3 -0.3**
FALS False Pass 72.45 27 P **P** **06 26 19.4 +0.5**
FALS IAmb IAmb 06 26 24.1
comp=Z,400nm,0.9s
FALS False Pass 72.45 27 P **P** **06 26 18.9 +0.1**
baz=230
KOD Kodaikanal 72.90 283 ⇑*i*P **P** **06 26 21.4 -1.4**
TRD Trivandrum 73.12 281 ⇑*i*P **P** **06 26 22.8 -1.0**
TRD IAmb IAmb 06 26 27.8
comp=Z,81nm,0.6s
HYB Hyderabad 73.20 290 ⇑*i*P **P** **06 26 22.0 -2.2**
HYB IAmb IAmb 06 26 31.3
comp=Z,50nm,0.9s
HYBB Hyderabad (bro 73.20 290 IVmB_BB 06 26 23.4
comp=Z,1μm,12.5s
HYBB *e*P **P** **06 26 25.0 +0.8**
HYBB *e*pP pP 06 26 37.3 -1.7
HYBB *e*sP **PcP** **06 26 42.3 +1.8**
HYBB *e*PP **PP** **06 29 08.1 +0.2**
HYBB *e*S **SKiKP** **06 35 50.7 -1.3**
HYBB *e*ScS **ScS** **06 36 29.6 +0.7**
HYBB *e*SS **SS** **06 40 33.5 +2.0**
HYBB IVMs_BB IVMs_BB 07 00 17.0
comp=Z,2μm,22.9s
WMQ Urumqi 74.03 319 P **P** **06 26 29.1 +0.5**
WMQ sP sP 06 26 49.3 +0.1
WMQ PP **PP** **06 29 14.3 -0.2**
WMQ S **S** **06 35 57.8 +0.4**
WMQ sS sS 06 36 21.8 -0.5
WMQ SS **SS** **06 40 45.5 +2.3**
WMQ pmax pmax
comp=Z,270nm,1.5s
WMQ pmax pmax
comp=Z,5μm,9.7s
WMQ LR LR
comp=Z,14μm,22.1s
WMQ LR LR
comp=Z,10μm,23.9s
WMQ LR LR
comp=Z,21μm,25.5s
PCHI Peechi 74.03 283 ⇑*e*P **P** **06 26 26.7 -2.4**
PCHI *e*S **SKiKP** **06 35 50.3 -3.0**
SDPT Sand Point 74.08 27 P **P** **06 26 28.8 +0.3**
SDPT Sand Point 74.08 27 P **P** **06 26 27.7 -0.8**
baz=233,SNR=16
CNBA Chernabura Isl 74.18 28 P **P** **06 26 29.5 +0.5**
CHNA Chernabura Isl 74.18 28 P **P** **06 26 28.8 -0.3**
baz=234
LGTI Lohaghat 74.61 303 ⇑*i*P **P** **06 26 31.3 -0.8**
PTH Pithoragarh 74.66 303 ⇑*i*P **P** **06 26 31.3 -1.4**
BILL Bilibino 74.92 7 P **P** **06 26 35.4 +2.3**
BILL IAmb IAmb 06 26 41.3
comp=Z,290nm,0.8s
BILL Bilibino 74.92 7 *d iP* **P** **06 26 32.4 -0.7**
BILL *i* 06 29 27.7
BILL *e*PPP PPP 06 31 14.6
BILL *i* S **S** **06 35 59.7 -6.6**
BILL pmax pmax
comp=Z,497nm,1.3s
JHNI Jhansi 75.03 298 ⇑*i*P **P** **06 26 32.0 -2.7**
AKL Akola 75.31 293 ⇑*i*P **P** **06 26 33.6 -2.8**
BHPL Bhopal 75.50 296 ⇑*i*P **P** **06 26 35.0 -2.5**
BHPL IAmb IAmb 06 26 42.8
comp=Z,54nm,0.5s
CHGN Chignik 75.58 27 P **P** **06 26 37.8 +0.6**
CHGN Chignik 75.58 27 P **P** **06 26 35.8 -1.3**
baz=235,SNR=58
GAMB Gambell 75.66 17 P **P** **06 26 39.9 +2.5**
GAMB IAmb IAmb 06 27 10.0
comp=Z,152nm,1.0s
GAMB IAMs_20 IAMs_20 06 56 29.5
comp=Z,38μm,21.0s
GAMB Gambell 75.66 17 P **P** **06 26 37.9 +0.4**
baz=221

H08S2 Diego Garcia H 75.74 264 P **P** **06 26 41.2 +2.5**
baz=42,slow=5.9,SNR=15
H08S3 Diego Garcia H 75.75 264 P **P** **06 26 41.1 +2.3**
baz=42,slow=5.9,SNR=8.5
H08S1 Diego Garcia H 75.76 264 P **P** **06 26 41.2 +2.4**
baz=42,slow=5.9,SNR=9.8
DGAR Diego Garcia 75.80 264 P **P** **06 26 40.0 +0.7**
DGAR Diego Garcia 75.80 264 P **P** **06 26 40.0 +0.7**
DGAR pmax pmax
comp=Z,2μm,1.8s
DGAR MLR MLR
comp=Z,15μm,20.0s
DGAR Diego Garcia 75.80 264 P **P** **06 26 40.4 +1.1**
MNGI Mangalore 75.90 285 ⇑*i*P **P** **06 26 37.8 -2.1**
KAAM Kaadhehdhoo 75.99 272 P **P** **06 26 43.1 +2.7**
HMDM Hanimaadhoo 76.57 278 P **P** **06 26 44.9 +1.3**
CHIR Chirikof Islan 76.62 29 IAMs_20 IAMs_20 07 04 29.1
comp=Z,26μm,19.0s
CHIR Chirikof Islan 76.62 29 P **P** **06 26 42.7 -0.4**
baz=237,SNR=13
DDI Dehra Dun 76.68 303 ⇑*i*P **P** **06 26 42.9 -1.2**
DDI IAmb IAmb 06 26 48.6
comp=Z,104nm,0.7s
R16K Pilot Point 76.69 26 P **P** **06 26 43.9 +0.5**
baz=235
DGZ Jazzator, Alta 76.73 324 *c iP* **P** **06 26 42.9 -1.2**
DGZ pmax pmax
comp=Z,116nm,0.7s
DGZ MLR MLR
comp=Z,50μm,21.0s
MNCI Minicoy 76.90 280 IAmb IAmb 06 26 52.6
comp=Z,231nm,0.7s
MNCI Minicoy 76.90 280 ⇑P **P** **06 26 45.7 +0.2**
MNCY Minicoy 76.92 280 *e*P **P** **06 26 44.8 -0.9**
KAD Karad 77.27 289 ⇑*i*P **P** **06 26 47.7 0.0**
ZSN Zaisan 77.33 321 *e*P **P** **06 26 45.3 -2.0**
ZSN *e*S **S** **06 36 30.7 -2.9**
ZSN Zaisan 77.33 321 *e*P **P** **06 26 45.4 -2.0**
baz=321
ZSN *e*S **S** **06 36 30.7 -2.9**
baz=321
P16K Nushagak River 77.35 25 P **P** **06 26 46.5 -0.6**
baz=235
SMLA Simla 77.63 304 ⇑*i*P **P** **06 26 47.4 -1.9**
SMLA IAmb IAmb 06 26 57.4
comp=Z,86nm,0.6s
SMLA *i* x x 06 28 56.4
O16K Kokwok River B 77.64 25 P **P** **06 26 47.6 -1.0**
baz=234,SNR=54
SII Sitkinak Islan 77.69 28 IAmb IAmb 06 26 54.7
comp=Z,298nm,0.7s
SII Sitkinak Islan 77.69 28 P **P** **06 26 47.9 -1.2**
baz=238,SNR=8.8
SII Sitkinak Islan 77.69 28 P **P** **06 26 51.1 +2.0**
Q16K King Salmon 77.72 26 P **P** **06 26 48.0 -1.2**
baz=236
POO Poona 77.81 290 ⇑*i*P **P** **06 26 48.5 -2.1**
POO *i* S **S** **06 36 35.0 -4.9**
Q17K Contact Creek 77.83 26 P **P** **06 26 48.7 -1.3**
baz=237,SNR=93
N16K Nishlik Lake 77.88 24 P **P** **06 26 50.3 +0.2**
baz=234,SNR=51
PAF Port-aux-Franc 78.04 221 ⇑P **P** **06 26 53.0 +1.8**
TNA Tin City 78.08 17 P **P** **06 26 51.8 +0.7**
TNA Tin City 78.08 17 P **P** **06 26 51.1 +0.1**
baz=224
TNA Tin City 78.08 17 ⇑P **P** **06 26 51.1 +0.1**
P17K Kvichak River 78.10 25 P **P** **06 26 50.1 -1.2**
baz=236
ANM Nome 78.15 18 P **P** **06 26 51.8 +0.3**
ANM IAmb IAmb 06 26 58.2
comp=Z,260nm,0.8s
ANM IAMs_20 IAMs_20 06 57 04.3
comp=Z,48μm,22.0s
ANM Nome 78.15 18 P **P** **06 26 51.8 +0.3**
ANM pmax pmax
comp=Z,260nm,0.8s
ANM Nome 78.15 18 P **P** **06 26 51.5 +0.1**
baz=227
O17K Koliganek Bris 78.15 25 P **P** **06 26 51.5 -0.1**
baz=235
BHK Bhakra 78.32 304 ⇑*i*P **P** **06 26 51.5 -1.7**
Q18K Katmai Hardscr 78.42 26 P **P** **06 26 51.7 -1.5**
baz=237,SNR=92
OHAK Old Harbor 78.45 28 P **P** **06 26 53.9 +0.6**
OHAK IAmb IAmb 06 27 10.9
comp=Z,188nm,0.9s
OHAK Old Harbor 78.45 28 P **P** **06 26 52.1 -1.1**
baz=239,SNR=15
TIXI Tiksi 78.64 354 LR LR 06 58 57.4
comp=Z,11μm,21.6s,baz=90,slow=34
TIXI Tiksi 78.64 354 P **P** **06 26 53.8 -0.3**
TIXI Tiksi 78.64 354 *ce*P **P** **06 26 52.5 -1.5**
TIXI pmax pmax
comp=Z,115nm,0.8s
TIXI MLR MLR
comp=Z,10μm,18.0s
TIXI Tiksi 78.64 354 ⇑P **P** **06 26 52.8 -1.2**
AJM Ajmer 78.68 298 ⇑*i*P **P** **06 26 53.4 -1.9**
MK31 Makanchi Array 78.70 320 P **P** **06 26 54.2 -0.8**
MK31 Makanchi Array 78.70 320 *i* P **P** **06 26 54.0 -0.9**
MK31 pmax pmax
comp=Z,59nm,0.6s
MKAR Makanchi Array 78.70 320 P **P** **06 26 54.2 -0.8**
comp=Z,37nm,0.5s,baz=100,slow=7.1,SNR=66
MKAR S **S** **06 36 45.4 -3.0**
comp=Z,0.8nm,0.8s,baz=168,slow=2.8,SNR=1.3
MKAR PKKPbc **PKKPbc** **06 45 50.6 -1.2**
comp=Z,9.4nm,0.6s,baz=302,slow=1.8,SNR=34
MKAR PKPPKP **P'P'df** **06 53 52.8 +0.2**
comp=Z,4.3nm,0.9s,baz=292,slow=2.4,SNR=12
MKAR LR LR 07 00 12.7
comp=Z,18μm,21.8s,baz=121,slow=34
comp=Z,37nm,0.5s
P18K Big Mountain, 78.73 26 P **P** **06 26 54.4 -0.4**
P18K IAmb IAmb 06 27 00.3
comp=Z,205nm,0.8s
P18K IAMs_20 IAMs_20 06 55 23.9
comp=Z,41μm,22.0s
P18K Big Mountain, 78.73 26 P **P** **06 26 53.7 -1.2**
baz=237,SNR=18
MAKZ Makanchi 78.91 320 P **P** **06 26 55.4 -0.7**
MAKZ Makanchi 78.91 320 P **P** **06 26 55.4 -0.7**
MAKZ pmax pmax
comp=Z,162nm,1.2s
MAKZ Makanchi 78.91 320 ⇑P **P** **06 26 55.3 -0.8**
O18K Koktuh Hills 78.99 25 P **P** **06 26 57.1 +0.9**
O18K IAmb IAmb 06 27 01.1
comp=Z,139nm,0.8s
O18K Koktuh Hills 78.99 25 P **P** **06 26 55.9 -0.4**
baz=237,SNR=17
KDAK Kodiak Island 79.07 28 LR LR 06 55 57.1
comp=Z,22μm,21.8s,baz=271,slow=31
KDAK Kodiak Island 79.07 28 P **P** **06 26 57.9 +1.3**
KDAK IAmb IAmb 06 26 59.9
comp=Z,196nm,1.1s
KDAK Kodiak Island 79.07 28 *i* P **P** **06 26 58.0 +1.3**
KDAK pmax pmax
comp=Z,293nm,1.0s
KDAK MLR MLR
comp=Z,19μm,19.0s
KDAK Kodiak Island 79.07 28 P **P** **06 26 56.6 0.0**
baz=240
KDAK Kodiak Island 79.07 28 ⇑P **P** **06 26 56.6 0.0**
THN Thein Dam 79.15 305 ⇑*i*P **P** **06 26 56.2 -1.4**
N18K Kilae Creek 79.16 24 IAmb IAmb 06 27 03.1
comp=Z,170nm,1.0s
N18K IAMs_20 IAMs_20 06 57 27.2
comp=Z,37μm,22.0s
N18K Kilae Creek 79.16 24 P **P** **06 26 57.9 +0.7**
baz=236,SNR=34
Q19K Cape Douglas, 79.17 26 P **P** **06 26 56.8 -0.4**
baz=239,SNR=34
SHLS Shalkode 79.34 316 *c iP* **P** **06 26 55.9 -2.7**
SHLS *e*S **S** **06 36 49.5 -6.0**
SHLS Shalkode 79.34 316 ⇑*i*P **P** **06 26 56.0 -2.7**
baz=316
SHLS *e*S **S** **06 36 49.6 -6.0**
baz=316
SVW2 Sparrevohn 79.52 24 IAmb IAmb 06 27 05.8
comp=Z,322nm,0.9s
O19K Port Alsworth 79.55 25 P **P** **06 26 59.2 0.0**
O19K IAmb IAmb 06 27 04.8
comp=Z,160nm,0.9s
O19K Port Alsworth 79.55 25 P **P** **06 26 58.6 -0.6**
baz=238

Q20K Shuyak Island 79.57 27 P **P** **06 27 00.0 +0.7**
baz=240,SNR=15
UZB Uzynbulak 79.64 316 *i* P **P** **06 26 59.3 -1.0**
UZB *e*S **S** **06 36 57.0 -1.8**
UZB Uzynbulak 79.64 316 *i* P **P** **06 26 59.4 -1.0**
baz=316
UZB *e*S **S** **06 36 57.0 -1.8**
baz=316
P19K Oil Pt 79.73 26 P **P** **06 26 59.8 -0.5**
P19K Oil Pt 79.73 26 P **P** **06 26 59.9 -0.5**
baz=239,SNR=36
N19K Bonanza Creek 79.81 25 P **P** **06 27 01.7 +0.9**
N19K IAmb IAmb 06 27 06.4
comp=Z,189nm,0.9s
N19K IAMs_20 IAMs_20 06 57 26.5
comp=Z,47μm,21.0s
N19K Bonanza Creek 79.81 25 P **P** **06 27 00.3 -0.5**
baz=238,SNR=46
JMU Jammu 79.89 305 ⇑*i*P **P** **06 27 01.1 -0.6**
KPKS Kokpek 79.97 316 *c iP* **P** **06 27 00.8 -1.2**
KPKS *i* S **S** **06 36 57.9 -4.3**
KPKS Kokpek 79.97 316 ⇑*i*P **P** **06 27 00.8 -1.2**
baz=316
KPKS *i* S **S** **06 36 58.0 -4.3**
baz=316
ZALV Zalesovo Beam 80.03 327 P **P** **06 27 00.5 -1.4**
comp=Z,108nm,0.6s,baz=115,slow=6.4,SNR=52
ZALV S **S** **06 37 05.5 +3.4**
comp=Z,6.8nm,1.1s,baz=98,slow=11,SNR=4.7
ZALV PKKPbc **PKKPbc** **06 45 48.1 -1.0**
comp=Z,9.2nm,0.7s,baz=314,slow=2.7,SNR=10
ZALV PKP2ab 06 53 35.1
comp=Z,2.3nm,0.6s,baz=270,slow=2.5,SNR=4.6
ZALV PKPPKP **P'P'df** **06 53 52.6 +3.0**
comp=Z,21nm,1.1s,baz=281,slow=3.1,SNR=8.9
ZALV LR LR 07 01 17.5
comp=Z,52μm,21.8s,baz=131,slow=35
comp=Z,108nm,0.6s
SATY Saty 80.04 315 *c iP* **P** **06 27 01.6 -0.8**
SATY *e*S **S** **06 37 01.5 -1.5**
SATY Saty 80.04 315 ⇑*i*P **P** **06 27 01.7 -0.8**
baz=315
SATY *e*S **S** **06 37 01.6 -1.5**
baz=315
O20K Slope Mountain 80.22 26 P **P** **06 27 01.9 -1.0**
baz=239,SNR=16
TTA Tatalina 80.38 22 IAmb IAmb 06 27 07.2
comp=Z,170nm,0.9s
TTA Tatalina 80.38 22 P **P** **06 27 02.3 -1.5**
baz=236,SNR=9.7
TTA Tatalina 80.38 22 ⇑P **P** **06 27 03.6 -0.1**
L19K White Mountain 80.41 23 IAMs_20 IAMs_20 06 59 08.1
comp=Z,47μm,21.0s
L19K White Mountain 80.41 23 P **P** **06 27 03.2 -0.6**
baz=237,SNR=160
HOM Homer 80.43 26 P **P** **06 27 03.3 -0.7**
baz=240,SNR=20
M19K Big River Lodg 80.44 24 P **P** **06 27 05.3 +1.2**
M19K IAmb IAmb 06 27 10.6
comp=Z,278nm,0.8s
M19K Big River Lodg 80.44 24 P **P** **06 27 03.9 -0.1**
baz=238
CNPM China Poot 80.55 27 P **P** **06 27 05.5 +0.9**
TDK Taldyqorghan 80.64 317 *c iP* **P** **06 27 04.7 -0.8**
TDK *e*S **S** **06 37 04.8 -4.2**
TDK Taldyqorghan 80.64 317 ⇑*i*P **P** **06 27 04.8 -0.8**
baz=317
TDK *e*S **S** **06 37 04.8 -4.2**
baz=317
TDK *e*LR LR 06 58 55.9
comp=Z,19μm,25.9s,baz=317
KSH Kashi 80.78 312 P **P** **06 27 07.3 +0.8**
KSH PP **PP** **06 30 13.1 +1.8**
KSH S **S** **06 37 08.0 -2.8**
KSH SS **SS** **06 42 33.1 +7.8**
KSH pmax pmax
comp=Z,73nm,0.8s
KSH pmax pmax
comp=Z,7μm,11.0s
KSH LR LR
comp=Z,19μm,22.7s
KSH LR LR
comp=Z,13μm,22.0s
KSH LR LR
comp=Z,26μm,21.3s
BRLK Bradley Lake 80.82 26 P **P** **06 27 06.2 +0.1**
BRLK IAmb IAmb 06 27 11.4
comp=Z,361nm,0.8s
BRSE Bradley Lake S 80.87 26 P **P** **06 27 05.4 -1.0**
baz=241,SNR=17
M20K Styx River 80.93 24 P **P** **06 27 07.5 +0.7**
M20K IAmb IAmb 06 27 10.6
comp=Z,245nm,0.8s
M20K IAMs_20 IAMs_20 06 59 06.1
comp=Z,44μm,21.0s
M20K Styx River 80.93 24 P **P** **06 27 06.3 -0.5**
baz=239
L20K Farewell, AK 80.95 23 P **P** **06 27 06.4 -0.4**
baz=238,SNR=73
N20K Mount Spurr 80.96 25 P **P** **06 27 05.4 -1.5**
baz=240,SNR=22
SPCR Spurr Chakacha 80.96 25 P **P** **06 27 05.4 -1.5**
baz=240
MDOK Medeo 81.02 315 *i* P **P** **06 27 06.6 -1.1**
MDOK Medeo 81.02 315 *i* P **P** **06 27 06.7 -1.1**
baz=315
MDOK *e*S S 06 36 52.7 -21
baz=315
TNSS Tian-Shan 81.06 315 *i* P **P** **06 27 07.1 -1.1**
TNSS Tian-Shan 81.06 315 *i* P **P** **06 27 07.2 -1.1**
baz=315
GCSA Galena City Sc 81.09 21 P **P** **06 27 07.4 0.0**
baz=235
AAA Alma-Ata 81.13 315 *e*P **P** **06 27 07.3 -0.9**
AAA Alma-Ata 81.13 315 *e*P **P** **06 27 07.4 -0.9**
baz=315
CAPN Captain Cook N 81.19 25 IAMs_20 IAMs_20 06 57 23.9
comp=Z,37μm,22.0s
RDOG Red Dog Mine 81.25 16 IAMs_20 IAMs_20 07 05 51.1
comp=Z,36μm,22.0s
RDOG Red Dog Mine 81.25 16 P **P** **06 27 08.0 -0.2**
baz=229
CHKK Chushkaly 81.27 316 *e*P **P** **06 27 07.4 -1.4**
CHKK Chushkaly 81.27 316 *e*P **P** **06 27 07.5 -1.4**
baz=316
ULHL Ulahol 81.33 314 P **P** **06 27 09.2 -0.3**
SNR=14
K20K Telida 81.35 23 IAmb IAmb 06 27 15.3
comp=Z,469nm,0.8s
K20K Telida 81.35 23 P **P** **06 27 08.5 -0.4**
baz=238,SNR=129
SEW Seward 81.61 26 P **P** **06 27 09.6 -0.7**
baz=242,SNR=50
SKT Skwentna 81.64 24 IAmb IAmb 06 27 14.5
comp=Z,133nm,0.9s
SKT Skwentna 81.64 24 P **P** **06 27 08.4 -2.0**
baz=240,SNR=46
O22K Cooper Landing 81.67 26 IAMs_20 IAMs_20 06 57 32.7
comp=Z,31μm,22.0s
O22K Cooper Landing 81.67 26 P **P** **06 27 09.6 -0.9**
baz=242,SNR=28
SUA Susitna One 81.71 25 IAmb IAmb 06 27 15.9
comp=Z,247nm,0.8s
SUA IAMs_20 IAMs_20 06 58 46.5
comp=Z,44μm,22.0s
SUA Susitna One 81.71 25 P **P** **06 27 09.0 -1.9**
baz=241
KUU Kurty 81.73 316 *c iP* **P** **06 27 10.2 -1.1**
KUU *e*S **S** **06 37 13.6 -6.7**
KUU pmax pmax
comp=Z,273nm,1.8s
KUU Kurty 81.73 316 ⇑*i*P **P** **06 27 10.3 -1.1**
comp=Z,273nm,1.8s,baz=316
KUU *e*S **S** **06 37 13.7 -6.7**
baz=316
J20K Nowinta River 81.76 22 IAmb IAmb 06 27 17.1
comp=Z,349nm,0.9s
J20K IAMs_20 IAMs_20 06 58 19.8
comp=Z,35μm,22.0s
J20K Nowinta River 81.76 22 P **P** **06 27 10.1 -0.8**
baz=237,SNR=136
FIS Fire Island 81.77 25 IAMs_20 IAMs_20 06 58 16.3
comp=Z,37μm,22.0s
PPLA Purkeypile 81.83 23 P **P** **06 27 12.1 +0.5**
PPLA IAmb IAmb 06 27 19.9
comp=Z,233nm,0.8s
PPLA Purkeypile 81.83 23 P **P** **06 27 11.0 -0.6**

baz=239,SNR=27
RC01 Rabbit Creek A 81.95 26 P **P** **06 27 12.1 +0.1**
RC01 IAmb IAmb 06 27 16.9
comp=Z,346nm,0.8s
RC01 Rabbit Creek A 81.95 26 P **P** **06 27 11.4 -0.7**
baz=242,SNR=31
TKM2 Tokmak 2 81.97 315 P **P** **06 27 11.9 -1.0**
SNR=61
TKM2 Tokmak 2 81.97 315 *i* P **P** **06 27 11.4 -1.5**
TKM2 pmax pmax
comp=Z,59nm,0.6s
M22K Willow 82.11 25 P **P** **06 27 12.7 -0.1**
M22K IAMs_20 IAMs_20 06 57 22.1
comp=Z,48μm,22.0s
M22K Willow 82.11 25 P **P** **06 27 10.9 -1.9**
baz=241,SNR=53
CAST Castle Rocks 82.14 23 P **P** **06 27 12.8 -0.2**
CAST Castle Rocks 82.14 23 P **P** **06 27 12.6 -0.4**
baz=239,SNR=271
CHUM Lake Minchumin 82.29 22 P **P** **06 27 13.4 -0.3**
baz=239,SNR=79
KURK Kurchatov 82.34 323 P **P** **06 27 13.2 -1.1**
KURK IAmb IAmb 06 27 55.5
comp=Z,185nm,1.1s
KURK Kurchatov 82.34 323 IAMs_20 IAMs_20 07 02 46.9
comp=Z,31μm,22.0s
KURK Kurchatov 82.34 323 P **P** **06 27 13.2 -1.1**
KURK pmax pmax
comp=Z,185nm,1.2s
KURK MLR MLR
comp=Z,31μm,22.0s
KURK Kurchatov 82.34 323 P **P** **06 27 13.7 -0.7**
KURK S **S** **06 37 22.2 -4.0**
KURK Kurchatov 82.34 323 ⇑P **P** **06 27 12.2 -2.1**
KURK ⇓P **PcP** **06 27 19.1 -0.4**
CUT Chulitna 82.36 24 P **P** **06 27 13.4 -0.8**
CUT Chulitna 82.36 24 P **P** **06 27 11.7 -2.5**
baz=241,SNR=57
KBK Karagaybulak 82.36 314 P **P** **06 27 14.2 -0.7**
SNR=28
KURBB Kurchatov Arra 82.37 323 LR LR 07 03 12.7
comp=Z,25μm,20.6s,baz=95,slow=35
KURBB Kurchatov Arra 82.37 323 P **P** **06 27 12.8 -1.6**
PMR Palmer 82.45 25 P **P** **06 27 14.2 -0.4**
PMR IAmb IAmb 06 27 19.7
comp=Z,202nm,0.8s
PMR Palmer 82.45 25 P **P** **06 27 14.2 -0.4**
PMR pmax pmax
comp=Z,202nm,0.8s
PMR Palmer 82.45 25 P **P** **06 27 12.6 -2.0**
baz=242,SNR=46
PWL Port Wells 82.45 26 P **P** **06 27 15.1 +0.4**
PWL IAMs_20 IAMs_20 06 57 43.3
comp=Z,37μm,22.0s
PWL Port Wells 82.45 26 P **P** **06 27 13.7 -1.0**
baz=243,SNR=187
P23K Montague Islan 82.48 27 P **P** **06 27 13.9 -1.0**
baz=244
BHUJ Bhuj 82.50 294 ⇑*i* P **P** **06 27 15.0 -0.7**
BHUJ IAmb IAmb 06 27 20.5
comp=Z,70nm,0.9s
UCH Uchtor 82.56 314 P **P** **06 27 16.0 -0.3**
SNR=50
CHMS Chumysh 82.59 315 P **P** **06 27 15.1 -0.8**
SNR=31
GHO Glory Hole Cre 82.62 25 P **P** **06 27 16.1 +0.4**
GHO IAMs_20 IAMs_20 06 58 33.5
comp=Z,35μm,21.0s
KNK Knik Glacier 82.65 26 P **P** **06 27 15.6 -0.2**
KNK IAmb IAmb 06 27 20.4
comp=Z,309nm,1.0s
KNK IAMs_20 IAMs_20 06 58 05.5
comp=Z,35μm,22.0s
KNK Knik Glacier 82.65 26 P **P** **06 27 14.7 -1.0**
baz=243,SNR=48
KTH Kantishna Hill 82.66 23 IAMs_20 IAMs_20 07 02 35.6
comp=Z,25μm,19.0s
AAK Ala-Archa 82.68 314 P **P** **06 27 16.1 -0.5**
SNR=29
AAK Ala-Archa 82.68 314 LR LR 07 03 39.3
comp=Z,20μm,21.9s,baz=104,slow=35
AAK Ala-Archa 82.68 314 P **P** **06 27 15.8 -0.7**
AAK IAmb IAmb 06 27 22.7
comp=Z,92nm,0.7s
AAK Ala-Archa 82.68 314 *ce* P **P** **06 27 15.9 -0.6**
AAK pmax pmax
comp=Z,86nm,0.7s
AAK MLR MLR
comp=Z,27μm,21.0s
AAK Ala-Archa 82.68 314 P **P** **06 27 16.0 -0.5**
AAK Ala-Archa 82.68 314 P **P** **06 27 15.9 -0.6**
AAK Ala-Archa 82.68 314 ⇑P **P** **06 27 16.0 -0.5**
AAK ⇑P **P** **06 27 16.0 -0.5**
AAK ⇑P **P** **06 27 18.6 +2.1**
Q23K Middleton Isla 82.72 28 P **P** **06 27 15.1 -1.0**
baz=245
SGDS Sogindy 82.80 315 *c i* P **P** **06 27 15.3 -1.7**
SGDS *e* S **S** **06 37 29.3 -2.1**
SGDS Sogindy 82.80 315 ⇑*i* P **P** **06 27 15.3 -1.7**
baz=315
SGDS *e* S **S** **06 37 29.4 -2.1**
baz=315
USP Ospenovka 82.84 315 P **P** **06 27 16.4 -0.7**
SNR=44
TRF Thorofare Moun 82.86 23 P **P** **06 27 17.1 +0.2**
TRF IAMs_20 IAMs_20 07 02 03.9
comp=Z,25μm,20.0s
TRF Thorofare Moun 82.86 23 P **P** **06 27 15.3 -1.7**
baz=241,SNR=171
IMAR Indian Mountai 82.88 20 P **P** **06 27 15.6 -1.2**
SML Sawmill 82.89 25 IAMs_20 IAMs_20 06 59 44.7
comp=Z,29μm,22.0s
SML Sawmill 82.89 25 P **P** **06 27 16.7 -0.3**
baz=243,SNR=127
BPAW Bear Paw Mtn. 82.91 23 IAmb IAmb 06 27 21.9
comp=Z,247nm,0.9s
BPAW Bear Paw Mtn. 82.91 23 P **P** **06 27 15.3 -1.7**
baz=240,SNR=53
MAW Mawson 82.92 203 P **P** **06 27 17.6 +0.6**
comp=Z,121nm,0.8s,baz=87,slow=6.3,SNR=145
MAW PKiKP **PKiKP** **06 32 36.5 +0.5**
comp=Z,8.0nm,0.7s,baz=113,slow=4.1,SNR=6.1
MAW S **S** **06 37 26.9 -4.7**
comp=Z,1.5nm,0.8s,baz=121,slow=16,SNR=1.5
MAW PKKPbc **PKKPbc** **06 45 41.4 -1.0**
comp=Z,6.0nm,0.8s,baz=266,slow=7.2,SNR=6.7
MAW LR LR 07 02 10.0
comp=Z,24μm,21.9s,baz=76,slow=34
comp=Z,121nm,0.8s
MAW Mawson 82.92 203 P **P** **06 27 18.0 +1.0**
baz=83,SNR=192
MAW Mawson 82.92 203 P **P** **06 27 18.0 +1.0**
MAW Mawson 82.92 203 P **P** **06 27 18.0 +1.0**
MAW pmax pmax
comp=Z,52nm,1.0s
MAW Mawson 82.92 203 ⇑P **P** **06 27 17.9 +0.8**
GLI Glacier Island 83.01 26 P **P** **06 27 16.8 -0.8**
baz=244,SNR=67
H21K Melozitna Rive 83.03 21 IAMs_20 IAMs_20 06 58 51.4
comp=Z,33μm,22.0s
H21K Melozitna Rive 83.03 21 P **P** **06 27 17.5 -0.1**
baz=238,SNR=65
HIN Hinchinbrook I 83.06 27 IAmb IAmb 06 27 20.8
comp=Z,344nm,0.9s
I21K Tanana 83.08 21 IAmb IAmb 06 27 24.3
comp=Z,269nm,0.8s
I21K Tanana 83.08 21 P **P** **06 27 17.0 -0.9**
baz=239,SNR=125
AML Almayashu 83.12 314 P **P** **06 27 18.9 -0.2**
SNR=74
M23K Glacier View 83.14 25 P **P** **06 27 16.7 -1.5**
baz=244,SNR=67
EKS2 Erkin-Say 83.20 314 P **P** **06 27 18.9 -0.3**
SNR=39
FID Port Fidalgo 83.22 27 P **P** **06 27 19.4 +0.7**
G21K Allakaket 83.25 20 P **P** **06 27 18.1 -0.6**
baz=238
WAT1 Susitna Watana 83.26 24 P **P** **06 27 17.4 -1.5**
baz=243
SCM Sheep Creek Mo 83.32 25 P **P** **06 27 19.4 +0.1**
SCM IAMs_20 IAMs_20 06 58 25.3
comp=Z,36μm,22.0s
SCM Sheep Creek Mo 83.32 25 P **P** **06 27 19.4 +0.1**
SCM pmax pmax
comp=Z,739nm,0.9s
SCM Sheep Creek Mo 83.32 25 P **P** **06 27 18.4 -0.8**
baz=244,SNR=115

MLY Manley 83.46 22 IAmb IAmb 06 27 25.5
comp=Z,339nm,0.8s
MLY Manley 83.46 22 P **P** **06 27 19.2 -0.7**
baz=240,SNR=48
EYAK Cordova Ski Ar 83.47 27 IAmb IAmb 06 27 25.1
comp=Z,145nm,0.9s
EYAK Cordova Ski Ar 83.47 27 P **P** **06 27 18.6 -1.3**
baz=246,SNR=17
WAT6 Susitna Watana 83.48 25 P **P** **06 27 18.7 -1.5**
baz=244,SNR=63
MCK McKinley 83.53 23 IAMs_20 IAMs_20 07 01 28.5
comp=Z,27μm,21.0s
MCK McKinley 83.53 23 P **P** **06 27 19.1 -1.1**
baz=242,SNR=439
BTLS Baital 83.62 316 *c i* P **P** **06 27 19.9 -1.1**
BTLS *i* S **S** **06 37 33.4 -6.0**
BTLS pmax pmax
comp=Z,332nm,3.3s
BTLS Baital 83.62 316 ⇑*i* P **P** **06 27 20.0 -1.1**
comp=Z,332nm,3.3s,baz=316
BTLS *i* S **S** **06 37 33.5 -6.0**
baz=316
F21K Alatna River 83.63 19 P **P** **06 27 20.2 -0.5**
baz=238,SNR=22
H22K Ishtalitna Cre 83.66 21 P **P** **06 27 20.2 -0.7**
baz=240,SNR=77
DIV Divide 83.70 26 IAmb IAmb 06 27 27.0
comp=Z,326nm,0.8s
ROCAM Rodrigues Isla 83.75 251 P **P** **06 27 23.6 +1.4**
KLU Klutina 83.78 26 P **P** **06 27 20.5 -1.1**
baz=245,SNR=159
KAIM Kayak Island 83.82 28 P **P** **06 27 21.7 0.0**
baz=247
DHY Denali Highway 83.85 24 IAmb IAmb 06 27 25.4
comp=Z,361nm,0.8s
DHY Denali Highway 83.85 24 P **P** **06 27 20.9 -1.2**
baz=244,SNR=164
NEA2 Nenana 83.88 23 P **P** **06 27 20.0 -2.0**
baz=242,SNR=157
RAGM Ragged Mountai 83.89 27 IAmb IAmb 06 27 29.7
comp=Z,229nm,0.8s
QSPA South Pole Qui 83.93 180 PKKPbc PKKPbc 06 45 39.3 -1.6
QSPA comp=Z,7.7nm,0.8s,baz=183,slow=1.7,SNR=16 LR LR 07 03 40.2
comp=Z,35μm,20.6s,baz=11,slow=35
QSPA South Pole Qui 83.93 180 IAMs_20 IAMs_20 07 03 28.6
comp=Z,41μm,21.0s
M24K Tolsona, Glenn 83.93 25 IAMs_20 IAMs_20 06 58 44.4
comp=Z,35μm,21.0s
M24K Tolsona, Glenn 83.93 25 P **P** **06 27 22.3 -0.1**
baz=245,SNR=55
I23K Minto, Yukon-K 84.03 22 P **P** **06 27 21.0 -1.7**
baz=242,SNR=42
HMT Hamilton 84.06 27 P **P** **06 27 23.6 +0.6**
HMT IAmb IAmb 06 27 26.1
comp=Z,251nm,0.8s
G22K Bettles 84.14 20 P **P** **06 27 22.1 -1.1**
baz=240
BMRM Bremner River 84.15 27 P **P** **06 27 24.2 +0.7**
BMRM IAmb IAmb 06 27 26.5
comp=Z,277nm,1.0s
BMRM Bremner River 84.15 27 P **P** **06 27 22.4 -1.1**
baz=246,SNR=24
F22K John River 84.21 19 P **P** **06 27 22.5 -1.2**
baz=239,SNR=76
H23K Yukon River 84.28 21 P **P** **06 27 23.3 -0.8**
H23K IAmb IAmb 06 27 29.6
comp=Z,157nm,0.8s
H23K Yukon River 84.28 21 P **P** **06 27 23.1 -1.0**
baz=242,SNR=111
BERG Berg Lake 84.33 27 P **P** **06 27 24.6 +0.2**
BERG IAmb IAmb 06 27 27.7
comp=Z,306nm,0.9s
MDM Murphy Dome 84.37 22 P **P** **06 27 23.6 -0.9**
MDM IAmb IAmb 06 27 28.6
comp=Z,116nm,1.0s
N25K Chitina, Valde 84.41 26 P **P** **06 27 23.8 -1.1**
N25K IAmb IAmb 06 27 28.1
comp=Z,108nm,0.8s
N25K Chitina, Valde 84.41 26 P **P** **06 27 24.5 -0.4**
baz=246,SNR=32
BGLC Bering Glacier 84.42 28 P **P** **06 27 24.0 -0.8**
baz=248
TCOL CIGO, UAF Yank 84.47 23 P **P** **06 27 22.9 -2.0**
baz=243,SNR=51
COLA College 84.47 23 P **P** **06 27 24.9 0.0**
COLA College 84.47 23 P **P** **06 27 24.9 0.0**
COLA pmax pmax
comp=Z,523nm,0.9s
COLA College 84.47 23 P **P** **06 27 23.7 -1.2**
baz=243
COLA College 84.47 23 P **P** **06 27 25.0 +0.1**
COLA College 84.47 23 ⇑P **P** **06 27 22.7 -2.2**
HARP HAARP 84.49 25 P **P** **06 27 23.8 -1.3**
baz=246,SNR=58
G23K Bananza Creek 84.54 20 P **P** **06 27 25.2 -0.2**
baz=241,SNR=85
PAX Paxson 84.59 25 P **P** **06 27 26.3 +0.5**
PAX IAmb IAmb 06 27 29.3
comp=Z,92nm,0.7s
PAX Paxson 84.59 25 P **P** **06 27 26.3 +0.5**
PAX pmax pmax
comp=Z,92nm,0.7s
PAX Paxson 84.59 25 P **P** **06 27 24.3 -1.4**
baz=246,SNR=67
HDA Harding Lake 84.61 23 IAmb IAmb 06 27 32.0
comp=Z,221nm,0.9s
HDA IAMs_20 IAMs_20 07 02 51.2
comp=Z,28μm,21.0s
HDA Harding Lake 84.61 23 P **P** **06 27 23.4 -2.3**
baz=244,SNR=65
SNH Sunshine Point 84.65 28 P **P** **06 27 26.6 +0.5**
SNH IAmb IAmb 06 27 30.1
comp=Z,328nm,0.9s
E22K Anaktuvuk Pass 84.66 19 P **P** **06 27 25.5 -0.4**
baz=239
GLB Gilahina Butte 84.69 26 IAmb IAmb 06 27 29.3
comp=Z,220nm,0.8s
COLD Coldfoot 84.73 20 IAmb IAmb 06 27 32.2
comp=Z,162nm,0.8s
COLD Coldfoot 84.73 20 P **P** **06 27 26.1 -0.1**
baz=241
POKR Poker Plat Res 84.74 22 IAmb IAmb 06 27 30.8
comp=Z,163nm,0.8s
POKR Poker Plat Res 84.74 22 P **P** **06 27 24.0 -2.3**
baz=244,SNR=49
BTK Batken 84.76 311 P **P** **06 27 25.9 -1.1**
BTK IAmb IAmb 06 28 27.4
comp=Z,146nm,1.2s
BTK Batken 84.76 311 P **P** **06 27 26.0 -1.1**
BTK pmax pmax
comp=Z,146nm,1.3s
VRDI Verde Repeater 84.77 27 P **P** **06 27 27.0 +0.2**
VRDI IAmb IAmb 06 27 29.8
comp=Z,165nm,0.8s
IL31 84.80 23 P **P** **06 27 25.3 -1.2**
ILAR Eielson Array 84.80 23 P **P** **06 27 25.8 -0.9**
comp=Z,362nm,0.8s,baz=252,slow=5.0,SNR=403
ILAR S **S** **06 37 46.6 -3.9**
comp=Z,1.9nm,1.1s,baz=269,slow=3.6,SNR=1.9
ILAR PKKPbc **PKKPbc** **06 45 35.2 -3.3**
comp=Z,3.2nm,0.6s,baz=27,slow=1.0,SNR=11
ILAR PKPPKP **P'P'df** **06 53 39.7 -0.7**
comp=Z,7.3nm,1.0s,baz=20,slow=1.5,SNR=8.6
ILAR LR LR 06 59 11.2
comp=Z,12μm,21.7s,baz=246,slow=31
comp=Z,362nm,0.8s
ILAR Eielson Array 84.80 23 P **P** **06 27 24.8 -1.8**
K24K Donnelly Dome 84.82 24 P **P** **06 27 24.7 -2.1**
baz=245,SNR=139
TGL Tana Glacier 84.87 27 P **P** **06 27 27.4 +0.2**
TGL IAmb IAmb 06 27 32.2
comp=Z,169nm,1.0s
H24K Noodor Dome 84.90 22 IAmb IAmb 06 27 33.0
comp=Z,144nm,0.9s
H24K IAMs_20 IAMs_20 07 01 32.7
comp=Z,32μm,21.0s
H24K Noodor Dome 84.90 22 P **P** **06 27 26.4 -0.8**
baz=243,SNR=60
GAR Garm 84.92 310 P **P** **06 27 26.3 -1.7**
GAR IAmb IAmb 06 27 33.0
comp=Z,165nm,0.7s
DZA Taraz 85.00 314 *eP* **P** **06 27 26.4 -1.8**
DZA Taraz 85.00 314 *eP* **P** **06 27 26.4 -1.8**
baz=314
A21K Barrow 85.01 15 P **P** **06 27 26.5 -1.0**
baz=234

MCARA McCarthy VSAT 85.02 27 P **P** **06 27 28.5 +0.7**
MCARA IAmb IAmb 06 27 43.1
comp=Z,171nm,0.8s
MCARA McCarthy VSAT 85.02 27 P **P** **06 27 26.7 -1.1**
baz=248,SNR=35
ISLE Juniper Island 85.04 28 IAmb IAmb 06 27 31.0
comp=Z,131nm,0.9s
KBL Kabul 85.05 305 P **P** **06 27 28.1 -0.7**
KBL Kabul 85.05 305 P **P** **06 27 28.1 -0.7**
KBL pmax pmax
comp=Z,42nm,0.8s
KBL Kabul 85.05 305 P **P** **06 27 28.0 -0.8**
SNR=22
MESA MESA 85.06 28 P **P** **06 27 28.1 -0.1**
MESA IAmb IAmb 06 27 31.6
comp=Z,157nm,0.8s
MESA MESA 85.06 28 P **P** **06 27 28.2 -0.1**
baz=249,SNR=9.7
RIDG Independent Ri 85.17 24 P **P** **06 27 27.5 -1.1**
baz=246,SNR=57
YAH Yahtse 85.22 28 IAmb IAmb 06 27 35.1
comp=Z,151nm,0.9s
MENT Mentasta 85.31 25 P **P** **06 27 30.5 +1.2**
MENT IAmb IAmb 06 27 34.7
comp=Z,214nm,0.8s
J25K Salcha River, 85.32 23 IAMs_20 IAMs_20 07 03 32.9
comp=Z,32μm,20.0s
J25K Salcha River, 85.32 23 P **P** **06 27 27.9 -1.4**
baz=246,SNR=488
E23K Chandalar 85.33 19 P **P** **06 27 29.4 0.0**
baz=241,SNR=99
M26K Nabesna, AK 85.42 26 IAmb IAmb 06 27 35.8
comp=Z,84nm,0.8s
M26K Nabesna, AK 85.42 26 P **P** **06 27 28.7 -1.2**
baz=248,SNR=45
G24K Hadweenzic Riv 85.43 21 P **P** **06 27 29.3 -0.5**
baz=243,SNR=49
D23K Nanushuk River 85.44 18 P **P** **06 27 30.1 +0.4**
baz=240,SNR=192
L26K Log Cabin Wild 85.50 25 IAmb IAmb 06 27 33.7
comp=Z,189nm,0.7s
L26K Log Cabin Wild 85.50 25 P **P** **06 27 29.9 -0.3**
baz=247,SNR=145
BARN Barnard Glacie 85.51 27 P **P** **06 27 31.5 +0.9**
BARN IAmb IAmb 06 27 36.2
comp=Z,234nm,0.8s
TABL Table Mountain 85.53 28 P **P** **06 27 31.8 +1.2**
TABL IAmb IAmb 06 27 35.5
comp=Z,182nm,0.9s
SCRK Sand Creek 85.61 24 P **P** **06 27 31.3 +0.4**
SCRK IAmb IAmb 06 27 36.0
comp=Z,188nm,0.8s
SCRK IAMs_20 IAMs_20 07 01 41.6
comp=Z,40μm,21.0s
SCRK Sand Creek 85.61 24 P **P** **06 27 29.6 -1.2**
baz=247,SNR=34
CTG Chitna Glacier 85.62 27 P **P** **06 27 30.0 -1.0**
baz=249,SNR=68
TOLK Toolik Lake Re 85.63 19 P **P** **06 27 31.6 +0.8**
TOLK IAmb IAmb 06 27 34.3
comp=Z,158nm,0.8s
TOLK Toolik Lake Re 85.63 19 P **P** **06 27 30.3 -0.5**
baz=241,SNR=78
KK31 Karatay Array 85.64 314 P **P** **06 27 30.8 -0.5**
KK31 IAmb IAmb 06 27 36.9
comp=Z,109nm,0.8s
KK31 Karatay Array 85.64 314 *i* P **P** **06 27 30.0 -1.3**
KKAR Karatay Array 85.64 314 P **P** **06 27 30.1 -1.2**
KKAR Karatay Array 85.64 314 P **P** **06 27 30.1 -1.2**
KKAR Karatay Array 85.64 314 ⇑P **P** **06 27 30.1 -1.2**
KKAR ⇓P **PcP** **06 27 30.8 -3.4**
PRP Porcupine Dome 85.64 22 IAmb IAmb 06 27 35.9
comp=Z,85nm,0.9s
PRP Porcupine Dome 85.64 22 P **P** **06 27 29.3 -1.7**
baz=245,SNR=25
F24K Squaw Lake 85.66 20 P **P** **06 27 31.0 0.0**
baz=243,SNR=244
E24K Your Creek 85.72 20 P **P** **06 27 30.5 -0.8**
baz=242,SNR=74
LOGN Logan Glacier 85.73 28 IAmb IAmb 06 27 37.1
comp=Z,171nm,0.8s
BRZS Berezniki 85.78 321 *c i* P **P** **06 27 30.2 -1.6**
BRZS pmax pmax
comp=Z,220nm,3.0s
BRZS Berezniki 85.78 321 ⇑*i* P **P** **06 27 30.2 -1.6**
comp=Z,220nm,3.0s,baz=321
BRZS *e* S SKSac 06 37 38.4 -15
baz=321
IUG Iuzhnay 85.78 313 *c i* P **P** **06 27 31.2 -1.0**
IUG Iuzhnay 85.78 313 ⇑*i* P **P** **06 27 31.2 -1.0**
baz=313
PCA Pinnacle 85.83 28 IAmb IAmb 06 27 37.8
comp=Z,199nm,0.8s
PINM Pinnacle 85.83 28 P **P** **06 27 31.2 -0.7**
baz=250,SNR=17
H25K Birch Creek 85.84 22 P **P** **06 27 30.8 -1.0**
baz=245,SNR=33
NRIK Noril'sk 85.88 342 P **P** **06 27 31.6 -0.3**
comp=Z,78nm,0.6s,baz=117,slow=5.0,SNR=42
NRIK S **SKSac** **06 37 51.8 -1.1**
comp=Z,1.1nm,0.4s,baz=186,slow=22,SNR=1.3
NRIK LR LR 07 04 56.8
comp=Z,15μm,21.9s,baz=124,slow=35
comp=Z,78nm,0.6s
NRIK Noril'sk 85.88 342 *ce* P **P** **06 27 30.7 -1.2**
NRIK pmax pmax
comp=Z,265nm,1.4s
NRIK MLR MLR
comp=Z,16μm,20.0s
M27K Edge Creek, AK 85.88 26 IAMs_20 IAMs_20 07 00 52.0
comp=Z,38μm,22.0s
M27K Edge Creek, AK 85.88 26 P **P** **06 27 32.1 -0.2**
baz=249,SNR=265
C23K Itkillik River 85.89 18 P **P** **06 27 31.9 -0.1**
baz=240,SNR=139
G25K Bearman Lake 85.95 21 P **P** **06 27 32.0 -0.3**
baz=245,SNR=29
J26L Joseph Creek 85.99 24 P **P** **06 27 31.8 -0.9**
J26L IAmb IAmb 06 27 37.5
comp=Z,222nm,0.8s
J26L Joseph Creek 85.99 24 P **P** **06 27 32.5 -0.2**
baz=247,SNR=222
BCPM Bancas Point 86.08 29 P **P** **06 27 34.4 +1.3**
BCPM IAmb IAmb 06 27 35.4
comp=Z,276nm,1.4s
O28M Mount Upton 86.09 28 P **P** **06 27 33.3 -0.2**
baz=250,SNR=46
PNL Peninsula 86.10 29 P **P** **06 27 32.5 -0.7**
baz=251,SNR=7.4
D24K Happy Valley 86.11 19 P **P** **06 27 33.2 +0.1**
baz=242,SNR=72
TAS Tashkent 86.15 312 IAmb IAmb 06 28 13.8
comp=Z,288nm,1.0s
L27K Beaver Creek, 86.16 25 P **P** **06 27 33.6 +0.1**
L27K IAmb IAmb 06 27 37.0
comp=Z,259nm,1.0s
L27K Beaver Creek, 86.16 25 P **P** **06 27 33.1 -0.4**
baz=249,SNR=160
FYU Fort Yukon 86.18 21 IAmb IAmb 06 27 36.9
comp=Z,242nm,0.8s
FYU IAMs_20 IAMs_20 07 02 10.6
comp=Z,26μm,21.0s
YUK3 Moose Creek 86.30 27 P **P** **06 27 33.8 -0.6**
baz=250,SNR=119
BVCY Beaver Creek 86.35 26 P **P** **06 27 34.3 -0.1**
baz=250,SNR=124
K27K Chicken 86.41 24 P **P** **06 27 34.7 0.0**
K27K Chicken 86.41 24 P **P** **06 27 34.6 0.0**
baz=248
C24K Franklin Bluff 86.42 18 P **P** **06 27 33.9 -0.6**
baz=242
YUK8 Steele Glacier 86.45 27 P **P** **06 27 34.8 -0.4**
baz=251,SNR=65
I26K Coal Creek Min 86.46 23 P **P** **06 27 34.2 -0.6**
I26K IAmb IAmb 06 27 39.7
comp=Z,171nm,0.9s
I26K IAMs_20 IAMs_20 07 04 47.0
comp=Z,27μm,20.0s
I26K Coal Creek Min 86.46 23 P **P** **06 27 33.6 -1.3**
baz=247,SNR=143
F25K Christian Rive 86.47 20 P **P** **06 27 34.7 -0.3**
baz=245,SNR=46
O29M Mount Kennedy 86.69 28 P **P** **06 27 35.7 -0.6**
baz=252,SNR=43
E25K Arctic Village 86.72 20 P **P** **06 27 35.4 -0.8**
baz=245,SNR=35
BMAR Burnt Mountain 86.77 21 P **P** **06 27 36.5 0.0**

G26K	Porcupine Rive	86.86	21	P	P	06 27 36.3	-0.5	
	baz=247,SNR=261							
P29M	Windy Craggy	86.89	29	P	P	06 27 36.6	-0.5	
	baz=253							
D25K	Kavik River	86.97	19	P	P	06 27 37.3	0.0	
	baz=244,SNR=149							
YUK4	Talbot Arm	86.98	27	P	P	06 27 38.3	+0.6	
	baz=252,SNR=119							
YUK6	Outpost Mounta	86.99	28	P	P	06 27 37.4	-0.4	
	baz=252,SNR=26							
F26K	Sheenjek River	87.03	21	P	P	06 27 38.2	+0.5	
	baz=246,SNR=45							
EGAK	Eagle	87.05	24	IAMs_20	IAMs_20	07 04 15.8		
	comp=Z,37µm,20.0s							
EGAK	Eagle	87.05	24	P	P	06 27 37.1	-0.7	
	baz=249,SNR=320							
S31K	Pelican	87.16	31	P	P	06 27 38.3	0.0	
	baz=254							
I27K	Kandik River	87.17	23	P	P	06 27 37.8	-0.6	
	baz=249,SNR=298							
HYT	Haines Junctio	87.35	28	P	P	06 27 40.6	+1.1	
	baz=253,SNR=200							
SIT	Sitka	87.39	32	IAmb	IAmb	06 28 18.6		
	comp=Z,290nm,1.6s							
SIT	Sitka	87.39	32	P	P	06 27 39.3	-0.2	
	baz=255							
P30M	Million Dollar	87.41	29	P	P	06 27 39.3	-0.3	
	baz=253							
M29M	Somme Creek	87.41	26	P	P	06 27 39.4	-0.3	
	baz=252,SNR=203							
H27K	Steamboat Moun	87.43	22	P	P	06 27 38.7	-0.9	
	baz=249,SNR=204							
PLBC	Pleasant Camp	87.51	30	P	P	06 27 39.3	-0.7	
	baz=254,SNR=58							
DAWY	Dawson	87.53	25	P	P	06 27 40.4	+0.3	
DAWY	Dawson	87.53	25	P	P	06 27 40.5	+0.3	
	baz=251,SNR=262							
DAWY	Dawson	87.53	25	⇑P	P	06 27 39.5	-0.6	
R31K	City Hall, Gus	87.53	31	P	P	06 27 39.7	-0.5	
	baz=254							
G27K	Doyon Strip	87.59	22	P	P	06 27 39.5	-0.8	
	baz=249,SNR=92							
C26K	Camden Bay	87.68	18	P	P	06 27 41.0	+0.4	
	baz=246,SNR=20							
N30M	Aishikik Lake	87.73	28	P	P	06 27 40.7	-0.5	
	baz=253,SNR=76							
L29M	L29M	87.76	26	P	P	06 27 41.0	-0.3	
	baz=252,SNR=310							
BVA0	Borovoye Array	87.88	324	*i* P	P	06 27 40.1	-1.9	
BVAR	Borovoye Array	87.88	324	LR	LR	07 08 48.5		
	comp=Z,14µm,19.6s,baz=91,slow=37							
S32K	Killisnoo	87.89	32	P	P	06 27 41.9	0.0	
	baz=255,SNR=14							
C27K	Jago River	87.95	19	P	P	06 27 42.0	0.0	
	baz=247,SNR=147							
BRVK	Borovoye	87.95	324	P	P	06 27 40.6	-1.8	
BRVK	Borovoye	87.95	324	*ce*P	P	06 27 40.1	-2.2	
BRVK				pmax	pmax			
	comp=Z,65nm,0.9s							
BRVK				MLR	MLR			
	comp=Z,22µm,21.0s							
BRVK	Borovoye	87.95	324	P	P	06 27 41.9	-0.4	
BRVK	Borovoye	87.95	324	⇑P	P	06 27 40.2	-2.1	
O30N	Mendenhall	88.00	28	P	P	06 27 41.7	-0.8	
	baz=254,SNR=119							
SKAG	Skagway	88.02	30	P	P	06 27 42.5	0.0	
SKAG	Skagway	88.02	30	P	P	06 27 42.0	-0.4	
	baz=255,SNR=57							
SKAG	Skagway	88.02	30	⇑P	P	06 27 42.3	-0.2	
BESE	Bessie Mountai	88.03	31	P	P	06 27 41.7	-1.0	
BESE				IAmb	IAmb	06 27 48.5		
	comp=Z,202nm,0.9s							
DIB	Dawson Inlet,	88.05	36	P	P	06 27 42.2	-0.5	
DIB				IAmb	IAmb	06 27 49.0		
	comp=Z,103nm,0.9s							
E27K	Coleen River	88.11	21	P	P	06 27 42.2	-0.6	
	baz=249,SNR=187							
R32K	Eaglecrest	88.12	31	P	P	06 27 42.8	-0.3	
	baz=255,SNR=13							
J29M	Klondike Camp	88.14	25	P	P	06 27 43.2	+0.1	
	baz=252,SNR=30							
CRAG	Craig	88.19	34	P	P	06 27 43.6	+0.2	
	baz=257							
CRAG	Craig	88.19	34	⇑P	P	06 27 43.9	+0.6	
JIS	Juneau Island	88.19	31	IAmb	IAmb	06 27 49.1		
	comp=Z,95nm,0.9s							
JIS				IAMs_20	IAMs_20	07 03 24.1		
	comp=Z,22µm,21.0s							
K29M	Barlow Dome	88.25	25	P	P	06 27 43.4	-0.3	
	baz=253,SNR=157							
U33K	Whale Pass	88.34	33	P	P	06 27 42.7	-1.3	
	baz=257,SNR=11							
N31M	Braeburn, Yuko	88.34	28	P	P	06 27 43.0	-1.0	
	baz=254,SNR=48							
I29M	Ogilvie Camp,	88.39	24	IAmb	IAmb	06 27 49.5		
	comp=Z,200nm,0.9s							
I29M				IAMs_20	IAMs_20	07 05 17.0		
	comp=Z,34µm,20.0s							
I29M	Ogilvie Camp,	88.39	24	P	P	06 27 43.3	-0.8	
	baz=252,SNR=192							
WHY	Whitehorse	88.55	29	P	P	06 27 44.6	-0.6	
WHY				IAmb	IAmb	06 27 50.8		
	comp=Z,143nm,0.8s							
WHY	Whitehorse	88.55	29	P	P	06 27 44.2	-0.9	
	baz=255,SNR=89							
WHY	Whitehorse	88.55	29	⇑P	P	06 27 44.4	-0.7	
T33K	Petersburg	88.59	33	P	P	06 27 44.7	-0.5	
	baz=257,SNR=6.2							
HG4B	Hotspring	88.62	37	IAmb	IAmb	06 27 51.2		
	comp=Z,87nm,0.9s							
WRAK	Wrangell Islan	88.83	33	P	P	06 27 47.1	+0.8	
WRAK				IAmb	IAmb	06 28 25.3		
	comp=Z,266nm,1.4s							
WRAK	Wrangell Islan	88.83	33	IAMs_20	IAMs_20	06 58 51.2		
	comp=Z,39µm,22.0s							
WRAK	Wrangell Islan	88.83	33	P	P	06 27 45.3	-1.1	
	baz=257,SNR=13							
P32M	Atlin	88.85	30	P	P	06 27 46.2	-0.3	
	baz=256,SNR=52							
MAYO	Mayo, Yukon	88.87	26	P	P	06 27 45.8	-0.7	
	baz=254,SNR=38							
V35K	Ketchikan	89.00	34	P	P	06 27 46.3	-0.8	
	baz=258,SNR=13							
M31M	Drury Creek, Y	89.17	27	P	P	06 27 47.6	-0.3	
M31M				IAmb	IAmb	06 28 36.9		
	comp=Z,130nm,1.2s							
M31M				IAMs_20	IAMs_20	07 03 23.8		
	comp=Z,33µm,22.0s							
M31M	Drury Creek, Y	89.17	27	P	P	06 27 47.6	-0.3	
	baz=256,SNR=46							
EPYK	Eagle Plains	89.31	23	IAMs_20	IAMs_20	07 03 39.4		
	comp=Z,26µm,22.0s							
EPYK	Eagle Plains	89.31	23	P	P	06 27 47.8	-0.7	
	baz=253,SNR=115							
Q32M	Nakina River	89.42	31	P	P	06 27 50.2	+0.8	
	baz=257,SNR=12							
P33M	Teslin, Yukon	89.43	29	IAmb	IAmb	06 27 54.5		
	comp=Z,91nm,0.9s							
P33M	Teslin, Yukon	89.43	29	P	P	06 27 48.1	-1.1	
	baz=257,SNR=38							
N32M	Quiet Lake	89.52	28	P	P	06 27 48.8	-0.8	
	baz=257							
RUBB	Prince Rupert	89.57	35	IAmb	IAmb	06 27 55.0		
	comp=Z,95nm,0.9s							
FARO	Faro, Yukon	89.65	27	IAmb	IAmb	06 27 53.2		
	comp=Z,84nm,0.9s							
FARO	Faro, Yukon	89.65	27	P	P	06 27 48.9	-1.3	
	baz=256,SNR=68							
GRNB	Grenville Isla	89.65	36	P	P	06 27 51.3	+1.0	
GRNB				IAmb	IAmb	06 28 23.2		
	comp=Z,288nm,1.7s							
G30M	tAoh Zrail Nji	89.67	22	P	P	06 27 48.7	-1.5	
	baz=254,SNR=77							
S34M	Telegraph Cree	89.79	32	P	P	06 27 50.0	-0.8	
	baz=258,SNR=37							
T35M	Bob Quinn	90.07	33	P	P	06 27 51.3	-0.9	
	baz=259,SNR=9.2							
R33M	Jennings River	90.17	30	P	P	06 27 52.8	+0.1	
	baz=258,SNR=49							
BBB	Bella Bella	90.46	38	LR	LR	07 03 13.0		
	comp=Z,28µm,19.6s,baz=258,slow=32							
DLBC	Dease Lake	90.46	31	LR	LR	07 04 37.0		
	comp=Z,22µm,19.1s,baz=268,slow=33							
DLBC	Dease Lake	90.46	31	P	P	06 27 55.2	+1.1	
DLBC				IAmb	IAmb	06 28 27.0		
	comp=Z,324nm,1.8s							
DLBC	Dease Lake	90.46	31	P	P	06 27 53.7	-0.4	
	baz=259,SNR=22							
CRZF	Crozet Islands	90.47	223	P	P	06 27 54.3	-0.1	
CRZF				IAMs_20	IAMs_20	07 03 54.7		
	comp=Z,38µm,22.0s							
HRA	Herat	90.58	304	P	P	06 27 53.7	-1.6	
HRA				IAmb	IAmb	06 29 13.5		
	comp=Z,134nm,1.2s							
MMPY	Sheldon Lake,	90.68	27	P	P	06 27 53.6	-1.4	
	baz=258,SNR=33							
F31M	Tsiigehtchic	90.73	22	P	P	06 27 53.6	-1.4	
	baz=256,SNR=41							
RER	Riviere de l'E	90.73	249	P	P	06 27 57.3	+1.0	
	SNR=11							
RER	Riviere de l'E	90.73	249	⇑P	P	06 27 57.0	+0.7	
INK	Inuvik	91.02	21	LR	LR	07 04 48.8		
	comp=Z,12µm,21.5s,baz=238,slow=33							
INK	Inuvik	91.02	21	P	P	06 27 54.4	-1.9	
	baz=256,SNR=123							
INK	Inuvik	91.02	21	⇑P	P	06 27 54.6	-1.7	
INK				⇑P	PcP	06 27 56.0	-1.3	
WTLY	Watson Lake, Y	91.38	30	IAmb	IAmb	06 28 03.9		
	comp=Z,200nm,1.0s							
WTLY	Watson Lake, Y	91.38	30	P	P	06 27 57.4	-0.9	
	baz=260,SNR=13							
JCC	Jacoby Creek,	91.72	49	IAMs_20	IAMs_20	07 00 45.8		
	comp=Z,22µm,22.0s							
TGTN	Hyland Airport	91.87	28	P	P	06 28 00.1	-0.4	
	baz=261,SNR=58							
WBK	Wadi Bani Khal	92.18	292	P	P	06 28 00.5	-2.3	
HOPS	Hopland Field	92.26	51	IAMs_20	IAMs_20	07 01 05.2		
	comp=Z,36µm,22.0s							
MCCM	Marconi Confer	92.33	52	IAMs_20	IAMs_20	07 01 15.9		
	comp=Z,32µm,22.0s							
WSAR	Wadi Sarin	92.55	293	LR	LR	07 10 12.0		
	comp=Z,3µm,21.8s,baz=121,slow=36							
LIRD	Liard River Hi	92.63	31	P	P	06 28 03.4	-0.7	
	baz=263							
HUMO	Hull Mountain	92.71	48	P	P	06 28 04.2	-0.6	
HUMO	Hull Mountain	92.71	48	⇑P	P	06 28 06.2	+1.4	
YBH	Yreka Blue Hor	92.81	49	P	P	06 28 05.2	-0.2	
	comp=Z,28nm,1.0s,baz=239,slow=3.6,SNR=18							
YBH				LR	LR	07 02 31.5		
	comp=Z,38µm,21.7s,baz=270,slow=31							
	comp=Z,28nm,1.0s							
YBH	Yreka Blue Hor	92.81	49	P	P	06 28 05.5	+0.1	
YBH	Yreka Blue Hor	92.81	49	P	P	06 28 05.5	+0.1	
YBH				pmax	pmax			
	comp=Z,50nm,1.2s							
MSEY	Mahe Island	92.86	265	P	P	06 28 04.7	-1.5	
MSEY	Mahe Island	92.86	265	P	P	06 28 04.2	-1.9	
MHTO	MHTO	92.95	291	P	P	06 28 03.9	-2.4	
	SNR=13							
JMDO	Jabal Madar	92.95	292	P	P	06 28 04.1	-2.3	
BIDO	Bidbid	93.04	293	P	P	06 28 04.6	-2.1	
	SNR=5.1							
SMDO	Samad	93.07	293	P	P	06 28 04.4	-2.6	
DQM	DQM	93.26	290	P	P	06 28 05.8	-1.9	
SAO	San Andreas Ge	93.33	54	IAMs_20	IAMs_20	07 02 17.6		
	comp=Z,37µm,21.0s							
H04A	Detroit Lake	93.46	46	IAmb	IAmb	06 29 42.5		
	comp=Z,153nm,2.0s							
JASK	Jask - Hormozg	93.48	296	P	P	06 28 07.8	-0.9	
	SNR=5.6							
BBGB	Big Mountain B	93.64	54	IAmb	IAmb	06 28 19.6		
	comp=Z,71nm,1.0s							
KOTAN	Kotaneelee Air	93.74	30	P	P	06 28 09.0	-0.2	
	baz=264							
HOQ	Hoqain	93.79	293	P	P	06 28 07.8	-2.4	
	SNR=7.6							
AB31	Akbulak array	93.81	319	*i* P	P	06 28 07.4	-2.3	
ABKAR	Akbulak array	93.81	319	P	P	06 28 07.4	-2.3	
ABKAR				IAmb	IAmb	06 28 37.6		
	comp=Z,143nm,1.7s							
BSY	Bisya	93.82	292	P	P	06 28 08.0	-2.4	
AFDM	Forest Hills D	93.89	51	P	P	06 28 10.6	+0.2	
SVE	Sverdlovsk	94.03	327	*e*P	P	06 28 08.3	-2.2	
SVE				*e*PPP	PPP	06 33 55.3		
SVE				*e*S	SKSac	06 38 40.6	-0.3	
SVE				*e*SS	SS	06 45 45.0	+7.4	
SVE				pmax	pmax			
	comp=Z,37nm,0.9s							
SVE				pmax	pmax			
	comp=Z,4µm,24.6s							
SVE				MLR	MLR			
	comp=E,53µm,23.0s							
SVE				MLR	MLR			
	comp=Z,61µm,23.0s							
SVE				MLR	MLR			
	comp=N,13µm,21.0s							
FLDN	Fort Liard	94.04	30	P	P	06 28 10.6	+0.1	
	baz=265							
K05A	Summer Lake	94.24	48	IAmb	IAmb	06 29 19.5		
	comp=Z,79nm,1.3s							
GEYT	Alibeck	94.24	308	P	P	06 28 10.3	-1.7	
	comp=Z,24nm,0.9s,baz=114,slow=1.8,SNR=22							
GEYT				S	SKSac	06 38 37.7	-5.4	
	comp=Z,1.0nm,0.4s,baz=232,slow=47,SNR=1.0							
GEYT				PKKPbc	PKKPdf	06 45 11.8	-1.4	
	comp=Z,2.4nm,0.5s,baz=270,slow=1.5,SNR=5.3							
GEYT				LR	LR	07 12 36.0		
	comp=Z,23µm,21.7s,baz=92,slow=37							
	comp=Z,24nm,0.9s							
GEYT	Alibeck	94.24	308	P	P	06 28 09.6	-2.5	
GYA0B	ALIBECK ARRAY	94.24	308	P	P	06 28 11.8	-0.3	
CMB	Columbia Colle	94.28	52	P	P	06 28 11.1	-1.1	
CMB				IAMs_20	IAMs_20	07 02 27.6		
	comp=Z,33µm,22.0s							
CMB	Columbia Colle	94.28	52	P	P	06 28 11.1	-1.1	
CMB				pmax	pmax			
	comp=Z,17nm,1.0s							
PINE	Pine Mountain	94.28	47	P	P	06 28 11.2	-1.1	
PINE				IAmb	IAmb	06 29 04.7		
	comp=Z,84nm,1.6s							
WRGLY	Wrigley	94.30	27	P	P	06 28 10.5	-1.1	
	baz=265							
SMMC	Simmler	94.39	55	P	P	06 28 11.4	-1.4	
	baz=266							
A36M	Sachs Harbour	94.42	18	P	P	06 28 12.4	+0.4	
A36M				IAMs_20	IAMs_20	07 06 56.3		
	comp=Z,28µm,22.0s							
A36M	Sachs Harbour	94.42	18	P	P	06 28 11.3	-0.7	
	baz=264,SNR=68							
ARQ	Araqi	94.49	293	P	P	06 28 11.1	-2.3	
	SNR=5.2							
PKM	Mcpherson Peak	94.50	56	P	P	06 28 11.6	-1.9	
	baz=266,SNR=12							
SOHO	SOHO	94.54	294	P	P	06 28 10.6	-3.0	
SOHO	SOHO	94.54	294	P	P	06 28 10.6	-3.0	
SBC	Santa Barbara	94.55	56	P	P	06 28 11.8	-1.7	
	baz=266							
C36M	Paulatuk	94.57	21	IAmb	IAmb	06 28 16.9		
	comp=Z,79nm,0.8s							
C36M	Paulatuk	94.57	21	P	P	06 28 11.2	-1.5	
	baz=265,SNR=8.8							
SCZ2	Santa Cruz Isl	94.59	56	P	P	06 28 12.6	-1.1	
	baz=266							
SNCC	San Nicolas Is	94.62	57	P	P	06 28 12.9	-0.9	
	baz=266							
BCW	Bitter Crk WRg	94.84	55	IAmb	IAmb	06 28 20.8		
	comp=Z,60nm,0.9s							
BANOM	Banah	94.89	295	P	P	06 28 13.0	-2.3	
BANOM	Banah	94.89	295	P	P	06 28 13.3	-2.0	
UOSS	Minazif	94.90	294	P	P	06 28 14.4	-0.9	
UOSS	Minazif	94.90	294	P	P	06 28 12.4	-2.9	
UOSS	Minazif	94.90	294	P	P	06 28 11.0	-4.3	
VCNR	Virginia City	94.94	51	P	P	06 28 14.2	-1.2	
VOG	Valley Oaks Go	94.95	54	P	P	06 28 12.8	-2.4	
	baz=266							
HATD	Hatta, Dubai	94.96	294	P	P	06 28 12.6	-2.9	
HATD	Hatta, Dubai	94.96	294	P	P	06 28 11.6	-4.0	
PNTR	Pine Nut	94.96	51	P	P	06 28 16.8	+1.2	
MSFE	Esma-Masafi	94.98	295	P	P	06 28 11.5	-4.1	
MASF	Masafi	94.98	295	P	P	06 28 13.2	-2.5	
ASHO	Ashiyiah	95.02	294	P	P	06 28 13.1	-2.7	
ASHO	Ashiyiah	95.02	294	P	P	06 28 12.4	-3.5	
SHME	Shamm	95.04	296	P	P	06 28 13.6	-2.2	
SHME	Shamm	95.04	296	P	P	06 28 11.4	-4.4	
AKTO	Aktyubinsk	95.14	320	LR	LR	07 11 08.2		
	comp=Z,26µm,21.5s,baz=88,slow=35							
AKTO	Aktyubinsk	95.14	320	P	P	06 28 10.0	-5.8	
ARU	Arti	95.14	326	LR	LR	07 11 04.0		
	comp=Z,30µm,21.9s,baz=90,slow=35							
ARU	Arti	95.14	326	*c i* P	P	06 28 12.8	-2.8	
ARU						06 32 00.4		
ARU				PPP	PPP	06 34 06.9		
ARU				S	SKSac	06 38 45.1	-1.8	
ARU				SP	SP	06 40 49.0	+5.7	
ARU				PS	PS	06 41 29.0	+39	
ARU				SS	SS	06 45 57.5	+4.0	
ARU				pmax	pmax			
	comp=Z,50nm,1.4s							
ARU				MLR	MLR			
	comp=Z,52µm,23.0s							
VES	Vestal, Richgr	95.16	55	P	P	06 28 15.6	-0.6	
	baz=266,SNR=19							
ALNE	Al Ain	95.25	294	P	P	06 28 14.1	-2.8	
	SNR=9.1							
ALNE	Al Ain	95.25	294	P	P	06 28 12.7	-4.2	
ARVC	Arvin	95.33	55	P	P	06 28 16.1	-0.9	
	baz=266,SNR=11							
OSI	Osito Audit: C	95.38	56	P	P	06 28 16.6	-0.7	
	baz=266							
NAZ	Nazwa, Dubai	95.40	294	P	P	06 28 15.3	-2.2	
NAZ	Nazwa, Dubai	95.40	294	P	P	06 28 14.7	-2.9	
SCI2	San Clemente I	95.42	58	P	P	06 28 17.0	-0.4	
	baz=266							
HAWA	Hanford	95.44	44	IAMs_20	IAMs_20	07 03 07.6		
	comp=Z,27µm,22.0s							
FAQ	Al Faqa, Dubai	95.44	294	P	P	06 28 14.8	-2.9	
MLAC	Mammoth, Mammo	95.47	53	P	P	06 28 17.5	-0.4	
	baz=267							
DMTO	DMTO	95.52	287	P	P	06 28 14.9	-3.3	
PNT	Penticton	95.53	41	P	P	06 28 16.8	-0.8	
PNT				pmax	pmax			
	comp=Z,45nm,1.0s							
PNT	Penticton	95.53	41	⇑P	P	06 28 17.7	+0.1	
PNT				⇓P	PcP	06 28 18.3	+0.4	
CIS	Catalina Islan	95.56	57	P	P	06 28 17.1	-1.0	
	baz=266							
ISA	Isabella, Lake	95.65	55	P	P	06 28 17.5	-1.0	
	baz=267,SNR=19							
B08A	Colville Reser	95.67	42	P	P	06 28 17.4	-0.9	
B08A				IAmb	IAmb	06 29 14.6		
	comp=Z,94nm,1.8s							
ASUD	Al Ashush, Dub	95.67	294	P	P	06 28 16.2	-2.6	
ASUD	Al Ashush, Dub	95.67	294	P	P	06 28 16.5	-2.3	
DECC	Green Verdugo	95.68	56	P	P	06 28 17.9	-0.7	
	baz=267,SNR=7.1							
FMP	Fort Macarthur	95.68	57	P	P	06 28 16.1	-2.5	
	baz=266							
UMZA	Um Al Zommool	95.69	292	P	P	06 28 16.1	-2.8	
RYN	Ryan	95.78	52	P	P	06 28 18.1	-1.0	
G08A	Pilot Rock	95.79	45	P	P	06 28 19.1	+0.1	
PASC	Pasadena Art C	95.80	56	IAMs_20	IAMs_20	07 02 10.2		
	comp=Z,26µm,22.0s							
WVOR	Wild Horse Val	95.88	48	IAmb	IAmb	06 29 45.0		
	comp=Z,86nm,1.8s							
WVOR	Wild Horse Val	95.88	48	⇑P	P	06 28 20.6	+1.1	
D08A	Wollman Farm,	95.89	43	IAmb	IAmb	06 29 11.4		
	comp=Z,94nm,1.9s							
TIN	Tinemaha, Big	95.92	53	P	P	06 28 18.3	-1.6	
	baz=267							
NVAR	Mina Array Bea	95.94	52	P	P	06 28 20.2	+0.3	
	comp=Z,18nm,0.7s,baz=262,slow=6.3,SNR=42							
NVAR				PP	PP	06 32 11.4	-1.4	
	comp=Z,3.1nm,0.9s,baz=234,slow=7.7,SNR=1.7							
NVAR				PKKPbc	PKKPbc	06 45 08.8	-0.7	
	comp=Z,3.3nm,0.6s,baz=66,slow=3.6,SNR=9.9							
NVAR				PKPPKP	P'P'df	06 53 19.3	-2.7	
	comp=Z,0.3nm,0.5s,baz=64,slow=2.1,SNR=4.0							
NVAR				LR	LR	07 04 10.1		
	comp=Z,24µm,21.8s,baz=276,slow=31							
	comp=Z,18nm,0.7s							
NVAR	Mina Array Bea	95.94	52	P	P	06 28 20.6	+0.6	
AJN	Ajban	95.98	294	P	P	06 28 16.7	-3.5	
AJN	Ajban	95.98	294	P	P	06 28 16.1	-4.1	
WAPA	Wapiti River	95.99	35	IAmb	IAmb	06 28 24.3		
	comp=Z,86nm,1.0s							
EDW2	Edwards Air Fo	96.00	56	P	P	06 28 19.9	-0.2	
	baz=267,SNR=17							
CWC	Cottonwood Cre	96.01	54	P	P	06 28 19.7	-0.6	
	baz=267							
BELA	Belgrano 2	96.19	179	P	P	06 28 19.8	-0.2	
RBK	Rabkut	96.21	287	P	P	06 28 18.7	-2.7	
	SNR=7.2							
BFSC	Mount Baldy Ra	96.24	56	P	P	06 28 20.2	-1.1	
	baz=267,SNR=11							
LRMC	Laurel Mtn Rad	96.28	55	P	P	06 28 21.5	-0.1	
	baz=267							
C09A	Chrisman Ranch	96.36	43	P	P	06 28 21.8	+0.3	
DOK	Doka	96.36	288	P	P	06 28 18.9	-3.1	
	SNR=8.3							
E09A	Wood Farm, Sta	96.40	44	P	P	06 28 21.8	+0.2	
MPMC	Manual Prospec	96.47	54	P	P	06 28 22.1	-0.3	
	baz=267,SNR=12							
MURC	Murrieta	96.59	57	P	P	06 28 22.1	-0.7	
	baz=267,SNR=5.6							
GRAC	Grapevine Rang	96.61	54	P	P	06 28 22.7	-0.2	
	baz=267							
109C	Camp Elliot, M	96.63	58	P	P	06 28 23.0	0.0	
	baz=267							
WHFO	Wadi Hawf	96.65	287	P	P	06 28 20.3	-3.1	
	SNR=8.3							
TPH	Tonopah	96.77	52	IAmb	IAmb	06 29 19.0		
	comp=Z,150nm,1.5s							
RRX	Edison Barstow	96.81	56	P	P	06 28 23.1	-0.7	
	baz=267							
MANA	Manning	96.94	34	IAmb	IAmb	06 28 32.6		
	comp=Z,82nm,0.7s							
MZWR	Madinat Zayed	96.94	293	P	P	06 28 21.8	-2.8	
BMO	Blue Mountains	96.94	46	P	P	06 28 23.1	-1.1	
BMO				IAMs_20	IAMs_20	07 03 40.6		
	comp=Z,26µm,21.0s							
BMO	Blue Mountains	96.94	46	P	P	06 28 23.1	-1.1	
BMO				pmax	pmax			
	comp=Z,58nm,1.7s							
BAR	Barrett	96.98	58	P	P	06 28 24.6	0.0	
GSC	Goldstone, Bar	96.99	55	P	P	06 28 24.1	-0.5	
	baz=268,SNR=10							
FURC	Furnace Creek,	96.99	54	P	P	06 28 24.6	+0.2	
	baz=268							
BRLDA	Berland Lookou	97.05	36	IAmb	IAmb	06 28 57.2		
	comp=Z,252nm,1.7s							
ABTO	Aybut	97.06	287	P	P	06 28 23.0	-2.3	

PLID	Pearl Lake	97.87	45	IAMs_20	IAMs_20	07 03 59.3	
	comp=Z,23µm,22.0s						
GMRC	Granite Mounta	97.91	56	P	Pdif	06 28 30.0	+1.0
	baz=268,SNR=12						
JRN	Qarnain Island	97.94	294	P	P	06 28 27.1	-2.0
BC3	Big Chuckawall	98.05	57	P	Pdif	06 28 30.3	+0.8
	baz=268,SNR=7.6						
R11A	Troy Canyon, C	98.07	52	P	Pdif	06 28 30.0	+0.3
	baz=269						
NVL	N'lazarevskaya	98.20	193	*e*P	P	06 28 28.0	-1.2
NVL				*e*S	SKSac	06 38 57.5	-4.9
NVL				*e*SS	SS	06 46 35.0	-0.2
NVL				pmax	pmax		
	comp=Z,75nm,1.3s						
NVL				MLR	MLR		
	comp=Z,26µm,17.0s						
IRM	Iron Mountain	98.32	56	Pdiff	P	06 28 30.0	-0.6
	baz=268						
YKA	Yellowknife Ar	98.34	28	P	Pdif	06 28 30.2	+0.3
	comp=Z,23nm,0.9s,baz=272,slow=4.6,SNR=26						
YKA				PKKPbc	PKKPbc	06 45 00.2	-3.3
	comp=Z,11nm,0.5s,baz=92,slow=2.7,SNR=37						
YKA				LR	LR	07 09 57.0	
	comp=Z,22µm,20.9s,baz=282,slow=34						
	comp=Z,23nm,0.9s						
SHPR	Sheep Range	98.36	54	P	P	06 28 30.3	-0.7
ELK	Elko	98.38	50	P	Pdif	06 28 31.1	+0.1
	comp=Z,5.8nm,0.8s,baz=266,slow=3.6,SNR=15						
ELK				LR	LR	07 08 02.3	
	comp=Z,20µm,20.1s,baz=274,slow=32						
	comp=Z,5.8nm,0.8s						
ELK	Elko	98.38	50	P	P	06 28 30.0	-1.0
ELK				IAMs_20	IAMs_20	07 07 52.0	
	comp=Z,26µm,21.0s						
GLA	Glamis	98.55	58	Pdiff	Pdif	06 28 32.3	+0.6
	baz=268						
V12A	Nelson	98.60	55	P	P	06 28 31.0	-0.9
NEE2	Needles Airpor	98.77	56	Pdiff	Pdif	06 28 34.4	+1.8
	baz=269						
VOI	Vohitsoka	98.87	247	P	P	06 28 32.5	-0.9
VOI				IAmb	IAmb	06 28 37.3	
	comp=Z,74nm,1.1s						
VOI	Vohitsoka	98.87	247	P	P	06 28 33.4	-0.1
	SNR=5.9						
VOI	Vohitsoka	98.87	247	P	P	06 28 33.0	-0.4
ABPO	Ambohimpanom	98.96	250	P	P	06 28 33.1	-0.9
ABPO				IAmb	IAmb	06 28 35.5	
	comp=Z,255nm,1.9s						
ABPO	Ambohimpanom	98.96	250	IAMs_20	IAMs_20	07 09 40.3	
	comp=Z,23µm,21.0s						
ABPO	Ambohimpanom	98.96	250	P	P	06 28 33.1	-0.9
ABPO				pmax	pmax		
	comp=Z,255nm,1.9s						
HLID	Hailey	99.00	47	P	Pdif	06 28 33.9	+0.2
HLID	Hailey	99.00	47	Pdiff	Pdif	06 28 33.6	-0.1
	baz=270						
TROLL	Troll, Antarti	99.09	190	Pdiff	Pdif	06 28 33.7	+0.3
PDMCI	Parker Dam,Lak	99.15	56	Pdiff	Pdif	06 28 33.2	-1.1
	baz=269						
WALA	Waterton Lakes	99.27	41	IAmb	IAmb	06 29 47.2	
	comp=Z,55nm,1.3s						
MSO	Missoula	99.30	44	IAMs_20	IAMs_20	07 05 15.9	
	comp=Z,22µm,22.0s						
MSO	Missoula	99.30	44	Pdiff	Pdif	06 28 33.9	-0.9
	baz=271						
PSUT	Pine Spring	99.43	52	P	Pdif	06 28 34.5	-1.2
EDM	Edmonton	99.47	37	P	Pdif	06 28 34.1	-1.2
EDM				IAmb	IAmb	06 29 15.0	
	comp=Z,62nm,1.3s						
EDM	Edmonton	99.47	37	P	Pdif	06 28 34.1	-1.2
EDM				pmax	pmax		
	comp=Z,62nm,1.3s						
SHMA	Al-Shehemyia	99.69	295	P	Pdif	06 28 34.2	-2.6
KIRV	Kirov	100.04	328	*i* P	Pdif	06 28 37.3	-0.3
DUG	Dugway, Tooele	100.23	50	Pdiff	Pdif	06 28 39.8	+0.6
	baz=271						
214A	Organ Pipe Nat	100.23	59	Pdiff	Pdif	06 28 39.5	+0.3
	baz=269						
SNAA	Sanae	100.25	189	Pdiff	Pdif	06 28 38.6	+0.1
SNAA	Sanae	100.25	189	PKKPbc	PKKPbc	06 44 55.8	-2.5
	comp=Z,12nm,0.9s,baz=352,slow=3.2,SNR=13						
SNAA	Sanae	100.25	189*c*	*i*P	Pdif	06 28 38.4	-0.1
SNAA				MLR	MLR		
	comp=Z,29µm,19.0s						
BOZ	Bozeman (W)	100.94	45	IAMs_20	IAMs_20	07 06 19.5	
	comp=Z,25µm,21.0s						
BOZ	Bozeman (W)	100.94	45	Pdiff	Pdif	06 28 41.9	-0.3
	baz=272						
HWUT	Hardware Ranch	101.14	49	IAMs_20	IAMs_20	07 09 31.1	
	comp=Z,20µm,20.0s						
WUAZ	Wupatki	101.43	55	IAMs_20	IAMs_20	07 08 07.2	
	comp=Z,20µm,20.0s						
WUAZ	Wupatki	101.43	55	Pdiff	Pdif	06 28 43.8	-0.8
	baz=271						
FXWY	Fox Creek	101.46	47	IAMs_20	IAMs_20	07 06 47.4	
	comp=Z,22µm,22.0s						
IMW	Indian Meadow	101.51	47	IAMs_20	IAMs_20	07 10 55.7	
	comp=Z,17µm,20.0s						
TPAW	Teton Pass	101.52	47	IAMs_20	IAMs_20	07 06 48.9	
	comp=Z,30µm,22.0s						
PRGR	Permogore	101.56	332	*e*P	Pdif	06 28 41.4	-2.9
PRGR				*e*		06 32 56.2	
PRGR				*e*S	SKSac	06 39 17.6	-1.5
PRGR				pmax	pmax		
	comp=Z,24nm,0.8s						
VNA3	Neumayer Olymp	101.57	187	Pdiff	Pdif	06 28 44.2	-0.1
VNA2	Neumayer--Watz	101.57	188	PKiKP	PKiKP	06 33 09.0	+1.2
	baz=158,slow=1.2						
VNA2	Neumayer--Watz	101.57	188	Pdiff	Pdif	06 28 44.6	+0.3
	baz=163,slow=4.3						
SNOW	Snow King Moun	101.67	47	IAMs_20	IAMs_20	07 07 05.9	
	comp=Z,28µm,22.0s						
H17A	Grant Village	101.75	46	Pdiff	Pdif	06 28 45.7	-0.2
	baz=273						
VNA1	Neumayer--Stat	101.94	188	Pdiff	Pdif	06 28 45.4	-0.5
TUC	Tucson	101.95	58	Pdiff	Pdif	06 28 46.9	0.0
	baz=270						
EGMT	Eagleton	102.08	42	Pdiff	Pdif	06 28 46.2	-1.0
	baz=274						
MAK	Makhachkala	102.39	313	*i* P	Pdif	06 28 44.7	-3.7
MAK				*e*		06 33 00.6	
MAK				*e*		06 39 19.0	
MAK				*e*PS	PS	06 42 00.2	-8.8
MAK				*e*SS	SS	06 47 33.2	-2.5
MAK				*e*SSS	SSS	06 51 24.8	
MAK				pmax	pmax		
	comp=Z,294nm,1.6s						
BW06	Boulder Array	102.58	48	Pdiff	Pdif	06 28 47.8	-1.8
	baz=273						
PDAR	Pinedale Array	102.58	48	P	Pdif	06 28 49.4	-0.3
	comp=Z,7.7nm,0.7s,baz=229,slow=1.2,SNR=41						
PDAR				PKiKP	PKiKP	06 33 13.2	+2.5
	comp=Z,3.5nm,0.8s,baz=253,slow=2.7,SNR=4.0						
PDAR				PKKPbc	PKKPbc	06 44 49.0	-1.9
	comp=Z,3.4nm,0.6s,baz=109,slow=4.9,SNR=12						
PDAR				PKPPKP	P'P'df	06 53 09.4	+0.3
	comp=Z,1.6nm,1.0s,baz=103,slow=3.3,SNR=6.9						
RLMT	Red Lodge	102.64	45	Pdiff	Pdif	06 28 48.3	-1.5
	baz=274						
W18A	Petrified Fore	102.78	55	Pdiff	Pdif	06 28 50.9	+0.3
	baz=272						
HOPEN	Hopen	103.39	348	*e*Pdif	Pdif	06 28 51.9	-0.2
HOPEN				*e*PP	PP	06 33 08.7	+0.7
HOPEN				*e*PS	PS	06 42 19.6	+1.3
HOPEN				*e*SS	SS	06 47 51.7	+4.1
MVCO	Mesa Verde	103.70	53	IAMs_20	IAMs_20	07 08 31.2	
	comp=Z,19µm,22.0s						
MVCO	Mesa Verde	103.70	53	Pdiff	Pdif	06 28 54.1	-0.6
	baz=273						
O20A	White River Ci	103.73	50	Pdiff	Pdif	06 28 54.8	0.0
	baz=274						
SPA0	Spitsbergen Ar	103.93	351	*e*Pdif	Pdif	06 28 53.9	-0.7
SPA0				*e*PP	PP	06 33 12.7	+0.7
SPA0				*e*PS	PS	06 42 24.2	+0.2
KBS	Kingsbay	104.06	352	*e*Pdif	Pdif	06 28 55.2	0.0
KBS				*e*PP	PP	06 33 13.3	+0.3
KBS				*e*SP	SP	06 42 22.1	+4.2
KBS				*e*SS	SS	06 48 00.4	+3.6
KBS	Kingsbay	104.06	352	*i* P	Pdif	06 28 46.5	-8.6
NOR	Nord	104.18	358	*i* P	Pdif	06 28 46.5	-9.1
RWWY	Rawlins	104.40	49	IAMs_20	IAMs_20	07 11 38.2	
	comp=Z,24µm,19.0s						
121A	Cookes Peak, D	104.48	58	Pdiff	Pdif	06 28 58.6	+0.4
	baz=272						
LVZ	Lovozero	104.53	339	IAMs_20	IAMs_20	07 19 59.6	
	comp=Z,20µm,20.0s						
LAO	LASA Array	104.60	43	IAMs_20	IAMs_20	07 09 29.2	
	comp=Z,21µm,21.0s						
LAO	LASA Array	104.60	43	P	Pdif	06 28 59.4	+1.1
	baz=277						
LAO	LASA Array	104.60	43	Pdiff	Pdif	06 28 57.6	-0.8
	baz=277						
KLMR	Klimovskoe	104.61	331	*e*P	Pdif	06 28 55.0	-2.9
KLMR				*e*		06 33 16.6	
KLMR				*e*		06 39 32.7	
KLMR				PS	PS	06 42 25.6	-6.0
KLMR				SS	SS	06 48 14.1	+9.0
KLMR				pmax	pmax		
	comp=Z,57nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,32µm,20.0s						
KLMR	Klimovskoe	104.61	331	*e*Pdif	Pdif	06 28 55.0	-2.9
KLMR				AMP		06 29 00.2	
	comp=Z,57nm,1.5s						
KLMR				*e*		06 29 17.9	
KLMR				*e*		06 32 42.7	
KLMR				*e*PP	PP	06 33 16.6	-0.9
KLMR				*e*SKSac	SKSac	06 39 32.8	-0.6
KLMR				*e*SKSac	SKSac	06 39 32.8	-0.6
KLMR				PS	PS	06 42 25.7	-5.9
KLMR				PS	PS	06 42 25.7	-5.9
KLMR				*e*PKKPbc	PKKPbc	06 44 30.9	-14
KLMR				SS	SS	06 48 14.1	+9.0
KLMR				SS	SS	06 48 14.1	+9.0
KLMR				LQ	LQ	07 04 26.2	
KLMR				LQ	LQ	07 04 26.2	
KLMR				LR	LR	07 06 23.2	
KLMR				AMP		07 17 49.2	
	comp=Z,32µm,20.2s						
GNI	Garni	104.65	310	Pdiff	Pdif	06 28 57.2	-1.6
SMCO	Snowmass	104.78	51	IAMs_20	IAMs_20	07 09 24.4	
	comp=Z,31µm,22.0s						
K22A	Casper	104.82	48	P	Pdif	06 28 59.7	+0.2
	baz=276						
K22A	Casper	104.82	48	Pdiff	Pdif	06 28 58.0	-1.5
	baz=276						
S22A	4UR Ranch, Cre	104.99	53	Pdiff	Pdif	06 29 02.4	+1.8
	baz=274						
ZEI	Tsey	105.04	313	*e*P	Pdif	06 29 02.3	+1.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
APA	Apatity	105.09	339	⇓*i*P	Pdif	06 29 00.3	+0.4
APA				*i* PPS	PPS	06 42 37.0	
APA				*i*		06 43 30.0	
APA				pmax	pmax		
	comp=Z,17nm,0.8s						
Y22D	IRIS PASSCAL I	105.14	56	IAMs_20	IAMs_20	07 07 56.5	
	comp=Z,23µm,21.0s						
Y22D	IRIS PASSCAL I	105.14	56	Pdiff	Pdif	06 29 02.6	+1.5
	baz=273						
Y22F	Passcal Instru	105.14	56	Pdiff	Pdif	06 29 02.6	+1.5
	baz=273						
VRH	Novokhopyorsk	105.39	321	*e*P	Pdif	06 29 00.1	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRH				MLR	MLR		
	comp=Z,17µm,20.0s						
N23A	Red Feather La	105.42	49	Pdiff	Pdif	06 29 02.4	0.0
	baz=275						
ANMO	Albuquerque	105.47	56	IAMs_20	IAMs_20	07 08 21.2	
	comp=Z,22µm,22.0s						
ANMO	Albuquerque	105.47	56	Pdiff	Pdif	06 29 03.3	+0.6
	baz=273						
EPT	El Paso	105.60	59	IAMs_20	IAMs_20	07 07 53.8	
	comp=Z,27µm,22.0s						
KBZ	Khabaz	105.67	314	Pdiff	Pdif	06 29 04.8	+1.7
	comp=Z,1.5nm,0.8s,baz=331,slow=17,SNR=1.7						
DGMT	Dagmar	105.72	41	IAMs_20	IAMs_20	07 20 01.6	
	comp=Z,16µm,19.0s						
DGMT	Dagmar	105.72	41	Pdiff	Pdif	06 29 02.2	-1.0
	baz=279						
PHWY	Pilot Hill	105.74	49	IAMs_20	IAMs_20	07 09 30.9	
	comp=Z,28µm,21.0s						
ISCO	Idaho Springs	105.77	50	IAMs_20	IAMs_20	07 18 27.8	
	comp=Z,15µm,19.0s						
ISCO	Idaho Springs	105.77	50	Pdiff	Pdif	06 29 04.5	+0.5
	baz=275						
BJO1	Bjornoya	105.78	348	*e*Pdif	Pdif	06 29 03.3	+0.5
BJO1				*e*		06 33 19.8	
BJO1				*e*SKSac	SKSac	06 39 39.6	+1.4
BJO1				*e*SP	SP	06 42 36.4	+0.5
KIV	Kislovodsk	105.80	314	⇑P	PP	06 33 27.0	+0.1
KIV	Kislovodsk	105.80	314	*i* P	Pdif	06 29 01.4	-2.3
KIV				*e*		06 33 26.4	
KIV				*e*		06 39 36.7	
KIV				*e*PS	PS	06 42 41.1	-3.8
KIV				*e*SS	SS	06 48 22.5	-0.1
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,12µm,21.0s						
FFC	Flin Flon	105.93	35	IAMs_20	IAMs_20	07 15 23.7	
	comp=Z,24µm,20.0s						
SDCO	Great Sand Dun	106.04	53	Pdiff	Pdif	06 29 04.3	-0.9
	baz=275						
Q24A	Divide	106.21	51	Pdiff	Pdif	06 29 05.7	-0.3
	baz=275						
KEV	Kevo	106.29	342	IAMs_20	IAMs_20	07 18 36.0	
	comp=Z,18µm,22.0s						
RSSD	Black Hills	106.45	46	IAMs_20	IAMs_20	07 10 29.4	
	comp=Z,27µm,22.0s						
RSSD	Black Hills	106.45	46	Pdiff	Pdif	06 29 04.3	-2.5
	baz=278						
TULEG	Thule	106.62	9	IAMs_20	IAMs_20	07 13 57.2	
	comp=Z,25µm,21.0s						
TULEG	Thule	106.62	9	*i* P	Pdif	06 29 04.4	-2.1
TULEG				IAMs_20	IAMs_20	07 10 03.1	
	comp=Z,36µm,27.8s						
BRIGG	Briggsdale	106.68	50	IAMs_20	IAMs_20	07 10 24.6	
	comp=Z,17µm,22.0s						
ATD	Arta Tunnel	106.83	280	*e*P	Pdif	06 29 04.0	-4.9
HAMF	Hammerfest	106.83	343	*e*Pdif	Pdif	06 29 08.6	+1.0
HAMF				*e*PP	PP	06 33 33.5	0.0
HAMF				*e*SP	SP	06 42 45.8	-1.0
LPSR	Galich'ya Gora	106.83	323	*e*P	Pdif	06 29 05.8	-2.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,9µm,23.0s						
MOS	Moscow	106.84	327	*i* P	Pdif	06 29 05.9	-2.0
MOS				*e*PPP	PPP	06 35 50.0	
MOS				*e*PS	PS	06 42 50.6	-4.3
MOS				*e*PPS	PPS	06 44 01.2	
MOS				*e*SS	SS	06 49 00.0	+24
MOS				MLR	MLR		
	comp=Z,59µm,24.0s						
MOS				MLR	MLR		
	comp=E,38µm,24.0s						
VORR	Voronezh	106.85	322	*e*P	Pdif	06 29 05.8	-2.3
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
ARA0	ARCESS Array S	106.86	342	*e*Pdif	Pdif	06 29 07.1	-0.6
ARA0				*e*		06 33 25.8	
ARA0				*e*SKSac	SKSac	06 39 46.1	+3.0
ARA0				*e*SP	SP	06 42 46.6	-0.6
ARCES	ARCESS Array B	106.86	342	Pdiff	Pdif	06 29 08.1	+0.3
	comp=Z,30nm,0.8s,baz=54,slow=6.2,SNR=21						
ARCES				PKiKP	PKiKP	06 33 17.8	+0.4
	comp=Z,5.5nm,0.7s,baz=118,slow=1.8,SNR=25						
ARCES				PKKPbc	PKKPbc	06 44 35.4	-3.2
	comp=Z,4.9nm,0.4s,baz=244,slow=2.2,SNR=19						
T25A	Trinidad	106.96	53	Pdiff	Pdif	06 29 08.6	-0.6
	baz=275						
VSR	Storozhevoye	106.97	322	*e*P	Pdif	06 29 09.1	+0.5
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VSR				MLR	MLR		
	comp=Z,26µm,24.0s						
KTK1	Kautokeino	107.82	342	*e*Pdif	Pdif	06 29 12.0	-0.1
KTK1				*e*PP	PP	06 33 40.9	+0.1
KTK1				*e*PS	PS	06 43 04.0	-0.5
SOC	Sochi	107.98	314*c*	*i*P	Pdif	06 29 10.6	-2.7
SOC				*e*PS	PS	06 43 01.9	-5.2
SOC				*e*SS	SS	06 48 49.9	-2.1
SOC				pmax	pmax		
	comp=Z,13nm,0.6s						
SOC				MLR	MLR		
	comp=Z,19µm,22.0s						
KSCO	Kaye Shedlock'	108.16	51	Pdiff	Pdif	06 29 14.4	0.0
	baz=277						
TXAR	Lajitas Array	108.17	61	Pdiff	Pdif	06 29 14.9	+0.3
	comp=Z,0.8nm,0.9s,baz=318,slow=4.9,SNR=2.5						
TXAR				PKiKP	PKiKP	06 33 21.8	+0.6
	comp=Z,3.7nm,0.9s,baz=252,slow=2.5,SNR=9.2						
TXAR				PP	PP	06 33 46.7	+1.8
	comp=Z,6.5nm,0.9s,baz=267,slow=5.1,SNR=6.4						
TXAR				PKKPbc	PKKPbc	06 44 32.8	-0.5
	comp=Z,3.6nm,0.5s,baz=109,slow=5.1,SNR=30						
TXAR				PKKP	PKKPdf	06 44 47.2	-0.3
	comp=Z,10nm,0.9s,baz=115,slow=5.5,SNR=11						
TXAR				PKPPKP	P'P'df	06 53 00.4	+1.2
	comp=Z,0.8nm,1.0s,baz=96,slow=1.8,SNR=3.6						
OGNE	Ogallala	108.36	49	Pdiff	Pdif	06 29 12.5	-2.7
	baz=278						
JETT	Jettan, Norway	108.36	343	*e*Pdif	Pdif	06 29 14.0	-0.5
JETT				*e*PP	PP	06 33 44.8	0.0
JETT				*e*PS	PS	06 43 10.6	+0.5
MSTX	Muleshoe	108.58	56	Pdiff	Pdif	06 29 15.6	-0.8
	baz=275						
TRO	Tromso	108.74	344	*e*Pdif	Pdif	06 29 16.3	+0.2
TRO				*e*PP	PP	06 33 47.8	+0.4
TRO				*e*SP	SP	06 43 08.4	+2.1
MDND	Maddock	108.86	41	Pdiff	Pdif	06 29 17.3	+0.1
	baz=282						
DAG	Danmarks Havn	108.98	357	*i* P	Pdif	06 29 11.6	-5.5
DAG				IAMs_20	IAMs_20	07 10 07.7	
	comp=Z,25µm,30.2s						
ANN	Anapa	109.38	315	*i* P	Pdif	06 29 17.3	-2.2
ANN				*e*		06 39 55.3	
ANN				*i* SP	SP	06 43 11.6	-2.8
ANN				*e*SS	SS	06 49 21.3	+10
ANN				pmax	pmax		
	comp=E,44nm,1.1s						
ANN				pmax	pmax		
	comp=Z,76nm,1.2s						
AMTX	Amarillo	109.39	55	IAMs_20	IAMs_20	07 10 23.9	
	comp=Z,23µm,22.0s						
AMTX	Amarillo	109.39	55	Pdiff	Pdif	06 29 18.3	-1.6
	baz=276						
ANKE	Ethiopia-Afar	109.78	278	*e*P	Pdif	06 29 20.0	-2.5
SUSD	Miller	110.00	45	Pdiff	Pdif	06 29 19.8	-2.5
	baz=282						
CBKS	Cedar Bluff	110.42	51	Pdiff	Pdif	06 29 21.4	-3.0
	baz=279						
FINES	FINESS Array B	110.50	334	Pdiff	Pdif	06 29 23.0	-1.1
	comp=Z,9.7nm,0.8s,baz=50,slow=3.2,SNR=18						
FINES				PKiKP	PKiKP	06 33 25.2	+0.8
	comp=Z,9.5nm,0.6s,baz=104,slow=3.4,SNR=12						
FINES				PP	PP	06 34 01.1	+0.7
	comp=Z,24nm,1.0s,baz=76,slow=5.9,SNR=6.5						
FINES				PKKPbc	PKKPbc	06 44 25.0	-1.7
	comp=Z,8.7nm,0.7s,baz=197,slow=4.2,SNR=11						
ULM	Lac du Bonnet	110.65	38	PKiKP	PKiKP	06 33 25.4	+0.3
	comp=Z,13nm,0.6s,baz=280,slow=2.1,SNR=11						
ULM				PKKPbc	PKKPbc	06 44 25.0	-0.9
	comp=Z,6.2nm,0.5s,baz=128,slow=5.0,SNR=7.1						
AAE	Adis Abeba	110.71	277	*e*P	Pdif	06 29 16.0	-11
FURI	Furi	110.79	277	*e*P	Pdif	06 29 31.9	+5.1
STEI	Steigen	110.85	343	*e*Pdif	Pdif	06 29 25.8	+0.3
STEI				*e*PP	PP	06 34 02.6	-0.1
STEI				*e*SP	SP	06 43 28.3	+1.4
BGNE	Belgrade	111.17	48	P	PKiKP	06 33 28.1	+1.7
	baz=281						
BGNE	Belgrade	111.17	48	Pdiff	Pdif	06 29 23.6	-4.0
	baz=281						
FAUS	Fauske	111.19	343	*e*Pdif	Pdif	06 29 28.0	+1.0
FAUS				*e*PP	PP	06 34 05.4	+0.3
FAUS				*e*SKSac	SKSac	06 40 01.2	-0.3
FAUS				*e*SP	SP	06 43 27.2	-2.8
FAUS				*e*SS	SS	06 49 35.2	+1.8
AGMN	Agassiz Nation	111.19	40	IAMs_20	IAMs_20	07 17 09.1	
	comp=Z,19µm,22.0s						
AGMN	Agassiz Nation	111.19	40	Pdiff	Pdif	06 29 26.3	-1.2
	baz=285						
LOF	Lofoten	111.21	344	*e*Pdif	Pdif	06 29 27.0	-0.1
LOF				*e*PP	PP	06 34 05.7	+0.5
LOF				*e*PS	PS	06 43 36.1	-1.3
LOF				*e*SS	SS	06 49 34.2	+0.6
ABTX	Abilene, Hawle	111.33	57	Pdiff	Pdif	06 29 29.3	+0.8
	baz=277						
KMBO	Kilima Mbogo	111.34	266	*e*P	Pdif	06 29 31.9	+2.7
JCT	Junction City	111.42	60	P	PKiKP	06 33 27.8	+0.6
	baz=276						
JCT	Junction City	111.42	60	Pdiff	Pdif	06 29 29.9	+0.9
	baz=276						
DBG	Daneborg	111.49	357	*i* P	Pdif	06 29 22.9	-5.4
DBG				IAMs_20	IAMs_20	07 12 29.3	
	comp=Z,22µm,27.5s						
F33A	5 Mile Ranch,	111.53	43	P	PKiKP	06 33 26.8	-0.1
	baz=284						
OK035	E0210 Rd and N	111.55	53	IAMs_20	IAMs_20	07 14 59.8	
	comp=Z,19µm,20.0s						
OK038	West end E0370	111.55	53	IAMs_20	IAMs_20	07 12 14.1	
	comp=Z,21µm,22.0s						
UPNV	Upernavik	111.60	8	*i* P	Pdif	06 29 25.4	-3.4
UPNV				IAMs_20	IAMs_20	07 13 34.8	
	comp=Z,37µm,26.8s						
SIM	Simferopol'	111.66	316	*i* PKIKP	PKiKP	06 33 17.5	-10
SIM				pmax	pmax		
	comp=Z,59nm,1.3s						
WMOK	Wichita Mounta	111.77	55	IAMs_20	IAMs_20	07 12 35.0	
	comp=Z,27µm,22.0s						
WMOK	Wichita Mounta	111.77	55	P	PKiKP	06 33 28.6	+0.8
	baz=278						
WMOK	Wichita Mounta	111.77	55	Pdiff	Pdif	06 29 29.8	-0.7
	baz=278						
ECSD	EROS Data Cent	111.80	45	IAMs_20	IAMs_20	07 13 33.7	
	comp=Z,26µm,22.0s						
ECSD	EROS Data Cent	111.80	45	P	PKiKP	06 33 27.3	-0.2
	baz=283						
ECSD	EROS Data Cent	111.80	45	Pdiff	Pdif	06 29 28.6	-1.7
	baz=283						
MEF	Metsahovi	111.80	334	*e*P	PKiKP	06 33 26.1	-0.8
N33B	J Bar K, Exete	111.82	49	P	PKiKP	06 33 28.6	+1.0
	baz=281						
833A	Chaparral WMA,	111.98	62	P	PKiKP	06 33 28.8	+0.6
	baz=275						
833A	Chaparral WMA,	111.98	62	Pdiff	Pdif	06 29 29.4	-2.1
	baz=275						
MOR8	Moi Rana	112.22	342	*e*Pdif	Pdif	06 29 31.4

MTSE **Matsula** 112.77 332 *e*P **PKiKP** **06 33 30.9 +2.2**
OK025 **Westminster Rd** 112.82 54 IAMs_20 IAMs_20 07 16 33.6
comp=Z,25μm,20.0s
NACGM **Naroch** 112.97 328⇑*e*PKP **PKiKP** **06 33 29.4 +0.1**
comp=Z,9.0nm,0.7s,baz=67
ISAL **Salakas** 113.04 329 *e*P **PKiKP** **06 33 30.4 +0.9**
OK033 **Mehan** 113.06 53 IAMs_20 IAMs_20 07 15 05.0
comp=Z,19μm,20.0s
IIGN **Ignalina** 113.08 328 *e*P **PKiKP** **06 33 30.4 +0.8**
BRTR **Keskin Array B** 113.15 311 PKiKP **PKiKP** **06 33 30.5 +0.1**
comp=Z,9.3nm,0.9s,baz=123,slow=3.1,SNR=13
BRTR PP **PP** **06 34 21.1 +0.6**
comp=Z,6.5nm,0.8s,baz=94,slow=4.7,SNR=4.7
BRTR PKKPbc **PKKPbc** **06 44 17.0 -0.5**
comp=Z,8.3nm,0.8s,baz=230,slow=4.2,SNR=12
BRTR PKKP **PKKPdf** **06 44 36.8 -1.7**
comp=Z,4.6nm,0.8s,baz=224,slow=3.4,SNR=4.2
AKASG **Malin Array Be** 113.16 323 Pdiff **Pdif** **06 29 32.9 -3.3**
comp=Z,0.2nm,0.3s,baz=46,slow=4.2,SNR=5.5
AKASG PKiKP **PKiKP** **06 33 29.7 -0.1**
comp=Z,14nm,0.8s,baz=59,slow=2.6,SNR=22
AKASG PP **PP** **06 34 20.2 +0.4**
comp=Z,9.2nm,0.9s,baz=55,slow=6.7,SNR=5.1
AKASG PKKPbc **PKKPbc** **06 44 15.1 -2.5**
comp=Z,7.4nm,0.6s,baz=260,slow=3.1,SNR=16
OK031 **S. Brethren Rd** 113.16 54 IAMs_20 IAMs_20 07 14 56.5
comp=Z,22μm,20.0s
WHTX **Lake Whitney,** 113.24 58 Pdiff **Pdif** **06 29 34.5 -2.5**
baz=276
OK034 **N. Norfolk Rd.** 113.25 53 IAMs_20 IAMs_20 07 15 40.9
comp=Z,19μm,20.0s
435B **Jarrell** 113.29 59 Pdiff **Pdif** **06 29 37.7 +0.4**
baz=277
KVTX **Kingsville** 113.37 63 IAMs_20 IAMs_20 07 12 42.0
comp=Z,20μm,22.0s
F36A **Milaca** 113.39 42 P **PKiKP** **06 33 31.6 +1.2**
baz=286
JMIC **Jan Mayen** 113.55 352 *e*Pdif **Pdif** **06 29 38.8 +1.3**
JMIC *e*PP **PP** **06 34 23.0 +1.1**
JMIC *e*PS **PS** **06 43 59.6 +0.7**
LODK **Lodwar** 113.70 271 *e*P **Pdif** **06 29 39.9 +0.4**
AAL **Aland** 113.72 335 *e*P **PKiKP** **06 33 29.5 -1.0**
ANTO **Ankara** 113.76 311 ⇑P **PKiKP** **06 33 33.3 +1.9**
ANTO **Ankara** 113.76 311 ⇑PKIKP **PKiKP** **06 33 33.3 +1.9**
VSVD **Vaisvydziai** 113.98 330 *e*P **PKiKP** **06 33 34.6 +3.5**
I37B **Waseca** 113.98 44 P **PKiKP** **06 33 32.9 +1.3**
baz=286
SLIT **Slitere, Latvi** 114.00 332 *e*P PKPdf 06 33 29.8 -1.4
TUL1 **Leonard** 114.00 53 IAMs_20 IAMs_20 07 14 24.8
comp=Z,25μm,22.0s
TUL1 **Leonard** 114.00 53 Pdiff **Pdif** **06 29 37.9 -2.4**
baz=280
MUSN **Musina, Limpop** 114.02 242 *i*P PKPdf 06 33 29.1 -3.2
MUSN **Musina, Limpop** 114.02 242 *i*P PKPdf 06 33 29.1 -3.2
SPMN **Marine on St.** 114.05 43 P **PKiKP** **06 33 32.7 +1.0**
baz=287
SPMN **Marine on St.** 114.05 43 Pdiff **Pdif** **06 29 39.5 -0.8**
baz=287
NSS **Namsos** 114.08 341 *e*PP **PP** **06 34 26.0 +0.2**
NSS *e*PS **PS** **06 44 04.8 +0.8**
NSS *e*SS SS 06 50 14.8 +3.0
EYMN **Ely** 114.09 40 IAMs_20 IAMs_20 07 17 09.8
comp=Z,20μm,21.0s
EYMN **Ely** 114.09 40 Pdiff **Pdif** **06 29 41.1 +0.7**
baz=289
PABE **Paberze** 114.17 329 *e*P **PKiKP** **06 33 32.4 +0.8**
KDZE **Karadeniz Ereo** 114.43 313 ⇑P PKPdf 06 33 29.8 -2.7
X37A **Clayton** 114.57 55 P **PKiKP** **06 33 33.4 +0.3**
baz=280
KIS **Kishinev** 114.64 319 *e*P **Pdif** **06 29 42.0 -0.8**
KIS **Kishinev** 114.64 319 *e*P **Pdif** **06 29 42.0 -0.8**
KIS pmax pmax
comp=Z,1μm,15.5s
SCIA **State Center** 114.66 47 Pdiff **Pdif** **06 29 43.7 +0.7**
baz=285
MILM **Milestii Mici** 114.66 319 ⇓P **PKiKP** **06 33 31.8 -1.0**
MILM **Milestii Mici** 114.66 319 *e*P **Pdif** **06 29 42.0 -0.9**
MILM **Milestii Mici** 114.66 319 *e*PS PS 06 43 59.0 -11
MILM **Milestii Mici** 114.66 319 *de*P **Pdif** **06 29 42.0 -0.9**
MILM pmax pmax
comp=Z,3μm,12.9s
UPP **Uppsala** 114.89 335 *e*P PKPdf 06 33 33.5 +0.7
P38A **Dawn** 114.99 49 P PKPdf 06 33 34.0 +0.3
baz=284,SNR=23
U38A **Gravette** 115.02 53 P **PKPdf** **06 33 33.9 +0.1**
baz=282,SNR=22
TLCR 115.21 317 ⇑P **PKPdf** **06 33 35.0 +1.1**
TLCR 115.21 317 ⇑PKIKP **PKPdf** **06 33 35.0 +1.1**
SCO **Scoresbysund** 115.36 357 *e*P **Pdif** **06 29 40.2 -5.3**
SCO IAMs_20 IAMs_20 07 15 01.9
comp=Z,18μm,25.7s
HHAR **Hobbs** 115.40 53 PKiKP **PKPdf** **06 33 34.9 +0.3**
HHAR **Hobbs** 115.40 53 P **PKiKP** **06 33 34.3 -0.3**
baz=282
VLDR **Vladesti** 115.49 318 ⇓P **PKPdf** **06 33 36.3 +1.9**
TBLU **Trondheim** 115.51 341 *e*PP **PP** **06 34 33.5 -2.4**
TBLU *e*SP SP 06 44 09.0 -0.7
TBLU *e*SS **SS** **06 50 30.6 0.0**
ILULI **Ilulissat** 115.55 8 IAMs_20 IAMs_20 07 22 06.2
comp=Z,16μm,22.0s
ILULI **Ilulissat** 115.55 8 *i*P **Pdif** **06 29 39.3 -7.1**
ILULI IAMs_20 IAMs_20 07 15 54.8
comp=Z,42μm,25.9s
TPGR **Topolog** 115.58 317 ⇑P **PKKPbc** **06 44 12.3 +3.1**
S39A **Bolivar** 115.59 51 **PKPdf** **06 33 35.5 +0.6**
S39A **Bolivar** 115.59 51 P **PKPdf** **06 33 35.5 +0.6**
baz=283,SNR=18
SCTR **Scanteiesti** 115.60 318 ⇑P **PKPdf** **06 33 35.7 +1.1**
SCTR **Scanteiesti** 115.60 318 ⇓P **PKKPbc** **06 44 08.1 -0.9**
NATX **Nacogdoches** 115.63 58 IAMs_20 IAMs_20 07 25 10.4
comp=Z,14μm,19.0s
CFR **Carcaliu** 115.67 318 ⇑P **PKPdf** **06 33 35.6 +0.9**
CFR **Carcaliu** 115.67 318 ⇓P **PKKPbc** **06 44 11.1 +2.3**
CFR **Carcaliu** 115.67 318 ⇑PKIKP **PKPdf** **06 33 35.6 +0.9**
BOSA **Boshof** 115.72 234 Pdiff **Pdif** **06 29 50.0 +1.7**
comp=Z,1.5nm,0.7s,baz=100,slow=4.4,SNR=1.5
BOSA PKP **PKiKP** **06 33 35.5 -0.1**
comp=Z,12nm,0.6s,baz=125,slow=1.9,SNR=28
BOSA PKKPbc **PKKPbc** **06 44 07.8 -0.6**
comp=Z,5.1nm,0.9s,baz=334,slow=1.7,SNR=5.0
BOSA **Boshof** 115.72 234 *i*P **PKPdf** **06 33 36.4 +0.8**
BOSA **Boshof** 115.72 234 *i*P **PKPdf** **06 33 36.4 +0.8**
I40A **Norwalk** 115.94 44 P **PKiKP** **06 33 35.9 +0.5**
baz=288
MIAR **Mount Ida** 116.04 55 **PKiKP** **06 33 37.2 +1.4**
MIAR **Mount Ida** 116.04 55 PKIKP **PKiKP** **06 33 37.2 +1.4**
MIAR **Mount Ida** 116.04 55 P **PKiKP** **06 33 36.7 +0.8**
baz=281
MIAR **Mount Ida** 116.04 55 Pdiff **Pdif** **06 29 50.2 +0.9**
baz=281
VIKU **Vikbolandet** 116.06 334 *e*P **PKPdf** **06 33 35.2 +0.1**
P40A **Paris** 116.12 49 **PKiKP** **06 33 36.6 +0.7**
P40A **Paris** 116.12 49 P **PKiKP** **06 33 36.5 +0.7**
baz=285
COWI **Conover** 116.22 41 IAMs_20 IAMs_20 07 17 22.4
comp=Z,21μm,21.0s
COWI **Conover** 116.22 41 P **PKiKP** **06 33 37.0 +1.1**
baz=290
ICOR **Ion Corvin** 116.23 317 ⇑P **PKiKP** **06 33 39.2 +3.3**
R40A **Maddies Statio** 116.26 50 P **PKiKP** **06 33 36.6 +0.4**
baz=284,SNR=11
VRI **Vrincioaia** 116.37 319 ⇑P **PKiKP** **06 33 36.5 +0.3**
VRI **Vrincioaia** 116.37 319 ⇑P **PKKPbc** **06 44 05.0 -1.4**
VRI **Vrincioaia** 116.37 319 ⇑PKIKP **PKiKP** **06 33 36.5 +0.3**
PLOR **Plostina** 116.43 319 ⇑P **PKKPbc** **06 44 08.8 +2.6**
JFWS **Jewell Farm** 116.49 45 IAMs_20 IAMs_20 07 16 39.9
comp=Z,25μm,22.0s
JFWS **Jewell Farm** 116.49 45 P **PKiKP** **06 33 37.0 +0.5**
baz=288
JFWS **Jewell Farm** 116.49 45 Pdiff **Pdif** **06 29 51.5 +0.3**
baz=288
KLNR **Kaliningrad** 116.50 329 *i*PKIKP **PKiKP** **06 33 37.2 +1.1**
KLNR pmax pmax
comp=Z,92nm,1.2s
KLNR MLR MLR
comp=Z,55μm,21.0s
KSV **Kosov** 116.55 322 PKIKP **PKiKP** **06 33 36.5 +0.1**
LVV **L'vov** 116.58 324 *e*P **Pdif** **06 29 49.2 -2.2**
LVV *i* 06 33 34.8
LVV *e*PS **PS** **06 44 21.0 -6.4**
LVV *e*SS SS 06 51 01.5 +16
LVV MLR MLR
comp=E,26μm,27.0s
LVV MLR MLR
comp=N,20μm,25.0s
LVV MLR MLR
comp=Z,40μm,27.0s
WLAR **White Oak Lake** 116.58 55 **PKiKP** **06 33 37.8 +0.9**
NB2 **NORSAR Subarra** 116.67 338 P **Pdif** **06 29 52.9 +1.3**
comp=Z,8.6nm,1.2s,baz=30,slow=6.2
NB2 **NORSAR Subarra** 116.67 338 PKPdf **PKiKP** **06 33 37.0 +0.7**
comp=Z,5.8nm,0.6s,baz=45,slow=1.9
NB2 **NORSAR Subarra** 116.67 338 *e* **PKiKP** **06 33 37.0 +0.7**
baz=45,slow=1.9
NOA **NORSAR Array B** 116.67 338 Pdiff **Pdif** **06 29 51.0 -0.6**
comp=Z,3.1nm,0.9s,baz=59,slow=4.3,SNR=5.1
NOA PKP **PKPdf** **06 33 35.8 -0.6**
comp=Z,8.7nm,0.6s,baz=49,slow=1.9,SNR=24
NOA PP **PP** **06 34 43.7 -0.5**
comp=Z,11nm,1.0s,baz=48,slow=6.0,SNR=5.3
NOA PKKPbc **PKKPbc** **06 44 04.1 -1.7**
comp=Z,11nm,0.7s,baz=227,slow=3.4,SNR=21
NC204 **NORSAR Array S** 116.68 339 **PKiKP** **06 33 37.8 +1.4**
BUR08 **Bucovina Ar. S** 116.72 321 **PKiKP** **06 33 39.2 +2.3**
BURAR **Bucovina Array** 116.72 321 ⇑P **PKiKP** **06 33 39.1 +2.2**
BURAR **Bucovina Array** 116.72 321 ⇑P **PKKPbc** **06 44 05.8 +0.4**
BURAR **Bucovina Array** 116.72 321 **PKPdf** **06 33 36.5 -0.4**
BURAR **Bucovina Array** 116.72 321 ⇑PKIKP **PKiKP** **06 33 39.1 +2.2**
COVR **Voineasa-Covas** 116.72 319 ⇑P **PKiKP** **06 33 38.2 +1.3**
DOMB **Dombas** 116.75 340 *e*Pdif **Pdif** **06 29 52.8 +0.8**
DOMB *e*PP **PP** **06 34 41.8 -2.9**
DOMB *e*SP SP 06 44 22.7 +1.6
DOMB *e*SS **SS** **06 50 48.9 +2.0**
NC602 **NORSAR Array S** 116.75 338 **PKPdf** **06 33 35.9 -0.5**
NC602 **NORSAR Array S** 116.75 338 *e*Pdif **Pdif** **06 29 52.0 +0.1**
NC602 *e*PP **PP** **06 34 44.5 -0.1**
NC602 *e*SP SP 06 44 23.0 +1.8
NC602 *e*SS **SS** **06 50 48.9 +1.9**
NORES **NORESS Array B** 116.75 338 PKIKP **PKiKP** **06 33 40.0 +3.6**
NORES pmax pmax
comp=Z,2.0nm,0.5s
ICESG **Greenland Ices** 116.78 3 *i*P **Pdif** **06 29 46.9 -5.4**
LBTB **Lobatse** 116.80 238 PKKPbc PKKPbc 06 44 04.6 +0.1
comp=Z,5.0nm,0.6s,baz=279,slow=4.5,SNR=8.7
LBTB **Lobatse** 116.80 238 *i*P **PKPdf** **06 33 34.5 -3.2**
LBTB **Lobatse** 116.80 238 *i*P **PKPdf** **06 33 34.5 -3.2**
CMIG **Matias Romero** 116.83 74 PKP **PKPdf** **06 33 37.3 -0.5**
comp=Z,9.6nm,0.7s,baz=322,slow=3.2,SNR=14
NBO00 **NORSAR Array S** 116.84 339 **PKiKP** **06 33 36.9 +0.3**
MOL **Molde** 116.87 341 *e*PP **PP** **06 34 45.8 +0.4**
WHAR **Wooly Hollow** 116.92 53 **PKPdf** **06 33 36.2 -1.4**
FCAR **Ozark Folk Cen** 116.92 53 **PKPdf** **06 33 36.0 -1.5**
COYC **Coyhaique** 116.96 149 **PKPdf** **06 33 36.6 -0.8**
UALR **University of** 116.99 54 **PKPdf** **06 33 37.0 -0.7**
MLR **Muntele Rosu** 117.02 318 ⇑P **PKPdf** **06 33 36.7 -0.9**
MLR **Muntele Rosu** 117.02 318 ⇑P **PKKPbc** **06 44 02.7 -1.6**
MLR **Muntele Rosu** 117.02 318 ⇑PKIKP **PKPdf** **06 33 36.7 -0.9**
CCM **Cathedral Cave** 117.10 50 **PKPdf** **06 33 37.7 -0.1**
CCM **Cathedral Cave** 117.10 50 PKIKP **PKPdf** **06 33 37.7 -0.1**
CCM **Cathedral Cave** 117.10 50 P **PKiKP** **06 33 37.8 0.0**
baz=284,SNR=18
CCM **Cathedral Cave** 117.10 50 Pdiff **Pdif** **06 29 50.3 -3.7**
baz=284
I42A **Draeger Farm,** 117.11 43 **PKPdf** **06 33 36.7 -0.9**
I42A **Draeger Farm,** 117.11 43 P **PKiKP** **06 33 38.1 +0.5**
baz=289
L42A **Oliver, Polo** 117.18 46 **PKiKP** **06 33 37.8 0.0**
L42A **Oliver, Polo** 117.18 46 P **PKPdf** **06 33 37.3 -0.5**
baz=288
DOPR **Dopca** 117.21 319 ⇑P **PKiKP** **06 33 39.3 +1.5**
DOPR **Dopca** 117.21 319 ⇑P **PKKPbc** **06 44 04.3 +0.8**
AKN **Aaknes** 117.33 341 *e*Pdif **Pdif** **06 29 54.9 +0.4**
AKN *e*PP **PP** **06 34 45.4 -3.3**
AKN *e*SP SP 06 44 28.5 +2.2
AKN *e*SS **SS** **06 51 00.3 +5.8**
AY01 **Puyuhuapi** 117.44 148 **PKiKP** **06 33 38.5 +0.3**
LSZ **Lusaka** 117.53 249 PKKPbc PKKPbc 06 44 02.6 +0.9
baz=240,slow=2.8
SUR **Sutherland** 117.57 229 PKKPbc PKKPbc 06 44 04.0 +2.0
comp=Z,9.8nm,0.8s,baz=260,slow=5.9,SNR=3.8
SUR **Sutherland** 117.57 229 **PKiKP** **06 33 40.0 +0.8**
SUR **Sutherland** 117.57 229 IAMs_20 IAMs_20 07 21 28.7
comp=Z,24μm,20.0s
VOIR 117.63 319 ⇑P **PKiKP** **06 33 41.7 +3.0**
VOIR 117.63 319 ⇑PKIKP **PKiKP** **06 33 41.7 +3.0**
CCAR **Cane Creek** 117.63 55 **PKPdf** **06 33 38.1 -0.8**
LCAR **Lake Charles** 117.65 52 **PKPdf** **06 33 38.0 -0.9**
SFJD **Kangerlussuaq** 117.68 9 IAMs_20 IAMs_20 07 23 46.5
comp=Z,14μm,21.0s
SFJD **Kangerlussuaq** 117.68 9 *i*P **Pdif** **06 29 49.0 -6.9**
SFJD IAMs_20 IAMs_20 07 15 11.5
comp=Z,33μm,27.4s
H43A **Windswept, Lux** 117.69 42 PKPdf **PKiKP** **06 33 38.9 +0.1**
SZH **Strazhica** 117.78 316 *e*P **PKiKP** **06 33 40.5 +1.5**
MBAR **Mbarara** 117.87 266 *e*P **Pdif** **06 29 59.8 +1.6**
HDIL **Hopedale** 117.88 47 IAMs_20 IAMs_20 07 25 34.8
comp=Z,15μm,20.0s
HDIL **Hopedale** 117.88 47 P **PKiKP** **06 33 40.4 +1.2**
baz=287
HDIL **Hopedale** 117.88 47 PKiKP **PKPdf** **06 33 38.1 -1.1**
baz=287
ARR **Arges** 117.92 319 ⇑P **PKiKP** **06 33 41.9 +2.6**
SKAR **Skarslia** 117.96 339 *e*Pdif **Pdif** **06 29 57.5 +0.1**
SKAR *e*PP **PP** **06 34 54.3 +1.2**
SKAR *e*PS **PS** **06 44 37.8 -1.8**
P43A **Skaggs, Pawnee** 117.97 48 P **PKiKP** **06 33 40.1 +0.7**
baz=286,SNR=16
KOLS **Kolonicke sedl** 117.99 323 *e*PKIKP **PKiKP** **06 33 41.4 +2.2**
EFI **East Falkland** 118.06 161 **PKiKP** **06 33 39.9 +0.6**
EFI **East Falkland** 118.06 161 PKIKP **PKiKP** **06 33 39.9 +0.6**
CJR **Cluj-Napoca** 118.08 320 ⇑P **PKiKP** **06 33 41.5 +2.0**
CJR **Cluj-Napoca** 118.08 320 ⇑PKIKP **PKiKP** **06 33 41.5 +2.0**
CBBR **Cluj-Babes-Bol** 118.09 321 ⇑P **PKiKP** **06 33 42.1 +2.6**
UZH **Uzhgorod** 118.11 323 *e*P **Pdif** **06 30 03.0 +4.8**
UZH *e* 06 33 46.0
UZH *e* 06 33 57.7
UZH *e* 06 34 00.1
UZH *e* 06 40 27.5
UZH *i* 06 44 33.0
TRPA **Tarpa** 118.17 322 ⇓P **PKiKP** **06 33 40.0 +0.5**
143A **Socs Landing,** 118.18 56 P **PKiKP** **06 33 40.5 +0.5**
baz=282,SNR=6.2
KONO **Kongsberg** 118.20 338 *e*Pdif **Pdif** **06 29 59.6 +1.2**
KONO *e*PP **PP** **06 34 54.4 -0.3**
KONO *e*PS **PS** **06 44 41.1 -0.6**
HYA **Hoyanger** 118.34 340 *e*PP **PP** **06 34 54.5 -1.1**
HYA *e*PS **PS** **06 44 41.9 -0.8**
L44A **Lake County Fo** 118.36 45 IAMs_20 IAMs_20 07 17 47.4
comp=Z,24μm,22.0s
L44A **Lake County Fo** 118.36 45 PKiKP **PKPdf** **06 33 39.0 -1.0**
baz=289
STHS **Stebnicka Huta** 118.39 324 *e*PKIKP **PKiKP** **06 33 41.1 +1.1**
FOO **Floro** 118.39 341 *e*Pdif **Pdif** **06 29 60.0 +0.8**
FOO *e*PP **PP** **06 34 56.0 +0.1**
FOO *e*PS **PS** **06 44 42.0 -1.2**
FOO *e*SS SS 06 51 11.7 +3.7
DIM **Dimitrovgrad** 118.46 315 *e*P **PKiKP** **06 33 41.2 +0.9**
CRVS **Cervenica-Dubn** 118.49 323 *e*PKIKP **PKiKP** **06 33 41.3 +1.1**
DEL **Delary** 118.49 333 *e*P **PKiKP** **06 33 40.0 +0.1**
M44A **Midewin, Midew** 118.52 46 **PKPdf** **06 33 40.1 -0.4**
M44A **Midewin, Midew** 118.52 46 P **PKiKP** **06 33 41.8 +1.4**
baz=289
GNAR **Gosnell** 118.57 52 **PKiKP** **06 33 41.6 +0.9**
O44A **Mansfield** 118.60 47 P **PKiKP** **06 33 41.0 +0.3**
baz=288,SNR=17
DRGR 118.61 321 ⇑P **PKiKP** **06 33 42.4 +1.8**
DRGR 118.61 321 ⇑PKIKP **PKiKP** **06 33 42.4 +1.8**
S44A **Carbondale** 118.71 50 P **PKiKP** **06 33 41.2 +0.3**
baz=286,SNR=5.2
RDO **Rodhopi** 118.75 314 **PKPdf** **06 33 40.6 -0.2**
DY2G **Dye2** 118.76 7 *e*P **Pdif** **06 29 53.3 -7.8**
DY2G IAMs_20 IAMs_20 07 19 42.5
comp=Z,42μm,23.9s
BSD **Bornholm Skovb** 118.81 332 *i*P **Pdif** **06 29 57.6 -3.6**
BSD IAMs_20 IAMs_20 07 17 22.4
comp=Z,36μm,34.2s
OJC **Ojcow** 118.85 325 *e*PKPdf **PKPdf** **06 33 39.8 -1.0**
OJC *e*PP **PP** **06 34 59.7 +0.1**
OJC *e*L L 07 23 55.0
comp=Z,45μm,24.2s
OJC **Ojcow** 118.85 325 PKPdf **PKPdf** **06 33 40.0 -0.8**
OJC **Ojcow** 118.85 325 PKIKP **PKPdf** **06 33 40.0 -0.8**
DEV **Deva** 118.85 320 ⇑P **PKiKP** **06 33 42.9 +1.9**
DEV **Deva** 118.85 320 ⇑PKIKP **PKiKP** **06 33 42.9 +1.9**
SUE **Sulen** 118.89 341 *e*Pdif **Pdif** **06 30 01.8 +0.4**
SUE *e*PP **PP** **06 34 59.3 0.0**
SUE *e*PS **PS** **06 44 47.6 0.0**
344A **Westbrook Farm** 118.98 57 P **PKPdf** **06 33 41.4 -0.2**
baz=281,SNR=11
VBMS **Vicksburg** 119.01 57 IAMs_20 IAMs_20 07 18 05.7
comp=Z,15μm,22.0s
VBMS **Vicksburg** 119.01 57 P **PKiKP** **06 33 42.2 +0.5**
baz=282
VBMS **Vicksburg** 119.01 57 PKiKP **PKPdf** **06 33 40.7 -0.9**
baz=282
ODD1 **Odda** 119.10 339 *e*Pdif **Pdif** **06 30 02.5 +0.1**
ODD1 *e*PP **PP** **06 35 01.2 +0.3**
ODD1 *e*PS **PS** **06 44 48.6 -1.2**
ODD1 *e*SS SS 06 51 23.1 +5.7
GZR **Gura Zlata** 119.13 319 ⇑P **PKiKP** **06 33 42.2 +0.6**
GZR **Gura Zlata** 119.13 319 ⇑P **PKKPbc** **06 43 55.9 -0.7**
GZR **Gura Zlata** 119.13 319 ⇑PKIKP **PKiKP** **06 33 42.2 +0.6**
SRE **Strehaia** 119.13 318 ⇑P **PKiKP** **06 33 43.6 +2.0**
SRE **Strehaia** 119.13 318 ⇑PKIKP **PKiKP** **06 33 43.6 +2.0**
RZN **Rozhen** 119.16 315 *e*P **PKiKP** **06 33 42.8 +0.9**
BER **Bergen** 119.20 340 *e*Pdif **Pdif** **06 30 02.6 -0.2**
BER *e*PP **PP** **06 35 02.4 +0.9**
BER *e*PS **PS** **06 44 50.3 -0.2**
BER *e*SS SS 06 51 21.5 +3.0
E46A **Sault Ste Mari** 119.23 39 **PKPdf** **06 33 41.5 -0.1**
E46A **Sault Ste Mari** 119.23 39 P **PKiKP** **06 33 42.3 +0.6**
baz=294
OLIL **Olney** 119.29 49 **PKPdf** **06 33 40.9 -1.1**
OLIL **Olney** 119.29 49 P **PKiKP** **06 33 42.8 +0.8**
baz=287,SNR=11
T45B **Paducah** 119.36 51 P **PKiKP** **06 33 43.1 +0.9**
baz=286,SNR=11
OXF **Oxford** 119.40 54 **PKPdf** **06 33 41.9 -0.4**
OXF IAMs_20 IAMs_20 07 18 58.9
comp=Z,23μm,20.0s
OXF **Oxford** 119.40 54 PKIKP **PKPdf** **06 33 41.9 -0.4**
OXF **Oxford** 119.40 54 PKiKP **PKPdf** **06 33 41.2 -1.1**
baz=284
W45A **Hickory Valley** 119.42 53 P **PKPdf** **06 33 42.2 -0.2**
baz=284
Y45A **Yeager Farm, C** 119.45 54 P **PKiKP** **06 33 42.8 +0.3**
baz=284,SNR=12
PUNG **Punghina** 119.45 318 ⇑P **PKiKP** **06 33 43.8 +1.6**
SIRR **Siria** 119.49 321 ⇑P **PKiKP** **06 33 43.0 +0.8**
SIRR **Siria** 119.49 321 ⇑P **PKKPbc** **06 43 53.2 -2.0**
CCIG **Comitan** 119.50 75 **PKiKP** **06 33 43.3 0.0**
BLS5 **Blasjo** 119.51 339 *e*Pdif **Pdif** **06 30 05.5 +1.2**
BLS5 *e*PP **PP** **06 35 03.9 +0.1**
BLS5 *e*SP SP 06 44 47.5 +1.4
SFIN **Lafayette** 119.53 47 **PKiKP** **06 33 42.4 0.0**
SFIN **Lafayette** 119.53 47 P **PKiKP** **06 33 43.0 +0.6**
baz=289,SNR=12
SFIN **Lafayette** 119.53 47 PKiKP **PKPdf** **06 33 41.7 -0.7**
baz=289
L46A **Eue Claire** 119.55 45 P **PKiKP** **06 33 42.5 0.0**
baz=290
L46A P **PKiKP** **06 33 42.5 0.0**
baz=290
HOMB **Homborsund** 119.56 337 *e*Pdif **Pdif** **06 30 05.4 +0.9**
HOMB *e*PP **PP** **06 35 04.1 0.0**
HOMB *e*PS **PS** **06 44 52.3 -1.5**
HOMB *e*SS SS 06 51 22.1 -1.1
HERR **Herculane** 119.56 319 ⇑P **PKPdf** **06 33 42.1 -0.2**
HERR **Herculane** 119.56 319 ⇓P **PKKPbc** **06 43 55.3 +0.4**
DJES **Djerdap** 119.58 319 ⇑P **PKiKP** **06 33 43.2 +0.8**
DJES **Djerdap** 119.58 319 ⇑P **PKKPbc** **06 43 54.8 0.0**
COP **Copenhagen** 119.61 333 *i*P **Pdif** **06 30 01.8 -2.9**
COP IAMs_20 IAMs_20 07 18 04.1
comp=Z,57μm,32.6s
GLMI **Grayling** 119.65 41 **PKPdf** **06 33 42.2 -0.3**
GLMI IAMs_20 IAMs_20 07 22 33.1
comp=Z,21μm,21.0s
GLMI **Grayling** 119.65 41 PKiKP **PKPdf** **06 33 41.7 -0.8**
baz=293
HOPE **Hope Point** 119.74 176 **PKiKP** **06 33 42.6 +0.2**
HOPE **Hope Point** 119.74 176 PKIKP **PKiKP** **06 33 42.6 +0.2**
HOPE MLR MLR
comp=Z,25μm,19.0s
BZS **Buzias** 119.78 320 ⇑P **PKiKP** **06 33 43.0 +0.2**
BZS **Buzias** 119.78 320 ⇑P **PKKPbc** **06 43 53.6 -0.5**
BZS **Buzias** 119.78 320 ⇑PKIKP **PKiKP** **06 33 43.0 +0.2**
PSZ **Piszkesteto** 119.86 323 ⇓P **PKiKP** **06 33 44.0 +1.0**
PSZ **Piszkesteto** 119.86 323 IAMs_20 IAMs_20 07 27 38.2
comp=Z,18μm,22.0s
PSZ **Piszkesteto** 119.86 323 ⇓PKIKP **PKiKP** **06 33 44.0 +1.0**
VTS **Vitosha** 119.86 316 ⇑P **PKiKP** **06 33 43.9 +0.6**
VTS **Vitosha** 119.86 316 **PKPdf** **06 33 42.8 -0.4**
VTS **Vitosha** 119.86 316 ⇑PKIKP **PKiKP** **06 33 43.9 +0.6**
VTS **Vitosha** 119.86 316 *e*P **PKiKP** **06 33 43.5 +0.2**
NVR **Nevrokopi** 119.87 315 P **PKiKP** **06 33 43.3 +0.1**
BLKB **Belogradchik** 119.88 317 ⇑P **PKiKP** **06 33 43.3 +0.2**
BLKB **Belogradchik** 119.88 317 ⇑P **PKKPbc** **06 43 53.4 -0.4**
MMB **Musomiste** 119.89 315 *e*P **PKPdf** **06 33 42.9 -0.2**
LL04 **Puerto Octay** 119.90 145 **PKiKP** **06 33 43.5 +0.3**
OKC **Ostrava-Krasne** 119.97 325 *e*PKIKP **PKPdf** **06 33 41.7 -1.2**
OKC *e* 06 35 10.1
OKC MLR MLR
comp=Z,38μm,24.1s
OKC **Ostrava-Krasne** 119.97 325 *e*PKPDF **PKPdf** **06 33 41.7 -1.2**
OKC *e*PP **PP** **06 35 10.1 +2.8**
OKC *e*PS **PS** **06 45 09.8 +12**
OKC AMS AMS 07 24 10.0
comp=Z,38μm,24.1s
MDVR **Moldovita** 120.06 319 ⇓P **PKiKP** **06 33 43.8 +0.4**
NUUK **Nuuk** 120.11 10 *e*P **Pdif** **06 30 00.5 -6.2**
GOET **G??ttrup** 120.11 336 *i*P **Pdif** **06 30 04.9 -2.0**
J47A **Sunmer** 120.12 43 P **PKPdf** **06 33 43.3 -0.1**
baz=292
J47A P **PKPdf** **06 33 43.3 -0.1**
baz=292
BANR **Banloc** 120.19 320 ⇑P **PKiKP** **06 33 45.9 +2.3**
VYHS **Vyhne** 120.22 324 *e*PKIKP **PKiKP** **06 33 44.4 +0.8**
WVT **Waverly** 120.24 52 **PKPdf** **06 33 43.8 -0.1**
WVT **Waverly** 120.24 52 PKIKP **PKPdf** **06 33 43.8 -0.1**
WVT **Waverly** 120.24 52 P **PKPdf** **06 33 42.2 -1.7**
baz=286
WVT **Waverly** 120.24 52 PKiKP **PKPdf** **06 33 42.8 -1.0**
baz=286
KKB **Krupnik** 120.24 315 *e*P **PKPdf** **06 33 43.5 -0.2**
MORC **Moravsky Berou** 120.34 326 ⇑P **PKiKP** **06 33 45.0 +1.2**
MORC **Moravsky Berou** 120.34 326 **PKPdf** **06 33 43.7 0.0**
MORC **Moravsky Berou** 120.34 326 ⇑PKIKP **PKiKP** **06 33 45.0 +1.2**
MORC **Moravsky Berou** 120.34 326 *e*PKP **PKiKP** **06 33 44.4 +0.6**
MORC *e*PP **PP** **06 35 08.5 -1.4**
MORC *e*PKKP **PKKPab** **06 43 49.9 -2.2**
MORC *e*SP SP 06 44 58.4 +4.2
MORC *e*SS SS 06 52 26.9 +53
ANGG **Ammassalik, Gr** 120.35 3 IAMs_20 IAMs_20 07 21 46.9
comp=Z,21μm,22.0s
PLAL **Pickwick Lake** 120.35 53 **PKPdf** **06 33 42.8 -1.4**
N47A **Urbana** 120.37 46 P **PKPdf** **06 33 43.1 -0.9**
baz=290,SNR=19
N47A P **PKPdf** **06 33 43.1 -0.9**
baz=290,SNR=19
MAUC **Maruska** 120.38 325 *e*PKPDF **PKPdf** **06 33 42.5 -1.3**
MAUC *e*PP **PP** **06 35 12.8 +2.6**
MAUC *e*PKKP **PKKPbc** **06 43 52.5 +0.4**
MAUC *e*PS **PS** **06 45 01.0 -0.8**
MAUC AMS AMS 07 24 20.0
comp=Z,60μm,23.3s
KSP **Ksiaz** 120.48 327 *e*PKPdf **PKiKP** **06 33 44.7 +0.7**
KSP *e*PP **PP** **06 35 13.5 +2.7**
KSP *e*L L 07 25 28.9
comp=Z,33μm,23.8s
MUD **Monsted U'grnd** 120.52 335 *i*P **Pdif** **06 30 05.8 -2.9**
MUD IAMs_20 IAMs_20 07 27 38.9
comp=Z,34μm,20.3s
BOVS **Bovan** 120.52 318 ⇑P **PKiKP** **06 33 44.5 +0.2**
T47A **Sharon Grove** 120.56 50 **PKPdf** **06 33 44.1 -0.4**
T47A **Sharon Grove** 120.56 50 P **PKiKP** **06 33 44.7 +0.1**
baz=287,SNR=40
KRLC **Kraliky** 120.61 326 *e*PKIKP **PKPdf** **06 33 43.4 -0.8**
KRLC *e* 06 35 15.0
KRLC *e*PS **PS** **06 45 11.0 +7.2**
KRLC MLR MLR
comp=Z,40μm,23.6s
KRLC **Kraliky** 120.61 326 *e*PKPDF **PKPdf** **06 33 43.4 -0.8**
KRLC *e*PP **PP** **06 35 15.0 +3.2**
KRLC *e*PKKP **PKKPbc** **06 43 51.2 -0.1**
KRLC *e*PS **PS** **06 45 11.0 +7.2**
KRLC AMS AMS 07 24 30.0
comp=Z,40μm,23.6s
OSTC **Ostas** 120.67 327 *e*PKPDF **PKPdf** **06 33 43.9 -0.4**
OSTC *e*PP **PP** **06 35 15.9 +3.8**
OSTC *e*PKKP **PKKPab** **06 43 50.7 +0.1**
OSTC *e*PS **PS** **06 45 03.6 -0.7**

OSTC AMS AMS 07 24 20.0
comp=Z,41µm,25.6s
DPC Dobruska-Polom 120.72 327 *e*PKIKP **PKPdf 06 33 43.9 -0.5**
DPC *e* 06 35 16.7
DPC *e*PS **PS 06 45 02.9 -1.9**
DPC MLR MLR
comp=Z,42µm,24.6s
DPC Dobruska-Polom 120.72 327 *e*PKPDF **PKPdf 06 33 43.9 -0.5**
DPC *e*PP **PP 06 35 16.7 +4.2**
DPC *e*PKKP **PKKPbc 06 43 50.7 -0.2**
DPC *e*PS **PS 06 45 02.9 -1.9**
DPC AMS AMS 07 24 20.0
comp=Z,42µm,24.6s
JAVC Velka Javorina 120.72 325 *e*PKP **PKiKP 06 33 46.6 +2.0**
JAVC *e*PP **PP 06 35 10.8 -1.8**
JAVC *e*PKKP **PKKPbc 06 43 50.7 -0.1**
JAVC *e*SS SS 06 52 34.6 +55
CHVC Chvalec 120.74 327 *e*PKPDF **PKPdf 06 33 43.2 -1.3**
CHVC *e*PP **PP 06 35 16.1 +3.5**
CHVC *e*PKKP **PKKPbc 06 43 50.6 -0.2**
CHVC *e*PS **PS 06 45 02.4 -2.5**
CHVC AMS AMS 07 24 30.0
comp=Z,37µm,25.0s
VAY Valandovo 120.80 315 *i* P **PKPdf 06 33 44.7 -0.1**
WCI Wyandotte Cave 120.80 49 **PKPdf 06 33 44.6 -0.3**
WCI Wyandotte Cave 120.80 49 IAMs_20 IAMs_20 07 21 13.3
comp=Z,22µm,21.0s
WCI Wyandotte Cave 120.80 49 PKIKP **PKPdf 06 33 44.6 -0.3**
WCI Wyandotte Cave 120.80 49 P **PKPdf 06 33 44.7 -0.2**
baz=288,SNR=31
WCI Wyandotte Cave 120.80 49 PKiKP **PKPdf 06 33 44.2 -0.7**
baz=288
Z47A Carrollton 120.80 55 P **PKPdf 06 33 44.3 -0.7**
baz=284
UPC Upice 120.81 327 *e*PKIKP **PKPdf 06 33 44.3 -0.3**
UPC *e* 06 35 16.9
UPC *e*PS **PS 06 45 03.5 -1.9**
UPC MLR MLR
comp=Z,40µm,24.8s
UPC Upice 120.81 327 *e*PKPDF **PKPdf 06 33 44.3 -0.3**
UPC *e*PP **PP 06 35 16.9 +3.9**
UPC *e*PKKP **PKKPbc 06 43 50.4 -0.1**
UPC *e*PS **PS 06 45 03.5 -1.9**
UPC AMS AMS 07 24 30.0
comp=Z,40µm,24.8s
SRO Srobarova 120.85 323 *e*PKIKP **PKiKP 06 33 45.9 +1.1**
L48A N Adams 120.87 44 P **PKiKP 06 33 45.0 -0.1**
baz=292
L48A P **PKiKP 06 33 45.0 -0.1**
baz=292
O48B Farmland 120.97 46 P **PKPdf 06 33 45.0 -0.1**
baz=290,SNR=24
O48B Farmland 120.97 46 PKiKP **PKPdf 06 33 44.3 -0.9**
baz=290
IDI Anoyia 120.97 308 ⇑P **PKiKP 06 33 47.8 +2.3**
IDI Anoyia 120.97 308 ⇑P **PKKPbc 06 43 50.5 +1.0**
IDI Anoyia 120.97 308 P **PKPdf 06 33 45.4 0.0**
BORG Borgarnes 120.98 355 **PKiKP 06 33 45.4 +0.9**
BORG Borgarnes 120.98 355 PKIKP **PKiKP 06 33 45.4 +0.9**
P48A Milroy 121.04 47 P **PKPdf 06 33 45.3 0.0**
baz=290,SNR=18
P48A P **PKPdf 06 33 45.3 0.0**
baz=290,SNR=18
PLCA Paso Flores 121.07 146 PKP **PKiKP 06 33 45.9 +0.2**
comp=Z,73nm,0.7s,baz=229,slow=2.5,SNR=182
PLCA PKKPbc **PKKPbc 06 43 49.2 -0.2**
comp=Z,12nm,0.8s,baz=74,slow=8.1,SNR=9.4
PLCA Paso Flores 121.07 146 **PKPdf 06 33 44.8 -0.7**
VRAC Vranov 121.11 326 ⇑P **PKiKP 06 33 46.4 +1.1**
VRAC Vranov 121.11 326 ⇑P **PKKPbc 06 43 48.5 -0.9**
VRAC Vranov 121.11 326 ⇑PKIKP **PKiKP 06 33 46.4 +1.1**
VRAC Vranov 121.11 326 *e*PKP **PKiKP 06 33 46.1 +0.8**
VRAC *e*PP **PP 06 35 13.0 -2.2**
VRAC *e*PKKP **PKKPab 06 43 48.2 -0.5**
VRAC *e*SP SP 06 45 06.9 +5.9
VRAC *e* 06 51 16.3
VRAC *e*SS SS 06 52 44.0 +60
V48A Smith Brothers 121.13 52 **PKPdf 06 33 44.9 -0.7**
V48A Smith Brothers 121.13 52 P **PKPdf 06 33 45.3 -0.3**
baz=286,SNR=19
FRGS Fruska Gora 121.13 320 ⇑P **PKiKP 06 33 46.2 +0.7**
FRGS Fruska Gora 121.13 320 ⇑P **PKKPbc 06 43 51.7 +2.5**
FRGS Fruska Gora 121.13 320 *e*P **PKPdf 06 33 45.3 -0.1**
APG El Apazote 121.15 76 PKP **PKPdf 06 33 46.4 -0.1**
comp=Z,35nm,1.0s,baz=317,slow=6.8,SNR=20
APG PP **PP 06 35 16.5 -0.6**
comp=Z,9.1nm,0.9s,baz=260,slow=9.3,SNR=1.2
I49A Point Hope 121.18 41 **PKPdf 06 33 44.6 -0.8**
I49A Point Hope 121.18 41 P **PKiKP 06 33 46.1 +0.5**
baz=294
I49A P **PKiKP 06 33 46.1 +0.5**
baz=294
MODS Modra-Piesok 121.19 324 *e*PKIKP **PKiKP 06 33 46.7 +1.2**
AAM Ann Arbor 121.27 44 **PKPdf 06 33 45.3 -0.3**
AAM IAMs_20 IAMs_20 07 23 17.3
comp=Z,22µm,22.0s
AAM Ann Arbor 121.27 44 PKIKP **PKPdf 06 33 45.3 -0.3**
AAM MLR MLR
comp=Z,22µm,22.0s
AAM Ann Arbor 121.27 44 P **PKPdf 06 33 45.5 -0.2**
baz=293
AAM Ann Arbor 121.27 44 PKiKP **PKPdf 06 33 44.2 -1.5**
baz=293
LIT Litokhoron 121.28 314 **PKPdf 06 33 45.7 -0.1**
LIT Litokhoron 121.28 314 PKIKP **PKPdf 06 33 45.7 -0.1**
X48A Hartselle 121.31 53 P **PKPdf 06 33 45.1 -0.9**
baz=286,SNR=9.5
GO06 Curarrehue 121.31 144 **PKiKP 06 33 46.6 +0.4**
SKO Skopje 121.34 316 *i* P **PKiKP 06 33 46.5 +0.5**
KRUC Moravsky 121.35 325 *e*PKP **PKiKP 06 33 46.3 +0.5**
KRUC *e*PP **PP 06 35 15.5 -1.3**
KRUC *e*PKKP **PKKPab 06 43 47.2 -0.5**
KRUC *e*SP SP 06 45 08.3 +5.2
KRUC *e*SS SS 06 52 47.1 +60
ZST Bratislava 121.38 324 *e*PKIKP **PKiKP 06 33 46.8 +1.0**
MORH Mrgy, Hungar 121.40 322 ⇑P **PKiKP 06 33 46.7 +0.8**
MORH Mrgy, Hungar 121.40 322 ⇑P **PKKPbc 06 43 47.3 -0.8**
N49A Columbus Grove 121.42 45 P **PKPdf 06 33 46.0 0.0**
baz=291,SNR=32
N49A P **PKPdf 06 33 46.0 0.0**
baz=291,SNR=32
DIVS Divibare 121.47 319 **PKiKP 06 33 46.3 0.0**
DIVS Divibare 121.47 319 *e*P **PKPdf 06 33 45.2 -0.9**
P49A Miami Univ. Ec 121.53 47 **PKPdf 06 33 45.4 -0.8**
P49A IAMs_20 IAMs_20 07 25 25.5
comp=Z,17µm,19.0s
P49A Miami Univ. Ec 121.53 47 P **PKPdf 06 33 45.8 -0.5**
baz=290,SNR=23
P49A Miami Univ. Ec 121.53 47 PKiKP **PKPdf 06 33 45.8 -0.5**
baz=290
PVCC Panska Ves 121.57 328 *e*PKIKP **PKPdf 06 33 45.7 -0.3**
PVCC *e* 06 35 22.8
PVCC *e*PS **PS 06 45 10.8 -1.4**
PVCC Panska Ves 121.57 328 *e*PKPDF **PKPdf 06 33 45.7 -0.3**
PVCC *e*PP **PP 06 35 22.8 +4.6**
PVCC *e*PS **PS 06 45 10.8 -1.4**
PVCC AMS AMS 07 19 40.0
comp=Z,44µm,32.7s
TEKS Tekeris 121.58 320 *e*P **PKPdf 06 33 43.6 -2.6**
O49A Covington 121.58 46 **PKPdf 06 33 45.7 -0.7**
O49A Covington 121.58 46 P **PKPdf 06 33 46.2 -0.1**
baz=291,SNR=24
O49A P **PKPdf 06 33 46.2 -0.1**
baz=291,SNR=24
R49A Shelbyville 121.61 48 **PKPdf 06 33 45.2 -1.3**
R49A Shelbyville 121.61 48 P **PKiKP 06 33 46.6 0.0**
baz=289
R49A P **PKiKP 06 33 46.6 0.0**
baz=289
IMMV Iera Moni Meta 121.63 308 P **PKPdf 06 33 46.6 0.0**
PETF Flores 121.64 74 **PKPdf 06 33 46.9 -0.2**
LRAL Lakeview Retre 121.71 55 **PKPdf 06 33 45.9 -0.9**
LRAL IAMs_20 IAMs_20 07 21 02.1
comp=Z,20µm,21.0s
LRAL Lakeview Retre 121.71 55 P **PKPdf 06 33 46.4 -0.4**
baz=285,SNR=15
LRAL Lakeview Retre 121.71 55 PKiKP **PKPdf 06 33 46.1 -0.7**
baz=285
U49A Red Boiling Sp 121.71 51 **PKPdf 06 33 46.1 -0.6**
U49A Red Boiling Sp 121.71 51 P **PKPdf 06 33 46.3 -0.4**
baz=288,SNR=19
GVDS Gavdos 121.72 307 P **PKPdf 06 33 46.6 -0.2**
GVD Gavdhos 121.72 307 P **PKiKP 06 33 46.9 0.0**
TREC Trest 121.74 326 *e*PKIKP **PKPdf 06 33 46.4 0.0**
TREC *e* 06 35 22.2
TREC *e*PS **PS 06 45 10.9 -2.9**
TREC MLR MLR
comp=Z,57µm,24.0s
TREC Trest 121.74 326 *e*PKPDF **PKPdf 06 33 46.4 0.0**
TREC *e*PP **PP 06 35 22.2 +2.8**
TREC *e*PS **PS 06 45 10.9 -2.9**
TREC AMS AMS 07 25 00.0
comp=Z,57µm,24.0s
GOPC GO Pecny, Ondr 121.79 327 *e*PKIKP **PKPdf 06 33 46.4 -0.1**
GOPC *e* 06 35 23.5
GOPC *e*PS **PS 06 45 11.3 -2.9**
GOPC *e*PS **PS 06 45 11.7 -2.5**
GOPC MLR MLR
comp=Z,30µm,22.9s
GOPC GO Pecny, Ondr 121.79 327 *e*PKPDF **PKPdf 06 33 46.4 -0.1**
GOPC *e*PP **PP 06 35 23.5 +3.7**
GOPC *e*PKKP **PKKPbc 06 43 46.9 +0.1**
GOPC *e*PS **PS 06 45 11.3 -2.9**
GOPC AMS AMS 07 25 00.0
comp=Z,30µm,22.9s
PRU Pruhonice 121.88 327 *e*PKIKP **PKPdf 06 33 45.6 -1.0**
PRU *e* 06 35 24.4
PRU *e*PS **PS 06 45 13.4 -1.6**
PRU Pruhonice 121.88 327 *e*PKPDF **PKPdf 06 33 45.6 -1.0**
PRU *e*PP **PP 06 35 24.4 +4.1**
PRU *e*PKKP **PKKPbc 06 43 46.5 +0.1**
PRU *e*PS **PS 06 45 13.4 -1.6**
PRU AMS AMS 07 20 00.0
comp=Z,43µm,31.2s
BBLS Lazići 121.95 319 *e*P **PKiKP 06 33 47.4 +0.2**
CLL Collm 121.95 329 *i* PKIKP **PKiKP 06 33 47.4 +0.5**
CLL pmax pmax
comp=Z,77nm,0.8s
CLL MLR MLR
comp=Z,43µm,20.9s
CLL Collm 121.95 329 *e*Pdif **Pdif 06 30 16.0 +0.7**
CLL *i* PKPdf **PKiKP 06 33 47.4 +0.5**
comp=Z,77nm,0.8s
CLL *e*PP **PP 06 35 21.0 +0.3**
CLL *e*SKPdf **SKPdf 06 37 18.0 0.0**
CLL *e*PPP PPP 06 38 02.0
CLL *e*pPPP 06 38 06.0
CLL *e*x x 06 39 30.0
CLL *e*PKKPbc **PKKPbc 06 43 46.0 -0.2**
CLL *e*sPKKPbc 06 44 03.0
CLL *e*PKKPdf **PKKPdf 06 44 23.0 +1.3**
CLL *e*PS **PS 06 45 15.0 -0.5**
CLL *e*PPS PPS 06 46 36.0
CLL *e*x x 06 47 20.0
CLL *e*PKKSbc PKKSbc 06 47 34.0 -3.1
CLL *e*x x 06 47 42.0
CLL *e*SKKPdf **SKKPdf 06 47 54.0 +1.1**
CLL *e*x x 06 51 12.0
CLL *e*(SS) 06 51 36.0
CLL *e*x x 06 52 48.0
CLL *e*SSS SSS 06 56 54.0
CLL *e*x x 07 01 18.0
CLL *e*x x 07 04 36.0
CLL LmV 07 27 00.0
comp=Z,43µm,20.9s
Y49A Blount Mountai 121.97 54 P **PKiKP 06 33 47.5 +0.1**
baz=286,SNR=13
M50A Fremont 122.04 44 P **PKiKP 06 33 47.4 +0.1**
baz=293,SNR=17
M50A P **PKiKP 06 33 47.4 +0.1**
baz=293,SNR=17
ANKY Antikythira Is 122.05 309 P **PKiKP 06 33 47.8 +0.3**
BI05 Punta Hualpn 122.08 141 **PKiKP 06 33 47.8 +0.2**
RUDO Rudo 122.08 319 *e*P **PKiKP 06 33 47.5 +0.1**
RONA Rosalia, Austr 122.10 324 *e*P **PKiKP 06 33 48.0 +0.7**
comp=Z,26nm,1.0s,SNR=18
RONA *e*P **PKKPbc 06 43 45.4 -0.2**
comp=Z,21nm,0.8s
RONA *e*S **SKKPbc 06 47 24.7 -6.4**
comp=Z,21nm,1.9s
OHR Ohrid 122.11 315 *i* P **PKiKP 06 33 48.3 +0.7**
BRAL Brewton 122.12 57 **PKiKP 06 33 48.1 +0.3**
BRAL IAMs_20 IAMs_20 07 21 53.2
comp=Z,18µm,21.0s
BRAL Brewton 122.12 57 P **PKiKP 06 33 48.6 +0.8**
baz=284
BRAL Brewton 122.12 57 PKiKP **PKiKP 06 33 48.0 +0.2**
baz=284
BCI Bajram Curri 122.13 317 *i* P **PKiKP 06 33 47.5 -0.1**
PHP Peshkopia 122.14 316 P **PKPdf 06 33 47.4 -0.1**
PHP Peshkopia 122.14 316 *i* P **PKiKP 06 33 47.5 -0.1**
SERG Sergoula 122.18 312 P **PKiKP 06 33 48.7 +0.9**
NEST Nestorio 122.20 315 P **PKiKP 06 33 47.9 +0.1**
CONA Conrad Observa 122.23 324 *e*P **PKiKP 06 33 48.0 +0.3**
comp=Z,27nm,1.2s,SNR=15
CONA *i* P **PKKPbc 06 43 44.7 -0.4**
comp=Z,19nm,0.8s
CONA *e*S **SKKPbc 06 47 27.5 -3.2**
comp=Z,17nm,1.4s
KLV Kalavryta, Ach 122.23 312 P **PKPdf 06 33 47.8 0.0**
R50A Paris 122.24 48 **PKPdf 06 33 47.3 -0.4**
R50A Paris 122.24 48 P **PKPdf 06 33 47.3 -0.4**
baz=290,SNR=18
R50A P **PKPdf 06 33 47.3 -0.4**
baz=290,SNR=18
T50A Nancy 122.27 50 P **PKiKP 06 33 47.9 -0.1**
baz=289
T50A P **PKiKP 06 33 47.9 -0.1**
baz=289
KBN Korca 122.31 315 *i* P **PKPdf 06 33 47.5 -0.3**
W50A Signal Mountai 122.47 52 **PKPdf 06 33 47.9 -0.4**
W50A Signal Mountai 122.47 52 P **PKiKP 06 33 48.5 +0.1**
baz=287,SNR=25
ACSO Alum Creek Sta 122.53 46 IAMs_20 IAMs_20 07 19 28.7
comp=Z,22µm,22.0s
ACSO Alum Creek Sta 122.53 46 P **PKPdf 06 33 47.6 -0.6**
baz=292,SNR=36
ACSO Alum Creek Sta 122.53 46 PKiKP **PKPdf 06 33 47.6 -0.6**
baz=292
UPM Unac-Piva 122.56 318 *e*P **PKiKP 06 33 48.5 -0.1**
250A Grady 122.58 56 P **PKiKP 06 33 48.9 +0.2**
baz=284,SNR=12
A052A Srbac 122.61 321 *e*P **PKPdf 06 33 47.9 -0.2**
LSK Leskovik 122.62 314 P **PKiKP 06 33 48.8 +0.2**
LSK Leskovik 122.62 314 *i* P **PKiKP 06 33 49.1 +0.5**
CKRC Cesky Krumlov 122.64 326 *e*PKPDF **PKPdf 06 33 47.4 -0.8**
CKRC *e*PP **PP 06 35 29.6 +4.0**
CKRC *e*PKKP **PKKPbc 06 43 42.8 -0.7**
CKRC *e*PS **PS 06 45 20.9 -1.0**
CKRC AMS AMS 07 25 30.0
comp=Z,52µm,23.6s
PDG Podgorica 122.65 317 ⇑P **PKiKP 06 33 49.0 +0.5**
PDG Podgorica 122.65 317 IAMs_20 IAMs_20 07 30 55.5
comp=Z,19µm,22.0s
TIR Tirane 122.67 316 P **PKKPbc 06 43 45.6 +2.6**
TIR Tirane 122.67 316 **PKiKP 06 33 48.9 +0.3**
TIR IAMs_20 IAMs_20 07 30 22.4
comp=Z,16µm,22.0s
TIR Tirane 122.67 316 PKIKP **PKiKP 06 33 48.9 +0.3**
ITM Ithomi 122.69 311 **PKPdf 06 33 48.6 +0.1**
N51A Ashland 122.69 45 **PKPdf 06 33 48.2 -0.3**
N51A Ashland 122.69 45 P **PKiKP 06 33 48.6 -0.1**
baz=293,SNR=20
N51A P **PKiKP 06 33 48.6 -0.1**
baz=293,SNR=20
Q51A Peebles 122.71 47 P **PKPdf 06 33 48.6 0.0**
baz=291,SNR=18
Q51A P **PKPdf 06 33 48.6 0.0**
baz=291,SNR=18
P51A Williamsport 122.75 46 **PKPdf 06 33 48.0 -0.6**
P51A Williamsport 122.75 46 P **PKiKP 06 33 48.7 -0.1**
baz=292,SNR=22
P51A P **PKiKP 06 33 48.7 -0.1**
baz=292,SNR=22
ARSA Arzberg 122.78 324 *e*P **PKiKP 06 33 49.1 +0.5**
comp=Z,19nm,1.1s,SNR=12
ARSA *i* P **PKKPbc 06 43 42.6 -0.3**
comp=Z,14nm,0.8s
DRME Dracevica, Mon 122.80 317 *e*P **PKiKP 06 33 49.1 +0.3**
NKC Novy Kostel 122.86 328 *e*PKIKP **PKPdf 06 33 47.4 -1.1**
NKC *e* 06 35 31.7
NKC *e*PS **PS 06 45 23.6 -0.1**
NKC MLR MLR
comp=Z,30µm,19.6s
NKC Novy Kostel 122.86 328 *e*PKPDF **PKPdf 06 33 47.4 -1.1**
NKC *e*PP **PP 06 35 31.7 +4.7**
NKC *e*PS **PS 06 45 23.6 -0.1**
NKC AMS AMS 07 30 00.0
comp=Z,30µm,19.6s
KHC Kasperske Hory 122.88 327 *e*PKIKP **PKPdf 06 33 48.1 -0.5**
KHC *e* 06 34 02.0
KHC *e* 06 35 31.3
KHC *e*PS **PS 06 45 23.3 -0.6**
KHC MLR MLR
comp=Z,38µm,22.8s
KHC Kasperske Hory 122.88 327 *e*PKPDF **PKPdf 06 33 48.1 -0.5**
KHC pPKP **pPKPdf 06 34 02.0 -2.3**
KHC *e*PP **PP 06 35 31.3 +4.1**
KHC *e*PKKP **PKKPbc 06 43 42.9 +0.3**
KHC *e*PS **PS 06 45 23.3 -0.6**
KHC AMS AMS 07 25 40.0
comp=Z,38µm,22.8s
PYL PYLOS 122.92 310 P **PKPdf 06 33 49.0 0.0**
BRY Bratogost 122.93 318 *e*P **PKPdf 06 33 48.1 -0.9**
GEC2 GERESS Array S 122.97 326 **PKiKP 06 33 49.1 0.0**
GERES GERESS Array B 122.97 326 PKP **PKPdf 06 33 48.9 0.0**
comp=Z,39nm,0.7s,baz=79,slow=2.1,SNR=75
GERES PKKPbc **PKKPab 06 43 40.3 -0.5**
comp=Z,6.2nm,0.7s,baz=204,slow=2.9,SNR=14
GERES PKKP **PKKPdf 06 44 18.4 -1.5**
comp=Z,4.4nm,0.7s,baz=194,slow=2.8,SNR=4.6
GERES GERESS Array B 122.97 326 **PKPdf 06 33 48.5 -0.3**
BLY Banja Luka 122.98 321 *e*P **PKiKP 06 33 49.0 -0.1**
S51A Beattyville 123.01 49 P **PKPdf 06 33 49.0 -0.1**
baz=290,SNR=47
S51A P **PKPdf 06 33 49.0 -0.1**
baz=290,SNR=47
X51A Calhoun 123.01 52 P **PKiKP 06 33 49.5 +0.1**
baz=287
X51A P **PKiKP 06 33 49.5 +0.1**
baz=287
V51A Loudon 123.03 51 P **PKiKP 06 33 49.7 +0.2**
baz=288,SNR=12
A051A Mrakovica 123.03 321 *e*P **PKPdf 06 33 49.0 -0.1**
IGT Igoumenitsa 123.04 314 *i* P **PKiKP 06 33 49.5 +0.1**
NYDR Nydri-Lefkada 123.07 313 P **PKiKP 06 33 49.8 +0.4**
LKD2 Lefkada island 123.08 313 P **PKiKP 06 33 49.8 +0.3**
LKD2 Lefkada island 123.08 313 *i* P **PKiKP 06 33 49.8 +0.3**
Z51A Franklin 123.11 54 **PKPdf 06 33 49.5 0.0**
Z51A Franklin 123.11 54 P **PKiKP 06 33 50.0 +0.3**
baz=286,SNR=38
M52A Chesterland 123.15 44 P **PKiKP 06 33 49.9 +0.3**
baz=294,SNR=10
M52A P **PKiKP 06 33 49.9 +0.3**
baz=294,SNR=10
HCY Herceg Novi 123.15 318 *e*P **PKPdf 06 33 49.1 -0.2**
SADO Sadowa 123.19 39 PKP **PKPdf 06 33 48.8 -0.5**
comp=Z,29nm,0.7s,baz=292,slow=2.7,SNR=18
SADO SKP **SKPdf 06 37 20.4 -0.2**
comp=Z,13nm,1.0s,baz=284,slow=5.9,SNR=2.6
SADO Sadowa 123.19 39 **PKiKP 06 33 49.5 0.0**
MOA Molln 123.19 325 *e*P **PKiKP 06 33 49.8 +0.3**
comp=Z,15nm,1.1s,SNR=14
MOA *e*P **PKKPbc 06 43 40.7 -0.6**
comp=Z,40nm,1.0s
MGRS Mrkonjic Grad 123.20 320 *e*P **PKiKP 06 33 50.0 +0.4**
SOKA Soboth 123.36 324 *e*P **PKiKP 06 33 49.9 0.0**
comp=Z,14nm,1.0s,SNR=22
SOKA *i* P **PKKPbc 06 43 40.4 -0.3**
comp=Z,14nm,1.0s
P52A Corning 123.36 46 IAMs_20 IAMs_20 07 29 04.7
comp=Z,16µm,21.0s
P52A Corning 123.36 46 PKiKP **PKPdf 06 33 49.2 -0.6**
baz=292
O52A Adamsville 123.38 45 P **PKiKP 06 33 50.1 0.0**
baz=293,SNR=16
O52A P **PKiKP 06 33 50.1 0.0**
baz=293,SNR=16
TZTN Tazewell 123.41 50 **PKPdf 06 33 49.6 -0.4**
TZTN Tazewell 123.41 50 P **PKiKP 06 33 50.8 +0.6**
baz=289,SNR=13
TZTN Tazewell 123.41 50 PKiKP **PKPdf 06 33 49.6 -0.4**
baz=289
IVI Ivigtut 123.49 10 **PKiKP 06 33 49.6 0.0**
STON Ston 123.50 318 *e*P **PKPdf 06 33 48.1 -1.8**
Q52A Bidwell 123.51 47 **PKPdf 06 33 49.6 -0.5**
Q52A Bidwell 123.51 47 P **PKiKP 06 33 50.7 +0.3**
baz=292,SNR=12
Q52A P **PKiKP 06 33 50.7 +0.3**
baz=292,SNR=12
TKL Tuckaleechee C 123.52 51 PKP **PKiKP 06 33 50.4 -0.1**
comp=Z,45nm,0.7s,baz=271,slow=5.1,SNR=43
TKL Tuckaleechee C 123.52 51 P **PKiKP 06 33 50.5 +0.1**
baz=289,SNR=25
CRES Cresnjev 123.53 322 *e*P **PKPdf 06 33 48.5 -1.4**
SCHQ Schefferville 123.54 24 PKP **PKiKP 06 33 50.4 +0.5**
comp=Z,30nm,0.6s,baz=337,slow=2.2,SNR=26
SCHQ PKKPbc **PKKPbc 06 43 39.3 -0.8**
comp=Z,12nm,0.5s,baz=134,slow=3.5,SNR=18
W52A Murphy 123.58 52 P **PKiKP 06 33 50.6 0.0**
baz=288,SNR=34
BIGH Upper Bighouse 123.59 343 *e*P **PKiKP 06 33 50.2 +0.3**
V52A Sevierville 123.60 51 P **PKiKP 06 33 50.9 +0.3**
baz=289,SNR=35
BIOA Bad Ischl, Aus 123.63 325 *e*P **PKiKP 06 33 50.5 +0.1**
comp=Z,17nm,0.8s,SNR=7.9
BIOA *e*P **PKKPbc 06 43 38.8 -0.7**
comp=Z,29nm,0.8s
BIOA *e*S **SKKPbc 06 47 28.3 +2.4**
comp=Z,29nm,1.2s
M53A Wt Miller and 123.66 43 PKiKP **PKPdf 06 33 49.6 -0.7**
baz=295
152A Waverly Hall 123.66 55 P **PKiKP 06 33 51.5 +0.7**
baz=286,SNR=22
OBKA Obir 123.73 324 *e*P **PKPdf 06 33 50.2 -0.2**
OBKA Obir 123.73 324 *e*P **PKiKP 06 33 50.6 -0.1**
comp=Z,21nm,1.1s,SNR=9.5
OBKA *e*P **PKKPbc 06 43 38.6 -0.7**
comp=Z,32nm,0.8s
OBKA *i* S **SKKPbc 06 47 23.1 -2.5**
comp=Z,16nm,1.3s
O53A New Philadelph 123.77 45 **PKPdf 06 33 50.7 -0.1**
O53A IAMs_20 IAMs_20 07 29 23.6
comp=Z,18µm,19.0s
O53A New Philadelph 123.77 45 PKiKP **PKPdf 06 33 50.1 -0.5**
baz=294
N53A Lisbon 123.81 44 **PKiKP 06 33 50.9 -0.1**
N53A Lisbon 123.81 44 P **PKiKP 06 33 50.8 -0.1**
baz=294,SNR=40
N53A P **PKiKP 06 33 50.8 -0.1**
baz=294,SNR=40
ML02 Panimavida 123.81 141 **PKiKP 06 33 51.4 +0.3**
BOJS Bojanci 123.82 322 *e*P **PKPdf 06 33 50.1 -0.4**
BOJS Bojanci 123.82 322 *i* Pdiff **Pdif 06 30 23.2 -0.5**
BOJS *i* PKPdf **PKiKP 06 33 51.0 +0.3**
BOJS *e*PKKPbc **PKKPbc 06 43 38.7 0.0**
GRFO Grafenberg 123.82 328 **PKiKP 06 33 51.2 +0.6**
GRFO Grafenberg 123.82 328 PKIKP **PKiKP 06 33 51.2 +0.6**
GRFO MLR MLR
comp=Z,29µm,22.0s
ERPA Erie 123.83 42 IAMs_20 IAMs_20 07 21 38.0
comp=Z,20µm,21.0s
ERPA Erie 123.83 42 PKiKP **PKPdf 06 33 50.0 -0.7**
baz=296
Y52A Lilburn 123.85 53 **PKPdf 06 33 51.0 +0.1**
Y52A Lilburn 123.85 53 P **PKiKP 06 33 52.1 +1.0**
baz=287,SNR=26
Y52A P **PKiKP 06 33 52.1 +1.0**
baz=287,SNR=26
ALLY Alegheny Colle 123.93 43 **PKiKP 06 33 51.0 -0.1**
P53A Whipple 123.94 46 **PKiKP 06 33 51.1 0.0**
P53A Whipple 123.94 46 P **PKiKP 06 33 51.4 +0.2**
baz=293,SNR=32
P53A P **PKiKP 06 33 51.4 +0.2**
baz=293,SNR=32
NRS Narsarsuaq 123.96 8 **PKPdf 06 33 49.5 -0.7**
NRS IAMs_20 IAMs_20 07 24 29.6
comp=Z,17µm,21.0s
NRS Narsarsuaq 123.96 8 PKIKP **PKPdf 06 33 49.6 -0.7**
NRS MLR MLR
comp=Z,17µm,21.0s
R53A Hurricane 123.98 47 P **PKiKP 06 33 51.5 +0.2**
baz=292,SNR=16
R53A P **PKiKP 06 33 51.5 +0.2**
baz=292,SNR=16
LJU Ljubljana 123.98 323 *e*Pdiff **Pdif 06 30 23.4 -1.0**
LJU *i* PKPdf **PKiKP 06 33 51.2 +0.1**
LJU *e*PP **PP 06 35 37.3 +2.6**
LJU *e* 06 36 51.2
LJU *e* 06 38 14.8
LJU *e*PKKPbc **PKKPbc 06 43 37.5 -0.6**
LJU *e*PS **PS 06 45 40.8 +7.1**
LJU *e* 06 53 11.0

KBA	**Koelnbreinsper**	124.13	325	*e*P		PKiKP	06 33 51.4	-0.2
	comp=Z,20nm,0.9s,SNR=19							
KBA				*e*P		PKKPbc	06 43 36.9	-0.8
	comp=Z,20nm,1.0s							
KBA				*e*S		SKKPbc	06 47 20.2	-4.2
	comp=Z,10nm,0.9s							
SCTE	**Santa Cesarea**	124.15	315			PKPdf	06 33 50.8	-0.5
SCTE	**Santa Cesarea**	124.15	315	*i* P		PKiKP	06 33 52.6	+1.0
MCD	**Coleburn Disti**	124.16	342	*e*P		PKPdf	06 33 50.8	+0.1
CEY	**Cerknica**	124.20	323	*e*P		PKPdf	06 33 49.4	-1.9
MYKA	**Terra Mystica**	124.20	324	*i* P		PKPdf	06 33 51.3	0.0
	comp=Z,22nm,1.1s,SNR=12							
MYKA				*i* P		PKKPbc	06 43 37.4	+0.1
	comp=Z,22nm,0.8s							
MYKA				*i* S		SKKPbc	06 47 19.4	-4.7
	comp=Z,25nm,1.1s							
J54A	**Appleton**	124.21	41	P		PKiKP	06 33 51.9	+0.3
	baz=298							
J54A				P		PKiKP	06 33 51.9	+0.3
	baz=298							
V53A	**Saluda**	124.26	51	P		PKiKP	06 33 52.3	+0.3
	baz=289,SNR=29							
V53A				P		PKiKP	06 33 52.3	+0.3
	baz=289,SNR=29							
TGUH	**Tegucigalpa,Un**	124.28	77			PKiKP	06 33 52.8	+0.1
TGUH					IAMs_20	IAMs_20	07 18 21.8	
	comp=Z,21μm,22.0s							
MEDO	**Medina**	124.38	41			PKPdf	06 33 51.3	-0.3
O54A	**Avella**	124.38	45	P		PKiKP	06 33 52.1	0.0
	baz=294,SNR=39							
O54A				P		PKiKP	06 33 52.1	0.0
	baz=294,SNR=39							
CASEE	**Lake Jocassee**	124.39	51	P		PKiKP	06 33 53.4	+1.2
	baz=289,SNR=26							
GOGA	**Godfrey**	124.45	53		IAMs_20	IAMs_20	07 20 01.6	
	comp=Z,20μm,22.0s							
GOGA	**Godfrey**	124.45	53	P		PKPdf	06 33 51.6	-0.4
	baz=287,SNR=16							
GOGA	**Godfrey**	124.45	53	PKiKP		PKPdf	06 33 52.0	-0.1
	baz=287							
UPAO	**U. Pittsburgh**	124.51	44	P		PKiKP	06 33 52.5	+0.3
	baz=295							
CRIN	**San Cristobal**	124.54	79			PKPdf	06 33 52.6	-0.2
Q54A	**Coxs Mills**	124.54	46	P		PKiKP	06 33 52.7	+0.3
	baz=293,SNR=48							
Q54A				P		PKiKP	06 33 52.7	+0.3
	baz=293,SNR=48							
SKDS	**Skadanscina**	124.55	323	*e*P		PKPdf	06 33 49.6	-2.3
MDO	**Dochfour**	124.61	343	*e*P		PKiKP	06 33 51.8	-0.1
WVNY	**West Valley, N**	124.63	42	P		PKiKP	06 33 52.5	+0.1
	baz=297,SNR=18							
S54A	**Dingess, Beckl**	124.64	48	P		PKiKP	06 33 52.9	+0.2
	baz=292,SNR=18							
S54A				P		PKiKP	06 33 52.9	+0.2
	baz=292,SNR=18							
U54A	**Nelsons Funny**	124.72	49	P		PKiKP	06 33 53.2	+0.3
	baz=291,SNR=11							
U54A				P		PKiKP	06 33 53.2	+0.3
	baz=291,SNR=11							
CLUD	**Cludinico**	124.73	324			PKPdf	06 33 51.7	-0.5
J55A	**Hilton**	124.74	40	P		PKiKP	06 33 53.1	+0.5
	baz=298,SNR=12							
J55A				P		PKiKP	06 33 53.1	+0.5
	baz=298,SNR=12							
ABTA	**Abfaltersbach**	124.79	325	*e*P		PKPdf	06 33 52.4	0.0
	comp=Z,47nm,1.1s,SNR=32							
ABTA				*e*P		PKKPbc	06 43 34.8	-0.2
	comp=Z,33nm,0.7s							
ABTA				*e*S		SKKPbc	06 47 14.9	-7.2
	comp=Z,24nm,1.3s							
TIGA	**Tifton**	124.92	56	P		PKiKP	06 33 53.8	+0.5
	baz=286,SNR=10							
TIGA	**Tifton**	124.92	56	PKiKP		PKPdf	06 33 53.0	0.0
	baz=286							
MMNY	**Mt. Morris Dam**	124.93	41			PKPdf	06 33 52.6	-0.1
EDU	**Dundee**	124.94	341	*e*P		PKiKP	06 33 53.1	+0.5
M55A	**Ridgway**	124.94	43	P		PKiKP	06 33 53.4	+0.3
	baz=296,SNR=18							
M55A				P		PKiKP	06 33 53.4	+0.3
	baz=296,SNR=18							
STAL	**STALIGIAL**	124.94	324			PKPdf	06 33 52.4	-0.3
MCWV	**Mont Chateau**	124.97	45		IAMs_20	IAMs_20	07 27 05.3	
	comp=Z,18μm,22.0s							
MCWV	**Mont Chateau**	124.97	45	P		PKiKP	06 33 54.3	+1.1
	baz=294							
MCWV	**Mont Chateau**	124.97	45	PKiKP		PKPdf	06 33 52.7	-0.1
	baz=294							
WATA	**Walderalm**	124.99	326	*i* P		PKiKP	06 33 53.2	0.0
	comp=Z,43nm,1.0s,SNR=16							
WATA				*e*P		PKKPab	06 43 32.5	+0.2
	comp=Z,6.3nm,0.6s							
WTTA	**Wattenberg**	125.00	326	*e*P		PKiKP	06 33 53.2	-0.1
	comp=Z,129nm,1.0s,SNR=39							
WTTA				*i* P		PKKPbc	06 43 33.7	-0.7
	comp=Z,17nm,1.2s							
WTTA				*e*S		SKKPbc	06 47 13.6	-7.9
	comp=Z,38nm,1.4s							
KPL	**Plockton**	125.06	343	*e*P		PKiKP	06 33 53.3	+0.5
PSDB	**Penn State Uni**	125.10	43	P		PKiKP	06 33 53.3	-0.1
	baz=296							
MATE	**Matera**	125.14	316	⇑P		PKiKP	06 33 54.0	+0.5
HODGE	**Hodges**	125.16	52	P		PKiKP	06 33 54.7	+1.0
	baz=289,SNR=18							
MOTA	**Moosalm**	125.25	326	*e*P		PKPdf	06 33 53.4	0.0
	comp=Z,76nm,1.2s,SNR=70							
MOTA				*e*S		SKKPbc	06 47 15.4	-5.2
	comp=Z,49nm,1.9s							
SQTA	**Sankt Quirin**	125.27	326	*e*P		PKiKP	06 33 54.0	+0.3
	comp=Z,60nm,1.2s,SNR=36							
SQTA				*e*S		SKKPbc	06 47 13.2	-7.4
	comp=Z,16nm,0.9s							
SGRT	**San Giovanni R**	125.30	318			PKiKP	06 33 53.9	0.0
SGRT	**San Giovanni R**	125.30	318	*i* P		PKiKP	06 33 54.0	0.0
PAULI	**Pauline**	125.31	51			PKPdf	06 33 53.6	0.0
PAULI	**Pauline**	125.31	51	P		PKiKP	06 33 54.8	+0.7
	baz=290,SNR=20							
ESY	**Stoneypath**	125.32	341	*e*P		PKiKP	06 33 54.4	+1.0
R55A	**Marlinton**	125.33	47	P		PKPdf	06 33 53.6	-0.1
	baz=293,SNR=51							
R55A				P		PKPdf	06 33 53.6	-0.1
	baz=293,SNR=51							
J56A	**Wolcott**	125.35	40			PKPdf	06 33 53.2	-0.3
J56A	**Wolcott**	125.35	40	P		PKPdf	06 33 53.1	-0.3
	baz=299,SNR=13							
J56A				P		PKPdf	06 33 53.1	-0.3
	baz=299,SNR=13							
INVG	**Invergeldie, C**	125.36	342	*e*P		PKiKP	06 33 53.7	+0.3
RETA	**Reutte**	125.36	326	*i* P		PKiKP	06 33 54.0	+0.1
	comp=Z,26nm,1.1s,SNR=14							
RETA				*e*S		SKKPbc	06 47 11.7	-8.5
	comp=Z,33nm,1.5s							
V55A	**Taylorsville**	125.42	50			PKiKP	06 33 54.2	0.0
V55A	**Taylorsville**	125.42	50	P		PKiKP	06 33 54.7	+0.5
	baz=291,SNR=16							
V55A				P		PKiKP	06 33 54.7	+0.5
	baz=291,SNR=16							
STU	**Stuttgart**	125.44	328		IAMs_20	IAMs_20	07 28 35.2	
	comp=Z,22μm,22.0s							
L56A	**Greenwood**	125.44	41			PKiKP	06 33 54.1	0.0
L56A	**Greenwood**	125.44	41	P		PKiKP	06 33 54.2	+0.1
	baz=298,SNR=14							
L56A				P		PKiKP	06 33 54.2	+0.1
	baz=298,SNR=14							
BLA	**Blacksburg**	125.52	48		IAMs_20	IAMs_20	07 24 51.2	
	comp=Z,17μm,21.0s							
BLA	**Blacksburg**	125.52	48	P		PKPdf	06 33 54.0	0.0
	baz=292,SNR=26							
BLA	**Blacksburg**	125.52	48	PKiKP		PKPdf	06 33 53.6	-0.5
	baz=292							
KMSC	**Kings Mountain**	125.57	51			PKPdf	06 33 54.1	-0.1
KMSC	**Kings Mountain**	125.57	51	P		PKiKP	06 33 54.5	0.0
	baz=290,SNR=27							
KMSC	**Kings Mountain**	125.57	51	PKiKP		PKPdf	06 33 53.5	-0.7
	baz=290							
EBL	**Broad Law**	125.58	341	*e*P		PKiKP	06 33 55.3	+1.3
FETA	**Feichten**	125.65	326	*e*P		PKiKP	06 33 54.9	+0.3
	comp=Z,58nm,1.1s,SNR=46							
FETA				*i* S		SKKPbc	06 47 13.8	-5.5
	comp=Z,20nm,1.3s							
Q56A	**Snyder Ridge,**	125.69	45	P		PKiKP	06 33 54.9	+0.2
	baz=294,SNR=16							
Q56A				P		PKiKP	06 33 54.9	+0.2
	baz=294,SNR=16							
TIP	**Timpagrande**	125.72	315	⇑P		PKiKP	06 33 55.6	+0.8
MT05	**Renca**	125.73	139			PKiKP	06 33 55.3	+0.3
WCNY	**West Carthage**	125.75	39	P		PKPdf	06 33 53.4	-0.9
	baz=301,SNR=12							
BTNL	**Ternell**	125.80	332	*d*PKPdf		PKiKP	06 33 54.8	+0.2
J57A	**Williamstown**	125.83	39	P		PKiKP	06 33 55.0	+0.2
	baz=300,SNR=13							
J57A				P		PKiKP	06 33 55.0	+0.2
	baz=300,SNR=13							
K57A	**Scipio Center**	125.83	40	P		PKPdf	06 33 54.5	+0.1
	baz=299,SNR=14							
MEM	**Membach**	125.84	332	*d*PKPdf		PKiKP	06 33 54.8	+0.2
TSUM	**Tsumeb**	125.86	241			PKPdf	06 33 55.1	-0.2
TSUM	**Tsumeb**	125.86	241	IAMs_20		IAMs_20	07 28 15.3	
	comp=Z,17μm,20.0s							
U56A	**King**	125.87	49	P		PKiKP	06 33 55.7	+0.6
	baz=292,SNR=9.9							
U56A				P		PKiKP	06 33 55.7	+0.6
	baz=292,SNR=9.9							
BOAB	**BOACO BROADBAND**	125.89	79	IAMs_20		IAMs_20	07 37 54.7	
	comp=Z,14μm,22.0s							
SSPA	**Standing Stone**	125.91	43			PKPdf	06 33 53.9	-0.7
SSPA	**Standing Stone**	125.91	43	IAMs_20		IAMs_20	07 22 55.9	
	comp=Z,21μm,22.0s							
SSPA	**Standing Stone**	125.91	43	P		PKPdf	06 33 54.4	-0.2
	baz=297,SNR=18							
SSPA	**Standing Stone**	125.91	43	PKiKP		PKPdf	06 33 54.3	-0.3
	baz=297							
JSC	**Jenkinsville**	125.92	52	P		PKiKP	06 33 55.7	+0.5
	baz=290,SNR=21							
HAW	**Hawthorne Fire**	125.95	53	P		PKiKP	06 33 56.0	+0.7
	baz=289							
DAVA	**Damuels**	125.96	326	*e*P		PKiKP	06 33 55.3	+0.1
	comp=Z,19nm,0.8s,SNR=32							
EDMD	**Edmundbyers**	125.98	340	*e*P		PKiKP	06 33 54.9	+0.1
BMNY	**Brushton-Moira**	126.00	37	P		PKPdf	06 33 54.2	-0.5
	baz=302,SNR=17							
ESK	**Eskdalemuir**	126.01	341	*e*P		PKPdf	06 33 54.4	0.0
ESK	**Eskdalemuir**	126.01	341			PKiKP	06 33 55.0	+0.2
ESK	**Eskdalemuir**	126.01	341	IAMs_20		IAMs_20	07 31 26.3	
	comp=Z,19μm,22.0s							
ESK	**Eskdalemuir**	126.01	341	PKiKP		PKiKP	06 33 55.0	+0.2
ESK				MLR		MLR		
	comp=Z,19μm,22.0s							
PGBU	**Glenifferbraes**	126.01	342	*e*P		PKiKP	06 33 55.0	+0.3
BHOU	**Houvegnez**	126.01	331	*d*PKPdf		PKiKP	06 33 55.9	+0.9
CUC	**Castrocucco**	126.03	316			PKPdf	06 33 54.5	-0.4
BSTI	**Sart Tilman**	126.06	332	*d*PKP		PKiKP	06 33 56.1	+1.1
LONY	**Lake Ozonia**	126.08	37	IAMs_20		IAMs_20	07 25 17.7	
	comp=Z,21μm,21.0s							
LONY	**Lake Ozonia**	126.08	37	PKiKP		PKPdf	06 33 54.8	-0.1
	baz=302							
DUNO	**Dulce Nombre,**	126.09	82			PKiKP	06 33 56.9	+0.8
M57A	**Sunshine Farm,**	126.10	42	P		PKiKP	06 33 55.4	0.0
	baz=298,SNR=26							
M57A				P		PKiKP	06 33 55.4	0.0
	baz=298,SNR=26							
BFO	**Black Forest**	126.16	328			PKPdf	06 33 54.7	-0.2
BFO	**Black Forest**	126.16	328	PKiKP		PKPdf	06 33 54.7	-0.2
BFO				MLR		MLR		
	comp=Z,22μm,20.0s							
MNTQ	**Montreal, Queb**	126.17	36			PKPdf	06 33 54.0	-0.9
BCLA	**Clavier**	126.30	332	*d*PKPdf		PKiKP	06 33 56.1	+0.6
J58A	**Remsen**	126.30	39	P		PKPdf	06 33 55.0	-0.3
	baz=301,SNR=20							
J58A				P		PKPdf	06 33 55.0	-0.3
	baz=301,SNR=20							
P57A	**Homestead Farm**	126.33	45	P		PKiKP	06 33 55.8	-0.1
	baz=296,SNR=13							
P57A				P		PKiKP	06 33 55.8	-0.1
	baz=296,SNR=13							
S57A	**Dark Hollow, R**	126.38	47	P		PKiKP	06 33 56.8	+0.8
	baz=294							
S57A				P		PKiKP	06 33 56.8	+0.8
	baz=294							
WLF	**Walferdange**	126.40	331	*d*PKPdf		PKiKP	06 33 57.1	+1.4
BIRD	**Birdtown, Kers**	126.42	51	P		PKiKP	06 33 57.1	+0.9
	baz=290,SNR=13							
BGES	**Gesves**	126.42	332	*d*PKPdf		PKPdf	06 33 55.3	0.0
BINY	**Binghamton**	126.44	41	P		PKPdf	06 33 55.6	0.0
	baz=299,SNR=9.0							
BINY	**Binghamton**	126.44	41	PKiKP		PKPdf	06 33 55.5	-0.1
	baz=299							
T57A	**Hurt**	126.46	48	P		PKPdf	06 33 55.3	-0.5
	baz=293,SNR=17							
T57A				P		PKPdf	06 33 55.3	-0.5
	baz=293,SNR=17							
NEWG	**New Galloway**	126.51	341	*e*P		PKPdf	06 33 55.0	-0.3
RCHB	**Rochefort**	126.51	332	*d*PKPdf		PKiKP	06 33 56.6	+0.7
AQU	**L'Aquila**	126.54	320	IAMs_20		IAMs_20	07 31 11.4	
	comp=Z,18μm,22.0s							
FRNY	**Flat Rock**	126.56	37	P		PKiKP	06 33 56.2	0.0
	baz=303,SNR=18							
KESW	**Keswick, Cumbr**	126.57	340	*e*P		PKPdf	06 33 55.2	-0.3
W57A	**Gilead**	126.60	50	P		PKiKP	06 33 56.7	+0.1
	baz=291,SNR=16							
W57A				P		PKiKP	06 33 56.7	+0.1
	baz=291,SNR=16							
N58A	**Sunbury**	126.61	42			PKPdf	06 33 55.9	-0.1
N58A	**Sunbury**	126.61	42	P		PKiKP	06 33 56.2	-0.2
	baz=298,SNR=18							
N58A				P		PKiKP	06 33 56.2	-0.2
	baz=298,SNR=18							
JTS	**Las Juntas de**	126.62	82	PKiKP		PKPdf	06 33 56.6	-0.1
BMRD	**Maredsous**	126.63	332	*d*PKPdf		PKiKP	06 33 56.6	+0.5
NCB	**Newcomb**	126.64	38	P		PKPdf	06 33 56.1	+0.1
	baz=302,SNR=16							
CDF	**Champ du Feu**	126.65	329	*e*PKiKP		PKPdf	06 33 55.7	-0.2
CDF				pmax		pmax		
	comp=Z,18nm,0.9s							
WACR	**West Acre**	126.67	336	*e*P		PKPdf	06 33 54.9	-0.8
Y57A	**Sumter**	126.69	52	P		PKiKP	06 33 57.8	+1.0
	baz=290,SNR=12							
Y57A				P		PKiKP	06 33 57.8	+1.0
	baz=290,SNR=12							
SNF	**Seneffe**	126.71	332	*d*PKPdf		PKiKP	06 33 57.2	+0.9
CEL	**Celeste**	126.72	314	IAMs_20		IAMs_20	07 33 05.8	
	comp=Z,15μm,22.0s							
J59A	**Piesco**	126.73	39	P		PKPdf	06 33 56.0	-0.2
	baz=302,SNR=16							
J59A				P		PKPdf	06 33 56.0	-0.2
	baz=302,SNR=16							
GIVF	**Givet**	126.74	332	*e*PKiKP		PKiKP	06 33 56.4	0.0
GIVF				pmax		pmax		
	comp=Z,59nm,0.8s							
CO06	**Fray Jorge**	126.78	136			PKPdf	06 33 56.7	+0.1
DOU	**Dourbes**	126.85	332	*d*PKPdf		PKiKP	06 33 57.1	+0.5
GAL1	**Galloway**	126.87	341	*e*P		PKiKP	06 33 56.6	+0.1
KSPA	**Keystone Colle**	126.89	41	P		PKiKP	06 33 57.1	+0.1
	baz=299,SNR=9.6							
CO02	**Combarbal**	126.90	137			PKPdf	06 33 57.0	0.0
V58A	**Windy Hill, Pi**	127.03	49	P		PKiKP	06 33 57.8	+0.4
	baz=292,SNR=10							
V58A				P		PKiKP	06 33 57.8	+0.4
	baz=292,SNR=10							
L59A	**Walton**	127.05	40	P		PKiKP	06 33 57.2	-0.2
	baz=300,SNR=8.0							
L59A				P		PKiKP	06 33 57.2	-0.2
	baz=300,SNR=8.0							
BAIF	**Baives**	127.06	332	*e*PKiKP		PKiKP	06 33 59.3	+2.3
BAIF				pmax		pmax		
	comp=Z,42nm,0.8s							
R58B	**Mineral**	127.07	46	P		PKiKP	06 33 57.5	+0.1
	baz=295,SNR=16							
R58B				P		PKiKP	06 33 57.5	+0.1
	baz=295,SNR=16							
NHSC	**New Hope**	127.16	53	IAMs_20		IAMs_20	07 24 38.3	
	comp=Z,17μm,21.0s							
NHSC	**New Hope**	127.16	53	PKiKP		PKPdf	06 33 57.2	0.0
	baz=290							
SDMD	**Soldier's Deli**	127.17	44			PKPdf	06 33 56.5	-0.6
SDMD	**Soldier's Deli**	127.17	44	P		PKiKP	06 33 57.3	-0.3
	baz=297,SNR=12							
JSRW	**J. Sargeant Re**	127.18	46			PKiKP	06 33 57.6	0.0
HCNY	**Howe Caverns**	127.20	39	P		PKiKP	06 33 57.6	0.0
	baz=301,SNR=9.6							
ESPN	**Las Esperanzas**	127.23	79	PKPdf		PKiKP	06 33 58.4	0.0
HINF	**Hinteralfeld**	127.25	329	*e*PKiKP		PKiKP	06 33 57.9	+0.3
HINF				pmax		pmax		
	comp=Z,52nm,0.8s							
Y58A	**Scranton**	127.29	52	P		PKiKP	06 33 58.3	+0.3
	baz=291,SNR=5.8							
Y58A				P		PKiKP	06 33 58.3	+0.3
	baz=291,SNR=5.8							
X58A	**Rowland**	127.32	51	P		PKiKP	06 33 58.9	+0.9
	baz=291,SNR=9.1							
X58A				P		PKiKP	06 33 58.9	+0.9
	baz=291,SNR=9.1							
CBN	**Corbin Frederi**	127.33	46			PKiKP	06 33 58.6	+0.7
CBN				IAMs_20		IAMs_20	07 29 44.9	
	comp=Z,17μm,20.0s							
CBN	**Corbin Frederi**	127.33	46	P		PKiKP	06 33 59.0	+1.1
	baz=296							
CBN	**Corbin Frederi**	127.33	46	PKiKP		PKPdf	06 33 57.2	-0.2
	baz=296							
VT1	**Waterbury**	127.33	37			PKiKP	06 33 58.6	+0.8
VT1	**Waterbury**	127.33	37	P		PKiKP	06 33 58.3	+0.5
	baz=304,SNR=9.7							
HAU	**Haudompre**	127.39	329	*e*PKiKP		PKPdf	06 33 57.4	+0.1
HAU				pmax		pmax		
	comp=Z,61nm,0.7s							
MCVT	**Middlebury Col**	127.40	37	P		PKiKP	06 33 58.9	+1.0
	baz=303,SNR=9.6							
LATE	**Laterza**	127.43	321			PKiKP	06 33 58.3	+0.2
WIM	**Isle of Man**	127.46	341	*e*P		PKiKP	06 33 57.6	-0.1
CO05	**La Serena**	127.50	135			PKiKP	06 33 58.3	-0.3
TRQA	**Tornquist**	127.59	149	PKPdf		PKiKP	06 33 58.6	0.0
TRQA				IAMs_20		IAMs_20	07 21 44.0	
	comp=Z,12μm,21.0s							
TRQA	**Tornquist**	127.59	149	PKiKP		PKiKP	06 33 58.6	0.0
DWPF	**Disney Wildern**	127.61	59	IAMs_20		IAMs_20	07 28 23.4	
	comp=Z,15μm,22.0s							
GO04	**Tololo Observa**	127.65	136			PKiKP	06 33 59.0	-0.2
T59A	**Double "B" Far**	127.72	47	P		PKPdf	06 33 58.1	-0.1
	baz=294,SNR=18							
T59A				P		PKPdf	06 33 58.1	-0.1
	baz=294,SNR=18							
U59A	**Littleton**	127.80	48	P		PKiKP	06 33 59.0	+0.1
	baz=294,SNR=7.1							
U59A				P		PKiKP	06 33 59.0	+0.1
	baz=294,SNR=7.1							
E62A	**Clayton Lake**	127.81	33			PKPdf	06 33 58.1	0.0
E62A	**Clayton Lake**	127.81	33	P		PKPdf	06 33 57.8	-0.3
	baz=309,SNR=7.2							
E62A				P		PKPdf	06 33 57.8	-0.3
	baz=309,SNR=7.2							
GEDE	**Greenville**	127.82	43	P		PKiKP	06 33 59.1	+0.3
	baz=298,SNR=12							
NPNY	**Mohonk Preserv**	127.85	40	P		PKiKP	06 33 59.1	+0.2
	baz=301,SNR=7.3							
LBNH	**Lisbon**	127.87	36	P		PKiKP	06 33 59.2	+0.3
	baz=305,SNR=6.3							
LBNH	**Lisbon**	127.87	36	PKiKP		PKiKP	06 33 58.9	0.0
	baz=305							
Y59A	**Loris**	127.88	51	P		PKiKP	06 33 59.9	+0.7
	baz=291							
Y59A				P		PKiKP	06 33 59.9	+0.7
	baz=291							
PSUB	**Penn St. - Bra**	127.89	43	P		PKiKP	06 33 59.1	+0.1
	baz=298							
ODNJ	**Ogdensburg**	127.89	41			PKiKP	06 33 59.4	+0.4
ODNJ	**Ogdensburg**	127.89	41	P		PKiKP	06 33 59.0	0.0
	baz=300,SNR=8.9							
TUPA	**Temple Univers**	127.95	42	P		PKiKP	06 33 59.3	+0.2
	baz=299,SNR=6.5							
WME	**Myndd Eilian**	127.95	340	*e*P		PKiKP	06 33 59.5	+0.8
HNH	**Hanover**	127.96	37	P		PKiKP	06 33 59.8	+0.8
	baz=304,SNR=7.9							
FOEL	**Foel Wylfa**	127.98	339	*e*P		PKPdf	06 33 58.2	0.0
J61A	**Chester**	128.00	38	P		PKiKP	06 33 59.2	+0.1
	baz=304,SNR=6.9							
J61A				P		PKiKP	06 33 59.2	+0.1
	baz=304,SNR=6.9							
F62A	**Pittston Farm,**	128.02	34			PKiKP	06 33 59.2	+0.1
F62A	**Pittston Farm,**	128.02	34	P		PKiKP	06 33 59.2	+0.1
	baz=308,SNR=7.2							
F62A				P		PKiKP	06 33 59.2	+0.1
	baz=308,SNR=7.2							
WLF1	**Llynfaes**	128.07	340	*e*P		PKiKP	06 33 59.4	+0.4
BRNY	**Black Rk. Fore**	128.11	41	P		PKiKP	06 33 59.2	-0.2
	baz=301							
G62A	**West of Eustis**	128.11	35	P		PKiKP	06 33 59.6	+0.2
	baz=307,SNR=7.4							
G62A				P		PKiKP	06 33 59.6	+0.2
	baz=307,SNR=7.4							
BRNJ	**Basking Ridge**	128.11	42			PKiKP	06 33 59.4	0.0
YLL	**Llanberis**	128.12	340	*e*P		PKiKP	06 33 59.3	+0.3
CNNC	**Cliffs of the**	128.16	49	IAMs_20		IAMs_20	07 26 46.3	
	comp=Z,16μm,21.0s							
CNNC	**Cliffs of the**	128.16	49	P		PKiKP	06 34 00.4	+0.7
	baz=293							
CNNC	**Cliffs of the**	128.16	49	PKiKP		PKPdf	06 33 59.0	-0.1
	baz=293							
YRC	**Rhoscolyn**	128.17	340	*e*P		PKiKP	06 33 59.2	+0.1
T60A	**Surry**	128.24	47			PKiKP	06 34 00.5	+0.7
T60A	**Surry**	128.24	47	P		PKiKP	06 34 00.5	+0.7
	baz=295,SNR=18							
T60A				P		PKiKP	06 34 00.5	+0.7
	baz=295,SNR=18							
PAL	**Palisades**	128

SSF **Saint Saulge** 129.46 330 *e*PKIKP **PKiKP** 06 34 02.8 +0.8
SSF pmax pmax
comp=Z,51nm,0.8s
MAPC **Malpelo** 129.71 90 *e*P **PKPdf** 06 34 02.4 -0.2
AVF **Avril sur Loir** 129.72 330 *e*PKIKP **PKiKP** 06 34 02.8 +0.3
AVF pmax pmax
comp=Z,18nm,0.7s
G65A **Princeton** 129.77 33 **PKPdf** 06 34 01.7 -0.1
PRVC **Isla de Provid** 130.04 78 *e*P **PKiKP** 06 34 04.0 +0.1
LDF **La Druitiere** 130.08 333 *e*PKIKP **PKiKP** 06 34 03.6 +0.4
LDF pmax pmax
comp=Z,32nm,0.8s
FLN **La Foliniere** 130.12 334 *e*PKIKP **PKiKP** 06 34 03.8 +0.6
FLN pmax pmax
comp=Z,56nm,0.8s
AC01 **Pan de Azucar** 130.13 132 **PKiKP** 06 34 04.3 +0.4
BGF **Bois d'Agland** 130.13 330 *e*PKIKP **PKiKP** 06 34 03.2 -0.1
BGF pmax pmax
comp=Z,34nm,0.6s
LMR **La Mourre** 130.23 324 *e*PKIKP **PKiKP** 06 34 04.1 +0.5
LMR pmax pmax
comp=Z,28nm,0.7s
VIVF **Saint-Julien-l** 130.31 327 *e*PKIKP **PKPdf** 06 34 02.4 -0.6
VIVF pmax pmax
comp=Z,36nm,1.0s
GRR **Gorron** 130.56 334 *e*PKIKP **PKPdf** 06 34 02.7 -0.6
GRR pmax pmax
comp=Z,39nm,0.6s
ATAH **Atahualpa** 131.08 105 PKP **PKiKP** 06 34 06.8 +0.1
comp=Z,113nm,0.9s,baz=250,slow=0.7,SNR=9.0
ATAH PP **PP** 06 36 24.8 +1.5
comp=Z,14nm,1.0s,baz=272,slow=7.6,SNR=1.3
ATAH SKPab **SKPab** 06 37 29.8 +3.3
comp=Z,64nm,0.8s,baz=231,slow=3.0,SNR=11
PB14 **IPOC Station P** 131.12 130 **PKiKP** 06 34 06.5 +0.2
NNA **Nana** 131.16 112 PKhKP PKPpre 06 33 53.4
comp=Z,13nm,0.8s,baz=45,slow=16,SNR=2.3
NNA PKP **PKiKP** 06 34 06.2 -0.2
comp=Z,96nm,1.1s,baz=275,slow=3.7,SNR=14
NNA SKPbc **SKPab** 06 37 27.4 +1.1
comp=Z,16nm,0.8s,baz=273,slow=9.2,SNR=3.3
NNA **Nana** 131.16 112 PKPdf **PKiKP** 06 34 06.3 -0.1
NNA **Nana** 131.16 112 PKIKP **PKiKP** 06 34 06.3 -0.1
NNA MLR MLR
comp=Z,5µm,19.0s
SGMF **Saint Gilles** 131.40 335 *e*PKIKP **PKiKP** 06 34 06.3 +0.5
SGMF pmax pmax
comp=Z,36nm,0.6s
ROSF **Rostrenen** 131.63 335 *e*PKIKP **PKiKP** 06 34 08.4 +2.1
ROSF pmax pmax
comp=Z,54nm,0.8s
CAF **Calviac** 131.65 329 *e*PKIKP **PKiKP** 06 34 07.6 +1.1
CAF pmax pmax
comp=Z,16nm,0.8s
QUIF **Quistinic** 131.92 335 *e*PKIKP **PKiKP** 06 34 07.3 +0.5
QUIF pmax pmax
comp=Z,30nm,0.8s
UPA **Univ. de Panam** 131.97 83 *e*P **PKPdf** 06 34 05.0 -1.9
LPA **La Plata** 132.08 150 *ce*PKIKP **PKPdf** 06 34 05.0 -1.6
LPA SKP 06 37 28.8
LPA PKIKS 06 37 44.3
LPA PPP PPP 06 39 24.9
LPA SDIFF 06 44 32.7
LPA PS **PS** 06 46 43.4 -0.6
LFF **La Frestale** 132.32 330 *e*PKIKP **PKiKP** 06 34 09.3 +1.5
LFF pmax pmax
comp=Z,16nm,0.8s
TUMC **Tumaco** 132.37 93 *e*P **PKPdf** 06 34 07.0 -0.6
KEST **Kesra** 132.54 314 PKP **PKiKP** 06 34 09.2 +0.5
comp=Z,65nm,0.9s,baz=294,slow=3.5,SNR=31
KEST SKPbc **SKPbc** 06 37 30.2 -0.1
comp=Z,49nm,1.0s,baz=306,slow=3.3,SNR=6.3
KEST **Kesra** 132.54 314 **PKiKP** 06 34 08.1 -0.5
MTLF **Montolieu** 132.64 327 *e*PKIKP **PKPdf** 06 34 05.8 -1.6
MTLF pmax pmax
comp=Z,31nm,0.7s
TULM **Tulcn-Chalpat** 133.16 95 *e*P **PKPdf** 06 34 09.8 0.0
LVC **Limon Verde** 133.36 129 PKhKP PKPpre 06 33 52.9
comp=Z,8.4nm,0.7s,baz=254,slow=6.3,SNR=4.0
LVC PKP **PKiKP** 06 34 11.1 +0.1
comp=Z,55nm,0.6s,baz=260,slow=2.5,SNR=33
LVC SKPab **SKPab** 06 37 38.1 +2.1
comp=Z,53nm,1.0s,baz=230,slow=2.1,SNR=10
LVC **Limon Verde** 133.36 129 *e*P **PKiKP** 06 34 11.9 +0.9
MAHO **Mahon** 133.65 322 IAMs_20 IAMs_20 07 33 35.4
comp=Z,15µm,22.0s
PTAC **Punta Ardita,** 133.65 86 *e*P **PKPdf** 06 34 09.7 -0.3
GCUF **Volcan Galeras** 133.67 94 *e*P **PKPdf** 06 34 09.0 -1.8
EPF **Esparros** 133.86 328 *e*PKIKP **PKPdf** 06 34 09.8 +0.1
EPF pmax pmax
comp=Z,17nm,0.7s
BBAC **Balboa, Cauca** 133.86 93 *e*P **PKPdf** 06 34 09.8 -1.0
ETSF **Etsaut** 134.42 328 *e*PKIKP **PKiKP** 06 34 14.3 +2.1
ETSF pmax pmax
comp=Z,63nm,0.8s
SJPF **Ste Jean** 134.61 329 *e*PKIKP **PKPdf** 06 34 11.3 +0.2
SJPF pmax pmax
comp=Z,22nm,0.7s
YOTC **Yotoco, Valle** 134.94 90 *e*P **PKPdf** 06 34 12.3 -0.3
PLMC **San Jos del P** 135.07 89 *e*P **PKPdf** 06 34 09.9 -2.9
GTBY **Guantanamo Bay** 135.15 68 IAMs_20 IAMs_20 07 25 37.3
comp=Z,14µm,22.0s
CBOC **Ciudad Bolivar** 135.39 88 *e*P **PKPdf** 06 34 13.5 -0.1
FLOC **Florencia** 135.39 94 *e*P **PKPdf** 06 34 06.2 -7.2
BETC **Betania** 135.72 92 *e*P **PKPdf** 06 34 14.5 +0.5
HELC **Santa Helena** 135.88 87 *e*P **PKPdf** 06 34 12.4 -2.3
ANIL **Santa Ana** 135.91 90 *e*P **PKPdf** 06 34 14.1 -0.6
GUY2C **Guyana, Caldas** 136.00 89 *e*P **PKPdf** 06 34 08.6 -6.5
PTLC **Puerto Leguiza** 136.05 96 *e*P **PKPdf** 06 34 14.1 -0.5
SJCC **San Jacinto, C** 136.25 82 *e*P **PKPdf** 06 34 14.4 -0.6
PRAC **Prado** 136.37 91 *e*P **PKPdf** 06 34 14.6 -0.7
NORC **Norcasia** 136.51 88 *e*P **PKPdf** 06 34 08.1 -7.4
PLTB **Pedras Altas** 136.74 152 *e*P **PKiKP** 06 34 16.4 -0.8
ITQB **Itaqui** 136.88 147 *e*P **PKiKP** 06 34 17.0 -0.5
PTBC **PUERTO BERRIO** 136.96 87 *e*P **PKPdf** 06 34 09.1 -7.2
ROSC **El Rosal** 137.01 89 PKhKP PKPpre 06 34 11.2
comp=Z,58nm,0.5s,baz=24,slow=3.8,SNR=18
ROSC PP **PP** 06 37 02.5 +1.4
comp=Z,14nm,0.8s,baz=267,slow=10,SNR=1.2
ROSC SKPbc **SKPbc** 06 37 47.1 +1.4
comp=Z,32nm,0.8s,baz=76,slow=4.2,SNR=5.3
ROSC **El Rosal** 137.01 89 *e*P **PKPdf** 06 34 11.1 -5.8
ARGC **Ariguani, Magd** 137.17 82 *e*P **PKPdf** 06 34 11.8 -4.8
LPAZ **La Paz** 137.21 122 PKhKP PKPpre 06 34 03.6
comp=Z,17nm,0.7s,baz=265,slow=1.9,SNR=31
LPAZ PKP **PKPdf** 06 34 17.6 +0.2
comp=Z,94nm,0.7s,baz=272,slow=2.2,SNR=19
LPAZ SKPbc **SKPbc** 06 37 48.0 +1.5
comp=Z,45nm,1.0s,baz=264,slow=4.9,SNR=5.6
SPBC **San Pablo de B** 137.31 88 *e*P **PKPdf** 06 34 10.6 -6.5
CHIC **Chingaza** 137.59 90 *e*P **PKPdf** 06 34 16.5 -1.4
UCM **Universidad Co** 137.68 328 PP PP 06 36 58.8 -4.3
LL5C **La Loma 5 El P** 137.69 82 *e*P **PKPdf** 06 34 14.7 -2.9
BRRC **Barranca, Sant** 137.71 86 *e*P **PKPdf** 06 34 12.5 -5.1
LL1C **La Loma 1 Cana** 137.86 82 *e*P **PKPdf** 06 34 15.4 -2.5
CPSB **Cacapava Do Su** 137.94 151 *e*P **PKiKP** 06 34 19.6 0.0
OCAC **Ocana** 138.11 84 *e*P PKPpre 06 34 07.7
PBRG **Braganca** 138.28 332 *e*PKPdf **PKPdf** 06 34 17.2 -0.8
PBRG **Braganca** 138.28 332 *e*PP **PP** 06 37 03.9 -2.8
PBRG **Braganca** 138.28 332 *e*SS SS 06 56 14.2 +59
CART **Cartagena** 138.30 323 PKP PKPpre 06 34 07.0
CART **Cartagena** 138.30 323 PP PP 06 37 04.8 -2.3
RUSC **La Rusia** 138.30 88 *e*P **PKPdf** 06 34 13.4 -5.9
GRTK **Grand Turk** 138.39 64 IAMs_20 IAMs_20 07 44 34.8
comp=Z,11µm,22.0s
CRJC **Cerrejon, Guaj** 138.46 80 *e*P **PKPdf** 06 34 18.4 -0.7
ESDC **Sonseca Array** 138.52 328 PKhKP PKPpre 06 34 08.3
comp=Z,2.5nm,0.9s,baz=25,slow=2.5,SNR=15
ESDC PKP **PKPdf** 06 34 19.2 +0.6
comp=Z,10nm,0.9s,baz=18,slow=1.9,SNR=14
ESDC PP **PP** 06 37 09.8 +1.5
comp=Z,5.9nm,0.9s,baz=31,slow=6.0,SNR=3.9
ESDC SKPbc **SKPbc** 06 37 48.0 -0.9
comp=Z,5.6nm,0.9s,baz=18,slow=3.0,SNR=1.9
ESDC PKKP **PKKPdf** 06 43 49.0 -0.7
comp=Z,2.5nm,0.8s,baz=259,slow=1.2,SNR=8.5
ESDC SKKPbc **SKKPbc** 06 46 37.5 +5.2
comp=Z,12nm,1.1s,baz=238,slow=4.1,SNR=6.1
PAMC **Pamplona, Colo** 138.72 86 *e*P PKPpre 06 34 10.1
PAB **San Pablo** 138.82 328 ⇑PKHKP PKPpre 06 34 13.5
PGAV **Gavieira, Arco** 138.84 334 *e*PKPdf PKPpre 06 34 10.4
PGAV **Gavieira, Arco** 138.84 334 *e*PP **PP** 06 37 15.3 +5.1
PGAV **Gavieira, Arco** 138.84 334 *e*SS SS 06 56 25.0 +64
PGAV **Gavieira, Arco** 138.84 334 *e*LR LR 07 25 58.4
comp=Z,28µm,22.0s
SDDR **Presa de Saban** 138.87 68 IAMs_20 IAMs_20 07 28 39.0
comp=Z,15µm,21.0s
MVO **Moncorvo** 138.92 332 *e*PKPdf PKPpre 06 34 10.6
MVO **Moncorvo** 138.92 332 *e*PP **PP** 06 37 14.4 +3.7
MVO **Moncorvo** 138.92 332 *e*SS SS 06 56 27.8 +65
MVO **Moncorvo** 138.92 332 *e*LR LR 07 23 05.1
comp=Z,28µm,20.0s
PCAB **Cabril** 138.94 333 *e*PKPdf **PKPdf** 06 34 19.8 +0.6
CPUP **Villa Florida** 139.01 143 PKhKP PKPpre 06 34 10.1
comp=Z,14nm,0.6s,baz=247,slow=2.5,SNR=38
CPUP PKP **PKiKP** 06 34 21.4 -0.5
comp=Z,92nm,0.8s,baz=270,slow=2.0,SNR=25
CPUP SKP **SKPdf** 06 37 52.0 +1.6
comp=Z,32nm,1.1s,baz=227,slow=4.8,SNR=3.5
CPUP **Villa Florida** 139.01 143 *e*P **PKiKP** 06 34 21.4 -0.5
POLO **Lamas de Olo** 139.11 333 *e*PKPdf PKPpre 06 34 13.6
POLO **Lamas de Olo** 139.11 333 *e*PP **PP** 06 37 15.1 +3.2
POLO **Lamas de Olo** 139.11 333 *e*SS SS 06 56 18.4 +54
PTGC **Puerto Gaitan,** 139.15 91 *e*P PKPpre 06 34 11.4
PVRL **Vila Real** 139.15 333 *e*PKPdf **PKiKP** 06 34 21.8 -0.1
BBSR **BB Station** 139.21 46 IAMs_20 IAMs_20 07 30 48.3
comp=Z,17µm,21.0s
URIC **Uribia, Colomb** 139.29 79 *e*P PKPpre 06 34 07.7
PVIS **Viseu** 139.68 332 *e*PKPdf PKPpre 06 34 13.2
MTE **Manteigas** 139.76 332 *e*PKPdf PKPpre 06 34 13.2
MTE **Manteigas** 139.76 332 *e*PP **PP** 06 37 17.5 +1.6
MTE **Manteigas** 139.76 332 *e*SS SS 06 56 33.6 +61
MTE **Manteigas** 139.76 332 *e*LR LR 07 23 17.6
comp=Z,23µm,20.0s
PCBR **Castelo Branco** 140.17 331 *e*PKPdf PKPpre 06 34 16.3
PMRV **Marv??o** 140.45 331 *e*PKPdf PKPpre 06 34 16.2
PMRV **Marv??o** 140.45 331 *e*PP **PP** 06 37 19.8 -0.3
PMRV **Marv??o** 140.45 331 *e*SS SS 06 56 24.9 +45
PMRV **Marv??o** 140.45 331 *e*LR LR 07 23 34.8
comp=Z,13µm,24.0s
PCAS **Casmilo, Conde** 140.48 332 *e*PKPdf PKPpre 06 34 16.1
PCAS **Casmilo, Conde** 140.48 332 *e*PP **PP** 06 37 20.1 -0.1
PCAS **Casmilo, Conde** 140.48 332 *e*SS SS 06 56 43.5 +63
SOCV **Socops** 140.55 84 *e*P PKPpre 06 34 13.1
CHAS **Isla Isabel II** 140.75 322 PKP PKPpre 06 34 10.9
CHAS **Isla Isabel II** 140.75 322 PP PP 06 37 20.4 -1.9
SDV **Santo Domingo** 140.76 83 PKhKP PKPpre 06 34 17.5
comp=Z,36nm,0.6s,baz=291,slow=7.5,SNR=1.1
SDV SKP **SKPdf** 06 37 54.9 +0.8
comp=Z,53nm,0.9s,baz=239,slow=4.4,SNR=3.2
EMAL **Malaga-Limoner** 140.86 325 PKP PKPpre 06 34 09.4
EMAL **Malaga-Limoner** 140.86 325 PP PP 06 37 21.1 -1.7
TAF **Taforalt** 140.98 321 P **PKPdf** 06 34 20.0 -3.2
WMELI **Melilla** 140.98 322 PKP PKPpre 06 34 09.9
WMELI **Melilla** 140.98 322 PP PP 06 37 21.6 -2.0
PESTR **Estremoz** 140.98 330 *e*PKPdf **PKPdf** 06 34 18.5 -4.5
PESTR **Estremoz** 140.98 330 *e*PP **PP** 06 37 23.4 0.0
PESTR **Estremoz** 140.98 330 *e*SS SS 06 56 25.8 +39
PSBE **So Bento** 141.05 332 *e*PKPdf **PKPdf** 06 34 19.6 -3.5
PSBE **So Bento** 141.05 332 *e*PP **PP** 06 37 23.4 -0.3
PSBE **So Bento** 141.05 332 *e*SS SS 06 56 34.1 +47
PMTG **Montargil** 141.13 331 *e*PKPdf PKPpre 06 34 14.7
PMTG **Montargil** 141.13 331 *e*PP **PP** 06 37 23.0 -1.2
PMTG **Montargil** 141.13 331 *e*SS SS 06 56 41.0 +53
PBAR **Barrancos** 141.24 329 *e*PKPdf PKPpre 06 34 12.6
PBAR **Barrancos** 141.24 329 *e*PP **PP** 06 37 24.8 -0.1
PBAR **Barrancos** 141.24 329 *e*SS SS 06 56 14.4 +25
JBK **JBK** 141.38 321 P **PKPdf** 06 34 20.0 -4.1
EVO **Evora** 141.45 330 PKP PKPpre 06 34 14.4
EVO **Evora** 141.45 330 PP PP 06 37 24.5 -1.7
EVO **Evora** 141.45 330 *e*PKPdf PKPpre 06 34 15.5
EVO **Evora** 141.45 330 *e*PP **PP** 06 37 25.8 -0.4
TER01 **Tubaro-SC** 141.51 154 *e*P **PKiKP** 06 34 26.4 -0.6
PALE **Palemas** 141.64 323 P **PKPdf** 06 34 22.0 -2.3
PACT **Alcochete** 141.66 331 *e*PKPdf **PKPdf** 06 34 20.7 -3.4
PACT **Alcochete** 141.66 331 *e*PP **PP** 06 37 31.0 +3.6
PMAFR **Mafra** 141.72 332 *e*PKPdf **PKPdf** 06 34 20.0 -4.3
PMAFR **Mafra** 141.72 332 *e*PP **PP** 06 37 31.6 +3.8
PMAFR **Mafra** 141.72 332 *e*SS SS 06 56 44.9 +50
PBEJ **Beja** 141.77 330 *e*PKPdf **PKPdf** 06 34 23.3 -1.1
PBEJ **Beja** 141.77 330 *e*PP **PP** 06 37 30.9 +2.7
LIS **Lisbon** 141.85 332 *e*PKPdf **PKPdf** 06 34 19.2 -5.3
LIS *e*PP **PP** 06 37 23.8 -4.8
LIS IAMs_20 IAMs_20 07 43 07.8
comp=Z,28µm,20.5s
LIS **Lisbon** 141.85 332 *e*PKHKP PKPpre 06 34 19.2
PMST **Lisbon--Monsan** 141.85 332 *e*PP **PP** 06 37 27.8 -0.8
ARNO **Arenosillo** 141.88 328 PKP PKPpre 06 34 14.1
ARNO **Arenosillo** 141.88 328 PP PP 06 37 25.4 -3.5
PVLZ **Peæn de** 141.89 323 PKP PKPpre 06 34 11.9
PVLZ **Peæn de** 141.89 323 PP PP 06 37 22.6 -6.5
FIGM **Figuig** 141.89 317 P **PKPdf** 06 34 21.0 -4.0
CEU **Ceuta** 142.01 325 PKP PKPpre 06 34 14.6
CEU **Ceuta** 142.01 325 PP PP 06 37 26.1 -3.7
PNCL **Nicolau / Gran** 142.03 330 *e*PKPdf PKPpre 06 34 16.5
PNCL **Nicolau / Gran** 142.03 330 *e*PP **PP** 06 37 33.3 +3.6
PNCL **Nicolau / Gran** 142.03 330 *e*SS SS 06 56 37.1 +38
AKLM **AKL** 142.07 322 P **PKPdf** 06 34 21.0 -4.1
MESJ **Messejana** 142.09 330 *e*PKPdf **PKPdf** 06 34 19.7 -5.2
MESJ *e*PP **PP** 06 37 25.2 -4.9
MESJ IAMs_20 IAMs_20 07 31 27.3
comp=Z,32µm,31.6s
MESJ **Messejana** 142.09 330 *e*PKPdf PKPpre 06 34 17.9
MESJ **Messejana** 142.09 330 *e*PP **PP** 06 37 30.7 +0.6
MESJ **Messejana** 142.09 330 *e*PKHKP PKPpre 06 34 19.7
PCVE **Castro Verde** 142.16 329 *e*PKPdf PKPpre 06 34 17.8
PCVE **Castro Verde** 142.16 329 *e*PP **PP** 06 37 33.5 +3.0
PCVE **Castro Verde** 142.16 329 *e*SS SS 06 56 13.4 +13
PVAQ **Vaqueiros** 142.17 329 *e*PKPdf PKPpre 06 34 18.7
PVAQ **Vaqueiros** 142.17 329 *e*PP **PP** 06 37 30.8 +0.2
PVAQ **Vaqueiros** 142.17 329 *e*SS SS 06 56 28.7 +28
PVAQ **Vaqueiros** 142.17 329 *e*LR LR 07 24 40.9
comp=Z,22µm,22.0s
CHEFC **Chefchaouen** 142.55 324 P **PKPdf** 06 34 23.0 -3.0
PTEO **Sao Teotonio** 142.57 330 *e*PKPdf **PKPdf** 06 34 22.9 -2.9
PTEO **Sao Teotonio** 142.57 330 *e*PP **PP** 06 37 34.8 +1.8
MORF **Marmelete** 142.72 330 *e*PKPdf **PKPdf** 06 34 20.6 -5.5
MORF *e*PP **PP** 06 37 29.0 -5.0
MORF *e*SS SS 06 56 03.2 -3.7
MORF IAMs_20 IAMs_20 07 33 04.1
comp=Z,36µm,32.3s
MORF **Marmelete** 142.72 330 *e*PKPdf PKPpre 06 34 19.6
MORF **Marmelete** 142.72 330 *e*PP **PP** 06 37 36.1 +2.1
MORF **Marmelete** 142.72 330 *e*SS SS 06 56 27.4 +21
MORF **Marmelete** 142.72 330 *e*PKHKP PKPpre 06 34 20.6
PFVI **Vila Bisbo** 142.94 330 *e*PKPdf **PKPdf** 06 34 21.1 -5.4
PFVI **Vila Bisbo** 142.94 330 *e*PP **PP** 06 37 39.5 +4.2
PFVI **Vila Bisbo** 142.94 330 *e*SS SS 06 56 29.5 +20
SIV **San Ignacio** 143.17 127 PKhKP PKPpre 06 34 24.3
comp=Z,250nm,0.6s,baz=238,slow=3.8,SNR=476
SIV SKPbc **SKiKP** 06 38 02.8 0.0
comp=Z,39nm,1.0s,baz=242,slow=6.4,SNR=2.1
AOPR **Arecibo Observ** 143.20 67 *e*P PKPab 06 34 21.7 -1.4
BAUV **El Baul** 143.32 83 *e*P PKPab 06 34 19.8 -3.9
IFR **Ifrane** 143.52 322 PKP PKPab 06 34 23.1 -1.1
IFR **Ifrane** 143.52 322 PP PP 06 37 42.6 +3.3
MDT **Midelt** 143.66 321 P PKPab 06 34 24.4 -0.3
SJG **San Juan** 143.81 68 SKPbc **SKPbc** 06 38 03.1 0.0
comp=Z,178nm,1.2s,baz=259,slow=3.2,SNR=5.6
SJG **San Juan** 143.81 68 IAMs_20 IAMs_20 07 32 42.8
comp=Z,12µm,22.0s
SJG **San Juan** 143.81 68 *e*P PKPpre 06 34 20.0
AQDB **Aquidauana** 144.28 138 *e*P **PKPdf** 06 34 29.4 +0.1
TRCB **Terra Rica** 144.47 144 *e*P **PKPdf** 06 34 29.1 -0.5
ZHG **ZHG** 144.48 323 P **PKPab** 06 34 27.0 -0.8
PTLB **Pontes e Lacer** 145.01 128 *e*P **PKPdf** 06 34 30.9 +0.3
AVE **Averroes** 145.04 324 PKP **PKPbc** 06 34 27.2 -2.5
AVE **Averroes** 145.04 324 PP PP 06 37 47.2 -0.9
AVE **Averroes** 145.04 324 **PKPbc** 06 34 28.4 -1.3
AVE IAMs_20 IAMs_20 07 53 22.6
comp=Z,10µm,22.0s
AVE **Averroes** 145.04 324 P **PKPbc** 06 34 28.7 -1.0
VILB **Vilhena** 145.52 123 *e*P **PKPab** 06 34 33.0 +1.0
FRTB **Fartura** 145.70 149 *e*P **PKPab** 06 34 33.0 +0.5
PET01 **Itanhaem-SP** 146.00 153 *e*P **PKPab** 06 34 33.9 +0.4
PCMB **Pacaembu** 146.18 145 *e*P **PKPab** 06 34 34.1 -0.1
H07N1 **FLORES T-PHASE** 146.49 360 *e*PKP **PKPab** 06 34 34.9 -0.1
PCRV **Puerto La Cruz** 146.61 81 PKPbc **PKPdf** 06 34 33.6 +0.1
comp=Z,210nm,0.7s,baz=330,slow=3.8,SNR=10
PCRV PP **PP** 06 37 59.5 +0.5
comp=Z,11nm,1.0s,baz=287,slow=7.1,SNR=0.8
SMRT **St. Maarten** 146.64 66 **PKPdf** 06 34 33.1 -0.2
SMRT IAMs_20 IAMs_20 07 34 00.6
comp=Z,13µm,21.0s
SMRT **St. Maarten** 146.64 66 *e*P **PKPdf** 06 34 29.9 -3.5
TORD **Torodi Ar. Bea** 146.88 285 PKPbc **PKPdf** 06 34 34.0 +0.1
comp=Z,40nm,0.6s,baz=69,slow=3.0,SNR=85
SEUS **St. Eustatius** 146.88 67 IAMs_20 IAMs_20 07 36 23.2
comp=Z,9µm,20.0s
SEUS **St. Eustatius** 146.88 67 *e*P **PKPdf** 06 34 31.4 -2.3
PGRA **Graciosa** 147.03 355 *e*PKP **PKPab** 06 34 37.0 0.0
PAGU **Agualva, Azore** 147.22 354 *e*PKP **PKPab** 06 34 37.3 -0.5
PSBA **Serra de Santa** 147.23 354 *e*PKP **PKPab** 06 34 37.2 -0.7
VAO **Valinhos** 147.26 152 *e*P **PKPbc** 06 34 36.2 -0.5
PSCM **Serra do Cume** 147.28 354 *e*PKP **PKPab** 06 34 37.8 -0.2
ADH **Angra Heroismo** 147.33 354 *e*PKP **PKPab** 06 34 38.2 0.0
ROSA **Rosais** 147.36 356 *e*PKP **PKPab** 06 34 38.1 -0.2
PMAN **Manadas** 147.43 356 *e*PKP **PKiKP** 06 34 39.0 +0.1
PCED **Cedros** 147.48 356 *e*PKP **PKPab** 06 34 38.7 -0.1
RCLB **Rio Claro- Sao** 147.49 151 *e*P **PKPdf** 06 34 35.6 +0.8
CALA **Caldeira** 147.53 356 *e*PKP **PKiKP** 06 34 39.4 +0.2
PARB **Paraibuna** 147.56 155 *e*P **PKPbc** 06 34 36.8 -0.7
HOR **Horta** 147.57 356 *e*PKP **PKPab** 06 34 39.4 +0.2
PICO **Pico** 147.59 356 *e*PKP **PKPab** 06 34 39.6 +0.3
PPNO **Prainha do Nor** 147.60 356 *e*PKP **PKPab** 06 34 39.5 +0.1
PID **Ribeirinha** 147.62 356 *e*PKP **PKPab** 06 34 39.4 0.0
PCAN **Candelaria** 147.63 356 *e*PKP **PKPbc** 06 34 37.9 +0.7
MBFL **Flemmings, Mon** 147.79 68 *e*P **PKPdf** 06 34 33.9 -1.5
ANWB **Willy Bob** 147.93 66 IAMs_20 IAMs_20 07 37 35.7
comp=Z,11µm,21.0s
ANWB **Willy Bob** 147.93 66 *e*P **PKPdf** 06 34 34.0 -1.5
BART **Pico Bartolome** 147.94 351 *e*PKP **PKiKP** 06 34 39.3 -0.7
PSET **Sete Cidades** 147.97 352 *e*PKP **PKPab** 06 34 40.5 -0.3
PGRON **Lagoa das Cont** 147.98 351 *e*PKP **PKPab** 06 34 40.5 -0.4
CMLA **Cha da Macela** 148.00 352 PKPbc **PKiKP** 06 34 39.6 -0.5
CMLA **Cha da Macela** 148.00 352 PKIKP **PKiKP** 06 34 39.6 -0.5
CMLA **Cha da Macela** 148.00 352 P **PKiKP** 06 34 40.3 +0.2
PDA **Ponta Delgada** 148.04 352 *e*PKP **PKiKP** 06 34 39.8 -0.3
ANBD **Bethesda, Anti** 148.12 67 *e*P **PKPdf** 06 34 31.5 -4.3
GDHS **Morne Mazeau,** 148.33 69 IAMs_20 IAMs_20 07 33 28.7
comp=Z,12µm,22.0s
CBE **Ff, Capester** 148.53 69 IAMs_20 IAMs_20 07 38 56.0
comp=Z,11µm,22.0s
CBE **Ff, Capester** 148.53 69 *e*P **PKPdf** 06 34 36.1 -0.5
ABD **La Joyeuse, An** 148.54 68 **PKPbc** 06 34 38.9 -1.3
ABD **La Joyeuse, An** 148.54 68 *e*P **PKPdf** 06 34 33.3 -3.2
TDBA **Terre de Bas,** 148.56 69 IAMs_20 IAMs_20 07 42 55.8
comp=Z,10µm,20.0s
TDBA **Terre de Bas,** 148.56 69 *e*P **PKPdf** 06 34 34.3 -2.3
MAN01 **Angra dos Reis** 148.66 157 *e*P **PKPdf** 06 34 37.7 +1.0
PSMN **Pico do Norte,** 148.68 351 *e*PKP **PKiKP** 06 34 41.3 -0.2
PSMA **Santa Maria** 148.70 351 *e*PKP **PKiKP** 06 34 41.6 +0.1
MDCT **Cottage Hill,** 148.78 70 *e*P **PKPdf** 06 34 38.9 +1.9
MDVC **Dominica, Viel** 148.84 70 *e*P **PKPdf** 06 34 37.0 0.0
DSLB **Salisbury** 148.87 70 *e*P **PKPdf** 06 34 34.7 -2.4
MAGL **Barre de l'ile** 148.87 69 IAMs_20 IAMs_20 07 38 41.9
comp=Z,10µm,22.0s
MAGL **Barre de l'ile** 148.87 69 *e*P **PKPdf** 06 34 34.7 -2.4
MAGL **Barre de l'ile** 148.87 69 *e*P **PKPdf** 06 34 38.0 +0.9
GDSD **La Dsirade Is** 148.97 68 PKPbc **PKPbc** 06 34 39.6 -1.7
DLPL **La Plaine** 149.05 70 **PKPbc** 06 34 41.0 -0.6
DLPL **La Plaine** 149.05 70 *e*P **PKPdf** 06 34 32.5 -5.0
PDRB **Porto dos Gac** 149.10 125 *e*P **PKPdf** 06 34 39.5 +1.9
SVN **Savane Anatole** 149.24 71 PKPdf **PKPdf** 06 34 37.9 +0.1
SVN PKPbc **PKPbc** 06 34 42.0 -0.1
SVN PKPab **PKPab** 06 34 45.6 -1.1
FDF **Fort de France** 149.28 71 IAMs_20 IAMs_20 07 42 06.2
comp=Z,12µm,22.0s
GRGR **Grenville** 149.29 76 **PKPdf** 06 34 34.7 -3.2
GRGR **Grenville** 149.29 76 *e*P **PKPdf** 06 34 33.3 -4.5
BIM **Bigot** 149.41 72 IAMs_20 IAMs_20 07 43 38.6
comp=Z,13µm,21.0s
BIM **Bigot** 149.41 72 *e*P **PKPdf** 06 34 35.0 -3.0
GCMP **Grenada, Carri** 149.46 76 *e*P **PKPdf** 06 34 31.7 -6.4
SVB **Belmont** 149.49 74 *e*P **PKPdf** 06 34 36.5 -1.7
ILAM **Ilet Lapin Mar** 149.54 71 PKPdf **PKPdf** 06 34 37.2 -0.9
ILAM **PKPbc** 06 34 42.0 -0.8
ILAM PKPab **PKPab** 06 34 47.3 -0.5
ILAM IAMs_20 IAMs_20 07 43 33.8
comp=Z,12µm,22.0s
ILAM **Ilet Lapin Mar** 149.54 71 *e*P **PKPdf** 06 34 34.1 -4.1
SSV **Crater Summit** 149.54 74 *e*P **PKPdf** 06 34 38.8 +0.4
SLB **Belfond** 149.58 73 *e*P **PKPbc** 06 34 41.0 -2.0
SLBI **Saint Lucia, B** 149.61 73 *e*P **PKPdf** 06 34 33.7 -4.6
MPOM **Morne Pois Mar** 149.62 72 IAMs_20 IAMs_20 07 43 41.2
comp=Z,12µm,20.0s
MPOM **Morne Pois Mar** 149.62 72 *e*P **PKPdf** 06 34 35.1 -3.2
MCLT **Moule a Chique** 149.70 73 *e*P **PKPdf** 06 34 33.9 -4.6
TRN **Trinidad (W)** 149.73 79 *e*P **PKPdf** 06 34 37.0 -1.5
PMPST **Porto Santo, M** 149.77 335 *e*PKPbc **PKiKP** 06 34 44.5 +0.6
CLDB **Colider** 150.26 124 *e*P **PKPdf** 06 34 40.7 +1.2
PMAR **Madeira** 150.32 335 *e*PKPbc **PKiKP** 06 34 46.3 +1.1
PMOZ **Porto Moniz, M** 150.35 336 *e*PKPbc **PKiKP** 06 34 46.3 +1.1
PMOZ **Porto Moniz, M** 150.35 336 *e*SS SS 06 58 48.2 +75
PMOZ **Porto Moniz, M** 150.35 336 *e*LR LR 07 29 15.8
comp=Z,16µm,22.0s
CAM01 **Campos-RJ** 150.46 160 *e*P **PKPdf** 06 34 41.5 +2.1
BOAV **Boa Vista** 150.49 96 *e*P **PKPdf** 06 34 41.5 +1.7
TOSP **Speyside** 150.50 78 *e*P **PKPdf** 06 34 36.2 -3.5
IPMB **Ipameri, GO** 150.79 145 *e*P **PKPdf** 06 34 42.1 +1.9
BBGH **Gun Hill** 151.13 74 PKPdf **PKPdf** 06 34 39.9 -0.8
BBGH **PKPbc** 06 34 44.5 -2.1
BBGH PKPab **PKPab** 06 34 51.8 -2.6
BBGH IAMs_20 IAMs_20 07 37 57.3
comp=Z,15µm,22.0s
BBGH **Gun Hill** 151.13 74 *e*P **PKPdf** 06 34 41.5 +0.8
BBSP **Saint Philip** 151.24 74 *e*P **PKiKP** 06 34 50.1 +2.8
PMNB **Patos De Minas** 151.30 149 *e*P **PKPdf** 06 34 43.0 +2.0
ALF01 **Guarapari-ES** 151.89 161 *e*P **PKPdf** 06 34 43.3 +1.6
KOWA **Kowa** 152.04 290 **PKPdf** 06 34 40.8 -1.2
KOWA **PKPbc** 06 34 48.7 0.0
KOWA **Kowa** 152.04 290 P **PKPdf** 06 34 41.9 -0.2
NPGB **Novo Progresso** 152.57 118 *e*P **PKPdf** 06 34 44.2 +1.2
BDFB **Brasilia** 152.75 142 PKP **PKPdf** 06 34 44.0 +0.7
comp=Z,84nm,0.7s,baz=225,slow=0.8,SNR=73
BDFB PKPbc **PKiKP** 06 34 51.1 +0.5
comp=Z,488nm,0.6s,baz=229,slow=1.7,SNR=60
BDFB **Brasilia** 152.75 142 **PKPdf** 06 34 44.2 +0.9
BDFB PKPbc **PKiKP** 06 34 51.2 +0.6
BDFB PKPab **PKPab** 06 35 02.0 +0.9
BDFB **Brasilia** 152.75 142 PKIKP **PKPdf** 06 34 44.2 +0.9
BDFB 06 34 51.2
BDFB 06 35 02.1
BDFB **Brasilia** 152.75 142 *e*P **PKPdf** 06 34 45.1 +1.8
SNDB **Serra Nova Dou** 153.14 132 *e*P **PKPdf** 06 34 45.1 +1.4
RIB01 **Linhares ES** 153.22 160 *e*P **PKPdf** 06 34 44.5 +0.8
ITTB **Itaituba**

comp=Z,19nm,0.7s,baz=293,slow=2.9,SNR=12
RCBR PKPab **PKPab 06 36 04.7 +0.5**
comp=Z,54nm,0.9s,baz=352,slow=6.0,SNR=9.9
RCBR Riachuelo 167.30 158 PKPdf **PKPdf 06 34 56.9 -2.6**
RCBR **PKPab 06 36 03.4 -0.7**
RCBR Riachuelo 167.30 158 *e*P **PKPdf 06 34 59.0 -0.4**
SACV Santiago Islan 168.44 321 PKPdf **PKPdf 06 34 58.4 -1.8**
SACV PKPab **PKPab 06 36 08.8 -0.4**

*NEIC **17** 06:23:21.8±2.3, 25°.09N±0°.04×109°.63W±0°.03, h10km±2km, mb4.6/1, Md4.1/9(MEX), Error ellipse: s-maj=7.3km s-min=5.0km az=340.0*
*IDC **17** 06:23:22.2±1.2, 25°.02N×109°.53W, h0km, mb3.6/1, mbtmp3.5/6, ML3.5/4, MS4.5/2, Error ellipse: s-maj=25.8km s-min=10.1km az=126.0*
*ECX **17** 06:23:23.2±0.8, 25°.27N×109°.90W, h17km±36km, MD3.3, ML3.5*
*MEX **17** 06:23:26.1±0.3, 25°.22N×109°.79W, h12km±7km, MD4.1*
ISC 17 06:23:22.8±1.8, 25°.19N±0°.05×109°.82W±0°.04, h13km±13km, n46, σ1°.63/52, 4C, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.82**	**60**		**Pb**	**06 23 38.8**	**0.0**
TSIG					**Sg**	**06 23 48.8**	**-0.5**
TSIG	**Topolobambo**	**0.82**	**60**	*i* P	**Pb**	**06 23 38.8**	**0.0**
TSIG				*i* S	**Sg**	**06 23 48.8**	**-0.5**
TSIG	**Topolobambo**	**0.82**	**60**	⇑*i*P	**Pb**	**06 23 38.7**	**0.0**
TSIG				*e*S	**Sg**	**06 23 49.0**	**-0.3**
TSIG				*e*		06 23 49.7	
TSIG				IAML		06 23 49.7	
	comp=N,2μm,0.2s						
LPIG	**La Paz**	**1.17**	**202**	Pg	**Pn**	**06 23 45.1**	**+0.3**
	comp=N,45nm,0.3s,baz=26,slow=14,SNR=20						
LPIG				Lg	Lg	06 23 59.0	
	comp=N,52nm,0.3s,baz=189,slow=15,SNR=8.2						
LPIG				LR	LR	06 24 16.1	
	comp=N,294nm,20.8s,baz=212,slow=47						
LPIG	**La Paz**	**1.17**	**202**	*e*P	**Pn**	**06 23 45.1**	**+0.3**
LPIG	**La Paz**	**1.17**	**202**	*e*P	**Pn**	**06 23 44.7**	**-0.1**
LPIG				*e*S	**Sb**	**06 23 59.6**	**-0.3**
LPIG				⇑*e*		06 24 00.3	
LPIG				IAML		06 24 00.3	
	comp=E,615nm,0.8s						
SLBS	**Sierra La Lagu**	**1.50**	**184**		**Pn**	**06 23 48.2**	**-1.3**
SLBS	**Sierra La Lagu**	**1.50**	**184**	*e*P	**Pn**	**06 23 50.2**	**+0.8**
SLBS				*i* S	**Sn**	**06 24 08.3**	**-0.7**
SLBS	**Sierra La Lagu**	**1.50**	**184**	*e*P	**Pn**	**06 23 49.9**	**+0.4**
NE77	**Loreto B.C.S**	**1.62**	**301**	⇑*e*P	**Pn**	**06 23 48.4**	**-2.6**
NE77				*e*S	**Sn**	**06 24 06.7**	**-5.0**
NE80	**Navojoa**	**1.80**	**17**	*e*P	**Pn**	**06 23 52.5**	**-1.0**
NE80				*e*S	**Sn**	**06 24 16.6**	**+0.3**
NE80				IAML		06 24 17.3	
	comp=E,434nm,0.6s						
NE80				⇑*e*		06 24 17.3	
SNIRB	**San Nicol¡s**	**2.06**	**311**	*e*P	**Pn**	**06 23 55.2**	**-1.9**
CSIG	**Choix**	**2.09**	**38**		**Pn**	**06 23 57.3**	**-0.2**
CSIG	**Choix**	**2.09**	**38**	*e*P	**Pn**	**06 23 57.3**	**-0.2**
SSIG	**Sanalona**	**2.46**	**98**		**Pn**	**06 24 02.7**	**+0.1**
SSIG	**Sanalona**	**2.46**	**98**	*e*P	**Pn**	**06 24 02.7**	**+0.1**
SRIG	**Santa Rosalia**	**3.04**	**315**	Pn	**Pn**	**06 24 12.6**	**+2.1**
HSIG		**3.95**	**345**	Pn	**Pn**	**06 24 22.9**	**-0.1**
HPIG		**4.12**	**64**		**Pn**	**06 24 23.4**	**-2.2**
HPIG		**4.12**	**64**	*e*P	**Pn**	**06 24 26.1**	**+0.4**
HPIG				*i* S	**Sn**	**06 25 14.2**	**+0.4**
319A	**Douglas**	**6.18**	**4**	Pn	**Pn**	**06 24 54.5**	**+0.6**
TX31	**Lajitas Ar. Si**	**6.86**	**52**	Pn	**Pn**	**06 25 00.0**	**-3.1**
TX32	**Lajitas Array**	**6.86**	**52**	Pn	**Pn**	**06 24 60.0**	**-3.2**
TXAR	**Lajitas Array**	**6.86**	**52**	Pn	**Pn**	**06 25 03.1**	**0.0**
	comp=E,0.3nm,0.3s,baz=230,slow=15,SNR=7.0						
TXAR				Sn	**Sn**	**06 26 19.8**	**-1.4**
	comp=E,0.9nm,0.3s,baz=233,slow=26,SNR=3.6						
TXAR				Lg	Lg	06 26 53.5	
	comp=E,0.6nm,0.3s,baz=246,slow=28,SNR=3.6						
	comp=E,0.5nm,0.3s						
TXAR	**Lajitas Array**	**6.86**	**52**	Pn	**Pn**	**06 24 59.5**	**-3.6**
ZAIG	**Zacatecas**	**7.06**	**108**	Pn	Pn	06 24 59.6	-6.5
TUC	**Tucson**	**7.15**	**353**		**Pn**	**06 25 07.9**	**+0.8**
SFX	**San Felipe**	**7.33**	**324**	Pn	**Pn**	**06 25 11.9**	**+2.4**
121A	**Cookes Peak, D**	**7.53**	**13**	Pn	**Pn**	**06 25 11.7**	**-0.8**
SBM	**South Baldy**	**9.05**	**14**	Pn	**Pn**	**06 25 33.3**	**-0.2**
CRNM	**Carthage**	**9.14**	**16**		**Pn**	**06 25 34.2**	**-0.3**
X18A	**Snowflake**	**9.31**	**359**	Pn	**Pn**	**06 25 36.6**	**-0.3**
BNM	**Barren Site**	**9.35**	**17**	Pn	**Pn**	**06 25 35.8**	**-1.8**
ANMO	**Albuquerque**	**10.15**	**16**	Pn	Pn	06 25 52.7	+4.3
	comp=E,1.4nm,0.9s,baz=203,slow=12,SNR=6.2						
ANMO				Lg	Lg	06 28 41.7	
	baz=72,slow=19,SNR=1.6						
PFO	**Pinyon Flats O**	**10.19**	**327**	LR	LR	06 28 46.7	
	comp=E,2μm,19.6s,baz=18,slow=31						
CCUT	**Cedar City**	**12.69**	**347**	Pn	**Pn**	**06 26 23.1**	**-0.1**
PV05	**Paradox Valley**	**12.87**	**3**	Pn	**Pn**	**06 26 26.8**	**+1.2**
TPNV	**Topopah Spring**	**12.95**	**336**	Pn	**Pn**	**06 26 28.2**	**+1.6**
PSUT	**Pine Spring**	**13.74**	**347**		**Pn**	**06 26 38.6**	**+1.2**
P17A	**Butcher Ranch,**	**14.27**	**357**	Pn	**Pn**	**06 26 44.2**	**-0.4**
MPU	**Maple Canyon**	**14.86**	**355**	Pn	**Pn**	**06 26 54.6**	**+1.7**
O20A	**White River Ci**	**14.96**	**5**	Pn	**Pn**	**06 26 54.0**	**-0.2**
O20A				IAmb	IAmb	06 27 09.4	
	comp=Z,30nm,1.2s						
NVAR	**Mina Array Bea**	**15.03**	**333**	Pn	**P**	**06 27 04.5**	**+4.0**
	comp=Z,0.1nm,0.3s,baz=166,slow=12,SNR=5.7						
	comp=Z,1.4nm,0.8s						
ELK	**Elko**	**16.16**	**345**	Pn	**P**	**06 27 14.4**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=158,slow=11,SNR=3.1						
ELK				Lg	Lg	06 31 54.9	
	comp=Z,0.1nm,0.3s,baz=327,slow=0.6,SNR=1.4						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**17.54**	**1**	P	**P**	**06 27 30.1**	**+1.8**
	baz=169,slow=10,SNR=8.5						
	comp=Z,1.5nm,1.0s						
APG	**El Apazote**	**20.79**	**116**	P	**P**	**06 28 02.6**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=321,slow=14,SNR=2.7						
APG				LR	LR	06 36 20.6	
	comp=Z,1μm,21.0s,baz=18,slow=38						
	comp=Z,2.4nm,0.8s						

IDC 17 06:31:11.4±2.0, 5°.66S×148°.90E, h0km, mb3.7/3, mbtmp3.9/4, ML2.3/1, Error ellipse: s-maj=119.6km s-min=28.1km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.11**	**205**	Pn	Pn	06 32 17.0	+1.6
	14nm,0.3s,baz=16,slow=8.2,SNR=11						
PMG				Sn	Sn	06 32 58.9	-5.3
	13nm,0.3s,baz=194,slow=23,SNR=7.7						
	40nm,0.4s						
WRA	**Warramunga Arr**	**20.05**	**224**	P	P	06 35 46.0	-0.4
	2.5nm,0.4s,baz=51,slow=11,SNR=30						
	2.5nm,0.4s						
ASAR	**Alice Springs**	**23.00**	**217**	P	P	06 36 17.2	-0.9
	1.1nm,0.7s,baz=48,slow=9.7,SNR=5.6						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**84.43**	**23**	P	P	06 43 45.1	-0.4
	0.6nm,0.8s,baz=253,slow=3.5,SNR=2.4						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**146.83**	**285**	PKPbc	PKPbc	06 50 56.8	+0.1
	0.2nm,0.4s,baz=66,slow=3.3,SNR=0.7						

TAP 17 06:31:54.7, 22°.99N×120°.55E, h16km, ML3.9, 18C-10D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGST	**Jiashian**	**0.09**	**17**	⇓*i*P	Pg	06 31 58.2	+0.2
	baz=22						
SGST				*i* S	Sg	06 32 01.7	+1.4
	baz=22						
SCST	**Cishan**	**0.12**	**207**	⇓*i*P	Pb	06 31 59.2	+0.6
	baz=207						
SCST				*i* S	Sb	06 32 03.0	+1.8
	baz=207						
SHHT	**Tainan City**	**0.19**	**279**	⇑*i*P	Pb	06 31 59.9	+0.1
	baz=279						
SHHT				*e*S	Sb	06 32 05.5	+2.2
	baz=279						
CHN3	**Shinhua**	**0.19**	**296**	⇑*i*P	Pb	06 32 00.9	+1.0
	baz=295						
CHN3				*e*S	Sb	06 32 06.6	+3.2
	baz=295						
CHN1	**Nanshi**	**0.19**	**353**	⇓*i*P	Pb	06 32 00.3	+0.4
	baz=353						
CHN1				S	Sb	06 32 04.7	+1.3
	baz=353						
TWM1	**Shoushan**	**0.21**	**216**	⇓*i*P	Pb	06 32 00.9	+0.8
	baz=214						
TWM1				*e*S	Sb	06 32 06.5	+2.8
	baz=214						
STYT	**Tauyuan**	**0.25**	**48**	⇓*i*P	Pb	06 32 01.5	+0.5
	baz=49						
STYT				*i* S	Sb	06 32 06.4	+1.2
	baz=49						
SSD	**Sandimen**	**0.26**	**163**	⇑*i*P	Pb	06 32 01.0	+0.1
	baz=162						
SSD				S	Sb	06 32 05.7	+0.6
	baz=162						
WTP	**Ta-pu**	**0.26**	**13**	⇓*i*P	Pb	06 32 01.4	+0.3
	baz=14						
WTP				*e*S	Sb	06 32 06.6	+1.3
	baz=14						
STYH	**Taoyuan**	**0.27**	**49**	*i* P	Pg	06 32 00.7	+0.2
	baz=48						
STYH				*e*S	Sb	06 32 05.8	+0.2
	baz=48						
SGLT	**Jiouru**	**0.27**	**192**	*e*P	Pn	06 32 02.6	-1.4
	baz=191						
TWK	**Hsinying**	**0.28**	**348**	⇑*i*P	Pb	06 32 01.7	+0.3
	baz=350						
TWK				*e*S	Sb	06 32 07.4	+1.5
	baz=350						
SSHA	**Shanhua**	**0.28**	**300**	*e*P	Pb	06 32 02.2	+0.8
	baz=300						
SSHA				*e*S	Sn	06 32 08.4	-1.7
	baz=300						
TSMG	**Majia**	**0.30**	**163**	⇑*i*P	Pb	06 32 01.5	-0.2
	baz=164						
TSMG				*i* S	Sb	06 32 06.4	0.0
	baz=164						
TAI1	**Yung-k'ang**	**0.30**	**279**	*e*P	Pb	06 32 02.3	+0.6
	baz=279						
SNJT	**Kaohsiung City**	**0.31**	**220**	*e*P	Pg	06 32 00.9	-0.3
	baz=220						
SNJT				*e*S	Sb	06 32 07.7	+1.0
	baz=220						
TPUB	**Ta-pu**	**0.32**	**13**	⇓*i*P	Pb	06 32 02.1	+0.1
	baz=13						
TPUB				S	Sb	06 32 07.7	+0.7
	baz=13						
TSPT	**Pingtung City**	**0.32**	**190**	*e*P	Pb	06 32 03.3	+1.3
	baz=190						
TAI	**Tainan**	**0.33**	**271**	*e*P	Pg	06 32 01.4	-0.1
	baz=270						
CHN4	**Tsaushan**	**0.36**	**6**	⇓P	Pg	06 32 01.9	-0.2
	baz=6.0						
CHN4				*e*S	Sb	06 32 08.0	-0.1
	baz=6.0						
SCLT	**Jiali**	**0.38**	**299**	*e*P	Pb	06 32 03.3	+0.3
	baz=299						
SCLT				*e*S	Sb	06 32 10.5	+1.9
	baz=299						
MASBT	**Mashibuluo**	**0.39**	**169**	⇑*i*P	Pb	06 32 03.0	-0.1
	baz=169						
MASBT				*i* S	Sb	06 32 09.0	+0.1
	baz=169						
WSSB	**Gushan**	**0.44**	**218**	*e*P	Pb	06 32 05.0	+0.9
	baz=218						
WSSB				*e*S	Sn	06 32 14.3	+0.3
	baz=218						
ICHU	**Yijhu**	**0.45**	**326**	*e*P	Pb	06 32 04.3	+0.1
	baz=325						
ICHU				*e*S	Sb	06 32 11.5	+0.9
	baz=325						
WCKO	**Fanlu**	**0.45**	**6**	*e*P	Pg	06 32 02.5	-1.2
	baz=6.0						
WCKO				*e*S	Sb	06 32 10.8	+0.1
	baz=6.0						
TSCK	**Chigu Township**	**0.46**	**290**	*e*P	Pg	06 32 03.3	-0.5
	baz=290						
TSCK				*e*S	Sb	06 32 10.8	-0.1
	baz=290						
ELDTW	**Lidau**	**0.47**	**65**	⇑*i*P	Pb	06 32 05.0	+0.3
	baz=66						
ELDTW				*e*S	Sb	06 32 12.9	+1.4
	baz=66						
CHN8	**Yiju**	**0.47**	**318**	P	Pb	06 32 04.8	+0.1
	baz=319						
CHN8				*e*S	Sb	06 32 13.1	+1.7
	baz=319						
KAU	**Kaohsiung**	**0.48**	**208**	*e*P	Pb	06 32 05.7	+1.0
	baz=207						
TWG	**Pinlang**	**0.51**	**110**	⇑*i*P	Pb	06 32 06.0	+0.7
	baz=110						
TWG				S	Sn	06 32 14.6	-1.1
	baz=110						
CHY	**Chiayi**	**0.52**	**347**	⇑*e*P	Pb	06 32 05.8	+0.4
	baz=348						
CHY				*e*S	Sb	06 32 14.2	+1.5
	baz=348						
LONT	**Longtian**	**0.54**	**99**	⇑*i*P	Pb	06 32 06.3	+0.5
	baz=99						
LONT				*e*S	Sb	06 32 14.8	+1.5
	baz=99						
ECL	**Taimali**	**0.54**	**137**	⇑*i*P	Pb	06 32 05.9	+0.2
	baz=136						
ECL				S	Sb	06 32 13.8	+0.5
	baz=136						
CHN2	**Minshiung**	**0.54**	**352**	*e*P	Pb	06 32 06.7	+0.8
	baz=352						
CHN2				*e*S	Sn	06 32 15.8	-0.8
	baz=352						
ALS	**Alishan**	**0.57**	**24**	⇓P	Pb	06 32 06.6	+0.2
	baz=25						
ALS				*e*S	Sb	06 32 15.9	+1.5
	baz=25						
TTN	**Taitung**	**0.60**	**113**	*e*P	Pn	06 32 07.7	-0.8
	baz=113						
WSL	**Shuilin Townsh**	**0.61**	**331**	*e*P	Pg	06 32 06.0	-0.6
	baz=330						
WSL				*e*S	Sb	06 32 15.1	-0.2
	baz=330						
YUS	**Yu-Shan**	**0.62**	**36**	P	Pb	06 32 07.8	+0.3
	baz=37						
YUS				*e*S	Sb	06 32 17.0	+1.0
	baz=37						
SCZT	**Fangliau**	**0.62**	**174**	⇑*i*P	Pb	06 32 07.2	0.0
	baz=174						
SCZT				*e*S	Sn	06 32 18.1	-0.4
	baz=174						
EHD	**Haiduan**	**0.62**	**75**	⇑*e*P	Pg	06 32 06.6	-0.3
	baz=75						
EHD				*e*S	Sb	06 32 15.8	+0.1
	baz=75						
ECS	**Chishang**	**0.62**	**80**	*e*P	Pn	06 32 08.1	-0.8
	baz=81						
WLCH	**Liuqiu**	**0.66**	**194**	*e*P	Pn	06 32 09.9	+0.6
	baz=194						
EAST	**Anshuo**	**0.67**	**156**	*e*P	Pb	06 32 08.2	+0.3
	baz=155						
EAST				*e*S	Sn	06 32 18.4	-1.2
	baz=155						
TWP	**Hsiaoliuchiu**	**0.67**	**195**	*e*P	Pn	06 32 09.6	+0.1
	baz=195						
TWP				*e*S	Sn	06 32 21.9	+2.3
	baz=195						
WGK	**Gukeng**	**0.69**	**1**	*e*P	Pn	06 32 09.4	-0.5
	baz=1.0						
WGK				*e*S	Sn	06 32 20.3	0.0
	baz=1.0						
EDH	**Donghe**	**0.69**	**91**	⇑*e*P	Pn	06 32 09.1	-0.7
	baz=92						
EDH				*e*S	Sn	06 32 20.1	-0.2
	baz=92						
WDLH	**Douliu**	**0.69**	**359**	*e*P	Pb	06 32 08.9	+0.5
	baz=359						
WDLH				*e*S	Sn	06 32 19.9	-0.4
	baz=359						
WTK	**Tuku**	**0.71**	**348**	*e*P	Pn	06 32 09.8	-0.3
	baz=348						
WTK				*e*S	Sn	06 32 20.4	-0.2
	baz=348						
WSF	**Szhu**	**0.71**	**335**	*e*P	Pb	06 32 09.1	+0.4
	baz=335						
WSF				*e*S	Sn	06 32 19.7	-1.0
	baz=335						
TAWH	**Dawu Township**	**0.72**	**154**	*e*P	Pg	06 32 08.0	-0.7
	baz=155						
TAWH				*e*S	Sb	06 32 18.9	+0.4
	baz=155						
WHYT	**Xinyi Township**	**0.75**	**21**	*e*P	Pb	06 32 09.7	+0.3
	baz=21						
WHYT				*e*S	Sn	06 32 21.0	-0.9
	baz=21						
CHKT	**Chengkung**	**0.76**	**82**	*e*P	Pb	06 32 09.8	+0.3
	baz=82						
TWF1	**Yuli**	**0.77**	**62**	⇑*i*P	Pb	06 32 10.3	+0.5
	baz=63						
TWF1				*e*S	Sn	06 32 21.4	-0.9
	baz=63						
EYUL	**Yuli**	**0.79**	**63**	⇑*e*P	Pg	06 32 10.5	+0.5
	baz=63						
EYUL				*e*S	Sn	06 32 21.6	-1.0
	baz=63						
YULB	**Yu-li**	**0.79**	**60**	⇑P	Pg	06 32 10.4	+0.2
	baz=60						
YULB				*e*S	Sb	06 32 21.0	+0.4
	baz=60						
SLIU	**Shizi**	**0.81**	**164**	*e*P	Pg	06 32 10.5	+0.2
	baz=164						
SLIU				*e*S	Sn	06 32 22.7	-0.4
	baz=164						
WJS	**Zhushan**	**0.84**	**11**	*e*P	Pg	06 32 11.3	+0.2
	baz=11						
WJS				*e*S	Sn	06 32 23.9	-0.1
	baz=11						
WDGT	**Dungji**	**0.86**	**288**	⇓*e*P	Pb	06 32 10.3	-1.0
	baz=288						
WDGT				*e*S	Sb	06 32 22.7	0.0
	baz=288						
EHY	**Hungye**	**0.87**	**54**	⇑*e*P	Pg	06 32 11.9	+0.2
	baz=55						
EHY				*e*S	Sn	06 32 24.1	-0.7
	baz=55						
SSLB	**Suanglung**	**0.87**	**25**	*e*P	Pg	06 32 11.7	0.0
	baz=25						
SSLB				*e*S	Sn	06 32 24.1	-0.7
	baz=25						
ECBN	**Changbin**	**0.89**	**68**	*e*P	Pg	06 32 12.1	+0.1
	baz=69						
WNT	**Mingjian**	**0.89**	**8**	*e*P	Pg	06 32 12.3	+0.3
	baz=8.0						
LDUT	**Ludao**	**0.90**	**110**	*e*P	Pg	06 32 12.2	0.0
	baz=111						
LDUT				*e*S	Sn	06 32 27.3	+1.8
	baz=111						
WRL	**Guolierlin Hig**	**0.92**	**350**	*e*P	Pb	06 32 10.8	-1.5
	baz=350						
WRL				*e*S	Sb	06 32 23.8	-0.5
	baz=350						
VWDT	**VWDT**	**0.93**	**35**	*e*P	Pn	06 32 13.1	0.0
	baz=35						
VWDT				*e*S	Sn	06 32 26.7	+0.5
	baz=35						
SMLT	**Sun Moon Lake**	**0.94**	**20**	*e*P	Pg	06 32 13.0	0.0
	baz=20						
SMLT				*e*S	Sn	06 32 27.1	+0.5
	baz=20						
HGSD	**Ruisui**	**0.94**	**58**	*e*P	Pn	06 32 13.9	+0.6
	baz=58						
HGSD				*e*S	Sn	06 32 27.9	+1.5
	baz=58						
TYC	**Yuchr**	**0.95**	**17**	*e*P	Pg	06 32 13.0	-0.1
	baz=18						
TYC				*e*S	Sn	06 32 27.4	+0.7
	baz=18						
HEN	**Hengchun**	**1.00**	**170**	*e*P	Pn	06 32 15.0	+1.0
	baz=170						
SMST	**Manzhou Townsh**	**1.00**	**165**	*e*P	Pn	06 32 14.4	+0.3
	baz=165						
SMST				*e*S	Sn	06 32 28.4	+0.6
	baz=165						
PHUB	**P'eng-hu**	**1.04**	**300**	*e*P	Pb	06 32 12.9	-1.5
	baz=300						
PHUB				*e*S	Sb	06 32 26.4	-1.3
	baz=300						
EGFH	**Guangfu**	**1.05**	**50**	*e*P	Pg	06 32 15.1	+0.1
	baz=50						
EGFH				*e*S	Sn	06 32 30.2	+1.1
	baz=50						
VCHM	**Qimei**	**1.06**	**282**	*e*P	Pb	06 32 13.0	-1.6
	baz=282						
TWK1	**Hengchun**	**1.07**	**167**	*e*P	Pg	06 32 16.6	+1.2
	baz=167						
TWK1				*e*S	Sn	06 32 31.3	+1.7
	baz=167						
TWKBT	**Hengchun**	**1.07**	**167**	*e*P	Pn	06 32 15.1	+0.1
	baz=167						
TWKBT				*e*S	Sn	06 32 31.3	+1.7
	baz=167						
PNG	**Penghu**	**1.08**	**302**	*e*P	Pb	06 32 13.9	-1.2
	baz=302						
PNG				*e*S	Sb	06 32 27.9	-1.1
	baz=302						
WCHH	**Zhanghua**	**1.08**	**0**	*e*P	Pg	06 32 15.4	-0.2
WCS	**Beigang Elemen**	**1.11**	**17**	*e*P	Pb	06 32 15.0	-0.5
	baz=17						
WCS				*e*S	Sb	06 32 30.1	+0.4
	baz=17						
WUSB	**Renai**	**1.12**	**27**	*e*P	Pn	06 32 16.1	+0.2
	baz=28						
WUSB				*e*S	Sg	06 32 31.4	+0.3
	baz=28						
TSEB	**Hengchuen, Pin**	**1.13**	**163**	*e*P	Pg	06 32 16.5	-0.1
	baz=166						
TSEB				*e*S	Sg	06 32 33.5	+2.1
	baz=166						
ESL	**Shilin**	**1.15**	**44**	*e*P	Pg	06 32 17.0	0.0
	baz=45						
ESL				*e*S	Sg	06 32 34.3	+2.3
	baz=45						
TCU	**Taichung**	**1.16**	**6**	*e*P	Pg	06 32 16.8	-0.3
	baz=6.0						
CHGB	**Renai**	**1.21**	**28**	*e*P	Pg	06 32 17.8	-0.2
	baz=28						
ETM	**Tongmen**	**1.30**	**41**	*e*P	Pg	06 32 19.4	-0.3
	baz=42						
WHF	**Hehuan Shan**	**1.32**	**30**	*e*P	Pb	06 32 19.7	+0.3
	baz=30						
LAY	**Lan-yu**	**1.32**	**136**	*e*P	Pn	06 32 18.4	-0.2
	baz=136						
LAY				*e*S	Sn	06 32 35.6	-0.3
	baz=136						
WHP	**Taichung City**	**1.33**	**16**	*e*P	Pb	06 32 19.2	-0.2
	baz=16						
TWQ1	**Liyutan**	**1.36**	**8**	*e*P	Pb	06 32 20.1	+0.2
	baz=9.0						
TWQ1				*e*S	Sg	06 32 38.9	+0.1
	baz=9.0						
LYUB	**Lan-yu**	**1.37**	**136**	*e*P	Pn	06 32 17.8	-1.4
	baz=136						
TDCB	**Techi**	**1.37**	**24**	*e*P	Pn	06 32 19.3	-0.1
	baz=24						
FUSS	**Fushou**	**1.40**	**27**	*e*P	Pn	06 32 20.0	+0.2
	baz=27						
TWD	**Chiawan**	**1.45**	**41**	*e*P	Pb	06 32 21.2	0.0
	baz=42						
ETLH	**Xiulin Townshi**	**1.48**	**35**	*e*P	Pb	06 32 22.5	+0.6
	baz=35						
NACB	**Ninganchiao**	**1.52**	**39**	*e*P	Pb	06 32 22.4	0.0
	baz=39						
LATG	**Datong**	**1.78**	**30**	*e*P	Pb	06 32 26.1	-0.8
	baz=30						

*IDC **17** 06:35:55.4±1.1, 6°.03S×148°.90E, h0km, mb4.1/6, mbtmp4.2/7, ML4.4/1, Error ellipse: s-maj=36.1km s-min=24.0km az=109.0*
*NEIC **17** 06:36:01.7±1.4, 5°.84S±0°.08×148°.5E±0°.2, h35km±2km, mb4.3/7, Error ellipse: s-maj=30.7km s-min=5.4km az=295.0*
ISC 17 06:36:03.5±0.8, 6°.1S±0°.1×148°.7E±0°.1, h65km, n20, σ0°.87/22, mb4.1/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.65**	**205**	Pn	**Pn**	**06 36 59.0**	**+1.4**
	20nm,0.3s,baz=22,slow=6.1,SNR=21						
PMG				Sn	**Sn**	**06 37 40.1**	**+0.6**
	28nm,0.3s,baz=261,slow=21,SNR=14						
PMG	**Port

comp=Z,12nm,1.0s
WRAB Tennant Creek 19.61 224 P **P** **06 40 26.6 -0.1**
WRAB IAmb IAmb 06 40 28.8
comp=Z,13nm,0.7s
WB2 Warramunga Arr 19.62 224 P **P** **06 40 26.4 -0.5**
WB2 IAmb IAmb 06 40 28.9
comp=Z,14nm,0.7s
WRA Warramunga Arr 19.63 224 P **Pn** **06 40 28.3 -0.6**
comp=Z,1.1nm,0.3s,baz=49,slow=11,SNR=29
comp=Z,8.9nm,0.7s
AS31 Alice Springs 22.56 218 P **P** **06 40 59.2 +0.6**
ASAR Alice Springs 22.56 218 P **P** **06 40 59.0 +0.5**
comp=Z,3.4nm,0.6s,baz=52,slow=9.5,SNR=28
comp=Z,3.4nm,0.6s
ASAR Alice Springs 22.56 218 P **P** **06 40 59.4 +0.9**
DZM Mont Dzumac 23.38 135 P **P** **06 41 05.5 -1.4**
comp=Z,7.4nm,0.8s,baz=306,slow=22,SNR=5.7
comp=Z,7.4nm,0.8s
ARMA Armidale 24.38 174 P **P** **06 41 15.3 -0.5**
PETK Petropavlovsk- 59.44 6 P **P** **06 45 59.6 +0.2**
comp=Z,3.1nm,0.9s,baz=163,slow=6.0,SNR=2.4
comp=Z,3.1nm,0.9s
VNDA Vanda 71.75 177 P **P** **06 47 19.0 +0.6**
comp=Z,1.6nm,0.8s,baz=0.0,slow=2.0,SNR=3.9
comp=Z,1.6nm,0.8s
QSPA South Pole Qui 83.90 180 P **P** **06 48 26.5 +0.3**
comp=Z,1.9nm,0.7s,baz=67,slow=6.0,SNR=1.7
comp=Z,1.9nm,0.7s
QSPA South Pole Qui 83.90 180 P **P** **06 48 26.6 +0.4**
QSPA IAmb IAmb 06 48 32.1
comp=Z,4.7nm,1.1s
ILAR Eielson Array 84.88 23 P **P** **06 48 31.4 +0.5**
comp=Z,1.0nm,0.9s,baz=248,slow=5.1,SNR=2.7
comp=Z,1.0nm,0.9s
TORD Torodi Ar. Bea 146.75 285 PKPbc **PKPab** **06 55 39.8 -0.8**
comp=Z,0.6nm,0.6s,baz=60,slow=3.8,SNR=2.5

WEL 17 06:51:44.9±0.9, 45°S±4°×16°8E±°, h44km±8km, M3.4/6, ML3.7/6, MLv3.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=122.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.38**	**52**	P	Pn	06 51 56.3	+2.0
MSZ				S	Sn	06 52 05.1	+4.2
DCZ	**Deep Cove**	**0.61**	**204**	P	Pn	06 51 57.8	+0.6
DCZ				S	Sn	06 52 08.2	+2.2
MLZ	**Mavora Lakes**	**0.63**	**137**	P	Pn	06 51 58.2	+0.7
MLZ				S	Sn	06 52 08.7	+2.0
WHZ	**Wether Hill Ro**	**1.03**	**163**	P	Pn	06 52 02.6	-0.3
WHZ				S	Sn	06 52 16.9	+0.6
WKZ	**Wanaka**	**1.08**	**86**	P	Pn	06 52 04.1	+0.5
WKZ				S	Sn	06 52 18.1	+0.7
JCZ	**Jackson Bay**	**1.24**	**48**	P	Pn	06 52 05.4	-0.4
JCZ				S	Sn	06 52 20.6	-0.8
EAZ	**Earnscleugh**	**1.32**	**105**	P	Pn	06 52 06.9	0.0
EAZ				S	Sn	06 52 23.4	+0.2
PYZ	**Puysegur Point**	**1.39**	**204**	P	Pn	06 52 08.9	+1.2
TUZ	**Tuapeka**	**1.83**	**126**	P	Pn	06 52 13.2	-0.5
APZ	**The Paps**	**1.96**	**170**	P	Pn	06 52 14.5	-1.0
LBZ	**Lake Benmore**	**1.98**	**76**	P	Pn	06 52 14.7	-1.2
SYZ	**Scrubby Hill**	**1.99**	**146**	P	Pn	06 52 15.2	-0.9
FOZ	**Fox Glacier**	**2.16**	**51**	P	Pn	06 52 16.3	-2.0
ODZ	**Otahua Downs**	**2.23**	**95**	P	Pn	06 52 18.1	-1.3
HHSZ	**Highcliff Hill**	**2.39**	**115**	P	Pn	06 52 20.8	-0.7
GCSZ	**Gaunt Creek Bo**	**2.58**	**53**	P	Pn	06 52 21.9	-2.2
ARCZ	**Arundel**	**2.80**	**71**	P	Pn	06 52 24.7	-2.4
RPZ	**Rata Peaks**	**2.81**	**66**	P	Pn	06 52 25.2	-2.2
WVZ	**Waitaha Valley**	**2.97**	**53**	P	Pn	06 52 27.3	-2.1
WACZ	**Wakanui South**	**3.25**	**74**	P	Pn	06 52 30.8	-2.5
RACZ	**Rakaia**	**3.53**	**72**	P	Pn	06 52 34.6	-2.5
INZ	**Inchbonnie**	**3.59**	**54**	P	Pn	06 52 35.7	-2.2
MQZ	**McQueen's Vall**	**3.89**	**74**	P	Pn	06 52 39.1	-3.0
AKCZ	**Akaroa Harbour**	**4.01**	**77**	P	Pn	06 52 41.0	-2.8
LTZ	**Lake Taylor**	**4.05**	**60**	P	Pn	06 52 41.2	-3.2
OKCZ	**Okains Bay**	**4.16**	**75**	P	Pn	06 52 43.5	-2.3
DSZ	**Denniston Nort**	**4.45**	**46**	P	Pn	06 52 47.2	-2.7
THZ	**Tophouse**	**5.04**	**53**	P	Pn	06 52 54.8	-3.1
MRNZ	**Matariki Terra**	**5.20**	**49**	P	Pn	06 52 58.4	-1.7
QRZ	**Quartz Range**	**5.50**	**44**	P	Pn	06 53 02.1	-2.2
NNZ	**Nelson**	**5.67**	**51**	P	Pn	06 53 05.0	-1.5
TCW	**Tory Channel**	**6.18**	**56**	P	Pn	06 53 13.9	+0.3
MRZ	**Mangatainoka R**	**7.30**	**57**	P	Pn	06 53 32.3	+3.4
NBEZ	**Newall Road No**	**7.36**	**42**	P	Pn	06 53 27.8	-1.8
KHEZ	**Kahui Hut**	**7.41**	**43**	P	Pn	06 53 28.7	-1.7
PREZ	**Palmer Road**	**7.44**	**44**	P	Pn	06 53 30.0	-0.9
NEZ	**North Egmont**	**7.46**	**43**	P	Pn	06 53 29.3	-2.0
PRWZ	**Pori Road**	**7.60**	**58**	P	Pn	06 53 33.4	+0.4
BFZ	**Birch Farm**	**7.69**	**60**	P	Pn	06 53 36.5	+2.3
DVHZ	**Dannevirke**	**7.87**	**57**	P	Pn	06 53 35.8	-1.0
MRHZ	**Matea Rd**	**9.00**	**51**	P	Pn	06 53 48.8	-3.4
WCZ	**Waipu Caves**	**10.36**	**33**	P	Pn	06 54 09.3	-1.5
PUZ	**Puketiti**	**10.56**	**53**	P	Pn	06 54 14.8	+1.2
OUZ	**Omahuta**	**10.74**	**28**	P	Pn	06 54 15.1	-0.8

*NEIC **17** 07:11:55.1±1.3, 24°.25S±0°.03×67°.3W±0°.1, h206km±9km, mb4.2/7, Md4.7(SJA), ML4.3(GUC), Error ellipse: s-maj=15.4km s-min=3.7km az=85.0*
*SJA **17** 07:11:56.9±1.0, 24°.16S×67°.22W, h150km, ML4.2, MW4.0*
*GUC **17** 07:11:56.9±0.6, 24°.12S×67°.64W, h229km±8km, ML4.3*
ISC 17 07:11:54.3±0.7, 24°.15S±0°.04×67°.23W±0°.04, h202km±7km, n71, σ1°.20/105, mb4.2/3, 5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.48**	**324**		**Pn**	**07 12 29.3**	**+0.9**
AF01				Sn	**S**	**07 12 55.7**	**+1.2**
SLA	**San Lorenzo**	**1.67**	**110**	*e*P	**Pn**	**07 12 29.9**	**0.0**
SLA				*e*S	**S**	**07 12 55.6**	**-1.5**
HJA	**Humahuaca**	**1.91**	**61**	*e*P	**Pn**	**07 12 33.0**	**+0.4**
HJA				*e*S	**S**	**07 13 00.4**	**-1.3**
AZAP	**Zapla**	**1.97**	**92**	*e*P	**Pn**	**07 12 32.8**	**-0.2**
AZAP				*e*S	**S**	**07 13 01.2**	**-1.2**
LVC	**Limon Verde**	**2.18**	**314**	Pn	**Pn**	**07 12 36.5**	**+1.2**
LVC				Sn	**S**	**07 13 06.6**	**0.0**
LVC	**Limon Verde**	**2.18**	**314**	⇑*i*P	**Pn**	**07 12 36.4**	**+1.0**
LVC				*e*S	**S**	**07 13 06.9**	**+0.3**
LVC	**Limon Verde**	**2.18**	**314**	*e*P	**Pn**	**07 12 36.4**	**+1.0**
LVC				*e*S	**S**	**07 13 05.8**	**-0.7**
PB15	**IPOC Station P**	**2.26**	**294**		**Pn**	**07 12 37.0**	**+1.0**
PB15	**IPOC Station P**	**2.26**	**294**	⇑*i*P	**Pn**	**07 12 37.0**	**+1.0**
PB15				*e*S	**S**	**07 13 07.5**	**-0.4**
PB15	**IPOC Station P**	**2.26**	**294**	*e*P	**Pn**	**07 12 37.0**	**+1.0**
PB15				*e*S	**S**	**07 13 06.9**	**-0.9**
PB15				IAML		07 13 09.8	
comp=Z,4μm,0.2s							
GO02	**Mina Guanaco**	**2.38**	**244**	Pn	**Pn**	**07 12 37.6**	**+0.3**
GO02	**Mina Guanaco**	**2.38**	**244**	⇑*i*P	**Pn**	**07 12 37.6**	**+0.3**
GO02				*e*S	**S**	**07 13 09.6**	**-0.5**
GO02				IAML		07 13 12.2	
comp=N,569nm,0.3s							
GO02	**Mina Guanaco**	**2.38**	**244**	*e*P	**Pn**	**07 12 37.7**	**+0.4**
GO02				*e*S	**S**	**07 13 09.8**	**-0.4**
YJA	**Yavi**	**2.52**	**39**	*e*P	**Pn**	**07 12 40.0**	**+0.9**
YJA				*e*S	**S**	**07 13 13.6**	**+0.4**
ASTB	**Santa Barbara**	**2.54**	**86**	*e*P	**Pn**	**07 12 39.0**	**0.0**
ASTB				*e*S	S	07 13 25.5	+12
PB06	**IPOC Station P**	**2.59**	**303**	Pn	**Pn**	**07 12 40.5**	**+1.0**
PB06	**IPOC Station P**	**2.59**	**303**	⇑*i*P	**Pn**	**07 12 40.6**	**+1.0**
PB06				*e*S	**S**	**07 13 13.4**	**-0.8**
PB06				IAML		07 13 15.9	
comp=N,2μm,0.1s							
PB06	**IPOC Station P**	**2.59**	**303**	*e*P	**Pn**	**07 12 40.4**	**+0.8**
PB06				*e*S	**S**	**07 13 13.5**	**-0.7**
PB06				IAML		07 13 15.2	
comp=Z,991nm,0.2s							
PB14	**IPOC Station P**	**2.94**	**260**	Pn	**Pn**	**07 12 42.7**	**-0.9**
PB14	**IPOC Station P**	**2.94**	**260**	*e*P	**Pn**	**07 12 43.7**	**+0.1**
PB14				*e*S	**S**	**07 13 20.0**	**-1.5**
PB14	**IPOC Station P**	**2.94**	**260**	*e*P	**Pn**	**07 12 44.7**	**+1.0**
PB14				*e*P	**Pn**	**07 12 44.9**	**+1.2**
PB14				*e*S	**S**	**07 13 21.1**	**-0.5**
ALOL	**LOMAS DE OLMED**	**2.98**	**84**	*e*P	**Pn**	**07 12 44.1**	**+0.2**
ALOL				*e*S	**S**	**07 13 20.8**	**-1.3**
PB09	**IPOC Station P**	**2.99**	**321**		**Pn**	**07 12 45.5**	**+1.2**
PB09	**IPOC Station P**	**2.99**	**321**	*e*P	**Pn**	**07 12 46.0**	**+1.8**
PB09				*e*S	**S**	**07 13 23.1**	**+0.6**
PB09				IAML		07 13 25.2	
comp=E,371nm,0.2s							
PB09	**IPOC Station P**	**2.99**	**321**	*e*P	**Pn**	**07 12 44.9**	**+0.6**
PB09				*e*P	**Pn**	**07 12 46.2**	**+2.0**
PB09				*e*S	**S**	**07 13 22.0**	**-0.6**
PB09				IAML		07 13 23.9	
comp=Z,282nm,0.5s							
PB10	**IPOC Station P**	**3.11**	**281**	Pn	**Pn**	**07 12 45.7**	**+0.3**
PB10	**IPOC Station P**	**3.11**	**281**	*e*P	**Pn**	**07 12 46.4**	**+0.9**
PB10				*e*S	**S**	**07 13 22.1**	**-2.6**
PB10				IAML		07 13 27.8	
comp=E,275nm,0.5s							
PB10	**IPOC Station P**	**3.11**	**281**	*e*P	**Pn**	**07 12 46.2**	**+0.9**
PB10				*e*P	**Pn**	**07 12 46.6**	**+1.2**
PB10				*e*S	**S**	**07 13 23.9**	**-0.8**
PB10				IAML		07 13 28.3	
comp=Z,234nm,0.3s							
PB03	**IPOC Station P**	**3.13**	**311**		**Pn**	**07 12 46.6**	**+0.8**
PB03	**IPOC Station P**	**3.13**	**311**	*e*P	**Pn**	**07 12 46.6**	**+0.8**
PB03				*e*S	**S**	**07 13 23.9**	**-1.5**
PB03				IAML		07 13 28.4	
comp=E,660nm,0.3s							
PB03	**IPOC Station P**	**3.13**	**311**	*e*P	**Pn**	**07 12 46.6**	**+0.8**
PB03				*e*S	**S**	**07 13 24.5**	**-1.0**
PB03				IAML		07 13 27.2	
comp=Z,629nm,0.2s							
AC02	**Maricunga**	**3.18**	**212**	Pn	**Pn**	**07 12 47.0**	**+0.4**
AC02	**Maricunga**	**3.18**	**212**	*e*P	**Pn**	**07 12 47.5**	**+0.8**
AC02				*e*S	**S**	**07 13 32.1**	**+5.1**
PB04	**IPOC Station P**	**3.24**	**303**		**Pn**	**07 12 47.7**	**+0.5**
PB04	**IPOC Station P**	**3.24**	**303**	*e*P	**Pn**	**07 12 48.0**	**+0.8**
PB04				*e*S	**S**	**07 13 25.6**	**-2.2**
PB04	**IPOC Station P**	**3.24**	**303**	*e*P	**Pn**	**07 12 48.0**	**+0.8**
PB04				*e*S	**S**	**07 13 27.1**	**-0.7**
PB04				IAML		07 13 30.5	
comp=Z,449nm,0.2s							
PB07	**IPOC Station P**	**3.44**	**314**		**Pn**	**07 12 50.2**	**+0.7**
PB07	**IPOC Station P**	**3.44**	**314**	⇑*i*P	**Pn**	**07 12 50.3**	**+0.7**
PB07				*e*S	**S**	**07 13 30.4**	**-1.7**
PB07	**IPOC Station P**	**3.44**	**314**	*e*P	**Pn**	**07 12 50.4**	**+0.8**
PB07				*e*S	**S**	**07 13 31.4**	**-0.8**
PB07				IAML		07 13 32.7	
comp=Z,327nm,0.3s							
AC01	**Pan de Azucar**	**3.65**	**236**	Pn	**Pn**	**07 12 51.0**	**-0.9**
PB01	**IPOC Station P**	**3.73**	**326**		**Pn**	**07 12 53.6**	**+0.6**
PB01	**IPOC Station P**	**3.73**	**326**	*e*P	**Pn**	**07 12 53.6**	**+0.6**
PB01				*e*S	**S**	**07 13 36.5**	**-2.0**
PB01	**IPOC Station P**	**3.73**	**326**	*e*P	**Pn**	**07 12 54.0**	**+0.9**
PB01				*e*S	**S**	**07 13 37.7**	**-0.8**
PB01				IAML		07 13 42.9	
comp=Z,236nm,0.3s							
PB02	**IPOC Station P**	**3.75**	**318**		**Pn**	**07 12 53.7**	**+0.5**
PB02	**IPOC Station P**	**3.75**	**318**	*e*P	**Pn**	**07 12 54.1**	**+0.9**
PB02				*e*S	**S**	**07 13 37.8**	**-0.9**
PB02				IAML		07 13 45.5	
comp=Z,621nm,0.2s							
AC06	**Mina Casimiro**	**4.26**	**221**	Pn	**Pn**	**07 12 58.4**	**-1.0**
PATCX	**Punta Patache**	**4.28**	**320**	Pn	**Pn**	**07 13 00.4**	**+0.6**
PB08	**IPOC Station P**	**4.37**	**336**	Pn	**Pn**	**07 13 03.0**	**+1.7**
TA01	**Diego Aracena**	**4.50**	**322**	Pn	**Pn**	**07 13 03.2**	**+0.8**
GO01	**Chusmiza**	**4.82**	**337**	Pn	**Pn**	**07 13 08.3**	**+1.3**
AC04	**Llanos de Chal**	**5.31**	**220**	Pn	**Pn**	**07 13 11.1**	**-1.7**
AC05	**El Transito**	**5.41**	**210**	Pn	**Pn**	**07 13 13.1**	**-1.0**
LCO	**Las Campanas**	**5.75**	**212**	Pn	**Pn**	**07 13 17.1**	**-1.5**
PB16	**IPOC Station P**	**6.17**	**339**		**Pn**	**07 13 25.6**	**+1.2**
PB12	**IPOC Station P**	**6.22**	**332**	Pn	**Pn**	**07 13 24.7**	**0.0**
CO01	**Juntas del Tor**	**6.34**	**203**	Pn	**Pn**	**07 13 27.1**	**+0.9**
CO05	**La Serena**	**6.77**	**211**	Pn	**Pn**	**07 13 30.9**	**-0.6**
GO04	**Tololo Observa**	**6.79**	**207**	Pn	**Pn**	**07 13 30.4**	**-1.6**
CO03	**El Pedregal**	**7.33**	**204**	Pn	**Pn**	**07 13 38.1**	**-0.9**
CO06	**Fray Jorge**	**7.58**	**210**	Pn	**Pn**	**07 13 40.5**	**-1.6**
CO02	**Combarbal**	**7.78**	**205**	Pn	**Pn**	**07 13 43.3**	**-1.4**
VA06	**Catapilco**	**9.11**	**202**	Pn	**Pn**	**07 14 00.8**	**-1.1**
CPUP	**Villa Florida**	**9.22**	**106**	Pn	**Pn**	**07 14 03.2**	**-0.2**
ROC1	**El Roble**	**9.40**	**200**	Pn	**Pn**	**07 14 03.3**	**-2.6**
TRQA	**Tornquist**	**14.56**	**163**		**Pn**	**07 15 11.0**	**-0.1**
PLCA	**Paso Flores**	**16.77**	**189**	P	**P**	**07 15 35.6**	**-0.9**
PLCA				IAmb	IAmb	07 15 47.9	
comp=Z,5.9nm,1.0s							
BDFB	**Brasilia**	**19.93**	**68**	P	**P**	**07 16 12.7**	**+1.6**
COYC	**Coyhaique**	**21.73**	**189**	P	**P**	**07 16 30.2**	**+0.7**
COYC				IAmb	IAmb	07 16 36.2	
comp=Z,7.3nm,1.0s							
CBYP	**Canovanas**	**42.19**	**2**	P	**P**	**07 19 27.9**	**+0.5**
CBYP				IAmb	IAmb	07 19 34.4	
comp=Z,20nm,1.2s							
SNAA	**Sanae**	**59.27**	**161**	P	**P**	**07 21 36.5**	**+2.2**
QSPA	**South Pole Qui**	**66.05**	**180**	P	**P**	**07 22 17.5**	**-1.8**
QSPA				IAmb	IAmb	07 22 19.8	
comp=Z,5.4nm,1.3s							

*IDC **17** 07:14:44.9±0.3, 32°.83N×94°.87E, h0km, mb5.7/43, mbtmp5.7/47, ML4.7/4, MS5.7/50, Error ellipse: s-maj=10.0km s-min=7.2km az=57.0*
*PRE **17** 07:14:45.6±2.1, 32°.88N×94°.91E, h10km, mb6.0*
*BJI **17** 07:14:47.6±0.0, 32°.89N×95°.02E, h9km, mb5.8/53, mB6.2/50, ML6.4/9, Ms6.3/82, Ms7 6.2/77*
*GCMT **17** 07:14:48.9±0.2, 32°.79N±0°.01×94°.95E±0°.01, h21km, MW6.0/144, Moment Tensor Solution. s59,c79; s144,c330; Duration: 2s4 Moment tensor: Scale 10^{18} Nm; M_{rr}=0.55±.04; $M_{\theta\theta}$=0.25±.02; $M_{\phi\phi}$0.79±.03; $M_{r\theta}$=0.58±.06; $M_{r\phi}$0.71±.01; $M_{\theta\phi}$0.34±.04; Best double couple: $M_0$1.20300×10^{18} NP1:ϕ_s171.00000°, δ62.00000°, λ-145.00000°. NP2:ϕ_s63.00000°, δ59.00000°, λ-33.00000°. Principal axes: T 1.1560, Plg2.0000°, Azm296.0000°; N 0.0950, Plg46.0000°, Azm204.0000°; P -1.2510, Plg44.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*MOS **17** 07:14:48.9±0.9, 32°.87N×94°.88E, h40km, mb6.2/127, MS5.8/54 Error ellipse: s-maj=5.0km s-min=2.8km az=127.1*
*NEIC **17** 07:14:50.9±1.7, 32°.90N±0°.05×94°.88E±0°.06, h35km±1km, mb6.1/458, Ms_20 6.0/222, Mww5.9, Error ellipse: s-maj=10.8km s-min=5.1km az=132.0*
*NEIC **17** 07:14:51, 32°.91N×95°.11E, h30km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-8.85; $M_{\theta\theta}$0.99; $M_{\phi\phi}$7.87; $M_{r\theta}$-0.07; $M_{\theta\phi}$4.75; $M_{r\phi}$-2.22; Fault plane solution: $M_0$9.91000×10^{17} NP1: ϕ_s214.00000°, δ39.00000°, λ-79.00000°. NP2:ϕ_s20.00000°, δ51.00000°, λ-98.00000°. Principal axes: T 10.5009, Plg6.0000°, Azm117.0000°; N -1.3243, Plg7.0000°, Azm26.0000°; P -9.1766, Plg81.0000°, Azm247.0000°;*
*NDI **17** 07:14:51.4, 32°.87N×94°.56E, h33km, mb5.6, MS5.9, MS6.0(NEIC)*
ISC 17 07:14:49.1±0.2, 32°.86N±0°.02×94°.88E±0°.02, h25km±1km, h25km:pP-P, n2040, σ1°.47/2093, mb6.1/501, MS6.0/203, 85C-99D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMU	**GeErMu**	**3.33**	**359**	*e*Pn	**Pn**	**07 15 43.9**	**+3.9**
GOMU				Pg	**Pb**	**07 15 49.8**	**+2.0**
GOMU				LR	LR		
comp=N,498μm,6.8s							
GOMU				LR	LR		
comp=E,172μm,4.6s							
GOMU				LR	LR		
comp=Z,397μm,7.3s							
LSA	**Lhasa**	**4.48**	**226**	Pn	**Pn**	**07 15 58.7**	**+2.9**
LSA	**Lhasa**	**4.48**	**226**	P	**Pn**	**07 15 59.3**	**+3.5**
LSA				S	Sb	07 17 11.8	+11
LSA	**Lhasa**	**4.48**	**226**	Pn	**Pn**	**07 15 59.1**	**+3.3**
LSA				Sg	Sb	07 17 11.0	+10
LSA				LR	LR		
comp=N,188μm,7.5s							
LSA				LR	LR		
comp=E,162μm,6.4s							
LSA				LR	LR		
comp=Z,209μm,5.3s							
LSA	**Lhasa**	**4.48**	**226**	P	**Pn**	**07 15 58.7**	**+2.9**
DIBR	**DIBRUGARH**	**5.37**	**180**	*i* x	x	07 17 56.3	
DIBR				IAMs_20	IAMs_20	07 18 45.1	
comp=Z,268μm,6.7s							
ZIRO	**ZIRO**	**5.38**	**190**	*e*P	**Pn**	**07 16 10.0**	**+2.0**
ZIRO				*i* x	x	07 17 60.0	
ZIRO				IAMs_20	IAMs_20	07 18 06.1	
comp=Z,381μm,4.5s							
LKP	**Lekhapani**	**5.57**	**171**	*e*P	**Pn**	**07 16 12.0**	**+1.6**
LKP				IAMs_20	IAMs_20	07 18 55.2	
comp=Z,227μm,6.7s							
ITAN	**ITANAGAR**	**5.78**	**190**	*e*P	**Pn**	**07 16 15.7**	**+2.5**
ITAN				IAMs_20	IAMs_20	07 18 22.3	
comp=Z,540μm,4.5s							
JORH	**JORHAT**	**6.12**	**185**	IAMs_20	IAMs_20	07 18 50.2	
comp=Z,261μm,12.3s							
TEZP	**TEZPUR**	**6.47**	**197**	*e*P	**Pn**	**07 16 23.0**	**+0.2**
TEZP				IAMs_20	IAMs_20	07 18 45.7	
comp=Z,180μm,11.1s							
MOKO	**MOKOCHONG**	**6.52**	**183**	*e*P	**Pn**	**07 16 23.9**	**+0.3**
MOKO				IAMs_20	IAMs_20	07 19 16.9	
comp=Z,317μm,11.1s							
KOHI	**KOHIMA**	**7.14**	**186**	*e*P	**Pn**	**07 16 33.0**	**+0.9**
GTA	**Gaotai**	**7.66**	**30**	Pn	**Pn**	**07 16 41.0**	**+1.8**
GTA				Sn	**Sn**	**07 18 08.2**	**+2.9**
GTA				LR	LR		
comp=Z,150μm,9.5s							
GTA				LR	LR		
comp=Z,114μm,10.2s							
GTA				LR	LR		
comp=Z,176μm,10.2s							
SHL	**Shillong**	**7.72**	**201**	Pn	**Pn**	**07 16 40.0**	**-0.1**
SHL	**Shillong**	**7.72**	**201**	P	**Pn**	**07 16 40.0**	**-0.1**
SHL	**Shillong**	**7.72**	**201**	P	**Pn**	**07 16 40.4**	**+0.3**
SNR=21							
SHL	**Shillong**	**7.72**	**201**	*e*P	**Pn**	**07 16 39.5**	**-0.6**
CD2	**Chengdu**	**7.80**	**102**	Pn	**Pn**	**07 16 44.6**	**+3.6**
CD2				Sn	Sn	07 18 18.8	+10
CD2				smax	smax		
comp=Z,3μm,1.7s							
CD2				smax	smax		
comp=Z,2μm,1.8s							
CD2				LR	LR		
comp=Z,353μm,10.0s							
CD2				LR	LR		
comp=Z,163μm,8.8s							
CD2				LR	LR		
comp=Z,101μm,6.3s							
DHUB	**DHUBRI**	**8.03**	**213**	*e*P	**Pn**	**07 16 43.8**	**-0.4**
DHUB				*i* x	x	07 19 34.9	
IMP	**Imphal**	**8.04**	**186**	*e*P	**Pn**	**07 16 44.8**	**+0.5**
LZH	**Lanzhou**	**8.07**	**64**	P	**Pn**	**07 16 47.3**	**+2.4**
LZH				S	**Sn**	**07 18 18.7**	**+3.2**
LZH				smax	smax		
comp=Z,2μm,1.4s							
LZH				smax	smax		
comp=Z,2μm,1.5s							
LZH				LR	LR		
comp=Z,261μm,10.0s							
LZH				LR	LR		
comp=Z,66μm,8.2s							
LZH				LR	LR		
comp=Z,116μm,9.3s							
TAPN	**Taplejung**	**8.28**	**230**	*e*P	**Pn**	**07 16 48.2**	**+0.3**
comp=Z,182nm,0.5s							
PZH	**PanZhiHua**	**8.70**	**135**	P	**Pn**	**07 16 54.8**	**+1.3**
PZH				pP		07 16 57.2	
PZH				PP	**PnPn**	**07 17 01.5**	**+0.4**
PZH				S	**Sn**	**07 18 33.4**	**+2.5**
PZH				SS	**SnSn**	**07 18 50.0**	**+7.5**
PZH				ScS	**ScS**	**07 30 24.0**	**-1.1**
PZH				pmax	pmax		
comp=Z,540nm,1.3s							
PZH				pmax	pmax		
comp=Z,2μm,3.5s							
PZH				LR	LR		
comp=Z,93μm,7.0s							
PZH				LR	LR		
comp=Z,66μm,8.0s							
PZH				LR	LR		
comp=Z,119μm,9.0s							
ODAN	**Odare**	**8.83**	**229**	*e*P	**Pn**	**07 16 56.9**	**+1.6**
comp=Z,117nm,0.6s							
JIRN	**Jiri**	**9.12**	**238**	*e*P	**Pn**	**07 16 58.7**	**-0.8**
comp=Z,302nm,0.7s							
GUN	**Gumba**	**9.20**	**240**	*e*P	**Pn**	**07 16 59.5**	**-1.0**
comp=Z,517nm,0.5s							
RAMN	**Ramite**	**9.28**	**233**	*e*P	**Pn**	**07 17 00.5**	**-1.1**
comp=Z,32nm,0.5s							
KKN	**Kakani**	**9.71**	**241**	*e*P	**Pn**	**07 17 06.4**	**-1.0**
comp=Z,47nm,0.5s							
PKI	**Pulchoki**	**9.73**	**240**	*e*P	**Pn**	**07 17 06.4**	**-1.5**
comp=Z,521nm,0.5s							
PKIN	**Phulchoki**	**9.74**	**240**	*e*P	**Pn**	**07 17 06.0**	**-1.9**
comp=Z,390nm,0.5s							
DMN	**Daman**	**9.94**	**241**	*e*P	**Pn**	**07 17 08.8**	**-1.7**
comp=Z,411nm,0.6s							
GKN	**Gorkha**	**10.07**	**244**	*e*P	**Pn**	**07 17 10.6**	**-1.7**
comp=Z,111nm,0.5s							
KMI	**Kunming**	**10.33**	**136**	⇑P	**Pn**	**07 17 16.1**	**+0.2**
KMI				sP		07 17 29.0	
KMI				S	**Sn**	**07 19 11.4**	**+0.4**
KMI				SS	**SnSn**	**07 19 27.7**	**+4.9**
KMI				pmax	pmax		
comp=Z,410nm,1.0s							
KMI				LR	LR		
comp=Z,154μm,11.2s							
KMI				LR	LR		
comp=Z,166μm,10.3s							
KMI				LR	LR		
comp=Z,86μm,9.4s							
DANN	**Dangsing**	**10.58**	**248**	*e*P	**Pn**	**07 17 17.9**	**-1.5**
comp=Z,684nm,0.6s							
KOLN	**Koldanda**	**10.98**	**245**	*e*P	**Pn**	**07 17 22.5**	**-2.3**
VLK	**Valmikinagar**	**11.02**	**243**	*e*P	**Pn**	**07 17 25.3**	**+0.3**
PYUN	**Piuthan**	**11.29**	**248**	*e*P	**Pn**	**07 17 27.1**	**-2.0**
comp=Z,1μm,0.7s							
XAN	**Xi'an**	**11

LYN	**LuoYang**	**14.74**	**79**⇑	*i*P	**Pn**	**07 18 14.2**	**-1.7**
LYN				sP	P	07 18 21.7	-0.1
LYN				PP	**PnPn**	**07 18 28.1**	**+4.2**
LYN				S	**Sn**	**07 21 02.6**	**+4.1**
LYN				SS	**S**	**07 21 15.8**	**-0.9**
LYN				pmax	pmax		
	comp=Z,4μm,10.0s						
LYN				LR	LR		
	comp=Z,169μm,16.5s						
LYN				LR	LR		
	comp=Z,47μm,14.5s						
LYN				LR	LR		
	comp=Z,34μm,13.3s						
CM31	**Chiang Mai Arr**	**14.80**	**165**	Pn	**Pn**	**07 18 18.3**	**+1.6**
CMAR	**Chiang Mai Arr**	**14.80**	**165**	Pn	**Pn**	**07 18 15.4**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=343,slow=11,SNR=35						
CMAR				Sn	**Sn**	**07 21 04.0**	**+4.1**
	comp=Z,0.5nm,0.3s,baz=187,slow=1.5,SNR=1.2						
CMAR				Lg	Lg	07 22 33.1	
	comp=Z,0.6nm,0.3s,baz=28,slow=20,SNR=1.0						
CMAR				LR	LR	07 25 03.5	
	comp=Z,9μm,19.1s,baz=345,slow=42						
CMAR				SKKS	SKKSdf	07 54 01.1	+15
	comp=Z,2.0nm,0.4s,baz=196,slow=4.0,SNR=10.0						
	comp=Z,24nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.80**	**165**	Pn	**Pn**	**07 18 16.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.80**	**165**	P	**Pn**	**07 18 16.5**	**-0.3**
JHSG	**JHARSUGUGA**	**14.80**	**224**	*e*P	**Pn**	**07 18 16.1**	**-0.7**
BWNR	**Bhubaneshwar**	**14.90**	**215**	*e*P	**Pn**	**07 18 16.3**	**-1.8**
SMLA	**Simla**	**15.13**	**268**	*e*P	**Pn**	**07 18 18.3**	**-2.8**
SMLA				IAmb	IAmb	07 18 21.5	
	comp=Z,406nm,1.2s						
SMLA				IAMs_20	IAMs_20	07 24 35.5	
	comp=Z,42μm,8.7s						
TIY	**Taiyuan**	**15.13**	**66**	⇑P	**Pn**	**07 18 19.8**	**-1.4**
TIY				pP	**P**	**07 18 24.7**	**-1.5**
TIY				S	**Sn**	**07 21 07.6**	**-0.5**
TIY				SS	**S**	**07 21 23.1**	**-1.7**
TIY				pmax	pmax		
	comp=Z,5μm,4.5s						
TIY				LR	LR		
	comp=Z,49μm,6.9s						
TIY				LR	LR		
	comp=Z,51μm,6.2s						
TIY				LR	LR		
	comp=Z,36μm,7.9s						
GULI	**GuiLin**	**15.49**	**115**	⇓P	**Pn**	**07 18 21.3**	**-4.6**
GULI				S	Sn	07 21 05.9	-11
BLSP	**Bilaspur**	**15.54**	**230**	*e*P	**Pn**	**07 18 23.4**	**-3.2**
HHC	**Hu-ho-hao-te**	**15.54**	**54**	*e*P	**Pn**	**07 18 25.0**	**-1.6**
HHC				pP	P	07 18 31.3	+0.5
HHC				S	**Sn**	**07 21 22.5**	**+4.4**
HHC				SS	**S**	**07 21 33.3**	**+0.1**
BHK	**Bhakra**	**15.71**	**270**	*e*P	**Pn**	**07 18 26.9**	**-1.8**
NDI	**New Delhi**	**15.74**	**259**	*e*P	**Pn**	**07 18 25.0**	**-4.1**
SHLS	**Shalkode**	**15.89**	**315**	*e*P	**Pn**	**07 18 25.8**	**-5.3**
SHLS				*e*S	**Sn**	**07 21 21.6**	**-5.0**
SHLS				pmax	pmax		
	comp=Z,609nm,2.1s						
SHLS	**Shalkode**	**15.89**	**315**	*e*P	**Pn**	**07 18 25.9**	**-5.3**
	comp=Z,609nm,2.1s,baz=316						
SHLS				*e*S	**Sn**	**07 21 21.7**	**-5.0**
	baz=316						
JHNI	**Jhansi**	**16.05**	**247**	*e*P	**Pn**	**07 18 28.3**	**-4.8**
THN	**Thein Dam**	**16.15**	**274**	*e*P	**Pn**	**07 18 33.3**	**-1.0**
THN				*e*P	**P**	**07 18 36.0**	**-1.4**
UZB	**Uzynbulak**	**16.15**	**314**	*e*P	**Pn**	**07 18 33.4**	**-1.1**
UZB				*e*S	**S**	**07 21 40.8**	**-4.9**
UZB	**Uzynbulak**	**16.15**	**314**	*e*P	**Pn**	**07 18 33.4**	**-1.1**
	baz=315						
UZB				*e*S	**S**	**07 21 40.8**	**-4.9**
	baz=315						
TARG	**Taragay, Kyrgy**	**16.20**	**308**		**Pn**	**07 18 34.1**	**-1.2**
TARG	**Taragay, Kyrgy**	**16.20**	**308**	P	**Pn**	**07 18 34.1**	**-1.2**
TARG				pmax	pmax		
	comp=Z,832nm,1.6s						
CNSH	**ChangSha**	**16.24**	**102**	⇑P	**Pn**	**07 18 33.3**	**-2.3**
CNSH				S	**Sn**	**07 21 28.4**	**-6.5**
CNSH	**ChangSha**	**16.24**	**102**	⇑P	**Pn**	**07 18 33.2**	**-2.3**
CNSH				S	**Sn**	**07 21 28.4**	**-6.5**
CNSH				pmax	pmax		
	comp=Z,220nm,1.5s						
CNSH				LR	LR		
	comp=Z,96μm,10.2s						
CNSH				LR	LR		
	comp=Z,37μm,9.8s						
JBP	**Jabalpur**	**16.30**	**237**⇓	*e*P	**Pn**	**07 18 33.5**	**-2.8**
JBP				IVmB_BB		07 18 42.3	
	comp=Z,4μm,3.6s						
JBP				*e*S	**Sn**	**07 21 34.8**	**-1.6**
ZSN	**Zaisan**	**16.44**	**335**	*e*P	**Pn**	**07 18 36.9**	**-1.1**
ZSN	**Zaisan**	**16.44**	**335**	*e*P	**Pn**	**07 18 36.9**	**-1.1**
	baz=336						
ZSN				*e*S	**S**	**07 21 52.0**	**+0.6**
	baz=336						
SATY	**Saty**	**16.48**	**313**	*e*P	**Pn**	**07 18 38.2**	**-0.4**
SATY				*e*S	**Sn**	**07 21 41.8**	**+1.0**
SATY	**Saty**	**16.48**	**313**	*e*P	**Pn**	**07 18 38.2**	**-0.4**
	baz=314						
SATY				*e*S	**Sn**	**07 21 41.9**	**+1.0**
	baz=314						
ZHN	**Zhinishke**	**16.52**	**313**	*e*P	**Pn**	**07 18 38.5**	**-0.7**
ZHN				*e*S	**Sn**	**07 21 41.3**	**-0.5**
ZHN	**Zhinishke**	**16.52**	**313**	*e*P	**Pn**	**07 18 38.5**	**-0.7**
	baz=314						
ZHN				*e*S	**Sn**	**07 21 41.3**	**-0.5**
	baz=314						
KPKS	**Kokpek**	**16.54**	**314**	*e*P	**Pn**	**07 18 38.5**	**-0.8**
KPKS	**Kokpek**	**16.54**	**314**	*e*P	**Pn**	**07 18 38.5**	**-0.8**
	baz=315						
KPKS				*e*S	**S**	**07 21 56.8**	**+3.3**
	baz=315						
KSH	**Kashi**	**16.63**	**299**	P	**P**	**07 18 43.8**	**+0.9**
KSH				pP	pP	07 18 50.0	-1.1
KSH				sP	sP	07 18 55.0	+0.1
KSH				S	**S**	**07 21 51.8**	**-3.8**
KSH	**Kashi**	**16.63**	**299**	P	**P**	**07 18 43.7**	**+0.9**
KSH				pP	pP	07 18 50.0	-1.1
KSH				S	**S**	**07 21 51.7**	**-3.8**
KSH				pmax	pmax		
	comp=Z,190nm,1.2s						
KSH				pmax	pmax		
	comp=Z,4μm,4.6s						
KSH				LR	LR		
	comp=Z,59μm,13.7s						
KSH				LR	LR		
	comp=Z,44μm,13.4s						
KSH				LR	LR		
	comp=Z,51μm,16.5s						
WHN	**Wuhan**	**16.73**	**93**	⇓P	**Pn**	**07 18 39.8**	**-2.0**
WHN				sP	**pP**	**07 18 50.2**	**-1.8**
WHN				pmax	pmax		
	comp=Z,320nm,1.4s						
WHN				LR	LR		
	comp=Z,216μm,13.3s						
WHN				LR	LR		
	comp=Z,155μm,12.4s						
WHN				LR	LR		
	comp=Z,81μm,15.2s						
JMU	**Jammu**	**16.80**	**275**	*e*P	**Pn**	**07 18 41.9**	**-0.8**
JMU				*i* x	**S**	**07 21 56.6**	**-2.2**
HNS	**HongShan**	**16.84**	**69**	⇓P	**Pn**	**07 18 42.0**	**-1.1**
HNS				PP	**sP**	**07 18 58.2**	**+1.2**
HNS				*e*S	**Sn**	**07 21 46.6**	**-2.8**
HNS				pmax	pmax		
	comp=Z,300nm,1.4s						
HNS				LR	LR		
	comp=Z,178μm,15.5s						
HNS				LR	LR		
	comp=Z,49μm,14.1s						
HNS				LR	LR		
	comp=Z,35μm,7.4s						
MK31	**Makanchi Array**	**16.92**	**329**		**Pn**	**07 18 42.4**	**-1.7**
MK31	**Makanchi Array**	**16.92**	**329**	*i* P	**Pn**	**07 18 42.7**	**-1.3**
MK31				pmax	pmax		
	comp=Z,298nm,1.1s						
MKAR	**Makanchi Array**	**16.92**	**329**	Pn	**Pn**	**07 18 42.0**	**-2.1**
	comp=Z,1.0nm,0.3s,baz=135,slow=12,SNR=67						
MKAR				Sn	**Sn**	**07 21 49.1**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=136,slow=17,SNR=1.3						
MKAR				LR	LR	07 25 20.9	
	comp=Z,15μm,19.7s,baz=156,slow=38						
MKAR				SKKS	**SKKSdf**	**07 53 42.3**	**+10**
	comp=Z,1.0nm,0.6s,baz=127,slow=8.8,SNR=6.1						
	comp=Z,87nm,1.1s						
MKAR	**Makanchi Array**	**16.92**	**329**	Pn	**Pn**	**07 18 42.0**	**-2.1**
MKAR	**Makanchi Array**	**16.92**	**329**	P	**Pn**	**07 18 42.0**	**-2.1**
RAGD	**RAYAGADA**	**16.98**	**220**	*e*P	**Pn**	**07 18 43.1**	**-1.8**
MAKZ	**Makanchi**	**17.06**	**328**	Pn	**Pn**	**07 18 44.1**	**-1.8**
MAKZ	**Makanchi**	**17.06**	**328**	P	**Pn**	**07 18 44.1**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,394nm,1.4s						
NRN	**Naryn**	**17.29**	**305**	Pn	**Pn**	**07 18 48.4**	**-0.7**
NRN	**Naryn**	**17.29**	**305**	P	**Pn**	**07 18 48.4**	**-0.7**
NRN				pmax	pmax		
	comp=Z,410nm,1.1s						
SONM	**Songino Array**	**17.32**	**27**	P	**Pn**	**07 18 48.2**	**-0.9**
	comp=Z,4.3nm,0.3s,baz=212,slow=12,SNR=503						
SONM				LR	LR	07 26 13.4	
	comp=Z,34μm,21.7s,baz=207,slow=40						
SONM				ScP	**ScP**	**07 27 06.1**	**+2.1**
	comp=Z,6.7nm,1.1s,baz=180,slow=3.4,SNR=3.5						
SONM				SKKS	SKKSdf	07 53 47.4	+15
	comp=Z,2.3nm,1.0s,baz=45,slow=4.4,SNR=8.7						
	comp=Z,1μm,1.1s						
MDOK	**Medeo**	**17.38**	**311**	*e*P	**Pn**	**07 18 49.3**	**-0.7**
MDOK	**Medeo**	**17.38**	**311**	*e*P	**Pn**	**07 18 49.3**	**-0.7**
	baz=312						
MDOK				*e*S	**S**	**07 22 10.8**	**-0.1**
	baz=312						
TNSS	**Tian-Shan**	**17.38**	**311**	*e*P	**Pn**	**07 18 50.1**	**-0.1**
TNSS	**Tian-Shan**	**17.38**	**311**	*e*P	**Pn**	**07 18 50.1**	**-0.1**
	baz=312						
KNDC	**Almaty**	**17.46**	**311**	P	**P**	**07 18 54.0**	**+2.0**
ULHL	**Ulahol**	**17.47**	**308**	P	**P**	**07 18 55.0**	**+2.8**
	SNR=72						
AAA	**Alma-Ata**	**17.49**	**311**	*e*P	**P**	**07 18 52.1**	**-0.2**
ULN	**Ulaanbaatar**	**17.60**	**28**	Pn	**Pn**	**07 18 51.2**	**-1.4**
ULN	**Ulaanbaatar**	**17.60**	**28**	*de*P	**Pn**	**07 18 50.5**	**-2.1**
ULN				pmax	pmax		
	comp=Z,1μm,1.7s						
ULN				MLR	MLR		
	comp=Z,34μm,18.0s						
ULN	**Ulaanbaatar**	**17.60**	**28**	P	**Pn**	**07 18 50.1**	**-2.5**
ULN	**Ulaanbaatar**	**17.60**	**28**	P	**Pn**	**07 18 50.1**	**-2.5**
	comp=Z,68μmcomp=Z,2μm,1.4s						
TDK	**Taldyqorghan**	**17.60**	**318**	*e*P	**Pn**	**07 18 51.6**	**-1.0**
TDK				*e*S	**S**	**07 22 12.9**	**-2.2**
TDK	**Taldyqorghan**	**17.60**	**318**	*e*P	**Pn**	**07 18 51.7**	**-1.0**
	baz=319						
TDK				*e*S	**S**	**07 22 12.9**	**-2.2**
	baz=319						
DGZ	**Jazzator, Alta**	**17.72**	**344**	*d i* P	**Pn**	**07 18 53.6**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,176nm,1.6s						
DGZ				MLR	MLR		
	comp=Z,17μm,12.0s						
BOOM	**Boomskoye usch**	**17.78**	**308**	P	**Pn**	**07 18 54.5**	**-0.5**
BOOM	**Boomskoye usch**	**17.78**	**308**	P	**Pn**	**07 18 54.5**	**-0.5**
BOOM				pmax	pmax		
	comp=Z,456nm,1.0s						
CHCP	**Chirah Chowk**	**18.09**	**278**	P	**Pn**	**07 18 56.4**	**-2.4**
NIL	**Nilore**	**18.11**	**278**		**Pn**	**07 18 57.0**	**-1.9**
NIL	**Nilore**	**18.11**	**278**	P	**Pn**	**07 18 57.0**	**-1.9**
NIL				pmax	pmax		
	comp=Z,272nm,0.8s						
BHPL	**Bhopal**	**18.12**	**243**	*e*P	**Pn**	**07 18 53.5**	**-5.6**
BHPL				IAmb	IAmb	07 18 56.3	
	comp=Z,153nm,0.9s						
BHPL				IAMs_20	IAMs_20	07 26 09.9	
	comp=Z,53μm,10.9s						
KUU	**Kurty**	**18.20**	**313**	*e*P	**Pn**	**07 18 58.8**	**-1.1**
KUU				*e*S	**Sn**	**07 22 21.3**	**-0.9**
KUU	**Kurty**	**18.20**	**313**	*e*P	**Pn**	**07 18 58.9**	**-1.1**
	baz=313						
KUU				*e*S	**Sn**	**07 22 21.4**	**-0.9**
	baz=313						
TKM2	**Tokmak 2**	**18.20**	**309**	P	**P**	**07 19 00.6**	**+0.3**
	SNR=117						
TKM2	**Tokmak 2**	**18.20**	**309**	*i* P	**P**	**07 19 02.0**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,517nm,1.4s						
NGP	**Nagpur**	**18.27**	**234**	*e*P	**Pn**	**07 18 59.2**	**-1.8**
KBK	**Karagaybulak**	**18.51**	**308**	P	**Pn**	**07 19 07.0**	**+3.2**
	SNR=46						
BJT	**Baijiatuau**	**18.54**	**61**	Pn	**Pn**	**07 19 05.2**	**+1.1**
BJT				IAmb	IAmb	07 19 07.7	
	comp=Z,2μm,1.8s						
BJT	**Baijiatuau**	**18.54**	**61**	P	**Pn**	**07 19 05.2**	**+1.1**
BJT				pmax	pmax		
	comp=Z,2μm,1.8s						
BJI	**Beijing**	**18.55**	**61**	P	**Pn**	**07 19 04.5**	**+0.3**
BJI				S	**Sn**	**07 22 27.1**	**-3.7**
BJI				pmax	pmax		
	comp=Z,540nm,1.6s						
BJI				pmax	pmax		
	comp=Z,13μm,5.5s						
BJI				LR	LR		
	comp=Z,32μm,14.0s						
BJI				LR	LR		
	comp=Z,57μm,14.0s						
BJI				LR	LR		
	comp=Z,70μm,11.2s						
ZAK	**Zakamensk**	**18.58**	**17**	*e*P	**P**	**07 19 04.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,329nm,1.5s						
UCH	**Uchtor**	**18.62**	**306**	P	**Pn**	**07 19 07.5**	**+1.9**
	SNR=156						
TIA	**Tai'an**	**18.63**	**73**	⇓P	**Pn**	**07 19 05.3**	**+0.1**
TIA				S	**Sn**	**07 22 32.0**	**-0.7**
TIA				pmax	pmax		
	comp=Z,10μm,10.0s						
TIA				LR	LR		
	comp=Z,113μm,13.7s						
TIA				LR	LR		
	comp=Z,48μm,12.5s						
TIA				LR	LR		
	comp=Z,31μm,14.5s						
AJM	**Ajmer**	**18.68**	**255**	*e*P	**P**	**07 19 04.3**	**-1.2**
CHMS	**Chumysh**	**18.79**	**308**	P	**Pn**	**07 19 08.3**	**+1.2**
	SNR=46						
AAK	**Ala-Archa**	**18.80**	**307**	P	**Pn**	**07 19 09.4**	**+2.0**
	SNR=108						
AAK	**Ala-Archa**	**18.80**	**307**	P	**Pn**	**07 19 07.7**	**+0.3**
	comp=Z,4.5nm,0.3s,baz=113,slow=10,SNR=115						
AAK				S	**S**	**07 22 39.4**	**+0.1**
	comp=Z,9.4nm,1.0s,baz=275,slow=18,SNR=0.9						
AAK				LR	LR	07 27 36.6	
	comp=Z,56μm,18.6s,baz=117,slow=41						
	comp=Z,82nm,0.9s						
AAK	**Ala-Archa**	**18.80**	**307**	P	**Pn**	**07 19 07.5**	**0.0**
AAK	**Ala-Archa**	**18.80**	**307**	*ce*P	**Pn**	**07 19 09.2**	**+1.7**
AAK				pmax	pmax		
	comp=Z,385nm,1.3s						
AAK				MLR	MLR		
	comp=Z,59μm,22.0s						
AAK	**Ala-Archa**	**18.80**	**307**	P	**Pn**	**07 19 09.9**	**+2.4**
AAK				P	**Pn**	**07 19 09.9**	**+2.4**
AAK				S	**S**	**07 22 45.1**	**+5.8**
AAK				S	**S**	**07 22 45.1**	**+5.8**
AAK	**Ala-Archa**	**18.80**	**307**	*i* Pn	**Pn**	**07 19 07.4**	**0.0**
	SNR=165						
SGDS	**Sogindy**	**19.07**	**310**	*e*P	**P**	**07 19 08.8**	**-0.8**
SGDS				*e*S	**S**	**07 22 44.3**	**-0.1**
SGDS	**Sogindy**	**19.07**	**310**	*e*P	**P**	**07 19 08.9**	**-0.8**
	baz=310						
SGDS				*e*S	**S**	**07 22 44.4**	**-0.1**
	baz=310						
USP	**Ospenovka**	**19.07**	**309**	P	**Pn**	**07 19 11.0**	**+0.4**
	SNR=143						
AML	**Almayashu**	**19.15**	**305**	P	**Pn**	**07 19 13.8**	**+1.9**
	SNR=40						
CEP	**Cherat**	**19.21**	**279**	P	**P**	**07 19 09.9**	**-1.5**
QIZ	**Qiongzhong**	**19.22**	**132**	P	**Pn**	**07 19 12.4**	**-0.1**
QIZ	**Qiongzhong**	**19.22**	**132**	⇓*i*P	**Pn**	**07 19 12.8**	**+0.3**
QIZ				pP	**pP**	**07 19 17.0**	**-2.6**
QIZ				S	**S**	**07 22 49.4**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,200nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,6μm,4.0s						
QIZ				LR	LR		
	comp=Z,89μm,15.9s						
QIZ				LR	LR		
	comp=Z,84μm,17.5s						
QIZ				LR	LR		
	comp=Z,66μm,10.4s						
QIZ	**Qiongzhong**	**19.22**	**132**	P	**Pn**	**07 19 13.0**	**+0.5**
EKS2	**Erkin-Say**	**19.30**	**307**	P	**Pn**	**07 19 14.3**	**+0.9**
	SNR=139						
MOY	**Mondy**	**19.32**	**12**	*e*P	**Pn**	**07 19 14.0**	**+0.4**
MOY				pmax	pmax		
	comp=Z,1μm,3.5s						
THW	**Thamme Wali**	**19.44**	**276**	P	**P**	**07 19 13.1**	**-0.7**
MCO	**Taipa Grande**	**19.69**	**118**	P	**P**	**07 19 17.0**	**+0.5**
DRK	**Karamyk**	**19.74**	**296**	P	**P**	**07 19 17.8**	**+0.5**
DRK				IAmb	IAmb	07 19 31.8	
	comp=Z,861nm,1.4s						
XLT	**XiLinHaoTe**	**19.89**	**50**⇓	*i*P	**P**	**07 19 18.8**	**+0.1**
XLT				pP	pP	07 19 25.5	-1.3
XLT				sP	sP	07 19 30.3	-0.4
XLT				PP	**PnPn**	**07 19 37.1**	**+2.5**
XLT				S	**S**	**07 22 51.3**	**-10**
XLT				sS	Sn	07 23 06.8	+3.6
XLT				SS	**SnSn**	**07 23 27.4**	**+10**
UBPT	**Khong Chiam**	**19.97**	**149**	P	**P**	**07 19 19.8**	**+0.2**
AKL	**Akola**	**19.98**	**237**	*e*P	**P**	**07 19 20.2**	**+0.5**
AKL				*i* x	**S**	**07 23 00.2**	**-3.2**
HKPS	**Hong Kong Po S**	**20.04**	**117**	P	**P**	**07 19 20.2**	**-0.1**
BTLS	**Baital**	**20.19**	**313**	*e*P	**P**	**07 19 20.7**	**-1.1**
BTLS				*e*S	**S**	**07 23 06.8**	**-0.4**
BTLS	**Baital**	**20.19**	**313**	*e*P	**P**	**07 19 20.8**	**-1.1**
	baz=314						
BTLS				*e*S	**S**	**07 23 06.9**	**-0.4**
	baz=314						
NJ2	**Nanjing**	**20.24**	**86**	⇓P	**P**	**07 19 23.3**	**+0.8**
NJ2				pP	**pP**	**07 19 29.6**	**-1.1**
NJ2				sP	**sP**	**07 19 33.1**	**-1.4**
NJ2				PP	**PnPn**	**07 19 44.0**	**+4.6**
NJ2				S	**S**	**07 23 08.1**	**-0.3**
NJ2				sS	Sn	07 23 14.5	+2.7
NJ2				SS	**SnSn**	**07 23 28.6**	**+2.3**
NJ2	**Nanjing**	**20.24**	**86**	⇓P	**P**	**07 19 23.2**	**+0.8**
NJ2				pP	**pP**	**07 19 29.6**	**-1.1**
NJ2				sP	**sP**	**07 19 33.1**	**-1.4**
NJ2				PP	**PnPn**	**07 19 44.0**	**+4.6**
NJ2				S	**S**	**07 23 08.1**	**-0.3**
NJ2				sS	Sn	07 23 14.5	+2.7
NJ2				SS	**SnSn**	**07 23 28.6**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,320nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,6μm,9.8s						
NJ2				LR	LR		
	comp=Z,66μm,11.3s						
NJ2				LR	LR		
	comp=Z,27μm,11.7s						
NJ2				LR	LR		
	comp=Z,37μm,8.3s						
IRK	**Irkutsk**	**20.54**	**17**	*e*P	Pn	07 19 27.0	-0.8
IRK				pmax	pmax		
	comp=Z,3μm,1.7s						
SEM	**Semipalatinsk**	**20.60**	**333**	*e*P	**P**	**07 19 25.6**	**-0.8**
SEM				*e*S	**S**	**07 23 15.4**	**-0.2**
SEM	**Semipalatinsk**	**20.60**	**333**	*e*P	**P**	**07 19 25.7**	**-0.8**
	baz=333						
SEM				*e*S	**S**	**07 23 15.4**	**-0.2**
	baz=333						
BTK	**Batken**	**20.61**	**297**	P	**P**	**07 19 27.3**	**+0.8**
BTK				IAmb	IAmb	07 19 37.2	
	comp=Z,701nm,1.1s						
BTK	**Batken**	**20.61**	**297**	P	**P**	**07 19 27.3**	**+0.8**
BTK				pmax	pmax		
	comp=Z,701nm,1.2s						
VJD	**Vijayawada**	**20.74**	**222**	*e*P	**P**	**07 19 27.0**	**-1.0**
GAR	**Garm**	**20.78**	**294**	P	**P**	**07 19 28.0**	**-0.5**
GAR				IAmb	IAmb	07 19 35.8	
	comp=Z,663nm,1.0s						
DZA	**Taraz**	**21.05**	**305**	*e*P	**P**	**07 19 30.9**	**-0.3**
DZA	**Taraz**	**21.05**	**305**	*e*P	**P**	**07 19 31.0**	**-0.3**
	baz=306						
PBA	**Port Blair**	**21.19**	**186**	P	**P**	**07 19 32.2**	**-0.6**
PBA				IAmb	IAmb	07 19 39.0	
	comp=Z,699nm,1.1s						
PBA	**Port Blair**	**21.19**	**186**	P	**P**	**07 19 33.2**	**+0.4**
	SNR=52						
PBA	**Port Blair**	**21.19**	**186**	*e*P	**P**	**07 19 33.4**	**+0.6**
PBA				IAmb	IAmb	07 19 36.9	
	comp=Z,781nm,1.3s						
HYBB	**Hyderabad (bro**	**21.28**	**228**	*e*P	**P**	**07 19 35.3**	**+1.5**
HYBB				IVmB_BB		07 19 36.1	
	comp=Z,2μm,1.9s						
HYBB				*e*pP	**sP**	**07 19 44.0**	**-1.9**
HYBB				*e*S	**S**	**07 23 30.6**	**+1.5**
HYBB				*e*ScP	**ScP**	**07 27 13.0**	**-0.4**
HYBB				*e*PcS	**PcS**	**07 27 16.0**	**-0.5**
HYBB				IVMs_BB	IVMs_BB	07 27 45.6	
	comp=Z,26μm,9.8s						
HYB	**Hyderabad**	**21.28**	**228**	*e*P	**P**	**07 19 33.1**	**-0.7**
HYB				IAmb	IAmb	07 19 37.6	
	comp=Z,228nm,0.5s						
KURBB	**Kurchatov Arra**	**21.45**	**331**	P	**P**	**07 19 35.2**	**-0.2**
	comp=Z,526nm,0.8s,baz=139,slow=11,SNR=940						
KURBB				S	**S**	**07 23 34.8**	**+2.8**
	comp=Z,13nm,1.1s,baz=140,slow=15,SNR=4.8						
KURBB				ScP	**ScP**	**07 27 13.8**	**+0.6**
	comp=Z,30nm,1.1s,baz=139,slow=1.9,SNR=14						
KURBB				LR	LR	07 28 06.3	
	comp=Z,30μm,21.6s,baz=115,slow=37						
KURBB				SKKS	**SKKSdf**	**07 53 30.1**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=311,slow=4.3,SNR=10						
KURBB				P3KP		07 54 10.9	
	comp=Z,1.2nm,0.5s,baz=125,slow=6.9,SNR=16						
	comp=Z,526nm,0.8s						
KURBB	**Kurchatov Arra**	**21.45**	**331**	P	**P**	**07 19 35.0**	**-0.4**
KURK	**Kurchatov**	**21.49**	**331**	P	**P**	**07 19 35.3**	**-0.5**
KURK				IAmb	IAmb	07 19 41.3	
	comp=Z,740nm,0.9s						
KURK	**Kurchatov**	**21.49**	**331**⇑	*e*P	**P**	**07 19 35.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,1μm,1.2s						
KURK	**Kurchatov**	**21.49**	**331**	P	**P**	**07 19 35.5**	**-0.2**
KURK				P	**P**	**07 19 35.5**	**-0.2**
KURK				P	**P**	**07 19 35.5**	**-0.2**
KURK				S	**S**	**07 23 31.3**	**-1.4**
KURK				S	**S**	**07 23 31.3**	**-1.4**
KURK				S	**S**	**07 23 31.3**	**-1.4**
KBL	**Kabul**	**21.55**	**282**	P	**P**	**07 19 36.3**	**-0.5**
KBL				IAmb	IAmb	07 19 47.8	
	comp=Z,625nm,1.0s						
KBL	**Kabul**	**21.55**	**282**	P	**P**	**07 19 36.3**	**-0.5**
KBL				pmax	pmax		
	comp=Z,625nm,1.0s						
KBL	**Kabul**	**21.55**	**282**	P	**P**	**07 19 37.3**	**+0.5**
	SNR=335						
KBL				S	**S**	**07 23 36.1**	**+1.6**
JASL	**Jaisalmer**	**21.59**	**260**	*e*P	**P**	**07 19 37.1**	**+0.1**
CHGR	**Chuyangaron**	**21.62**	**293**	P	**P**	**07 19 35.8**	**-1.7**
CHGR				IAmb	IAmb	07 19 42.6	
	comp=Z,931nm,1.2s						
CHGR	**Chuyangaron**	**21.62**

KNMB IAmb IAmb 07 19 49.5
comp=Z,620nm,1.3s
ZAA0 Zalesovo Array 22.27 344 P **P 07 19 43.5 -0.7**
ZAA0 IAmb IAmb 07 19 48.2
comp=Z,937nm,1.1s
ZALV Zalesovo Beam 22.27 344 P **P 07 19 43.8 -0.3**
comp=Z,481nm,1.0s,baz=155,slow=11,SNR=179
ZALV S **S 07 23 50.9 +3.2**
comp=Z,8.5nm,1.0s,baz=123,slow=11,SNR=2.0
ZALV LR LR 07 28 58.7
comp=Z,14μm,18.1s,baz=165,slow=38
ZALV SKKS **SKKSdf 07 53 26.4 -3.4**
comp=Z,3.6nm,0.9s,baz=331,slow=5.6,SNR=8.3
comp=Z,481nm,1.0s
ZALV Zalesovo Beam 22.27 344 P **P 07 19 43.5 -0.6**
SSE Sheshan 22.37 87 P **P 07 19 45.9 +0.5**
SSE S **S 07 23 50.7 +0.8**
SSE pmax pmax
comp=Z,130nm,1.3s
SSE pmax pmax
comp=Z,2μm,5.1s
SSE LR LR
comp=Z,11μm,10.2s
SSE LR LR
comp=Z,16μm,10.1s
SSE LR LR
comp=Z,18μm,10.4s
DL2 Dalian 22.46 67⇓*i*P **P 07 19 46.4 +0.1**
DL2 PP **PnPn 07 20 12.7 +3.1**
DL2 S **S 07 23 54.7 +3.3**
DL2 pmax pmax
comp=Z,760nm,1.1s
DL2 pmax pmax
comp=Z,3μm,6.3s
DL2 LR LR
comp=Z,70μm,16.8s
DL2 LR LR
comp=Z,19μm,15.3s
DL2 LR LR
comp=Z,46μm,13.0s
CIT Chita 23.47 30 *e*P **P 07 19 55.6 -1.0**
CIT *e* 07 20 02.8
CIT *e* 07 20 12.2
CIT *e* 07 20 27.6
CIT *e* 07 30 56.4
CIT pmax pmax
comp=Z,1μm,3.0s
POO Poona 23.66 238 *e*P **P 07 19 57.6 -1.1**
POO IAmb IAmb 07 20 01.9
comp=Z,164nm,1.1s
POO IAMs_20 IAMs_20 07 29 37.2
comp=Z,53μm,10.9s
BRZS Berezniki 23.73 323*d i*P **P 07 19 59.3 +0.2**
BRZS pmax pmax
comp=Z,644nm,2.5s
BRZS Berezniki 23.73 323⇓*i*P **P 07 19 59.3 +0.2**
comp=Z,644nm,2.5s,baz=323
MDRS Chennai 23.81 218 *e*P **P 07 20 01.1 +1.0**
BHUJ Bhuj 24.18 253⇓*i*P **P 07 20 03.1 -0.4**
BHUJ IAmb IAmb 07 20 05.5
comp=Z,527nm,1.4s
BHUJ IAMs_20 IAMs_20 07 30 31.4
comp=Z,32μm,8.7s
KAD Karad 24.24 235 *e*P **P 07 20 03.5 -0.7**
SNY Shenyang 24.42 60 ⇓P **P 07 20 05.8 +0.2**
SNY S **S 07 24 23.8 -0.1**
SRIT Nakonsritamara 24.54 169 P **P 07 20 07.3 +0.5**
SRIT IAmb IAmb 07 20 12.4
comp=Z,1μm,1.6s
TATO Taipei 24.54 102 P **P 07 20 06.1 -0.7**
TATO IAmb IAmb 07 20 20.0
comp=Z,818nm,1.7s
TATO Taipei 24.54 102 P **P 07 20 09.1 +2.3**
YHNB Yeheng 24.57 103 P **P 07 20 07.7 +0.5**
YHNB IAmb IAmb 07 20 14.8
comp=Z,409nm,1.2s
YHNB Yeheng 24.57 103 P **P 07 20 09.4 +2.2**
TPUB Ta-pu 24.58 106 P **P 07 20 07.0 -0.2**
SSLB Suanglung 24.62 105 P **P 07 20 08.2 +0.6**
SSLB Suanglung 24.62 105 P **P 07 20 09.8 +2.2**
HIA Hailar 24.74 41 P **P 07 20 08.5 0.0**
HIA IAmb IAmb 07 20 11.1
comp=Z,516nm,1.0s
HIA Hailar 24.74 41*d i*P **P 07 20 09.0 +0.6**
HIA pmax pmax
comp=Z,568nm,1.0s
HIA MLR MLR
comp=Z,41μm,11.0s
SUJ Sinuiju 24.81 65 P **P 07 20 08.8 -0.4**
SUJ pP **pP 07 20 10.9 -7.1**
SUJ S **S 07 24 32.7 +2.5**
NACB Ninganchiao 24.97 103 P **P 07 20 09.7 -1.0**
NACB IAmb IAmb 07 20 41.5
comp=Z,484nm,1.3s
YULB Yu-li 25.08 105 P **P 07 20 11.5 -0.3**
HJU Haeju 25.59 70 P **P 07 20 15.9 -0.3**
HJU pP **pP 07 20 18.3 -6.7**
HJU S **S 07 24 44.2 +1.6**
YOJ Yonaguni jima 26.01 101 P **P 07 20 19.6 -0.5**
YOJ Yonaguni jima 26.01 101 P **P 07 20 19.6 -0.5**
YOJ pmax pmax
comp=Z,204nm,0.9s
YOJ Yonaguni jima 26.01 101 P **P 07 20 22.4 +2.3**
SALM Salem 26.07 220 *e*P **P 07 20 22.1 +1.3**
CN2 Changchun 26.21 56 ⇓P **P 07 20 22.1 +0.2**
CN2 *es*P pP 07 20 29.0 -1.6
CN2 *e*S **S 07 24 50.8 -1.7**
CN2 Changchun 26.21 56 ⇓P **P 07 20 22.0 +0.2**
CN2 *es*P pP 07 20 29.0 -1.6
CN2 *e*S **S 07 24 50.7 -1.7**
CN2 pmax pmax
comp=Z,800nm,1.2s
CN2 pmax pmax
comp=Z,5μm,6.0s
CN2 LR LR
comp=Z,81μm,15.0s
CN2 LR LR
comp=Z,29μm,15.0s
CN2 LR LR
comp=Z,41μm,14.0s
INCN Inchon 26.30 71 P **P 07 20 23.1 +0.4**
BVA0 Borovoye Array 26.75 326 *i* P **P 07 20 25.3 -1.2**
BVAR Borovoye Array 26.75 326 P **P 07 20 26.6 +0.1**
comp=Z,17nm,0.9s,baz=123,slow=11,SNR=65
BVAR PcP **PcP 07 23 48.8 -0.5**
comp=Z,9.3nm,0.8s,baz=158,slow=0.8,SNR=4.6
BVAR ScP **ScP 07 27 28.7 +1.1**
comp=Z,8.1nm,0.9s,baz=124,slow=2.6,SNR=7.8
BVAR PKiKP **PKiKP 07 31 26.8 -0.4**
comp=Z,2.8nm,1.0s,baz=243,slow=0.3,SNR=5.3
BVAR LR LR 07 32 13.3
comp=Z,9μm,20.0s,baz=117,slow=39
BVAR PKPPKP P'P'df 07 54 48.9 -16
comp=Z,0.7nm,0.6s,baz=107,slow=9.5,SNR=4.5
comp=Z,17nm,0.9s
BRVK Borovoye 26.82 326 P **P 07 20 27.1 -0.1**
BRVK IAmb IAmb 07 20 33.6
comp=Z,746nm,1.9s
BRVK Borovoye 26.82 326*ce*P **P 07 20 27.6 +0.4**
BRVK pmax pmax
comp=Z,202nm,1.7s
BRVK MLR MLR
comp=Z,12μm,11.0s
BRVK Borovoye 26.82 326 P **P 07 20 27.2 +0.1**
BRVK S **S 07 25 04.8 +3.0**
TJN Taejon 26.90 73 P **P 07 20 27.8 -0.2**
TJN IAmb IAmb 07 20 29.7
comp=Z,1μm,1.3s
TJN Taejon 26.90 73*ce*P **P 07 20 27.7 -0.3**
TJN Taejon 26.90 73 P **P 07 20 27.8 -0.2**
HHU Hamhung 27.11 66 P **P 07 20 29.9 0.0**
HHU pP **pP 07 20 32.8 -6.0**
HHU S **S 07 25 08.0 +1.4**
HRA Herat 27.16 282 P **P 07 20 29.6 -1.1**
KS19 Wonju Array Si 27.28 71 P **P 07 20 30.6 -0.9**
KSAR Wonju Array Be 27.29 71 P **P 07 20 30.9 -0.7**
KSAR Wonju Array Be 27.29 71 P **P 07 20 30.9 -0.7**
KSRS Korea Array 27.32 71 P **P 07 20 31.2 -0.6**
comp=Z,48nm,0.9s,baz=253,slow=9.0,SNR=85
KSRS PcP **PcP 07 23 50.1 -0.7**
comp=Z,6.5nm,0.8s,baz=290,slow=2.6,SNR=4.9
KSRS LR LR 07 31 08.6
comp=Z,7μm,18.9s,baz=245,slow=36
comp=Z,48nm,0.9s
LHMI Lhok Sumawe 27.55 176 P **P 07 20 38.9 +4.8**
comp=Z,7μmcomp=Z,376nm,1.1s
KOD Kodaikanal 27.65 219 *e*P **P 07 20 35.7 +0.4**
KULM Kulim 27.95 168 P **P 07 20 37.9 +0.2**
KULM IAmb IAmb 07 20 42.4
comp=Z,387nm,1.6s
KULM Kulim 27.95 168 P **P 07 20 37.8 +0.2**
comp=Z,3μmcomp=Z,159nm,1.7s
PCHI Peechi 28.01 222⇓*e*P **P 07 20 37.8 -0.4**
baz=37,slow=10
PCHI *e*S **S 07 25 25.8 +4.6**
PCHI AMS AMS 07 31 20.8
comp=E,17μm,10.0s
PCHI AMS AMS 07 31 35.2
comp=Z,18μm,11.2s
PCHI AMS AMS 07 31 38.1
comp=N,14μm,20.3s
BNX BinXian 28.06 53 ⇓P **P 07 20 38.5 +0.1**
BNX pP **pP 07 20 48.2 +0.9**
BNX S **S 07 25 22.9 +1.3**
BNX pmax pmax
comp=N,280nm,1.3s
BNX pmax pmax
comp=N,960nm,5.5s
BNX LR LR
comp=N,33μm,10.8s
BNX LR LR
comp=N,20μm,15.4s
BNX LR LR
comp=N,36μm,14.3s
BOD Bodaibo 28.15 22 *e*P **P 07 20 39.9 +0.9**
BOD pmax pmax
comp=Z,372nm,1.8s
PALK Pallekele 28.66 210 P **P 07 20 43.7 -0.3**
comp=Z,25nm,0.9s,baz=123,slow=9.1,SNR=13
PALK LR LR 07 32 26.2
comp=Z,10μm,21.4s,baz=138,slow=37
comp=Z,25nm,0.9s
PALK Pallekele 28.66 210 P **P 07 20 43.7 -0.3**
PALK Pallekele 28.66 210 P **P 07 20 43.7 -0.3**
PALK pmax pmax
comp=Z,240nm,1.8s
PALK MLR MLR
comp=Z,10μm,21.0s
PALK Pallekele 28.66 210 P **P 07 20 44.7 +0.7**
PALK P **P 07 20 44.7 +0.7**
PALK Pallekele 28.66 210 P **P 07 20 44.2 +0.2**
comp=Z,47nm,1.0s
JTU Tsushima 28.69 77 P **P 07 20 43.1 -1.0**
IPM Ipoh 28.81 167 P **P 07 20 45.7 +0.4**
IPM Ipoh 28.81 167 P **P 07 20 46.3 +1.0**
comp=Z,2μmcomp=Z,85nm,1.4s
IPM Ipoh 28.81 167 P **P 07 20 47.3 +2.0**
MDJ Mudanjiang 29.30 56 P **P 07 20 48.9 -0.5**
MDJ Mudanjiang 29.30 56 P **P 07 20 49.3 -0.1**
MDJ ScP **ScP 07 27 36.0 +0.3**
MDJ Mudanjiang 29.30 56 P **P 07 20 50.0 +0.6**
KCSI Kotacane, Aceh 29.31 174 P **P 07 20 50.2 +0.5**
comp=Z,70nm,1.6s
JOW Kunigami 29.50 93 LR LR 07 34 04.0
comp=Z,16μm,18.1s,baz=292,slow=39
JSU Suzuyama 30.06 83 P **P 07 20 56.0 -0.3**
MSHR Mys Shultsa 30.10 61*de*P **P 07 20 57.0 +0.5**
MSHR pmax pmax
comp=Z,108nm,1.2s
MSHR MLR MLR
comp=Z,9μm,11.0s
PSI Prapat 30.14 172 P **P 07 20 56.8 -0.4**
comp=Z,7.6nm,0.4s,baz=320,slow=8.7,SNR=8.0
PSI LR LR 07 33 57.8
comp=Z,7μm,19.1s,baz=336,slow=38
comp=Z,7.6nm,0.4s
PSI Prapat 30.14 172 P **P 07 20 57.7 +0.5**
PSI pmax pmax
comp=Z,96nm,1.6s
PSI MLR MLR
comp=Z,12μm,19.0s
PSI Prapat 30.14 172 P **P 07 20 57.3 +0.1**
comp=Z,30nm,1.3s
PSI P **pP 07 20 59.7 -6.4**
comp=Z,30nm,1.3s
PSI Prapat 30.14 172 P **P 07 20 57.9 +0.7**
RPSI Rantau Prapat 30.24 172 P **P 07 20 57.7 -0.2**
GEYT Alibeck 30.26 290 P **P 07 20 58.3 +0.2**
comp=Z,34nm,0.9s,baz=102,slow=6.2,SNR=46
GEYT LR LR 07 35 06.0
comp=Z,13μm,20.8s,baz=86,slow=40
comp=Z,34nm,0.9s
GEYT Alibeck 30.26 290 P **P 07 20 59.8 +1.7**
GYA0B ALIBECK ARRAY 30.26 290 P **P 07 20 59.5 +1.5**
NGCH Negor - Chabah 30.32 265 P **P 07 21 00.0 +1.4**
NGCH S **S 07 26 01.8 +4.5**
AB31 Akbulak array 30.68 313 *i* P **P 07 21 01.4 -0.2**
ABKAR Akbulak array 30.68 313 P **P 07 21 01.1 -0.5**
ABKAR Akbulak array 30.68 313 P **P 07 21 01.6 0.0**
ABKAR IAmb IAmb 07 21 03.5
comp=Z,39nm,1.0s
VLA Vladivostok 30.70 60*d i*P **P 07 21 03.7 +1.9**
VLA pmax pmax
comp=Z,639nm,2.0s
VLA MLR MLR
comp=Z,18μm,14.0s
USA0B Ussuriysk Arra 30.92 58 P **P 07 21 03.9 +0.2**
USA0B Ussuriysk Arra 30.92 58*d i*P **P 07 21 03.6 -0.1**
USRK Ussuriysk Ar. 30.92 58 P **P 07 21 03.5 -0.2**
comp=Z,112nm,1.1s,baz=262,slow=5.8,SNR=57
USRK LR LR 07 33 37.7
comp=Z,9μm,20.7s,baz=252,slow=37
comp=Z,112nm,1.1s
USRK Ussuriysk Ar. 30.92 58 P **P 07 21 03.4 -0.4**
ZEA Zeya 31.06 38*de*P **P 07 21 06.2 +1.4**
ZEA *e* 07 26 16.1
ZEA pmax pmax
comp=N,100nm,1.4s
ZEA pmax pmax
comp=E,100nm,1.4s
ZEA pmax pmax
comp=Z,240nm,1.3s
ZEA pmax pmax
comp=E,500nm,2.5s
ZEA pmax pmax
comp=N,400nm,3.5s
ZEA pmax pmax
comp=Z,1μm,5.7s
ZEA MLR MLR
comp=E,13μm,12.0s
ZEA MLR MLR
comp=N,13μm,15.0s
ZEA MLR MLR
comp=Z,18μm,11.0s
GSI Gunungsitoli 31.49 175 P **P 07 21 08.9 -0.1**
GSI IAmb IAmb 07 21 13.5
comp=Z,738nm,1.5s
GSI Gunungsitoli 31.49 175 P **P 07 21 10.1 +1.1**
comp=Z,13μmcomp=Z,383nm,2.1s
GSI Gunungsitoli 31.49 175 P **P 07 21 09.6 +0.6**
JHS Saijyo 31.68 75 P **P 07 21 10.0 -0.6**
MNCI Minicoy 31.72 224 P **P 07 21 10.8 -0.3**
MNCI IAmb IAmb 07 21 15.9
comp=Z,818nm,1.7s
KLR Kul'dur 31.88 48 P **P 07 21 12.1 -0.1**
comp=Z,77nm,0.9s,baz=263,slow=10,SNR=118
KLR PcP **PcP 07 24 02.5 +0.2**
comp=Z,59nm,1.0s,baz=283,slow=4.8,SNR=11
KLR LR LR 07 35 57.6
comp=Z,12μm,21.5s,baz=254,slow=40
comp=Z,77nm,0.9s
KLR Kul'dur 31.88 48*de*P **P 07 21 12.4 +0.2**
KLR pmax pmax
comp=Z,389nm,1.7s
KLR MLR MLR
comp=Z,28μm,14.0s
MYKOM Kota Tinggi 32.03 163 P **P 07 21 14.7 +1.0**
MYKOM Kota Tinggi 32.03 163 P **P 07 21 16.8 +3.1**
MNSI Mandailing Nat 32.20 171 P **P 07 21 18.1 +2.9**
comp=Z,7μmcomp=Z,58nm,0.7s
AKTO Aktyubinsk 32.24 314 LR LR 07 35 47.7
comp=Z,21μm,18.1s,baz=116,slow=39
AKTO Aktyubinsk 32.24 314 P **P 07 21 15.8 +0.5**
JMZ Minamidaito 2 32.33 93 P **P 07 21 16.1 -0.2**
BTDF Bukit Timah Da 32.43 163 P **P 07 21 21.7 +4.5**
comp=Z,2μmcomp=Z,63nm,1.5s
JMN Monobe 32.48 78 P **P 07 21 18.0 +0.3**
HMDM Hanimaadhoo 32.87 223 P **P 07 21 19.8 -1.3**
HMDM IAmb IAmb 07 21 31.2
comp=Z,176nm,1.1s
BKNI Bangkinang 32.87 169 P **P 07 21 20.1 -1.0**
BKNI IAmb IAmb 07 21 26.5
comp=Z,570nm,1.4s
BKNI Bangkinang 32.87 169 P **P 07 21 22.9 +1.8**
comp=Z,6μmcomp=Z,328nm,1.5s
TPRI Tanjung Pinang 33.04 162 P P 07 21 27.6 +5.0
WBK Wadi Bani Khal 33.24 261 P **P 07 21 25.4 +1.0**
SNR=8.8
WSAR Wadi Sarin 33.26 263 LR LR 07 36 27.6
comp=Z,8μm,18.6s,baz=112,slow=39
KKM Kota Kinabalu 33.26 139 P **P 07 21 24.8 +0.2**
KKM IAmb IAmb 07 21 48.0
comp=Z,368nm,1.2s
KKM Kota Kinabalu 33.26 139 P **P 07 21 25.6 +0.9**
comp=Z,3μmcomp=Z,272nm,1.1s
KKM Kota Kinabalu 33.26 139 P **P 07 21 26.7 +2.0**
SVE Sverdlovsk 33.53 326*ce*P **P 07 21 27.8 +1.3**
SVE *e*S **S 07 26 50.6 +3.7**
SVE pmax pmax
comp=Z,391nm,1.6s
SVE MLR MLR
comp=Z,14μm,15.0s
BIDO Bidbid 33.56 263 P **P 07 21 28.5 +1.4**
SNR=12
BIDO P **P 07 21 28.5 +1.4**
SNR=12
SMDO Samad 33.82 263 P **P 07 21 30.4 +0.9**
SNR=20
SMDO P **P 07 21 30.4 +0.9**
SNR=20
JMDO Jabal Madar 34.07 262 P **P 07 21 32.1 +0.6**
SNR=8.4
JMDO P **P 07 21 32.1 +0.6**
SNR=8.4
SDSI Sungai Dareh 34.17 168 P **P 07 21 33.9 +1.5**
comp=Z,3μmcomp=Z,46nm,1.3s
BANOM Banah 34.17 269 P **P 07 21 33.7 +1.2**
SNR=5.1
BANOM P **P 07 21 33.7 +1.2**
SNR=5.1
BANOM Banah 34.17 269 *i* P **P 07 21 32.8 +0.3**
SNR=10
HOQ Hoqain 34.22 264 P **P 07 21 33.4 +0.6**
SNR=14
HOQ P **P 07 21 33.4 +0.6**
SNR=14
SISI Saibi 34.23 172 P **P 07 21 36.9 +4.0**
comp=Z,7μmcomp=Z,335nm,1.8s
SHME Shamm 34.26 269 P **P 07 21 34.6 +1.4**
SNR=6.2
SHME P **P 07 21 34.6 +1.4**
SNR=6.2
SHME Shamm 34.26 269 *i* P **P 07 21 33.7 +0.5**
SNR=5.0
TEY Ternei 34.29 57⇓*i*P **P 07 21 33.5 +0.3**
TEY pmax pmax
comp=E,400nm,2.0s
TEY pmax pmax
comp=Z,900nm,1.8s
TEY pmax pmax
comp=E,120nm,1.3s
TEY pmax pmax
comp=N,30nm,1.1s
TEY pmax pmax
comp=Z,250nm,1.3s
ARU Arti 34.34 324 LR LR 07 36 54.6
comp=Z,6μm,19.2s,baz=110,slow=39
ARU Arti 34.34 324 P **P 07 21 33.7 +0.2**
ARU IAmb IAmb 07 21 36.7
comp=Z,426nm,1.3s
ARU Arti 34.34 324*d i*P **P 07 21 34.3 +0.8**
ARU 07 22 46.2
ARU 07 24 07.0
ARU S **S 07 27 03.7 +4.4**
ARU SS **SnSn 07 29 14.6 +5.0**
ARU pmax pmax
comp=Z,422nm,1.3s
ARU MLR MLR
comp=Z,8μm,16.0s
ARU Arti 34.34 324 P **P 07 21 34.1 +0.6**
ARU pP **pP 07 21 43.7 +1.2**
SBUM Sibu 34.35 148 P **P 07 21 33.6 -0.3**
SBUM Sibu 34.35 148 P **P 07 21 35.3 +1.3**
comp=Z,28nm,1.0s
DSRI Dabo 34.40 163 P **P 07 21 37.7 +3.3**
comp=Z,133nm,1.5s
KSM Kuching 34.42 152 P **P 07 21 34.6 0.0**
KSM IAmb IAmb 07 21 40.3
comp=Z,351nm,1.7s
KSM Kuching 34.42 152 P **P 07 21 36.0 +1.4**
comp=Z,3μmcomp=Z,130nm,1.7s
KSM Kuching 34.42 152 P **P 07 21 36.4 +1.8**
MASF Masafi 34.49 268 P **P 07 21 36.9 +1.6**
SNR=7.2
MASF P **P 07 21 36.9 +1.6**
SNR=7.2
MSFE Esma-Masafi 34.50 268 *i* P **P 07 21 36.5 +1.2**
SNR=7.3
UOSS Minazif 34.61 267 *i* P P 07 21 27.5 -8.8
SNR=8.9
BSY Bisya 34.66 263 P **P 07 21 37.7 +1.0**
SNR=20
BSY P **P 07 21 37.7 +1.0**
SNR=20
HATD Hatta, Dubai 34.72 267 *i* P P 07 21 30.3 -6.9
SNR=17
INU Inuyama 34.80 74 P **P 07 21 35.0 -2.7**
INU Inuyama 34.80 74 P **P 07 21 37.4 -0.3**
INU Inuyama 34.80 74 P **P 07 21 36.8 -0.9**
MHTO MHTO 34.80 260 P **P 07 21 37.8 -0.1**
SNR=34
MHTO P **P 07 21 37.8 -0.1**
SNR=34
ASHO Ashiyiah 34.83 267 P **P 07 21 39.3 +1.1**
SNR=9.4
ASHO P **P 07 21 39.3 +1.1**
SNR=9.4
ASHO Ashiyiah 34.83 267 *i* P P 07 21 31.4 -6.9
SNR=8.3
ARQ Araqi 34.98 264 P **P 07 21 40.4 +0.9**
SNR=21
ARQ P **P 07 21 40.4 +0.9**
SNR=21
JGF Kuroka 35.03 73 P **P 07 21 37.5 -2.4**
JGF **PcP 07 24 11.5 0.0**
NAZ Nazwa, Dubai 35.05 267 P **P 07 21 41.0 +1.0**
SNR=12
NAZ P **P 07 21 41.0 +1.0**
SNR=12
NAZ Nazwa, Dubai 35.05 267 *i* P **P 07 21 40.2 +0.1**
SNR=12
GRNR Gornyy 35.20 47⇓*i*P **P 07 21 41.8 +0.7**
GRNR *e*S **S 07 27 18.3 +5.5**
GRNR pmax pmax
comp=E,50nm,1.1s
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,100nm,1.2s
GRNR smax smax
comp=N,5.0nm,1.2s
GRNR MLR MLR
comp=N,5μm,12.0s
GRNR MLR MLR
comp=E,10μm,12.0s
GRNR MLR MLR
comp=Z,14μm,13.0s
FAQ Al Faqa, Dubai 35.20 267 P **P 07 21 42.7 +1.4**
SNR=21
FAQ Al Faqa, Dubai 35.20 267 *i* P **P 07 21 42.2 +0.9**
SNR=11
MYLDM Lahad Datu 35.27 136 P **P 07 21 40.1 -1.8**
MYLDM IAmb IAmb 07 22 05.6
comp=Z,319nm,1.1s
MYLDM Lahad Datu 35.27 136 P **P 07 21 44.1 +2.2**
comp=Z,289nm,1.4s
ALNE Al Ain 35.34 266 P **P 07 21 43.5 +1.0**
SNR=14
ALNE P **P 07 21 43.5 +1.0**
SNR=14
ALNE Al Ain 35.34 266 *i* P **P 07 21 43.3 +0.8**
SNR=7.0
ASUD Al Ashush, Dub 35.47 267 P **P 07 21 44.5 +0.9**
SNR=10
ASUD P **P 07 21 44.5 +0.9**
SNR=10
ASUD Al Ashush, Dub 35.47 267 *i* P **P 07 21 44.7 +1.1**
SNR=11

JSD	Sado	35.48	69	P	P	07 21 41.8	-1.7
JSD				IAmb	IAmb	07 21 43.3	
	comp=Z,220nm,1.2s						
JSD				PcP	PcP	07 24 13.0	+0.3
MJB9	Matsu-Tunnel	35.59	72	P	P	07 21 44.2	-0.4
MAJO	Matsushiro	35.59	72	P	P	07 21 43.3	-1.3
MAJO	Matsushiro	35.59	72	*d* iP	P	07 21 42.9	-1.7
MAJO				pmax	pmax		
	comp=Z,134nm,1.4s						
MAJO	Matsushiro	35.59	72	P	P	07 21 43.6	-1.0
MAJO	Matsushiro	35.59	72	P	P	07 21 43.3	-1.3
MAJO				sP	sP	07 21 56.9	-0.4
MJAR	Matsushiro Arr	35.59	72	P	P	07 21 44.0	-0.7
	comp=Z,92nm,1.2s,baz=282,slow=9.1,SNR=80						
MJAR				PcP	PcP	07 24 13.1	0.0
	comp=Z,29nm,1.1s,baz=291,slow=2.1,SNR=10						
MJAR				LR	LR	07 36 05.9	
	comp=Z,12μm,18.8s,baz=251,slow=36						
	comp=Z,92nm,1.2s						
DQM	DQM	35.65	258	P	P	07 21 45.1	-0.2
	SNR=11						
DQM				P	P	07 21 45.1	-0.2
	SNR=11						
PPSI	Pulau Pagai	35.76	171	P	P	07 21 48.0	+1.9
	comp=Z,10μmcomp=Z,606nm,1.6s						
AJN	Ajban	35.78	267	P	P	07 21 46.8	+0.5
	SNR=12						
AJN				P	P	07 21 46.8	+0.5
	SNR=12						
AJN	Ajban	35.78	267	*i* P	P	07 21 46.6	+0.3
	SNR=12						
UMZA	Um Al Zommool	36.38	264	P	P	07 21 51.1	-0.3
PPBI	Pangkal Pinang	36.42	161	P	P	07 21 53.3	+1.5
	comp=Z,58μmcomp=Z,90nm,1.0s						
MASI	Maura Aman, Be	36.47	168	P	P	07 22 06.9	+15
YAK	Yakutsk	36.68	27	P	P	07 21 53.5	0.0
	comp=Z,414nm,0.9s,baz=229,slow=2.6,SNR=151						
YAK				LR	LR	07 37 59.4	
	comp=Z,21μm,18.9s,baz=256,slow=38						
	comp=Z,414nm,0.9s						
YAK	Yakutsk	36.68	27	P	P	07 21 53.7	+0.2
YAK				IAMs_20	IAMs_20	07 37 39.4	
	comp=Z,27μm,18.0s						
YAK	Yakutsk	36.68	27	*d* iP	P	07 21 53.5	0.0
YAK				*e**PP	sP	07 22 07.4	+1.3
YAK				*e*		07 23 19.1	
YAK				*e*		07 24 11.6	
YAK				*e*S	S	07 27 35.1	0.0
YAK				*e**SS	sS	07 27 52.0	+2.1
YAK				*e*		07 32 03.4	
YAK				pmax	pmax		
	comp=Z,1μm,0.9s						
YAK				pmax	pmax		
	comp=N,372nm,0.9s						
YAK				pmax	pmax		
	comp=E,436nm,1.0s						
YAK				pmax	pmax		
	comp=Z,1μm,6.7s						
YAK				pmax	pmax		
	comp=N,587nm,6.4s						
YAK				smax	smax		
	comp=N,225nm,2.2s						
YAK				smax	smax		
	comp=E,424nm,2.0s						
YAK				MLR	MLR		
	comp=Z,16μm,13.0s						
YAK				MLR	MLR		
	comp=N,11μm,16.0s						
YAK				MLR	MLR		
	comp=E,13μm,15.0s						
YAK	Yakutsk	36.68	27	P	P	07 21 53.5	0.0
NRIK	Noril'sk	36.77	356	P	P	07 21 54.1	0.0
	comp=E,352nm,1.1s,baz=162,slow=6.7,SNR=146						
NRIK				LR	LR	07 36 41.2	
	comp=E,13μm,19.3s,baz=189,slow=36						
	comp=E,352nm,1.1s						
NRIK	Noril'sk	36.77	356	P	P	07 21 53.5	-0.6
NRIK	Noril'sk	36.77	356	*de*P	P	07 21 54.7	+0.5
NRIK				pmax	pmax		
	comp=Z,709nm,1.3s						
NRIK				MLR	MLR		
	comp=Z,8μm,12.0s						
MZWR	Madinat Zayed	37.02	267	P	P	07 21 56.8	-0.2
MZWR				P	P	07 21 56.8	-0.2
MZWR				P	P	07 21 56.8	-0.2
JYT	Yasato	37.22	72	P	P	07 21 57.6	-0.9
JYT				IAmb	IAmb	07 22 01.3	
	comp=Z,162nm,1.0s						
TPI	Tanjungpandan	37.43	159	P	P	07 22 02.4	+2.1
	comp=Z,50nm,1.0s						
JRN	Qarnain Island	37.44	269	P	P	07 21 59.8	-0.6
	SNR=8.3						
JHJ	Hachijo jima 2	37.45	77	LR	LR	07 37 07.4	
	comp=Z,13μm,18.5s,baz=286,slow=36						
JTM	Tenmabayashi	37.46	64	P	P	07 21 58.2	-2.3
JMM	Marumori	37.49	69	P	P	07 21 59.8	-0.9
JMM				IAmb	IAmb	07 22 01.9	
	comp=Z,163nm,1.0s						
MZR	Muzera	37.67	266	P	P	07 22 02.0	-0.4
	SNR=34						
MZR	Muzera	37.67	266	*i* P	P	07 22 02.1	-0.4
	SNR=14						
JEW	Eniwo	37.68	61	P	P	07 22 01.0	-1.3
JEW				IAmb	IAmb	07 22 06.7	
	comp=Z,394nm,1.1s						
GHWR	Ruwais	37.79	267	P	P	07 22 02.7	-0.7
MAK	Makhachkala	38.27	299	*e*P	P	07 22 02.7	-4.5
MAK				*e*S	S	07 27 54.3	-5.4
MAK				pmax	pmax		
	comp=Z,262nm,1.2s						
DAV	Davao City (W)	38.34	125	LR	LR	07 40 12.8	
	comp=Z,12μm,19.8s,baz=340,slow=40						
UGL	Uglegorsk	38.47	51	*e*P	P	07 22 08.9	+0.1
UGL				*e*		07 24 23.4	
UGL				*e*S	S	07 28 05.5	+2.9
UGL				pmax	pmax		
	comp=Z,2μm,2.0s						
UGL				pmax	pmax		
	comp=Z,600nm,1.0s						
UGL				MLR	MLR		
	comp=E,26μm,10.0s						
UGL				MLR	MLR		
	comp=N,29μm,13.0s						
UGL				MLR	MLR		
	comp=Z,36μm,13.0s						
MTKI	Muara Teweh, K	38.56	147	P	P	07 22 12.2	+2.2
LWLI	Liwa	38.66	165	P	P	07 22 11.5	+0.6
	comp=Z,231nm,0.8s						
SHMA	Al-Shehemyia	38.69	271	P	P	07 22 10.3	-0.7
YSS	Yuzh-Sakhalins	38.73	54	P	P	07 22 10.5	-0.5
YSS				IAmb	IAmb	07 22 13.7	
	comp=Z,723nm,1.1s						
YSS					PcP	07 24 22.7	+0.3
YSS	Yuzh-Sakhalins	38.73	54	*d* iP	P	07 22 11.4	+0.3
YSS				*e*		07 23 41.8	
YSS				*e*		07 24 23.0	
YSS				*e*S	S	07 28 07.4	+0.8
YSS				pmax	pmax		
	comp=Z,3μm,2.1s						
YSS				pmax	pmax		
	comp=Z,550nm,1.1s						
YSS				MLR	MLR		
	comp=Z,21μm,14.0s						
YSS				MLR	MLR		
	comp=N,13μm,12.0s						
YSS				MLR	MLR		
	comp=E,14μm,13.0s						
YSS	Yuzh-Sakhalins	38.73	54	P	P	07 22 11.8	+0.7
YSS	Yuzh-Sakhalins	38.73	54	P	P	07 22 11.3	+0.2
SLWR	Sila	38.74	268	P	P	07 22 11.1	-0.3
PBKI	Pangkalan Bun	38.78	153	P	P	07 22 17.4	+5.7
DMTO	DMTO	38.87	257	P	P	07 22 12.6	0.0
	SNR=18						
ERM	Erimo	38.97	62	P	P	07 22 12.9	-0.2
ERM				IAmb	IAmb	07 22 18.2	
	comp=Z,687nm,1.4s						
ERM	Erimo	38.97	62	*de*P	P	07 22 13.1	0.0
ERM				pmax	pmax		
	comp=Z,742nm,1.7s						
ERM	Erimo	38.97	62	P	P	07 22 14.4	+1.3
ERM	Erimo	38.97	62	P	P	07 22 13.4	+0.3
JEM	Erimo	38.97	62	P	P	07 22 08.0	-5.1
JEM				IAmb	IAmb	07 22 18.2	
	comp=Z,396nm,1.4s						
SAKB	Bahrain	39.01	272	P	P	07 22 13.2	-0.4
TYV	Tymovskoe	39.09	48	*e*P	P	07 22 14.9	+0.9
TYV				*e*S	S	07 28 13.9	+2.0
TYV				pmax	pmax		
	comp=Z,2μm,4.2s						
TYV				pmax	pmax		
	comp=Z,295nm,1.4s						
TYV				smax	smax		
	comp=N,2μm,9.8s						
TYV				smax	smax		
	comp=E,3μm,9.8s						
DOK	Doka	39.10	259	P	P	07 22 14.1	-0.4
	SNR=48						
SMRA	Abu-Samra	39.21	270	P	P	07 22 15.1	-0.2
GROC	Groznyy	39.52	300	*e*P	P	07 22 18.2	+0.5
GROC				*e*		07 24 24.4	
GROC				*e*S	S	07 28 21.9	+3.4
GROC				pmax	pmax		
	comp=Z,79nm,0.5s						
RBK	Rabkut	39.59	257	P	P	07 22 18.4	-0.3
	SNR=52						
KIRV	Kirov	39.72	324	P	P	07 22 20.0	+0.9
	comp=Z,151nm,0.9s,baz=112,slow=3.8,SNR=4.8						
KIRV				LR	LR	07 39 22.7	
	comp=Z,12μm,19.0s,baz=109,slow=37						
	comp=Z,151nm,0.9s						
WHFO	Wadi Hawf	39.74	258	P	P	07 22 19.1	-0.8
	SNR=62						
TOLI2	Tolitoli	39.88	137	P	P	07 22 20.8	-0.2
TOLI2	Tolitoli	39.88	137	P	P	07 22 22.3	+1.3
MPSI	Mapaga	40.02	139	P	P	07 22 23.9	+1.8
	comp=Z,44nm,1.2s						
ABTO	Aybut	40.41	258	P	P	07 22 25.0	-0.5
	SNR=53						
GNI	Garni	40.51	295	LR	LR	07 43 42.7	
	comp=Z,4μm,18.9s,baz=104,slow=43						
GNI	Garni	40.51	295	P	P	07 22 27.4	+1.2
GNI				IAmb	IAmb	07 22 40.4	
	comp=Z,297nm,1.2s						
GNI	Garni	40.51	295	*ce*P	P	07 22 28.1	+1.9
GNI				pmax	pmax		
	comp=Z,204nm,1.3s						
GNI				MLR	MLR		
	comp=Z,6μm,22.0s						
GNI	Garni	40.51	295	P	P	07 22 28.2	+2.1
GNI	Garni	40.51	295	P	P	07 22 26.0	-0.2
GNI	Garni	40.51	295	P	P	07 22 28.1	+1.9
GNI				pP	sP	07 22 38.6	-0.4
BBKI	Banjar Baru	40.77	149	P	P	07 22 30.2	+1.8
	comp=Z,6μmcomp=Z,302nm,1.0s						
ZEI	Tsey	40.92	299	*e*P	P	07 22 29.3	-0.3
ZEI				pmax	pmax		
	comp=Z,65nm,1.4s						
MRSI	Marisa	41.06	136	P	P	07 22 43.4	+13
ONI	Oni	41.27	299	P	P	07 22 31.6	-0.7
ONI				IAmb	IAmb	07 22 36.1	
	comp=Z,311nm,1.2s						
ONI	Oni	41.27	299	P	P	07 22 31.6	-0.7
ONI				pmax	pmax		
	comp=Z,311nm,1.2s						
LEM	Lembang	41.28	161	P	P	07 22 32.3	-0.4
	comp=Z,42nm,0.7s,baz=359,slow=21,SNR=6.7						
LEM				LR	LR	07 40 40.3	
	comp=Z,12μm,20.3s,baz=330,slow=38						
	comp=Z,42nm,0.7s						
GOF	Gofitskoye	41.45	303⇑	*i* P	P	07 22 35.1	+1.4
GOF				*e*S	S	07 28 51.7	+4.4
GOF				pmax	pmax		
	comp=Z,506nm,0.9s						
GOF				smax	smax		
	comp=N,211nm,1.7s						
GOF				smax	smax		
	comp=E,405nm,1.5s						
GTOI	Gorontalo	41.57	135	P	P	07 22 34.0	-0.9
	comp=E,730nmcomp=E,44nm,0.8s						
KBZ	Khabaz	41.60	301	P	P	07 22 35.4	+0.5
	comp=E,25nm,0.9s,baz=128,slow=3.2,SNR=30						
KBZ				LR	LR	07 42 59.9	
	comp=E,8μm,19.1s,baz=67,slow=41						
	comp=E,25nm,0.9s						
KBZ	Khabaz	41.60	301	*ce*P	P	07 22 34.4	-0.5
KBZ				pmax	pmax		
	comp=Z,29nm,0.9s						
KIV	Kislovodsk	41.74	301	⇑P	P	07 22 37.9	+1.7
KIV	Kislovodsk	41.74	301	P	P	07 22 37.0	+0.8
KIV	Kislovodsk	41.74	301	*e*P	P	07 22 36.6	+0.4
KIV				*e*		07 24 13.6	
KIV				*e*S	S	07 28 54.6	+2.7
KIV				*e*SSS	SSS	07 32 30.9	
KIV				pmax	pmax		
	comp=Z,146nm,1.1s						
KIV				pmax	pmax		
	comp=Z,474nm,4.6s						
KIV				MLR	MLR		
	comp=Z,6μm,16.0s						
KIV	Kislovodsk	41.74	301	P	P	07 22 37.6	+1.4
KIV				P	P	07 22 37.6	+1.4
KIV	Kislovodsk	41.74	301	*i* P	P	07 22 35.1	-1.2
	SNR=29						
KIV	Kislovodsk	41.74	301	P	P	07 22 37.2	+0.9
KIV				pP	pP	07 22 47.1	+1.7
KIV				sP	sP	07 22 52.0	+2.9
NEY	Neytrino	41.76	300	*i* P	P	07 22 36.6	+0.2
SHA1	Shidzhatmaz	41.78	301	*d* iP	P	07 22 37.2	+0.5
CTJI	Waduk Cacaban	41.91	158	P	P	07 22 39.9	+2.2
	comp=Z,9μmcomp=Z,450nm,1.0s						
APSI	Ampana	42.02	138	P	P	07 22 41.5	+2.9
	comp=Z,148nm,1.1s						
GEVA	Gevas	42.04	293	P	P	07 22 39.0	+0.1
KMSI	Cibinong	42.20	134	P	P	07 22 43.4	+3.3
	comp=Z,415nm,0.9s						
SMRI	Semarang	42.36	157	P	P	07 22 41.7	+0.4
SMRI				IAmb	IAmb	07 22 46.2	
	comp=Z,343nm,1.0s						
SMRI	Semarang	42.36	157	P	P	07 22 42.9	+1.6
	comp=Z,9μmcomp=Z,356nm,1.5s						
SMRI	Semarang	42.36	157	P	P	07 22 43.8	+2.5
VRH	Novokhopyorsk	42.50	312	*e*P	P	07 22 42.2	+0.1
VRH				pmax	pmax		
	comp=Z,320nm,1.0s						
VRH				pmax	pmax		
	comp=Z,540nm,1.2s						
VRH				MLR	MLR		
	comp=Z,6μm,13.0s						
PRGR	Permogore	42.54	328	*e*P	P	07 22 39.9	-2.4
PRGR				*e*		07 24 19.4	
PRGR				*e*S	S	07 29 05.2	+2.2
PRGR				pmax	pmax		
	comp=Z,533nm,1.8s						
PMSI	Majene	42.73	143	P	P	07 22 48.2	+3.8
	comp=Z,3μmcomp=Z,144nm,1.3s						
LUWI	Luwuk	42.77	136	P	P	07 22 42.8	-2.0
GURO	Guroymak-BITLI	42.80	293	P	P	07 22 46.1	+1.1
TTSI	Tana Toraja	42.81	142	P	P	07 22 46.3	+1.3
	comp=Z,117nm,1.0s						
TIXI	Tiksi	42.84	15	P	P	07 22 43.9	-0.7
	comp=Z,165nm,0.9s,baz=270,slow=18,SNR=173						
TIXI				LR	LR	07 42 31.4	
	comp=Z,4μm,18.0s,baz=359,slow=39						
	comp=Z,165nm,0.9s						
TIXI	Tiksi	42.84	15	P	P	07 22 43.8	-0.9
TIXI				IAmb	IAmb	07 22 45.8	
	comp=Z,268nm,0.9s						
TIXI	Tiksi	42.84	15⇑	*e*P	P	07 22 43.9	-0.7
TIXI				pmax	pmax		
	comp=Z,585nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,12μm,12.0s						
TIXI	Tiksi	42.84	15	P	P	07 22 43.7	-0.9
SPSI	Sidrap Palu	43.56	142	P	P	07 22 51.9	+0.8
	comp=Z,3μmcomp=Z,146nm,1.5s						
KMMI	Kalianget	43.64	152	P	P	07 22 53.1	+1.4
	comp=Z,5μmcomp=Z,225nm,1.0s						
GAMI	Galela, Maluku	43.66	128	P	P	07 23 01.7	+10
PWJI	Pagerwojo	43.73	155	P	P	07 22 51.6	-0.8
	comp=Z,166nm,1.0s						
KOPT	Kop Dagi	43.76	295	P	P	07 22 53.1	+0.3
SOC	Sochi	43.92	301	*e*P	P	07 22 51.8	-1.9
SOC				*e*		07 24 33.5	
SOC				*e*PPP	PPP	07 25 08.8	
SOC				*e*S	S	07 29 24.1	+0.5
SOC				*e*SS	SS	07 32 44.4	+4.1
SOC				*e*SSS	SSS	07 33 30.6	
SOC				pmax	pmax		
	comp=Z,15nm,0.3s						
SOC				MLR	MLR		
	comp=Z,6μm,21.0s						
MARD	Mardin	43.99	292	P	P	07 22 55.8	+1.2
VORR	Voronezh	44.10	312	*e*P	P	07 22 55.2	+0.1
VORR				*e*S	S	07 29 28.9	+2.8
VORR				pmax	pmax		
	comp=Z,520nm,1.0s						
VORR				pmax	pmax		
	comp=Z,630nm,1.0s						
VORR				smax	smax		
	comp=N,350nm,0.8s						
VSR	Storozhevoye	44.11	312	*e*P	P	07 22 55.1	0.0
VSR				pmax	pmax		
	comp=Z,320nm,1.0s						
VSR				pmax	pmax		
	comp=Z,480nm,1.2s						
VSR				MLR	MLR		
	comp=Z,9μm,15.0s						
RAYN	Ar Rayn	44.17	271	P	P	07 22 55.5	-0.5
RAYN	Ar Rayn	44.17	271	P	P	07 22 55.6	-0.5
RAYN				pmax	pmax		
	comp=Z,85nm,1.4s						
RAYN	Ar Rayn	44.17	271	P	P	07 22 55.5	-0.5
RAYN	Ar Rayn	44.17	271	*i* P	P	07 22 55.5	-0.5
	SNR=23						
RAYN	Ar Rayn	44.17	271	P	P	07 22 55.6	-0.5
RAYN				sP	sP	07 23 09.9	+1.0
RAYN				ScP	ScP	07 28 32.5	+1.5
TNTI	Ternate	44.18	130	P	P	07 22 56.5	+0.4
TNTI	Ternate	44.18	130	P	P	07 22 57.3	+1.2
	comp=Z,2μmcomp=Z,122nm,1.0s						
TNTI	Ternate	44.18	130	P	P	07 22 57.6	+1.5
LPSR	Galich'ya Gora	44.33	314	*e*P	P	07 22 57.2	+0.3
LPSR				pmax	pmax		
	comp=Z,550nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,550nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,5μm,11.0s						
KAPI	Kappang	44.45	143	P	P	07 22 57.3	-0.9
	comp=Z,14nm,0.5s,baz=302,slow=6.9,SNR=9.9						
KAPI				LR	LR	07 44 36.5	
	comp=Z,3μm,19.4s,baz=309,slow=40						
	comp=Z,14nm,0.5s						
KAPI	Kappang	44.45	143	P	P	07 22 57.6	-0.6
KAPI	Kappang	44.45	143	P	P	07 22 57.6	-0.6
KAPI				pmax	pmax		
	comp=Z,200nm,1.7s						
KAPI	Kappang	44.45	143	P	P	07 22 56.0	-2.2
KAPI	Kappang	44.45	143	P	P	07 22 58.6	+0.4
KAPI	Kappang	44.45	143	P	P	07 22 57.7	-0.6
JAGI	Jajag, Banyuwa	45.01	153	P	P	07 23 02.4	-0.3
JAGI	Jajag, Banyuwa	45.01	153	P	P	07 23 01.0	-1.7
	comp=Z,156nm,1.5s						
JAGI	Jajag, Banyuwa	45.01	153	P	P	07 23 02.8	+0.1
SRBI	Singaraja	45.09	151	P	P	07 23 04.8	+1.6
	comp=Z,4μmcomp=Z,194nm,1.0s						
KLMR	Klimovskoe	45.17	325	*d* iP	P	07 23 03.9	+0.5
KLMR				*e*		07 24 41.8	
KLMR				*e*S	S	07 29 43.0	+1.8
KLMR				pmax	pmax		
	comp=Z,1μm,1.3s						
KLMR	Klimovskoe	45.17	325	⇓ *i* P	P	07 23 03.9	+0.5
KLMR				*e*P	P	07 23 03.9	+0.5
KLMR				⇑ *i* P	P	07 23 03.9	+0.5
KLMR				AMP		07 23 05.5	
	comp=Z,1μm,1.3s						
KLMR				*e*PcP	PcP	07 24 41.9	-1.5
KLMR				*e*S	S	07 29 43.1	+1.8
KLMR				*e*S	S	07 29 43.1	+1.8
MA2	Magadan	45.17	36	P	P	07 23 03.2	-0.3
	comp=Z,162nm,1.0s,baz=258,slow=8.1,SNR=118						
MA2				PcP	PcP	07 24 44.0	+0.6
	comp=Z,97nm,0.9s,baz=225,slow=0.8,SNR=10						
MA2				ScP	ScP	07 28 35.7	+1.3
	comp=Z,8.2nm,0.5s,baz=170,slow=7.6,SNR=6.0						
MA2				LR	LR	07 43 44.0	
	comp=Z,11μm,21.4s,baz=256,slow=38						
	comp=Z,162nm,1.0s						
MA2	Magadan	45.17	36	P	P	07 23 03.5	0.0
MA2				IAmb	IAmb	07 23 05.3	
	comp=Z,439nm,1.2s						
MA2				IAMs_20	IAMs_20	07 43 14.2	
	comp=Z,17μm,18.0s						
MA2	Magadan	45.17	36	*ce*P	P	07 23 03.6	+0.1
MA2				pmax	pmax		
	comp=Z,678nm,1.7s						
MA2				MLR	MLR		
	comp=Z,14μm,11.0s						
MA2	Magadan	45.17	36	P	P	07 23 04.2	+0.7
MA2	Magadan	45.17	36	P	P	07 23 03.7	+0.2
MA2				ScP	ScP	07 28 35.2	+0.9
RTBI	Rangdo, Negare	45.32	151	P	P	07 23 07.3	+2.2
	comp=Z,174nm,1.0s						
MOS	Moscow	45.35	318	*e*P	P	07 23 02.7	-2.2
MOS				*e*		07 23 22.7	
MOS				*e*		07 24 42.2	
MOS				*e*		07 24 50.9	
MOS				*e*S	S	07 29 42.4	-1.6
MOS				*e*		07 32 56.7	
MOS				pmax	pmax		
	comp=Z,1μm,1.4s						
MOS				pmax	pmax		
	comp=N,169nm,1.2s						
MOS				pmax	pmax		
	comp=E,480nm,1.2s						
MOS				pmax	pmax		
	comp=Z,2μm,1.8s						
MOS				pmax	pmax		
	comp=E,800nm,1.7s						
MOS				smax	smax		
	comp=N,2μm,3.5s						
MOS				smax	smax		
	comp=E,2μm,3.5s						
MOS				MLR	MLR		
	comp=E,11μm,13.0s						
MOS				MLR	MLR		
	comp=Z,12μm,13.0s						
DGAR	Diego Garcia	45.38	212	P	P	07 23 06.2	+0.6
ANN	Anapa	45.44	303	*d* iP	P	07 23 05.8	0.0
ANN				*e*		07 24 52.9	
ANN				*e*S	S	07 29 47.8	+2.1
ANN				pmax	pmax		
	comp=Z,295nm,0.9s						
ANN				pmax	pmax		
	comp=N,135nm,1.1s						
ANN				pmax	pmax		
	comp=E,58nm,0.9s						
ANN				MLR	MLR		
	comp=Z,11μm,14.0s						
ANN				MLR	MLR		
	comp=E,5μm,15.0s						
SANI	Sanana	45.49	134	P	P	07 23 08.3	+1.8
	comp=E,2μmcomp=E,33nm,0.7s						
SANI	Sanana	45.49	134	P	P	07 23 08.6	+2.1
	comp=E,49nm,0.9s						
IGBI	Denpasar	45.72	151	P	P	07 23 08.9	+0.6
OBN	Obninsk	45.89	317	⇑P	P	07 23 10.2	+1.0
OBN	Obninsk	45.89	317	LR	LR	07 42 49.5	
	comp=E,3μm,19.2s,baz=92,slow=37						
OBN	Obninsk	45.89	317	P	P	07 23 09.8	+0.6
OBN	Obninsk	45.89	317	*d* iP	P	07 23 09.7	+0.5
OBN				*e*		07 24 46.2	
OBN				*e*		07 25 01.6	
OBN				*e*PPP	PPP	07 25 36.0	
OBN				pmax	pmax		
	comp=Z,650nm,1.4s						
OBN				MLR	MLR		
	comp=Z,12μm,13.0s						
SEY	Seymchan	46.61	32	P	P	07 23 15.1	+0.3
	comp=Z,208nm,1.1s,baz=261,slow=8.4,SNR=165						
SEY				PcP	PcP	07 24 49.2	+0.8
	comp=Z,42nm,0.8s,baz=224,slow=3.1,SNR=5.7						
SEY				LR	LR	07 44 19.6	
	comp=Z,13μm,18.7s,baz=260,slow=38						
	comp=Z,208nm,1.1s						
TOKA	Tokat	46.74	297	P	P	07 23 17.2	+1.0
GAZ	Gaziantep	46.81	292	P	P	07 23 18.1	+1.2
GAZ				IAmb	IAmb	07 23 19.5	
	comp=Z,280nm,1.2s						
PLAI	Plampang	46.84	148	P	P	07 23 16.7	-0.4
DIKM	Dikmen	47.43	299	⇑P	P	07 23 22.6	+1.1
BNN	Bunyan	47.51	295	P	P	07 23 22.1	-0.2
SKR	Severo-Kuril's	47.60	49	*e*P	P	07 23 21.4	-1.3
SKR				*e*S	S	07 30 13.7	-2.8
SKR				pmax	pmax		
	comp=Z,102nm,1.2s						
SKR				pmax	pmax		

comp=Z,2μm,14.3s
SKR smax smax
comp=E,500nm,10.9s
SKR smax smax
comp=N,1μm,8.8s
SKR MLR MLR
comp=Z,12μm,15.0s
SIM Simferopol' 47.77 303 *e*P **P** 07 23 24.4 +0.3
SIM *e*S **S** 07 30 24.4 +5.4
SIM pmax pmax
comp=Z,146nm,0.7s
SIM smax smax
comp=E,227nm,1.4s
ASF Jabal al Asfar 48.35 286 LR LR 07 47 53.4
comp=E,4μm,20.7s,baz=70,slow=41
PEA0B Petropavlovsk- 48.50 46 P **P** 07 23 29.7 +0.1
PEA0B IAmb IAmb 07 23 34.2
comp=Z,327nm,1.2s
PEA0B Petropavlovsk- 48.50 46*de*P **P** 07 23 28.8 -0.9
PETK Petropavlovsk- 48.50 46 P **P** 07 23 29.9 +0.3
comp=Z,104nm,1.1s,baz=209,slow=2.7,SNR=58
PETK PcP **PcP** 07 24 53.9 -1.5
comp=Z,32nm,1.0s,baz=355,slow=1.6,SNR=6.3
PETK PP **PP** 07 25 23.9 +1.6
comp=Z,26nm,1.1s,baz=246,slow=9.0,SNR=3.6
comp=Z,104nm,1.1s
HWQ Hawqa 48.52 289 *e*P **P** 07 23 31.2 +1.0
ILGA Ilgaz 48.68 298 P **P** 07 23 32.2 +0.8
BHL Bhannes 48.85 288 *e*P **P** 07 23 33.9 +1.2
LVZ Lovozero 48.85 334 P **P** 07 23 32.2 0.0
LVZ IAMs_20 IAMs_20 07 44 53.5
comp=Z,11μm,19.0s
LVZ Lovozero 48.85 334*de*P **P** 07 23 32.4 +0.2
LVZ pmax pmax
comp=Z,580nm,1.3s
LVZ MLR MLR
comp=Z,12μm,15.0s
LVZ Lovozero 48.85 334 P **P** 07 23 31.8 -0.4
LVZ pP **pP** 07 23 42.8 +1.3
QRWL Qaraoun 48.93 288 *e*P **P** 07 23 34.5 +1.1
DQRL Deir Qamar 48.97 288 *e*P **P** 07 23 34.7 +1.1
BR131 Keskin Array S 49.00 296 P **P** 07 23 33.6 -0.2
BR131 Keskin Array S 49.00 296 P **P** 07 23 33.6 -0.2
BR131 pmax pmax
comp=Z,107nm,1.0s
BRTR Keskin Array B 49.00 296 P **P** 07 23 33.8 -0.1
comp=Z,45nm,0.9s,baz=101,slow=6.5,SNR=100
comp=Z,45nm,0.9s
BRTR Keskin Array B 49.00 296 P **P** 07 23 33.6 -0.2
PET Petropavlovsk 49.08 46 P **P** 07 23 33.5 -0.6
PET IAmb IAmb 07 23 34.7
comp=Z,277nm,1.3s
PET IAMs_20 IAMs_20 07 47 38.3
comp=Z,11μm,19.0s
PET Petropavlovsk 49.08 46 *e*P **P** 07 23 33.8 -0.3
PET *e*S **S** 07 30 34.2 -3.1
PET pmax pmax
comp=Z,230nm,1.3s
PET MLR MLR
comp=Z,20μm,15.0s
PET MLR MLR
comp=Z,20μm,14.0s
PET Petropavlovsk 49.08 46 P **P** 07 23 33.6 -0.5
APA Apatity 49.24 334⇓*i*P **P** 07 23 34.2 -0.9
APA *i* 07 25 05.0
APA *i* 07 25 36.0
APA *i* S **S** 07 30 31.0 -8.2
APA *i* 07 33 26.0
APA *i* SS **SS** 07 34 04.0 -6.3
APA pmax pmax
comp=Z,62nm,1.0s
APA MLR MLR
comp=Z,10μm,14.0s
GUMO Guam 49.29 101 P **P** 07 23 35.8 -0.3
comp=Z,232nm,1.0s,baz=225,slow=2.9,SNR=7.0
GUMO LR LR 07 44 07.8
comp=Z,4μm,19.9s,baz=297,slow=36
comp=Z,232nm,1.0s
GUMO Guam 49.29 101 P **P** 07 23 35.5 -0.7
GUMO IAmb IAmb 07 23 38.7
comp=Z,395nm,1.1s
GUMO Guam 49.29 101 P **P** 07 23 37.5 +1.4
PUL Pulkovo 49.55 323*ce*P **P** 07 23 38.5 +0.9
PUL pmax pmax
comp=Z,860nm,1.3s
PUL MLR MLR
comp=Z,11μm,13.0s
ANTO Ankara 49.60 297 ⇑P **P** 07 23 39.6 +1.2
ANTO Ankara 49.60 297 P **P** 07 23 38.6 +0.2
ANTO IAmb IAmb 07 23 40.4
comp=Z,396nm,1.1s
ANTO Ankara 49.60 297 P **P** 07 23 38.6 +0.2
ANTO pmax pmax
comp=Z,396nm,1.2s
ANTO Ankara 49.60 297 P **P** 07 23 38.0 -0.4
ANTO Ankara 49.60 297 P **P** 07 23 38.9 +0.5
ANTO sP **sP** 07 23 54.1 +2.7
BR231 Keskin MP Arra 49.62 297 P **P** 07 23 38.2 -0.4
BR231 IAmb IAmb 07 23 40.6
comp=Z,342nm,1.1s
KDZE Karadeniz Ereo 50.31 299 ⇑P **P** 07 23 44.2 +0.6
CSS Mathiatis 50.40 290 P **P** 07 23 43.5 -1.0
AKASG Malin Array Be 50.40 311 P **P** 07 23 43.8 -0.4
comp=Z,148nm,0.9s,baz=76,slow=6.8,SNR=365
AKASG LR LR 07 48 30.0
comp=Z,9μm,19.5s,baz=88,slow=40
comp=Z,148nm,0.9s
AKASG Malin Array Be 50.40 311 P **P** 07 23 43.2 -0.9
AKASG IAmb IAmb 07 23 45.6
comp=Z,287nm,0.9s
AKBB Malin Array Si 50.40 311 P **P** 07 23 44.0 -0.1
AKBB IAmb IAmb 07 23 45.6
comp=Z,320nm,1.0s
AKBB Malin Array Si 50.40 311 P **P** 07 23 44.0 -0.1
AKBB pmax pmax
comp=Z,321nm,1.0s
MDUB Mudurnu 50.67 298 P **P** 07 23 45.4 -1.1
EIL Elat 50.73 283 LR LR 07 47 50.3
comp=Z,11μm,20.0s,baz=72,slow=39
SOEI Soe 50.80 141 P **P** 07 23 46.8 -0.9
SOEI IAmb IAmb 07 24 37.7
comp=Z,298nm,1.2s
SOEI Soe 50.80 141 P **P** 07 23 48.5 +0.8
MNK Minsk 50.91 316 *e*P **P** 07 23 49.0 +1.1
MNK Minsk 50.91 316 *i* P **P** 07 23 49.1 +1.1
comp=E,53nm,1.1s
MNK *i* P **P** 07 23 49.1 +1.1
comp=N,24nm,0.7s
MNK *i* P **P** 07 23 49.1 +1.1
comp=Z,355nm,0.9s,baz=266
MNK *i* PcP **PcP** 07 25 05.4 +1.3
MNK *i* PP **PP** 07 25 45.5 +1.3
MNK *i* PPP PPP 07 26 42.8
MNK *i* S **S** 07 31 06.3 +3.4
MNK *i* SS **SS** 07 34 42.5 +5.1
MNK *i* SSS SSS 07 36 13.1
MNK *i* LQ LQ 07 42 05.5
MNK *i* LR LR 07 45 37.3
MNK *i* LRM MLR 07 47 54.2
comp=Z,2μm,14.4s
MNK *i* LRM MLR 07 48 07.6
comp=E,574nm,16.1s
MNK *i* LRM MLR 07 48 17.8
comp=N,4μm,17.0s
KIS Kishinev 51.14 307 *e*P **P** 07 23 49.0 -0.8
KIS *e*L L 07 43 08.0
KIS LQM 07 44 00.0
comp=N,3μm,29.0s
KIS LRM MLR 07 48 31.0
comp=N,3μm,15.5s
KIS Kishinev 51.14 307 *e*P **P** 07 23 49.0 -0.8
KIS *e* 07 23 58.0
KIS MLR MLR
comp=Z,3μm,15.5s
MILM Milestii Mici 51.16 306 ⇑P **P** 07 23 50.3 +0.5
MILM Milestii Mici 51.16 306⇓*i*P **P** 07 23 49.4 -0.5
comp=Z,580nm,1.1s
MILM *e*L L 07 42 01.0
MILM LQM 07 44 07.0
comp=Z,7μm,29.0s
MILM LRM MLR 07 48 35.0
comp=Z,6μm,14.5s
MILM Milestii Mici 51.16 306*d*i*P* **P** 07 23 49.4 -0.5
MILM pmax pmax
comp=Z,580nm,1.1s
MILM MLR MLR
comp=Z,6μm,14.0s
BORA Eskisehir 51.36 297 P **P** 07 23 50.8 -0.8
BORA IAmb IAmb 07 23 52.8
comp=Z,160nm,1.3s
VSU Vasula 51.39 321 *e*P **P** 07 23 52.4 +1.0
TLCR 51.44 304 ⇑P **P** 07 23 52.6 +0.6
TLCR 51.44 304 P **P** 07 23 52.6 +0.6
JURR Jurilovca 51.48 304 ⇑P **P** 07 23 54.0 +1.7
NACGM Naroch 51.53 317⇓*i*P **P** 07 23 53.4 +0.9
baz=86
FIA1 FINESS Array S 51.70 325 P **P** 07 23 53.5 -0.2
FIA1 IAmb IAmb 07 23 55.8
comp=Z,511nm,1.3s
FIA0 FINESS Array S 51.70 325 P **P** 07 23 54.1 +0.4
FIA0 FINESS Array S 51.70 325 P **P** 07 23 54.1 +0.4
FINES FINESS Array B 51.70 325 P **P** 07 23 53.6 -0.1
comp=Z,161nm,1.0s,baz=103,slow=6.7,SNR=128
FINES PcP **PcP** 07 25 07.1 +0.2
comp=Z,23nm,0.9s,baz=101,slow=6.4,SNR=1.9
comp=Z,161nm,1.0s
TPGR Topolog 51.78 304 ⇓P **P** 07 23 55.1 +0.5
GIUM Giurgiulesti 51.81 305 ⇑P **P** 07 23 55.9 +1.1
IIGN Ignalina 51.81 317 *e*P **P** 07 23 56.0 +1.4
ISP Isparta 51.81 295 P **P** 07 23 54.6 -0.5
ISP IAmb IAmb 07 23 56.1
comp=Z,190nm,1.1s
ISP Isparta 51.81 295 P **P** 07 23 54.6 -0.5
ISP pmax pmax
comp=Z,190nm,1.1s
VLDR Vladesti 51.83 305 ⇓P **P** 07 23 55.8 +0.8
ISAL Salakas 51.85 318 *e*P **P** 07 23 55.9 +1.0
TIRR Tirgusor 51.86 303 ⇑P **P** 07 23 56.0 +0.8
TIRR Tirgusor 51.86 303 P **P** 07 23 56.0 +0.8
TIRR IAmb IAmb 07 23 57.0
comp=Z,318nm,1.2s
TIRR Tirgusor 51.86 303 P **P** 07 23 56.0 +0.8
TIRR pmax pmax
comp=Z,318nm,1.2s
VASR Vaslui 51.89 306 ⇑P **P** 07 23 55.9 +0.5
TATR Tatarca 51.90 305 ⇑P **P** 07 23 56.7 +1.2
CFR Carcaliu 51.92 304 ⇑P **P** 07 23 56.3 +0.7
CFR Carcaliu 51.92 304 P **P** 07 23 56.3 +0.7
KEV Kevo 51.94 336 P **P** 07 23 55.2 -0.1
KEV IAmb IAmb 07 23 57.6
comp=Z,401nm,1.1s
KEV Kevo 51.94 336 P **P** 07 23 55.3 -0.1
KEV pmax pmax
comp=Z,401nm,1.1s
KEV Kevo 51.94 336 P **P** 07 23 56.0 +0.7
KEV pP **sP** 07 24 07.0 -1.3
IAS Iasi 51.96 307 ⇑P **P** 07 23 57.2 +1.2
IAS Iasi 51.96 307 P **P** 07 23 57.1 +1.2
VARL Varlezi 51.98 305 ⇓P **P** 07 23 57.4 +1.3
ATD Arta Tunnel 52.06 258 LR LR 07 46 50.5
comp=Z,5μm,19.6s,baz=38,slow=37
ATD Arta Tunnel 52.06 258 P **P** 07 23 57.7 +0.5
IZVR Izvoarele 52.10 305 ⇑P **P** 07 23 58.2 +1.2
HARR Harsova 52.15 304 ⇑P **P** 07 23 58.7 +1.3
HARR Harsova 52.15 304 P **P** 07 23 58.6 +1.3
TUDR 52.16 305 ⇓P **P** 07 23 58.6 +1.1
GHRR 52.26 306 ⇑P **P** 07 23 59.6 +1.5
ICOR Ion Corvin 52.36 303 ⇑P **P** 07 24 00.6 +1.7
ARA0 ARCESS Array S 52.43 335 *e*P **P** 07 23 59.3 +0.2
ARA0 IAmb IAmb 07 24 01.1
comp=Z,406nm,1.1s
ARCES ARCESS Array B 52.43 335 P **P** 07 23 59.1 0.0
comp=Z,147nm,0.9s,baz=90,slow=4.9,SNR=120
ARCES PcP **PcP** 07 25 09.8 +0.3
comp=Z,59nm,1.0s,baz=101,slow=4.7,SNR=6.1
ARCES LR LR 07 48 39.7
comp=Z,9μm,19.6s,baz=96,slow=39
comp=Z,147nm,0.9s
ARCES ARCESS Array B 52.43 335 P **P** 07 23 59.2 +0.1
ARCES IAmb IAmb 07 24 01.4
comp=Z,347nm,1.1s
ARCES ARCESS Array B 52.43 335 P **P** 07 23 59.2 +0.1
ARCES pmax pmax
comp=Z,347nm,1.1s
PANC Panciu 52.47 305 ⇓P **P** 07 24 01.2 +1.5
MEF Metsahovi 52.54 324 *e*P **P** 07 24 00.9 +1.0
ODBI Odobesti 52.55 305 ⇑P **P** 07 24 01.9 +1.5
ELL Elmali 52.58 294 P **P** 07 24 00.2 -0.6
ELL Elmali 52.58 294 P **P** 07 24 00.2 -0.6
ELL pmax pmax
comp=Z,760nm,1.1s
AMRR Amara 52.59 304 ⇑P **P** 07 24 02.2 +1.6
GRER 52.68 305 ⇑P **P** 07 24 02.9 +1.5
TESR Tescani 52.69 306 ⇑P **P** 07 24 01.7 +0.3
VRI Vrincioaia 52.76 305 ⇓P **P** 07 24 03.1 +1.1
VRI Vrincioaia 52.76 305 P **P** 07 24 03.0 +1.1
MSEY Mahe Island 52.80 233 P **P** 07 24 02.7 +0.2
MSEY IAmb IAmb 07 24 06.7
comp=Z,249nm,1.3s
MSEY Mahe Island 52.80 233 P **P** 07 24 02.7 +0.2
MSEY pmax pmax
comp=Z,249nm,1.3s
MSEY Mahe Island 52.80 233 P **P** 07 24 02.2 -0.4
MSEY Mahe Island 52.80 233 *i* P **P** 07 24 02.4 -0.1
SNR=15
PLOR Plostina 52.81 305 ⇑P **P** 07 24 03.7 +1.4
PLOR Plostina 52.81 305 P **P** 07 24 03.7 +1.4
PRD Provadia 52.84 302 *i* P **P** 07 24 03.1 +0.6
MTSE Matsula 52.90 322 *e*P **P** 07 24 03.7 +1.0
AKAS Kas 52.96 293 P **P** 07 24 01.6 -2.1
KSL Kastellorizon 53.00 293 P **P** 07 24 02.3 -1.5
ISR Istrita 53.03 305 ⇑P **P** 07 24 05.9 +1.8
ISR Istrita 53.03 305 P **P** 07 24 05.8 +1.8
BILL Bilibino 53.04 26 P **P** 07 24 04.2 +0.7
BILL IAmb IAmb 07 24 05.8
comp=Z,444nm,1.0s
BILL Bilibino 53.04 26*c*i*P* **P** 07 24 04.3 +0.7
BILL *e* 07 25 13.4
BILL *e* 07 25 59.4
BILL *e*PPP PPP 07 27 07.6
BILL pmax pmax
comp=Z,639nm,1.3s
BILL MLR MLR
comp=Z,8μm,10.0s
BILL Bilibino 53.04 26 P **P** 07 24 04.1 +0.5
VSVD Vaisvydziai 53.06 318 *e*P **P** 07 24 04.2 +0.3
PABE Paberze 53.08 318 P **P** 07 24 03.6 -0.4
PABE Paberze 53.08 318 *e*P **P** 07 24 04.9 +0.8
COVR Voineasa-Covas 53.12 306 ⇑P **P** 07 24 06.1 +1.5
MANT Manisa 53.13 296 P **P** 07 24 05.0 0.0
HAMF Hammerfest 53.16 337 *e*P **P** 07 24 05.4 +0.9
HAMF IAmb IAmb 07 24 06.6
comp=Z,711nm,1.0s
KTK1 Kautokeino 53.19 335 *e*P **P** 07 24 05.4 +0.7
KTK1 IAmb IAmb 07 24 06.5
comp=Z,361nm,1.1s
SULR 53.33 304 ⇑P **P** 07 24 07.8 +1.7
OZUR 53.36 306 ⇑P **P** 07 24 07.5 +1.1
MLR Muntele Rosu 53.37 305 ⇓P **P** 07 24 07.8 +1.3
MLR Muntele Rosu 53.37 305 P **P** 07 24 07.2 +0.7
MLR Muntele Rosu 53.37 305 P **P** 07 24 07.2 +0.7
MLR pmax pmax
comp=Z,497nm,1.1s
SECR 53.38 305 ⇓P **P** 07 24 08.3 +1.8
RAZG Razgrad 53.39 303 ⇓P **P** 07 24 07.2 +0.6
BURAR Bucovina Array 53.45 308 ⇑P **P** 07 24 07.9 +0.9
BURAR Bucovina Array 53.45 308 P **P** 07 24 06.6 -0.5
BURAR Bucovina Array 53.45 308 P **P** 07 24 06.6 -0.5
BURAR pmax pmax
comp=Z,62nm,0.9s
BUR08 Bucovina Ar. S 53.45 308 P **P** 07 24 06.9 -0.2
JMB Yambol 53.59 301 *i* P **P** 07 24 06.3 -1.7
HOPEN Hopen 53.64 344 *e*P **P** 07 24 09.4 +1.5
DOPR Dopca 53.66 306 ⇑P **P** 07 24 10.1 +1.6
RAF Rauma 53.80 325 *e*P **P** 07 24 10.0 +0.8
SLIT Slitere, Latvi 53.80 320 *e*P **P** 07 24 10.3 +1.0
LVV L'vov 53.83 311 *e*P **P** 07 24 10.2 +0.6
LVV *e* 07 26 18.7
LVV *e*S **S** 07 31 44.5 +1.7
LVV *e*SS **ScS** 07 33 58.6 +1.3
LVV pmax pmax
comp=Z,1μm,1.2s
LVV MLR MLR
comp=E,7μm,20.0s
LVV MLR MLR
comp=N,4μm,17.0s
LVV MLR MLR
comp=Z,8μm,20.0s
SZH Strazhica 53.87 302 *i* P **P** 07 24 08.9 -1.2
VOIR 54.00 305 ⇓P **P** 07 24 11.5 +0.3
VOIR 54.00 305 P **P** 07 24 11.4 +0.3
MTUR Matau 54.03 305 ⇑P **P** 07 24 11.6 +0.2
MTUR Matau 54.03 305 P **P** 07 24 11.5 +0.2
ARG Arkhangelos 54.10 293 P **P** 07 24 11.0 -0.9
ARG Arkhangelos 54.10 293 P **P** 07 24 11.0 -0.9
ARG pmax pmax
comp=Z,95nm,1.0s
ARCR ARCALIA 54.13 307 ⇑P **P** 07 24 13.2 +1.3
PBUR Paburge 54.17 319 *e*P **P** 07 24 13.0 +1.0
STFAR Stefanesti-Arg 54.19 305 ⇑P **P** 07 24 13.6 +1.2
JETT Jettan, Norway 54.22 335 *e*P **P** 07 24 12.7 +0.4
JETT IAmb IAmb 07 24 14.3
comp=Z,559nm,1.1s
HUMR Humele 54.25 304 ⇑P **P** 07 24 13.9 +1.1
ARR Arges 54.30 305 ⇑P **P** 07 24 14.3 +1.0
PVL Pavlikeni 54.30 302 *i* P **P** 07 24 15.0 +1.8
ALN Alexandroupoli 54.37 300 P **P** 07 24 13.8 +0.1
ALN IAmb IAmb 07 24 15.2
comp=Z,180nm,1.3s
ALN Alexandroupoli 54.37 300 P **P** 07 24 14.0 +0.3
ALN Alexandroupoli 54.37 300 P **P** 07 24 13.8 +0.1
ALN pmax pmax
comp=Z,180nm,1.3s
EZN Ezine 54.45 298 P **P** 07 24 14.2 -0.1
DIM Dimitrovgrad 54.45 301 *i* P **P** 07 24 14.9 +0.6
BMR Baia Mare 54.58 308 ⇑P **P** 07 24 16.6 +1.4
RDO Rodhopi 54.67 300 P **P** 07 24 15.6 -0.3
RDO IAmb IAmb 07 24 17.5
comp=Z,169nm,1.3s
RDO Rodhopi 54.67 300 P **P** 07 24 16.0 0.0
CJR Cluj-Napoca 54.71 307 ⇑P **P** 07 24 17.8 +1.5
CJR Cluj-Napoca 54.71 307 P **P** 07 24 17.7 +1.5
CBBR Cluj-Babes-Bol 54.73 307 ⇑P **P** 07 24 17.5 +1.2
AAL Aland 54.73 324 *e*P **P** 07 24 15.8 -0.3
TRO Tromso 54.74 335 *e*P **P** 07 24 15.9 -0.1
TRO IAmb IAmb 07 24 17.6
comp=Z,410nm,1.0s
VLAD Vladila 54.77 304 ⇑P **P** 07 24 17.2 +0.6
LOT Lotru 54.88 305 ⇑P **P** 07 24 18.5 +1.0
BJO1 Bjornoya 54.88 341 *e*P **P** 07 24 17.6 +0.7
BJO1 IAmb IAmb 07 24 18.6
comp=Z,727nm,1.0s
PLD Plovdiv 55.03 301 *i* P **P** 07 24 19.7 +1.2
MESR Meseseni 55.05 308 ⇓P **P** 07 24 20.2 +1.6
KARP Karpathos 55.05 293 P **P** 07 24 17.8 -1.0
KARP Karpathos 55.05 293 P **P** 07 24 18.5 -0.4
TRPA Tarpa 55.11 309 ⇓P **P** 07 24 19.8 +0.8
TRPA Tarpa 55.11 309 P **P** 07 24 19.8 +0.8
KOLS Kolonicke sedl 55.12 310 *e*P **P** 07 24 19.7 +0.6
KOLS pmax pmax
comp=Z,87nm,1.0s
RZN Rozhen 55.13 301 *i* P **P** 07 24 19.6 +0.1
UZH Uzhgorod 55.17 310 *e*P **P** 07 24 19.1 -0.3
UZH *e* 07 24 30.5
UZH *e* 07 25 25.3
UZH *e* 07 26 23.7
UZH *e*S **S** 07 31 57.1 -3.8
UZH *e* 07 34 08.5
DRGR 55.29 307 ⇑P **P** 07 24 21.8 +1.3
DRGR 55.29 307 P **P** 07 24 21.7 +1.3
PGB Panagyurishte 55.30 302 *i* P **P** 07 24 21.1 +0.5
KLNR Kaliningrad 55.34 317 *i* P **P** 07 24 21.1 +0.6
KLNR pmax pmax
comp=Z,939nm,1.1s
KLNR MLR MLR
comp=Z,10μm,14.0s
DEV Deva 55.37 306 ⇑P **P** 07 24 22.6 +1.7
GENI Genyem 55.44 120 P **P** 07 24 23.9 +2.1
BEL Belsk 55.48 314 *e*P **P** 07 24 22.6 +1.0
BEL Belsk 55.48 314 P **P** 07 24 21.2 -0.4
GZR Gura Zlata 55.57 306 ⇑P **P** 07 24 23.5 +1.1
CRVS Cervenica-Dubn 55.65 310 *e*P **P** 07 24 23.6 +0.7
CRVS pmax pmax
comp=Z,166nm,1.2s
STHS Stebnicka Huta 55.68 311 *e*P **P** 07 24 23.0 -0.1
LTVH Ltavrtes, Hu 55.70 308 ⇑P **P** 07 24 25.0 +1.8
LTVH Ltavrtes, Hu 55.70 308 P **P** 07 24 24.5 +1.2
PUNG Punghina 55.73 304 ⇑P **P** 07 24 24.4 +0.9
SPB2 Spitsbergen Ar 55.74 346 P **P** 07 24 23.8 +0.7
SPA0 Spitsbergen Ar 55.74 346 *e*P **P** 07 24 23.9 +0.8
SPA0 IAmb IAmb 07 24 25.2
comp=Z,592nm,1.1s
SPITS Spitsbergen Ar 55.74 346 P **P** 07 24 23.3 +0.1
comp=Z,153nm,0.7s,baz=121,slow=14,SNR=56
comp=Z,153nm,0.7s
SPITS Spitsbergen Ar 55.74 346 P **P** 07 24 23.9 +0.8
SPITS pmax pmax
comp=Z,507nm,1.0s
NVR Nevrokopi 55.84 301 P **P** 07 24 24.3 -0.1
HSPB Hornsund (broa 55.86 344 *e*P **P** 07 24 24.9 +0.9
HSPB Hornsund (broa 55.86 344 *e*P **P** 07 24 24.9 +0.9
HSPB IAmb IAmb 07 24 26.1
comp=Z,429nm,1.0s
MMB Musomiste 55.87 301 *i* P **P** 07 24 24.4 -0.2
DJES Djerdap 55.92 305 ⇑P **P** 07 24 25.9 +0.9
ZKR Zakros 55.92 293 P **P** 07 24 24.8 -0.3
HERR Herculane 55.94 305 ⇑P **P** 07 24 25.0 0.0
VTS Vitosha 55.95 302 ⇓P **P** 07 24 26.1 +0.7
VTS Vitosha 55.95 302 P **P** 07 24 24.6 -0.7
VTS IAmb IAmb 07 24 27.6
comp=Z,243nm,1.3s
VTS Vitosha 55.95 302 P **P** 07 24 24.6 -0.7
VTS pmax pmax
comp=Z,243nm,1.3s
VTS Vitosha 55.95 302 *i* P **P** 07 24 25.7 +0.4
UPP Uppsala 55.95 324 *e*P **P** 07 24 25.4 +0.5
BLKB Belogradchik 56.08 304 ⇑P **P** 07 24 26.4 +0.3
SANT Santorini 56.11 294 ⇑P **P** 07 24 26.7 +0.3
SANT Santorini 56.11 294 P **P** 07 24 25.6 -0.8
SANT IAmb IAmb 07 24 26.5
comp=Z,444nm,1.3s
SIRR Siria 56.12 307 ⇑P **P** 07 24 27.2 +0.8
STEI Steigen 56.14 333 *e*P **P** 07 24 25.9 -0.1
STEI IAmb IAmb 07 24 27.4
comp=Z,360nm,1.1s
FAUS Fauske 56.17 333 *e*P **P** 07 24 25.8 -0.5
FAUS IAmb IAmb 07 24 27.7
comp=Z,382nm,1.0s
KKB Krupnik 56.26 301 *i* P **P** 07 24 27.2 -0.2
BZS Buzias 56.30 306 ⇑P **P** 07 24 28.4 +0.7
BZS Buzias 56.30 306 P **P** 07 24 28.3 +0.7
KECS Kecovo 56.37 310 *e*P **P** 07 24 29.3 +1.2
KECS pmax pmax
comp=Z,159nm,1.3s
OJC Ojcow 56.42 312 *e*P **P** 07 24 27.2 -1.2
OJC Ojcow 56.42 312 P **P** 07 24 26.6 -1.8
OJC IAmb IAmb 07 24 28.8
comp=Z,299nm,1.2s
OJC Ojcow 56.42 312 P **P** 07 24 26.6 -1.8
OJC pmax pmax
comp=Z,299nm,1.2s
MDVR Moldovita 56.45 305 ⇑P **P** 07 24 29.8 +1.1
KNT Kendrikon 56.59 301 P **P** 07 24 28.8 -0.9
MOR8 Moi Rana 56.62 331 *e*P **P** 07 24 28.3 -1.2
MOR8 IAmb IAmb 07 24 29.9
comp=Z,425nm,1.1s
VIKU Vikbolandet 56.63 322 *e*P **P** 07 24 30.3 +0.7
KBS Kingsbay 56.65 347 P **P** 07 24 27.9 -1.6
KBS IAmb IAmb 07 24 31.2
comp=Z,137nm,0.9s
KBS Kingsbay 56.65 347 IAMs_20 IAMs_20 07 53 22.1
comp=Z,10μm,18.0s
KBS Kingsbay 56.65 347 P **P** 07 24 27.9 -1.6
KBS pmax pmax
comp=Z,137nm,1.0s
KBS MLR MLR
comp=Z,10μm,18.0s
KBS Kingsbay 56.65 347 *e*P **P** 07 24 29.1 -0.4
KBS IAmb IAmb 07 24 30.9
comp=Z,134nm,0.9s
KBS Kingsbay 56.65 347 *i* P **P** 07 24 28.6 -1.0
KBS Kingsbay 56.65 347 P **P** 07 24 29.0 -0.6
AMBH Ambrzfalva 56.72 307 ⇑P **P** 07 24 31.1 +0.5
AMBH Ambrzfalva 56.72 307 P **P** 07 24 31.3 +0.8
BOVS Bovan 56.76 304 ⇑P **P** 07 24 31.1 +0.2
LOF Lofoten 56.76 334 *e*P **P** 07 24 29.6 -0.8
LOF IAmb IAmb 07 24 31.3
comp=Z,698nm,1.1s
VAY Valandovo 56.78 301 *i* P **P** 07 24 30.7 -0.3
BSZH Besenyszg 56.80 308 P **P** 07 24 32.7 +1.7
PSZ Piszkesteto 56.89 309 ⇓P **P** 07 24 32.6 +0.7

PSZ Piszkesteto 56.89 309 P P 07 24 30.7 -1.1
PSZ IAmb IAmb 07 24 34.0
comp=Z,190nm,1.3s
PSZ Piszkesteto 56.89 309 P P 07 24 30.7 -1.1
PSZ pmax pmax
comp=Z,190nm,1.3s
PSZ Piszkesteto 56.89 309 P P 07 24 32.4 +0.6
IDI Anoyia 56.89 293 ⇑P P 07 24 32.5 +0.4
IDI Anoyia 56.89 293 P P 07 24 30.4 -1.6
IDI IAmb IAmb 07 24 33.4
comp=Z,127nm,1.0s
IDI Anoyia 56.89 293 P P 07 24 30.7 -1.4
GRG Griva 57.01 301 P P 07 24 31.9 -0.8
KONS Konsvik 57.11 332 *e*P **P 07 24 33.5 +0.5**
KONS IAmb IAmb 07 24 34.1
comp=Z,231nm,1.1s
STOK Stokkvaagen 57.17 332 *e*P **P 07 24 33.4 0.0**
LKR Lokris 57.26 298 P P 07 24 32.1 -2.4
GKP Gorka Klasztor 57.32 316 *e*P **P 07 24 35.5 +0.8**
GKP Gorka Klasztor 57.32 316 P P 07 24 34.5 -0.2
GKP Gorka Klasztor 57.32 316 *e*P **P 07 24 35.6 +0.8**
SKO Skopje 57.41 302 *i* P **P 07 24 35.4 -0.2**
VYHS Vyhne 57.44 310 *e*P **P 07 24 36.3 +0.7**
VYHS pmax pmax
comp=Z,284nm,1.4s
TYRN Tyrnavos 57.50 299 P P 07 24 35.0 -1.2
IMMV Iera Moni Meta 57.54 294 P P 07 24 36.2 -0.3
OKC Ostrava-Krasne 57.55 312 *e*P **P 07 24 37.5 +1.1**
OKC MLR MLR
comp=Z,7μm,13.3s
OKC Ostrava-Krasne 57.55 312 *e*P **P 07 24 37.5 +1.1**
OKC AMS AMS 07 52 00.0
comp=Z,7μm,13.3s
BUD Budapest 57.57 309 P P 07 24 37.4 +0.9
FRGS Fruska Gora 57.65 306 ⇑P P 07 24 37.9 +0.6
FRGS Fruska Gora 57.65 306 *e*P **P 07 24 37.3 +0.1**
GVDS Gavdos 57.66 293 P P 07 24 36.7 -0.7
GVD Gavdhos 57.66 293 P P 07 24 36.5 -0.9
THL Klokotos Trika 57.71 299 P P 07 24 36.0 -1.6
KDU Kakadu 57.79 135 P P 07 24 38.5 +0.1
DIVS Divibare 57.82 305 P P 07 24 38.6 +0.1
DIVS IAmb IAmb 07 24 40.1
comp=Z,282nm,1.3s
DIVS Divibare 57.82 305 ⇓*i*P **P 07 24 38.6 +0.1**
HFS Hagfors 57.86 324 LR LR 07 49 42.8
comp=Z,8μm,20.6s,baz=87,slow=36
MAUC Maruska 57.87 311 *e*P **P 07 24 40.2 +1.5**
MAUC AMS AMS 07 54 10.0
comp=Z,16μm,17.3s
NSS Namsos 57.87 330 *e*P **P 07 24 38.1 -0.3**
NSS IAmb IAmb 07 24 39.3
comp=Z,406nm,1.2s
VLI Velíai 57.92 296 P P 07 24 36.0 -3.2
MORC Moravsky Berou 57.94 312 ⇓P **P 07 24 40.1 +0.9**
MORC Moravsky Berou 57.94 312 P P 07 24 39.3 +0.1
MORC IAmb IAmb 07 24 41.4
comp=Z,213nm,1.2s
MORC Moravsky Berou 57.94 312 P P 07 24 39.3 +0.1
MORC pmax pmax
comp=Z,213nm,1.2s
MORC Moravsky Berou 57.94 312 *e*P **P 07 24 39.6 +0.4**
MORC *e*S **S 07 32 41.6 +3.8**
SRO Srobarova 57.95 309 *e*P **P 07 24 40.4 +1.2**
SRO pmax pmax
comp=Z,188nm,1.2s
TEKS Tekeris 58.01 305 ⇓*i*P **P 07 24 38.3 -1.5**
EVR Evrytania 58.06 298 P P 07 24 38.8 -1.5
KLV Kalavryta, Ach 58.08 297 P P 07 24 38.2 -2.2
JAVC Velka Javorina 58.09 311 *e*P **P 07 24 42.0 +1.7**
JAVC *e*S **S 07 32 46.0 +6.2**
CSKK Cskako 58.10 309 P P 07 24 40.7 +0.5
OHR Ohrid 58.12 301 *i* P **P 07 24 39.6 -1.0**
KNRA Kununurra 58.12 141 P P 07 24 40.9 +0.2
KNRA Kununurra 58.12 141 P P 07 24 41.3 +0.6
NEST Nestorio 58.15 300 P P 07 24 39.6 -1.3
PENT Pentalofos 58.15 300 P P 07 24 40.0 -0.9
MORH Mrgy, Hungar 58.15 307 ⇑P P 07 24 41.0 +0.3
MORH Mrgy, Hungar 58.15 307 P P 07 24 40.7 +0.1
IVA Berane 58.24 303 *e*P **P 07 24 42.1 +0.6**
BSD Bornholm Skovb 58.25 318 P P 07 24 40.6 -0.6
BSD Bornholm Skovb 58.25 318 *e*P **P 07 24 41.3 +0.2**
BSD Bornholm Skovb 58.25 318 *i* P **P 07 24 40.5 -0.7**
BSD IAmb IAmb 07 24 41.8
comp=Z,220nm,1.2s
KBN Korca 58.28 301 P P 07 24 40.8 -1.0
KBN IAmb IAmb 07 24 42.3
comp=Z,204nm,1.1s
KBN Korca 58.28 301 P P 07 24 40.4 -1.3
KBN Korca 58.28 301 P P 07 24 40.8 -1.0
KBN pmax pmax
comp=Z,204nm,1.1s
BBLS Lazići 58.29 305 ⇓*i*P **P 07 24 42.0 +0.2**
SMOL Smolenice 58.34 310 *e*P **P 07 24 39.0 -2.9**
SMOL pmax pmax
comp=Z,70nm,1.3s
KRLC Kraliky 58.34 312 *e*P **P 07 24 43.2 +1.2**
KRLC MLR MLR
comp=Z,6μm,20.5s
KRLC Kraliky 58.34 312 *e*P **P 07 24 43.2 +1.2**
KRLC AMS AMS 07 49 30.0
comp=Z,6μm,20.5s
SHEM Shemya Is, Ala 58.38 45 LR LR 07 50 00.6
comp=Z,7μm,20.9s,baz=278,slow=36
RUDO Rudo 58.39 304 *e*P **P 07 24 42.1 -0.3**
KSP Ksiaz 58.45 313 *e*P **P 07 24 43.7 +1.0**
KSP Ksiaz 58.45 313 P P 07 24 42.5 -0.2
PLE Pljevlja 58.46 304 *e*P **P 07 24 43.7 +0.7**
TIH Tihany 58.47 308 P P 07 24 43.3 +0.5
MODS Modra-Piesok 58.47 310 *e*P **P 07 24 44.1 +1.2**
MODS pmax pmax
comp=Z,308nm,1.3s
KOME Kolasin 58.51 303 *e*P **P 07 24 43.9 +0.5**
DEL Delary 58.52 320 *e*P **P 07 24 43.0 0.0**
DEL Delary 58.52 320 *i* P **P 07 24 43.0 0.0**
ITM Ithomi 58.53 296 P P 07 24 41.9 -1.6
ITM IAmb IAmb 07 24 42.8
comp=Z,256nm,1.6s
KOVH Kovagotottos 58.55 307 P P 07 24 43.5 +0.1
LSK Leskovik 58.56 300 P P 07 24 42.6 -1.1
DPC Dobruska-Polom 58.56 313 *e*P **P 07 24 44.0 +0.5**
DPC MLR MLR
comp=Z,8μm,12.0s
DPC Dobruska-Polom 58.56 313 *e*P **P 07 24 44.0 +0.5**
DPC AMS AMS 07 52 20.0
comp=Z,8μm,12.0s
OSTC Ostas 58.57 313 *e*P **P 07 24 45.1 +1.5**
OSTC AMS AMS 07 52 40.0
comp=Z,7μm,15.3s
NC405 NORSAR Array S 58.62 326 P P 07 24 43.0 -0.7
MPLH Magyarpolny 58.62 309 P P 07 24 44.3 +0.4
ZST Bratislava 58.63 310 *e*P **P 07 24 44.6 +0.6**
ZST pmax pmax
comp=Z,242nm,1.1s
VRAC Vranov 58.66 311 ⇓P **P 07 24 45.5 +1.3**
VRAC Vranov 58.66 311 LR LR 07 54 59.8
comp=Z,9μm,18.2s,baz=82,slow=41
VRAC Vranov 58.66 311 P P 07 24 45.4 +1.3
VRAC Vranov 58.66 311 *e*P **P 07 24 45.0 +0.8**
VRAC *e*S **S 07 32 50.9 +3.8**
CHVC Chvalec 58.66 313 *e*P **P 07 24 45.2 +1.0**
CHVC AMS AMS 07 52 50.0
comp=Z,7μm,15.1s
EGYH Egyhazaskeszo 58.69 309 P P 07 24 45.2 +0.8
UPC Upice 58.71 313 *e*P **P 07 24 45.8 +1.3**
UPC MLR MLR
comp=Z,8μm,15.5s
UPC Upice 58.71 313 *e*P **P 07 24 45.8 +1.3**
UPC AMS AMS 07 52 50.0
comp=Z,8μm,15.5s
TIR Tirane 58.72 302 P P 07 24 43.6 -1.1
TIR IAmb IAmb 07 24 52.6
comp=Z,107nm,0.9s
TIR Tirane 58.72 302 P P 07 24 43.6 -1.1
TIR pmax pmax
comp=Z,107nm,0.9s
MBWA Marble Bar 58.73 153 P P 07 24 45.1 +0.3
MBWA IAmb IAmb 07 24 49.3
comp=Z,162nm,1.4s
MBWA Marble Bar 58.73 153 P P 07 24 43.6 -1.2
MBWA Marble Bar 58.73 153 P P 07 24 45.4 +0.6
MBWA Marble Bar 58.73 153 P P 07 24 45.2 +0.3
MBWA sP **sP 07 24 59.5 +1.7**
NC303 NORSAR Array S 58.76 326 P P 07 24 44.8 +0.1
NC303 IAmb IAmb 07 24 46.4
comp=Z,358nm,1.1s
PYL PYLOS 58.77 296 P P 07 24 42.7 -2.4
NC602 NORSAR Array S 58.78 325 P P 07 24 44.1 -0.7
NC602 NORSAR Array S 58.78 325 *e*P **P 07 24 44.3 -0.5**
NC602 IAmb IAmb 07 24 46.0
comp=Z,373nm,1.1s
NORES NORESS Array B 58.78 325 P P 07 24 44.2 -0.6
NORES pmax pmax
comp=Z,59nm,1.0s
PDG Podgorica 58.82 303 ⇓P **P 07 24 45.3 -0.1**
PDG Podgorica 58.82 303 P P 07 24 45.0 -0.3
PDG IAmb IAmb 07 24 46.4
comp=Z,154nm,1.1s
TTG Podgorica 58.82 303 *e*P **P 07 24 45.3 -0.1**
UPM Unac-Piva 58.83 304 ⇓*i*P **P 07 24 46.0 +0.3**
UPM Unac-Piva 58.83 304 *e*P **P 07 24 45.8 +0.1**
NB201 NORSAR Array S 58.84 326 P P 07 24 44.8 -0.4
KRUC Moravsky 58.85 311 *e*P **P 07 24 46.4 +0.9**
KRUC *e*S **S 07 32 54.1 +4.6**
NB2 NORSAR Subarra 58.88 326 P P 07 24 44.6 -0.9
comp=Z,355nm,1.0s,baz=78,slow=7.4
NB2 NORSAR Subarra 58.88 326 P P 07 24 41.5 -4.0
NB2 pmax pmax
comp=Z,15nm,0.9s
NB2 NORSAR Subarra 58.88 326 P P 07 24 44.6 -0.9
baz=78,slow=7.4
NOA NORSAR Array B 58.88 326 P P 07 24 44.8 -0.8
comp=Z,166nm,1.0s,baz=78,slow=6.9,SNR=202
NOA LR LR 07 50 10.8
comp=Z,6μm,19.4s,baz=225,slow=36
comp=Z,166nm,1.0s
NKME Niksic 58.93 303 *e*P **P 07 24 46.0 -0.2**
DRME Dracevica, Mon 58.95 303 *e*P **P 07 24 45.6 -0.7**
DRME Dracevica, Mon 58.95 303 *e*P **P 07 24 46.2 -0.1**
LUNU Lund 58.95 319 *i* P **P 07 24 46.0 0.0**
NYDR Nydri-Lefkada 58.95 299 P P 07 24 44.0 -2.3
IGT Igoumenitsa 58.95 300 P P 07 24 44.3 -2.1
ULC Ulcinj 58.97 303 *e*P **P 07 24 46.1 -0.4**
EVGI Lefkada island 59.01 298 P P 07 24 44.5 -2.3
CEME Cevo 59.02 303 *e*P **P 07 24 46.6 -0.3**
NC204 NORSAR Array S 59.04 326 P P 07 24 46.1 -0.6
NAO01 NORSAR Array S 59.07 325 P P 07 24 46.2 -0.6
NBO00 NORSAR Array S 59.08 326 P P 07 24 46.8 -0.2
BUM Brajici-Budva 59.12 303 *e*P **P 07 24 47.0 -0.5**
SOP Sopron 59.12 310 P P 07 24 48.0 +0.6
PSA00 Pilbara Seismi 59.15 153 P P 07 24 47.7 -0.1
PSA00 IAmb IAmb 07 24 52.1
comp=Z,171nm,1.3s
PSA00 Pilbara Seismi 59.15 153 P P 07 24 48.2 +0.5
BRY Bratogost 59.18 304 ⇓*i*P **P 07 24 47.4 -0.7**
BRY Bratogost 59.18 304 *e*P **P 07 24 47.8 -0.3**
A052A Srbac 59.23 306 ⇓*i*P **P 07 24 47.9 -0.3**
VLO Vlora 59.26 301 P P 07 24 47.3 -1.1
VLO IAmb IAmb 07 25 07.2
comp=Z,175nm,1.2s
VLO Vlora 59.26 301 P P 07 24 47.3 -1.1
VLO pmax pmax
comp=Z,175nm,1.2s
KEK Kerkira 59.28 300 P P 07 24 47.0 -1.7
KEK IAmb IAmb 07 24 48.0
comp=Z,130nm,1.3s
RONA Rosalia, Austr 59.29 310 *i* P **P 07 24 49.2 +0.6**
comp=Z,114nm,1.1s,SNR=46
BEHE Becsehely 59.33 308 P P 07 24 49.6 +0.8
HCY Herceg Novi 59.35 303 ⇓*i*P **P 07 24 48.0 -1.1**
HCY Herceg Novi 59.35 303 *e*P **P 07 24 48.6 -0.5**
OSL Oslo 59.36 324 *e*P **P 07 24 48.9 +0.2**
OSL IAmb IAmb 07 24 50.3
comp=Z,626nm,1.0s
TREC Trest 59.36 312 *e*P **P 07 24 50.4 +1.3**
TREC MLR MLR
comp=Z,8μm,13.8s
TREC Trest 59.36 312 *e*P **P 07 24 50.4 +1.3**
TREC AMS AMS 07 53 40.0
comp=Z,8μm,13.8s
COP Copenhagen 59.49 319 *i* P **P 07 24 51.4 +1.6**
COP IAmb IAmb 07 24 51.7
comp=Z,504nm,1.1s
CONA Conrad Observa 59.51 310 *i* P **P 07 24 51.0 +0.8**
comp=Z,167nm,1.0s,SNR=135
RUE Ruedersdorf 59.55 315 *e*P **P 07 24 51.0 +0.8**
BLY Banja Luka 59.56 306 ⇓*i*P **P 07 24 50.4 -0.1**
PVCC Panska Ves 59.59 313 *e*P **P 07 24 52.2 +1.6**
PVCC MLR MLR
comp=Z,6μm,15.1s
PVCC Panska Ves 59.59 313 *e*P **P 07 24 52.2 +1.6**
PVCC AMS AMS 07 49 50.0
comp=Z,6μm,15.1s
GOPC GO Pecny, Ondr 59.63 312 *e*P **P 07 24 51.7 +0.8**
GOPC MLR MLR
comp=Z,10μm,11.9s
GOPC GO Pecny, Ondr 59.63 312 *e*P **P 07 24 51.7 +0.8**
GOPC AMS AMS 07 53 00.0
comp=Z,10μm,11.9s
DOMB Dombas 59.66 327 *e*P **P 07 24 50.9 0.0**
DOMB IAmb IAmb 07 24 52.2
comp=Z,408nm,1.3s
A051A Mrakovica 59.67 307 ⇓*i*P **P 07 24 51.1 -0.2**
KOGS Kog 59.68 308 *i* P **P 07 24 51.5 +0.3**
KOGS *e*S **S 07 33 03.0 +2.8**
MGRS Mrkonjic Grad 59.73 306 *e*P **P 07 24 52.3 +0.6**
PRU Pruhonice 59.76 313 *e*P **P 07 24 52.6 +0.8**
PRU MLR MLR
comp=Z,10μm,12.8s
PRU Pruhonice 59.76 313 *e*P **P 07 24 52.6 +0.8**
PRU AMS AMS 07 53 10.0
comp=Z,10μm,12.8s
STON Ston 59.78 304 ⇓*i*P **P 07 24 49.2 -2.8**
ARSA Arzberg 59.92 309 *i* P **P 07 24 53.2 +0.3**
comp=Z,78nm,1.2s,SNR=33
KONO Kongsberg 59.98 324 P P 07 24 53.2 +0.1
KONO IAmb IAmb 07 24 54.7
comp=Z,279nm,1.1s
KONO Kongsberg 59.98 324 P P 07 24 53.2 +0.1
KONO pmax pmax
comp=Z,279nm,1.1s
KONO MLR MLR
comp=Z,6μm,21.0s
KONO Kongsberg 59.98 324 *e*P **P 07 24 52.8 -0.3**
KONO Kongsberg 59.98 324 P P 07 24 52.6 -0.4
SCTE Santa Cesarea 60.13 301 P P 07 24 53.3 -1.2
SCTE IAmb IAmb 07 24 54.3
comp=Z,137nm,1.0s
MOL Molde 60.22 328 *e*P **P 07 24 54.1 -0.6**
MOL IAmb IAmb 07 24 55.5
comp=Z,460nm,1.1s
CKRC Cesky Krumlov 60.24 311 *e*P **P 07 24 56.4 +1.3**
CKRC AMS AMS 07 54 40.0
comp=Z,8μm,19.4s
CLL Collm 60.33 314 P P 07 24 55.8 +0.2
CLL IAmb IAmb 07 24 57.4
comp=Z,167nm,1.1s
CLL Collm 60.33 314 ⇓*i*P **P 07 24 56.1 +0.5**
CLL *e**SP **pP 07 25 06.0 +0.9**
CLL *e*S **S 07 33 10.0 +1.5**
CLL pmax pmax
comp=Z,225nm,1.3s
CLL MLR MLR
comp=Z,7μm,21.6s
CLL Collm 60.33 314 ⇓*i*P **P 07 24 56.1 +0.5**
comp=Z,225nm,1.3s
CLL *e*pP **pP 07 25 06.0 +0.9**
CLL *e*S **S 07 33 10.0 +1.5**
CLL *e*PS **PnS 07 33 25.0 +1.8**
CLL LmV 07 51 00.0
comp=Z,7μm,21.6s
SKAR Skarslia 60.34 326 *e*P **P 07 24 56.0 +0.4**
SKAR IAmb IAmb 07 24 57.9
comp=Z,487nm,1.1s
ROCAM Rodrigues Isla 60.37 214 P P 07 24 55.6 -0.5
PERS Pernice 60.37 309 *i* P **P 07 24 56.3 +0.2**
CRES Cresnjev 60.39 308 ⇓*i*P **P 07 24 56.5 +0.3**
SOKA Soboth 60.41 309 *i* P **P 07 24 56.7 +0.3**
comp=Z,210nm,1.3s,SNR=113
MANU Manus Island 60.46 114 P P 07 24 59.2 +2.2
MOA Molln 60.55 310 *i* P **P 07 24 57.8 +0.5**
comp=Z,72nm,1.1s,SNR=9.9
AKN Aaknes 60.56 327 *e*P **P 07 24 57.7 +0.6**
AKN IAmb IAmb 07 24 58.9
comp=Z,143nm,0.9s
KHC Kasperske Hory 60.61 312 P P 07 24 57.5 -0.2
KHC IAmb IAmb 07 24 59.9
comp=Z,197nm,1.6s
KHC Kasperske Hory 60.61 312 *e*P **P 07 24 58.5 +0.9**
KHC *e* 07 25 16.5
KHC MLR MLR
comp=Z,11μm,20.1s
KHC Kasperske Hory 60.61 312 *e*P **P 07 24 58.5 +0.9**
KHC x x 07 25 16.5
KHC AMS AMS 07 55 40.0
comp=Z,11μm,20.1s
GEC2 GERESS Array S 60.62 311 IAmb IAmb 07 24 59.9
comp=Z,196nm,1.2s
GERES GERESS Array B 60.62 311 P P 07 24 56.9 -0.8
comp=Z,60nm,1.0s,baz=69,slow=7.7,SNR=166
GERES PKPPKP **P'P'df 07 54 16.4 -7.0**
comp=Z,0.2nm,0.3s,baz=333,slow=2.1,SNR=3.5
GERES LR LR 07 55 21.8
comp=Z,8μm,19.6s,baz=47,slow=40
comp=Z,60nm,1.0s
GERES GERESS Array B 60.62 311 P P 07 24 57.0 -0.8
PDKS Podkum 60.62 308 *i* P **P 07 24 58.4 +0.6**
BOJS Bojanci 60.63 307 ⇓*i*P **P 07 24 57.9 +0.1**
NOR Nord 60.75 351 *i* P **P 07 24 57.3 -0.8**
NOR IAmb IAmb 07 24 58.8
comp=Z,242nm,1.2s
OBKA Obir 60.78 309 ⇓*i*P **P 07 24 58.8 -0.1**
OBKA Obir 60.78 309 *i* P **P 07 24 59.2 +0.2**
comp=Z,69nm,1.1s,SNR=26
GOET G??ttrup 60.86 321 *i* P **P 07 24 59.9 +0.8**
GOET IAmb IAmb 07 25 00.7
comp=Z,468nm,1.3s
HOMB Homborsund 60.89 323 *e*P **P 07 24 59.4 +0.1**
HOMB Homborsund 60.89 323 *i* P **P 07 24 59.0 -0.3**
NKC Novy Kostel 60.98 313 *e*P **P 07 25 01.1 +1.0**
NKC MLR MLR
comp=Z,10μm,20.8s
NKC Novy Kostel 60.98 313 *e*P **P 07 25 01.1 +1.0**
NKC AMS AMS 07 55 10.0
comp=Z,10μm,20.8s
BIOA Bad Ischl, Aus 61.01 310 *i* P **P 07 25 00.7 +0.3**
comp=Z,69nm,1.2s,SNR=17
MUD Monsted U'grnd 61.05 321 P P 07 25 00.8 +0.4
MUD Monsted U'grnd 61.05 321 *i* P **P 07 25 01.2 +0.8**
MUD IAmb IAmb 07 25 02.6
comp=Z,403nm,1.3s
CEY Cerknica 61.10 308 *e*P **P 07 25 01.1 0.0**
MATE Matera 61.21 302 ⇑P **P 07 25 01.9 +0.2**
HYA Hoyanger 61.21 326 *e*P **P 07 25 02.6 +1.2**
HYA IAmb IAmb 07 25 03.0
comp=Z,633nm,2.1s
MYKA Terra Mystica 61.34 309 *i* P **P 07 25 02.5 -0.2**
comp=Z,36nm,1.1s,SNR=14
ODD1 Odda 61.36 325 *e*P **P 07 25 03.6 +1.1**
ODD1 IAmb IAmb 07 25 04.2
comp=Z,232nm,1.3s
KBA Koelnbreinsper 61.39 310 *i* P **P 07 25 03.1 0.0**
comp=Z,47nm,1.1s,SNR=33
SKDS Skadanscina 61.44 308 *e*P **P 07 25 03.0 -0.3**
PRED Cave del Predi 61.45 309 P P 07 25 03.0 -0.5
SNART Snartemo 61.52 323 *e*P **P 07 25 04.2 +0.5**
SNART IAmb IAmb 07 25 05.5
comp=Z,1μm,1.1s
SNART Snartemo 61.52 323 *i* P **P 07 25 03.0 -0.6**
BLS5 Blasjo 61.58 324 *e*P **P 07 25 05.1 +1.1**
BLS5 IAmb IAmb 07 25 05.9
comp=Z,214nm,1.2s
FOO Floro 61.61 327 *e*P **P 07 25 04.2 +0.1**
FOO IAmb IAmb 07 25 05.5
comp=Z,144nm,1.1s
TIP Timpagrande 61.68 300 ⇑P **P 07 25 05.0 -0.1**
TIP Timpagrande 61.68 300 IAmb IAmb 07 25 06.0
comp=Z,159nm,1.3s
BER Bergen 61.84 326 *e*P **P 07 25 06.7 +1.0**
BER IAmb IAmb 07 25 07.4
comp=Z,301nm,1.1s
ASK Askoy 61.87 326 *e*P **P 07 25 07.1 +1.2**
ASK IAmb IAmb 07 25 07.5
comp=Z,613nm,1.1s
SUE Sulen 61.90 327 *e*P **P 07 25 06.8 +0.6**
SUE IAmb IAmb 07 25 07.7
comp=Z,199nm,1.1s
ABTA Abfaltersbach 62.03 309 *i* P **P 07 25 06.8 -0.6**
comp=Z,84nm,1.2s,SNR=26
STAL STALIGIAL 62.07 309 IAmb IAmb 07 25 08.2
comp=Z,159nm,1.1s
CUC Castrocucco 62.07 301 IAmb IAmb 07 25 09.2
comp=Z,124nm,1.0s
WTTA Wattenberg 62.43 310 *i* P **P 07 25 10.1 -0.1**
comp=Z,110nm,1.1s,SNR=48
WATA Walderalm 62.44 310 *i* P **P 07 25 09.9 -0.3**
comp=Z,169nm,1.4s,SNR=31
GAMB Gambell 62.52 30 P P 07 25 09.6 -0.6
GAMB Gambell 62.52 30 P P 07 25 10.4 +0.2
baz=289,SNR=6.5
PAOL Paolisi 62.59 303 P P 07 25 09.8 -1.4
CEL Celeste 62.64 300 P P 07 25 11.2 -0.3
CEL IAmb IAmb 07 25 12.5
comp=Z,301nm,1.0s
INTR Introdacqua 62.71 304 P P 07 25 11.1 -0.9
INTR IAmb IAmb 07 25 20.1
comp=Z,146nm,1.2s
SQTA Sankt Quirin 62.72 310 *i* P **P 07 25 11.6 -0.4**
comp=Z,86nm,0.8s,SNR=40
LODK Lodwar 62.73 255 P P 07 25 12.6 +0.2
SNR=26
MOTA Moosalm 62.74 310 *i* P **P 07 25 12.0 -0.2**
comp=Z,137nm,1.1s,SNR=57
RETA Reutte 62.91 311 *i* P **P 07 25 13.4 +0.2**
comp=Z,116nm,1.0s,SNR=40
AQU L'Aquila 62.94 305 IAmb IAmb 07 25 21.4
comp=Z,253nm,1.1s
AQU L'Aquila 62.94 305 P P 07 25 12.6 -0.9
SBV Sambava 62.96 231 P P 07 25 12.8 -0.9
NRCA Norcia 62.97 305 IAmb IAmb 07 25 15.3
comp=Z,399nm,1.8s
TEOL Teolo 63.06 308 IAmb IAmb 07 25 15.4
comp=Z,237nm,1.0s
FETA Feichten 63.09 310 *i* P **P 07 25 14.3 -0.2**
comp=Z,121nm,1.0s,SNR=68
DAG Danmarks Havn 63.38 346 P P 07 25 13.8 -2.0
DAG Danmarks Havn 63.38 346 *i* P **P 07 25 14.7 -1.1**
DAG IAmb IAmb 07 25 16.1
comp=Z,664nm,2.2s
CESX Cesi 63.42 305 IAmb IAmb 07 25 17.6
comp=Z,177nm,1.3s
TNA Tin City 63.44 27 P P 07 25 16.8 +0.6
TNA Tin City 63.44 27 P P 07 25 16.3 0.0
baz=291,SNR=15
STU Stuttgart 63.46 312 P P 07 25 16.4 -0.3
FUORN Ofenpass-Fuorn 63.53 310 IAmb IAmb 07 25 19.0
comp=Z,278nm,1.9s
DAVA Damuels 63.55 311 *i* P **P 07 25 17.2 -0.3**
comp=Z,73nm,1.1s,SNR=31
SALO Salr 63.72 309 P P 07 25 18.0 -0.6
SALO IAmb IAmb 07 25 23.6
comp=Z,100nm,0.8s
DAVOX Davos/Dischmat 63.73 310 LR LR 07 54 43.1
comp=Z,8μm,21.4s,baz=152,slow=38
ZCCA Zocca 63.88 307 IAmb IAmb 07 25 31.9
comp=Z,216nm,1.2s
KMBO Kilima Mbogo 63.89 250 P P 07 25 19.9 -0.4
comp=Z,1.3nm,0.8s,baz=46,slow=23,SNR=24
KMBO Kilima Mbogo 63.89 250 P P 07 25 20.3 -0.1
KMBO Kilima Mbogo 63.89 250 ⇓*i*P **P 07 25 20.5 +0.1**
KMBO IAmb IAmb 07 25 24.5
comp=Z,28nm,0.9s
KMBO Kilima Mbogo 63.89 250 P P 07 25 20.3 -0.1
KMBO pmax pmax
comp=Z,53nm,0.9s
KMBO Kilima Mbogo 63.89 250 P P 07 25 20.1 -0.3
KMBO Kilima Mbogo 63.89 250 *i* P **P 07 25 20.3 -0.1**
SNR=37
KMBO Kilima Mbogo 63.89 250 P P 07 25 20.2 -0.1
LATE Laterza 63.95 305 IAmb IAmb 07 25 21.6
comp=Z,316nm,1.2s
OSSC Osservatorio P 63.99 306 IAmb IAmb 07 25 18.6
comp=Z,202nm,1.2s
KIBK Kibwezi 64.01 249 P P 07 25 20.7 -0.3
SNR=17
ADK Adak 64.03 44 P P 07 25 18.2 -2.2
ADK Adak 64.03 44 P P 07 25 18.2 -2.2
ADK pmax pmax
comp=Z,54nm,1.1s
ADK Adak 64.03 44 P P 07 25 19.4 -1.0
PATS Pohnpei 64.05 99 P P 07 25 23.2 +2.1
BFO Black Forest 64.15 312 P P 07 25 21.4 +0.1
BFO IAmb IAmb 07 25 23.0
comp=Z,168nm,1.1s

BFO IAMs_20 IAMs_20 07 57 48.1
comp=Z,9µm,22.0s
BFO Black Forest 64.15 312 P **P** **07 25 21.4 +0.1**
BFO pmax pmax
comp=Z,168nm,1.1s
BFO MLR MLR
comp=Z,9µm,22.0s
BFO Black Forest 64.15 312 P **P** **07 25 21.4 +0.1**
BFO pP **pP** **07 25 31.8 +0.9**
RAFF Raffo Rosso 64.15 299 IAmb IAmb 07 25 23.0
comp=Z,261nm,1.3s
PRMA PARMA 64.17 308 IAmb IAmb 07 25 24.0
comp=Z,239nm,1.3s
SLE Schleitheim 64.25 312 P **P** **07 25 20.9 -1.1**
ALE Alert 64.32 357 P **P** **07 25 21.6 -0.2**
ALE sP **sP** **07 25 36.8 +1.9**
VLC Villacollemand 64.34 307 IAmb IAmb 07 25 25.1
comp=Z,157nm,1.0s
WB0 Warramunga Arr 64.53 138 P **P** **07 25 23.3 -0.7**
WRAB Tennant Creek 64.64 139 P **P** **07 25 25.4 +0.6**
WRAB IAmb IAmb 07 25 29.3
comp=Z,259nm,1.6s
WRAB Tennant Creek 64.64 139 P **P** **07 25 25.4 +0.6**
WRAB pmax pmax
comp=Z,259nm,1.7s
WRAB Tennant Creek 64.64 139 P **P** **07 25 25.6 +0.8**
WRAB Tennant Creek 64.64 139 P **P** **07 25 25.0 +0.3**
WRA Warramunga Arr 64.64 139 P **P** **07 25 24.8 0.0**
comp=Z,48nm,1.0s,baz=331,slow=7.3,SNR=51
WRA ScS **ScS** **07 35 18.1 +0.2**
comp=Z,5.1nm,1.3s,baz=313,slow=7.9,SNR=5.4
WRA PKPPKP **P'P'df** **07 54 06.8 -0.8**
comp=Z,6.6nm,1.2s,baz=128,slow=3.5,SNR=11
WRA PKP2bc 07 54 17.4
comp=Z,14nm,1.1s,baz=143,slow=2.3,SNR=15
comp=Z,48nm,1.0s
WRA Warramunga Arr 64.64 139 P **P** **07 25 24.2 -0.6**
WB2 Warramunga Arr 64.65 139 P **P** **07 25 24.4 -0.4**
WB2 IAmb IAmb 07 25 29.3
comp=Z,269nm,1.6s
WB1 Warramunga Ar. 64.66 139 P **P** **07 25 25.1 +0.2**
BTNL Ternell 64.67 315 *d*P **P** **07 25 24.7 0.0**
comp=Z,74nm,1.1s
MEM Membach 64.74 315 *d*P **P** **07 25 25.6 +0.5**
comp=Z,62nm,1.1s
WR0 Warramunga Arr 64.77 138 P **P** **07 25 26.0 +0.4**
MORW Morawa 64.78 160 IAmb IAmb 07 25 29.9
comp=Z,234nm,1.6s
MORW Morawa 64.78 160 P **P** **07 25 25.9 +0.4**
CDF Champ du Feu 64.78 313 *e*P **P** **07 25 25.3 -0.2**
CDF pmax pmax
comp=Z,181nm,1.2s
ANM Nome 64.82 28 P **P** **07 25 25.8 +0.4**
ANM Nome 64.82 28 P **P** **07 25 25.8 +0.4**
ANM pmax pmax
comp=Z,591nm,1.4s
ANM MLR MLR
comp=Z,15µm,18.0s
ANM Nome 64.82 28 P **P** **07 25 26.4 +1.0**
baz=294,SNR=13
A21K Barrow 64.84 20 P **P** **07 25 25.4 0.0**
A21K Barrow 64.84 20 P **P** **07 25 26.2 +0.8**
baz=298,SNR=6.0
MSSA Maissana 64.86 308 IAmb IAmb 07 25 27.4
comp=Z,209nm,1.2s
BEBN Eben Emael 64.86 315 *d*P **P** **07 25 26.5 +0.6**
ECH Echery 64.92 312 P **P** **07 25 26.2 -0.2**
ECH pP **pP** **07 25 37.2 +1.3**
WLF Walferdange 65.00 314 *d*P **P** **07 25 28.1 +1.3**
comp=Z,222nm,1.1s
BSTI Sart Tilman 65.01 315 *d*P **P** **07 25 28.0 +1.1**
comp=Z,13nm,1.1s
DBG Daneborg 65.01 344 *i* P **P** **07 25 26.3 -0.2**
DBG IAmb IAmb 07 25 27.5
comp=Z,488nm,2.0s
PMG Port Moresby 65.14 121 P **P** **07 25 28.8 +0.7**
comp=Z,216nm,1.1s,baz=344,slow=5.1,SNR=21
comp=Z,216nm,1.1s
PMG Port Moresby 65.14 121 P **P** **07 25 29.2 +1.1**
PMG IAmb IAmb 07 25 32.3
comp=Z,219nm,1.1s
PMG Port Moresby 65.14 121 P **P** **07 25 29.2 +1.1**
PMG pmax pmax
comp=Z,219nm,1.1s
PMG Port Moresby 65.14 121 P **P** **07 25 29.3 +1.2**
PMG Port Moresby 65.14 121 P **P** **07 25 29.4 +1.3**
PMG Port Moresby 65.14 121 P **P** **07 25 28.8 +0.7**
PMG sP **sP** **07 25 43.7 +2.5**
BCLA Clavier 65.23 315 *d*P **P** **07 25 29.2 +0.9**
comp=Z,58nm,1.2s
HINF Hinteralfeld 65.26 312 *e*P **P** **07 25 28.2 -0.4**
HINF pmax pmax
comp=Z,101nm,1.2s
BGES Gesves 65.37 315 *d*P **P** **07 25 29.8 +0.6**
comp=Z,43nm,1.2s
RCHB Rochefort 65.37 315 *d*P **P** **07 25 29.7 +0.5**
comp=Z,56nm,1.2s
HAU Haudompre 65.51 312 *e*P **P** **07 25 29.8 -0.4**
HAU pmax pmax
comp=Z,113nm,1.2s
RABL Rabaul 65.51 113 P **P** **07 25 32.7 +2.1**
comp=Z,428nm,1.4s
COEN Coen 65.53 127 P **P** **07 25 31.3 +0.7**
SENIN Lac Senin/Sane 65.53 311 P **P** **07 25 30.6 0.0**
SENIN IAMs_20 IAMs_20 07 59 15.7
comp=Z,10µm,21.0s
BMRD Maredsous 65.59 315 *d*P **P** **07 25 31.4 +0.8**
comp=Z,58nm,1.1s
GIVF Givet 65.63 315 *e*P **P** **07 25 31.1 +0.2**
GIVF pmax pmax
comp=Z,140nm,1.1s
DOU Dourbes 65.77 315 *d*P **P** **07 25 32.0 +0.2**
comp=Z,50nm,1.2s
WRKA Warakurna 65.79 147 P **P** **07 25 33.0 +0.8**
SNF Seneffe 65.80 316 *d*P **P** **07 25 32.7 +0.8**
comp=Z,64nm,1.0s
PGF Pioggiola 65.89 306 *e*P **P** **07 25 32.6 -0.2**
PGF pmax pmax
comp=Z,231nm,1.2s
BAIF Baives 66.01 315 *e*P **P** **07 25 33.6 +0.2**
BAIF pmax pmax
comp=Z,157nm,1.3s
CABF La Chapelle 66.21 311 *e*P **P** **07 25 34.4 -0.4**
CABF pmax pmax
comp=Z,74nm,1.2s
LPG La Plagne 66.22 310 *e*P **P** **07 25 35.3 +0.1**
LPG pmax pmax
comp=Z,192nm,1.0s
LPL La Plagne 66.23 310 *e*P **P** **07 25 34.4 -0.7**
LPL pmax pmax
comp=Z,229nm,1.0s
BLDU Ballidu 66.42 160 P **P** **07 25 36.3 +0.2**
BNI Bardonecchia 66.44 309 IAmb IAmb 07 25 37.9
comp=Z,124nm,1.2s
BNI Bardonecchia 66.44 309 P **P** **07 25 35.7 -0.7**
MBDF Montbardon 66.51 309 *e*P **P** **07 25 35.9 -1.0**
MBDF pmax pmax
comp=Z,81nm,0.9s
MLA1 Latheron 66.74 325⇑ *e*P **P** **07 25 38.9 +1.0**
DRUM Mains of Drumt 66.90 324 *e*P **P** **07 25 39.6 +0.7**
BIGH Upper Bighouse 66.92 326 *e*P **P** **07 25 40.0 +1.0**
BIGH IAmb IAmb 07 25 41.0
comp=Z,324nm,1.2s
WACR West Acre 67.00 319 *e*P **P** **07 25 40.3 +0.7**
WACR IAmb IAmb 07 25 41.2
comp=Z,488nm,1.0s
EDU Dundee 67.32 324 *e*P **P** **07 25 42.3 +0.7**
C23K Itkillik River 67.33 20 P **P** **07 25 42.2 +0.8**
baz=304,SNR=174
LOR Lormes 67.34 312 *e*P **P** **07 25 41.3 -0.6**
LOR pmax pmax
comp=Z,132nm,1.2s
ESY Stoneypath 67.39 323 *e*P **P** **07 25 41.9 -0.1**
AS31 Alice Springs 67.42 141 P **P** **07 25 43.6 +1.0**
ASAR Alice Springs 67.42 141 P **P** **07 25 43.0 +0.4**
comp=Z,54nm,0.9s,baz=328,slow=6.2,SNR=87
ASAR ScS **SKiKP** **07 35 41.0 +1.1**
comp=Z,1.2nm,1.1s,baz=294,slow=3.4,SNR=4.6
ASAR PKPPKP **P'P'df** **07 54 05.5 +2.9**
comp=Z,6.7nm,1.1s,baz=113,slow=3.9,SNR=7.0
comp=Z,54nm,0.9s
ASAR Alice Springs 67.42 141 P **P** **07 25 42.4 -0.2**
AS01 Alice Springs 67.44 141 P **P** **07 25 44.0 +1.2**
EDMD Edmundbyers 67.52 322 *e*P **P** **07 25 43.1 +0.2**
EDMD IAmb IAmb 07 25 44.0
comp=Z,164nm,1.0s
MUN Mundaring 67.56 160 P **P** **07 25 43.3 0.0**
SCO Scoresbysund 67.61 341 P **P** **07 25 42.2 -1.0**
SCO IAmb IAmb 07 25 45.8
comp=Z,234nm,1.3s
SCO Scoresbysund 67.61 341 P **P** **07 25 42.2 -1.0**
SCO pmax pmax
comp=Z,234nm,1.3s
SCO Scoresbysund 67.61 341 *i* P **P** **07 25 43.7 +0.5**
SCO IAmb IAmb 07 25 45.4
comp=Z,275nm,1.4s
KLBR Kellerberrin 67.65 159 P **P** **07 25 44.4 +0.6**
EBL Broad Law 67.67 323 *e*P **P** **07 25 44.0 +0.2**
HPK Haverah Park 67.71 321 *e*P **P** **07 25 44.6 +0.5**
SSB Saint Sauveur 67.73 310 P **P** **07 25 44.3 -0.2**
SSB Saint Sauveur 67.73 310 P **P** **07 25 44.3 -0.2**
SSB pmax pmax
comp=Z,73nm,1.1s
SSB Saint Sauveur 67.73 310 P **P** **07 25 44.6 +0.1**
SSB pP **pP** **07 25 54.5 +0.4**
D23K Nanushuk River 67.80 21 P **P** **07 25 45.4 +1.0**
baz=304,SNR=171
VIVF Saint-Julien-l 67.83 310 *e*P **P** **07 25 44.8 -0.2**
VIVF pmax pmax
comp=Z,211nm,1.3s
AVF Avril sur Loir 67.86 312 *e*P **P** **07 25 43.8 -1.3**
AVF pmax pmax
comp=Z,290nm,1.2s
F21K Alatna River 67.88 23 P **P** **07 25 45.6 +0.6**
baz=302,SNR=101
EKA Eskdalemuir Ar 67.92 322 P **P** **07 25 45.2 -0.2**
E22K Anaktuvuk Pass 67.92 22 P **P** **07 25 46.2 +1.0**
baz=304
HMNX Herstmonceux 67.94 317 *e*P **P** **07 25 45.6 0.0**
C24K Franklin Bluff 67.95 20 P **P** **07 25 45.6 +0.3**
baz=306
ESK Eskdalemuir 67.95 322 *e*P **P** **07 25 45.2 -0.4**
ESK Eskdalemuir 67.95 322 P **P** **07 25 45.7 +0.1**
ESK IAmb IAmb 07 25 47.3
comp=Z,231nm,1.1s
ESK Eskdalemuir 67.95 322 P **P** **07 25 45.7 +0.1**
ESK pmax pmax
comp=Z,231nm,1.2s
ESK Eskdalemuir 67.95 322 P **P** **07 25 45.1 -0.5**
ESK pP **pP** **07 25 54.9 -0.2**
GCSA Galena City Sc 67.99 26 P **P** **07 25 46.3 +0.7**
baz=300,SNR=194
CLF Chambon-Foret 68.01 314 IAmb IAmb 07 25 47.8
comp=Z,373nm,1.1s
CLF Chambon-Foret 68.01 314 P **P** **07 25 46.4 +0.4**
KAC Achnashellach 68.02 325 *e*P **P** **07 25 46.0 0.0**
F22K John River 68.15 22 P **P** **07 25 47.4 +0.7**
baz=303,SNR=190
QIS Mount Isa 68.17 135 P **P** **07 25 47.8 +0.4**
KESW Keswick, Cumbr 68.22 322 *e*P **P** **07 25 47.8 +0.5**
KESW IAmb IAmb 07 25 48.9
comp=Z,373nm,1.2s
D24K Happy Valley 68.24 20 P **P** **07 25 47.5 +0.3**
baz=306
G21K Allakaket 68.26 24 P **P** **07 25 47.9 +0.6**
baz=303
TOLK Toolik Lake Re 68.32 21 P **P** **07 25 48.1 +0.4**
TOLK IAMs_20 IAMs_20 07 59 35.6
comp=Z,8µm,22.0s
TOLK Toolik Lake Re 68.32 21 P **P** **07 25 48.0 +0.3**
baz=305,SNR=233
PGBU Glenifferbraes 68.38 323 *e*P **P** **07 25 49.0 +0.7**
PGBU IAmb IAmb 07 25 50.0
comp=Z,244nm,1.1s
KEST Kesra 68.45 299 P **P** **07 25 49.2 0.0**
comp=Z,88nm,1.1s,baz=330,slow=0.9,SNR=42
comp=Z,88nm,1.1s
KEST Kesra 68.45 299 P **P** **07 25 49.1 0.0**
KEST IAmb IAmb 07 25 50.7
comp=Z,215nm,1.2s
IMAR Indian Mountai 68.46 24 P **P** **07 25 48.5 -0.1**
NEWG New Galloway 68.57 322 *e*P **P** **07 25 50.1 +0.7**
NEWG IAmb IAmb 07 25 51.1
comp=Z,185nm,1.1s
LAWE Loch Awe, Argy 68.64 324 *e*P **P** **07 25 50.5 +0.7**
LAWE IAmb IAmb 07 25 51.4
comp=Z,160nm,1.1s
E23K Chandalar 68.64 21 P **P** **07 25 50.6 +0.7**
baz=305,SNR=152
G22K Bettles 68.70 23 P **P** **07 25 50.4 +0.3**
baz=304
NWAO Narrogin (SRO) 68.74 160 LR LR 07 56 52.1
comp=Z,4µm,20.6s,baz=194,slow=37
NWAO Narrogin (SRO) 68.74 160 P **P** **07 25 50.0 -0.6**
NWAO Narrogin (SRO) 68.74 160 P **P** **07 25 50.0 -0.6**
NWAO pmax pmax
comp=Z,120nm,1.4s
NWAO MLR MLR
comp=Z,5µm,21.0s
NWAO Narrogin (SRO) 68.74 160 P **P** **07 25 50.7 0.0**
NWAO Narrogin (SRO) 68.74 160 P **P** **07 25 49.9 -0.8**
TCF Toulx Ste Croi 68.78 312 *e*P **P** **07 25 51.0 0.0**
TCF pmax pmax
comp=Z,297nm,1.1s
ABPO Ambohimpanom 68.80 229 P **P** **07 25 50.8 -0.7**
ABPO IAmb IAmb 07 25 55.5
comp=Z,161nm,1.4s
ABPO Ambohimpanom 68.80 229 P **P** **07 25 50.8 -0.7**
ABPO pmax pmax
comp=Z,161nm,1.5s
ABPO Ambohimpanom 68.80 229 P **P** **07 25 50.7 -0.9**
MBAR Mbarara 68.81 255 P **P** **07 25 51.7 -0.1**
MBAR Mbarara 68.81 255 P **P** **07 25 51.7 -0.1**
MBAR pmax pmax
comp=Z,57nm,1.1s
MBAR Mbarara 68.81 255 P **P** **07 25 51.5 -0.3**
MBAR P **P** **07 25 51.5 -0.3**
MBAR Mbarara 68.81 255 P **P** **07 25 51.6 -0.3**
D25K Kavik River 68.84 20 P **P** **07 25 51.5 +0.5**
baz=308,SNR=94
C26K Camden Bay 68.87 19 P **P** **07 25 51.4 +0.3**
baz=309,SNR=6.2
UNV Unalaska Valle 68.89 39 IAmb IAmb 07 25 51.0
comp=Z,235nm,1.4s
UNV Unalaska Valle 68.89 39 P **P** **07 25 48.8 -2.7**
baz=297
COLD Coldfoot 68.94 22 IAmb IAmb 07 25 54.0
comp=Z,381nm,1.0s
COLD Coldfoot 68.94 22 P **P** **07 25 51.5 -0.1**
baz=305
STRD Stroud 68.96 319 *e*P **P** **07 25 52.3 +0.4**
STRD IAmb IAmb 07 25 53.3
comp=Z,328nm,1.0s
H21K Melozitna Rive 68.97 24 IAMs_20 IAMs_20 07 58 21.8
comp=Z,7µm,19.0s
H21K Melozitna Rive 68.97 24 P **P** **07 25 52.2 +0.5**
baz=304,SNR=177
E24K Your Creek 68.98 21 P **P** **07 25 52.5 +0.6**
baz=306,SNR=283
HLM1 Long Mynd 69.02 320 *e*P **P** **07 25 52.8 +0.4**
HLM1 IAmb IAmb 07 25 54.0
comp=Z,285nm,1.2s
FOEL Foel Wylfa 69.03 320 *e*P **P** **07 25 52.1 -0.3**
FOEL IAmb IAmb 07 25 53.1
comp=Z,288nm,1.1s
LDF La Druitiere 69.20 315 *e*P **P** **07 25 53.1 -0.4**
LDF pmax pmax
comp=Z,118nm,1.0s
OLDB Oldbury-Upon-S 69.23 319 *e*P **P** **07 25 54.0 +0.5**
WIM Isle of Man 69.24 322⇑ *e*P **P** **07 25 54.7 +1.0**
TTA Tatalina 69.26 28 P **P** **07 25 54.2 +0.5**
baz=302,SNR=15
MONM Monmouth 69.29 319 *e*P **P** **07 25 54.5 +0.6**
MONM IAmb IAmb 07 25 55.4
comp=Z,263nm,1.2s
G23K Bananza Creek 69.30 23 P **P** **07 25 54.5 +0.7**
baz=306,SNR=49
J20K Nowinta River 69.30 26 P **P** **07 25 54.6 +0.8**
baz=303,SNR=139
MTSU Mount Surprise 69.30 129 P **P** **07 25 55.7 +1.2**
H22K Ishtalitna Cre 69.32 24 P **P** **07 25 54.4 +0.4**
baz=305,SNR=82
MCH1 Michaelchurch 69.32 319 *e*P **P** **07 25 54.7 +0.5**
MCH1 IAmb IAmb 07 25 55.6
comp=Z,186nm,1.1s
FLN La Foliniere 69.34 315 *e*P **P** **07 25 54.0 -0.4**
FLN pmax pmax
comp=Z,98nm,1.2s
C27K Jago River 69.38 19 P **P** **07 25 55.1 +0.8**
baz=310,SNR=110
WME Myndd Eilian 69.39 321⇑ *e*P **P** **07 25 55.4 +0.8**
N16K Nishlik Lake 69.41 31 P **P** **07 25 55.3 +0.7**
baz=300,SNR=34
YLL Llanberis 69.44 321⇑ *e*P **P** **07 25 55.6 +0.7**
CAF Calviac 69.47 311 *e*P **P** **07 25 55.5 +0.2**
CAF pmax pmax
comp=Z,107nm,1.0s
WLF1 Llynfaes 69.49 321 *e*P **P** **07 25 55.8 +0.6**
WLF1 IAmb IAmb 07 25 56.7
comp=Z,345nm,1.1s
F24K Squaw Lake 69.50 21 P **P** **07 25 55.8 +0.7**
baz=307,SNR=112
I21K Tanana 69.52 24 P **P** **07 25 56.1 +0.9**
I21K IAmb IAmb 07 25 57.9
comp=Z,436nm,1.2s
I21K IAMs_20 IAMs_20 07 58 47.4
comp=Z,6µm,18.0s
I21K Tanana 69.52 24 P **P** **07 25 56.1 +0.9**
baz=304,SNR=75
YRC Rhoscolyn 69.60 321 *e*P **P** **07 25 56.8 +0.9**
RJF Les Rejaudoux 69.65 311 *e*P **P** **07 25 55.8 -0.6**
RJF pmax pmax
comp=Z,271nm,1.2s
GRR Gorron 69.73 315 *e*P **P** **07 25 56.5 -0.3**
GRR pmax pmax
comp=Z,192nm,1.1s
K20K Telida 69.78 27 IAMs_20 IAMs_20 07 58 22.4
comp=Z,10µm,18.0s
K20K Telida 69.78 27 P **P** **07 25 58.2 +1.3**
baz=303,SNR=28
E25K Arctic Village 69.82 20 P **P** **07 25 57.6 +0.5**
baz=309,SNR=145
H23K Yukon River 69.98 23 IAmb IAmb 07 26 00.8
comp=Z,325nm,1.1s
H23K IAMs_20 IAMs_20 08 00 13.5
comp=Z,8µm,18.0s
H23K Yukon River 69.98 23 P **P** **07 25 58.6 +0.5**
baz=306,SNR=98
FALS False Pass 70.01 37 P **P** **07 25 58.9 +0.6**
baz=299
MLY Manley 70.04 24 IAmb IAmb 07 26 00.9
comp=Z,379nm,1.1s
MLY IAMs_20 IAMs_20 07 59 13.1
comp=Z,8µm,18.0s
MLY Manley 70.04 24 P **P** **07 25 59.3 +0.8**
baz=305,SNR=24
MFF Saint Martin d 70.11 313 *e*P **P** **07 25 58.9 -0.2**
MFF pmax pmax
comp=Z,175nm,1.3s
L19K White Mountain 70.12 28 IAMs_20 IAMs_20 07 58 43.4
comp=Z,8µm,19.0s
L19K White Mountain 70.12 28 P **P** **07 25 60.0 +1.0**
baz=303,SNR=88
G24K Hadweenzic Riv 70.12 22 P **P** **07 25 59.6 +0.7**
baz=308,SNR=69
F25K Christian Rive 70.13 21 P **P** **07 26 00.0 +1.0**
baz=309,SNR=189
CHUM Lake Minchumin 70.14 26 P **P** **07 26 00.2 +1.2**
baz=304,SNR=14
JSA Saint Aubin 70.14 316 *e*P **P** **07 25 59.6 +0.4**
JSA IAmb IAmb 07 26 00.4
comp=Z,227nm,1.2s
O16K Kokwok River B 70.15 31 P **P** **07 26 00.0 +0.9**
baz=301,SNR=43
RSBS Rosebush, Pemb 70.30 320 *e*P **P** **07 26 00.8 +0.6**
LFF La Frestale 70.31 311 *e*P **P** **07 26 00.7 +0.3**
LFF pmax pmax
comp=Z,135nm,1.2s
L20K Farewell, AK 70.34 27 P **P** **07 26 01.8 +1.5**
baz=304,SNR=33
TULEG Thule 70.39 356 P **P** **07 26 00.1 -0.2**
TULEG IAmb IAmb 07 26 01.6
comp=Z,315nm,1.1s
TULEG IAMs_20 IAMs_20 08 00 05.9
comp=Z,7µm,19.0s
TULEG Thule 70.39 356 *i* P **P** **07 25 59.2 -1.1**
TULEG IAmb IAmb 07 26 01.1
comp=Z,299nm,1.1s
I23K Minto, Yukon-K 70.44 24 P **P** **07 26 00.8 0.0**
I23K IAmb IAmb 07 26 03.3
comp=Z,442nm,1.4s
I23K IAMs_20 IAMs_20 07 59 27.8
comp=Z,7µm,18.0s
I23K Minto, Yukon-K 70.44 24 P **P** **07 26 02.1 +1.3**
baz=306,SNR=34
M19K Big River Lodg 70.45 28 P **P** **07 26 00.5 -0.5**
M19K IAmb IAmb 07 26 04.2
comp=Z,498nm,1.4s
M19K IAMs_20 IAMs_20 07 58 55.0
comp=Z,9µm,19.0s
M19K Big River Lodg 70.45 28 P **P** **07 26 02.5 +1.5**
baz=303
CAST Castle Rocks 70.49 26 P **P** **07 26 01.0 -0.2**
CAST IAMs_20 IAMs_20 07 58 19.0
comp=Z,7µm,18.0s
CAST Castle Rocks 70.49 26 P **P** **07 26 02.0 +0.8**
baz=305,SNR=70
O17K Koliganek Bris 70.49 31 P **P** **07 26 01.9 +0.7**
baz=302
BPAW Bear Paw Mtn. 70.49 25 IAMs_20 IAMs_20 07 59 06.2
comp=Z,9µm,19.0s
BPAW Bear Paw Mtn. 70.49 25 P **P** **07 26 01.9 +0.7**
baz=306,SNR=83
P16K Nushagak River 70.49 32 P **P** **07 26 02.0 +0.7**
baz=302,SNR=7.8
F26K Sheenjek River 70.51 20 P **P** **07 26 02.1 +0.9**
baz=310,SNR=68
G25K Bearman Lake 70.51 22 P **P** **07 26 02.3 +1.1**
baz=309,SNR=56
N18K Kilae Creek 70.52 30 IAmb IAmb 07 26 04.2
comp=Z,413nm,1.2s
N18K IAMs_20 IAMs_20 07 59 41.0
comp=Z,7µm,20.0s
N18K Kilae Creek 70.52 30 P **P** **07 26 02.2 +0.8**
baz=303,SNR=44
H24K Noodor Dome 70.52 23 IAMs_20 IAMs_20 08 00 49.8
comp=Z,9µm,18.0s
H24K Noodor Dome 70.52 23 P **P** **07 26 02.2 +0.8**
baz=308,SNR=37
BMAR Burnt Mountain 70.55 21 P **P** **07 26 02.2 +0.7**
HTL Hartland 70.61 319 *e*P **P** **07 26 02.7 +0.6**
FORT Forrest 70.65 150 IAmb IAmb 07 26 04.2
comp=Z,112nm,0.8s
FORT Forrest 70.65 150 P **P** **07 26 03.7 +1.2**
PPLA Purkeypile 70.75 27 P **P** **07 26 03.2 +0.3**
PPLA Purkeypile 70.75 27 P **P** **07 26 03.5 +0.6**
baz=305,SNR=116
SGMF Saint Gilles 70.80 315 *e*P **P** **07 26 03.6 +0.3**
SGMF pmax pmax
comp=Z,255nm,1.3s
BORG Borgarnes 70.83 336 P **P** **07 26 04.1 +0.9**
BORG IAmb IAmb 07 26 07.0
comp=Z,277nm,1.6s
BORG Borgarnes 70.83 336 P **P** **07 26 04.1 +0.9**
BORG Borgarnes 70.83 336 P **P** **07 26 05.4 +2.2**
KTH Kantishna Hill 70.83 26 P **P** **07 26 03.9 +0.6**
KTH IAMs_20 IAMs_20 07 59 32.2
comp=Z,6µm,19.0s
NEA2 Nenana 70.87 24 IAMs_20 IAMs_20 07 59 49.2
comp=Z,6µm,18.0s
NEA2 Nenana 70.87 24 P **P** **07 26 03.9 +0.4**
baz=307,SNR=68
FYU Fort Yukon 70.91 22 IAMs_20 IAMs_20 08 01 35.9
comp=Z,7µm,18.0s
E27K Coleen River 70.91 19 P **P** **07 26 04.4 +0.7**
baz=312,SNR=150
H25K Birch Creek 70.91 22 P **P** **07 26 04.4 +0.7**
baz=309,SNR=36
MDM Murphy Dome 70.94 24 P **P** **07 26 03.4 -0.5**
MDM IAMs_20 IAMs_20 08 00 01.9
comp=Z,8µm,18.0s
M20K Styx River 70.96 28 IAMs_20 IAMs_20 07 59 19.4
comp=Z,9µm,18.0s
M20K Styx River 70.96 28 P **P** **07 26 05.4 +1.2**
baz=304
BWN Browne 70.99 25 IAMs_20 IAMs_20 08 00 15.8
comp=Z,6µm,18.0s
N19K Bonanza Creek 71.02 29 IAmb IAmb 07 26 10.6
comp=Z,499nm,1.4s
N19K IAMs_20 IAMs_20 07 59 38.3
comp=Z,8µm,18.0s
N19K Bonanza Creek 71.02 29 P **P** **07 26 06.0 +1.4**
baz=304,SNR=43
P17K Kvichak River 71.08 31 P **P** **07 26 06.0 +1.2**
baz=303
G26K Porcupine Rive 71.10 21 P **P** **07 26 06.0 +1.2**
baz=311,SNR=148

POKR	Poker Plat Res	71.11	23	P	P	07 26 05.5	+0.5
	baz=308,SNR=128						
TCOL	CIGO, UAF Yank	71.12	24	IAMs_20	IAMs_20	08 00 07.6	
	comp=Z,8μm,18.0s						
TCOL	CIGO, UAF Yank	71.12	24	P	P	07 26 05.3	+0.4
	baz=308,SNR=36						
COLA	College	71.12	24	P	P	07 26 05.5	+0.6
COLA	College	71.12	24	IAMs_20	IAMs_20	08 00 07.6	
	comp=Z,8μm,18.0s						
COLA	College	71.12	24	P	P	07 26 05.5	+0.6
COLA				pmax	pmax		
	comp=Z,568nm,1.0s						
COLA				MLR	MLR		
	comp=Z,8μm,18.0s						
COLA	College	71.12	24	P	P	07 26 05.7	+0.7
	baz=308						
COLA	College	71.12	24	P	P	07 26 05.6	+0.6
COLA	College	71.12	24	P	P	07 26 04.9	-0.1
COLA				pP	pP	07 26 15.8	+1.3
COLA				sP	sP	07 26 20.2	+2.1
TRF	Thorofare Moun	71.12	26	IAMs_20	IAMs_20	07 59 24.9	
	comp=Z,9μm,20.0s						
TRF	Thorofare Moun	71.12	26	P	P	07 26 05.8	+0.5
	baz=306,SNR=19						
ROSF	Rostrenen	71.18	316	eP	P	07 26 05.9	+0.2
ROSF				pmax	pmax		
	comp=Z,268nm,1.2s						
VOI	Vohitsoka	71.22	227	P	P	07 26 05.6	-0.7
VOI	Vohitsoka	71.22	227	P	P	07 26 06.0	-0.3
	SNR=6.7						
VOI	Vohitsoka	71.22	227	P	P	07 26 06.0	-0.3
O18K	Koktuh Hills	71.25	30	IAMs_20	IAMs_20	07 59 44.5	
	comp=Z,7μm,20.0s						
O18K	Koktuh Hills	71.25	30	P	P	07 26 07.0	+1.1
	baz=303,SNR=41						
Q16K	King Salmon	71.27	32	P	P	07 26 06.2	+0.3
	baz=303,SNR=10						
CCB	Clear Creek Bu	71.28	24	P	P	07 26 05.5	-0.4
CCB				IAmb	IAmb	07 26 07.4	
	comp=Z,341nm,1.4s						
CCB				IAMs_20	IAMs_20	08 00 02.8	
	comp=Z,6μm,18.0s						
WRH	Wood River Hil	71.28	24	IAMs_20	IAMs_20	08 00 03.1	
	comp=Z,6μm,18.0s						
QUIF	Quistinic	71.32	315	eP	P	07 26 07.5	+1.0
QUIF				pmax	pmax		
	comp=Z,146nm,1.2s						
O19K	Port Alsworth	71.43	30	IAMs_20	IAMs_20	08 00 10.7	
	comp=Z,6μm,18.0s						
O19K	Port Alsworth	71.43	30	P	P	07 26 08.0	+1.1
	baz=304						
EPF	Esparros	71.44	310	eP	P	07 26 05.6	-1.8
EPF				pmax	pmax		
	comp=Z,55nm,1.4s						
MCK	McKinley	71.44	25	IAmb	IAmb	07 26 09.1	
	comp=Z,152nm,0.9s						
MCK	McKinley	71.44	25	P	P	07 26 06.4	-0.6
	baz=307,SNR=60						
PRP	Porcupine Dome	71.48	22	IAMs_20	IAMs_20	08 01 14.2	
	comp=Z,11μm,18.0s						
PRP	Porcupine Dome	71.48	22	P	P	07 26 07.9	+0.5
	baz=310,SNR=64						
P18K	Big Mountain,	71.50	30	P	P	07 26 08.2	+0.8
P18K				IAMs_20	IAMs_20	08 00 35.0	
	comp=Z,7μm,20.0s						
P18K	Big Mountain,	71.50	30	P	P	07 26 07.6	+0.1
	baz=304,SNR=37						
IL31		71.51	23	P	P	07 26 06.7	-0.6
IL31				IAmb	IAmb	07 26 08.5	
	comp=Z,279nm,1.1s						
ILAR	Eielson Array	71.51	23	P	P	07 26 06.7	-0.7
	comp=Z,152nm,0.9s,baz=293,slow=4.4,SNR=540						
ILAR				PP	PP	07 28 45.7	+0.1
	comp=Z,16nm,0.8s,baz=297,slow=5.2,SNR=9.4						
ILAR				LR	LR	08 00 40.4	
	comp=Z,8μm,18.0s,baz=294,slow=38						
	comp=Z,152nm,0.9s						
ILAR	Eielson Array	71.51	23	P	P	07 26 06.4	-0.9
SKT	Skwentna	71.53	27	IAMs_20	IAMs_20	07 59 44.6	
	comp=Z,10μm,20.0s						
SKT	Skwentna	71.53	27	P	P	07 26 07.0	-0.5
	baz=306,SNR=86						
SOEG	Soedalen	71.64	341	iP	P	07 26 08.3	+0.2
SOEG				IAmb	IAmb	07 26 09.8	
	comp=Z,295nm,1.2s						
RND	Reindeer	71.67	25	IAmb	IAmb	07 26 09.8	
	comp=Z,391nm,1.3s						
OOD	Oodnadatta	71.70	142	P	P	07 26 09.8	+0.9
HDA	Harding Lake	71.71	24	IAmb	IAmb	07 26 09.3	
	comp=Z,235nm,1.2s						
HDA	Harding Lake	71.71	24	P	P	07 26 08.1	-0.5
	baz=309,SNR=37						
SPCR	Spurr Chakacha	71.72	28	P	P	07 26 08.7	-0.1
	baz=305,SNR=11						
N20K	Mount Spurr	71.72	28	P	P	07 26 08.7	-0.1
	baz=305,SNR=25						
CHGN	Chignik	71.73	34	P	P	07 26 07.7	-1.1
CHGN				IAmb	IAmb	07 26 11.3	
	comp=Z,184nm,1.0s						
CHGN	Chignik	71.73	34	P	P	07 26 07.3	-1.5
	baz=302,SNR=11						
TV1H	Townsville Har	71.74	128	P	P	07 26 10.6	+1.3
CUT	Chulitna	71.75	26	P	P	07 26 09.0	+0.2
CUT				IAMs_20	IAMs_20	07 59 44.6	
	comp=Z,7μm,19.0s						
CUT	Chulitna	71.75	26	P	P	07 26 09.1	+0.2
	baz=306,SNR=40						
A36M	Sachs Harbour	71.76	12	P	P	07 26 09.0	+0.3
	baz=325,SNR=119						
SPU	Mount Spurr	71.79	28	P	P	07 26 09.7	+0.5
G27K	Doyon Strip	71.82	20	P	P	07 26 09.9	+0.7
	baz=312,SNR=156						
Q17K	Contact Creek	71.83	32	P	P	07 26 08.0	-1.6
	baz=303,SNR=14						
CHNA	Chernabura Isl	71.94	36	P	P	07 26 08.5	-1.5
	baz=302,SNR=19						
CTA	Charters Tower	71.97	129	P	P	07 26 10.7	0.0
	comp=Z,98nm,1.1s,baz=316,slow=7.1,SNR=52						
	comp=Z,98nm,1.1s						
CTA	Charters Tower	71.97	129	P	P	07 26 11.2	+0.5
CTAO	Charters Tower	71.97	129	P	P	07 26 10.8	0.0
CTAO	Charters Tower	71.97	129	P	P	07 26 10.8	+0.1
CTAO				pmax	pmax		
	comp=Z,87nm,1.0s						
CTAO	Charters Tower	71.97	129	P	P	07 26 11.2	+0.5
Q18K	Katmai Hardscr	72.00	31	P	P	07 26 09.3	-1.2
	baz=304,SNR=15						
ETSF	Etsaut	72.08	310	eP	P	07 26 11.5	+0.2
ETSF				pmax	pmax		
	comp=Z,70nm,0.8s						
J25K	Salcha River,	72.11	23	IAmb	IAmb	07 26 11.8	
	comp=Z,139nm,1.1s						
J25K				IAMs_20	IAMs_20	08 00 58.9	
	comp=Z,9μm,18.0s						
J25K	Salcha River,	72.11	23	P	P	07 26 10.1	-1.0
	baz=310,SNR=72						
WAT1	Susitna Watana	72.13	26	P	P	07 26 10.2	-1.0
	baz=308						
SUA	Susitna One	72.13	27	IAmb	IAmb	07 26 13.1	
	comp=Z,392nm,0.9s						
SUA				IAMs_20	IAMs_20	07 59 55.6	
	comp=Z,8μm,19.0s						
SUA	Susitna One	72.13	27	P	P	07 26 11.7	+0.4
	baz=306						
P19K	Oil Pt	72.19	30	P	P	07 26 12.0	+0.4
P19K				IAMs_20	IAMs_20	08 00 15.3	
	comp=Z,6μm,18.0s						
P19K	Oil Pt	72.19	30	P	P	07 26 11.6	0.0
	baz=305,SNR=17						
O20K	Slope Mountain	72.20	29	P	P	07 26 10.6	-1.0
	baz=305						
M22K	Willow	72.20	27	IAMs_20	IAMs_20	08 00 08.4	
	comp=Z,7μm,18.0s						
M22K	Willow	72.20	27	P	P	07 26 10.6	-0.9
	baz=307,SNR=25						
H27K	Steamboat Moun	72.25	21	P	P	07 26 12.8	+0.9
	baz=313,SNR=183						
I26K	Coal Creek Min	72.38	22	IAmb	IAmb	07 26 14.9	
	comp=Z,467nm,1.2s						
I26K				IAMs_20	IAMs_20	08 01 46.1	
	comp=Z,8μm,20.0s						
I26K	Coal Creek Min	72.38	22	P	P	07 26 13.5	+1.0
	baz=312						
DHY	Denali Highway	72.40	25	IAmb	IAmb	07 26 14.4	
	comp=Z,198nm,1.0s						
DHY				IAMs_20	IAMs_20	08 00 24.6	
	comp=Z,8μm,18.0s						
DHY	Denali Highway	72.40	25	P	P	07 26 12.6	-0.3
	baz=309,SNR=92						
SJPF	Ste Jean	72.41	310	eP	P	07 26 14.7	+1.5
SJPF				pmax	pmax		
	comp=Z,29nm,0.8s						
Q19K	Cape Douglas,	72.43	30	IAMs_20	IAMs_20	08 00 20.7	
	comp=Z,7μm,19.0s						
Q19K	Cape Douglas,	72.43	30	P	P	07 26 11.6	-1.5
	baz=305,SNR=8.4						
K24K	Donnelly Dome	72.50	24	P	P	07 26 12.0	-1.3
	baz=310,SNR=154						
FIS	Fire Island	72.53	27	IAMs_20	IAMs_20	08 00 21.1	
	comp=Z,7μm,20.0s						
RES	Resolute Bay	72.54	3	IAmb	IAmb	07 26 15.4	
	comp=Z,261nm,1.4s						
RES	Resolute Bay	72.54	3	P	P	07 26 13.1	-0.2
WAT6	Susitna Watana	72.58	26	P	P	07 26 13.0	-1.0
	baz=308,SNR=40						
GHO	Glory Hole Cre	72.64	27	IAMs_20	IAMs_20	08 00 22.8	
	comp=Z,8μm,20.0s						
I27K	Kandik River	72.65	21	P	P	07 26 15.0	+0.8
	baz=313,SNR=378						
PMR	Palmer	72.67	27	P	P	07 26 14.3	0.0
PMR	Palmer	72.67	27	P	P	07 26 14.3	0.0
PMR				pmax	pmax		
	comp=Z,479nm,1.0s						
PMR	Palmer	72.67	27	P	P	07 26 14.2	0.0
	baz=308,SNR=65						
RC01	Rabbit Creek A	72.75	27	IAMs_20	IAMs_20	08 00 37.9	
	comp=Z,7μm,19.0s						
RC01	Rabbit Creek A	72.75	27	P	P	07 26 14.8	0.0
	baz=307,SNR=30						
UPNV	Upernavik	72.77	351	iP	P	07 26 14.0	-0.8
UPNV				IAmb	IAmb	07 26 15.7	
	comp=Z,351nm,1.4s						
J26L	Joseph Creek	72.78	23	P	P	07 26 14.5	-0.6
J26L				IAmb	IAmb	07 26 16.6	
	comp=Z,268nm,1.0s						
J26L				IAMs_20	IAMs_20	08 01 22.5	
	comp=Z,10μm,18.0s						
J26L	Joseph Creek	72.78	23	P	P	07 26 14.7	-0.4
	baz=311,SNR=136						
SML	Sawmill	72.84	26	IAMs_20	IAMs_20	08 00 30.3	
	comp=Z,9μm,20.0s						
SML	Sawmill	72.84	26	P	P	07 26 15.6	+0.2
	baz=308,SNR=116						
HOM	Homer	72.85	29	IAMs_20	IAMs_20	08 00 47.5	
	comp=Z,7μm,18.0s						
HOM	Homer	72.85	29	P	P	07 26 14.1	-1.3
	baz=306						
RIDG	Independent Ri	72.85	24	P	P	07 26 14.9	-0.5
	baz=310,SNR=141						
INK	Inuvik	72.93	17	P	P	07 26 15.8	0.0
	comp=Z,198nm,1.0s,baz=326,slow=7.2,SNR=171						
INK				LR	LR	08 04 20.4	
	comp=Z,3μm,18.4s,baz=14,slow=41						
	comp=Z,198nm,1.0s						
INK	Inuvik	72.93	17	IAmb	IAmb	07 26 17.7	
	comp=Z,334nm,1.1s						
INK	Inuvik	72.93	17	P	P	07 26 15.7	0.0
	baz=319,SNR=108						
SCRK	Sand Creek	72.99	23	P	P	07 26 16.1	-0.3
	baz=311,SNR=148						
ICESG	Greenland Ices	73.02	344	iP	P	07 26 16.8	+0.1
ICESG				IAmb	IAmb	07 26 17.8	
	comp=Z,444nm,1.1s						
KNK	Knik Glacier	73.04	27	IAMs_20	IAMs_20	08 00 36.6	
	comp=Z,8μm,18.0s						
KNK	Knik Glacier	73.04	27	P	P	07 26 16.8	+0.2
	baz=308,SNR=62						
M23K	Glacier View	73.08	26	P	P	07 26 17.3	+0.5
	baz=309,SNR=60						
BRLK	Bradley Lake	73.09	29	P	P	07 26 16.6	-0.3
BRLK				IAmb	IAmb	07 26 17.9	
	comp=Z,323nm,0.9s						
BRLK				IAMs_20	IAMs_20	08 00 41.1	
	comp=Z,7μm,18.0s						
CNPM	China Poot	73.09	29	IAmb	IAmb	07 26 19.7	
	comp=Z,350nm,1.0s						
CNPM				IAMs_20	IAMs_20	08 00 55.1	
	comp=Z,8μm,18.0s						
O22K	Cooper Landing	73.12	28	IAmb	IAmb	07 26 18.3	
	comp=Z,260nm,0.8s						
O22K	Cooper Landing	73.12	28	P	P	07 26 16.3	-0.7
	baz=307,SNR=10						
PAX	Paxson	73.14	25	P	P	07 26 16.9	-0.3
PAX				IAmb	IAmb	07 26 18.8	
	comp=Z,202nm,1.1s						
PAX	Paxson	73.14	25	P	P	07 26 16.9	-0.3
PAX				pmax	pmax		
	comp=Z,202nm,1.1s						
PAX	Paxson	73.14	25	P	P	07 26 17.3	+0.1
	baz=310,SNR=65						
Q20K	Shuyak Island	73.15	30	P	P	07 26 15.8	-1.4
	baz=306						
BRSE	Bradley Lake S	73.16	29	P	P	07 26 16.5	-0.8
	baz=307,SNR=27						
DOT	Dot Lake	73.18	24	IAmb	IAmb	07 26 21.1	
	comp=Z,179nm,1.2s						
SCM	Sheep Creek Mo	73.20	26	P	P	07 26 18.1	+0.5
	baz=309,SNR=62						
G30M	tAoh Zraii Nji	73.23	19	P	P	07 26 17.8	+0.1
	baz=317,SNR=103						
CHIR	Chirikof Islan	73.31	34	P	P	07 26 18.3	0.0
	baz=304						
EGAK	Eagle	73.36	22	P	P	07 26 18.9	+0.5
EGAK				IAMs_20	IAMs_20	08 02 33.8	
	comp=Z,10μm,18.0s						
EGAK	Eagle	73.36	22	P	P	07 26 18.9	+0.5
	baz=313,SNR=211						
PWL	Port Wells	73.43	27	IAMs_20	IAMs_20	08 00 39.0	
	comp=Z,8μm,18.0s						
PWL	Port Wells	73.43	27	P	P	07 26 19.2	+0.3
	baz=308,SNR=54						
M24K	Tolsona, Glenn	73.44	25	P	P	07 26 19.8	+0.7
	baz=310,SNR=66						
SEW	Seward	73.46	28	IAmb	IAmb	07 26 20.4	
	comp=Z,283nm,1.0s						
SEW	Seward	73.46	28	P	P	07 26 18.7	-0.3
	baz=308,SNR=20						
NUUG	Nuugaatsiaq	73.49	350	iP	P	07 26 17.6	-1.4
NUUG				IAmb	IAmb	07 26 19.8	
	comp=Z,162nm,1.4s						
F31M	Tsiigehtchic	73.53	18	P	P	07 26 19.2	-0.1
	baz=319,SNR=30						
EPYK	Eagle Plains	73.54	19	IAmb	IAmb	07 26 21.0	
	comp=Z,414nm,1.2s						
EPYK	Eagle Plains	73.54	19	P	P	07 26 19.6	+0.1
	baz=317,SNR=94						
KDAK	Kodiak Island	73.55	31	LR	LR	08 01 21.2	
	comp=Z,9μm,19.7s,baz=333,slow=38						
KDAK	Kodiak Island	73.55	31	P	P	07 26 19.4	-0.2
KDAK	Kodiak Island	73.55	31	IAMs_20	IAMs_20	08 01 00.4	
	comp=Z,8μm,19.0s						
KDAK	Kodiak Island	73.55	31	P	P	07 26 19.4	-0.2
KDAK				pmax	pmax		
	comp=Z,769nm,1.2s						
KDAK				MLR	MLR		
	comp=Z,8μm,19.0s						
KDAK	Kodiak Island	73.55	31	P	P	07 26 19.0	-0.6
	baz=306						
SII	Sitkinak Islan	73.55	33	P	P	07 26 19.5	-0.2
SII	Sitkinak Islan	73.55	33	P	P	07 26 19.2	-0.5
	baz=305,SNR=6.3						
SII	Sitkinak Islan	73.55	33	P	P	07 26 20.0	+0.3
OHAK	Old Harbor	73.57	32	P	P	07 26 20.1	+0.4
	baz=306,SNR=25						
K27K	Chicken	73.58	23	IAMs_20	IAMs_20	08 01 55.9	
	comp=Z,8μm,19.0s						
K27K	Chicken	73.58	23	P	P	07 26 20.5	+0.8
	baz=313						
HARP	HAARP	73.62	25	P	P	07 26 20.3	+0.3
	baz=311,SNR=42						
I29M	Ogilvie Camp,	73.81	20	IAmb	IAmb	07 26 22.5	
	comp=Z,220nm,1.1s						
I29M				IAMs_20	IAMs_20	08 02 13.8	
	comp=Z,6μm,18.0s						
I29M	Ogilvie Camp,	73.81	20	P	P	07 26 20.6	-0.5
	baz=316,SNR=98						
L26K	Log Cabin Wild	73.83	24	P	P	07 26 21.0	-0.3
L26K	Log Cabin Wild	73.83	24	P	P	07 26 21.2	0.0
	baz=312,SNR=44						
GLI	Glacier Island	73.89	27	IAmb	IAmb	07 26 23.2	
	comp=Z,143nm,0.9s						
GLI				IAMs_20	IAMs_20	08 01 13.0	
	comp=Z,10μm,19.0s						
GLI	Glacier Island	73.89	27	P	P	07 26 21.2	-0.3
	baz=309,SNR=10						
KLU	Klutina	73.93	26	P	P	07 26 22.7	+0.8
	baz=310,SNR=103						
C36M	Paulatuk	74.18	13	P	P	07 26 22.7	-0.4
	baz=327,SNR=62						
FID	Port Fidalgo	74.20	27	IAmb	IAmb	07 26 25.4	
	comp=Z,392nm,1.0s						
DIV	Divide	74.22	26	IAmb	IAmb	07 26 25.8	
	comp=Z,293nm,0.9s						
L27K	Beaver Creek,	74.32	23	P	P	07 26 25.0	+0.9
	baz=313,SNR=222						
BCAR	Beaver Creek A	74.33	23	P	P	07 26 24.1	-0.1
P23K	Montague Islan	74.33	28	P	P	07 26 24.8	+0.7
	baz=309						
N25K	Chitina, Valde	74.34	25	P	P	07 26 24.9	+0.6
N25K				IAMs_20	IAMs_20	08 01 27.9	
	comp=Z,7μm,19.0s						
N25K	Chitina, Valde	74.34	25	P	P	07 26 24.8	+0.6
	baz=311,SNR=80						
INKA	Innaminka	74.37	139	P	P	07 26 26.1	+1.4
M26K	Nabesna, AK	74.37	24	IAmb	IAmb	07 26 28.3	
	comp=Z,207nm,1.1s						
M26K				IAMs_20	IAMs_20	08 01 49.7	
	comp=Z,8μm,18.0s						
M26K	Nabesna, AK	74.37	24	P	P	07 26 25.6	+1.1
	baz=312,SNR=62						
DAWY	Dawson	74.41	22	IAmb	IAmb	07 26 26.5	
	comp=Z,363nm,1.2s						
DAWY	Dawson	74.41	22	P	P	07 26 25.0	+0.4
	baz=315,SNR=179						
HIN	Hinchinbrook I	74.42	27	P	P	07 26 25.3	+0.6
J29M	Klondike Camp	74.49	21	IAMs_20	IAMs_20	08 03 33.7	
	comp=Z,10μm,18.0s						
J29M	Klondike Camp	74.49	21	P	P	07 26 25.8	+0.7
	baz=316,SNR=32						
EYAK	Cordova Ski Ar	74.61	27	IAmb	IAmb	07 26 28.2	
	comp=Z,289nm,1.0s						
EYAK	Cordova Ski Ar	74.61	27	P	P	07 26 26.9	+1.2
	baz=310,SNR=25						
GLB	Gilahina Butte	74.73	25	IAmb	IAmb	07 26 28.9	
	comp=Z,271nm,1.2s						
GLB				IAMs_20	IAMs_20	08 01 41.2	
	comp=Z,7μm,18.0s						
BMRM	Bremner River	74.76	26	P	P	07 26 27.5	+0.8
BMRM	Bremner River	74.76	26	P	P	07 26 27.1	+0.4
	baz=311,SNR=44						
M27K	Edge Creek, AK	74.79	24	P	P	07 26 28.2	+1.2
M27K				IAMs_20	IAMs_20	08 02 04.6	
	comp=Z,8μm,18.0s						
M27K	Edge Creek, AK	74.79	24	P	P	07 26 27.7	+0.8
	baz=313,SNR=124						
HNR	Honiara	74.80	112	LR	LR	07 57 06.5	
	comp=Z,46μm,21.8s,baz=305,slow=34						
CART	Cartagena	74.96	305	P	P	07 26 29.1	+0.9
VRDI	Verde Repeater	75.00	25	P	P	07 26 28.6	+0.3
VRDI				IAmb	IAmb	07 26 30.7	
	comp=Z,337nm,1.2s						
VRDI				IAMs_20	IAMs_20	08 01 50.4	
	comp=Z,6μm,19.0s						
MCARA	McCarthy VSAT	75.05	25	P	P	07 26 29.2	+0.9
MCARA				IAMs_20	IAMs_20	08 01 51.7	
	comp=Z,7μm,20.0s						
MCARA	McCarthy VSAT	75.05	25	P	P	07 26 29.1	+0.8
	baz=312,SNR=63						
BVCY	Beaver Creek	75.09	23	P	P	07 26 29.5	+0.9
	baz=314,SNR=110						
Q23K	Middleton Isla	75.11	28	P	P	07 26 28.5	-0.1
	baz=310						
K29M	Barlow Dome	75.14	21	P	P	07 26 29.7	+0.7
	baz=316,SNR=66						
LCRK	Leigh Creek	75.14	142	P	P	07 26 29.9	+0.8
ILULI	Ilulissat	75.21	348	P	P	07 26 28.2	-0.8
ILULI				IAmb	IAmb	07 26 30.1	
	comp=Z,436nm,1.6s						
ILULI	Ilulissat	75.21	348	P	P	07 26 28.2	-0.8
ILULI				pmax	pmax		
	comp=Z,436nm,1.6s						
ILULI	Ilulissat	75.21	348	iP	P	07 26 28.8	-0.3
ILULI				IAmb	IAmb	07 26 29.6	
	comp=Z,577nm,1.7s						
ANGG	Ammassalik, Gr	75.22	342	IAmb	IAmb	07 26 30.5	
	comp=Z,410nm,1.7s						
ANGG	Ammassalik, Gr	75.22	342	eP	P	07 26 29.0	-0.1
ANGG				IAmb	IAmb	07 26 29.9	
	comp=Z,374nm,1.6s						
HMT	Hamilton	75.31	26	IAmb	IAmb	07 26 32.2	
	comp=Z,310nm,1.0s						
HMT				IAMs_20	IAMs_20	08 02 11.5	
	comp=Z,9μm,18.0s						
BERG	Berg Lake	75.48	26	IAmb	IAmb	07 26 33.2	
	comp=Z,409nm,1.1s						
L29M	L29M	75.49	22	P	P	07 26 31.4	+0.6
	baz=316,SNR=147						
QLP	Quilpie	75.49	135	P	P	07 26 33.1	+1.9
KAIM	Kayak Island	75.52	27	P	P	07 26 30.7	-0.3
	baz=312						
TGL	Tana Glacier	75.55	25	IAMs_20	IAMs_20	08 02 05.9	
	comp=Z,8μm,21.0s						
YUK3	Moose Creek	75.67	24	P	P	07 26 33.1	+1.0
	baz=314,SNR=108						
WAX	Waxell Ridge	75.75	26	IAmb	IAmb	07 26 35.2	
	comp=Z,392nm,1.1s						
WAX				IAMs_20	IAMs_20	08 02 23.2	
	comp=Z,7μm,18.0s						
BARN	Barnard Glacie	75.76	25	IAMs_20	IAMs_20	08 02 17.3	
	comp=Z,6μm,18.0s						
BGLC	Bering Glacier	75.81	26	P	P	07 26 33.5	+0.9
	baz=313						
MAYO	Mayo, Yukon	75.82	21	P	P	07 26 33.2	+0.5
MAYO	Mayo, Yukon	75.82	21	P	P	07 26 33.0	+0.3
	baz=318,SNR=34						
ISLE	Juniper Island	75.83	25	IAmb	IAmb	07 26 35.3	
	comp=Z,302nm,1.0s						
M29M	Somme Creek	75.86	23	P	P	07 26 34.2	+1.1
	baz=316,SNR=138						
ESBB	Sonseca Array	75.90	308	P	P	07 26 33.5	-0.2
ESDC	Sonseca Array	75.91	308	P	P	07 26 33.9	+0.2
	comp=Z,32nm,1.0s,baz=47,slow=6.2,SNR=106						
	comp=Z,32nm,1.0s						
ESDC	Sonseca Array	75.91	308	P	P	07 26 33.1	-0.6
CTG	Chitna Glacier	75.94	25	P	P	07 26 34.5	+0.9
	baz=314,SNR=57						
CTGM	Chitina Glacie	75.94	25	P	P	07 26 33.3	-0.3
CTGM				IAmb	IAmb	07 26 36.6	
	comp=Z,460nm,1.1s						
SNH	Sunshine Point	75.94	26	P	P	07 26 32.9	-0.5
SNH				IAmb	IAmb	07 26 36.6	
	comp=Z,422nm,1.2s						
SNH				IAMs_20	IAMs_20	08 02 32.1	
	comp=Z,8μm,20.0s						
BBOO	Buckleboo	75.98	145	P	P	07 26 33.5	-0.3
BBOO	Buckleboo	75.98	145	P	P	07 26 34.4	+0.5
LOGN	Logan Glacier	76.15	25	IAmb	IAmb	07 26 37.7	
	comp=Z,449nm,1.3s						
LOGN				IAMs_20	IAMs_20	08 02 38.7	
	comp=Z,6μm,19.0s						
YAH	Yahtse	76.21	25	IAMs_20	IAMs_20	08 04 59.3	
	comp=Z,6μm,18.0s						
PAB	San Pablo	76.23	308	P	P	07 26 34.6	-0.9
PAB	San Pablo	76.23	308	P	P	07 26 34.6	-0.9
PAB				pmax	pmax		
	comp=Z,155nm,1.8s

SFJD Kangerlussuaq 77.06 347 P P 07 26 39.2 -0.4
SFJD IAmb IAmb 07 26 40.5
comp=Z,346nm,1.1s
SFJD Kangerlussuaq 77.06 347 P P 07 26 39.2 -0.4
SFJD pmax pmax
comp=Z,346nm,1.1s
SFJD Kangerlussuaq 77.06 347 *i* P **P 07 26 39.4 -0.2**
SFJD IAmb IAmb 07 26 40.2
comp=Z,348nm,1.1s
RK1H Rockhampton Ha 77.08 129 P P 07 26 41.7 +1.4
MVO Moncorvo 77.12 311 *eP* **P 07 26 41.5 +1.0**
comp=Z,71nm,1.0s
M31M Drury Creek, Y 77.32 21 P P 07 26 41.8 +0.6
M31M IAmb IAmb 07 26 44.2
comp=Z,459nm,1.2s
M31M Drury Creek, Y 77.32 21 P P 07 26 41.9 +0.6
baz=319,SNR=115
TAF Taforalt 77.35 303 P P 07 26 43.0 +1.0
HYT Haines Junctio 77.35 23 IAmb IAmb 07 26 44.3
comp=Z,402nm,1.0s
HYT Haines Junctio 77.35 23 P P 07 26 42.7 +1.1
baz=317,SNR=94
O29M Mount Kennedy 77.37 24 P P 07 26 42.8 +1.1
baz=316,SNR=26
N31M Braeburn, Yuko 77.43 22 P P 07 26 42.7 +0.9
baz=318,SNR=122
PCAB Cabril 77.46 312 *eP* **P 07 26 43.4 +1.0**
comp=Z,154nm,1.8s
PGAV Gavieira, Arco 77.47 312 *eP* **P 07 26 43.7 +1.2**
comp=Z,152nm,1.9s
TAM Tamanrasset 77.48 289 P P 07 26 42.3 -0.7
POLO Lamas de Olo 77.49 311 *eP* **P 07 26 43.4 +0.7**
comp=Z,30nm,1.8s
PVRL Vila Real 77.50 311 *eP* **P 07 26 43.6 +1.0**
comp=Z,64nm,1.8s
PNL Peninsula 77.54 25 P P 07 26 44.2 +1.7
baz=316,SNR=9.6
AUMOU Moura State Hi 77.58 130 P P 07 26 45.5 +2.4
comp=Z,133nm,2.0s
FARO Faro, Yukon 77.62 21 P P 07 26 43.2 +0.3
FARO IAmb IAmb 07 26 45.1
comp=Z,333nm,1.5s
FARO Faro, Yukon 77.62 21 P P 07 26 43.3 +0.4
baz=320,SNR=66
JBK JBK 77.71 303 P P 07 26 45.0 +0.9
MTE Manteigas 77.86 310 *eP* **P 07 26 45.8 +1.1**
comp=Z,154nm,2.3s
O30N Mendenhall 77.86 23 P P 07 26 45.5 +1.2
baz=318,SNR=98
HTT Hallett 77.89 144 P P 07 26 46.0 +1.3
FIGM Figuig 77.91 300 P P 07 26 45.0 -0.2
PVIS Viseu 77.91 311 *eP* **P 07 26 46.0 +1.0**
comp=Z,135nm,1.8s
MMPY Sheldon Lake, 77.93 20 P P 07 26 45.5 +0.8
baz=322,SNR=194
STKA Stephens Creek 78.04 141 P P 07 26 45.6 +0.1
comp=Z,42nm,1.0s,baz=326,slow=6.9,SNR=28
STKA LR LR 08 05 18.4
comp=Z,2µm,18.9s,baz=299,slow=39
comp=Z,42nm,1.0s
STKA Stephens Creek 78.04 141 P P 07 26 45.6 +0.1
STKA Stephens Creek 78.04 141 P P 07 26 46.0 +0.5
P30M Million Dollar 78.05 24 P P 07 26 46.1 +0.7
baz=318
PCBR Castelo Branco 78.12 310 *eP* **P 07 26 46.7 +0.7**
comp=Z,89nm,1.7s
P29M Windy Craggy 78.15 24 IAmb IAmb 07 26 48.5
comp=Z,257nm,1.1s
P29M Windy Craggy 78.15 24 P P 07 26 47.1 +1.2
baz=317
RMQ Roma 78.16 132 P P 07 26 48.6 +2.3
PALE Palemas 78.21 304 P P 07 26 47.0 +0.3
PMRV Marv??o 78.29 309 *eP* **P 07 26 47.6 +0.6**
comp=Z,154nm,1.6s
WHY Whitehorse 78.34 23 P P 07 26 47.0 0.0
WHY IAmb IAmb 07 26 49.2
comp=Z,307nm,1.4s
WHY Whitehorse 78.34 23 P P 07 26 47.2 +0.1
baz=319,SNR=41
N32M Quiet Lake 78.53 22 P P 07 26 47.9 -0.1
baz=320
PCAS Casmilo, Conde 78.66 310 *eP* **P 07 26 50.0 +1.0**
comp=Z,122nm,1.7s
PESTR Estremoz 78.72 309 *eP* **P 07 26 50.0 +0.6**
comp=Z,92nm,2.0s
PESTR Estremoz 78.72 309 P P 07 26 50.5 +1.1
PBAR Barrancos 78.73 308 *eP* **P 07 26 50.2 +0.7**
comp=Z,194nm,1.8s
PLBC Pleasant Camp 78.75 24 P P 07 26 49.9 +0.8
baz=318,SNR=39
EIDS Eidsvold 78.84 130 P P 07 26 51.1 +1.0
EIDS Eidsvold 78.84 130 P P 07 26 51.4 +1.3
PMTG Montargil 79.02 309 *eP* **P 07 26 51.7 +0.7**
comp=Z,131nm,1.7s
SKAG Skagway 79.10 24 P P 07 26 52.7 +1.7
baz=319,SNR=145
PSBE So Bento 79.15 310 *eP* **P 07 26 53.0 +1.2**
comp=Z,174nm,1.5s
CHEFC Chefchaouen 79.24 305 P P 07 26 53.0 +0.6
P33M Teslin, Yukon 79.34 22 P P 07 26 53.0 +0.5
P33M Teslin, Yukon 79.34 22 P P 07 26 53.2 +0.7
baz=321,SNR=82
PBEJ Beja 79.36 308 *eP* **P 07 26 53.7 +0.8**
comp=Z,98nm,1.5s
WRGLY Wrigley 79.49 17 P P 07 26 53.1 0.0
baz=328,SNR=49
P32M Atlin 79.53 23 P P 07 26 54.7 +1.2
baz=320,SNR=73
PVAQ Vaqueiros 79.60 308 *eP* **P 07 26 54.8 +0.6**
comp=Z,113nm,1.6s
PVAQ Vaqueiros 79.60 308 P P 07 26 55.2 +1.0
TGTN Hyland Airport 79.65 19 P P 07 26 55.9 +1.7
baz=324,SNR=137
LCRM LCR 79.66 303 P P 07 26 56.0 +1.1
PCVE Castro Verde 79.69 308 *eP* **P 07 26 55.4 +0.7**
comp=Z,79nm,1.6s
MESJ Messejana 79.70 308 *eP* **P 07 26 55.0 +0.3**
MESJ IAmb IAmb 07 26 56.6
comp=Z,78nm,1.2s
MESJ Messejana 79.70 308 *eP* **P 07 26 55.5 +0.8**
comp=Z,132nm,1.9s
MESJ Messejana 79.70 308 *eP* **P 07 26 55.0 +0.3**
R31K City Hall, Gus 79.75 24 P P 07 26 55.4 +0.8
baz=319
PNCL Nicolau / Gran 79.75 309 *eP* **P 07 26 56.1 +1.1**
comp=Z,128nm,1.8s
NUUK Nuuk 79.77 346 *i* P **P 07 26 54.1 -0.4**
NUUK IAmb IAmb 07 26 55.1
comp=Z,305nm,1.1s
PMAFR Mafra 79.77 310 *eP* **P 07 26 56.4 +1.3**
comp=Z,145nm,1.4s
AULRC Lightning Ridg 79.81 135 P P 07 26 56.6 +1.3
S31K Pelican 79.91 25 P P 07 26 56.6 +1.1
baz=318,SNR=12
MDT Midelt 79.95 302 P P 07 26 56.6 +0.3
CMSA Cobar Meteorol 80.04 138 P P 07 26 57.7 +1.3
PTEO Sao Teotonio 80.19 308 *eP* **P 07 26 59.0 +1.6**
comp=Z,186nm,1.7s
R32K Eaglecrest 80.27 24 P P 07 26 59.0 +1.6
baz=320,SNR=31
MORF Marmelete 80.28 308 *eP* **P 07 26 58.2 +0.2**
MORF IAmb IAmb 07 27 00.4
comp=Z,73nm,1.2s
MORF Marmelete 80.28 308 *eP* **P 07 26 58.9 +0.9**
comp=Z,131nm,1.7s
MORF Marmelete 80.28 308 *eP* **P 07 26 58.2 +0.2**
JIS Juneau Island 80.32 24 IAmb IAmb 07 27 01.0
comp=Z,445nm,1.0s
PFVI Vila Bisbo 80.49 308 *eP* **P 07 27 00.1 +1.1**
comp=Z,145nm,1.6s
Q32M Nakina River 80.49 23 P P 07 26 59.7 +0.8
baz=321,SNR=51
R33M Jennings River 80.56 22 P P 07 27 00.6 +1.4
baz=322,SNR=188
WTLY Watson Lake, Y 80.65 21 P P 07 27 00.4 +0.9
WTLY IAmb IAmb 07 27 01.6
comp=Z,469nm,1.2s
WTLY Watson Lake, Y 80.65 21 P P 07 26 59.7 +0.2
baz=324,SNR=15
S32K Killisnoo 80.87 25 P P 07 27 01.9 +1.3
baz=320,SNR=13
SIT Sitka 80.92 25 IAmb IAmb 07 27 04.2
comp=Z,390nm,1.2s
SIT Sitka 80.92 25 P P 07 27 03.0 +2.1
baz=319,SNR=16
IVI Ivigtut 81.56 343 P P 07 27 03.4 -0.8
IVI IAmb IAmb 07 27 04.9
comp=Z,198nm,1.1s
IVI Ivigtut 81.56 343 *i* P **P 07 27 02.9 -1.3**
IVI IAmb IAmb 07 27 04.5
comp=Z,238nm,1.2s
DLBC Dease Lake 81.62 22 P P 07 27 06.3 +1.5
DLBC Dease Lake 81.62 22 P P 07 27 06.2 +1.5
baz=323,SNR=172
AVE Averroes 81.66 304 IAmb IAmb 07 27 07.0
comp=Z,299nm,1.5s
AVE Averroes 81.66 304 P P 07 27 06.2 +0.8
S34M Telegraph Cree 81.69 23 P P 07 27 06.7 +1.7
baz=322,SNR=124
T33K Petersburg 81.94 24 P P 07 27 07.7 +1.4
baz=321,SNR=8.5
KOTAN Kotaneelee Air 81.97 19 P P 07 27 07.2 +0.7
baz=328
ARPS Mount Arapiles 81.98 144 P P 07 27 07.9 +1.2
LIRD Liard River Hi 82.01 20 P P 07 27 07.6 +0.9
baz=326
FLDN Fort Liard 82.03 18 P P 07 27 08.0 +1.2
baz=328,SNR=66
YKA Yellowknife Ar 82.07 13 P P 07 27 06.2 -0.7
comp=Z,190nm,1.0s,baz=333,slow=4.6,SNR=137
YKA PP PP 07 30 12.4 -1.7
comp=Z,7.9nm,0.9s,baz=328,slow=7.9,SNR=4.0
comp=Z,190nm,1.0s
AUDCS Dubbo College 82.23 136 P P 07 27 09.6 +1.5
U33K Whale Pass 82.42 25 P P 07 27 10.0 +1.1
baz=321,SNR=12
WRAK Wrangell Islan 82.46 24 P P 07 27 09.9 +0.9
WRAK Wrangell Islan 82.46 24 IAMs_20 IAMs_20 08 06 44.5
comp=Z,6µm,18.0s
WRAK Wrangell Islan 82.46 24 P P 07 27 10.3 +1.3
baz=322,SNR=44
MOPA Mopani 82.49 236 *eP* **P 07 27 09.3 -0.4**
MOPA IAmb IAmb 07 27 13.6
comp=Z,100nm,1.1s
T35M Bob Quinn 82.72 23 P P 07 27 12.1 +1.6
baz=323,SNR=106
ARMA Armidale 82.73 133 P P 07 27 10.0 -0.9
ARMA IAmb IAmb 07 27 14.0
comp=Z,150nm,1.1s
ARMA Armidale 82.73 133 P P 07 27 12.9 +2.0
AUPHS Peel High Scho 82.76 134 P P 07 27 12.9 +2.0
MUSN Musina, Limpop 82.78 238⇓ *iP* **P 07 27 11.1 -0.2**
MUSN IAmb IAmb 07 27 12.4
comp=Z,69nm,1.0s
CRAG Craig 82.93 25 P P 07 27 10.7 -0.8
CRAG IAmb IAmb 07 27 14.5
comp=Z,258nm,1.0s
CRAG Craig 82.93 25 P P 07 27 12.9 +1.4
baz=321,SNR=20
OUK Oukaimeden 83.15 303 P P 07 27 15.0 +1.4
V35K Ketchikan 83.57 25 P P 07 27 15.1 +0.3
baz=322,SNR=7.3
BRAT Ballarat 83.64 143 P P 07 27 17.0 +1.7
TTIG Tnine Tigouga, 83.93 302 P P 07 27 18.0 +0.6
MMAL MMAL 84.26 234 *eP* **P 07 27 18.7 -0.2**
MMAL IAmb IAmb 07 27 23.0
comp=Z,161nm,1.2s
TOO Toolangi 84.46 142 P P 07 27 20.9 +1.4
CAN Canberra 84.69 138 P P 07 27 21.6 +0.9
CAN IAmb IAmb 07 27 23.1
comp=Z,206nm,1.6s
CAN Canberra 84.69 138 P P 07 27 21.6 +0.9
CAN pmax pmax
comp=Z,206nm,1.6s
CAN Canberra 84.69 138 P P 07 27 21.9 +1.2
POGA Pongola 84.77 233 P P 07 27 20.6 -0.7
POGA IAmb IAmb 07 27 22.7
comp=Z,132nm,1.1s
POGA Pongola 84.77 233 *eP* **P 07 27 21.4 +0.1**
POGA IAmb IAmb 07 27 25.7
comp=Z,153nm,1.2s
RUBB Prince Rupert 84.85 25 IAmb IAmb 07 27 24.0
comp=Z,219nm,1.1s
CNB Canberra Magne 84.89 138 P P 07 27 22.5 +0.7
KOUNC Koumac, New Ca 84.89 118 P P 07 27 23.8 +1.8
DIB Dawson Inlet, 84.93 26 IAmb IAmb 07 27 24.1
comp=Z,251nm,1.0s
CRLN Carolina, Mapu 85.04 235 *eP* **P 07 27 22.7 -0.2**
CRLN IAmb IAmb 07 27 24.0
comp=Z,90nm,1.1s
LEPH Lephalale, Lim 85.24 238⇓ *iP* **P 07 27 23.6 -0.2**
LEPH IAmb IAmb 07 27 27.6
comp=Z,545nm,1.6s
AUSMG Snowy Mountain 85.27 139 P P 07 27 24.9 +1.2
TOA0 Torodi Ar. Sit 85.61 283 P P 07 27 25.0 -0.9
TOA0 IAmb IAmb 07 27 27.0
comp=Z,106nm,1.2s
TORD Torodi Ar. Bea 85.61 283 P P 07 27 25.4 -0.4
comp=Z,34nm,0.9s,baz=48,slow=4.7,SNR=129
TORD PP PP 07 30 41.9 -2.8
comp=Z,8.4nm,1.1s,baz=67,slow=8.4,SNR=4.7
comp=Z,34nm,0.9s
MILA Mila 86.03 139 P P 07 27 28.4 +1.0
SLR Silverton 86.08 236⇓ *iP* **P 07 27 28.1 0.0**
SLR IAmb IAmb 07 27 32.1
comp=Z,342nm,1.5s
HG4B Hotspring 86.13 26 IAmb IAmb 07 27 30.0
comp=Z,216nm,1.2s
NWCL Newcastle 86.24 234 *eP* **P 07 27 28.8 0.0**
NWCL IAmb IAmb 07 27 32.7
comp=Z,163nm,1.4s
MANA Manning 86.49 17 P P 07 27 29.4 -0.1
HRAO HartRAO 86.59 236⇓ *iP* **P 07 27 30.5 -0.1**
HRAO IAmb IAmb 07 27 34.5
comp=Z,573nm,1.6s
KSR Koster 87.12 237 *eP* **P 07 27 33.2 0.0**
KSR IAmb IAmb 07 27 37.0
comp=Z,127nm,1.5s
BBB Bella Bella 87.34 25 IAmb IAmb 07 27 35.7
comp=Z,135nm,1.3s
DZM Mont Dzumac 87.41 118 *eP* **P 07 27 34.5 -0.1**
comp=Z,200nm,1.4s
DZM Mont Dzumac 87.41 118 P P 07 27 35.0 +0.5
DZM IAmb IAmb 07 27 37.4
comp=Z,99nm,1.2s
DZM Mont Dzumac 87.41 118 P P 07 27 35.9 +1.3
PRYS Parys 87.47 236 *eP* **P 07 27 33.2 -1.6**
PRYS IAmb IAmb 07 27 38.2
comp=Z,148nm,1.4s
LBTB Lobatse 87.53 238 P P 07 27 35.0 -0.1
LBTB IAmb IAmb 07 27 36.4
comp=Z,151nm,1.1s
LBTB Lobatse 87.53 238⇓ *iP* **P 07 27 35.2 +0.1**
LBTB IAmb IAmb 07 27 39.0
comp=Z,308nm,1.6s
LBTB Lobatse 87.53 238 P P 07 27 35.0 -0.1
LBTB pmax pmax
comp=Z,151nm,1.1s
YATNC Mamie plateau, 87.74 118 P P 07 27 38.7 +2.7
SNKL Senekal, Frees 88.03 234⇑ *iP* **P 07 27 37.5 0.0**
SNKL IAmb IAmb 07 27 41.0
comp=Z,358nm,1.6s
AULHS Lilydale High 88.11 143 P P 07 27 39.3 +2.0
SWZ Schweizer 89.05 237 *eP* **P 07 27 40.4 -1.9**
SWZ IAmb IAmb 07 27 46.6
comp=Z,168nm,1.6s
KOWA Kowa 89.53 287 P P 07 27 43.7 -1.0
KOWA IAmb IAmb 07 27 45.8
comp=Z,90nm,1.2s
KOWA Kowa 89.53 287 P P 07 27 44.7 0.0
BOSA Boshof 89.97 236 P P 07 27 45.3 -1.3
comp=Z,15nm,1.1s,baz=58,slow=6.0,SNR=8.8
comp=Z,15nm,1.1s
BOSA Boshof 89.97 236 P P 07 27 45.0 -1.6
BOSA IAmb IAmb 07 27 50.3
comp=Z,178nm,1.9s
BOSA Boshof 89.97 236 *eP* **P 07 27 44.6 -2.0**
BOSA IAmb IAmb 07 27 49.7
comp=Z,196nm,1.9s
TSUM Tsumeb 90.09 247 P P 07 27 46.7 -0.6
TSUM Tsumeb 90.09 247 *eP* **P 07 27 47.6 +0.3**
EDM Edmonton 90.83 17 P P 07 27 50.5 +0.3
EDM Edmonton 90.83 17 P P 07 27 50.5 +0.3
EDM pmax pmax
comp=Z,517nm,1.1s
HVD Gariep Dam 91.03 234 *eP* **P 07 27 49.1 -2.3**
HVD IAmb IAmb 07 27 54.0
comp=Z,48nm,1.3s
SCHQ Schefferville 91.26 350 P P 07 27 51.0 -1.1
comp=Z,46nm,0.9s,baz=30,slow=5.8,SNR=27
SCHQ PP PP 07 31 28.2 -0.1
comp=Z,10nm,0.9s,baz=24,slow=7.6,SNR=4.3
comp=Z,46nm,0.9s
SCHQ Schefferville 91.26 350 IAmb IAmb 07 27 53.0
comp=Z,70nm,0.9s
FFC Flin Flon 91.57 10 P P 07 27 53.0 -0.5
FFC Flin Flon 91.57 10 P P 07 27 53.0 -0.5
FFC pmax pmax
comp=Z,332nm,1.0s
OPA Opana 91.83 63 P P 07 27 55.4 +0.1
OPA Opana 91.83 63 P P 07 27 55.4 +0.1
OPA pmax pmax
comp=Z,189nm,0.9s
PGC Sidney 91.93 24 P P 07 27 55.8 +0.5
PGC IAmb IAmb 07 27 58.3
comp=Z,200nm,1.2s
KIP Kipapa 91.98 63 P P 07 27 56.2 +0.1
KIP IAmb IAmb 07 27 57.6
comp=Z,148nm,1.1s
KIP Kipapa 91.98 63 P P 07 27 56.2 +0.1
KIP pmax pmax
comp=Z,148nm,1.1s
KIP Kipapa 91.98 63 P P 07 27 57.2 +1.2
UPI Upington 92.64 238 *eP* **P 07 27 57.6 -1.2**
UPI IAmb IAmb 07 27 59.7
comp=Z,33nm,1.2s
B06A Marblemount 92.71 23 P P 07 27 59.4 +0.5
GRAF Camdeboo Natio 92.73 233 *eP* **P 07 27 58.7 -0.5**
GRAF IAmb IAmb 07 28 02.7
comp=Z,151nm,1.7s
NLWA Neilton Lookou 92.86 25 P P 07 27 58.8 -0.9
NLWA IAmb IAmb 07 28 03.1
comp=Z,184nm,1.3s
BFON Badsfontein, M 92.98 234 *eP* **P 07 28 00.1 -0.4**
BFON IAmb IAmb 07 28 04.2
comp=Z,215nm,1.9s
KEIM Keimoes 93.04 238 *eP* **P 07 28 00.1 -0.6**
KEIM IAmb IAmb 07 28 04.7
comp=Z,162nm,1.7s
B08A Colville Reser 93.55 22 P P 07 28 02.7 -0.2
E03A Lebam 93.69 25 IAmb IAmb 07 28 06.5
comp=Z,191nm,1.3s
LTY Liberty 94.08 23 IAmb IAmb 07 28 07.6
comp=Z,102nm,1.2s
NEW Newport 94.31 21 P P 07 28 06.5 +0.1
NEW IAmb IAmb 07 28 08.9
comp=Z,138nm,1.4s
NEW Newport 94.31 21 IAMs_20 IAMs_20 08 14 41.6
comp=Z,6µm,18.0s
NEW Newport 94.31 21 P P 07 28 06.5 +0.1
NEW pmax pmax
comp=Z,138nm,1.5s
NEW Newport 94.31 21 P P 07 28 07.1 +0.7
baz=334,SNR=29
C09A Chrisman Ranch 94.38 22 IAmb IAmb 07 28 09.3
comp=Z,146nm,1.2s
WALA Waterton Lakes 94.50 19 IAmb IAmb 07 28 09.0
comp=Z,79nm,1.2s
DBIC Dimbokro 94.53 281 P P 07 28 06.2 -1.7
comp=Z,23nm,1.0s,baz=40,slow=4.0,SNR=12
comp=Z,23nm,1.0s
DBIC Dimbokro 94.53 281 P P 07 28 06.8 -1.1
DBIC Dimbokro 94.53 281 *eP* **P 07 28 06.9 -1.0**
DBIC IAmb IAmb 07 28 08.1
comp=Z,39nm,1.1s
DBIC Dimbokro 94.53 281 P P 07 28 06.8 -1.1
DBIC pmax pmax
comp=Z,40nm,1.1s
HPAH Hawaii Prepara 94.55 63 P P 07 28 07.5 -0.5
KIC Kosan Boka 94.61 281⇑ *eP* **P 07 28 06.9 -1.4**
comp=Z,5.7nm,0.5s
FRAZ Fraserburg 94.62 235 *eP* **P 07 28 07.4 -0.6**
FRAZ IAmb IAmb 07 28 11.8
comp=Z,97nm,1.6s
TIC Toumodi 94.68 281⇑ *eP* **P 07 28 08.0 -0.6**
comp=Z,21nm,0.9s
D08A Wollman Farm, 94.83 22 IAmb IAmb 07 28 11.3
comp=Z,103nm,1.5s
LIC Lamto 94.92 281⇓ *eP* **P 07 28 08.6 -1.1**
comp=Z,47nm,1.2s
E08A Dider Farm, El 95.28 23 IAmb IAmb 07 28 13.6
comp=Z,134nm,1.4s
SUR Sutherland 95.29 235 IAMs_20 IAMs_20 08 09 57.0
comp=Z,6µm,20.0s
PUH Pauahi 95.31 63 P P 07 28 12.3 +0.8
HOOD Mount Hood Mea 95.42 25 IAmb IAmb 07 28 14.3
comp=Z,138nm,1.1s
F07A Phinny Hill Vi 95.52 24 IAmb IAmb 07 28 14.8
comp=Z,132nm,1.7s
E09A Wood Farm, Sta 95.56 22 IAmb IAmb 07 28 14.5
comp=Z,78nm,1.4s
JTMT Jette 95.60 19 P P 07 28 12.6 +0.2
JTMT IAmb IAmb 07 28 14.8
comp=Z,147nm,1.1s
H04A Detroit Lake 95.78 26 P P 07 28 12.8 -0.4
H04A IAmb IAmb 07 28 15.4
comp=Z,88nm,1.3s
EGMT Eagleton 96.51 16 P P 07 28 13.6 -2.8
EGMT IAmb IAmb 07 28 17.8
comp=Z,129nm,1.3s
EGMT IAMs_20 IAMs_20 08 17 38.8
comp=Z,5µm,19.0s
EGMT Eagleton 96.51 16 P P 07 28 15.3 -1.2
baz=339
MSO Missoula 96.53 19 P P 07 28 15.2 -1.4
MSO IAmb IAmb 07 28 18.3
comp=Z,67nm,1.3s
MSO Missoula 96.53 19 P P 07 28 16.4 -0.2
baz=336,SNR=34
ULM Lac du Bonnet 96.71 7 P P 07 28 15.9 -1.3
comp=Z,33nm,0.9s,baz=352,slow=5.1,SNR=17
comp=Z,33nm,0.9s
ULM Lac du Bonnet 96.71 7 P P 07 28 15.2 -2.0
ULM IAmb IAmb 07 28 17.3
comp=Z,62nm,1.1s
PINE Pine Mountain 97.00 25 IAmb IAmb 07 28 22.1
comp=Z,97nm,1.1s
I07A Izee 97.25 24 IAmb IAmb 07 28 22.9
comp=Z,81nm,1.4s
DGMT Dagmar 97.26 13 P P 07 28 19.5 -0.3
DGMT Dagmar 97.26 13 IAMs_20 IAMs_20 08 18 42.5
comp=Z,6µm,18.0s
DGMT Dagmar 97.26 13 P Pdif 07 28 20.4 +0.5
baz=344,SNR=27
DGMT Dagmar 97.26 13 P Pdif 07 28 19.9 +0.1
baz=344
HUMO Hull Mountain 97.27 27 IAmb IAmb 07 28 23.1
comp=Z,116nm,1.6s
PLID Pearl Lake 97.51 22 P P 07 28 20.7 -0.5
PLID IAmb IAmb 07 28 22.8
comp=Z,78nm,1.2s
LRM Limekiln Ridge 97.87 19 P P 07 28 22.2 -0.7
K05A Summer Lake 97.94 26 IAmb IAmb 07 28 26.4
comp=Z,168nm,1.5s
J08A Circle Bar Ran 98.25 24 IAmb IAmb 07 28 27.1
comp=Z,73nm,1.3s
BOZ Bozeman (W) 98.30 18 IAmb IAmb 07 28 26.4
comp=Z,71nm,1.6s
BOZ Bozeman (W) 98.30 18 P P 07 28 24.3 -0.4
baz=338,SNR=27
BATG Bathurst New B 98.41 347 IAmb IAmb 07 28 26.6
comp=Z,76nm,1.0s
LAO LASA Array 98.56 15 P Pdif 07 28 26.0 +0.2
LAO IAmb IAmb 07 28 27.6
comp=Z,77nm,1.4s
LAO LASA Array 98.56 15 P Pdif 07 28 26.6 +0.8
baz=342
LAO LASA Array 98.56 15 P Pdif 07 28 26.1 +0.3
baz=342
MDND Maddock 98.62 10 P 07 28 24.3 -1.6
MDND IAmb IAmb 07 28 27.2
comp=Z,78nm,1.2s
MDND Maddock 98.62 10 P Pdif 07 28 26.4 +0.5
baz=348,SNR=5.9
MDND Maddock 98.62 10 P P 07 28 25.5 -0.4
baz=348
GCMT Greycliff 98.62 17 P P 07 28 25.6 -0.5
AGMN Agassiz Nation 98.64 7 P P 07 28 25.4 -0.5
AGMN IAMs_20 IAMs_20 08 21 34.9
comp=Z,6µm,22.0s
AGMN Agassiz Nation 98.64 7 P P 07 28 25.4 -0.5
baz=351
MCMT McKenzie Canyo 98.67 20 P P 07 28 26.5 0.0
B35A Bob, Littlefor 98.78 6 P 07 28 25.9 -0.7
B35A IAmb IAmb 07 28 28.0
comp=Z,145nm,1.4s
B35A Bob, Littlefor 98.78 6 P P 07 28 26.1 -0.5
baz=353
MOD Modoc Plateau 98.88 26 P P 07 28 26.7 -0.6

MOD				IAmb	IAmb	07 28 30.2		
	comp=Z,92nm,1.6s							
WVOR	**Wild Horse Val**	**99.00**	**24**	P	**Pdif**	**07 28 25.8**	**-2.1**	
WVOR				IAmb	IAmb	07 28 30.4		
	comp=Z,58nm,1.4s							
WVOR	**Wild Horse Val**	**99.00**	**24**	P	**Pdif**	**07 28 25.8**	**-2.1**	
WVOR				pmax	pmax			
	comp=Z,58nm,1.4s							
MFID	**Camas Ranch**	**99.07**	**22**	IAmb	IAmb	07 32 27.2		
	comp=Z,50nm,1.4s							
D62A	**Allapoint, All**	**99.12**	**349**	P	**Pdif**	**07 28 27.6**	**-0.5**	
YHH	**Holmes Hill**	**99.25**	**18**	P	**Pdif**	**07 28 30.1**	**+0.9**	
YMR	**Madison River**	**99.34**	**18**	P	**Pdif**	**07 28 29.2**	**-0.2**	
PQI	**Presque Isle**	**99.35**	**348**	P	**Pdif**	**07 28 26.9**	**-2.2**	
PQI				IAmb	IAmb	07 28 30.4		
	comp=Z,66nm,1.1s							
RLMT	**Red Lodge**	**99.35**	**17**	Pdiff	**Pdif**	**07 28 29.1**	**-0.4**	
	baz=340							
LATQ	**La Tuque**	**99.36**	**352**	IAmb	IAmb	07 28 30.6		
	comp=Z,64nm,1.0s							
EYMN	**Ely**	**99.36**	**4**	P	**Pdif**	**07 28 28.3**	**-0.9**	
EYMN				IAmb	IAmb	07 28 30.0		
	comp=Z,69nm,1.2s							
EYMN	**Ely**	**99.36**	**4**	Pdiff	**Pdif**	**07 28 27.6**	**-1.6**	
	baz=355							
HLID	**Hailey**	**99.37**	**21**		**Pdif**	**07 28 29.8**	**+0.2**	
HLID	**Hailey**	**99.37**	**21**	Pdiff	**Pdif**	**07 28 30.4**	**+0.8**	
	baz=335							
YMP	**Mirror Lake Pl**	**99.48**	**18**	P	**Pdif**	**07 28 29.0**	**-1.1**	
E62A	**Clayton Lake**	**99.65**	**349**	P	**Pdif**	**07 28 30.7**	**+0.2**	
	baz=13							
E62A				P	**Pdif**	**07 28 30.7**	**+0.2**	
	baz=13							
E63A	**Oxbow**	**99.66**	**348**	P	**Pdif**	**07 28 30.4**	**-0.1**	
	baz=14							
E63A				P	**Pdif**	**07 28 30.4**	**-0.1**	
	baz=14							
H17A	**Grant Village**	**99.69**	**18**	Pdiff	**Pdif**	**07 28 31.4**	**+0.3**	
	baz=339							
E28A	**Huff**	**99.70**	**11**	P	**Pdif**	**07 28 31.2**	**+0.5**	
	baz=347,SNR=13							
SNOW	**Snow King Moun**	**100.51**	**19**	IAms_20	IAms_20	08 16 34.8		
	comp=Z,5µm,21.0s							
PKME	**Peaks-Kenny Pk**	**100.93**	**349**	Pdiff	**Pdif**	**07 28 35.0**	**-1.1**	
	baz=14							
F33A	**5 Mile Ranch,**	**101.02**	**8**	P	**Pdif**	**07 28 36.2**	**-0.3**	
	baz=350,SNR=6.0							
F36A	**Milaca**	**101.28**	**6**	P	**Pdif**	**07 28 37.7**	**-0.1**	
	baz=353,SNR=7.7							
COWI	**Conover**	**101.33**	**3**	IAms_20	IAms_20	08 23 34.9		
	comp=Z,4µm,20.0s							
RSSD	**Black Hills**	**101.47**	**14**	IAms_20	IAms_20	08 21 50.9		
	comp=Z,5µm,18.0s							
RSSD	**Black Hills**	**101.47**	**14**	P	**Pdif**	**07 28 39.2**	**+0.3**	
	baz=344							
RSSD	**Black Hills**	**101.47**	**14**	Pdiff	**Pdif**	**07 28 38.6**	**-0.3**	
	baz=344							
BW06	**Boulder Array**	**101.48**	**18**	IAms_20	IAms_20	08 17 55.0		
	comp=Z,6µm,22.0s							
BW06	**Boulder Array**	**101.48**	**18**	Pdiff	**Pdif**	**07 28 37.2**	**-1.8**	
	baz=339							
PDAR	**Pinedale Array**	**101.48**	**18**	P	**Pdif**	**07 28 38.6**	**-0.4**	
	comp=Z,4.2nm,0.9s,baz=28,slow=2.3,SNR=27							
PDAR				PP	**PP**	**07 32 43.2**	**-4.5**	
	comp=Z,3.7nm,1.0s,baz=340,slow=5.1,SNR=4.8							
PDAR				PKKPbc	**PKKPbc**	**07 44 45.2**	**-1.7**	
	comp=Z,0.3nm,0.6s,baz=178,slow=2.6,SNR=4.3							
SPMN	**Marine on St.**	**101.97**	**6**	P	**Pdif**	**07 28 41.0**	**+0.2**	
	baz=353,SNR=5.3							
SPMN	**Marine on St.**	**101.97**	**6**	Pdiff	**Pdif**	**07 28 39.0**	**-1.8**	
	baz=353							
SUSD	**Miller**	**102.04**	**10**	P	**Pdif**	**07 28 41.7**	**+0.5**	
	baz=348							
SUSD	**Miller**	**102.04**	**10**	Pdiff	**Pdif**	**07 28 39.9**	**-1.2**	
	baz=348							
G40A	**Rib Lake**	**102.11**	**4**	P	**Pdif**	**07 28 40.6**	**-0.8**	
	baz=356							
LONY	**Lake Ozonia**	**102.30**	**352**	Pdiff	**Pdif**	**07 28 42.7**	**+0.4**	
	baz=9.0							
LBNH	**Lisbon**	**102.33**	**350**	Pdiff	**Pdif**	**07 28 42.3**	**-0.2**	
	baz=11							
K22A	**Casper**	**102.34**	**16**	Pdiff	**Pdif**	**07 28 41.2**	**-1.5**	
	baz=342							
NVAR	**Mina Array Bea**	**102.65**	**26**	Pdiff	**Pdif**	**07 28 45.5**	**+1.2**	
	comp=Z,4.5nm,0.9s,baz=306,slow=3.5,SNR=24							
NVAR				PP	**PP**	**07 32 52.0**	**-4.6**	
	comp=Z,14nm,1.2s,baz=340,slow=5.0,SNR=5.7							
NVAR				PKKPbc	**PKKPbc**	**07 44 41.4**	**-2.0**	
	comp=Z,1.4nm,1.0s,baz=159,slow=5.8,SNR=2.9							
GLMI	**Grayling**	**102.69**	**360**	Pdiff	**Pdif**	**07 28 41.3**	**-2.8**	
	baz=0.4							
DUG	**Dugway, Tooele**	**102.93**	**21**	Pdiff	**Pdif**	**07 28 43.4**	**-2.0**	
	baz=336							
MAW	**Mawson**	**103.02**	**192**	PKKPbc	PKKPbc	07 44 41.2	-2.1	
	comp=Z,2.6nm,0.7s,baz=224,slow=6.1,SNR=7.1							
ECSD	**EROS Data Cent**	**103.06**	**9**	P	**Pdif**	**07 28 46.0**	**+0.3**	
	baz=350,SNR=12							
ECSD	**EROS Data Cent**	**103.06**	**9**	Pdiff	**Pdif**	**07 28 44.1**	**-1.6**	
	baz=350							
RWWY	**Rawlins**	**103.08**	**17**	IAms_20	IAms_20	08 21 30.7		
	comp=Z,5µm,22.0s							
I37B	**Waseca**	**103.12**	**6**	P	**Pdif**	**07 28 46.6**	**+0.6**	
	baz=353							
MLAC	**Mammoth, Mammt**	**103.16**	**27**	Pdiff	**Pdif**	**07 28 43.6**	**-3.0**	
	baz=331							
J61A	**Chester**	**103.30**	**351**	P	**Pdif**	**07 28 48.7**	**+1.9**	
	baz=11,SNR=6.4							
J61A				P	**Pdif**	**07 28 48.7**	**+1.9**	
	baz=11,SNR=6.4							
UNH	**University of**	**103.30**	**349**	P	**Pdif**	**07 28 47.2**	**+0.5**	
	baz=12							
ACCN	**Adirondack Com**	**103.41**	**351**	P	**Pdif**	**07 28 48.5**	**+1.2**	
	baz=9.8,SNR=6.3							
J59A	**Piesco**	**103.43**	**352**	P	**Pdif**	**07 28 48.2**	**+0.8**	
	baz=9.1,SNR=7.0							
J59A				P	**Pdif**	**07 28 48.2**	**+0.8**	
	baz=9.1,SNR=7.0							
I40A	**Norwalk**	**103.45**	**4**	P	**Pdif**	**07 28 48.3**	**+0.9**	
	baz=355							
R11A	**Troy Canyon, C**	**103.70**	**24**	Pdiff	**Pdif**	**07 28 47.8**	**-1.1**	
	baz=334							
J56A	**Wolcott**	**103.86**	**354**	P	**Pdif**	**07 28 49.5**	**+0.2**	
	baz=7.1							
J56A				P	**Pdif**	**07 28 49.5**	**+0.2**	
	baz=7.1							
PHWY	**Pilot Hill**	**103.86**	**16**	IAms_20	IAms_20	08 21 20.3		
	comp=Z,5µm,22.0s							
TIN	**Tinemaha, Big**	**103.89**	**27**	Pdiff	**Pdif**	**07 28 48.4**	**-1.3**	
	baz=332							
J55A	**Hilton**	**103.95**	**355**	P	**Pdif**	**07 28 47.3**	**-2.3**	
	baz=6.3,SNR=5.9							
J55A				P	**Pdif**	**07 28 47.3**	**-2.3**	
	baz=6.3,SNR=5.9							
HRV	**Adam Dziewonsk**	**103.98**	**350**	Pdiff	**Pdif**	**07 28 47.6**	**-2.1**	
	baz=12							
N23A	**Red Feather La**	**104.14**	**16**	Pdiff	**Pdif**	**07 28 49.6**	**-1.3**	
	baz=342							
GRAC	**Grapevine Rang**	**104.27**	**26**	Pdiff	**Pdif**	**07 28 48.2**	**-3.1**	
	baz=332							
O20A	**White River Ci**	**104.29**	**18**	Pdiff	**Pdif**	**07 28 50.0**	**-1.5**	
	baz=340							
JFWS	**Jewell Farm**	**104.45**	**4**	Pdiff	**Pdif**	**07 28 50.3**	**-1.6**	
	baz=356							
VES	**Vestal, Richgr**	**104.62**	**28**	Pdiff	**Pdif**	**07 28 50.1**	**-2.7**	
	baz=331							
SMMC	**Simmler**	**104.72**	**29**	Pdiff	**Pdif**	**07 28 52.6**	**-0.7**	
	baz=330							
BRIGG	**Briggsdale**	**104.81**	**15**	IAms_20	IAms_20	08 25 58.2		
	comp=Z,5µm,22.0s							
BINY	**Binghamton**	**104.84**	**353**	Pdiff	**Pdif**	**07 28 51.2**	**-2.5**	
	baz=7.9							
WVNY	**West Valley, N**	**104.87**	**355**	P	**Pdif**	**07 28 53.9**	**+0.1**	
	baz=5.7							
FURC	**Furnace Creek,**	**104.92**	**26**	Pdiff	**Pdif**	**07 28 52.6**	**-1.5**	
	baz=333							
OGNE	**Ogallala**	**104.92**	**13**	IAms_20	IAms_20	08 24 45.3		
	comp=Z,6µm,21.0s							
OGNE	**Ogallala**	**104.92**	**13**	Pdiff	**Pdif**	**07 28 51.6**	**-2.6**	
	baz=345							
MPMC	**Manual Prospec**	**105.05**	**27**	Pdiff	**Pdif**	**07 28 54.7**	**-0.3**	
	baz=332							
BGNE	**Belgrade**	**105.13**	**10**	P	**Pdif**	**07 28 55.5**	**+0.5**	
	baz=349							
BGNE	**Belgrade**	**105.13**	**10**	Pdiff	**Pdif**	**07 28 55.2**	**+0.2**	
	baz=349							
AAM	**Ann Arbor**	**105.20**	**359**	Pdiff	**Pdif**	**07 28 53.3**	**-1.9**	
	baz=1.3							
SCIA	**State Center**	**105.23**	**6**	Pdiff	**Pdif**	**07 28 55.0**	**-0.4**	
	baz=353							
ERPA	**Erie**	**105.24**	**356**	Pdiff	**Pdif**	**07 28 53.2**	**-2.2**	
	baz=4.5							
ISCO	**Idaho Springs**	**105.26**	**16**	Pdiff	**Pdif**	**07 28 54.6**	**-1.4**	
	baz=342							
L44A	**Lake County Fo**	**105.29**	**2**	Pdiff	**Pdif**	**07 28 55.2**	**-0.4**	
	baz=358							
LRMC	**Laurel Mtn Rad**	**105.48**	**27**	PKiKP	**PKiKP**	**07 33 05.7**	**-4.6**	
	baz=332							
SBC	**Santa Barbara**	**105.59**	**29**	PKiKP	**PKiKP**	**07 33 09.3**	**-0.9**	
	baz=330							
PAL	**Palisades**	**105.78**	**351**	PKiKP	**PKiKP**	**07 33 08.1**	**-2.4**	
	baz=9.8							
OSI	**Osito Audit: C**	**105.84**	**28**	PKiKP	**PKiKP**	**07 33 07.9**	**-3.0**	
	baz=331							
EDW2	**Edwards Air Fo**	**105.89**	**28**	PKiKP	**PKiKP**	**07 33 11.0**	**+0.1**	
	baz=332							
M53A	**WI Miller and**	**105.96**	**357**	IAms_20	IAms_20	08 16 00.4		
	comp=Z,6µm,22.0s							
M53A	**WI Miller and**	**105.96**	**357**	PKiKP	**PKiKP**	**07 33 09.5**	**-1.3**	
	baz=3.9							
GSC	**Goldstone, Bar**	**105.97**	**27**	PKiKP	**PKiKP**	**07 33 08.9**	**-2.2**	
	baz=333							
Q24A	**Divide**	**106.16**	**16**	PKiKP	**PKiKP**	**07 33 09.9**	**-1.7**	
	baz=343							
DECC	**Green Verdugo**	**106.31**	**28**	PKiKP	**PKiKP**	**07 33 11.8**	**+0.1**	
	baz=331							
SSPA	**Standing Stone**	**106.57**	**354**	PKiKP	**PKiKP**	**07 33 08.0**	**-4.0**	
	baz=6.3							
BFSC	**Mount Baldy Ra**	**106.59**	**28**	PKiKP	**PKiKP**	**07 33 09.7**	**-2.7**	
	baz=332							
SNCC	**San Nicolas Is**	**106.70**	**30**	PKiKP	**PKiKP**	**07 33 10.3**	**-2.2**	
	baz=330							
HDIL	**Hopedale**	**106.85**	**3**	PKiKP	**PKiKP**	**07 33 10.8**	**-1.7**	
	baz=356							
S22A	**4UR Ranch, Cre**	**106.90**	**18**	PKiKP	**PKiKP**	**07 33 09.4**	**-3.6**	
	baz=341							
MVCO	**Mesa Verde**	**106.96**	**19**	IAms_20	IAms_20	08 26 30.7		
	comp=Z,6µm,22.0s							
CIS	**Catalina Islan**	**107.02**	**29**	PKiKP	**PKiKP**	**07 33 09.7**	**-3.3**	
	baz=331							
SFIN	**Lafayette**	**107.11**	**2**	PKiKP	**PKiKP**	**07 33 10.1**	**-2.8**	
	baz=358							
O53A	**New Philadelph**	**107.17**	**357**	IAms_20	IAms_20	08 13 23.5		
	comp=Z,6µm,22.0s							
O53A	**New Philadelph**	**107.17**	**357**	PKiKP	**PKiKP**	**07 33 09.9**	**-3.2**	
	baz=3.4							
SDCO	**Great Sand Dun**	**107.24**	**17**	IAms_20	IAms_20	08 24 06.6		
	comp=Z,7µm,22.0s							
SDCO	**Great Sand Dun**	**107.24**	**17**	PKiKP	**PKiKP**	**07 33 10.8**	**-2.9**	
	baz=342							
ACSO	**Alum Creek Sta**	**107.25**	**358**	P	**PKiKP**	**07 33 12.9**	**-0.3**	
	baz=1.9							
ACSO	**Alum Creek Sta**	**107.25**	**358**	PKiKP	**PKiKP**	**07 33 11.5**	**-1.7**	
	baz=1.9							
O48B	**Farmland**	**107.25**	**0**	PKiKP	**PKiKP**	**07 33 10.8**	**-2.5**	
	baz=360							
NEE2	**Needles Airpor**	**107.25**	**25**	PKiKP	**PKiKP**	**07 33 10.5**	**-2.9**	
	baz=334							
MURC	**Murrieta**	**107.33**	**28**	PKiKP	**PKiKP**	**07 33 10.7**	**-3.0**	
	baz=332							
SCI2	**San Clemente I**	**107.33**	**29**	PKiKP	**PKiKP**	**07 33 09.9**	**-3.7**	
	baz=331							
CBKS	**Cedar Bluff**	**107.41**	**12**	PKiKP	**PKiKP**	**07 33 12.2**	**-1.4**	
	baz=347							
BELC	**Belle Mtn. Jos**	**107.43**	**27**	PKiKP	**PKiKP**	**07 33 12.4**	**-1.6**	
	baz=333							
P38A	**Dawn**	**107.46**	**7**	P	**PKiKP**	**07 33 13.0**	**-0.6**	
	baz=353							
IRM	**Iron Mountain**	**107.61**	**26**	PKiKP	**PKiKP**	**07 33 11.2**	**-3.0**	
	baz=334							
TPFO	**Pinon Flats**	**107.61**	**27**	PKiKP	**PKiKP**	**07 33 11.6**	**-2.7**	
	baz=333							
KSU1	**Kansas State U**	**107.62**	**9**	PKiKP	**PKiKP**	**07 33 10.7**	**-3.2**	
	baz=350							
WUAZ	**Wupatki**	**107.67**	**22**	PKiKP	**PKiKP**	**07 33 10.9**	**-3.5**	
	baz=337							
P52A	**Corning**	**107.82**	**358**	PKiKP	**PKiKP**	**07 33 11.8**	**-2.5**	
	baz=2.6							
PDMCI	**Parker Dam,Lak**	**107.84**	**25**	PKiKP	**PKiKP**	**07 33 11.2**	**-3.3**	
	baz=335							
BC3	**Big Chuckawall**	**107.95**	**26**	PKiKP	**PKiKP**	**07 33 11.8**	**-3.1**	
	baz=334							
P49A	**Miami Univ. Ec**	**107.97**	**360**	PKiKP	**PKiKP**	**07 33 10.2**	**-4.4**	
	baz=0.4							
T25A	**Trinidad**	**108.08**	**16**	PKiKP	**PKiKP**	**07 33 13.1**	**-2.0**	
	baz=343							
MONP2	**Monument Peak**	**108.26**	**27**	PKiKP	**PKiKP**	**07 33 15.4**	**-0.2**	
	baz=333							
SWSC	**Sam W. Stewart**	**108.45**	**27**	PKiKP	**PKiKP**	**07 33 15.0**	**-0.6**	
	baz=333							
W18A	**Petrified Fore**	**108.55**	**21**	PKiKP	**PKiKP**	**07 33 15.2**	**-0.9**	
	baz=338							
IKP	**In-Ko-Pah, Jac**	**108.59**	**27**	PKiKP	**PKiKP**	**07 33 14.5**	**-1.5**	
	baz=333							
GLA	**Glamis**	**108.72**	**26**	PKiKP	**PKiKP**	**07 33 15.5**	**-0.7**	
	baz=334							
R40A	**Maddies Statio**	**108.90**	**6**	P	**PKiKP**	**07 33 16.1**	**-0.3**	
	baz=354							
CBN	**Corbin Frederi**	**108.93**	**354**	PKiKP	**PKiKP**	**07 33 12.8**	**-3.6**	
	baz=6.9							
CCM	**Cathedral Cave**	**109.22**	**5**	PKiKP	**PKiKP**	**07 33 14.9**	**-2.1**	
	baz=355							
WCI	**Wyandotte Cave**	**109.27**	**1**	PKiKP	**PKiKP**	**07 33 15.7**	**-1.4**	
	baz=359							
ANMO	**Albuquerque**	**109.64**	**19**	PKiKP	**PKiKP**	**07 33 16.1**	**-2.1**	
	baz=341							
OK045	**Pawnee Station**	**110.18**	**10**	IAms_20	IAms_20	08 25 53.2		
	comp=Z,6µm,21.0s							
OK048	**Pawnee Station**	**110.20**	**10**	IAms_20	IAms_20	08 25 53.6		
	comp=Z,6µm,21.0s							
OK050	**Pawnee Station**	**110.22**	**10**	IAms_20	IAms_20	08 25 54.4		
	comp=Z,5µm,20.0s							
Y22D	**IRIS PASSCAL I**	**110.34**	**19**	IAms_20	IAms_20	08 29 43.9		
	comp=Z,6µm,20.0s							
Y22D	**IRIS PASSCAL I**	**110.34**	**19**	PKiKP	**PKiKP**	**07 33 18.9**	**-0.5**	
	baz=341							
Y22F	**Passcal Instru**	**110.34**	**19**	PKiKP	**PKiKP**	**07 33 20.0**	**+0.6**	
	baz=341							
214A	**Organ Pipe Nat**	**110.44**	**25**	PKiKP	**PKiKP**	**07 33 16.5**	**-3.0**	
	baz=336							
Y22A	**Socorro**	**110.46**	**19**	P	**PKiKP**	**07 33 19.9**	**+0.2**	
	baz=341							
T47A	**Sharon Grove**	**110.49**	**2**	P	**PKiKP**	**07 33 19.2**	**-0.2**	
	baz=358							
OK029	**Liberty Lake**	**110.73**	**11**	IAms_20	IAms_20	08 29 01.6		
	comp=Z,5µm,19.0s							
TUC	**Tucson**	**110.81**	**23**	PKiKP	**PKiKP**	**07 33 19.1**	**-1.2**	
	baz=337							
AMTX	**Amarillo**	**110.85**	**15**	IAms_20	IAms_20	08 25 09.1		
	comp=Z,5µm,22.0s							
AMTX	**Amarillo**	**110.85**	**15**	PKiKP	**PKiKP**	**07 33 19.8**	**-0.4**	
	baz=345							
TUL1	**Leonard**	**110.87**	**9**	IAms_20	IAms_20	08 20 39.4		
	comp=Z,6µm,22.0s							
TUL1	**Leonard**	**110.87**	**9**	PKiKP	**PKiKP**	**07 33 17.6**	**-2.6**	
	baz=350							
TZTN	**Tazewell**	**110.94**	**359**	PKiKP	**PKiKP**	**07 33 17.3**	**-3.0**	
	baz=1.4							
OK025	**Westminster Rd**	**110.96**	**11**	IAms_20	IAms_20	08 26 14.1		
	comp=Z,6µm,20.0s							
WVT	**Waverly**	**111.33**	**2**	IAms_20	IAms_20	08 23 34.5		
	comp=Z,6µm,22.0s							
WVT	**Waverly**	**111.33**	**2**	PKiKP	**PKiKP**	**07 33 20.0**	**-1.0**	
	baz=358							
MSTX	**Muleshoe**	**111.49**	**16**	P	**PKiKP**	**07 33 19.7**	**-1.8**	
	baz=344							
MSTX	**Muleshoe**	**111.49**	**16**	PKiKP	**PKiKP**	**07 33 20.7**	**-0.9**	
	baz=344							
121A	**Cookes Peak, D**	**111.54**	**20**	PKiKP	**PKiKP**	**07 33 20.4**	**-1.3**	
	baz=340							
WMOK	**Wichita Mounta**	**111.55**	**12**	PKiKP	**PKiKP**	**07 33 19.3**	**-2.2**	
	baz=348							
V51A	**Loudon**	**111.69**	**359**	P	**PKiKP**	**07 33 20.7**	**-1.0**	
	baz=0.7							
V53A	**Saluda**	**111.80**	**358**	P	**PKiKP**	**07 33 21.6**	**-0.4**	
	baz=2.1							
V53A				P	**PKiKP**	**07 33 21.6**	**-0.4**	
	baz=2.1							
CNNC	**Cliffs of the**	**111.92**	**354**	PKiKP	**PKiKP**	**07 33 21.5**	**-0.7**	
	baz=6.5							
X37A	**Clayton**	**112.22**	**9**	P	**PKiKP**	**07 33 22.5**	**-0.3**	
	baz=351							
W45A	**Hickory Valley**	**112.24**	**4**	P	**PKiKP**	**07 33 22.2**	**-0.6**	
	baz=356							
KMSC	**Kings Mountain**	**112.27**	**357**	PKiKP	**PKiKP**	**07 33 22.1**	**-0.7**	
	baz=3.4							
CASEE	**Lake Jocassee**	**112.48**	**358**	P	**PKiKP**	**07 33 22.7**	**-0.5**	
	baz=2.0							
MIAR	**Mount Ida**	**112.48**	**8**	PKiKP	**PKiKP**	**07 33 23.7**	**+0.4**	
	baz=352							
EPT	**El Paso**	**112.62**	**20**	IAms_20	IAms_20	08 27 56.0		
	comp=Z,5µm,20.0s							
X48A	**Hartselle**	**113.02**	**2**	P	**PKiKP**	**07 33 23.4**	**-0.9**	
	baz=358							
ABTX	**Abilene, Hawle**	**113.44**	**13**	PKiKP	**PKiKP**	**07 33 24.8**	**-0.4**	
	baz=347							
GOGA	**Godfrey**	**114.07**	**358**	IAms_20	IAms_20	08 23 42.1		
	comp=Z,5µm,20.0s							
GOGA	**Godfrey**	**114.07**	**358**	PKiKP	PKPdf	07 33 26.7	+0.4	
	baz=1.5							
NHSC	**New Hope**	**114.22**	**355**	IAms_20	IAms_20	08 16 48.3		
	comp=Z,6µm,22.0s							
LRAL	**Lakeview Retre**	**114.44**	**2**	PKiKP	**PKiKP**	**07 33 26.3**	**-0.7**	
	baz=358							
152A	**Waverly Hall**	**114.82**	**360**	P	**PKiKP**	**07 33 26.6**	**-1.2**	
	baz=0.4							
NATX	**Nacogdoches**	**115.10**	**9**	IAms_20	IAms_20	08 29 41.2		
	comp=Z,5µm,20.0s							
JCT	**Junction City**	**115.49**	**14**		**PKiKP**	**07 33 28.7**	**-0.5**	
JCT	**Junction City**	**115.49**	**14**	PKIKP	**PKiKP**	**07 33 28.7**	**-0.5**	
JCT	**Junction City**	**115.49**	**14**	P	**PKiKP**	**07 33 28.6**	**-0.5**	
	baz=346							
JCT	**Junction City**	**115.49**	**14**	PKiKP	**PKPdf**	**07 33 29.5**	**+0.3**	
	baz=346							
435B	**Jarrell**	**115.62**	**12**		**PKiKP**	**07 33 28.1**	**-1.3**	
435B	**Jarrell**	**115.62**	**12**	PKiKP	**PKiKP**	**07 33 28.2**	**-1.2**	
	baz=348							
TX31	**Lajitas Ar. Si**	**115.70**	**18**		**PKiKP**	**07 33 28.7**	**-1.0**	
TX31	**Lajitas Ar. Si**	**115.70**	**18**	P	**PKiKP**	**07 33 28.5**	**-1.2**	
	baz=343							
TX32	**Lajitas Array**	**115.70**	**18**		**PKiKP**	**07 33 28.3**	**-1.4**	
TXAR	**Lajitas Array**	**115.70**	**18**	PKP	**PKiKP**	**07 33 29.0**	**-0.7**	
	comp=Z,9.4nm,0.9s,baz=270,slow=0.9,SNR=40							
TXAR				PP	**PP**	**07 34 28.6**	**-2.5**	
	comp=Z,10.0nm,1.1s,baz=350,slow=4.6,SNR=5.3							
TXAR				PKKPbc	**PKKPbc**	**07 43 60.0**	**-1.7**	
	comp=Z,2.0nm,1.1s,baz=174,slow=4.4,SNR=8.5							
TXAR				PKPPKP	**P'P'df**	**07 52 35.3**	**-6.7**	
	comp=Z,0.6nm,1.0s,baz=185,slow=6.3,SNR=4.2							
TXAR	**Lajitas Array**	**115.70**	**18**		**PKiKP**	**07 33 28.7**	**-0.9**	
TXAR	**Lajitas Array**	**115.70**	**18**	PKIKP	**PKiKP**	**07 33 29.0**	**-0.7**	
342A	**Flagon Creek P**	**115.75**	**7**		**PKiKP**	**07 33 29.1**	**-0.5**	
342B	**Flagon Creek P**	**115.75**	**7**	P	**PKPdf**	**07 33 30.2**	**+0.6**	
	baz=353							
352A	**Blakely**	**116.01**	**360**	PKPdf	**PKiKP**	**07 33 29.3**	**-0.7**	
TIGA	**Tifton**	**116.03**	**359**	PKiKP	**PKiKP**	**07 33 30.1**	**0.0**	
	baz=1.4							
BRAL	**Brewton**	**116.30**	**2**	PKiKP	**PKiKP**	**07 33 29.9**	**-0.8**	
	baz=358							
HKT	**Hockley**	**116.72**	**10**	PKPdf	**PKPdf**	**07 33 30.9**	**-0.4**	
HKT	**Hockley**	**116.72**	**10**	PKIKP	**PKPdf**	**07 33 31.0**	**-0.4**	
VNDA	**Vanda**	**117.09**	**167**	PKP	**PKPdf**	**07 33 29.9**	**-0.8**	
	comp=Z,6.4nm,0.9s,baz=290,slow=4.5,SNR=30							
VNDA				PKKPbc	**PKKPab**	**07 43 55.7**	**-1.3**	
	comp=Z,7.2nm,0.9s,baz=128,slow=2.3,SNR=23							
HPIG		**117.41**	**21**	PKPdf	**PKPdf**	**07 33 32.2**	**-1.0**	
833A	**Chaparral WMA,**	**117.67**	**14**	PKPdf	**PKPdf**	**07 33 32.5**	**-0.9**	
833A	**Chaparral WMA,**	**117.67**	**14**	P	**PKiKP**	**07 33 33.8**	**+0.4**	
	baz=346							
SBA	**Scott Base**	**118.18**	**167**	PKPdf	**PKiKP**	**07 33 33.1**	**+0.4**	
SBA	**Scott Base**	**118.18**	**167**	PKIKP	**PKiKP**	**07 33 33.1**	**+0.4**	
NVL	**N'lazarevskaya**	**118.40**	**202**	*e*PKIKP	**PKPdf**	**07 33 32.6**	**-0.7**	
NVL				pmax	pmax			
	comp=Z,47nm,1.0s							
PPT2	**Papeete2**	**120.56**	**92**	*e*LR	LR	08 10 39.0		
	comp=Z,5µm,28.0s							
PPTF	**Pamatai, Papee**	**120.57**	**92**	PKPdf	**PKPdf**	**07 33 38.4**	**-0.7**	
TROLL	**Troll, Antarti**	**121.60**	**201**	PKPdf	**PKiKP**	**07 33 40.3**	**+0.5**	
TROLL	**Troll, Antarti**	**121.60**	**201**	SKP

YOTC Yotoco, Valle 142.43 346 *eP* PKPpre 07 34 14.1
MAN01 Angra dos Reis 142.48 275 *eP* **PKPdf 07 34 21.6 +1.4**
PMNB Patos de Minas 142.56 283 *eP* **PKPdf 07 34 21.2 +0.7**
SNDB Serra Nova Dou 142.70 296 *eP* **PKPdf 07 34 20.1 -0.7**
IPMB Ipameri, GO 143.73 285 *eP* PKPbc 07 34 21.1 +1.0
GR1C Gorgona, Isla 143.73 348 *eP* PKPbc 07 34 20.2 +0.1
GARC Garzon, Huila 143.98 343 *eP* PKPab 07 34 19.8 -0.8
PARB Paraibuna 144.06 275 *eP* PKPbc 07 34 21.4 +0.4
BBAC Balboa, Cauca 144.52 346 *eP* **PKPab 07 34 21.0 -1.6**
FLOC Florencia 144.60 344 *eP* **PKPab 07 34 21.8 -0.8**
TUMC Tumaco 144.98 349 *eP* **PKPdf 07 34 24.9 0.0**
VAO Valinhos 145.05 276 *eP* **PKPbc 07 34 24.1 -0.1**
RCLB Rio Claro- Sao 145.27 278 *eP* **PKPdf 07 34 25.1 0.0**
CLDB Colider 145.29 302 *eP* **PKPbc 07 34 25.0 0.0**
GCUF Volcan Galeras 145.31 346 *eP* **PKPdf 07 34 26.1 0.0**
BB19B Bebedouro 145.50 281 *eP* **PKPab 07 34 26.1 +0.2**
PMSA Palmer Station 145.53 196 **PKPdf 07 34 24.1 +0.1**
PMSA Palmer Station 145.53 196 IAMs_20 IAMs_20 08 39 48.7
comp=Z,3μm,20.0s
PMSA Palmer Station 145.53 196 *eP* **PKPdf 07 34 24.2 +0.1**
PTLC Puerto Leguiza 145.74 341 *eP* **PKPbc 07 34 26.4 -0.1**
PET01 Itanhaem-SP 145.83 275 *eP* **PKPab 07 34 26.9 0.0**
TULM Tulcn-Chalpat 145.90 347 PKPdf **PKPbc 07 34 27.4 -0.2**
IMBA Imbabura, San 146.40 347 PKPbc **PKPbc 07 34 28.6 -0.4**
PDRB Porto dos Gac 146.46 303 *eP* **PKPdf 07 34 27.0 -0.3**
FRTB Fartura 147.36 278 *eP* **PKPdf 07 34 29.1 +0.6**
SLOR San Lorenzo - 147.44 348 PKPbc **PKPdf 07 34 30.8 +1.2**
PAYG Puerto Ayora 147.62 10 PKPbc **PKPbc 07 34 31.6 -0.4**
C2SB Chapadao do Su 147.87 288 *eP* **PKPdf 07 34 30.3 +0.8**
PCMB Pacaembu 148.00 282 *eP* **PKPdf 07 34 30.5 +0.9**
TBTG Tabatinga, AM 148.13 330 *eP* **PKPdf 07 34 29.9 -0.2**
SALV Santo Antonio 148.47 295 *eP* **PKPdf 07 34 31.0 +0.5**
TER01 Tubaro-SC 148.84 268 *eP* **PKPdf 07 34 31.8 +1.0**
RPRD Ribas do Rio P 149.45 286 *eP* **PKPdf 07 34 33.0 +1.0**
TRCB Terra Rica 149.68 281 *eP* **PKPdf 07 34 33.4 +1.0**
VILB Vilhena 149.81 305 *eP* **PKPdf 07 34 33.6 +0.8**
PTGB Pitanga 150.01 277 *eP* **PKPdf 07 34 33.3 +0.4**
CNLB Canela 150.51 268 *eP* **PKPdf 07 34 34.5 +1.0**
PTLB Pontes e Lacer 150.75 300 *eP* **PKPdf 07 34 34.7 +0.5**
AQDB Aquidauana 151.06 288 *eP* **PKPdf 07 34 34.4 -0.2**
ETMB Extrema 151.19 318 *eP* **PKPdf 07 34 34.1 -0.8**
FRBT Francisco Belt 151.32 275 *eP* **PKPdf 07 34 36.5 +1.6**
MCR1 Marechal Candi 151.55 279 *eP* **PKPdf 07 34 35.2 0.0**
ANTJ Antonio Joao (152.07 285 *eP* **PKPdf 07 34 37.5 +1.4**
ALGR Alto Alegre (B 152.20 270 *eP* **PKPdf 07 34 36.6 +0.4**
CZSB Cruzeiro do Su 152.47 333 *eP* **PKPdf 07 34 35.7 -1.2**
SIV San Ignacio 152.51 302 PKP **PKPdf 07 34 36.5 -0.3**
comp=Z,27nm,1.1s,baz=74,slow=1.9,SNR=44
SIV PKPbc **PKiKP 07 34 44.0 -0.1**
comp=Z,62nm,1.1s,baz=71,slow=1.1,SNR=37
CRSM Crissiumal (Br 152.66 273 *eP* **PKPdf 07 34 36.3 -0.5**
EFI East Falkland 152.78 218 **PKiKP 07 34 43.5 +0.1**
EFI East Falkland 152.78 218 PKIKP **PKiKP 07 34 43.5 +0.1**
BBSD Serra de San D 152.95 299 *eP* **PKPdf 07 34 36.6 -0.9**
CPSB Cacapava Do Su 152.96 267 *eP* **PKPdf 07 34 37.4 +0.3**
BBRB Robore, Bolivi 153.03 296 *eP* **PKPdf 07 34 37.6 +0.1**
MURT Porto Murtinho 153.20 288 *eP* **PKPdf 07 34 36.8 -0.9**
PLTB Pedras Altas 153.39 264 PKPdf **PKPdf 07 34 37.4 -0.3**
PLTB Pedras Altas 153.39 264 *eP* **PKPdf 07 34 38.3 +0.6**
ATAH Atahualpa 153.65 345 PKP **PKPdf 07 34 38.9 -0.2**
comp=Z,58nm,1.1s,baz=24,slow=0.9,SNR=25
ATAH PKPbc **PKiKP 07 34 47.1 +0.2**
comp=Z,82nm,1.0s,baz=5.9,slow=4.7,SNR=19
UNIS Unistalda (Bra 154.00 270 *eP* **PKPdf 07 34 39.5 +0.9**
RODS Rosario do Sul 154.43 268 *eP* **PKPdf 07 34 41.0 +1.8**
AZCA Azaras, Argent 154.48 273 *eP* **PKPdf 07 34 40.0 +0.6**
CPUP Villa Florida 155.01 278 PKP **PKPdf 07 34 39.6 -0.5**
comp=Z,20nm,1.2s,baz=65,slow=2.3,SNR=13
CPUP Villa Florida 155.01 278 *eP* **PKPdf 07 34 40.2 +0.1**
ITQB Itaqui 155.46 270 PKPdf **PKPdf 07 34 41.3 +0.7**
ITQB Itaqui 155.46 270 *eP* **PKPdf 07 34 41.5 +0.9**
NNA Nana 157.88 338 PKP **PKPdf 07 34 44.3 +0.1**
comp=Z,20nm,1.1s,baz=218,slow=7.6,SNR=4.2
NNA PKPab **PKPab 07 35 16.1 -0.9**
comp=Z,31nm,1.0s,baz=334,slow=4.8,SNR=7.0
LVC Limon Verde 162.41 301 PKP **PKPdf 07 34 50.0 +0.5**
comp=Z,22nm,1.2s,baz=143,slow=2.3,SNR=9.2
LVC Limon Verde 162.41 301 PKIKP **PKPdf 07 34 50.0 +0.5**
LVC Limon Verde 162.41 301 *eP* **PKPdf 07 34 50.7 +1.2**
COYC Coyhaique 163.80 215 **PKPdf 07 34 48.6 -1.1**
COYC PKPab **PKPab 07 35 41.0 -1.0**
GO02 Mina Guanaco 164.41 295 PKPdf **PKPdf 07 34 51.1 -0.1**
AC02 Maricunga 164.89 289 PKPdf **PKPdf 07 34 49.5 -2.3**
AC02 PKPab **PKPab 07 35 48.0 -0.2**
PLCA Paso Flores 165.94 232 PKP **PKPdf 07 34 52.1 +0.4**
comp=Z,27nm,1.2s,baz=270,slow=0.9,SNR=19
PLCA PKPab **PKPab 07 35 51.5 -0.3**
comp=Z,5.0nm,0.9s,baz=150,slow=8.0,SNR=3.1
PLCA Paso Flores 165.94 232 *eP* **PKPdf 07 34 53.2 +1.4**
LL04 Puerto Octay 167.04 228 PKPdf **PKPdf 07 34 51.8 -0.7**
LL04 PKPab **PKPab 07 35 55.2 -1.4**
LL05 Los Muermos 167.39 224 PKPdf **PKPdf 07 34 53.7 +1.0**
LL05 PKPab **PKPab 07 35 57.1 -1.0**
BO02 Sierra Bellavi 167.92 257 PKPdf **PKPdf 07 34 52.1 -1.4**
BO02 PKPab **PKPab 07 36 00.1 -0.7**
MT05 Renca 167.93 264 PKPdf **PKPdf 07 34 51.9 -1.5**
BO01 Tunca 168.20 259 PKPdf **PKPdf 07 34 52.7 -0.9**
BO01 PKPab **PKPab 07 36 01.6 -0.4**
GO05 Huala 168.83 255 PKPdf **PKPdf 07 34 50.9 -3.1**
GO05 **PKPab 07 36 04.6 -0.2**

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*IDC **17** 07:16:28.0±1.2,3°.69S×131°.56E, h0km, mb4.3/4, mbtmp4.4/7, ML3.1/2, Error ellipse: s-maj=54.4km s-min=20.5km az=69.0*
*DJA **17** 07:16:32.5±0.3,3°.5±4°×13°.1E±°, h10km, M4.4/8, mb4.7/3, MLv4.2/8*
ISC 17 07:16:31.3±0.6,3°.69S±0°.05×131°.51E±0°.05,h24km,n34, σ1$23/34,mb4.2/4,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.06**	**44**	P	**Pb**	**07 16 51.4**	**+0.5**
FAKI				S	**Sn**	**07 17 05.3**	**+0.6**
FAKI	**Fak Fak**	**1.06**	**44**	P	**Pb**	**07 16 51.5**	**+0.5**
BNDI	**Bandanaira**	**1.80**	**243**	P	**Pn**	**07 17 01.5**	**+0.6**
BNDI	**Bandanaira**	**1.80**	**243**	P	**Pn**	**07 17 01.6**	**+0.6**
MSAI	**Masohi**	**2.60**	**277**	P	**Pn**	**07 17 13.4**	**+1.6**
SIJI	**Sorong**	**2.81**	**355**	Pn	**Pn**	**07 17 13.5**	**-1.3**
9.6nm,0.3s,baz=187,slow=22,SNR=22							
SIJI				Sn	**Sn**	**07 17 45.9**	**-2.0**
28nm,0.3s,baz=240,slow=20,SNR=4.2							
25nm,0.3s							
SIJI	**Sorong**	**2.81**	**355**	P	**Pn**	**07 17 14.1**	**-0.7**
SIJI				S	**Sn**	**07 17 47.2**	**-0.7**
KRAI	**Karang Ratu**	**3.13**	**277**	P	**Pn**	**07 17 20.8**	**+1.6**
AAI	**Ambon**	**3.31**	**270**	P	**Pn**	**07 17 22.9**	**+1.3**
RKPI	**Ransiki, Papua**	**3.43**	**51**	P	**Pn**	**07 17 24.8**	**+1.5**
MWPI	**Manokwari, Pap**	**3.73**	**43**	P	**Pn**	**07 17 30.2**	**+2.8**
LBMI	**Labuha**	**5.02**	**307**	P	**Pn**	**07 17 46.1**	**+0.9**
KDU	**Kakadu**	**8.99**	**174**	P	**Pn**	**07 18 38.0**	**-1.8**
MTN	**Manton Dam**	**9.11**	**182**	P	**Pn**	**07 18 40.3**	**-1.0**
SOEI	**Soe**	**9.38**	**230**	P	Pn	07 18 52.0	+6.8
54nm,0.8s							
GTOI	**Gorontalo**	**9.52**	**297**	P	Pn	07 19 01.5	+15
PLAI	**Plampang**	**14.57**	**249**	P	**Pn**	**07 19 56.6**	**+0.4**
COEN	**Coen**	**15.38**	**132**	P	**Pn**	**07 20 04.6**	**-2.4**
WRAB	**Tennant Creek**	**16.39**	**170**	P	**Pn**	**07 20 17.9**	**-2.0**
WRA	**Warramunga Arr**	**16.39**	**171**	Pn	Pn	07 20 14.4	-5.6
0.4nm,0.3s,baz=354,slow=13,SNR=24							
WRA				Sn	Sn	07 23 05.8	-15
1.2nm,0.3s,baz=357,slow=23,SNR=7.1							
PMG	**Port Moresby**	**16.55**	**111**	Pn	**Pn**	**07 20 20.9**	**-1.0**
1.2nm,0.3s,baz=286,slow=4.8,SNR=4.5							
14nm,0.6s							
QIS	**Mount Isa**	**18.53**	**155**	P	**P**	**07 20 45.2**	**-1.1**
MTSU	**Mount Surprise**	**19.07**	**140**	P	**P**	**07 20 52.2**	**0.0**
ASAR	**Alice Springs**	**20.00**	**174**	P	**P**	**07 21 02.4**	**0.0**
4.9nm,0.3s,baz=348,slow=11,SNR=83							
ASAR				S	S	07 24 35.5	-11
1.2nm,0.6s,baz=358,slow=27,SNR=5.7							
AS01	**Alice Springs**	**20.00**	**173**	P	**P**	**07 21 02.6**	**+0.2**
WRKA	**Warakurna**	**21.45**	**188**	P	**P**	**07 21 17.3**	**-0.8**
CTA	**Charters Tower**	**21.74**	**140**	P	**P**	**07 21 21.4**	**+0.2**
7.8nm,0.6s,baz=318,slow=11,SNR=18							
7.8nm,0.6s							
CTAO	**Charters Tower**	**21.74**	**140**	P	**P**	**07 21 21.7**	**+0.6**
OOD	**Oodnadatta**	**24.30**	**171**	P	**P**	**07 21 46.6**	**-0.5**
FORT	**Forrest**	**27.14**	**187**	P	**P**	**07 22 12.3**	**-0.5**
LCRK	**Leigh Creek**	**27.36**	**167**	P	**P**	**07 22 15.7**	**+1.0**
STKA	**Stephens Creek**	**29.60**	**162**	P	**P**	**07 22 33.9**	**-0.8**
1.5nm,0.6s,baz=329,slow=11,SNR=4.8							
1.5nm,0.6s							
MKAR	**Makanchi Array**	**66.33**	**325**	P	**P**	**07 27 19.2**	**+1.2**
8.5nm,1.1s,baz=105,slow=7.2,SNR=3.3							
8.5nm,1.1s							
VNDA	**Vanda**	**75.54**	**173**	P	**P**	**07 28 14.0**	**+0.6**
1.1nm,0.8s,baz=310,slow=7.2,SNR=8.1							
1.1nm,0.8s							

IDC 17 07:24:22.1±3.9,54°.33N×87°.31E,h0km,mbtmp3.4/2, ML2.5/2,Error ellipse: s-maj=34.7km s-min=22.0km az=45.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**256**	I		07 34 00.0	
baz=77,slow=334,SNR=5.7							
ZALV	**Zalesovo Beam**	**1.52**	**256**	Pg	Pn	07 24 48.7	-1.7
0.8nm,0.3s,baz=70,slow=20,SNR=4.8							
ZALV				Lg	Lg	07 25 10.4	
2.1nm,0.3s,baz=83,slow=15,SNR=2.4							
KURBB	**Kurchatov Arra**	**6.52**	**239**	Pn	Pn	07 26 00.1	+0.9
baz=53,slow=13,SNR=1.9							
2.0nm,0.7s							
MKAR	**Makanchi Array**	**8.19**	**205**	Pn	Pn	07 26 23.3	+1.1
0.1nm,0.3s,baz=20,slow=15,SNR=1.8							
3.0nm,0.9s							

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*NEIC **17** 07:31:09.3±1.0,6°.0S±0°.2×149°.0E±0°.2, h65km±10km, mb4.3/9, Error ellipse: s-maj=38.3km s-min=11.0km az=132.0*
*IDC **17** 07:31:09.1±2.2,6°.11S×149°.02E, h77km±19km, mb3.8/8, mbtmp4.2/10, MS4.4/1, Error ellipse: s-maj=27.1km s-min=13.4km az=117.0*
ISC 17 07:31:07.7±0.7,6°.0S±0°.1×148°.9E±0°.1,h60km,n27, σ1$29/31,mb4.2/9,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.69**	**61**	Pn	**Pn**	**07 32 03.7**	**+1.4**
PMG	**Port Moresby**	**3.80**	**208**	P	**Pn**	**07 32 04.9**	**+1.2**
84nm,0.5s,baz=45,slow=5.8,SNR=28							
PMG				S	**Sn**	**07 32 48.4**	**+1.3**
307nm,0.7s,baz=305,slow=21,SNR=13							
PMG	**Port Moresby**	**3.80**	**208**		**Pn**	**07 32 05.5**	**+1.8**
COEN	**Coen**	**9.71**	**215**	Pn	**Pn**	**07 33 24.6**	**-0.2**
SIJI	**Sorong**	**18.37**	**286**	LR	LR	07 43 13.0	
comp=Z,1μm,21.7s,baz=326,slow=39							
WB0	**Warramunga Arr**	**19.66**	**225**	P	**P**	**07 35 32.8**	**+0.9**
WB0				IAmb	IAmb	07 35 33.4	
comp=Z,6.9nm,0.7s							
WR0	**Warramunga Arr**	**19.69**	**224**	P	**P**	**07 35 33.0**	**+0.8**
WR0				IAmb	IAmb	07 35 52.1	
comp=Z,7.5nm,0.8s							
WRAB	**Tennant Creek**	**19.81**	**224**	P	**P**	**07 35 34.5**	**+1.1**
WRAB				IAmb	IAmb	07 35 34.7	
comp=Z,12nm,0.5s							
WB2	**Warramunga Arr**	**19.81**	**224**	P	**P**	**07 35 34.3**	**+0.8**
WB2				IAmb	IAmb	07 35 34.9	
comp=Z,13nm,0.5s							
WRA	**Warramunga Arr**	**19.82**	**224**	P	**P**	**07 35 33.0**	**-0.6**
comp=Z,7.0nm,0.4s,baz=52,slow=11,SNR=88							
WRA				S	**S**	**07 39 08.9**	**-4.9**
comp=Z,1.1nm,0.9s,baz=42,slow=23,SNR=4.6							
WRA				PcP	**PcP**	**07 39 49.3**	**-0.3**
comp=Z,0.6nm,0.9s,baz=41,slow=2.3,SNR=4.6							
WRA	**Warramunga Arr**	**19.82**	**224**	P	**P**	**07 35 33.5**	**-0.1**
KNRA	**Kununurra**	**22.00**	**243**	P	**P**	**07 35 58.2**	**+1.2**
KNRA				IAmb	IAmb	07 36 04.5	
comp=Z,21nm,1.1s							
AS31	**Alice Springs**	**22.74**	**218**	P	**P**	**07 36 05.8**	**+0.9**
ASAR	**Alice Springs**	**22.74**	**218**	P	**P**	**07 36 05.2**	**+0.2**
comp=Z,2.9nm,0.5s,baz=52,slow=9.6,SNR=58							
ASAR				PcP	**PcP**	**07 39 55.3**	**+0.1**
comp=Z,0.6nm,0.8s,baz=38,slow=3.5,SNR=3.9							
ASAR				S	**S**	**07 40 08.2**	**-1.2**
comp=Z,0.5nm,0.7s,baz=30,slow=20,SNR=4.2							
comp=Z,2.9nm,0.5s							
ASAR	**Alice Springs**	**22.74**	**218**	P	**P**	**07 36 05.5**	**+0.5**
DZM	**Mont Dzumac**	**23.25**	**135**	P	**P**	**07 36 09.3**	**-0.9**
comp=Z,9.5nm,0.7s,baz=349,slow=21,SNR=6.5							
comp=Z,9.5nm,0.7s							
STKA	**Stephens Creek**	**26.62**	**194**	P	**P**	**07 36 39.9**	**-0.7**
comp=Z,2.9nm,0.9s,baz=339,slow=17,SNR=1.8							
comp=Z,2.9nm,0.9s							
TOO	**Toolangi**	**31.56**	**185**	P	**P**	**07 37 24.9**	**+0.4**
PETK	**Petropavlovsk-**	**59.37**	**6**	P	**P**	**07 41 03.8**	**+0.2**
comp=Z,3.1nm,0.6s,baz=158,slow=6.1,SNR=4.2							
comp=Z,3.1nm,0.6s							
MKAR	**Makanchi Array**	**78.75**	**320**	P	**P**	**07 43 04.0**	**+0.1**
comp=Z,0.4nm,0.6s,baz=101,slow=6.0,SNR=2.8							
comp=Z,0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**80.07**	**327**	P	**P**	**07 43 11.1**	**+0.2**
comp=Z,1.5nm,0.3s,baz=116,slow=6.6,SNR=2.5							
comp=Z,1.5nm,0.3s							
KURBB	**Kurchatov Arra**	**82.41**	**323**	P	**P**	**07 43 24.0**	**+0.7**
comp=Z,0.3nm,0.5s,baz=104,slow=3.9,SNR=2.3							
comp=Z,0.3nm,0.5s							
ILAR	**Eielson Array**	**84.75**	**23**	P	**P**	**07 43 33.8**	**-1.3**
comp=Z,2.4nm,1.0s,baz=252,slow=5.0,SNR=10							
comp=Z,2.4nm,1.0s							
ILAR	**Eielson Array**	**84.75**	**23**	P	**P**	**07 43 34.6**	**-0.5**
J25K	**Salcha River,**	**85.27**	**23**	P	**P**	**07 43 37.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**146.97**	**285**	PKPbc	**PKPdf**	**07 50 43.5**	**+0.9**
comp=Z,1.1nm,0.5s,baz=50,slow=2.7,SNR=7.3							
BDFB	**Brasilia**	**152.70**	**142**	PKPbc	**PKPbc**	**07 50 57.6**	**-1.3**
comp=Z,3.0nm,0.4s,baz=239,slow=2.4,SNR=6.0							

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*IDC **17** 07:32:20.9±1.1,32°.81N×94°.94E, h0km, mb3.7/7, mbtmp3.7/10, ML3.6/3, Error ellipse: s-maj=55.7km s-min=19.0km az=55.0*
ISC 17 07:32:22.8±0.8,32°.86N±0°.06×94°.9E±0°.1,h10km,n20, σ1$67/22,mb3.8/7,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**6.47**	**197**	*eP*	**Pn**	**07 33 59.1**	**+0.9**
TEZP				*eS*	**Sn**	**07 35 13.6**	**+1.4**
MOKO	**MOKOCHONG**	**6.52**	**183**	*eP*	**Pn**	**07 33 60.0**	**+1.0**
MOKO				*eS*	**Sn**	**07 35 14.7**	**+1.2**
KOHI	**KOHIMA**	**7.14**	**186**	*eP*	**Pn**	**07 34 11.0**	**+3.5**
KOHI				*eS*	**Sn**	**07 35 23.5**	**-5.3**
GUN	**Gumba**	**9.20**	**240**	*eP*	**Pn**	**07 34 36.7**	**+0.7**
RAMN	**Ramite**	**9.29**	**233**	*eP*	**Pn**	**07 34 37.5**	**+0.5**
PKI	**Pulchoki**	**9.74**	**240**	*eP*	**Pn**	**07 34 43.3**	**0.0**
14nm,0.4s							
PKIN	**Phulchoki**	**9.74**	**240**	*eP*	**Pn**	**07 34 43.6**	**+0.3**
19nm,0.4s							
DANN	**Dangsing**	**10.58**	**248**	*eP*	**Pn**	**07 34 54.5**	**-0.3**
12nm,0.4s							
PYUN	**Piuthan**	**11.30**	**248**	*eP*	**Pn**	**07 35 04.4**	**-0.2**
29nm,0.9s							
SMLA	**Simla**	**15.13**	**268**	*eP*	Pn	07 35 51.4	-5.3
MKAR	**Makanchi Array**	**16.92**	**329**	Pn	**Pn**	**07 36 19.2**	**-0.4**
0.2nm,0.3s,baz=146,slow=10,SNR=4.1							
0.6nm,0.5s							
SONM	**Songino Array**	**17.32**	**27**	Pn	**Pn**	**07 36 25.4**	**+0.6**
0.1nm,0.3s,baz=218,slow=13,SNR=1.2							
2.0nm,0.9s							
AAK	**Ala-Archa**	**18.81**	**307**	P	**P**	**07 36 44.6**	**+1.9**
0.3nm,0.3s,baz=90,slow=8.7,SNR=1.9							
0.6nm,0.3s							
KURBB	**Kurchatov Arra**	**21.45**	**331**	P	**P**	**07 37 10.5**	**-0.7**
3.3nm,0.6s,baz=139,slow=11,SNR=23							
3.3nm,0.6s							
ZALV	**Zalesovo Beam**	**22.27**	**344**	P	**P**	**07 37 19.4**	**-0.5**
0.5nm,0.4s,baz=144,slow=10.0,SNR=2.3							
0.5nm,0.4s							
AKASG	**Malin Array Be**	**50.41**	**311**	P	**P**	**07 41 19.6**	**-0.7**
0.2nm,0.3s,baz=73,slow=6.8,SNR=4.2							
0.2nm,0.3s							
FINES	**FINESS Array B**	**51.70**	**325**	P	**P**	**07 41 29.9**	**+0.2**
2.4nm,1.0s,baz=100,slow=7.6,SNR=1.9							
2.4nm,1.0s							
ARCES	**ARCESS Array B**	**52.43**	**335**	P	**P**	**07 41 35.4**	**+0.3**
3.8nm,1.1s,baz=97,slow=6.7,SNR=1.5							
3.8nm,1.1s							
WRA	**Warramunga Arr**	**64.64**	**139**	P	**P**	**07 43 00.0**	**-0.9**
0.5nm,1.0s,baz=320,slow=8.6,SNR=2.0							
0.5nm,1.0s							
ASAR	**Alice Springs**	**67.42**	**141**	P	**P**	**07 43 18.1**	**-0.6**
0.4nm,0.6s,baz=325,slow=6.4,SNR=5.5							
0.4nm,0.6s							

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*BJI **17** 07:33:34.7±0.0,32°.73N×94°.89E, h11km, mb4.5/13, mB4.8/1, ML3.9/3*
*IDC **17** 07:33:34.3±0.7,32°.88N×95°.00E, h0km, mb4.2/19, mbtmp4.2/23, ML4.1/4, Error ellipse: s-maj=24.5km s-min=14.2km az=45.0*
*MOS **17** 07:33:37.8±1.2,32°.77N×94°.93E, h39km, mb4.7/23, Error ellipse: s-maj=9.1km s-min=5.4km az=117.6*
*NEIC **17** 07:33:39.5±1.9,32°.87N±0°.07×94°.99E±0°.10, h37km±6km, mb4.7/79, ML4.1(BJI), Error ellipse: s-maj=11.6km s-min=10.1km az=82.0*
ISC 17 07:33:36.2±0.4,32°.72N±0°.05×95°.00E±0°.05,h10km,n165, σ1$64/134,mb4.6/65,MS5.0/3,11C-2D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMU	**GeErMu**	**3.48**	**358**	Pn	**Pn**	**07 34 33.1**	**+2.4**
GOMU				Pg	**Pb**	**07 34 38.8**	**+0.7**
GOMU				Sg	**Sg**	**07 35 31.3**	**+3.4**
LSA	**Lhasa**	**4.46**	**229**	Pn	**Pn**	**07 34 44.6**	**+0.3**
LSA	**Lhasa**	**4.46**	**229**	Pn	Pn	07 34 43.1	-1.2
LSA	**Lhasa**	**4.46**	**229**	P	**Pn**	**07 34 44.6**	**+0.3**
ITAN	**ITANAGAR**	**5.66**	**192**	*eP*	Pn	07 35 06.6	+6.2
GTA	**Gaotai**	**7.73**	**29**	*eP*n	**Pn**	**07 35 30.3**	**+1.3**
LZH	**Lanzhou**	**8.05**	**63**	*eP*	Pn	07 35 40.0	+6.7
LZH				pmax	pmax		
comp=Z,21nm,1.6s							
PZH	**PanZhiHua**	**8.53**	**135**	P	**Pn**	**07 35 43.6**	**+3.6**
KMI	**Kunming**	**10.16**	**136**	⇓P	**Pn**	**07 36 05.6**	**+3.2**
KMI				pmax	pmax		
comp=Z,15nm,1.0s							
XAN	**Xi'an**	**11.72**	**80**	⇑P	**Pn**	**07 36 25.6**	**+2.1**
XAN				pP		07 36 31.8	
XAN				pmax	pmax		
comp=Z,6.0nm,0.9s							
GYA	**Guiyang**	**11.91**	**119**	⇓*i*P	**Pn**	**07 36 30.0**	**+3.7**
WMQ	**Urumqi**	**12.47**	**335**	*eP*	**Pn**	**07 36 35.9**	**+2.1**
ENH	**Enshi**	**12.61**	**97**	Pn	**Pn**	**07 36 34.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**14.64**	**165**	Pn	**Pn**	**07 37 04.0**	**+0.6**
0.9nm,0.3s,baz=337,slow=11,SNR=1.6							
1.0nm,0.3s							
HHC	**Hu-ho-hao-te**	**15.54**	**54**	*eP*	**Pn**	**07 37 15.8**	**+0.3**
HHC				pmax	pmax		
comp=Z,42nm,0.8s							
TARG	**Taragay, Kyrgy**	**16.36**	**308**		**Pn**	**07 37 26.2**	**-0.1**
TARG	**Taragay, Kyrgy**	**16.36**	**308**	P	**Pn**	**07 37 26.2**	**-0.1**
TARG				pmax	pmax		
comp=Z,9.0nm,0.9s							
MK31	**Makanchi Array**	**17.09**	**329**	Pn	**Pn**	**07 37 34.0**	**-1.1**
MK31					**P**	**07 37 34.1**	**-2.7**
MK31	**Makanchi Array**	**17.09**	**329**	*i* P	**Pn**	**07 37 36.9**	**+1.8**
MKAR	**Makanchi Array**	**17.09**	**329**	Pn	**Pn**	**07 37 31.6**	**-3.5**
comp=Z,0.3nm,0.3s,baz=136,slow=15,SNR=3.2							
comp=Z,1.3nm,0.8s							
MKAR	**Makanchi Array**	**17.09**	**329**		**Pn**	**07 37 33.9**	**-1.2**
MKAR	**Makanchi Array**	**17.09**	**329**	P	**Pn**	**07 37 33.9**	**-1.2**
MAKZ	**Makanchi**	**17.23**	**329**	Pn	**Pn**	**07 37 35.2**	**-1.8**
MAKZ	**Makanchi**	**17.23**	**329**	P	**Pn**	**07 37 35.2**	**-1.8**
MAKZ				pmax	pmax		
comp=Z,21nm,1.5s							
SONM	**Songino Array**	**17.39**	**26**	P	**Pn**	**07 37 37.1**	**-2.0**
comp=Z,0.3nm,0.3s,baz=217,slow=13,SNR=20							
comp=Z,17nm,1.0s							
SONM	**Songino Array**	**17.39**	**26**		**Pn**	**07 37 37.0**	**-2.0**
NRN	**Naryn**	**17.45**	**305**	Pn	**Pn**	**07 37 38.0**	**-2.0**
NRN	**Naryn**	**17.45**	**305**	P	**Pn**	**07 37 38.0**	**-2.0**
NRN				pmax	pmax		
comp=Z,6.0nm,1.0s							
ULN	**Ulaanbaatar**	**17.67**	**28**	Pn	**Pn**	**07 37 39.8**	**-2.8**
ULN	**Ulaanbaatar**	**17.67**	**28**	*ce*P	**Pn**	**07 37 42.1**	**-0.4**
ULN				pmax	pmax		
comp=Z,21nm,1.7s							
DGZ	**Jazzator, Alta**	**17.88**	**344**	*i* P	**Pn**	**07 37 46.0**	**+0.9**
DGZ				pmax	pmax		
comp=Z,3.0nm,1.0s							
BOOM	**Boomskoye usch**	**17.94**	**308**		**Pn**	**07 37 45.1**	**-0.8**
BOOM				IAmb	IAmb	07 37 51.7	
comp=Z,34nm,1.3s							
BOOM	**Boomskoye usch**	**17.94**	**308**	P	**Pn**	**07 37 45.1**	**-0.8**
BOOM				pmax	pmax		
comp=Z,34nm,1.3s							
AAK	**Ala-Archa**	**18.97**	**307**	P	**P**	**07 37 57.7**	**-0.1**
comp=Z,0.6nm,0.3s,baz=142,slow=8.9,SNR=9.7							
comp=Z,7.0nm,0.7s		

USA0B pmax pmax
comp=Z,15nm,1.5s
GSI Gunungsitoli 31.34 175 P **P 07 39 57.2 +0.2**
MNCI Minicoy 31.69 225 P P 07 39 58.7 -1.4
KLR Kul'dur 31.90 48 *i* P **P 07 40 02.0 +0.4**
KLR pmax pmax
comp=Z,2.0nm,0.9s
SBUM Sibu 34.18 148 P **P 07 40 21.9 +0.1**
ARU Arti 34.51 324 *c i* P **P 07 40 25.4 +1.1**
ARU 07 41 37.8
ARU S **S 07 45 56.0 +3.3**
ARU SS **SnSn 07 48 07.5 +4.0**
ARU pmax pmax
comp=Z,4.0nm,0.7s
INU Inuyama 34.74 74 P **P 07 40 24.9 -1.6**
INU IAmb IAmb 07 40 27.4
comp=Z,25nm,1.3s
JSD Sado 35.43 69 P P 07 40 28.9 -3.6
JSD IAmb IAmb 07 40 38.9
comp=Z,25nm,1.4s
YAK Yakutsk 36.76 27 *c e* P **P 07 40 43.8 +0.3**
YAK pmax pmax
comp=Z,35nm,1.0s
NRIK Noril'sk 36.91 356 P **P 07 40 43.4 -1.4**
comp=Z,3.5nm,0.6s,baz=140,slow=8.1,SNR=5.5
comp=Z,3.5nm,0.6s
NRIK Noril'sk 36.91 356 P 07 40 42.6 -2.2
NRIK IAmb IAmb 07 40 55.5
comp=Z,7.7nm,1.1s
NRIK Noril'sk 36.91 356 *c e* P P 07 40 42.5 -2.2
NRIK pmax pmax
comp=Z,6.0nm,1.1s
JHJ2 Mitsune 37.41 77 P P 07 40 46.5 -2.9
YSS Yuzh-Sakhalins 38.73 54 *e* P **P 07 41 01.5 +1.1**
JCJ Chichijima 41.02 85 P **P 07 41 18.1 -1.7**
TIXI Tiksi 42.95 15 P P 07 41 33.0 -1.9
TIXI IAmb IAmb 07 41 43.0
comp=Z,9.3nm,1.4s
TIXI Tiksi 42.95 15 *i* P **P 07 41 33.7 -1.2**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
RAYN Ar Rayn 44.27 271 P **P 07 41 46.3 +0.1**
RAYN pmax pmax
comp=Z,1.0nm,1.4s
KLMR Klimovskoe 45.34 325 *e* P P 07 41 52.3 -1.8
KLMR *e* 07 43 34.9
KLMR pmax pmax
comp=Z,31nm,1.7s
KLMR Klimovskoe 45.34 325 *e* P P 07 41 52.3 -1.8
KLMR AMP 07 41 53.8
KLMR *e* PcP **PcP 07 43 34.9 +1.4**
OBN Obninsk 46.06 317⇑ *e* P **P 07 42 02.5 +2.6**
OBN *e* 07 43 49.9
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,2μm,19.0s
SEY Seymchan 46.67 32 *c e* P **P 07 42 05.6 +1.0**
SEY pmax pmax
comp=Z,20nm,2.5s
BRTR Keskin Array B 49.15 297 P **P 07 42 24.1 -0.3**
comp=Z,1.3nm,0.6s,baz=95,slow=7.9,SNR=5.0
comp=Z,1.3nm,0.6s
AKASG Malin Array Be 50.57 311 P P 07 42 33.1 -1.7
comp=Z,1.9nm,0.6s,baz=71,slow=7.0,SNR=8.3
comp=Z,1.9nm,0.6s
AKASG Malin Array Be 50.57 311 P **P 07 42 33.3 -1.5**
AKASG Malin Array Be 50.57 311 P **P 07 42 33.3 -1.5**
AKASG pmax pmax
comp=Z,2.0nm,0.9s
AKBB Malin Array Si 50.57 311 P P 07 42 32.6 -2.2
AKBB IAmb IAmb 07 42 36.4
comp=Z,13nm,1.4s
AKBB Malin Array Si 50.57 311 P P 07 42 32.6 -2.2
AKBB pmax pmax
comp=Z,13nm,1.4s
MNK Minsk 51.08 316 *i* P **P 07 42 39.9 +1.3**
MNK *i* 07 44 36.4
MNK *i* PPP PPP 07 45 34.1
MNK *i* S **S 07 49 57.6 +1.6**
MNK *i* SSS SSS 07 55 05.3
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK pmax pmax
comp=N,27nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=Z,2μm,21.0s
MNK MLR MLR
comp=E,243nm,18.0s
MNK MLR MLR
comp=N,1μm,16.0s
MNK Minsk 51.08 316 *i* P **P 07 42 40.0 +1.3**
comp=E,2.0nm,0.8s
MNK *i* P **P 07 42 40.0 +1.3**
comp=N,27nm,0.8s
MNK *i* P **P 07 42 40.0 +1.3**
comp=Z,8.0nm,0.8s,baz=266
MNK *i* PP **PP 07 44 36.5 +1.5**
MNK *i* PPP PPP 07 45 34.1
MNK *i* S **S 07 49 57.7 +1.6**
MNK *i* SS **SS 07 53 34.0 +3.2**
MNK *i* SSS SSS 07 55 05.3
MNK *i* LQ LQ 08 00 37.7
MNK *i* LR LR 08 04 30.5
MNK *i* LRM MLR 08 06 47.7
comp=Z,2μm,21.2s
MNK *i* LRM MLR 08 07 05.9
comp=E,243nm,17.8s
MNK *i* LRM MLR 08 07 08.4
comp=N,1μm,16.1s
FIA1 FINESS Array S 51.87 325 P P 07 42 42.8 -1.6
FINES FINESS Array B 51.87 325 P **P 07 42 43.0 -1.4**
comp=N,2.2nm,0.5s,baz=81,slow=8.6,SNR=15
comp=N,2.2nm,0.5s
FINES FINESS Array B 51.87 325 P P 07 42 41.7 -2.7
ARCES ARCESS Array B 52.59 336 P P 07 42 48.0 -1.7
comp=N,3.5nm,0.9s,baz=87,slow=7.3,SNR=6.6
comp=N,3.5nm,0.9s
ARCES ARCESS Array B 52.59 336 P P 07 42 47.4 -2.3
BILL Bilibino 53.12 26⇑ *e* P **P 07 42 53.0 -0.6**
BILL *e* 07 44 56.4
BILL *e* S S 07 50 41.0 +17
BILL pmax pmax
comp=Z,49nm,2.5s
BILL MLR MLR
comp=Z,1μm,18.0s
MLR Muntele Rosu 53.53 305 P **P 07 42 56.3 -0.8**
comp=Z,6.8nm,0.9s,baz=166,slow=8.3,SNR=4.0
comp=Z,6.8nm,0.9s
MLR Muntele Rosu 53.53 305 P **P 07 42 56.0 -1.2**
MLR IAmb IAmb 07 42 59.8
comp=Z,8.6nm,0.9s
BURAR Bucovina Array 53.61 308 P **P 07 42 56.2 -1.4**
BURAR Bucovina Array 53.61 308 P P 07 42 55.8 -1.9
BURAR pmax pmax
comp=Z,2.0nm,0.8s
SPITS Spitsbergen Ar 55.90 346 P **P 07 43 12.5 -1.2**
comp=Z,10nm,0.9s,baz=109,slow=12,SNR=2.1
comp=Z,10nm,0.9s
HFS Hagfors 58.03 324 P **P 07 43 27.6 -1.4**
comp=Z,3.2nm,0.5s,baz=89,slow=9.4,SNR=15
comp=Z,3.2nm,0.5s
MORC Moravsky Berou 58.11 312 *e* P **P 07 43 30.0 +0.2**
NC405 NORSAR Array S 58.79 326 P P 07 43 32.5 -1.9
NC303 NORSAR Array S 58.93 326 P P 07 43 33.3 -2.0
NC602 NORSAR Array S 58.95 325 P P 07 43 33.8 -1.6
NORES NORESS Array B 58.95 325 P **P 07 43 36.1 +0.7**
NB201 NORSAR Array S 59.01 326 P P 07 43 34.2 -1.6
NB2 NORSAR Subarra 59.05 326 P P 07 43 34.3 -1.8
comp=Z,1.9nm,0.5s,baz=77,slow=7.4
NOA NORSAR Array B 59.05 326 P P 07 43 34.4 -1.7
comp=Z,2.0nm,0.5s,baz=78,slow=7.9,SNR=14
comp=Z,2.0nm,0.5s
NC204 NORSAR Array S 59.21 326 P P 07 43 35.7 -1.6
NAO01 NORSAR Array S 59.24 325 P P 07 43 35.3 -2.1
NBO00 NORSAR Array S 59.25 326 P **P 07 43 36.8 -0.7**
GEC2 GERESS Array S 60.78 312 P P 07 43 46.7 -1.6
GEC2 IAmb IAmb 07 43 56.0
comp=Z,4.1nm,1.3s
GERES GERESS Array B 60.78 312 P **P 07 43 47.0 -1.3**
comp=Z,1.3nm,0.6s,baz=64,slow=9.1,SNR=7.6
comp=Z,1.3nm,0.6s
GERES GERESS Array B 60.78 312 P P 07 43 46.8 -1.6
DAVOX Davos/Dischmat 63.89 310 P P 07 44 07.4 -1.9
comp=Z,2.3nm,0.4s,baz=88,slow=14,SNR=5.5
comp=Z,2.3nm,0.4s
WB0 Warramunga Arr 64.36 138 P **P 07 44 12.4 0.0**
WB0 IAmb IAmb 07 44 49.2
comp=Z,17nm,1.5s
WRA Warramunga Arr 64.47 139 P **P 07 44 13.9 +0.7**
comp=Z,1.2nm,0.9s,baz=319,slow=8.4,SNR=5.4
comp=Z,1.2nm,0.9s
WRA Warramunga Arr 64.47 139 P **P 07 44 13.2 +0.1**
WB2 Warramunga Arr 64.48 139 P **P 07 44 13.6 +0.4**
WB2 IAmb IAmb 07 44 37.1
comp=Z,11nm,1.4s
WR0 Warramunga Arr 64.60 138 P **P 07 44 13.6 -0.4**
WR0 IAmb IAmb 07 44 56.2
comp=Z,9.3nm,1.4s
SENIN Lac Senin/Sane 65.70 311 P **P 07 44 20.0 -1.1**
SENIN IAmb IAmb 07 45 03.4
comp=Z,6.3nm,1.2s
SAOF Saorge 66.45 308 P **P 07 44 25.5 -0.3**
SAOF pmax pmax
comp=Z,11nm,0.8s
BNI Bardonecchia 66.61 309 P **P 07 44 26.1 -0.8**
BNI pmax pmax
comp=Z,7.0nm,1.3s
AS31 Alice Springs 67.25 141 P **P 07 44 32.5 +1.6**
ASAR Alice Springs 67.25 141 P **P 07 44 31.8 +0.8**
comp=Z,1.7nm,0.9s,baz=323,slow=6.8,SNR=10
comp=Z,1.7nm,0.9s
ASAR Alice Springs 67.25 141 P **P 07 44 29.8 -1.2**
EUNU Eureka 67.47 0 P **P 07 44 31.7 0.0**
EUNU IAmb IAmb 07 44 42.6
comp=Z,15nm,1.5s
TOLK Toolik Lake Re 68.41 21 P **P 07 44 37.2 -0.6**
TOLK IAmb IAmb 07 44 38.5
comp=Z,9.5nm,0.8s
IMAR Indian Mountai 68.55 24 P **P 07 44 37.4 -1.3**
MBAR Mbarara 68.87 255 *c e* P **P 07 44 44.0 +2.4**
MBAR pmax pmax
comp=Z,5.0nm,1.3s
COLD Coldfoot 69.03 22 P **P 07 44 41.2 -0.4**
COLD IAmb IAmb 07 44 42.5
comp=Z,5.6nm,1.0s
I21K Tanana 69.60 24 P **P 07 44 43.4 -1.7**
BMAR Burnt Mountain 70.64 21 P **P 07 44 52.4 +0.8**
PPLA Purkeypile 70.83 27 P **P 07 44 52.4 -0.5**
NEA2 Nenana 70.96 24 P **P 07 44 53.3 -0.2**
NEA2 IAmb IAmb 07 44 53.9
comp=Z,6.6nm,0.9s
MDM Murphy Dome 71.03 24 P **P 07 44 53.3 -0.6**
MDM IAmb IAmb 07 44 55.1
comp=Z,5.5nm,1.0s
BWN Browne 71.07 25 P **P 07 44 52.8 -1.4**
POKR Poker Plat Res 71.20 23 P **P 07 44 53.7 -1.3**
POKR IAmb IAmb 07 45 28.6
comp=Z,7.5nm,0.8s
IL31 71.59 23 P **P 07 44 55.7 -1.6**
IL31 IAmb IAmb 07 44 56.9
comp=Z,3.3nm,0.8s
ILAR Eielson Array 71.59 23 P **P 07 44 56.0 -1.3**
comp=Z,3.0nm,0.9s,baz=296,slow=5.4,SNR=20
comp=Z,3.0nm,0.9s
ILAR Eielson Array 71.59 23 P **P 07 44 56.6 -0.7**
ILAR Eielson Array 71.59 23 P **P 07 44 56.6 -0.7**
SKT Skwentna 71.60 27 P **P 07 44 56.9 -0.6**
SKT IAmb IAmb 07 45 37.3
comp=Z,8.6nm,1.2s
HDA Harding Lake 71.80 24 P P 07 44 55.2 -3.4
HDA IAmb IAmb 07 45 07.7
comp=Z,8.9nm,1.0s
A36M Sachs Harbour 71.88 12 P **P 07 44 58.1 -0.8**
A36M IAmb IAmb 07 44 59.1
comp=Z,14nm,0.9s
J26L Joseph Creek 72.87 23 P **P 07 45 04.4 -0.7**
J26L IAmb IAmb 07 45 04.5
comp=Z,4.4nm,0.9s
SML Sawmill 72.92 26 P P 07 45 02.1 -3.3
INK Inuvik 73.04 17 P **P 07 45 05.0 -0.9**
comp=Z,2.9nm,0.8s,baz=321,slow=4.9,SNR=5.0
comp=Z,2.9nm,0.8s
INK Inuvik 73.04 17 P P 07 45 02.9 -2.9
INK IAmb IAmb 07 45 09.1
comp=Z,4.9nm,1.0s
INK Inuvik 73.04 17 P **P 07 45 05.0 -0.9**
KNK Knik Glacier 73.12 27 P P 07 45 04.0 -2.5
KNK IAmb IAmb 07 45 22.8
comp=Z,24nm,1.2s
EGAK Eagle 73.45 22 P P 07 45 06.3 -2.0
EGAK IAmb IAmb 07 45 09.2
comp=Z,9.3nm,1.1s
KLU Klutina 74.01 26 P P 07 45 09.3 -2.6
KLU IAmb IAmb 07 45 14.5
comp=Z,21nm,1.2s
L27K Beaver Creek, 74.41 23 P P 07 45 11.8 -2.3
L27K IAmb IAmb 07 45 15.8
comp=Z,6.2nm,1.1s
BCAR Beaver Creek A 74.42 23 P P 07 45 11.6 -2.6

*IDC **17** 07:43:04.2±1.2, 19°.88N×122°.59E, h0km, mb3.5/4, mbtmp3.7/6, ML4.1/2, Error ellipse: s-maj=44.0km s-min=21.5km az=74.0*
*MAN **17** 07:43:13.7, 20°.24N×122°.16E, h34km, mb4.4, ML3.2, MS3.0*
MAN INTENSITY II - BASCO BATANES.
*JMA **17** 07:43:14.4±0.7, 21°.N±3°.×12°.2E±°, h50km, MV4.5/9, PHILIPPINE ISL REGION*
*NEIC **17** 07:43:14.6±1.1, 20°.5N±0°.1×122°.3E±0°.1, h67km±15km, mb4.1/4, Error ellipse: s-maj=20.6km s-min=14.0km az=69.0*
ISC 17 07:43:11.3±1.2, 20°.39N±0°.08×122°.37E±0°.07, h31km, n27, σ1§61/33, mb3.7/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.71**	**334**	Pn	**Pn**	**07 43 53.0**	**+0.2**
TWG				Sn	**Sn**	**07 44 23.9**	**-0.6**
YULB	**Yu-li**	**3.15**	**342**	Pn	**Pn**	**07 43 59.0**	**+0.1**
TPUB	**Ta-pu**	**3.32**	**331**	Pn	**Pn**	**07 44 03.0**	**+1.8**
SSLB	**Suanglung**	**3.63**	**339**	Pn	**Pn**	**07 44 06.7**	**+1.3**
NACB	**Ninganchiao**	**3.84**	**349**	Pn	**Pn**	**07 44 08.7**	**+0.5**
HATJ	**Hateruma jima**	**3.89**	**20**	*e* S	**Sn**	**07 44 52.1**	**-1.4**
JYNG	**Yonaguni jima**	**4.08**	**7**	*e* P	**Pn**	**07 44 13.1**	**+1.5**
JYNG				*e* S	**Sn**	**07 44 57.8**	**-0.4**
YOJ	**Yonaguni jima**	**4.10**	**8**	Pn	**Pn**	**07 44 13.2**	**+1.4**
YOJ	**Yonaguni jima**	**4.10**	**8**	P	**Pn**	**07 44 13.4**	**+1.6**
YOJ				*e* S	**Sn**	**07 44 58.4**	**-0.4**
JKRS	**Kuro-shima**	**4.12**	**21**	*e* P	**Pn**	**07 44 13.9**	**+1.8**
JKRS				*e* S	**Sn**	**07 44 58.5**	**-0.8**
IRIF	**Iriomote-Funau**	**4.12**	**17**	P	**Pn**	**07 44 14.1**	**+1.9**
IRIF				S	**Sn**	**07 44 60.0**	**+0.6**
JIJ	**Ishigaki jima**	**4.28**	**22**	*e* P	**Pn**	**07 44 16.2**	**+1.8**
JIJ				S	**Sn**	**07 45 02.0**	**-1.4**
YHNB	**Yeheng**	**4.36**	**348**	Pn	**Pn**	**07 44 17.2**	**+1.7**
TATO	**Taipei**	**4.64**	**350**	Pn	**Pn**	**07 44 20.8**	**+1.5**
JTJ	**Tarama**	**4.75**	**27**	P	**Pn**	**07 44 23.0**	**+2.2**
JTJ				S	**Sn**	**07 45 13.3**	**-1.5**
KNMB	**Chin-men Tao**	**5.48**	**318**	Pn	**Pn**	**07 44 31.6**	**+0.7**
JOW	**Kunigami**	**8.39**	**39**	Pn	**Pn**	**07 45 12.4**	**+1.5**
	7.5nm,0.3s,baz=222,slow=11,SNR=9.9						
JOW				Sn	**Sn**	**07 46 40.5**	**-4.0**
	1.3nm,0.3s,baz=107,slow=19,SNR=1.8						
	16nm,0.2s						
KSRS	**Korea Array**	**17.68**	**15**	P	**Pn**	**07 47 15.2**	**0.0**
	0.4nm,0.3s,baz=203,slow=12,SNR=1.7						
	0.5nm,0.4s						
WB0	**Warramunga Arr**	**41.60**	**163**	P	**P**	**07 50 56.7**	**+0.1**
WB0				IAmb	IAmb	07 51 21.3	
	comp=Z,5.5nm,1.2s						
WRA	**Warramunga Arr**	**41.76**	**163**	P	P	07 50 49.9	-8.0
	comp=Z,0.4nm,0.7s,baz=346,slow=9.3,SNR=2.9						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**41.76**	**163**	P	**P**	**07 50 57.7**	**-0.2**
WB2	**Warramunga Arr**	**41.76**	**163**	P	**P**	**07 50 57.2**	**-0.7**
MK31	**Makanchi Array**	**41.86**	**318**	P	**P**	**07 50 55.7**	**-2.9**
MK31				IAmb	IAmb	07 51 15.7	
	comp=Z,3.2nm,1.4s						
MKAR	**Makanchi Array**	**41.86**	**318**	P	**P**	**07 51 00.5**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=111,slow=8.5,SNR=5.4						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**41.86**	**318**	P	**P**	**07 50 56.5**	**-2.1**
ASAR	**Alice Springs**	**45.20**	**165**	P	P	07 51 19.4	-6.2
	comp=Z,0.3nm,0.5s,baz=352,slow=6.8,SNR=7.2						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**45.74**	**322**	P	**P**	**07 51 30.8**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=114,slow=7.6,SNR=4.9						
	comp=Z,0.8nm,0.6s						

IDC 17 07:47:30.4±2.4, 53°.70N×87°.03E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=21.6km s-min=14.0km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**282**	I		07 56 30.0	
	baz=100,slow=335,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.33**	**282**	Pg	Pg	07 47 54.4	-1.5
	2.2nm,0.3s,baz=100,slow=16,SNR=23						
ZALV				Lg	Lg	07 48 13.1	
	1.6nm,0.3s,baz=98,slow=29,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.07**	**243**	Pn	Pn	07 49 02.5	+1.3
	0.1nm,0.3s,baz=58,slow=14,SNR=8.9						
KURBB				Sn	Sn	07 50 10.4	-0.9
	baz=48,slow=39,SNR=1.2						
KURBB				Lg	Lg	07 50 41.0	
	baz=65,slow=34,SNR=3.0						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**7.55**	**206**	Pn	Pn	07 49 23.1	+1.4
	0.3nm,0.3s,baz=25,slow=13,SNR=10.0						
MKAR				Sn	Sn	07 50 46.5	-1.4
	0.1nm,0.3s,baz=294,slow=41,SNR=1.7						
MKAR				Lg	Lg	07 51 31.7	
	baz=28,slow=31						
	0.4nm,0.3s						

*IDC **17** 07:55:03.8±1.1, 32°.88N×94°.78E, h0km, mb3.8/9, mbtmp3.8/12, ML3.5/3, Error ellipse: s-maj=41.2km s-min=19.6km az=53.0*
ISC 17 07:55:04.8±0.9, 32°.79N±0°.09×94°.7E±0°.1, h10km, n16, σ1§27/15, mb4.0/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.30**	**225**	Pn	**Pg**	**07 56 25.9**	**-1.4**
LSA				Sn	**Sb**	**07 57 13.6**	**+0.6**
GTA	**Gaotai**	**7.81**	**31**	*e* P	Pn	07 57 01.3	+2.6
LZH	**Lanzhou**	**8.27**	**64**	*e* P	Pn	07 57 08.4	+3.3
MKAR	**Makanchi Array**	**16.87**	**330**	Pn	**Pn**	**07 58 59.6**	**-1.5**
	0.1nm,0.3s,baz=135,slow=13,SNR=3.4						
	0.3nm,0.5s						
SONM	**Songino Array**	**17.46**	**27**	P	**P**	**07 59 07.6**	**-2.1**
	0.2nm,0.3s,baz=212,slow=14,SNR=14						
	4.5nm,0.9s						
AAK	**Ala-Archa**	**18.69**	**307**	P	**Pn**	**07 59 24.1**	**+0.4**
	0.2nm,0.3s,baz=175,slow=11,SNR=1.7						
	1.5nm,0.5s						
KURBB	**Kurchatov Arra**	**21.42**	**331**	P	**P**	**07 59 54.0**	**+1.2**
	5.8nm,0.8s,baz=138,slow=11,SNR=15						
	5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**22.28**	**345**	P	**P**	**08 00 03.4**	**+1.4**
	0.8nm,0.3s,baz=151,slow=9.2,SNR=1.7						
	0.8nm,0.3s						
AKASG	**Malin Array Be**	**50.30**	**311**	P	**P**	**08 04 01.8**	**+0.3**
	0.4nm,0.4s,baz=72,slow=6.8,SNR=5.2						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**51.64**	**325**	P	**P**	**08 04 10.9**	**-0.4**
	2.0nm,0.9s,baz=86,slow=9.8,SNR=4.7						
	2.0nm,0.9s						
ARCES	**ARCESS Array B**	**52.41**	**335**	P	**P**	**08 04 17.1**	**+0.2**
	9.2nm,1.2s,baz=69,slow=7.9,SNR=4.1						
	9.2nm,1.2s						
NB2	**NORSAR Subarra**	**58.82**	**326**	P	**P**	**08 05 04.6**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=77,slow=6.9						
NOA	**NORSAR Array B**	**58.82**	**326**	P	**P**	**08 05 03.3**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=77,slow=7.0,SNR=4.1						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**64.72**	**138**	P	**P**	**08 05 45.4**	**+1.9**
	comp=Z,0.4nm,0.9s,baz=338,slow=7.2,SNR=2.3						
	comp=Z,0.4nm,0.9s						
ASAR	**Alice Springs**	**67.49**	**141**	P	**P**	**08 06 01.1**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=318,slow=5.9,SNR=3.2						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**71.64**	**23**	P	**P**	**08 06 25.4**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=297,slow=6.1,SNR=11						
	comp=Z,1.1nm,0.8s						

*IDC **17** 08:06:23.6±0.8, 32°.83N×94°.83E, h0km, mb3.9/11, mbtmp3.9/14, ML3.4/2, Error ellipse: s-maj=36.4km s-min=17.1km az=58.0*
*NEIC **17** 08:06:30.0±1.7, 32°.98N±0°.09×95°.0E±0°.1, h38km±7km, mb4.6/17, Error ellipse: s-maj=15.5km s-min=13.0km az=70.0*
ISC 17 08:06:28.9±0.6, 32°.94N±0°.08×95°.01E±0°.09, h35km, n40, σ1§05/40, mb4.2/18, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.62**	**227**	Pn	**Pn**	**08 07 39.2**	**+2.6**
TEZP	**TEZPUR**	**6.58**	**198**	*e* P	**Pn**	**08 08 01.8**	**-1.4**
MOKO	**MOKOCHONG**	**6.61**	**184**	*e* P	**Pn**	**08 08 04.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**14.85**	**165**	Pn	**Pn**	**08 09 55.6**	**-0.7**
	0.8nm,0.3s,baz=330,slow=14,SNR=1.4						
MK31	**Makanchi Array**	**16.90**	**329**	Pn	**Pn**	**08 10 21.1**	**-1.5**
MKAR	**Makanchi Array**	**16.90**	**329**	Pn	**Pn**	**08 10 20.4**	**-2.3**
	0.1nm,0.3s,baz=134,slow=12,SNR=2.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**16.90**	**329**	Pn	**Pn**	**08 10 21.7**	**-1.0**
SONM	**Songino Array**	**17.20**	**27**	P	**Pn**	**08 10 27.2**	**+0.8**
	0.4nm,0.3s,baz=213,slow=13,SNR=16						
	6.2nm,0.9s						
SONM	**Songino Array**	**17.20**	**27**	Pn	**Pn**	**08 10 26.2**	**-0.2**
BOOM	**Boomskoye usch**	**17.81**	**308**		**P**	**08 10 33.7**	**-0.9**
GAR	**Garm**	**20.85**	**294**	P	**P**	**08 11 07.3**	**-0.5**
GAR				IAmb	IAmb	08 11 14.5	
	comp=Z,7.4nm,0.8s						
KURBB	**Kurchatov Arra**	**21.44**	**330**	P	**P**	**08 11 13.8**	**0.0**
	comp=Z,5.8nm,0.6s,baz=138,slow=11,SNR=27						
	comp=Z,5.8nm,0.6s						
KURK	**Kurchatov**	**21.47**	**331**	P	**P**	**08 11 14.5**	**+0.3**
KURK				IAmb	IAmb	08 11 18.6	
	comp=Z,8.8nm,0.6s						
KKAR	**Karatay Array**	**21.73**	**305**	P	**P**	**08 11 17.1**	**0.0**
ZALV	**Zalesovo Beam**	**22.22**	**344**	P	**P**	**08 11 22.0**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=158,slow=12,SNR=8.6						
	comp=Z,2.6nm,0.8s						
YHNB	**Yeheng**	**24.48**	**103**	P	**P**	**08 11 43.3**	**-1.6**
TPUB	**Ta-pu**	**24.50**	**107**	P	**P**	**08 11 45.8**	**+0.8**
JTM	**Tenmabayashi**	**37.33**	**64**	P	**P**	**08 13 38.0**	**+0.2**
JTM				IAmb	IAmb	08 14 05.4	
	comp=Z,31nm,1.2s						
AKASG	**Malin Array Be**	**50.43**	**311**	P	**P**	**08 15 21.8**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=71,slow=7.4,SNR=5.1						
	comp=Z,0.3nm,0.3s						
FINES	**FINESS Array B**	**51.70**	**325**	P	**P**	**08 15 32.9**	**+0.8**
ARCES	**ARCESS Array B**	**52.40**	**335**	P	**P**	**08 15 37.5**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=93,slow=8.1,SNR=4.9						
	comp=Z,2.7nm,0.9s						
ARCES	**ARCESS Array B**	**52.40**	**335**	P	**P**	**08 15 38.3**	**+1.0**
ARCES				IAmb	IAmb	08 16 00.8	
	comp=Z,22nm,1.4s						
HFS	**Hagfors**	**57.85**	**324**	P	**P**	**08 16 17.1**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=92,slow=13,SNR=2.0						
	comp=Z,1.4nm,0.6s						
NB201	**NORSAR Array S**	**58.83**	**326**	P	**P**	**08 16 23.9**	**+0.3**
NB2	**NORSAR Subarra**	**58.87**	**326**	P	**P**	**08 16 23.7**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=77,slow=6.9						
NOA	**NORSAR Array B**	**58.87**	**326**	P	**P**	**08 16 23.9**	**0.0**
	comp=Z,1.4nm,0.7s,baz=78,slow=6.9,SNR=4.4						
	comp=Z,1.4nm,0.7s						
NC204	**NORSAR Array S**	**59.03**	**326**	P	**P**	**08 16 25.3**	**+0.2**
GERES	**GERESS Array B**	**60.64**	**311**	P	**P**	**08 16 36.0**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=76,slow=8.2,SNR=4.5						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	**60.64**	**311**	P	**P**	**08 16 35.9**	**-0.5**
WB0	**Warramunga Arr**	**64.52**	**139**	P	**P**	**08 17 03.0**	**+0.6**
WB0				IAmb	IAmb	08 17 15.5	
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**64.63**	**139**	P	**P**	**08 17 03.4**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=345,slow=8.3,SNR=4.1						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**64.63**	**139**	P	**P**	**08 17 03.4**	**+0.2**
WB2	**Warramunga Arr**	**64.64**	**139**	P	**P**	**08 17 03.7**	**+0.5**
WB2				IAmb	IAmb	08 17 13.7	
	comp=Z,10nm,1.4s						
ASAR	**Alice Springs**	**67.41**	**141**	P	**P**	**08 17 21.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=328,slow=5.9,SNR=6.8						

comp=Z,0.7nm,0.7s
TOLK Toolik Lake Re 68.20 21 P P 08 17 27.7 +2.3
TOLK IAmb IAmb 08 18 07.0
comp=Z,9.7nm,1.4s
BMAR Burnt Mountain 70.44 21 P P 08 17 40.7 +1.4
ILAR Eielson Array 71.39 24 P P 08 17 45.9 +0.8
comp=Z,0.9nm,0.8s,baz=293,slow=6.1,SNR=8.3
comp=Z,0.9nm,0.8s
SKT Skwentna 71.40 27 P P 08 17 46.9 +1.7
SKT IAmb IAmb 08 17 47.5
comp=Z,8.8nm,1.2s
INK Inuvik 72.82 17 P P 08 17 54.6 +1.1
INK IAmb IAmb 08 17 57.0
comp=Z,2.5nm,1.0s
TORD Torodi Ar. Bea 85.70 283 P P 08 19 03.6 -1.1
comp=Z,0.4nm,0.6s,baz=49,slow=5.1,SNR=2.6
comp=Z,0.4nm,0.6s

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*THE **17** 08:09:59.3, 38.°39N×20.°44E, h8km±1km, ML3.1/12, Error ellipse: s-maj=1.5km s-min=0.5km az=276.0*
*ATH **17** 08:09:59.1, 38.°37N×20.°46E, h14km±1km, ML3.0/13, Error ellipse: s-maj=1.9km s-min=0.7km az=265.0*
ISC 17 08:09:59.2±0.9, 38.°38N±0.°02×20.°47E±0.°03, h13km±5km, n39, σ0.°61/66, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.11**	**42**	P	**Pg**	**08 10 02.5**	**+0.2**
FSK				S	**Sg**	**08 10 04.2**	**-0.3**
	10μm,0.4s						
FSK	**Fiskardo**	**0.11**	**42**	P	**Pg**	**08 10 02.4**	**0.0**
FSK				AML	AML	08 10 04.6	
	comp=N,16523μm,0.5s						
FSK				S	**Sg**	**08 10 04.7**	**+0.2**
FSK				AML	AML	08 10 08.0	
	comp=E,23898μm,0.5s						
KEF4	**Livadi, Kephal**	**0.13**	**197**	P	**Pg**	**08 10 02.4**	**-0.2**
KEF4				S	**Sg**	**08 10 04.9**	**+0.1**
KEF4	**Livadi, Kephal**	**0.13**	**197**	P	**Pg**	**08 10 02.4**	**-0.2**
KEF4				S	**Sg**	**08 10 05.0**	**+0.1**
DMLN	**Damoulianata-K**	**0.16**	**209**	P	**Pg**	**08 10 02.9**	**-0.2**
DMLN				S	**Sg**	**08 10 06.3**	**+0.6**
	comp=E,27μm,0.4s						
VLS	**Valsamata**	**0.22**	**155**	P	**Pg**	**08 10 03.8**	**-0.3**
VLS				S	**Sg**	**08 10 07.5**	**+0.1**
	comp=E,9μm,0.3s						
VLS	**Valsamata**	**0.22**	**155**	P	**Pg**	**08 10 03.8**	**-0.3**
VLS				S	**Sg**	**08 10 07.6**	**+0.3**
VLS				AML	AML	08 10 08.1	
	comp=E,18488μm,0.4s						
VLS				AML	AML	08 10 13.0	
	comp=N,16615μm,0.4s						
PSDA	**Pessada-Kefalo**	**0.28**	**161**	P	**Pg**	**08 10 04.9**	**-0.2**
PSDA				S	**Sg**	**08 10 09.7**	**+0.8**
PSDA	**Pessada-Kefalo**	**0.28**	**161**	P	**Pg**	**08 10 04.9**	**-0.2**
PSDA				S	**Sg**	**08 10 09.3**	**+0.3**
EVGI	**Lefkada island**	**0.28**	**31**	P	**Pg**	**08 10 04.8**	**-0.3**
EVGI				S	**Sg**	**08 10 09.5**	**+0.4**
	comp=N,6μm,0.3s						
EVGI	**Lefkada island**	**0.28**	**31**	P	**Pg**	**08 10 04.9**	**-0.2**
EVGI				S	**Sg**	**08 10 09.4**	**+0.4**
DRAG	**Dragano-Lefkad**	**0.32**	**15**	P	**Pg**	**08 10 05.2**	**-0.5**
DRAG				S	**Sg**	**08 10 10.3**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.38**	**28**	P	**Pg**	**08 10 06.3**	**-0.6**
NYDR				S	**Sg**	**08 10 12.2**	**+0.2**
	comp=N,5μm,0.5s						
LKD2	**Lefkada island**	**0.43**	**20**	P	**Pg**	**08 10 07.3**	**-0.6**
LKD2				S	**Sg**	**08 10 13.5**	**-0.3**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.43**	**20**	P	**Pg**	**08 10 07.4**	**-0.6**
LKD2				S	**Sg**	**08 10 13.9**	**+0.2**
LKD2				AML	AML	08 10 15.5	
	comp=E,4364μm,0.4s						
LKD2				AML	AML	08 10 18.0	
	comp=N,5417μm,0.7s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**08 10 08.1**	**-0.4**
TSLK				S	**Sg**	**08 10 15.3**	**+0.5**
	comp=N,3μm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**08 10 08.1**	**-0.4**
TSLK				S	**Sb**	**08 10 15.6**	**-0.6**
TSLK				AML	AML	08 10 21.4	
	comp=N,5410μm,0.6s						
TSLK				AML	AML	08 10 22.3	
	comp=E,4943μm,0.6s						
LTHK	**Lithakia**	**0.73**	**157**	P	**Pg**	**08 10 12.8**	**-0.6**
LTHK				S	**Sb**	**08 10 24.6**	**+1.0**
	comp=E,2μm,0.3s						
LTHK	**Lithakia**	**0.73**	**157**	P	**Pg**	**08 10 12.6**	**-0.7**
LTHK				S	**Sg**	**08 10 23.1**	**+0.2**
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**08 10 14.7**	**-0.9**
RLS				S	**Sn**	**08 10 29.0**	**-0.1**
	comp=E,658nm,0.7s						
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**08 10 15.1**	**-0.5**
RLS				S	**Sg**	**08 10 26.9**	**+0.2**
RLS				AML	AML	08 10 33.7	
	comp=N,1668μm,0.5s						
RLS				AML	AML	08 10 38.4	
	comp=E,958μm,1.0s						
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**08 10 15.7**	**-0.2**
PVO				S	**Sb**	**08 10 28.9**	**+1.4**
	comp=E,2μm,0.6s						
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**08 10 15.7**	**-0.2**
PVO				S	**Sg**	**08 10 27.9**	**+0.7**
DRO	**Drossia**	**1.07**	**113**	P	**Pb**	**08 10 18.6**	**-1.0**
DRO				S	**Sn**	**08 10 36.3**	**+1.7**
	comp=E,2μm,0.5s						
DRO	**Drossia**	**1.07**	**113**	P	**Pb**	**08 10 18.6**	**-1.0**
EFP	**Efpalio**	**1.13**	**87**	P	**Pb**	**08 10 19.6**	**-1.0**
IGT	**Igoumenitsa**	**1.16**	**355**	P	**Pb**	**08 10 21.2**	**+0.1**
IGT				AML	AML	08 10 41.4	
	comp=E,1036μm,0.4s						
IGT				AML	AML	08 10 41.6	
	comp=N,1342μm,0.4s						
EVR	**Evrytania**	**1.18**	**62**	P	**Pb**	**08 10 20.5**	**-1.0**
EVR				AML	AML	08 10 48.0	
	comp=E,1156μm,0.8s						
EVR				AML	AML	08 10 48.1	
	comp=N,970μm,0.9s						
LAKA	**Lakka**	**1.19**	**96**	P	**Pn**	**08 10 21.0**	**-0.7**
LAKA				AML	AML	08 10 44.5	
	comp=N,713μm,0.9s						
LAKA				AML	AML	08 10 48.5	
	comp=E,600μm,0.6s						
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**08 10 21.6**	**-0.7**
SERG				S	**Sg**	**08 10 41.1**	**+1.6**
	comp=E,865nm,0.8s						
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**08 10 21.7**	**-0.7**
SERG				S	**Sb**	**08 10 39.3**	**+0.7**
SERG				AML	AML	08 10 45.9	
	comp=N,2530μm,0.6s						
SERG				AML	AML	08 10 46.2	
	comp=E,1738μm,0.4s						
JAN	**Janina**	**1.31**	**13**	P	**Pn**	**08 10 23.4**	**+0.1**
JAN				AML	AML	08 10 44.6	
	comp=N,1270μm,0.5s						
JAN				AML	AML	08 10 47.3	
	comp=E,1404μm,0.5s						
KLV	**Kalavryta, Ach**	**1.36**	**104**	P	**Pn**	**08 10 23.7**	**-0.3**
KLV				S	**Sg**	**08 10 44.3**	**+1.1**
KLV	**Kalavryta, Ach**	**1.36**	**104**	P	**Pn**	**08 10 23.8**	**-0.3**
KLV				AML	AML	08 10 45.7	
	comp=N,717μm,0.5s						
KLV				AML	AML	08 10 50.3	
	comp=E,579μm,0.5s						
KASA	**Kassiopi**	**1.43**	**343**	P	**Pn**	**08 10 24.8**	**0.0**
KEK	**Kerkira**	**1.43**	**339**	P	**Pn**	**08 10 24.4**	**-0.5**
KEK				AML	AML	08 10 51.3	
	comp=N,573μm,0.6s						
KEK				AML	AML	08 10 54.4	
	comp=E,740μm,0.7s						
ITM	**Ithomi**	**1.66**	**136**	P	**Pb**	**08 10 29.4**	**-0.3**
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pb**	**08 10 29.9**	**-0.2**
THL				AML	AML	08 10 59.0	
	comp=E,592μm,0.6s						
THL				AML	AML	08 10 59.3	
	comp=N,801μm,0.7s						
PENT	**Pentalofos**	**1.89**	**16**	P	**Pb**	**08 10 33.8**	**+0.1**

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*ISK **17** 08:10:58.5, 41.°43N×44.°24E, h5km, ML3.7/11*
*TIF **17** 08:11:00.0, 41.°39N×44.°02E, h12km*
*MOS **17** 08:11:00.7±1.2, 41.°34N×44.°00E, h4km, mb4.1/1, Error ellipse: s-maj=4.9km s-min=3.4km az=88.9*

*NORS **17** 08:11:00.7±0.0, 41.°52N×43.°87E, h1km, MPVA4.7*
*AZER **17** 08:11:00.2±0.2, 41.°42N×44.°23E, h18km±1km, Error ellipse: s-maj=3.3km s-min=1.6km az=276.0*
*NSSP **17** 08:11:00.1, 41.°37N×43.°95E, h10km, Ms3.4*
*DDA **17** 08:11:01.9±0.0, 41.°36N×43.°85E, h7km±3km, ML3.5*
*DRS **17** 08:11:01.7±0.0, 40.°93N×43.°54E, h26km*
ISC 17 08:11:01.4±0.6, 41.°36N±0.°01×44.°01E±0.°01, h10km, n168, σ1.9 97/298, 17C-13D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.14**	**102**	P	**Pg**	**08 11 04.0**	**-0.6**
DMNI				S	**Sg**	**08 11 06.3**	**-0.8**
DMNI	**Dmanisi**	**0.14**	**102**	PG	**Pg**	**08 11 04.1**	**-0.6**
BRNG	**Burnasheti**	**0.30**	**333**	P	**Pb**	**08 11 07.1**	**-1.9**
BRNG				S	**Sb**	**08 11 12.0**	**-2.0**
AKH	**Akhalkalaki**	**0.39**	**278**	PG	**Pb**	**08 11 10.8**	**+0.2**
AKH	**Akhalkalaki**	**0.39**	**278**	PG	**Pb**	**08 11 10.9**	**+0.3**
STE	**Stepanavan**	**0.45**	**143**	⇑*i*P	**Pg**	**08 11 09.9**	**-0.4**
STE				⇓*i*S	**Sg**	**08 11 16.7**	**+0.4**
STE	**Stepanavan**	**0.45**	**143**	⇑*i*PG	**Pg**	**08 11 09.9**	**-0.4**
STEZ	**Stepenevan**	**0.47**	**140**	⇑*i*P	**Pg**	**08 11 07.0**	**-3.5**
STEZ				⇓*i*S	**Sg**	**08 11 13.1**	**-3.6**
BKRG	**Bakuriani**	**0.54**	**318**	P	**Pb**	**08 11 11.5**	**-1.6**
BKRG				S	**Sb**	**08 11 19.4**	**-1.6**
BKRG	**Bakuriani**	**0.54**	**318**	PG	**Pb**	**08 11 11.5**	**-1.6**
BKRG				S	**Sb**	**08 11 19.5**	**-1.6**
AZMN	**Azmana**	**0.55**	**266**	P	Pn	08 11 19.8	+4.4
AZMN				S	**Sn**	**08 11 27.7**	**+3.0**
GMRZ	**Gyumri**	**0.56**	**194**	⇓*i*P	**Pb**	**08 11 13.0**	**-0.5**
GMRZ				⇓S	**Sb**	**08 11 22.0**	**+0.3**
SPIZ	**Spitak**	**0.57**	**160**	⇑⇓*i*P	**Pg**	**08 11 09.1**	**-3.4**
SPIZ				⇑*i*S	**Sg**	**08 11 17.4**	**-2.6**
CKLZ	**Chkalov**	**0.65**	**131**	⇓*i*P	**Pg**	**08 11 10.1**	**-3.8**
CKLZ				⇓*i*S	**Sg**	**08 11 18.1**	**-4.3**
BTNK	**Botanikuri**	**0.68**	**61**	P	Pg	08 11 05.8	-8.7
BTNK				S	**Sg**	**08 11 15.3**	**-8.1**
SEAG	**Tbilisi Sea**	**0.72**	**56**	P	**Pg**	**08 11 14.2**	**-1.2**
SEAG				S	**Sg**	**08 11 24.3**	**-0.5**
SEAG	**Tbilisi Sea**	**0.72**	**56**	PG	**Pg**	**08 11 14.2**	**-1.2**
SEAG				S	**Sg**	**08 11 24.3**	**-0.5**
EAK	**Akyaka**	**0.74**	**204**	S	**Sg**	**08 11 24.4**	**-0.9**
ALIG	**Mtskhetisjvari**	**0.79**	**340**	P	**Pg**	**08 11 15.5**	**-1.2**
ALIG				S	**Sb**	**08 11 26.4**	**-1.8**
EPOS	**Posof**	**0.97**	**279**	P	**Pg**	**08 11 18.4**	**-1.8**
EPOS				S	**Sg**	**08 11 31.6**	**-1.2**
EPOS				*i* AML	AML	08 11 37.0	
	comp=N,1μm,0.8s						
ABS	**Abastumani**	**0.98**	**294**	P	**Pg**	**08 11 19.1**	**-1.2**
ABS				S	**Sb**	**08 11 33.0**	**-0.6**
ABS	**Abastumani**	**0.98**	**294**	PG	**Pg**	**08 11 19.1**	**-1.2**
ABS				S	**Sb**	**08 11 33.0**	**-0.6**
KARS	**Kars**	**1.01**	**224**	PN	**Pn**	**08 11 20.9**	**-0.9**
KARS	**Kars**	**1.01**	**224**	PG	**Pn**	**08 11 20.9**	**-0.9**
DGRG	**David-gareji**	**1.03**	**84**	P	**Pg**	**08 11 19.1**	**-2.2**
DGRG				S	**Sb**	**08 11 34.6**	**-0.4**
DGRG	**David-gareji**	**1.03**	**84**	PG	**Pg**	**08 11 19.1**	**-2.2**
DGRG				S	**Sb**	**08 11 34.6**	**-0.4**
QZX	**Qazax, Azerbai**	**1.07**	**106**	P	**Pg**	**08 11 20.0**	**-2.0**
	SNR=1012						
QZX				S	**Sg**	**08 11 34.4**	**-1.6**
ARUZ	**Aruch**	**1.08**	**177**	⇑*i*P	**Pn**	**08 11 22.6**	**-0.1**
ARUZ				⇑*i*S	**Sn**	**08 11 37.8**	**+0.1**
GUDG	**Gudauri**	**1.16**	**17**	P	**Pn**	**08 11 22.9**	**-1.0**
GUDG	**Gudauri**	**1.16**	**17**	PG	**Pn**	**08 11 22.9**	**-1.0**
KAPZ	**Kaputan**	**1.16**	**153**	⇑*i*P	**Pb**	**08 11 22.7**	**-1.1**
KAPZ				⇑*i*S	**Sg**	**08 11 38.7**	**-0.2**
KAPZ	**Kaputan**	**1.16**	**153**	⇑*i*PG	**Pb**	**08 11 22.6**	**-1.1**
METS	**Metsamor**	**1.21**	**177**	⇑*i*P	**Pn**	**08 11 23.4**	**-1.0**
METS				⇑*i*S	**Sn**	**08 11 41.1**	**+0.1**
TKB	**Tkibuli**	**1.25**	**323**	P	**Pb**	**08 11 24.0**	**-1.1**
TKB				S	**Sn**	**08 11 41.1**	**-0.8**
TKB	**Tkibuli**	**1.25**	**323**	PG	**Pb**	**08 11 24.0**	**-1.1**
TKB				S	**Sn**	**08 11 41.1**	**-0.8**
VNNZ	**Vanand**	**1.26**	**186**	⇓*i*P	**Pn**	**08 11 24.5**	**-0.7**
VNNZ				⇑*i*S	**Sn**	**08 11 42.5**	**+0.2**
VNNZ	**Vanand**	**1.26**	**186**	⇓*i*PG	**Pn**	**08 11 24.5**	**-0.7**
ONI	**Oni**	**1.30**	**342**	PN	**Pn**	**08 11 24.3**	**-1.4**
ONI	**Oni**	**1.30**	**342**	P	**Pn**	**08 11 24.4**	**-1.4**
ONI				S	**Sn**	**08 11 42.2**	**-1.0**
ONI	**Oni**	**1.30**	**342**	PG	**Pn**	**08 11 24.4**	**-1.3**
ONI				S	**Sn**	**08 11 42.2**	**-1.0**
GNI	**Garni**	**1.33**	**155**	⇓*i*P	**Pb**	**08 11 26.1**	**-0.5**
GNI				⇑*i*S	**Sg**	**08 11 44.9**	**+0.6**
GNI	**Garni**	**1.33**	**155**	PN	**Pn**	**08 11 25.6**	**-0.6**
GNI				SN	**Sg**	**08 11 44.9**	**+0.6**
GNI	**Garni**	**1.33**	**155**	*d i*PG	**Pb**	**08 11 25.9**	**-0.7**
GNI				*i* S	**Sg**	**08 11 44.8**	**+0.6**
GNI				pmax	pmax		
	comp=Z,398nm,0.5s						
GNI				smax	smax		
	comp=Z,930nm,0.6s						
PNSH	**Pansheti**	**1.35**	**19**	P	**Pn**	**08 11 25.6**	**-1.0**
PNSH	**Pansheti**	**1.35**	**19**	PG	**Pn**	**08 11 25.6**	**-1.0**
TASB	**TASBURUN-IGDIR**	**1.39**	**173**	PN	**Pb**	**08 11 26.6**	**-0.8**
ZEI	**Tsey**	**1.43**	**357**	*ce*PG	**Pb**	**08 11 26.9**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,276nm,0.6s						
ZEI	**Tsey**	**1.43**	**357**	*e*Pg	**Pb**	**08 11 27.1**	**-1.2**
ZEI				*e*Sg	**Sg**	**08 11 46.6**	**-0.9**
NRKZ	**NAREK**	**1.45**	**160**	⇑*i*P	**Pn**	**08 11 26.4**	**-1.3**
NRKZ				⇓*i*S	**Sn**	**08 11 46.3**	**-0.5**
GDB	**GEDABAY**	**1.47**	**115**	P	**Pn**	**08 11 26.4**	**-1.7**
	SNR=32						
GDB				S	**Sn**	**08 11 45.3**	**-2.1**
LACR	**Lac**	**1.48**	**8**	⇑*i*PG	**Pb**	**08 11 28.1**	**-1.1**
LACR				*e*S	**Sg**	**08 11 48.1**	**-1.0**
LACR	**Lac**	**1.48**	**8**	*i* Pg	**Pb**	**08 11 28.1**	**-1.1**
LACR				*e*Sg	**Sg**	**08 11 48.1**	**-1.0**
SENK	**Senkaya-Erzuru**	**1.49**	**238**	PN	**Pg**	**08 11 29.1**	**-0.9**
SHTL	**Shatili**	**1.55**	**33**	P	**Pb**	**08 11 29.0**	**-1.3**
SHTL				S	**Sb**	**08 11 49.4**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.57**	**348**	*e*PG	**Pb**	**08 11 29.6**	**-1.1**
DIGR				*e*S	**Sg**	**08 11 51.5**	**-0.5**
DIGR				pmax	pmax		
	comp=Z,104nm,0.2s						
DIGR				smax	smax		
	comp=N,280nm,0.5s						
DIGR	**Digorskoe uzhe**	**1.57**	**348**	*e*Pg	**Pb**	**08 11 29.6**	**-1.1**
DIGR				*e*Sg	**Sg**	**08 11 51.5**	**-0.5**
DDFL	**Dedoflistskaro**	**1.59**	**86**	P	**Pg**	**08 11 31.6**	**-0.3**
DDFL				S	**Sg**	**08 11 56.8**	**+4.2**
DDFL	**Dedoflistskaro**	**1.59**	**86**	PG	**Pg**	**08 11 31.7**	**-0.3**
DDFL				S	**Sg**	**08 11 56.8**	**+4.2**
DAGI	**Agillar**	**1.60**	**261**	P	**Pb**	**08 11 30.6**	**-0.6**
DAGI				S	**Sg**	**08 11 52.0**	**-1.0**
DAGI				*i* AML	AML	08 11 57.0	
	comp=N,653nm,0.5s						
DAGI				*i* AML	AML	08 11 57.0	
	comp=N,614nm,0.4s						
KORR	**Kora**	**1.73**	**1**	*i* PN	**Pg**	**08 11 33.5**	**-1.0**
KORR				pmax	pmax		
	comp=Z,465nm,0.4s						
KORR	**Kora**	**1.73**	**1**	*i* Pg	**Pg**	**08 11 33.5**	**-1.0**
KORR				*e*Sg	**Sg**	**08 11 58.9**	**+2.0**
LGD	**Lagodekhi**	**1.74**	**73**	P	**Pn**	**08 11 31.7**	**-0.1**
LGD				S	**Sg**	**08 11 55.6**	**-1.8**
LGD	**Lagodekhi**	**1.74**	**73**	PN	**Pn**	**08 11 31.7**	**-0.1**
LGD				S	**Sg**	**08 11 55.6**	**-1.8**
BATM	**Batumi**	**1.76**	**279**	P	**Pb**	**08 11 32.6**	**-1.1**
BATM				S	**Sg**	**08 11 56.1**	**-1.8**
BATM	**Batumi**	**1.76**	**279**	PN	**Pb**	**08 11 32.6**	**-1.1**
BATM				S	**Sg**	**08 11 56.1**	**-1.8**
VLKR	**Vladikavkaz**	**1.76**	**16**	*e*PN	**Pg**	**08 11 34.0**	**-1.1**
VLKR				*e*S	**Sg**	**08 11 59.4**	**+1.5**
VLKR	**Vladikavkaz**	**1.76**	**16**	*e*Pg	**Pg**	**08 11 34.1**	**-1.0**
VLKR				*e*Sg	**Sg**	**08 11 59.4**	**+1.5**
HYR	**Heyderabad**	**1.76**	**158**	P	**Pb**	**08 11 33.0**	**-0.8**
	SNR=13						
HYR				S	**Sg**	**08 11 57.4**	**-0.6**
DBOC	**Borcka**	**1.76**	**270**	P	**Pb**	**08 11 33.0**	**-0.9**
DBOC				S	**Sb**	**08 11 55.3**	**-0.7**
DBOC				*i* AML	AML	08 11 58.0	
	comp=Z,567nm,0.4s						
DDEM	**Demirkent**	**1.77**	**255**	P	**Pb**	**08 11 33.6**	**-0.4**
DDEM				S	**Sb**	**08 11 56.0**	**-0.2**
DDEM				*i* AML	AML	08 11 57.0	
	comp=Z,2μm,0.3s						
DDEM				*i* AML	AML	08 11 59.0	
	comp=Z,3μm,0.4s						
DBAD	**Bademkaya**	**1.78**	**260**	P	**Pb**	**08 11 33.0**	**-1.2**
DBAD				S	**Sg**	**08 11 56.8**	**-1.8**
DBAD				*i* AML	AML	08 11 58.0	
	comp=Z,1μm,0.6s						
DBAD				*i* AML	AML	08 12 00.0	
	comp=Z,758nm,0.4s						
ARNR	**Ardon**	**1.83**	**6**	*e*PN	**Pg**	**08 11 35.5**	**-1.0**
ARNR				pmax	pmax		
	comp=Z,290nm,0.6s						
ARNR	**Ardon**	**1.83**	**6**	*e*Pg	**Pg**	**08 11 35.6**	**-1.0**
ARNR				*e*Sg	**Sg**	**08 12 02.2**	**+1.9**
EATA	**Eleskirt**	**1.89**	**218**	P	**Pb**	**08 11 36.0**	**-0.2**
EATA				S	**Sg**	**08 12 02.3**	**+0.1**
GANJ	**Ganja**	**1.89**	**111**	PN	**Pn**	**08 11 33.5**	**-0.3**
GANJ	**Ganja**	**1.89**	**111**	P	**Pn**	**08 11 33.5**	**-0.3**
	SNR=23						
GANJ				S	**Sn**	**08 11 57.4**	**-0.3**
LSNR	**Lesken**	**1.92**	**356**	*e*PN	**Pb**	**08 11 36.2**	**-0.4**
LSNR				pmax	pmax		
	comp=Z,121nm,0.9s						
LSNR	**Lesken**	**1.92**	**356**	*e*Pg	**Pb**	**08 11 36.3**	**-0.4**
LSNR				*e*Sg	**Sg**	**08 12 03.4**	**+0.2**
HOPA	**Hopa-Artvin**	**1.93**	**272**	PN	**Pb**	**08 11 36.1**	**-0.5**
AGRB	**Hanur-Agry**	**1.94**	**204**	PN	**Pb**	**08 11 35.9**	**-1.1**
ZKTA	**Zakatala**	**1.98**	**81**	PN	**Pn**	**08 11 35.0**	**-0.1**
ZKTA	**Zakatala**	**1.98**	**81**	Pg	**Pn**	**08 11 35.0**	**-0.1**
	SNR=48						
ZKTA				Sn	**Sb**	**08 12 02.3**	**-0.1**
STDR	**Stavd-Durt**	**2.01**	**1**	⇓*i*PN	**Pg**	**08 11 39.4**	**-0.5**
STDR				*e*S	**Sg**	**08 12 07.9**	**+1.9**
STDR	**Stavd-Durt**	**2.01**	**1**	*i* Pg	**Pg**	**08 11 39.4**	**-0.5**
NEY	**Neytrino**	**2.12**	**334**	*e*PN	**Pb**	**08 11 39.4**	**-0.6**
NEY				pmax	pmax		
	comp=Z,205nm,0.7s						
NEY	**Neytrino**	**2.12**	**334**	*e*Pg	**Pb**	**08 11 39.4**	**-0.6**
NEY				*e*Sg	**Sg**	**08 12 07.0**	**-2.5**
KOPR	**Koprukoy-ERZUR**	**2.13**	**231**	PN	**Pb**	**08 11 39.3**	**-1.0**
NCK	**Nalchik**	**2.16**	**352**	*i* PN	**Pb**	**08 11 38.4**	**-2.2**
NCK				pmax	pmax		
	comp=Z,104nm,0.8s						
NCK	**Nalchik**	**2.16**	**352**	*e*Pg	**Pg**	**08 11 42.0**	**-0.8**
NCK				*e*Sg	**Sg**	**08 12 11.0**	**+0.3**
CLDR	**Caldiran**	**2.21**	**182**	PN	**Pn**	**08 11 38.9**	**+0.5**
GROC	**Groznyy**	**2.27**	**35**	*e*PN	**Pb**	**08 11 42.6**	**+0.1**
GROC				*e*		08 12 14.3	
GROC				pmax	pmax		
	comp=Z,864nm,0.5s						
GROC				smax	smax		
	comp=E,1μm,0.7s						
GROC				smax	smax		
	comp=N,325nm,0.6s						
GROC				smax	smax		
	comp=E,1μm,0.6s						
GROC				MLR	MLR		
	comp=Z,26nm,1.0s						
GROC	**Groznyy**	**2.27**	**35**	*e*Pg	**Pb**	**08 11 42.7**	**+0.1**
GROC				*e*Sg	**Sg**	**08 12 14.3**	**0.0**
SBZ	**Shahbuz**	**2.29**	**148**	Pg	**Pb**	**08 11 42.7**	**-0.2**
	SNR=33						
SBZ				Sg	**Sb**	**08 12 11.9**	**+0.7**
XNZR	**Khunzakh**	**2.33**	**59**	*e*Pn	**Pb**	**08 11 42.6**	**-1.1**
	comp=Z,41nm,0.4s						
XNZR				*e*Sn	**Sg**	**08 12 15.2**	**-1.3**
	comp=Z,344nm,0.3s						
MNGR	**Mingechevir, A**	**2.40**	**103**	PN	**Pn**	**08 11 41.0**	**+0.3**
MNGR	**Mingechevir, A**	**2.40**	**103**	Pg	**Pn**	**08 11 41.0**	**+0.3**
	SNR=7.8						
MNGR				Sg	**Sb**	**08 12 11.7**	**-2.6**
SEKA	**Sheki**	**2.41**	**93**	PN	**Pn**	**08 11 41.3**	**+0.4**
SEKA	**Sheki**	**2.41**	**93**	Pg	**Pn**	**08 11 41.4**	**+0.4**
	SNR=68						
SEKA				Sg	**Sb**	**08 12 14.4**	**-0.3**
GNBR	**Gunib**	**2.44**	**64**	*e*PN	**Pb**	**08 11 43.5**	**-1.8**
GNBR				*e*S	**Sg**	**08 12 16.6**	**-3.0**
GNBR				*e*S	**Sb**	**08 12 17.7**	**+2.3**
GNBR				pmax	pmax		
	comp=Z,75nm,0.6s						
GNBR				smax	smax		
	comp=N,345nm,0.3s						
GNBR				smax	smax		
	comp=E,637nm,0.6s						
GNBR				smax	smax		
	comp=E,581nm,0.6s						
GNBR	**Gunib**	**2.44**	**64**	*e*Pn	**Pb**	**08 11 43.5**	**-1.8**
	comp=E,75nm,0.7s						
GNBR				*e*Sn	**Sg**	**08 12 16.7**	**-3.0**
	comp=E,767nm,0.5s						
KMKR	**Kumukh**	**2.44**	**71**	*e*PN	**Pb**	**08 11 43.1**	**-2.4**
KMKR				*e*S	**Sb**	**08 12 16.7**	**+1.0**
KMKR				*e*S	**Sg**	**08 12 17.3**	**-2.5**
KMKR				pmax	pmax		
	comp=Z,8.0nm,0.1s						
KMKR				smax	smax		
	comp=N,767nm,0.5s						
KMKR				smax	smax		
	comp=E,963nm,0.4s						
KMKR				smax	smax		
	comp=E,445nm,0.2s						
KMKR	**Kumukh**	**2.44**	**71**	*e*Pn	**Pb**	**08 11 43.1**	**-2.4**
	comp=E,8.0nm,0.1s						
KMKR				*e*Sn	**Sb**	**08 12 16.7**	**+1.0**
	comp=E,397nm,0.5s						
CHOM	**Cayeli-Rize**	**2.46**	**265**	PN	**Pb**	**08 11 44.2**	**-1.6**
CHOM				SN	**Sg**	**08 12 17.4**	**-3.1**
NAX	**Nakhchivan**	**2.46**	**152**	PN	**Pb**	**08 11 45.1**	**-0.

comp=E,280nm,0.5s
DLMR *e*Sn **Sg** **08 12 22.1 -2.6**
comp=E,128nm,0.5s
KRNR Karanay 2.61 55 *e*PN **Pb** **08 11 46.7 -1.6**
KRNR *e*S **Sg** **08 12 22.8 -2.4**
KRNR *e*S **Sb** **08 12 23.1 +2.6**
KRNR pmax pmax
comp=Z,29nm,0.4s
KRNR smax smax
comp=N,175nm,0.5s
KRNR smax smax
comp=E,128nm,0.5s
KRNR smax smax
comp=N,149nm,0.3s
KRNR Karanay 2.61 55 *e*Pn **Pb** **08 11 46.7 -1.6**
comp=N,28nm,0.4s
KRNR *e*Sn **Sg** **08 12 22.8 -2.4**
comp=N,532nm,0.4s
BRDA Brd 2.64 113 Pg **Pb** **08 11 47.7 -1.2**
SNR=8.1
BRDA Sg **Sb** **08 12 21.7 +0.4**
EMRE Erzurum,Aziziy 2.66 241 P **Pg** **08 11 50.6 -1.8**
AGDM Agdam 2.67 117 Pg **Pb** **08 11 46.6 -2.6**
SNR=34
AGDM Sg **Sb** **08 12 23.0 +0.9**
DBC Dubki 2.67 51 *e*PN **Pb** **08 11 48.1 -1.3**
DBC *e*S **Sg** **08 12 24.4 -2.9**
DBC *e*S **Sb** **08 12 25.3 +3.0**
DBC pmax pmax
comp=Z,21nm,0.3s
DBC smax smax
comp=E,271nm,0.5s
DBC smax smax
comp=N,187nm,0.5s
DBC smax smax
comp=E,299nm,0.9s
DBC Dubki 2.67 51 *e*Pn **Pb** **08 11 48.1 -1.3**
comp=E,20nm,0.2s
DBC *e*Sn **Sg** **08 12 24.5 -2.9**
comp=E,108nm,0.4s
BUJR Buynaksk 2.73 57 *e*PN **Pb** **08 11 48.4 -2.0**
BUJR *e*S **Sb** **08 12 25.2 +1.3**
BUJR *e*S **Sg** **08 12 25.6 -3.6**
BUJR pmax pmax
comp=Z,84nm,0.4s
BUJR smax smax
comp=E,531nm,0.4s
BUJR smax smax
comp=N,564nm,0.6s
BUJR smax smax
comp=E,457nm,0.5s
BUJR Buynaksk 2.73 57 *e*Pn **Pb** **08 11 48.5 -2.0**
comp=E,85nm,0.4s
BUJR *e*Sn **Sb** **08 12 25.3 +1.3**
comp=E,307nm,0.4s
KIV Kislovodsk 2.77 340 *e*PN **Pn** **08 11 46.6 +0.6**
KIV *e*S **Sb** **08 12 21.3 -3.8**
KIV pmax pmax
comp=Z,38nm,1.0s
VANB Van 2.80 190 PN **Pb** **08 11 48.8 -2.8**
AKT Akhty 2.80 86 *e*PN **Pn** **08 11 47.3 +0.9**
AKT *e*S **Sb** **08 12 24.2 -1.8**
AKT *e*S **Sn** **08 12 24.9 +4.6**
AKT pmax pmax
comp=Z,94nm,0.5s
AKT smax smax
comp=N,532nm,0.4s
AKT smax smax
comp=Z,217nm,0.4s
AKT smax smax
comp=E,454nm,0.4s
AKT smax smax
comp=N,417nm,0.4s
AKT Akhty 2.80 86 *e*Pn **Pn** **08 11 47.4 +0.9**
comp=N,93nm,0.5s
AKT *e*Sn **Sb** **08 12 24.3 -1.8**
comp=N,270nm,0.5s
URKR Urkarakh 2.83 72 *e*PN **Pn** **08 11 48.1 +1.3**
URKR *e*S **Sb** **08 12 25.1 -1.7**
URKR *e*S **Sn** **08 12 25.6 +4.6**
URKR pmax pmax
comp=Z,43nm,0.5s
URKR smax smax
comp=N,108nm,0.4s
URKR smax smax
comp=E,177nm,0.5s
URKR smax smax
comp=E,118nm,0.4s
URKR Urkarakh 2.83 72 *e*Pn **Pn** **08 11 48.1 +1.3**
comp=E,43nm,0.5s
URKR *e*Sn **Sb** **08 12 25.2 -1.7**
comp=E,564nm,0.6s
ORD Ordubad 2.87 147 Pg **Pb** **08 11 52.4 -0.3**
SNR=19
ORD Sg **Sg** **08 12 30.6 -2.9**
SGKR Sergokala 2.94 67 *e*PN **Pn** **08 11 50.1 +1.9**
SGKR *e*S **Sb** **08 12 29.4 -0.5**
SGKR *e*S **Sg** **08 12 30.3 -5.5**
SGKR pmax pmax
comp=Z,1.0nm,0.7s
SGKR smax smax
comp=E,238nm,0.5s
SGKR smax smax
comp=N,307nm,0.4s
SGKR smax smax
comp=N,114nm,0.7s
SGKR Sergokala 2.94 67 *e*Pn **Pn** **08 11 50.1 +1.9**
comp=N,1.0nm,0.7s
SGKR *e*Sn **Sb** **08 12 29.4 -0.5**
comp=N,527nm,0.5s
ZRD Zardab 2.99 110 Pg **Pb** **08 11 52.3 -2.5**
SNR=9.2
ZRD Sg **Sb** **08 12 32.7 +1.4**
BAYB BAYBURT 3.05 250 P **Pg** **08 11 58.2 -1.7**
MAK Makhachkala 3.05 57 *e*PN **Pb** **08 11 52.1 -3.7**
MAK *e* 08 11 58.8
MAK *e*S **Sb** **08 12 31.6 -1.5**
MAK *e* 08 12 39.1
MAK *e* 08 12 47.3
MAK pmax pmax
comp=Z,175nm,0.3s
MAK smax smax
comp=N,482nm,0.7s
MAK smax smax
comp=N,527nm,0.5s
MAK MLR MLR
comp=Z,928nm,13.0s
MAK Makhachkala 3.05 57 *e*Pn **Pb** **08 11 52.6 -3.2**
comp=Z,119nm,0.3s
MAK *e*Sn **Sb** **08 12 33.7 +0.6**
comp=Z,527nm,0.5s
BAYT Aydintepe-Bayb 3.09 253 PN **Pb** **08 11 53.3 -3.2**
XNQ Khinaliq 3.12 92 Pg **Pn** **08 11 53.1 +2.3**
SNR=26
XNQ Sg **Sb** **08 12 34.8 -0.5**
AKDM Akdamar-Van 3.13 195 PN **Pn** **08 11 52.8 +1.9**
QRD Qoradiz 3.16 126 Pg **Pb** **08 11 54.6 -3.1**
SNR=4.4
QRD Sg **Sb** **08 12 37.7 +1.5**
BLQ Beylaqan 3.16 120 Pg **Pb** **08 11 54.9 -2.8**
SNR=12
BLQ Sg **Sb** **08 12 36.7 +0.5**
QSAR Qusar 3.20 86 Pg **Pb** **08 11 54.5 -3.9**
SNR=17
QSAR Sg **Sb** **08 12 34.1 -3.4**
IML Ismayilli 3.21 99 Pg **Pb** **08 11 54.6 -3.9**
SNR=6.3
IML Sg **Sb** **08 12 36.0 -1.6**
KTUT Trabzon 3.22 265 PN **Pb** **08 11 54.8 -3.9**
MACK Trabzon 3.23 264 P **Pb** **08 11 56.2 -2.7**
MACK *i* AML AML 08 12 44.0
comp=Z,149nm,0.6s
MACK *i* AML AML 08 12 54.0
comp=Z,186nm,0.6s
MUSM Mu-Merkez 3.25 217 P **Pn** **08 11 54.6 +1.9**
KDMR Kurdemir 3.32 106 Pg **Pb** **08 11 56.5 -3.8**
KDMR Sg **Sb** **08 12 40.8 +0.1**
QUBA Quba, Azerbaij 3.38 89 Pg **Pn** **08 11 56.5 +2.3**
QUBA Sg **Sb** **08 12 41.8 -0.7**
PQL Pirkuli 3.51 98 Pg **Pb** **08 12 00.1 -3.7**
SNR=6.8
PQL Sg **Sb** **08 12 47.1 +0.5**
SIZA Siyzn 3.70 93 Pg **Pn** **08 12 01.2 +2.5**
SIZA Sg **Sb** **08 12 52.2 +0.3**
ATGJ Altiaghaj 3.76 96 Pg **Pn** **08 12 02.6 +3.1**
ATGJ Sg **Sb** **08 12 55.1 +1.6**

KELT Kelkit 3.81 253 P **Pb** **08 12 09.8 +1.0**
KELT S **Sg** **08 12 58.9 -4.7**
SOC Sochi 3.88 306 *e*PN **Pn** **08 12 02.5 +1.5**
SOC *e* 08 12 08.6
SOC *e* 08 12 50.4
SOC *e*SS **Sg** **08 13 05.8 0.0**
SOC pmax pmax
comp=Z,16nm,0.8s
SOC MLR MLR
comp=Z,3μm,22.0s
GLBA Ciilabad 3.96 121 Pg **Pb** **08 12 09.2 -2.2**
GLBA Sg **Sb** **08 13 02.2 +2.9**
YRD Yardimli 4.06 126 Pg **Pb** **08 12 10.2 -2.9**
SNR=6.2
YRD Sg **Sb** **08 13 05.5 +3.2**
LRK Lerik 4.29 128 Pg **Pb** **08 12 14.8 -2.3**
LRK Sg **Sb** **08 13 12.8 +3.8**
ASTR Astara 4.62 126 Sg **Sg** **08 13 23.5 -6.1**
OBN Obninsk 14.62 343⇑*e*P **Pn** **08 14 27.9 -0.2**
OBN pmax pmax
comp=Z,10.0nm,0.5s
MNK Minsk 16.96 326 *i* P **P** **08 14 58.9 -1.6**
MNK *i* S **Sn** **08 18 08.8 +1.8**
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK pmax pmax
comp=E,1.0nm,0.5s
MNK MLR MLR
comp=Z,1μm,20.0s
MNK MLR MLR
comp=N,617nm,16.0s
MNK MLR MLR
comp=E,183nm,19.0s
MNK Minsk 16.96 326 *i* P **P** **08 14 59.0 -1.6**
comp=E,1.0nm,0.5s
MNK *i* P **P** **08 14 59.0 -1.6**
comp=N,24nm,0.9s
MNK *i* P **P** **08 14 59.0 -1.6**
comp=Z,10.0nm,0.7s,baz=135
MNK *i* PP **PnPn** **08 15 08.5 +0.4**
MNK *i* PPP PPP 08 15 16.3
MNK *i* S **Sn** **08 18 08.8 +1.8**
MNK *i* SS **SnSn** **08 18 23.4 +3.3**
MNK *i* LR LR 08 21 00.1
MNK *i* LRM MLR 08 22 29.9
comp=Z,1μm,19.7s
MNK *i* LRM MLR 08 22 38.4
comp=N,617nm,16.4s
MNK *i* LRM MLR 08 22 56.8
comp=E,183nm,19.0s
ARU Arti 17.80 27 *e*P **P** **08 15 11.7 +1.9**
ARU pmax pmax
comp=Z,2.0nm,1.0s
GERES GERESS Array B 22.55 300 *e*P **P** **08 16 04.5 +2.9**
AAK Ala-Archa 22.64 77 *i* P **P** **08 16 05.6 +2.9**
KURK Kurchatov 25.58 57 *i* P **P** **08 16 33.9 +3.5**
KURK pmax pmax
comp=Z,2.0nm,0.9s

*IDC **17** 08:24:33.4±0.8, 32°.89N×94°.96E, h0km, mb4.0/12, mbtmp4.0/15, ML3.8/4, Error ellipse: s-maj=29.2km s-min=15.4km az=49.0*
*MOS **17** 08:24:35.9±0.9, 32°.88N×95°.01E, h24km, mb4.7/25, Error ellipse: s-maj=9.0km s-min=5.5km az=114.3*
*BJI **17** 08:24:37.0±0.0, 32°.88N×94°.93E, h9km, mb4.5/22, mB5.0/6, ML3.9/8, Ms4.4/18, Ms7 4.2/18*
*NEIC **17** 08:24:39.2±2.1, 32°.95N±0°.07×95°.0E±0°.1, h35km±2km, mb4.4/42, Error ellipse: s-maj=14.4km s-min=12.5km az=84.0*
ISC 17 08:24:36.2±0.4, **32°.93N**±0°.04×**94°.95E**±0°.05, **h10km, n133,** σ1§**48**/137, **mb4.4**/42, **8C-4D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
GOMU	**GeErMu**	**3.26**	**358**	Pn	**Pb**	**08 25 33.3**	**-1.1**
GOMU				Sg	**Sg**	**08 26 21.9**	**+0.9**
LSA	**Lhasa**	**4.58**	**226**	Pn	**Pn**	**08 25 47.6**	**+1.7**
LSA	**Lhasa**	**4.58**	**226**	Pn	**Pn**	**08 25 49.3**	**+3.4**
LSA				Sn	**Sn**	**08 26 43.0**	**+3.6**
LSA				smax	smax		
LSA				smax	smax		
LSA	**Lhasa**	**4.58**	**226**	P	**Pn**	**08 25 47.6**	**+1.7**
TEZP	**TEZPUR**	**6.56**	**197**	*e*P	**Pn**	**08 26 14.6**	**+1.8**
TEZP				*i* x	x	08 28 18.1	
MOKO	**MOKOCHONG**	**6.60**	**183**	*e*P	**Pn**	**08 26 13.1**	**-0.2**
MOKO				*i* x	x	08 28 42.5	
KOHI	**KOHIMA**	**7.22**	**186**	*e*P	**Pn**	**08 26 23.3**	**+1.4**
GTA	**Gaotai**	**7.57**	**30**	*e*Pn	**Pn**	**08 26 30.8**	**+4.2**
SHL	**Shillong**	**7.81**	**201**	Pn	**Pn**	**08 26 30.7**	**+0.6**
SHL	**Shillong**	**7.81**	**201**	P	**Pn**	**08 26 30.7**	**+0.6**
LZH	**Lanzhou**	**7.99**	**64**	⇑P	Pn	08 26 37.5	+5.1
LZH				pmax	pmax		
LZH				LR	LR		
LZH				LR	LR		
PZH	**PanZhiHua**	**8.71**	**136**	P	**Pn**	**08 26 43.0**	**+0.7**
PZH				S	**Sn**	**08 28 23.4**	**+2.7**
PZH				pmax	pmax		
PZH				pmax	pmax		
PZH				LR	LR		
PZH				LR	LR		
PZH				LR	LR		
KMI	**Kunming**	**10.34**	**137**	⇓P	**Pn**	**08 27 05.8**	**+1.0**
KMI				pmax	pmax		
XAN	**Xi'an**	**11.72**	**81**	⇑P	Pn	08 27 29.8	+6.3
XAN				pmax	pmax		
GYA	**Guiyang**	**12.05**	**119**	⇓P	**Pn**	**08 27 30.0**	**+1.9**
GYA				S	**Sn**	**08 29 44.8**	**+2.2**
GYA				pmax	pmax		
GYA				LR	LR		
GYA				LR	LR		
GYA				LR	LR		
WMQ	**Urumqi**	**12.27**	**335**	*e*P	**Pn**	**08 27 31.6**	**+0.7**
WMQ				pP		08 27 35.0	
WMQ				pmax	pmax		
WMQ				LR	LR		
WMQ				LR	LR		
WMQ				LR	LR		
CMAR	**Chiang Mai Arr**	**14.85**	**165**	Pn	**Pn**	**08 28 05.2**	**-1.1**
	0.4nm,0.3s,baz=343,slow=12,SNR=5.4						
	0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.85**	**165**	Pn	**Pn**	**08 28 06.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.85**	**165**	P	**Pn**	**08 28 06.1**	**-0.2**
HHC	**Hu-ho-hao-te**	**15.45**	**55**	*e*P	**Pn**	**08 28 14.8**	**+0.6**
HHC				pmax	pmax		
TARG	**Taragay, Kyrgy**	**16.20**	**308**	Pn	**Pn**	**08 28 25.2**	**+0.9**
TARG				IAmb	IAmb	08 28 34.8	
TARG	**Taragay, Kyrgy**	**16.20**	**308**	P	**Pn**	**08 28 25.2**	**+0.9**
TARG				pmax	pmax		
WHN	**Wuhan**	**16.67**	**93**	⇑P	**P**	**08 28 34.9**	**+2.6**
HNS	**HongShan**	**16.75**	**69**	*e*P	**P**	**08 28 37.0**	**+3.9**
MK31	**Makanchi Array**	**16.89**	**329**	Pn	**Pn**	**08 28 29.8**	**-2.8**
MK31	**Makanchi Array**	**16.89**	**329**	*i* P	**P**	**08 28 34.5**	**-0.1**
MKAR	**Makanchi Array**	**16.89**	**329**	Pn	**Pn**	**08 28 30.5**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=138,slow=13,SNR=4.7						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**16.89**	**329**	Pn	**Pn**	**08 28 31.7**	**-0.8**
MKAR	**Makanchi Array**	**16.89**	**329**	P	**P**	**08 28 34.5**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,50nm,1.1s						
MAKZ	**Makanchi**	**17.03**	**328**	Pn	**Pn**	**08 28 34.5**	**+0.2**
MAKZ	**Makanchi**	**17.03**	**328**	P	**Pn**	**08 28 34.6**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.2s						
SONM	**Songino Array**	**17.22**	**27**	P	**Pn**	**08 28 35.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=209,slow=11,SNR=9.9						
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**17.22**	**27**	Pn	**Pn**	**08 28 35.6**	**-1.2**
SONM	**Songino Array**	**17.22**	**27**	P	**Pn**	**08 28 35.7**	**-1.2**
SONM				pmax	pmax		
	comp=Z,11nm,1.1s						
NRN	**Naryn**	**17.30**	**305**		**Pn**	**08 28 38.6**	**+0.5**
NRN	**Naryn**	**17.30**	**305**	P	**Pn**	**08 28 38.6**	**+0.5**
NRN				pmax	pmax		
	comp=Z,17nm,1.3s						
ULN	**Ulaanbaatar**	**17.50**	**28**		**Pn**	**08 28 40.5**	**+0.2**
ULN	**Ulaanbaatar**	**17.50**	**28**	*ce*P	**Pn**	**08 28 40.6**	**+0.2**
ULN				pmax	pmax		
	comp=Z,16nm,1.7s						
DGZ	**Jazzator, Alta**	**17.67**	**344**	*i* P	**P**	**08 28 44.8**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOOM	**Boomskoye usch**	**17.78**	**308**		**Pn**	**08 28 44.3**	**+0.4**
BOOM	**Boomskoye usch**	**17.78**	**308**	P	**Pn**	**08 28 44.3**	**+0.4**
BOOM				pmax	pmax		
	comp=Z,16nm,1.1s						
NIL	**Nilore**	**18.16**	**278**	P	**Pn**	**08 28 47.9**	**-0.6**
NIL	**Nilore**	**18.16**	**278**	P	**Pn**	**08 28 47.9**	**-0.6**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	**Ala-Archa**	**18.81**	**307**	P	**P**	**08 28 55.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=121,slow=8.6,SNR=2.2						
AAK	**Ala-Archa**	**18.81**	**307**	P	**P**	**08 28 54.7**	**-1.4**
AAK	**Ala-Archa**	**18.81**	**307**	*ce*P	**Pn**	**08 28 57.8**	**+1.3**
AAK				pmax	pmax		
	comp=Z,22nm,2.5s						
QIZ	**Qiongzhong**	**19.23**	**132**	P	**Pn**	**08 29 00.4**	**-1.1**
QIZ				S	**S**	**08 32 39.8**	**+1.4**
QIZ				LR	LR		
	comp=Z,1μm,19.9s						
QIZ				LR	LR		
	comp=Z,2μm,18.3s						
QIZ				LR	LR		
	comp=Z,1μm,15.9s						
UBPT	**Khong Chiam**	**20.00**	**149**	P	**P**	**08 29 07.0**	**-2.0**
UBPT				IAmb	IAmb	08 29 18.2	
	comp=Z,11nm,0.9s						
NJ2	**Nanjing**	**20.18**	**86**	*e*P	**P**	**08 29 08.0**	**-2.8**
ARK	**Arkit**	**20.26**	**302**	P	Pn	08 29 16.0	+2.3
ARK				pmax	pmax		
	comp=Z,12nm,1.4s						
BTK	**Batken**	**20.63**	**297**	P	**P**	**08 29 16.6**	**+0.8**
BTK				IAmb	IAmb	08 29 23.4	
	comp=Z,12nm,0.9s						
BTK	**Batken**	**20.63**	**297**	P	**P**	**08 29 16.6**	**+0.8**
BTK				pmax	pmax		
	comp=Z,12nm,1.0s						
TRKS	**Terek-Say**	**20.76**	**301**	P	**P**	**08 29 18.3**	**+0.9**
TRKS				pmax	pmax		
	comp=Z,22nm,0.9s						
GAR	**Garm**	**20.81**	**294**	P	**P**	**08 29 17.3**	**-0.5**
GAR				IAmb	IAmb	08 29 23.4	
	comp=Z,34nm,1.3s						
KURBB	**Kurchatov Arra**	**21.42**	**330**	P	**P**	**08 29 24.2**	**+0.1**
	comp=Z,13nm,0.8s,baz=138,slow=11,SNR=64						
	comp=Z,13nm,0.8s						
KURK	**Kurchatov**	**21.45**	**331**	P	**P**	**08 29 23.1**	**-1.4**
KURK				IAmb	IAmb	08 29 32.5	
	comp=Z,40nm,1.4s						
KURK	**Kurchatov**	**21.45**	**331**	*i* P	**P**	**08 29 25.1**	**+0.6**
KURK				pmax	pmax		
	comp=Z,15nm,0.9s						
KBL	**Kabul**	**21.59**	**281**	P	**P**	**08 29 25.8**	**-0.6**
KBL				IAmb	IAmb	08 29 30.2	
	comp=Z,21nm,0.9s						
KBL	**Kabul**	**21.59**	**281**	P	**P**	**08 29 25.8**	**-0.6**
KBL				pmax	pmax		
	comp=Z,21nm,1.0s						
CHGR	**Chuyangaron**	**21.65**	**293**	P	**P**	**08 29 26.4**	**-0.5**
CHGR				IAmb	IAmb	08 29 32.0	
	comp=Z,22nm,0.8s						
CHGR	**Chuyangaron**	**21.65**	**293**	P	**P**	**08 29 26.4**	**-0.5**
CHGR				pmax	pmax		
	comp=Z,22nm,0.8s						
KK31	**Karatay Array**	**21.70**	**305**	P	**P**	**08 29 28.6**	**+1.3**
KK31				IAmb	IAmb	08 29 33.0	
	comp=Z,12nm,1.2s						
KK31	**Karatay Array**	**21.70**	**305**	P	**P**	**08 29 28.6**	**+1.3**
KK31				pmax	pmax		
	comp=Z,12nm,1.2s						
KKAR	**Karatay Array**	**21.70**	**305**	P	**P**	**08 29 28.2**	**+0.9**
KKAR	**Karatay Array**	**21.70**	**305**	P	**P**	**08 29 28.5**	**+1.3**
KKAR				IAmb	IAmb	08 29 33.0	
	comp=Z,12nm,1.2s						
KKAR	**Karatay Array**	**21.70**	**305**	P	**P**	**08 29 28.2**	**+0.9**
KKAR				pmax	pmax		
	comp=Z,12nm,1.2s						
ZAA0	**Zalesovo Array**	**22.22**	**344**	P	**P**	**08 29 31.3**	**-1.3**
ZAA0				IAmb	IAmb	08 29 36.4	
	comp=Z,9.7nm,0.9s						
ZALV	**Zalesovo Beam**	**22.22**	**344**	P	**P**	**08 29 31.9**	**-0.7**
	comp=Z,7.7nm,0.9s,baz=158,slow=9.6,SNR=20						
	comp=Z,7.7nm,0.9s						
ZALV	**Zalesovo Beam**	**22.22**	**344**	P	**P**	**08 29 31.6**	**-1.0**
HIA	**Hailar**	**24.64**	**41**	*i* P	**P**	**08 29 56.6**	**-0.2**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	**Borovoye**	**26.79**	**326**	*i* P	**P**	**08 30 15.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSRS	**Korea Array**	**27.24**	**71**	P	**P**	**08 30 17.4**	**-2.9**
	comp=Z,0.9nm,0.6s,baz=271,slow=8.3,SNR=1.8						
	comp=Z,0.9nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**30.29**	**290**	P	**P**	**08 30 48.0**	**+0.3**
GYA0B				IAmb	IAmb	08 31 07.9	
	comp=Z,4.4nm,0.7s						
ABKAR	**Akbulak array**	**30.68**	**313**	P	**P**	**08 30 49.8**	**-1.1**
ARU	**Arti**	**34.31**	**324**	*d* iP	**P**	**08 31 23.1**	**+0.5**
ARU						08 32 34.9	
ARU				S	**S**	**08 36 52.8**	**+3.1**
ARU				SS	**SnSn**	**08 39 04.0**	**+5.2**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YAK	**Yakutsk**	**36.58**	**27**	*ce*P	**P**	**08 31 42.3**	**+0.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	**36.70**	**356**	*i* P	**P**	**08 31 42.8**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRH	**Novokhopyorsk**	**42.50**	**312**	*e*P	P	08 32 42.5	+11
VRH				pmax	pmax		
	comp=Z,30nm,1.8s						
TIXI	**Tiksi**	**42.76**	**15**	P	**P**	**08 32 32.7**	**-0.6**
TIXI				IAmb	IAmb	08 32 38.1	
	comp=Z,6.9nm,1.2s						
TIXI	**Tiksi**	**42.76**	**15**	*i* P	**P**	**08 32 32.6**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LUWI	**Luwuk**	**42.79**	**137**	P	**P**	**08 32 32.4**	**-1.7**
VSR	**Storozhevoye**	**44.11**	**312**	*e*P	**P**	**08 32 47.0**	**+2.6**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LPSR	**Galich'ya Gora**	**44.32**	**314**	*e*P	**P**	**08 32 42.7**	**-3.4**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KLMR	**Klimovskoe**	**45.14**	**325**	*e*P	**P**	**08 32 51.8**	**-0.8**
KLMR				*e*		08 34 32.5	
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	**Klimovskoe**	**45.14**	**325**	*e*P	**P**	**08 32 51.8**	**-0.8**
KLMR				AMP		08 32 54.5	
	comp=Z,20nm,1.4s						
KLMR				*e*PcP	**PcP**	**08 34 32.6**	**-0.2**
OBN	**Obninsk**	**45.88**	**317**⇓	*e*P	**P**	**08 32 58.0**	**-0.5**
OBN				*e*		08 34 44.9	
OBN				*e*SS	SS	08 43 00.5	-6.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SEY	**Seymchan**	**46.51**	**32**	*i* P	**P**	**08 33 04.1**	**+0.8**
SEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**49.02**	**296**	P	**P**	**08 33 21.7**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=82,slow=12,SNR=2.2						
	comp=Z,0.9nm,0.8s						

AKASG Malin Array Be 50.40 311 P P 08 33 32.0 -1.5
comp=Z,0.5nm,0.4s,baz=75,slow=6.2,SNR=9.7
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 50.40 311 P **P 08 33 32.0 -1.5**
AKBB Malin Array Si 50.40 311 *ceP* **P 08 33 34.6 +1.1**
FINES FINESS Array B 51.67 325 P **P 08 33 41.9 -1.0**
comp=Z,2.7nm,0.9s,baz=92,slow=8.4,SNR=6.2
comp=Z,2.7nm,0.9s
FINES FINESS Array B 51.67 325 P **P 08 33 43.2 +0.3**
FINES FINESS Array B 51.67 325 P **P 08 33 43.2 +0.3**
ARCES ARCESS Array B 52.39 335 P **P 08 33 47.9 -0.3**
comp=Z,1.3nm,0.6s,baz=92,slow=8.5,SNR=7.5
comp=Z,1.3nm,0.6s
ARCES ARCESS Array B 52.39 335 P **P 08 33 48.0 -0.1**
ARCES IAmb IAmb 08 34 06.2
comp=Z,9.2nm,1.3s
ARCES ARCESS Array B 52.39 335 P **P 08 33 48.0 -0.1**
ARCES pmax pmax
comp=Z,9.0nm,1.3s
BILL Bilibino 52.94 27⇑ *eP* **P 08 33 52.4 +0.2**
BILL *e* 08 35 57.7
BILL pmax pmax
comp=Z,5.0nm,0.9s
BILL MLR MLR
comp=Z,2μm,21.0s
BURAR Bucovina Array 53.45 308 P **P 08 33 55.8 -0.6**
SPITS Spitsbergen Ar 55.69 346 P **P 08 34 12.6 +0.5**
SPITS pmax pmax
comp=Z,41nm,1.3s
GRG Griva 57.02 301 P **P 08 34 21.4 -0.9**
GRG pmax pmax
comp=Z,13nm,1.9s
NC405 NORSAR Array S 58.60 326 P **P 08 34 33.9 +0.9**
NORES NORESS Array B 58.76 325 P **P 08 34 34.1 +0.1**
NB201 NORSAR Array S 58.81 326 P **P 08 34 34.3 -0.2**
NB2 NORSAR Subarra 58.85 326 P **P 08 34 34.2 -0.5**
comp=Z,1.1nm,0.5s,baz=77,slow=6.9
NOA NORSAR Array B 58.85 326 P **P 08 34 33.3 -1.4**
comp=Z,2.2nm,0.6s,baz=77,slow=7.0,SNR=7.4
comp=Z,2.2nm,0.6s
NC204 NORSAR Array S 59.01 326 P **P 08 34 35.7 -0.2**
GERES GERESS Array B 60.61 311 P **P 08 34 45.1 -2.0**
comp=Z,0.8nm,0.7s,baz=71,slow=7.4,SNR=4.0
comp=Z,0.8nm,0.7s
WB0 Warramunga Arr 64.55 138 P **P 08 35 11.6 -2.0**
WB0 IAmb IAmb 08 35 31.4
comp=Z,9.2nm,1.4s
WRA Warramunga Arr 64.66 139 P **P 08 35 13.2 -1.1**
comp=Z,0.8nm,0.8s,baz=333,slow=6.8,SNR=5.5
comp=Z,0.8nm,0.8s
WRA Warramunga Arr 64.66 139 P **P 08 35 13.8 -0.5**
WRA Warramunga Arr 64.66 139 P **P 08 35 13.8 -0.5**
WB2 Warramunga Arr 64.66 139 P **P 08 35 14.6 +0.3**
WB2 IAmb IAmb 08 35 24.1
comp=Z,4.8nm,1.1s
WR0 Warramunga Arr 64.78 139 P **P 08 35 11.8 -3.3**
WR0 IAmb IAmb 08 35 19.7
comp=Z,6.6nm,1.2s
SAOF Saorge 66.30 308 P **P 08 35 24.3 -0.5**
SAOF pmax pmax
comp=Z,6.0nm,0.8s
ORIF Oris-en-Rattie 67.02 310 P **P 08 35 30.1 +0.7**
ORIF pmax pmax
comp=Z,7.0nm,0.9s
EUNU Eureka 67.25 0 P **P 08 35 29.9 -0.5**
EUNU IAmb IAmb 08 35 51.1
comp=Z,7.8nm,1.3s
ASAR Alice Springs 67.44 141 P **P 08 35 31.1 -1.1**
comp=Z,0.7nm,0.6s,baz=329,slow=6.1,SNR=8.5
comp=Z,0.7nm,0.6s
ASAR Alice Springs 67.44 141 P **P 08 35 30.9 -1.2**
TOLK Toolik Lake Re 68.23 21 P **P 08 35 34.2 -2.4**
BMAR Burnt Mountain 70.46 21 P **P 08 35 51.2 +0.7**
PPLA Purkeypile 70.65 27 P **P 08 35 52.0 +0.1**
COLA College 71.03 24 P **P 08 35 54.7 +0.9**
COLA pmax pmax
comp=Z,9.0nm,0.9s
ILAR Eielson Array 71.41 23 P **P 08 35 55.8 -0.4**
comp=Z,1.8nm,0.8s,baz=299,slow=5.6,SNR=14
comp=Z,1.8nm,0.8s
ILAR Eielson Array 71.41 23 P **P 08 35 54.3 -1.9**
SKT Skwentna 71.43 27 P **P 08 35 54.5 -1.9**
SKT IAmb IAmb 08 36 01.0
comp=Z,7.7nm,1.3s
INK Inuvik 72.84 17 P **P 08 36 05.1 +0.4**
INK pmax pmax
comp=Z,6.0nm,1.9s
SCM Sheep Creek Mo 73.10 26 P **P 08 36 05.8 -0.7**
SCM Sheep Creek Mo 73.10 26 P **P 08 36 05.8 -0.7**
SCM pmax pmax
comp=Z,27nm,1.2s
PWL Port Wells 73.34 27 P **P 08 36 07.1 -0.7**
BCAR Beaver Creek A 74.24 23 P **P 08 36 13.9 +0.8**
DAWY Dawson 74.31 22 P **P 08 36 12.4 -1.1**
DAWY IAmb IAmb 08 36 48.6
comp=Z,4.0nm,1.2s
PCA Pinnacle 76.83 25 P **P 08 36 24.9 -3.2**

*NEIC **17** 08:29:57.9±1.1, 35°.88S±0°.06×71°.4W±0°.1, h111km±7km,*
Error ellipse: s-maj=14.5km s-min=7.3km az=112.0
*GUC **17** 08:29:58.6±0.7, 35°.82S×71°.32W, h121km±5km, ML3.8*
ISC 17 08:29:57.6±1.0, 35°.88S±0°.05×71°.32W±0°.09, h112km±8km,
n39, σ0°67/54, 2C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ML02	**Panimavida**	**0.14**	**324**	Pn	**Pn**	**08 30 12.9**	**-0.3**
ML02				Sn	**Sn**	**08 30 24.7**	**-0.1**
GO05	**Huala**	**1.00**	**330**		**Pn**	**08 30 19.5**	**+0.5**
GO05				Sn	**Sn**	**08 30 35.5**	**+0.3**
GO05	**Huala**	**1.00**	**330⇑**	*iP*	**Pn**	**08 30 19.5**	**+0.5**
GO05				*eS*	**Sn**	**08 30 35.8**	**+0.7**
BO02	**Sierra Bellavi**	**1.17**	**22**		**Pn**	**08 30 21.2**	**+0.3**
BO02	**Sierra Bellavi**	**1.17**	**22⇓**	*iP*	**Pn**	**08 30 21.2**	**+0.3**
BO02				*eS*	**Sn**	**08 30 39.2**	**+0.8**
BO02				IAML		08 30 42.0	
comp=E,3μm,0.2s							
BO03	**Pichilemu**	**1.47**	**339⇑**	*iP*	**Pn**	**08 30 25.1**	**+0.8**
BO03				*eS*	**Sn**	**08 30 44.5**	**+0.1**
BO03				IAML		08 30 46.9	
comp=N,785nm,0.3s							
BO01	**Tunca**	**1.49**	**7**		**Pn**	**08 30 24.9**	**+0.3**
BO01				Sn	**Sn**	**08 30 44.9**	**0.0**
BO01	**Tunca**	**1.49**	**7**	*eP*	**Pn**	**08 30 24.8**	**+0.3**
BO01				*eS*	**Sn**	**08 30 45.2**	**+0.3**
BI05	**Punta Hualpn**	**1.75**	**240**	Pn	**Pn**	**08 30 27.2**	**-0.3**
BO04	**La Punta**	**1.97**	**17**		**Pn**	**08 30 31.3**	**+0.8**
MT01	**Popeta**	**2.01**	**2**		**Pn**	**08 30 31.1**	**+0.2**
MT01	**Popeta**	**2.01**	**2**	*eP*	**Pn**	**08 30 31.1**	**+0.2**
MT01				*eS*	**Sn**	**08 30 55.6**	**-0.6**
MT01				IAML		08 30 58.3	
comp=E,500nm,0.3s							
MT09	**Talagante**	**2.11**	**7**		**Pn**	**08 30 32.6**	**+0.3**
MT09	**Talagante**	**2.11**	**7**	*eP*	**Pn**	**08 30 32.8**	**+0.5**
MT09				*eS*	**Sn**	**08 30 58.3**	**-0.5**
MT09				IAML		08 30 59.6	
comp=N,1μm,0.1s							
LMEL	**Las Melosas**	**2.22**	**25**		**Pn**	**08 30 34.7**	**+1.0**
VA05	**Santo Domingo**	**2.23**	**354**		**Pn**	**08 30 33.7**	**+0.1**
VA05	**Santo Domingo**	**2.23**	**354**	*eP*	**Pn**	**08 30 33.9**	**+0.3**
VA05				*eS*	**Sn**	**08 31 00.1**	**-1.0**
VA05				IAML		08 31 07.9	
comp=E,677nm,0.5s							
MT03	**Universidad Ad**	**2.47**	**16**	Pn	**Pn**	**08 30 37.4**	**+0.5**
MT05	**Renca**	**2.52**	**11**		**Pn**	**08 30 38.1**	**+0.6**
MT02	**Curacav**	**2.61**	**3**		**Pn**	**08 30 39.1**	**+0.4**
MT02	**Curacav**	**2.61**	**3**	*eP*	**Pn**	**08 30 39.4**	**+0.8**
MT02				*eS*	**Sn**	**08 31 09.3**	**-0.8**
MT02				IAML		08 31 11.6	
comp=N,320nm,0.5s							
PEL	**Peldehue**	**2.77**	**11**	*eP*	**Pn**	**08 30 41.1**	**+0.3**
PEL				*eS*	**Sn**	**08 31 12.3**	**-1.7**
ROC1	**El Roble**	**2.90**	**5**		**Pn**	**08 30 43.6**	**+0.9**
ROCH	**El Roble**	**2.91**	**5**	*eP*	**Pn**	**08 30 43.0**	**+0.3**
ROCH				*eP*	**Pn**	**08 30 42.6**	**-0.1**
ROCH				*eS*	**Sn**	**08 31 17.1**	**-0.2**
ROCH				*eS*	**Sn**	**08 31 17.2**	**-0.2**
ROCH				IAML		08 31 19.5	
comp=N,690nm,0.3s							
VA03	**San Esteban**	**3.17**	**12**		**Pn**	**08 30 46.4**	**+0.3**
VA06	**Catapilco**	**3.31**	**0**	Pn	**Pn**	**08 30 47.2**	**-0.6**
GO06	**Curarrehue**	**3.70**	**182**	Pn	**Pn**	**08 30 52.9**	**-0.3**
LR04	**Corral**	**4.33**	**202**	Pn	**Pn**	**08 31 01.4**	**0.0**
CO02	**Combarbal**	**4.67**	**3**	Pn	**Pn**	**08 31 04.8**	**-1.3**
PLCA	**Paso Flores**	**4.89**	**173**	Pn	**Pn**	**08 31 08.8**	**-0.2**
CO03	**El Pedregal**	**5.05**	**6**	Pn	**Pn**	**08 31 11.3**	**0.0**
CO06	**Fray Jorge**	**5.19**	**357**	Pn	**Pn**	**08 31 13.3**	**+0.1**
GO04	**Tololo Observa**	**5.70**	**5**	Pn	**Pn**	**08 31 18.7**	**-1.5**
LL05	**Los Muermos**	**5.77**	**196**	Pn	**Pn**	**08 31 20.0**	**-0.8**
CO01	**Juntas del Tor**	**5.97**	**10**	Pn	**Pn**	**08 31 22.7**	**-1.2**
AC05	**El Transito**	**7.07**	**7**	Pn	**Pn**	**08 31 37.8**	**-0.9**
TRQA	**Tornquist**	**7.79**	**109**	Pn	**Pn**	**08 31 47.1**	**-1.1**
SNAA	**Sanae**	**49.63**	**157**	P	**P**	**08 38 36.6**	**-0.6**
SNAA				IAmb	IAmb	08 38 52.0	
comp=Z,3.8nm,1.4s							
QSPA	**South Pole Qui**	**54.37**	**180**	P	**P**	**08 39 13.4**	**+0.9**
QSPA				IAmb	IAmb	08 39 14.5	
comp=Z,4.5nm,1.2s							

IDC 17 08:46:38.7±2.7, 54°.05N×86°.50E, h0km, mbtmp3.2/2,
ML3.0/2, Error ellipse: s-maj=21.7km s-min=13.1km
az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**265**	I		08 54 00.0	
baz=84,slow=332,SNR=5.5							
ZALV	**Zalesovo Beam**	**1.00**	**265**	Pg	Pg	08 46 57.0	-0.9
2.4nm,0.3s,baz=81,slow=17,SNR=8.5							
ZALV				Lg	Lg	08 47 12.1	
3.7nm,0.3s,baz=90,slow=31,SNR=10.0							
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	08 48 09.1	+0.7
0.3nm,0.3s,baz=55,slow=13,SNR=9.9							
KURBB				Lg	Lg	08 49 47.5	
baz=55,slow=34,SNR=1.8							
1.7nm,0.4s							
MKAR	**Makanchi Array**	**7.75**	**202**	Pn	Pn	08 48 33.9	+1.2
0.3nm,0.3s,baz=24,slow=14,SNR=7.1							
MKAR				Sn	Sn	08 50 01.1	0.0
0.1nm,0.3s,baz=33,slow=26,SNR=1.2							
MKAR				Lg	Lg	08 50 41.7	
baz=32,slow=32,SNR=2.2							
0.4nm,0.3s							

*IDC **17** 08:50:46.7±2.1, 60°.00N×153°.27W, h76km±29km, mb4.0/5,*
mbtmp4.2/11, MS4.6/2, Error ellipse: s-maj=29.0km
s-min=15.9km az=115.0
*NEIC **17** 08:50:48.4±1.1, 59°.84N±0°.03×152°.95W±0°.06,*
h101km±6km, Error ellipse: s-maj=5.2km s-min=3.8km
az=150.0
*ANF **17** 08:50:48.6±0.1, 59°.86N×152°.96W, h96km±1km, ML3.9/65,*
ML3.9/64, Error ellipse: s-maj=1.3km s-min=1.2km
az=171.0
*AEIC **17** 08:50:49±1.1, 59°.85N±0°.04×152°.93W±0°.06, h97km±3km,*
ML3.7, mb4.3/3(NEIC), ML3.9/134(NEIC), Error ellipse:
s-maj=5.8km s-min=4.5km az=198.0
ISC 17 08:50:48.5±0.6, 59°.84N±0°.03×152°.92W±0°.03,
h105km±6km, n303, σ0°81/332, mb4.4/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.24**	**221**		**Pn**	**08 51 03.0**	**-0.6**
P19K				Sn	**Sn**	**08 51 13.9**	**-0.8**
P19K	**Oil Pt**	**0.24**	**221**	P	**Pn**	**08 51 02.9**	**-0.6**
baz=38,SNR=75							
P19K				S	**Sn**	**08 51 13.7**	**-1.0**
baz=38							
O20K	**Slope Mountain**	**0.29**	**31**	P	**Pn**	**08 51 03.1**	**-0.6**
baz=214,SNR=61							
O20K				S	**Sn**	**08 51 14.4**	**-0.7**
baz=214							
RSO	**Redoubt South**	**0.63**	**7**		**Pn**	**08 51 05.4**	**-0.7**
HOM	**Homer**	**0.67**	**105**		**Pn**	**08 51 06.0**	**-0.1**
HOM				Sn	**Sn**	**08 51 19.7**	**+0.4**
HOM				IAML		08 51 20.7	
comp=N,7μm,0.8s							
HOM				IAML		08 51 21.3	
comp=E,6μm,0.3s							
HOM	**Homer**	**0.67**	**105**	P	**Pn**	**08 51 06.0**	**-0.1**
baz=287,SNR=39							
HOM				S	**Sn**	**08 51 19.3**	**0.0**
baz=287							
O19K	**Port Alsworth**	**0.79**	**298**		**Pn**	**08 51 06.5**	**-0.7**
O19K				Sn	**Sn**	**08 51 20.1**	**-1.1**
O19K	**Port Alsworth**	**0.79**	**298**	P	**Pn**	**08 51 06.4**	**-0.7**
baz=116							
O19K				S	**Sn**	**08 51 19.8**	**-1.4**
baz=116							
CNPM	**China Poot**	**0.91**	**109**		**Pn**	**08 51 08.1**	**-0.2**
CNPM				Sn	**Sn**	**08 51 22.7**	**-0.6**
CNPM				IAML		08 51 23.2	
comp=N,4μm,0.6s							
CNPM				IAML		08 51 23.6	
comp=E,6μm,0.6s							
Q19K	**Cape Douglas,**	**0.98**	**203**		**Pn**	**08 51 08.8**	**-0.4**
Q19K				Sn	**Sn**	**08 51 23.9**	**-0.8**
Q19K				IAML		08 51 28.2	
comp=E,2μm,0.7s							
Q19K	**Cape Douglas,**	**0.98**	**203**	P	**Pn**	**08 51 08.6**	**-0.6**
baz=21,SNR=13							
Q19K				S	**Sn**	**08 51 23.6**	**-1.1**
baz=21							
BRLK	**Bradley Lake**	**1.03**	**93**		**Pn**	**08 51 09.2**	**-0.4**
BRLK				Sn	**Sn**	**08 51 24.8**	**-0.8**
BRLK				IAML		08 51 26.5	
comp=N,4μm,0.2s							
BRLK				IAML		08 51 26.7	
comp=E,4μm,0.1s							
BRSE	**Bradley Lake S**	**1.10**	**94**	P	**Pn**	**08 51 10.1**	**-0.3**
baz=276,SNR=64							
BRSE				S	**Sn**	**08 51 26.2**	**-0.8**
baz=276							
O18K	**Koktuh Hills**	**1.16**	**272**		**Pn**	**08 51 10.4**	**-0.6**
O18K				Sn	**Sn**	**08 51 26.7**	**-1.3**
O18K				IAML		08 51 27.2	
comp=E,1μm,0.7s							
O18K	**Koktuh Hills**	**1.16**	**272**	P	**Pn**	**08 51 10.4**	**-0.6**
baz=89,SNR=46							
O18K				S	**Sn**	**08 51 26.7**	**-1.3**
baz=89							
N19K	**Bonanza Creek**	**1.25**	**322**	Pn	**Pn**	**08 51 11.5**	**-0.6**
N19K	**Bonanza Creek**	**1.25**	**322**	P	**Pn**	**08 51 11.6**	**-0.6**
baz=141,SNR=324							
N19K				S	**Sn**	**08 51 28.6**	**-1.5**
baz=141							
P18K	**Big Mountain,**	**1.26**	**250**	Pn	**Pn**	**08 51 11.3**	**-0.9**
P18K	**Big Mountain,**	**1.26**	**250**	P	**Pn**	**08 51 11.3**	**-0.9**
baz=68							
P18K				S	**Sn**	**08 51 28.3**	**-1.7**
baz=68							
Q20K	**Shuyak Island**	**1.26**	**167**	P	**Pn**	**08 51 12.2**	**0.0**
baz=348,SNR=39							
Q20K				S	**Sn**	**08 51 29.3**	**-0.7**
baz=348							
CAPN	**Captain Cook N**	**1.28**	**42**	Pn	**Pn**	**08 51 13.5**	**+1.1**
CAPN				IAML		08 51 35.4	
comp=E,4μm,0.4s							
CAPN	**Captain Cook N**	**1.28**	**42**	P	**Pn**	**08 51 13.7**	**+1.4**
baz=224							
N20K	**Mount Spurr**	**1.41**	**14**	P	**Pn**	**08 51 13.6**	**-0.4**
baz=195,SNR=38							
N20K				S	**Sn**	**08 51 32.0**	**-1.4**
baz=195							
SPCR	**Spurr Chakacha**	**1.41**	**14**	P	**Pn**	**08 51 13.6**	**-0.4**
baz=195,SNR=8.7							
SPCR				S	**Sn**	**08 51 32.0**	**-1.3**
baz=195							
SPU	**Mount Spurr**	**1.42**	**17**		**Pn**	**08 51 13.6**	**-0.4**
Q18K	**Katmai Hardscr**	**1.60**	**223**	P	**Pn**	**08 51 16.1**	**-0.2**
baz=41,SNR=26							
Q18K				S	**Sn**	**08 51 36.2**	**-1.4**
baz=41							
N18K	**Kilae Creek**	**1.71**	**301**		**Pn**	**08 51 16.9**	**-0.7**
N18K	**Kilae Creek**	**1.71**	**301**	P	**Pn**	**08 51 16.8**	**-0.7**
baz=118,SNR=77							
N18K				S	**Sn**	**08 51 37.8**	**-1.8**
baz=118							
O22K	**Cooper Landing**	**1.72**	**67**		**Pn**	**08 51 17.6**	**-0.1**
O22K	**Cooper Landing**	**1.72**	**67**	P	**Pn**	**08 51 17.4**	**-0.3**
baz=250,SNR=58							
SEW	**Seward**	**1.76**	**80**	Pn	**Pn**	**08 51 17.9**	**-0.3**
SEW	**Seward**	**1.76**	**80**	P	**Pn**	**08 51 17.7**	**-0.5**
baz=263,SNR=21							
SEW				S	**Sn**	**08 51 39.7**	**-1.1**
baz=263							
SVW2	**Sparrevohn**	**1.83**	**315**		**Pn**	**08 51 18.2**	**-0.8**
P17K	**Kvichak River**	**1.91**	**252**	P	**Pn**	**08 51 19.9**	**-0.1**
baz=68							
SUA	**Susitna One**	**1.95**	**32**	Pn	**Pn**	**08 51 20.9**	**+0.3**
SUA				IAML		08 51 47.8	
comp=E,1μm,0.5s							
SUA				IAML		08 51 48.5	
comp=N,1μm,0.7s							
SUA	**Susitna One**	**1.95**	**32**	P	**Pn**	**08 51 21.0**	**+0.3**
baz=214,SNR=16							
SUA				S	**Sn**	**08 51 45.0**	**-0.3**
baz=214							
RC01	**Rabbit Creek A**	**2.02**	**50**		**Pn**	**08 51 21.3**	**-0.1**
RC01				IAML		08 51 47.6	
comp=N,2μm,0.2s							
RC01				IAML		08 51 48.2	
comp=E,2μm,0.2s							
RC01	**Rabbit Creek A**	**2.02**	**50**	P	**Pn**	**08 51 21.3**	**-0.1**
baz=233,SNR=31							
RC01				S	**Sn**	**08 51 45.3**	**-1.3**
baz=233							
M20K	**Styx River**	**2.06**	**357**		**Pn**	**08 51 21.9**	**-0.1**
M20K	**Styx River**	**2.06**	**357**	P	**Pn**	**08 51 21.9**	**-0.1**
baz=177,SNR=74							
M20K				S	**Sn**	**08 51 46.7**	**-1.0**
baz=177							
KDAK	**Kodiak Island**	**2.07**	**175**	P	**Pn**	**08 51 21.1**	**-1.0**
comp=E,218nm,0.3s,baz=53,slow=10.0,SNR=918							
KDAK				S	**Sn**	**08 51 45.2**	**-2.5**
comp=E,153nm,0.4s,baz=17,slow=18,SNR=5.0							
KDAK	**Kodiak Island**	**2.07**	**175**	Pn	**Pn**	**08 51 21.1**	**-1.0**
KDAK				IAML		08 51 47.9	
comp=E,670nm,0.4s							
KDAK				IAML		08 51 48.2	
comp=E,590nm,0.3s							
KDAK	**Kodiak Island**	**2.07**	**175**	P	**Pn**	**08 51 21.1**	**-1.0**
baz=355							
O17K	**Koliganek Bris**	**2.11**	**270**	P	**Pn**	**08 51 22.1**	**-0.5**
baz=86							
M19K	**Big River Lodg**	**2.20**	**341**		**Pn**	**08 51 23.4**	**-0.4**
M19K	**Big River Lodg**	**2.20**	**341**	P	**Pn**	**08 51 23.4**	**-0.4**
baz=160							
Q17K	**Contact Creek**	**2.20**	**225**	P	**Pn**	**08 51 23.8**	**-0.1**
baz=42,SNR=7.8							
Q16K	**King Salmon**	**2.24**	**240**	P	**Pn**	**08 51 23.9**	**-0.4**
baz=57							
SKT	**Skwentna**	**2.26**	**17**		**Pn**	**08 51 24.1**	**-0.4**
SKT				IAML		08 51 53.9	
comp=E,244nm,0.6s							
SKT	**Skwentna**	**2.26**	**17**	P	**Pn**	**08 51 24.1**	**-0.4**
baz=198,SNR=15							
M22K	**Willow**	**2.36**	**34**		**Pn**	**08 51 26.2**	**+0.4**
M22K	**Willow**	**2.36**	**34**	P	**Pn**	**08 51 26.2**	**+0.4**
baz=217,SNR=16							
M22K				S	**Sn**	**08 51 54.4**	**-0.1**
baz=217							
PWL	**Port Wells**	**2.50**	**64**		**Pn**	**08 51 26.5**	**-1.2**
PWL	**Port Wells**	**2.50**	**64**	P	**Pn**	**08 51 26.4**	**-1.2**
baz=248,SNR=44							
L19K	**White Mountain**	**2.54**	**339**	Pn	**Pn**	**08 51 27.7**	**-0.5**
L19K	**White Mountain**	**2.54**	**339**	P	**Pn**	**08 51 27.6**	**-0.5**
baz=157,SNR=61							
PMR	**Palmer**	**2.56**	**45**		**Pn**	**08 51 27.7**	**-0.7**
PMR				IAML		08 51 58.3	
comp=E,387nm,0.2s							
PMR				IAML		08 51 59.0	
comp=N,523nm,0.2s							
PMR	**Palmer**	**2.56**	**45**	P	**Pn**	**08 51 27.6**	**-0.9**
baz=228,SNR=13							
OHAK	**Old Harbor**	**2.63**	**184**	Pn	**Pn**	**08 51 28.3**	**-1.1**
OHAK				IAML		08 52 00.0	
comp=N,327nm,0.3s							
OHAK				IAML		08 52 00.5	
comp=E,247nm,0.6s							
OHAK	**Old Harbor**	**2.63**	**184**	P	**Pn**	**08 51 28.3**	**-1.1**
baz=3.9,SNR=25							
L20K	**Farewell, AK**	**2.69**	**350**	P	**Pn**	**08 51 30.0**	**-0.2**
baz=170,SNR=31							
KNK	**Knik Glacier**	**2.71**	**52**		**Pn**	**08 51 29.4**	**-1.0**
KNK	**Knik Glacier**	**2.71**	**52**	P	**Pn**	**08 51 29.4**	**-1.0**
baz=236,SNR=22							
GHO	**Glory Hole Cre**	**2.76**	**43**	Pn	**Pn**	**08 51 30.7**	**-0.4**
GHO				IAML		08 52 04.0	
comp=E,770nm,0.6s							
GHO				IAML		08 52 06.2	
comp=N,653nm,0.5s							
P23K	**Montague Islan**	**2.78**	**84**	P	**Pn**	**08 51 30.8**	**-0.5**
baz=269,SNR=6.6							
CUT	**Chulitna**	**2.88**	**25**		**Pn**	**08 51 32.9**	**+0.3**
CUT				IAML		08 52 12.5	
comp=N,557nm,0.4s							
CUT				IAML		08 52 13.1	
comp=E,618nm,0.5s							
CUT	**Chulitna**	**2.88**	**25**	P	**Pn**	**08 51 33.0**	**+0.3**
baz=208,SNR=14							
SML	**Sawmill**	**2.99**	**47**		**Pn**	**08 51 33.2**	**-1.0**
SML				IAML		08 52 09.3	
comp=N,466nm,0.8s							
SML				IAML		08 52 09.3	
comp=E,350nm,0.7s							
SML	**Sawmill**	**2.99**	**47**	P	**Pn**	**08 51 33.3**	**-0.9**
baz=231							
N16K	**Nishlik Lake**	**3.00**	**285**	P	**Pn**	**08 51 34.1**	**-0.1**
baz=100,SNR=11							
GLI	**Glacier Island**	**3.08**	**68**	P	**Pn**	**08 51 33.4**	**-1.9**
baz=253,SNR=6.4							
PPLA	**Purkeypile**	**3.09**	**6**		**Pn**	**08 51 35.9**	**+0.3**
PPLA	**Purkeypile**	**3.09**	**6**	P	**Pn**	**08 51 36.2**	**+0.6**
baz=187,SNR=16							
M23K	**Glacier View**	**3.21**	**50**	P	**Pn**	**08 51 36.3**	**-0.8**
baz=235,SNR=20							
HIN	**Hinchinbrook I**	**3.26**	**77**	Pn	**Pn**	**08 51 36.3**	**-1.5**
HIN				IAML		08 52 15.0	
comp=N,376nm,0.4s							
HIN				IAML		08 52 16.9	
comp=E,369nm,0.7s							
FID	**Port Fidalgo**	**3.33**	**71**	Pn	**Pn**	**08 51 36.6**	**-2.2**
SII	**Sitkinak Islan**	**3.35**	**192**	Pn	**Pn**	**08 51 37.8**	**-1.3**
SII				IAML		08 52 27.0	
comp=N,348nm,0.9s							
SII				IAML		08 52 32.0	
comp=E,371nm,1.0s							
SII	**Sitkinak Islan**	**3.35**	**192**	P	**Pn**	**08 51 37.9**	**-1.1**
baz=11							
Q23K	**Middleton Isla**	**3.36**	**94**	Pn	**Pn**	**08 51 38.9**	**-0.1**
Q23K	**Middleton Isla**	**3.36**	**94**	P	**Pn**	**08 51 38.9**	**-0.1**
baz=280							
MID	**Middleton Isla**	**3.37**	**94**	Pn	**Pn**	**08 51 38.9**	**-0.2**
SCM	**Sheep Creek Mo**	**3.39**	**51**		**Pn**	**08 51 38.7**	**-0.8**
SCM				IAML		08 52 20.2	
comp=E,366nm,0.5s							
SCM				IAML		08 52 21.7	
comp=N,292nm,0.8s							
SCM	**Sheep Creek Mo**	**3.39**	**51**	P	**Pn**	**08 51 38.8**	**-0.8**
baz=236							
TTA	**Tatalina**	**3.44**	**336**	Pn	**Pn**	**08 51 39.5**	**-0.8**
TTA	**Tatalina**	**3.44**	**336**	P	**Pn**	**08 51 39.3**	**-1.0**
baz=153,SNR=5.6							
K20K	**Telida**	**3.58**	**352**		**Pn**	**08 51 41.6**	**-0.3**
K20K	**Telida**	**3.58**	**352**	P	**Pn**	**08 51 41.7**	**-0.3**
baz=171,SNR=29							
CAST	**Castle Rocks**	**3.62**	**6**	Pn	**Pn**	**08 51 42.5**	**-0.1**
CAST	**Castle Rocks**	**3.62**	**6**	P	**Pn**	**08 51 42.5**	**-0.1**
baz=187,SNR=32							
EYAK	**Cordova Ski Ar**	**3.65**	**76**	Pn	**Pn**	**08 51 41.5**	**-1.4**
EYAK	**Cordova Ski Ar**	**3.65**	**76**	P	**Pn**	**08 51 41.5**	**-1.4**

comp=E,76nm,0.9s
M24K Tolsona, Glenn 4.00 52 Pn Pn 08 51 47.3 -0.4
M24K IAML 08 52 34.7
comp=N,239nm,1.0s
M24K IAML 08 52 35.0
comp=E,243nm,0.7s
M24K Tolsona, Glenn 4.00 52 P Pn 08 51 47.3 -0.4
baz=238,SNR=14
CHUM Lake Minchumin 4.07 4 P Pn 08 51 48.6 0.0
baz=184,SNR=5.9
RND Reindeer 4.07 27 Pn Pn 08 51 48.6 -0.1
RND IAML 08 52 52.2
comp=N,66nm,0.7s
RND IAML 08 52 54.4
comp=E,75nm,0.7s
RAGM Ragged Mountai 4.16 79 Pn Pn 08 51 49.8 -0.1
DHY Denali Highway 4.20 37 Pn 08 51 50.0 -0.4
DHY IAML 08 52 38.9
comp=E,172nm,0.4s
DHY IAML 08 52 40.3
comp=N,188nm,0.5s
DHY Denali Highway 4.20 37 P Pn 08 51 49.9 -0.6
baz=222,SNR=14
BMRM Bremner River 4.28 71 Pn 08 51 51.1 -0.3
BMRM Bremner River 4.28 71 P Pn 08 51 50.1 -1.3
baz=258,SNR=10
CHIR Chirikof Islan 4.28 201 Pn Pn 08 51 50.3 -1.1
CHIR IAML 08 53 56.9
comp=E,210nm,3.1s
KAIM Kayak Island 4.28 85 Pn Pn 08 51 51.2 -0.2
KAIM Kayak Island 4.28 85 P Pn 08 51 51.3 -0.2
baz=273
MCK McKinley 4.34 24 Pn Pn 08 51 52.3 0.0
MCK IAML 08 52 59.0
comp=E,65nm,0.5s
MCK IAML 08 53 03.4
comp=N,57nm,1.2s
MCK McKinley 4.34 24 P Pn 08 51 52.3 0.0
baz=208,SNR=17
HMT Hamilton 4.37 80 Pn Pn 08 51 51.1 -1.5
BPAW Bear Paw Mtn. 4.38 11 Pn Pn 08 51 51.4 -1.3
BPAW Bear Paw Mtn. 4.38 11 P Pn 08 51 51.9 -0.8
baz=193
J20K Nowinta River 4.40 353 Pn Pn 08 51 52.8 -0.1
J20K Nowinta River 4.40 353 P Pn 08 51 52.6 -0.3
baz=172,SNR=71
N25K Chitina, Valde 4.46 63 Pn 08 51 52.7 -1.2
N25K IAML 08 52 44.8
comp=N,127nm,0.5s
N25K IAML 08 52 44.9
comp=E,172nm,0.6s
N25K Chitina, Valde 4.46 63 P Pn 08 51 52.8 -1.1
baz=250,SNR=11
HARP HAARP 4.56 52 P Pn 08 51 54.4 -0.8
baz=239
CHGN Chignik 4.59 222 Pn Pn 08 51 55.7 +0.1
CHGN IAML 08 52 48.1
comp=E,93nm,0.2s
CHGN IAML 08 52 48.2
comp=N,82nm,0.1s
BERG Berg Lake 4.64 79 Pn Pn 08 51 56.4 +0.1
PAX Paxson 4.76 45 Pn 08 51 57.9 -0.1
PAX Paxson 4.76 45 P Pn 08 51 58.0 0.0
baz=232,SNR=6.9
GLB Gilahina Butte 4.76 66 Pn Pn 08 51 56.8 -1.2
GLB IAML 08 52 51.6
comp=N,92nm,0.6s
GLB IAML 08 52 51.7
comp=E,79nm,0.3s
VRDI Verde Repeater 4.88 69 Pn Pn 08 51 58.5 -1.2
VRDI IAML 08 52 55.0
comp=E,42nm,0.5s
VRDI IAML 08 53 15.4
comp=N,52nm,0.7s
WAX Waxell Ridge 5.07 79 Pn Pn 08 52 01.9 -0.2
SNH Sunshine Point 5.07 82 Pn Pn 08 52 02.5 +0.4
NEA2 Nenana 5.10 19 Pn 08 52 01.9 -0.6
NEA2 IAML 08 52 51.2
comp=E,29nm,3.4s
NEA2 Nenana 5.10 19 P Pn 08 52 01.7 -0.8
baz=202,SNR=9.2
TGL Tana Glacier 5.10 75 Pn Pn 08 52 02.8 +0.2
TGL IAML 08 53 02.3
comp=E,95nm,0.4s
TGL IAML 08 53 02.6
comp=N,86nm,0.7s
MCARA McCarthy VSAT 5.12 68 Pn 08 52 01.8 -0.9
MCARA IAML 08 53 02.4
comp=N,100nm,0.3s
MCARA IAML 08 53 05.8
comp=E,90nm,0.6s
MCARA McCarthy VSAT 5.12 68 P Pn 08 52 02.4 -0.3
baz=257
WRH Wood River Hil 5.17 24 Pn 08 52 02.8 -0.6
WRH IAML 08 53 00.3
comp=N,34nm,0.8s
WRH IAML 08 53 03.3
comp=E,32nm,1.0s
K24K Donnelly Dome 5.22 37 P Pn 08 52 05.3 +1.2
baz=224,SNR=20
GCSA Galena City Sc 5.26 341 P Pn 08 52 04.2 -0.4
baz=158,SNR=13
MLY Manley 5.31 10 Pn Pn 08 52 05.5 +0.1
ISLE Juniper Island 5.33 77 Pn 08 52 05.5 -0.2
ISLE IAML 08 53 06.7
comp=N,112nm,0.7s
ISLE IAML 08 53 07.4
comp=E,96nm,0.9s
HDA Harding Lake 5.38 29 Pn 08 52 05.5 -0.7
HDA Harding Lake 5.38 29 P Pn 08 52 05.7 -0.5
baz=214,SNR=12
I21K Tanana 5.38 4 Pn 08 52 05.7 -0.6
I21K IAML 08 54 01.4
comp=E,65nm,1.3s
I21K IAML 08 54 01.4
comp=N,34nm,1.4s
CCB Clear Creek Bu 5.39 24 Pn 08 52 05.4 -0.9
CCB IAML 08 53 04.7
comp=E,29nm,0.4s
CCB IAML 08 53 05.5
comp=N,26nm,0.8s
M26K Nabesna, AK 5.45 58 Pn 08 52 06.7 -0.6
M26K Nabesna, AK 5.45 58 P Pn 08 52 07.2 -0.1
baz=246,SNR=9.4
RIDG Independent Ri 5.48 41 Pn 08 52 07.9 +0.3
RIDG Independent Ri 5.48 41 P Pn 08 52 08.2 +0.6
baz=228,SNR=12
MESA MESA 5.51 82 Pn 08 52 08.5 +0.2
MESA MESA 5.51 82 P Pn 08 52 08.4 +0.2
baz=271
TCOL CIGO, UAF Yank 5.58 23 Pn 08 52 08.3 -0.6
TCOL CIGO, UAF Yank 5.58 23 P Pn 08 52 08.3 -0.6
baz=207
COLA College 5.58 23 Pn 08 52 08.5 -0.4
COLA College 5.58 23 P Pn 08 52 08.5 -0.4
baz=207
I23K Minto, Yukon-K 5.58 16 Pn 08 52 09.0 +0.1
I23K Minto, Yukon-K 5.58 16 P Pn 08 52 08.7 -0.2
baz=199,SNR=17
MDM Murphy Dome 5.58 21 Pn 08 52 08.1 -0.9
L26K Log Cabin Wild 5.60 51 Pn 08 52 09.6 +0.4
L26K Log Cabin Wild 5.60 51 P Pn 08 52 09.4 +0.2
baz=240
YAH Yahtse 5.62 80 Pn 08 52 09.5 -0.2
DOT Dot Lake 5.68 44 Pn 08 52 10.3 0.0
IL31 5.69 27 Pn 08 52 09.6 -0.9
ILAR Eielson Array 5.69 27 P Pn 08 52 09.1 -1.4
comp=N,7.8nm,0.3s,baz=214,slow=14,SNR=109
ILAR S Sn 08 53 10.8 -3.7
comp=N,6.9nm,0.5s,baz=200,slow=18,SNR=11
ILAR LR LR 08 54 41.2
comp=N,2μm,20.7s,baz=82,slow=42
ILAR Eielson Array 5.69 27 Pn 08 52 09.6 -0.9
BARN Barnard Glacie 5.71 73 Pn 08 52 11.3 +0.5
H21K Melozitna Rive 5.84 0 Pn 08 52 12.2 -0.3
H21K Melozitna Rive 5.84 0 P Pn 08 52 12.4 -0.1
baz=181,SNR=14
CTG Chitna Glacier 5.85 74 P Pn 08 52 13.4 +0.6
baz=264,SNR=12
CTGM Chitina Glacie 5.85 74 Pn 08 52 13.3 +0.5
POKR Poker Plat Res 5.88 23 Pn 08 52 12.8 -0.2
POKR Poker Plat Res 5.88 23 P Pn 08 52 12.5 -0.5
baz=208
TABL Table Mountain 5.92 79 Pn 08 52 14.1 +0.3
SCRK Sand Creek 5.92 42 Pn Pn 08 52 12.6 -1.1
SCRK Sand Creek 5.92 42 P Pn 08 52 13.4 -0.3
baz=230
M27K Edge Creek, AK 5.92 60 Pn 08 52 13.9 +0.2
M27K Edge Creek, AK 5.92 60 P Pn 08 52 13.8 +0.1
baz=250
J25K Salcha River, 5.95 33 Pn 08 52 13.4 -0.6
J25K Salcha River, 5.95 33 P Pn 08 52 13.6 -0.4
baz=220,SNR=12
LOGN Logan Glacier 6.00 75 Pn 08 52 15.1 +0.3
H22K Ishtalitna Cre 6.12 6 P Pn 08 52 16.1 -0.2
baz=187,SNR=8.9
IMAR Indian Mountai 6.18 357 Pn Pn 08 52 17.3 +0.2
H23K Yukon River 6.21 13 Pn 08 52 17.4 0.0
H23K Yukon River 6.21 13 P Pn 08 52 17.5 0.0
baz=196,SNR=16
L27K Beaver Creek, 6.22 54 Pn Pn 08 52 17.7 0.0
L27K Beaver Creek, 6.22 54 P Pn 08 52 18.0 +0.3
baz=244
BCAR Beaver Creek A 6.24 54 Pn Pn 08 52 17.9 -0.1
PCA Pinnacle 6.36 82 Pn 08 52 19.9 +0.2
PINM Pinnacle 6.37 82 P Pn 08 52 19.9 +0.2
baz=273
BVCY Beaver Creek 6.39 61 P Pn 08 52 20.5 +0.5
baz=252
O28M Mount Upton 6.40 76 P Pn 08 52 21.0 +0.7
baz=267,SNR=21
YUK3 Moose Creek 6.40 67 P Pn 08 52 20.4 +0.2
baz=258,SNR=8.8
J26L Joseph Creek 6.41 39 Pn Pn 08 52 20.2 -0.1
J26L Joseph Creek 6.41 39 P Pn 08 52 19.9 -0.3
baz=227,SNR=17
H24K Noodor Dome 6.45 19 Pn 08 52 20.9 +0.1
H24K Noodor Dome 6.45 19 P Pn 08 52 20.3 -0.4
baz=203,SNR=6.0
K27K Chicken 6.62 46 Pn 08 52 23.3 +0.2
K27K Chicken 6.62 46 P Pn 08 52 23.2 +0.2
baz=236
PRP Porcupine Dome 6.64 28 Pn 08 52 23.4 +0.1
PRP Porcupine Dome 6.64 28 P Pn 08 52 23.3 -0.1
baz=214,SNR=14
YUK8 Steele Glacier 6.65 72 P Pn 08 52 24.4 +0.7
baz=263,SNR=21
BCPM Bancas Point 6.69 83 Pn Pn 08 52 24.9 +1.0
G21K Allakaket 6.71 358 P Pn 08 52 24.4 +0.1
baz=178
YKU2 Yakutat 6.72 87 Pn Pn 08 52 25.9 +1.5
PNL Peninsula 6.83 86 P Pn 08 52 25.9 -0.1
baz=277,SNR=6.3
G23K Bananza Creek 7.02 9 P Pn 08 52 28.5 -0.1
baz=192
I26K Coal Creek Min 7.10 35 Pn 08 52 29.5 0.0
I26K Coal Creek Min 7.10 35 P Pn 08 52 29.3 -0.2
baz=224
YUK4 Talbot Arm 7.19 72 P Pn 08 52 31.8 +0.9
baz=264
O29M Mount Kennedy 7.19 80 P Pn 08 52 31.4 +0.5
baz=273,SNR=7.9
H25K Birch Creek 7.21 23 P Pn 08 52 30.7 -0.3
baz=210,SNR=5.5
YUK6 Outpost Mounta 7.30 75 P Pn 08 52 32.6 +0.2
baz=268
G24K Hadweenzic Riv 7.31 17 P Pn 08 52 31.9 -0.5
baz=202
EGAK Eagle 7.38 43 Pn 08 52 33.0 -0.3
EGAK Eagle 7.38 43 P Pn 08 52 33.1 -0.2
baz=233
F21K Alatna River 7.42 358 P Pn 08 52 34.6 +0.7
baz=178,SNR=6.5
M29M Somme Creek 7.47 63 P Pn 08 52 34.8 +0.1
baz=256,SNR=6.1
ANM Nome 7.50 314 P Pn 08 52 35.4 +0.4
baz=124
COLD Coldfoot 7.52 8 Pn 08 52 35.1 -0.1
COLD Coldfoot 7.52 8 P Pn 08 52 35.0 -0.2
baz=191
G25K Bearman Lake 7.60 21 P Pn 08 52 36.2 -0.1
baz=207
DAWY Dawson 7.65 51 Pn Pn 08 52 36.6 -0.4
DAWY Dawson 7.65 51 P Pn 08 52 37.1 0.0
baz=243
P29M Windy Craggy 7.67 85 Pn 08 52 37.4 -0.1
P29M Windy Craggy 7.67 85 P Pn 08 52 38.0 +0.6
baz=278
F22K John River 7.71 2 P Pn 08 52 38.2 +0.4
baz=183
HYT Haines Junctio 7.71 76 Pn 08 52 38.3 +0.3
HYT Haines Junctio 7.71 76 P Pn 08 52 38.3 +0.3
baz=270
I27K Kandik River 7.76 37 P Pn 08 52 38.3 -0.3
baz=227
L29M L29M 7.80 59 P Pn 08 52 39.0 -0.1
baz=252
N30M Aishikik Lake 7.95 71 P Pn 08 52 40.4 -0.7
baz=265,SNR=11
P30M Million Dollar 8.01 81 P Pn 08 52 42.4 +0.4
baz=275
F24K Squaw Lake 8.03 14 P Pn 08 52 41.9 -0.3
baz=198
G26K Porcupine Rive 8.22 26 P Pn 08 52 44.0 -0.7
baz=214
H27K Steamboat Moun 8.23 34 P Pn 08 52 44.7 -0.2
baz=224
E22K Anaktuvuk Pass 8.35 3 P Pn 08 52 46.4 -0.1
baz=184
E23K Chandalar 8.38 9 P Pn 08 52 46.9 0.0
baz=192
PLBC Pleasant Camp 8.39 85 P Pn 08 52 47.5 +0.3
baz=280,SNR=8.1
O30N Mendenhall 8.41 76 P Pn 08 52 47.1 -0.2
baz=271
F25K Christian Rive 8.42 19 P Pn 08 52 46.0 -1.5
baz=206
BMAR Burnt Mountain 8.47 22 Pn Pn 08 52 47.6 -0.5
E24K Your Creek 8.50 11 P Pn 08 52 47.6 -0.9
baz=195
N31M Braeburn, Yuko 8.57 72 Pn 08 52 49.6 0.0
N31M Braeburn, Yuko 8.57 72 P Pn 08 52 49.3 -0.3
baz=266
G27K Doyon Strip 8.62 31 P Pn 08 52 48.9 -1.3
baz=221
I29M Ogilvie Camp, 8.71 44 Pn Pn 08 52 51.9 +0.5
I29M Ogilvie Camp, 8.71 44 P Pn 08 52 51.9 +0.5
baz=237
F26K Sheenjek River 8.78 22 P Pn 08 52 51.1 -1.3
baz=210
E25K Arctic Village 8.91 18 P Pn 08 52 52.8 -1.4
baz=205
SKAG Skagway 8.91 85 Pn 08 52 54.7 +0.6
SKAG Skagway 8.91 85 P Pn 08 52 54.9 +0.7
baz=280,SNR=5.4
TNA Tin City 8.96 316 Pn Pn 08 52 56.5 +1.8
TOLK Toolik Lake Re 8.96 8 Pn Pn 08 52 56.0 +1.2
TOLK Toolik Lake Re 8.96 8 P Pn 08 52 54.5 -0.3
baz=191
WHY Whitehorse 9.01 77 Pn 08 52 55.9 +0.3
WHY Whitehorse 9.01 77 P Pn 08 52 55.5 0.0
baz=273
D23K Nanushuk River 9.22 5 P Pn 08 52 58.7 +0.5
baz=187
M31M Drury Creek, Y 9.29 67 Pn Pn 08 53 00.1 +0.7
M31M Drury Creek, Y 9.29 67 P Pn 08 52 59.5 +0.1
baz=264
BESE Bessie Mountai 9.35 90 Pn Pn 08 53 01.9 +1.8
D24K Happy Valley 9.52 9 P Pn 08 53 03.1 +0.8
baz=193
UNV Unalaska Valle 9.55 237 P Pn 08 53 03.8 +1.0
baz=46
R32K Eaglecrest 9.60 91 P Pn 08 53 04.3 +0.7
baz=287
SIT Sitka 9.63 99 Pn Pn 08 53 03.2 -0.7
SIT Sitka 9.63 99 P Pn 08 53 03.2 -0.7
baz=294
JIS Juneau Island 9.67 91 Pn Pn 08 53 05.8 +1.4
P32M Atlin 9.70 83 P Pn 08 53 05.2 +0.3
baz=280
E27K Coleen River 9.72 26 P Pn 08 53 03.7 -1.4
baz=216
FARO Faro, Yukon 9.78 67 P Pn 08 53 04.7 -1.2
baz=265
EPYK Eagle Plains 9.81 41 P Pn 08 53 06.4 +0.1
baz=236
S32K Killisnoo 9.84 96 P Pn 08 53 06.2 -0.6
baz=292
N32M Quiet Lake 9.87 74 P Pn 08 53 06.8 -0.4
baz=271
D25K Kavik River 9.92 14 P Pn 08 53 07.4 -0.5
baz=200
P33M Teslin, Yukon 10.06 79 Pn 08 53 10.2 +0.4
P33M Teslin, Yukon 10.06 79 P Pn 08 53 10.0 +0.1
baz=277
G30M tAoh Zraii Nji 10.33 39 P Pn 08 53 12.1 -1.2
baz=234
Q32M Nakina River 10.56 86 P Pn 08 53 16.8 +0.1
baz=284
MMPY Sheldon Lake, 10.79 66 P Pn 08 53 20.2 +0.6
baz=265
R33M Jennings River 11.12 83 P Pn 08 53 24.3 +0.2
baz=282
U33K Whale Pass 11.14 101 P Pn 08 53 24.3 0.0
baz=298
S34M Telegraph Cree 11.43 90 P Pn 08 53 30.1 +2.0
baz=289,SNR=7.3
CRAG Craig 11.45 104 Pn Pn 08 53 27.9 -0.6
DLBC Dease Lake 11.82 87 P Pn 08 53 35.8 +2.3
comp=N,6.1nm,0.3s,baz=278,slow=9.4,SNR=70
DLBC S Sn 08 55 42.0 -1.4
comp=N,2.7nm,0.4s,baz=305,slow=27,SNR=9.4
DLBC Dease Lake 11.82 87 Pn Pn 08 53 34.2 +0.7
DLBC Dease Lake 11.82 87 P Pn 08 53 35.2 +1.7
baz=287
INK Inuvik 11.94 37 P Pn 08 53 33.6 -1.3
comp=N,1.6nm,0.5s,baz=160,slow=3.9,SNR=7.9
INK Inuvik 11.94 37 Pn Pn 08 53 35.8 +0.8
INK Inuvik 11.94 37 P Pn 08 53 36.3 +1.4
baz=234
T35M Bob Quinn 12.21 94 P Pn 08 53 40.5 +2.0
baz=293
DIB Dawson Inlet, 13.06 112 Pn Pn 08 53 51.8 +2.1
RUBB Prince Rupert 13.47 104 Pn Pn 08 53 57.1 +2.1
GRNB Grenville Isla 13.88 105 Pn Pn 08 54 01.4 +1.0
ADK Adak 15.46 250 Pn Pn 08 54 21.3 +0.8
ADK IAmb IAmb 08 54 40.6
comp=Z,20nm,1.0s
BBB Bella Bella 15.77 108 P P 08 54 27.6 +1.6
comp=Z,25nm,1.2s,baz=330,slow=7.3,SNR=5.6
BBB S Sn 08 57 17.4 -1.2
comp=Z,18nm,1.1s,baz=104,slow=19,SNR=2.1
A36M Sachs Harbour 16.38 31 Pn Pn 08 54 32.0 +0.4
A36M IAmb IAmb 08 54 52.0
comp=Z,22nm,1.2s
AMKA Amchitka 17.71 254 P P 08 54 46.5 -1.0
YKA Yellowknife Ar 18.48 65 P P 08 54 56.1 +0.3
comp=Z,0.9nm,0.8s,baz=278,slow=9.9,SNR=4.7
PEA0B Petropavlovsk- 27.52 278 P P 08 56 25.2 +0.4
PEA0B IAmb IAmb 08 56 34.9
comp=Z,14nm,1.1s
PETK Petropavlovsk- 27.52 278 P P 08 56 23.6 -1.1
comp=Z,1.5nm,0.6s,baz=73,slow=13,SNR=24
comp=Z,1.5nm,0.6s
PETK Petropavlovsk- 27.52 278 P P 08 56 24.4 -0.4
KSRS Korea Array 53.26 283 P P 08 59 56.5 +0.6
comp=Z,2.1nm,0.4s,baz=43,slow=7.2,SNR=9.2
comp=Z,2.1nm,0.4s
SONM Songino Array 54.92 306 P P 09 00 07.7 -0.3
comp=Z,1.7nm,0.4s,baz=40,slow=6.3,SNR=12
comp=Z,1.7nm,0.4s
ZALV Zalesovo Beam 57.53 324 P P 09 00 26.2 0.0
comp=Z,4.3nm,0.4s,baz=27,slow=7.7,SNR=15
comp=Z,4.3nm,0.4s
MKAR Makanchi Array 64.59 321 P P 09 01 13.2 -0.9
comp=Z,0.9nm,0.6s,baz=42,slow=6.8,SNR=8.1
comp=Z,0.9nm,0.6s
SIJI Sorong 83.64 257 LR LR 09 35 29.0
comp=Z,825nm,21.4s,baz=64,slow=32

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*IDC **17** 08:59:58.4±4.1, 6°.08S×149°.10E, h48km±36km, mb3.8/6, mbtmp4.2/8, ML4.1/3, Error ellipse: s-maj=45.6km s-min=21.0km az=89.0*
*NEIC **17** 08:59:59.8±1.1, 6°.08S±0°.06×148°.78E±0°.07, h42km±8km, mb4.6/27, Error ellipse: s-maj=10.5km s-min=8.2km az=79.0*
*DJA **17** 09:00:01.5±0.5, 6°S±5°×14°9E±°, h44km±10km, M4.9/6, mB4.7/2, mb4.5/6, MLv5.1/3, Mw(mB)3.9/2*
ISC 17 09:00:00.3±0.4, **6°.10S**±0°.05×**148°.79E**±0°.06, **h60**km, **n60**, σ0**97**/64, **mb4.4**/16, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.66**	**206**	P	**Pn**	**09 00 55.8**	**+1.3**
	130nm,0.3s,baz=38,slow=5.8,SNR=265						
PMG				S	**Sn**	**09 01 36.4**	**0.0**
	329nm,0.4s,baz=206,slow=20,SNR=8.1						
PMG	**Port Moresby**	**3.66**	**206**	Pn	**Pn**	**09 00 54.6**	**+0.1**
PMG	**Port Moresby**	**3.66**	**206**	P	**Pn**	**09 00 54.7**	**+0.2**
PMG	**Port Moresby**	**3.66**	**206**	P	**Pn**	**09 00 55.8**	**+1.3**
RABL	**Rabaul**	**3.86**	**61**	Pn	**Pn**	**09 00 56.7**	**-0.6**
RABL	**Rabaul**	**3.86**	**61**	P	**Pn**	**09 00 57.2**	**-0.1**
MANU	**Manus Island**	**4.27**	**341**	Pn	**Pn**	**09 01 01.7**	**-1.2**
MANU	**Manus Island**	**4.27**	**341**	P	Pn	09 01 11.4	+8.5
COEN	**Coen**	**9.56**	**215**	Pn	**Pn**	**09 02 14.1**	**-1.2**
HNR	**Honiara**	**11.54**	**107**	Pn	**Pn**	**09 02 41.1**	**-1.3**
MTSU	**Mount Surprise**	**12.73**	**200**	P	**Pn**	**09 02 59.6**	**+0.9**
TV1H	**Townsville Har**	**13.22**	**188**	P	**Pn**	**09 03 05.8**	**+0.5**
CTA	**Charters Tower**	**14.12**	**190**	P	**Pn**	**09 03 16.3**	**-1.1**
	0.4nm,0.3s,baz=23,slow=16,SNR=11						
	6.9nm,0.8s						
CTAO	**Charters Tower**	**14.12**	**190**	Pn	**Pn**	**09 03 17.1**	**-0.4**
PATS	**Pohnpei**	**15.99**	**37**	Pn	**Pn**	**09 03 40.7**	**-0.9**
PATS				IAmb	IAmb	09 03 43.0	
	comp=Z,68nm,1.0s						
FAKI	**Fak Fak**	**16.78**	**280**	Pn	**Pn**	**09 03 49.8**	**-1.8**
QIS	**Mount Isa**	**16.91**	**211**	P	**Pn**	**09 03 52.6**	**-0.5**
MTN	**Manton Dam**	**18.65**	**248**	P	**P**	**09 04 13.7**	**+0.3**
MTN				IAmb	IAmb	09 04 17.3	
	comp=Z,18nm,0.8s						
EIDS	**Eidsvold**	**19.29**	**174**	P	**P**	**09 04 20.0**	**-0.3**
EIDS				IAmb	IAmb	09 04 22.0	
	comp=Z,15nm,0.8s						
EIDS	**Eidsvold**	**19.29**	**174**	P	**P**	**09 04 21.0**	**+0.7**
WB0	**Warramunga Arr**	**19.50**	**225**		**P**	**09 04 23.7**	**+0.9**
WR0	**Warramunga Arr**	**19.53**	**224**	P	**P**	**09 04 23.5**	**+0.5**
WR0				IAmb	IAmb	09 04 40.7	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**19.64**	**224**	P	**P**	**09 04 23.9**	**-0.4**
WRAB				IAmb	IAmb	09 04 25.8	
	comp=Z,22nm,0.6s						
WRAB	**Tennant Creek**	**19.64**	**224**	P	**P**	**09 04 25.4**	**+1.1**
WB2	**Warramunga Arr**	**19.65**	**224**		**P**	**09 04 24.8**	**+0.4**
WB2				IAmb	IAmb	09 04 25.9	
	comp=Z,22nm,0.6s						
WRA	**Warramunga Arr**	**19.66**	**224**	P	**P**	**09 04 25.2**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=51,slow=11,SNR=140						
WRA				S	**S**	**09 07 59.9**	**-3.3**
	comp=Z,3.6nm,1.0s,baz=45,slow=23,SNR=8.1						
WRA				PcP	**PcP**	**09 08 42.0**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=33,slow=2.0,SNR=5.1						
	comp=Z,13nm,0.5s						
WRA	**Warramunga Arr**	**19.66**	**224**		**P**	**09 04 24.7**	**+0.2**
GUMO	**Guam**	**19.95**	**349**	P	**P**	**09 04 27.4**	**-0.2**
RMQ	**Roma**	**20.27**	**180**	P	**P**	**09 04 31.8**	**+0.7**
QLP	**Quilpie**	**20.82**	**192**	P	**P**	**09 04 38.7**	**+1.7**
KNRA	**Kununurra**	**21.82**	**243**	P	**P**	**09 04 48.0**	**+0.2**
KNRA				IAmb	IAmb	09 05 16.5	
	comp=Z,13nm,0.8s						
AS01	**Alice Springs**	**22.55**	**218**	P	**P**	**09 04 56.3**	**+0.6**
AS31	**Alice Springs**	**22.58**	**218**	P	**P**	**09 04 56.5**	**+0.5**
ASAR	**Alice Springs**	**22.58**	**218**	P	**P**	**09 04 56.5**	**+0.5**
	comp=Z,9.1nm,0.6s,baz=53,slow=9.7,SNR=149						
ASAR				PcP	**PcP**	**09 08 48.1**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=49,slow=1.8,SNR=5.1						
ASAR				S	**S**	**09 08 59.5**	**0.0**
	comp=Z,4.7nm,0.8s,baz=31,slow=23,SNR=15						
	comp=Z,9.1nm,0.6s						
ASAR	**Alice Springs**	**22.58**	**218**	P	**P**	**09 04 55.0**	**-1.0**
INKA	**Innaminka**	**22.84**	**199**	P	**P**	**09 04 59.1**	**+0.6**
AULRC	**Lightning Ridg**	**23.22**	**182**	P	**P**	**09 05 02.9**	**+0.6**
	comp=Z,67nm,0.8s						
DZM	**Mont Dzumac**	**23.31**	**135**	P	**P**	**09 05 03.5**	**+0.1**
DZM				IAmb	IAmb	09 05 12.9	
	comp=Z,39nm,1.4s						
ARMA	**Armidale**	**24.34**	**174**	P	**P**	**09 05 12.8**	**+0.1**
ARMA				IAmb	IAmb	09 05 35.6	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**26.51**	**194**	P	**P**	**09 05 32.9**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=14,slow=7.2,SNR=4.3						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**26.51**	**194**	P	**P**	**09 05 34.1**	**+1.8**
PSA00	**Pilbara Seismi**	**31.94**	**238**	P	**P**	**09 06 21.5**	**+0.8**
PSA00				IAmb	IAmb	09 06 32.6	
	comp=Z,8.3nm,1.4s						
JCJ	**Chichijima**	**33.61**	**349**	P	**P**	**09 06 35.5**	**+0.4**
JAGI	**Jajag, Banyuwa**	**34.43**	**264**	P	**P**	**09 06 40.7**	**-1.7**

KKM	**Kota Kinabalu**	**34.68 290**	P	**P**	**09 06 45.7**	**+1.0**
KKM			IAmb	IAmb	09 06 48.5	
comp=Z,23nm,1.1s						
RAO	**Raoul Island**	**38.95 130**	P	**P**	**09 07 20.9**	**+0.2**
MQZ	**McQueen's Vall**	**42.93 154**	P	**P**	**09 07 53.0**	**-0.2**
JMM	**Marumori**	**44.37 351**	P	**P**	**09 08 05.6**	**+0.8**
JMM			IAmb	IAmb	09 08 24.7	
comp=Z,56nm,1.5s						
JTM	**Tenmabayashi**	**47.19 352**	P	**P**	**09 08 27.4**	**+0.3**
JTM			IAmb	IAmb	09 08 28.8	
comp=Z,42nm,1.4s						
KSRS	**Korea Array**	**47.50 337**	P	**P**	**09 08 30.0**	**+0.5**
comp=Z,1.8nm,0.7s,baz=155,slow=8.4,SNR=5.9						
comp=Z,1.8nm,0.7s						
KSAR	**Wonju Array Be**	**47.51 337**	P	**P**	**09 08 29.9**	**+0.3**
SONM	**Songino Array**	**65.37 330**	P	**P**	**09 10 37.0**	**+0.4**
comp=Z,0.5nm,0.5s,baz=106,slow=5.1,SNR=2.0						
comp=Z,0.5nm,0.5s						
CASY	**Casey**	**65.64 196**	P	**P**	**09 10 37.9**	**0.0**
CASY			IAmb	IAmb	09 10 52.7	
comp=Z,4.2nm,1.1s						
VNDA	**Vanda**	**71.71 177**	P	**P**	**09 11 15.0**	**-0.6**
comp=Z,0.6nm,0.6s,baz=344,slow=9.4,SNR=7.6						
comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**71.71 177**	P	**P**	**09 11 16.3**	**+0.7**
GAMB	**Gambell**	**75.75 17**	P	**P**	**09 11 41.3**	**+2.0**
TARG	**Taragay, Kyrgy**	**80.06 314**	P	**P**	**09 12 04.6**	**+0.3**
TARG			IAmb	IAmb	09 12 14.4	
comp=Z,12nm,0.9s						
ILAR	**Eielson Array**	**84.88 23**	P	**P**	**09 12 26.4**	**-1.9**
comp=Z,1.6nm,0.7s,baz=254,slow=5.1,SNR=12						
comp=Z,1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**146.83 285**	PKPbc	**PKPdf**	**09 19 36.2**	**+1.2**
comp=Z,1.8nm,0.7s,baz=74,slow=3.6,SNR=10						
BDFB	**Brasilia**	**152.73 143**	PKPbc	**PKPbc**	**09 19 50.6**	**-1.0**
comp=Z,3.9nm,0.5s,baz=186,slow=3.1,SNR=6.0						

*IDC **17** 09:03:36.4±4.7, 12°.64N×86°.73W, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=241.1km s-min=69.4km az=62.0*
*SNET **17** 09:03:58.0±1.9, 11°.98N×87°.83W, h18km±35km, ML3.1*
*INET **17** 09:03:58.0±0.3, 12°.86N×87°.33W, h158km±7km, MW3.2*
ISC 17 09:03:57.6±1.0, 12°.8N±0°.1×87°.35W±0°.08, h162km±8km, n23, σ0°60/31, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.31**	**110**	*e*P	**Pn**	**09 04 19.9**	**+0.2**
TEL3	**Telica 3**	**0.55**	**115**	*e*P	**Pn**	**09 04 20.6**	**+0.1**
TELN	**Telica**	**0.55**	**112**	*e*P	**Pn**	**09 04 20.7**	**+0.1**
CNGN	**Cerro Negro**	**0.71**	**115**	*e*P	**Pn**	**09 04 20.4**	**-1.1**
LCND	**La Caada**	**0.72**	**314**	*e*P	**Pn**	**09 04 21.1**	**-0.4**
LCND				IAML		09 04 21.5	
comp=Z,326nm,0.3s							
MOMN	**Momotombo**	**0.89**	**116**	*e*P	**Pn**	**09 04 22.6**	**-0.1**
MOMN				*e*P	**Pn**	**09 04 22.7**	**0.0**
COPN	**Copaltepe**	**0.97**	**130**	*e*P	**Pn**	**09 04 23.2**	**-0.1**
PACA	**Pacayal**	**1.15**	**305**	*e*P	**Pn**	**09 04 25.1**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.25**	**4**	*e*P	**Pn**	**09 04 25.7**	**-0.1**
MGAN	**Managua**	**1.26**	**121**	*e*P	**Pn**	**09 04 25.9**	**+0.2**
WILN	**Americas 2**	**1.31**	**119**	*e*P	**Pn**	**09 04 26.4**	**+0.3**
MATN	**Matagalpa**	**1.40**	**85**	*e*P	**Pn**	**09 04 27.2**	**+0.1**
MATN				*e*P	**Pn**	**09 04 27.3**	**+0.1**
PQSS	**Presa 15 de Se**	**1.43**	**305**	*e*P	**Pn**	**09 04 27.4**	**+0.1**
PQSS				IAML		09 04 29.8	
comp=Z,115nm,0.2s							
SCLA	**Alcaldia de Sa**	**1.61**	**304**	*e*P	**Pn**	**09 04 29.3**	**+0.1**
SCLA				*e*S	**Sn**	**09 04 55.9**	**+2.3**
COEG	**Centro de Oper**	**1.69**	**299**	*e*P	**Pn**	**09 04 30.2**	**0.0**
COEG				IAML		09 04 31.1	
comp=Z,230nm,0.3s							
COEG				*e*S	**Sn**	**09 04 55.2**	**0.0**
PAVA	**Las Pavas**	**1.79**	**300**	*e*P	**Pn**	**09 04 31.2**	**0.0**
PAVA				*e*S	**Sn**	**09 04 57.0**	**-0.1**
SJTE	**Alcalda de S**	**1.80**	**297**	*e*P	**Pn**	**09 04 31.2**	**-0.1**
SJTE				IAML		09 04 31.7	
comp=Z,167nm,0.2s							
SJTE				*e*S	**Sn**	**09 04 56.5**	**-0.8**
NUBE	**Las Nubes**	**2.60**	**295**	*e*P	**Pn**	**09 04 40.9**	**+0.2**
NUBE				*e*S	**Sn**	**09 05 14.4**	**+0.4**
SLOZ	**Alcaldia de Sa**	**2.66**	**297**	*e*P	**Pn**	**09 04 41.6**	**+0.3**
SLOZ				*e*S	**Sn**	**09 05 13.9**	**-1.1**
TXAR	**Lajitas Array**	**22.36**	**320**	P	**P**	**09 08 42.0**	**-0.6**
comp=Z,0.6nm,0.6s,baz=142,slow=9.5,SNR=18							
comp=Z,0.6nm,0.6s							
PDAR	**Pinedale Array**	**35.51**	**331**	P	**P**	**09 10 39.0**	**-0.2**
comp=Z,0.2nm,0.5s,baz=129,slow=10.0,SNR=3.9							
comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**139.46**	**254**	PKP	**PKPdf**	**09 23 07.1**	**+0.4**
comp=Z,0.3nm,0.4s,baz=90,slow=2.4,SNR=14							
ASAR	**Alice Springs**	**139.49**	**249**	PKP	**PKPdf**	**09 23 07.2**	**+0.5**
comp=Z,0.6nm,0.8s,baz=103,slow=2.0,SNR=6.0							

*IDC **17** 09:12:41.4±8.3, 48°.08N×153°.12E, h0km, mb3.9/3, mbtmp3.9/3, MS4.1/2, Error ellipse: s-maj=178.7km s-min=44.4km az=126.0*
*JMA **17** 09:12:56.8±0.6, 46°.N±6°.×15°.3E±°, h113km, KURILE ISLANDS REGION*
ISC 17 09:12:55.5±4.0, 46°.3N±0°.6×153°.6E±0°.3, h100km, n17, σ0°94/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**6.30**	**245**	*e*P	**Pn**	**09 14 26.8**	**+1.1**
NEM2				*e*S	**Sn**	**09 15 36.0**	**-0.3**
JAK	**Akkeshi**	**7.15**	**246**	*e*P	**Pn**	**09 14 37.9**	**+0.6**
JAK				*e*S	**Sn**	**09 15 56.1**	**-0.8**
PETK	**Petropavlovsk-**	**7.31**	**20**	LR	LR	09 16 20.4	
comp=Z,956nm,21.9s,baz=42,slow=38							
JAR	**Ashorobuto**	**7.60**	**250**	*e*P	**Pn**	**09 14 44.7**	**+1.2**
JAR				*e*S	**Sn**	**09 16 08.2**	**+0.3**
JKK2	**Kamakawa 2**	**8.04**	**256**	*e*P	**Pn**	**09 14 50.0**	**+0.6**
JCH	**Churui**	**8.19**	**247**	*e*P	**Pn**	**09 14 51.8**	**+0.4**
JNBK	**Urakawa-nobuka**	**8.75**	**247**	*e*P	**Pn**	**09 14 59.4**	**+0.4**
KSRS	**Korea Array**	**20.98**	**254**	P	**P**	**09 17 29.2**	**-1.3**
2.3nm,0.8s,baz=53,slow=10,SNR=7.3							
2.3nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**28.67**	**153**	T	T	09 50 43.3	
baz=342,slow=74,SNR=11							
H11N1	**WAKE ISLAND Hy**	**28.69**	**153**	T	T	09 50 44.1	
baz=342,slow=74,SNR=8.4							
H11N3	**WAKE ISLAND Hy**	**28.69**	**153**	T	T	09 50 44.7	
baz=342							
H11S1	**WAKE ISLAND Hy**	**29.76**	**154**	T	T	09 52 07.6	
baz=341,slow=76,SNR=22							
H11S3	**WAKE ISLAND Hy**	**29.77**	**154**	T	T	09 52 10.9	
baz=341,slow=76,SNR=28							
H11S2	**WAKE ISLAND Hy**	**29.78**	**154**	T	T	09 52 07.0	
baz=341,slow=76,SNR=16							
ZALV	**Zalesovo Beam**	**43.14**	**306**	P	P	09 20 32.7	-13
0.7nm,0.3s,baz=69,slow=9.1,SNR=2.6							
0.7nm,0.3s							
FINES	**FINESS Array B**	**64.58**	**335**	P	P	09 23 08.4	-13
1.1nm,0.5s,baz=43,slow=7.1,SNR=11							
1.1nm,0.5s							
ATD	**Arta Tunnel**	**95.59**	**293**	LR	LR	10 12 11.1	
comp=Z,156nm,20.8s,baz=81,slow=38							

IDC 17 09:21:19.7±7.2, 6°.36S×149°.46E, h65km±56km, mb3.2/1, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=116.4km s-min=47.7km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.79**	**217**	P	Pn	09 22 17.1	+1.4
35nm,0.3s,baz=46,slow=5.0,SNR=25							
PMG				S	Sn	09 22 59.5	+0.5
62nm,0.3s,baz=178,slow=16,SNR=10							
WRA	**Warramunga Arr**	**19.95**	**226**	P	P	09 25 45.8	-0.9
0.6nm,0.3s,baz=51,slow=11,SNR=34							
4.2nm,0.6s							
ASAR	**Alice Springs**	**22.80**	**219**	P	P	09 26 16.8	-0.5
0.7nm,0.5s,baz=55,slow=9.0,SNR=21							
0.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**147.55**	**284**	PKPbc	PKPbc	09 40 57.8	+0.2
0.1nm,0.4s,baz=68,slow=3.9,SNR=1.5							

*JMA **17** 09:24:41.9±0.5, 23°.N±1°.×12°.1E±°, h14km±3km, MV3.7/12, TAIWAN REGION*
*TAP **17** 09:24:44.3, 23°.21N×121°.35E, h16km, ML4.0, B*

*IDC **17** 09:24:49.4±9.4, 23°.03N×121°.75E, h59km±92km, mb3.3/5, mbtmp3.6/6, ML3.3/1, MS4.2/1, Error ellipse: s-maj=52.6km s-min=21.1km az=71.0*
ISC 17 09:24:44.2±0.7, 23°.17N±0°.01×121°.40E±0°.02, h16km±4km, n167, σ1°00/229, mb3.5/5, 31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.08**	**204**	P	**Pg**	**09 24 47.5**	**+0.2**
CHKT				S	**Sg**	**09 24 50.2**	**+0.7**
ECBN	**Changbin**	**0.15**	**18**	P	**Pg**	**09 24 47.8**	**-0.5**
ECBN				S	**Sg**	**09 24 51.8**	**+0.8**
EHD	**Haiduan**	**0.18**	**263**	⇓*e*P	**Pg**	**09 24 47.6**	**-1.1**
EHD				*e*S	**Sg**	**09 24 50.8**	**-0.9**
ECS	**Chishang**	**0.18**	**246**	*e*P	**Pb**	**09 24 49.6**	**+0.4**
ECS				S	**Sb**	**09 24 53.8**	**+1.2**
EYUL	**Yuli**	**0.19**	**337**	⇓P	**Pg**	**09 24 49.1**	**+0.2**
EYUL				S	**Sb**	**09 24 52.7**	**-0.1**
TWF1	**Yuli**	**0.20**	**332**	⇓*i*P	**Pg**	**09 24 48.9**	**-0.1**
TWF1				S	**Sg**	**09 24 52.4**	**+0.1**
EDH	**Donghe**	**0.22**	**204**	P	**Pb**	**09 24 49.9**	**+0.1**
EDH				S	**Sb**	**09 24 54.0**	**+0.6**
YULB	**Yu-li**	**0.24**	**337**	⇓P	**Pg**	**09 24 49.3**	**-0.3**
YULB				S	**Sg**	**09 24 53.1**	**-0.1**
HGSD	**Ruisui**	**0.32**	**4**	*e*P	**Pg**	**09 24 51.2**	**+0.3**
HGSD				S	**Sb**	**09 24 58.0**	**+1.5**
EHY	**Hungye**	**0.34**	**348**	⇓P	**Pg**	**09 24 51.0**	**-0.3**
EHY				S	**Sg**	**09 24 56.1**	**-0.1**
ELDTW	**Lidau**	**0.35**	**273**	P	**Pg**	**09 24 50.8**	**-0.8**
LONT	**Longtian**	**0.36**	**223**	⇓*i*P	**Pb**	**09 24 52.0**	**-0.2**
LONT				*e*S	**Sb**	**09 24 56.8**	**-0.9**
TWG	**Pinlang**	**0.46**	**221**	⇓P	**Pg**	**09 24 53.3**	**-0.2**
TWG				S	**Sb**	**09 24 59.8**	**-0.8**
TTN	**Taitung**	**0.48**	**209**	*e*P	**Pb**	**09 24 54.1**	**-0.1**
TTN				*e*S	**Sb**	**09 25 01.6**	**+0.6**
EGFH	**Guangfu**	**0.50**	**3**	*e*P	**Pb**	**09 24 55.5**	**+0.9**
LDUT	**Ludao**	**0.50**	**173**	⇓P	**Pb**	**09 24 54.7**	**+0.1**
LDUT				*i*S	**Sb**	**09 25 02.9**	**+1.3**
YUS	**Yu-Shan**	**0.52**	**308**	⇓*i*P	**Pg**	**09 24 54.1**	**-0.7**
YUS				S	**Sg**	**09 25 00.5**	**-1.3**
TEGC	**Jichi Village**	**0.55**	**13**	*e*P	**Pg**	**09 24 55.4**	**+0.3**
STYH	**Taoyuan**	**0.57**	**270**	⇓*i*P	**Pg**	**09 24 53.9**	**-1.6**
STYH				*e*S	**Sg**	**09 25 01.4**	**-1.9**
STYT	**Tauyuan**	**0.59**	**269**	⇓P	**Pg**	**09 24 55.2**	**-0.7**
STYT				S	**Sg**	**09 25 02.8**	**-1.0**
VWDT	**VWDT**	**0.63**	**338**	⇓P	**Pg**	**09 24 56.0**	**-0.5**
VWDT				S	**Sg**	**09 25 03.3**	**-1.6**
ESL	**Shilin**	**0.64**	**3**	*e*P	**Pg**	**09 24 56.5**	**-0.3**
ESL				*e*S	**Sg**	**09 25 04.1**	**-1.3**
ALS	**Alishan**	**0.64**	**302**	⇓*i*P	**Pg**	**09 24 56.5**	**-0.5**
ALS				S	**Sg**	**09 25 05.0**	**-0.6**
ECL	**Taimali**	**0.70**	**216**	*e*P	**Pg**	**09 24 56.7**	**-1.3**
ECL				S	**Sg**	**09 25 06.2**	**-1.2**
TEYL	**Yanliau Villag**	**0.72**	**15**	*e*P	**Pb**	**09 24 59.0**	**+0.7**
TEYL				*e*S	**Sn**	**09 25 12.0**	**+1.7**
TPUB	**Ta-pu**	**0.72**	**280**	⇓P	**Pb**	**09 24 58.0**	**-0.4**
TPUB				S	**Sb**	**09 25 07.2**	**-0.9**
WHYT	**Xinyi Township**	**0.72**	**316**	⇓*e*P	**Pg**	**09 24 57.9**	**-0.5**
WHYT				*e*S	**Sg**	**09 25 06.4**	**-1.7**
WTP	**Ta-pu**	**0.73**	**276**	⇓*i*P	**Pb**	**09 24 58.2**	**-0.3**
WTP				S	**Sb**	**09 25 07.5**	**-0.8**
SSLB	**Suanglung**	**0.74**	**326**	⇓P	**Pg**	**09 24 57.7**	**-1.0**
SSLB				*e*S	**Sg**	**09 25 06.3**	**-2.1**
SGST	**Jiashian**	**0.76**	**263**	⇓*i*P	**Pg**	**09 24 57.9**	**-1.1**
SGST				*e*S	**Sb**	**09 25 08.3**	**-0.8**
CHN4	**Tsaushan**	**0.76**	**284**	⇓*e*P	**Pg**	**09 24 57.9**	**-1.2**
WCKO	**Fanlu**	**0.78**	**290**	⇓*e*P	**Pg**	**09 24 58.3**	**-1.1**
WCKO				*e*S	**Sg**	**09 25 08.9**	**-0.8**
CHN5	**Tsauling**	**0.79**	**303**	⇓*e*P	**Pg**	**09 24 58.5**	**-1.1**
ETM	**Tongmen**	**0.80**	**6**	*e*P	**Pb**	**09 24 58.3**	**-1.4**
CHN1	**Nanshi**	**0.80**	**271**	⇓*i*P	**Pb**	**09 24 59.8**	**+0.1**
CHN1				S	**Sn**	**09 25 11.0**	**-1.5**
OWD	**Renai**	**0.81**	**345**	*e*P	**Pg**	**09 24 58.8**	**-1.1**
HWA	**Hwalien**	**0.82**	**13**	*e*P	**Pg**	**09 25 00.8**	**+0.6**
SSD	**Sandimen**	**0.83**	**239**	⇓P	**Pb**	**09 24 59.0**	**-1.2**
SNST	**Tainan City**	**0.83**	**273**	*e*P	**Pn**	**09 25 01.1**	**-0.2**
TSMG	**Majia**	**0.84**	**236**	*e*P	**Pb**	**09 24 59.5**	**-0.8**
SMLT	**Sun Moon Lake**	**0.84**	**327**	⇓P	**Pb**	**09 24 59.9**	**-0.6**
SMLT				*e*S	**Sn**	**09 25 12.8**	**-0.9**
TWK	**Hsinying**	**0.84**	**277**	⇓*i*P	**Pg**	**09 25 00.3**	**-0.3**
TWK				S	**Sn**	**09 25 12.3**	**-1.2**
WUSB	**Renai**	**0.86**	**342**	*e*P	**Pb**	**09 24 59.8**	**-0.9**
WUSB				*e*S	**Sb**	**09 25 09.9**	**-2.1**
SCST	**Cishan**	**0.88**	**251**	⇓P	**Pn**	**09 25 01.4**	**-0.5**
TYC	**Yuchr**	**0.88**	**326**	*e*P	**Pb**	**09 25 00.7**	**-0.4**
TYC				S	**Sg**	**09 25 13.5**	**+0.5**
WJS	**Zhushan**	**0.90**	**316**	⇓*e*P	**Pg**	**09 25 01.7**	**+0.1**
MASBT	**Mashibuluo**	**0.90**	**232**	⇓*e*P	**Pb**	**09 25 00.3**	**-1.1**
baz=221							
CHGB	**Renai**	**0.91**	**347**	*e*P	**Pb**	**09 25 00.6**	**-1.1**
baz=348							
TWD	**Chiawan**	**0.92**	**11**	*e*P	**Pb**	**09 25 01.8**	**0.0**
baz=360							
CHN2	**Minshiung**	**0.92**	**293**	*e*P	**Pn**	**09 25 02.0**	**-0.5**
baz=291							
WGK	**Gukeng**	**0.93**	**304**	*e*P	**Pg**	**09 25 01.9**	**-0.2**
baz=303							
WPL	**Puli Township**	**0.93**	**334**	*e*P	**Pb**	**09 25 01.4**	**-0.5**
baz=343							
EAST	**Anshuo**	**0.94**	**213**	*e*P	**Pb**	**09 25 00.4**	**-1.7**
baz=212							
WDLH	**Douliu**	**0.94**	**303**	*e*P	**Pn**	**09 25 02.6**	**-0.2**
baz=302							
SGLT	**Jiouru**	**0.95**	**242**	*e*P	**Pn**	**09 25 03.2**	**+0.4**
baz=238							
CHY	**Chiayi**	**0.95**	**290**	*e*P	**Pn**	**09 25 02.6**	**-0.3**
baz=288							
CHN3	**Shinhua**	**0.96**	**265**	⇓*i*P	**Pn**	**09 25 03.7**	**+0.8**
baz=271							
CHN3				S	**Sn**	**09 25 18.5**	**+2.2**
baz=271							
DPDB	**Guoxing**	**0.96**	**333**	*e*P	**Pb**	**09 25 02.4**	**-0.2**
baz=341							
WNT	**Mingjian**	**0.96**	**317**	⇓*i*P	**Pn**	**09 25 03.0**	**-0.1**
baz=316							
WNT				*e*S	**Sn**	**09 25 16.2**	**-0.2**
baz=316							
TWM1	**Shoushan**	**0.97**	**249**	P	**Pn**	**09 25 03.3**	**+0.2**
baz=247							
WHF	**Hehuan Shan**	**0.98**	**353**	*e*P	**Pb**	**09 25 02.0**	**-1.0**
baz=356							
WHF				*e*S	**Sb**	**09 25 14.3**	**-1.5**
baz=356							
SHHT	**Tainan City**	**0.98**	**261**	*e*P	**Pn**	**09 25 03.4**	**+0.2**
baz=259							
WNT1	**Nantou City**	**0.99**	**318**	*e*P	**Pg**	**09 25 03.0**	**-0.3**
baz=317							
WNT1				S	**Sn**	**09 25 17.0**	**0.0**
baz=317							
WCS	**Beigang Elemen**	**0.99**	**333**	*e*P	**Pb**	**09 25 01.6**	**-1.3**
baz=340							
ETL	**Fush Village**	**1.00**	**12**	*e*P	**Pb**	**09 25 03.0**	**-0.3**
baz=359							
NACB	**Ninganchiao**	**1.01**	**10**	*e*P	**Pb**	**09 25 01.5**	**-1.9**
baz=10.0							
SSHA	**Shanhua**	**1.02**	**268**	*e*P	**Pn**	**09 25 03.8**	**-0.1**
baz=274							
SSHA				*e*S	**Sn**	**09 25 20.6**	**+2.6**
baz=274							
ETLH	**Xiulin Townshi**	**1.03**	**4**	*e*P	**Pb**	**09 25 01.9**	**-1.8**
baz=4.0							
ICHU	**Yijhu**	**1.05**	**281**	⇓P	**Pg**	**09 25 04.3**	**-0.2**
baz=276							
ICHU				*e*S	**Sn**	**09 25 19.2**	**+0.7**
baz=276							
WTK	**Tuku**	**1.06**	**299**	*e*P	**Pg**	**09 25 05.1**	**+0.4**
baz=298							
SNJT	**Kaohsiung City**	**1.07**	**247**	*e*P	**Pg**	**09 25 04.6**	**-0.2**
baz=243							
SNJT				*e*S	**Sn**	**09 25 21.6**	**+2.6**
baz=243							
SCZT	**Fangliau**	**1.07**	**222**	*e*P	**Pb**	**09 25 03.8**	**-0.6**
baz=211							
SCZT				*e*S	**Sg**	**09 25 18.2**	**-0.8**
baz=211							
WWF	**Wufeng**	**1.08**	**324**	*e*P	**Pb**	**09 25 03.6**	**-0.9**
baz=306							
WWF				*e*S	**Sn**	**09 25 19.1**	**-0.2**
baz=306							
FUSS	**Fushou**	**1.08**	**352**	*e*P	**Pb**	**09 25 03.5**	**-1.2**
baz=3.0							
WYL	**Yuanlin Townsh**	**1.09**	**316**	*e*P	**Pg**	**09 25 06.4**	**+1.2**
baz=315							
TWT	**Tachien**	**1.10**	**349**	*e*P	**Pb**	**09 25 04.3**	**-0.6**
baz=347							
TDCB	**Techi**	**1.10**	**348**	*e*P	**Pb**	**09 25 04.2**	**-0.7**
baz=347							
SLIU	**Shizi**	**1.10**	**210**	*e*P	**Pg**	**09 25 05.0**	**-0.5**
baz=200							
CHN8	**Yiju**	**1.11**	**279**	*e*P	**Pg**	**09 25 05.1**	**-0.5**
baz=275							
CHN8				*e*S	**Sn**	**09 25 19.6**	**-0.3**
baz=275							
SCLT	**Jiali**	**1.11**	**270**	*e*P	**Pn**	**09 25 04.8**	**-0.2**
baz=266							
SCLT				*e*S	**Sn**	**09 25 22.2**	**+2.1**
baz=266							
WSL	**Shuilin Townsh**	**1.13**	**288**	*e*P	**Pb**	**09 25 04.5**	**-0.9**
baz=284							
WSL				*e*S	**Sg**	**09 25 20.8**	**-0.1**
baz=284							
LAY	**Lan-yu**	**1.14**	**173**	*e*P	**Pb**	**09 25 03.6**	**-1.9**
baz=164							
WSSB	**Gushan**	**1.18**	**244**	*e*P	**Pg**	**09 25 07.8**	**+0.9**
baz=240							
WSSB				*e*S	**Sg**	**09 25 25.6**	**+3.4**
baz=240							
LYUB	**Lan-yu**	**1.18**	**172**	*e*P	**Pn**	**09 25 03.2**	**-2.7**
baz=164							
TCU	**Taichung**	**1.18**	**326**	*e*P	**Pg**	**09 25 06.5**	**-0.4**
baz=324							
WHP	**Taichung City**	**1.18**	**339**	*e*P	**Pg**	**09 25 07.2**	**+0.2**
baz=346							
WSF	**Szhu**	**1.18**	**293**	*e*P	**Pn**	**09 25 05.5**	**-0.5**
baz=289							
WSF				S	**Sg**	**09 25 22.2**	**-0.2**
baz=289							
WRL	**Guolierlin Hig**	**1.19**	**308**	*e*P	**Pn**	**09 25 05.5**	**-0.6**
baz=306							
WCHH	**Zhanghua**	**1.19**	**320**	*e*P	**Pb**	**09 25 06.3**	**-0.1**
baz=318							
TSCK	**Chigu Township**	**1.21**	**269**	*e*P	**Pn**	**09 25 06.0**	**-0.5**
baz=264							
TSCK				*e*S	**Sg**	**09 25 22.7**	**-0.7**
baz=264							
WTCT	**Ta-ch'eng**	**1.24**	**304**	*e*P	**Pb**	**09 25 07.1**	**0.0**
baz=303							
WLCH	**Liuqiu**	**1.25**	**229**	*e*P	**Pg**	**09 25 10.5**	**+2.3**
baz=214							
NNSB	**Datong**	**1.25**	**359**	*e*P	**Pn**	**09 25 05.8**	**-1.4**
baz=11							
SMST	**Manzhou Townsh**	**1.26**	**205**	*e*P	**Pg**	**09 25 08.2**	**-0.3**
baz=196							
TWP	**Hsiaoliuchiu**	**1.26**	**230**	*e*P	**Pg**	**09 25 10.9**	**+2.4**
baz=215							
NNS	**Nan Shan**	**1.26**	**359**	*e*P	**Pb**	**09 25 08.1**	**+0.4**
baz=11							
TWQ1	**Liyutan**	**1.30**	**334**	P	**Pg**	**09 25 09.1**	**-0.3**
baz=333							
TWQ1				S	**Sg**	**09 25 26.1**	**-0.3**
baz=333							
HEN	**Hengchun**	**1.31**	**208**	*e*P	**Pg**	**09 25 08.8**	**-0.7**
baz=200							
EWUT	**Wuta**	**1.31**	**15**	*e*P	**Pn**	**09 25 06.8**	**-1.1**
baz=2.0							
TWKBT	**Hengchun**	**1.34**	**204**	*e*P	**Pn**	**09 25 07.8**	**-0.5**
baz=192							
TWKBT				*e*S	**Sg**	**09 25 26.6**	**-0.9**
baz=192							
TWK1	**Hengchun**	**1.34**	**204**	*e*P	**Pg**	**09 25 09.9**	**-0.1**
baz=196							
TSEB	**Hengchuen, Pin**	**1.35**	**200**	*e*P	**Pg**	**09 25 09.4**	**-0.7**
baz=194							
LATG	**Datong**	**1.36**	**5**	*e*P	**Pn**	**09 25 07.3**	**-1.3**
baz=3.0							
WDJ	**Dajia District**	**1.36**	**329**	*e*P	**Pg**	**09 25 10.0**	**-0.5**
baz=343							
WDJ				*e*S	**Sg**	**09 25 28.2**	**-0.1**
baz=343							
NSY	**Sanyi**	**1.37**	**335**	*e*P	**Pg**	**09 25 10.1**	**-0.5**
baz=334							
NSY				*e*S	**Sg**	**09 25 28.6**	**+0.1**
baz=334							
NDT	**Datong Townshi**	**1.43**	**4**	*e*P	**Pn**	**09 25 09.5**	**+0.1**
baz=14							
ENTT	**Nioudou**	**1.47**	**6**	*e*P	**Pb**	**09 25 11.0**	**-0.1**
baz=4.0							
NMLH	**Miaoli**	**1.47**	**338**	*e*P	**Pb**	**09 25 11.4**	**+0.3**
baz=336							
NMLH				*e*S	**Sg**	**09 25 30.9**	**-0.8**
baz=336							
NFF	**Wufeng Townshi**	**1.48**	**350**	*e*P	**Pn**	**09 25 10.4**	**+0.2**
baz=357							
NDS	**Dongshan**	**1.48**	**11**	*e*P	**Pn**	**09 25 07.4**	**-2.8**
baz=8.0							
TWC	**Suao**	**1.49**	**16**	*e*P	**Pn**	**09 25 10.7**	**+0.5**
YHNB	**Yeheng**	**1.49**	**359**	P	**Pn**	**09 25 10.0**	**-0.4**

	baz=17							
YHNB				*e*S	**Sn**	**09 25 29.6**	**0.0**	
	baz=17							
NSK	**Sanguang**	**1.50**	**359**	*e*P	**Pn**	**09 25 09.2**	**-1.3**	
	baz=17							
NSK				*e*S	**Sn**	**09 25 30.1**	**+0.3**	
	baz=17							
NSTT	**Nanjuang**	**1.50**	**346**	*e*P	**Pn**	**09 25 11.2**	**+0.8**	
	baz=347							
NSTT				*e*S	**Sb**	**09 25 31.1**	**+0.7**	
	baz=347							
LIOB	**Emei**	**1.51**	**347**	*e*P	**Pb**	**09 25 11.7**	**-0.1**	
	baz=344							
TWE	**Neicheng**	**1.56**	**9**	*e*P	**Pn**	**09 25 11.4**	**+0.1**	
	baz=6.0							
FUSB	**Fushanzhiwuyua**	**1.59**	**6**	*e*P	**Pn**	**09 25 10.8**	**-0.9**	
	baz=17							
WDGT	**Dungji**	**1.60**	**273**	*e*P	**Pn**	**09 25 11.7**	**-0.1**	
	baz=268							
WDGT				*e*S	**Sb**	**09 25 32.2**	**-1.3**	
	baz=268							
PHUB	**P'eng-hu**	**1.71**	**282**	*e*P	**Pn**	**09 25 12.3**	**-1.0**	
	baz=280							
EGS		**1.73**	**16**	*e*P	**Pn**	**09 25 15.1**	**+1.4**	
	baz=360							
PNG	**Penghu**	**1.74**	**283**	*e*P	**Pn**	**09 25 13.8**	**0.0**	
	baz=278							
PNG				*e*S	**Sn**	**09 25 34.8**	**-0.8**	
	baz=278							
TATO	**Taipei**	**1.80**	**3**	*e*P	**Pn**	**09 25 13.6**	**-0.9**	
	baz=12							
TWA	**Mucha**	**1.81**	**5**	*e*P	**Pn**	**09 25 14.6**	**-0.1**	
	baz=14							
VCHM	**Qimei**	**1.81**	**272**	*e*P	**Pn**	**09 25 14.9**	**+0.2**	
	baz=266							
VCHM				*e*S	**Sb**	**09 25 39.0**	**-0.5**	
	baz=266							
TIPB	**Shuangxi**	**1.83**	**12**	*e*P	**Pn**	**09 25 15.3**	**+0.3**	
	baz=8.0							
JYNG	**Yonagunijimaku**	**1.90**	**48**	*e*P	**Pn**	**09 25 15.5**	**-0.5**	
JYNG				*e*S	**Sn**	**09 25 39.7**	**+0.1**	
TWB1	**Santiao Chiao**	**1.91**	**16**	*e*P	**Pn**	**09 25 16.9**	**+0.9**	
	baz=1.0							
NWF	**Wu-fen Shan**	**1.92**	**10**	*e*P	**Pn**	**09 25 17.1**	**+0.8**	
	baz=4.0							
WFSB	**Wu-fen Shan**	**1.92**	**10**	*e*P	**Pn**	**09 25 16.8**	**+0.6**	
	baz=5.0							
YOJ	**Yonaguni jima**	**1.96**	**49**	*e*P	**Pn**	**09 25 16.2**	**-0.5**	
	baz=46							
YOJ	**Yonaguni jima**	**1.96**	**49**	*e*P	**Pn**	**09 25 15.7**	**-1.0**	
YOJ				*e*S	**Sn**	**09 25 40.5**	**-0.4**	
SXI1	**Grass Mountain**	**1.96**	**13**	*e*P	**Pn**	**09 25 17.1**	**+0.2**	
	baz=6.0							
YM01	**YM01**	**1.97**	**4**	*e*P	**Pn**	**09 25 17.2**	**+0.2**	
	baz=15							
YM08	**YM08**	**2.02**	**5**	*e*P	**Pb**	**09 25 19.4**	**-1.1**	
	baz=358							
TWY	**Chenhua**	**2.10**	**5**	*e*P	**Pn**	**09 25 20.7**	**+1.9**	
	baz=358							
HATJ	**Hateruma jima**	**2.38**	**68**	*e*P	**Pn**	**09 25 21.9**	**-0.6**	
HATJ				*e*S	**Sn**	**09 25 51.3**	**+0.1**	
IRIF	**Iriomote-Funau**	**2.43**	**61**	P	**Pn**	**09 25 22.9**	**-0.3**	
IRIF				S	**Sn**	**09 25 52.8**	**+0.2**	
VWUC	**VWUC**	**2.54**	**316**	*e*P	**Pn**	**09 25 25.1**	**+0.3**	
	baz=311							
VWUC				*e*S	**Sn**	**09 25 55.6**	**+0.2**	
	baz=311							
JKRS	**Kuro-shima**	**2.62**	**66**	P	**Pn**	**09 25 25.7**	**-0.1**	
JKRS				*e*S	**Sn**	**09 25 56.8**	**-0.4**	
JIJ	**Ishigaki jima**	**2.78**	**64**	*e*P	**Pn**	**09 25 27.9**	**-0.1**	
KNM	**Kinmen**	**2.99**	**295**	*e*P	**Pn**	**09 25 31.8**	**+0.9**	
	baz=294							
KNMB	**Chin-men Tao**	**3.04**	**296**	*e*P	**Pn**	**09 25 30.9**	**-0.8**	
	baz=296							
MATB	**Ma-tsu**	**3.25**	**336**	*e*P	**Pn**	**09 25 34.8**	**+0.3**	
	baz=334							
MATB				*e*S	**Sn**	**09 26 11.5**	**-1.3**	
	baz=334							
JTJ	**Tarama**	**3.36**	**64**	*e*P	**Pn**	**09 25 36.1**	**+0.1**	
JTJ				*e*S	**Sn**	**09 26 15.0**	**-0.5**	
ZPLA	**Ao Xicun**	**3.43**	**283**	*e*P	**Pn**	**09 25 36.5**	**-0.5**	
	baz=283							
AXDP	**Jialang**	**3.58**	**299**	*e*P	**Pn**	**09 25 38.6**	**-0.4**	
	baz=299							
MHZQ	**Yeshan**	**3.63**	**324**	*e*P	**Pn**	**09 25 40.2**	**+0.5**	
	baz=326							
LYJJ	**Jianjiangzhen**	**3.68**	**336**	*e*P	**Pn**	**09 25 40.2**	**-0.1**	
	baz=338							
DSXP	**Dongshan**	**3.69**	**279**	*e*P	**Pn**	**09 25 40.9**	**+0.4**	
	baz=278							
JIRB	**Irabujima**	**3.82**	**64**	*e*P	**Pn**	**09 25 41.7**	**-0.7**	
XPSS	**Dashiqiu**	**3.90**	**344**	*e*P	**Pn**	**09 25 43.8**	**+0.4**	
	baz=341							
JMJ2	**Miyako jima3**	**3.92**	**66**	P	**Pn**	**09 25 43.9**	**+0.2**	
JMJ2				*e*S	**Sn**	**09 26 28.3**	**-1.0**	
JMJ	**Miyako jima 2**	**3.92**	**65**	*e*P	**Pn**	**09 25 44.0**	**+0.3**	
	baz=74							
JMJ				*e*S	**Sn**	**09 26 28.1**	**-1.2**	
	baz=74							
SXFK	**Yanhouchang**	**4.69**	**314**	*e*P	**Pn**	**09 25 54.0**	**-0.3**	
	baz=315							
KSRS	**Korea Array**	**15.30**	**20**	P	**Pn**	**09 28 21.9**	**+2.4**	
	0.1nm,0.3s,baz=201,slow=12,SNR=3.0							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**39.20**	**317**	P	**P**	**09 32 14.5**	**+2.9**	
	0.8nm,0.7s,baz=116,slow=8.2,SNR=2.1							
	0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**41.20**	**328**	P	**P**	**09 32 30.2**	**+2.3**	
	0.9nm,0.4s,baz=112,slow=8.5,SNR=4.2							
	0.9nm,0.4s							
PALK	**Pallekele**	**42.15**	**255**	LR	LR	09 50 20.9		
	comp=Z,306nm,21.4s,baz=191,slow=36							
H11N1	**WAKE ISLAND Hy**	**42.35**	**86**	T	T	10 17 47.5		
	baz=282,slow=74,SNR=24							
H11N2	**WAKE ISLAND Hy**	**42.36**	**86**	T	T	10 17 53.8		
	baz=282,slow=74,SNR=27							
H11N3	**WAKE ISLAND Hy**	**42.37**	**86**	T	T	10 17 48.8		
	baz=282,slow=74,SNR=25							
H11S3	**WAKE ISLAND Hy**	**42.45**	**88**	T	T	10 17 56.6		
	baz=284,slow=75,SNR=41							
H11S1	**WAKE ISLAND Hy**	**42.46**	**88**	T	T	10 18 03.0		
	baz=284,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy**	**42.47**	**88**	T	T	10 17 58.0		
	baz=284,slow=75,SNR=19							
WRA	**Warramunga Arr**	**44.67**	**163**	P	**P**	**09 32 54.1**	**-2.3**	
	0.3nm,0.4s,baz=345,slow=8.8,SNR=6.0							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**48.12**	**165**	P	**P**	**09 33 22.4**	**-1.1**	
	0.2nm,0.4s,baz=345,slow=7.0,SNR=5.7							
	0.2nm,0.4s							
ILAR	**Eielson Array**	**70.02**	**27**	P	**P**	**09 35 54.5**	**-0.3**	
	0.3nm,0.6s,baz=251,slow=6.3,SNR=1.4							
	0.3nm,0.6s							

*IDC **17** 09:37:15.6±1.6, 39.°92N×20.°77E, h0km, mb3.6/4, mbtmp3.6/4, MS4.0/1, Error ellipse: s-maj=68.4km s-min=28.5km az=127.0*
*ATH **17** 09:37:18.1, 39.°78N×20.°67E, h13km±2km, ML2.8/12, Error ellipse: s-maj=2.2km s-min=1.0km az=258.0*
*BEO **17** 09:37:18.7±0.4, 39.°67N×20.°65E, h21km±5km, ML2.6/6*
*THE **17** 09:37:18.5, 39.°77N×20.°67E, h6km±2km, ML2.9/7, Error ellipse: s-maj=2.4km s-min=0.7km az=270.0*

ISC 17 09:37:18.2±0.8, 39.°75N±0.°02×20.°67E±0.°02, h15km±6km, n48, σ0°96/65, mb3.5/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**125**	P	**Pg**	**09 37 21.8**	**-0.6**
JAN				S	**Sg**	**09 37 25.6**	**+0.5**
	7μm,0.4s						
JAN	**Janina**	**0.17**	**125**	P	**Pg**	**09 37 21.8**	**-0.6**
JAN				S	**Sg**	**09 37 25.6**	**+0.5**
JAN				AML	AML	09 37 25.9	
	comp=E,20267μm,0.4s						
JAN				AML	AML	09 37 26.3	
	comp=N,8947μm,0.4s						
IGT	**Igoumenitsa**	**0.34**	**230**	P	**Pg**	**09 37 25.0**	**-0.3**
IGT				S	**Sb**	**09 37 31.5**	**+0.2**
	comp=N,2μm,0.5s						
IGT	**Igoumenitsa**	**0.34**	**230**	*e*Pg	**Pg**	**09 37 25.0**	**-0.3**
IGT				*e*Sg	**Sb**	**09 37 31.8**	**+0.5**
IGT	**Igoumenitsa**	**0.34**	**230**	P	**Pg**	**09 37 24.9**	**-0.3**
IGT				S	**Sg**	**09 37 31.3**	**+1.2**
IGT				AML	AML	09 37 33.2	
	comp=E,4068μm,0.3s						
IGT				AML	AML	09 37 35.2	
	comp=N,4669μm,0.3s						
LSK	**Leskovik**	**0.40**	**352**	P	**Pg**	**09 37 25.9**	**-0.5**
LSK				S	**Sb**	**09 37 32.2**	**-0.9**
	comp=N,4μm,0.9s						
SRN	**Sarande**	**0.53**	**284**	P	**Pg**	**09 37 28.1**	**-0.6**
SRN				S	**Sg**	**09 37 36.0**	**+0.1**
	comp=N,2μm,0.4s						
KASA	**Kassiopi**	**0.57**	**270**	P	**Pg**	**09 37 28.7**	**-0.7**
KASA				S	**Sg**	**09 37 36.5**	**-0.4**
KASA				AML	AML	09 37 39.5	
	comp=N,3421μm,0.3s						
KASA				AML	AML	09 37 43.0	
	comp=E,3015μm,0.3s						
KPRO	**Kipourio**	**0.57**	**69**	P	**Pg**	**09 37 29.0**	**-0.4**
KPRO				S	**Sg**	**09 37 37.2**	**+0.2**
	comp=E,2μm,0.5s						
PENT	**Pentalofos**	**0.57**	**39**	P	**Pg**	**09 37 28.9**	**-0.6**
PENT	**Pentalofos**	**0.57**	**39**	P	**Pg**	**09 37 28.8**	**-0.6**
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	**09 37 30.3**	**-1.1**
KEK				S	**Sb**	**09 37 41.0**	**+0.2**
	comp=E,1μm,0.3s						
KEK	**Kerkira**	**0.68**	**267**	P	**Pg**	**09 37 30.3**	**-1.1**
KEK				S	**Sb**	**09 37 41.1**	**+0.2**
KEK				AML	AML	09 37 45.4	
	comp=N,1737μm,0.3s						
KEK				AML	AML	09 37 47.5	
	comp=E,3082μm,0.2s						
NEST	**Nestorio**	**0.72**	**23**	P	**Pg**	**09 37 31.8**	**-0.5**
NEST				S	**Sb**	**09 37 43.0**	**+0.7**
	comp=E,415nm,0.4s						
NEST	**Nestorio**	**0.72**	**23**	P	**Pg**	**09 37 31.8**	**-0.5**
NEST				AML	AML	09 37 51.2	
	comp=E,1260μm,0.3s						
NEST				AML	AML	09 37 54.9	
	comp=N,956μm,0.7s						
TSLK	**Tsoukalades, L**	**0.93**	**181**	P	**Pb**	**09 37 35.8**	**-0.2**
TSLK	**Tsoukalades, L**	**0.93**	**181**	P	**Pb**	**09 37 35.9**	**0.0**
TSLK				AML	AML	09 37 54.0	
	comp=N,1028μm,0.6s						
TSLK				AML	AML	09 37 56.4	
	comp=E,1157μm,0.7s						
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pb**	**09 37 36.0**	**-0.6**
LKD2	**Lefkada island**	**0.96**	**181**	P	**Pb**	**09 37 36.1**	**-0.5**
LKD2				AML	AML	09 37 55.1	
	comp=E,648μm,0.7s						
LKD2				AML	AML	09 37 56.6	
	comp=N,557μm,0.4s						
KZN	**Kozani**	**1.01**	**56**	P	**Pb**	**09 37 37.5**	**+0.1**
KZN	**Kozani**	**1.01**	**56**	P	**Pb**	**09 37 36.8**	**-0.6**
KZN				AML	AML	09 37 56.4	
	comp=N,977μm,0.5s						
KZN				AML	AML	09 38 00.7	
	comp=E,803μm,0.4s						
THL	**Klokotos Trika**	**1.05**	**100**	P	**Pb**	**09 37 38.0**	**-0.1**
THL	**Klokotos Trika**	**1.05**	**100**	P	**Pb**	**09 37 37.6**	**-0.5**
THL				AML	AML	09 37 56.0	
	comp=N,300μm,0.7s						
THL				AML	AML	09 38 01.4	
	comp=E,260μm,0.6s						
DRAG	**Dragano-Lefkad**	**1.07**	**184**	P	**Pb**	**09 37 39.4**	**+1.0**
EVGi	**Lefkada island**	**1.13**	**181**	P	**Pb**	**09 37 39.6**	**+0.2**
EVGi	**Lefkada island**	**1.13**	**181**	P	**Pb**	**09 37 39.3**	**-0.1**
TYRN	**Tyrnavos**	**1.20**	**91**	P	**Pn**	**09 37 40.2**	**-0.3**
EVR	**Evrytania**	**1.21**	**133**	P	**Pg**	**09 37 42.3**	**+0.7**
FSK	**Fiskardo**	**1.29**	**184**	P	**Pn**	**09 37 41.9**	**+0.2**
FSK				S	**Sb**	**09 37 59.9**	**+1.3**
FSK				AML	AML	09 38 06.3	
	comp=E,716μm,0.5s						
FSK				AML	AML	09 38 07.8	
	comp=N,416μm,0.5s						
OHR	**Ohrid**	**1.36**	**4**	*e*Pg	**Pg**	**09 37 44.4**	**0.0**
OHR				*e*Sg	**Sg**	**09 38 05.0**	**+2.9**
OHR	**Ohrid**	**1.36**	**4**	*i* Pn	**Pg**	**09 37 45.1**	**+0.7**
LIT	**Litokhoron**	**1.44**	**75**	P	**Pn**	**09 37 44.5**	**+0.8**
LIT	**Litokhoron**	**1.44**	**75**	P	**Pn**	**09 37 44.6**	**+0.8**
LIT				AML	AML	09 38 10.6	
	comp=N,772μm,0.7s						
LIT				AML	AML	09 38 14.6	
	comp=E,432μm,0.7s						
VLS	**Valsamata**	**1.57**	**182**	P	**Pb**	**09 37 47.3**	**+0.2**
VLS				AML	AML	09 38 12.2	
	comp=N,610μm,0.5s						
VLS				AML	AML	09 38 12.9	
	comp=E,468μm,0.4s						
GRG	**Griva**	**1.79**	**47**	P	**Pn**	**09 37 49.5**	**+0.9**
VAY	**Valandovo**	**2.13**	**42**	*e*Pn	**Pn**	**09 37 53.3**	**0.0**
VAY				*e*Sn	**Sb**	**09 38 22.3**	**-0.5**
SRS	**Serrai**	**2.61**	**58**	*e*Pn	**Pn**	**09 38 00.6**	**+0.7**
SRS				*e*Sn	**Sn**	**09 38 31.9**	**+0.6**
BARS	**Barje**	**3.18**	**15**	*e*Pn	**Pn**	**09 38 09.3**	**+1.6**
BARS				*e*Sn	**Sn**	**09 38 45.1**	**-0.2**
SELS	**Selova**	**3.48**	**5**	*e*Pn	**Pn**	**09 38 13.0**	**+1.2**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn	**Pn**	**09 38 18.8**	**+2.4**
BOVS	**Bovan**	**3.96**	**11**	*e*Pn	**Pn**	**09 38 19.8**	**+1.5**
GRUS	**Gruza**	**4.13**	**0**	*e*Pn	**Pn**	**09 38 22.0**	**+1.2**
ZAGS	**Zajecar**	**4.22**	**16**	*e*Pn	**Pn**	**09 38 24.0**	**+2.0**
ZAGS				*e*Sn	**Sn**	**09 39 11.1**	**+0.1**
FINES	**FINESS Array B**	**21.97**	**7**	P	**P**	**09 42 08.9**	**-2.3**
	comp=E,1.3nm,0.8s,baz=187,slow=9.5,SNR=3.6						
	comp=E,1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	**09 43 39.4**	**+1.3**
	comp=E,0.1nm,0.4s,baz=28,slow=9.3,SNR=1.8						
	comp=E,0.1nm,0.4s						
WSAR	**Wadi Sarin**	**36.00**	**106**	LR	LR	10 03 32.8	
	comp=E,230nm,21.8s,baz=154,slow=44						
MKAR	**Makanchi Array**	**44.39**	**60**	P	**P**	**09 45 26.5**	**-1.5**
	comp=E,0.4nm,0.4s,baz=277,slow=8.7,SNR=5.3						
	comp=E,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**44.56**	**49**	P	**P**	**09 45 27.6**	**-1.6**
	comp=E,0.7nm,0.2s,baz=296,slow=7.5,SNR=3.3						
	comp=E,0.7nm,0.2s						

*NEIC **17** 10:30:22.2±2.3, 6.°1S±0.°1×148.°9E±0.°1, h35km±2km, mb4.1/12, Error ellipse: s-maj=25.9km s-min=13.0km az=309.0*
*IDC **17** 10:30:24.1±2.5, 6.°17S×148.°98E, h66km±20km, mb3.6/4, mbtmp4.0/6, Error ellipse: s-maj=56.6km s-min=14.3km az=119.0*

ISC 17 10:30:23.5±0.7, 6.°1S±0.°1×149.°0E±0.°1, h60km, n27, σ0°89/30, mb4.1/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.72**	**59**	Pn	**Pn**	**10 31 19.9**	**+1.3**
PMG	**Port Moresby**	**3.73**	**208**	P	**Pn**	**10 31 19.0**	**+0.4**
	110nm,0.5s,baz=29,slow=4.8,SNR=64						
PMG				S	**Sn**	**10 32 01.4**	**+0.2**
	76nm,0.3s,baz=207,slow=18,SNR=2.5						
PMG	**Port Moresby**	**3.73**	**208**		**Pn**	**10 31 19.0**	**+0.4**
COEN	**Coen**	**9.65**	**216**	Pn	**Pn**	**10 32 38.5**	**-1.3**
MTN	**Manton Dam**	**18.80**	**248**	Pn	**Pn**	**10 34 39.2**	**-0.1**
MTN				IAmb	IAmb	10 34 45.6	
	comp=Z,26nm,1.4s						
WB0	**Warramunga Arr**	**19.61**	**225**	P	**P**	**10 34 47.2**	**0.0**
WB0				IAmb	IAmb	10 35 03.1	
	comp=Z,6.3nm,0.9s						
WR0	**Warramunga Arr**	**19.64**	**224**	P	**P**	**10 34 47.6**	**+0.2**
WR0				IAmb	IAmb	10 35 21.8	
	comp=Z,8.5nm,1.2s						
WB2	**Warramunga Arr**	**19.76**	**225**	P	**P**	**10 34 48.5**	**-0.2**
WB2				IAmb	IAmb	10 34 49.4	
	comp=Z,6.5nm,0.5s						
WRA	**Warramunga Arr**	**19.77**	**225**	P	**P**	**10 34 48.3**	**-0.5**
	comp=Z,3.2nm,0.4s,baz=51,slow=11,SNR=68						
WRA				S	**Sn**	**10 38 35.9**	**+3.4**
	comp=Z,1.2nm,0.7s,baz=44,slow=17,SNR=5.9						
WRA	**Warramunga Arr**	**19.77**	**225**	P	**P**	**10 34 47.9**	**-0.9**
KNRA	**Kununurra**	**21.97**	**243**	P	**P**	**10 35 11.6**	**-1.0**
KNRA				IAmb	IAmb	10 35 48.4	
	comp=Z,25nm,1.4s						
AS31	**Alice Springs**	**22.68**	**218**	P	**P**	**10 35 19.9**	**-0.3**
ASAR	**Alice Springs**	**22.68**	**218**	P	**P**	**10 35 19.8**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=54,slow=9.0,SNR=64						
ASAR				S	**S**	**10 39 24.6**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=35,slow=23,SNR=5.5						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**22.68**	**218**	P	**P**	**10 35 20.1**	**0.0**
ARMA	**Armidale**	**24.31**	**174**	P	**P**	**10 35 35.5**	**-0.2**
PETK	**Petropavlovsk-**	**59.46**	**6**	P	**P**	**10 40 21.2**	**+1.1**
	comp=Z,3.2nm,1.0s,baz=163,slow=6.1,SNR=6.6						
	comp=Z,3.2nm,1.0s						
PETK	**Petropavlovsk-**	**59.46**	**6**	P	**P**	**10 40 20.2**	**+0.2**
CASY	**Casey**	**65.68**	**196**	P	**P**	**10 41 00.2**	**-1.1**
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**10 41 38.4**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=337,slow=6.4,SNR=5.6						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**10 41 38.8**	**+0.2**
VNDA				IAmb	IAmb	10 41 39.9	
	comp=Z,2.5nm,1.4s						
ILAR	**Eielson Array**	**84.82**	**23**	P	**P**	**10 42 50.4**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=254,slow=6.4,SNR=4.1						
	comp=Z,0.4nm,0.7s						
KK31	**Karatay Array**	**85.76**	**314**	P	**P**	**10 42 56.6**	**+0.1**
KK31	**Karatay Array**	**85.76**	**314**	P	**P**	**10 42 56.3**	**-0.1**
	comp=Z,2.7nm,0.2s,baz=181,slow=12,SNR=77						
KK31	**Karatay Array**	**85.76**	**314**	P	**P**	**10 42 56.3**	**-0.1**
	comp=Z,2.7nm,0.2s,baz=181,slow=12,SNR=77						
KKAR	**Karatay Array**	**85.76**	**314**	P	**P**	**10 42 56.4**	**0.0**
KKAR	**Karatay Array**	**85.76**	**314**	P	**P**	**10 42 56.5**	**0.0**
KKAR				IAmb	IAmb	10 42 56.7	
	comp=Z,12nm,0.4s						
TORD	**Torodi Ar. Bea**	**147.00**	**285**	PKPbc	**PKPdf**	**10 49 59.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=80,slow=3.4,SNR=6.7						

ROM 17 10:43:32.4±0.1, 42.°865N±0.°003×13.°247E±0.°005, h6km, ML1.0/1, Error ellipse: s-maj=0.3km s-min=0.3km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**259**	P	Pg	10 43 33.9	-0.1
T1245				S	Sg	10 43 34.9	-0.2
T1245				AML	AML		
	comp=E,727μm,0.2s						
T1245				AML	AML		
	comp=N,272μm,1.3s						
MC2	**Monte Cornacci**	**0.06**	**319**	P	Pg	10 43 34.2	0.0
MC2				S	Sg	10 43 35.7	+0.2
MMO1	**Montemonaco**	**0.07**	**60**	P	Pg	10 43 34.4	+0.2
MMO1				S	Sg	10 43 35.8	+0.4
NRCA	**Norcia**	**0.10**	**252**	AML	AML		
	comp=E,142μm,1.3s						
NRCA				AML	AML		
	comp=N,228μm,0.1s						
T1202	**Accumoli, Fraz**	**0.16**	**186**	P	Pg	10 43 36.4	+0.8
T1202				S	Sg	10 43 39.4	+1.4
T1204	**Amatrice, Fraz**	**0.20**	**165**	P	Pg	10 43 36.8	+0.5
T1204				S	Sg	10 43 40.3	+1.4
T1204				AML	AML		
	comp=E,95μm,4.6s						
T1204				AML	AML		
	comp=N,61μm,4.4s						
T1201	**Domo (RI)**	**0.21**	**179**	P	Pg	10 43 37.0	+0.5
GUMA	**Gualdo di Mace**	**0.21**	**18**	P	Pg	10 43 37.1	+0.6
GUMA				S	Sg	10 43 40.7	+1.4
T1243	**Rocca Santa Ma**	**0.22**	**138**	P	Pg	10 43 37.4	+0.6
T1243				S	Sg	10 43 40.9	+1.1

VIE 17 10:44:20.4±0.1, 47.°24N×10.°81E, h0km, mb1.3/5, ml1.4/9, 1C, Error ellipse: s-maj=1.2km s-min=0.9km az=147.0
5 km E of Imst Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm**	**0.22**	**63**	*e*Pg	Pg	10 44 24.6	-0.1
	2.3nm,0.1s,SNR=14						
MOTA				*e*Sg	Sg	10 44 28.3	+0.7
	22nm,0.2s						
FETA	**Feichten**	**0.23**	**194**	*i* Pg	Pg	10 44 25.1	+0.3
	0.3nm,0.0s,SNR=21						
FETA				*e*Sg	Sg	10 44 28.5	+0.8
	2.0nm,0.1s						
RETA	**Reutte**	**0.25**	**352**	*i* Pg	Pg	10 44 25.2	+0.1
	1.4nm,0.1s,SNR=12						
SQTA	**Sankt Quirin**	**0.27**	**95**	*e*Pg	Pg	10 44 25.5	-0.1
	12nm,0.1s,SNR=26						
SQTA				*e*Sg	Sg	10 44 29.6	+0.5
	18nm,0.2s						
WTTA	**Wattenberg**	**0.56**	**88**	*e*Pg	Pg	10 44 31.1	-0.1
	0.7nm,0.1s,SNR=4.8						
WTTA				*e*Sg	Sg	10 44 39.8	+1.3
	3.2nm,0.3s						
WTTA	**Wattenberg**	**0.56**	**88**	⇑P	Pg	10 44 31.1	0.0
DAVA	**Damuels**	**0.64**	**274**	*e*Pg	Pg	10 44 32.9	+0.3
	0.8nm,0.2s						

KRSC 17 10:49:35.8±2.1, 49.°45N×157.°01E, h40km±25km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.36**	**335**	*e*S	Sn	10 50 13.0	-2.0
PAU	**Pauzhetka**	**2.02**	**357**	*e*P	Pn	10 50 09.0	+1.7
PAU				*e*S	Sn	10 50 33.8	+2.5
KDTR	**Khodutka, Kamc**	**2.46**	**16**	*e*P	Pn	10 50 16.8	+3.5
KDTR				*e*S	Sn	10 50 47.1	+5.1
ASAK	**Asacha**	**2.99**	**11**	*e*P	Pn	10 50 24.9	+4.2
MTVR	**Mutnovka**	**3.12**	**13**	*e*P	Pn	10 50 26.3	+3.7
MTVR				*e*S	Sn	10 51 03.7	+5.0
RUS	**Russkaya**	**3.13**	**17**	*e*P	Pn	10 50 25.9	+3.3
RUS				*e*S	Sn	10 51 02.6	+3.9
GRL	**Gorelyy**	**3.17**	**12**	*e*P	Pn	10 50 27.3	+4.0
GRL				*e*S	Sn	10 51 04.9	+5.0
KRMR	**Karymshinskiy**	**3.45**	**11**	*e*P	Pn	10 50 31.0	+4.0
APC	**Apacha**	**3.48**	**2**	*e*P	Pn	10 50 30.5	+3.2
PET	**Petropavlovsk**	**3.72**	**16**	*e*P	Pn	10 50 34.7	+4.0
DALK	**Dalny**	**3.75**	**16**	*e*P	Pn	10 50 35.1	+4.1
DALK

CHGN IAML 10 57 31.7
comp=N,241nm,0.8s
CHGN Chignik 4.55 50 P **Pn 10 56 26.8 +0.5**
baz=236
CHGN S **Sn 10 57 17.4 -0.5**
baz=236
KDAK Kodiak Island 8.05 54 Pn **Pn 10 57 12.8 -1.5**
comp=N,2.3nm,0.3s,baz=242,slow=4.1,SNR=62
KDAK Sn **Sn 10 58 36.7 -7.3**
baz=338,slow=19
comp=N,5.4nm,0.3s
Q19K Cape Douglas, 8.17 44 Pn **Pn 10 57 16.8 +0.8**
O18K Koktuh Hills 8.18 36 **Pn 10 57 18.1 +2.0**
N18K Kilae Creek 8.59 30 Pn **Pn 10 57 23.6 +1.9**
O19K Port Alsworth 8.74 36 **Pn 10 57 26.6 +3.0**
SVW2 Sparrevohn 9.01 30 Pn **Pn 10 57 29.7 +2.3**
N19K Bonanza Creek 9.13 33 **Pn 10 57 31.4 +2.2**
CNPM China Poot 9.53 46 Pn **Pn 10 57 34.7 +0.2**
AMKA Amchitka 9.99 264 Pn **Pn 10 57 41.5 +0.7**
M19K Big River Lodg 10.00 29 **Pn 10 57 41.8 +0.8**
M20K Styx River 10.37 32 **Pn 10 57 49.8 +3.7**
O22K Cooper Landing 10.69 44 **Pn 10 57 49.9 -0.5**
SKT Skwentna 10.96 35 **Pn 10 57 55.5 +1.4**
RC01 Rabbit Creek A 11.04 41 Pn **Pn 10 57 54.7 -0.5**
K20K Telida 11.27 25 **Pn 10 58 01.3 +3.1**
PPLA Purkeypile 11.42 30 Pn 10 58 05.0 +4.5
PWL Port Wells 11.47 44 **Pn 10 58 00.3 -0.8**
KNK Knik Glacier 11.73 41 Pn **Pn 10 58 04.1 -0.5**
CAST Castle Rocks 11.86 29 Pn **Pn 10 58 07.5 +1.2**
J20K Nowinta River 11.94 23 Pn **Pn 10 58 09.2 +1.8**
TRF Thorofare Moun 12.41 31 Pn **Pn 10 58 16.4 +2.3**
SCM Sheep Creek Mo 12.41 41 **Pn 10 58 12.6 -1.4**
DIV Divide 12.69 46 **Pn 10 58 18.1 +0.3**
SHEM Shemya Is, Ala 12.74 275 LR LR 11 02 41.8
comp=N,204nm,21.8s,baz=1.0,slow=36
MCK McKinley 13.04 32 **Pn 10 58 21.3 -1.3**
N25K Chitina, Valde 13.41 45 **Pn 10 58 25.9 -1.8**
H21K Melozitna Rive 13.50 22 **Pn 10 58 31.4 +2.7**
GLB Gilahina Butte 13.68 46 **Pn 10 58 29.8 -1.4**
VRDI Verde Repeater 13.74 48 Pn **Pn 10 58 30.7 -1.5**
PAX Paxson 13.77 39 **Pn 10 58 30.8 -1.7**
MCARA McCarthy VSAT 13.99 47 Pn **Pn 10 58 37.6 +2.1**
IL31 14.41 32 **Pn 10 58 42.4 +1.3**
ILAR Eielson Array 14.41 32 Pn **Pn 10 58 39.9 -1.2**
comp=N,0.2nm,0.3s,baz=215,slow=11,SNR=13
comp=N,0.9nm,0.6s
H23K Yukon River 14.42 26 **Pn 10 58 42.3 +1.0**
DOT Dot Lake 14.68 38 P **Pn 10 58 46.0 +1.2**
J25K Salcha River, 14.80 34 P **Pn 10 58 44.3 -2.1**
M27K Edge Creek, AK 14.90 45 P **Pn 10 58 47.9 0.0**
L27K Beaver Creek, 15.24 42 P **Pn 10 58 51.4 -0.9**
J26L Joseph Creek 15.35 36 Pn **Pn 10 58 53.2 -0.5**
K27K Chicken 15.63 39 P **P 10 59 00.9 -0.2**
I26K Coal Creek Min 15.97 34 P **Pn 10 59 02.0 +0.4**
I26K IAmb IAmb 10 59 09.6
comp=Z,14nm,0.6s
P29M Windy Craggy 15.97 57 Pn **Pn 10 59 03.0 +1.2**
HYT Haines Junctio 16.34 53 P **P 10 59 11.2 +2.0**
DAWY Dawson 16.68 41 P **P 10 59 11.8 -1.0**
TOLK Toolik Lake Re 16.71 19 **P 10 59 12.7 -0.4**
N31M Braeburn, Yuko 17.32 51 P **P 10 59 23.2 +3.3**
N31M IAmb IAmb 10 59 31.3
comp=Z,20nm,0.7s
JIS Juneau Island 17.55 62 **P 10 59 23.6 +1.3**
JIS IAmb IAmb 10 59 26.1
comp=Z,38nm,1.1s
WHY Whitehorse 17.57 54 P **P 10 59 23.6 +0.9**
I29M Ogilvie Camp, 17.70 38 **P 10 59 24.1 +0.1**
M31M Drury Creek, Y 18.13 50 P **P 10 59 31.5 +2.6**
M31M IAmb IAmb 10 59 35.5
comp=Z,17nm,0.6s
P33M Teslin, Yukon 18.51 56 P **Pn 10 59 35.1 +1.7**
FARO Faro, Yukon 18.61 50 P **Pn 10 59 36.0 +1.5**
EPYK Eagle Plains 18.77 36 IAmb IAmb 10 59 44.0
comp=Z,18nm,0.8s
DLBC Dease Lake 19.85 62 P **Pn 10 59 49.2 -0.2**
comp=Z,0.3nm,0.3s,baz=268,slow=11,SNR=12
comp=Z,8.0nm,0.9s
DLBC Dease Lake 19.85 62 P **Pn 10 59 49.0 -0.5**
INK Inuvik 20.80 33 P **P 10 59 56.4 -1.5**
comp=Z,3.0nm,0.6s,baz=246,slow=9.5,SNR=4.6
INK LR LR 11 08 15.2
comp=Z,159nm,21.5s,baz=202,slow=37
comp=Z,3.0nm,0.6s
INK Inuvik 20.80 33 P **P 10 59 56.5 -1.3**
PEA0B Petropavlovsk- 22.28 284 P **P 11 00 13.4 -0.5**
PEA0B IAmb IAmb 11 00 23.5
comp=Z,28nm,1.4s
PETK Petropavlovsk- 22.28 284 P **P 11 00 12.2 -1.7**
comp=Z,2.6nm,0.6s,baz=97,slow=14,SNR=17
PETK LR LR 11 08 08.3
comp=Z,66nm,20.1s,baz=81,slow=35
comp=Z,2.6nm,0.6s
PETK Petropavlovsk- 22.28 284 P **P 11 00 13.7 -0.2**
SEY Seymchan 23.99 310 P **P 11 00 31.5 +0.6**
comp=Z,1.9nm,0.9s,baz=73,slow=13,SNR=5.3
C36M Paulatuk 24.36 34 P **P 11 00 33.3 -1.0**
A36M Sachs Harbour 25.03 28 P **P 11 00 41.0 +0.6**
A36M IAmb IAmb 11 00 46.5
comp=Z,19nm,0.8s
YKA Yellowknife Ar 27.32 51 P **P 11 01 03.3 +2.3**
comp=Z,3.1nm,0.7s,baz=278,slow=9.1,SNR=5.1
comp=Z,3.1nm,0.7s
EDM Edmonton 30.09 70 P **P 11 01 26.9 +1.1**
EDM IAmb IAmb 11 01 36.4
comp=Z,9.6nm,1.4s
YBH Yreka Blue Hor 30.23 96 LR LR 11 10 48.2
comp=Z,88nm,21.1s,baz=359,slow=31
I07A Izee 30.77 89 P **P 11 01 33.7 +1.7**
I07A IAmb IAmb 11 01 48.7
comp=Z,7.9nm,1.3s
TIXI Tiksi 33.18 328 LR LR 11 17 01.1
comp=Z,124nm,19.4s,baz=112,slow=40
RES Resolute Bay 34.06 26 LR LR 11 18 25.3
comp=Z,80nm,18.6s,baz=12,slow=41
YAK Yakutsk 34.51 311 LR LR 11 17 27.2
comp=Z,133nm,20.2s,baz=87,slow=39
KVN Kaiserville 34.65 96 P **P 11 02 07.2 +1.1**
KVN IAmb IAmb 11 02 08.8
comp=Z,10nm,1.2s
NVAR Mina Array Bea 34.94 97 P **P 11 02 09.8 +1.2**
comp=Z,4.3nm,1.0s,baz=298,slow=7.9,SNR=16
comp=Z,4.3nm,1.0s
NVAR Mina Array Bea 34.94 97 P **P 11 02 10.2 +1.6**
ELK Elko 35.28 91 LR LR 11 13 49.1
comp=Z,97nm,18.6s,baz=0.5,slow=31
ELK Elko 35.28 91 IAmb IAmb 11 02 13.8
comp=Z,4.7nm,0.9s
YHH Holmes Hill 35.52 82 P **P 11 02 13.9 +0.3**
YHH IAmb IAmb 11 02 15.7
comp=Z,7.2nm,1.5s
EUNU Eureka 35.76 17 P **P 11 02 14.6 -0.5**
EUNU IAmb IAmb 11 02 50.4
comp=Z,15nm,1.4s
TPH Tonopah 35.81 96 P **P 11 02 16.9 +0.8**
DSP Deep Springs 35.84 98 P **P 11 02 18.2 +2.2**
DSP IAmb IAmb 11 02 19.4
comp=Z,12nm,1.2s
LCH Last Change Ra 36.12 98 P **P 11 02 20.0 +1.3**
LCH IAmb IAmb 11 02 22.1
comp=Z,12nm,1.3s
GMN Gold Mountain 36.30 97 P **P 11 02 22.2 +1.9**
GMN IAmb IAmb 11 02 22.9
comp=Z,3.6nm,0.9s
R11A Troy Canyon, C 36.60 94 IAmb IAmb 11 02 25.0
comp=Z,7.8nm,1.0s
ISA Isabella, Lake 36.70 100 P **P 11 02 25.3 +1.7**
ISA IAmb IAmb 11 02 25.6
comp=Z,4.1nm,0.9s
WCT Wildcat Mounta 37.02 97 P **P 11 02 27.4 +1.1**
DUG Dugway, Tooele 37.08 90 P **P 11 02 27.0 +0.3**
DUG IAmb IAmb 11 02 28.8
comp=Z,4.9nm,1.1s
TPNV Topopah Spring 37.14 97 P **P 11 02 28.0 +0.6**
GWY Greenwater Val 37.41 98 P **P 11 02 31.1 +1.5**
GWY IAmb IAmb 11 02 31.9
comp=Z,8.6nm,1.0s
PDAR Pinedale Array 37.45 84 P **P 11 02 30.1 +0.1**
comp=Z,0.6nm,0.8s,baz=309,slow=7.1,SNR=4.2
comp=Z,0.6nm,0.8s
PRN Pahroc Range 37.54 95 P **P 11 02 31.5 +0.7**
PRN IAmb IAmb 11 02 33.2
comp=Z,9.5nm,1.0s
GSC Goldstone, Bar 37.93 99 P **P 11 02 34.3 +0.3**
GSC IAmb IAmb 11 02 36.4
comp=Z,12nm,1.1s
KLR Kul'dur 38.70 290 LR LR 11 19 37.0
comp=Z,46nm,19.2s,baz=146,slow=38
Q16A Castle Valley 38.87 90 IAmb IAmb 11 02 44.2
comp=Z,13nm,1.5s
W13A Hualapai Mount 39.80 97 IAmb IAmb 11 02 51.9
comp=Z,6.9nm,0.9s
BAR Barrett 39.86 102 IAmb IAmb 11 02 52.6
comp=Z,17nm,1.2s
H11N2 WAKE ISLAND Hy 40.21 224 T T 11 46 14.3
baz=26,slow=76,SNR=279
H11N3 WAKE ISLAND Hy 40.22 224 T T 11 46 14.8
baz=26,slow=76,SNR=142
H11N1 WAKE ISLAND Hy 40.23 224 T T 11 46 15.7
baz=26,slow=76,SNR=140
BLYC Blythe 40.36 99 IAmb IAmb 11 02 56.3
comp=Z,13nm,1.1s
H11S1 WAKE ISLAND Hy 41.39 223 T T 11 47 14.1
baz=25,slow=76,SNR=182
H11S2 WAKE ISLAND Hy 41.40 223 T T 11 47 19.5
baz=25,slow=76,SNR=163
H11S3 WAKE ISLAND Hy 41.40 223 T T 11 47 13.1
baz=25,slow=76,SNR=200
214A Organ Pipe Nat 42.65 99 P **P 11 03 12.2 -0.8**
214A IAmb IAmb 11 03 15.0
comp=Z,7.6nm,0.9s
TUC Tucson 43.59 97 P **P 11 03 21.1 +0.4**
BNM Baren Site 44.77 92 P **P 11 03 30.8 +0.5**
NRIK Noril'sk 46.69 332 LR LR 11 25 00.9
comp=Z,65nm,18.7s,baz=103,slow=38
AMTX Amarillo 47.21 87 P **P 11 03 49.2 -0.2**
DAG Danmarks Havn 48.16 10 *i* P **P 11 03 55.0 -1.0**
WMOK Wichita Mounta 49.04 85 IAmb IAmb 11 04 04.1
comp=Z,5.1nm,0.8s
TXAR Lajitas Array 49.96 94 P **P 11 04 10.9 +0.4**
comp=Z,5.0nm,0.7s,baz=300,slow=5.4,SNR=66
comp=Z,5.0nm,0.7s
TXAR Lajitas Array 49.96 94 P **P 11 04 10.6 0.0**
U38A Gravette 50.47 80 IAmb IAmb 11 04 13.6
comp=Z,6.7nm,1.0s
MGMO Mountain Grove 51.22 78 IAmb IAmb 11 04 18.9
comp=Z,5.3nm,0.9s
SONM Songino Array 53.06 303 P **P 11 04 31.9 -1.6**
comp=Z,0.6nm,0.6s,baz=74,slow=6.3,SNR=3.7
SONM PcP **PcP 11 05 42.0 +0.4**
comp=Z,1.1nm,0.7s,baz=64,slow=3.5,SNR=4.0
comp=Z,0.6nm,0.6s
WVT Waverly 54.50 76 P **P 11 04 42.7 -1.3**
OXF Oxford 54.72 78 P **P 11 04 44.6 -1.1**
HHC Hu-ho-hao-te 55.08 293 *e*P **P 11 04 50.8 +2.5**
PLAL Pickwick Lake 55.16 77 P **P 11 04 47.8 -1.0**
PLAL IAmb IAmb 11 04 48.4
comp=Z,5.7nm,0.9s
ARCES ARCESS Array B 56.98 356 P **P 11 04 59.6 -1.7**
comp=Z,2.0nm,0.6s,baz=13,slow=7.1,SNR=9.9
comp=Z,2.0nm,0.6s
NJ2 Nanjing 57.13 281 *e*P **P 11 05 00.8 -2.1**
ZALV Zalesovo Beam 58.39 319 P **P 11 05 11.6 +0.1**
comp=Z,0.6nm,0.4s,baz=47,slow=6.3,SNR=3.1
ZALV PcP **PcP 11 06 02.4 +0.4**
comp=Z,0.8nm,0.5s,baz=39,slow=7.6,SNR=3.9
ZALV LR LR 11 31 48.6
comp=Z,75nm,18.1s,baz=67,slow=38
comp=Z,0.6nm,0.4s
GTA Gaotai 62.38 300 *e*P **P 11 05 38.8 -0.4**
GTA pP sP 11 05 59.1 +6.7
GTA sP PcP 11 06 11.6 -6.9
KIRV Kirov 64.84 341 LR LR 11 37 32.8
comp=Z,79nm,19.7s,baz=345,slow=39
WMQ Urumqi 64.95 310 *e*P **P 11 05 57.3 +1.4**
WMQ pP sP 11 06 13.3 +4.1
WMQ sP PcP 11 06 23.5 -5.3
MKAR Makanchi Array 64.97 316 P **P 11 05 54.2 -1.8**
comp=Z,0.3nm,0.3s,baz=49,slow=6.2,SNR=7.4
comp=Z,0.3nm,0.3s
FINES FINESS Array B 65.01 354 P **P 11 05 54.5 -1.5**
comp=Z,4.3nm,0.7s,baz=26,slow=9.1,SNR=9.5
comp=Z,4.3nm,0.7s
NB2 NORSAR Subarra 65.69 2 P **P 11 06 00.7 +0.3**
comp=Z,3.6nm,0.9s,baz=359,slow=6.9
NOA NORSAR Array B 65.69 2 P **P 11 06 00.9 +0.5**
comp=Z,1.1nm,0.7s,baz=359,slow=6.6,SNR=3.5
comp=Z,1.1nm,0.7s
AFI Afiamalu 67.48 187 LR LR 11 32 19.2
comp=Z,52nm,18.3s,baz=86,slow=33
OBN Obninsk 70.27 347 LR LR 11 41 37.0
comp=Z,11nm,18.3s,baz=176,slow=40
PZH PanZhiHua 71.14 289 P **P 11 06 35.3 +0.2**
AAK Ala-Archa 71.55 318 LR LR 11 40 23.6
comp=Z,80nm,18.6s,baz=27,slow=38
PPT Papeete 72.04 165 LR LR 11 31 03.0
comp=Z,130nm,21.3s,baz=9.0,slow=30
KKAR Karatay Array 72.70 321 P **P 11 06 43.8 -0.3**
BTK Batken 75.20 319 P **P 11 06 57.6 -1.3**
BTK IAmb IAmb 11 06 59.8
comp=Z,4.1nm,0.5s
AKASG Malin Array Be 75.44 351 P **P 11 06 59.0 -0.9**
comp=Z,4.6nm,0.6s,baz=11,slow=5.8,SNR=17
comp=Z,4.6nm,0.6s
AKBB Malin Array Si 75.44 351 P **P 11 06 59.4 -0.5**
AKBB IAmb IAmb 11 07 00.4
comp=Z,5.5nm,0.6s
GAR Garm 76.31 319 P **P 11 07 04.9 -0.3**
GERES GERESS Array B 77.95 1 P **P 11 07 14.9 +0.6**
comp=Z,0.5nm,0.6s,baz=355,slow=3.1,SNR=5.0
comp=Z,0.5nm,0.6s
CMAR Chiang Mai Arr 79.04 286 P **P 11 07 19.9 -0.6**
comp=Z,0.8nm,0.6s,baz=28,slow=5.4,SNR=4.7
comp=Z,0.8nm,0.6s
ESDC Sonseca Array 85.65 15 P **P 11 07 56.0 +1.1**
comp=Z,0.6nm,0.7s,baz=342,slow=4.6,SNR=4.6
comp=Z,0.6nm,0.7s
BRTR Keskin Array B 85.73 346 P **P 11 07 56.0 +0.6**
comp=Z,2.1nm,0.9s,baz=61,slow=8.9,SNR=3.5
comp=Z,2.1nm,0.9s
RPN Rapa Nui 93.56 133 LR LR 11 40 55.6
comp=Z,123nm,20.6s,baz=6.5,slow=29
H03N2 Juan Fernandez 113.81 114 T T 13 17 47.0
baz=322,slow=77,SNR=32
H03N1 Juan Fernandez 113.82 114 T T 13 17 48.3
baz=322,slow=77,SNR=32
H03N3 Juan Fernandez 113.82 114 T T 13 17 49.5
baz=322,slow=77,SNR=27

*NOU **17** 11:09:45.8, 13°.21S×167°.66E, h154km, mb4.2/10, Vanuatu Islands*
*NEIC **17** 11:10:04.6±2.5, 14°.7S±0°.1×167°.5E±0°.2, h137km±3km, mb4.4/23, Error ellipse: s-maj=22.2km s-min=15.7km az=98.0*
*IDC **17** 11:10:04.5±4.7, 14°.67S×167°.43E, h140km±41km, mb3.8/8, mbtmp4.2/9, Error ellipse: s-maj=29.3km s-min=21.2km az=28.0*
ISC 17 11:10:06.1±0.8,**14°.82S**±0°.08×**167°.4E**±0°.1,**h150**km,**n46,**
σ1$**57**/46,**mb4.5**/17,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**5.93**	**182**	Pn	**Pn**	**11 11 28.7**	**-3.2**
KOUNC	**Koumac, New Ca**	**6.44**	**207**		**Pn**	**11 11 38.6**	**-0.1**
KOUNC	**Koumac, New Ca**	**6.44**	**207**	P	**Pn**	**11 11 39.0**	**+0.2**
MARNC	**Mare, Loyalty**	**6.65**	**175**	P	**Pn**	**11 11 42.9**	**+1.4**
YATNC	**Mamie plateau,**	**7.22**	**184**	P	**Pn**	**11 11 49.5**	**+0.3**
DZM	**Mont Dzumac**	**7.28**	**187**	P	**Pn**	**11 11 50.1**	**+0.1**
	7.1nm,0.3s,baz=325,slow=10,SNR=54						
DZM				S	**Sn**	**11 13 09.0**	**-2.4**
	4.8nm,0.4s,baz=162,slow=20,SNR=1.7						
DZM	**Mont Dzumac**	**7.28**	**187**	Pn	**Pn**	**11 11 49.3**	**-0.6**
DZM	**Mont Dzumac**	**7.28**	**187**	P	**Pn**	**11 11 50.4**	**+0.4**
NOUC	**Port Laguerre**	**7.33**	**188**	P	**Pn**	**11 11 51.7**	**+1.2**
ONTNC	**Ouen Toro**	**7.51**	**187**	Pn	**Pn**	**11 11 54.1**	**+1.2**
ONTNC	**Ouen Toro**	**7.51**	**187**	P	**Pn**	**11 11 54.8**	**+1.8**
OUENC	**Ouen Island, N**	**7.58**	**184**	P	**Pn**	**11 11 55.0**	**+1.0**
EIDS	**Eidsvold**	**18.58**	**233**	P	**Pn**	**11 14 13.4**	**-0.4**
EIDS				IAmb	IAmb	11 14 14.4	
	comp=Z,16nm,0.7s						
CTA	**Charters Tower**	**20.87**	**252**	P	**P**	**11 14 37.0**	**+0.5**
	comp=Z,6.3nm,0.7s,baz=80,slow=11,SNR=11						
	comp=Z,6.3nm,0.7s						
CTAO	**Charters Tower**	**20.87**	**252**	P	**P**	**11 14 37.2**	**+0.7**
CTAO				IAmb	IAmb	11 14 38.1	
	comp=Z,8.7nm,0.8s						
OUZ	**Omahuta**	**21.06**	**166**	P	**P**	**11 14 39.6**	**+1.3**
OUZ				IAmb	IAmb	11 15 01.6	
	comp=Z,25nm,1.3s						
ARMA	**Armidale**	**21.27**	**220**	P	**P**	**11 14 41.4**	**+0.6**
ARMA				IAmb	IAmb	11 14 51.1	
	comp=Z,29nm,1.4s						
COEN	**Coen**	**23.51**	**269**	P	**P**	**11 15 03.2**	**+0.5**
COEN				IAmb	IAmb	11 15 27.1	
	comp=Z,25nm,1.5s						
URZ	**Urewera**	**24.87**	**162**	P	**P**	**11 15 15.7**	**+0.9**
	comp=Z,4.4nm,0.5s,baz=326,slow=4.5,SNR=6.1						
	comp=Z,4.4nm,0.5s						
URZ	**Urewera**	**24.87**	**162**	P	**P**	**11 15 15.4**	**+0.6**
URZ				IAmb	IAmb	11 15 25.6	
	comp=Z,34nm,1.3s						
BKZ	**Black Stump Fm**	**25.53**	**164**	P	**P**	**11 15 20.9**	**0.0**
BKZ				IAmb	IAmb	11 15 53.7	
	comp=Z,21nm,1.2s						
THZ	**Tophouse**	**27.27**	**171**	P	**P**	**11 15 29.3**	**-7.1**
STKA	**Stephens Creek**	**29.06**	**230**	P	**P**	**11 15 53.4**	**+0.9**
	comp=Z,6.1nm,0.4s,baz=53,slow=8.8,SNR=34						
	comp=Z,6.1nm,0.4s						
STKA	**Stephens Creek**	**29.06**	**230**	P	**P**	**11 15 53.5**	**+1.0**
LBZ	**Lake Benmore**	**29.57**	**176**	P	**P**	**11 15 57.4**	**+0.6**
WB0	**Warramunga Arr**	**31.89**	**256**	P	**P**	**11 16 16.1**	**-1.4**
WB0				IAmb	IAmb	11 16 42.1	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**31.95**	**256**	P	**P**	**11 16 16.6**	**-1.4**
WB2				IAmb	IAmb	11 16 17.5	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**31.96**	**256**	P	**P**	**11 16 16.9**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=84,slow=8.9,SNR=14						
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**31.96**	**256**	P	**P**	**11 16 16.7**	**-1.4**
AS31	**Alice Springs**	**32.79**	**249**	P	**P**	**11 16 24.4**	**-0.9**
AS31				IAmb	IAmb	11 16 24.9	
	comp=Z,3.7nm,1.2s						
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**11 16 24.2**	**-1.2**
	comp=Z,3.6nm,0.5s,baz=79,slow=9.2,SNR=90						
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**11 16 24.5**	**-0.9**
BBOO	**Buckleboo**	**33.65**	**232**	P	**P**	**11 16 32.9**	**+0.2**
KNRA	**Kununurra**	**37.28**	**263**	P	**P**	**11 17 03.3**	**-0.6**
FORT	**Forrest**	**39.39**	**239**	P	**P**	**11 17 20.9**	**-0.4**
VNDA	**Vanda**	**62.78**	**181**	P	**P**	**11 20 15.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=347,slow=7.4,SNR=9.9						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**62.78**	**181**	P	**P**	**11 20 15.0**	**-0.1**
CASY	**Casey**	**63.51**	**202**	P	**P**	**11 20 20.8**	**+0.8**
CASY				IAmb	IAmb	11 20 33.6	
	comp=Z,5.7nm,1.4s						
PETK	**Petropavlovsk-**	**68.16**	**354**	P	**P**	**11 20 50.3**	**+0.4**
QSPA	**South Pole Qui**	**75.21**	**180**	P	**P**	**11 21 31.8**	**-0.3**
MAW	**Mawson**	**81.86**	**202**	P	**P**	**11 22 09.9**	**+1.6**
M20K	**Styx River**	**82.53**	**18**	P	**P**	**11 22 10.2**	**-1.7**
M20K				IAmb	IAmb	11 22 46.2	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**82.66**	**324**	P	**P**	**11 22 13.7**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.8,SNR=1.6						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**86.56**	**18**	P	**P**	**11 22 29.9**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=233,slow=5.0,SNR=5.7						
	comp=Z,0.6nm,0.8s						
SNAA	**Sanae**	**93.47**	**183**	P	**P**	**11 23 04.7**	**+0.3**
SNAA				IAmb	IAmb	11 23 22.7	
	comp=Z,5.6nm,1.4s						
MKAR	**Makanchi Array**	**97.38**	**316**	P	Pdif	11 23 24.2	+1.7
	comp=Z,0.6nm,0.7s,baz=132,slow=3.6,SNR=4.5						

*MDD **17** 11:36:45.0±0.8, 37°.06N×11°.04W, h30km, mb_Lg3.2/13, Error ellipse: s-maj=6.7km s-min=4.3km az=53.0*
*INMG **17** 11:36:45.1±0.9, 36°.97N×11°.10W, h31km, ML2.5, Error ellipse: s-maj=3.9km s-min=2.4km az=77.0*
*CNRM **17** 11:36:47.4, 36°.54N×10°.46W, h30km, ml2.7*
ISC 17 11:36:41.9±2.4,**36°.98N**±0°.07×**11°.1W**±0°.1,**h35**km,**n54,**
σ1$**99**/89,**6C-1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.82**	**84**	⇑*i*Pn	**Pn**	**11 37 12.6**	**+1.9**
PFVI				*e*Sn	**Sn**	**11 37 32.3**	**-0.3**
PFVI				A	A	11 37 33.9	
	46nm,0.2s						
PTEO	**Sao Teotonio**	**1.98**	**73**	⇑*i*Pn	**Pn**	**11 37 14.9**	**+2.1**
PTEO				*e*Sn	**Sn**	**11 37 37.1**	**+0.7**
PTEO				A	A	11 37 39.1	
	19nm,0.5s						
MORF	**Marmelete**	**1.98**	**80**	*e*P	**Pn**	**11 37 14.8**	**+1.9**
MORF				*e*S	**Sn**	**11 37 36.4**	**-0.2**
MORF				IAML		11 37 39.8	
	comp=E,64nm,0.2s						
MORF	**Marmelete**	**1.98**	**80**	⇑*i*Pn	**Pn**	**11 37 14.8**	**+1.9**
MORF				*e*Sn	**Sn**	**11 37 37.5**	**+0.9**
MORF				A	A	11 37 40.5	
	comp=E,27nm,0.1s						
PMST	**Lisbon--Monsan**	**2.32**	**40**	*e*Sn	**Sn**	**11 37 45.6**	**+0.7**
PMST				A	A	11 37 47.4	
	comp=E,31nm,0.2s						
PNCL	**Nicolau / Gran**	**2.33**	**60**	*e*Pn	**Pn**	**11 37 19.8**	**+2.0**
PNCL				*e*Sn	**Sn**	**11 37 45.6**	**+0.4**
PNCL				A	A	11 37 51.8	
	comp=E,9.9nm,0.4s						
PMAFR	**Mafra**	**2.44**	**35**	*e*Pn	**Pn**	**11 37 21.1**	**+1.8**
PMAFR				*e*Sn	**Sn**	**11 37 48.3**	**+0.4**
PMAFR				A	A	11 37 49.8	
	comp=E,60nm,0.2s						
MESJ	**Messejana**	**2.45**	**69**	*e*P	**Pn**	**11 37 21.1**	**+1.8**
MESJ				*e*S	**Sn**	**11 37 47.5**	**-0.5**
MESJ				IAML		11 37 52.2	
	comp=N,11nm,0.1s						
MESJ	**Messejana**	**2.45**	**69**	⇓*e*Pn	**Pn**	**11 37 21.3**	**+2.0**
MESJ				*e*Sn	**Sn**	**11 37 48.7**	**+0.7**
MESJ				A	A	11 37 54.1	
	comp=N,7.5nm,0.2s						
PCVE	**Castro Verde**	**2.52**	**74**	*e*Pn	**Pn**	**11 37 22.4**	**+2.0**
PCVE				*e*Sn	**Sn**	**11 37 50.2**	**+0.3**
PCVE				A	A	11 37 52.3	
	comp=N,8.0nm,0.2s						
PACT	**Alcochete**	**2.53**	**44**	*e*Pn	**Pn**	**11 37 22.8**	**+2.3**
PACT				*e*Sn	**Sn**	**11 37 52.3**	**+2.2**
PVAQ	**Vaqueiros**	**2.73**	**80**	⇑*e*Pn	**Pn**	**11 37 25.5**	**+2.3**
PVAQ				*e*Sn	**Sn**	**11 37 55.4**	**+0.3**
PVAQ				A	A	11 37 58.3	
	comp=N,14nm,0.4s						
PVAQ	**Vaqueiros**	**2.73**	**80**	P	**Pn**	**11 37 25.2**	**+2.0**
PVAQ				S	**Sn**	**11 37 53.6**	**-1.4**
PBEJ	**Beja**	**2.77**	**67**	*e*Sn	**Sn**	**11 37 56.0**	**-0.1**
PBEJ				A	A	11 38 00.1	
	comp=N,6.4nm,0.2s						
EVO	**Evora**	**2.90**	**57**	P	**Pn**	**11 37 28.0**	**+2.5**
EGRO	**El Granado**	**2.94**	**78**	P	**Pn**	**11 37 27.9**	**+1.9**
EGRO				S	**Sn**	**11 37 59.2**	**-0.8**
EGRO				*i* Vmb_Lg		11 38 04.5	
PMTG	**Montargil**	**3.08**	**46**	*e*Pn	**Pn**	**11 37 29.6**	**+1.5**
PMTG				*e*Sn	**Sn**	**11 38 04.0**	**+0.3**
PMTG				A	A	11 38 09.9	
	comp=N,5.1nm,0.2s						
PSBE	**So Bento**	**3.11**	**35**	*e*Pn	**Pn**	**11 37 30.5**	**+2.0**
PSBE				*e*Sn	**Sn**	**11 38 05.2**	**+0.7**
PSBE				A	A	11 38 06.2	
	comp=N,9.2nm,0.5s						
PESTR	**Estremoz**	**3.35**	**55**	*e*Pn	**Pn**	**11 37 33.9**	**+2.1**
PESTR				*e*Sn	**Sn**	**11 38 10.6**	**+0.2**
PESTR				A	A	11 38 15.6	
	comp=N,2.8nm,0.3s						
PESTR	**Estremoz**	**3.35**	**55**	P	**Pn**	**11 37 32.5**	**+0.7**
PBAR	**Barrancos**	**3.44**	**68**	*e*Pn	**Pn**	**11 37 34.7**	**+1.7**
PBAR				*e*Sn	**Sn**	**11 38 11.9**	**-0.6**
PBAR				A	A	11 38 16.4	
	comp=N,4.2nm,0.2s						
EMIN	**Mina Concepcio**	**3.61**	**76**	P	**Pn**	**11 37 37.0**	**+1.7**
EMIN				S	**Sn**	**11 38 14.7**	**-2.1**
EMIN				*i* Vmb_Lg		11 38 21.4	
PCAS	**Casmilo, Conde**	**3.69**	**33**	*e*Pn	**Pn**	**11 37 38.3**	**+1.9**
PCAS				*e*Sn	**Sn**	**11 38 18.6**	**0.0**
PCAS				A	A	11 38 22.3	
	comp=N,6.2nm,0.3s						
EBAD	**Badajoz**	**3.69**	**60**	P	**Pn**	**11 37 37.7**	**+1.3**
EBAD				S	**Sn**	**11 38 17.8**	**-0.8**
EBAD				*i* Vmb_Lg		11 38 24.2	

	comp=N,4.7nm,0.6s						
ESPR	**Espera**	**4.20**	**90**	P	**Pn**	**11 37 45.4**	**+1.9**
ESPR				S	**Sn**	**11 38 30.7**	**-0.6**
ESPR				*i* Vmb_Lg		11 38 32.8	
PVIS	**Viseu**	**4.49**	**33**	*e*Pn	**Pn**	**11 37 49.2**	**+1.7**
PVIS				*e*Sn	**Sn**	**11 38 37.4**	**-1.1**
PVIS				A	A	11 38 39.2	
	comp=N,12nm,0.1s						
ECAB	**El Cabril**	**4.64**	**75**	P	**Pn**	**11 37 51.1**	**+1.5**
ECAB				S	**Sn**	**11 38 40.7**	**-1.6**
ECAB				*i* Vmb_Lg		11 38 43.4	
EPLA	**Plasencia**	**5.00**	**50**	P	**Pn**	**11 37 55.9**	**+1.4**
EPLA				*i* Vmb_Lg		11 38 47.0	
EPLA				S	**Sn**	**11 38 47.9**	**-3.1**
PVRL	**Vila Real**	**5.03**	**30**	*e*Sn	**Sn**	**11 38 50.2**	**-1.7**
PVRL				A	A	11 38 52.8	
	comp=N,6.6nm,0.1s						
POLO	**Lamas de Olo**	**5.08**	**29⇑**	*e*Pn	**Pn**	**11 37 57.3**	**+1.6**
POLO				*e*Sn	**Sn**	**11 38 51.3**	**-1.9**
POLO				A	A	11 38 53.7	
	comp=N,1.7nm,0.3s						
SRHM	**Skhour des Reh**	**5.21**	**149**	P	**Pn**	**11 37 56.5**	**-0.9**
SRHM				S	**Sn**	**11 38 51.6**	**-4.7**
MVO	**Moncorvo**	**5.24**	**36**	*e*Pn	**Pn**	**11 37 59.2**	**+1.4**
MVO				*e*Sn	**Sn**	**11 38 55.2**	**-1.9**
MVO				A	A	11 38 57.1	
	comp=N,7.3nm,0.5s						
PCAB	**Cabril**	**5.29**	**26**	*e*Sn	**Sn**	**11 38 56.3**	**-1.9**
PCAB				A	A	11 38 59.2	
	comp=N,4.5nm,0.3s						
EADA	**Adamuz**	**5.31**	**75**	P	**Pn**	**11 38 00.2**	**+1.4**
EADA				S	**Sn**	**11 38 57.0**	**-1.8**
EADA				*i* Vmb_Lg		11 39 00.9	
ELOB	**Lobios**	**5.42**	**25**	P	**Pn**	**11 38 01.7**	**+1.5**
ELOB				S	**Sn**	**11 38 57.9**	**-3.5**
ELOB				*i* Vmb_Lg		11 39 03.1	
PGAV	**Gavieira, Arco**	**5.44**	**23**	*e*Pn	**Pn**	**11 38 02.2**	**+1.6**
PGAV				*e*Sn	**Sn**	**11 38 59.9**	**-2.1**
PGAV				A	A	11 39 02.7	
	comp=N,5.0nm,0.5s						
EZAM	**Zamans**	**5.49**	**19**	S	**Sn**	**11 38 58.4**	**-4.6**
EZAM				*i* Vmb_Lg		11 39 01.4	
EGOR	**Sierra Gorda,**	**5.59**	**87**	S	**Sn**	**11 39 00.9**	**-4.9**
EGOR				*i* Vmb_Lg		11 39 26.0	
PBRG	**Braganca**	**5.88**	**34**	*e*Sn	**Sn**	**11 39 10.3**	**-2.5**
PBRG				A	A	11 39 13.6	
	comp=N,3.2nm,0.1s						
PAB	**San Pablo**	**5.90**	**62**	P	**Pn**	**11 38 08.3**	**+1.5**
PAB				S	**Sn**	**11 39 08.7**	**-4.5**
ELGU	**Los Guajares,**	**5.99**	**89**	P	**Pn**	**11 38 10.0**	**+2.0**
ELGU				*i* Vmb_Lg		11 39 22.6	
ECAL	**Calabor**	**6.00**	**33**	P	**Pn**	**11 38 09.8**	**+1.6**
ECAL				S	**Sn**	**11 39 12.8**	**-2.8**
ECAL				*i* Vmb_Lg		11 39 15.8	
EMAZ	**Mazaricos**	**6.18**	**15**	S	Sn	11 39 14.1	-6.0
EAGO	**Agolada(Pontev**	**6.26**	**21**	P	**Pn**	**11 38 13.3**	**+1.5**
EAGO				S	**Sn**	**11 39 17.9**	**-4.1**
EAGO				*i* Vmb_Lg		11 39 24.5	
OUK	**Oukaimeden**	**6.35**	**154**	P	**Pn**	**11 38 12.6**	**-0.7**
OUK				S	Sn	11 39 15.6	-9.1
EQES	**Quesada**	**6.44**	**80**	P	**Pn**	**11 38 15.7**	**+1.3**
EQES				S	**Sn**	**11 39 25.0**	**-1.7**
GUD	**Guadarrama**	**6.54**	**54**	P	**Pn**	**11 38 17.2**	**+1.5**
MD31	**MD31**	**6.63**	**126**	P	**Pn**	**11 38 16.7**	**-0.1**
MD31				S	Sn	11 39 20.5	-11
MDT	**Midelt**	**6.76**	**126**	P	Pn	11 38 16.2	-2.5
MDT				S	Sn	11 39 23.8	-11
EPON	**Pontenova**	**7.03**	**24**	P	**Pn**	**11 38 22.6**	**+0.3**
EPON				S	**Sn**	**11 39 35.8**	**-5.0**
ETOB	**Tobarra**	**7.74**	**75**	P	**Pn**	**11 38 32.9**	**+0.7**
ETOR	**Torete**	**8.03**	**59**	P	**Pn**	**11 38 37.7**	**+1.7**

ROM 17 11:38:08.0±0.1,**42°.889N**±0°.003×**13°.245E**±0°.004, **h9**km,**ML1.2**/2,**Error ellipse: s-maj=0.4km s-min=0.1km az=57.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**301**	P	Pg	11 38 10.1	0.0
MC2				S	Sg	11 38 11.3	-0.3
MC2	**Monte Cornacci**	**0.05**	**301**	P	Pg	11 38 10.1	0.0
MC2				S	Sg	11 38 11.3	-0.3
T1245	**Castelsantange**	**0.05**	**232**	P	Pg	11 38 10.2	+0.1
T1245				S	Sg	11 38 11.4	-0.2
T1245	**Castelsantange**	**0.05**	**232**	P	Pg	11 38 10.1	+0.1
T1245				S	Sg	11 38 11.4	-0.2
T1245				AML	AML		
	comp=N,3225μm,0.3s						
T1245				AML	AML		
	comp=E,2830μm,0.2s						
T1245				AML	AML		
	comp=E,2880μm,1.3s						
T1245				AML	AML		
	comp=N,3220μm,0.3s						
T1245				AML	AML		
	comp=N,3125μm,0.1s						
MMO1	**Montemonaco**	**0.06**	**81**	P	Pg	11 38 10.3	+0.2
MMO1				S	Sg	11 38 11.6	-0.1
MMO1	**Montemonaco**	**0.06**	**81**	P	Pg	11 38 10.3	+0.2
MMO1				S	Sg	11 38 11.6	-0.1
NRCA	**Norcia**	**0.11**	**240**	P	Pg	11 38 11.1	+0.4
NRCA				S	Sg	11 38 13.1	+0.5
NRCA	**Norcia**	**0.11**	**240**	P	Pg	11 38 11.1	+0.4
NRCA				S	Sg	11 38 13.1	+0.5
NRCA				AML	AML		
	comp=E,866μm,0.1s						
NRCA				AML	AML		
	comp=E,866μm,0.1s						
NRCA				AML	AML		
	comp=N,849μm,0.9s						
AM05	**Amandola Campo**	**0.12**	**42**	P	Pg	11 38 11.3	+0.5
AM05				S	Sg	11 38 13.6	+0.8
FEMA	**Monte Fema**	**0.16**	**297**	P	Pg	11 38 12.1	+0.6
FEMA				S	Sg	11 38 15.0	+1.0
FEMA	**Monte Fema**	**0.16**	**297**	P	Pg	11 38 12.1	+0.6
T1216	**Preci, Frazion**	**0.17**	**271**	P	Pg	11 38 12.1	+0.6
T1216				S	Sg	11 38 15.0	+1.0
T1216	**Preci, Frazion**	**0.17**	**271**	P	Pg	11 38 12.1	+0.6
T1216				S	Sg	11 38 15.0	+1.0
GUMA	**Gualdo di Mace**	**0.19**	**21**	P	Pg	11 38 12.8	+0.9
GUMA				S	Sg	11 38 16.3	+1.7
GUMA				AML	AML		
	comp=E,498μm,0.3s						
GUMA				AML	AML		
	comp=N,878μm,0.5s						
GUMA				AML	AML		
	comp=N,554μm,0.5s						
GUMA				AML	AML		
	comp=E,852μm,0.3s						
GUMA				AML	AML		
	comp=E,490μm,1.0s						
GUMA				AML	AML		
	comp=N,877μm,0.5s						
GUMA	**Gualdo di Mace**	**0.19**	**21**	P	Pg	11 38 12.8	+1.0
GUMA				S	Sg	11 38 16.5	+1.9
T1202	**Accumoli, Fraz**	**0.19**	**184**	P	Pg	11 38 12.7	+0.7
T1202				S	Sg	11 38 16.4	+1.8
T1202	**Accumoli, Fraz**	**0.19**	**184**	P	Pg	11 38 12.7	+0.8
T1202				S	Sg	11 38 16.5	+1.9
T1204	**Amatrice, Fraz**	**0.22**	**166**	P	Pg	11 38 13.3	+0.8
T1204				S	Sg	11 38 17.3	+1.6
T1204	**Amatrice, Fraz**	**0.22**	**166**	P	Pg	11 38 13.3	+0.8
T1201	**Domo (RI)**	**0.23**	**179**	P	Pg	11 38 13.8	+1.0
T1201				S	Sg	11 38 18.0	+2.1
T1243	**Rocca Santa Ma**	**0.24**	**142**	P	Pg	11 38 13.7	+0.7
T1243				S	Sg	11 38 17.7	+1.4
SMA1	**SAN MARTINO**	**0.27**	**165**	P	Pg	11 38 13.8	+0.5
SMA1				S	Sb	11 38 18.5	-1.2
SMA1	**SAN MARTINO**	**0.27**	**165**	P	Pg	11 38 13.9	+0.5
SMA1				AML	AML		
	comp=E,96μm,0.6s						
SMA1				AML	AML		
	comp=N,95μm,0.3s						
CESI	**CESI - Serrava**	**0.28**	**295**	P	Pg	11 38 14.1	+0.6
CESI				S	Sb	11 38 19.0	-0.9
T1215	**Vallo di Nera,**	**0.29**	**253**	P	Pg	11 38 14.3	+0.6
T1215				S	Sb	11 38 19.2	-1.0
T1215				AML	AML		
	comp=E,68μm,0.5s						
T1215				AML	AML		
	comp=N,68μm,1.1s						
T1215				AML	AML		
	comp=N,88μm,0.3s						
T1215				AML	AML		
	comp=E,70μm,2.7s						
T1215				AML	AML		
	comp=N,63μm,0.1s						
T1215				AML	AML		
	comp=E,134μm,1.9s						
T1217	**Poggiodomo (PG**	**0.29**	**233**	P	Pg	11 38 14.3	+0.5
LNSS	**Leonessa**	**0.32**	**208**	P	Pg	11 38 15.0	+0.6
LNSS				S	Sb	11 38 20.6	-0.7
LNSS				AML	AML		
	comp=E,378μm,0.3s						
LNSS				AML	AML		
	comp=N,232μm,0.3s						
T1246	**Crognaleto (TE**	**0.36**	**149**	P	Pg	11 38 15.5	+0.5
T1246				S	Sb	11 38 21.3	-1.0
TERO	**Teramo**	**0.38**	**135**	P	Pg	11 38 15.9	+0.5
TERO				S	Sb	11 38 22.2	-0.5
TERO				AML	AML		
	comp=E,66μm,0.1s						
TERO				AML	AML		
	comp=N,106μm,0.1s						
RM33	**Pellescritta (**	**0.38**	**183**	P	Pb	11 38 16.4	-0.5
RM33				AML	AML		
	comp=N,54μm,0.9s						
RM33				AML	AML		
	comp=E,55μm,0.2s						
SNTG	**Esanatoglia**	**0.43**	**329**	P	Pg	11 38 16.8	+0.4
SNTG				S	Sb	11 38 23.7	-0.6
SNTG				AML	AML		
	comp=E,29μm,0.3s						
SNTG				AML	AML		
	comp=N,29μm,0.3s						
SNTG				AML	AML		
	comp=E,29μm,0.3s						
SNTG				AML	AML		
	comp=N,29μm,0.3s						
SNTG				AML	AML		
	comp=E,24μm,0.6s						
SNTG				AML	AML		
	comp=N,11μm,0.8s						
EL6	**Elcito**	**0.45**	**347**	P	Pg	11 38 17.3	+0.5
EL6				AML	AML		
	comp=E,64μm,1.5s						
EL6				AML	AML		
	comp=N,78μm,1.6s						
EL6				AML	AML		
	comp=E,62μm,1.5s						
EL6				AML	AML		
	comp=N,75μm,1.6s						
ASSB	**Assisi San Ben**	**0.46**	**290**	P	Pg	11 38 17.2	+0.3
ASSB				S	Sb	11 38 24.7	-0.4
T1211	**Morro Reatino**	**0.46**	**219**	P	Pg	11 38 17.5	+0.6
T1211				S	Sb	11 38 24.5	-0.7
ARRO	**Arrone**	**0.47**	**229**	P	Pg	11 38 17.3	+0.2

*IDC **17** 11:40:20.7±1.6,39°.78N×20°.76E,h0km,mb3.7/3, mbtmp3.8/3,MS3.3/3,Error ellipse: s-maj=69.5km s-min=27.8km az=125.0*
*ATH **17** 11:40:24.0,39°.80N×20°.69E,h11km±1km,ML3.2/20,Error ellipse: s-maj=1.7km s-min=0.9km az=315.0*
*TIR **17** 11:40:23.1,39°.79N×20°.64E,h0km±18km,Md3.0,Ml3.2*
*BEO **17** 11:40:24.8±0.4,39°.68N×20°.67E,h21km±4km,ML3.0/6*
*THE **17** 11:40:24.3,39°.78N×20°.71E,h3km±1km,ML3.2/15,Error ellipse: s-maj=1.5km s-min=0.5km az=309.0*
ISC 17 11:40:24.1±0.8,**39°.77N**±0°.02×**20°.71E**±0°.02,**h15**km±5km, **n86**,σ**1**°**21**/113,**mb3.7**/3,**MS3.2**/3,**10C-1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**135**	P	**Pg**	**11 40 27.7**	**-0.4**
JAN				S	**Sg**	**11 40 30.9**	**+0.1**
	23μm,0.4s						
JAN	**Janina**	**0.16**	**135**	P	**Pg**	**11 40 27.8**	**-0.3**
JAN				S	**Sg**	**11 40 31.2**	**+0.4**
JAN				AML	AML	11 40 31.8	
	comp=E,44365μm,0.2s						
JAN				AML	AML	11 40 32.2	
	comp=N,38741μm,0.4s						
IGT	**Igoumenitsa**	**0.37**	**231**	P	**Pg**	**11 40 31.4**	**-0.2**
IGT				S	**Sg**	**11 40 37.8**	**+1.0**
	comp=N,7μm,0.4s						
IGT	**Igoumenitsa**	**0.37**	**231**	*e*Pg	**Pg**	**11 40 31.4**	**-0.2**
IGT				*e*Sg	**Sb**	**11 40 39.3**	**+1.3**
IGT	**Igoumenitsa**	**0.37**	**231**	P	**Pg**	**11 40 31.5**	**-0.2**
	baz=224						
IGT				S	**Sb**	**11 40 39.1**	**+1.1**
	baz=224						
IGT	**Igoumenitsa**	**0.37**	**231**	P	**Pg**	**11 40 31.5**	**-0.2**
IGT				S	**Sg**	**11 40 37.2**	**+0.3**
IGT				AML	AML	11 40 39.7	
	comp=N,9209μm,0.3s						
IGT				AML	AML	11 40 40.3	
	comp=E,16941μm,0.4s						
LSK	**Leskovik**	**0.39**	**348**	P	**Pg**	**11 40 31.9**	**-0.1**
LSK				S	**Sg**	**11 40 37.5**	**+0.1**
	comp=E,5μm,0.8s						
KPRO	**Kipourio**	**0.54**	**70**	P	**Pg**	**11 40 34.5**	**-0.3**
KPRO				S	**Sg**	**11 40 41.5**	**-0.5**
	comp=E,4μm,0.5s						
PENT	**Pentalofos**	**0.54**	**38**	P	**Pg**	**11 40 34.7**	**-0.1**
PENT	**Pentalofos**	**0.54**	**38**	P	**Pg**	**11 40 34.4**	**-0.4**
PENT				AML	AML	11 40 44.9	
	comp=E,2542μm,0.3s						
PENT				AML	AML	11 40 48.3	
	comp=N,882μm,0.3s						
SRN	**Sarande**	**0.55**	**282**	P	**Pg**	**11 40 34.6**	**-0.4**
SRN				S	**Sg**	**11 40 42.3**	**-0.1**
	comp=N,2μm,0.6s						
SRN	**Sarande**	**0.55**	**282**	P	**Pg**	**11 40 34.6**	**-0.4**
	baz=281						
SRN				S	**Sg**	**11 40 42.7**	**+0.3**
	baz=281						
SRN				AMP			
	comp=N,8.8nm,0.3s,baz=281						
KASA	**Kassiopi**	**0.59**	**268**	P	**Pg**	**11 40 35.2**	**-0.6**
KASA				S	**Sg**	**11 40 43.7**	**+0.1**
KASA				AML	AML	11 40 45.3	
	comp=N,6614μm,0.7s						
KASA				AML	AML	11 40 45.9	
	comp=E,6223μm,0.2s						
NEST	**Nestorio**	**0.70**	**22**	P	**Pg**	**11 40 37.4**	**-0.3**
NEST				S	**Sg**	**11 40 47.5**	**+0.6**
	comp=E,908nm,0.5s						
NEST	**Nestorio**	**0.70**	**22**	P	**Pg**	**11 40 37.1**	**-0.6**
NEST				S	**Sg**	**11 40 45.5**	**-1.5**
NEST				AML	AML	11 40 51.5	
	comp=N,2382μm,0.5s						
NEST				AML	AML	11 40 52.9	
	comp=E,2176μm,0.7s						
KEK	**Kerkira**	**0.70**	**266**	P	**Pg**	**11 40 36.6**	**-1.2**
KEK				S	**Sg**	**11 40 47.6**	**+0.6**
	comp=E,2μm,0.1s						
KEK	**Kerkira**	**0.70**	**266**	P	**Pg**	**11 40 36.8**	**-0.9**
KEK				AML	AML	11 40 48.8	
	comp=E,3883μm,0.2s						
KEK				AML	AML	11 40 52.0	
	comp=N,3109μm,0.2s						
KBN	**Korca**	**0.85**	**4**	P	**Pb**	**11 40 41.9**	**+1.2**
	baz=7.0						
TSLK	**Tsoukalades, L**	**0.94**	**182**	P	**Pg**	**11 40 42.0**	**-0.4**
TSLK				S	**Sn**	**11 40 57.1**	**+1.1**
	comp=N,3μm,0.5s						
TSLK	**Tsoukalades, L**	**0.94**	**182**	P	**Pg**	**11 40 41.5**	**-0.8**
TSLK				S	**Sb**	**11 40 56.0**	**+1.6**
TSLK				AML	AML	11 41 01.8	
	comp=E,5539μm,0.5s						
TSLK				AML	AML	11 41 01.8	
	comp=N,5318μm,0.5s						
KZN	**Kozani**	**0.98**	**56**	P	**Pg**	**11 40 42.5**	**-0.5**
KZN				S	**Sb**	**11 40 56.5**	**+0.9**
	comp=N,962nm,0.7s						
KZN	**Kozani**	**0.98**	**56**	P	**Pg**	**11 40 42.5**	**-0.5**
KZN				AML	AML	11 40 59.4	
	comp=E,2211μm,0.7s						
KZN				AML	AML	11 40 59.5	
	comp=N,1642μm,0.7s						
LKD2	**Lefkada island**	**0.98**	**182**	P	**Pg**	**11 40 42.6**	**-0.4**
LKD2	**Lefkada island**	**0.98**	**182**	P	**Pg**	**11 40 42.1**	**-1.0**
LKD2				S	**Sn**	**11 40 57.2**	**+0.3**
LKD2				AML	AML	11 41 08.4	
	comp=E,3038μm,0.4s						
LKD2				AML	AML	11 41 10.0	
	comp=N,3557μm,0.6s						
THL	**Klokotos Trika**	**1.03**	**101**	P	**Pg**	**11 40 42.8**	**-1.2**
THL				S	**Sb**	**11 40 57.9**	**+0.9**
	comp=N,818nm,0.8s						
THL	**Klokotos Trika**	**1.03**	**101**	P	**Pg**	**11 40 42.7**	**-1.3**
THL				S	**Sb**	**11 40 57.4**	**+0.5**
THL				AML	AML	11 40 59.4	
	comp=N,1905μm,0.8s						
THL				AML	AML	11 41 01.0	
	comp=E,1370μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.05**	**180**	P	**Pg**	**11 40 44.5**	**0.0**
NYDR				S	**Sn**	**11 40 59.5**	**+0.8**
	comp=E,1μm,0.7s						
DRAG	**Dragano-Lefkad**	**1.09**	**185**	P	**Pg**	**11 40 44.8**	**-0.3**
DRAG				S	**Sn**	**11 41 01.2**	**+1.6**
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pb**	**11 40 45.9**	**+0.2**
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pb**	**11 40 45.8**	**+0.2**
VLO	**Vlora**	**1.16**	**307**	P	Pg	11 40 56.3	+10
	baz=309						
TYRN	**Tyrnavos**	**1.18**	**92**	P	**Pb**	**11 40 45.8**	**-0.4**
TYRN				S	**Sn**	**11 41 03.8**	**+2.0**
	comp=E,2μm,0.6s						
EVR	**Evrytania**	**1.21**	**135**	P	**Pb**	**11 40 46.5**	**-0.2**
EVR	**Evrytania**	**1.21**	**135**	P	**Pb**	**11 40 46.5**	**-0.2**
EVR				S	**Sn**	**11 41 03.4**	**+0.7**
EVR				AML	AML	11 41 08.5	
	comp=N,1445μm,0.5s						
EVR				AML	AML	11 41 08.9	
	comp=E,1622μm,0.4s						
FSK	**Fiskardo**	**1.31**	**185**	P	**Pb**	**11 40 49.1**	**+0.7**
FSK				S	**Sg**	**11 41 06.8**	**+0.3**
	comp=E,920nm,0.5s						
FSK	**Fiskardo**	**1.31**	**185**	P	**Pb**	**11 40 49.0**	**+0.5**
FSK				AML	AML	11 41 10.8	
	comp=N,1320μm,0.4s						
FSK				AML	AML	11 41 14.7	
	comp=E,2140μm,0.5s						
PVO	**Paravola**	**1.32**	**151**	P	**Pg**	**11 40 49.5**	**+0.1**
PVO	**Paravola**	**1.32**	**151**	P	**Pn**	**11 40 48.7**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.34**	**124**	P	**Pn**	**11 40 49.1**	**+0.8**
MAKR				S	**Sg**	**11 41 09.4**	**+2.1**
	comp=E,2μm,0.6s						
MAKR	**Makrakomi, Fth**	**1.34**	**124**	P	**Pn**	**11 40 49.1**	**+0.8**
MAKR				AML	AML	11 41 11.7	
	comp=N,3159μm,0.7s						
MAKR				AML	AML	11 41 13.2	
	comp=E,3043μm,0.4s						
OHR	**Ohrid**	**1.34**	**3**	*e*Pg	**Pb**	**11 40 49.8**	**+0.8**
OHR				*e*Sg	**Sg**	**11 41 10.5**	**+3.1**
OHR	**Ohrid**	**1.34**	**3**	*i* Pn	**Pg**	**11 40 50.5**	**+0.6**
LIT	**Litokhoron**	**1.41**	**76**	P	**Pn**	**11 40 49.7**	**+0.4**
LIT				S	**Sg**	**11 41 09.8**	**+0.2**
	comp=E,685nm,1.0s						
LIT	**Litokhoron**	**1.41**	**76**	P	**Pn**	**11 40 49.6**	**+0.4**
LIT				AML	AML	11 41 15.7	
	comp=E,1042μm,0.8s						
LIT				AML	AML	11 41 18.3	
	comp=N,1605μm,0.6s						
KEF4	**Livadi, Kephal**	**1.53**	**188**	P	**Pn**	**11 40 52.0**	**+1.3**
VLS	**Valsamata**	**1.59**	**183**	P	**Pn**	**11 40 52.1**	**+0.4**
VLS				AML	AML	11 41 19.4	
	comp=N,1606μm,0.5s						
VLS				AML	AML	11 41 28.0	
	comp=E,1427μm,0.8s						
EFP	**Efpalio**	**1.64**	**145**	P	**Pb**	**11 40 54.6**	**+0.7**
EFP				AML	AML	11 41 26.5	
	comp=E,1297μm,0.6s						
EFP				AML	AML	11 41 27.0	
	comp=N,1496μm,0.7s						
TIR	**Tirane**	**1.70**	**338**	⇑P	**Pg**	**11 40 57.2**	**+0.4**
TIR	**Tirane**	**1.70**	**338**	P	**Pg**	**11 40 58.0**	**+1.2**
	baz=340						
SERG	**Sergoula**	**1.71**	**142**	P	**Pb**	**11 40 55.6**	**+0.3**
SERG				AML	AML	11 41 26.5	
	comp=E,1231μm,0.5s						
SERG				AML	AML	11 41 27.4	
	comp=N,1425μm,0.4s						
AXAR	**Agios Charalam**	**1.82**	**123**	P	**Pb**	**11 40 57.0**	**-0.1**
AXAR				AML	AML	11 41 30.9	
	comp=E,1322μm,0.5s						
AXAR				AML	AML	11 41 36.4	
	comp=N,1403μm,0.8s						
LAKA	**Lakka**	**1.82**	**147**	P	**Pb**	**11 40 57.0**	**-0.1**
LAKA				AML	AML	11 41 42.4	
	comp=E,510μm,0.6s						
LAKA				AML	AML	11 41 46.8	
	comp=N,395μm,1.2s						
PHP	**Peshkopia**	**1.92**	**354**	P	**Pb**	**11 40 58.7**	**-0.2**
	baz=356						
KLV	**Kalavryta, Ach**	**2.06**	**146**	P	**Pb**	**11 41 00.4**	**-0.8**
KLV				AML	AML	11 41 41.6	
	comp=E,407μm,1.3s						
KLV				AML	AML	11 41 47.5	
	comp=N,383μm,0.9s						
VAY	**Valandovo**	**2.10**	**42**	*e*Pn	**Pn**	**11 40 59.7**	**+1.0**
VAY				*e*Sn	**Sb**	**11 41 27.6**	**-0.2**
VAY	**Valandovo**	**2.10**	**42**	*i* Pn	**Pn**	**11 40 59.9**	**+1.2**
SRS	**Serrai**	**2.58**	**58**	*e*Pn	**Pn**	**11 41 05.9**	**+0.6**
SRS				*e*Sn	**Sn**	**11 41 38.6**	**+2.1**
BCI	**Bajram Curri**	**2.64**	**350**	P	**Pb**	**11 41 09.8**	**-1.3**
	baz=351						
KKB	**Krupnik**	**2.77**	**40**	*i* P	**Pn**	**11 41 10.2**	**+2.3**
PDG	**Podgorica**	**2.87**	**338**	⇑P	**Pn**	**11 41 10.5**	**+1.2**
MMB	**Musomiste**	**2.93**	**51**	*i* P	**Pn**	**11 41 11.3**	**+1.1**
TIP	**Timpagrande**	**3.11**	**260**	⇑P	**Pn**	**11 41 12.4**	**-0.3**
BARS	**Barje**	**3.16**	**15**	*e*Pn	**Pn**	**11 41 14.9**	**+1.7**
BARS				*e*Sn	**Sn**	**11 41 53.1**	**+2.4**
MATE	**Matera**	**3.19**	**287**	⇑P	**Pn**	**11 41 17.0**	**+3.3**
VTS	**Vitosha**	**3.43**	**33**	*i* P	**Pn**	**11 41 19.6**	**+2.5**
SELS	**Selova**	**3.46**	**5**	*e*Pn	**Pn**	**11 41 18.7**	**+1.3**
SJES	**Sjenica**	**3.53**	**351**	*e*Pn	**Pn**	**11 41 20.6**	**+2.1**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**11 41 24.2**	**+2.2**
BOVS	**Bovan**	**3.93**	**11**	⇑P	**Pn**	**11 41 23.0**	**-0.9**
BOVS	**Bovan**	**3.93**	**11**	*e*Pn	**Pn**	**11 41 24.0**	**+0.1**
GRUS	**Gruza**	**4.12**	**0**	*e*Pn	**Pn**	**11 41 27.5**	**+1.1**
BLKB	**Belogradchik**	**4.12**	**20**	⇓P	**Pn**	**11 41 23.2**	**-3.3**
ZAGS	**Zajecar**	**4.20**	**15**	*e*Pn	**Pn**	**11 41 27.8**	**+0.3**
SGRT	**San Giovanni R**	**4.26**	**299**	P	**Pn**	**11 41 28.6**	**+0.1**
	baz=300						
SGRT				S	**Sn**	**11 42 13.7**	**-4.3**
	baz=300						
DIVS	**Divibare**	**4.36**	**353**	*e*Pn	**Pn**	**11 41 30.4**	**+0.6**
DIVS				*e*Sn	**Sn**	**11 42 20.5**	**+0.1**
TRUS	**Trudelj**	**4.46**	**357**	*e*Pn	**Pn**	**11 41 32.5**	**+1.4**
HERR	**Herculane**	**5.26**	**13**	⇑P	**Pn**	**11 41 40.0**	**-2.1**
GZR	**Gura Zlata**	**5.82**	**15**	⇑P	**Pn**	**11 41 47.4**	**-2.5**
MLR	**Muntele Rosu**	**6.90**	**32**	⇑P	Pn	11 41 56.8	-8.0
PLOR	**Plostina**	**7.48**	**34**	⇑P	Pn	11 42 04.0	-8.7
VRI	**Vrincioaia**	**7.53**	**34**	⇑P	Pn	11 42 04.9	-8.4
MDT	**Midelt**	**21.51**	**259**	LR	LR	11 54 29.0	
	comp=N,45nm,19.7s,baz=194,slow=39						
FINES	**FINESS Array B**	**21.95**	**7**	P	**P**	**11 45 15.3**	**-1.6**
	comp=N,2.3nm,0

comp=Z,244nm,0.2s
HLGC Holguin 1.95 315 *e*P **Pn 12 07 25.6 +4.1**
HLGC *e*S **Sn 12 07 49.5 +4.7**
HLGC IAML 12 07 54.5
comp=N,79nm,0.3s
HLGC IAML 12 07 54.7
comp=E,88nm,0.5s
LMGC Las Mercedes 2.35 284 *e*P **Pn 12 07 28.6 +1.6**
LMGC *e*S **Sn 12 07 56.7 +2.1**
LMGC IAML 12 08 00.0
comp=N,109nm,0.1s
LMGC IAML 12 08 00.2
comp=E,73nm,0.1s
PAPH Port-au-Prince 2.38 114 *e*S **Sn 12 07 57.7 +2.4**
PAPH IAML 12 08 03.0
comp=Z,25nm,0.1s
SDDR Presa de Saban 3.16 99 *e*P **Pn 12 07 36.7 -1.6**
SDDR Presa de Saban 3.16 99 *i*P **Pn 12 07 38.8 +0.6**
SDDR *e*S **Sn 12 08 13.1 -1.6**
SDDR IAML 12 08 15.2
comp=Z,54nm,0.5s
CCCC Cccc 3.42 300 *e*P **Pn 12 07 40.1 -1.8**
CCCC *e*S **Sn 12 08 14.8 -6.4**

ROM 17 12:14:48.8±0.1, 42°.684N×0°.003×13°.079E±0°.004, h15km, ML0.6/3, Error ellipse: s-maj=0.3km s-min=0.1km az=191.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.09**	**200**	P	Pg	12 14 52.2	+0.1
LNSS				S	Sg	12 14 54.6	+0.4
LNSS				AML	AML		
	comp=E,99μm,1.1s						
LNSS				AML	AML		
	comp=N,152μm,0.4s						
LNSS				AML	AML		
	comp=E,78μm,0.6s						
T1202	**Accumoli, Fraz**	**0.11**	**80**	P	Pg	12 14 52.4	0.0
T1202				S	Sb	12 14 55.0	-0.2
T1217	**Poggiodomo (PG**	**0.11**	**284**	P	Pb	12 14 52.6	-0.1
T1217				S	Sb	12 14 55.1	-0.2
T1245	**Castelsantange**	**0.19**	**25**	P	Pb	12 14 53.9	-0.2
T1245				S	Sg	12 14 57.0	+0.4
T1245				AML	AML		
	comp=N,23μm,0.7s						
T1215	**Vallo di Nera,**	**0.20**	**307**	P	Pg	12 14 53.5	+0.1
T1215				S	Sg	12 14 57.1	+0.5
RM33	**Pellescritta (**	**0.20**	**150**	P	Pg	12 14 53.7	+0.2
RM33				S	Sb	12 14 57.3	-0.6
RM33				AML	AML		
	comp=E,12μm,0.2s						
T1211	**Morro Reatino**	**0.22**	**228**	P	Pg	12 14 54.2	+0.3
T1211				S	Sb	12 14 58.2	-0.3

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*IDC **17** 12:15:02.7±1.1, 39°.81N×20°.55E, h0km, mb3.8/8, mbtmp3.8/13, ML3.7/5, MS2.9/3, Error ellipse: s-maj=18.9km s-min=17.8km az=80.0*
*ATH **17** 12:15:05.4, 39°.77N×20°.67E, h7km±3km, ML3.6/12, Error ellipse: s-maj=3.4km s-min=0.9km az=291.0*
*THE **17** 12:15:05.1, 39°.76N×20°.66E, h13km±1km, ML3.6/8, Error ellipse: s-maj=1.1km s-min=0.5km az=310.0*
*PDG **17** 12:15:05.0±0.5, 39°.75N×20°.63E, h16km, ML3.7/12, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BEO **17** 12:15:06.2±0.4, 39°.66N×20°.53E, h25km±4km, ML3.4/11*
ISC 17 12:15:04.7±0.8, 39°.74N±0°.02×20°.65E±0°.02, h14km±6km, n140, σ1$29/191, mb3.8/7, 22C-13D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**118**	P	Pg	12 15 08.6	-0.3
JAN				S	Sg	12 15 12.5	+0.7
	118μm,0.4s						
JAN	**Janina**	**0.18**	**118**	P	Pg	12 15 08.8	-0.2
JAN				S	Sg	12 15 11.9	+0.1
JAN				AML	AML	12 15 12.7	
JAN				AML	AML	12 15 12.7	
IGT	**Igoumenitsa**	**0.32**	**229**	P	Pb	12 15 11.8	-0.3
IGT				S	Sb	12 15 17.7	+0.5
	12μm,0.6s						
IGT	**Igoumenitsa**	**0.32**	**229**	*e*Pg	Pb	12 15 12.0	-0.1
IGT				*e*Sg	Sb	12 15 18.4	+1.2
IGT	**Igoumenitsa**	**0.32**	**229**	P	Pg	12 15 11.6	+0.4
IGT				S	Sb	12 15 17.1	-0.1
IGT				AML	AML	12 15 20.9	
	comp=E,24758μm,0.5s						
IGT				AML	AML	12 15 21.9	
	comp=N,20565μm,0.6s						
LSK	**Leskovik**	**0.41**	**355**	P	Pb	12 15 13.5	-0.3
LSK				S	Sg	12 15 18.5	-0.1
	comp=N,32μm,0.5s						
SRN	**Sarande**	**0.52**	**286**	P	Pb	12 15 15.3	-0.2
SRN				S	Sb	12 15 22.6	-0.2
	comp=N,5μm,0.9s						
KASA	**Kassiopi**	**0.55**	**271**	P	Pb	12 15 16.0	-0.1
KASA				S	Sb	12 15 23.6	-0.2
KASA				AML	AML	12 15 26.5	
	comp=E,15998μm,0.5s						
KASA				AML	AML	12 15 26.8	
	comp=N,19897μm,0.5s						
PENT	**Pentalofos**	**0.59**	**40**	P	Pg	12 15 16.2	-0.2
PENT				S	Sg	12 15 23.8	-0.5
PENT	**Pentalofos**	**0.59**	**40**	P	Pg	12 15 16.4	0.0
KEK	**Kerkira**	**0.65**	**268**	P	Pg	12 15 17.5	+0.1
KEK				S	Sb	12 15 27.6	+0.8
	comp=N,5μm,0.5s						
KEK	**Kerkira**	**0.65**	**268**	P	Pg	12 15 17.6	+0.1
KEK				S	Sb	12 15 28.2	+1.4
KEK				AML	AML	12 15 30.1	
	comp=N,10416μm,0.7s						
KEK				AML	AML	12 15 34.0	
	comp=E,9176μm,0.3s						
NEST	**Nestorio**	**0.74**	**25**	P	Pg	12 15 19.2	0.0
NEST				S	Sb	12 15 29.6	+0.1
	comp=E,4μm,0.5s						
NEST	**Nestorio**	**0.74**	**25**	P	Pg	12 15 19.1	0.0
NEST				S	Sg	12 15 29.0	+0.1
NEST				AML	AML	12 15 33.1	
	comp=N,7842μm,0.7s						
NEST				AML	AML	12 15 34.6	
	comp=E,11452μm,0.4s						
KBN	**Korca**	**0.89**	**7**	P	Pg	12 15 21.4	-0.5
TSLK	**Tsoukalades, L**	**0.91**	**179**	P	Pb	12 15 22.2	-0.1
TSLK				S	Sn	12 15 36.4	+0.3
TSLK	**Tsoukalades, L**	**0.91**	**179**	P	Pg	12 15 22.5	+0.2
TSLK				S	Sn	12 15 36.3	+0.3
TSLK				AML	AML	12 15 42.8	
	comp=E,9268μm,0.5s						
TSLK				AML	AML	12 15 42.8	
	comp=N,9593μm,0.4s						
LKD2	**Lefkada island**	**0.95**	**179**	P	Pn	12 15 23.8	+0.2
LKD2				S	Sn	12 15 36.5	-0.5
	comp=N,5μm,0.5s						
LKD2	**Lefkada island**	**0.95**	**179**	P	Pn	12 15 23.6	0.0
LKD2				S	Sn	12 15 37.5	+0.5
LKD2				AML	AML	12 15 43.5	
	comp=E,7720μm,0.6s						
LKD2				AML	AML	12 15 47.1	
	comp=N,10428μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.03**	**178**	P	Pb	12 15 24.1	-0.1
KZN	**Kozani**	**1.03**	**56**	P	Pb	12 15 23.8	-0.6
KZN				S	Sn	12 15 38.9	-0.3
	comp=N,3μm,0.6s						
KZN	**Kozani**	**1.03**	**56**	P	Pb	12 15 23.8	-0.6
KZN				S	Sb	12 15 37.9	0.0
KZN				AML	AML	12 15 39.6	
	comp=E,7215μm,0.6s						
KZN				AML	AML	12 15 40.1	
	comp=N,5866μm,0.7s						
DRAG	**Dragano-Lefkad**	**1.06**	**183**	P	Pg	12 15 25.4	+0.3
THL	**Klokotos Trika**	**1.07**	**99**	P	Pb	12 15 24.5	-0.5
THL	**Klokotos Trika**	**1.07**	**99**	P	Pb	12 15 24.7	-0.3
THL				AML	AML	12 15 45.9	
	comp=N,7352μm,0.6s						
THL				AML	AML	12 15 48.4	
	comp=E,4045μm,0.3s						
EVGI	**Lefkada island**	**1.12**	**180**	P	Pg	12 15 26.2	0.0
EVGI	**Lefkada island**	**1.12**	**180**	P	Pg	12 15 26.5	+0.3
EVR	**Evrytania**	**1.22**	**132**	P	Pn	12 15 27.2	-0.2
EVR	**Evrytania**	**1.22**	**132**	P	Pb	12 15 27.8	+0.2
EVR				AML	AML	12 15 50.4	
	comp=N,4525μm,0.5s						
EVR				AML	AML	12 15 50.4	
	comp=E,5175μm,0.6s						
FSK	**Fiskardo**	**1.28**	**183**	P	Pg	12 15 29.8	+0.5
FSK				AML	AML	12 15 51.0	
	comp=E,5182μm,0.3s						
FSK				AML	AML	12 15 54.9	
	comp=N,2709μm,0.6s						
PVO	**Paravola**	**1.31**	**148**	P	Pg	12 15 30.4	+0.4
OHR	**Ohrid**	**1.38**	**5**	*e*Pg	Pg	12 15 31.6	+0.4
OHR				*e*Sg	Sg	12 15 53.0	+3.9
OHR	**Ohrid**	**1.38**	**5**	*i*Pn	Pg	12 15 31.1	0.0
LIT	**Litokhoron**	**1.46**	**75**	P	Pn	12 15 30.6	-0.1
LIT				S	Sn	12 15 49.6	-0.1
LIT	**Litokhoron**	**1.46**	**75**	P	Pb	12 15 31.9	+0.2
LIT				AML	AML	12 15 56.3	
	comp=N,6550μm,0.4s						
LIT				AML	AML	12 15 57.3	
	comp=E,6138μm,0.5s						
TIR	**Tirane**	**1.71**	**340**	⇑P	Pb	12 15 35.6	-0.3
TIR				⇑S	Sb	12 15 57.7	+0.4
VAY	**Valandovo**	**2.16**	**42**	*e*Pn	Pn	12 15 41.7	+1.5
VAY				*e*Sn	Sb	12 16 10.2	+0.1
VAY	**Valandovo**	**2.16**	**42**	*i*Pn	Pn	12 15 41.2	+1.0
SKO	**Skopje**	**2.31**	**15**	*e*Pn	Pb	12 15 45.3	-0.8
SKO				*e*Sn	Sb	12 16 14.0	-0.5
SKO	**Skopje**	**2.31**	**15**	*i*Pn	Pb	12 15 45.4	-0.8
ULC	**Ulcinj**	**2.46**	**335**	*e*Pn	Pn	12 15 45.3	+0.9
ULC				*i*Sn	Sb	12 16 16.8	-2.1
SRS	**Serrai**	**2.64**	**58**	*e*Pn	Pn	12 15 48.0	+1.2
SRS				*e*Sn	Sb	12 16 21.3	-2.6
DRME	**Dracevica, Mon**	**2.68**	**336**	*e*Pn	Pn	12 15 48.8	+1.4
DRME	**Dracevica, Mon**	**2.68**	**336**	⇑*i*Pn	Pn	12 15 48.4	+1.0
DRME				*i*Sn	Sn	12 16 22.2	+2.5
BUM	**Brajici-Budva**	**2.88**	**333**	⇑*i*Pn	Pn	12 15 51.1	+0.9
BUM				*i*Sn	Sn	12 16 27.0	+2.3
PDG	**Podgorica**	**2.89**	**339**	⇑P	Pn	12 15 51.5	+1.3
PDG				⇑S	Sn	12 16 26.6	+1.9
TTG	**Podgorica**	**2.89**	**339**	*e*Pn	Pn	12 15 51.2	+1.0
TTG				*i*Sn	Sn	12 16 27.1	+2.4
PVY	**Plav**	**2.90**	**350**	*e*Pn	Pn	12 15 51.4	+0.9
PVY				*i*Sn	Sn	12 16 27.5	+2.3
NOCI	**Noci**	**2.93**	**292**	AML	AML		
	comp=N,1110μm,0.8s						
NOCI	**Noci**	**2.93**	**292**	AML	AML		
	comp=E,886μm,0.5s						
NOCI	**Noci**	**2.93**	**292**	⇑P	Pn	12 15 51.1	+0.2
LTRZ	**Laterza**	**3.06**	**288**	⇓P	Pn	12 15 52.8	+0.3
TIP	**Timpagrande**	**3.06**	**261**	⇑P	Pn	12 15 53.0	+0.3
TIP				⇑S	Sn	12 16 29.4	+0.3
TIP	**Timpagrande**	**3.06**	**261**	⇑P	Pn	12 15 53.1	+0.4
CEME	**Cevo**	**3.09**	**336**	⇑*i*Pn	Pn	12 15 54.0	+0.9
CEME				*i*Sn	Sn	12 16 31.8	+1.9
MATE	**Matera**	**3.15**	**288**	⇑S	Sn	12 16 32.8	+1.6
MATE	**Matera**	**3.15**	**288**	⇓P	Pn	12 15 54.4	+0.6
HCY	**Herceg Novi**	**3.16**	**330**	*e*Pn	Pn	12 15 52.0	-1.9
HCY	**Herceg Novi**	**3.16**	**330**	*e*Pn	Pn	12 15 54.5	+0.6
HCY				*i*Sn	Sn	12 16 33.7	+2.3
IVA	**Berane**	**3.18**	**350**	*e*Pn	Pn	12 15 55.4	+1.0
IVA				*i*Sn	Sn	12 16 34.4	+2.3
BARS	**Barje**	**3.20**	**16**	*e*Pn	Pn	12 15 57.1	+2.6
CELI	**Celico**	**3.21**	**265**	⇑P	Pn	12 15 55.5	+0.6
KOME	**Kolasin**	**3.22**	**345**	⇓*i*Pn	Pn	12 15 56.0	+1.1
KOME				*i*Sn	Sn	12 16 35.3	+2.1
NKME	**Niksic**	**3.28**	**338**	⇑*i*Pn	Pn	12 15 56.6	+0.9
NKME				*i*Sn	Sn	12 16 36.6	+2.0
VTS	**Vitosha**	**3.48**	**33**	⇓P	Pn	12 16 00.1	+1.6
VTS				⇑S	Sn	12 16 42.8	+3.3
SELS	**Selova**	**3.50**	**6**	*e*Pn	Pn	12 16 00.7	+2.1
PLAC	**Placanica**	**3.52**	**250**	⇓P	Pn	12 15 59.4	+0.4
BRY	**Bratogost**	**3.54**	**334**	*e*Pn	Pn	12 15 59.0	-0.3
BRY	**Bratogost**	**3.54**	**334**	*e*Pn	Pn	12 15 59.8	+0.5
BRY				*i*Sn	Sn	12 16 42.7	+1.8
SJES	**Sjenica**	**3.55**	**352**	*e*Pn	Pn	12 16 02.0	+2.5
UPM	**Unac-Piva**	**3.70**	**340**	*e*Pn	Pn	12 16 03.7	+2.1
UPM	**Unac-Piva**	**3.70**	**340**	*e*Pn	Pn	12 16 02.5	+0.9
UPM				*i*Sn	Sn	12 16 46.9	+1.8
PLE	**Pljevlja**	**3.71**	**346**	*e*Pn	Pn	12 16 02.7	+1.0
PLE				*i*Sn	Sn	12 16 47.1	+1.9
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn	Pn	12 16 06.3	+3.0
STON	**Ston**	**3.83**	**326**	*e*Pn	Pn	12 16 02.1	-1.1
STON	**Ston**	**3.83**	**326**	P	Pn	12 16 02.3	-0.9
BOVS	**Bovan**	**3.97**	**11**	*e*Pn	Pn	12 16 06.2	+1.0
BOVS				*e*Sn	Sn	12 16 50.8	-0.7
RUDO	**Rudo**	**3.99**	**347**	*e*Pn	Pn	12 16 03.5	-1.9
GRUS	**Gruza**	**4.15**	**1**	*e*Pn	Pn	12 16 09.2	+1.7
BLKB	**Belogradchik**	**4.17**	**21**	⇑P	Pn	12 16 10.2	+2.3
BLKB				⇑S	Sn	12 16 59.1	+2.8
BBLS	**Lazići**	**4.23**	**348**	*e*Pn	Pn	12 16 09.6	+0.9
BBLS	**Lazići**	**4.23**	**348**	*e*Pn	Pn	12 16 09.6	+0.9
ZAGS	**Zajecar**	**4.24**	**16**	*e*Pn	Pn	12 16 10.3	+1.5
ZAGS				*e*Sn	Sn	12 16 59.8	+1.7
DIVS	**Divibare**	**4.38**	**354**	*e*Pn	Pn	12 16 12.2	+1.3
DIVS	**Divibare**	**4.38**	**354**	*e*Pn	Pn	12 16 12.0	+1.1
DIVS				*e*Sn	Sn	12 17 01.4	-0.4
DIVS	**Divibare**	**4.38**	**354**	P	Pn	12 16 11.6	+0.8
TRUS	**Trudelj**	**4.48**	**358**	*e*Pn	Pn	12 16 13.7	+1.5
HAPS	**Han Pijesak,Bl**	**4.52**	**344**	*e*Pn	Pn	12 16 13.0	+0.2
TEKS	**Tekeris**	**4.88**	**351**	*e*Pn	Pn	12 16 17.0	-0.6
TEKS				*e*Pn	Pn	12 16 17.3	-0.4
TEKS	**Tekeris**	**4.88**	**351**	*e*Pn	Pn	12 16 17.2	-0.4
SRKY	**Kupres RS**	**5.04**	**330**	*e*Pn	Pn	12 16 20.1	+0.1
HERR	**Herculane**	**5.30**	**14**	⇓P	Pn	12 16 24.6	+1.2
HERR				⇓S	Sn	12 17 25.8	+1.5
MGRS	**Mrkonjic Grad**	**5.37**	**332**	*e*Pn	Pn	12 16 26.0	+1.6
FRGS	**Fruska Gora**	**5.45**	**354**	⇓P	Pn	12 16 26.5	+1.0
FRGS	**Fruska Gora**	**5.45**	**354**	*e*Pn	Pn	12 16 25.4	-0.1
FRGS	**Fruska Gora**	**5.45**	**354**	*e*Pn	Pn	12 16 26.1	+0.6
IDI	**Anoyia**	**5.58**	**141**	⇑P	Pn	12 16 29.2	+1.9
IDI	**Anoyia**	**5.58**	**141**	Pn	Pn	12 16 29.5	+2.2
	comp=E,1.2nm,0.3s,baz=245,slow=4.5,SNR=8.7						
IDI				Sn	Sn	12 17 29.3	-2.0
	comp=E,5.5nm,0.3s,baz=144,slow=15,SNR=8.5						
	comp=E,3.1nm,0.3s						
BLY	**Banja Luka**	**5.62**	**334**	*e*Pn	Pn	12 16 27.4	-0.5
GZR	**Gura Zlata**	**5.87**	**15**	⇑P	Pn	12 16 33.0	+1.8
GZR				⇑S	Sn	12 17 40.7	+2.4
BZS	**Buzias**	**5.92**	**7**	⇓P	Pn	12 16 33.7	+1.8
A051A	**Mrakovica**	**5.95**	**334**	*e*Pn	Pn	12 16 32.4	0.0
VOIR		**6.55**	**28**	⇓P	Pn	12 16 43.1	+2.4
KOVH	**Kovagotottos**	**6.61**	**344**	P	Pn	12 16 41.3	-0.2
KOVH				S	Sn	12 17 52.8	-3.8
MORH	**Mrgy, Hungar**	**6.64**	**348**	⇓P	Pn	12 16 42.7	+1.0
MORH	**Mrgy, Hungar**	**6.64**	**348**	P	Pn	12 16 42.4	+0.7
MLR	**Muntele Rosu**	**6.95**	**32**	⇑P	Pn	12 16 48.8	+2.6
MLR	**Muntele Rosu**	**6.95**	**32**	Pn	Pn	12 16 49.3	+3.2
	comp=E,0.5nm,0.3s,baz=122,slow=13,SNR=2.0						
MLR				LR	LR	12 20 21.8	
	comp=E,168nm,20.7s,baz=164,slow=46						
	comp=E,3.2nm,0.6s						
BOJS	**Bojanci**	**7.00**	**327**	*e*Pn	Pn	12 16 46.6	-0.1
CRES	**Cresnjev**	**7.18**	**330**	*e*Pn	Pn	12 16 48.4	-0.8
DRGR		**7.21**	**11**	⇓P	Pn	12 16 51.4	+1.7
GBRS	**Gornja Briga**	**7.21**	**325**	*i*Pn	Pn	12 16 50.0	+0.4
PLOR	**Plostina**	**7.54**	**34**	⇑P	Pn	12 16 56.5	+2.4
CEY	**Cerknica**	**7.54**	**325**	*e*Pn	Pn	12 16 53.8	-0.4
VRI	**Vrincioaia**	**7.58**	**34**	⇓P	Pn	12 16 57.0	+2.3
SKDS	**Skadanscina**	**7.58**	**322**	*e*Pn	Pn	12 16 53.0	-1.8
SOKA	**Soboth**	**8.05**	**331**	*e*Pn	Pn	12 17 01.2	-0.1
	comp=E,4.8nm,0.3s,SNR=7.5						
OBKA	**Obir**	**8.10**	**329**	*e*Pn	Pn	12 17 01.7	-0.2
OBKA	**Obir**	**8.10**	**329**	*i*Pn	Pn	12 17 02.2	+0.3
	comp=E,8.0nm,0.5s						
OBKA				*e*Sn	Sn	12 18 32.6	-0.7
	comp=E,11nm,0.6s						
PSZ	**Piszkesteto**	**8.19**	**356**	P	Pn	12 17 04.3	+1.1
ARSA	**Arzberg**	**8.38**	**335**	*e*Pn	Pn	12 17 06.4	+0.7
	comp=E,2.5nm,0.3s						
KBA	**Koelnbreinsper**	**9.05**	**327**	*i*Pn	Pn	12 17 14.6	-0.4
	comp=E,3.3nm,0.4s						
KBA				*i*Sn	Sn	12 18 57.1	+0.3
	comp=E,1.8nm,0.4s						
MOA	**Molln**	**9.32**	**332**	*i*Pn	Pn	12 17 20.5	+1.9
	comp=E,3.4nm,0.3s						
WTTA	**Wattenberg**	**9.96**	**322**	*e*Pn	Pn	12 17 28.6	+1.1
	comp=E,3.3nm,0.3s						
WTTA				*e*Sn	Sn	12 19 19.5	+0.3
	comp=E,7.8nm,0.6s						
WATA	**Walderalm**	**10.04**	**322**	*i*Pn	Pn	12 17 29.6	+1.0
	comp=E,8.8nm,0.5s						
MOTA	**Moosalm**	**10.28**	**321**	*i*Pn	Pn	12 17 32.2	+0.4
	comp=E,3.4nm,0.3s						
MOTA				*i*Sn	Sn	12 19 25.7	-1.1
	comp=E,2.5nm,0.3s						
GERES	**GERESS Array B**	**10.37**	**334**	Pn	Pn	12 17 32.5	-0.5
	comp=E,0.3nm,0.3s,baz=164,slow=15,SNR=4.9						
	comp=E,0.5nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.54**	**315**	Pn	Pn	12 17 34.8	-0.6
	comp=E,0.9nm,0.3s,baz=141,slow=17,SNR=4.9						
	comp=E,3.0nm,0.5s						
CLL	**Collm**	**12.74**	**338**	*e*(PP)	P	12 18 17.0	+0.6
ESDC	**Sonseca Array**	**18.92**	**278**	P	P	12 19 24.6	-0.5
	comp=E,0.1nm,0.3s,baz=62,slow=12,SNR=6.7						
	comp=E,1.6nm,1.0s						
HFS	**Hagfors**	**20.88**	**350**	P	P	12 19 45.1	-1.0
	comp=E,2.5nm,0.5s,baz=161,slow=14,SNR=9.0						
HFS				LR	LR	12 27 49.0	
	comp=E,40nm,21.8s,baz=46,slow=37						
	comp=E,2.5nm,0.5s						
MDT	**Midelt**	**21.46**	**259**	LR	LR	12 28 09.9	
	comp=E,19nm,19.6s,baz=210,slow=37						
FINES	**FINESS Array B**	**21.99**	**7**	P	P	12 19 56.4	-1.6
	comp=E,1.0nm,0.3s,baz=173,slow=12,SNR=14						
	comp=E,1.0nm,0.3s						
NB2	**NORSAR Subarra**	**22.11**	**348**	P	P	12 19 58.2	-1.2
	comp=Z,6.6nm,1.1s,baz=165,slow=11						
NOA	**NORSAR Array B**	**22.11**	**348**	P	P	12 19 58.7	-0.7
	comp=Z,2.5nm,0.9s,baz=165,slow=11,SNR=5.9						
	comp=Z,2.5nm,0.9s						
EKA	**Eskdalemuir Ar**	**22.23**	**322**	P	P	12 19 59.9	-0.8
	comp=Z,2.1nm,0.6s,baz=123,slow=10,SNR=5.4						
	comp=Z,2.1nm,0.6s						
ARCES	**ARCESS Array B**	**29.97**	**3**	P	P	12 21 10.6	-1.6
	comp=Z,1.9nm,0.8s,baz=187,slow=8.4,SNR=7.6						
	comp=Z,1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.32**	**217**	P	P	12 21 25.0	+0.4
	comp=Z,0.6nm,0.5s,baz=34,slow=9.4,SNR=7.4						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**44.42**	**60**	P	P	12 23 14.3	-0.6
	comp=Z,0.9nm,0.4s,baz=281,slow=7.4,SNR=17						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**44.59**	**49**	P	P	12 23 16.2	+0.1
	comp=Z,0.6nm,0.4s,baz=281,slow=7.3,SNR=3.1						
	comp=Z,0.6nm,0.4s						

DDA 17 12:15:25.8±0.0, 36°.94N×36°.60E, h7km±3km, ML1.2, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.25**	**12**	P	Pg	12 15 31.2	+0.5
KAMA				S	Sg	12 15 34.7	+0.5
KAMA				*i*AML	AML	12 15 35.0	
	comp=E,54nm,0.1s						
KAMA				*i*AML	AML	12 15 36.0	
	comp=N,29nm,0.1s						
KUZU	**Kuzuini**	**0.41**	**114**	P	Pg	12 15 34.5	+0.6
KUZU				S	Sg	12 15 39.8	+0.5
KUZU				*i*AML	AML	12 15 40.0	
	comp=E,80nm,0.3s						
KUZU				*i*AML	AML	12 15 42.0	
	comp=N,67nm,0.4s						
KAHM	**Kahramanmaras,**	**0.65**	**28**	P	Pg	12 15 38.5	+0.2
KAHM				*i*AML	AML	12 15 51.0	
	comp=E,12nm,0.2s						
KAHM				*i*AML	AML	12 15 51.0	
	comp=N,10nm,0.2s						
GZT	**Gaziantep**	**0.87**	**61**	P	Pb	12 15 43.1	-0.3
GZT				S	Sb	12 15 55.4	+0.1
GZT				*i*AML	AML	12 15 56.0	
	comp=N,11nm,0.7s						
GZT				*i*AML	AML	12 15 57.0	
	comp=E,16nm,0.4s						
ELBS	**KAHRAMANMARAS**	**1.44**	**17**	P	Pn	12 15 45.0	-7.5

ISK 17 12:15:43.3, 38°.35N×37°.05E, h0km, ML1.9/3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.41**	**56**	PG	Pg	12 15 52.0	+0.9
DARE				SG	Sb	12 15 59.2	-1.1
SARI	**SarD1z-Kayseri**	**0.50**	**277**	PG	Pg	12 15 53.9	+1.0
SARI				SG	Sb	12 16 02.4	-0.6
ARPR	**Arapgir-MALATY**	**1.25**	**53**	PN	Pn	12 16 08.4	+0.2
ARPR				SN	Sn	12 16 26.8	+0.9
KOZT	**Kozan**	**1.30**	**229**	PN	Pn	12 16 09.3	+0.6

IDC 17 12:21:13.1±457.0, 54°.01N×0°.23E, h0km, Error ellipse: s-maj=228.3km s-min=49.2km az=23.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.87**	**116**	I		13 20 20.0	
	baz=308,slow=325,SNR=8.8						
I37NO	**I37NO**		**17.34**	**22**	I	14 06 30.0	
	baz=219,slow=329,SNR=1.9						
I43RU	**DUBNA INFRASON**		**21.03**	**68**	I	14 30 00.0	
	baz=280,slow=316,SNR=1.2						
I46RU	**ZALESOVO INFRA**		**46.84**	**54**	I	17 11 00.0	
	baz=305,slow=333,SNR=2.0						

IDC 17 12:38:17.9±403.0, 54°.25N×0°.30E, h0km, Error ellipse: s-maj=188.8km s-min=49.5km az=23.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.95**	**117**	I		13 33 08.5	
	baz=312,slow=326						
I37NO	**I37NO**		**17.10**	**23**	I	14 22 30.0	
	baz=219,

GRG	**Griva**	**0.39 217**	P	**Pg**	**13 02 41.4**	**-0.2**
GRG			S	**Sg**	**13 02 46.7**	**-0.2**
GRG			AML	AML	13 02 48.2	
	comp=E,15936μm,0.1s					
GRG			AML	AML	13 02 48.7	
	comp=N,11944μm,0.2s					
KKB	**Krupnik**	**0.66 25**	*i* P	**Pg**	**13 02 46.4**	**-0.2**
SOH	**Sokhos**	**0.66 133**	P	**Pg**	**13 02 46.3**	**-0.3**
SOH			S	**Sg**	**13 02 55.5**	**+0.2**
	comp=N,4μm,0.4s					
SOH	**Sokhos**	**0.66 133**	*i* Pg	**Pg**	**13 02 46.4**	**-0.3**
SOH			*i* Sg	**Sb**	**13 02 56.6**	**+0.2**
SOH	**Sokhos**	**0.66 133**	P	**Pg**	**13 02 46.3**	**-0.3**
SOH			S	**Sg**	**13 02 55.3**	**0.0**
SOH			AML	AML	13 02 58.1	
	comp=E,8965μm,0.1s					
SOH			AML	AML	13 02 59.1	
	comp=N,11325μm,0.4s					
THE	**Thessaloniki**	**0.66 163**	P	**Pg**	**13 02 46.1**	**-0.6**
THE			S	**Sg**	**13 02 55.5**	**0.0**
	comp=N,2μm,0.2s					
THE	**Thessaloniki**	**0.66 163**	*i* Pg	**Pg**	**13 02 46.3**	**-0.4**
THE			*i* Sg	**Sg**	**13 02 55.4**	**0.0**
THE	**Thessaloniki**	**0.66 163**	P	**Pg**	**13 02 46.3**	**-0.4**
SRS	**Serrai**	**0.68 103**	P	**Pg**	**13 02 46.7**	**-0.2**
SRS			S	**Sg**	**13 02 56.0**	**0.0**
	comp=N,1μm,0.2s					
SRS	**Serrai**	**0.68 103**	*e*Pg	**Pg**	**13 02 46.8**	**-0.2**
SRS			*e*Sg	**Sg**	**13 02 55.7**	**-0.2**
SRS	**Serrai**	**0.68 103**	*i* Pg	**Pg**	**13 02 46.6**	**-0.4**
SRS	**Serrai**	**0.68 103**	P	**Pg**	**13 02 46.8**	**-0.2**
SRS			S	**Sg**	**13 02 55.7**	**-0.2**
SRS			AML	AML	13 03 00.8	
	comp=E,2348μm,0.1s					
SRS			AML	AML	13 03 03.2	
	comp=N,2662μm,0.2s					
HORT	**Hortiatis**	**0.73 156**	P	**Pg**	**13 02 47.7**	**-0.3**
HORT			S	**Sg**	**13 02 57.5**	**-0.1**
	comp=N,2μm,0.2s					
HORT	**Hortiatis**	**0.73 156**	P	**Pg**	**13 02 47.8**	**-0.3**
HORT			S	**Sb**	**13 02 58.0**	**-0.6**
HORT			AML	AML	13 02 59.6	
	comp=N,3825μm,0.3s					
HORT			AML	AML	13 03 01.0	
	comp=E,2721μm,0.3s					
MMB	**Musomiste**	**0.83 67**	*i* P	**Pg**	**13 02 49.6**	**-0.2**
NVR	**Nevrokopi**	**0.87 84**	P	**Pg**	**13 02 50.2**	**-0.4**
NVR			S	**Sb**	**13 03 02.5**	**0.0**
	comp=E,2μm,0.3s					
NVR	**Nevrokopi**	**0.87 84**	P	**Pg**	**13 02 50.3**	**-0.3**
NVR			S	**Sg**	**13 03 01.9**	**0.0**
NVR			AML	AML	13 03 04.6	
	comp=E,2871μm,0.2s					
NVR			AML	AML	13 03 06.6	
	comp=N,3014μm,0.4s					
KOKK	**Kokkinochori,**	**1.07 115**	P	**Pg**	**13 02 53.8**	**-0.7**
KOKK			S	**Sb**	**13 03 08.7**	**+0.4**
	comp=N,740nm,0.5s					
KOKK	**Kokkinochori,**	**1.07 115**	P	**Pg**	**13 02 53.8**	**-0.7**
KOKK			S	**Sg**	**13 03 07.2**	**-1.2**
KOKK			AML	AML	13 03 11.3	
	comp=N,4636μm,0.6s					
KOKK			AML	AML	13 03 11.9	
	comp=E,3332μm,0.5s					
LIT	**Litokhoron**	**1.18 188**	P	**Pg**	**13 02 55.5**	**-1.0**
LIT			S	**Sn**	**13 03 12.5**	**+0.3**
	comp=E,530nm,0.2s					
LIT	**Litokhoron**	**1.18 188**	*i* Pg	**Pg**	**13 02 55.5**	**-1.0**
SKO	**Skopje**	**1.19 307**	*e*Pg	**Pb**	**13 02 56.2**	**-0.1**
SKO			*e*Sg	**Sb**	**13 03 12.5**	**+0.9**
SKO	**Skopje**	**1.19 307**	*i* Pg	**Pb**	**13 02 54.9**	**-1.4**
SKO			*i* Sg	**Sn**	**13 03 12.8**	**+0.5**
SKO			*e*Lg	Lg	13 03 16.7	
	comp=N,21nm,0.3s					
SKO			*e*Lg	Lg	13 03 20.6	
	comp=E,14nm,0.4s					
KZN	**Kozani**	**1.20 217**	P	**Pg**	**13 02 55.2**	**-1.7**
KZN			S	**Sn**	**13 03 13.0**	**+0.2**
	comp=E,550nm,0.6s					
KZN	**Kozani**	**1.20 217**	P	**Pg**	**13 02 55.0**	**-1.9**
KZN			AML	AML	13 03 18.0	
	comp=E,1477μm,0.7s					
KZN			AML	AML	13 03 18.4	
	comp=N,741μm,0.4s					
KVLA	**Kavala**	**1.30 104**	P	**Pn**	**13 02 58.1**	**+0.2**
KVLA			AML	AML	13 03 16.6	
	comp=N,2888μm,0.3s					
KVLA			AML	AML	13 03 16.9	
	comp=E,3352μm,0.3s					
OUR	**Ouranopolis**	**1.34 134**	P	**Pn**	**13 02 58.8**	**+0.4**
OUR			S	**Sg**	**13 03 16.4**	**-0.4**
VTS	**Vitosha**	**1.40 16**	||P	**Pn**	**13 02 59.4**	**0.0**
VTS			||S	**Sb**	**13 03 16.3**	**-1.7**
VTS	**Vitosha**	**1.40 16**	*e*Pg	**Pn**	**13 02 59.7**	**+0.3**
VTS			*e*Sg	**Sb**	**13 03 17.7**	**-0.3**
VTS	**Vitosha**	**1.40 16**	*i* Pg	**Pn**	**13 02 59.2**	**-0.2**
VTS			*i* Sg	**Sb**	**13 03 17.9**	**-0.1**
VTS	**Vitosha**	**1.40 16**	*i* P	**Pn**	**13 02 59.7**	**+0.3**
OHR	**Ohrid**	**1.46 264**	*e*Pg	**Pn**	**13 03 00.6**	**+0.6**
OHR			*e*Sg	**Sg**	**13 03 20.8**	**+0.1**
OHR	**Ohrid**	**1.46 264**	*i* Pn	**Pn**	**13 03 00.7**	**+0.6**
OHR			*i* Sn	**Sg**	**13 03 22.5**	**+1.8**
OHR			*e*Lg	Lg	13 03 27.5	
	comp=N,258nm,0.9s					
OHR			*e*Lg	Lg	13 03 31.6	
	comp=E,176nm,0.6s					
NEST	**Nestorio**	**1.53 237**	P	**Pn**	**13 03 01.4**	**+0.4**
RZN	**Rozhen**	**1.56 74**	*i* P	**Pg**	**13 03 03.5**	**-0.3**
BARS	**Barje**	**1.69 337**	*e*Pn	**Pn**	**13 03 03.0**	**-0.2**
BARS	**Barje**	**1.69 337**	*i* Pn	**Pn**	**13 03 03.0**	**-0.2**
PLD	**Plovdiv**	**1.71 60**	*e*Pn	**Pb**	**13 03 04.9**	**-0.3**
PLD			*e*Sn	**Sb**	**13 03 27.3**	**+0.7**
PLD	**Plovdiv**	**1.71 60**	*i* Pn	**Pb**	**13 03 05.2**	**0.0**
PLD	**Plovdiv**	**1.71 60**	*i* P	**Pb**	**13 03 06.0**	**+0.8**
ZAPS	**Zavoj**	**2.00 358**	*e*Pn	**Pb**	**13 03 10.0**	**-0.3**
ZAPS			*e*Sn	**Sn**	**13 03 34.5**	**+1.9**
TIR	**Tirane**	**2.15 273**	||P	**Pb**	**13 03 12.9**	**+0.2**
TIR	**Tirane**	**2.15 273**	*e*Pn	**Pn**	**13 03 10.5**	**+1.0**
TIR			*e*Sn	**Sn**	**13 03 37.1**	**+1.0**
DIM	**Dimitrovgrad**	**2.25 69**	*i* P	**Pg**	**13 03 16.3**	**-0.7**
SELS	**Selova**	**2.28 329**	*e*Pn	**Pn**	**13 03 10.9**	**-0.5**
SELS			*e*Sn	**Sn**	**13 03 40.7**	**+1.3**
BLKB	**Belogradchik**	**2.35 359**	||P	**Pn**	**13 03 13.2**	**+0.8**
BLKB			||S	**Sn**	**13 03 40.1**	**-1.1**
BOVS	**Bovan**	**2.48 343**	||P	**Pn**	**13 03 13.7**	**-0.3**
BOVS			||S	**Sn**	**13 03 43.3**	**-1.0**
BOVS	**Bovan**	**2.48 343**	*e*Pn	**Pn**	**13 03 13.7**	**-0.3**
BOVS			*e*Sn	**Sn**	**13 03 47.0**	**+2.7**
ZAGS	**Zajecar**	**2.57 352**	*e*Pn	**Pn**	**13 03 15.3**	**+0.1**
ZAGS			*e*Sn	**Sn**	**13 03 47.5**	**+1.1**
BAIL	**Bailesti**	**2.79 9**	||S	**Sn**	**13 03 50.0**	**-1.9**
PDG	**Podgorica**	**2.83 295**	||P	**Pn**	**13 03 20.2**	**+1.3**
VLAD	**Vladila**	**3.00 24**	||P	**Pn**	**13 03 21.8**	**+0.6**
VLAD			||S	**Sn**	**13 03 56.4**	**-0.6**
GRUS	**Gruza**	**3.00 331**	*e*Pn	**Pn**	**13 03 21.3**	**0.0**
GRUS			*e*Sn	**Sn**	**13 03 59.4**	**+2.2**
KUBS	**Kucevo**	**3.23 347**	*e*Pn	**Pn**	**13 03 23.1**	**-1.3**
KUBS			*e*Sn	**Sn**	**13 04 03.5**	**+0.6**
TRUS	**Trudelj**	**3.41 331**	*e*Pn	**Pn**	**13 03 27.0**	**+0.2**
DIVS	**Divibare**	**3.47 326**	*e*Pn	**Pn**	**13 03 27.5**	**-0.2**
HERR	**Herculane**	**3.62 357**	||P	**Pn**	**13 03 29.1**	**-0.6**
SGRR	**Singureni**	**3.80 38**	||P	**Pn**	**13 03 33.4**	**+1.2**
SGRR			||S	**Sn**	**13 04 17.5**	**+0.6**
GZR	**Gura Zlata**	**4.12 1**	||P	**Pn**	**13 03 36.3**	**-0.4**
LOT	**Lotru**	**4.25 10**	||P	**Pn**	**13 03 38.6**	**+0.1**
LOT			||S	**Sn**	**13 04 26.9**	**-1.1**
MTUR	**Matau**	**4.31 23**	||P	**Pn**	**13 03 40.3**	**+1.0**
ARR	**Arges**	**4.33 18**	||P	**Pn**	**13 03 39.3**	**-0.3**
BZS	**Buzias**	**4.42 350**	||P	**Pn**	**13 03 40.0**	**-0.7**
BZS			||S	**Sn**	**13 04 30.3**	**-1.8**
VOIR		**4.50 21**	||P	**Pn**	**13 03 42.5**	**+0.6**
MLR	**Muntele Rosu**	**4.83 28**	||P	**Pn**	**13 03 47.6**	**+1.1**
NEHR	**Nehoiu**	**4.91 31**	||P	**Pn**	**13 03 47.8**	**+0.3**
VRI	**Vrincioaia**	**5.44 31**	||P	**Pn**	**13 03 56.5**	**+1.8**
TPGR	**Topolog**	**5.50 47**	||S	**Sn**	**13 04 59.1**	**+0.3**
DRGR		**5.52 360**	||P	**Pn**	**13 03 55.6**	**-0.3**
CFR	**Carcaliu**	**5.56 44**	||P	**Pn**	**13 03 57.7**	**+1.4**
CFR			||S	**Sn**	**13 05 01.6**	**+1.4**
MORH	**Mrgy, Hungar**	**5.76 331**	||P	**Pn**	**13 03 58.3**	**-0.7**

*IDC **17** 13:15:13.4±1.8, 40°.23S×174°.47E, h85km±20km, mb3.6/3,*

mbtmp3.8/5, Error ellipse: s-maj=25.2km s-min=15.7km az=136.0
*NEIC **17** 13:15:13.7±0.8, 40°.21S±0°.06×174°.45E±0°.07, h80km±12km, mb4.3/5, Error ellipse: s-maj=10.9km s-min=2.8km az=139.0*
*WEL **17** 13:15:15.8±0.7, 40°S±3°×17°5E±°, h73km±8km, M4.2/20, ML4.6/20, MLv4.2/20, Error ellipse: s-maj=0.0km s-min=0.0km az=66.1*
ISC 17 13:15:14.5±0.7,**40°.39S**±0°.03×**174°.50E**±0°.03,**h98**km±5km, **n170**,σ1$**35**/181,**mb4.1**/5,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.57**	**147**	P	**Pn**	**13 15 30.6**	**-0.1**
KIW				S	**Sn**	**13 15 41.9**	**-0.8**
DUWZ	**D'Urville Isla**	**0.60**	**227**	P	**Pn**	**13 15 30.6**	**-0.3**
DUWZ				S	**Sn**	**13 15 42.6**	**-0.7**
OHWZ	**Ohakea**	**0.65**	**74**	P	**Pn**	**13 15 31.3**	**0.0**
OHWZ				S	**Sn**	**13 15 43.8**	**-0.1**
OGWZ	**Otaki Gorge**	**0.67**	**130**	P	**Pn**	**13 15 31.5**	**0.0**
OGWZ				S	**Sn**	**13 15 43.4**	**-0.7**
WAZ	**Wanganui**	**0.73**	**31**	P	**Pn**	**13 15 32.1**	**0.0**
CAW	**Cannon Point**	**0.84**	**149**	P	**Pn**	**13 15 33.4**	**+0.3**
CAW				S	**Sn**	**13 15 47.2**	**+0.1**
TCW	**Tory Channel**	**0.84**	**191**	P	**Pn**	**13 15 33.5**	**+0.4**
TCW				S	**Sn**	**13 15 46.3**	**-0.7**
MRZ	**Mangatainoka R**	**0.87**	**109**	P	**Pn**	**13 15 33.3**	**-0.1**
MRZ				S	**Sn**	**13 15 46.2**	**-1.3**
WEL	**Wellington**	**0.92**	**167**	P	**Pn**	**13 15 34.2**	**+0.3**
WEL				S	**Sn**	**13 15 48.5**	**0.0**
HOWZ	**Holdsworth Sta**	**0.93**	**124**	P	**Pn**	**13 15 34.0**	**-0.1**
HOWZ				S	**Sn**	**13 15 47.7**	**-1.0**
LREZ	**Lake Rotokare**	**0.93**	**355**	P	**Pn**	**13 15 33.8**	**-0.2**
LREZ				S	**Sn**	**13 15 48.7**	**0.0**
SNZO	**South Karori**	**0.94**	**170**	P	**Pn**	**13 15 34.1**	**0.0**
POWZ	**Post Office Ro**	**0.97**	**91**	P	**Pn**	**13 15 34.1**	**-0.4**
PREZ	**Palmer Road**	**1.08**	**346**	P	**Pn**	**13 15 35.5**	**-0.2**
PREZ				S	**Sn**	**13 15 52.0**	**+0.3**
MTW	**Mount Morrison**	**1.08**	**136**	P	**Pn**	**13 15 35.7**	**0.0**
MTW				S	**Sn**	**13 15 50.9**	**-0.8**
NMEZ	**Namu Road**	**1.08**	**334**	P	**Pn**	**13 15 35.2**	**-0.5**
TUWZ	**Tuamarina**	**1.12**	**202**		**Pn**	**13 15 36.0**	**-0.2**
TUWZ	**Tuamarina**	**1.12**	**202**	P	**Pn**	**13 15 36.2**	**0.0**
TIWZ	**Tintock**	**1.13**	**111**	P	**Pn**	**13 15 36.2**	**-0.1**
PRWZ	**Pori Road**	**1.14**	**99**	P	**Pn**	**13 15 36.3**	**0.0**
KHEZ	**Kahui Hut**	**1.15**	**341**	P	**Pn**	**13 15 36.3**	**-0.3**
NEZ	**North Egmont**	**1.16**	**344**	P	**Pn**	**13 15 36.1**	**-0.6**
TSZ	**Takapari Road**	**1.17**	**74**	P	**Pn**	**13 15 36.2**	**-0.5**
MSWZ	**Moikau Station**	**1.17**	**151**		**Pn**	**13 15 36.6**	**-0.1**
MSWZ	**Moikau Station**	**1.17**	**151**	P	**Pn**	**13 15 37.0**	**+0.2**
NNZ	**Nelson**	**1.19**	**225**		**Pn**	**13 15 36.6**	**-0.3**
NNZ	**Nelson**	**1.19**	**225**	P	**Pn**	**13 15 36.7**	**-0.1**
PAWZ	**Paruwai Farm**	**1.22**	**145**	P	**Pn**	**13 15 37.5**	**+0.2**
DREZ	**Durham Road**	**1.22**	**349**	P	**Pn**	**13 15 37.1**	**-0.2**
NBEZ	**Newall Road No**	**1.22**	**336**	P	**Pn**	**13 15 37.0**	**-0.3**
MTVZ	**Mangateitei**	**1.25**	**37**	P	**Pn**	**13 15 37.3**	**-0.5**
PKE	**Pukeiti**	**1.26**	**342**	P	**Pn**	**13 15 37.2**	**-0.5**
PKVZ	**Pokaka**	**1.28**	**31**	P	**Pn**	**13 15 37.4**	**-0.7**
VRZ	**Vera Road**	**1.28**	**9**	P	**Pn**	**13 15 37.7**	**-0.3**
TMWZ	**Te Maipa**	**1.28**	**125**	P	**Pn**	**13 15 38.0**	**0.0**
PLWZ	**Palliser**	**1.31**	**154**		**Pn**	**13 15 38.4**	**-0.1**
PLWZ	**Palliser**	**1.31**	**154**	P	**Pn**	**13 15 38.5**	**+0.1**
MHEZ	**Mangahewa**	**1.32**	**354**	P	**Pn**	**13 15 38.5**	**0.0**
TKNZ	**Takaka Hill**	**1.33**	**241**	P	**Pn**	**13 15 38.3**	**-0.4**
TRWZ	**Traveller**	**1.35**	**139**	P	**Pn**	**13 15 38.8**	**-0.1**
TRVZ	**Turoa**	**1.35**	**37**	P	**Pn**	**13 15 38.7**	**-0.5**
WNVZ	**Wahianoa**	**1.36**	**39**	P	**Pn**	**13 15 38.7**	**-0.4**
BFZ	**Birch Farm**	**1.36**	**103**	Pn	**Pn**	**13 15 38.6**	**-0.4**
BFZ	**Birch Farm**	**1.36**	**103**	P	**Pn**	**13 15 38.7**	**-0.3**
MOVZ	**Moawhango**	**1.38**	**45**	P	**Pn**	**13 15 38.4**	**-0.8**
CMWZ	**Cape Campbell**	**1.38**	**189**		**Pn**	**13 15 39.8**	**+0.7**
CMWZ	**Cape Campbell**	**1.38**	**189**	P	**Pn**	**13 15 40.1**	**+1.0**
DRZ	**Dome Shelter**	**1.38**	**37**	P	**Pn**	**13 15 40.3**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.39**	**38**	P	**Pn**	**13 15 38.9**	**-0.6**
PNHZ	**Pukenui**	**1.39**	**71**	P	**Pn**	**13 15 38.3**	**-1.0**
FWVZ	**Far West T-bar**	**1.39**	**36**	P	**Pn**	**13 15 39.1**	**-0.5**
CPWZ	**Castlepoint**	**1.40**	**112**	P	**Pn**	**13 15 39.9**	**+0.5**
BSWZ	**Blackbirch Sta**	**1.41**	**199**		**Pn**	**13 15 39.7**	**+0.2**
BSWZ	**Blackbirch Sta**	**1.41**	**199**	P	**Pn**	**13 15 39.9**	**+0.3**
TUVZ	**Tukino**	**1.43**	**39**	P	**Pn**	**13 15 39.4**	**-0.5**
NGZ	**Ngauruhoe**	**1.48**	**35**	P	**Pn**	**13 15 39.8**	**-0.8**
SNVZ	**South Ngauruho**	**1.49**	**37**	P	**Pn**	**13 15 40.1**	**-0.6**
BHHZ	**Black Hill Sta**	**1.50**	**54**	P	**Pn**	**13 15 39.8**	**-0.9**
TWVZ	**Taurewa**	**1.50**	**29**	P	**Pn**	**13 15 39.9**	**-0.9**
ANWZ	**Angora Road**	**1.51**	**93**	P	**Pn**	**13 15 40.4**	**-0.4**
OTVZ	**Oturere**	**1.52**	**37**	P	**Pn**	**13 15 40.4**	**-0.7**
NNVZ	**North Ngauruho**	**1.52**	**35**	P	**Pn**	**13 15 40.2**	**-0.9**
WPHZ	**Waipukurau**	**1.52**	**78**	P	**Pn**	**13 15 40.3**	**-0.6**
WTVZ	**West Tongariro**	**1.52**	**34**	P	**Pn**	**13 15 40.2**	**-0.9**
ETVZ	**East Tongariro**	**1.56**	**37**	P	**Pn**	**13 15 40.8**	**-0.8**
QRZ	**Quartz Range**	**1.56**	**253**		**Pn**	**13 15 40.4**	**-1.0**
QRZ	**Quartz Range**	**1.56**	**253**	P	**Pn**	**13 15 40.6**	**-0.8**
KRVZ	**Karewarewa**	**1.56**	**35**	P	**Pn**	**13 15 40.7**	**-0.9**
TMVZ	**Te Maari**	**1.57**	**37**	P	**Pn**	**13 15 41.0**	**-0.7**
PRHZ	**Porangahau**	**1.64**	**86**	P	**Pn**	**13 15 41.9**	**-0.5**
MRNZ	**Matariki Terra**	**1.66**	**232**	P	**Pn**	**13 15 42.7**	**+0.1**
KATZ	**Kakaramea**	**1.69**	**34**	P	**Pn**	**13 15 42.9**	**-0.3**
KWHZ	**Kaweka Forest**	**1.77**	**58**	P	**Pn**	**13 15 45.0**	**+0.9**
RATZ	**Rangitukua**	**1.81**	**33**	P	**Pn**	**13 15 44.2**	**-0.5**
THZ	**Tophouse**	**1.83**	**221**		**Pn**	**13 15 44.8**	**0.0**
THZ	**Tophouse**	**1.83**	**221**	P	**Pn**	**13 15 44.9**	**0.0**
PXZ	**Pawanui**	**1.84**	**80**	P	**Pn**	**13 15 44.0**	**-1.0**
HIZ	**Hauiti**	**1.89**	**9**	P	**Pn**	**13 15 45.2**	**-0.4**
KAHZ	**Kahuranaki**	**1.92**	**73**	P	**Pn**	**13 15 45.0**	**-1.0**
WATZ	**Wairara**	**1.93**	**30**	P	**Pn**	**13 15 45.5**	**-0.6**
HATZ	**Hinemaiaia**	**1.94**	**40**	P	**Pn**	**13 15 47.5**	**+1.3**
BKZ	**Black Stump Fm**	**1.96**	**52**	P	**Pn**	**13 15 45.5**	**-1.1**
CKHZ	**Cape Kidnapper**	**2.11**	**71**	P	**Pn**	**13 15 47.3**	**-1.2**
MRHZ	**Matea Rd**	**2.15**	**44**	P	**Pn**	**13 15 47.0**	**-1.9**
KHZ	**Kahutara**	**2.15**	**199**		**Pn**	**13 15 49.0**	**0.0**
KHZ	**Kahutara**	**2.15**	**199**	P	**Pn**	**13 15 49.1**	**+0.2**
KUTZ	**Kaahu Road**	**2.16**	**29**	P	**Pn**	**13 15 48.3**	**-0.8**
NMHZ	**Naumai**	**2.20**	**55**	P	**Pn**	**13 15 48.6**	**-1.1**
TLZ	**Tolley Road**	**2.21**	**22**	P	**Pn**	**13 15 48.6**	**-1.2**
ARHZ	**Aropaoanui**	**2.23**	**61**	P	**Pn**	**13 15 48.4**	**-1.6**
ALRZ	**Allen Road**	**2.32**	**39**	P	**Pn**	**13 15 56.0**	**+4.9**
MTHZ	**Maungataniwha**	**2.37**	**50**	P	**Pn**	**13 15 51.0**	**-0.9**
PRRZ	**Plateau Road**	**2.39**	**38**	P	**Pn**	**13 15 51.7**	**-0.4**
HRRZ	**Handcock Road**	**2.43**	**35**	P	**Pn**	**13 15 55.0**	**+2.4**
DSZ	**Dennistoun Nort**	**2.45**	**235**	P	**Pn**	**13 15 52.2**	**-0.7**
RAHZ	**Arahi**	**2.48**	**54**	P	**Pn**	**13 15 58.0**	**+4.7**
WHHZ	**Waihua**	**2.48**	**59**	P	**Pn**	**13 15 56.7**	**+3.3**
RRRZ	**Republican Roa**	**2.58**	**48**	P	**Pn**	**13 15 59.3**	**+4.7**
MUGZ	**Mupara**	**2.60**	**43**	P	**Pn**	**13 15 52.9**	**-1.9**
RTZ	**Ruatahuna**	**2.61**	**48**	P	**Pn**	**13 15 53.4**	**-1.7**
SNGZ	**Shannon Statio**	**2.72**	**55**	P	**Pn**	**13 15 59.2**	**+2.7**
TOZ	**Tahuroa Road**	**2.77**	**17**	P	**Pn**	**13 15 56.2**	**-0.9**
GVZ	**Greta Valley S**	**2.80**	**203**	P	**Pn**	**13 15 57.0**	**-0.6**
KNZ	**Kokohu**	**2.80**	**62**	P	**Pn**	**13 15 55.1**	**-2.4**
LTZ	**Lake Taylor**	**2.92**	**214**		**Pn**	**13 15 58.0**	**-1.1**
LTZ	**Lake Taylor**	**2.92**	**214**	P	**Pn**	**13 15 58.2**	**-0.9**
URZ	**Urewera**	**2.94**	**44**	P	**Pn**	**13 15 56.6**	**-2.7**
	3.7nm,0.3s,baz=315,slow=5.3,SNR=14						
URZ				S	**Sn**	**13 16 30.6**	**-3.3**
	71nm,0.4s,baz=20,slow=22,SNR=25						
URZ	**Urewera**	**2.94**	**44**	Pn	**Pn**	**13 15 56.4**	**-3.0**
URZ	**Urewera**	**2.94**	**44**	P	**Pn**	**13 15 56.6**	**-2.7**
RAGZ	**Rawiri**	**2.94**	**51**	P	**Pn**	**13 16 02.1**	**+2.6**
TGRZ	**Tauranga**	**2.99**	**28**	P	**Pn**	**13 15 59.2**	**-0.8**
OPRZ	**Ohinepanea**	**3.00**	**33**	P	**Pn**	**13 15 59.0**	**-1.2**
RIGZ	**Rimuhau**	**3.03**	**57**	P	**Pn**	**13 15 58.4**	**-2.3**
AMCZ	**Amberley**	**3.11**	**206**	P	**Pn**	**13 16 00.6**	**-1.1**
MWZ	**Matawai**	**3.12**	**50**	P	**Pn**	**13 15 59.0**	**-2.8**
TKGZ	**Te Karaka**	**3.24**	**54**	P	**Pn**	**13 16 01.6**	**-1.9**
INZ	**Inchbonnie**	**3.27**	**223**	P	**Pn**	**13 16 02.9**	**-0.9**
MKAZ	**Moumakai**	**3.32**	**9**	P	**Pn**	**13 16 03.6**	**-0.9**
AWAZ	**Awhitu Peninsu**	**3.32**	**2**	P	**Pn**	**13 16 04.2**	**-0.3**
CNGZ	**Carnagh Statio**	**3.44**	**58**	P	**Pn**	**13 16 08.1**	**+1.9**
ETAZ	**East Tamaki Re**	**3.45**	**6**	P	**Pn**	**13 16 05.5**	**-0.7**
WTAZ	**Waiatarua**	**3.45**	**1**	P	**Pn**	**13 16 06.2**	**-0.1**
RUGZ	**Raukumara Rang**	**3.46**	**47**	P	**Pn**	**13 16 03.2**	**-3.2**
OXZ	**Oxford**	**3.46**	**211**	P	**Pn**	**13 16 04.3**	**-2.1**
TWGZ	**Tauwhareparae**	**3.49**	**52**	P	**Pn**	**13 16 04.8**	**-2.0**
OKCZ	**Okains Bay**	**3.50**	**197**	P	**Pn**	**13 16 05.5**	**-1.4**
EPAZ	**Eden Park BICE**	**3.51**	**3**	P	**Pn**	**13 16 07.0**	**-0.1**
HBAZ	**Herne Bay Bore**	**3.54**	**3**	P	**Pn**	**13 16 07.2**	**-0.2**
MQZ	**McQueen's Vall**	**3.59**	**202**	P	**Pn**	**13 16 05.8**	**-2.2**
RVAZ	**Riverhead Bore**	**3.61**	**1**	P	**Pn**	**13 16 08.0**	**-0.4**
WIAZ	**Waiheke Island**	**3.62**	**8**	P	**Pn**	**13 16 07.8**	**-0.8**
MBAZ	**Motutapu North**	**3.63**	**5**	P	**Pn**	**13 16 08.3**	**-0.3**
HAZ	**Te Kaha**	**3.67**	**45**	P	**Pn**	**13 16 05.8**	**-3.3**
AKCZ	**Akaroa Harbour**	**3.68**	**198**	P	**Pn**	**13 16 07.5**	**-1.8**
PUZ	**Puketiti**	**3.72**	**53**	P	**Pn**	**13 16 06.9**	**-3.1**
PKGZ	**Pakihiroa**	**3.74**	**49**	P	**Pn**	**13 16 07.2**	**-2.9**
KUZ	**Kuaotunu**	**3.76**	**15**	P	**Pn**	**13 16 09.0**	**-1.4**
RACZ	**Rakaia**	**3.77**	**207**	P	**Pn**	**13 16 08.5**	**-2.0**
ABAZ	**Army Bay**	**3.79**	**4**	P	**Pn**	**13 16 10.7**	**-0.1**
WVZ	**Waitaha Valley**	**3.89**	**225**	P	**Pn**	**13 16 12.8**	**+0.7**
WMGZ	**Waiomatatini S**	**3.98**	**51**	P	**Pn**	**13 16 10.2**	**-3.2**
WACZ	**Wakanui South**	**4.07**	**208**	P	**Pn**	**13 16 13.2**	**-1.3**
MXZ	**Matakaoa Point**	**4.09**	**48**	P	**Pn**	**13 16 18.3**	**+3.4**
RPZ	**Rata Peaks**	**4.20**	**217**	P	**Pn**	**13 16 15.0**	**-1.3**
	5.9nm,0.4s,baz=255,slow=1.5,SNR=10						
RPZ				S	**Sn**	**13 16 59.4**	**-4.9**
	35nm,0.4s,baz=235,slow=1.6,SNR=19						
RPZ	**Rata Peaks**	**4.20**	**217**	Pn	**Pn**	**13 16 16.1**	**-0.3**
RPZ	**Rata Peaks**	**4.20**	**217**	P	**Pn**	**13 16 15.9**	**-0.4**
GRZ	**Great Barrier**	**4.20**	**11**	P	**Pn**	**13 16 15.8**	**-0.6**
GCSZ	**Gaunt Creek Bo**	**4.27**	**225**	P	Pn	13 16 22.0	+4.7
WCZ	**Waipu Caves**	**4.44**	**358**	P	**Pn**	**13 16 19.5**	**-0.2**
FOZ	**Fox Glacier**	**4.70**	**226**	P	**Pn**	**13 16 21.3**	**-1.7**
TMZ	**Timaru**	**4.76**	**212**	P	**Pn**	**13 16 21.7**	**-2.2**
LBZ	**Lake Benmore**	**5.11**	**217**	Pn	**Pn**	**13 16 28.0**	**-0.7**
LBZ	**Lake Benmore**	**5.11**	**217**	P	**Pn**	**13 16 28.0**	**-0.7**
OUZ	**Omahuta**	**5.21**	**352**	P	**Pn**	**13 16 29.8**	**-0.3**
ODZ	**Otahua Downs**	**5.45**	**210**	Pn	**Pn**	**13 16 31.6**	**-1.7**
ODZ	**Otahua Downs**	**5.45**	**210**	P	**Pn**	**13 16 31.2**	**-2.0**
JCZ	**Jackson Bay**	**5.62**	**227**	P	**Pn**	**13 16 35.7**	**+0.1**
EAZ	**Earnscleugh**	**6.16**	**217**	P	**Pn**	**13 16 41.5**	**-1.4**
CTZ	**Chatham Island**	**7.41**	**120**	P	**Pn**	**13 16 58.9**	**-0.9**
AS31	**Alice Springs**	**37.87**	**284**	P	**P**	**13 22 21.7**	**-0.3**
AS31				IAmb	IAmb	13 22 49

AGPR	**Aguadilla, PR**	**1.54 272**⇑	*e*P	**Pn**	**13 43 16.9**	**+1.2**
AGPR	**Aguadilla, PR**	**1.54 272**		**Pn**	**13 43 16.7**	**+0.9**
AGPR	**Aguadilla, PR**	**1.54 272**		**Sn**	**13 43 37.6**	**-0.3**
AGPR	**Aguadilla, PR**	**1.54 272**	IAML		13 43 40.8	
	comp=N,3μm,0.4s					
AGPR			IAML		13 43 40.8	
	comp=E,4μm,0.2s					
AGPR	**Aguadilla, PR**	**1.54 272**⇑	*e*P	**Pn**	**13 43 16.9**	**+1.2**
AGPR			*e*S	**Sn**	**13 43 37.6**	**-0.3**
AGPR	**Aguadilla, PR**	**1.54 272**	*i* P	**Pn**	**13 43 17.0**	**+1.2**
AGPR			*e*S	**Sn**	**13 43 38.5**	**+0.6**
AGPR			IAML		13 43 42.9	
	comp=Z,2μm,0.2s					
MLPR	**Magueyes Islan**	**1.54 253**⇑	*e*P	**Pn**	**13 43 16.7**	**+0.9**
MLPR	**Magueyes Islan**	**1.54 253**	*e*S	**Sn**	**13 43 37.4**	**-0.6**
MLPR	**Magueyes Islan**	**1.54 253**		**Pn**	**13 43 16.5**	**+0.7**
MLPR	**Magueyes Islan**	**1.54 253**		**Sn**	**13 43 37.4**	**-0.6**
MLPR	**Magueyes Islan**	**1.54 253**	IAML		13 43 40.0	
	comp=E,1μm,0.5s					
MLPR			IAML		13 43 41.5	
	comp=N,1μm,0.6s					
PRSN	**Puerto Rico Se**	**1.58 263**⇑	*i* P	**Pn**	**13 43 17.6**	**+1.3**
PRSN	**Puerto Rico Se**	**1.58 263**	*e*S	**Sn**	**13 43 38.8**	**0.0**
PRSN	**Puerto Rico Se**	**1.58 263**		**Pn**	**13 43 17.4**	**+1.1**
PRSN	**Puerto Rico Se**	**1.58 263**		**Sn**	**13 43 38.8**	**0.0**
PRSN	**Puerto Rico Se**	**1.58 263**	IAML		13 43 42.2	
	comp=N,12μm,0.2s					
PRSN			IAML		13 43 42.3	
	comp=E,13μm,0.2s					
CRPR	**Cabo Rojo, PR**	**1.59 255**⇑	*e*P	**Pn**	**13 43 17.3**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.59 255**	Pn	**Pn**	**13 43 17.2**	**+0.9**
CRPR			IAML		13 43 42.4	
	comp=N,1μm,0.3s					
CRPR	**Cabo Rojo, PR**	**1.59 255**		**Sn**	**13 43 38.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.59 255**⇑	*e*P	**Pn**	**13 43 17.3**	**+0.9**
CRPR			*e*S	**Sn**	**13 43 38.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.59 255**	*i* P	**Pn**	**13 43 17.3**	**+0.9**
CRPR			*e*S	**Sn**	**13 43 39.0**	**+0.1**
CRPR			IAML		13 43 41.2	
	comp=Z,2μm,0.6s					
IDE	**Isla Desecheo**	**1.88 269**⇑	*e*P	**Pn**	**13 43 21.2**	**+1.4**
IDE	**Isla Desecheo**	**1.88 269**⇑	*e*P	**Pn**	**13 43 21.2**	**+1.4**
IDE			*e*S	**Sn**	**13 43 45.8**	**+0.8**
SMRT	**St. Maarten**	**2.33 99**⇑	*e*P	**Pn**	**13 43 26.2**	**+1.0**
SMRT	**St. Maarten**	**2.33 99**		**Pn**	**13 43 26.1**	**+0.8**
SMRT	**St. Maarten**	**2.33 99**		**Sn**	**13 43 53.8**	**-0.8**
SMRT	**St. Maarten**	**2.33 99**	IAML		13 43 54.5	
	comp=N,5μm,0.3s					
SMRT			IAML		13 43 54.6	
	comp=E,6μm,0.2s					
SMRT	**St. Maarten**	**2.33 99**⇑	*e*P	**Pn**	**13 43 26.2**	**+1.0**
SMRT	**St. Maarten**	**2.33 99**	*e*P	**Pn**	**13 43 26.3**	**+1.1**
SMRT			*e*S	**Sn**	**13 43 53.8**	**-0.8**
SMRT			*e*S	**Sn**	**13 43 54.0**	**-0.7**
SEUS	**St. Eustatius**	**2.56 111**		**Pn**	**13 43 29.2**	**+1.1**
SEUS			IAML		13 44 11.7	
	comp=N,845nm,0.5s					
SEUS			IAML		13 44 53.9	
	comp=E,617nm,0.2s					
PCDR	**Punta Cana, DR**	**2.74 272**⇑	*e*P	**Pn**	**13 43 32.5**	**+2.1**
PCDR	**Punta Cana, DR**	**2.74 272**	Pn	**Pn**	**13 43 32.4**	**+2.0**
PCDR			IAML		13 44 06.4	
	comp=E,535nm,0.8s					
PCDR			IAML		13 44 10.0	
	comp=N,795nm,0.8s					
PCDR	**Punta Cana, DR**	**2.74 272**⇑	*e*P	**Pn**	**13 43 32.5**	**+2.1**
PCDR			*e*S	**Sn**	**13 44 04.9**	**+1.0**
PCDR	**Punta Cana, DR**	**2.74 272**	*i* P	**Pn**	**13 43 32.6**	**+2.3**
PCDR			*e*S	**Sn**	**13 44 05.0**	**+1.1**
PCDR			IAML		13 44 12.5	
	comp=Z,506nm,0.5s					
MBFL	**Flemmings, Mon**	**3.54 117**	*e*P	**Pn**	**13 43 41.8**	**+1.0**
ANWB	**Willy Bob**	**3.61 101**	Pn	**Pn**	**13 43 41.3**	**-0.3**
ANWB			IAML		13 44 28.3	
	comp=Z,261nm,0.5s					
ANWB			IAML		13 44 29.2	
	comp=Z,245nm,0.6s					
ANWB	**Willy Bob**	**3.61 101**	*e*P	**Pn**	**13 43 41.0**	**-0.6**
ANWB			*e*S	**Sn**	**13 44 21.9**	**-2.1**
ANBD	**Bethesda, Anti**	**3.81 110**	*e*P	**Pn**	**13 43 44.2**	**0.0**
ANBD			*e*S	**Sn**	**13 44 27.6**	**-1.0**
GDHS	**Morne Mazeau,**	**4.15 120**		**Pn**	**13 43 49.5**	**+0.7**
GDHS			IAML		13 44 42.6	
	comp=N,462nm,0.6s					
LONA1	**Toro Cenizo, N**	**4.25 284**	*i* P	**Pn**	**13 43 52.0**	**+2.0**
LONA1			*e*S	**Sn**	**13 44 39.7**	**+0.6**
LONA1			IAML		13 44 42.6	
	comp=Z,939nm,0.9s					
ABD	**La Joyeuse, An**	**4.29 116**	Pn	**Pn**	**13 43 50.9**	**+0.4**
ABD			IAML		13 44 44.0	
	comp=E,167nm,0.4s					
ABD			IAML		13 44 47.6	
	comp=N,140nm,0.6s					
ABD	**La Joyeuse, An**	**4.29 116**	*e*P	**Pn**	**13 43 51.5**	**+1.0**
ABD	**La Joyeuse, An**	**4.29 116**	*e*S	**Sn**	**13 44 39.0**	**-1.0**
CBE	**Ff, Capester**	**4.39 122**		**Pn**	**13 43 53.1**	**+1.1**
CBE	**Ff, Capester**	**4.39 122**	*e*P	**Pn**	**13 43 53.6**	**+1.6**
CBE	**Ff, Capester**	**4.39 122**	*e*S	**Sn**	**13 44 41.1**	**-1.4**
TBG	**Guadaloupe-3**	**4.48 124**	*e*P	**Pn**	**13 43 54.0**	**+0.9**
TDBA	**Terre de Bas,**	**4.49 124**		**Pn**	**13 43 53.7**	**+0.5**
TDBA			IAML		13 45 01.1	
	comp=N,124nm,0.7s					
TDBA	**Terre de Bas,**	**4.49 124**	*e*P	**Pn**	**13 43 54.1**	**+0.9**
BANI	**BANI**	**4.62 270**	Pn	**Pn**	**13 43 51.2**	**-3.9**
BANI	**BANI**	**4.62 270**	*i* P	**Pn**	**13 43 51.3**	**-3.7**
BANI			*e*S	**Sn**	**13 44 44.0**	**-4.1**
BANI			IAML		13 44 48.7	
	comp=Z,216nm,1.0s					
MAGL	**Barre de l'ile**	**4.72 121**		**Pn**	**13 43 56.6**	**+0.3**
MAGL			IAML		13 45 02.1	
	comp=E,175nm,0.8s					
MAGL			IAML		13 45 05.2	
	comp=N,137nm,0.6s					
MAGL	**Barre de l'ile**	**4.72 121**	*e*P	**Pn**	**13 43 57.8**	**+1.5**
MAGL	**Barre de l'ile**	**4.72 121**	*e*S	**Sn**	**13 44 47.9**	**-2.4**
GDSD	**La Dsirade Is**	**4.72 116**		**Pn**	**13 43 55.9**	**-0.5**
GDSD			IAML		13 44 57.2	
	comp=N,92nm,0.3s					
GDSD			IAML		13 45 00.2	
	comp=E,68nm,0.7s					
MDCT	**Cottage Hill,**	**4.76 125**	*e*P	**Pn**	**13 43 58.0**	**+1.2**
MDVC	**Dominica, Viel**	**4.80 125**	*e*P	**Pn**	**13 43 58.7**	**+1.2**
MDVC	**Dominica, Viel**	**4.80 125**	*e*S	**Sn**	**13 44 49.9**	**-2.5**
DSLB	**Salisbury**	**4.90 127**	*e*P	**Pn**	**13 43 59.6**	**+0.9**
SC01	**Santiago de lo**	**5.05 282**		**Pn**	**13 44 03.0**	**+2.2**
SC01	**Santiago de lo**	**5.05 282**	*i* P	**Pn**	**13 44 03.6**	**+2.8**
SC01			*e*S	**Sn**	**13 44 59.0**	**+0.6**
SC01			IAML		13 45 04.8	
	comp=Z,269nm,0.3s					
SVN	**Savane Anatole**	**5.46 130**		**Pn**	**13 44 04.6**	**-1.7**
SDDR	**Presa de Saban**	**5.52 277**		**Pn**	**13 44 09.2**	**+2.1**
SDDR	**Presa de Saban**	**5.52 277**	*e*P	**Pn**	**13 44 09.0**	**+2.0**
SDDR	**Presa de Saban**	**5.52 277**	*i* P	**Pn**	**13 44 09.3**	**+2.2**
SDDR			*e*S	**Sn**	**13 45 10.2**	**+0.6**
SDDR			IAML		13 45 14.8	
	comp=Z,140nm,0.3s					
FDF	**Fort de France**	**5.55 131**	Pn	**Pn**	**13 44 06.2**	**-1.2**
BIM	**Bigot**	**5.75 132**		**Pn**	**13 44 09.6**	**-0.6**
BIM	**Bigot**	**5.75 132**	*e*P	**Pn**	**13 44 10.2**	**0.0**
MPOM	**Morne Pois Mar**	**5.95 131**	*e*P	**Pn**	**13 44 14.2**	**+1.4**
MPOM	**Morne Pois Mar**	**5.95 131**	*e*S	**Sn**	**13 45 22.0**	**+2.1**
LOPE2	**Hotel El Peder**	**5.95 267**	*i* P	**Pn**	**13 44 15.8**	**+3.0**
LOPE2			*e*S	**Sn**	**13 45 19.9**	**0.0**
LOPE2			IAML		13 45 32.4	
	comp=Z,74nm,0.6s					
GRTK	**Grand Turk**	**6.13 301**	Pn	**Pn**	**13 44 16.2**	**+1.0**
GRTK	**Grand Turk**	**6.13 301**	*i* P	**Pn**	**13 44 16.3**	**+1.1**
GRTK			*e*S	**Sn**	**13 45 20.9**	**-3.3**
GRTK			IAML		13 45 27.9	
	comp=Z,134nm,0.2s					
MCLT	**Moule a Chique**	**6.41 136**	Pn	**Pn**	**13 44 19.2**	**+0.2**
GTBY	**Guantanamo Bay**	**9.21 281**	Pn	**Pn**	**13 44 54.2**	**-2.4**
GTBY	**Guantanamo Bay**	**9.21 281**	*e*S	**Sn**	**13 46 32.4**	**-6.2**
GTBY			IAML		13 46 36.9	
	comp=Z,5.5nm,0.1s					
BAUV	**El Baul**	**9.74 195**	Pn	**Pn**	**13 45 01.6**	**-2.0**
OCAC	**Ocana**	**12.66 218**	*e*P	**P**	**13 45 51.2**	**+3.0**
PAMC	**Pamplona, Colo**	**13.06 213**	*e*P	**P**	**13 45 53.6**	**+0.7**
FSCY	**Frank Sound, G**	**14.88 276**	Pn	**Pn**	**13 46 08.9**	**-1.5**
HELC	**Santa Helena**	**15.60 220**	*e*P	**P**	**13 46 21.5**	**+0.3**
NORC	**Norcasia**	**15.72 217**	*e*P	**P**	**13 46 22.3**	**+0.2**
GUY2C	**Guyana, Caldas**	**16.28 218**	*e*P	**Pn**	**13 46 28.7**	**+0.5**

*IDC **17** 13:43:54.8±1.7, 39°.83N×20°.76E, h0km, mb3.4/3, mbtmp3.5/3, MS3.2/1, Error ellipse: s-maj=69.5km s-min=29.9km az=125.0*
*ATH **17** 13:43:57.9, 39°.77N×20°.70E, h14km±1km, ML2.8/18, Error ellipse: s-maj=1.6km s-min=0.9km az=326.0*
*THE **17** 13:43:58.3, 39°.77N×20°.72E, h12km±1km, ML2.9/7, Error ellipse: s-maj=1.5km s-min=0.6km az=290.0*
*BEO **17** 13:44:00.2±0.9, 39°.77N×20°.74E, h25km±5km, ML2.9/6*

ISC 17 13:43:57.9±0.8, 39°.76N±0°.02×20°.72E±0°.02, h15km±5km, n52, σ0°85/72, mb3.4/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**136**	P	**Pg**	**13 44 01.2**	**-0.6**
JAN				S	**Sg**	**13 44 04.3**	**0.0**
	9μm,0.2s						
JAN	**Janina**	**0.14**	**136**	P	**Pg**	**13 44 01.3**	**-0.5**
JAN				S	**Sg**	**13 44 04.8**	**+0.4**
JAN				AML	AML	13 44 05.5	
	comp=E,22369μm,0.4s						
JAN				AML	AML	13 44 06.0	
	comp=N,17552μm,0.3s						
IGT	**Igoumenitsa**	**0.38**	**233**	P	**Pg**	**13 44 05.5**	**0.0**
IGT				S	**Sg**	**13 44 11.8**	**+1.0**
	comp=N,3μm,0.2s						
IGT	**Igoumenitsa**	**0.38**	**233**	P	**Pg**	**13 44 05.3**	**-0.3**
IGT				S	**Sg**	**13 44 10.9**	**+0.1**
IGT				AML	AML	13 44 13.6	
	comp=E,5455μm,0.2s						
IGT				AML	AML	13 44 14.2	
	comp=N,5081μm,0.3s						
LSK	**Leskovik**	**0.40**	**347**	P	**Pg**	**13 44 06.4**	**+0.3**
LSK				S	**Sg**	**13 44 12.2**	**+0.6**
	comp=N,3μm,0.6s						
PENT	**Pentalofos**	**0.54**	**36**	P	**Pg**	**13 44 08.5**	**-0.1**
PENT				S	**Sb**	**13 44 16.9**	**+0.1**
PENT	**Pentalofos**	**0.54**	**36**	P	**Pg**	**13 44 08.6**	**-0.1**
PENT				S	**Sb**	**13 44 16.8**	**+0.1**
PENT				AML	AML	13 44 20.5	
	comp=E,3027μm,0.3s						
PENT				AML	AML	13 44 21.0	
	comp=N,906μm,0.5s						
SRN	**Sarande**	**0.57**	**283**	P	**Pg**	**13 44 08.9**	**-0.2**
SRN				S	**Sg**	**13 44 17.3**	**+0.6**
KASA	**Kassiopi**	**0.61**	**269**	P	**Pg**	**13 44 09.0**	**-0.8**
KASA				AML	AML	13 44 25.9	
	comp=N,1507μm,0.2s						
KASA				AML	AML	13 44 27.1	
	comp=E,1168μm,0.3s						
NEST	**Nestorio**	**0.70**	**21**	P	**Pg**	**13 44 11.5**	**-0.1**
NEST				S	**Sb**	**13 44 22.6**	**+1.3**
	comp=E,825nm,0.4s						
NEST	**Nestorio**	**0.70**	**21**	P	**Pg**	**13 44 11.4**	**-0.3**
NEST				S	**Sg**	**13 44 20.1**	**-0.8**
NEST				AML	AML	13 44 23.9	
	comp=N,1623μm,0.4s						
NEST				AML	AML	13 44 26.3	
	comp=E,2270μm,0.4s						
KEK	**Kerkira**	**0.71**	**267**	P	**Pg**	**13 44 10.9**	**-0.9**
KEK	**Kerkira**	**0.71**	**267**	P	**Pg**	**13 44 11.0**	**-0.8**
KEK				S	**Sg**	**13 44 21.2**	**-0.1**
KEK				AML	AML	13 44 26.2	
	comp=N,950μm,0.3s						
KEK				AML	AML	13 44 29.2	
	comp=E,773μm,0.5s						
TSLK	**Tsoukalades, L**	**0.93**	**183**	P	**Pb**	**13 44 16.3**	**+0.6**
TSLK				S	**Sn**	**13 44 30.5**	**+1.0**
	comp=E,762nm,0.4s						
TSLK	**Tsoukalades, L**	**0.93**	**183**	P	**Pb**	**13 44 15.3**	**-0.4**
TSLK				AML	AML	13 44 35.5	
	comp=E,1371μm,0.4s						
TSLK				AML	AML	13 44 36.1	
	comp=N,1565μm,0.4s						
LKD2	**Lefkada island**	**0.97**	**183**	P	**Pb**	**13 44 16.8**	**+0.5**
LKD2				S	**Sn**	**13 44 30.9**	**+0.5**
	comp=N,542nm,0.6s						
LKD2	**Lefkada island**	**0.97**	**183**	P	**Pb**	**13 44 16.2**	**-0.1**
LKD2				AML	AML	13 44 41.9	
	comp=N,1070μm,0.7s						
LKD2				AML	AML	13 44 42.9	
	comp=E,981μm,0.6s						
KZN	**Kozani**	**0.97**	**55**	P	**Pb**	**13 44 16.1**	**-0.4**
KZN				S	**Sn**	**13 44 30.4**	**-0.2**
	comp=E,942nm,0.7s						
KZN	**Kozani**	**0.97**	**55**	P	**Pb**	**13 44 15.9**	**-0.6**
KZN				AML	AML	13 44 31.0	
	comp=E,2503μm,0.6s						
KZN				AML	AML	13 44 31.3	
	comp=N,1316μm,0.9s						
THL	**Klokotos Trika**	**1.02**	**101**	P	**Pb**	**13 44 16.5**	**-0.6**
THL				AML	AML	13 44 34.4	
	comp=E,615μm,0.7s						
THL				AML	AML	13 44 37.7	
	comp=N,657μm,0.6s						
EVGI	**Lefkada island**	**1.14**	**183**	P	**Pb**	**13 44 19.7**	**+0.5**
EVR	**Evrytania**	**1.19**	**135**	P	**Pn**	**13 44 19.6**	**-0.4**
EVR				AML	AML	13 44 42.0	
	comp=E,1023μm,0.7s						
EVR				AML	AML	13 44 45.4	
	comp=N,1200μm,0.6s						
PVO	**Paravola**	**1.30**	**151**	P	**Pn**	**13 44 22.2**	**+0.7**
FSK	**Fiskardo**	**1.30**	**186**	P	**Pb**	**13 44 22.7**	**+0.7**
FSK				S	**Sb**	**13 44 39.2**	**+0.7**
FSK				AML	AML	13 44 45.3	
	comp=E,693μm,0.2s						
FSK				AML	AML	13 44 48.1	
	comp=N,501μm,0.4s						
OHR	**Ohrid**	**1.35**	**2**	*e*Pg	**Pg**	**13 44 24.5**	**+0.6**
OHR				*e*Sg	**Sg**	**13 44 42.9**	**+1.3**
OHR	**Ohrid**	**1.35**	**2**	*i* Pn	**Pg**	**13 44 24.2**	**+0.3**
LIT	**Litokhoron**	**1.40**	**75**	P	**Pn**	**13 44 23.1**	**+0.3**
LIT				AML	AML	13 44 50.6	
	comp=E,953μm,0.4s						
LIT				AML	AML	13 44 51.1	
	comp=N,922μm,0.6s						
VLS	**Valsamata**	**1.58**	**184**	P	**Pn**	**13 44 26.3**	**+0.9**
EFP	**Efpalio**	**1.62**	**145**	P	**Pb**	**13 44 27.8**	**+0.4**
EFP				AML	AML	13 45 00.1	
	comp=N,607μm,0.5s						
EFP				AML	AML	13 45 02.2	
	comp=E,805μm,0.9s						
PSDA	**Pessada-Kefalo**	**1.65**	**184**	P	**Pn**	**13 44 26.4**	**+0.3**
SERG	**Sergoula**	**1.70**	**142**	P	**Pb**	**13 44 29.5**	**+0.7**
SERG				AML	AML	13 45 00.3	
	comp=E,512μm,0.5s						
SERG				AML	AML	13 45 03.6	
	comp=N,766μm,0.7s						
TIR	**Tirane**	**1.72**	**338**	*e*Pn	**Pb**	**13 44 29.2**	**+0.1**
TIR				*e*Sn	**Sb**	**13 44 50.3**	**-0.1**
SCTE	**Santa Cesarea**	**1.76**	**281**	P	**Pn**	**13 44 27.7**	**0.0**
AXAR	**Agios Charalam**	**1.80**	**123**	P	**Pb**	**13 44 31.0**	**+0.5**
AXAR				AML	AML	13 45 01.5	
	comp=E,795μm,0.5s						
AXAR				AML	AML	13 45 07.5	
	comp=N,667μm,0.4s						
LAKA	**Lakka**	**1.81**	**147**	P	**Pn**	**13 44 29.8**	**+1.4**
LAKA				AML	AML	13 45 04.8	
	comp=E,215μm,0.5s						
LAKA				AML	AML	13 45 11.5	
	comp=N,214μm,0.9s						
KLV	**Kalavryta, Ach**	**2.04**	**146**	P	**Pb**	**13 44 34.3**	**-0.4**
KLV				AML	AML	13 45 11.9	
	comp=E,186μm,0.7s						
KLV				AML	AML	13 45 17.0	
	comp=N,190μm,0.9s						
VAY	**Valandovo**	**2.10**	**41**	*e*Pn	**Pn**	**13 44 33.1**	**+0.6**
VAY				*e*Sn	**Sn**	**13 44 59.4**	**+1.1**
VAY	**Valandovo**	**2.10**	**41**	*i* Pn	**Pb**	**13 44 34.8**	**-0.8**
SRS	**Serrai**	**2.58**	**57**	*e*Pn	**Pn**	**13 44 40.1**	**+1.1**
SRS				*e*Sn	**Sn**	**13 45 10.4**	**+0.4**
BARS	**Barje**	**3.16**	**15**	*e*Pn	**Pn**	**13 44 49.4**	**+2.3**
BARS				*e*Sn	**Sn**	**13 45 25.0**	**+0.5**
SELS	**Selova**	**3.47**	**5**	*e*Pn	**Pn**	**13 44 52.4**	**+1.1**
SJES	**Sjenica**	**3.54**	**351**	*e*Pn	**Pn**	**13 44 53.4**	**+1.0**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**13 44 57.9**	**+2.1**
BOVS	**Bovan**	**3.94**	**10**	*e*Pn	**Pn**	**13 44 59.1**	**+1.4**
GRUS	**Gruza**	**4.13**	**360**	*e*Pn	**Pn**	**13 45 02.0**	**+1.7**
ZAGS	**Zajecar**	**4.21**	**15**	*e*Pn	**Pn**	**13 45 02.3**	**+0.9**
BBLS	**Lazići**	**4.22**	**347**	*e*Pn	**Pn**	**13 45 02.5**	**+0.9**
DIVS	**Divibare**	**4.37**	**353**	*e*Pn	**Pn**	**13 45 04.2**	**+0.5**
DIVS				*e*Sn	**Sn**	**13 45 52.5**	**-1.9**
FINES	**FINESS Array B**	**21.96**	**7**	P	**P**	**13 48 49.0**	**-1.7**
	comp=N,0.9nm,0.6s,baz=186,slow=12,SNR=4.2						
	comp=N,0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**13 50 17.8**	**-0.1**
	comp=N,0.2nm,0.4s,baz=23,slow=7.8,SNR=2.5						
	comp=N,0.2nm,0.4s						
WSAR	**Wadi Sarin**	**35.97**	**106**	LR	LR	14 09 01.0	
	comp=N,30nm,18.2s,baz=6.5,slow=42						
MKAR	**Makanchi Array**	**44.36**	**60**	P	**P**	**13 52 06.1**	**-1.3**
	comp=N,0.4nm,0.5s,baz=284,slow=7.4,SNR=5.7						
	comp=N,0.4nm,0.5s						

IDC 17 13:44:04.5±2.2, 0°.30N×126°.35E, h0km, mb3.1/3, mbtmp3.1/3, MS2.8/1, Error ellipse: s-maj=185.5km s-min=28.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.58**	**159**	P	P	13 48 57.8	+1.8
	1.1nm,0.7s,baz=338,slow=11,SNR=15						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**24.93**	**163**	P	P	13 49 28.0	-1.6
	0.2nm,0.8s,baz=338,slow=7.1,SNR=5.0						
	0.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.41**	**305**	LR	LR	14 04 29.5	
	comp=Z,16nm,20.6s,baz=270,slow=38						
MKAR	**Makanchi Array**	**60.17**	**327**	P	P	13 54 14.2	+0.1
	0.1nm,0.3s,baz=119,slow=9.7,SNR=1.2						
	0.1nm,0.3s						

IDC 17 14:42:12.7±3.4, 32°.74S×178°.22W, h0km, mb3.7/3, mbtmp3.8/4, ML2.9/1, MS2.8/1, Error ellipse: s-maj=70.0km s-min=38.0km az=112.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.70**	**213**	Pn	Pn	14 43 52.9	+0.7
	0.3nm,0.3s,baz=23,slow=7.7,SNR=2.7						
URZ				Sn	Sn	14 45 07.6	-1.7
	0.7nm,0.3s,baz=317,slow=5.7,SNR=7.1						
	12nm,1.1s						
AFI	**Afiamalu**	**19.64**	**19**	LR	LR	14 54 39.5	
	comp=Z,27nm,18.7s,baz=102,slow=38						
CTA	**Charters Tower**	**34.06**	**283**	P	P	14 48 59.8	+0.9
	2.7nm,0.9s,baz=107,slow=11,SNR=2.4						
	2.7nm,0.9s						
ASAR	**Alice Springs**	**42.85**	**270**	P	P	14 50 12.6	-0.3
	0.5nm,0.7s,baz=107,slow=7.6,SNR=9.5						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**44.05**	**275**	P	P	14 50 22.1	-0.4
	0.6nm,0.6s,baz=114,slow=7.9,SNR=12						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**147.26**	**339**	PKPbc	PKPbc	15 01 56.2	-1.0
	1.1nm,0.7s,baz=46,slow=6.0,SNR=1.7						

*IDC **17** 14:54:22.1±1.8, 33°.69N×141°.59E, h0km, mb3.9/5, mbtmp4.0/7, ML4.1/2, MS2.8/3, Error ellipse: s-maj=46.7km s-min=18.7km az=66.0*
*JMA **17** 14:54:28.4±0.2, 33°.8N±0°.5×14°.1E±°, h62km±3km, MV3.7/37, E OFF HACHIJOJIMA ISLAND*
*NEIC **17** 14:54:28.7±0.4, 33°.67N±0°.03×141°.3E±0°.1, h41km±11km, mb4.2/6, Error ellipse: s-maj=15.9km s-min=1.8km az=105.0*
*NIED **17** 14:54:28.4, 33°.75N×141°.23E, h62km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; M_{rr}=4.23; $M_{\theta\theta}$=0.66; $M_{\phi\phi}$=-4.89; $M_{r\theta}$=-1.14; $M_{\theta\phi}$=-0.37; $M_{\phi r}$=-4.00; Fault plane solution: M_0=6.19000×10^14^ NP1: ϕ_s=353.00000°, δ=25.00000°, λ=72.00000°. NP2: ϕ_s=193.00000°, δ=66.00000°, λ=98.00000°.*

ISC 17 14:54:27.8±0.9, 33°.64N±0°.05×141°.37E±0°.07, h41km, n42, σ1§18/53, mb3.9/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.06**	**342**	P	**Pn**	**14 54 45.6**	**-0.1**
BSO1				*e*S	**Sn**	**14 54 58.8**	**-0.3**
BSO3	**Boso 3**	**1.36**	**329**	P	**Pn**	**14 54 49.8**	**-0.3**
JHJ2	**Mitsune**	**1.40**	**248**		**Pn**	**14 54 51.2**	**+0.3**
JHJ2	**Mitsune**	**1.40**	**248**	P	**Pn**	**14 54 51.3**	**+0.5**
JHJ2				*e*S	**Sn**	**14 55 08.0**	**-0.1**
JHJ	**Hachijo jima 2**	**1.43**	**249**	Pn	**Pn**	**14 54 51.4**	**+0.2**
	179nm,0.3s,baz=280,slow=19,SNR=79						
JHJ				Sn	**Sn**	**14 55 07.7**	**-1.1**
	297nm,0.3s,baz=110,slow=23,SNR=21						
JHCJ	**Hachijojimakas**	**1.43**	**247**	P	**Pn**	**14 54 51.6**	**+0.3**
JHCJ				*e*S	**Sn**	**14 55 08.4**	**-0.5**
JMKN	**Mikurajimanish**	**1.50**	**280**	P	**Pn**	**14 54 52.0**	**-0.2**
JMKN				*e*S	**Sn**	**14 55 09.5**	**-1.2**
JMYK	**Miyake Tsubota**	**1.57**	**286**	*e*P	**Pn**	**14 54 52.8**	**-0.4**
JMYK				*e*S	**Sn**	**14 55 10.8**	**-1.6**
BSO4	**Boso 4**	**1.60**	**328**	*e*P	**Pn**	**14 54 53.4**	**0.0**
JAOM	**Aogashimamukai**	**1.79**	**229**	*e*P	**Pn**	**14 54 57.2**	**+1.0**
JIM2	**Oshima 3**	**1.94**	**304**	P	**Pn**	**14 54 57.2**	**-1.0**
JKO	**Kozu shima**	**1.94**	**287**	P	**Pn**	**14 54 57.9**	**-0.3**
JKO				*e*S	**Sn**	**14 55 19.7**	**-1.6**
JTHY	**Toshimahigashi**	**1.94**	**298**	P	**Pn**	**14 54 58.1**	**-

mbtmp3.9/6, MS3.1/8, Error ellipse: s-maj=79.8km s-min=36.7km az=137.0
*NEIC **17** 15:04:55.2±0.4, 53°.4S±0°.2×24°.9E±0°.5, h10km±1km, mb4.2/6, Error ellipse: s-maj=47.1km s-min=25.6km az=266.0*
ISC 17 15:04:55.1±1.3, **53°.3S**±0°.2×**25°.2E**±0°.3, **h10**km, **n17**, σ1§**07**/13, **mb4.0**/8, **MS2.9**/8, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**21.13**	**350**	LR	LR	15 16 11.7	
	comp=Z,50nm,21.4s,baz=158,slow=32						
SNAA	**Sanae**	**22.14**	**203**	P	**P**	**15 09 52.6**	**+2.0**
	4.6nm,1.0s,baz=45,slow=8.9,SNR=8.2						
SNAA				LR	LR	15 16 03.0	
	comp=Z,28nm,21.7s,baz=9.0,slow=30						
	4.6nm,1.0s						
SNAA	**Sanae**	**22.14**	**203**	P	**P**	**15 09 49.0**	**-1.5**
SNAA				IAmb	IAmb	15 09 56.9	
	comp=Z,11nm,1.2s						
MAW	**Mawson**	**22.96**	**143**	P	**P**	**15 09 58.9**	**-0.3**
	comp=Z,4.6nm,1.1s,baz=270,slow=12,SNR=6.8						
MAW				LR	LR	15 16 56.7	
	comp=Z,31nm,21.4s,baz=309,slow=32						
	comp=Z,4.6nm,1.1s						
MAW	**Mawson**	**22.96**	**143**	P	**P**	**15 09 58.4**	**-0.9**
BOSA	**Boshof**	**24.65**	**0**	LR	LR	15 18 01.3	
	comp=Z,34nm,20.4s,baz=192,slow=32						
BOSA	**Boshof**	**24.65**	**0**	P	**P**	**15 10 15.5**	**-0.4**
BOSA				IAmb	IAmb	15 10 19.2	
	comp=Z,18nm,1.5s						
LBTB	**Lobatse**	**28.23**	**1**	LR	LR	15 19 59.8	
	comp=Z,32nm,21.6s,baz=184,slow=32						
QSPA	**South Pole Qui**	**36.94**	**180**	P	**P**	**15 12 03.2**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=219,slow=2.6,SNR=5.8						
QSPA				LR	LR	15 26 12.8	
	comp=Z,40nm,19.4s,baz=236,slow=35						
	comp=Z,2.4nm,1.0s						
QSPA	**South Pole Qui**	**36.94**	**180**	P	**P**	**15 12 03.2**	**-0.8**
QSPA				IAmb	IAmb	15 12 25.2	
	comp=Z,5.9nm,1.2s						
VNDA	**Vanda**	**46.72**	**168**	P	**P**	**15 13 24.4**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=226,slow=13,SNR=4.1						
VNDA				LR	LR	15 32 05.7	
	comp=Z,34nm,20.4s,baz=288,slow=35						
	comp=Z,0.7nm,0.8s						
DBIC	**Dimbokro**	**64.92**	**327**	LR	LR	15 38 33.2	
	comp=Z,18nm,19.2s,baz=180,slow=31						
ASAR	**Alice Springs**	**81.80**	**119**	P	**P**	**15 17 15.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=209,slow=5.6,SNR=7.9						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**81.80**	**119**	P	**P**	**15 17 14.7**	**+0.3**
AS31	**Alice Springs**	**81.80**	**119**	P	**P**	**15 17 14.5**	**+0.2**
AS31				IAmb	IAmb	15 17 30.2	
	comp=Z,2.2nm,1.5s						
WRA	**Warramunga Arr**	**85.07**	**117**	P	**P**	**15 17 31.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=200,slow=3.8,SNR=5.8						
	comp=Z,0.9nm,0.8s						
WB2	**Warramunga Arr**	**85.08**	**117**	P	**P**	**15 17 32.2**	**+1.0**

IDC 17 15:23:53.4±7.5, **31°.33S**×**178°.07W**, **h0**km, **mb3.2**/2, **mbtmp3.2**/2, **Error ellipse: s-maj=320.5km s-min=58.8km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.01**	**268**	P	P	15 31 55.1	+0.3
	0.4nm,1.0s,baz=112,slow=7.3,SNR=3.0						
	0.4nm,1.0s						
WRA	**Warramunga Arr**	**44.08**	**273**	P	P	15 32 02.8	-0.7
	0.2nm,0.4s,baz=114,slow=6.9,SNR=7.3						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**145.99**	**339**	PKPbc	PKPdf	15 43 33.7	+0.1
	1.4nm,0.7s,baz=69,slow=4.6,SNR=5.3						

*NOU **17** 15:27:04.9, 36°.95S×179°.85W, h0km, MLv4.4/8, East of North Island, N.Z.*
*WEL **17** 15:27:14.8±2.8, 37°.S±.9°×17°.9E±1°.5, h5km±11km, M3.7/18, ML3.9/19, MLv3.7/18, Error ellipse: s-maj=0.0km s-min=0.0km az=62.7*
ISC 17 15:27:10.2±2.8, **36°.95S**±0°.07×**179°.5E**±0°.1, **h2**km±12km, **n106**, σ1§**47**/112, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.11**	**236**	P	**Pg**	**15 27 32.0**	**+0.5**
MXZ				S	**Sg**	**15 27 44.9**	**-1.0**
MXZ	**Matakaoa Point**	**1.11**	**236**	P	**Pb**	**15 27 32.5**	**+0.3**
WMGZ	**Waiomatatini S**	**1.21**	**224**	P	**Pn**	**15 27 36.6**	**+2.4**
WMGZ				S	**Sn**	**15 27 51.1**	**0.0**
PKGZ	**Pakihiroa**	**1.45**	**229**	P	**Pg**	**15 27 38.3**	**+0.3**
PKGZ				S	**Sb**	**15 27 56.6**	**-0.4**
PUZ	**Puketiti**	**1.48**	**220**	P	**Pg**	**15 27 40.0**	**+1.5**
PUZ				S	**Sn**	**15 27 57.4**	**-0.4**
HAZ	**Te Kaha**	**1.57**	**238**	P	**Pn**	**15 27 38.6**	**-0.4**
HAZ				S	**Sn**	**15 27 59.8**	**-0.2**
TWGZ	**Tauwhareparae**	**1.70**	**223**	P	**Pg**	**15 27 43.2**	**+0.3**
RUGZ	**Raukumara Rang**	**1.75**	**234**	P	**Pb**	**15 27 43.4**	**+0.2**
CNGZ	**Carnagh Statio**	**1.83**	**213**	P	**Pg**	**15 27 45.6**	**+0.3**
WIZ	**White Island**	**1.91**	**252**	P	**Pn**	**15 27 44.2**	**+0.4**
TKGZ	**Te Karaka**	**1.97**	**220**	P	**Pb**	**15 27 46.4**	**-0.4**
TKGZ				S	**Sn**	**15 28 09.5**	**-0.3**
MWZ	**Matawai**	**2.07**	**227**	P	**Pb**	**15 27 48.0**	**-0.6**
WHRZ	**Whale Island**	**2.18**	**245**	P	**Pb**	**15 27 49.4**	**-1.1**
RIGZ	**Rimuhau**	**2.21**	**217**	P	**Pb**	**15 27 49.9**	**-1.1**
RAGZ	**Rawiri**	**2.24**	**226**	P	**Pb**	**15 27 50.4**	**-1.1**
URZ	**Urewera**	**2.28**	**234**	P	**Pn**	**15 27 50.4**	**+1.5**
URZ	**Urewera**	**2.28**	**234**	P	**Pb**	**15 27 50.8**	**-1.4**
MARZ	**Manawahe**	**2.45**	**244**	P	**Pn**	**15 27 52.8**	**+1.5**
OPRZ	**Ohinepanea**	**2.49**	**248**	P	**Pn**	**15 27 52.8**	**+1.0**
SNGZ	**Shannon Statio**	**2.49**	**222**	P	**Pn**	**15 27 53.3**	**+1.6**
KNZ	**Kokohu**	**2.51**	**214**	P	**Pn**	**15 27 53.2**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.52**	**209**	P	**Pn**	**15 27 54.3**	**+2.1**
RTZ	**Ruatahuna**	**2.58**	**229**	P	**Pn**	**15 27 54.7**	**+1.6**
MYRZ	**Mayor Island**	**2.60**	**262**	P	**Pn**	**15 27 54.4**	**+1.1**
MUGZ	**Murupara**	**2.63**	**234**	P	**Pn**	**15 27 55.1**	**+1.4**
TGRZ	**Tauranga**	**2.67**	**252**	P	**Pn**	**15 27 55.4**	**+1.1**
TARZ	**Mount Tarawera**	**2.68**	**240**	P	**Pn**	**15 27 56.4**	**+1.9**
OMRZ	**Omania**	**2.72**	**244**	P	**Pn**	**15 27 57.3**	**+2.4**
RAHZ	**Arahi**	**2.72**	**223**	P	**Pn**	**15 27 56.6**	**+1.6**
RRRZ	**Republican Roa**	**2.72**	**238**	P	**Pn**	**15 27 56.6**	**+1.6**
WHHZ	**Waihua**	**2.76**	**219**	P	**Pn**	**15 27 57.0**	**+1.5**
KARZ	**Kaharoa**	**2.78**	**246**	P	**Pn**	**15 27 57.2**	**+1.5**
HLRZ	**Highlands Stat**	**2.79**	**241**	P	**Pn**	**15 27 55.2**	**-0.8**
MTHZ	**Maungataniwha**	**2.82**	**227**	P	**Pn**	**15 27 58.0**	**+1.7**
UTU	**Utuhina**	**2.88**	**244**	P	**Pb**	**15 28 00.8**	**-1.5**
PRRZ	**Plateau Road**	**2.89**	**237**	P	**Pn**	**15 27 58.6**	**+1.3**
HSRZ	**Hossack Road**	**2.90**	**241**	P	**Pn**	**15 27 59.8**	**+2.4**
HRRZ	**Handcock Road**	**2.91**	**239**	P	**Pn**	**15 27 59.3**	**+1.7**
ALRZ	**Allen Road**	**2.95**	**236**	P	**Pn**	**15 27 59.5**	**+1.4**
NMHZ	**Naumai**	**3.00**	**224**	P	**Pn**	**15 28 00.6**	**+1.7**
GRRZ	**Galatos Road**	**3.01**	**241**	P	**Pn**	**15 28 01.1**	**+2.1**
KUZ	**Kuaotunu**	**3.01**	**273**	P	**Pn**	**15 27 57.8**	**-1.2**
ARHZ	**Aropaoanui**	**3.02**	**219**	P	**Pn**	**15 28 00.5**	**+1.4**
WPRZ	**Whakapapatarin**	**3.05**	**238**	P	**Pn**	**15 28 01.5**	**+1.9**
MRHZ	**Matea Rd**	**3.06**	**231**	P	**Pn**	**15 28 00.7**	**+1.0**
BKZ	**Black Stump Fm**	**3.23**	**226**	P	**Pn**	**15 28 03.1**	**+1.1**
BKZ	**Black Stump Fm**	**3.23**	**226**	P	**Pn**	**15 28 03.4**	**+1.4**
TOZ	**Tahuroa Road**	**3.25**	**255**	P	**Pn**	**15 28 01.6**	**-0.7**
KUTZ	**Kaahu Road**	**3.27**	**241**	P	**Pn**	**15 28 04.2**	**+1.6**
CKHZ	**Cape Kidnapper**	**3.29**	**214**	P	**Pn**	**15 28 03.5**	**+0.6**
GRZ	**Great Barrier**	**3.30**	**281**	P	**Pn**	**15 28 04.1**	**+1.2**
KWHZ	**Kaweka Forest**	**3.44**	**223**	P	**Pn**	**15 28 05.8**	**+0.8**
MKAZ	**Moumakai**	**3.45**	**266**	P	**Pn**	**15 28 04.3**	**-0.6**
WIAZ	**Waiheke Island**	**3.48**	**271**	P	**Pn**	**15 28 05.4**	**0.0**
RATZ	**Rangitukua**	**3.49**	**236**	P	**Pn**	**15 28 07.5**	**+1.9**
KAHZ	**Kahuranaki**	**3.50**	**215**	P	**Pn**	**15 28 06.1**	**+0.4**
ETAZ	**East Tamaki Re**	**3.64**	**269**	P	**Pn**	**15 28 07.7**	**+0.2**
MBAZ	**Motutapu North**	**3.67**	**271**	P	**Pn**	**15 28 09.0**	**+1.1**
TMVZ	**Te Maari**	**3.68**	**233**	P	**Pn**	**15 28 09.1**	**+0.9**
ETVZ	**East Tongariro**	**3.68**	**232**	P	**Pn**	**15 28 09.1**	**+0.8**
BHHZ	**Black Hill Sta**	**3.69**	**226**	P	**Pn**	**15 28 09.2**	**+0.8**
PXZ	**Pawanui**	**3.69**	**213**	P	**Pn**	**15 28 08.0**	**-0.3**
KRVZ	**Karewarewa**	**3.70**	**233**	P	**Pn**	**15 28 10.1**	**+1.5**
OTVZ	**Oturere**	**3.73**	**232**	P	**Pn**	**15 28 10.5**	**+1.5**
ABAZ	**Army Bay**	**3.74**	**274**	P	**Pn**	**15 28 09.2**	**+0.3**
NNVZ	**North Ngauruho**	**3.74**	**233**	P	**Pn**	**15 28 10.6**	**+1.5**
WTVZ	**West Tongariro**	**3.75**	**234**	P	**Pn**	**15 28 10.7**	**+1.5**
SNVZ	**South Ngauruho**	**3.76**	**232**	P	**Pn**	**15 28 10.9**	**+1.5**
NGZ	**Ngauruhoe**	**3.77**	**233**	P	**Pn**	**15 28 10.4**	**+0.8**
EPAZ	**Eden Park BICE**	**3.79**	**270**	P	**Pn**	**15 28 11.5**	**+1.9**
TUVZ	**Tukino**	**3.80**	**231**	P	**Pn**	**15 28 10.5**	**+0.7**
HBAZ	**Herne Bay Bore**	**3.80**	**270**	P	**Pn**	**15 28 12.1**	**+2.3**
MOVZ	**Moawhango**	**3.82**	**229**	P	**Pn**	**15 28 10.7**	**+0.5**
TWVZ	**Taurewa**	**3.82**	**235**	P	**Pn**	**15 28 10.1**	**-0.1**
WHVZ	**Whangaehu Hut**	**3.84**	**232**	P	**Pn**	**15 28 11.7**	**+1.0**
FWVZ	**Far West T-bar**	**3.85**	**232**	P	**Pn**	**15 28 11.8**	**+1.1**
AWAZ	**Awhitu Peninsu**	**3.86**	**267**	P	**Pn**	**15 28 10.8**	**+0.2**
WNVZ	**Wahianoa**	**3.87**	**231**	P	**Pn**	**15 28 11.5**	**+0.7**
TRVZ	**Turoa**	**3.88**	**232**	P	**Pn**	**15 28 12.0**	**+0.8**
WPHZ	**Waipukurau**	**3.91**	**216**	P	**Pn**	**15 28 11.4**	**0.0**
PNHZ	**Pukenui**	**3.92**	**220**	P	**Pn**	**15 28 11.0**	**-0.5**
WTAZ	**Waiatarua**	**3.92**	**269**	P	**Pn**	**15 28 12.6**	**+1.1**
RVAZ	**Riverhead Bore**	**3.92**	**271**	P	**Pn**	**15 28 12.0**	**+0.5**
HIZ	**Hauiti**	**3.98**	**245**	P	**Pn**	**15 28 14.5**	**+2.3**
HIZ	**Hauiti**	**3.98**	**245**	P	**Pn**	**15 28 14.7**	**+2.5**
MTVZ	**Mangateitei**	**3.98**	**231**	P	**Pn**	**15 28 13.6**	**+1.3**
PKVZ	**Pokaka**	**4.00**	**233**	P	**Pn**	**15 28 14.0**	**+1.3**
TSZ	**Takapari Road**	**4.15**	**220**	P	**Pn**	**15 28 13.8**	**-0.8**
WCZ	**Waipu Caves**	**4.25**	**282**	P	**Pn**	**15 28 16.4**	**+0.4**
VRZ	**Vera Road**	**4.31**	**238**	P	**Pn**	**15 28 18.7**	**+2.0**
POWZ	**Post Office Ro**	**4.49**	**219**	P	**Pn**	**15 28 20.1**	**+0.8**
WAZ	**Wanganui**	**4.50**	**230**	P	**Pn**	**15 28 20.4**	**+0.9**
PRWZ	**Pori Road**	**4.52**	**216**	P	**Pn**	**15 28 19.6**	**-0.1**
LREZ	**Lake Rotokare**	**4.71**	**236**	P	**Pn**	**15 28 24.6**	**+2.3**
PREZ	**Palmer Road**	**4.82**	**239**	P	**Pn**	**15 28 27.1**	**+3.2**
NEZ	**North Egmont**	**4.83**	**240**	P	**Pn**	**15 28 27.1**	**+3.1**
PKE	**Pukeiti**	**4.87**	**241**	P	**Pn**	**15 28 28.3**	**+3.8**
KHEZ	**Kahui Hut**	**4.90**	**240**	P	**Pn**	**15 28 28.2**	**+3.3**
KHEZ	**Kahui Hut**	**4.90**	**240**	P	**Pn**	**15 28 27.9**	**+3.0**
	247nm,1.9s						
NBEZ	**Newall Road No**	**4.99**	**241**	P	**Pn**	**15 28 29.9**	**+3.8**
OUZ	**Omahuta**	**5.06**	**288**	P	**Pn**	**15 28 28.0**	**+0.9**
OUZ	**Omahuta**	**5.06**	**288**	P	**Pn**	**15 28 28.7**	**+1.6**
	28nm,0.6s						
TKNZ	**Takaka Hill**	**6.50**	**229**	P	**Pn**	**15 28 46.4**	**-0.6**
QRZ	**Quartz Range**	**6.65**	**232**	P	**Pn**	**15 28 47.8**	**-1.2**
QRZ	**Quartz Range**	**6.65**	**232**	P	**Pn**	**15 28 48.0**	**-1.0**
	33nm,1.6s						
KHZ	**Kahutara**	**7.12**	**218**	P	**Pn**	**15 28 54.2**	**-1.2**

IDC 17 15:35:55.5±5.6, **6°.91S**×**129°.45E**, **h126**km±71km, **mb2.8**/1, **mbtmp3.3**/4, **Error ellipse: s-maj=122.5km s-min=25.0km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.27**	**17**	P	Pn	15 37 26.0	+0.2
	2.0nm,0.2s,baz=160,slow=24,SNR=10						
SIJI				S	Sn	15 38 30.6	-5.6
	2.6nm,0.2s,baz=253,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**13.79**	**160**	P	Pn	15 39 04.3	-1.6
	0.4nm,0.5s,baz=340,slow=13,SNR=8.8						
WRA				S	Sn	15 41 26.3	-12
	0.3nm,0.7s,baz=335,slow=23,SNR=3.4						
ASAR	**Alice Springs**	**17.20**	**166**	P	Pn	15 39 49.1	+0.9
	0.2nm,0.3s,baz=337,slow=9.5,SNR=9.4						
MKAR	**Makanchi Array**	**67.85**	**327**	P	P	15 46 40.1	-0.1
	0.1nm,0.3s,baz=117,slow=8.7,SNR=1.5						
	0.1nm,0.3s						

*BER **17** 15:48:27.4±1.3, 69°.93N×30°.59E, h0km, ML0.9, Suspected explosion*
HEL 17 15:48:24.6±0.8, **69°.42N**×**30°.71E**, **h0**km, **ML1.2**, **Explosion, Norway-Murmansk border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.34**	**286**	*eP*	Pg	15 48 49.1	-1.2
KEV				*eS*	Sg	15 49 06.4	-1.2
KEV	**Kevo**	**1.34**	**286**	PG	Pg	15 48 49.0	-1.3
	baz=97						
KEV				MSG		15 49 05.0	
	comp=Z,1.4nm,0.2s						
KEV				SG	Sg	15 49 06.7	-1.0
VRF	**Varrio**	**1.73**	**194**	PG	Pn	15 48 56.0	+0.1
VRF				MSG		15 49 16.2	
	comp=Z,1.3nm,0.2s						
VRF				SG	Sn	15 49 17.5	-1.1
ARA0	**ARCESS Array S**	**1.84**	**276**	*eP*	Pn	15 48 57.6	+0.2
ARA0				*eS*	Sn	15 49 20.5	-0.8
ARA0				IAML		15 49 24.3	
	comp=Z,2.0nm,0.3s						
ARA0	**ARCESS Array S**	**1.84**	**276**	PG	Pn	15 48 57.5	+0.1
	baz=91						
ARA0				SN	Sg	15 49 23.2	-0.4
LVZ	**Lovozero**	**2.10**	**135**	SN	Sn	15 49 24.4	-3.4
SGF	**Sodankyl**	**2.52**	**220**	SB	Sb	15 49 40.4	-1.7
KTK1	**Kautokeino**	**2.70**	**265**	*eP*	Pb	15 49 11.7	-2.0
KTK1				*eS*	Sn	15 49 43.9	+1.4
KTK1				IAML		15 49 49.9	
	comp=Z,1.2nm,0.4s						
KTK1	**Kautokeino**	**2.70**	**265**	SG	Sb	15 49 45.9	-1.4
HEF	**Hetta**	**2.75**	**252**	*eP*	Pb	15 49 13.2	-1.3
HEF				*eS*	Sn	15 49 46.1	+2.5
HEF	**Hetta**	**2.75**	**252**	PG	Pb	15 49 13.1	-1.4
	baz=73						
HEF				MSG		15 49 45.4	
	comp=Z,1.1nm,0.2s						
HEF				SG	Sb	15 49 47.0	-1.7
KIF	**Kilpisjarvi**	**3.56**	**268**	*e*	Pg	15 49 49.7	+17
KIF	**Kilpisjarvi**	**3.56**	**268**	PN	Pn	15 49 20.2	-0.8

IDC 17 16:02:02.7±13.0, **15°.17S**×**165°.27E**, **h0**km, **mb3.6**/3, **mbtmp3.7**/4, **ML3.7**/1, **Error ellipse: s-maj=228.9km s-min=35.9km az=52.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.96**	**171**	Pn	Pn	16 03 46.1	0.0
	1.4nm,0.3s,baz=75,slow=10,SNR=33						
DZM				Sn	Sn	16 05 06.6	+0.7
	0.8nm,0.3s,baz=150,slow=20,SNR=1.8						
	2.8nm,0.3s						
STKA	**Stephens Creek**	**27.25**	**228**	P	P	16 07 48.8	+0.1
	1.0nm,0.4s,baz=58,slow=12,SNR=8.2						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**29.84**	**256**	P	P	16 08 12.4	+0.4
	0.2nm,0.8s,baz=84,slow=7.9,SNR=1.7						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**30.71**	**249**	P	P	16 08 19.4	-0.3
	0.5nm,0.5s,baz=75,slow=9.7,SNR=13						
	0.5nm,0.5s						

*NIED **17** 16:02:10.2, 32°.58N×130°.64E, h12km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.35; $M_{\theta\theta}$1.29; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.06; $M_{\theta\phi}$0.77; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.45000×10^{14} NP1: ϕ_s116.00000°, δ70.00000°, λ-12.00000°. NP2: ϕ_s210.00000°, δ78.00000°, λ-159.00000°.*
JMA 17 16:02:10.2±0.1, **32°.6N**±0°.2×**130°.6E**±0°.2, **h12**km, **MV3.5**/20, **SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.15**	**101**	*i* P	Pg	16 02 13.7	0.0
JIU3				S	Sg	16 02 16.2	0.0
JTA	**Tamana**	**0.40**	**346**	*i* P	Pg	16 02 18.1	0.0
JTA				S	Sg	16 02 23.6	+0.2
JZO	**Okuchi**	**0.44**	**185**	P	Pg	16 02 18.8	0.0
JZO				S	Sg	16 02 24.6	-0.1
JTZ	**Takazaki**	**0.77**	**151**	*i* P	Pb	16 02 25.4	0.0

*NOU **17** 16:07:27.4, 35°.93S×178°.39W, h0km, MLv4.2/6, East of North Island, N.Z.*
*WEL **17** 16:07:59.2±1.0, 37°.S±4°.×17°.9E±°, h14km±6km, M3.2/23, ML3.4/30, MLv3.2/23, Error ellipse: s-maj=0.0km s-min=0.0km az=94.1*
ISC 17 16:07:59.8±2.7, **36°.94S**±0°.07×**179°.1E**±0°.1, **h17**km±11km, **n47**, σ1§**20**/58, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.87**	**224**	P	**Pb**	**16 08 15.1**	**-1.4**
MXZ				S	**Sb**	**16 08 28.2**	**+0.4**
MXZ	**Matakaoa Point**	**0.87**	**224**	P	**Pb**	**16 08 15.1**	**-1.4**
WMGZ	**Waiomatatini S**	**1.02**	**210**	P	**Pg**	**16 08 19.8**	**+0.1**
WMGZ				S	**Sn**	**16 08 34.8**	**+1.5**
PKGZ	**Pakihiroa**	**1.24**	**219**	P	**Pn**	**16 08 21.6**	**-0.7**
PUZ	**Puketiti**	**1.30**	**209**	P	**Pb**	**16 08 24.0**	**+0.2**
HAZ	**Te Kaha**	**1.31**	**231**	P	**Pn**	**16 08 21.6**	**-1.6**
HAZ				S	**Sg**	**16 08 43.0**	**+0.8**
RUGZ	**Raukumara Rang**	**1.51**	**227**	P	**Pn**	**16 08 26.1**	**-0.1**
RUGZ				S	**Sg**	**16 08 48.3**	**-0.3**
TWGZ	**Tauwhareparae**	**1.51**	**215**	P	**Pn**	**16 08 26.9**	**+0.8**
TWGZ				S	**Sb**	**16 08 47.7**	**+1.4**
CNGZ	**Carnagh Statio**	**1.69**	**204**	P	**Pn**	**16 08 29.5**	**+1.0**
TKGZ	**Te Karaka**	**1.79**	**212**	P	**Pn**	**16 08 30.2**	**+0.4**
TKGZ				S	**Sn**	**16 08 53.1**	**+1.0**
MWZ	**Matawai**	**1.86**	**221**	P	**Pn**	**16 08 31.5**	**+0.7**
MWZ				S	**Sn**	**16 08 55.3**	**+1.4**
RAGZ	**Rawiri**	**2.04**	**220**	P	**Pn**	**16 08 33.7**	**+0.4**
URZ	**Urewera**	**2.04**	**229**	P	**Pn**	**16 08 33.6**	**+0.3**
URZ				S	**Sn**	**16 08 58.9**	**+0.5**
URZ	**Urewera**	**2.04**	**229**	P	**Pn**	**16 08 33.8**	**+0.5**
RIGZ	**Rimuhau**	**2.05**	**210**	P	**Pn**	**16 08 33.2**	**-0.2**
RIGZ				S	**Sn**	**16 08 58.9**	**+0.3**
MARZ	**Manawahe**	**2.17**	**240**	P	**Pn**	**16 08 35.9**	**+0.7**
OPRZ	**Ohinepanea**	**2.20**	**245**	P	**Pn**	**16 08 35.9**	**+0.4**
SNGZ	**Shannon Statio**	**2.29**	**216**	P	**Pn**	**16 08 36.9**	**+0.1**
SNGZ				S	**Sn**	**16 09 05.4**	**+0.7**
RTZ	**Ruatahuna**	**2.36**	**224**	P	**Pn**	**16 08 38.0**	**+0.3**
MUGZ	**Murupara**	**2.38**	**229**	P	**Pn**	**16 08 38.7**	**+0.6**
MHGZ	**Mahia Peninsul**	**2.40**	**202**	P	**Pn**	**16 08 37.7**	**-0.5**
RAHZ	**Arahi**	**2.52**	**218**	P	**Pn**	**16 08 41.0**	**+1.0**
MTHZ	**Maungataniwha**	**2.60**	**222**	P	**Pn**	**16 08 41.7**	**+0.6**
KUZ	**Kuaotunu**	**2.69**	**273**	P	**Pn**	**16 08 40.8**	**-1.4**
KUZ	**Kuaotunu**	**2.69**	**273**	P	**Pn**	**16 08 40.9**	**-1.4**
MRHZ	**Matea Rd**	**2.83**	**227**	P	**Pn**	**16 08 44.8**	**+0.6**
ARHZ	**Aropaoanui**	**2.84**	**214**	P	**Pn**	**16 08 44.1**	**-0.2**
TOZ	**Tahuroa Road**	**2.95**	**253**	P	**Pn**	**16 08 44.8**	**-1.0**
BKZ	**Black Stump Fm**	**3.02**	**222**	P	**Pn**	**16 08 46.7**	**-0.1**
BKZ	**Black Stump Fm**	**3.02**	**222**	P	**Pn**	**16 08 47.0**	**+0.2**
	16nm,1.2s						
MKAZ	**Moumakai**	**3.13**	**266**	P	**Pn**	**16 08 47.5**	**-0.8**
WIAZ	**Waiheke Island**	**3.16**	**271**	P	**Pn**	**16 08 48.9**	**+0.2**
ETAZ	**East Tamaki Re**	**3.32**	**268**	P	**Pn**	**16 08 52.1**	**+1.2**
KAHZ	**Kahuranaki**	**3.33**	**210**	P	**Pn**	**16 08 49.7**	**-1.5**
ABAZ	**Army Bay**	**3.42**	**274**	P	**Pn**	**16 08 52.3**	**0.0**
TMVZ	**Te Maari**	**3.43**	**230**	P	**Pn**	**16 08 53.0**	**+0.4**
ETVZ	**East Tongariro**	**3.44**	**229**	P	**Pn**	**16 08 53.1**	**+0.4**
BHHZ	**Black Hill Sta**	**3.48**	**222**	P	**Pn**	**16 08 53.1**	**-0.1**
AWAZ	**Awhitu Peninsu**	**3.54**	**267**	P	**Pn**	**16 08 54.4**	**+0.4**
RVAZ	**Riverhead Bore**	**3.60**	**271**	P	**Pn**	**16 08 55.0**	**+0.2**
HIZ	**Hauiti**	**3.69**	**243**	P	**Pn**	**16 08 58.1**	**+2.1**
HIZ	**Hauiti**	**3.69**	**243**	P	**Pn**	**16 08 59.0**	**+3.0**
	56nm,1.7s						
WCZ	**Waipu Caves**	**3.94**	**283**	P	**Pn**	**16 08 59.4**	**+0.1**
VRZ	**Vera Road**	**4.04**	**236**	P	**Pn**	**16 09 02.2**	**+1.3**
OUZ	**Omahuta**	**4.75**	**289**	P	**Pn**	**16 09 12.7**	**+2.1**
TKNZ	**Takaka Hill**	**6.28**	**227**	P	**Pn**	**16 09 28.5**	**-3.0**
TKNZ				S	**Sn**	**16 10 38.5**	**-4.3**
QRZ	**Quartz Range**	**6.41**	**231**	P	**Pn**	**16 09 33.5**	**+0.1**
	42nm,0.5s						

KRSC 17 16:28:53.2±1.8, **53°.06N**×**168°.31E**, **h60**km±47km, **ML3.9**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.55**	**328**	P	Pn	16 29 33.1	+1.1
BKI				S	Sn	16 30 04.9	+3.1
MKZ	**Mys Kozlova**	**4.17**	**

IDC 17 16:57:07.3±839.0, 53'.09N×4'.25E, h0km, Error ellipse: s-maj=373.8km s-min=139.9km az=110.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	7.33	122	I		17 40 13.4	
baz=309,slow=327,SNR=8.0							
I43RU	DUBNA INFRASONI	9.19	66	I		18 55 10.0	
baz=277,slow=320,SNR=1.7							
I31KZ	AKTYUBINSK INF	32.76	73	I		20 21 00.0	
baz=295,slow=331,SNR=1.5							
I46RU	ZALESOVO INFRA	45.43	55	I		21 39 07.8	
baz=303,slow=336,SNR=1.2							

IDC 17 17:00:31.7±4.0, 5'.26S×129'.29E, h192km±57km, mb2.9/2, mbtmp3.5/5, Error ellipse: s-maj=84.4km s-min=19.1km az=76.0
DJA 17 17:00:33.5±0.5, 5°S±5°×13°0E±°, h243km±10km, M3.7/12, mb3.9/5, mB4.7/1, MLv3.6/12, Mw(mB)3.9/1

ISC 17 17:00:34.1±1.1, 5.13S±0.10×129.71E±0.08, h250km, n15, σ1§41/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.64	17	P	Pn	17 01 06.8	-0.7
MSAI	Masohi	1.94	336	P	Pn	17 01 15.1	-1.0
AAI	Ambon	2.09	313	P	Pn	17 01 17.0	-0.4
KRAI	Karang Ratu	2.23	324	P	Pn	17 01 18.7	-0.1
FAKI	Fak Fak	3.35	49	P	Pn	17 01 31.1	+0.6
SIJI	Sorong	4.51	20	P	Pn	17 01 43.8	-0.3
4.1nm,0.3s,baz=216,slow=19,SNR=31							
SIJI				S	S	17 02 36.5	-3.3
27nm,0.2s,baz=227,slow=23,SNR=24							
SIJI	Sorong	4.51	20	P	Pn	17 01 43.8	-0.3
SANI	Sanana	4.82	309	P	Pn	17 01 47.3	-0.4
LBMI	Labuha	4.98	334	P	Pn	17 01 50.0	+0.3
0.1nm20nm,2.4s							
RKPI	Ransiki, Papua	5.73	51	P	Pn	17 02 00.2	+1.3
0.3nm1µm29nm,0.8s							
SRPI	Serui, Papua	7.28	64	P	Pn	17 02 18.1	-0.2
0.3nm48nm,0.5s							
WRA	Warramunga Arr	15.39	163	P	Pn	17 03 58.5	-0.7
0.7nm,0.8s,baz=347,slow=13,SNR=8.0							
ASAR	Alice Springs	18.86	168	P	Pn	17 04 37.8	-2.2
1.1nm,0.5s,baz=351,slow=12,SNR=30							
CMAR	Chiang Mai Arr	38.34	308	P	P	17 07 32.4	+1.0
0.2nm,0.5s,baz=136,slow=6.7,SNR=2.6							
0.2nm,0.5s							
MKAR	Makanchi Array	66.52	327	P	P	17 10 59.5	+2.3
0.3nm,0.5s,baz=119,slow=6.8,SNR=4.6							
0.3nm,0.5s							

HVO 17 17:08:41.1±2.6, 19°.43N±0°.02×155°.597W±0°.009, h3km±4km, ML2.8/37, ML2.6/42(NEIC), Error ellipse: s-maj=2.2km s-min=1.1km az=190.0

NEIC 17 17:08:41.1±2.7, 19°.44N±0°.02×155°.553W±0°.009, h3km±8km, Error ellipse: s-maj=2.3km s-min=1.0km az=195.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWH	Moku'aweowe	0.07	320		Sg	17 08 45.0	+1.1
MWH	Moku'aweowe	0.07	320	Pg	Pg	17 08 41.8	-1.0
MWH				IAML		17 08 44.0	
comp=E,1µm,0.3s							
MWH				IAML		17 08 44.0	
comp=N,2µm,0.3s							
MLOA	Mauna Loa Obse	0.10	348		Sg	17 08 46.0	+1.2
MLOA	Mauna Loa Obse	0.10	348	Pg	Pg	17 08 42.8	-0.5
MLOA	Mauna Loa Obse	0.10	348	IAML		17 08 46.6	
comp=E,1µm,0.4s							
MLOA				IAML		17 08 47.1	
comp=N,2µm,0.5s							
MLH	Mauna Loa	0.17	70	Pg	Pg	17 08 44.4	-0.2
MLH				IAML		17 08 50.8	
comp=N,2µm,0.7s							
MLH				IAML		17 08 52.1	
comp=E,1µm,0.4s							
HMH	Humu'ula Sheep	0.18	22		Pg	17 08 46.2	+1.4
HMH					Sg	17 08 49.5	+2.3
HMH	Humu'ula Sheep	0.18	22	IAML		17 08 50.1	
comp=N,1µm,0.4s							
KHU	Kahuku	0.20	197	Pg	Pg	17 08 43.5	-1.5
KHU				IAML		17 08 50.7	
comp=N,1µm,0.5s							
WRMHI	West Rim	0.24	97	Pg	Pg	17 08 45.3	-0.5
UWE	Uwekahuna	0.25	93	Pg	Pg	17 08 46.1	+0.2
UWE				IAML		17 08 55.5	
comp=N,1µm,0.5s							
SDHHI	Sand Hill	0.25	100	Pg	Pg	17 08 45.4	-0.6
SDHHI				Sg	Sg	17 08 50.7	+1.5
SDHHI				IAML		17 08 56.7	
comp=N,1µm,0.4s							
OBL	Observatory Le	0.26	94	Pg	Pg	17 08 45.0	-1.1
NPH	North Pit	0.26	95	Pg	Pg	17 08 43.9	-2.2
NPH				IAML		17 08 56.1	
comp=N,631nm,0.5s							
UWB	Uwekahuna B	0.26	92		Pg	17 08 45.2	-0.9
RSD	Rainshed	0.26	84	Pg	Pg	17 08 47.3	+1.1
RIM	Rim	0.27	98	Pg	Pg	17 08 46.2	-0.1
RIM				IAML		17 08 52.7	
comp=N,968nm,0.5s							
RIM				IAML		17 08 56.0	
comp=E,742nm,0.6s							
SBLHI	Steaming Bluff	0.27	92	Pg	Pg	17 08 45.3	-1.1
SBLHI				IAML		17 08 58.2	
comp=N,1µm,0.3s							
KKO	Keanakako`i	0.27	98	Pg	Pg	17 08 43.5	-2.9
KKO				IAML		17 08 57.5	
comp=E,976nm,1.0s							
HATHI	Halema'uma'u T	0.28	92	Pg	Pg	17 08 47.2	+0.7
HATHI				IAML		17 08 57.2	
comp=N,938nm,0.8s							
BYL	Byron's Ledge	0.28	95	Pg	Pg	17 08 45.0	-1.5
BYL				IAML		17 08 56.0	
comp=E,781nm,0.4s							
BYL				IAML		17 08 57.6	
comp=N,603nm,0.8s							
POHA	Pohakuloa	0.32	3	Pg	Pg	17 08 46.9	-0.5
POHA				IAML		17 08 59.3	
comp=N,492nm,0.5s							
PUH	Pauahi	0.32	101	Pg	Pb	17 08 49.2	-0.4
PUH				IAML		17 08 55.6	
comp=E,455nm,0.6s							
CPH	Captain Cook	0.35	279		Pg	17 08 47.8	0.0
KHLU	Kahalu`u	0.36	296		Pg	17 08 48.2	+0.1
KHLU					Sg	17 08 54.1	+1.3
KHLU	Kahalu`u	0.36	296	IAML		17 08 55.1	
comp=N,2µm,0.3s							
KHLU				IAML		17 08 58.5	
comp=E,2µm,0.5s							
HUH	Hualalai	0.36	313	Pg	Pg	17 08 47.3	-1.0
HUH				IAML		17 08 56.2	
comp=N,1µm,0.3s							
HPAH	Hawaii Prepara	0.61	347		Pg	17 08 52.0	-0.9
HPAH				IAML		17 09 13.9	
comp=N,228nm,0.7s							
HPAH				IAML		17 09 14.2	
comp=E,263nm,0.6s							

IDC 17 17:14:11.0±1.3, 5°.44N×61°.29E, h0km, mb3.8/10, mbtmp3.8/10, MS3.5/34, Error ellipse: s-maj=36.4km s-min=22.3km az=45.0
NEIC 17 17:14:12.6±2.5, 5°.5N±0°.1×61°.2E±0°.1, h10km±1km, mb4.1/7, Error ellipse: s-maj=21.6km s-min=14.2km az=227.0

ISC 17 17:14:12.1±0.7, 5°.4N±0°.1×61°.2E±0°.1, h10km, n44, σ1§03/17, mb3.9/15, MS3.5/32, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.55	210	Pn	Pn	17 16 57.2	-0.1
WSAR	Wadi Sarin	17.88	352	LR	LR	17 23 50.8	
comp=Z,133nm,19.1s,baz=195,slow=32							
PALK	Pallekele	19.46	84	LR	LR	17 24 03.0	
comp=Z,162nm,21.1s,baz=21,slow=31							
RAYN	Ar Rayn	23.51	321	P	P	17 19 21.0	-1.5
RAYN				IAmb	IAmb	17 19 53.9	
comp=Z,3.9nm,1.1s							
KMBO	Kilima Mbogo	24.80	255	P	P	17 19 34.7	-0.2
KMBO				IAmb	IAmb	17 19 47.7	
comp=Z,11nm,1.4s							
MBAR	Mbarara	31.02	260	LR	LR	17 33 35.4	
comp=Z,52nm,18.0s,baz=57,slow=37							
GEYT	Alibeck	32.47	355	LR	LR	17 34 14.9	
comp=Z,16nm,20.9s,baz=190,slow=37							
BRDH	Bariadhala	34.02	57	LR	LR	17 35 02.9	
comp=Z,167nm,20.0s,baz=269,slow=37							
DRK	Karamyk	35.22	14	P	P	17 21 08.1	+1.0
DRK				IAmb	IAmb	17 21 11.2	
comp=Z,7.7nm,1.2s							
MMAI	Mount Meron Ar	36.48	322	LR	LR	17 35 10.3	
comp=Z,50nm,20.8s,baz=118,slow=34							
PSI	Prapat	37.70	92	LR	LR	17 34 46.3	
comp=Z,104nm,19.2s,baz=228,slow=33							
LSZ	Lusaka	38.65	237	LR	LR	17 36 21.4	
comp=Z,133nm,18.5s,baz=100,slow=34							
AAK	Ala-Archa	38.88	16	P	P	17 21 38.8	+0.9
comp=Z,1.1nm,0.7s,baz=211,slow=12,SNR=4.0							
AAK				LR	LR	17 37 56.5	
comp=Z,78nm,20.9s,baz=208,slow=37							
comp=Z,1.1nm,0.7s							
CMAR	Chiang Mai Arr	39.02	67	P	P	17 21 40.0	+0.7
comp=Z,0.4nm,0.3s,baz=256,slow=9.3,SNR=6.5							
CMAR				LR	LR	17 36 20.1	
comp=Z,28nm,21.3s,baz=260,slow=34							
comp=Z,0.4nm,0.3s							
KBZ	Khabaz	41.42	340	LR	LR	17 41 37.3	
comp=Z,31nm,18.1s,baz=108,slow=40							
BRTR	Keskin Array B	42.23	328	P	P	17 22 05.9	+0.2
comp=Z,1.5nm,0.9s,baz=128,slow=9.8,SNR=5.1							
BRTR				LR	LR	17 39 40.6	
comp=Z,62nm,21.4s,baz=124,slow=36							
comp=Z,1.5nm,0.9s							
ABKAR	Akbulak array	43.68	359	P	P	17 22 17.5	+0.4
ABKAR				IAmb	IAmb	17 22 20.9	
comp=Z,3.4nm,1.1s							
AKTO	Aktyubinsk	44.93	357	LR	LR	17 42 10.6	
comp=Z,46nm,19.0s,baz=194,slow=37							
MK31	Makanchi Array	45.04	20	P	P	17 22 26.0	-2.1
MK31				IAmb	IAmb	17 22 34.4	
comp=Z,1.3nm,1.0s							
MKAR	Makanchi Array	45.04	20	P	P	17 22 28.6	+0.5
comp=Z,0.5nm,0.9s,baz=220,slow=11,SNR=3.2							
MKAR				LR	LR	17 43 14.4	
comp=Z,38nm,18.5s,baz=244,slow=39							
comp=Z,0.5nm,0.9s							
LBTB	Lobatse	45.99	227	LR	LR	17 39 15.4	
comp=Z,107nm,20.8s,baz=44,slow=33							
KURBB	Kurchatov Arra	47.32	15	LR	LR	17 43 48.9	
comp=Z,74nm,21.5s,baz=191,slow=38							
BVAR	Borovoye Array	48.04	7	LR	LR	17 44 58.2	
comp=Z,72nm,19.3s,baz=224,slow=38							
BELG	Belogornoye	48.14	349	LR	LR	17 44 16.8	
comp=Z,51nm,22.0s,baz=147,slow=38							
BOSA	Boshof	48.41	224	LR	LR	17 41 33.4	
comp=Z,70nm,19.1s,baz=12,slow=34							
TSUM	Tsumeb	49.44	239	LR	LR	17 43 09.3	
comp=Z,70nm,18.1s,baz=54,slow=35							
ARU	Arti	50.90	358	LR	LR	17 46 41.2	
comp=Z,42nm,18.1s,baz=212,slow=38							
ZALV	Zalesovo Beam	52.04	17	P	P	17 23 21.6	-0.3
comp=Z,0.2nm,0.3s,baz=198,slow=4.1,SNR=2.2							
ZALV				LR	LR	17 45 57.5	
comp=Z,41nm,21.2s,baz=214,slow=37							
comp=Z,0.2nm,0.3s							
KIRV	Kirov	53.80	352	LR	LR	17 48 44.7	
comp=Z,49nm,19.2s,baz=179,slow=38							
SONM	Songino Array	57.16	35	P	P	17 23 59.2	-0.2
comp=Z,1.1nm,1.0s,baz=219,slow=6.7,SNR=4.1							
SONM				LR	LR	17 49 24.6	
comp=Z,59nm,18.4s,baz=255,slow=37							
comp=Z,1.1nm,1.0s							
VRAC	Vranov	57.66	327	LR	LR	17 49 04.9	
comp=Z,17nm,20.6s,baz=240,slow=36							
FINES	FINESS Array B	61.73	342	LR	LR	17 53 18.5	
comp=Z,38nm,18.4s,baz=140,slow=38							
NOA	NORSAR Array B	66.82	336	LR	LR	17 56 19.6	
comp=Z,17nm,20.6s,baz=60,slow=38							
JOW	Kunigami	67.11	63	LR	LR	17 56 26.3	
comp=Z,23nm,18.8s,baz=188,slow=38							
ESDC	Sonseca Array	67.52	311	P	P	17 25 10.1	+1.2
comp=Z,0.9nm,0.9s,baz=96,slow=7.0,SNR=5.5							
comp=Z,0.9nm,0.9s							
KSRS	Korea Array	68.27	52	P	P	17 25 11.7	-1.8
comp=Z,1.4nm,0.8s,baz=260,slow=8.3,SNR=5.2							
KSRS				LR	LR	17 55 21.2	
comp=Z,27nm,19.9s,baz=265,slow=36							
comp=Z,1.4nm,0.8s							
KLR	Kul'dur	73.23	40	LR	LR	17 59 06.6	
comp=Z,56nm,19.5s,baz=262,slow=37							
YAK	Yakutsk	75.22	27	LR	LR	17 59 45.3	
comp=Z,39nm,19.5s,baz=268,slow=36							
WRA	Warramunga Arr	76.11	112	P	P	17 26 01.1	+0.3
comp=Z,3.7nm,0.9s,baz=287,slow=5.2,SNR=15							
comp=Z,3.7nm,0.9s							
WRA	Warramunga Arr	76.11	112	P	P	17 26 01.3	+0.5
SPITS	Spitsbergen Ar	76.26	351	LR	LR	18 03 06.4	
comp=Z,16nm,19.5s,baz=75,slow=38							
MJAR	Matsushiro Arr	76.34	54	LR	LR	18 02 12.0	
comp=Z,18nm,19.1s,baz=254,slow=38							
ASAR	Alice Springs	76.46	116	P	P	17 26 03.0	+0.2
comp=Z,2.0nm,0.9s,baz=285,slow=5.4,SNR=12							
comp=Z,2.0nm,0.9s							
MA2	Magadan	85.13	31	LR	LR	18 05 52.2	
comp=Z,18nm,20.9s,baz=278,slow=36							

ARE 17 17:15:59±2.8, 14°.39S±0°.08×75°.71W±0°.10, h53km±8km, Error ellipse: s-maj=15.3km s-min=8.6km az=56.0
NEIC 17 17:16:01.9±1.5, 14°.20S±0°.08×75°.4W±0°.1, h52km±13km, mb4.5/16, ML5.0(ARE), Error ellipse: s-maj=16.7km s-min=7.8km az=53.0
IDC 17 17:16:01.6±1.8, 14°.18S×75°.41W, h55km±16km, mb3.8/11, mbtmp4.1/16, ML4.0/5, MS3.4/18, Error ellipse: s-maj=25.0km s-min=11.5km az=56.0

ISC 17 17:16:01.1±0.6, 14°.21S±0°.07×75°.4W±0°.1, h50km, n91, σ1§06/74, mb4.1/12, MS3.5/13, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.62	327	P	Pn	17 16 40.5	-0.5
209nm,0.3s,baz=137,slow=9.4,SNR=121							
NNA				S	Sn	17 17 11.9	+0.3
2µm,0.4s,baz=226,slow=20,SNR=16							
NNA				LR	LR	17 17 46.3	
comp=Z,184nm,21.0s,baz=125,slow=40							
346nm,0.3s							
NNA	Nana	2.62	327	Pn	Pn	17 16 40.1	-0.8
PB12	IPOC Station P	6.54	133	Pn	Pn	17 17 34.0	-0.9
PB16	IPOC Station P	6.99	127		Pn	17 17 43.0	+1.7
ATAH	Atahualpa	7.62	337	P	Pn	17 17 50.6	+0.6
3.8nm,0.3s,baz=158,slow=5.2,SNR=14							
ATAH				S	Sn	17 19 16.6	+1.3
67nm,0.7s,baz=180,slow=1.0,SNR=2.3							
ATAH				LR	LR	17 20 35.2	
comp=Z,53nm,22.0s,baz=183,slow=36							
5.0nm,0.3s							
TA02	Huaiquique	7.85	141	Pn	Pn	17 17 52.4	-0.3
GO01	Chusmiza	8.04	133	Pn	Pn	17 17 55.9	+0.2
TA01	Diego Aracena	8.04	143	Pn	Pn	17 17 54.9	-0.5
PATCX	Punta Patache	8.26	143		Pn	17 17 59.0	+0.6
PB08	IPOC Station P	8.39	136	Pn	Pn	17 18 01.2	+0.8
PB02	IPOC Station P	8.80	144		Pn	17 18 06.3	+0.6
PB01	IPOC Station P	8.83	141		Pn	17 18 06.7	+0.6
PB07	IPOC Station P	9.13	146		Pn	17 18 11.3	+0.9
PB03	IPOC Station P	9.46	146		Pn	17 18 15.4	+0.5
PB04	IPOC Station P	9.49	149	Pn	Pn	17 18 15.8	+0.4
PB09	IPOC Station P	9.55	143		Pn	17 18 17.0	+0.9
PB06	IPOC Station P	10.10	148	Pn	Pn	17 18 22.1	-1.4
LVC	Limon Verde	10.38	145	P	Pn	17 18 29.1	+1.5
3.2nm,0.3s,baz=332,slow=10.0,SNR=14							
LVC				S	Sn	17 20 21.4	-1.2
13nm,0.6s,baz=0.2,slow=23,SNR=2.0							
LVC				LR	LR	17 22 23.3	
comp=Z,78nm,18.3s,baz=340,slow=37							
8.4nm,0.4s							
LVC	Limon Verde	10.38	145		Pn	17 18 29.9	+2.3
PB15	IPOC Station P	10.56	149		Pn	17 18 31.1	+1.1
AF01	San Pedro de A	11.06	143	Pn	Pn	17 18 35.0	-1.9
BOSC	San Juan Bosco	11.41	344		Pn	17 18 41.1	-0.5
ARNL	Arenillas	11.55	336	Pn	Pn	17 18 44.9	+1.5
COHC	Cochancay	12.28	342		Pn	17 18 53.4	+0.1
PIAT	Ana Tenorio	13.43	348	eP	Pn	17 19 08.7	-0.7
SLOR	San Lorenzo -	13.74	347		Pn	17 19 12.7	-1.0
SIV	San Ignacio	13.95	99	P	Pn	17 19 15.6	-0.5
baz=270,slow=15,SNR=6.4							
SIV				LR	LR	17 25 26.4	
comp=Z,339nm,20.1s,baz=280,slow=40							
1.3nm,0.5s							
FLOC	Florencia	15.69	359	eP	Pn	17 19 38.7	-0.3
BBAC	Balboa, Cauca	16.23	353	eP	P	17 19 48.4	-0.1
GARC	Garzon, Huila	16.29	360	eP	Pn	17 19 46.4	-0.4
VILC	Villavicencio,	18.28	5	eP	Pn	17 20 13.5	+2.2
CHIC	Chingaza	18.79	5	eP	Pn	17 20 18.3	+0.6
ROSC	El Rosal	18.95	3	P	P	17 20 19.2	+0.6
1.5nm,0.3s,baz=102,slow=20,SNR=1.7							
ROSC				LR	LR	17 29 12.3	
comp=Z,140nm,19.3s,baz=220,slow=42							
5.1nm,0.4s							
ROSC	El Rosal	18.95	3	P	Pn	17 20 20.4	+0.6
ROSC				IAmb	IAmb	17 21 00.8	
comp=Z,50nm,1.4s							
PLMC	San Jos del P	19.01	357	eP	P	17 20 19.3	+0.4
GUY2C	Guyana, Caldas	19.31	0	eP	Pn	17 20 26.1	+2.1
H03N1	Juan Fernandez	19.41	189	T	T	17 39 45.5	
baz=10.0,slow=74,SNR=1372							
H03N2	Juan Fernandez	19.41	189	T	T	17 39 44.8	
baz=10.0,slow=74,SNR=712							
H03N3	Juan Fernandez	19.43	189	T	T	17 39 44.1	
baz=10.0,slow=74,SNR=1457							
NORC	Norcasia	19.65	2	eP	Pn	17 20 28.0	+0.3
AQDB	Aquidauana	19.80	111	P	Pn	17 20 29.7	+0.4
CBOC	Ciudad Bolivar	19.95	358	eP	P	17 20 29.0	-0.3
RUSC	La Rusia	20.10	7	eP	P	17 20 32.8	+1.6
LMEL	Las Melosas	20.11	167	P	P	17 20 32.4	+1.4
LMEL				IAmb	IAmb	17 20 33.5	
comp=Z,50nm,1.5s							
PTBC	PUERTO BERRIO,	20.64	3	eP	P	17 20 36.7	+0.1
CPUP	Villa Florida	20.77	128	P	P	17 20 39.3	+1.4
comp=Z,2.1nm,0.9s,baz=306,slow=17,SNR=3.5							
CPUP				LR	LR	17 30 34.2	
comp=Z,69nm,19.9s,baz=289,slow=42							
comp=Z,2.1nm,0.9s							
BO02	Sierra Bellavi	20.91	169	P	P	17 20 40.9	+1.4
BO02				IAmb	IAmb	17 20 42.4	
comp=Z,15nm,0.9s							
PAMC	Pamplona, Colo	21.57	7	eP	P	17 20 50.2	+3.1
ML02	Panimavida	21.76	171	P	P	17 20 49.0	+0.6
OCAC	Ocana	22.40	5	eP	P	17 20 55.1	-0.6
SOCV	Socops	22.80	12	eP	P	17 20 59.9	+0.2
TRCB	Terra Rica	23.19	115	P	P	17 21 03.1	-0.6
TRCB				IAmb	IAmb	17 21 25.6	
comp=Z,18nm,0.8s							
SDV	Santo Domingo	23.43	12	P	P	17 21 06.7	+0.5
comp=Z,11nm,0.7s,baz=158,slow=6.5,SNR=8.9							
SDV				LR	LR	17 31 21.2	
comp=Z,224nm,18.9s,baz=200,slow=39							
comp=Z,11nm,0.7s							
SDV	Santo Domingo	23.43	12	P	P	17 21 06.4	+0.2
SDV				IAmb	IAmb	17 21 30.9	
comp=Z,17nm,0.7s							
ARGC	Ariguani, Magd	23.94	3	eP	P	17 21 18.3	+7.6
SJCC	San Jacinto, C	23.95	1	eP	P	17 21 12.6	+1.7
BAUV	El Baul	24.13	18	P	P	17 21 12.2	-0.2
PLCA	Paso Flores	26.76	172	P	P	17 21 36.1	-0.2
comp=Z,1.7nm,0.9s,baz=341,slow=9.7,SNR=3.9							
PLCA				LR	LR	17 31 43.8	
comp=Z,35nm,18.5s,baz=350,slow=35							
comp=Z,1.7nm,0.9s							
MDP	Montagnes des	29.62	51	LR	LR	17 34 47.6	
comp=Z,119nm,18.1s,baz=266,slow=38							
CELP	Cerrillos	33.24	15	P	P	17 22 33.4	-0.2
SJG	San Juan	33.38	16	LR	LR	17 37 09.0	
comp=Z,47nm,18.5s,baz=265,slow=38							
CMIG	Matias Romero	36.57	328	LR	LR	17 35 18.6	
comp=Z,29nm,18.8s,baz=294,slow=32							
RCBR	Riachuelo	39.72	82	LR	LR	17 39 51.9	
comp=Z,50nm,21.9s,baz=31,slow=36							
TXAR	Lajitas Array	51.18	328	P	P	17 24 58.4	-1.1
comp=Z,0.9nm,0.7s,baz=147,slow=8.2,SNR=7.8							
comp=Z,0.9nm,0.7s							
TXAR	Lajitas Array	51.18	328	P	P	17 24 59.0	-0.5
TX31	Lajitas Ar. Si	51.18	328	P	P	17 24 58.9	-0.7
TX31				IAmb	IAmb	17 25 04.8	
comp=Z,6.9nm,1.1s							
TX32	Lajitas Array	51.18	328	P	P	17 24 58.4	-1.1
PDAR	Pinedale Array	64.79	333	P	P	17 26 36.0	+1.2
comp=Z,0.6nm,0.9s,baz=318,slow=1.2,SNR=4.0							
comp=Z,0.6nm,0.9s							
BBTS	Babate	64.91	66	LR	LR	17 55 02.1	
comp=Z,50nm,18.1s,baz=236,slow=36							
NVAR	Mina Array Bea	65.99	324	P	P	17 26 42.1	-0.6
comp=Z,0.4nm,0.5s,baz=119,slow=7.5,SNR=2.0							
comp=Z,0.4nm,0.5s							
SCHQ	Schefferville	69.15	5	P	P	17 26 60.0	-2.0
comp=Z,5.1nm,0.8s,baz=249,slow=6.2,SNR=3.6							
comp=Z,5.1nm,0.8s							
DBIC	Dimbokro	72.97	78	P	P	17 27 25.2	-0.8
comp=Z,3.2nm,0.9s,baz=230,slow=8.3,SNR=4.4							
comp=Z,3.2nm,0.9s							
FRB	Frobisher Bay	77.89	3	LR	LR	18 05 31.1	
comp=Z,19nm,18.1s,baz=174,slow=38							
TORD	Torodi Ar. Bea	81.03	74	P	P	17 28 11.2	-0.1
comp=Z,3.7nm,0.5s,baz=261,slow=5.3,SNR=24							
comp=Z,3.7nm,0.5s							
MDT	Midelt	82.12	53	LR	LR	18 02 27.9	
comp=Z,26nm,19.8s,baz=53,slow=34							
VNDA	Vanda	82.88	191	P	P	17 28 20.4	+0.5
comp=Z,1.3nm,0.9s,baz=97,slow=2.4,SNR=6.3							
comp=Z,1.3nm,0.9s							
ESDC	Sonseca Array	85.23	47	P	P	17 28 33.0	+0.5
comp=Z,0.4nm,0.5s,baz=264,slow=5.5,SNR=2.1							
ESDC				LR	LR	18 04 10.4	
comp=Z,26nm,19.3s,baz=257,slow=34							
comp=Z,0.4nm,0.5s							
RES	Resolute Bay	89.55	355	LR	LR	18 11 31.7	
comp=Z,16nm,19.0s,baz=10,slow=37							
URZ	Urewera	94.54	229	LR	LR	18 01 20.8	
comp=Z,50nm,20.1s,baz=202,slow=29							
H11N3	WAKE ISLAND Hyl	20.43	285	T	T	19 46 01.5	
baz=96,slow=74,SNR=41							
H11N2	WAKE ISLAND Hyl	20.44	285	T	T	19 45 57.4	
baz=96,slow=74,SNR=41							
H11N1	WAKE ISLAND Hyl	20.44	285	T	T	19 45 57.8	
baz=96,slow=74,SNR=25							
H11S2	WAK

comp=Z,162nm,19.1s,baz=188,slow=32
PALK Pallekele 19.15 83 LR LR 17 55 01.7
comp=Z,219nm,18.8s,baz=14,slow=32
ATD Arta Tunnel 19.45 290 LR LR 17 55 36.2
comp=Z,62nm,20.2s,baz=333,slow=34
RAYN Ar Rayn 23.74 321 P **P** **17 49 52.0 -1.0**
KIBK Kibwezi 24.68 252 P **P** **17 50 04.4 +2.6**
KIBK IAmb IAmb 17 50 28.0
comp=Z,9.4nm,1.5s
KMBO Kilima Mbogo 25.09 256 P **P** **17 50 07.9 +2.2**
KMBO IAmb IAmb 17 50 10.5
comp=Z,8.4nm,1.4s
LODK Lodwar 26.16 267 P **P** **17 50 17.3 +2.0**
LODK IAmb IAmb 17 50 26.6
comp=Z,7.3nm,1.3s
MBAR Mbarara 31.32 260 LR LR 18 04 20.3
comp=Z,75nm,18.1s,baz=63,slow=38
BRDH Bariadhala 33.78 56 LR LR 18 05 29.8
comp=Z,273nm,19.8s,baz=273,slow=37
EIL Elat 34.83 317 LR LR 18 05 02.1
comp=Z,146nm,18.3s,baz=238,slow=35
BTK Batken 35.52 12 P **P** **17 51 37.6 +0.1**
BTK IAmb IAmb 17 51 39.5
comp=Z,3.3nm,0.8s
MMAI Mount Meron Ar 36.71 322 LR LR 18 06 09.4
comp=Z,71nm,20.2s,baz=245,slow=35
LSA Lhasa 36.97 46 P **P** **17 51 50.2 -0.3**
LSA IAmb IAmb 17 51 53.2
comp=Z,7.2nm,1.2s
MARD Mardin 37.00 332 P **P** **17 51 50.9 +0.5**
MARD IAmb IAmb 17 51 53.0
comp=Z,4.7nm,0.9s
KK31 Karatay Array 38.40 11 P **P** **17 52 02.2 +0.3**
KKAR Karatay Array 38.40 11 P **P** **17 52 02.2 +0.3**
KKAR IAmb IAmb 17 52 11.4
comp=Z,4.6nm,1.4s
CMAR Chiang Mai Arr 38.75 67 P **P** **17 52 07.3 +2.2**
comp=Z,1.0nm,0.8s,baz=251,slow=8.0,SNR=8.5
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 38.75 67 P **P** **17 52 06.5 +1.3**
AAK Ala-Archa 38.84 15 P **P** **17 52 06.9 +1.1**
comp=Z,1.6nm,0.7s,baz=192,slow=9.3,SNR=4.3
AAK LR LR 18 09 57.7
comp=Z,94nm,18.3s,baz=191,slow=39
comp=Z,1.6nm,0.7s
LSZ Lusaka 38.89 238 LR LR 18 06 49.0
comp=Z,183nm,18.4s,baz=17,slow=34
KBZ Khabaz 41.57 340 LR LR 18 10 48.1
comp=Z,55nm,19.9s,baz=140,slow=38
BR131 Keskin Array S 42.44 328 P **P** **17 52 34.7 -0.8**
BR131 IAmb IAmb 17 53 07.7
comp=Z,6.1nm,0.9s
BRTR Keskin Array B 42.44 328 P **P** **17 52 35.6 0.0**
comp=Z,2.4nm,1.0s,baz=140,slow=7.6,SNR=5.5
BRTR LR LR 18 10 29.4
comp=Z,78nm,20.3s,baz=138,slow=37
comp=Z,2.4nm,1.0s
BRTR Keskin Array B 42.44 328 P **P** **17 52 34.5 -1.1**
ABKAR Akbulak array 43.74 359 P **P** **17 52 45.7 0.0**
ABKAR IAmb IAmb 17 52 47.2
comp=Z,4.9nm,1.1s
ABKAR Akbulak array 43.74 359 P **P** **17 52 45.7 0.0**
MKAR Makanchi Array 44.98 20 P **P** **17 52 55.6 -0.2**
comp=Z,0.6nm,0.9s,baz=218,slow=9.1,SNR=4.3
MKAR LR LR 18 13 52.3
comp=Z,39nm,18.8s,baz=242,slow=39
comp=Z,0.6nm,0.9s
AKTO Aktyubinsk 44.99 357 LR LR 18 12 17.1
comp=Z,69nm,21.0s,baz=180,slow=37
KURBB Kurchatov Arra 47.29 15 LR LR 18 14 06.5
comp=Z,88nm,20.6s,baz=161,slow=37
BVAR Borovoye Array 48.05 7 LR LR 18 15 16.1
comp=Z,106nm,20.0s,baz=207,slow=38
ZALV Zalesovo Beam 51.99 17 P **P** **17 53 49.2 -0.5**
comp=Z,0.3nm,0.3s,baz=220,slow=8.7,SNR=2.0
ZALV LR LR 18 16 14.6
comp=Z,78nm,20.3s,baz=208,slow=36
comp=Z,0.3nm,0.3s
SONM Songino Array 57.02 35 P **P** **17 54 26.8 +0.3**
comp=Z,1.5nm,1.0s,baz=232,slow=7.1,SNR=7.0
comp=Z,1.5nm,1.0s
ESDC Sonseca Array 67.78 311 P **P** **17 55 38.9 +0.2**
comp=Z,2.4nm,1.1s,baz=93,slow=5.2,SNR=9.5
comp=Z,2.4nm,1.1s
ESDC Sonseca Array 67.78 311 P **P** **17 55 38.3 -0.4**
KSRS Korea Array 68.06 52 P **P** **17 55 37.1 -3.2**
comp=Z,1.6nm,0.8s,baz=268,slow=7.8,SNR=6.0
WRA Warramunga Arr 75.81 112 P **P** **17 56 28.8 +1.6**
comp=Z,5.5nm,1.0s,baz=289,slow=5.0,SNR=18
comp=Z,5.5nm,1.0s
WRA Warramunga Arr 75.81 112 P **P** **17 56 27.6 +0.4**
WB2 Warramunga Arr 75.82 112 P **P** **17 56 27.6 +0.4**
WB0 Warramunga Arr 75.83 112 P **P** **17 56 27.7 +0.4**
ASAR Alice Springs 76.16 116 P **P** **17 56 30.8 +1.5**
comp=Z,2.5nm,0.9s,baz=286,slow=5.3,SNR=16
comp=Z,2.5nm,0.9s
ASAR Alice Springs 76.16 116 P **P** **17 56 29.4 +0.1**

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*IDC **17** 18:00:26.0±2.4,39°.87N×21°.42E, h0km, mb3.3/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=58.6km s-min=21.2km az=54.0*
*TIR **17** 18:00:26.1,39°.78N×20°.64E, h15km±1km, Md3.1, Ml3.0*
*THE **17** 18:00:26.1,39°.78N×20°.67E, h14km, ML2.9/11, Error ellipse: s-maj=1.0km s-min=0.4km az=256.0*
*ATH **17** 18:00:26.5,39°.78N×20°.67E, h11km±2km, ML3.0/12, Error ellipse: s-maj=2.3km s-min=0.8km az=270.0*
*BEO **17** 18:00:27.1±0.4,39°.71N×20°.73E, h10km±3km, ML2.9/7*
ISC 17 18:00:26.2±0.8, 39°.76N±0°.02×20°.68E±0°.02, h16km±5km, n58, σ1§10/94, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**128**	P		**Pg**		**18 00 30.1**	**-0.4**
JAN				S		**Sg**		**18 00 33.5**	**+0.1**
	10μm,0.2s								
JAN	**Janina**	**0.17**	**128**	P		**Pg**		**18 00 30.1**	**-0.4**
JAN				S		**Sg**		**18 00 33.5**	**+0.1**
JAN				AML		AML		18 00 34.1	
	comp=N,17316μm,0.2s								
JAN				AML		AML		18 00 34.3	
	comp=E,24074μm,0.3s								
IGT	**Igoumenitsa**	**0.35**	**230**	P		**Pg**		**18 00 33.4**	**-0.1**
IGT				S		**Sb**		**18 00 39.3**	**-0.1**
	comp=E,4μm,0.2s								
IGT	**Igoumenitsa**	**0.35**	**230**	*e*Pg		**Pg**		**18 00 33.5**	**-0.1**
IGT				*e*Sg		**Sb**		**18 00 40.1**	**+0.7**
IGT	**Igoumenitsa**	**0.35**	**230**	P		**Pg**		**18 00 33.4**	**-0.1**
IGT				S		**Sb**		**18 00 39.3**	**-0.1**
IGT				AML		AML		18 00 40.9	
	comp=E,6745μm,0.2s								
IGT				AML		AML		18 00 41.8	
	comp=N,10450μm,0.3s								
LSK	**Leskovik**	**0.40**	**351**	P		**Pg**		**18 00 34.1**	**-0.2**
	baz=356								
LSK				S		**Sb**		**18 00 41.4**	**+0.6**
	baz=356								
LSK				AMP					
	comp=N,28nm,0.2s,baz=356								
SRN	**Sarande**	**0.54**	**283**	P		**Pg**		**18 00 36.5**	**-0.4**
SRN				S		**Sb**		**18 00 44.5**	**-0.3**
	comp=N,1μm,0.3s								
SRN	**Sarande**	**0.54**	**283**	P		**Pg**		**18 00 36.4**	**-0.4**
	baz=282								
SRN				S		**Sb**		**18 00 44.2**	**-0.6**
	baz=282								
SRN				AMP					
	comp=N,5.4nm,0.4s,baz=282								
PENT	**Pentalofos**	**0.56**	**39**	P		**Pg**		**18 00 37.3**	**-0.1**
PENT				S		**Sg**		**18 00 44.8**	**-0.1**
PENT	**Pentalofos**	**0.56**	**39**	P		**Pg**		**18 00 37.3**	**-0.1**
PENT				S		**Sg**		**18 00 44.8**	**-0.1**
KASA	**Kassiopi**	**0.57**	**269**	P		**Pg**		**18 00 37.1**	**-0.5**
KASA				S		**Sg**		**18 00 45.1**	**-0.2**
KASA				AML		AML		18 00 48.6	
	comp=N,5359μm,0.2s								
KASA				AML		AML		18 00 49.3	
	comp=E,5478μm,0.3s								
KEK	**Kerkira**	**0.68**	**266**	P		**Pg**		**18 00 38.7**	**-0.9**
KEK				S		**Sg**		**18 00 48.6**	**-0.1**
	comp=E,2μm,0.2s								
KEK	**Kerkira**	**0.68**	**266**	P		**Pg**		**18 00 38.7**	**-0.9**
KEK				AML		AML		18 00 51.8	
	comp=N,3716μm,0.2s								
KEK				AML		AML		18 00 52.6	
	comp=E,3514μm,0.3s								
NEST	**Nestorio**	**0.71**	**23**	P		**Pb**		**18 00 40.0**	**-0.3**
NEST				S		**Sg**		**18 00 49.0**	**-0.7**
	comp=E,625nm,0.3s								
NEST	**Nestorio**	**0.71**	**23**	P		**Pb**		**18 00 40.1**	**-0.3**
NEST				S		**Sg**		**18 00 49.0**	**-0.7**
NEST				AML		AML		18 00 53.2	
	comp=E,1429μm,0.3s								
NEST				AML		AML		18 00 54.4	
	comp=N,1479μm,0.3s								
KBN	**Korca**	**0.87**	**5**	P		**Pg**		**18 00 42.3**	**-0.8**
KBN				S		**Sb**		**18 00 54.0**	**-0.4**
	comp=N,532nm,0.6s								
KBN	**Korca**	**0.87**	**5**	P		**Pb**		**18 00 42.8**	**-0.2**
	baz=7.0								
KBN				S		**Sn**		**18 00 57.0**	**+0.8**
	baz=7.0								
KBN				AMP					
	comp=N,2.1nm,0.5s,baz=7.0								
TSLK	**Tsoukalades, L**	**0.93**	**181**	P		**Pg**		**18 00 44.2**	**-0.1**
TSLK				S		**Sb**		**18 00 57.6**	**+1.4**
	comp=N,915nm,0.5s								
TSLK	**Tsoukalades, L**	**0.93**	**181**	P		**Pg**		**18 00 44.2**	**-0.1**
TSLK				S		**Sb**		**18 00 57.6**	**+1.4**
TSLK				AML		AML		18 01 04.7	
	comp=E,2345μm,0.6s								
TSLK				AML		AML		18 01 09.9	
	comp=N,1856μm,0.5s								
LKD2	**Lefkada island**	**0.97**	**181**	P		**Pg**		**18 00 44.5**	**-0.5**
LKD2				S		**Sb**		**18 00 58.7**	**+1.5**
	comp=N,692nm,0.6s								
LKD2	**Lefkada island**	**0.97**	**181**	P		**Pb**		**18 00 45.3**	**+0.6**
	baz=179								
LKD2				S		**Sn**		**18 01 00.1**	**+1.5**
	baz=179								
LKD2	**Lefkada island**	**0.97**	**181**	P		**Pg**		**18 00 44.5**	**-0.5**
LKD2				S		**Sb**		**18 00 58.7**	**+1.5**
LKD2				AML		AML		18 01 06.6	
	comp=E,1093μm,0.3s								
LKD2				AML		AML		18 01 08.7	
	comp=N,1214μm,0.6s								
KZN	**Kozani**	**1.00**	**56**	P		**Pg**		**18 00 45.2**	**-0.4**
KZN				S		**Sn**		**18 00 59.6**	**+0.1**
	comp=N,638nm,0.4s								
KZN	**Kozani**	**1.00**	**56**	P		**Pg**		**18 00 45.2**	**-0.4**
KZN				S		**Sn**		**18 00 59.6**	**+0.1**
KZN				AML		AML		18 01 03.2	
	comp=E,1545μm,0.4s								
KZN				AML		AML		18 01 05.3	
	comp=N,999μm,0.3s								
THL	**Klokotos Trika**	**1.05**	**100**	P		**Pb**		**18 00 45.2**	**-0.8**
THL				S		**Sb**		**18 01 00.5**	**+1.1**
	comp=N,538nm,0.5s								
THL	**Klokotos Trika**	**1.05**	**100**	P		**Pb**		**18 00 45.2**	**-0.8**
THL				S		**Sb**		**18 01 00.5**	**+1.1**
THL				AML		AML		18 01 05.8	
	comp=N,1086μm,0.7s								
THL				AML		AML		18 01 07.3	
	comp=E,1050μm,0.3s								
EVR	**Evrytania**	**1.21**	**134**	P		**Pn**		**18 00 49.0**	**+0.4**
EVR				S		**Sb**		**18 01 05.6**	**+1.3**
	comp=E,570nm,0.6s								
EVR	**Evrytania**	**1.21**	**134**	P		**Pn**		**18 00 49.1**	**+0.5**
EVR				AML		AML		18 01 13.8	
	comp=N,1075μm,0.4s								
EVR				AML		AML		18 01 13.8	
	comp=E,1212μm,0.4s								
FSK	**Fiskardo**	**1.30**	**184**	P		**Pn**		**18 00 49.2**	**-0.5**
FSK	**Fiskardo**	**1.30**	**184**	P		**Pg**		**18 00 51.3**	**-0.1**
FSK				AML		AML		18 01 12.9	
	comp=N,628μm,0.3s								
FSK				AML		AML		18 01 15.1	
	comp=E,1105μm,0.4s								
MAKR	**Makrakomi, Fth**	**1.35**	**123**	P		**Pb**		**18 00 51.6**	**+0.4**
MAKR				AML		AML		18 01 18.1	
	comp=E,2333μm,0.5s								
MAKR				AML		AML		18 01 19.1	
	comp=N,1557μm,0.4s								
OHR	**Ohrid**	**1.35**	**4**	*e*Pg		**Pg**		**18 00 52.8**	**+0.5**
OHR				*e*Sg		**Sg**		**18 01 11.4**	**+1.4**
OHR	**Ohrid**	**1.35**	**4**	*i* Pn		**Pg**		**18 00 53.1**	**+0.8**
LIT	**Litokhoron**	**1.43**	**76**	P		**Pn**		**18 00 51.8**	**+0.2**
LIT	**Litokhoron**	**1.43**	**76**	P		**Pb**		**18 00 52.6**	**+0.1**
TIR	**Tirane**	**1.70**	**339**	*e*Pn		**Pb**		**18 00 57.7**	**+0.5**
TIR				*e*Sn		**Sg**		**18 01 21.9**	**+0.7**
TIR	**Tirane**	**1.70**	**339**	P		**Pb**		**18 00 57.3**	**+0.1**
	baz=340								
TIR				S		**Sg**		**18 01 19.4**	**-1.8**
	baz=340								
AXAR	**Agios Charalam**	**1.83**	**122**	P		**Pb**		**18 00 59.7**	**+0.4**
PHP	**Peshkopia**	**1.93**	**355**	P		**Pb**		**18 01 01.7**	**+0.6**
	baz=356								
PHP				S		**Sg**		**18 01 27.9**	**-0.5**
	baz=356								
VAY	**Valandovo**	**2.12**	**42**	*e*Pn		**Pn**		**18 01 02.2**	**+1.2**
VAY				*e*Sn		**Sb**		**18 01 29.4**	**-1.0**
VAY	**Valandovo**	**2.12**	**42**	*i* Pn		**Pn**		**18 01 02.2**	**+1.2**
SKO	**Skopje**	**2.28**	**14**	*e*Pn		**Pb**		**18 01 06.3**	**-0.8**
SKO				*e*Sn		**Sb**		**18 01 34.8**	**-0.3**
SKO	**Skopje**	**2.28**	**14**	*i* Pn		**Pb**		**18 01 08.1**	**+1.0**
SRS	**Serrai**	**2.60**	**58**	*e*Pn		**Pn**		**18 01 09.3**	**+1.6**
SRS				*e*Sn		**Sn**		**18 01 40.8**	**+1.8**
BARS	**Barje**	**3.17**	**15**	*e*Pn		**Pn**		**18 01 17.6**	**+2.1**
BARS				*e*Sn		**Sn**		**18 01 55.0**	**+2.0**
SELS	**Selova**	**3.47**	**5**	*e*Pn		**Pn**		**18 01 21.2**	**+1.6**
SJES	**Sjenica**	**3.54**	**352**	*e*Pn		**Pn**		**18 01 23.2**	**+2.6**
ZAPS	**Zavoj**	**3.81**	**22**	*e*Pn		**Pn**		**18 01 26.9**	**+2.7**
BOVS	**Bovan**	**3.95**	**11**	*e*Pn		**Pn**		**18 01 27.8**	**+1.7**
BOVS				*e*Sn		**Sn**		**18 02 13.0**	**+0.9**
GRUS	**Gruza**	**4.13**	**0**	*e*Pn		**Pn**		**18 01 30.4**	**+1.8**
ZAGS	**Zajecar**	**4.21**	**15**	*e*Pn		**Pn**		**18 01 31.9**	**+2.1**
DIVS	**Divibare**	**4.37**	**353**	*e*Pn		**Pn**		**18 01 33.2**	**+1.2**
DIVS				*e*Sn		**Sn**		**18 02 22.3**	**-0.2**
TRUS	**Trudelj**	**4.47**	**357**	*e*Pn		**Pn**		**18 01 36.1**	**+2.8**
IDI	**Anoyia**	**5.58**	**142**	Pn		**Pn**		**18 01 47.0**	**-1.6**
	comp=N,0.4nm,0.3s,baz=87,slow=23,SNR=1.1								
IDI				Sn		**Sn**		**18 02 49.0**	**-3.4**
	comp=N,1.0nm,0.3s,baz=278,slow=9.3,SNR=2.7								
	comp=N,20nm,1.1s								
SOKA	**Soboth**	**8.05**	**331**	*i* Pn		**Pn**		**18 02 22.6**	**+0.1**
	comp=N,0.6nm,0.2s								
GERES	**GERESS Array B**	**10.36**	**334**	Pn		Pn		18 02 59.2	+5.0
	comp=N,0.1nm,0.3s,baz=156,slow=12,SNR=4.0								
	comp=N,0.2nm,0.4s								
FINES	**FINESS Array B**	**21.96**	**7**	P		**P**		**18 05 17.8**	**-1.2**
	comp=N,1.6nm,0.8s,baz=178,slow=11,SNR=3.7								
	comp=N,1.6nm,0.8s								
MKAR	**Makanchi Array**	**44.38**	**60**	P		**P**		**18 08 34.1**	**-1.7**
	comp=N,0.1nm,0.4s,baz=272,slow=8.2,SNR=6.2								
	comp=N,0.1nm,0.4s								

IDC 17 18:01:29.4±575.0, 53°.39N×1°.57E, h0km, Error ellipse: s-maj=319.5km s-min=167.4km az=107.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.88**	**116**	I				18 51 20.4	
	baz=309,slow=325,SNR=7.7								
I43RU	**DUBNA INFRASON**	**20.54**	**66**	I				20 06 30.0	
	baz=279,slow=317,SNR=1.6								
I31KZ	**AKTYUBINSK INF**	**34.20**	**72**	I				21 34 05.4	
	baz=296,slow=330,SNR=1.2								
I46RU	**ZALESOVO INFRA**	**46.57**	**54**	I				22 51 40.0	
	baz=304,slow=334,SNR=1.6								

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*NEIC **17** 18:04:48.8±1.9, 4°.82S±0°.10×68°.77E±0°.09, h10km±1km, mb4.8/38, Error ellipse: s-maj=16.8km s-min=13.7km az=209.0*
*IDC **17** 18:04:49.4±0.7, 4°.59S×69°.17E, h0km, mb4.1/19, mbtmp4.1/19, MS4.5/19, Error ellipse: s-maj=24.2km s-min=15.2km az=49.0*
*GCMT **17** 18:04:50.8±0.1, 4°.86S±0°.01×68°.55E±0°.01, h16km, MW5.2/136, Moment Tensor Solution. s68,c90; s136,c265; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$-0.74±.01; $M_{\phi\phi}$0.89±.02; $M_{r\theta}$-0.27±.05; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$-0.15±.04; Best double couple: $M_0$0.88800×10^{17} NP1:φ$_s$39.00000°, δ80.00000°, λ-21.00000°. NP2:φ$_s$133.00000°, δ70.00000°, λ-169.00000°. Principal axes: T 0.9170, Plg7.0000°, Azm87.0000°; N -0.0580, Plg67.0000°, Azm194.0000°; P -0.8590, Plg22.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 18:04:50.0±0.5, 4°.66S±0°.08×69°.02E±0°.08, h10km, n100, σ1§86/90, mb4.5/44, MS4.6/19, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.38**	**129**	Pn		**Pn**		**18 05 55.8**	**-0.7**
H08S3	**Diego Garcia H**	**4.54**	**131**	T		T		18 10 47.4	
	baz=311,slow=74,SNR=301								
H08S1	**Diego Carcia H**	**4.54**	**131**	T		T		18 10 40.6	
	baz=311,slow=74,SNR=0.2								
H08S2	**Diego Garcia H**	**4.55**	**131**	T		T		18 10 49.3	
	baz=311,slow=74,SNR=385								
KAAM	**Kaadhehdhoo**	**6.48**	**38**	Pn		**Pn**		**18 06 27.4**	**+2.0**
MSEY	**Mahe Island**	**13.49**	**269**	Pn		Pn		18 07 55.1	-6.7
PALK	**Pallekele**	**16.63**	**45**	Pn		**P**		**18 08 48.6**	**+2.7**
	1.5nm,0.3s,baz=340,slow=13,SNR=12								
PALK				Sn		**Sn**		**18 11 46.7**	**-1.6**
	0.2nm,0.3s,baz=277,slow=19,SNR=1.5								
PALK				LR		LR		18 13 53.3	
	comp=Z,2μm,18.9s,baz=326,slow=33								
PSI	**Prapat**	**30.79**	**77**	LR		LR		18 22 18.1	
	comp=Z,2μm,19.1s,baz=271,slow=34								
RAYN	**Ar Rayn**	**36.21**	**322**	P		**P**		**18 11 49.7**	**-3.6**
SHL	**Shillong**	**37.35**	**35**	P		**P**		**18 12 02.2**	**-1.0**
CM31	**Chiang Mai Arr**	**37.38**	**51**	P		**P**		**18 12 02.4**	**-1.0**
CM31				IAmb		IAmb		18 12 59.5	
	comp=Z,34nm,1.9s								
CMAR	**Chiang Mai Arr**	**37.38**	**51**	P		**P**		**18 12 04.6**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=244,slow=9.0,SNR=13								
CMAR				PcP		**PcP**		**18 14 23.4**	**+1.1**
	comp=Z,1.5nm,1.0s,baz=248,slow=4.2,SNR=4.1								
	comp=Z,1.3nm,0.7s								
CMAR	**Chiang Mai Arr**	**37.38**	**51**	P		**P**		**18 12 01.4**	**-1.9**
CHTO	**Chiang Mai**	**37.59**	**51**	P		**P**		**18 12 05.5**	**+0.4**
NIL	**Nilore**	**38.31**	**6**	P		**P**		**18 12 10.0**	**-1.0**
NIL				IAmb		IAmb		18 12 21.4	
	comp=Z,14nm,0.9s								
MBAR	**Mbarara**	**38.44**	**275**	P		P		18 12 06.7	-5.9
LEM	**Lembang**	**38.46**	**95**	LR		LR		18 25 47.3	
	comp=Z,973nm,20.5s,baz=256,slow=33								
KBL	**Kabul**	**38.99**	**0**	P		**P**		**18 12 16.3**	**-0.6**
LSA	**Lhasa**	**40.22**	**31**	P		**P**		**18 12 24.6**	**-2.9**
LSA				IAmb		IAmb		18 12 47.0	
	comp=Z,34nm,1.7s								
GAR	**Garm**	**43.46**	**1**	P		**P**		**18 12 53.0**	**-0.5**
GEYT	**Alibeck**	**43.57**	**347**	P		**P**		**18 12 54.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=270,slow=8.9,SNR=3.6								
GEYT				LR		LR		18 29 54.1	
	comp=Z,744nm,20.6s,baz=165,slow=35								
	comp=Z,0.6nm,0.5s								
DRK	**Karamyk**	**43.99**	**3**	P		**P**		**18 12 56.7**	**-1.3**
DRK				IAmb		IAmb		18 13 12.0	
	comp=Z,11nm,1.1s								
PZH	**PanZhiHua**	**44.31**	**44**	P		**P**		**18 13 03.3**	**+2.8**
BTK	**Batken**	**44.53**	**2**	P		**P**		**18 13 01.6**	**-0.4**
BTK				IAmb		IAmb		18 13 26.9	
	comp=Z,9.0nm,0.9s								
NRN	**Naryn**	**46.31**	**7**	P		**P**		**18 13 15.9**	**-0.5**
NRN				IAmb		IAmb		18 13 45.0	
	comp=Z,14nm,1.3s								
AAK	**Ala-Archa**	**47.34**	**5**	P		**P**		**18 13 23.8**	**-0.4**
	comp=Z,4.1nm,1.0s,baz=188,slow=7.1,SNR=6.3								
	comp=Z,4.1nm,1.0s								
AAK	**Ala-Archa**	**47.34**	**5**	P		**P**		**18 13 25.2**	**+0.9**
KK31	**Karatay Array**	**47.56**	**1**	P		**P**		**18 13 24.3**	**-1.5**
KK31				IAmb		IAmb		18 13 59.7	
	comp=Z,12nm,1.6s								
KKAR	**Karatay Array**	**47.56**	**1**	P		**P**		**18 13 25.7**	**-0.1**
MARD	**Mardin**	**49.35**	**330**	P		**P**		**18 13 39.1**	**-0.7**
GNI	**Garni**	**49.86**	**336**	P		**P**		**18 13 45.3**	**+1.5**
	comp=Z,4.5nm,0.9s,baz=135,slow=1.4,SNR=3.6								
	comp=Z,4.5nm,0.9s								
KAPI	**Kappang**	**50.54**	**93**	LR		LR		18 33 21.6	
	comp=Z,817nm,21.1s,baz=265,slow=34								
WMQ	**Urumqi**	**51.11**	**17**	*e*P		**P**		**18 13 55.4**	**+2.4**
GTA	**Gaotai**	**52.25**	**30**	*e*P		**P**		**18 14 02.0**	**+0.4**
GTA				pP		pwP		18 14 07.5	-0.4
GTA				sP		sP		18 14 10.1	+5.4
MAKZ	**Makanchi**	**52.51**	**11**	P		**P**		**18 14 03.6**	**+0.2**
MK31	**Makanchi Array**	**52.56**	**11**	P		**P**		**18 14 03.2**	**-0.5**
MKAR	**Makanchi Array**	**52.56**	**11**	P		**P**		**18 14 02.7**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=198,slow=6.8,SNR=14								
	comp=Z,0.8nm,0.5s								
MKAR	**Makanchi Array**	**52.56**	**11**	P		**P**		**18 14 03.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**52.97**	**128**	LR		LR		18 31 56.1	
	comp=Z,292nm,21.1s,baz=136,slow=31								
KBZ	**Khabaz**	**53.62**	**337**	P		**P**		**18 14 11.9**	**+0.5**
	comp=Z,4.7nm,0.9s,baz=149,slow=9.3,SNR=4.5								
	comp=Z,4.7nm,0.9s								
ABKAR	**Akbulak array**	**54.27**	**353**	P		**P**		**18 14 15.6**	**-0.6**
ABKAR				IAmb		IAmb		18 14 25.1	
	comp=Z,8.1nm,1.1s								
ABKAR	**Akbulak array**	**54.27**	**353**	P		**P**		**18 14 15.4**	**-0.8**
BRTR	**Keskin Array B**	**54.87**	**327**	P		**P**		**18 14 21.9**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=126,slow=7.4,SNR=3.7								
	comp=Z,0.9nm,0.7s								
BRTR	**Keskin Array B**	**54.87**	**327**	P		**P**		**18 14 19.9**	**-1.1**
AKTO	**Aktyubinsk**	**55.69**	**352**	P		**P**		**18 14 26.2**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=162,slow=9.9,SNR=2.8								
	comp=Z,0.9nm,0.5s								
KURK	**Kurchatov**	**55.77**	**7**	P		**P**		**18 14 26.1**	**-0.9**
BRVK	**Borovoye**	**57.51**	**1**	P		**P**		**18 14 39.8**	**+0.5**
BRVK				IAmb		IAmb		18 14 52.5	
	comp=Z,7.9nm,1.1s								
DAV	**Davao City (W)**	**57.64**	**79**	LR		LR		18 38 16.1	
	comp=Z,371nm,22.0s,baz=261,slow=35								
BELG	**Belogornoye**	**59.67**	**345**	LR		LR		18 41 50.2	
	comp=Z,231nm,20.1s,baz=141,slow=37								
HHC	**Hui-ho-hao-te**	**59.70**	**36**	*e*P		**P**		**18 14 56.6**	**+1.6**
NJ2	**Nanjing**	**59.78**	**49**	*e*P		**P**		**18 14 52.9**	**-2.7**
ZAA0	**Zalesovo Array**	**59.88**	**11**	P		**P**		**18 14 54.3**	**-1.5**
ZAA0				IAmb		IAmb	

MNK *i* PcP **PcP** **18 16 18.0 +2.0**
MNK *i* PP **PP** **18 18 22.4 +1.8**
MNK *i* PPP PPP 18 20 00.5
MNK *i* S **S** **18 24 53.0 +2.9**
MNK *i* SS **SS** **18 29 16.6 +3.6**
MNK *i* SSS SSS 18 32 32.3
MNK *i* LQ LQ 18 39 30.5
MNK *i* LR LR 18 45 38.6
MNK *i* LRM MLR 18 47 44.9
comp=Z,70nm,17.0s
MNK *i* LRM MLR 18 47 52.6
comp=N,887nm,15.2s
MNK *i* LRM MLR 18 47 54.3
comp=E,13nm,17.0s
KSRS Korea Array 68.85 47 LR LR 18 47 51.2
comp=E,322nm,18.1s,baz=260,slow=38
NRCA Norcia 69.12 319 P **P** **18 15 56.9 +0.3**
NRCA IAmb IAmb 18 16 09.5
comp=Z,14nm,1.4s
TORD Torodi Ar. Bea 69.14 286 P **P** **18 15 58.9 +1.7**
comp=Z,2.9nm,1.4s,baz=106,slow=4.6,SNR=4.3
comp=Z,2.9nm,1.4s
KLMR Klimovskoe 69.25 345 *e*P **P** **18 15 55.5 -1.4**
KLMR AMP 18 16 02.8
comp=Z,25nm,1.7s
RONA Rosalia, Austr 69.62 325 *i* P **P** **18 16 01.0 +1.4**
comp=Z,4.4nm,1.2s
ARSA Arzberg 69.83 324 *e*P **P** **18 16 02.4 +1.5**
comp=Z,5.1nm,1.0s
CONA Conrad Observa 69.99 325 *e*P **P** **18 16 03.0 +1.1**
comp=Z,6.4nm,1.4s
BIOA Bad Ischl, Aus 71.15 324 *i* P **P** **18 16 09.2 +0.3**
comp=Z,3.1nm,0.8s
ABTA Abfaltersbach 71.36 323 *i* P **P** **18 16 13.4 +3.1**
comp=Z,4.4nm,0.9s
WTTA Wattenberg 72.13 323 *e*P **P** **18 16 16.3 +1.2**
comp=Z,4.3nm,1.1s
SQTA Sankt Quirin 72.37 323 *e*P **P** **18 16 17.8 +1.4**
comp=Z,6.1nm,1.3s
FETA Feichten 72.57 322 *e*P **P** **18 16 18.1 +0.4**
comp=Z,3.7nm,1.2s
STKA Stephens Creek 72.76 122 P **P** **18 16 19.9 +0.9**
comp=Z,1.8nm,0.8s,baz=264,slow=9.2,SNR=2.9
comp=Z,1.8nm,0.8s
CLL Collm 73.33 327 *i* P **P** **18 16 22.1 +0.3**
comp=Z,36nm,2.4s
CLL *e*S **S** **18 25 47.0 -3.6**
CLL *e*SS **SS** **18 30 24.0 -8.8**
CLL *e*SSS SSS 18 34 06.0
CLL *e*SSSS 18 35 30.0
MJAR Matsushiro Arr 76.27 51 P **P** **18 16 38.6 -0.7**
comp=Z,0.8nm,0.6s,baz=261,slow=5.0,SNR=2.1
comp=Z,0.8nm,0.6s
CTA Charters Tower 76.44 109 LR LR 18 46 16.4
comp=Z,361nm,21.8s,baz=274,slow=33
GUMO Guam 77.40 75 LR LR 18 48 45.5
comp=Z,259nm,21.2s,baz=230,slow=34
PMG Port Moresby 77.57 99 LR LR 18 54 27.2
comp=Z,175nm,18.4s,baz=293,slow=38
HFS Hagfors 77.64 335 P **P** **18 16 47.6 +1.2**
baz=124,slow=7.8
MDT Midelt 78.87 305 LR LR 18 50 19.3
comp=Z,132nm,20.9s,baz=104,slow=35
NOA NORSAR Array B 79.16 335 P **P** **18 16 57.6 +2.7**
comp=Z,0.2nm,0.4s,baz=115,slow=6.2,SNR=3.9
comp=Z,0.2nm,0.4s
ESDC Sonseca Array 79.99 311 P **P** **18 17 01.9 +2.0**
comp=Z,2.3nm,1.1s,baz=102,slow=5.2,SNR=4.1
comp=Z,2.3nm,1.1s
ESDC Sonseca Array 79.99 311 P **P** **18 16 56.4 -3.5**
TIXI Tiksi 85.29 16 P **P** **18 17 26.4 -0.3**
TIXI IAmb IAmb 18 17 36.5
comp=Z,11nm,1.1s
BBTS Babate 86.87 285 LR LR 18 56 51.7
comp=Z,393nm,18.4s,baz=92,slow=36
DZM Mont Dzumac 95.13 113 LR LR 18 58 55.8
comp=Z,552nm,19.9s,baz=240,slow=34
PDAR Pinedale Array 142.03 358 PKP **PKiKP** **18 24 25.3 -0.7**
comp=Z,0.4nm,0.8s,baz=28,slow=4.1,SNR=2.9
NVAR Mina Array Bea 145.73 10 PKPbc **PKPab** **18 24 31.3 +1.0**
comp=Z,5.0nm,0.9s,baz=30,slow=1.7,SNR=21

IDC 17 18:16:36.0±884.0, 53°.41N×0°.65E, h0km, Error ellipse: s-maj=428.9km s-min=184.0km az=98.0, United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.39**	**114**	I			19 13 19.0	
baz=307,slow=317								
I43RU	**DUBNA INFRASON**	**21.04**	**66**	I			20 21 37.8	
baz=278,slow=319,SNR=1.9								
I31KZ	**AKTYUBINSK INF**	**34.71**	**71**	I			21 52 40.0	
baz=296,slow=330,SNR=1.5								
I46RU	**ZALESOVO INFRA**	**47.00**	**54**	I			23 08 19.6	
baz=303,slow=335,SNR=1.7								

*IDC **17** 18:16:49.4±0.5, 5°.59N×61°.61E, h0km, mb4.2/26, mbtmp4.2/28, ML3.9/2, MS4.4/54, Error ellipse: s-maj=13.9km s-min=12.3km az=144.0*
*NEIC **17** 18:16:50.4±2.3, 5°.41N±0°.04×61°.4E±0°.1, h10km±1km, mb4.6/68, Error ellipse: s-maj=17.7km s-min=7.4km az=272.0*
*GCMT **17** 18:16:51.4±0.2, 5°.57N±0°.01×61°.35E±0°.01, h13km, MW5.2/134, Moment Tensor Solution. s48,c58; s134,c233; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}=-6.37±.25; $M_{\theta\theta}$3.42±.15; $M_{\phi\phi}$2.95±.16; $M_{r\theta}$3.29±.39; $M_{\theta\phi}$-2.89±.09; $M_{r\phi}$0.89±.37; Best double couple: M_0=7.01600×10^16^ NP1:ϕ_s=292.00000°, δ=57.00000°, λ=-113.00000°. NP2:ϕ_s=150.00000°, δ=40.00000°, λ=-59.00000°. Principal axes: T 6.3740, Plg9.0000°, Azm38.0000°; N 1.2850, Plg19.0000°, Azm305.0000°; P -7.6580, Plg69.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 18:16:51.3±0.3, 5°.51N±0°.04×61°.50E±0°.05, h14km, n231, σ1=84/228, mb4.6/70, MS4.5/53, 13C-2D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**11.77**	**211**			**Pn**	**18 19 34.4**	**-4.5**
MSEY					Sn	**Sn**	**18 21 42.7**	**-7.5**
MSEY	**Mahe Island**	**11.77**	**211**		P	**Pn**	**18 19 41.1**	**+2.1**
MSEY					P	**Pn**	**18 19 41.1**	**+2.1**
MSEY					S	**Sn**	**18 21 53.8**	**+3.7**
MSEY					S	**Sn**	**18 21 53.8**	**+3.7**
MSEY	**Mahe Island**	**11.77**	**211**	*i* P		Pn	18 19 33.8	-5.2
SNR=16								
DMTO	**DMTO**	**13.72**	**333**		P	**Pn**	**18 20 07.3**	**+1.7**
RBK	**Rabkut**	**13.90**	**330**		P	**Pn**	**18 20 10.0**	**+1.9**
RBK					P	**Pn**	**18 20 10.0**	**+1.9**
RBK					S	**Sn**	**18 22 42.1**	**-0.2**
RBK					S	**Sn**	**18 22 42.1**	**-0.2**
ABTO	**Aybut**	**14.25**	**326**		P	**Pn**	**18 20 14.0**	**+1.1**
SNR=10								
ABTO					P	**Pn**	**18 20 14.0**	**+1.1**
SNR=10								
ABTO					S	**Sn**	**18 22 55.1**	**+4.1**
ABTO					S	**Sn**	**18 22 55.1**	**+4.1**
WHFO	**Wadi Hawf**	**14.47**	**329**		P	**Pn**	**18 20 16.0**	**+0.2**
SNR=7.3								
WHFO					P	**Pn**	**18 20 16.0**	**+0.2**
SNR=7.3								
DQM	**DQM**	**14.85**	**345**		P	**Pn**	**18 20 19.6**	**-1.3**
DQM					P	**Pn**	**18 20 19.6**	**-1.3**
DQM					S	**Sn**	**18 23 03.1**	**-2.3**
DQM					S	**Sn**	**18 23 03.1**	**-2.3**
DOK	**Doka**	**14.89**	**332**		P	**Pn**	**18 20 20.7**	**-0.8**
DOK					S	**Sn**	**18 23 13.7**	**+7.3**
MHTO	**MHTO**	**15.77**	**348**		P	**P**	**18 20 37.0**	**0.0**
SNR=15								
MHTO					P	**P**	**18 20 37.0**	**0.0**
SNR=15								
MHTO					S	**Sn**	**18 23 29.9**	**+2.2**
MHTO					S	**Sn**	**18 23 29.9**	**+2.2**
JMDO	**Jabal Madar**	**17.08**	**349**		P	**P**	**18 20 53.8**	**+2.2**
SNR=9.9								
JMDO					S	**Sn**	**18 23 54.3**	**-5.5**
WBK	**Wadi Bani Khal**	**17.18**	**352**		P	**P**	**18 20 54.5**	**+1.8**
WBK					S	**Sn**	**18 23 55.2**	**-6.9**
BSY	**Bisya**	**17.64**	**347**		P	**Pn**	**18 20 57.4**	**+0.6**
SNR=31								
BSY					S	**Sn**	**18 24 14.2**	**+1.1**
SMDO	**Samad**	**17.77**	**350**		P	**Pn**	**18 20 57.7**	**-0.7**
SNR=7.3								
WSAR	**Wadi Sarin**	**17.85**	**351**		P	**Pn**	**18 20 59.8**	**+0.5**
0.1nm,0.3s,baz=223,slow=8.1,SNR=3.6								
WSAR					LR	LR	18 26 27.1	
comp=Z,1μm,19.2s,baz=192,slow=32								
5.6nm,0.8s								
BIDO	**Bidbid**	**18.20**	**350**		P	**P**	**18 21 10.0**	**+6.0**
SNR=7.3								
BIDO					S	**S**	**18 24 31.3**	**-0.8**
ARQ	**Araqi**	**18.37**	**345**		P	**Pn**	**18 21 06.0**	**+0.2**
SNR=19								
ARQ					P	**Pn**	**18 21 06.0**	**+0.2**
SNR=19								
HOQ	**Hoqain**	**18.42**	**348**		P	**P**	**18 21 05.2**	**-1.2**
SNR=12								
HOQ					P	**P**	**18 21 05.2**	**-1.2**
SNR=12								
HOQ					S	**Sn**	**18 24 34.6**	**+2.4**
HOQ					S	**Sn**	**18 24 34.6**	**+2.4**
MZR	**Muzera**	**19.04**	**337**		P	**Pn**	**18 21 17.0**	**+3.1**
SNR=9.3								
MZR					P	**Pn**	**18 21 17.0**	**+3.1**
SNR=9.3								
MZR					S	**S**	**18 24 49.6**	**+0.5**
MZR					S	**S**	**18 24 49.6**	**+0.5**
MZR	**Muzera**	**19.04**	**337**	*i* P		**P**	**18 21 13.0**	**-0.2**
SNR=6.5								
PALK	**Pallekele**	**19.16**	**84**		LR	LR	18 27 12.0	
comp=Z,2μm,18.8s,baz=15,slow=33								
ALNE	**Al Ain**	**19.26**	**344**		P	**P**	**18 21 15.7**	**+0.1**
SNR=10								
ALNE					S	**S**	**18 24 55.7**	**+2.3**
ALNE	**Al Ain**	**19.26**	**344**	*i* P		**P**	**18 21 16.1**	**+0.5**
SNR=17								
ATD	**Arta Tunnel**	**19.39**	**289**		P	**Pn**	**18 21 18.4**	**+0.1**
1.2nm,0.3s,baz=97,slow=17,SNR=3.8								
10nm,0.8s								
ATD	**Arta Tunnel**	**19.39**	**289**		P	**P**	**18 21 13.1**	**-4.0**
ATD					IAmb	IAmb	18 21 24.7	
comp=Z,28nm,1.1s								
ASHO	**Ashiyiah**	**19.77**	**345**		P	**P**	**18 21 21.0**	**-0.2**
SNR=7.6								
ASHO					P	**P**	**18 21 21.0**	**-0.2**
SNR=7.6								
ASHO					S	**S**	**18 25 03.9**	**+0.1**
ASHO					S	**S**	**18 25 03.9**	**+0.1**
ASHO	**Ashiyiah**	**19.77**	**345**	*i* P		**P**	**18 21 21.8**	**+0.6**
SNR=11								
HATD	**Hatta, Dubai**	**19.89**	**346**	*i* P		**P**	**18 21 23.0**	**+0.5**
SNR=9.9								
ASUD	**Al Ashush, Dub**	**19.91**	**343**		P	**P**	**18 21 23.3**	**+0.6**
FAQ	**Al Faqa, Dubai**	**19.95**	**344**	*i* P		**P**	**18 21 23.9**	**+0.8**
SNR=8.2								
AJN	**Ajban**	**19.95**	**342**	*i* P		**P**	**18 21 23.8**	**+0.6**
SNR=6.3								
UOSS	**Minazif**	**19.99**	**346**			**P**	**18 21 23.5**	**0.0**
UOSS					IAmb	IAmb	18 21 33.7	
comp=Z,42nm,1.1s								
UOSS	**Minazif**	**19.99**	**346**		P	**P**	**18 21 23.4**	**-0.1**
NAZ	**Nazwa, Dubai**	**20.17**	**344**	*i* P		**P**	**18 21 25.6**	**+0.2**
SNR=8.9								
MSFE	**Esma-Masafi**	**20.39**	**346**	*i* P		**P**	**18 21 28.2**	**+0.2**
SNR=6.0								
BANOM	**Banah**	**20.90**	**347**		P	**P**	**18 21 33.5**	**+0.1**
SHME	**Shamm**	**21.06**	**346**		P	**P**	**18 21 36.2**	**+1.1**
AKL	**Akola**	**21.33**	**44**	*e*P		**P**	**18 21 40.2**	**+2.1**
FURI	**Furi**	**22.89**	**280**		P	**P**	**18 21 52.7**	**-2.5**
NGP	**Nagpur**	**23.05**	**46**	*e*P		**P**	**18 21 59.8**	**+3.3**
RAYN	**Ar Rayn**	**23.63**	**321**		P	**P**	**18 22 00.4**	**-1.9**
RAYN					IAmb	IAmb	18 22 16.8	
comp=Z,19nm,1.2s								
RAYN	**Ar Rayn**	**23.63**	**321**	*i* P		**P**	**18 22 00.6**	**-1.7**
SNR=8.9								
KIBK	**Kibwezi**	**24.69**	**252**		P	**P**	**18 22 11.0**	**-1.3**
KIBK					IAmb	IAmb	18 22 37.8	
comp=Z,21nm,1.4s								
KMBO	**Kilima Mbogo**	**25.10**	**255**		P	**P**	**18 22 18.1**	**+1.9**
comp=Z,0.6nm,1.1s,baz=57,slow=24,SNR=7.1								
KMBO					LR	LR	18 31 00.7	
comp=Z,27nm,21.1s,baz=94,slow=34								
KMBO	**Kilima Mbogo**	**25.10**	**255**		P	**P**	**18 22 14.9**	**-1.2**
KMBO	**Kilima Mbogo**	**25.10**	**255**		S	**S**	**18 26 40.2**	**-0.6**
KMBO	**Kilima Mbogo**	**25.10**	**255**	*i* P		**P**	**18 22 14.4**	**-1.8**
SNR=16								
LODK	**Lodwar**	**26.14**	**267**		P	**P**	**18 22 26.0**	**+0.6**
LODK					IAmb	IAmb	18 22 36.6	
comp=Z,19nm,1.2s								
LODK	**Lodwar**	**26.14**	**267**		P	**P**	**18 22 28.4**	**+2.9**
SNR=12								
HRA	**Herat**	**28.75**	**1**		P	**P**	**18 22 47.8**	**-0.9**
KBL	**Kabul**	**29.72**	**13**		P	**P**	**18 22 58.3**	**+0.9**
NIL	**Nilore**	**30.06**	**20**		P	**P**	**18 23 01.2**	**+1.0**
NIL					IAmb	IAmb	18 23 11.1	
comp=Z,16nm,1.2s								
MBAR	**Mbarara**	**31.31**	**260**		LR	LR	18 36 12.0	
comp=Z,637nm,18.3s,baz=66,slow=37								
GEYT	**Alibeck**	**32.42**	**355**		P	**P**	**18 23 21.0**	**0.0**
comp=Z,1.1nm,0.8s,baz=179,slow=8.5,SNR=2.3								
comp=Z,1.1nm,0.8s								
CHGR	**Chuyangaron**	**33.72**	**11**		P	**P**	**18 23 32.0**	**-0.4**
CHGR					IAmb	IAmb	18 23 34.5	
comp=Z,6.7nm,0.8s								
BRDH	**Bariadhala**	**33.73**	**57**		LR	LR	18 37 19.6	
comp=Z,2μm,19.1s,baz=242,slow=37								
GAR	**Garm**	**34.29**	**12**		P	**P**	**18 23 37.6**	**+0.3**
GAR					IAmb	IAmb	18 24 18.3	
comp=Z,11nm,1.1s								
EIL	**Elat**	**34.72**	**317**		LR	LR	18 37 10.6	
comp=Z,975nm,18.2s,baz=80,slow=35								
DRK	**Karamyk**	**35.08**	**14**		P	**P**	**18 23 44.3**	**-0.1**
DRK					IAmb	IAmb	18 23 47.6	
comp=Z,12nm,0.9s								
BTK	**Batken**	**35.41**	**12**		P	**P**	**18 23 48.0**	**+1.0**
BTK					IAmb	IAmb	18 23 50.4	
comp=Z,8.7nm,0.8s								
KSH	**Kashi**	**36.29**	**19**		P	**P**	**18 23 51.4**	**-3.2**
MMAI	**Mount Meron Ar**	**36.60**	**322**		LR	LR	18 38 56.8	
comp=Z,427nm,18.2s,baz=344,slow=36								
MARD	**Mardin**	**36.88**	**332**		P	**P**	**18 24 01.0**	**+1.3**
MARD					IAmb	IAmb	18 24 11.8	
comp=Z,8.3nm,1.0s								
LSA	**Lhasa**	**36.90**	**46**		P	**P**	**18 24 01.3**	**+1.0**
LSA					IAmb	IAmb	18 24 04.2	
comp=Z,16nm,1.3s								
LSA	**Lhasa**	**36.90**	**46**		P	**P**	**18 24 01.1**	**+0.7**
GURO	**Guroymak-BITLI**	**37.34**	**334**		P	**P**	**18 24 03.9**	**+0.3**
PSI	**Prapat**	**37.41**	**93**		LR	LR	18 37 04.4	
comp=Z,749nm,19.9s,baz=256,slow=33								
GNI	**Garni**	**37.65**	**339**		P	**P**	**18 24 07.2**	**+1.1**
comp=Z,8.1nm,1.0s,baz=139,slow=9.3,SNR=3.6								
GNI					LR	LR	18 41 21.5	
comp=Z,205nm,18.2s,baz=141,slow=39								
comp=Z,8.1nm,1.0s								
GNI	**Garni**	**37.65**	**339**		P	**P**	**18 24 06.3**	**+0.1**
KK31	**Karatay Array**	**38.28**	**11**		P	**P**	**18 24 11.6**	**+0.2**
KKAR	**Karatay Array**	**38.28**	**11**		P	**P**	**18 24 11.7**	**+0.4**
KKAR	**Karatay Array**	**38.28**	**11**		P	**P**	**18 24 11.8**	**+0.5**
GAZ	**Gaziantep**	**38.55**	**328**		P	**P**	**18 24 12.8**	**-0.9**
GAZ					IAmb	IAmb	18 24 34.4	
comp=Z,14nm,1.5s								
CM31	**Chiang Mai Arr**	**38.72**	**67**		P	**P**	**18 24 13.9**	**-1.4**
CM31					IAmb	IAmb	18 24 30.8	
comp=Z,15nm,1.3s								
CMAR	**Chiang Mai Arr**	**38.72**	**67**		P	**P**	**18 24 15.7**	**+0.4**
comp=Z,2.0nm,1.0s,baz=257,slow=8.4,SNR=8.9								
CMAR					PcP	**PcP**	**18 26 27.5**	**+0.3**
comp=Z,1.1nm,1.0s,baz=256,slow=4.9,SNR=4.3								
CMAR					LR	LR	18 38 57.3	
comp=Z,340nm,21.4s,baz=255,slow=34								
comp=Z,2.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**38.72**	**67**		P	**P**	**18 24 16.1**	**+0.8**
AAK	**Ala-Archa**	**38.73**	**15**		P	**P**	**18 24 16.2**	**+1.0**
comp=Z,4.2nm,0.6s,baz=203,slow=11,SNR=17								
AAK					PcP	**PcP**	**18 26 27.3**	**+0.3**
comp=Z,0.8nm,0.4s,baz=192,slow=5.4,SNR=1.9								
AAK					LR	LR	18 40 33.7	
comp=Z,609nm,21.5s,baz=202,slow=37								
comp=Z,4.2nm,0.6s								
AAK	**Ala-Archa**	**38.73**	**15**		P	**P**	**18 24 16.3**	**+1.0**
AAK	**Ala-Archa**	**38.73**	**15**	*i* P		**P**	**18 24 15.6**	**+0.3**
SNR=5.4								
CHTO	**Chiang Mai**	**38.81**	**67**		P	**P**	**18 24 17.1**	**+0.9**
LSZ	**Lusaka**	**38.93**	**238**		P	**P**	**18 24 19.9**	**+2.7**
comp=Z,1.8nm,0.3s,baz=44,slow=7.4,SNR=4.0								
LSZ					LR	LR	18 39 07.6	
comp=Z,1μm,18.1s,baz=60,slow=34								
comp=Z,1.8nm,0.3s								
KULM	**Kulim**	**38.97**	**88**		P	**P**	**18 24 15.8**	**-1.7**
KULM					IAmb	IAmb	18 24 49.6	
comp=Z,31nm,1.4s								
SDSI	**Sungai Dareh**	**40.38**	**98**		P	**P**	**18 24 31.0**	**+1.7**
comp=Z,2μmcomp=Z,16nm,1.1s								
BNN	**Bunyan**	**40.52**	**329**		P	**P**	**18 24 28.6**	**-1.6**
TOKA	**Tokat**	**41.32**	**331**		P	**P**	**18 24 37.1**	**+0.4**
TOKA					IAmb	IAmb	18 24 50.4	
comp=Z,16nm,1.1s								
MATP	**Matopo**	**41.42**	**231**		P	**P**	**18 24 40.4**	**+2.5**
comp=Z,2.1nm,0.6s,baz=53,slow=10,SNR=3.6								
MATP					LR	LR	18 39 44.1	
comp=Z,2μm,19.0s,baz=61,slow=33								
comp=Z,2.1nm,0.6s								
KBZ	**Khabaz**	**41.45**	**340**		P	**P**	**18 24 38.8**	**+1.3**
comp=Z,1.9nm,0.7s,baz=119,slow=11,SNR=3.6								
KBZ					LR	LR	18 42 57.4	
comp=Z,223nm,19.8s,baz=148,slow=38								
comp=Z,1.9nm,0.7s								
KVAR	**Kislovodsk Arr**	**41.72**	**340**		LR	LR	18 41 54.6	
comp=Z,274nm,20.9s,baz=66,slow=36								
BR131	**Keskin Array S**	**42.32**	**328**		P	**P**	**18 24 44.5**	**-0.5**
BR131					IAmb	IAmb	18 24 49.0	
comp=Z,11nm,1.1s								
BRTR	**Keskin Array B**	**42.32**	**328**		P	**P**	**18 24 44.3**	**-0.7**
comp=Z,3.7nm,0.9s,baz=142,slow=7.3,SNR=8.9								
BRTR					LR	LR	18 43 00.2	
comp=Z,403nm,19.8s,baz=134,slow=37								
comp=Z,3.7nm,0.9s								
BRTR	**Keskin Array B**	**42.32**	**328**		P	**P**	**18 24 40.5**	**-4.6**
GOMU	**GeErMu**	**43.20**	**40**		P	**P**	**18 24 55.1**	**+2.6**
GOMU					pP	pwP	18 24 59.8	-0.4
GOMU					sP	sP	18 25 01.4	+4.3
GOMU					S	S	18 31 02.0	-17
GOMU					sS	pS	18 31 11.6	-11
GOMU					SS	SS	18 34 21.1	-11
ABKAR	**Akbulak array**	**43.62**	**359**		P	**P**	**18 24 55.0**	**-0.2**
ABKAR	**Akbulak array**	**43.62**	**359**		P	**P**	**18 24 55.2**	**+0.1**
ABKAR					IAmb	IAmb	18 24 59.9	
comp=Z,6.7nm,0.9s								
PZH	**PanZhiHua**	**43.68**	**57**		P	**P**	**18 24 58.3**	**+2.1**
PZH					S	**S**	**18 31 29.8**	**+3.7**
WMQ	**Urumqi**	**44.58**	**27**	*e*P		**P**	**18 25 04.5**	**+1.4**
WMQ					sP	pwP	18 25 13.1	+2.3
WMQ					PcP	**PP**	**18 26 49.5**	**+2.3**
MAKZ	**Makanchi**	**44.78**	**20**		P	**P**	**18 25 02.7**	**-1.9**
AKTO	**Aktyubinsk**	**44.87**	**357**		LR	LR	18 44 26.1	
comp=Z,368nm,21.3s,baz=160,slow=37								
MKAR	**Makanchi Array**	**44.87**	**20**		P	**P**	**18 25 04.7**	**-0.7**
comp=Z,1.9nm,0.9s,baz=201,slow=7.7,SNR=11								
MKAR					PcP	**PcP**	**18 26 46.5**	**-0.4**
comp=Z,0.8nm,0.8s,baz=218,slow=2.9,SNR=4.4								
MKAR					LR	LR	18 46 00.4	
comp=Z,267nm,18.5s,baz=244,slow=39								
comp=Z,1.9nm,0.9s								
MKAR	**Makanchi Array**	**44.87**	**20**		P	**P**	**18 25 03.9**	**-1.4**
MK31	**Makanchi Array**	**44.87**	**20**		P	**P**	**18 25 04.1**	**-1.2**
IDI	**Anoyia**	**44.89**	**316**		LR	LR	18 45 50.0	
comp=Z,95nm,19.6s,baz=86,slow=39								
LBTB	**Lobatse**	**46.25**	**227**		LR	LR	18 41 52.7	
comp=Z,1μm,21.3s,baz=46,slow=32								
KURBB	**Kurchatov Arra**	**47.18**	**15**		LR	LR	18 46 15.7	
comp=Z,462nm,20.3s,baz=180,slow=38								
LEM	**Lembang**	**47.63**	**104**		LR	LR	18 42 01.2	
comp=Z,291nm,20.2s,baz=290,slow=32								
BVAR	**Borovoye Array**	**47.93**	**7**		LR	LR	18 47 45.3	
comp=Z,551nm,19.9s,baz=180,slow=39								
GTA	**Gaotai**	**48.29**	**40**	*e*P		**P**	**18 25 32.3**	**-0.1**
GTA					pP	pP	18 25 36.0	+0.2
GTA					sP	sP	18 25 38.9	+1.9
BOSA	**Boshof**	**48.67**	**224**		P	**P**	**18 25 36.3**	**+0.9**
comp=Z,3.9nm,0.9s,baz=60,slow=12,SNR=3.2								
BOSA					LR	LR	18 44 20.4	
comp=Z,847nm,19.1s,baz=42,slow=34								
comp=Z,3.9nm,0.9s								
LZH	**Lanzhou**	**49.32**	**46**	*e*P		P	18 25 36.0	-4.4
LZH					pP	pP	18 25 42.6	-1.2
TSUM	**Tsumeb**	**49.72**	**239**		P	**P**	**18 25 45.2**	**+1.6**
comp=Z,6.5nm,0.8s,baz=58,slow=7.0,SNR=5.2								
TSUM					LR	LR	18 45 37.5	
comp=Z,719nm,18.4s,baz=64,slow=35								
comp=Z,6.5nm,0.8s								
VTS	**Vitosha**	**50.12**	**323**	⇑P		**P**	**18 25 45.2**	**-1.2**
VTS	**Vitosha**	**50.12**	**323**		P	**P**	**18 25 45.7**	**-0.7**
VTS					IAmb	IAmb	18 25 50.3	
comp=Z,9.9nm,1.0s								
VRI	**Vrincioaia**	**50.24**	**329**	⇓P		**P**	**18 25 48.2**	**+1.1**
PLOR	**Plostina**	**50.27**	**329**	⇓P		**P**	**18 25 50.1**	**+2.8**
HUMR	**Humele**	**50.30**	**326**	⇑P		**P**	**18 25 50.3**	**+2.9**
MLR	**Muntele Rosu**	**50.40**	**328**	⇑P		**P**	**18 25 52.5**	**+4.1**
TESR	**Tescani**	**50.72**	**329**	⇑P		**P**	**18 25 51.0**	**+0.4**
ARU	**Arti**	**50.84**	**358**		P	**P**	**18 25 50.7**	**-0.7**
ARU					IAmb	IAmb	18 26 04.1	
comp=Z,12nm,1.3s								
VOIR		**50.84**	**327**	⇑P		**P**	**18 25 51.4**	**-0.3**
DOPR	**Dopca**	**51.01**	**328**	⇑P		**P**	**18 25 53.6**	**+0.7**
ARR	**Arges**	**51.02**	**327**	⇑P		**P**	**18 25 52.1**	**-0.9**
ZAA0	**Zalesovo Array**	**51.89**	**17**	P		**P**	**18 25 57.6**	**-1.6**
ZALV	**Zalesovo Beam**	**51.89**	**17**	P		**P**	**18 25 58.0**	**-1.2**
comp=Z,1.7nm,0.8s,baz=216,slow=7.3,SNR=6.9								
ZALV					LR	LR	18 48 33.8	
comp=Z,466nm,20.6s,baz=214,slow=37								
comp=Z,1.7nm,0.8s								
ZALV	**Zalesovo Beam**	**51.89**	**17**	P		**P**	**18 25 57.2**	**-2.1**
BURAR	**Bucovina Array**	**52.19**	**330**	⇑P		**P**	**18 26 03.2**	**+1.5**
BURAR	**Bucovina Array**	**52.19**	**330**	P		**P**	**18 26 00.1**	**-1.7**
XAN	**Xi'an**	**52.24**	**51**	⇑P		**P**	**18 26 01.8**	**-0.5**
XAN					pP	pwP	18 26 10.9	+0.8
ARCR	**ARCALI

VRAC Vranov 57.76 327 LR LR 18 52 14.4
comp=Z,105nm,19.7s,baz=120,slow=37
VRAC Vranov 57.76 327 *eP* **P 18 26 40.5 -1.4**
PRED Cave del Predi 57.99 323 P **P 18 26 41.7 -2.0**
CASP Castiglione de 58.05 318 P **P 18 26 42.2 -1.8**
CASP IAmb IAmb 18 26 50.9
comp=Z,5.9nm,1.1s
CLUD Cludinico 58.41 322 P **P 18 26 43.2 -3.4**
CLUD IAmb IAmb 18 26 57.6
comp=Z,8.7nm,1.1s
STAL STALIGIAL 58.42 322 P **P 18 26 44.9 -1.7**
STAL IAmb IAmb 18 26 56.9
comp=Z,8.4nm,1.0s
MPSI Mapaga 58.52 93 P **P 18 26 48.4 +0.6**
comp=Z,469nmcomp=Z,8.2nm,1.1s
ZCCA Zocca 58.64 320 P **P 18 26 47.8 -0.4**
TEOL Teolo 58.65 321 P **P 18 26 47.2 -1.0**
ABTA Abfaltersbach 58.78 323 *eP* **P 18 26 48.4 -0.8**
comp=Z,10nm,1.5s
CTI Castel Tesino 58.98 322 P **P 18 26 49.0 -1.6**
CTI IAmb IAmb 18 26 58.9
comp=Z,6.9nm,1.2s
KAPI Kappang 59.10 99 LR LR 18 49 00.2
comp=Z,212nm,21.8s,baz=280,slow=33
GERES GERESS Array B 59.12 325 LR LR 18 54 21.7
comp=Z,103nm,19.0s,baz=83,slow=38
PRMA PARMA 59.25 320 P **P 18 26 52.5 +0.2**
KHC Kasperske Hory 59.33 325 *eP* **P 18 26 50.5 -2.5**
BNSI Bone 59.35 98 P **P 18 26 53.2 -0.4**
comp=Z,20nm,1.7s
TORD Torodi Ar. Bea 59.39 282 P **P 18 26 54.1 +0.2**
comp=Z,1.1nm,0.8s,baz=92,slow=5.0,SNR=7.9
TORD PcP **PcP 18 27 42.0 +0.2**
comp=Z,2.1nm,0.7s,baz=78,slow=3.9,SNR=7.7
comp=Z,1.1nm,0.8s
WTTA Wattenberg 59.55 323 *eP* **P 18 26 53.6 -1.1**
comp=Z,9.9nm,1.2s
NJ2 Nanjing 59.58 56 *eP* **P 18 26 51.3 -3.6**
MOTA Moosalm 59.91 323 *i P* **P 18 26 55.6 -1.5**
comp=Z,3.7nm,1.0s
FUORN Ofenpass-Fuorn 60.09 322 P **P 18 26 58.1 -0.4**
RETA Reutte 60.18 323 *i P* **P 18 26 57.0 -1.8**
comp=Z,2.3nm,0.7s
DAVOX Davos/Dischmat 60.40 322 LR LR 18 53 53.2
comp=Z,87nm,19.6s,baz=102,slow=37
MRSI Marisa 60.54 93 P **P 18 26 59.9 -1.9**
comp=Z,9.3nm,1.1s
DAVA Damuels 60.62 322 *eP* **P 18 27 00.7 -1.3**
comp=Z,11nm,1.4s
CLL Collm 60.77 327 *eP* **P 18 27 01.0 -1.7**
XLT XiLinHaoTe 61.12 42 *eP* **P 18 27 05.4 0.0**
XLT pP pP 18 27 09.8 +1.0
XLT sP pwP 18 27 12.5 -0.8
XLT S **S 18 35 25.5 +1.1**
FINES FINESS Array B 61.75 342 P **P 18 27 08.0 -1.1**
comp=Z,0.9nm,0.7s,baz=134,slow=4.0,SNR=4.3
comp=Z,0.9nm,0.7s
SENIN Lac Senin/Sane 61.84 320 P **P 18 27 09.0 -1.3**
H01W3 Cape Leeuwin H 63.74 133 T T 19 36 35.2
baz=299,slow=75,SNR=9.4
H01W2 Cape Leeuwin H 63.75 133 T T 19 36 40.7
baz=299,slow=75,SNR=9.3
H01W1 Cape Leeuwin H 63.76 133 T T 19 36 40.3
baz=299,slow=75,SNR=11
NWAO Narrogin (SRO) 65.18 130 LR LR 18 52 16.2
comp=Z,93nm,19.2s,baz=94,slow=33
DBIC Dimbokro 65.95 275 P **P 18 27 38.1 +0.4**
comp=Z,3.4nm,0.8s,baz=85,slow=6.6,SNR=3.7
comp=Z,3.4nm,0.8s
NRIK Noril'sk 66.02 10 LR LR 18 58 34.0
comp=Z,536nm,20.2s,baz=194,slow=38
LBMI Labuha 66.18 93 P **P 18 27 39.0 -0.2**
comp=Z,830nmcomp=Z,33nm,2.3s
JOW Kunigami 66.82 63 LR LR 19 00 18.9
comp=Z,266nm,18.2s,baz=242,slow=39
NOA NORSAR Array B 66.87 336 P **P 18 27 42.9 +0.1**
comp=Z,0.2nm,0.3s,baz=125,slow=5.5,SNR=2.3
comp=Z,0.2nm,0.3s
KRAI Karang Ratu 67.39 96 P **P 18 27 48.8 +1.9**
comp=Z,598nmcomp=Z,15nm,0.9s
CN2 Changchun 67.52 45 *eP* **P 18 27 48.3 +1.1**
ESBB Sonseca Array 67.69 311 P **P 18 27 47.5 -0.9**
ESDC Sonseca Array 67.69 311 P **P 18 27 48.1 -0.3**
comp=Z,3.8nm,0.8s,baz=88,slow=5.3,SNR=30
comp=Z,3.8nm,0.8s
ESDC Sonseca Array 67.69 311 P **P 18 27 47.7 -0.7**
ESDC IAmb IAmb 18 27 49.0
comp=Z,6.7nm,1.1s
KSRS Korea Array 68.00 52 P **P 18 27 48.9 -1.5**
comp=Z,1.7nm,0.7s,baz=260,slow=6.8,SNR=6.2
comp=Z,1.7nm,0.7s
ARCES ARCESS Array B 68.13 347 P **P 18 27 50.1 -0.5**
comp=Z,2.2nm,0.7s,baz=150,slow=6.2,SNR=7.6
comp=Z,2.2nm,0.7s
USRK Ussuriysk Ar. 72.22 45 LR LR 19 01 40.8
comp=Z,624nm,19.8s,baz=239,slow=37
MAW Mawson 72.94 179 P **P 18 28 21.7 +1.9**
comp=Z,2.4nm,1.0s,baz=0.3,slow=9.5,SNR=4.0
MAW LR LR 18 52 46.1
comp=Z,167nm,20.0s,baz=7.5,slow=30
comp=Z,2.4nm,1.0s
KLR Kul'dur 72.99 40 LR LR 19 01 53.3
comp=Z,482nm,18.1s,baz=249,slow=37
YAK Yakutsk 75.02 27 LR LR 19 04 16.3
comp=Z,326nm,19.3s,baz=266,slow=38
WRA Warramunga Arr 75.88 112 P **P 18 28 37.5 -0.5**
comp=Z,6.0nm,0.9s,baz=294,slow=4.5,SNR=35
WRA LR LR 18 56 20.3
comp=Z,60nm,22.0s,baz=316,slow=31
comp=Z,6.0nm,0.9s
WRA Warramunga Arr 75.88 112 P **P 18 28 37.1 -0.8**
WB2 Warramunga Arr 75.89 112 P **P 18 28 37.0 -1.1**
WB0 Warramunga Arr 75.89 112 P **P 18 28 37.2 -0.8**
WB0 IAmb IAmb 18 28 40.1
comp=Z,7.4nm,0.9s
MJAR Matsushiro Arr 76.06 54 P **P 18 28 38.8 0.0**
comp=Z,1.7nm,0.8s,baz=268,slow=7.2,SNR=4.2
comp=Z,1.7nm,0.8s
WR0 Warramunga Arr 76.06 112 P **P 18 28 38.7 -0.4**
SPITS Spitsbergen Ar 76.23 351 LR LR 19 05 50.1
comp=Z,245nm,18.4s,baz=88,slow=39
AS31 Alice Springs 76.24 116 P **P 18 28 38.9 -1.1**
ASAR Alice Springs 76.24 116 P **P 18 28 39.6 -0.4**
comp=Z,4.3nm,0.8s,baz=288,slow=5.6,SNR=32
ASAR LR LR 18 58 05.2
comp=Z,135nm,20.1s,baz=326,slow=32
comp=Z,4.3nm,0.8s
ASAR Alice Springs 76.24 116 P **P 18 28 40.1 +0.1**
TIXI Tiksi 77.78 17 LR LR 19 04 40.8
comp=Z,225nm,19.6s,baz=181,slow=37
TIXI Tiksi 77.78 17 P **P 18 28 45.8 -1.8**
TIXI IAmb IAmb 18 28 51.3
comp=Z,6.0nm,0.9s
JCJ Chichijima 79.23 64 LR LR 19 03 54.8
comp=Z,86nm,21.3s,baz=160,slow=36
STKA Stephens Creek 84.51 123 P **P 18 29 23.7 -0.7**
comp=Z,5.1nm,0.9s,baz=268,slow=11,SNR=4.3
STKA LR LR 19 02 36.9
comp=Z,314nm,20.7s,baz=263,slow=32
comp=Z,5.1nm,0.9s
MA2 Magadan 84.92 31 LR LR 19 09 56.9
comp=Z,193nm,18.1s,baz=268,slow=38
CTA Charters Tower 86.96 110 LR LR 19 05 13.5
comp=Z,134nm,21.4s,baz=272,slow=33
SNAA Sanae 87.36 197 LR LR 19 01 07.8
comp=Z,294nm,22.0s,baz=14,slow=30
PETK Petropavlovsk- 89.36 37 LR LR 19 12 45.9
comp=Z,213nm,19.5s,baz=267,slow=38
QSPA South Pole Qui 95.46 180 LR LR 19 06 51.1
comp=Z,297nm,20.5s,baz=268,slow=31
VNDA Vanda 97.58 168 LR LR 19 08 36.3
comp=Z,154nm,20.1s,baz=271,slow=32
RCBR Riachuelo 97.89 265 LR LR 19 08 06.6
comp=Z,285nm,21.4s,baz=261,slow=31
RES Resolute Bay 98.66 354 LR LR 19 19 14.2
comp=Z,183nm,21.3s,baz=9.0,slow=38
SHEM Shemya Is, Ala 99.03 35 LR LR 19 17 13.5
comp=Z,197nm,20.7s,baz=290,slow=37
PDAR Pinedale Array 131.27 351 PKP **PKPdf 18 36 03.1 -0.7**
comp=Z,0.7nm,0.6s,baz=100,slow=2.4,SNR=5.9
NVAR Mina Array Bea 136.29 360 PKP **PKiKP 18 36 14.1 -0.9**
comp=Z,0.3nm,0.6s,baz=2.7,slow=1.9,SNR=2.6
TXAR Lajitas Array 142.54 338 PKhKP PKPpre 18 36 19.3
comp=Z,0.7nm,0.8s,baz=33,slow=2.5,SNR=6.1
CMIG Matias Romero 147.62 314 PKPbc **PKPbc 18 36 35.6 -0.8**
comp=Z,2.0nm,0.6s,baz=52,slow=6.2,SNR=4.1

ROM 17 18:17:03.8±0.1, 42°.712N×0°.004×13°.210E±0°.006, h13km±1km, ML1.7/1, Error ellipse: s-maj=0.5km s-min=0.2km az=35.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.01**	**127**	P	Pg	18 17 06.7	+0.3
T1202				S	Sg	18 17 08.4	+0.4
T1204	**Amatrice, Fraz**	**0.09**	**115**	P	Pg	18 17 07.1	+0.3
T1204				S	Sg	18 17 09.2	+0.2
NRCA	**Norcia**	**0.14**	**330**	P	Pg	18 17 07.9	+0.4
NRCA				S	Sg	18 17 10.4	+0.4
LNSS	**Leonessa**	**0.17**	**229**	P	Pg	18 17 08.2	+0.4
LNSS				S	Sg	18 17 11.2	+0.6
T1243	**Rocca Santa Ma**	**0.18**	**95**	P	Pg	18 17 08.4	+0.4
T1243				S	Sg	18 17 11.4	+0.6
MMO1	**Montemonaco**	**0.21**	**25**	P	Pb	18 17 09.0	-0.4
MMO1				S	Sb	18 17 12.6	-0.6
T1216	**Preci, Frazion**	**0.23**	**322**	*e*P	Pg	18 17 08.6	-0.2
T1216				S	Sg	18 17 13.0	+0.8
TERO	**Teramo**	**0.30**	**107**	P	Pg	18 17 10.4	+0.3
TERO				S	Sg	18 17 15.0	+0.7
AQU	**L'Aquila**	**0.39**	**158**	AML	AML		
AQU	comp=E,170μm,0.1s			AML	AML		
	comp=N,113μm,0.1s						

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*IDC **17** 18:22:33.4±0.6, 5°.55N×61°.49E, h0km, mb4.1/16, mbtmp4.1/17, ML4.0/1, Error ellipse: s-maj=18.2km s-min=14.8km az=173.0*
*NEIC **17** 18:22:33.3±2.8, 5°.3N±0°.1×61°.40E±0°.07, h10km±1km, mb4.6/63, Error ellipse: s-maj=20.3km s-min=3.2km az=146.0*
ISC 17 18:22:34.4±0.5, 5°.42N±0°.09×61°.45E±0°.07, h14km, n137, σ1933/140, mb4.6/54, 17C-1D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**11.66**	**211**	Pn	**Pn**	**18 25 17.8**	**-2.8**
MNCI	**Minicoy**	**11.88**	**75**	Pn	**Pn**	**18 25 23.4**	**-0.1**
ATD	**Arta Tunnel**	**19.37**	**289**	P	**Pn**	**18 27 01.9**	**+0.9**
	0.5nm,0.3s,baz=111,slow=18,SNR=2.3						
	3.4nm,0.4s						
ATD	**Arta Tunnel**	**19.37**	**289**	P	**Pn**	**18 27 00.7**	**-0.4**
UOSS	**Minazif**	**20.06**	**346**	P	Pn	18 27 08.4	-0.8
FURI	**Furi**	**22.85**	**280**	P	**P**	**18 27 37.3**	**-0.6**
FURI				IAmb	IAmb	18 27 58.1	
	comp=Z,46nm,1.2s						
RAYN	**Ar Rayn**	**23.67**	**321**	P	**P**	**18 27 44.7**	**-1.1**
KMBO	**Kilima Mbogo**	**25.02**	**256**	P	**P**	**18 27 58.5**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=52,slow=19,SNR=7.9						
KMBO	**Kilima Mbogo**	**25.02**	**256**	P	**P**	**18 27 56.3**	**-2.3**
KMBO				IAmb	IAmb	18 28 04.3	
	comp=Z,23nm,1.3s						
LODK	**Lodwar**	**26.08**	**267**	P	**P**	**18 28 08.2**	**+0.2**
LODK				IAmb	IAmb	18 28 23.1	
	comp=Z,21nm,1.5s						
KBL	**Kabul**	**29.82**	**13**	P	**P**	**18 28 41.0**	**-0.4**
KBL				IAmb	IAmb	18 28 49.9	
	comp=Z,8.7nm,1.4s						
PYUN	**Piuthan**	**30.45**	**40**	*e*P	**P**	**18 28 47.8**	**+0.7**
KOLN	**Koldanda**	**30.62**	**41**	*e*P	**P**	**18 28 48.9**	**+0.3**
DANN	**Dangsing**	**31.12**	**40**	*e*P	**P**	**18 28 54.7**	**+1.6**
DMN	**Daman**	**31.52**	**43**	*e*P	**P**	**18 28 57.9**	**+1.3**
PKIN	**Phulchoki**	**31.70**	**43**	*e*P	**P**	**18 28 59.4**	**+1.3**
	comp=Z,23nm,1.2s						
PKI	**Pulchoki**	**31.70**	**43**	*e*P	**P**	**18 28 59.5**	**+1.3**
	comp=Z,18nm,1.2s						
KKN	**Kakani**	**31.75**	**43**	*e*P	**P**	**18 29 00.2**	**+1.6**
	comp=Z,6.5nm,2.0s						
GUN	**Gumba**	**32.24**	**43**	*e*P	**P**	**18 29 04.8**	**+1.8**
	comp=Z,49nm,1.1s						
JIRN	**Jiri**	**32.30**	**44**	*e*P	**P**	**18 29 04.6**	**+1.1**
GEYT	**Alibeck**	**32.51**	**355**	P	**P**	**18 29 04.0**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=145,slow=5.3,SNR=4.4						
	comp=Z,1.5nm,0.8s						
DRK	**Karamyk**	**35.18**	**14**	P	**P**	**18 29 29.2**	**+0.8**
DRK				IAmb	IAmb	18 29 30.6	
	comp=Z,20nm,1.2s						
SHL	**Shillong**	**35.36**	**52**	P	**P**	**18 29 25.4**	**-4.6**
SHL				IAmb	IAmb	18 29 32.3	
	comp=Z,6.7nm,0.9s						
BTK	**Batken**	**35.51**	**12**	P	**P**	**18 29 32.1**	**+1.2**
BTK				IAmb	IAmb	18 29 33.8	
	comp=Z,10nm,1.0s						
KSH	**Kashi**	**36.40**	**19**	P	**P**	**18 29 35.8**	**-2.8**
MARD	**Mardin**	**36.94**	**332**	P	**P**	**18 29 43.8**	**+0.5**
MARD				IAmb	IAmb	18 29 52.1	
	comp=Z,7.3nm,0.9s						
GURO	**Guroymak-BITLI**	**37.40**	**335**	P	**P**	**18 29 46.2**	**-0.9**
KK31	**Karatay Array**	**38.38**	**11**	P	**P**	**18 29 52.8**	**-2.4**
KKAR	**Karatay Array**	**38.38**	**11**	P	**P**	**18 29 53.1**	**-2.2**
KKAR	**Karatay Array**	**38.38**	**11**	P	**P**	**18 29 52.1**	**-3.1**
KKAR				IAmb	IAmb	18 29 57.8	
	comp=Z,8.9nm,1.4s						
CM31	**Chiang Mai Arr**	**38.81**	**67**	P	**P**	**18 29 59.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**38.81**	**67**	P	**P**	**18 30 01.2**	**+2.0**
	comp=Z,2.5nm,1.1s,baz=259,slow=9.5,SNR=13						
CMAR				PcP	**PcP**	**18 32 11.7**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=255,slow=4.9,SNR=6.3						
	comp=Z,2.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.81**	**67**	P	**P**	**18 30 00.1**	**+0.9**
AAK	**Ala-Archa**	**38.83**	**15**	P	**P**	**18 30 00.9**	**+1.6**
	comp=Z,1.9nm,0.5s,baz=198,slow=7.1,SNR=5.9						
AAK				PcP	**PcP**	**18 32 11.2**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=214,slow=1.0,SNR=2.3						
	comp=Z,1.9nm,0.5s						
AAK	**Ala-Archa**	**38.83**	**15**	P	**P**	**18 29 59.5**	**+0.3**
CHTO	**Chiang Mai**	**38.90**	**67**	P	**P**	**18 30 01.5**	**+1.6**
MATP	**Matopo**	**41.32**	**231**	P	**P**	**18 30 23.3**	**+3.2**
	comp=Z,2.1nm,0.8s,baz=55,slow=12,SNR=2.1						
	comp=Z,2.1nm,0.8s						
TOKA	**Tokat**	**41.37**	**331**	P	**P**	**18 30 21.3**	**+1.1**
TOKA				IAmb	IAmb	18 30 29.1	
	comp=Z,30nm,1.4s						
KBZ	**Khabaz**	**41.51**	**340**	P	**P**	**18 30 22.4**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=152,slow=4.4,SNR=3.9						
	comp=Z,2.4nm,0.8s						
BR131	**Keskin Array S**	**42.37**	**328**	P	**P**	**18 30 28.1**	**-0.4**
BR131				IAmb	IAmb	18 30 30.2	
	comp=Z,15nm,1.1s						
BRTR	**Keskin Array B**	**42.37**	**328**	P	**P**	**18 30 29.1**	**+0.6**
	comp=Z,5.2nm,1.0s,baz=140,slow=7.8,SNR=14						
	comp=Z,5.2nm,1.0s						
BRTR	**Keskin Array B**	**42.37**	**328**	P	**P**	**18 30 27.4**	**-1.1**
ISP	**Isparta**	**42.81**	**323**	P	**P**	**18 30 29.8**	**-2.3**
ISP				IAmb	IAmb	18 31 03.4	
	comp=Z,14nm,0.8s						
GOMU	**GeErMu**	**43.31**	**40**	P	**P**	**18 30 38.8**	**+2.4**
GOMU				pP	pwP	18 30 43.1	-0.2
GOMU				sP	sP	18 30 44.3	+2.8
ABKAR	**Akbulak array**	**43.70**	**359**	P	**P**	**18 30 39.1**	**+0.2**
ABKAR				IAmb	IAmb	18 30 41.0	
	comp=Z,12nm,1.2s						
PZH	**PanZhiHua**	**43.77**	**57**	P	**P**	**18 30 41.8**	**+1.7**
WMQ	**Urumqi**	**44.68**	**27**	*e*P	**P**	**18 30 48.8**	**+1.8**
MK31	**Makanchi Array**	**44.98**	**20**	P	**P**	**18 30 48.8**	**-0.4**
MK31				IAmb	IAmb	18 30 49.8	
	comp=Z,7.0nm,1.5s						
MKAR	**Makanchi Array**	**44.98**	**20**	P	**P**	**18 30 49.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=198,slow=7.3,SNR=5.3						
MKAR				PcP	**PcP**	**18 32 30.8**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=232,slow=5.9,SNR=5.5						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**44.98**	**20**	P	**P**	**18 30 47.9**	**-1.3**
GTA	**Gaotai**	**48.39**	**40**	*e*P	**P**	**18 31 16.5**	**+0.2**
GTA				pP	sP	18 31 21.4	0.0
GTA				sP	pwP	18 31 25.3	+2.1
TSUM	**Tsumeb**	**49.63**	**239**	P	**P**	**18 31 29.6**	**+3.5**
	comp=Z,3.4nm,0.8s,baz=53,slow=5.1,SNR=2.3						
	comp=Z,3.4nm,0.8s						
COPA	**Copaceanca**	**49.96**	**326**	⇑P	**P**	**18 31 29.2**	**+1.1**
VTS	**Vitosha**	**50.16**	**324**	⇑P	**P**	**18 31 30.6**	**+0.8**
VTS	**Vitosha**	**50.16**	**324**	P	**P**	**18 31 30.4**	**+0.6**
TESR	**Tescani**	**50.77**	**329**	⇑P	**P**	**18 31 34.4**	**+0.3**
VOIR		**50.89**	**327**	⇑P	**P**	**18 31 36.1**	**+0.9**
ARU	**Arti**	**50.92**	**358**	P	**P**	**18 31 34.3**	**-0.8**
ARU				IAmb	IAmb	18 31 40.3	
	comp=Z,4.8nm,1.0s						
OZUR		**50.93**	**328**	⇑P	**P**	**18 31 36.0**	**+0.5**
ARR	**Arges**	**51.07**	**327**	⇑P	**P**	**18 31 37.2**	**+0.7**
BLKB	**Belogradchik**	**51.09**	**324**	⇑P	**P**	**18 31 36.7**	**+0.1**
LOT	**Lotru**	**51.59**	**327**	⇑P	**P**	**18 31 40.0**	**-0.4**
ZAA0	**Zalesovo Array**	**51.99**	**17**	P	**P**	**18 31 42.6**	**-0.5**
ZALV	**Zalesovo Beam**	**51.99**	**17**	P	**P**	**18 31 42.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=211,slow=5.2,SNR=5.2						
ZALV				PcP	**PcP**	**18 32 55.2**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=199,slow=3.1,SNR=1.7						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**51.99**	**17**	P	**P**	**18 31 42.6**	**-0.5**
HERR	**Herculane**	**51.99**	**325**	⇑P	**P**	**18 31 43.7**	**+0.4**
GZR	**Gura Zlata**	**52.10**	**326**	⇑P	**P**	**18 31 44.5**	**+0.3**
BURAR	**Bucovina Array**	**52.24**	**330**	⇑P	**P**	**18 31 46.5**	**+1.3**
BURAR	**Bucovina Array**	**52.24**	**330**	P	**P**	**18 31 43.2**	**-2.0**
XAN	**Xi'an**	**52.34**	**51**	⇑P	**P**	**18 31 46.4**	**+0.3**
XAN				pP	sP	18 31 51.8	+0.6
AKASG	**Malin Array Be**	**52.56**	**335**	P	**P**	**18 31 47.3**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=142,slow=6.2,SNR=6.2						
	comp=Z,0.7nm,0.7s						
BZS	**Buzias**	**52.89**	**326**	⇑P	**P**	**18 31 50.0**	**+0.1**
DIVS	**Divibare**	**52.94**	**323**	P	**P**	**18 31 48.9**	**-1.6**
DIVS				IAmb	IAmb	18 31 51.9	
	comp=Z,11nm,1.2s						
SIRR	**Siria**	**53.26**	**326**	⇑P	**P**	**18 31 53.8**	**+1.2**
CUC	**Castrocucco**	**53.50**	**317**	P	**P**	**18 31 54.1**	**-0.5**
CUC				IAmb	IAmb	18 31 56.4	
	comp=Z,9.1nm,1.3s						
TRPA	**Tarpa**	**53.94**	**329**	⇑P	**P**	**18 31 58.6**	**+1.0**
MORH	**Mrgy, Hungar**	**54.92**	**325**	⇓P	**P**	**18 32 05.2**	**+0.4**
PSZ	**Piszkesteto**	**55.21**	**327**	P	**P**	**18 32 06.3**	**-0.6**
PSZ				IAmb	IAmb	18 32 07.3	
	comp=Z,5.1nm,1.0s						
INTR	**Introdacqua**	**55.71**	**318**	P	**P**	**18 32 09.9**	**-0.8**
INTR				IAmb	IAmb	18 32 12.1	
	comp=Z,8.0nm,1.2s						
NRCA	**Norcia**	**56.61**	**319**	P	**P**	**18 32 16.0**	**-1.1**
NRCA				IAmb	IAmb	18 32 19.1	
	comp=Z,12nm,1.3s						
CESX	**Cesi**	**56.86**	**318**	P	**P**	**18 32 16.8**	**-1.9**
CESX				IAmb	IAmb	18 32 24.2	
	comp=Z,14nm,1.5s						
HHC	**Hu-ho-hao-te**	**56.95**	**44**	*e*P	**P**	**18 32 21.8**	**+2.2**
SONM	**Songino Array**	**57.04**	**35**	P	**P**	**18 32 20.1**	**-0.1**
	comp=Z,2.1nm,1.0s,baz=228,slow=7.6,SNR=12						
	comp=Z,2.1nm,1.0s						
RONA	**Rosalia, Austr**	**57.08**	**325**	*e*P	**P**	**18 32 20.6**	**+0.3**
	comp=Z,11nm,1.6s						
SOKA	**Soboth**	**57.28**	**324**	*e*P	**P**	**18 32 22.0**	**+0.2**
	comp=Z,6.0nm,1.2s						
ARSA	**Arzberg**	**57.29**	**324**	*e*P	**P**	**18 32 22.0**	**+0.3**
	comp=Z,9.0nm,1.2s						
LATE	**Laterza**	**57.37**	**318**	P	**P**	**18 32 21.2**	**-1.3**
LATE				IAmb	IAmb	18 32 52.5	
	comp=Z,10nm,1.2s						
ULN	**Ulaanbaatar**	**57.43**	**35**	P	**P**	**18 32 21.9**	**-1.1**
CONA	**Conrad Observa**	**57.45**	**325**	*e*P	**P**	**18 32 23.0**	**0.0**
	comp=Z,11nm,1.3s						
OBKA	**Obir**	**57.48**	**323**	*i* P	**P**	**18 32 23.6**	**+0.5**
	comp=Z,8.1nm,1.4s						
MORC	**Moravsky Berou**	**57.56**	**328**	⇑P	**P**	**18 32 23.5**	**-0.2**
MORC	**Moravsky Berou**	**57.56**	**328**	P	**P**	**18 32 23.4**	**-0.2**
MORC				IAmb	IAmb	18 32 25.0	
	comp=Z,11nm,1.3s						
MORC	**Moravsky Berou**	**57.56**	**328**	*e*P	**P**	**18 32 23.9**	**+0.2**
KLMR	**Klimovskoe**	**57.73**	**348**	*e*P	**P**	**18 32 23.1**	**-1.5**
KLMR				AMP		18 32 25.0	
	comp=Z,16nm,1.2s						
KRUC	**Moravsky**	**57.77**	**327**	*e*P	**P**	**18 32 25.4**	**+0.3**
VRAC	**Vranov**	**57.80**	**327**	⇑P	**P**	**18 32 26.0**	**+0.6**
VRAC	**Vranov**	**57.80**	**327**	*e*P	**P**	**18 32 25.8**	**+0.5**
CASP	**Castiglione de**	**58.08**	**318**	P	**P**	**18 32 25.6**	**-1.8**
CASP				IAmb	IAmb	18 32 34.4	
	comp=Z,7.6nm,1.2s						
MYKA	**Terra Mystica**	**58.08**	**323**	*e*P	**P**	**18 32 28.0**	**+0.6**
	comp=Z,2.8nm,0.5s						
CLUD	**Cludinico**	**58.45**	**323**	P	**P**	**18 32 29.9**	**-0.1**
CLUD				IAmb	IAmb	18 32 30.9	
	comp=Z,8.5nm,1.3s						
STAL	**STALIGIAL**	**58.46**	**322**	P	**P**	**18 32 29.0**	**-1.1**
ZCCA	**Zocca**	**58.67**	**320**	P	**P**	**18 32 31.4**	**-0.2**
TEOL	**Teolo**	**58.68**	**321**	P	**P**	**18 32 30.1**	**-1.5**
TEOL				IAmb	IAmb	18 32 45.1	
	comp=Z,6.2nm,0.7s						
ABTA	**Abfaltersbach**	**58.81**	**323**	*e*P	**P**	**18 32 32.8**	**+0.2**
	comp=Z,6.4nm,1.2s						
VLC	**Villacollemand**	**58.97**	**319**	P	**P**	**18 32 32.1**	**-1.6**
CTI	**Castel Tesino**	**59.01**	**322**	P	**P**	**18 32 34.0**	**0.0**
CTI				IAmb	IAmb	18 32 35.3	
	comp=Z,8.4nm,1.3s						
TORD	**Torodi Ar. Bea**	**59.35**	**282**	P	**P**	**18 32 38.3**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=116,slow=4.6,SNR=3.9						
	comp=Z,0.9nm,0.9s						
TOLI2	**Tolitoli**	**59.37**	**92**	P	**P**	**18 32 34.9**	**-1.9**
KHC	**Kasperske Hory**	**59.38**	**326**	P	**P**	**18 32 33.7**	**-2.6**
KHC				IAmb	IAmb	18 32 36.1	
	comp=Z,4.4nm,1.2s						
KHC	**Kasperske Hory**	**59.38**	**326**	*e*P	**P**	**18 32 34.5**	**-1.9**
WTTA	**Wattenberg**	**59.59**	**323**	*e*P	**P**	**18 32 37.5**	**-0.5**
	comp=Z,6.4nm,1.1s						
MSSA	**Maissana**	**59.60**	**319**	P	**P**	**18 32 36.0**	**-2.1**
MSSA				IAmb	IAmb	18 33 19.1	
	comp=Z,6.8nm,1.1s						
WATA	**Walderalm**	**59.66**	**323**	*e*P	**P**	**18 32 37.8**	**-0.7**
	comp=Z,2.6nm,0.5s						
NJ2	**Nanjing**	**59.67**	**56**	*e*P	**P**	**18 32 39.3**	**+0.7**
SQTA	**Sankt Quirin**	**59.83**	**323**	*e*P	**P**	**18 32 39.0**	**-0.6**
	comp=Z,9.3nm,1.6s						
MOTA	**Moosalm**	**59.95**	**323**	*e*P	**P**	**18 32 40.0**	**-0.5**
	comp=Z,5.8nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**60.13**	**322**	P	**P**	**18 32 41.6**	**-0.2**
CLL	**Collm**	**60.82**	**327**	*e*P	**P**	**18 32 47.0**	**+0.9**
SENIN	**Lac Senin/Sane**	**61.87**	**320**	P	**P**	**18 32 53.3**	**-0.4**
BFO	**Black Forest**	**62.06**	**323**	P	**P**	**18 32 53.6**	**-1.0**
TNTI	**Ternate**	**65.96**	**92**	P	**P**	**18 33 17.7**	**-3.2**
ESBB	**Sonseca Array**	**67.71**	**311**	P	**P**	**18 33 31.4**	**-0.3**
ESDC	**Sonseca Array**	**67.71**	**311**	P	**P**	**18 33 32.2**	**+0.6**

SPA0	**Spitsbergen Ar**	**4.71 249**	*e*P	Pn	18 37 42.2	-1.7
SPA0			*e*S	Sn	18 38 30.6	-7.1
KBS	**Kingsbay**	**4.94 262**	*e*P	Pn	18 37 46.1	-0.9
KBS			*e*S	Sn	18 38 38.0	-5.4
KBS			*e*Sg	Sb	18 39 03.7	+4.8
KBS			IAML		18 39 11.4	
	comp=Z,17nm,0.6s					
KBS	**Kingsbay**	**4.94 262**	*e*P	Pn	18 37 45.9	-1.2
KBS			*e*S	Sn	18 38 37.2	-6.2
HOPEN	**Hopen**	**4.94 218**	*e*P	Pn	18 37 45.5	-1.6
HOPEN			*e*S	Sn	18 38 34.6	-8.8
HOPEN			IAML		18 38 55.4	
	comp=Z,24nm,0.8s					
HOPEN			*e*Sg	Sb	18 39 00.2	+1.2
HOPEN	**Hopen**	**4.94 218**	*e*P	Pn	18 37 46.0	-1.1
HOPEN			*e*S	Sn	18 38 34.4	-9.0
BRBB	**Barentsburg B**	**5.10 251**	*e*P	Pn	18 37 47.5	-1.7
BRBB			*e*S	Sn	18 38 41.2	-6.0
BRBA	**Barentsburg A**	**5.12 251**	*e*P	Pn	18 37 47.9	-1.6
BRBA			*e*S	Sn	18 38 41.5	-6.2
BRBA			IAML		18 38 54.4	
	comp=Z,6.1nm,0.4s					
HSPB	**Hornsund (broa**	**5.70 241**	*e*P	Pn	18 37 54.9	-2.6
HSPB			*e*S	Sn	18 38 55.5	-6.5
HSPB			*e*Sg	Sb	18 39 25.6	+4.8
HSPB			IAML		18 39 33.3	
	comp=Z,12nm,0.6s					
BJO1	**Bjornoya**	**7.41 223**	*e*P	Pn	18 38 18.1	-2.8
BJO1			*e*S	Sn	18 39 31.3	-13
BJO1			IAML		18 39 44.7	
	comp=Z,11nm,1.1s					
BJO1	**Bjornoya**	**7.41 223**	P	Pn	18 38 18.5	-2.4
BJO1			*e*S	Sn	18 39 32.8	-11
PRVG	**Vayda Guba**	**11.12 191**	P	Pn	18 39 10.7	-1.0
PRVG			S	Sn	18 41 02.1	-13
ARCES	**ARCESS Array B**	**11.64 202**	P	Pn	18 39 16.4	-2.4
ARCES			S	Sn	18 41 12.2	-16

*IDC **17** 18:37:10.8±0.5,5°.34S×153°.50E, h0km, mb4.4/18, mbtmp4.5/21, ML3.1/2, MS3.9/9, Error ellipse: s-maj=17.6km s-min=12.5km az=81.0*
*NEIC **17** 18:37:13.0±2.0,5°.43S±0°.07×153°.38E±0°.08, h10km±1km, mb4.9/46, Error ellipse: s-maj=15.3km s-min=10.3km az=50.0*
*DJA **17** 18:37:15.2±2.1,5°S±4°×15°4E±°, h26km±14km, M5.2/23, mB5.7/5, mb4.7/23, MLv5.4/3, Mw(mB)5.2/5*
ISC 17 18:37:12.2±0.3,5°.37S±0°.05×153°.48E±0°.06, h10km, n157, σ1§**81**/157**, mb4.8**/39**, MS4.0**/12**, 2C-3D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.76 312**		Pn	**Pn**	**18 37 43.1**	**+0.4**
RABL	**Rabaul**	**1.76 312**		P	**Pb**	**18 37 45.2**	**+0.7**
MANU	**Manus Island**	**6.94 298**		Pn	Pn	18 38 49.2	-4.7
PMG	**Port Moresby**	**7.44 237**		Pn	**Pn**	**18 39 02.7**	**+1.8**
	3.4nm,0.3s,baz=62,slow=11,SNR=12						
PMG				Sn	**Sn**	**18 40 27.7**	**+2.3**
	2.5nm,0.3s,baz=53,slow=20,SNR=6.4						
	4.9nm,0.3s						
PMG	**Port Moresby**	**7.44 237**		Pn	**Pn**	**18 39 00.6**	**-0.3**
PMG	**Port Moresby**	**7.44 237**		P	**Pn**	**18 39 03.7**	**+2.8**
	0.4nm749nm72nm,0.7s						
PMG	**Port Moresby**	**7.44 237**		P	**Pn**	**18 39 03.9**	**+3.0**
HNR	**Honiara**	**7.58 123**		Pn	**Pn**	**18 39 01.3**	**-1.4**
	155nm,0.4s,baz=304,slow=18,SNR=1.4						
HNR				Sn	**Sn**	**18 40 30.8**	**+2.1**
	53nm,0.3s,baz=225,slow=20,SNR=1.5						
HNR	**Honiara**	**7.58 123**		Pn	**Pn**	**18 39 03.9**	**+1.1**
PATS	**Pohnpei**	**13.05 22**		Pn	**Pn**	**18 40 20.0**	**+2.3**
PATS	**Pohnpei**	**13.05 22**		P	**Pn**	**18 40 20.2**	**+2.5**
COEN	**Coen**	**13.26 229**		Pn	**Pn**	**18 40 18.3**	**-2.4**
SMPI	**Sarmi**	**15.12 282**		P	**Pn**	**18 40 47.2**	**+1.3**
	49nm,0.9s						
CTA	**Charters Tower**	**16.23 205**		Pn	**P**	**18 41 01.9**	**-1.7**
	0.2nm,0.3s,baz=25,slow=13,SNR=7.0						
	6.5nm,1.0s						
CTAO	**Charters Tower**	**16.23 205**		P	**P**	**18 41 02.7**	**-0.9**
RKPI	**Ransiki, Papua**	**19.64 281**		P	**Pn**	**18 41 43.5**	**+0.9**
	37nm,1.0s						
EIDS	**Eidsvold**	**20.02 186**		P	**Pn**	**18 41 46.3**	**-0.7**
EIDS				IAmb	IAmb	18 41 47.1	
	comp=Z,63nm,1.5s						
LIFNC	**LIFOU**	**20.33 140**		P	**P**	**18 41 48.9**	**+0.3**
LIFNC	**LIFOU**	**20.33 140**		P	**P**	**18 41 50.2**	**+1.6**
NOUC	**Port Laguerre**	**20.75 144**		P	Pn	18 41 55.6	0.0
DZM	**Mont Dzumac**	**20.81 144**		*e*Pn	**P**	**18 41 55.7**	**+1.7**
	comp=Z,119nm,1.4s						
DZM				*e*LR	LR	18 46 50.8	
	comp=Z,572nm,22.9s						
DZM	**Mont Dzumac**	**20.81 144**		P	**P**	**18 41 55.5**	**+1.5**
	comp=Z,27nm,0.6s,baz=328,slow=14,SNR=30						
	comp=Z,27nm,0.6s						
DZM	**Mont Dzumac**	**20.81 144**		P	**P**	**18 41 54.2**	**+0.2**
DZM				IAmb	IAmb	18 42 00.0	
	comp=Z,64nm,1.2s						
DZM	**Mont Dzumac**	**20.81 144**		P	**P**	**18 41 55.8**	**+1.7**
ONTNC	**Ouen Toro**	**21.00 145**		P	**P**	**18 41 57.4**	**+1.4**
ONTNC				IAmb	IAmb	18 41 59.0	
	comp=Z,41nm,0.8s						
OUENC	**Ouen Island, N**	**21.31 144**		P	**P**	**18 41 58.8**	**-0.5**
OUENC				IAmb	IAmb	18 42 03.8	
	comp=Z,36nm,1.0s						
OUENC	**Ouen Island, N**	**21.31 144**		P	**P**	**18 42 00.7**	**+1.4**
FAKI	**Fak Fak**	**21.31 276**		P	**P**	**18 41 59.9**	**+0.4**
FAKI	**Fak Fak**	**21.31 276**		P	**P**	**18 42 01.7**	**+2.3**
	comp=Z,23nm,1.8s						
MARNC	**Mare, Loyalty**	**21.34 140**		P	**P**	**18 41 58.6**	**-1.0**
RMQ	**Roma**	**21.48 192**		P	**P**	**18 42 02.0**	**+0.9**
KDU	**Kakadu**	**21.97 249**		P	**P**	**18 42 06.8**	**+0.4**
SIJI	**Sorong**	**22.62 281**		P	**P**	**18 42 14.7**	**+1.3**
	comp=Z,7.9nm,0.7s,baz=85,slow=11,SNR=7.3						
	comp=Z,7.9nm,0.7s						
SIJI	**Sorong**	**22.62 281**		P	**P**	**18 42 14.9**	**+1.4**
	comp=Z,18nm,1.0s						
MTN	**Manton Dam**	**23.27 250**		P	**P**	**18 42 19.4**	**-0.7**
MTN	**Manton Dam**	**23.27 250**		P	**P**	**18 42 22.8**	**+2.7**
WR0	**Warramunga Arr**	**23.45 230**		P	**P**	**18 42 22.3**	**+0.3**
WB0	**Warramunga Arr**	**23.45 231**		P	**P**	**18 42 20.6**	**-1.3**
WB0				IAmb	IAmb	18 42 44.0	
	comp=Z,22nm,1.0s						
WRAB	**Tennant Creek**	**23.58 230**		P	**P**	**18 42 23.9**	**+0.6**
WB2	**Warramunga Arr**	**23.58 230**		P	**P**	**18 42 22.1**	**-1.2**
WB2				IAmb	IAmb	18 42 42.8	
	comp=Z,54nm,1.6s						
WRA	**Warramunga Arr**	**23.59 230**		P	**P**	**18 42 22.9**	**-0.5**
	comp=Z,7.4nm,1.0s,baz=56,slow=9.7,SNR=36						
WRA				PcP	**PcP**	**18 46 08.9**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=53,slow=2.4,SNR=6.5						
WRA				ScP	**ScP**	**18 49 48.1**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=51,slow=2.3,SNR=3.8						
	comp=Z,7.4nm,1.0s						
WRA	**Warramunga Arr**	**23.59 230**		P	**P**	**18 42 21.5**	**-1.9**
ARMA	**Armidale**	**24.98 184**		P	**P**	**18 42 37.6**	**+1.4**
ARMA				IAmb	IAmb	18 42 38.4	
	comp=Z,30nm,1.0s						
ARMA	**Armidale**	**24.98 184**		P	**P**	**18 42 37.8**	**+1.6**
AS31	**Alice Springs**	**26.20 224**		P	**P**	**18 42 45.7**	**-1.6**
ASAR	**Alice Springs**	**26.20 224**		P	**P**	**18 42 47.0**	**-0.4**
	comp=Z,6.8nm,0.9s,baz=55,slow=9.1,SNR=30						
ASAR				PcP	**PcP**	**18 46 14.8**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=47,slow=3.1,SNR=7.3						
ASAR				ScP	**ScP**	**18 49 56.1**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=49,slow=2.8,SNR=1.9						
	comp=Z,6.8nm,0.9s						
ASAR	**Alice Springs**	**26.20 224**		P	**P**	**18 42 44.4**	**-3.0**
KNRA	**Kununurra**	**26.34 245**		P	**P**	**18 42 46.9**	**-1.6**
LBMI	**Labuha**	**26.36 279**		P	**P**	**18 42 51.3**	**+2.5**
	comp=Z,45nm,1.1s						
H11S3	**WAKE ISLAND Hy 27.05**	**28**		T	T	19 11 21.3	
	baz=208,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy 27.06**	**29**		T	T	19 11 14.3	
	baz=208,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy 27.07**	**28**		T	T	19 11 15.8	
	baz=208,slow=75,SNR=11						
STKA	**Stephens Creek**	**28.63 201**		P	**P**	**18 43 07.9**	**-1.0**
	comp=Z,4.6nm,1.0s,baz=30,slow=15,SNR=3.5						
	comp=Z,4.6nm,1.0s						
STKA	**Stephens Creek**	**28.63 201**		P	**P**	**18 43 07.6**	**-1.3**
FORT	**Forrest**	**34.79 220**		P	**P**	**18 44 00.2**	**-2.9**
BKZ	**Black Stump Fm**	**39.57 152**		P	**P**	**18 44 44.6**	**+0.9**
BKZ				IAmb	IAmb	18 46 07.1	
	comp=Z,48nm,1.8s						
RPZ	**Rata Peaks**	**41.21 161**		P	**P**	**18 44 57.1**	**-0.1**
	comp=Z,7.1nm,0.4s,baz=318,slow=15,SNR=1.6						
	comp=Z,7.1nm,0.4s						
MJAR	**Matsushiro Arr**	**44.07 342**		P	**P**	**18 45 18.9**	**-1.6**
	comp=Z,1.6nm,1.0s,baz=170,slow=7.6,SNR=2.9						
	comp=Z,1.6nm,1.0s						
LEM	**Lembang**	**45.61 266**		LR	LR	19 07 17.4	
	comp=Z,88nm,19.1s,baz=58,slow=40						
LEM	**Lembang**	**45.61 266**		P	**P**	**18 45 34.1**	**+0.8**
	comp=Z,26nm,0.9s						
KSRS	**Korea Array**	**48.81 333**		P	**P**	**18 45 58.2**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=152,slow=8.5,SNR=14						
KSRS				PcP	**PcP**	**18 47 23.5**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=155,slow=3.8,SNR=1.7						
	comp=Z,4.2nm,0.8s						
NJ2	**Nanjing**	**49.71 321**		*e*P	**P**	**18 46 02.9**	**-1.7**
USRK	**Ussuriysk Ar.**	**53.00 341**		P	**P**	**18 46 29.3**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=145,slow=5.3,SNR=2.8						
	comp=Z,2.9nm,0.9s						
HNS	**HongShan**	**55.80 323**		⇓P	**P**	**18 46 50.8**	**+1.1**
BNX	**BinXian**	**55.95 338**		⇓P	**P**	**18 46 50.6**	**+0.1**
XAN	**Xi'an**	**57.50 316**		P	**P**	**18 47 02.3**	**+0.4**
XAN				pP	sP	18 47 05.8	+1.4
XAN				sP	pwP	18 47 09.0	-0.3
TBI	**Tubuai**	**57.71 114**		*e*LR	LR	19 03 57.8	
	comp=Z,98nm,31.0s						
KMI	**Kunming**	**57.86 304**		⇑P	**P**	**18 47 03.6**	**-1.2**
PETK	**Petropavlovsk-**	**58.36 3**		P	**P**	**18 47 07.7**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=187,slow=8.4,SNR=7.5						
	comp=Z,2.9nm,0.9s						
CM31	**Chiang Mai Arr**	**58.73 295**		P	**P**	**18 47 11.5**	**+0.8**
CM31				IAmb	IAmb	18 47 13.3	
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.73 295**		P	**P**	**18 47 11.8**	**+1.1**
	comp=Z,6.4nm,0.9s,baz=111,slow=5.1,SNR=55						
	comp=Z,6.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.73 295**		P	**P**	**18 47 11.7**	**+1.0**
CHTO	**Chiang Mai**	**58.84 296**		P	**P**	**18 47 12.5**	**+1.0**
PZH	**PanZhiHua**	**59.25 305**		P	**P**	**18 47 14.5**	**+0.1**
XLT	**XiLinHaoTe**	**59.50 329**		*e*P	**P**	**18 47 16.1**	**+0.4**
XLT				pP	sP	18 47 20.5	+2.2
XLT				sP	pwP	18 47 23.8	+0.7
CD2	**Chengdu**	**59.62 311**		*e*P	**P**	**18 47 16.6**	**-0.1**
HHC	**Hu-ho-hao-te**	**59.90 324**		*e*P	**P**	**18 47 20.5**	**+2.0**
LZH	**Lanzhou**	**62.11 316**		⇓P	**P**	**18 47 35.8**	**+2.1**
LZH				sP	pwP	18 47 42.8	+1.6
GTA	**Gaotai**	**66.53 317**		⇑P	**P**	**18 48 04.1**	**+1.5**
GTA				pP	pwP	18 48 14.6	+4.5
GTA				sP	sP	18 48 17.4	+12
ULN	**Ulaanbaatar**	**66.83 328**		P	**P**	**18 48 05.3**	**+0.9**
ULN				IAmb	IAmb	18 48 06.7	
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**66.83 328**		P	**P**	**18 48 05.8**	**+1.4**
	comp=Z,40nm,1.6s						
SONM	**Songino Array**	**67.16 328**		P	**P**	**18 48 06.4**	**0.0**
	comp=Z,3.9nm,0.8s,baz=144,slow=5.8,SNR=18						
SONM				LR	LR	19 18 29.5	
	comp=Z,48nm,18.1s,baz=162,slow=37						
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**67.16 328**		P	**P**	**18 48 07.2**	**+0.8**
SONM				IAmb	IAmb	18 48 08.6	
	comp=Z,16nm,1.5s						
SHL	**Shillong**	**67.18 300**		P	**P**	**18 48 07.5**	**+0.4**
CASY	**Casey**	**67.68 197**		P	**P**	**18 48 08.9**	**-0.3**
CASY				IAmb	IAmb	18 48 28.8	
	comp=Z,11nm,1.4s						
GOMU	**GeErMu**	**68.64 312**		P	**P**	**18 48 20.6**	**+4.3**
GOMU				pP	pwP	18 48 24.8	+0.9
GOMU				sP	sP	18 48 27.8	+8.9
LSA	**Lhasa**	**69.11 304**		P	**P**	**18 48 17.9**	**-1.6**
LSA				IAmb	IAmb	18 48 21.9	
	comp=Z,5.8nm,1.1s						
YAK	**Yakutsk**	**69.66 348**		P	**P**	**18 48 22.4**	**+0.8**
YAK				IAmb	IAmb	18 48 23.7	
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**72.24 178**		P	**P**	**18 48 38.0**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=323,slow=6.4,SNR=27						
	comp=Z,4.0nm,0.8s						
VNDA	**Vanda**	**72.24 178**		P	**P**	**18 48 37.6**	**+0.5**
VNDA				IAmb	IAmb	18 48 39.0	
	comp=Z,6.0nm,0.9s						
JIRN	**Jiri**	**72.66 301**		*e*P	**P**	**18 48 41.6**	**+0.6**
	comp=Z,20nm,0.8s						
SBA	**Scott Base**	**72.78 177**		P	**P**	**18 48 41.9**	**+1.6**
SBA				IAmb	IAmb	18 48 44.5	
	comp=Z,10nm,1.3s						
GUN	**Gumba**	**72.99 301**		*e*P	**P**	**18 48 43.8**	**+0.8**
	comp=Z,38nm,0.8s						
PKI	**Pulchoki**	**73.30 301**		*e*P	**P**	**18 48 44.9**	**+0.1**
	comp=Z,35nm,1.1s						
PKIN	**Phulchoki**	**73.31 301**		*e*P	**P**	**18 48 44.9**	**+0.1**
KKN	**Kakani**	**73.47 301**		*e*P	**P**	**18 48 46.2**	**+0.6**
	comp=Z,3.5nm,1.1s						
DMN	**Daman**	**73.57 301**		*e*P	**P**	**18 48 46.9**	**+0.6**
	comp=Z,51nm,0.9s						
GKN	**Gorkha**	**74.08 301**		*e*P	**P**	**18 48 49.2**	**+0.1**
	comp=Z,49nm,1.1s						
KOLN	**Koldanda**	**74.91 300**		*e*P	**P**	**18 48 54.2**	**+0.2**
	comp=Z,6.1nm,1.4s						
DANN	**Dangsing**	**74.91 301**		*e*P	**P**	**18 48 54.0**	**-0.1**
PYUN	**Piuthan**	**75.51 301**		*e*P	**P**	**18 48 57.3**	**-0.2**
	comp=Z,47nm,1.1s						
WMQ	**Urumqi**	**76.61 317**		*e*P	**P**	**18 49 05.6**	**+2.3**
MK31	**Makanchi Array**	**81.19 319**		P	**P**	**18 49 28.9**	**+0.5**
MK31	**Makanchi Array**	**81.19 319**		P	**P**	**18 49 28.8**	**+0.5**
	comp=Z,6.3nm,0.8s,baz=106,slow=5.8,SNR=30						
MKAR	**Makanchi Array**	**81.19 319**		P	**P**	**18 49 28.9**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=99,slow=7.5,SNR=26						
MKAR				LR	LR	19 24 48.5	
	comp=Z,62nm,19.9s,baz=123,slow=35						
	comp=Z,2.9nm,0.6s						
MKAR	**Makanchi Array**	**81.19 319**		P	**P**	**18 49 28.5**	**+0.2**
MAKZ	**Makanchi**	**81.41 319**		P	**P**	**18 49 29.8**	**+0.3**
MAKZ				IAmb	IAmb	18 49 31.3	
	comp=Z,23nm,1.4s						
ZAA0	**Zalesovo Array**	**82.00 326**		P	**P**	**18 49 31.7**	**-0.6**
ZAA0				IAmb	IAmb	18 49 33.0	
	comp=Z,7.2nm,0.8s						
ZALV	**Zalesovo Beam**	**82.00 326**		P	**P**	**18 49 32.0**	**-0.3**
	comp=Z,6.8nm,0.8s,baz=108,slow=5.4,SNR=31						
	comp=Z,6.8nm,0.8s						
ZALV	**Zalesovo Beam**	**82.00 326**		P	**P**	**18 49 31.4**	**-0.9**
ILAR	**Eielson Array**	**82.43 22**		P	**P**	**18 49 33.1**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=249,slow=4.1,SNR=2.4						
	comp=Z,3.2nm,0.3s						
KSH	**Kashi**	**83.82 311**		P	**P**	**18 49 45.3**	**+3.0**
QSPA	**South Pole Qui**	**84.60 180**		P	**P**	**18 49 45.4**	**-0.3**
KURK	**Kurchatov**	**84.63 322**		P	**P**	**18 49 45.6**	**-0.4**
TKM2	**Tokmak 2**	**84.81 314**		P	**P**	**18 49 48.4**	**+1.0**
	SNR=10						
MAW	**Mawson**	**85.31 203**		P	**P**	**18 49 49.8**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=108,slow=6.6,SNR=14						
	comp=Z,2.9nm,0.5s						
MAW	**Mawson**	**85.31 203**		P	**P**	**18 49 49.2**	**+0.2**
CHMS	**Chumysh**	**85.43 314**		P	**P**	**18 49 51.6**	**+1.3**
	SNR=5.8						
UCH	**Uchtor**	**85.45 313**		P	**P**	**18 49 52.5**	**+1.6**
	SNR=5.3						
AAK	**Ala-Archa**	**85.55 313**		LR	LR	19 30 36.3	
	comp=Z,50nm,18.1s,baz=108,slow=38						
AAK	**Ala-Archa**	**85.55 313**		P	**P**	**18 49 51.7**	**+0.7**
AAK				IAmb	IAmb	18 49 53.1	
	comp=Z,6.2nm,0.8s						
USP	**Ospenovka**	**85.67 314**		P	**P**	**18 49 52.5**	**+1.1**
	SNR=6.2						
AML	**Almayashu**	**86.03 313**		P	**P**	**18 49 55.4**	**+1.7**
	SNR=5.7						
BBB	**Bella Bella**	**87.14 37**		LR	LR	19 23 21.9	
	comp=Z,82nm,20.7s,baz=324,slow=32						
KK31	**Karatay Array**	**88.51 313**		P	**P**	**18 50 05.0**	**-0.2**
KK31				IAmb	IAmb	18 50 07.7	
	comp=Z,13nm,1.9s						
KKAR	**Karatay Array**	**88.51 313**		P	**P**	**18 50 05.1**	**-0.1**
KKAR	**Karatay Array**	**88.51 313**		P	**P**	**18 50 05.0**	**-0.2**
KKAR				IAmb	IAmb	18 50 07.7	
	comp=Z,13nm,1.9s						
CHGR	**Chuyangaron**	**88.89 309**		P	**P**	**18 50 07.2**	**-0.1**
BVAR	**Borovoye Array**	**90.10 323**		LR	LR	19 29 46.6	
	comp=Z,38nm,21.9s,baz=62,slow=35						
BRVK	**Borovoye**	**90.17 323**		P	**P**	**18 50 11.8**	**-0.9**
NVAR	**Mina Array Bea**	**91.90 52**		P	**P**	**18 50 22.7**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=264,slow=7.2,SNR=2.4						
	comp=Z,0.2nm,0.5s						
NEW	**Newport**	**93.56 42**		LR	LR	19 26 18.2	
	comp=Z,109nm,21.3s,baz=353,slow=32						
ABKAR	**Akbulak array**	**96.34 319**		P	**P**	**18 50 39.6**	**-1.6**
ABKAR				IAmb	IAmb	18 50 41.2	
	comp=Z,2.2nm,1.0s						
ARU	**Arti**	**97.16 326**		LR	LR	19 35 36.4	
	comp=Z,74nm,20.3s,baz=78,slow=36						
ARU	**Arti**	**97.16 326**		P	**P**	**18 50 42.8**	**-2.0**
GEYT	**Alibeck**	**97.50 307**		LR	LR	19 36 12.7	
	comp=Z,45nm,19.9s,baz=284,slow=36						
MNK	**Minsk**	**114.42 329**		*i* PKP	**PKiKP**	**18 55 45.4**	**-6.9**
	comp=E,1.0nm,0.8s						
MNK				*i* PKP	**PKiKP**	**18 55 45.4**	**-6.9**
	comp=N,37nm,0.8s						
MNK				*i* PKP	**PKiKP**	**18 55 45.4**	**-6.9**
	comp=Z,7.0nm,0.8s,baz=243						
MNK				*i* PP	**PP**	**18 56 41.5**	**-6.7**
MNK				*i* PPP	PPP	18 59 06.2	
MNK				*i* SKS	**SKSdf**	**19 02 57.6**	**-6.9**
MNK				*i* PS	**PS**	**19 06 29.3**	**+2.7**
MNK				*i* SS	**SS**	**19 12 35.5**	**-4.9**
MNK				*i* SSS	SSS	19 16 50.2	
MNK				*i* LQ	LQ	19 37 40.3	
MNK				*i* LR	LR	19 43 59.8	
MNK				*i* LRM	MLR	19 45 04.9	
	comp=E,10.0nm,18.5s						
MNK				*i* LRM	MLR	19 45 50.3	
	comp=Z,31nm,16.0s						
MNK				*i* LRM	MLR	19 46 04.3	
	comp=N,194nm,17.2s						
AKASG	**Malin Array Be**	**115.35 324**		PKP	**PKiKP**	**18 55 53.6**	**-0.5**
	comp=N,1.0nm,0.5s,baz=51,slow=2.3,SNR=9.5						
BRTR	**Keskin Array B**	**116.18 312**		PKP	**PKPdf**	**18 55 55.9**	**-0.5**
	comp=N,0.5nm,0.7s,baz=159,slow=2.7,SNR=4.4						
BOSA	**Boshof**	**119.83 233**		PKP	**PKiKP**	**18 56 04.5**	**+0.7**
	comp=N,4.1nm,1.0s,baz=127,slow=2.7,SNR=4.9						
CLL	**Collm**	**123.67 331**		*i* PKPdf	**PKPdf**	**18 56 10.4**	**+0.2**
	comp=Z,4.0nm,0.8s						
RONA	**Rosalia, Austr**	**124.19 326**		*i* P	**PKPdf**	**18 56 12.0**	**+0.7**
	comp=Z,5.5nm,1.1s						
CONA	**Conrad Observa**	**124.29 327**		*e*P	**PKPdf**	**18 56 12.3**	**+0.7**
	comp=Z,5.1nm,1.8s,SNR=9.7						
KHC	**Kasperske Hory**	**124.77 329**		*e*PKPDF	**PKPdf**	**18 56 12.5**	**0.0**
GERES	**GERESS Array B**	**124.89 329**		PKP	**PKPdf**	**18 56 12.7**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=50,slow=1.5,SNR=19						
SOKA	**Soboth**	**125.48 326**		*e*P	**PKPdf**	**18 56 14.2**	**+0.2**
	comp=Z,4.6nm,1.2s						
ABTA	**Abfaltersbach**	**126.82 327**		*e*P	**PKPdf**	**18 56 16.5**	**0.0**
	comp=Z,4.4nm,0.9s						
WATA	**Walderalm**	**126.95 328**		*i* P	**PKPdf**	**18 56 17.2**	**+0.4**
	comp=Z,3.2nm,0.5s						
WTTA	**Wattenberg**	**126.96 328**		*i* P	**PKPdf**	**18 56 16.9**	**0.0**
	comp=Z,8.6nm,1.2s						
MOTA	**Moosalm**	**127.19 329**		*e*P	**PKPdf**	**18 56 17.6**	**+0.3**
	comp=Z,6.6nm,0.9s,SNR=4.9						
SQTA	**Sankt Quirin**	**127.21 328**		*i* P	**PKPdf**	**18 56 17.9**	**+0.6**
	comp=Z,7.8nm,1.0s						
RETA	**Reutte**	**127.27 329**		*i* P	**PKPdf**	**18 56 17.9**	**+0.6**
	comp=Z,2.9nm,0.8s						
FETA	**Feichten**	**127.59 328**		*e*P	**PKPdf**	**18 56 18.9**	**+0.8**
	comp=Z,6.4nm,1.0s,SNR=7.7						
DAVA	**Damuels**	**127.85 329**		*i* P	**PKPdf**	**18 56 19.3**	**+0.7**
	comp=Z,4.5nm,0.9s						
KEST	**Kesra**	**135.28 317**		PKP	**PKPdf**	**18 56 33.2**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=59,slow=5.9,SNR=2.9						
BDFB	**Brasilia**	**150.19 135**		PKPbc	**PKPbc**	**18 57 04.8**	**+0.1**
	comp=Z,7.0nm,1.0s,baz=208,slow=4.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**151.12 288**		PKPbc	**PKPbc**	**18 57 06.2**	**-0.6**
	comp=Z,13nm,0.8s,baz=64,slow=2.4,SNR=12						

*SKHL **17** 18:52:21.4±0.4, 47°.60N×153°.10E, h138km±3km, mb5.2/5, mbv5.5/2, msh5.5/2, msha5.9/5*
*MOS **17** 18:52:21.9±1.1, 47°.87N×152°.63E, h141km, mb4.6/63, Error ellipse: s-maj=7.0km s-min=4.8km az=78.5*
*NEIC **17** 18:52:23.0±1.3, 48°.0N±0°.1×152°.5E±0°.1, h132km±7km, mb4.6/128, Error ellipse: s-maj=18.1km s-min=10.9km az=138.0*
*IDC **17** 18:52:23.3±1.5, 47°.98N×152°.55E, h136km±12km, mb4.0/28, mbtmp4.4/32, Error ellipse: s-maj=12.1km s-min=8.8km

PETK S **Sn** **18 55 00.9 -0.4**
comp=N,8.0nm,0.5s,baz=158,slow=13,SNR=1.4
RUSJ Misakicho 6.36 237⇑ *i*PN **Pn** **18 53 55.3 +1.7**
RUSJ *e*S **Sn** **18 55 10.2 +5.2**
PET Petropavlovsk 6.48 34 Pn **Pn** **18 53 53.9 -1.2**
PET Petropavlovsk 6.48 34 *e*PN **Pn** **18 53 53.2 -1.9**
PET *e*S **Sn** **18 55 02.8 -4.9**
PET pmax pmax
comp=Z,51nm,0.5s
PET smax smax
comp=N,185nm,0.6s
PET smax smax
comp=E,146nm,0.5s
PET MLR MLR
comp=Z,300nm,14.0s
PET Petropavlovsk 6.48 34 *e*P **Pn** **18 53 54.7 -0.4**
PET AMB AMB 18 54 14.4
comp=Z,50nm,0.5s
PET *e*S **Sn** **18 55 04.2 -3.5**
PET A A 18 55 05.1
comp=Z,190nm,0.6s
PET A A 18 55 05.1
comp=Z,150nm,0.6s
JRA Rausu 6.53 237 *e*P **Pn** **18 53 57.0 +1.0**
NEM2 Nemuro 2 6.58 230 *e*P **Pn** **18 53 54.9 -1.7**
NEM2 *e*S **Sn** **18 55 04.8 -5.4**
NMR Nemuro--Hokkai 6.58 230 *e*PN **Pn** **18 53 54.9 -1.8**
YSS Yuzh-Sakhalins 6.79 267 Pn **Pn** **18 53 55.7 -3.7**
YSS Yuzh-Sakhalins 6.79 267 *e*PN **Pn** **18 54 02.6 +3.2**
YSS pmax pmax
comp=Z,60nm,0.8s
YSS Yuzh-Sakhalins 6.79 267 *e*P **Pn** **18 54 02.6 +3.2**
YSS AMB AMB 18 54 04.7
comp=Z,60nm,0.8s
JNK Nakash 6.98 236 *e*P **Pn** **18 54 02.2 +0.1**
JTKR Abashiri--Toko 7.21 241 *e*P **Pn** **18 54 06.7 +1.5**
TYV Tymovskoe 7.23 299 *e*PN **Pn** **18 54 08.1 +2.9**
TYV *e*S **Sn** **18 55 27.4 +1.6**
TYV pmax pmax
comp=Z,34nm,1.0s
TYV pmax pmax
comp=Z,200nm,2.1s
TYV smax smax
comp=N,22nm,1.2s
TYV smax smax
comp=E,20nm,1.2s
TYV smax smax
comp=E,500nm,2.8s
TYV Tymovskoe 7.23 299 *e*P **Pn** **18 54 08.1 +2.9**
TYV AMB AMB 18 54 09.4
comp=E,340nm,1.0s
TYV AMB AMB 18 54 09.9
comp=E,500nm,3.0s
TYV A A 18 55 28.6
comp=E,20nm,1.0s
TYV A A 18 55 28.6
comp=E,20nm,1.0s
TYV *e*S **Sn** **18 55 29.4 +3.6**
TYV A A 18 55 29.8
comp=E,500nm,2.0s
JAK Akkeshi 7.39 232 *e*P **Pn** **18 54 05.6 -1.8**
JAK *e*S **Sn** **18 55 24.3 -5.5**
JAR Ashorobuto 7.70 237 *e*P **Pn** **18 54 12.6 +0.9**
JAR *e*S **Sn** **18 55 36.6 -0.8**
JWK2 Keihoku 7.83 255 *e*P Pn 18 54 18.5 +5.1
JOB Onbets 7.92 235 *e*P **Pn** **18 54 13.9 -0.7**
JOB *e*S **Sn** **18 55 38.8 -3.7**
JKK2 Kamakawa 2 7.96 244 *e*P **Pn** **18 54 17.5 +2.3**
JRBN Rebuntou 8.34 258 *e*P **Pn** **18 54 24.8 +4.6**
JCH Churui 8.37 235 *e*P **Pn** **18 54 18.9 -1.7**
JCH *e*S **Sn** **18 55 47.7 -5.8**
JAB Ashibetsu 8.48 243 *e*P **Pn** **18 54 24.2 +2.1**
ERM Erimo 8.89 233 Pn **Pn** **18 54 26.8 -0.9**
ERM Erimo 8.89 233 *ce*PN **Pn** **18 54 26.7 -0.9**
ERM pmax pmax
comp=Z,60nm,0.6s
JNBK Urakawa-nobuka 8.93 235 *e*P **Pn** **18 54 25.7 -2.5**
JNBK *e*S **Sn** **18 55 59.5 -7.5**
JEW Eniwo 9.33 242 **Pn** **18 54 34.3 +0.8**
JTM Tenmabayashi 10.87 234 **Pn** **18 54 50.1 -4.0**
JANG Nango 10.92 231 *e*P Pn 18 54 50.0 -4.8
JANG *e*S Sn 18 56 43.4 -12
JTH Tanohata 11.06 229 *e*P Pn 18 54 51.2 -5.5
MA2 Magadan 11.85 355 P **Pn** **18 55 07.7 +0.9**
comp=Z,2.5nm,0.4s,baz=176,slow=16,SNR=1.3
JMM Marumori 13.20 226 Pn Pn 18 55 18.7 -5.8
KLR Kul'dur 13.94 284 P **P** **18 55 36.2 -1.4**
comp=Z,27nm,0.9s,baz=90,slow=13,SNR=18
KLR Kul'dur 13.94 284 *de*P **P** **18 55 36.5 -1.1**
KLR pmax pmax
comp=Z,60nm,1.7s
KLR Kul'dur 13.94 284 *e*P **P** **18 55 36.5 -1.1**
JSD Sado 14.36 232 P **Pn** **18 55 36.9 -2.4**
JYT Yasato 14.80 223 Pn **Pn** **18 55 43.9 -0.9**
USA0B Ussuriysk Arra 14.81 264 *e*P **P** **18 55 46.8 -0.5**
USA0B Ussuriysk Arra 14.81 264 *c i*P **P** **18 55 46.4 -0.9**
USRK Ussuriysk Ar. 14.81 264 P **P** **18 55 46.4 -0.9**
comp=Z,16nm,0.5s,baz=65,slow=12,SNR=40
USRK Ussuriysk Ar. 14.81 264 **P** **18 55 46.8 -0.5**
USRK Ussuriysk Ar. 14.81 264 P **P** **18 55 46.8 -0.5**
SEY Seymchan 15.17 359 P **Pn** **18 55 48.6 -0.6**
comp=Z,2.2nm,0.4s,baz=182,slow=11,SNR=19
SEY Seymchan 15.17 359 *ce*P **Pn** **18 55 49.2 0.0**
SEY pmax pmax
comp=Z,13nm,1.7s
SEY Seymchan 15.17 359 *e*P **Pn** **18 55 49.2 0.0**
MJA0 Matsu Arr-Jizo 15.49 229 *e*P **Pn** **18 55 53.5 0.0**
MJA0 pmax pmax
comp=Z,16nm,0.8s
MJB9 Matsu-Tunnel 15.51 229 P **Pn** **18 55 54.2 +0.5**
MJB9 IAmb IAmb 18 55 59.0
comp=Z,41nm,1.1s
MAJO Matsushiro 15.51 229 Pn **Pn** **18 55 53.2 -0.5**
MAJO IAmb IAmb 18 55 58.1
comp=Z,40nm,1.1s
MAJO Matsushiro 15.51 229 *i* P **Pn** **18 55 53.3 -0.4**
MJAR Matsushiro Arr 15.51 229 P **Pn** **18 55 52.0 -1.7**
comp=Z,16nm,0.8s,baz=24,slow=11,SNR=22
MJAR Matsushiro Arr 15.51 229 *e*P **Pn** **18 55 53.5 -0.2**
MJAR pmax pmax
comp=Z,16nm,0.8s
MDJ Mudanjiang 16.28 267 P **Pn** **18 56 02.2 -0.9**
MDJ IAmb IAmb 18 56 08.1
comp=Z,28nm,0.8s
MDJ Mudanjiang 16.28 267 P **Pn** **18 56 01.8 -1.2**
JGF Kuroka 16.68 229 **Pn** **18 56 07.4 -0.6**
JGF IAmb IAmb 18 56 11.4
comp=Z,24nm,0.8s
INU Inuyama 17.05 229 P **P** **18 56 11.4 -0.6**
INU IAmb IAmb 18 56 13.9
comp=Z,34nm,0.7s
ZEA Zeya 17.09 300 *e*P **Pn** **18 56 13.2 +0.4**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA Zeya 17.09 300 *e*P **Pn** **18 56 12.9 +0.1**
ZEA AMB AMB 18 56 14.6
comp=Z,20nm,1.0s
AMKA Amchitka 17.59 68 P **Pn** **18 56 19.6 +0.8**
YAK Yakutsk 19.28 326 P **P** **18 56 35.4 -0.8**
comp=Z,8.0nm,0.5s,baz=112,slow=3.1,SNR=12
YAK Yakutsk 19.28 326 P **P** **18 56 35.9 -0.3**
YAK IAmb IAmb 18 56 40.5
comp=Z,28nm,0.8s
YAK Yakutsk 19.28 326 *e*P **Pn** **18 56 37.8 -0.8**
YAK pmax pmax
comp=Z,35nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,13nm,1.0s
JHS Saijyo 19.39 236 P **Pn** **18 56 39.1 -1.2**
JHS IAmb IAmb 18 56 49.3
comp=Z,18nm,0.8s
KSRS Korea Array 20.86 249 P **P** **18 56 54.9 +1.6**
comp=Z,24nm,0.8s,baz=50,slow=10,SNR=56
comp=Z,24nm,0.8s
KS19 Wonju Array Si 20.86 250 P **P** **18 56 53.3 -0.2**
KS19 IAmb IAmb 18 56 56.1
comp=Z,47nm,1.1s
KSAR Wonju Array Be 20.89 249 P **P** **18 56 53.2 -0.5**
KSAR Wonju Array Be 20.89 249 P **P** **18 56 53.2 -0.5**
BILL Bilibino 21.44 14⇑ *e*P **P** **18 57 01.4 +2.0**
BILL *e**PP **pwP** **18 57 29.0 +2.3**
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 21.44 14 *e*P **P** **18 57 01.4 +2.0**
INCN Inchon 21.66 251 P **P** **18 57 03.0 +1.0**
INCN IAmb IAmb 18 57 05.6
comp=Z,57nm,1.3s
INCN Inchon 21.66 251 P **P** **18 57 03.0 +1.0**
INCN pmax pmax
comp=Z,57nm,1.3s
TJN Taejon 21.88 248 P **P** **18 57 05.2 +1.0**
TJN Taejon 21.88 248 *ce*P **P** **18 57 05.7 +1.5**
TIXI Tiksi 26.38 343 P **P** **18 57 43.7 -1.7**
comp=Z,0.7nm,0.3s,baz=90,slow=23,SNR=1.7
comp=Z,0.7nm,0.3s
JOW Kunigami 28.33 231 P **P** **18 58 04.9 +1.5**
comp=Z,21nm,0.6s,baz=12,slow=9.3,SNR=6.3
comp=Z,21nm,0.6s
JOW Kunigami 28.33 231 P **P** **18 58 05.1 +1.7**
HHC Hu-ho-hao-te 29.94 272 *e*P **P** **18 58 15.3 -2.3**
CNBA Chernabura Isl 30.15 59 P **P** **18 58 20.0 +0.9**
H11N2 WAKE ISLAND Hy 30.29 153 T T 19 30 04.7
baz=341,slow=76,SNR=66
H11N1 WAKE ISLAND Hy 30.30 153 T T 19 30 28.0
baz=341,slow=76,SNR=108
H11N3 WAKE ISLAND Hy 30.31 153 T T 19 30 22.2
baz=341,slow=76,SNR=62
SONM Songino Array 30.72 288 P **P** **18 58 24.1 -0.4**
comp=Z,1.4nm,0.7s,baz=56,slow=9.7,SNR=8.7
SONM PcP **PcP** **19 01 19.1 +0.4**
comp=Z,0.7nm,0.6s,baz=64,slow=2.7,SNR=3.0
SONM ScP **ScP** **19 04 49.1 +0.6**
comp=Z,0.8nm,0.7s,baz=60,slow=1.9,SNR=4.3
comp=Z,1.4nm,0.7s
SONM Songino Array 30.72 288 P **P** **18 58 22.5 -1.9**
SONM Songino Array 30.72 288 *e*P **P** **18 58 24.0 -0.4**
SONM pmax pmax
comp=Z,2.0nm,0.6s
H11S1 WAKE ISLAND Hy 31.38 154 T T 19 32 01.6
baz=343,slow=76,SNR=186
H11S3 WAKE ISLAND Hy 31.39 154 T T 19 32 02.3
baz=343,slow=76,SNR=130
H11S2 WAKE ISLAND Hy 31.40 154 T T 19 32 03.0
baz=343,slow=76,SNR=95
J20K Nowinta River 32.76 40 P **P** **18 58 43.2 +1.2**
IMAR Indian Mountai 33.10 37 P **P** **18 58 45.3 +0.4**
KDAK Kodiak Island 33.68 52 P **P** **18 58 49.5 -0.4**
comp=Z,6.7nm,0.8s,baz=309,slow=4.9,SNR=9.7
comp=Z,6.7nm,0.8s
YHNB Yeheng 33.83 238 P **P** **18 58 51.3 -0.5**
KTH Kantishna Hill 34.17 42 P **P** **18 58 55.4 +1.2**
KTH IAmb IAmb 18 58 56.3
comp=Z,14nm,1.0s
TRF Thorofare Moun 34.45 42 P **P** **18 58 57.8 +1.1**
TRF IAmb IAmb 18 58 59.7
comp=Z,13nm,1.2s
H23K Yukon River 34.81 38 P **P** **18 59 01.3 +1.6**
H23K IAmb IAmb 18 59 01.9
comp=Z,7.7nm,0.9s
YULB Yu-li 34.87 237 P **P** **18 59 00.6 0.0**
NEA2 Nenana 34.98 40 P **P** **18 59 01.3 +0.2**
NEA2 IAmb IAmb 18 59 03.5
comp=Z,7.2nm,0.6s
TOLK Toolik Lake Re 35.02 33 P **P** **18 59 02.5 +1.0**
TOLK IAmb IAmb 18 59 06.0
comp=Z,13nm,1.4s
TPUB Ta-pu 35.32 238 P **P** **18 59 04.7 +0.2**
KNK Knik Glacier 35.40 45 P **P** **18 59 05.2 +0.4**
SML Sawmill 35.42 45 P **P** **18 59 05.6 +0.6**
SML Sawmill 35.42 45 P **P** **18 59 05.6 +0.6**
SML pmax pmax
comp=Z,15nm,0.7s
TWG Pinlang 35.45 236 P **P** **18 59 06.2 +0.6**
DHY Denali Highway 35.78 42 P **P** **18 59 08.4 +0.3**
SCM Sheep Creek Mo 35.90 44 P **P** **18 59 10.0 +0.9**
SCM Sheep Creek Mo 35.90 44 P **P** **18 59 10.0 +0.9**
SCM pmax pmax
comp=Z,40nm,1.5s
HDA Harding Lake 35.91 40 P **P** **18 59 09.1 +0.1**
HDA IAmb IAmb 18 59 12.2
comp=Z,5.7nm,0.4s
ILAR Eielson Array 35.92 39 P **P** **18 59 09.7 +0.6**
comp=Z,5.3nm,1.1s,baz=272,slow=8.9,SNR=14
comp=Z,5.3nm,1.1s
M24K Tolsona, Glenn 36.41 44 P **P** **18 59 14.8 +1.3**
J25K Salcha River, 36.58 40 P **P** **18 59 14.3 -0.5**
KLU Klutina 36.60 45 P **P** **18 59 16.0 +0.9**
BMAR Burnt Mountain 36.82 35 P **P** **18 59 17.9 +1.0**
DOT Dot Lake 37.22 41 P **P** **18 59 18.7 -1.6**
ENH Enshi 37.28 258 P **P** **18 59 21.5 +0.4**
LZH Lanzhou 37.57 270 *e*P **P** **18 59 24.8 +1.2**
LZH pP pwP 18 59 59.3 +2.6
M26K Nabesna, AK 37.85 43 P **P** **18 59 27.6 +2.0**
L27K Beaver Creek, 38.29 42 P **P** **18 59 31.0 +1.8**
L27K IAmb IAmb 18 59 31.7
comp=Z,13nm,1.2s
BCAR Beaver Creek A 38.31 42 P **P** **18 59 30.9 +1.4**
EGAK Eagle 38.37 39 P **P** **18 59 30.6 +0.8**
EGAK IAmb IAmb 18 59 30.9
comp=Z,11nm,1.1s
M27K Edge Creek, AK 38.38 43 P **P** **18 59 31.2 +1.2**
M27K IAmb IAmb 19 00 05.9
comp=Z,12nm,1.4s
ISLE Juniper Island 38.46 46 P **P** **18 59 31.1 +0.3**
GTA Gaotai 38.52 277 ⇓P **P** **18 59 33.0 +1.5**
GTA pP pwP 19 00 05.8 +1.1
GTA sP sP 19 00 17.4 +2.2
BARN Barnard Glacie 38.70 45 P **P** **18 59 34.0 +1.1**
INK Inuvik 40.93 33 P **P** **18 59 51.8 +1.0**
comp=Z,0.9nm,0.3s,baz=284,slow=5.8,SNR=2.3
comp=Z,0.9nm,0.3s
GYA Guiyang 41.66 256 ⇓P **P** **18 59 58.8 +1.3**
ZAA0 Zalesovo Array 41.76 305 P **P** **18 59 56.5 -1.4**
ZAA0 IAmb IAmb 18 59 57.5
comp=Z,4.8nm,0.6s
ZALV Zalesovo Beam 41.76 305 P **P** **18 59 56.8 -1.1**
comp=Z,4.8nm,0.5s,baz=61,slow=6.7,SNR=23
ZALV PcP **PcP** **19 01 52.1 +0.6**
comp=Z,3.8nm,0.6s,baz=75,slow=2.5,SNR=13
ZALV ScP **ScP** **19 05 28.6 -0.3**
comp=Z,0.3nm,0.4s,baz=62,slow=8.5,SNR=1.7
comp=Z,4.8nm,0.5s
ZALV Zalesovo Beam 41.76 305 P **P** **18 59 56.5 -1.4**
GOMU GeErMu 43.58 277 P **P** **19 00 13.4 +0.2**
WMQ Urumqi 44.27 290 *e*P **P** **19 00 19.6 +1.3**
PZH PanZhiHua 44.88 260 P **P** **19 00 23.6 +0.2**
KMI Kunming 45.15 258 ⇓P **P** **19 00 26.4 +0.8**
MK31 Makanchi Array 46.20 296 P **P** **19 00 32.8 -0.6**
MK31 Makanchi Array 46.20 296 P **P** **19 00 32.8 -0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 46.20 296 P **P** **19 00 32.5 -0.9**
comp=Z,2.4nm,0.6s,baz=68,slow=7.8,SNR=21
MK31 S **pP** **19 01 08.2 +5.2**
comp=Z,5.9nm,0.7s,baz=65,slow=8.8,SNR=10.0
MKAR Makanchi Array 46.20 296 P **P** **19 00 32.6 -0.7**
comp=Z,1.7nm,0.5s,baz=66,slow=7.2,SNR=27
MKAR PcP **PcP** **19 02 07.4 +0.6**
comp=Z,1.6nm,0.6s,baz=59,slow=3.6,SNR=5.5
MKAR ScP **ScP** **19 05 46.8 -0.4**
comp=Z,0.6nm,0.8s,baz=63,slow=4.5,SNR=4.0
comp=Z,1.7nm,0.5s
MAKZ Makanchi 46.38 296 P **P** **19 00 33.1 -1.7**
MAKZ Makanchi 46.38 296 P **P** **19 00 33.1 -1.7**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 46.54 303 P **P** **19 00 35.2 -0.7**
KURK IAmb IAmb 19 00 35.9
comp=Z,12nm,0.8s
KURK Kurchatov 46.54 303 P **P** **19 00 35.2 -0.7**
KURK pmax pmax
comp=Z,12nm,0.8s
EUNU Eureka 48.16 12 P **P** **19 00 48.0 -0.2**
EUNU IAmb IAmb 19 00 55.3
comp=Z,6.8nm,0.9s
LSA Lhasa 49.93 272 P **P** **19 01 03.7 +1.0**
LSA Lhasa 49.93 272 ⇑P **P** **19 01 04.8 +2.0**
LSA Lhasa 49.93 272 P **P** **19 01 03.7 +1.0**
LSA pmax pmax
comp=Z,12nm,0.6s
LSA Lhasa 49.93 272 P **P** **19 01 04.3 +1.5**
RES Resolute Bay 49.94 19 P **P** **19 01 00.7 -1.0**
comp=Z,4.5nm,1.0s,baz=270,slow=4.3,SNR=6.6
comp=Z,4.5nm,1.0s
RES Resolute Bay 49.94 19 P **P** **19 01 01.4 -0.2**
RES IAmb IAmb 19 01 02.8
comp=Z,8.9nm,1.2s
RES Resolute Bay 49.94 19 P **P** **19 01 01.4 -0.2**
RES pmax pmax
comp=Z,9.0nm,1.2s
BRVK Borovoye 50.00 309 P **P** **19 01 01.8 -0.7**
BRVK IAmb IAmb 19 01 02.6
comp=Z,5.5nm,0.7s
BRVK Borovoye 50.00 309 *ce*P **P** **19 01 02.2 -0.3**
BRVK pmax pmax
comp=Z,11nm,2.5s
BRVK Borovoye 50.00 309 *e*P **P** **19 01 02.2 -0.3**
CHTO Chiang Mai 52.08 255 P **P** **19 01 18.5 +0.1**
CHTO Chiang Mai 52.08 255 P **P** **19 01 18.5 +0.1**
CHTO pmax pmax
comp=Z,17nm,0.9s
SHL Shillong 52.11 267 P **P** **19 01 19.0 +0.2**
SHL Shillong 52.11 267 P **P** **19 01 19.0 +0.2**
SHL pmax pmax
comp=Z,14nm,0.8s
CM31 Chiang Mai Arr 52.34 255 P **P** **19 01 22.2 +1.9**
CMAR Chiang Mai Arr 52.34 255 P **P** **19 01 22.1 +1.8**
comp=Z,8.7nm,0.7s,baz=35,slow=7.1,SNR=91
CMAR PcP **PcP** **19 02 31.2 +1.6**
comp=Z,1.7nm,0.8s,baz=18,slow=3.4,SNR=6.8
CMAR ScP **ScP** **19 06 15.0 +1.2**
comp=Z,1.2nm,0.8s,baz=39,slow=3.5,SNR=9.7
comp=Z,8.7nm,0.7s
CMAR Chiang Mai Arr 52.34 255 P **P** **19 01 22.0 +1.7**
AAK Ala-Archa 53.10 295 P **P** **19 01 25.5 -0.4**
AAK IAmb IAmb 19 01 26.5
comp=Z,10nm,1.4s
AAK Ala-Archa 53.10 295 *ce*P **P** **19 01 26.6 +0.7**
AAK pmax pmax
comp=Z,8.0nm,2.5s
AAK Ala-Archa 53.10 295 *e*P **P** **19 01 26.6 +0.7**
AAK Ala-Archa 53.10 295 P **P** **19 01 25.8 -0.1**
KSH Kashi 53.98 291 P **P** **19 01 35.8 +3.5**
ARU Arti 54.04 317 P **P** **19 01 30.7 -1.5**
ARU IAmb IAmb 19 01 32.1
comp=Z,9.6nm,0.7s
ARU Arti 54.04 317 *c i*P **P** **19 01 31.6 -0.6**
ARU *PP **pwP** **19 02 05.2 -2.0**
ARU 19 02 34.5
ARU S **S** **19 08 58.5 +1.0**
ARU SS **SS** **19 12 36.9 -3.2**
ARU pmax pmax
comp=Z,10.0nm,0.7s
JIRN Jiri 54.57 274 *e*P **P** **19 01 37.8 +0.8**
GUN Gumba 54.62 274 *e*P **P** **19 01 38.1 +0.8**
comp=Z,37nm,0.4s
RAMN Ramite 54.76 273 *e*P **P** **19 01 38.7 +0.5**
comp=Z,29nm,0.3s
KKN Kakani 55.10 274 *e*P **P** **19 01 41.6 +1.0**
PKI Pulchoki 55.16 274 *e*P **P** **19 01 41.9 +0.8**
comp=Z,18nm,0.4s
PKIN Phulchoki 55.16 274 *e*P **P** **19 01 41.9 +0.8**
comp=Z,21nm,0.4s
KK31 Karatay Array 55.24 298 P **P** **19 01 39.9 -1.2**
KK31 Karatay Array 55.24 298 P **P** **19 01 39.9 -1.2**
KK31 pmax pmax
comp=Z,5.0nm,1.1s
KKAR Karatay Array 55.24 298 P **P** **19 01 40.1 -1.0**
KKAR Karatay Array 55.24 298 P **P** **19 01 39.9 -1.2**
KKAR Karatay Array 55.24 298 P **P** **19 01 40.1 -1.0**
KKAR pmax pmax
comp=Z,5.0nm,1.1s
DMN Daman 55.34 274 *e*P **P** **19 01 43.7 +1.4**
comp=Z,46nm,0.4s
GKN Gorkha 55.40 275 *e*P **P** **19 01 43.1 +0.5**
comp=Z,52nm,0.5s
B08A Colville Reser 55.53 54 P **P** **19 01 43.6 +0.4**
B08A IAmb IAmb 19 01 45.0
comp=Z,6.3nm,1.1s
DANN Dangsing 55.76 276 *e*P **P** **19 01 46.1 +0.7**
comp=Z,55nm,0.5s
TRKS Terek-Say 55.78 296 P **P** **19 01 45.3 +0.1**
TRKS pmax pmax
comp=Z,10.0nm,1.0s
KOLN Koldanda 56.24 275 *e*P **P** **19 01 49.3 +0.6**
DRK Karamyk 56.60 294 P **P** **19 01 50.9 -0.3**
DRK IAmb IAmb 19 01 52.4
comp=Z,7.2nm,1.0s
ARA0 ARCESS Array S 56.76 340 *e*P **P** **19 01 51.0 -0.6**
ARCES ARCESS Array B 56.76 340 P **P** **19 01 50.4 -1.2**
comp=Z,1.2nm,0.8s,baz=35,slow=8.0,SNR=7.2
comp=Z,1.2nm,0.8s
NEW Newport 56.78 53 P **P** **19 01 52.3 +0.3**
NEW IAmb IAmb 19 01 54.0
comp=Z,4.4nm,0.8s
NEW Newport 56.78 53 P **P** **19 01 52.3 +0.3**
NEW pmax pmax
comp=Z,4.0nm,0.9s
BTK Batken 56.86 295 P **P** **19 01 51.8 -1.0**
BTK IAmb IAmb 19 01 53.9
comp=Z,7.6nm,1.0s
BTK Batken 56.86 295 P **P** **19 01 51.8 -1.0**
BTK pmax pmax
comp=Z,8.0nm,1.0s
E09A Wood Farm, Sta 57.26 55 P **P** **19 01 55.8 +0.4**
E09A IAmb IAmb 19 01 57.4
comp=Z,10nm,1.1s
PINE Pine Mountain 57.31 59 P **P** **19 01 57.0 +1.0**
PINE IAmb IAmb 19 01 59.1
comp=Z,7.9nm,0.9s
ABKAR Akbulak array 57.53 309 P **P** **19 01 55.9 -1.3**
ABKAR Akbulak array 57.53 309 P **P** **19 01 55.3 -1.9**
ABKAR IAmb IAmb 19 01 57.4
comp=Z,6.3nm,1.1s
KTK1 Kautokeino 57.68 341 *e*P **P** **19 01 56.8 -1.2**
GAR Garm 57.81 294 P **P** **19 01 59.1 -0.4**
JETT Jettan, Norway 57.85 342 *e*P **P** **19 01 58.9 -0.3**
TRO Tromso 58.09 343 *e*P **P** **19 02 00.8 0.0**
CHGR Chuyangaron 58.73 294 P **P** **19 02 05.3 -0.6**
CHGR Chuyangaron 58.73 294 P **P** **19 02 05.3 -0.6**
CHGR pmax pmax
comp=Z,18nm,0.8s
BMO Blue Mountains 58.74 56 P **P** **19 02 06.9 +1.1**
BMO Blue Mountains 58.74 56 P **P** **19 02 06.9 +1.1**
BMO pmax pmax
comp=Z,3.0nm,0.9s
NIL Nilore 59.30 288 P **P** **19 02 08.0 -1.8**
NIL Nilore 59.30 288 P **P** **19 02 08.0 -1.8**
NIL pmax pmax
comp=Z,22nm,1.2s
PLID Pearl Lake 59.32 55 P **P** **19 02 10.9 +0.9**
PLID IAmb IAmb 19 02 12.1
comp=Z,8.0nm,0.9s
MSO Missoula 59.36 53 P **P** **19 02 11.2 +1.0**
MSO IAmb IAmb 19 02 11.7
comp=Z,6.7nm,1.0s
WVOR Wild Horse Val 59.48 59 P **P** **19 02 12.1 +1.1**
WVOR IAmb IAmb 19 02 13.4
comp=Z,5.1nm,0.9s
WVOR Wild Horse Val 59.48 59 P **P** **19 02 12.1 +1.1**
WVOR pmax pmax
comp=Z,5.0nm,1.0s
BEKR Beckworth 60.07 62 P **P** **19 02 16.3 +1.2**
BEKR IAmb IAmb 19 02 17.0
comp=Z,7.5nm,1.1s
LOF Lofoten 60.41 344 *e*P **P** **19 02 16.9 +0.1**
FAUS Fauske 60.72 343 *e*P **P** **19 02 18.5 -0.3**
LRM Limekiln Ridge 60.80 53 P **P** **19 02 21.6 +1.5**
PNTR Pine Nut 61.01 63 P **P** **19 02 23.0 +1.4**
PNTR IAmb IAmb 19 02 59.0
comp=Z,7.9nm,1.0s
BOZ Bozeman (W) 61.38 53 P **P** **19 02 25.3 +1.4**
BOZ IAmb IAmb 19 02 25.9
comp=Z,3.7nm,0.7s
BOZ Bozeman (W) 61.38 53 P **P** **19 02 25.3 +1.4**
BOZ pmax pmax
comp=Z,4.0nm,0.7s
KBL Kabul 61.41 291 P **P** **19 02 23.0 -1.3**
KBL Kabul 61.41 291 P **P** **19 02 23.0 -1.3**
KBL pmax pmax
comp=Z,16nm,1.3s
BMN Battle Mountai 61.56 60 P **P** **19 02 26.9 +1.7**
BMN Battle Mountai 61.56 60 P **P** **19 02 26.9 +1.7**
BMN pmax pmax
comp=Z,3.0nm,0.9s
MOR8 Moi Rana 61.93 342 *e*P **P** **19 02 25.7 -1.4**
KVN Kaiserville 61.93 62 P **P** **19 02 28.2 +0.4**
KVN IAmb IAmb 19 02 29.6
comp=Z,4.3nm,0.8s
KVN Kaiserville 61.93 62 P **P** **19 02 28.2 +0.4**

KVN pmax pmax
comp=Z,4.0nm,0.8s
RYN Ryan 61.95 63 P **P 19 02 28.9 +1.0**
RYN IAmb IAmb 19 02 30.0
comp=Z,4.8nm,0.9s
QLMT Earthquake Lak 61.99 53 P **P 19 02 29.1 +1.0**
LHV Little Huntoon 62.21 63 P **P 19 02 30.7 +1.4**
LHV IAmb IAmb 19 02 32.2
comp=Z,7.0nm,0.9s
NVAR Mina Array Bea 62.21 63 P **P 19 02 30.9 +1.3**
comp=Z,2.5nm,0.6s,baz=294,slow=7.3,SNR=22
comp=Z,2.5nm,0.6s
YHH Holmes Hill 62.33 53 P **P 19 02 31.9 +1.5**
RLMT Red Lodge 62.96 52 P **P 19 02 36.2 +1.7**
RLMT IAmb IAmb 19 03 11.2
comp=Z,4.9nm,1.1s
FINES FINESS Array B 62.96 334 P **P 19 02 32.4 -1.5**
comp=Z,3.3nm,0.4s,baz=34,slow=7.5,SNR=50
comp=Z,3.3nm,0.4s
FINES FINESS Array B 62.96 334 *e*P **P 19 02 32.7 -1.2**
FINES pmax pmax
comp=Z,3.0nm,0.4s
TPH Tonopah 63.09 62 P **P 19 02 36.3 +0.8**
TPH Tonopah 63.09 62 P **P 19 02 36.3 +0.8**
TPH pmax pmax
comp=Z,43nm,1.2s
MZP Montezuma Peak 63.24 63 P **P 19 02 37.1 +0.6**
HVU Hansel Valley 63.24 57 P **P 19 02 38.2 +1.8**
HVU IAmb IAmb 19 02 47.7
comp=Z,8.4nm,1.5s
HVU Hansel Valley 63.24 57 P **P 19 02 38.2 +1.8**
HVU pmax pmax
comp=Z,8.0nm,1.5s
GMN Gold Mountain 63.58 63 P **P 19 02 39.3 +0.6**
R11A Troy Canyon, C 63.88 61 P **P 19 02 41.5 +0.8**
DUG Dugway, Tooele 64.27 58 P **P 19 02 44.8 +1.7**
DUG IAmb IAmb 19 02 45.6
comp=Z,6.3nm,1.1s
DUG Dugway, Tooele 64.27 58 P **P 19 02 44.8 +1.7**
DUG pmax pmax
comp=Z,6.0nm,1.2s
HEL Helsinki 64.31 334 P **P 19 02 41.7 -1.1**
HEL pmax pmax
comp=Z,3.0nm,0.6s
BW06 Boulder Array 64.37 54 P **P 19 02 43.7 -0.2**
PD31 Pinedale Array 64.37 54 P **P 19 02 44.5 +0.7**
PDAR Pinedale Array 64.37 54 P **P 19 02 44.8 +1.0**
comp=Z,2.5nm,0.8s,baz=301,slow=1.4,SNR=17
comp=Z,2.5nm,0.8s
PDAR Pinedale Array 64.37 54 P **P 19 02 44.4 +0.5**
TPNV Topopah Spring 64.41 63 P **P 19 02 44.4 +0.3**
TPNV Topopah Spring 64.41 63 P **P 19 02 44.4 +0.3**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
GWY Greenwater Val 64.67 64 P **P 19 02 46.2 +0.4**
GWY IAmb IAmb 19 02 47.6
comp=Z,4.8nm,0.8s
JLU Jordanelle 64.77 57 P **P 19 02 46.9 +0.4**
JLU IAmb IAmb 19 02 49.1
comp=Z,7.7nm,1.4s
PRN Pahroc Range 64.82 62 P **P 19 02 47.6 +0.9**
NLU North Lily Min 64.85 58 P **P 19 02 47.7 +0.7**
MPU Maple Canyon 65.06 57 P **P 19 02 48.4 0.0**
MPU IAmb IAmb 19 02 49.3
comp=Z,2.9nm,0.6s
GEYT Alibeck 65.81 300 P **P 19 02 53.9 +0.9**
comp=Z,1.7nm,0.6s,baz=5.7,slow=1.5,SNR=5.3
comp=Z,1.7nm,0.6s
RDMU Red Mountain 65.85 56 P **P 19 02 54.9 +1.5**
LCMT Little Creek M 66.16 61 P **P 19 02 56.5 +1.3**
SRU San Rafael Swe 66.31 58 P **P 19 02 56.9 +0.6**
SRU IAmb IAmb 19 02 58.2
comp=Z,7.5nm,1.2s
SRU San Rafael Swe 66.31 58 P **P 19 02 56.9 +0.6**
SRU pmax pmax
comp=Z,7.0nm,1.2s
RSSD Black Hills 66.38 50 P **P 19 02 57.2 +0.5**
RSSD IAmb IAmb 19 02 58.3
comp=Z,5.4nm,0.7s
RSSD Black Hills 66.38 50 P **P 19 02 57.2 +0.5**
RSSD pmax pmax
comp=Z,5.0nm,0.7s
DOMB Dombas 66.69 342 *e*P **P 19 02 59.1 +0.9**
AKN Aaknes 66.98 343 *e*P **P 19 03 00.1 +0.1**
NB2 NORSAR Subarra 67.14 341 P **P 19 03 01.3 +0.3**
comp=Z,1.2nm,0.5s,baz=26,slow=6.5
NB2 NORSAR Subarra 67.14 341 P **P 19 03 01.3 +0.3**
baz=26,slow=6.5
NOA NORSAR Array B 67.14 341 P **P 19 03 01.1 +0.2**
comp=Z,1.5nm,0.5s,baz=28,slow=6.6,SNR=11
comp=Z,1.5nm,0.5s
NC602 NORSAR Array S 67.34 340 *e*P **P 19 03 02.2 0.0**
NORES NORESS Array B 67.34 340 P **P 19 03 02.0 -0.2**
OSL Oslo 68.23 340 *e*P **P 19 03 07.3 -0.5**
KONO Kongsberg 68.74 341 *e*P **P 19 03 10.2 -0.8**
ASK Askoy 68.89 343 *e*P **P 19 03 11.8 -0.1**
WB0 Warramunga Arr 69.23 198 P **P 19 03 14.1 -0.3**
WB2 Warramunga Arr 69.41 198 P **P 19 03 16.6 +1.1**
WB2 IAmb IAmb 19 03 18.0
comp=Z,9.7nm,1.3s
WRA Warramunga Arr 69.41 198 P **P 19 03 16.4 +0.9**
comp=Z,2.3nm,0.7s,baz=24,slow=6.6,SNR=26
comp=Z,2.3nm,0.7s
WRA Warramunga Arr 69.41 198 P **P 19 03 16.5 +0.9**
KBZ Khabaz 69.92 313 P **P 19 03 17.6 -0.9**
comp=Z,1.4nm,0.4s,baz=63,slow=9.0,SNR=7.5
comp=Z,1.4nm,0.4s
KBZ Khabaz 69.92 313 *e*P **P 19 03 19.8 +1.4**
KBZ pmax pmax
comp=Z,1.0nm,0.4s
KBZ Khabaz 69.92 313 *e*P **P 19 03 19.8 +1.4**
AKASG Malin Array Be 70.51 326 P **P 19 03 20.4 -1.5**
comp=Z,1.6nm,0.4s,baz=34,slow=6.3,SNR=9.5
comp=Z,1.6nm,0.4s
AKASG Malin Array Be 70.51 326 *e*P **P 19 03 20.7 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 70.51 326 P **P 19 03 21.4 -0.6**
AKBB IAmb IAmb 19 03 22.3
comp=Z,6.2nm,0.8s
AKBB Malin Array Si 70.51 326 *ce*P **P 19 03 22.4 +0.5**
319A Douglas 72.43 63 P **P 19 03 34.9 +0.9**
319A IAmb IAmb 19 04 10.2
comp=Z,10nm,0.9s
SCHQ Schefferville 72.46 23 P **P 19 03 34.4 +0.8**
comp=Z,3.7nm,0.8s,baz=271,slow=5.9,SNR=5.3
comp=Z,3.7nm,0.8s
AS31 Alice Springs 73.11 198 P **P 19 03 39.7 +2.0**
AS31 IAmb IAmb 19 03 40.5
comp=Z,5.3nm,0.5s
ASAR Alice Springs 73.11 198 P **P 19 03 39.9 +2.1**
comp=Z,8.7nm,0.5s,baz=10,slow=5.5,SNR=208
comp=Z,8.7nm,0.5s
ASAR Alice Springs 73.11 198 P **P 19 03 39.5 +1.7**
ASAR Alice Springs 73.11 198 P **P 19 03 39.5 +1.7**
BUR08 Bucovina Ar. S 74.53 326 P **P 19 03 45.3 -0.7**
BURAR Bucovina Array 74.55 326 ⇓P **P 19 03 45.6 -0.5**
BURAR Bucovina Array 74.55 326 P **P 19 03 45.2 -0.9**
BURAR Bucovina Array 74.55 326 ⇓P **P 19 03 45.6 -0.5**
VLDR Vladesti 74.89 323 ⇑P **P 19 03 52.6 +4.7**
TESR Tescani 74.91 325 ⇑P **P 19 03 46.3 -1.8**
TRPA Tarpa 75.10 328 ⇑P **P 19 03 48.6 -0.4**
EKA Eskdalemuir Ar 75.25 346 P **P 19 03 49.5 -0.3**
BANOM Banah 75.30 292 P **P 19 03 50.4 -0.3**
SHME Shamm 75.31 292 P **P 19 03 50.7 +0.1**
CLL Collm 75.39 335 *i* P **P 19 03 50.7 +0.1**
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 75.39 335 *i* P **P 19 03 50.7 +0.1**
comp=Z,7.0nm,0.6s
VRI Vrincioaia 75.42 324 ⇑P **P 19 03 47.1 -3.9**
VRI Vrincioaia 75.42 324 ⇑P **P 19 03 47.1 -3.9**
TIRR Tirgusor 75.89 322 ⇑P P 19 03 40.4 -13
MLR Muntele Rosu 76.03 324 ⇑P **P 19 03 55.9 +1.3**
MLR Muntele Rosu 76.03 324 ⇑P **P 19 03 55.9 +1.3**
UOSS Minazif 76.06 292 P **P 19 03 55.4 +0.4**
HATD Hatta, Dubai 76.20 292 P **P 19 03 56.7 +1.0**
ASHO Ashiyiah 76.34 292 P **P 19 03 57.1 +0.5**
VOIR 76.43 325 ⇑P **P 19 03 56.5 -0.3**
VOIR 76.43 325 ⇑P **P 19 03 56.5 -0.3**
ASUD Al Ashush, Dub 76.84 292 P **P 19 04 00.1 +0.7**
KDZE Karadeniz Ereo 77.15 319 ⇑P P 19 03 51.8 -9.0
KHC Kasperske Hory 77.16 334 P **P 19 03 59.4 -1.4**
KHC Kasperske Hory 77.16 334 *eP* **P 19 04 00.0 -0.8**
KHC *e* 19 04 05.5
KHC Kasperske Hory 77.16 334 *eP* **P 19 04 00.0 -0.8**
KHC x x 19 04 05.5
TX31 Lajitas Ar. Si 77.23 60 P **P 19 04 02.4 +0.8**
TX32 Lajitas Array 77.23 60 P **P 19 04 02.4 +0.8**
TX32 IAmb IAmb 19 04 03.3
comp=Z,5.3nm,0.7s
TXAR Lajitas Array 77.24 60 P **P 19 04 02.3 +0.7**
comp=Z,4.3nm,0.6s,baz=297,slow=4.4,SNR=49
comp=Z,4.3nm,0.6s
TXAR Lajitas Array 77.24 60 P **P 19 04 01.7 +0.1**
TXAR Lajitas Array 77.24 60 P **P 19 04 01.7 +0.1**
GERES GERESS Array B 77.38 334 P **P 19 04 01.7 -0.4**
comp=Z,0.7nm,0.5s,baz=33,slow=5.0,SNR=8.7
comp=Z,0.7nm,0.5s
RAZG Razgrad 77.41 323 ⇑P pP 19 04 30.5 -4.2
BRTR Keskin Array B 77.42 316 P **P 19 04 03.2 +0.6**
comp=Z,1.1nm,0.6s,baz=42,slow=6.7,SNR=5.6
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 77.42 316 *eP* **P 19 04 03.6 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
CONA Conrad Observa 77.53 332 *i* P **P 19 04 04.0 +1.1**
comp=Z,1.9nm,0.5s
RONA Rosalia, Austr 77.59 331 *i* P **P 19 04 05.2 +2.0**
comp=Z,3.4nm,1.0s
BTNL Ternell 77.85 339 *dP* **P 19 04 04.4 -0.2**
BSTI Sart Tilman 77.99 339 *dP* **P 19 04 06.8 +1.6**
MOA Molln 78.10 333 *i* P **P 19 04 08.0 +2.1**
comp=Z,1.0nm,0.5s
BCLA Clavier 78.20 339 *dP* **P 19 04 06.8 +0.3**
BCLA *dPcP* **PcP 19 04 16.0 +0.6**
BGES Gesves 78.29 339 *dP* **P 19 04 07.0 +0.1**
BIOA Bad Ischl, Aus 78.43 333 *i* P **P 19 04 08.5 +0.7**
comp=Z,1.5nm,0.4s
BMRD Maredsous 78.44 340 *dP* **P 19 04 08.0 +0.3**
comp=Z,9.6nm,0.8s
BAIF Baives 78.80 340 *eP* **P 19 04 09.9 +0.2**
BAIF pmax pmax
comp=Z,6.0nm,0.8s
SOKA Soboth 78.90 332 *i* P **P 19 04 11.0 +0.6**
comp=Z,7.5nm,1.4s
KBA Koelnbreinsper 79.07 333 P **P 19 04 12.4 +0.9**
KBA pmax pmax
comp=Z,14nm,0.9s
KBA Koelnbreinsper 79.07 333 *i* P **P 19 04 12.3 +0.9**
comp=Z,7.8nm,0.5s
MZR Muzera 79.18 292 P **P 19 04 12.6 +0.3**
OBKA Obir 79.20 332 *i* P **P 19 04 12.4 +0.2**
comp=Z,2.8nm,0.8s
BOVS Bovan 79.23 326 ⇑P **P 19 04 10.6 -1.6**
WATA Walderalm 79.36 334 *i* P **P 19 04 14.0 +0.9**
comp=Z,4.1nm,0.5s
MYKA Terra Mystica 79.38 333 *i* P **P 19 04 12.9 -0.2**
comp=Z,2.7nm,0.5s
WTTA Wattenberg 79.41 334 P **P 19 04 14.4 +1.0**
WTTA pmax pmax
comp=Z,16nm,1.1s
WTTA Wattenberg 79.41 334 *i* P **P 19 04 14.3 +1.0**
comp=Z,8.4nm,0.5s
DIVS Divibare 79.46 327 P **P 19 04 13.3 -0.3**
RETA Reutte 79.46 335 *i* P **P 19 04 14.1 +0.6**
comp=Z,2.2nm,0.7s
MOTA Mosalm 79.50 335 *i* P **P 19 04 14.6 +0.8**
comp=Z,6.1nm,0.8s
VTS Vitosha 79.51 325 ⇑P **P 19 04 13.6 -0.3**
VTS Vitosha 79.51 325 P **P 19 04 13.2 -0.7**
VTS IAmb IAmb 19 04 15.1
comp=Z,6.9nm,0.8s
VTS Vitosha 79.51 325 ⇑P **P 19 04 13.6 -0.3**
CDF Champ du Feu 79.57 337 *eP* **P 19 04 13.9 -0.2**
CDF pmax pmax
comp=Z,9.0nm,1.0s
SQTA Sankt Quirin 79.58 334 *i* P **P 19 04 15.0 +0.8**
comp=Z,7.6nm,1.3s
ABTA Abfaltersbach 79.62 333 *i* P **P 19 04 14.2 -0.2**
comp=Z,3.6nm,1.1s
ECH Echery 79.78 337 P **P 19 04 14.2 -1.0**
ECH IAmb IAmb 19 04 16.1
comp=Z,11nm,1.3s
ECH Echery 79.78 337 P **P 19 04 14.2 -1.0**
ECH pmax pmax
comp=Z,11nm,1.3s
FETA Feichten 79.90 335 *i* P **P 19 04 16.7 +0.8**
comp=Z,2.4nm,0.6s
DAVA Damuels 79.90 335 *i* P **P 19 04 16.6 +0.6**
comp=Z,4.8nm,0.8s
STKA Stephens Creek 79.94 190 P **P 19 04 16.9 +1.1**
comp=Z,1.8nm,0.8s,baz=8.1,slow=7.1,SNR=4.7
comp=Z,1.8nm,0.8s
STKA Stephens Creek 79.94 190 P **P 19 04 17.0 +1.1**
HAU Haudompre 80.19 338 *eP* **P 19 04 16.8 -0.5**
HAU pmax pmax
comp=Z,23nm,1.6s
FUORN Ofenpass-Fuorn 80.39 335 P **P 19 04 19.3 +0.6**
FLN La Foliniere 81.04 342 *eP* **P 19 04 21.3 -0.5**
FLN pmax pmax
comp=Z,59nm,1.6s
LDF La Druitiere 81.13 342 *eP* **P 19 04 22.1 -0.2**
LDF pmax pmax
comp=Z,8.0nm,1.1s
PDG Podgorica 81.18 327 ⇑P **P 19 04 22.3 -0.3**
PDG Podgorica 81.18 327 P **P 19 04 21.6 -1.0**
PDG IAmb IAmb 19 04 22.9
comp=Z,11nm,0.6s
GRR Gorron 81.47 343 *eP* **P 19 04 24.2 +0.1**
GRR pmax pmax
comp=Z,29nm,1.4s
LOR Lormes 81.49 339 *eP* **P 19 04 23.8 -0.5**
LOR pmax pmax
comp=Z,12nm,0.6s
CABF La Chapelle 81.54 337 *eP* **P 19 04 25.2 +0.6**
CABF pmax pmax
comp=Z,45nm,2.1s
SSF Saint Saulge 81.77 339 *eP* **P 19 04 25.3 -0.4**
SSF pmax pmax
comp=Z,9.0nm,0.8s
SGMF Saint Gilles 81.94 344 *eP* **P 19 04 26.4 -0.1**
SGMF pmax pmax
comp=Z,57nm,1.6s
ROSF Rostrenen 81.99 344 *eP* **P 19 04 26.8 0.0**
ROSF pmax pmax
comp=Z,56nm,1.5s
AVF Avril sur Loir 82.06 339 *eP* **P 19 04 27.0 -0.2**
AVF pmax pmax
comp=Z,10.0nm,0.6s
SMF Signal de Mont 82.08 339 *eP* **P 19 04 27.1 -0.2**
SMF pmax pmax
comp=Z,10.0nm,0.6s
LPL La Plagne 82.39 337 *eP* **P 19 04 29.5 +0.3**
LPL pmax pmax
comp=Z,5.0nm,0.6s
BGF Bois d'Agland 82.40 340 *eP* **P 19 04 29.7 +0.7**
BGF pmax pmax
comp=Z,8.0nm,0.6s
LPG La Plagne 82.40 337 *eP* **P 19 04 29.7 +0.3**
LPG pmax pmax
comp=Z,7.0nm,0.7s
MURB Monte Urbino 82.75 332 P **P 19 04 31.0 +0.1**
TCF Toulx Ste Croi 82.80 340 *eP* **P 19 04 31.1 0.0**
TCF pmax pmax
comp=Z,8.0nm,0.7s
NRCA Norcia 82.94 331 P **P 19 04 32.1 +0.2**
NRCA IAmb IAmb 19 04 33.3
comp=Z,13nm,1.0s
MFF Saint Martin d 83.03 342 *eP* **P 19 04 32.3 +0.1**
MFF pmax pmax
comp=Z,4.0nm,0.6s
MBDF Montbardon 83.11 336 *eP* **P 19 04 33.0 +0.1**
MBDF pmax pmax
comp=Z,3.0nm,0.6s
ORIF Oris-en-Rattie 83.17 337 *eP* **P 19 04 33.4 +0.3**
ORIF pmax pmax
comp=Z,9.0nm,0.8s
SSB Saint Sauveur 83.18 338 P **P 19 04 33.5 +0.4**
SSB Saint Sauveur 83.18 338 P **P 19 04 33.5 +0.4**
SSB pmax pmax
comp=Z,23nm,1.4s
INTR Introdacqua 83.42 330 P **P 19 04 33.6 -0.8**
INTR IAmb IAmb 19 04 35.6
comp=Z,5.2nm,0.8s
VIVF Saint-Julien-l 83.54 338 *eP* **P 19 04 35.3 +0.3**
VIVF pmax pmax
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 83.66 298 P **P 19 04 36.2 +0.2**
RAYN IAmb IAmb 19 04 37.6
comp=Z,13nm,0.9s
RAYN Ar Rayn 83.66 298 ⇑P **P 19 04 36.5 +0.6**
RAYN Ar Rayn 83.66 298 P **P 19 04 36.7 +0.8**
SBF Sospel 83.72 335 *eP* **P 19 04 35.6 -0.3**
SBF pmax pmax
comp=Z,5.0nm,0.4s
RJF Les Rejaudoux 83.89 340 *eP* **P 19 04 37.3 +0.6**
RJF pmax pmax
comp=Z,8.0nm,1.0s
CAF Calviac 84.12 339 *eP* **P 19 04 38.4 +0.5**
CAF pmax pmax
comp=Z,6.0nm,0.6s
LFF La Frestale 84.41 340 *eP* **P 19 04 39.6 +0.3**
LFF pmax pmax
comp=Z,5.0nm,0.7s
LMR La Mourre 84.47 336 *eP* **P 19 04 39.6 0.0**
LMR pmax pmax
comp=Z,28nm,1.4s
PGF Pioggiola 84.48 334 *eP* P 19 04 34.8 -5.0
PGF pmax pmax
comp=Z,3.0nm,0.8s
TIP Timpagrande 84.94 327 P **P 19 04 42.0 -0.2**
TIP IAmb IAmb 19 04 43.2
comp=Z,14nm,1.2s
MTLF Montolieu 85.57 339 *eP* **P 19 04 45.8 +0.6**
MTLF pmax pmax
comp=Z,4.0nm,0.6s
EPF Esparros 86.31 340 *eP* **P 19 04 49.7 +0.8**
EPF pmax pmax
comp=Z,4.0nm,0.9s
ETSF Etsaut 86.64 341 *eP* **P 19 04 50.6 +0.1**
ETSF pmax pmax
comp=Z,2.0nm,0.5s
ESDC Sonseca Array 90.46 342 P **P 19 05 08.3 -0.3**
comp=Z,0.4nm,0.6s,baz=12,slow=4.5,SNR=4.2
comp=Z,0.4nm,0.6s
KEST Kesra 90.61 331 P **P 19 05 09.7 +0.3**
comp=Z,3.6nm,0.6s,baz=342,slow=4.2,SNR=7.8
comp=Z,3.6nm,0.6s
VNDA Vanda 125.17 178 PKP **PKiKP 19 11 05.6 +0.2**
comp=Z,0.4nm,0.8s,baz=326,slow=3.6,SNR=2.2
QSPA South Pole Qui 137.54 180 PKP **PKiKP 19 11 30.1 -0.6**
comp=Z,0.8nm,0.6s,baz=41,slow=0.6,SNR=6.7
H03N2 Juan Fernandez 139.04 89 T T 21 46 33.2
baz=309,slow=77,SNR=3.8
H03N1 Juan Fernandez 139.06 89 T T 21 46 35.0
baz=309,slow=77,SNR=4.3
H03N3 Juan Fernandez 139.06 89 T T 21 46 45.9
baz=309,slow=77,SNR=15
TROLL Troll, Antarti 152.09 199 P **PKiKP 19 12 00.9 +0.3**
SNAA Sanae 153.47 197 P **PKPbc 19 12 03.2 -0.1**
SNAA Sanae 153.47 197 PKPbc **PKPbc 19 12 02.8 -0.5**
comp=Z,0.8nm,0.5s,baz=207,slow=7.3,SNR=11
VNA3 Neumayer Olymp 155.05 193 P PKPdf 19 12 06.0 +8.4
VNA1 Neumayer--Stat 155.33 195 P PKPdf 19 12 07.4 +9.4

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*IDC **17** 18:52:44.1±9.9, 46.°73N×153.°05E, h64km±91km, mb3.9/8, mbtmp4.2/9, ML3.3/1, Error ellipse: s-maj=30.8km s-min=22.8km az=163.0*

ISC 17 18:52:43.0±1.0, **46.°8N**±0.°2×**152.°9E**±0.°1, **h56**km, **n9,** σ1°**30**/9, **mb4.2**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**14.36**	**288**	P	**P**	**18 56 06.5**	**-2.1**
	0.1nm,0.3s,baz=112,slow=15,SNR=2.1						
	6.2nm,0.8s						
SONM	**Songino Array**	**31.18**	**289**	P	**P**	**18 58 57.8**	**+1.1**
	1.2nm,0.6s,baz=64,slow=8.2,SNR=5.2						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**42.48**	**306**	P	**P**	**19 00 32.4**	**+0.1**
	1.8nm,0.6s,baz=68,slow=8.3,SNR=5.2						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**46.80**	**297**	P	**P**	**19 01 08.3**	**+1.4**
	5.7nm,0.8s,baz=70,slow=7.8,SNR=10						
	5.7nm,0.8s						
NVAR	**Mina Array Bea**	**62.57**	**62**	P	**P**	**19 03 00.8**	**-0.5**
	2.4nm,0.7s,baz=294,slow=7.2,SNR=8.7						
	2.4nm,0.7s						
FINES	**FINESS Array B**	**63.96**	**335**	P	**P**	**19 03 10.5**	**+0.6**
	1.3nm,0.4s,baz=36,slow=5.7,SNR=4.1						
	1.3nm,0.4s						
PDAR	**Pinedale Array**	**64.87**	**54**	P	**P**	**19 03 15.2**	**-1.2**
	1.6nm,0.8s,baz=357,slow=3.0,SNR=6.7						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**68.47**	**199**	P	**P**	**19 03 39.1**	**0.0**
	1.0nm,0.6s,baz=16,slow=5.1,SNR=7.9						
	1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.62**	**60**	P	**P**	**19 04 34.0**	**+0.5**
	3.1nm,0.7s,baz=297,slow=4.6,SNR=11						
	3.1nm,0.7s						

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*AEIC **17** 19:03:05±1.9, 54.°84N±0.°07×159.°32W±0.°08, h18km±8km, Error ellipse: s-maj=10.8km s-min=6.7km az=195.0*

NEIC 17 19:03:02.7±1.8, **54.°7N**±0.°1×**159.°3W**±0.°1, **h23**km±13km, **ML3.7**/16, **ML3.2**(AEIC), **Error ellipse: s-maj=15.6km s-min=8.0km az=166.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.24**	**307**	Pg	Pb	19 03 09.6	+1.0
CNBA				IAML		19 03 13.9	
	comp=N,11μm,0.3s						
SDPT	**Sand Point**	**0.97**	**314**		Pb	19 03 19.4	-1.5
CHGN	**Chignik**	**1.70**	**16**	Pn	Pn	19 03 29.8	-1.1
CHGN				IAML		19 03 55.9	
	comp=N,502nm,0.5s						
CHGN				IAML		19 03 56.3	
	comp=E,695nm,0.4s						
CHIR	**Chirikof Islan**	**2.38**	**60**	Pn	Pn	19 03 40.1	-0.1
FALS	**False Pass**	**2.42**	**276**	Pn	Pn	19 03 41.4	+0.6
SII	**Sitkinak Islan**	**3.44**	**55**	Pn	Pn	19 03 54.4	-0.4
SII				IAML		19 04 59.2	
	comp=N,222nm,2.8s						
SII				IAML		19 05 38.5	
	comp=E,161nm,4.1s						
AKUT	**Akutan**	**3.85**	**265**	Pn	Pn	19 03 59.7	-0.7
OHAK	**Old Harbor**	**4.21**	**50**	Pn	Pn	19 04 05.0	-0.4
OHAK				IAML		19 04 56.2	
	comp=N,108nm,3.1s						
OHAK				IAML		19 05 59.2	
	comp=E,84nm,3.8s						
UNV	**Unalaska Valle**	**4.33**	**262**	Pn	Pn	19 04 06.6	-0.5
KDAK	**Kodiak Island**	**4.85**	**47**	Pn	Pn	19 04 13.1	-1.1
O18K	**Koktuh Hills**	**5.64**	**21**	Pn	Pn	19 04 24.3	-0.7
N18K	**Kilae Creek**	**6.28**	**15**	Pn	Pn	19 04 33.9	0.0
CNPM	**China Poot**	**6.53**	**39**	Pn	Pn	19 04 39.3	+2.0
N19K	**Bonanza Creek**	**6.66**	**21**	Pn	Pn	19 04 39.5	+0.3
SVW2	**Sparrevohn**	**6.73**	**15**	Pn	Pn	19 04 39.5	-0.5
M19K	**Big River Lodg**	**7.69**	**17**	Pn	Pn	19 04 53.6	+0.5
L19K	**White Mountain**	**7.87**	**15**	Pn	Pn	19 04 55.4	-0.3
M20K	**Styx River**	**7.91**	**22**	Pn	Pn	19 04 56.9	+0.7
SUA	**Susitna One**	**8.16**	**30**	Pn	Pn	19 04 58.4	-1.2
RC01	**Rabbit Creek A**	**8.18**	**34**	Pn	Pn	19 05 00.8	+0.9
PWL	**Port Wells**	**8.51**	**39**	Pn	Pn	19 05 04.1	-0.2
KNK	**Knik Glacier**	**8.84**	**36**	Pn	Pn	19 05 08.5	-0.4
PPLA	**Purkeypile**	**9.02**	**21**	Pn	Pn	19 05 12.8	+1.3
SML	**Sawmill**	**9.17**	**34**	Pn	Pn	19 05 12.5	-0.9
CAST	**Castle Rocks**	**9.51**	**20**	Pn	Pn	19 05 17.8	-0.3
SCM	**Sheep Creek Mo**	**9.53**	**36**	Pn	Pn	19 05 18.3	-0.1
KLU	**Klutina**	**9.81**	**40**	Pn	Pn	19 05 22.2	-0.1
TRF	**Thorofare Moun**	**9.92**	**24**	Pn	Pn	19 05 24.4	+0.5
M24K	**Tolsona, Glenn**	**10.11**	**37**	Pn	Pn	19 05 26.4	0.0
N25K	**Chitina, Valde**	**10.38**	**42**	Pn	Pn	19 05 30.2	+0.1
ISLE	**Juniper Island**	**10.82**	**50**	Pn	Pn	19 05 36.7	+0.6
MCARA	**McCarthy VSAT**	**10.90**	**45**	Pn	Pn	19 05 36.8	-0.3
PAX	**Paxson**	**10.94**	**35**	Pn	Pn	19 05 37.8	+0.1
M26K	**Nabesna, AK**	**11.46**	**41**	Pn	Pn	19 05 43.8	-1.0
P29M	**Windy Craggy**	**12.66**	**58**	Pn	Pn	19 06 02.0	+0.8

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*IDC **17** 19:08:31.6±1.5, 43.°76N×105.°53W, h0km, mb3.9/2, mbtmp3.7/6, ML3.2/3, Error ellipse: s-maj=47.3km s-min=8.3km az=148.0*

*NEIC **17** 19:08:32.3±1.3, 43.°76N±0.°05×105.°30W±0.°06, h0km±2km, ML3.2/68, Error ellipse: s-maj=9.4km s-min=5.0km az=321.0*

ISC 17 19:08:31.8±1.0, **43.°76N**±0.°06×**105.°32W**±0.°06, **h0**km, **n50,** σ0°**83**/50, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.99**	**68**		**Pg**	**19 08 51.2**	**+0.4**

K22A	**Casper**	**1.42 219**	Pn	**Pn**	**19 08 56.9**	**-2.0**
K22A			IAML		19 09 19.9	
	comp=E,430nm,0.3s					
K22A			IAML		19 09 21.5	
	comp=N,474nm,0.3s					
PHWY	**Pilot Hill**	**2.46 182**	Pn	**Pn**	**19 09 13.6**	**+0.2**
PHWY			IAML		19 09 49.7	
	comp=N,91nm,0.3s					
PHWY			IAML		19 09 50.1	
	comp=N,122nm,0.4s					
RWWY	**Rawlins**	**2.49 215**	Pn	**Pn**	**19 09 15.1**	**+1.3**
RWWY			IAML		19 09 50.0	
	comp=N,137nm,0.6s					
N23A	**Red Feather La**	**2.90 189**	Pn	**Pn**	**19 09 20.3**	**+0.9**
N23A			IAML		19 10 06.7	
	comp=E,85nm,0.5s					
LAO	**LASA Array**	**3.00 348**		**Pn**	**19 09 21.2**	**+0.5**
RLMT	**Red Lodge**	**3.14 297**	Pn	**Pn**	**19 09 22.7**	**0.0**
RLMT			IAML		19 10 14.3	
	comp=E,64nm,0.7s					
RLMT			IAML		19 10 14.4	
	comp=E,71nm,0.3s					
BW06	**Boulder Array**	**3.25 254**	Pn	**Pn**	**19 09 24.5**	**+0.3**
BW06			IAML		19 10 11.7	
	comp=E,51nm,0.4s					
BW06			IAML		19 10 17.7	
	comp=E,48nm,0.6s					
PD31	**Pinedale Array**	**3.25 254**	Pn	**Pn**	**19 09 24.5**	**+0.3**
PDAR	**Pinedale Array**	**3.25 254**	Pn	**Pn**	**19 09 24.8**	**+0.6**
	comp=E,8.0nm,0.3s,baz=78,slow=18,SNR=28					
PDAR			Lg	Lg	19 10 08.4	
	comp=E,18nm,0.3s,baz=75,slow=35,SNR=4.3					
PDAR	**Pinedale Array**	**3.25 254**	Pn	**Pn**	**19 09 24.5**	**+0.3**
YMP	**Mirror Lake Pl**	**3.61 287**		**Pn**	**19 09 29.9**	**+0.6**
OGNE	**Ogallala**	**3.72 138**	Pn	**Pn**	**19 09 31.2**	**+0.7**
LKWY	**Lake**	**3.75 284**	Pn	**Pn**	**19 09 32.2**	**+1.2**
LKWY			IAML		19 09 57.6	
	comp=E,44nm,0.9s					
LKWY			IAML		19 11 10.9	
	comp=E,34nm,1.4s					
LOHW	**Long Hollow**	**3.84 270**		**Pn**	**19 09 33.2**	**+0.9**
H17A	**Grant Village**	**3.84 281**		**Pn**	**19 09 34.0**	**+1.6**
H17A			IAML		19 10 35.5	
	comp=N,34nm,0.7s					
MOOW	**Moose Ponds**	**3.93 272**		**Pn**	**19 09 34.4**	**+0.9**
SNOW	**Snow King Moun**	**3.96 268**	Pn	**Pn**	**19 09 34.9**	**+0.9**
SNOW			IAML		19 10 50.9	
	comp=N,38nm,1.4s					
SNOW			IAML		19 10 53.9	
	comp=N,46nm,1.1s					
ISCO	**Idaho Springs**	**3.96 183**	Pn	**Pn**	**19 09 35.5**	**+1.5**
YPP	**Pitchstone Pla**	**3.99 279**		**Pn**	**19 09 34.9**	**+0.4**
REDW	**Red Top Meadow**	**4.04 266**		**Pn**	**19 09 35.8**	**+0.7**
REDW			IAML		19 11 18.5	
	comp=N,39nm,1.0s					
IMW	**Indian Meadow**	**4.07 274**		**Pn**	**19 09 35.4**	**-0.1**
IMW			IAML		19 10 46.1	
	comp=N,45nm,0.6s					
IMW			IAML		19 10 55.8	
	comp=N,24nm,0.7s					
YHH	**Holmes Hill**	**4.11 286**	Pn	**Pn**	**19 09 35.3**	**-0.7**
FXWY	**Fox Creek**	**4.14 270**	Pn	**Pn**	**19 09 38.2**	**+1.7**
E28A	**Huff**	**4.32 48**	Pn	**Pn**	**19 09 39.5**	**+0.8**
AHID	**Auburn Hatcher**	**4.34 259**		**Pn**	**19 09 39.6**	**+0.5**
AHID			IAML		19 10 52.2	
	comp=N,36nm,1.4s					
AHID			IAML		19 10 59.2	
	comp=N,29nm,0.8s					
YHL	**Hebgen Lake**	**4.35 287**	Pn	**Pn**	**19 09 39.8**	**+0.4**
YHL			IAML		19 10 54.2	
	comp=N,27nm,1.1s					
YHL			IAML		19 11 08.9	
	comp=E,30nm,1.3s					
ECR	**Eagle Creek**	**4.47 263**		**Pn**	**19 09 42.3**	**+1.3**
RDMU	**Red Mountain**	**4.49 226**	Pn	**Pn**	**19 09 40.5**	**-0.7**
RDMU			IAML		19 10 58.6	
	comp=N,26nm,0.8s					
RDMU			IAML		19 11 04.5	
	comp=E,32nm,1.1s					
DGMT	**Dagmar**	**4.78 9**	Pn	**Pn**	**19 09 45.4**	**+0.3**
BOZ	**Bozeman (W)**	**4.86 294**	Pn	**Pn**	**19 09 46.2**	**-0.1**
BOZ			IAML		19 11 08.8	
	comp=E,16nm,0.6s					
BOZ			IAML		19 11 10.1	
	comp=E,22nm,0.9s					
HWUT	**Hardware Ranch**	**5.08 247**		**Pn**	**19 09 49.3**	**-0.1**
KSCO	**Kaye Shedlock'**	**5.16 156**	Pn	**Pn**	**19 09 49.2**	**-1.1**
TCUT	**Toone Canyon**	**5.22 242**		**Pn**	**19 09 51.7**	**+0.4**
EGMT	**Eagleton**	**5.27 326**	Pn	**Pn**	**19 09 51.4**	**-0.4**
P18A	**Preston Nutter**	**5.53 223**		**Pn**	**19 09 55.9**	**+0.2**
MDND	**Maddock**	**5.72 42**	Pn	**Pn**	**19 09 57.6**	**-0.3**
HVU	**Hansel Valley**	**5.83 253**	Pn	**Pn**	**19 09 59.9**	**+0.3**
PV22	**Blue Mesa, Par**	**5.84 208**	Pn	**Pn**	**19 10 00.6**	**+0.8**
PV07	**Paradox Valley**	**5.88 206**		**Pn**	**19 10 00.1**	**-0.2**
SRU	**San Rafael Swe**	**6.07 222**		**Pn**	**19 10 03.4**	**+0.5**
PV20	**West Nyswonger**	**6.07 208**	Pn	**Pn**	**19 10 03.8**	**+0.8**
ECSD	**EROS Data Cent**	**6.30 87**	Pn	**Pn**	**19 10 06.4**	**+0.4**
NLU	**North Lily Min**	**6.31 235**	Pn	**Pn**	**19 10 06.7**	**+0.4**
MSU	**Marysvale**	**7.36 227**	Pn	**Pn**	**19 10 21.3**	**+0.6**
ELK	**Elko**	**7.95 251**	Pn	**Pn**	**19 10 30.2**	**+1.5**
	comp=E,0.4nm,0.3s,baz=65,slow=10,SNR=6.6					
	comp=E,0.7nm,0.3s					
ULM	**Lac du Bonnet**	**9.15 41**	Pn	**Pn**	**19 10 44.3**	**-0.6**
	comp=E,4.4nm,0.3s,baz=225,slow=12,SNR=24					
ULM			Lg	Lg	19 13 15.9	
	comp=E,0.5nm,0.3s,baz=116,slow=18,SNR=4.4					
	comp=E,6.4nm,0.3s					
NVAR	**Mina Array Bea**	**11.15 246**	Pn	**Pn**	**19 11 13.1**	**+0.6**
	comp=E,0.1nm,0.3s,baz=70,slow=8.8,SNR=5.8					
	comp=E,0.5nm,0.6s					
ZALV	**Zalesovo Beam**	**82.28 354**	P	**P**	**19 20 54.1**	**-0.7**
	comp=E,0.5nm,0.4s,baz=358,slow=4.1,SNR=2.8					
	comp=E,0.5nm,0.4s					
MKAR	**Makanchi Array**	**89.58 355**	P	**P**	**19 21 30.2**	**-0.9**
	comp=E,0.4nm,0.6s,baz=6.1,slow=4.5,SNR=4.3					
	comp=E,0.4nm,0.6s					

*SOME **17** 19:13:06.8, 41.°12N×71.°23E, h5km*
*KRNET **17** 19:13:07.7±0.1, 41.°04N×71.°20E, h17km, mb3.1*
*ISU **17** 19:13:08, 41.°13N×71.°28E, h15km*

ISC 17 19:13:07.5±1.1, **41.°11N**±0.°02×**71.°26E**±0.°02, **h11**km±10km, **n32**, σ1°**41**/57, **13C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.43**	**347**	⇑*eP*	**Pg**	**19 13 16.2**	**+0.2**
	baz=57						
TRKS				⇑*eS*	**Sg**	**19 13 22.3**	**+0.5**
	baz=57						
MINT	**Mingtut**	**0.68**	**199**	P	**Pg**	**19 13 20.6**	**0.0**
FRG	**Fergana**	**0.83**	**152**	P	**Pb**	**19 13 24.5**	**+0.5**
FRG				S	**Sb**	**19 13 36.3**	**+1.0**
CHMI	**Chimion**	**0.86**	**167**	P	**Pb**	**19 13 24.6**	**+0.1**
CHMI				S	**Sb**	**19 13 36.7**	**+0.6**
ARK	**Arkit**	**0.87**	**37**	⇑*eP*	**Pn**	**19 13 25.7**	**-0.1**
	baz=37						
ARK				⇑*eS*	**Sn**	**19 13 38.5**	**0.0**
	baz=37						
ARK	**Arkit**	**0.87**	**37**	P	**Pn**	**19 13 25.3**	**-0.5**
ARK				S	**Sb**	**19 13 36.9**	**+0.6**
ANR	**Andizhan**	**0.90**	**113**	P	**Sn**	**19 13 40.5**	**+1.3**
TSTA	**Tashata**	**1.06**	**120**	P	**Pn**	**19 13 28.8**	**+0.4**
TSTA				S	**Sn**	**19 13 43.9**	**+0.7**
BTK	**Batken**	**1.10**	**198**	⇑*eP*	**Pb**	**19 13 26.7**	**-2.0**
	baz=97						
BTK				⇑*iS*	**Sb**	**19 13 40.3**	**-2.8**
	baz=97						
CHRV	**Charvak**	**1.12**	**299**	P	**Pb**	**19 13 28.3**	**-0.7**
CHRV				S	**Sn**	**19 13 44.1**	**-0.7**
YBZ	**Yangibazar**	**1.28**	**279**	P	**Pb**	**19 13 31.4**	**-0.3**
YBZ				S	**Sg**	**19 13 49.2**	**+0.5**
OHH	**Osh**	**1.29**	**116**	⇑*eP*	**Pn**	**19 13 31.8**	**+0.1**
	baz=12						
OHH				⇑*eS*	**Sg**	**19 13 49.4**	**+0.3**
	baz=12						
OHH	**Osh**	**1.29**	**116**	P	**Pn**	**19 13 31.7**	**+0.1**
OHH				S	**Sg**	**19 13 49.6**	**+0.5**
IUG	**Iuzhnay**	**1.39**	**319**	*eP*	**Pg**	**19 13 34.2**	**0.0**
	1μm,0.3s						
IUG				*eS*	**Sg**	**19 13 53.1**	**+0.9**
	139nm,0.2s						
KUMR	**Kumaryk**	**1.49**	**274**	P	**Sg**	**19 13 56.5**	**+1.2**
TAS	**Tashkent**	**1.50**	**279**	⇑*iP*	**Pb**	**19 13 34.7**	**-0.7**
	baz=82						
TAS				⇑*iS*	**Sb**	**19 13 54.2**	**-0.3**
	baz=82						
TAS	**Tashkent**	**1.50**	**279**	P	**Sg**	**19 13 56.1**	**+0.3**
NZBK	**Nazarbek**	**1.62**	**275**	P	**Sg**	**19 14 00.6**	**+0.9**
DRK	**Karamyk**	**1.68**	**166**	⇓*eP*	**Pn**	**19 13 37.4**	**+0.3**
	baz=63						
DRK				⇓*eS*	**Sn**	**19 13 59.0**	**+0.2**
	baz=63						
DZA	**Taraz**	**1.78**	**2**	*eP*	**Pg**	**19 13 41.1**	**-0.5**
	34nm,0.2s						
DZA				*eS*	**Sg**	**19 14 05.5**	**+0.7**
	158nm,0.1s						
KK31	**Karatay Array**	**2.07**	**345**	Pn	**Pb**	**19 13 44.2**	**-0.9**
	2.4nm,0.3s,baz=169,slow=9.6,SNR=82						
KK31				Lg	Lg	19 14 13.3	
	13nm,0.3s,baz=136,slow=21,SNR=24						
MRKS	**Merke**	**2.19**	**41**	*eP*	**Pg**	**19 13 48.6**	**-1.0**
	0.9nm,0.3s						
MRKS				*eS*	**Sg**	**19 14 18.1**	**+0.1**
	41nm,0.5s						
GAR	**Garm**	**2.23**	**199**	⇑*eP*	**Pn**	**19 13 45.2**	**+0.7**
	baz=99						
GAR				⇑*eS*	**Sn**	**19 14 12.7**	**+0.6**
	baz=99						
ARLS	**Aral**	**2.42**	**71**	⇓*eP*	**Pb**	**19 13 50.0**	**-1.1**
	baz=70						
ARLS				⇓*eS*	**Sb**	**19 14 21.0**	**0.0**
	baz=70						
EKS2	**Erkin-Say**	**2.44**	**50**	⇓*eP*	**Pb**	**19 13 50.5**	**-0.9**
	baz=49						
EKS2				⇓*eS*	**Sb**	**19 14 21.6**	**+0.1**
	baz=49						
SGDS	**Sogindy**	**3.42**	**46**	*eP*	**Pb**	**19 14 10.7**	**+2.5**
	1.4nm,0.6s						
SGDS				*eS*	**Sg**	**19 14 55.9**	**-1.5**
	3.1nm,0.5s						
TKM2	**Tokmak 2**	**3.70**	**59**	⇑Pn	**Pb**	**19 14 13.2**	**+0.2**
TKM2				⇓Lg	Lg	19 15 04.3	
DGS	**Degeres**	**3.97**	**56**	*eP*	**Pb**	**19 14 20.0**	**+2.5**
	1.2nm,0.8s						
DGS				*eS*	**Sg**	**19 15 12.7**	**-2.3**
	2.9nm,1.1s						
KST	**Kastek**	**4.00**	**60**	*eP*	**Pg**	**19 14 22.4**	**-1.6**
	0.9nm,0.6s						
KST				*eS*	**Sg**	**19 15 16.0**	**+0.2**
	3.5nm,0.5s						
KRBS	**Karabastau**	**4.17**	**50**	*eP*	**Pb**	**19 14 24.0**	**+3.2**
	0.6nm,0.6s						
KRBS				*eS*	**Sg**	**19 15 19.5**	**-1.7**
	2.2nm,0.6s						
BTLS	**Baital**	**4.43**	**26**	*eP*	**Pb**	**19 14 28.3**	**+3.0**
	0.6nm,0.6s						
BTLS				*eS*	**Sg**	**19 15 26.4**	**-3.2**
	2.8nm,0.4s						
KUU	**Kurty**	**4.67**	**52**	*eP*	**Pb**	**19 14 32.8**	**+3.4**
	1.2nm,0.6s						
KUU				*eS*	**Sg**	**19 15 33.9**	**-3.5**
	3.9nm,1.1s						

ROM 17 19:19:31.5±0.1, **43.°334N**±0.°003×**13.°010E**±0.°004, **h15**km, **ML0.9/6, Error ellipse: s-maj=0.3km s-min=0.2km az=26.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EL6	**Elcito**	**0.07**	**94**	P	Pg	19 19 34.7	+0.1
EL6				S	Sg	19 19 37.0	+0.3
SNTG	**Esanatoglia**	**0.09**	**213**	P	Pg	19 19 35.0	+0.2
SNTG				S	Sg	19 19 37.5	+0.5
SNTG				AML	AML		
	comp=E,52μm,0.6s						
SNTG				AML	AML		
	comp=N,95μm,0.7s						
SNTG				AML	AML		
	comp=E,52μm,1.4s						
SNTG				AML	AML		
	comp=N,95μm,1.3s						
GAG1	**Gagliole**	**0.10**	**156**	P	Pg	19 19 34.7	-0.2
GAG1				S	Sb	19 19 37.8	+0.1
MMUR	**Monte Murano**	**0.11**	**355**	P	Pg	19 19 35.2	+0.2
MMUR				S	Sb	19 19 37.8	-0.1
CING	**Cingoli**	**0.14**	**73**	P	Pb	19 19 35.8	-0.1
CING				S	Sb	19 19 38.4	-0.4
CING				AML	AML		
	comp=N,39μm,0.1s						
CING				AML	AML		
	comp=E,42μm,0.4s						
MDAR	**Monte D'Aria**	**0.17**	**145**	P	Pg	19 19 36.0	+0.2
MDAR				S	Sb	19 19 39.5	-0.2
ARVD	**Arcevia**	**0.17**	**343**	P	Pg	19 19 36.0	+0.2
ARVD				S	Sg	19 19 39.1	+0.5
ARVD				AML	AML		
	comp=N,42μm,0.1s						
ARVD				AML	AML		
	comp=E,54μm,0.2s						
FOSV	**Fossato di Vic**	**0.19**	**258**	P	Pg	19 19 36.2	+0.2
FOSV				S	Sb	19 19 39.7	-0.4
FOSV				AML	AML		
	comp=E,51μm,0.2s						
FOSV				AML	AML		
	comp=E,51μm,1.8s						
FOSV				AML	AML		
	comp=N,54μm,0.2s						
FRON	**Frontone**	**0.28**	**312**	P	Pg	19 19 37.7	+0.2
FRON				S	Sb	19 19 42.4	-0.4
FRON				AML	AML		
	comp=N,35μm,1.5s						
FRON				AML	AML		
	comp=E,26μm,0.2s						
ATFO	**Monte Foce - G**	**0.32**	**276**	P	Pg	19 19 38.5	+0.2
ATFO				S	Sb	19 19 43.7	-0.3
MPAG	**Monte Paganucc**	**0.35**	**328**	P	Pg	19 19 38.8	+0.1
MPAG				S	Sb	19 19 44.6	-0.2
PIEI	**Pieia**	**0.40**	**300**	P	Pg	19 19 39.6	0.0
PIEI				S	Sb	19 19 46.0	-0.3
PIEI				AML	AML		
	comp=E,23μm,1.3s						
PIEI				AML	AML		
	comp=N,21μm,0.2s						
PIEI				AML	AML		
	comp=E,23μm,0.7s						
ATVO	**AVT- Monte Val**	**0.44**	**277**	P	Pg	19 19 40.6	+0.2
ATVO				S	Sb	19 19 47.0	-0.5

IDC 17 19:19:33.9±999.0, **53.°52N**×**0.°42E, h0**km, **Error ellipse: s-maj=530.7km s-min=218.3km az=96.0, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.56**	**114**	I		20 18 58.7	
	baz=307,slow=320,SNR=5.4						
I43RU	**DUBNA INFRASON**	**21.12**	**66**	I		21 25 40.0	
	baz=276,slow=311,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	**34.81**	**71**	I		22 57 40.0	
	baz=295,slow=328,SNR=1.3						

*NOU **17** 19:23:15.6, 39.°77S×176.°93E, h33km, MLv3.4/7, North Island, New Zealand*
*WEL **17** 19:23:16.9, 40.°S±3.°×17.°7E±.°, h41km±6km, M3.2/12, ML3.6/12, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=71.1*

ISC 17 19:23:15.3±1.3, **39.°79S**±0.°03×**176.°99E**±0.°04, **h57**km±7km, **n100**, σ0°**92**/115, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHZ	**Kahuranaki**	**0.08**	**269**	P	**Pn**	**19 23 23.8**	**-0.1**
KAHZ				S	**Sn**	**19 23 29.4**	**-0.7**
CKHZ	**Cape Kidnapper**	**0.15**	**28**	P	**Pn**	**19 23 24.2**	**+0.1**
CKHZ				S	**Sn**	**19 23 30.2**	**-0.2**
PXZ	**Pawanui**	**0.26**	**202**	P	**Pn**	**19 23 25.4**	**+0.7**
PXZ				S	**Sn**	**19 23 32.2**	**+0.7**
WPHZ	**Waipukurau**	**0.50**	**237**	P	**Pn**	**19 23 27.8**	**+0.8**
WPHZ				S	**Sn**	**19 23 36.4**	**+0.9**
ARHZ	**Aropaoanui**	**0.53**	**1**	P	**Pn**	**19 23 27.7**	**+0.4**
ARHZ				S	**Sn**	**19 23 36.3**	**+0.3**
PRHZ	**Porangahau**	**0.54**	**209**	P	**Pn**	**19 23 28.6**	**+1.1**
PRHZ				S	**Sn**	**19 23 37.8**	**+1.5**
KWHZ	**Kaweka Forest**	**0.57**	**310**	P	**Pn**	**19 23 27.4**	**-0.4**
KWHZ				S	**Sn**	**19 23 35.5**	**-1.4**
PNHZ	**Pukenui**	**0.62**	**258**	P	**Pn**	**19 23 28.5**	**+0.1**
PNHZ				S	**Sn**	**19 23 37.5**	**-0.3**
NMHZ	**Naumai**	**0.71**	**349**	P	**Pn**	**19 23 29.9**	**+0.3**
NMHZ				S	**Sn**	**19 23 39.6**	**-0.3**
BKZ	**Black Stump Fm**	**0.73**	**329**	P	**Pn**	**19 23 29.6**	**-0.2**
BKZ				S	**Sn**	**19 23 39.1**	**-1.3**
BKZ	**Black Stump Fm**	**0.73**	**329**	P	**Pn**	**19 23 29.6**	**-0.2**
WHHZ	**Waihua**	**0.74**	**15**	P	**Pn**	**19 23 30.5**	**+0.6**
BHHZ	**Black Hill Sta**	**0.77**	**293**	P	**Pn**	**19 23 30.2**	**-0.1**
BHHZ				S	**Sn**	**19 23 39.8**	**-1.5**
DVHZ	**Dannevirke**	**0.81**	**231**	P	**Pn**	**19 23 31.5**	**+0.8**
DVHZ				S	**Sn**	**19 23 43.0**	**+1.0**
TSZ	**Takapari Road**	**0.83**	**251**	P	**Pn**	**19 23 31.3**	**+0.3**
TSZ				S	**Sn**	**19 23 42.7**	**+0.1**
RAHZ	**Arahi**	**0.88**	**5**	P	**Pn**	**19 23 32.1**	**+0.5**
RAHZ				S	**Sn**	**19 23 44.2**	**+0.5**
KNZ	**Kokohu**	**0.94**	**35**	P	**Pn**	**19 23 33.0**	**+0.6**
MTHZ	**Maungataniwha**	**0.95**	**353**	P	**Pn**	**19 23 32.7**	**+0.1**
MTHZ				S	**Sn**	**19 23 44.8**	**-0.4**
MHGZ	**Mahia Peninsul**	**0.96**	**48**	P	**Pn**	**19 23 34.2**	**+1.6**
MOVZ	**Moawhango**	**1.03**	**292**	P	**Pn**	**19 23 34.2**	**+0.6**
MOVZ				S	**Sn**	**19 23 46.5**	**-0.7**
SNGZ	**Shannon Statio**	**1.05**	**15**	P	**Pn**	**19 23 34.3**	**+0.5**
BFZ	**Birch Farm**	**1.05**	**212**	P	**Pn**	**19 23 34.7**	**+0.8**
BFZ	**Birch Farm**	**1.05**	**212**	P	**Pn**	**19 23 34.7**	**+0.8**
MRHZ	**Matea Rd**	**1.05**	**335**	P	**Pn**	**19 23 34.4**	**+0.5**
PRWZ	**Pori Road**	**1.09**	**225**	P	**Pn**	**19 23 35.5**	**+1.2**
POWZ	**Post Office Ro**	**1.11**	**237**	P	**Pn**	**19 23 35.7**	**+1.1**
HATZ	**Hinemaiaia**	**1.14**	**322**	P	**Pn**	**19 23 35.7**	**+0.6**
TUVZ	**Tukino**	**1.16**	**297**	P	**Pn**	**19 23 36.5**	**+1.1**
WNVZ	**Wahianoa**	**1.17**	**293**	P	**Pn**	**19 23 36.6**	**+1.0**
RTZ	**Ruatahuna**	**1.18**	**360**	P	**Pn**	**19 23 35.9**	**+0.3**
ETVZ	**East Tongariro**	**1.19**	**303**	P	**Pn**	**19 23 36.6**	**+0.8**
RITZ	**Rihia Road**	**1.19**	**313**	P	**Pn**	**19 23 36.7**	**+0.9**
WHVZ	**Whangaehu Hut**	**1.19**	**295**	P	**Pn**	**19 23 37.1**	**+1.1**
OTVZ	**Oturere**	**1.20**	**301**	P	**Pn**	**19 23 37.0**	**+1.0**
TMVZ	**Te Maari**	**1.20**	**304**	P	**Pn**	**19 23 36.8**	**+0.8**
SNVZ	**South Ngauruho**	**1.20**	**300**	P	**Pn**	**19 23 37.0**	**+0.9**
FWVZ	**Far West T-bar**	**1.23**	**295**	P	**Pn**	**19 23 37.3**	**+0.8**
NGZ	**Ngauruhoe**	**1.23**	**299**	P	**Pn**	**19 23 37.3**	**+0.8**
RIGZ	**Rimuhau**	**1.24**	**29**	P	**Pn**	**19 23 37.0**	**+0.6**
NNVZ	**North Ngauruho**	**1.25**	**301**	P	**Pn**	**19 23 37.5**	**+0.8**
KRVZ	**Karewarewa**	**1.25**	**303**	P	**Pn**	**19 23 37.5**	**+0.9**
WTVZ	**West Tongariro**	**1.27**	**302**	P	**Pn**	**19 23 38.0**	**+1.0**
TIWZ	**Tintock**	**1.29**	**220**	P	**Pn**	**19 23 38.1**	**+0.9**
RATZ	**Rangitukua**	**1.32**	**314**	P	**Pn**	**19 23 38.4**	**+0.9**
MUGZ	**Murupara**	**1.32**	**353**	P	**Pn**	**19 23 37.9**	**+0.3**
ALRZ	**Allen Road**	**1.33**	**338**	P	**Pn**	**19 23 38.0**	**+0.5**
RAGZ	**Rawiri**	**1.34**	**15**	P	**Pn**	**19 23 38.1**	**+0.3**
PKVZ	**Pokaka**	**1.36**	**291**	P	**Pn**	**19 23 39.1**	**+1.0**
PRRZ	**Plateau Road**	**1.37**	**340**	P	**Pn**	**19 23 38.5**	**+0.4**
WHTZ	**Whakaora**	**1.38**	**324**	P	**Pn**	**19 23 39.2**	**+0.9**
MRZ	**Mangatainoka R**	**1.38**	**231**	P	**Pn**	**19 23 38.9**	**+0.6**
TWVZ	**Taurewa**	**1.40**	**301**	P	**Pn**	**19 23 39.1**	**+0.5**
WPRZ	**Whakapapatarin**	**1.42**	**333**	P	**Pn**	**19 23 39.1**	**+0.2**
TKGZ	**Te Karaka**	**1.51**	**27**	P	**Pn**	**19 23 40.1**	**+0.1**
MWZ	**Matawai**	**1.52**	**16**	P	**Pn**	**19 23 40.2**	**0.0**
URZ	**Urewera**	**1.54**	**4**	P	**Pn**	**19 23 40.3**	**0.0**
URZ	**Urewera**	**1.54**	**4**	P	**Pn**	**19 23 40.4**	**0.0**
WAZ	**Wanganui**	**1.54**	**271**	P	**Pn**	**19 23 42.7**	**+2.2**
TMWZ	**Te Maipa**	**1.56**	**212**	P	**Pn**	**19 23 41.0**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.57**	**225**	P	**Pn**	**19 23 41.1**	**+0.2**
KUTZ	**Kaahu Road**	**1.58**	**325**	P	**Pn**	**19 23 41.6**	**+0.5**
HSRZ	**Hossack Road**	**1.59**	**338**	P	**Pn**	**19 23 41.2**	**+0.1**
TARZ	**Mount Tarawera**	**1.60**	**346**	P	**Pn**	**19 23 42.0**	**+0.6**
OGWZ	**Otaki Gorge**	**1.72**	**233**	P	**Pn**	**19 23 43.3**	**+0.4**
MTW	**Mount Morrison**	**1.77**	**219**	P	**Pn**	**19 23 43.2**	**-0.4**
TWGZ	**Tauwhareparae**	**1.79**	**26**	P	**Pn**	**19 23 44.4**	**+0.5**
RUGZ	**Raukumara Rang**	**1.90**	**17**	P	**Pn**	**19 23 45.6**	**+0.2**
KIW	**Kapiti Island**	**1.91**	**235**	P	**Pn**	**19 23 46.0**	**+0.5**
WHRZ	**Whale Island**	**1.93**	**360**	P	**Pn**	**19 23 45.9**	**+0.1**
CAW	**Cannon Point**	**1.97**	**227**	P	**Pn**	**19 23 46.3**	**+0.1**
PKGZ	**Pakihiroa**	**2.08**	**24**	P	**Pn**	**19 23 48.0**	**+0.1**
HIZ	**Hauiti**	**2.09**	**307**	P	**Pn**	**19 23 48.4**	**+0.5**
HIZ	**Hauiti**	**2.09**	**307**	P	**Pn**	**19 23 48.5**	**+0.6**
MSWZ	**Moikau Station**	**2.09**	**219**	P	**Pn**	**19 23 47.1**	**-0.8**
HAZ	**Te Kaha**	**2.13**	**17**	P	**Pn**	**19 23 49.1**	**+0.7**
PLWZ	**Palliser**	**2.21**	**216**	P	**Pn**	**19 23 48.6**	**-1.0**
PREZ	**Palmer Road**	**2.23**	**281**	P	**Pn**	**19 23 52.7**	**+2.9**
WMGZ	**Waiomatatini S**	**2.27**	**30**	P	**Pn**	**19 23 50.4**	**+0.1**
NEZ	**North Egmont**	**2.29**	**282**	P	**Pn**	**19 23 54.0**	**+3.2**
TOZ	**Tahuroa Road**	**2.36**	**330**	P	**Pn**	**19 23 51.8**	**+0.2**
MXZ	**Matakaoa Point**	**2.46**	**25**	P	**Pn**	**19 23 53.4**	**+0.5**
TCW	**Tory Channel**	**2.50**	**235**	P	**Pn**	**19 23 53.2**	**-0.3**
MKAZ	**Moumakai**	**3.04**	**331**	P	**Pn**	**19 24 02.0**	**+1.1**
BSWZ	**Blackbirch Sta**	**3.04**	**230**	P	**Pn**	**19 24 00.2**	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.29**	**325**	P	**Pn**	**19 24 05.2**	**+0.9**
WIAZ	**Waiheke Island**	**3.33**	**333**	P	**Pn**	**19 24 05.8**	**+0.9**
MBAZ	**Motutapu North**	**3.44**	**331**	P	**Pn**	**19 24 07.5**	**+1.2**
QRZ	**Quartz Range**	**3.56**	**252**	P	**Pn**	**19 24 07.4**	**-0.6**
QRZ	**Quartz Range**	**3.56**	**252**	P	**Pn**	**19 24 07.4**	**-0.6**
RVAZ	**Riverhead Bore**	**3.56**	**327**	P	Pn	19 24

comp=Z,0.9nm,0.7s
SONM Songino Array 43.18 343 P P 19 50 38.7 -1.3
MKAR Makanchi Array 53.02 325 P P 19 51 55.7 -0.3
comp=Z,0.5nm,0.7s,baz=127,slow=8.9,SNR=5.7
comp=Z,0.5nm,0.7s
NIL Nilore 53.37 307 P **P 19 51 58.7 -0.1**
NIL IAmb IAmb 19 52 00.2
comp=Z,9.7nm,1.1s
YAK Yakutsk 55.06 4 LR LR 20 16 02.0
comp=Z,20nm,21.3s,baz=91,slow=36
GAR Garm 57.33 312 P **P 19 52 27.5 +0.1**
GAR IAmb IAmb 19 52 28.4
comp=Z,5.7nm,0.9s
KK31 Karatay Array 58.63 317 P **P 19 52 36.3 0.0**
KK31 IAmb IAmb 19 52 37.0
comp=Z,2.6nm,1.0s
KKAR Karatay Array 58.63 317 P **P 19 52 36.3 0.0**
MSVF Nonsavu 59.22 115 P **P 19 52 38.3 -2.5**
ABKAR Akbulak array 67.56 321 P **P 19 53 34.9 -0.5**
VNDA Vanda 87.12 172 P **P 19 55 25.4 +1.2**
comp=Z,0.6nm,0.9s,baz=297,slow=6.8,SNR=4.0
comp=Z,0.6nm,0.9s

ROM 17 19:42:48.1±0.1, 42°.765N±0°.004×13°.195E±0°.006, h10km, ML0.9/6, Error ellipse: s-maj=0.5km s-min=0.4km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**160**	P	Pg	19 42 50.8	+0.3
T1202				AML	AML		
	comp=N,295μm,0.2s						
T1202				AML	AML		
	comp=E,42μm,1.6s						
NRCA	**Norcia**	**0.09**	**319**	P	Pg	19 42 50.9	+0.2
NRCA				AML	AML		
	comp=N,356μm,1.1s						
NRCA				AML	AML		
	comp=E,348μm,1.0s						
T1245	**Castelsantange**	**0.09**	**357**	P	Pg	19 42 51.1	+0.3
T1245				AML	AML		
	comp=E,69μm,1.4s						
T1245				AML	AML		
	comp=N,123μm,0.3s						
T1204	**Amatrice, Fraz**	**0.13**	**135**	P	Pg	19 42 51.9	+0.6
MMO1	**Montemonaco**	**0.17**	**36**	P	Pg	19 42 52.5	+0.6
MMO1				S	Sg	19 42 55.3	+0.9
SMA1	**SAN MARTINO**	**0.17**	**142**	P	Pg	19 42 52.5	+0.6
SMA1				AML	AML		
	comp=N,32μm,0.4s						
SMA1				AML	AML		
	comp=E,31μm,1.1s						
T1216	**Preci, Frazion**	**0.18**	**314**	P	Pb	19 42 52.9	-0.7
LNSS	**Leonessa**	**0.20**	**215**	P	Pg	19 42 52.8	+0.4
LNSS				AML	AML		
	comp=E,54μm,0.7s						
LNSS				AML	AML		
	comp=N,53μm,0.1s						
T1243	**Rocca Santa Ma**	**0.20**	**110**	P	Pg	19 42 53.0	+0.5
T1243				S	Sg	19 42 56.1	+0.8
T1217	**Poggiodomo (PG**	**0.20**	**255**	P	Pg	19 42 53.0	+0.5
T1215	**Vallo di Nera,**	**0.24**	**279**	P	Pg	19 42 53.5	+0.4
T1215				AML	AML		
	comp=E,38μm,1.6s						
T1215				AML	AML		
	comp=N,42μm,1.6s						
RM33	**Pellescritta (**	**0.26**	**177**	P	Pb	19 42 54.2	-0.7
RM33				AML	AML		
	comp=E,21μm,1.1s						
RM33				AML	AML		
	comp=N,19μm,0.5s						

IDC 17 19:44:39.0±691.0, 53°.17N×1°.16E, h0km, Error ellipse: s-maj=360.9km s-min=176.9km az=101.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.02**	**114**	I		20 36 57.5	
	baz=306,slow=324						
I43RU	**DUBNA INFRASON**	**20.86**	**66**	I		21 51 10.0	
	baz=278,slow=321,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	**34.50**	**71**	I		23 18 10.0	
	baz=295,slow=327,SNR=1.3						
I46RU	**ZALESOVO INFRA**	**46.90**	**54**	I		00 34 54.8	
	baz=304,slow=335						

*NEIC **17** 20:04:01.7±1.9, 43°.69N±0°.01×105°.26W±0°.07, h0km±2km, ML3.2/44, Error ellipse: s-maj=8.9km s-min=3.1km az=79.0*
*IDC **17** 20:04:02.0±1.7, 44°.10N×105°.66W, h0km, mb3.7/1, mbtmp3.2/4, ML3.7/2, Error ellipse: s-maj=24.4km s-min=14.1km az=162.0*
ISC 17 20:04:01.8±1.0, 43°.70N±0°.05×105°.33W±0°.05, h0km, n40, σ0°76/39, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**65**	Pg	**Pg**	**20 04 20.8**	**-0.8**
K22A	**Casper**	**1.36**	**220**	Pn	**Pg**	**20 04 27.2**	**-0.7**
K22A				IAML		20 04 51.6	
	comp=N,290nm,0.8s						
K22A				IAML		20 04 53.0	
	comp=E,268nm,0.8s						
PHWY	**Pilot Hill**	**2.40**	**182**	Pn	**Pn**	**20 04 42.9**	**+0.3**
PHWY				IAML		20 05 21.2	
	comp=E,97nm,1.0s						
RWWY	**Rawlins**	**2.44**	**215**	Pn	**Pn**	**20 04 42.8**	**-0.3**
N23A	**Red Feather La**	**2.84**	**189**		**Pn**	**20 04 48.5**	**-0.1**
N23A				IAML		20 05 35.2	
	comp=N,108nm,0.8s						
N23A				IAML		20 05 40.4	
	comp=E,107nm,0.9s						
LAO	**LASA Array**	**3.06**	**348**	Pn	**Pn**	**20 04 52.4**	**+0.9**
RLMT	**Red Lodge**	**3.16**	**298**	Pn	**Pn**	**20 04 53.2**	**+0.2**
RLMT				IAML		20 05 46.6	
	comp=E,52nm,0.9s						
RLMT				IAML		20 05 51.1	
	comp=E,54nm,1.2s						
BW06	**Boulder Array**	**3.22**	**255**		**Pn**	**20 04 54.3**	**+0.4**
BW06				IAML		20 05 44.9	
	comp=E,54nm,0.8s						
PD31	**Pinedale Array**	**3.22**	**255**		**Pn**	**20 04 54.0**	**+0.1**
PDAR	**Pinedale Array**	**3.22**	**255**	Pn	**Pn**	**20 04 54.3**	**+0.4**
	comp=E,3.1nm,0.3s,baz=74,slow=18,SNR=32						
PDAR				Pg	**Pg**	**20 05 02.7**	**-0.9**
	comp=E,4.7nm,0.3s,baz=70,slow=19,SNR=24						
PDAR				Lg	Lg	20 05 40.4	
	comp=E,5.4nm,0.3s,baz=71,slow=33,SNR=14						
	comp=E,4.5nm,0.5s						
PDAR	**Pinedale Array**	**3.22**	**255**	Pn	**Pn**	**20 04 54.1**	**+0.1**
YMP	**Mirror Lake PI**	**3.62**	**288**		**Pn**	**20 04 59.5**	**0.0**
LOHW	**Long Hollow**	**3.83**	**271**		**Pn**	**20 05 02.9**	**+0.7**
LOHW				IAML		20 06 06.2	
	comp=E,26nm,0.9s						
H17A	**Grant Village**	**3.84**	**282**		**Pn**	**20 05 02.1**	**-0.4**
MOOW	**Moose Ponds**	**3.92**	**273**	Pn	**Pn**	**20 05 04.9**	**+1.4**
REDW	**Red Top Meadow**	**4.03**	**267**		**Pn**	**20 05 06.3**	**+1.3**
REDW				IAML		20 06 23.6	
	comp=E,46nm,0.9s						
REDW				IAML		20 06 32.5	
	comp=E,46nm,1.1s						
IMW	**Indian Meadow**	**4.06**	**275**		**Pn**	**20 05 06.9**	**+1.4**
IMW				IAML		20 06 19.5	
	comp=E,31nm,0.7s						
IMW				IAML		20 06 23.4	
	comp=E,36nm,0.7s						
YHH	**Holmes Hill**	**4.11**	**287**		**Pn**	**20 05 05.9**	**-0.3**
YHH				IAML		20 06 13.5	
	comp=N,20nm,0.9s						
AHID	**Auburn Hatcher**	**4.32**	**260**		**Pn**	**20 05 09.3**	**+0.4**
AHID				IAML		20 06 25.6	
	comp=N,32nm,1.1s						
AHID				IAML		20 06 45.2	
	comp=N,30nm,1.1s						
YHL	**Hebgen Lake**	**4.36**	**287**		**Pn**	**20 05 09.2**	**-0.4**
YHL				IAML		20 06 29.6	
	comp=N,29nm,1.1s						
YHL				IAML		20 06 33.7	
	comp=E,31nm,1.2s						
ECR	**Eagle Creek**	**4.45**	**264**		**Pn**	**20 05 11.1**	**+0.3**
DGMT	**Dagmar**	**4.84**	**9**		**Pn**	**20 05 16.4**	**+0.5**
BOZ	**Bozeman (W)**	**4.88**	**295**	Pn	**Pn**	**20 05 16.2**	**-0.4**
BOZ				IAML		20 06 42.7	
	comp=E,17nm,0.9s						
BOZ				IAML		20 06 53.5	
	comp=E,15nm,1.2s						
HWUT	**Hardware Ranch**	**5.05**	**248**	Pn	**Pn**	**20 05 20.3**	**+1.3**
EGMT	**Eagleton**	**5.32**	**326**	Pn	**Pn**	**20 05 22.0**	**-0.5**
P18A	**Preston Nutter**	**5.48**	**224**		**Pn**	**20 05 25.7**	**+0.7**
HRY	**Holter Researc**	**5.49**	**306**	Pn	**Pn**	**20 05 25.0**	**0.0**
SPUT	**South Promonto**	**5.78**	**248**	Pn	**Pn**	**20 05 27.8**	**-1.1**
PV22	**Blue Mesa, Par**	**5.78**	**208**	Pn	**Pn**	**20 05 28.0**	**-1.0**
HVU	**Hansel Valley**	**5.80**	**253**	Pn	**Pn**	**20 05 30.4**	**+1.0**
PV07	**Paradox Valley**	**5.82**	**207**		**Pn**	**20 05 29.2**	**-0.3**
PV21	**Cone Mtn., Par**	**5.82**	**209**	Pn	**Pn**	**20 05 30.0**	**+0.4**
TMUT	**Trail Mountain**	**6.23**	**227**		**Pn**	**20 05 35.6**	**+0.3**
PV05	**Paradox Valley**	**6.29**	**208**	Pn	**Pn**	**20 05 35.3**	**-0.8**
Q16A	**Castle Valley**	**6.49**	**225**	Pn	**Pn**	**20 05 38.0**	**-0.7**
ELK	**Elko**	**7.92**	**252**	Pn	**Pn**	**20 05 59.5**	**+1.1**
	comp=E,0.1nm,0.3s,baz=72,slow=6.4,SNR=2.4						
	comp=E,0.6nm,0.5s						
I10CA	**LAC DU BONNET**	**9.10**	**41**	I		20 56 00.0	
	baz=222,slow=314,SNR=2.5						
ULM	**Lac du Bonnet**	**9.20**	**41**	Lg	Lg	20 08 45.1	
	comp=E,0.2nm,0.3s,baz=310,slow=23,SNR=1.4						
TXAR	**Lajitas Array**	**14.40**	**174**	Pn	**P**	**20 07 35.6**	**+1.4**
	comp=E,0.2nm,0.7s,baz=7.8,slow=7.3,SNR=1.8						
TXAR				Pg		20 08 33.2	
	comp=E,0.1nm,0.3s,baz=360,slow=14,SNR=3.9						
TXAR				Lg	Lg	20 11 40.5	
	baz=0.4,slow=27,SNR=3.2						
MKAR	**Makanchi Array**	**89.64**	**355**	P	**P**	**20 17 00.7**	**-0.7**
	comp=E,0.4nm,0.7s,baz=13,slow=2.3,SNR=3.7						
	comp=E,0.4nm,0.7s						

IDC 17 20:07:13.1±999.0, 55°.16N×9°.09E, h0km, Error ellipse: s-maj=2867.0km s-min=305.4km az=72.0, Denmark

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**15.79**	**73**	I		21 40 30.0	
	baz=279,slow=317,SNR=1.6						
I31KZ	**AKTYUBINSK INF**	**29.48**	**79**	I		23 07 40.0	
	baz=296,slow=327,SNR=0.7						
I46RU	**ZALESOVO INFRA**	**41.91**	**59**	I		00 25 50.0	
	baz=304,slow=334,SNR=1.0						

*ATH **17** 20:07:18.7, 39°.78N×20°.66E, h13km±1km, ML2.7/9, Error ellipse: s-maj=1.8km s-min=0.8km az=356.0*
*THE **17** 20:07:18.5, 39°.79N×20°.67E, h14km±1km, ML2.7/12, Error ellipse: s-maj=1.0km s-min=0.4km az=318.0*
*TIR **17** 20:07:18.2, 39°.79N×20°.64E, h19km, Md3.5, Ml3.0*
*BEO **17** 20:07:19.5±0.4, 39°.68N×20°.63E, h20km±4km, ML2.8/6*
ISC 17 20:07:18.6±0.9, 39°.77N±0°.02×20°.66E±0°.02, h14km±7km, n52, σ0°94/84, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**127**	P	**Pb**	**20 07 22.6**	**-1.2**
JAN				S	**Sb**	**20 07 26.3**	**-1.0**
	6μm,0.2s						
JAN	**Janina**	**0.18**	**127**	P	**Pb**	**20 07 22.6**	**-1.2**
JAN				S	**Sb**	**20 07 26.3**	**-1.0**
JAN				AML	AML	20 07 26.9	
	comp=E,13654μm,0.4s						
JAN				AML	AML	20 07 27.0	
	comp=N,8355μm,0.2s						
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pg**	**20 07 25.6**	**-0.1**
IGT				S	**Sg**	**20 07 31.2**	**+0.7**
	comp=N,2μm,0.3s						
IGT	**Igoumenitsa**	**0.34**	**227**	*e*Pg	**Pg**	**20 07 25.9**	**+0.2**
IGT				*e*Sg	**Sb**	**20 07 32.8**	**+0.9**
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pg**	**20 07 25.6**	**-0.1**
	baz=224						
IGT				S	**Sb**	**20 07 31.8**	**-0.1**
	baz=224						
IGT	**Igoumenitsa**	**0.34**	**227**	P	**Pg**	**20 07 25.6**	**-0.1**
IGT				S	**Sg**	**20 07 31.2**	**+0.7**
IGT				AML	AML	20 07 34.9	
	comp=N,3805μm,0.3s						
IGT				AML	AML	20 07 36.2	
	comp=E,3814μm,0.6s						
LSK	**Leskovik**	**0.39**	**353**	P	**Pg**	**20 07 26.3**	**-0.2**
LSK				S	**Sg**	**20 07 31.2**	**-0.6**
	comp=E,4μm,0.7s						
LSK	**Leskovik**	**0.39**	**353**	P	**Pg**	**20 07 26.4**	**-0.1**
	baz=355						
LSK				S	**Sg**	**20 07 32.0**	**+0.2**
	baz=355						
LSK				AMP			
	comp=N,13nm,0.7s,baz=355						
SRN	**Sarande**	**0.52**	**283**	P	**Pg**	**20 07 28.5**	**-0.4**
SRN				S	**Sb**	**20 07 36.4**	**-0.5**
	comp=N,1μm,0.4s						
SRN	**Sarande**	**0.52**	**283**	P	**Pg**	**20 07 28.9**	**0.0**
	baz=281						
KASA	**Kassiopi**	**0.56**	**268**	P	**Pb**	**20 07 29.2**	**-0.9**
KASA				S	**Sg**	**20 07 37.7**	**+0.6**
KASA				AML	AML	20 07 40.8	
	comp=E,2446μm,0.3s						
KASA				AML	AML	20 07 40.8	
	comp=N,3102μm,0.3s						
PENT	**Pentalofos**	**0.56**	**41**	P	**Pb**	**20 07 29.3**	**-1.1**
PENT				S	**Sg**	**20 07 36.9**	**-0.5**
	comp=N,318nm,0.6s						
PENT	**Pentalofos**	**0.56**	**41**	P	**Pb**	**20 07 29.3**	**-1.1**
PENT				S	**Sg**	**20 07 36.9**	**-0.5**
KEK	**Kerkira**	**0.67**	**266**	P	**Pb**	**20 07 30.9**	**-1.1**
KEK				S	**Sg**	**20 07 41.6**	**+1.1**
	comp=N,862nm,0.4s						
KEK	**Kerkira**	**0.67**	**266**	P	**Pb**	**20 07 30.9**	**-1.1**
KEK				S	**Sg**	**20 07 41.6**	**+1.1**
KEK				AML	AML	20 07 45.6	
	comp=N,1418μm,0.3s						
KEK				AML	AML	20 07 47.5	
	comp=E,1896μm,0.2s						
NEST	**Nestorio**	**0.71**	**25**	P	**Pb**	**20 07 32.1**	**-0.8**
NEST				S	**Sg**	**20 07 42.3**	**+0.3**
	comp=E,600nm,0.5s						
NEST	**Nestorio**	**0.71**	**25**	P	**Pb**	**20 07 32.1**	**-0.8**
NEST				S	**Sg**	**20 07 42.3**	**+0.3**
NEST				AML	AML	20 07 46.9	
	comp=E,1632μm,0.7s						
NEST				AML	AML	20 07 49.7	
	comp=N,1362μm,0.4s						
KBN	**Korca**	**0.86**	**6**	P	**Pb**	**20 07 35.0**	**-0.5**
	baz=7.0						
KBN				S	**Sn**	**20 07 48.1**	**-0.8**
	baz=7.0						
KBN				AMP			
	comp=N,1.4nm,0.4s,baz=7.0						
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pb**	**20 07 36.5**	**-0.2**
TSLK				S	**Sn**	**20 07 50.4**	**-0.2**
	comp=N,570nm,0.7s						
TSLK	**Tsoukalades, L**	**0.94**	**180**	P	**Pb**	**20 07 36.5**	**-0.2**
TSLK				AML	AML	20 07 57.3	
	comp=E,821μm,0.5s						
TSLK				AML	AML	20 08 00.3	
	comp=N,1306μm,0.9s						
LKD2	**Lefkada island**	**0.98**	**180**	P	**Pb**	**20 07 36.9**	**-0.5**
LKD2				S	**Sn**	**20 07 51.6**	**0.0**
	comp=N,360nm,0.6s						
LKD2	**Lefkada island**	**0.98**	**180**	P	**Pb**	**20 07 36.8**	**-0.5**
LKD2				S	**Sn**	**20 07 51.6**	**0.0**
LKD2				AML	AML	20 07 58.4	
	comp=N,562μm,0.5s						
LKD2				AML	AML	20 08 00.1	
	comp=E,598μm,0.4s						
KZN	**Kozani**	**1.01**	**57**	P	**Pb**	**20 07 37.3**	**-0.6**
KZN				S	**Sb**	**20 07 50.7**	**-0.4**
	comp=E,322nm,0.6s						
KZN	**Kozani**	**1.01**	**57**	P	**Pb**	**20 07 37.3**	**-0.6**
KZN				AML	AML	20 07 54.8	
	comp=E,727μm,0.6s						
KZN				AML	AML	20 07 54.9	
	comp=N,557μm,0.6s						
THL	**Klokotos Trika**	**1.06**	**101**	P	**Pb**	**20 07 37.9**	**-0.9**
THL				S	**Sg**	**20 07 53.5**	**+0.4**
	comp=N,228nm,0.7s						
THL	**Klokotos Trika**	**1.06**	**101**	P	**Pb**	**20 07 37.9**	**-0.9**
THL				AML	AML	20 07 59.0	
	comp=N,497μm,0.6s						
THL				AML	AML	20 08 00.4	
	comp=E,409μm,0.7s						
EVGI	**Lefkada island**	**1.15**	**180**	P	**Pn**	**20 07 40.1**	**-0.1**
EVGI	**Lefkada island**	**1.15**	**180**	P	**Pn**	**20 07 40.1**	**-0.1**
EVR	**Evrytania**	**1.23**	**133**	P	**Pg**	**20 07 42.2**	**-0.1**
FSK	**Fiskardo**	**1.31**	**183**	P	**Pg**	**20 07 44.1**	**+0.3**
OHR	**Ohrid**	**1.35**	**4**	*e*Pg	**Pg**	**20 07 44.7**	**+0.1**
OHR				*e*Sg	**Sg**	**20 08 05.0**	**+2.9**
OHR	**Ohrid**	**1.35**	**4**	*i* Pn	**Pg**	**20 07 44.4**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.37**	**123**	P	**Pb**	**20 07 44.2**	**+0.3**
KEF4	**Livadi, Kephal**	**1.52**	**187**	P	**Pn**	**20 07 44.8**	**-0.5**
KEF4				S	**Sb**	**20 08 05.2**	**-0.4**
	comp=E,1μm,0.5s						
KEF4	**Livadi, Kephal**	**1.52**	**187**	P	**Pn**	**20 07 44.8**	**-0.5**
TIR	**Tirane**	**1.69**	**339**	*e*Pn	**Pb**	**20 07 48.6**	**-0.9**
TIR				*e*Sn	**Sg**	**20 08 12.7**	**-0.4**
TIR	**Tirane**	**1.69**	**339**	P	**Pg**	**20 07 50.5**	**-0.6**
	baz=340						
TIR				S	**Sg**	**20 08 12.8**	**-0.4**
	baz=340						
SCTE	**Santa Cesarea**	**1.71**	**281**	P	**Pn**	**20 07 47.7**	**-0.4**
PHP	**Peshkopia**	**1.92**	**355**	P	**Pb**	**20 07 53.1**	**-0.4**
	baz=356						
PHP				S	**Sg**	**20 08 19.5**	**-1.1**
	baz=356						
VAY	**Valandovo**	**2.13**	**43**	*e*Pn	**Pb**	**20 07 54.9**	**-2.0**
VAY				*e*Sn	**Sb**	**20 08 22.5**	**-0.7**
VAY	**Valandovo**	**2.13**	**43**	*i* Pn	**Pb**	**20 07 57.4**	**+0.4**
SKO	**Skopje**	**2.28**	**15**	*e*Pn	**Pb**	**20 07 58.0**	**-1.6**
SKO				*e*Sn	**Sb**	**20 08 26.8**	**-0.8**
SRS	**Serrai**	**2.61**	**58**	*e*Pn	**Pn**	**20 08 01.5**	**+1.1**
SRS				*e*Sn	**Sn**	**20 08 33.5**	**+1.6**
BARS	**Barje**	**3.17**	**16**	*e*Pn	**Pn**	**20 08 09.6**	**+1.5**
BARS				*e*Sn	**Sn**	**20 08 48.1**	**+2.5**
SELS	**Selova**	**3.47**	**6**	*e*Pn	**Pn**	**20 08 13.7**	**+1.5**
SJES	**Sjenica**	**3.53**	**352**	*e*Pn	**Pn**	**20 08 14.8**	**+1.7**
ZAPS	**Zavoj**	**3.80**	**22**	*e*Pn	**Pn**	**20 08 19.6**	**+2.8**
IVAS	**Ivanjica**	**3.83**	**354**	*e*Pn	**Pn**	**20 08 17.3**	**+0.2**
BOVS	**Bovan**	**3.94**	**11**	*e*Pn	**Pn**	**20 08 19.3**	**+0.6**
GRUS	**Gruza**	**4.12**	**1**	*e*Pn	**Pn**	**20 08 22.3**	**+1.2**
BBLS	**Lazići**	**4.20**	**348**	*e*Pn	**Pn**	**20 08 23.1**	**+0.8**
DIVS	**Divibare**	**4.36**	**354**	*e*Pn	**Pn**	**20 08 24.7**	**+0.3**
DIVS				*e*Sn	**Sn**	**20 09 14.3**	**-0.7**

*JMA **17** 20:15:58.8±0.5, 46°.N±3°.×14°.5E±°., h410km, MV3.5/23, SOUTHERN SEA OF OKHOTSK*
*IDC **17** 20:16:00.1±3.4, 46°.91N×144°.71E, h408km±36km, mb2.9/5, mbtmp3.7/8, Error ellipse: s-maj=40.3km s-min=16.5km az=87.0*
ISC 17 20:15:58.1±0.9, 46°.57N±0°.08×144°.9E±0°.1, h400km, n23, σ2°.02/29, mb3.3/5, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**2.29**	**226**	*e*P	**Pn**	**20 16 56.9**	**+0.9**
JWK2	**Keihoku**	**2.45**	**240**	*e*P	**Pn**	**20 16 58.4**	**+1.3**
JRA	**Rausu**	**2.63**	**177**	*e*P	**Pn**	**20 16 59.7**	**+1.2**
JTKR	**Abashiri--Toko**	**2.69**	**196**	*e*P	**Pn**	**20 17 00.2**	**+1.2**
JRBN	**Rebuntou**	**2.92**	**248**	*e*P	**Pn**	**20 17 00.8**	**+0.2**
JNK	**Nakash**	**2.99**	**183**	*e*P	**Pn**	**20 17 02.3**	**+1.0**
NEM2	**Nemuro 2**	**3.26**	**169**	*e*P	**Pn**	**20 17 02.7**	**-0.8**
NEM2				*e*S	**S**	**20 17 54.1**	**-2.3**
JAR	**Ashorobuto**	**3.37**	**194**	*e*P	**Pn**	**20 17 05.6**	**+1.0**
JAK	**Akkeshi**	**3.58**	**183**	*e*P	**Pn**	**20 17 06.2**	**-0.1**
JAK				*e*S	**S**	**20 17 59.4**	**-2.1**
JCH	**Churui**	**4.11**	**196**	*e*P	**Pn**	**20 17 11.1**	**-0.2**
JCH				*e*S	**S**	**20 18 08.0**	**-2.5**
JBT2	**Biratori 2**	**4.20**	**207**	*e*P	**Pn**	**20 17 13.7**	**+1.5**
JBT2				*e*S	**S**	**20 18 11.7**	**-0.6**
JNBK	**Urakawa-nobuka**	**4.56**	**201**	*e*P	**Pn**	**20 17 15.7**	**0.0**
JOT	**Ohata**	**5.89**	**210**	*e*P	**Pn**	**20 17 29.8**	**+0.3**
JOT				*e*S	**S**	**20 18 39.8**	**-4.2**
JANG	**Nango**	**6.67**	**203**	*e*P	**P**	**20 17 38.0**	**-0.7**
JANG				*e*S	**S**	**20 18 55.7**	**-4.1**
JIW	**Iwasaki**	**6.95**	**213**	*e*P	**P**	**20 17 41.6**	**-0.3**
MJAR	**Matsushiro Arr**	**11.20**	**209**	P	**Pn**	**20 18 33.0**	**+2.8**
	1.4nm,0.5s,baz=14,slow=12,SNR=6.5						
KSRS	**Korea Array**	**15.54**	**240**	P	**P**	**20 19 19.3**	**+2.9**
	0.9nm,0.6s,baz=42,slow=11,SNR=5.1						
SEY	**Seymchan**	**16.93**	**12**	P	**P**	**20 19 29.8**	**-1.2**
	1.6nm,0.5s,baz=186,slow=10.0,SNR=8.7						
MKAR	**Makanchi Array**	**41.93**	**294**	P	**P**	**20 23 10.6**	**-0.8**
	0.4nm,0.6s,baz=72,slow=8.8,SNR=5.0						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**61.64**	**331**	P	**P**	**20 25 33.2**	**-1.4**
	1.0nm,0.7s,baz=42,slow=6.4,SNR=7.6						
	1.0nm,0.7s						
NOA	**NORSAR Array B**	**66.40**	**337**	P	**P**	**20 26 04.0**	**-1.3**
	0.7nm,0.7s,baz=31,slow=6.7,SNR=4.0						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**66.88**	**191**	P	**P**	**20 26 11.2**	**+2.5**
	0.2nm,0.3s,baz=6.9,slow=6.6,SNR=7.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**70.61**	**191**	P	**P**	**20 26 35.3**	**+3.9**
	0.3nm,0.6s,baz=8.2,slow=5.8,SNR=5.7						
	0.3nm,0.6s						

*MAN **17** 20:20:08.0, 9°.11N×122°.56E, h34km, mb5.1, ML4.1, MS4.2*
*NEIC **17** 20:20:08.8±1.4, 9°.1N±0°.1×122°.6E±0°.1, h43km±8km, mb4.2/7, Error ellipse: s-maj=19.5km s-min=15.0km az=86.0*
*IDC **17** 20:20:10.9±7.6, 9°.06N×122°.91E, h61km±73km, mb3.7/13, mbtmp4.0/14, ML4.2/1, MS3.1/7, Error ellipse: s-maj=32.3km s-min=15.9km az=77.0*
ISC 17 20:20:08.2±0.6, 9°.06N±0°.08×122°.8E±0°.1, h35km, n34, σ1°.33/30, mb4.1/18, MS3.2/5, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.41**	**125**	LR	LR	20 22 47.5	
	comp=Z,274nm,20.2s,baz=316,slow=47						
MYLDM	**Lahad Datu**	**5.72**	**228**	Pn	**Pn**	**20 21 31.4**	**+0.6**
KKM	**Kota Kinabalu**	**7.15**	**246**	Pn	**Pn**	**20 21 48.8**	**-1.7**
TOLI2	**Tolitoli**	**8.14**	**194**	Pn	**Pn**	**20 22 03.1**	**-0.9**
LUWI	**Luwuk**	**10.03**	**180**	Pn	**Pn**	**20 22 32.0**	**+2.0**
JOW	**Kunigami**	**18.43**	**16**	P	**Pn**	**20 24 22.7**	**+1.6**
	1.2nm,0.3s,baz=229,slow=11,SNR=2.1						
JOW				LR	LR	20 32 42.1	
	comp=Z,29nm,18.5s,baz=188,slow=41						
	8.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**24.93**	**295**	P	**P**	**20 25 30.6**	**+2.1**
	0.2nm,0.5s,baz=116,slow=9.2,SNR=2.2						
	0.2nm,0.5s						
JHJ	**Hachijo jima 2**	**28.64**	**31**	LR	LR	20 36 58.3	
	comp=Z,24nm,20.6s,baz=92,slow=35						
KSRS	**Korea Array**	**28.65**	**9**	LR	LR	20 37 16.1	
	comp=Z,26nm,21.6s,baz=185,slow=36						
WB0	**Warramunga Arr**	**30.84**	**158**	P	**P**	**20 26 20.5**	**-0.8**
WB0				IAmb	IAmb	20 26 58.0

comp=Z,0.6nm,0.6s
MKAR Makanchi Array 50.96 325 P **P** **20 29 09.5 +3.0**
PETK Petropavlovsk- 52.20 26 P **P** **20 29 15.7 +0.2**
comp=Z,2.1nm,0.9s,baz=212,slow=10,SNR=1.8
comp=Z,2.1nm,0.9s
PETK Petropavlovsk- 52.20 26 P **P** **20 29 15.6 0.0**
ZALV Zalesovo Beam 54.09 333 P **P** **20 29 29.3 -0.1**
comp=Z,0.6nm,0.4s,baz=128,slow=8.5,SNR=2.5
comp=Z,0.6nm,0.4s
SEY Seymchan 57.87 15 P **P** **20 29 55.3 -1.0**
comp=Z,0.8nm,0.5s,baz=222,slow=16,SNR=1.9
comp=Z,0.8nm,0.5s
SHEM Shemya Is, Ala 60.04 33 LR LR 20 52 35.3
comp=Z,24nm,21.0s,baz=290,slow=32
TIXI Tiksi 62.65 2 P **P** **20 30 27.2 -1.7**
TIXI IAmb IAmb 20 30 29.7
comp=Z,5.1nm,1.0s
NRIK Noril'sk 64.37 347 P **P** **20 30 40.4 +0.1**
comp=Z,2.6nm,0.4s,baz=143,slow=1.8,SNR=2.5
comp=Z,2.6nm,0.4s
ABKAR Akbulak array 65.56 320 P **P** **20 30 46.9 -1.5**
PPLA Purkeypile 79.74 28 P **P** **20 32 13.7 +1.1**
ARCES ARCESS Array B 84.12 339 P **P** **20 32 35.3 0.0**
comp=Z,2.2nm,0.9s,baz=79,slow=6.7,SNR=6.9
comp=Z,2.2nm,0.9s
FINES FINESS Array B 85.31 331 P **P** **20 32 41.5 +0.1**
comp=Z,1.3nm,0.8s,baz=79,slow=4.1,SNR=6.3
comp=Z,1.3nm,0.8s

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*IDC **17** 20:22:34.1±1.1, 5.°55S×151.°74E, h0km, mb3.9/8, mbtmp3.9/9, ML2.3/1, MS3.4/6, Error ellipse: s-maj=45.2km s-min=19.9km az=108.0*
*NEIC **17** 20:22:36.8±1.3, 5.°9S±0.°1×152.°1E±0.°1, h10km±2km, mb4.3/5, Error ellipse: s-maj=30.0km s-min=9.9km az=127.0*
ISC 17 20:22:39.6±0.8, 5.°80S±0.°09×151.°9E±0.°1, h36km, n32, σ1°71/28, mb4.0/11, MS3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.62**	**10**		**Pn**	**20 23 06.4**	**+0.7**
RABL	**Rabaul**	**1.62**	**10**	P	**Pn**	**20 23 07.5**	**+1.8**
MANU	**Manus Island**	**5.86**	**309**	Pn	**Pn**	**20 24 07.0**	**+3.0**
PMG	**Port Moresby**	**5.91**	**232**	Pn	**Pn**	**20 24 05.2**	**+0.6**
	5.2nm,0.3s,baz=44,slow=10,SNR=11						
PMG				Sn	**Sn**	**20 25 07.1**	**-4.0**
	0.9nm,0.3s,baz=23,slow=13,SNR=1.5						
PMG				LR	LR	20 26 27.0	
	comp=Z,161nm,19.1s,baz=328,slow=39						
	27nm,0.5s						
PMG	**Port Moresby**	**5.91**	**232**		**Pn**	**20 24 05.8**	**+1.2**
PMG	**Port Moresby**	**5.91**	**232**	P	**Pn**	**20 24 07.7**	**+3.1**
CTA	**Charters Tower**	**15.22**	**201**	LR	LR	20 30 59.4	
	comp=Z,70nm,20.7s,baz=334,slow=33						
DZM	**Mont Dzumac**	**21.44**	**140**	LR	LR	20 34 03.4	
	comp=Z,76nm,20.0s,baz=275,slow=32						
WB0	**Warramunga Arr**	**21.96**	**229**	P	**P**	**20 27 29.9**	**-0.6**
WB0				IAmb	IAmb	20 27 33.3	
	comp=Z,22nm,1.4s						
WRAB	**Tennant Creek**	**22.10**	**229**	P	**P**	**20 27 33.3**	**+1.4**
WRAB				IAmb	IAmb	20 27 34.5	
	comp=Z,5.8nm,0.6s						
WRAB	**Tennant Creek**	**22.10**	**229**	P	**P**	**20 27 32.1**	**+0.2**
WB2	**Warramunga Arr**	**22.10**	**229**	P	**P**	**20 27 33.2**	**+1.2**
WB2				IAmb	IAmb	20 27 36.2	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**22.11**	**229**	P	**P**	**20 27 31.5**	**-0.6**
	comp=Z,3.8nm,0.5s,baz=53,slow=10,SNR=40						
	comp=Z,3.8nm,0.5s						
WRA	**Warramunga Arr**	**22.11**	**229**	P	**P**	**20 27 32.9**	**+0.8**
KNRA	**Kununurra**	**24.73**	**245**	P	**P**	**20 27 59.7**	**+1.9**
KNRA	**Kununurra**	**24.73**	**245**	P	**P**	**20 28 00.2**	**+2.4**
AS01	**Alice Springs**	**24.77**	**222**	P	**P**	**20 27 59.8**	**+1.6**
ASAR	**Alice Springs**	**24.81**	**222**	P	**P**	**20 27 58.6**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=56,slow=9.5,SNR=25						
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**24.81**	**222**	P	**P**	**20 27 58.9**	**+0.4**
STKA	**Stephens Creek**	**27.68**	**199**	P	**P**	**20 28 24.6**	**+0.3**
	comp=Z,3.2nm,1.1s,baz=55,slow=12,SNR=1.7						
	comp=Z,3.2nm,1.1s						
MULG	**Mulgathing**	**29.58**	**212**	P	**P**	**20 28 41.0**	**-0.3**
WRKA	**Warakurna**	**29.62**	**227**	P	**P**	**20 28 41.6**	**-0.2**
JOW	**Kunigami**	**39.69**	**326**	LR	LR	20 42 34.5	
	comp=Z,54nm,21.8s,baz=128,slow=30						
SONM	**Songino Array**	**66.69**	**328**	P	**P**	**20 33 25.5**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=137,slow=6.2,SNR=5.4						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**71.87**	**178**	P	**P**	**20 34 00.8**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=3.1,slow=7.1,SNR=1.7						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**80.48**	**319**	P	**P**	**20 34 46.9**	**-1.1**
	comp=Z,0.3nm,0.9s,baz=143,slow=2.9,SNR=2.0						
	comp=Z,0.3nm,0.9s						
ZALV	**Zalesovo Beam**	**81.48**	**327**	P	**P**	**20 34 50.6**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=117,slow=8.3,SNR=2.8						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**83.42**	**22**	P	**P**	**20 35 02.2**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=241,slow=5.2,SNR=5.4						
	comp=Z,0.9nm,0.5s						
YBH	**Yreka Blue Hor**	**90.39**	**48**	LR	LR	21 10 02.3	
	comp=Z,30nm,19.3s,baz=296,slow=32						
NVAR	**Mina Array Bea**	**93.41**	**52**	LR	LR	21 14 29.7	
	comp=Z,28nm,18.1s,baz=265,slow=33						
GERES	**GERESS Array B**	**124.42**	**308**	PKP	**PKPdf**	**20 41 35.2**	**0.0**
	comp=Z,0.2nm,0.5s,baz=96,slow=3.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.74**	**286**	PKPbc	**PKPbc**	**20 42 26.1**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=97,slow=0.9,SNR=14						

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*NEIC **17** 20:25:39.0±1.0, 19.°6N±0.°1×145.°7E±0.°1, h113km±16km, mb4.3/10, Error ellipse: s-maj=21.0km s-min=12.3km az=46.0*
*IDC **17** 20:25:52.3±9.0, 19.°32N×145.°46E, h236km±87km, mb3.4/9, mbtmp3.9/9, MS3.1/1, Error ellipse: s-maj=31.9km s-min=17.5km az=85.0*
ISC 17 20:25:43.0±0.7, 19.°4N±0.°1×145.°4E±0.°1, h147km, n21, σ1°39/22, mb4.0/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMZ	**Minamidaito 2**	**14.53**	**299**	Pn	**Pn**	**20 29 01.1**	**-0.6**
NACB	**Ninganchiao**	**22.56**	**286**	P	**P**	**20 30 27.8**	**-3.2**
NACB				IAmb	IAmb	20 31 07.2	
	comp=Z,42nm,1.4s						
KSRS	**Korea Array**	**23.57**	**323**	P	**P**	**20 30 42.9**	**+2.8**
	comp=Z,0.8nm,0.6s,baz=145,slow=9.6,SNR=2.0						
	comp=Z,0.8nm,0.6s						
RABL	**Rabaul**	**24.38**	**163**	P	**P**	**20 30 48.4**	**+0.6**
COEN	**Coen**	**33.22**	**184**	P	**P**	**20 32 05.0**	**-1.1**
MTN	**Manton Dam**	**34.97**	**205**	P	**P**	**20 32 22.8**	**+1.5**
KNRA	**Kununurra**	**38.49**	**206**	P	**P**	**20 32 52.5**	**+1.4**
WB0	**Warramunga Arr**	**40.38**	**196**		**P**	**20 33 07.3**	**+0.6**
WB0				IAmb	IAmb	20 33 29.3	
	comp=Z,7.8nm,1.4s						
WR0	**Warramunga Arr**	**40.53**	**196**	P	**P**	**20 33 08.5**	**+0.6**
WR0				IAmb	IAmb	20 33 20.9	
	comp=Z,8.3nm,1.4s						
WB2	**Warramunga Arr**	**40.56**	**196**	P	**P**	**20 33 08.7**	**+0.5**
WB2				IAmb	IAmb	20 33 41.1	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**40.57**	**196**	P	**P**	**20 33 08.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=0.5,slow=8.4,SNR=10						
WRA				PcP	**PcP**	**20 35 06.8**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=21,slow=4.5,SNR=2.1						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**40.57**	**196**	P	**P**	**20 33 08.4**	**+0.2**
SONM	**Songino Array**	**42.40**	**321**	P	**P**	**20 33 22.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**43.82**	**277**	P	**P**	**20 33 37.3**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=61,slow=5.9,SNR=6.3						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**44.24**	**195**	P	**P**	**20 33 37.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=16,slow=6.9,SNR=2.5						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**57.27**	**322**	P	**P**	**20 35 15.4**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=98,slow=8.9,SNR=2.6						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**57.75**	**314**	PcP	**PcP**	**20 36 09.0**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=70,slow=6.6,SNR=1.3						
MKAR				LR	LR	21 00 27.5	
	comp=Z,18nm,20.3s,baz=80,slow=36						
ILAR	**Eielson Array**	**63.16**	**26**	P	**P**	**20 35 54.9**	**-0.1**
	comp=Z,0.5nm,0.2s,baz=274,slow=4.3,SNR=2.0						
	comp=Z,0.5nm,0.2s						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**20 37 52.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=269,slow=5.3,SNR=5.6						
	comp=Z,0.9nm,0.7s						
FINES FINESS Array B 86.12 335 P **P** **20 38 06.4 -0.8**							
	comp=Z,1.4nm,0.4s,baz=68,slow=5.2,SNR=18						
	comp=Z,1.4nm,0.4s						
HFS Hagfors 91.62 338 P **P** **20 38 31.9 -1.3**							
	comp=Z,2.2nm,0.9s,baz=64,slow=3.4,SNR=5.6						
	comp=Z,2.2nm,0.9s						

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*IDC **17** 20:52:30.1±1.0, 32.°64N×95.°02E, h0km, mb3.5/9, mbtmp3.5/13, ML3.5/4, MS3.2/5, Error ellipse: s-maj=47.9km s-min=18.4km az=59.0*
ISC 17 20:52:31.5±0.8, 32.°7N±0.°1×95.°2E±0.°2, h10km, n15, σ1°29/13, mb3.5/9, MS3.2/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR Chiang Mai Arr 14.54 166 Pn **Pn** **20 55 56.9 -0.6**							
	0.1nm,0.3s,baz=351,slow=11,SNR=2.2						
CMAR				LR	LR	21 02 15.8	
	comp=Z,67nm,18.7s,baz=200,slow=40						
	0.1nm,0.3s						
MKAR Makanchi Array 17.21 329 Pn **Pn** **20 56 31.2 -0.7**							
	0.2nm,0.3s,baz=144,slow=14,SNR=9.7						
	0.5nm,0.5s						
SONM Songino Array 17.39 26 Pn **Pn** **20 56 35.1 +0.7**							
	0.2nm,0.3s,baz=211,slow=14,SNR=13						
	3.0nm,0.9s						
AAK Ala-Archa 19.11 307 Pn **P** **20 56 57.7 +3.1**							
	0.1nm,0.3s,baz=127,slow=9.8,SNR=4.9						
AAK				LR	LR	21 05 23.2	
	comp=Z,93nm,18.7s,baz=137,slow=41						
	1.3nm,0.6s						
KURBB Kurchatov Arra 21.74 331 P **P** **20 57 22.5 -0.4**							
	2.5nm,0.6s,baz=138,slow=11,SNR=20						
	2.5nm,0.6s						
ZALV Zalesovo Beam 22.53 344 P **P** **20 57 30.6 -0.7**							
	0.7nm,0.4s,baz=165,slow=12,SNR=4.9						
	0.7nm,0.4s						
BVAR Borovoye Array 27.04 326 P **P** **20 58 14.4 +0.6**							
	0.1nm,0.3s,baz=139,slow=12,SNR=2.1						
BVAR				LR	LR	21 08 42.7	
	comp=Z,46nm,19.7s,baz=91,slow=36						
	0.1nm,0.3s						
PALK Pallekele 28.60 211 LR LR 21 11 02.5							
	comp=Z,58nm,18.0s,baz=222,slow=39						
ARCES ARCESS Array B 52.71 336 P **P** **21 01 45.2 -0.6**							
	1.2nm,0.7s,baz=80,slow=6.5,SNR=1.5						
	1.2nm,0.7s						
MLR Muntele Rosu 53.67 305 LR LR 21 28 25.9							
	comp=Z,30nm,20.1s,baz=88,slow=40						
NOA NORSAR Array B 59.17 326 P **P** **21 02 32.2 -0.1**							
	1.0nm,0.9s,baz=78,slow=9.2,SNR=1.8						
	1.0nm,0.9s						
GERES GERESS Array B 60.92 312 P **P** **21 02 43.4 -1.3**							
	0.1nm,0.3s,baz=71,slow=7.4,SNR=1.7						
	0.1nm,0.3s						
WRA Warramunga Arr 64.34 139 P **P** **21 03 09.2 +1.6**							
	0.2nm,0.6s,baz=322,slow=8.4,SNR=1.2						
	0.2nm,0.6s						
ASAR Alice Springs 67.12 141 P **P** **21 03 25.5 0.0**							
	0.3nm,0.8s,baz=328,slow=7.1,SNR=1.5						
	0.3nm,0.8s						
TORD Torodi Ar. Bea 85.88 283 P **P** **21 05 11.7 -0.3**							
	0.1nm,0.4s,baz=59,slow=3.8,SNR=2.0						
	0.1nm,0.4s						

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*MAN **17** 21:02:16.4, 10.°46N×124.°12E, h1km, mb4.9, ML3.9, MS3.9*
MAN INTENSITY III - LILOAN LAPU-LAPU CITY MANDAUE CITY CEBU CITY AND CONSOLACION CEBU; INTENSITY II - TALISAY CITY AND MINGLANELIA CEBU.
*NEIC **17** 21:02:16.7±1.3, 10.°5N±0.°1×124.°4E±0.°2, h10km±2km, mb4.1/6, Error ellipse: s-maj=28.8km s-min=23.9km az=90.0*
ISC 17 21:02:20.8±1.2, 10.°3N±0.°1×124.°3E±0.°2, h35km, n13, σ1°51/13, mb4.1/4, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYLDM Lahad Datu 7.68 229					**Pn**	**21 04 11.4**	**+1.2**
SBUM Sibu 14.30 238				Pn	**Pn**	**21 05 40.3**	**-0.6**
PZH PanZhiHua 26.67 310				P	**P**	**21 07 57.3**	**+0.5**
WRA Warramunga Arr 31.68 162				P	**P**	**21 08 40.4**	**-0.8**
WB2 Warramunga Arr 31.68 162				P	**P**	**21 08 41.1**	**-0.1**
WB2				IAmb	IAmb	21 08 56.5	
	comp=Z,4.8nm,1.1s						
HHC Hu-ho-hao-te 32.40 342				*e*P	**P**	**21 08 49.6**	**+2.2**
AS31 Alice Springs 35.08 165				P	**P**	**21 09 11.3**	**+0.5**
AS31				IAmb	IAmb	21 09 30.1	
	comp=Z,2.2nm,1.4s						
ASAR Alice Springs 35.08 165				P	**P**	**21 09 10.8**	**0.0**
WMQ Urumqi 45.98 323				*e*P	**P**	**21 10 42.8**	**+2.2**
MK31 Makanchi Array 50.80 324				P	**P**	**21 11 16.5**	**-1.2**
MK31				IAmb	IAmb	21 11 21.5	
	comp=Z,1.2nm,1.0s						
MKAR Makanchi Array 50.80 324				P	**P**	**21 11 15.6**	**-2.1**
KURK Kurchatov 54.91 326				P	**P**	**21 11 46.3**	**-1.6**
KURK				IAmb	IAmb	21 11 48.3	
	comp=Z,3.2nm,0.8s						
KKAR Karatay Array 56.81 315				P	**P**	**21 12 00.3**	**-1.4**

IDC 17 21:11:36.5±3.2, 26.°16N×96.°13E, h0km, mb3.6/3, mbtmp3.6/3, MS2.8/1, Error ellipse: s-maj=352.3km s-min=26.1km az=59.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR Makanchi Array 23.34 335				P	P	21 16 46.3	0.0
	0.6nm,0.4s,baz=142,slow=10.0,SNR=14						
	0.6nm,0.4s						
PALK Pallekele 23.85 221				LR	LR	21 26 54.6	
	comp=Z,22nm,20.4s,baz=204,slow=38						
WRA Warramunga Arr 58.96 137				P	P	21 21 37.8	-0.2
	0.6nm,0.6s,baz=325,slow=7.4,SNR=14						
	0.6nm,0.6s						
ASAR Alice Springs 61.56 140				P	P	21 21 55.9	+0.1
	0.4nm,0.5s,baz=324,slow=6.4,SNR=6.5						
	0.4nm,0.5s						

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*IDC **17** 21:21:08.3±0.7, 53.°51S×25.°22E, h0km, mb4.2/12, mbtmp4.2/12, MS3.5/12, Error ellipse: s-maj=31.8km s-min=14.7km az=79.0*
*NEIC **17** 21:21:10.4±1.4, 53.°48S±0.°03×25.°4E±0.°3, h10km±1km, mb4.5/16, Error ellipse: s-maj=26.9km s-min=3.9km az=273.0*
ISC 17 21:21:10.2±0.6, 53.°47S±0.°09×25.°4E±0.°1, h10km, n41, σ0°86/35, mb4.3/15, MS3.5/12, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TROLL Troll, Antarti 21.08 200				P	**P**	**21 25 54.2**	**-0.2**
SUR Sutherland 21.33 349				P	**P**	**21 25 58.3**	**+0.8**
	12nm,0.9s,baz=194,slow=13,SNR=2.4						
SUR				LR	LR	21 32 25.9	
	comp=Z,164nm,20.7s,baz=157,slow=32						
	12nm,0.9s						
SUR Sutherland 21.33 349				P	**P**	**21 25 57.3**	**-0.1**
SUR				IAmb	IAmb	21 25 59.2	
	comp=Z,42nm,1.5s						
SNAA Sanae 22.02 204				P	**P**	**21 26 04.5**	**+0.1**
SNAA Sanae 22.02 204				P	**P**	**21 26 04.1**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=62,slow=13,SNR=17						
SNAA				LR	LR	21 32 39.7	
	comp=Z,70nm,19.8s,baz=130,slow=32						
	comp=Z,4.1nm,0.8s						
SNAA Sanae 22.02 204				P	**P**	**21 26 03.4**	**-1.0**
SNAA				IAmb	IAmb	21 26 11.2	
	comp=Z,22nm,1.1s						
VNA2 Neumayer--Watz 22.74 207				P	**P**	**21 26 12.5**	**+0.4**
	baz=52,slow=7.7						
MAW Mawson 22.74 143				P	**P**	**21 26 11.9**	**-0.2**
	comp=Z,9.7nm,1.1s,baz=283,slow=8.8,SNR=16						
MAW				LR	LR	21 33 10.2	
	comp=Z,105nm,21.4s,baz=293,slow=32						
	comp=Z,9.7nm,1.1s						
MAW Mawson 22.74 143				P	**P**	**21 26 12.0**	**0.0**
VNA1 Neumayer--Stat 22.84 208				P	**P**	**21 26 14.4**	**+1.4**
VNA3 Neumayer Olymp 23.54 208				P	**P**	**21 26 20.9**	**+0.6**
BOSA Boshof 24.83 360				P	**P**	**21 26 33.2**	**+0.6**
	comp=Z,2.9nm,1.0s,baz=196,slow=13,SNR=3.5						
BOSA				LR	LR	21 34 26.9	
	comp=Z,116nm,20.2s,baz=192,slow=32						
	comp=Z,2.9nm,1.0s						
BOSA Boshof 24.83 360				P	**P**	**21 26 32.3**	**-0.4**
BOSA				IAmb	IAmb	21 26 47.6	
	comp=Z,17nm,1.4s						
LBTB Lobatse 28.41 0				P	**P**	**21 27 05.1**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=188,slow=9.6,SNR=2.9						
LBTB				LR	LR	21 37 04.6	
	comp=Z,92nm,19.0s,baz=181,slow=34						
	comp=Z,3.4nm,0.8s						
TSUM Tsumeb 34.73 347				LR	LR	21 40 12.2	
	comp=Z,40nm,21.9s,baz=150,slow=33						
QSPA South Pole Qui 36.75 180				P	**P**	**21 28 17.3**	**-0.2**
	comp=Z,6.2nm,1.0s,baz=254,slow=2.8,SNR=12						
QSPA				LR	LR	21 42 37.7	
	comp=Z,107nm,19.7s,baz=254,slow=35						
	comp=Z,6.2nm,1.0s						
QSPA South Pole Qui 36.75 180				P	**P**	**21 28 16.8**	**-0.8**
QSPA				IAmb	IAmb	21 28 18.1	
	comp=Z,16nm,1.3s						
LSZ Lusaka 38.17 4				P	**P**	**21 28 29.6**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=202,slow=9.5,SNR=4.1						
LSZ				LR	LR	21 42 11.6	
	comp=Z,123nm,21.3s,baz=178,slow=33						
	comp=Z,0.9nm,0.3s						
CASY Casey 41.10 142				P	**P**	**21 28 54.1**	**+0.5**
CASY				IAmb	IAmb	21 28 56.0	
	comp=Z,6.8nm,0.9s						
VNDA Vanda 46.52 168				P	**P**	**21 29 34.9**	**-2.2**
	comp=Z,1.6nm,1.0s,baz=246,slow=8.3,SNR=6.6						
VNDA				LR	LR	21 48 39.7	
	comp=Z,109nm,20.5s,baz=208,slow=36						
	comp=Z,1.6nm,1.0s						
VNDA Vanda 46.52 168				P	**P**	**21 29 36.8**	**-0.2**
VNDA				IAmb	IAmb	21 29 38.5	
	comp=Z,4.8nm,1.3s						
SBA Scott Base 46.80 170				P	**P**	**21 29 41.0**	**+1.6**
SBA				IAmb	IAmb	21 29 41.8	
	comp=Z,7.5nm,1.1s						
MBAR Mbarara 52.87 7				LR	LR	21 51 57.9	
	comp=Z,48nm,19.0s,baz=210,slow=35						
H10S2 ASCENSION HYDR 54.82 309				T	T	22 29 42.8	
	baz=150,slow=74,SNR=27						
H10S3 ASCENSION HYDR 54.83 309				T	T	22 29 46.3	
	baz=70,slow=74,SNR=49						
TRQA Tornquist 59.09 247				P	**P**	**21 31 10.2**	**-0.3**
DBIC Dimbokro 65.14 327				LR	LR	21 53 56.5	
	comp=Z,50nm,20.4s,baz=179,slow=30						
MORW Morawa 67.56 109				P	**P**	**21 32 06.8**	**0.0**
TOA0 Torodi Ar. Sit 69.39 335				P	**P**	**21 32 18.8**	**+0.7**
TOA0				IAmb	IAmb	21 32 38.2	
	comp=Z,6.6nm,1.4s						
TORD Torodi Ar. Bea 69.39 335				P	**P**	**21 32 16.6**	**-1.5**
	comp=Z,1.5nm,1.1s,baz=180,slow=7.2,SNR=4.7						
	comp=Z,1.5nm,1.1s						
TOO Toolangi 75.61 135				P	**P**	**21 32 56.3**	**+1.1**
BBTS Babate 76.77 318				LR	LR	22 01 09.9	
	comp=Z,49nm,19.5s,baz=302,slow=31						
STKA Stephens Creek 78.65 129				P	**P**	**21 33 12.1**	**-0.2**
	comp=Z,8.4nm,1.0s,baz=180,slow=10,SNR=6.6						
	comp=Z,8.4nm,1.0s						
STKA Stephens Creek 78.65 129				P	**P**	**21 33 10.4**	**-1.9**
ASAR Alice Springs 81.60 118				P	**P**	**21 33 29.4**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=210,slow=4.8,SNR=15						
	comp=Z,2.6nm,0.8s						
AS31 Alice Springs 81.61 118				P	**P**	**21 33 28.5**	**+0.1**
WRA Warramunga Arr 84.88 117				P	**P**	**21 33 45.5**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=208,slow=3.7,SNR=16						
	comp=Z,2.8nm,0.9s						
WRA Warramunga Arr 84.88 117				P	**P**	**21 33 45.0**	**-0.3**
WB2 Warramunga Arr 84.89 117				P	**P**	**21 33 45.8**	**+0.4**
PDAR Pinedale Array 148.59 269				PKPbc	**PKPdf**	**21 40 54.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=122,slow=4.4,SNR=3.8						
NVAR Mina Array Bea 151.00 254				PKPbc	**PKiKP**	**21 41 03.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=151,slow=2.1,SNR=4.2						

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*UCR **17** 21:30:36.8±1.0, 13.°30N×88.°32W, h254km±11km, ML3.5*
*SNET **17** 21:30:37.0±0.9, 13.°32N×88.°30W, h251km±9km, ML3.7*
ISC 17 21:30:37.7±4.5, 13.°5N±0.°5×88.°2W±0.°2, h252km±27km, n21, σ0°49/26, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PACA Pacayal 0.14 263				*e*P	**Pn**	**21 31 10.8**	**+0.6**
PACA				*e*S	S	21 31 36.3	+0.4
PACA Pacayal 0.14 263				*e*P	**Pn**	**21 31 10.8**	**+0.6**
PACA				*e*S	**S**	**21 31 36.3**	**+0.4**
COEB Comit de Eme 0.34 272				*e*P	**Pn**	**21 31 10.3**	**-0.3**
COEB Comit de Eme 0.34 272				*e*P	**Pn**	**21 31 10.3**	**-0.3**
CNCH Conchagua 0.39 122				*e*P	**Pn**	**21 31 10.7**	**-0.1**
CNCH				*e*S	**S**	**21 31 36.5**	**-0.1**
CNCH				IAML		21 31 41.5	
	comp=Z,409nm,0.3s						
CNCH Conchagua 0.39 122				*e*P	**Pn**	**21 31 10.7**	**-0.1**
CNCH				*e*S	**S**	**21 31 36.5**	**-0.1**
CNCH				IAML		21 31 41.5	
	comp=Z,409nm,0.3s						
PQSS Presa 15 de Se 0.40 290				*e*P	**Pn**	**21 31 10.0**	**-0.5**
PQSS Presa 15 de Se 0.40 290				*e*P	**Pn**	**21 31 10.0**	**-0.5**
SCLA Alcaldia de Sa 0.58 292				*e*P	**Pn**	**21 31 11.0**	**-0.1**
SCLA Alcaldia de Sa 0.58 292				*e*P	**Pn**	**21 31 11.0**	**-0.1**
COEG Centro de Oper 0.70 281				*e*P	**Pn**	**21 31 11.2**	**-0.3**
COEG Centro de Oper 0.70 281				*e*P	**Pn**	**21 31 11.2**	**-0.3**
P5NO Presa 5 de nov 0.75 311				*e*P	**Pn**	**21 31 11.4**	**-0.2**
P5NO				*e*P	**Pn**	**21 31 11.5**	**-0.2**
PAVA Las Pavas 0.77 287				*e*P	**Pn**	**21 31 11.4**	**-0.5**
PAVA Las Pavas 0.77 287				*e*P	**

PMTG			*e*Sn	Sn	21 42 13.1	-3.4
ZHG	**ZHG**	**3.08 150**	P	Pn	21 41 46.2	+2.0
ZHG			S	Sn	21 42 20.8	+0.8
PMRV	**Marv??o**	**3.41 14**	*e*Pn	Pn	21 41 47.8	-0.9
MD31	**MD31**	**4.48 136**	P	Pn	21 42 01.7	-1.8
MD31			S	Sn	21 42 49.9	-4.7
MDT	**Midelt**	**4.60 135**	P	Pn	21 42 03.6	-1.6
MDT			S	Sn	21 42 54.9	-2.8

MOS ***17*** *21:45:01.4±1.1, 10°.03N×126°.03E, h36km, mb5.1/35, Error ellipse: s-maj=9.7km s-min=4.9km az=112.7*
BJI ***17*** *21:45:02.3±0.0, 9°.64N×126°.22E, h67km, mb4.8/49, mB5.3/23, Ms4.4/7, Ms7 4.2/8*
MAN ***17*** *21:45:04.4, 9°.95N×126°.17E, h20km, mb5.4, ML4.4, MS4.6*
MAN INTENSITY III - SAN BENITO SURIGAO DEL NORTE; INTENSITY II - SURIGAO CITY AND SOCORRO SURIGAO DEL NORTE.
IDC ***17*** *21:45:04.4±1.5, 9°.99N×126°.02E, h45km±13km, mb4.5/28, mbtmp4.7/31, ML4.7/3, MS3.7/52, Error ellipse: s-maj=16.7km s-min=9.0km az=72.0*
NEIC ***17*** *21:45:05.4±1.9, 10°.01N±0°.07×126°.10E±0°.09, h50km±4km, mb5.1/158, Error ellipse: s-maj=12.8km s-min=9.8km az=78.0*
DJA ***17*** *21:45:05.1±0.7, 10°N±5°×12°6E±°, h49km±5km, M5.2/42, mb5.0/42, mB5.6/13, MLv5.6/3, Mw(mB)5.1/13, MwMwp4.9/2, Mwp5.2/2*
ISC 17 21:45:05.9±0.4,**9.99N**±0°.04×**126°.17E**±0°.06,**h60**km±3km, **h60**km:**pP-P**,**n650**,σ1$**32**/619,**mb5.0**/151,**MS3.8**/54, **23C-7D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.96**	**191**	P	**Pn**	**21 45 50.0**	**-0.5**
	379nm,0.3s,baz=278,slow=2.8,SNR=20						
DAV				S	**Sn**	**21 46 29.7**	**+4.8**
	1μm,0.7s,baz=126,slow=23,SNR=12						
DAV				LR	LR	21 47 33.0	
	comp=Z,3μm,20.0s,baz=349,slow=51						
	856nm,0.4s						
DAV	**Davao City (W)**	**2.96**	**191**	Pn	**Pn**	**21 45 51.5**	**+0.9**
DAV	**Davao City (W)**	**2.96**	**191**	P	**Pn**	**21 45 51.9**	**+1.3**
DAV	**Davao City (W)**	**2.96**	**191**	P	**Pn**	**21 45 53.1**	**+2.5**
SGSI	**Sangihe**	**6.30**	**186**	P	**Pn**	**21 46 37.2**	**+0.9**
	2.5nm6μm372nm,0.6s						
MYLDM	**Lahad Datu**	**8.98**	**238**	Pn	**Pn**	**21 47 12.6**	**-0.3**
MYLDM	**Lahad Datu**	**8.98**	**238**	P	**Pn**	**21 47 15.7**	**+2.8**
	55nm,0.9s						
TNTI	**Ternate**	**9.24**	**172**	Pn	**Pn**	**21 47 16.9**	**+0.4**
TNTI	**Ternate**	**9.24**	**172**	P	**Pn**	**21 47 17.3**	**+0.8**
	43nm,0.7s						
GTOI	**Gorontalo**	**9.81**	**199**	P	**Pn**	**21 47 24.1**	**-0.3**
	358nm60nm,0.8s						
TOLI2	**Tolitoli**	**10.32**	**212**	Pn	**Pn**	**21 47 30.2**	**-1.1**
TOLI2	**Tolitoli**	**10.32**	**212**	P	Pn	21 47 37.0	+5.7
MRSI	**Marisa**	**10.35**	**204**	P	**Pn**	**21 47 32.6**	**+0.9**
	47nm,0.6s						
KKM	**Kota Kinabalu**	**10.60**	**249**	Pn	**Pn**	**21 47 34.4**	**-0.9**
LBMI	**Labuha**	**10.64**	**173**	P	**Pn**	**21 47 37.6**	**+1.8**
	2μm63nm,0.8s						
LUWI	**Luwuk**	**11.47**	**197**	Pn	**Pn**	**21 47 47.0**	**-0.1**
LUWI	**Luwuk**	**11.47**	**197**	P	**Pn**	**21 47 49.5**	**+2.5**
	4μm139nm,0.9s						
APSI	**Ampana**	**11.73**	**203**	P	**Pn**	**21 47 53.6**	**+3.0**
	932nm81nm,1.0s						
SWI	**Sorong**	**11.92**	**155**	P	**Pn**	**21 47 52.8**	**-0.4**
SWI				pmax	pmax		
	comp=Z,19nm,0.5s						
SIJI	**Sorong**	**11.93**	**155**	P	**Pn**	**21 47 51.9**	**-1.4**
	comp=Z,1.8nm,0.3s,baz=342,slow=20,SNR=8.1						
SIJI				S	Sn	21 49 56.0	-8.8
	comp=Z,2.4nm,0.4s,baz=147,slow=23,SNR=1.7						
SIJI				LR	LR	21 53 29.8	
	comp=Z,133nm,18.4s,baz=314,slow=42						
	comp=Z,11nm,0.7s						
SIJI	**Sorong**	**11.93**	**155**	P	**Pn**	**21 47 52.3**	**-1.0**
	comp=Z,18nm,0.6s						
SANI	**Sanana**	**11.96**	**181**	P	**Pn**	**21 47 50.6**	**-3.2**
	comp=Z,60nm,0.8s						
SANI	**Sanana**	**11.96**	**181**	P	**Pn**	**21 47 53.8**	**0.0**
KRAI	**Karang Ratu**	**13.41**	**170**	P	**Pn**	**21 48 13.3**	**-0.2**
	comp=Z,5μmcomp=Z,32nm,0.6s						
RKPI	**Ransiki, Papua**	**13.94**	**145**	P	**Pn**	**21 48 20.8**	**+0.2**
	comp=Z,103nm,1.2s						
YULB	**Yu-li**	**14.11**	**341**	Pn	**Pn**	**21 48 23.7**	**+0.8**
FAKI	**Fak Fak**	**14.19**	**154**	Pn	**Pn**	**21 48 22.7**	**-1.2**
FAKI	**Fak Fak**	**14.19**	**154**	P	**Pn**	**21 48 23.1**	**-0.8**
	comp=Z,6μmcomp=Z,85nm,0.7s						
TPUB	**Ta-pu**	**14.25**	**339**		**P**	**21 48 29.4**	**-0.9**
TTSI	**Tana Toraja**	**14.41**	**206**	P	**Pn**	**21 48 28.5**	**+1.6**
	comp=Z,88nm,0.9s						
SSLB	**Suanglung**	**14.59**	**341**	P	**P**	**21 48 33.0**	**-1.1**
SPSI	**Sidrap Palu**	**15.26**	**205**	P	**Pn**	**21 48 39.3**	**+1.5**
	comp=Z,39nm,0.9s						
YHNB	**Yeheng**	**15.29**	**343**	P	**P**	**21 48 40.7**	**-1.3**
BNSI	**Bone**	**15.52**	**203**	P	**Pn**	**21 48 42.8**	**+1.6**
	comp=Z,734nmcomp=Z,35nm,0.8s						
SBUM	**Sibu**	**15.75**	**243**	P	**P**	**21 48 46.8**	**-0.2**
KAPI	**Kappang**	**16.22**	**203**	P	**Pn**	**21 48 49.1**	**-0.9**
	comp=Z,1.6nm,0.3s,baz=102,slow=8.3,SNR=1.9						
KAPI				LR	LR	21 55 22.2	
	comp=Z,314nm,20.2s,baz=4.0,slow=38						
	comp=Z,4.7nm,0.3s						
KAPI	**Kappang**	**16.22**	**203**	P	**Pn**	**21 48 50.1**	**+0.1**
KAPI	**Kappang**	**16.22**	**203**	*i* P	**Pn**	**21 48 49.5**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,46nm,1.1s						
KAPI	**Kappang**	**16.22**	**203**	P	**Pn**	**21 48 49.9**	**-0.2**
	comp=Z,44nm,1.1s						
BKSI	**Bulukumba**	**16.36**	**202**	P	**P**	**21 48 54.7**	**+0.9**
	comp=Z,592nmcomp=Z,28nm,0.8s						
JOW	**Kunigami**	**16.87**	**7**	P	**P**	**21 49 03.6**	**+4.3**
	comp=Z,28nm,0.7s,baz=186,slow=8.4,SNR=5.4						
JOW				LR	LR	21 54 33.8	
	comp=Z,231nm,21.6s,baz=144,slow=34						
JOW	**Kunigami**	**16.87**	**7**	P	**P**	**21 48 59.8**	**+0.5**
SMPI	**Sarmi**	**17.25**	**133**	P	**Pn**	**21 49 03.4**	**+0.4**
	comp=Z,54nm,1.0s						
GUMO	**Guam**	**18.65**	**77**	LR	LR	21 56 44.2	
	comp=Z,168nm,18.2s,baz=259,slow=37						
GENI	**Genyem**	**18.73**	**131**	P	**P**	**21 49 19.9**	**0.0**
	comp=Z,109nm,0.8s						
MMRI	**Maumere**	**18.91**	**192**	P	**P**	**21 49 21.9**	**-0.1**
MMRI				IAmb	IAmb	21 49 32.7	
	comp=Z,71nm,0.9s						
MMRI	**Maumere**	**18.91**	**192**	P	**Pn**	**21 49 26.6**	**+3.5**
	comp=Z,91nm,0.9s						
SOEI	**Soe**	**19.71**	**186**	P	**Pn**	**21 49 32.2**	**-0.5**
SOEI	**Soe**	**19.71**	**186**	P	**Pn**	**21 49 33.8**	**+1.1**
	comp=Z,65nm,0.9s						
PLAI	**Plampang**	**20.48**	**204**	P	Pn	21 49 44.5	+2.9
JSU	**Suzuyama**	**21.77**	**10**	P	**P**	**21 49 53.5**	**+0.7**
JCJ	**Chichijima**	**22.76**	**39**	LR	LR	21 57 05.4	
	comp=Z,206nm,21.4s,baz=278,slow=32						
NJ2	**Nanjing**	**22.97**	**344**	*e*P	**P**	**21 50 03.5**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,23nm,1.1s						
SMRI	**Semarang**	**23.06**	**223**	P	**P**	**21 50 07.2**	**+0.6**
SMRI				IAmb	IAmb	21 50 12.2	
	comp=Z,90nm,0.7s						
MTN	**Manton Dam**	**23.22**	**168**	P	**P**	**21 50 06.7**	**-1.3**
MTN				IAmb	IAmb	21 50 11.0	
	comp=Z,45nm,0.7s						
WHN	**Wuhan**	**23.22**	**333**	⇓P	**P**	**21 50 11.0**	**+3.1**
KDU	**Kakadu**	**23.39**	**164**	P	**P**	**21 50 08.9**	**-0.7**
MYKOM	**Kota Tinggi**	**23.63**	**251**	P	**P**	**21 50 11.3**	**-0.6**
MYKOM	**Kota Tinggi**	**23.63**	**251**	P	**P**	**21 50 13.7**	**+1.8**
BTDF	**Bukit Timah Da**	**23.86**	**250**	P	**P**	**21 50 15.9**	**+1.9**
	comp=Z,54nm,0.8s						
JMN	**Monobe**	**24.66**	**16**	P	**P**	**21 50 21.9**	**+0.7**
JMN				IAmb	IAmb	21 50 23.4	
	comp=Z,37nm,0.8s						
LEM	**Lembang**	**24.91**	**229**	P	**P**	**21 50 22.6**	**-1.1**
	comp=Z,16nm,0.5s,baz=344,slow=15,SNR=1.5						
	comp=Z,16nm,0.5s						
TNG	**Tangerang**	**25.22**	**231**	P	P	21 50 34.2	+7.8
	comp=Z,18μmcomp=Z,2μm,0.5s						
IPM	**Ipoh**	**25.52**	**259**	P	**P**	**21 50 30.0**	**+0.8**
IPM				IAmb	IAmb	21 50 33.1	
	comp=Z,32nm,0.8s						
IPM	**Ipoh**	**25.52**	**259**	P	**P**	**21 50 31.1**	**+1.9**
	comp=Z,45nm,0.8s						
KNRA	**Kununurra**	**25.63**	**174**	P	**P**	**21 50 29.8**	**-0.3**
KNRA				IAmb	IAmb	21 50 33.2	
	comp=Z,66nm,0.7s						
KNRA	**Kununurra**	**25.63**	**174**	P	**P**	**21 50 30.2**	**+0.1**
JHS	**Saijyo**	**25.69**	**13**	P	**P**	**21 50 30.1**	**-0.3**
JHJ	**Hachijo jima 2**	**26.21**	**27**	LR	LR	22 00 45.0	
	comp=Z,120nm,20.1s,baz=263,slow=36						
LWLI	**Liwa**	**26.59**	**237**	P	**P**	**21 50 40.8**	**+1.8**
	comp=Z,95nm,0.9s						
BKNI	**Bangkinang**	**26.77**	**250**	P	**P**	**21 50 40.8**	**+0.3**
BKNI				IAmb	IAmb	21 50 45.0	
	comp=Z,82nm,1.0s						
BKNI	**Bangkinang**	**26.77**	**250**	P	**P**	**21 50 42.4**	**+1.9**
	comp=Z,82nm,1.0s						
SDSI	**Sungai Dareh**	**26.91**	**248**	P	**P**	**21 50 42.8**	**+1.1**
	comp=Z,2μmcomp=Z,12nm,1.1s						
INU	**Inuyama**	**27.11**	**20**	P	**P**	**21 50 43.3**	**+0.1**
KSRS	**Korea Array**	**27.39**	**3**	P	**P**	**21 50 45.2**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=187,slow=9.1,SNR=12						
KSRS				LR	LR	22 01 15.7	
	comp=Z,66nm,21.8s,baz=190,slow=36						
	comp=Z,4.4nm,0.8s						
LYN	**LuoYang**	**27.47**	**335**	⇓*i*P	**P**	**21 50 45.8**	**-0.7**
LYN				pP	pP	21 51 02.4	+1.8
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
CM31	**Chiang Mai Arr**	**27.66**	**291**	P	**P**	**21 50 47.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**27.66**	**291**	P	**P**	**21 50 48.1**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=93,slow=7.8,SNR=27						
CMAR				PcP	**PcP**	**21 54 05.7**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=71,slow=0.7,SNR=8.9						
CMAR				LR	LR	22 03 32.8	
	comp=Z,92nm,18.1s,baz=110,slow=40						
	comp=Z,3.0nm,0.6s						
CHTO	**Chiang Mai**	**27.75**	**291**	P	**P**	**21 50 48.7**	**-0.5**
CHTO	**Chiang Mai**	**27.75**	**291**	P	**P**	**21 50 48.7**	**-0.5**
MNSI	**Mandailing Nat**	**27.97**	**253**	P	**P**	**21 50 52.3**	**+1.1**
	comp=Z,39nm,1.0s						
PSI	**Prapat**	**27.98**	**257**	P	**P**	**21 50 51.3**	**-0.1**
PSI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSI	**Prapat**	**27.98**	**257**	P	**P**	**21 50 53.8**	**+2.4**
	comp=Z,9.4nm,1.0s,comp=Z,15nm,1.0s						
PSI				P	**P**	**21 50 53.8**	**+2.4**
	comp=Z,9.4nm,1.0s,comp=Z,15nm,1.0s						
RPSI	**Rantau Prapat**	**28.01**	**257**	P	**P**	**21 50 51.2**	**-0.3**
PZH	**PanZhiHua**	**28.33**	**309**	P	**P**	**21 50 56.8**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,120nm,5.9s						
PMG	**Port Moresby**	**28.42**	**132**	P	**P**	**21 50 54.7**	**-0.5**
	comp=Z,21nm,0.7s,baz=248,slow=6.2,SNR=5.9						
	comp=Z,21nm,0.7s						
PMG	**Port Moresby**	**28.42**	**132**	P	**P**	**21 50 54.2**	**-1.0**
PMG				IAmb	IAmb	21 50 59.8	
	comp=Z,26nm,0.8s						
PMG	**Port Moresby**	**28.42**	**132**	*ce*P	**P**	**21 50 56.0**	**+0.8**
PMG				pmax	pmax		
	comp=Z,34nm,1.0s						
PMG	**Port Moresby**	**28.42**	**132**	P	**P**	**21 50 55.4**	**+0.2**
	comp=Z,34nm,0.9s						
MJAR	**Matsushiro Arr**	**28.60**	**21**	P	**P**	**21 50 55.1**	**-1.5**
	comp=Z,3.5nm,0.7s,baz=193,slow=9.3,SNR=11						
MJAR				LR	LR	22 00 37.8	
	comp=Z,164nm,21.9s,baz=202,slow=33						
	comp=Z,3.5nm,0.7s						
XAN	**Xi'an**	**28.69**	**329**	⇑P	**P**	**21 50 56.4**	**-1.0**
XAN				pmax	pmax		
	comp=Z,47nm,1.0s						
DL2	**Dalian**	**29.08**	**353**	P	**P**	**21 51 02.0**	**+1.3**
DL2				pmax	pmax		
	comp=Z,23nm,0.8s						
COEN	**Coen**	**29.17**	**144**	P	**P**	**21 51 01.6**	**-0.2**
COEN				IAmb	IAmb	21 51 14.5	
	comp=Z,90nm,1.9s						
HNS	**HongShan**	**29.18**	**341**	⇓P	**P**	**21 51 02.8**	**+1.1**
HNS				pmax	pmax		
	comp=Z,16nm,0.8s						
CD2	**Chengdu**	**29.45**	**318**	*e*P	**P**	**21 51 05.0**	**+0.8**
GSI	**Gunungsitoli**	**29.70**	**255**	P	**P**	**21 51 05.5**	**-1.1**
GSI				IAmb	IAmb	21 51 09.8	
	comp=Z,34nm,1.0s						
JSD	**Sado**	**29.97**	**19**	P	**P**	**21 51 06.6**	**-2.0**
WB0	**Warramunga Arr**	**30.66**	**165**	P	**P**	**21 51 13.0**	**-2.0**
JMM	**Marumori**	**30.72**	**23**	P	**P**	**21 51 14.4**	**-0.9**
JMM				IAmb	IAmb	21 51 28.4	
	comp=Z,65nm,1.5s						
WRAB	**Tennant Creek**	**30.81**	**165**	*ce*P	**P**	**21 51 15.2**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s						
WRAB	**Tennant Creek**	**30.81**	**165**	P	**P**	**21 51 14.5**	**-1.7**
WRA	**Warramunga Arr**	**30.82**	**165**	P	**P**	**21 51 14.8**	**-1.5**
	comp=Z,6.0nm,0.8s,baz=345,slow=9.6,SNR=28						
WRA				PcP	**PcP**	**21 54 13.2**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=343,slow=2.9,SNR=3.4						
WRA				S	**S**	**21 56 10.7**	**-5.2**
	comp=Z,1.1nm,1.0s,baz=327,slow=21,SNR=5.8						
WRA				ScP	**ScP**	**21 57 50.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=351,slow=3.9,SNR=3.9						
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**30.82**	**165**	P	**P**	**21 51 14.1**	**-2.2**
WB2	**Warramunga Arr**	**30.82**	**165**	P	**P**	**21 51 14.6**	**-1.7**
WR0	**Warramunga Arr**	**30.89**	**165**	P	**P**	**21 51 14.9**	**-2.0**
BJI	**Beijing**	**31.22**	**345**	P	**P**	**21 51 19.9**	**+0.3**
BJI				sP	**sP**	**21 51 40.6**	**-0.7**
BJI				pmax	pmax		
	comp=Z,14nm,1.5s						
MBWA	**Marble Bar**	**31.60**	**192**	P	**P**	**21 51 23.5**	**+0.3**
MBWA				IAmb	IAmb	21 52 28.5	
	comp=Z,54nm,1.4s						
PSA00	**Pilbara Seismi**	**31.98**	**191**	P	**P**	**21 51 26.1**	**-0.3**
PSA00				IAmb	IAmb	21 51 37.4	
	comp=Z,107nm,1.9s						
MSHR	**Mys Shultsa**	**32.76**	**7**	*i* P	**P**	**21 51 30.5**	**-2.6**
MSHR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZH	**Lanzhou**	**32.95**	**326**	⇓P	**P**	**21 51 35.6**	**+0.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
HHC	**Hu-ho-hao-te**	**33.34**	**340**	*e*P	**P**	**21 51 39.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,52nm,0.9s						
HHC				pmax	pmax		
	comp=Z,620nm,5.8s						
CN2	**Changchun**	**33.69**	**359**	*e*P	**P**	**21 51 45.3**	**+4.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AS31	**Alice Springs**	**34.30**	**167**	P	**P**	**21 51 46.1**	**-0.6**
ASAR	**Alice Springs**	**34.30**	**167**	P	**P**	**21 51 46.1**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=354,slow=7.0,SNR=71						
ASAR				PcP	**PcP**	**21 54 22.2**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=340,slow=2.5,SNR=7.4						
ASAR				S	**S**	**21 57 06.9**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=81,slow=23,SNR=6.4						
ASAR				ScP	**ScP**	**21 58 03.6**	**+1.4**
	comp=Z,2.2nm,1.0s,baz=343,slow=2.9,SNR=5.9						
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**34.30**	**167**	P	**P**	**21 51 45.1**	**-1.7**
USRK	**Ussuriysk Ar.**	**34.45**	**7**	P	**P**	**21 51 47.7**	**-0.1**
	comp=Z,5.9nm,0.7s,baz=189,slow=8.5,SNR=9.4						
USRK				LR	LR	22 04 44.8	
	comp=Z,80nm,20.8s,baz=178,slow=34						
	comp=Z,5.9nm,0.7s						
XLT	**XiLinHaoTe**	**34.90**	**347**	*e*P	**P**	**21 51 52.8**	**+1.0**
XLT				pP	pP	21 52 06.6	+1.1
XLT				sP	sP	21 52 17.0	+4.9
XLT				pmax	pmax		
	comp=Z,30nm,0.7s						
XLT				pmax	pmax		
	comp=Z,170nm,5.3s						
BRDH	**Bariadhala**	**35.35**	**295**	LR	LR	22 07 56.8	
	comp=Z,231nm,18.4s,baz=90,slow=39						
BNX	**BinXian**	**35.64**	**1**	⇓P	**P**	**21 51 58.9**	**+0.9**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,340nm,5.2s						
CTAO	**Charters Tower**	**35.84**	**147**	P	**P**	**21 51 59.9**	**-0.2**
CTAO				IAmb	IAmb	21 52 07.8	
	comp=Z,25nm,1.6s						
CTAO	**Charters Tower**	**35.84**	**147**	P	**P**	**21 51 59.9**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,25nm,1.6s						
CTAO	**Charters Tower**	**35.84**	**147**	P	**P**	**21 52 00.5**	**+0.5**
GTA	**Gaotai**	**37.55**	**326**	⇑P	**P**	**21 52 14.4**	**-0.2**
GTA				pP	pP	21 52 31.8	+2.1
GTA				sP	sP	21 52 40.6	+3.9
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GOMU	**GeErMu**	**38.58**	**318**	P	**P**	**21 52 24.1**	**+0.5**
GOMU				pmax	pmax		
	comp=Z,160nm,5.5s						
HNR	**Honiara**	**38.77**	**119**	LR	LR	22 06 24.9	
	comp=Z,819nm,21.2s,baz=312,slow=33						
KLR	**Kul'dur**	**39.39**	**6**	LR	LR	22 07 08.0	
	comp=Z,62nm,21.9s,baz=189,slow=34						
KLR	**Kul'dur**	**39.39**	**6**	*ce*P	**P**	**21 52 29.1**	**-0.6**
KLR				pmax	pmax		
	comp=Z,17nm,2.5s						
MORW	**Morawa**	**40.04**	**194**	P	**P**	**21 52 34.9**	**-0.5**
MORW				IAmb	IAmb	21 53 29.3	
	comp=Z,47nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**40.10**	**73**	T	T	22 35 47.7	
	baz=265,slow=78,SNR=205						
H11S1	**WAKE ISLAND Hy**	**40.11**	**73**	T	T	22 35 53.9	
	baz=265,slow=78,SNR=115						
H11S2	**WAKE ISLAND Hy**	**40.12**	**73**	T	T	22 35 42.3	
	baz=265,slow=78,SNR=92						
H11N1	**WAKE ISLAND Hy**	**40.44**	**71**	T	T	22 35 53.8	
	baz=265,slow=75,SNR=203						
H11N2	**WAKE ISLAND Hy**	**40.45**	**71**	T	T	22 35 55.4	
	baz=265,slow=75,SNR=217						
H11N3	**WAKE ISLAND Hy**	**40.46**	**71**	T	T	22 35 55.2	
	baz=265,slow=75,SNR=231						
FORT	**Forrest**	**40.58**	**177**	P	**P**	**21 52 39.8**	**+0.1**
RAMN	**Ramite**	**40.93**	**300**	*e*P	**P**	**21 52 42.9**	**-0.2**
	comp=Z,24nm,0.6s						
ULN	**Ulaanbaatar**	**41.05**	**340**	P	**P**	**21 52 44.0**	**+0.3**
ULN	**Ulaanbaatar**	**41.05**	**340**	*ce*P	**P**	**21 52 43.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	**Ulaanbaatar**	**41.05**	**340**	P	**P**	**21 52 44.3**	**+0.6**
	comp=Z,90nm,1.1s						
ULN	**Ulaanbaatar**	**41.05**	**340**	P	**P**	**21 52 44.2**	**+0.6**
ULN				ScP	**ScP**	**21 58 29.9**	**+2.6**
SONM	**Songino Array**	**41.24**	**340**	P	**P**	**21 52 45.3**	**+0.2**
	comp=Z,4.6nm,0.7s,baz=160,slow=9.5,SNR=23						
SONM				PcP	**PcP**	**21 54 43.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=165,slow=4.7,SNR=4.1						
SONM				ScP	**ScP**	**21 58 30.2**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=168,slow=3.5,SNR=8.3						
SONM				LR	LR	22 11 47.8	
	comp=Z,109nm,19.9s,baz=191,slow=39						
	comp=Z,4.6nm,0.7s						
SONM	**Songino Array**	**41.24**	**340**	P	**P**	**21 52 45.4**	**+0.2**
SONM	**Songino Array**	**41.24**	**340**	P	**P**	**21 52 45.4**	**+0.2**
SONM				pmax	pmax		
	comp=Z,16nm,1.4s						
JIRN	**Jiri**	**41.48**	**301**	*e*P	**P**	**21 52 46.9**	**-0.9**
	comp=Z,38nm,0.6s						
GUN	**Gumba**	**41.82**	**301**	*e*P	**P**	**21 52 49.2**	**-1.3**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**42.12**	**300**	*e*P	**P**	**21 52 52.1**	**-0.8**
	comp=Z,15nm,0.7s						
PKIN	**Phulchoki**	**42.13**	**300**	*e*P	**P**	**21 52 52.5**	**-0.5**
	comp=Z,15nm,0.6s						
DMN	**Daman**	**42.39**	**300**	*e*P	**P**	**21 52 54.4**	**-0.7**
EIDS	**Eidsvold**	**42.72**	**146**	P	**P**	**21 52 56.3**	**-1.1**
EIDS				IAmb	IAmb	21 53 13.4	
	comp=Z,91nm,1.9s						
GKN	**Gorkha**	**42.90**	**301**	*e*P	**P**	**21 52 58.1**	**-1.0**
	comp=Z,13nm,0.6s						
NWAO	**Narrogin (SRO)**	**43.52**	**191**	P	**P**	**21 53 04.0**	**+0.3**
NWAO				IAmb	IAmb	21 53 19.8	
	comp=Z,39nm,1.1s						
NWAO	**Narrogin (SRO)**	**43.52**	**191**	P	**P**	**21 53 04.0**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,39nm,1.1s						
NWAO	**Narrogin (SRO)**	**43.52**	**191**	P	**P**	**21 53 04.4**	**+0.7**
NWAO				pP	**pP**	**21 53 17.7**	**-1.4**
BBOO	**Buckleboo**	**43.60**	**168**	P	**P**	**21 53 03.7**	**-0.6**
BBOO				IAmb	IAmb	21 53 05.6	
	comp=Z,48nm,0.7s						
ZEA	**Zeya**	**43.64**	**1**	*e*P	**P**	**21 53 05.3**	**+0.9**
KOLN	**Koldanda**	**43.72**	**300**	*e*P	**P**	**21 53 04.4**	**-1.3**
DANN	**Dangsing**	**43.74**	**301**	*e*P	**P**	**21 53 04.8**	**-1.2**
	comp=Z,27nm,0.6s						
STKA	**Stephens Creek**	**44.17**	**161**	P	**P**	**21 53 08.9**	**-0.1**
	comp=Z,13nm,0.6s,baz=337,slow=8.4,SNR=24						
STKA				LR	LR	22 13 39.6	
	comp=Z,30nm,21.7s,baz=26,slow=39						
	comp=Z,13nm,0.6s						
STKA	**Stephens Creek**	**44.17**	**161**	P	**P**	**21 53 08.3**	**-0.7**
STKA	**Stephens Creek**	**44.17**	**161**	*i* P	**P**	**21 53 09.0**	**0.0**
PYUN	**Piuthan**	**44.33**	**300**	*e*P	**P**	**21 53 09.6**	**-1.0**
	comp=Z,29nm,0.8s						
PALK	**Pallekele**	**45.00**	**270**	LR	LR	22 13 24.8	
	comp=Z,67nm,18.1s,baz=192,slow=38						
HYBB	**Hyderabad (bro**	**46.74**	**284**	*e*P	**P**	**21 53 29.9**	**+0.3**
HYBB				*es*P	**pP**	**21

MK31 IAmb IAmb 21 54 11.6
comp=Z,10nm,0.8s
MK31 Makanchi Array 52.18 323*c iP* **P 21 54 10.2 -0.5**
MK31 Makanchi Array 52.18 323 P **P 21 54 09.9 -0.8**
comp=Z,13nm,0.7s,baz=121,slow=8.0,SNR=101
MK31 S **PcP 21 55 21.6 0.0**
comp=Z,3.3nm,0.7s,baz=116,slow=5.5,SNR=3.0
MKAR Makanchi Array 52.18 323 P **P 21 54 10.2 -0.5**
comp=Z,12nm,0.7s,baz=121,slow=8.2,SNR=127
MKAR PcP **PcP 21 55 21.6 0.0**
comp=Z,3.5nm,0.7s,baz=111,slow=5.0,SNR=5.5
MKAR ScP **ScP 21 59 13.5 -0.2**
comp=Z,0.4nm,0.8s,baz=134,slow=4.2,SNR=3.4
MKAR LR LR 22 18 03.1
comp=Z,113nm,21.3s,baz=126,slow=38
comp=Z,12nm,0.7s
MKAR Makanchi Array 52.18 323 P **P 21 54 10.0 -0.7**
SHLS Shalkode 52.28 318 *eP* **P 21 54 07.1 -4.4**
SHLS Shalkode 52.28 318 *eP* **P 21 54 07.1 -4.4**
baz=318
MAKZ Makanchi 52.38 323 P **P 21 54 11.3 -0.8**
MAKZ Makanchi 52.38 323 P **P 21 54 11.3 -0.8**
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
MAKZ Makanchi 52.38 323 P **P 21 54 11.7 -0.4**
MA2 Magadan 52.83 15 LR LR 22 16 03.7
comp=Z,24nm,20.6s,baz=158,slow=35
MA2 Magadan 52.83 15 P **P 21 54 15.7 +0.5**
MA2 Magadan 52.83 15 P **P 21 54 15.7 +0.5**
MA2 pmax pmax
comp=Z,99nm,1.9s
MA2 Magadan 52.83 15 P **P 21 54 16.5 +1.3**
KPKS Kokpek 52.92 318 *eP* **P 21 54 13.6 -2.6**
KPKS Kokpek 52.92 318 *eP* **P 21 54 13.7 -2.6**
baz=318
SATY Saty 52.94 317 *eP* **P 21 54 14.2 -2.2**
SATY Saty 52.94 317 *eP* **P 21 54 14.3 -2.2**
baz=317
TDK Taldyqorghan 53.75 319 *eP* **P 21 54 20.7 -1.5**
TDK Taldyqorghan 53.75 319 *eP* **P 21 54 20.8 -1.5**
baz=319
NIL Nilore 53.80 304 P **P 21 54 22.5 -0.3**
NIL IAmb IAmb 21 54 27.4
comp=Z,15nm,0.8s
NIL Nilore 53.80 304 P **P 21 54 22.5 -0.3**
NIL pmax pmax
comp=Z,15nm,0.8s
NIL Nilore 53.80 304 P **P 21 54 22.7 -0.1**
TNSS Tian-Shan 53.92 317 *eP* **P 21 54 22.3 -1.6**
TNSS Tian-Shan 53.92 317 *eP* **P 21 54 22.3 -1.6**
baz=317
NRN Naryn 53.98 314 P **P 21 54 23.6 -0.7**
NRN Naryn 53.98 314 P **P 21 54 23.6 -0.7**
NRN pmax pmax
comp=Z,6.0nm,1.4s
KUU Kurty 54.65 317 *eP* **P 21 54 27.2 -1.6**
KUU Kurty 54.65 317 *eP* **P 21 54 27.3 -1.6**
baz=317
ZAA0 Zalesovo Array 54.82 331 P **P 21 54 28.4 -1.4**
ZALV Zalesovo Beam 54.82 331 P **P 21 54 28.9 -0.8**
comp=Z,6.9nm,0.7s,baz=124,slow=6.8,SNR=28
ZALV PcP **PcP 21 55 30.4 -1.0**
comp=Z,2.2nm,0.5s,baz=121,slow=5.1,SNR=4.4
ZALV LR LR 22 20 19.1
comp=Z,68nm,18.2s,baz=72,slow=39
comp=Z,6.9nm,0.7s
ZALV Zalesovo Beam 54.82 331 P **P 21 54 28.4 -1.3**
AAK Ala-Archa 55.45 315 LR LR 22 20 23.0
comp=Z,99nm,22.0s,baz=103,slow=38
SEY Seymchan 56.11 14*ceP* **P 21 54 40.3 +1.4**
SEY pmax pmax
comp=Z,6.0nm,0.7s
KURK Kurchatov 56.24 326 P **P 21 54 39.0 -1.0**
KURK IAmb IAmb 21 54 40.4
comp=Z,18nm,0.8s
KURK Kurchatov 56.24 326*ceP* **P 21 54 39.3 -0.7**
KURK pmax pmax
comp=Z,19nm,0.7s
KURK Kurchatov 56.24 326 P **P 21 54 39.4 -0.6**
BTLS Baital 56.61 318 *eP* **P 21 54 40.8 -1.9**
BTLS Baital 56.61 318 *eP* **P 21 54 40.8 -1.9**
baz=318
SHEM Shemya Is, Ala 57.44 32 LR LR 22 13 34.9
comp=Z,77nm,21.5s,baz=146,slow=30
MSVF Nonsavu 58.18 118 LR LR 22 17 41.8
comp=Z,36nm,20.0s,baz=319,slow=34
CHGR Chuyangaron 58.18 309 P **P 21 54 52.6 -1.5**
CHGR IAmb IAmb 21 55 25.1
comp=Z,7.5nm,0.7s
CHGR Chuyangaron 58.18 309 P **P 21 54 52.6 -1.5**
CHGR pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 58.37 315 P **P 21 54 53.9 -1.4**
KK31 Karatay Array 58.37 315 P **P 21 54 53.9 -1.4**
KK31 pmax pmax
comp=Z,11nm,1.6s
KKAR Karatay Array 58.37 315 P **P 21 54 54.0 -1.2**
KKAR Karatay Array 58.37 315 P **P 21 54 54.0 -1.2**
IUG Iuzhnay 58.44 314 *eP* **P 21 54 54.1 -1.7**
IUG Iuzhnay 58.44 314 *eP* **P 21 54 54.2 -1.6**
baz=314
BRZS Berezniki 59.34 323 *eP* **P 21 55 00.2 -1.5**
BRZS Berezniki 59.34 323 *eP* **P 21 55 00.3 -1.5**
baz=323
TIXI Tiksi 61.63 1 LR LR 22 24 25.6
comp=Z,36nm,19.3s,baz=162,slow=38
TIXI Tiksi 61.63 1 P **P 21 55 17.3 +0.3**
TIXI Tiksi 61.63 1*ceP* **P 21 55 17.2 +0.3**
TIXI pmax pmax
comp=Z,46nm,1.0s
TIXI Tiksi 61.63 1 P **P 21 55 17.3 +0.3**
BVAR Borovoye Array 61.83 325 LR LR 22 24 47.3
comp=Z,39nm,18.4s,baz=114,slow=39
BRVK Borovoye 61.91 325 P **P 21 55 18.0 -1.2**
BRVK IAmb IAmb 21 55 19.5
comp=Z,9.2nm,0.8s
BRVK Borovoye 61.91 325*ceP* **P 21 55 18.8 -0.4**
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 61.91 325 P **P 21 55 18.4 -0.8**
BRVK sP **pP 21 55 39.0 +4.0**
BILL Bilibino 63.70 16*eP* **P 21 55 30.0 -0.8**
BILL *e* 21 57 49.1
BILL pmax pmax
comp=Z,45nm,2.5s
BILL MLR MLR
comp=Z,68nm,16.0s
NRIK Noril'sk 64.26 346 P **P 21 55 34.7 +0.2**
comp=Z,6.6nm,0.6s,baz=125,slow=8.9,SNR=8.9
NRIK LR LR 22 26 50.1
comp=Z,114nm,19.1s,baz=188,slow=39
comp=Z,6.6nm,0.6s
NRIK Noril'sk 64.26 346 P **P 21 55 34.1 -0.4**
NRIK IAmb IAmb 21 55 36.8
comp=Z,8.7nm,0.8s
NRIK Noril'sk 64.26 346*ceP* **P 21 55 33.3 -1.2**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
WSAR Wadi Sarin 65.55 291 LR LR 22 27 30.6
comp=Z,19nm,19.1s,baz=105,slow=39
GEYT Alibeck 66.63 307 P **P 21 55 50.1 -0.4**
comp=Z,5.4nm,0.9s,baz=129,slow=4.0,SNR=11
GEYT PcP **PcP 21 56 19.6 +0.2**
comp=Z,3.3nm,0.9s,baz=113,slow=3.3,SNR=4.3
comp=Z,5.4nm,0.9s
GEYT Alibeck 66.63 307 P **P 21 55 49.5 -0.9**
GYA0B ALIBECK ARRAY 66.63 307 P **P 21 55 50.3 -0.2**
NNZ Nelson 66.95 143 P **P 21 55 52.0 -0.3**
THZ Tophouse 67.01 144 P **P 21 55 52.5 -0.2**
ABKAR Akbulak array 67.02 319 P **P 21 55 51.2 -1.5**
NIKH Nikolski High 67.09 37 P **P 21 55 53.8 +0.8**
NIKH Nikolski High 67.09 37 P **P 21 55 54.2 +1.2**
baz=256
LBZ Lake Benmore 67.19 147 P **P 21 55 54.9 +1.2**
RPZ Rata Peaks 67.21 146 P **P 21 55 54.2 +0.3**
comp=Z,11nm,0.6s,baz=300,slow=8.3,SNR=2.4
comp=Z,11nm,0.6s
SPIA Saint Paul Isl 67.47 32 P **P 21 55 57.1 +1.8**
baz=253
BKZ Black Stump Fm 67.64 140 P **P 21 55 57.4 +0.7**
SVE Sverdlovsk 68.39 327 *eP* **P 21 56 00.8 -0.3**
SVE pmax pmax
comp=Z,14nm,0.9s
AKTO Aktyubinsk 68.47 320 LR LR 22 28 18.8
comp=Z,90nm,19.1s,baz=94,slow=38
UNV Unalaska Valle 68.67 36 P **P 21 56 04.5 +1.7**
baz=257
GAMB Gambell 68.96 25 P **P 21 56 05.9 +1.3**
baz=249
ARU Arti 69.40 327 LR LR 22 28 16.0
comp=Z,44nm,20.0s,baz=128,slow=37
ARU Arti 69.40 327 P **P 21 56 06.0 -1.4**
ARU IAmb IAmb 21 56 07.0
comp=Z,19nm,0.5s
ARU Arti 69.40 327*c iP* **P 21 56 06.2 -1.2**
ARU *PP **pP 21 56 23.3 -0.2**
ARU S **S 22 05 11.4 +1.5**
ARU pmax pmax
comp=Z,12nm,0.5s
ARU Arti 69.40 327 P **P 21 56 06.3 -1.1**
FALS False Pass 70.64 35 P **P 21 56 16.4 +1.4**
baz=260
TNA Tin City 71.09 24 P **P 21 56 19.0 +1.4**
baz=252
ANM Nome 71.84 25 P **P 21 56 23.0 +0.9**
baz=255
SDPT Sand Point 72.39 35 P **P 21 56 27.0 +1.5**
baz=262
CHNA Chernabura Isl 72.82 36 P **P 21 56 29.7 +1.6**
baz=263
RDOG Red Dog Mine 73.70 22 P **P 21 56 34.8 +1.7**
baz=256
N16K Nishlik Lake 74.01 30 P **P 21 56 36.6 +1.5**
baz=262
O16K Kokwok River B 74.23 31 P **P 21 56 38.2 +1.9**
baz=263
KIRV Kirov 74.63 328 LR LR 22 31 44.6
comp=Z,63nm,20.5s,baz=90,slow=38
KIRV Kirov 74.63 328*ceP* **P 21 56 37.4 -1.2**
O17K Koliganek Bris 74.75 31 P **P 21 56 41.3 +2.0**
baz=264
P17K Kvichak River 75.02 31 P **P 21 56 42.2 +1.3**
baz=264
Q17K Contact Creek 75.22 32 P **P 21 56 43.1 +0.9**
baz=265
N18K Kilae Creek 75.44 30 P **P 21 56 45.5 +2.1**
N18K IAmb IAmb 21 56 46.6
comp=Z,24nm,1.1s
N18K Kilae Creek 75.44 30 P **P 21 56 43.6 +0.2**
baz=264
GCSA Galena City Sc 75.46 26 P **P 21 56 44.0 +0.7**
baz=262
SVW2 Sparrevohn 75.64 29 P **P 21 56 43.7 -0.7**
SVW2 IAmb IAmb 21 57 48.0
comp=Z,74nm,2.0s
P18K Big Mountain, 75.66 31 P **P 21 56 45.1 +0.4**
P18K IAmb IAmb 21 57 19.2
comp=Z,47nm,1.2s
P18K Big Mountain, 75.66 31 P **P 21 56 46.0 +1.4**
baz=265
O18K Koktuh Hills 75.71 31 P **P 21 56 46.4 +1.5**
baz=265
Q18K Katmai Hardscr 75.72 32 P **P 21 56 46.7 +1.6**
baz=266
SII Sitkinak Islan 76.02 34 P **P 21 56 48.6 +1.8**
baz=267
L19K White Mountain 76.08 28 P **P 21 56 48.3 +1.3**
L19K IAmb IAmb 21 56 50.1
comp=Z,22nm,1.1s
L19K White Mountain 76.08 28 P **P 21 56 48.5 +1.6**
baz=265
N19K Bonanza Creek 76.14 30 P **P 21 56 48.0 +0.5**
N19K Bonanza Creek 76.14 30 P **P 21 56 49.4 +1.9**
baz=266
Q19K Cape Douglas, 76.44 32 P **P 21 56 48.6 -0.5**
Q19K Cape Douglas, 76.44 32 P **P 21 56 50.2 +1.1**
baz=267
A21K Barrow 76.50 19 P **P 21 56 49.4 +0.3**
A21K Barrow 76.50 19 P **P 21 56 50.8 +1.7**
baz=261
K20K Telida 76.54 27 P **P 21 56 51.1 +1.6**
baz=265
OHAK Old Harbor 76.55 33 P **P 21 56 49.4 -0.2**
OHAK Old Harbor 76.55 33 P **P 21 56 51.6 +2.0**
baz=268
L20K Farewell, AK 76.56 28 P **P 21 56 51.5 +1.8**
baz=266
J20K Nowinta River 76.57 26 P **P 21 56 50.5 +0.8**
J20K IAmb IAmb 21 56 52.4
comp=Z,16nm,1.2s
J20K Nowinta River 76.57 26 P **P 21 56 51.8 +2.1**
baz=265
P19K Oil Pt 76.69 31 P **P 21 56 52.4 +1.9**
baz=267
M20K Styx River 76.87 29 IAmb IAmb 21 56 56.3
comp=Z,18nm,1.1s
M20K Styx River 76.87 29 P **P 21 56 53.0 +1.5**
baz=267
IMAR Indian Mountai 76.90 24 P **P 21 56 51.6 +0.2**
KDAK Kodiak Island 76.95 33 LR LR 22 26 13.0
comp=Z,70nm,21.4s,baz=269,slow=32
KDAK Kodiak Island 76.95 33 P **P 21 56 52.7 +0.8**
KDAK Kodiak Island 76.95 33 P **P 21 56 52.7 +0.8**
KDAK pmax pmax
comp=Z,270nm,2.0s
KDAK Kodiak Island 76.95 33 P **P 21 56 53.4 +1.5**
baz=268
G21K Allakaket 77.04 24 P **P 21 56 53.8 +1.5**
baz=265,SNR=12
Q20K Shuyak Island 77.08 32 P **P 21 56 53.7 +1.1**
baz=268
GNI Garni 77.10 309 LR LR 22 36 36.6
comp=Z,31nm,19.4s,baz=74,slow=40
GNI Garni 77.10 309 *i* P **P 21 56 54.2 +0.8**
GNI pmax pmax
comp=Z,22nm,1.2s
F21K Alatna River 77.11 23 P **P 21 56 53.8 +1.1**
baz=265
H21K Melozitna Rive 77.26 25 P **P 21 56 54.1 +0.5**
H21K IAmb IAmb 21 56 56.6
comp=Z,14nm,0.8s
H21K Melozitna Rive 77.26 25 P **P 21 56 55.0 +1.5**
baz=266,SNR=6.5
N20K Mount Spurr 77.27 29 P **P 21 56 54.7 +0.9**
baz=266
SPCR Spurr Chakacha 77.27 29 P **P 21 56 54.8 +1.0**
baz=268
CHUM Lake Minchumin 77.36 27 P **P 21 56 55.3 +1.2**
baz=267
PPLA Purkeypile 77.36 28 P **P 21 56 55.2 +0.9**
PPLA IAmb IAmb 21 57 13.5
comp=Z,34nm,1.4s
PPLA Purkeypile 77.36 28 P **P 21 56 55.4 +1.1**
baz=267
CAST Castle Rocks 77.44 27 P **P 21 56 55.2 +0.6**
CAST IAmb IAmb 21 56 57.3
comp=Z,16nm,0.9s
CAST Castle Rocks 77.44 27 P **P 21 56 55.8 +1.2**
baz=267,SNR=6.8
HOM Homer 77.50 31 P **P 21 56 57.4 +2.4**
baz=268
I21K Tanana 77.57 25 P **P 21 56 56.2 +0.9**
baz=267
RAYN Ar Rayn 77.58 292 P **P 21 56 54.7 -1.5**
RAYN IAmb IAmb 21 56 56.6
comp=Z,22nm,1.6s
RAYN Ar Rayn 77.58 292 P **P 21 56 54.7 -1.5**
RAYN pmax pmax
comp=Z,22nm,1.6s
ZEI Tsey 77.63 312 *eP* **P 21 56 55.2 -1.1**
ZEI pmax pmax
comp=Z,17nm,1.0s
SKT Skwentna 77.63 29 P **P 21 56 56.8 +1.1**
baz=268
F22K Jon River 77.64 23 P **P 21 56 57.6 +2.0**
baz=266
CNPM China Poot 77.70 31 P **P 21 56 56.0 -0.1**
E22K Anaktuvuk Pass 77.82 22 P **P 21 56 58.5 +1.8**
baz=266
H22K Ishtalitna Cre 77.86 25 P **P 21 56 58.6 +1.7**
baz=267,SNR=9.2
BRLK Bradley Lake 77.89 31 P **P 21 56 56.5 -0.7**
BPAW Bear Paw Mtn. 77.95 26 P **P 21 56 59.0 +1.5**
baz=268,SNR=6.4
BRSE Bradley Lake S 77.96 31 P **P 21 56 58.1 +0.6**
baz=269
KTH Kantishna Hill 77.96 27 P **P 21 56 57.7 +0.2**
KTH IAmb IAmb 21 57 37.2
comp=Z,25nm,1.5s
ONI Oni 77.97 311 P **P 21 56 58.1 +0.1**
ONI IAmb IAmb 21 56 59.7
comp=Z,25nm,1.7s
ONI Oni 77.97 311 P **P 21 56 58.1 +0.1**
ONI pmax pmax
comp=Z,25nm,1.7s
SUA Susitna One 77.99 29 P **P 21 56 58.0 +0.2**
SUA Susitna One 77.99 29 P **P 21 56 58.5 +0.7**
baz=269
MLY Manley 78.09 26 P **P 21 56 58.3 +0.1**
MLY IAmb IAmb 21 57 00.9
comp=Z,18nm,0.6s
MLY Manley 78.09 26 P **P 21 56 59.8 +1.5**
baz=268,SNR=5.7
CUT Chulitna 78.23 28 P **P 21 56 59.5 +0.6**
baz=269
TRF Thorofare Moun 78.24 27 P **P 21 56 59.3 0.0**
TRF IAmb IAmb 21 57 01.3
comp=Z,9.4nm,0.8s
TRF Thorofare Moun 78.24 27 P **P 21 56 59.9 +0.7**
baz=269
D23K Nanushuk River 78.28 21 P **P 21 57 01.3 +2.1**
baz=267,SNR=7.4
M22K Willow 78.29 29 P **P 21 57 00.5 +1.2**
baz=269
KBZ Khabaz 78.32 313 P **P 21 56 58.6 -1.2**
comp=Z,4.9nm,0.9s,baz=123,slow=2.9,SNR=6.1
KBZ LR LR 22 35 38.5
comp=Z,54nm,19.2s,baz=128,slow=39
comp=Z,4.9nm,0.9s
KBZ Khabaz 78.32 313*ceP* **P 21 56 58.3 -1.5**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
C23K Itkillik River 78.35 21 P **P 21 57 01.5 +2.0**
baz=267,SNR=26
COLD Coldfoot 78.39 23 P **P 21 57 01.3 +1.5**
COLD IAmb IAmb 21 57 03.0
comp=Z,18nm,0.7s
COLD Coldfoot 78.39 23 P **P 21 57 01.5 +1.7**
baz=268
G23K Bananza Creek 78.44 24 P **P 21 57 02.0 +1.9**
baz=268
KIV Kislovodsk 78.46 313 P **P 21 57 00.1 -0.7**
KIV IAmb IAmb 21 57 02.0
comp=Z,11nm,0.8s
KIV Kislovodsk 78.46 313 *eP* **P 21 57 01.0 +0.2**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,39nm,19.0s
RC01 Rabbit Creek A 78.47 30 P **P 21 57 00.6 +0.2**
RC01 Rabbit Creek A 78.47 30 P **P 21 57 02.0 +1.6**
baz=270
O22K Cooper Landing 78.47 30 P **P 21 57 01.5 +1.2**
baz=270
SEW Seward 78.61 31 P **P 21 57 02.6 +1.5**
baz=270
H23K Yukon River 78.61 25 P **P 21 57 02.1 +1.1**
H23K IAmb IAmb 21 57 04.3
comp=Z,16nm,0.8s
H23K Yukon River 78.61 25 P **P 21 57 02.9 +1.8**
baz=269,SNR=12
E23K Chandalar 78.64 22 P **P 21 57 02.9 +1.6**
baz=268,SNR=15
TOLK Toolik Lake Re 78.67 22 P **P 21 57 03.2 +1.9**
TOLK IAmb IAmb 21 57 04.4
comp=Z,22nm,0.7s
TOLK Toolik Lake Re 78.67 22 P **P 21 57 02.6 +1.2**
baz=268,SNR=16
I23K Minto, Yukon-K 78.68 25 P **P 21 57 01.8 +0.5**
I23K IAmb IAmb 21 57 04.6
comp=Z,19nm,0.7s
I23K Minto, Yukon-K 78.68 25 P **P 21 57 02.9 +1.5**
baz=269,SNR=6.2
PMR Palmer 78.76 29 P **P 21 57 03.0 +1.1**
baz=270
NEA2 Nenana 78.80 26 P **P 21 57 02.8 +0.7**
NEA2 IAmb IAmb 21 57 04.6
comp=Z,18nm,0.8s
NEA2 Nenana 78.80 26 P **P 21 57 03.6 +1.5**
baz=270,SNR=6.2
VRH Novokhopyorsk 78.81 320 *eP* **P 21 57 00.5 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.7s
MCK McKinley 78.85 27 P **P 21 57 02.4 0.0**
MCK McKinley 78.85 27 P **P 21 57 02.4 0.0**
MCK pmax pmax
comp=Z,34nm,0.7s
MCK McKinley 78.85 27 P **P 21 57 03.4 +1.0**
baz=270,SNR=18
RND Reindeer 78.89 27 IAmb IAmb 21 57 04.3
comp=Z,40nm,1.5s
D24K Happy Valley 78.95 21 P **P 21 57 04.6 +1.8**
baz=269
C24K Franklin Bluff 79.01 21 P **P 21 57 04.4 +1.3**
baz=269
WAT1 Susitna Watana 79.03 28 P **P 21 57 03.5 +0.1**
baz=270
E24K Your Creek 79.06 22 P **P 21 57 05.1 +1.5**
baz=270
KNK Knik Glacier 79.09 29 P **P 21 57 04.1 +0.3**
KNK Knik Glacier 79.09 29 P **P 21 57 05.9 +2.1**
baz=271
SML Sawmill 79.14 29 IAmb IAmb 21 57 06.2
comp=Z,34nm,1.0s
SML Sawmill 79.14 29 P **P 21 57 05.4 +1.3**
baz=271
PWL Port Wells 79.16 30 P **P 21 57 04.3 +0.2**
PWL IAmb IAmb 21 57 06.2
comp=Z,31nm,0.8s
PWL Port Wells 79.16 30 P **P 21 57 05.2 +1.1**
baz=271
MDM Murphy Dome 79.16 26 IAmb IAmb 21 57 07.5
comp=Z,10nm,0.8s
GURO Guroymak-BITLI 79.28 307 IAmb IAmb 21 57 07.0
comp=Z,17nm,0.7s
F24K Squaw Lake 79.29 23 P **P 21 57 06.6 +1.9**
baz=270,SNR=17
H24K Noodor Dome 79.30 25 P **P 21 57 06.6 +1.7**
baz=270,SNR=7.3
TCOL CIGO, UAF Yank 79.31 26 P **P 21 57 04.7 -0.1**
baz=271
COLA College 79.32 26 P **P 21 57 05.2 +0.4**
baz=271
WAT6 Susitna Watana 79.41 28 P **P 21 57 06.1 +0.5**
baz=271,SNR=7.6
M23K Glacier View 79.43 29 P **P 21 57 05.7 +0.1**
baz=271
G24K Hadweenzic Riv 79.45 24 P **P 21 57 07.4 +1.7**
baz=271,SNR=6.5
POKR Poker Plat Res 79.49 25 P **P 21 57 07.2 +1.3**
baz=271
DHY Denali Highway 79.56 28 P **P 21 57 07.4 +1.0**
baz=272
SCM Sheep Creek Mo 79.62 29 P **P 21 57 07.6 +0.9**
baz=272
P23K Montague Islan 79.64 31 P **P 21 57 08.2 +1.5**
baz=272
KLMR Klimovskoe 79.72 330 *eP* **P 21 57 05.3 -1.8**
KLMR *e* 22 00 08.1
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR Klimovskoe 79.72 330 *eP* **P 21 57 05.3 -1.8**
KLMR AMP 21 57 07.4
comp=Z,16nm,1.4s
KLMR *e*PP **PP 22 00 08.1 -0.4**
HDA Harding Lake 79.72 26 IAmb IAmb 21 57 08.1
comp=Z,17nm,0.6s
HDA Harding Lake 79.72 26 P **P 21 57 07.9 +0.8**
baz=272,SNR=11
ILAR Eielson Array 79.73 26 P **P 21 57 07.2 0.0**
comp=Z,5.5nm,0.7s,baz=239,slow=4.8,SNR=44
comp=Z,5.5nm,0.7s
GLI Glacier Island 79.76 30 P **P 21 57 08.4 +1.0**
baz=272
D25K Kavik River 79.83 21 P **P 21 57 09.1 +1.4**
baz=271
G25K Bearman Lake 80.00 24 P **P 21 57 09.8 +1.2**
baz=272
H25K Birch Creek 80.13 24 P **P 21 57 10.3 +1.1**
baz=272
F25K Christian Rive 80.15 23 P **P 21 57 10.7 +1.3**
baz=272,SNR=6.8
M24K Tolsona, Glenn 80.15 28 P **P 21 57 10.3 +0.7**
baz=273
E25K Arctic Village 80.16 22 P **P 21 57 10.8 +1.3**
baz=272,SNR=7.1
K24K Donnelly Dome 80.25 27 P **P 21 57 11.3 +1.2**
baz=273
KLU Klutina 80.30 29 IAmb IAmb 21 58 09.6
comp=Z,52nm,1.7s

KLU	Klutina	80.30	29	P	P	21 57 12.1	+1.7
	baz=273						
C26K	Camden Bay	80.32	21	P	P	21 57 11.3	+1.1
	baz=272						
VORR	Voronezh	80.36	321	eP	P	21 57 09.4	-1.4
VORR				pmax	pmax		
	comp=Z,20nm,0.5s						
MARD	Mardin	80.37	306	IAmb	IAmb	21 57 12.2	
	comp=Z,11nm,0.7s						
J25K	Salcha River,	80.39	26	P	P	21 57 11.7	+0.9
	baz=273,SNR=5.5						
DIV	Divide	80.39	29	IAmb	IAmb	21 57 15.4	
	comp=Z,20nm,0.6s						
VSR	Storozhevoye	80.42	320	eP	P	21 57 08.8	-2.3
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PAX	Paxson	80.43	28	P	P	21 57 12.1	+1.0
	baz=273,SNR=5.3						
EYAK	Cordova Ski Ar	80.44	30	P	P	21 57 12.0	+1.0
	baz=273						
LPSR	Galich'ya Gora	80.47	322	eP	P	21 57 10.2	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HARP	HAARP	80.61	28	P	P	21 57 12.9	+0.9
	baz=274						
RIDG	Independent Ri	80.67	27	P	P	21 57 12.5	+0.2
RIDG				IAmb	IAmb	21 57 14.3	
	comp=Z,32nm,1.0s						
RIDG	Independent Ri	80.67	27	P	P	21 57 13.3	+1.0
	baz=274,SNR=8.4						
F26K	Sheenjek River	80.71	23	P	P	21 57 13.6	+1.1
	baz=274						
C27K	Jago River	80.75	21	P	P	21 57 14.0	+1.5
	baz=274,SNR=6.3						
G26K	Porcupine Rive	80.90	24	P	P	21 57 15.1	+1.7
	baz=274						
N25K	Chitina, Valde	80.93	29	P	P	21 57 14.7	+1.0
	baz=274						
BMRM	Bremner River	80.97	30	P	P	21 57 14.8	+0.8
	baz=274						
SCRK	Sand Creek	81.03	27	IAmb	IAmb	21 57 16.7	
	comp=Z,25nm,1.5s						
SCRK	Sand Creek	81.03	27	P	P	21 57 15.3	+1.0
	baz=274,SNR=6.9						
KAIM	Kayak Island	81.14	31	P	P	21 57 15.9	+1.1
	baz=275						
J26L	Joseph Creek	81.18	26	P	P	21 57 15.3	+0.3
J26L	Joseph Creek	81.18	26	P	P	21 57 15.7	+0.7
	baz=275,SNR=8.7						
I26K	Coal Creek Min	81.28	25	IAmb	IAmb	21 57 17.4	
	comp=Z,10.0nm,0.8s						
I26K	Coal Creek Min	81.28	25	P	P	21 57 16.4	+0.9
	baz=275						
L26K	Log Cabin Wild	81.40	27	IAmb	IAmb	21 57 20.3	
	comp=Z,7.8nm,0.6s						
L26K	Log Cabin Wild	81.40	27	P	P	21 57 17.0	+0.9
	baz=275						
ATD	Arta Tunnel	81.57	280	LR	LR	22 32 30.5	
	comp=Z,15nm,18.5s,baz=24,slow=35						
M26K	Nabesna, AK	81.61	28	IAmb	IAmb	21 57 20.2	
	comp=Z,19nm,1.2s						
M26K	Nabesna, AK	81.61	28	P	P	21 57 18.4	+1.0
	baz=276,SNR=8.0						
E27K	Coleen River	81.63	22	P	P	21 57 18.6	+1.3
	baz=276,SNR=9.4						
OBN	Obninsk	81.66	325⇑	eP	P	21 57 18.4	+0.8
OBN				e		22 00 23.4	
OBN				ePPP	PPP	22 02 13.6	
OBN				eS	S	22 07 29.6	+4.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,44nm,23.0s						
BGLC	Bering Glacier	81.69	30	P	P	21 57 19.3	+1.6
	baz=276						
MCARA	McCarthy VSAT	81.70	29	P	P	21 57 17.6	-0.1
	baz=276						
G27K	Doyon Strip	81.75	24	P	P	21 57 18.2	+0.2
	baz=276,SNR=5.5						
H27K	Steamboat Moun	81.86	24	P	P	21 57 20.0	+1.4
	baz=276						
K27K	Chicken	81.87	26	IAmb	IAmb	21 57 23.4	
	comp=Z,20nm,0.8s						
K27K	Chicken	81.87	26	P	P	21 57 20.6	+2.0
	baz=276						
I27K	Kandik River	81.90	25	P	P	21 57 20.4	+1.6
	baz=276,SNR=24						
L27K	Beaver Creek,	82.08	27	P	P	21 57 20.0	+0.2
L27K				IAmb	IAmb	21 57 24.1	
	comp=Z,12nm,0.8s						
L27K	Beaver Creek,	82.08	27	P	P	21 57 21.9	+2.2
	baz=276,SNR=10						
M27K	Edge Creek, AK	82.14	28	IAmb	IAmb	21 57 24.1	
	comp=Z,12nm,0.9s						
M27K	Edge Creek, AK	82.14	28	P	P	21 57 21.4	+1.2
	baz=276						
EGAK	Eagle	82.18	26	P	P	21 57 21.6	+1.4
	baz=277,SNR=7.3						
MESA	MESA	82.35	30	P	P	21 57 22.4	+0.9
	baz=277						
CTG	Chitna Glacier	82.56	29	P	P	21 57 23.3	+0.8
	baz=277,SNR=8.9						
BVCY	Beaver Creek	82.60	28	P	P	21 57 23.5	+1.0
	baz=277,SNR=5.6						
YUK3	Moose Creek	82.87	29	P	P	21 57 25.4	+1.2
	baz=278						
DAWY	Dawson	83.03	26	P	P	21 57 26.0	+1.3
DAWY				IAmb	IAmb	21 57 27.8	
	comp=Z,47nm,1.6s						
DAWY	Dawson	83.03	26	P	P	21 57 26.1	+1.3
	baz=278,SNR=9.3						
O28M	Mount Upton	83.14	30	P	P	21 57 26.4	+0.8
	baz=278						
PINM	Pinnacle	83.20	30	P	P	21 57 27.9	+2.1
	baz=278						
GAZ	Gaziantep	83.22	306	IAmb	IAmb	21 57 27.5	
	comp=Z,10.0nm,0.7s						
YUK8	Steele Glacier	83.27	29	P	P	21 57 27.7	+1.5
	baz=278						
I29M	Ogilvie Camp,	83.30	25	IAmb	IAmb	21 57 29.0	
	comp=Z,60nm,1.7s						
I29M	Ogilvie Camp,	83.30	25	P	P	21 57 27.3	+1.3
	baz=279,SNR=11						
J29M	Klondike Camp	83.48	26	P	P	21 57 28.2	+1.1
	baz=279						
M29M	Somme Creek	83.70	28	P	P	21 57 29.5	+1.2
	baz=279,SNR=10						
L29M	L29M	83.74	27	P	P	21 57 30.2	+1.8
	baz=280,SNR=19						
EPYK	Eagle Plains	83.77	24	IAmb	IAmb	21 57 30.9	
	comp=Z,14nm,0.8s						
EPYK	Eagle Plains	83.77	24	P	P	21 57 29.8	+1.4
	baz=281,SNR=6.3						
YUK4	Talbot Arm	83.79	29	P	P	21 57 30.1	+1.2
	baz=280						
G30M	tAoh Zraii Nji	83.85	23	P	P	21 57 29.7	+0.8
	baz=281						
K29M	Barlow Dome	83.89	26	P	P	21 57 30.6	+1.4
	baz=280,SNR=8.8						
YUK6	Outpost Mounta	84.00	29	P	P	21 57 31.8	+1.8
	baz=280						
O29M	Mount Kennedy	84.00	30	P	P	21 57 31.1	+1.3
	baz=280						
BNN	Bunyan	84.06	308	IAmb	IAmb	21 57 30.5	
	comp=Z,23nm,1.0s						
SPB2	Spitsbergen Ar	84.27	349	P	P	21 57 30.0	-0.8
SPA0	Spitsbergen Ar	84.27	349	eP	P	21 57 31.4	+0.6
SPA0				IAmb	IAmb	21 57 34.2	
	comp=Z,54nm,1.2s						
SPITS	Spitsbergen Ar	84.27	349	LR	LR	22 41 56.2	
	comp=Z,50nm,18.2s,baz=42,slow=40						
ARA0	ARCESS Array S	84.42	340	eP	P	21 57 31.9	+0.2
ARA0				IAmb	IAmb	21 57 36.2	
	comp=Z,84nm,1.8s						
ARCES	ARCESS Array B	84.42	340	P	P	21 57 31.8	+0.2
	comp=Z,3.9nm,0.6s,baz=83,slow=6.7,SNR=36						
	comp=Z,3.9nm,0.6s						
HYT	Haines Junctio	84.43	29	P	P	21 57 33.3	+1.3
	baz=280,SNR=11						
N30M	Aishikik Lake	84.51	29	P	P	21 57 33.9	+1.5
	baz=281,SNR=8.6						
P29M	Windy Craggy	84.53	30	P	P	21 57 34.0	+1.6
	baz=280,SNR=7.4						
INK	Inuvik	84.58	22	IAmb	IAmb	21 57 34.8	
	comp=Z,30nm,1.4s						
INK	Inuvik	84.58	22	P	P	21 57 33.9	+1.5
	baz=283,SNR=7.6						
F31M	Tsiigehtchic	84.70	22	P	P	21 57 34.0	+0.9
	baz=283						
HAMF	Hammerfest	84.75	341	eP	P	21 57 32.8	-0.4
P30M	Million Dollar	84.83	30	P	P	21 57 35.7	+1.8
	baz=281						
O30N	Mendenhall	85.12	29	P	P	21 57 36.8	+1.4
	baz=282,SNR=5.4						
N31M	Braeburn, Yuko	85.12	28	P	P	21 57 36.9	+1.6
	baz=282						
PLBC	Pleasant Camp	85.25	31	P	P	21 57 37.4	+1.4
	baz=282						
KTK1	Kautokeino	85.33	339	eP	P	21 57 36.2	0.0
KTK1				IAmb	IAmb	21 57 41.5	
	comp=Z,55nm,1.9s						
M31M	Drury Creek, Y	85.61	28	IAmb	IAmb	21 57 40.6	
	comp=Z,12nm,0.8s						
M31M	Drury Creek, Y	85.61	28	P	P	21 57 39.8	+2.0
	baz=283,SNR=5.3						
BR131	Keskin Array S	85.63	309	IAmb	IAmb	21 57 49.0	
	comp=Z,7.1nm,0.9s						
BR131	Keskin Array S	85.63	309	i P	P	21 57 37.2	-1.3
BRTR	Keskin Array B	85.63	309	P	P	21 57 37.0	-1.5
	comp=Z,3.8nm,0.8s,baz=100,slow=4.0,SNR=16						
BRTR				LR	LR	22 39 26.2	
	comp=Z,45nm,21.0s,baz=106,slow=38						
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	85.63	309	P	P	21 57 37.0	-1.5
WHY	Whitehorse	85.73	29	P	P	21 57 40.3	+1.8
	baz=283,SNR=8.4						
SKAG	Skagway	85.77	30	P	P	21 57 40.0	+1.4
	baz=282						
FARO	Faro, Yukon	86.08	27	P	P	21 57 41.3	+1.2
	baz=284,SNR=5.6						
FINES	FINESS Array B	86.08	332	P	P	21 57 39.7	-0.4
	comp=Z,5.4nm,0.4s,baz=76,slow=4.8,SNR=120						
FINES				LR	LR	22 40 27.5	
	comp=Z,61nm,19.3s,baz=90,slow=39						
	comp=Z,5.4nm,0.4s						
JETT	Jettan, Norway	86.13	340	eP	P	21 57 40.1	-0.1
JETT				IAmb	IAmb	21 57 42.3	
	comp=Z,14nm,0.6s						
EIL	Elat	86.17	299	LR	LR	22 41 23.3	
	comp=Z,21nm,19.2s,baz=96,slow=39						
SIT	Sitka	86.29	33	P	P	21 57 42.9	+1.7
	baz=283						
R32K	Eaglecrest	86.44	31	P	P	21 57 42.9	+1.0
	baz=283						
N32M	Quiet Lake	86.47	29	P	P	21 57 42.7	+0.7
	baz=284,SNR=6.4						
P32M	Atlin	86.54	30	P	P	21 57 43.9	+1.5
	baz=284						
S32K	Killisnoo	86.59	32	P	P	21 57 43.2	+0.5
	baz=283						
AKASG	Malin Array Be	86.71	321	P	P	21 57 42.4	-1.0
	comp=Z,2.3nm,0.6s,baz=68,slow=4.7,SNR=14						
AKASG				LR	LR	22 41 36.7	
	comp=Z,29nm,19.0s,baz=156,slow=39						
	comp=Z,2.3nm,0.6s						
AKASG	Malin Array Be	86.71	321	IAmb	IAmb	21 57 43.7	
	comp=Z,9.8nm,1.3s						
AKBB	Malin Array Si	86.71	321	IAmb	IAmb	21 57 43.8	
	comp=Z,9.8nm,1.0s						
AKBB	Malin Array Si	86.71	321	ceP	P	21 57 43.0	-0.4
MNK	Minsk	86.72	325	i P	P	21 57 42.8	-0.5
MNK				i *PP	pP	21 57 59.8	-0.4
MNK				i		22 01 05.7	
MNK				i PPP	PPP	22 03 00.2	
MNK				i S	SKSac	22 08 03.5	-1.4
MNK				i		22 08 23.1	
MNK				i SS	SS	22 13 59.7	+1.7
MNK				i SSS	SSS	22 17 32.6	
MNK				pmax	pmax		
	comp=N,15nm,0.7s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,210nm,20.0s						
MNK				MLR	MLR		
	comp=Z,56nm,17.0s						
MNK	Minsk	86.72	325	i P	P	21 57 42.9	-0.5
	comp=E,1.0nm,0.7s						
MNK				i P	P	21 57 42.9	-0.5
	comp=N,15nm,0.7s						
MNK				i P	P	21 57 42.9	-0.5
	comp=Z,5.0nm,0.7s,baz=258						
MNK				i pP	pP	21 57 59.8	-0.4
MNK				i PP	PP	22 01 05.7	-0.3
MNK				i PPP	PPP	22 03 00.2	
MNK				i S	SKSac	22 08 03.6	-1.4
MNK				i sS	pS	22 08 33.9	-3.5
MNK				i SS	SS	22 13 59.8	+1.7
MNK				i SSS	SSS	22 17 32.6	
MNK				i LR	LR	22 37 13.8	
MNK				i LRM	MLR	22 38 10.0	
	comp=N,210nm,19.8s						
MNK				i LRM	MLR	22 38 43.8	
	comp=Z,56nm,16.6s						
MNK				i LRM	MLR	22 38 49.6	
	comp=E,4.0nm,12.8s						
P33M	Teslin, Yukon	86.83	29	P	P	21 57 45.1	+1.3
	baz=284						
NOR	Nord	86.84	355	i P	P	21 57 44.0	+0.5
MMPY	Sheldon Lake,	86.92	27	P	P	21 57 45.1	+0.8
	baz=286						
NACGM	Naroch	87.25	325⇓	eP	P	21 57 45.0	-0.9
	baz=77						
Q32M	Nakina River	87.42	31	P	P	21 57 47.3	+0.4
	baz=285						
C36M	Paulatuk	87.54	20	P	P	21 57 48.0	+1.0
	baz=292						
PPT2	Papeete2	87.58	108	eLR	LR	22 25 42.7	
	comp=E,87nm,22.0s						
U33K	Whale Pass	87.69	33	P	P	21 57 48.6	+0.7
	baz=284						
CRAG	Craig	87.85	34	P	P	21 57 50.8	+2.1
	baz=284						
R33M	Jennings River	87.94	30	P	P	21 57 51.1	+1.8
	baz=286						
WRAK	Wrangell Islan	88.03	33	P	P	21 57 50.6	+1.0
	baz=285						
S34M	Telegraph Cree	88.27	31	P	P	21 57 52.0	+1.3
	baz=286						
STEI	Steigen	88.47	339	eP	P	21 57 50.5	-0.9
STEI				IAmb	IAmb	21 57 55.4	
	comp=Z,26nm,1.4s						
KIBK	Kibwezi	88.55	267	P	P	21 57 51.9	-1.1
TGTN	Hyland Airport	88.59	28	P	P	21 57 54.2	+1.9
	baz=288,SNR=7.8						
FAUS	Fauske	88.67	339	eP	P	21 57 51.4	-1.0
DLBC	Dease Lake	88.69	31	LR	LR	22 31 44.3	
	comp=Z,48nm,20.8s,baz=272,slow=32						
TBI	Tubuai	88.81	114	eLR	LR	22 26 15.6	
	comp=Z,175nm,25.2s						
T35M	Bob Quinn	88.99	32	P	P	21 57 55.8	+1.6
	baz=287						
GIRR	Girov	89.29	318	⇑P	P	21 57 55.2	-0.5
TESR	Tescani	89.30	317	⇑P	P	21 57 54.6	-1.2
MAW	Mawson	89.40	200	P	P	21 57 55.6	-0.1
	comp=Z,4.1nm,0.6s,baz=70,slow=4.5,SNR=18						
	comp=Z,4.1nm,0.6s						
MAW	Mawson	89.40	200	P	P	21 57 56.0	+0.3
MAW	Mawson	89.40	200	P	P	21 57 56.0	+0.3
MAW				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VNDA	Vanda	89.67	173	P	P	21 57 57.0	+0.2
	comp=Z,2.6nm,0.7s,baz=311,slow=6.1,SNR=17						
VNDA				LR	LR	22 37 31.7	
	comp=Z,31nm,20.8s,baz=325,slow=35						
	comp=Z,2.6nm,0.7s						
VNDA	Vanda	89.67	173	P	P	21 57 56.8	0.0
VNDA				IAmb	IAmb	21 57 58.2	
	comp=Z,7.6nm,1.1s						
BURAR	Bucovina Array	89.98	318	⇑P	P	21 57 58.0	-1.1
BURAR	Bucovina Array	89.98	318	IAmb	IAmb	21 58 00.9	
	comp=Z,4.6nm,0.7s						
BUR08	Bucovina Ar. S	89.98	318	IAmb	IAmb	21 58 00.3	
	comp=Z,5.4nm,0.9s						
WRGLY	Wrigley	90.09	25	P	P	21 58 00.8	+1.7
	baz=293						
LIRD	Liard River Hi	90.31	29	P	P	21 58 02.0	+1.8
	baz=290						
KOTAN	Kotaneelee Air	91.01	28	P	P	21 58 05.0	+1.5
	baz=292						
DAG	Danmarks Havn	91.01	352	i P	P	21 58 02.0	-1.2
KOLS	Kolonicke sedl	91.51	320	eP	P	21 58 05.6	-0.5
UZH	Uzhgorod	91.59	320	eP	P	21 58 06.5	+0.1
UZH				e		21 58 18.9	
UZH				e		21 58 24.9	
DRGR		91.85	318	⇑P	P	21 58 04.7	-3.0
CRVS	Cervenica-Dubn	92.03	320	eP	P	21 58 08.9	+0.4
HFS	Hagfors	92.25	332	LR	LR	22 41 39.8	
	comp=Z,56nm,20.9s,baz=70,slow=37						
SIRR	Siria	92.69	318	⇓P	P	21 58 10.0	-1.6
NB2	NORSAR Subarra	92.96	334	P	P	21 58 11.2	-1.4
	comp=Z,2.8nm,0.8s,baz=68,slow=4.6						
NB2	NORSAR Subarra	92.96	334	P	P	21 58 11.2	-1.4
	baz=68,slow=4.6						
NOA	NORSAR Array B	92.96	334	P	P	21 58 10.9	-1.7
	comp=Z,1.8nm,0.8s,baz=66,slow=4.5,SNR=5.7						
NOA				LR	LR	22 43 08.4	
	comp=Z,41nm,21.8s,baz=45,slow=38						
	comp=Z,1.8nm,0.8s						
IDI	Anoyia	93.35	307	LR	LR	22 46 40.4	
	comp=Z,15nm,18.9s,baz=74,slow=40						
JMIC	Jan Mayen	93.67	346	LR	LR	22 45 22.5	
	comp=Z,32nm,18.9s,baz=28,slow=39						
VYHS	Vyhne	93.81	320	eP	P	21 58 15.7	-1.0
YKA	Yellowknife Ar	94.05	24	P	P	21 58 18.9	+1.4
	comp=Z,8.2nm,0.7s,baz=296,slow=4.6,SNR=13						
	comp=Z,8.2nm,0.7s						
MORC	Moravsky Berou	94.17	322	eP	P	21 58 17.8	-0.6
JAVC	Velka Javorina	94.41	321	eP	P	21 58 20.3	+0.8
VRAC	Vranov	94.91	322	LR	LR	22 46 10.2	
	comp=Z,33nm,18.7s,baz=92,slow=39						
VRAC	Vranov	94.91	322	eP	P	21 58 21.6	-0.1
TAOE	Nuku Hiva Isla	95.10	98	eLR	LR	22 29 10.8	
	comp=Z,254nm,24.9s						
KRUC	Moravsky	95.12	322	eP	P	21 58 22.8	+0.1
MBAR	Mbarara	95.45	270	LR	LR	22 40 50.4	
	comp=Z,46nm,18.8s,baz=18,slow=35						
KHC	Kasperske Hory	96.81	322	eP	P	21 58 29.0	-1.4
KHC	Kasperske Hory	96.81	322	eP	P	21 58 29.0	-1.4
GERES	GERESS Array B	96.85	322	P	P	21 58 30.1	-0.6
	comp=Z,1.2nm,0.6s,baz=71,slow=5.8,SNR=14						
	comp=Z,1.2nm,0.6s						
GERES	GERESS Array B	96.85	322	P	P	21 58 29.6	-1.1
WTTA	Wattenberg	98.76	321	i P	P	21 58 39.0	-0.4
	comp=Z,3.5nm,0.8s						
SQTA	Sankt Quirin	99.04	321	i P	Pdif	21 58 40.2	-0.4
	comp=Z,3.2nm,0.8s						
MOTA	Moosalm	99.05	321	i P	Pdif	21 58 40.1	-0.6
	comp=Z,2.6nm,0.8s						
RETA	Reutte	99.20	322	eP	Pdif	21 58 40.6	-0.7
	comp=Z,4.5nm,1.1s						
FETA	Feichten	99.42	321	i P	Pdif	21 58 42.2	-0.2
	comp=Z,2.6nm,1.0s						
NEW	Newport	99.65	37	P	Pdif	21 58 44.6	+1.4
	baz=297						
DAVOX	Davos/Dischmat	100.05	321	LR	LR	22 48 35.6	
	comp=Z,34nm,18.8s,baz=82,slow=38						
MSO	Missoula	102.23	38	P	Pdif	21 58 54.9	+0.1
	baz=299						
SCZ2	Santa Cruz Isl	103.86	51	P	Pdif	21 59 01.6	-0.6
	baz=292						
EGMT	Eagleton	104.05	35	P	Pdif	21 59 02.8	-0.1
	baz=303						
CWC	Cottonwood Cre	104.08	48	P	Pdif	21 59 02.8	-0.5
	baz=294						
MPMC	Manual Prospec	104.67	49	P	Pdif	21 59 06.8	+0.8
	baz=294						
RSSD	Black Hills	109.54	36	P	PKiKP	22 03 30.7	+0.3
	baz=307						
TX31	Lajitas Ar. Si	118.08	49	PKPdf	PKPdf	22 03 46.5	-0.4
TX32	Lajitas Array	118.08	49	PKPdf	PKiKP	22 03 47.3	+0.3
TXAR	Lajitas Array	118.08	49	PKP	PKiKP	22 03 48.1	+1.1
	comp=Z,0.5nm,0.6s,baz=5.7,slow=0.9,SNR=7.6						
TXAR	Lajitas Array	118.08	49	PKPdf	PKPdf	22 03 46.3	-0.6
JCT	Junction City	120.27	46	P	PKPdf	22 03 51.1	0.0
	baz=305						
TORD	Torodi Ar. Bea	120.27	292	PKP	PKPdf	22 03 50.4	-1.0
	comp=Z,1.8nm,0.7s,baz=27,slow=2.3,SNR=14						
TORD				PP	PP	22 05 17.1	-0.5
	comp=Z,0.6nm,0.8s,baz=77,slow=7.8,SNR=3.7						
TORD	Torodi Ar. Bea	120.27	292	PKPdf	PKPdf	22 03 50.2	-1.2
SMAI	San Martin Ant	121.27	174	PKPdf	PKPdf	22 03 51.3	-0.4
833A	Chaparral WMA,	121.78	48	P	PKiKP	22 03 54.2	+0.1
	baz=304						
MIAR	Mount Ida	121.86	38	P	PKPdf	22 03 53.9	0.0
	baz=312						
BATG	Bathurst New B	121.96	10	PKPdf	PKPdf	22 03 53.8	+0.1
O48B	Farmland	122.21	28	P	PKPdf	22 03 53.7	-0.8
	baz=323						
LONY	Lake Ozonia	122.49	17	P	PKPdf	22 03 54.3	-0.6
	baz=336						
ERPA	Erie	122.86	23	P	PKPdf	22 03 54.9	-0.8
	baz=329						
M53A	WI Miller and	123.17	24	P	PKiKP	22 03 56.4	-0.1
	baz=328						
ACSO	Alum Creek Sta	123.21	26	P	PKPdf	22 03 56.4	0.0
	baz=325						
WCI	Wyandotte Cave	123.25	30	P	PKiKP	22 03 56.8	0.0
	baz=321						
PKME	Peaks-Kenny Pk	123.26	13	P	PKPdf	22 03 56.3	+0.1
	baz=342						
LBNH	Lisbon	123.58	16	P	PKPdf	22 03 56.6	-0.4
	baz=339						
O53A	New Philadelph	123.95	25	P	PKPdf	22 03 57.8	0.0
	baz=327						
WVT	Waverly	124.05	33	PKPdf	PKPdf	22 03 57.3	-0.8
WVT	Waverly	124.05	33	PKIKP	PKPdf	22 03 57.3	-0.8
WVT	Waverly	124.05	33	P	PKiKP	22 03 58.6	+0.3
	baz=319						
P52A	Corning	124.07	26	P	PKPdf	22 03 57.4	-0.7
	baz=326						
PLAL	Pickwick Lake	124.77	34	PKPdf	PKPdf	22 03 57.3	-2.2
U49A	Red Boiling Sp	124.84	31	PKPdf	PKPdf	22 03 59.5	-0.1
KOWA	Kowa	124.94	295	PKPdf	PKPdf	22 03 58.8	-1.6
SSPA	Standing Stone	124.94	22	P	PKiKP	22 04 00.3	+0.2
	baz=331						
MCWV	Mont Chateau	125.02	24	P	PKiKP	22 04 00.4	+0.2
	baz=328						
L61B	Northampton	125.03	17	P	PKPdf	22 03 59.5	-0.3
	baz=337						
TZTN	Tazewell	125.93	30	P	PKPdf	22 04 01.1	-0.6
	baz=323						
PAL	Palisades	125.98	19	P	PKiKP	22 04 02.6	+0.5
	baz=336						
LRAL	Lakeview Retre	126.81	35	PKPdf	PKPdf	22 04 02.7	-0.7
LRAL	Lakeview Retre	126.81	35	P	PKiKP	22 04 04.1	+0.2
	baz=318						
BLA	Blacksburg	126.83	27	P	PKPdf	22 04 03.5	0.0
	baz=327						
KMSC	Kings Mountain	128.12	29	P	PKPdf	22 04 05.9	0.0
	baz=325						
NHSC	New Hope	130.33	29	P	PKPdf	22 04 09.8	-0.3
	baz=325						
RIMA	Rio Macho	144.25	58	PKPdf	PKPdf	22 04 35.8	-0.7
SRBA	San Rafael, Bu	144.95	58		PKPbc	22 04 37.1	+0.2
PLCA	Paso Flores	145.99	157	PKPbc	PKPbc	22 04 39.3	-0.1
	comp=Z,3.9nm,0.7s,baz=204,slow=3.7,SNR=12						
PLCA	Paso Flores	145.99	157	PKPbc	PKPab	22 04 39.8	-0.1
SDDR	Presa de Saban	146.46	31	PKPdf	PKPdf	22 04 39.7	-0.3

IDC 17 22:10:21.9±2.5, 8°46S×147°63E, h0km, mb3.9/6, mbtmp3.9/8, ML3.6/2, MS3.6/3, Error ellipse: s-maj=77.6km s-min=10.6km az=106.0

ISC 17 22:10:27.3±1.6, 8°58S±0°10×147°4E±0°3, h35km, n12, σ0°72/10, mb4.0/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**		**0.87 198**	Pn		**Pn**		**22 10 42.0**	**-1.1**
	318nm,0.3s,baz=21,slow=7.5,SNR=213								
PMG				Lg		Lg		22 10 56.7	
	565nm,0.3s,baz=22,slow=21,SNR=12								
CTA	**Charters Tower**		**11.50 186**	Pn		**Pn**		**22 13 10.0**	**+0.8**
	0.4nm,0.3s,baz=5.9,slow=15,SNR=2.3								
CTA				LR		LR		22 17 00.4	
	comp=Z,88nm,18.1s,baz=281,slow=34								
	1.1nm,0.4s								
HNR	**Honiara**		**12.39 95**	LR		LR		22 17 20.9	
	comp=Z,875nm,20.0s,baz=28,slow=34								
WRA	**Warramunga Arr**		**16.98 227**	P		**P**		**22 14 23.3**	**-0.6**
	0.2nm,0.3s,baz=53,slow=12,SNR=6.2								
	0.5nm,0.6s								
ASAR	**Alice Springs**		**19.83 219**	P		**Pn**		**22 14 57.6**	**+0.7**
	1.4nm,0.5s,baz=53,slow=9.7,SNR=22								
	1.4nm,0.5s								
KSRS	**Korea Array**		**49.30 339**	P		**P**		**22 19 12.9**	**0.0**
	2.0nm,0.7s,baz=152,slow=8.1,SNR=4.8								
	2.0nm,0.7s								
USRK	**Ussuriysk Ar.**		**54.36 346**	P		**P**		**22 19 50.3**	**-0.3**
	1.1nm,0.6s,baz=178,slow=9.0,SNR=2.6								
	1.1nm,0.6s								
CMAR	**Chiang Mai Arr**		**54.87 300**	P		**P**		**22 19 55.3**	**+0.6**
	0.4nm,0.3s,baz=118,slow=5.7,SNR=1.1								
	0.4nm,0.3s								
YAK	**Yakutsk**		**71.74 351**	LR		LR		22 52 04.3	
	comp=Z,26nm,18.9s,baz=262,slow=35								
MKAR	**Makanchi Array**		**79.75 321**	P		**P**		**22 22 32.0**	**+0.2**
	0.9nm,0.6s,baz=108,slow=5.6,SNR=11								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**		**81.41 328**	P		**P**		**22 22 39.8**	**-0.7**
	0.9nm,0.5s,baz=122,slow=5.2,SNR=4.3								
	0.9nm,0.5s								
TORD	**Torodi Ar. Bea**		**146.07 281**	PKPbc		**PKPdf**		**22 30 04.0**	**+0.2**
	0.4nm,0.6s,baz=102,slow=6.6,SNR=6.2								

IDC 17 22:27:51.4±5.0, 2°16S×139°84E, h0km, mb3.2/2, mbtmp3.3/3, ML3.1/1, MS3.3/1, Error ellipse: s-maj=192.9km s-min=32.1km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**		**18.47 197**	P			Pn	22 32 09.1	0.0
	0.1nm,0.3s,baz=17,slow=12,SNR=3.4								
	0.5nm,0.7s								
ASAR	**Alice Springs**		**22.14 195**	P			P	22 32 49.1	+0.2
	0.5nm,0.5s,baz=28,slow=12,SNR=7.3								
ASAR				LR			LR	22 42 57.9	
	comp=Z,70nm,18.5s,baz=258,slow=41								
	0.5nm,0.5s								
MKAR	**Makanchi Array**		**70.05 322**	P			P	22 39 05.1	-0.2
	0.2nm,0.7s,baz=117,slow=5.2,SNR=2.1								
	0.2nm,0.7s								

IDC 17 22:40:09.5±2.1, 16°61S×174°71W, h0km, mb3.9/5, mbtmp3.9/5, MS3.9/52, Error ellipse: s-maj=123.6km s-min=25.7km az=151.0

GCMT 17 22:40:16.0±0.3, 16°66S±0°05×174°40W±0°02, h16km±1km, MW4.8/80, Moment Tensor Solution. s21,c21; s80,c94; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.91±.16; Mθθ=0.25±.10; Mφφ=1.66±.11; Mrθ=0.55±.44; Mφθ=0.28±.07; Mrφ=0.94±.31; Best double couple: M0=2.11000×10^16 NP1:φs=200.00000°, δ60.00000°, λ-82.00000°. NP2: φs=4.00000°, δ31.00000°, λ-104.00000°. Principal axes: T 1.9900, Plg15.0000°, Azm284.0000°; N 0.2370, Plg7.0000°, Azm16.0000°; P -2.2300, Plg73.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function

ISC 17 22:40:11.1±1.8, 16°4S±0°6×174°9W±0°4, h10km, n87, σ1°01/18, mb3.8/5, MS4.0/50, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**		**3.85 51**	LR		LR		22 42 24.5	
	comp=Z,1μm,21.0s,baz=172,slow=35								
MSVF	**Nonsavu**		**6.92 258**	LR		LR		22 44 19.4	
	comp=Z,4μm,18.5s,baz=95,slow=36								
RAO	**Raoul Island**		**13.12 192**	LR		LR		22 47 40.7	
	comp=Z,178nm,19.3s,baz=286,slow=35								
RAR	**Rarotonga**		**15.07 111**	LR		LR		22 48 00.6	
	comp=Z,341nm,19.4s,baz=300,slow=32								
DZM	**Mont Dzumac**		**18.54 249**	*e*LR		LR		22 49 13.1	
	comp=Z,2μm,25.5s								
DZM	**Mont Dzumac**		**18.54 249**	LR		LR		22 50 29.5	
	comp=Z,950nm,19.5s,baz=39,slow=33								
URZ	**Urewera**		**22.92 196**	LR		LR		22 52 34.2	
	comp=Z,211nm,20.7s,baz=110,slow=33								
PAE	**Paea**		**24.20 97**	*e*T		T		23 10 03.8	
	4.1nm,0.3s								
PPT	**Papeete**		**24.20 96**	LR		LR		22 52 11.9	
	comp=Z,235nm,21.3s,baz=208,slow=30								
PPT2	**Papeete2**		**24.20 97**	*e*LR		LR		22 50 43.3	
	comp=Z,989nm,26.0s								
TVO	**Taravao**		**24.51 97**	*e*T		T		23 10 30.4	
	4.2nm,0.3s								
TBI	**Tubuai**		**24.85 110**	*e*LR		LR		22 51 03.0	
	comp=Z,966nm,27.8s								
TBI	**Tubuai**		**24.85 110**	*e*T		T		23 10 52.8	
	8.6nm,0.3s								
VAH	**Vaihoa**		**26.22 91**	*e*T		T		23 12 36.8	
	10nm,0.3s								
RPZ	**Rata Peaks**		**29.77 201**	LR		LR		22 58 36.3	
	comp=Z,147nm,18.1s,baz=26,slow=37								
TAOE	**Nuku Hiva Isla**		**34.64 82**	*e*LR		LR		22 55 32.3	
	comp=Z,555nm,28.0s								
TAOE	**Nuku Hiva Isla**		**34.64 82**	*e*T		T		23 23 14.1	
	58nm,0.2s								
CTA	**Charters Tower**		**37.07 258**	LR		LR		23 00 48.0	
	comp=Z,321nm,19.2s,baz=82,slow=33								
PMG	**Port Moresby**		**37.62 276**	LR		LR		23 01 33.7	
	comp=Z,151nm,18.8s,baz=92,slow=34								
H11S2	**WAKE ISLAND Hy 39.11 332**			T		T		23 29 47.6	
	baz=150,slow=75,SNR=12								
H11S3	**WAKE ISLAND Hy 39.12 332**			T		T		23 29 48.2	
	baz=150,slow=75,SNR=6.3								
H11S1	**WAKE ISLAND Hy 39.13 332**			T		T		23 29 49.1	
	baz=150,slow=75,SNR=8.1								
H11N3	**WAKE ISLAND Hy 40.09 333**			T		T		23 31 01.2	
	baz=151,slow=76,SNR=20								
H11N1	**WAKE ISLAND Hy 40.10 333**			T		T		23 30 59.7	
	baz=151,slow=76,SNR=37								
H11N2	**WAKE ISLAND Hy 40.11 333**			T		T		23 31 04.3	
	baz=151,slow=76,SNR=28								
STKA	**Stephens Creek**		**42.34 240**	LR		LR		23 02 52.6	
	comp=Z,159nm,21.7s,baz=52,slow=32								
WRA	**Warramunga Arr**		**48.26 258**	P		**P**		**22 48 53.5**	**+0.7**
	0.8nm,0.9s,baz=97,slow=7.7,SNR=5.0								
WRA				LR		LR		23 08 04.9	
	comp=Z,187nm,19.6s,baz=96,slow=35								
	0.8nm,0.9s								
ASAR	**Alice Springs**		**48.48 253**	P		**P**		**22 48 54.8**	**+0.3**
	5.6nm,0.9s,baz=87,slow=8.1,SNR=37								
ASAR				LR		LR		23 08 37.2	
	comp=Z,367nm,18.1s,baz=112,slow=35								
	5.6nm,0.9s								
GUMO	**Guam**		**49.70 304**	LR		LR		23 07 55.5	
	comp=Z,67nm,20.3s,baz=118,slow=33								
SIJI	**Sorong**		**55.25 281**	LR		LR		23 12 45.6	
	comp=Z,121nm,19.7s,baz=128,slow=35								
JCJ	**Chichijima**		**60.04 315**	LR		LR		23 12 11.3	
	comp=Z,104nm,19.9s,baz=108,slow=32								
VNDA	**Vanda**		**62.27 186**	LR		LR		23 12 07.8	
	comp=Z,20nm,21.4s,baz=342,slow=31								
DAV	**Davao City (W)**		**63.36 287**	LR		LR		23 16 49.2	
	comp=Z,65nm,18.5s,baz=154,slow=35								
KAPI	**Kappang**		**65.00 272**	LR		LR		23 18 28.8	
	comp=Z,34nm,19.0s,baz=108,slow=35								
JHJ	**Hachijo jima 2**		**65.56 319**	LR		LR		23 19 42.1	
	comp=Z,38nm,18.1s,baz=199,slow=36								
MJAR	**Matsushiro Arr**		**68.79 321**	LR		LR		23 15 59.4	
	comp=Z,47nm,21.5s,baz=147,slow=31								
SHEM	**Shemya Is, Ala**		**69.48 353**	LR		LR		23 19 02.7	
	comp=Z,36nm,18.1s,baz=302,slow=34								
JOW	**Kunigami**		**69.94 307**	LR		LR		23 16 37.0	
	comp=Z,95nm,19.9s,baz=317,slow=31								
PETK	**Petropavlovsk-**		**73.14 343**	LR		LR		23 20 31.8	
	comp=Z,41nm,18.9s,baz=141,slow=33								
PFO	**Pinyon Flats O**		**74.61 47**	LR		LR		23 16 25.9	
	comp=Z,170nm,20.5s,baz=241,slow=29								
LPIG	**La Paz**		**74.74 59**	LR		LR		23 16 12.9	
	comp=Z,143nm,18.5s,baz=235,slow=29								
YBH	**Yreka Blue Hor**		**75.22 38**	LR		LR		23 16 25.6	
	comp=Z,124nm,19.3s,baz=234,slow=29								
KSRS	**Korea Array**		**75.88 316**	LR		LR		23 20 12.2	
	comp=Z,21nm,20.8s,baz=145,slow=32								
NVAR	**Mina Array Bea**		**75.99 42**	LR		LR		23 16 56.1	
	comp=Z,156nm,20.7s,baz=266,slow=29								
KDAK	**Kodiak Island**		**76.16 12**	LR		LR		23 20 34.7	
	comp=Z,47nm,19.4s,baz=214,slow=32								
LEM	**Lembang**		**76.17 267**	LR		LR		23 25 57.8	
	comp=Z,92nm,19.4s,baz=171,slow=36								
USRK	**Ussuriysk Ar.**		**77.33 324**	LR		LR		23 19 18.0	
	comp=Z,87nm,20.2s,baz=113,slow=30								
ELK	**Elko**		**79.24 42**	LR		LR		23 19 07.4	
	comp=Z,91nm,20.8s,baz=232,slow=30								
KLR	**Kul'dur**		**80.58 328**	LR		LR		23 23 07.3	
	comp=Z,38nm,21.4s,baz=152,slow=32								
MA2	**Magadan**		**80.67 343**	LR		LR		23 22 58.3	
	comp=Z,45nm,20.9s,baz=155,slow=32								
NEW	**Newport**		**82.30 35**	LR		LR		23 22 06.9	
	comp=Z,43nm,19.6s,baz=220,slow=30								
TXAR	**Lajitas Array**		**82.31 57**	P		**P**		**22 52 34.0**	**+0.5**
	0.3nm,0.8s,baz=218,slow=5.7,SNR=5.0								
TXAR				LR		LR		23 20 32.4	
	comp=Z,96nm,19.7s,baz=234,slow=29								
	0.3nm,0.8s								
ANMO	**Albuquerque**		**82.50 50**	LR		LR		23 19 54.4	
	comp=Z,103nm,21.2s,baz=241,slow=29								
DLBC	**Dease Lake**		**83.12 22**	LR		LR		23 21 14.9	
	comp=Z,34nm,19.9s,baz=278,slow=30								
ILAR	**Eielson Array**		**83.67 12**	P		**P**		**22 52 41.2**	**+1.5**
	3.8nm,1.3s,baz=211,slow=6.3,SNR=7.0								
	3.8nm,1.3s								
PMSA	**Palmer Station**		**83.86 156**	LR		LR		23 21 09.1	
	comp=Z,38nm,20.1s,baz=282,slow=29								
PDAR	**Pinedale Array**		**83.92 42**	P		**P**		**22 52 41.7**	**-0.1**
	0.5nm,0.7s,baz=224,slow=3.8,SNR=3.9								
PDAR				LR		LR		23 22 41.1	
	comp=Z,72nm,20.3s,baz=248,slow=30								
	0.5nm,0.7s								
CMIG	**Matias Romero**		**85.52 71**	LR		LR		23 22 08.4	
	comp=Z,92nm,20.2s,baz=204,slow=30								
H03S2	**Juan Fernandez**		**85.83 124**	T		T		00 27 07.8	
	baz=250,slow=75,SNR=70								
H03S1	**Juan Fernandez**		**85.84 124**	T		T		00 27 07.8	
	baz=250,slow=75,SNR=76								
H03S3	**Juan Fernandez**		**85.84 124**	T		T		00 27 07.8	
	baz=250,slow=75,SNR=84								
H03N2	**Juan Fernandez**		**85.94 124**	T		T		00 27 13.0	
	baz=257,slow=73,SNR=8.1								
H03N3	**Juan Fernandez**		**85.94 124**	T		T		00 27 13.0	
	baz=257,slow=73,SNR=8.4								
H03N1	**Juan Fernandez**		**85.95 124**	T		T		00 27 11.4	
	baz=257,slow=73,SNR=11								
MAW	**Mawson**		**86.42 199**	LR		LR		23 30 45.9	
	comp=Z,33nm,18.1s,baz=64,slow=35								
APG	**El Apazote**		**88.94 74**	LR		LR		23 25 28.5	
	comp=Z,51nm,18.4s,baz=52,slow=31								
YAK	**Yakutsk**		**89.46 337**	LR		LR		23 26 04.0	
	comp=Z,24nm,21.8s,baz=94,slow=31								
PLCA	**Paso Flores**		**89.89 133**	LR		LR		23 25 19.0	
	comp=Z,69nm,21.4s,baz=242,slow=30								
CMAR	**Chiang Mai Arr**		**91.59 289**	LR		LR		23 30 21.2	
	comp=Z,52nm,21.6s,baz=130,slow=33								
SNAA	**Sanae**		**92.00 177**	LR		LR		23 30 14.4	
	comp=Z,25nm,20.7s,baz=154,slow=33								
ATAH	**Atahualpa**		**94.17 99**	LR		LR		23 25 52.1	
	comp=Z,100nm,21.1s,baz=262,slow=29								
NNA	**Nana**		**94.19 104**	LR		LR		23 26 25.5	
	comp=Z,37nm,22.0s,baz=251,slow=30								
ULM	**Lac du Bonnet**		**95.57 39**	LR		LR		23 28 54.1	
	comp=Z,76nm,21.4s,baz=152,slow=31								
LVC	**Limon Verde**		**97.85 116**	LR		LR		23 27 29.1	
	comp=Z,71nm,20.2s,baz=228,slow=29								
MORC	**Moravsky Berou**		**145.20 346**	*e*PKP		**PKiKP**		**22 59 51.0**	**-2.0**
VRAC	**Vranov**		**145.85 347**	*e*PKP		**PKiKP**		**22 59 53.2**	**-1.1**
BRTR	**Keskin Array B**		**146.00 319**	PKPbc		**PKPbc**		**22 59 51.1**	**-0.5**
	1.0nm,1.1s,baz=40,slow=2.5,SNR=1.7								
KRUC	**Moravsky**		**146.13 347**	*e*PKP		**PKPab**		**22 59 52.2**	**+0.1**
GERES	**GERESS Array B**		**146.87 350**	PKPbc		**PKPbc**		**22 59 53.3**	**-0.5**
	0.1nm,0.3s,baz=36,slow=2.6,SNR=2.4								
CONA	**Conrad Observa**		**147.32 347**	*i* P		**PKiKP**		**22 59 58.4**	**+0.9**
	6.2nm,1.4s								
ARSA	**Arzberg**		**148.03 347**	*i* P		**PKPab**		**22 59 58.5**	**-1.2**
	7.1nm,1.1s								
RETA	**Reutte**		**148.63 353**	*e*P		**PKiKP**		**22 59 59.8**	**-0.3**
	6.0nm,1.7s								
WATA	**Walderalm**		**148.67 352**	*e*P		**PKiKP**		**22 59 59.8**	**-0.5**
	2.9nm,0.9s								
SOKA	**Soboth**		**148.69 347**	*e*P		**PKiKP**		**22 59 59.1**	**-1.2**
	5.1nm,1.6s								
WTTA	**Wettenberg**		**148.73 351**	*e*P		**PKiKP**		**23 00 00.3**	**-0.2**
	3.0nm,0.9s								
FETA	**Feichten**		**149.09 353**	*i* P		**PKPab**		**23 00 02.8**	**-1.3**
	3.2nm,1.2s								
ABTA	**Abfaltersbach**		**149.10 350**	*i* P		**PKiKP**		**23 00 00.5**	**-0.7**
	5.9nm,1.5s								

NEIC 17 23:07:49.8±2.3, 24°21S±0°03×67°4W±0°1, h209km±9km, mb4.1/3, ML4.2(GUC), Error ellipse: s-maj=18.2km s-min=4.4km az=92.0

GUC 17 23:07:51.6±0.5, 24°20S×67°55W, h207km±9km, ML4.2

IDC 17 23:08:01.5±9.7, 23°23S×66°90W, h262km±69km, mb3.2/1, mbtmp4.0/3, Error ellipse: s-maj=110.2km s-min=41.2km az=28.0

ISC 17 23:07:49.4±0.9, 24°19S±0°04×67°36W±0°10, h198km±9km, n47, σ1°40/70, mb3.4/3, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**		**1.44 328**	Pn		**Pn**		**23 08 23.3**	**+0.5**
AF01				Sn		**S**		**23 08 48.9**	**+0.3**
LVC	**Limon Verde**		**2.12 317**	LR		LR		23 09 15.3	
	comp=Z,66nm,19.1s,baz=94,slow=38								
LVC	**Limon Verde**		**2.12 317**	Pn		**Pn**		**23 08 30.1**	**+0.7**
LVC				Sn		**S**		**23 09 00.6**	**+0.1**
LVC	**Limon Verde**		**2.12 317**	*e*S		**S**		**23 09 00.8**	**+0.2**
PB15	**IPOC Station P**		**2.17 296**	Pn		**Pn**		**23 08 31.0**	**+1.2**
PB15				Sn		**S**		**23 09 01.3**	**+0.2**
PB15	**IPOC Station P**		**2.17 296**⇑	*e*P		**Pn**		**23 08 31.3**	**+1.5**
PB15				*e*S		**S**		**23 09 01.2**	**+0.1**
GO02	**Mina Guanaco**		**2.25 244**	Pn		**Pn**		**23 08 31.7**	**+0.9**
GO02				Sn		**S**		**23 09 03.6**	**+0.7**
GO02	**Mina Guanaco**		**2.25 244**⇑	*e*P		**Pn**		**23 08 31.9**	**+1.2**
GO02				*e*S		**S**		**23 09 02.8**	**-0.1**
GO02				IAML				23 09 04.5	
	comp=N,968nm,0.2s								
PB06	**IPOC Station P**		**2.51 305**	Pn		**Pn**		**23 08 35.0**	**+1.5**
PB06				Sn		**S**		**23 09 07.9**	**+0.2**
PB06	**IPOC Station P**		**2.51 305**⇑	*e*P		**Pn**		**23 08 35.0**	**+1.5**
PB06				*e*S		**S**		**23 09 07.7**	**0.0**
PB06				IAML				23 09 10.1	
	comp=E,502nm,0.1s								
PB14	**IPOC Station P**		**2.81 260**	Pn		**Pn**		**23 08 38.5**	**+1.5**
PB09	**IPOC Station P**		**2.94 324**	Pn		**Pn**		**23 08 40.4**	**+1.9**
PB09				Sn		**S**		**23 09 17.3**	**+0.5**
PB09	**IPOC Station P**		**2.94 324**	*e*S		**S**		**23 09 17.5**	**+0.7**
PB09				IAML				23 09 18.5	
	comp=N,325nm,0.5s								
PB10	**IPOC Station P**		**3.00 282**	Pn		**Pn**		**23 08 40.9**	**+1.9**
PB10				Sn		**S**		**23 09 19.8**	**+2.1**
PB03	**IPOC Station P**		**3.06 314**	Pn		**Pn**		**23 08 40.8**	**+0.9**
PB03				Sn		**S**		**23 09 19.2**	**-0.1**
PB03	**IPOC Station P**		**3.06 314**⇑	*e*P		**Pn**		**23 08 41.0**	**+1.1**
PB03				*e*S		**S**		**23 09 18.4**	**-0.9**
PB03				IAML				23 09 19.7	
	comp=E,299nm,0.3s								
AC02	**Maricunga**		**3.09 211**	Pn		**Pn**		**23 08 40.9**	**+0.5**
AC02				Sn		**S**		**23 09 20.2**	**-0.2**
PB04	**IPOC Station P**		**3.16 305**	Pn		**Pn**		**23 08 42.6**	**+1.5**
PB04				Sn		**S**		**23 09 21.7**	**+0.4**
PB04	**IPOC Station P**		**3.16 305**⇓	*e*P		**Pn**		**23 08 42.5**	**+1.5**
PB04				*e*S		**S**		**23 09 20.5**	**-0.8**
PB04				IAML				23 09 22.4	
	comp=N,418nm,0.7s								
PB07	**IPOC Station P**		**3.38 316**	Pn		**Pn**		**23 08 45.1**	**+1.4**
PB07				Sn		**S**		**23 09 25.6**	**-0.6**
PB07	**IPOC Station P**		**3.38 316**⇑	*e*P		**Pn**		**23 08 44.9**	**+1.2**
PB07				*i* S		**S**		**23 09 25.0**	**-1.2**
AC01	**Pan de Azucar**		**3.53 236**	Pn		**Pn**		**23 08 45.4**	**+0.1**
AC01				Sn		**S**		**23 09 27.2**	**-1.9**
PB02	**IPOC Station P**		**3.69 320**	Pn		**Pn**		**23 08 48.3**	**+0.8**
PB02				Sn		**S**		**23 09 32.4**	**-0.5**
PB02	**IPOC Station P**		**3.69 320**	*e*S		**S**		**23 09 31.2**	**-1.7**
PB01	**IPOC Station P**		**3.69 327**	Pn		**Pn**		**23 08 48.6**	**+1.1**
PB01	**IPOC Station P**		**3.69 327**	*e*S		**S**		**23 09 31.6**	**-1.3**
AC06	**Mina Casimiro**		**4.16 220**	Pn		**Pn**		**23 08 52.7**	**-0.3**
PATCX	**Punta Patache**		**4.23 322**	Pn		**Pn**		**23 08 56.2**	**+2.1**
GO03	**Copiap**		**4.27 217**	Pn		**Pn**		**23 08 54.3**	**-0.2**
GO03				Sn		**S**		**23 09 44.3**	**-1.5**
PB08	**IPOC Station P**		**4.35 337**	Pn		**Pn**		**23 08 56.9**	**+0.9**
TA01	**Diego Aracena**		**4.45 324**	Pn		**Pn**		**23 08 57.0**	**+0.2**
GO01	**Chusmiza**		**4.81 339**	Pn		**Pn**		**23 09 02.3**	**+0.4**
AC05	**El Transito**		**5.32 209**	Pn		**Pn**		**23 09 07.8**	**-0.2**
LCO	**Las Campanas**		**5.66 211**	Pn		**Pn**		**23 09 12.6**	**+0.1**
PB16	**IPOC Station P**		**6.16 341**	Pn		**Pn**		**23 09 19.7**	**+0.4**
PB12	**IPOC Station P**		**6.20 333**	Pn		**Pn**		**23 09 18.9**	**-0.5**
CO01	**Juntas del Tor**		**6.26 202**	Pn		**Pn**		**23 09 20.4**	**+0.2**
GO04	**Tololo Observa**		**6.70 206**	Pn		**Pn**		**23 09 26.1**	**+0.2**
CO03	**El Pedregal**		**7.26 203**	Pn		**Pn**		**23 09 32.9**	**-0.1**
CO02	**Combarbal**		**7.70 204**	Pn		**Pn**		**23 09 36.8**	**-2.0**
CO02				Sn		**S**		**23 11 01.4**	**-4.5**
LPAZ	**La Paz**		**7.89 355**	P		**Pn**		**23 09 43.0**	**+1.1**
	comp=N,5.6nm,0.3s,baz=171,slow=10,SNR=48								
LPAZ				S		**S**		**23 11 05.2**	**-6.1**
	comp=N,0.6nm,0.5s,baz=270,slow=9.3,SNR=1.1								
LPAZ	**La Paz**		**7.89 355**	Pn		**Pn**		**23 09 43.4**	**+1.4**
BDFB	**Brasilia**		**20.06 69**	P		**P**		**23 12 08.0**	**+0.1**
	comp=N,4.7nm,0.6s,baz=251,slow=10.0,SNR=6.9								
BDFB	**Brasilia**		**20.06 69**	P		**P**		**23 12 08.2**	**+0.4**
BDFB				IAmb		IAmb		23 12 08.5	
	comp=Z,4.8nm,0.7s								
OK034	**N. Norfolk Rd.**		**65.99 334**	P		**P**		**23 18 12.6**	**-2.0**
OK034				IAmb		IAmb		23 18 13.6	
	comp=Z,23nm,0.9s								
OK034				PcP		**PcP**		**23 18 44.4**	**+0.8**
QSPA	**South Pole Qui**		**66.02 180**	P		**P**		**23 18 14.2**	**-0.4**
QSPA				IAmb		IAmb		23 18 29.9	
	comp=Z,0.7nm,1.0s								
QSPA				PcP		**PcP**		**23 18 43.9**	**+0.4**
TORD	**Torodi Ar. Bea**		**76.94 69**	P		**P**		**23 19 21.7**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=251,slow=5.5,SNR=4.3								
	comp=Z,0.7nm,0.8s								

IPEC 17 23:50:30.8±0.3, 51°57N×16°29E, h1km, ML4.5/4, Error ellipse: s-maj=1.8km s-min=1.5km az=36.0

BGR 17 23:50:31.8±0.4, 51°51N×16°27E, h1km, ML4.3/15, Error ellipse: s-maj=4.4km s-min=2.2km az=23.0

MCSM 17 23:50:32.3±1.3, 51°N±10°×1°6E±1°0, h5km±1km, ML4.5

IDC 17 23:50:33.0±0.4, 51°47N×16°10E, h0km, mb4.3/22, mbtmp4.2/35, ML3.3/12, Error ellipse: s-maj=7.5km s-min=5.3km az=106.0

VIE 17 23:50:32.9±0.5, 51°43N×16°08E, h0km, mb3.7/22, ml3.9/17, ms4.5/4, Error ellipse: s-maj=5.8km s-min=3.0km az=43.0 75 km WNW of Wroclaw Suspected Mining induced.

DNK 17 23:50:32.1±2.8, 51°66N×16°60E, h0km±110km, ML4.1

MOS 17 23:50:32.2±0.9, 51°45N×16°16E, h7km, mb4.7/37, Error ellipse: s-maj=4.6km s-min=2.7km az=83.9

NEIC 17 23:50:33.9±1.8, 51°46N±0°05×16°20E±0°07, h5km±1km, mb4.5/140, Error ellipse: s-maj=8.3km s-min=7.6km az=211.0

BNS 17 23:50:34.7±0.2, 51°48N×16°11E, h1km, ML4.2

LDG 17 23:50:34.8±0.2, 51°55N×16°10E, h1km, Ml4.0/24, Error ellipse: s-maj=4.0km s-min=2.6km az=12.0, Suspected Mining induced.

PRU 17 23:50:35.3±0.0, 51°42N×16°19E, h0km, M4.5, Felt In Harrachov, Jablonec N.n.

BER 17 23:50:39.2±3.6, 52°25N×15°99E, h1km, ML3.0, ML4.3(CSEM)

ISC 17 23:50:31.8±0.3, 51°52N±0°02×16°11E±0°02, h0km, n603, σ1°93/704, mb4.5/97, 26C-11D, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**		**0.68 170**	*i*

CLL ex x 23 52 00.0
CLL Collm 1.96 265 ePn **Pn 23 51 05.6 -0.6**
MORC Moravsky Berou 1.97 152 ||P **Pn 23 51 05.5 -0.9**
MORC Moravsky Berou 1.97 152 **Pn 23 51 05.4 -1.0**
MORC Moravsky Berou 1.97 152 P **Pn 23 51 05.4 -1.0**
MORC Moravsky Berou 1.97 152 ePN **Pn 23 51 05.3 -1.0**
MORC ePG **Pb 23 51 06.7 -1.7**
MORC eSG **Sn 23 51 32.0 +0.3**
MORC Moravsky Berou 1.97 152 ePn **Pn 23 51 05.4 -1.0**
MORC eSg **Sb 23 51 33.5 0.0**
MORC Moravsky Berou 1.97 152 ePn **Pn 23 51 05.3 -1.0**
baz=336
MORC Moravsky Berou 1.97 152 ePg **Pn 23 51 06.6 +0.2**
baz=336
MORC eSg **Sn 23 51 32.0 +0.3**
comp=Z,2µm,2.1s,baz=336
OKC Ostrava-Krasne 2.12 142 eP **Pn 23 51 08.6 +0.1**
OKC e 23 51 39.0
OKC smax smax
comp=N,2µm,0.8s
OKC Ostrava-Krasne 2.12 142 ePN **Pn 23 51 08.6 +0.1**
OKC ePG **Pg 23 51 12.2 -0.2**
OKC eSG **Sg 23 51 39.0 -0.9**
comp=N,2µm,0.8s
OKC Ostrava-Krasne 2.12 142 ePn **Pn 23 51 06.9 -1.6**
OKC eSg **Sb 23 51 38.7 +0.7**
VRAC Vranov 2.23 172 ⇑P **Pb 23 51 12.0 -0.9**
VRAC Vranov 2.23 172 Pn **Pn 23 51 10.4 +0.4**
comp=N,9.7nm,0.3s,baz=353,slow=14,SNR=44
VRAC Sn **Sn 23 51 38.4 +0.2**
comp=N,12nm,0.3s,baz=16,slow=17,SNR=5.0
VRAC Lg Lg 23 51 42.6
comp=N,42nm,0.3s,baz=53,slow=20,SNR=11
comp=N,327nm,1.0s
VRAC Vranov 2.23 172 ePN **Pn 23 51 09.6 -0.4**
VRAC eSG **Sb 23 51 42.0 +0.9**
VRAC Vranov 2.23 172 ePn **Pn 23 51 09.6 -0.4**
baz=355
VRAC eSg **Sb 23 51 42.0 +0.9**
comp=N,2µm,2.0s,baz=355
TREC Trest 2.26 190 eP **Pn 23 51 10.2 -0.2**
TREC e 23 51 43.4
TREC smax smax
comp=N,2µm,1.4s
TREC Trest 2.26 190 ePN **Pn 23 51 10.2 -0.2**
TREC ePG **Pb 23 51 12.9 -0.5**
TREC eSG **Sg 23 51 43.4 -0.9**
comp=N,2µm,1.4s
MAUC Maruska 2.42 152 ePN **Pn 23 51 12.3 -0.3**
MAUC ePG **Pg 23 51 17.7 -0.4**
MAUC eSG **Sg 23 51 49.6 +0.2**
comp=N,2µm,0.9s
KRUC Moravsky 2.46 176 P **Pn 23 51 13.9 +0.7**
KRUC Moravsky 2.46 176 ePN **Pn 23 51 12.8 -0.4**
KRUC ePG **Pb 23 51 16.8 -0.2**
KRUC eSG **Sg 23 51 49.4 -1.5**
KRUC Moravsky 2.46 176 ePn **Pn 23 51 12.8 -0.4**
baz=358
KRUC Moravsky 2.46 176 ePg **Pb 23 51 16.7 -0.2**
baz=358
KRUC eSg **Sg 23 51 49.4 -1.5**
comp=N,2µm,1.8s,baz=358
TANN Tannenbergstha 2.56 246 ePn **Pn 23 51 14.7 +0.2**
TANN eSg **Sg 23 51 56.1 +2.3**
WERD Werda 2.63 247 ePn **Pn 23 51 15.5 0.0**
WERD eSg **Sg 23 51 59.5 +3.3**
NKC Novy Kostel 2.65 242 eP **Pn 23 51 16.0 +0.2**
NKC Novy Kostel 2.65 242 ePN **Pn 23 51 16.0 +0.2**
NKC ePG **Pg 23 51 24.3 +1.7**
NKC eSG **Sg 23 51 59.3 +2.4**
comp=N,942nm,0.9s
OJC Ojcow 2.67 118 ePn **Pn 23 51 11.9 -4.2**
OJC ePg **Pb 23 51 21.3 +0.9**
OJC eSn **Sn 23 51 45.9 -3.2**
OJC eSg **Sg 23 51 56.1 -1.5**
OJC Ojcow 2.67 118 Pn **Pn 23 51 12.5 -3.5**
OJC Ojcow 2.67 118 P **Pn 23 51 12.5 -3.5**
OJC Ojcow 2.67 118 ePn **Pn 23 51 11.9 -4.2**
JAVC Velka Javorina 2.84 159 ePN **Pn 23 51 17.1 -1.3**
KHC Kasperske Hory 2.89 215 **Pn 23 51 19.3 +0.2**
KHC Kasperske Hory 2.89 215 eP **Pn 23 51 18.6 -0.4**
KHC e 23 51 54.8
KHC smax smax
comp=N,926nm,1.2s
KHC Kasperske Hory 2.89 215 ePN **Pn 23 51 18.6 -0.4**
KHC ePG **Pg 23 51 26.7 -0.4**
KHC eSN **Sn 23 51 54.8 +0.4**
KHC eSG **Sg 23 52 06.2 +1.8**
comp=N,926nm,1.2s
BEL Belsk 2.93 82 P **Pn 23 51 21.3 +1.7**
CKRC Cesky Krumlov 2.94 204 ePN **Pn 23 51 20.3 +0.6**
CKRC ePG **Pg 23 51 27.6 -0.4**
CKRC eSG **Sg 23 52 05.3 -0.8**
comp=N,2µm,1.6s
MOX Moxa 2.96 255 P **Pn 23 51 20.5 +0.4**
MOX Moxa 2.96 255 ePn **Pn 23 51 19.9 -0.2**
MOX eSg **Sg 23 52 09.4 +2.4**
MANZ Manzenberg 2.97 240 ePn **Pn 23 51 20.3 +0.2**
MANZ eSg **Sg 23 52 09.2 +2.2**
ROTZ Rotzenmuhle 3.04 236 ePn **Pn 23 51 21.0 -0.1**
GEC2 GERESS Array S 3.09 211 Pn **Pn 23 51 22.0 +0.2**
GEC2 GERESS Array S 3.09 211 P **Pn 23 51 22.7 +0.8**
GEC2 GERESS Array S 3.09 211 ePn **Pn 23 51 22.3 +0.5**
GEC2 eSg **Sg 23 52 11.4 +0.5**
GERES GERESS Array B 3.09 211 Pn **Pn 23 51 21.5 -0.3**
comp=N,4.4nm,0.3s,baz=30,slow=11,SNR=76
GERES Pg **Pg 23 51 30.0 -0.9**
comp=N,20nm,0.3s,baz=31,slow=14,SNR=62
GERES Lg Lg 23 52 08.3
comp=N,37nm,0.3s,baz=31,slow=25,SNR=4.4
comp=N,14nm,0.5s
GERES GERESS Array B 3.09 211 **Pn 23 51 22.0 +0.2**
GERES GERESS Array B 3.09 211 P **Pn 23 51 22.0 +0.2**
SMOL Smolenice 3.12 164 eP **Pn 23 51 23.5 +1.2**
WET Wettzell 3.15 222 P **Pn 23 51 22.6 0.0**
WET Wettzell 3.15 222 ePn **Pn 23 51 22.3 -0.3**
MODS Modra-Piesok 3.23 166 eP **Pn 23 51 25.0 +1.2**
ZST Bratislava 3.38 169 eP **Pn 23 51 27.7 +1.9**
RGN Rugen 3.47 332 **Pn 23 51 27.0 0.0**
VYHS Vyhne 3.50 149 eP **Pn 23 51 26.3 -1.1**
GRB1 Grafenberg Arr 3.55 235 P **Pn 23 51 29.1 +0.9**
CLZ Clausthal 3.59 277 ePn **Pn 23 51 29.3 +0.7**
CONA Conrad Observa 3.59 183 i Pn **Pn 23 51 28.8 0.0**
comp=N,19nm,0.4s,SNR=63
CONA Sg **Sg 23 52 26.9 -0.3**
comp=N,582nm,1.0s
GRA1 Grafenberg Arr 3.61 242 **Pn 23 51 29.4 +0.4**
GRF Grafenberg Arr 3.61 242 P **Pn 23 51 29.4 +0.4**
GRF Grafenberg Arr 3.61 242 ePn **Pn 23 51 29.2 +0.2**
GRF eSg **Sg 23 52 29.0 +1.4**
GRFO Grafenberg 3.61 242 Pn **Pn 23 51 29.4 +0.4**
GRFO Grafenberg 3.61 242 P **Pn 23 51 29.4 +0.4**
BSD Bornholm Skovb 3.68 349 eP **Pn 23 51 29.0 -0.8**
BSD IAML 23 52 53.6
comp=Z,112µm,1.3s
BSD Bornholm Skovb 3.68 349 i P **Pn 23 51 29.0 -0.8**
BSD eS **Sn 23 52 12.8 -0.9**
BSD IAML 23 52 43.2
comp=Z,175nm,1.5s
RONA Rosalia, Austr 3.82 178 **Pn 23 51 32.1 +0.2**
RONA **Sg 23 52 33.8 -0.7**
RONA Rosalia, Austr 3.82 178 ePn **Pn 23 51 32.1 +0.2**
comp=Z,19nm,0.5s,SNR=18
RONA Sg **Sg 23 52 33.8 -0.7**
comp=Z,262nm,0.6s
SOP Sopron 3.85 175 P **Pn 23 51 33.5 +1.3**
SOP pmax pmax
comp=Z,66nm,1.3s
SOP Sopron 3.85 175 P **Pn 23 51 32.6 +0.4**
MOA Molln 3.86 199 i Pn **Pn 23 51 32.3 -0.1**
comp=Z,47nm,0.5s,SNR=73
MOA Sg **Sg 23 52 35.4 -0.3**
comp=Z,511nm,0.9s
STHS Stebnicka Huta 3.90 121 eP **Pn 23 51 31.6 -1.3**
KLNR Kaliningrad 3.96 37 i P **Pn 23 51 35.5 +1.8**
KLNR pmax pmax
comp=Z,10.0nm,0.2s
SRO Srobarova 3.97 158 P **Pn 23 51 36.5 +2.6**
KECS Kecovo 4.14 135 eP **Pn 23 51 35.5 -0.8**
BIOA Bad Ischl, Aus 4.15 204 **Pn 23 51 36.4 0.0**
BIOA **Sg 23 52 45.2 +0.2**
BIOA Bad Ischl, Aus 4.15 204 i Pn **Pn 23 51 36.4 0.0**
comp=Z,30nm,0.5s,SNR=44
BIOA Sg **Sg 23 52 45.2 +0.2**
comp=Z,566nm,0.7s
EGYH Egyhazaskeszo 4.18 169 P **Pn 23 51 38.3 +1.5**
BSEG Bad Segeberg 4.27 307 P **Pn 23 51 38.5 +0.5**
ARSA Arzberg 4.29 185 i Pn **Pn 23 51 39.6 +1.3**
comp=Z,7.8nm,0.3s,SNR=6.0
ARSA Sg **Sg 23 52 52.7 +3.3**
comp=Z,543nm,1.0s
CRVS Cervenica-Dubn 4.32 125 eP **Pn 23 51 39.5 +0.8**
PSZ Piszkesteto 4.36 144 ⇑P **Pn 23 51 39.4 +0.1**
PSZ Piszkesteto 4.36 144 Pn **Pn 23 51 39.2 -0.1**
PSZ Piszkesteto 4.36 144 P **Pn 23 51 39.2 -0.1**
PSZ Piszkesteto 4.36 144 P **Pn 23 51 39.2 -0.1**
CSKK Cskako 4.39 161 P **Pn 23 51 40.5 +0.9**
LUNU Lund 4.42 340 i P **Pn 23 51 40.2 +0.2**
LUNU i S **Sn 23 52 29.4 -2.7**
MPLH Magyarpolny 4.45 167 P **Pn 23 51 41.3 +0.9**
BUD Budapest 4.46 154 P **Pn 23 51 41.9 +1.3**
BUD pmax pmax
comp=Z,40nm,1.1s
BUD Budapest 4.46 154 P **Pn 23 51 41.4 +0.8**
FUR Furstenfeldbru 4.58 225 P **Pn 23 51 43.2 +0.8**
ABAH Abaujker 4.62 132 P **Pn 23 51 43.9 +1.0**
COP Copenhagen 4.72 334 i S **Sn 23 52 39.0 -0.4**
COP IAML 23 53 33.0
comp=Z,302nm,1.5s
KOLS Kolonicke sedl 4.73 121 eP **Pn 23 51 43.9 -0.4**
KOLS pmax pmax
comp=Z,426nm,0.9s
TIH Tihany 4.76 165 P **Pn 23 51 46.4 +1.6**
KBA Koelnbreinsper 4.79 203 P **Pn 23 51 45.9 +0.5**
KBA Koelnbreinsper 4.79 203 i Pn **Pn 23 51 45.8 +0.5**
comp=Z,38nm,0.7s,SNR=66
KBA Sg **Sg 23 53 06.1 +0.4**
comp=Z,238nm,0.8s
BLEU Blekinge 4.80 358 i P **Pn 23 51 45.4 +0.1**
BLEU i S **Sn 23 52 37.4 -4.1**
SOKA Soboth 4.89 189 i Pn **Pn 23 51 47.2 +0.6**
comp=Z,3.8nm,0.4s,SNR=12
SOKA Sg **Sg 23 53 07.8 -1.1**
comp=Z,119nm,0.9s
UZH Uzhgorod 4.92 124 eP **Pn 23 51 47.7 +0.8**
UZH eS **Sn 23 52 45.7 +1.3**
UZH MLR MLR
comp=N,80nm,1.2s
UZH MLR MLR
comp=E,68nm,1.2s
UZH MLR MLR
comp=Z,34nm,1.2s
BJUU Bjuv 4.92 339 i P **Pn 23 51 45.7 -1.1**
BJUU i S **Sn 23 52 40.9 -3.5**
BSZH Besenyszg 5.02 146 ⇑P **Pn 23 51 48.2 0.0**
BSZH Besenyszg 5.02 146 P **Pn 23 51 49.5 +1.2**
TNS Taunus Mts 5.02 258 P **Pn 23 51 48.6 +0.2**
TNS pmax pmax
comp=Z,116nm,0.7s
BEHE Becsehely 5.07 175 P **Pn 23 51 51.2 +2.2**
GROS Grobnik 5.08 185 i Pn **Pn 23 51 49.8 +0.7**
GROS i 23 51 51.3
OBKA Obir 5.12 192 ePn **Pn 23 51 49.6 -0.1**
OBKA Obir 5.12 192 ePn **Pn 23 51 50.0 +0.3**
comp=Z,9.6nm,0.6s,SNR=18
OBKA Sg **Sg 23 53 17.4 +1.4**
comp=Z,513nm,1.0s
WATA Walderalm 5.12 217 **Pn 23 51 50.5 +0.7**
WATA **Sg 23 53 17.4 +1.1**
WATA Walderalm 5.12 217 P **Pn 23 51 50.5 +0.7**
WATA Walderalm 5.12 217 i Pn **Pn 23 51 50.5 +0.7**
comp=Z,52nm,0.6s,SNR=38
WATA Sg **Sg 23 53 17.3 +1.1**
comp=Z,169nm,0.9s
DEL Delary 5.14 346 eP **Pn 23 51 48.7 -1.1**
DEL eS **Sn 23 52 46.0 -3.8**
DEL Delary 5.14 346 i P **Pn 23 51 48.8 -1.1**
DEL i S **Sn 23 52 46.2 -3.6**
MYKA Terra Mystica 5.15 199 i Pn **Pn 23 51 51.4 +1.3**
comp=Z,14nm,0.7s
MYKA Sg **Sg 23 53 17.4 +0.2**
comp=Z,230nm,1.1s
WTTA Wattenberg 5.16 216 P **Pn 23 51 51.6 +1.2**
WTTA pmax pmax
comp=Z,82nm,1.3s
WTTA Wattenberg 5.16 216 i Pn **Pn 23 51 51.5 +1.1**
comp=Z,15nm,0.4s,SNR=40
WTTA Sg **Sg 23 53 18.1 +0.7**
comp=Z,321nm,1.0s
STU Stuttgart 5.22 241 **Pn 23 51 51.1 0.0**
STU Stuttgart 5.22 241 P **Pn 23 51 51.1 0.0**
MOTA Moosalm 5.30 220 **Pn 23 51 52.3 0.0**
MOTA Moosalm 5.30 220 P **Pn 23 51 52.3 0.0**
MOTA Moosalm 5.30 220 i Pn **Pn 23 51 52.3 0.0**
comp=Z,18nm,0.5s,SNR=19
LVV L'vov 5.32 106 cePn **Pn 23 51 52.6 +0.2**
LVV eS **Sn 23 52 52.6 -1.7**
LVV pmax pmax
comp=Z,280nm,1.3s
ABTA Abfaltersbach 5.32 208 ePn **Pn 23 51 53.4 +0.9**
comp=Z,34nm,0.7s,SNR=63
ABTA Sg **Sg 23 53 20.8 -1.9**
comp=Z,336nm,1.0s
RETA Reutte 5.33 223 i Pn **Pn 23 51 52.0 -0.6**
comp=Z,12nm,0.4s,SNR=19
RETA Sg **Sg 23 53 22.4 -0.5**
comp=Z,289nm,1.0s
PRED Cave del Predi 5.35 199 **Pn 23 51 54.6 +1.7**
SQTA Sankt Quirin 5.36 219 **Pn 23 51 53.6 +0.5**
SQTA **Sg 23 53 23.2 -0.7**
SQTA Sankt Quirin 5.36 219 ePn **Pn 23 51 53.6 +0.5**
comp=Z,19nm,0.3s,SNR=38
SQTA Sg **Sg 23 53 23.2 -0.7**
comp=Z,82nm,0.6s
TRPA Tarpa 5.37 127 ⇑P **Pn 23 51 53.0 0.0**
TRPA Tarpa 5.37 127 P **Pn 23 51 53.0 0.0**
TRPA S **Sg 23 53 24.6 +0.5**
NAST IGS Nastaetten 5.39 259 ePn **Pn 23 51 54.8 +1.4**
KOE Koeppel 5.41 262 ePn **Pn 23 51 55.0 +1.4**
CLUD Cludinico 5.49 204 Pn **Pn 23 51 56.0 +1.2**
BUG Bochum--Univer 5.53 273 P **Pn 23 51 57.1 +1.9**
BUG pmax pmax
comp=Z,44nm,1.2s
HOBG Hohbusch 5.54 268 ePn **Pn 23 51 57.0 +1.6**
MORH Mrgy, Hungar 5.56 162 ⇑P **Pn 23 51 56.6 +0.9**
MORH Mrgy, Hungar 5.56 162 P **Pn 23 51 56.0 +0.2**
LJU Ljubljana 5.58 191 i Pn **Pn 23 51 56.4 +0.5**
LJU i Pg **Pg 23 52 19.5 +0.9**
LJU eSg **Sg 23 53 37.7 +6.9**
KOVH Kovagotottos 5.59 166 P **Pn 23 51 56.2 +0.1**
LTVH Ltavrtes, Hu 5.60 135 ||P **Pn 23 51 56.1 -0.1**
LTVH Ltavrtes, Hu 5.60 135 P **Pn 23 51 57.1 +0.9**
PTJ Puntijarka 5.61 181 P **Pn 23 51 58.1 +1.6**
PBUR Paburge 5.68 35 eP **Pn 23 51 59.8 +2.4**
PBUR IAML 23 53 49.9
comp=Z,94nm,0.6s
BGG Burgeitz 5.71 260 ePn **Pn 23 51 59.1 +1.4**
BGG eSn **Sn 23 53 03.4 -0.5**
comp=Z,72nm,0.9s
CRES Cresnjev 5.71 185 ePn **Pn 23 51 57.1 -0.7**
FETA Feichten 5.71 220 ePn **Pn 23 51 58.2 +0.3**
comp=Z,7.3nm,0.4s,SNR=10
FETA Sg **Sg 23 53 40.0 +4.9**
comp=Z,98nm,0.9s
STAL STALIGIAL 5.72 204 **Pn 23 51 58.3 +0.4**
LAUG Laupendahl 5.74 272 ePn **Pn 23 51 59.6 +1.5**
DAVA Damuels 5.87 226 i Pn **Pn 23 51 59.5 -0.6**
comp=Z,17nm,0.7s,SNR=10
DAVA eSg **Sg 23 53 43.3 +3.2**
comp=Z,175nm,1.0s
CEY Cerknica 5.89 192 ePn **Pn 23 51 59.6 -0.7**
STB Steinbach 5.92 265 ePn **Pn 23 52 02.2 +1.6**
BFO Black Forest 5.95 241 Pn **Pn 23 52 00.9 -0.2**
BFO Black Forest 5.95 241 P **Pn 23 52 00.9 -0.2**
AMBH Ambrzfalva 6.00 148 P **Pn 23 52 03.1 +1.4**
BOJS Bojanci 6.04 186 ePn **Pn 23 52 02.6 +0.3**
RNPP1 Kostyukhnivka 6.04 88 Pn **Pn 23 52 00.3 -2.0**
HILG Hillesheim 6.09 262 ePn **Pn 23 52 04.6 +1.6**
RNPP8 Varash 6.10 88 Pn **Pn 23 52 01.8 -1.3**
RNPP9 Sopachiv 6.12 87 Pn **Pn 23 52 01.8 -1.5**
RNPP5 Staryi Chortor 6.13 89 Pn **Pn 23 52 02.2 -1.3**
SKDS Skadanscina 6.13 194 ePn **Pn 23 52 04.5 +0.9**
BMR Baia Mare 6.15 126 ⇑P **Pn 23 52 04.6 +0.8**
BMR Baia Mare 6.15 126 P **Pn 23 52 03.2 -0.6**
BMR pmax pmax
comp=Z,68nm,1.1s
PABE Paberze 6.16 46 Pn **Pn 23 52 04.1 +0.3**
PABE Paberze 6.16 46 eP **Pn 23 52 04.5 +0.6**
PABE IAML 23 54 14.7
comp=Z,57nm,0.6s
SLE Schleitheim 6.21 236 P **Pn 23 52 06.3 +1.6**
SLE pmax pmax
comp=Z,42nm,0.9s
CTI Castel Tesino 6.21 210 Pn **Pn 23 52 06.4 +1.6**
CTI Castel Tesino 6.21 210 P **Pn 23 52 06.4 +1.6**
FUORN Ofenpass-Fuorn 6.22 220 Pn **Pn 23 52 05.4 +0.3**
KLL Kalitalsperre 6.24 266 ePn **Pn 23 52 06.5 +1.5**
MESR Meseseni 6.25 132 ||P **Pn 23 52 04.9 -0.3**
DAVOX Davos/Dischmat 6.26 223 Pn **Pn 23 52 05.3 -0.1**
comp=Z,1.2nm,0.3s,baz=39,slow=13,SNR=36
DAVOX Lg Lg 23 53 49.3
comp=Z,3.0nm,0.3s,baz=21,slow=14,SNR=5.0
comp=Z,10nm,0.6s
DREG Dreilaegerbach 6.28 266 ePn **Pn 23 52 07.0 +1.4**
SIRR Siria 6.40 143 ⇑P **Pn 23 52 07.0 -0.3**
DRGR 6.41 135 ⇑P **Pn 23 52 07.0 -0.4**
MUD Monsted U'grnd 6.42 323 i P **Pn 23 52 11.0 +3.6**
MEM Membach 6.43 266 P **Pn 23 52 09.9 +2.2**
MEM pmax pmax
comp=Z,90nm,1.1s
A052A Srbac 6.49 171 ePn **Pn 23 52 09.2 +0.8**
CDF Champ du Feu 6.49 245 ePn **Pn 23 52 08.1 -0.5**
CDF Champ du Feu 6.49 245 ePg **Pg 23 52 34.2 -1.9**
CDF eSn **Sn 23 53 18.9 -4.4**
comp=Z,40nm,1.0s
A051A Mrakovica 6.53 175 ePn **Pn 23 52 08.8 -0.3**
LLS Linth-Limmern 6.59 228 P **Pn 23 52 11.6 +1.5**
LLS pmax pmax
comp=Z,16nm,0.7s
WLF Walferdange 6.61 258 Pn **Pn 23 52 11.8 +1.8**
WLF Walferdange 6.61 258 P **Pn 23 52 11.9 +1.8**
ECH Echery 6.66 244 Pn **Pn 23 52 10.4 -0.5**
ECH Echery 6.66 244 P **Pn 23 52 10.4 -0.5**
MARR Marisel-Cluj 6.68 134 ⇑P **Pn 23 52 11.0 -0.2**
BLY Banja Luka 6.81 174 ePn **Pn 23 52 09.2 -3.7**
FRGS Fruska Gora 6.82 157 ⇑P **Pn 23 52 13.7 +0.6**
FRGS Fruska Gora 6.82 157 ePn **Pn 23 52 12.7 -0.4**
TEOL Teolo 6.83 207 Pn **Pn 23 52 14.2 +1.0**
CJR Cluj-Napoca 6.87 131 ||P **Pn 23 52 13.7 -0.1**
CJR Cluj-Napoca 6.87 131 P **Pn 23 52 13.7 -0.1**
BZS Buzias 6.94 146 ⇑P **Pn 23 52 14.8 +0.1**
BZS Buzias 6.94 146 P **Pn 23 52 15.9 +1.2**
BZS pmax pmax
comp=Z,22nm,1.3s
ARCR ARCALIA 6.98 126 ||P **Pn 23 52 15.8 +0.6**
VIKU Vikbolandet 7.01 3 eP **Pn 23 52 14.6 -0.9**
VIKU IAML 23 55 05.1
comp=Z,9.4nm,0.6s
HINF Hinteralfeld 7.05 242 ePn **Pn 23 52 15.4 -0.9**
HINF Hinteralfeld 7.05 242 ePg **Pg 23 52 44.6 -2.3**
HINF eSn **Sn 23 53 32.9 -4.3**
comp=Z,24nm,0.8s
HINF eSg **Sg 23 54 15.3 -2.9**
comp=Z,306nm,1.0s
BUR08 Bucovina Ar. S 7.07 120 Pn **Pn 23 52 16.5 +0.1**
BURAR Bucovina Array 7.09 120 ⇑P **Pn 23 52 16.8 0.0**
BURAR Bucovina Array 7.09 120 Pn **Pn 23 52 16.7 -0.2**
BURAR Bucovina Array 7.09 120 P **Pn 23 52 16.8 0.0**
SLIT Slitere, Latvi 7.10 28 eP **Pn 23 52 16.2 -0.5**
MGRS Mrkonjic Grad 7.13 174 ePn **Pn 23 52 16.0 -1.3**
MDI Monti di Nese 7.13 219 P **Pn 23 52 20.2 +2.8**
MDI pmax pmax
comp=Z,28nm,0.6s
IIGN Ignalina 7.16 54 eP **Pn 23 52 19.0 +1.4**
IIGN IAML 23 54 03.8
comp=Z,12nm,0.7s
DEV Deva 7.21 139 P **Pn 23 52 20.1 +1.8**
DEV pmax pmax
comp=Z,20nm,1.2s
ISAL Salakas 7.22 52 eP **Pn 23 52 20.3 +1.9**
ISAL IAML 23 53 51.0
comp=Z,9.5nm,0.7s
HAU Haudompre 7.23 245 ePn **Pn 23 52 18.0 -0.7**
HAU Haudompre 7.23 245 ePg **Pg 23 52 47.4 -2.8**
HAU eSg **Sg 23 54 20.7 -3.2**
comp=Z,414nm,1.0s
NACGM Naroch 7.25 58 ||eP **Pn 23 52 20.3 +1.4**
baz=251
MI28 Mi28,Pidlybu 7.29 90 Pn **Pn 23 52 18.1 -1.3**
MI28 Sn **Sn 23 53 37.1 -5.6**
GIVF Givet 7.29 263 ePn **Pn 23 52 18.8 -0.7**
KMPD K-Podol'skiy 7.29 110 Pn **Pn 23 52 17.7 -1.7**
PAGF Fort de Pagny 7.31 250 ePn **Pn 23 52 19.3 -0.5**
PAGF Fort de Pagny 7.31 250 ePg **Pg 23 52 48.8 -3.0**
PAGF eSg **Sg 23 54 23.0 -3.5**
comp=Z,12nm,0.6s
MI29 MI29, Kamyanyy 7.50 94 Pn **Pn 23 52 21.9 -0.4**
GZR Gura Zlata 7.56 142 ||P **Pn 23 52 23.0 -0.2**
GZR Gura Zlata 7.56 142 P **Pn 23 52 23.0 -0.2**
MMK Mattmark 7.67 228 P **Pn 23 52 27.4 +2.5**
MMK pmax pmax
comp=Z,20nm,0.8s
HAPS Han Pijesak,Bl 7.67 164 ePn **Pn 23 52 25.3 +0.4**
MNK Minsk 7.71 63 i P **Pn 23 52 22.5 -2.6**
MNK i S **Sn 23 53 48.7 -4.3**
MNK pmax pmax
comp=N,26nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,12nm,0.9s
MNK Minsk 7.71 63 i P **Pn 23 52 22.5 -2.6**
comp=E,2.0nm,0.8s
MNK i P **Pn 23 52 22.5 -2.6**
comp=N,26nm,0.9s
MNK i P **Pn 23 52 22.5 -2.6**
comp=Z,12nm,0.8s,baz=250
MNK i PP **PnPn 23 52 30.1 -2.3**
MNK i PPP PPP 23 52 37.7
MNK i S **Sn 23 53 48.7 -4.3**
MNK i SS **SnSn 23 54 01.2 -2.8**
MNK i LR LR 23 54 41.7
MNK i LRM MLR 23 55 40.2
comp=E,7.0nm,14.0s
MNK i LRM MLR 23 55 43.1
comp=N,224nm,19.5s
MNK i LRM MLR 23 55 45.7
comp=Z,26nm,9.8s
MEZF Maizieres J'vi 7.74 251 ePn **Pn 23 52 24.8 -0.8**
MEZF Maizieres J'vi 7.74 251 ePg **Pg 23 52 57.2 -2.7**
MEZF eSg **Sg 23 54 36.1 -3.9**
comp=Z,3.8nm,0.5s
PRMA PARMA 7.79 212 **Pn 23 52 29.7 +3.5**
DIVS Divibare 7.87 159 ePn **Pn 23 52 29.5 +2.0**
SFTF Sexfontaines 7.88 249 ePn **Pn 23 52 26.8 -0.8**
SFTF Sexfontaines 7.88 249 ePg **Pg 23 52 59.5 -3.2**
SFTF eSg **Sg 23 54 41.2 -3.6**
comp=Z,60nm,0.7s
LOT Lotru 7.92 137 ||P **Pn 23 52 28.1 -0.1**
ZCCA Zocca 7.95 208 Pn **Pn 23 52 29.7 +1.1**
BBLS Lazići 7.97 163 ePn **Pn 23 52 30.1 +1.2**
BIZ Bicaz 7.98 121 ⇑P **Pn 23 52 28.9 -0.1**
HOMB Homborsund 8.06 330 eS **Sn 23 53 55.5 -6.1**
BOB Bobbio (Coli) 8.09 216 P **Pn 23 52 32.9 +2.4**
BOB pmax pmax
comp=Z,36nm,1.1s
AK20 Malin Array Si 8.15 90 Pn **Pn 23 52 29.4 -1.9**
AK19 Malin Array Si 8.16 91 Pn **Pn 23 52 29.5 -1.9**
GIRR Girov 8.19 120 ⇑P **Pn 23 52 33.0 +1.3**
AK22 Malin Array Si 8.19 90 Pn **Pn 23 52 30.2 -1.6**
AK17 Malin Array Si 8.20 91 Pn **Pn 23 52 29.7 -2.1**
AK18 Malin Array Si 8.20 90 Pn **Pn 23 52 30.0 -1.8**
CABF La Chapelle 8.21 237 ePn **Pn 23 52 30.9 -1.2**
CABF La Chapelle 8.21 237 ePg **Pg 23 53 05.5 -3.4**
CABF eSg **Sg 23 54 51.6 -3.6**
comp=Z,998nm,1.3s
AK13 Malin Array Si 8.21 91 Pn **Pn 23 52 29.8 -2.3**
AK23 Malin Array Si 8.22 90 Pn **Pn 23 52 30.1 -2.1**
AK16 Malin Array Si 8.23 91 Pn **Pn 23 52 30.1 -2.2**
AK11 Malin Array Si 8.27 91 Pn **Pn 23 52 30.7 -2.1**
AK01 Malin Array Si 8.29 91 Pn **Pn 23 52 31.2 -2.0**
AK02 Malin Array Si 8.29 91 Pn **Pn 23 52 31.2 -2.0**
AKASG Malin Array Be 8.30 91 Pn **Pn 23 52 31.0 -2.3**
comp=Z,17nm,0.8s,baz=273,slow=13,SNR=17
AKASG Sn **Sn 23 54 01.5 -6.1**
comp=Z,3.2nm,0.3s,baz=268,slow=24,SNR=6.2
AKASG Lg Lg 23 54 54.9
baz=278,slow=27
AKASG Malin Array Be 8.30 91 Pn **Pn 23 52 31.2 -2.0**

AKASG Malin Array Be 8.30 91 P **Pn 23 52 31.2 -2.0**
AKBB Malin Array Si 8.30 91 Pn **Pn 23 52 32.1 -1.1**
AKBB Malin Array Si 8.30 91 *ce*P **Pn 23 52 30.8 -2.4**
AKBB Malin Array Si 8.30 91 Pn **Pn 23 52 31.3 -1.9**
VLC Villacollemand 8.30 210 Pn 23 52 33.0 -0.4
AK07 Malin Array Si 8.31 92 Pn **Pn 23 52 31.0 -2.5**
AK08 Malin Array Si 8.33 91 Pn **Pn 23 52 31.4 -2.3**
AK10 Malin Array Si 8.33 91 Pn **Pn 23 52 31.7 -2.0**
AK09 Malin Array Si 8.35 91 Pn **Pn 23 52 31.9 -2.1**
UPP Uppsala 8.41 5 IAML 23 55 21.3
comp=Z,15nm,0.8s
MSSA Maissana 8.45 214 Pn **Pn 23 52 35.8 +0.3**
MTSE Matsula 8.45 28 *eP* **Pn 23 52 35.4 +0.1**
VOIR 8.50 132 ⇓P **Pn 23 52 35.9 -0.2**
VOIR 8.50 132 P **Pn 23 52 39.2 +3.1**
VOIR pmax pmax
comp=Z,10.0nm,1.3s
SNART Snartemo 8.54 327 *e* **Pn 23 52 40.8 +4.3**
SNART *eS* **Sn 23 54 08.1 -5.4**
SNART IAML 23 54 29.1
comp=Z,13nm,0.8s
SNART Snartemo 8.54 327 *eS* **Sn 23 54 06.8 -6.6**
RSL Roselend 8.57 231 P Pn 23 52 43.1 +5.9
RSL pmax pmax
comp=Z,9.0nm,0.9s
PCP Piancastagn 8.62 219 P **Pn 23 52 40.2 +2.4**
PCP pmax pmax
comp=Z,61nm,0.6s
LPL La Plagne 8.64 230 *e*Pn **Pn 23 52 38.3 +0.1**
LPL *eSn* **Sn 23 54 10.8 -5.7**
LPL *eSg* **Sg 23 55 04.9 -4.3**
comp=Z,22nm,1.0s
OSSC Osservatorio P 8.64 204 Pn 23 52 36.9 -1.2
LPG La Plagne 8.65 230 *e*Pn Pn 23 52 44.5 +6.2
LPG *eSn* **Sn 23 54 11.6 -5.1**
comp=Z,19nm,0.9s
LPG *eSg* **Sg 23 55 05.2 -4.1**
comp=Z,19nm,0.8s
PII Pisa 8.66 208 P **Pn 23 52 39.4 +1.2**
PII pmax pmax
comp=Z,17nm,0.9s
STON Ston 8.71 172 *e*Pn **Pn 23 52 38.2 -0.8**
HFS Hagfors 8.74 352 Pn **Pn 23 52 38.2 -1.1**
comp=Z,0.5nm,0.3s,baz=172,slow=14,SNR=12
HFS Sn **Sn 23 54 12.8 -5.7**
comp=Z,0.3nm,0.3s,baz=171,slow=23,SNR=1.9
comp=Z,3.4nm,0.5s
MLR Muntele Rosu 8.88 129 Pn **Pn 23 52 41.6 +0.2**
comp=Z,0.1nm,0.3s,baz=152,slow=20,SNR=1.3
comp=Z,2.1nm,1.1s
NRCA Norcia 8.92 194 Pn 23 52 42.4 +0.4
KONO Kongsberg 8.94 338 *e*P **Pn 23 52 40.0 -2.0**
KONO *eS* **Sn 23 54 16.9 -6.5**
KONO IAML 23 55 37.6
comp=Z,16nm,0.9s
AAL Aland 8.95 13 *e*P **Pn 23 52 42.9 +0.7**
AAL IAML 23 55 01.5
comp=Z,4.4nm,0.7s
PLOR Plostina 8.98 125 ⇑P **Pn 23 52 42.7 0.0**
PLOR Plostina 8.98 125 P **Pn 23 52 42.7 0.0**
BNI Bardonecchia 9.02 228 Pn **Pn 23 52 44.5 +1.3**
BNI Bardonecchia 9.02 228 P **Pn 23 52 44.5 +1.3**
LOR Lormes 9.05 247 *e*Pn **Pn 23 52 42.5 -1.1**
baz=60
LOR Lormes 9.05 247 *e*Pg Pn 23 53 20.9 +37
LOR *eSg* Sn 23 55 17.8 +52
comp=Z,50nm,0.9s
RRL Rocca Remolon 9.06 227 P **Pn 23 52 47.0 +3.0**
RRL pmax pmax
comp=Z,17nm,1.0s
CAMP Campotosto 9.17 193 Pn 23 52 45.6 +0.2
MBDF Montbardon 9.22 226 *e*Pn **Pn 23 52 45.2 -0.9**
CESX Cesi 9.23 196 Pn 23 52 46.3 +0.2
PZZ Stroppo 9.24 224 P **Pn 23 52 48.8 +2.5**
PZZ pmax pmax
comp=Z,15nm,0.6s
VSU Vasula 9.25 37 *i* P **Pn 23 52 47.4 +1.1**
VSU pmax pmax
comp=Z,182nm,1.1s
VSU Vasula 9.25 37 *e*P **Pn 23 52 46.5 +0.3**
AQU L'Aquila 9.35 192 Pn 23 52 47.6 -0.1
AQU L'Aquila 9.35 192 P **Pn 23 52 48.4 +0.6**
AQU pmax pmax
comp=Z,13nm,1.1s
SSF Saint Saulge 9.36 246 *e*Pn **Pn 23 52 46.9 -1.0**
SSF Saint Saulge 9.36 246 *e*Pg Pn 23 53 26.5 +39
SSF *eSg* Sn 23 55 27.4 +54
comp=Z,18nm,0.6s
LATE Laterza 9.38 200 Pn **Pn 23 52 48.0 -0.1**
SMF Signal de Mont 9.41 244 *e*Pn **Pn 23 52 47.2 -1.3**
SMF Signal de Mont 9.41 244 *e*Pg Pn 23 53 28.1 +40
SMF *eSg* Sn 23 55 28.7 +54
comp=Z,451nm,1.5s
CASP Castiglione de 9.43 204 Pn **Pn 23 52 48.8 0.0**
SAOF Saorge 9.48 221 P **Pn 23 52 51.0 +1.5**
SAOF pmax pmax
comp=Z,39nm,1.3s
ORIF Oris-en-Rattie 9.49 230 *e*Pn **Pn 23 52 49.0 -0.7**
ORIF *eSn* **Sn 23 54 30.9 -6.2**
comp=Z,7.9nm,0.8s
ORIF Oris-en-Rattie 9.49 230 P **Pn 23 52 51.6 +1.9**
ORIF pmax pmax
comp=Z,11nm,0.8s
ISO Isola 9.53 223 P **Pn 23 52 54.6 +4.4**
ISO pmax pmax
comp=Z,13nm,0.7s
NC602 NORSAR Array S 9.58 346 Pn 23 52 50.2 -0.6
NORES NORESS Array B 9.58 346 P **Pn 23 52 52.2 +1.4**
AVF Avril sur Loir 9.60 245 *e*Pn **Pn 23 52 50.2 -0.9**
AVF Avril sur Loir 9.60 245 *e*Pg Pn 23 53 30.8 +40
AVF *eSg* Sn 23 55 34.7 +55
comp=Z,116nm,1.2s
CLF Chambon-Foret 9.62 254 Pn **Pn 23 52 51.9 +0.6**
BLS5 Blasjo 9.62 329 *e*P **Pn 23 52 49.0 -2.4**
BLS5 *eS* Sn 23 54 29.2 -11
INTR Introdacqua 9.63 190 Pn **Pn 23 52 52.4 +0.8**
SBF Sospel 9.63 221 *e*Pn **Pn 23 52 51.6 0.0**
SBF *eSn* **Sn 23 54 33.8 -6.6**
comp=Z,2.6nm,0.4s
NAO01 NORSAR Array S 9.79 345 Pn **Pn 23 52 52.9 -0.7**
NB201 NORSAR Array S 9.92 346 Pn 23 52 54.8 -0.7
NC405 NORSAR Array S 9.92 348 Pn 23 52 55.4 -0.1
NOA NORSAR Array B 9.92 346 Pn **Pn 23 52 53.4 -2.2**
comp=Z,0.1nm,0.3s,baz=93,slow=18,SNR=11
NOA Sn **Sn 23 54 39.5 -8.0**
baz=164,slow=20,SNR=1.9
NOA Lg Lg 23 55 41.8
comp=Z,0.1nm,0.3s,baz=188,slow=19,SNR=1.8
comp=Z,1.0nm,0.5s
NBO00 NORSAR Array S 9.98 345 Pn **Pn 23 52 55.8 -0.6**
BGF Bois d'Agland 10.02 246 *e*Pn **Pn 23 52 56.2 -0.7**
BGF Bois d'Agland 10.02 246 *e*Pg Pn 23 53 39.0 +42
RAF Rauma 10.03 16 *e*P **Pn 23 52 56.5 -0.4**
VIVF Saint-Julien-l 10.13 233 *e*Pn **Pn 23 52 57.6 -0.8**
VIVF *eSn* **Sn 23 54 46.0 -6.6**
comp=Z,2.6nm,0.6s
SKAR Skarslia 10.16 338 *e*P **Pn 23 52 58.7 -0.1**
SKAR *eS* Sn 23 54 44.2 -9.2
SKAR IAML 23 56 09.2
comp=Z,9.5nm,0.7s
PGF Pioggiola 10.19 211 *e*Pn **Pn 23 52 58.6 -0.8**
NC204 NORSAR Array S 10.22 345 Pn **Pn 23 52 59.1 -0.5**
SMRF Simiane la Rot 10.35 227 *e*Pn **Pn 23 53 00.5 -0.9**
SMRF *eSn* **Sn 23 54 51.0 -7.0**
comp=Z,13nm,1.0s
LMR La Mourre 10.45 222 *e*Pn **Pn 23 53 02.0 -0.7**
LMR *eSn* **Sn 23 54 53.2 -7.2**
comp=Z,0.9nm,0.4s
TCF Toulx Ste Croi 10.53 246 *e*Pn **Pn 23 53 02.9 -1.0**
TCF Toulx Ste Croi 10.53 246 *e*Pg Pn 23 53 48.5 +45
TCF *eSg* 23 56 04.0
comp=Z,1.5nm,0.4s
PAOL Paolisi 10.54 186 Pn **Pn 23 53 04.8 +0.7**
LDF La Druitiere 10.84 261 *e*Pn **Pn 23 53 07.3 -0.8**
FLN La Foliniere 11.00 262 *e*Pn **Pn 23 53 09.1 -1.2**
LASF Ste Croix 11.09 233 *e*Pn **Pn 23 53 10.7 -0.9**
LASF *eSn* **Sn 23 55 08.8 -7.5**
comp=Z,7.7nm,0.8s
DOMB Dombas 11.23 343 *e*P **Pn 23 53 11.9 -1.5**
DOMB IAML 23 56 51.0
comp=Z,7.7nm,0.8s
FINES FINESS Array B 11.36 25 Pn **Pn 23 53 13.3 -1.8**
comp=Z,0.9nm,0.3s,baz=208,slow=9.9,SNR=32
FINES Sn Sn 23 55 12.2 -10
comp=Z,1.7nm,0.3s,baz=210,slow=19,SNR=4.2
FINES Lg Lg 23 56 18.4
comp=Z,0.6nm,0.3s,baz=218,slow=24,SNR=1.4
comp=Z,15nm,0.8s
FINES FINESS Array B 11.36 25 P **Pn 23 53 13.6 -1.5**
FINES FINESS Array B 11.36 25 P **Pn 23 53 13.6 -1.5**
FIA1 FINESS Array S 11.36 25 Pn **Pn 23 53 13.9 -1.2**
MFF Saint Martin d 11.74 252 *e*Pn **Pn 23 53 19.6 -0.7**
EKA Eskdalemuir Ar 12.10 296 Pn **Pn 23 53 22.6 -2.7**
baz=100,slow=14
OBN Obninsk 12.74 66 Pn **Pn 23 53 30.0 -4.0**
comp=Z,0.3nm,0.3s,baz=164,slow=23,SNR=8.5
OBN Sn Sn 23 55 44.0 -12
comp=Z,0.7nm,0.3s,baz=180,slow=20,SNR=1.8
OBN Lg Lg 23 57 15.0
comp=Z,0.6nm,0.3s,baz=195,slow=19,SNR=1.5
comp=Z,4.5nm,0.4s
OBN Obninsk 12.74 66 Pn **Pn 23 53 31.1 -2.9**
OBN Obninsk 12.74 66 *de*P **Pn 23 53 30.5 -3.5**
OBN *eS* **Sn 23 55 59.5 +3.1**
OBN pmax pmax
comp=Z,64nm,1.3s
OBN MLR MLR
comp=Z,36nm,12.0s
NSS Namsos 13.23 352 *e*P **Pn 23 53 38.8 -1.8**
NSS IAmb IAmb 23 53 40.5
comp=Z,78nm,1.5s
MOS Moscow 13.43 63 *e*P **Pn 23 53 38.7 -4.7**
MOS pmax pmax
comp=Z,86nm,1.2s
MOS pmax pmax
comp=E,68nm,1.2s
LPSR Galich'ya Gora 14.07 77 *e*P Pn 23 53 47.3 -4.9
LPSR pmax pmax
comp=Z,40nm,0.7s
VORR Voronezh 14.35 80 *e*P Pn 23 53 50.7 -5.3
VORR pmax pmax
comp=Z,61nm,1.5s
VSR Storozhevoye 14.40 82 *e*P Pn 23 53 50.5 -6.2
VSR pmax pmax
comp=Z,20nm,1.0s
MOR8 Moi Rana 14.72 357 *e*P **Pn 23 53 59.1 -1.9**
FAUS Fauske 15.92 359 *e*P **Pn 23 54 16.1 -0.7**
KLMR Klimovskoe 15.95 45 *e*P Pn 23 54 09.2 -8.1
KLMR pmax pmax
comp=Z,34nm,1.2s
KLMR Klimovskoe 15.95 45 *e*Pn Pn 23 54 09.3 -8.0
KLMR *e*Pn Pn 23 54 09.3 -8.0
KLMR *e*Pn Pn 23 54 09.3 -8.0
KLMR AMP 23 54 25.6
comp=Z,34nm,1.2s
KLMR *eSn* Sn 23 57 02.4 -12
KLMR *eSn* Sn 23 57 02.4 -12
VRH Novokhopyorsk 15.98 81 *e*P **Pn 23 54 10.9 -6.8**
VRH pmax pmax
comp=Z,110nm,1.4s
KEST Kesra 16.51 200 Pn **P 23 54 26.9 -0.5**
baz=32,slow=3.0,SNR=9.1
comp=Z,11nm,1.1s
KEST Kesra 16.51 200 P **P 23 54 27.6 +0.1**
SANT Santorini 16.55 153 P **P 23 54 27.5 -0.3**
SANT IAmb IAmb 23 54 43.0
comp=Z,71nm,1.1s
BR131 Keskin Array S 16.96 127 Pn **Pn 23 54 29.0 -1.4**
BR131 Keskin Array S 16.96 127 P **Pn 23 54 29.0 -1.4**
BR131 pmax pmax
comp=Z,5.0nm,1.1s
BRTR Keskin Array B 16.96 127 Pn **P 23 54 32.5 0.0**
baz=337,slow=6.6,SNR=6.3
comp=Z,3.2nm,1.1s
BRTR Keskin Array B 16.96 127 Pn **Pn 23 54 29.0 -1.5**
KTK1 Kautokeino 17.88 8 *e*P **Pn 23 54 38.6 -3.0**
KTK1 IAmb IAmb 23 54 40.9
comp=Z,21nm,0.9s
AKAS Kas 18.07 143 P 23 54 44.5 -0.2
AKAS IAmb IAmb 23 54 49.1
comp=Z,26nm,1.0s
TRO Tromso 18.23 3 *e*P **Pn 23 54 44.3 -1.5**
TRO IAmb IAmb 23 54 46.5
comp=Z,94nm,1.6s
ESDC Sonseca Array 18.30 238 P **P 23 54 47.6 +0.4**
baz=50,slow=9.2,SNR=12
comp=Z,3.2nm,1.1s
ARA0 ARCESS Array S 18.62 10 *e*P **P 23 54 48.0 -2.4**
ARA0 IAmb IAmb 23 54 49.1
comp=Z,173nm,2.2s
ARCES ARCESS Array B 18.62 10 Pn **P 23 54 47.3 -3.2**
comp=Z,0.5nm,0.3s,baz=192,slow=12,SNR=18
comp=Z,3.2nm,0.5s
ARCES ARCESS Array B 18.62 10 P **P 23 54 49.1 -1.3**
ARCES ARCESS Array B 18.62 10 P **P 23 54 49.2 -1.3**
ARCES pmax pmax
comp=Z,5.0nm,1.0s
PRGR Permogore 18.98 46 *e*P **P 23 54 48.7 -5.7**
PRGR *e* 23 58 27.6
PRGR pmax pmax
comp=Z,13nm,0.7s
GOF Gofitskoye 18.98 99⇑*e*P **Pn 23 54 56.8 +1.6**
KIV Kislovodsk 19.33 103 *e*P **P 23 54 56.6 -2.0**
KIV pmax pmax
comp=Z,16nm,1.1s
BELG Belogornoye 19.37 75 P **P 23 54 55.1 -3.6**
comp=Z,65nm,1.0s,baz=137,slow=1.9,SNR=14
BELG Belogornoye 19.37 75 *i* P **P 23 54 54.7 -4.0**
BELG pmax pmax
comp=Z,11nm,1.0s
SHA1 Shidzhatmaz 19.43 103 *i* P **P 23 54 58.1 -1.7**
HAMF Hammerfest 19.51 8 *e*P **P 23 55 00.4 +0.2**
KBZ Khabaz 19.58 103 *ce*P **Pn 23 55 02.3 -0.1**
KBZ pmax pmax
comp=Z,5.0nm,1.1s
KIRV Kirov 20.18 56 P **P 23 55 07.5 -0.1**
comp=Z,13nm,0.6s,baz=291,slow=1.4,SNR=7.6
KIRV Lg Lg 00 01 14.1
comp=Z,0.2nm,0.3s,baz=352,slow=23,SNR=4.1
comp=Z,13nm,0.6s
KIRV Kirov 20.18 56 *ce*P Pn 23 55 09.6 +0.2
ONI Oni 20.56 105 P **P 23 55 11.5 -0.4**
ONI Oni 20.56 105 P **P 23 55 11.5 -0.4**
ONI pmax pmax
comp=Z,9.0nm,1.2s
CSS Mathiatis 20.68 136 P **P 23 55 13.0 -0.1**
GAZ Gaziantep 20.71 126 P **P 23 55 14.3 +0.7**
GAZ IAmb IAmb 23 55 17.5
comp=Z,14nm,1.0s
ZEI Tsey 20.71 104 *e*P Pn 23 55 16.9 +0.9
ZEI pmax pmax
comp=Z,15nm,1.2s
PVAQ Vaqueiros 21.96 239 P **P 23 55 28.1 +1.1**
MARD Mardin 22.48 120 P **P 23 55 34.0 +1.3**
GNI Garni 22.81 109 *ce*P **P 23 55 34.7 -1.5**
GNI pmax pmax
comp=Z,52nm,1.7s
GEVA Gevas 23.05 114 P **P 23 55 37.6 -1.0**
GEVA IAmb IAmb 23 55 43.1
comp=Z,12nm,1.0s
MMAI Mount Meron Ar 23.23 135 P **P 23 55 40.5 0.0**
comp=Z,4.5nm,0.9s,baz=330,slow=8.3,SNR=8.3
comp=Z,4.5nm,0.9s
MDT Midelt 24.04 227 P **P 23 55 49.4 +0.9**
comp=Z,0.8nm,0.7s,baz=58,slow=9.5,SNR=3.7
comp=Z,0.8nm,0.7s
ASF Jabal al Asfar 24.61 134 P **P 23 55 54.9 +1.1**
comp=Z,4.5nm,1.0s,baz=354,slow=2.0,SNR=11
comp=Z,4.5nm,1.0s
GHAJ Ghor Haditha 24.77 137 P **P 23 55 56.5 +1.4**
GHAJ IAmb IAmb 23 56 08.1
comp=Z,14nm,1.1s
ARU Arti 25.14 62 P **P 23 55 58.1 -0.1**
comp=Z,16nm,0.7s,baz=265,slow=8.7,SNR=23
comp=Z,16nm,0.7s
ARU Arti 25.14 62 P **P 23 55 58.6 +0.4**
ARU Arti 25.14 62 *d* *i*P **P 23 55 57.9 -0.2**
ARU S **S 00 00 22.3 -1.4**
ARU pmax pmax
comp=Z,40nm,1.1s
EIL Elat 25.95 140 P **P 23 56 06.8 +1.0**
comp=Z,9.1nm,1.0s,baz=347,slow=7.2,SNR=4.6
comp=Z,9.1nm,1.0s
AKTO Aktyubinsk 26.15 76 P **P 23 56 07.1 -0.4**
comp=Z,5.1nm,0.7s,baz=285,slow=9.7,SNR=16
comp=Z,5.1nm,0.7s
SVE Sverdlovsk 26.23 61 *e*P **P 23 56 09.7 +1.7**
SVE pmax pmax
comp=Z,42nm,1.4s
KBS Kingsbay 27.56 358 P **P 23 56 20.1 +0.2**
KBS IAmb IAmb 23 56 21.7
comp=Z,17nm,1.1s
KBS Kingsbay 27.56 358 P **P 23 56 20.1 +0.2**
KBS pmax pmax
comp=Z,17nm,1.1s
TAM Tamanrasset 29.82 200 P **P 23 56 41.5 +0.9**
TAM Tamanrasset 29.82 200 P **P 23 56 41.5 +0.9**
TAM pmax pmax
comp=Z,3.0nm,1.1s
GEYT Alibeck 32.32 98 P **P 23 57 04.1 +1.7**
comp=Z,3.8nm,1.1s,baz=269,slow=11,SNR=6.0
comp=Z,3.8nm,1.1s
GEYT Alibeck 32.32 98 P **P 23 57 02.4 -0.1**
GEYT IAmb IAmb 23 57 12.2
comp=Z,3.6nm,0.9s
GYA0B ALIBECK ARRAY 32.32 98 P **P 23 57 02.8 +0.4**
GYA0B IAmb IAmb 23 57 06.7
comp=Z,5.7nm,1.1s
BRVK Borovoye 32.52 66 P **P 23 57 04.3 +0.4**
BRVK IAmb IAmb 23 57 07.8
comp=Z,12nm,1.1s
BRVK Borovoye 32.52 66 *ce*P **P 23 57 04.9 +1.0**
BRVK pmax pmax
comp=Z,17nm,1.3s
RAYN Ar Rayn 35.95 130 P **P 23 57 33.9 -0.1**
RAYN Ar Rayn 35.95 130 P **P 23 57 33.9 -0.1**
RAYN pmax pmax
comp=Z,5.0nm,1.2s
NRIK Noril'sk 36.82 34 P **P 23 57 43.5 +2.5**
comp=Z,7.0nm,1.1s,baz=270,slow=7.4,SNR=5.2
comp=Z,7.0nm,1.1s
NRIK Noril'sk 36.82 34 P **P 23 57 39.9 -1.1**
NRIK IAmb IAmb 23 57 45.7
comp=Z,7.0nm,1.1s
NRIK Noril'sk 36.82 34 *ce*P **P 23 57 42.7 +1.7**
NRIK pmax pmax
comp=Z,12nm,1.2s
KK31 Karatay Array 37.06 81 P **P 23 57 44.8 +1.4**
KK31 Karatay Array 37.06 81 P **P 23 57 44.8 +1.4**
KK31 pmax pmax
comp=Z,4.0nm,1.1s
KKAR Karatay Array 37.06 81 P **P 23 57 44.6 +1.3**
KKAR Karatay Array 37.06 81 P **P 23 57 45.1 +1.7**
KKAR Karatay Array 37.06 81 P **P 23 57 44.6 +1.3**
KKAR pmax pmax
comp=Z,4.0nm,1.1s
HRA Herat 37.15 99 P **P 23 57 45.9 +1.5**
KURK Kurchatov 38.19 66 P **P 23 57 52.7 0.0**
KURK IAmb IAmb 23 57 55.6
comp=Z,12nm,1.1s
KURK Kurchatov 38.19 66 *ce*P **P 23 57 53.2 +0.5**
KURK pmax pmax
comp=Z,13nm,1.3s
CHGR Chuyangaron 38.76 88 P **P 23 57 58.1 +0.3**
CHGR IAmb IAmb 23 58 01.6
comp=Z,24nm,1.1s
CHGR Chuyangaron 38.76 88 P **P 23 57 58.1 +0.3**
CHGR pmax pmax
comp=Z,24nm,1.1s
BTK Batken 38.96 85 P **P 23 58 00.4 +0.9**
BTK IAmb IAmb 23 58 03.3
comp=Z,16nm,1.1s
BTK Batken 38.96 85 P **P 23 58 00.4 +0.9**
BTK pmax pmax
comp=Z,16nm,1.2s
GAR Garm 39.28 87 P **P 23 58 03.3 +1.1**
AAK Ala-Archa 39.77 79 P **P 23 58 07.0 +0.7**
AAK IAmb IAmb 23 58 10.8
comp=Z,19nm,1.1s
AAK Ala-Archa 39.77 79 *ce*P **P 23 58 07.7 +1.4**
AAK pmax pmax
comp=Z,24nm,1.3s
TOA0 Torodi Ar. Sit 40.01 202 P **P 23 58 08.7 +0.4**
TOA0 IAmb IAmb 23 58 10.3
comp=Z,11nm,1.1s
TORD Torodi Ar. Bea 40.01 202 P **P 23 58 07.7 -0.5**
comp=Z,8.0nm,1.1s,baz=15,slow=6.5,SNR=29
TORD PcP **PcP 00 00 13.3 -0.1**
comp=Z,0.5nm,0.8s,baz=342,slow=0.5,SNR=2.4
comp=Z,8.0nm,1.1s
TORD Torodi Ar. Bea 40.01 202 P **P 23 58 08.5 +0.3**
TORD IAmb IAmb 23 58 10.3
comp=Z,8.8nm,1.1s
ZAA0 Zalesovo Array 40.20 59 P **P 23 58 10.2 +0.8**
ZAA0 IAmb IAmb 23 58 12.9
comp=Z,7.9nm,1.1s
ZALV Zalesovo Beam 40.20 59 P **P 23 58 11.0 +1.6**
comp=Z,7.1nm,1.1s,baz=298,slow=9.3,SNR=17
comp=Z,7.1nm,1.1s
ZALV Zalesovo Beam 40.20 59 P **P 23 58 10.7 +1.3**
KOWA Kowa 40.32 211 P **P 23 58 11.4 +0.6**
BOOM Boomskoye usch 40.74 78 P **P 23 58 14.9 +0.6**
BOOM Boomskoye usch 40.74 78 P **P 23 58 14.9 +0.6**
BOOM pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 41.27 93 P **P 23 58 19.7 +0.8**
KBL Kabul 41.27 93 P **P 23 58 19.7 +0.8**
KBL pmax pmax
comp=Z,1.0nm,0.8s
NRN Naryn 41.38 80 P **P 23 58 20.6 +0.9**
NRN Naryn 41.38 80 P **P 23 58 20.6 +0.9**
NRN pmax pmax
comp=Z,5.0nm,1.2s
MAKZ Makanchi 42.02 69 P **P 23 58 25.1 +0.4**
MAKZ Makanchi 42.02 69 P **P 23 58 25.1 +0.4**
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
MK31 Makanchi Array 42.21 69 P **P 23 58 27.1 +0.8**
MK31 Makanchi Array 42.21 69 *i* P **P 23 58 26.8 +0.6**
MKAR Makanchi Array 42.21 69 P **P 23 58 26.5 +0.3**
comp=Z,1.6nm,0.8s,baz=297,slow=6.3,SNR=14
MKAR PP **PP 00 00 04.9 +1.3**
comp=Z,1.6nm,1.0s,baz=298,slow=9.3,SNR=5.3
comp=Z,1.6nm,0.8s
MKAR Makanchi Array 42.21 69 P **P 23 58 27.1 +0.8**
KSH Kashi 42.48 82 P **P 23 58 31.4 +2.8**
DGZ Jazzator, Alta 43.64 63 *i* P **P 23 58 38.8 +0.9**
DGZ pmax pmax
comp=Z,8.0nm,1.1s
TIXI Tiksi 48.40 23 *i* P **P 23 59 19.1 +4.2**
TIXI pmax pmax
comp=Z,3.0nm,1.4s
LODK Lodwar 50.57 155 P **P 23 59 33.2 +1.0**
SONM Songino Array 54.91 55 P **P 00 00 05.6 +1.5**
comp=Z,6.3nm,1.1s,baz=291,slow=5.6,SNR=16
comp=Z,6.3nm,1.1s
SONM Songino Array 54.91 55 P **P 00 00 06.2 +2.1**
SONM Songino Array 54.91 55 P **P 00 00 06.2 +2.1**
SONM pmax pmax
comp=Z,2.0nm,0.9s
YAK Yakutsk 55.20 32 *i* P **P 00 00 06.6 +0.9**
YAK pmax pmax
comp=Z,14nm,0.9s
ULN Ulaanbaatar 55.23 55 P **P 00 00 07.8 +1.4**
ULN Ulaanbaatar 55.23 55 P **P 00 00 07.8 +1.4**
ULN pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 58.70 13 *e*P P 00 00 36.3 +5.8
BILL *e* 00 02 46.6
BILL pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 59.85 336 P **P 00 00 40.7 +2.2**
comp=Z,6.2nm,1.0s,baz=24,slow=6.4,SNR=6.7
comp=Z,6.2nm,1.0s
ILAR Eielson Array 63.30 352 P **P 00 01 04.6 +2.8**
comp=Z,0.4nm,0.7s,baz=20,slow=5.8,SNR=7.0
comp=Z,0.4nm,0.7s
XAN Xi'an 65.82 65 ⇑P **P 00 01 21.8 +3.0**
CMAR Chiang Mai Arr 71.36 84 P **P 00 01 54.6 +1.1**
comp=Z,3.6nm,0.4s,baz=309,slow=7.2,SNR=18
comp=Z,3.6nm,0.4s
KSRS Korea Array 73.26 50 P **P 00 02 06.0 +1.4**
comp=Z,1.8nm,0.8s,baz=354,slow=5.0,SNR=5.6
comp=Z,1.8nm,0.8s
KSRS Korea Array 73.26 50 P **P 00 02 06.0 +1.4**
R32A Long Quarter, 73.91 312 P **P 00 02 09.7 +1.2**
H17A Grant Village 73.94 323 P **P 00 02 10.8 +2.0**
CBKS Cedar Bluff 74.06 313 P **P 00 02 11.5 +2.1**
CBKS Cedar Bluff 74.06 313 P **P 00 02 11.5 +2.1**
CBKS pmax pmax
comp=Z,13nm,1.0s
T35A Sooner Cattle 74.08 310 P **P 00 02 10.7 +1.2**
YPP Pitchstone Pla 74.13 323 P **P 00 02 12.1 +2.1**
YPP IAmb IAmb 00 02 17.8
comp=Z,7.6nm,1.2s

MCMT	McKenzie Canyo	74.40	325	P	P	00 02 14.4 +2.9
D08A	Wollman Farm,	74.48	330	P	P	00 02 13.4 +1.8
D08A				IAmb	IAmb	00 02 17.6
	comp=Z,3.6nm,0.8s					
LOHW	Long Hollow	74.61	323	P	P	00 02 15.2 +2.5
LOHW				IAmb	IAmb	00 02 17.7
	comp=Z,9.3nm,1.1s					
FXWY	Fox Creek	74.75	323	P	P	00 02 15.6 +2.0
FXWY				IAmb	IAmb	00 02 20.1
	comp=Z,5.8nm,1.1s					
SNOW	Snow King Moun	74.80	323	P	P	00 02 16.6 +2.7
REDW	Red Top Meadow	74.92	323	P	P	00 02 16.1 +1.6
REDW				IAmb	IAmb	00 02 20.3
	comp=Z,5.9nm,1.1s					
BW06	Boulder Array	74.94	322	P	P	00 02 15.8 +1.1
PD31	Pinedale Array	74.94	322	P	P	00 02 15.9 +1.3
PD31				IAmb	IAmb	00 02 19.6
	comp=Z,3.8nm,1.1s					
PDAR	Pinedale Array	74.94	322	P	P	00 02 15.7 +1.1
	comp=Z,1.6nm,0.6s,baz=54,slow=5.0,SNR=12					
	comp=Z,1.6nm,0.6s					
PDAR	Pinedale Array	74.94	322	P	P	00 02 16.4 +1.7
E08A	Dider Farm, El	75.03	330	P	P	00 02 17.0 +2.2
HAWA	Hanford	75.27	330	P	P	00 02 17.7 +1.5
PLID	Pearl Lake	75.27	327	P	P	00 02 17.3 +0.7
PLID				IAmb	IAmb	00 02 19.5
	comp=Z,5.8nm,0.9s					
BMO	Blue Mountains	75.92	328	P	P	00 02 21.7 +1.6
BMO	Blue Mountains	75.92	328	P	P	00 02 21.7 +1.6
BMO				pmax	pmax	
	comp=Z,19nm,1.1s					
HLID	Hailey	76.05	325	P	P	00 02 23.5 +2.5
HLID				IAmb	IAmb	00 02 26.0
	comp=Z,6.9nm,1.1s					
O20A	White River Ci	76.65	319	P	P	00 02 26.7 +2.3
O20A				IAmb	IAmb	00 02 27.5
	comp=Z,5.4nm,0.9s					
MFID	Camas Ranch	76.68	326	P	P	00 02 26.0 +1.6
MFID				IAmb	IAmb	00 02 27.6
	comp=Z,5.1nm,0.9s					
HWUT	Hardware Ranch	76.70	322	P	P	00 02 26.9 +2.2
HWUT				IAmb	IAmb	00 02 29.7
	comp=Z,8.6nm,1.1s					
RDMU	Red Mountain	76.81	321	P	P	00 02 26.6 +1.2
HOOD	Mount Hood Mea	76.88	331	P	P	00 02 27.2 +1.5
SMCO	Snowmass	76.93	318	P	P	00 02 27.6 +1.3
HVU	Hansel Valley	77.01	323	P	P	00 02 29.0 +2.6
HVU				IAmb	IAmb	00 02 30.3
	comp=Z,4.3nm,1.2s					
HVU	Hansel Valley	77.01	323	P	P	00 02 29.0 +2.6
HVU				pmax	pmax	
	comp=Z,4.0nm,1.2s					
TCUT	Toone Canyon	77.06	322	P	P	00 02 29.3 +2.5
SDCO	Great Sand Dun	77.51	316	P	P	00 02 30.7 +1.3
SDCO				IAmb	IAmb	00 02 34.4
	comp=Z,2.5nm,1.0s					
JLU	Jordanelle	77.52	322	P	P	00 02 30.9 +1.5
JLU				IAmb	IAmb	00 02 33.3
	comp=Z,5.1nm,1.1s					
CTU	Camp Tracy	77.56	322	P	P	00 02 31.5 +2.0
CTU				IAmb	IAmb	00 02 36.1
	comp=Z,6.8nm,1.1s					
BGU	Big Grassy Mou	77.84	323	P	P	00 02 33.9 +2.8
P18A	Preston Nutter	77.88	320	P	P	00 02 33.4 +1.8
PINE	Pine Mountain	78.04	330	P	P	00 02 33.6 +1.5
S22A	4UR Ranch, Cre	78.08	317	P	P	00 02 34.9 +2.2
S22A				IAmb	IAmb	00 02 39.1
	comp=Z,3.9nm,1.0s					
MPU	Maple Canyon	78.09	322	P	P	00 02 35.5 +3.0
PV07	Paradox Valley	78.25	319	P	P	00 02 35.8 +2.3
PV07				IAmb	IAmb	00 02 40.7
	comp=Z,7.9nm,1.2s					
PV15	Paradox Valley	78.27	319	P	P	00 02 34.9 +1.3
NLU	North Lily Min	78.32	322	P	P	00 02 36.5 +2.7
PV23	Carpenter Ridg	78.39	319	P	P	00 02 36.5 +2.1
DUG	Dugway, Tooele	78.39	323	P	P	00 02 36.8 +2.6
DUG	Dugway, Tooele	78.39	323	P	P	00 02 36.8 +2.6
DUG				pmax	pmax	
	comp=Z,10.0nm,1.0s					
SRU	San Rafael Swe	78.44	320	P	P	00 02 36.7 +2.3
SRU				IAmb	IAmb	00 02 37.5
	comp=Z,7.9nm,1.0s					
SRU	San Rafael Swe	78.44	320	P	P	00 02 36.7 +2.3
SRU				pmax	pmax	
	comp=Z,8.0nm,1.0s					
PV11	David Mesa, Pa	78.46	319	P	P	00 02 37.3 +2.7
PV10	Paradox Valley	78.47	319	P	P	00 02 37.3 +2.6
TMUT	Trail Mountain	78.55	321	P	P	00 02 36.5 +1.2
TMUT				IAmb	IAmb	00 02 38.7
	comp=Z,4.3nm,1.0s					
PV13	Radium Mtn., P	78.56	319	P	P	00 02 37.5 +2.3
MJAR	Matsushiro Arr	78.73	44	P	P	00 02 37.7 +1.8
	comp=Z,0.8nm,0.3s,baz=323,slow=4.5,SNR=6.0					
	comp=Z,0.8nm,0.3s					
ELK	Elko	78.81	324	P	P	00 02 39.1 +2.5
ELK				IAmb	IAmb	00 02 42.3
	comp=Z,3.7nm,0.9s					
ELK	Elko	78.81	324	P	P	00 02 39.1 +2.5
ELK				pmax	pmax	
	comp=Z,4.0nm,1.0s					
Q16A	Castle Valley	78.86	321	P	P	00 02 38.9 +2.1
Q16A				IAmb	IAmb	00 02 40.9
	comp=Z,6.3nm,1.1s					
K05A	Summer Lake	78.99	329	P	P	00 02 40.0 +2.6
ABTX	Abilene, Hawle	79.06	309	P	P	00 02 39.1 +1.4
ABTX				IAmb	IAmb	00 02 42.4
	comp=Z,6.1nm,1.1s					
MVCO	Mesa Verde	79.23	318	P	P	00 02 41.0 +2.1
BAUV	El Baul	79.43	271	P	P	00 02 42.1 +2.1
MOD	Modoc Plateau	79.54	328	P	P	00 02 42.4 +2.0
MOD				IAmb	IAmb	00 02 45.1
	comp=Z,8.9nm,1.0s					
MSU	Marysvale	79.61	321	P	P	00 02 43.0 +2.1
MSU	Marysvale	79.61	321	P	P	00 02 43.0 +2.1
TCRU	Three Creeks R	79.63	321	P	P	00 02 44.2 +3.2
BMN	Battle Mountai	79.80	326	P	P	00 02 43.5 +1.6
BMN				IAmb	IAmb	00 02 47.1
	comp=Z,7.6nm,1.2s					
BMN	Battle Mountai	79.80	326	P	P	00 02 43.5 +1.6
MTPU	Mount Pierson	80.02	321	P	P	00 02 45.6 +2.3
MTPU				IAmb	IAmb	00 02 48.2
	comp=Z,5.0nm,1.1s					
BOSA	Boshof	80.19	172	P	P	00 02 45.4 +1.7
	comp=Z,3.8nm,0.9s,baz=73,slow=3.3,SNR=4.2					
	comp=Z,3.8nm,0.9s					
PSUT	Pine Spring	80.23	322	P	P	00 02 47.2 +2.9
PSUT				IAmb	IAmb	00 02 48.6
	comp=Z,6.8nm,1.1s					
ANMO	Albuquerque	80.28	315	P	P	00 02 46.9 +2.3
ANMO				IAmb	IAmb	00 02 50.0
	comp=Z,3.7nm,1.0s					
ANMO	Albuquerque	80.28	315	P	P	00 02 46.9 +2.3
ANMO				pmax	pmax	
	comp=Z,4.0nm,1.0s					
PKCU	Pink Cliffs	80.58	321	P	P	00 02 47.7 +1.3
SZCU	Shurtz Canyon	80.76	321	P	P	00 02 48.2 +1.0
SZCU				IAmb	IAmb	00 02 51.1
	comp=Z,5.3nm,1.2s					
CCUT	Cedar City	80.90	322	P	P	00 02 50.2 +2.3
CCUT				IAmb	IAmb	00 02 53.0
	comp=Z,5.3nm,1.0s					
BNM	Barren Site	81.02	315	P	P	00 02 52.2 +3.5
R11A	Troy Canyon, C	81.05	324	P	P	00 02 50.7 +2.1
SDV	Santo Domingo	81.09	273	P	P	00 02 50.6 +1.5
SDV				IAmb	IAmb	00 02 53.2
	comp=Z,5.6nm,0.8s					
KNB	Kanab	81.16	321	P	P	00 02 51.3 +2.1
KNB	Kanab	81.16	321	P	P	00 02 51.3 +2.1
KNB				pmax	pmax	
	comp=Z,1.0nm,0.8s					
PAHR	Pah Rah Range	81.20	327	P	P	00 02 52.1 +2.7
LCMT	Little Creek M	81.33	321	P	P	00 02 51.9 +1.8
U15A	North Rim	81.46	320	P	P	00 02 52.8 +1.8
U15A				IAmb	IAmb	00 02 55.4
	comp=Z,4.8nm,1.0s					
PRN	Pahroc Range	81.68	323	P	P	00 02 54.4 +2.4
PRN				IAmb	IAmb	00 02 57.8
	comp=Z,7.1nm,1.1s					
MPK	Martis Peak	81.79	327	P	P	00 02 52.1 -0.6
YERR	Yerington	81.79	326		P	00 02 54.0 +1.4
YERR				IAmb	IAmb	00 02 57.3
	comp=Z,5.9nm,0.9s					
WUAZ	Wupatki	81.87	319	P	P	00 02 54.7 +1.6
WUAZ				IAmb	IAmb	00 02 56.9
	comp=Z,3.6nm,0.8s					
TPH	Tonopah	81.89	325		P	00 02 54.7 +1.6
TPH	Tonopah	81.89	325	P	P	00 02 54.7 +1.6
TPH				pmax	pmax	
	comp=Z,14nm,1.0s					
NV11	Mina Array Sit	81.91	325	P	P	00 02 54.4 +1.3
NVAR	Mina Array Bea	81.96	325	P	P	00 02 55.4 +1.8
	comp=Z,1.7nm,1.0s,baz=47,slow=7.2,SNR=6.8					
	comp=Z,1.7nm,1.0s					
NVAR	Mina Array Bea	81.96	325	P	P	00 02 54.6 +1.0
ORV	Oroville	82.05	328	P	P	00 02 55.0 +1.4
ORV				IAmb	IAmb	00 03 01.0
	comp=Z,2.6nm,1.0s					
ORV	Oroville	82.05	328	P	P	00 02 55.0 +1.4
ORV				pmax	pmax	
	comp=Z,3.0nm,1.0s					
LHV	Little Huntoon	82.19	326	P	P	00 02 57.1 +2.7
LHV				IAmb	IAmb	00 03 00.7
	comp=Z,4.6nm,1.0s					
MZP	Montezuma Peak	82.28	324	P	P	00 02 56.4 +1.1
833A	Chaparral WMA,	82.45	307	P	P	00 02 57.8 +1.8
833A				IAmb	IAmb	00 02 59.7
	comp=Z,4.8nm,0.8s					
SHPR	Sheep Range	82.51	322	P	P	00 02 58.9 +2.6
TPNV	Topopah Spring	82.53	323	P	P	00 02 58.4 +2.0
TPNV				IAmb	IAmb	00 03 00.5
	comp=Z,5.6nm,1.1s					
TPNV	Topopah Spring	82.53	323	P	P	00 02 58.4 +2.0
TPNV				pmax	pmax	
	comp=Z,6.0nm,1.2s					
121A	Cookes Peak, D	82.91	315	P	P	00 03 00.5 +2.0
121A				IAmb	IAmb	00 03 01.7
	comp=Z,2.8nm,1.1s					
V12A	Nelson	83.08	322	P	P	00 03 01.0 +1.8
V12A				IAmb	IAmb	00 03 05.1
	comp=Z,6.2nm,1.1s					
W13A	Hualapai Mount	83.25	321	P	P	00 03 02.9 +2.6
PSI	Prapat	83.34	94	P	P	00 03 01.5 +0.6
PSI				pmax	pmax	
	comp=Z,10.0nm,1.0s					
GWY	Greenwater Val	83.36	323	P	P	00 03 03.3 +2.6
RPSI	Rantau Prapat	83.42	94	P	P	00 03 01.5 +0.4
QSM	Queen of Sheba	83.63	323	P	P	00 03 04.4 +2.5
QSM				IAmb	IAmb	00 03 10.2
	comp=Z,4.4nm,1.2s					
TX31	Lajitas Ar. Si	83.71	310	P	P	00 03 04.8 +2.2
TX31				IAmb	IAmb	00 03 22.0
	comp=Z,3.4nm,1.1s					
TX32	Lajitas Array	83.71	310	P	P	00 03 05.4 +2.8
TXAR	Lajitas Array	83.71	310	P	P	00 03 05.1 +2.5
	comp=Z,0.8nm,0.6s,baz=46,slow=3.6,SNR=14					
	comp=Z,0.8nm,0.6s					
TXAR	Lajitas Array	83.71	310	P	P	00 03 05.5 +3.0
Y14A	Wickenburg	83.91	320	P	P	00 03 06.4 +2.9
GSC	Goldstone, Bar	84.19	323	P	P	00 03 07.7 +2.7
GSC				IAmb	IAmb	00 03 08.7
	comp=Z,1.6nm,0.5s					
GSC	Goldstone, Bar	84.19	323	P	P	00 03 07.7 +2.7
GSC				pmax	pmax	
	comp=Z,2.0nm,0.5s					
TUC	Tucson	84.40	317	P	P	00 03 07.7 +1.7
TUC				pmax	pmax	
	comp=Z,7.0nm,1.1s					
ISA	Isabella, Lake	84.49	324	P	P	00 03 08.5 +2.1
ISA				IAmb	IAmb	00 03 23.7
	comp=Z,2.7nm,1.1s					
ISA	Isabella, Lake	84.49	324	P	P	00 03 08.5 +2.1
ISA				pmax	pmax	
	comp=Z,3.0nm,1.1s					
BLYC	Blythe	84.68	321	P	P	00 03 10.1 +2.7
BLYC				IAmb	IAmb	00 03 28.4
	comp=Z,2.6nm,0.8s					
ASAR	Alice Springs	125.37	84	PKP	PKiKP	00 09 35.2 +0.4
	comp=Z,0.6nm,0.8s,baz=319,slow=1.3,SNR=3.0					
VNDA	Vanda	150.97	165	PKPbc	PKiKP	00 10 25.9 +0.5
	comp=Z,2.3nm,1.1s,baz=273,slow=4.1,SNR=6.6					

*IDC **18** 00:05:36.4±1.2,32°.44N×47°.57E,h0km,mb3.8/12,*
mbtmp3.8/16,ML3.2/2,MS2.2/1,Error ellipse:
s-maj=24.8km s-min=16.4km az=151.0
*ISN **18** 00:05:37.6±1.2,32°.44N×47°.79E,h3km±23km,ML3.7*
*TEH **18** 00:05:38.8,32°.54N×47°.87E,h11km,ML3.8*
*OMAN **18** 00:05:43.5±0.1,31°.83N×47°.88E,h10km,mb5.2/13,*
ms2.6/2,Error ellipse: s-maj=2.5km s-min=1.5km az=43.0

ISC 18 00:05:37.6±0.5,32°.43N±0°.04×47°.78E±0°.03,h10km,n99,
σ2°51/128,mb3.8/13,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	Dehloran	0.49	302	ePg	Pb	00 05 48.3	0.0
DHL1				eSg	Sb	00 05 57.3	+1.7
IKFM	Kafar-mosalman	1.10	3	ePg	Pb	00 05 58.0	-0.7
IKFM				e		00 06 19.1	
	comp=Z,45μm,0.5s						
IKMR	Kamar-syah	1.20	25	ePg	Pn	00 05 59.9	-0.6
IKMR				e		00 06 24.7	
	comp=Z,24μm,0.8s						
AHWZ	Ahwaz	1.32	146	eSg	Sg	00 06 25.7	+5.6
AHWZ				ePg	Pg	00 06 05.7	+2.7
IDOB	Doab	1.40	14	ePg	Pn	00 06 03.2	-0.2
AMIS	Naft Sefid	1.49	120	e		00 06 35.9	
	comp=Z,11μm,0.4s						
AMIS				ePg	Pg	00 06 07.2	+0.9
RAFI	Al-Rafai	1.57	244	ePn	Pg	00 06 09.0	+1.2
RAFI				eSn	Sg	00 06 31.0	+2.7
IBDR	Badra	1.70	294	ePn	Pg	00 06 10.0	-0.2
IBDR				eSn	Sg	00 06 33.0	+0.8
IKOM	Komasi	1.76	353	e		00 06 13.3	
	comp=Z,16μm,0.6s						
IKOM				ePn	Pn	00 06 09.5	+1.2
HSAM	Samen	1.91	21	ePn	Pn	00 06 11.6	+1.1
HSAM				e		00 06 46.5	
	comp=Z,7μm,0.8s						
KCHF	Cheshme Sefid,	1.94	342	ePn	Pn	00 06 12.3	+1.4
KCHF				e		00 06 49.0	
	comp=Z,10μm,0.5s						
KER	Kermanshah	2.03	345	ePn	Pn	00 06 14.0	+2.0
KER				e		00 06 52.2	
	comp=Z,8μm,0.8s						
IBZA	Bozab	2.04	2	ePn	Pn	00 06 13.8	+1.5
IBZA				e		00 06 46.2	
	comp=Z,6μm,0.8s						
IGHG	Ghaleghazi	2.15	332	ePn	Pn	00 06 16.0	+2.2
IGHG				e		00 07 25.5	
	comp=Z,9μm,1.0s						
KHMZ	Khomeyn	2.25	54	ePg	Pb	00 06 18.0	-0.6
IDHR	Dehrash	2.55	333	ePn	Pn	00 06 20.8	+1.6
IDHR				e		00 07 02.5	
	comp=Z,6μm,0.7s						
ILIN	Lien	2.58	345	ePn	Pn	00 06 21.2	+1.5
ILIN				e		00 07 04.1	
	comp=Z,5μm,0.8s						
SHK1	Shahrekord	2.63	91	ePn	Pn	00 06 22.2	+1.8
SHK1				e		00 07 09.7	
	comp=Z,3μm,0.7s						
IPIR	Pirpir	2.65	84	ePn	Pn	00 06 22.4	+1.8
IPIR				e		00 07 18.8	
	comp=Z,3μm,0.7s						
HAGD	Aghdareh	2.65	25	ePn	Pn	00 06 21.9	+1.3
HAGD				e		00 07 07.1	
	comp=Z,4μm,0.8s						
SNGE	Sanandaj	2.68	352	ePn	Pb	00 06 24.8	-1.1
BHD	Baghdad	2.98	287	ePn	Pn	00 06 28.0	+3.1
BHD				eSn	Sb	00 07 05.0	-2.2
BHD				AML	AML	00 07 31.3	
	comp=E,361nm,0.6s						
IBRJ	Brojen	3.00	99	ePn	Pn	00 06 27.4	+1.9
QAMS	Qamsar	3.31	66	ePn	Pn	00 06 30.9	+1.2
QAMS				e		00 07 23.1	
	comp=Z,2μm,0.5s						
IKLH	Kolahrood	3.32	73	ePn	Pn	00 06 32.4	+2.5
IKLH				e		00 07 28.0	
	comp=Z,1μm,0.7s						
IRAZ	Razeghan	3.47	30	ePn	Pn	00 06 33.7	+1.8
IRAZ				e		00 07 44.6	
	comp=Z,2μm,0.8s						
KLNJ	Kolanjah	3.55	112	ePn	Pn	00 06 35.0	+1.9
KLNJ				e		00 08 05.1	
	comp=Z,2μm,1.0s						
QABG	Abgarm-Qazvin	3.60	24	ePn	Pn	00 06 35.4	+1.7
IGAR	Gharneh	3.61	89	ePn	Pn	00 06 35.6	+1.8
IGAR				e		00 07 41.8	
	comp=Z,770nm,0.5s						
IQOM	Qom	3.66	48	ePn	Pn	00 06 35.8	+1.3
IQOM				e		00 06 48.9	
	comp=Z,2μm,0.6s						
IZEF	Zefreh	3.87	82	ePn	Pn	00 06 39.0	+1.5
IZEF				e		00 06 44.9	
	comp=Z,707nm,0.4s						
IRAM	Rameseh	3.96	98	ePn	Pn	00 06 40.0	+1.4
IRAM				e		00 08 03.8	
	comp=Z,874nm,0.8s						
KRSH	Karshahi	3.97	66	ePn	Pn	00 06 40.8	+2.1
KRSH				e		00 08 00.7	
	comp=Z,1μm,1.0s						
IKRK	Kirkuk	4.12	317	ePn	Pn	00 06 43.0	+2.4
IKRK				eSn	Sn	00 07 32.0	+3.1
IVRN	Varamin	4.17	51	ePn	Pn	00 06 43.1	+1.6
IVRN				e		00 07 00.6	
	comp=Z,913nm,0.6s						
IHSB	Hasanabad	4.18	43	ePn	Pn	00 06 43.7	+2.1
ISFB	Sefidab	4.20	62	ePn	Pn	00 06 43.1	+1.3
QSDN	Sirdan	4.23	15	ePn	Pn	00 06 44.0	+1.6
NASN	Na'in	4.26	84	ePn	Pn	00 06 44.3	+1.4
QALM	Alamut, Qazvin	4.65	30	ePn	Pn	00 06 49.5	+1.4
MAHB	Mahabad	4.65	339	ePn	Pn	00 06 49.9	+1.8
IDMV	Damavand	4.73	47	ePn	Pn	00 06 50.8	+1.5
ISAD	Sadrabad	5.04	94	ePn	Pn	00 06 55.0	+1.5
ANAR	Anarak	5.07	80	ePn	Pn	00 06 54.8	+0.9
IFIR	Firoozkooh	5.23	51	ePn	Pn	00 06 57.9	+1.7
ISRB	Sarab	5.39	359	ePn	Pn	00 06 59.5	+1.2
IAZR	Azarshahr	5.44	345	ePn	Pn	00 07 01.1	+2.0
ICHK	Chekchek	5.62	90	ePn	Pn	00 07 02.7	+1.3
ICHK				e		00 08 49.6	
	comp=Z,321nm,0.6s						
YZKH	Yazd	5.77	89	ePn	Pn	00 07 04.8	+1.4
IMEH	Mehriz	5.91	98	ePn	Pn	00 07 06.5	+1.1
IHRS	Heris	5.91	354	ePn	Pn	00 07 07.5	+2.0
ISHB	Shabestar	6.10	344	ePn	Pn	00 07 10.0	+1.9
TPRV	Parvadeh(Tabas	7.53	83	ePn	Pn	00 07 29.1	+1.5
TKDS	Koohdasht(Taba	7.94	79	ePn	Pn	00 07 34.7	+1.5
GNI	Garni	8.09	343	Pn	Pn	00 07 36.0	+0.7
	comp=Z,5.0nm,1.0s,baz=192,slow=19,SNR=1.1						
GNI				Sn	Sn	00 09 04.0	-2.8
	comp=Z,0.4nm,0.3s,baz=82,slow=20,SNR=1.4						
GNI				LR	LR	00 10 23.2	
	comp=Z,16nm,18.8s,baz=133,slow=36						
NGRK	Negar Kerman	8.17	107	ePn	Pn	00 07 38.1	+1.5
RAYN	Ar Rayn	9.09	193	Pn	Pn	00 07 50.2	+1.2
ASF	Jabal al Asfar	9.21	271	Pn	Pn	00 07 47.2	-3.5
	comp=Z,0.2nm,0.3s,baz=96,slow=1.6,SNR=1.5						
ASF				Sn	Sn	00 09 30.9	-3.5
	comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=1.7						
ASF				Lg	Lg	00 10 18.6	
	comp=Z,0.2nm,0.3s,baz=93,slow=17,SNR=1.8						
	comp=Z,0.8nm,0.3s						
SHME	Shamm	9.68	129	Pn	Pn	00 07 55.1	-1.9
BANOM	Banah	9.87	129	P	Pn	00 07 58.5	-1.2
BANOM				P	Pn	00 07 58.5	-1.2
BANOM				S	Sn	00 09 46.8	-3.8
BANOM				S	Sn	00 09 46.8	-3.8
BANOM	Banah	9.87	129	Pn	Pn	00 07 57.9	-1.7
GEYT	Alibeck	10.09	54	Pn	Pn	00 08 05.7	+3.1
	comp=Z,0.2nm,0.3s,baz=255,slow=8.8,SNR=3.2						
GEYT				Sn	Sn	00 09 55.7	-0.2
	comp=Z,0.1nm,0.3s,baz=200,slow=39,SNR=1.2						
	comp=Z,1.4nm,0.7s						
MASF	Masafi	10.16	132	P	Pn	00 08 02.6	-1.1
MASF				S	Sn	00 09 53.1	-4.7
MSFE	Esma-Masafi	10.17	132	Pn	Pn	00 08 01.8	-2.0
ASUD	Al Ashush, Dub	10.22	138	P	Pn	00 08 04.8	+0.4
ASUD				S	Sn	00 09 57.2	-1.8
ASUD	Al Ashush, Dub	10.22	138	Pn	Pn	00 08 05.1	+0.7
MMAI	Mount Meron Ar	10.44	277	Pn	Pn	00 08 09.2	+1.8
	comp=Z,0.2nm,0.3s,baz=53,slow=21,SNR=1.2						
MMAI				Lg	Lg	00 11 02.8	
	comp=Z,0.3nm,0.3s,baz=114,slow=35,SNR=2.6						
UOSS	Minazif	10.50	133	P	Pn	00 08 07.3	-1.0
UOSS				S	Sn	00 10 02.4	-3.6
UOSS	Minazif	10.50	133	Pn	Pn	00 08 06.1	-2.2
HATD	Hatta, Dubai	10.54	134	P	Pn	00 08 09.1	+0.3
HATD				S	Sn	00 10 01.8	-5.2
HATD	Hatta, Dubai	10.54	134	Pn	Pn	00 08 08.4	-0.5
ASHO	Ashiyiah	10.60	135	P	Pn	00 08 10.0	+0.3
	SNR=5.7						
ASHO				S	Sn	00 10 06.0	-2.6
ASHO	Ashiyiah	10.60	135	Pn	Pn	00 08 09.0	-0.7
ASHO				Sn	Sn	00 10 04.3	-4.3
MZR	Muzera	10.66	150	P	Pn	00 08 12.4	+1.9
	SNR=11						
MZR				S	Sn	00 10 08.9	-1.0
MZR	Muzera	10.66	150	Pn	Pn	00 08 10.9	+0.5
ALNE	Al Ain	10.90	138	P	Pn	00 08 14.2	+0.4
	SNR=5.9						
ALNE	Al Ain	10.90	138	Pn	Pn	00 08 13.8	0.0
UMZA	Um Al Zommool	11.68	144	P	Pn	00 08 24.1	-0.2
UMZA				S	Sn	00 10 29.5	-5.4
BSY	Bisya	12.75	137	P	Pn	00 08 38.2	-0.9
	SNR=5.8						
BSY				P	Pn	00 08 38.2	-0.9
	SNR=5.8						
BSY				S	Sn	00 10 55.1	-6.1
BSY				S	Sn	00 10 55.1	-6.1
SMDO	Samad	13.02	133	P	Pn	00 08 42.8	0.0
SMDO				S	Sn	00 11 05.7	-2.3
WSAR	Wadi Sarin	13.26	131	Pn	Pn	00 08 44.4	-1.6
	comp=Z,0.6nm,0.3s,baz=332,slow=8.6,SNR=6.8						
WSAR				Sn	Sn	00 11 12.8	-0.7
	comp=Z,0.3nm,0.3s,baz=147,slow=23,SNR=1.6						
MHTO	MHTO	14.57	139	P	Pn	00 09 01.2	-2.8
MHTO				S	Sn	00 11 38.7	-7.0
DOK	Doka	14.89	156	P	Pn	00 09 06.3	-2.0
DOK				S	Sn	00 11 47.1	-6.3
DQM	DQM	15.21	143	P	Pn	00 09 09.9	-2.7
DQM				S	Sn	00 11 52.0	-9.1
WHFO	Wadi Hawf	15.42	158	P	Pn	00 09 14.7	-0.8
	SNR=6.5						
WHFO				S	Sn	00 11 59.4	-7.1
BELG	Belogornoye	19.96	360	P	P	00 10 10.2	+0.5
	comp=Z,7.9nm,0.6s,baz=357,slow=2.7,SNR=10						
MLR	Muntele Rosu	21.33	314	P	P	00 10 30.2	+5.4
	comp=Z,3.9nm,0.7s,baz=56,slow=6.2,SNR=8.3						
AKASG	Malin Array Be	22.82	329	P	P	00 10 39.8	-0.8
	com

az=95.0

ISC 18 00:36:58.9±0.6, 6°22S±0°05×130°40E±0°08, h150km, n57, σ2°16/57, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.76**	**344**	P	**Pn**	**00 37 29.6**	**-1.6**
BNDI	**Bandanaira**	**1.76**	**344**	P	**Pn**	**00 37 29.7**	**-1.5**
SAUI	**Saumlaki**	**1.96**	**153**	Pn	**Pn**	**00 37 34.4**	**+0.8**
SAUI	**Saumlaki**	**1.96**	**153**	P	**Pn**	**00 37 33.8**	**+0.2**
SAUI	**Saumlaki**	**1.96**	**153**	P	**Pn**	**00 37 35.1**	**+1.5**
MSAI	**Masohi**	**3.21**	**333**	P	**Pn**	**00 37 47.9**	**-1.0**
AAI	**Ambon**	**3.34**	**319**	P	**Pn**	**00 37 50.6**	**0.0**
KRAI	**Karang Ratu**	**3.51**	**325**	P	**Pn**	**00 37 52.4**	**-0.4**
FAKI	**Fak Fak**	**3.76**	**29**	Pn	**Pn**	**00 37 54.6**	**-1.4**
FAKI	**Fak Fak**	**3.76**	**29**	P	**Pn**	**00 37 54.6**	**-1.4**
FAKI	**Fak Fak**	**3.76**	**29**	P	**Pn**	**00 37 55.0**	**-1.0**
SIJI	**Sorong**	**5.38**	**9**	P	**Pn**	**00 38 15.7**	**-1.7**
	24nm,0.2s,baz=202,slow=15,SNR=31						
SIJI				S	**Sn**	**00 39 14.0**	**-4.8**
	40nm,0.2s,baz=198,slow=20,SNR=7.7						
SIJI	**Sorong**	**5.38**	**9**	P	**Pn**	**00 38 15.5**	**-1.9**
	0.4nm5μm19nm,0.5s						
RKPI	**Ransiki, Papua**	**6.00**	**39**	P	**Pn**	**00 38 25.4**	**-0.3**
	1.8nm10μm71nm,0.4s						
MTN	**Manton Dam**	**6.62**	**174**	Pn	**Pn**	**00 38 32.9**	**-1.0**
MTN	**Manton Dam**	**6.62**	**174**	P	**Pn**	**00 38 33.4**	**-0.5**
KDU	**Kakadu**	**6.74**	**163**	P	**Pn**	**00 38 34.6**	**-0.9**
SOEI	**Soe**	**7.02**	**240**	Pn	**Pn**	**00 38 37.1**	**-2.2**
SOEI	**Soe**	**7.02**	**240**	P	**Pn**	**00 38 38.2**	**-1.1**
	0.2nm40nm,0.7s						
SOEI	**Soe**	**7.02**	**240**	P	**Pn**	**00 38 39.0**	**-0.3**
KNRA	**Kununurra**	**9.54**	**190**	Pn	**Pn**	**00 39 10.1**	**-2.6**
KNRA	**Kununurra**	**9.54**	**190**	P	**Pn**	**00 39 10.2**	**-2.6**
WB0	**Warramunga Arr**	**14.02**	**164**	Pn	**Pn**	**00 40 10.1**	**-0.9**
WRAB	**Tennant Creek**	**14.16**	**165**	P	**Pn**	**00 40 11.0**	**-1.9**
WRA	**Warramunga Arr**	**14.17**	**165**	P	**Pn**	**00 40 11.0**	**-1.9**
	4.6nm,0.5s,baz=344,slow=13,SNR=58						
WRA				S	Sn	00 42 35.9	-14
	2.1nm,0.5s,baz=340,slow=19,SNR=4.6						
WRA	**Warramunga Arr**	**14.17**	**165**	Pn	**Pn**	**00 40 11.2**	**-1.8**
WB2	**Warramunga Arr**	**14.17**	**165**	Pn	**Pn**	**00 40 12.1**	**-0.9**
WR0	**Warramunga Arr**	**14.24**	**164**	Pn	**P**	**00 40 13.6**	**-3.1**
COEN	**Coen**	**14.73**	**122**	Pn	**P**	**00 40 23.2**	**+1.0**
COEN				IAmb	IAmb	00 40 28.9	
	comp=Z,28nm,1.5s						
MYLDM	**Lahad Datu**	**16.41**	**313**	Pn	**Pn**	**00 40 36.8**	**-4.0**
MYLDM				IAmb	IAmb	00 40 44.7	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**17.67**	**169**	P	**Pn**	**00 40 57.9**	**+2.0**
ASAR	**Alice Springs**	**17.67**	**169**	P	**Pn**	**00 40 56.4**	**+0.5**
	comp=Z,6.0nm,0.5s,baz=350,slow=10,SNR=49						
ASAR				S	**S**	**00 44 02.8**	**-7.9**
	comp=Z,2.3nm,0.7s,baz=345,slow=24,SNR=6.1						
ASAR	**Alice Springs**	**17.67**	**169**	P	**Pn**	**00 40 57.1**	**+1.2**
MBWA	**Marble Bar**	**18.10**	**214**	P	**Pn**	**00 40 59.9**	**-1.0**
MBWA				IAmb	IAmb	00 41 05.8	
	comp=Z,41nm,1.4s						
PSA00	**Pilbara Seismi**	**18.37**	**213**	P	**Pn**	**00 41 02.6**	**-1.5**
PSA00				IAmb	IAmb	00 41 10.5	
	comp=Z,20nm,1.2s						
FORT	**Forrest**	**24.53**	**185**	P	**P**	**00 42 08.2**	**+3.7**
BBOO	**Buckleboo**	**26.98**	**169**	P	P	00 42 32.3	+5.7
CMAR	**Chiang Mai Arr**	**39.55**	**309**	P	**P**	**00 44 16.6**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=134,slow=8.2,SNR=5.5						
	comp=Z,0.8nm,0.4s						
PZH	**PanZhiHua**	**42.78**	**321**	P	**P**	**00 44 44.3**	**+2.4**
HHC	**Hu-ho-hao-te**	**49.93**	**341**	*e*P	P	00 45 42.8	+5.3
TAPN	**Taplejung**	**53.07**	**311**	*e*P	**P**	**00 46 02.4**	**+1.0**
	comp=Z,14nm,0.4s						
RAMN	**Ramite**	**53.70**	**310**	*e*P	**P**	**00 46 07.3**	**+1.4**
	comp=Z,22nm,0.4s						
JIRN	**Jiri**	**54.38**	**310**	*e*P	**P**	**00 46 12.0**	**+1.0**
	comp=Z,5.9nm,0.3s						
GUN	**Gumba**	**54.75**	**311**	*e*P	**P**	**00 46 14.8**	**+1.2**
	comp=Z,15nm,0.4s						
PKI	**Pulchoki**	**54.93**	**310**	*e*P	**P**	**00 46 16.0**	**+1.1**
	comp=Z,4.8nm,0.4s						
GKN	**Gorkha**	**55.74**	**310**	*e*P	**P**	**00 46 21.5**	**+1.1**
	comp=Z,12nm,0.4s						
PYUN	**Piuthan**	**57.05**	**309**	*e*P	**P**	**00 46 31.0**	**+1.2**
	comp=Z,6.3nm,0.7s						
SONM	**Songino Array**	**57.84**	**341**	P	**P**	**00 46 36.8**	**+2.1**
	comp=Z,1.2nm,0.4s,baz=134,slow=10,SNR=2.4						
	comp=Z,1.2nm,0.4s						
WMQ	**Urumqi**	**62.97**	**327**	*e*P	**P**	**00 47 12.6**	**+3.0**
MK31	**Makanchi Array**	**67.80**	**326**	P	**P**	**00 47 43.3**	**+2.6**
MK31				IAmb	IAmb	00 47 43.9	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**00 47 43.0**	**+2.4**
	comp=Z,2.4nm,0.6s,baz=125,slow=7.9,SNR=31						
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**00 47 42.9**	**+2.3**
MAKZ	**Makanchi**	**67.98**	**326**	P	**P**	**00 47 43.3**	**+1.6**
ZALV	**Zalesovo Beam**	**71.07**	**333**	P	**P**	**00 48 02.4**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=144,slow=5.0,SNR=2.9						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**71.07**	**333**	P	**P**	**00 48 02.7**	**+2.2**
ABKAR	**Akbulak array**	**82.15**	**321**	P	**P**	**00 49 03.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**129.05**	**282**	PKP	**PKiKP**	**00 55 52.9**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=71,slow=1.0,SNR=1.7						

*IDC **18** 00:53:19.6±6.1, 15°68S×168°01E, h144km±56km, mb3.5/4, mbtmp4.0/5, MS2.8/1, Error ellipse: s-maj=57.0km s-min=31.2km az=157.0*

*NEIC **18** 00:53:26.6±0.9, 16°3S±0°1×168°0E±0°2, h190km±9km, mb4.1/11, Error ellipse: s-maj=23.3km s-min=15.1km az=106.0*

ISC 18 00:53:23.3±1.1, 16°06S±0°10×168°3E±0°2, h200km, n28, σ1°65/27, mb4.1/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**4.80**	**192**		**Pn**	**00 54 34.6**	**-0.6**
LIFNC				Sn	**Sn**	**00 55 28.4**	**-3.5**
MARNC	**Mare, Loyalty**	**5.40**	**183**		**Pn**	**00 54 43.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**5.87**	**220**		**Pn**	**00 54 47.9**	**-1.1**
DZM	**Mont Dzumac**	**6.23**	**196**	P	**Pn**	**00 54 53.4**	**-0.3**
	20nm,0.5s,baz=25,slow=19,SNR=42						
DZM				S	**Sn**	**00 56 07.0**	**+1.7**
	18nm,0.7s,baz=126,slow=20,SNR=5.7						
DZM	**Mont Dzumac**	**6.23**	**196**	Pn	**Pn**	**00 54 54.0**	**+0.3**
ONTNC	**Ouen Toro**	**6.46**	**195**	Pn	**Pn**	**00 54 56.5**	**0.0**
OUENC	**Ouen Island, N**	**6.48**	**192**	Pn	**Pn**	**00 54 58.1**	**+1.3**
STKA	**Stephens Creek**	**28.93**	**232**	P	**P**	**00 59 05.7**	**+1.7**
	5.1nm,0.8s,baz=57,slow=11,SNR=6.3						
	5.1nm,0.8s						
STKA	**Stephens Creek**	**28.93**	**232**	P	**P**	**00 59 05.7**	**+1.7**
STKA				IAmb	IAmb	00 59 06.7	
	comp=Z,2.7nm,1.2s						
WB0	**Warramunga Arr**	**32.44**	**258**	P	**P**	**00 59 34.6**	**-0.4**
WB0				IAmb	IAmb	00 59 44.1	
	comp=Z,8.8nm,1.3s						
WB2	**Warramunga Arr**	**32.48**	**258**	P	**P**	**00 59 35.8**	**+0.4**
WB2				IAmb	IAmb	00 59 36.1	
	comp=Z,5.8nm,1.3s						
WRA	**Warramunga Arr**	**32.49**	**258**	P	**P**	**00 59 34.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=80,slow=6.2,SNR=5.5						
WRA				PcP	**PcP**	**01 02 19.6**	**+2.1**
	comp=Z,0.3nm,0.8s,baz=90,slow=3.1,SNR=4.6						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**32.49**	**258**	P	**P**	**00 59 33.8**	**-1.6**
AS31	**Alice Springs**	**33.16**	**251**	P	**P**	**00 59 40.6**	**-0.6**
ASAR	**Alice Springs**	**33.16**	**251**	P	**P**	**00 59 41.5**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=78,slow=8.7,SNR=31						
ASAR				PcP	**PcP**	**01 02 22.2**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=90,slow=2.8,SNR=2.1						
	comp=Z,1.4nm,0.4s						
ASAR	**Alice Springs**	**33.16**	**251**	P	**P**	**00 59 41.7**	**+0.5**
BBOO	**Buckleboo**	**33.58**	**234**	P	**P**	**00 59 45.4**	**+0.7**
BBOO				IAmb	IAmb	00 59 51.0	
	comp=Z,50nm,1.5s						
FORT	**Forrest**	**39.50**	**241**	P	**P**	**01 00 35.2**	**+0.5**
MJAR	**Matsushiro Arr**	**59.54**	**332**	LR	LR	01 30 18.9	
	comp=Z,8.0nm,18.2s,baz=117,slow=38						
VNDA	**Vanda**	**61.57**	**182**	P	P	01 03 23.0	+4.1
VNDA				IAmb	IAmb	01 03 51.0	
	comp=Z,2.0nm,1.2s						
QSPA	**South Pole Qui**	**73.98**	**180**	P	**P**	**01 04 35.8**	**-0.9**
QSPA				IAmb	IAmb	01 04 38.0	
	comp=Z,6.8nm,1.4s						
CNBA	**Chernabura Isl**	**75.69**	**19**	P	P	01 04 52.0	+5.7
ILAR	**Eielson Array**	**87.48**	**18**	P	P	01 05 49.7	+1.8
	comp=Z,0.3nm,0.5s,baz=238,slow=5.2,SNR=2.3						
	comp=Z,0.3nm,0.5s						
SNAA	**Sanae**	**92.28**	**183**	P	P	01 06 13.7	+3.3
SNAA				IAmb	IAmb	01 06 42.6	
	comp=Z,2.1nm,1.2s						
ARCES	**ARCESS Array B**	**121.78**	**346**	PKP	**PKiKP**	**01 11 54.8**	**+1.7**
	comp=Z,3.3nm,1.1s,baz=15,slow=3.7,SNR=8.7						
AKASG	**Malin Array Be**	**132.38**	**326**	PKP	**PKiKP**	**01 12 13.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=47,slow=2.1,SNR=1.6						
ABTA	**Abfaltersbach**	**143.38**	**332**	*i* P	**PKiKP**	**01 12 33.7**	**-3.8**
	comp=Z,2.3nm,0.6s						
FETA	**Feichten**	**143.95**	**334**	*i* P	**PKiKP**	**01 12 36.7**	**-2.1**
	comp=Z,3.0nm,1.0s						

ROM 18 01:02:22.7±0.1, 42°958N±0°007×11°496E±0°006, h9km, Md1.3/3, ML1.3/4, 3C-6D, Error ellipse: s-maj=0.8km s-min=0.5km az=184.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCI	**Arcidosso**	**0.11**	**188**	⇓P	Pg	01 02 25.7	+0.4
ARCI				S	Sg	01 02 27.8	+0.5
ARCI				AML	AML		
	comp=E,600μm,0.3s						
ARCI				AML	AML		
	comp=N,637μm,0.1s						
ARCI				END			
SF01	**Poggio Pratacc**	**0.15**	**161**	P	Pg	01 02 26.8	+0.7
SF01				S	Sg	01 02 29.1	+0.7
SF01				END			
SF11	**Podere del Sol**	**0.16**	**124**	P	Pg	01 02 27.0	+0.8
SF11				S	Sg	01 02 29.4	+0.9
SF13	**Bagnolo**	**0.17**	**147**	⇓P	Pg	01 02 27.1	+0.8
SF13				S	Sg	01 02 29.7	+1.0
SF04	**Casetta**	**0.17**	**135**	⇓P	Pg	01 02 27.2	+0.9
SF04				S	Sg	01 02 29.8	+1.0
SF04				END			
SF03	**Valle Cupa**	**0.21**	**138**	⇓P	Pg	01 02 27.9	+0.9
SF03				S	Sg	01 02 30.9	+1.0
SF14	**Selvena**	**0.22**	**157**	⇓P	Pg	01 02 28.1	+0.9
SF14				S	Sg	01 02 31.2	+0.9
MCIV	**Monte Civitell**	**0.22**	**143**	⇓P	Pg	01 02 28.1	+0.8
MCIV				S	Sg	01 02 31.4	+1.1
MCIV				AML	AML		
	comp=N,70μm,0.1s						
MCIV				AML	AML		
	comp=E,51μm,0.7s						
SACS	**San Casciano d**	**0.32**	**110**	P	Pb	01 02 30.3	-0.4
SACS				S	Sb	01 02 35.1	-1.0
MGAB	**Montegabbione**	**0.46**	**96**	P	Pb	01 02 32.4	-0.6
MGAB				S	Sb	01 02 39.1	-0.8
MGAB				AML	AML		
	comp=E,100μm,1.4s						
MGAB				AML	AML		
	comp=N,109μm,0.4s						
TRIF	**Trifonti**	**0.46**	**290**	P	Pb	01 02 32.5	-0.6
CASP	**Castiglione de**	**0.49**	**250**	⇑P	Pb	01 02 33.0	-0.5
CASP				S	Sb	01 02 39.9	-1.0
CAFI	**Castiglion Fio**	**0.51**	**43**	⇑P	Pg	01 02 33.1	+0.5
CAFI				S	Sb	01 02 40.5	-0.8
CSNT	**Castellina Chi**	**0.54**	**344**	⇑P	Pg	01 02 33.1	0.0
CSNT				S	Sg	01 02 40.8	+0.7
CSNT				AML	AML		
	comp=E,11μm,1.2s						
CSNT				AML	AML		
	comp=N,10μm,0.5s						

*TIR **18** 01:02:52.2, 39°74N×20°71E, h15km±1km, Md3.5, Ml3.5*

*ATH **18** 01:02:53.0, 39°75N×20°75E, h10km±1km, ML3.4/12, Error ellipse: s-maj=1.8km s-min=0.9km az=328.0*

*BEO **18** 01:02:52.2±0.8, 39°61N×20°76E, h15km±5km, ML3.1/8*

*PDG **18** 01:02:53.1±0.6, 39°75N×20°70E, h14km±1km, ML3.3/12, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

*THE **18** 01:02:53.4, 39°74N×20°74E, h4km±1km, ML3.5/14, Error ellipse: s-maj=1.4km s-min=0.4km az=308.0*

*IDC **18** 01:02:57.8±1.7, 39°87N×20°62E, h71km±20km, mb3.6/9, mbtmp3.7/17, MS2.9/8, Error ellipse: s-maj=18.9km s-min=12.9km az=142.0*

ISC 18 01:02:52.7±0.7, 39°74N±0°01×20°72E±0°02, h16km±5km, n164, σ1°71/226, mb3.8/8, 28C-2D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.13**	**130**	P	**Pg**	**01 02 55.9**	**-0.6**
JAN				S	**Sg**	**01 02 58.3**	**-0.7**
	77μm,0.1s						
JAN	**Janina**	**0.13**	**130**	P	**Pg**	**01 02 55.6**	**-0.9**
JAN				S	**Sg**	**01 02 59.1**	**+0.2**
JAN				AML	AML	01 02 59.8	
JAN				AML	AML	01 02 59.9	
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**01 03 00.3**	**+0.1**
IGT				S	**Sb**	**01 03 06.9**	**+0.6**
	21μm,0.4s						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**01 03 00.3**	**+0.1**
	baz=234						
IGT				S	**Sb**	**01 03 07.5**	**+1.3**
	baz=234						
IGT	**Igoumenitsa**	**0.36**	**236**	P	**Pg**	**01 02 60.0**	**-0.2**
IGT				S	**Sb**	**01 03 06.8**	**+0.6**
IGT				AML	AML	01 03 08.2	
	comp=N,36926μm,0.5s						
IGT				AML	AML	01 03 08.3	
	comp=E,47881μm,0.3s						
LSK	**Leskovik**	**0.42**	**347**	P	**Pg**	**01 03 01.5**	**+0.3**
LSK				S	**Sb**	**01 03 07.7**	**-0.3**
	comp=E,6μm,0.7s						
LSK	**Leskovik**	**0.42**	**347**	P	**Pg**	**01 03 01.0**	**-0.2**
	baz=349						
LSK				S	**Sg**	**01 03 07.2**	**+0.1**
	baz=349						
LSK				AMP			
	comp=N,21nm,0.6s,baz=349						
KPRO	**Kipourio**	**0.54**	**66**	P	**Pg**	**01 03 03.0**	**-0.4**
KPRO				S	**Sb**	**01 03 11.3**	**0.0**
	comp=N,6μm,0.4s						
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**01 03 03.5**	**-0.3**
PENT				S	**Sb**	**01 03 12.2**	**+0.3**
PENT	**Pentalofos**	**0.56**	**35**	P	**Pg**	**01 03 03.4**	**-0.4**
PENT				S	**Sb**	**01 03 11.7**	**-0.2**
SRN	**Sarande**	**0.57**	**284**	P	**Pg**	**01 03 03.8**	**-0.2**
SRN				S	**Sb**	**01 03 12.7**	**+0.5**
	comp=N,4μm,0.4s						
SRN	**Sarande**	**0.57**	**284**	P	**Pg**	**01 03 03.1**	**-0.9**
	baz=285						
SRN				S	**Sb**	**01 03 12.4**	**+0.2**
	baz=285						
SRN				AMP			
	comp=N,15nm,0.4s,baz=285						
KASA	**Kassiopi**	**0.61**	**271**	P	**Pg**	**01 03 04.2**	**-0.4**
KASA				S	**Sb**	**01 03 13.6**	**+0.4**
KASA				AML	AML	01 03 18.7	
	comp=N,8507μm,0.5s						
KASA				AML	AML	01 03 18.8	
	comp=E,6722μm,0.4s						
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**01 03 06.3**	**-0.3**
KEK				S	**Sn**	**01 03 18.3**	**-0.4**
	comp=E,3μm,0.5s						
KEK	**Kerkira**	**0.71**	**268**	P	**Pg**	**01 03 06.0**	**-0.6**
KEK				S	**Sb**	**01 03 17.2**	**+0.9**
KEK				AML	AML	01 03 22.9	
	comp=N,6064μm,0.5s						
KEK				AML	AML	01 03 24.3	
	comp=E,5657μm,0.5s						
NEST	**Nestorio**	**0.72**	**20**	P	**Pb**	**01 03 07.1**	**+0.2**
NEST				S	**Sb**	**01 03 17.1**	**+0.5**
NEST	**Nestorio**	**0.72**	**20**	P	**Pg**	**01 03 06.5**	**-0.3**
NEST				S	**Sg**	**01 03 16.2**	**-0.1**
NEST				AML	AML	01 03 19.6	
	comp=N,3237μm,0.6s						
NEST				AML	AML	01 03 21.4	
	comp=E,3493μm,0.4s						
KBN	**Korca**	**0.88**	**3**	P	**Pb**	**01 03 09.2**	**-0.5**
KBN				S	**Sn**	**01 03 23.2**	**+0.1**
	comp=E,915nm,0.8s						
KBN	**Korca**	**0.88**	**3**	P	**Pg**	**01 03 09.9**	**0.0**
	baz=4.0						
KBN				S	**Sn**	**01 03 23.0**	**-0.1**
	baz=4.0						
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pb**	**01 03 10.3**	**+0.1**
TSLK				S	**Sn**	**01 03 24.7**	**+1.0**
	comp=E,3μm,0.3s						
TSLK	**Tsoukalades, L**	**0.92**	**183**	P	**Pb**	**01 03 09.7**	**-0.5**
TSLK				AML	AML	01 03 28.5	
	comp=N,6001μm,0.4s						
TSLK				AML	AML	01 03 29.6	
	comp=E,6405μm,0.2s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pg**	**01 03 11.1**	**0.0**
LKD2				S	**Sn**	**01 03 25.5**	**+0.9**
	comp=E,4μm,0.5s						
LKD2	**Lefkada island**	**0.95**	**183**	P	**Pb**	**01 03 10.6**	**-0.1**
LKD2				AML	AML	01 03 29.0	
	comp=N,6319μm,0.5s						
LKD2				AML	AML	01 03 29.7	
	comp=E,6620μm,0.4s						
KZN	**Kozani**	**0.98**	**55**	P	**Pb**	**01 03 11.2**	**-0.2**
KZN				S	**Sn**	**01 03 26.3**	**+0.7**
	comp=E,1μm,0.7s						
KZN	**Kozani**	**0.98**	**55**	P	**Pb**	**01 03 10.8**	**-0.6**
KZN				AML	AML	01 03 26.5	
	comp=N,1972μm,0.8s						
KZN				AML	AML	01 03 26.9	
	comp=E,2535μm,0.7s						
THL	**Klokotos Trika**	**1.01**	**100**	P	**Pb**	**01 03 11.3**	**-0.5**
THL				S	**Sn**	**01 03 26.2**	**+0.1**
	comp=E,1μm,0.5s						
THL	**Klokotos Trika**	**1.01**	**100**	P	**Pb**	**01 03 11.1**	**-0.7**
THL				S	**Sb**	**01 03 24.6**	**-0.3**
THL				AML	AML	01 03 29.3	
	comp=E,2192μm,0.5s						
THL				AML	AML	01 03 31.8	
	comp=N,1828μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.02**	**181**	P	**Pb**	**01 03 12.2**	**+0.2**
NYDR				S	**Sn**	**01 03 28.0**	**+1.6**
	comp=N,3μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.06**	**186**	P	**Pg**	**01 03 13.4**	**+0.2**
DRAG				S	**Sn**	**01 03 28.8**	**+1.5**
EVGI	**Lefkada island**	**1.12**	**183**	P	**Pg**	**01 03 14.2**	**-0.1**
EVGI	**Lefkada island**	**1.12**	**183**	P	**Pb**	**01 03 13.5**	**-0.1**
TYRN	**Tyrnavos**	**1.17**	**91**	P	**Pb**	**01 03 14.4**	**0.0**
EVR	**Evrytania**	**1.18**	**134**	P	**Pn**	**01 03 14.5**	**-0.1**
EVR	**Evrytania**	**1.18**	**134**	P	**Pn**	**01 03 14.3**	**-0.3**
EVR				S	**Sb**	**01 03 29.8**	**0.0**
EVR				AML	AML	01 03 36.5	
	comp=N,2979μm,0.9s						
EVR				AML	AML	01 03 39.7	
	comp=E,2129μm,0.4s						
VLO	**Vlora**	**1.19**	**308**	P	**Pg**	**01 03 16.1**	**+0.5**
VLO				S	**Sg**	**01 03 33.1**	**+1.9**
	comp=E,3μm,0.6s						
PVO	**Paravola**	**1.28**	**151**	P	**Pg**	**01 03 17.2**	**-0.2**
PVO				S	**Sg**	**01 03 35.4**	**+1.2**
	comp=E,2μm,0.8s						
PVO	**Paravola**	**1.28**	**151**	P	**Pg**	**01 03 17.0**	**-0.4**
FSK	**Fiskardo**	**1.28**	**186**	P	**Pg**	**01 03 17.8**	**+0.4**
FSK	**Fiskardo**	**1.28**	**186**	P	**Pg**	**01 03 17.4**	**0.0**
FSK				AML	AML	01 03 37.9	
	comp=E,5954μm,0.2s						
FSK				AML	AML	01 03 38.8	
	comp=N,4177μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pg**	**01 03 17.6**	**-0.4**
MAKR				S	**Sg**	**01 03 36.5**	**+1.4**
MAKR	**Makrakomi, Fth**	**1.31**	**123**	P	**Pb**	**01 03 17.2**	**+0.2**
OHR	**Ohrid**	**1.37**	**2**	*e*Pg	**Pg**	**01 03 19.5**	**+0.4**
OHR				*e*Sg	**Sg**	**01 03 39.7**	**+2.7**
OHR	**Ohrid**	**1.37**	**2**	*i* Pn	**Pg**	**01 03 19.3**	**+0.2**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pb**	**01 03 18.3**	**-0.3**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pb**	**01 03 18.3**	**-0.3**
VLS	**Valsamata**	**1.56**	**184**	P	**Pb**	**01 03 21.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**1.63**	**184**	P	**Pn**	**01 03 21.4**	**+0.8**
SERG	**Sergoula**	**1.68**	**141**	AML	AML	01 03 54.9	
	comp=E,2550μm,0.5s						
SERG				AML	AML	01 03 56.5	
	comp=N,2315μm,0.5s						
TIR	**Tirane**	**1.73**	**338**	*e*Pn	**Pb**	**01 03 24.2**	**+0.1**
TIR				*e*Sn	**Sb**	**01 03 47.1**	**+1.4**
TIR	**Tirane**	**1.73**	**338**	P	**Pb**	**01 03 24.6**	**+0.5**
	baz=339						
TIR				S	**Sg**	**01 03 56.2**	**+7.7**
	baz=339						
TIR				AMP			
	comp=N,1.2nm,1.2s,baz=339						
SCTE	**Santa Cesarea**	**1.77**	**282**	P	**Pn**	**01 03 23.1**	**+0.6**
PHP	**Peshkopia**	**1.96**	**354**	P	**Pb**	**01 03 27.7**	**-0.2**
	baz=355						
PHP				S	**Sg**	**01 03 55.7**	**+0.1**
	baz=355						
VAY	**Valandovo**	**2.12**	**41**	*e*Pn	**Pn**	**01 03 28.5**	**+1.1**
VAY				*e*Sn	**Sn**	**01 03 54.6**	**+1.2**
VAY	**Valandovo**	**2.12**	**41**	*i* Pn	**Pn**	**01 03 28.5**	**+1.1**
SKO	**Skopje**	**2.30**	**13**	*e*Pn	**Pn**	**01 03 31.6**	**+1.7**
SKO				*e*Sn	**Sb**	**01 04 01.0**	**-0.8**
ULC	**Ulcinj**	**2.49**	**334**	*e*Pn	**Pn**	**01 03 34.5**	**+2.0**
ULC				*i* Sn	**Sb**	**01 04 05.3**	**-2.1**
SRS	**Serrai**	**2.59**	**57**	*e*Pn	**Pn**	**01 03 34.6**	**+0.7**
SRS				*e*Sn	**Sn**	**01 04 04.8**	**-0.2**
BCI	**Bajram Curri**	**2.67**	**350**	P	**Pb**	**01 03 38.5**	**-1.6**
	baz=350						
DRME	**Dracevica, Mon**	**2.71**	**335**	*e*Pn	**Pn**	**01 03 36.2**	**+0.7**
DRME	**Dracevica, Mon**	**2.71**	**335**	*e*Pn	**Pn**	**01 03 37.1**	**+1.6**
DRME				*i* Sn	**Sn**	**01 04 10.5**	**+2.5**
KKB	**Krupnik**	**2.78**	**39**	*i* P	**Pn**	**01 03 38.5**	**+2.0**
PDG	**Podgorica**	**2.91**	**338**	⇑P	**Pn**	**01

VAE	**Valguarnera**	**5.43 247**	P	**Pn**	**01 04 16.5**	**+3.5**
	comp=N,6.4nm,0.8s,baz=112,slow=4.6,SNR=6.1					
VAE			S	**Sn**	**01 05 18.2**	**+3.0**
	comp=N,10nm,0.4s,baz=109,slow=11,SNR=5.7					
FRGS	**Fruska Gora**	**5.46 353**	⇑P	**Pn**	**01 04 14.0**	**+0.7**
FRGS	**Fruska Gora**	**5.46 353**	*e*Pn	**Pn**	**01 04 13.2**	**-0.1**
FRGS	**Fruska Gora**	**5.46 353**	*e*Pn	**Pn**	**01 04 14.0**	**+0.7**
IDI	**Anoyia**	**5.54 142**	⇑P	Pn	01 04 20.6	+6.0
IDI	**Anoyia**	**5.54 142**	P	**Pn**	**01 04 13.6**	**-1.0**
	comp=N,24nm,1.0s,baz=117,slow=8.7,SNR=1.2					
IDI			S	**Sn**	**01 05 14.4**	**-3.6**
	comp=N,12nm,0.3s,baz=330,slow=15,SNR=7.3					
BLY	**Banja Luka**	**5.65 333**	*e*Pn	**Pn**	**01 04 15.9**	**-0.1**
GZR	**Gura Zlata**	**5.85 14**	⇑P	**Pn**	**01 04 21.0**	**+2.2**
GZR			⇑S	**Sn**	**01 05 27.8**	**+2.3**
BZS	**Buzias**	**5.91 6**	⇑P	**Pn**	**01 04 20.8**	**+1.3**
A051A	**Mrakovica**	**5.98 333**	*e*Pn	**Pn**	**01 04 19.9**	**-0.6**
LOT	**Lotru**	**6.13 21**	⇑P	**Pn**	**01 04 24.9**	**+2.2**
VOIR		**6.53 28**	⇑P	**Pn**	**01 04 31.3**	**+3.3**
SIRR	**Siria**	**6.56 6**	⇑P	**Pn**	**01 04 30.6**	**+2.2**
SIRR			⇑S	**Sn**	**01 05 44.1**	**+1.2**
MORH	**Mrgy, Hungar**	**6.65 347**	⇑P	**Pn**	**01 04 29.7**	**+0.1**
MORH	**Mrgy, Hungar**	**6.65 347**	P	**Pn**	**01 04 29.9**	**+0.3**
ISR	**Istrita**	**6.89 37**	⇑P	**Pn**	**01 04 36.2**	**+3.2**
MLR	**Muntele Rosu**	**6.92 32**	⇑P	**Pn**	**01 04 36.7**	**+3.2**
MLR	**Muntele Rosu**	**6.92 32**	P	**Pn**	**01 04 36.9**	**+3.4**
	comp=N,12nm,1.0s,baz=152,slow=12,SNR=6.8					
MLR			LR	LR	01 07 51.8	
	comp=N,192nm,19.1s,baz=177,slow=43					
BOJS	**Bojanci**	**7.03 327**	*e*Pn	**Pn**	**01 04 34.3**	**-0.6**
CRES	**Cresnjev**	**7.21 329**	*e*Pn	**Pn**	**01 04 36.4**	**-1.0**
COVR	**Voineasa-Covas**	**7.31 32**	⇑P	**Pn**	**01 04 41.4**	**+2.6**
PLOR	**Plostina**	**7.50 34**	⇑P	**Pn**	**01 04 44.6**	**+3.2**
VRI	**Vrincioaia**	**7.55 34**	⇑P	**Pn**	**01 04 45.2**	**+3.2**
CEY	**Cerknica**	**7.58 324**	*e*Pn	**Pn**	**01 04 42.1**	**-0.3**
SKDS	**Skadanscina**	**7.62 322**	*e*Pn	**Pn**	**01 04 41.3**	**-1.7**
SOKA	**Soboth**	**8.08 331**	*i* Pn	**Pn**	**01 04 48.9**	**-0.5**
	comp=N,2.6nm,0.5s					
SOKA			*i* Sn	**Sn**	**01 06 19.0**	**-1.4**
	comp=N,1.3nm,0.5s					
OBKA	**Obir**	**8.13 328**	*e*Pn	**Pn**	**01 04 48.1**	**-2.0**
OBKA	**Obir**	**8.13 328**	*i* Pn	**Pn**	**01 04 50.4**	**+0.3**
	comp=N,2.6nm,0.4s					
OBKA			*e*Sn	**Sn**	**01 06 20.5**	**-1.2**
	comp=N,5.9nm,0.6s					
BURAR	**Bucovina Array**	**8.52 21**	⇑P	**Pn**	**01 04 58.3**	**+2.9**
KBA	**Koelnbreinsper**	**9.09 326**	*e*Pn	**Pn**	**01 05 03.9**	**+0.6**
	comp=N,1.2nm,0.5s					
KBA			*e*Sn	**Sn**	**01 06 40.2**	**-5.0**
	comp=N,1.1nm,0.5s					
ABTA	**Abfaltersbach**	**9.21 322**	*i* Pn	**Pn**	**01 05 04.3**	**-0.5**
	comp=N,0.4nm,0.2s					
MOA	**Molin**	**9.35 332**	*i* Pn	**Pn**	**01 05 08.3**	**+1.6**
	comp=N,1.2nm,0.4s					
KEST	**Kesra**	**9.86 250**	P	**Pn**	**01 05 16.9**	**+3.1**
	comp=N,4.5nm,1.0s,baz=312,slow=12,SNR=4.4					
BRTR	**Keskin Array B**	**9.95 86**	P	**Pn**	**01 05 19.2**	**+4.1**
	comp=N,1.1nm,1.0s,baz=266,slow=11,SNR=1.9					
BRTR			LR	LR	01 10 03.2	
	comp=N,30nm,20.1s,baz=274,slow=42					
WTTA	**Wattenberg**	**10.00 322**	*e*Pn	**Pn**	**01 05 15.7**	**0.0**
	comp=N,1.3nm,0.3s					
WTTA			*i* Sn	**Sn**	**01 07 04.2**	**-3.5**
	comp=N,2.0nm,0.4s					
VRAC	**Vranov**	**10.01 344**	LR	LR	01 10 04.0	
	comp=N,82nm,19.6s,baz=175,slow=43					
SQTA	**Sankt Quirin**	**10.18 320**	*i* Pn	**Pn**	**01 05 18.6**	**+0.4**
	comp=N,1.2nm,0.2s					
SQTA			*i* Sn	**Sn**	**01 07 08.7**	**-3.2**
	comp=N,2.1nm,0.5s					
FETA	**Feichten**	**10.28 318**	*i* Pn	**Pn**	**01 05 20.7**	**+1.1**
	comp=N,0.6nm,0.4s					
FETA			*i* Sn	**Sn**	**01 07 11.5**	**-3.1**
	comp=N,0.6nm,0.4s					
MOTA	**Moosalm**	**10.31 321**	*i* Pn	**Pn**	**01 05 20.1**	**0.0**
	comp=N,1.5nm,0.4s					
MOTA			*e*Sn	**Sn**	**01 07 11.6**	**-3.8**
	comp=N,4.1nm,0.7s					
GERES	**GERESS Array B**	**10.40 333**	P	**Pn**	**01 05 21.7**	**+0.6**
	comp=N,0.3nm,0.4s,baz=156,slow=14,SNR=4.7					
DAVOX	**Davos/Dischmat**	**10.58 315**	P	**Pn**	**01 05 24.8**	**+1.1**
	comp=N,1.4nm,0.4s,baz=163,slow=15,SNR=7.0					
DAVOX			S	**Sn**	**01 07 18.7**	**-3.1**
	comp=N,1.2nm,0.6s,baz=26,slow=18,SNR=1.6					
RETA	**Reutte**	**10.58 320**	*e*Pn	**Pn**	**01 05 24.9**	**+1.2**
	comp=N,0.6nm,0.4s					
RETA			*e*Sn	**Sn**	**01 07 17.3**	**-4.4**
	comp=N,1.0nm,0.5s					
KHC	**Kasperske Hory**	**10.68 334**	*e*P	Pn	01 05 30.0	+5.0
KHC			*ex*	x	01 05 45.5	
AKASG	**Malin Array Be**	**12.48 26**	LR	LR	01 11 30.3	
	comp=N,62nm,20.5s,baz=187,slow=41					
MMAI	**Mount Meron Ar**	**13.59 115**	P	**Pn**	**01 06 08.2**	**+3.4**
	comp=N,1.0nm,0.6s,baz=318,slow=16,SNR=2.4					
OBN	**Obninsk**	**18.68 29**	LR	LR	01 15 13.8	
	comp=N,23nm,19.7s,baz=198,slow=40					
ESDC	**Sonseca Array**	**18.98 278**	P	**P**	**01 07 12.5**	**-1.0**
	comp=N,0.3nm,0.8s,baz=60,slow=12,SNR=1.8					
ESDC			LR	LR	01 15 31.7	
	comp=N,37nm,19.4s,baz=350,slow=40					
HFS	**Hagfors**	**20.89 350**	P	**P**	**01 07 32.7**	**-1.2**
	comp=N,3.4nm,0.6s,baz=167,slow=14,SNR=6.8					
HFS			LR	LR	01 16 33.0	
	comp=N,37nm,20.4s,baz=194,slow=39					
	comp=N,3.4nm,0.6s					
FINES	**FINESS Array B**	**21.98 7**	P	**P**	**01 07 44.0**	**-1.6**
	comp=N,3.3nm,0.7s,baz=180,slow=3.8,SNR=8.2					
	comp=N,3.3nm,0.7s					
NB2	**NORSAR Subarra**	**22.12 348**	P	**P**	**01 07 45.6**	**-1.6**
	comp=Z,6.4nm,1.0s,baz=160,slow=11					
NOA	**NORSAR Array B**	**22.12 348**	P	**P**	**01 07 45.9**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=165,slow=10,SNR=8.5					
NOA			LR	LR	01 16 55.3	
	comp=Z,14nm,20.2s,baz=160,slow=38					
	comp=Z,2.9nm,0.9s					
EKA	**Eskdalemuir Ar**	**22.27 322**	P	**P**	**01 07 47.6**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=119,slow=12,SNR=3.8					
	comp=Z,1.0nm,0.6s					
ARCES	**ARCESS Array B**	**29.97 3**	P	**P**	**01 08 57.6**	**-2.3**
	comp=Z,0.7nm,0.5s,baz=185,slow=7.3,SNR=6.8					
	comp=Z,0.7nm,0.5s					
TORD	**Torodi Ar. Bea**	**31.35 218**	P	**P**	**01 09 12.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=33,slow=9.9,SNR=5.5					
	comp=Z,0.5nm,0.6s					
SPITS	**Spitsbergen Ar**	**38.59 359**	P	**P**	**01 10 10.6**	**-3.7**
	comp=Z,2.4nm,0.5s,baz=337,slow=8.3,SNR=8.9					
	comp=Z,2.4nm,0.5s					
MKAR	**Makanchi Array**	**44.37 60**	P	**P**	**01 11 01.0**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=279,slow=6.9,SNR=18					
	comp=Z,1.4nm,0.5s					
TXAR	**Lajitas Array**	**94.01 314**	P	**P**	**01 16 09.5**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=20,slow=4.0,SNR=3.5					
	comp=Z,0.3nm,0.8s					

ROM 18 01:03:12.1±0.1, 42°.825N±0°.003×13°.180E±0°.004, h7km, ML1.8/29, 20C-11D, Error ellipse: s-maj=0.3km s-min=0.1km az=135.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**11**	P	Pg	01 03 13.6	-0.1
T1245				S	Sg	01 03 14.5	-0.4
T1245				AML	AML		
	comp=E,10550μm,0.4s						
T1245				AML	AML		
	comp=E,11650μm,0.2s						
T1245				AML	AML		
	comp=N,22250μm,0.4s						
T1245				AML	AML		
	comp=E,10585μm,0.4s						
T1245				AML	AML		
	comp=N,23300μm,0.4s						
NRCA	**Norcia**	**0.05**	**280**	⇑P	Pg	01 03 13.9	+0.2
NRCA				S	Sg	01 03 15.1	+0.1
NRCA				AML	AML		
	comp=E,13000μm,0.2s						
NRCA				AML	AML		
	comp=N,14100μm,0.2s						
NRCA				AML	AML		
	comp=E,14550μm,0.2s						
NRCA				AML	AML		
	comp=E,13050μm,0.2s						
NRCA				AML	AML		
	comp=E,13000μm,0.2s						
NRCA				AML	AML		
	comp=N,14500μm,0.1s						
NRCA				AML	AML		
	comp=N,14100μm,0.1s						
MC2	**Monte Cornacci**	**0.09**	**5**	⇑P	Pg	01 03 14.7	+0.3
MC2				S	Sg	01 03 16.6	+0.6
T1202	**Accumoli, Fraz**	**0.13**	**165**	P	Pg	01 03 15.5	+0.6
T1202				S	Sg	01 03 18.1	+1.3
T1216	**Preci, Frazion**	**0.14**	**299**	⇓P	Pg	01 03 15.5	+0.5
T1216				AML	AML		
	comp=N,1630μm,0.5s						
T1216				AML	AML		
	comp=E,1364μm,0.4s						
T1216				AML	AML		
	comp=N,1630μm,0.4s						
T1216				AML	AML		
	comp=E,1362μm,0.3s						
T1216				AML	AML		
	comp=N,1638μm,0.5s						
T1204	**Amatrice, Fraz**	**0.18**	**146**	⇑P	Pg	01 03 16.4	+0.6
AM05	**Amandola Campo**	**0.20**	**40**	⇑P	Pg	01 03 16.7	+0.6
AM05				S	Sg	01 03 20.1	+1.3
AM05				AML	AML		
	comp=E,190μm,0.3s						
AM05				AML	AML		
	comp=N,242μm,0.2s						
AM05				AML	AML		
	comp=E,792μm,0.7s						
AM05				AML	AML		
	comp=N,950μm,0.2s						
AM05				AML	AML		
	comp=N,241μm,0.2s						
AM05				AML	AML		
	comp=N,952μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**238**	⇑P	Pg	01 03 17.0	+0.6
T1217				S	Sg	01 03 20.8	+1.5
SMA1	**SAN MARTINO**	**0.23**	**149**	⇑P	Pg	01 03 17.1	+0.5
SMA1				AML	AML		
	comp=E,521μm,0.4s						
SMA1				AML	AML		
	comp=N,747μm,0.5s						
T1215	**Vallo di Nera,**	**0.23**	**264**	P	Pg	01 03 17.2	+0.5
T1215				S	Sg	01 03 21.3	+1.5
T1215				AML	AML		
	comp=E,209μm,0.3s						
T1215				AML	AML		
	comp=E,209μm,0.3s						
T1215				AML	AML		
	comp=N,286μm,0.7s						
T1243	**Rocca Santa Ma**	**0.24**	**123**	⇑P	Pg	01 03 17.2	+0.4
T1243				S	Sg	01 03 21.1	+1.1
LNSS	**Leonessa**	**0.24**	**205**	⇑P	Pg	01 03 17.5	+0.5
LNSS				AML	AML		
	comp=E,920μm,0.1s						
LNSS				AML	AML		
	comp=N,1003μm,0.1s						
GUMA	**Gualdo di Mace**	**0.26**	**26**	⇑P	Pg	01 03 18.1	+0.8
GUMA				S	Sb	01 03 22.9	-1.1
GUMA				AML	AML		
	comp=E,1122μm,0.5s						
GUMA				AML	AML		
	comp=N,1200μm,0.4s						
GUMA				AML	AML		
	comp=N,1360μm,0.3s						
GUMA				AML	AML		
	comp=E,1220μm,0.6s						
GUMA				AML	AML		
	comp=E,1120μm,0.5s						
CESI	**CESI - Serrava**	**0.27**	**312**	⇑P	Pg	01 03 18.1	+0.6
CESI				S	Sb	01 03 22.7	-1.5
CESI				AML	AML		
	comp=N,592μm,0.2s						
CESI				AML	AML		
	comp=N,592μm,0.2s						
CESI				AML	AML		
	comp=E,408μm,0.2s						
RM33	**Pellescritta (**	**0.32**	**175**	⇑P	Pg	01 03 18.7	+0.4
RM33				AML	AML		
	comp=E,511μm,1.0s						
RM33				AML	AML		
	comp=N,426μm,0.2s						
RM33				AML	AML		
	comp=E,474μm,0.9s						
RM33				AML	AML		
	comp=E,512μm,1.0s						
RM33				AML	AML		
	comp=N,426μm,0.2s						
RM33				AML	AML		
	comp=N,394μm,0.2s						
RM33				AML	AML		
	comp=E,474μm,0.9s						
CAMP	**Campotosto**	**0.34**	**150**	⇓P	Pg	01 03 19.0	+0.3
CAMP				AML	AML		
	comp=N,90μm,0.7s						
CAMP				AML	AML		
	comp=E,105μm,0.6s						
TERO	**Teramo**	**0.37**	**123**	⇑P	Pg	01 03 19.5	+0.2
TERO				AML	AML		
	comp=E,216μm,0.8s						
TERO				AML	AML		
	comp=N,295μm,0.5s						
T1211	**Morro Reatino**	**0.38**	**219**	⇑P	Pg	01 03 19.8	+0.3
T1211				AML	AML		
	comp=E,232μm,1.5s						
T1211				AML	AML		
	comp=N,261μm,0.7s						
OFFI	**Offida**	**0.39**	**73**	⇑P	Pb	01 03 20.9	-0.5
OFFI				AML	AML		
	comp=E,277μm,0.3s						
OFFI				AML	AML		
	comp=N,366μm,0.5s						
ARRO	**Arrone**	**0.39**	**231**	⇑P	Pg	01 03 20.1	+0.4
ARRO				AML	AML		
	comp=E,118μm,0.6s						
ARRO				AML	AML		
	comp=N,128μm,1.3s						
ARRO				AML	AML		
	comp=E,117μm,0.6s						
ARRO				AML	AML		
	comp=N,127μm,1.3s						
T1247	**Pizzolo (AQ)**	**0.39**	**167**	⇓P	Pg	01 03 20.2	+0.5
T1247				AML	AML		
	comp=E,292μm,1.6s						
T1247				AML	AML		
	comp=N,275μm,0.4s						
ASSB	**Assisi San Ben**	**0.44**	**300**	⇑P	Pg	01 03 20.9	+0.3
ASSB				AML	AML		
	comp=E,212μm,0.1s						
ASSB				AML	AML		
	comp=N,184μm,1.1s						
SNTG	**Esanatoglia**	**0.46**	**338**	⇑P	Pg	01 03 21.6	+0.5
SNTG				AML	AML		
	comp=N,93μm,0.4s						
SNTG				AML	AML		
	comp=N,93μm,0.4s						
SNTG				AML	AML		
	comp=E,72μm,0.8s						
GIGS	**Gran Sasso**	**0.47**	**142**	P	Pg	01 03 21.5	+0.3
GIGS				AML	AML		
	comp=E,28μm,0.6s						
GIGS				AML	AML		
	comp=N,28μm,1.0s						
GIGS				AML	AML		
	comp=E,28μm,0.6s						
GIGS				AML	AML		
	comp=N,28μm,1.0s						
CESX	**Cesi**	**0.49**	**244**	P	Pg	01 03 21.5	-0.1
CESX				S	Sb	01 03 30.0	-0.5
CESX				AML	AML		
	comp=N,111μm,0.4s						
CESX				AML	AML		
	comp=E,93μm,0.3s						
EL6	**Elcito**	**0.51**	**354**	⇓P	Pg	01 03 22.4	+0.4
EL6				AML	AML		
	comp=N,182μm,1.2s						
EL6				AML	AML		
	comp=E,185μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.54**	**312**	⇓P	Pg	01 03 22.8	+0.3
ATCC				AML	AML		
	comp=E,153μm,1.1s						
ATCC				AML	AML		
	comp=N,140μm,0.5s						
ATCC				AML	AML		
	comp=E,153μm,1.1s						
CING	**Cingoli**	**0.55**	**1**	⇓P	Pg	01 03 23.2	+0.4
CING				AML	AML		
	comp=E,94μm,0.7s						
CING				AML	AML		
	comp=N,70μm,0.4s						
FIAM	**Fiamignano**	**0.56**	**185**	⇑P	Pg	01 03 22.8	0.0
FIAM				S	Sb	01 03 32.0	-0.5
FIAM				AML	AML		
	comp=N,65μm,0.6s						
FIAM				AML	AML		
	comp=E,104μm,0.4s						
FOSV	**Fossato di Vic**	**0.56**	**327**	⇓P	Pg	01 03 23.1	+0.2
FOSV				S	Sb	01 03 33.0	+0.4
FOSV				AML	AML		
	comp=E,70μm,1.3s						
FOSV				AML	AML		
	comp=N,111μm,0.3s						
FOSV				AML	AML		
	comp=E,69μm,1.3s						
FOSV				AML	AML		
	comp=N,110μm,0.3s						
PP3	**Marolino**	**0.64**	**30**	⇓P	Pb	01 03 25.7	+0.2
PP3				AML	AML		
	comp=N,210μm,1.6s						
PP3				AML	AML		
	comp=E,214μm,0.7s						
VCEL	**Villa Celiera**	**0.65**	**131**	P	Pg	01 03 25.1	+0.5
VCEL				S	Sb	01 03 36.0	+0.8
ARVD	**Arcevia**	**0.69**	**346**	⇓P	Pg	01 03 25.9	+0.4
ARVD				S	Sn	01 03 38.0	-1.5
ARVD				AML	AML		
	comp=E,38μm,0.5s						
ARVD				AML	AML		
	comp=N,29μm,0.8s						
ATFO	**Monte Foce - G**	**0.70**	**321**	P	Pg	01 03 25.8	+0.2
ATFO				AML	AML		
	comp=E,56μm,1.2s						
ATFO				AML	AML		
	comp=N,46μm,0.4s						
T0110	**Collepietro**	**0.74**	**143**	⇑P	Pg	01 03 26.8	+0.4
T0110				AML	AML		
	comp=N,80μm,0.3s						
T0110				AML	AML		
	comp=E,68μm,0.5s						
FRON	**Frontone**	**0.77**	**335**	⇑P	Pg	01 03 26.8	-0.1
FRON				AML	AML		
	comp=E,39μm,1.2s						
FRON				AML	AML		
	comp=N,59μm,0.4s						
MGAB	**Montegabbione**	**0.79**	**277**	⇓P	Pn	01 03 30.0	+0.3
PIEI	**Pieia**	**0.85**	**327**	⇓P	Pg	01 03 28.6	+0.1
PIEI				AML	AML		
	comp=E,29μm,0.8s						
PIEI				AML	AML		
	comp=N,25μm,1.5s						
PIEI				AML	AML		
	comp=N,25μm,1.5s						
NARO	**Abbazia di Nar**	**0.90**	**331**	P	Pg	01 03 29.1	-0.3
NARO				AML	AML		
	comp=N,19μm,1.6s						
NARO				AML	AML		
	comp=E,23μm,1.1s						
FSSB	**Fossombrone**	**0.92**	**341**	P	Pg	01 03 29.8	+0.1
FSSB				AML	AML		
	comp=E,104μm,0.3s						
FSSB				AML	AML		
	comp=N,198μm,0.4s						

JMA ***18*** *01:13:34.0±0.8, 46°.N±4°.×15°.2E±°, h30km, MV5.1/13, KURILE ISLANDS REGION*
SKHL ***18*** *01:13:34.3±0.6, 46°.10N×151°.80E, h112km±7km, mb5.3/5, mbv5.5/2, msh5.4/2, msha6.0/6*
IDC ***18*** *01:13:34.9±2.2, 46°.30N×151°.42E, h93km±19km, mb4.2/26, mbtmp4.5/31, MS3.2/10, Error ellipse: s-maj=13.2km s-min=11.2km az=147.0*
BJI ***18*** *01:13:36.7±0.0, 46°.65N×151°.29E, h106km, mb4.8/28, mB5.0/13*
MOS ***18*** *01:13:36.0±1.2, 46°.21N×151°.38E, h115km, mb4.8/75, Error ellipse: s-maj=7.8km s-min=4.5km az=111.5*
NEIC ***18*** *01:13:37.1±1.1, 46°.2N±0°.1×151°.6E±0°.1, h116km±7km, mb4.7/73, Error ellipse: s-maj=19.5km s-min=12.7km az=149.0*

ISC 18 01:13:34.6±0.4, 46°.12N±0°.05×151°.65E±0°.05, h100km, n417, σ1§19/427, mb4.7/158, 68C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.80**	**253**	*e*PN	**Pn**	**01 14 19.2**	**+1.6**
KUR				*i* S	**Sn**	**01 14 52.1**	**+1.3**
KUR				pmax	pmax		
	comp=E,114nm,0.6s						
KUR				pmax	pmax		
	comp=Z,591nm,0.6s						
KUR				pmax	pmax		
	comp=N,248nm,0.2s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,471nm,0.3s						
KUR	**Kuril'sk**	**2.80**	**253**	*e*P	**Pn**	**01 14 19.2**	**+1.6**
KUR				AMB	AMB	01 14 19.9	
	comp=E,600nm,0.6s						
KUR				AMB	AMB	01 14 23.3	
	comp=E,2μm,4.0s						
KUR				*i* S	**Sn**	**01 14 52.5**	**+1.7**
KUR				A	A	01 14 54.2	
	comp=E,2μm,0.3s						
KUR				A	A	01 14 54.2	
	comp=E,470nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.60**	**245**	*d i*PN	**Pn**	**01 14 42.8**	**+0.9**
YUK				*e*S	**Sn**	**01 15 34.1**	**-0.1**
YUK				pmax	pmax		
	comp=E,150nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1μm,0.1s						
YUK				pmax	pmax		
	comp=N,71nm,0.2s						
YUK				smax	smax		
	comp=N,284nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.60**	**245**	*i* P	**Pn**	**01 14 42.8**	**+0.9**
YUK				AMB	AMB	01 14 43.3	
	comp=E,450nm,0.2s						
YUK				*e*S	**Sn**	**01 15 34.1**	**-0.1**
YUK				A	A	01 15 38.2	
	comp=E,2μm,2.0s						
YUK				A	A	01 15 38.2	
	comp=E,2μm,2.0s						
YUK				A	A	01 15 40.0	
	comp=E,680nm,0.4s						
YUK				A	A	01 15 40.0	
	comp=E,950nm,0.4s						
RUSJ	**Misakicho**	**4.96**	**248**	*e*PN	**Pn**	**01 14 43.4**	**-3.4**
RUSJ				*e*S	**Sn**	**01 15 43.6**	**+0.7**
NEM2	**Nemuro 2**	**5.03**	**239**	*e*P	**Pn**	**01 14 46.4**	**-1.3**
NEM2				*e*S	**Sn**	**01 15 39.5**	**-5.1**
NMR	**Nemuro--Hokkai**	**5.04**	**239**	⇓*i*PN	**Pn**	**01 14 46.4**	**-1.4**
NMR				*e*S	**Sn**	**01 15 40.6**	**-4.1**
NMR	**Nemuro--Hokkai**	**5.04**	**239**	*i* P	**Pn**	**01 14 47.0**	**-0.8**
JRA	**Rausu**	**5.12**	**247**	*e*P	**Pn**	**01 14 49.9**	**+1.0**
SKR	**Severo-Kuril's**	**5.45**	**31**	*e*PN	**Pn**	**01 14 53.1**	**-0.2**
SKR				pmax	pmax		
	comp=Z,52nm,0.6s						
SKR	**Severo-Kuril's**	**5.45**	**31**	*e*P	**Pn**	**01 14 53.2**	**-0.1**
SKR				AMB	AMB	01 14 53.8	
	comp=Z,50nm,0.4s						
SKR				*e*S	**Sn**	**01 15 51.6**	**-3.0**
SKR				A	A	01 16 00.6	
	comp=Z,280nm,0.6s						
SKR				A	A	01 16 00.6	
	comp=Z,230nm,0.6s						
JNK	**Nakash**	**5.54**	**245**	*e*P	**Pn**	**01 14 55.0**	**+0.4**
JAK	**Akkeshi**	**5.87**	**240**	*e*P	**Pn**	**01 14 57.7**	**-1.4**
JAK				*e*S	**Sn**	**01 15 59.9**	**-5.1**
JTKR	**Abashiri--Toko**	**5.89**	**251**	*e*P	**Pn**	**01 15 00.6**	**+1.2**
YSS	**Yuzh-Sakhalins**	**6.20**	**281**		**Pn**	**01 15 05.8**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.20**	**281**	*e*PN	**Pn**	**01 15 05.5**	**+2.0**
YSS				pmax	pmax		
	comp=Z,81nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.20**	**281**	*e*P	**Pn**	**01 15 05.5**	**+2.0**
YSS				AMB	AMB	01 15 10.9	
	comp=Z,90nm,0.7s						
YSS				*e*S	**Sn**	**01 16 14.2**	**+1.4**
YSS				A	A	01 16 20.0	
	comp=Z,60nm,0.6s						
YSS				A	A	01 16 20.0	

comp=Z,40nm,0.6s
JAR Ashorobuto 6.29 246 *e*P **Pn 01 15 05.5 +0.7**
PAU Pauzhetka 6.34 31 *e*P **Pn 01 15 05.6 +0.2**
PAU AMB AMB 01 15 07.2
comp=Z,80nm,0.4s
PAU *e*S **Sn 01 16 13.3 -3.0**
PAU A A 01 16 15.5
comp=Z,320nm,0.5s
PAU A A 01 16 15.5
comp=Z,240nm,0.5s
JOB Onbets 6.45 243 *e*P **Pn 01 15 06.6 -0.4**
JKK2 Kamakawa 2 6.70 254 *e*P **Pn 01 15 12.0 +1.6**
JCH Churui 6.90 242 *e*P **Pn 01 15 11.9 -1.1**
JCH *e*S **Sn 01 16 25.1 -4.9**
ERM Erimo 7.37 239 *i* PN **Pn 01 15 20.1 +0.7**
JNBK Urakawa-nobuka 7.46 242 *e*P **Pn 01 15 19.1 -1.6**
TYV Tymovskoe 7.63 312 *e*PN **Pn 01 15 25.6 +2.7**
TYV *e*S **Sn 01 16 49.4 +1.7**
TYV pmax pmax
comp=Z,57nm,0.9s
TYV pmax pmax
comp=Z,400nm,2.9s
TYV smax smax
comp=N,600nm,3.4s
TYV smax smax
comp=E,700nm,3.4s
TYV smax smax
comp=N,34nm,1.1s
TYV smax smax
comp=E,26nm,1.1s
TYV Tymovskoe 7.63 312 *e*P **Pn 01 15 25.2 +2.3**
TYV AMB AMB 01 15 26.3
comp=E,60nm,0.9s
TYV AMB AMB 01 15 30.4
comp=E,400nm,3.0s
TYV *e*S **Sn 01 16 49.0 +1.3**
TYV A A 01 16 50.3
comp=E,600nm,4.0s
TYV A A 01 16 50.3
comp=E,700nm,4.0s
TYV A A 01 16 52.4
comp=E,30nm,1.0s
TYV A A 01 16 52.4
comp=E,30nm,1.0s
PEA0B Petropavlovsk- 8.02 27 Pn 01 15 27.3 -0.9
PEA0B Petropavlovsk- 8.02 27 *i* PN **Pn 01 15 27.8 -0.4**
PETK Petropavlovsk- 8.02 27 P **Pn 01 15 27.0 -1.2**
comp=E,10.0nm,0.5s,baz=202,slow=11,SNR=40
PETK S **Sn 01 17 00.2 +3.1**
comp=E,3.7nm,0.6s,baz=128,slow=21,SNR=1.4
PET Petropavlovsk 8.27 31 Pn **Pn 01 15 33.6 +2.0**
PET Petropavlovsk 8.27 31 *e*S **Sn 01 16 58.8 -4.4**
PET A A 01 17 02.3
comp=E,70nm,0.5s
PET A A 01 17 02.3
comp=E,90nm,0.5s
JANG Nango 9.36 236 *e*P **Pn 01 15 43.1 -3.5**
JANG *e*S Sn 01 17 20.0 -10
MA2 Magadan 13.49 358 P **Pn 01 16 43.3 +1.7**
comp=E,7.4nm,0.5s,baz=176,slow=13,SNR=5.2
MA2 LR LR 01 21 31.4
comp=E,35nm,20.1s,baz=132,slow=36
KLR Kul'dur 13.76 290 P **Pn 01 16 46.6 +1.3**
comp=E,8.5nm,0.7s,baz=96,slow=14,SNR=17
KLR LR LR 01 22 03.7
comp=E,33nm,19.1s,baz=84,slow=38
KLR Kul'dur 13.76 290*ce*P **Pn 01 16 47.0 +1.7**
KLR pmax pmax
comp=Z,17nm,1.7s
KLR Kul'dur 13.76 290 *e*P **Pn 01 16 44.7 -0.6**
MJAR Matsushiro Arr 13.90 231 P **Pn 01 16 46.0 -1.1**
comp=Z,0.8nm,0.3s,baz=27,slow=12,SNR=5.5
MJB9 Matsu-Tunnel 13.90 231 P **P 01 16 51.5 -0.5**
MAJO Matsushiro 13.90 231 **P 01 16 50.6 -1.5**
MAJO Matsushiro 13.90 231 *i* P **Pn 01 16 46.8 -0.4**
USA0B Ussuriysk Arra 14.01 269 *i* P **Pn 01 16 48.7 +0.2**
USRK Ussuriysk Ar. 14.01 269 P **Pn 01 16 48.3 -0.2**
comp=Z,3.8nm,0.5s,baz=73,slow=13,SNR=9.3
MDJ Mudanjiang 15.57 272 **Pn 01 17 09.5 +1.1**
MDJ IAmb IAmb 01 17 11.0
comp=Z,30nm,1.1s
SEY Seymchan 16.85 1 P **Pn 01 17 22.7 -1.4**
comp=Z,5.6nm,0.4s,baz=161,slow=7.4,SNR=14
SEY Seymchan 16.85 1*ce*P **Pn 01 17 22.4 -1.7**
SEY pmax pmax
comp=Z,12nm,1.0s
SEY Seymchan 16.85 1 *e*P **Pn 01 17 22.4 -1.7**
ZEA Zeya 17.40 305 *e*P **Pn 01 17 31.5 +0.7**
ZEA pmax pmax
comp=Z,20nm,0.5s
ZEA Zeya 17.40 305 *e*P **P 01 17 28.9 -1.7**
ZEA AMB AMB 01 17 32.1
CN2 Changchun 18.66 272 *e*P **P 01 17 43.9 -0.7**
CN2 *e*pP pP 01 17 59.8 -3.6
CN2 S S 01 21 00.3 -12
CN2 pmax pmax
comp=Z,20nm,0.7s
KSRS Korea Array 19.64 252 P **Pn 01 17 57.3 -0.4**
comp=Z,2.9nm,0.7s,baz=55,slow=11,SNR=6.9
YAK Yakutsk 20.33 329 P **P 01 18 01.5 -0.9**
comp=Z,19nm,0.4s,baz=135,slow=5.2,SNR=5.6
comp=Z,19nm,0.4s
YAK Yakutsk 20.33 329 *e*P **P 01 18 00.9 -1.5**
YAK *e*S **S 01 21 44.0 -0.5**
YAK *e**SS **sS 01 22 13.9 -1.1**
YAK pmax pmax
comp=Z,73nm,1.4s
YAK pmax pmax
comp=N,26nm,1.1s
YAK pmax pmax
comp=E,23nm,1.4s
YAK smax smax
comp=N,265nm,3.5s
YAK smax smax
comp=E,245nm,3.1s
SNY Shenyang 20.61 268 ⇑P **P 01 18 06.8 +1.2**
SNY sP **sP 01 18 38.5 +1.2**
SNY S **S 01 21 50.1 -0.2**
SNY pmax pmax
comp=E,20nm,0.6s
SNY pmax pmax
comp=E,360nm,4.0s
SNY LR LR
comp=E,320nm,4.3s
SNY LR LR
comp=E,410nm,5.1s
SNY LR LR
comp=E,320nm,4.9s
BILL Bilibino 23.24 14 *i* P **P 01 18 31.6 -1.1**
BILL *i* *PP **pP 01 18 54.8 +2.1**
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL Bilibino 23.24 14 *e*P **P 01 18 31.6 -1.1**
BJT Baijiatuau 26.48 270 P **P 01 19 02.6 +0.3**
BJT IAmb IAmb 01 19 05.9
comp=Z,11nm,0.8s
BJT Baijiatuau 26.48 270 P **P 01 19 02.6 +0.3**
BJT pmax pmax
comp=Z,11nm,0.8s
TIXI Tiksi 27.80 345 P **P 01 19 11.3 -2.4**
comp=Z,5.7nm,0.4s,baz=270,slow=18,SNR=15
comp=Z,5.7nm,0.4s
TIXI Tiksi 27.80 345 P **P 01 19 11.8 -1.9**
TIXI IAmb IAmb 01 19 12.5
comp=Z,8.1nm,0.5s
TIXI Tiksi 27.80 345*ce*P **P 01 19 11.9 -1.9**
TIXI pmax pmax
comp=Z,20nm,2.5s
NJ2 Nanjing 28.85 252 *e*P **P 01 19 26.8 +3.3**
NJ2 pmax pmax
comp=Z,28nm,0.6s
ULN Ulaanbaatar 30.16 290*ce*P **P 01 19 34.3 -0.8**
ULN pmax pmax
comp=Z,5.0nm,1.3s
ULN Ulaanbaatar 30.16 290 *e*P **P 01 19 34.9 -0.2**
H11S1 WAKE ISLAND Hy 30.22 151 T T 01 51 28.9
baz=339,slow=76
H11S3 WAKE ISLAND Hy 30.23 151 T T 01 51 32.0
baz=339
H11S2 WAKE ISLAND Hy 30.24 151 T T 01 51 30.3
baz=339,slow=76
SONM Songino Array 30.59 290 P **P 01 19 36.9 -2.0**
comp=Z,1.3nm,0.4s,baz=201,slow=41,SNR=1.7
comp=Z,1.3nm,0.4s
GUMO Guam 32.93 192 LR LR 01 31 46.5
comp=Z,18nm,21.3s,baz=123,slow=33

I21K Tanana 35.52 37 P **P 01 20 20.5 -0.9**
I21K IAmb IAmb 01 20 21.6
comp=Z,14nm,0.8s
H23K Yukon River 36.57 36 P **P 01 20 31.1 +0.6**
TOLK Toolik Lake Re 36.81 32 P **P 01 20 33.1 +0.7**
TOLK IAmb IAmb 01 20 33.8
comp=Z,7.7nm,0.7s
LZH Lanzhou 36.90 272 *e*P **P 01 20 35.4 +1.7**
LZH pmax pmax
comp=Z,52nm,1.4s
POKR Poker Plat Res 37.43 37 P **P 01 20 38.5 +0.9**
POKR IAmb IAmb 01 20 39.9
comp=Z,17nm,0.9s
ILAR Eielson Array 37.67 38 P **P 01 20 40.1 +0.5**
comp=Z,2.4nm,0.8s,baz=267,slow=7.7,SNR=18
comp=Z,2.4nm,0.8s
GTA Gaotai 38.07 279 *e*P **P 01 20 44.8 +1.3**
GTA pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 38.78 329 P **P 01 20 47.6 -1.3**
comp=Z,1.6nm,0.4s,baz=104,slow=9.0,SNR=4.2
comp=Z,1.6nm,0.4s
NRIK Noril'sk 38.78 329*ce*P **P 01 20 46.8 -2.1**
NRIK pmax pmax
comp=Z,17nm,1.8s
K27K Chicken 39.80 39 P **P 01 20 58.8 +1.3**
L27K Beaver Creek, 40.02 41 P **P 01 21 00.1 +0.8**
EPYK Eagle Plains 41.76 35 P **P 01 21 15.0 +1.4**
EPYK IAmb IAmb 01 21 16.9
comp=Z,11nm,1.1s
DGZ Jazzator, Alta 42.03 299 *i* P **P 01 21 15.5 -0.6**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
ZALV Zalesovo Beam 42.16 306 P **P 01 21 14.9 -2.0**
comp=Z,1.1nm,0.5s,baz=66,slow=7.5,SNR=6.4
ZALV PcP **PcP 01 23 10.1 +0.7**
comp=Z,1.0nm,0.6s,baz=67,slow=5.0,SNR=4.2
ZALV LR LR 01 38 36.2
comp=Z,20nm,20.1s,baz=76,slow=36
comp=Z,1.1nm,0.5s
INK Inuvik 42.72 32 P **P 01 21 21.7 +0.4**
comp=Z,7.1nm,0.7s,baz=288,slow=7.2,SNR=18
comp=Z,7.1nm,0.7s
INK Inuvik 42.72 32 P **P 01 21 21.8 +0.6**
INK IAmb IAmb 01 21 23.5
comp=Z,8.3nm,0.8s
INK Inuvik 42.72 32 P **P 01 21 21.8 +0.6**
INK pmax pmax
comp=Z,8.0nm,0.8s
GOMU GeErMu 43.10 278 *e*P **P 01 21 25.9 +0.7**
GOMU pmax pmax
comp=Z,13nm,0.8s
GOMU pmax pmax
comp=Z,130nm,5.9s
PZH PanZhiHua 43.92 261 P **P 01 21 34.4 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,130nm,5.4s
MK31 Makanchi Array 46.33 297 P **P 01 21 50.2 -0.1**
MK31 Makanchi Array 46.33 297 *i* P **P 01 21 49.7 -0.6**
MKAR Makanchi Array 46.33 297 P **P 01 21 49.6 -0.7**
comp=Z,4.1nm,0.6s,baz=70,slow=7.9,SNR=43
MKAR PcP **PcP 01 23 24.5 +0.7**
comp=Z,0.9nm,0.6s,baz=54,slow=3.1,SNR=3.8
MKAR ScP **ScP 01 27 08.0 +0.1**
comp=Z,1.3nm,0.9s,baz=57,slow=4.5,SNR=6.9
MKAR LR LR 01 41 47.9
comp=Z,29nm,19.6s,baz=111,slow=37
comp=Z,4.1nm,0.6s
MKAR Makanchi Array 46.33 297 P **P 01 21 50.2 -0.1**
MKAR Makanchi Array 46.33 297 P **P 01 21 50.3 -0.1**
MAKZ Makanchi 46.52 297 P **P 01 21 51.0 -0.8**
MAKZ Makanchi 46.52 297 P **P 01 21 51.0 -0.8**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
KURK Kurchatov 46.87 304 P **P 01 21 53.1 -1.3**
KURK IAmb IAmb 01 21 53.7
comp=Z,6.7nm,0.7s
KURK Kurchatov 46.87 304 P **P 01 21 53.1 -1.3**
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 46.87 304 *e*P **P 01 21 53.1 -1.3**
EUNU Eureka 49.94 11 P **P 01 22 17.8 +0.2**
EUNU IAmb IAmb 01 22 19.0
comp=Z,11nm,0.8s
BRVK Borovoye 50.52 309 P **P 01 22 21.5 -0.8**
BRVK IAmb IAmb 01 22 21.9
comp=Z,4.1nm,0.8s
BRVK Borovoye 50.52 309 P **P 01 22 21.5 -0.8**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 50.52 309 *e*P **P 01 22 21.5 -0.8**
RES Resolute Bay 51.75 18 P **P 01 22 31.7 +0.5**
RES IAmb IAmb 01 22 34.5
comp=Z,14nm,1.0s
RES Resolute Bay 51.75 18 P **P 01 22 31.7 +0.5**
RES pmax pmax
comp=Z,14nm,1.0s
YKA Yellowknife Ar 52.03 36 P **P 01 22 34.2 +0.8**
comp=Z,2.2nm,0.6s,baz=295,slow=7.0,SNR=5.0
comp=Z,2.2nm,0.6s
NOR Nord 52.37 358 *i* P **P 01 22 35.3 -0.4**
BOOM Boomskoye usch 52.38 295 P **P 01 22 36.9 +0.4**
BOOM IAmb IAmb 01 22 39.8
comp=Z,5.1nm,0.8s
BOOM Boomskoye usch 52.38 295 P **P 01 22 36.9 +0.4**
BOOM pmax pmax
comp=Z,5.0nm,0.8s
SPITS Spitsbergen Ar 53.05 350 P **P 01 22 40.7 -0.1**
comp=Z,4.9nm,0.5s,baz=348,slow=13,SNR=12
comp=Z,4.9nm,0.5s
SPB2 Spitsbergen Ar 53.05 350 P **P 01 22 40.6 -0.1**
SPB2 IAmb IAmb 01 23 10.9
comp=Z,13nm,0.8s
TAPN Taplejung 53.12 273 *e*P **P 01 22 44.6 +2.2**
comp=Z,13nm,0.6s
AAK Ala-Archa 53.20 296 P **P 01 22 42.2 -0.4**
AAK Ala-Archa 53.20 296*ce*P **P 01 22 42.7 +0.1**
AAK pmax pmax
comp=Z,6.0nm,1.3s
AAK Ala-Archa 53.20 296 *e*P **P 01 22 42.7 +0.1**
SVE Sverdlovsk 53.60 317 *e*P **P 01 22 44.3 -0.8**
SVE pmax pmax
comp=Z,19nm,0.9s
SVE Sverdlovsk 53.60 317 *e*P **P 01 22 44.3 -0.8**
KSH Kashi 53.95 292 P P 01 22 53.3 +5.2
KSH sP sP 01 23 30.8 +7.9
KSH pmax pmax
comp=Z,17nm,0.6s
JIRN Jiri 53.99 274 *e*P **P 01 22 50.9 +2.2**
comp=Z,39nm,0.6s
GUN Gumba 54.05 274 *e*P **P 01 22 51.0 +1.8**
comp=Z,17nm,0.5s
RAMN Ramite 54.14 273 *e*P **P 01 22 50.7 +0.9**
comp=Z,33nm,0.6s
PKI Pulchoki 54.58 274 *e*P **P 01 22 54.0 +1.0**
comp=Z,12nm,0.6s
PKIN Phulchoki 54.59 274 *e*P **P 01 22 53.9 +0.9**
comp=Z,11nm,0.6s
DMN Daman 54.77 275 *e*P **P 01 22 56.4 +2.1**
comp=Z,20nm,0.5s
ARU Arti 54.79 317 P **P 01 22 52.4 -1.2**
comp=Z,17nm,0.5s,baz=58,slow=4.6,SNR=30
comp=Z,17nm,0.5s
ARU Arti 54.79 317 P **P 01 22 52.6 -1.1**
ARU Arti 54.79 317*ce*P **P 01 22 52.2 -1.5**
ARU pmax pmax
comp=Z,42nm,1.7s
ARU Arti 54.79 317 *e*P **P 01 22 52.2 -1.5**
GKN Gorkha 54.85 275 *e*P **P 01 22 56.7 +2.0**
comp=Z,22nm,0.6s
ARK Arkit 55.24 296 P **P 01 22 57.0 -0.3**
ARK pmax pmax
comp=Z,3.0nm,1.1s
DANN Dangsing 55.24 276 *e*P **P 01 22 59.3 +1.6**
comp=Z,25nm,0.6s
KK31 Karatay Array 55.41 298 P **P 01 22 57.3 -1.2**
KK31 Karatay Array 55.41 298 P **P 01 22 57.3 -1.2**
KK31 pmax pmax
comp=Z,5.0nm,1.1s
KKAR Karatay Array 55.41 298 P **P 01 22 58.1 -0.3**
KKAR Karatay Array 55.41 298 P **P 01 22 58.1 -0.3**
KKAR pmax pmax
comp=Z,5.0nm,1.1s
NEEM North Greenlan 55.89 6 *i* P **P 01 23 00.4 -1.3**

NEEM IAmb IAmb 01 23 01.8
comp=Z,29nm,0.9s
TRKS Terek-Say 55.90 297 P **P 01 23 02.4 +0.3**
TRKS pmax pmax
comp=Z,9.0nm,0.5s
PYUN Piuthan 55.93 277 *e*P **P 01 23 04.2 +1.7**
comp=Z,13nm,0.5s
BTK Batken 56.93 295 P **P 01 23 08.9 -0.5**
BTK Batken 56.93 295 P **P 01 23 08.9 -0.5**
BTK pmax pmax
comp=Z,13nm,0.8s
DAG Danmarks Havn 57.23 357 P **P 01 23 10.7 -0.1**
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 57.23 357 *i* P **P 01 23 10.0 -0.8**
DAG IAmb IAmb 01 23 11.0
comp=Z,6.0nm,0.9s
PRGR Permogore 57.34 327 *e*P **P 01 23 11.1 -0.7**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
GAR Garm 57.86 295 P **P 01 23 16.0 +0.1**
ABKAR Akbulak array 58.05 309 P **P 01 23 15.8 -1.1**
ABKAR Akbulak array 58.05 309 P **P 01 23 15.3 -1.6**
ABKAR IAmb IAmb 01 23 17.0
comp=Z,8.8nm,1.1s
ARA0 ARCESS Array S 58.11 340 *e*P **P 01 23 17.0 -0.1**
ARCES ARCESS Array B 58.11 340 P **P 01 23 16.0 -1.1**
comp=Z,3.7nm,0.8s,baz=49,slow=6.3,SNR=24
comp=Z,3.7nm,0.8s
AKTO Aktyubinsk 58.39 311 LR LR 01 52 01.7
comp=Z,29nm,18.8s,baz=29,slow=40
CHGR Chuyangaron 58.80 295 P **P 01 23 21.2 -1.2**
CHGR Chuyangaron 58.80 295 P **P 01 23 21.2 -1.2**
CHGR pmax pmax
comp=Z,66nm,0.5s
KTK1 Kautokeino 59.03 341 *e*P **P 01 23 22.8 -0.7**
KTK1 IAmb IAmb 01 23 24.4
comp=Z,16nm,1.2s
NIL Nilore 59.14 288 P **P 01 23 24.0 -0.8**
NIL Nilore 59.14 288 P **P 01 23 24.0 -0.8**
NIL pmax pmax
comp=Z,26nm,0.8s
JETT Jettan, Norway 59.23 342 *e*P **P 01 23 24.6 -0.3**
JETT IAmb IAmb 01 23 25.8
comp=Z,16nm,0.4s
TRO Tromso 59.48 343 *e*P **P 01 23 26.6 +0.1**
TRO IAmb IAmb 01 23 27.4
comp=Z,9.3nm,0.8s
PLID Pearl Lake 60.86 54 P **P 01 23 37.0 +0.4**
KBL Kabul 61.35 291 P **P 01 23 39.4 -0.7**
KBL Kabul 61.35 291 P **P 01 23 39.4 -0.7**
KBL pmax pmax
comp=Z,15nm,0.7s
SUMG Summit 61.39 3 P **P 01 23 40.9 +0.9**
SUMG pmax pmax
comp=Z,30nm,1.0s
SUMG Summit 61.39 3 *i* P **P 01 23 40.0 0.0**
SUMG IAmb IAmb 01 23 42.1
comp=Z,18nm,0.7s
STEI Steigen 61.65 343 *e*P **P 01 23 40.5 -0.8**
LOF Lofoten 61.82 344 *e*P **P 01 23 41.6 -0.8**
LOF IAmb IAmb 01 23 42.1
comp=Z,76nm,1.6s
FAUS Fauske 62.10 342 *e*P **P 01 23 43.7 -0.6**
FAUS IAmb IAmb 01 23 44.5
comp=Z,12nm,0.7s
MOR8 Moi Rana 63.31 342 *e*P **P 01 23 51.4 -1.0**
MOR8 IAmb IAmb 01 23 52.2
comp=Z,9.0nm,0.8s
NVAR Mina Array Bea 63.62 61 P **P 01 23 56.4 +1.3**
comp=Z,0.3nm,0.5s,baz=288,slow=7.6,SNR=6.1
comp=Z,0.3nm,0.5s
FIA1 FINESS Array S 64.17 334 P **P 01 23 56.8 -1.2**
FINES FINESS Array B 64.17 334 P **P 01 23 57.0 -1.1**
comp=Z,16nm,0.7s,baz=38,slow=6.7,SNR=58
comp=Z,16nm,0.7s
FINES FINESS Array B 64.17 334 P **P 01 23 57.0 -1.1**
ICESG Greenland Ices 64.80 4 *i* P **P 01 24 02.4 -0.1**
ICESG IAmb IAmb 01 24 04.9
comp=Z,33nm,0.8s
OBN Obninsk 65.25 325 *e*P **P 01 24 04.5 -0.6**
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN Obninsk 65.25 325 *e*P **P 01 24 04.5 -0.6**
NSS Namsos 65.26 342 *e*P **P 01 24 04.7 -0.3**
NSS IAmb IAmb 01 24 10.1
comp=Z,12nm,1.0s
VRH Novokhopyorsk 65.84 320 *e*P **P 01 24 06.9 -2.1**
VRH pmax pmax
comp=Z,10.0nm,0.6s
PDAR Pinedale Array 65.93 53 P **P 01 24 11.3 +1.3**
comp=Z,1.0nm,0.8s,baz=304,slow=0.8,SNR=10.0
comp=Z,1.0nm,0.8s
SFJD Kangerlussuaq 65.94 9 *i* P **P 01 24 10.1 +0.7**
GEYT Alibeck 66.05 300 P **P 01 24 11.6 +0.9**
comp=Z,12nm,0.7s,baz=29,slow=3.4,SNR=32
comp=Z,12nm,0.7s
GEYT Alibeck 66.05 300 P **P 01 24 09.7 -1.0**
GEYT IAmb IAmb 01 24 12.5
comp=Z,14nm,0.8s
GYA0B ALIBECK ARRAY 66.05 300 P **P 01 24 10.3 -0.4**
GYA0B IAmb IAmb 01 24 12.5
comp=Z,13nm,0.8s
LPSR Galich'ya Gora 66.08 322 *e*P **P 01 24 09.3 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 66.62 321 *e*P **P 01 24 12.1 -1.9**
VORR pmax pmax
comp=Z,20nm,0.4s
DY2G Dye2 66.90 8 *i* P **P 01 24 15.4 -0.4**
DY2G IAmb IAmb 01 24 18.1
comp=Z,87nm,1.6s
VSR Storozhevoye 66.97 321 *e*P **P 01 24 14.9 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.5s
RDMU Red Mountain 67.38 55 P **P 01 24 18.8 -0.5**
RDMU IAmb IAmb 01 24 21.9
comp=Z,4.9nm,0.7s
WB0 Warramunga Arr 67.42 198 P **P 01 24 20.5 +1.2**
WB0 IAmb IAmb 01 24 20.9
comp=Z,7.9nm,0.8s
WR0 Warramunga Arr 67.57 197 P **P 01 24 21.2 +0.9**
WB2 Warramunga Arr 67.60 198 P **P 01 24 21.1 +0.6**
WB2 IAmb IAmb 01 24 22.5
comp=Z,7.4nm,0.8s
WRA Warramunga Arr 67.60 198 P **P 01 24 21.3 +0.8**
comp=Z,5.9nm,0.8s,baz=18,slow=6.8,SNR=32
comp=Z,5.9nm,0.8s
WRA Warramunga Arr 67.60 198 P **P 01 24 21.1 +0.6**
WRA Warramunga Arr 67.60 198 P **P 01 24 21.1 +0.6**
DOMB Dombas 68.08 342 *e*P **P 01 24 23.3 +0.2**
DOMB IAmb IAmb 01 24 24.8
comp=Z,8.6nm,0.7s
NC303 NORSAR Array S 68.29 341 P **P 01 24 24.1 -0.2**
NC303 IAmb IAmb 01 24 50.0
comp=Z,23nm,1.2s
NC405 NORSAR Array S 68.31 340 P **P 01 24 24.3 -0.2**
NC204 NORSAR Array S 68.38 341 P **P 01 24 24.9 -0.1**
NB201 NORSAR Array S 68.46 341 P **P 01 24 25.3 -0.2**
NB2 NORSAR Subarra 68.49 341 P **P 01 24 25.4 -0.3**
comp=Z,3.1nm,0.4s,baz=28,slow=6.5
NB2 NORSAR Subarra 68.49 341 P **P 01 24 25.4 -0.3**
baz=28,slow=6.5
NOA NORSAR Array B 68.49 341 P **P 01 24 25.4 -0.3**
comp=Z,3.5nm,0.4s,baz=29,slow=6.6,SNR=47
comp=Z,3.5nm,0.4s
NC602 NORSAR Array S 68.68 340 *e*P **P 01 24 26.3 -0.5**
NC602 IAmb IAmb 01 24 29.0
comp=Z,10nm,0.9s
NORES NORESS Array B 68.68 340 P **P 01 24 30.7 +3.9**
NACGM Naroch 69.09 330⇑*e*P **P 01 24 28.2 -1.2**
baz=38
KONO Kongsberg 70.10 341 *e*P **P 01 24 36.0 +0.5**
KIV Kislovodsk 70.51 314 ⇑P **P 01 24 39.7 +1.2**
KIV Kislovodsk 70.51 314 P **P 01 24 38.2 -0.3**
KIV IAmb IAmb 01 24 41.2
comp=Z,8.8nm,0.7s
KIV Kislovodsk 70.51 314 *e*P **P 01 24 38.7 +0.3**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV Kislovodsk 70.51 314 *e*P **P 01 24 38.7 +0.3**
KBZ Khabaz 70.56 313 P **P 01 24 36.4 -2.2**
comp=Z,9.8nm,0.8s,baz=74,slow=3.6,SNR=20
comp=Z,9.8nm,0.8s
KBZ Khabaz 70.56 313*ce*P **P 01 24 37.5 -1.1**

KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 70.56 313 *e*P **P 01 24 37.5 -1.1**
SHA1 Shidzhatmaz 70.68 313 *i* P **P 01 24 39.7 0.0**
ASAR Alice Springs 71.30 197 P **P 01 24 45.3 +2.1**
comp=Z,2.7nm,0.8s,baz=13,slow=5.4,SNR=19
ASAR LR LR 01 58 45.0
comp=Z,55nm,18.4s,baz=178,slow=38
comp=Z,2.7nm,0.8s
AKASG Malin Array Be 71.50 326 P **P 01 24 43.4 -0.8**
comp=Z,5.9nm,0.4s,baz=36,slow=6.2,SNR=43
comp=Z,5.9nm,0.4s
AKBB Malin Array Si 71.50 326 P **P 01 24 43.4 -0.8**
AKBB IAmb IAmb 01 24 44.7
comp=Z,24nm,1.2s
AKBB Malin Array Si 71.50 326 *c*e*P* **P 01 24 43.9 -0.3**
SCHQ Schefferville 74.27 22 P **P 01 25 01.1 +0.5**
comp=Z,3.3nm,0.5s,baz=357,slow=4.6,SNR=7.6
SCHQ LR LR 01 59 59.8
comp=Z,23nm,20.6s,baz=192,slow=38
comp=Z,3.3nm,0.5s
MILM Milestii Mici 74.66 323 ⇓P **P 01 25 02.3 -0.5**
MILM Milestii Mici 74.66 323 ⇓P **P 01 25 02.3 -0.5**
GURO Guroymak-BITLI 74.76 310 P **P 01 25 04.3 +0.5**
VASR Vaslui 75.30 324 ⇑P **P 01 25 06.6 +0.1**
OJC Ojcow 75.37 330 *e*P **P 01 25 05.8 -1.1**
OJC Ojcow 75.37 330 P **P 01 25 05.4 -1.5**
OJC IAmb IAmb 01 25 06.5
comp=Z,8.8nm,0.6s
OJC Ojcow 75.37 330 P **P 01 25 05.4 -1.5**
OJC pmax pmax
comp=Z,9.0nm,0.6s
BUR08 Bucovina Ar. S 75.53 326 P **P 01 25 08.2 +0.2**
BUR08 IAmb IAmb 01 25 09.3
comp=Z,10nm,0.6s
STHS Stebnicka Huta 75.54 329 *e*P **P 01 25 08.6 +0.7**
BURAR Bucovina Array 75.55 326 ⇑P **P 01 25 08.4 +0.3**
BURAR Bucovina Array 75.55 326 P **P 01 25 08.4 +0.3**
BURAR IAmb IAmb 01 25 09.7
comp=Z,17nm,0.7s
BURAR Bucovina Array 75.55 326 ⇑P **P 01 25 08.4 +0.3**
KOLS Kolonicke sedl 75.57 328 *e*P **P 01 25 09.1 +1.0**
KOLS pmax pmax
comp=Z,15nm,0.9s
BIZ Bicaz 75.75 325 ⇑P **P 01 25 10.1 +1.0**
VLDR Vladesti 75.82 323 ⇑P **P 01 25 09.9 +0.3**
TESR Tescani 75.87 324 ⇑P **P 01 25 10.1 +0.2**
CRVS Cervenica-Dubn 75.90 329 *e*P **P 01 25 10.9 +1.0**
CRVS pmax pmax
comp=Z,10.0nm,0.9s
GHRR 75.93 324 ⇑P **P 01 25 09.3 -0.8**
KSP Ksiaz 76.00 333 *e*P **P 01 25 10.7 +0.2**
KSP Ksiaz 76.00 333 P **P 01 25 10.0 -0.5**
KSP pmax pmax
comp=Z,11nm,0.8s
TLCR 76.04 322 ⇑P **P 01 25 11.5 +0.7**
TLCR 76.04 322 ⇑P **P 01 25 11.5 +0.7**
KAN08 Anthony NE Sta 76.14 50 P **P 01 25 12.0 +0.4**
TRPA Tarpa 76.14 328 ⇑P **P 01 25 12.2 +0.9**
CHVC Chvalec 76.30 333 *e*P **P 01 25 12.5 +0.3**
ODBI Odobesti 76.31 324 ⇑P **P 01 25 14.8 +2.5**
ARCR ARCALIA 76.32 326 ⇑P **P 01 25 13.6 +1.3**
CFR Carcaliu 76.33 323 ⇑P **P 01 25 12.4 0.0**
CFR Carcaliu 76.33 323 ⇑P **P 01 25 12.4 0.0**
MARD Mardin 76.34 310 P **P 01 25 12.6 -0.3**
MARD IAmb IAmb 01 25 15.2
comp=Z,13nm,0.8s
VRI Vrincioaia 76.36 324 ⇑P **P 01 25 14.6 +1.9**
VRI Vrincioaia 76.36 324 ⇑P **P 01 25 14.6 +1.9**
UPC Upice 76.38 333 *e*P **P 01 25 13.3 +0.6**
UPC Upice 76.38 333 *e*P **P 01 25 13.3 +0.6**
PLOR Plostina 76.41 324 ⇑P P 01 25 19.8 +6.9
PLOR Plostina 76.41 324 ⇑P P 01 25 19.8 +6.9
DPC Dobruska-Polom 76.42 332 *e*P **P 01 25 13.1 +0.2**
DPC Dobruska-Polom 76.42 332 *e*P **P 01 25 13.1 +0.2**
TPGR Topolog 76.47 322 ⇑P **P 01 25 13.5 +0.3**
KRLC Kraliky 76.51 332 *e*P **P 01 25 13.5 +0.1**
KRLC Kraliky 76.51 332 *e*P **P 01 25 13.5 +0.1**
MORC Moravsky Berou 76.52 331 ⇑P **P 01 25 14.2 +0.7**
MORC Moravsky Berou 76.52 331 P **P 01 25 13.6 +0.1**
MORC IAmb IAmb 01 25 15.1
comp=Z,13nm,0.9s
MORC Moravsky Berou 76.52 331 P **P 01 25 13.6 +0.1**
MORC pmax pmax
comp=Z,13nm,0.9s
MORC Moravsky Berou 76.52 331 *e*P **P 01 25 13.9 +0.4**
OZUR 76.56 325 ⇑P **P 01 25 14.8 +1.0**
COVR Voineasa-Covas 76.59 324 ⇑P **P 01 25 14.6 +0.7**
CLL Collm 76.61 335 P **P 01 25 13.7 -0.2**
CLL IAmb IAmb 01 25 14.7
comp=Z,13nm,0.7s
CLL Collm 76.61 335 P **P 01 25 13.7 -0.2**
CLL pmax pmax
comp=Z,13nm,0.7s
CLL Collm 76.61 335 *i* P **P 01 25 13.7 -0.2**
comp=Z,22nm,1.2s
EKA Eskdalemuir Ar 76.70 346 P **P 01 25 14.2 -0.1**
MESR Mesesenti 76.81 327 ⇑P **P 01 25 16.2 +1.1**
HARR Harsova 76.81 322 ⇑P **P 01 25 15.5 +0.4**
HARR Harsova 76.81 322 ⇑P **P 01 25 15.5 +0.4**
PVCC Panska Ves 76.82 333 *e*P **P 01 25 15.2 +0.1**
PVCC Panska Ves 76.82 333 *e*P **P 01 25 15.2 +0.1**
CBBR Cluj-Babes-Bol 76.89 326 ⇑P **P 01 25 16.8 +1.2**
CJR Cluj-Napoca 76.92 326 ⇑P **P 01 25 16.9 +1.1**
CJR Cluj-Napoca 76.92 326 ⇑P **P 01 25 16.9 +1.1**
MLR Muntele Rosu 76.99 324 ⇑P **P 01 25 17.5 +1.2**
MLR Muntele Rosu 76.99 324 LR LR 02 00 41.2
comp=Z,19nm,21.0s,baz=5.5,slow=37
MLR Muntele Rosu 76.99 324 ⇑P **P 01 25 17.5 +1.2**
ISR Istrita 77.05 324 ⇑P **P 01 25 17.1 +0.6**
ISR Istrita 77.05 324 ⇑P **P 01 25 17.1 +0.6**
VYHS Vyhne 77.17 330 *e*P **P 01 25 17.9 +0.8**
VYHS pmax pmax
comp=Z,14nm,1.2s
DRGR 77.19 327 ⇑P **P 01 25 17.9 +0.5**
DRGR 77.19 327 ⇑P **P 01 25 17.9 +0.5**
VRAC Vranov 77.23 332 ⇑P **P 01 25 18.5 +1.0**
VRAC Vranov 77.23 332 ⇑P **P 01 25 18.5 +1.0**
VRAC Vranov 77.23 332 *e*P **P 01 25 18.2 +0.7**
JAVC Velka Javorina 77.26 331 *e*P **P 01 25 19.3 +1.6**
PSZ Piszkesteto 77.29 329 ⇑P **P 01 25 18.5 +0.7**
PSZ Piszkesteto 77.29 329 P **P 01 25 18.0 +0.1**
PSZ IAmb IAmb 01 25 19.7
comp=Z,8.8nm,0.9s
PSZ Piszkesteto 77.29 329 P **P 01 25 18.0 +0.1**
PSZ pmax pmax
comp=Z,9.0nm,0.9s
GOPC GO Pecny, Ondr 77.29 333 *e*P **P 01 25 18.4 +0.6**
GOPC GO Pecny, Ondr 77.29 333 *e*P **P 01 25 18.4 +0.6**
PRU Pruhonice 77.30 333 *e*P **P 01 25 18.3 +0.5**
PRU Pruhonice 77.30 333 *e*P **P 01 25 18.3 +0.5**
ICOR Ion Corvin 77.33 322 ⇑P **P 01 25 19.3 +1.2**
VOIR 77.40 325 ⇑P **P 01 25 19.4 +0.9**
VOIR 77.40 325 ⇑P **P 01 25 19.4 +0.9**
KRUC Moravsky 77.51 332 P **P 01 25 19.9 +0.9**
KRUC pmax pmax
comp=Z,15nm,0.9s
KRUC Moravsky 77.51 332 *e*P **P 01 25 19.6 +0.6**
TREC Trest 77.61 332 *e*P **P 01 25 20.1 +0.5**
TREC Trest 77.61 332 *e*P **P 01 25 20.1 +0.5**
ARR Arges 77.62 325 ⇑P **P 01 25 21.7 +1.9**
SMOL Smolenice 77.64 331 *e*P **P 01 25 21.4 +1.7**
SMOL pmax pmax
comp=Z,6.0nm,0.9s
BSZH Besenyszg 77.68 328 ⇑P **P 01 25 21.0 +1.1**
NKC Novy Kostel 77.73 335 P **P 01 25 21.1 +0.9**
NKC pmax pmax
comp=Z,9.0nm,1.2s
NKC Novy Kostel 77.73 335 *e*P **P 01 25 20.7 +0.5**
MODS Modra-Piesok 77.81 331 *e*P **P 01 25 21.9 +1.2**
MODS pmax pmax
comp=Z,26nm,0.9s
SRO Srobarova 77.94 330 *e*P **P 01 25 23.0 +1.6**
SRO pmax pmax
comp=Z,15nm,0.7s
SIRR Siria 78.03 327 ⇑P **P 01 25 22.5 +0.6**
BR131 Keskin Array S 78.15 316 P **P 01 25 22.8 -0.1**
BR131 IAmb IAmb 01 25 24.6
comp=Z,8.0nm,0.8s
BR131 Keskin Array S 78.15 316 P **P 01 25 22.8 -0.1**
BR131 pmax pmax
comp=Z,8.0nm,0.8s
BRTR Keskin Array B 78.15 316 P **P 01 25 23.8 +0.9**
comp=Z,4.6nm,0.8s,baz=78,slow=4.8,SNR=17
comp=Z,4.6nm,0.8s
BRTR Keskin Array B 78.15 316 P **P 01 25 22.7 -0.1**
BRTR Keskin Array B 78.15 316 P **P 01 25 22.7 -0.1**
STKA Stephens Creek 78.17 189 LR LR 02 05 20.6
comp=Z,31nm,18.2s,baz=213,slow=40
GZR Gura Zlata 78.33 326 ⇑P **P 01 25 23.8 +0.1**
GZR Gura Zlata 78.33 326 ⇑P **P 01 25 23.8 +0.1**
KHC Kasperske Hory 78.36 333 P **P 01 25 24.0 +0.4**
KHC IAmb IAmb 01 25 25.5
comp=Z,12nm,0.7s
KHC Kasperske Hory 78.36 333 *e*P **P 01 25 24.1 +0.4**
KHC Kasperske Hory 78.36 333 *e*P **P 01 25 24.1 +0.4**
COPA Copaceanca 78.40 324 ⇑P **P 01 25 24.1 +0.2**
CKRC Cesky Krumlov 78.40 333 *e*P **P 01 25 24.0 +0.1**
ANTO Ankara 78.44 317 ⇑P **P 01 25 25.8 +1.4**
ANTO Ankara 78.44 317 P **P 01 25 24.9 +0.5**
ANTO IAmb IAmb 01 25 26.5
comp=Z,16nm,0.7s
ANTO Ankara 78.44 317 P **P 01 25 24.9 +0.5**
ANTO pmax pmax
comp=Z,16nm,0.7s
WET Wettzell 78.56 334 P **P 01 25 25.9 +1.1**
WET pmax pmax
comp=Z,14nm,1.0s
GEC2 GERESS Array S 78.57 333 P **P 01 25 25.4 +0.4**
GERES GERESS Array B 78.57 333 P **P 01 25 25.4 +0.4**
comp=Z,3.2nm,0.6s,baz=40,slow=5.6,SNR=39
comp=Z,3.2nm,0.6s
GRA1 Grafenberg Arr 78.57 335 P **P 01 25 25.2 +0.3**
GRF Grafenberg Arr 78.57 335 P **P 01 25 25.2 +0.3**
GRF pmax pmax
comp=Z,19nm,0.7s
GRFO Grafenberg 78.57 335 P **P 01 25 24.7 -0.1**
GRFO Grafenberg 78.57 335 P **P 01 25 24.7 -0.1**
GRFO pmax pmax
comp=Z,18nm,0.7s
BZS Buzias 78.59 327 ⇓P **P 01 25 25.2 +0.2**
BZS Buzias 78.59 327 ⇓P **P 01 25 25.2 +0.2**
CONA Conrad Observa 78.67 331 *i* P **P 01 25 26.8 +1.2**
comp=Z,9.4nm,0.7s,SNR=5.7
TX31 Lajitas Ar. Si 78.68 59 P **P 01 25 26.9 +1.0**
TX32 Lajitas Array 78.68 59 P **P 01 25 26.2 +0.3**
TXAR Lajitas Array 78.68 59 P **P 01 25 27.1 +1.2**
comp=Z,0.8nm,0.5s,baz=304,slow=4.0,SNR=16
comp=Z,0.8nm,0.5s
GRB1 Grafenberg Arr 78.71 335 P **P 01 25 24.2 -1.4**
GRB1 pmax pmax
comp=Z,12nm,1.0s
RONA Rosalia, Austr 78.72 331 *e*P **P 01 25 27.1 +1.3**
comp=Z,12nm,1.0s,SNR=6.9
VLAD Vladila 78.84 324 ⇑P **P 01 25 27.6 +1.2**
MORH Mrgy, Hungar 79.19 329 ⇑P **P 01 25 28.2 -0.1**
MOA Molln 79.26 332 *i* P **P 01 25 29.5 +0.8**
comp=Z,5.7nm,0.8s
ARSA Arzberg 79.38 331 *i* P **P 01 25 29.6 +0.2**
comp=Z,5.2nm,1.1s
BIOA Bad Ischl, Aus 79.61 333 *e*P **P 01 25 31.4 +0.8**
comp=Z,9.3nm,1.0s
FRGS Fruska Gora 79.66 328 ⇑P **P 01 25 30.4 -0.5**
BLKB Belogradchik 79.85 325 ⇑P **P 01 25 31.4 -0.6**
GIVF Givet 79.93 339 *e*P **P 01 25 33.5 +1.3**
GIVF pmax pmax
comp=Z,15nm,1.1s
SOKA Soboth 80.04 331 *e*P **P 01 25 33.5 +0.5**
comp=Z,6.3nm,0.9s,SNR=7.0
PERS Pernice 80.05 331 *e*P **P 01 25 33.6 +0.6**
BAIF Baives 80.13 339 *e*P **P 01 25 33.9 +0.6**
BAIF pmax pmax
comp=Z,2.0nm,0.2s
BOVS Bovan 80.22 326 ⇑P **P 01 25 33.5 -0.4**
KBA Koelnbreinsper 80.24 333 P **P 01 25 35.5 +1.3**
KBA pmax pmax
comp=Z,14nm,0.9s
KBA Koelnbreinsper 80.24 333 *i* P **P 01 25 35.3 +1.1**
comp=Z,16nm,1.2s,SNR=11
OBKA Obir 80.35 332 *e*P **P 01 25 34.8 +0.1**
comp=Z,2.4nm,0.6s
GOLS Golise 80.42 331 *i* P **P 01 25 35.1 +0.1**
VTS Vitosha 80.46 324 ⇑P **P 01 25 36.2 +0.8**
VTS Vitosha 80.46 324 P **P 01 25 36.5 +1.0**
VTS IAmb IAmb 01 25 37.3
comp=Z,19nm,0.9s
VTS Vitosha 80.46 324 ⇑P **P 01 25 36.2 +0.8**
WATA Walderalm 80.57 334 *e*P **P 01 25 37.2 +1.3**
comp=Z,8.2nm,0.5s,SNR=8.2
WTTA Wattenberg 80.61 334 P **P 01 25 37.3 +1.1**
WTTA pmax pmax
comp=Z,17nm,1.2s
WTTA Wattenberg 80.61 334 *i* P **P 01 25 37.2 +1.0**
comp=Z,9.3nm,0.5s,SNR=12
BFO Black Forest 80.63 336 P **P 01 25 36.2 +0.2**
BFO IAmb IAmb 01 25 36.9
comp=Z,8.5nm,1.1s
BFO Black Forest 80.63 336 P **P 01 25 36.3 +0.2**
BFO pmax pmax
comp=Z,9.0nm,1.1s
RETA Reutte 80.68 334 *i* P **P 01 25 38.0 +1.6**
comp=Z,5.4nm,1.0s
MOTA Moosalm 80.70 334 *i* P **P 01 25 37.4 +0.8**
comp=Z,17nm,1.3s,SNR=6.9
SQTA Sankt Quirin 80.78 334 *i* P **P 01 25 37.8 +0.8**
comp=Z,13nm,1.3s,SNR=5.2
ABTA Abfaltersbach 80.80 333 *e*P **P 01 25 37.7 +0.6**
comp=Z,2.8nm,1.0s
CDF Champ du Feu 80.84 337 *e*P **P 01 25 37.6 +0.3**
CDF pmax pmax
comp=Z,25nm,1.6s
JAVS Javornik 81.05 332 *e*P **P 01 25 37.7 -0.7**
FETA Feichten 81.11 334 *e*P **P 01 25 40.4 +1.6**
comp=Z,5.5nm,1.1s
DAVA Damuels 81.12 335 *e*P **P 01 25 40.3 +1.4**
comp=Z,6.3nm,1.0s
FUORN Ofenpass-Fuorn 81.61 334 P **P 01 25 41.5 0.0**
PDG Podgorica 82.20 327 ⇑P **P 01 25 44.2 -0.1**
ELL Elmali 82.29 316 P **P 01 25 44.9 -0.3**
ELL Elmali 82.29 316 P **P 01 25 44.9 -0.3**
ELL pmax pmax
comp=Z,61nm,1.4s
FLN La Foliniere 82.42 342 *e*P **P 01 25 47.0 +1.6**
FLN pmax pmax
comp=Z,29nm,1.4s
LDF La Druitiere 82.50 342 *e*P **P 01 25 45.9 0.0**
LDF pmax pmax
comp=Z,57nm,1.9s
LOR Lormes 82.80 339 *e*P **P 01 25 48.0 +0.5**
LOR pmax pmax
comp=Z,4.0nm,0.6s
CABF La Chapelle 82.82 337 *e*P **P 01 25 48.5 +0.8**
CABF pmax pmax
comp=Z,22nm,1.6s
GRR Gorron 82.86 342 *e*P **P 01 25 48.0 +0.3**
GRR pmax pmax
comp=Z,54nm,1.6s
SSF Saint Saulge 83.08 339 *e*P **P 01 25 49.0 +0.1**
SSF pmax pmax
comp=Z,10.0nm,1.1s
SGMF Saint Gilles 83.34 343 *e*P **P 01 25 51.2 +1.0**
SGMF pmax pmax
comp=Z,22nm,1.0s
AVF Avril sur Loir 83.37 339 *e*P **P 01 25 50.6 +0.2**
AVF pmax pmax
comp=Z,3.0nm,0.6s
SMF Signal de Mont 83.38 338 *e*P **P 01 25 50.8 +0.3**
SMF pmax pmax
comp=Z,8.0nm,0.8s
ROSF Rostrenen 83.41 343 *e*P **P 01 25 51.9 +1.4**
ROSF pmax pmax
comp=Z,16nm,0.8s
LPL La Plagne 83.64 336 *e*P **P 01 25 52.7 +0.6**
LPL pmax pmax
comp=Z,4.0nm,0.6s
LPG La Plagne 83.66 336 *e*P **P 01 25 52.9 +0.7**
LPG pmax pmax
comp=Z,6.0nm,0.7s
RAYN Ar Rayn 83.83 298 P **P 01 25 53.1 -0.1**
RAYN Ar Rayn 83.83 298 P **P 01 25 53.1 -0.1**
RAYN pmax pmax
comp=Z,2.0nm,0.7s
MURB Monte Urbino 83.89 331 P **P 01 25 52.5 -0.7**
MURB IAmb IAmb 01 26 08.7
comp=Z,8.8nm,1.0s
NRCA Norcia 84.07 331 P **P 01 25 54.0 -0.1**
NRCA IAmb IAmb 01 25 56.7
comp=Z,10.0nm,0.9s
TCF Toulx Ste Croi 84.13 339 *e*P **P 01 25 54.8 +0.5**
TCF pmax pmax
comp=Z,4.0nm,0.8s
MBDF Montbardon 84.36 336 *e*P **P 01 25 56.2 +0.6**
MBDF pmax pmax
comp=Z,3.0nm,0.6s
MFF Saint Martin d 84.39 341 *e*P **P 01 25 55.9 +0.3**
MFF pmax pmax
comp=Z,8.0nm,0.7s
AQU L'Aquila 84.40 330 P **P 01 25 55.5 -0.3**
AQU L'Aquila 84.40 330 P **P 01 25 55.5 -0.3**
AQU pmax pmax
comp=Z,5.0nm,1.0s
ORIF Oris-en-Rattie 84.43 336 *e*P **P 01 25 57.2 +1.3**
ORIF pmax pmax
comp=Z,6.0nm,0.6s
VIVF Saint-Julien-l 84.82 337 *e*P **P 01 25 59.6 +1.8**
VIVF pmax pmax
comp=Z,3.0nm,0.8s
SBF Sospel 84.95 335 *e*P **P 01 26 00.0 +1.5**
SBF pmax pmax
comp=Z,6.0nm,0.8s
RJF Les Rejaudoux 85.22 339 *e*P **P 01 26 01.3 +1.5**
RJF pmax pmax
comp=Z,30nm,1.6s
CAF Calviac 85.44 339 *e*P **P 01 26 01.9 +1.0**
CAF pmax pmax
comp=Z,15nm,1.3s
PGF Pioggiola 85.67 333 *e*P **P 01 26 03.0 +0.8**
PGF pmax pmax
comp=Z,4.0nm,1.0s
LMR La Mourre 85.71 335 *e*P **P 01 26 05.2 +3.0**
LMR pmax pmax
comp=Z,22nm,1.4s
LFF La Frestale 85.75 340 *e*P **P 01 26 02.9 +0.5**
LFF pmax pmax
comp=Z,4.0nm,0.5s
MTLF Montolieu 86.88 338 *e*P **P 01 26 10.0 +2.0**
MTLF pmax pmax
comp=Z,4.0nm,0.7s
EPF Esparros 87.64 339 *e*P **P 01 26 13.7 +2.0**
EPF pmax pmax
comp=Z,9.0nm,1.3s
ETSF Etsaut 87.99 340 *e*P **P 01 26 13.9 +0.5**
ETSF pmax pmax
comp=Z,4.0nm,0.5s
ESDC Sonseca Array 91.84 341 P **P 01 26 30.4 -0.9**
comp=Z,0.4nm,0.6s,baz=14,slow=5.7,SNR=2.7
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 115.09 327 PKP **PKiKP 01 32 04.1 -0.2**
comp=Z,0.4nm,0.9s,baz=52,slow=1.4,SNR=1.1
VNDA Vanda 123.53 177 PKP **PKiKP 01 32 19.1 +0.3**
comp=Z,0.6nm,0.8s,baz=66,slow=1.6,SNR=3.9
H03N2 Juan Fernandez 139.76 90 T T 04 08 49.9
baz=308,slow=76
H03N3 Juan Fernandez 139.77 90 T T 04 08 40.2
baz=308
H03N1 Juan Fernandez 139.78 90 T T 04 08 50.2
baz=308,slow=76
PLCA Paso Flores 149.16 95 PKPbc **PKiKP 01 33 12.1 0.0**
comp=Z,5.0nm,0.6s,baz=284,slow=2.9,SNR=19
TROLL Troll, Antarti 150.28 199 PKPdf **PKiKP 01 33 13.5 0.0**
SNAA Sanae 151.66 197 PKPdf **PKPbc 01 33 16.0 0.0**
VNA2 Neumayer--Watz 153.14 195 PKPdf **PKiKP 01 33 19.9 +0.6**
baz=118,slow=2.0
VNA3 Neumayer Olymp 153.25 193 PKPdf **PKiKP 01 33 19.9 +0.3**
VNA1 Neumayer--Stat 153.53 195 PKPdf **PKiKP 01 33 20.8 +0.7**

IDC 18 01:29:56.1±999.0, 35°.83N×47°.57W, h0km, Error ellipse: s-maj=2600.0km s-min=91.6km az=72.0, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I42PT	**GRACIOSA ISLAN**	**15.87**	**73**	I			03 08 10.0	
0.1nm,0.9s,baz=264,slow=322,SNR=2.1								
I48TN	**KESRA INFRASON**	**45.55**	**73**	I			06 08 05.9	
baz=288,slow=312,SNR=1.2								
I26DE	**FREYUNG INFRAS**	**45.94**	**54**	I			06 12 00.7	
baz=278,slow=322,SNR=3.7								

NOU 18 01:49:31.2, 17°.61S×170°.76E, h0km, MLv4.2/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**2.23**	**265**	P		Pn	01 50 07.7	-1.8
DVP	**Devils Point**	**2.46**	**267**	P		Pn	01 50 13.0	+0.5
YATNC	**Mamie plateau,**	**5.73**	**219**	P		Pn	01 50 56.5	-1.1
DZM	**Mont Dzumac**	**6.02**	**222**	P		Pn	01 51 01.4	-0.2
NOUC	**Port Laguerre**	**6.13**	**222**	P		Pn	01 51 03.1	+0.1
KOUNC	**Koumac, New Ca**	**6.78**	**243**	P		Pn	01 51 12.4	+0.3

ISU ***18*** *01:56:26, 40°.98N×73°.19E, h10km*
KRNET ***18*** *01:56:28.1±0.1, 41°.30N×71°.89E, h27km, mb2.4*
SOME ***18*** *01:56:32.3, 41°.60N×71°.82E, h0km*
NNC ***18*** *01:56:34.6±2.0, 41°.57N×71°.99E, h0km, mb3.1, mpv2.9,*
Error ellipse: s-maj=17.7km s-min=5.9km az=7.0
ISC 18 01:56:28.3±1.2, 41°.36N±0°.04×71°.88E±0°.03, h8km±11km, n28, σ1°.49/43, 13C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.44**	**8**	⇑*i*P		**Pb**	**01 56 38.2**	**-0.2**
baz=7.0								
ARK				⇑*i*S		**Sb**	**01 56 45.3**	**+0.1**
baz=7.0								
TRKS	**Terek-Say**	**0.58**	**287**	⇑*i*P		**Pg**	**01 56 39.3**	**-0.3**
baz=87								
TRKS				⇑*i*S		**Sg**	**01 56 47.3**	**0.0**
baz=87								
ANR	**Andizhan**	**0.71**	**149**	P		**Sn**	**01 56 56.3**	**+0.6**
FRG	**Fergana**	**0.99**	**184**	P		**Pg**	**01 56 47.1**	**-0.3**
FRG				S		**Sn**	**01 57 04.4**	**+1.6**
BTK	**Batken**	**1.54**	**212**	⇑*i*P		**Pn**	**01 56 55.1**	**-1.0**
baz=14								
BTK				⇑*i*S		**Sn**	**01 57 14.7**	**-1.6**
baz=14								
IUG	**Iuzhnay**	**1.59**	**300**	*e*P		**Pg**	**01 57 00.3**	**+1.4**
100nm,0.2s								
IUG				*e*S		**Sg**	**01 57 21.3**	**+1.8**
114nm,0.2s								
MRKS	**Merke**	**1.70**	**35**	*e*P		**Pg**	**01 57 02.5**	**+1.5**
8.0nm,0.2s								
ARLS	**Aral**	**1.90**	**74**	⇓*i*P		**Pn**	**01 57 01.6**	**+0.5**
baz=72								
ARLS				⇓*i*S		**Sn**	**01 57 25.8**	**+0.5**
baz=72								
EKS2	**Erkin-Say**	**1.92**	**47**	⇑*i*P		**Pn**	**01 57 02.2**	**+0.8**
baz=45								
EKS2				⇑*i*S		**Sb**	**01 57 26.8**	**-0.9**
baz=45								
KK31	**Karatay Array**	**2.02**	**330**	⇓Pn		**Pg**	**01 57 06.3**	**-0.7**
0.5nm,0.2s,baz=142,slow=16,SNR=38								
KK31				⇑Sn		**Sg**	**01 57 33.9**	**+0.9**
2.4nm,0.2s,baz=140,slow=24,SNR=11								
UCH	**Uchtor**	**2.15**	**65**	⇑*i*P		**Pn**	**01 57 05.3**	**+0.4**
baz=64								
UCH				⇑*i*S		**Sn**	**01 57 32.3**	**+0.4**
baz=64								
CHMS	**Chumysh**	**2.69**	**52**	⇓Lg		Lg	01 57 54.6	
6.1nm,0.8s								
TKM2	**Tokmak 2**	**3.17**	**59**	⇑Pg		**Pg**	**01 57 32.4**	**+3.4**
2.7nm,1.1s								
TKM2				⇑Lg		Lg	01 58 09.8	
1.4nm,0.4s								
DGS	**Degeres**	**3.44**	**56**	*e*P		**Pg**	**01 57 33.8**	**-0.5**
0.9nm,0.3s								
DGS	**Degeres**	**3.44**	**56**	Pg		**Pg**	**01 57 33.8**	**-0.5**
0.9nm,0.3s								
KST	**Kastek**	**3.46**	**60**	*e*P		**Pg**	**01 57 33.9**	**-0.8**
1.8nm,0.4s								
KST				*e*S		**Sg**	**01 58 18.5**	**-1.1**
6.3nm,0.3s								
KST	**Kastek**	**3.46**	**60**	Pg		**Pg**	**01 57 33.9**	**-0.8**
1.8nm,0.4s								
KST				Lg		Lg	01 58 18.5	
6.3nm,0.5s								
KRBS	**Karabastau**	**3.64**	**49**	*e*P		**Pg**	**01 57 37.3**	**-0.9**
1.9nm,0.3s								
KRBS				*e*S		**Sg**	**01 58 24.3**	**-1.1**
4.3nm,0.3s								
KRBS	**Karabastau**	**3.64**	**49**	Pg		**Pg**	**01 57 37.3**	**-0.9**

1.7nm,0.5s
KRBS Lg Lg 01 58 24.3
4.3nm,0.6s
BTLS Baital 4.00 23 *e*P **Pg 01 57 44.2 -0.7**
1.6nm,0.2s
BTLS *e*S **Sg 01 58 36.2 -0.6**
2.6nm,0.1s
BTLS Baital 4.00 23 Pg **Pg 01 57 44.2 -0.7**
1.6nm,0.4s
BTLS Lg Lg 01 58 36.2
2.6nm,0.5s
TNSS Tian-Shan 4.12 64 *e*P **Pg 01 57 47.8 +0.5**
1.0nm,0.1s
TNSS *e*S **Sg 01 58 42.0 +1.4**
3.1nm,0.2s
TNSS Tian-Shan 4.12 64 Pg **Pg 01 57 47.8 +0.5**
1.0nm,0.3s
TNSS Lg Lg 01 58 42.0
3.1nm,0.2s
KUU Kurty 4.15 51 *e*P **Pg 01 57 45.9 -1.8**
2.3nm,0.1s
KUU *e*S **Sg 01 58 39.4 -2.1**
4.8nm,0.3s
KUU Kurty 4.15 51 Pg **Pg 01 57 45.9 -1.8**
1.4nm,0.1s
KUU Lg Lg 01 58 39.3
4.6nm,0.5s
MDOK Medeo 4.23 63 *e*P **Pg 01 57 51.5 +2.0**
1.1nm,0.2s
MDOK *e*S **Sg 01 58 48.5 +4.3**
2.1nm,0.2s
KTBS Karatobe 4.25 55 *e*P **Pg 01 57 47.8 -2.0**
0.7nm,0.3s
KTBS *e*S **Sg 01 58 42.4 -2.4**
5.2nm,0.3s
KTBS Karatobe 4.25 55 Pg **Pg 01 57 47.8 -2.0**
1.0nm,0.4s
KTBS Lg Lg 01 58 42.4
5.2nm,0.5s

SOME 18 01:57:15.0, 42°.58N×73°.05E, h20km, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.21**	**39**	*e*P	Pb	01 57 20.7	+0.3
MRKS	5.5nm,0.2s			*e*S	Sb	01 57 25.1	+1.1
MRKS	18nm,0.2s **Merke**	**0.21**	**39**	*e*S	Sb	01 57 25.0	+1.0
SGDS	39nm,0.1s **Sogindy**	**1.45**	**53**	*e*P	Pb	01 57 41.5	+0.1
SGDS	1.1nm,0.1s			*e*S	Sb	01 58 00.4	+1.1
DGS	7.1nm,0.2s **Degeres**	**2.10**	**71**	*e*P	Pb	01 57 52.0	-0.6
DGS	1.1nm,0.2s			*e*S	Sb	01 58 18.4	+0.1
DGS	5.3nm,0.3s **Degeres**	**2.10**	**71**	*e*S	Sb	01 58 18.2	-0.1
KRBS	5.3nm,0.3s **Karabastau**	**2.22**	**59**	*e*P	Pb	01 57 54.6	+0.1
KRBS	1.0nm,0.4s			*e*S	Sb	01 58 23.1	+1.5
KTBS	4.3nm,0.3s **Karatobe**	**2.89**	**66**	*e*P	Pb	01 58 06.5	+0.7
KTBS	1.1nm,0.3s			*e*S	Sb	01 58 43.8	+3.1
MDOK	5.2nm,0.3s **Medeo**	**3.00**	**77**	*e*P	Pb	01 58 10.1	+2.3
MDOK	1.3nm,0.2s			*e*S	Sb	01 58 49.6	+5.7
	2.1nm,0.2s						

SOME ***18*** *02:15:25.8, 40°.43N×77°.93E, h0km*
KRNET ***18*** *02:15:25.8±0.1, 40°.47N×78°.04E, mb3.1*
NNC ***18*** *02:15:27.1±0.9, 40°.41N×78°.01E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=6.0km s-min=4.2km az=171.0
ISC 18 02:15:29.3±2.7, 40°.52N±0°.09×77°.97E±0°.04, h2km±14km, n61, σ1°.20/92, 13C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.22**	**354**	⇓*i*P	**Pn**	**02 15 50.0**	**-3.8**
TARG	baz=52			⇓*i*S	**Sb**	**02 16 07.8**	**-1.9**
NRN	baz=52 **Naryn**	**1.75**	**302**	⇑*i*P	**Pn**	**02 15 59.9**	**-1.2**
NRN	baz=2.0			⇑*i*S	**Sb**	**02 16 24.9**	**-0.1**
ULHL	baz=2.0 **Ulahol**	**2.16**	**324**	P	**Pb**	**02 16 09.1**	**-0.3**
ULHL	SNR=7.8 **Ulahol**	**2.16**	**324**	⇓*i*P	**Pn**	**02 16 06.0**	**-0.6**
ULHL	baz=23			⇓*i*S	**Sb**	**02 16 35.4**	**-1.3**
ANVS	baz=23 **Anan'yevo**	**2.27**	**354**	⇓*i*P	**Pn**	**02 16 07.4**	**-0.7**
ANVS	baz=53			⇓*i*S	**Sn**	**02 16 37.8**	**+1.0**
BOOM	baz=53 **Boomskoye usch**	**2.49**	**323**	⇑*i*P	**Pn**	**02 16 10.6**	**-0.5**
BOOM	baz=23			⇑*i*S	**Sn**	**02 16 43.3**	**+1.1**
SATY	baz=23 **Saty**	**2.56**	**7**	*e*P	**Pb**	**02 16 16.7**	**+0.7**
SATY	10nm,0.4s			*e*S	**Sg**	**02 16 53.7**	**+2.2**
SATY	32nm,0.3s **Saty**	**2.56**	**7**	Pg	**Pb**	**02 16 16.7**	**+0.7**
SATY	10nm,0.4s			Lg	Lg	02 16 53.7	
TNSS	32nm,0.3s **Tian-Shan**	**2.63**	**343**	*e*P	**Pb**	**02 16 17.4**	**0.0**
TNSS	10.0nm,0.4s			*e*S	**Sg**	**02 16 54.1**	**+0.3**
TNSS	17nm,0.4s **Tian-Shan**	**2.63**	**343**	Pg	**Pb**	**02 16 17.4**	**0.0**
TNSS	10.0nm,0.4s			Lg	Lg	02 16 54.1	
IZV	17nm,0.4s **Izvestkoviy**	**2.71**	**338**	*e*P	**Pb**	**02 16 19.4**	**+0.7**
IZV	9.2nm,0.3s			*e*S	**Sg**	**02 16 57.8**	**+1.4**
IZV	53nm,0.4s **Izvestkoviy**	**2.71**	**338**	Pg	**Pb**	**02 16 19.4**	**+0.7**
IZV	9.2nm,0.3s			Lg	Lg	02 16 57.8	
MDOK	53nm,0.4s **Medeo**	**2.73**	**346**	*e*P	**Pb**	**02 16 19.7**	**+0.7**
MDOK	7.0nm,0.3s			*e*S	**Sg**	**02 16 58.1**	**+1.0**
MDOK	43nm,0.6s **Medeo**	**2.73**	**346**	Pg	**Pb**	**02 16 19.2**	**+0.2**
MDOK	9.3nm,0.8s			Pg	**Pb**	**02 16 19.7**	**+0.7**
MDOK	7.0nm,0.3s			Lg	Lg	02 16 58.1	
MDOK	43nm,0.6s			⇓Lg	Lg	02 16 58.1	
UZB	40nm,0.6s **Uzynbulak**	**2.74**	**16**	*e*P	**Pb**	**02 16 19.1**	**-0.1**
UZB	1.8nm,0.1s			*e*S	**Sg**	**02 16 57.0**	**-0.3**
UZB	16nm,0.3s **Uzynbulak**	**2.74**	**16**	Pg	**Pb**	**02 16 19.1**	**-0.1**
UZB	1.8nm,0.1s			Lg	Lg	02 16 57.0	
KOTS	16nm,0.3s **Kotyrbulak**	**2.79**	**347**	*e*P	**Pb**	**02 16 20.9**	**+0.9**
KOTS	4.7nm,0.2s			*e*S	**Sg**	**02 17 00.4**	**+1.5**
KOTS	45nm,0.4s **Kotyrbulak**	**2.79**	**347**	Pg	**Pb**	**02 16 20.9**	**+0.9**
KOTS	4.7nm,0.2s			Lg	Lg	02 17 00.4	
MTBS	45nm,0.4s **Maitube**	**2.85**	**337**	*e*P	**Pb**	**02 16 21.7**	**+0.7**
MTBS	6.2nm,0.3s			*e*S	**Sg**	**02 17 01.8**	**+0.9**
MTBS	37nm,0.4s **Maitube**	**2.85**	**337**	Pg	**Pb**	**02 16 21.7**	**+0.7**
MTBS	6.2nm,0.3s			Lg	Lg	02 17 01.8	
SHLS	37nm,0.4s **Shalkode**	**2.86**	**22**	*e*P	**Pb**	**02 16 21.7**	**+0.5**
SHLS	8.7nm,0.6s			*e*S	**Sg**	**02 17 02.0**	**+0.7**
SHLS	23nm,0.3s **Shalkode**	**2.86**	**22**	Pg	**Pb**	**02 16 21.7**	**+0.5**
SHLS	8.7nm,0.6s			Lg	Lg	02 17 02.0	
KST	23nm,0.3s **Kastek**	**2.94**	**330**	*e*P	**Pb**	**02 16 22.3**	**-0.2**
KST	13nm,0.8s			*e*S	**Sg**	**02 17 02.6**	**-1.0**
KST	33nm,0.9s **Kastek**	**2.94**	**330**	Pg	**Pb**	**02 16 22.3**	**-0.2**
KST	13nm,0.8s			Lg	Lg	02 17 02.6	
TKM2	33nm,0.9s **Tokmak 2**	**2.99**	**324**	P	**Pb**	**02 16 24.6**	**+1.2**
TKM2	SNR=14 **Tokmak 2**	**2.99**	**324**	⇑*i*P	**Pn**	**02 16 17.5**	**-0.4**
TKM2	baz=24			⇑*i*S	**Sn**	**02 16 55.2**	**+0.7**
TKM2	baz=24 **Tokmak 2**	**2.99**	**324**	⇑Pg	**Pb**	**02 16 23.5**	**+0.1**
TKM2	2.2nm,0.2s			⇓Lg	Lg	02 17 06.3	
PDGK	13nm,0.6s **Podgornoye**	**3.03**	**21**	⇓Pg	**Pb**	**02 16 23.6**	**-0.4**
PDGK	5.1nm,0.5s			⇑Lg	Lg	02 17 04.7	
ARLS	24nm,0.8s **Aral**	**3.06**	**297**	⇓*i*P	**Pn**	**02 16 18.4**	**-0.5**
ARLS	baz=98			⇓*i*S	**Sn**	**02 16 56.7**	**+0.4**
UCH	baz=98 **Uchtor**	**3.11**	**304**	P	**Pn**	**02 16 21.1**	**+1.2**
UCH	SNR=12 **Uchtor**	**3.11**	**304**	⇓*i*P	**Pn**	**02 16 19.3**	**-0.6**
UCH	baz=5.0			⇓*i*S	**Sn**	**02 16 58.3**	**+0.4**
KBK	baz=5.0 **Karagaybulak**	**3.12**	**314**	P	**Pb**	**02 16 25.8**	**+0.2**
KBK	SNR=7.0 **Karagaybulak**	**3.12**	**314**	⇓*i*P	**Pn**	**02 16 19.3**	**-0.4**
KBK	baz=14			⇓*i*S	**Sn**	**02 16 58.3**	**+0.7**
DGS	baz=14 **Degeres**	**3.18**	**330**	*e*P	**Pb**	**02 16 27.2**	**+0.6**
DGS	15nm,0.6s			*e*S	**Sg**	**02 17 11.7**	**+0.3**
DGS	26nm,0.7s **Degeres**	**3.18**	**330**	Pg	**Pb**	**02 16 27.2**	**+0.6**
DGS	15nm,0.6s			Lg	Lg	02 17 11.7	
KTBS	26nm,0.7s **Karatobe**	**3.33**	**344**	*e*P	**Pb**	**02 16 30.1**	**+0.9**
KTBS	2.8nm,0.2s			*e*S	**Sg**	**02 17 16.5**	**+0.1**
KTBS	95nm,0.7s **Karatobe**	**3.33**	**344**	Pg	**Pb**	**02 16 30.1**	**+0.9**
KTBS	2.8nm,0.2s			Lg	Lg	02 17 16.5	
AAK	95nm,0.7s **Ala-Archa**	**3.36**	**310**	P	**Pb**	**02 16 29.6**	**-0.2**
AAK	SNR=7.3 **Ala-Archa**	**3.36**	**310**	⇑*i*P	**Pn**	**02 16 22.7**	**-0.3**
AAK	baz=10.0			⇑*i*S	**Sn**	**02 17 04.2**	**+0.6**
CHKK	baz=10.0 **Chushkaly**	**3.41**	**348**	*e*P	**Pb**	**02 16 32.0**	**+1.4**
CHKK	7.3nm,0.2s			*e*S	**Sg**	**02 17 19.3**	**+0.4**
CHKK	32nm,0.6s **Chushkaly**	**3.41**	**348**	Pg	**Pb**	**02 16 32.0**	**+1.4**
CHKK	7.3nm,0.2s			Lg	Lg	02 17 19.3	
KTMS	32nm,0.6s **Ketmen**	**3.42**	**30**	*e*P	**Pb**	**02 16 31.1**	**+0.3**
KTMS	3.1nm,0.5s			*e*S	**Sg**	**02 17 18.2**	**-1.0**
KTMS	4.0nm,0.2s **Ketmen**	**3.42**	**30**	Pg	**Pb**	**02 16 31.0**	**+0.3**
KTMS	3.1nm,0.5s			Lg	Lg	02 17 18.2	
CHMS	4.0nm,0.2s **Chumysh**	**3.46**	**317**	P	**Pb**	**02 16 31.8**	**+0.5**
CHMS	SNR=6.8 **Chumysh**	**3.46**	**317**	⇑Pg	**Pb**	**02 16 31.3**	**0.0**
CHMS	6.6nm,0.6s			⇑Lg	Lg	02 17 18.6	
KUU	14nm,0.9s **Kurty**	**3.58**	**341**	*e*P	**Pb**	**02 16 34.0**	**+0.5**
KUU	0.8nm,0.1s			*e*S	**Sg**	**02 17 22.5**	**-1.8**
KUU	23nm,0.9s **Kurty**	**3.58**	**341**	Pg	**Pb**	**02 16 33.9**	**+0.5**
KUU	0.8nm,0.1s			Lg	Lg	02 17 22.5	
BLB	23nm,0.9s **Baldybastay**	**3.59**	**6**	*e*P	**Pb**	**02 16 35.1**	**+1.4**
BLB	8.0nm,0.3s			*e*S	**Sg**	**02 17 24.8**	**0.0**
BLB	40nm,0.4s **Baldybastay**	**3.59**	**6**	Pg	**Pb**	**02 16 35.1**	**+1.4**
BLB	8.0nm,0.3s			Lg	Lg	02 17 24.7	
KRBS	40nm,0.4s **Karabastau**	**3.60**	**332**	*e*P	**Pb**	**02 16 34.4**	**+0.5**
KRBS	8.3nm,0.6s			*e*S	**Sg**	**02 17 23.4**	**-1.8**
KRBS	30nm,0.7s **Karabastau**	**3.60**	**332**	Pg	**Pb**	**02 16 34.4**	**+0.5**
KRBS	8.3nm,0.6s			Lg	Lg	02 17 23.3	
ARXS	30nm,0.7s **Arharly**	**3.69**	**358**	*e*P	**Pb**	**02 16 36.9**	**+1.6**
ARXS	2.6nm,0.3s			*e*S	**Sg**	**02 17 27.9**	**0.0**
ARXS	18nm,0.4s **Arharly**	**3.69**	**358**	Pg	**Pb**	**02 16 36.9**	**+1.6**
ARXS	2.6nm,0.3s			Lg	Lg	02 17 27.9	
USP	18nm,0.4s **Ospenovka**	**3.77**	**318**	P	**Pb**	**02 16 37.1**	**+0.3**
DJR	SNR=25 **Jarkent**	**4.04**	**19**	*e*P	**Pb**	**02 16 43.4**	**+2.1**
DJR	2.9nm,0.6s			*e*S	**Sg**	**02 17 38.9**	**-0.2**
DJR	7.7nm,0.5s **Jarkent**	**4.04**	**19**	Pg	**Pb**	**02 16 43.4**	**+2.1**
DJR	2.9nm,0.6s			Lg	Lg	02 17 38.9	
MRKS	7.7nm,0.5s **Merke**	**4.19**	**304**	*e*P	**Pb**	**02 16 44.5**	**+0.6**
MRKS	3.0nm,0.5s			*e*S	**Sg**	**02 17 40.5**	**-3.5**
MRKS	6.0nm,0.5s **Merke**	**4.19**	**304**	Pg	**Pb**	**02 16 44.5**	**+0.6**
MRKS	3.0nm,0.5s			Lg	Lg	02 17 40.6	
BTLS	6.0nm,0.5s **Baital**	**5.36**	**329**	*e*P	**Pb**	**02 17 06.8**	**+3.0**
BTLS	3.5nm,0.7s			*e*S	**Sg**	**02 18 19.9**	**-1.6**
BTLS	6.2nm,0.7s **Baital**	**5.36**	**329**	Pg	**Pb**	**02 17 06.8**	**+3.0**
BTLS	3.5nm,0.7s			Lg	Lg	02 18 19.9	
KK31	6.2nm,0.7s **Karatay Array**	**6.14**	**297**	⇓Pg	**Pb**	**02 17 20.4**	**+3.3**
KK31	0.7nm,0.6s,baz=118,slow=16,SNR=6.3			⇑Lg	Lg	02 18 45.7	
	0.8nm,0.6s,baz=117,slow=29,SNR=4.1						

IDC ***18*** *02:21:45.9±2.5, 20°.06S×178°.16W, h559km±21km, mb2.9/7,*
mbtmp3.8/8, Error ellipse: s-maj=59.7km s-min=15.7km
az=154.0
ISC 18 02:21:46.6±1.3, 19°.9S±0°.3×178°.2W±0°.2, h569km, n11, σ0°.55/13, mb3.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.15**	**301**	P	**P**	**02 23 10.1**	**-1.0**
ASAR	14nm,0.7s,baz=157,slow=7.7,SNR=11 **Alice Springs**	**44.44**	**256**	P	**P**	**02 29 08.4**	**+0.3**
ASAR	1.2nm,0.6s,baz=95,slow=7.7,SNR=14			PcP	**PcP**	**02 30 38.8**	**-0.4**
ASAR	0.5nm,0.7s,baz=114,slow=3.9,SNR=2.3			S	**S**	**02 35 02.6**	**+0.2**
	0.5nm,0.7s,baz=86,slow=14,SNR=3.4						
WRA	1.2nm,0.6s **Warramunga Arr**	**44.47**	**262**	P	**P**	**02 29 08.4**	**+0.1**
WRA	0.8nm,0.6s,baz=97,slow=7.5,SNR=15			PcP	**PcP**	**02 30 39.0**	**-0.4**
MJAR	0.6nm,1.0s,baz=97,slow=3.3,SNR=2.8 **Matsushiro Arr**	**69.63**	**324**	P	**P**	**02 32 00.5**	**+0.9**
NVAR	0.8nm,0.6s **Mina Array Bea**	**80.76**	**44**	P	**P**	**02 33 02.3**	**+0.6**
TXAR	1.4nm,0.5s,baz=167,slow=5.5,SNR=2.0 **Lajitas Array**	**86.93**	**57**	P	**P**	**02 33 31.9**	**-0.3**
ILAR	1.4nm,0.5s **Eielson Array**	**87.81**	**13**	P	**P**	**02 33 35.3**	**-0.1**
PDAR	0.1nm,0.2s,baz=245,slow=7.7,SNR=2.6 **Pinedale Array**	**88.70**	**43**	P	**P**	**02 33 39.9**	**-0.4**
AKASG	0.1nm,0.2s **Malin Array Be**	**142.41**	**331**	PKhKP	PKPpre	02 40 11.9	
BRTR	1.3nm,0.5s,baz=43,slow=4.7,SNR=11 **Keskin Array B**	**146.30**	**313**	PKPbc	**PKPbc**	**02 40 24.8**	**+0.3**
GERES	0.4nm,0.5s,baz=122,slow=4.4,SNR=1.8 **GERESS Array B**	**149.60**	**344**	PKPbc	**PKiKP**	**02 40 33.4**	**+0.2**
	0.4nm,0.8s,baz=75,slow=7.4,SNR=2.2						

IDC ***18*** *02:36:17.5±1.0, 35°.82N×135°.72E, h346km±18km, mb3.0/2,*
mbtmp3.7/6, Error ellipse: s-maj=37.2km s-min=18.6km
az=50.0
JMA ***18*** *02:36:17.9±0.2, 35°.9N±0°.9×135°.7E±0°.9, h342km±1km,*
MV2.9/33, NW OFF KINKI DISTRICT
ISC 18 02:36:17.6±0.9, 35°.88N±0°.08×135°.68E±0°.08, h344km±8km, n22, σ0°.61/27, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.42**	**145**	P	**Pn**	**02 37 01.6**	**+0.5**
JFM				S	**S**	**02 37 35.6**	**-0.3**
JWT	**Wachi**	**0.64**	**201**	P	**Pn**	**02 37 02.0**	**+0.3**
JWT				S	**S**	**02 37 35.8**	**-1.0**
JKG	**Kaga**	**0.66**	**53**	P	**Pn**	**02 37 01.7**	**+0.2**
JKG				*e*S	**S**	**02 37 36.2**	**-0.4**
JYTA	**Yamagatataniai**	**0.90**	**108**	P	**Pn**	**02 37 02.6**	**+0.3**
JYTA				*e*S	**S**	**02 37 37.3**	**-0.8**
JWY	**Kouya**	**1.66**	**183**	P	**Pn**	**02 37 06.8**	**+0.5**
JIE	**Ise**	**1.70**	**150**	*e*S	**S**	**02 37 45.7**	**+0.2**
JTNC	**Tanabenakahech**	**2.05**	**182**	P	**Pn**	**02 37 09.0**	**+0.1**
JSZ	**Suzu**	**2.07**	**40**	*e*P	**Pn**	**02 37 09.1**	**+0.4**
MAT	**Matsushiro**	**2.15**	**71**	*e*P	**Pn**	**02 37 09.0**	**-0.4**
MJAR	**Matsushiro Arr**	**2.15**	**71**	P	**Pn**	**02 37 09.8**	**+0.4**
MJAR	9.2nm,0.4s,baz=262,slow=7.4,SNR=24			S	**S**	**02 37 51.8**	**+0.8**
	1.2nm,0.3s,baz=41,slow=22,SNR=1.4						
JHG	**Hegura jima**	**2.20**	**26**	P	**Pn**	**02 37 10.3**	**+0.6**
JHS	**Saijyo**	**2.27**	**248**	*e*P	**Pn**	**02 37 10.7**	**+0.2**
JAI	**Aioi**	**2.31**	**206**	P	**Pn**	**02 37 11.3**	**+0.6**
JYN	**Shimob**	**2.36**	**98**	*e*P	**Pn**	**02 37 11.2**	**+0.1**
TTO1	**TONANKAI O.B.S**	**2.42**	**158**	*e*P	**Pn**	**02 37 12.6**	**+1.2**
JRY	**Ryogami san**	**2.62**	**86**	*e*P	**Pn**	**02 37 13.2**	**0.0**
JOD2	**Odawara 2**	**2.84**	**101**	P	**Pn**	**02 37 15.7**	**+0.6**
KSRS	**Korea Array**	**6.43**	**286**	P	**Pn**	**02 37 53.7**	**+0.6**
	3.5nm,0.7s,baz=103,slow=12,SNR=9.9						
USRK	**Ussuriysk Ar.**	**8.78**	**342**	P	**Pn**	**02 38 21.6**	**+0.8**
	4.7nm,0.6s,baz=155,slow=11,SNR=8.2						
KLR	**Kul'dur**	**13.65**	**349**	P	**P**	**02 39 17.0**	**-0.5**
	2.0nm,0.6s,baz=186,slow=10,SNR=6.0						
KURBB	**Kurchatov Arra**	**43.08**	**308**	P	**P**	**02 43 45.2**	**+0.6**
	0.3nm,0.2s,baz=89,slow=8.4,SNR=1.8						
	0.3nm,0.2s						
WRA	**Warramunga Arr**	**55.53**	**182**	P	**P**	**02 45 17.3**	**-0.8**
	0.3nm,0.3s,baz=360,slow=7.6,SNR=10						
	0.3nm,0.3s						

DNK ***18*** *02:47:31.4±1.6, 51°.37N×16°.36E, h26km±55km, ML1.7*
IPEC ***18*** *02:47:32.8±0.4, 51°.46N×16°.34E, h1km±2km, ML2.1/4,*
Error ellipse: s-maj=4.1km s-min=1.8km az=56.0
PRU ***18*** *02:47:33.0±0.0, 51°.44N×16°.20E, h0km*
VIE ***18*** *02:47:34.0±1.0, 51°.36N×16°.50E, h0km, mb2.2/3, ml2.6/2,*
Error ellipse: s-maj=10.2km s-min=6.2km az=76.0 47 km
NW of Wroclaw Suspected Mining induced.
ISC 18 02:47:30.8±0.8, 51°.55N±0°.03×16°.29E±0°.03, h0km, n30, σ1°.05/62, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**180**	*e*Pg	**Pg**	**02 47 44.9**	**+0.6**
KSP				*e*Sg	**Sg**	**02 47 52.8**	**-0.7**
CHVC	**Chvalec**	**0.97**	**189**	*e*PG	**Pg**	**02 47 49.5**	**+0.1**
CHVC				*e*SG	**Sg**	**02 48 00.8**	**-1.2**
	comp=Z,22nm,0.6s						
OSTC	**Ostas**	**0.99**	**183**	*e*PG	**Pg**	**02 47 50.2**	**+0.4**
OSTC				*e*SG	**Sg**	**02 48 01.4**	**-1.3**
	comp=Z,20nm,0.4s						
UPC	**Upice**	**1.06**	**190**	*e*PG	**Pg**	**02 47 51.0**	**0.0**
UPC				*e*SG	**Sg**	**02 48 03.4**	**-1.3**
	comp=Z,65nm,0.3s						
DPC	**Dobruska-Polom**	**1.20**	**179**	*e*PG	**Pg**	**02 47 53.7**	**-0.1**
DPC				*e*SG	**Sg**	**02 48 08.0**	**-1.3**
	comp=Z,32nm,0.9s						
PVCC	**Panska Ves**	**1.49**	**227**	*e*PG	**Pn**	**02 47 58.8**	**-0.1**
PVCC				*e*SG	**Sg**	**02 48 16.7**	**-2.0**
	comp=Z,79nm,0.3s						
KRLC	**Kraliky**	**1.51**	**168**	*e*PG	**Pn**	**02 47 59.3**	**+0.2**
KRLC				*e*SG	**Sg**	**02 48 18.1**	**-1.1**
	comp=Z,15nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.89**	**211**	*e*PG	**Pn**	**02 48 05.4**	**+1.0**
GOPC				*e*SG	**Sn**	**02 48 29.2**	**+0.2**
	comp=Z,16nm,1.0s						
PRU	**Pruhonice**	**1.92**	**216**	*e*PG	**Pn**	**02 48 05.8**	**+1.1**
PRU				*e*SG	**Sn**	**02 48 29.9**	**+0.4**
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**1.94**	**155**	*e*PN	**Pn**	**02 48 05.8**	**+0.6**
MORC				*e*SG	**Sn**	**02 48 30.9**	**+0.6**
MORC	**Moravsky Berou**	**1.94**	**155**	*e*Pn	**Pn**	**02 48 05.7**	**+0.6**
MORC	baz=336			*e*Sg	**Sn**	**02 48 30.9**	**+0.6**
	14nm,0.5s,baz=336						
CLL	**Collm**	**2.07**	**265**	*e*Pg	**Pb**	**02 48 10.0**	**+0.7**
CLL				*e*Sg	**Sb**	**02 48 37.0**	**+1.4**
	comp=Z,10.0nm,0.5s						
OKC	**Ostrava-Krasne**	**2.08**	**145**	*e*PG	**Pg**	**02 48 10.8**	**+0.1**
OKC				*e*SG	**Sg**	**02 48 37.6**	**0.0**
	comp=Z,12nm,0.4s						
VRAC	**Vranov**	**2.25**	**175**	*e*PN	**Pn**	**02 48 09.9**	**+0.6**
VRAC				*e*SG	**Sb**	**02 48 40.6**	**-0.2**
VRAC	**Vranov**	**2.25**	**175**	*e*Pn	**Pn**	**02 48 09.8**	**+0.5**
VRAC	baz=356			*e*Sg	**Sb**	**02 48 40.5**	**-0.2**
	comp=Z,14nm,0.6s,baz=356						
TREC	**Trest**	**2.31**	**193**	*e*PG	**Pb**	**02 48 13.6**	**+0.2**
TREC				*e*SG	**Sb**	**02 48 41.6**	**-0.9**
	comp=Z,9.4nm,0.3s						
MAUC	**Maruska**	**2.40**	**155**	*e*PG	**Pg**	**02 48 16.1**	**-0.6**
MAUC				*e*SG	**Sg**	**02 48 47.4**	**-0.3**
	comp=Z,22nm,0.7s						
KRUC	**Moravsky**	**2.49**	**178**	*e*PN	**Pn**	**02 48 13.2**	**+0.6**
KRUC				*e*SG	**Sb**	**02 48 48.1**	**+0.5**
KRUC	**Moravsky**	**2.49**	**178**	*e*Pn	**Pn**	**02 48 13.2**	**+0.6**
KRUC	baz=359			*e*Sg	**Sb**	**02 48 48.1**	**+0.5**
	comp=Z,9.4nm,0.7s,baz=359						
OJC	**Ojcow**	**2.59**	**120**	*e*Pg	**Pg**	**02 48 20.4**	**0.0**
OJC				*e*Sn	**Sn**	**02 48 43.7**	**-2.5**
OJC				*e*Sg	**Sg**	**02 48 55.0**	**+1.0**
NKC	**Novy Kostel**	**2.77**	**243**	*e*PN	**Pn**	**02 48 17.2**	**+0.8**
NKC				*e*SG	**Sb**	**02 48 57.1**	**+1.5**
	comp=Z,14nm,0.3s						
KHC	**Kasperske Hory**	**2.98**	**217**	*e*PN	**Pn**	**02 48 20.0**	**+0.6**
KHC				*e*PG	**Pb**	**02 48 24.7**	**-0.1**
KHC				*e*SN	**Sn**	**02 48 54.8**	**-1.0**
KHC				*e*SG	**Sb**	**02 49 02.7**	**+1.0**
	comp=Z,9.1nm,0.9s						
CKRC	**Cesky Krumlov**	**3.01**	**206**	*e*PN	**Pn**	**02 48 21.2**	**+1.4**
CKRC				*e*SG	**Sb**	**02 49 03.8**	**+1.1**
CONA	**Conrad Observa**	**3.63**	**185**	*i* Pn	**Pn**	**02 48 29.6**	**+1.2**
	comp=Z,0.2nm,0.1s						
CONA				Sg	**Sg**	**02 49 26.4**	**-1.1**
	comp=Z,3.9nm,0.3s						
BSD	**Bornholm Skovb**	**3.67**	**348**	*i* S	**Sn**	**02 49 11.5**	**-1.1**

BSD IAML 02 49 15.2
comp=Z,0.7nm,0.2s
MOA Molln 3.93 200 *i* Pn **Pn 02 48 33.0 +0.6**
comp=Z,0.4nm,0.1s
MOA *e*Sg **Sg 02 49 34.4 -2.5**
comp=Z,1.8nm,0.3s
LUNU Lund 4.43 339 *i* P **Pn 02 48 39.9 +0.7**
LUNU *i* S **Sn 02 49 31.2 -0.2**
BLEU Blekinge 4.78 357 *i* P **Pn 02 48 45.4 +1.5**
BLEU *i* S **Sn 02 49 38.8 -1.1**
BJUU Bjuv 4.93 338 *i* P **Pn 02 48 46.3 +0.2**
BJUU *i* S **Sn 02 49 42.6 -1.2**
DEL Delary 5.13 345 *i* P **Pn 02 48 50.1 +1.2**
DEL *i* S **Sn 02 49 45.8 -3.1**
DEL IAML 02 49 50.9
comp=Z,0.3nm,0.2s

MOS ***18*** *02:53:42.7±0.0, 42°.25N×48°.65E, h38km, MPVA3.9*
DRS ***18*** *02:53:44.2±0.0, 42°.22N×48°.80E, h22km*
ISC 18 02:53:42.8±1.1,**42°35N**±0°.05×**48°78E**±0°.06,**h35**km,**n27,**
σ1°99/52,**1C-3D,Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.46**	**226**	*e*Pg	**Pn**	**02 53 54.0**	**+1.1**
DRN				*e*Sg	**Sn**	**02 54 02.6**	**+2.7**
SGKR	**Sergokala**	**0.84**	**278**	*e*Pg	**Pn**	**02 53 58.2**	**+0.1**
SGKR				*e*Sg	**Sn**	**02 54 09.4**	**+0.1**
URKR	**Urkarakh**	**0.87**	**258**	*i* Pg	**Pn**	**02 53 58.4**	**-0.3**
URKR				*e*Sg	**Sn**	**02 54 09.7**	**-0.6**
MAK	**Makhachkala**	**1.12**	**303**	*e*Pg	**Pn**	**02 54 03.8**	**+1.8**
MAK				*e*Sg	**Sn**	**02 54 17.8**	**+1.6**
AKT	**Akhty**	**1.17**	**222**	*e*Pg	**Pn**	**02 54 02.5**	**-0.3**
AKT				*e*Sg	**Sn**	**02 54 16.9**	**-0.7**
KMKR	**Kumukh**	**1.27**	**261**	*e*Pg	**Pn**	**02 54 04.3**	**+0.1**
KMKR				*e*Sg	**Sn**	**02 54 19.9**	**-0.2**
KANR	**Karaman**	**1.27**	**312**	*e*Pg	**Pn**	**02 54 05.4**	**+1.3**
KANR				*e*Sg	**Sn**	**02 54 23.3**	**+3.4**
BUJR	**Buynaksk**	**1.32**	**292**	*e*Pg	**Pn**	**02 54 06.4**	**+1.6**
BUJR				*e*Sg	**Sn**	**02 54 22.0**	**+0.8**
ARKR	**Arakani**	**1.34**	**281**	*e*Pg	**Pn**	**02 54 05.6**	**+0.5**
ARKR				*e*Sg	**Sn**	**02 54 23.0**	**+1.2**
GNBR	**Gunib**	**1.34**	**272**	*e*Pg	**Pn**	**02 54 05.4**	**+0.2**
GNBR				*e*Sg	**Sn**	**02 54 22.6**	**+0.8**
KRNR	**Karanay**	**1.46**	**290**	*e*Pg	**Pn**	**02 54 07.6**	**+0.8**
KRNR				*e*Sg	**Sn**	**02 54 25.9**	**+1.1**
UNCR	**Uncukul**	**1.51**	**285**	*e*Pg	**Pn**	**02 54 08.3**	**+0.9**
UNCR				*e*Sg	**Sn**	**02 54 26.9**	**+1.0**
DBC	**Dubki**	**1.58**	**296**	*e*Pg	**Pn**	**02 54 09.5**	**+1.0**
DBC				*e*Sg	**Sn**	**02 54 28.4**	**+0.6**
DLMR	**Dylym**	**1.74**	**295**	*e*Pg	**Pn**	**02 54 11.8**	**+1.3**
DLMR				*e*Sg	**Sn**	**02 54 33.7**	**+2.2**
BTLR	**Botlikh**	**1.92**	**280**	*e*Pg	**Pn**	**02 54 13.7**	**+0.7**
BTLR				*e*Sg	**Sn**	**02 54 37.5**	**+1.5**
DVE	**Vedeno**	**2.05**	**288**	*e*Pg	**Pn**	**02 54 16.2**	**+1.4**
DVE				*e*Sg	**Sn**	**02 54 41.3**	**+2.1**
SHTL	**Shatili**	**2.70**	**278**	P	**Pn**	**02 54 23.0**	**-0.9**
SHTL				S	**Sn**	**02 55 00.9**	**+5.6**
SHTL	**Shatili**	**2.70**	**278**	*e*Pn	**Pn**	**02 54 23.0**	**-0.9**
PNSH	**Pansheti**	**3.09**	**277**	P	**Pn**	**02 54 28.7**	**-0.6**
PNSH				S	**Sn**	**02 55 08.5**	**+3.4**
PNSH	**Pansheti**	**3.09**	**277**	*e*Pn	**Pn**	**02 54 28.7**	**-0.6**
LACR	**Lac**	**3.34**	**280**	*e*Pn	**Pn**	**02 54 31.9**	**-0.8**
LACR				*e*Sn	**Sn**	**02 55 10.8**	**-0.5**
KBZ	**Khabaz**	**4.53**	**290**	*e*Pn	**Pn**	**02 54 46.1**	**-2.6**
KBZ				*e*Sn	**Sn**	**02 55 35.6**	**-4.5**
BEYR	**Belyy Ugol+**	**4.67**	**293**	*e*Pn	**Pn**	**02 54 48.6**	**-2.2**
BEYR				*e*Sn	**Sn**	**02 55 38.8**	**-4.9**
SHA1	**Shidzhatmaz**	**4.70**	**289**	*e*Pn	**Pn**	**02 54 49.8**	**-1.6**
SHA1				*e*Sn	**Sn**	**02 55 41.2**	**-3.5**
GOF	**Gofitskoye**	**4.96**	**305**	*e*Pn	**Pn**	**02 54 54.1**	**-0.7**
GOF				*e*Sn	**Sn**	**02 55 48.6**	**-2.3**
AKTO	**Aktyubinsk**	**10.29**	**35**	⇓P	**Pn**	**02 56 09.7**	**+1.9**
	0.5nm,0.5s						
AKTO				⇑S	**Sn**	**02 57 60.0**	**-2.0**
	0.6nm,0.4s						
AB31	**Akbulak array**	**10.41**	**45**	⇓P	**Pn**	**02 56 10.6**	**+1.2**
	0.6nm,0.8s,baz=240,slow=13,SNR=2.9						
AB31				⇓S	**Sn**	**02 58 02.0**	**-2.6**
	0.7nm,0.6s,baz=239,slow=22,SNR=4.1						

PDG ***18*** *03:00:58.8±0.9, 34°.56N×23°.03E, h100km±3km, ML4.3/12, Error ellipse: s-maj=5.8km s-min=3.6km az=90.0*
ISK ***18*** *03:00:59.2, 34°.72N×22°.94E, h10km, ML4.0/8*
ATH ***18*** *03:01:02.5, 34°.79N×23°.11E, h7km±3km, ML3.8/9, Error ellipse: s-maj=5.0km s-min=1.7km az=43.0*
HLW ***18*** *03:01:03.4, 34°.96N×23°.52E, h22km±26km, Md4.6, Ml5.3*
THE ***18*** *03:01:04.4, 34°.89N×23°.19E, h8km±1km, ML3.7/5, Error ellipse: s-maj=1.8km s-min=0.7km az=44.0*
IDC ***18*** *03:01:05.9±1.9, 35°.05N×23°.20E, h53km±16km, mb3.9/12, mbtmp4.0/18, ML3.8/4, MS3.0/2, Error ellipse: s-maj=19.4km s-min=13.2km az=1.0*
NEIC ***18*** *03:01:05.5±1.3, 35°.0N±0°.1×23°.23E±0°.08, h42km±13km, mb4.1/10, ML3.8(ATH), Error ellipse: s-maj=16.3km s-min=9.2km az=187.0*
DDA ***18*** *03:01:07.0±0.0, 35°.24N×23°.88E, h7km±4km, ML3.7*
GII ***18*** *03:01:10.0±0.0, 34°.64N×24°.11E, h10km, Mm3.9/3*
ISC 18 03:01:03.9±0.7,**34°94N**±0°.04×**23°24E**±0°.05,**h36**km±2km,
n186, σ2°**26/228,mb4.3**/21,**16C-2D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.47**	**51**	PG	**Pn**	**03 01 14.2**	**+0.2**
KNDR				SG	**Sn**	**03 01 25.7**	**+4.5**
KNDR	**Palaiochora Ch**	**0.47**	**51**	P	**Pn**	**03 01 14.0**	**0.0**
KNDR	**Palaiochora Ch**	**0.47**	**51**	P	**Pn**	**03 01 13.9**	**-0.2**
KNDR				S	**Sn**	**03 01 22.7**	**+1.6**
KNDR				AML	AML	03 01 31.1	
	comp=E,28192μm,0.6s						
KNDR				AML	AML	03 01 33.5	
	comp=N,29553μm,0.5s						
GVD	**Gavdhos**	**0.71**	**98**	PG	**Pn**	**03 01 18.3**	**+0.9**
GVD				SG	**Sn**	**03 01 31.7**	**+4.6**
GVD	**Gavdhos**	**0.71**	**98**	P	**Pn**	**03 01 18.6**	**+1.2**
GVD				S	**Sn**	**03 01 29.3**	**+2.2**
	comp=N,15μm,0.4s						
GVD	**Gavdhos**	**0.71**	**98**	P	**Pn**	**03 01 18.3**	**+0.9**
GVD				S	**Sn**	**03 01 28.4**	**+1.4**
GVD				AML	AML	03 01 32.2	
	comp=N,30443μm,0.4s						
GVD				AML	AML	03 01 32.8	
	comp=E,30478μm,0.4s						
GVDS	**Gavdos**	**0.71**	**98**	PG	**Pn**	**03 01 17.7**	**+0.3**
GVDS				SG	**Sn**	**03 01 30.9**	**+3.8**
GVDS	**Gavdos**	**0.71**	**98**	P	**Pn**	**03 01 17.9**	**+0.5**
GVDS				S	**Sn**	**03 01 28.8**	**+1.7**
	comp=E,8μm,0.4s						
RODP	**Rodopos**	**0.75**	**35**	P	**Pn**	**03 01 20.3**	**+2.3**
IMMV	**Iera Moni Meta**	**0.80**	**49**	PN	**Pn**	**03 01 20.9**	**+2.2**
IMMV				SN	**Sn**	**03 01 37.6**	**+8.2**
IMMV	**Iera Moni Meta**	**0.80**	**49**	P	**Pn**	**03 01 20.5**	**+1.8**
IMMV				S	**Sn**	**03 01 33.0**	**+3.6**
	comp=E,5μm,0.5s						
IMMV	**Iera Moni Meta**	**0.80**	**49**	P	**Pn**	**03 01 20.5**	**+1.8**
IMMV				AML	AML	03 01 38.5	
	comp=N,10081μm,0.6s						
IMMV				AML	AML	03 01 46.4	
	comp=E,10386μm,0.9s						
CHAN	**Chania**	**0.88**	**49**	P	**Pn**	**03 01 21.9**	**+2.2**
CHAN				AML	AML	03 01 40.9	
	comp=N,10874μm,0.6s						
CHAN				AML	AML	03 01 46.1	
	comp=E,11194μm,0.6s						
ANKY	**Antikythira Is**	**0.93**	**3**	P	**Pn**	**03 01 22.8**	**+2.4**
ANKY				S	**Sn**	**03 01 36.5**	**+4.0**
	comp=E,4μm,0.5s						
ANKY	**Antikythira Is**	**0.93**	**3**	P	**Pn**	**03 01 22.6**	**+2.2**
ANKY				S	**Sn**	**03 01 37.5**	**+5.1**
ANKY				AML	AML	03 01 43.4	
	comp=N,7870μm,0.6s						
ANKY				AML	AML	03 01 46.1	
	comp=E,7050μm,0.5s						
PRNS	**Prines Rethymn**	**1.12**	**67**	P	**Pn**	**03 01 24.3**	**+1.3**
TMBK	**Timbaki Herakl**	**1.26**	**84**	P	**Pn**	**03 01 27.3**	**+2.3**
TMBK	**Timbaki Herakl**	**1.26**	**84**	P	**Pn**	**03 01 27.4**	**+2.3**
TMBK				AML	AML	03 01 58.2	
	comp=N,6130μm,0.5s						
TMBK				AML	AML	03 01 59.6	
	comp=E,8150μm,0.6s						
SIVA	**Sivas**	**1.30**	**86**	P	**Pn**	**03 01 28.0**	**+2.6**
KTHA	**Kythira Island**	**1.32**	**354**	PN	**Pn**	**03 01 27.8**	**+2.0**
KTHA	**Kythira Island**	**1.32**	**354**	P	**Pn**	**03 01 28.9**	**+3.1**
KTHA	**Kythira Island**	**1.32**	**354**	P	**Pn**	**03 01 28.9**	**+3.1**
KTHA				AML	AML	03 01 56.1	
	comp=N,2494μm,0.4s						
KTHA				AML	AML	03 02 02.8	
	comp=E,5394μm,0.7s						
KTHR	**Kythira**	**1.33**	**352**	P	**Pn**	**03 01 28.9**	**+2.9**
KTHR	**Kythira**	**1.33**	**352**	P	**Pn**	**03 01 28.8**	**+2.8**
KTHR				AML	AML	03 01 53.7	
	comp=N,6273μm,0.4s						
KTHR				AML	AML	03 01 59.9	
	comp=E,6674μm,0.5s						
IDI	**Anoyia**	**1.40**	**75**	⇑P	**Pn**	**03 01 29.8**	**+2.8**
IDI				⇑S	**Sn**	**03 01 50.1**	**+5.8**
IDI	**Anoyia**	**1.40**	**75**	P	**Pn**	**03 01 29.3**	**+2.3**
	comp=E,138nm,0.5s,baz=255,slow=9.0,SNR=91						
IDI				S	**Sn**	**03 01 49.3**	**+5.1**
	comp=E,212nm,0.4s,baz=326,slow=22,SNR=7.4						
IDI	**Anoyia**	**1.40**	**75**	PN	**Pn**	**03 01 29.1**	**+2.2**
IDI				SN	**Sn**	**03 01 52.2**	**+8.0**
IDI	**Anoyia**	**1.40**	**75**	Pn	**Pn**	**03 01 28.7**	**+1.7**
IDI	**Anoyia**	**1.40**	**75**	P	**Pn**	**03 01 29.2**	**+2.3**
IDI				S	**Sn**	**03 01 50.1**	**+5.8**
	comp=E,920nm,0.5s						
IDI	**Anoyia**	**1.40**	**75**	P	**Pn**	**03 01 29.1**	**+2.2**
IDI				AML	AML	03 02 01.0	
	comp=N,2244μm,0.5s						
IDI				AML	AML	03 02 02.7	
	comp=E,1228μm,0.6s						
KSTL	**Kastelli Herak**	**1.55**	**76**	P	Pn	03 01 34.1	+5.2
HRKL	**Herakleio**	**1.57**	**76**	PN	**Pn**	**03 01 32.5**	**+3.2**
HRKL	**Herakleio**	**1.57**	**76**	P	**Pn**	**03 01 31.9**	**+2.6**
VLI	**Veliai**	**1.79**	**352**	P	**Pn**	**03 01 35.4**	**+3.1**
VLI	**Veliai**	**1.79**	**352**	P	**Pn**	**03 01 35.1**	**+2.8**
PYL	**PYLOS**	**2.30**	**329**	P	**Pn**	**03 01 41.9**	**+2.7**
SANT	**Santorini**	**2.31**	**51**	⇓P	**Pn**	**03 01 40.5**	**+1.1**
SANT				⇑S	**Sn**	**03 02 08.4**	**+1.8**
ZKR	**Zakros**	**2.45**	**85**	PN	**Pn**	**03 01 44.3**	**+2.9**
ITM	**Ithomi**	**2.47**	**335**	Pn	**Pn**	**03 01 44.1**	**+2.4**
ITM	**Ithomi**	**2.47**	**335**	P	**Pn**	**03 01 44.0**	**+2.3**
APE	**Apeiranthos**	**2.83**	**41**	⇑P	**Pn**	**03 01 47.2**	**+0.7**
APE				⇑S	**Sn**	**03 02 19.1**	**-0.2**
KARP	**Karpathos**	**3.27**	**78**	Pn	**Pn**	**03 01 53.7**	**+1.1**
SLUM	**Salum**	**3.82**	**154**	P	**Pn**	**03 02 00.1**	**-0.1**
	baz=157						
SLUM				S	**Sn**	**03 02 41.0**	**-2.8**
	baz=157						
ARG	**Arkhangelos**	**4.18**	**71**	Pn	**Pn**	**03 02 06.6**	**+1.4**
TURN	**Turunc**	**4.46**	**64**	P	**Pn**	**03 02 10.2**	**+1.2**
TURN				S	**Sn**	**03 02 59.1**	**-0.5**
AYDN	**Tasoluk**	**4.63**	**53**	P	**Pn**	**03 02 12.6**	**+1.2**
MULA	**Mugla, Merkez-**	**4.72**	**59**	P	**Pn**	**03 02 15.8**	**+3.1**
MULA				S	**Sn**	**03 03 08.5**	**+2.3**
MATC	**Matruh**	**4.91**	**136**	P	**Pn**	**03 02 14.1**	**-1.0**
	baz=138						
MATC				S	**Sn**	**03 03 05.1**	**-5.5**
	baz=138						
LIT	**Litokhoron**	**5.19**	**354**	Pn	**Pn**	**03 02 20.2**	**+1.2**
TAVA	**DENIZLI_Tavas**	**5.24**	**60**	P	**Pn**	**03 02 21.4**	**+1.6**
TAVA				S	**Sn**	**03 03 20.5**	**+1.6**
AKAS	**Kas**	**5.35**	**74**	P	**Pn**	**03 02 21.8**	**+0.5**
AKAS	**Kas**	**5.35**	**74**	P	**Pn**	**03 02 21.5**	**+0.2**
AKAS				S	**Sn**	**03 03 16.4**	**-5.3**
AKAS				*i* AML	AML	03 03 23.0	
	comp=E,133nm,0.6s						
AKAS				*i* AML	AML	03 03 24.0	
	comp=E,82nm,0.6s						
CAEL	**Denizli, Camel**	**5.39**	**64**	P	**Pn**	**03 02 23.1**	**+1.2**
CAEL				S	**Sn**	**03 03 22.1**	**-0.7**
CAEL				*i* AML	AML	03 04 10.0	
	comp=E,90nm,2.0s						
CAEL				*i* AML	AML	03 04 16.0	
	comp=E,65nm,1.7s						
KEK	**Kerkira**	**5.49**	**331**	Pn	**Pn**	**03 02 25.0**	**+1.9**
GOLH	**Golhisar**	**5.61**	**64**	P	**Pn**	**03 02 26.4**	**+1.5**
GOLH				S	**Sn**	**03 03 25.9**	**-2.2**
ELL	**Elmali**	**5.71**	**70**	Pn	**Pn**	**03 02 28.1**	**+1.8**
AKUM	**Antalya-Kumluc**	**5.95**	**75**	P	**Pn**	**03 02 30.2**	**+0.7**
AKUM				S	**Sn**	**03 03 33.1**	**-3.2**
USAK	**Uak-Merkez**	**5.97**	**49**	P	**Pn**	**03 02 31.0**	**+1.2**
USAK				*i* AML	AML	03 05 32.0	
	comp=E,76nm,7.3s						
SWA2		**5.98**	**161**	P	**Pn**	**03 02 29.7**	**-0.2**
	baz=163						
SWA2				S	**Sn**	**03 03 33.2**	**-3.9**
	baz=163						
KBN	**Korca**	**6.00**	**342**		**Pn**	**03 02 32.1**	**+2.0**
KORT	**Korkueli**	**6.13**	**68**	P	**Pn**	**03 02 34.1**	**+2.1**
KORT				S	**Sn**	**03 03 37.9**	**-2.9**
BRDR	**BURDUR-Merkez**	**6.16**	**61**	P	**Pn**	**03 02 33.8**	**+1.5**
GDZ	**Gediz**	**6.49**	**49**	P	**Pn**	**03 02 37.4**	**+0.5**
TIP	**Timpagrande**	**6.69**	**311**	⇑P	**Pn**	**03 02 37.4**	**-2.1**
TIP				⇑S	**Sn**	**03 03 52.4**	**-2.1**
KEPZ	**Antalya-Kepez**	**7.07**	**72**	P	**Pn**	**03 02 46.0**	**+1.2**
KEPZ				S	**Sn**	**03 04 01.0**	**-2.9**
YVAC	**Isparta, Yalva**	**7.25**	**60**	P	**Pn**	**03 02 47.8**	**+0.5**
SEDI	**Konya, Seydise**	**7.33**	**68**	P	**Pn**	**03 02 49.1**	**+0.6**
SEDI				S	**Sn**	**03 04 07.1**	**-3.4**
RAFF	**Raffo Rosso**	**7.54**	**290**	Pn	**Pn**	**03 02 51.2**	**0.0**
VAE	**Valguarnera**	**7.57**	**292**	P	**Pn**	**03 02 54.1**	**+2.5**
	comp=E,1.9nm,0.4s,baz=324,slow=23,SNR=1.7						
VAE				S	**Sn**	**03 04 16.8**	**+0.6**
	comp=E,8.2nm,0.5s,baz=106,slow=21,SNR=4.1						
VTS	**Vitosha**	**7.67**	**0**	⇑P	**Pn**	**03 02 51.1**	**-2.1**
ULC	**Ulcinj**	**7.68**	**337**	*e*Pn	**Pn**	**03 02 52.4**	**-0.8**
ULC				*i* Sn	**Sn**	**03 04 15.7**	**-3.2**
MATE	**Matera**	**7.69**	**320**	⇑P	**Pn**	**03 02 51.9**	**-1.4**
CUC	**Castrocucco**	**7.76**	**313**	Pn	**Pn**	**03 02 55.9**	**+1.6**
DRME	**Dracevica, Mon**	**7.90**	**338**	*e*Pn	**Pn**	**03 02 54.7**	**-1.5**
DRME	**Dracevica, Mon**	**7.90**	**338**	⇓*i*Pn	**Pn**	**03 02 55.4**	**-0.8**
DRME				*i* Sn	**Sn**	**03 04 20.9**	**-3.4**
PVY	**Plav**	**8.06**	**342**	*e*Pn	**Pn**	**03 02 57.9**	**-0.6**
PVY				*i* Sn	**Sn**	**03 04 25.1**	**-3.3**
BUM	**Brajici-Budva**	**8.10**	**336**	*e*Pn	**Pn**	**03 02 57.7**	**-1.2**
BUM				*i* Sn	**Sn**	**03 04 25.4**	**-3.8**
PDG	**Podgorica**	**8.10**	**339**	⇑P	**Pn**	**03 02 57.0**	**-1.9**
PDG				⇑S	**Sn**	**03 04 24.4**	**-4.7**
PDG	**Podgorica**	**8.10**	**339**	Pn	**Pn**	**03 02 58.8**	**-0.1**
TTG	**Podgorica**	**8.10**	**339**	*e*Pn	**Pn**	**03 02 58.2**	**-0.7**
TTG				*i* Sn	**Sn**	**03 04 25.8**	**-3.3**
HMYD	**Mayadein**	**8.20**	**127**	P	**Pn**	**03 02 59.5**	**-0.8**
	baz=128						
CEME	**Cevo**	**8.31**	**337**	*e*Pn	**Pn**	**03 03 00.1**	**-1.7**
CEME				*i* Sn	**Sn**	**03 04 30.3**	**-4.1**
IVA	**Berane**	**8.34**	**343**	*e*Pn	**Pn**	**03 03 01.7**	**-0.5**
IVA				*i* Sn	**Sn**	**03 04 31.8**	**-3.3**
RYAN	**Fayoum**	**8.36**	**132**	P	**Pn**	**03 03 01.2**	**-1.2**
	baz=133						
HCY	**Herceg Novi**	**8.36**	**335**	*e*Pn	**Pn**	**03 03 00.4**	**-2.1**
HCY	**Herceg Novi**	**8.36**	**335**	*e*Pn	**Pn**	**03 03 01.2**	**-1.3**
HCY				*i* Sn	**Sn**	**03 04 31.1**	**-4.5**
KOME	**Kolasin**	**8.41**	**341**	*e*Pn	**Pn**	**03 03 02.6**	**-0.7**
KOME				*i* Sn	**Sn**	**03 04 33.3**	**-3.7**
NKME	**Niksic**	**8.50**	**338**	*e*Pn	**Pn**	**03 03 03.6**	**-0.8**
NKME				*i* Sn	**Sn**	**03 04 35.2**	**-3.8**
BLKB	**Belogradchik**	**8.68**	**357**	⇑P	**Pn**	**03 03 05.2**	**-1.7**
BRY	**Bratogost**	**8.75**	**337**	*e*Pn	**Pn**	**03 03 05.7**	**-2.3**
BRY	**Bratogost**	**8.75**	**337**	*e*Pn	**Pn**	**03 03 07.0**	**-1.0**
BRY				*i* Sn	**Sn**	**03 04 41.0**	**-4.3**
BOVS	**Bovan**	**8.76**	**353**	⇑P	Pn	03 03 04.7	-3.3
HSAF	**As Saff**	**8.81**	**125**	P	**Pn**	**03 03 08.4**	**-0.4**
	baz=125						
KOT	**Kottamia**	**8.81**	**122**	P	**Pn**	**03 03 08.5**	**-0.3**
	baz=123						
PLE	**Pljevlja**	**8.89**	**342**	⇑*i*Pn	**Pn**	**03 03 09.1**	**-0.8**
PLE				*i* Sn	**Sn**	**03 04 44.6**	**-4.2**
UPM	**Unac-Piva**	**8.91**	**339**	*e*Pn	**Pn**	**03 03 08.6**	**-1.6**
UPM	**Unac-Piva**	**8.91**	**339**	*e*Pn	**Pn**	**03 03 09.3**	**-0.9**
UPM				*i* Sn	**Sn**	**03 04 45.0**	**-4.3**
GLL	**Jalalah**	**8.95**	**124**	P	**Pn**	**03 03 09.3**	**-1.3**
	baz=125						
STON	**Ston**	**9.02**	**333**	*e*Pn	Pn	03 03 07.7	-3.7
RUDO	**Rudo**	**9.17**	**342**	*e*Pn	**Pn**	**03 03 11.5**	**-2.1**
NBNS	**Bani Suef**	**9.31**	**130**	P	**Pn**	**03 03 14.6**	**-0.9**
	baz=131						
BBLS	**Lazići**	**9.39**	**343**	*e*Pn	**Pn**	**03 03 15.5**	**-1.2**
DIVS	**Divibare**	**9.48**	**346**	Pn	**Pn**	**03 03 16.6**	**-1.4**
DIVS	**Divibare**	**9.48**	**346**	*e*Pn	**Pn**	**03 03 16.2**	**-1.7**
BRTR	**Keskin Array B**	**9.56**	**57**	P	**Pn**	**03 03 21.6**	**+2.5**
	comp=E,0.3nm,0.3s,baz=232,slow=14,SNR=13						
	comp=E,0.8nm,0.4s						
HAPS	**Han Pijesak,Bl**	**9.71**	**341**	*e*Pn	**Pn**	**03 03 19.0**	**-2.1**
TEKS	**Tekeris**	**10.01**	**345**	*e*Pn	Pn	03 03 21.7	-3.4
SRKY	**Kupres RS**	**10.25**	**335**	*e*Pn	**Pn**	**03 03 27.5**	**-0.9**
MMAI	**Mount Meron Ar**	**10.29**	**97**	P	**Pn**	**03 03 27.5**	**-1.5**
	comp=E,2.6nm,0.4s,baz=303,slow=13,SNR=9.5						
MMAI				S	Sn	03 05 12.7	-10
	comp=E,1.6nm,0.4s,baz=283,slow=32,SNR=2.8						
SALP	**Salfit**	**10.38**	**103**	Pn	**Pn**	**03 03 29.0**	**-1.3**
SALP				Sn	Sn	03 05 16.9	-8.5
GEM	**Giv'at Ha'Em**	**10.45**	**96**	Pn	**Pn**	**03 03 29.9**	**-1.3**
GEM				Sn	Sn	03 05 19.2	-7.8
FRGS	**Fruska Gora**	**10.54**	**347**	⇑P	**Pn**	**03 03 29.7**	**-2.6**
FRGS	**Fruska Gora**	**10.54**	**347**	*e*Pn	**Pn**	**03 03 29.9**	**-2.4**
YTIR	**Yattir**	**10.58**	**106**	Pn	**Pn**	**03 03 31.0**	**-2.0**
YTIR				Sn	Sn	03 05 21.9	-8.3
MGRS	**Mrkonjic Grad**	**10.58**	**335**	*e*Pn	**Pn**	**03 03 31.1**	**-1.8**
MLR	**Muntele Rosu**	**10.74**	**10**	⇑P	**Pn**	**03 03 33.9**	**-1.3**
MLR	**Muntele Rosu**	**10.74**	**10**	P	**Pn**	**03 03 36.3**	**+1.1**
	comp=E,4.0nm,0.8s,baz=180,slow=20						
KRMI	**Paran Flat**	**10.82**	**113**	Pn	**Pn**	**03 03 34.2**	**-2.1**
KRMI				Sn	Sn	03 05 26.7	-9.5
BLY	**Banja Luka**	**10.84**	**336**	*e*Pn	**Pn**	**03 03 34.6**	**-1.8**
PRNI	**Paran**	**10.92**	**111**	Pn	**Pn**	**03 03 36.6**	**-1.1**
PRNI				Sn	Sn	03 05 29.7	-8.9
A052A	**Srbac**	**11.05**	**338**	*e*Pn	Pn	03 03 36.1	-3.2
HRFI	**Mount Harif**	**11.10**	**113**	Pn	**Pn**	**03 03 37.8**	**-2.3**
HRFI				Sn	Sn	03 05 34.4	-8.5
MBRI	**Mt Berech**	**11.12**	**114**	Pn	**Pn**	**03 03 38.5**	**-2.0**
MBRI				Sn	Sn	03 05 35.7	-8.0
A051A	**Mrakovica**	**11.16**	**336**	*e*Pn	**Pn**	**03 03 38.5**	**-2.5**
EIL	**Elat**	**11.22**	**115**	P	**Pn**	**03 03 39.4**	**-2.3**
	comp=E,3.3nm,0.3s,baz=18,slow=6.2,SNR=15						
EIL				S	Sn	03 05 34.0	-12
	comp=E,3.5nm,0.3s,baz=12,slow=12,SNR=2.4						
EIL	**Elat**	**11.22**	**115**	Pn	**Pn**	**03 03 40.3**	**-1.4**
ASF	**Jabal al Asfar**	**11.73**	**100**	P	Pn	03 03 42.7	-6.0
	comp=E,0.9nm,0.4s,baz=257,slow=8.4,SNR=1.8						
ASF				S	Sn	03 05 49.4	-9.0
	comp=E,1.7nm,0.7s,baz=171,slow=4.3,SNR=3.3						
BOJS	**Bojanci**	**12.18**	**332**	*e*Pn	**Pn**	**03 03 51.7**	**-3.0**
CRES	**Cresnjev**	**12.38**	**334**	*e*Pn	**Pn**	**03 03 55.6**	**-1.9**
CEY	**Cerknica**	**12.70**	**331**	*e*Pn	**Pn**	**03 03 59.7**	**-2.2**
SKDS	**Skadanscina**	**12.71**	**329**	*e*Pn	**Pn**	**03 03 59.5**	**-2.5**
SOKA	**Soboth**	**13.26**	**335**	*i* Pn	**Pn**	**03 04 07.3**	**-2.2**
	comp=E,0.4nm,0.2s						
OBKA	**Obir**	**13.29**	**333**	*e*Pn	**Pn**	**03 04 08.1**	**-1.9**
OBKA	**Obir**	**13.29**	**333**	*i* Pn	**Pn**	**03 04 09.4**	**-0.6**
	comp=E,1.0nm,0.3s						
VRAC	**Vranov**	**15.17**	**343**	P	**P**	**03 04 39.9**	**-0.1**
	comp=E,3.6nm,0.5s,baz=139,slow=10.0,SNR=5.2						
VRAC				LR	LR	03 12 04.0	
	comp=E,67nm,18.8s,baz=150,slow=44						
CKRC	**Cesky Krumlov**	**15.36**	**337**	*e*P	**P**	**03 04 43.8**	**+1.6**
MORC	**Moravsky Berou**	**15.40**	**346**		**P**	**03 04 43.2**	**+0.5**
GEC2	**GERESS Array S**	**15.58**	**336**		**P**	**03 04 45.3**	**+0.6**
GERES	**GERESS Array B**	**15.58**	**336**	P	**Pn**	**03 04 39.1**	**-1.7**
	comp=E,0.2nm,0.3s,baz=167,slow=15,SNR=2.6						
	comp=E,0.2nm,0.4s						
GERES	**GERESS Array B**	**15.58**	**336**		**P**	**03 04 46.2**	**+1.5**
KRLC	**Kraliky**	**15.85**	**345**	*e*P	**P**	**03 04 48.6**	**+1.

*IDC **18** 03:33:38.9±1.4, 5°.41N×61°.32E, h0km, mb4.0/6, mbtmp4.0/6, MS3.3/17, Error ellipse: s-maj=54.6km s-min=22.8km az=38.0*

ISC 18 03:33:41.3±1.6, 5°.5N±0°.3×61°.3E±0°.2, h14km, n25, σ0s60/6, mb4.0/6, MS3.3/15, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**19.24**	**289**	LR	LR	03 44 23.4	
	comp=Z,38nm,20.6s,baz=30,slow=34						
PALK	**Pallekele**	**19.33**	**84**	LR	LR	03 43 42.0	
	comp=Z,138nm,19.1s,baz=11,slow=31						
MBAR	**Mbarara**	**31.14**	**260**	LR	LR	03 52 35.8	
	comp=Z,29nm,18.4s,baz=60,slow=36						
BRDH	**Bariadhala**	**33.90**	**57**	LR	LR	03 54 08.4	
	comp=Z,116nm,18.6s,baz=261,slow=36						
EIL	**Elat**	**34.64**	**317**	LR	LR	03 53 56.4	
	comp=Z,47nm,19.1s,baz=114,slow=35						
LSZ	**Lusaka**	**38.77**	**237**	LR	LR	03 55 10.5	
	comp=Z,39nm,20.8s,baz=56,slow=33						
AAK	**Ala-Archa**	**38.82**	**16**	LR	LR	03 57 20.5	
	comp=Z,32nm,19.9s,baz=180,slow=37						
CMAR	**Chiang Mai Arr**	**38.89**	**67**	P	**P**	**03 41 07.3**	**+0.5**
	1.0nm,0.4s,baz=259,slow=9.1,SNR=4.2						
CMAR				LR	LR	03 55 47.7	
	comp=Z,20nm,20.3s,baz=225,slow=34						
	1.0nm,0.4s						
BRTR	**Keskin Array B**	**42.27**	**328**	P	**P**	**03 41 34.9**	**+0.3**
	1.2nm,0.9s,baz=170,slow=9.5,SNR=5.3						
	1.2nm,0.9s						
AKTO	**Aktyubinsk**	**44.90**	**357**	P	**P**	**03 41 54.8**	**-0.7**
	1.5nm,0.8s,baz=156,slow=7.6,SNR=4.2						
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**44.97**	**20**	LR	LR	04 02 36.2	
	comp=Z,17nm,18.6s,baz=216,slow=39						
LBTB	**Lobatse**	**46.10**	**227**	LR	LR	03 58 43.4	
	comp=Z,52nm,19.9s,baz=38,slow=33						
BOSA	**Boshof**	**48.52**	**224**	LR	LR	04 00 52.1	
	comp=Z,37nm,19.4s,baz=15,slow=34						
TSUM	**Tsumeb**	**49.56**	**239**	LR	LR	04 01 27.8	
	comp=Z,36nm,21.7s,baz=116,slow=34						
ZALV	**Zalesovo Beam**	**51.97**	**17**	LR	LR	04 07 27.5	
	comp=Z,17nm,18.2s,baz=165,slow=39						
H01W3	**Cape Leeuwin H**	**63.84**	**133**	T	T	04 53 26.4	
	baz=299						
H01W2	**Cape Leeuwin H**	**63.84**	**133**	T	T	04 53 27.0	
	baz=299						
H01W1	**Cape Leeuwin H**	**63.85**	**133**	T	T	04 53 27.7	
	baz=299						
KOWA	**Kowa**	**64.81**	**283**	LR	LR	04 13 07.7	
	comp=Z,32nm,18.4s,baz=298,slow=37						
ESDC	**Sonseca Array**	**67.59**	**311**	P	**P**	**03 44 38.1**	**+0.2**
	0.8nm,0.8s,baz=76,slow=5.1,SNR=7.5						
	0.8nm,0.8s						
KLR	**Kul'dur**	**73.13**	**40**	LR	LR	04 16 59.3	
	comp=Z,21nm,20.9s,baz=286,slow=36						
WRA	**Warramunga Arr**	**76.02**	**112**	P	**P**	**03 45 28.4**	**-0.4**
	2.1nm,0.9s,baz=287,slow=4.6,SNR=7.4						
	2.1nm,0.9s						
MJAR	**Matsushiro Arr**	**76.22**	**54**	LR	LR	04 21 50.3	
	comp=Z,32nm,18.4s,baz=184,slow=38						
ASAR	**Alice Springs**	**76.37**	**116**	P	**P**	**03 45 30.7**	**-0.1**
	1.2nm,0.8s,baz=287,slow=5.8,SNR=8.2						
	1.2nm,0.8s						
PETK	**Petropavlovsk-**	**89.49**	**37**	LR	LR	04 28 37.6	
	comp=Z,19nm,18.3s,baz=141,slow=37						

*IDC **18** 03:38:00.4±1.2, 24°.05S×179°.97E, h527km±15km, mb3.3/6, mbtmp4.2/8, Error ellipse: s-maj=20.4km s-min=16.3km az=124.0*

*NEIC **18** 03:38:01.9±1.3, 24°.05S±0°.1×180°.0E±0°.1, h534km±11km, mb4.1/13, Error ellipse: s-maj=23.9km s-min=10.2km az=128.0*

ISC 18 03:37:59.8±0.6, 23°.92S±0°.07×180°.0W±0°.1, h518km, n39, σ1s20/40, mb4.0/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.63**	**161**	P	**P**	**03 39 34.5**	**+1.2**
	298nm,0.3s,baz=95,slow=3.0,SNR=12						
RAO				S	**S**	**03 40 49.4**	**-0.4**
	111nm,0.3s,baz=326,slow=24,SNR=1.8						
RAO	**Raoul Island**	**5.63**	**161**	P	**P**	**03 39 35.6**	**+2.3**
MSVF	**Nonsavu**	**6.42**	**343**	P	**P**	**03 39 41.6**	**+0.4**
	3.3nm,0.4s,baz=101,slow=22,SNR=6.8						
OUZ	**Omahuta**	**12.56**	**205**	P	**P**	**03 40 46.5**	**+2.4**
URZ	**Urewera**	**14.51**	**189**	P	**P**	**03 41 03.3**	**-1.1**
	4.7nm,0.3s,baz=344,slow=3.5,SNR=9.0						
URZ				S	**S**	**03 43 33.6**	**-3.0**
	9.2nm,0.8s,baz=273,slow=23,SNR=11						
BKZ	**Black Stump Fm**	**15.49**	**190**	P	**P**	**03 41 14.3**	**-0.5**
BKZ				IAmb	IAmb	03 41 16.1	
	comp=Z,9.9nm,1.1s						
RPZ	**Rata Peaks**	**21.07**	**198**	P	**P**	**03 42 05.6**	**-1.4**
	comp=Z,5.2nm,0.5s,baz=20,slow=17,SNR=1.7						
	comp=Z,5.2nm,0.5s						
ARMA	**Armidale**	**26.02**	**249**	P	**P**	**03 42 53.3**	**+1.9**
CTAO	**Charters Tower**	**31.48**	**270**	P	**P**	**03 43 40.1**	**+1.1**
CTAO				IAmb	IAmb	03 43 40.5	
	comp=Z,5.8nm,0.7s						
COEN	**Coen**	**36.12**	**279**	P	**P**	**03 44 18.6**	**+0.5**
COEN				IAmb	IAmb	03 44 24.0	
	comp=Z,5.7nm,1.0s						
BBOO	**Buckleboo**	**39.44**	**247**	P	**P**	**03 44 44.6**	**-0.4**
ASAR	**Alice Springs**	**42.04**	**261**	P	**P**	**03 45 05.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=94,slow=8.2,SNR=8.3						
ASAR				S	**S**	**03 50 45.7**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=105,slow=17,SNR=3.1						
	comp=Z,0.5nm,0.4s						
WB2	**Warramunga Arr**	**42.40**	**266**	P	**P**	**03 45 08.6**	**-0.2**
WB2				IAmb	IAmb	03 45 09.0	
	comp=Z,3.7nm,0.7s						
WB0	**Warramunga Arr**	**42.40**	**266**	P	**P**	**03 45 08.3**	**-0.5**
WB0				IAmb	IAmb	03 45 09.1	
	comp=Z,3.8nm,0.7s						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**03 45 08.6**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=90,slow=5.7,SNR=96						
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**03 45 08.1**	**-0.8**
FORT	**Forrest**	**46.31**	**250**	P	**P**	**03 45 38.9**	**+0.1**
KNRA	**Kununurra**	**48.69**	**270**	P	**P**	**03 45 56.8**	**-0.2**
KNRA				IAmb	IAmb	03 45 57.3	
	comp=Z,10nm,0.9s						
CASY	**Casey**	**60.10**	**206**	P	**P**	**03 47 16.5**	**+0.1**
QSPA	**South Pole Qui**	**66.16**	**180**	P	**P**	**03 47 56.6**	**+1.1**
QSPA				IAmb	IAmb	03 48 01.2	
	comp=Z,4.0nm,1.1s						
MJAR	**Matsushiro Arr**	**71.92**	**326**	P	**P**	**03 48 30.1**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=146,slow=5.5,SNR=4.5						
	comp=Z,1.9nm,0.8s						
PMBI	**Palembang**	**75.32**	**273**	P	**P**	**03 48 49.8**	**-0.5**
MAW	**Mawson**	**77.73**	**200**	P	**P**	**03 49 04.2**	**+1.6**
KSRS	**Korea Array**	**78.27**	**320**	P	**P**	**03 49 06.5**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=134,slow=5.2,SNR=3.0						
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**79.12**	**347**	P	**P**	**03 49 10.9**	**+0.9**
	comp=Z,5.7nm,0.9s,baz=150,slow=6.5,SNR=2.8						
	comp=Z,5.7nm,0.9s						
MKAR	**Makanchi Array**	**112.17**	**313**	PKiKP	**PKiKP**	**03 55 35.3**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=88,slow=0.8,SNR=2.5						
KURBB	**Kurchatov Arra**	**115.26**	**316**	PKP	**PKPdf**	**03 55 40.7**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=85,slow=2.0,SNR=2.6						
BVAR	**Borovoye Array**	**120.46**	**319**	PKP	**PKPdf**	**03 55 50.5**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=98,slow=2.5,SNR=4.3						
ARCES	**ARCESS Array B**	**131.91**	**348**	PKP	**PKPdf**	**03 56 11.5**	**-1.8**
	comp=Z,1.6nm,0.8s,baz=26,slow=2.3,SNR=5.3						
FINES	**FINESS Array B**	**138.47**	**341**	PKP	**PKPdf**	**03 56 24.7**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=102,slow=3.3,SNR=7.1						
NB2	**NORSAR Subarra**	**142.10**	**351**	PKP	PKPpre	03 56 28.3	
	comp=Z,0.5nm,0.5s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**142.10**	**351**	PKhKP	PKPpre	03 56 28.3	
	comp=Z,0.2nm,0.4s,baz=27,slow=4.0,SNR=1.2						
HFS	**Hagfors**	**142.57**	**349**	PKhKP	PKPpre	03 56 29.4	
	comp=Z,4.1nm,0.5s,baz=67,slow=3.9,SNR=31						
AKASG	**Malin Array Be**	**144.99**	**327**	PKPbc	**PKPdf**	**03 56 37.5**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=46,slow=4.6,SNR=15						
BRTR	**Keskin Array B**	**147.59**	**307**	PKPbc	**PKPbc**	**03 56 45.2**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=153,slow=3.4,SNR=4.4						
BRTR				PKPab	**PKPab**	**03 56 50.4**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=104,slow=3.1,SNR=5.0						
EKA	**Eskdalemuir Ar**	**148.54**	**3**	PKPbc	**PKPbc**	**03 56 47.2**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=341,slow=2.6,SNR=5.8						
CLL	**Collm**	**150.88**	**343**		**PKPbc**	**03 56 51.8**	**-1.6**
DAVOX	**Davos/Dischmat**	**155.85**	**343**	PKPab	**PKPab**	**03 57 25.1**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=108,slow=4.1,SNR=5.8						
ESDC	**Sonseca Array**	**163.94**	**11**	PKPab	**PKPab**	**03 57 59.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=356,slow=3.2,SNR=3.4						

MEX 18 03:38:47.1±0.8, 16°.83N×100°.07W, h8km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.18**	**76**	*e*P	Pg	03 38 51.1	+0.4
ACP2				*e*S	Sg	03 38 54.3	+1.0
ACP2	**Acapulco**	**0.18**	**76**	*e*P	Pg	03 38 51.0	+0.2
ACP2				*e*S	Sg	03 38 54.1	+0.9
CAIG	**El Cayaco**	**0.29**	**318**	*e*P	Pg	03 38 52.5	-0.3
CAIG				*e*S	Sg	03 38 56.6	0.0
CAIG	**El Cayaco**	**0.29**	**318**	*e*P	Pg	03 38 52.5	-0.3
CAIG				*i* S	Sg	03 38 56.6	-0.1
DAIG	**Los Arroyos**	**0.44**	**65**	*e*P	Pg	03 38 54.9	-0.8
DAIG				*e*S	Sg	03 39 00.9	-0.6
DAIG	**Los Arroyos**	**0.44**	**65**	*e*P	Pg	03 38 54.9	-0.8
DAIG				*i* S	Sg	03 39 00.8	-0.6
ATYC	**Atoyac**	**0.52**	**317**	*e*P	Pg	03 38 56.0	-1.1
ATYC				*i* S	Sg	03 39 03.4	-0.5
ATYC	**Atoyac**	**0.52**	**317**	*i* P	Pg	03 38 55.9	-1.2
ATYC				*e*S	Sg	03 39 02.6	-1.2
CRIG	**Cruz Grande**	**0.90**	**96**	*e*P	Pg	03 39 02.3	-2.1
CRIG				*e*S	Sg	03 39 13.6	-2.5
CRIG	**Cruz Grande**	**0.90**	**96**	*e*P	Pg	03 39 02.3	-2.1
CRIG				*e*S	Sg	03 39 13.3	-2.8
MEIG	**Mezcala**	**1.17**	**21**	*e*P	Pg	03 39 07.0	-2.6
MEIG				*e*S	Sg	03 39 22.5	-2.3
MEIG	**Mezcala**	**1.17**	**21**	*e*P	Pg	03 39 06.7	-2.9
MEIG				*e*S	Sg	03 39 21.0	-3.8
MGIG	**Malinaltepec**	**1.43**	**74**	*e*P	Pn	03 39 10.7	-2.8
MGIG				*e*S	Sb	03 39 29.3	-3.2
MGIG	**Malinaltepec**	**1.43**	**74**	*e*P	Pn	03 39 10.7	-2.9
ARIG	**Puente Sto Nin**	**1.47**	**349**	*e*P	Pn	03 39 11.7	-2.3
ARIG				*e*S	Sn	03 39 30.9	-2.4
ARIG	**Puente Sto Nin**	**1.47**	**349**	*e*P	Pn	03 39 11.3	-2.6
ARIG				*e*S	Sn	03 39 30.1	-3.2
ZIIG	**Zihuatanejo**	**1.54**	**300**	*e*P	Pn	03 39 13.2	-1.7
ZIIG				*e*S	Sn	03 39 32.7	-2.5
ZIIG	**Zihuatanejo**	**1.54**	**300**	*e*P	Pn	03 39 12.4	-2.5
ZIIG				*e*S	Sn	03 39 32.5	-2.7
TLIG	**Tlapa**	**1.61**	**63**	*e*P	Pn	03 39 13.1	-2.8
TLIG				*e*S	Sn	03 39 36.1	-0.9
TLIG	**Tlapa**	**1.61**	**63**	*e*P	Pn	03 39 13.9	-2.0
TLIG				*e*S	Sn	03 39 32.3	-4.6
PLIG	**Platanillo**	**1.64**	**19**	*e*P	Pn	03 39 14.7	-1.7
PLIG				*e*S	Sn	03 39 35.4	-2.3
PLIG	**Platanillo**	**1.64**	**19**	*e*P	Pn	03 39 13.9	-2.5
PLIG				*e*S	Sn	03 39 34.1	-3.7
PNIG	**Pinotepa**	**1.91**	**103**	*e*P	Pn	03 39 19.1	-0.9
PNIG	**Pinotepa**	**1.91**	**103**	*e*P	Pn	03 39 18.1	-2.0
PNIG				*e*S	Sn	03 39 40.0	-4.3
PNIG				*e*S	Sb	03 39 45.2	-1.0
FTIG	**Fresnillo de T**	**2.13**	**60**	*e*P	Pn	03 39 20.6	-2.5
FTIG				*i* S	Sn	03 39 46.8	-3.1
FTIG	**Fresnillo de T**	**2.13**	**60**	*e*P	Pn	03 39 20.6	-2.6
FTIG				*e*S	Sn	03 39 45.1	-4.8
TXIG	**Tlaxiaco**	**2.24**	**79**	*e*P	Pg	03 39 29.2	-0.8
TXIG				*e*S	Sn	03 39 48.1	-4.7
TXIG	**Tlaxiaco**	**2.24**	**79**	*e*P	Pg	03 39 29.1	-1.0
TXIG				*e*S	Sn	03 39 47.5	-5.2
HLIG	**Huajuapan de L**	**2.38**	**65**	*e*P	Pn	03 39 26.8	+0.2
HLIG	**Huajuapan de L**	**2.38**	**65**	*e*P	Pn	03 39 24.5	-2.1
HLIG				*e*S	Sn	03 39 54.7	-1.4

*TRN **18** 03:38:59.5, 10°.51N×62°.19W, h3km, MD3.7*

*FUNV **18** 03:39:00.5, 10°.48N×62°.27W, h45km, MW3.4*

ISC 18 03:38:56.8±1.4, 10°.38N±0°.05×62°.30W±0°.04, h12km±10km, n20, σ1s73/30, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.92**	**73**	*e*P	**Pg**	**03 39 13.9**	**-0.6**
TRN				*e*S	**Sb**	**03 39 26.5**	**-0.3**
CRUV	**Carupano**	**0.97**	**288**	*e*P	**Pg**	**03 39 16.6**	**+1.1**
CRUV				*e*S	**Sg**	**03 39 29.3**	**+1.1**
GRFF	**Grenada Fort F**	**1.74**	**18**	*e*P	**Pb**	**03 39 28.9**	**+0.1**
GRFF				*e*S	**Sg**	**03 39 50.3**	**-2.7**
GRGR	**Grenville**	**1.85**	**20**	*e*P	**Pn**	**03 39 29.8**	**+1.4**
GRGR				*e*S	**Sb**	**03 39 53.0**	**-0.8**
TOSP	**Speyside**	**1.95**	**62**	*e*P	**Pb**	**03 39 32.5**	**+0.2**
TOSP				*e*S	**Sb**	**03 39 55.3**	**-1.4**
GCMP	**Grenada, Carri**	**2.26**	**22**	*e*P	**Pb**	**03 39 36.3**	**-1.3**
GCMP				*e*S	**Sb**	**03 40 02.6**	**-2.9**
PCRV	**Puerto La Cruz**	**2.31**	**265**	*e*P	**Pn**	**03 39 34.8**	**-0.1**
PCRV				*e*S	**Sn**	**03 40 01.1**	**-2.2**
PRGV	**PARIAGUAN**	**2.82**	**235**	*e*P	**Pn**	**03 39 44.1**	**+2.3**
PRGV				*e*S	**Sn**	**03 40 14.6**	**-1.3**
SVB	**Belmont**	**3.05**	**19**	*e*P	**Pn**	**03 39 46.5**	**+1.6**
SVB				*e*S	**Sn**	**03 40 22.5**	**+1.1**
MCLT	**Moule a Chique**	**3.56**	**22**	*e*P	**Pn**	**03 39 54.2**	**+2.2**
MCLT				*e*S	**Sn**	**03 40 34.3**	**+0.2**
SLBI	**Saint Lucia, B**	**3.84**	**20**	*e*P	**Pn**	**03 39 58.3**	**+2.5**
SLBI				*e*S	**Sn**	**03 40 41.8**	**+0.8**
BIRV	**Birongo**	**3.91**	**272**	*e*P	**Pn**	**03 39 56.6**	**-0.2**
MPOM	**Morne Pois Mar**	**4.27**	**19**	*e*P	**Pn**	**03 40 04.5**	**+2.8**
MPOM	**Morne Pois Mar**	**4.27**	**19**	*e*S	**Sn**	**03 40 50.9**	**-0.7**
BIM	**Bigot**	**4.28**	**16**	*e*P	**Pn**	**03 40 04.8**	**+2.9**
BENV	**Beln**	**5.24**	**266**	*e*P	**Pn**	**03 40 15.5**	**+0.4**
BENV				*e*S	Sn	03 41 10.1	-5.5
BAUV	**El Baul**	**5.84**	**256**	*e*P	**Pn**	**03 40 26.2**	**+2.8**
BAUV	**El Baul**	**5.84**	**256**	*e*S	**Sn**	**03 41 30.2**	**-0.2**
BAUV	**El Baul**	**5.84**	**256**	*e*P	**Pn**	**03 40 23.8**	**+0.4**
BAUV				*e*S	Sn	03 41 24.3	-6.1
MAPV	**Macapo**	**6.09**	**265**	*e*P	Pn	03 40 26.3	-0.5

*NEIC **18** 03:55:44.7±1.4, 4°.3S±0°.1×153°.04E±0°.06, h30km±8km, mb4.9/18, Error ellipse: s-maj=16.3km s-min=7.0km az=201.0*

*IDC **18** 03:55:48.1±2.9, 4°.33S×152°.89E, h53km±21km, mb3.8/6, mbtmp4.1/8, ML3.1/2, MS3.3/10, Error ellipse: s-maj=29.2km s-min=21.8km az=130.0*

ISC 18 03:55:48.0±0.7, 4°.30S±0°.07×152°.91E±0°.09, h55km, n51, σ1s29/47, mb4.8/16, MS3.2/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.75**	**279**	Pn	**Pn**	**03 56 01.6**	**-1.1**
RABL				Sn	**Sn**	**03 56 12.4**	**-1.0**
RABL	**Rabaul**	**0.75**	**279**	P	**Pn**	**03 56 01.6**	**-1.1**
MANU	**Manus Island**	**5.97**	**292**	Pn	**Pn**	**03 57 18.0**	**+4.1**
PMG	**Port Moresby**	**7.63**	**228**	P	**Pn**	**03 57 38.4**	**+1.7**
	2.8nm,0.3s,baz=21,slow=12,SNR=4.8						
PMG				S	**Sn**	**03 59 01.8**	**-0.1**
	14nm,0.4s,baz=102,slow=18,SNR=6.0						
	15nm,0.4s						
PMG	**Port Moresby**	**7.63**	**228**	Pn	**Pn**	**03 57 39.5**	**+2.8**
HNR	**Honiara**	**8.64**	**126**	LR	LR	04 01 21.3	
	comp=Z,2μm,20.9s,baz=309,slow=39						
PATS	**Pohnpei**	**12.31**	**26**	Pn	**Pn**	**03 58 40.3**	**-0.4**
COEN	**Coen**	**13.57**	**224**	Pn	**P**	**03 59 05.5**	**+0.2**
MTSU	**Mount Surprise**	**16.11**	**211**	P	**P**	**03 59 36.4**	**+2.9**
	12nm,1.1s						
CTA	**Charters Tower**	**16.98**	**202**	P	**Pn**	**03 59 43.1**	**+1.2**
	0.2nm,0.3s,baz=38,slow=10,SNR=5.5						
CTA				LR	LR	04 05 32.6	
	comp=Z,82nm,20.4s,baz=72,slow=34						
	2.8nm,0.8s						
CTAO	**Charters Tower**	**16.98**	**202**	P	**Pn**	**03 59 39.2**	**-2.7**
GUMO	**Guam**	**19.49**	**336**	LR	LR	04 07 58.7	
	comp=Z,19nm,18.1s,baz=76,slow=38						
QIS	**Mount Isa**	**20.70**	**218**	P	**P**	**04 00 24.3**	**+0.4**
KDU	**Kakadu**	**21.84**	**246**	P	**P**	**04 00 35.3**	**-0.9**
DZM	**Mont Dzumac**	**22.00**	**145**	P	**P**	**04 00 38.2**	**+0.3**
	3.3nm,0.5s,baz=286,slow=16,SNR=6.2						
DZM				LR	LR	04 08 17.1	
	comp=Z,85nm,19.0s,baz=206,slow=34						
	3.3nm,0.5s						
DZM	**Mont Dzumac**	**22.00**	**145**	P	**P**	**04 00 37.5**	**-0.3**
DZM				IAmb	IAmb	04 00 38.9	
	comp=Z,29nm,1.4s						
MTN	**Manton Dam**	**23.13**	**247**	P	**P**	**04 00 49.5**	**-0.2**
MTN				IAmb	IAmb	04 00 58.5	
	comp=Z,86nm,1.9s						
WB0	**Warramunga Arr**	**23.71**	**228**	P	**P**	**04 00 54.3**	**-0.9**
WB0				IAmb	IAmb	04 00 56.4	
	comp=Z,31nm,0.6s						
WR0	**Warramunga Arr**	**23.72**	**227**	P	**P**	**04 00 54.3**	**-0.9**
WR0				IAmb	IAmb	04 00 56.5	
	comp=Z,20nm,0.6s						
WRAB	**Tennant Creek**	**23.84**	**228**	P	**P**	**04 00 55.8**	**-0.6**
WRAB				IAmb	IAmb	04 00 57.6	
	comp=Z,29nm,0.6s						
WRAB	**Tennant Creek**	**23.84**	**228**	P	**P**	**04 00 55.9**	**-0.5**
WB2	**Warramunga Arr**	**23.85**	**228**	P	**P**	**04 00 55.8**	**-0.6**
WB2				IAmb	IAmb	04 00 57.8	
	comp=Z,29nm,0.6s						
WRA	**Warramunga Arr**	**23.86**	**228**	P	**P**	**04 00 55.9**	**-0.6**
	comp=Z,22nm,0.5s,baz=54,slow=9.9,SNR=168						
WRA				ScP	**ScP**	**04 08 13.0**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=56,slow=2.9,SNR=3.5						
WRA				LR	LR	04 10 22.9	
	comp=Z,109nm,18.2s,baz=126,slow=37						
WRA	**Warramunga Arr**	**23.86**	**228**	P	**P**	**04 00 55.1**	**-1.4**
WB1	**Warramunga Ar.**	**23.86**	**228**	P	**P**	**04 00 56.2**	**-0.4**
KNRA	**Kununurra**	**26.29**	**243**	P	**P**	**04 01 19.8**	**+1.2**
H11S3	**WAKE ISLAND Hy**	**26.41**	**31**	T	T	04 28 46.9	
	baz=210,slow=76,SNR=25						
H11S2	**WAKE ISLAND Hy**	**26.42**	**31**	T	T	04 28 51.5	
	baz=210,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**26.43**	**31**	T	T	04 28 54.0	
	baz=210,slow=76,SNR=16						
AS01	**Alice Springs**	**26.56**	**222**	P	**P**	**04 01 21.5**	**+0.5**
AS31	**Alice Springs**	**26.59**	**222**	P	**P**	**04 01 20.9**	**-0.4**
ASAR	**Alice Springs**	**26.59**	**222**	P	**P**	**04 01 21.1**	**-0.3**
	comp=Z,5.9nm,0.5s,baz=56,slow=8.8,SNR=18						
ASAR				ScP	**ScP**	**04 08 20.9**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=70,slow=3.0,SNR=5.1						
ASAR				LR	LR	04 11 29.3	
	comp=Z,71nm,19.7s,baz=353,slow=35						
	comp=Z,5.9nm,0.5s						
ASAR	**Alice Springs**	**26.59**	**222**	P	**P**	**04 01 19.9**	**-1.4**
STKA	**Stephens Creek**	**29.41**	**200**	P	**P**	**04 01 45.6**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=35,slow=14,SNR=5.5						
STKA				LR	LR	04 14 03.8	
	comp=Z,77nm,18.1s,baz=190,slow=37						
	comp=Z,2.9nm,0.7s						
WRKA	**Warakurna**	**31.38**	**227**	P	**P**	**04 02 03.0**	**-0.9**
KAPI	**Kappang**	**33.05**	**267**	LR	LR	04 18 56.8	
	comp=Z,22nm,20.0s,baz=86,slow=42						
FORT	**Forrest**	**35.24**	**219**	P	**P**	**04 02 36.3**	**-1.1**
MBWA	**Marble Bar**	**36.31**	**240**	P	**P**	**04 02 45.7**	**-1.1**
MBWA				IAmb	IAmb	04 03 42.3	
	comp=Z,46nm,1.5s						
PSA00	**Pilbara Seismi**	**36.38**	**239**	P	**P**	**04 02 45.0**	**-2.2**
PSA00				IAmb	IAmb	04 02 46.4	
	comp=Z,13nm,1.4s						
PSA00	**Pilbara Seismi**	**36.38**	**239**	P	**P**	**04 02 45.7**	**-1.5**
PSA00				IAmb	IAmb	04 02 46.4	
	comp=Z,54nm,1.5s						
JHJ	**Hachijo jima 2**	**39.24**	**342**	LR	LR	04 15 58.4	
	comp=Z,23nm,21.6s,baz=136,slow=31						
GIRL	**Giralia**	**41.60**	**240**	P	**P**	**04 03 30.7**	**-0.2**
MORW	**Morawa**	**42.74**	**231**	P	**P**	**04 03 39.1**	**-1.1**
MORW				IAmb	IAmb	04 04 32.9	
	comp=Z,81nm,1.9s						
KSRS	**Korea Array**	**47.61**	**333**	LR	LR	04 20 41.9	
	comp=Z,12nm,22.0s,baz=10,0,slow=31						
MKAR	**Makanchi Array**	**80.03**	**319**	P	**P**	**04 07 53.0**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=108,slow=7.0,SNR=2.4						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**81.66**	**22**	P	**P**	**04 07 59.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=232,slow=5.2,SNR=2.4						
	comp=Z,0.3nm,0.6s						
QSPA	**South Pole Qui**	**85.65**	**180**	P	**P**	**04 08 20.1**	**-0.5**
QSPA				IAmb	IAmb	04 08 22.3	
	comp=Z,10nm,1.4s						
MAW	**Mawson**	**86.07**	**203**	P	**P**	**04 08 22.8**	**+0.3**
	comp=Z,

KAN06	Argonia West S	1.61	347	Pn	Pb	04 15 33.1	-0.3
KAN08	Anthony NE Sta	1.61	344	Pn	Pn	04 15 32.9	+0.8
KAN12	Harper NE Stat	1.69	344	Pn	Pn	04 15 34.0	+0.9
X37A	Clayton	1.99	122	Pn	Pn	04 15 38.0	+0.7
X37A	Clayton	1.99	122	P	Pn	04 15 38.1	+0.8
	baz=304						
X37A				Sb	Sg	04 16 06.7	-1.1
	baz=304						
Z35A	Perchaven, San	2.34	177	Pn	Pn	04 15 43.4	+1.3
U38A	Gravette	2.57	72	Pn	Pn	04 15 45.8	+0.6
HHAR	Hobbs	2.88	77	Pn	Pn	04 15 50.0	+0.5
R32A	Long Quarter,	2.93	340	Pn	Pn	04 15 51.5	+1.3
Z38A	Mt. Pleasant	3.13	140	Pn	Pn	04 15 53.7	+0.8
MIAR	Mount Ida	3.34	109	Pn	Pn	04 15 56.7	+0.9
MIAR				IAmb_Lg		04 16 55.7	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	3.48	10	Pn	Pn	04 15 58.5	+0.8
KSU1				IAmb_Lg		04 16 56.2	
	comp=Z,9.1nm,0.9s						
KSU1	Kansas State U	3.48	10	P	Pn	04 15 58.8	+1.1
	baz=191						
AMTX	Amarillo	3.58	258	IAmb_Lg		04 16 56.7	
	comp=Z,10nm,0.8s						
CBKS	Cedar Bluff	3.64	330	IAmb_Lg		04 17 01.2	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.85	57	Pn	Pn	04 16 04.3	+1.5
WLAR	White Oak Lake	4.06	118	Pn	Pn	04 16 04.4	-1.3
WHAR	Wooly Hollow	4.20	94	Pn	Pn	04 16 08.1	+0.5
WHAR				IAmb_Lg		04 17 25.7	
	comp=Z,13nm,0.9s						
UALR	University of	4.24	101	IAmb_Lg		04 17 29.9	
	comp=Z,15nm,0.8s						
FCAR	Ozark Folk Cen	4.30	86	Pn	Pn	04 16 09.8	+0.8
FCAR				IAmb_Lg		04 17 23.8	
	comp=Z,10nm,0.8s						
MGMO	Mountain Grove	4.40	69	IAmb_Lg		04 17 30.7	
	comp=Z,8.4nm,0.7s						
R40A	Maddies Statio	4.87	56	IAmb_Lg		04 17 51.6	
	comp=Z,6.8nm,0.7s						
435B	Jarrell	4.88	182	IAmb_Lg		04 17 50.5	
	comp=Z,14nm,0.7s						
P38A	Dawn	5.00	37	Pn	Pn	04 16 19.0	+0.4
P38A				IAmb_Lg		04 17 55.4	
	comp=Z,6.7nm,0.8s						
LCAR	Lake Charles	5.09	84	Pn	Pn	04 16 19.1	-0.8
LCAR				IAmb_Lg		04 17 50.5	
	comp=Z,6.8nm,0.9s						
CCM	Cathedral Cave	5.48	63	IAmb_Lg		04 18 01.5	
	comp=Z,9.2nm,0.7s						
W45A	Hickory Valley	6.74	92	IAmb_Lg		04 18 50.1	
	comp=Z,12nm,0.7s						
S44A	Carbondale	6.86	71	IAmb_Lg		04 18 53.0	
	comp=Z,11nm,0.8s						
Q24A	Divide	6.99	300	IAmb_Lg		04 18 56.9	
	comp=Z,5.3nm,0.9s						
T45A	Paducah	7.20	77	IAmb_Lg		04 19 05.3	
	comp=Z,13nm,0.7s						
P43A	Skaggs, Pawnee	7.40	55	IAmb_Lg		04 19 03.8	
	comp=Z,10nm,0.9s						
ISCO	Idaho Springs	7.69	305	IAmb_Lg		04 19 10.1	
	comp=Z,9.1nm,0.9s						

IDC ***18*** *04:26:05.9±0.5, 60°.75S×47°.13W, h0km, mb4.7/16, mbtmp4.7/18, ML4.5/2, MS4.9/46, Error ellipse: s-maj=17.5km s-min=12.3km az=63.0*

NEIC ***18*** *04:26:06.9±1.7, 60°.30S±0°.08×47°.2W±0°.2, h10km±1km, mb5.3/80, Ms_20 5.1/100, Error ellipse: s-maj=16.9km s-min=13.1km az=78.0*

MOS ***18*** *04:26:07.2±1.9, 60°.22S×47°.12W, h10km, mb5.6/15, MS5.0/7, Error ellipse: s-maj=25.1km s-min=9.1km az=98.9*

GCMT ***18*** *04:26:08.9±0.1, 60°.47S±0°.01×47°.41W±0°.01, h12km, MW5.4/149, Moment Tensor Solution. s129,c223; s149,c277; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.45±.02; Mθθ0.22±.02; Mφφ-0.66±.02; Mrθ0.19±.04; Mθφ1.50±.01; Mφr0.47±.04; Best double couple: M=1.66800×10^17 NP1:φs6.00000°, δ79.00000°, λ159.00000°. NP2:φs100.00000°, δ69.00000°, λ11.00000°. Principal axes: T 1.5180, Plg22.0000°, Azm321.0000°; N 0.3000, Plg67.0000°, Azm160.0000°; P -1.8190, Plg7.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 04:26:07.8±0.2, 60°.33S±0°.05×47°.21W±0°.05, h10km, n447, σ1§86/352, mb5.3/57, MS5.1/110, 9C-1D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.38	48	P	Pn	04 28 07.4	-1.8
HOPE				pmax	pmax		
	comp=Z,730nm,0.7s						
PMSA	Palmer Station	8.95	233	Pn	Pn	04 28 16.3	-0.6
	comp=Z,8.4nm,0.3s,baz=55,slow=10,SNR=72						
PMSA				Sn	Sn	04 29 57.2	-0.4
	comp=Z,1.8nm,0.3s,baz=198,slow=20,SNR=1.1						
PMSA				LR	LR	04 31 45.7	
	comp=Z,12μm,18.7s,baz=34,slow=38						
	comp=Z,27nm,0.4s						
PMSA	Palmer Station	8.95	233	Pn	Pn	04 28 15.7	-1.2
EFI	East Falkland	10.57	320	Pn	Pn	04 28 38.9	-0.3
EFI	East Falkland	10.57	320	*i* P	Pn	04 28 40.1	+0.9
SMAI	San Martin Ant	11.61	219	Pn	Pn	04 28 50.9	-2.4
USHA	Ushuaia	12.62	286	Pn	Pn	04 29 06.5	-0.6
	comp=Z,1.7nm,0.3s,baz=335,slow=0.3,SNR=13						
USHA				LR	LR	04 32 51.2	
	comp=Z,7μm,19.0s,baz=119,slow=32						
	comp=Z,7.6nm,0.3s						
MG02	Cerro Sombrero	14.24	292	Pn	Pn	04 29 30.1	+0.8
GO10	Punta Arenas	14.86	288	Pn	Pn	04 29 37.8	+0.1
MG05	Puerto Natales	16.49	290	Pn	Pn	04 29 58.9	0.0
GO09	Cerro Castillo	16.69	292	Pn	Pn	04 30 00.5	-0.9
BELA	Belgrano 2	18.10	171	Pn	Pn	04 30 18.2	-0.7
VNA3	Neumayer Olymp	18.48	142	P	Pn	04 30 23.9	+0.3
VNA1	Neumayer--Stat	18.77	139	P	Pn	04 30 26.9	-0.2
VNA2	Neumayer--Watz	19.11	140	P	P	04 30 30.6	+0.2
	baz=283,slow=15						
SNAA	Sanae	20.71	141	P	P	04 30 48.4	+0.7
SNAA	Sanae	20.71	141	P	P	04 30 48.6	+0.8
	comp=Z,195nm,1.1s,baz=284,slow=8.5,SNR=38						
SNAA				S	S	04 34 34.2	-4.5
	comp=Z,10.0nm,0.9s,baz=336,slow=23,SNR=4.4						
SNAA				LR	LR	04 38 01.3	
	comp=Z,4μm,18.1s,baz=293,slow=34						
	comp=Z,195nm,1.1s						
SNAA	Sanae	20.71	141		P	04 30 46.9	-0.9
SNAA	Sanae	20.71	141	*c i* P	P	04 30 48.5	+0.7
SNAA				pmax	pmax		
	comp=Z,450nm,1.4s						
COYC	Coyhaique	20.85	304	P	P	04 30 48.3	-1.2
COYC				IAmb	IAmb	04 31 03.7	
	comp=Z,267nm,1.7s						
AY01	Puyuhuapi	22.03	305	P	P	04 31 00.5	-1.6
TROLL	Troll, Antarti	22.42	142	P	P	04 31 07.2	+0.9
LL02	Futaleuf	22.73	308	P	P	04 31 07.7	-2.0
LL02				IAmb	IAmb	04 31 21.1	
	comp=Z,152nm,1.6s						
PLCA	Paso Flores	24.36	313	P	P	04 31 25.6	-0.2
	comp=Z,9.7nm,0.6s,baz=180,slow=7.1,SNR=51						
PLCA				LR	LR	04 40 40.0	
	comp=Z,3μm,20.7s,baz=161,slow=36						
	comp=Z,9.7nm,0.6s						
PLCA	Paso Flores	24.36	313	P	P	04 31 23.7	-2.0
PLCA				IAmb	IAmb	04 31 33.8	
	comp=Z,74nm,1.1s						
PLCA	Paso Flores	24.36	313	*eP*	P	04 31 25.7	0.0
LL04	Puerto Octay	24.89	310	P	P	04 31 29.6	-0.9
NVL	N'lazarevskaya	25.41	139	*eP*	P	04 31 36.4	+1.5
NVL				*e*S	S	04 35 58.5	-2.7
NVL				pmax	pmax		
	comp=Z,73nm,1.3s						
NVL				MLR	MLR		
	comp=Z,4μm,15.0s						
GO06	Curarrehue	25.70	313	P	P	04 31 36.5	-1.5
LPA	La Plata	26.37	340	*c i* P	P	04 31 39.0	-4.9
LPA				pPP		04 32 25.8	
LPA				PCP	PcP	04 35 12.4	+3.1
LPA				S	S	04 36 21.7	+4.9
LPA				SCS	ScS	04 42 41.3	+2.4
PLTB	Pedras Altas	28.89	349	P	P	04 32 03.9	-2.6
PLTB				IAmb	IAmb	04 32 14.9	
	comp=Z,48nm,1.0s						
ML02	Panimavida	29.10	317	P	P	04 32 06.9	-1.4
ML02				IAmb	IAmb	04 32 47.6	
	comp=Z,65nm,1.3s						
QSPA	South Pole Qui	29.91	180	P	P	04 32 16.7	+1.3
	comp=Z,45nm,0.8s,baz=169,slow=4.8,SNR=54						
	comp=Z,45nm,0.8s						
QSPA	South Pole Qui	29.91	180	P	P	04 32 14.4	-1.0
GO05	Huala	29.96	317	P	P	04 32 13.2	-2.8
GO05				IAmb	IAmb	04 32 32.1	
	comp=Z,57nm,1.1s						
BO04	La Punta	30.45	319	P	P	04 32 19.3	-1.0
BO04				IAmb	IAmb	04 32 35.5	
	comp=Z,41nm,1.1s						
MT09	Talagante	30.77	319	P	P	04 32 21.5	-1.7
MT01	Popeta	30.77	319	P	P	04 32 21.6	-1.5
MT01				IAmb	IAmb	04 32 35.7	
	comp=Z,41nm,0.9s						
MT03	Universidad Ad	30.87	320	P	P	04 32 22.8	-1.4
MT05	Renca	31.04	320	P	P	04 32 23.2	-2.3
MT02	Curacav	31.29	319	P	P	04 32 25.7	-2.0
MT02				IAmb	IAmb	04 32 40.7	
	comp=Z,47nm,0.9s						
ITQB	Itaqui	31.31	344	P	P	04 32 25.4	-2.4
VA03	San Esteban	31.56	320	P	P	04 32 29.1	-1.1
ZON	Zonda	32.12	324	P	P	04 32 33.8	-1.3
ZON	Zonda	32.12	324	P	P	04 32 33.8	-1.3
ZON				pmax	pmax		
	comp=Z,13nm,0.8s						
CO01	Juntas del Tor	34.01	323	P	P	04 32 50.2	-1.6
CO01				IAmb	IAmb	04 33 07.1	
	comp=Z,66nm,1.4s						
GO04	Tololo Observa	34.04	322	P	P	04 32 49.8	-2.3
CPUP	Villa Florida	34.69	344	P	P	04 32 56.9	-0.5
	comp=Z,2.8nm,0.7s,baz=168,slow=8.2,SNR=8.0						
CPUP				LR	LR	04 45 48.6	
	comp=Z,1μm,22.0s,baz=172,slow=34						
	comp=Z,2.8nm,0.7s						
CPUP	Villa Florida	34.69	344	P	P	04 32 55.1	-2.3
AC05	El Transito	35.13	323	P	P	04 32 58.8	-2.6
AC04	Llanos de Chal	35.96	323	P	P	04 33 07.1	-1.2
GO03	Copiap	36.28	324	P	P	04 33 09.8	-1.4
GO03				IAmb	IAmb	04 33 27.7	
	comp=Z,41nm,0.8s						
AC06	Mina Casimiro	36.54	324	P	P	04 33 11.4	-2.0
AC06				IAmb	IAmb	04 33 27.6	
	comp=Z,48nm,1.0s						
AC02	Maricunga	36.69	326	P	P	04 33 12.7	-2.4
AC02				IAmb	IAmb	04 33 31.8	
	comp=Z,40nm,0.9s						
TRCB	Terra Rica	37.70	352	P	P	04 33 21.0	-2.3
GO02	Mina Guanaco	38.40	326	P	P	04 33 27.0	-2.5
PB15	IPOC Station P	40.22	327	P	P	04 33 42.9	-1.6
AQDB	Aquidauana	40.27	348	P	P	04 33 43.5	-1.2
SBA	Scott Base	40.50	190	P	P	04 33 46.9	+0.8
SBA				IAmb	IAmb	04 33 59.7	
	comp=Z,62nm,1.1s						
SBA	Scott Base	40.50	190	IAms_20	IAms_20	04 53 18.3	
	comp=Z,2μm,19.0s						
SBA	Scott Base	40.50	190	P	P	04 33 46.9	+0.8
SBA				pmax	pmax		
	comp=Z,62nm,1.1s						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s						
LVC	Limon Verde	40.65	328	P	P	04 33 48.2	0.0
	comp=Z,6.9nm,0.8s,baz=166,slow=5.3,SNR=6.0						
LVC				LR	LR	04 52 04.9	
	comp=Z,1μm,18.2s,baz=190,slow=38						
	comp=Z,6.9nm,0.8s						
LVC	Limon Verde	40.65	328	P	P	04 33 46.4	-1.8
VNDA	Vanda	41.23	189	P	P	04 33 53.1	+1.0
	comp=Z,2.1nm,0.7s,baz=158,slow=9.0,SNR=8.9						
VNDA				LR	LR	04 52 49.5	
	comp=Z,3μm,18.0s,baz=158,slow=39						
	comp=Z,2.1nm,0.7s						
VNDA	Vanda	41.23	189	P	P	04 33 52.2	+0.1
VNDA				IAmb	IAmb	04 34 03.0	
	comp=Z,90nm,1.9s						
PB03	IPOC Station P	41.40	327	P	P	04 33 53.1	-1.1
PB09	IPOC Station P	41.51	328	P	P	04 33 53.7	-1.5
PB09				IAmb	IAmb	04 34 10.5	
	comp=Z,63nm,1.3s						
PB07	IPOC Station P	41.75	327	P	P	04 33 56.2	-0.9
PB01	IPOC Station P	42.29	328	P	P	04 34 00.0	-1.4
PB01				IAmb	IAmb	04 34 16.4	
	comp=Z,96nm,1.4s						
MAW	Mawson	42.63	148	P	P	04 34 04.5	+0.9
	comp=Z,16nm,0.7s,baz=225,slow=9.8,SNR=20						
MAW				LR	LR	04 51 28.1	
	comp=Z,2μm,18.3s,baz=236,slow=36						
	comp=Z,16nm,0.7s						
MAW	Mawson	42.63	148	P	P	04 34 02.5	-1.1
PB08	IPOC Station P	43.07	329	P	P	04 34 06.3	-1.8
GO01	Chusmiza	43.53	329	P	P	04 34 09.8	-2.2
GO01				IAmb	IAmb	04 34 22.9	
	comp=Z,119nm,1.7s						
BDFB	Brasilia	44.63	359	P	P	04 34 20.3	0.0
	comp=Z,6.6nm,0.7s,baz=167,slow=2.9,SNR=16						
BDFB				LR	LR	04 51 52.4	
	comp=Z,312nm,18.7s,baz=179,slow=35						
	comp=Z,6.6nm,0.7s						
BDFB	Brasilia	44.63	359	P	P	04 34 19.4	-0.9
SIV	San Ignacio	45.41	341	LR	LR	04 52 37.1	
	comp=Z,1μm,21.9s,baz=184,slow=35						
LPAZ	La Paz	46.52	332	P	P	04 34 36.0	+0.1
	comp=Z,2.0nm,0.7s,baz=177,slow=6.0,SNR=9.5						
LPAZ				LR	LR	04 54 29.8	
	comp=Z,546nm,21.7s,baz=220,slow=37						
	comp=Z,2.0nm,0.7s						
LPAZ	La Paz	46.52	332	P	P	04 34 34.1	-1.8
LPAZ	La Paz	46.52	332	P	P	04 34 36.0	+0.1
SUR	Sutherland	51.69	89	P	P	04 35 15.3	+0.4
	comp=Z,14nm,0.8s,baz=212,slow=6.6,SNR=14						
SUR				LR	LR	04 51 53.4	
	comp=Z,2μm,21.9s,baz=210,slow=30						
	comp=Z,14nm,0.8s						
SUR	Sutherland	51.69	89	IAms_20	IAms_20	04 51 35.3	
	comp=Z,2μm,21.0s						
MERW	Merweville	51.81	90	*eP*	P	04 35 16.5	+0.7
MERW				IAmb	IAmb	04 35 21.5	
	comp=Z,218nm,1.9s						
FRAZ	Fraserburg	52.35	89	*eP*	P	04 35 20.2	+0.4
FRAZ				IAmb	IAmb	04 35 26.1	
	comp=Z,237nm,2.0s						
GRAN	Grantham	52.43	90	*eP*	P	04 35 20.7	+0.4
GRAN				IAmb	IAmb	04 35 28.2	
	comp=Z,19nm,0.6s						
CASY	Casey	52.63	169	P	P	04 35 21.8	+0.6
CASY				IAmb	IAmb	04 35 28.0	
	comp=Z,73nm,1.3s						
CASY	Casey	52.63	169	IAms_20	IAms_20	04 59 01.4	
	comp=Z,2μm,18.0s						
ROOI	Rooidraai Farm	52.96	92	*eP*	P	04 35 24.6	+0.3
ROOI				IAmb	IAmb	04 35 31.5	
	comp=Z,384nm,2.4s						
NNA	Nana	52.98	323	LR	LR	04 56 48.2	
	comp=Z,656nm,20.0s,baz=141,slow=35						
NNA	Nana	52.98	323	*i* P	P	04 35 25.5	+1.1
NNA				pmax	pmax		
	comp=Z,63nm,1.0s						
RPN	Rapa Nui	53.08	280	LR	LR	04 52 05.9	
	comp=Z,370nm,19.3s,baz=151,slow=29						
GRAF	Camdeboo Natio	53.60	92	*eP*	P	04 35 28.4	-0.6
GRAF				IAmb	IAmb	04 35 38.4	
	comp=Z,56nm,0.8s						
SOE	Somerset East	53.79	94	P	P	04 35 29.8	-0.4
RCBR	Riachuelo	55.05	14	LR	LR	04 58 23.4	
	comp=Z,751nm,18.6s,baz=326,slow=35						
H10S2	ASCENSION HYDR	56.74	39	T	T	05 37 41.0	
	baz=200,slow=74,SNR=19						
H10S3	ASCENSION HYDR	56.74	39	T	T	05 37 41.0	
	baz=20,slow=74,SNR=33						
BOSA	Boshof	56.97	90	P	P	04 35 52.4	-1.0
	comp=Z,8.8nm,0.8s,baz=206,slow=6.3,SNR=10						
BOSA				LR	LR	04 55 40.6	
	comp=Z,2μm,19.3s,baz=217,slow=31						
	comp=Z,8.8nm,0.8s						
H10N3	ASCENSION HYDR	57.84	39	T	T	05 39 03.1	
	baz=199,slow=75,SNR=183						
H10N1	ASCENSION HYDR	57.84	39	T	T	05 39 03.4	
	baz=199,slow=75,SNR=137						
H10N2	ASCENSION HYDR	57.85	39	T	T	05 39 04.5	
	baz=199,slow=75,SNR=136						
ATAH	Atahualpa	58.03	323	LR	LR	04 59 02.3	
	comp=Z,922nm,22.0s,baz=152,slow=34						
NWCL	Newcastle	60.00	94	*eP*	P	04 36 14.1	-0.3
NWCL				IAmb	IAmb	04 36 20.8	
	comp=Z,38nm,1.0s						
LBTB	Lobatse	60.12	88	P	P	04 36 14.5	-0.8
	comp=Z,13nm,0.8s,baz=219,slow=7.1,SNR=17						
LBTB				LR	LR	04 56 38.8	
	comp=Z,2μm,21.4s,baz=220,slow=30						
	comp=Z,13nm,0.8s						
LBTB	Lobatse	60.12	88	P	P	04 36 14.4	-0.8
LBTB	Lobatse	60.12	88	P	P	04 36 14.5	-0.8
LBTB				pmax	pmax		
	comp=Z,202nm,1.8s						
TSUM	Tsumeb	61.06	78	LR	LR	04 56 27.4	
	comp=Z,770nm,21.8s,baz=214,slow=30						
POGA	Pongola	61.22	95	P	P	04 36 20.5	-2.1
POGA				IAmb	IAmb	04 36 29.2	
	comp=Z,43nm,1.3s						
BOSC	San Juan Bosco	61.84	324	P	P	04 36 25.5	-1.5
BOSC				IAmb	IAmb	04 36 34.3	
	comp=Z,19nm,0.7s						
ARNL	Arenillas	61.94	322	P	P	04 36 26.4	-1.1
ARNL				IAmb	IAmb	04 36 35.1	
	comp=Z,30nm,1.0s						
LEPH	Lephalale, Lim	62.18	90	*eP*	P	04 36 29.0	-0.2
LEPH				IAmb	IAmb	04 36 35.1	
	comp=Z,167nm,1.6s						
COHC	Cochancay	62.72	323	P	P	04 36 31.6	-1.1
SLOR	San Lorenzo -	64.14	325	P	P	04 36 40.9	-1.9
SLOR				IAmb	IAmb	04 36 54.6	
	comp=Z,15nm,0.9s						
MATP	Matopo	65.41	88	LR	LR	04 59 39.0	
	comp=Z,1μm,21.9s,baz=238,slow=31						
ROSC	El Rosal	68.37	331	P	P	04 37 09.2	-0.5
	comp=Z,5.3nm,0.7s,baz=115,slow=23,SNR=3.3						
ROSC				LR	LR	05 11 15.4	
	comp=Z,1μm,18.2s,baz=208,slow=40						
	comp=Z,5.3nm,0.7s						
ROSC	El Rosal	68.37	331	P	P	04 37 07.4	-2.3
ROSC				IAmb	IAmb	04 37 41.1	
	comp=Z,34nm,1.4s						
LSZ	Lusaka	69.62	85	LR	LR	05 05 33.9	
	comp=Z,1μm,18.1s,baz=204,slow=34						
BAUV	El Baul	71.01	338	P	P	04 37 24.8	-0.7
BAUV				IAmb	IAmb	04 37 32.5	
	comp=Z,28nm,0.9s						
SDV	Santo Domingo	71.46	336	LR	LR	05 10 53.0	
	comp=Z,574nm,19.3s,baz=162,slow=38						
SDV	Santo Domingo	71.46	336	IAMs_20	IAMs_20	05 10 33.5	
	comp=Z,842nm,18.0s						
PCRV	Puerto La Cruz	71.64	342	LR	LR	05 11 43.6	
	comp=Z,601nm,20.0s,slow=38						
RPZ	Rata Peaks	71.69	208	LR	LR	05 07 21.6	
	comp=Z,630nm,18.7s,baz=150,slow=34						
LTZ	Lake Taylor	72.28	209	P	P	04 37 32.7	-0.3
SNZO	South Karori	73.05	212	IAMs_20	IAMs_20	05 07 21.0	
	comp=Z,1μm,18.0s						
THZ	Tophouse	73.08	210	P	P	04 37 37.6	-0.2
VOI	Vohitsoka	73.17	105	P	P	04 37 47.0	+8.4
BFZ	Birch Farm	73.22	213	IAMs_20	IAMs_20	05 06 46.7	
	comp=Z,1μm,18.0s						
NNZ	Nelson	73.48	211	IAMs_20	IAMs_20	05 03 50.3	
	comp=Z,1μm,21.0s						
QRZ	Quartz Range	74.06	210	IAMs_20	IAMs_20	05 05 09.8	
	comp=Z,1μm,21.0s						
LIC	Lamto	74.15	44⇑	*eP*	P	04 37 43.9	-0.3
	comp=Z,170nm,0.9s						
HATO	Hato, Curacao	74.34	338	IAMs_20	IAMs_20	05 11 33.8	
	comp=Z,889nm,21.0s						
KIC	Kosan Boka	74.38	44⇑	*eP*	P	04 37 45.6	+0.1
	comp=Z,27nm,0.8s						
TIC	Toumodi	74.55	44⇑	*eP*	P	04 37 44.9	-1.6
	comp=Z,57nm,1.0s						
DBIC	Dimbokro	74.63	44	P	P	04 37 46.6	-0.3
	comp=Z,4.6nm,0.8s,baz=142,slow=6.4,SNR=5.6						
DBIC				LR	LR	05 04 25.2	
	comp=Z,930nm,19.8s,baz=186,slow=31						
	comp=Z,4.6nm,0.8s						
DBIC	Dimbokro	74.63	44	P	P	04 37 44.2	-2.8
DBIC				IAmb	IAmb	04 37 54.2	
	comp=Z,47nm,1.1s						
URZ	Urewera	75.24	215	LR	LR	05 05 37.2	
	comp=Z,1μm,20.6s,baz=218,slow=32						
TBI	Tubuai	75.83	248	*e*S	S	04 47 36.6	+0.7
	comp=Z,282nm,32.8s						
TBI	Tubuai	75.83	248	*e*LR	LR	05 01 15.0	
	comp=Z,4μm,27.5s						
JTS	Las Juntas de	76.51	322	*i* P	P	04 37 59.2	+1.4
JTS				pmax	pmax		
	comp=Z,23nm,1.1s						
ESPN	Las Esperanzas	78.11	323	P	P	04 38 05.6	-1.1
BBTS	Babate	78.70	30	LR	LR	05 08 17.2	
	comp=Z,442nm,18.4s,baz=222,slow=32						
BOAB	BOACO BROADBAN	78.77	322	P	P	04 38 09.4	-0.9
BOAB				IAmb	IAmb	04 38 16.2	
	comp=Z,35nm,0.9s						
OUZ	Omahuta	79.06	213	IAMs_20	IAMs_20	05 07 43.3	
	comp=Z,1μm,20.0s						
MATN	Matagalpa	79.30	322	P	P	04 38 11.9	-1.5
SJG	San Juan	79.66	342	LR	LR	05 17 41.8	
	comp=Z,219nm,18.4s,baz=156,slow=39						
MEH	Mehetia	79.90	252	*eP*	P	04 38 19.0	+2.4
	comp=Z,14nm,1.0s						
TVO	Taravao	80.54	251	*eP*	P	04 38 20.3	+0.2
	comp=Z,21nm,1.2s						
PPT2	Papeete2	80.86	251	*e*S	S	04 48 30.5	+0.3
	comp=Z,239nm,24.5s						
PPT2	Papeete2	80.86	251	*e*LR	LR	05 03 34.8	
	comp=Z,3μm,27.5s						
PPT	Papeete	80.87	251	LR	LR	05 06 37.8	
	comp=Z,372nm,18.3s,baz=155,slow=30						
MTO3	Montecristo	81.77	319	P	P	04 38 25.2	-1.6
MTO3				IAmb	IAmb	04 38 33.3	
	comp=Z,20nm,0.8s						
ESQI	Esquipulas	81.92	319	P	P	04 38 26.7	-0.7
ESQI				IAmb	IAmb	04 38 33.9	
	comp=Z,26nm,0.9s						
RAO	Raoul Island	82.06	222	LR	LR	05 14 09.6	
	comp=Z,277nm,18.1s,baz=150,slow=35						
KOWA	Kowa	82.21	42	LR	LR	05 08 14.2	
	comp=Z,662nm,20.2s,baz=200,slow=31						
KOWA	Kowa	82.21	42	P	P	04 38 28.1	-0.7
KOWA				IAmb	IAmb	04 38 36.4	
	comp=Z,38nm,1.2s						
KOWA				IAMs_20	IAMs_20	05 08 03.0	
	comp=

comp=Z,216nm,19.5s,baz=159,slow=32
ASAR Alice Springs 96.31 181 P P 04 39 35.1 -1.3
comp=Z,1.4nm,0.8s,baz=170,slow=4.1,SNR=8.7
ASAR PP **PP 04 43 27.9 -0.9**
comp=Z,2.3nm,1.1s,baz=178,slow=7.1,SNR=4.7
ASAR LR LR 05 22 46.5
comp=Z,484nm,19.8s,baz=178,slow=35
comp=Z,1.4nm,0.8s
ASAR Alice Springs 96.31 181 P P 04 39 34.9 -1.6
LPIG La Paz 98.43 305 LR LR 05 16 08.0
comp=Z,266nm,20.7s,baz=160,slow=30
AVE Averroes 98.85 33 IAMs_20 IAMs_20 05 18 57.7
comp=Z,732nm,20.0s
CTA Charters Tower 99.12 193 LR LR 05 25 48.4
comp=Z,396nm,18.1s,baz=175,slow=36
MDT Midelt 99.18 35 LR LR 05 21 16.6
comp=Z,396nm,18.0s,baz=222,slow=33
ATD Arta Tunnel 99.95 84 LR LR 05 24 16.1
comp=Z,512nm,18.1s,baz=183,slow=35
ATD Arta Tunnel 99.95 84 IAMs_20 IAMs_20 05 20 27.0
comp=Z,785nm,22.0s
WRA Warramunga Arr 100.01 181 P **Pdif 04 39 51.6 -1.4**
comp=Z,0.9nm,0.7s,baz=181,slow=4.2,SNR=11
WRA PKKPbc **PKKPbc 04 56 05.5 -3.4**
comp=Z,0.5nm,1.0s,baz=356,slow=5.1,SNR=2.3
WRAB Tennant Creek 100.02 181 *i* P **Pdif 04 39 54.0 +0.9**
WRAB pmax pmax
comp=Z,5.0nm,1.2s
TXAR Lajitas Array 100.53 312 P **Pdif 04 39 54.2 -0.9**
comp=Z,0.2nm,0.6s,baz=145,slow=3.3,SNR=2.1
TXAR PP **PP 04 44 03.4 +1.0**
comp=Z,0.5nm,1.0s,baz=157,slow=6.8,SNR=4.0
TXAR PKKP **PKKPdf 04 56 15.8 +1.8**
comp=Z,0.3nm,0.8s,baz=242,slow=2.4,SNR=3.6
BCX Boston College 104.18 342 IAMs_20 IAMs_20 05 22 22.0
comp=Z,636nm,21.0s
CART Cartagena 104.68 36 IAMs_20 IAMs_20 05 23 33.0
comp=Z,712nm,21.0s
PAB San Pablo 105.55 33 IAMs_20 IAMs_20 05 25 56.1
comp=Z,641nm,19.0s
CBKS Cedar Bluff 107.76 319 IAMs_20 IAMs_20 05 28 04.4
comp=Z,428nm,18.0s
RAYN Ar Rayn 111.46 80 IAMs_20 IAMs_20 05 27 02.1
comp=Z,742nm,22.0s
TIP Timpagrande 112.09 49 IAMs_20 IAMs_20 05 25 03.5
comp=Z,740nm,22.0s
RSSD Black Hills 113.94 319 IAMs_20 IAMs_20 05 29 04.0
comp=Z,452nm,21.0s
KAPI Kappang 114.05 166 IAMs_20 IAMs_20 05 30 47.6
comp=Z,652nm,20.0s
NVAR Mina Array Bea 114.22 305 PP **PP 04 45 42.5 -0.4**
comp=Z,0.1nm,0.4s,baz=149,slow=8.9,SNR=1.3
VLC Villacollemand 114.23 42 IAMs_20 IAMs_20 05 30 09.8
comp=Z,519nm,19.0s
TIR Tirane 115.15 50 IAMs_20 IAMs_20 05 30 21.4
comp=Z,623nm,20.0s
CSS Mathiatis 115.32 64 IAMs_20 IAMs_20 05 30 09.1
comp=Z,519nm,20.0s
PDG Podgorica 115.85 49 IAMs_20 IAMs_20 05 31 26.0
comp=Z,427nm,19.0s
ECH Echery 116.81 38 IAMs_20 IAMs_20 05 32 13.1
comp=Z,570nm,18.0s
FAKI Fak Fak 116.94 179 IAMs_20 IAMs_20 05 33 00.4
comp=Z,476nm,20.0s
BFO Black Forest 117.27 38 IAMs_20 IAMs_20 05 28 57.3
comp=Z,526nm,22.0s
WLF Walferdange 117.80 36 IAMs_20 IAMs_20 05 30 40.4
comp=Z,604nm,21.0s
KSM Kuching 118.80 154 IAMs_20 IAMs_20 05 30 45.0
comp=Z,450nm,19.0s
GRFO Grafenberg 119.37 39 IAMs_20 IAMs_20 05 30 46.9
comp=Z,388nm,20.0s
BRTR Keskin Array B 119.42 61 PKP **PKPdf 04 44 54.2 -2.5**
comp=Z,0.9nm,0.6s,baz=200,slow=3.3,SNR=3.5
BRTR PP **PP 04 46 19.5 +0.5**
comp=Z,2.0nm,1.0s,baz=226,slow=6.6,SNR=4.4
GERES GERESS Array B 119.44 42 PKP **PKPdf 04 44 55.0 -1.4**
comp=Z,0.7nm,0.6s,baz=217,slow=3.3,SNR=6.7
GERES GERESS Array B 119.44 42 PKIKP **PKPdf 04 44 55.0 -1.4**
CKRC Cesky Krumlov 119.61 42 *e*PS PS 04 56 10.5 +2.6
CKRC *e*SKKS 05 02 54.9
KHC Kasperske Hory 119.64 41 *e*PS PS 04 56 11.3 +3.1
KHC *e*SKKS 05 02 59.7
KHC AMS AMS 05 30 30.0
comp=Z,800nm,22.7s
NKC Novy Kostel 120.23 40 AMS AMS 05 33 50.0
comp=Z,400nm,19.0s
TREC Trest 120.42 42 *e*PS PS 04 56 18.0 +2.9
TREC AMS AMS 05 33 10.0
comp=Z,1μm,18.2s
PRU Pruhonice 120.70 41 *e*PS PS 04 56 13.9 -3.7
PRU *e*SKKS 05 03 12.1
PRU AMS AMS 05 30 50.0
comp=Z,900nm,20.8s
GOPC GO Pecny, Ondr 120.72 42 *e*PS PS 04 56 13.5 -4.3
GOPC *e*SKKS 05 03 16.2
GOPC AMS AMS 05 31 20.0
comp=Z,900nm,20.2s
PSZ Piszkesteto 120.78 46 IAMs_20 IAMs_20 05 34 13.2
comp=Z,388nm,19.0s
VYHS Vyhne 120.89 45 *e*PKIKP **PKiKP 04 45 04.5 +5.4**
MLR Muntele Rosu 121.01 52 IAMs_20 IAMs_20 05 39 30.5
comp=Z,409nm,19.0s
NRS Narsarsuaq 121.17 1 PKiKP 04 44 59.4 +0.2
NRS Narsarsuaq 121.17 1 PKIKP **PKiKP 04 44 59.4 +0.2**
NRS Narsarsuaq 121.17 1 *i* P **PKiKP 04 46 02.8 +3.6**
PVCC Panska Ves 121.17 41 *e*PS PS 04 56 22.9 +1.1
PVCC AMS AMS 05 30 50.0
comp=Z,600nm,23.2s
MAUC Maruska 121.28 44 AMS AMS 05 35 00.0
comp=Z,900nm,22.0s
CLL Collm 121.34 40 IAMs_20 IAMs_20 05 34 49.0
comp=Z,376nm,19.0s
CLL Collm 121.34 40 *e*PKIKP **PKiKP 04 45 03.0 +3.1**
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL MLR MLR
comp=Z,300nm,18.6s
CLL Collm 121.34 40 *e*(PKPdf) **PKiKP 04 45 03.0 +3.1**
comp=Z,4.0nm,0.6s
CLL *ex* x 04 55 42.0
CLL *e*PS **PS 04 56 24.0 +0.8**
CLL *e*SS SS 05 03 24.0 +18
CLL *e*SSS SSS 05 07 24.0
CLL *e*(SSSS) 05 12 00.0
CLL Lm MLR 05 34 00.0
comp=Z,300nm,18.6s
KRLC Kraliky 121.52 43 AMS AMS 05 34 20.0
comp=Z,500nm,20.2s
DPC Dobruska-Polom 121.60 42 *e*PS PS 04 56 31.9 +6.2
DPC *e*SKKS 05 03 24.5
DPC AMS AMS 05 33 10.0
comp=Z,500nm,17.0s
UPC Upice 121.63 42 *e*PS PS 04 56 16.5 -9.4
UPC *e*SKKS 05 03 25.3
UPC AMS AMS 05 31 40.0
comp=Z,500nm,19.3s
CHVC Chvalec 121.72 42 AMS AMS 05 34 10.0
comp=Z,500nm,18.5s
OSTC Ostas 121.74 42 AMS AMS 05 31 50.0
comp=Z,400nm,18.8s
OKC Ostrava-Krasne 121.79 44 AMS AMS 05 35 50.0
comp=Z,600nm,17.4s
RGN Rugen 124.22 38 IAMs_20 IAMs_20 05 35 09.2
comp=Z,432nm,20.0s
GNI Garni 124.76 69 IAMs_20 IAMs_20 05 37 53.0
comp=Z,484nm,21.0s
AKASG Malin Array Be 126.53 50 PKP **PKPdf 04 45 08.1 -1.7**
comp=Z,2.7nm,0.6s,baz=247,slow=1.6,SNR=13
AKASG PP **PP 04 47 06.6 -0.2**
comp=Z,0.7nm,0.8s,baz=219,slow=5.9,SNR=6.9
AKBB Malin Array Si 126.53 50 *i* PKIKP **PKiKP 04 45 12.1 +1.9**
KBZ Khabaz 126.74 65 PKP **PKPdf 04 45 08.6 -1.7**
comp=Z,1.2nm,0.7s,baz=260,slow=2.7,SNR=2.2
KBZ Khabaz 126.74 65 *i* PKIKP **PKiKP 04 45 13.2 +2.4**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
SRDT SRDT 127.95 137 PKP **PKPdf 04 45 13.0 -0.6**
MAK Makhachkala 128.25 69 *i* P **Pdif 04 41 56.0 -1.8**
MAK *i* *i* 04 45 12.5
MAK *e* *e* 04 47 16.8
MAK *e*PPP PPP 04 50 03.6
MAK *e* 04 52 17.7
MAK *e*SS SS 05 04 32.6 -0.3
MAK *e*SSS SSS 05 09 23.9
MAK pmax pmax
comp=Z,103nm,0.9s
PABE Paberze 128.47 43 IAMs_20 IAMs_20 05 39 35.6
comp=Z,424nm,20.0s
NACGM Naroch 128.97 46 *e*PKP **PKiKP 04 45 14.6 -0.4**
baz=218
MNK Minsk 129.05 47 *i* PKIKP **PKiKP 04 45 20.2 +5.1**
MNK *i* PPP PPP 04 50 15.8
MNK *i* 04 52 29.1
MNK *i* SS SS 05 04 49.3 +6.7
MNK *i* SSS SSS 05 09 36.0
MNK pmax pmax
comp=Z,1.0nm,0.9s
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK pmax pmax
comp=Z,28nm,0.9s
MNK MLR MLR
comp=Z,376nm,20.0s
MNK MLR MLR
comp=N,331nm,20.0s
MNK MLR MLR
comp=E,47nm,20.0s
MNK Minsk 129.05 47 *i* PKP **PKiKP 04 45 20.3 +5.1**
comp=E,1.0nm,0.9s
MNK *i* PKP **PKiKP 04 45 20.3 +5.1**
comp=N,7.0nm,0.9s
MNK *i* PKP **PKiKP 04 45 20.3 +5.1**
comp=Z,28nm,0.9s,baz=218
MNK *i* PP PP 04 47 37.4 +14
MNK *i* PPP PPP 04 50 15.9
MNK *i* SKS **SKSdf 04 52 29.2 +3.8**
MNK *i* SKKS 04 55 52.2
MNK *i* PS PS 04 57 46.1 +15
MNK *i* SS **SS 05 04 49.3 +6.7**
MNK *i* SSS SSS 05 09 36.1
MNK *i* LQ LQ 05 29 22.7
MNK *i* LR LR 05 34 49.8
MNK *i* LRM MLR 05 39 15.3
comp=Z,376nm,19.6s
MNK *i* LRM MLR 05 39 30.6
comp=N,331nm,19.8s
MNK *i* LRM MLR 05 39 44.6
comp=E,47nm,19.8s
NB2 NORSAR Subarra129.12 32 PKPdf **PKiKP 04 45 20.2 +5.1**
comp=Z,1.3nm,0.7s,baz=212,slow=1.9
VSR Storozhevoye 130.89 56 *e*PKIKP **PKiKP 04 45 20.4 +1.5**
VSR pmax pmax
comp=Z,20nm,1.2s
VORR Voronezh 131.25 56 *e*PKIKP **PKiKP 04 45 22.1 +2.5**
VORR pmax pmax
comp=Z,80nm,0.4s
CMAR Chiang Mai Arr 131.70 135 PKP **PKPdf 04 45 20.7 +0.1**
comp=Z,5.5nm,0.8s,baz=234,slow=3.5,SNR=8.5
LPSR Galich'ya Gora 131.83 55 *e*PKIKP **PKiKP 04 45 20.5 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.8s
VRH Novokhopyorsk 131.95 58 *e*PKIKP **PKPdf 04 45 18.6 -1.4**
VRH pmax pmax
comp=Z,20nm,0.8s
SUMG Summit 132.77 4 *i* P **PKPdf 04 45 21.0 -0.5**
OBN Obninsk 132.77 51 IAMs_20 IAMs_20 05 41 22.5
comp=Z,369nm,19.0s
OBN Obninsk 132.77 51 *e*PKIKP **PKiKP 04 45 24.4 +1.9**
OBN pmax pmax
comp=Z,21nm,2.0s
FINES FINESS Array B 133.79 40 PKP **PKPdf 04 45 22.2 -1.0**
comp=Z,2.2nm,0.7s,baz=132,slow=2.8,SNR=6.3
BELG Belogornoye 135.33 60 *i* PKIKP **PKiKP 04 45 29.7 +1.9**
BELG pmax pmax
comp=Z,4.0nm,0.9s
BESE Bessie Mountai 136.73 310 PKPpre 04 45 18.4
KLMR Klimovskoe 137.94 47 *e*PKIKP **PKiKP 04 45 34.1 +1.2**
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR MLR MLR
comp=Z,254nm,15.0s
KLMR Klimovskoe 137.94 47 *e*PKPdf **PKiKP 04 45 34.2 +1.3**
KLMR AMP 04 45 44.8
comp=Z,16nm,1.5s
KLMR LR LR 05 35 06.7
KLMR AMP 05 42 59.5
comp=Z,254nm,15.3s
DAG Danmarks Havn 138.03 9 *i* P **PKPdf 04 45 30.8 +0.1**
AKTO Aktyubinsk 138.63 69 PKP **PKPdf 04 45 31.9 -0.7**
comp=Z,1.9nm,0.8s,baz=201,slow=4.3,SNR=3.1
AB31 Akbulak array 138.72 72 *i* PKIKP **PKPdf 04 45 27.7 -5.0**
AB31 *i* S **PP 04 48 25.5 +0.6**
ABKAR Akbulak array 138.72 72 PKPpre 04 45 23.5
ARCES ARCESS Array B 139.47 31 PKhKP PKPpre 04 45 25.2
comp=Z,0.8nm,0.4s,baz=204,slow=2.0,SNR=7.6
ARCES PKP **PKPdf 04 45 33.0 -0.5**
comp=Z,2.6nm,0.7s,baz=220,slow=2.3,SNR=6.0
ARCES ARCESS Array B 139.47 31 PKPdf 04 45 32.8 -0.7
KK31 Karatay Array 139.48 86 *i* PKHKP PKPpre 04 45 27.7
KK31 *i* S **PP 04 48 27.4 -2.3**
KKAR Karatay Array 139.48 86 PKPpre 04 45 27.0
KKAR Karatay Array 139.48 86 PKHKP PKPpre 04 45 27.0
KSH Kashi 139.50 95 PKP **PKiKP 04 45 38.8 +1.8**
PZH PanZhiHua 140.08 134 PKP **PKPdf 04 45 36.8 +0.6**
C36M Paulatuk 140.43 327 IAMs_20 IAMs_20 05 44 15.2
comp=Z,381nm,20.0s
AAK Ala-Archa 141.11 90 PKPdf **PKPdf 04 45 33.3 -4.3**
AAK Ala-Archa 141.11 90 IAMs_20 IAMs_20 05 48 33.2
comp=Z,362nm,20.0s
AAK Ala-Archa 141.11 90 *i* PKIKP **PKiKP 04 45 39.2 -1.1**
AAK pmax pmax
comp=Z,21nm,2.2s
TKM2 Tokmak 2 141.87 91 PKIKP **PKPdf 04 45 34.9 -4.1**
BCAR Beaver Creek A 142.22 312 PKPdf **PKPdf 04 45 35.2 -3.5**
EPYK Eagle Plains 142.38 319 PKPdf 04 45 38.1 -0.8
A36M Sachs Harbour 142.40 330 IAMs_20 IAMs_20 05 52 43.1
comp=Z,414nm,21.0s
BTLS Baital 142.63 87 *e*PKIKP **PKPdf 04 45 38.8 -1.2**
ARU Arti 142.79 62 *i* PKIKP **PKPdf 04 45 39.6 -0.2**
K27K Chicken 142.88 313 PKPpre PKPpre 04 45 36.0
EGAK Eagle 142.98 315 P **PKiKP 04 45 45.4 +2.3**
baz=125
M24K Tolsona, Glenn 143.32 309 P **PKiKP 04 45 46.3 +2.3**
baz=125
SPITS Spitsbergen Ar 143.43 18 PKIKP PKPbc 04 45 38.3 +0.5
I27K Kandik River 143.61 316 P **PKiKP 04 45 47.0 +2.5**
baz=123
J26L Joseph Creek 143.69 313 PKPpre 04 45 37.4
H27K Steamboat Moun 143.92 317 P **PKiKP 04 45 46.5 +1.4**
baz=123
ARXS Arharly 143.92 91 *e*PKIKP **PKPdf 04 45 43.0 +0.6**
SVE Sverdlovsk 143.94 63 *e*PKIKP **PKiKP 04 45 44.9 -0.5**
SVE pmax pmax
comp=Z,46nm,1.4s
SHLS Shalkode 143.97 94 *e*PKIKP **PKiKP 04 45 45.6 -0.5**
I26K Coal Creek Min 143.98 315 PKPab 04 45 37.4 -1.7
PDGK Podgornoye 144.10 94 PKIKP PKPbc 04 45 40.6 -0.3
K24K Donnelly Dome 144.12 312 P **PKiKP 04 45 46.7 +1.1**
baz=123
RC01 Rabbit Creek A 144.15 306 P **PKiKP 04 45 46.7 +1.1**
baz=124
PMR Palmer 144.19 307 PKPbc 04 45 40.5 +0.2
PMR Palmer 144.19 307 PKIKP PKPbc 04 45 40.5 +0.1
PMR Palmer 144.19 307 P **PKiKP 04 45 46.7 +1.0**
baz=124
G27K Doyon Strip 144.27 317 P **PKiKP 04 45 47.4 +1.6**
baz=122
DHY Denali Highway 144.32 310 PKPbc 04 45 40.9 -0.1
DHY Denali Highway 144.32 310 P **PKiKP 04 45 47.7 +1.5**
baz=123
J25K Salcha River, 144.40 313 P **PKiKP 04 45 46.1 0.0**
baz=122
Q19K Cape Douglas, 144.55 301 P **PKiKP 04 45 46.0 -0.6**
baz=125
WAT1 Susitna Watana 144.64 309 P **PKiKP 04 45 46.9 +0.2**
baz=123
M22K Willow 144.67 307 PKPdf 04 45 43.0 +0.1
SUA Susitna One 144.77 306 PKPdf **PKPab 04 45 41.7 -0.6**
SUA Susitna One 144.77 306 P **PKiKP 04 45 47.9 +0.8**
baz=123
O20K Slope Mountain 144.77 303 P **PKiKP 04 45 48.8 +1.7**
baz=124
P19K Oil Pt 144.79 302 P **PKiKP 04 45 48.4 +1.3**
baz=124
CD2 Chengdu 144.81 134 PKP **PKPdf 04 45 44.6 +0.3**
HDA Harding Lake 144.88 312 PKPbc 04 45 42.6 +0.1
HDA Harding Lake 144.88 312 P **PKiKP 04 45 48.2 +1.1**
baz=122
PRP Porcupine Dome 144.94 314 PKPdf 04 45 43.8 +0.3
PRP Porcupine Dome 144.94 314 P **PKiKP 04 45 48.4 +1.0**
baz=121
E27K Coleen River 144.97 320 P **PKiKP 04 45 47.7 +0.5**
baz=120
Q18K Katmai Hardscr 144.98 300 P **PKiKP 04 45 48.1 +0.5**
baz=124,SNR=14
RSO Redoubt South 145.04 304 PKPbc 04 45 42.7 -0.7
ILAR Eielson Array 145.04 312 PKPbc **PKPbc 04 45 42.6 -0.4**
comp=Z,14nm,0.8s,baz=156,slow=1.1,SNR=64
G26K Porcupine Rive 145.06 317 P **PKiKP 04 45 47.8 +0.4**
baz=120
RND Reindeer 145.07 310 PKPbc 04 45 42.9 -0.3
RND Reindeer 145.07 310 PKIKP **PKPbc 04 45 42.9 -0.3**
CUT Chulitna 145.09 308 P **PKiKP 04 45 48.1 +0.6**
baz=122
CHGN Chignik 145.13 295 P **PKiKP 04 45 47.9 +0.1**
baz=126
Q17K Contact Creek 145.14 299 P **PKiKP 04 45 48.1 +0.1**
baz=124
SPU Mount Spurr 145.14 305 PKPbc 04 45 42.6 -0.9
N20K Mount Spurr 145.22 305 P **PKiKP 04 45 48.5 +0.6**
baz=123
SPCR Spurr Chakacha 145.22 305 P **PKiKP 04 45 48.8 +0.8**
baz=123
MCK McKinley 145.27 310 PKPbc 04 45 43.7 -0.1
MCK McKinley 145.27 310 PKIKP **PKPbc 04 45 43.7 -0.1**
MCK McKinley 145.27 310 P **PKiKP 04 45 49.0 +1.0**
baz=121
WRH Wood River Hil 145.33 312 PKPbc 04 45 41.7 -2.2
BRZS Berezniki 145.34 80 *e*PKIKP **PKiKP 04 45 48.4 -0.1**
SKT Skwentna 145.36 306 P **PKiKP 04 45 49.0 +0.8**
baz=122
FYU Fort Yukon 145.37 316 IAMs_20 IAMs_20 05 54 47.3
comp=Z,386nm,19.0s
POKR Poker Plat Res 145.42 313 P **PKiKP 04 45 49.2 +1.0**
baz=120
H25K Birch Creek 145.42 315 P **PKiKP 04 45 49.8 +1.7**
baz=120,SNR=9.0
COLA College 145.45 312 PKPdf 04 45 43.0 -1.2
COLA College 145.45 312 PKP2 **PKPdf 04 45 43.0 -1.2**
COLA College 145.45 312 P **PKiKP 04 45 49.3 +1.1**
baz=120
TCOL CIGO, UAF Yank 145.45 312 PKPdf 04 45 43.0 -1.3
TCOL CIGO, UAF Yank 145.45 312 P **PKiKP 04 45 49.6 +1.4**
baz=120
P18K Big Mountain, 145.49 301 P **PKiKP 04 45 49.2 +0.7**
baz=124
SDPT Sand Point 145.52 292 P **PKiKP 04 45 49.9 +1.3**
baz=126
F26K Sheenjek River 145.56 318 P **PKiKP 04 45 50.7 +2.3**
baz=119,SNR=11
BMAR Burnt Mountain 145.57 317 PKPdf **PKPdf 04 45 44.3 -0.2**
MDM Murphy Dome 145.63 312 PKPdf 04 45 43.2 -1.4
TRF Thorofare Moun 145.64 309 PKPdf 04 45 44.1 -0.8
TRF Thorofare Moun 145.64 309 P **PKiKP 04 45 50.3 +1.4**
baz=121
BWN Browne 145.69 311 PKPdf 04 45 43.4 -1.3
Q16K King Salmon 145.71 299 P **PKiKP 04 45 50.5 +1.6**
baz=124
Q18K Koktuh Hills 145.73 302 PKPdf 04 45 44.6 -0.3
Q18K Koktuh Hills 145.73 302 P **PKiKP 04 45 50.3 +1.3**
baz=123
NEA2 Nenana 145.76 311 PKPdf 04 45 44.6 -0.2
NEA2 Nenana 145.76 311 P **PKiKP 04 45 50.6 +1.7**
baz=120,SNR=12
G25K Bearman Lake 145.77 316 P **PKiKP 04 45 51.1 +2.3**
baz=119
GOMU GeErMu 145.82 118 PKPbc **PKiKP 04 45 52.1 +1.7**
GOMU AMB AMB
comp=Z,460nm,5.2s
P17K Kvichak River 145.90 300 P **PKiKP 04 45 50.9 +1.7**
baz=123,SNR=6.1
KTH Kantishna Hill 145.94 309 PKPdf **PKPdf 04 45 45.4 +0.1**
KTH IAMs_20 IAMs_20 05 50 03.7
comp=Z,441nm,21.0s
H24K Noodor Dome 145.94 314 PKPdf **PKPdf 04 45 45.3 +0.2**
H24K Noodor Dome 145.94 314 P **PKiKP 04 45 51.1 +1.9**
baz=119,SNR=9.2
N19K Bonanza Creek 145.95 303 PKPdf **PKPdf 04 45 44.1 -1.2**
N19K Bonanza Creek 145.95 303 P **PKiKP 04 45 51.7 +2.2**
baz=122
M20K Styx River 145.95 306 PKPdf 04 45 45.2 -0.1
M20K Styx River 145.95 306 P **PKiKP 04 45 51.3 +1.8**
baz=121
F25K Christian Rive 146.01 317 P **PKiKP 04 45 51.5 +2.1**
baz=118,SNR=18
PPLA Purkeypile 146.10 308 PKPdf 04 45 45.2 -0.4
PPLA Purkeypile 146.10 308 P **PKiKP 04 45 51.4 +1.6**
baz=121
BRVK Borovoye 146.12 74 PKPdf **PKPdf 04 45 46.0 +0.3**
BRVK Borovoye 146.12 74 IAMs_20 IAMs_20 05 51 45.5
comp=Z,438nm,20.0s
BRVK Borovoye 146.12 74 *i* PKP2 **PKPdf 04 45 45.6 -0.2**
BRVK pmax pmax
comp=Z,89nm,1.3s
I23K Minto, Yukon-K 146.14 312 PKPdf 04 45 45.7 +0.3
I23K Minto, Yukon-K 146.14 312 P **PKiKP 04 45 51.7 +2.1**
baz=119,SNR=7.6
BVA0 Borovoye Array 146.16 74 PKIKP **PKPdf 04 45 45.6 -0.2**
G24K Hadweenzic Riv 146.22 315 P **PKiKP 04 45 52.2 +2.4**
baz=118
E25K Arctic Village 146.23 318 P **PKiKP 04 45 52.1 +2.3**
baz=118
BPAW Bear Paw Mtn. 146.24 310 PKPdf 04 45 45.3 -0.4
BPAW Bear Paw Mtn. 146.24 310 P **PKiKP 04 45 51.6 +1.7**
baz=120,SNR=6.2
CAST Castle Rocks 146.32 308 PKPdf **PKPdf 04 45 45.4 -0.4**
CAST Castle Rocks 146.32 308 P **PKiKP 04 45 51.9 +1.8**
baz=120,SNR=14
C27K Jago River 146.33 321 P **PKiKP 04 45 52.1 +2.2**
baz=117,SNR=6.0
N18K Kilae Creek 146.46 302 P **PKiKP 04 45 52.0 +1.5**
baz=122
M19K Big River Lodg 146.48 305 PKPdf 04 45 46.0 -0.2
M19K Big River Lodg 146.48 305 P **PKiKP 04 45 52.9 +2.5**
baz=121
P16K Nushagak River 146.49 299 P **PKiKP 04 45 52.2 +1.8**
baz=123
O17K Koliganek Bris 146.50 300 P **PKiKP 04 45 52.6 +2.1**
baz=122
H23K Yukon River 146.54 313 PKPdf 04 45 45.4 -0.7
H23K Yukon River 146.54 313 P **PKiKP 04 45 52.5 +2.0**
baz=118
L20K Farewell, AK 146.56 306 P **PKiKP 04 45 53.2 +2.5**
baz=120
FALS False Pass 146.59 290 P **PKiKP 04 45 53.1 +2.2**
baz=126
MLY Manley 146.60 311 PKPdf **PKPdf 04 45 46.2 0.0**
MLY Manley 146.60 311 P **PKiKP 04 45 52.3 +1.7**
baz=119,SNR=8.0
CHUM Lake Minchumin 146.64 309 P **PKiKP 04 45 53.0 +2.3**
baz=119
F24K Squaw Lake 146.74 316 P **PKiKP 04 45 52.8 +1.9**
baz=117,SNR=19
L19K White Mountain 146.81 305 P **PKiKP 04 45 53.6 +2.4**
baz=120
O16K Kokwok River B 146.83 300 P **PKiKP 04 45 53.7 +2.5**
baz=122
C26K Camden Bay 146.83 321 P **PKiKP 04 45 54.1 +3.2**
baz=116
D25K Kavik River 147.04 320 P **PKiKP 04 45 53.9 +2.4**
baz=116
K20K Telida 147.07 307 P **PKiKP 04 45 54.1 +2.5**
baz=119
G23K Bananza Creek 147.12 314 P **PKiKP 04 45 54.7 +3.0**
baz=117,SNR=14
I21K Tanana 147.13 311 P **PKiKP 04 45 55.0 +3.4**
baz=118
E24K Your Creek 147.19 317 P **PKiKP 04 45 55.0 +3.2**
baz=116,SNR=14
H22K Ishtalitna Cre 147.24 313 P **PKiKP 04 45 54.9 +3.0**
baz=117,SNR=20
UNV Unalaska Valle 147.46 286 P **PKiKP 04 45 55.3 +2.6**
baz=126
J20K Nowinta River 147.49 309 PKPdf 04 45 46.8 -0.9
J20K Nowinta River 147.49 309 P **PKPab 04 45 55.4 +2.9**
baz=118
E23K Chandalar 147.57 317 P **PKPab 04 45 55.9 +3.1**
baz=115
N16K Nishlik Lake 147.58 301 P **PKPab 04 45 55.2 +2.2**
baz=120
TTA Tatalina 147.64 306 P **PKPab 04 45 56.1 +2.9**
baz=118
H21K Melozitna Rive 147.66 312 PKPdf 04 45 48.0 +0.1
H21K Melozitna Rive 147.66 312 P **PKPab 04 45 55.8 +2.6**
baz=116,SNR=12
G22K Bettles 147.74 314 P **PKPab 04 45 56.4 +3.0**
baz=116

WHN	**Wuhan**	**147.76**	**149**	PKPbc	**PKPab**	**04 45 56.5**	**+2.0**
TOLK	**Toolik Lake Re**	**147.80**	**318**	PKPdf	**PKPdf**	**04 45 48.9**	**+0.8**
TOLK	**Toolik Lake Re**	**147.80**	**318**	P	**PKPab**	**04 45 56.2**	**+2.6**
baz=114,SNR=10							
MAKZ	**Makanchi**	**147.82**	**92**	PKPdf	**PKPdf**	**04 45 48.7**	**-0.2**
MAKZ				IAMs_20	IAMs_20	05 54 23.7	
comp=Z,322nm,22.0s							
MAKZ	**Makanchi**	**147.82**	**92**	PKIKP	**PKPdf**	**04 45 48.7**	**-0.2**
MAKZ				MLR	MLR		
comp=Z,300nm,22.0s							
C24K	**Franklin Bluff**	**147.95**	**320**	P	**PKPab**	**04 45 56.8**	**+2.7**
baz=113							
MK31	**Makanchi Array**	**147.97**	**92**		**PKPdf**	**04 45 48.8**	**-0.3**
MK31	**Makanchi Array**	**147.97**	**92**	*i* PKIKP	**PKPbc**	**04 45 50.8**	**-1.4**
MKAR	**Makanchi Array**	**147.97**	**92**	PKPbc	**PKPbc**	**04 45 50.6**	**-1.6**
comp=Z,5.2nm,0.6s,baz=242,slow=3.1,SNR=45							
MKAR	**Makanchi Array**	**147.97**	**92**	PKPdf	**PKPdf**	**04 45 49.2**	**+0.1**
MKAR	**Makanchi Array**	**147.97**	**92**	PKIKP	**PKPdf**	**04 45 49.2**	**+0.1**
NIKH	**Nikolski High**	**148.07**	**283**	P	**PKPab**	**04 45 57.8**	**+2.7**
baz=127							
IMAR	**Indian Mountai**	**148.15**	**312**	PKPdf	**PKPdf**	**04 45 50.0**	**+1.3**
F22K	**John River**	**148.22**	**315**	P	**PKPab**	**04 45 57.6**	**+2.2**
baz=114							
G21K	**Allakaket**	**148.29**	**313**	P	**PKPab**	**04 45 58.1**	**+2.4**
baz=115							
D23K	**Nanushuk River**	**148.30**	**318**	P	**PKPab**	**04 45 58.2**	**+2.6**
baz=113							
E22K	**Anaktuvuk Pass**	**148.35**	**316**	P	**PKPab**	**04 45 58.0**	**+2.1**
baz=114							
WMQ	**Urumqi**	**148.51**	**101**	*e*PKPbc	**PKPbc**	**04 45 52.4**	**-1.4**
WMQ				LR	LR		
comp=Z,210nm,18.9s							
WMQ				LR	LR		
comp=Z,220nm,18.9s							
WMQ				LR	LR		
comp=Z,250nm,21.5s							
F21K	**Alatna River**	**148.57**	**314**	P	**PKPab**	**04 45 58.7**	**+2.0**
baz=114							
C23K	**Itkillik River**	**148.61**	**320**	P	**PKPab**	**04 45 59.3**	**+2.5**
baz=112							
KURK	**Kurchatov**	**148.73**	**83**	PKPdf	**PKPdf**	**04 45 48.8**	**-1.4**
KURK	**Kurchatov**	**148.73**	**83**	IAMs_20	IAMs_20	05 53 45.7	
comp=Z,391nm,20.0s							
KURK	**Kurchatov**	**148.73**	**83**	PKIKP	**PKPdf**	**04 45 48.8**	**-1.4**
KURK				MLR	MLR		
comp=Z,400nm,20.0s							
GCSA	**Galena City Sc**	**148.81**	**309**	P	**PKPab**	**04 45 59.9**	**+2.2**
baz=115							
XAN	**Xi'an**	**149.44**	**139**	⇑PKPbc	**PKPab**	**04 46 00.3**	**-1.0**
LZH	**Lanzhou**	**149.47**	**129**	⇑PKPbc	**PKPab**	**04 46 01.3**	**-0.2**
LZH				pPKP	sPKPab	04 46 08.8	+3.2
LZH				sPKP		04 46 11.0	
NJ2	**Nanjing**	**150.25**	**156**	*e*PKPbc	**PKPdf**	**04 45 53.3**	**+0.1**
GTA	**Gaotai**	**150.68**	**121**	⇓PKPbc	**PKPbc**	**04 45 59.3**	**0.0**
GTA				LR	LR		
comp=Z,310nm,17.8s							
GTA				LR	LR		
comp=Z,400nm,17.8s							
GTA				LR	LR		
comp=Z,310nm,21.1s							
LYN	**LuoYang**	**151.02**	**144**	⇑PKPbc	**PKiKP**	**04 46 03.0**	**+2.3**
ZALV	**Zalesovo Beam**	**153.71**	**82**	PKPbc	**PKPbc**	**04 46 03.5**	**-2.0**
comp=Z,2.3nm,0.7s,baz=252,slow=3.5,SNR=6.9							
HNS	**HongShan**	**154.33**	**145**	PKPbc	**PKPbc**	**04 46 05.3**	**-2.0**
BTO	**Baotou**	**155.74**	**134**	*e*P	**PKPab**	**04 46 32.4**	**+4.8**
MJAR	**Matsushiro Arr**	**155.94**	**191**	PKPab	**PKPab**	**04 46 27.8**	**-0.6**
comp=Z,1.3nm,0.3s,baz=179,slow=5.2,SNR=1.7							
HHC	**Hu-ho-hao-te**	**156.49**	**136**	*e*PKP	**PKPdf**	**04 45 58.0**	**-4.1**
KSRS	**Korea Array**	**156.90**	**170**	PKPab	**PKPab**	**04 46 32.1**	**-0.3**
comp=Z,1.2nm,0.7s,baz=174,slow=4.4,SNR=1.8							
SONM	**Songino Array**	**160.27**	**117**	PKPab	**PKPab**	**04 46 46.5**	**-0.6**
comp=Z,0.6nm,0.3s,baz=186,slow=5.8,SNR=2.0							
XLT	**XiLinHaoTe**	**160.71**	**141**	*e*PKP	**PKPdf**	**04 46 11.1**	**+4.1**
CN2	**Changchun**	**162.86**	**162**	*e*PKP	**PKPdf**	**04 46 11.6**	**+2.5**
YSS	**Yuzh-Sakhalins**	**165.38**	**208**	*i* PKIKP	**PKPdf**	**04 46 08.5**	**-2.7**
YSS				*e*PPS	PPS	05 04 35.1	
TIXI	**Tiksi**	**168.52**	**6**	PKPab	**PKPab**	**04 47 22.0**	**-0.5**
comp=Z,1.0nm,0.3s,baz=89,slow=24,SNR=4.4							

*IDC **18** 04:33:42.7±0.9, 60°.31S×47°.13W, h0km, mb4.1/5, mbtmp4.2/6, ML4.1/1, Error ellipse: s-maj=33.4km s-min=21.7km az=67.0*
*NEIC **18** 04:33:45.0±1.6, 60°.27S±0°.08×47°.1W±0°.2, h10km±1km, mb4.5/12, Error ellipse: s-maj=16.0km s-min=12.9km az=112.0*

ISC 18 04:33:44.3±0.6, **60°.30S**±0°.07×**47°.19W**±0°.07, **h10**km, **n36**, σ1§**48**/31, **mb4.2**/5, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.36**	**49**	Pn	**Pn**	**04 35 43.9**	**-1.5**
PMSA	**Palmer Station**	**8.98**	**233**	Pn	**Pn**	**04 35 52.5**	**-1.3**
1.8nm,0.3s,baz=67,slow=13,SNR=25							
PMSA				Sn	**Sn**	**04 37 32.5**	**-2.3**
1.3nm,0.3s,baz=312,slow=20,SNR=7.3							
3.8nm,0.3s							
PMSA	**Palmer Station**	**8.98**	**233**	Pn	**Pn**	**04 35 53.1**	**-0.7**
EFI	**East Falkland**	**10.56**	**320**	Pn	**Pn**	**04 36 16.2**	**+0.6**
SMAI	**San Martin Ant**	**11.64**	**219**	Pn	**Pn**	**04 36 31.2**	**+1.0**
MG02	**Cerro Sombrero**	**14.24**	**292**	Pn	**Pn**	**04 37 06.8**	**+1.0**
GO10	**Punta Arenas**	**14.86**	**288**	Pn	**Pn**	**04 37 14.8**	**+0.5**
MG05	**Puerto Natales**	**16.49**	**290**	Pn	**Pn**	**04 37 36.8**	**+1.3**
GO09	**Cerro Castillo**	**16.69**	**292**	Pn	**Pn**	**04 37 38.7**	**+0.7**
GO09				IAmb	IAmb	04 38 18.9	
comp=Z,29nm,1.2s							
BELA	**Belgrano 2**	**18.13**	**172**	P	**P**	**04 37 57.8**	**+1.7**
VNA3	**Neumayer Olymp**	**18.50**	**142**	P	**Pn**	**04 38 01.3**	**+1.0**
VNA1	**Neumayer--Stat**	**18.78**	**139**	P	**Pn**	**04 38 03.7**	**0.0**
VNA2	**Neumayer--Watz**	**19.13**	**140**	P	**Pn**	**04 38 08.0**	**0.0**
baz=288,slow=15							
SNAA	**Sanae**	**20.72**	**141**	P	Pn	04 38 28.3	+1.4
SNAA	**Sanae**	**20.72**	**141**	P	**P**	**04 38 24.9**	**+0.4**
comp=Z,14nm,1.2s,baz=289,slow=9.9,SNR=11							
SNAA				S	**S**	**04 42 10.5**	**-5.1**
comp=Z,0.9nm,1.0s,baz=136,slow=22,SNR=5.5							
comp=Z,14nm,1.2s							
SNAA	**Sanae**	**20.72**	**141**	P	Pn	04 38 26.1	-0.7
SNAA				IAmb	IAmb	04 38 30.0	
comp=Z,50nm,1.5s							
TROLL	**Troll, Antarti**	**22.43**	**142**	P	**P**	**04 38 45.1**	**+2.2**
TRQA	**Tornquist**	**24.16**	**330**	P	**P**	**04 39 00.9**	**+0.5**
TRQA				IAmb	IAmb	04 39 06.0	
comp=Z,17nm,1.1s							
PLCA	**Paso Flores**	**24.35**	**313**	P	**P**	**04 39 03.4**	**+1.2**
comp=Z,3.8nm,0.8s,baz=166,slow=8.1,SNR=10							
comp=Z,3.8nm,0.8s							
PLCA	**Paso Flores**	**24.35**	**313**	P	**P**	**04 39 01.7**	**-0.5**
PLCA				IAmb	IAmb	04 39 15.7	
comp=Z,9.3nm,0.9s							
QSPA	**South Pole Qui**	**29.94**	**180**	P	**P**	**04 39 52.6**	**+0.4**
comp=Z,4.8nm,0.8s,baz=178,slow=6.3,SNR=7.6							
comp=Z,4.8nm,0.8s							
QSPA	**South Pole Qui**	**29.94**	**180**	P	**P**	**04 39 53.2**	**+0.9**
PB12	**IPOC Station P**	**44.82**	**328**	P	**P**	**04 41 57.4**	**-0.9**
SIV	**San Ignacio**	**45.38**	**341**	P	**P**	**04 42 02.2**	**-0.6**
comp=Z,2.0nm,1.0s,baz=188,slow=7.1,SNR=3.1							
comp=Z,2.0nm,1.0s							
CASY	**Casey**	**52.65**	**169**	P	**P**	**04 42 58.8**	**+0.9**
H10S2	**ASCENSION HYDR**	**56.71**	**39**	T	T	05 45 17.9	
baz=199							
H10S3	**ASCENSION HYDR**	**56.71**	**39**	T	T	05 45 21.6	
baz=21							
H10N3	**ASCENSION HYDR**	**57.81**	**39**	T	T	05 46 42.2	
baz=199,slow=75,SNR=7.9							
H10N1	**ASCENSION HYDR**	**57.81**	**39**	T	T	05 46 40.1	
baz=199,slow=75,SNR=6.1							
H10N2	**ASCENSION HYDR**	**57.82**	**39**	T	T	05 46 40.1	
baz=199,slow=75,SNR=5.7							
DBIC	**Dimbokro**	**74.60**	**44**	P	**P**	**04 45 24.8**	**+1.5**
TORD	**Torodi Ar. Bea**	**82.93**	**48**	P	**P**	**04 46 09.1**	**0.0**
comp=Z,0.9nm,0.9s,baz=206,slow=5.1,SNR=3.9							
comp=Z,0.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**82.93**	**48**	P	**P**	**04 46 09.9**	**+0.8**
TORD				IAmb	IAmb	04 46 51.8	
comp=Z,3.3nm,1.3s							
WRA	**Warramunga Arr**	**100.04**	**181**	P	**Pdif**	**04 47 28.2**	**-1.5**
comp=Z,0.5nm,0.9s,baz=179,slow=4.1,SNR=2.2							
ILAR	**Eielson Array**	**145.03**	**313**	PKPbc	**PKPbc**	**04 53 18.7**	**-0.9**
comp=Z,1.0nm,0.6s,baz=149,slow=1.6,SNR=8.5							
MKAR	**Makanchi Array**	**147.95**	**92**	PKPbc	**PKPbc**	**04 53 27.4**	**-1.4**
comp=Z,0.7nm,0.6s,baz=231,slow=1.7,SNR=5.9							

*IDC **18** 04:47:50.1±0.6, 60°.31S×47°.24W, h0km, mb4.2/11, mbtmp4.2/12, ML4.1/1, MS4.1/1, Error ellipse: s-maj=23.2km s-min=16.2km az=73.0*
*NEIC **18** 04:47:51.9±2.0, 60°.27S±0°.10×47°.4W±0°.2, h10km±1km, mb4.5/29, Error ellipse: s-maj=18.7km s-min=13.3km az=133.0*

ISC 18 04:47:51.5±0.5, **60°.30S**±0°.07×**47°.45W**±0°.08, **h10**km, **n45**, σ1§**30**/44, **mb4.4**/16, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.45**	**49**	Pn	**Pn**	**04 49 52.8**	**-1.1**
PMSA	**Palmer Station**	**8.87**	**233**	Pn	**Pn**	**04 49 59.9**	**+0.4**
1.8nm,0.3s,baz=66,slow=9.7,SNR=15							
PMSA				Sn	**Sn**	**04 51 37.3**	**-2.1**
0.1nm,0.3s,baz=26,slow=22,SNR=1.1							
3.7nm,0.4s							
GO09	**Cerro Castillo**	**16.57**	**292**		**P**	**04 51 46.4**	**+0.2**
BELA	**Belgrano 2**	**18.15**	**171**		**Pn**	**04 52 02.8**	**-0.4**
COYC	**Coyhaique**	**20.74**	**304**	P	**P**	**04 52 31.2**	**-0.8**
COYC				IAmb	IAmb	04 52 44.5	
comp=Z,19nm,1.1s							
SNAA	**Sanae**	**20.80**	**141**	P	**P**	**04 52 32.0**	**-0.5**
comp=Z,2.1nm,0.9s,baz=38,slow=5.4,SNR=2.1							
comp=Z,2.1nm,0.9s							
SNAA	**Sanae**	**20.80**	**141**	P	**P**	**04 52 32.7**	**+0.2**
SNAA				IAmb	IAmb	04 52 56.0	
comp=Z,29nm,1.5s							
AY01	**Puyuhuapi**	**21.91**	**305**	P	**P**	**04 52 42.0**	**-2.6**
AY01				IAmb	IAmb	04 53 02.2	
comp=Z,24nm,1.5s							
LL02	**Futaleuf**	**22.62**	**308**	P	**P**	**04 52 49.1**	**-3.2**
GO07	**Milladeo Hill,**	**23.41**	**305**	P	**P**	**04 52 57.2**	**-3.1**
TRQA	**Tornquist**	**24.09**	**331**	P	**P**	**04 53 07.8**	**+0.8**
TRQA				IAmb	IAmb	04 53 18.2	
comp=Z,29nm,1.2s							
PLCA	**Paso Flores**	**24.25**	**313**	P	**P**	**04 53 09.4**	**+0.9**
comp=Z,5.5nm,0.9s,baz=174,slow=6.8,SNR=12							
PLCA				LR	LR	05 01 26.0	
comp=Z,384nm,18.4s,baz=122,slow=34							
comp=Z,5.5nm,0.9s							
PLCA	**Paso Flores**	**24.25**	**313**	P	**P**	**04 53 08.7**	**+0.1**
PLCA				IAmb	IAmb	04 53 18.7	
comp=Z,8.9nm,0.8s							
GO06	**Curarrehue**	**25.60**	**313**	P	**P**	**04 53 20.3**	**-0.4**
PLTB	**Pedras Altas**	**28.84**	**349**	P	**P**	**04 53 51.2**	**+1.5**
QSPA	**South Pole Qui**	**29.94**	**180**	P	**P**	**04 54 00.6**	**+1.1**
comp=Z,11nm,0.9s,baz=180,slow=4.5,SNR=31							
comp=Z,11nm,0.9s							
QSPA	**South Pole Qui**	**29.94**	**180**	P	**P**	**04 54 00.8**	**+1.4**
QSPA				IAmb	IAmb	04 54 02.2	
comp=Z,13nm,0.9s							
MT09	**Talagante**	**30.67**	**319**	P	**P**	**04 54 06.0**	**-0.1**
TRCB	**Terra Rica**	**37.65**	**352**	P	**P**	**04 55 06.6**	**0.0**
SBA	**Scott Base**	**40.51**	**191**	P	**P**	**04 55 32.3**	**+2.4**
SBA				IAmb	IAmb	04 55 33.0	
comp=Z,8.7nm,0.8s							
LVC	**Limon Verde**	**40.56**	**329**	P	**P**	**04 55 30.6**	**-0.6**
LVC				IAmb	IAmb	04 56 03.1	
comp=Z,9.1nm,1.1s							
VNDA	**Vanda**	**41.24**	**189**	P	**P**	**04 55 37.4**	**+1.5**
comp=Z,1.1nm,0.9s,baz=209,slow=6.7,SNR=4.1							
comp=Z,1.1nm,0.9s							
VNDA	**Vanda**	**41.24**	**189**	P	**P**	**04 55 38.1**	**+2.2**
PB03	**IPOC Station P**	**41.32**	**328**	P	**P**	**04 55 37.3**	**0.0**
PB01	**IPOC Station P**	**42.21**	**329**	P	**P**	**04 55 45.9**	**+1.4**
PB01				IAmb	IAmb	04 56 18.1	
comp=Z,8.9nm,1.1s							
BDFB	**Brasilia**	**44.59**	**359**	P	**P**	**04 56 04.6**	**+0.8**
comp=Z,2.0nm,0.7s,baz=188,slow=10,SNR=4.1							
comp=Z,2.0nm,0.7s							
BDFB	**Brasilia**	**44.59**	**359**	P	**P**	**04 56 04.9**	**+1.0**
BDFB				IAmb	IAmb	04 56 16.1	
comp=Z,6.5nm,1.2s							
SIV	**San Ignacio**	**45.34**	**341**	P	**P**	**04 56 10.2**	**+0.5**
comp=Z,2.7nm,0.8s,baz=166,slow=8.5,SNR=15							
comp=Z,2.7nm,0.8s							
LPAZ	**La Paz**	**46.44**	**332**	P	**P**	**04 56 20.1**	**+1.0**
comp=Z,1.1nm,0.9s,baz=163,slow=11,SNR=3.9							
comp=Z,1.1nm,0.9s							
LPAZ	**La Paz**	**46.44**	**332**	P	**P**	**04 56 18.0**	**-1.0**
SUR	**Sutherland**	**51.81**	**90**	P	**P**	**04 56 59.5**	**-0.1**
comp=Z,10nm,1.1s,baz=174,slow=10,SNR=2.8							
comp=Z,10nm,1.1s							
SUR	**Sutherland**	**51.81**	**90**	P	**P**	**04 56 59.3**	**-0.3**
BOSA	**Boshof**	**57.09**	**91**	P	**P**	**04 57 37.2**	**-0.7**
comp=Z,1.7nm,0.6s,baz=217,slow=7.9,SNR=4.8							
comp=Z,1.7nm,0.6s							
BOSA	**Boshof**	**57.09**	**91**	P	**P**	**04 57 37.1**	**-0.8**
BOSA				IAmb	IAmb	04 57 47.0	
comp=Z,9.5nm,1.1s							
LBTB	**Lobatse**	**60.24**	**89**	P	**P**	**04 57 59.1**	**-0.7**
TOA0	**Torodi Ar. Sit**	**83.03**	**48**	P	**P**	**05 00 17.3**	**+0.5**
TOA0				IAmb	IAmb	05 00 22.0	
comp=Z,3.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.03**	**48**	P	**P**	**05 00 17.2**	**+0.3**
comp=Z,2.2nm,0.8s,baz=220,slow=4.5,SNR=11							
comp=Z,2.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.03**	**48**	P	**P**	**05 00 17.1**	**+0.3**
TORD				IAmb	IAmb	05 00 52.5	
comp=Z,3.5nm,0.8s							
ASAR	**Alice Springs**	**96.33**	**181**	P	**P**	**05 01 18.9**	**-1.4**
comp=Z,0.8nm,0.7s,baz=182,slow=6.6,SNR=6.2							
comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**100.03**	**182**	P	**Pdif**	**05 01 35.7**	**-1.2**
comp=Z,0.5nm,0.6s,baz=177,slow=4.2,SNR=10							
AKASG	**Malin Array Be**	**126.60**	**50**	PKP	**PKPdf**	**05 06 51.9**	**-1.7**
comp=Z,1.3nm,0.6s,baz=236,slow=1.0,SNR=5.1							
CMAR	**Chiang Mai Arr**	**131.80**	**135**	PKP	**PKPdf**	**05 07 04.0**	**-0.6**
comp=Z,1.7nm,0.5s,baz=230,slow=2.8,SNR=5.2							
ARCES	**ARCESS Array B**	**139.50**	**31**	PKiKP	PKPpre	05 07 07.8	
comp=Z,0.8nm,0.6s,baz=220,slow=2.1,SNR=5.7							
ILAR	**Eielson Array**	**144.94**	**313**	PKPbc	PKPbc	05 07 25.9	-0.6
comp=Z,4.3nm,0.6s,baz=151,slow=1.6,SNR=41							
MKAR	**Makanchi Array**	**148.08**	**92**	PKPbc	**PKPbc**	**05 07 35.2**	**-1.1**
comp=Z,3.4nm,0.5s,baz=238,slow=2.6,SNR=31							

IDC 18 05:04:41.3±1.6, **5°.39S**×**153°.39E**, **h0**km, **mb3.5**/4, **mbtmp3.6**/4, **Error ellipse: s-maj=40.4km s-min=34.4km az=66.0**, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.85**	**144**	P	P	05 09 24.8	-0.1
2.5nm,0.4s,baz=318,slow=15,SNR=9.0							
2.5nm,0.4s							
WRA	**Warramunga Arr**	**23.51**	**230**	P	P	05 09 53.3	+0.1
0.8nm,0.8s,baz=56,slow=10,SNR=5.0							
0.8nm,0.8s							
ASAR	**Alice Springs**	**26.13**	**224**	P	P	05 10 17.5	+0.2
0.4nm,0.6s,baz=61,slow=7.7,SNR=2.9							
0.4nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**27.11**	**29**	T	T	05 38 39.1	
baz=208							
H11S2	**WAKE ISLAND Hy**	**27.12**	**29**	T	T	05 38 40.2	
baz=208							
H11S1	**WAKE ISLAND Hy**	**27.13**	**29**	T	T	05 38 38.5	
baz=208							
MKAR	**Makanchi Array**	**81.15**	**319**	P	P	05 16 59.4	+0.5
0.2nm,0.4s,baz=100,slow=4.8,SNR=2.5							
0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**151.05**	**287**	PKPbc	PKPbc	05 24 36.6	-0.7
0.3nm,0.4s,baz=63,slow=2.5,SNR=9.1							

*IDC **18** 05:32:51.9±1.5, 2°.89S×119°.87E, h0km, mb3.5/3, mbtmp3.6/4, ML3.6/1, MS3.3/1, Error ellipse: s-maj=49.0km s-min=16.8km az=84.0*
*DJA **18** 05:32:55.2±0.3, 3°.5±2°.×12°.0E±°, h11km±2km, M4.1/13, mb4.4/1, MLv4.0/13*

ISC 18 05:32:54.6±1.0, **2°.96S**±0°.04×**119°.83E**±0°.06, **h10**km±6km, **n19**, σ2§**22**/24, **mb3.4**/3, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.08**	**188**	P	**Pg**	**05 32 56.6**	**-0.3**
TTSI				S	**Sg**	**05 32 59.9**	**+1.3**
SPSI	**Sidrap Palu**	**1.00**	**184**	P	**Pg**	**05 33 12.9**	**-0.9**
SPSI				S	**Sb**	**05 33 27.4**	**+0.2**
PMSI	**Majene**	**1.06**	**240**	P	**Pg**	**05 33 12.5**	**-2.5**
PMSI				S	**Sg**	**05 33 27.8**	**-1.0**
BNSI	**Bone**	**1.46**	**169**	P	**Pb**	**05 33 21.2**	**-0.6**
KAPI	**Kappang**	**2.04**	**182**	Pn	**Pb**	**05 33 30.2**	**-1.6**
18nm,0.3s,baz=346,slow=11,SNR=24							
KAPI				Lg	Lg	05 33 58.3	
32nm,0.3s,baz=232,slow=19,SNR=12							
80nm,0.4s							
KAPI	**Kappang**	**2.04**	**182**	P	**Pn**	**05 33 29.8**	**+0.8**
KKSI	**Kolaka, Sulawe**	**2.18**	**124**	P	**Pb**	**05 33 32.2**	**-1.9**
BKSI	**Bulukumba**	**2.36**	**173**	P	**Pn**	**05 33 34.1**	**+0.6**
APSI	**Ampana**	**2.73**	**42**	P	**Pn**	**05 33 39.7**	**+1.2**
BSSI	**Bau Bau, Buton**	**3.23**	**168**	P	**Pb**	**05 33 51.4**	**-0.7**
MPSI	**Mapaga**	**3.28**	**1**	P	**Pn**	**05 33 47.1**	**+1.0**
LUWI	**Luwuk**	**3.50**	**57**	P	**Pn**	**05 33 50.8**	**+1.6**
MRSI	**Marisa**	**4.01**	**32**	P	**Pn**	**05 33 57.5**	**+1.3**
MRSI				pP	**Pb**	**05 34 03.1**	**-2.4**
GTOI	**Gorontalo**	**4.78**	**42**	P	**Pn**	**05 34 07.3**	**+0.5**
PLAI	**Plampang**	**6.17**	**199**	P	**Pn**	**05 34 25.6**	**-0.3**
PSI	**Prapat**	**21.67**	**285**	P	**P**	**05 37 51.5**	**+5.6**
PSI				P	**P**	**05 37 51.4**	**+5.6**
WRA	**Warramunga Arr**	**22.03**	**141**	P	**P**	**05 37 48.5**	**-1.0**
1.0nm,0.6s,baz=309,slow=12,SNR=5.5							
1.0nm,0.6s							
ASAR	**Alice Springs**	**24.68**	**148**	P	**P**	**05 38 14.8**	**-1.1**
0.4nm,0.5s,baz=334,slow=9.8,SNR=3.0							
ASAR				LR	LR	05 48 53.5	
comp=Z,68nm,21.3s,baz=348,slow=39							
0.4nm,0.5s							
MKAR	**Makanchi Array**	**59.55**	**331**	P	**P**	**05 42 56.8**	**-1.7**
1.1nm,1.0s,baz=132,slow=7.1,SNR=5.7							
1.1nm,1.0s							

*IDC **18** 05:37:01.4±4.7, 6°.71S×149°.08E, h51km±46km, mb3.8/4, mbtmp4.1/7, ML3.7/3, MS3.7/8, Error ellipse: s-maj=36.5km s-min=26.2km az=153.0*
*NEIC **18** 05:37:01.8±2.2, 6°.80S±0°.08×149°.15E±0°.08, h35km±2km, mb4.2/12, Error ellipse: s-maj=16.9km s-min=10.3km az=134.0*

ISC 18 05:37:01.8±0.8, **6°.7S**±0°.1×**149°.0E**±0°.1, **h53**km, **n41**, σ1§**48**/36, **mb4.1**/5, **MS3.7**/6, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.25**	**213**	P	**Pn**	**05 37 51.8**	**+1.6**
80nm,0.3s,baz=33,slow=5.9,SNR=79							
PMG				S	**Sn**	**05 38 28.4**	**+0.7**
1μm,0.9s,baz=144,slow=20,SNR=2.9							
333nm,0.6s							
PMG	**Port Moresby**	**3.25**	**213**		**Pn**	**05 37 52.1**	**+1.8**
PMG	**Port Moresby**	**3.25**	**213**	P	**Pn**	**05 37 52.0**	**+1.7**
PMG	**Port Moresby**	**3.25**	**213**	P	**Pn**	**05 37 52.1**	**+1.8**
RABL	**Rabaul**	**4.03**	**52**		**Pn**	**05 38 00.7**	**-0.3**
MANU	**Manus Island**	**4.88**	**341**	Pn	Pn	05 38 16.8	+4.2
COEN	**Coen**	**9.21**	**218**	Pn	**Pn**	**05 39 12.0**	**0.0**
COEN	**Coen**	**9.21**	**218**	P	**Pn**	**05 39 12.0**	**0.0**
MTSU	**Mount Surprise**	**12.26**	**201**	P	**Pn**	**05 39 54.2**	**+0.5**
CTA	**Charters Tower**	**13.59**	**191**	P	**Pn**	**05 40 11.6**	**-0.3**
0.2nm,0.3s,baz=12,slow=17,SNR=1.5							
CTA				LR	LR	05 45 44.7	
comp=Z,105nm,18.2s,baz=342,slow=38							
2.4nm,1.1s							
SIJI	**Sorong**	**18.58**	**287**	LR	LR	05 50 40.8	
comp=Z,250nm,19.5s,baz=136,slow=44							
EIDS	**Eidsvold**	**18.69**	**174**	P	**P**	**05 41 16.3**	**+0.5**
EIDS				IAmb	IAmb	05 41 42.6	
comp=Z,16nm,1.2s							
WB0	**Warramunga Arr**	**19.23**	**226**		**P**	**05 41 22.1**	**+0.3**
WB0				IAmb	IAmb	05 41 35.1	
comp=Z,8.8nm,0.8s							
WR0	**Warramunga Arr**	**19.25**	**225**	P	**P**	**05 41 23.0**	**+1.1**
WR0				IAmb	IAmb	05 41 39.5	
comp=Z,9.6nm,0.6s							
WRAB	**Tennant Creek**	**19.37**	**226**	P	**P**	**05 41 23.8**	**+0.5**
WRAB				IAmb	IAmb	05 41 36.1	
comp=Z,13nm,0.8s							
WRAB	**Tennant Creek**	**19.37**	**226**	P	**P**	**05 41 23.8**	**+0.5**
WB2	**Warramunga Arr**	**19.37**	**226**	P	**P**	**05 41 23.8**	**+0.5**
WB2				IAmb	IAmb	05 41 36.3	
comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**19.38**	**226**	P	**P**	**05 41 24.1**	**+0.7**
comp=Z,1.1nm,0.3s,baz=51,slow=11,SNR=75							
WRA				S	**S**	**05 44 53.7**

3.8nm,0.3s
PDGK ⇑S **Sg** **06 02 02.6 0.0**
8.0nm,0.4s
SHLS Shalkode 1.73 225 *e*P **Pn** **06 01 42.1 -0.2**
17nm,0.2s
SHLS *e*S **Sn** **06 02 02.0 -3.0**
23nm,0.3s
SHLS Shalkode 1.73 225 P **Pn** **06 01 42.1 -0.2**
17nm,0.2s
SHLS S **Sn** **06 02 02.0 -3.0**
23nm,0.3s
BLB Baldybastay 1.93 262 *e*P **Pb** **06 01 47.7 +0.6**
59nm,0.2s
BLB *e*S **Sb** **06 02 12.1 +0.4**
62nm,0.2s
UZB Uzynbulak 1.98 232 *e*P **Pg** **06 01 48.8 -0.3**
8.4nm,0.2s
UZB *e*S **Sb** **06 02 13.7 +0.7**
10nm,0.2s
ZHN Zhinishke 2.31 239 *e*P **Pb** **06 01 54.7 +1.1**
15nm,0.3s
ZHN *e*S **Sb** **06 02 23.6 +1.1**
25nm,0.4s
ZHN Zhinishke 2.31 239 Pg **Pb** **06 01 54.7 +1.1**
15nm,0.3s
ZHN Lg Lg 06 02 23.6
25nm,0.4s
ARXS Arharly 2.38 267 *e*P **Pb** **06 01 55.0 +0.2**
21nm,0.4s
ARXS *e*S **Sb** **06 02 24.9 +0.3**
23nm,0.5s
ARXS Arharly 2.38 267 Pg **Pb** **06 01 55.0 +0.2**
21nm,0.4s
ARXS Lg Lg 06 02 24.9
23nm,0.5s
SATY Saty 2.39 237 *e*P **Pb** **06 01 54.8 -0.2**
12nm,0.2s
SATY *e*S **Sb** **06 02 24.3 -0.5**
18nm,0.4s
SATY Saty 2.39 237 Pg **Pb** **06 01 54.8 -0.2**
12nm,0.2s
SATY Lg Lg 06 02 24.3
18nm,0.4s
MAKZ Makanchi 2.48 13 ⇓Pg **Pg** **06 01 58.5 -0.2**
0.7nm,0.3s
MAKZ ⇓Lg Lg 06 02 32.9
2.1nm,0.4s
MK31 Makanchi Array 2.53 18 ⇓Pg **Pg** **06 01 59.0 -0.7**
0.5nm,0.3s,baz=205,slow=16,SNR=30
MK31 ⇑Lg Lg 06 02 32.9
1.0nm,0.3s,baz=202,slow=27,SNR=10
KOTS Kotyrbulak 3.14 250 *e*P **Pb** **06 02 08.7 +1.0**
1.6nm,0.1s
KOTS *e*S **Sb** **06 02 47.6 +1.3**
12nm,0.3s
MDOK Medeo 3.21 249 Pg **Pg** **06 02 12.6 -0.1**
2.8nm,0.4s
MDOK Lg Lg 06 02 54.9
2.2nm,0.5s
KTBS Karatobe 3.28 259 *e*P **Pb** **06 02 10.8 +0.7**
1.5nm,0.3s
KTBS *e*S **Sb** **06 02 51.5 +1.0**
34nm,0.7s
KTBS Karatobe 3.28 259 Pg **Pb** **06 02 10.8 +0.7**
1.5nm,0.3s
KTBS Lg Lg 06 02 51.5
34nm,0.7s
KUU Kurty 3.49 263 *e*P **Pb** **06 02 14.4 +0.8**
1.5nm,0.3s
KUU *e*S **Sb** **06 02 57.6 +1.2**
7.1nm,0.5s
KUU Kurty 3.49 263 Pg **Pb** **06 02 14.4 +0.8**
1.5nm,0.3s
KUU Lg Lg 06 02 57.6
7.1nm,0.5s
KST Kastek 3.99 252 *e*P **Pg** **06 02 25.8 -1.7**
5.3nm,0.4s
KST *e*S **Sg** **06 03 17.2 -2.1**
4.3nm,0.8s
KST Kastek 3.99 252 Pg **Pg** **06 02 25.8 -1.7**
5.3nm,0.4s
KST Lg Lg 06 03 17.2
4.3nm,0.8s
KRBS Karabastau 4.00 262 *e*P **Pb** **06 02 23.4 +1.1**
2.3nm,0.4s
KRBS *e*S **Sb** **06 03 13.2 +2.1**
2.3nm,0.3s
KRBS Karabastau 4.00 262 Pg **Pb** **06 02 23.4 +1.1**
2.3nm,0.4s
KRBS Lg Lg 06 03 13.2
2.3nm,0.3s
DGS Degeres 4.05 255 *e*P **Pb** **06 02 23.9 +0.7**
1.9nm,0.3s
DGS *e*S **Sb** **06 03 13.7 +1.1**
2.7nm,0.2s
TKM2 Tokmak 2 4.28 252 ⇑Pg **Pb** **06 02 30.1 +2.9**
2.7nm,0.6s
TKM2 ⇑Lg Lg 06 03 27.8
2.2nm,0.5s

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*IDC **18** 06:25:30.3±0.9, 33°.30S×22°.44E, h0km, mb3.9/6, mbtmp3.9/10, ML4.0/4, MS3.3/6, Error ellipse: s-maj=20.8km s-min=13.8km az=46.0*
*PRE **18** 06:25:31.4±2.4, 33°.35S×22°.38E, h5km, ML3.5, Fault plane solution: NP1:ϕs336.87000°, δ61.98000°, λ21.88000°.*
*NEIC **18** 06:25:33.2±2.4, 33°.27S±0°.06×22°.34E±0°.07, h10km±1km, mb4.5/7, Error ellipse: s-maj=11.4km s-min=8.5km az=227.0*
ISC 18 06:25:32.2±1.2, **33°.29S**±0°.03×**22°.39E**±0°.03, **h12**km±8km, **n77**, σ1§**87**/117, **mb4.1**/10, **9C-14D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERW	**Merweville**	**0.95**	**310**	⇓*i*P	**Pg**	**06 25 50.7**	**0.0**
MERW				*e*S	**Sg**	**06 26 03.2**	**+0.1**
MERW				IAML		06 26 09.4	
	comp=Z,2μm,0.4s						
GRAN	**Grantham**	**1.00**	**349**	⇑*i*P	**Pg**	**06 25 51.5**	**0.0**
GRAN				*e*S	**Sn**	**06 26 07.6**	**+1.5**
GRAN				IAML		06 26 16.1	
	comp=Z,760nm,0.5s						
ROOI	**Rooidraai Farm**	**1.25**	**51**	⇑*i*P	**Pn**	**06 25 56.1**	**+0.5**
ROOI				*e*S	**Sn**	**06 26 13.9**	**+1.4**
ROOI				IAML		06 26 18.0	
	comp=Z,1μm,0.3s						
MATJ	**Matjiesfontein**	**1.52**	**270**	⇓*i*P	**Pg**	**06 26 00.2**	**-1.2**
MATJ				*e*S	**Sg**	**06 26 20.2**	**-0.9**
MATJ				IAML		06 26 23.0	
	comp=Z,2μm,0.5s						
BRAK	**Brakfontein**	**1.56**	**16**	⇑*i*P	**Pb**	**06 26 01.9**	**+0.8**
BRAK				*e*S	**Sg**	**06 26 23.4**	**+1.0**
BRAK				IAML		06 26 26.0	
	comp=Z,1μm,0.5s						
FRAZ	**Fraserburg**	**1.59**	**328**	⇓*i*P	**Pb**	**06 26 01.8**	**+0.3**
FRAZ				*e*S	**Sn**	**06 26 22.2**	**+1.5**
FRAZ				IAML		06 26 25.0	
	comp=Z,1μm,0.5s						
SUR	**Sutherland**	**1.61**	**304**	Pg	**Pn**	**06 26 01.6**	**+1.0**
	comp=Z,126nm,0.3s,baz=111,slow=14,SNR=3877						
SUR				Lg	Lg	06 26 22.2	
	comp=Z,1μm,0.3s,baz=203,slow=18,SNR=78						
SUR				LR	LR	06 26 53.3	
	comp=Z,184nm,19.8s,baz=124,slow=50						
SUR	**Sutherland**	**1.61**	**304**		**Pn**	**06 26 01.4**	**+0.8**
SUR				Sn	**Sn**	**06 26 22.5**	**+1.2**
SUR	**Sutherland**	**1.61**	**304**	⇓*i*P	**Pn**	**06 26 01.6**	**+1.0**
SUR				*e*S	**Sn**	**06 26 22.8**	**+1.5**
SUR				IAML		06 26 28.5	
	comp=Z,3μm,0.3s						
BFON	**Badsfontein, M**	**1.84**	**37**	⇑*i*P	**Pb**	**06 26 06.2**	**+0.3**
BFON				*e*S	**Sn**	**06 26 29.8**	**+2.7**
BFON				IAML		06 26 33.4	
	comp=Z,1μm,0.7s						
ROSN	**Rosenhof**	**1.97**	**115**	*e*P	**Pb**	**06 26 06.4**	**-1.6**
ROSN				*e*S	**Sn**	**06 26 28.6**	**-1.4**
ROSN				IAML		06 26 35.9	
	comp=Z,416nm,0.4s						
GRAF	**Camdeboo Natio**	**2.03**	**61**	⇓*i*P	**Pb**	**06 26 09.3**	**+0.2**
GRAF				*e*S	**Sb**	**06 26 36.0**	**+1.6**
GRAF				IAML		06 26 38.1	
	comp=Z,496nm,0.4s						
KROM	**Kromhout**	**2.05**	**115**	⇓*i*P	**Pb**	**06 26 07.5**	**-1.9**
KROM				*e*S	**Sn**	**06 26 32.4**	**+0.5**
KROM				IAML		06 26 35.0	
	comp=Z,389nm,0.5s						
BUFB	**Buffelsbos**	**2.14**	**114**	⇓*i*P	**Pn**	**06 26 08.8**	**+1.1**
BUFB				*e*S	**Sn**	**06 26 35.1**	**+0.8**
BUFB				IAML		06 26 37.4	
	comp=Z,224nm,0.7s						
ELIM	**Elim**	**2.56**	**239**	*e*P	**Pn**	**06 26 13.2**	**-0.4**
ELIM				*e*S	**Sn**	**06 26 45.7**	**+1.1**
ELIM				IAML		06 26 56.7	
	comp=Z,658nm,0.5s						
CER	**Ceres**	**2.59**	**267**	⇓*i*P	**Pn**	**06 26 15.1**	**+1.1**
CER				*e*S	**Sn**	**06 26 46.6**	**+1.1**
CER				IAML		06 27 00.5	
	comp=Z,646nm,0.4s						
SOE	**Somerset East**	**2.73**	**79**		**Pn**	**06 26 18.5**	**+2.6**
SOE	**Somerset East**	**2.73**	**79**	*e*P	**Pn**	**06 26 17.4**	**+1.5**
SOE				*e*S	**Sn**	**06 26 49.5**	**+0.7**
SOE				IAML		06 26 58.8	
	comp=Z,344nm,0.6s						
CVNA	**Calvinia**	**2.86**	**308**	⇓*i*P	**Pn**	**06 26 19.8**	**+2.0**
CVNA				*e*S	**Sn**	**06 26 54.9**	**+2.7**
CVNA				IAML		06 27 05.1	
	comp=Z,316nm,0.6s						
GRHM	**Grahamstown, E**	**3.34**	**91**	⇓*i*P	**Pn**	**06 26 25.0**	**+0.8**
GRHM				*e*S	**Sn**	**06 27 04.4**	**+0.6**
GRHM				IAML		06 27 25.3	
	comp=Z,485nm,0.6s						
PKA	**Prieska**	**3.62**	**5**	⇓*i*P	**Pn**	**06 26 30.2**	**+2.0**
PKA				*e*S	**Sn**	**06 27 14.3**	**+3.4**
PKA				IAML		06 27 30.5	
	comp=Z,221nm,0.6s						
HVD	**Gariep Dam**	**3.76**	**45**	⇓*i*P	**Pn**	**06 26 32.9**	**+2.8**
HVD				*e*S	**Sn**	**06 27 18.1**	**+3.8**
HVD				IAML		06 27 37.3	
	comp=Z,126nm,0.5s						
KEIM	**Keimoes**	**4.73**	**345**	*e*P	**Pn**	**06 26 44.1**	**+0.7**
KEIM				*e*S	**Sn**	**06 27 39.1**	**+0.9**
KEIM				IAML		06 27 59.3	
	comp=Z,171nm,0.5s						
AUGR	**Augrabies**	**5.00**	**339**	*e*P	**Pn**	**06 26 47.1**	**0.0**
AUGR				*e*S	**Sn**	**06 27 44.6**	**-0.2**
AUGR				IAML		06 28 16.9	
	comp=Z,232nm,0.6s						
UPI	**Upington**	**5.00**	**348**	*e*P	**Pn**	**06 26 48.1**	**+0.9**
UPI				*e*S	**Sn**	**06 27 48.1**	**+3.1**
UPI				IAML		06 28 21.5	
	comp=Z,84nm,0.5s						
BOSA	**Boshof**	**5.27**	**29**	Pn	**Pn**	**06 26 52.0**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=212,slow=11,SNR=40						
BOSA				Sn	**Sn**	**06 27 49.9**	**-1.7**
	comp=Z,9.3nm,0.3s,baz=149,slow=18,SNR=10.0						
BOSA				Lg	Lg	06 28 13.1	
	comp=Z,17nm,0.3s,baz=118,slow=22,SNR=7.2						
BOSA				LR	LR	06 29 10.0	
	comp=Z,83nm,21.6s,baz=245,slow=42						
	comp=Z,15nm,0.6s						
BOSA	**Boshof**	**5.27**	**29**		**Pn**	**06 26 52.0**	**+1.1**
BOSA	**Boshof**	**5.27**	**29**	⇑*i*P	**Pn**	**06 26 51.9**	**+1.1**
BOSA				*e*S	**Sn**	**06 27 53.5**	**+1.9**
BOSA				IAML		06 28 23.1	
	comp=Z,43nm,0.8s						
BOSA	**Boshof**	**5.27**	**29**	*i*P	**Pn**	**06 26 52.4**	**+1.5**
BOSA	**Boshof**	**5.27**	**29**	*i*P	**Pn**	**06 26 52.4**	**+1.5**
KOMG	**Komaggas**	**5.44**	**308**	*e*P	**Pn**	**06 26 54.7**	**+1.5**
KOMG				*e*S	**Sn**	**06 27 56.1**	**+0.4**
KOMG				IAML		06 28 23.1	
	comp=Z,45nm,0.5s						
KSTD	**Kokstad**	**6.45**	**68**	*e*P	**Pn**	**06 27 08.2**	**+1.0**
KSTD				*e*S	**Sn**	**06 28 19.9**	**-0.9**
KSTD				IAML		06 28 57.0	
	comp=Z,40nm,0.7s						
SWZ	**Schweizer**	**6.59**	**23**	*e*P	**Pn**	**06 27 09.9**	**+0.8**
SWZ				*e*S	**Sn**	**06 28 23.8**	**-0.5**
SWZ				IAML		06 28 59.0	
	comp=Z,58nm,0.6s						
SNKL	**Senekal, Frees**	**6.81**	**44**	⇓*i*P	**Pn**	**06 27 13.3**	**+1.2**
SNKL				*e*S	**Sn**	**06 28 27.1**	**-2.5**
SNKL				IAML		06 29 09.1	
	comp=Z,98nm,0.7s						
PRYS	**Parys**	**7.66**	**35**	⇑*i*P	**Pn**	**06 27 23.7**	**0.0**
PRYS				*e*S	**Sn**	**06 28 46.9**	**-3.7**
PRYS				IAML		06 29 40.6	
	comp=Z,76nm,0.7s						
WDLM	**Western Deep L**	**8.11**	**34**	*e*P	**Pn**	**06 27 31.8**	**+1.7**
WDLM				*e*S	**Sn**	**06 28 58.9**	**-2.8**
WDLM				IAML		06 29 52.6	
	comp=Z,30nm,0.6s						
KSR	**Koster**	**8.38**	**29**	⇑*i*P	**Pn**	**06 27 34.5**	**+0.8**
KSR				*e*S	**Sn**	**06 29 07.7**	**-0.7**
KSR				IAML		06 30 01.4	
	comp=Z,167nm,0.7s						
NWCL	**Newcastle**	**8.51**	**51**	⇓*i*P	**Pn**	**06 27 38.1**	**+2.7**
NWCL				*e*S	**Sn**	**06 29 12.2**	**+0.7**
NWCL				IAML		06 30 10.2	
	comp=Z,25nm,0.7s						
HRAO	**HartRAO**	**8.69**	**33**	*e*P	**Pn**	**06 27 38.1**	**+0.2**
HRAO				*e*S	**Sn**	**06 29 12.9**	**-3.0**
LBTB	**Lobatse**	**8.70**	**20**	Pn	**Pn**	**06 27 38.0**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=197,slow=13,SNR=13						
LBTB				Sn	**Sn**	**06 29 11.0**	**-5.2**
	comp=Z,1.3nm,0.3s,baz=163,slow=19,SNR=2.6						
LBTB				Lg	Lg	06 29 58.9	
	comp=Z,2.2nm,0.3s,baz=104,slow=19,SNR=3.8						
LBTB				LR	LR	06 31 01.7	
	comp=Z,131nm,18.6s,baz=202,slow=38						
	comp=Z,3.8nm,0.5s						
LBTB	**Lobatse**	**8.70**	**20**		**Pn**	**06 27 38.6**	**+0.5**
LBTB	**Lobatse**	**8.70**	**20**	⇑*i*P	**Pn**	**06 27 38.3**	**+0.3**
LBTB				*e*S	**Sn**	**06 29 12.9**	**-3.3**
LBTB				IAML		06 30 13.8	
	comp=Z,17nm,0.6s						
LBTB	**Lobatse**	**8.70**	**20**	*i*P	**Pn**	**06 27 38.5**	**+0.4**
LBTB				*i*S	**Sn**	**06 29 14.8**	**-1.4**
LBTB	**Lobatse**	**8.70**	**20**	*i*P	**Pn**	**06 27 38.5**	**+0.4**
LBTB				*i*S	**Sn**	**06 29 14.8**	**-1.4**
SLR	**Silverton**	**9.11**	**36**	*e*P	**Pn**	**06 27 46.6**	**+3.0**
SLR				*e*S	**Sn**	**06 29 23.6**	**-2.5**
SLR				IAML		06 30 24.0	
	comp=Z,73nm,0.7s						
POGA	**Pongola**	**9.99**	**56**	Pn	**Pn**	**06 27 56.0**	**+0.5**
POGA	**Pongola**	**9.99**	**56**	*e*P	**Pn**	**06 27 56.1**	**+0.5**
POGA				*e*S	**Sn**	**06 29 44.5**	**-3.1**
POGA				IAML		06 30 53.9	
	comp=Z,9.8nm,0.6s						
LEPH	**Lephalale, Lim**	**10.52**	**28**	⇑*i*P	**Pn**	**06 28 02.6**	**-0.4**
LEPH				*e*S	**Sn**	**06 29 56.4**	**-4.5**
LEPH				IAML		06 31 10.7	
	comp=Z,15nm,0.7s						
WIN	**Windhoek**	**11.65**	**335**	*e*S	**Sn**	**06 30 24.1**	**-4.6**
WIN				IAML		06 31 43.4	
	comp=Z,19nm,0.6s						
MOPA	**Mopani**	**12.54**	**41**	*e*P	**Pn**	**06 28 29.4**	**-1.2**
MOPA				*e*S	**Sn**	**06 30 48.6**	**-1.7**
MOPA				IAML		06 32 21.6	
	comp=Z,0.9nm,0.7s						
MOPA	**Mopani**	**12.54**	**41**	*i*P	**Pn**	**06 28 27.2**	**-3.3**
MOPA				*i*S	Sn	06 30 39.3	-11
MOPA	**Mopani**	**12.54**	**41**	*i*P	**Pn**	**06 28 27.2**	**-3.3**
MOPA				*i*S	Sn	06 30 39.3	-11
MUSN	**Musina, Limpop**	**12.79**	**33**	*e*P	**Pn**	**06 28 33.1**	**-0.8**
MUSN	**Musina, Limpop**	**12.79**	**33**	*i*P	**Pn**	**06 28 32.5**	**-1.5**
MUSN				*i*S	Sn	06 30 48.3	-8.0
MUSN	**Musina, Limpop**	**12.79**	**33**	*i*P	**Pn**	**06 28 32.5**	**-1.5**
MUSN				*i*S	Sn	06 30 48.3	-8.0
MATP	**Matopo**	**13.91**	**25**	Pn	**Pn**	**06 28 47.1**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=208,slow=11,SNR=9.2						
MATP				Sn	Sn	06 31 14.4	-9.5
	comp=Z,0.6nm,0.3s,baz=252,slow=0.9,SNR=15						
MATP				Lg	Lg	06 32 39.4	
	comp=Z,0.7nm,0.3s,baz=118,slow=20,SNR=7.2						
	comp=Z,3.2nm,0.5s						
TSUM	**Tsumeb**	**14.67**	**342**	Lg	Lg	06 33 01.0	
	comp=Z,0.7nm,0.3s,baz=108,slow=18,SNR=5.9						
TSUM				LR	LR	06 34 43.2	
	comp=Z,91nm,19.9s,baz=260,slow=38						
TSUM	**Tsumeb**	**14.67**	**342**	P	**P**	**06 29 05.6**	**-0.4**
TSUM	**Tsumeb**	**14.67**	**342**	*e*S	**Sn**	**06 31 37.5**	**-4.8**
TSUM				IAML		06 33 21.4	
	comp=Z,18nm,0.9s						
LSZ	**Lusaka**	**18.68**	**18**	P	**P**	**06 29 48.2**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=202,slow=18,SNR=1.8						
LSZ				Sn	**Sn**	**06 33 18.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=245,slow=8.4,SNR=3.3						
LSZ				Lg	Lg	06 35 11.2	
	comp=Z,0.3nm,0.3s,baz=112,slow=21,SNR=3.7						
LSZ				LR	LR	06 37 18.7	
	comp=Z,80nm,18.8s,baz=196,slow=38						
	comp=Z,1.6nm,0.5s						
MBAR	**Mbarara**	**33.45**	**15**	LR	LR	06 46 10.3	
	comp=Z,88nm,19.1s,baz=36,slow=37						
SNAA	**Sanae**	**40.72**	**192**	P	**P**	**06 33 14.9**	**+2.4**
SNAA				IAmb	IAmb	06 33 56.0	
	comp=Z,6.1nm,1.5s						
DBIC	**Dimbokro**	**47.41**	**322**	P	**P**	**06 34 05.0**	**-1.6**
	comp=Z,1.9nm,0.5s,baz=103,slow=12,SNR=1.8						
	comp=Z,1.9nm,0.5s						
DBIC	**Dimbokro**	**47.41**	**322**	P	**P**	**06 34 05.2**	**-1.5**
TOA0	**Torodi Ar. Sit**	**50.22**	**333**	P	**P**	**06 34 28.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**50.22**	**333**	P	**P**	**06 34 28.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=157,slow=7.2,SNR=7.3						
	comp=Z,1.1nm,0.6s						
QSPA	**South Pole Qui**	**56.93**	**180**	P	**P**	**06 35 17.4**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=185,slow=19,SNR=2.6						
	comp=Z,1.4nm,0.9s						
QSPA	**South Pole Qui**	**56.93**	**180**	P	**P**	**06 35 17.7**	**+0.7**
QSPA				IAmb	IAmb	06 35 34.3	
	comp=Z,5.2nm,1.4s						
TRQA	**Tornquist**	**66.41**	**239**	P	**P**	**06 36 21.3**	**0.0**
TRQA				IAmb	IAmb	06 37 00.6	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**66.75**	**171**	P	**P**	**06 36 22.2**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=214,slow=7.3,SNR=2.2						
	comp=Z,0.3nm,0.5s						
PLCA	**Paso Flores**	**71.19**	**233**	P	**P**	**06 36 50.2**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=105,slow=20,SNR=1.5						
	comp=Z,0.6nm,0.6s						
LPAZ	**La Paz**	**81.67**	**256**	P	**P**	**06 37 52.5**	**+1.0**
	comp=Z,2.1nm,1.2s,baz=132,slow=5.5,SNR=2.5						
	comp=Z,2.1nm,1.2s						
KK31	**Karatay Array**	**87.84**	**33**	P	**P**	**06 38 24.6**	**+3.4**
KK31				IAmb	IAmb	06 38 27.3	
	comp=Z,3.1nm,1.0s						
KKAR	**Karatay Array**	**87.84**	**33**	P	**P**	**06 38 24.4**	**+3.2**
KKAR				IAmb	IAmb	06 38 27.3	
	comp=Z,3.1nm,1.0s						
ARU	**Arti**	**94.50**	**19**	LR	LR	07 27 25.1	
	comp=Z,27nm,18.2s,baz=269,slow=39						
ILAR	**Eielson Array**	**147.81**	**351**	PKPbc	**PKPbc**	**06 45 16.7**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=349,slow=3.1,SNR=3.9						
NVAR	**Mina Array Bea**	**147.91**	**291**	PKPbc	**PKPbc**	**06 45 17.7**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=115,slow=4.1,SNR=1.7						

GUC 18 07:02:46.4±0.4, **29°.87S**×**71°.65W**, **h23**km±4km, **ML2.9, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.36**	**98**	⇑*i*P	Pb	07 02 53.9	-0.3
CO05				*i*S	Sb	07 02 59.5	-0.1
CO05				IAML		07 02 59.8	
	comp=N,3μm,0.1s						
GO04	**Tololo Observa**	**0.80**	**112**	*e*P	Pb	07 03 01.1	-0.6
GO04				*i*S	Sb	07 03 12.4	+0.2
CO06	**Fray Jorge**	**0.80**	**179**	⇓*i*P	Pb	07 03 01.0	-0.7
CO06				*i*S	Sb	07 03 11.9	-0.2
CO06				IAML		07 03 14.2	
	comp=E,1μm,0.2s						
CO03	**El Pedregal**	**1.27**	**140**	⇑*e*P	Pn	07 03 08.7	-0.3
CO03				*i*S	Sb	07 03 25.8	0.0
CO01	**Juntas del Tor**	**1.35**	**95**	*e*P	Pn	07 03 10.3	+0.1
CO01				*i*S	Sn	07 03 27.9	+0.3
CO01				IAML		07 03 28.4	
	comp=N,239nm,0.2s						

GUC 18 07:03:13.6±0.7, **32°.49S**×**70°.04W**, **h136**km±5km, **ML3.6, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA03	**San Esteban**	**0.51**	**237**	⇑*i*P	Pn	07 03 33.0	-0.6
VA03				*i*S	Sn	07 03 47.4	-1.3
VA03				IAML		07 03 48.7	
	comp=N,4μm,0.2s						
PEL	**Peldehue**	**0.85**	**219**	*e*P	Pn	07 03 35.0	-0.8
PEL				*i*S	Sn	07 03 51.4	-1.4
PEL				IAML		07 03 51.9	
	comp=N,834nm,0.3s						
MT05	**Renca**	**1.07**	**213**	*e*P	Pn	07 03 37.5	-0.3
MT05				*i*S	Sn	07 03 55.6	-0.8
MT03	**Universidad Ad**	**1.08**	**201**	*e*P	Pn	07 03 37.3	-0.6
MT03				*i*S	Sn	07 03 55.5	-1.0
MT03				IAML		07 03 59.3	
	comp=E,1μm,0.1s						
MT02	**Curacav**	**1.20**	**230**	*e*P	Pn	07 03 38.6	-0.3
MT02				*i*S	Sn	07 03 57.4	-0.9
MT02	**Curacav**	**1.20**	**230**	⇑*e*P	Pn	07 03 38.6	-0.4
MT02				*i*S	Sn	07 03 57.6	-0.8
MT09	**Talagante**	**1.51**	**211**	*e*P	Pn	07 03 42.0	-0.5
MT09				*i*S	Sn	07 04 03.6	-0.8
MT09				IAML		07 04 05.2	
	comp=N,1μm,0.4s						
MT01	**Popeta**	**1.71**	**216**	⇓*i*P	Pn	07 03 43.8	-0.7
MT01				*i*S	Sn	07 04 06.6	-1.5
MT01				IAML		07 04 08.3	
	comp=E,478nm,0.1s						

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*IDC **18** 07:22:06.1±0.7, 27°.57N×128°.58E, h0km, mb4.1/18, mbtmp4.1/18, MS3.1/14, Error ellipse: s-maj=22.3km s-min=11.6km az=93.0*
*NIED **18** 07:22:12.2, 27°.45N×128°.65E, h43km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr1.75; Mθθ-0.50; Mφφ-1.24; Mrθ0.99; Mθφ-0.89; Mφr0.19; Fault plane solution: M0 2.06000×10^15 NP1: ϕs196.00000°, δ37.00000°, λ59.00000°. NP2: ϕs53.00000°, δ59.00000°, λ111.00000°.*
*JMA **18** 07:22:12.2±0.1, 27°.5N±0°.5×128°.7E±0°.7, h43km, MD4.0/26, MV4.1/26, NEAR OKINAWAJIMA ISLAND*
JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .
*NEIC **18** 07:22:13.5±1.0, 27°.36N±0°.08×128°.5E±0°.1, h54km±3km, mb4.5/13, Error ellipse: s-maj=18.8km s-min=9.3km az=115.0*
ISC 18 07:22:11.8±0.7, **27°.40N**±0°.03×**128°.72E**±0°.04, **h45**km±6km, **n87**, σ1§**29**/83, **mb4.3**/26, **MS3.0**/10, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOKE	**Okinoerabujima**	**0.14**	**256**	P	**Pn**	**07 22 19.1**	**-0.1**
JOKE				S	**Sn**	**07 22 24.0**	**-0.4**
JOKE	**Okinoerabujima**	**0.14**	**256**	A	A	07 22 19.1	
	comp=E,76nm,0.7s,comp=E,24nm,0.2s						
JTK	**Tokunoshima**	**0.44**	**27**	P	**Pn**	**07 22 22.1**	**0.0**
JTK				S	**Sn**	**07 22 28.8**	**-0.4**
JTK	**Tokunoshima**	**0.44**	**27**	A	A	07 22 22.1	
	comp=E,20nm,0.7s,comp=E,34nm,0.7s						
JYRO	**Yoronjima**	**0.44**	**213**	P	**Pn**	**07 22 22.4**	**+0.3**
JYRO				S	**Sn**	**07 22 29.4**	**+0.1**
JYRO	**Yoronjima**	**0.44**	**213**	A	A	07 22 22.4	
	comp=E,12nm,0.7s,comp=E,16nm,0.7s						
JOW	**Kunigami**	**0.69**	**216**	Pn	**Pn**	**07 22 25.6**	**+0.4**
	358nm,0.3s,baz=164,slow=23,SNR=807						
JOW				Sn	**Sn**	**07 22 36.5**	**+1.6**
	1μm,0.3s,baz=148,slow=29,SNR=24						
JOW				LR	LR	07 22 55.6	
	comp=Z,312nm,19.4s,baz=83,slow=63						
JOW	**Kunigami**	**0.69**	**216**	P	**Pn**	**07 22 25.6**	**+0.4**
JOW				S	**Sn**	**07 22 35.4**	**+0.4**
JOW	**Kunigami**	**0.69**	**216**	A	A	07 22 25.6	
	comp=E,18nm,1.1s,comp=E,11nm,0.6s						
JIH	**Iheya**	**0.76**	**242**	P	**Pn**	**07 22 26

JKE	Kume jima 2	2.03	239	eP	Pn	07 22 44.0	+0.4
JNN	Nakanoshima	2.64	22	eP	Pn	07 22 52.0	+0.1
JNN				eS	Sn	07 23 22.5	-0.2
JKDJ	Kitadaitoujima	2.72	121	P	Pn	07 22 52.6	-0.3
JKDJ				eS	Sn	07 23 22.9	-1.6
JMZ	Minamidaito 2	2.73	125	P	Pn	07 22 52.7	-0.5
JMZ				eS	Sn	07 23 22.1	-2.9
JYAK	Yakushimahirau	3.24	29	eP	Pn	07 23 00.5	+0.4
JYAK				eS	Sn	07 23 37.5	+0.2
JKC	Kuchinoerabu	3.32	23	eP	Pn	07 23 01.7	+0.5
JKC				eS	Sn	07 23 38.3	-1.0
JMTN	Minamitane	3.55	32	eP	Pn	07 23 06.6	+2.2
JMTN				eS	Sn	07 23 45.5	+0.5
JTN	Tanegashima 3	3.80	31	eP	Pn	07 23 10.3	+2.4
JSU	Suzuyama	4.36	20		Pn	07 23 19.2	+3.6
YHNB	Yeheng	7.15	249	Pn	Pn	07 23 53.4	-0.5
SSLB	Suanglung	7.88	245		Pn	07 24 01.9	-2.1
TPUB	Ta-pu	8.38	243	Pn	Pn	07 24 08.4	-2.4
KSRS	Korea Array	10.05	356	Pn	Pn	07 24 35.5	+2.0
	0.2nm,0.3s,baz=174,slow=14,SNR=19						
KSRS				LR	LR	07 28 49.0	
	comp=Z,100nm,18.3s,baz=180,slow=41						
JHJ	Hachijo jima 2	11.13	57	LR	LR	07 28 49.6	
	comp=Z,108nm,20.8s,baz=283,slow=36						
JCJ	Chichijima	11.98	88	LR	LR	07 28 55.2	
	comp=Z,82nm,19.7s,baz=116,slow=34						
MJAR	Matsushiro Arr	12.16	39	Pn	Pn	07 25 06.3	+4.0
	0.1nm,0.3s,baz=232,slow=9.3,SNR=1.1						
MJAR				LR	LR	07 29 48.7	
	comp=Z,59nm,20.0s,baz=208,slow=38						
GUMO	Guam	20.40	129	LR	LR	07 33 09.8	
	comp=Z,60nm,21.0s,baz=328,slow=32						
KLR	Kul'dur	21.93	5	LR	LR	07 34 36.3	
	comp=Z,26nm,20.2s,baz=199,slow=34						
SONM	Songino Array	26.83	325	P	P	07 27 48.0	-0.1
	0.7nm,0.4s,baz=127,slow=8.7,SNR=2.5						
SONM				LR	LR	07 39 24.8	
	comp=Z,54nm,19.2s,baz=210,slow=39						
	0.7nm,0.4s						
SIJI	Sorong	28.21	175	LR	LR	07 38 46.0	
	comp=Z,34nm,19.9s,baz=298,slow=35						
CMAR	Chiang Mai Arr	28.78	258	P	P	07 28 04.8	-0.8
	1.6nm,0.4s,baz=55,slow=7.6,SNR=6.4						
CMAR				LR	LR	07 39 33.7	
	comp=Z,28nm,18.3s,baz=85,slow=36						
	1.6nm,0.4s						
KAPI	Kappang	33.37	196	LR	LR	07 43 22.2	
	comp=Z,40nm,18.9s,baz=299,slow=38						
PETK	Petropavlovsk-	33.48	32	LR	LR	07 44 14.3	
	comp=Z,19nm,18.3s,baz=247,slow=40						
BRDH	Bariadhala	33.84	270	LR	LR	07 43 58.1	
	comp=Z,91nm,18.7s,baz=108,slow=39						
H11N2	WAKE ISLAND Hy	35.70	94	T	T	08 06 50.1	
	baz=290,slow=75,SNR=84						
H11N1	WAKE ISLAND Hy	35.70	94	T	T	08 06 46.2	
	baz=290,slow=75,SNR=61						
H11N3	WAKE ISLAND Hy	35.72	94	T	T	08 06 48.4	
	baz=290,slow=75,SNR=84						
H11S3	WAKE ISLAND Hy	35.95	96	T	T	08 07 16.7	
	baz=292,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	35.96	96	T	T	08 07 12.9	
	baz=292,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	35.97	96	T	T	08 07 14.3	
	baz=292,slow=75,SNR=23						
MK31	Makanchi Array	41.10	311	P	P	07 29 50.0	-1.3
MKAR	Makanchi Array	41.10	311	P	P	07 29 49.8	-1.5
	0.5nm,0.5s,baz=96,slow=9.3,SNR=5.9						
	0.5nm,0.5s						
MKAR	Makanchi Array	41.10	311	P	P	07 29 50.2	-1.1
ZALV	Zalesovo Beam	41.60	322	P	P	07 29 54.4	-0.8
	0.7nm,0.4s,baz=113,slow=8.0,SNR=1.5						
	0.7nm,0.4s						
KURK	Kurchatov	44.29	316	P	P	07 30 16.2	-0.8
KURBB	Kurchatov Arra	44.32	316	P	P	07 30 15.8	-1.5
	3.1nm,0.4s,baz=102,slow=9.0,SNR=12						
	3.1nm,0.4s						
WB0	Warramunga Arr	47.20	173	P	P	07 30 40.9	+0.6
WB0				IAmb	IAmb	07 30 53.3	
	comp=Z,3.8nm,1.0s						
WRA	Warramunga Arr	47.37	173	P	P	07 30 42.3	+0.6
	comp=Z,0.6nm,0.5s,baz=353,slow=8.3,SNR=12						
WRA				LR	LR	07 48 11.2	
	comp=Z,29nm,21.4s,baz=250,slow=33						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	47.37	173	P	P	07 30 42.0	+0.4
WB2	Warramunga Arr	47.37	173	P	P	07 30 42.2	+0.6
WB2				IAmb	IAmb	07 31 23.9	
	comp=Z,11nm,1.4s						
KKAR	Karatay Array	49.11	305	P	P	07 30 54.6	-0.2
BRVK	Borovoye	49.77	318	P	P	07 30 58.6	-1.1
BRVK				IAmb	IAmb	07 30 59.8	
	comp=Z,4.0nm,0.8s						
CTA	Charters Tower	50.16	158	LR	LR	07 50 54.9	
	comp=Z,35nm,20.0s,baz=260,slow=34						
ASAR	Alice Springs	51.01	174	P	P	07 31 11.3	+1.9
	comp=Z,0.3nm,0.5s,baz=7.4,slow=14,SNR=11						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	51.01	174	P	P	07 31 09.6	+0.2
ABKAR	Akbulak array	56.18	313	P	P	07 31 46.1	-0.9
J20K	Nowinta River	60.12	30	P	P	07 32 15.4	+1.0
J20K				IAmb	IAmb	07 32 18.5	
	comp=Z,6.4nm,1.2s						
PPLA	Purkeypile	61.05	31	P	P	07 32 22.3	+1.3
TOLK	Toolik Lake Re	61.78	24	P	P	07 32 27.0	+1.4
TOLK				IAmb	IAmb	07 33 02.1	
	comp=Z,11nm,1.4s						
H23K	Yukon River	61.98	27	P	P	07 32 28.4	+1.5
H23K				IAmb	IAmb	07 33 08.8	
	comp=Z,6.7nm,1.1s						
ILAR	Eielson Array	63.20	29	P	P	07 32 35.1	0.0
	comp=Z,0.8nm,0.9s,baz=297,slow=8.7,SNR=7.4						
	comp=Z,0.8nm,0.9s						
BMAR	Burnt Mountain	63.77	25	P	P	07 32 40.5	+1.6
M24K	Tolsona, Glenn	63.92	31	P	P	07 32 41.8	+1.8
K27K	Chicken	65.39	29	P	P	07 32 50.9	+1.5
K27K				IAmb	IAmb	07 32 52.0	
	comp=Z,3.2nm,1.0s						
INK	Inuvik	67.65	23	P	P	07 33 04.2	+0.5
	comp=Z,1.3nm,0.8s,baz=295,slow=4.7,SNR=1.9						
	comp=Z,1.3nm,0.8s						
KBZ	Khabaz	68.77	309	P	P	07 33 10.9	-0.2
	comp=Z,5.6nm,0.9s,baz=10,slow=0.8,SNR=7.8						
	comp=Z,5.6nm,0.9s						
ARCES	ARCESS Array B	69.09	338	P	P	07 33 11.8	-0.9
	comp=Z,2.8nm,0.8s,baz=86,slow=6.2,SNR=7.9						
	comp=Z,2.8nm,0.8s						
FIA1	FINESS Array S	72.07	330	P	P	07 33 30.5	-0.5
FINES	FINESS Array B	72.07	330	P	P	07 33 30.1	-0.9
	comp=Z,1.3nm,0.3s,baz=69,slow=5.4,SNR=24						
	comp=Z,1.3nm,0.3s						
FINES	FINESS Array B	72.07	330	P	P	07 33 30.5	-0.5
AKASG	Malin Array Be	74.93	319	P	P	07 33 47.0	-1.0
	comp=Z,0.9nm,0.5s,baz=53,slow=5.9,SNR=7.9						
	comp=Z,0.9nm,0.5s						
BRTR	Keskin Array B	76.67	308	P	P	07 33 58.0	-0.3
	comp=Z,2.4nm,0.7s,baz=96,slow=5.0,SNR=7.5						
	comp=Z,2.4nm,0.7s						
NB2	NORSAR Subarra	78.47	334	P	P	07 34 06.7	-1.2
	comp=Z,2.2nm,0.6s,baz=52,slow=5.9						
NOA	NORSAR Array B	78.47	334	P	P	07 34 07.0	-0.9
	comp=Z,4.6nm,0.8s,baz=51,slow=5.6,SNR=13						
	comp=Z,4.6nm,0.8s						
CLL	Collm	83.45	325	eP	P	07 34 34.6	+0.1
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	84.54	323	P	P	07 34 40.2	-0.1
	comp=Z,2.9nm,0.3s,baz=57,slow=9.4,SNR=1.9						
	comp=Z,2.9nm,0.3s						
NVAR	Mina Array Bea	89.38	46	P	P	07 35 05.9	+1.7
	comp=Z,0.4nm,0.8s,baz=305,slow=6.3,SNR=2.4						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	91.98	39	P	P	07 35 17.3	+1.0
	comp=Z,0.1nm,0.3s,baz=309,slow=1.7,SNR=1.7						
	comp=Z,0.1nm,0.3s						

*IDC **18** 07:22:57.5±4.3, 23°.20N×93°.80E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=351.2km s-min=23.0km az=60.0*

ISC 18 07:23:03.7±1.3, 23°.2N±0°.3×93°.5E±0°.2, h53km, n14, σ1§57/15, mb3.6/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	6.68	310	eP	Pn	07 24 36.6	-2.9
	64nm,0.4s						
RAMN	Ramite	7.28	303	eP	Pn	07 24 49.0	+1.2
	45nm,0.4s						
RAMN				eS	Sn	07 26 10.2	+1.0
JIRN	Jiri	7.96	306	eP	Pn	07 24 55.9	-1.3
	48nm,0.3s						
GUN	Gumba	8.33	306	eP	Pn	07 25 00.1	-2.1
	54nm,0.4s						
PKI	Pulchoki	8.51	303	eP	Pn	07 25 03.9	-0.8
	43nm,0.4s						
PKIN	Phulchoki	8.52	303	eP	Pn	07 25 04.1	-0.7
	33nm,0.3s						
DMN	Daman	8.76	302	eP	Pn	07 25 07.5	-0.6
	18nm,0.2s						
GKN	Gorkha	9.32	303	eP	Pn	07 25 14.5	-1.0
	37nm,0.3s						
DANN	Dangsing	10.16	303	eP	Pn	07 25 25.6	-1.6
	14nm,0.3s						
PYUN	Piuthan	10.65	300	eP	Pn	07 25 32.6	-1.3
	7.6nm,0.2s						
MKAR	Makanchi Array	25.25	342	P	P	07 28 24.6	-0.2
	0.6nm,0.6s,baz=160,slow=7.8,SNR=4.1						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	29.79	341	P	P	07 29 07.7	+2.3
	0.2nm,0.3s,baz=145,slow=9.8,SNR=3.0						
	0.2nm,0.3s						
WRA	Warramunga Arr	58.52	134	P	P	07 32 54.4	-0.6
	1.0nm,0.7s,baz=321,slow=7.4,SNR=27						
	1.0nm,0.7s						
ASAR	Alice Springs	60.91	137	P	P	07 33 11.6	+0.2
	0.4nm,0.4s,baz=316,slow=6.8,SNR=7.2						
	0.4nm,0.4s						

*ROM **18** 07:39:37.9±0.3, 43°.40N±0°.02×14°.31E±0°.02, h10km, ML2.5/22, Error ellipse: s-maj=2.2km s-min=1.5km az=238.0*

ISC 18 07:39:40.8±0.9, 43°.37N±0°.03×14°.10E±0°.02, h16km±7km, n59, σ1§08/76, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADA	Capodarco di F	0.30	235	P	Pb	07 39 47.4	-0.5
CADA				S	Sg	07 39 52.5	+0.9
CIMA	Civitanova Mar	0.32	259	P	Pg	07 39 46.2	-1.4
CIMA				S	Sg	07 39 52.6	+0.4
PP3	Marolino	0.36	272	P	Pg	07 39 48.1	-0.1
PP3				S	Sn	07 39 56.9	-1.1
PP3				AML	AML		
	comp=E,1106μm,0.2s						
PP3				AML	AML		
	comp=N,1260μm,1.3s						
PP3				AML	AML		
	comp=N,1235μm,1.3s						
PP3				AML	AML		
	comp=E,1109μm,0.2s						
PP3				AML	AML		
	comp=N,1260μm,1.3s						
PP3				AML	AML		
	comp=E,1106μm,0.2s						
PP3				AML	AML		
	comp=N,1265μm,1.3s						
PP3				AML	AML		
	comp=N,1236μm,1.3s						
PP3				AML	AML		
	comp=E,1030μm,0.2s						
PP3				AML	AML		
	comp=E,1033μm,0.2s						
PP3				AML	AML		
	comp=N,1185μm,0.2s						
PP3				AML	AML		
	comp=N,1226μm,0.2s						
PP3				AML	AML		
	comp=E,1108μm,0.2s						
AOI	Ancona	0.41	297	P	Pg	07 39 48.0	-1.1
AOI				S	Sg	07 39 55.2	+0.4
AOI				AML	AML		
	comp=E,537μm,0.4s						
AOI				AML	AML		
	comp=N,687μm,0.3s						
AOI				AML	AML		
	comp=N,687μm,0.3s						
AOI				AML	AML		
	comp=E,537μm,0.4s						
OFFI	Offida	0.53	215	P	Pg	07 39 51.7	+0.4
OFFI				AML	AML		
	comp=E,576μm,0.7s						
OFFI				AML	AML		
	comp=N,648μm,0.4s						
OFFI				AML	AML		
	comp=E,577μm,0.7s						
OFFI				AML	AML		
	comp=N,648μm,0.4s						
TRTR	Tortoreto Alta	0.58	194	P	Pg	07 39 52.5	+0.3
GUMA	Gualdo di Mace	0.64	242	P	Pg	07 39 53.6	+0.2
GUMA				S	Sn	07 40 04.6	-0.4
CING	Cingoli	0.66	271	P	Pb	07 39 53.0	-1.0
CING				AML	AML		
	comp=E,152μm,0.4s						
CING				AML	AML		
	comp=N,148μm,1.5s						
CING				AML	AML		
	comp=E,127μm,0.3s						
CING				AML	AML		
	comp=N,131μm,0.2s						
CSP1	Cessapalombo	0.71	247	P	Pb	07 39 54.0	-0.9
CSP1				S	Sn	07 40 06.7	-0.2
CSP1				AML	AML		
	comp=E,366μm,1.0s						
CSP1				AML	AML		
	comp=N,415μm,0.4s						
CSP1				AML	AML		
	comp=E,352μm,0.3s						
CSP1				AML	AML		
	comp=N,415μm,0.4s						
EL6	Elcito	0.73	267	P	Pb	07 39 54.1	-1.1
EL6				AML	AML		
	comp=E,1450μm,1.6s						
EL6				AML	AML		
	comp=N,550μm,1.6s						
EL6				AML	AML		
	comp=N,550μm,1.6s						
MMO1	Montemonaco	0.74	231	P	Pb	07 39 54.1	-1.2
MC2	Monte Cornacci	0.81	236	P	Pb	07 39 55.2	-1.3
MC2				S	Sn	07 40 10.0	+0.6
T1243	Rocca Santa Ma	0.82	216	P	Pb	07 39 54.9	-1.9
TERO	Teramo	0.83	206	P	Pb	07 39 54.8	-2.0
TERO				AML	AML		
	comp=N,468μm,0.3s						
TERO				AML	AML		
	comp=E,255μm,0.3s						
TERO				AML	AML		
	comp=N,451μm,0.3s						
TERO				AML	AML		
	comp=E,255μm,0.3s						
TERO				AML	AML		
	comp=E,255μm,0.3s						
TERO				AML	AML		
	comp=N,468μm,0.3s						
T1245	Castelsantange	0.84	233	P	Pb	07 39 55.1	-2.1
T1245				AML	AML		
	comp=E,756μm,0.6s						
T1245				AML	AML		
	comp=N,644μm,0.3s						
T1245				AML	AML		
	comp=E,749μm,1.2s						
T1245				AML	AML		
	comp=N,560μm,0.3s						
T1245				AML	AML		
	comp=E,755μm,0.6s						
T1245				AML	AML		
	comp=E,750μm,1.2s						
T1245				AML	AML		
	comp=N,645μm,0.3s						
T1245				AML	AML		
	comp=N,561μm,0.3s						
T1245				AML	AML		
	comp=E,615μm,0.2s						
T1245				AML	AML		
	comp=E,650μm,0.2s						
ARVD	Arcevia	0.85	279	P	Pb	07 39 56.8	-0.4
SNTG	Esanatoglia	0.85	263	P	Pb	07 39 55.7	-1.6
SNTG				S	Sn	07 40 11.1	+0.7
T1204	Amatrice, Fraz	0.90	220	P	Pb	07 39 56.0	-2.1
T1204				AML	AML		
	comp=E,287μm,0.2s						
T1204				AML	AML		
	comp=N,176μm,0.3s						
T1246	Crognaleto (TE	0.90	210	P	Pb	07 39 56.0	-2.1
T1202	Accumoli, Fraz	0.92	224	P	Pb	07 39 57.0	-1.5
T1216	Preci, Frazion	0.93	239	P	Pb	07 39 56.7	-1.8
T1216				S	Sn	07 40 11.7	-0.4
T1216				AML	AML		
	comp=E,544μm,0.4s						
T1216				AML	AML		
	comp=N,393μm,0.3s						
SMA1	SAN MARTINO	0.93	218	P	Pb	07 39 56.6	-1.9
SMA1				AML	AML		
	comp=E,278μm,1.5s						
SMA1				AML	AML		
	comp=N,266μm,0.3s						
SMA1				AML	AML		
	comp=N,266μm,0.3s						
SMA1				AML	AML		
	comp=E,214μm,0.4s						
DUGI	Dugi Otok	0.93	48	ePg	Pb	07 39 57.9	-0.7
DUGI				Sg	Sn	07 40 12.5	+0.2
CESI	CESI - Serrava	0.95	248	P	Pb	07 39 57.7	-1.1
CAMP	Campotosto	0.97	212	P	Pb	07 39 59.0	-0.4
VCEL	Villa Celiera	0.99	191	P	Pb	07 39 58.8	-0.8
VCEL				AML	AML		
	comp=N,218μm,0.3s						
VCEL				AML	AML		
	comp=E,246μm,1.5s						
VCEL				AML	AML		
	comp=N,218μm,0.3s						
VCEL				AML	AML		
	comp=N,218μm,0.3s						
VCEL				AML	AML		
	comp=E,218μm,0.5s						
GIGS	Gran Sasso	1.00	203	P	Pb	07 39 59.1	-0.6
GIGS				AML	AML		
	comp=E,32μm,1.3s						
GIGS				AML	AML		
	comp=N,40μm,1.2s						
GIGS				AML	AML		
	comp=N,37μm,0.3s						
GIGS				AML	AML		
	comp=E,30μm,0.5s						
MPAG	Monte Paganucc	1.01	285	P	Pb	07 39 59.5	-0.5
MPAG				S	Sg	07 40 15.5	+1.9
FSSB	Fossombrone	1.02	289	P	Pb	07 39 59.6	-0.4
FSSB				AML	AML		
	comp=N,330μm,0.3s						
FSSB				AML	AML		
	comp=E,348μm,1.1s						
FSSB				AML	AML		
	comp=N,330μm,0.3s						
FSSB				AML	AML		
	comp=N,330μm,0.3s						
FSSB				AML	AML		
	comp=E,343μm,0.3s						
ATSC	Scheggia e Pas	1.03	274	P	Pb	07 39 59.0	-1.3
T1215	Vallo di Nera,	1.07	238	P	Pb	07 39 59.7	-1.2
RM33	Pellescritta (	1.08	217	P	Pb	07 40 00.6	-0.5
RM33				AML	AML		
	comp=E,152μm,1.1s						
RM33				AML	AML		
	comp=N,161μm,0.8s						
RM33				AML	AML		
	comp=N,160μm,0.8s						
RM33				AML	AML		
	comp=E,193μm,0.7s						
RM33				AML	AML		
	comp=N,176μm,0.3s						
RM33				AML	AML		
	comp=E,133μm,0.3s						
RM33				AML	AML		
	comp=N,131μm,0.3s						
ATCC	AVT- Casa Cast	1.08	261	P	Pn	07 40 01.1	-0.2
ATCC				S	Sg	07 40 18.0	+2.1
LNSS	Leonessa	1.09	226	P	Pb	07 39 59.8	-1.5
ASSB	Assisi San Ben	1.10	253	P	Pb	07 40 00.1	-1.4
ASSB				S	Sg	07 40 18.1	+1.5
ASSB				AML	AML		
	comp=E,206μm,0.3s						
ASSB				AML	AML		
	comp=N,233μm,0.2s						
ASSB				AML	AML		
	comp=E,205μm,0.3s						
ASSB				AML	AML		
	comp=N,233μm,0.2s						
ATFO	Monte Foce - G	1.12	270	P	Pn	07 40 01.3	-0.5
ATFO				AML	AML		
	comp=E,144μm,1.1s						
ATFO				AML	AML		
	comp=N,166μm,0.7s						
ATFO				AML	AML		
	comp=E,144μm,1.1s						
ATFO				AML	AML		
	comp=N,167μm,0.7s						
ATFO				AML	AML		
	comp=E,134μm,0.3s						
NARO	Abbazia di Nar	1.13	283	P	Pn	07 40 01.4	-0.6
ATBU	Serra di Buran	1.14	276	P	Pn	07 40 01.8	-0.3
ATBU				S	Sg	07 40 20.3	+2.6
PIEI	Pieia	1.15	279	P	Pn	07 40 01.9	-0.4
PIEI				AML	AML		
	comp=E,96μm,0.3s						
PIEI				AML	AML		
	comp=N,58μm,0.4s						
PIEI				AML	AML		
	comp=E,96μm,0.3s						
PIEI				AML	AML		
	comp=N,58μm,0.4s						
VIRC	Vir	1.15	36	ePg	Pn	07 40 01.3	-0.9
VIRC				Sg	Sn	07 40 18.4	+0.8
MURB	Monte Urbino	1.16	265	P	Pb	07 40 02.2	-0.2
ZIRJ	Zirje	1.16	75	ePg	Pn	07 40 01.6	-0.7
ZIRJ				Sg	Sg	07 40 19.2	+0.9
T0110	Collepietro	1.17	192	P	Pn	07 40 01.9	-0.6
T0110				AML	AML		
	comp=N,136μm,0.3s						
T0110				AML	AML		
	comp=N,135μm,0.3s						
T0110				AML	AML		
	comp=E,130μm,0.5s						
T0110				AML	AML		
	comp=E,130μm,0.5s						
T0110				AML	AML		
	comp=N,135μm,0.3s						
ATPC	Poggio Castell	1.20	276	P	Pn	07 40 02.6	-0.3
ATVO	AVT- Monte Val	1.24	271	P	Pn	07 40 03.2	-0.2
ATVO				AML	AML		
	comp=E,77μm,0.3s						
ATVO				AML	AML		
	comp=N,99μm,0.9s						
ATVO				AML	AML		
	comp=N,99μm,0.9s						
ATVO				AML	AML		
	comp=N,92μm,0.4s						
ATVO				AML	AML		
	comp=E,77μm,0.3s						
T1211	Morro Reatino	1.24	228	P	Pb	07 40 03.6	-0.3
ATPI	Pietralunga -	1.24	274	P	Pb	07 40 03.5	-0.3
ARRO	Arrone	1.26	232	P	Pb	07 40 04.2	+0.1
MORI	Morici	1.27	66	ePg	Pn	07 40 03.4	-0.4
MORI				Sg	Sg	07 40 22.2	+0.4
FIAM	Fiamignano	1.32	214	AML	AML		
	comp=E,85μm,0.7s						
FIAM				AML	AML		
	comp=E,85μm,0.7s						
FIAM				AML	AML		
	comp=E,85μm,0.7s						
FIAM				AML	AML		
	comp=N,48μm,0.6s						
FIAM				AML	AML		
	comp=N,48μm,0.6s						
NVLJ	Novalja	1.32	25	ePg	Pn	07 40 03.8	-0.7
NVLJ				Sg	Sb	07 40 22.7	+0.9
CESX	Cesi	1.35	236	P	Pb	07 40 05.1	-0.6
CESX				AML	AML		
	comp=E,96μm,1.3s						
CESX				AML	AML		
	comp=N,110μm,0.7s						
CESX				AML	AML		
	comp=E,96μm,1.3s						
CESX				AML	AML		
	comp=E,96μm,0.4s						
CESX				AML	AML		
	comp=N,104μm,0.7s						
INTR	Introdacqua	1.36	186	P	Pn	07 40 05.1	-0.2
INTR				AML	AML		
	comp=E,67μm,0.8s						
INTR				AML	AML		
	comp=N,113μm,1.1s						

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
INTR				AML	AML		
	comp=N,112μm,1.1s						
INTR				AML	AML		
	comp=E,57μm,0.4s						
INTR				AML	AML		
	comp=N,100μm,0.6s						
INTR				AML	AML		
	comp=E,87nm,0.8s						
RABC	**Rab**	**1.47**	**19**	*e*Pn	**Pn**	**07 40 05.9**	**-0.6**
RABC				Sg	**Sb**	**07 40 26.9**	**+0.9**
BRJN	**Brijuni**	**1.56**	**351**	P	**Pn**	**07 40 06.6**	**-1.2**
HVAR	**Hvar**	**1.73**	**96**	*e*Pn	**Pn**	**07 40 09.8**	**-0.3**
HVAR				Sn	**Sb**	**07 40 34.4**	**+1.0**
RICI	**Ricice**	**2.21**	**86**	*e*Pn	**Pn**	**07 40 17.0**	**+0.1**
CAVE	**Cavezzo**	**2.69**	**305**	AML	AML		
	comp=N,720μm,0.5s						
CAVE				AML	AML		
	comp=E,598μm,0.7s						
SPS2	**Spezzano della**	**4.41**	**157**	AML	AML		
	comp=E,54μm,0.1s						
SPS2				AML	AML		
	comp=N,35μm,0.2s						

BJI ***18*** *07:51:13.2±0.0,5°.16N×60°.95E,h10km,mb4.8/47, mB5.5/35,Ms5.2/39,Ms7 5.0/40*
IDC ***18*** *07:51:17.5±0.4,5°.66N×61°.49E,h0km,mb4.5/45, mbtmp4.5/48,ML4.1/3,MS4.6/75,Error ellipse: s-maj=11.0km s-min=9.8km az=30.0*
MOS ***18*** *07:51:17.9±1.2,5°.77N×61°.43E,h10km,mb5.2/84, MS4.4/7,Error ellipse: s-maj=6.3km s-min=3.8km az=106.2*
GCMT ***18*** *07:51:19.6±0.1,5°.57N±0°.01×61°.40E±0°.01,h12km, MW5.4/159,Moment Tension Solution. s93,c132; s159,c294; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-1.27±.01; Mθθ0.73±.01; Mφφ0.54±.01; Mrθ0.89±.04; Mθφ-0.55±.01; Mφr-0.02±.04; Best double couple: M0 1.50600×10^17 NP1:φs291.00000°,δ63.00000°, λ-107.00000°. NP2:φs145.00000°,δ32.00000°, λ-60.00000°. Principal axes: T 1.3890, Plg16.0000°, Azm33.0000°; N 0.2310, Plg15.0000°, Azm299.0000°; P -1.6230, Plg68.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***18*** *07:51:20.7±2.8,5°.64N±0°.08×61°.45E±0°.08,h10km±1km, mb5.1/72,Mwc5.4(GCMT) Error ellipse: s-maj=14.8km s-min=13.1km az=138.0*
ISC 18 07:51:19.8±0.3,5°.54N±0°.04×61°.36E±0°.04,h14km,n510, σ1s99/552,**mb5.0**/184,**MS4.8**/115,**31C-19D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**11.72**	**210**	Pn	**Pn**	**07 54 04.8**	**-2.1**
MSEY				Sn	**Sn**	**07 56 10.7**	**-7.0**
MSEY	**Mahe Island**	**11.72**	**210**	P	**Pn**	**07 54 04.8**	**-2.1**
MSEY	**Mahe Island**	**11.72**	**210**	P	**Pn**	**07 54 04.2**	**-2.6**
MSEY				S	**Sn**	**07 56 16.4**	**-1.3**
MSEY	**Mahe Island**	**11.72**	**210**	*i* P	Pn	07 54 01.8	-5.0
	SNR=18						
KAAM	**Kaadhehdhoo**	**12.65**	**113**	Pn	**Pn**	**07 54 19.5**	**0.0**
DMTO	**DMTO**	**13.63**	**333**	P	**P**	**07 54 39.1**	**-2.7**
	SNR=9.3						
DMTO				P	**P**	**07 54 39.1**	**-2.7**
	SNR=9.3						
DMTO				S	**S**	**07 57 23.7**	**-3.6**
DMTO				S	**S**	**07 57 23.7**	**-3.6**
RBK	**Rabkut**	**13.80**	**330**	P	**P**	**07 54 44.0**	**+0.3**
	SNR=12						
RBK				P	**P**	**07 54 44.0**	**+0.3**
	SNR=12						
RBK				P	**P**	**07 54 44.0**	**+0.3**
	SNR=12						
RBK				S	**S**	**07 57 25.8**	**-5.0**
RBK				S	**S**	**07 57 25.8**	**-5.0**
RBK				S	**S**	**07 57 25.8**	**-5.0**
ABTO	**Aybut**	**14.15**	**327**	P	**P**	**07 54 46.0**	**-1.6**
	SNR=24						
ABTO				P	**P**	**07 54 46.0**	**-1.6**
	SNR=24						
ABTO				P	**P**	**07 54 46.0**	**-1.6**
	SNR=24						
ABTO				S	**S**	**07 57 36.3**	**-1.7**
ABTO				S	**S**	**07 57 36.3**	**-1.7**
ABTO				S	**S**	**07 57 36.3**	**-1.7**
WHFO	**Wadi Hawf**	**14.37**	**330**	P	**P**	**07 54 49.0**	**-1.1**
	SNR=23						
WHFO				P	**P**	**07 54 49.0**	**-1.1**
	SNR=23						
WHFO				S	**S**	**07 57 40.2**	**-2.2**
WHFO				S	**S**	**07 57 40.2**	**-2.2**
DQM	**DQM**	**14.78**	**346**	P	**P**	**07 54 55.1**	**+0.6**
	SNR=10						
DQM				P	**P**	**07 54 55.1**	**+0.6**
	SNR=10						
DQM				S	**S**	**07 57 48.8**	**-1.9**
DQM				S	**S**	**07 57 48.8**	**-1.9**
DOK	**Doka**	**14.79**	**332**	P	**P**	**07 54 52.0**	**-2.7**
	SNR=18						
DOK				P	**P**	**07 54 52.0**	**-2.7**
	SNR=18						
DOK				S	**S**	**07 57 54.7**	**+3.6**
DOK				S	**S**	**07 57 54.7**	**+3.6**
PCHI	**Peechi**	**15.64**	**71**	*e*P	**Pn**	**07 54 58.7**	**-1.3**
PCHI				*ex*	x	07 58 12.0	
MHTO	**MHTO**	**15.71**	**348**	P	**P**	**07 55 03.0**	**-1.8**
	SNR=37						
MHTO				P	**P**	**07 55 03.0**	**-1.8**
	SNR=37						
MHTO				P	**P**	**07 55 03.0**	**-1.8**
	SNR=37						
MHTO				S	**S**	**07 58 09.2**	**-0.5**
MHTO				S	**S**	**07 58 09.2**	**-0.5**
MHTO				S	**S**	**07 58 09.2**	**-0.5**
TRD	**Trivandrum**	**15.76**	**78**	*e*P	**Pn**	**07 54 59.4**	**-2.1**
TRD				IAmb	IAmb	07 55 09.5	
	comp=Z,29nm,0.9s						
TRD				IAMs_20	IAMs_20	08 01 42.1	
	comp=Z,2μm,14.2s						
DGAR	**Diego Garcia**	**16.97**	**139**	P	**P**	**07 55 19.0**	**+0.1**
DGAR				IAmb	IAmb	07 55 20.9	
	comp=Z,197nm,1.1s						
DGAR	**Diego Garcia**	**16.97**	**139**	P	**P**	**07 55 19.0**	**+0.1**
DGAR				pmax	pmax		
	comp=Z,197nm,1.1s						
JMDO	**Jabal Madar**	**17.03**	**350**	P	**P**	**07 55 21.0**	**+1.5**
	SNR=16						
JMDO				P	**P**	**07 55 21.0**	**+1.5**
	SNR=16						
JMDO				P	**P**	**07 55 21.0**	**+1.5**
	SNR=16						
WBK	**Wadi Bani Khal**	**17.13**	**352**	P	**P**	**07 55 23.0**	**+2.3**
	SNR=12						
WBK				P	**P**	**07 55 23.0**	**+2.3**
	SNR=12						
BSY	**Bisya**	**17.57**	**347**	P	**P**	**07 55 28.0**	**+2.4**
	SNR=57						
BSY				P	**P**	**07 55 28.0**	**+2.4**
	SNR=57						
SMDO	**Samad**	**17.71**	**350**	P	**P**	**07 55 27.0**	**-0.2**
	SNR=20						
SMDO				P	**P**	**07 55 27.0**	**-0.2**
	SNR=20						
SMDO				P	**P**	**07 55 27.0**	**-0.2**
	SNR=20						
POO	**Poona**	**17.75**	**42**	*ex*	**Pn**	**07 55 22.0**	**-4.8**
POO				IAmb	IAmb	07 55 43.6	
POO				*i* x	x	07 59 34.4	
POO				IAMs_20	IAMs_20	08 00 34.3	
	comp=Z,6μm,17.5s						
WSAR	**Wadi Sarin**	**17.80**	**352**	P	**Pn**	**07 55 25.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=170,slow=16,SNR=7.5 comp=Z,5.6nm,0.8s						
BIDO	**Bidbid**	**18.15**	**350**	P	**P**	**07 55 34.0**	**+2.1**
	SNR=25						
BIDO				P	**P**	**07 55 34.0**	**+2.1**
	SNR=25						
ARQ	**Araqi**	**18.30**	**346**	P	**P**	**07 55 35.0**	**+1.4**
	SNR=39						
ARQ				P	**P**	**07 55 35.0**	**+1.4**
	SNR=39						
ARQ				P	**P**	**07 55 35.0**	**+1.4**
	SNR=39						
HOQ	**Hoqain**	**18.36**	**348**	P	**P**	**07 55 36.0**	**+1.8**
	SNR=39						
HOQ				P	**P**	**07 55 36.0**	**+1.8**
	SNR=39						
HOQ				P	**P**	**07 55 36.0**	**+1.8**
	SNR=39						
MZR	**Muzera**	**18.96**	**337**	P	**Pn**	**07 55 43.6**	**+2.2**
	SNR=15						
MZR				P	**Pn**	**07 55 43.6**	**+2.2**
	SNR=15						
MZR	**Muzera**	**18.96**	**337**	*i* P	**P**	**07 55 40.6**	**-0.1**
	SNR=6.4						
SOHO	**SOHO**	**19.06**	**346**	P	**Pn**	**07 55 46.1**	**+3.4**
SOHO				P	**Pn**	**07 55 46.1**	**+3.4**
SOHO	**SOHO**	**19.06**	**346**	*i* P	**Pn**	**07 55 43.4**	**+0.7**
	SNR=12						
ALNE	**Al Ain**	**19.19**	**344**	P	**Pn**	**07 55 47.5**	**+3.3**
	SNR=12						
ALNE				P	**Pn**	**07 55 47.5**	**+3.3**
	SNR=12						
ALNE				P	**Pn**	**07 55 47.5**	**+3.3**
	SNR=12						
ALNE	**Al Ain**	**19.19**	**344**	*i* P	**P**	**07 55 43.4**	**+0.1**
	SNR=17						
ATD	**Arta Tunnel**	**19.25**	**289**	P	**Pn**	**07 55 46.0**	**+0.9**
	comp=Z,1.5nm,0.3s,baz=68,slow=8.0,SNR=6.6						
ATD				LR	LR	08 02 12.8	
	comp=Z,1μm,18.7s,baz=106,slow=34 comp=Z,22nm,0.7s						
ATD	**Arta Tunnel**	**19.25**	**289**		**Pn**	**07 55 47.2**	**+2.1**
ATD	**Arta Tunnel**	**19.25**	**289**	*e*P	**P**	**07 55 43.5**	**-0.6**
ATD	**Arta Tunnel**	**19.25**	**289**	*e*P	**Pn**	**07 55 46.4**	**+1.3**
PALK	**Pallekele**	**19.29**	**84**	P	**P**	**07 55 44.7**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=180,slow=16,SNR=3.6						
PALK				LR	LR	08 01 40.5	
	comp=Z,4μm,18.7s,baz=14,slow=32 comp=Z,8.3nm,0.9s						
PALK	**Pallekele**	**19.29**	**84**	P	**Pn**	**07 55 47.4**	**+1.7**
PALK	**Pallekele**	**19.29**	**84**	*c i* P	**P**	**07 55 44.0**	**-0.6**
PALK				pmax	pmax		
	comp=Z,116nm,2.8s						
PALK	**Pallekele**	**19.29**	**84**	P	**P**	**07 55 43.6**	**-1.0**
	comp=Z,5μmcomp=Z,2μmcomp=Z,32nm,2.8s						
BHUJ	**Bhuj**	**19.34**	**24**	*e*P	**Pn**	**07 55 48.4**	**+2.3**
BHUJ				*i* x	x	08 00 27.0	
BHUJ				IAMs_20	IAMs_20	08 01 39.1	
	comp=Z,4μm,20.0s						
ASHO	**Ashiyiah**	**19.71**	**346**	P	**Pn**	**07 55 51.0**	**+0.5**
	SNR=17						
ASHO				P	**Pn**	**07 55 51.0**	**+0.5**
	SNR=17						
ASHO	**Ashiyiah**	**19.71**	**346**	*i* P	**P**	**07 55 49.1**	**+0.1**
	SNR=11						
HATD	**Hatta, Dubai**	**19.82**	**346**	P	**Pn**	**07 55 53.0**	**+1.1**
	SNR=18						
HATD				P	**Pn**	**07 55 53.0**	**+1.1**
	SNR=18						
HATD	**Hatta, Dubai**	**19.82**	**346**	*i* P	**P**	**07 55 50.4**	**+0.1**
	SNR=17						
ASUD	**Al Ashush, Dub**	**19.84**	**344**	P	**P**	**07 55 49.6**	**-0.9**
AJN	**Ajban**	**19.88**	**343**	P	**Pn**	**07 55 52.3**	**-0.2**
FAQ	**Al Faqa, Dubai**	**19.89**	**344**	P	**Pn**	**07 55 57.0**	**+4.4**
	SNR=10.0						
FAQ	**Al Faqa, Dubai**	**19.89**	**344**	*i* P	**Pn**	**07 55 52.1**	**-0.5**
	SNR=11						
UOSS	**Minazif**	**19.92**	**346**	P	**P**	**07 55 51.0**	**-0.3**
UOSS	**Minazif**	**19.92**	**346**	P	**Pn**	**07 55 54.5**	**+1.5**
UOSS				P	**Pn**	**07 55 54.5**	**+1.5**
UOSS	**Minazif**	**19.92**	**346**	*i* P	**P**	**07 55 50.3**	**-1.0**
	SNR=7.5						
MDRS	**Chennai**	**20.07**	**67**	*e*P	**P**	**07 55 53.5**	**+0.6**
MDRS				*i* x	x	08 00 43.2	
MDRS				IAMs_20	IAMs_20	08 02 34.6	
	comp=Z,5μm,15.8s						
NAZ	**Nazwa, Dubai**	**20.10**	**345**	P	Pn	07 55 60.0	+4.9
	SNR=11						
NAZ				P	Pn	07 55 60.0	+4.9
	SNR=11						
NAZ				P	Pn	07 55 60.0	+4.9
	SNR=11						
NAZ	**Nazwa, Dubai**	**20.10**	**345**	*i* P	**P**	**07 55 53.5**	**+0.3**
	SNR=11						
MSFE	**Esma-Masafi**	**20.33**	**346**	*i* P	**P**	**07 55 55.4**	**-0.4**
	SNR=7.7						
MASF	**Masafi**	**20.34**	**346**	P	Pn	07 56 00.7	+2.7
	SNR=8.9						
MASF				P	Pn	07 56 00.7	+2.7
	SNR=8.9						
HYB	**Hyderabad**	**20.54**	**54**	*e*P	**P**	**07 55 57.9**	**-0.3**
HYB				IAmb	IAmb	07 56 07.0	
	comp=Z,41nm,0.5s						
HYB				*i* x	x	08 00 57.4	
HYB				IAMs_20	IAMs_20	08 02 36.2	
	comp=Z,7μm,15.0s						
HYBB	**Hyderabad (bro**	**20.54**	**54**	*e*P	**P**	**07 55 57.5**	**-0.7**
HYBB				IVmB_BB		07 56 00.3	
	comp=Z,678nm,6.9s						
HYBB				*e*S	**S**	**07 59 47.3**	**-0.5**
HYBB				IVMs_BB	IVMs_BB	08 02 32.9	
	comp=Z,1μm,17.0s						
BANOM	**Banah**	**20.84**	**347**	P	Pn	07 56 05.8	+1.9
BANOM				P	Pn	07 56 05.8	+1.9
BANOM	**Banah**	**20.84**	**347**	*i* P	**P**	**07 56 01.0**	**-0.3**
	SNR=8.3						
SHME	**Shamm**	**21.00**	**347**	P	Pn	07 56 07.3	+1.7
SHME				P	Pn	07 56 07.3	+1.7
SHME	**Shamm**	**21.00**	**347**	P	**P**	**07 56 03.1**	**+0.1**
ANKE	**Ethiopia-Afar**	**21.81**	**282**	*e*P	**P**	**07 56 13.4**	**+1.2**
ANKE	**Ethiopia-Afar**	**21.81**	**282**	*e*P	**P**	**07 56 14.3**	**+2.1**
SHMA	**Al-Shehemyia**	**22.52**	**335**	P	**P**	**07 56 23.2**	**+3.9**
AAE	**Adis Abeba**	**22.68**	**280**	*e*P	**P**	**07 56 24.1**	**+2.6**
FURI	**Furi**	**22.75**	**280**	P	**P**	**07 56 25.2**	**+3.0**
FURI	**Furi**	**22.75**	**280**	*e*P	**P**	**07 56 25.8**	**+3.5**
BHPL	**Bhopal**	**23.44**	**40**	*e*P	**P**	**07 56 29.6**	**+0.7**
BHPL				IAmb	IAmb	07 56 39.5	
	comp=Z,56nm,1.0s						
BHPL				*i* x	x	08 02 16.2	
BHPL				IAMs_20	IAMs_20	08 03 48.7	
	comp=Z,4μm,17.5s						
RAYN	**Ar Rayn**	**23.52**	**321**	P	**P**	**07 56 29.0**	**-0.8**
RAYN				IAmb	IAmb	07 56 37.9	
	comp=Z,83nm,1.7s						
RAYN	**Ar Rayn**	**23.52**	**321**	P	**P**	**07 56 29.0**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,83nm,1.7s						
RAYN	**Ar Rayn**	**23.52**	**321**	P	**P**	**07 56 29.7**	**-0.1**
RAYN	**Ar Rayn**	**23.52**	**321**	*i* P	**P**	**07 56 28.3**	**-1.4**
	SNR=13						
KIBK	**Kibwezi**	**24.57**	**252**	P	**P**	**07 56 41.2**	**+1.5**
KIBK				IAmb	IAmb	07 56 47.9	
	comp=Z,74nm,1.5s						
KIBK	**Kibwezi**	**24.57**	**252**	P	**P**	**07 56 41.7**	**+2.0**
	SNR=19						
KMBO	**Kilima Mbogo**	**24.97**	**255**	P	**P**	**07 56 43.4**	**-0.2**
	comp=Z,0.7nm,1.1s,baz=55,slow=23,SNR=21						
KMBO				LR	LR	08 05 19.4	
	comp=Z,65nm,21.6s,baz=78,slow=34						
KMBO	**Kilima Mbogo**	**24.97**	**255**	P	**P**	**07 56 46.0**	**+2.4**
KMBO	**Kilima Mbogo**	**24.97**	**255**	*e*P	**P**	**07 56 45.5**	**+1.9**
KMBO	**Kilima Mbogo**	**24.97**	**255**	P	**P**	**07 56 46.1**	**+2.5**
KMBO				P	**P**	**07 56 46.1**	**+2.5**
KMBO				P	**P**	**07 56 46.1**	**+2.5**
KMBO	**Kilima Mbogo**	**24.97**	**255**	*e*P	**P**	**07 56 36.7**	**-6.9**
KMBO				*e*P	**P**	**07 56 36.7**	**-6.9**
KMBO	**Kilima Mbogo**	**24.97**	**255**	*e*P	**P**	**07 56 45.3**	**+1.7**
KMBO	**Kilima Mbogo**	**24.97**	**255**	*i* P	**P**	**07 56 43.4**	**-0.2**
	SNR=18						
JBP	**Jabalpur**	**25.09**	**44**	*e*P	**P**	**07 56 44.1**	**-0.1**
JBP				IAmb	IAmb	07 56 53.8	
	comp=Z,316nm,2.7s						
JBP				*e*S	**S**	**08 01 16.3**	**+7.8**
LODK	**Lodwar**	**26.01**	**266**	P	**P**	**07 56 56.1**	**+3.4**
LODK	**Lodwar**	**26.01**	**266**	P	**P**	**07 56 57.1**	**+4.3**
	SNR=22						
LODK	**Lodwar**	**26.01**	**266**	*e*P	**P**	**07 56 53.3**	**+0.5**
LODK	**Lodwar**	**26.01**	**266**	*e*P	**P**	**07 56 56.3**	**+3.5**
ABPO	**Ambohimpanom**	**28.10**	**209**	P	**P**	**07 57 14.8**	**+3.2**
ABPO	**Ambohimpanom**	**28.10**	**209**	P	**P**	**07 57 14.8**	**+3.2**
ABPO				pmax	pmax		
	comp=Z,29nm,1.4s						
HRA	**Herat**	**28.72**	**2**	P	**P**	**07 57 19.7**	**+2.7**
DDI	**Dehra Dun**	**29.24**	**31**	*i* x	x	08 05 24.4	
SMLA	**Simla**	**29.47**	**28**	*e*P	**P**	**07 57 25.5**	**+2.1**
SMLA				*i* x	x	08 05 16.3	
KBL	**Kabul**	**29.72**	**13**	P	**P**	**07 57 26.6**	**+0.7**
KBL	**Kabul**	**29.72**	**13**	P	**P**	**07 57 26.6**	**+0.7**
KBL				pmax	pmax		
	comp=Z,18nm,1.3s						
NIL	**Nilore**	**30.07**	**20**	P	**P**	**07 57 30.2**	**+1.3**
NIL				IAmb	IAmb	07 57 42.0	
	comp=Z,24nm,1.1s						
NIL	**Nilore**	**30.07**	**20**	P	**P**	**07 57 30.2**	**+1.3**
NIL				pmax	pmax		
	comp=Z,24nm,1.1s						
PYUN	**Piuthan**	**30.41**	**40**	*e*P	**P**	**07 57 32.7**	**+0.5**
	comp=Z,43nm,1.1s						
DANN	**Dangsing**	**31.08**	**41**	*e*P	**P**	**07 57 38.6**	**+0.5**
	comp=Z,82nm,1.1s						
MBAR	**Mbarara**	**31.18**	**260**	LR	LR	08 10 41.0	
	comp=Z,1μm,18.3s,baz=68,slow=37						
MBAR	**Mbarara**	**31.18**	**260**	P	**P**	**07 57 41.5**	**+2.4**
MBAR				IAmb	IAmb	07 57 48.1	
	comp=Z,61nm,1.8s						
MBAR	**Mbarara**	**31.18**	**260**	*i* P	**P**	**07 57 41.7**	**+2.6**
MBAR				pmax	pmax		
	comp=Z,33nm,1.7s						
MBAR	**Mbarara**	**31.18**	**260**	*e*P	**P**	**07 57 39.8**	**+0.7**
MBAR	**Mbarara**	**31.18**	**260**	*e*P	**P**	**07 57 40.0**	**+0.9**
DMN	**Daman**	**31.49**	**43**	*e*P	**P**	**07 57 42.3**	**+0.6**
	comp=Z,61nm,0.8s						
PKIN	**Phulchoki**	**31.66**	**44**	*e*P	**P**	**07 57 43.6**	**+0.3**
	comp=Z,30nm,0.8s						
PKI	**Pulchoki**	**31.67**	**44**	*e*P	**P**	**07 57 43.6**	**+0.2**
	comp=Z,19nm,0.7s						
RAMN	**Ramite**	**32.12**	**46**	*e*P	**P**	**07 57 47.6**	**+0.3**
	comp=Z,48nm,0.8s						
GUN	**Gumba**	**32.21**	**44**	*e*P	**P**	**07 57 48.6**	**+0.5**
	comp=Z,114nm,1.1s						
JIRN	**Jiri**	**32.27**	**44**	*e*P	**P**	**07 57 48.8**	**+0.1**
	comp=Z,32nm,1.1s						
GEYT	**Alibeck**	**32.38**	**355**	P	**P**	**07 57 48.7**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=171,slow=12,SNR=4.3 comp=Z,3.4nm,0.9s						
GEYT	**Alibeck**	**32.38**	**355**	P	**P**	**07 57 49.2**	**+0.1**
BRDH	**Bariadhala**	**33.83**	**57**	LR	LR	08 11 38.6	
	comp=Z,5μm,19.4s,baz=238,slow=36						
DRK	**Karamyk**	**35.08**	**14**	P	**P**	**07 58 12.8**	**-0.1**
SHL	**Shillong**	**35.35**	**52**	P	**P**	**07 58 15.3**	**0.0**
SHL				IAmb	IAmb	07 58 18.8	
	comp=Z,25nm,1.1s						
SHL	**Shillong**	**35.35**	**52**	P	**P**	**07 58 15.3**	**0.0**
SHL				pmax	pmax		
	comp=Z,25nm,1.1s						
SHL	**Shillong**	**35.35**	**52**	*e*P	**P**	**07 58 12.7**	**-2.6**
BTK	**Batken**	**35.41**	**13**	P	**P**	**07 58 16.6**	**+1.1**
BTK				IAmb	IAmb	07 58 26.9	
	comp=Z,75nm,1.7s						
BTK	**Batken**	**35.41**	**13**	P	**P**	**07 58 16.6**	**+1.1**
BTK				pmax	pmax		
	comp=Z,75nm,1.7s						
KSH	**Kashi**	**36.31**	**19**	P	**P**	**07 58 20.3**	**-3.0**
KSH				PP	**PnPn**	**07 59 39.5**	**-5.8**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KSH				LR	LR		
	comp=Z,1μm,21.3s						
KSH				LR	LR		
	comp=Z,2μm,19.9s						
KSH				LR	LR		
	comp=Z,3μm,21.6s						
OHH	**Osh**	**36.31**	**15**	P	**P**	**07 58 23.4**	**+0.2**
OHH				pmax	pmax		
	comp=Z,17nm,1.2s						
KCSI	**Kotacane, Aceh**	**36.34**	**92**	P	**P**	**07 58 22.9**	**-0.9**
	comp=Z,18nm,0.8s						
MMAI	**Mount Meron Ar**	**36.49**	**322**	P	**P**	**07 58 25.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=151,slow=9.2,SNR=1.8 comp=Z,0.3nm,0.3s						
MARD	**Mardin**	**36.79**	**332**	P	**P**	**07 58 29.7**	**+2.3**
MARD				IAmb	IAmb	07 58 36.2	
	comp=Z,38nm,1.2s						
TRKS	**Terek-Say**	**36.89**	**12**	P	**P**	**07 58 27.7**	**-0.5**
TRKS				pmax	pmax		
	comp=Z,22nm,1.2s						
LSA	**Lhasa**	**36.98**	**46**	P	**P**	**07 58 29.1**	**-0.3**
LSA				IAmb	IAmb	07 58 33.5	
	comp=Z,46nm,1.3s						
LSA	**Lhasa**	**36.98**	**46**	P	**P**	**07 58 29.8**	**+0.3**
LSA	**Lhasa**	**36.98**	**46**	P	**P**	**07 58 29.2**	**-0.3**
LSA				pmax	pmax		
	comp=Z,46nm,1.3s						
IUG	**Iuzhnay**	**37.26**	**11**	*e*P	**P**	**07 58 29.1**	**-2.2**
IUG	**Iuzhnay**	**37.26**	**11**	*e*P	**P**	**07 58 29.1**	**-2.2**
	baz=10						
PSI	**Prapat**	**37.55**	**93**	LR	LR	08 11 32.9	
	comp=Z,2μm,20.4s,baz=257,slow=32						
PSI	**Prapat**	**37.55**	**93**	P	**P**	**07 58 35.2**	**+1.0**
PSI				pmax	pmax		
	comp=Z,88nm,2.0s						
RPSI	**Rantau Prapat**	**37.56**	**93**	P	**P**	**07 58 35.2**	**+1.0**
RPSI				IAmb	IAmb	07 58 38.0	
	comp=Z,88nm,2.0s						
GNI	**Garni**	**37.57**	**339**	LR	LR	08 14 21.0	
	comp=Z,682nm,21.6s,baz=143,slow=37						
GNI	**Garni**	**37.57**	**339**	*c i* P	**P**	**07 58 31.5**	**-2.5**
GNI				pmax	pmax		
	comp=Z,27nm,1.4s						
ARLS	**Aral**	**37.97**	**16**	P	**P**	**07 58 37.4**	**0.0**
ARLS				pmax	pmax		
	comp=Z,11nm,1.3s						
KK31	**Karatay Array**	**38.28**	**11**	P	**P**	**07 58 40.0**	**+0.2**
KK31	**Karatay Array**	**38.28**	**11**	P	**P**	**07 58 40.0**	**+0.2**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	**Karatay Array**	**38.28**	**11**	P	**P**	**07 58 40.5**	**+0.7**
KKAR	**Karatay Array**	**38.28**	**11**	P	**P**	**07 58 39.9**	**+0.1**
KKAR				IAmb	IAmb	07 58 50.9	
	comp=Z,7.4nm,1.0s						
KKAR	**Karatay Array**	**38.28**	**11**	P	**P**	**07 58 40.5**	**+0.7**
AAK	**Ala-Archa**	**38.74**	**16**	P	**P**	**07 58 44.1**	**+0.2**
	comp=Z,6.9nm,0.6s,baz=185,slow=4.3,SNR=17						
AAK				LR	LR	08 15 02.5	
	comp=Z,1μm,21.4s,baz=214,slow=37 comp=Z,6.9nm,0.6s						
AAK	**Ala-Archa**	**38.74**	**16**	P	**P**	**07 58 44.7**	**+0.8**
AAK				IAmb	IAmb	07 58 52.7	
	comp=Z,74nm,1.9s						
AAK	**Ala-Archa**	**38.74**	**16**	*d i* P	**P**	**07 58 44.6**	**+0.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AAK	**Ala-Archa**	**38.74**	**16**	*i* P	**P**	**07 58 42.3**	**-1.5**
	SNR=11						
LSZ	**Lusaka**	**38.83**	**237**	P	**P**	**07 58 46.3**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=48,slow=3.1,SNR=6.2						
LSZ				LR	LR	08 13 27.6	
	comp=Z,3μm,18.4s,baz=62,slow=34 comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.84**	**67**	P	**P**	**07 58 45.0**	**+0.1**
	comp=Z,17nm,1.2s,baz=258,slow=9.3,SNR=18						
CMAR				PcP	**PcP**	**08 00 54.9**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=254,slow=4.9,SNR

baz=15
TNSS Tian-Shan 39.81 18 eP P 07 58 50.6 -2.5
TNSS Tian-Shan 39.81 18 eP P 07 58 50.7 -2.5
baz=18
MDOK Medeo 39.95 18 eP P 07 58 52.2 -1.8
MDOK Medeo 39.95 18 eP P 07 58 52.3 -1.8
baz=18
ZEI Tsey 40.19 340 eP P 07 58 56.0 -0.1
ZEI e 08 00 30.2
ZEI pmax pmax
comp=Z,17nm,1.9s
SATY Saty 40.29 19 eP P 07 58 54.6 -2.2
SATY Saty 40.29 19 eP P 07 58 54.7 -2.2
baz=19
KUU Kurty 40.41 17 eP P 07 58 55.9 -1.7
KUU Kurty 40.41 17 eP P 07 58 55.9 -1.7
baz=17
SDSI Sungai Dareh 40.52 98 P P 07 58 58.0 -0.9
comp=Z,8μmcomp=Z,36nm,1.7s
UZB Uzynbulak 40.58 20 eP P 07 58 56.5 -2.6
UZB Uzynbulak 40.58 20 eP P 07 58 56.6 -2.6
baz=20
SHLS Shalkode 40.74 20 eP P 07 58 59.6 -0.8
SHLS Shalkode 40.74 20 eP P 07 58 59.7 -0.8
baz=21
KPKS Kokpek 40.75 19 eP P 07 58 57.9 -2.6
KPKS Kokpek 40.75 19 eP P 07 58 58.0 -2.6
baz=19
BTLS Baital 40.88 14 eP P 07 58 59.1 -2.3
BTLS Baital 40.88 14 eP P 07 58 59.1 -2.3
baz=14
MATP Matopo 41.33 230 P P 07 59 06.8 +1.1
comp=Z,7.5nm,0.9s,baz=28,slow=12,SNR=6.5
MATP LR LR 08 13 44.0
comp=Z,5μm,21.5s,baz=60,slow=32
comp=Z,7.5nm,0.9s
KBZ Khabaz 41.37 340 P P 07 59 05.0 -0.5
comp=Z,6.2nm,0.9s,baz=163,slow=9.3,SNR=7.8
KBZ LR LR 08 17 16.0
comp=Z,444nm,19.0s,baz=144,slow=38
comp=Z,6.2nm,0.9s
KBZ Khabaz 41.37 340⇑ iP P 07 59 04.8 -0.6
KBZ pmax pmax
comp=Z,25nm,1.7s
SHA1 Shidzhatmaz 41.46 339⇑ iP P 07 59 06.5 0.0
KVAR Kislovodsk Arr 41.64 340 LR LR 08 16 13.8
comp=Z,533nm,20.2s,baz=90,slow=36
KIV Kislovodsk 41.64 340 eP P 07 59 06.7 -1.1
KIV eS S **08 05 23.2 -0.8**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,256nm,16.0s
BRTR Keskin Array B 42.22 328 P P 07 59 12.8 +0.1
comp=Z,9.2nm,0.9s,baz=149,slow=8.5,SNR=25
BRTR LR LR 08 17 08.0
comp=Z,945nm,21.0s,baz=130,slow=37
comp=Z,9.2nm,0.9s
BRTR Keskin Array B 42.22 328 P P 07 59 12.7 0.0
BRTR Keskin Array B 42.22 328 P P 07 59 12.7 0.0
BR131 Keskin Array S 42.22 328 P P 07 59 12.7 0.0
BR131 Keskin Array S 42.22 328 d iP **P 07 59 12.6 -0.1**
ANTO Ankara 42.78 327 P P 07 59 18.2 +1.1
ANTO pmax pmax
comp=Z,18nm,1.2s
GOMU GeErMu 43.27 41 P P 07 59 23.8 +2.2
GOMU pP pwP 07 59 28.0 -0.9
GOMU sP sP 07 59 29.8 +3.4
GOMU PP **PP 08 01 01.3 -0.9**
GOMU S **S 08 05 47.5 -1.3**
GOMU pmax pmax
comp=Z,8.0nm,1.2s
GOMU pmax pmax
comp=Z,240nm,5.0s
GOMU LR LR
comp=Z,1μm,16.9s
GOMU LR LR
comp=Z,860nm,17.4s
GOMU LR LR
comp=Z,2μm,19.8s
ABKAR Akbulak array 43.58 359 P P 07 59 23.5 +0.1
ABKAR IAmb IAmb 07 59 35.9
comp=Z,30nm,1.1s
ABKAR Akbulak array 43.58 359 P P 07 59 23.3 -0.1
PZH PanZhiHua 43.78 57 P P 07 59 27.8 +2.3
PZH S **S 08 05 54.8 -1.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,150nm,4.8s
PZH LR LR
comp=Z,1μm,17.3s
PZH LR LR
comp=Z,1μm,18.0s
PZH LR LR
comp=Z,2μm,18.8s
KMI Kunming 44.15 59⇑P P 07 59 29.3 +0.7
KMI pmax pmax
comp=Z,15nm,1.3s
KMI LR LR
comp=Z,1μm,30.2s
WMQ Urumqi 44.61 27 eP P 07 59 32.3 +0.4
WMQ sP pwP 07 59 40.3 +0.5
WMQ ScP **ScP 08 05 07.8 +1.1**
WMQ S **S 08 06 11.4 +3.8**
WMQ pmax pmax
comp=Z,27nm,0.7s
WMQ pmax pmax
comp=Z,210nm,4.1s
WMQ LR LR
comp=Z,620nm,19.9s
WMQ LR LR
comp=Z,1μm,19.9s
WMQ LR LR
comp=Z,970nm,21.3s
AKTO Aktyubinsk 44.83 357 P P 07 59 33.0 -0.4
comp=Z,13nm,1.0s,baz=162,slow=8.6,SNR=20
AKTO LR LR 08 18 55.2
comp=Z,906nm,21.4s,baz=167,slow=37
comp=Z,13nm,1.0s
MK31 Makanchi Array 44.89 20 P P 07 59 32.5 -1.5
MK31 Makanchi Array 44.89 20 d iP **P 07 59 32.7 -1.3**
MKAR Makanchi Array 44.89 20 P P 07 59 32.9 -1.1
comp=Z,1.5nm,0.8s,baz=201,slow=6.5,SNR=8.0
MKAR PcP **PcP 08 01 14.3 -1.2**
comp=Z,1.6nm,0.9s,baz=205,slow=3.0,SNR=3.0
MKAR LR LR 08 20 29.2
comp=Z,528nm,19.1s,baz=222,slow=39
comp=Z,1.5nm,0.8s
MKAR Makanchi Array 44.89 20 P P 07 59 32.7 -1.3
MKAR Makanchi Array 44.89 20 P P 07 59 32.7 -1.3
BRZS Berezniki 45.31 10 eP P 07 59 35.4 -1.8
BRZS Berezniki 45.31 10 eP P 07 59 35.5 -1.8
baz=10
LBTB Lobatse 46.17 227 LR LR 08 16 21.6
comp=Z,2μm,21.3s,baz=48,slow=32
LBTB Lobatse 46.17 227 P P 07 59 47.5 +2.9
LBTB Lobatse 46.17 227 P P 07 59 47.5 +2.9
LBTB pmax pmax
comp=Z,73nm,1.6s
CD2 Chengdu 47.09 52 eP P 07 59 50.5 -1.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KURBB Kurchatov Arra 47.18 15 P P 07 59 51.4 -0.5
comp=Z,1.6nm,0.6s,baz=214,slow=8.1,SNR=10
KURBB LR LR 08 20 44.4
comp=Z,1μm,20.4s,baz=184,slow=38
comp=Z,1.6nm,0.6s
KURK Kurchatov 47.29 15 P P 07 59 52.7 -0.1
KURK IAmb IAmb 08 00 00.4
comp=Z,28nm,1.7s
KURK Kurchatov 47.29 15⇑ eP P 07 59 52.5 -0.2
KURK pmax pmax
comp=Z,4.0nm,0.9s
LEM Lembang 47.77 104 LR LR 08 16 18.7
comp=Z,671nm,21.0s,baz=284,slow=32
BVAR Borovoye Array 47.91 7 P P 07 59 57.3 -0.3
comp=Z,0.6nm,0.5s,baz=186,slow=7.0,SNR=8.3
BVAR PcP **PcP 08 01 24.8 -1.1**
comp=Z,1.9nm,0.9s,baz=165,slow=6.2,SNR=4.6
BVAR LR LR 08 21 43.5
comp=Z,1μm,20.2s,baz=194,slow=38
comp=Z,0.6nm,0.5s
GYA Guiyang 47.92 59⇓ iP P 07 59 59.0 +0.7
GYA S **S 08 06 54.4 -1.3**
GYA pmax pmax
comp=Z,24nm,0.9s
GYA pmax pmax
comp=Z,980nm,4.6s
GYA LR LR
comp=Z,2μm,9.2s
GYA LR LR
comp=Z,1μm,7.7s
GYA LR LR
comp=Z,2μm,16.1s
BRVK Borovoye 47.94 7 P P 07 59 57.5 -0.2
BRVK IAmb IAmb 08 00 05.5
comp=Z,24nm,1.8s
BRVK Borovoye 47.94 7 de **P 07 59 56.8 -0.9**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
BELG Belogornoye 48.06 349 P P 07 59 58.4 -0.3
comp=Z,31nm,1.1s,baz=72,slow=2.7,SNR=5.2
BELG LR LR 08 24 01.9
comp=Z,220nm,19.2s,baz=134,slow=41
comp=Z,31nm,1.1s
BELG Belogornoye 48.06 349 ce **P 07 59 58.2 -0.5**
BELG pmax pmax
comp=Z,5.0nm,1.1s
GTA Gaotai 48.35 40 eP **P 08 00 03.4 +2.0**
GTA pP sP 08 00 07.3 +1.0
GTA sP pwP 08 00 11.3 +2.5
GTA PP **PP 08 01 56.1 +2.1**
GTA S **S 08 07 03.5 +2.0**
GTA pmax pmax
comp=Z,240nm,8.4s
GTA LR LR
comp=Z,2μm,21.4s
GTA LR LR
comp=Z,2μm,20.4s
GTA LR LR
comp=Z,2μm,20.4s
BOSA Boshof 48.59 224 P P 08 00 04.5 +1.1
comp=Z,5.8nm,0.8s,baz=54,slow=7.3,SNR=6.9
BOSA LR LR 08 18 49.5
comp=Z,2μm,19.0s,baz=38,slow=34
comp=Z,5.8nm,0.8s
BOSA Boshof 48.59 224 P P 08 00 06.6 +3.2
BOSA Boshof 48.59 224 P P 08 00 06.6 +3.2
BOSA pmax pmax
comp=Z,44nm,1.4s
SRS Serrai 48.91 322 P P 08 00 05.9 +0.4
SRS pmax pmax
comp=Z,35nm,2.5s
VSR Storozhevoye 49.14 342 eP **P 08 00 04.7 -2.4**
VSR pmax pmax
comp=Z,20nm,1.2s
DGZ Jazzator, Alta 49.20 22⇓ eP **P 08 00 06.9 -0.8**
DGZ pmax pmax
comp=Z,13nm,1.8s
KNT Kendrikon 49.36 322 P P 08 00 09.3 +0.4
KNT pmax pmax
comp=Z,21nm,1.8s
LZH Lanzhou 49.39 46 eP P 08 00 15.1 +5.6
LZH S **S 08 07 20.8 +4.5**
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,380nm,5.2s
LZH LR LR
comp=Z,730nm,13.7s
LZH LR LR
comp=Z,980nm,13.4s
LZH LR LR
comp=Z,1μm,15.8s
VORR Voronezh 49.53 342 eP **P 08 00 07.0 -3.0**
VORR pmax pmax
comp=Z,50nm,0.4s
TSUM Tsumeb 49.62 239 LR LR 08 19 57.2
comp=Z,2μm,18.6s,baz=120,slow=34
MILM Milestii Mici 49.84 331⇑ iP **P 08 00 13.0 +0.5**
comp=Z,120nm,2.1s
MILM eS **S 08 07 25.0 +3.2**
MILM eSSS SSS 08 12 54.0
MILM eL L 08 16 10.0
MILM LRM MLR 08 24 20.0
comp=Z,300nm,16.0s
VTS Vitosha 50.01 323⇑P P 08 00 14.5 +0.4
VTS Vitosha 50.01 323 P P 08 00 14.1 0.0
VTS IAmb IAmb 08 00 16.3
comp=Z,34nm,1.2s
VTS Vitosha 50.01 323 P P 08 00 14.1 0.0
VTS pmax pmax
comp=Z,34nm,1.2s
VRI Vrincioaia 50.15 329⇓P P 08 00 15.6 +0.8
VRI Vrincioaia 50.15 329 P P 08 00 14.9 0.0
VRI pmax pmax
comp=Z,51nm,1.7s
MLR Muntele Rosu 50.30 328⇑P P 08 00 17.1 +0.9
MLR Muntele Rosu 50.30 328 P P 08 00 16.3 +0.1
comp=Z,11nm,1.1s,baz=168,slow=1.5,SNR=6.2
MLR LR LR 08 23 15.7
comp=Z,487nm,18.9s,baz=134,slow=38
comp=Z,11nm,1.1s
MLR Muntele Rosu 50.30 328 P P 08 00 17.6 +1.4
MLR Muntele Rosu 50.30 328 P P 08 00 17.6 +1.4
MLR pmax pmax
comp=Z,115nm,1.9s
COVR Voineasa-Covas 50.40 329⇑P P 08 00 17.0 +0.2
LPSR Galich'ya Gora 50.42 342 eP **P 08 00 15.1 -1.7**
LPSR pmax pmax
comp=Z,7.0nm,0.8s
TESR Tescani 50.62 329⇑P P 08 00 18.6 +0.2
VOIR 50.74 327⇑P P 08 00 19.7 +0.2
VOIR 50.74 327 P P 08 00 19.9 +0.4
VOIR pmax pmax
comp=Z,25nm,1.1s
OZUR 50.79 328⇓P P 08 00 20.3 +0.5
ARU Arti 50.80 358 P P 08 00 18.2 -1.3
comp=Z,7.0nm,0.6s,baz=166,slow=4.5,SNR=9.7
ARU LR LR 08 23 36.4
comp=Z,532nm,18.1s,baz=173,slow=38
comp=Z,7.0nm,0.6s
ARU Arti 50.80 358 P P 08 00 18.8 -0.8
ARU IAmb IAmb 08 00 29.1
comp=Z,40nm,1.7s
ARU Arti 50.80 358 c iP **P 08 00 18.4 -1.2**
ARU 08 01 37.3
ARU 08 02 12.7
ARU PPP PPP 08 03 10.2
ARU S **S 08 07 35.6 +0.7**
ARU SS **SS 08 11 10.5 +0.9**
ARU pmax pmax
comp=Z,8.0nm,0.8s
ARU MLR MLR
comp=Z,568nm,18.0s
SBUM Sibu 50.81 91 P P 08 00 19.7 -0.7
SBUM Sibu 50.81 91 P P 08 00 16.3 -4.1
comp=Z,334nmcomp=Z,14nm,1.4s
BLKB Belogradchik 50.94 324⇓P P 08 00 20.6 -0.4
LOT Lotru 51.44 327⇓P P 08 00 24.7 0.0
DJES Djerdap 51.66 325⇑P P 08 00 26.7 +0.4
HERR Herculane 51.84 325⇓P P 08 00 27.7 0.0
ZALV Zalesovo Beam 51.90 17 P P 08 00 26.6 -1.3
comp=Z,2.2nm,0.6s,baz=219,slow=6.8,SNR=5.6
ZALV LR LR 08 23 02.9
comp=Z,904nm,20.9s,baz=212,slow=37
comp=Z,2.2nm,0.6s
GZR Gura Zlata 51.96 326⇓P P 08 00 29.3 +0.8
BURAR Bucovina Array 52.09 330⇑P P 08 00 30.3 +0.8
BURAR Bucovina Array 52.09 330 P P 08 00 29.5 0.0
BURAR Bucovina Array 52.09 330 P P 08 00 29.5 0.0
BURAR pmax pmax
comp=Z,6.0nm,0.8s
BUR08 Bucovina Ar. S 52.12 330 P P 08 00 30.8 +1.0
XAN Xi'an 52.32 51⇓P P 08 00 30.9 -0.6
XAN pP pwP 08 00 42.4 +3.5
XAN S **S 08 08 00.9 +4.2**
XAN pmax pmax
comp=Z,16nm,1.2s
XAN LR LR
comp=Z,1μm,20.3s
XAN LR LR
comp=Z,1μm,19.4s
XAN LR LR
comp=Z,2μm,19.0s
TIP Timpagrande 52.33 316 P P 08 00 32.2 +0.7
TIP IAmb IAmb 08 00 33.8
comp=Z,26nm,1.5s
AKASG Malin Array Be 52.41 335 P P 08 00 30.1 -1.6
comp=Z,0.4nm,0.4s,baz=131,slow=6.3,SNR=11
AKASG LR LR 08 24 31.1
comp=Z,194nm,18.9s,baz=133,slow=38
comp=Z,0.4nm,0.4s
AKBB Malin Array Si 52.41 335⇑ eP **P 08 00 30.3 -1.4**
BZS Buzias 52.74 326⇓P P 08 00 34.1 -0.2
BZS Buzias 52.74 326 P P 08 00 34.1 -0.2
BZS pmax pmax
comp=Z,20nm,2.4s
DIVS Divibare 52.80 323 P P 08 00 34.2 -0.7
DIVS IAmb IAmb 08 00 41.5
comp=Z,19nm,1.1s
DRGR 52.86 327 P P 08 00 34.4 -0.8
DRGR pmax pmax
comp=Z,14nm,1.6s
SIRR Siria 53.11 326⇑P P 08 00 37.8 +0.8
VAE Valguarnera 53.23 313 LR LR 08 21 49.8
comp=Z,131nm,21.3s,baz=98,slow=34
OBN Obninsk 53.30 343⇑ eP **P 08 00 37.6 -0.6**
OBN e 08 01 45.8
OBN e 08 02 36.9
OBN i S **S 08 08 16.9 +7.7**
OBN eSS **SS 08 11 39.5 -10**
OBN pmax pmax
comp=Z,7.0nm,1.0s
CUC Castrocucco 53.35 317 P P 08 00 39.3 +0.3
CUC IAmb IAmb 08 00 41.0
comp=Z,15nm,1.1s
MOS Moscow 53.53 344 eP **P 08 00 37.5 -2.4**
MOS pmax pmax
comp=Z,45nm,0.7s
KIRV Kirov 53.72 352 P P 08 00 39.8 -1.4
comp=Z,22nm,0.7s,baz=83,slow=1.5,SNR=5.4
KIRV LR LR 08 25 40.7
comp=Z,756nm,19.9s,baz=155,slow=38
comp=Z,22nm,0.7s
TRPA Tarpa 53.79 329⇑P P 08 00 42.4 +0.4
TRPA Tarpa 53.79 329 P P 08 00 41.0 -0.9
SUR Sutherland 53.92 223 LR LR 08 21 59.0
comp=Z,937nm,18.8s,baz=50,slow=34
LVV L'vov 54.15 331 eP **P 08 00 44.8 +0.3**
LVV e 08 01 45.1
LVV eS **S 08 08 17.9 -3.1**
LVV ePS **PnS 08 08 34.6 +3.8**
LVV pmax pmax
comp=Z,70nm,1.6s
UZH Uzhgorod 54.24 329⇑ iP **P 08 00 44.6 -0.6**
UZH e 08 00 48.1
KOLS Kolonicke sedl 54.44 329 eP **P 08 00 47.5 +0.8**
KOLS pmax pmax
comp=Z,25nm,1.1s
ABAH Abaujker 54.58 328 P P 08 00 48.1 +0.5
MORH Mrgy, Hungar 54.78 325 P P 08 00 48.8 -0.4
CRVS Cervenica-Dubn 54.84 329 eP **P 08 00 50.9 +1.3**
CRVS pmax pmax
comp=Z,98nm,1.9s
KOVH Kovagotottos 55.02 324 P P 08 00 50.5 -0.5
PSZ Piszkesteto 55.06 327⇑P P 08 00 51.7 +0.4
PSZ Piszkesteto 55.06 327 P P 08 00 51.0 -0.3
PSZ pmax pmax
comp=Z,13nm,1.3s
PSZ Piszkesteto 55.06 327 P P 08 00 50.7 -0.7
CSKK Cskako 55.64 326 P P 08 00 56.0 +0.6
SRO Srobarova 55.87 326 eP **P 08 00 58.0 +1.0**
MPLH Magyarpolny 55.94 325 P P 08 00 57.2 -0.4
VYHS Vyhne 55.98 327 eP **P 08 00 57.5 -0.3**
VYHS pmax pmax
comp=Z,22nm,1.2s
BEHE Becsehely 56.00 324 P P 08 00 58.7 +0.8
CAMP Campotosto 56.13 319 P P 08 01 00.0 +0.9
EGYH Egyhazaskeszo 56.19 325 P P 08 01 00.6 +1.3
TIY Taiyuan 56.33 48 eP P 08 01 05.8 +5.2
TIY S **S 08 08 47.3 -3.4**
TIY pmax pmax
comp=Z,11nm,0.5s
TIY LR LR
comp=Z,700nm,15.8s
TIY LR LR
comp=Z,890nm,19.2s
TIY LR LR
comp=Z,930nm,17.9s
KEST Kesra 56.35 310 P P 08 01 01.6 +0.7
comp=Z,4.4nm,0.8s,baz=63,slow=1.5,SNR=4.3
KEST PcP **PcP 08 01 59.5 +1.5**
comp=Z,12nm,0.9s,baz=137,slow=5.3,SNR=6.7
KEST LR LR 08 23 48.0
comp=Z,305nm,21.1s,baz=43,slow=35
comp=Z,4.4nm,0.8s
BOJS Bojanci 56.40 323 eP **P 08 01 00.5 -0.4**
TAM Tamanrasset 56.45 294 P P 08 01 02.9 +1.1
TAM IAmb IAmb 08 01 09.9
comp=Z,35nm,1.4s
TAM Tamanrasset 56.45 294 P P 08 01 02.9 +1.1
TAM pmax pmax
comp=Z,35nm,1.4s
NRCA Norcia 56.46 319 P P 08 01 01.7 +0.3
NRCA IAmb IAmb 08 01 08.7
comp=Z,33nm,1.5s
OJC Ojcow 56.50 329 P P 08 00 58.8 -2.7
OJC pmax pmax
comp=Z,10.0nm,1.5s
NACGM Naroch 56.52 337⇑ eP **P 08 01 01.2 -0.4**
baz=138
SMOL Smolenice 56.75 327 eP **P 08 01 02.8 -0.6**
ZST Bratislava 56.76 326 eP **P 08 01 04.8 +1.4**
MODS Modra-Piesok 56.76 326 eP **P 08 01 03.2 -0.2**
MODS pmax pmax
comp=Z,32nm,1.1s
SOP Sopron 56.78 325 P P 08 01 03.7 +0.2
SOP pmax pmax
comp=Z,18nm,1.2s
SOP Sopron 56.78 325 P P 08 01 05.1 +1.6
JAVC Velka Javorina 56.82 327 eP **P 08 01 04.1 +0.2**
HHC Hu-ho-hao-te 56.92 44 eP **P 08 01 05.8 +1.0**
HHC S **S 08 09 00.8 +2.2**
HHC SS **SS 08 12 46.6 -0.4**
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,440nm,6.3s
HHC LR LR
comp=Z,1μm,14.6s
HHC LR LR
comp=Z,1μm,13.3s
HHC LR LR
comp=Z,2μm,14.0s
RONA Rosalia, Austr 56.94 325 eP **P 08 01 04.6 -0.1**
comp=Z,16nm,1.1s,SNR=7.3
SONM Songino Array 56.99 35 P P 08 01 04.4 -0.8
comp=Z,4.3nm,1.0s,baz=235,slow=5.2,SNR=9.2
SONM LR LR 08 25 55.2
comp=Z,1μm,18.8s,baz=237,slow=37
comp=Z,4.3nm,1.0s
SONM Songino Array 56.99 35 P P 08 01 04.1 -1.1
SONM IAmb IAmb 08 01 17.3
comp=Z,29nm,1.7s
SONM Songino Array 56.99 35 P P 08 01 04.1 -1.1
SONM pmax pmax
comp=Z,29nm,1.7s
CEY Cerknica 57.02 322 i P **P 08 01 04.6 -0.7**
MAUC Maruska 57.02 328 eP **P 08 01 05.9 +0.6**
MAUC AMS AMS 08 26 00.0
comp=Z,800nm,24.8s
GBAS Gorenja Brezov 57.10 323 i P **P 08 01 05.2 -0.7**
SOKA Soboth 57.13 324 eP **P 08 01 05.9 -0.2**
comp=Z,13nm,1.5s,SNR=6.6
OKC Ostrava-Krasne 57.13 328 AMS AMS 08 25 40.0
comp=Z,500nm,28.5s
ARSA Arzberg 57.14 324 eP **P 08 01 06.3 +0.1**
comp=Z,9.0nm,1.1s
PRGR Permogore 57.20 351 eP **P 08 01 03.5 -2.7**
PRGR pmax pmax
comp=Z,9.0nm,0.4s
CONA Conrad Observa 57.31 325 eP **P 08 01 07.3 -0.1**
comp=Z,23nm,1.2s,SNR=12
OBKA Obir 57.33 323 eP **P 08 01 07.5 -0.1**
comp=Z,16nm,1.2s,SNR=5.4
ULN Ulaanbaatar 57.38 35 ce **P 08 01 07.1 -0.9**
ULN pmax pmax
comp=Z,9.0nm,1.7s
MORC Moravsky Berou 57.41 328 P P 08 01 07.7 -0.3
MORC IAmb IAmb 08 01 14.5
comp=Z,19nm,1.2s
MORC Moravsky Berou 57.41 328 P P 08 01 07.7 -0.3
MORC pmax pmax
comp=Z,19nm,1.2s
MORC Moravsky Berou 57.41 328 eP **P 08 01 07.3 -0.8**

KLMR Klimovskoe 57.60 348 *e*P **P 08 01 06.3 -2.7**
KLMR S **S 08 09 10.3 +3.8**
KLMR pmax pmax
comp=Z,48nm,1.5s
KLMR MLR MLR
comp=Z,462nm,19.0s
KLMR Klimovskoe 57.60 348 *e*P **P 08 01 06.3 -2.7**
KLMR *e*P **P 08 01 06.3 -2.7**
KLMR *e*P **P 08 01 06.3 -2.7**
KLMR AMP 08 01 20.0
comp=Z,48nm,1.5s
KLMR S **S 08 09 10.3 +3.8**
KLMR S **S 08 09 10.3 +3.8**
KLMR LR LR 08 25 19.4
KLMR AMP 08 27 54.4
comp=Z,462nm,18.5s
KRUC Moravsky 57.63 327 P **P 08 01 09.4 -0.1**
KRUC pmax pmax
comp=Z,20nm,2.3s
KRUC Moravsky 57.63 327 *e*P **P 08 01 08.9 -0.6**
VRAC Vranov 57.66 327 ⇑P **P 08 01 10.7 +1.0**
VRAC Vranov 57.66 327 P **P 08 01 09.3 -0.4**
comp=Z,13nm,1.0s,baz=125,slow=7.2,SNR=11
VRAC LR LR 08 27 34.5
comp=Z,137nm,18.3s,baz=112,slow=38
comp=Z,13nm,1.0s
VRAC Vranov 57.66 327 P **P 08 01 09.4 -0.3**
VRAC pmax pmax
comp=Z,18nm,1.2s
VRAC Vranov 57.66 327 *e*P **P 08 01 08.9 -0.8**
HNS HongShan 57.91 49 ⇓P **P 08 01 13.8 +2.1**
HNS S **S 08 09 18.9 +7.5**
HNS pmax pmax
comp=Z,20nm,1.1s
HNS LR LR
comp=Z,440nm,14.3s
HNS LR LR
comp=Z,1μm,17.7s
HNS LR LR
comp=Z,1μm,20.6s
CASP Castiglione de 57.93 318 P **P 08 01 11.9 +0.1**
CASP IAmb IAmb 08 01 18.1
comp=Z,36nm,1.6s
MYKA Terra Mystica 57.93 323 *i* P **P 08 01 11.7 -0.1**
comp=Z,13nm,1.0s,SNR=6.8
KRLC Kraliky 57.99 328 P **P 08 01 12.2 +0.1**
KRLC pmax pmax
comp=Z,9.0nm,1.1s
KRLC Kraliky 57.99 328 AMS AMS 08 26 10.0
comp=Z,300nm,17.6s
MOA Molln 58.18 325 *e*P **P 08 01 13.2 -0.3**
comp=Z,20nm,1.1s
TREC Trest 58.25 326 AMS AMS 08 24 40.0
comp=Z,300nm,22.2s
CLUD Cludinico 58.30 323 P **P 08 01 14.4 0.0**
STAL STALIGIAL 58.31 322 P **P 08 01 14.4 0.0**
STAL IAmb IAmb 08 01 15.8
comp=Z,27nm,1.3s
KBA Koelnbreinsper 58.33 323 P **P 08 01 13.8 -0.9**
KBA pmax pmax
comp=Z,11nm,1.2s
KBA Koelnbreinsper 58.33 323 *i* P **P 08 01 14.1 -0.6**
comp=Z,13nm,1.2s
DPC Dobruska-Polom 58.39 328 *e*P **P 08 01 14.0 -0.9**
DPC *e*S **S 08 09 23.8 +6.5**
DPC MLR MLR
comp=Z,400nm,26.5s
DPC Dobruska-Polom 58.39 328 *e*P **P 08 01 14.0 -0.9**
DPC *e*S **S 08 09 23.8 +6.5**
DPC AMS AMS 08 25 50.0
comp=Z,400nm,26.5s
BIOA Bad Ischl, Aus 58.46 324 *i* P **P 08 01 14.9 -0.5**
comp=Z,19nm,1.2s
ZCCA Zocca 58.53 320 P **P 08 01 16.4 +0.4**
OSTC Ostas 58.56 328 AMS AMS 08 26 40.0
comp=Z,400nm,20.6s
UPC Upice 58.64 328 AMS AMS 08 26 00.0
comp=Z,300nm,23.2s
CKRC Cesky Krumlov 58.66 325 *e*S **S 08 09 20.7 -0.2**
CHVC Chvalec 58.66 328 *e*P P 08 01 22.4 +5.6
CHVC AMS AMS 08 26 30.0
comp=Z,500nm,28.4s
ABTA Abfaltersbach 58.67 323 *e*P **P 08 01 16.7 -0.3**
comp=Z,13nm,1.4s,SNR=7.6
CTI Castel Tesino 58.87 322 P **P 08 01 18.3 -0.1**
CTI IAmb IAmb 08 01 38.0
comp=Z,14nm,1.0s
CTI Castel Tesino 58.87 322 P **P 08 01 18.3 -0.1**
CTI pmax pmax
comp=Z,14nm,1.0s
GOPC GO Pecny, Ondr 58.97 327 AMS AMS 08 25 40.0
comp=Z,400nm,31.0s
GERES GERESS Array B 59.01 325 P **P 08 01 17.7 -1.6**
comp=Z,1.0nm,0.8s,baz=134,slow=7.6,SNR=6.6
GERES LR LR 08 29 40.5
comp=Z,126nm,18.2s,baz=111,slow=39
comp=Z,1.0nm,0.8s
PRU Pruhonice 59.15 327 *e*S **S 08 09 26.8 -0.3**
PRU AMS AMS 08 25 30.0
comp=Z,400nm,27.9s
KHC Kasperske Hory 59.23 326 *e*P **P 08 01 19.1 -1.7**
KHC *e*S **S 08 09 25.5 -2.8**
KHC MLR MLR
comp=Z,400nm,20.7s
KHC Kasperske Hory 59.23 326 *e*P **P 08 01 19.1 -1.7**
KHC *e*S **S 08 09 25.5 -2.8**
KHC AMS AMS 08 27 40.0
comp=Z,400nm,20.7s
KAPI Kappang 59.24 99 P **P 08 01 20.9 -0.5**
comp=Z,2.8nm,0.3s,baz=280,slow=7.7,SNR=4.5
KAPI LR LR 08 23 17.7
comp=Z,434nm,21.9s,baz=282,slow=32
comp=Z,2.8nm,0.3s
KAPI Kappang 59.24 99⇑*e*P **P 08 01 20.3 -1.1**
KAPI pmax pmax
comp=Z,49nm,1.8s
TOA0 Torodi Ar. Sit 59.25 282 P **P 08 01 22.3 +0.9**
TOA0 IAmb IAmb 08 01 29.1
comp=Z,28nm,1.5s
TORD Torodi Ar. Bea 59.25 282 P **P 08 01 22.7 +1.3**
comp=Z,4.5nm,1.0s,baz=92,slow=4.8,SNR=13
TORD PcP **PcP 08 02 09.7 0.0**
comp=Z,3.5nm,1.0s,baz=87,slow=5.3,SNR=4.4
TORD LR LR 08 26 25.1
comp=Z,296nm,21.9s,baz=42,slow=36
comp=Z,4.5nm,1.0s
TIA Tai'an 59.38 51 *e*P **P 08 01 25.4 +3.4**
TIA pmax pmax
comp=Z,7.0nm,1.0s
TIA pmax pmax
comp=Z,220nm,3.5s
TIA LR LR
comp=Z,330nm,13.2s
TIA LR LR
comp=Z,820nm,19.9s
TIA LR LR
comp=Z,970nm,19.2s
PVCC Panska Ves 59.42 327 AMS AMS 08 25 50.0
comp=Z,300nm,18.5s
WTTA Wattenberg 59.44 323 P **P 08 01 21.3 -1.1**
WTTA pmax pmax
comp=Z,18nm,1.3s
WTTA Wattenberg 59.44 323 *e*P **P 08 01 21.5 -0.9**
comp=Z,11nm,0.9s,SNR=6.1
BNSI Bone 59.49 98 P **P 08 01 22.2 -0.9**
comp=Z,29nm,1.7s
WATA Walderalm 59.51 323 *e*P **P 08 01 21.6 -1.2**
comp=Z,14nm,1.1s
NJ2 Nanjing 59.67 56 *e*P **P 08 01 25.8 +1.7**
NJ2 pmax pmax
comp=Z,24nm,0.8s
SQTA Sankt Quirin 59.68 323 *e*P **P 08 01 23.1 -0.9**
comp=Z,8.5nm,0.8s
MOTA Moosalm 59.80 323 *e*P **P 08 01 22.9 -1.9**
comp=Z,11nm,1.0s
FETA Feichten 59.88 322 *e*P **P 08 01 23.0 -2.4**
comp=Z,15nm,1.3s
BJI Beijing 59.88 46 P **P 08 01 23.9 -1.4**
BJI pmax pmax
comp=Z,7.0nm,0.8s
BJI pmax pmax
comp=Z,240nm,4.8s
BJI LR LR
comp=Z,140nm,15.3s
BJI LR LR
comp=Z,620nm,16.8s
BJI LR LR
comp=Z,1μm,21.4s
FUORN Ofenpass-Fuorn 59.98 322 P **P 08 01 26.3 0.0**
RETA Reutte 60.07 323 *e*P **P 08 01 25.5 -1.1**
comp=Z,2.9nm,0.5s
DAVOX Davos/Dischmat 60.29 322 P **P 08 01 27.4 -0.9**
comp=Z,9.7nm,1.0s,baz=167,slow=6.3,SNR=9.2
DAVOX LR LR 08 28 11.3
comp=Z,220nm,21.7s,baz=86,slow=37
comp=Z,9.7nm,1.0s
NKC Novy Kostel 60.42 326 *e*P **P 08 01 28.1 -0.8**
NKC Novy Kostel 60.42 326 *e*P **P 08 01 28.1 -0.8**
NKC AMS AMS 08 25 50.0
comp=Z,400nm,33.3s
DAVA Damuels 60.51 322 *e*P **P 08 01 28.9 -0.9**
comp=Z,23nm,1.8s
SAOF Saorge 60.62 318 P **P 08 01 28.8 -1.6**
SAOF pmax pmax
comp=Z,16nm,1.3s
CLL Collm 60.67 327 *e*P **P 08 01 30.0 -0.6**
CLL *e*S **S 08 09 46.0 -0.7**
CLL pmax pmax
comp=Z,69nm,2.2s
CLL Collm 60.67 327 *e*P **P 08 01 30.0 -0.6**
comp=Z,69nm,2.2s
CLL *e*x x 08 02 22.0
CLL *e*S **S 08 09 46.0 -0.7**
CLL *e*SS **SS 08 13 48.0 +2.6**
CLL *e*x x 08 15 06.0
CLL *e*(SSS) 08 16 18.0
MRSI Marisa 60.67 93 P **P 08 01 29.4 -1.8**
comp=Z,28nm,1.3s
LMR La Mourre 61.08 317 *e*P **P 08 01 32.9 -0.6**
LMR pmax pmax
comp=Z,54nm,1.7s
MBDF Montbardon 61.42 319 *e*P **P 08 01 37.2 +1.2**
MBDF pmax pmax
comp=Z,16nm,1.4s
FINES FINESS Array B 61.67 342 P **P 08 01 37.3 +0.2**
comp=Z,1.6nm,0.7s,baz=152,slow=9.1,SNR=2.0
comp=Z,1.6nm,0.7s
SENIN Lac Senin/Sane 61.73 320 P **P 08 01 37.7 -0.4**
LPG La Plagne 61.73 319 *e*P **P 08 01 37.0 -1.2**
LPG pmax pmax
comp=Z,14nm,1.0s
LPL La Plagne 61.75 319 *e*P **P 08 01 38.1 -0.2**
LPL pmax pmax
comp=Z,21nm,1.1s
BFO Black Forest 61.91 323 P **P 08 01 38.3 -0.8**
BFO Black Forest 61.91 323 P **P 08 01 38.3 -0.8**
BFO pmax pmax
comp=Z,42nm,1.5s
ECH Echery 62.57 322 P **P 08 01 42.7 -0.8**
ECH Echery 62.57 322 P **P 08 01 42.7 -0.8**
ECH pmax pmax
comp=Z,37nm,1.5s
CDF Champ du Feu 62.58 323 *e*P **P 08 01 43.1 -0.5**
CDF pmax pmax
comp=Z,148nm,2.0s
CABF La Chapelle 62.59 320 *e*P **P 08 01 43.6 -0.1**
CABF pmax pmax
comp=Z,84nm,1.2s
VIVF Saint-Julien-l 62.86 318 *e*P **P 08 01 45.7 +0.2**
VIVF pmax pmax
comp=Z,38nm,1.7s
HAU Haudompre 62.98 322 *e*P **P 08 01 45.2 -1.0**
HAU pmax pmax
comp=Z,18nm,1.2s
SSB Saint Sauveur 63.10 318 P **P 08 01 46.9 -0.2**
SSB pmax pmax
comp=Z,15nm,1.3s
PSA00 Pilbara Seismi 63.30 117 P **P 08 01 49.9 +1.1**
DAV Davao City (W) 63.80 85 LR LR 08 28 40.7
comp=Z,284nm,21.4s,baz=331,slow=35
H01W3 Cape Leeuwin H 63.86 133 T T 09 11 09.2
baz=299,slow=75,SNR=32
H01W2 Cape Leeuwin H 63.87 133 T T 09 11 07.8
baz=299,slow=75,SNR=33
H01W1 Cape Leeuwin H 63.88 133 T T 09 11 05.0
baz=299,slow=75,SNR=29
SMF Signal de Mont 64.04 320 *e*P **P 08 01 53.2 -0.1**
SMF pmax pmax
comp=Z,15nm,1.2s
LOR Lormes 64.25 320 *e*P **P 08 01 54.4 -0.2**
LOR pmax pmax
comp=Z,17nm,1.3s
SSF Saint Saulge 64.41 320 *e*P **P 08 01 54.7 -0.9**
SSF pmax pmax
comp=Z,16nm,1.0s
AVF Avril sur Loir 64.41 320 *e*P **P 08 01 54.5 -1.1**
AVF pmax pmax
comp=Z,49nm,2.0s
BGF Bois d'Agland 64.65 319 *e*P **P 08 01 56.8 -0.5**
BGF pmax pmax
comp=Z,62nm,1.3s
GIVF Givet 64.74 324 *e*P **P 08 01 57.3 -0.4**
GIVF pmax pmax
comp=Z,33nm,1.3s
KOWA Kowa 64.82 283 P **P 08 01 59.9 +1.1**
KOWA IAmb IAmb 08 02 06.8
comp=Z,21nm,1.4s
LVZ Lovozero 64.83 349⇓*e*P **P 08 01 58.5 +0.4**
LVZ pmax pmax
comp=Z,19nm,1.4s
BAIF Baives 65.09 323 *e*P **P 08 02 00.7 +0.7**
BAIF pmax pmax
comp=Z,24nm,1.1s
HFS Hagfors 65.26 336 P **P 08 01 59.8 -1.1**
comp=Z,6.9nm,0.6s,baz=123,slow=5.5,SNR=13
HFS LR LR 08 32 28.1
comp=Z,287nm,21.6s,baz=126,slow=38
comp=Z,6.9nm,0.6s
NWAO Narrogin (SRO) 65.30 130 LR LR 08 24 27.8
comp=Z,278nm,21.9s,baz=138,slow=30
LFF La Frestale 65.53 317 *e*P **P 08 02 03.0 +0.1**
LFF pmax pmax
comp=Z,39nm,1.4s
SNY Shenyang 65.76 46 ⇓P **P 08 02 09.1 +4.6**
SNY S **S 08 10 58.8 +8.1**
SNY pmax pmax
comp=Z,17nm,0.6s
SNY pmax pmax
comp=Z,480nm,4.7s
SNY LR LR
comp=Z,490nm,17.5s
SNY LR LR
comp=Z,670nm,17.1s
SNY LR LR
comp=Z,930nm,21.8s
DBIC Dimbokro 65.81 275 P **P 08 02 06.8 +1.5**
DBIC comp=Z,4.9nm,0.9s,baz=101,slow=9.0,SNR=2.9
LR LR 08 30 04.4
comp=Z,789nm,21.3s,baz=60,slow=35
comp=Z,4.9nm,0.9s
ETSF Etsaut 65.84 315 *e*P **P 08 02 07.7 +2.6**
ETSF pmax pmax
comp=Z,30nm,1.7s
NRIK Noril'sk 66.01 10 LR LR 08 33 02.7
comp=Z,1μm,20.5s,baz=200,slow=38
SJPF Ste Jean 66.37 315 *e*P **P 08 02 08.7 +0.3**
SJPF pmax pmax
comp=Z,34nm,1.4s
NOA NORSAR Array B 66.78 336 P **P 08 02 09.1 -1.7**
comp=Z,2.3nm,0.9s,baz=119,slow=7.3,SNR=3.7
NOA LR LR 08 33 24.9
comp=Z,262nm,21.6s,baz=105,slow=38
comp=Z,2.3nm,0.9s
MDT Midelt 66.86 303 P **P 08 02 12.2 +0.3**
comp=Z,6.1nm,1.1s,baz=101,slow=5.9,SNR=6.8
MDT LR LR 08 33 07.3
comp=Z,198nm,18.5s,baz=105,slow=38
comp=Z,6.1nm,1.1s
JOW Kunigami 66.93 63 LR LR 08 34 38.7
comp=Z,535nm,18.5s,baz=306,slow=39
LDF La Druitiere 67.22 321 *e*P **P 08 02 13.0 -0.7**
LDF pmax pmax
comp=Z,40nm,1.3s
ESDC Sonseca Array 67.56 311 P **P 08 02 15.9 -0.2**
comp=Z,11nm,1.0s,baz=86,slow=5.8,SNR=48
comp=Z,11nm,1.0s
ESDC Sonseca Array 67.56 311 P **P 08 02 15.7 -0.4**
ESDC IAmb IAmb 08 02 22.9
comp=Z,22nm,1.2s
CN2 Changchun 67.60 45 *e*P **P 08 02 15.8 -0.4**
CN2 PP **PP 08 04 46.1 +0.8**
CN2 S **S 08 11 09.5 -3.4**
CN2 LR LR
comp=Z,340nm,19.0s
CN2 LR LR
comp=Z,850nm,19.0s
CN2 LR LR
comp=Z,1μm,20.0s
PAB San Pablo 67.83 310 P **P 08 02 18.1 +0.2**
PAB San Pablo 67.83 310 P **P 08 02 18.1 +0.2**
PAB pmax pmax
comp=Z,35nm,1.3s
KSAR Wonju Array Be 68.06 52 P **P 08 02 18.7 -0.5**
KSAR Wonju Array Be 68.06 52 P **P 08 02 18.7 -0.5**
ARCES ARCESS Array B 68.07 347 P **P 08 02 17.1 -1.6**
comp=Z,2.4nm,0.7s,baz=159,slow=4.8,SNR=8.3
ARCES LR LR 08 34 23.2
comp=Z,252nm,21.3s,baz=125,slow=38
comp=Z,2.4nm,0.7s
KSRS Korea Array 68.09 52 P **P 08 02 16.9 -2.5**
comp=Z,6.2nm,0.8s,baz=257,slow=7.0,SNR=18
KSRS LR LR 08 33 01.2
comp=Z,576nm,21.1s,baz=245,slow=37
comp=Z,6.2nm,0.8s
SIJI Sorong 70.09 93 P **P 08 02 31.5 -0.8**
comp=Z,6.9nm,0.5s,baz=303,slow=6.9,SNR=5.6
SIJI LR LR 08 32 32.0
comp=Z,91nm,21.6s,baz=265,slow=35
comp=Z,6.9nm,0.5s
MDJ Mudanjiang 70.68 45 P **P 08 02 34.8 -0.6**
MDJ sP sP 08 02 39.8 -0.5
MDJ S **S 08 11 48.8 -0.5**
MDJ ScS **SKKSac 08 12 37.6 +0.2**
MDJ pmax pmax
comp=Z,17nm,1.5s
MDJ pmax pmax
comp=Z,480nm,4.1s
MDJ LR LR
comp=Z,400nm,11.5s
MDJ LR LR
comp=Z,780nm,17.7s
MDJ LR LR
comp=Z,1μm,16.2s
EKA Eskdalemuir Ar 71.14 327 P **P 08 02 37.0 -0.9**
comp=Z,1.8nm,0.6s,baz=119,slow=4.3,SNR=4.8
EKA LR LR 08 38 13.1
comp=Z,113nm,18.4s,baz=100,slow=40
comp=Z,1.8nm,0.6s
USA0B Ussuriysk Arra 72.30 45⇑*e*P **P 08 02 44.3 -0.8**
USRK Ussuriysk Ar. 72.30 45 LR LR 08 36 09.3
comp=Z,1μm,19.8s,baz=202,slow=37
MAW Mawson 72.98 179 P **P 08 02 50.3 +1.8**
comp=Z,2.8nm,0.2s,baz=356,slow=5.5,SNR=23
MAW LR LR 08 27 15.4
comp=Z,373nm,21.0s,baz=344,slow=30
comp=Z,2.8nm,0.2s
MAW Mawson 72.98 179 P **P 08 02 52.4 +3.8**
MAW Mawson 72.98 179 P **P 08 02 52.4 +3.8**
MAW pmax pmax
comp=Z,6.0nm,1.6s
KLR Kul'dur 73.06 40 P **P 08 02 47.1 -2.4**
comp=Z,4.3nm,0.8s,baz=264,slow=6.6,SNR=9.2
KLR LR LR 08 36 22.3
comp=Z,1μm,18.3s,baz=257,slow=37
comp=Z,4.3nm,0.8s
KLR Kul'dur 73.06 40⇑*e*P **P 08 02 46.3 -3.2**
KLR pmax pmax
comp=Z,26nm,3.0s
YAK Yakutsk 75.05 27 LR LR 08 38 45.4
comp=Z,708nm,19.4s,baz=268,slow=38
YAK Yakutsk 75.05 27*de*P **P 08 03 00.8 -0.1**
YAK pmax pmax
comp=Z,24nm,0.8s
WRA Warramunga Arr 76.02 112 P **P 08 03 06.5 -0.8**
comp=Z,15nm,0.9s,baz=295,slow=4.5,SNR=74
WRA LR LR 08 32 54.0
comp=Z,365nm,18.0s,baz=272,slow=33
comp=Z,15nm,0.9s
WRA Warramunga Arr 76.02 112 P **P 08 03 06.5 -0.8**
WRA Warramunga Arr 76.02 112 P **P 08 03 06.5 -0.8**
WRA pmax pmax
comp=Z,3.0nm,1.1s
WRAB Tennant Creek 76.02 112*d i*P **P 08 03 06.3 -1.0**
WRAB pmax pmax
comp=Z,36nm,1.0s
WB2 Warramunga Arr 76.03 112 P **P 08 03 07.0 -0.3**
WB0 Warramunga Arr 76.03 112 P **P 08 03 06.6 -0.8**
MJAR Matsushiro Arr 76.16 54 P **P 08 03 06.1 -1.7**
comp=Z,2.4nm,0.8s,baz=274,slow=6.9,SNR=4.6
comp=Z,2.4nm,0.8s
SPITS Spitsbergen Ar 76.17 351 LR LR 08 41 02.6
comp=Z,498nm,18.4s,baz=92,slow=39
WR0 Warramunga Arr 76.20 112 P **P 08 03 08.5 +0.2**
WR0 IAmb IAmb 08 03 11.1
comp=Z,22nm,1.1s
ASAR Alice Springs 76.38 116 P **P 08 03 08.5 -0.8**
comp=Z,8.7nm,0.9s,baz=289,slow=5.4,SNR=39
ASAR LR LR 08 31 41.1
comp=Z,409nm,19.4s,baz=290,slow=32
comp=Z,8.7nm,0.9s
AS31 Alice Springs 76.38 116 P **P 08 03 08.8 -0.5**
BBTS Babate 76.93 284 LR LR 08 38 41.5
comp=Z,556nm,18.4s,baz=79,slow=37
JHJ Hachijo jima 2 77.30 57 LR LR 08 38 19.1
comp=Z,267nm,21.4s,baz=278,slow=37
TIXI Tiksi 77.78 17 P **P 08 03 14.2 -2.0**
comp=Z,11nm,1.1s,baz=270,slow=23,SNR=8.5
TIXI LR LR 08 39 09.7
comp=Z,520nm,19.5s,baz=268,slow=37
comp=Z,11nm,1.1s
TIXI Tiksi 77.78 17 P **P 08 03 14.4 -1.8**
TIXI IAmb IAmb 08 03 22.4
comp=Z,13nm,1.1s
TIXI Tiksi 77.78 17 P **P 08 03 14.4 -1.8**
TIXI pmax pmax
comp=Z,13nm,1.1s
JMIC Jan Mayen 78.30 342 LR LR 08 40 02.3
comp=Z,155nm,21.1s,baz=96,slow=37
JCJ Chichijima 79.34 64 LR LR 08 38 33.9
comp=Z,188nm,21.6s,baz=270,slow=36
YSS Yuzh-Sakhalins 80.10 43 *e*P **P 08 03 26.0 -3.4**
YSS *e* 08 03 39.9
YSS pmax pmax
comp=Z,300nm,4.5s
BORG Borgarnes 81.90 335 LR LR 08 43 29.3
comp=Z,211nm,19.7s,baz=86,slow=38
DAG Danmarks Havn 82.36 347 P **P 08 03 40.2 -0.6**
DAG Danmarks Havn 82.36 347 *i* P **P 08 03 39.0 -1.8**
GUMO Guam 82.42 77 LR LR 08 37 55.3
comp=Z,189nm,19.7s,baz=265,slow=34
NVL N'lazarevskaya 82.90 195 *e*P **P 08 03 47.4 +3.7**
NVL *e*S **S 08 13 59.5 -2.2**
NVL pmax pmax
comp=Z,7.0nm,1.0s
STKA Stephens Creek 84.65 123 P **P 08 03 52.9 -0.6**
comp=Z,5.8nm,0.8s,baz=313,slow=2.4,SNR=5.2
STKA LR LR 08 37 26.3
comp=Z,824nm,20.5s,baz=249,slow=33
comp=Z,5.8nm,0.8s
STKA Stephens Creek 84.65 123⇑*e*P **P 08 03 53.1 -0.4**
MA2 Magadan 84.96 31 LR LR 08 44 25.3
comp=Z,317nm,18.6s,baz=293,slow=38
TROLL Troll, Antarti 86.05 195 P **P 08 04 02.1 +2.3**
PMG Port Moresby 86.76 100 P **P 08 04 04.0 -0.3**
comp=Z,13nm,0.7s,baz=337,slow=7.3,SNR=5.0
PMG LR LR 08 44 20.7
comp=Z,105nm,18.9s,baz=301,slow=37
comp=Z,13nm,0.7s
PMG Port Moresby 86.76 100*ce*P **P 08 04 05.4 +1.0**
PMG pmax pmax
comp=Z,43nm,1.1s
CTA Charters Tower 87.10 110 P **P 08 04 04.7 -1.3**
comp=Z,4.6nm,0.8s,baz=221,slow=3.0,SNR=8.1
CTA LR LR 08 38 08.8
comp=Z,280nm,19.9s,baz=260,slow=32
comp=Z,4.6nm,0.8s
CTA Charters Tower 87.10 110 P **P 08 04 04.9 -1.0**
CTA pmax pmax
comp=Z,16nm,2.1s
CTAO Charters Tower 87.10 110 P **P 08 04 05.1 -0.8**
CTAO pmax pmax
comp=Z,14nm,2.1s
SNAA Sanae 87.36 197 P **P 08 04 10.2 +4.1**
SNAA Sanae 87.36 197 LR LR 08 35 47.8
comp=Z,577nm,21.9s,baz=23,slow=30
SNAA Sanae 87.36 197⇑*e*P **P 08 04 08.7 +2.6**
SNAA pmax pmax
comp=Z,2.0nm,1.2s
VNA2 Neumayer--Watz 88.39 198 P **P 08 04 15.1 +4.1**

baz=32,slow=4.0
VNA1 Neumayer--Stat 88.56 198 P **P 08 04 14.9 +3.1**
VNA3 Neumayer Olymp 89.20 198 P **P 08 04 15.9 +1.0**
PETK Petropavlovsk- 89.41 37 LR LR 08 47 14.7
comp=Z,540nm,19.3s,baz=269,slow=38
PET Petropavlovsk 89.99 37 *e*P P 08 04 24.5 +5.6
PET *e*SS **S 08 15 11.7 +0.2**
PET *e*SS **SS 08 21 14.4 +5.2**
PET pmax pmax
comp=Z,100nm,15.7s
PET MLR MLR
comp=Z,700nm,18.0s
PET MLR MLR
comp=Z,700nm,16.0s
BILL Bilibino 90.43 21 *i* P **P 08 04 18.0 -2.7**
BILL pmax pmax
comp=Z,10.0nm,1.1s
SFJD Kangerlussuaq 93.34 339 LR LR 08 49 58.0
comp=Z,113nm,18.2s,baz=55,slow=38
QSPA South Pole Qui 95.49 180 LR LR 08 41 31.1
comp=Z,704nm,21.2s,baz=267,slow=32
VNDA Vanda 97.64 168 LR LR 08 43 16.0
comp=Z,378nm,20.2s,baz=252,slow=32
RCBR Riachuelo 97.75 265 LR LR 08 46 18.7
comp=Z,339nm,19.5s,baz=246,slow=34
RES Resolute Bay 98.61 354 LR LR 08 53 43.1
comp=Z,341nm,21.5s,baz=12,slow=38
SHEM Shemya Is, Ala 99.08 35 LR LR 08 51 53.3
comp=Z,322nm,21.0s,baz=287,slow=37
HNR Honiara 99.33 99 LR LR 08 54 01.2
comp=Z,1μm,18.1s,baz=266,slow=38
DZM Mont Dzumac 106.02 111 *e*LR LR 08 40 24.5
comp=Z,361nm,27.6s
PLCA Paso Flores 124.58 223 PKP **PKiKP 08 10 21.1 +1.5**
comp=Z,4.4nm,1.2s,baz=72,slow=6.4,SNR=2.8
PDAR Pinedale Array 131.22 351 PKP **PKPdf 08 10 30.9 -1.4**
comp=Z,1.0nm,0.6s,baz=80,slow=1.6,SNR=11
U38A Gravette 132.47 333 PKPdf 08 10 32.4 -2.1
NVAR Mina Array Bea 136.25 360 PKP **PKPdf 08 10 42.1 +0.3**
comp=Z,2.4nm,1.0s,baz=318,slow=1.5,SNR=9.6
TXAR Lajitas Array 142.46 338 PKhKP PKPpre 08 10 47.2
comp=Z,0.7nm,0.7s,baz=50,slow=5.0,SNR=7.8
ESQI Esquipulas 144.75 305 PKPdf 08 10 57.3 -0.3
MTO3 Montecristo 144.85 305 PKPdf 08 10 58.4 +0.5
TBI Tubuai 145.43 124 *e*LR LR 08 58 42.0
comp=Z,279nm,30.8s
HUEH Huehuetenango 146.06 308 PKPdf 08 11 00.2 +0.2
PAE Paea 147.45 114 *e*P **PKPbc 08 11 03.2 -1.2**
comp=Z,7.5nm,1.2s
PPT2 Papeete2 147.47 114 *e*P **PKPbc 08 11 04.2 -0.4**
comp=Z,46nm,1.2s
PPT2 Papeete2 147.47 114 *e*LR LR 08 59 38.7
comp=Z,464nm,29.8s
PPT Papeete 147.48 114 PKPbc **PKPbc 08 11 05.1 +0.6**
comp=Z,49nm,1.1s,baz=345,slow=2.0,SNR=9.0
TVO Taravao 147.71 115 *e*P **PKPbc 08 11 05.3 +0.1**
comp=Z,6.3nm,0.9s
TAOE Nuku Hiva Isla 158.41 100 *e*LR LR 09 04 39.9
comp=Z,302nm,25.0s

ROM 18 07:58:27.7±0.1, 42°.743N±0°.003×13°.190E±0°.002, h10km, ML1.2/3, 1C, Error ellipse: s-maj=0.3km s-min=0.1km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.05**	**147**	P	Pg	07 58 30.1	+0.2
T1202				S	Sg	07 58 31.5	0.0
T1245	**Castelsantange**	**0.11**	**359**	P	Pg	07 58 31.3	+0.6
T1245				S	Sg	07 58 33.2	+0.3
T1245				AML	AML		
	comp=E,92μm,1.0s						
T1245				AML	AML		
	comp=E,92μm,1.0s						
T1245				AML	AML		
	comp=N,140μm,0.2s						
MC2	**Monte Cornacci**	**0.17**	**0**	⇑P	Pg	07 58 32.3	+0.7
LNSS	**Leonessa**	**0.18**	**218**	P	Pg	07 58 32.3	+0.6
LNSS				S	Sg	07 58 35.5	+1.2
LNSS				AML	AML		
	comp=E,83μm,0.2s						
LNSS				AML	AML		
	comp=N,68μm,1.5s						
MMO1	**Montemonaco**	**0.19**	**33**	P	Pg	07 58 32.4	+0.6
MMO1				S	Sg	07 58 35.7	+1.1
T1217	**Poggiodomo (PG**	**0.19**	**261**	P	Pb	07 58 32.7	-0.7
T1217				S	Sg	07 58 35.9	+1.2
T1243	**Rocca Santa Ma**	**0.20**	**104**	P	Pg	07 58 32.6	+0.6
T1243				S	Sg	07 58 36.0	+1.1
T1215	**Vallo di Nera,**	**0.24**	**284**	P	Pg	07 58 33.3	+0.5
T1215				S	Sg	07 58 37.4	+1.2
AM05	**Amandola Campo**	**0.26**	**27**	AML	AML		
	comp=E,337μm,0.1s						
AM05				AML	AML		
	comp=N,402μm,0.1s						
TERO	**Teramo**	**0.33**	**111**	P	Pg	07 58 34.7	+0.4
TERO				S	Sb	07 58 40.1	-0.9
PP3	**Marolino**	**0.70**	**26**	P	Pn	07 58 43.3	-0.4
PP3				AML	AML		
	comp=N,190μm,1.5s						
PP3				AML	AML		
	comp=E,184μm,0.5s						

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*IDC **18** 08:10:48.6±1.4, 5°.62N×61°.44E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=70.4km s-min=23.9km az=42.0*

ISC 18 08:10:51.0±1.6, 5°.7N±0°.4×61°.4E±0°.3, h14km, n9, σ0§12/5, mb4.0/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**42.17**	**328**	P	**P**	**08 18 43.4**	**0.0**
	1.7nm,0.9s,baz=124,slow=7.8,SNR=5.5						
	1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**51.77**	**17**	P	**P**	**08 19 58.1**	**0.0**
	0.4nm,0.3s,baz=191,slow=6.9,SNR=1.5						
	0.4nm,0.3s						
H01W3	**Cape Leeuwin H**	**63.88**	**133**	T	T	09 30 33.5	
	baz=300						
H01W2	**Cape Leeuwin H**	**63.89**	**133**	T	T	09 30 36.0	
	baz=300						
H01W1	**Cape Leeuwin H**	**63.90**	**133**	T	T	09 30 37.4	
	baz=300						
ESDC	**Sonseca Array**	**67.55**	**311**	P	**P**	**08 21 47.3**	**0.0**
	0.9nm,0.7s,baz=102,slow=5.0,SNR=7.1						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**75.98**	**112**	P	**P**	**08 22 38.1**	**-0.1**
	1.4nm,0.9s,baz=293,slow=4.6,SNR=14						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**76.35**	**116**	P	**P**	**08 22 40.5**	**+0.1**
	1.0nm,0.8s,baz=284,slow=5.8,SNR=8.6						
	1.0nm,0.8s						
TXAR	**Lajitas Array**	**142.39**	**338**	PKhKP	PKPpre	08 30 18.0	
	0.4nm,1.0s,baz=90,slow=1.3,SNR=3.6						

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*JMA **18** 08:29:04.9±0.1, 36°.2N±0°.3×139°.7E±0°.4, h109km, MV2.9/37, SW IBARAKI PREF*
*IDC **18** 08:29:05.8±1.4, 36°.23N×139°.46E, h138km±13km, mb3.0/3, mbtmp3.8/5, Error ellipse: s-maj=38.0km s-min=17.7km az=71.0*

ISC 18 08:29:04.1±0.9, 36°.22N±0°.05×139°.71E±0°.06, h117km±7km, n17, σ1§24/24, mb3.3/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.29**	**315**	P	**Pn**	**08 29 20.6**	**-0.1**
JYT	**Yasato**	**0.39**	**89**	P	**Pn**	**08 29 21.1**	**-0.1**
JYT				S	**Sn**	**08 29 33.0**	**-0.9**
JKT	**Katashina**	**0.66**	**326**	P	**Pn**	**08 29 23.4**	**+0.4**
JRY	**Ryogami san**	**0.69**	**253**	P	**Pn**	**08 29 23.5**	**+0.4**
JOD2	**Odawara 2**	**1.08**	**208**	P	**Pn**	**08 29 26.5**	**-0.3**
JOD2				S	**Sn**	**08 29 42.9**	**-1.0**
JYN	**Shimob**	**1.19**	**233**	P	**Pn**	**08 29 28.4**	**+0.4**
JYN				S	**Sn**	**08 29 46.2**	**+0.2**
MJAR	**Matsushiro Arr**	**1.25**	**285**	P	**Pn**	**08 29 28.8**	**+0.2**
	11nm,0.4s,baz=99,slow=12,SNR=34						
MJAR				S	**Sn**	**08 29 48.6**	**+1.5**
	4.5nm,0.4s,baz=162,slow=12,SNR=5.4						
MAT	**Matsushiro**	**1.25**	**285**	P	**Pn**	**08 29 29.1**	**+0.5**
MAT				*e*S	**Sn**	**08 29 47.4**	**+0.3**
JFNN	**Fujinakano**	**1.32**	**219**	S	**Sn**	**08 29 48.4**	**0.0**
JOTO	**OTAMA OYAMA**	**1.43**	**20**	P	**Pn**	**08 29 31.1**	**+0.5**
JOTO				*e*S	**Sn**	**08 29 51.3**	**+0.7**
JNS	**Sasagawa**	**1.62**	**349**	P	**Pn**	**08 29 33.1**	**+0.3**
BSO1	**Boso 1**	**1.88**	**146**	P	**Pn**	**08 29 35.9**	**+0.5**
JHJ	**Hachijo jima 2**	**3.10**	**179**	P	**Pn**	**08 29 52.6**	**+1.0**
	112nm,0.7s,baz=86,slow=19,SNR=5.4						
JHJ				S	**Sn**	**08 30 26.9**	**-1.3**
	47nm,0.3s,baz=53,slow=20,SNR=5.8						
JCJ	**Chichijima**	**9.34**	**166**	P	**Pn**	**08 31 19.8**	**+4.1**
	20nm,0.4s,baz=290,slow=23,SNR=7.1						
ZALV	**Zalesovo Beam**	**41.46**	**313**	P	**P**	**08 36 37.0**	**-2.1**
	0.5nm,0.6s,baz=110,slow=6.6,SNR=1.4						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**50.91**	**32**	P	**P**	**08 37 53.8**	**+0.9**
	0.2nm,0.7s,baz=285,slow=6.8,SNR=2.1						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**56.09**	**186**	P	**P**	**08 38 30.5**	**-0.6**
	0.2nm,0.6s,baz=1.2,slow=7.5,SNR=1.4						
	0.2nm,0.6s						

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*AEIC **18** 08:32:48±3.8, 53°.1N±0°.1×166°.7W±0°.1, h33km±9km, Error ellipse: s-maj=20.5km s-min=6.6km az=151.0*

NEIC 18 08:32:51.1±2.8, 53°.39N±0°.06×166°.9W±0°.1, h36km±37km, ML3.6/8, ML3.2(AEIC), Error ellipse: s-maj=11.7km s-min=6.2km az=129.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.50**	**24**		Pn	08 33 01.8	+0.1
AKUT	**Akutan**	**0.98**	**40**		Pn	08 33 08.3	0.0
NIKH	**Nikolski High**	**1.28**	**252**	Pn	Pn	08 33 10.7	-1.6
FALS	**False Pass**	**2.50**	**53**		Pn	08 33 29.8	+0.7
SDPT	**Sand Point**	**4.21**	**60**	Pn	Pn	08 33 54.0	+1.4
SDPT				IAML		08 34 55.6	
	comp=N,83nm,2.1s						
CNBA	**Chernabura Isl**	**4.51**	**69**	Pn	Pn	08 33 56.2	-0.4
CNBA				IAML		08 35 17.5	
	comp=E,53nm,3.3s						
CNBA				IAML		08 35 19.1	
	comp=N,46nm,2.7s						
CHGN	**Chignik**	**5.68**	**56**	Pn	Pn	08 34 12.6	-0.2
OHAK	**Old Harbor**	**8.63**	**58**	Pn	Pn	08 34 52.4	-0.8
O18K	**Koktuh Hills**	**9.11**	**40**	Pn	Pn	08 35 02.2	+2.4
KDAK	**Kodiak Island**	**9.20**	**56**	Pn	Pn	08 34 59.7	-1.3
Q19K	**Cape Douglas,**	**9.22**	**48**	Pn	Pn	08 35 02.9	+1.6

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*IDC **18** 08:53:26.5±2.8, 60°.78N×148°.24W, h0km, mb3.4/2, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=48.6km s-min=16.1km az=73.0*
*NEIC **18** 08:53:31.0±1.4, 61°.00N±0°.04×147°.46W±0°.04, h23km±11km, Error ellipse: s-maj=5.3km s-min=2.7km az=181.0*
*ANF **18** 08:53:30.4±0.2, 61°.03N×147°.47W, h20km±2km, ML3.6/92, ML3.6/93, Error ellipse: s-maj=1.4km s-min=0.9km az=175.0*
*AEIC **18** 08:53:31±1.6, 61°.01N±0°.03×147°.45W±0°.06, h15km±7km, ML3.3, ML3.5/190(NEIC), Error ellipse: s-maj=5.0km s-min=3.5km az=217.0*

ISC 18 08:53:31.0±0.9, 61°.02N±0°.02×147°.44W±0°.02, h26km±7km, n239, σ0§81/259, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLI	**Glacier Island**	**0.22**	**129**		**Pb**	**08 53 36.8**	**-0.2**
GLI				IAML		08 53 42.3	
	comp=N,9μm,0.5s						
GLI	**Glacier Island**	**0.22**	**129**	P	**Pb**	**08 53 36.9**	**-0.1**
	baz=307,SNR=340						
GLI				S	**Sb**	**08 53 41.7**	**+0.6**
	baz=307						
PWL	**Port Wells**	**0.46**	**251**		**Pb**	**08 53 40.0**	**-0.7**
PWL				IAML		08 53 48.3	
	comp=E,4μm,0.5s						
PWL				IAML		08 53 49.4	
	comp=E,6μm,0.6s						
PWL	**Port Wells**	**0.46**	**251**	P	**Pb**	**08 53 40.1**	**-0.5**
	baz=70,SNR=1000						
PWL				S	**Sb**	**08 53 47.2**	**0.0**
	baz=70						
FID	**Port Fidalgo**	**0.54**	**119**		**Pb**	**08 53 40.5**	**-1.4**
FID				IAML		08 53 50.1	
	comp=N,5μm,0.4s						
KNK	**Knik Glacier**	**0.63**	**310**		**Pb**	**08 53 43.0**	**-0.5**
KNK	**Knik Glacier**	**0.63**	**310**	P	**Pb**	**08 53 43.0**	**-0.5**
	baz=129,SNR=87						
KNK				S	**Sb**	**08 53 52.0**	**+0.1**
	baz=129						
HIN	**Hinchinbrook I**	**0.78**	**143**		**Pb**	**08 53 45.4**	**-0.4**
HIN				IAML		08 54 01.3	
	comp=N,3μm,0.5s						
M23K	**Glacier View**	**0.79**	**350**	P	**Pb**	**08 53 45.3**	**-0.9**
	baz=170,SNR=158						
M23K				S	**Sb**	**08 53 55.6**	**-0.9**
	baz=170						
DIV	**Divide**	**0.82**	**81**		**Pb**	**08 53 45.1**	**-1.5**
SCM	**Sheep Creek Mo**	**0.82**	**4**		**Pb**	**08 53 45.5**	**-1.2**
SCM	**Sheep Creek Mo**	**0.82**	**4**	P	**Pb**	**08 53 45.5**	**-1.2**
	baz=184,SNR=27						
SCM				S	**Sb**	**08 53 56.6**	**-0.8**
	baz=184						
KLU	**Klutina**	**0.88**	**56**		**Pb**	**08 53 46.1**	**-1.5**
KLU				IAML		08 53 58.5	
	comp=E,2μm,0.4s						
KLU				IAML		08 53 58.6	
	comp=N,2μm,0.5s						
KLU	**Klutina**	**0.88**	**56**	P	**Pb**	**08 53 46.3**	**-1.3**
	baz=237,SNR=119						
KLU				S	**Sb**	**08 53 58.0**	**-1.0**
	baz=237						
SML	**Sawmill**	**0.90**	**332**		**Pb**	**08 53 46.5**	**-1.5**
SML				IAML		08 53 59.7	
	comp=E,2μm,0.6s						
SML				IAML		08 54 00.3	
	comp=N,2μm,0.8s						
SML	**Sawmill**	**0.90**	**332**	P	**Pb**	**08 53 46.9**	**-1.1**
	baz=152,SNR=53						
SML				S	**Sb**	**08 53 58.8**	**-0.8**
	baz=152						
EYAK	**Cordova Ski Ar**	**0.95**	**119**		**Pb**	**08 53 48.6**	**-0.2**
EYAK	**Cordova Ski Ar**	**0.95**	**119**	P	**Pb**	**08 53 48.1**	**-0.7**
	baz=300,SNR=48						
PMR	**Palmer**	**1.00**	**306**		**Pb**	**08 53 48.5**	**-1.1**
PMR				IAML		08 54 02.2	
	comp=N,2μm,0.4s						
PMR	**Palmer**	**1.00**	**306**	P	**Pb**	**08 53 48.4**	**-1.1**
	baz=125,SNR=75						
PMR				S	**Sb**	**08 54 01.8**	**-0.6**
	baz=125						
P23K	**Montague Islan**	**1.02**	**179**	P	**Pb**	**08 53 49.1**	**-0.8**
	baz=359,SNR=15						
RC01	**Rabbit Creek A**	**1.12**	**275**		**Pn**	**08 53 50.6**	**-0.3**
RC01				IAML		08 54 08.8	
	comp=E,2μm,0.4s						
RC01	**Rabbit Creek A**	**1.12**	**275**	P	**Pn**	**08 53 50.5**	**-0.3**
	baz=93,SNR=96						
RC01				S	**Sb**	**08 54 05.1**	**-0.7**
	baz=93						
O22K	**Cooper Landing**	**1.24**	**245**		**Pn**	**08 53 52.4**	**-0.2**
O22K	**Cooper Landing**	**1.24**	**245**	P	**Pn**	**08 53 52.4**	**-0.2**
	baz=64,SNR=71						
O22K				S	**Sb**	**08 54 08.7**	**-0.6**
	baz=64						
M24K	**Tolsona, Glenn**	**1.25**	**28**	Pn	**Pn**	**08 53 52.8**	**0.0**
M24K	**Tolsona, Glenn**	**1.25**	**28**	P	**Pn**	**08 53 52.5**	**-0.2**
	baz=210,SNR=31						
M24K				Sb	**Sb**	**08 54 09.8**	**+0.1**
	baz=210						
SEW	**Seward**	**1.35**	**228**		**Pn**	**08 53 53.6**	**-0.3**
SEW	**Seward**	**1.35**	**228**	P	**Pn**	**08 53 53.7**	**-0.3**
	baz=46,SNR=22						
SEW				S	**Sn**	**08 54 11.3**	**+0.2**
	baz=46						
FIS	**Fire Island**	**1.35**	**277**		**Pb**	**08 53 55.2**	**-0.4**
BMRM	**Bremner River**	**1.38**	**91**		**Pn**	**08 53 54.3**	**-0.2**
BMRM	**Bremner River**	**1.38**	**91**	P	**Pn**	**08 53 54.2**	**-0.3**
	baz=273,SNR=80						
BMRM				S	**Sn**	**08 54 12.2**	**+0.2**
	baz=273						
M22K	**Willow**	**1.49**	**301**		**Pn**	**08 53 56.2**	**+0.3**
M22K	**Willow**	**1.49**	**301**	P	**Pn**	**08 53 56.1**	**+0.2**
	baz=119,SNR=113						
M22K				Sb	**Sb**	**08 54 16.6**	**+0.4**
	baz=119						
N25K	**Chitina, Valde**	**1.50**	**65**	Pn	**Pn**	**08 53 55.7**	**-0.5**
N25K				IAML		08 54 18.0	
	comp=N,732nm,0.3s						
N25K	**Chitina, Valde**	**1.50**	**65**	P	**Pn**	**08 53 55.7**	**-0.5**
	baz=248,SNR=57						
N25K				S	**Sn**	**08 54 15.1**	**+0.3**
	baz=248						
RAGM	**Ragged Mountai**	**1.50**	**114**		**Pn**	**08 53 54.4**	**-1.7**
WAT6	**Susitna Watana**	**1.58**	**355**	P	**Pn**	**08 53 56.7**	**-0.7**
	baz=175,SNR=41						
WAT6				S	**Sn**	**08 54 16.4**	**-0.5**
	baz=175						
SUA	**Susitna One**	**1.66**	**287**	Pn	**Pn**	**08 53 58.7**	**+0.3**
SUA				IAML		08 54 21.1	
	comp=E,434nm,0.8s						
SUA	**Susitna One**	**1.66**	**287**	P	**Pn**	**08 53 58.7**	**+0.3**
	baz=104,SNR=94						
SUA				Sb	**Sb**	**08 54 21.0**	**-0.4**
	baz=104						
Q23K	**Middleton Isla**	**1.68**	**161**		**Pb**	**08 54 00.7**	**-0.5**
Q23K				IAML		08 54 27.5	
	comp=E,524nm,0.5s						
Q23K				IAML		08 54 31.9	
	comp=N,504nm,1.1s						
Q23K	**Middleton Isla**	**1.68**	**161**	P	**Pn**	**08 53 58.2**	**-0.4**
	baz=341						
MID	**Middleton Isla**	**1.69**	**160**		**Pb**	**08 54 01.3**	**+0.1**
MID				IAML		08 54 27.6	
	comp=E,501nm,0.5s						
MID				IAML		08 54 31.8	
	comp=N,488nm,0.9s						
HMT	**Hamilton**	**1.71**	**112**		**Pn**	**08 53 58.8**	**-0.2**
HARP	**HAARP**	**1.76**	**37**	P	**Pn**	**08 54 00.8**	**+1.0**
	baz=219,SNR=32						
HARP				Sb	**Sb**	**08 54 24.3**	**0.0**
	baz=219						
GLB	**Gilahina Butte**	**1.81**	**75**		**Pn**	**08 54 00.6**	**+0.2**
GLB				IAML		08 54 24.8	
	comp=E,462nm,0.6s						
GLB				IAML		08 54 26.3	
	comp=N,507nm,0.5s						
CAPN	**Captain Cook N**	**1.83**	**264**	Pn	**Pn**	**08 54 01.8**	**+1.1**
CAPN	**Captain Cook N**	**1.83**	**264**	P	**Pn**	**08 54 02.2**	**+1.6**
	baz=81						
KAIM	**Kayak Island**	**1.85**	**125**		**Pn**	**08 54 02.5**	**+1.5**
KAIM				IAML		08 54 43.3	
	comp=E,431nm,0.6s						
KAIM				IAML		08 54 43.6	
	comp=N,404nm,0.6s						
KAIM	**Kayak Island**	**1.85**	**125**	P	**Pn**	**08 54 00.0**	**-0.9**
	baz=307						
WAT1	**Susitna Watana**	**1.89**	**344**	P	**Pn**	**08 54 01.8**	**+0.2**
	baz=164						
CUT	**Chulitna**	**1.94**	**317**		**Pn**	**08 54 02.7**	**+0.6**
CUT	**Chulitna**	**1.94**	**317**	P	**Pn**	**08 54 02.9**	**+0.8**
	baz=135,SNR=152						
BERG	**Berg Lake**	**1.94**	**107**		**Pn**	**08 54 01.8**	**-0.4**
VRDI	**Verde Repeater**	**1.95**	**82**	Pn	**Pn**	**08 54 02.6**	**+0.1**
VRDI				IAML		08 54 29.4	
	comp=N,552nm,0.8s						
VRDI				IAML		08 54 33.7	
	comp=E,272nm,0.7s						
SUCK	**Suckling Hills**	**2.04**	**116**		**Pn**	**08 54 03.6**	**0.0**
SUCK				IAML		08 54 48.3	
	comp=E,344nm,0.8s						
DHY	**Denali Highway**	**2.07**	**1**		**Pn**	**08 54 04.7**	**+0.7**
DHY	**Denali Highway**	**2.07**	**1**	P	**Pn**	**08 54 04.1**	**0.0**
	baz=181,SNR=32						
BRSE	**Bradley Lake S**	**2.08**	**233**	P	**Pn**	**08 54 04.0**	**-0.1**
	baz=51,SNR=16						
BRSE				S	**Sn**	**08 54 28.7**	**-0.3**
	baz=51						
BRLK	**Bradley Lake**	**2.12**	**235**		**Pn**	**08 54 04.7**	**0.0**
BRLK				IAML		08 54 37.4	
	comp=N,285nm,0.6s						
BRLK				IAML		08 54 38.0	
	comp=E,283nm,0.7s						
MCARA	**McCarthy VSAT**	**2.17**	**78**		**Pn**	**08 54 05.7**	**+0.4**
MCARA	**McCarthy VSAT**	**2.17**	**78**	P	**Pn**	**08 54 05.3**	**-0.1**
	baz=262,SNR=18						
PAX	**Paxson**	**2.17**	**25**		**Pn**	**08 54 06.6**	**+1.1**
PAX	**Paxson**	**2.17**	**25**	P	**Pn**	**08 54 06.3**	**+0.8**
	baz=206,SNR=35						
SKT	**Skwentna**	**2.19**	**298**	Pn	**Pn**	**08 54 05.9**	**+0.3**
SKT	**Skwentna**	**2.19**	**298**	P	**Pn**	**08 54 05.6**	**0.0**
	baz=115,SNR=144						
SPU	**Mount Spurr**	**2.25**	**276**		**Pn**	**08 54 06.3**	**-0.1**
TGL	**Tana Glacier**	**2.27**	**95**		**Pn**	**08 54 08.0**	**+1.2**
TGL				IAML		08 54 45.8	
	comp=E,365nm,0.6s						
N20K	**Mount Spurr**	**2.32**	**277**	P	**Pn**	**08 54 07.2**	**-0.3**
	baz=93,SNR=31						
SPCR	**Spurr Chakacha**	**2.32**	**277**	P	**Pn**	**08 54 07.5**	**0.0**
	baz=93,SNR=17						
WAX	**Waxell Ridge**	**2.33**	**102**	Pn	**Pn**	**08 54 07.1**	**-0.4**
CNPM	**China Poot**	**2.41**	**233**		**Pn**	**08 54 08.7**	**0.0**
CNPM				IAML		08 54 44.0	
	comp=E,170nm,0.8s						
CNPM				IAML		08 54 45.0	
	comp=N,234nm,0.4s						
SNH	**Sunshine Point**	**2.42**	**108**		**Pn**	**08 54 09.7**	**+0.9**
SNH				IAML		08 54 46.6	
	comp=N,284nm,0.3s						
SNH				IAML		08 54 47.7	
	comp=E,290nm,0.4s						
RND	**Reindeer**	**2.49**	**345**	Pn	**Pn**	**08 54 11.3**	**+1.5**
HOM	**Homer**	**2.49**	**239**	Pn	**Pn**	**08 54 10.1**	**+0.3**
HOM	**Homer**	**2.49**	**239**	P	**Pn**	**08 54 10.1**	**+0.3**
	baz=55						
M26K	**Nabesna, AK**	**2.53**	**55**		**Pn**	**08 54 11.2**	**+0.8**
M26K				IAML		08 54 48.6	
	comp=N,150nm,0.6s						
M26K	**Nabesna, AK**	**2.53**	**55**	P	**Pn**	**08 54 11.2**	**+0.8**
	baz=239,SNR=45						
ISLE	**Juniper Island**	**2.54**	**97**		**Pn**	**08 54 11.3**	**+0.9**
ISLE				IAML		08 54 58.3	
	comp=E,242nm,0.9s						
ISLE				IAML		08 55 00.1	
	comp=N,251nm,0.6s						
MENT	**Mentasta**	**2.61**	**41**		**Pn**	**08 54 12.9**	**+1.5**
MENT				IAML		08 54 56.4	
	comp=E,219nm,0.7s						
MENT				IAML		08 54 57.2	
	comp=N,206nm,0.8s						
RSO	**Redoubt South**	**2.67**	**260**		**Pn**	**08 54 12.3**	**-0.1**
O20K	**Slope Mountain**	**2.73**	**252**	P	**Pn**	**08 54 12.6**	**-0.4**
	baz=68						
TRF	**Thorofare Moun**	**2.78**	**333**		**Pn**	**08 54 14.9**	**+1.0**
TRF				IAML		08 54 56.9	
	comp=N,141nm,0.8s						
TRF				IAML		08 54 59.4	
	comp=E,161nm,0.8s						
TRF	**Thorofare Moun**	**2.78**	**333**	P	**Pn**	**08 54 14.9**	**+1.0**
	baz=150,SNR=19						
L26K	**Log Cabin Wild**	**2.79**	**42**		**Pn**	**08 54 15.4**	**+1.5**
L26K				IAML		08 55 01.2	
	comp=E,145nm,0.5s						
L26K	**Log Cabin Wild**	**2.79**	**42**	P	**Pn**	**08 54 15.1**	**+1.2**
	baz=226						
BARN	**Barnard Glacie**	**2.81**	**87**		**Pn**	**08 54 15.7**	**+1.3**
BARN				IAML		08 55 00.0	
	comp=N,141nm,0.8s						
BARN				IAML		08 55 04.0	
	comp=E,165nm,0.9s						
MCK	**McKinley**	**2.81**	**346**	Pn	**Pn**	**08 54 15.5**	**+1.3**
MCK				IAML		08 54 57.4	
	comp=N,129nm,0.7s						
MCK				IAML		08 55 04.4	
	comp=E,109nm,0.7s						
MCK	**McKinley**	**2.81**	**346**	P	**Pn**	**08 54 15.5**	**+1.3**
	baz=165,SNR=28						
MESA	**MESA**	**2.84**	**105**	Pn	**Pn**	**08 54 15.2**	**+0.5**
MESA	**MESA**	**2.84**	**105**	P	**Pn**	**08 54 14.4**	**-0.3**
	baz=290						
M20K	**Styx River**	**2.87**	**290**		**Pn**	**08 54 14.7**	**-0.2**
M20K				IAML		08 54 58.6

K24K	Donnelly Dome	2.90	15	P	Pn	08 54 16.8 +1.4
	baz=196					
PPLA	Purkeypile	2.93	312	Pn	Pn	08 54 16.4 +0.5
PPLA	Purkeypile	2.93	312	P	Pn	08 54 16.2 +0.3
	baz=128,SNR=12					
CTG	Chitna Glacier	2.97	88	P	Pn	08 54 16.7 +0.2
	baz=274					
M27K	Edge Creek, AK	2.97	61		Pn	08 54 17.3 +0.8
M27K	Edge Creek, AK	2.97	61	P	Pn	08 54 17.5 +1.0
	baz=246,SNR=12					
CTGM	Chitina Glacie	2.98	88		Pn	08 54 17.8 +1.2
CTGM				IAML		08 55 12.0
	comp=N,104nm,0.7s					
RIDG	Independent Ri	2.99	23		Pn	08 54 18.6 +2.0
RIDG				IAML		08 55 04.9
	comp=E,110nm,1.1s					
RIDG	Independent Ri	2.99	23	P	Pn	08 54 16.3 -0.3
	baz=205					
KTH	Kantishna Hill	3.02	329	Pn	Pn	08 54 18.1 +1.0
KTH				IAML		08 55 03.1
	comp=E,184nm,0.6s					
KTH				IAML		08 55 09.8
	comp=N,168nm,0.9s					
DOT	Dot Lake	3.08	29		Pn	08 54 20.8 +3.0
TABL	Table Mountain	3.15	98		Pn	08 54 21.9 +2.9
TABL				IAML		08 55 04.7
	comp=N,147nm,0.3s					
TABL				IAML		08 55 14.9
	comp=E,128nm,0.6s					
LOGN	Logan Glacier	3.15	91		Pn	08 54 20.4 +1.5
LOGN				IAML		08 55 08.3
	comp=N,86nm,0.6s					
LOGN				IAML		08 55 10.1
	comp=E,96nm,0.6s					
P19K	Oil Pt	3.19	247	Pn	Pn	08 54 19.2 -0.2
P19K				IAML		08 55 09.6
	comp=N,160nm,0.7s					
P19K	Oil Pt	3.19	247	P	Pn	08 54 18.8 -0.6
	baz=62					
CAST	Castle Rocks	3.25	320	Pn	Pn	08 54 20.7 +0.6
CAST				IAML		08 55 19.8
	comp=E,89nm,0.7s					
CAST	Castle Rocks	3.25	320	P	Pn	08 54 20.6 +0.5
	baz=136,SNR=22					
L27K	Beaver Creek,	3.35	50		Pn	08 54 22.2 +0.6
L27K	Beaver Creek,	3.35	50	P	Pn	08 54 22.0 +0.5
	baz=235					
BCAR	Beaver Creek A	3.37	50	Pn	Pn	08 54 22.6 +0.8
SCRK	Sand Creek	3.38	27		Pb	08 54 28.4 -1.8
L20K	Farewell, AK	3.40	298	P	Pn	08 54 21.6 -0.5
	baz=113,SNR=18					
HDA	Harding Lake	3.41	4		Pn	08 54 23.6 +1.2
HDA				IAML		08 55 22.9
	comp=E,72nm,0.7s					
HDA				IAML		08 55 23.1
	comp=N,76nm,0.6s					
HDA	Harding Lake	3.41	4	P	Pn	08 54 22.8 +0.3
	baz=184					
BVCY	Beaver Creek	3.43	63	P	Pn	08 54 23.5 +0.8
	baz=249					
N19K	Bonanza Creek	3.44	270	Pn	Pn	08 54 23.0 +0.1
N19K				IAML		08 55 17.6
	comp=N,75nm,0.8s					
N19K	Bonanza Creek	3.44	270	P	Pn	08 54 22.1 -0.8
	baz=84,SNR=6.6					
YUK3	Moose Creek	3.44	74	P	Pn	08 54 23.3 +0.3
	baz=260					
M19K	Big River Lodg	3.45	288		Pn	08 54 22.4 -0.5
M19K				IAML		08 55 17.3
	comp=N,81nm,0.7s					
M19K				IAML		08 55 21.6
	comp=E,88nm,0.7s					
M19K	Big River Lodg	3.45	288	P	Pn	08 54 22.4 -0.5
	baz=102,SNR=9.7					
Q20K	Shuyak Island	3.48	228	P	Pn	08 54 23.4 +0.2
	baz=44					
WRH	Wood River Hil	3.48	355		Pn	08 54 24.1 +0.7
BPAW	Bear Paw Mtn.	3.50	334	Pn	Pn	08 54 24.7 +1.0
BPAW				IAML		08 55 24.3
	comp=N,75nm,0.8s					
BPAW				IAML		08 55 27.3
	comp=E,68nm,0.5s					
BPAW	Bear Paw Mtn.	3.50	334	P	Pn	08 54 23.3 -0.3
	baz=151,SNR=5.6					
O28M	Mount Upton	3.55	91	P	Pn	08 54 25.0 +0.4
	baz=277,SNR=6.9					
CCB	Clear Creek Bu	3.65	358		Pn	08 54 26.2 +0.6
CHUM	Lake Minchumin	3.66	324	P	Pn	08 54 26.5 +0.8
	baz=140,SNR=6.1					
PCA	Pinnacle	3.67	101		Pn	08 54 25.6 -0.4
NEA2	Nenana	3.67	349		Pn	08 54 26.7 +0.8
NEA2				IAML		08 55 24.3
	comp=N,56nm,1.4s					
NEA2	Nenana	3.67	349	P	Pn	08 54 25.7 -0.1
	baz=168					
PINM	Pinnacle	3.67	101	P	Pn	08 54 25.6 -0.4
	baz=288					
L19K	White Mountain	3.73	292	Pn	Pn	08 54 26.5 -0.3
L19K				IAML		08 55 35.4
	comp=N,64nm,0.8s					
L19K				IAML		08 55 38.9
	comp=E,61nm,0.9s					
L19K	White Mountain	3.73	292	P	Pn	08 54 26.5 -0.3
	baz=105,SNR=40					
YUK8	Steele Glacier	3.73	83	P	Pn	08 54 26.6 -0.4
	baz=269					
J25K	Salcha River,	3.73	14		Pn	08 54 27.1 +0.3
J25K				IAML		08 55 27.1
	comp=E,55nm,0.6s					
J25K	Salcha River,	3.73	14	P	Pn	08 54 27.0 +0.1
	baz=196					
Q19K	Cape Douglas,	3.75	239		Pn	08 54 26.9 -0.2
Q19K	Cape Douglas,	3.75	239	P	Pn	08 54 27.0 -0.2
	baz=54					
IL31		3.78	4		Pn	08 54 27.9 +0.5
ILAR	Eielson Array	3.78	4	Pn	Pn	08 54 27.6 +0.1
	comp=E,1.1nm,0.3s,baz=185,slow=14,SNR=26					
ILAR				Sn	Sn	08 55 12.8 +1.9
	comp=E,2.5nm,0.3s,baz=192,slow=21,SNR=5.6					
	comp=E,2.6nm,0.3s					
ILAR	Eielson Array	3.78	4		Pn	08 54 27.8 +0.4
COLA	College	3.88	357		Pn	08 54 29.4 +0.7
COLA	College	3.88	357	P	Pn	08 54 29.4 +0.7
	baz=177					
TCOL	CIGO, UAF Yank	3.88	357		Pn	08 54 29.4 +0.6
TCOL	CIGO, UAF Yank	3.88	357	P	Pn	08 54 29.3 +0.6
	baz=177					
K20K	Telida	3.89	310		Pn	08 54 28.8 -0.3
K20K				IAML		08 55 34.6
	comp=E,79nm,0.7s					
K20K				IAML		08 55 38.4
	comp=N,45nm,0.8s					
K20K	Telida	3.89	310	P	Pn	08 54 28.7 -0.3
	baz=124,SNR=8.7					
K27K	Chicken	3.92	37	Pn	Pn	08 54 30.3 +1.0
K27K	Chicken	3.92	37	P	Pn	08 54 29.9 +0.7
	baz=222					
J26L	Joseph Creek	3.93	25		Pn	08 54 30.5 +0.9
J26L	Joseph Creek	3.93	25	P	Pn	08 54 30.3 +0.7
	baz=209					
SVW2	Sparrevohn	3.96	275		Pn	08 54 28.8 -1.0
SVW2				IAML		08 55 37.8
	comp=E,48nm,0.7s					
MDM	Murphy Dome	3.98	355		Pn	08 54 30.7 +0.6
BCPM	Bancas Point	4.01	102	Pn	Pn	08 54 31.1 +0.5
O18K	Koktuh Hills	4.02	257		Pn	08 54 30.7 -0.1
O18K				IAML		08 55 38.8
	comp=N,52nm,1.1s					
O18K	Koktuh Hills	4.02	257	P	Pn	08 54 29.4 -1.4
	baz=70					
POKR	Poker Plat Res	4.12	0	Pn	Pn	08 54 32.4 +0.3
POKR				IAML		08 55 49.8
	comp=E,38nm,0.8s					
POKR	Poker Plat Res	4.12	0	P	Pn	08 54 32.2 +0.1
	baz=180					
N18K	Kilae Creek	4.15	269	Pn	Pn	08 54 31.6 -0.8
N18K				IAML		08 55 40.5
	comp=N,45nm,0.8s					
N18K	Kilae Creek	4.15	269	P	Pn	08 54 31.0 -1.5
	baz=82					
KDAK	Kodiak Island	4.17	221	Pn	Pn	08 54 31.7 -1.1
KDAK				IAML		08 56 09.4
	comp=N,59nm,4.0s					
KDAK				IAML		08 56 58.5
	comp=N,62nm,3.4s					
KDAK	Kodiak Island	4.17	221	P	Pn	08 54 32.1 -0.7
	baz=37					
P18K	Big Mountain,	4.21	251	Pn	Pn	08 54 32.5 -0.9
P18K	Big Mountain,	4.21	251	P	Pn	08 54 32.2 -1.2
	baz=64					
PNL	Peninsula	4.22	105	P	Pn	08 54 33.4 -0.1
	baz=292					
I23K	Minto, Yukon-K	4.24	349		Pn	08 54 33.7 0.0
I23K				IAML		08 55 41.8
	comp=N,39nm,1.0s					
I23K	Minto, Yukon-K	4.24	349	P	Pn	08 54 34.2 +0.6
	baz=167,SNR=8.4					
MLY	Manley	4.30	341	Pn	Pn	08 54 35.6 +1.0
MLY				IAML		08 55 32.5
	comp=N,33nm,0.4s					
MLY	Manley	4.30	341	P	Pn	08 54 35.1 +0.5
	baz=158					
O29M	Mount Kennedy	4.42	95	P	Pn	08 54 37.1 +0.7
	baz=283					
YUK6	Outpost Mounta	4.42	87	P	Pn	08 54 37.3 +0.8
	baz=275					
J20K	Nowinta River	4.43	319	Pn	Pn	08 54 36.5 +0.1
J20K				IAML		08 55 53.3
	comp=N,73nm,0.7s					
J20K				IAML		08 55 58.6
	comp=E,62nm,1.1s					
J20K	Nowinta River	4.43	319	P	Pn	08 54 36.5 +0.1
	baz=133,SNR=15					
TTA	Tatalina	4.48	299	P	Pn	08 54 36.1 -0.9
	baz=112					
M29M	Somme Creek	4.50	68	P	Pn	08 54 37.9 +0.4
	baz=255					
PRP	Porcupine Dome	4.60	10		Pn	08 54 39.1 +0.3
PRP				IAML		08 55 51.6
	comp=E,28nm,0.6s					
PRP				IAML		08 55 59.5
	comp=N,38nm,0.8s					
PRP	Porcupine Dome	4.60	10	P	Pn	08 54 37.7 -1.1
	baz=192					
I21K	Tanana	4.66	336	Pn	Pn	08 54 40.3 +0.8
I21K				IAML		08 56 01.5
	comp=E,30nm,0.8s					
I21K				IAML		08 56 13.8
	comp=N,30nm,1.0s					
I21K	Tanana	4.66	336	P	Pn	08 54 39.2 -0.3
	baz=152					
I26K	Coal Creek Min	4.72	22		Pn	08 54 41.3 +0.9
I26K				IAML		08 56 03.7
	comp=E,32nm,0.9s					
I26K				IAML		08 56 06.8
	comp=N,27nm,1.1s					
I26K	Coal Creek Min	4.72	22	P	Pn	08 54 41.0 +0.6
	baz=206					
EGAK	Eagle	4.74	35	Pn	Pn	08 54 42.2 +1.6
EGAK				IAML		08 56 06.8
	comp=N,26nm,1.0s					
EGAK				IAML		08 56 08.3
	comp=N,32nm,0.8s					
EGAK	Eagle	4.74	35	P	Pn	08 54 40.7 0.0
	baz=220					
DAWY	Dawson	4.82	47		Pn	08 54 42.7 +0.9
DAWY	Dawson	4.82	47	P	Pn	08 54 42.6 +0.8
	baz=234					
H24K	Noodor Dome	4.84	358		Pn	08 54 42.6 +0.6
H24K				IAML		08 56 08.6
	comp=E,28nm,1.0s					
H24K	Noodor Dome	4.84	358	P	Pn	08 54 42.2 +0.1
	baz=178					
OHAK	Old Harbor	4.85	221	Pn	Pn	08 54 41.2 -0.9
OHAK				IAML		08 57 17.2
	comp=E,53nm,3.3s					
OHAK	Old Harbor	4.85	221	P	Pn	08 54 40.9 -1.2
	baz=36					
HYT	Haines Junctio	4.86	88	Pn	Pn	08 54 43.0 +0.7
HYT				IAML		08 56 05.5
	comp=E,27nm,2.7s					
HYT				IAML		08 56 09.2
	comp=N,23nm,3.0s					
HYT	Haines Junctio	4.86	88	P	Pn	08 54 42.6 +0.3
	baz=276					
L29M	L29M	4.86	60	P	Pn	08 54 43.1 +0.8
	baz=248					
P17K	Kvichak River	4.86	252	P	Pn	08 54 41.4 -0.8
	baz=64					
H23K	Yukon River	4.92	350		Pn	08 54 44.4 +1.3
H23K	Yukon River	4.92	350	P	Pn	08 54 44.0 +0.9
	baz=168					
P29M	Windy Craggy	5.02	102		Pn	08 54 45.7 +1.2
P29M	Windy Craggy	5.02	102	P	Pn	08 54 45.2 +0.7
	baz=290					
N30M	Aishikik Lake	5.02	80	P	Pn	08 54 43.8 -0.8
	baz=269					
H22K	Ishtalitna Cre	5.20	342	P	Pn	08 54 47.2 +0.2
	baz=158					
H21K	Melozitna Rive	5.25	335		Pn	08 54 48.0 +0.4
H21K				IAML		08 56 14.2
	comp=E,19nm,0.9s					
H21K				IAML		08 56 18.8
	comp=N,17nm,3.1s					
H21K	Melozitna Rive	5.25	335	P	Pn	08 54 47.5 0.0
	baz=150,SNR=8.7					
P30M	Million Dollar	5.25	95	P	Pn	08 54 48.4 +0.7
	baz=284					
I27K	Kandik River	5.30	27	P	Pn	08 54 49.0 +0.7
	baz=212					
K29M	Barlow Dome	5.41	54	P	Pn	08 54 49.7 -0.2
	baz=243					
O30N	Mendenhall	5.55	88	P	Pn	08 54 51.4 -0.4
	baz=277					
N16K	Nishlik Lake	5.58	269	P	Pn	08 54 51.0 -1.2
	baz=80					
N31M	Braeburn, Yuko	5.65	80	Pn	Pn	08 54 53.7 +0.5
SII	Sitkinak Islan	5.68	221	P	Pn	08 54 52.5 -1.0
	baz=35					
G24K	Hadweenzic Riv	5.71	360	P	Pn	08 54 54.1 +0.2
	baz=180					
GCSA	Galena City Sc	5.71	315	P	Pn	08 54 54.0 +0.1
	baz=127					
IMAR	Indian Mountai	5.73	333	Pn	Pn	08 54 54.5 +0.3
PLBC	Pleasant Camp	5.74	101	P	Pn	08 54 54.3 0.0
	baz=290					
G23K	Bananza Creek	5.83	350	P	Pn	08 54 56.0 +0.4
	baz=168,SNR=7.1					
I29M	Ogilvie Camp,	6.00	40	Pn	Pn	08 54 59.7 +1.7
G21K	Allakaket	6.14	337	P	Pn	08 54 59.8 0.0
	baz=151					
WHY	Whitehorse	6.15	88	Pn	Pn	08 55 00.2 0.0
WHY	Whitehorse	6.15	88	P	Pn	08 54 59.6 -0.5
	baz=279					
G22K	Bettles	6.19	345	P	Pn	08 55 00.1 -0.4
	baz=161					
SKAG	Skagway	6.23	99	P	Pn	08 55 01.2 +0.1
	baz=290					
M31M	Drury Creek, Y	6.34	73	Pn	Pn	08 55 02.1 -0.5
BMAR	Burnt Mountain	6.56	10	Pn	Pn	08 55 06.4 +0.8
FARO	Faro, Yukon	6.83	74	P	Pn	08 55 09.2 -0.1
	baz=266					
R32K	Eaglecrest	7.10	107	P	Pn	08 55 11.9 -1.1
	baz=298					
E24K	Your Creek	7.10	357	P	Pn	08 55 13.5 +0.4
	baz=176					
JIS	Juneau Island	7.16	107	Pn	Pn	08 55 13.8 0.0
P33M	Teslin, Yukon	7.24	90	Pn	Pn	08 55 15.5 +0.5
P33M	Teslin, Yukon	7.24	90	P	Pn	08 55 14.5 -0.6
	baz=283					
MMPY	Sheldon Lake,	7.83	71	P	Pn	08 55 22.5 -0.5
	baz=265					
Q32M	Nakina River	7.88	98	P	Pn	08 55 23.4 -0.5
	baz=292					
R33M	Jennings River	8.36	94	P	Pn	08 55 29.9 -0.6
	baz=288					
C24K	Franklin Bluff	8.76	357	P	Pn	08 55 33.9 -1.7
	baz=176					
S34M	Telegraph Cree	8.86	103	P	Pn	08 55 35.6 -1.5
	baz=297					
YKA	Yellowknife Ar	15.52	70	Pn	P	08 57 11.7 -0.1
	comp=N,0.2nm,0.3s,baz=275,slow=9.7,SNR=4.4					
	comp=N,1.4nm,0.9s					
NVAR	Mina Array Bea	28.99	128	P	P	08 59 29.5 +1.1
	comp=N,0.3nm,0.5s,baz=312,slow=8.4,SNR=2.8					
	comp=N,0.3nm,0.5s					
PDAR	Pinedale Array	29.08	111	P	P	08 59 30.3 +1.1
	comp=N,0.2nm,0.6s,baz=324,slow=4.5,SNR=1.9					
	comp=N,0.2nm,0.6s					

JMA ***18*** *09:04:39.2±0.4,23°N±1°×12°1E±°, h0km, MV3.6/9, TAIWAN REGION*

TAP ***18*** *09:04:40.8,22°71N×120°69E, h25km, ML3.6, B*
ISC 18 09:04:41.6±0.9,22°70N±0°02×120°67E±0°02, h25km±4km, n72, σ1.9 23/133, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSMG	Majia	0.02	284	*i* P	Pb	09 04 45.4	-0.6
TSMG	baz=269			*i* S	Sb	09 04 48.6	-0.3
SSD	Sandimen	0.06	325	*i* P	Pb	09 04 45.6	-0.5
SSD	baz=311			*i* S	Sb	09 04 48.9	-0.2
MASBT	Mashibuluo	0.09	200	P	Pb	09 04 45.7	-0.6
MASBT	baz=208			S	Sb	09 04 49.5	0.0
TSPT	Pingtung City	0.16	262	P	Pb	09 04 47.2	+0.4
TSPT	baz=261			*e*S	Sb	09 04 52.9	+2.5
SCST	Cishan	0.24	319	P	Pb	09 04 48.2	+0.3
SCST	baz=321			*i* S	Sb	09 04 54.2	+2.0
TWM1	Shoushan	0.26	299	*i* P	Pb	09 04 48.8	+0.7
TWM1	baz=296			*e*S	Sn	09 04 56.8	+1.8
ECL	Taimali	0.28	111	*i* P	Pb	09 04 48.0	-0.5
ECL	baz=113			S	Sb	09 04 53.3	+0.2
SCZT	Fangliau	0.33	188	*i* P	Pb	09 04 48.7	-0.4
SCZT	baz=194			*i* S	Sb	09 04 54.5	+0.2
EAST	Anshuo	0.36	152	*i* P	Pb	09 04 49.2	-0.4
EAST	baz=147			*i* S	Sb	09 04 55.1	+0.1
KAU	Kaohsiung	0.36	248	P	Pn	09 04 51.0	-0.2
KAU	baz=248			*e*S	Sn	09 04 59.6	+2.2
WSSB	Gushan	0.38	261	*i* P	Pn	09 04 51.0	-0.6
WSSB	baz=270			S	Sn	09 04 59.7	+1.7
SGST	Jiashian	0.39	349	P	Pb	09 04 50.1	+0.1
SGST	baz=347			*e*S	Sb	09 04 56.6	+0.8
TWG	Pinlang	0.39	72	*i* P	Pb	09 04 49.9	-0.2
TWG	baz=73			*e*S	Sb	09 04 56.2	+0.3
WLCH	Liuqiu	0.44	218	P	Pn	09 04 52.9	+0.6
WLCH	baz=219			*e*S	Sn	09 05 02.8	+3.4
TWP	Hsiaoliuchiu	0.45	219	P	Pn	09 04 52.9	+0.5
TWP	baz=219			*e*S	Sn	09 05 02.9	+3.2
CHN3	Shinhua	0.47	323	P	Pn	09 04 52.7	0.0
CHN3	baz=321			S	Sn	09 05 02.0	+1.9
STYT	Tauyuan	0.47	10	*i* P	Pb	09 04 51.2	-0.2
LONT	baz=15 Longtian	0.47	64	*i* P	Pb	09 04 51.1	-0.3
STYH	baz=64 Taoyuan	0.48	12	*e*P	Pb	09 04 50.8	-0.7
STYH	baz=16			S	Sb	09 04 59.1	+0.9
SLIU	baz=16 Shizi	0.50	166	P	Pb	09 04 51.4	-0.5
CHN1	baz=162 Nanshi	0.50	345	*i* P	Pb	09 04 52.3	+0.4
WTP	baz=343 Ta-pu	0.55	355	P	Pb	09 04 53.1	+0.5
ELDTW	baz=354 Lidau	0.58	33	P	Pb	09 04 53.3	-0.1
TWK	baz=33 Hsinying	0.59	344	*i* P	Pb	09 04 53.5	+0.1
TWK	baz=343			*e*S	Sb	09 05 01.5	+0.2
TPUB	Ta-pu	0.60	357	*e*P	Pb	09 04 54.1	+0.5
TPUB	baz=355			S	Sn	09 05 03.1	-0.4
ECS	Chishang	0.64	52	*i* P	Pb	09 04 54.3	0.0
ECS	baz=56			*e*S	Sn	09 05 05.2	+0.7
SCLT	Jiali	0.64	317	P	Pn	09 04 54.9	-0.3
EDH	baz=316 Donghe	0.65	65	P	Pb	09 04 53.8	-0.5
EDH	baz=65			*i* S	Sb	09 05 03.3	+0.3
HEN	Hengchun	0.69	175	P	Pn	09 04 55.7	-0.1
HEN	baz=176			S	Sn	09 05 06.5	+0.7
SMST	Manzhou Townsh	0.69	167	P	Pb	09 04 55.0	-0.2
SMST	baz=169			S	Sn	09 05 05.5	-0.3
WCKO	Fanlu	0.74	356	*e*P	Pb	09 04 54.4	-1.4
WCKO	baz=346			*e*S	Sb	09 05 06.1	+0.5
LDUT	Ludao	0.74	92	P	Pb	09 04 55.0	-0.9
LDUT	baz=92			S	Sb	09 05 05.6	-0.1
SNW	Nanwan	0.74	174	*e*P	Pb	09 04 54.9	-1.0
SNW	baz=176			S	Sn	09 05 08.0	+1.1
FULB	Fuli	0.76	49	*e*P	Pb	09 04 55.3	-1.0
ALS	baz=41 Alishan	0.82	9	P	Pb	09 04 57.2	-0.2
ALS	baz=8.0			*e*S	Sb	09 05 07.6	-0.5
CHY	Chiayi	0.82	344	P	Pn	09 04 57.5	-0.1
YUS	baz=343 Yu-Shan	0.83	18	*i* P	Pb	09 04 57.5	-0.3
YUS	baz=18			*e*S	Sb	09 05 07.5	-1.2
CHN2	baz=18 Minshiung	0.85	348	*e*P	Pn	09 04 57.6	-0.4
CHN2	baz=347			*e*S	Sb	09 05 08.7	0.0
TWF1	baz=347 Yuli	0.87	42	*i* P	Pn	09 04 57.8	-0.5
TWF1	baz=42			*e*S	Sn	09 05 09.9	-0.2
EYUL	baz=42 Yuli	0.88	43	P	Pn	09 04 57.9	-0.5
EYUL	baz=42			*e*S	Sb	09 05 08.6	-1.0
YULB	baz=42 Yu-li	0.90	40	P	Pn	09 04 58.0	-0.7
YULB	baz=39			*i* S	Sb	09 05 10.1	-0.2
ECBN	baz=39 Changbin	0.95	50	P	Pn	09 04 58.5	-0.8
ECBN	baz=63			S	Sn	09 05 12.1	+0.1
WHYT	baz=63 Xinyi Township	1.01	10	P	Pn	09 04 59.6	-0.6
WHYT	baz=354			*e*S	Sb	09 05 13.9	+0.6
LAY	baz=354 Lan-yu	1.05	129	P	Pn	09 04 60.0	-0.8
LAY	baz=129			S	Sn	09 05 14.1	-0.5
HGSD	Ruisui	1.05	41	P	Pb	09 05 01.2	0.0
HGSD	baz=34			S	Sb	09 05 16.6	+2.0
LYUB	Lan-yu	1.10	129	*e*P	Pn	09 04 59.0	-2.4

	baz=130								
LYUB					*e*S		**Sn**	**09 05 13.1**	**-2.7**
	baz=130								
SSLB	**Suanglung**	**1.11**	**14**		P		**Pn**	**09 05 01.3**	**-0.4**
	baz=13								
SSLB					S		**Sb**	**09 05 17.0**	**+0.6**
	baz=13								
VWDT	**VWDT**	**1.14**	**22**		*i* P		**Pn**	**09 05 02.2**	**+0.3**
	baz=22								
VWDT					*e*S		**Sb**	**09 05 19.8**	**+2.8**
	baz=22								
EGFH	**Guangfu**	**1.19**	**36**		*i* P		**Pn**	**09 05 02.8**	**+0.1**
	baz=35								
EGFH					S		**Sb**	**09 05 18.6**	**0.0**
	baz=35								
SMLT	**Sun Moon Lake**	**1.20**	**10**		P		**Pn**	**09 05 02.6**	**-0.3**
	baz=353								
SMLT					*e*S		**Sb**	**09 05 22.0**	**+3.1**
	baz=353								
TYC	**Yuchr**	**1.21**	**8**		P		**Pn**	**09 05 02.5**	**-0.4**
	baz=353								
TYC					*e*S		**Sb**	**09 05 19.9**	**+0.8**
	baz=353								
VCHM	**Qimei**	**1.25**	**294**		*e*P		**Pn**	**09 05 01.7**	**-1.8**
	baz=294								
VCHM					*e*S		**Sn**	**09 05 18.4**	**-1.1**
	baz=294								
TEGC	**Jichi Village**	**1.29**	**38**		P		**Pb**	**09 05 05.0**	**-0.1**
	baz=38								
TEGC					*e*S		**Sb**	**09 05 25.2**	**+3.9**
	baz=38								
PHUB	**P'eng-hu**	**1.29**	**309**		*e*P		**Pn**	**09 05 02.1**	**-2.0**
	baz=308								
PHUB					*e*S		**Sn**	**09 05 17.9**	**-2.7**
	baz=308								
ESL	**Shilin**	**1.31**	**32**		P		**Pn**	**09 05 04.8**	**+0.4**
	baz=44								
ESL					*i* S		**Sb**	**09 05 22.8**	**+0.7**
	baz=44								
PNG	**Penghu**	**1.34**	**310**		P		**Pn**	**09 05 02.8**	**-1.9**
	baz=310								
PNG					*e*S		**Sn**	**09 05 19.3**	**-2.4**
	baz=310								
WUSB	**Renai**	**1.35**	**18**		P		**Pn**	**09 05 04.9**	**-0.1**
	baz=17								
WUSB					*e*S		**Sn**	**09 05 22.0**	**-0.2**
	baz=17								
CHGB	**Renai**	**1.43**	**19**		P		**Pn**	**09 05 05.9**	**-0.3**
	baz=3.0								
CHGB					*e*S		**Sn**	**09 05 24.9**	**+0.6**
	baz=3.0								
ETLH	**Xiulin Townshi**	**1.68**	**26**		*e*P		**Pn**	**09 05 09.4**	**0.0**
	baz=13								
ETLH					S		**Sb**	**09 05 32.8**	**+0.2**
	baz=13								
NACB	**Ninganchiao**	**1.70**	**30**		P		**Pn**	**09 05 10.1**	**+0.4**
	baz=29								
NACB					S		**Sn**	**09 05 30.9**	**+0.4**
	baz=29								
VWUC	**VWUC**	**2.54**	**334**		*e*P		**Pn**	**09 05 18.7**	**-2.5**
	baz=333								
VWUC					*e*S		**Sn**	**09 05 48.9**	**-2.5**
	baz=333								
JYNG	**Yonagunijimaku**	**2.72**	**50**		P		**Pn**	**09 05 24.8**	**+1.1**
JYNG					S		**Sn**	**09 05 58.0**	**+2.2**
KNMB	**Chin-men Tao**	**2.73**	**310**		*e*P		**Pn**	**09 05 22.8**	**-1.0**
	baz=311								
KNMB					*e*S		**Sn**	**09 05 53.3**	**-2.7**
	baz=311								
YOJ	**Yonaguni jima**	**2.77**	**50**		P		**Pn**	**09 05 25.2**	**+0.7**
	baz=63								
YOJ					S		**Sn**	**09 05 58.9**	**+1.8**
	baz=63								
YOJ	**Yonaguni jima**	**2.77**	**50**		*e*P		**Pn**	**09 05 25.7**	**+1.2**
YOJ					*e*S		**Sn**	**09 05 59.6**	**+2.4**
HATJ	**Hateruma jima**	**3.18**	**64**		P		**Pn**	**09 05 30.5**	**+0.4**
HATJ					*e*S		**Sn**	**09 06 07.7**	**+0.4**
IRIF	**Iriomote-Funau**	**3.25**	**59**		P		**Pn**	**09 05 31.9**	**+0.9**
IRIF					*e*S		**Sn**	**09 06 10.4**	**+1.6**
AXDP	**Jialang**	**3.30**	**312**		*e*P		**Pn**	**09 05 30.9**	**-0.8**
	baz=313								
AXDP					*e*S		**Sn**	**09 06 08.2**	**-2.0**
	baz=313								
JKRS	**Kuro-shima**	**3.43**	**63**		P		**Pn**	**09 05 34.2**	**+0.7**
JKRS					S		**Sn**	**09 06 14.2**	**+0.9**
JIJ	**Ishigaki jima**	**3.59**	**62**		P		**Pn**	**09 05 34.6**	**-1.2**
JIJ					S		**Sn**	**09 06 17.1**	**-0.3**
MHZQ	**Yeshan**	**3.70**	**337**		*e*P		**Pn**	**09 05 36.7**	**-0.5**
	baz=333								
JTJ	**Tarama**	**4.17**	**62**		*e*S		**Sn**	**09 06 32.2**	**+0.5**

JMA 18 09:18:12.9±0.1, 25°.9N±0°.7×14°.1E±°, h72km, MV4.3/17, IOTO ISLANDS REGION, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**0.99**	**42**	*e*P	Pn	09 18 31.6	+0.2
JHH2				*e*S	Sn	09 18 45.3	+0.1
CBIJ	**Chichi jima**	**1.38**	**29**	*e*P	Pn	09 18 36.7	+0.4
CBIJ				*e*S	Sn	09 18 54.6	+0.8
BSO3	**Boso 3**	**8.92**	**355**	P	Pn	09 20 18.4	-0.3
BSO4	**Boso 4**	**9.12**	**354**	*e*P	Pn	09 20 22.0	+0.4
JAG	**Ashikaga**	**10.64**	**351**	*e*P	Pn	09 20 40.8	-1.6
JHO	**Hitachi**	**10.71**	**356**	*e*P	Pn	09 20 42.1	-1.3

*JMA **18** 09:53:26.1±0.2, 34°.6N±0°.7×140°.2E±0°.7, h58km±2km, MV2.9/31, SE OFF BOSO PENINSULA*
*IDC **18** 09:53:29.0±4.0, 34°.36N×139°.61E, h82km±44km, mb3.0/2, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=69.9km s-min=33.4km az=62.0*
ISC 18 09:53:25.6±1.1, 34°.57N±0°.07×140°.18E±0°.06, h64km±9km, n15, σ0°89/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.36**	**49**	P	**Pn**	**09 53 36.7**	**+0.5**
BSO4	**Boso 4**	**0.44**	**17**	P	**Pn**	**09 53 37.7**	**+0.5**
KTR	**Katsuura**	**0.59**	**11**	P	**Pn**	**09 53 39.0**	**+0.2**
JKUC	**kamogawauchiur**	**0.59**	**1**	P	**Pn**	**09 53 38.8**	**0.0**
JIM2	**Oshima 3**	**0.64**	**284**	P	**Pn**	**09 53 39.5**	**+0.1**
JIM2				S	**Sn**	**09 53 49.0**	**-0.5**
BSO1	**Boso 1**	**0.66**	**83**	P	**Pn**	**09 53 39.4**	**+0.3**
JTHY	**Toshimahigashi**	**0.74**	**267**	P	**Pn**	**09 53 41.3**	**+0.8**
JMKN	**Mikurajimanish**	**0.83**	**216**	P	**Pn**	**09 53 42.6**	**+0.9**
KTJ3	**Kamata3**	**0.98**	**292**	P	**Pn**	**09 53 43.4**	**-0.1**
KTJ3				S	**Sn**	**09 53 55.9**	**-1.0**
JIZS	**Izushimoda**	**1.08**	**278**	P	**Pn**	**09 53 45.0**	**+0.2**
JIZS				S	**Sn**	**09 53 59.7**	**+0.5**
JOD2	**Odawara 2**	**1.13**	**308**	P	**Pn**	**09 53 45.4**	**-0.1**
JOD2				S	**Sn**	**09 53 59.7**	**-0.7**
JFNN	**Fujinakano**	**1.38**	**297**	P	**Pn**	**09 53 49.5**	**+0.7**
JFNN				*e*S	**Sn**	**09 54 06.7**	**+0.6**
MJAR	**Matsushiro Arr**	**2.54**	**321**	P	**Pn**	**09 54 05.7**	**+1.2**
	2.2nm,0.3s,baz=156,slow=13,SNR=98						
MJAR				S	**Sn**	**09 54 36.7**	**+2.4**
	4.5nm,0.4s,baz=149,slow=18,SNR=4.5 27nm,0.4s						
MKAR	**Makanchi Array**	**44.62**	**304**	P	**P**	**10 01 30.4**	**-1.0**
	0.3nm,0.6s,baz=88,slow=8.2,SNR=2.2 0.3nm,0.6s						
WRA	**Warramunga Arr**	**54.49**	**187**	P	**P**	**10 02 46.6**	**-0.1**
	0.2nm,0.6s,baz=1.9,slow=7.5,SNR=6.2 0.2nm,0.6s						

*IDC **18** 09:59:44.8±3.5, 64°.59N×32°.41E, h0km, mbtmp3.0/3, ML1.9/3, Error ellipse: s-maj=43.4km s-min=10.4km az=97.0*
*HEL **18** 09:59:49.6±0.2, 64°.77N×30°.68E, h0km, ML1.8, Explosion*
*KOLA **18** 09:59:55.6, 64°.56N×29°.13E, h0km, ML2.1*
ISC 18 09:59:50.5±0.9, 64°.75N±0°.03×30°.57E±0°.04, h0km, n26, σ2°20/39, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.32**	**348**	PG	**Pg**	**10 00 12.9**	**-2.7**
	baz=164						
KU6				MSG		10 00 29.0	
	comp=Z,3.6nm,0.2s						
KU6				SN	**Sb**	**10 00 32.2**	**-1.2**
MSF	**Maaselka**	**1.33**	**332**	PG	**Pg**	**10 00 13.5**	**-2.6**
	baz=147						
MSF				SN	**Sn**	**10 00 34.6**	**-0.3**
OLKF	**Oulanka, Finla**	**1.66**	**343**	PG	**Pn**	**10 00 19.0**	**-1.7**
JOF	**Joensuu**	**1.86**	**170**	PG	**Pn**	**10 00 23.3**	**-0.3**
JOF				SB	**Sn**	**10 00 44.4**	**-3.4**
OUL	**Oulu**	**2.02**	**282**	PB	**Pn**	**10 00 25.4**	**-0.3**
OUL				SG	**Sn**	**10 00 52.6**	**+0.9**
OBF4	**Vikkela, Lumij**	**2.34**	**274**	PB	**Pn**	**10 00 30.6**	**+0.4**
OBF4				SG	**Sb**	**10 01 03.9**	**+0.9**
OUF	**Merijarvi**	**2.55**	**264**	PN	**Pn**	**10 00 31.6**	**-1.4**
OUF				MSG		10 01 06.3	
	comp=Z,9.3nm,0.2s						
OUF				SB	**Sn**	**10 01 07.0**	**+2.2**
RNF	**Rovaniemi**	**2.66**	**317**	PB	**Pb**	**10 00 36.5**	**-2.4**
	baz=127						
RNF				SG	**Sb**	**10 01 12.3**	**+0.4**
OBF0	**Syolatti, Pyha**	**2.74**	**268**	PN	**Pn**	**10 00 36.6**	**+1.0**
	baz=79						
OBF0				SG	**Sb**	**10 01 15.2**	**+0.8**
TOF	**Tornio**	**2.94**	**300**	MSG		10 01 16.7	
	comp=Z,2.1nm,0.2s						
TOF				SG	**Sb**	**10 01 21.4**	**+1.4**
APA0	**Apatity Array**	**3.04**	**18**	P	**Pg**	**10 00 50.9**	**+2.3**
APA0				S	**Sg**	**10 01 29.6**	**+1.8**
KALU	**Kalix**	**3.23**	**293**	SG	**Sb**	**10 01 31.0**	**+2.6**
KAF	**Kangasniemi**	**3.27**	**218**	SG	**Sb**	**10 01 30.4**	**+0.9**
KEF	**Keuruu**	**3.64**	**227**	SG	**Sg**	**10 01 45.3**	**-2.0**
KLF	**Kolari**	**3.68**	**316**	PB	**Pn**	**10 00 50.9**	**+2.4**
VAF	**Ylistaro**	**3.89**	**248**	SG	**Sb**	**10 01 51.2**	**+3.8**
FIA0	**FINESS Array S**	**3.89**	**214**	PG	**Pb**	**10 00 59.1**	**-0.8**
	baz=33						
FIA0				SG	**Sb**	**10 01 50.7**	**+3.2**
FINES	**FINESS Array B**	**3.89**	**214**	Pn	**Pn**	**10 00 50.3**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=39,slow=13,SNR=1.3						
FINES				Pg	**Pb**	**10 00 58.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=41,slow=15,SNR=5.8						
FINES				Sn	**Sn**	**10 01 40.1**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=33,slow=24,SNR=3.6						
FINES				Lg	Lg	10 01 51.0	
	comp=Z,0.9nm,0.3s,baz=48,slow=29,SNR=9.6 comp=Z,0.4nm,0.3s						
ERTU	**Ertsjaerv**	**3.92**	**301**	PN	**Pn**	**10 00 52.7**	**+0.9**
BURU	**Burvik**	**3.96**	**272**	SG	**Sg**	**10 01 55.3**	**-2.1**
UMAU	**Umeaa**	**4.39**	**263**	SG	**Sb**	**10 02 07.3**	**+5.4**
VJF	**Virojoki**	**4.45**	**200**	SG	**Sb**	**10 02 07.4**	**+4.0**
ARCES	**ARCESS Array B**	**5.20**	**340**	Pn	**Pn**	**10 01 07.4**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=2.0						
ARCES				Sn	**Sn**	**10 02 10.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=151,slow=23,SNR=7.1						
ARCES				Lg	Lg	10 02 42.2	
	comp=Z,0.4nm,0.3s,baz=142,slow=27,SNR=7.0 comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**5.20**	**340**	P	**Pn**	**10 01 12.1**	**+2.7**
ARCES				S	**Sn**	**10 02 12.2**	**+2.2**
I43RU	**DUBNA INFRASON**	**8.68**	**155**	I		10 52 40.0	
	baz=346,slow=329,SNR=5.0						
HFS	**Hagfors**	**9.07**	**247**	Pn	**Pn**	**10 02 02.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=62,slow=10,SNR=1.7 comp=Z,1.7nm,0.8s						

*IDC **18** 10:10:56.2±4.1, 36°.34N×71°.20E, h73km±37km, mb3.2/3, mbtmp3.7/10, ML3.6/7, MS3.0/2, Error ellipse: s-maj=36.1km s-min=19.4km az=156.0*
*NNC **18** 10:11:00.8±4.5, 37°.09N×70°.91E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=36.0km s-min=25.9km az=170.0*
ISC 18 10:10:57.2±0.7, 36°.48N±0°.06×71°.18E±0°.06, h100km, n39, σ3°01/46, mb3.3/3, 7C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.50**	**136**	*e*P	**Pn**	**10 12 18.0**	**+1.3**
THN				*e*S	**Sn**	**10 13 17.0**	**-1.7**
AML	**Almayashu**	**5.97**	**18**	P	**Pn**	**10 12 25.4**	**+1.9**
	SNR=16						
EKS2	**Erkin-Say**	**6.49**	**17**	P	**Pn**	**10 12 32.4**	**+2.2**
	SNR=11						
KK31	**Karatay Array**	**6.64**	**356**	⇑P	**Pn**	**10 12 33.5**	**+1.4**
	3.0nm,0.4s,baz=187,slow=15,SNR=29						
KK31				⇑S	**Sn**	**10 13 43.0**	**-3.3**
	2.9nm,0.3s,baz=185,slow=24,SNR=5.5						
AAK	**Ala-Archa**	**6.66**	**22**	P	**Pn**	**10 12 34.7**	**+2.2**
	SNR=11						
AAK	**Ala-Archa**	**6.66**	**22**	P	**Pn**	**10 12 34.5**	**+1.9**
	2.6nm,0.3s,baz=255,slow=22,SNR=23						
AAK				S	**Sn**	**10 13 49.0**	**+1.9**
	3.2nm,0.4s,baz=335,slow=22,SNR=8.2 7.5nm,0.4s						
CHMS	**Chumysh**	**7.07**	**22**	P	**Pn**	**10 12 39.5**	**+1.5**
	SNR=7.2						
CHMS	**Chumysh**	**7.07**	**22**	⇑P	**Pn**	**10 12 39.2**	**+1.2**
	10nm,0.8s						
CHMS				⇓S	**Sn**	**10 13 56.9**	**+0.1**
	4.2nm,0.6s						
USP	**Ospenovka**	**7.25**	**20**	P	**Pn**	**10 12 41.9**	**+1.5**
	SNR=5.3						
TKM2	**Tokmak 2**	**7.28**	**27**	P	**Pn**	**10 12 42.8**	**+1.8**
	SNR=6.5						
TKM2	**Tokmak 2**	**7.28**	**27**	⇑P	**Pn**	**10 12 42.2**	**+1.2**
	3.7nm,0.5s						
TKM2				⇑S	**Sn**	**10 14 00.4**	**-1.7**
	2.9nm,0.7s						
GEYT	**Alibeck**	**10.52**	**282**	P	**Pn**	**10 13 24.8**	**-0.2**
	0.6nm,0.3s,baz=101,slow=7.9,SNR=3.6						
GEYT				S	**Sn**	**10 15 20.3**	**-0.6**
	1.3nm,0.4s,baz=140,slow=27,SNR=2.5 1.7nm,0.4s						
PYUN	**Piuthan**	**13.01**	**127**	*e*P	**Pn**	**10 13 55.4**	**-3.0**
	19nm,0.4s						
PYUN	**Piuthan**	**13.01**	**127**	*e*P	**Pn**	**10 13 55.3**	**-3.1**
MKAR	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**10 14 01.9**	**+1.0**
	0.1nm,0.3s,baz=219,slow=10,SNR=2.8 0.5nm,0.7s						
DANN	**Dangsing**	**13.35**	**124**	*e*P	**Pn**	**10 13 59.5**	**-3.5**
	10nm,0.3s						
DANN	**Dangsing**	**13.35**	**124**	*e*P	**Pn**	**10 13 59.5**	**-3.5**
KOLN	**Koldanda**	**13.63**	**126**	*e*P	**Pn**	**10 14 02.6**	**-3.9**
GKN	**Gorkha**	**14.17**	**123**	*e*P	**Pn**	**10 14 10.5**	**-2.9**
	17nm,0.4s						
PKIN	**Phulchoki**	**14.96**	**122**	*e*P	**Pn**	**10 14 20.7**	**-2.9**
	5.4nm,0.3s						
PKI	**Pulchoki**	**14.97**	**122**	*e*P	**Pn**	**10 14 20.6**	**-3.3**
	3.2nm,0.3s						
PKI	**Pulchoki**	**14.97**	**122**	*e*P	**Pn**	**10 14 20.5**	**-3.3**
GUN	**Gumba**	**15.08**	**120**	*e*P	**Pn**	**10 14 21.6**	**-3.6**
	9.6nm,0.4s						
KURBB	**Kurchatov Arra**	**15.10**	**18**	P	**P**	**10 14 28.3**	**+0.5**
	0.1nm,0.3s,baz=207,slow=10,SNR=9.1 0.9nm,0.7s						
AB31	**Akbulak array**	**15.18**	**331**	P	**Pn**	**10 14 25.7**	**-0.3**
	0.3nm,0.3s,baz=151,slow=11,SNR=28						
AB31				⇓S	**Sn**	**10 17 07.9**	**-5.5**
	2.6nm,1.0s,baz=161,slow=25,SNR=5.0						
JIRN	**Jiri**	**15.45**	**120**	*e*P	**Pn**	**10 14 26.1**	**-3.9**
	14nm,0.3s						
JIRN	**Jiri**	**15.45**	**120**	*e*P	**Pn**	**10 14 26.0**	**-3.9**
RAMN	**Ramite**	**16.18**	**122**	*e*P	**Pn**	**10 14 34.9**	**-4.0**
	6.7nm,0.4s						
RAMN	**Ramite**	**16.18**	**122**	*e*P	**Pn**	**10 14 35.0**	**-4.0**
BVAR	**Borovoye Array**	**16.56**	**358**	P	**P**	**10 14 45.3**	**+1.3**
	0.3nm,0.3s,baz=188,slow=8.7,SNR=2.4 0.4nm,0.4s						
TAPN	**Taplejung**	**16.71**	**118**	*e*P	**Pn**	**10 14 42.4**	**-3.1**
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**P**	**10 14 50.0**	**+2.5**
	0.5nm,0.3s,baz=146,slow=13,SNR=6.3						
AKTO				S	**Sn**	**10 17 45.9**	**-8.4**
	0.7nm,0.3s,baz=321,slow=17,SNR=1.3 1.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.87**	**330**	⇑P	**P**	**10 14 49.3**	**+1.8**
	1.4nm,0.5s						
AKTO				⇑S	**Sn**	**10 17 49.3**	**-5.0**
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**10 15 21.4**	**+1.2**
	1.4nm,0.3s,baz=225,slow=10,SNR=19 4.0nm,0.4s						
GNI	**Garni**	**21.04**	**288**	LR	LR	10 25 30.3	
	comp=Z,17nm,21.8s,baz=182,slow=41						
VRAC	**Vranov**	**41.13**	**306**	LR	LR	10 38 17.9	
	comp=Z,57nm,18.0s,baz=305,slow=40						
ARCES	**ARCESS Array B**	**41.22**	**338**	P	**P**	**10 18 35.1**	**+3.3**
	1.1nm,0.7s,baz=105,slow=8.8,SNR=3.9 1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.86**	**269**	P	**P**	**10 21 34.5**	**+2.1**
	0.2nm,0.5s,baz=51,slow=7.6,SNR=2.1 0.2nm,0.5s						
WRA	**Warramunga Arr**	**81.85**	**122**	P	**P**	**10 23 07.2**	**+1.7**
	0.2nm,0.8s,baz=327,slow=5.0,SNR=1.6 0.2nm,0.8s						

IDC 18 10:11:14.5±2.9, 11°.94N×122°.16E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=283.4km s-min=28.6km az=63.0, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.87**	**159**	P	P	10 17 58.7	-0.5
	0.4nm,0.3s,baz=339,slow=9.5,SNR=26 0.4nm,0.3s						
ASAR	**Alice Springs**	**37.20**	**162**	P	P	10 18 28.1	+0.3
	0.3nm,0.4s,baz=329,slow=8.6,SNR=19 0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.29**	**324**	P	P	10 19 57.5	-0.1
	0.3nm,0.5s,baz=115,slow=8.7,SNR=2.0 0.3nm,0.5s						

*NEIC **18** 10:12:05.6±0.9, 17°.35S±0°.04×175°.4W±0°.1, h10km±2km, mb4.3/8, Error ellipse: s-maj=23.3km s-min=6.8km az=82.0.*
*IDC **18** 10:12:12.2±4.0, 16°.88S×175°.39W, h69km±38km, mb3.4/5, mbtmp3.8/6, ML4.3/1, MS3.7/1, Error ellipse: s-maj=137.3km s-min=21.0km az=146.0*
ISC 18 10:12:13.5±0.8, 17°.25±0°.1×175°.1W±0°.1, h100km, n18, σ1°67/17, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.57**	**44**	P	**Pn**	**10 13 18.8**	**-1.7**
	13nm,0.3s,baz=233,slow=1.9,SNR=18						
AFI				S	Sn	10 14 00.6	-12
	171nm,0.3s,baz=48,slow=20,SNR=16 29nm,0.3s						
AFI	**Afiamalu**	**4.57**	**44**	Pn	**Pn**	**10 13 19.0**	**-1.5**
NIUE	**Niue**	**5.20**	**111**	Pn	**Pn**	**10 13 27.1**	**-1.8**
PMG	**Port Moresby**	**37.54**	**277**	LR	LR	10 32 44.0	
	comp=Z,103nm,20.5s,baz=34,slow=33						
STKA	**Stephens Creek**	**41.76**	**241**	P	**P**	**10 19 54.8**	**+1.7**
	2.8nm,0.9s,baz=69,slow=14,SNR=2.9 2.8nm,0.9s						
STKA	**Stephens Creek**	**41.76**	**241**	P	**P**	**10 19 51.4**	**-1.7**
BBOO	**Buckleboo**	**46.53**	**241**	P	**P**	**10 20 29.5**	**-1.7**
WR0	**Warramunga Arr**	**47.72**	**258**	P	**P**	**10 20 39.0**	**-1.6**
WR0				IAmb	IAmb	10 20 43.2	
	comp=Z,0.9nm,0.8s						
WB0	**Warramunga Arr**	**47.87**	**259**	P	**P**	**10 20 41.3**	**-0.5**
WB0				IAmb	IAmb	10 20 53.5	
	comp=Z,2.0nm,0.9s						
WB2	**Warramunga Arr**	**47.89**	**258**	P	**P**	**10 20 41.2**	**-0.7**
WB2				IAmb	IAmb	10 20 54.8	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**47.91**	**258**	P	**P**	**10 20 41.6**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=96,slow=6.9,SNR=18 comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**47.91**	**258**	P	**P**	**10 20 40.9**	**-1.1**
AS31	**Alice Springs**	**48.05**	**253**	P	**P**	**10 20 42.2**	**-1.0**
ASAR	**Alice Springs**	**48.05**	**253**	P	**P**	**10 20 43.0**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=92,slow=7.8,SNR=25 comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**48.05**	**253**	P	**P**	**10 20 40.7**	**-2.5**
QSPA	**South Pole Qui**	**72.81**	**180**	P	**P**	**10 23 33.4**	**+2.3**
QSPA				IAmb	IAmb	10 23 38.6	
	comp=Z,4.6nm,0.9s						
NVAR	**Mina Array Bea**	**76.75**	**42**	P	**P**	**10 23 56.2**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=221,slow=6.3,SNR=4.3 comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**84.56**	**12**	P	**P**	**10 24 36.2**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=220,slow=6.8,SNR=4.3 comp=Z,0.3nm,0.8s						

*IDC **18** 10:29:55.0±1.2, 5°.54S×147°.15E, h169km±11km, mb3.9/15, mbtmp4.4/19, MS3.0/3, Error ellipse: s-maj=14.0km s-min=7.9km az=105.0*
*DJA **18** 10:29:55.5±0.3, 6°.5±4°.×14°.7E±°, h162km±7km, M4.7/13, mB5.0/6, mb4.7/13, MLv5.0/4, Mw(mB)4.3/6*
*NEIC **18** 10:29:57.2±1.2, 5°.48S±0°.07×147°.16E±0°.08, h185km±7km, mb4.5/70, Error ellipse: s-maj=12.3km s-min=9.7km az=90.0*
ISC 18 10:29:57.6±0.3, 5°.54S±0°.05×147°.15E±0°.05, h195km, n193, σ1°20/199, mb4.4/48, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.48**	**4**	Pn	**Pn**	**10 30 51.0**	**-1.9**
PMG	**Port Moresby**	**3.84**	**180**	P	**Pn**	**10 30 54.2**	**-3.0**
	594nm,0.5s,baz=42,slow=6.7,SNR=401						
PMG				S	**Sn**	**10 31 38.8**	**-5.3**
	268nm,0.5s,baz=123,slow=22,SNR=7.3						
PMG	**Port Moresby**	**3.84**	**180**	P	**Pn**	**10 30 54.0**	**-3.2**
PMG	**Port Moresby**	**3.84**	**180**	P	**Pn**	**10 30 54.7**	**-2.5**
PMG	**Port Moresby**	**3.84**	**180**	P	**Pn**	**10 30 54.6**	**-2.6**
RABL	**Rabaul**	**5.17**	**75**	Pn	**Pn**	**10 31 12.1**	**-2.0**
RABL	**Rabaul**	**5.17**	**75**	P	**Pn**	**10 31 12.8**	**-1.3**
GENI	**Genyem**	**7.56**	**293**	P	**Pn**	**10 31 42.2**	**-2.9**
	0.5nm130nm,0.6s						
GENI	**Genyem**	**7.56**	**293**	P	**Pn**	**10 31 44.0**	**-1.1**
COEN	**Coen**	**9.23**	**205**	P	**Pn**	**10 32 07.5**	**+0.5**
	baz=9.4,SNR=12						
COEN	**Coen**	**9.23**	**205**	Pn	**Pn**	**10 32 06.8**	**-0.2**
COEN	**Coen**	**9.23**	**205**	P	**Pn**	**10 32 07.7**	**+0.7**
MTSU	**Mount Surprise**	**12.82**	**192**	P	**Pn**	**10 32 54.1**	**+1.1**
	baz=13,SNR=20						
MTSU	**Mount Surprise**	**12.82**	**192**	P	**Pn**	**10 32 53.8**	**+0.8**
HNR	**Honiara**	**13.26**	**108**	P	**Pn**	**10 32 57.1**	**-1.5**
	2μm,0.3s,baz=129,slow=10,SNR=7.3						
HNR	**Honiara**	**13.26**	**108**	Pn	**Pn**	**10 32 57.0**	**-1.6**
RKPI	**Ransiki, Papua**	**13.55**	**287**	P	**

ASAR	**Alice Springs**	**22.08 214**	P	**P**	**10 34 37.8 +0.7**
	comp=Z,51nm,0.8s,baz=48,slow=8.4,SNR=793				
ASAR			S	**S**	**10 38 29.6 +3.2**
	comp=Z,27nm,0.9s,baz=31,slow=22,SNR=38				
	comp=Z,51nm,0.8s				
INKA	**Innaminka**	**22.90 195**	P	**P**	**10 34 45.7 +1.2**
SOEI	**Soe**	**23.06 258**	P	**P**	**10 34 44.5 -1.8**
SOEI			IAmb	IAmb	10 35 25.8
	comp=Z,20nm,0.7s				
SOEI	**Soe**	**23.06 258**	P	**P**	**10 34 47.5 +1.2**
DVP	**Devils Point**	**23.86 122**	P	**P**	**10 34 54.4 +1.1**
OOD	**Oodnadatta**	**24.67 205**	P	**P**	**10 35 01.6 +1.0**
LIFNC	**LIFOU**	**24.68 130**	P	**P**	**10 35 01.4 +0.5**
LIFNC	**LIFOU**	**24.68 130**	P	**P**	**10 35 01.2 +0.4**
DZM	**Mont Dzumac**	**24.86 133**	P	**P**	**10 35 02.3 -0.2**
	comp=Z,13nm,0.6s,baz=270,slow=4.9,SNR=24				
	comp=Z,13nm,0.6s				
DZM	**Mont Dzumac**	**24.86 133**	P	**P**	**10 35 02.4 -0.2**
DZM			IAmb	IAmb	10 35 05.3
	comp=Z,37nm,1.3s				
DZM	**Mont Dzumac**	**24.86 133**	P	**P**	**10 35 02.6 +0.1**
ARMA	**Armidale**	**25.10 171**	P	**P**	**10 35 05.6 +0.9**
	baz=25,SNR=10				
ARMA	**Armidale**	**25.10 171**	P	**P**	**10 35 05.4 +0.9**
ARMA			IAmb	IAmb	10 35 06.4
	comp=Z,12nm,0.8s				
ARMA	**Armidale**	**25.10 171**	P	**P**	**10 35 05.5 +0.9**
YATNC	**Mamie plateau,**	**25.18 133**	P	**P**	**10 35 06.2 +0.9**
MARNC	**Mare, Loyalty**	**25.69 130**	P	**P**	**10 35 10.3 +0.4**
CMSA	**Cobar Meteorol**	**25.90 183**	P	**P**	**10 35 14.7 +3.1**
LCRK	**Leigh Creek**	**26.16 198**	P	**P**	**10 35 14.8 +0.8**
WRKA	**Warakurna**	**26.51 221**	P	**P**	**10 35 17.6 +0.3**
	baz=27,SNR=18				
WRKA	**Warakurna**	**26.51 221**	P	**P**	**10 35 17.8 +0.5**
STKA	**Stephens Creek**	**26.71 191**	P	**P**	**10 35 19.6 +0.7**
	comp=Z,1.7nm,0.5s,baz=4.3,slow=7.7,SNR=5.5				
STKA			LR	LR	10 47 05.7
	comp=Z,128nm,18.9s,baz=205,slow=39				
	comp=Z,1.7nm,0.5s				
STKA	**Stephens Creek**	**26.71 191**	P	**P**	**10 35 23.5 +4.6**
	baz=27,SNR=4.1				
STKA	**Stephens Creek**	**26.71 191**	P	**P**	**10 35 20.2 +1.3**
STKA	**Stephens Creek**	**26.71 191**	P	**P**	**10 35 20.0 +1.1**
TOLI2	**Tolitoli**	**27.15 283**	P	**P**	**10 35 22.8 -0.3**
MULG	**Mulgathing**	**27.53 205**	P	**P**	**10 35 26.6 +0.4**
HTT	**Hallett**	**28.79 194**	P	**P**	**10 35 39.3 +1.9**
	baz=29,SNR=7.7				
HTT	**Hallett**	**28.79 194**	P	**P**	**10 35 40.3 +2.9**
BBOO	**Buckleboo**	**29.04 200**	P	**P**	**10 35 40.1 +0.6**
BBOO	**Buckleboo**	**29.04 200**	P	**P**	**10 35 40.3 +0.7**
MBWA	**Marble Bar**	**30.78 237**	P	**P**	**10 35 55.5 +0.4**
MBWA			IAmb	IAmb	10 36 14.9
	comp=Z,21nm,1.4s				
FORT	**Forrest**	**30.86 213**	P	**P**	**10 35 56.2 +0.5**
FORT	**Forrest**	**30.86 213**	P	**P**	**10 35 56.3 +0.6**
PSA00	**Pilbara Seismi**	**30.87 236**	P	**P**	**10 35 55.1 -0.7**
MSVF	**Nonsavu**	**32.53 114**	P	**P**	**10 36 10.3 -0.2**
MSVF			IAmb	IAmb	10 36 55.1
	comp=Z,25nm,1.2s				
MSVF	**Nonsavu**	**32.53 114**	P	**P**	**10 36 11.9 +1.4**
JCJ	**Chichijima**	**32.80 352**	P	**P**	**10 36 11.1 -1.5**
	comp=Z,52nm,0.5s,baz=336,slow=19,SNR=4.8				
JCJ	**Chichijima**	**32.80 352**	P	**P**	**10 36 11.7 -0.9**
MORW	**Morawa**	**37.59 228**	P	**P**	**10 36 53.8 +0.3**
	baz=38,SNR=4.9				
MORW	**Morawa**	**37.59 228**	P	**P**	**10 36 54.1 +0.5**
MORW			IAmb	IAmb	10 37 22.1
	comp=Z,18nm,1.2s				
MORW	**Morawa**	**37.59 228**	P	**P**	**10 36 53.8 +0.3**
KLBR	**Kellerberrin**	**37.81 223**	P	**P**	**10 36 55.2 -0.2**
	baz=38,SNR=9.7				
KLBR	**Kellerberrin**	**37.81 223**	P	**P**	**10 36 55.3 0.0**
BLDU	**Ballidu**	**37.96 225**	P	**P**	**10 36 56.9 +0.2**
	baz=38,SNR=5.6				
BLDU	**Ballidu**	**37.96 225**	P	**P**	**10 36 56.9 +0.2**
YULB	**Yu-li**	**38.27 320**	P	**P**	**10 36 58.7 -0.6**
YULB			IAmb	IAmb	10 37 05.7
	comp=Z,36nm,1.5s				
OUZ	**Omahuta**	**38.30 144**	P	**P**	**10 37 00.8 +1.5**
OUZ			IAmb	IAmb	10 37 01.8
	comp=Z,8.2nm,0.8s				
OUZ	**Omahuta**	**38.30 144**	P	**P**	**10 37 01.0 +1.7**
TPUB	**Ta-pu**	**38.64 319**	P	**P**	**10 37 01.8 -0.6**
SSLB	**Suanglung**	**38.77 320**	P	**P**	**10 37 03.1 -0.3**
NWAO	**Narrogin (SRO)**	**38.97 222**	P	**P**	**10 37 04.4 -0.6**
	baz=39,SNR=4.4				
NWAO			P	**P**	**10 37 04.4 -0.6**
	baz=39,SNR=4.4				
NWAO	**Narrogin (SRO)**	**38.97 222**	P	**P**	**10 37 07.2 +2.2**
MUN	**Mundaring**	**39.10 224**	P	**P**	**10 37 06.2 +0.1**
	baz=39,SNR=3.8				
MUN	**Mundaring**	**39.10 224**	P	**P**	**10 37 06.9 +0.8**
YHNB	**Yeheng**	**39.14 321**	P	**P**	**10 37 05.3 -1.2**
AFI	**Afiamalu**	**41.27 105**	P	**P**	**10 37 23.6 -0.6**
	comp=Z,23nm,0.7s,baz=263,slow=15,SNR=4.1				
	comp=Z,23nm,0.7s				
AFI	**Afiamalu**	**41.27 105**	P	**P**	**10 37 23.8 -0.4**
JGF	**Kuroka**	**41.95 348**	P	**P**	**10 37 29.2 -0.2**
JGF			IAmb	IAmb	10 37 30.2
	comp=Z,14nm,1.1s				
URZ	**Urewera**	**42.43 144**	P	**P**	**10 37 33.6 +0.4**
URZ			IAmb	IAmb	10 37 39.3
	comp=Z,32nm,1.5s				
URZ	**Urewera**	**42.43 144**	P	**P**	**10 37 33.8 +0.6**
URZ	**Urewera**	**42.43 144**	P	**P**	**10 37 34.0 +0.8**
HAZ	**Te Kaha**	**42.49 143**	P	**P**	**10 37 34.7 +1.0**
RUGZ	**Raukumara Rang**	**42.57 144**	P	**P**	**10 37 35.1 +0.7**
RTZ	**Ruatahuna**	**42.60 145**	P	**P**	**10 37 35.3 +0.6**
MJAR	**Matsushiro Arr**	**42.69 349**	P	**P**	**10 37 34.7 -0.7**
	comp=Z,0.8nm,0.3s,baz=162,slow=7.5,SNR=5.1				
	comp=Z,0.8nm,0.3s				
MAJO	**Matsushiro**	**42.70 349**	P	**P**	**10 37 35.0 -0.3**
MJB9	**Matsu-Tunnel**	**42.70 349**	P	**P**	**10 37 34.2 -1.2**
BKZ	**Black Stump Fm**	**42.70 146**	P	**P**	**10 37 35.9 +0.4**
BKZ			IAmb	IAmb	10 37 37.4
	comp=Z,7.1nm,0.7s				
BKZ	**Black Stump Fm**	**42.70 146**	P	**P**	**10 37 36.2 +0.8**
PKGZ	**Pakihiroa**	**42.75 143**	P	**P**	**10 37 37.5 +1.6**
TWGZ	**Tauwhareparae**	**42.89 144**	P	**P**	**10 37 38.6 +1.6**
WMGZ	**Waiomatatini S**	**42.91 143**	P	**P**	**10 37 38.2 +1.2**
PUZ	**Puketiti**	**42.98 143**	P	**P**	**10 37 38.4 +0.8**
TKGZ	**Te Karaka**	**42.98 144**	P	**P**	**10 37 38.7 +1.1**
TUWZ	**Tuamarina**	**42.99 150**	P	**P**	**10 37 38.2 +0.6**
BSWZ	**Blackbirch Sta**	**43.18 151**	P	**P**	**10 37 39.6 +0.4**
CNGZ	**Carnagh Statio**	**43.22 144**	P	**P**	**10 37 40.5 +1.0**
KAHZ	**Kahuranaki**	**43.35 146**	P	**P**	**10 37 41.6 +1.0**
PXZ	**Pawanui**	**43.51 146**	P	**P**	**10 37 42.5 +0.7**
KHZ	**Kahutara**	**43.55 151**	P	**P**	**10 37 42.2 +0.1**
KSRS	**Korea Array**	**46.38 339**	P	**P**	**10 38 04.4 0.0**
	comp=Z,1.6nm,0.9s,baz=162,slow=9.2,SNR=5.4				
KSRS			LR	LR	10 55 34.8
	comp=Z,12nm,19.4s,baz=165,slow=33				
	comp=Z,1.6nm,0.9s				
USRK	**Ussuriysk Ar.**	**51.37 346**	P	**P**	**10 38 42.6 +0.4**
	comp=Z,1.0nm,0.6s,baz=175,slow=5.9,SNR=4.6				
	comp=Z,1.0nm,0.6s				
USRK	**Ussuriysk Ar.**	**51.37 346**	P	**P**	**10 38 41.5 -0.7**
HNS	**HongShan**	**52.34 327**	‖P	**P**	**10 38 49.1 -0.5**
CN2	**Changchun**	**52.88 340**	*e*P	**P**	**10 38 53.0 -0.4**
CN2			*e*PP	**PP**	**10 40 56.8 +1.6**
CN2			*e*S	**S**	**10 46 06.3 -0.8**
PZH	**PanZhiHua**	**54.30 308**	P	**P**	**10 39 05.4 +1.2**
HHC	**Hu-ho-hao-te**	**56.53 328**	*e*P	**P**	**10 39 22.6 +2.8**
PETK	**Petropavlovsk-**	**59.11 7**	P	**P**	**10 39 38.1 +0.8**
	comp=Z,2.0nm,0.8s,baz=161,slow=8.1,SNR=1.5				
	comp=Z,2.0nm,0.8s				
SONM	**Songino Array**	**64.08 331**	P	**P**	**10 40 12.1 +1.2**
	comp=Z,3.2nm,1.0s,baz=132,slow=4.6,SNR=2.7				
	comp=Z,3.2nm,1.0s				
CASY	**Casey**	**65.73 195**	P	**P**	**10 40 20.5 -0.6**
VNDA	**Vanda**	**72.36 177**	P	**P**	**10 41 02.3 +0.6**
	comp=Z,3.5nm,0.7s,baz=328,slow=6.3,SNR=35				
	comp=Z,3.5nm,0.7s				
VNDA	**Vanda**	**72.36 177**	P	**P**	**10 41 02.6 +0.9**
WMQ	**Urumqi**	**72.55 319**	*e*P	**P**	**10 41 06.1 +2.6**
SBA	**Scott Base**	**73.00 176**	P	**P**	**10 41 04.3 -1.1**
MKAR	**Makanchi Array**	**77.24 320**	P	**P**	**10 41 30.5 +0.2**
	comp=Z,0.4nm,0.4s,baz=100,slow=8.6,SNR=3.0				
	comp=Z,0.4nm,0.4s				
ZALV	**Zalesovo Beam**	**78.71 328**	P	**P**	**10 41 37.5 -0.6**
	comp=Z,1.2nm,0.5s,baz=123,slow=6.7,SNR=5.3				
	comp=Z,1.2nm,0.5s				
ZALV	**Zalesovo Beam**	**78.71 328**	P	**P**	**10 41 37.2 -0.9**
Q19K	**Cape Douglas,**	**79.50 27**	P	**P**	**10 41 43.0 +0.7**
L19K	**White Mountain**	**80.63 24**	P	**P**	**10 41 49.0 +0.7**
L19K			IAmb	IAmb	10 42 22.1
	comp=Z,7.1nm,1.2s				
CNPM	**China Poot**	**80.87 27**	P	**P**	**10 41 49.0 -0.7**
M20K	**Styx River**	**81.18 24**	P	**P**	**10 41 51.0 -0.3**
M20K			IAmb	IAmb	10 41 58.1
	comp=Z,8.9nm,1.2s				
SKT	**Skwentna**	**81.89 25**	P	**P**	**10 41 54.8 -0.2**
SKT			IAmb	IAmb	10 42 36.0
	comp=Z,7.2nm,1.2s				
J20K	**Nowinta River**	**81.94 22**	P	**P**	**10 41 56.6 +1.5**
SUA	**Susitna One**	**81.98 25**	P	**P**	**10 41 55.8 +0.2**
SUA			IAmb	IAmb	10 42 15.5
	comp=Z,14nm,1.4s				
PPLA	**Purkeypile**	**82.06 24**	P	**P**	**10 41 56.9 +0.9**
PPLA			IAmb	IAmb	10 42 03.2
	comp=Z,21nm,1.5s				
RC01	**Rabbit Creek A**	**82.25 26**	P	**P**	**10 41 57.2 +0.4**
RC01			IAmb	IAmb	10 42 22.6
	comp=Z,18nm,1.2s				
CAST	**Castle Rocks**	**82.36 23**	P	**P**	**10 41 58.2 +0.8**
CAST			IAmb	IAmb	10 42 00.0
	comp=Z,7.3nm,1.3s				
MAW	**Mawson**	**82.72 203**	P	**P**	**10 41 59.8 +0.6**
	comp=Z,1.0nm,0.5s,baz=105,slow=5.1,SNR=2.2				
	comp=Z,1.0nm,0.5s				
MAW	**Mawson**	**82.72 203**	P	**P**	**10 41 59.8 +0.6**
PMR	**Palmer**	**82.73 26**	P	**P**	**10 41 57.8 -1.5**
PMR			IAmb	IAmb	10 42 32.1
	comp=Z,12nm,1.4s				
KTH	**Kantishna Hill**	**82.88 23**	P	**P**	**10 41 59.3 -0.9**
KTH			IAmb	IAmb	10 42 01.1
	comp=Z,8.9nm,1.4s				
IMAR	**Indian Mountai**	**83.01 21**	P	**P**	**10 41 59.6 -1.1**
TRF	**Thorofare Moun**	**83.08 24**	P	**P**	**10 42 00.8 -0.5**
TRF			IAmb	IAmb	10 42 10.7
	comp=Z,18nm,1.5s				
SML	**Sawmill**	**83.17 26**	P	**P**	**10 42 02.1 +0.5**
SML			IAmb	IAmb	10 42 02.5
	comp=Z,10.0nm,0.8s				
KKAR	**Karatay Array**	**84.08 314**	P	**P**	**10 42 06.2 -0.4**
DHY	**Denali Highway**	**84.11 25**	P	**P**	**10 42 06.4 -0.1**
DHY			IAmb	IAmb	10 42 07.7
	comp=Z,5.2nm,0.9s				
I23K	**Minto, Yukon-K**	**84.21 22**	P	**P**	**10 42 07.4 +0.7**
I23K			IAmb	IAmb	10 42 07.9
	comp=Z,7.2nm,1.4s				
M24K	**Tolsona, Glenn**	**84.22 26**	P	**P**	**10 42 07.0 0.0**
QSPA	**South Pole Qui**	**84.42 180**	P	**P**	**10 42 08.0 0.0**
BMRM	**Bremner River**	**84.48 27**	P	**P**	**10 42 09.0 +0.8**
BMRM			IAmb	IAmb	10 42 12.9
	comp=Z,18nm,1.2s				
CCB	**Clear Creek Bu**	**84.59 23**	P	**P**	**10 42 08.4 -0.2**
N25K	**Chitina, Valde**	**84.72 26**	P	**P**	**10 42 07.2 -2.3**
N25K			IAmb	IAmb	10 42 20.0
	comp=Z,9.1nm,1.1s				
HDA	**Harding Lake**	**84.83 23**	P	**P**	**10 42 09.6 -0.3**
IL31		**85.00 23**	P	**P**	**10 42 09.3 -1.4**
IL31			IAmb	IAmb	10 42 10.6
	comp=Z,4.8nm,0.7s				
ILAR	**Eielson Array**	**85.00 23**	P	**P**	**10 42 09.9 -0.9**
	comp=Z,4.3nm,0.8s,baz=252,slow=4.9,SNR=48				
	comp=Z,4.3nm,0.8s				
ILAR	**Eielson Array**	**85.00 23**	P	**P**	**10 42 08.4 -2.3**
MCARA	**McCarthy VSAT**	**85.34 27**	P	**P**	**10 42 12.2 -0.3**
J25K	**Salcha River,**	**85.54 24**	P	**P**	**10 42 13.0 -0.5**
J25K			IAmb	IAmb	10 42 14.4
	comp=Z,7.3nm,0.9s				
M27K	**Edge Creek, AK**	**86.19 26**	P	**P**	**10 42 17.5 +0.7**
M27K			IAmb	IAmb	10 42 19.2
	comp=Z,6.1nm,0.9s				
J26L	**Joseph Creek**	**86.22 24**	P	**P**	**10 42 17.1 +0.2**
L27K	**Beaver Creek,**	**86.44 26**	P	**P**	**10 42 18.6 +0.7**
BCAR	**Beaver Creek A**	**86.46 26**	P	**P**	**10 42 18.3 +0.3**
K27K	**Chicken**	**86.67 25**	P	**P**	**10 42 19.4 +0.4**
I26K	**Coal Creek Min**	**86.67 23**	P	**P**	**10 42 19.5 +0.6**
I26K			IAmb	IAmb	10 42 33.9
	comp=Z,7.0nm,1.2s				
BMAR	**Burnt Mountain**	**86.92 21**	P	**P**	**10 42 21.0 +0.9**
EGAK	**Eagle**	**87.29 24**	P	**P**	**10 42 22.6 +0.7**
DAWY	**Dawson**	**87.80 25**	P	**P**	**10 42 24.3 -0.1**
DAWY			IAmb	IAmb	10 42 46.5
	comp=Z,7.2nm,1.5s				
EPYK	**Eagle Plains**	**89.52 23**	P	**P**	**10 42 33.0 +0.6**
EPYK			IAmb	IAmb	10 42 33.4
	comp=Z,5.8nm,0.8s				
INK	**Inuvik**	**91.17 21**	P	**P**	**10 42 40.8 +0.8**
INK			IAmb	IAmb	10 42 41.1
	comp=Z,3.4nm,0.8s				
NVAR	**Mina Array Bea**	**96.97 52**	P	**P**	**10 43 07.4 -0.1**
	comp=Z,0.6nm,0.8s,baz=251,slow=6.6,SNR=5.5				
	comp=Z,0.6nm,0.8s				
PDAR	**Pinedale Array**	**103.50 47**	Pdiff	**Pdif**	**10 43 36.6 0.0**
	comp=Z,0.3nm,0.5s,baz=268,slow=2.4,SNR=2.8				
CLL	**Collm**	**120.66 328**	*e*PKPdf	**PKiKP**	**10 48 26.7 +0.4**
	comp=Z,4.0nm,0.7s				
PLCA	**Paso Flores**	**122.42 147**	PKP	**PKPdf**	**10 48 30.4 +0.3**
	comp=Z,0.6nm,0.5s,baz=282,slow=3.4,SNR=7.1				
LPAZ	**La Paz**	**138.90 122**	PKP	**PKPdf**	**10 49 02.8 +0.2**
	comp=Z,0.9nm,0.5s,baz=222,slow=1.7,SNR=3.8				
TORD	**Torodi Ar. Bea**	**145.12 285**	PKPbc	**PKPbc**	**10 49 12.0 -0.8**
	comp=Z,1.3nm,0.5s,baz=64,slow=3.2,SNR=21				

az=88.0
*NOU **18** 11:56:02.1,25.°49S×129.°81E, h0km, MLv4.1/8, Northern Territory, Australia*

ISC 18 11:56:01.5±0.8, 25.°57S±0.°06×129.°81E±0.°05, h10km, n22, σ1.°76/31, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.47**	**291**	P	**Pn**	**11 56 28.3**	**+0.2**
	baz=1.4						
WRKA				S	**Sn**	**11 56 47.5**	**+0.1**
	baz=1.4						
WRKA	**Warakurna**	**1.47**	**291**	P	**Pn**	**11 56 28.2**	**+0.2**
ASPA	**Alice Springs**	**4.18**	**64**	P	**Pn**	**11 57 06.2**	**+0.9**
	baz=4.2						
ASAR	**Alice Springs**	**4.18**	**64**	Pn	**Pn**	**11 57 06.3**	**+0.9**
	0.9nm,0.3s,baz=243,slow=12,SNR=80						
ASAR				Pg	**Pb**	**11 57 17.7**	**+2.5**
	1.1nm,0.3s,baz=238,slow=17,SNR=17						
ASAR				Sn	**Sn**	**11 57 54.5**	**+0.1**
	0.9nm,0.3s,baz=250,slow=21,SNR=4.3						
ASAR				Lg	Lg	11 58 09.1	
	2.1nm,0.3s,baz=245,slow=26,SNR=9.3						
	2.6nm,0.4s						
AS01	**Alice Springs**	**4.22**	**64**	P	**Pn**	**11 57 07.5**	**+1.6**
FORT	**Forrest**	**5.42**	**196**	P	**Pn**	**11 57 24.2**	**+1.9**
	baz=5.4						
FORT				S	**Sn**	**11 58 26.0**	**+1.3**
	baz=5.4						
FORT	**Forrest**	**5.42**	**196**	P	**Pn**	**11 57 25.2**	**+2.9**
OOD	**Oodnadatta**	**5.71**	**114**	P	**Pn**	**11 57 27.5**	**+1.2**
	baz=5.7						
OOD				S	**Sn**	**11 58 33.4**	**+1.5**
	baz=5.7						
OOD	**Oodnadatta**	**5.71**	**114**	P	**Pn**	**11 57 28.4**	**+2.1**
MULG	**Mulgathing**	**6.01**	**142**	P	**Pn**	**11 57 31.6**	**+1.1**
	baz=6.0						
MULG				S	**Sn**	**11 58 39.8**	**+0.3**
	baz=6.0						
MULG	**Mulgathing**	**6.01**	**142**	P	**Pn**	**11 57 32.9**	**+2.4**
WB1	**Warramunga Ar.**	**6.98**	**38**	P	**Pn**	**11 57 44.4**	**+0.6**
WRA	**Warramunga Arr**	**6.99**	**38**	Pn	**Pn**	**11 57 44.4**	**+0.4**
	0.4nm,0.3s,baz=219,slow=14,SNR=27						
WRA				Sn	**Sn**	**11 59 02.2**	**-1.4**
	0.6nm,0.3s,baz=216,slow=22,SNR=7.5						
WRA				Lg	Lg	11 59 38.8	
	0.9nm,0.3s,baz=214,slow=31,SNR=7.7						
	1.0nm,0.4s						
WC3	**Warramunga Arr**	**6.99**	**38**	P	**Pn**	**11 57 42.2**	**-1.8**
	baz=7.1						
WRAB	**Tennant Creek**	**7.00**	**38**	P	**Pn**	**11 57 44.9**	**+0.8**
LCRK	**Leigh Creek**	**8.88**	**125**	P	**Pn**	**11 58 09.8**	**0.0**
	baz=8.9						
BBOO	**Buckleboo**	**9.05**	**144**	P	**Pn**	**11 58 12.4**	**+0.2**
	baz=9.1						
BBOO				S	**Sn**	**11 59 49.8**	**-4.4**
	baz=9.1						
KNRA	**Kununurra**	**9.89**	**354**	P	**Pn**	**11 58 24.9**	**+1.1**
	baz=10.0						
KNRA	**Kununurra**	**9.89**	**354**	P	**Pn**	**11 58 24.9**	**+1.1**
MEEK	**Meekatharra**	**10.12**	**262**	P	**Pn**	**11 58 25.2**	**-1.7**
	baz=10						
STKA	**Stephens Creek**	**12.10**	**124**	Pn	**Pn**	**11 58 53.0**	**-0.9**
	0.2nm,0.3s,baz=305,slow=16,SNR=3.4						
STKA				Sn	**Sn**	**12 01 05.0**	**-4.0**
	0.2nm,0.3s,baz=241,slow=19,SNR=1.9						
	0.8nm,0.4s						
KLBR	**Kellerberrin**	**12.17**	**238**	P	**Pn**	**11 58 54.4**	**-0.6**
	baz=12						

*ISK **18** 12:02:13.3, 36.°52N×28.°82E, h16km, ML3.1/12*
*THE **18** 12:02:13.9, 36.°53N×28.°80E, h4km±1km, ML2.6/3, Error ellipse: s-maj=1.8km s-min=0.4km az=166.0*
*ATH **18** 12:02:15.5, 36.°45N×28.°77E, h48km±19km, ML2.6/3, Error ellipse: s-maj=20.9km s-min=2.2km az=190.0*

ISC 18 12:02:13.8±1.0, 36.°53N±0.°03×28.°80E±0.°02, h16km±8km, n31, σ0.°66/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**64**	PG	**Pg**	**12 02 18.8**	**-0.6**
FETY				SG	**Sg**	**12 02 23.1**	**0.0**
DALY	**Dalyan (Mula)**	**0.31**	**338**	PG	**Pg**	**12 02 20.4**	**0.0**
TURN	**Turunc**	**0.51**	**299**	PG	**Pg**	**12 02 24.2**	**+0.2**
TURN				SG	**Sb**	**12 02 32.2**	**+0.5**
CAME	**Cameli-Denizli**	**0.58**	**44**	PG	**Pg**	**12 02 24.9**	**-0.4**
CAME				SG	**Sg**	**12 02 33.5**	**+0.5**
ARG	**Arkhangelos**	**0.63**	**241**	PG	**Pg**	**12 02 26.2**	**0.0**
ARG				SG	**Sb**	**12 02 35.5**	**+0.5**
ARG	**Arkhangelos**	**0.63**	**241**	P	**Pb**	**12 02 26.4**	**0.0**
ARG				S	**Sn**	**12 02 36.2**	**-1.6**
	365nm,0.4s						
ARG	**Arkhangelos**	**0.63**	**241**	P	**Pb**	**12 02 26.4**	**0.0**
ARG				S	**Sb**	**12 02 36.0**	**+1.0**
ARG				AML	AML	12 02 39.8	
	comp=E,787μm,0.5s						
ARG				AML	AML	12 02 41.9	
	comp=N,670μm,0.3s						
AKAS	**Kas**	**0.71**	**114**	PG	**Pg**	**12 02 27.0**	**-0.8**
KSL	**Kastellorizon**	**0.73**	**121**	P	**Pb**	**12 02 28.4**	**+0.1**
KSL				S	**Sn**	**12 02 39.8**	**-0.6**
	comp=N,305nm,0.9s						
KSL	**Kastellorizon**	**0.73**	**121**	P	**Pb**	**12 02 28.3**	**+0.1**
KSL				S	**Sn**	**12 02 39.8**	**-0.6**
KSL				AML	AML	12 02 41.3	
	comp=E,770μm,0.5s						
KSL				AML	AML	12 02 50.0	
	comp=N,448μm,1.2s						
YER	**Yerkesik**	**0.74**	**326**	PG	**Pb**	**12 02 28.4**	**+0.1**
YER				SG	**Sb**	**12 02 39.2**	**+1.0**
YER	**Yerkesik**	**0.74**	**326**	P	**Pb**	**12 02 28.5**	**+0.1**
YER				S	**Sb**	**12 02 39.2**	**+1.0**
ELL	**Elmali**	**0.92**	**76**	PG	**Pb**	**12 02 31.1**	**-0.3**
DAT	**Datca**	**1.00**	**282**	PG	**Pb**	**12 02 32.9**	**0.0**
APMY	**Acipayam-Deniz**	**1.02**	**23**	PG	**Pb**	**12 02 32.9**	**-0.4**
NIS1	**Nisyros Isl.**	**1.31**	**274**	PN	**Pb**	**12 02 38.4**	**+0.3**
NIS1	**Nisyros Isl.**	**1.31**	**274**	P	**Pn**	**12 02 37.1**	**-0.4**
NIS1	**Nisyros Isl.**	**1.31**	**274**	P	**Pb**	**12 02 37.8**	**-0.3**
BODT	**Bodrum**	**1.31**	**294**	PN	**Pn**	**12 02 36.8**	**-0.7**
KORT	**Korkueli**	**1.33**	**69**	PN	**Pn**	**12 02 38.2**	**+0.3**
KOSK	**Kos Island**	**1.48**	**279**	PN	**Pn**	**12 02 39.9**	**0.0**
ANTB	**Antalya**	**1.53**	**75**	PN	**Pn**	**12 02 41.1**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.59**	**333**	PN	**Pb**	**12 02 42.4**	**-0.6**
KARP	**Karpathos**	**1.65**	**234**	PN	**Pn**	**12 02 42.9**	**+0.7**
BCK	**Bucak**	**1.71**	**56**	PN	**Pn**	**12 02 43.7**	**+0.7**
BASM	**Basmaki-Afyon**	**1.71**	**35**	PN	**Pn**	**12 02 43.7**	**+0.6**
GCAM	**G?zelcaml?**	**1.72**	**314**	PN	**Pb**	**12 02 44.1**	**-0.9**
ISP	**Isparta**	**1.89**	**46**	PN	**Pn**	**12 02 46.2**	**+0.7**
SMG	**Samos**	**1.96**	**307**	P	**Pn**	**12 02 46.5**	**0.0**
SMG				S	**Sn**	**12 03 11.4**	**+0.5**
	comp=N,268nm,0.5s						
SMG	**Samos**	**1.96**	**307**	P	**Pn**	**12 02 46.9**	**+0.4**
SMG				S	**Sn**	**12 03 09.1**	**-1.8**
SMG				AML	AML	12 03 14.7	
	comp=E,524μm,0.4s						
SMG				AML	AML	12 03 14.7	
	comp=N,535μm,0.6s						
SEYD	**Seydisehir-KON**	**2.58**	**69**	PN	**Pn**	**12 02 56.0**	**+0.9**

*RSNC **18** 12:27.°46.8±0.9, 7.°74N×74.°42W, h23km±5km, ML3.8, Mw3.9, Fault plane solution: NP1:φ=115.00000°, δ=88.00000°, λ=-22.00000°.*
*NEIC **18** 12:27.°46.0±2.5, 7.°65N±0.°08×74.°51W±0.°09, h74km±15km, mb4.2/5, Error ellipse: s-maj=13.1km s-min=11.5km az=46.0*
*IDC **18** 12:27.°49.5±1.4, 7.°62N×74.°29W, h101km±13km, mb3.5/9, mbtmp4.0/12, MS3.2/7, Error ellipse: s-maj=16.6km s-min=9.5km az=120.0*

ISC 18 12:27.°46.3±0.7, 7.°74N±0.°03×74.°40W±0.°03, h71km±8km, n69, σ2.°16/100, mb3.9/10, 8C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.93**	**132**	⇑*i*P	**Pn**	**12 28 03.5**	**-0.4

PTBC	**PUERTO BERRIO,**	**1.19**	**183**⇑	*i*P	**Pn**	**12 28 06.5**	**-0.9**
PTBC				*e*S	**Sn**	**12 28 22.2**	**-0.8**
PTBC				*i*		12 28 22.4	
	comp=Z,3μm,0.2s						
BARC	**Barichara**	**1.66**	**133**⇑	*i*P	**Pn**	**12 28 14.1**	**+0.4**
BARC			⇓	*i*P	**Pn**	**12 28 14.1**	**+0.4**
BARC				*e*S	**Sn**	**12 28 35.1**	**+0.8**
BARC				*i*		12 28 39.5	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**1.73**	**103**⇓	*i*P	**Pn**	**12 28 15.8**	**+0.9**
PAMC				*e*S	**Sn**	**12 28 37.3**	**+0.9**
PAMC				*i*		12 28 39.9	
	comp=Z,1μm,0.3s						
HELC	**Santa Helena**	**1.90**	**216**	*e*P	**Pn**	**12 28 17.1**	**+0.1**
HELC				*e*S	**Sn**	**12 28 41.8**	**+1.5**
HELC				*i*		12 28 45.5	
	comp=Z,691nm,0.2s						
DBBC	**Dabeiba**	**1.93**	**248**	*e*P	**Pn**	**12 28 17.0**	**-0.1**
DBBC				*e*S	**Sn**	**12 28 40.7**	**+0.1**
SPBC	**San Pablo de B**	**2.10**	**171**⇑	*e*P	**Pn**	**12 28 19.4**	**-0.1**
SPBC				*e*S	**Sn**	**12 28 46.1**	**+1.5**
SPBC				*i*		12 28 49.1	
	comp=Z,707nm,0.5s						
ARGC	**Ariguani, Magd**	**2.11**	**4**⇑	*e*P	**Pn**	**12 28 22.1**	**+2.5**
ARGC				*e*S	**Sn**	**12 28 49.0**	**+4.1**
ARGC				*i*		12 29 15.9	
	comp=Z,374nm,0.4s						
NORC	**Norcasia**	**2.21**	**192**	*e*P	**Pn**	**12 28 21.0**	**+0.1**
NORC				*e*S	**Sn**	**12 28 47.0**	**-0.2**
NORC				*i*		12 28 52.6	
	comp=Z,906nm,0.5s						
LCBC	**Los crdobas,**	**2.24**	**300**	*e*P	**Pn**	**12 28 22.3**	**+1.0**
LCBC				*e*S	**Sn**	**12 28 52.0**	**+4.0**
LCBC				*i*		12 29 03.8	
	comp=Z,762nm,0.6s						
RUSC	**La Rusia**	**2.25**	**144**⇑	*e*P	**Pn**	**12 28 22.4**	**+0.5**
RUSC				*e*S	**Sn**	**12 28 49.3**	**+0.4**
RUSC				*i*		12 29 07.3	
	comp=Z,416nm,0.3s						
SJCC	**San Jacinto, C**	**2.28**	**340**⇑	*i*P	**Pn**	**12 28 22.6**	**+0.8**
SJCC				*e*S	**Sn**	**12 28 49.1**	**+0.1**
SJCC				*i*		12 29 01.3	
	comp=Z,660nm,0.6s						
CBOC	**Ciudad Bolivar**	**2.45**	**221**	*e*P	**Pn**	**12 28 25.0**	**+0.7**
CBOC				*e*S	**Sn**	**12 28 58.0**	**+4.6**
CBOC				*i*		12 29 00.6	
	comp=Z,348nm,0.6s						
GUY2C	**Guyana, Caldas**	**2.67**	**201**	*e*P	**Pn**	**12 28 28.1**	**+0.5**
GUY2C				*e*S	**Sn**	**12 29 02.5**	**+3.3**
GUY2C				*i*		12 29 09.9	
	comp=Z,585nm,0.5s						
ROSC	**El Rosal**	**2.88**	**178**	P	**Pn**	**12 28 31.7**	**+1.4**
	comp=Z,78nm,0.3s,baz=181,slow=18,SNR=34						
ROSC				S	**Sn**	**12 29 06.3**	**+2.3**
	comp=Z,392nm,0.5s,baz=182,slow=23,SNR=9.3						
ROSC	**El Rosal**	**2.88**	**178**		**Pn**	**12 28 30.1**	**-0.2**
ROSC	**El Rosal**	**2.88**	**178**	*e*P	**Pn**	**12 28 31.3**	**+1.0**
ROSC				*e*S	**Sn**	**12 29 08.2**	**+4.2**
ROSC				*i*		12 29 14.4	
	comp=Z,327nm,0.3s						
TAMC	**Tame, Arauca**	**2.90**	**116**	*e*P	**Pn**	**12 28 32.5**	**+2.3**
TAMC				*e*S	**Sn**	**12 29 05.6**	**+1.7**
TAMC				*i*		12 29 12.3	
	comp=Z,174nm,0.3s						
CHIC	**Chingaza**	**3.16**	**168**⇑	*i*P	**Pn**	**12 28 35.4**	**+1.3**
CHIC				*e*S	**Sn**	**12 29 13.8**	**+2.9**
CHIC				*i*		12 29 26.7	
	comp=Z,264nm,0.7s						
ANIL	**Santa Ana**	**3.38**	**197**	*e*P	**Pn**	**12 28 41.3**	**+4.4**
ANIL				*e*S	Sn	12 29 26.1	+10
PLMC	**San Jos del P**	**3.38**	**214**	*e*P	**Pn**	**12 28 37.5**	**+0.7**
PLMC				*e*S	**Sn**	**12 29 20.4**	**+4.6**
PLMC				*i*		12 29 31.2	
	comp=Z,247nm,0.7s						
SOCV	**Socops**	**3.55**	**81**⇓	*i*P	**Pn**	**12 28 40.9**	**+1.8**
SOCV				*e*S	**Sn**	**12 29 22.3**	**+2.3**
CRJC	**Cerrejon, Guaj**	**3.59**	**25**	*e*P	**Pn**	**12 28 39.6**	**-0.1**
CRJC				*e*S	**Sn**	**12 29 25.4**	**+4.4**
CRJC				*i*		12 29 29.7	
	comp=Z,563nm,0.2s						
UPD2	**Meteti**	**3.67**	**283**	*e*P	**Pn**	**12 28 40.5**	**-0.2**
UPD2				*e*S	**Sn**	**12 29 21.4**	**-1.3**
UPD2				*i*		12 29 26.3	
	comp=Z,348nm,0.5s						
VILC	**Villavicencio,**	**3.67**	**169**	*e*P	**Pn**	**12 28 42.6**	**+1.7**
VILC				*e*S	**Sn**	**12 29 26.5**	**+3.5**
VILC				*i*		12 29 36.7	
	comp=Z,437nm,0.5s						
SDV	**Santo Domingo**	**3.90**	**73**	P	**Pn**	**12 28 46.3**	**+2.3**
	comp=Z,86nm,0.4s,baz=284,slow=5.5,SNR=45						
SDV				S	**Sn**	**12 29 31.4**	**+2.7**
	comp=Z,342nm,0.4s,baz=340,slow=16,SNR=6.8						
SDV				LR	LR	12 30 40.9	
	comp=Z,182nm,20.1s,baz=270,slow=45						
SDV	**Santo Domingo**	**3.90**	**73**		**Pn**	**12 28 45.4**	**+1.3**
PRAC	**Prado**	**4.03**	**187**	*e*P	**Pn**	**12 28 45.9**	**+0.3**
PRAC				*e*S	**Sn**	**12 29 38.5**	**+6.9**
PRAC				*i*		12 29 56.0	
	comp=Z,235nm,0.6s						
PTGC	**Puerto Gaitan,**	**4.18**	**147**	*e*P	**Pn**	**12 28 48.2**	**+0.6**
PTGC				*e*S	**Sn**	**12 29 36.6**	**+1.4**
PTGC				*i*		12 29 43.2	
	comp=Z,145nm,0.6s						
YOTC	**Yotoco, Valle**	**4.20**	**208**	*e*P	**Pn**	**12 28 48.6**	**+0.5**
YOTC				*e*S	**Sn**	**12 29 37.6**	**+1.6**
YOTC				*i*		12 30 00.8	
	comp=Z,50nm,0.7s						
URIC	**Uribia, Colomb**	**4.60**	**31**	*e*P	**Pn**	**12 28 53.2**	**-0.2**
URIC				*e*S	**Sn**	**12 29 48.0**	**+2.4**
URIC				*i*		12 29 52.5	
	comp=Z,101nm,0.5s						
DABV	**Dabajuro**	**4.88**	**49**	*i* P	**Pn**	**12 28 58.8**	**+1.5**
DABV				*e*S	**Sn**	**12 29 54.8**	**+2.3**
GUVC	**San Jose del G**	**5.45**	**161**	*e*P	**Pn**	**12 29 05.8**	**+0.7**
GUVC				*e*S	**Sn**	**12 30 06.7**	**+0.2**
GUVC				*i*		12 30 13.9	
	comp=Z,146nm,0.2s						
BCIP	**Isla Barro Col**	**5.56**	**285**	Pn	**Pn**	**12 29 04.1**	**-2.4**
BCIP	**Isla Barro Col**	**5.56**	**285**	*e*P	**Pn**	**12 29 05.1**	**-1.4**
BCIP				*e*S	**Sn**	**12 30 09.9**	**+0.7**
BCIP				*i*		12 30 18.1	
	comp=Z,25nm,0.6s						
GARC	**Garzon, Huila**	**5.62**	**191**	*e*P	**Pn**	**12 29 10.8**	**+3.2**
GARC				*e*S	**Sn**	**12 30 16.1**	**+5.1**
GARC				*i*		12 30 35.4	
	comp=Z,66nm,0.3s						
BBAC	**Balboa, Cauca**	**6.35**	**207**	*e*P	**Pn**	**12 29 18.1**	**+0.6**
BBAC				*e*S	**Sn**	**12 30 26.9**	**-1.8**
BBAC				*i*		12 30 37.8	
	comp=Z,15nm,0.5s						
BAUV	**El Baul**	**6.41**	**79**		**Pn**	**12 29 17.9**	**-0.3**
HATO	**Hato, Curacao**	**6.95**	**50**	Pn	**Pn**	**12 29 25.6**	**+0.1**
TULM	**Tulcn-Chalpat**	**7.75**	**206**	Pn	**Pn**	**12 29 34.5**	**-2.4**
BRU2	**Volcan**	**8.27**	**278**	Pn	**Pn**	**12 29 41.8**	**-2.0**
SRBA	**San Rafael, Bu**	**8.98**	**280**	Pn	**Pn**	**12 29 50.7**	**-2.8**
RIMA	**Rio Macho**	**9.57**	**283**	Pn	**Pn**	**12 29 59.1**	**-2.4**
PCRV	**Puerto La Cruz**	**9.95**	**75**	P	**Pn**	**12 30 08.5**	**+1.9**
	comp=Z,8.7nm,0.6s,baz=325,slow=4.3,SNR=9.4						
PCRV				S	**Sn**	**12 31 54.0**	**-2.7**
	comp=Z,29nm,0.9s,baz=144,slow=22,SNR=3.9						
MTDJ	**Mount Denham**	**10.86**	**344**	Pn	**Pn**	**12 30 20.9**	**+1.8**
ORTG	**Ortega, Santa**	**11.23**	**284**	Pn	**Pn**	**12 30 23.9**	**-0.2**
HZTE	**Horizontes, Gu**	**11.44**	**286**	Pn	**Pn**	**12 30 25.7**	**-1.2**
SDDR	**Presa de Saban**	**11.58**	**15**	Pn	**Pn**	**12 30 30.5**	**+1.7**
SJG	**San Juan**	**13.07**	**37**	S	**Sn**	**12 33 06.6**	**-6.1**
	comp=Z,11nm,0.6s,baz=351,slow=17,SNR=1.9						
APG	**El Apazote**	**17.32**	**296**	LR	LR	12 39 59.4	
	comp=Z,67nm,18.0s,baz=30,slow=42						
MDP	**Montagnes des**	**21.78**	**96**	LR	LR	12 41 33.8	
	comp=Z,66nm,18.9s,baz=1.0,slow=38						
CMIG	**Matias Romero**	**22.04**	**297**	LR	LR	12 41 50.0	
	comp=Z,32nm,18.0s,baz=87,slow=38						
LPAZ	**La Paz**	**24.66**	**165**	P	**P**	**12 33 00.1**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=350,slow=9.2,SNR=17						
	comp=Z,3.5nm,0.6s						
LPAZ	**La Paz**	**24.66**	**165**	P	**P**	**12 33 00.2**	**-1.2**
LPAZ				IAmb	IAmb	12 33 01.1	
	comp=Z,5.3nm,0.7s						
PB16	**IPOC Station P**	**26.35**	**169**	P	**P**	**12 33 14.0**	**-2.6**
PB16				IAmb	IAmb	12 33 18.4	
	comp=Z,6.8nm,0.9s						
SIV	**San Ignacio**	**27.02**	**151**	P	**P**	**12 33 20.6**	**-1.4**
	comp=Z,3.0nm,0.6s,baz=318,slow=9.0,SNR=14						
SIV				LR	LR	12 44 34.0	
	comp=Z,89nm,18.2s,baz=100,slow=37						
	comp=Z,3.0nm,0.6s						
TKL	**Tuckaleechee C**	**29.09**	**344**	LR	LR	12 45 26.9	
	comp=Z,44nm,18.0s,baz=134,slow=36						
TXAR	**Lajitas Array**	**34.91**	**312**	P	**P**	**12 34 32.8**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=120,slow=8.5,SNR=8.9						
	comp=Z,0.5nm,0.6s						
LPIG	**La Paz**	**38.02**	**300**	LR	LR	12 53 15.3	
	comp=Z,23nm,19.0s,baz=131,slow=40						
PDAR	**Pinedale Array**	**46.60**	**324**	P	**P**	**12 36 08.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=103,slow=12,SNR=4.7						
	comp=Z,0.2nm,0.3s						
PDAR	**Pinedale Array**	**46.60**	**324**	P	**P**	**12 36 05.4**	**-2.3**
PLCA	**Paso Flores**	**48.36**	**176**	P	**P**	**12 36 19.8**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=332,slow=10.0,SNR=5.1						
	comp=Z,1.5nm,0.7s						
YKA	**Yellowknife Ar**	**61.97**	**340**	P	**P**	**12 37 59.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=128,slow=6.6,SNR=4.1						
	comp=Z,0.8nm,0.8s						
DBIC	**Dimbokro**	**68.93**	**86**	P	**P**	**12 38 43.6**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=261,slow=8.4,SNR=4.1						
	comp=Z,2.6nm,0.8s						
ESDC	**Sonseca Array**	**70.05**	**51**	P	**P**	**12 38 51.3**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=268,slow=5.9,SNR=6.0						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.80**	**78**	P	**P**	**12 39 19.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=288,slow=6.0,SNR=3.4						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**148.58**	**237**	PKPbc	**PKPbc**	**12 47 25.0**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=125,slow=3.4,SNR=2.4						
WRA	**Warramunga Arr**	**149.63**	**243**	PKPbc	**PKPbc**	**12 47 28.1**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=106,slow=2.4,SNR=6.1						

*SEA **18** 12:35:03.±1.5, 44.°087N±0.°010×122.°83W±0.°01, h10km±2km, ML2.2/12, ML2.1/22(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=206.0*

NEIC 18 12:35:02.9±1.4, 44.°088N±0.°007×122.°83W±0.°01, h11km±3km, Error ellipse: s-maj=1.5km s-min=0.8km az=64.0, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUCK	**Buck Mountain**	**0.15**	**315**		Pg	12 35 06.4	-0.1
BUCK					Sg	12 35 08.4	-0.6
BUCK				IAML		12 35 10.4	
	comp=E,504nm,0.3s						
ALVY	**Alvey**	**0.16**	**236**		Pg	12 35 07.0	+0.5
ALVY					Sg	12 35 09.8	+0.8
LANE	**Lane BPA Site-**	**0.29**	**263**		Sb	12 35 14.0	-1.0
BROR	**Big Rock Looko**	**0.33**	**57**		Pg	12 35 09.8	+0.3
HBO	**Huckleberry Mo**	**0.44**	**123**		Pg	12 35 12.2	+0.5
I03D	**Drain, OR**	**0.54**	**224**		Pg	12 35 13.4	0.0
I03D					Sg	12 35 21.3	+0.8
HSO	**Harness Mounta**	**0.59**	**198**		Pg	12 35 14.6	+0.2
COR	**Corvallis**	**0.60**	**326**		Pg	12 35 14.5	-0.1
COR					Sb	12 35 23.3	-0.6
PRLK	**Prince Lake**	**0.64**	**79**		Pb	12 35 15.8	-0.4
PRLK					Sb	12 35 25.3	+0.1
MPOR	**Mary's Peak**	**0.66**	**309**		Pg	12 35 15.8	0.0
RNO	**Roman Nose**	**0.68**	**255**		Pg	12 35 16.3	+0.3
HUOR	**Husband**	**0.71**	**87**		Pg	12 35 16.2	-0.5
HUOR					Sg	12 35 26.3	+0.3
H04A	**Detroit Lake**	**0.76**	**38**		Pg	12 35 16.9	-0.6
H04A				IAML		12 35 27.9	
	comp=N,66nm,0.1s						
H04A				IAML		12 35 28.2	
	comp=E,59nm,0.1s						
DBO	**Dodson Butte**	**1.01**	**197**	Pg	Pg	12 35 21.7	-0.7
DBO				IAML		12 35 42.0	
	comp=N,41nm,4.0s						
DBO				IAML		12 35 45.1	
	comp=E,54nm,2.5s						
PINE	**Pine Mountain**	**1.40**	**102**		Pn	12 35 28.3	-0.3
PINE				IAML		12 35 36.0	
	comp=E,22nm,4.5s						
PINE				IAML		12 35 55.2	
	comp=N,31nm,4.8s						
HUMO	**Hull Mountain**	**1.48**	**184**	Pn	Pn	12 35 29.3	-0.2
KEBM	**Edson Butte**	**1.63**	**222**	Pn	Pn	12 35 31.3	-0.4
G06A	**Carlson Farm,**	**1.94**	**53**	Pn	Pn	12 35 35.1	-0.8
G06A				IAML		12 36 11.0	
	comp=E,17nm,4.3s						
G06A				IAML		12 36 16.3	
	comp=N,16nm,3.8s						
K05A	**Summer Lake**	**1.96**	**133**	Pn	Pn	12 35 35.8	-0.6
K05A				IAML		12 36 07.8	
	comp=N,19nm,4.6s						

*IDC **18** 12:57:30.4±5.8, 50.°39N×153.°57E, h219km±32km, mb3.3/8, mbtmp3.8/8, Error ellipse: s-maj=65.8km s-min=28.5km az=12.0*

*KRSC **18** 12:57:31.0±1.3, 49.°52N×155.°66E, h211km±13km, ML4.1*

ISC 18 12:57:28.4±1.4, 50.°00N±0.°2×154.°0E±0.°2, h209km, n18, σ1§94/22, mb3.5/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.49**	**63**	*e*P	**Pn**	**12 58 03.7**	**+1.0**
KDTR	**Khodutka, Kamc**	**3.12**	**53**	*e*P	**Pn**	**12 58 19.8**	**0.0**
KDTR				*e*S	**S**	**12 58 55.9**	**-3.8**
GRL	**Gorelyy**	**3.58**	**43**	*e*P	**Pn**	**12 58 28.1**	**+2.6**
MTVR	**Mutnovka**	**3.59**	**45**	*e*P	**Pn**	**12 58 27.9**	**+2.4**
MTVR				*e*S	**S**	**12 59 09.4**	**-0.6**
RUS	**Russkaya**	**3.71**	**48**	*e*P	**Pn**	**12 58 27.5**	**+0.7**
RUS				*e*S	**S**	**12 59 08.8**	**-3.6**
PETK	**Petropavlovsk-**	**3.85**	**35**	P	**Pn**	**12 58 29.6**	**+1.1**
	3.9nm,1.0s,baz=215,slow=12,SNR=6.9						
PETK				S	**S**	**12 59 16.8**	**+1.4**
	1.7nm,0.8s,baz=138,slow=13,SNR=2.0						
PET	**Petropavlovsk**	**4.17**	**42**	*e*P	**Pn**	**12 58 34.2**	**+1.8**
DALK	**Dalny**	**4.21**	**42**	*e*P	**Pn**	**12 58 34.4**	**+1.4**
KOK	**Koryaka**	**4.35**	**39**	*e*P	**Pn**	**12 58 37.2**	**+2.3**
SMAR	**Somma**	**4.40**	**41**	*e*P	**Pn**	**12 58 37.0**	**+1.4**
ILAR	**Eielson Array**	**33.65**	**42**	P	**P**	**13 03 48.9**	**0.0**
	0.6nm,0.6s,baz=268,slow=6.3,SNR=9.9						
	0.6nm,0.6s						
INK	**Inuvik**	**38.58**	**35**	P	**P**	**13 04 31.0**	**+0.5**
	0.5nm,0.4s,baz=292,slow=7.0,SNR=5.9						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**47.96**	**39**	P	**P**	**13 05 45.6**	**+0.2**
	1.1nm,0.7s,baz=296,slow=6.9,SNR=5.6						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**54.97**	**340**	P	**P**	**13 06 34.6**	**-2.7**
	1.4nm,0.9s,baz=34,slow=8.8,SNR=3.7						
	1.4nm,0.9s						
FINES	**FINESS Array B**	**61.35**	**334**	P	**P**	**13 07 19.7**	**-1.8**
	0.6nm,0.5s,baz=328,slow=4.9,SNR=3.7						
	0.6nm,0.5s						
PDAR	**Pinedale Array**	**62.35**	**56**	P	**P**	**13 07 30.0**	**+1.2**
	0.3nm,0.4s,baz=343,slow=4.6,SNR=4.6						
	0.3nm,0.4s						
SCHQ	**Schefferville**	**70.06**	**24**	P	**P**	**13 08 16.7**	**-0.6**
	2.4nm,0.8s,baz=309,slow=6.5,SNR=1.3						
	2.4nm,0.8s						
TXAR	**Lajitas Array**	**75.38**	**62**	P	**P**	**13 08 50.6**	**+1.6**
	0.3nm,0.4s,baz=297,slow=5.2,SNR=8.9						
	0.3nm,0.4s						

MAN 18 12:59:53.2, 9.°90N×124.°09E, h19km, mb4.3, ML3.1, MS2.8, 4C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABP	**Talibon, Bohol**	**0.30**	**51**⇑	*i*P	Pb	13 00 00.6	+0.6
TABP				*i* S	Sb	13 00 05.4	+0.8
TBP	**Tagbilaran**	**0.31**	**227**⇑	*i*P	Pb	13 00 00.7	+0.6
TBP				*i* S	Sb	13 00 05.6	+0.9
GHBP	**Garcia Hernand**	**0.35**	**140**⇓	*i*P	Pb	13 00 01.2	+0.2
GHBP				*i* S	Sb	13 00 06.5	+0.4
LLP	**Lapu-Lapu**	**0.43**	**343**⇓	*i*P	Pn	13 00 03.5	-0.9
LLP				*i* S	Sn	13 00 10.3	-1.5
MSLP	**Maasin**	**0.79**	**73**⇑	*e*P	Pg	13 00 08.9	+0.2
MSLP				*e*S	Sn	13 00 21.6	+1.0
LSIP	**Lazi, Siquijor**	**0.89**	**211**⇓	*i*P	Pg	13 00 10.6	0.0
LSIP				*i* S	Sn	13 00 23.1	0.0
CGP	**Cagayan de Oro**	**1.56**	**157**⇓	*e*P	Pn	13 00 19.4	-0.5
CGP				*e*S	Sb	13 00 40.8	+0.1
RCP	**Roxas**	**2.11**	**321**⇑	*e*P	Pb	13 00 30.5	-0.4

*NEIC **18** 13:03:38.4±1.3, 3.°8S±0.°1×140.°2E±0.°1, h35km±2km, mb4.3/8, Error ellipse: s-maj=23.4km s-min=17.2km az=25.0*

*DJA **18** 13:03:43.9±1.2, 3.°S±6.°×14.°0E±.°, h79km±10km, M4.7/4, mB5.8/1, MLv4.7/4, Mw(mB)5.3/1*

*IDC **18** 13:03:57.9±9.8, 4.°17S×140.°44E, h287km±122km, mb3.1/2, mbtmp4.1/3, Error ellipse: s-maj=161.6km s-min=38.2km az=96.0*

ISC 18 13:03:38.9±0.9, 3.°93S±0.°06×140.°19E±0.°09, h37km, n18, σ1§61/20, mb4.1/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.33**	**359**	P	**Pn**	**13 04 00.8**	**-0.1**
GENI				S	**Sn**	**13 04 16.0**	**-1.3**
SRPI	**Serui, Papua**	**4.45**	**297**	P	**Pn**	**13 04 45.3**	**+1.5**
SRPI				S	**Sn**	**13 05 33.2**	**-1.1**
RKPI	**Ransiki, Papua**	**6.47**	**292**	P	**Pn**	**13 05 14.1**	**+2.4**
FAKI	**Fak Fak**	**7.99**	**277**	Pn	**Pn**	**13 05 32.0**	**-0.5**
COEN	**Coen**	**10.39**	**164**	Pn	**Pn**	**13 06 07.7**	**+2.2**
MTN	**Manton Dam**	**12.60**	**225**		**Pn**	**13 06 36.4**	**+0.7**
KNRA	**Kununurra**	**16.21**	**223**	Pn	**Pn**	**13 07 24.1**	**+0.1**
WB0	**Warramunga Arr**	**16.73**	**199**	Pn	**Pn**	**13 07 30.7**	**+0.1**
WR0	**Warramunga Arr**	**16.86**	**199**	Pn	**Pn**	**13 07 32.5**	**+0.3**
WR0				IAmb	IAmb	13 07 36.4	
	comp=Z,14nm,0.5s						
WRAB	**Tennant Creek**	**16.90**	**199**	P	**P**	**13 07 34.0**	**-0.4**
WRAB				IAmb	IAmb	13 07 37.5	
	comp=Z,19nm,0.7s						
WB2	**Warramunga Arr**	**16.91**	**199**	Pn	**Pn**	**13 07 33.3**	**+0.5**
WRA	**Warramunga Arr**	**16.91**	**199**	P	**P**	**13 07 33.9**	**-0.6**
	comp=Z,9.5nm,0.7s,baz=26,slow=12,SNR=127						
WRA				S	**Sn**	**13 10 34.8**	**-5.0**
	comp=Z,1.6nm,0.7s,baz=20,slow=21,SNR=5.1						
AS31	**Alice Springs**	**20.54**	**197**	P	**P**	**13 08 13.9**	**-0.5**
ASAR	**Alice Springs**	**20.54**	**197**	P	**P**	**13 08 14.2**	**-0.1**
	comp=Z,3.7nm,0.5s,baz=28,slow=10,SNR=128						
	comp=Z,3.7nm,0.5s						
ASAR	**Alice Springs**	**20.54**	**197**	P	**P**	**13 08 13.8**	**-0.5**
EIDS	**Eidsvold**	**23.75**	**155**	P	**P**	**13 08 48.0**	**+0.1**
EIDS				IAmb	IAmb	13 09 16.4	
	comp=Z,8.7nm,1.2s						
PSA00	**Pilbara Seismi**	**26.42**	**227**	P	**P**	**13 09 11.7**	**-0.7**
PSA00				IAmb	IAmb	13 09 40.1	
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**71.65**	**322**	P	P	13 14 50.6	-6.3
	comp=Z,0.2nm,0.5s,baz=101,slow=7.0,SNR=1.4						
	comp=Z,0.2nm,0.5s						

*IDC **18** 13:08:22.3±0.7, 16.°67N×99.°76W, h0km, mb4.4/15, mbtmp4.4/20, ML3.2/4, MS3.9/53, Error ellipse: s-maj=21.3km s-min=11.7km az=50.0*

*MEX **18** 13:08:23.0±0.8, 16.°42N×100.°08W, h16km±5km, MD4.8*

*NEIC **18** 13:08:26.4±1.4, 16.°71N±0.°03×99.°79W±0.°04, h26km±5km, mb4.8/223, Md4.8/130(MEX), Error ellipse: s-maj=5.9km s-min=4.2km az=117.0*

*GCMT **18** 13:08:26.5±0.5, 16.°53N±0.°02×99.°58W±0.°04, h16km±1km, MW4.8/92, Moment Tensor Solution. s11,c12; s92,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.46±.14; $M_{\theta\theta}$-1.24±.09; $M_{\phi\phi}$-0.21±.08; $M_{r\theta}$1.41±.31; $M_{\theta\phi}$0.76±.06; $M_{\phi r}$1.42±.35; Best double couple: $M_0$2.37600×10^{16} NP1:ϕ_s76.00000°, δ70.00000°, λ60.00000°. NP2: ϕ_s316.00000°, δ36.00000°, λ145.00000°. Principal axes: T 2.8910, Plg54.0000°, Azm308.0000°; N -1.0230, Plg29.0000°, Azm87.0000°; P -1.8610, Plg20.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 13:08:22.9±1.1, 16.°52N±0.°03×99.°99W±0.°03, h15km±6km, n596, σ1§49/638, mb4.8/109, MS4.0/53, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.37**	**15**		**Pb**	**13 08 31.0**	**-0.1**
ACP2					**Sn**	**13 08 38.1**	**-2.4**
ACP2	**Acapulco**	**0.37**	**15**	*e*P	**Pb**	**13 08 31.0**	**-0.1**
ACP2				*e*S	**Sn**	**13 08 38.1**	**-2.4**
CAIG	**El Cayaco**	**0.59**	**333**		**Pg**	**13 08 33.3**	**-1.2**
CAIG					**Sg**	**13 08 41.6**	**-0.9**
CAIG	**El Cayaco**	**0.59**	**333**	*e*P	**Pg**	**13 08 33.3**	**-1.2**
CAIG				*e*S	**Sg**	**13 08 41.6**	**-0.9**
DAIG	**Los Arroyos**	**0.59**	**33**		**Pg**	**13 08 34.6**	**0.0**
DAIG					**Sb**	**13 08 43.7**	**+0.5**
DAIG	**Los Arroyos**	**0.59**	**33**	*e*P	**Pg**	**13 08 34.6**	**0.0**
DAIG				*e*S	**Sb**	**13 08 43.7**	**+0.5**
ATYC	**Atoyac**	**0.81**	**328**	*e*P	**Pb**	**13 08 36.6**	**-2.1**
ATYC				*e*S	**Sb**	**13 08 47.0**	**-2.4**
CRIG	**Cruz Grande**	**0.85**	**75**		**Pb**	**13 08 38.0**	**-1.4**
CRIG					**Sb**	**

THVM De Xico 2.94 19 *eP* **Pn 13 09 08.9 -0.4**
THVM *eS* **Sn 13 09 44.1 -0.3**
BJVM Benito Juarez 2.94 15 *eP* **Pn 13 09 10.6 +1.2**
BJVM *eS* **Sn 13 09 43.8 -0.8**
VRVM Mexico City 3.00 16 *eS* **Sn 13 09 44.9 -1.0**
APVM Azcapotzalco 3.04 14 *eP* **Pn 13 09 11.1 +0.3**
APVM *eS* **Sn 13 09 45.7 -1.3**
TXVM Universitario 3.07 19 *i* **Pb 13 09 19.3 +1.9**
TXVM *i S* **Sn 13 09 46.3 -1.4**
GMVM Gustavo A Made 3.07 16 *eP* **Pn 13 09 10.4 -0.7**
GMVM *eS* **Sn 13 09 45.8 -2.0**
OXIG Oaxaca 3.17 80 Pn 13 09 11.9 -0.5
OXIG **Sn 13 09 48.3 -1.6**
VHO Vista Hermosa 3.17 80 *eP* **Pn 13 09 11.9 -0.4**
VHO *eS* **Sn 13 09 48.3 -1.6**
PTVM Pico Tres Padr 3.17 15 Pn 13 09 10.7 -1.8
PTVM **Sn 13 09 51.9 +1.8**
PTVM Pico Tres Padr 3.17 15 *eP* **Pn 13 09 10.7 -1.8**
PTVM *eS* **Sn 13 09 51.9 +1.8**
OXBJ Oaxaca 3.17 80 Pb 13 09 17.2 -1.9
OXBJ **Sb 13 09 57.3 -0.4**
OXBJ Oaxaca 3.17 80 *eP* **Pb 13 09 17.2 -1.9**
OXBJ *eS* **Sb 13 09 57.3 -0.4**
OXLC Oaxaca 3.19 80 *eP* **Pb 13 09 20.6 +1.2**
OXLC *eS* **Sb 13 09 55.6 -2.6**
TOIG Toxpalan 3.20 60 Pn 13 09 11.8 -1.0
TOIG **Sn 13 09 48.5 -2.3**
TOIG Toxpalan 3.20 60 *eP* **Pn 13 09 11.8 -1.0**
TOIG *eS* **Sn 13 09 48.5 -2.3**
ATVM ATLACOMULCO 3.23 2 Pn 13 09 12.2 -1.1
ATVM **Sn 13 09 51.0 -0.6**
ATVM ATLACOMULCO 3.23 2 *eP* **Pn 13 09 12.2 -1.1**
ATVM *eS* **Sn 13 09 51.0 -0.6**
MOIG Morelia 3.34 340 Pn 13 09 15.4 +0.6
MOIG Morelia 3.34 340 *eP* **Pn 13 09 15.5 +0.6**
MOIG *eS* **Sn 13 09 51.5 -2.9**
ZUVM ZUMPANGO 3.40 15 Pn 13 09 16.6 +0.9
ZUVM **Sn 13 09 54.9 -1.0**
ZUVM ZUMPANGO 3.40 15 *eP* **Pn 13 09 16.6 +0.9**
ZUVM *eS* **Sn 13 09 54.9 -1.0**
VTVM Tizayuca 3.43 19 Pn 13 09 17.8 +1.7
VTVM **Sn 13 09 59.3 +2.6**
VTVM Tizayuca 3.43 19 *eP* **Pn 13 09 17.8 +1.7**
VTVM *eS* **Sn 13 09 59.3 +2.6**
ACIG Acambay 3.44 2 Pn 13 09 18.8 +2.7
ACIG **Sn 13 09 54.6 -2.1**
ACIG Acambay 3.44 2 *eP* **Pn 13 09 18.8 +2.7**
ACIG *eS* **Sn 13 09 54.6 -2.1**
OZST Orizaba 3.61 49 *e* **Pg 13 09 32.8 +0.6**
OZST *e* 13 10 03.2
MMIG Aquila 3.66 299 Sn 13 09 58.7 -3.1
MMIG Aquila 3.66 299 *eP* Pn 13 09 12.7 -6.3
MMIG *eS* **Sn 13 09 58.7 -3.1**
HUIG Huatulco 3.80 101 Pn 13 09 19.6 -1.3
HUIG **Sn 13 09 59.5 -5.9**
HUIG Huatulco 3.80 101 *eP* **Pn 13 09 19.6 -1.3**
HUIG *eS* **Sn 13 09 59.5 -5.9**
DHIG Demacu 3.87 13 Pn 13 09 23.0 +1.0
DHIG **Sn 13 10 04.7 -2.6**
DEIG Demacu 3.87 13 *eP* **Pn 13 09 23.0 +0.9**
DEIG *eS* **Sn 13 10 04.7 -2.6**
JAUV Jalcomulco 4.15 46 *eP* **Pn 13 09 23.9 -1.8**
JAUV *eS* **Sn 13 10 14.2 +0.3**
NEUV Arroyo Zacate 4.17 73 *eP* **Pn 13 09 25.3 -0.7**
NEUV *eS* **Sn 13 10 12.2 -2.4**
JRQG Juriquilla Cam 4.18 354 *e* **Pb 13 09 32.2 -4.1**
JRQG *eS* **Sn 13 19 12.2 -3.0**
CXUV Coxquihui 4.29 32 *eP* **Pn 13 09 25.8 -1.8**
CXUV *eS* **Sn 13 10 16.5 -0.9**
IGIG Irapuato, Guan 4.40 343 Pb 13 09 40.2 +0.2
IGIG Irapuato, Guan 4.40 343 *e* **Pb 13 09 40.2 +0.2**
LVIG Laguna Verde 4.66 46 *eP* **Pn 13 09 33.8 +1.2**
LVIG *eS* **Sn 13 10 32.2 +5.8**
CMIG Matias Romero 4.92 83 Pn **Pn 13 09 35.5 -0.8**
1.6nm,0.3s,baz=289,slow=11,SNR=13
CMIG Sn **Sn 13 10 31.3 -1.7**
4.8nm,0.3s,baz=319,slow=20,SNR=1.9
11nm,0.6s
CMIG Matias Romero 4.92 83 Pn 13 09 34.9 -1.4
CMIG **Sn 13 10 31.5 -1.5**
CMIG Matias Romero 4.92 83 *eP* **Pn 13 09 34.9 -1.4**
CMIG *eS* **Sn 13 10 31.5 -1.5**
RPIG Rio Verde 5.34 0 Pb 13 09 58.5 +2.5
RPIG Rio Verde 5.34 0 *e* **Pb 13 09 58.5 +2.5**
RPIG *e* 13 10 54.9
UXUV UXUV 5.65 81 *eP* **Pn 13 09 44.7 -1.6**
UXUV *eS* **Sn 13 10 47.3 -3.6**
CJM Chamela 5.65 302 *eP* **Pn 13 09 45.7 -0.6**
CJM *eS* **Sn 13 10 47.4 -3.6**
PCIG 6.56 96 Pn 13 09 58.6 -0.2
PCIG 6.56 96 *eP* **Pn 13 09 58.6 -0.2**
PATR El Naranjo 7.59 100 *eP* **Pn 13 10 13.9 +0.6**
PATR *i* 13 11 34.4
PAVE Pavencul 7.63 99 *eP* **Pn 13 10 10.8 -3.0**
PAVE *i* 13 11 37.1
CHUJ Union Juarez 7.72 99 *eP* **Pn 13 10 15.7 +0.7**
CHUJ *e* 13 11 35.5
APG El Apazote 9.29 98 Pn **Pn 13 10 36.9 +0.4**
0.2nm,0.3s,baz=315,slow=15,SNR=3.3
APG Lg Lg 13 13 13.8
0.7nm,0.3s,baz=233,slow=20,SNR=3.4
APG LR LR 13 14 22.0
comp=Z,1µm,18.0s,baz=284,slow=40
4.4nm,0.7s
ESQI Esquipulas 10.44 99 Pn **Pn 13 10 52.9 +0.6**
MTO3 Montecristo 10.46 100 Pn 13 10 53.4 +0.8
KVTX Kingsville 11.14 10 Pn **Pn 13 11 01.6 0.0**
HPIG 11.63 334 Pn 13 11 08.7 +0.2
TEIG Tepich 11.71 70 Pn **Pn 13 11 08.7 -0.8**
SLBS Sierra La Lagu 11.76 309 Pn 13 11 13.1 +2.9
833A Chaparral WMA, 11.76 3 P **Pn 13 11 10.2 0.0**
baz=182
LPIG La Paz 12.27 310 Pn **Pn 13 11 20.7 +3.6**
20nm,0.3s,baz=170,slow=6.1,SNR=1.9
LPIG LR LR 13 15 09.2
comp=Z,481nm,19.2s,baz=130,slow=33
TX31 Lajitas Ar. Si 13.20 346 Pn 13 11 27.9 -2.0
TXAR Lajitas Array 13.20 346 Pn **Pn 13 11 31.5 +1.6**
baz=155,slow=12,SNR=9.1
TXAR Lg Lg 13 15 19.2
baz=162,slow=24,SNR=1.4
2.1nm,1.1s
TXAR Lajitas Array 13.20 346 Pn **Pn 13 11 28.2 -1.7**
CNGN Cerro Negro 13.47 106 Pn **Pn 13 11 31.7 -1.9**
JCT Junction City 13.90 1 Pn 13 11 38.6 -0.8
JCT Junction City 13.90 1 P **Pn 13 11 39.6 +0.2**
baz=180
HKT Hockley 13.90 15 Pn **Pn 13 11 39.0 -0.3**
MATN Matagalpa 14.06 103 Pn 13 11 41.0 -0.8
435B Jarrell 14.37 8 P **Pn 13 11 45.9 +0.1**
baz=189
ORTG Ortega, Santa 15.39 112 Pn **Pn 13 12 00.5 +0.7**
ORTG IAmb IAmb 13 12 08.0
comp=Z,157nm,1.9s
WHTX Lake Whitney, 15.57 8 Pn **Pn 13 12 00.8 -1.1**
WHTX IAmb IAmb 13 12 08.4
comp=Z,81nm,1.2s
WHTX Lake Whitney, 15.57 8 P **Pn 13 12 02.2 +0.2**
baz=188,SNR=7.7
237A Washetta, Mont 15.88 13 P 13 12 08.0 -1.5
237A IAmb IAmb 13 12 11.5
comp=Z,98nm,1.1s
NATX Nacogdoches 15.93 17 Pn 13 12 07.5 +1.0
NATX IAmb IAmb 13 12 11.8
comp=Z,116nm,1.3s
NATX Nacogdoches 15.93 17 P **Pn 13 12 06.6 +0.1**
baz=198
HSIG 16.02 323 Pn **Pn 13 12 08.4 +0.8**
ABTX Abilene, Hawle 16.04 1 Pn **Pn 13 12 07.8 -0.1**
ABTX Abilene, Hawle 16.04 1 P **Pn 13 12 09.1 +1.1**
baz=181
CLNB Carlsbad 16.07 348 Pn **Pn 13 12 08.6 +0.2**
GDL2 Guadalupe Moun 16.11 347 Pn **Pn 13 12 07.1 -1.9**
CLN7 Carlsbad 7 16.20 348 Pn **Pn 13 12 10.7 +0.6**
HTMS Hat Mesa 16.22 349 Pn **Pn 13 12 08.0 -2.4**
319A Douglas 17.04 332 Pn 13 12 20.1 -0.6
344A Westbrook Farm 17.09 28 Pn **Pn 13 12 19.6 -1.7**
344A IAmb IAmb 13 12 23.5
comp=Z,128nm,1.8s
121A Cookes Peak, D 17.44 338 P **P 13 12 27.4 +0.5**
121A Cookes Peak, D 17.44 338 P **P 13 12 27.5 +0.5**
baz=154,SNR=7.8

MSTX Muleshoe 17.56 352 Pn **Pn 13 12 25.1 -2.1**
MSTX Muleshoe 17.56 352 P **P 13 12 28.1 -0.2**
baz=170
WMOK Wichita Mounta 18.18 3 P **Pn 13 12 32.0 -2.8**
WMOK Wichita Mounta 18.18 3 P **Pn 13 12 34.4 -0.4**
baz=183
WLAR White Oak Lake 18.18 19 P **Pn 13 12 32.1 -2.6**
WLAR IAmb IAmb 13 12 36.1
comp=Z,86nm,1.3s
AMTX Amarillo 18.35 356 P **Pn 13 12 36.6 -0.4**
baz=174
CRNM Carthage 18.39 342 P **P 13 12 36.6 -0.8**
X37A Clayton 18.46 12 P 13 12 36.6 -1.5
TUC Tucson 18.52 330 P **Pn 13 12 40.1 +1.1**
baz=145
BNM Barren Site 18.54 342 P **P 13 12 39.2 -0.1**
SBM South Baldy 18.55 341 P **P 13 12 38.3 -1.2**
LENM Lemitar 18.66 342 P **Pn 13 12 41.0 +0.1**
BRAL Brewton 18.75 37 P **P 13 12 39.7 -1.6**
baz=222
MIAR Mount Ida 18.85 17 P **P 13 12 40.3 -2.1**
MIAR Mount Ida 18.85 17 P **P 13 12 41.8 -0.5**
baz=199,SNR=6.6
ANMO Albuquerque 19.24 344 P **Pn 13 12 48.1 +0.2**
comp=Z,0.1nm,0.3s,baz=153,slow=16,SNR=8.4
ANMO Lg Lg 13 18 37.2
comp=Z,0.1nm,0.3s,baz=32,slow=19,SNR=5.8
ANMO LR LR 13 21 15.7
comp=Z,774nm,19.6s,baz=166,slow=40
comp=Z,9.8nm,1.2s
ANMO Albuquerque 19.24 344 P **P 13 12 47.0 +0.1**
ANMO Albuquerque 19.24 344 P **Pn 13 12 48.0 +0.1**
baz=160
214A Organ Pipe Nat 19.28 325 P **P 13 12 46.3 -0.9**
214A Organ Pipe Nat 19.28 325 P **Pn 13 12 49.2 +1.0**
baz=139,SNR=8.5
OK029 Liberty Lake 19.33 6 P **P 13 12 46.9 -0.7**
PIX Pinacate 19.35 323 P **Pn 13 12 49.1 +0.1**
OK031 S. Brethren Rd 19.56 8 P **P 13 12 49.4 -0.7**
PAYG Puerto Ayora 19.58 150 P **Pn 13 12 52.3 +0.4**
OK034 N. Norfolk Rd. 19.63 8 P **P 13 12 49.5 -1.4**
OK033 Mehan 19.64 7 P **P 13 12 50.1 -0.9**
Y45A Yeager Farm, C 19.67 27 P **P 13 12 50.0 -1.3**
Y45A IAmb IAmb 13 12 53.7
comp=Z,37nm,0.9s
TUL1 Leonard 19.67 10 P **P 13 12 50.0 -1.3**
TUL1 Leonard 19.67 10 P **P 13 12 50.8 -0.6**
baz=192
WHAR Wooly Hollow 19.92 19 P **P 13 12 52.7 -1.4**
WHAR IAmb IAmb 13 13 03.1
comp=Z,51nm,1.2s
OK044 Pawnee Station 19.98 8 P **P 13 12 53.9 -0.8**
OK044 IAmb IAmb 13 12 58.8
comp=Z,48nm,1.4s
OK046 Pawnee Station 19.99 7 P **P 13 12 53.8 -1.0**
OK048 Pawnee Station 20.00 7 P **P 13 12 54.4 -0.5**
X18A Snowflake 20.04 335 P **P 13 12 56.0 +0.4**
X18A IAmb IAmb 13 13 09.8
comp=Z,36nm,1.2s
LRAL Lakeview Retre 20.20 33 P **P 13 12 55.9 -1.2**
LRAL Lakeview Retre 20.20 33 P **P 13 12 56.4 -0.7**
baz=218,SNR=8.1
OXF Oxford 20.28 26 P **P 13 12 56.6 -1.3**
baz=210
HHAR Hobbs 20.41 14 P **P 13 12 58.1 -1.2**
113A Mohawk Valley, 20.42 325 P **P 13 13 00.6 +1.1**
113A IAmb IAmb 13 13 05.9
comp=Z,33nm,1.2s
U38A Gravette 20.46 13 P **P 13 12 58.6 -1.3**
U38A IAmb IAmb 13 13 06.2
comp=Z,33nm,1.2s
W18A Petrified Fore 20.47 337 P **P 13 13 00.8 +0.5**
W18A IAmb IAmb 13 13 07.5
comp=Z,41nm,0.9s
W18A Petrified Fore 20.47 337 P **P 13 13 00.8 +0.5**
baz=152
FCAR Ozark Folk Cen 20.52 18 P **P 13 12 58.9 -1.7**
T35A Sooner Cattle 20.55 8 P **P 13 12 59.5 -1.3**
T25A Trinidad 20.91 350 P **P 13 13 03.5 -1.5**
T25A Trinidad 20.91 350 P **P 13 13 05.5 +0.4**
baz=168,SNR=11
Y14A Wickenburg 20.93 328 P **P 13 13 05.6 +0.5**
LCAR Lake Charles 21.00 20 P **P 13 13 04.1 -1.6**
GLA Glamis 21.23 324 P **P 13 13 09.3 +1.0**
GLA Glamis 21.23 324 P **P 13 13 10.5 +2.2**
baz=137,SNR=14
X48A Hartselle 21.30 31 P **P 13 13 06.6 -2.5**
Z51A Franklin 21.41 36 P **P 13 13 08.2 -2.0**
Z51A IAmb IAmb 13 13 14.3
comp=Z,43nm,1.0s
WUAZ Wupatki 21.48 334 P **P 13 13 12.4 +1.3**
WUAZ IAmb IAmb 13 13 24.1
comp=Z,63nm,1.3s
WUAZ Wupatki 21.48 334 P **P 13 13 13.7 +2.6**
baz=148,SNR=25
BLYC Blythe 21.58 325 P **P 13 13 13.4 +1.4**
BLYC IAmb IAmb 13 13 15.6
comp=Z,50nm,1.2s
YUH Yuha Desert 21.58 321 P **P 13 13 13.7 +1.6**
YUH IAmb IAmb 13 13 24.2
comp=Z,59nm,1.7s
MGMO Mountain Grove 21.66 17 P **P 13 13 11.2 -1.7**
MGMO IAmb IAmb 13 13 25.9
comp=Z,58nm,1.9s
SDCO Great Sand Dun 21.70 348 P **P 13 13 13.5 0.0**
SDCO Great Sand Dun 21.70 348 P **P 13 13 14.3 +0.8**
baz=165,SNR=28
IKP In-Ko-Pah, Jac 21.70 321 P **P 13 13 15.3 +1.9**
baz=133
SWSC Sam W. Stewart 21.72 322 P **P 13 13 15.2 +1.6**
baz=135
PDMCI Parker Dam,Lak 21.80 327 P **P 13 13 16.0 +1.6**
baz=140,SNR=8.7
S39A Bolivar 21.89 14 P **P 13 13 14.4 -1.0**
S39A IAmb IAmb 13 13 20.3
comp=Z,29nm,1.1s
MVCO Mesa Verde 21.94 342 P **P 13 13 16.8 +0.6**
MVCO IAmb IAmb 13 13 20.9
comp=Z,48nm,1.3s
MVCO Mesa Verde 21.94 342 P **P 13 13 17.6 +1.5**
baz=157,SNR=20
S22A 4UR Ranch, Cre 21.99 345 P **P 13 13 17.4 +0.7**
S22A 4UR Ranch, Cre 21.99 345 P **P 13 13 18.0 +1.3**
baz=162,SNR=18
BC3 Big Chuckawall 22.03 324 P **P 13 13 18.7 +1.8**
baz=136,SNR=13
MONP2 Monument Peak 22.06 321 P **P 13 13 19.1 +1.7**
baz=133
FPAL Fort Paine 22.10 33 P **P 13 13 16.8 -0.8**
CBKS Cedar Bluff 22.21 1 P **P 13 13 18.1 -0.7**
CBKS IAmb IAmb 13 13 20.1
comp=Z,41nm,1.5s
CBKS Cedar Bluff 22.21 1 P **P 13 13 19.0 +0.2**
baz=180
IRM Iron Mountain 22.23 325 P **P 13 13 21.0 +2.0**
baz=138,SNR=24
WVT Waverly 22.33 27 P **P 13 13 19.8 -0.2**
baz=212
NEE2 Needles Airpor 22.41 327 P **P 13 13 22.9 +2.0**
baz=140
Y52A Lilburn 22.44 37 P **P 13 13 19.6 -1.7**
Y52A IAmb IAmb 13 13 23.7
comp=Z,51nm,1.1s
SWET Sewanee 22.46 31 P **P 13 13 19.3 -2.2**
GOGA Godfrey 22.47 38 P **P 13 13 19.4 -2.1**
GOGA Godfrey 22.47 38 P **P 13 13 20.8 -0.7**
baz=225,SNR=11
KSCO Kaye Shedlock' 22.53 355 P **P 13 13 21.9 -0.4**
KSCO IAmb IAmb 13 13 30.5
comp=Z,26nm,1.1s
KSCO Kaye Shedlock' 22.53 355 P **P 13 13 23.0 +0.7**
baz=173
TPFO Pinon Flats 22.57 322 P **P 13 13 24.5 +1.6**
baz=134
PFO Pinyon Flats O 22.58 322 P **P 13 13 25.2 +2.3**
comp=Z,4.6nm,0.9s,baz=127,slow=11,SNR=4.1
PFO LR LR 13 22 07.1
comp=Z,258nm,19.5s,baz=134,slow=36
comp=Z,4.6nm,0.9s
PFO Pinyon Flats O 22.58 322 P **P 13 13 23.3 +0.4**
PFO IAmb IAmb 13 13 34.0
comp=Z,36nm,1.4s
PFO Pinyon Flats O 22.58 322 P **P 13 13 24.5 +1.6**
baz=134
BELC Belle Mtn. Jos 22.59 323 P **P 13 13 24.6 +1.6**
baz=136,SNR=10

KSU1 Kansas State U 22.69 7 P **P 13 13 24.5 +0.6**
baz=188
R40A Maddies Statio 22.73 16 P **P 13 13 21.8 -2.5**
R40A IAmb IAmb 13 13 30.7
comp=Z,27nm,1.2s
W50A Signal Mountai 22.76 32 P **P 13 13 22.1 -2.6**
W50A IAmb IAmb 13 13 32.2
comp=Z,21nm,1.0s
CCM Cathedral Cave 22.79 18 P **P 13 13 25.4 +0.4**
baz=202
Q24A Divide 22.81 350 P **P 13 13 26.5 +0.9**
baz=167
PV13 Radium Mtn., P 22.91 342 P **P 13 13 26.8 +0.2**
GMRC Granite Mounta 22.98 325 P **P 13 13 29.3 +2.3**
baz=138,SNR=8.0
PV15 Paradox Valley 22.99 343 P **P 13 13 27.2 -0.1**
PV15 IAmb IAmb 13 13 30.8
comp=Z,25nm,1.2s
MURC Murrieta 23.01 321 P **P 13 13 29.7 +2.4**
baz=133
PV07 Paradox Valley 23.12 342 P **P 13 13 28.9 +0.3**
PV07 IAmb IAmb 13 13 31.9
comp=Z,26nm,1.1s
PV10 Paradox Valley 23.18 342 P **P 13 13 28.6 -0.7**
PV10 IAmb IAmb 13 13 31.3
comp=Z,29nm,1.2s
PV23 Carpenter Ridg 23.24 342 P **P 13 13 30.3 +0.4**
PV23 IAmb IAmb 13 13 32.6
comp=Z,34nm,1.2s
T47A Sharon Grove 23.36 27 P **P 13 13 29.7 -1.1**
KNB Kanab 23.36 333 P **P 13 13 31.3 +0.2**
CPCT Cooper Cave 23.37 33 P **P 13 13 29.7 -1.2**
HEC Hector,Ludlow 23.38 324 P **P 13 13 33.2 +2.1**
baz=137,SNR=5.9
SMCO Snowmass 23.39 346 P **P 13 13 31.7 +0.2**
SMCO IAmb IAmb 13 13 38.6
comp=Z,36nm,1.2s
W52A Murphy 23.42 35 P **P 13 13 30.2 -1.2**
PKCU Pink Cliffs 23.51 335 P **P 13 13 32.9 +0.2**
U49A Red Boiling Sp 23.57 30 P **P 13 13 31.5 -1.4**
TUQ Turquoise Moun 23.61 326 P **P 13 13 35.4 +2.0**
baz=138,SNR=19
V51A Loudon 23.73 33 P **P 13 13 33.6 -0.8**
V51A IAmb IAmb 13 13 35.8
comp=Z,27nm,1.1s
HODGE Hodges 23.76 39 P **P 13 13 34.4 -0.3**
HODGE IAmb IAmb 13 13 36.3
comp=Z,49nm,1.2s
BG3 Lake Jocassee 23.90 36 P **P 13 13 35.9 -0.2**
TKL Tuckaleechee C 23.92 34 P **P 13 13 34.6 -1.7**
comp=Z,25nm,1.0s,baz=200,slow=11,SNR=15
TKL LR LR 13 23 45.4
comp=Z,92nm,21.0s,baz=211,slow=39
comp=Z,25nm,1.0s
TKL Tuckaleechee C 23.92 34 P **P 13 13 35.0 -1.3**
TKL IAmb IAmb 13 13 37.8
comp=Z,52nm,1.2s
P40A Paris 23.95 15 P **P 13 13 34.9 -1.6**
GSC Goldstone, Bar 23.99 324 P **P 13 13 39.2 +2.2**
baz=136
SHPR Sheep Range 24.03 329 P **P 13 13 38.0 +0.5**
CCUT Cedar City 24.05 333 P **P 13 13 38.5 +0.8**
V52A Sevierville 24.16 34 P **P 13 13 37.1 -1.4**
V52A IAmb IAmb 13 13 39.9
comp=Z,36nm,1.1s
Q44A Meyer Farm, Va 24.28 21 P **P 13 13 38.8 -0.7**
Q44A IAmb IAmb 13 13 43.9
comp=Z,40nm,1.4s
SRU San Rafael Swe 24.32 340 P **P 13 13 40.9 +0.7**
Q16A Castle Valley 24.37 338 P **P 13 13 41.0 +0.4**
Q16A IAmb IAmb 13 13 56.0
comp=Z,74nm,1.8s
EDW2 Edwards Air Fo 24.37 322 P **P 13 13 42.7 +2.1**
baz=134
MSU Marysvale 24.38 336 P **P 13 13 40.6 -0.2**
MVU Marysvale 24.39 336 P **P 13 13 41.4 +0.5**
JSC Jenkinsville 24.40 40 P **P 13 13 39.8 -0.9**
JSC IAmb IAmb 13 13 42.4
comp=Z,36nm,1.1s
OGNE Ogallala 24.41 356 P **P 13 13 41.7 +0.9**
baz=175
T50A Nancy 24.43 30 P **P 13 13 40.2 -0.8**
T50A IAmb IAmb 13 13 41.7
comp=Z,24nm,1.0s
V53A Saluda 24.46 36 P **P 13 13 41.1 -0.2**
V53A IAmb IAmb 13 13 49.6
comp=Z,31nm,1.0s
QSM Queen of Sheba 24.51 325 P **P 13 13 43.4 +1.6**
QSM IAmb IAmb 13 13 51.8
comp=Z,59nm,1.8s
GWY Greenwater Val 24.57 326 P **P 13 13 43.6 +1.1**
GWY IAmb IAmb 13 13 51.4
comp=Z,21nm,1.2s
TCRU Three Creeks R 24.57 336 P **P 13 13 43.9 +1.3**
O20A White River Ci 24.60 345 P **P 13 13 44.1 +1.4**
baz=160,SNR=9.7
LRMC Laurel Mtn Rad 24.61 323 P **P 13 13 44.4 +1.6**
baz=135
PRN Pahroc Range 24.70 330 P **P 13 13 44.8 +1.2**
PRN IAmb IAmb 13 13 47.9
comp=Z,42nm,1.5s
P18A Preston Nutter 24.70 341 P **P 13 13 44.4 +0.6**
P18A IAmb IAmb 13 13 58.9
comp=Z,31nm,1.3s
TZTN Tazewell 24.71 33 P **P 13 13 42.9 -0.7**
TZTN IAmb IAmb 13 13 45.9
comp=Z,32nm,1.1s
TZTN Tazewell 24.71 33 P **P 13 13 43.8 +0.2**
baz=220,SNR=8.0
P17A Butcher Ranch, 24.72 340 P **P 13 13 44.4 +0.6**
TMUT Trail Mountain 24.72 339 P **P 13 13 44.8 +0.8**
WCI Wyandotte Cave 24.75 26 P **P 13 13 44.0 +0.2**
WCI IAmb IAmb 13 13 47.0
comp=Z,41nm,1.2s
WCI Wyandotte Cave 24.75 26 P **P 13 13 43.9 0.0**
baz=213
SCZ2 Santa Cruz Isl 24.79 318 P **P 13 13 46.4 +2.0**
baz=129
N23A Red Feather La 24.83 349 P **P 13 13 45.8 +0.9**
baz=166,SNR=17
BGNE Belgrade 24.85 3 P **P 13 13 44.9 +0.2**
BGNE Belgrade 24.85 3 P **P 13 13 45.2 +0.4**
baz=184
FURC Furnace Creek, 24.88 326 P **P 13 13 47.3 +2.3**
baz=138
N38A Joes South For 24.89 12 P **P 13 13 44.5 -0.5**
MPMC Manual Prospec 24.92 325 P **P 13 13 47.2 +1.5**
baz=136,SNR=13
TPNV Topopah Spring 24.93 328 P **P 13 13 47.0 +1.3**
TPNV Topopah Spring 24.93 328 P **P 13 13 47.7 +2.1**
baz=140,SNR=20
KMSC Kings Mountain 24.94 38 P **P 13 13 45.1 -0.4**
baz=226,SNR=15
WCT Wildcat Mounta 25.00 327 P **P 13 13 47.7 +1.4**
WCT IAmb IAmb 13 13 51.0
comp=Z,24nm,1.3s
ARVC Arvin 25.04 321 P **P 13 13 49.0 +2.5**
baz=132
PSUT Pine Spring 25.08 334 P **P 13 13 47.5 +0.4**
PSUT IAmb IAmb 13 13 57.8
comp=Z,36nm,1.9s
BIRD Birdtown, Kers 25.14 40 P **P 13 13 46.9 -0.5**
PHWY Pilot Hill 25.14 350 P **P 13 13 47.4 -0.3**
PHWY IAmb IAmb 13 13 50.1
comp=Z,23nm,1.2s
ISA Isabella, Lake 25.20 323 P **P 13 13 50.3 +2.3**
baz=134
S11A Rachel 25.22 330 P **P 13 13 49.5 +1.2**
RDMU Red Mountain 25.37 343 P **P 13 13 50.2 +0.5**
RDMU IAmb IAmb 13 13 53.3
comp=Z,28nm,1.1s
N41A Harden Midland 25.37 16 P **P 13 13 49.0 -0.4**
V55A Taylorsville 25.50 37 P **P 13 13 49.9 -0.8**
MPU Maple Canyon 25.51 339 P **P 13 13 51.6 +0.7**
MPU IAmb IAmb 13 14 02.4
comp=Z,24nm,1.2s
CWC Cottonwood Cre 25.53 324 P **P 13 13 53.0 +1.9**
baz=136
S51A Beattyville 25.53 31 P **P 13 13 50.2 -0.7**
S51A IAmb IAmb 13 13 53.5
comp=Z,37nm,1.1s
NLU North Lily Min 25.61 338 P **P 13 13 53.0 +1.1**
NLU IAmb IAmb 13 14 00.5
comp=Z,30nm,1.3s
U54A Nelsons Funny 25.63 36 P **P 13 13 50.9 -1.0**

R50A **Paris** **25.68 29** P **P** **13 13 51.5 -0.8**
R50A IAmb IAmb 13 13 53.8
comp=Z,22nm,1.3s
VES **Vestal, Richgr** **25.68 322** P **P** **13 13 54.9 +2.6**
baz=133
HDIL **Hopedale** **25.68 19** P **P** **13 13 52.5 +0.2**
baz=204
R11A **Troy Canyon, C** **25.70 331** P **P** **13 13 54.2 +1.5**
R11A **Troy Canyon, C** **25.70 331** P **P** **13 13 54.9 +2.2**
baz=143,SNR=23
GMN **Gold Mountain** **25.72 327** P **P** **13 13 54.4 +1.5**
GMN IAmb IAmb 13 14 03.6
comp=Z,32nm,1.4s
W57A **Gilead** **25.76 40** P **P** **13 13 53.3 +0.3**
LCH **Last Change Ra** **25.87 326** P **P** **13 13 55.6 +1.4**
LCH IAmb IAmb 13 14 11.4
comp=Z,43nm,1.8s
SMMC **Simmler** **25.87 320** P **P** **13 13 56.2 +2.1**
baz=131
MZP **Montezuma Peak** **26.08 327** P **P** **13 13 58.0 +1.7**
DUG **Dugway, Tooele** **26.09 337** P **P** **13 13 56.7 +0.6**
DUG IAmb IAmb 13 14 14.2
comp=Z,17nm,1.1s
DUG **Dugway, Tooele** **26.09 337** P **P** **13 13 58.2 +2.0**
baz=151,SNR=11
TCUT **Toone Canyon** **26.43 340** P **P** **13 13 60.0 +0.7**
TCUT IAmb IAmb 13 14 02.4
comp=Z,41nm,1.2s
P49A **Miami Univ. Ec** **26.52 27** P **P** **13 13 58.6 -1.3**
P49A IAmb IAmb 13 14 02.1
comp=Z,48nm,1.3s
P49A **Miami Univ. Ec** **26.52 27** P **P** **13 13 59.6 -0.3**
baz=214
K22A **Casper** **26.64 349** P **P** **13 14 00.4 -0.7**
K22A IAmb IAmb 13 14 37.6
comp=Z,40nm,1.6s
K22A **Casper** **26.64 349** P **P** **13 14 02.4 +1.3**
baz=166
Q51A **Peebles** **26.74 30** P **P** **13 14 00.2 -1.6**
Q51A IAmb IAmb 13 14 03.1
comp=Z,13nm,0.8s
BGU **Big Grassy Mou** **26.81 338** P **P** **13 14 03.1 +0.5**
S54A **Dingess, Beckl** **26.83 34** P **P** **13 14 01.9 -0.9**
S54A IAmb IAmb 13 14 04.2
comp=Z,40nm,1.2s
M44A **Midewin, Midew** **26.84 20** P **P** **13 14 00.9 -1.8**
M44A IAmb IAmb 13 14 08.6
comp=Z,26nm,1.1s
L42A **Oliver, Polo** **26.90 17** P **P** **13 14 02.2 -1.0**
L42A IAmb IAmb 13 14 03.6
comp=Z,27nm,0.9s
BLA **Blacksburg** **26.91 36** P **P** **13 14 03.1 -0.3**
BLA **Blacksburg** **26.91 36** P **P** **13 14 03.2 -0.2**
baz=225,SNR=7.3
HWUT **Hardware Ranch** **26.92 341** P **P** **13 14 04.1 +0.5**
HWUT IAmb IAmb 13 14 06.5
comp=Z,24nm,1.1s
SPUT **South Promonto** **26.94 339** P **P** **13 14 04.8 +0.9**
SPUT IAmb IAmb 13 14 07.9
comp=Z,19nm,1.1s
NV11 **Mina Array Sit** **27.04 327** P **P** **13 14 05.7 +1.0**
NV11 IAmb IAmb 13 14 15.1
comp=Z,31nm,1.4s
LHV **Little Huntoon** **27.08 327** P **P** **13 14 05.2 +0.3**
LHV IAmb IAmb 13 14 22.6
comp=Z,25nm,1.4s
NVAR **Mina Array Bea** **27.11 327** P **P** **13 14 08.0 +2.6**
comp=Z,6.1nm,1.0s,baz=155,slow=9.3,SNR=24
NVAR PcP **PcP** **13 17 27.9 +1.7**
comp=Z,1.1nm,0.8s,baz=160,slow=4.7,SNR=3.6
comp=Z,6.1nm,1.0s
Q52A **Bidwell** **27.21 31** P **P** **13 14 04.7 -1.4**
Q52A IAmb IAmb 13 14 07.2
comp=Z,30nm,1.1s
P51A **Williamsport** **27.23 30** P **P** **13 14 05.2 -1.1**
P51A IAmb IAmb 13 14 08.5
comp=Z,23nm,1.0s
ECSD **EROS Data Cent** **27.28 5** P **P** **13 14 06.3 -0.3**
ECSD IAmb IAmb 13 14 08.5
comp=Z,21nm,1.1s
ECSD **EROS Data Cent** **27.28 5** P **P** **13 14 07.0 +0.3**
baz=187,SNR=12
PD31 **Pinedale Array** **27.41 345** P **P** **13 14 08.2 +0.1**
PD31 IAmb IAmb 13 14 10.5
comp=Z,17nm,1.1s
PDAR **Pinedale Array** **27.41 345** P **P** **13 14 09.2 +1.1**
comp=Z,10.0nm,1.0s,baz=147,slow=8.9,SNR=43
PDAR LR LR 13 26 27.7
comp=Z,652nm,21.1s,baz=178,slow=40
comp=Z,10.0nm,1.0s
PDAR **Pinedale Array** **27.41 345** P **P** **13 14 08.2 +0.1**
BW06 **Boulder Array** **27.41 345** P **P** **13 14 08.7 +0.6**
BW06 IAmb IAmb 13 14 10.5
comp=Z,19nm,1.1s
BW06 **Boulder Array** **27.41 345** P **P** **13 14 08.8 +0.7**
baz=159,SNR=17
HVU **Hansel Valley** **27.47 339** P **P** **13 14 09.5 +0.9**
KVN **Kaiserville** **27.48 328** P **P** **13 14 10.4 +1.7**
KVN IAmb IAmb 13 14 18.8
comp=Z,25nm,1.4s
ELK **Elko** **27.52 334** P **P** **13 14 11.1 +2.0**
comp=Z,1.4nm,0.9s,baz=189,slow=8.4,SNR=5.4
ELK Lg Lg 13 22 55.6
baz=144,slow=19,SNR=1.5
ELK LR LR 13 27 26.8
comp=Z,244nm,19.6s,baz=161,slow=42
comp=Z,1.4nm,0.9s
RSSD **Black Hills** **27.73 354** P **P** **13 14 10.3 -0.6**
RSSD **Black Hills** **27.73 354** P **P** **13 14 11.4 +0.5**
baz=171
P52A **Corning** **27.80 31** P **P** **13 14 10.8 -0.5**
baz=219
ACSO **Alum Creek Sta** **27.86 29** P **P** **13 14 11.5 -0.4**
baz=217
YERR **Yerington** **28.01 327** P **P** **13 14 15.0 +1.5**
YERR IAmb IAmb 13 14 23.7
comp=Z,35nm,1.5s
S57A **Dark Hollow, R** **28.13 37** P **P** **13 14 12.6 -1.7**
BMN **Battle Mountai** **28.13 331** P **P** **13 14 15.8 +1.3**
REDW **Red Top Meadow** **28.31 343** P **P** **13 14 16.0 -0.2**
REDW IAmb IAmb 13 14 36.4
comp=Z,22nm,1.4s
O52A **Adamsville** **28.31 30** P **P** **13 14 14.5 -1.5**
O52A IAmb IAmb 13 14 22.0
comp=Z,40nm,1.4s
SNOW **Snow King Moun** **28.38 343** P **P** **13 14 17.2 +0.4**
SNOW IAmb IAmb 13 14 40.5
comp=Z,22nm,1.3s
LOHW **Long Hollow** **28.47 344** P **P** **13 14 18.4 +0.8**
FXWY **Fox Creek** **28.61 343** P **P** **13 14 18.9 0.0**
IMW **Indian Meadow** **28.83 343** P **P** **13 14 20.8 0.0**
MCWV **Mont Chateau** **28.97 33** P **P** **13 14 21.6 -0.2**
baz=223
BEKR **Beckworth** **29.25 327** P **P** **13 14 25.1 +0.6**
BEKR IAmb IAmb 13 14 34.6
comp=Z,17nm,1.4s
SPMN **Marine on St.** **29.25 10** P **P** **13 14 24.6 +0.5**
baz=194
N53A **Lisbon** **29.33 31** P **P** **13 14 24.4 -0.6**
N53A IAmb IAmb 13 14 25.5
comp=Z,20nm,1.1s
YMR **Madison River** **29.55 344** P **P** **13 14 27.1 -0.1**
YMR IAmb IAmb 13 14 37.0
comp=Z,15nm,1.3s
RLMT **Red Lodge** **29.56 347** P **P** **13 14 28.2 +0.9**
baz=161
SDV **Santo Domingo** **29.59 101** P **P** **13 14 29.1 +1.3**
comp=Z,3.2nm,0.3s,baz=353,slow=8.1,SNR=1.7
SDV LR LR 13 26 04.6
comp=Z,199nm,21.1s,baz=327,slow=36
comp=Z,3.2nm,0.3s
HLID **Hailey** **29.61 339** P **P** **13 14 28.5 +0.8**
HLID **Hailey** **29.61 339** P **P** **13 14 28.9 +1.2**
baz=151,SNR=12
YHH **Holmes Hill** **29.63 344** P **P** **13 14 28.7 +0.7**
BCYI **Bear Canyon** **29.94 341** P **P** **13 14 31.2 +0.6**
E28A **Huff** **29.97 359** P **P** **13 14 29.9 -0.7**
MFID **Camas Ranch** **30.01 337** P **P** **13 14 31.9 +0.8**
MFID IAmb IAmb 13 14 39.5
comp=Z,21nm,1.3s
MCMT **McKenzie Canyo** **30.23 342** P **P** **13 14 34.2 +1.0**
WVOR **Wild Horse Val** **30.36 332** P **P** **13 14 35.0 +0.7**
WVOR IAmb IAmb 13 14 43.7
comp=Z,14nm,1.3s
LAO **LASA Array** **30.53 352** P **P** **13 14 34.8 -0.8**
LAO IAmb IAmb 13 14 37.4
comp=Z,22nm,1.1s
LAO **LASA Array** **30.53 352** P **P** **13 14 36.1 +0.5**
baz=168,SNR=5.6
BOZ **Bozeman (W)** **30.59 344** P **P** **13 14 37.6 +1.4**
baz=157,SNR=11
SSPA **Standing Stone** **30.72 34** P **P** **13 14 37.0 -0.3**
SSPA IAmb IAmb 13 14 39.0
comp=Z,28nm,1.2s
SSPA **Standing Stone** **30.72 34** P **P** **13 14 37.2 0.0**
baz=225
LRM **Limekiln Ridge** **31.02 343** P **P** **13 14 41.0 +0.8**
J08A **Circle Bar Ran** **31.03 333** P **P** **13 14 40.9 +0.7**
J08A IAmb IAmb 13 14 43.4
comp=Z,21nm,1.1s
MDND **Maddock** **31.24 0** P **P** **13 14 41.9 +0.1**
baz=180,SNR=5.4
PLID **Pearl Lake** **31.50 338** P **P** **13 14 45.1 +0.7**
PLID IAmb IAmb 13 14 59.3
comp=Z,27nm,1.4s
HRY **Holter Researc** **31.67 344** P **P** **13 14 46.4 +0.6**
ATAH **Atahualpa** **31.76 136** LR LR 13 25 11.2
comp=Z,221nm,18.4s,baz=326,slow=32
YBH **Yreka Blue Hor** **31.83 327** LR LR 13 28 56.0
comp=Z,124nm,20.7s,baz=154,slow=39
AGMN **Agassiz Nation** **31.87 5** P **P** **13 14 47.4 0.0**
baz=187,SNR=7.1
BAUV **El Baul** **32.02 100** P **P** **13 14 48.0 -1.1**
BAUV IAmb IAmb 13 15 09.0
comp=Z,25nm,1.3s
DGMT **Dagmar** **32.05 355** P **P** **13 14 48.9 -0.1**
DGMT **Dagmar** **32.05 355** P **P** **13 14 49.7 +0.8**
baz=172,SNR=5.8
B35A **Bob, Littlefor** **32.17 8** P **P** **13 14 49.6 -0.3**
B35A IAmb IAmb 13 14 51.1
comp=Z,14nm,1.0s
SJG **San Juan** **32.32 82** LR LR 13 29 31.9
comp=Z,127nm,18.7s,baz=264,slow=40
MSO **Missoula** **32.37 342** P **P** **13 14 52.9 +1.1**
baz=154,SNR=5.8
EGMT **Eagleton** **32.43 348** P **P** **13 14 53.8 +1.5**
baz=162,SNR=5.8
G08A **Pilot Rock** **32.81 335** P **P** **13 14 56.1 +0.4**
BINY **Binghamton** **32.83 34** P **P** **13 14 55.2 -0.7**
BINY IAmb IAmb 13 14 57.6
comp=Z,16nm,1.0s
BINY **Binghamton** **32.83 34** P **P** **13 14 55.0 -0.9**
baz=226
TRNY **Table Rock, Ra** **33.11 37** P **P** **13 14 57.3 -1.0**
SADO **Sadowa** **33.19 28** LR LR 13 29 52.8
comp=Z,151nm,19.9s,baz=176,slow=39
PAL **Palisades** **33.20 37** P **P** **13 14 58.9 -0.2**
baz=230
JTMT **Jette** **33.30 342** P **P** **13 15 00.5 +0.5**
JTMT IAmb IAmb 13 15 02.3
comp=Z,18nm,1.2s
L59A **Walton** **33.34 35** P **P** **13 14 59.0 -1.3**
J57A **Williamstown** **33.68 32** P **P** **13 15 02.2 -0.9**
H04A **Detroit Lake** **33.74 331** P **P** **13 15 04.6 +0.8**
ULM **Lac du Bonnet** **33.81 5** P **P** **13 15 03.9 -0.4**
comp=Z,16nm,1.0s,baz=205,slow=7.7,SNR=6.5
comp=Z,16nm,1.0s
ULM **Lac du Bonnet** **33.81 5** P **P** **13 15 03.3 -0.9**
HOOD **Mount Hood Mea** **33.98 332** P **P** **13 15 06.7 +0.7**
WALA **Waterton Lakes** **34.38 344** P **P** **13 15 09.7 +0.3**
WALA IAmb IAmb 13 15 12.2
comp=Z,15nm,1.1s
J59A **Piesco** **34.49 34** P **P** **13 15 09.7 -0.7**
NEW **Newport** **34.64 340** LR LR 13 30 16.1
comp=Z,295nm,19.4s,baz=164,slow=38
NEW **Newport** **34.64 340** P **P** **13 15 13.0 +1.4**
baz=150
L61B **Northampton** **34.83 36** P **P** **13 15 12.3 -0.9**
baz=230
LTY **Liberty** **35.10 335** P **P** **13 15 16.2 +0.6**
LONY **Lake Ozonia** **35.25 32** P **P** **13 15 16.5 -0.4**
LONY **Lake Ozonia** **35.25 32** P **P** **13 15 16.8 -0.1**
baz=225
B08A **Colville Reser** **35.49 338** P **P** **13 15 18.9 0.0**
B08A IAmb IAmb 13 15 27.1
comp=Z,28nm,1.7s
NNA **Nana** **36.42 140** LR LR 13 27 11.3
comp=Z,204nm,19.8s,baz=329,slow=31
G62A **West of Eustis** **37.79 35** P **P** **13 15 38.8 +0.3**
EDM **Edmonton** **38.10 347** P **P** **13 15 41.1 +0.1**
FFC **Flin Flon** **38.16 358** P **P** **13 15 40.8 -0.7**
PKME **Peaks-Kenny Pk** **38.50 35** P **P** **13 15 44.3 -0.2**
baz=232
D62A **Allapoint, All** **39.77 33** P **P** **13 15 54.9 -0.2**
BBB **Bella Bella** **41.97 334** LR LR 13 34 07.3
comp=Z,144nm,18.9s,baz=144,slow=37
HILA **High Level** **43.83 347** P **P** **13 16 28.2 +0.1**
RPN **Rapa Nui** **44.32 192** LR LR 13 30 33.2
comp=Z,240nm,21.2s,baz=52,slow=30
LPAZ **La Paz** **45.28 134** P **P** **13 16 42.3 +1.4**
comp=Z,1.0nm,0.7s,baz=266,slow=5.6,SNR=5.0
LPAZ LR LR 13 33 55.0
comp=Z,164nm,18.3s,baz=306,slow=34
comp=Z,1.0nm,0.7s
LPAZ **La Paz** **45.28 134** P **P** **13 16 41.4 +0.5**
SCHQ **Schefferville** **45.96 26** P **P** **13 16 44.5 -0.7**
comp=Z,16nm,1.0s,baz=246,slow=6.1,SNR=6.0
SCHQ LR LR 13 37 20.6
comp=Z,110nm,20.2s,baz=204,slow=38
comp=Z,16nm,1.0s
SCHQ **Schefferville** **45.96 26** P **P** **13 16 44.7 -0.4**
T35M **Bob Quinn** **46.36 338** P **P** **13 16 49.6 +1.3**
baz=138
CRAG **Craig** **46.39 335** P **P** **13 16 50.4 +1.9**
baz=133
TAOE **Nuku Hiva Isla** **47.06 241** *e*S **S** **13 23 49.6 +3.4**
comp=Z,20nm,19.1s
TAOE *e*LR LR 13 30 10.3
comp=Z,50nm,18.4s
YKA **Yellowknife Ar** **47.06 351** P **P** **13 16 53.5 -0.1**
comp=Z,5.3nm,0.9s,baz=162,slow=7.8,SNR=11
YKA LR LR 13 37 46.8
comp=Z,311nm,19.0s,baz=179,slow=38
comp=Z,5.3nm,0.9s
S34M **Telegraph Cree** **47.38 338** P **P** **13 16 57.8 +1.6**
baz=137
DLBC **Dease Lake** **47.38 339** LR LR 13 37 23.4
comp=Z,414nm,21.3s,baz=132,slow=37
DLBC **Dease Lake** **47.38 339** P **P** **13 16 57.9 +1.6**
baz=139
MDP **Montagnes des** **47.75 98** LR LR 13 38 48.9
comp=Z,46nm,20.5s,baz=279,slow=38
R33M **Jennings River** **48.43 339** P **P** **13 17 06.4 +1.9**
baz=138
Q32M **Nakina River** **48.55 338** P **P** **13 17 06.9 +1.4**
baz=137
TGTN **Hyland Airport** **49.24 343** P **P** **13 17 11.7 +1.0**
baz=143
LVC **Limon Verde** **49.37 141** LR LR 13 36 17.7
comp=Z,53nm,18.1s,baz=354,slow=34
P32M **Atlin** **49.52 338** P **P** **13 17 13.5 +0.8**
baz=135
P33M **Teslin, Yukon** **49.66 339** P **P** **13 17 15.0 +1.2**
baz=137
PLBC **Pleasant Camp** **50.40 337** P **P** **13 17 21.1 +1.8**
baz=132
MMPY **Sheldon Lake,** **50.98 342** P **P** **13 17 25.1 +1.4**
baz=140,SNR=11
O30N **Mendenhall** **51.20 338** P **P** **13 17 27.0 +1.5**
baz=133
FARO **Faro, Yukon** **51.32 341** P **P** **13 17 27.0 +0.7**
FARO **Faro, Yukon** **51.32 341** P **P** **13 17 28.0 +1.6**
baz=137
N31M **Braeburn, Yuko** **51.59 339** P **P** **13 17 30.2 +1.9**
N31M IAmb IAmb 13 17 32.1
comp=Z,19nm,1.1s
N31M **Braeburn, Yuko** **51.59 339** P **P** **13 17 30.2 +1.9**
baz=134
M31M **Drury Creek, Y** **51.64 340** P **P** **13 17 30.7 +2.0**
baz=136
FRB **Frobisher Bay** **51.90 17** LR LR 13 40 49.4
comp=Z,144nm,18.1s,baz=202,slow=38
N30M **Aishikik Lake** **52.03 338** P **P** **13 17 33.5 +1.8**
baz=132
YUK6 **Outpost Mounta** **52.14 337** P **P** **13 17 33.9 +1.2**
baz=131
YUK4 **Talbot Arm** **52.51 338** P **P** **13 17 37.2 +1.8**
baz=131
O28M **Mount Upton** **52.72 337** P **P** **13 17 39.0 +1.9**
baz=129
YUK8 **Steele Glacier** **52.88 337** P **P** **13 17 40.3 +2.1**
baz=129
MAYO **Mayo, Yukon** **53.12 341** P **P** **13 17 41.8 +2.2**
baz=135
M29M **Somme Creek** **53.17 339** P **P** **13 17 42.1 +2.0**
baz=132
CTG **Chitna Glacier** **53.28 336** P **P** **13 17 43.0 +2.0**
baz=128
YUK3 **Moose Creek** **53.45 337** P **P** **13 17 43.9 +1.5**
baz=129
L29M **L29M** **53.51 340** P **P** **13 17 44.3 +1.8**
baz=132,SNR=7.2
K29M **Barlow Dome** **53.81 340** P **P** **13 17 46.5 +1.7**
baz=133,SNR=5.4
BVCY **Beaver Creek** **54.00 338** P **P** **13 17 47.7 +1.5**
baz=129
MCARA **McCarthy VSAT** **54.18 336** P **P** **13 17 49.6 +2.1**
baz=126
M27K **Edge Creek, AK** **54.34 337** P **P** **13 17 50.2 +1.5**
baz=128
DAWY **Dawson** **54.57 340** P **P** **13 17 51.7 +1.5**
baz=131
BCAR **Beaver Creek A** **54.74 338** P **P** **13 17 52.9 +1.3**
L27K **Beaver Creek,** **54.76 338** P **P** **13 17 53.2 +1.5**
L27K IAmb IAmb 13 17 54.7
comp=Z,7.7nm,1.1s
L27K **Beaver Creek,** **54.76 338** P **P** **13 17 53.4 +1.7**
baz=128
M26K **Nabesna, AK** **54.78 337** P **P** **13 17 53.3 +1.5**
baz=126
N25K **Chitina, Valde** **54.93 336** P **P** **13 17 55.0 +2.0**
baz=124
EPYK **Eagle Plains** **55.35 343** P **P** **13 17 57.1 +1.2**
baz=136
KLU **Klutina** **55.39 335** P **P** **13 17 57.9 +1.6**
baz=123
K27K **Chicken** **55.45 339** P **P** **13 17 58.8 +2.3**
baz=128
HARP **HAARP** **55.59 336** P **P** **13 17 59.2 +1.5**
baz=124
EGAK **Eagle** **55.62 340** P **P** **13 17 57.9 +0.1**
EGAK IAmb IAmb 13 18 06.7
comp=Z,7.6nm,1.1s
EGAK **Eagle** **55.62 340** P **P** **13 17 58.8 +1.1**
baz=130
INK **Inuvik** **55.97 346** P **P** **13 18 01.1 +0.8**
comp=Z,6.5nm,1.0s,baz=131,slow=6.5,SNR=5.7
INK LR LR 13 44 07.7
comp=Z,287nm,20.1s,baz=150,slow=38
comp=Z,6.5nm,1.0s
INK **Inuvik** **55.97 346** P **P** **13 18 01.0 +0.8**
INK IAmb IAmb 13 18 02.2
comp=Z,11nm,1.1s
INK **Inuvik** **55.97 346** P **P** **13 18 01.0 +0.8**
baz=140
PAX **Paxson** **56.04 337** P **P** **13 18 01.9 +0.9**
baz=124
SCRK **Sand Creek** **56.08 338** P **P** **13 18 02.5 +1.2**
SCRK IAmb IAmb 13 18 09.8
comp=Z,11nm,1.2s
SCRK **Sand Creek** **56.08 338** P **P** **13 18 02.4 +1.2**
baz=126
RIDG **Independent Ri** **56.25 338** P **P** **13 18 03.7 +1.3**
baz=125
J26L **Joseph Creek** **56.25 339** P **P** **13 18 04.2 +1.8**
J26L IAmb IAmb 13 18 13.2
comp=Z,13nm,1.1s
J26L **Joseph Creek** **56.25 339** P **P** **13 18 03.6 +1.1**
baz=127,SNR=9.2
I27K **Kandik River** **56.30 341** P **P** **13 18 04.0 +1.3**
baz=130
KDAK **Kodiak Island** **56.58 329** LR LR 13 43 20.5
comp=Z,105nm,18.1s,baz=118,slow=37
KDAK **Kodiak Island** **56.58 329** P **P** **13 18 06.0 +1.3**
baz=114
I26K **Coal Creek Min** **56.61 340** P **P** **13 18 06.0 +1.2**
baz=128
K24K **Donnelly Dome** **56.63 338** P **P** **13 18 06.5 +1.5**
baz=124
WAT6 **Susitna Watana** **56.70 336** P **P** **13 18 07.1 +1.3**
baz=122
PMR **Palmer** **56.75 334** P **P** **13 18 07.5 +1.6**
baz=120
DHY **Denali Highway** **56.82 336** P **P** **13 18 07.6 +1.0**
baz=122
Q20K **Shuyak Island** **56.83 330** P **P** **13 18 07.7 +1.2**
baz=114
SII **Sitkinak Islan** **56.91 328** P **P** **13 18 08.6 +1.5**
baz=112
J25K **Salcha River,** **56.95 339** P **P** **13 18 08.4 +1.1**
baz=125
G27K **Doyon Strip** **57.09 342** P **P** **13 18 09.4 +1.1**
baz=130
M22K **Willow** **57.24 334** P **P** **13 18 10.5 +1.1**
baz=119
HDA **Harding Lake** **57.39 338** P **P** **13 18 11.2 +0.8**
baz=123
PRP **Porcupine Dome** **57.53 339** P **P** **13 18 12.3 +0.7**
baz=126,SNR=5.5
IL31 **57.57 338** P **P** **13 18 11.9 +0.3**
IL31 IAmb IAmb 13 18 21.4
comp=Z,13nm,1.3s
ILAR **Eielson Array** **57.57 338** P **P** **13 18 12.9 +1.3**
comp=Z,4.4nm,1.0s,baz=145,slow=5.5,SNR=21
ILAR LR LR 13 45 56.2
comp=Z,192nm,19.3s,baz=82,slow=39
comp=Z,4.4nm,1.0s
ILAR **Eielson Array** **57.57 338** P **P** **13 18 12.0 +0.3**
CUT **Chulitna** **57.62 335** P **P** **13 18 12.8 +0.7**
baz=119
MCK **McKinley** **57.77 337** P **P** **13 18 14.1 +1.0**
baz=121
SPU **Mount Spurr** **57.80 333** P **P** **13 18 13.8 +0.4**
G26K **Porcupine Rive** **57.83 341** P **P** **13 18 14.5 +1.0**
baz=128
N20K **Mount Spurr** **57.87 333** P **P** **13 18 14.8 +0.9**
baz=116
SPCR **Spurr Chakacha** **57.87 333** P **P** **13 18 14.9 +1.0**
baz=116
SKT **Skwentna** **57.94 334** P **P** **13 18 15.7 +1.4**
baz=117
POKR **Poker Plat Res** **57.96 338** P **P** **13 18 14.1 -0.3**
POKR IAmb IAmb 13 18 24.1
comp=Z,8.4nm,0.9s
POKR **Poker Plat Res** **57.96 338** P **P** **13 18 15.8 +1.3**
baz=123
COLA **College** **57.97 338** P **P** **13 18 16.5 +2.0**
baz=123
TCOL **CIGO, UAF Yank** **57.98 338** P **P** **13 18 16.2 +1.8**
baz=123
E27K **Coleen River** **57.98 343** P **P** **13 18 16.3 +1.7**
baz=131
H25K **Birch Creek** **58.07 340** P **P** **13 18 16.4 +1.3**
baz=126
TRF **Thorofare Moun** **58.14 336** P **P** **13 18 16.4 +0.5**
TRF **Thorofare Moun** **58.14 336** P **P** **13 18 17.2 +1.3**
baz=119
RES **Resolute Bay** **58.24 2** LR LR 13 44 26.0
comp=Z,132nm,19.8s,baz=340,slow=37
NEA2 **Nenana** **58.27 337** P **P** **13 18 18.2 +1.6**
baz=121
F26K **Sheenjek River** **58.41 342** P **P** **13 18 19.2 +1.7**
baz=128
H24K **Noodor Dome** **58.51 339** P **P** **13 18 19.1 +0.8**
H24K **Noodor Dome** **58.51 339** P **P** **13 18 19.7 +1.4**
baz=123
M20K **Styx River** **58.57 334** P **P** **13 18 19.7 +0.8**
baz=116
PPLA **Purkeypile** **58.64 335** P **P** **13 18 20.1 +0.8**
baz=117
I23K **Minto, Yukon-K** **58.66 338** P **P** **13 18 20.2 +0.9**
I23K **Minto, Yukon-K** **58.66 338** P **P** **13 18 20.7 +1.4**
baz=121
BPAW **Bear Paw Mtn.** **58.73 336** P **P** **13 18 20.3 +0.4**
BPAW IAmb IAmb 13 19 07.3
comp=Z,17nm,1.5s
BPAW **Bear Paw Mtn.** **58.73 336** P **P** **13 18 21.0 +1.1**
baz=119
CAST **Castle Rocks** **58.84 335** P **P** **13 18 20.6 +0.1**
CAST IAmb IAmb 13 18 27.7
comp=Z,12nm,1.2s
CAST **Castle Rocks** **58.84 335** P **P** **13 18 21.6 +1.0**
baz=118
G24K **Hadweenzic Riv** **58.86 340** P **P** **13 18 21.7 +1.0**
baz=124
H23K **Yukon River** **59.09 339** P **P** **13 18 23.7 +1.4**
baz=122
E25K **Arctic Village** **59.09 342** P **P** **13 18 23.7 +1.4**
baz=127
MLY **Manley** **59.10 337** P **P** **13 18 22.4 -0.1**
MLY IAmb IAmb 13 18 30.2

comp=Z,15nm,1.3s
MLY Manley 59.10 337 P **P 13 18 23.6 +1.2**
baz=120
M19K Big River Lodg 59.12 333 P **P 13 18 22.9 +0.4**
baz=114
L19K White Mountain 59.43 334 P **P 13 18 26.2 +1.5**
baz=114
PPT Papeete 59.44 238 LR LR 13 38 05.5
comp=Z,59nm,20.5s,baz=64,slow=30
CPUP Villa Florida 59.44 135 P **P 13 18 27.3 +2.0**
comp=Z,2.5nm,0.8s,baz=295,slow=7.3,SNR=5.0
CPUP LR LR 13 43 53.8
comp=Z,50nm,18.0s,baz=4.5,slow=36
comp=Z,2.5nm,0.8s
PPT2 Papeete2 59.45 237 *e*LR LR 13 35 55.8
comp=Z,42nm,19.5s
C27K Jago River 59.51 344 P **P 13 18 26.6 +1.5**
baz=130
K20K Telida 59.61 335 P **P 13 18 26.6 +0.7**
K20K IAmb IAmb 13 19 10.6
comp=Z,6.8nm,0.8s
K20K Telida 59.61 335 P **P 13 18 26.3 +0.4**
baz=116
I21K Tanana 59.64 337 P **P 13 18 26.8 +0.8**
baz=119
SFJD Kangerlussuaq 59.65 20 LR LR 13 46 04.7
comp=Z,155nm,18.9s,baz=232,slow=38
G23K Bananza Creek 59.72 339 P **P 13 18 27.3 +0.7**
baz=121
H22K Ishtalitna Cre 59.77 338 P **P 13 18 27.7 +0.7**
baz=120
O16K Kokwok River B 59.93 330 P **P 13 18 29.5 +1.3**
baz=110
J20K Nowinta River 60.00 336 P **P 13 18 28.5 0.0**
J20K Nowinta River 60.00 336 P **P 13 18 29.6 +1.0**
baz=116
COLD Coldfoot 60.05 340 P **P 13 18 30.3 +1.4**
baz=122
D25K Kavik River 60.05 343 P **P 13 18 29.8 +0.9**
baz=126
H21K Melozitna Rive 60.17 338 P **P 13 18 28.9 -0.8**
H21K Melozitna Rive 60.17 338 P **P 13 18 29.7 -0.1**
baz=118
E23K Chandalar 60.30 341 P **P 13 18 31.8 +1.1**
baz=122
N16K Nishlik Lake 60.54 331 P **P 13 18 34.0 +1.6**
baz=109
TOLK Toolik Lake Re 60.61 341 P **P 13 18 34.1 +1.4**
baz=123
DY2G Dye2 60.88 22 *i* P **P 13 18 34.3 -0.6**
DY2G IAmb IAmb 13 18 35.6
comp=Z,15nm,1.0s
D23K Nanushuk River 61.12 341 P **P 13 18 37.1 +1.0**
baz=122
F21K Alatna River 61.15 339 P **P 13 18 37.9 +1.5**
baz=118
ITQB Itaqui 62.11 137 P **P 13 18 43.7 +0.4**
TBI Tubuai 62.52 232 *e*LR LR 13 37 31.9
comp=Z,83nm,23.2s
PLCA Paso Flores 63.18 155 P **P 13 18 51.2 +0.8**
comp=Z,5.2nm,0.9s,baz=321,slow=8.5,SNR=9.2
PLCA LR LR 13 42 11.1
comp=Z,78nm,19.2s,baz=352,slow=32
comp=Z,5.2nm,0.9s
PLCA Paso Flores 63.18 155 P **P 13 18 51.3 +0.8**
ICESG Greenland Ices 64.27 20 *i* P **P 13 18 54.0 -3.5**
ICESG IAmb IAmb 13 18 58.8
comp=Z,19nm,1.1s
LL02 Futaleuf 64.79 158 P **P 13 19 02.2 +1.4**
NEEM North Greenlan 65.57 10 *i* P **P 13 19 06.3 +0.4**
NEEM IAmb IAmb 13 19 18.7
comp=Z,265nm,2.6s
AY01 Puyuhuapi 65.58 159 P **P 13 19 06.9 +1.0**
SUMG Summit 65.97 17 *i* P **P 13 19 09.0 +0.4**
SUMG IAmb IAmb 13 19 10.3
comp=Z,15nm,1.1s
COYC Coyhaique 66.78 159 P **P 13 19 14.0 +0.4**
RCBR Riachuelo 67.14 104 LR LR 13 51 10.5
comp=Z,111nm,18.7s,baz=100,slow=38
GAMB Gambell 67.24 333 P **P 13 19 17.6 +1.3**
baz=99
BORG Borgarnes 70.36 27 LR LR 13 52 25.0
comp=Z,24nm,18.7s,baz=285,slow=38
DAG Danmarks Havn 72.05 14 *i* P **P 13 19 45.1 -0.6**
DAG IAmb IAmb 13 19 53.0
comp=Z,21nm,1.6s
JMIC Jan Mayen 75.00 20 LR LR 13 53 17.2
comp=Z,99nm,21.2s,baz=58,slow=36
BBTS Babate 79.81 78 LR LR 13 52 43.6
comp=Z,100nm,18.2s,baz=290,slow=33
EKA Eskdalemuir Ar 80.40 35 LR LR 13 57 55.9
comp=Z,67nm,18.8s,baz=350,slow=37
PAB San Pablo 83.90 51 P **P 13 20 52.7 +0.3**
PAB IAmb IAmb 13 20 55.4
comp=Z,14nm,1.4s
PETK Petropavlovsk- 84.14 324 LR LR 13 58 06.6
comp=Z,40nm,18.6s,baz=48,slow=36
ESDC Sonseca Array 84.15 50 P **P 13 20 54.6 +0.9**
comp=Z,3.1nm,1.1s,baz=305,slow=5.0,SNR=12
comp=Z,3.1nm,1.1s
ESDC Sonseca Array 84.15 50 P **P 13 20 54.1 +0.4**
ESDC IAmb IAmb 13 21 01.6
comp=Z,11nm,1.5s
MA2 Magadan 85.28 331 LR LR 14 01 19.2
comp=Z,64nm,18.1s,baz=120,slow=37
NOA NORSAR Array B 85.53 27 LR LR 14 00 11.5
comp=Z,46nm,20.4s,baz=275,slow=36
PMSA Palmer Station 85.56 165 LR LR 13 49 30.9
comp=Z,66nm,21.7s,baz=316,slow=29
MDT Midelt 85.60 57 LR LR 13 54 44.2
comp=Z,79nm,20.5s,baz=338,slow=33
ARCES ARCESS Array B 86.06 17 LR LR 14 02 26.7
comp=Z,86nm,18.9s,baz=282,slow=38
HFS Hagfors 87.03 27 LR LR 13 59 59.5
comp=Z,57nm,21.4s,baz=302,slow=36
MSVF Nonsavu 87.58 251 LR LR 13 51 25.6
comp=Z,67nm,20.3s,baz=79,slow=29
CLL Collm 90.87 35 *e*SKSac **SKSac 13 31 56.0 -1.3**
CLL *e*SKKSac **SKKSac 13 32 11.0 -1.0**
CLL *e*S **S 13 32 19.0 -3.2**
CLL *e*PS PS 13 33 32.0 +0.6
CLL *e*SS **SS 13 38 18.0 -6.1**
CLL *e*SSS SSS 13 41 48.0
CLL LmV 13 59 00.0
comp=Z,100nm,21.7s
DAVOX Davos/Dischmat 91.08 40 LR LR 14 05 24.2
comp=Z,58nm,18.4s,baz=265,slow=38
FINES FINESS Array B 91.35 23 LR LR 14 03 42.0
comp=Z,86nm,20.6s,baz=306,slow=36
YAK Yakutsk 92.49 339 LR LR 14 05 45.1
comp=Z,133nm,18.5s,baz=89,slow=37
DBIC Dimbokro 93.02 82 LR LR 14 03 57.8
comp=Z,26nm,18.2s,baz=224,slow=36
VRAC Vranov 93.86 36 LR LR 14 06 50.7
comp=Z,44nm,18.2s,baz=300,slow=38
URZ Urewera 94.64 232 LR LR 13 54 03.2
comp=Z,55nm,21.0s,baz=12,slow=29
KEST Kesra 95.40 50 LR LR 13 59 24.4
comp=Z,30nm,21.0s,baz=290,slow=32
DZM Mont Dzumac 99.26 250 *e*LR LR 13 54 33.5
comp=Z,92nm,21.9s
DZM Mont Dzumac 99.26 250 LR LR 13 57 18.1
comp=Z,65nm,20.0s,baz=218,slow=30
AKASG Malin Array Be 99.64 30 LR LR 14 09 45.5
comp=Z,36nm,18.1s,baz=271,slow=37
WRA Warramunga Arr 128.47 257 PKP **PKiKP 13 27 32.7 +2.1**
comp=Z,1.9nm,1.2s,baz=91,slow=1.9,SNR=7.2
ASAR Alice Springs 129.13 253 PKP **PKiKP 13 27 34.3 +2.4**
comp=Z,1.5nm,1.2s,baz=129,slow=3.4,SNR=4.1
PZH PanZhiHua 132.30 333 PKP **PKPdf 13 27 37.9 +0.6**
CMAR Chiang Mai Arr 140.56 331 PKP **PKPdf 13 27 53.8 +1.2**
comp=Z,0.4nm,0.3s,baz=355,slow=2.1,SNR=1.5

IDC 18 14:29:39.1±3.9, 3°.90S×152°.50E, $h0^{km}$, mb3.1/2, mbtmp3.1/2, Error ellipse: s-maj=162.0km s-min=52.4km az=119.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.83**	**227**	P	P	14 34 54.9	+0.8
	0.4nm,0.5s,baz=52,slow=9.5,SNR=7.5						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.62**	**221**	P	P	14 35 19.4	-0.3
	0.2nm,0.9s,baz=51,slow=9.7,SNR=4.4						
	0.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**149.74**	**289**	PKPbc	PKPbc	14 49 31.2	-1.0
	0.5nm,0.9s,baz=48,slow=2.1,SNR=3.0						

*IDC **18** 14:43:20.6±1.6, 27°.74N×86°.23E, $h0^{km}$, mb3.7/5, mbtmp3.6/6, ML3.5/1, MS3.3/4, Error ellipse: s-maj=57.1km s-min=23.0km az=59.0*

ISC 18 14:43:22.0±1.6, 27°.8N±0°.2×86°.3E±0°.3, $h10^{km}$, n10, σ0°.74/6, mb3.7/5, MS3.4/4, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.26**	**352**	P	P	**14 47 46.7**	**+0.1**
	0.2nm,0.3s,baz=181,slow=11,SNR=5.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**23.58**	**348**	P	P	**14 48 33.7**	**+1.0**
	1.4nm,0.3s,baz=165,slow=8.9,SNR=2.4						
	1.4nm,0.3s						
KSRS	**Korea Array**	**36.16**	**64**	P	P	**14 50 24.4**	**-0.3**
	0.5nm,0.5s,baz=262,slow=8.9,SNR=4.1						
	0.5nm,0.5s						
EIL	**Elat**	**44.73**	**285**	LR	LR	15 14 00.3	
	comp=Z,24nm,18.0s,baz=57,slow=41						
FINES	**FINESS Array B**	**51.83**	**328**	P	P	**14 52 29.4**	**-0.5**
	2.2nm,0.9s,baz=119,slow=4.9,SNR=1.9						
	2.2nm,0.9s						
MA2	**Magadan**	**53.65**	**35**	LR	LR	15 14 49.0	
	comp=Z,44nm,18.4s,baz=124,slow=35						
WRA	**Warramunga Arr**	**66.43**	**130**	P	P	**14 54 12.3**	**+0.6**
	0.3nm,0.6s,baz=323,slow=6.3,SNR=9.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**68.75**	**133**	P	P	**14 54 26.1**	**-0.2**
	0.2nm,0.8s,baz=311,slow=6.0,SNR=1.8						
	0.2nm,0.8s						
ESDC	**Sonseca Array**	**73.02**	**306**	LR	LR	15 31 01.3	
	comp=Z,20nm,18.8s,baz=216,slow=39						
SUR	**Sutherland**	**86.28**	**230**	LR	LR	15 32 50.9	
	comp=Z,14nm,18.3s,baz=52,slow=34						

*IDC **18** 14:53:16.5±0.9, 24°.94N×126°.85E, $h0^{km}$, mb4.0/11, mbtmp4.0/12, ML3.1/1, MS3.1/8, Error ellipse: s-maj=30.1km s-min=15.2km az=69.0*

*NEIC **18** 14:53:18.7±1.5, 24°.9N±0°.1×126°.8E±0°.1, $h12^{km}$±1^{km}, mb4.3/11, Error ellipse: s-maj=19.2km s-min=9.1km az=143.0*

*NIED **18** 14:53:20.0, 24°.92N×126°.87E, $h77^{km}$, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.22; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.04; $M_{r\theta}$1.04; $M_{\theta\phi}$-0.70; $M_{\phi r}$1.24; Fault plane solution: $M_0$1.71000×10^{15} NP1: ϕ_s271.00000°, δ14.00000°, λ144.00000°. NP2: ϕ_s36.00000°, δ82.00000°, λ79.00000°.*

*JMA **18** 14:53:20.0±0.2, 25°.N±1°×12°.7E±°, $h77^{km}$±4km, MV3.5/24, NEAR MIYAKOJIMA ISLAND*

ISC 18 14:53:16.6±1.7, 24°.85N±0°.06×126°.94E±0°.04, $h6^{km}$±10km, n74, σ1°.33/78, mb4.2/17, MS3.0/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.39**	**267**	P	**Pg**	**14 53 43.6**	**+0.3**
JOGS				*e*S	**Sg**	**14 54 01.2**	**-0.1**
JMJ2	**Miyako jima3**	**1.47**	**266**	P	**Pb**	**14 53 44.4**	**+0.1**
JKE	**Kume jima 2**	**1.47**	**355**	*i* P	**Pb**	**14 53 44.3**	**-0.2**
JJT3	**Tamagusuku3**	**1.50**	**31**	P	**Pb**	**14 53 45.2**	**+0.3**
JJT3				*e*S	**Sn**	**14 54 03.7**	**-0.3**
JIKM	**Ikemajima**	**1.53**	**273**	P	**Pb**	**14 53 45.5**	**0.0**
JIRB	**Irabujima**	**1.60**	**270**	P	**Pn**	**14 53 46.0**	**+0.5**
JIRB				*e*S	**Sn**	**14 54 05.4**	**-1.1**
JAGN	**Aguni-jima**	**1.75**	**9**	P	**Pb**	**14 53 48.7**	**-0.5**
JNTH	**Nagotoyohara**	**1.93**	**30**	P	**Pn**	**14 53 50.7**	**+0.7**
JNTH				*e*S	**Sn**	**14 54 13.1**	**-1.4**
JTJ	**Tarama**	**2.04**	**265**	*i* P	**Pn**	**14 53 52.1**	**+0.6**
JTJ				*e*S	**Sn**	**14 54 15.6**	**-1.7**
JOW	**Kunigami**	**2.31**	**31**	Pn	**Pn**	**14 53 56.7**	**+1.4**
	8.8nm,0.3s,baz=144,slow=22,SNR=36						
JOW				Sn	**Sn**	**14 54 21.7**	**-2.4**
	38nm,0.3s,baz=112,slow=24,SNR=9.7						
	19nm,0.3s						
JOW	**Kunigami**	**2.31**	**31**		**Pn**	**14 53 56.8**	**+1.6**
JOW	**Kunigami**	**2.31**	**31**	P	**Pn**	**14 53 56.9**	**+1.6**
JIH	**Iheya**	**2.36**	**23**	P	**Pn**	**14 53 57.0**	**+1.0**
JYRO	**Yoronjima**	**2.56**	**32**	P	**Pn**	**14 53 59.6**	**+1.0**
JYRO				*e*S	**Sn**	**14 54 28.8**	**-1.4**
JJJ	**Ishigaki jima**	**2.59**	**260**	P	**Pn**	**14 53 59.2**	**+0.1**
JKRS	**Kuro-shima**	**2.73**	**258**	P	**Pn**	**14 54 01.9**	**+0.8**
JOKE	**Okinoerabujima**	**2.90**	**30**	P	**Pn**	**14 54 04.8**	**+1.4**
IRIF	**Iriomote-Funau**	**2.96**	**261**	*e*P	**Pn**	**14 54 05.2**	**+1.0**
JTK	**Tokunoshima**	**3.44**	**31**	P	**Pn**	**14 54 11.6**	**+0.9**
JTK				S	**Sn**	**14 54 49.1**	**-2.7**
YOJ	**Yonaguni jima**	**3.59**	**265**	Pn	**Pn**	**14 54 12.3**	**-0.6**
YOJ	**Yonaguni jima**	**3.59**	**265**	P	**Pg**	**14 54 23.8**	**-1.6**
JYNG	**Yonagunijimaku**	**3.65**	**265**	P	**Pn**	**14 54 14.0**	**+0.3**
JMZ	**Minamidaito 2**	**4.00**	**75**	P	**Pn**	**14 54 17.8**	**-0.6**
JMZ				*e*S	**Sn**	**14 55 01.6**	**-4.1**
JKDJ	**Kitadaitoujima**	**4.09**	**74**	P	**Pn**	**14 54 19.2**	**-0.6**
JKDJ				S	**Sn**	**14 55 03.7**	**-4.3**
NACB	**Ninganchiao**	**4.91**	**263**	Pn	**Pn**	**14 54 30.2**	**-0.8**
YHNB	**Yeheng**	**5.06**	**269**	Pn	**Pn**	**14 54 32.2**	**-0.9**
YHNB	**Yeheng**	**5.06**	**269**	P	**Pn**	**14 54 35.5**	**+2.4**
YULB	**Yu-li**	**5.35**	**255**	Pn	**Pn**	**14 54 35.2**	**-2.0**
SSLB	**Suanglung**	**5.56**	**260**	Pn	**Pn**	**14 54 38.3**	**-1.7**
SSLB	**Suanglung**	**5.56**	**260**	P	**Pn**	**14 54 39.8**	**-0.2**
TWG	**Pinlang**	**5.74**	**251**	Pn	**Pn**	**14 54 40.1**	**-2.3**
TPUB	**Ta-pu**	**5.97**	**256**	Pn	**Pn**	**14 54 45.2**	**-0.4**
TPUB	**Ta-pu**	**5.97**	**256**	P	**Pn**	**14 54 45.8**	**+0.2**
JSU	**Suzuyama**	**7.32**	**24**	Pn	**Pn**	**14 55 05.2**	**+1.1**
KSRS	**Korea Array**	**12.59**	**4**	LR	LR	15 01 23.0	
	comp=Z,57nm,18.4s,baz=200,slow=39						
JHJ	**Hachijo jima 2**	**13.93**	**51**	LR	LR	15 01 27.0	
	comp=Z,45nm,19.8s,baz=273,slow=35						
JMM	**Marumori**	**17.53**	**39**	P	**P**	**14 57 25.4**	**+2.6**
JMM				IAmb	IAmb	14 57 54.8	
	comp=Z,44nm,1.3s						
GUMO	**Guam**	**20.28**	**120**	LR	LR	15 06 44.6	
	comp=Z,32nm,18.1s,baz=226,slow=40						
SIJI	**Sorong**	**25.91**	**170**	LR	LR	15 08 01.9	
	comp=Z,34nm,21.1s,baz=82,slow=34						
CMAR	**Chiang Mai Arr**	**26.75**	**262**	P	**P**	**14 58 59.0**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=57,slow=8.0,SNR=6.8						
CMAR				LR	LR	15 09 31.3	
	comp=Z,35nm,18.5s,baz=285,slow=36						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**28.11**	**330**	P	**P**	**14 59 09.0**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=154,slow=11,SNR=15						
	comp=Z,2.3nm,0.5s						
SONM	**Songino Array**	**28.11**	**330**	P	**P**	**14 59 08.8**	**-0.6**
TAPN	**Taplejung**	**35.22**	**283**	*e*P	**P**	**15 00 13.3**	**+1.0**
	comp=Z,13nm,0.7s						
ODAN	**Odare**	**35.55**	**282**	*e*P	**P**	**15 00 16.6**	**+1.5**
	comp=Z,2.6nm,0.7s						
RAMN	**Ramite**	**36.24**	**282**	*e*P	**P**	**15 00 21.7**	**+0.7**
JIRN	**Jiri**	**36.53**	**283**	*e*P	**P**	**15 00 24.1**	**+0.4**
	comp=Z,10nm,0.7s						
PKIN	**Phulchoki**	**37.24**	**283**	*e*P	**P**	**15 00 30.1**	**+0.5**
	comp=Z,8.5nm,0.6s						
DMN	**Daman**	**37.50**	**284**	*e*P	**P**	**15 00 32.3**	**+0.6**
GKN	**Gorkha**	**37.87**	**284**	*e*P	**P**	**15 00 35.2**	**+0.4**
DANN	**Dangsing**	**38.61**	**285**	*e*P	**P**	**15 00 42.1**	**+0.9**
	comp=Z,19nm,0.6s						
PYUN	**Piuthan**	**39.31**	**285**	*e*P	**P**	**15 00 47.6**	**+0.6**
	comp=Z,21nm,0.8s						
MK31	**Makanchi Array**	**41.60**	**313**	P	**P**	**15 01 04.1**	**-1.3**
MK31				IAmb	IAmb	15 01 15.4	
	comp=Z,3.9nm,1.0s						
MKAR	**Makanchi Array**	**41.60**	**313**	P	**P**	**15 01 05.0**	**-0.5**
	comp=Z,3.8nm,0.6s,baz=99,slow=9.9,SNR=25						
	comp=Z,3.8nm,0.6s						
MKAR	**Makanchi Array**	**41.60**	**313**	P	**P**	**15 01 04.0**	**-1.5**
ZALV	**Zalesovo Beam**	**42.65**	**324**	P	**P**	**15 01 12.7**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=111,slow=8.4,SNR=4.9						
ZALV				LR	LR	15 20 00.3	
	comp=Z,19nm,19.3s,baz=206,slow=38						
	comp=Z,1.0nm,0.4s						
WB0	**Warramunga Arr**	**44.94**	**170**	P	**P**	**15 01 33.3**	**+0.7**
KURK	**Kurchatov**	**45.03**	**318**	P	**P**	**15 01 32.1**	**-0.9**
KURK				IAmb	IAmb	15 01 33.7	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**45.06**	**318**	P	**P**	**15 01 32.6**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=107,slow=9.1,SNR=12						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**45.10**	**170**	P	**P**	**15 01 35.0**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=352,slow=8.6,SNR=12						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**45.10**	**170**	P	**P**	**15 01 35.2**	**+1.3**
WB2	**Warramunga Arr**	**45.11**	**170**	P	**P**	**15 01 34.7**	**+0.8**
WB2				IAmb	IAmb	15 02 17.0	
	comp=Z,6.6nm,1.2s						
WR0	**Warramunga Arr**	**45.15**	**170**	P	**P**	**15 01 34.2**	**-0.1**
WR0				IAmb	IAmb	15 02 10.1	
	comp=Z,4.6nm,1.2s						
ASAR	**Alice Springs**	**48.70**	**171**	P	**P**	**15 02 03.8**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=357,slow=8.1,SNR=11						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**50.53**	**319**	P	**P**	**15 02 15.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=107,slow=10,SNR=4.2						
	comp=Z,0.3nm,0.3s						
BRVK	**Borovoye**	**50.60**	**319**	P	**P**	**15 02 16.0**	**-0.3**
BRVK				IAmb	IAmb	15 02 16.6	
	comp=Z,4.0nm,1.3s						
ABKAR	**Akbulak array**	**56.74**	**314**	P	**P**	**15 03 01.4**	**+0.1**
ABKAR				IAmb	IAmb	15 03 02.5	
	comp=Z,6.5nm,1.4s						
STKA	**Stephens Creek**	**58.12**	**165**	P	**P**	**15 03 12.1**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=313,slow=8.7,SNR=5.4						
	comp=Z,2.1nm,0.7s						
GEYT	**Alibeck**	**58.98**	**301**	P	**P**	**15 03 16.9**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=355,slow=3.5,SNR=4.3						
	comp=Z,1.1nm,0.5s						
IMAR	**Indian Mountai**	**63.24**	**27**	P	**P**	**15 03 44.4**	**-1.3**
KVAR	**Kislovodsk Arr**	**69.21**	**310**	LR	LR	15 37 55.8	
	comp=Z,26nm,18.3s,baz=22,slow=39						
FIA1	**FINESS Array S**	**73.48**	**331**	P	**P**	**15 04 50.4**	**+0.6**
FINES	**FINESS Array B**	**73.48**	**331**	P	**P**	**15 04 50.6**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=51,slow=5.5,SNR=10						
	comp=Z,1.2nm,0.4s						
FINES	**FINESS Array B**	**73.48**	**331**	P	**P**	**15 04 50.2**	**+0.4**
HFS	**Hagfors**	**79.49**	**332**	LR	LR	15 44 43.3	
	comp=Z,31nm,19.5s,baz=351,slow=39						

*UPA **18** 15:09:26.8±1.5, 8°.46N×82°.81W, $h18^{km}$±3^{km}, MW3.6*

*UCR **18** 15:09:26.1±1.6, 8°.43N×82°.93W, $h24^{km}$±3^{km}, MW3.8*

ISC 18 15:09:26.0±1.2, 8°.41N±0°.05×82°.86W±0°.03, $h19^{km}$±2km, n22, σ0°.93/34, 4C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.11**	**270**	*e*P	**Pg**	**15 09 29.9**	**0.0**
CCOL				*e*S	**Sg**	**15 09 34.4**	**+1.9**
CDITO	**Canoas**	**0.17**	**357⇑**	*e*P	**Pg**	**15 09 30.5**	**-0.1**
CDITO				*e*S	**Sg**	**15 09 34.3**	**+0.6**
DVD	**David**	**0.41**	**86⇑**	*i*P	**Pg**	**15 09 34.4**	**0.0**
DVD				*e*S	**Sb**	**15 09 41.3**	**+0.7**
BRU2	**Volcan**	**0.42**	**24**	*e*P	**Pg**	**15 09 34.7**	**-0.1**
BRU2				*e*S	**Sb**	**15 09 42.2**	**+1.1**
BRU2	**Volcan**	**0.42**	**24⇓**	*i*P	**Pg**	**15 09 34.6**	**-0.1**
BRU2				*i* S	**Sb**	**15 09 42.1**	**+1.0**
EDSV	**San Vito**	**0.42**	**345**	*e*P	**Pg**	**15 09 34.6**	**-0.2**
BCO2	**Palmira**	**0.45**	**47⇓**	*e*P	**Pg**	**15 09 35.1**	**-0.2**
BCO2				*e*S	**Sb**	**15 09 42.9**	**+0.9**
PTAR3	**Potrerillos Ar**	**0.46**	**52⇑**	*i*P	**Pg**	**15 09 35.4**	**-0.1**
PTAR3				*i* S	**Sb**	**15 09 42.8**	**+0.6**
PIRO	**Carate, Puerto**	**0.47**	**270**	*e*P	**Pg**	**15 09 34.6**	**-0.9**
BC3P	**Paso Ancho**	**0.48**	**32⇓**	*e*P	**Pg**	**15 09 35.3**	**-0.5**
BC3P				*i* S	**Sg**	**15 09 43.0**	**+0.6**
CTCR	**Cotoan**	**0.50**	**12**	*e*P	**Pg**	**15 09 35.7**	**-0.5**
CHIR3	**Chiriqui UPA,**	**0.53**	**91⇑**	*i*P	**Pg**	**15 09 36.0**	**-0.6**
CHIR3				*e*S	**Sb**	**15 09 44.7**	**+0.9**
LNBQ3	**Los Naranjos,**	**0.56**	**48**	*e*P	**Pb**	**15 09 36.5**	**-0.8**
LNBQ3				*e*S	**Sg**	**15 09 44.3**	**-0.8**
POTG	**Potrero Grande**	**0.69**	**338**	*e*P	**Pb**	**15 09 38.5**	**-0.9**
EDPN	**Palmar Norte**	**0.81**	**313**	*e*P	**Pb**	**15 09 40.1**	**-1.3**
CDM	**Cerro de Muert**	**1.45**	**322**	*e*P	**Pn**	**15 09 49.9**	**-1.7**
MRVA	**Moravia de Chi**	**1.52**	**338**	*e*P	**Pn**	**15 09 51.2**	**-1.1**
RIMA	**Rio Macho**	**1.67**	**324**	*e*P	**Pn**	**15 09 53.5**	**-1.0**
VTCV	**VTCV, Calle Va**	**1.78**	**331**	*e*P	**Pn**	**15 09 55.8**	**-0.2**
HDC	**Heredia**	**2.01**	**322**	*e*P	**Pn**	**15 10 00.1**	**+1.1**
HDC				*e*S	**Sn**	**15 10 24.1**	**+0.4**
JACO	**JACO, Garabito**	**2.17**	**305**	*e*P	**Pn**	**15 10 00.1**	**-1.0**
JTS	**Las Juntas de**	**2.79**	**312**	*e*P	**Pn**	**15 10 11.3**	**+1.7**
JTS				*e*S	**Sn**	**15 10 43.6**	**+0.9**

*UUSS **18** 15:24:40.4±1.3, 37°.74N±0°.03×110°.53W±0°.04, $h8^{km}$±6^{km}, ML2.9/11, ML3.0/65(NEIC), Error ellipse: s-maj=4.6km s-min=4.4km az=149.0*

NEIC 18 15:24:39.3±1.7, 37°.70N±0°.03×110°.46W±0°.04, $h3^{km}$±6^{km}, Error ellipse: s-maj=5.3km s-min=2.7km az=224.0, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMU	**Henry Mountain**	**0.33**	**317**		Pg	15 24 45.8	+0.1
HMU					Sg	15 24 50.0	-0.1
MMU	**Miners Mountai**	**0.83**	**307**		Pg	15 24 54.6	-0.6
R19A	**Curley Farm, L**	**1.11**	**58**		Pb	15 25 01.5	+0.2
BTU	**Barney Top**	**1.12**	**273**		Pg	15 25 00.3	-0.5
PV05	**Paradox Valley**	**1.14**	**70**		Pn	15 25 04.1	+1.8
PV05	**Paradox Valley**	**1.14**	**70**	IAML		15 25 22.1	
	comp=E,355nm,0.3s						
PV10	**Paradox Valley**	**1.31**	**58**		Pg	15 25 03.9	-0.5
OWUT	**Old Woman Plat**	**1.32**	**325**		Pb	15 25 05.0	+0.1
Q16A	**Castle Valley**	**1.34**	**335**		Pg	15 25 04.0	-1.0
Q16A				IAML		15 25 22.4	
	comp=E,161nm,0.4s						
Q16A				IAML		15 25 22.7	
	comp=N,174nm,0.3s						
PV23	**Carpenter Ridg**	**1.37**	**56**		Pb	15 25 05.8	+0.2
PV11	**David Mesa, Pa**	**1.39**	**64**		Pb	15 25 06.2	+0.3
MTPU	**Mount Pierson**	**1.41**	**285**		Pn	15 25 05.1	-1.0
SRU	**San Rafael Swe**	**1.41**	**358**	Pn	Pn	15 25 05.3	-0.7
SRU				IAML		15 25 27.3	
	comp=N,239nm,0.6s						
SRU				IAML		15 25 27.9	
	comp=E,315nm,0.4s						
PV21	**Cone Mtn., Par**	**1.45**	**53**		Pg	15 25 07.7	+0.6
PKCU	**Pink Cliffs**	**1.50**	**261**		Pn	15 25 06.9	-0.4
PKCU	**Pink Cliffs**	**1.50**	**261**	IAML		15 25 29.9	
	comp=N,334nm,0.6s						
MSU	**Marysvale**	**1.58**	**301**		Pn	15 25 07.4	-1.0
MVU	**Marysvale**	**1.60**	**301**		Pn	15 25 08.5	-0.2
MVU	**Marysvale**	**1.60**	**301**	IAML		15 25 34.1	
	comp=E,222nm,0.4s						
MVCO	**Mesa Verde**	**1.63**	**107**		Pg	15 25 10.4	-0.2
MVCO				IAML		15 25 35.9	
	comp=E,162nm,0.2s						
MVCO				IAML		15 25 37.6	

PSUT	**Pine Spring**	**2.81 288**		Pn	15 25 24.1	-1.1
RDMU	**Red Mountain**	**2.95 13**	Pn	Pn	15 25 26.9	-0.3
RDMU			IAML		15 26 12.7	
	comp=E,45nm,0.6s					
RDMU			IAML		15 26 17.2	
	comp=N,28nm,0.6s					
DUG	**Dugway, Tooele**	**3.10 324**	Pn	Pn	15 25 28.0	-1.1
CTU	**Camp Tracy**	**3.15 342**	Pn	Pn	15 25 29.4	-0.6
X18A	**Snowflake**	**3.19 172**	Pn	Pn	15 25 31.2	+0.8
X18A			IAML		15 26 21.3	
	comp=N,45nm,0.9s					
TCUT	**Toone Canyon**	**3.49 348**	Pn	Pn	15 25 33.9	-0.8
TCUT			IAML		15 26 36.1	
	comp=N,38nm,0.6s					
TCUT			IAML		15 26 42.6	
	comp=E,26nm,0.8s					
PRN	**Pahroc Range**	**3.66 267**		Pn	15 25 36.4	-0.5
PRN			IAML		15 26 38.5	
	comp=E,20nm,0.3s					
PRN			IAML		15 26 51.8	
	comp=N,24nm,0.7s					
W13A	**Hualapai Mount**	**3.79 228**		Pn	15 25 37.8	-0.9
W13A			IAML		15 26 44.7	
	comp=N,13nm,0.8s					
HWUT	**Hardware Ranch**	**4.00 348**	Pn	Pn	15 25 40.3	-1.2
TPNV	**Topopah Spring**	**4.68 263**		Pn	15 25 50.6	-0.2
TPNV			IAML		15 27 12.4	
	comp=N,8.8nm,3.0s					
TPNV			IAML		15 27 13.2	
	comp=N,8.6nm,1.6s					
BNM	**Barren Site**	**4.71 138**	Pn	Pn	15 25 51.8	+0.4
COMI	**Craters of Moo**	**6.23 338**		Pn	15 26 11.1	-1.2

IDC 18 15:30:20.6±3.7, 16°28S×179°25W, h501km±113km, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=273.0km s-min=25.4km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.59**	**73**	P	P	15 32 12.9	0.0
	21nm,0.5s,baz=262,slow=14,SNR=6.3						
WRA	**Warramunga Arr**	**44.16**	**258**	P	P	15 37 43.9	-0.7
	0.3nm,0.2s,baz=96,slow=6.7,SNR=16						
	0.3nm,0.2s						
ASAR	**Alice Springs**	**44.48**	**253**	P	P	15 37 47.5	+0.4
	2.0nm,0.5s,baz=84,slow=8.7,SNR=94						
	2.0nm,0.5s						
ILAR	**Eielson Array**	**84.49**	**13**	P	P	15 41 59.7	0.0
	0.2nm,0.5s,baz=229,slow=6.0,SNR=4.1						
	0.2nm,0.5s						

*IDC **18** 15:50:54.7±1.6, 30°36S×177°38W, h0km, mb4.2/4, mbtmp4.2/5, ML3.8/1, MS3.4/4, Error ellipse: s-maj=38.9km s-min=25.7km az=109.0*

*NEIC **18** 15:50:55.6±2.3, 30°1S±0°1×177°15W±0°05, h10km±1km, mb4.4/14, Error ellipse: s-maj=18.9km s-min=7.7km az=357.0*

ISC 18 15:50:58.5±0.9, 30°31S±0°06×177°8W±0°2, h10km, n47, σ1§85/32, mb4.3/10, MS2.9/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.07**	**352**	Pn	**Pg**	**15 51 18.0**	**-1.0**
	2μm,0.3s,baz=176,slow=23,SNR=296						
RAO				Sn	**Sg**	**15 51 30.6**	**-2.3**
	4μm,0.3s,baz=90,slow=20,SNR=11						
RAO				LR	LR	15 51 44.3	
	comp=Z,556nm,18.9s,baz=116,slow=42						
RAO	**Raoul Island**	**1.07**	**352**		**Pg**	**15 51 17.8**	**-1.2**
MXZ	**Matakaoa Point**	**7.94**	**203**	Pn	Pn	15 52 49.4	-4.5
URZ	**Urewera**	**8.99**	**207**	Pn	Pn	15 53 05.1	-3.2
	1.0nm,0.3s,baz=1.2,slow=4.3,SNR=9.1						
URZ				Sn	**Sn**	**15 54 46.7**	**-2.9**
	2.5nm,0.3s,baz=295,slow=19,SNR=2.8						
	2.2nm,0.3s						
URZ	**Urewera**	**8.99**	**207**	Pn	Pn	15 53 04.9	-3.5
MSVF	**Nonsavu**	**13.09**	**342**	LR	LR	15 58 27.7	
	comp=Z,211nm,18.2s,baz=188,slow=34						
MSVF	**Nonsavu**	**13.09**	**342**	Pn	Pn	15 53 59.8	-4.9
NIUE	**Niue**	**13.25**	**34**	Pn	Pn	15 53 57.3	-9.5
THZ	**Tophouse**	**13.69**	**211**	Pn	**Pn**	**15 54 12.9**	**+0.3**
DZM	**Mont Dzumac**	**16.37**	**296**	eLR	LR	15 58 47.7	
	comp=Z,222nm,24.0s						
DZM	**Mont Dzumac**	**16.37**	**296**	LR	LR	16 00 03.8	
	comp=Z,113nm,19.6s,baz=192,slow=33						
ODZ	**Otahua Downs**	**17.31**	**209**	Pn	**Pn**	**15 54 57.1**	**-3.0**
TBI	**Tubuai**	**26.14**	**81**	eLR	LR	16 02 34.2	
	comp=Z,50nm,31.8s						
PPT2	**Papeete2**	**28.61**	**70**	eLR	LR	16 03 46.3	
	comp=Z,45nm,25.8s						
PPT	**Papeete**	**28.62**	**70**	LR	LR	16 06 26.7	
	comp=Z,18nm,20.0s,baz=171,slow=33						
CTA	**Charters Tower**	**33.99**	**279**	P	**P**	**15 57 43.6**	**+1.0**
	2.9nm,0.5s,baz=89,slow=10,SNR=5.1						
CTA				LR	LR	16 09 30.8	
	comp=Z,138nm,18.0s,baz=166,slow=32						
	2.9nm,0.5s						
CTAO	**Charters Tower**	**33.99**	**279**	P	**P**	**15 57 44.0**	**+1.4**
CTAO				IAmb	IAmb	15 57 57.6	
	comp=Z,9.6nm,1.1s						
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**15 57 50.4**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=86,slow=7.5,SNR=6.3						
	comp=Z,1.3nm,0.3s						
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**15 57 50.5**	**+1.8**
STKA				IAmb	IAmb	15 57 59.3	
	comp=Z,2.6nm,1.2s						
BBOO	**Buckleboo**	**39.19**	**254**	P	**P**	**15 58 28.2**	**+1.4**
AS31	**Alice Springs**	**43.32**	**267**	P	**P**	**15 59 01.5**	**+0.6**
ASAR	**Alice Springs**	**43.32**	**267**	P	**P**	**15 59 01.3**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=104,slow=7.2,SNR=27						
ASAR				ScP	**ScP**	**16 04 39.1**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=122,slow=4.0,SNR=5.6						
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**43.32**	**267**	P	**P**	**15 59 02.0**	**+1.1**
WR0	**Warramunga Arr**	**44.12**	**272**	P	**P**	**15 59 07.9**	**+0.6**
WR0				IAmb	IAmb	15 59 24.5	
	comp=Z,10.0nm,1.2s						
WB2	**Warramunga Arr**	**44.29**	**272**	P	**P**	**15 59 07.7**	**-1.1**
WB2				IAmb	IAmb	15 59 26.2	
	comp=Z,4.4nm,0.9s						
WRA	**Warramunga Arr**	**44.30**	**272**	P	**P**	**15 59 08.2**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=110,slow=8.1,SNR=64						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.30**	**272**	P	**P**	**15 59 08.1**	**-0.7**
WB0	**Warramunga Arr**	**44.33**	**272**	P	**P**	**15 59 08.4**	**-0.6**
WB0				IAmb	IAmb	15 59 25.6	
	comp=Z,5.5nm,1.0s						
KNRA	**Kununurra**	**50.91**	**274**	P	**P**	**16 00 00.1**	**-0.1**
CASY	**Casey**	**55.31**	**208**	P	**P**	**16 00 30.7**	**-1.2**
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**16 01 03.4**	**-0.3**
QSPA				IAmb	IAmb	16 01 24.3	
	comp=Z,6.3nm,0.9s						
BELA	**Belgrano 2**	**69.84**	**172**	P	P	16 02 05.8	-3.1
BELA				IAmb	IAmb	16 02 20.8	
	comp=Z,2.5nm,1.2s						
TROLL	**Troll, Antarti**	**77.96**	**180**	P	**P**	**16 02 55.8**	**-0.8**
SNAA	**Sanae**	**78.24**	**178**	P	**P**	**16 02 57.1**	**-0.9**
SNAA	**Sanae**	**78.24**	**178**	P	**P**	**16 02 56.7**	**-1.3**
SNAA				IAmb	IAmb	16 03 07.3	
	comp=Z,3.9nm,1.5s						
VNA3	**Neumayer Olymp**	**78.38**	**176**	P	**P**	**16 02 57.4**	**-1.4**
H03S2	**Juan Fernandez**	**80.34**	**123**	T	T	17 32 48.4	
	baz=239,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**80.35**	**123**	T	T	17 32 47.9	
	baz=239,slow=74,SNR=19						
H03S3	**Juan Fernandez**	**80.36**	**123**	T	T	17 32 45.9	
	baz=239,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**80.53**	**123**	T	T	17 32 46.5	
	baz=249,slow=74,SNR=2.9						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	17 32 51.0	
	baz=249,slow=74,SNR=4.8						
H03N1	**Juan Fernandez**	**80.55**	**123**	T	T	17 32 48.1	
	baz=249						
MKAR	**Makanchi Array**	**117.88**	**310**	PKP	**PKPdf**	**16 09 45.3**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=129,slow=1.5,SNR=1.8						
FINES	**FINESS Array B**	**145.13**	**340**	PKPbc	**PKPbc**	**16 10 33.0**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=43,slow=4.2,SNR=21						
NB2	**NORSAR Subarra**	**148.70**	**352**	PKP	**PKPbc**	**16 10 47.0**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
AKASG	**Malin Array Be**	**151.36**	**323**	PKPbc	**PKPdf**	**16 10 49.5**	**+3.5**
	comp=Z,0.4nm,0.3s,baz=48,slow=3.4,SNR=5.5						
BRTR	**Keskin Array B**	**152.74**	**299**	PKPbc	**PKPdf**	**16 10 54.0**	**+5.3**
	comp=Z,0.3nm,0.3s,baz=144,slow=3.7,SNR=2.0						

*SKHL **18** 16:11:14.1±0.2, 43°40N×145°60E, h77km±3km, mb4.0/2*
*JMA **18** 16:11:14.0±0.2, 43°4N±0°5×145°5E±0°7, h73km±1km, MV2.5/40, NEMURO REGION*

ISC 18 16:11:13.3±2.1, 43°37N±0°07×145°58E±0°06, h76km±12km, n13, σ0§62/23, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMR	**Nemuro--Hokkai**	**0.11**	**88**	*i* P	**Pn**	**16 11 24.7**	**+0.3**
NMR				AMB	AMB	16 11 25.0	
	130nm,0.2s						
NMR				*i* S	**Sn**	**16 11 32.5**	**0.0**
NMR				A	A	16 11 32.8	
	440nm,0.2s						
NMR				A	A	16 11 32.8	
	320nm,0.2s						
NEM2	**Nemuro 2**	**0.12**	**91**	*i* P	**Pn**	**16 11 24.7**	**+0.3**
NEM2				*e*S	**Sn**	**16 11 32.4**	**-0.1**
JKHN	**Kushirohamanak**	**0.41**	**227**	*i* P	**Pn**	**16 11 26.3**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.58**	**315**	*e*P	**Pn**	**16 11 27.6**	**+0.1**
JNSB				*e*S	**Sn**	**16 11 37.6**	**-0.3**
AKK	**Akkeshi**	**0.64**	**237**	*e*S	**Sn**	**16 11 38.2**	**-0.8**
JRA	**Rausu**	**0.66**	**330**	P	**Pn**	**16 11 28.6**	**+0.3**
JRA				*e*S	**Sn**	**16 11 39.6**	**+0.3**
JNK	**Nakash**	**0.66**	**290**	*e*P	**Pn**	**16 11 27.9**	**-0.4**
JNK				*e*S	**Sn**	**16 11 37.9**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**0.70**	**17**	*i* P	**Pn**	**16 11 29.2**	**+0.5**
YUK				AMB	AMB	16 11 29.5	
	140nm,0.3s						
YUK				*i* S	**Sn**	**16 11 40.6**	**+0.5**
YUK				A	A	16 11 47.1	
	200nm,0.2s						
YUK				A	A	16 11 47.1	
	160nm,0.2s						
JAK	**Akkeshi**	**0.74**	**240**	P	**Pn**	**16 11 29.1**	**0.0**
JAK				*e*S	**Sn**	**16 11 40.4**	**-0.5**
JAR	**Ashorobuto**	**1.32**	**268**	*e*P	**Pn**	**16 11 36.5**	**+0.3**
JAR				*e*S	**Sn**	**16 11 53.4**	**0.0**
JTKR	**Abashiri--Toko**	**1.35**	**297**	*e*P	**Pn**	**16 11 37.0**	**+0.5**
JTKR				*e*S	**Sn**	**16 11 54.0**	**-0.1**
JOB	**Onbets**	**1.36**	**251**	P	**Pn**	**16 11 37.0**	**+0.4**
JOB				*e*S	**Sn**	**16 11 54.6**	**+0.5**
KUR	**Kuril'sk**	**2.49**	**41**	*e*S	**Sn**	**16 12 19.5**	**-1.5**
KUR				A	A	16 12 34.8	
	40nm,0.4s						
KUR				A	A	16 12 34.8	
	40nm,0.4s						

*NEIC **18** 16:20:05.7±0.9, 4°97S±0°06×152°46E±0°10, h39km±10km, mb4.3/12, Error ellipse: s-maj=14.6km s-min=7.0km az=68.0*

*IDC **18** 16:20:12.7±8.7, 4°94S×152°54E, h127km±59km, mb3.8/2, mbtmp4.1/3, MS4.3/3, Error ellipse: s-maj=115.5km s-min=54.9km az=121.0*

ISC 18 16:20:07.1±0.8, 4°87S±0°08×152°4E±0°2, h55km, n33, σ1§27/30, mb4.3/8, MS4.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.71**	**343**	Pn	**Pn**	**16 20 21.1**	**-0.2**
RABL				Sn	**Sn**	**16 20 31.6**	**+0.1**
PMG	**Port Moresby**	**6.86**	**229**	P	Pn	16 21 52.3	+7.1
	6.9nm,0.8s,baz=41,slow=9.3,SNR=1.7						
PMG				S	Sn	16 23 11.2	+9.2
	9.0nm,0.5s,baz=150,slow=16,SNR=1.6						
PMG	**Port Moresby**	**6.86**	**229**	Pn	**Pn**	**16 21 43.7**	**-1.5**
COEN	**Coen**	**12.80**	**224**	P	**P**	**16 23 18.8**	**+3.0**
PATS	**Pohnpei**	**13.05**	**27**	Pn	**Pn**	**16 23 08.1**	**-1.9**
QIS	**Mount Isa**	**19.93**	**217**	P	**Pn**	**16 24 36.7**	**0.0**
KDU	**Kakadu**	**21.13**	**247**	P	**P**	**16 24 47.9**	**+0.2**
WB0	**Warramunga Arr**	**22.93**	**228**	P	**P**	**16 25 06.0**	**-0.8**
WB0				IAmb	IAmb	16 25 06.9	
	comp=Z,6.3nm,0.5s						
WR0	**Warramunga Arr**	**22.94**	**228**	P	**P**	**16 25 06.1**	**-0.9**
WRAB	**Tennant Creek**	**23.07**	**228**	P	**P**	**16 25 06.7**	**-1.5**
WRAB				IAmb	IAmb	16 25 08.7	
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	**23.07**	**228**	P	**P**	**16 25 07.6**	**-0.6**
WB2	**Warramunga Arr**	**23.07**	**228**	P	**P**	**16 25 07.6**	**-0.6**
WB2				IAmb	IAmb	16 25 08.3	
	comp=Z,8.0nm,0.5s						
WRA	**Warramunga Arr**	**23.08**	**228**	P	**P**	**16 25 07.8**	**-0.6**
	comp=Z,4.9nm,0.6s,baz=54,slow=10,SNR=112						
	comp=Z,4.9nm,0.6s						
WRA	**Warramunga Arr**	**23.08**	**228**	P	**P**	**16 25 06.9**	**-1.5**
INKA	**Innaminka**	**25.30**	**205**	P	**P**	**16 25 31.1**	**+2.5**
KNRA	**Kununurra**	**25.56**	**243**	P	**P**	**16 25 30.5**	**-0.7**
KNRA				IAmb	IAmb	16 25 35.6	
	comp=Z,14nm,1.2s						
KNRA	**Kununurra**	**25.56**	**243**	P	**P**	**16 25 32.0**	**+0.8**
AS01	**Alice Springs**	**25.78**	**222**	P	**P**	**16 25 32.8**	**-0.3**
AS31	**Alice Springs**	**25.81**	**222**	P	**P**	**16 25 32.5**	**-0.9**
ASAR	**Alice Springs**	**25.81**	**222**	P	**P**	**16 25 33.0**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=55,slow=9.2,SNR=48						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**25.81**	**222**	P	**P**	**16 25 32.8**	**-0.6**
WRKA	**Warakurna**	**30.60**	**227**	P	**P**	**16 26 14.9**	**-1.3**
MULG	**Mulgathing**	**30.62**	**212**	P	**P**	**16 26 15.6**	**-0.6**
FORT	**Forrest**	**34.47**	**219**	P	**P**	**16 26 48.8**	**-1.1**
FORT	**Forrest**	**34.47**	**219**	P	**P**	**16 26 49.0**	**-0.9**
PSA00	**Pilbara Seismi**	**35.63**	**239**	P	**P**	**16 26 58.3**	**-1.7**
RAR	**Rarotonga**	**49.14**	**114**	LR	LR	16 47 12.8	
	comp=Z,568nm,19.5s,baz=186,slow=33						
PPT	**Papeete**	**58.11**	**108**	LR	LR	16 50 23.3	
	comp=Z,469nm,20.9s,baz=262,slow=31						
VNDA	**Vanda**	**72.77**	**178**	P	**P**	**16 31 28.9**	**-0.3**
VNDA				IAmb	IAmb	16 32 01.1	
	comp=Z,2.6nm,1.4s						
MKAR	**Makanchi Array**	**80.10**	**319**	LR	LR	17 09 08.6	
	comp=Z,53nm,19.9s,baz=306,slow=37						
TOLK	**Toolik Lake Re**	**83.42**	**18**	P	**P**	**16 32 30.0**	**+1.6**
QSPA	**South Pole Qui**	**85.09**	**180**	P	**P**	**16 32 36.7**	**-0.3**
QSPA				IAmb	IAmb	16 32 58.2	
	comp=Z,3.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**149.93**	**288**	PKPbc	**PKPdf**	**16 39 49.3**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=52,slow=2.6,SNR=4.1						

*BJI **18** 16:36:38.0±0.0, 23°40S×179°90W, h520km, mb5.1/64, mB5.4/47*

*MOS **18** 16:36:40.4±0.7, 23°33S×179°93W, h539km, mb5.9/58, Error ellipse: s-maj=7.7km s-min=6.3km az=68.5*

*NOU **18** 16:36:41.1, 23°39S×179°79W, h541km, ML5.8/179, South of Fiji Islands*

*NEIC **18** 16:36:41.8±1.6, 23°33S±0°09×179°84W±0°09, h540km±1km, mb5.9/500, Mwb6.0/53, Mww5.9, Error ellipse: s-maj=14.6km s-min=13.6km az=149.0*

*IDC **18** 16:36:41.7±0.4, 23°37S×179°95W, h540km±3km, mb5.2/23, mbtmp6.1/26, Error ellipse: s-maj=7.8km s-min=6.7km az=6.0*

*NEIC **18** 16:36:42, 23°30S×179°93W, h540km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.47; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-0.52; $M_{r\theta}$0.36; $M_{\theta\phi}$0.10; $M_{\phi r}$-1.01; Fault plane solution: $M_0$1.19000×10^{18} NP1:ϕ_s161.35000°, δ77.62000°, λ85.59000°. NP2:ϕ_s1.14000°, δ13.13000°, λ109.32000°. Principal axes: T 1.1577, Plg57.0000°, Azm66.0000°; N 0.0560, Plg4.0000°, Azm162.0000°; P -1.2137, Plg32.0000°, Azm255.0000°;*

*GCMT **18** 16:36:44.8±0.1, 23°39S±0°01×179°78W±0°01, h552km, MW6.0/160, Moment Tensor Solution. s160, c343; s112, c128; Duration: 2s3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.46±.01; $M_{\theta\theta}$-0.02±.01; $M_{\phi\phi}$-0.44±.01; $M_{r\theta}$0.25±.01; $M_{\theta\phi}$-0.10±.01; $M_{\phi r}$-0.92±.01; Best double couple: $M_0$1.05300×10^{18} NP1:ϕ_s168.00000°, δ78.00000°, λ80.00000°. NP2:ϕ_s29.00000°, δ16.00000°, λ129.00000°. Principal axes: T 1.0920, Plg56.0000°, Azm66.0000°; N -0.0790, Plg10.0000°, Azm170.0000°; P -1.0140, Plg32.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **18** 16:36:47, 23°33S×179°89W, h550km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.77; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-4.39; $M_{r\theta}$1.85; $M_{\theta\phi}$-0.83; $M_{\phi r}$-7.82; Fault plane solution: $M_0$9.29000×10^{17} NP1:ϕ_s24.00000°, δ17.00000°, λ122.00000°. NP2:ϕ_s171.00000°, δ76.00000°, λ81.00000°. Principal axes: T 9.6550, Plg58.0000°, Azm68.0000°; N -0.7787, Plg9.0000°, Azm173.0000°; P -8.8762, Plg30.0000°, Azm268.0000°;*

ISC 18 16:36:40.9±0.2, 23°38S±0°03×179°83W±0°03, h541km±1km, h542km:pP-P, n2210, σ1§51/2463, mb5.9/413, 116C-126D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.96**	**340**	P	**P**	**16 38 19.7**	**+0.7**
	198nm,0.5s,baz=202,slow=8.7,SNR=169						
MSVF				S	**S**	**16 39 39.1**	**+0.1**
	329nm,1.0s,baz=190,slow=23,SNR=7.2						
MSVF	**Nonsavu**	**5.96**	**340**	P	**P**	**16 38 19.4**	**+0.5**
MSVF	**Nonsavu**	**5.96**	**340**	*c* *i*P	**P**	**16 38 19.6**	**+0.7**
MSVF				pmax	pmax		
	comp=Z,456nm,1.1s						
MSVF	**Nonsavu**	**5.96**	**340**	P	**P**	**16 38 19.9**	**+1.0**
	comp=Z,560nm,0.9s						
RAO	**Raoul Island**	**6.09**	**164**	P	**P**	**16 38 20.3**	**+0.6**
	comp=Z,6μm,0.3s,baz=88,slow=1.8,SNR=77						
RAO				S	**S**	**16 39 36.2**	**-4.6**
	comp=Z,3μm,0.4s,baz=90,slow=20,SNR=3.4						
RAO	**Raoul Island**	**6.09**	**164**	P	**P**	**16 38 19.8**	**0.0**
RAO	**Raoul Island**	**6.09**	**164**	P	**P**	**16 38 20.3**	**+0.6**
FUTU	**Fugatoga**	**9.17**	**10**	P	**P**	**16 38 51.7**	**+1.4**
NIUE	**Niue**	**10.18**	**67**	P	**P**	**16 39 00.8**	**+0.1**
	baz=10						
NIUE				S	**S**	**16 40 53.9**	**-1.6**
	baz=10						
NIUE	**Niue**	**10.18**	**67**	P	**P**	**16 39 00.6**	**0.0**
MARNC	**Mare, Loyalty**	**11.39**	**277**	P	**P**	**16 39 13.2**	**+0.2**
MARNC	**Mare, Loyalty**	**11.39**	**277**	P	**P**	**16 39 14.0**	**+1.0**
AFI	**Afiamalu**	**12.12**	**40**	P	**P**	**16 39 18.0**	**-2.9**
	comp=Z,213nm,0.6s,baz=169,slow=1.1,SNR=14						
AFI				S	**S**	**16 41 24.0**	**-8.5**
	comp=Z,398nm,0.5s,baz=280,slow=23,SNR=8.0						
AFI	**Afiamalu**	**12.12**	**40**	P	**P**	**16 39 17.6**	**-3.3**
AFI	**Afiamalu**	**12.12**	**40**	P	**P**	**16 39 17.9**	**-2.9**
AFI				pmax	pmax		
	comp=Z,697nm,0.9s						
AFI	**Afiamalu**	**12.12**	**40**	P	**P**	**16 39 18.0**	**-2.9**
LIFNC	**LIFOU**	**12.26**	**280**	P	**P**	**16 39 22.0**	**-0.2**
LIFNC	**LIFOU**	**12.26**	**280**	P	**P**	**16 39 22.3**	**+0.1**
	comp=Z,6μm,1.1s						
RTV	**Rentapao**	**12.32**	**295**	P	**P**	**16 39 23.5**	**+0.7**
OUENC	**Ouen Island, N**	**12.32**	**272**	P	**P**	**16 39 23.5**	**+0.7**
OUENC	**Ouen Island, N**	**12.32**	**272**	P	**P**	**16 39 24.0**	**+1.2**
YATNC	**Mamie plateau,**	**12.33**	**274**	P	**P**	**16 39 23.8**	**+1.0**
NFK	**Norfolk Island**	**12.34**	**240**	P	**P**	**16 39 24.3**	**+1.5**
	baz=12,SNR=60						
NFK	**Norfolk Island**	**12.34**	**240**	P	**P**	**16 39 25.3**	**+2.5**
	comp=Z,4μm,1.2s						
DVP	**Devils Point**	**12.55**	**294**	P	**P**	**16 39 25.9**	**+0.7**
ONTNC	**Ouen Toro**	**12.69**	**272**	P	**P**	**16 39 27.0**	**+0.4**
ONTNC	**Ouen Toro**	**12.69**	**272**	P	**P**	**16 39 27.4**	**+0.8**
DZM	**Mont Dzumac**	**12.73**	**273**	*e*Pn	**P**	**16 39 26.4**	**-0.8**
	comp=Z,1μm,1.1s						
DZM				*e*Sn	**S**	**16 41 42.6**	**-1.5**
DZM	**Mont Dzumac**	**12.73**	**273**	P	**P**	**16 39 28.1**	**+0.9**
	comp=Z,312nm,0.9s,baz=143,slow=22,SNR=90						
DZM				ScP	**ScP**	**16 47 01.6**	**+2.5**
	comp=Z,136nm,1.1s,baz=225,slow=5.7,SNR=19						
DZM	**Mont Dzumac**	**12.73**	**273**	P	**P**	**16 39 27.3**	**+0.1**
DZM	**Mont Dzumac**	**12.73**	**273**	P	**P**	**16 39 27.8**	**+0.6**
NOUC	**Port Laguerre**	**12.86**	**273**	P	**P**	**16 39 29.0**	**+0.7**
KUZ	**Kuaotunu**	**13.86**	**195**	P	**P**	**16 39 39.2**	**+0.7**
MXZ	**Matakaoa Point**	**14.22**	**186**	P	**P**	**16 39 40.4**	**-1.8**
MXZ	**Matakaoa Point**	**14.22**	**186**	P	**P**	**16 39 40.8**	**-1.4**
WHRZ	**Whale Island**	**14.68**	**190**	P	**P**	**16 39 48.0**	**+1.0**
WHRZ				S	**S**	**16 42 19.6**	**-0.9**
RUGZ	**Raukumara Rang**	**14.69**	**188**	P	**P**	**16 39 45.3**	**-1.9**
RUGZ				S	**S**	**16 42 16.9**	**-3.9**
FUNA	**Funafuti**	**14.80**	**356**	P	**P**	**16 39 46.1**	**-2.5**
FUNA	**Funafuti**	**14.80**	**356**	P	**P**	**16 39 46.8**	**-1.8**
TWGZ	**Tauwhareparae**	**14.86**	**187**	P	**P**	**16 39 50.1**	**+1.1**
TWGZ				S	**S**	**16 42 20.5**	**-3.4**
KOUNC	**Koumac, New Ca**	**15.00**	**278**	P	**P**	**16 39 49.8**	**-0.8**
KOUNC	**Koumac, New Ca**	**15.00**	**278**	P	**P**	**16 39 51.0**	**+0.4**
URZ	**Urewera**	**15.06**	**189**	P	**P**	**16 39 47.5**	**-3.3**
	comp=Z,303nm,0.4s,baz=325,slow=4.8,SNR=70						
URZ				S	**S**	**16 42 20.7**	**-6.7**
	comp=Z,166nm,0.5s,baz=294,slow=20,SNR=3.3						
URZ				ScP	**ScP**	**16 47 01.6**	**-1.0**
	comp=Z,48nm,0.9s,baz=180,slow=1.0,SNR=3.0						
URZ	**Urewera**	**15.06**	**189**	P	**P**	**16 39 47.0**	**-3.9**
URZ	**Urewera**	**15.06**	**189**	P	**P**	**16 39 49.8**	**-1.0**
URZ				S	**S**	**16 42 20.5**	**-6.8**
URZ	**Urewera**	**15.06**	**189**	P	**P**	**16 39 48.4**	**-2.5**
MWZ	**Matawai**	**15.07**	**188**	P	**P**	**16 39 48.9**	**-2.2**
MWZ				S	**S**	**16 42 20.5**	**-7.2**
TKGZ	**Te Karaka**	**15.14**	**187**	P	**P**	**16 39 50.6**	**-1.1**
TKGZ				S	**S**	**16 42 22.3**	**-6.5**
CNGZ	**Carnagh Statio**	**15.14**	**186**	P	**P**	**16 39 51.3**	**-0.5**
CNGZ				S	**S**	**16 42 24.1**	**-4.8**
RAGZ	**Rawiri**	**15.25**	**188**	P	**P**	**16 39 51.8**	**-1.1**

SNZO South Karori 18.45 193 P **P** **16 40 20.9 -2.1**
SNZO South Karori 18.45 193 P **P** **16 40 21.9 -1.1**
QRZ Quartz Range 18.54 198 P **S** **16 43 26.2 +0.8**
QRZ Quartz Range 18.54 198 P **P** **16 40 24.3 +0.4**
PLWZ Palliser 18.59 192 P **P** **16 40 22.4 -2.1**
PLWZ Palliser 18.59 192 P **S** **16 43 22.9 -3.4**
NNZ Nelson 18.67 196 P **S** **16 43 23.6 -3.8**
TUWZ Tuamarina 18.73 195 P **P** **16 40 23.5 -2.1**
TUWZ Tuamarina 18.73 195 P **S** **16 43 24.5 -3.9**
CMWZ Cape Campbell 18.98 194 P **P** **16 40 26.3 -1.5**
CMWZ Cape Campbell 18.98 194 P **S** **16 43 31.1 -1.3**
MRNZ Matariki Terra 19.01 197 P **S** **16 43 29.7 -3.2**
BSWZ Blackbirch Sta 19.02 195 P **S** **16 43 31.0 -2.1**
THZ Tophouse 19.31 197 P **S** **16 43 34.2 -3.6**
DSZ Denniston Nort 19.60 199 P **S** **16 43 41.7 -0.8**
KHZ Kahutara 19.77 195 P **P** **16 40 33.0 -2.0**
KHZ Kahutara 19.77 195 P **S** **16 43 38.8 -6.2**
LHI Lord Howe Isla 20.39 242 P **P** **16 40 41.6 +0.8**
baz=20,SNR=45
LHI Lord Howe Isla 20.39 242 P **P** **16 40 42.4 +1.6**
LHI Lord Howe Isla 20.39 242 P **P** **16 40 43.1 +2.3**
GVZ Greta Valley S 20.41 195 P **S** **16 43 49.9 -5.4**
GVZ Greta Valley S 20.41 195 P **ScP** **16 47 15.1 +1.0**
LTZ Lake Taylor 20.43 197 P **P** **16 40 39.0 -2.0**
LTZ Lake Taylor 20.43 197 P **S** **16 43 53.1 -2.6**
CTZ Chatham Island 20.47 173 P **P** **16 40 42.9 +1.5**
AMCZ Amberley 20.70 196 P **S** **16 43 52.2 -7.6**
MQZ McQueen's Vall 21.20 195 P **P** **16 40 46.3 -1.6**
MQZ McQueen's Vall 21.20 195 P **ScP** **16 47 17.4 +1.4**
AKCZ Akaroa Harbour 21.29 195 P **ScP** **16 47 17.7 +1.4**
RPZ Rata Peaks 21.63 198 P **P** **16 40 50.8 -1.0**
comp=Z,484nm,0.9s,baz=80,slow=2.7,SNR=31
RPZ S **S** **16 44 11.3 -3.2**
comp=Z,73nm,1.1s,baz=345,slow=20,SNR=2.9
RPZ ScP **ScP** **16 47 17.3 +0.2**
comp=Z,145nm,1.0s,baz=41,slow=1.7,SNR=7.1
comp=Z,484nm,0.9s
RPZ Rata Peaks 21.63 198 P **P** **16 40 50.0 -1.9**
RPZ Rata Peaks 21.63 198 P **ScP** **16 47 17.7 +0.5**
RPZ Rata Peaks 21.63 198 P **P** **16 40 50.4 -1.5**
ARCZ Arundel 21.80 198 P **ScP** **16 47 17.8 +0.2**
FOZ Fox Glacier 21.84 201 P **ScP** **16 47 17.3 -0.3**
TMZ Timaru 22.25 198 P **ScP** **16 47 19.1 +0.4**
LBZ Lake Benmore 22.49 199 P **ScP** **16 47 20.2 +0.8**
JCZ Jackson Bay 22.66 202 P **ScP** **16 47 21.3 +1.4**
JCZ Jackson Bay 22.66 202 P **P** **16 41 01.0 -0.2**
ODZ Otahua Downs 22.96 197 P **P** **16 41 02.4 -1.4**
ODZ Otahua Downs 22.96 197 P **ScP** **16 47 21.4 +0.8**
ODZ Otahua Downs 22.96 197 P **P** **16 41 02.9 -0.9**
WKZ Wanaka 23.25 200 P **P** **16 41 04.6 -1.8**
WKZ Wanaka 23.25 200 P **ScP** **16 47 23.3 +1.9**
EAZ Earnscleugh 23.52 199 P **ScP** **16 47 23.9 +1.8**
HHSZ Highcliff Hill 23.75 197 P **ScP** **16 47 21.5 -1.2**
HNR Honiara 23.80 302 P **P** **16 41 10.7 -0.9**
comp=Z,5μm,0.7s,baz=171,slow=4.4,SNR=30
HNR Honiara 23.80 302 P **P** **16 41 10.2 -1.4**
HNR Honiara 23.80 302 P **P** **16 41 11.5 -0.1**
GC1S Gold Coast 1 S 24.45 253 P **P** **16 41 19.8 +2.6**
SYZ Scrubby Hill 24.76 198 P **P** **16 41 19.4 -0.2**
AUBSH Beerwah State 24.87 256 P **P** **16 41 21.8 +0.9**
PYZ Puysegur Point 25.21 202 P **P** **16 41 23.3 -0.4**
TARA Tarawa 25.58 343 P **P** **16 41 24.9 -2.5**
TARA Tarawa 25.58 343 P **P** **16 41 27.3 -0.1**
ARMA Armidale 26.35 248 P **P** **16 41 35.5 +1.4**
baz=26,SNR=219
ARMA Armidale 26.35 248 P **P** **16 41 35.1 +1.0**
ARMA Armidale 26.35 248 P **P** **16 41 35.7 +1.6**
EIDS Eidsvold 26.55 260 P **P** **16 41 36.3 +0.6**
baz=26,SNR=280
EIDS Eidsvold 26.55 260 P **P** **16 41 35.7 -0.1**
EIDS Eidsvold 26.55 260 P **P** **16 41 36.4 +0.6**
GD1S Gladstone Soft 26.56 263 P **P** **16 41 36.6 +0.7**
NTLH Newcastle Hard 26.76 243 P **P** **16 41 38.2 +0.7**
AUPHS Peel High Scho 27.09 247 P **P** **16 41 41.9 +1.4**
RK1H Rockhampton Ha 27.22 264 P **P** **16 41 42.5 +0.8**
RIV Riverview 27.43 241 P **P** **16 41 44.9 +1.6**
baz=28,SNR=17
RIV Riverview 27.43 241 P **P** **16 41 45.0 +1.6**
RIV pmax pmax
comp=Z,605nm,1.6s
RIV Riverview 27.43 241 P **P** **16 41 44.5 +1.1**
AUMOU Moura State Hi 27.59 261 P **P** **16 41 46.4 +1.5**
SYDH Sydney Hard Ro 27.75 242 P **P** **16 41 47.5 +1.3**
TBI Tubuai 27.86 96 *e*P **P** **16 41 47.5 +0.2**
comp=Z,2μm,1.2s
TBI *e*pP **pP** **16 43 11.7 -2.5**
comp=Z,989nm,1.4s
TBI *e*sP **sP** **16 44 19.9 +3.1**
TBI *e*S **S** **16 45 56.3 +3.5**
comp=Z,1μm,45.8s
TBI *e*ScP **ScP** **16 47 35.8 +0.5**
comp=Z,515nm,1.2s
AUUHS Ulladulla High 28.39 238 P **P** **16 41 52.9 +1.1**
RMQ Roma 28.61 257 P **P** **16 41 55.3 +1.5**
baz=29,SNR=106
RMQ Roma 28.61 257 P **P** **16 41 55.2 +1.3**
PAE Paea 28.86 84 *e*P **P** **16 41 55.7 -0.4**
comp=Z,156nm,1.2s
PAE *e*pP **pP** **16 43 19.7 -3.8**
comp=Z,119nm,1.2s
PAE *e*ScP **ScP** **16 47 38.8 +0.3**
comp=Z,31nm,1.2s
PPT2 Papeete2 28.89 84 *e*P **P** **16 41 56.2 -0.2**
comp=Z,696nm,1.2s
PPT2 *e*pP **pP** **16 43 20.5 -3.3**
comp=Z,473nm,1.3s
PPT2 *e*S **S** **16 46 12.2 +3.1**
comp=Z,2μm,26.5s
PPT2 *e*ScP **ScP** **16 47 39.0 +0.3**
comp=Z,155nm,1.2s
PPT2 *e*LR LR 16 50 06.3
comp=Z,1μm,14.8s
PPT Papeete 28.89 84 P **P** **16 41 57.4 +1.0**
comp=Z,435nm,1.0s,baz=305,slow=2.0,SNR=78
PPT ScP **ScP** **16 47 40.4 +1.7**
comp=Z,140nm,1.1s,baz=55,slow=1.2,SNR=10
comp=Z,435nm,1.0s
PPTF Pamatai, Papee 28.90 84 P **P** **16 41 56.6 +0.1**
PPTF Pamatai, Papee 28.90 84 P **P** **16 41 57.4 +0.9**
TIAR Tiarei 29.11 84 *e*P **P** **16 41 57.8 -0.5**
comp=Z,169nm,1.1s
TIAR *e*pP **pP** **16 43 22.4 -3.3**
comp=Z,102nm,1.3s
TIAR *e*ScP **ScP** **16 47 40.3 +0.9**
comp=Z,17nm,1.1s
TVO Taravao 29.13 85 *e*P **P** **16 41 58.9 +0.4**
comp=Z,141nm,1.0s
TVO *e*pP **pP** **16 43 22.8 -3.2**
comp=Z,260nm,1.5s
TVO *e*ScP **ScP** **16 47 39.3 -0.2**
comp=Z,15nm,1.0s
AUDCS Dubbo College 29.17 245 P **P** **16 41 59.6 +1.0**
CNB Canberra Magne 29.25 239 P **P** **16 42 00.6 +1.2**
baz=29,SNR=172
CNB Canberra Magne 29.25 239 P **P** **16 42 00.8 +1.5**
AULRC Lightning Ridg 29.39 251 P **P** **16 42 01.3 +0.7**
CAN Canberra 29.54 239 P **P** **16 42 02.3 +0.5**
CAN Canberra 29.54 239 P **P** **16 42 02.3 +0.5**
CAN pmax pmax
comp=Z,1μm,1.0s
CAN Canberra 29.54 239 P **P** **16 42 02.9 +1.1**
MILA Mila 29.91 236 P **P** **16 42 06.0 +0.9**
baz=30,SNR=62
MILA Mila 29.91 236 P **P** **16 42 06.2 +1.1**
AUSMG Snowy Mountain 30.14 237 P **P** **16 42 08.3 +1.2**
MEH Mehetia 30.19 86 *e*P P 16 41 57.8 -10
comp=Z,864nm,1.1s
MEH *e*pP pP 16 43 22.5 -13
comp=Z,517nm,1.3s
MEH *e*ScP **ScP** **16 47 40.4 -2.5**
comp=Z,87nm,1.1s
AUAYR Ayr State High 30.68 271 P **P** **16 42 11.9 +0.1**
PMOR Pomariorio Ree 31.24 80 *e*P **P** **16 42 16.2 -0.4**
comp=Z,1μm,1.2s
PMOR *e*ScP **ScP** **16 47 46.0 -0.4**
comp=Z,391nm,1.2s
TV1H Townsville Har 31.32 271 P **P** **16 42 17.8 +0.5**
VAH Vaihoa 31.40 81 *e*P **P** **16 42 17.4 -0.6**
comp=Z,479nm,1.1s
VAH *e*ScP **ScP** **16 47 46.7 -0.2**
comp=Z,149nm,1.1s
CMSA Cobar Meteorol 31.55 247 P **P** **16 42 19.7 +0.6**
baz=32,SNR=793
CMSA Cobar Meteorol 31.55 247 P **P** **16 42 19.6 +0.5**

CTA Charters Tower 31.63 269 P **P** **16 42 20.9 +0.9**
comp=Z,1μm,0.7s,baz=95,slow=10.0,SNR=1296
CTA S **S** **16 46 50.9 -0.3**
comp=Z,40nm,1.0s,baz=329,slow=19,SNR=6.8
CTA ScP **ScP** **16 47 51.1 +3.3**
comp=Z,66nm,1.0s,baz=138,slow=3.8,SNR=9.6
CTA P3KPbc 17 13 43.3
comp=Z,15nm,1.2s,baz=272,slow=3.5,SNR=13
comp=Z,1μm,0.7s
CTAO Charters Tower 31.63 269 P **P** **16 42 20.5 +0.5**
CTAO Charters Tower 31.63 269 P **P** **16 42 20.5 +0.5**
CTAO pmax pmax
comp=Z,2μm,0.7s
CTAO Charters Tower 31.63 269 P **P** **16 42 20.5 +0.5**
CTAO Charters Tower 31.63 269 ⇓P **P** **16 42 20.7 +0.7**
CTAO ScP **ScP** **16 47 50.5 +2.8**
AUSSC Sale College, 31.81 235 P **P** **16 42 21.6 +0.4**
QLP Quilpie 32.66 257 P **P** **16 42 29.1 +0.4**
baz=33,SNR=172
QLP Quilpie 32.66 257 P **P** **16 42 29.1 +0.4**
AULHS Lilydale High 32.80 229 P **P** **16 42 30.9 +1.4**
TOO Toolangi 32.86 236 P **P** **16 42 30.9 +0.7**
baz=33,SNR=208
TOO Toolangi 32.86 236 P **P** **16 42 30.5 +0.3**
TOO Toolangi 32.86 236 P **P** **16 42 30.5 +0.3**
TOO pmax pmax
comp=Z,785nm,1.0s
TOO Toolangi 32.86 236 P **P** **16 42 30.9 +0.7**
AUCSH Cairns State H 32.87 275 P **P** **16 42 32.5 +2.0**
comp=Z,593nm,0.8s
CORO Coronation Par 32.93 229 P **P** **16 42 32.1 +1.5**
comp=Z,719nm,1.0s
AUMAG Moama Anglican 33.08 239 P **P** **16 42 32.5 +0.5**
RABL Rabaul 33.10 301 P **P** **16 42 30.6 -1.9**
RABL IAmb IAmb 16 42 36.3
comp=Z,444nm,1.4s
RABL Rabaul 33.10 301 P **P** **16 42 31.1 -1.4**
comp=Z,214nm,0.6s
MOO Moorlands 33.29 227 P **P** **16 42 34.9 +1.2**
baz=33,SNR=14
MOO Moorlands 33.29 227 P **P** **16 42 34.6 +0.9**
MLBS Spotswood, Mel 33.38 236 P **P** **16 42 35.8 +1.3**
comp=Z,539nm,1.0s
TAU Tasmania Unive 33.40 226 P **P** **16 42 35.0 +0.4**
TAU IAmb IAmb 16 42 36.8
comp=Z,493nm,1.0s
TAU Tasmania Unive 33.40 226 P **P** **16 42 35.0 +0.4**
TAU pmax pmax
comp=Z,493nm,1.0s
TAU Tasmania Unive 33.40 226 P **P** **16 42 35.7 +1.1**
TAU Tasmania Unive 33.40 226 P **P** **16 42 35.3 +0.7**
TAU PP **PP** **16 44 16.1 -0.6**
TAU ScP **ScP** **16 47 55.2 +1.7**
MTSU Mount Surprise 33.87 272 P **P** **16 42 39.2 +0.2**
baz=34,SNR=510
MTSU Mount Surprise 33.87 272 P **P** **16 42 39.4 +0.4**
GEXS Deakin Univers 33.94 236 P **P** **16 42 40.4 +1.2**
BRAT Ballarat 34.05 237 P **P** **16 42 41.5 +1.3**
PMG Port Moresby 34.48 288 P **P** **16 42 44.2 +0.1**
comp=Z,1μm,0.8s,baz=99,slow=5.5,SNR=227
PMG S **S** **16 47 33.3 -1.2**
comp=Z,5.9nm,0.7s,baz=12,slow=22,SNR=9.0
PMG ScP **ScP** **16 48 01.4 +3.6**
comp=Z,85nm,1.0s,baz=267,slow=23,SNR=8.1
comp=Z,1μm,0.8s
PMG Port Moresby 34.48 288 P **P** **16 42 44.1 0.0**
PMG Port Moresby 34.48 288 *d*iP **P** **16 42 44.0 0.0**
PMG pmax pmax
comp=Z,1μm,0.9s
PMG Port Moresby 34.48 288 P **P** **16 42 43.7 -0.3**
comp=Z,5μmcomp=Z,18μmcomp=Z,2μm,1.0s
PMG Port Moresby 34.48 288 P **P** **16 42 43.9 -0.1**
PMG Port Moresby 34.48 288 P **P** **16 42 44.1 0.0**
PMG ScP **ScP** **16 48 00.5 +2.7**
MCQ Macquarie Isla 34.90 202 P **P** **16 42 48.4 +1.5**
baz=35,SNR=6.1
MCQ Macquarie Isla 34.90 202 P **P** **16 42 47.4 +0.5**
MCQ Macquarie Isla 34.90 202 P **P** **16 42 47.4 +0.5**
MCQ pmax pmax
comp=Z,793nm,1.4s
MCQ Macquarie Isla 34.90 202 P **P** **16 42 47.9 +1.0**
STKA Stephens Creek 35.06 247 P **P** **16 42 49.3 +0.6**
comp=Z,422nm,0.7s,baz=90,slow=9.8,SNR=525
STKA ScP **ScP** **16 48 02.4 +2.7**
comp=Z,96nm,1.2s,baz=68,slow=5.4,SNR=7.3
comp=Z,422nm,0.7s
STKA Stephens Creek 35.06 247 P **P** **16 42 49.4 +0.6**
baz=35,SNR=550
STKA Stephens Creek 35.06 247 P **P** **16 42 49.3 +0.6**
STKA Stephens Creek 35.06 247 *d*iP **P** **16 42 49.1 +0.4**
STKA Stephens Creek 35.06 247 P **P** **16 42 49.1 +0.4**
AUHPC Hawkesdale P12 35.42 237 P **P** **16 42 52.1 +0.5**
ARPS Mount Arapiles 35.51 239 P **P** **16 42 52.7 +0.4**
baz=36,SNR=80
ARPS Mount Arapiles 35.51 239 P **P** **16 42 52.8 +0.4**
INKA Innaminka 35.72 255 P **P** **16 42 55.5 +1.2**
COEN Coen 36.19 278 P **P** **16 42 58.7 +0.5**
baz=36,SNR=95
COEN Coen 36.19 278 P **P** **16 42 58.6 +0.3**
COEN Coen 36.19 278 P **P** **16 42 58.8 +0.5**
PATS Pohnpei 36.86 322 P **P** **16 43 03.6 -0.1**
baz=37,SNR=6.6
PATS Pohnpei 36.86 322 P **P** **16 43 03.2 -0.5**
PATS IAmb IAmb 16 43 05.7
comp=Z,373nm,1.3s
PATS Pohnpei 36.86 322 P **P** **16 43 04.1 +0.4**
HTT Hallett 37.43 245 P **P** **16 43 08.4 +0.1**
baz=38,SNR=352
HTT Hallett 37.43 245 P **P** **16 43 08.6 +0.3**
comp=Z,1μm,1.1s
QIS Mount Isa 37.64 266 P **P** **16 43 09.8 -0.4**
baz=38,SNR=155
QIS Mount Isa 37.64 266 P **P** **16 43 09.8 -0.4**
GHSS Government Hou 37.83 243 P **P** **16 43 12.5 +1.0**
LCRK Leigh Creek 37.90 250 P **P** **16 43 12.4 +0.3**
PTPS Port Pirie 38.18 246 P **P** **16 43 15.4 +1.0**
MANU Manus Island 38.20 299 P **P** **16 43 14.2 -0.6**
MANU Manus Island 38.20 299 P **P** **16 43 14.5 -0.3**
WHYH Whyalla 38.53 246 P **P** **16 43 17.6 +0.5**
BBOO Buckleboo 39.79 246 P **P** **16 43 27.0 -0.4**
baz=40,SNR=265
BBOO Buckleboo 39.79 246 P **P** **16 43 26.8 -0.6**
BBOO Buckleboo 39.79 246 P **P** **16 43 27.1 -0.3**
OOD Oodnadatta 40.20 254 P **P** **16 43 31.7 +1.0**
TAOE Nuku Hiva Isla 40.61 76 *e*P **P** **16 43 34.0 -0.3**
comp=Z,3μm,1.1s
TAOE *e*S **S** **16 49 07.9 +2.5**
comp=Z,870nm,24.7s
TAOE Nuku Hiva Isla 40.61 76 P **P** **16 43 35.0 +0.8**
TAOE Nuku Hiva Isla 40.61 76 P **P** **16 43 35.6 +1.3**
comp=Z,1μm,1.2s
TAOE Nuku Hiva Isla 40.61 76 P **P** **16 43 35.5 +1.3**
TAOE pP **pwP** **16 45 13.7 -0.8**
JOHN Johnston Islan 41.12 15 P **P** **16 43 37.1 -0.9**
MULG Mulgathing 41.49 250 P **P** **16 43 41.0 0.0**
AS01 Alice Springs 42.23 260 P **P** **16 43 47.0 +0.1**
AS31 Alice Springs 42.27 260 P **P** **16 43 47.0 -0.3**
AS31 IAmb IAmb 16 43 48.5
comp=Z,252nm,0.9s
ASAR Alice Springs 42.27 260 P **P** **16 43 47.4 +0.1**
comp=Z,1μm,0.8s,baz=93,slow=8.1,SNR=1475
ASAR ScP **ScP** **16 48 30.9 +3.0**
comp=Z,127nm,1.0s,baz=110,slow=4.1,SNR=26
ASAR S **S** **16 49 27.5 -1.6**
comp=Z,33nm,1.0s,baz=100,slow=14,SNR=6.2
ASAR PKP2ab 17 16 51.1
comp=Z,3.2nm,1.2s,baz=312,slow=3.3,SNR=4.1
ASAR P4KPbc 17 21 40.0
comp=Z,0.9nm,0.6s,baz=105,slow=4.5,SNR=18
comp=Z,1μm,0.8s
ASAR Alice Springs 42.27 260 P **P** **16 43 47.0 -0.3**
WR0 Warramunga Arr 42.41 266 P **P** **16 43 47.5 -0.9**
WC3 Warramunga Arr 42.56 266 P **P** **16 43 48.7 -0.9**
baz=42
WB2 Warramunga Arr 42.59 266 P **P** **16 43 49.0 -0.8**
WB1 Warramunga Ar. 42.59 266 P **P** **16 43 49.4 -0.3**
WB0 Warramunga Arr 42.59 266 P **P** **16 43 48.9 -0.9**
WRAB Tennant Creek 42.59 266 P **P** **16 43 48.9 -0.9**
WRAB Tennant Creek 42.59 266 P **P** **16 43 48.9 -0.9**
WRAB pmax pmax
comp=Z,1μm,0.8s
WRAB Tennant Creek 42.59 266 P **P** **16 43 49.2 -0.6**
WRAB Tennant Creek 42.59 266 ⇓P **P** **16 43 49.1 -0.6**
WRAB ScP **ScP** **16 48 32.3 +3.2**
WRA Warramunga Arr 42.60 266 P **P** **16 43 49.5 -0.3**
comp=Z,908nm,0.8s,baz=90,slow=5.7,SNR=1391
WRA PP **PP** **16 45 44.0 +2.7**
comp=Z,46nm,1.0s,baz=101,slow=8.7,SNR=6.3
WRA ScP **ScP** **16 48 31.0 +1.9**
comp=Z,134nm,1.0s,baz=103,slow=4.2,SNR=23
WRA S **S** **16 49 29.5 -4.3**
comp=Z,115nm,1.2s,baz=98,slow=14,SNR=11
WRA PKiKP **PKiKP** **16 52 31.1 -1.3**
comp=Z,1.4nm,0.5s,baz=75,slow=0.4,SNR=5.4
comp=Z,908nm,0.8s
WRA Warramunga Arr 42.60 266 P **P** **16 43 49.0 -0.9**
GENI Genyem 43.87 292 P **P** **16 43 59.0 -0.8**
comp=Z,4μmcomp=Z,14μmcomp=Z,1μm,0.9s
GENI Genyem 43.87 292 P **P** **16 44 00.5 +0.7**
PTCN Pitcairn Islan 45.18 103 P **P** **16 44 11.0 +1.3**
PTCN Pitcairn Islan 45.18 103 P **P** **16 44 09.8 +0.1**
KDU Kakadu 46.40 275 P **P** **16 44 18.4 -0.7**
baz=46,SNR=230
KDU Kakadu 46.40 275 P **P** **16 44 18.6 -0.5**
FORT Forrest 46.64 249 P **P** **16 44 20.0 -0.7**
baz=47,SNR=327
FORT Forrest 46.64 249 P **P** **16 44 20.1 -0.7**
FORT Forrest 46.64 249 P **P** **16 44 20.2 -0.5**
comp=Z,3μm,1.0s
WRKA Warakurna 47.10 257 P **P** **16 44 23.9 -0.5**
baz=47,SNR=1000
WRKA Warakurna 47.10 257 P **P** **16 44 24.3 -0.1**
MTN Manton Dam 47.57 274 P **P** **16 44 27.0 -1.0**
baz=48,SNR=121
MTN Manton Dam 47.57 274 P **P** **16 44 26.8 -1.2**
MTN IAmb IAmb 16 44 28.4
comp=Z,288nm,0.8s
MTN Manton Dam 47.57 274 P **P** **16 44 27.2 -0.8**
SRPI Serui, Papua 47.61 290 P **P** **16 44 27.8 -0.5**
comp=Z,8μmcomp=Z,750nm,1.0s
KHU Kahuku 48.52 31 P **P** **16 44 35.6 +0.5**
KHU IAmb IAmb 16 44 37.1
comp=Z,628nm,1.6s
KHU Kahuku 48.52 31 P **P** **16 44 35.6 +0.5**
KHU pmax pmax
comp=Z,628nm,1.6s
KHLU Kahalu`u 48.68 31 P **P** **16 44 37.3 +1.1**
AIN Ainahou 48.70 31 P **P** **16 44 37.0 +0.6**
AIN IAmb IAmb 16 44 39.6
comp=Z,582nm,1.2s
HLP Hilina Pali 48.70 31 P **P** **16 44 37.2 +0.8**
MWH Moku'aweowe 48.73 31 P **P** **16 44 37.7 +0.7**
MWH IAmb IAmb 16 44 45.9
comp=Z,513nm,1.3s
MLOA Mauna Loa Obse 48.78 31 P **P** **16 44 37.9 +0.5**
HUH Hualalai 48.79 31 P **P** **16 44 37.8 +0.6**
SDHHI Sand Hill 48.79 31 P **P** **16 44 37.3 +0.3**
SDHHI IAmb IAmb 16 44 39.2
comp=Z,496nm,0.8s
WRMHI West Rim 48.80 31 P **P** **16 44 37.5 +0.4**
KKO Keanakako`i 48.81 31 P **P** **16 44 37.6 +0.4**
PUH Pauahi 48.82 31 P **P** **16 44 37.5 +0.3**
OBL Observatory Le 48.82 31 P **P** **16 44 37.9 +0.7**
OBL IAmb IAmb 16 44 39.2
comp=Z,502nm,0.9s
BYL Byron's Ledge 48.83 31 P **P** **16 44 37.6 +0.3**
HATHI Halema'uma'u T 48.84 31 P **P** **16 44 38.3 +1.0**
SBLHI Steaming Bluff 48.84 31 P **P** **16 44 37.6 +0.2**
KNRA Kununurra 48.85 269 P **P** **16 44 37.3 -0.1**
baz=49,SNR=803
KNRA Kununurra 48.85 269 P **P** **16 44 37.2 -0.2**
KNRA Kununurra 48.85 269 P **P** **16 44 37.5 +0.1**
JCUZ Jacuzzi 48.88 32 P **P** **16 44 38.2 +0.6**
NPOC North of Pu'u 48.88 32 P **P** **16 44 38.0 +0.4**
HMH Humu'ula Sheep 48.88 31 P **P** **16 44 38.7 +0.7**
POHA Pohakuloa 48.99 31 P **P** **16 44 39.1 +0.4**
POHA Pohakuloa 48.99 31 P **P** **16 44 39.8 +1.1**
POHA Pohakuloa 48.99 31 P **P** **16 44 39.4 +0.7**
HPAH Hawaii Prepara 49.15 31 P **P** **16 44 39.8 +0.2**
KEKH Kekaha 49.16 25 P **P** **16 44 39.9 +0.4**
SAUI Saumlaki 49.23 280 P **P** **16 44 40.5 +0.2**
SAUI Saumlaki 49.23 280 P **P** **16 44 40.8 +0.5**
comp=Z,28μmcomp=Z,3μm,1.1s
SAUI Saumlaki 49.23 280 P **P** **16 44 40.8 +0.5**
HON Honolulu 49.26 27 P **P** **16 44 40.9 +0.6**
HON Honolulu 49.26 27 P **P** **16 44 40.9 +0.6**
HON pmax pmax
comp=Z,982nm,1.0s
KIP Kipapa 49.35 27 P **P** **16 44 41.2 +0.2**
KIP Kipapa 49.35 27 *de*P **P** **16 44 42.3 +1.4**
KIP pmax pmax
comp=Z,441nm,1.2s
KIP Kipapa 49.35 27 P **P** **16 44 41.7 +0.8**
KIP Kipapa 49.35 27 P **P** **16 44 41.6 +0.7**
KIP Kipapa 49.35 27 P **P** **16 44 41.9 +0.9**
KIP pP **pwP** **16 46 25.8 +1.0**
HLK Haleakala 49.53 29 P **P** **16 44 43.3 +0.6**
RKPI Ransiki, Papua 49.57 289 P **P** **16 44 42.3 -0.5**
comp=Z,4μmcomp=Z,5μmcomp=Z,529nm,0.8s
OPA Opana 49.58 27 P **P** **16 44 42.9 +0.2**
OPA IAmb IAmb 16 44 44.8
comp=Z,453nm,1.0s
OPA Opana 49.58 27 P **P** **16 44 42.9 +0.2**
OPA pmax pmax
comp=Z,453nm,1.0s
MWPI Manokwari, Pap 49.98 290 P **P** **16 44 46.0 +0.2**
comp=Z,8μmcomp=Z,582nm,1.4s
DRV Dumont d'Urvil 50.08 200 ⇓P **P** **16 44 46.0 +0.3**
DRV pP **pwP** **16 46 30.1 -1.3**
DRV ScP **ScP** **16 48 59.1 -0.5**
GUMO Guam 50.43 313 P **P** **16 44 48.5 -0.5**
GUMO Guam 50.43 313 P **P** **16 44 48.5 -0.5**
GUMO pmax pmax
comp=Z,600nm,0.8s
GUMO Guam 50.43 313 P **P** **16 44 49.2 +0.1**
comp=Z,915nm,0.9s
GUMO Guam 50.43 313 P **P** **16 44 49.1 +0.1**
GUMO ScP **ScP** **16 49 03.2 +1.2**
FAKI Fak Fak 50.58 286 P **P** **16 44 49.1 -1.2**
FAKI IAmb IAmb 16 44 51.2
comp=Z,686nm,1.1s
FAKI Fak Fak 50.58 286 P **P** **16 44 49.3 -1.0**
comp=Z,4μmcomp=Z,8μmcomp=Z,651nm,1.2s
FAKI Fak Fak 50.58 286 P **P** **16 44 49.9 -0.4**
MIDW Midway 51.35 3 P **P** **16 44 55.2 -0.2**
MIDW Midway 51.35 3 P **P** **16 44 56.0 +0.5**
MIDW Midway 51.35 3 P **P** **16 44 55.8 +0.4**
BNDI Bandanaira 51.94 283 P **P** **16 44 59.4 -0.7**
comp=Z,6μmcomp=Z,18μmcomp=Z,2μm,1.1s
BNDI Bandanaira 51.94 283 P **P** **16 45 00.3 +0.2**
SIJI Sorong 52.42 288 P **P** **16 45 02.5 -1.0**
comp=Z,3μmcomp=Z,16μmcomp=Z,2μm,1.0s
MSAI Masohi 53.33 284 P **P** **16 45 08.9 -1.1**
comp=Z,783nmcomp=Z,104nm,0.6s
KRAI Karang Ratu 53.82 284 P **P** **16 45 12.3 -1.2**
comp=Z,8μmcomp=Z,607nm,2.3s
AAI Ambon 53.84 283 P **P** **16 45 12.6 -1.0**
comp=Z,4μmcomp=Z,11μmcomp=Z,682nm,1.5s
AUALB St Joseph's Co 54.81 243 P **P** **16 45 19.9 -0.2**
SBA Scott Base 54.90 183 P **P** **16 45 22.6 +2.6**
SBA Scott Base 54.90 183 P **P** **16 45 22.6 +2.6**
SBA pmax pmax
comp=Z,390nm,1.1s
SBA Scott Base 54.90 183 P **P** **16 45 23.0 +3.0**
SBA pP **pwP** **16 47 05.6 -1.8**
SBA ScP **ScP** **16 49 21.9 +1.4**
VNDA Vanda 54.90 185 P **P** **16 45 21.9 +1.8**
comp=Z,44nm,0.9s,baz=0.5,slow=7.8,SNR=193
VNDA PcP **PcP** **16 46 15.0 +1.2**
comp=Z,15nm,1.0s,baz=26,slow=4.7,SNR=6.7
VNDA ScP **ScP** **16 49 21.5 +1.0**
comp=Z,9.4nm,0.8s,baz=27,slow=4.4,SNR=3.9
comp=Z,44nm,0.9s
VNDA Vanda 54.90 185 P **P** **16 45 21.7 +1.7**
VNDA Vanda 54.90 185 P **P** **16 45 21.9 +1.8**
VNDA ScP **ScP** **16 49 21.0 +0.5**
SOEI Soe 54.96 274 P **P** **16 45 22.2 +0.6**
SOEI Soe 54.96 274 P **P** **16 45 21.9 +0.3**
comp=Z,7μmcomp=Z,25μmcomp=Z,2μm,1.0s
SOEI Soe 54.96 274 P **P** **16 45 22.9 +1.3**
NLAI Namlea 55.02 283 P **P** **16 45 20.9 -1.0**
comp=Z,7μmcomp=Z,471nm,1.5s
KLBR Kellerberrin 55.33 247 P **P** **16 45 23.5 -0.3**
baz=55,SNR=469
KLBR Kellerberrin 55.33 247 P **P** **16 45 23.6 -0.3**
PSA00 Pilbara Seismi 55.41 259 P **P** **16 45 23.6 -0.9**
PSA00 IAmb IAmb 16 45 25.5
comp=Z,695nm,1.1s
PSA00 Pilbara Seismi 55.41 259 P **P** **16 45 23.2 -1.3**

PSA00 IAmb IAmb 16 45 25.6
comp=Z,503nm,1.2s
PSA00 Pilbara Seismi 55.41 259 P **P 16 45 24.0 -0.5**
NWAO Narrogin (SRO) 55.59 245 P **P 16 45 25.4 -0.2**
baz=56,SNR=72
NWAO P **P 16 45 25.4 -0.2**
baz=56,SNR=72
NWAO Narrogin (SRO) 55.59 245 P **P 16 45 25.2 -0.4**
NWAO IAmb IAmb 16 45 26.9
comp=Z,866nm,1.2s
NWAO Narrogin (SRO) 55.59 245 P **P 16 45 25.2 -0.4**
NWAO pmax pmax
comp=Z,866nm,1.2s
NWAO Narrogin (SRO) 55.59 245 P **P 16 45 25.6 0.0**
NWAO Narrogin (SRO) 55.59 245 P **P 16 45 25.2 -0.4**
RKGY Rocky Gully 55.60 243 P **P 16 45 25.8 +0.2**
baz=56,SNR=30
RKGY Rocky Gully 55.60 243 P **P 16 45 25.7 0.0**
MBWA Marble Bar 55.62 260 P **P 16 45 25.2 -0.8**
MBWA IAmb IAmb 16 45 26.9
comp=Z,832nm,0.9s
MBWA Marble Bar 55.62 260 P **P 16 45 25.3 -0.6**
MBWA Marble Bar 55.62 260 P **P 16 45 25.4 -0.6**
MBWA ScP **ScP 16 49 26.8 +2.1**
LBMI Labuha 55.84 286 P **P 16 45 26.9 -0.7**
comp=Z,8μmcomp=Z,852nm,0.9s
BLDU Ballidu 56.36 248 P **P 16 45 30.5 -0.5**
baz=56,SNR=517
BLDU Ballidu 56.36 248 P **P 16 45 30.7 -0.3**
SANI Sanana 56.54 284 P **P 16 45 30.8 -1.6**
comp=Z,4μmcomp=Z,7μmcomp=Z,398nm,0.6s
SANI Sanana 56.54 284 P **P 16 45 31.6 -0.8**
MUN Mundaring 56.58 246 P **P 16 45 32.4 -0.1**
baz=57,SNR=119
MUN Mundaring 56.58 246 P **P 16 45 32.6 +0.1**
TNTI Ternate 56.62 287 P **P 16 45 32.1 -0.9**
TNTI IAmb IAmb 16 45 34.2
comp=Z,700nm,1.1s
TNTI Ternate 56.62 287 P **P 16 45 32.1 -0.9**
comp=Z,2μmcomp=Z,7μmcomp=Z,638nm,1.2s
TNTI Ternate 56.62 287 P **P 16 45 32.9 -0.1**
AUHAR St Anne's Scho 56.69 245 P **P 16 45 33.7 +0.6**
GAMI Galela, Maluku 56.77 289 P **P 16 45 32.0 -2.0**
comp=Z,6μmcomp=Z,538nm,1.0s
MTKN Mount Kenneth 56.95 246 P **P 16 45 37.1 +2.1**
MORW Morawa 57.20 250 P **P 16 45 36.4 -0.3**
baz=57,SNR=256
MORW Morawa 57.20 250 P **P 16 45 36.3 -0.5**
MORW IAmb IAmb 16 45 37.9
comp=Z,839nm,0.9s
MORW Morawa 57.20 250 P **P 16 45 36.5 -0.3**
MMRI Maumere 57.23 275 P **P 16 45 36.4 -0.8**
MMRI IAmb IAmb 16 45 38.2
comp=Z,911nm,1.0s
MMRI Maumere 57.23 275 P **P 16 45 36.3 -0.9**
comp=Z,4μmcomp=Z,12μmcomp=Z,1μm,1.2s
MMRI Maumere 57.23 275 P **P 16 45 36.8 -0.4**
BBSI Bau Bau 58.16 278 P **P 16 45 43.1 -0.4**
comp=Z,317nm,1.0s
CCD Concordia, Ant 59.26 195 P **P 16 45 51.0 +0.7**
CCD pP **pP 16 47 35.8 0.0**
CCD sP **sP 16 48 33.9 +0.5**
CCD ScP **ScP 16 49 40.3 0.0**
KKSI Kolaka, Sulawe 59.53 279 P **P 16 45 51.1 -1.6**
comp=Z,4μmcomp=Z,320nm,1.1s
SGSI Sangihe 59.64 289 P **P 16 45 52.5 -0.9**
comp=Z,4μmcomp=Z,414nm,0.7s
BSSI Bau Bau, Buton 59.79 277 P **P 16 45 52.9 -1.5**
comp=Z,3μmcomp=Z,7μmcomp=Z,445nm,1.4s
LUWI Luwuk 59.86 283 P **P 16 45 54.5 -0.4**
LUWI Luwuk 59.86 283 P **P 16 45 54.1 -0.8**
comp=Z,3μmcomp=Z,11μmcomp=Z,1μm,1.2s
LUWI Luwuk 59.86 283 P **P 16 45 54.7 -0.2**
GIRL Giralia 60.19 256 P **P 16 45 57.9 +1.0**
baz=60,SNR=57
GIRL Giralia 60.19 256 P **P 16 45 57.9 +1.0**
GIRL Giralia 60.19 256 P **P 16 45 57.7 +0.8**
BKSI Bulukumba 60.45 277 P **P 16 45 57.2 -1.6**
comp=Z,2μmcomp=Z,6μmcomp=Z,699nm,1.0s
CASY Casey 60.64 206 P **P 16 45 59.1 0.0**
CASY Casey 60.64 206 P **P 16 45 59.1 0.0**
CASY pP **pP 16 47 45.3 +0.2**
CASY ScP **ScP 16 49 45.1 -0.9**
BNSI Bone 60.84 278 P **P 16 46 00.2 -1.1**
comp=Z,2μmcomp=Z,5μmcomp=Z,403nm,1.4s
KAPI Kappang 60.91 278 P **P 16 46 01.3 -0.6**
KAPI IAmb IAmb 16 46 03.5
comp=Z,1μm,1.9s
KAPI Kappang 60.91 278 *d iP* **P 16 46 01.4 -0.4**
KAPI pmax pmax
comp=Z,262nm,1.9s
KAPI Kappang 60.91 278 P **P 16 46 00.5 -1.3**
comp=Z,3μmcomp=Z,5μmcomp=Z,275nm,1.7s
KAPI Kappang 60.91 278 P **P 16 46 01.5 -0.4**
KAPI Kappang 60.91 278 P **P 16 46 01.5 -0.4**
APSI Ampana 60.92 283 P **P 16 46 01.9 0.0**
comp=Z,8μmcomp=Z,899nm,1.3s
BIPH Bislig 61.23 294‖ *eP* **P 16 46 01.9 -2.0**
PLAI Plampang 61.25 273 P **P 16 46 02.8 -1.2**
comp=Z,3μmcomp=Z,13μmcomp=Z,2μm,0.9s
PLAI Plampang 61.25 273 P **P 16 46 03.8 -0.2**
comp=Z,2μm,0.9s
MRSI Marisa 61.28 284 P **P 16 46 01.8 -2.4**
comp=Z,3μmcomp=Z,312nm,1.4s
DAV Davao City (W) 61.30 293 P **P 16 46 04.0 -0.4**
DAV IAmb IAmb 16 46 05.3
comp=Z,385nm,0.8s
DAV Davao City (W) 61.30 293 P **P 16 46 03.8 -0.6**
comp=Z,501nm,0.7s
DAV Davao City (W) 61.30 293 P **P 16 46 05.0 +0.6**
comp=Z,514nm,0.7s
SPSI Sidrap Palu 61.32 279 P **P 16 46 02.6 -1.9**
comp=Z,4μmcomp=Z,352nm,1.0s
TTSI Tana Toraja 61.66 280 P **P 16 46 05.7 -1.0**
comp=Z,3μmcomp=Z,275nm,1.2s
KCP Kidapawan 61.69 292‖ *eP* **P 16 46 05.9 -1.1**
TWSI Taliwang, Sumb 62.10 272 P **P 16 46 08.4 -1.2**
comp=Z,10μmcomp=Z,878nm,1.3s
JCJ Chichijima 62.17 322 P **P 16 46 09.4 -0.3**
PMSI Majene 62.29 279 P **P 16 46 10.1 -0.8**
comp=Z,3μmcomp=Z,9μmcomp=Z,829nm,1.2s
CTBH Cotabato--PC H 62.52 292‖ *iP* **P 16 46 12.0 -0.3**
TOLI2 Tolitoli 62.60 284 P **P 16 46 11.7 -1.1**
TOLI2 IAmb IAmb 16 46 13.5
comp=Z,480nm,0.9s
TOLI2 Tolitoli 62.60 284 P **P 16 46 12.1 -0.7**
CGP Cagayan de Oro 62.77 294‖ *eP* **P 16 46 14.1 +0.2**
KLNI Mataram 62.94 272 P **P 16 46 13.0 -2.0**
comp=Z,7μmcomp=Z,698nm,1.0s
VA02 Isla de Pascua 63.01 110 P **P 16 46 16.7 +1.4**
VA02 IAmb IAmb 16 46 18.8
comp=Z,696nm,1.1s
MPSI Mapaga 63.04 283 P **P 16 46 13.9 -1.8**
comp=Z,2μmcomp=Z,6μmcomp=Z,729nm,1.0s
RPN Rapa Nui 63.10 110 P **P 16 46 18.1 +2.3**
comp=Z,431nm,0.9s,baz=290,slow=4.6,SNR=16
comp=Z,431nm,0.9s
RPN Rapa Nui 63.10 110 P **P 16 46 16.8 +0.9**
RPN IAmb IAmb 16 46 19.5
comp=Z,728nm,1.1s
RPN Rapa Nui 63.10 110 P **P 16 46 18.0 +2.1**
DNP Denpasar 63.66 272 P **P 16 46 20.2 +0.6**
comp=Z,18μmcomp=Z,1μm,1.4s
IGBI Denpasar 63.67 272 P **P 16 46 19.2 -0.5**
comp=Z,2μmcomp=Z,12μmcomp=Z,1μm,1.2s
SRBI Singaraja 63.88 272 P **P 16 46 20.2 -0.8**
comp=Z,4μmcomp=Z,9μmcomp=Z,710nm,1.1s
TABP Talibon, Bohol 63.94 295‖ *iP* **P 16 46 19.6 -1.7**
RTBI Rangdo, Negare 63.99 272 P **P 16 46 20.5 -1.3**
comp=Z,8μmcomp=Z,624nm,1.0s
LSIP Lazi, Siquijor 64.02 294⇑ *iP* **P 16 46 21.3 -0.6**
TBP Tagbilaran 64.12 294 *eP* **P 16 46 22.4 -0.1**
JAGI Jajag, Banyuwa 64.71 272 P **P 16 46 25.0 -1.4**
JAGI Jajag, Banyuwa 64.71 272 P **P 16 46 24.6 -1.7**
comp=Z,7μmcomp=Z,614nm,1.2s
JAGI Jajag, Banyuwa 64.71 272 P **P 16 46 25.1 -1.2**
BKB Balikpapan 65.05 280 P **P 16 46 29.5 +1.1**
BKB Balikpapan 65.05 280 P **P 16 46 29.7 +1.2**
comp=Z,5μmcomp=Z,342nm,1.8s
BKB Balikpapan 65.05 280 P **P 16 46 30.6 +2.1**
SMKI Samarinda 65.12 281 P **P 16 46 29.7 +0.8**
comp=Z,10μmcomp=Z,774nm,1.4s
KMMI Kalianget 65.41 273 P **P 16 46 29.6 -1.1**
comp=Z,11μmcomp=Z,995nm,1.2s
BBKI Banjar Baru 66.01 277 P **P 16 46 34.2 -0.3**
comp=Z,8μmcomp=Z,629nm,1.4s
RCP Roxas 66.03 295‖ *eP* **P 16 46 33.8 -0.7**
KRKI Karangkates 66.39 271 P P 16 46 42.2 +5.4
MYLDM Lahad Datu 66.49 287 P **P 16 46 38.7 +1.4**
MYLDM IAmb IAmb 16 46 40.9
comp=Z,586nm,1.6s
MYLDM Lahad Datu 66.49 287 P **P 16 46 38.8 +1.4**
comp=Z,4μmcomp=Z,228nm,1.5s
QSPA South Pole Qui 66.70 180 P **P 16 46 39.3 +1.4**
comp=Z,391nm,1.1s,baz=18,slow=0.9,SNR=448
QSPA pP **pP 16 48 27.9 +0.7**
comp=Z,27nm,1.1s,baz=8.3,slow=6.2,SNR=2.0
comp=Z,391nm,1.1s
QSPA South Pole Qui 66.70 180 P **P 16 46 39.1 +1.2**
QSPA IAmb IAmb 16 46 41.1
comp=Z,315nm,0.9s
QSPA South Pole Qui 66.70 180 ⇑P **P 16 46 39.4 +1.4**
QSPA pP **pP 16 48 27.2 0.0**
MTKI Muara Teweh, K 67.00 279 P **P 16 46 39.5 -1.1**
comp=Z,11μmcomp=Z,369nm,0.9s
PWJI Paperwojo 67.03 271 P **P 16 46 39.1 -1.7**
comp=Z,6μmcomp=Z,620nm,1.1s
TBJI Tambak Boyo 67.44 272 P **P 16 46 43.9 +0.6**
comp=Z,4μmcomp=Z,11μmcomp=Z,687nm,1.4s
GQP Guinayangan 67.53 297‖ *eP* **P 16 46 43.1 -0.6**
PCJI Pacitan 67.55 271 P **P 16 46 43.7 -0.2**
comp=Z,15μmcomp=Z,2μm,1.3s
JHJ2 Mitsune 68.09 324 P **P 16 46 47.1 +0.3**
UGM Wanagama 68.25 271 P **P 16 46 47.8 -0.5**
UGM Wanagama 68.25 271 P **P 16 46 47.1 -1.2**
comp=Z,741nm,0.9s
UGM Wanagama 68.25 271 P **P 16 46 48.1 -0.2**
YOGI Yogyakarta 68.50 271 P **P 16 46 49.9 +0.2**
comp=Z,5μmcomp=Z,661nm,1.2s
SMRI Semarang 68.65 271 P **P 16 46 50.6 0.0**
SMRI Semarang 68.65 271 P **P 16 46 50.8 +0.1**
comp=Z,10μmcomp=Z,647nm,0.8s
SMRI Semarang 68.65 271 P **P 16 46 51.2 +0.5**
KKM Kota Kinabalu 68.90 287 P **P 16 46 52.1 -0.2**
KKM IAmb IAmb 16 46 53.9
comp=Z,670nm,1.5s
KKM Kota Kinabalu 68.90 287 P **P 16 46 52.2 -0.1**
comp=Z,5μmcomp=Z,347nm,1.3s
KKM Kota Kinabalu 68.90 287 P **P 16 46 52.5 +0.2**
SCJI Gunung Srandil 69.58 270 P **P 16 46 55.3 -0.9**
comp=Z,4μmcomp=Z,241nm,0.5s
CTJI Waduk Cacaban 69.82 271 P **P 16 46 57.0 -0.7**
comp=Z,6μmcomp=Z,593nm,1.3s
JYT Yasato 70.30 327 P **P 16 47 00.4 +0.4**
JOW Kunigami 70.76 312 P **P 16 47 03.7 +0.8**
JOW IAmb IAmb 16 47 05.4
comp=Z,254nm,0.9s
JOW Kunigami 70.76 312 P **P 16 47 03.9 +1.0**
JCJI Jatiwangi 70.85 271 P **P 16 47 02.7 -1.1**
comp=Z,13μmcomp=Z,1μm,1.6s
SBUM Sibu 70.86 281 P **P 16 47 03.8 0.0**
SBUM Sibu 70.86 281 P **P 16 47 03.2 -0.6**
comp=Z,1μmcomp=Z,69nm,1.9s
PACPP Pamplona Cagay 70.89 301⇑ *iP* **P 16 47 03.1 -0.7**
CICP Calayan Island 71.24 302‖ *eP* **P 16 47 01.9 -3.9**
INU Inuyama 71.30 324 P **P 16 47 06.1 +0.3**
INU Inuyama 71.30 324 P **P 16 47 06.8 +0.9**
INU Inuyama 71.30 324 P **P 16 47 05.9 0.0**
JGF Kuroka 71.30 324 P **P 16 47 05.8 -0.1**
JGF Kuroka 71.30 324 P **P 16 47 06.2 +0.2**
MJAR Maushiro Arr 71.56 325 P **P 16 47 07.5 0.0**
comp=Z,13nm,0.7s,baz=160,slow=6.0,SNR=24
MJAR PKPPKP **P'P'df 17 14 47.0 -4.5**
comp=Z,12nm,1.1s,baz=327,slow=3.2,SNR=9.6
MAJO Matsushiro 71.56 325 P **P 16 47 07.2 -0.3**
MAJO Matsushiro 71.56 325 *deP* **P 16 47 07.3 -0.1**
MAJO pmax pmax
comp=Z,22nm,0.9s
MAJO Matsushiro 71.56 325 P **P 16 47 07.9 +0.5**
MAJO Matsushiro 71.56 325 P **P 16 47 07.2 -0.3**
MAJO pP **pP 16 48 59.3 +0.6**
MJB9 Matsu-Tunnel 71.57 325 P **P 16 47 07.8 +0.4**
CNJI Cibinong 71.59 270 P **P 16 47 06.2 -1.9**
comp=Z,2μmcomp=Z,282nm,1.2s
XMI Christmas Isla 71.76 266 P **P 16 47 09.9 +0.8**
comp=Z,700nm,1.4s
JMN Monobe 71.88 321 P **P 16 47 09.9 +0.5**
JMN Monobe 71.88 321 P **P 16 47 10.3 +0.9**
KSM Kuching 72.17 280 P **P 16 47 11.1 -0.4**
KSM IAmb IAmb 16 47 13.0
comp=Z,347nm,0.8s
KSM Kuching 72.17 280 P **P 16 47 10.4 -1.1**
comp=Z,5μmcomp=Z,517nm,1.3s
KSM Kuching 72.17 280 P **P 16 47 11.5 0.0**
SKJI Sukabumi 72.23 270 P **P 16 47 10.2 -1.6**
comp=Z,3μmcomp=Z,381nm,0.9s
JSU Suzuyama 72.41 317 P **P 16 47 12.5 +0.1**
JSU Suzuyama 72.41 317 P **P 16 47 13.0 +0.5**
JSD Sado 72.67 326 P **P 16 47 14.9 +1.1**
SBJI Serang 72.96 271 P **P 16 47 15.0 -1.0**
comp=Z,6μmcomp=Z,304nm,1.4s
YOJ Yonaguni jima 73.05 307 P **P 16 47 16.2 0.0**
YOJ IAmb IAmb 16 47 19.2
comp=Z,350nm,1.1s
YOJ Yonaguni jima 73.05 307 P **P 16 47 16.2 0.0**
YOJ pmax pmax
comp=Z,350nm,1.1s
YOJ Yonaguni jima 73.05 307 P **P 16 47 15.5 -0.7**
JHS Saijyo 73.22 321 P **P 16 47 17.3 +0.2**
JHS Saijyo 73.22 321 P **P 16 47 18.1 +1.0**
JTM Tenmabayashi 73.46 330 P **P 16 47 18.5 +0.2**
ERM Erimo 73.53 332 *ceP* **P 16 47 20.5 +2.0**
ERM pmax pmax
comp=Z,77nm,1.2s
YULB Yu-li 73.70 305 P **P 16 47 19.0 -1.0**
NACB Ninganchiao 73.93 306 P **P 16 47 20.5 -0.7**
NACB IAmb IAmb 16 47 22.9
comp=Z,472nm,1.2s
BLSI Bandar Lampung 74.06 271 P **P 16 47 21.8 -0.5**
comp=Z,4μmcomp=Z,366nm,1.6s
TPUB Ta-pu 74.16 305 P **P 16 47 21.6 -1.0**
TPUB IAmb IAmb 16 47 23.5
comp=Z,258nm,0.9s
TPUB Ta-pu 74.16 305 P **P 16 47 21.6 -1.0**
SSLB Suanglung 74.19 305 P **P 16 47 21.7 -1.1**
SSLB Suanglung 74.19 305 P **P 16 47 22.1 -0.7**
comp=Z,222nm,1.1s
YHNB Yeheng 74.38 306 P **P 16 47 23.4 -0.5**
YHNB Yeheng 74.38 306 P **P 16 47 24.2 +0.3**
AMKA Amchitka 74.44 359 P **P 16 47 23.4 -0.1**
TATO Taipei 74.47 306 P **P 16 47 23.8 -0.5**
TATO IAmb IAmb 16 47 25.5
comp=Z,424nm,0.9s
TATO Taipei 74.47 306 P **P 16 47 24.5 +0.2**
PPBI Pangkal Pinang 74.49 274 P **P 16 47 24.5 -0.2**
comp=Z,5μmcomp=Z,286nm,1.4s
KLI Kotabumi 74.61 271 P **P 16 47 23.3 -2.1**
comp=Z,4μmcomp=Z,354nm,1.4s
KASI Kota Agung 74.69 271 P **P 16 47 24.2 -1.6**
comp=Z,4μmcomp=Z,524nm,1.1s
JEW Eniwo 74.94 332 P **P 16 47 27.4 +0.9**
KIWB Kanaga Island 74.95 2 P **P 16 47 26.2 -0.1**
ADK Adak 74.99 2 P **P 16 47 26.5 -0.1**
ADK IAmb IAmb 16 47 28.1
comp=Z,818nm,1.5s
ADK Adak 74.99 2 P **P 16 47 26.5 -0.1**
ADK pmax pmax
comp=Z,818nm,1.5s
ADK Adak 74.99 2 P **P 16 47 26.7 +0.1**
LWLI Liwa 75.28 271 P **P 16 47 27.6 -1.7**
comp=Z,7μmcomp=Z,592nm,1.3s
PMBI Palembang 75.44 273 P **P 16 47 31.3 +1.3**
SMY Shemya 75.97 356 P **P 16 47 31.9 -0.1**
SMY IAmb IAmb 16 47 33.5
comp=Z,565nm,1.3s
SMY Shemya 75.97 356 P **P 16 47 31.9 -0.1**
SMY pmax pmax
comp=Z,565nm,1.3s
SMAI San Martin Ant 76.53 159 P **P 16 47 36.3 +1.2**
MNAI Manna 76.55 271 P **P 16 47 35.1 -1.1**
MNAI IAmb IAmb 16 47 36.8
comp=Z,343nm,1.0s
DSRI Dabo 76.59 275 P **P 16 47 35.9 -0.5**
comp=Z,2μmcomp=Z,3μmcomp=Z,220nm,1.3s
QZH Quanzhou 76.61 305⇑ *iP* **P 16 47 37.8 +1.6**
QZH S **S 16 56 39.5 +0.5**
QZH pmax pmax
comp=Z,100nm,1.4s
NIKH Nikolski High 76.63 7 P **P 16 47 35.5 -0.2**
NIKH IAmb IAmb 16 47 37.1
comp=Z,731nm,1.0s
NIKH Nikolski High 76.63 7 P **P 16 47 35.2 -0.4**
baz=190,SNR=7.1
BELA Belgrano 2 76.92 173 P **P 16 47 37.1 0.0**
JMBI JAMBI 76.99 274 P **P 16 47 39.5 +0.9**
comp=Z,5μmcomp=Z,417nm,1.3s
KSI Kapahiang 77.16 272 P **P 16 47 37.5 -2.1**
comp=Z,665nm,1.3s
TPRI Tanjung Pinang 77.20 277 P **P 16 47 39.4 -0.3**
comp=Z,4μmcomp=Z,232nm,1.1s
UBSI University, Be 77.41 271 P **P 16 47 39.9 -1.0**
comp=Z,619nm,1.5s
TJN Taejon 77.57 319 P **P 16 47 41.4 +0.3**
TJN IAmb IAmb 16 47 43.5
comp=Z,711nm,1.9s
TJN Taejon 77.57 319 *deP* **P 16 47 41.9 +0.8**
TJN Taejon 77.57 319 P **P 16 47 42.0 +0.8**
MASI Maura Aman, Be 77.68 272 P **P 16 47 42.0 -0.4**
comp=Z,3μmcomp=Z,386nm,1.1s
YSS Yuzh-Sakhalins 77.73 335 P **P 16 47 42.9 +1.1**
YSS Yuzh-Sakhalins 77.73 335 *eP* **P 16 47 42.9 +1.1**
YSS *e**PP **pwP 16 49 40.1 -0.3**
YSS *eS* **S 16 56 55.3 +5.4**
YSS pmax pmax
comp=Z,80nm,1.5s
YSS pmax pmax
comp=Z,500nm,3.2s
YSS smax smax
comp=N,2μm,7.2s
YSS smax smax
comp=E,2μm,7.3s
YSS Yuzh-Sakhalins 77.73 335 P **P 16 47 43.2 +1.4**
UNV Unalaska Valle 77.77 8 P **P 16 47 41.1 -0.7**
UNV Unalaska Valle 77.77 8 P **P 16 47 41.5 -0.3**
baz=192,SNR=10
KSRS Korea Array 77.95 320 P **P 16 47 44.2 +1.1**
comp=E,10nm,0.7s,baz=133,slow=5.8,SNR=39
KSAR Wonju Array Be 77.97 320 P **P 16 47 43.5 +0.2**
KSAR Wonju Array Be 77.97 320 P **P 16 47 43.5 +0.2**
KS19 Wonju Array Si 78.02 320 P **P 16 47 44.1 +0.5**
BTDF Bukit Timah Da 78.07 277 P **P 16 47 44.0 -0.4**
comp=E,2μmcomp=E,162nm,1.4s
MYKOM Kota Tinggi 78.17 277 P **P 16 47 44.5 -0.5**
MYKOM Kota Tinggi 78.17 277 P **P 16 47 43.9 -1.1**
comp=E,3μmcomp=E,279nm,1.2s
MAW Mawson 78.28 200 P **P 16 47 45.9 +1.4**
comp=E,96nm,0.9s,baz=124,slow=6.5,SNR=156
comp=E,96nm,0.9s
MAW Mawson 78.28 200 P **P 16 47 46.0 +1.4**
baz=78,SNR=116
MAW Mawson 78.28 200 P **P 16 47 45.6 +1.1**
PET Petropavlovsk 78.36 347 P **P 16 47 44.4 -0.5**
PET Petropavlovsk 78.36 347 *eP* **P 16 47 45.5 +0.5**
PET *e**PP **pwP 16 49 41.8 -1.8**
PET *e**SP **sP 16 50 35.9 +1.9**
PET *eS* **S 16 56 56.1 0.0**
PET pmax pmax
comp=Z,200nm,15.9s
HKPS Hong Kong Po S 78.64 300 P **P 16 47 47.0 -0.2**
PEA0B Petropavlovsk- 78.64 346 P **P 16 47 47.1 +0.6**
PEA0B Petropavlovsk- 78.64 346 *ceP* **P 16 47 47.4 +0.9**
PETK Petropavlovsk- 78.64 346 P **P 16 47 46.9 +0.3**
comp=Z,48nm,0.9s,baz=112,slow=7.3,SNR=46
PETK pP **pwP 16 49 44.8 -0.4**
comp=Z,13nm,0.9s,baz=133,slow=8.3,SNR=4.8
comp=Z,48nm,0.9s
PETK Petropavlovsk- 78.64 346 P **P 16 47 45.9 -0.6**
INCN Inchon 78.74 319 P **P 16 47 48.2 +0.7**
FALS False Pass 79.19 10 P **P 16 47 48.6 -0.7**
baz=195
COCO West Island 79.22 261 P **P 16 47 50.1 -0.4**
COCO IAmb IAmb 16 47 53.1
comp=Z,702nm,1.4s
COCO West Island 79.22 261 P **P 16 47 50.1 -0.4**
COCO pmax pmax
comp=Z,702nm,1.4s
SDSI Sungai Dareh 79.30 274 P **P 16 47 49.1 -1.8**
comp=Z,2μmcomp=Z,112nm,1.3s
PMSA Palmer Station 79.32 157 P **P 16 47 50.8 +0.7**
HJU Haeju 79.65 319 P **P 16 47 52.8 +0.6**
HJU pP **pwP 16 49 52.4 +0.9**
HJU S **S 16 57 06.6 -3.5**
CNBA Chernabura Isl 79.80 12 P **P 16 47 52.7 +0.1**
CHNA Chernabura Isl 79.81 12 P **P 16 47 53.0 +0.4**
baz=199
HHU Hamhung 79.84 322 P **P 16 47 54.2 +1.1**
HHU pP **pP 16 49 49.0 +1.4**
HHU S **S 16 57 15.9 +3.9**
PPSI Pulau Pagai 79.88 271 P **P 16 47 54.6 +0.6**
comp=Z,6μmcomp=Z,394nm,1.4s
SDPT Sand Point 80.14 11 P **P 16 47 54.3 0.0**
SDPT IAmb IAmb 16 47 55.9
comp=Z,655nm,1.4s
SDPT Sand Point 80.14 11 P **P 16 47 54.2 -0.2**
baz=198,SNR=9.1
BKNI Bangkinang 80.15 275 P **P 16 47 54.7 -0.8**
BKNI Bangkinang 80.15 275 P **P 16 47 55.3 -0.1**
comp=Z,2μmcomp=Z,3μmcomp=Z,297nm,1.4s
BKNI Bangkinang 80.15 275 P **P 16 47 55.3 -0.1**
USA0B Ussuriysk Arra 80.42 327 P **P 16 47 56.5 +0.4**
USA0B Ussuriysk Arra 80.42 327 *c iP* **P 16 47 57.4 +1.3**
USRK Ussuriysk Ar. 80.42 327 P **P 16 47 57.5 +1.4**
comp=Z,6.6nm,0.6s,baz=131,slow=3.9,SNR=34
USRK pP **pwP 16 49 53.7 -1.9**
comp=Z,4.2nm,1.0s,baz=160,slow=4.6,SNR=2.2
USRK Ussuriysk Ar. 80.42 327 P **P 16 47 56.6 +0.5**
USRK Ussuriysk Ar. 80.42 327 P **P 16 47 56.6 +0.5**
NJ2 Nanjing 80.44 311 ‖P **P 16 47 58.1 +1.6**
NJ2 pmax pmax
comp=Z,60nm,1.0s
SNCC San Nicolas Is 80.44 48 P **P 16 47 58.3 +1.8**
baz=234
SPIA Saint Paul Isl 80.65 5 P **P 16 47 57.7 +0.8**
SPIA IAmb IAmb 16 47 59.3
comp=Z,805nm,1.3s
SPIA Saint Paul Isl 80.65 5 P **P 16 47 57.8 +0.9**
baz=189
SCZ2 Santa Cruz Isl 80.81 47 P **P 16 48 00.0 +1.6**
baz=234,SNR=13
SCI2 San Clemente I 80.95 48 P **P 16 48 00.7 +1.6**
baz=235,SNR=7.9
TYV Tymovskoe 80.99 337 *eP* **P 16 48 00.4 +1.5**
TYV *eS* **S 16 57 18.0 -5.2**
TYV pmax pmax
comp=Z,73nm,1.2s
TYV pmax pmax
comp=Z,300nm,4.4s
TYV smax smax
comp=N,2μm,6.6s
TYV smax smax
comp=E,2μm,6.6s
SBC Santa Barbara 81.02 47 P **P 16 48 01.1 +1.7**
baz=234
PKM Mcpherson Peak 81.21 46 P **P 16 48 02.6 +1.9**
baz=234
SAO San Andreas Ge 81.28 44 P **P 16 48 01.9 +1.2**
SAO IAmb IAmb 16 48 04.0
comp=Z,331nm,1.1s
SAO San Andreas Ge 81.28 44 P **P 16 48 01.9 +1.2**
SAO pmax pmax
comp=Z,331nm,1.2s
SISI Saibi 81.28 272 P **P 16 48 01.1 -0.2**
comp=Z,4μmcomp=Z,101nm,1.3s
CIS Catalina Islan 81.29 48 P **P 16 48 02.3 +1.4**
baz=235,SNR=14
SMMC Simmler 81.34 46 P **P 16 48 03.2 +2.1**
baz=233
PMPB Monarch Peak 81.36 45 P **P 16 48 02.8 +1.5**
PMPB IAmb IAmb 16 48 04.7
comp=Z,394nm,1.2s
CHGN Chignik 81.42 12 P **P 16 48 01.3 +0.4**
CHGN IAmb IAmb 16 48 02.8
comp=Z,467nm,1.2s
CHGN Chignik 81.42 12 P **P 16 48 01.1 +0.2**
baz=200,SNR=12
BBGB Big Mountain B 81.43 44 P **P 16 48 02.6 +1.0**
BBGB IAmb IAmb 16 48 05.4
comp=Z,663nm,1.4s
BCW Bitter Crk WRg 81.51 46 P **P 16 48 03.4 +1.3**
BCW IAmb IAmb 16 48 05.5
comp=Z,478nm,1.1s
CHIR Chirikof Islan 81.54 14 P **P 16 48 02.2 +0.7**
CHIR IAmb IAmb 16 48 04.7
comp=Z,618nm,1.5s
CHIR Chirikof Islan 81.54 14 P **P 16 48 04.1 +2.5**
baz=202

FMP	**Fort Macarthur**	**81.55**	**48**	P	**P**	**16 48 03.7 +1.5**
	baz=235,SNR=5.4					
CCX	**Cicese**	**81.63**	**50**	P	**P**	**16 48 04.2 +1.6**
CCX				IAmb	IAmb	16 48 06.0
	comp=Z,306nm,1.2s					
HOPS	**Hopland Field**	**81.65**	**41**	P	**P**	**16 48 04.2 +1.6**
HOPS				IAmb	IAmb	16 48 06.0
	comp=Z,521nm,1.2s					
TJX	**Tijuana**	**81.72**	**49**	P	**P**	**16 48 04.5 +1.4**
OSI	**Osito Audit: C**	**81.78**	**47**	P	**P**	**16 48 04.5 +1.1**
	baz=234,SNR=9.4					
KCPM	**Cahto Peak**	**81.78**	**40**	P	**P**	**16 48 04.7 +1.3**
KCPM				IAmb	IAmb	16 48 07.0
	comp=Z,670nm,1.3s					
DECC	**Green Verdugo**	**81.83**	**47**	P	**P**	**16 48 04.7 +1.0**
	baz=235,SNR=5.7					
IPM	**Ipoh**	**81.84**	**278**	P	**P**	**16 48 03.8 -0.4**
IPM				IAmb	IAmb	16 48 05.8
	comp=Z,220nm,0.8s					
IPM					**pP**	**16 49 59.6 +0.4**
IPM	**Ipoh**	**81.84**	**278**	P	**P**	**16 48 03.3 -0.9**
	comp=Z,3μmcomp=Z,339nm,1.1s					
IPM	**Ipoh**	**81.84**	**278**	P	**P**	**16 48 04.3 +0.1**
CBX	**Cerro Bola**	**81.88**	**50**	P	**P**	**16 48 05.5 +1.4**
PASC	**Pasadena Art C**	**81.89**	**47**	P	**P**	**16 48 04.7 +0.8**
109C	**Camp Elliot, M**	**81.89**	**49**	P	**P**	**16 48 05.1 +1.1**
109C	**Camp Elliot, M**	**81.89**	**49**	P	**P**	**16 48 05.4 +1.4**
	baz=236,SNR=10.0					
MDJ	**Mudanjiang**	**81.92**	**326**	P	**P**	**16 48 04.7 +0.9**
MDJ	**Mudanjiang**	**81.92**	**326**	P	**P**	**16 48 04.8 +0.9**
MDJ				pP	pP	16 49 59.0 -0.1
MDJ				S	**S**	**16 57 31.3 -1.6**
MDJ				pmax	pmax	
	comp=Z,26nm,1.0s					
MDJ				pmax	pmax	
	comp=Z,280nm,3.7s					
MDJ	**Mudanjiang**	**81.92**	**326**	P	**P**	**16 48 04.8 +0.9**
KMPM	**Mount Pierce**	**81.93**	**40**	P	**P**	**16 48 06.1 +2.0**
MG04	**Isla Riesco**	**82.00**	**144**	P	**P**	**16 48 05.9 +1.7**
MG04				IAmb	IAmb	16 48 07.7
	comp=Z,312nm,1.0s					
ARVC	**Arvin**	**82.01**	**46**	P	**P**	**16 48 05.9 +1.4**
	baz=234,SNR=12					
MG05	**Puerto Natales**	**82.04**	**143**	P	**P**	**16 48 05.3 +0.9**
MG05				IAmb	IAmb	16 48 07.1
	comp=Z,268nm,0.9s					
KMRM	**Mail Ridge**	**82.05**	**40**	P	**P**	**16 48 06.4 +1.7**
KMRM				IAmb	IAmb	16 48 09.2
	comp=Z,399nm,1.2s					
BAR	**Barrett**	**82.08**	**49**	P	**P**	**16 48 06.3 +1.3**
BAR				IAmb	IAmb	16 48 08.1
	comp=Z,669nm,1.9s					
ELS	**Elsinore Mount**	**82.10**	**48**	P	**P**	**16 48 06.0 +0.9**
ELS					**pwP**	**16 50 03.3 -0.9**
GO10	**Punta Arenas**	**82.13**	**145**	P	**P**	**16 48 06.5 +1.5**
GO10				IAmb	IAmb	16 48 08.5
	comp=Z,529nm,1.1s					
ESJX	**Sierra Juarez**	**82.21**	**50**	P	**P**	**16 48 07.2 +1.4**
ESJX				IAmb	IAmb	16 48 09.5
	comp=Z,426nm,1.3s					
MURC	**Murrieta**	**82.23**	**48**	P	**P**	**16 48 07.1 +1.4**
	baz=235,SNR=30					
VES	**Vestal, Richgr**	**82.25**	**46**	P	**P**	**16 48 07.0 +1.3**
	baz=234					
BFSC	**Mount Baldy Ra**	**82.28**	**48**	P	**P**	**16 48 07.2 +1.2**
	baz=235,SNR=41					
GO09	**Cerro Castillo**	**82.33**	**143**	P	**P**	**16 48 07.1 +1.2**
LPIG	**La Paz**	**82.33**	**60**	P	**P**	**16 48 08.2 +1.8**
	comp=Z,405nm,1.2s,baz=149,slow=1.3,SNR=37					
	comp=Z,405nm,1.2s					
VOG	**Valley Oaks Go**	**82.34**	**45**	P	**P**	**16 48 07.0 +0.9**
	baz=234					
MONP2	**Monument Peak**	**82.37**	**49**	P	**P**	**16 48 08.6 +1.9**
	baz=236,SNR=68					
SLBS	**Sierra La Lagu**	**82.41**	**60**	P	**P**	**16 48 08.3 +1.4**
SLBS				IAmb	IAmb	16 48 10.4
	comp=Z,518nm,1.2s					
EDW2	**Edwards Air Fo**	**82.42**	**47**	P	**P**	**16 48 08.2 +1.5**
	baz=235,SNR=51					
SRIG	**Santa Rosalia**	**82.44**	**56**	P	**P**	**16 48 08.0 +1.1**
RMX	**La Rumorosa**	**82.45**	**50**	P	**P**	**16 48 08.1 +1.1**
RMX				IAmb	IAmb	16 48 10.4
	comp=Z,447nm,1.2s					
KHMM	**Horse Mountain**	**82.45**	**39**	P	**P**	**16 48 08.4 +1.5**
KHMM				IAmb	IAmb	16 48 10.6
	comp=Z,373nm,1.2s					
IKP	**In-Ko-Pah, Jac**	**82.46**	**50**	P	**P**	**16 48 08.9 +2.0**
	baz=236,SNR=69					
KRPM	**Rodgers**	**82.46**	**39**	P	**P**	**16 48 08.9 +2.2**
KRPM				IAmb	IAmb	16 48 10.7
	comp=Z,678nm,1.2s					
SFX	**San Felipe**	**82.47**	**52**	P	**P**	**16 48 07.4 +0.5**
UBPT	**Khong Chiam**	**82.49**	**290**	P	**P**	**16 48 08.2 +0.8**
UBPT	**Khong Chiam**	**82.49**	**290**	P	**P**	**16 48 09.0 +1.7**
	comp=Z,66nm,1.3s					
KULM	**Kulim**	**82.51**	**279**	P	**P**	**16 48 08.0 +0.4**
KULM	**Kulim**	**82.51**	**279**	P	**P**	**16 48 06.5 -1.1**
	comp=Z,3μmcomp=Z,231nm,1.6s					
SII	**Sitkinak Islan**	**82.53**	**14**	P	**P**	**16 48 07.5 +0.8**
SII				IAmb	IAmb	16 48 09.0
	comp=Z,353nm,1.1s					
SII	**Sitkinak Islan**	**82.53**	**14**	P	**P**	**16 48 07.4 +0.7**
	baz=204					
SII	**Sitkinak Islan**	**82.53**	**14**	P	**P**	**16 48 08.2 +1.6**
	comp=Z,370nm,1.6s					
ISA	**Isabella, Lake**	**82.55**	**46**	P	**P**	**16 48 08.7 +1.4**
ISA				IAmb	IAmb	16 48 10.5
	comp=Z,447nm,1.1s					
ISA	**Isabella, Lake**	**82.55**	**46**	P	**P**	**16 48 08.7 +1.4**
ISA				pmax	pmax	
	comp=Z,447nm,1.2s					
ISA	**Isabella, Lake**	**82.55**	**46**	P	**P**	**16 48 08.8 +1.4**
	baz=234,SNR=155					
CCAC	**Calif City Air**	**82.56**	**47**	P	**P**	**16 48 08.5 +1.1**
YUH	**Yuha Desert**	**82.59**	**50**	P	**P**	**16 48 08.9 +1.4**
YUH				IAmb	IAmb	16 48 10.8
	comp=Z,478nm,1.3s					
DL2	**Dalian**	**82.69**	**318**	P	**P**	**16 48 09.6 +1.8**
DL2				pP	**pP**	**16 50 04.3 +1.1**
DL2				SKS	**SKSac**	**16 57 35.3 -2.2**
DL2				S	**S**	**16 57 43.5 +2.8**
DL2				pmax	pmax	
	comp=Z,22nm,0.6s					
DL2				pmax	pmax	
	comp=Z,200nm,5.9s					
CMB	**Columbia Colle**	**82.72**	**43**	P	**P**	**16 48 09.2 +1.1**
CMB				IAmb	IAmb	16 48 10.9
	comp=Z,375nm,1.1s					
CMB	**Columbia Colle**	**82.72**	**43**	P	**P**	**16 48 09.2 +1.1**
CMB				pmax	pmax	
	comp=Z,375nm,1.2s					
PFO	**Pinyon Flats O**	**82.75**	**49**	P	**P**	**16 48 10.3 +1.8**
	comp=Z,101nm,1.1s,baz=250,slow=3.7,SNR=68					
	comp=Z,101nm,1.1s					
PFO	**Pinyon Flats O**	**82.75**	**49**	P	**P**	**16 48 09.5 +1.1**
PFO				IAmb	IAmb	16 48 11.6
	comp=Z,360nm,1.4s					
PFO	**Pinyon Flats O**	**82.75**	**49***c i*	P	**P**	**16 48 09.8 +1.4**
PFO				pmax	pmax	
	comp=Z,209nm,1.3s					
PFO	**Pinyon Flats O**	**82.75**	**49**	P	**P**	**16 48 10.0 +1.6**
	baz=236,SNR=40					
TPFO	**Pinon Flats**	**82.75**	**49**	P	**P**	**16 48 10.0 +1.6**
	baz=236,SNR=47					
KRMB	**Red Mountain**	**82.77**	**39**	P	**P**	**16 48 10.3 +2.0**
KRMB				IAmb	IAmb	16 48 12.2
	comp=Z,464nm,1.3s					
R16K	**Pilot Point**	**82.77**	**12**	P	**P**	**16 48 08.4 +0.7**
	baz=200					
BBRC	**Big Bear Solar**	**82.80**	**48**	P	**P**	**16 48 10.0 +1.1**
	baz=236					
WHN	**Wuhan**	**82.81**	**308**	⇓P	**P**	**16 48 10.3 +1.7**
WHN				S	**S**	**16 57 45.3 +3.0**
WHN				pmax	pmax	
	comp=Z,140nm,0.8s					
SWSC	**Sam W. Stewart**	**82.84**	**50**	P	**P**	**16 48 10.5 +1.7**
	baz=236,SNR=72					
CPBX	**Cerro Prieto**	**82.90**	**50**	P	**P**	**16 48 10.2 +1.1**
CPBX				IAmb	IAmb	16 48 12.7
	comp=Z,673nm,1.5s					
AFDM	**Forest Hills D**	**82.91**	**42**	P	**P**	**16 48 09.9 +1.0**
AFDM				IAmb	IAmb	16 48 11.8
	comp=Z,382nm,1.2s					
ORV	**Oroville**	**82.96**	**42**	P	**P**	**16 48 09.9 +0.7**
ORV				IAmb	IAmb	16 48 12.1
	comp=Z,355nm,1.2s					
ORV	**Oroville**	**82.96**	**42**	P	**P**	**16 48 09.9 +0.7**
ORV				pmax	pmax	
	comp=Z,355nm,1.2s					
LRMC	**Laurel Mtn Rad**	**82.97**	**47**	P	**P**	**16 48 11.0 +1.5**
	baz=235,SNR=124					
MG01	**Puerto William**	**83.00**	**147**	P	**P**	**16 48 10.3 +1.1**
RPSI	**Rantau Prapat**	**83.03**	**276**	P	**P**	**16 48 09.2 -0.9**
RPSI					**pP**	**16 50 05.2 -0.5**
PSI	**Prapat**	**83.08**	**276**	P	**P**	**16 48 09.3 -1.2**
PSI				*PP	**pP**	**16 50 05.2 -0.8**
PSI				pmax	pmax	
	comp=Z,184nm,1.1s					
PSI	**Prapat**	**83.08**	**276**	P	**P**	**16 48 09.1 -1.4**
	comp=Z,2μmcomp=Z,180nm,1.4s,comp=Z,1μm,1.4s,					
	comp=Z,110nm,1.4s					
PSI				P	**P**	**16 48 08.7 -1.8**
	comp=Z,2μmcomp=Z,180nm,1.4s,comp=Z,1μm,1.4s,					
	comp=Z,110nm,1.4s					
PSI	**Prapat**	**83.08**	**276**	P	**P**	**16 48 10.4 -0.1**
RRX	**Edison Barstow**	**83.09**	**47**	P	**P**	**16 48 11.5 +1.5**
	baz=235,SNR=8.5					
CWC	**Cottonwood Cre**	**83.26**	**46**	P	**P**	**16 48 12.5 +1.5**
	baz=234					
MG02	**Cerro Sombrero**	**83.28**	**145**	P	**P**	**16 48 11.8 +1.1**
BELC	**Belle Mtn. Jos**	**83.28**	**49**	P	**P**	**16 48 12.9 +1.7**
	baz=236,SNR=141					
GRNR	**Gornyy**	**83.30**	**334**	⇓*iP*	**P**	**16 48 12.2 +1.6**
GRNR				pmax	pmax	
	comp=Z,50nm,1.2s					
MDPB	**Devils Postpil**	**83.31**	**44**	P	**P**	**16 48 12.3 +1.0**
MDPB				IAmb	IAmb	16 48 14.3
	comp=Z,352nm,1.2s					
SKLT	**Songkhla**	**83.31**	**281**	P	**P**	**16 48 12.0 +0.5**
	comp=Z,3μmcomp=Z,173nm,1.6s					
OHAK	**Old Harbor**	**83.34**	**14**	P	**P**	**16 48 11.2 +0.6**
OHAK				IAmb	IAmb	16 48 12.9
	comp=Z,423nm,1.4s					
OHAK	**Old Harbor**	**83.34**	**14**	P	**P**	**16 48 11.7 +1.1**
	baz=204					
SNY	**Shenyang**	**83.34**	**321**	⇓P	**P**	**16 48 11.3 +0.3**
SNY				pmax	pmax	
	comp=Z,42nm,0.7s					
SNY				pmax	pmax	
	comp=Z,340nm,4.2s					
OMMB	**Old Mammoth Mi**	**83.35**	**44**	P	**P**	**16 48 12.5 +0.9**
OMMB				IAmb	IAmb	16 48 14.6
	comp=Z,302nm,1.3s					
MPMC	**Manual Prospec**	**83.44**	**46**	P	**P**	**16 48 13.2 +1.3**
	baz=235,SNR=142					
GSC	**Goldstone, Bar**	**83.46**	**47**	P	**P**	**16 48 13.0 +1.1**
GSC				IAmb	IAmb	16 48 14.9
	comp=Z,331nm,1.1s					
GSC	**Goldstone, Bar**	**83.46**	**47**	P	**P**	**16 48 13.0 +1.1**
GSC				pmax	pmax	
	comp=Z,331nm,1.2s					
GSC	**Goldstone, Bar**	**83.46**	**47**	P	**P**	**16 48 13.4 +1.5**
	baz=235,SNR=72					
EMB	**Emerald Bay**	**83.46**	**43**	P	**P**	**16 48 12.7 +0.6**
EMB				IAmb	IAmb	16 48 14.9
	comp=Z,403nm,1.3s					
MLAC	**Mammoth, Mammo**	**83.47**	**44**	P	**P**	**16 48 13.9 +1.8**
	baz=234					
BC3	**Big Chuckawall**	**83.47**	**49**	P	**P**	**16 48 14.1 +2.0**
	baz=236,SNR=138					
HEC	**Hector,Ludlow**	**83.52**	**48**	P	**P**	**16 48 13.2 +1.0**
	baz=236,SNR=154					
TIN	**Tinemaha, Big**	**83.52**	**45**	P	**P**	**16 48 13.8 +1.6**
	baz=234					
CN2	**Changchun**	**83.57**	**323**	*e*P	**P**	**16 48 12.0 -0.1**
CN2				*e*pP	pP	16 50 09.9 +2.0
CN2				*e*PP	**PP**	**16 51 36.8 +1.8**
CN2				SKS	**SKSac**	**16 57 41.3 -1.6**
CN2				*es*S	sS	17 01 17.4 +1.0
CN2				SS	**SS**	**17 03 36.1 +3.9**
CN2				pmax	pmax	
	comp=Z,40nm,1.4s					
GLA	**Glamis**	**83.58**	**50**	P	**P**	**16 48 14.1 +1.6**
GLA	**Glamis**	**83.58**	**50**	P	**P**	**16 48 14.1 +1.6**
GLA				pmax	pmax	
	comp=Z,678nm,1.2s					
GLA	**Glamis**	**83.58**	**50**	P	**P**	**16 48 14.8 +2.3**
	baz=237,SNR=58					
YBH	**Yreka Blue Hor**	**83.59**	**39**	P	**P**	**16 48 14.8 +2.4**
	comp=Z,75nm,0.9s,baz=173,slow=2.1,SNR=74					
	comp=Z,75nm,0.9s					
YBH	**Yreka Blue Hor**	**83.59**	**39**	P	**P**	**16 48 13.7 +1.3**
YBH				IAmb	IAmb	16 48 16.0
	comp=Z,266nm,1.2s					
YBH	**Yreka Blue Hor**	**83.59**	**39**	P	**P**	**16 48 13.7 +1.3**
WAKR	**Walker**	**83.60**	**43**	P	**P**	**16 48 14.1 +1.5**
WAKR				IAmb	IAmb	16 48 15.9
	comp=Z,669nm,1.3s					
MPK	**Martis Peak**	**83.70**	**42**	P	**P**	**16 48 14.2 +0.9**
GSI	**Gunungsitoli**	**83.71**	**274**	P	**P**	**16 48 13.8 +0.2**
GSI	**Gunungsitoli**	**83.71**	**274**	P	**P**	**16 48 14.4 +0.8**
	comp=Z,5μmcomp=Z,308nm,1.7s					
GSI	**Gunungsitoli**	**83.71**	**274**	P	**P**	**16 48 14.4 +0.8**
Q17K	**Contact Creek**	**83.75**	**12**	P	**P**	**16 48 13.2 +0.4**
	baz=202,SNR=47					
PIX	**Pinacate**	**83.75**	**52**	P	**P**	**16 48 14.5 +1.2**
PIX				IAmb	IAmb	16 48 16.5
	comp=Z,336nm,1.2s					
QSM	**Queen of Sheba**	**83.80**	**47**	P	**P**	**16 48 14.3 +0.8**
QSM				IAmb	IAmb	16 48 16.3
	comp=Z,358nm,1.4s					
BNX	**BinXian**	**83.82**	**326**	⇑P	**P**	**16 48 13.9 +0.6**
BNX				S	**S**	**16 57 54.0 +2.4**
BNX				pmax	pmax	
	comp=Z,34nm,0.9s					
BNX				pmax	pmax	
	comp=Z,190nm,4.4s					
BEKR	**Beckworth**	**83.84**	**42**	P	**P**	**16 48 14.7 +0.9**
BEKR				IAmb	IAmb	16 48 16.7
	comp=Z,387nm,1.4s					
PNTR	**Pine Nut**	**83.85**	**43**	P	**P**	**16 48 15.1 +1.2**
DSP	**Deep Springs**	**83.87**	**45**	P	**P**	**16 48 15.0 +1.2**
DSP				IAmb	IAmb	16 48 17.0
	comp=Z,406nm,1.3s					
VCNR	**Virginia City**	**83.94**	**43**	P	**P**	**16 48 15.4 +1.1**
VCNR				IAmb	IAmb	16 48 17.3
	comp=Z,308nm,1.3s					
GMRC	**Granite Mounta**	**83.95**	**48**	P	**P**	**16 48 15.9 +1.4**
	baz=236,SNR=102					
IRM	**Iron Mountain**	**83.96**	**49**	P	**P**	**16 48 16.3 +2.0**
	baz=237,SNR=294					
Q16K	**King Salmon**	**83.99**	**12**	P	**P**	**16 48 14.6 +0.8**
	baz=201,SNR=31					
TIA	**Tai'an**	**83.99**	**314**	⇓P	**P**	**16 48 15.5 +1.1**
TIA				pmax	pmax	
	comp=Z,21nm,0.5s					
HUMO	**Hull Mountain**	**84.00**	**38**	P	**P**	**16 48 16.0 +1.6**
HUMO				IAmb	IAmb	16 48 18.2
	comp=Z,526nm,1.3s					
LCH	**Last Change Ra**	**84.01**	**45**	P	**P**	**16 48 15.5 +0.9**
LCH				IAmb	IAmb	16 48 17.4
	comp=Z,319nm,1.3s					
YERR	**Yerington**	**84.01**	**43**	P	**P**	**16 48 15.7 +1.0**
YERR				IAmb	IAmb	16 48 17.5
	comp=Z,418nm,1.2s					
KDAK	**Kodiak Island**	**84.01**	**14**	P	**P**	**16 48 14.6 +0.7**
	comp=Z,155nm,1.2s,baz=240,slow=10					
	comp=Z,155nm,1.2s					
KDAK	**Kodiak Island**	**84.01**	**14**	P	**P**	**16 48 14.3 +0.4**
KDAK				IAmb	IAmb	16 48 16.3
	comp=Z,396nm,1.4s					
KDAK	**Kodiak Island**	**84.01**	**14**	P	**P**	**16 48 14.8 +0.8**
	baz=205					
LHV	**Little Huntoon**	**84.04**	**44**	P	**P**	**16 48 15.8 +1.3**
LHV				IAmb	IAmb	16 48 17.9
	comp=Z,449nm,1.3s					
GRAC	**Grapevine Rang**	**84.05**	**46**	P	**P**	**16 48 15.9 +1.1**
GRAC	**Grapevine Rang**	**84.05**	**46**	P	**P**	**16 48 16.4 +1.7**
	baz=235,SNR=101					
GWY	**Greenwater Val**	**84.05**	**47**	P	**P**	**16 48 15.7 +0.8**
GWY				IAmb	IAmb	16 48 17.6
	comp=Z,255nm,1.3s					
P16K	**Nushagak River**	**84.07**	**11**	P	**P**	**16 48 14.4 +0.2**
	baz=200,SNR=6.4					
FURC	**Furnace Creek,**	**84.08**	**46**	P	**P**	**16 48 15.9 +1.1**
	baz=235,SNR=21					
TUQ	**Turquoise Moun**	**84.13**	**47**	P	**P**	**16 48 16.8 +1.5**
	baz=236,SNR=22					
SHOC	**Shoshone, Teco**	**84.16**	**47**	P	**P**	**16 48 16.2 +1.0**
	baz=236,SNR=23					
KLR	**Kul'dur**	**84.16**	**330***ce*	P	**P**	**16 48 16.5 +1.6**
KLR				pmax	pmax	
	comp=Z,52nm,1.6s					
DBO	**Dodson Butte**	**84.16**	**38**	P	**P**	**16 48 16.9 +1.7**
DBO				IAmb	IAmb	16 48 18.7
	comp=Z,330nm,1.2s					
BLYC	**Blythe**	**84.17**	**50**	P	**P**	**16 48 16.8 +1.5**
BLYC				IAmb	IAmb	16 48 18.8
	comp=Z,354nm,1.1s					
113A	**Mohawk Valley,**	**84.17**	**51**	P	**P**	**16 48 16.8 +1.4**
113A				IAmb	IAmb	16 48 18.8
	comp=Z,473nm,1.3s					
RYN	**Ryan**	**84.25**	**44**	P	**P**	**16 48 16.9 +1.0**
RYN				IAmb	IAmb	16 48 18.8
	comp=Z,348nm,1.4s					
NVAR	**Mina Array Bea**	**84.28**	**44**	P	**P**	**16 48 17.6 +1.6**
	comp=Z,211nm,1.1s,baz=222,slow=7.2,SNR=342					
NVAR				pP	**pwP**	**16 50 15.5 -0.3**
	comp=Z,26nm,1.0s,baz=218,slow=4.9,SNR=8.7					
NVAR				PP	**PP**	**16 51 39.1 -1.9**
	comp=Z,17nm,1.2s,baz=227,slow=6.8,SNR=5.1					
NVAR				PKKPbc	**PKKPbc**	**17 06 27.2 +1.5**
	comp=Z,0.3nm,0.5s,baz=75,slow=3.7,SNR=3.7					
	comp=Z,211nm,1.1s					
NVAR	**Mina Array Bea**	**84.28**	**44**	P	**P**	**16 48 17.1 +1.0**
Q18K	**Katmai Hardscr**	**84.28**	**13**	P	**P**	**16 48 15.8 +0.4**
	baz=203,SNR=60					
HSIG		**84.29**	**55**	P	**P**	**16 48 17.2 +1.2**
HSIG				IAmb	IAmb	16 48 19.2
	comp=Z,404nm,1.1s					
GMN	**Gold Mountain**	**84.30**	**45**	P	**P**	**16 48 17.0 +0.8**
PAHR	**Pah Rah Range**	**84.35**	**42**	P	**P**	**16 48 17.2 +1.0**
PAHR				IAmb	IAmb	16 48 19.1
	comp=Z,307nm,1.2s					
NV11	**Mina Array Sit**	**84.37**	**44**	P	**P**	**16 48 17.3 +0.9**
NV11				IAmb	IAmb	16 48 19.3
	comp=Z,348nm,1.3s					
KCSI	**Kotacane, Aceh**	**84.42**	**276**	P	**P**	**16 48 15.9 -1.2**
	comp=Z,1μmcomp=Z,79nm,1.5s					
WCT	**Wildcat Mounta**	**84.42**	**46**	P	**P**	**16 48 17.5 +0.9**
WCT				IAmb	IAmb	16 48 19.6
	comp=Z,318nm,1.5s					
214A	**Organ Pipe Nat**	**84.43**	**52**	P	**P**	**16 48 18.3 +1.6**
214A				IAmb	IAmb	16 48 20.4
	comp=Z,456nm,1.4s					
214A	**Organ Pipe Nat**	**84.43**	**52**	P	**P**	**16 48 18.5 +1.8**
	baz=238					
MZP	**Montezuma Peak**	**84.45**	**45**	P	**P**	**16 48 17.3 +0.3**
P17K	**Kvichak River**	**84.51**	**12**	P	**P**	**16 48 16.6 +0.3**
	baz=202					
O16K	**Kokwok River B**	**84.59**	**11**	P	**P**	**16 48 16.6 -0.2**
	baz=200,SNR=23					
PAF	**Port-aux-Franc**	**84.64**	**218**	P	**P**	**16 48 18.5 +1.1**
PAF				IAmb	IAmb	16 48 21.1
	comp=Z,261nm,1.0s					
PAF	**Port-aux-Franc**	**84.64**	**218**	P	**P**	**16 48 18.5 +1.1**
PAF				pmax	pmax	
	comp=Z,261nm,1.0s					
NEE2	**Needles Airpor**	**84.66**	**49**	P	**P**	**16 48 19.4 +1.7**
	baz=237					
PDMCI	**Parker Dam,Lak**	**84.74**	**49**	P	**P**	**16 48 19.9 +1.8**
	baz=237,SNR=87					
TPNV	**Topopah Spring**	**84.76**	**46**	P	**P**	**16 48 19.4 +1.0**
TPNV	**Topopah Spring**	**84.76**	**46**	P	**P**	**16 48 19.4 +1.0**
TPNV				pmax	pmax	
	comp=Z,174nm,1.1s					
TPNV	**Topopah Spring**	**84.76**	**46**	P	**P**	**16 48 19.5 +1.1**
	baz=236,SNR=109					
TPH	**Tonopah**	**84.76**	**45**	P	**P**	**16 48 19.1 +0.7**
TPH	**Tonopah**	**84.76**	**45**	P	**P**	**16 48 19.1 +0.7**
TPH				pmax	pmax	
	comp=Z,1μm,1.2s					
KVN	**Kaiserville**	**84.77**	**44**	P	**P**	**16 48 19.0 +0.6**
KVN	**Kaiserville**	**84.77**	**44**	P	**P**	**16 48 19.0 +0.6**
KVN				pmax	pmax	
	comp=Z,196nm,1.2s					
Q20K	**Shuyak Island**	**84.80**	**14**	P	**P**	**16 48 18.3 +0.5**
	baz=205,SNR=11					
Q19K	**Cape Douglas,**	**84.82**	**13**	P	**P**	**16 48 17.8 -0.1**
Q19K				IAmb	IAmb	16 48 19.7
	comp=Z,429nm,1.1s					
Q19K	**Cape Douglas,**	**84.82**	**13**	P	**P**	**16 48 18.5 +0.5**
	baz=204,SNR=16					
TROLL	**Troll, Antarti**	**84.85**	**181**	P	**P**	**16 48 18.1 -0.1**
TROLL	**Troll, Antarti**	**84.85**	**181**	PKKPdf	PKKPdf	17 06 22.6 +8.2
TROLL	**Troll, Antarti**	**84.85**	**181**	pP	pP	16 50 17.0 +2.2
P18K	**Big Mountain,**	**84.93**	**12**	P	**P**	**16 48 18.2 -0.3**
P18K	**Big Mountain,**	**84.93**	**12**	P	**P**	**16 48 18.5 +0.1**
	baz=203,SNR=14					
O17K	**Koliganek Bris**	**84.93**	**11**	P	**P**	**16 48 18.5 +0.1**
	baz=201,SNR=11					
BUCK	**Buck Mountain**	**84.99**	**37**	P	**P**	**16 48 20.7 +1.4**
V12A	**Nelson**	**85.02**	**48**	P	**P**	**16 48 20.6 +1.0**
V12A				IAmb	IAmb	16 48 22.7
	comp=Z,245nm,1.3s					
MOD	**Modoc Plateau**	**85.11**	**40**	P	**P**	**16 48 20.5 +0.5**
MOD				IAmb	IAmb	16 48 22.9
	comp=Z,303nm,1.2s					
COYC	**Coyhaique**	**85.17**	**138**	P	**P**	**16 48 21.7 +1.5**
COYC				IAmb	IAmb	16 48 23.5
	comp=Z,404nm,0.9s					
SNAA	**Sanae**	**85.18**	**179**	P	**P**	**16 48 19.2 -0.6**
SNAA	**Sanae**	**85.18**	**179**	PKKPdf	PKKPdf	17 06 21.3 +7.6
SNAA	**Sanae**	**85.18**	**179**	pP	pP	16 50 18.7 +2.3
SNAA	**Sanae**	**85.18**	**179**	P	**P**	**16 48 19.0 -0.7**
SNAA	**Sanae**	**85.18**	**179***c i*	P	**P**	**16 48 19.1 -0.7**
SNAA				pmax	pmax	
	comp=Z,21nm,0.6s					
HEBO	**Mount Hebo**	**85.22**	**36**	P	**P**	**16 48 20.9 +0.6**
Q09A	**Carvers**	**85.22**	**44**	P	**P**	**16 48 21.1 +0.5**
Q09A				IAmb	IAmb	16 48 23.4
	comp=Z,325nm,1.2s					
SHPR	**Sheep Range**	**85.24**	**47**	P	**P**	**16 48 21.2 +0.4**
K05A	**Summer Lake**	**85.27**	**39**	P	**P**	**16 48 21.5 +0.7**
GO07	**Milladeo Hill,**	**85.33**	**135**	P	**P**	**16 48 22.4 +1.4**
GO07				IAmb	IAmb	16 48 24.1
	comp=Z,285nm,0.8s					
Y14A	**Wickenburg**	**85.34**	**50**	P	**P**	**16 48 22.1 +1.0**
W13A	**Hualapai Mount**	**85.34**	**49**	P	**P**	**16 48 22.2 +0.9**
AY01	**Puyuhuapi**	**85.37**	**137**	P	**P**	**16 48 22.2 +1.1**
VNA3	**Neumayer Olymp**	**85.38**	**177**	P	**P**	**16 48 20.1 -0

TUC	**Tucson**	**86.08**	**52**	P	**P**	**16 48 26.6**	**+1.9**
TUC				pmax	pmax		
	comp=Z,486nm,1.2s						
TUC	**Tucson**	**86.08**	**52**	P	**P**	**16 48 26.9**	**+2.1**
	baz=239						
O20K	**Slope Mountain**	**86.09**	**13**	P	**P**	**16 48 24.4**	**+0.3**
	baz=205,SNR=9.3						
BMN	**Battle Mountai**	**86.12**	**43**	P	**P**	**16 48 25.5**	**+0.7**
BMN				IAmb	IAmb	16 48 27.6	
	comp=Z,276nm,1.2s						
BMN	**Battle Mountai**	**86.12**	**43**	P	**P**	**16 48 25.5**	**+0.7**
BMN				pmax	pmax		
	comp=Z,276nm,1.2s						
MA2	**Magadan**	**86.12**	**345**	P	**P**	**16 48 24.4**	**+0.2**
MA2				IAmb	IAmb	16 48 25.9	
	comp=Z,223nm,1.2s						
MA2	**Magadan**	**86.12**	**345**	*ceP*	**P**	**16 48 24.5**	**+0.4**
MA2				pmax	pmax		
	comp=Z,379nm,2.5s						
MA2	**Magadan**	**86.12**	**345**	P	**P**	**16 48 24.3**	**+0.2**
E03A	**Lebam**	**86.18**	**35**	P	**P**	**16 48 25.9**	**+1.2**
BRLK	**Bradley Lake**	**86.19**	**14**	P	**P**	**16 48 24.8**	**+0.3**
BRLK				IAmb	IAmb	16 48 26.4	
	comp=Z,458nm,1.4s						
BRSE	**Bradley Lake S**	**86.20**	**14**	P	**P**	**16 48 25.4**	**+0.8**
	baz=207,SNR=25						
LL05	**Los Muermos**	**86.25**	**134**	P	**P**	**16 48 26.9**	**+1.5**
LL05				IAmb	IAmb	16 48 28.6	
	comp=Z,328nm,1.1s						
HNS	**HongShan**	**86.26**	**313**	⇑P	**P**	**16 48 27.6**	**+2.3**
HNS				SKS	**SKSac**	**16 57 58.1**	**-1.8**
HNS				S	**ScS**	**16 58 20.6**	**-0.6**
HNS				pmax	pmax		
	comp=Z,37nm,1.1s						
ENH	**Enshi**	**86.27**	**305**	P	**P**	**16 48 25.9**	**+0.2**
LYN	**LuoYang**	**86.28**	**310**	⇑*iP*	**P**	**16 48 27.8**	**+2.3**
LYN				S	**S**	**16 58 08.1**	**-7.6**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LYN				pmax	pmax		
	comp=Z,290nm,5.1s						
N19K	**Bonanza Creek**	**86.39**	**12**	P	**P**	**16 48 24.9**	**-0.6**
N19K	**Bonanza Creek**	**86.39**	**12**	P	**P**	**16 48 25.2**	**-0.3**
	baz=203,SNR=26						
RSO	**Redoubt South**	**86.41**	**13**	P	**P**	**16 48 25.4**	**-0.4**
WVOR	**Wild Horse Val**	**86.42**	**41**	P	**P**	**16 48 27.2**	**+1.0**
WVOR				IAmb	IAmb	16 48 29.3	
	comp=Z,423nm,1.3s						
WVOR	**Wild Horse Val**	**86.42**	**41**	P	**P**	**16 48 27.2**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,423nm,1.3s						
HOOD	**Mount Hood Mea**	**86.44**	**37**	P	**P**	**16 48 27.2**	**+1.0**
HOOD				IAmb	IAmb	16 48 29.1	
	comp=Z,460nm,1.4s						
SVW2	**Sparrevohn**	**86.44**	**12**	P	**P**	**16 48 25.6**	**-0.1**
LL02	**Futaleuf**	**86.46**	**136**	P	**P**	**16 48 27.8**	**+1.4**
LL02				IAmb	IAmb	16 48 29.4	
	comp=Z,324nm,1.0s						
HG4B	**Hotspring**	**86.47**	**28**	P	**P**	**16 48 27.1**	**+1.1**
HG4B				IAmb	IAmb	16 48 29.2	
	comp=Z,317nm,1.2s						
LL01	**San Ignacio de**	**86.49**	**135**	P	**P**	**16 48 27.5**	**+1.0**
NLWA	**Neilton Lookou**	**86.57**	**34**	P	**P**	**16 48 27.8**	**+1.2**
NLWA				IAmb	IAmb	16 48 30.1	
	comp=Z,359nm,1.4s						
DIB	**Dawson Inlet,**	**86.61**	**26**	P	**P**	**16 48 27.7**	**+1.1**
DIB				IAmb	IAmb	16 48 29.4	
	comp=Z,329nm,1.3s						
GYA	**Guiyang**	**86.62**	**301**	⇑P	**P**	**16 48 28.9**	**+1.4**
GYA				pP	pwP	16 50 27.8	-2.0
GYA				PP	**PP**	**16 51 59.0**	**-0.8**
GYA				SKS	**SKSac**	**16 58 02.4**	**-0.5**
GYA				S	**S**	**16 58 18.6**	**-1.0**
GYA				pmax	pmax		
	comp=Z,51nm,1.9s						
GYA				pmax	pmax		
	comp=Z,2μm,4.2s						
319A	**Douglas**	**86.72**	**54**	P	**P**	**16 48 29.7**	**+1.9**
BJT	**Baijiatuau**	**86.76**	**316**	P	**P**	**16 48 28.1**	**+0.5**
BJT	**Baijiatuau**	**86.76**	**316**	P	**P**	**16 48 28.1**	**+0.5**
BJT				pmax	pmax		
	comp=Z,164nm,1.1s						
BJI	**Beijing**	**86.77**	**316**	P	**P**	**16 48 27.8**	**+0.2**
BJI				pP	**pP**	**16 50 24.8**	**+0.3**
BJI				SKS	**SKSac**	**16 58 01.6**	**-1.2**
BJI				S	**S**	**16 58 23.3**	**+3.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,290nm,4.2s						
OZB	**Mount Ozzard**	**86.78**	**32**	P	**P**	**16 48 28.7**	**+1.2**
OZB				IAmb	IAmb	16 48 30.7	
	comp=Z,330nm,1.5s						
LCMT	**Little Creek M**	**86.81**	**47**	P	**P**	**16 48 29.2**	**+1.0**
LCMT				IAmb	IAmb	16 48 31.2	
	comp=Z,213nm,1.2s						
SEW	**Seward**	**86.82**	**15**	P	**P**	**16 48 27.4**	**0.0**
SEW				IAmb	IAmb	16 48 29.1	
	comp=Z,240nm,1.3s						
SEW	**Seward**	**86.82**	**15**	P	**P**	**16 48 27.7**	**+0.3**
	baz=208,SNR=12						
I07A	**Izee**	**86.89**	**39**	P	**P**	**16 48 29.5**	**+1.2**
Q23K	**Middleton Isla**	**86.99**	**16**	P	**P**	**16 48 28.8**	**+0.6**
	baz=210						
LR04	**Corral**	**87.00**	**132**	P	**P**	**16 48 30.2**	**+1.3**
LR04				IAmb	IAmb	16 48 32.0	
	comp=Z,410nm,1.4s						
CCUT	**Cedar City**	**87.02**	**47**	P	**P**	**16 48 30.4**	**+1.2**
CCUT				IAmb	IAmb	16 48 32.6	
	comp=Z,206nm,1.2s						
CAPN	**Captain Cook N**	**87.03**	**14**	P	**P**	**16 48 30.1**	**+1.8**
CAPN	**Captain Cook N**	**87.03**	**14**	P	**P**	**16 48 29.9**	**+1.6**
	baz=206						
J08A	**Circle Bar Ran**	**87.06**	**40**	P	**P**	**16 48 30.3**	**+1.2**
LL03	**Petrohue**	**87.09**	**134**	P	**P**	**16 48 30.5**	**+1.1**
O22K	**Cooper Landing**	**87.09**	**14**	P	**P**	**16 48 28.9**	**+0.2**
O22K				IAmb	IAmb	16 48 35.7	
	comp=Z,191nm,0.9s						
O22K	**Cooper Landing**	**87.09**	**14**	P	**P**	**16 48 28.9**	**+0.2**
	baz=208,SNR=11						
KNB	**Kanab**	**87.10**	**48**	P	**P**	**16 48 30.8**	**+1.2**
KNB				IAmb	IAmb	16 48 32.9	
	comp=Z,430nm,1.3s						
KNB	**Kanab**	**87.10**	**48**	P	**P**	**16 48 30.8**	**+1.2**
KNB				pmax	pmax		
	comp=Z,430nm,1.3s						
GAMB	**Gambell**	**87.10**	**4**	P	**P**	**16 48 29.8**	**+1.2**
GAMB	**Gambell**	**87.10**	**4**	P	**P**	**16 48 29.6**	**+0.9**
	baz=188						
B04A	**Port Angeles**	**87.19**	**34**	P	**P**	**16 48 30.8**	**+1.4**
LL04	**Puerto Octay**	**87.19**	**134**	P	**P**	**16 48 30.6**	**+0.7**
LL04				IAmb	IAmb	16 48 32.6	
	comp=Z,387nm,1.3s						
N20K	**Mount Spurr**	**87.19**	**13**	P	**P**	**16 48 28.9**	**-0.4**
	baz=205,SNR=39						
SPCR	**Spurr Chakacha**	**87.20**	**13**	P	**P**	**16 48 29.1**	**-0.2**
	baz=205,SNR=18						
SPU	**Mount Spurr**	**87.21**	**13**	P	**P**	**16 48 28.5**	**-0.8**
P23K	**Montague Islan**	**87.22**	**16**	P	**P**	**16 48 29.8**	**+0.5**
	baz=210,SNR=13						
PSUT	**Pine Spring**	**87.22**	**46**	P	**P**	**16 48 30.9**	**+0.8**
SZCU	**Shurtz Canyon**	**87.22**	**47**	P	**P**	**16 48 31.3**	**+1.1**
SZCU				IAmb	IAmb	16 48 33.5	
	comp=Z,259nm,1.2s						
WUAZ	**Wupatki**	**87.31**	**49**	P	**P**	**16 48 32.1**	**+1.5**
	baz=239,SNR=67						
HPIG		**87.36**	**59**	P	**P**	**16 48 31.8**	**+0.8**
HPIG				IAmb	IAmb	16 48 34.0	
	comp=Z,186nm,1.0s						
M19K	**Big River Lodg**	**87.41**	**12**	P	**P**	**16 48 30.2**	**0.0**
M19K	**Big River Lodg**	**87.41**	**12**	P	**P**	**16 48 30.5**	**+0.3**
	baz=203,SNR=14						
ELK	**Elko**	**87.54**	**43**	P	**P**	**16 48 32.2**	**+0.6**
ELK	**Elko**	**87.54**	**43**	P	**P**	**16 48 32.2**	**+0.6**
ELK				pmax	pmax		
	comp=Z,145nm,1.2s						
L19K	**White Mountain**	**87.58**	**11**	P	**P**	**16 48 31.6**	**+0.6**
L19K					**pwP**	**16 50 31.6**	**+0.5**
L19K	**White Mountain**	**87.58**	**11**	P	**P**	**16 48 31.9**	**+0.9**
	baz=203,SNR=84						
PGC	**Sidney**	**87.59**	**34**	P	**P**	**16 48 32.4**	**+1.1**
RC01	**Rabbit Creek A**	**87.63**	**14**	P	**P**	**16 48 31.7**	**+0.5**
RC01	**Rabbit Creek A**	**87.63**	**14**	P	**P**	**16 48 31.6**	**+0.3**
	baz=207,SNR=16						
SRDT	**SRDT**	**87.63**	**287**	P	**P**	**16 48 32.5**	**+0.2**
	comp=Z,3μmcomp=Z,163nm,1.5s						
M20K	**Styx River**	**87.63**	**12**	P	**P**	**16 48 30.7**	**-0.6**
M20K	**Styx River**	**87.63**	**12**	P	**P**	**16 48 31.1**	**-0.2**
	baz=204						
BBB	**Bella Bella**	**87.74**	**29**	P	**P**	**16 48 33.3**	**+1.5**
SUA	**Susitna One**	**87.74**	**14**	P	**P**	**16 48 32.1**	**+0.2**
	baz=206,SNR=17						
F07A	**Phinny Hill Vi**	**87.75**	**37**	P	**P**	**16 48 33.1**	**+1.0**
F07A				IAmb	IAmb	16 48 35.1	
	comp=Z,287nm,1.2s						
PWL	**Port Wells**	**87.75**	**15**	P	**P**	**16 48 31.7**	**0.0**
PWL				IAmb	IAmb	16 48 33.4	
	comp=Z,334nm,1.1s						
PWL	**Port Wells**	**87.75**	**15**	P	**P**	**16 48 31.8**	**0.0**
	baz=209,SNR=28						
HIN	**Hinchinbrook I**	**87.79**	**16**	P	**P**	**16 48 32.0**	**0.0**
HIN				IAmb	IAmb	16 48 33.9	
	comp=Z,282nm,1.2s						
MOIG	**Morelia**	**87.80**	**68**	P	**P**	**16 48 33.5**	**+0.2**
X18A	**Snowflake**	**87.81**	**51**	P	**P**	**16 48 34.0**	**+1.1**
G08A	**Pilot Rock**	**87.93**	**38**	P	**P**	**16 48 34.4**	**+1.2**
KAIM	**Kayak Island**	**87.93**	**17**	P	**P**	**16 48 33.6**	**+1.0**
KAIM	**Kayak Island**	**87.93**	**17**	P	**P**	**16 48 33.7**	**+1.1**
	baz=212,SNR=5.4						
TIY	**Taiyuan**	**87.95**	**313**	*eP*	**P**	**16 48 34.8**	**+1.4**
TIY				pP	**pwP**	**16 50 33.8**	**-2.2**
TIY				pmax	pmax		
	comp=Z,54nm,0.5s						
ZAIG	**Zacatecas**	**87.99**	**64**	P	**P**	**16 48 35.5**	**+1.3**
ZAIG				IAmb	IAmb	16 48 37.8	
	comp=Z,259nm,1.2s						
CRAG	**Craig**	**88.03**	**25**	P	**P**	**16 48 34.9**	**+1.8**
CRAG				IAmb	IAmb	16 48 36.6	
	comp=Z,359nm,1.3s						
CRAG	**Craig**	**88.03**	**25**	P	**P**	**16 48 34.6**	**+1.5**
	baz=222,SNR=9.1						
L20K	**Farewell, AK**	**88.03**	**12**	P	**P**	**16 48 33.4**	**+0.3**
	baz=204,SNR=42						
SKT	**Skwentna**	**88.04**	**13**	P	**P**	**16 48 32.0**	**-1.1**
SKT	**Skwentna**	**88.04**	**13**	P	**P**	**16 48 32.5**	**-0.7**
	baz=206,SNR=20						
GLI	**Glacier Island**	**88.06**	**15**	P	**P**	**16 48 33.2**	**0.0**
GLI	**Glacier Island**	**88.06**	**15**	P	**P**	**16 48 33.4**	**+0.2**
	baz=210,SNR=18						
TTA	**Tatalina**	**88.07**	**11**	P	**P**	**16 48 33.4**	**+0.1**
TTA				IAmb	IAmb	16 48 35.5	
	comp=Z,176nm,1.3s						
TTA	**Tatalina**	**88.07**	**11**	P	**P**	**16 48 33.4**	**+0.1**
TTA				pmax	pmax		
	comp=Z,176nm,1.3s						
TTA	**Tatalina**	**88.07**	**11**	P	**P**	**16 48 34.0**	**+0.6**
	baz=202,SNR=37						
FID	**Port Fidalgo**	**88.10**	**16**	P	**P**	**16 48 33.3**	**-0.1**
FID				IAmb	IAmb	16 48 35.1	
	comp=Z,310nm,1.2s						
EYAK	**Cordova Ski Ar**	**88.11**	**16**	P	**P**	**16 48 33.9**	**+0.5**
EYAK				IAmb	IAmb	16 48 35.5	
	comp=Z,246nm,1.2s						
EYAK	**Cordova Ski Ar**	**88.11**	**16**	P	**P**	**16 48 34.2**	**+0.8**
	baz=211,SNR=14						
GRNB	**Grenville Isla**	**88.11**	**27**	P	**P**	**16 48 35.0**	**+1.3**
M22K	**Willow**	**88.14**	**14**	P	**P**	**16 48 33.6**	**+0.1**
M22K	**Willow**	**88.14**	**14**	P	**P**	**16 48 33.8**	**+0.3**
	baz=207,SNR=26						
LTY	**Liberty**	**88.17**	**36**	P	**P**	**16 48 34.8**	**+0.6**
LTY				IAmb	IAmb	16 48 36.8	
	comp=Z,272nm,1.2s						
TCRU	**Three Creeks R**	**88.19**	**46**	P	**P**	**16 48 36.2**	**+1.5**
TCRU				IAmb	IAmb	16 48 38.3	
	comp=Z,374nm,1.5s						
KNK	**Knik Glacier**	**88.20**	**15**	P	**P**	**16 48 34.3**	**+0.4**
KNK				IAmb	IAmb	16 48 35.8	
	comp=Z,226nm,1.1s						
KNK	**Knik Glacier**	**88.20**	**15**	P	**P**	**16 48 34.6**	**+0.7**
	baz=209,SNR=26						
PMR	**Palmer**	**88.21**	**14**	P	**P**	**16 48 34.0**	**+0.1**
PMR				IAmb	IAmb	16 48 35.6	
	comp=Z,265nm,1.2s						
PMR	**Palmer**	**88.21**	**14**	P	**P**	**16 48 34.0**	**+0.1**
PMR				pmax	pmax		
	comp=Z,265nm,1.2s						
PMR	**Palmer**	**88.21**	**14**	P	**P**	**16 48 34.4**	**+0.5**
	baz=208,SNR=20						
RAGM	**Ragged Mountai**	**88.25**	**17**	P	**P**	**16 48 35.2**	**+1.0**
W18A	**Petrified Fore**	**88.26**	**50**	P	**P**	**16 48 35.9**	**+0.9**
W18A				IAmb	IAmb	16 48 38.1	
	comp=Z,318nm,1.4s						
W18A	**Petrified Fore**	**88.26**	**50**	P	**P**	**16 48 36.6**	**+1.6**
	baz=240,SNR=39						
HAWA	**Hanford**	**88.27**	**37**	P	**P**	**16 48 35.9**	**+1.3**
HMT	**Hamilton**	**88.31**	**17**	P	**P**	**16 48 35.0**	**+0.6**
HMT				IAmb	IAmb	16 48 36.7	
	comp=Z,218nm,1.2s						
MSU	**Marysvale**	**88.32**	**47**	P	**P**	**16 48 36.7**	**+1.4**
MSU	**Marysvale**	**88.32**	**47**	P	**P**	**16 48 36.7**	**+1.4**
RUBB	**Prince Rupert**	**88.33**	**26**	P	**P**	**16 48 36.0**	**+1.4**
RUBB				IAmb	IAmb	16 48 37.9	
	comp=Z,202nm,1.3s						
121A	**Cookes Peak, D**	**88.39**	**54**	P	**P**	**16 48 36.7**	**+1.0**
121A				IAmb	IAmb	16 48 39.4	
	comp=Z,246nm,1.1s						
121A	**Cookes Peak, D**	**88.39**	**54**	P	**P**	**16 48 38.1**	**+2.4**
	baz=241						
121A	**Cookes Peak, D**	**88.39**	**54**	P	**P**	**16 48 37.8**	**+2.1**
	baz=241						
GHO	**Glory Hole Cre**	**88.42**	**14**	P	**P**	**16 48 35.2**	**+0.3**
SIT	**Sitka**	**88.42**	**23**	P	**P**	**16 48 36.1**	**+1.1**
SIT				IAmb	IAmb	16 48 38.0	
	comp=Z,186nm,1.2s						
SIT	**Sitka**	**88.42**	**23**	P	**P**	**16 48 36.1**	**+1.1**
SIT				pmax	pmax		
	comp=Z,186nm,1.2s						
SIT	**Sitka**	**88.42**	**23**	P	**P**	**16 48 36.5**	**+1.5**
	baz=220,SNR=5.9						
GO06	**Curarrehue**	**88.46**	**133**	P	**P**	**16 48 36.8**	**+0.8**
GO06				IAmb	IAmb	16 48 38.9	
	comp=Z,213nm,1.1s						
V35K	**Ketchikan**	**88.51**	**25**	P	**P**	**16 48 37.3**	**+1.9**
	baz=223,SNR=31						
PLCA	**Paso Flores**	**88.51**	**134**	P	**P**	**16 48 37.6**	**+1.4**
	comp=Z,96nm,1.1s,baz=242,slow=5.2,SNR=88						
PLCA				pP	**pwP**	**16 50 35.5**	**-0.9**
	comp=Z,13nm,1.2s,baz=261,slow=5.0,SNR=3.7						
PLCA				PKKPbc	**PKKPbc**	**17 06 14.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=191,slow=5.2,SNR=4.9						
	comp=Z,96nm,1.1s						
PLCA	**Paso Flores**	**88.51**	**134**	P	**P**	**16 48 37.3**	**+1.2**
PLCA				IAmb	IAmb	16 48 39.3	
	comp=Z,266nm,1.3s						
PLCA	**Paso Flores**	**88.51**	**134**	P	**P**	**16 48 37.3**	**+1.2**
PLCA				pmax	pmax		
	comp=Z,266nm,1.3s						
BERG	**Berg Lake**	**88.51**	**17**	P	**P**	**16 48 36.0**	**+0.6**
U33K	**Whale Pass**	**88.51**	**24**	P	**P**	**16 48 37.1**	**+1.7**
	baz=222,SNR=22						
B06A	**Marblemount**	**88.52**	**34**	P	**P**	**16 48 36.2**	**+0.6**
B06A				IAmb	IAmb	16 48 38.1	
	comp=Z,154nm,1.0s						
XAN	**Xi'an**	**88.55**	**308**	⇓P	**P**	**16 48 38.1**	**+1.9**
XAN				SKS	**SKSac**	**16 58 13.3**	**-0.5**
XAN				S	**S**	**16 58 39.8**	**+2.8**
XAN				pmax	pmax		
	comp=Z,72nm,0.8s						
SNH	**Sunshine Point**	**88.57**	**18**	P	**P**	**16 48 36.3**	**+0.7**
SML	**Sawmill**	**88.58**	**14**	P	**P**	**16 48 35.8**	**+0.1**
SML	**Sawmill**	**88.58**	**14**	P	**P**	**16 48 35.8**	**+0.1**
SML				pmax	pmax		
	comp=Z,97nm,1.1s						
SML	**Sawmill**	**88.58**	**14**	P	**P**	**16 48 36.0**	**+0.3**
	baz=209,SNR=16						
E08A	**Dider Farm, El**	**88.59**	**37**	P	**P**	**16 48 36.6**	**+0.6**
E08A				IAmb	IAmb	16 48 39.0	
	comp=Z,303nm,1.2s						
DIV	**Divide**	**88.60**	**16**	P	**P**	**16 48 36.0**	**+0.1**
DIV				IAmb	IAmb	16 48 37.8	
	comp=Z,298nm,1.2s						
BMO	**Blue Mountains**	**88.62**	**39**	P	**P**	**16 48 36.9**	**+0.5**
BMO				IAmb	IAmb	16 48 39.0	
	comp=Z,313nm,1.4s						
BMO	**Blue Mountains**	**88.62**	**39**	P	**P**	**16 48 36.9**	**+0.5**
BMO				pmax	pmax		
	comp=Z,313nm,1.5s						
MFID	**Camas Ranch**	**88.67**	**41**	P	**P**	**16 48 37.4**	**+0.8**
CUT	**Chulitna**	**88.69**	**13**	P	**P**	**16 48 35.9**	**-0.2**
CUT	**Chulitna**	**88.69**	**13**	P	**P**	**16 48 36.3**	**+0.2**
	baz=207,SNR=30						
M23K	**Glacier View**	**88.71**	**15**	P	**P**	**16 48 36.5**	**+0.2**
	baz=209,SNR=23						
PPLA	**Purkeypile**	**88.74**	**12**	P	**P**	**16 48 35.2**	**-1.3**
	baz=205,SNR=12						
BMRM	**Bremner River**	**88.76**	**16**	P	**P**	**16 48 36.8**	**+0.3**
BMRM	**Bremner River**	**88.76**	**16**	P	**P**	**16 48 37.4**	**+0.8**
	baz=212,SNR=41						
DUG	**Dugway, Tooele**	**88.79**	**45**	P	**P**	**16 48 37.8**	**+0.4**
DUG				IAmb	IAmb	16 48 40.1	
	comp=Z,216nm,1.4s						
DUG	**Dugway, Tooele**	**88.79**	**45**	P	**P**	**16 48 37.8**	**+0.4**
DUG				pmax	pmax		
	comp=Z,216nm,1.4s						
DUG	**Dugway, Tooele**	**88.79**	**45**	P	**P**	**16 48 38.5**	**+1.2**
	baz=238,SNR=63						
WAX	**Waxell Ridge**	**88.79**	**17**	P	**P**	**16 48 37.6**	**+0.9**
SEY	**Seymchan**	**88.80**	**348**	PKKP	**PKKPdf**	**17 06 13.5**	**+2.7**
	comp=Z,2.6nm,0.7s,baz=282,slow=1.0,SNR=9.2						
SEY	**Seymchan**	**88.80**	**348**	⇑*eP*	**P**	**16 48 37.4**	**+0.8**
SEY				pmax	pmax		
	comp=Z,227nm,1.7s						
K20K	**Telida**	**88.81**	**11**	P	**P**	**16 48 36.9**	**+0.2**
K20K				IAmb	IAmb	16 48 38.5	
	comp=Z,217nm,1.2s						
K20K	**Telida**	**88.81**	**11**	P	**P**	**16 48 37.1**	**+0.5**
	baz=204,SNR=43						
S31K	**Pelican**	**88.81**	**22**	P	**P**	**16 48 38.4**	**+1.6**
	baz=219,SNR=12						
MESA	**MESA**	**88.82**	**18**	P	**P**	**16 48 37.8**	**+0.8**
MESA	**MESA**	**88.82**	**18**	P	**P**	**16 48 38.5**	**+1.5**
	baz=214,SNR=18						
SCM	**Sheep Creek Mo**	**88.84**	**15**	P	**P**	**16 48 37.1**	**+0.2**
SCM	**Sheep Creek Mo**	**88.84**	**15**	P	**P**	**16 48 37.1**	**+0.2**
SCM				pmax	pmax		
	comp=Z,312nm,1.1s						
SCM	**Sheep Creek Mo**	**88.84**	**15**	P	**P**	**16 48 37.5**	**+0.6**
	baz=210,SNR=52						
KLU	**Klutina**	**88.88**	**16**	P	**P**	**16 48 37.5**	**+0.3**
KLU				IAmb	IAmb	16 48 39.2	
	comp=Z,200nm,1.3s						
KLU	**Klutina**	**88.88**	**16**	P	**P**	**16 48 37.8**	**+0.6**
	baz=211,SNR=30						
KIDD	**KIDD Seismic O**	**88.98**	**55**	P	**P**	**16 48 40.3**	**+1.9**
	baz=242						
XLT	**XiLinHaoTe**	**88.99**	**319**	⇑*iP*	**P**	**16 48 39.0**	**+0.9**
XLT				pP	pP	16 50 36.6	+0.9
XLT				SKS	**SKSac**	**16 58 14.0**	**-2.1**
XLT				S	**S**	**16 58 43.0**	**+2.2**
XLT				SS	**SS**	**17 04 53.3**	**+2.4**
XLT				pmax	pmax		
	comp=Z,21nm,1.3s						
XLT				pmax	pmax		
	comp=Z,200nm,4.4s						
D08A	**Wollman Farm,**	**89.00**	**37**	P	**P**	**16 48 39.0**	**+1.1**
S32K	**Killisnoo**	**89.00**	**23**	P	**P**	**16 48 39.3**	**+1.6**
	baz=221,SNR=9.4						
YAH	**Yahtse**	**89.03**	**18**	P	**P**	**16 48 38.7**	**+0.6**
WRAK	**Wrangell Islan**	**89.03**	**24**	P	**P**	**16 48 38.9**	**+1.1**
WRAK				IAmb	IAmb	16 48 40.9	
	comp=Z,232nm,1.1s						
WRAK	**Wrangell Islan**	**89.03**	**24**	P	**P**	**16 48 39.3**	**+1.5**
	baz=223,SNR=24						
BGU	**Big Grassy Mou**	**89.04**	**44**	P	**P**	**16 48 39.1**	**+0.6**
BGU				IAmb	IAmb	16 48 41.3	
	comp=Z,202nm,1.4s						
TGL	**Tana Glacier**	**89.05**	**17**	P	**P**	**16 48 38.5**	**+0.5**
ISLE	**Juniper Island**	**89.06**	**17**	P	**P**	**16 48 38.7**	**+0.6**
E09A	**Wood Farm, Sta**	**89.11**	**37**	P	**P**	**16 48 39.1**	**+0.7**
E09A				IAmb	IAmb	16 48 41.0	
	comp=Z,303nm,1.3s						
TNA	**Tin City**	**89.13**	**5**	P	**P**	**16 48 38.6**	**+0.5**
	baz=191,SNR=7.3						
NLU	**North Lily Min**	**89.14**	**45**	P	**P**	**16 48 40.2**	**+1.1**
NLU				IAmb	IAmb	16 48 42.1	
	comp=Z,234nm,1.4s						
PNL	**Peninsula**	**89.15**	**19**	P	**P**	**16 48 38.9**	**+0.5**
	baz=217,SNR=14						
TLIG	**Tlapa**	**89.15**	**71**	P	**P**	**16 48 40.6**	**+1.1**
KMI	**Kunming**	**89.16**	**298**	⇑P	**P**	**16 48 41.9**	**+2.4**
KMI				SKS	**SKSac**	**16 58 20.1**	**+1.9**
KMI				S	**S**	**16 58 43.8**	**+0.4**
KMI				pmax	pmax		
	comp=Z,82nm,1.6s						
KMI				pmax	pmax		
	comp=Z,790nm,3.9s						
CAST	**Castle Rocks**	**89.23**	**12**	P	**P**	**16 48 37.6**	**-1.1**
CAST				IAmb	IAmb	16 48 39.1	
	comp=Z,194nm,1.1s						
CAST				pP	**pP**	**16 50 37.3**	**+0.1**
CAST	**Castle Rocks**	**89.23**	**12**	P	**P**	**16 48 37.8**	**-0.9**
	baz=205,SNR=86						
PINM	**Pinnacle**	**89.24**	**19**	P	**P**	**16 48 39.7**	**+0.8**
	baz=216,SNR=10.0						
TABL	**Table Mountain**	**89.26**	**18**	P	**P**	**16 48 39.8**	**+0.6**
TABL				IAmb	IAmb	16 48 41.4	
	comp=Z,250nm,1.1s						
VRDI	**Verde Repeater**	**89.28**	**17**	P	**P**	**16 48 39.5**	**+0.4**
VRDI				IAmb	IAmb	16 48 41.3	
	comp=Z,274nm,1.3s						
BCPM	**Bancas Point**	**89.30**	**19**	P	**P**	**16 48 39.7**	**+0.7**
BCPM				IAmb	IAmb	16 48 41.4	
	comp=Z,192nm,1.2s						
N25K	**Chitina, Valde**	**89.31**	**16**	P	**P**	**16 48 39.6**	**+0.5**
N25K				IAmb	IAmb	16 48 41.4	
	comp=Z,256nm,1.2s						
N25K	**Chitina, Valde**	**89.31**	**16**	P	**P**	**16 48 39.8**	**+0.6**
	baz=212,SNR=38						
R31K	**City Hall, Gus**	**89.32**	**21**	P	**P**	**16 48 40.6**	**+1.5**
	baz=220						
ZEA	**Zeya**	**89.33**	**332**	*eP*	**P**	**16 48 40

EFI pmax pmax
comp=Z,228nm,1.7s
KTH Kantishna Hill 89.58 13 P P 16 48 39.3 -11.1
KTH lAmb lAmb 16 48 41.0
comp=Z,152nm,1.1s
HLID Hailey 89.61 41 P P 16 48 42.1 +1.0
HLID lAmb lAmb 16 48 44.2
comp=Z,207nm,1.1s
HLID Hailey 89.61 41 P P 16 48 42.7 +1.6
baz=237,SNR=209
CHUM Lake Minchumin 89.61 12 P P 16 48 39.7 -0.7
baz=205,SNR=13
LOGN Logan Glacier 89.62 18 P P 16 48 41.1 +0.4
LOGN lAmb lAmb 16 48 42.9
comp=Z,239nm,1.2s
SPUT South Promonto 89.62 44 P P 16 48 42.2 +1.0
TRF Thorofare Moun 89.62 13 P P 16 48 39.9 -0.7
TRF lAmb lAmb 16 48 41.7
comp=Z,184nm,1.1s
TRF Thorofare Moun 89.62 13 P P 16 48 40.0 -0.7
baz=207,SNR=65
BARN Barnard Glacie 89.63 17 P P 16 48 41.0 +0.2
P29M Windy Craggy 89.63 20 P P 16 48 41.5 +0.9
P29M lAmb lAmb 16 48 43.5
comp=Z,164nm,1.2s
P29M Windy Craggy 89.63 20 P P 16 48 42.0 +1.4
baz=218,SNR=24
LLLB Lillooet 89.63 33 P P 16 48 41.5 +0.7
LLLB lAmb lAmb 16 48 43.4
comp=Z,174nm,1.2s
GCSA Galena City Sc 89.63 10 P P 16 48 41.3 +0.9
baz=201
R32K Eaglecrest 89.64 22 P P 16 48 41.8 +1.2
baz=221,SNR=7.5
CTG Chitna Glacier 89.64 18 P P 16 48 41.7 +0.9
baz=215,SNR=36
CTGM Chitina Glacie 89.64 18 P P 16 48 41.2 +0.4
CTGM lAmb lAmb 16 48 43.1
comp=Z,206nm,1.1s
HVU Hansel Valley 89.66 44 P P 16 48 42.2 +0.8
HVU Hansel Valley 89.66 44 P P 16 48 42.2 +0.8
HVU pmax pmax
comp=Z,426nm,1.2s
Y22A Socorro 89.67 53 P P 16 48 43.4 +1.8
baz=241
JIS Juneau Island 89.68 22 P P 16 48 41.8 +1.0
SRU San Rafael Swe 89.73 47 P P 16 48 42.9 +1.1
SRU San Rafael Swe 89.73 47 P P 16 48 42.9 +1.1
SRU pmax pmax
comp=Z,458nm,1.1s
CTU Camp Tracy 89.74 45 P P 16 48 42.6 +0.8
BESE Bessie Mountai 89.75 22 P P 16 48 41.9 +0.6
BESE lAmb lAmb 16 48 44.1
comp=Z,161nm,1.2s
Y22D IRIS PASSCAL I 89.77 53 P P 16 48 44.4 +2.4
baz=241
Y22D IRIS PASSCAL I 89.77 53 P P 16 48 43.7 +1.7
baz=241
Y22F Passcal Instru 89.77 53 P P 16 48 44.1 +2.1
baz=241
LENM Lemitar 89.77 52 P P 16 48 42.8 +0.7
P17A Butcher Ranch, 89.78 46 P P 16 48 42.9 +0.9
C09A Chrisman Ranch 89.80 36 P P 16 48 42.2 +0.5
C09A lAmb lAmb 16 48 44.2
comp=Z,179nm,1.3s
O28M Mount Upton 89.81 18 P P 16 48 42.4 +0.7
baz=216,SNR=24
HARP HAARP 89.84 15 P P 16 48 42.1 +0.6
baz=212,SNR=11
CRNM Carthage 89.85 53 P P 16 48 43.2 +0.8
RND Reindeer 89.88 13 P P 16 48 41.6 -0.1
RND Reindeer 89.88 13 P P 16 48 41.6 -0.1
RND pmax pmax
comp=Z,288nm,1.2s
JLU Jordanelle 89.89 45 P P 16 48 43.4 +0.8
O29M Mount Kennedy 89.90 19 P P 16 48 43.0 +1.0
baz=217,SNR=22
DHY Denali Highway 89.91 14 P P 16 48 41.8 -0.1
DHY lAmb lAmb 16 48 43.7
comp=Z,170nm,1.5s
DHY Denali Highway 89.91 14 P P 16 48 42.2 +0.3
baz=210,SNR=26
PLBC Pleasant Camp 89.93 21 P P 16 48 42.8 +0.9
baz=219,SNR=15
BNM Barren Site 90.02 53 P P 16 48 44.3 +1.0
TX31 Lajitas Ar. Si 90.03 58 P P 16 48 44.5 +1.3
TX31 Lajitas Ar. Si 90.03 58 P P 16 48 44.8 +1.6
baz=243
TX32 Lajitas Array 90.03 58 P P 16 48 44.6 +1.3
TXAR Lajitas Array 90.03 58 P P 16 48 45.6 +2.3
comp=Z,100nm,1.0s,baz=220,slow=4.9,SNR=437
TXAR pP **pwP 16 50 44.6 -0.5**
comp=Z,13nm,1.1s,baz=224,slow=5.0,SNR=5.2
TXAR PP **PP 16 52 24.8 -1.8**
comp=Z,4.0nm,1.1s,baz=234,slow=7.7,SNR=3.5
TXAR PKKPbc **PKKPbc 17 06 11.1 -0.2**
comp=Z,0.9nm,0.6s,baz=99,slow=2.9,SNR=11
TXAR SKKPbc SKKPbc 17 08 59.9 +0.1
comp=Z,1.5nm,1.1s,baz=101,slow=1.3,SNR=4.5
comp=Z,100nm,1.0s
TXAR Lajitas Array 90.03 58 P P 16 48 44.9 +1.6
TXAR Lajitas Array 90.03 58 P P 16 48 44.9 +1.6
BPAW Bear Paw Mtn. 90.06 12 P P 16 48 41.9 -0.6
BPAW Bear Paw Mtn. 90.06 12 P P 16 48 41.4 -1.1
baz=206,SNR=10.0
MCK McKinley 90.15 13 P P 16 48 42.5 -0.3
MCK lAmb lAmb 16 48 44.3
comp=Z,119nm,1.2s
MCK McKinley 90.15 13 P P 16 48 42.6 -0.3
MCK pmax pmax
comp=Z,119nm,1.2s
MCK McKinley 90.15 13 P P 16 48 42.7 -0.2
baz=208,SNR=38
MVCO Mesa Verde 90.16 49 P P 16 48 44.3 +0.4
baz=240
HHC Hu-ho-hao-te 90.16 315 *e*P **P 16 48 45.8 +2.2**
HHC pP pP 16 50 41.3 -0.1
HHC SKS **SKSac 16 58 21.3 -1.7**
HHC S **S 16 58 54.3 +2.8**
HHC pmax pmax
comp=Z,74nm,0.7s
HHC pmax pmax
comp=Z,560nm,5.3s
TCUT Toone Canyon 90.19 45 P P 16 48 44.9 +1.0
T35M Bob Quinn 90.23 25 P P 16 48 45.3 +1.8
baz=224,SNR=9.4
P30M Million Dollar 90.26 20 P P 16 48 45.1 +1.6
baz=219
PAX Paxson 90.26 15 P P 16 48 43.4 -0.1
PAX Paxson 90.26 15 P P 16 48 43.4 -0.1
PAX pmax pmax
comp=Z,107nm,1.4s
PAX Paxson 90.26 15 P P 16 48 43.2 -0.3
baz=211,SNR=22
SKAG Skagway 90.27 21 P P 16 48 44.2 +0.7
SKAG lAmb lAmb 16 48 46.8
comp=Z,272nm,1.6s
SKAG Skagway 90.27 21 P P 16 48 45.0 +1.5
baz=220,SNR=22
HWUT Hardware Ranch 90.34 44 P P 16 48 44.8 +0.2
HWUT lAmb lAmb 16 48 46.9
comp=Z,185nm,1.2s
YUK8 Steele Glacier 90.34 18 P P 16 48 44.9 +0.7
baz=216,SNR=37
ML02 Panimavida 90.37 129 P P 16 48 45.1 +0.4
GO05 Huala 90.37 129 P P 16 48 45.2 +0.4
GO05 lAmb lAmb 16 48 46.8
comp=Z,144nm,1.2s
M26K Nabesna, AK 90.39 16 P P 16 48 44.5 +0.4
M26K lAmb lAmb 16 48 46.4
comp=Z,247nm,1.6s
M26K Nabesna, AK 90.39 16 P P 16 48 44.8 +0.7
baz=213,SNR=38
BWN Browne 90.43 13 P P 16 48 43.7 -0.4
YUK6 Outpost Mounta 90.48 19 P P 16 48 45.5 +0.7
baz=218,SNR=13
ANMO Albuquerque 90.52 52 P P 16 48 45.8 +0.2
ANMO lAmb lAmb 16 48 48.3
comp=Z,187nm,1.1s
ANMO **pP 16 50 44.4 +0.5**
ANMO Albuquerque 90.52 52 *ce*P **P 16 48 46.6 +1.0**
ANMO pmax pmax
comp=Z,206nm,1.2s
ANMO Albuquerque 90.52 52 P P 16 48 47.2 +1.6
baz=242
ANMO Albuquerque 90.52 52 P P 16 48 46.6 +1.0
baz=242
YUK3 Moose Creek 90.55 18 P P 16 48 46.0 +1.0
baz=216,SNR=66
PZH PanZhiHua 90.57 299 P P 16 48 46.5 +0.6
PZH SKS **SKSac 16 58 24.1 -1.9**
PZH S **S 16 58 56.8 +1.0**
PZH pmax pmax
comp=Z,50nm,0.9s
PZH pmax pmax
comp=Z,280nm,6.3s
S34M Telegraph Cree 90.58 24 P P 16 48 46.8 +1.9
baz=224,SNR=42
BCYI Bear Canyon 90.63 41 P P 16 48 46.6 +0.8
HYT Haines Junctio 90.64 19 P P 16 48 45.9 +0.5
HYT Haines Junctio 90.64 19 P P 16 48 46.7 +1.3
baz=218,SNR=14
M27K Edge Creek, AK 90.64 17 P P 16 48 46.1 +0.8
M27K lAmb lAmb 16 48 47.9
comp=Z,211nm,1.3s
M27K Edge Creek, AK 90.64 17 P P 16 48 46.4 +1.0
baz=214,SNR=50
MENT Mentasta 90.66 16 P P 16 48 45.8 +0.6
NEW Newport 90.69 36 P P 16 48 46.1 +0.3
NEW Newport 90.69 36 P P 16 48 46.1 +0.3
NEW pmax pmax
comp=Z,37nm,1.3s
NEW Newport 90.69 36 P P 16 48 46.6 +0.7
baz=235,SNR=8.8
YUK4 Talbot Arm 90.71 19 P P 16 48 47.1 +1.3
baz=217,SNR=17
GDL2 Guadalupe Moun 90.79 55 P P 16 48 47.9 +1.1
L26K Log Cabin Wild 90.82 16 P P 16 48 46.4 +0.4
L26K Log Cabin Wild 90.82 16 P P 16 48 46.8 +0.8
baz=213,SNR=27
I21K Tanana 90.85 11 P P 16 48 46.1 0.0
I21K lAmb lAmb 16 48 47.7
comp=Z,150nm,1.3s
I21K Tanana 90.85 11 P P 16 48 46.1 0.0
baz=205,SNR=32
NEA2 Nenana 90.88 13 P P 16 48 45.5 -0.8
NEA2 Nenana 90.88 13 P P 16 48 45.8 -0.4
baz=208,SNR=6.2
P32M Atlin 90.90 22 P P 16 48 47.9 +1.4
baz=222,SNR=9.9
K24K Donnelly Dome 90.90 14 P P 16 48 46.6 +0.2
baz=211,SNR=24
CD2 Chengdu 90.93 303 ⇑P **P 16 48 49.9 +2.6**
CD2 pmax pmax
comp=Z,90nm,0.8s
Q32M Nakina River 90.93 22 P P 16 48 47.3 +0.5
baz=223,SNR=11
MLY Manley 90.95 12 P P 16 48 45.8 -0.8
MLY Manley 90.95 12 P P 16 48 46.1 -0.5
baz=206,SNR=21
BVCY Beaver Creek 90.96 17 P P 16 48 47.5 +0.8
baz=215,SNR=17
WRH Wood River Hil 90.98 13 P P 16 48 46.1 -0.5
WRH lAmb lAmb 16 48 48.0
comp=Z,183nm,1.3s
O30N Mendenhall 91.03 20 P P 16 48 48.0 +0.9
baz=219,SNR=22
RIDG Independent Ri 91.06 15 P P 16 48 47.5 +0.3
baz=212,SNR=8.1
RDMU Red Mountain 91.11 46 P P 16 48 48.7 +0.5
RDMU lAmb lAmb 16 48 50.6
comp=Z,172nm,1.2s
H21K Melozitna Rive 91.14 11 P P 16 48 47.2 -0.2
H21K lAmb lAmb 16 48 49.5
comp=Z,163nm,1.6s
H21K Melozitna Rive 91.14 11 P P 16 48 48.0 +0.6
baz=205,SNR=24
HDA Harding Lake 91.17 14 P P 16 48 47.0 -0.6
HDA Harding Lake 91.17 14 P P 16 48 47.3 -0.3
baz=210,SNR=28
DOT Dot Lake 91.17 15 P P 16 48 47.5 -0.2
CLNB Carlsbad 91.19 55 P P 16 48 49.0 +0.5
CCB Clear Creek Bu 91.19 13 P P 16 48 46.9 -0.8
CCB lAmb lAmb 16 48 48.7
comp=Z,113nm,1.3s
CCB **pP 16 50 46.9 +0.6**
ECR Eagle Creek 91.21 43 P P 16 48 48.8 +0.2
AHID Auburn Hatcher 91.23 43 P P 16 48 49.5 +0.8
L27K Beaver Creek, 91.24 16 P P 16 48 48.3 +0.4
L27K Beaver Creek, 91.24 16 P P 16 48 48.7 +0.7
baz=214,SNR=24
MCMT McKenzie Canyo 91.24 41 P P 16 48 49.2 +0.5
BCAR Beaver Creek A 91.25 16 P P 16 48 48.4 +0.3
BCAR **pwP 16 50 48.6 -0.4**
VA05 Santo Domingo 91.25 128 P P 16 48 48.9 +0.1
N30M Aishikik Lake 91.27 19 P P 16 48 48.6 +0.5
baz=219,SNR=7.9
BO01 Tunca 91.28 128 P P 16 48 49.3 +0.3
IMAR Indian Mountai 91.28 10 P P 16 48 48.2 +0.1
IMAR **pwP 16 50 49.5 +0.4**
BO02 Sierra Bellavi 91.30 129 P P 16 48 49.4 +0.2
BO02 lAmb lAmb 16 48 51.3
comp=Z,172nm,1.4s
CLN7 Carlsbad 7 91.31 55 P P 16 48 49.4 +0.3
I23K Minto, Yukon-K 91.32 12 P P 16 48 47.4 -0.8
I23K Minto, Yukon-K 91.32 12 P P 16 48 47.7 -0.5
baz=208,SNR=19
WHY Whitehorse 91.33 20 P P 16 48 49.2 +0.6
WHY Whitehorse 91.33 20 P P 16 48 48.8 +0.3
baz=220,SNR=13
DLBC Dease Lake 91.36 24 P P 16 48 50.1 +1.4
baz=225,SNR=16
MDM Murphy Dome 91.38 13 P P 16 48 47.7 -0.8
MDM lAmb lAmb 16 48 49.5
comp=Z,167nm,1.4s
MDM pP **pP 16 50 48.2 +1.0**
TCOL CIGO, UAF Yank 91.38 13 P P 16 48 47.9 -0.6
TCOL lAmb lAmb 16 48 49.6
comp=Z,136nm,1.3s
TCOL CIGO, UAF Yank 91.38 13 P P 16 48 48.1 -0.4
baz=209,SNR=6.0
COLA College 91.38 13 P P 16 48 48.0 -0.5
COLA lAmb lAmb 16 48 49.6
comp=Z,150nm,1.4s
COLA College 91.38 13 *i* P **P 16 48 48.0 -0.5**
COLA pmax pmax
comp=Z,72nm,1.2s
COLA College 91.38 13 P P 16 48 48.1 -0.4
baz=209
MT01 Popeta 91.42 128 P P 16 48 50.0 +0.4
MT01 lAmb lAmb 16 48 51.6
comp=Z,185nm,1.1s
HTMS Hat Mesa 91.47 55 P P 16 48 50.2 +0.3
SCRK Sand Creek 91.47 15 P P 16 48 49.1 0.0
SCRK lAmb lAmb 16 48 51.1
comp=Z,232nm,2.0s
SCRK Sand Creek 91.47 15 P P 16 48 49.6 +0.5
baz=213,SNR=24
IL31 91.50 13 P P 16 48 48.4 -0.6
IL31 lAmb lAmb 16 48 50.2
comp=Z,120nm,1.5s
ILAR Eielson Array 91.50 13 P P 16 48 48.6 -0.5
comp=Z,16nm,1.0s,baz=228,slow=5.1,SNR=64
ILAR pP **pP 16 50 48.6 +0.8**
comp=Z,4.4nm,0.9s,baz=231,slow=5.4,SNR=5.1
ILAR PP **PP 16 52 33.0 -4.2**
comp=Z,9.5nm,1.0s,baz=225,slow=7.4,SNR=4.8
ILAR PKiKP **PKiKP 16 53 35.9 -0.9**
comp=Z,0.4nm,0.3s,baz=274,slow=2.6,SNR=5.1
ILAR PKKP **PKKPdf 17 06 05.2 -0.9**
comp=Z,0.8nm,0.6s,baz=358,slow=2.9,SNR=9.2
comp=Z,16nm,1.0s
ILAR Eielson Array 91.50 13 P P 16 48 48.5 -0.5
ILAR **pwP 16 50 49.5 -0.6**
CPRX Cap Rock 91.54 55 P P 16 48 50.6 +0.4
S22A 4UR Ranch, Cre 91.58 49 P P 16 48 51.8 +1.3
baz=242,SNR=79
H22K Ishtalitna Cre 91.61 11 P P 16 48 49.7 +0.1
baz=206,SNR=40
M29M Somme Creek 91.64 18 P P 16 48 50.9 +1.0
baz=217,SNR=39
MT09 Talagante 91.65 128 P P 16 48 50.9 +0.1
MT09 lAmb lAmb 16 48 52.6
comp=Z,165nm,1.4s
P33M Teslin, Yukon 91.67 21 P P 16 48 50.8 +0.7
P33M Teslin, Yukon 91.67 21 P P 16 48 50.7 +0.7
baz=222,SNR=12
MSO Missoula 91.67 39 P P 16 48 50.5 0.0
MSO Missoula 91.67 39 P P 16 48 50.9 +0.4
baz=237,SNR=12
POKR Poker Plat Res 91.68 13 P P 16 48 49.4 -0.5
baz=210
N31M Braeburn, Yuko 91.68 19 P P 16 48 50.8 +0.7
N31M Braeburn, Yuko 91.68 19 P P 16 48 50.4 +0.4
baz=220,SNR=13
J25K Salcha River, 91.69 14 P P 16 48 50.2 +0.2
baz=211
REDW Red Top Meadow 91.70 43 P P 16 48 51.6 +0.8
R33M Jennings River 91.71 23 P P 16 48 51.9 +1.6
baz=224,SNR=24
BILL Bilibino 91.73 355 P P 16 48 50.3 +0.2
BILL lAmb lAmb 16 48 52.2
comp=Z,117nm,1.2s
BILL Bilibino 91.73 355 *d i* P **P 16 48 50.6 +0.5**
BILL *i* *PP **pP 16 50 49.2 +1.0**
BILL *e* 16 52 39.7
BILL pmax pmax
comp=Z,115nm,1.2s
FXWY Fox Creek 91.73 43 P P 16 48 51.7 +0.7
FXWY lAmb lAmb 16 48 53.9
comp=Z,195nm,1.6s
O20A White River Ci 91.77 47 P P 16 48 51.9 +0.7
baz=241
MT02 Curacav 91.80 127 P P 16 48 51.6 +0.2
MT02 lAmb lAmb 16 48 53.5
comp=Z,188nm,1.9s
G21K Allakaket 91.81 10 P P 16 48 50.6 +0.2
baz=204,SNR=24
SNOW Snow King Moun 91.81 43 P P 16 48 52.1 +0.7
BO04 La Punta 91.82 128 P P 16 48 51.8 +0.2
BO04 lAmb lAmb 16 48 53.4
comp=Z,137nm,1.6s
H23K Yukon River 91.89 12 P P 16 48 50.1 -0.8
H23K Yukon River 91.89 12 P P 16 48 50.1 -0.8
baz=208
IMW Indian Meadow 91.92 42 P P 16 48 52.5 +0.6
IMW lAmb lAmb 16 48 54.8
comp=Z,187nm,1.4s
MOOW Moose Ponds 91.96 43 P P 16 48 52.2 +0.2
MOOW lAmb lAmb 16 48 54.8
comp=Z,150nm,1.6s
K27K Chicken 91.98 16 P P 16 48 52.0 +0.7
baz=214
JTMT Jette 91.98 38 P P 16 48 51.5 -0.4
LOHW Long Hollow 91.98 43 P P 16 48 52.5 +0.4
LOHW lAmb lAmb 16 48 54.9
comp=Z,239nm,1.6s
LRM Limekiln Ridge 92.00 40 P P 16 48 52.4 +0.2
J26L Joseph Creek 92.01 15 P P 16 48 52.1 +0.6
J26L lAmb lAmb 16 48 53.9
comp=Z,134nm,1.1s
J26L Joseph Creek 92.01 15 P P 16 48 52.3 +0.7
baz=213,SNR=81
VA06 Catapilco 92.02 127 P P 16 48 52.5 +0.1
MT05 Renca 92.02 128 P P 16 48 53.0 +0.6
RDOG Red Dog Mine 92.02 6 P P 16 48 50.5 -0.9
baz=196
LMEL Las Melosas 92.18 128 P P 16 48 53.7 +0.4
YPP Pitchstone Pla 92.19 42 P P 16 48 54.0 +0.8
YHB Horse Butte 92.20 42 P P 16 48 54.0 +0.9
BW06 Boulder Array 92.21 44 P P 16 48 53.3 +0.1
BW06 lAmb lAmb 16 48 55.3
comp=Z,121nm,1.2s
BW06 Boulder Array 92.21 44 P P 16 48 54.0 +0.7
baz=240
PD31 Pinedale Array 92.21 44 P P 16 48 53.3 +0.2
PD31 lAmb lAmb 16 48 55.3
comp=Z,109nm,1.2s
PDAR Pinedale Array 92.21 44 P P 16 48 53.4 +0.2
comp=Z,62nm,1.0s,baz=204,slow=3.3,SNR=168
PDAR pP **pwP 16 50 54.8 +0.4**
comp=Z,9.5nm,1.1s,baz=220,slow=3.9,SNR=6.6
PDAR PP **PP 16 52 42.5 -1.0**
comp=Z,28nm,1.1s,baz=241,slow=6.1,SNR=14
PDAR PKKP **PKKPdf 17 06 05.0 +0.8**
comp=Z,0.5nm,0.6s,baz=94,slow=5.9,SNR=3.7
PDAR SKKPbc SKKPbc 17 08 53.0 -3.1
comp=Z,3.1nm,1.0s,baz=79,slow=3.2,SNR=10
comp=Z,62nm,1.0s
H24K Noodor Dome 92.22 13 P P 16 48 51.5 -0.9
baz=209
YHL Hebgen Lake 92.26 42 P P 16 48 54.8 +1.3
YHL lAmb lAmb 16 48 58.5
comp=Z,110nm,1.3s
L29M L29M 92.27 18 P P 16 48 53.9 +1.2
baz=218,SNR=54
N32M Quiet Lake 92.28 21 P P 16 48 54.4 +1.5
baz=222,SNR=5.7
YMR Madison River 92.30 42 P P 16 48 54.4 +0.8
YMR lAmb lAmb 16 48 56.9
comp=Z,326nm,1.9s
BOZ Bozeman (W) 92.38 41 P P 16 48 54.3 +0.5
BOZ Bozeman (W) 92.38 41 P P 16 48 54.3 +0.5
BOZ pmax pmax
comp=Z,85nm,1.2s
BOZ Bozeman (W) 92.38 41 P P 16 48 54.8 +1.0
baz=239,SNR=58
H17A Grant Village 92.40 42 P P 16 48 55.4 +1.4
H17A Grant Village 92.40 42 P P 16 48 56.4 +2.3
baz=239,SNR=21
YHH Holmes Hill 92.43 42 P P 16 48 55.2 +0.9
YHH lAmb lAmb 16 48 57.7
comp=Z,122nm,1.5s
PRP Porcupine Dome 92.43 14 P P 16 48 53.1 -0.5
PRP **pwP 16 50 54.6 -0.1**
PRP Porcupine Dome 92.43 14 P P 16 48 53.9 +0.3
baz=211,SNR=24
F21K Alatna River 92.46 10 P P 16 48 54.0 +0.5
baz=204,SNR=12
VA03 San Esteban 92.47 127 P P 16 48 54.8 +0.2
G22K Bettles 92.51 11 P P 16 48 54.4 +0.8
baz=206
SDCO Great Sand Dun 92.51 50 P P 16 48 55.3 +0.5
SDCO lAmb lAmb 16 48 57.1
comp=Z,119nm,1.1s
SDCO Great Sand Dun 92.51 50 P P 16 48 55.5 +0.7
baz=242
SDCO Great Sand Dun 92.51 50 P P 16 48 55.8 +1.0
baz=242,SNR=86
G23K Bananza Creek 92.58 11 P P 16 48 54.2 +0.1
baz=207,SNR=16
M31M Drury Creek, Y 92.66 20 P P 16 48 54.6 +0.1
M31M Drury Creek, Y 92.66 20 P P 16 48 55.2 +0.7
baz=221,SNR=9.3
DAWY Dawson 92.69 17 P P 16 48 54.8 +0.2
DAWY Dawson 92.69 17 P P 16 48 55.1 +0.5
baz=217,SNR=25
MSTX Muleshoe 92.78 54 P P 16 48 56.1 +0.2
MSTX lAmb lAmb 16 48 58.1
comp=Z,187nm,1.3s
MSTX Muleshoe 92.78 54 P P 16 48 56.4 +0.5
baz=244
MSTX Muleshoe 92.78 54 P P 16 48 56.5 +0.7
baz=244
I26K Coal Creek Min 92.78 15 P P 16 48 55.2 +0.3
I26K lAmb lAmb 16 48 57.0
comp=Z,94nm,1.4s
I26K Coal Creek Min 92.78 15 P P 16 48 55.1 +0.1
baz=213
EGAK Eagle 92.82 16 P P 16 48 55.3 +0.2
EGAK lAmb lAmb 16 48 57.0
comp=Z,72nm,1.1s
EGAK Eagle 92.82 16 P P 16 48 55.7 +0.5
baz=215,SNR=34
HRY Holter Researc 92.84 40 P P 16 48 56.0 +0.2
WALA Waterton Lakes 92.90 37 P P 16 48 56.4 +0.3
CO02 Combarbal 92.90 126 P P 16 48 57.1 +0.4
F22K John River 92.93 10 P P 16 48 56.1 +0.5
baz=205
833A Chaparral WMA, 92.96 61 P P 16 48 57.0 +0.3
833A Chaparral WMA, 92.96 61 P P 16 48 57.9 +1.2
baz=245,SNR=25
833A Chaparral WMA, 92.96 61 P P 16 48 57.5 +0.9
baz=245
WTLY Watson Lake, Y 92.99 23 P P 16 48 57.4 +1.3
baz=226
FARO Faro, Yukon 93.00 20 P P 16 48 56.2 +0.1
FARO Faro, Yukon 93.00 20 P P 16 48 56.3 +0.2
baz=222,SNR=6.1
T25A Trinidad 93.00 51 P P 16 48 57.1 +0.1
T25A lAmb lAmb 16 48 59.1
comp=Z,106nm,1.2s
T25A Trinidad 93.00 51 P P 16 48 57.5 +0.5
baz=243
COLD Coldfoot 93.02 11 P P 16 48 56.5 +0.5
baz=207
K29M Barlow Dome 93.02 17 P P 16 48 56.7 +0.5
baz=218,SNR=34

G24K	Hadweenzic Riv	93.06	12	P		P	16 48 55.8	-0.5
	baz=210,SNR=5.5							
LZH	Lanzhou	93.18	308	eP		P	16 48 59.3	+1.6
LZH				pP		pP	16 50 57.8	+2.1
LZH				SKS		SKSac	16 58 38.5	-1.6
LZH				pmax		pmax		
	comp=Z,42nm,1.5s							
LZH				pmax		pmax		
	comp=Z,160nm,4.1s							
RWWY	Rawlins	93.21	46	P		P	16 48 57.9	+0.1
RWWY				IAmb		IAmb	16 48 60.0	
	comp=Z,183nm,1.3s							
MAYO	Mayo, Yukon	93.28	18	P		P	16 48 58.1	+0.8
	baz=220							
J29M	Klondike Camp	93.31	17	P		P	16 48 58.1	+0.6
	baz=218							
CO03	El Pedregal	93.32	126	P		P	16 48 58.6	+0.1
CO03				IAmb		IAmb	16 49 00.8	
	comp=Z,144nm,0.9s							
Q24A	Divide	93.32	49	P		P	16 48 59.2	+0.7
Q24A				IAmb		IAmb	16 49 01.0	
	comp=Z,126nm,1.1s							
Q24A	Divide	93.32	49	P		P	16 48 59.6	+1.1
	baz=242,SNR=44							
G25K	Bearman Lake	93.39	13	P		P	16 48 58.2	+0.5
	baz=211							
I27K	Kandik River	93.39	15	P		P	16 48 58.3	+0.5
	baz=215,SNR=12							
LIRD	Liard River Hi	93.51	24	P		P	16 48 59.5	+1.1
	baz=228,SNR=10							
JCT	Junction City	93.55	58	P		P	16 48 59.7	+0.3
JCT				IAmb		IAmb	16 49 01.3	
	comp=Z,134nm,1.2s							
JCT	Junction City	93.55	58	P		P	16 48 59.7	+0.3
JCT				pmax		pmax		
	comp=Z,134nm,1.3s							
JCT	Junction City	93.55	58	P		P	16 48 59.9	+0.5
	baz=245,SNR=22							
JCT	Junction City	93.55	58	P		P	16 48 59.9	+0.5
	baz=245,SNR=22							
GO04	Tololo Observa	93.56	125	P		P	16 48 59.9	+0.1
GO04				IAmb		IAmb	16 49 01.3	
	comp=Z,136nm,1.1s							
RLMT	Red Lodge	93.57	42	P		P	16 49 00.1	+0.8
RLMT	Red Lodge	93.57	42	P		P	16 49 00.5	+1.1
	baz=240,SNR=22							
N23A	Red Feather La	93.67	47	P		P	16 49 00.5	+0.5
N23A				IAmb		IAmb	16 49 02.6	
	comp=Z,116nm,1.4s							
N23A	Red Feather La	93.67	47	P		P	16 49 00.8	+0.8
	baz=242,SNR=22							
F24K	Squaw Lake	93.69	12	P		P	16 48 59.7	+0.5
	baz=209,SNR=6.8							
E23K	Chandalar	93.86	11	P		P	16 49 00.6	+0.6
	baz=208,SNR=9.9							
BRLDA	Berland Lookou	93.92	32	P		P	16 49 01.1	+0.5
BRLDA				IAmb		IAmb	16 49 03.0	
	comp=Z,104nm,1.1s							
H27K	Steamboat Moun	93.93	15	P		P	16 49 00.9	+0.7
	baz=215,SNR=21							
MMPY	Sheldon Lake,	93.95	20	P		P	16 49 01.0	+0.6
	baz=224,SNR=12							
AMTX	Amarillo	93.99	54	P		P	16 49 00.7	-0.7
AMTX				IAmb		IAmb	16 49 03.5	
	comp=Z,95nm,1.4s							
AMTX	Amarillo	93.99	54	P		P	16 49 02.1	+0.8
	baz=244,SNR=7.8							
AMTX	Amarillo	93.99	54	P		P	16 49 01.5	+0.1
	baz=244							
I29M	Ogilvie Camp,	94.01	16	P		P	16 49 00.6	0.0
I29M	Ogilvie Camp,	94.01	16	P		P	16 49 00.2	-0.5
	baz=218,SNR=27							
G26K	Porcupine Rive	94.03	13	P		P	16 49 01.4	+0.8
	baz=213,SNR=19							
E24K	Your Creek	94.07	11	P		P	16 49 01.7	+0.8
	baz=209							
K22A	Casper	94.11	45	P		P	16 49 01.9	+0.1
K22A				IAmb		IAmb	16 49 04.1	
	comp=Z,186nm,1.6s							
K22A	Casper	94.11	45	P		P	16 49 02.6	+0.8
	baz=242,SNR=20							
K22A	Casper	94.11	45	P		P	16 49 02.0	+0.1
	baz=242,SNR=20							
YAK	Yakutsk	94.15	339	P		P	16 49 00.9	-0.3
YAK				IAmb		IAmb	16 49 02.6	
	comp=Z,88nm,1.4s							
YAK	Yakutsk	94.15	339	eP		P	16 49 01.3	+0.1
YAK				eS		SKSac	16 58 43.0	-0.6
YAK				pmax		pmax		
	comp=Z,33nm,0.9s							
YAK				pmax		pmax		
	comp=N,7.0nm,1.1s							
YAK				pmax		pmax		
	comp=E,8.0nm,1.1s							
YAK				smax		smax		
	comp=E,645nm,4.0s							
YAK				smax		smax		
	comp=N,579nm,3.6s							
TGTN	Hyland Airport	94.17	22	P		P	16 49 02.6	+1.1
	baz=226,SNR=17							
PHWY	Pilot Hill	94.19	47	P		P	16 49 02.3	0.0
CO01	Juntas del Tor	94.19	125	P		P	16 49 02.9	+0.2
F25K	Christian Rive	94.19	12	P		P	16 49 02.6	+1.1
	baz=211,SNR=6.5							
BMAR	Burnt Mountain	94.27	13	P		P	16 49 02.3	+0.6
BMAR						pwP	16 51 02.5	-0.6
CCIG	Comitan	94.27	74	P		P	16 49 03.6	+0.5
G27K	Doyon Strip	94.38	14	P		P	16 49 02.9	+0.6
	baz=215,SNR=8.9							
TOLK	Toolik Lake Re	94.39	11	P		P	16 49 02.6	+0.3
TOLK	Toolik Lake Re	94.39	11	P		P	16 49 01.8	-0.4
	baz=208,SNR=6.8							
ZON	Zonda	94.45	127	P		P	16 49 03.7	+0.1
ZON	Zonda	94.45	127	P		P	16 49 03.7	+0.1
ZON				pmax		pmax		
	comp=Z,59nm,1.1s							
735A	Kenedy	94.45	61	P		P	16 49 04.1	+0.6
735A	Kenedy	94.45	61	P		P	16 49 05.5	+2.1
	baz=246,SNR=6.2							
D23K	Nanushuk River	94.49	10	P		P	16 49 03.3	+0.6
	baz=207,SNR=7.0							
ABTX	Abilene, Hawle	94.57	57	P		P	16 49 04.0	0.0
ABTX				pP		pP	16 51 02.3	-0.2
ABTX	Abilene, Hawle	94.57	57	P		P	16 49 05.5	+1.6
	baz=245,SNR=19							
ABTX	Abilene, Hawle	94.57	57	P		P	16 49 04.1	+0.2
	baz=245,SNR=19							
F26K	Sheenjek River	94.58	13	P		P	16 49 04.2	+1.0
	baz=212,SNR=13							
AC05	El Transito	94.62	124	P		P	16 49 05.0	+0.5
E25K	Arctic Village	94.66	12	P		P	16 49 04.2	+0.7
	baz=211,SNR=6.5							
EGMT	Eagleton	94.72	39	P		P	16 49 04.7	+0.4
EGMT				IAmb		IAmb	16 53 02.3	
	comp=Z,160nm,1.4s							
EGMT	Eagleton	94.72	39	P		P	16 49 05.1	+0.8
	baz=240							
KOTAN	Kotaneelee Air	94.76	25	P		P	16 49 04.9	+0.8
	baz=230							
KSCO	Kaye Shedlock'	95.10	50	P		P	16 49 06.9	+0.5
KSCO	Kaye Shedlock'	95.10	50	P		P	16 49 08.1	+1.7
	baz=244,SNR=12							
KSCO	Kaye Shedlock'	95.10	50	P		P	16 49 07.7	+1.4
	baz=244,SNR=12							
EPYK	Eagle Plains	95.21	16	P		P	16 49 06.2	+0.2
EPYK				IAmb		IAmb	16 49 07.8	
	comp=Z,77nm,1.2s							
EPYK	Eagle Plains	95.21	16	P		P	16 49 06.5	+0.5
	baz=219,SNR=18							
C23K	Itkillik River	95.28	10	P		P	16 49 07.2	+1.0
	baz=207							
435B	Jarrell	95.41	59	P		P	16 49 08.3	+0.5
435B				IAmb		IAmb	16 49 10.1	
	comp=Z,141nm,1.4s							
435B	Jarrell	95.41	59	P		P	16 49 08.5	+0.7
	baz=246							
C24K	Franklin Bluff	95.49	10	P		P	16 49 07.8	+0.6
	baz=208							
E27K	Coleen River	95.53	13	P		P	16 49 08.3	+0.9
	baz=215,SNR=7.8							
D25K	Kavik River	95.55	11	P		P	16 49 07.6	+0.1
	baz=211							
LKP	Lekhapani	95.70	297	IAmb		IAmb	16 59 02.3	
	comp=Z,204nm,1.6s							
LKP				eP		SKSac	16 58 43.7	-10
G30M	tAoh Zraii Nji	95.81	16	P		P	16 49 09.2	+0.5
	baz=220,SNR=23							
A21K	Barrow	95.83	7	P		P	16 49 09.5	+0.9
	baz=201							
WHTX	Lake Whitney,	96.00	58	P		P	16 49 10.7	+0.3
WHTX				IAmb		IAmb	16 49 12.6	
	comp=Z,130nm,1.5s							
WHTX	Lake Whitney,	96.00	58	P		P	16 49 11.6	+1.2
	baz=246,SNR=6.8							
WHTX	Lake Whitney,	96.00	58	P		P	16 49 11.2	+0.8
	baz=246,SNR=6.8							
WMOK	Wichita Mounta	96.09	55			P	16 49 10.3	-0.5
WMOK	Wichita Mounta	96.09	55	P		P	16 49 10.3	-0.5
WMOK				pmax		pmax		
	comp=Z,61nm,1.9s							
WMOK	Wichita Mounta	96.09	55	P		P	16 49 10.7	-0.1
	baz=246,SNR=6.0							
WMOK	Wichita Mounta	96.09	55	P		P	16 49 10.7	-0.1
	baz=246,SNR=6.0							
LAO	LASA Array	96.19	42	P		P	16 49 11.8	+0.9
LAO				IAmb		IAmb	16 49 13.9	
	comp=Z,71nm,1.1s							
LAO	LASA Array	96.19	42	P		P	16 49 12.6	+1.6
	baz=242,SNR=8.1							
LAO	LASA Array	96.19	42	P		P	16 49 12.6	+1.6
	baz=242							
C27K	Jago River	96.30	12	P		P	16 49 11.6	+0.8
	baz=213,SNR=7.2							
IMP	Imphal	96.31	294	eP		SKSac	16 58 48.9	-7.9
C26K	Camden Bay	96.32	11	P		P	16 49 11.8	+0.9
	baz=212							
OGNE	Ogallala	96.35	48	P		P	16 49 11.2	-0.6
OGNE				IAmb		IAmb	16 49 14.1	
	comp=Z,125nm,1.3s							
OGNE	Ogallala	96.35	48	P		P	16 49 12.5	+0.7
	baz=245,SNR=7.0							
OGNE	Ogallala	96.35	48	P		P	16 49 12.0	+0.2
	baz=245,SNR=7.0							
RSSD	Black Hills	96.40	45	P		P	16 49 12.0	-0.2
RSSD	Black Hills	96.40	45	P		P	16 49 12.0	-0.2
RSSD				pmax		pmax		
	comp=Z,30nm,1.0s							
RSSD	Black Hills	96.40	45	P		P	16 49 12.6	+0.4
	baz=244,SNR=19							
RSSD	Black Hills	96.40	45	P		P	16 49 12.5	+0.4
	baz=244							
MOKO	MOKOCHONG	96.40	296	IAmb		IAmb	16 59 07.1	
	comp=Z,248nm,1.2s							
MOKO				eP		SKSac	16 58 47.1	-10
ULN	Ulaanbaatar	96.44	320	P		P	16 49 11.9	-0.3
ULN	Ulaanbaatar	96.44	320⇑	eP		P	16 49 12.4	+0.2
ULN				pmax		pmax		
	comp=Z,30nm,4.0s							
ULN	Ulaanbaatar	96.44	320	P		P	16 49 20.3	+8.1
HKT	Hockley	96.47	60	P		P	16 49 12.8	+0.3
HKT				IAmb		IAmb	16 49 15.3	
	comp=Z,117nm,1.6s							
HKT	Hockley	96.47	60	c iP		P	16 49 13.5	+1.1
HKT				pmax		pmax		
	comp=Z,79nm,1.7s							
HKT	Hockley	96.47	60	P		P	16 49 14.1	+1.7
	baz=247							
KOHI	KOHIMA	96.51	295	IAmb		IAmb	16 59 00.6	
	comp=Z,714nm,2.0s							
KOHI				eP		SKSac	16 58 48.9	-9.0
X34A	Smith Ranch, M	96.75	55			P	16 49 14.5	+0.8
X34A				IAmb		IAmb	16 49 16.4	
	comp=Z,107nm,1.5s							
F31M	Tsiigehtchic	96.79	16	P		P	16 49 13.1	+0.1
	baz=222,SNR=17							
SONM	Songino Array	96.81	319	P		P	16 49 14.1	+0.2
	comp=Z,0.8nm,0.5s,baz=124,slow=5.3,SNR=7.0							
SONM				pP		pP	16 51 12.4	+0.3
	comp=Z,0.8nm,0.7s,baz=130,slow=3.4,SNR=2.4							
SONM				PP		PP	16 53 12.5	-5.9
	comp=Z,9.6nm,1.2s,baz=130,slow=4.7,SNR=6.7							
SONM				PKiKP		PKiKP	16 53 47.2	+0.4
	comp=Z,3.1nm,1.0s,baz=110,slow=1.3,SNR=4.7							
SONM				S		SKSac	16 58 58.5	0.0
	comp=Z,0.6nm,0.8s,baz=66,slow=2.9,SNR=3.7							
SONM				PKKPbc		PKKPbc	17 05 54.9	+0.4
	comp=Z,5.4nm,0.7s,baz=274,slow=2.9,SNR=22							
SONM				SKKP			17 08 40.6	
	comp=Z,1.5nm,1.1s,baz=31,slow=1.3,SNR=4.1							
WRGLY	Wrigley	96.97	22	P		P	16 49 14.6	+0.6
	baz=230							
CBKS	Cedar Bluff	97.06	51	P		Pdif	16 49 15.2	+0.2
CBKS				IAmb		IAmb	16 49 17.4	
	comp=Z,106nm,1.4s							
CBKS	Cedar Bluff	97.06	51	P		Pdif	16 49 15.2	+0.2
CBKS				pmax		pmax		
	comp=Z,107nm,1.4s							
CBKS	Cedar Bluff	97.06	51	P		Pdif	16 49 15.9	+0.8
	baz=246,SNR=7.8							
CBKS	Cedar Bluff	97.06	51	P		Pdif	16 49 15.4	+0.4
	baz=246,SNR=7.8							
FNO	Franklin	97.34	55			P	16 49 16.4	+0.1
FNO				IAmb		IAmb	16 49 20.3	
	comp=Z,83nm,1.2s							
ITAN	ITANAGAR	97.38	296	eP		SKSac	16 58 58.8	-3.2
ZIRO	ZIRO	97.41	297	eP		SKSac	16 59 01.7	-0.9
GTA	Gaotai	97.49	310 ⇑	P		P	16 49 18.4	+1.3
GTA				pP		pP	16 51 17.3	+1.8
GTA				S		S	16 59 59.1	+4.1
GTA				pmax		pmax		
	comp=Z,6.0nm,1.3s							
GTA				pmax		pmax		
	comp=Z,130nm,6.9s							
INK	Inuvik	97.49	16	P		Pdif	16 49 15.8	-0.3
INK	Inuvik	97.49	16	P		Pdif	16 49 15.8	-0.3
INK				pmax		pmax		
	comp=Z,31nm,1.1s							
INK	Inuvik	97.49	16	P		P	16 49 16.4	+0.3
	baz=222							
R32A	Long Quarter,	97.63	52	P		P	16 49 18.7	+1.1
	baz=246,SNR=6.0							
TEZP	TEZPUR	97.94	295	IAmb		IAmb	16 59 05.7	
	comp=Z,335nm,2.0s							
TEZP				eP		SKSac	16 59 04.0	-0.8
NATX	Nacogdoches	98.09	59	P		P	16 49 20.6	+0.8
	baz=248							
DGMT	Dagmar	98.21	41	P		P	16 49 21.5	+1.5
	baz=244							
DGMT	Dagmar	98.21	41	P		P	16 49 20.9	+1.0
	baz=244							
SHL	Shillong	98.31	294	eP		SKSac	16 59 05.8	-1.3
JTS	Las Juntas de	98.45	82	ceP		P	16 49 23.1	+1.3
JTS				pmax		pmax		
	comp=Z,43nm,1.2s							
TUL1	Leonard	98.80	55	P		P	16 49 23.4	+0.5
	baz=248							
BGNE	Belgrade	99.21	49	P		Pdif	16 49 25.6	+1.1
	baz=247							
KSU1	Kansas State U	99.41	52	P		Pdif	16 49 25.7	+0.3
	baz=248							
YKA	Yellowknife Ar	99.83	25	P		Pdif	16 49 27.4	+0.7
	comp=Z,8.9nm,1.1s,baz=242,slow=4.8,SNR=17							
YKA				pP		pP	16 51 29.3	+2.8
	comp=Z,2.9nm,0.9s,baz=261,slow=12,SNR=3.5							
YKA				PP		PP	16 53 35.0	-5.6
	comp=Z,5.7nm,1.0s,baz=242,slow=7.5,SNR=6.3							
YKA				PKKPbc		PKKPbc	17 05 44.9	-1.5
	comp=Z,0.9nm,0.5s,baz=33,slow=2.3,SNR=7.4							
	comp=Z,8.9nm,1.1s							
GOMU	GeErMu	99.90	305	P		Pdif	16 49 29.8	+1.7
GOMU				S		S	17 00 21.1	+4.7
DHUB	DHUBRI	100.06	294	eP		SKSac	16 59 14.4	-0.8
PIAT	Ana Tenorio	100.22	96	eP		PP	16 53 45.1	+0.3
CUSE	Cuicocha Este	100.61	94	eP		PP	16 53 48.5	+0.7
TIXI	Tiksi	101.09	345 ⇓	eP		Pdif	16 49 31.5	-0.6
TIXI				pmax		pmax		
	comp=Z,9.0nm,1.4s							
ECSD	EROS Data Cent	101.14	47	Pdif		Pdif	16 49 32.8	-0.2
ECSD	EROS Data Cent	101.14	47	P		Pdif	16 49 33.5	+0.5
	baz=248							
ECSD	EROS Data Cent	101.14	47	P		Pdif	16 49 34.5	+1.5
	baz=248,SNR=8.7							
PALK	Pallekele	101.51	273	PP		PP	16 53 46.1	-7.9
	comp=Z,18nm,0.9s,baz=213,slow=3.4,SNR=5.0							
VBMS	Vicksburg	101.54	60	P		Pdif	16 49 36.0	+0.9
	baz=250							
GCUF	Volcan Galeras	101.95	94	eP		PKiKP	16 53 55.0	-2.5
BBAC	Balboa, Cauca	102.35	93	eP		PKiKP	16 54 00.1	+2.2
TAPN	Taplejung	102.44	294	eP		Pdif	16 49 44.7	+5.1
	comp=Z,8.5nm,0.8s							
TAPN	Taplejung	102.44	294	eP		PKiKP	16 53 55.3	-2.4
	comp=Z,59nm,1.0s							
LPAZ	La Paz	102.49	114	P		Pdif	16 49 42.4	+1.9
	comp=Z,5.2nm,1.0s,baz=231,slow=2.2,SNR=14							
LPAZ				PP		PKiKP	16 53 55.8	-2.7
	comp=Z,3.6nm,1.1s,baz=232,slow=8.6,SNR=3.9							
LPAZ				PKKPbc		PKKPbc	17 05 37.9	-0.5
	comp=Z,2.2nm,0.8s,baz=33,slow=5.1,SNR=4.4							
LPAZ	La Paz	102.49	114	eP		PP	16 54 01.5	0.0
BCIP	Isla Barro Col	102.70	85	eP		PKiKP	16 54 01.4	+3.3
RAMN	Ramite	103.24	294	eP		Pdif	16 49 45.5	+2.4
	comp=Z,8.6nm,0.8s							
RAMN	Ramite	103.24	294	eP		PKiKP	16 53 52.3	-6.8
	comp=Z,32nm,0.8s							
FLOC	Florencia	103.64	94	eP		PP	16 54 09.2	-0.5
JIRN	Jiri	103.81	294	eP		Pdif	16 49 50.3	+4.5
	comp=Z,13nm,0.7s							
PTLC	Puerto Leguiza	103.86	96	eP		PP	16 54 08.9	-2.4
YOTC	Yotoco, Valle	103.95	92	eP		PKiKP	16 54 02.5	+1.9
GARC	Garzon, Huila	104.02	94	eP		PP	16 54 11.1	-1.7
GUN	Gumba	104.16	294	eP		Pdif	16 49 52.0	+4.7
	comp=Z,19nm,0.8s							
PLMC	San Jos del P	104.36	91	eP		PP	16 54 11.1	-3.9
PKI	Pulchoki	104.44	294	eP		Pdif	16 49 52.8	+4.3
	comp=Z,12nm,0.8s							
PKIN	Phulchoki	104.45	294	eP		Pdif	16 49 52.8	+4.3
	comp=Z,13nm,0.7s							
ANIL	Santa Ana	105.01	92	eP		PP	16 54 18.6	-1.4
GKN	Gorkha	105.23	294	eP		Pdif	16 49 55.5	+3.7
	comp=Z,7.8nm,0.5s							
GKN	Gorkha	105.23	294	eP		PP	16 54 14.8	-6.6
	comp=Z,70nm,0.9s							
CPUP	Villa Florida	105.60	128	PP		PP	16 54 22.7	-0.4
	comp=Z,13nm,1.2s,baz=250,slow=7.7,SNR=5.4							
PYUN	Piuthan	106.64	294	eP		Pdif	16 50 01.9	+3.8
	comp=Z,22nm,1.2s							
PCHI	Peechi	106.71	274	eP		PKiKP	16 54 23.9	+18
PCHI				ex		x	16 59 41.8	
PCHI				ex		x	17 08 40.0	
HYBB	Hyderabad (bro	107.10	282	eP		PKiKP	16 54 06.2	0.0
HYBB				eP		PP	16 54 34.5	-0.5
HYBB				ep		pPKiKP	16 56 12.9	+0.7
HYBB				eS		SKiKP	16 56 50.0	-0.3
HYBB				eS		SKSac	16 59 47.2	-0.6
HYBB				eS		SKKSac	17 00 40.4	-1.6
HYBB				IVMs_BB		IVMs_BB	17 04 07.9	
	comp=Z,123nm,6.3s							
V52A	Sevierville	108.13	58	P		PKiKP	16 54 07.9	+0.3
	baz=254							
P49A	Miami Univ. Ec	108.27	54	P		PKiKP	16 54 06.6	-1.1
	baz=254							
CASEE	Lake Jocassee	108.42	59	P		PKiKP	16 54 07.6	-0.6
	baz=254,SNR=5.4							
SIV	San Ignacio	108.49	117	PKiKP		PKiKP	16 54 08.8	-0.1
	comp=Z,2.3nm,0.8s,baz=263,slow=1.9,SNR=7.0							
SIV				PKKPbc		PKKPbc	17 05 19.8	+0.1
	comp=Z,1.5nm,0.6s,baz=72,slow=8.6,SNR=7.5							
SIV				PKKPab		PKKPab	17 05 34.9	-1.4
	comp=Z,2.1nm,0.6s,baz=70,slow=6.1,SNR=6.6							
P52A	Corning	110.23	55	P		PKiKP	16 54 10.2	-1.2
	baz=256							
BLA	Blacksburg	110.95	57	P		PKiKP	16 54 11.5	-1.5
	baz=256							
Q54A	Coxs Mills	111.06	56	P		PKiKP	16 54 12.6	-0.4
	baz=256							
Q54A				P		PKiKP	16 54 12.6	-0.4
	baz=256							
O53A	New Philadelph	111.06	54	P		PKiKP	16 54 12.0	-1.0
	baz=257							
R55A	Marlinton	111.44	56	P		PKiKP	16 54 13.7	-0.1
	baz=257							
R55A				P		PKiKP	16 54 13.7	-0.1
	baz=257							
ZALV	Zalesovo Beam	111.65	321	PKiKP		PKiKP	16 54 12.9	-0.7
	comp=Z,5.4nm,0.6s,baz=144,slow=1.0,SNR=20							
ZALV				PP		PP	16 55 09.1	+2.6
	comp=Z,3.9nm,0.8s,baz=101,slow=6.4,SNR=4.9							
ZALV				PKKPbc		PKKPbc	17 05 10.1	-0.2
	comp=Z,2.1nm,0.7s,baz=272,slow=4.0,SNR=5.4							
ZALV				PKKPab		PKKPab	17 05 20.6	+1.6
	comp=Z,2.6nm,1.0s,baz=255,slow=4.5,SNR=4.6							
O54A	Avella	111.67	54	P		PKiKP	16 54 14.3	+0.2
	baz=257							
O54A				P		PKiKP	16 54 14.3	+0.2
	baz=257							
POO	Poona	111.69	281	ex		PKiKP	16 54 25.0	+10
T57A	Hurt	111.81	58	P		PKiKP	16 54 14.4	-0.1
	baz=257							
T57A				P		PKiKP	16 54 14.4	-0.1
	baz=257							
MK31	Makanchi Array	111.92	313	c iPKIKP		PKiKP	16 54 13.6	-0.9
MKAR	Makanchi Array	111.92	313	Pdiff		Pdif	16 50 23.1	+2.1
	comp=Z,0.6nm,0.6s,baz=88,slow=6.3,SNR=5.3							
MKAR				PKiKP		PKiKP	16 54 13.7	-0.8
	comp=Z,7.0nm,0.6s,baz=216,slow=1.3,SNR=52							
MKAR				PP		PP	16 55 07.0	-1.7
	comp=Z,3.2nm,0.9s,baz=116,slow=5.8,SNR=2.5							
MKAR				PKKPbc		PKKPbc	17 05 08.5	-0.7
	comp=Z,9.9nm,1.0s,baz=321,slow=0.7,SNR=8.2							
MKAR				PKKPab		PKKPab	17 05 19.6	+1.4
	comp=Z,15nm,1.0s,baz=261,slow=4.0,SNR=6.6							
MKAR				SKKPbc		SKKPbc	17 07 59.5	-3.8
	comp=Z,8.2nm,1.1s,baz=270,slow=3.5,SNR=9.1							
MAKZ	Makanchi	112.13	313	PKIKP		PKiKP	16 54 12.5	-2.4
NRIK	Noril'sk	112.57	337	PKiKP		PKiKP	16 54 15.5	+0.5
	comp=Z,3.9nm,0.7s,baz=123,slow=2.8,SNR=8.1							
NRIK				PKKPab		PKKPab	17 05 16.6	+2.0
	comp=Z,2.7nm,0.6s,baz=12,slow=3.1,SNR=3.7							
NRIK	Noril'sk	112.57	337 ⇓	iPKIKP		PKiKP	16 54 14.9	-0.1
T59A	Double "B" Far	113.13	58	P		PKiKP	16 54 17.2	+0.2
	baz=258							
T59A				P		PKiKP	16 54 17.2	+0.2
	baz=258							
SHLS	Shalkode	113.20	309	i PKIKP		PKiKP	16 54 15.7	-1.4
SHLS	Shalkode	113.20	309	ePKiKP		PKiKP	16 54 15.8	-1.4
	baz=309							
PDGK	Podgornoye	113.21	309	PKIKP		PKiKP	16 54 15.9	-1.3
SSPA	Standing Stone	113.62	54

L59A	Walton	116.00	53			PKPdf	16 54 21.9	-0.5
BRNJ	Basking Ridge	116.12	55			PKPdf	16 54 22.4	-0.2
ODNJ	Ogdensburg	116.15	54			PKPdf	16 54 22.6	-0.1
KBK	Karagaybulak	116.39	307		P	PKPdf	16 54 23.2	-0.2
	SNR=5.8							
TRNY	Table Rock, Ra	116.45	54			PKPdf	16 54 23.0	-0.3
J59A	Piesco	116.57	52			PKPdf	16 54 23.1	-0.5
J59A	Piesco	116.57	52		P	PKPdf	16 54 23.0	-0.5
	baz=262,SNR=5.7							
J59A					P	PKPdf	16 54 23.0	-0.5
	baz=262,SNR=5.7							
CHMS	Chumysh	116.58	308		P	PKPdf	16 54 23.2	-0.3
	SNR=8.5							
UCH	Uchtor	116.64	307		P	PKiKP	16 54 24.5	+0.2
	SNR=10							
BRNY	Black Rk. Fore	116.64	54		P	PKPdf	16 54 23.4	-0.3
	baz=262							
PAL	Palisades	116.66	55			PKPdf	16 54 23.4	-0.3
PAL	Palisades	116.66	55	PKIKP		PKPdf	16 54 23.4	-0.3
PAL	Palisades	116.66	55		P	PKiKP	16 54 24.1	+0.4
	baz=261							
PAL	Palisades	116.66	55		P	PKPdf	16 54 22.6	-1.1
	baz=261							
LONY	Lake Ozonia	116.67	50			PKPdf	16 54 23.1	-0.5
LONY	Lake Ozonia	116.67	50		P	PKPdf	16 54 22.7	-0.9
	baz=263							
AAK	Ala-Archa	116.71	307	PKP		PKPdf	16 54 23.7	-0.3
	comp=Z,4.7nm,0.6s,baz=148,slow=6.4,SNR=12							
AAK				PKKPbc		PKKPbc	17 04 53.4	+0.3
	comp=Z,30nm,0.9s,baz=234,slow=3.5,SNR=34							
AAK				SKKPbc		SKKPbc	17 07 45.6	-3.0
	comp=Z,9.4nm,1.1s,baz=183,slow=5.3,SNR=6.1							
AAK	Ala-Archa	116.71	307			PKPdf	16 54 23.1	-0.8
AAK	Ala-Archa	116.71	307	*c* PKIKP		PKiKP	16 54 24.7	+0.7
SGDS	Sogindy	116.73	308	*e*PKIKP		PKPdf	16 54 23.1	-0.8
SGDS	Sogindy	116.73	308	*e*PKP		PKPdf	16 54 23.1	-0.8
	baz=308							
USP	Ospenovka	116.80	308		P	PKPdf	16 54 23.7	-0.3
	SNR=6.7							
NCB	Newcomb	116.84	51			PKPdf	16 54 23.5	-0.5
NCB	Newcomb	116.84	51		P	PKPdf	16 54 23.9	-0.1
	baz=263,SNR=5.5							
TRY	Troy	117.08	53			PKPdf	16 54 24.3	-0.1
ACCN	Adirondack Com	117.17	52			PKPdf	16 54 23.9	-0.7
AML	Almayashu	117.23	307		P	PKiKP	16 54 25.4	+0.1
	SNR=8.9							
EKS2	Erkin-Say	117.24	307		P	PKiKP	16 54 25.2	+0.3
	SNR=5.8							
BTLS	Baital	117.34	310	*e*PKIKP		PKPdf	16 54 24.0	-0.8
BTLS	Baital	117.34	310	*e*PKP		PKPdf	16 54 24.1	-0.8
	baz=310							
L61B	Northampton	117.77	53			PKPdf	16 54 25.2	-0.6
L61B	Northampton	117.77	53		P	PKiKP	16 54 25.9	+0.1
	baz=263,SNR=7.4							
L61B	Northampton	117.77	53		P	PKPdf	16 54 24.9	-0.9
	baz=263							
J61A	Chester	117.97	52		P	PKiKP	16 54 26.2	0.0
	baz=263,SNR=6.3							
J61A					P	PKiKP	16 54 26.2	0.0
	baz=263,SNR=6.3							
OPO	Ambohidratompo	117.99	232	PKP		PKiKP	16 54 27.6	+0.3
	comp=Z,6.9nm,0.6s,baz=64,slow=1.3,SNR=15							
OPO				PP		PP	16 55 49.8	-0.7
	comp=Z,22nm,1.2s,baz=116,slow=9.3,SNR=9.4							
HNH	Hanover	118.20	52		P	PKPdf	16 54 26.6	0.0
	baz=264							
SJG	San Juan	118.22	81			PKPdf	16 54 26.4	-0.9
SJG	San Juan	118.22	81	PKIKP		PKPdf	16 54 26.4	-0.9
HUMP	Col San Antoni	118.51	81			PKPdf	16 54 26.8	-1.1
LBNH	Lisbon	118.52	51		P	PKiKP	16 54 27.4	+0.1
	baz=264							
LBNH	Lisbon	118.52	51		P	PKPdf	16 54 26.2	-0.9
	baz=264							
BRYW	Bryant College	118.55	54			PKPdf	16 54 26.6	-0.7
HRV	Adam Dziewonsk	118.60	53		P	PKPdf	16 54 26.5	-0.9
	baz=264							
BRZS	Berezniki	118.66	315	*e*PKIKP		PKPdf	16 54 25.8	-1.5
BRZS	Berezniki	118.66	315	*e*PKP		PKPdf	16 54 25.9	-1.5
	baz=315							
OTUK	Ortayu	118.79	313	PKIKP		PKPdf	16 54 26.9	-0.7
BDFB	Brasilia	118.98	125	PKP		PKiKP	16 54 29.2	+0.1
	comp=Z,14nm,0.6s,baz=114,slow=0.3,SNR=19							
BDFB				PKKPbc		PKKPbc	17 04 46.5	+1.5
	comp=Z,3.3nm,0.6s,baz=94,slow=3.8,SNR=4.3							
BDFB	Brasilia	118.98	125			PKPdf	16 54 28.1	-1.0
H62A	Milan	119.10	51		P	PKiKP	16 54 28.6	+0.3
	baz=265,SNR=5.5							
H62A					P	PKiKP	16 54 28.6	+0.3
	baz=265,SNR=5.5							
I63A	Otisfield	119.46	51			PKPdf	16 54 28.8	-0.2
I63A	Otisfield	119.46	51		P	PKiKP	16 54 29.5	+0.4
	baz=265,SNR=6.7							
I63A					P	PKiKP	16 54 29.5	+0.4
	baz=265,SNR=6.7							
G62A	West of Eustis	119.59	50		P	PKiKP	16 54 29.4	+0.1
	baz=266,SNR=6.5							
G62A					P	PKiKP	16 54 29.4	+0.1
	baz=266,SNR=6.5							
KK31	Karatay Array	119.67	307			PKPdf	16 54 28.8	-0.7
KK31	Karatay Array	119.67	307	PKIKP		PKPdf	16 54 28.8	-0.7
KKAR	Karatay Array	119.67	307			PKPdf	16 54 28.9	-0.6
KKAR	Karatay Array	119.67	307			PKPdf	16 54 28.8	-0.6
KKAR	Karatay Array	119.67	307	PKIKP		PKPdf	16 54 28.9	-0.6
IUG	Iuzhnay	119.94	306	*e*PKIKP		PKPdf	16 54 29.5	-0.6
IUG	Iuzhnay	119.94	306	*e*PKP		PKPdf	16 54 29.5	-0.6
	baz=306							
F62A	Pittston Farm,	120.03	49		P	PKiKP	16 54 30.3	+0.2
	baz=267,SNR=5.6							
F62A					P	PKiKP	16 54 30.3	+0.2
	baz=267,SNR=5.6							
BVAR	Borovoye Array	120.16	319	PKKPbc		PKKPbc	17 04 41.6	+0.7
	comp=Z,1.7nm,0.5s,baz=262,slow=4.5,SNR=11							
BRVK	Borovoye	120.22	319			PKPdf	16 54 29.6	-0.6
BRVK	Borovoye	120.22	319	*d* PKIKP		PKPdf	16 54 30.0	-0.2
E62A	Clayton Lake	120.38	49			PKPdf	16 54 30.6	-0.1
E62A	Clayton Lake	120.38	49		P	PKPdf	16 54 30.6	-0.1
	baz=267,SNR=10							
E62A					P	PKPdf	16 54 30.6	-0.1
	baz=267,SNR=10							
PKME	Peaks-Kenny Pk	120.47	50			PKPdf	16 54 30.9	0.0
PKME	Peaks-Kenny Pk	120.47	50		P	PKPdf	16 54 30.7	-0.2
	baz=267,SNR=9.0							
PKME	Peaks-Kenny Pk	120.47	50		P	PKPdf	16 54 30.2	-0.7
	baz=267							
F63A	Nahmakanta, Br	120.63	50			PKPdf	16 54 31.0	-0.3
F63A	Nahmakanta, Br	120.63	50		P	PKPdf	16 54 30.9	-0.3
	baz=267,SNR=9.2							
F63A					P	PKPdf	16 54 30.9	-0.3
	baz=267,SNR=9.2							
D62A	Allapoint, All	120.72	48		P	PKPdf	16 54 30.8	-0.5
	baz=268,SNR=7.9							
D62A					P	PKPdf	16 54 30.8	-0.5
	baz=268,SNR=7.9							
POGA	Pongola	121.08	213			PKPdf	16 54 32.4	-0.4
E63A	Oxbow	121.13	49		P	PKPdf	16 54 31.9	-0.2
	baz=268,SNR=5.2							
E63A					P	PKPdf	16 54 31.9	-0.2
	baz=268,SNR=5.2							
SUR	Sutherland	121.14	200			PKPdf	16 54 32.6	-0.3
NOR	Nord	121.31	3	*i* P		PKPdf	16 54 31.5	-0.1
FDF	Fort de France	121.76	87			PKPdf	16 54 34.0	-0.3
FDF	Fort de France	121.76	87	PKIKP		PKPdf	16 54 34.0	-0.3
UPNV	Upernavik	121.91	17	*i* P		PKPdf	16 54 32.2	-0.7
SCHQ	Schefferville	121.98	39	PKP		PKPdf	16 54 32.8	-0.7
	comp=Z,35nm,1.0s,baz=322,slow=2.1,SNR=10							
SCHQ				PP		PP	16 56 14.7	-2.6
	comp=Z,20nm,1.2s,baz=290,slow=4.9,SNR=5.4							
SCHQ				SKP			16 57 17.6	
	comp=Z,19nm,1.0s,baz=208,slow=3.3,SNR=5.1							
SCHQ	Schefferville	121.98	39			PKPdf	16 54 33.2	-0.3
BATG	Bathurst New B	122.77	48			PKPdf	16 54 35.0	-0.3
BOSA	Boshof	122.93	206	PKP		PKiKP	16 54 37.2	+0.5
	comp=Z,10nm,0.7s,baz=222,slow=2.7,SNR=7.4							
BOSA				SKP			16 57 21.4	
	comp=Z,14nm,1.1s,baz=171,slow=4.4,SNR=3.9							
BOSA				PKKPbc		PKKPbc	17 04 29.8	-1.5
	comp=Z,6.7nm,0.8s,baz=325,slow=5.7,SNR=9.7							
NUUG	Nuugaatsiaq	123.28	18	*i* P		PKPdf	16 54 34.2	-1.3
KBS	Kingsbay	124.13	357	*e*PKPdf		PKiKP	16 54 38.2	+0.9
KBS	Kingsbay	124.13	357	*i* P		PKiKP	16 54 37.6	+0.3
HAL	Halifax	124.50	51			PKPdf	16 54 38.5	-0.1
HAL	Halifax	124.50	51	PKIKP		PKPdf	16 54 38.5	-0.1
SPA0	Spitsbergen Ar	124.62	356	*e*PKPdf		PKiKP	16 54 38.4	0.0
SPITS	Spitsbergen Ar	124.62	356	PKIKP		PKiKP	16 54 38.3	0.0
SPB2	Spitsbergen Ar	124.62	356			PKiKP	16 54 38.5	+0.1
ILULI	Ilulissat	125.02	20	*i* P		PKPdf	16 54 37.8	-1.1
HRA	Herat	125.29	296			PKPdf	16 54 39.7	-1.1
SVE	Sverdlovsk	125.36	324	*e*PKIKP		PKPdf	16 54 39.8	-0.1
SVE				pmax		pmax		
	comp=Z,55nm,1.2s							
DAG	Danmarks Havn	125.76	5	*i* P		PKPdf	16 54 39.0	-1.1
LBTB	Lobatse	125.94	209			PKiKP	16 54 42.5	-0.2
LBTB	Lobatse	125.94	209	PKIKP		PKiKP	16 54 42.5	-0.2
MDP	Montagnes des	126.02	101	PKP		PKPdf	16 54 42.7	+0.3
	comp=Z,34nm,0.8s,baz=262,slow=3.1,SNR=23							
SFJD	Kangerlussuaq	126.24	22	*i* P		PKPdf	16 54 40.2	-1.0
SUMG	Summit	126.34	14	*i* P		PKPdf	16 54 42.0	+0.1
ARU	Arti	126.56	324			PKPdf	16 54 42.2	0.0
ARU	Arti	126.56	324	*i* PKIKP		PKPdf	16 54 41.7	-0.5
ARU							16 56 47.1	
ARU				PPP		PPP	16 59 34.5	
ARU							17 01 00.3	
ARU				SP		SP	17 05 51.6	-5.3
WSAR	Wadi Sarin	126.65	282	PKP		PKPdf	16 54 43.3	-0.1
	comp=Z,2.8nm,0.7s,baz=156,slow=5.3,SNR=5.7							
AB31	Akbulak array	126.96	315	*i* PKIKP		PKPdf	16 54 43.3	+0.1
ABKAR	Akbulak array	126.96	315			PKPdf	16 54 42.5	-0.6
NUUK	Nuuk	127.09	26	*i* P		PKPdf	16 54 43.0	+0.1
BSY	Bisya	127.83	281	P		SKPbc	16 57 16.0	
JASK	Jask - Hormozg	127.85	285	P		SKPbc	16 57 15.5	
HOQ	Hoqain	127.91	282	P		SKPbc	16 57 16.2	
DY2G	Dye2	128.00	22	*i* P		PKPdf	16 54 43.5	-1.5
AKTO	Aktyubinsk	128.03	317	PKIKP		PKPdf	16 54 45.2	0.0
DRLN	Deer Lake	128.32	45			PKPdf	16 54 45.5	-0.3
MATP	Matopo	128.44	215	PKP		PKPdf	16 54 47.5	+0.4
	comp=Z,12nm,0.6s,baz=178,slow=1.6,SNR=12							
MATP				SKPbc		SKPbc	16 57 17.4	
	comp=Z,105nm,1.0s,baz=152,slow=4.5,SNR=35							
ICESG	Greenland Ices	128.44	17	*i* P		PKPdf	16 54 43.5	-2.4
ARQ	Araqi	128.56	282	P		SKPbc	16 57 17.0	
	SNR=7.0							
DMTO	DMTO	128.64	274	P		SKPbc	16 57 19.8	
	SNR=12							
GEYT	Alibeck	128.84	301	PKhKP		PKPpre	16 54 34.5	
	comp=Z,1.6nm,0.6s,baz=224,slow=6.2,SNR=4.9							
GEYT				PKP		PKiKP	16 54 47.9	-0.1
	comp=Z,14nm,0.7s,baz=215,slow=1.8,SNR=31							
GEYT				pPKP		pPKPdf	16 56 55.3	+2.3
	comp=Z,16nm,1.1s,baz=352,slow=2.1,SNR=5.3							
GEYT				SKPbc		SKPbc	16 57 19.2	
	comp=Z,101nm,1.2s,baz=48,slow=2.2,SNR=22							
GEYT	Alibeck	128.84	301			PKPdf	16 54 47.5	+0.3
GYA0B	ALIBECK ARRAY	128.84	301			PKPdf	16 54 47.1	-0.1
UOSS	Minazif	129.16	284			PKPdf	16 54 47.3	-0.9
UOSS	Minazif	129.16	284	P		SKPbc	16 57 18.6	-0.5
UOSS	Minazif	129.16	284	PKPdf		PKPdf	16 54 47.3	-0.9
HATD	Hatta, Dubai	129.21	284	P		SKPbc	16 57 20.1	+0.8
	SNR=6.7							
HATD	Hatta, Dubai	129.21	284	*i* PKiKP		PKPdf	16 54 48.4	+0.2
	SNR=6.8							
ASHO	Ashiyiah	129.25	283	P		SKPbc	16 57 19.8	+0.3
	SNR=6.8							
ASHO	Ashiyiah	129.25	283	*i* PKiKP		PKPdf	16 54 48.6	+0.2
	SNR=6.5							
BANOM	Banah	129.25	285	P		SKPbc	16 57 20.0	+0.5
	SNR=17							
RBK	Rabkut	129.27	274	P		SKPbc	16 57 20.1	+0.4
MSFE	Esma-Masafi	129.28	284	*i* PKiKP		PKPdf	16 54 48.6	+0.2
	SNR=6.0							
MASF	Masafi	129.28	284	P		SKPbc	16 57 19.8	+0.2
	SNR=12							
ALNE	Al Ain	129.40	283	P		SKPbc	16 57 20.5	+0.5
ALNE	Al Ain	129.40	283	PKPdf		PKPdf	16 54 48.7	+0.1
SHME	Shamm	129.41	285	P		SKPbc	16 57 20.6	+0.6
	SNR=12							
SHME	Shamm	129.41	285	PKiKP		PKPdf	16 54 49.0	+0.4
DOK	Doka	129.63	275	P		SKPbc	16 57 21.5	+0.5
NAZ	Nazwa, Dubai	129.66	284	P		SKPbc	16 57 21.4	+0.5
	SNR=12							
UMZA	Um Al Zommool	129.66	281	P		SKPbc	16 57 20.7	-0.3
FAQ	Al Faqa, Dubai	129.67	283	P		SKPbc	16 57 20.9	-0.1
	SNR=15							
FAQ	Al Faqa, Dubai	129.67	283	*i* PKPdf		PKPdf	16 54 48.5	-0.6
	SNR=6.2							
UMQ	Umm Al-Quwin	129.75	284	P		SKPbc	16 57 22.6	+1.4
	SNR=5.1							
WHFO	Wadi Hawf	129.78	274	P		SKPbc	16 57 22.6	+1.0
IVI	Ivigtut	129.87	28	*i* P		PKPdf	16 54 46.9	-1.4
ASUD	Al Ashush, Dub	129.89	283	P		SKPbc	16 57 22.2	+0.5
	SNR=12							
ASUD	Al Ashush, Dub	129.89	283	PKiKP		PKiKP	16 54 50.0	-0.4
ABTO	Aybut	130.06	273	P		SKPbc	16 57 23.6	+1.0
AJN	Ajban	130.18	283	P		SKPbc	16 57 23.4	+0.6
	SNR=11							
KIRV	Kirov	130.57	329	*d* PKIKP		PKPdf	16 54 50.2	+0.5
LVZ	Lovozero	130.69	344	⇑*e*PKIKP		PKPdf	16 54 49.1	-0.7
HAMF	Hammerfest	130.77	350	*e*PKPdf		PKPdf	16 54 49.8	0.0
PRGR	Permogore	130.88	333	*e*PKIKP		PKPdf	16 54 48.3	-1.9
PRGR				*e*			16 57 22.1	
PRGR				pmax		pmax		
	comp=Z,24nm,0.8s							
KEV	Kevo	130.95	348	PKPdf		PKPdf	16 54 50.4	+0.3
KEV	Kevo	130.95	348	PKIKP		PKPdf	16 54 50.4	+0.3
MZWR	Madinat Zayed	131.03	282	P		SKPbc	16 57 26.4	+0.4
NRS	Narsarsuaq	131.07	27	*i* P		PKPdf	16 54 50.2	-0.3
MZR	Muzera	131.24	281	P		SKPbc	16 57 27.7	+1.0
	SNR=28							
MZR	Muzera	131.24	281	*i* PKiKP		PKiKP	16 54 52.7	-0.5
	SNR=8.7							
ARA0	ARCESS Array S	131.41	348	*e*PKPdf		PKPdf	16 54 51.5	+0.4
ARCES	ARCESS Array B	131.41	348	PKhKP		PKPpre	16 54 39.3	
	comp=Z,0.9nm,0.4s,baz=40,slow=2.1,SNR=6.1							
ARCES				PKP		PKPdf	16 54 50.3	-0.8
	comp=Z,17nm,0.6s,baz=48,slow=1.8,SNR=41							
ARCES				pPKP		pPKPdf	16 56 59.0	+1.8
	comp=Z,4.4nm,0.9s,baz=28,slow=4.1,SNR=2.4							
ARCES				SKPbc		SKPab	16 57 27.0	0.0
	comp=Z,44nm,0.9s,baz=41,slow=3.9,SNR=22							
ARCES				PKKP		PKKPdf	17 04 47.7	-2.8
	comp=Z,1.3nm,0.7s,baz=222,slow=1.6,SNR=4.2							
ARCES	ARCESS Array B	131.41	348	PKPdf		PKPdf	16 54 51.3	+0.2
ARCES	ARCESS Array B	131.41	348	PKIKP		PKPdf	16 54 51.3	+0.2
GHWR	Ruwais	131.97	282	P		SKPbc	16 57 30.3	+1.0
JRN	Qarnain Island	132.16	283	P		SKPbc	16 57 31.1	+1.3
	SNR=6.5							
KTK1	Kautokeino	132.28	349	*e*		PKPpre	16 54 43.3	
KTK1				*e*PKPdf		PKPdf	16 54 52.5	-0.2
TRO	Tromso	132.40	351	*e*PKPdf		PKPdf	16 54 53.1	+0.2
LSZ	Lusaka	132.81	218	PKP		PKiKP	16 54 57.0	+0.3
	comp=Z,8.6nm,0.5s,baz=124,slow=1.5,SNR=11							
LSZ				SKPbc		SKPbc	16 57 33.4	+0.9
	comp=Z,51nm,1.0s,baz=173,slow=1.5,SNR=19							
SLWR	Sila	133.05	282	P		SKPbc	16 57 33.8	+0.9
KLMR	Klimovskoe	133.78	335	*e*PKIKP		PKPdf	16 54 49.5	-6.2
KLMR				*e*			16 57 33.5	
KLMR				pmax		pmax		
	comp=Z,58nm,1.4s							
KLMR	Klimovskoe	133.78	335	*e*PKPdf		PKPdf	16 54 49.6	-6.2
KLMR				AMP			16 54 58.7	
	comp=Z,58nm,1.4s							
KLMR				*e*PP		PP	16 57 33.5	+0.4
BELG	Belogornoye	133.84	321	*ce*PKIKP		PKPdf	16 54 55.9	-0.2
SMRA	Abu-Samra	133.94	282	P		SKPbc	16 57 36.4	+0.6
SHMA	Al-Shehemyia	133.99	284	P		SKPbc	16 57 37.6	+1.7
RCBR	Riachuelo	134.35	125	PKP		PKPdf	16 54 57.8	-0.5
	comp=Z,28nm,1.0s,baz=0.6,slow=4.0,SNR=6.2							
RCBR				SKPbc		SKPbc	16 57 36.6	-0.9
	comp=Z,140nm,1.0s,baz=348,slow=3.4,SNR=24							
SAKB	Bahrain	134.38	284	P		SKPbc	16 57 39.0	+1.9
STEI	Steigen	134.48	352	*e*		PKPpre	16 54 46.9	
STEI				*e*PKPdf		PKPdf	16 54 57.1	+0.3
LOF	Lofoten	134.49	353	*e*PKPdf		PKPdf	16 54 57.4	+0.5
LOF				*e*PP		PP	16 57 36.4	-0.8
FAUS	Fauske	134.99	352	*e*		PKPpre	16 54 48.3	
FAUS				*e*PKPdf		PKPdf	16 54 58.5	+0.7
FAUS				*e*PP		PP	16 57 38.7	-1.6
KONS	Konsvik	136.11	353	*e*PKPdf		PKiKP	16 55 01.2	-0.5
KONS				*e*SKPdf		SKPbc	16 57 41.8	+0.6
MOR8	Moi Rana	136.25	352	*e*		PKPpre	16 54 52.0	
MOR8				*e*PKPdf		PKPdf	16 55 00.1	-0.2
MAK	Makhachkala	136.48	308	*i* P		Pdif	16 52 08.4	-1.7
MAK				*i*			16 55 02.6	
MAK				*e*			16 57 09.3	
MAK				*e*			16 57 50.1	
MAK				*e*			17 01 22.6	
MAK				*e*SS		SS	17 15 12.8	+2.2
MAK				*e*SSS		SSS	17 20 26.2	
MAK				pmax		pmax		
	comp=Z,303nm,1.3s							
KMBO	Kilima Mbogo	136.48	241	SKP			16 57 46.9	
	comp=Z,2.5nm,1.0s,baz=135,slow=19,SNR=33							
KMBO	Kilima Mbogo	136.48	241			PKPdf	16 55 01.7	-0.8
KMBO	Kilima Mbogo	136.48	241	PKIKP		PKPdf	16 55 01.7	-0.8
KMBO	Kilima Mbogo	136.48	241	*e*P		SKPbc	16 57 36.4	-8.0
MOS	Moscow	137.56	329	*e*PKIKP		PKPdf	16 55 01.9	-1.0
MOS				*e*			16 57 53.5	
MOS				*e*			17 01 22.5	
MOS				pmax		pmax		
	comp=Z,104nm,1.3s							
VRH	Novokhopyorsk	137.68	322	*e*PKIKP		PKPdf	16 55 03.0	-0.2
VRH				pmax		pmax		
	comp=Z,40nm,0.6s							
ATD	Arta Tunnel	137.77	261	*e*P		SKPbc	16 57 39.0	-8.7
FIA1	FINESS Array S	138.01	342	PKPdf		PKPdf	16 55 04.2	+0.6
FINES	FINESS Array B	138.01	342	PKhKP		PKPpre	16 54 52.3	
	comp=Z,2.3nm,0.3s,baz=33,slow=4.4,SNR=21							
FINES				PKP		PKPdf	16 55 03.9	+0.3
	comp=Z,14nm,0.6s,baz=74,slow=2.5,SNR=12							
FINES				SKPbc		SKPbc	16 57 45.8	-1.0
	comp=Z,34nm,0.8s,baz=64,slow=4.4,SNR=18							
NSS	Namsos	138.14	352	*e*		PKPpre	16 54 54.6	
OBN	Obninsk	138.41	329			PKPdf	16 55 04.3	-0.1
OBN	Obninsk	138.41	329	*de*PKIKP		PKPdf	16 55 04.6	+0.2
OBN				*i* SS		SS	17 15 33.1	+1.2
OBN				pmax		pmax		
	comp=Z,110nm,1.6s							
RAYN	Ar Rayn	138.55	280	⇑PKHKP		PKPpre	16 54 57.6	
LPSR	Galich'ya Gora	138.57	325	*e*PKIKP		PKPdf	16 55 02.0	-2.8
LPSR				pmax		pmax		
	comp=Z,40nm,1.4s							
VORR	Voronezh	138.87	323	*e*PKIKP		PKPdf	16 55 03.2	-2.2
VORR				pmax		pmax		
	comp=Z,75nm,1.6s							
GNI	Garni	139.04	305	PKP		PKPdf	16 55 06.2	-0.2
	comp=Z,12nm,0.7s,baz=0.0,slow=4.0,SNR=4.1							
GNI				SKPbc		SKiKP	16 57 52.6	-1.0
	comp=Z,94nm,1.4s,baz=168,slow=4.2,SNR=9.0							
GNI	Garni	139.04	305			PKPdf	16 55 06.5	+0.1
GNI	Garni	139.04	305	*c* PKIKP		PKPdf	16 55 07.1	+0.7
ZEI	Tsey	139.10	309	*i* PKIKP		PKPdf	16 55 07.1	+0.7
ZEI				pmax		pmax		
	comp=Z,15nm,1.1s							
ONI	Oni	139.47	309			PKPdf	16 55 06.6	-0.4
ONI	Oni	139.47	309	PKIKP		PKPdf	16 55 06.6	-0.4
KBZ	Khabaz	139.56	311	PKhKP		PKPpre	16 55 01.2	
	comp=Z,1.6nm,0.6s,baz=140,slow=8.2,SNR=5.6							
KBZ				SKPbc		SKPbc	16 57 52.8	+1.2
	comp=Z,6.4nm,1.0s,baz=123,slow=2.6,SNR=6.7							
KBZ	Khabaz	139.56	311	*ce*PKIKP		PKPdf	16 55 07.1	+0.2
KIV	Kislovodsk	139.65	311	*e*PKIKP		PKPdf	16 55 04.9	-2.3
KIV				*e*			16 58 08.1	
KIV				*e*SS		SS	17 15 43.2	-4.5
KIV				pmax		pmax		
	comp=Z,12nm,1.1s							
ANKE	Ethiopia-Afar	139.81	257	*e*P		SKPbc	16 57 19.2	-35
VSU	Vasula	140.15	338	⇑*e*PKIKP		PKiKP	16 55 09.7	-0.5
VSU	Vasula	140.15	338	*e*P		PKPpre	16 55 01.9	
AAE	Adis Abeba	140.43	255	*e*P		SKPbc	16 57 15.1	-40
FURI	Furi	140.45	255	*e*P		SKPbc	16 57 15.3	-40
LODK

BZK	Bozkurt	146.32	312	PKPdf	PKPdf	16 55 19.0	+0.2
DRUM	Mains of Drumt	146.45	3	eP	PKPbc	16 55 20.5	-0.5
BSD	Bornholm Skovb	146.46	345	eP	PKPbc	16 55 20.7	-0.3
BSD	Bornholm Skovb	146.46	345	i P	PKPbc	16 55 20.1	-1.0
COP	Copenhagen	146.49	347	i P	PKPbc	16 55 20.5	-0.6
EDU	Dundee	146.79	3	eP	PKPbc	16 55 21.9	0.0
INVG	Invergeldie, C	146.85	4	eP	PKPbc	16 55 22.1	0.0
ILGA	Ilgaz	146.86	310		PKPbc	16 55 23.4	+0.4
LAWE	Loch Awe, Argy	146.91	6	eP	PKPbc	16 55 22.2	-0.1
EAB	Aberfoyle	147.07	5	eP	PKPbc	16 55 22.8	+0.1
KIS	Kishinev	147.10	323	ePKP	PKPbc	16 55 22.0	-1.1
	comp=Z,120nm,3.0s						
KIS				⇓iPKP	pPKPdf	16 57 23.0	-3.3
KIS				M	M	16 57 32.0	
	comp=Z,470nm,5.1s						
KIS				esPKP		16 58 24.0	
KIS	Kishinev	147.10	323	ePKIKP	PKPbc	16 55 22.0	-1.1
KIS				i		16 57 28.0	
KIS				e		16 58 24.0	
KIS				pmax	pmax		
	comp=Z,120nm,3.0s						
KIS				pmax	pmax		
	comp=Z,470nm,5.1s						
MILM	Milestii Mici	147.15	323	⇓P	PKPdf	16 55 20.7	+0.7
MILM	Milestii Mici	147.15	323	⇑P	pPKPab	16 57 28.9	+1.6
MILM	Milestii Mici	147.15	323	⇑iPKP	PKPdf	16 55 18.6	-1.5
	comp=Z,230nm,1.0s						
MILM				i pPKP	pPKPdf	16 57 22.0	-4.4
MILM				i sPKP		16 58 20.0	
MILM	Milestii Mici	147.15	323	c iPKHKP	PKPpre	16 55 18.6	
MILM				pmax	pmax		
	comp=Z,580nm,3.5s						
BHL	Bhannes	147.29	297	eP	PKPbc	16 55 24.6	+0.5
QRWL	Qaraoun	147.32	296	eP	PKPbc	16 55 25.0	+0.8
DQRL	Deir Qamar	147.39	296	eP	PKPbc	16 55 25.2	+0.8
BR131	Keskin Array S	147.39	308		PKPdf	16 55 20.3	-0.6
BR131				PKPbc	PKPbc	16 55 24.0	-0.3
BR131				PKPab	PKPab	16 55 28.5	+0.4
BR131	Keskin Array S	147.39	308	dePKIKP	PKPdf	16 55 20.4	-0.5
BRTR	Keskin Array B	147.39	308	PKPbc	PKPbc	16 55 23.9	-0.3
	comp=Z,25nm,0.6s,baz=144,slow=5.1,SNR=58						
BRTR				pPKPbc	pPKPbc	16 57 27.6	-0.6
	comp=Z,6.1nm,0.9s,baz=113,slow=3.2,SNR=4.2						
BRTR				SKPbc	SKiKP	16 58 11.8	+1.0
	comp=Z,14nm,1.2s,baz=141,slow=2.7,SNR=4.0						
BRTR	Keskin Array B	147.39	308		PKPdf	16 55 20.4	-0.5
BRTR				PKPbc	PKPbc	16 55 23.9	-0.3
BRTR				PKPab	PKPab	16 55 28.1	0.0
PGBU	Glenifferbraes	147.43	5	eP	PKPbc	16 55 23.5	-0.2
ESY	Stoneypath	147.44	3	eP	PKPbc	16 55 22.5	-1.2
BEL	Belsk	147.47	336	ePKPdf	PKPdf	16 55 20.9	+0.5
BEL				ePKPbc	PKiKP	16 55 24.7	-0.7
BEL				ePKPab	PKPab	16 55 29.4	+1.6
BEL				epPKPdf	pPKPdf	16 57 27.3	+0.4
GKP	Gorka Klasztor	147.47	341	ePKPbc	PKPbc	16 55 24.3	+0.5
GKP				ePKPab	PKPab	16 55 28.9	+1.2
GKP	Gorka Klasztor	147.47	341	eP	PKPdf	16 55 20.7	+0.4
EBL	Broad Law	147.56	3	eP	PKPbc	16 55 24.1	+0.1
LVV	L'vov	147.67	331	ePKIKP	PKPbc	16 55 24.6	+0.1
LVV				e		16 57 32.0	
VASR	Vaslui	147.88	323	⇓P	PKiKP	16 55 26.0	-0.5
VASR	Vaslui	147.88	323	⇓P	pPKPab	16 57 31.1	+1.0
ANTO	Ankara	147.95	309	⇓P	PKPdf	16 55 22.8	+1.0
ANTO	Ankara	147.95	309	⇓P	pPKPab	16 57 30.4	-0.4
ANTO	Ankara	147.95	309		PKPdf	16 55 21.4	-0.3
ANTO				PKPbc	PKPbc	16 55 25.8	+0.2
ANTO	Ankara	147.95	309	⇓PKIKP	PKPdf	16 55 22.8	+1.0
BR231	Keskin MP Arra	147.97	309		PKPbc	16 55 25.6	-0.2
ESK	Eskdalemuir	148.01	4	eP	PKPbc	16 55 23.9	-1.3
ESK	Eskdalemuir	148.01	4		PKPbc	16 55 25.2	+0.1
ESK	Eskdalemuir	148.01	4	PKHKP	PKPbc	16 55 25.2	+0.1
TLCR		148.13	320	⇑P	PKPbc	16 55 26.3	+0.5
TLCR		148.13	320	⇑PKP2	PKPbc	16 55 26.3	+0.5
NEWG	New Galloway	148.14	5	eP	PKPbc	16 55 25.0	-0.4
VLDR	Vladesti	148.19	322	⇑P	PKiKP	16 55 26.6	-0.5
VLDR	Vladesti	148.19	322	⇓P	pPKPab	16 57 31.8	+0.5
VARL	Varlezi	148.29	322	⇑P	PKiKP	16 55 27.4	+0.1
JURR	Jurilovca	148.33	319	⇓P	PKPdf	16 55 23.2	+1.1
SCTR	Scanteiesti	148.34	321	⇑P	PKPbc	16 55 26.8	+0.5
SCTR	Scanteiesti	148.34	321	⇑P	pPKPab	16 57 32.7	+0.9
GAL1	Galloway	148.35	5	eP	PKPbc	16 55 25.9	-0.1
GIRR	Girov	148.39	325	⇑P	PKPbc	16 55 26.4	0.0
GHRR		148.44	322	⇑P	PKiKP	16 55 29.5	+1.8
SLCR	Slobozia Conac	148.51	321	⇑P	PKiKP	16 55 27.5	-0.3
SLCR	Slobozia Conac	148.51	321	⇓P	pPKPab	16 57 40.2	+7.7
SCHL	Schela	148.53	321	⇑P	PKPbc	16 55 27.3	+0.5
CFR	Carcaliu	148.54	321	⇓P	PKPdf	16 55 27.9	+0.4
CFR	Carcaliu	148.54	321	⇑P	pPKPab	16 57 30.8	-1.8
CFR	Carcaliu	148.54	321	⇓PKHKP	PKPdf	16 55 22.8	+0.4
IZVR	Izvoarele	148.54	321	⇑P	PKPbc	16 55 26.6	-0.1
IZVR	Izvoarele	148.54	321	⇑P	pPKPab	16 57 35.2	+2.6
TPGR	Topolog	148.55	320	⇑P	PKPbc	16 55 26.7	-0.1
TPGR	Topolog	148.55	320	⇓P	pPKPab	16 57 34.2	+1.4
EDMD	Edmundbyers	148.55	2	eP	PKPbc	16 55 26.4	-0.2
TESR	Tescani	148.59	324	⇑P	PKPbc	16 55 27.3	+0.4
TESR	Tescani	148.59	324	⇑P	pPKPab	16 57 29.3	-3.5
BIZ	Bicaz	148.61	325	⇑P	PKPdf	16 55 24.2	+1.7
BIZ	Bicaz	148.61	325	⇑P	pPKPab	16 57 33.2	+0.3
BUR08	Bucovina Ar. S	148.62	327	PKPbc	PKPbc	16 55 27.6	+0.5
BUR01	Bucovina Ar. S	148.63	327	⇓P	PKPdf	16 55 23.6	+1.0
BUR01	Bucovina Ar. S	148.63	327	⇑P	pPKPab	16 57 31.2	-1.9
BURAR	Bucovina Array	148.63	327		PKPdf	16 55 22.8	+0.2
BURAR				PKPbc	PKiKP	16 55 28.4	+0.3
BURAR	Bucovina Array	148.63	327	PKIKP	PKPdf	16 55 22.8	+0.2
PANC	Panciu	148.70	322	⇑P	PKiKP	16 55 28.0	-0.2
ODBI	Odobesti	148.81	322	⇑P	PKiKP	16 55 28.6	+0.2
MDUB	Mudurnu	148.85	311		PKPbc	16 55 26.8	-1.1
HARR	Harsova	148.93	320	⇓P	PKPbc	16 55 28.2	+0.5
HARR	Harsova	148.93	320	⇓P	pPKPab	16 57 40.6	+6.4
HARR	Harsova	148.93	320	⇓PKHKP	PKPbc	16 55 28.2	+0.5
VRI	Vrincioaia	148.94	323	⇓P	PKiKP	16 55 29.0	+0.3
VRI	Vrincioaia	148.94	323	⇓P	pPKPab	16 57 34.5	+0.2
VRI	Vrincioaia	148.94	323	⇓PKP2	PKiKP	16 55 29.0	+0.3
TLBR	Topalu	148.94	320	⇑P	PKiKP	16 55 28.7	0.0
PLOR	Plostina	148.99	323	⇑P	PKiKP	16 55 28.8	-0.1
PLOR	Plostina	148.99	323	⇑PKHKP	PKiKP	16 55 28.8	-0.1
MANR	Mangalia	149.01	318	⇓P	PKPbc	16 55 27.4	-0.6
WIM	Isle of Man	149.06	6	eP	PKPbc	16 55 27.7	-0.1
KOLS	Kolonicke sedl	149.10	331	ePKHKP	PKPdf	16 55 25.0	+1.8
OJC	Ojcow	149.14	335	ePKPdf	PKPdf	16 55 21.2	-2.0
OJC				ePKPbc	PKPbc	16 55 26.8	-1.3
OJC				epPKPdf	pPKPdf	16 57 29.8	+0.1
RUE	Ruedersdorf	149.14	344	eP	PKPbc	16 55 28.2	+0.3
STHS	Stebnicka Huta	149.18	333	ePKHKP	PKPbc	16 55 28.3	0.0
COVR	Voineasa-Covas	149.24	323	⇑P	PKPbc	16 55 27.4	-1.2
OZUR		149.31	324	⇑P	PKiKP	16 55 29.4	-0.2
UZH	Uzhgorod	149.31	331	⇓iPKHKP	PKPdf	16 55 25.0	+1.5
ICOR	Ion Corvin	149.33	319	⇑P	PKPbc	16 55 28.7	-0.1
AMRR	Amara	149.33	320	⇓P	PKPbc	16 55 27.4	-1.3
AMRR	Amara	149.33	320	⇑P	pPKPab	16 57 36.2	+0.4
AMRR	Amara	149.33	320	⇓PKHKP	PKPbc	16 55 27.4	-1.3
ARCR	ARCALIA	149.42	327	⇓P	PKPdf	16 55 24.4	+0.6
ARCR	ARCALIA	149.42	327	⇑P	pPKPab	16 57 36.0	-0.1
BMR	Baia Mare	149.44	328	⇑P	PKiKP	16 55 29.4	-0.3
BMR	Baia Mare	149.44	328	⇑P	pPKPab	16 57 38.2	+1.9
BMR	Baia Mare	149.44	328	⇑PKHKP	PKiKP	16 55 29.4	-0.3
NEHR	Nehoiu	149.44	322	⇓P	PKPbc	16 55 28.7	-0.3
CRVS	Cervenica-Dubn	149.48	332	ePKIKP	PKPdf	16 55 25.1	+1.3
CRVS				e		16 57 33.6	
ISR	Istrita	149.49	322	⇓P	PKPbc	16 55 27.9	-1.3
ISR	Istrita	149.49	322	⇓P	pPKPab	16 57 37.9	+1.4
ISR	Istrita	149.49	322	⇓PKHKP	PKPbc	16 55 27.9	-1.3
TRPA	Tarpa	149.57	330	⇑P	PKiKP	16 55 29.6	-0.3
TRPA	Tarpa	149.57	330	⇑P	pPKPab	16 57 36.5	-0.3
TRPA	Tarpa	149.57	330	PKP	PKPdf	16 55 24.1	+0.2
MLR	Muntele Rosu	149.60	323	⇓P	PKPdf	16 55 24.1	-0.2
MLR	Muntele Rosu	149.60	323	⇑P	pPKPab	16 57 41.8	+4.7
MLR	Muntele Rosu	149.60	323		PKPdf	16 55 23.9	-0.4
MLR				PKPbc	PKPbc	16 55 29.2	-0.3
MLR	Muntele Rosu	149.60	323	PKIKP	PKPdf	16 55 23.9	-0.4
DOPR	Dopca	149.61	324	⇓P	PKPbc	16 55 29.1	-0.3
DOPR	Dopca	149.61	324	⇑P	pPKPab	16 57 36.0	-0.9
BORA	Eskisehir	149.61	310		PKPdf	16 55 24.6	+0.2
BORA				PKPbc	PKPbc	16 55 29.6	-0.1
DSB	Dublin	149.77	8		PKPbc	16 55 29.0	-0.5
SECR		149.81	322	⇑P	PKiKP	16 55 30.4	-0.1
WME	Myndd Eilian	149.84	5	eP	PKPbc	16 55 29.4	-0.2
KSP	Ksiaz	149.86	339	ePKPdf	PKPdf	16 55 24.5	+0.1
KSP				ePKPbc	PKiKP	16 55 30.7	+0.2
SULR		149.91	321	⇓P	PKiKP	16 55 30.7	0.0
WLF1	Llynfaes	149.94	5	eP	PKPbc	16 55 29.6	-0.2
CBBR	Cluj-Babes-Bol	150.04	327	⇑P	PKiKP	16 55 31.0	+0.1
OKC	Ostrava-Krasne	150.07	336	ex	pPKPab	16 57 46.7	+8.1
MESR	Meseseni	150.07	328	⇓P	PKPdf	16 55 27.0	+2.2
YLL	Llanberis	150.11	5	eP	PKPbc	16 55 30.0	-0.3
VOIR		150.13	324	⇑P	PKPbc	16 55 30.7	0.0
VOIR		150.13	324	⇓P	pPKPbc	16 57 36.2	+0.6
VOIR		150.13	324	⇑PKHKP	PKPbc	16 55 30.7	0.0
OSTC	Ostas	150.13	339	ePKPDF	PKPdf	16 55 25.7	+0.9
OSTC				⇑ePKP	PKiKP	16 55 31.2	+0.1
CHVC	Chvalec	150.16	339	ePKPDF	PKPdf	16 55 26.0	+1.2
CHVC				⇑ePKP	PKiKP	16 55 31.1	0.0
CHVC				epPKP	pPKPbc	16 57 36.6	+1.1
KECS	Kecovo	150.22	332	ePKIKP	PKiKP	16 55 33.3	+2.0
UPC	Upice	150.24	339	ePKIKP	PKPdf	16 55 27.3	+2.4
UPC				e		16 55 31.2	
UPC	Upice	150.24	339	ePKPDF	PKPdf	16 55 27.3	+2.4
UPC				⇑ePKP	PKiKP	16 55 31.2	-0.1
DPC	Dobruska-Polom	150.28	339	ePKIKP	PKPdf	16 55 26.4	+1.4
DPC	Dobruska-Polom	150.28	339	ePKPDF	PKPdf	16 55 26.4	+1.4
DPC				⇑ePKP	PKiKP	16 55 31.7	+0.3
DPC				epPKP	pPKPab	16 57 37.9	-1.7
STNC	Stoke	150.28	3	eP	PKPbc	16 55 30.9	+0.2
ISP	Isparta	150.33	306		PKPbc	16 55 30.4	-1.0
ISP	Isparta	150.33	306	PKHKP	PKPbc	16 55 30.4	-1.0
MORC	Moravsky Berou	150.34	337	⇓P	PKPdf	16 55 25.9	+0.7
MORC	Moravsky Berou	150.34	337	⇑P	pPKPbc	16 57 36.4	+0.5
MORC	Moravsky Berou	150.34	337		PKPdf	16 55 24.6	-0.6
MORC				PKPbc	PKiKP	16 55 31.3	-0.2
MORC	Moravsky Berou	150.34	337	⇓PKIKP	PKPdf	16 55 25.9	+0.7
MORC	Moravsky Berou	150.34	337	ePKP	PKPdf	16 55 24.8	-0.4
MORC				e		16 55 31.5	
MORC				e		16 57 35.7	
KRLC	Kraliky	150.36	338	ePKIKP	PKPdf	16 55 25.2	0.0
KRLC				e		16 55 31.5	
KRLC	Kraliky	150.36	338	ePKPDF	PKPdf	16 55 25.2	0.0
KRLC				⇑ePKP	PKiKP	16 55 31.5	-0.1
KRLC				epPKP	pPKPab	16 57 41.0	+1.1
ARR	Arges	150.40	324	⇑P	PKPdf	16 55 26.5	+1.1
ARR	Arges	150.40	324	⇑P	pPKPbc	16 57 37.4	+0.9
LTVH	Ltavrtes, Hu	150.40	329	⇓P	PKPbc	16 55 30.6	-0.5
LTVH	Ltavrtes, Hu	150.40	329	⇓P	pPKPab	16 57 40.0	-0.1
CLL	Collm	150.41	344		PKPdf	16 55 25.4	+0.2
CLL				PKPbc	PKiKP	16 55 31.4	-0.2
CLL	Collm	150.41	344	ePKIKP	PKPdf	16 55 25.0	-0.1
CLL				i		16 55 31.3	
CLL				i		16 55 40.2	
CLL				pmax	pmax		
	comp=Z,48nm,1.4s						
CLL				pmax	pmax		
	comp=Z,269nm,0.9s						
CLL	Collm	150.41	344	ePKPdf	PKPdf	16 55 25.0	-0.1
	comp=Z,48nm,1.4s						
CLL				i PKPbc	PKiKP	16 55 31.3	-0.2
	comp=Z,269nm,0.9s						
CLL				i PKPab	PKPab	16 55 40.2	+0.3
	comp=Z,132nm,1.0s						
CLL				epPKPdf	pPKPbc	16 57 34.0	-2.0
CLL				epPKPbc	pPKPab	16 57 38.0	-2.0
CLL				epPKPab	pPKPdf	16 57 42.0	+10
CLL				ex	x	16 57 51.0	
CLL				esPKPbc	sPKPab	16 58 32.0	-1.3
CLL				ePP	PP	16 59 12.0	0.0
CLL				eSKKSac	SKKSac	17 05 06.0	-2.7
CLL				ex	x	17 10 17.0	
CLL				ex	x	17 11 12.0	
CLL				ePPS	PPS	17 12 12.0	
CLL				eSS	SS	17 17 43.0	-3.7
CLL				eSKSSKSac	S'S'ac	17 18 46.0	+6.4
CLL				esSS		17 21 12.0	
CLL				ex	x	17 22 48.0	
CLL				ex	x	17 22 58.0	
CLL				eSSS	SSS	17 23 34.0	
CLL				esSSS		17 26 36.0	
CLL				eSSSS		17 27 18.0	
RAZG	Razgrad	150.41	319	⇑P	PKiKP	16 55 31.7	-0.1
FOEL	Foel Wylfa	150.43	4	eP	PKPbc	16 55 30.1	-1.0
DRGR		150.44	328	⇑P	pPKPbc	16 57 38.0	+1.8
MAUC	Maruska	150.58	336	ePKPDF	PKPdf	16 55 26.2	+0.7
MAUC				⇑ePKP	PKiKP	16 55 32.2	+0.2
MAUC				epPKP	pPKPab	16 57 40.2	-0.6
BORR	Bors	150.67	329	⇓P	PKPbc	16 55 32.0	+0.2
PVCC	Panska Ves	150.67	341	epPKP	pPKPab	16 57 40.1	-1.0
WACR	West Acre	150.70	359	eP	PKPbc	16 55 31.3	-0.3
HUMR	Humele	150.73	322	⇓P	PKPbc	16 55 29.9	-2.1
HUMR	Humele	150.73	322	⇑P	pPKPbc	16 57 38.4	+1.4
LOT	Lotru	150.81	325	⇓P	PKPdf	16 55 24.4	-1.8
COPA	Copaceanca	150.84	321	⇓P	PKPbc	16 55 31.9	-0.3
VYHS	Vyhne	150.89	334	ePKIKP	PKPdf	16 55 26.5	+0.5
VYHS				e		16 55 32.6	
VYHS				e		16 55 42.8	
PSZ	Piszkesteto	150.91	332	⇓P	PKPbc	16 55 32.0	-0.4
PSZ	Piszkesteto	150.91	332		PKPdf	16 55 25.7	-0.4
PSZ				PKPbc	PKPbc	16 55 32.5	+0.1
PSZ	Piszkesteto	150.91	332	PKIKP	PKPdf	16 55 25.7	-0.4
DEV	Deva	150.97	326	⇓P	PKiKP	16 55 33.3	+0.4
DEV	Deva	150.97	326	⇓PKIKP	PKiKP	16 55 33.3	+0.4
JAVC	Velka Javorina	151.05	336	ePKP	PKPdf	16 55 27.1	+0.8
JAVC				e		16 55 34.0	
JAVC				e		16 55 44.5	
JAVC				e		16 57 40.4	
VRAC	Vranov	151.07	338	⇑P	PKiKP	16 55 33.9	+0.9
VRAC	Vranov	151.07	338	⇑P	pPKPbc	16 57 37.7	0.0
VRAC	Vranov	151.07	338	⇑PKIKP	PKiKP	16 55 33.9	+0.9
VRAC	Vranov	151.07	338	ePKP	PKPdf	16 55 25.5	-0.7
VRAC				e		16 55 32.7	
VRAC				e		16 55 43.7	
VRAC				e		16 57 37.5	
GOPC	GO Pecny, Ondr	151.15	340	ePKIKP	PKPdf	16 55 26.0	-0.4
GOPC				e		16 55 32.9	
GOPC	GO Pecny, Ondr	151.15	340	ePKPDF	PKPdf	16 55 26.0	-0.4
GOPC				⇑ePKP	PKPbc	16 55 32.9	+0.1
GOPC				epPKP	pPKPab	16 57 44.8	+1.7
PRU	Pruhonice	151.16	341	ePKIKP	PKPdf	16 55 27.0	+0.7
PRU				e		16 55 32.7	
PRU				e		16 55 44.7	
PRU	Pruhonice	151.16	341	ePKPDF	PKPdf	16 55 27.0	+0.7
PRU				⇑ePKP	PKPbc	16 55 32.7	-0.1
PRU				ePKPAB	PKPab	16 55 44.7	+1.6
PRU				epPKP	pPKPab	16 57 44.7	+1.6
RSBS	Rosebush, Pemb	151.23	6	eP	PKPbc	16 55 31.9	-0.9
SIRR	Siria	151.32	328	⇑P	PKPdf	16 55 27.4	+0.7
SIRR	Siria	151.32	328	⇑P	pPKPbc	16 57 38.7	+0.1
MCH1	Michaelchurch	151.33	4	eP	PKPbc	16 55 31.6	-1.5
ELMS	Elmsett, Ipswi	151.33	359	eP	PKPbc	16 55 33.1	0.0
KRUC	Moravsky	151.35	337	ePKP	PKPdf	16 55 26.3	-0.4
KRUC				e		16 55 33.6	
KRUC				e		16 55 44.6	
KRUC				e		16 57 37.9	
GZR	Gura Zlata	151.37	326	⇓P	PKPdf	16 55 26.6	-0.3
GZR	Gura Zlata	151.37	326	⇓PKIKP	PKPdf	16 55 26.6	-0.3
ROSA	Rosais	151.41	51		PKiKP	16 55 34.4	+0.4
SMOL	Smolenice	151.43	336	ePKIKP	PKPdf	16 55 28.2	+1.4
SMOL				e		16 55 45.6	
MONM	Monmouth	151.50	4	eP	PKPbc	16 55 33.2	-0.3
NKC	Novy Kostel	151.53	343	ePKIKP	PKPdf	16 55 27.6	+0.7
NKC				e		16 55 35.1	
NKC				e		16 55 45.3	
NKC	Novy Kostel	151.53	343	ePKPDF	PKPdf	16 55 27.6	+0.7
NKC				⇑ePKP	PKiKP	16 55 35.1	+1.1
NKC				ePKPAB	PKPab	16 55 45.3	+0.6
AKAS	Kas	151.55	303		PKPbc	16 55 32.8	-1.6
STRD	Stroud	151.60	3	eP	PKiKP	16 55 34.0	0.0
MODS	Modra-Piesok	151.60	336	ePKIKP	PKPdf	16 55 28.3	+1.2
MODS				e		16 55 47.1	
BZS	Buzias	151.81	327	⇓P	PKPdf	16 55 27.6	+0.1
BZS	Buzias	151.81	327	⇑P	pPKPdf	16 57 30.8	-3.1
BZS	Buzias	151.81	327	⇓PKIKP	PKPdf	16 55 27.6	+0.1
ZST	Bratislava	151.81	336	ePKIKP	PKPdf	16 55 28.2	+0.8
ZST				e		16 55 35.3	
ZST				e		16 55 47.3	
SWN1	Swindon	151.88	3	eP	PKiKP	16 55 34.5	-0.1
HERR	Herculane	151.90	325	⇑P	PKPdf	16 55 27.8	+0.2
HERR	Herculane	151.90	325	⇓P	pPKPbc	16 57 38.4	-1.4
CSKK	Cskako	152.03	333	PKP	PKPdf	16 55 28.4	+0.7
KHC	Kasperske Hory	152.21	341		PKPdf	16 55 27.2	-0.7
KHC	Kasperske Hory	152.21	341	ePKIKP	PKPdf	16 55 27.3	-0.7
KHC				e		16 55 35.2	
KHC				e		16 55 47.6	
KHC	Kasperske Hory	152.21	341	ePKPDF	PKPdf	16 55 27.3	-0.7
KHC				⇑ePKP	PKPbc	16 55 35.2	0.0
KHC				eKPKAB	PKPab	16 55 47.6	-0.1
KHC				epPKP	pPKPab	16 57 47.4	-0.1
BANR	Banloc	152.21	327	⇓P	PKPbc	16 55 34.1	-1.1
CKRC	Cesky Krumlov	152.26	340	ePKPDF	PKPdf	16 55 28.0	0.0
CKRC				⇑ePKP	PKiKP	16 55 35.5	0.0
CKRC				ePKPAB	PKPab	16 55 48.4	+0.6
CKRC				epPKP	pPKPbc	16 57 42.2	+1.6
BEBN	Eben Emael	152.30	352	dPKiKP	PKPbc	16 55 34.8	-0.5
BEBN				dPKPab	PKPab	16 55 47.9	0.0
RDO	Rodhopi	152.34	316	PKPbc	PKPbc	16 55 35.3	-0.4
MDVR	Moldovita	152.34	326	⇓P	PKPdf	16 55 28.1	-0.3
GRA1	Grafenberg Arr	152.34	344		PKPdf	16 55 27.3	-0.8
GRA1					PKPab	16 55 48.5	+0.4
GRF	Grafenberg Arr	152.34	344	PKIKP	PKPdf	16 55 27.3	-0.8
GRFO	Grafenberg	152.34	344		PKPdf	16 55 27.2	-0.9
GRFO				PKPab	PKPab	16 55 48.6	+0.4
GRFO	Grafenberg	152.34	344	PKIKP	PKPdf	16 55 27.2	-0.9
GRFO						16 55 48.6	
GEC2	GERESS Array S	152.43	340		PKPdf	16 55 27.8	-0.6
GERES	GERESS Array B	152.43	340	PKP	PKPdf	16 55 28.8	+0.4
	comp=Z,5.6nm,1.0s,baz=135,slow=0.8,SNR=36						
GERES				PKPbc	PKPbc	16 55 35.9	0.0
	comp=Z,13nm,0.8s,baz=48,slow=2.0,SNR=11						
GERES				pPKPab	pPKPab	16 57 50.1	+1.6
	comp=Z,11nm,0.9s,baz=29,slow=3.0,SNR=11						
GERES	GERESS Array B	152.43	340		PKPdf	16 55 27.8	-0.6
GERES				PKPbc	PKPbc	16 55 35.7	-0.1
GERES	GERESS Array B	152.43	340	PKIKP	PKPdf	16 55 27.8	-0.6
GERES						16 55 35.7	
MEM	Membach	152.44	352	dPKPdf	PKPdf	16 55 28.0	-0.2
MEM				dPKiKP	PKiKP	16 55 36.2	+0.4
MEM				dPKPab	PKPab	16 55 48.4	-0.2
BTNL	Ternell	152.45	352	dPKPdf	PKPdf	16 55 28.5	+0.2
BTNL				dPKiKP	PKPbc	16 55 35.7	0.0
BTNL				dPKPab	PKPab	16 55 48.1	-0.5
CONA	Conrad Observa	152.50	337	i P	PKPdf	16 55 28.0	-0.5
	comp=Z,15nm,1.2s,SNR=13						
CONA				eP	PKPab	16 55 49.6	+0.6
	comp=Z,66nm,1.1s						
CONA				eP	pPKPbc	16 57 43.1	+1.9
	comp=Z,42nm,1.1s						
BSTI	Sart Tilman	152.53	353	dPKPdf	PKPdf	16 55 28.7	+0.4
BSTI				dPKiKP	PKiKP	16 55 35.9	0.0
BSTI				dPKPab	PKPab	16 55 49.2	+0.3
RONA	Rosalia, Austr	152.53	336	eP	PKPdf	16 55 28.0	-0.5
	comp=Z,18nm,1.2s,SNR=10						
RONA				eP	PKPab	16 55 50.1	+1.1
	comp=Z,62n

RETA *eP* **PKPab 16 55 58.1 +0.6**
comp=Z,86nm,1.2s,SNR=7.4
MOTA Moosalm 154.53 343 *eP* **PKPdf 16 55 31.4 -0.1**
comp=Z,26nm,1.0s,SNR=14
MOTA *eP* **PKPab 16 55 58.0 +0.2**
comp=Z,94nm,1.1s
MOTA *eP* **pPKPbc 16 57 50.8 +4.8**
comp=Z,46nm,1.7s
LJU Ljubljana 154.58 336 *i* PKPdf **PKPdf 16 55 31.0 -0.4**
ECH Echery 154.60 349 **PKPdf 16 55 30.8 -0.6**
ECH **PKPab 16 55 57.3 -0.5**
ECH Echery 154.60 349 PKP2 **PKPab 16 55 57.3 -0.5**
ECH 17 55 30.8
SQTA Sankt Quirin 154.62 342 *eP* **PKPdf 16 55 30.9 -0.6**
comp=Z,33nm,1.3s,SNR=14
SQTA *eP* **PKPab 16 55 58.7 +0.6**
comp=Z,74nm,1.2s,SNR=6.1
SQTA *eP* **pPKPbc 16 57 50.7 +4.6**
comp=Z,21nm,1.3s
CRNS Crni Vrh 154.64 337 *i* PKPdf **PKPdf 16 55 30.7 -0.8**
ABTA Abfaltersbach 154.66 340 *eP* **PKPdf 16 55 30.9 -0.7**
comp=Z,68nm,1.2s,SNR=34
ABTA *eP* **PKPab 16 55 57.9 -0.4**
comp=Z,40nm,1.2s
ABTA *eP* **pPKPbc 16 57 49.6 +3.4**
comp=Z,32nm,1.6s
CLUD Cludinico 154.80 339 **PKPdf 16 55 30.4 -1.4**
CLUD PKPab **PKPab 16 55 58.5 -0.3**
VOJS Vojsko 154.82 337 *e*PKPdf **PKPdf 16 55 31.0 -0.8**
LDF La Druitiere 154.84 0 *e*PKIKP **PKPdf 16 55 34.2 +2.6**
LDF pmax pmax
comp=Z,106nm,1.6s
LIT Litokhoron 154.85 317 **PKPab 16 55 59.0 -0.3**
LIT Litokhoron 154.85 317 PKP2 **PKPab 16 55 59.0 -0.3**
DAVA Damuels 154.91 344 *eP* **PKPdf 16 55 31.4 -0.6**
comp=Z,23nm,1.2s,SNR=9.0
DAVA *eP* **PKPab 16 55 59.8 +0.4**
comp=Z,63nm,1.0s
DAVA *eP* **pPKPbc 16 57 51.6 +4.8**
comp=Z,22nm,1.5s
FETA Feichten 154.93 343 *eP* **PKPdf 16 55 31.8 -0.3**
comp=Z,52nm,1.0s,SNR=20
FETA *eP* **PKPab 16 55 59.5 0.0**
comp=Z,60nm,1.4s
FETA *eP* **pPKPbc 16 57 48.8 +2.0**
comp=Z,46nm,1.3s
HAU Haudompre 154.94 350 *e*PKIKP **PKPdf 16 55 32.1 +0.3**
HAU pmax pmax
comp=Z,59nm,1.4s
STAL STALIGIAL 155.03 339 **PKPdf 16 55 31.0 -1.0**
STAL PKPab **PKPab 16 55 59.7 -0.1**
PDG Podgorica 155.25 325 ⇑P **PKPdf 16 55 39.7 +7.3**
CLF Chambon-Foret 155.35 357 **PKPdf 16 55 31.6 -0.7**
CLF **PKPab 16 56 01.0 -0.1**
FUORN Ofenpass-Fuorn 155.43 343 **PKPdf 16 55 31.7 -1.1**
CTI Castel Tesino 155.55 340 **PKPab 16 56 01.6 -0.5**
CTI Castel Tesino 155.55 340 PKP2 **PKPab 16 56 01.6 -0.5**
TUE Stuetta 155.80 344 **PKPab 16 56 03.3 0.0**
LOR Lormes 155.99 354 *e*PKIKP **PKPdf 16 55 33.6 +0.4**
LOR pmax pmax
comp=Z,48nm,1.2s
TEOL Teolo 156.16 340 **PKPdf 16 55 33.3 -0.2**
SALO Salr 156.28 342 **PKPab 16 56 04.8 -0.3**
SENIN Lac Senin/Sane 156.36 348 PKPab **PKPab 16 56 05.7 -0.1**
AVF Avril sur Loir 156.50 355 *e*PKIKP **PKPdf 16 55 33.9 0.0**
AVF pmax pmax
comp=Z,31nm,1.4s
MFF Saint Martin d 156.83 1 *e*PKIKP **PKPdf 16 55 34.6 +0.3**
MFF pmax pmax
comp=Z,97nm,1.4s
TCF Toulx Ste Croi 157.09 356 *e*PKIKP **PKPdf 16 55 34.9 +0.2**
TCF pmax pmax
comp=Z,51nm,1.2s
LPL La Plagne 157.28 348 *e*PKIKP **PKPdf 16 55 35.7 +0.5**
LPL pmax pmax
comp=Z,26nm,1.5s
LPG La Plagne 157.30 348 *e*PKIKP **PKPdf 16 55 35.8 +0.5**
LPG pmax pmax
comp=Z,32nm,1.5s
SGRT San Giovanni R 157.53 328 **PKPdf 16 55 35.3 -0.1**
SGRT PKPab **PKPab 16 56 10.3 -0.5**
MURB Monte Urbino 157.69 336 **PKPdf 16 55 35.0 -0.6**
BNI Bardonecchia 157.74 348 PKP2 **PKPab 16 56 12.1 +0.4**
BNI 17 55 35.0
MSSA Maissana 157.75 342 **PKPdf 16 55 34.7 -1.0**
MSSA **PKPab 16 56 10.8 -0.9**
NRCA Norcia 157.83 334 **PKPdf 16 55 34.8 -1.0**
MATE Matera 157.86 325 ⇓P **PKPdf 16 55 33.8 -1.9**
SSB Saint Sauveur 157.87 352 **PKPdf 16 55 35.4 -0.3**
SSB Saint Sauveur 157.87 352 PKIKP **PKPdf 16 55 35.4 -0.3**
CAMP Campotosto 157.96 333 **PKPdf 16 55 35.1 -0.9**
CAMP PKPab **PKPab 16 56 12.5 -0.2**
ORIF Oris-en-Rattie 158.02 349 *e*PKIKP **PKPdf 16 55 36.3 +0.3**
ORIF pmax pmax
comp=Z,27nm,1.4s
MBDF Montbardon 158.03 347 *e*PKIKP **PKPdf 16 55 36.4 +0.3**
MBDF pmax pmax
comp=Z,40nm,1.4s
RJF Les Rejaudoux 158.10 357 *e*PKIKP **PKPdf 16 55 36.3 +0.4**
RJF pmax pmax
comp=Z,66nm,1.4s
INTR Introdacqua 158.17 332 **PKPdf 16 55 34.8 -1.5**
CESX Cesi 158.23 335 **PKPdf 16 55 35.0 -1.2**
CESX **PKPab 16 56 13.1 -0.6**
VIVF Saint-Julien-l 158.27 351 *e*PKIKP **PKPdf 16 55 36.7 +0.5**
VIVF pmax pmax
comp=Z,52nm,1.6s
CAF Calviac 158.46 356 *e*PKIKP **PKPdf 16 55 37.0 +0.6**
CAF pmax pmax
comp=Z,53nm,1.4s
LFF La Frestale 158.49 359 *e*PKIKP **PKPdf 16 55 36.8 +0.4**
LFF pmax pmax
comp=Z,49nm,1.5s
LATE Laterza 158.52 336 **PKPdf 16 55 35.6 -1.0**
LATE **PKPab 16 56 14.8 -0.3**
SBF Sospel 158.71 345 *e*PKIKP **PKPdf 16 55 40.1 +3.3**
SBF pmax pmax
comp=Z,8.0nm,0.7s
TIP Timpagrande 158.87 322 ⇑P **PKPdf 16 55 35.6 -1.5**
TIP Timpagrande 158.87 322 **PKPdf 16 55 36.6 -0.5**
MTLF Montolieu 160.02 356 *e*PKIKP **PKPdf 16 55 38.6 +0.4**
MTLF pmax pmax
comp=Z,81nm,1.4s
PGAV Gavieira, Arco 160.18 19 *e*PKPdf **PKPdf 16 55 38.9 +0.4**
PGAV Gavieira, Arco 160.18 19 *e*PKPab **PKPab 16 56 22.9 +0.6**
SJPF Ste Jean 160.29 3 *e*PKIKP **PKPdf 16 55 39.3 +0.8**
SJPF pmax pmax
comp=Z,44nm,1.4s
EPF Esparros 160.41 360 *e*PKIKP **PKPdf 16 55 39.3 +0.6**
EPF pmax pmax
comp=Z,68nm,1.5s
PCAB Cabril 160.48 19 *e*PKPdf **PKPdf 16 55 39.7 +0.9**
PCAB Cabril 160.48 19 *e*PKPab **PKPab 16 56 24.4 +0.8**
ETSF Etsaut 160.53 2 *e*PKIKP **PKPdf 16 55 39.6 +0.7**
ETSF pmax pmax
comp=Z,10.0nm,0.9s
PBRG Braganca 160.74 16 *e*PKPdf **PKPdf 16 55 39.9 +0.8**
PBRG Braganca 160.74 16 *e*PKPab **PKPab 16 56 25.4 +0.7**
POLO Lamas de Olo 160.86 19 *e*PKPdf **PKPdf 16 55 39.8 +0.5**
POLO Lamas de Olo 160.86 19 *e*PKPab **PKPab 16 56 25.2 -0.1**
PVRL Vila Real 160.97 18 *e*PKPdf **PKPdf 16 55 40.6 +1.3**
PVRL Vila Real 160.97 18 *e*PKPab **PKPab 16 56 26.8 +1.0**
MVO Moncorvo 161.27 17 *e*PKPdf **PKPdf 16 55 40.4 +0.7**
MVO Moncorvo 161.27 17 *e*PKPab **PKPab 16 56 27.9 +0.8**
PVIS Viseu 161.43 20 *e*PKPdf **PKPdf 16 55 40.8 +0.9**
PVIS Viseu 161.43 20 *e*PKPab **PKPab 16 56 28.5 +0.7**
MTE Manteigas 161.83 19 *e*PKPdf **PKPdf 16 55 40.8 +0.5**
MTE Manteigas 161.83 19 *e*PKPab **PKPab 16 56 30.1 +0.5**
MTE Manteigas 161.83 19 **PKPdf 16 55 40.5 +0.3**
MTE **PKPab 16 56 29.9 +0.3**
PCAS Casmilo, Conde 161.84 22 *e*PKPdf **PKPdf 16 55 41.1 +0.9**
PCAS Casmilo, Conde 161.84 22 *e*PKPab **PKPab 16 56 30.2 +0.6**
PMOZ Porto Moniz, M 162.04 55 *e*PKPdf **PKPdf 16 55 41.5 +0.7**
PMOZ Porto Moniz, M 162.04 55 *e*PKPab **PKPab 16 56 31.9 +0.9**
LIC Lamto 162.22 163⇓*e*PKP2 **PKPdf 16 55 40.4 -1.0**
comp=Z,165nm,1.1s
LIC Lamto 162.22 163⇑*e*PKP2 **PKPab 16 56 32.3 +0.5**
comp=Z,257nm,1.0s
PCBR Castelo Branco 162.36 20 *e*PKPdf **PKPdf 16 55 41.3 +0.6**
PCBR Castelo Branco 162.36 20 *e*PKPab **PKPab 16 56 32.5 +0.7**
KIC Kosan Boka 162.43 164⇑*e*PKP2 **PKPdf 16 55 41.0 -0.6**
comp=Z,28nm,0.9s
KIC Kosan Boka 162.43 164⇑*e*PKP2 **PKPab 16 56 33.0 +0.3**
comp=Z,44nm,0.7s
PMAFR Mafra 162.51 25 *e*PKPdf **PKPdf 16 55 42.2 +1.3**
PMAFR Mafra 162.51 25 *e*PKPab **PKPab 16 56 33.1 +0.5**
PMPST Porto Santo, M 162.56 53 *e*PKPdf **PKPdf 16 55 42.3 +1.2**
PMPST Porto Santo, M 162.56 53 *e*PKPab **PKPab 16 56 34.0 +0.9**
PMPS Porto Santo 162.57 53 *e*PKPdf **PKPdf 16 55 42.2 +1.1**
PMPS Porto Santo 162.57 53 *e*PKPab **PKPab 16 56 33.8 +0.7**
TIC Toumodi 162.62 162⇓*e*PKP2 **PKPdf 16 55 42.1 +0.3**
comp=Z,138nm,0.9s
TIC Toumodi 162.62 162⇑*e*PKP2 **PKPab 16 56 34.0 +0.4**
comp=Z,49nm,0.6s
DBIC Dimbokro 162.69 163 PKP **PKPdf 16 55 41.5 -0.3**
comp=Z,58nm,1.1s,baz=154,slow=1.1,SNR=23
DBIC PKPab **PKPab 16 56 34.5 +0.7**
comp=Z,56nm,1.0s,baz=165,slow=4.1,SNR=14
DBIC pPKPab **sPKPdf 16 58 39.2 -1.9**
comp=Z,39nm,1.1s,baz=171,slow=5.7,SNR=10
PMST Lisbon--Monsan 162.74 25 *e*PKPdf **PKPdf 16 55 42.5 +1.4**
PMST Lisbon--Monsan 162.74 25 *e*PKPab **PKPab 16 56 34.3 +0.7**
PMRV Marv??o 162.76 20 *e*PKPdf **PKPdf 16 55 41.9 +0.7**
PMRV Marv??o 162.76 20 *e*PKPab **PKPab 16 56 34.3 +0.6**
PMTG Montargil 162.81 23 *e*PKPdf **PKPdf 16 55 41.5 +0.3**
PMTG Montargil 162.81 23 *e*PKPab **PKPab 16 56 34.3 +0.5**
PACT Alcochete 162.85 25 *e*PKPdf **PKPdf 16 55 41.9 +0.7**
UCM Universidad Co 162.88 9 PKP **PKPdf 16 55 38.9 -2.4**
MAHO Mahon 163.18 349 PKP **PKPdf 16 55 37.4 -4.1**
PESTR Estremoz 163.21 21 *e*PKPdf **PKPdf 16 55 42.3 +0.7**
PESTR Estremoz 163.21 21 *e*PKPab **PKPab 16 56 35.7 +0.1**
PESTR Estremoz 163.21 21 **PKPdf 16 55 41.7 +0.1**
PESTR **PKPab 16 56 34.8 -0.8**
PESTR Estremoz 163.21 21 P **PKPdf 16 55 42.2 +0.7**
PESTR Estremoz 163.21 21 P **PKPab 16 56 35.9 +0.3**
EVO Evora 163.36 23 PKP **PKPdf 16 55 41.5 -0.2**
EVO Evora 163.36 23 *e*PKPdf **PKPdf 16 55 42.6 +0.9**
EVO Evora 163.36 23 *e*PKPab **PKPab 16 56 36.9 +0.6**
EVO Evora 163.36 23 *e*PP **PP 17 00 22.3 -0.2**
ESBB Sonseca Array 163.38 11 **PKPdf 16 55 41.7 -0.1**
ESBB **PKPab 16 56 36.5 +0.1**
ESDC Sonseca Array 163.38 11 PKP **PKPdf 16 55 42.2 +0.4**
comp=Z,7.9nm,1.2s,baz=340,slow=2.6,SNR=22
ESDC PKPab **PKPab 16 56 37.0 +0.6**
comp=Z,55nm,1.1s,baz=343,slow=4.4,SNR=61
ESDC pPKPab **pPKPab 16 58 38.4 +2.3**
comp=Z,4.8nm,1.1s,baz=326,slow=3.0,SNR=3.3
ESDC PP **PP 17 00 22.1 -0.3**
comp=Z,2.1nm,1.0s,baz=342,slow=6.1,SNR=5.2
ESDC Sonseca Array 163.38 11 **PKPdf 16 55 41.6 -0.2**
ESDC **PKPab 16 56 36.3 -0.1**
PAB San Pablo 163.44 12 **PKPdf 16 55 41.8 -0.1**
PAB **PKPab 16 56 36.8 +0.2**
PAB San Pablo 163.44 12 PKIKP **PKPdf 16 55 41.8 -0.1**
PAB San Pablo 163.44 12 P **PKPdf 16 55 42.9 +1.0**
PNCL Nicolau / Gran 163.54 25 *e*PKPdf **PKPdf 16 55 42.8 +0.9**
PNCL Nicolau / Gran 163.54 25 *e*PKPab **PKPab 16 56 37.7 +0.6**
PNCL Nicolau / Gran 163.54 25 *e*PP **PP 17 00 23.4 0.0**
MESJ Messejana 163.90 25 *e*PKPdf **PKPdf 16 55 42.6 +0.3**
MESJ Messejana 163.90 25 *e*PKPdf **PKPdf 16 55 43.3 +1.1**
MESJ Messejana 163.90 25 *e*PKPab **PKPab 16 56 39.3 +0.6**
MESJ Messejana 163.90 25 *e*PP **PP 17 00 25.2 -0.1**
PTEO Sao Teotonio 163.95 26 *e*PKPdf **PKPdf 16 55 43.1 +0.8**
PTEO Sao Teotonio 163.95 26 *e*PKPab **PKPab 16 56 39.5 +0.6**
PTEO Sao Teotonio 163.95 26 *e*PP **PP 17 00 26.1 +0.5**
PBAR Barrancos 164.02 21 *e*PKPdf **PKPdf 16 55 42.9 +0.6**
PBAR Barrancos 164.02 21 *e*PKPab **PKPab 16 56 40.0 +0.8**
PBAR Barrancos 164.02 21 *e*PP **PP 17 00 25.5 -0.3**
MORF Marmelete 164.19 27 *e*PKPdf **PKPdf 16 55 42.9 +0.3**
MORF Marmelete 164.19 27 *e*PKPdf **PKPdf 16 55 43.5 +0.9**
MORF Marmelete 164.19 27 *e*PKPab **PKPab 16 56 40.7 +0.7**
MORF Marmelete 164.19 27 *e*PP **PP 17 00 26.6 -0.3**
PFVI Vila Bisbo 164.26 27 **PKPdf 16 55 43.4 +0.8**
PFVI Vila Bisbo 164.26 27 P **PKPdf 16 55 44.2 +1.7**
PVAQ Vaqueiros 164.47 24 *e*PKPdf **PKPdf 16 55 43.7 +1.0**
PVAQ Vaqueiros 164.47 24 *e*PKPab **PKPab 16 56 42.0 +0.8**
PVAQ Vaqueiros 164.47 24 *e*PP **PP 17 00 28.3 +0.1**
PVAQ Vaqueiros 164.47 24 **PKPab 16 56 40.8 -0.4**
PVAQ Vaqueiros 164.47 24 P **PKPdf 16 55 44.2 +1.4**
PVAQ Vaqueiros 164.47 24 P **PKPab 16 56 42.0 +0.8**
ARNO Arenosillo 165.09 22 PKP **PKPdf 16 55 43.6 +0.4**
KEST Kesra 165.34 329 PKP **PKPdf 16 55 43.9 +0.2**
comp=Z,6.9nm,1.0s,baz=315,slow=1.4,SNR=6.1
KEST PKPab **PKPab 16 56 45.6 +0.3**
comp=Z,16nm,1.0s,baz=264,slow=2.5,SNR=7.8
CART Cartagena 165.81 4 PKP **PKPdf 16 55 42.6 -1.2**
EMAL Malaga-Limoner 166.09 16 PKP PKPdf 16 55 30.7 -13
CEU Ceuta 166.63 20 PKP **PKPdf 16 55 45.0 +0.5**
CHEFC Chefchaouen 167.37 21 P **PKPab 16 56 57.0 +2.8**
RSA Sarsar 167.41 23 P **PKPdf 16 55 47.0 +1.8**
RSA Sarsar 167.41 23 P **PKPab 16 56 56.0 +1.7**
PVLZ Peæn de 167.62 17 PKP **PKPdf 16 55 42.0 -3.2**
PALE Palemas 167.68 16 P **PKPdf 16 55 46.1 +0.7**
WMELI Melilla 167.80 12 PKP **PKPdf 16 55 44.8 -0.6**
CHAS Isla Isabel II 168.03 10 PKP **PKPdf 16 55 44.5 -1.0**
AVE Averroes 168.08 32 PKP **PKPdf 16 55 45.0 -0.7**
AVE Averroes 168.08 32 PKPdf **PKPdf 16 55 46.0 +0.3**
AVE **PKPab 16 56 57.7 +0.4**
AVE Averroes 168.08 32 P **PKPdf 16 55 47.4 +1.7**
AVE Averroes 168.08 32 P **PKPab 16 56 58.3 +1.0**
ZHG ZHG 168.32 29 P **PKPdf 16 55 48.0 +2.1**
ZHG ZHG 168.32 29 P **PKPab 16 56 60.0 +1.5**
TAF Taforalt 168.39 11 P **PKPdf 16 55 48.0 +2.1**
SRHM Skhour des Reh 168.48 36 P **PKPdf 16 55 48.0 +1.9**
SRHM Skhour des Reh 168.48 36 P **PKPab 16 57 00.2 +0.9**
LCRM LCR 168.83 22 P **PKPdf 16 55 49.0 +2.6**
LCRM LCR 168.83 22 P **PKPab 16 57 03.0 +2.2**
JBK JBK 168.83 12 P **PKPdf 16 55 48.0 +1.6**
IFR Ifrane 168.88 24 PKP **PKPdf 16 55 47.3 +0.9**
OUK Oukaimeden 169.43 41 P **PKPdf 16 55 49.0 +1.9**
OUK Oukaimeden 169.43 41 P **PKPab 16 57 05.0 +1.1**
TTIG Tnine Tigouga, 169.52 45 P **PKPdf 16 55 49.0 +2.2**
TTIG Tnine Tigouga, 169.52 45 P **PKPab 16 57 05.0 +1.0**
MDT Midelt 169.71 23 P **PKPdf 16 55 48.5 +1.7**
MDT Midelt 169.71 23 P **PKPab 16 57 06.7 +2.1**
TORD Torodi Ar. Bea 169.72 188 PKP **PKPdf 16 55 46.2 -0.9**
comp=Z,39nm,1.1s,baz=318,slow=0.9,SNR=82
TORD PKPab **PKPab 16 57 04.2 -0.6**
comp=Z,26nm,1.1s,baz=174,slow=3.8,SNR=13
TORD pPKPab **pPKPab 16 59 06.5 +2.6**
comp=Z,20nm,1.2s,baz=184,slow=2.9,SNR=7.8
FIGM Figuig 171.19 8 P **PKPdf 16 55 49.0 +1.3**
TAM Tamanrasset 175.03 264 **PKPdf 16 55 49.0 -0.5**
TAM Tamanrasset 175.03 264 PKIKP **PKPdf 16 55 49.0 -0.5**

DJA 18 16:42:14.6±0.6, 4°S±5′×12°9E±°, h110km±4km, M3.4/8, MLv3.4/8, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.46**	**30**	P	Pn	16 42 32.7	+1.5
MSAI				S	Sn	16 42 46.3	+2.6
AAI	**Ambon**	**0.51**	**277**	P	Pn	16 42 32.9	+1.4
AAI				S	Sn	16 42 46.3	+2.1
KRAI	**Karang Ratu**	**0.53**	**325**	P	Pn	16 42 33.8	+2.1
KRAI				S	Sn	16 42 47.2	+2.8
BNDI	**Bandanaira**	**1.43**	**123**	P	Pn	16 42 41.0	+0.5
NLAI	**Namlea**	**1.68**	**288**	P	Pn	16 42 44.2	+0.7
NLAI				S	Sn	16 43 07.8	+2.2
SANI	**Sanana**	**3.19**	**302**	P	Pn	16 43 02.1	-1.1
SANI				S	Sn	16 43 38.0	-2.7
LBMI	**Labuha**	**3.31**	**339**	P	Pn	16 43 05.8	+1.0
LBMI				S	Sn	16 43 44.1	+0.5
FAKI	**Fak Fak**	**3.64**	**77**	P	Pn	16 43 08.6	-0.5

*IDC **18** 17:01:34.3±2.2, 2°27N×126°95E, h0km, mb3.7/3, mbtmp3.8/3, Error ellipse: s-maj=185.2km s-min=25.4km az=66.0*
*NEIC **18** 17:01:46.2±3.0, 1°89N±0°07×126°23E±0°04, h91km±13km, mb4.0/8, Error ellipse: s-maj=11.7km s-min=4.7km az=157.0*
*DJA **18** 17:01:48.0±1.4, 2°N±3°×12°6E±°, h29km±14km, M3.9/12, mb4.3/4, mB5.0/1, MLv3.8/12, Mw(mB)4.4/1*

ISC 18 17:01:46.9±0.9, 1°78N±0°05×126°14E±0°06, h100km±11km, n26, σ1°64/34, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.58**	**129**	**Pn**	**Pn**	**17 02 14.0**	**-0.1**
TNTI				Sn	**Sn**	**17 02 33.4**	**-1.4**
TNTI	**Ternate**	**1.58**	**129**	P	**Pn**	**17 02 15.3**	**+1.2**
TNTI				S	**Sn**	**17 02 35.8**	**+1.0**
GAMI	**Galela, Maluku**	**1.64**	**88**	P	**Pn**	**17 02 15.8**	**+0.8**
GAMI				S	**Sn**	**17 02 35.6**	**-0.7**
SGSI	**Sangihe**	**1.99**	**342**	P	**Pn**	**17 02 18.9**	**-0.6**
SGSI				S	**Sn**	**17 02 44.9**	**+0.6**
LBMI	**Labuha**	**2.75**	**150**	P	**Pn**	**17 02 31.4**	**+2.0**
LBMI				S	**Sn**	**17 03 03.4**	**+1.3**
GTOI	**Gorontalo**	**3.33**	**250**	P	**Pn**	**17 02 39.7**	**+2.6**
SANI	**Sanana**	**3.80**	**182**	P	**Pn**	**17 02 42.8**	**-0.7**
SANI				S	**Sn**	**17 03 22.7**	**-4.6**
LUWI	**Luwuk**	**4.38**	**230**	Pn	**Pn**	**17 02 53.6**	**+2.3**
LUWI				Sn	**Sn**	**17 03 42.3**	**+1.0**
LUWI	**Luwuk**	**4.38**	**230**	P	**Pn**	**17 02 52.1**	**+0.8**
NLAI	**Namlea**	**5.07**	**169**	P	**Pn**	**17 03 01.3**	**+0.6**
NLAI				S	**Sn**	**17 03 54.0**	**-4.0**
TOLI2	**Tolitoli**	**5.40**	**263**	Pn	**Pn**	**17 03 06.5**	**+1.4**
KRAI	**Karang Ratu**	**5.54**	**156**	P	**Pn**	**17 03 08.4**	**+1.4**
0.2nm1μm18nm,0.5s							
AAI	**Ambon**	**5.80**	**159**	P	**Pn**	**17 03 11.9**	**+1.3**
MYLDM	**Lahad Datu**	**8.35**	**294**	Pn	**Pn**	**17 03 42.9**	**-2.3**
MTN	**Manton Dam**	**15.35**	**161**	Pn	**Pn**	**17 05 17.2**	**-0.9**
WB0	**Warramunga Arr**	**22.89**	**160**	P	**P**	**17 06 42.2**	**-0.1**
WB0				IAmb	IAmb	17 07 23.6	
comp=Z,7.2nm,1.4s							
WRA	**Warramunga Arr**	**23.03**	**160**	P	**P**	**17 06 43.1**	**-0.6**
comp=Z,1.5nm,0.4s,baz=341,slow=11,SNR=37							
comp=Z,1.5nm,0.4s							
WRA	**Warramunga Arr**	**23.03**	**160**	P	**P**	**17 06 42.4**	**-1.3**
WB2	**Warramunga Arr**	**23.04**	**160**	P	**P**	**17 06 43.1**	**-0.6**
WB2				IAmb	IAmb	17 06 45.0	
comp=Z,9.5nm,1.2s							
WR0	**Warramunga Arr**	**23.12**	**160**	P	**P**	**17 06 44.3**	**-0.2**
WR0				IAmb	IAmb	17 06 53.3	
comp=Z,10nm,1.5s							
AS31	**Alice Springs**	**26.39**	**164**	P	**P**	**17 07 14.3**	**+0.1**
ASAR	**Alice Springs**	**26.39**	**164**	P	**P**	**17 07 15.2**	**+1.0**
comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=15							
comp=Z,0.3nm,0.3s							
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**17 08 44.2**	**+1.3**
STKA				IAmb	IAmb	17 09 16.1	
comp=Z,3.1nm,1.4s							
MK31	**Makanchi Array**	**58.83**	**326**	P	**P**	**17 11 34.3**	**-0.8**
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**17 11 35.0**	**0.0**
comp=Z,0.4nm,0.5s,baz=119,slow=7.6,SNR=5.3							
comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**17 11 35.1**	**0.0**

*NOU **18** 17:05:44.8, 42°89S×171°33E, h75km, MLv4.0/10, South Island, New Zealand*
*WEL **18** 17:05:44.8, 43°S±4°×17°1E±°, h56km±9km, M3.3/25, ML3.6/30, MLv3.3/25, Error ellipse: s-maj=0.0km s-min=0.0km az=101.9*

ISC 18 17:05:44.8±1.5, 42°84S±0°04×171°31E±0°04, h61km±10km, n63, σ0°70/65, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.15**	**40**	P	**Pn**	**17 05 53.9**	**-0.3**
INZ				S	**Sn**	**17 06 00.5**	**-0.4**
WVZ	**Waitaha Valley**	**0.48**	**241**	P	**Pn**	**17 05 57.0**	**+0.3**
WVZ				S	**Sn**	**17 06 05.1**	**-0.2**
LTZ	**Lake Taylor**	**0.71**	**86**	P	**Pn**	**17 05 59.6**	**+0.3**
LTZ				S	**Sn**	**17 06 10.3**	**+0.5**
MHCZ	**Mount Hutt**	**0.72**	**165**	P	**Pn**	**17 06 00.1**	**+0.7**
OXZ	**Oxford**	**0.72**	**133**	P	**Pn**	**17 05 59.4**	**0.0**
GCSZ	**Gaunt Creek Bo**	**0.87**	**236**	P	**Pn**	**17 06 01.5**	**+0.3**
RPZ	**Rata Peaks**	**0.90**	**192**	P	**Pn**	**17 06 01.9**	**+0.3**
AMCZ	**Amberley**	**1.04**	**109**	P	**Pn**	**17 06 03.8**	**+0.4**
RACZ	**Rakaia**	**1.07**	**146**	P	**Pn**	**17 06 03.9**	**+0.1**
ARCZ	**Arundel**	**1.11**	**185**	P	**Pn**	**17 06 04.3**	**-0.1**
DSZ	**Denniston Nort**	**1.15**	**19**	P	**Pn**	**17 06 04.4**	**-0.6**
WACZ	**Wakanui South**	**1.17**	**161**	P	**Pn**	**17 06 05.2**	**+0.1**
GVZ	**Greta Valley S**	**1.27**	**96**	P	**Pn**	**17 06 06.7**	**+0.3**
FOZ	**Fox Glacier**	**1.30**	**237**	P	**Pn**	**17 06 07.0**	**+0.2**
MQZ	**McQueen's Vall**	**1.31**	**132**	P	**Pn**	**17 06 06.7**	**-0.2**
OKCZ	**Okains Bay**	**1.55**	**125**	P	**Pn**	**17 06 10.4**	**+0.2**
AKCZ	**Akaroa Harbour**	**1.56**	**132**	P	**Pn**	**17 06 10.1**	**-0.1**
TMZ	**Timaru**	**1.56**	**188**	P	**Pn**	**17 06 10.1**	**-0.2**
THZ	**Tophouse**	**1.60**	**48**	P	**Pn**	**17 06 10.8**	**-0.1**
KHZ	**Kahutara**	**1.70**	**76**	P	**Pn**	**17 06 12.3**	**+0.2**
KHZ	**Kahutara**	**1.70**	**76**	P	**Pn**	**17 06 12.7**	**+0.6**
LBZ	**Lake Benmore**	**1.75**	**208**	P	**Pn**	**17 06 12.6**	**-0.3**
MRNZ	**Matariki Terra**	**1.80**	**37**	P	**Pn**	**17 06 13.3**	**-0.2**
TKNZ	**Takaka Hill**	**2.18**	**35**	P	**Pn**	**17 06 18.5**	**-0.3**
QRZ	**Quartz Range**	**2.21**	**25**	P	**Pn**	**17 06 18.8**	**-0.3**
QRZ	**Quartz Range**	**2.21**	**25**	P	**Pn**	**17 06 18.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**2.21**	**60**	P	**Pn**	**17 06 19.8**	**+0.7**
JCZ	**Jackson Bay**	**2.22**	**235**	P	**Pn**	**17 06 19.5**	**+0.2**
JCZ	**Jackson Bay**	**2.22**	**235**	P	**Pn**	**17 06 19.9**	**+0.6**
NNZ	**Nelson**	**2.24**	**44**	P	**Pn**	**17 06 19.7**	**+0.3**
ODZ	**Otahua Downs**	**2.26**	**192**	P	**Pn**	**17 06 19.2**	**-0.5**
ODZ	**Otahua Downs**	**2.26**	**192**	P	**Pn**	**17 06 19.2**	**-0.5**
TUWZ	**Tuamarina**	**2.41**	**55**	P	**Pn**	**17 06 21.7**	**-0.2**
WKZ	**Wanaka**	**2.59**	**219**	P	**Pn**	**17 06 23.2**	**-1.2**
TCW	**Tory Channel**	**2.74**	**55**	P	**Pn**	**17 06 26.1**	**-0.3**
EAZ	**Earnscleugh**	**2.79**	**210**	P	**Pn**	**17 06 25.8**	**-1.3**
DUWZ	**D'Urville Isla**	**2.82**	**45**	P	**Pn**	**17 06 27.8**	**+0.4**
SNZO	**South Karori**	**2.95**	**60**	P	**Pn**	**17 06 30.1**	**+0.9**
HHSZ	**Highcliff Hill**	**3.09**	**189**	P	**Pn**	**17 06 30.4**	**-0.7**
CAW	**Cannon Point**	**3.29**	**60**	P	**Pn**	**17 06 32.6**	**-1.3**
KIW	**Kapiti Island**	**3.33**	**55**	P	**Pn**	**17 06 33.3**	**-1.2**
MLZ	**Mavora Lakes**	**3.42**	**221**	P	**Pn**	**17 06 34.4**	**-1.2**
OGWZ	**Otaki Gorge**	**3.52**	**56**	P	**Pn**	**17 06 35.4**	**-1.6**
HOWZ	**Holdsworth Sta**	**3.69**	**60**	P	Pn	17 06 44.8	+5.5
MRZ	**Mangatainoka R**	**3.86**	**57**	P	**Pn**	**17 06 40.7**	**-1.0**
NMEZ	**Namu Road**	**3.93**	**30**	P	**Pn**	**17 06 43.5**	**+0.9**
SYZ	**Scrubby Hill**	**4.01**	**202**	P	**Pn**	**17 06 42.3**	**-1.4**
SYZ	**Scrubby Hill**	**4.01**	**202**	P	**Pn**	**17 06 42.9**	**-0.7**
NBEZ	**Newall Road No**	**4.06**	**29**	P	**Pn**	**17 06 45.0**	**+0.6**
KHEZ

MMO1	**Montemonaco**	**0.12**	**65**	P	Pg	17 21 20.5	+0.5
MMO1				S	Sg	17 21 22.9	+1.0
T1216	**Preci, Frazion**	**0.12**	**290**	P	Pg	17 21 20.6	+0.5
T1216				S	Sg	17 21 22.9	+1.0
T1216				END			
T1202	**Accumoli, Fraz**	**0.15**	**167**	P	Pg	17 21 21.1	+0.7
T1202				S	Sg	17 21 23.9	+1.3
T1204	**Amatrice, Fraz**	**0.20**	**149**	P	Pg	17 21 22.2	+0.9
T1217	**Poggiodomo (PG**	**0.23**	**233**	P	Pg	17 21 22.7	+0.9
T1217				S	Sg	17 21 26.5	+1.6
T1215	**Vallo di Nera,**	**0.23**	**259**	P	Pg	17 21 22.6	+0.7
T1215				S	Sg	17 21 26.6	+1.5
GUMA	**Gualdo di Mace**	**0.24**	**28**	P	Pg	17 21 23.3	+1.1
GUMA				S	Sg	17 21 28.0	+2.6
T1243	**Rocca Santa Ma**	**0.25**	**127**	P	Pg	17 21 22.9	+0.6
T1243				S	Sg	17 21 27.2	+1.6
CESI	**CESI - Serrava**	**0.26**	**308**	P	Pg	17 21 23.1	+0.8
CESI				S	Sb	17 21 27.5	-1.4
LNSS	**Leonessa**	**0.27**	**203**	P	Pg	17 21 23.2	+0.7
LNSS				S	Sb	17 21 27.9	-1.2
LNSS				AML	AML		
	comp=E,117μm,0.2s						
LNSS				AML	AML		
	comp=N,109μm,0.2s						
LNSS				AML	AML		
	comp=E,117μm,0.2s						
LNSS				AML	AML		
	comp=N,109μm,0.2s						
TERO	**Teramo**	**0.39**	**125**	P	Pg	17 21 25.3	+0.5
TERO				S	Sb	17 21 31.6	-1.0
TERO				AML	AML		
	comp=E,43μm,0.1s						
TERO				AML	AML		
	comp=N,37μm,0.3s						
TERO				AML	AML		
	comp=N,37μm,0.3s						
TERO				AML	AML		
	comp=E,43μm,0.1s						
T1211	**Morro Reatino**	**0.39**	**217**	P	Pb	17 21 26.1	-0.5
T1211				S	Sb	17 21 32.0	-0.9
T1211	**Morro Reatino**	**0.39**	**217**	S	Sb	17 21 33.0	+0.1

IDC 18 17:23:07.6±3.6, 22°.63N×12°.24W, h0km, mbtmp3.5/2, ML3.4/2, Error ellipse: s-maj=124.1km s-min=62.3km az=64.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.26**	**123**	Pn	Pn	17 26 57.2	-0.3
	0.1nm,0.3s,baz=310,slow=12,SNR=1.7						
	0.2nm,0.5s						
DBIC	**Dimbokro**	**17.39**	**155**	P	Pn	17 27 12.2	+0.4
	0.3nm,0.3s,baz=306,slow=8.7,SNR=1.9						
	3.1nm,0.9s						
I48TN	**KESRA INFRASON**	**22.88**	**50**	I		19 44 10.0	
	baz=239,slow=306,SNR=1.5						
ASAR	**Alice Springs**	**148.89**	**99**	PKPbc	PKPbc	17 42 57.5	-0.6
	0.4nm,0.9s,baz=253,slow=1.3,SNR=4.3						

MAN 18 17:33:52.8, 7°.68N×126°.16E, h12km, mb4.2, ML3.0, MS2.7, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.73**	**172**	↓eP	Pb	17 34 08.2	+0.7
MATI				eS	Sn	17 34 20.0	-0.1
BUKP	**Musuan**	**1.10**	**280**	↑eP	Pb	17 34 13.8	-0.1
BUKP				iS	Sn	17 34 30.5	+1.1
KCP	**Kidapawan**	**1.25**	**238**	↓eP	Pb	17 34 16.5	+0.1
DDMP	**Don Marcelino,**	**1.62**	**196**	↓eP	Pn	17 34 20.9	-0.4
DDMP				eS	Sn	17 34 42.4	+0.2
CGP	**Cagayan de Oro**	**1.64**	**298**	↑eP	Pn	17 34 20.9	-0.6
CGP				eS	Sn	17 34 42.9	+0.3
CTBH	**Cotabato--PC H**	**1.95**	**257**	↑iP	Pg	17 34 30.6	+0.4
CTBH				iS	Sb	17 34 51.8	-0.7
TABP	**Talibon, Bohol**	**3.00**	**323**	↓iP	Pn	17 34 39.6	-0.5
TABP				iS	Sn	17 35 14.2	-2.0

*IDC **18** 17:54:45.9±3.3, 30°.36S×177°.53W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=67.3km s-min=31.3km az=112.0*
*NEIC **18** 17:54:50.4±1.7, 30°.21S±0°.06×177°.8W±0°.3, h10km±2km, mb4.2/7, Error ellipse: s-maj=38.4km s-min=8.5km az=79.0*
ISC 18 17:54:47.0±2.2, 30°.30S±0°.07×177°.5W±0°.3, h10km, n15, σ1°.00/15, mb4.0/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.11**	**341**	Pn	**Pn**	**17 55 09.4**	**+0.8**
	95nm,0.3s,baz=360,slow=22,SNR=11						
RAO				Sn	**Sn**	**17 55 22.4**	**-1.5**
	494nm,0.3s,baz=48,slow=22,SNR=20						
RAO	**Raoul Island**	**1.11**	**341**		**Pn**	**17 55 09.4**	**+0.8**
RAO				Sg	**Sb**	**17 55 22.0**	**-0.8**
CMWZ	**Cape Campbell**	**13.24**	**208**	Pn	**Pn**	**17 57 53.6**	**-1.3**
CTA	**Charters Tower**	**34.21**	**279**	P	**P**	**18 01 34.4**	**+1.4**
	1.8nm,0.8s,baz=96,slow=12,SNR=1.5						
	1.8nm,0.8s						
CTAO	**Charters Tower**	**34.21**	**279**	P	**P**	**18 01 34.9**	**+1.9**
CTAO				IAmb	IAmb	18 01 48.9	
	comp=Z,7.5nm,1.2s						
AS31	**Alice Springs**	**43.55**	**267**	P	**P**	**18 02 50.9**	**-0.4**
AS31				IAmb	IAmb	18 03 17.4	
	comp=Z,2.1nm,1.4s						
ASAR	**Alice Springs**	**43.55**	**267**	P	**P**	**18 02 51.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=107,slow=7.4,SNR=16						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**43.55**	**267**		**P**	**18 02 50.9**	**-0.3**
WB2	**Warramunga Arr**	**44.52**	**272**	P	**P**	**18 02 59.0**	**0.0**
WB2				IAmb	IAmb	18 03 21.9	
	comp=Z,6.9nm,1.2s						
WRA	**Warramunga Arr**	**44.53**	**272**	P	**P**	**18 02 58.9**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=110,slow=8.0,SNR=20						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.53**	**272**	P	**P**	**18 02 59.3**	**+0.1**
CASY	**Casey**	**55.43**	**208**	P	**P**	**18 04 21.3**	**+0.1**
QSPA	**South Pole Qui**	**59.81**	**180**	P	P	18 04 57.6	+5.3
QSPA				IAmb	IAmb	18 05 01.7	
	comp=Z,2.7nm,1.1s						
BELA	**Belgrano 2**	**69.82**	**172**	P	P	18 06 09.7	+12
FINES	**FINESS Array B**	**145.20**	**340**	PKPbc	**PKPab**	**18 14 23.5**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=74,slow=5.1,SNR=7.8						

*WEL **18** 18:12:43.7±1.0, 37°S±4°×17°9E±°, h5km, M3.5/16, ML3.8/19, MLv3.5/16, Error ellipse: s-maj=0.0km s-min=0.0km az=102.1*
*NOU **18** 18:12:47.0, 36°.99S×178°.87E, h4km, MLv3.8/8, Off E. Coast of N. Island, N.Z.*
ISC 18 18:12:43.1±3.0, 37°.00S±0°.08×179°.2E±0°.1, h5km±13km, n68, σ0°.97/75, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.94**	**233**	P	**Pg**	**18 13 01.0**	**-0.1**
MXZ				S	**Sg**	**18 13 12.9**	**-0.3**
MXZ	**Matakaoa Point**	**0.94**	**233**	P	**Pg**	**18 13 01.2**	**+0.1**
WMGZ	**Waiomatatini S**	**1.05**	**218**	P	**Pn**	**18 13 05.4**	**+0.9**
WMGZ				S	**Sn**	**18 13 20.6**	**+1.0**
PKGZ	**Pakihiroa**	**1.29**	**226**	P	**Pb**	**18 13 07.5**	**-0.3**
PKGZ				S	**Sn**	**18 13 25.3**	**-0.1**
PUZ	**Puketiti**	**1.33**	**216**	P	**Pg**	**18 13 08.9**	**+0.3**
PUZ				S	**Sn**	**18 13 25.7**	**-0.8**
HAZ	**Te Kaha**	**1.39**	**236**	P	**Pn**	**18 13 08.2**	**-0.9**
HAZ				S	**Sg**	**18 13 28.9**	**+1.1**
TWGZ	**Tauwhareparae**	**1.55**	**220**	P	**Pb**	**18 13 12.4**	**+0.1**
TWGZ				S	**Sn**	**18 13 32.0**	**+0.2**
RUGZ	**Raukumara Rang**	**1.58**	**232**	P	**Pb**	**18 13 12.4**	**-0.4**
RUGZ				S	**Sg**	**18 13 34.4**	**+0.6**
CNGZ	**Carnagh Statio**	**1.70**	**209**	P	**Pb**	**18 13 14.7**	**-0.1**
WIZ	**White Island**	**1.72**	**251**	P	**Pb**	**18 13 13.8**	**-1.4**
TKGZ	**Te Karaka**	**1.82**	**217**	P	**Pn**	**18 13 13.9**	**-1.1**
MWZ	**Matawai**	**1.91**	**225**	P	**Pn**	**18 13 16.8**	**+0.5**
WHRZ	**Whale Island**	**2.00**	**244**	P	**Pb**	**18 13 18.3**	**-1.7**
RIGZ	**Rimuhau**	**2.07**	**214**	P	**Pn**	**18 13 18.8**	**+0.3**
RAGZ	**Rawiri**	**2.08**	**224**	P	**Pn**	**18 13 19.4**	**+0.7**
URZ	**Urewera**	**2.11**	**233**	P	**Pn**	**18 13 19.4**	**+0.3**
URZ	**Urewera**	**2.11**	**233**	P	**Pn**	**18 13 19.8**	**+0.8**
MARZ	**Manawahe**	**2.27**	**243**	P	**Pn**	**18 13 21.5**	**+0.2**
SNGZ	**Shannon Statio**	**2.33**	**220**	P	**Pn**	**18 13 22.5**	**+0.3**
KNZ	**Kokohu**	**2.37**	**211**	P	**Pn**	**18 13 22.3**	**-0.3**
MHGZ	**Mahia Peninsul**	**2.40**	**206**	P	**Pn**	**18 13 23.3**	**+0.3**
RTZ	**Ruatahuna**	**2.41**	**227**	P	**Pn**	**18 13 23.4**	**+0.1**
MUGZ	**Murupara**	**2.46**	**232**	P	**Pn**	**18 13 24.1**	**+0.2**
RAHZ	**Arahi**	**2.56**	**221**	P	**Pn**	**18 13 26.2**	**+0.8**
KARZ	**Kaharoa**	**2.59**	**246**	P	**Pn**	**18 13 26.4**	**+0.7**
MTHZ	**Maungataniwha**	**2.65**	**225**	P	**Pn**	**18 13 26.9**	**+0.3**
ALRZ	**Allen Road**	**2.78**	**235**	P	**Pn**	**18 13 28.4**	**+0.1**
KUZ	**Kuaotunu**	**2.83**	**274**	P	**Pn**	**18 13 27.3**	**-1.7**
KUZ	**Kuaotunu**	**2.83**	**274**	P	**Pn**	**18 13 27.9**	**-1.1**
NMHZ	**Naumai**	**2.85**	**222**	P	**Pn**	**18 13 29.7**	**+0.5**
ARHZ	**Aropaoanui**	**2.87**	**217**	P	**Pn**	**18 13 29.9**	**+0.3**
MRHZ	**Matea Rd**	**2.89**	**230**	P	**Pn**	**18 13 30.0**	**+0.2**
BKZ	**Black Stump Fm**	**3.07**	**224**	P	**Pn**	**18 13 32.0**	**-0.3**
BKZ	**Black Stump Fm**	**3.07**	**224**	P	**Pn**	**18 13 32.7**	**+0.4**
TOZ	**Tahuroa Road**	**3.07**	**255**	P	**Pn**	**18 13 31.4**	**-0.8**
GRZ	**Great Barrier**	**3.13**	**283**	P	**Pn**	**18 13 32.9**	**-0.2**
CKHZ	**Cape Kidnapper**	**3.16**	**212**	P	**Pn**	**18 13 32.6**	**-0.9**
MKAZ	**Moumakai**	**3.27**	**267**	P	**Pn**	**18 13 33.5**	**-1.4**
WIAZ	**Waiheke Island**	**3.30**	**272**	P	**Pn**	**18 13 34.8**	**-0.6**
KAHZ	**Kahuranaki**	**3.36**	**213**	P	**Pn**	**18 13 35.1**	**-1.2**
ETAZ	**East Tamaki Re**	**3.46**	**269**	P	**Pn**	**18 13 38.3**	**+0.7**
MBAZ	**Motutapu North**	**3.49**	**272**	P	**Pn**	**18 13 38.0**	**0.0**
TMVZ	**Te Maari**	**3.50**	**232**	P	**Pn**	**18 13 38.0**	**-0.4**
ETVZ	**East Tongariro**	**3.51**	**231**	P	**Pn**	**18 13 38.4**	**0.0**
BHHZ	**Black Hill Sta**	**3.53**	**224**	P	**Pn**	**18 13 38.5**	**-0.1**
ABAZ	**Army Bay**	**3.56**	**275**	P	**Pn**	**18 13 39.3**	**+0.3**
NNVZ	**North Ngauruho**	**3.57**	**232**	P	**Pn**	**18 13 39.9**	**+0.6**
NGZ	**Ngauruhoe**	**3.60**	**232**	P	**Pn**	**18 13 39.9**	**+0.1**
MOVZ	**Moawhango**	**3.65**	**228**	P	**Pn**	**18 13 39.6**	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.68**	**268**	P	**Pn**	**18 13 40.8**	**+0.1**
WNVZ	**Wahianoa**	**3.70**	**230**	P	**Pn**	**18 13 40.8**	**-0.2**
WTAZ	**Waitaruna**	**3.74**	**270**	P	**Pn**	**18 13 42.3**	**+0.9**
PNHZ	**Pukenui**	**3.77**	**218**	P	**Pn**	**18 13 40.8**	**-1.1**
HIZ	**Hauiti**	**3.79**	**245**	P	**Pn**	**18 13 43.1**	**+1.0**
HIZ	**Hauiti**	**3.79**	**245**	P	**Pn**	**18 13 43.2**	**+1.0**
PKVZ	**Pokaka**	**3.83**	**232**	P	**Pn**	**18 13 42.3**	**-0.5**
TSZ	**Takapari Road**	**4.00**	**219**	P	**Pn**	**18 13 43.5**	**-1.5**
DVHZ	**Dannevirke**	**4.08**	**215**	P	**Pb**	**18 13 52.9**	**-2.6**
WCZ	**Waipu Caves**	**4.09**	**284**	P	**Pn**	**18 13 46.2**	**-0.1**
VRZ	**Vera Road**	**4.13**	**238**	P	**Pn**	**18 13 47.7**	**+0.9**
WAZ	**Wanganui**	**4.33**	**229**	P	**Pn**	**18 13 50.0**	**+0.3**
NEZ	**North Egmont**	**4.65**	**239**	P	**Pn**	**18 13 57.4**	**+3.4**
KHEZ	**Kahui Hut**	**4.72**	**239**	P	**Pn**	**18 13 58.0**	**+3.0**
KHEZ	**Kahui Hut**	**4.72**	**239**	P	**Pn**	**18 13 56.2**	**+1.2**
OUZ	**Omahuta**	**4.90**	**290**	P	**Pn**	**18 13 58.0**	**+0.6**
OUZ	**Omahuta**	**4.90**	**290**	P	**Pn**	**18 13 58.2**	**+0.8**
KHZ	**Kahutara**	**6.97**	**217**	P	**Pn**	**18 14 27.9**	**+2.1**
	35nm,1.5s						
CTZ	**Chatham Island**	**7.44**	**156**	P	**Pn**	**18 14 32.7**	**+0.5**

*DJA **18** 18:18:08.4±0.3, 1°S±3°×12°4E±°, h10km, M4.0/10, mb4.4/1, MLv3.9/10*
*IDC **18** 18:18:19.5±6.5, 0°.91S×122°.96E, h111km±61km, mb3.0/3, mbtmp3.4/4, Error ellipse: s-maj=55.2km s-min=24.7km az=51.0*
ISC 18 18:18:07.6±0.8, 1°.03S±0°.05×123°.87E±0°.04, h10km, n13, σ2°.51/20, mb3.2/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.09**	**269**	P	**Pg**	**18 18 28.4**	**-0.2**
LUWI				S	**Sg**	**18 18 43.1**	**+0.2**
GTOI	**Gorontalo**	**1.86**	**333**	P	**Pg**	**18 18 43.0**	**-0.3**
GTOI				S	**Sg**	**18 19 07.5**	**+0.1**
APSI	**Ampana**	**2.22**	**273**	P	**Pn**	**18 18 45.2**	**+0.7**
APSI				S	**Sg**	**18 19 22.1**	**+3.1**
MRSI	**Marisa**	**2.44**	**308**	P	**Pn**	**18 18 48.5**	**+1.1**
MRSI				S	**Sn**	**18 19 16.5**	**-0.8**
LBMI	**Labuha**	**3.66**	**84**	P	**Pn**	**18 19 05.7**	**+1.4**
LBMI				S	**Sn**	**18 19 47.3**	**-0.2**
NLAI	**Namlea**	**3.91**	**124**	P	**Pn**	**18 19 08.0**	**+0.3**
NLAI				S	**Sn**	**18 19 50.7**	**-3.0**
MPSI	**Mapaga**	**4.19**	**289**	P	**Pn**	**18 19 12.3**	**+0.7**
TTSI	**Tana Toraja**	**4.51**	**244**	P	**Pn**	**18 19 16.8**	**+0.8**
SPSI	**Sidrap Palu**	**5.03**	**234**	P	**Pn**	**18 19 24.0**	**+0.9**
KAPI	**Kappang**	**5.71**	**226**	P	**Pn**	**18 19 32.8**	**+0.3**
	3.3nm,0.4s,baz=7.3,slow=5.6,SNR=11						
KAPI				S	**Sn**	**18 20 34.8**	**-3.3**
	5.9nm,0.3s,baz=212,slow=17,SNR=2.5						
WRA	**Warramunga Arr**	**21.41**	**152**	P	P	18 23 04.2	+8.3
	0.8nm,0.7s,baz=326,slow=11,SNR=5.7						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**24.52**	**157**	P	**P**	**18 23 34.7**	**+7.2**
	0.4nm,0.8s,baz=335,slow=11,SNR=3.2						
ASAR				PcP	**PcP**	**18 27 03.1**	**-2.9**
	0.7nm,1.1s,baz=341,slow=1.8,SNR=4.6						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**59.93**	**328**	P	**P**	**18 28 10.8**	**-3.2**
	0.2nm,0.3s,baz=125,slow=8.6,SNR=5.3						
	0.2nm,0.3s						

*NEIC **18** 18:21:40.5±1.5, 10°.1S±0°.2×166°.3E±0°.2, h148km±14km, mb4.3/13, Error ellipse: s-maj=31.2km s-min=16.9km az=213.0*
*IDC **18** 18:21:49.3±2.5, 10°.69S×165°.93E, h191km±23km, mb3.5/8, mbtmp4.2/11, Error ellipse: s-maj=20.7km s-min=16.9km az=165.0*
*NOU **18** 18:22:27.2, 13°.67S×167°.11E, h123km, mb4.3/8, Vanuatu Islands*
ISC 18 18:21:45.1±0.7, 10°.59S±0°.08×165°.92E±0°.08, h155km, n38, σ1°.85/41, mb4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.99**	**281**	P	**Pn**	**18 23 16.0**	**+4.2**
	416nm,0.4s,baz=346,slow=12,SNR=5.0						
HNR				S	**Sn**	**18 24 16.3**	**-3.3**
	494nm,0.4s,baz=115,slow=13,SNR=2.4						
HNR	**Honiara**	**5.99**	**281**		**Pn**	**18 23 13.0**	**+1.2**
KOUNC	**Koumac, New Ca**	**10.03**	**189**	Pn	**Pn**	**18 24 07.6**	**+2.2**
KOUNC	**Koumac, New Ca**	**10.03**	**189**	P	P	18 24 11.9	-3.6
DZM	**Mont Dzumac**	**11.43**	**178**	P	**Pn**	**18 24 26.3**	**+2.4**
	13nm,0.5s,baz=351,slow=11,SNR=34						
DZM				S	**Sn**	**18 26 27.3**	**-3.1**
	3.5nm,0.3s,baz=131,slow=19,SNR=3.3						
DZM	**Mont Dzumac**	**11.43**	**178**		**Pn**	**18 24 25.2**	**+1.2**
DZM	**Mont Dzumac**	**11.43**	**178**	P	**Pn**	**18 24 25.6**	**+1.7**
YATNC	**Mamie plateau,**	**11.44**	**175**	P	**Pn**	**18 24 24.1**	**+0.1**
NOUC	**Port Laguerre**	**11.45**	**178**	P	**Pn**	**18 24 26.9**	**+2.7**
ONTNC	**Ouen Toro**	**11.66**	**178**	Pn	**Pn**	**18 24 28.5**	**+1.6**
ONTNC	**Ouen Toro**	**11.66**	**178**	P	**Pn**	**18 24 29.4**	**+2.5**
OUENC	**Ouen Island, N**	**11.79**	**176**	Pn	**Pn**	**18 24 30.2**	**+1.6**
OUENC	**Ouen Island, N**	**11.79**	**176**	P	**Pn**	**18 24 30.5**	**+1.9**
MSVF	**Nonsavu**	**13.74**	**122**	P	**P**	**18 24 57.6**	**+0.4**
	4.0nm,0.5s,baz=265,slow=14,SNR=6.1						
RABL	**Rabaul**	**15.04**	**294**	Pn	**Pn**	**18 25 05.0**	**-5.0**
RABL				IAmb	IAmb	18 25 06.6	
	comp=Z,10nm,0.7s						
EIDS	**Eidsvold**	**20.34**	**222**	P	**P**	**18 26 10.4**	**+1.0**
EIDS				IAmb	IAmb	18 26 42.1	
	comp=Z,14nm,1.3s						
CTA	**Charters Tower**	**21.16**	**241**	P	**P**	**18 26 20.1**	**+1.8**
	comp=Z,2.8nm,0.4s,baz=76,slow=11,SNR=6.5						
	comp=Z,2.8nm,0.4s						
CTAO	**Charters Tower**	**21.16**	**241**	P	**P**	**18 26 19.4**	**+1.1**
ARMA	**Armidale**	**23.79**	**212**	P	**P**	**18 26 44.3**	**+0.5**
ARMA				IAmb	IAmb	18 26 53.0	
	comp=Z,9.5nm,1.2s						
MXZ	**Matakaoa Point**	**29.08**	**159**	P	**P**	**18 27 29.5**	**-1.5**
URZ	**Urewera**	**29.32**	**162**	P	**P**	**18 27 31.9**	**-1.3**
	comp=Z,4.8nm,0.3s,baz=94,slow=5.3,SNR=3.0						
	comp=Z,4.8nm,0.3s						
STKA	**Stephens Creek**	**30.88**	**223**	P	**P**	**18 27 47.2**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=40,slow=12,SNR=3.6						
	comp=Z,1.8nm,0.5s						
BFZ	**Birch Farm**	**31.33**	**165**	P	**P**	**18 27 48.1**	**-2.7**
WR0	**Warramunga Arr**	**31.61**	**249**	P	**P**	**18 27 54.1**	**+0.5**
WR0				IAmb	IAmb	18 28 32.8	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**31.71**	**250**	P	**P**	**18 27 55.1**	**+0.6**
WB0				IAmb	IAmb	18 28 37.6	
	comp=Z,7.3nm,1.4s						
MSWZ	**Moikau Station**	**31.79**	**167**	P	**P**	**18 27 54.0**	**-0.9**
WRA	**Warramunga Arr**	**31.80**	**249**	P	**P**	**18 27 55.9**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=83,slow=9.0,SNR=18						
WRA				PcP	**PcP**	**18 30 42.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=73,slow=3.1,SNR=5.9						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**31.80**	**249**	P	**P**	**18 27 54.6**	**-0.6**
KHZ	**Kahutara**	**32.40**	**169**	P	**P**	**18 27 59.9**	**-0.3**
ASAR	**Alice Springs**	**33.15**	**243**	P	**P**	**18 28 07.0**	**0.0**
	comp=Z,1.0nm,0.8s,baz=64,slow=10,SNR=19						
ASAR				PcP	**PcP**	**18 30 46.4**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=80,slow=2.6,SNR=7.9						
	comp=Z,1.0nm,0.8s						
BBOO	**Buckleboo**	**35.26**	**227**	P	**P**	**18 28 25.7**	**+0.7**
KNRA	**Kununurra**	**36.50**	**258**	P	**P**	**18 28 36.7**	**+0.9**
KNRA				IAmb	IAmb	18 28 49.0	
	comp=Z,13nm,1.2s						
CMAR	**Chiang Mai Arr**	**72.09**	**293**	P	**P**	**18 32 54.7**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=134,slow=5.2,SNR=2.3						
	comp=Z,0.3nm,0.5s						
QSPA	**South Pole Qui**	**79.41**	**180**	P	**P**	**18 33 32.4**	**-1.6**
QSPA				IAmb	IAmb	18 33 33.0	
	comp=Z,7.8nm,1.4s						
ILAR	**Eielson Array**	**83.03**	**18**	P	**P**	**18 33 53.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=230,slow=5.1,SNR=17						
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**85.61**	**50**	P	**P**	**18 34 07.0**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=229,slow=5.1,SNR=4.5						
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**115.94**	**346**	PKP	**PKPdf**	**18 40 07.9**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=63,slow=1.9,SNR=7.6						
ESDC	**Sonseca Array**	**149.67**	**344**	PKPbc	**PKPbc**	**18 41 16.5**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=40,slow=1.7,SNR=4.7						

WEL 18 18:25:16.9±1.2, 38°S±5°×17°9E±°, h20km±5km, M2.6/9, ML2.9/9, MLv2.6/9, Error ellipse: s-maj=0.0km s-min=0.0km az=106.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**0.48**	**293**	P	Pb	18 25 27.0	+0.3
PUZ				S	Sn	18 25 35.3	-1.3
PUZ	**Puketiti**	**0.48**	**293**	P	Pb	18 25 26.8	0.0
PUZ				S	Sn	18 25 35.4	-1.3
CNGZ	**Carnagh Statio**	**0.53**	**245**	P	Pn	18 25 28.7	-0.6
CNGZ	**Carnagh Statio**	**0.53**	**245**	P	Pn	18 25 28.8	-0.5
CNGZ				S	Sn	18 25 37.9	+0.2
WMGZ	**Waiomatatini S**	**0.55**	**324**	P	Pb	18 25 28.7	+0.8
WMGZ	**Waiomatatini S**	**0.55**	**324**	P	Pb	18 25 28.7	+0.8
WMGZ				S	Sn	18 25 36.9	-1.2
TWGZ	**Tauwhareparae**	**0.67**	**277**	P	Pb	18 25 30.2	+0.2
TWGZ				S	Sn	18 25 40.8	-0.4
TWGZ	**Tauwhareparae**	**0.67**	**277**	P	Pb	18 25 30.4	+0.4
TWGZ				S	Sn	18 25 40.6	-0.6
PKGZ	**Pakihiroa**	**0.70**	**303**	P	Pb	18 25 30.6	+0.2
PKGZ				S	Sn	18 25 40.9	-1.1
PKGZ	**Pakihiroa**	**0.70**	**303**	P	Pb	18 25 30.6	+0.2
PKGZ				S	Sn	18 25 41.0	-0.9
TKGZ	**Te Karaka**	**0.78**	**257**	P	Pb	18 25 32.2	+0.3
TKGZ				S	Sn	18 25 44.0	0.0
MXZ	**Matakaoa Point**	**0.81**	**330**	P	Pn	18 25 33.0	-0.2
MXZ				S	Sn	18 25 45.5	+0.9
MXZ	**Matakaoa Point**	**0.81**	**330**	P	Pn	18 25 32.9	-0.3
MXZ				S	Sn	18 25 46.2	+1.6
RIGZ	**Rimuhau**	**0.94**	**242**	P	Pb	18 25 34.5	-0.1
RIGZ				S	Sn	18 25 48.0	+0.1
RIGZ	**Rimuhau**	**0.94**	**242**	P	Pb	18 25 34.3	-0.2
RIGZ				S	Sn	18 25 47.7	-0.2
RUGZ	**Raukumara Rang**	**0.95**	**288**	P	Pb	18 25 34.3	-0.5
RUGZ				S	Sb	18 25 47.2	+0.2
RUGZ	**Raukumara Rang**	**0.95**	**288**	P	Pb	18 25 34.6	-0.1
RUGZ				S	Sb	18 25 47.5	+0.6
HAZ	**Te Kaha**	**0.96**	**302**	P	Pb	18 25 34.5	-0.4
HAZ				S	Sb	18 25 47.7	+0.5
MWZ	**Matawai**	**1.02**	**266**	P	Pb	18 25 35.4	-0.5
MWZ				S	Sb	18 25 49.2	+0.3
RAGZ	**Rawiri**	**1.13**	**258**	P	Pb	18 25 38.2	+0.4
SNGZ	**Shannon Statio**	**1.27**	**246**	P	Pb	18 25 40.8	+0.6
SNGZ				S	Sn	18 25 55.1	-0.9
URZ	**Urewera**	**1.34**	**270**	P	Pn	18 25 40.7	+0.2
URZ				S	Sb	18 25 59.0	+0.8
URZ	**Urewera**	**1.34**	**270**	P	Pn	18 25 40.4	-0.2
URZ				S	Sb	18 25 58.4

*MOS **18** 19:22:46.4±1.3,38.°44N×43.°66E,h12km,mb4.4/21,Error ellipse: s-maj=5.6km s-min=4.0km az=92.1*
*DDA **18** 19:22:47.9±0.0,38.°63N×43.°74E,h12km±1km,MW4.1*
*TEH **18** 19:22:47.2,38.°66N×43.°63E,h11km,ML4.2*
*NEIC **18** 19:22:48.6±1.9,38.°66N±0.°05×43.°53E±0.°05,h10km±1km, mb4.3/40,ML4.1(ISK),Error ellipse: s-maj=9.4km s-min=4.2km az=145.0*
*AZER **18** 19:22:49.1±0.1,38.°79N×43.°88E,h9km±1km,Error ellipse: s-maj=2.1km s-min=1.3km az=236.0*

ISC 18 19:22:48.0±0.8,38.°65N±0.°01×43.°65E±0.°01,h12km±5km, n321,σ1°83/364,mb4.2/53,MS3.0/7,17C-15D,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.21**	**256**		PG	**Pg**	**19 22 52.4**	**-0.3**
VANB	**Van**	**0.21**	**256**	*e*Pg	**Pg**	**Pg**	**19 22 52.7**	**0.0**
TVAN	**Van**	**0.23**	**239**	P	**Pg**	**Pg**	**19 22 52.9**	**-0.1**
TVAN				S	**Sg**	**Sg**	**19 22 58.6**	**+2.3**
OZAP	**Van, Ozalp-Mer**	**0.27**	**87**	P	**Pg**	**Pg**	**19 22 52.8**	**-0.8**
OZAP				S	**Sb**	**Sb**	**19 22 59.1**	**-0.5**
OZAP				*i* AML	AML	AML	19 23 01.0	
	comp=N,2μm,0.8s							
OZAP				*i* AML	AML	AML	19 23 01.0	
	comp=E,3μm,0.6s							
VMUR	**Van-Muradiye**	**0.35**	**350**	P	**Pg**	**Pg**	**19 22 53.8**	**-1.3**
VMUR				S	**Sb**	**Sb**	**19 23 01.5**	**-0.4**
VANT	**Van**	**0.38**	**234**	P	**Pg**	**Pg**	**19 22 52.7**	**-3.0**
CLDR	**Caldiran**	**0.54**	**23**	PG	**Pg**	**Pg**	**19 22 56.2**	**-2.4**
CLDR				SG	**Sb**	**Sb**	**19 23 05.2**	**-2.2**
GEVA	**Gevas**	**0.57**	**235**	Pg	**Pg**	**Pg**	**19 22 58.2**	**-1.0**
GEVA				Sg	**Sg**	**Sg**	**19 23 03.0**	**-3.9**
GEVA	**Gevas**	**0.57**	**235**	*e*Pn	**Pg**	**Pg**	**19 22 58.2**	**-1.0**
GEVA	**Gevas**	**0.57**	**235**	P	**Pg**	**Pg**	**19 22 58.4**	**-0.9**
GEVA				S	**Sn**	**Sn**	**19 23 09.7**	**-2.0**
AKDM	**Akdamar-Van**	**0.62**	**239**	PG	**Pb**	**Pb**	**19 22 59.4**	**-1.5**
AKDM	**Akdamar-Van**	**0.62**	**239**	*e*Pg	**Pb**	**Pb**	**19 22 59.4**	**-1.5**
ADCV	**BITLIS_Adilcev**	**0.74**	**283**	*e*Pn	**Pb**	**Pb**	**19 23 01.9**	**-1.1**
ADCV	**BITLIS_Adilcev**	**0.74**	**283**	P	**Pb**	**Pb**	**19 23 02.0**	**-1.1**
ADCV				S	**Sn**	**Sn**	**19 23 14.5**	**-1.5**
ADCV				*i* AML	AML	AML	19 23 15.0	
	comp=N,5μm,0.6s							
ADCV				*i* AML	AML	AML	19 23 18.0	
	comp=E,5μm,0.7s							
DYDN	**Diyadin**	**0.90**	**2**	P	**Pg**	**Pg**	**19 23 03.1**	**-2.3**
DYDN				S	**Sb**	**Sb**	**19 23 17.0**	**-0.7**
MLAZ	**Malazgirt-MUS**	**0.99**	**300**	PG	**Pg**	**Pg**	**19 23 06.0**	**-1.2**
MLAZ				SG	**Sn**	**Sn**	**19 23 21.5**	**-0.5**
MLAZ	**Malazgirt-MUS**	**0.99**	**300**	*e*Pn	**Pg**	**Pg**	**19 23 06.0**	**-1.2**
AGRB	**Hanur-Agry**	**1.06**	**331**	PG	**Pg**	**Pg**	**19 23 06.7**	**-1.8**
AGRB				SG	**Sn**	**Sn**	**19 23 23.4**	**-0.4**
AGRB	**Hanur-Agry**	**1.06**	**331**	*e*Pg	**Pg**	**Pg**	**19 23 06.5**	**-2.0**
MAKU	**Maku**	**1.07**	**48**	*e*Sg	**Sn**	**Sn**	**19 23 22.6**	**-1.4**
MAKU				*e*Pg	**Pb**	**Pb**	**19 23 07.4**	**-1.2**
HAKT	**HAKKARI**	**1.09**	**178**	*e*Pn	**Pg**	**Pg**	**19 23 07.6**	**-1.4**
HAKT	**HAKKARI**	**1.09**	**178**	P	**Pg**	**Pg**	**19 23 07.3**	**-1.7**
HAKT				S	**Sn**	**Sn**	**19 23 24.7**	**+0.2**
YOVA	**Hakkari_Yksek**	**1.17**	**154**	*e*Pn	**Pn**	**Pn**	**19 23 09.4**	**-1.1**
YOVA	**Hakkari_Yksek**	**1.17**	**154**	P	**Pb**	**Pb**	**19 23 09.1**	**-1.3**
YOVA				S	**Sn**	**Sn**	**19 23 28.8**	**+2.3**
YOVA				*i* AML	AML	AML	19 23 33.0	
	comp=E,2μm,0.7s							
YOVA				*i* AML	AML	AML	19 23 37.0	
	comp=N,1μm,1.0s							
KOTA	**Agri, Merkez-K**	**1.21**	**343**	P	**Pb**	**Pb**	**19 23 09.1**	**-1.8**
KOTA				S	**Sn**	**Sn**	**19 23 27.8**	**+0.5**
KOTA				*i* AML	AML	AML	19 23 31.0	
	comp=N,3μm,1.0s							
KOTA				*i* AML	AML	AML	19 23 39.0	
	comp=E,2μm,0.8s							
BLIS	**Bitlis-Merkez**	**1.23**	**260**	*e*Pn	**Pn**	**Pn**	**19 23 10.0**	**-1.3**
BLIS	**Bitlis-Merkez**	**1.23**	**260**	P	**Pn**	**Pn**	**19 23 09.9**	**-1.3**
BLIS				S	**Sn**	**Sn**	**19 23 28.3**	**+0.4**
BLIS				*i* AML	AML	AML	19 23 33.0	
	comp=N,3μm,0.4s							
BLIS				*i* AML	AML	AML	19 23 33.0	
	comp=E,2μm,0.4s							
IGDI	**IGDIR**	**1.26**	**15**	P	**Pn**	**Pn**	**19 23 10.2**	**-1.4**
IGDI				S	**Sn**	**Sn**	**19 23 30.8**	**+2.2**
IGDI				*i* AML	AML	AML	19 23 33.0	
	comp=N,4μm,0.9s							
IGDI				*i* AML	AML	AML	19 23 33.0	
	comp=E,5μm,0.8s							
GURO	**Guroymak-BITLI**	**1.27**	**266**	PN	**Pb**	**Pb**	**19 23 10.9**	**-1.2**
GURO				SN	**Sn**	**Sn**	**19 23 30.9**	**+2.0**
GURO	**Guroymak-BITLI**	**1.27**	**266**	P	**Pn**	**Pn**	**19 23 10.4**	**-1.4**
GURO				Sn	**Sb**	**Sb**	**19 23 27.4**	**-1.1**
GURO	**Guroymak-BITLI**	**1.27**	**266**	*e*Pn	**Pn**	**Pn**	**19 23 10.6**	**-1.2**
EKAR	**Karacoban**	**1.38**	**297**	P	**Pb**	**Pb**	**19 23 13.0**	**-1.0**
EKAR				S	**Sg**	**Sg**	**19 23 33.6**	**+1.0**
TASB	**TASBURUN-IGDIR**	**1.41**	**19**	PN	**Pn**	**Pn**	**19 23 12.6**	**-1.1**
TASB	**TASBURUN-IGDIR**	**1.41**	**19**	*e*Pn	**Pn**	**Pn**	**19 23 12.7**	**-1.0**
HYR	**Heyderabad**	**1.42**	**41**	*e*Pn	**Pg**	**Pg**	**19 23 13.9**	**-1.4**
HYR	**Heyderabad**	**1.42**	**41**	P	**Pg**	**Pg**	**19 23 14.0**	**-1.4**
	SNR=130							
HYR				S	**Sg**	**Sg**	**19 23 36.5**	**+2.7**
VNNZ	**Vanand**	**1.46**	**5**	⇑*i*P	**Pg**	**Pg**	**19 23 14.6**	**-1.5**
VNNZ				⇓*i*S	**Sg**	**Sg**	**19 23 38.6**	**+3.5**
EATA	**Eleskirt**	**1.51**	**324**	*e*Pn	**Pb**	**Pb**	**19 23 14.8**	**-1.4**
EATA	**Eleskirt**	**1.51**	**324**	P	**Pn**	**Pn**	**19 23 14.6**	**-0.7**
EATA				S	**Sg**	**Sg**	**19 23 38.9**	**+2.1**
EATA				*i* AML	AML	AML	19 23 40.0	
	comp=N,2μm,0.5s							
EATA				*i* AML	AML	AML	19 23 40.0	
	comp=E,2μm,0.5s							
NAX	**Nakhchivan**	**1.53**	**69**	P	**Pg**	**Pg**	**19 23 15.9**	**-1.5**
NAX	**Nakhchivan**	**1.53**	**69**	*e*Pn	**Pg**	**Pg**	**19 23 15.9**	**-1.5**
NAX	**Nakhchivan**	**1.53**	**69**	P	**Pg**	**Pg**	**19 23 16.0**	**-1.5**
	SNR=244							
NAX				S	**Sg**	**Sg**	**19 23 39.3**	**+2.0**
NRKZ	**NAREK**	**1.56**	**30**	⇓*i*P	**Pb**	**Pb**	**19 23 15.1**	**-1.9**
NRKZ				⇑*i*S	**Sg**	**Sg**	**19 23 39.4**	**+1.1**
ISHB	**Shabestar**	**1.58**	**103**	*e*Pn	**Pn**	**Pn**	**19 23 15.3**	**-0.9**
ISHB				*e*			19 23 22.7	
	comp=Z,26μm,0.4s							
IMRD	**Marand**	**1.61**	**87**	*e*Pg	**Pb**	**Pb**	**19 23 16.6**	**-1.2**
IMRD				*e*			19 23 44.1	
	comp=Z,70μm,0.8s							
SBZ	**Shahbuz**	**1.66**	**63**	*e*Pn	**Pg**	**Pg**	**19 23 17.9**	**-2.0**
SBZ	**Shahbuz**	**1.66**	**63**	P	**Pg**	**Pg**	**19 23 18.0**	**-2.0**
	SNR=894							
SBZ				S	**Sg**	**Sg**	**19 23 42.2**	**+0.8**
MUSM	**Mu-Merkez**	**1.68**	**273**	*e*Pn	**Pb**	**Pb**	**19 23 17.7**	**-1.3**
MUSM	**Mu-Merkez**	**1.68**	**273**	P	**Pb**	**Pb**	**19 23 17.4**	**-1.5**
MUSM				S	**Sg**	**Sg**	**19 23 41.4**	**-0.7**
GNI	**Garni**	**1.72**	**29**	Pn	**Pb**	**Pb**	**19 23 18.7**	**-1.0**
	comp=Z,104nm,0.3s,baz=274,slow=3.2,SNR=393							
GNI				Lg	Lg		19 23 45.7	
	comp=Z,110nm,0.3s,baz=301,slow=21,SNR=23							
GNI	**Garni**	**1.72**	**29**	⇓*i*P	**Pg**	**Pg**	**19 23 19.3**	**-1.8**
GNI				⇑*i*S	**Sg**	**Sg**	**19 23 45.5**	**+2.0**
GNI	**Garni**	**1.72**	**29**	PN	**Pn**	**Pn**	**19 23 17.4**	**-0.6**
GNI	**Garni**	**1.72**	**29**	Pn	**Pb**	**Pb**	**19 23 18.3**	**-1.5**
GNI				Sn	**Sg**	**Sg**	**19 23 42.2**	**-1.2**
GNI	**Garni**	**1.72**	**29**	*d*iP	**Pg**	**Pg**	**19 23 19.0**	**-2.1**
GNI	**Garni**	**1.72**	**29**	*e*Pn	**Pb**	**Pb**	**19 23 18.3**	**-1.5**
DIGO	**Kars**	**1.78**	**353**	*e*Pn	**Pb**	**Pb**	**19 23 18.7**	**-2.1**
DIGO	**Kars**	**1.78**	**353**	P	**Pb**	**Pb**	**19 23 18.6**	**-2.1**
DIGO				S	**Sg**	**Sg**	**19 23 45.8**	**+0.6**
VRTB	**Varto-Mus**	**1.79**	**287**	PN	**Pb**	**Pb**	**19 23 19.2**	**-1.7**
AMBZ	**Amberd**	**1.80**	**15**	⇓*i*P	**Pb**	**Pb**	**19 23 20.2**	**-0.9**
AMBZ				⇑*i*S	**Sg**	**Sg**	**19 23 48.2**	**+2.2**
ORD	**Ordubad**	**1.85**	**81**	*e*Pn	**Pb**	**Pb**	**19 23 20.9**	**-0.9**
ORD	**Ordubad**	**1.85**	**81**	P	**Pb**	**Pb**	**19 23 21.0**	**-0.9**
	SNR=753							
ORD				S	**Sg**	**Sg**	**19 23 46.2**	**-1.3**
KAPZ	**Kaputan**	**1.86**	**25**	⇑*i*P	**Pb**	**Pb**	**19 23 20.7**	**-1.4**
KAPZ				⇓*i*S	**Sg**	**Sg**	**19 23 49.2**	**+1.3**
KOPR	**Koprukoy-ERZUR**	**1.94**	**314**	PN	**Pb**	**Pb**	**19 23 21.2**	**-2.2**
HOMI	**Horasan**	**1.95**	**316**	P	**Pb**	**Pb**	**19 23 22.3**	**-1.3**
HOMI				S	**Sg**	**Sg**	**19 23 50.7**	**0.0**
SVAN	**Silvan-Diyarba**	**1.99**	**256**	PN	**Pb**	**Pb**	**19 23 22.2**	**-2.0**
SVAN	**Silvan-Diyarba**	**1.99**	**256**	*e*Pn	**Pb**	**Pb**	**19 23 22.0**	**-2.2**
ITBZ	**Tabriz**	**2.00**	**101**	*e*Pn	**Pb**	**Pb**	**19 23 22.3**	**-2.2**
BTMN	**Batman**	**2.02**	**249**	P	**Pb**	**Pb**	**19 23 23.3**	**-1.5**
BTMN				S	**Sg**	**Sg**	**19 23 53.7**	**+0.7**
KARS	**Kars**	**2.03**	**348**	PN	**Pn**	**Pn**	**19 23 21.9**	**-0.3**
KARS	**Kars**	**2.03**	**348**		**Pb**	**Pb**	**19 23 23.2**	**-1.7**
KARS	**Kars**	**2.03**	**348**	P	**Pb**	**Pb**	**19 23 23.2**	**-1.7**
EAK	**Akyaka**	**2.04**	**359**	P	**Pb**	**Pb**	**19 23 23.5**	**-1.6**
EAK				S	**Sg**	**Sg**	**19 23 58.2**	**+4.6**
EAK				*i* AML	AML	AML	19 24 14.0	
	comp=Z,1μm,0.9s							
IAZR	**Azarshahr**	**2.07**	**117**	*e*Pn	**Pb**	**Pb**	**19 23 24.2**	**-1.6**
IAZR				*e*			19 23 28.6	
	comp=Z,27μm,0.6s							
SLHN	**Bingol, Solhan**	**2.08**	**279**	P	**Pb**	**Pb**	**19 23 24.1**	**-1.6**
SLHN				S	**Sg**	**Sg**	**19 23 56.3**	**+1.5**
SLHN				*i* AML	AML	AML	19 23 59.0	
	comp=Z,774nm,0.7s							
SLHN				*i* AML	AML	AML	19 24 24.0	
	comp=Z,423nm,1.0s							
KARO	**Karliova-Bingo**	**2.13**	**289**	PN	**Pb**	**Pb**	**19 23 24.3**	**-2.5**
SENK	**Senkaya-Erzuru**	**2.16**	**333**	PN	**Pn**	**Pn**	**19 23 24.1**	**0.0**
MIDY	**Mardin/Midyat-**	**2.17**	**236**	P	**Pb**	**Pb**	**19 23 25.3**	**-2.0**
MIDY				*i* AML	AML	AML	19 24 09.0	
	comp=Z,612nm,0.6s							
MIDY				*i* AML	AML	AML	19 24 11.0	
	comp=Z,524nm,1.0s							
EJDE	**Erzurum, Palan**	**2.17**	**304**	P	**Pb**	**Pb**	**19 23 26.4**	**-1.2**
EJDE				S	**Sg**	**Sg**	**19 24 01.3**	**+3.3**
EJDE				*i* AML	AML	AML	19 24 03.0	
	comp=Z,2μm,0.5s							
EJDE				*i* AML	AML	AML	19 24 16.0	
	comp=Z,968nm,0.7s							
ERZM	**Erzurum**	**2.17**	**306**	P	**Pb**	**Pb**	**19 23 27.2**	**-0.3**
ERZM				S	**Sg**	**Sg**	**19 23 59.2**	**+1.2**
TAB1	**Tabriz**	**2.19**	**105**	*e*Pn	**Pb**	**Pb**	**19 23 26.4**	**-1.3**
TAB1				*e*			19 23 53.1	
	comp=Z,19μm,0.4s							
GRS	**Goris**	**2.25**	**67**	⇑*i*P	**Pg**	**Pg**	**19 23 32.0**	**+0.7**
GRS				⇓*i*S	**Sg**	**Sg**	**19 24 06.0**	**+5.5**
BNGB	**Bingl**	**2.35**	**279**	PN	**Pn**	**Pn**	**19 23 27.3**	**+0.7**
TVRZ	**Varzaqan**	**2.37**	**93**	*e*Pn	**Pb**	**Pb**	**19 23 28.5**	**-2.2**
TVRZ				*e*			19 23 36.8	
	comp=Z,19μm,1.0s							
BINT	**Bingol**	**2.48**	**276**	P	**Pn**	**Pn**	**19 23 27.7**	**-0.8**
MAHB	**Mahabad**	**2.48**	**138**	*e*Pn	**Pb**	**Pb**	**19 23 31.3**	**-1.4**
MAHB				*e*			19 23 51.8	
	comp=Z,6μm,0.5s							
YEDI	**Yedisu-Bingol**	**2.55**	**289**	PN	**Pn**	**Pn**	**19 23 30.2**	**+0.9**
HANI	**Diyarbakir_Han**	**2.56**	**266**	P	**Pb**	**Pb**	**19 23 31.7**	**-2.3**
HANI				*i* AML	AML	AML	19 24 25.0	
	comp=Z,205nm,1.1s							
HANI				*i* AML	AML	AML	19 24 32.0	
	comp=Z,199nm,0.8s							
GDB	**GEDABAY**	**2.63**	**37**	P	**Pb**	**Pb**	**19 23 31.6**	**-3.6**
	SNR=30							
GDB				S	**Sb**	**Sb**	**19 24 07.3**	**-0.2**
MARD	**Mardin**	**2.63**	**241**	Pn	**Pn**	**Pn**	**19 23 31.0**	**+0.5**
IHRS	**Heris**	**2.68**	**96**	*e*Pn	**Pb**	**Pb**	**19 23 33.1**	**-3.0**
IHRS				*e*			19 23 40.2	
	comp=Z,7μm,0.4s							
DMNI	**Dmanisi**	**2.71**	**9**	P	**Pb**	**Pb**	**19 23 33.2**	**-3.4**
IBST	**Bostanabad**	**2.72**	**109**	*e*Pn	**Pb**	**Pb**	**19 23 33.3**	**-3.5**
QZX	**Qazax, Azerbai**	**2.75**	**28**	P	**Pb**	**Pb**	**19 23 34.0**	**-3.1**
	SNR=26							
QZX				S	**Sg**	**Sg**	**19 24 12.3**	**-4.1**
AKH	**Akhalkalaki**	**2.76**	**358**	PN	**Pn**	**Pn**	**19 23 32.6**	**+0.3**
AKH	**Akhalkalaki**	**2.76**	**358**	P	**Pg**	**Pg**	**19 23 38.0**	**-3.0**
MAZI	**Mazidag**	**2.79**	**246**	PN	**Pn**	**Pn**	**19 23 33.2**	**+0.5**
DYBB	**Diyarbakir**	**2.85**	**257**	PN	**Pn**	**Pn**	**19 23 34.3**	**+0.9**
GANJ	**Ganja**	**2.87**	**45**	P	**Pn**	**Pn**	**19 23 35.1**	**+1.5**
GANJ	**Ganja**	**2.87**	**45**	P	**Pn**	**Pn**	**19 23 35.2**	**+1.5**
	SNR=61							
GANJ				S	**Sb**	**Sb**	**19 24 14.2**	**-0.1**
QRD	**Qoradiz**	**2.97**	**73**	P	**Pn**	**Pn**	**19 23 36.4**	**+1.4**
	SNR=82							
QRD				S	**Sb**	**Sb**	**19 24 18.6**	**+1.4**
AGDM	**Agdam**	**3.05**	**60**	P	**Pn**	**Pn**	**19 23 37.8**	**+1.7**
	SNR=12							
AGDM				S	**Sb**	**Sb**	**19 24 17.5**	**-2.0**
BAYB	**BAYBURT**	**3.08**	**303**	P	**Pn**	**Pn**	**19 23 37.5**	**+0.7**
IHSH	**Hashtrud**	**3.15**	**114**	*e*Pn	**Pn**	**Pn**	**19 23 39.2**	**+1.4**
IHSH				*e*			19 23 52.4	
	comp=Z,3μm,0.5s							
ABS	**Abastumani**	**3.17**	**349**	P	**Pb**	**Pb**	**19 23 45.1**	**+0.7**
BRDA	**Brd**	**3.17**	**58**	P	**Pb**	**Pb**	**19 23 40.2**	**-4.1**
	SNR=10							
BRDA				S	**Sb**	**Sb**	**19 24 22.4**	**-0.5**
ERZN	**Erzincan**	**3.20**	**288**	PN	**Pn**	**Pn**	**19 23 39.6**	**+1.3**
BLQ	**Beylaqan**	**3.22**	**69**	P	**Pn**	**Pn**	**19 23 40.2**	**+1.7**
	SNR=53							
BLQ				S	**Sb**	**Sb**	**19 24 24.5**	**+0.1**
BAYT	**Aydıntepe-Bayb**	**3.23**	**304**	PN	**Pn**	**Pn**	**19 23 39.9**	**+1.2**
ISRB	**Sarab**	**3.27**	**103**	*e*Pn	**Pn**	**Pn**	**19 23 41.4**	**+2.1**
ISRB				*e*			19 23 54.9	
	comp=Z,3μm,0.4s							
IKRK	**Kirkuk**	**3.29**	**170**	*e*Pn	**Pn**	**Pn**	**19 23 41.0**	**+1.6**
IKRK				*e*Sn	**Sb**	**Sb**	**19 24 22.0**	**-4.3**
IKRK				AML	AML	AML	19 24 46.8	
	comp=N,301nm,0.3s							
IKRK				AML	AML	AML	19 24 47.4	
	comp=E,414nm,0.7s							
CHOM	**Cayeli-Rize**	**3.31**	**319**	PN	**Pn**	**Pn**	**19 23 40.7**	**+1.0**
GRMI	**Germi**	**3.32**	**86**	*e*Pn	**Pn**	**Pn**	**19 23 41.5**	**+1.5**
PTK	**Pertek**	**3.34**	**276**	PN	**Pn**	**Pn**	**19 23 41.5**	**+1.2**
DDFL	**Dedoflistskaro**	**3.38**	**33**	P	**Pb**	**Pb**	**19 23 45.3**	**-2.6**
MNGR	**Mingechevir, A**	**3.39**	**50**	P	**Pn**	**Pn**	**19 23 42.6**	**+1.8**
MNGR	**Mingechevir, A**	**3.39**	**50**	P	**Pn**	**Pn**	**19 23 42.7**	**+1.8**
	SNR=9.8							
MNGR				S	**Sb**	**Sb**	**19 24 26.6**	**-2.7**
EZC	**Erzincan**	**3.52**	**290**	P	**Pn**	**Pn**	**19 23 39.5**	**-3.2**
ZRD	**Zardab**	**3.52**	**61**	P	**Pn**	**Pn**	**19 23 45.0**	**+2.5**
	SNR=11							
ZRD				S	**Sb**	**Sb**	**19 24 31.3**	**-1.7**
YRD	**Yardimli**	**3.60**	**84**	P	**Pn**	**Pn**	**19 23 46.0**	**+2.2**
	SNR=63							
YRD				S	**Sb**	**Sb**	**19 24 32.8**	**-2.6**
LRK	**Lerik**	**3.67**	**89**	P	**Pn**	Pb	19 23 48.0	-4.9
	SNR=6.2							
LRK				S	**Sb**	**Sb**	**19 24 35.1**	**-2.4**
SEKA	**Sheki**	**3.74**	**46**	P	**Pn**	**Pn**	**19 23 47.2**	**+1.6**
SEKA	**Sheki**	**3.74**	**46**	P	**Pn**	**Pn**	**19 23 47.3**	**+1.6**
	SNR=6.6							
SEKA				S	**Sb**	**Sb**	**19 24 36.9**	**-2.5**
GLBA	**Ciilabad**	**3.74**	**79**	P	**Pn**	**Pn**	**19 23 47.3**	**+1.6**
	SNR=9.8							
GLBA				S	**Sb**	**Sb**	**19 24 39.3**	**-0.1**
ZKTA	**Zakatala**	**3.75**	**36**	P	**Pn**	**Pn**	**19 23 48.7**	**+2.9**
ZKTA	**Zakatala**	**3.75**	**36**	P	**Pn**	**Pn**	**19 23 48.8**	**+2.9**
	SNR=13							
ZKTA				S	**Sb**	**Sb**	**19 24 39.3**	**-0.5**
KTUT	**Trabzon**	**3.80**	**309**	PN	**Pn**	**Pn**	**19 23 47.8**	**+1.4**
SAAT	**Saatly**	**3.90**	**70**	P	**Pn**	**Pn**	**19 23 49.7**	**+2.0**
SAAT				S	**Sb**	**Sb**	**19 24 41.5**	**-2.3**
KDMR	**Kurdemir**	**3.91**	**62**	P	**Pn**	**Pn**	**19 23 48.6**	**+0.7**
ONI	**Oni**	**3.94**	**358**	PN	**Pn**	**Pn**	**19 23 49.3**	**+0.9**
ONI	**Oni**	**3.94**	**358**		**Pn**	**Pn**	**19 23 50.5**	**+2.1**
ONI	**Oni**	**3.94**	**358**	P	**Pn**	**Pn**	**19 23 50.5**	**+2.1**
QBL	**Gabala**	**3.96**	**53**	P	**Pn**	**Pn**	**19 23 50.2**	**+1.6**
	SNR=6.4							
QBL				S	**Sb**	**Sb**	**19 24 42.7**	**-2.9**
URFA	**Urfa**	**4.00**	**254**	PN	**Pn**	**Pn**	**19 23 50.9**	**+1.6**
ASTR	**Astara**	**4.03**	**90**	P	**Pn**	**Pn**	**19 23 50.8**	**+1.3**
ASTR				S	**Sb**	**Sb**	**19 24 47.5**	**-0.1**
IML	**Ismayilli**	**4.10**	**57**	P	**Pn**	**Pn**	**19 23 53.0**	**+2.4**
	SNR=4.9							
IML				S	**Sb**	**Sb**	**19 24 47.4**	**-2.2**
ZEI	**Tsey**	**4.14**	**3**	*e*P	**Pb**	**Pb**	**19 23 58.8**	**-2.2**
ZEI				pmax	pmax			
	comp=Z,43nm,0.7s							
ARPR	**Arapgir-MALATY**	**4.17**	**278**	PN	**Pn**	**Pn**	**19 23 53.2**	**+1.5**
XNQ	**Khinaliq**	**4.27**	**52**	P	**Pn**	**Pn**	**19 23 52.1**	**-1.0**
PQL	**Pirkuli**	**4.37**	**59**	P	**Pn**	**Pn**	**19 23 55.4**	**+1.0**
	SNR=6.1							
PQL				S	**Sb**	**Sb**	**19 24 52.9**	**-4.6**
IDHR	**Dehrash**	**4.51**	**150**	*e*Pn	**Pn**	**Pn**	**19 23 59.1**	**+2.7**
IDHR				*e*			19 24 18.6	
	comp=Z,2μm,0.5s							
QSAR	**Qusar**	**4.55**	**50**	P	**Pn**	**Pn**	**19 23 59.5**	**+2.7**
	SNR=9.8							
QSAR				S	**Sb**	**Sb**	**19 24 58.3**	**-4.4**
QUBA	**Quba, Azerbaij**	**4.60**	**52**	P	**Pn**	**Pn**	**19 24 00.6**	**+3.1**
QUBA				S	**Sb**	**Sb**	**19 24 59.8**	**-4.2**
ATGJ	**Altiaghaj**	**4.63**	**60**	P	**Pn**	**Pn**	**19 23 59.8**	**+1.8**
ATGJ				S	**Sb**	**Sb**	**19 25 01.9**	**-3.3**
NEY	**Neytrino**	**4.65**	**352**	⇑*e*P	Pn	Pn	19 24 02.5	+4.2
SIZA	**Siyzn**	**4.71**	**57**	P	**Pn**	**Pn**	**19 24 02.0**	**+3.0**
	SNR=17							
SIZA				S	**Sb**	**Sb**	**19 25 01.6**	**-5.7**
GROC	**Groznyy**	**4.83**	**19**	*e*P	**Pb**	**Pb**	**19 24 15.0**	**+2.4**
GROC				*e*S	**Sn**	**Sn**	**19 24 57.9**	**+1.4**
GROC				pmax	pmax			
	comp=Z,111nm,0.6s							
GROC				smax	smax			
	comp=E,29nm,1.0s							
GROC				smax	smax			
	comp=N,144nm,1.5s							
GROC				smax	smax			
	comp=N,66nm,1.6s							
GROC				MLR	MLR			
	comp=Z,12nm,2.0s							
NCK	**Nalchik**	**4.84**	**360**	⇑*e*P	P	Pn	19 24 05.5	+4.7
KBZ	**Khabaz**	**5.11**	**354**	Pn	Pn	Pn	19 24 09.1	+4.7
	comp=Z,0.1nm,0.3s,baz=159,slow=11,SNR=6.5							
KBZ				LR	LR	LR	19 26 41.0	
	comp=Z,98nm,21.9s,baz=224,slow=45							
	comp=Z,3.0nm,0.8s							
KBZ	**Khabaz**	**5.11**	**354**	⇑*e*P	Pn	Pn	19 24 09.0	+4.6
KBZ				pmax	pmax			
	comp=Z,10.0nm,1.0s							
SHA1	**Shidzhatmaz**	**5.14**	**352**	⇑*e*P	**Pn**	**Pn**	**19 24 07.0**	**+1.9**
MAK	**Makhachkala**	**5.21**	**33**	*e*P	**Pn**	**Pn**	**19 24 03.5**	**-2.2**
MAK				*e*S	**Sn**	**Sn**	**19 25 02.1**	**-3.6**
MAK				pmax	pmax			
	comp=Z,278nm,1.2s							
MAK				MLR	MLR			
	comp=Z,547nm,10.0s							
GAZ	**Gaziantep**	**5.30**	**256**		**Pn**	**Pn**	**19 24 05.8**	**-1.4**
KIV	**Kislovodsk**	**5.35**	**352**	Pn	**Pn**	**Pn**	**19 24 08.8**	**+1.0**
KIV	**Kislovodsk**	**5.35**	**352**	*e*P	Pn	Pn	19 24 12.0	+4.1
KIV				pmax	pmax			
	comp=Z,17nm,1.1s							
KIV				MLR	MLR			
	comp=Z,27nm,9.0s							
KVAR	**Kislovodsk Arr**	**5.35**	**353**	Pn	Pn	Pn	19 24 11.8	+4.0
	baz=194,slow=4.2							
	comp=Z,7.7nm,1.0s							
BHD	**Baghdad**	**5.40**	**174**	*e*Pn	**Pn**	**Pn**	**19 24 11.0**	**+2.6**
BHD				*e*Sn	**Sn**	**Sn**	**19 25 12.0**	**+1.6**
BHD				AML	AML	AML	19 25 55.2	
	comp=E,199nm,0.5s							
IKOM	**Komasi**	**5.44**	**144**	*e*Pn	**Pn**	**Pn**	**19 24 12.3**	**+3.2**
QABG	**Abgarm-Qazvin

KBL Kabul 20.77 94 P Pn 19 27 30.5 -1.0
KBL Kabul 20.77 94 P Pn 19 27 30.5 -1.0
KBL pmax pmax
comp=Z,9.0nm,1.3s
BTK Batken 21.03 78 P **P** **19 27 32.1 +0.4**
BTK IAmb IAmb 19 27 35.9
comp=Z,12nm,1.1s
BTK Batken 21.03 78 P **P** **19 27 32.1 +0.4**
BTK pmax pmax
comp=Z,12nm,1.2s
SVE Sverdlovsk 21.37 26 *eP* **P** **19 27 36.2 +1.1**
SVE pmax pmax
comp=Z,13nm,1.2s
PABE Paberze 21.42 328 P **P** **19 27 34.5 -1.1**
PABE IAmb IAmb 19 27 40.5
comp=Z,15nm,0.8s
ARK Arkit 21.80 73 P **P** **19 27 41.0 +0.9**
ARK pmax pmax
comp=Z,13nm,1.6s
RONA Rosalia, Austr 21.81 303 *eP* **P** **19 27 42.9 +2.8**
comp=Z,6.1nm,1.5s
DRK Karamyk 21.84 79 P **P** **19 27 41.3 +0.6**
DRK IAmb IAmb 19 28 05.2
comp=Z,10nm,1.1s
VRAC Vranov 22.08 308 P **P** **19 27 45.1 +2.2**
comp=Z,3.5nm,0.8s,baz=127,slow=4.4,SNR=5.6
comp=Z,3.5nm,0.8s
VRAC Vranov 22.08 308 *eP* **P** **19 27 47.1 +4.2**
KRUC Moravsky 22.13 307 P **P** **19 27 47.0 +3.6**
KRUC pmax pmax
comp=Z,6.0nm,0.4s
KRUC Moravsky 22.13 307 *eP* **P** **19 27 46.7 +3.3**
CONA Conrad Observa 22.15 304 *eP* **P** **19 27 44.1 +0.4**
comp=Z,3.7nm,1.2s
KLMR Klimovskoe 22.38 355 *eP* **P** **19 27 46.0 +0.1**
KLMR pmax pmax
comp=Z,51nm,1.2s
KLMR Klimovskoe 22.38 355 *eP* **P** **19 27 46.0 +0.1**
KLMR AMP 19 27 51.9
comp=Z,51nm,1.2s
DPC Dobruska-Polom 22.60 310 P **P** **19 27 50.4 +2.0**
DPC pmax pmax
comp=Z,3.0nm,1.6s
DPC Dobruska-Polom 22.60 310 *eP* P 19 27 57.5 +9.1
UPC Upice 22.84 310 P **P** **19 27 51.7 +0.8**
UPC pmax pmax
comp=Z,7.0nm,0.9s
PRGR Permogore 23.05 2 *eP* **P** **19 27 50.2 -2.7**
PRGR pmax pmax
comp=Z,10.0nm,0.8s
RAFF Raffo Rosso 23.11 276 P **P** **19 27 54.4 +0.5**
CAMP Campotosto 23.23 289 P **P** **19 27 54.9 -0.2**
CAMP IAmb IAmb 19 28 00.5
comp=Z,15nm,1.1s
AQU L'Aquila 23.24 289 P **P** **19 27 54.9 -0.3**
AQU L'Aquila 23.24 289 P **P** **19 27 54.9 -0.3**
AQU pmax pmax
comp=Z,24nm,1.3s
BRVK Borovoye 23.31 43⇓ *eP* **P** **19 27 57.9 +2.2**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 23.35 43 P **P** **19 27 57.2 +1.1**
comp=Z,0.8nm,0.8s,baz=224,slow=10,SNR=4.3
comp=Z,0.8nm,0.8s
NRCA Norcia 23.45 290 P **P** **19 27 57.3 +0.1**
NRCA IAmb IAmb 19 28 07.4
comp=Z,7.8nm,1.0s
AAK Ala-Archa 23.67 70 P **P** **19 28 00.0 +0.4**
comp=Z,2.4nm,0.7s,baz=197,slow=11,SNR=2.3
comp=Z,2.4nm,0.7s
AAK Ala-Archa 23.67 70⇓ *eP* **P** **19 28 00.3 +0.7**
AAK pmax pmax
comp=Z,5.0nm,1.3s
GERES GERESS Array B 23.78 305 P **P** **19 28 01.1 +0.7**
comp=Z,0.8nm,0.7s,baz=108,slow=8.7,SNR=7.7
comp=Z,0.8nm,0.7s
GERES GERESS Array B 23.78 305 P **P** **19 28 00.9 +0.4**
CESX Cesi 23.84 290 P **P** **19 28 00.4 -0.6**
CESX IAmb IAmb 19 28 09.0
comp=Z,14nm,1.2s
MURB Monte Urbino 23.88 291 P **P** **19 28 03.1 +1.6**
KHC Kasperske Hory 23.93 306 P **P** **19 28 02.3 +0.4**
KHC Kasperske Hory 23.93 306 *eP* **P** **19 28 02.2 +0.4**
KHC Kasperske Hory 23.93 306 *eP* **P** **19 28 02.2 +0.4**
NIL Nilore 24.36 93 P **P** **19 28 07.9 +1.9**
NIL IAmb IAmb 19 28 25.8
comp=Z,5.5nm,0.8s
NIL Nilore 24.36 93 P **P** **19 28 07.9 +1.9**
NIL pmax pmax
comp=Z,6.0nm,0.8s
LATE Laterza 24.41 290 P **P** **19 28 06.3 -0.1**
WTTA Wattenberg 24.82 301 *eP* **P** **19 28 11.6 +1.3**
comp=Z,2.2nm,0.8s
WATA Walderalm 24.88 301 *eP* **P** **19 28 10.0 -0.7**
comp=Z,2.7nm,0.7s
CLL Collm 24.90 311 P **P** **19 28 10.8 +0.1**
CLL IAmb IAmb 19 28 13.3
comp=Z,6.7nm,1.2s
CLL Collm 24.90 311 *eP* **P** **19 28 12.0 +1.3**
CLL *e* 19 28 18.0
CLL pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 24.90 311 *eP* **P** **19 28 12.0 +1.3**
comp=Z,7.0nm,1.2s
CLL *ex* x 19 28 18.0
CLL *ex* x 19 28 35.0
SQTA Sankt Quirin 25.11 300 *eP* **P** **19 28 14.0 +1.3**
comp=Z,2.9nm,1.0s
MOTA Moosalm 25.19 301 *eP* **P** **19 28 13.7 +0.1**
comp=Z,3.0nm,1.1s
FINES FINESS Array B 25.29 340 P **P** **19 28 13.8 -0.3**
comp=Z,2.0nm,0.7s,baz=141,slow=9.3,SNR=6.1
FINES LR LR 19 40 14.7
comp=Z,44nm,18.8s,baz=357,slow=41
comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra 27.30 53 P **P** **19 28 33.4 +1.1**
comp=Z,2.5nm,0.6s,baz=261,slow=8.9,SNR=17
comp=Z,2.5nm,0.6s
KURK Kurchatov 27.37 52 P **P** **19 28 33.5 +0.5**
KURK IAmb IAmb 19 28 35.8
comp=Z,9.8nm,1.2s
KURK Kurchatov 27.37 52⇑ *eP* **P** **19 28 34.1 +1.1**
HFS Hagfors 28.60 329 P **P** **19 28 43.7 -0.1**
comp=Z,2.5nm,0.8s,baz=120,slow=9.0,SNR=4.1
comp=Z,2.5nm,0.8s
MK31 Makanchi Array 29.29 61 P **P** **19 28 50.8 +0.6**
MK31 IAmb IAmb 19 29 12.3
comp=Z,7.7nm,1.3s
MK31 Makanchi Array 29.29 61 P **P** **19 28 50.8 +0.6**
MK31 pmax pmax
comp=Z,8.0nm,1.3s
MKAR Makanchi Array 29.29 61 P **P** **19 28 51.2 +1.0**
comp=Z,1.0nm,0.6s,baz=262,slow=8.5,SNR=9.4
MKAR LR LR 19 42 24.9
comp=Z,37nm,19.4s,baz=252,slow=40
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 29.29 61 P **P** **19 28 51.1 +0.9**
SSB Saint Sauveur 29.61 296 P **P** **19 28 52.7 -0.3**
SSB Saint Sauveur 29.61 296 P **P** **19 28 52.7 -0.3**
SSB pmax pmax
comp=Z,19nm,1.5s
NOA NORSAR Array B 30.12 329 P **P** **19 28 56.6 -0.8**
comp=Z,0.8nm,0.8s,baz=125,slow=9.0,SNR=2.1
NOA LR LR 19 42 53.0
comp=Z,18nm,20.6s,baz=255,slow=40
comp=Z,0.8nm,0.8s
ZAA0 Zalesovo Array 31.78 48 P **P** **19 29 11.6 -0.5**
ZAA0 IAmb IAmb 19 29 14.4
comp=Z,2.2nm,0.7s
ZALV Zalesovo Beam 31.78 48 P **P** **19 29 12.2 +0.2**
comp=Z,1.3nm,0.5s,baz=262,slow=9.3,SNR=7.1
comp=Z,1.3nm,0.5s
ZALV Zalesovo Beam 31.78 48 P **P** **19 29 11.8 -0.2**
ARCES ARCESS Array B 32.44 348 P **P** **19 29 17.6 -0.1**
comp=Z,3.7nm,1.0s,baz=132,slow=3.4,SNR=4.1
comp=Z,3.7nm,1.0s
DGZ Jazzator, Alta 32.85 56⇓ *eP* **P** **19 29 22.6 +0.9**
DGZ pmax pmax
comp=Z,6.0nm,1.2s
WMQ Urumqi 33.22 67 *eP* **P** **19 29 27.3 +2.4**
WMQ pP sP 19 29 33.3 +2.4
WMQ sP pP 19 29 34.9 +5.7
DANN Dangsing 34.75 95 *eP* **P** **19 29 39.6 +1.0**
comp=Z,28nm,0.7s
EKA Eskdalemuir Ar 35.25 314 P **P** **19 29 42.1 -0.1**
comp=Z,0.4nm,0.4s,baz=108,slow=7.7,SNR=4.6
comp=Z,0.4nm,0.4s
GKN Gorkha 35.59 95 *eP* **P** **19 29 46.1 +0.4**
comp=Z,14nm,0.6s
TAM Tamanrasset 36.10 255 P **P** **19 29 50.0 -0.1**
TAM IAmb IAmb 19 29 55.9
comp=Z,3.1nm,0.8s
TAM Tamanrasset 36.10 255 P **P** **19 29 50.0 -0.1**
TAM pmax pmax
comp=Z,3.0nm,0.8s
PKIN Phulchoki 36.39 95 *eP* **P** **19 29 53.2 +0.6**
comp=Z,10.0nm,0.6s
PKI Pulchoki 36.40 95 *eP* **P** **19 29 53.3 +0.5**
comp=Z,7.3nm,0.6s
ESDC Sonseca Array 36.59 287 P **P** **19 29 53.4 -0.6**
comp=Z,1.7nm,0.9s,baz=67,slow=8.9,SNR=9.4
comp=Z,1.7nm,0.9s
GUN Gumba 36.61 94 *eP* **P** **19 29 55.2 +0.6**
comp=Z,31nm,1.0s
JIRN Jiri 36.97 94 *eP* **P** **19 29 58.3 +0.6**
comp=Z,21nm,0.8s
RAMN Ramite 37.63 95 *eP* **P** **19 30 03.5 +0.3**
comp=Z,18nm,0.6s
TAPN Taplejung 38.30 94 *eP* **P** **19 30 09.6 +0.7**
comp=Z,5.9nm,0.5s
NRIK Noril'sk 38.58 23⇓ *eP* **P** **19 30 11.8 +1.4**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
SPITS Spitsbergen Ar 41.23 352 P **P** **19 30 33.6 +1.3**
SPITS pmax pmax
comp=Z,20nm,1.2s
MSEY Mahe Island 44.47 163 P **P** **19 31 00.3 +1.0**
MSEY Mahe Island 44.47 163 P **P** **19 31 00.3 +1.0**
MSEY pmax pmax
comp=Z,32nm,1.3s
TOA0 Torodi Ar. Sit 44.94 247 P **P** **19 31 02.5 -0.6**
TOA0 IAmb IAmb 19 31 11.1
comp=Z,3.6nm,1.1s
TORD Torodi Ar. Bea 44.94 247 P **P** **19 31 01.9 -1.2**
comp=Z,2.9nm,1.2s,baz=39,slow=9.1,SNR=9.5
comp=Z,2.9nm,1.2s
SONM Songino Array 45.47 57 P **P** **19 31 07.6 +0.4**
comp=Z,0.2nm,0.5s,baz=261,slow=7.8,SNR=2.4
comp=Z,0.2nm,0.5s
PALK Pallekele 45.72 123 LR LR 19 50 19.2
comp=Z,43nm,19.4s,baz=223,slow=36
ULN Ulaanbaatar 45.90 57⇑ *eP* **P** **19 31 12.5 +2.0**
ULN pmax pmax
comp=Z,3.0nm,1.2s
LZH Lanzhou 47.15 73 *eP* **P** **19 31 17.0 -3.5**
LZH pP pP 19 31 22.0 -2.9
KOWA Kowa 48.28 254 P **P** **19 31 28.6 -0.7**
PZH PanZhiHua 49.69 86 P **P** **19 31 43.3 +3.2**
HHC Hu-ho-hao-te 51.05 65 *eP* **P** **19 31 52.3 +2.0**
CMAR Chiang Mai Arr 51.76 97 P **P** **19 31 55.2 -0.5**
comp=Z,0.9nm,0.6s,baz=299,slow=8.8,SNR=10.0
comp=Z,0.9nm,0.6s
EUNU Eureka 58.34 351 P **P** **19 32 43.0 +0.5**
KSRS Korea Array 63.97 62 P **P** **19 33 21.4 +0.3**
comp=Z,2.5nm,0.7s,baz=289,slow=7.3,SNR=9.6
comp=Z,2.5nm,0.7s
SEY Seymchan 64.02 29 P **P** **19 33 22.1 +0.9**
comp=Z,6.4nm,0.9s,baz=302,slow=5.9,SNR=7.7
comp=Z,6.4nm,0.9s
SEY Seymchan 64.02 29⇑ *eP* **P** **19 33 22.2 +1.1**
SEY pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 65.32 20 *i* P **P** **19 33 32.0 +2.5**
BILL pmax pmax
comp=Z,8.0nm,1.1s
LBTB Lobatse 65.55 198 P **P** **19 33 31.3 -0.3**
LBTB Lobatse 65.55 198 P **P** **19 33 31.3 -0.3**
LBTB pmax pmax
comp=Z,7.0nm,1.3s
MJAR Matsushiro Arr 71.42 58 LR LR 20 07 58.6
comp=Z,61nm,18.7s,baz=164,slow=38
SJG San Juan 93.45 296 LR LR 20 19 35.5
comp=Z,28nm,18.2s,baz=313,slow=36

*AEIC **18** 19:24:14.4±2.6, 52.°8N±0.°1×168.°81W±0.°07, h44km±6km,*
Error ellipse: s-maj=14.9km s-min=5.5km az=172.0
*ANF **18** 19:24:15.4±0.6, 52.°86N×168.°92W, h57km±2km, ML5.0/4,*
Error ellipse: s-maj=7.8km s-min=5.5km az=63.0
*NEIC **18** 19:24:15.2±2.4, 52.°8N±0.°1×168.°82W±0.°07, h54km±6km,*
mb4.5/122, ML4.7(AEIC), Error ellipse: s-maj=17.5km
s-min=4.8km az=166.0
*IDC **18** 19:24:15.4±2.6, 53.°08N×168.°90W, h60km±22km, mb3.8/26,*
mbtmp4.1/29, ML3.9/3, MS3.5/61, Error ellipse:
s-maj=18.1km s-min=11.3km az=7.0

ISC 18 19:24:14.7±0.8, 52.°87N±0.°08×168.°79W±0.°05, h57km±5km,
n456, σ1$39/382, mb4.4/59, MS3.6/61, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.11**	**338**		**Pn**	**19 24 23.0**	**-0.5**
NIKH				Sn	**Sn**	**19 24 29.6**	**-0.2**
NIKH	**Nikolski High**	**0.11**	**338**	P	**Pn**	**19 24 22.9**	**-0.6**
NIKH	baz=174,SNR=1000 baz=174			S	**Sn**	**19 24 29.5**	**-0.2**
UNV	**Unalaska Valle**	**1.68**	**53**	Pn	**Pn**	**19 24 43.1**	**+1.4**
UNV				Sn	**Sn**	**19 25 03.5**	**+1.3**
UNV	**Unalaska Valle**	**1.68**	**53**	P	**Pn**	**19 24 42.5**	**+0.8**
	baz=233,SNR=148						
AKUT	**Akutan**	**2.20**	**54**	Pn	**Pn**	**19 24 50.8**	**+2.0**
AKUT				Sn	**Sn**	**19 25 17.6**	**+2.8**
FALS	**False Pass**	**3.75**	**56**		**Pn**	**19 25 12.0**	**+2.0**
FALS	**False Pass**	**3.75**	**56**	P	**Pn**	**19 25 12.2**	**+2.3**
	baz=239						
SPIA	**Saint Paul Isl**	**4.40**	**350**	Pn	**Pn**	**19 25 20.8**	**+1.9**
SPIA	**Saint Paul Isl**	**4.40**	**350**	P	**Pn**	**19 25 20.7**	**+1.9**
SPIA	baz=169,SNR=23 baz=169			S	**Sn**	**19 26 09.7**	**+1.0**
GSTR	**Great Sitkin T**	**4.51**	**263**	Pn	**Pn**	**19 25 21.5**	**+1.1**
ADK	**Adak**	**4.94**	**262**	Pn	**Pn**	**19 25 26.6**	**+0.3**
KIWB	**Kanaga Island**	**5.23**	**262**		**Pn**	**19 25 31.1**	**+0.9**
SDPT	**Sand Point**	**5.48**	**60**	Pn	**Pn**	**19 25 34.9**	**+1.2**
SDPT	**Sand Point**	**5.48**	**60**	P	**Pn**	**19 25 37.0**	**+3.3**
	baz=246						
CNBA	**Chernabura Isl**	**5.79**	**67**		**Pn**	**19 25 38.6**	**+0.8**
CHNA	**Chernabura Isl**	**5.79**	**66**	P	**Pn**	**19 25 39.5**	**+1.6**
	baz=253						
CHGN	**Chignik**	**6.94**	**56**		**Pn**	**19 25 55.2**	**+1.6**
CHGN	**Chignik**	**6.94**	**56**	P	**Pn**	**19 25 56.2**	**+2.6**
	baz=244						
AMKA	**Amchitka**	**7.49**	**263**		**Pn**	**19 26 00.4**	**-0.7**
CHIR	**Chirikof Islan**	**8.24**	**64**	Pn	**Pn**	**19 26 11.9**	**+0.5**
P16K	**Nushagak River**	**8.64**	**40**	P	**Pn**	**19 26 20.4**	**+3.5**
	baz=229						
Q16K	**King Salmon**	**8.97**	**45**	P	**Pn**	**19 26 24.0**	**+2.7**
	baz=234						
O16K	**Kokwok River B**	**8.99**	**37**	P	**Pn**	**19 26 24.2**	**+2.6**
	baz=226,SNR=42						
Q17K	**Contact Creek**	**9.08**	**48**	P	**Pn**	**19 26 26.3**	**+3.3**
	baz=238,SNR=6.8						
SII	**Sitkinak Islan**	**9.22**	**61**	P	**Pn**	**19 26 28.3**	**+3.5**
	baz=252						
P17K	**Kvichak River**	**9.37**	**43**	P	**Pn**	**19 26 29.8**	**+3.0**
	baz=232						
N16K	**Nishlik Lake**	**9.40**	**32**	P	**Pn**	**19 26 30.5**	**+3.3**
	baz=220,SNR=34						
O17K	**Koliganek Bris**	**9.48**	**38**	P	**Pn**	**19 26 30.7**	**+2.4**
	baz=228,SNR=18						
Q18K	**Katmai Hardscr**	**9.68**	**48**	P	**Pn**	**19 26 32.8**	**+1.6**
	baz=239						
OHAK	**Old Harbor**	**9.90**	**58**	Pn	**Pn**	**19 26 32.6**	**-1.5**
OHAK	**Old Harbor**	**9.90**	**58**	P	**Pn**	**19 26 33.3**	**-0.8**
	baz=250						
P18K	**Big Mountain,**	**9.99**	**44**	Pn	**Pn**	**19 26 34.0**	**-1.3**
P18K	**Big Mountain,**	**9.99**	**44**	P	**Pn**	**19 26 38.7**	**+3.4**
	baz=235,SNR=8.8						
SHEM	**Shemya Is, Ala**	**10.37**	**276**	LR	LR	19 30 36.6	
	comp=Z,83nm,20.7s,baz=60,slow=37						
SMY	**Shemya**	**10.37**	**276**	Pn	**Pn**	**19 26 41.7**	**+1.2**
Q19K	**Cape Douglas,**	**10.43**	**48**	Pn	**Pn**	**19 26 43.4**	**+2.0**
Q19K	**Cape Douglas,**	**10.43**	**48**	P	**Pn**	**19 26 43.2**	**+1.8**
	baz=240						
KDAK	**Kodiak Island**	**10.45**	**55**	P	**Pn**	**19 26 41.0**	**-0.6**
	3.4nm,0.3s,baz=202,slow=5.0,SNR=28						
KDAK				S	**Sn**	**19 28 31.0**	**-6.0**
	9.2nm,0.7s,baz=168,slow=16,SNR=1.5						
	10nm,0.4s						
KDAK	**Kodiak Island**	**10.45**	**55**	Pn	**Pn**	**19 26 40.1**	**-1.5**
KDAK	**Kodiak Island**	**10.45**	**55**	P	**Pn**	**19 26 40.4**	**-1.2**
	baz=248						
N18K	**Kilae Creek**	**10.54**	**37**	Pn	**Pn**	**19 26 44.8**	**+2.0**
N18K	**Kilae Creek**	**10.54**	**37**	P	**Pn**	**19 26 44.9**	**+2.1**
	baz=227						
Q20K	**Shuyak Island**	**10.87**	**52**	P	**Pn**	**19 26 48.1**	**+0.8**
	baz=245						
SVW2	**Sparrevohn**	**10.93**	**36**		**Pn**	**19 26 49.0**	**+0.8**
GAMB	**Gambell**	**11.05**	**353**	Pn	**Pn**	**19 26 49.5**	**-0.1**
GAMB	**Gambell**	**11.05**	**353**	P	**Pn**	**19 26 50.5**	**+0.8**
	baz=171						
N19K	**Bonanza Creek**	**11.15**	**39**	Pn	**Pn**	**19 26 52.2**	**+1.0**
N19K	**Bonanza Creek**	**11.15**	**39**	P	**Pn**	**19 26 54.1**	**+3.0**
	baz=230,SNR=16						
RSO	**Redoubt South**	**11.62**	**43**		**Pn**	**19 26 57.7**	**0.0**
HOM	**Homer**	**11.69**	**48**	Pn	**Pn**	**19 26 58.5**	**+0.1**
CNPM	**China Poot**	**11.81**	**49**	Pn	**Pn**	**19 26 59.0**	**-1.1**
ANM	**Nome**	**11.86**	**7**	Pn	**Pn**	**19 27 01.7**	**+0.8**
M19K	**Big River Lodg**	**11.90**	**35**	P	**Pn**	**19 27 03.6**	**+2.2**
	baz=227						
L19K	**White Mountain**	**11.94**	**33**	Pn	**Pn**	**19 27 03.9**	**+2.0**
L19K	**White Mountain**	**11.94**	**33**	P	**Pn**	**19 27 04.4**	**+2.5**
	baz=225,SNR=35						
BRLK	**Bradley Lake**	**12.07**	**48**	Pn	**Pn**	**19 27 03.5**	**-0.3**
BRSE	**Bradley Lake S**	**12.13**	**48**	P	**Pn**	**19 27 07.2**	**+2.7**
	baz=243						
TTA	**Tatalina**	**12.13**	**29**		**Pn**	**19 27 05.5**	**+0.9**
TTA	**Tatalina**	**12.13**	**29**	P	**Pn**	**19 27 07.5**	**+2.9**
	baz=219,SNR=21						
N20K	**Mount Spurr**	**12.26**	**41**	P	**Pn**	**19 27 08.4**	**+2.0**
	baz=234						
SPCR	**Spurr Chakacha**	**12.26**	**41**	P	**Pn**	**19 27 08.7**	**+2.4**
	baz=234						
SPU	**Mount Spurr**	**12.31**	**41**		**Pn**	**19 27 08.6**	**+1.6**
M20K	**Styx River**	**12.33**	**37**	P	**Pn**	**19 27 09.7**	**+2.4**
	baz=230						
L20K	**Farewell, AK**	**12.47**	**34**	P	**Pn**	**19 27 11.9**	**+2.8**
	baz=226,SNR=9.0						
TNA	**Tin City**	**12.74**	**2**	Pn	**Pn**	**19 27 15.6**	**+2.9**
TNA	**Tin City**	**12.74**	**2**	P	**Pn**	**19 27 14.4**	**+1.6**
	baz=182						
SEW	**Seward**	**12.87**	**48**	Pn	**Pn**	**19 27 13.3**	**-1.2**
SEW	**Seward**	**12.87**	**48**	P	**Pn**	**19 27 14.5**	**-0.1**
	baz=244						
O22K	**Cooper Landing**	**12.92**	**46**	Pn	**Pn**	**19 27 14.9**	**-0.3**
O22K	**Cooper Landing**	**12.92**	**46**	P	**Pn**	**19 27 15.3**	**+0.1**
	baz=242						
SKT	**Skwentna**	**12.99**	**39**	Pn	**Pn**	**19 27 18.0**	**+1.9**
SKT	**Skwentna**	**12.99**	**39**	P	**Pn**	**19 27 19.3**	**+3.1**
	baz=233,SNR=6.4						
SUA	**Susitna One**	**12.99**	**41**	Pn	**Pn**	**19 27 16.5**	**+0.1**
SUA	**Susitna One**	**12.99**	**41**	P	**Pn**	**19 27 19.2**	**+2.8**
	baz=236						
K20K	**Telida**	**13.04**	**31**	Pn	**Pn**	**19 27 19.2**	**+2.3**
K20K	**Telida**	**13.04**	**31**	P	**Pn**	**19 27 20.1**	**+3.2**
	baz=223,SNR=15						
RC01	**Rabbit Creek A**	**13.21**	**44**	Pn	**Pn**	**19 27 18.9**	**-0.3**
PPLA	**Purkeypile**	**13.33**	**35**	Pn	**Pn**	**19 27 22.2**	**+1.2**
PPLA	**Purkeypile**	**13.33**	**35**	P	**Pn**	**19 27 24.7**	**+3.7**
	baz=228						
GCSA	**Galena City Sc**	**13.38**	**22**	P	**Pn**	**19 27 25.2**	**+3.7**
	baz=213						
J20K	**Nowinta River**	**13.63**	**28**	Pn	**Pn**	**19 27 26.8**	**+1.9**
J20K	**Nowinta River**	**13.63**	**28**	P	**Pn**	**19 27 28.1**	**+3.2**
	baz=220,SNR=30						
PWL	**Port Wells**	**13.70**	**46**	Pn	**Pn**	**19 27 24.6**	**-1.3**
PWL	**Port Wells**	**13.70**	**46**	P	**Pn**	**19 27 24.5**	**-1.4**
	baz=243						
CAST	**Castle Rocks**	**13.71**	**33**	Pn	**Pn**	**19 27 26.9**	**+0.8**
CAST	**Castle Rocks**	**13.71**	**33**	P	**Pn**	**19 27 29.2**	**+3.1**
	baz=227,SNR=24						
CUT	**Chulitna**	**13.72**	**39**		**Pn**	**19 27 26.4**	**+0.4**
P23K	**Montague Islan**	**13.77**	**50**	P	**Pn**	**19 27 26.1**	**-0.7**
	baz=248						
KNK	**Knik Glacier**	**13.91**	**44**		**Pn**	**19 27 27.1**	**-1.6**
KNK	**Knik Glacier**	**13.91**	**44**	P	**Pn**	**19 27 27.9**	**-0.8**
	baz=241						
CHUM	**Lake Minchumin**	**13.96**	**31**	P	**Pn**	**19 27 30.5**	**+1.2**
	baz=225,SNR=6.8						
Q23K	**Middleton Isla**	**14.08**	**53**	Pn	**Pn**	**19 27 31.2**	**+0.3**
MID	**Middleton Isla**	**14.08**	**53**	Pn	**Pn**	**19 27 31.5**	**+0.5**
SML	**Sawmill**	**14.16**	**43**	P	**Pn**	**19 27 30.6**	**-1.4**
SML	**Sawmill**	**14.16**	**43**	P	**Pn**	**19 27 31.5**	**-0.5**
	baz=240						
KTH	**Kantishna Hill**	**14.19**	**34**		**Pn**	**19 27 32.7**	**+0.2**
GLI	**Glacier Island**	**14.26**	**47**		**Pn**	**19 27 31.1**	**-2.2**
GLI	**Glacier Island**	**14.26**	**47**	P	**Pn**	**19 27 31.8**	**-1.5**
	baz=245						
HIN	**Hinchinbrook I**	**14.34**	**49**	Pn	**Pn**	**19 27 32.6**	**-1.7**
TRF	**Thorofare Moun**	**14.35**	**35**		**Pn**	**19 27 35.5**	**+0.9**
TRF	**Thorofare Moun**	**14.35**	**35**	P	**Pn**	**19 27 35.5**	**+0.9**
	baz=231						
M23K	**Glacier View**	**14.40**	**43**	P	**Pn**	**19 27 33.9**	**-1.3**
	baz=241,SNR=8.9						
FID	**Port Fidalgo**	**14.48**	**48**	Pn	**Pn**	**19 27 33.6**	**-2.6**
BPAW	**Bear Paw Mtn.**	**14.54**	**32**	P	**Pn**	**19 27 40.1**	**+3.1**
BPAW	**Bear Paw Mtn.**	**14.54**	**32**	P	**Pn**	**19 27 36.0**	**-1.0**
	baz=227,SNR=18						
SCM	**Sheep Creek Mo**	**14.59**	**44**		**Pn**	**19 27 36.3**	**-1.3**
SCM	**Sheep Creek Mo**	**14.59**	**44**	P	**Pn**	**19 27 36.9**	**-0.8**
	baz=241,SNR=10.0						
WAT1	**Susitna Watana**	**14.61**	**39**	P	**Pn**	**19 27 37.9**	**-0.1**
	baz=236						
EYAK	**Cordova Ski Ar**	**14.74**	**49**	Pn	**Pn**	**19 27 38.2**	**-1.4**
EYAK	**Cordova Ski Ar**	**14.74**	**49**	P	**Pn**	**19 27 39.4**	**-0.2**
	baz=248						
WAT6	**Susitna Watana**	**14.79**	**41**	P	**Pn**	**19 27 40.4**	**0.0**
	baz=238						
RND	**Reindeer**	**14.83**	**37**		**Pn**	**19 27 40.7**	**-0.1**
DIV	**Divide**	**14.95**	**47**		**Pn**	**19 27 40.3**	**-2.0**
MCK	**McKinley**	**15.00**	**36**	P	**Pn**	**19 27 44.2**	**+1.3**
MCK				IAmb	IAmb	19 27 53.6	
	comp=Z,27nm,0.9s						
MCK	**McKinley**	**15.00**	**36**	P	**Pn**	**19 27 44.8**	**+1.9**
	baz=232,SNR=6.6						
I21K	**Tanana**	**15.00**	**28**	P	**Pn**	**19 27 44.1**	**+1.2**
I21K				IAmb	IAmb	19 27 57.9	
	comp=Z,44nm,1.0s						
I21K	**Tanana**	**15.00**	**28**	P	**Pn**	**19 27 45.1**	**+2.2**
	baz=222,SNR=19						
KLU	**Klutina**	**15.03**	**46**	P	**Pn**	**19 27 41.4**	**-2.1**
KLU				IAmb	IAmb	19 27 46.6	
	comp=Z,26nm,0.6s						
KLU	**Klutina**	**15.03**	**46**	P	**Pn**	**19 27 41.4**	**-2.1**
	baz=245,SNR=16						
BWN	**Browne**	**15.09**	**34**	P	**Pn**	**19 27 44.4**	**+0.4**
H21K	**Melozitna Rive**	**15.13**	**26**	P	**Pn**	**19 27 45.4**	**+0.7**
H21K				IAmb	IAmb	19 27 53.9	
	comp=Z,29nm,0.9s						
H21K	**Melozitna Rive**	**15.13**	**26**	P	**Pn**	**19 27 46.5**	**+1.9**
	baz=220,SNR=21						
IMAR	**Indian Mountai**	**15.15**	**24**	P	**Pn**	**19 27 46.3**	**+1.5**
M24K	**Tolsona, Glenn**	**15.20**	**44**	P	**Pn**	**19 27 44.7**	**-0.8**
M24K	**Tolsona, Glenn**	**15.20**	**44**	P	**Pn**	**19 27 45.3**	**-0.2**
	baz=242,SNR=9.7						
DHY	**Denali Highway**	**15.20**	**39**	P	**Pn**	**19 27 45.5**	**-0.1**
DHY				IAmb	IAmb	19 28 07.1	
	comp=Z,34nm,1.4s						
DHY	**Denali Highway**	**15.20**	**39**	P	**Pn**	**19 27 45.7**	**+0.1**
	baz=237						
MLY	**Manley**	**15.26**	**30**	P	**Pn**	**19 27 46.9**	**+0.6**
MLY	**Manley**	**15.26**	**30**	P	**P**	**19 27 49.2**	**-0.9**
	baz=225,SNR=47						
BMRM	**Bremner River**	**15.42**	**49**	P	**Pn**	**19 27 46.4**	**-2.0**
BMRM				IAmb	IAmb	19 27 57.2	
	comp=Z,26nm,0.6s						
BMRM	**Bremner River**	**15.42**	**49**	P	**Pn**	**19 27 47.4**	**-1.0**
	baz=249						
NEA2	**Nenana**	**15.49**	**33**		**Pn**	**19 27 48.5**	**-0.8**
NEA2	**Nenana**	**15.49**	**33**	P	**Pn**	**19 27 49.1**	**-0.1**
	baz=230,SNR=9.0						
G21K	**Allakaket**	**15.64**	**23**	P	**Pn**	**19 27 51.5**	**+0.4**
	baz=216,SNR=9.7						
BERG	**Berg Lake**	**15.64**	**51**	P	**Pn**	**19 27 49.7**	**-1.5**
BERG			

HARP	HAARP	15.75	43	P	Pn	19 27 52.5	-0.1
	baz=243,SNR=13						
I23K	Minto, Yukon-K	15.76	31	P	Pn	19 27 54.0	+1.3
	baz=228						
PAX	Paxson	15.89	41	P	Pn	19 27 53.5	-1.0
PAX	Paxson	15.89	41	P	Pn	19 27 54.1	-0.4
	baz=241						
GLB	Gilahina Butte	15.95	48	P	Pn	19 27 54.5	-0.6
CCB	Clear Creek Bu	15.95	34	P	Pn	19 27 53.9	-1.1
CCB				IAmb	IAmb	19 28 04.1	
	comp=Z,58nm,1.0s						
MDM	Murphy Dome	16.00	33	IAmb	IAmb	19 28 04.7	
	comp=Z,35nm,0.9s						
VRDI	Verde Repeater	16.03	49	P	Pn	19 27 55.1	-1.3
VRDI				IAmb	IAmb	19 28 01.0	
	comp=Z,19nm,0.5s						
WAX	Waxell Ridge	16.07	52	P	Pn	19 27 56.2	-0.5
TCOL	CIGO, UAF Yank	16.07	33	P	Pn	19 27 56.1	-0.4
TCOL				IAmb	IAmb	19 28 06.2	
	comp=Z,53nm,0.9s						
TCOL	CIGO, UAF Yank	16.07	33	P	Pn	19 27 56.2	-0.4
	baz=231						
COLA	College	16.07	33	P	Pn	19 27 56.1	-0.5
COLA				IAmb	IAmb	19 28 06.2	
	comp=Z,53nm,0.9s						
COLA	College	16.07	33	P	Pn	19 27 56.2	-0.5
	baz=231						
HDA	Harding Lake	16.10	36	P	Pn	19 27 57.1	+0.1
	baz=234						
TGL	Tana Glacier	16.17	51	IAmb	IAmb	19 28 02.9	
	comp=Z,39nm,1.0s						
H23K	Yukon River	16.17	29	P	Pn	19 27 58.0	0.0
H23K				IAmb	IAmb	19 28 06.6	
	comp=Z,17nm,0.5s						
H23K	Yukon River	16.17	29	P	Pn	19 27 58.9	+1.0
	baz=226,SNR=16						
K24K	Donnelly Dome	16.19	38	P	Pn	19 27 59.7	+1.5
	baz=238						
F21K	Alatna River	16.22	22	P	Pn	19 27 59.6	+1.1
	baz=215						
MCARA	McCarthy VSAT	16.28	48	IAmb	IAmb	19 28 02.3	
	comp=Z,38nm,0.8s						
MCARA	McCarthy VSAT	16.28	48	P	Pn	19 27 57.6	-1.7
	baz=250,SNR=7.9						
IL31		16.34	35	IAmb	IAmb	19 28 09.4	
	comp=Z,33nm,1.2s						
ILAR	Eielson Array	16.34	35	P	Pn	19 27 59.7	-0.3
	comp=Z,0.6nm,0.3s,baz=226,slow=11,SNR=36						
ILAR				LR	LR	19 34 51.0	
	comp=Z,240nm,20.5s,baz=239,slow=39						
	comp=Z,3.8nm,0.7s						
ISLE	Juniper Island	16.35	51	P	Pn	19 27 59.5	-0.8
ISLE				IAmb	IAmb	19 28 08.9	
	comp=Z,53nm,1.1s						
POKR	Poker Plat Res	16.36	33	IAmb	IAmb	19 28 09.8	
	comp=Z,36nm,0.8s						
POKR	Poker Plat Res	16.36	33	P	Pn	19 28 00.1	-0.2
	baz=231,SNR=8.2						
MESA	MESA	16.42	53	P	Pn	19 28 01.5	+0.2
MESA	MESA	16.42	53	P	Pn	19 28 01.3	0.0
	baz=255						
G22K	Bettles	16.45	24	P	P	19 28 03.3	+0.1
	baz=219						
RIDG	Independent Ri	16.52	39	P	Pn	19 28 02.5	+0.3
	baz=240						
YAH	Yahtse	16.57	52	P	Pn	19 28 02.8	-0.3
M26K	Nabesna, AK	16.67	45	IAmb	IAmb	19 28 10.7	
	comp=Z,19nm,0.6s						
M26K	Nabesna, AK	16.67	45	P	Pn	19 28 03.6	-0.6
	baz=247,SNR=15						
G23K	Bananza Creek	16.67	26	P	Pn	19 28 05.5	+1.3
	baz=223,SNR=17						
H24K	Noodor Dome	16.68	31	P	Pn	19 28 03.6	-0.7
H24K				IAmb	IAmb	19 28 14.1	
	comp=Z,27nm,0.8s						
H24K	Noodor Dome	16.68	31	P	Pn	19 28 04.2	-0.2
	baz=229,SNR=15						
L26K	Log Cabin Wild	16.78	43	P	Pn	19 28 05.3	-0.2
L26K				IAmb	IAmb	19 28 09.0	
	comp=Z,18nm,0.6s						
L26K	Log Cabin Wild	16.78	43	P	Pn	19 28 05.1	-0.4
	baz=244,SNR=6.5						
J25K	Salcha River,	16.78	36	IAmb	IAmb	19 28 09.1	
	comp=Z,25nm,0.6s						
J25K	Salcha River,	16.78	36	P	Pn	19 28 05.2	-0.4
	baz=236,SNR=34						
TABL	Table Mountain	16.88	52	P	Pn	19 28 07.7	+0.7
CTG	Chitna Glacier	16.92	51	P	Pn	19 28 06.7	-0.8
	baz=253						
SCRK	Sand Creek	16.96	39	P	Pn	19 28 07.2	-0.7
	baz=240,SNR=10						
COLD	Coldfoot	17.01	25	P	Pn	19 28 08.1	-0.3
	baz=221						
LOGN	Logan Glacier	17.05	51	IAmb	IAmb	19 28 30.9	
	comp=Z,34nm,1.2s						
M27K	Edge Creek, AK	17.13	46	IAmb	IAmb	19 28 13.8	
	comp=Z,28nm,1.0s						
M27K	Edge Creek, AK	17.13	46	P	Pn	19 28 09.0	-1.0
	baz=248,SNR=14						
PCA	Pinnacle	17.23	54	P	Pn	19 28 11.0	-0.1
PCA				IAmb	IAmb	19 28 19.0	
	comp=Z,35nm,0.7s						
PINM	Pinnacle	17.23	54	P	Pn	19 28 10.6	-0.5
	baz=258						
PRP	Porcupine Dome	17.25	34	IAmb	IAmb	19 28 29.7	
	comp=Z,25nm,0.9s						
PRP	Porcupine Dome	17.25	34	P	Pn	19 28 10.5	-0.9
	baz=234,SNR=12						
G24K	Hadweenzic Riv	17.39	29	P	Pn	19 28 13.0	0.0
	baz=227,SNR=10.0						
J26L	Joseph Creek	17.39	38	P	Pn	19 28 11.3	-1.8
J26L	Joseph Creek	17.39	38	P	Pn	19 28 12.1	-1.0
	baz=240,SNR=56						
O28M	Mount Upton	17.42	52	P	Pn	19 28 13.6	-0.1
	baz=256,SNR=11						
L27K	Beaver Creek,	17.42	44	P	Pn	19 28 12.8	-0.7
L27K	Beaver Creek,	17.42	44	P	Pn	19 28 12.7	-0.8
	baz=246						
YUK3	Moose Creek	17.57	48	P	Pn	19 28 13.8	-1.6
	baz=252,SNR=8.4						
PNL	Peninsula	17.57	56	P	Pn	19 28 15.3	0.0
	baz=260						
BVCY	Beaver Creek	17.60	46	P	Pn	19 28 15.3	-0.3
	baz=250						
H25K	Birch Creek	17.61	31	P	Pn	19 28 15.2	-0.5
	baz=231						
K27K	Chicken	17.73	41	P	Pn	19 28 17.6	+0.4
	baz=243						
YUK8	Steele Glacier	17.75	50	P	Pn	19 28 18.0	+0.3
	baz=254						
E23K	Chandalar	17.79	24	P	Pn	19 28 18.3	+0.3
	baz=220						
F24K	Squaw Lake	17.84	27	P	Pn	19 28 19.4	+0.8
	baz=225,SNR=12						
G25K	Bearman Lake	17.84	30	P	Pn	19 28 18.8	+0.4
	baz=230,SNR=8.3						
I26K	Coal Creek Min	17.95	36	IAmb	IAmb	19 28 24.6	
	comp=Z,25nm,0.7s						
I26K	Coal Creek Min	17.95	36	P	P	19 28 19.4	-0.4
	baz=238						
E24K	Your Creek	18.08	25	P	P	19 28 21.8	+0.5
	baz=222						
O29M	Mount Kennedy	18.09	54	P	P	19 28 22.0	+0.5
	baz=259,SNR=17						
TOLK	Toolik Lake Re	18.25	23	P	P	19 28 23.2	+0.1
	baz=220						
D23K	Nanushuk River	18.25	21	P	P	19 28 22.8	-0.3
	baz=217						
YUK4	Talbot Arm	18.29	50	P	Pn	19 28 25.0	+0.8
	baz=256						
YUK6	Outpost Mounta	18.33	52	P	P	19 28 24.6	+0.4
	baz=257,SNR=9.0						
P29M	Windy Craggy	18.40	56	P	P	19 28 25.7	+0.9
	baz=262,SNR=11						
EGAK	Eagle	18.43	39	P	P	19 28 24.1	-0.9
	baz=243						
F25K	Christian River	18.52	28	P	P	19 28 25.9	-0.1
	baz=228,SNR=10.0						
I27K	Kandik River	18.66	36	P	P	19 28 26.5	-1.1
	baz=240,SNR=9.5						
M29M	Somme Creek	18.66	47	P	P	19 28 27.9	+0.1
	baz=253,SNR=27						
G26K	Porcupine Rive	18.67	31	P	P	19 28 26.7	-1.0
	baz=233						
HYT	Haines Junctio	18.71	52	P	P	19 28 28.5	+0.2
HYT	Haines Junctio	18.71	52	P	Pn	19 28 30.8	+1.5
	baz=259,SNR=30						
BMAR	Burnt Mountain	18.72	30	P	P	19 28 27.6	-0.7
DAWY	Dawson	18.82	42	P	P	19 28 28.7	-0.7
	baz=247,SNR=5.1						
P30M	Million Dollar	18.86	55	P	Pn	19 28 31.8	+0.9
	baz=261						
E25K	Arctic Village	18.89	27	P	P	19 28 30.3	+0.1
	baz=227,SNR=11						
C23K	Itkillik River	18.97	19	P	P	19 28 31.7	+0.8
	baz=216						
H27K	Steamboat Moun	19.01	35	P	P	19 28 30.7	-0.7
	baz=238,SNR=14						
L29M	L29M	19.01	45	P	P	19 28 31.5	-0.1
	baz=251,SNR=17						
F26K	Sheenjek River	19.02	29	P	P	19 28 31.2	-0.3
	baz=231						
N30M	Aishikik Lake	19.04	51	P	P	19 28 32.2	+0.3
	baz=257,SNR=13						
S31K	Pelican	19.05	62	P	P	19 28 31.8	0.0
	baz=268						
PLBC	Pleasant Camp	19.07	57	P	Pn	19 28 34.8	+1.3
	baz=264,SNR=14						
G27K	Doyon Strip	19.28	33	P	P	19 28 33.8	-0.5
	baz=237,SNR=14						
O30N	Mendenhall	19.39	53	P	P	19 28 37.1	+1.5
	baz=260,SNR=18						
K29M	Barlow Dome	19.51	44	P	P	19 28 36.6	-0.5
	baz=250,SNR=8.2						
SKAG	Skagway	19.60	57	P	P	19 28 39.4	+1.6
	baz=265,SNR=31						
N31M	Braeburn, Yuko	19.66	51	IAmb	IAmb	19 28 46.0	
	comp=Z,24nm,0.8s						
N31M	Braeburn, Yuko	19.66	51	P	P	19 28 40.4	+1.8
	baz=259,SNR=9.7						
I29M	Ogilvie Camp,	19.77	39	P	P	19 28 38.3	-1.4
I29M				IAmb	IAmb	19 28 43.8	
	comp=Z,28nm,1.1s						
I29M	Ogilvie Camp,	19.77	39	P	P	19 28 39.0	-0.8
	baz=245						
BESE	Bessie Mountai	19.79	60	IAmb	IAmb	19 29 01.1	
	comp=Z,47nm,1.2s						
S32K	Killisnoo	19.93	63	P	P	19 28 41.8	+0.4
	baz=271						
WHY	Whitehorse	19.96	54	IAmb	IAmb	19 28 47.6	
	comp=Z,28nm,0.8s						
WHY	Whitehorse	19.96	54	P	P	19 28 43.7	+1.8
	baz=262,SNR=12						
JIS	Juneau Island	20.03	61	P	P	19 28 43.3	+0.8
JIS				IAmb	IAmb	19 28 50.6	
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	20.08	284	P	P	19 28 42.5	-0.6
	comp=Z,0.4nm,0.3s,baz=91,slow=14,SNR=12						
PETK				LR	LR	19 36 27.9	
	comp=Z,46nm,19.0s,baz=89,slow=37						
	comp=Z,1.7nm,0.5s						
E27K	Coleen River	20.08	30	P	P	19 28 41.5	-1.6
	baz=234						
C27K	Jago River	20.41	25	P	P	19 28 47.1	+0.5
	baz=227,SNR=5.5						
P32M	Atlin	20.43	57	P	P	19 28 45.2	-1.7
	baz=266,SNR=5.2						
M31M	Drury Creek, Y	20.45	49	P	P	19 28 47.6	+0.6
EPYK	Eagle Plains	20.79	37	P	P	19 28 49.5	-1.2
	baz=245,SNR=36						
P33M	Teslin, Yukon	20.93	55	P	P	19 28 53.1	+0.8
P33M				IAmb	IAmb	19 29 00.3	
	comp=Z,30nm,0.9s						
P33M	Teslin, Yukon	20.93	55	P	P	19 28 53.3	+1.0
	baz=265,SNR=20						
FARO	Faro, Yukon	20.93	49	P	P	19 28 53.5	+1.2
FARO				IAmb	IAmb	19 29 00.1	
	comp=Z,15nm,0.6s						
FARO	Faro, Yukon	20.93	49	P	P	19 28 53.3	+1.0
	baz=260,SNR=9.4						
Q32M	Nakina River	21.15	59	P	P	19 28 54.7	-0.2
	baz=269						
G30M	tAoh Zraii Nji	21.23	36	P	P	19 28 54.4	-1.0
	baz=244						
R33M	Jennings River	21.82	58	P	P	19 29 03.9	+1.9
	baz=269,SNR=12						
MMPY	Sheldon Lake,	21.95	49	P	P	19 29 02.8	-0.5
	baz=261						
F31M	Tsiigehtchic	22.30	36	P	P	19 29 06.0	-0.8
	baz=246						
T35M	Bob Quinn	22.31	64	P	P	19 29 07.5	+0.3
	baz=276						
DLBC	Dease Lake	22.33	60	P	P	19 29 11.2	+3.8
	comp=Z,9.2nm,0.7s,baz=286,slow=14,SNR=8.9						
DLBC	Dease Lake	22.33	60	P	P	19 29 09.4	+2.1
DLBC				IAmb	IAmb	19 29 27.0	
	comp=Z,20nm,1.0s						
DLBC	Dease Lake	22.33	60	P	P	19 29 07.4	+0.1
	baz=272,SNR=7.0						
SEY	Seymchan	22.60	312	P	P	19 29 09.3	-0.8
	comp=Z,3.9nm,0.7s,baz=116,slow=9.9,SNR=10						
	comp=Z,3.9nm,0.7s						
INK	Inuvik	22.73	34	P	P	19 29 08.8	-2.6
	comp=Z,7.2nm,0.6s,baz=257,slow=12,SNR=13						
INK				LR	LR	19 39 02.6	
	comp=Z,225nm,19.8s,baz=253,slow=39						
	comp=Z,7.2nm,0.6s						
INK	Inuvik	22.73	34	IAmb	IAmb	19 29 25.7	
	comp=Z,12nm,0.7s						
INK	Inuvik	22.73	34	P	P	19 29 09.3	-2.1
	baz=245,SNR=9.1						
MA2	Magadan	23.16	303	LR	LR	19 39 13.4	
	comp=Z,74nm,18.4s,baz=134,slow=39						
KOTAN	Kotaneelee Air	25.30	56	P	P	19 29 36.7	+1.2
	baz=273						
C36M	Paulatuk	26.31	34	P	P	19 29 45.0	+0.5
	baz=254						
YKA	Yellowknife Ar	29.65	50	P	P	19 30 13.6	-0.7
	comp=Z,1.6nm,0.6s,baz=270,slow=7.9,SNR=14						
YKA				LR	LR	19 43 41.5	
	comp=Z,116nm,18.5s,baz=266,slow=39						
	comp=Z,1.6nm,0.6s						
H04A	Detroit Lake	31.30	86	P	P	19 30 30.7	+1.6
TIXI	Tiksi	32.49	329	LR	LR	19 44 27.3	
	comp=Z,76nm,19.3s,baz=15,slow=38						
NEW	Newport	32.55	77	P	P	19 30 40.1	+0.1
	comp=Z,4.2nm,0.6s,baz=325,slow=7.4,SNR=5.4						
NEW				LR	LR	19 42 52.9	
	comp=Z,38nm,18.6s,baz=275,slow=34						
	comp=Z,4.2nm,0.6s						
NEW	Newport	32.55	77	P	P	19 30 40.1	+0.1
	baz=298						
YBH	Yreka Blue Hor	32.63	91	LR	LR	19 39 59.8	
	comp=Z,57nm,19.7s,baz=337,slow=29						
YAK	Yakutsk	33.12	311	LR	LR	19 43 53.5	
	comp=Z,78nm,21.6s,baz=88,slow=36						
RES	Resolute Bay	35.77	26	LR	LR	19 48 53.7	
	comp=Z,132nm,18.0s,baz=231,slow=42						
HLID	Hailey	36.60	82	P	P	19 31 14.8	-0.4
	baz=304						
KLR	Kul'dur	36.63	289	LR	LR	19 45 32.3	
	comp=Z,71nm,21.9s,baz=60,slow=35						
MCMT	McKenzie Canyo	36.83	80	P	P	19 31 18.3	+1.0
EGMT	Eagleton	36.98	73	P	P	19 31 18.8	+0.5
	baz=300						
KVN	Kaiserville	37.05	91	P	P	19 31 20.6	+1.4
KVN				IAmb	IAmb	19 31 28.1	
	comp=Z,8.1nm,1.5s						
BOZ	Bozeman (W)	37.14	78	IAmb	IAmb	19 31 22.0	
	comp=Z,4.2nm,0.7s						
BOZ	Bozeman (W)	37.14	78	P	P	19 31 20.7	+0.9
	baz=302,SNR=6.3						
LHV	Little Huntoon	37.31	92	IAmb	IAmb	19 31 38.5	
	comp=Z,6.5nm,1.2s						
NVAR	Mina Array Bea	37.32	92	P	P	19 31 23.0	+1.6
	comp=Z,2.3nm,0.8s,baz=295,slow=7.7,SNR=10						
	comp=Z,2.3nm,0.8s						
NVAR	Mina Array Bea	37.32	92	P	P	19 31 23.2	+1.7
OMMB	Old Mammoth Mi	37.42	94	IAmb	IAmb	19 31 40.1	
	comp=Z,8.3nm,1.4s						
ELK	Elko	37.74	87	P	P	19 31 27.3	+2.2
	comp=Z,2.3nm,0.7s,baz=293,slow=11,SNR=9.4						
ELK				LR	LR	19 43 16.1	
	comp=Z,61nm,19.7s,baz=273,slow=30						
	comp=Z,2.3nm,0.7s						
ELK	Elko	37.74	87	P	P	19 31 27.1	+2.0
YHL	Hebgen Lake	37.81	78	IAmb	IAmb	19 31 28.1	
	comp=Z,5.0nm,0.7s						
YHB	Horse Butte	37.86	79	IAmb	IAmb	19 31 28.4	
	comp=Z,5.5nm,0.7s						
YHH	Holmes Hill	38.04	78	IAmb	IAmb	19 31 30.0	
	comp=Z,6.5nm,0.7s						
H11N2	WAKE ISLAND Hy	38.06	219	T	T	20 11 56.2	
	baz=24,slow=76,SNR=131						
H11N3	WAKE ISLAND Hy	38.07	219	T	T	20 11 56.7	
	baz=24,slow=76,SNR=133						
H11N1	WAKE ISLAND Hy	38.08	219	T	T	20 12 00.1	
	baz=24,slow=76,SNR=138						
H17A	Grant Village	38.42	79	P	P	19 31 32.6	+1.9
H17A	Grant Village	38.42	79	P	P	19 31 31.9	+1.1
	baz=304						
CWC	Cottonwood Cre	38.75	94	P	P	19 31 33.2	-0.2
	baz=311						
RLMT	Red Lodge	38.80	77	IAmb	IAmb	19 31 41.1	
	comp=Z,11nm,1.3s						
RLMT	Red Lodge	38.80	77	P	P	19 31 34.3	+0.5
	baz=303						
GRAC	Grapevine Rang	38.81	93	P	P	19 31 33.7	-0.1
	baz=311						
R11A	Troy Canyon, C	39.02	90	IAmb	IAmb	19 31 39.4	
	comp=Z,6.9nm,1.2s						
R11A	Troy Canyon, C	39.02	90	P	P	19 31 37.5	+1.8
	baz=310,SNR=9.2						
ISA	Isabella, Lake	39.02	96	P	P	19 31 37.1	+1.5
	baz=312						
H11S1	WAKE ISLAND Hy	39.25	218	T	T	20 13 21.9	
	baz=23,slow=76,SNR=2559						
H11S2	WAKE ISLAND Hy	39.25	218	T	T	20 13 25.1	
	baz=23,slow=76,SNR=828						
H11S3	WAKE ISLAND Hy	39.27	218	T	T	20 13 26.5	
	baz=23,slow=76,SNR=1230						
MPMC	Manual Prospec	39.36	94	P	P	19 31 40.0	+1.5
	baz=312						
TPNV	Topopah Spring	39.52	92	P	P	19 31 41.4	+1.6
TPNV				IAmb	IAmb	19 31 50.0	
	comp=Z,5.6nm,1.0s						
TPNV	Topopah Spring	39.52	92	P	P	19 31 40.0	+0.2
	baz=311						
DUG	Dugway, Tooele	39.55	86	IAmb	IAmb	19 31 43.8	
	comp=Z,5.7nm,0.9s						
DUG	Dugway, Tooele	39.55	86	P	P	19 31 41.6	+1.6
	baz=308						
LAO	LASA Array	39.72	73	P	P	19 31 43.8	+2.5
LAO	LASA Array	39.72	73	P	P	19 31 41.8	+0.5
	baz=303						
GWY	Greenwater Val	39.77	93	IAmb	IAmb	19 31 50.1	
	comp=Z,5.7nm,0.9s						
PSUT	Pine Spring	39.95	88	IAmb	IAmb	19 31 46.3	
	comp=Z,6.1nm,1.1s						
BW06	Boulder Array	39.96	80	P	P	19 31 44.5	+1.0
BW06	Boulder Array	39.96	80	P	P	19 31 44.2	+0.7
	baz=306,SNR=7.0						
PDAR	Pinedale Array	39.96	80	P	P	19 31 45.0	+1.4
	comp=Z,3.0nm,0.6s,baz=294,slow=3.7,SNR=39						
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	40.07	268	LR	LR	19 47 32.6	
	comp=Z,22nm,21.2s,baz=41,slow=35						
GSC	Goldstone, Bar	40.27	95	P	P	19 31 47.8	+1.8
GSC				IAmb	IAmb	19 31 49.3	
	comp=Z,5.5nm,0.8s						
GSC	Goldstone, Bar	40.27	95	P	P	19 31 48.0	+2.0
	baz=312						
BFSC	Mount Baldy Ra	40.48	97	P	P	19 31 49.1	+1.3
	baz=313						
TUQ	Turquoise Moun	40.72	94	P	P	19 31 51.1	+1.3
	baz=312						
HEC	Hector,Ludlow	40.88	95	P	P	19 31 52.6	+1.6
	baz=313						
CCUT	Cedar City	40.88	89	P	P	19 31 52.4	+1.2
GMRC	Granite Mounta	41.32	94	P	P	19 31 54.9	+0.3
	baz=313						
KNB	Kanab	41.55	89	P	P	19 31 58.5	+1.9
BELC	Belle Mtn. Jos	41.65	95	P	P	19 31 57.0	-0.4
	baz=313						
IRM	Iron Mountain	42.05	94	P	P	19 32 00.8	+0.2
	baz=313						
MONP2	Monument Peak	42.16	97	P	P	19 32 02.6	+1.0
	baz=314						
BC3	Big Chuckawall	42.21	95	P	P	19 32 02.5	+0.5
	baz=314						
U15A	North Rim	42.26	90	IAmb	IAmb	19 32 05.3	
	comp=Z,12nm,1.2s						
O20A	White River Ci	42.34	82	IAmb	IAmb	19 32 06.3	
	comp=Z,9.3nm,0.7s						
O20A	White River Ci	42.34	82	P	P	19 32 02.7	-0.4
	baz=308,SNR=6.4						
SWSC	Sam W. Stewart	42.49	96	P	P	19 32 04.6	+0.5
	baz=314						
PDMCI	Parker Dam,Lak	42.56	93	P	P	19 32 06.0	+1.3
	baz=313						
JWT	Wachi	42.61	269	P	P	19 32 05.6	+0.6
PV07	Paradox Valley	43.16	85	IAmb	IAmb	19 32 12.6	
	comp=Z,13nm,1.4s						
CN2	Changchun	43.22	285	*e*P	P	19 32 09.4	-0.5
CN2				*ep*P	pP	19 32 21.8	-2.7
PV13	Radium Mtn., P	43.24	85	IAmb	IAmb	19 32 12.6	
	comp=Z,23nm,1.5s						
WUAZ	Wupatki	43.42	90	P	P	19 32 12.9	+1.1
WUAZ				IAmb	IAmb	19 32 14.4	
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	43.42	90	P	P	19 32 13.0	+1.1
	baz=312						
MVCO	Mesa Verde	44.05	86	P	P	19 32 16.7	-0.2
	baz=311						
JCJ	Chichijima	44.38	254	LR	LR	19 47 51.0	
	comp=Z,41nm,21.1s,baz=44,slow=32						
AGMN	Agassiz Nation	44.69	65	P	P	19 32 21.6	-0.1
	baz=304						
214A	Organ Pipe Nat	44.99	95	IAmb	IAmb	19 32 27.0	
	comp=Z,10nm,1.1s						
214A	Organ Pipe Nat	44.99	95	P	P	19 32 24.9	+0.7
	baz=315,SNR=5.1						
KSRS	Korea Array	45.70	277	P	P	19 32 29.6	0.0
	comp=Z,0.9nm,0.8s,baz=56,slow=6.0,SNR=3.4						
KSRS				LR	LR	19 49 43.8	
	comp=Z,9.9nm,21.1s,baz=205,slow=34						
	comp=Z,0.9nm,0.8s						
B35A	Bob, Littlefor	45.83	64	P	P	19 32 30.3	-0.3
TUC	Tucson	45.97	93	P	P	19 32 33.4	+1.4
NRIK	Noril'sk	46.16	331	LR	LR	19 54 11.9	
	comp=Z,66nm,18.4s,baz=68,slow=39						
T25A	Trinidad	46.56	83	P	P	19 32 36.9	+0.1
	baz=311,SNR=5.4						
ANMO	Albuquerque	46.78	87	LR	LR	19 51 30.6	
	comp=Z,45nm,18.5s,baz=316,slow=35						
ECSD	EROS Data Cent	46.97	71	P	P	19 32 39.5	-0.1
	baz=308						
121A	Cookes Peak, D	47.63	90	P	P	19 32 45.0	-0.1
121A				IAmb	IAmb	19 32 47.6	
	comp=Z,6.5nm,1.1s						
121A	Cookes Peak, D	47.63	90	P	P	19 32 45.8	+0.7
	baz=314						
CBKS	Cedar Bluff	48.26	78	P	P	19 32 50.0	+0.3
	baz=311						
FRB	Frobisher Bay	48.37	36	LR	LR	19 54 20.5	
	comp=Z,174nm,20.2s,baz=358,slow=37						
SPITS	Spitsbergen Ar	49.18	359	LR	LR	19 53 41.2	
	comp=Z,55nm,19.5s,baz=316,slow=36						
MSTX	Muleshoe	49.67	85	P	P	19 33 01.0	+0.3
	baz=313						
AMTX	Amarillo	49.71	83	P	P	19 33 01.8	+0.9
	baz=313						
KAN09	Caldwell North	50.62	78

baz=313
MIAR Mount Ida 54.78 78 P **P 19 33 38.9 +0.5**
baz=314
SCHQ Schefferville 54.83 44 LR LR 19 59 15.2
comp=Z,118nm,19.2s,baz=227,slow=38
JMIC Jan Mayen 55.65 8 LR LR 19 57 44.6
comp=Z,47nm,19.9s,baz=94,slow=36
833A Chaparral WMA, 55.70 87 P **P 19 33 46.2 +1.0**
baz=317
O48B Farmland 55.71 67 P **P 19 33 43.5 -1.5**
baz=313
P49A Miami Univ. Ec 56.45 67 P **P 19 33 49.2 -1.1**
baz=314
ZALV Zalesovo Beam 57.30 318 ScP **ScP 19 38 44.9 +0.7**
comp=Z,0.4nm,0.3s,baz=46,slow=4.3,SNR=5.4
ZALV LR LR 19 59 44.8
comp=Z,50nm,20.3s,baz=70,slow=37
ARCES ARCESS Array B 57.46 354 P **P 19 33 56.5 -0.6**
comp=Z,1.1nm,0.8s,baz=8.9,slow=8.6,SNR=6.0
ARCES PcP **PcP 19 34 49.4 -0.6**
comp=Z,1.4nm,0.7s,baz=16,slow=4.9,SNR=7.5
ARCES LR LR 19 58 48.9
comp=Z,60nm,21.7s,baz=326,slow=36
comp=Z,1.1nm,0.8s
O53A New Philadelph 57.89 65 P **P 19 33 59.1 -1.4**
baz=314
LONY Lake Ozonia 58.33 57 P **P 19 34 02.1 -1.4**
baz=315
TZTN Tazewell 59.20 69 P **P 19 34 09.9 +0.3**
baz=315
SSPA Standing Stone 59.42 62 P **P 19 34 10.5 -0.6**
baz=315
L59A Walton 59.82 59 P **P 19 34 14.6 +0.8**
LBNH Lisbon 59.94 56 P **P 19 34 14.2 -0.5**
baz=316
BORG Borgarnes 60.05 15 LR LR 20 02 29.6
comp=Z,39nm,20.1s,baz=351,slow=38
BLA Blacksburg 60.48 67 P **P 19 34 17.9 -0.6**
BLA Blacksburg 60.48 67 P **P 19 34 17.0 -1.5**
baz=316
BRAL Brewton 61.03 76 P **P 19 34 22.2 0.0**
baz=317
T57A Hurt 61.28 66 P **P 19 34 23.1 -0.8**
KURBB Kurchatov Arra 62.34 318 P **P 19 34 30.7 -0.1**
comp=Z,0.5nm,0.8s,baz=46,slow=6.9,SNR=2.7
KURBB ScP **ScP 19 39 05.6 -1.1**
comp=Z,1.1nm,0.8s,baz=42,slow=4.7,SNR=6.6
KURBB LR LR 20 02 47.5
comp=Z,54nm,21.7s,baz=12,slow=37
comp=Z,0.5nm,0.8s
BVAR Borovoye Array 63.50 325 P **P 19 34 38.1 -0.3**
comp=Z,0.3nm,0.3s,baz=79,slow=7.7,SNR=5.7
BVAR ScP 19 39 12.1
comp=Z,1.0nm,0.9s,baz=112,slow=1.6,SNR=6.0
BVAR LR LR 20 04 47.3
comp=Z,51nm,18.8s,baz=50,slow=38
comp=Z,0.3nm,0.3s
WMQ Urumqi 63.50 308 *e*P **P 19 34 41.4 +2.7**
MKAR Makanchi Array 63.72 314 P **P 19 34 39.2 -0.8**
comp=Z,0.2nm,0.3s,baz=52,slow=6.4,SNR=4.9
MKAR LR LR 20 03 18.5
comp=Z,51nm,19.1s,baz=9.5,slow=37
comp=Z,0.2nm,0.3s
ARU Arti 64.34 333 LR LR 20 04 55.6
comp=Z,37nm,20.9s,baz=358,slow=38
KIRV Kirov 64.66 339 LR LR 20 04 46.7
comp=Z,65nm,20.9s,baz=20,slow=38
FINES FINESS Array B 65.42 352 P **P 19 34 49.5 -1.3**
comp=Z,1.4nm,0.5s,baz=14,slow=7.1,SNR=15
FINES LR LR 20 05 42.9
comp=Z,56nm,19.3s,baz=20,slow=38
comp=Z,1.4nm,0.5s
NOA NORSAR Array B 66.44 0 P **P 19 34 55.0 -2.4**
comp=Z,0.5nm,0.6s,baz=2.6,slow=6.0,SNR=4.0
NOA LR LR 20 03 33.6
comp=Z,20nm,20.5s,baz=250,slow=36
comp=Z,0.5nm,0.6s
AFI Afiamalu 66.55 183 LR LR 19 59 06.9
comp=Z,18nm,21.4s,baz=56,slow=31
HFS Hagfors 67.33 359 P **P 19 35 01.5 -1.5**
comp=Z,1.3nm,0.4s,baz=11,slow=3.4,SNR=18
HFS LR LR 20 04 39.7
comp=Z,23nm,18.6s,baz=10.0,slow=36
comp=Z,1.3nm,0.4s
HNR Honiara 67.56 214 LR LR 19 57 42.4
comp=Z,335nm,21.1s,baz=78,slow=30
PZH PanZhiHua 69.02 286 P **P 19 35 15.0 +0.7**
AKTO Aktyubinsk 69.76 330 P **P 19 35 17.7 -0.6**
comp=Z,1.3nm,0.6s,baz=44,slow=4.8,SNR=5.3
AKTO LR LR 20 08 52.4
comp=Z,35nm,19.5s,baz=26,slow=38
comp=Z,1.3nm,0.6s
DAV Davao City (W) 69.79 254 LR LR 20 01 14.8
comp=Z,44nm,21.5s,baz=40,slow=32
OBN Obninsk 70.36 345 LR LR 20 09 58.5
comp=Z,5.1nm,18.8s,baz=7.5,slow=39
AAK Ala-Archa 70.39 316 LR LR 20 10 24.7
comp=Z,48nm,18.1s,baz=22,slow=40
BELG Belogornoye 70.76 337 LR LR 20 09 46.9
comp=Z,58nm,19.1s,baz=51,slow=39
MSVF Nonsavu 71.22 193 LR LR 19 58 50.5
comp=Z,70nm,21.9s,baz=65,slow=29
EKA Eskdalemuir Ar 71.51 9 P **P 19 35 28.5 -0.4**
comp=Z,1.4nm,0.7s,baz=8.9,slow=5.0,SNR=3.8
comp=Z,1.4nm,0.7s
PPT Papeete 72.09 161 LR LR 19 59 26.4
comp=Z,71nm,20.1s,baz=344,slow=29
PPT2 Papeete2 72.11 161 *e*LR LR 19 57 42.4
comp=Z,125nm,25.8s
PMG Port Moresby 72.50 226 LR LR 20 06 51.7
comp=Z,43nm,19.4s,baz=26,slow=35
SIJI Sorong 73.05 245 LR LR 20 05 27.7
comp=Z,17nm,18.4s,baz=72,slow=34
RAR Rarotonga 74.18 171 LR LR 20 07 23.7
comp=Z,22nm,18.1s,baz=302,slow=35
AKASG Malin Array Be 75.69 348 P **P 19 35 52.3 -1.1**
comp=Z,0.4nm,0.3s,baz=14,slow=5.6,SNR=3.3
AKASG LR LR 20 13 35.3
comp=Z,33nm,19.8s,baz=3.0,slow=39
comp=Z,0.4nm,0.3s
CLL Collm 76.19 359 *e*Px Px 19 35 56.0
CMAR Chiang Mai Arr 76.85 283 P **P 19 36 00.8 +0.3**
comp=Z,0.9nm,0.3s,baz=25,slow=6.3,SNR=13
comp=Z,0.9nm,0.3s
CMAR Chiang Mai Arr 76.85 283 P **P 19 36 00.3 -0.2**
DZM Mont Dzumac 77.67 203 *e*LR LR 20 00 16.4
comp=Z,100nm,22.7s
DZM Mont Dzumac 77.67 203 LR LR 20 03 04.9
comp=Z,58nm,21.0s,baz=36,slow=30
TBI Tubuai 77.74 162 *e*LR LR 20 00 19.1
comp=Z,89nm,28.2s
GERES GERESS Array B 78.64 358 P **P 19 36 07.8 -2.4**
comp=Z,0.9nm,0.9s,baz=13,slow=9.1,SNR=6.1
comp=Z,0.9nm,0.9s
CONA Conrad Observa 79.50 357 *e*P **P 19 36 15.6 +0.7**
comp=Z,5.6nm,1.3s
KVAR Kislovodsk Arr 79.82 337 LR LR 20 15 21.1
comp=Z,34nm,19.0s,baz=280,slow=38
KBZ Khabaz 79.99 337 LR LR 20 15 43.5
comp=Z,36nm,18.6s,baz=18,slow=39
MOTA Moosalm 80.17 0 *e*P **P 19 36 19.2 +0.6**
comp=Z,3.9nm,1.0s
WATA Walderalm 80.17 360 *e*P **P 19 36 19.3 +0.7**
comp=Z,1.7nm,0.6s
DAVA Damuels 80.22 1 *e*P **P 19 36 19.1 +0.2**
comp=Z,4.5nm,0.8s
WTTA Wattenberg 80.25 360 *e*P **P 19 36 19.7 +0.7**
comp=Z,3.3nm,0.8s
SQTA Sankt Quirin 80.29 0 *e*P **P 19 36 19.1 -0.1**
comp=Z,3.8nm,0.9s
KBA Koelnbreinsper 80.42 359 *e*P **P 19 36 20.0 +0.1**
DAVOX Davos/Dischmat 80.72 1 P **P 19 36 22.1 +0.5**
comp=Z,2.0nm,0.5s,baz=5.4,slow=8.7,SNR=4.8
DAVOX LR LR 20 10 52.3
comp=Z,25nm,21.9s,baz=15,slow=35
comp=Z,2.0nm,0.5s
ABTA Abfaltersbach 80.76 359 *e*P **P 19 36 21.2 -0.4**
comp=Z,7.4nm,1.5s
GEYT Alibeck 80.84 324 LR LR 20 15 01.4
comp=Z,59nm,18.3s,baz=357,slow=38
OBKA Obir 80.96 358 *e*P **P 19 36 22.5 -0.2**
comp=Z,5.0nm,0.9s
BNI Bardonecchia 82.38 3 P **P 19 36 31.2 +0.9**
BNI IAmb IAmb 19 36 35.0
comp=Z,7.4nm,1.0s
CTA Charters Tower 82.44 222 LR LR 20 15 35.4
comp=Z,62nm,18.7s,baz=193,slow=37
GNI Garni 82.91 335 LR LR 20 18 09.6
comp=Z,45nm,20.1s,baz=43,slow=39

ESDC Sonseca Array 86.90 12 P **P 19 36 52.5 -0.6**
comp=Z,1.5nm,0.6s,baz=345,slow=4.6,SNR=23
ESDC LR LR 20 16 54.8
comp=Z,24nm,20.3s,baz=341,slow=36
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 87.59 232 P **P 19 36 55.3 -1.1**
comp=Z,3.9nm,1.0s,baz=32,slow=5.6,SNR=18
comp=Z,3.9nm,1.0s
ASAR Alice Springs 90.99 231 P **P 19 37 12.2 -0.1**
comp=Z,3.8nm,0.9s,baz=22,slow=4.4,SNR=37
ASAR LR LR 20 10 58.4
comp=Z,40nm,20.7s,baz=100,slow=31
comp=Z,3.8nm,0.9s
MMAI Mount Meron Ar 91.91 340 LR LR 20 22 09.6
comp=Z,22nm,20.5s,baz=109,slow=38
MDT Midelt 93.57 13 LR LR 20 24 04.4
comp=Z,28nm,18.1s,baz=346,slow=38
STKA Stephens Creek 94.81 221 LR LR 20 14 20.2
comp=Z,89nm,21.4s,baz=211,slow=32
EIL Elat 95.24 339 LR LR 20 24 17.7
comp=Z,28nm,18.9s,baz=62,slow=38
H03N2 Juan Fernandez 115.78 112 T T 21 49 35.2
baz=321,slow=78,SNR=57
H03N1 Juan Fernandez 115.79 112 T T 21 49 36.5
baz=321,slow=78,SNR=55
H03N3 Juan Fernandez 115.80 112 T T 21 49 35.7
baz=321,slow=78,SNR=50
MAW Mawson 151.49 219 PKPbc **PKPbc 19 44 01.0 +0.5**
comp=Z,4.2nm,0.9s,baz=164,slow=3.0,SNR=9.3

IDC 18 19:47:31.5±2.5, 1°.83S×133°.13E, h0^{km}, mb3.8/2, mbtmp3.7/4, ML3.2/2, Error ellipse: s-maj=79.9km s-min=24.2km az=65.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.10**	**297**	Pn	Pn	19 48 07.9	0.0
	2.3nm,0.3s,baz=14,slow=4.3,SNR=42						
SIJI				Sn	Sg	19 48 40.9	+1.9
	17nm,0.3s,baz=237,slow=22,SNR=9.9						
	19nm,0.4s						
WRA	**Warramunga Arr**	**18.04**	**176**	P	Pn	19 51 43.2	-0.7
	0.2nm,0.3s,baz=355,slow=12,SNR=11						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**21.72**	**178**	P	P	19 52 24.9	+0.3
	3.0nm,0.6s,baz=1.1,slow=12,SNR=61						
	3.0nm,0.6s						
MKAR	**Makanchi Array**	**65.76**	**324**	P	P	19 58 18.4	0.0
	0.6nm,0.6s,baz=117,slow=8.3,SNR=5.1						
	0.6nm,0.6s						

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*SKHL **18** 19:58:19.7±0.6, 45°.10N×150°.40E, h45^{km}±5^{km}, mb4.3/3*
JMA 18 19:58:22.5±0.7, 45°N±4°.×150°0E±°, h30^{km}, MV4.3/8, KURILE ISLANDS REGION, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.48**	**270**	*e*P	Pn	19 58 47.1	+0.1
KUR				AMB	AMB	19 58 48.4	
	60nm,0.3s						
KUR				*i* S	Sb	19 59 07.6	0.0
KUR				A	A	19 59 11.0	
	100nm,0.3s						
KUR				A	A	19 59 11.0	
	140nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.16**	**249**	A	A	20 00 57.4	
	160nm,0.5s						
YUK				*e*P	Pn	19 59 10.6	+0.5
YUK				AMB	AMB	19 59 11.9	
	50nm,0.3s						
YUK				*e*S	Sn	19 59 49.1	+2.3
YUK				A	A	20 00 57.4	
	180nm,0.5s						
NEM2	**Nemuro 2**	**3.56**	**240**	*e*P	Pn	19 59 14.6	-1.0
NEM2				*e*S	Sn	19 59 53.3	-3.3
NMR	**Nemuro--Hokkai**	**3.57**	**240**	A	A	20 00 07.1	
	80nm,0.5s						
NMR				*e*P	Pn	19 59 16.0	+0.3
NMR				AMB	AMB	19 59 16.7	
	30nm,0.3s						
NMR				*i* S	Sn	19 59 58.4	+1.6
NMR				A	A	20 00 07.1	
	70nm,0.5s						
JRA	**Rausu**	**3.69**	**251**	*e*P	Pn	19 59 19.3	+1.9
JNK	**Nakash**	**4.10**	**248**	*e*S	Sn	20 00 09.5	-0.5
AKK	**Akkeshi**	**4.30**	**241**	*e*S	Sn	20 00 15.5	+0.6
AKK				*e*P	Pn	19 59 25.6	-0.2
JAK	**Akkeshi**	**4.40**	**241**	*e*P	Pn	19 59 26.7	-0.5
JAK				*e*S	Sn	20 00 13.8	-3.6
JTKR	**Abashiri--Toko**	**4.50**	**256**	*e*P	Pn	19 59 30.9	+2.3
JAR	**Ashorobuto**	**4.85**	**249**	*e*P	Pn	19 59 34.7	+1.3
JAR				*e*S	Sn	20 00 27.9	-0.6
JCH	**Churui**	**5.44**	**243**	*e*P	Pn	19 59 41.4	0.0
JCH				*e*S	Sn	20 00 39.5	-3.5

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*ISU **18** 20:00:06, 40°.38N×73°.04E, h4^{km}*
*SOME **18** 20:00:06.0, 40°.72N×73°.18E, h5^{km}*
*KRNET **18** 20:00:06.2±0.1, 40°.62N×73°.14E, h24^{km}, mb3.5*
*KNET **18** 20:00:07.4±0.4, 40°.77N×73°.27E, h5^{km}±2^{km}, ml3.0, Error ellipse: s-maj=7.0km s-min=2.9km az=103.0*
*NNC **18** 20:00:09.3±1.4, 40°.79N×73°.25E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=12.0km s-min=6.0km az=169.0*
ISC 18 20:00:06.0±1.2, 40°.66N±0°.03×73°.15E±0°.02, h2^{km}±10^{km}, n67, σ1°50/111, 32C-23D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.31**	**245**	⇓*i*P	Pg	20 00 12.5	+0.5
OHH				⇓*i*S	Sg	20 00 17.3	+1.3
	baz=50						
OHH	**Osh**	**0.31**	**245**	P	Pg	20 00 12.2	+0.2
OHH				S	Sg	20 00 16.2	+0.2
TSTA	**Tashata**	**0.52**	**262**	P	Pg	20 00 16.0	0.0
TSTA				S	Sg	20 00 23.3	+0.6
ANR	**Andizhan**	**0.61**	**280**	P	Pb	20 00 18.8	-0.6
ANR				S	Sb	20 00 28.8	+0.3
FRG	**Fergana**	**1.08**	**255**	P	Pg	20 00 27.0	+0.3
FRG				S	Sb	20 00 41.4	-0.6
NAM	**Namangan**	**1.18**	**287**	P	Pb	20 00 29.0	-0.1
NAM				S	Sn	20 00 47.0	+0.8
CHMI	**Chimion**	**1.30**	**253**	P	Pn	20 00 30.7	-0.5
AML	**Almayashu**	**1.53**	**15**	⇑P	Pn	20 00 34.7	0.0
	97nm,0.1s,SNR=258						
AML				⇓S	Sg	20 00 55.8	+0.6
	195nm,0.2s						
DRK	**Karamyk**	**1.57**	**222**	⇑*i*P	Pn	20 00 34.2	-0.9
	baz=22						
DRK				⇑*i*S	Sn	20 00 54.6	-1.5
	baz=22						
TRKS	**Terek-Say**	**1.76**	**301**	⇑*i*P	Pn	20 00 36.8	-0.8
	baz=0.0						
TRKS				⇑*i*S	Sn	20 00 59.8	-0.8
	baz=0.0						
UCH	**Uchtor**	**1.88**	**33**	⇑P	Pb	20 00 40.3	-0.9
	18nm,0.3s,SNR=9.5						
UCH				⇓S	Sb	20 01 05.5	+0.3
	64nm,0.2s						
UCH	**Uchtor**	**1.88**	**33**	⇓*i*P	Pn	20 00 40.0	+0.5
	baz=32						
UCH				⇓*i*S	Sb	20 01 04.3	-0.9
	baz=32						
BTK	**Batken**	**1.88**	**252**	⇑*i*P	Pn	20 00 39.1	-0.1
	baz=53						
BTK				⇑*i*S	Sn	20 01 03.2	-0.3
	baz=53						
EKS2	**Erkin-Say**	**2.06**	**13**	⇓P	Pb	20 00 43.9	-0.2
	12nm,0.1s,SNR=90						
EKS2				⇓S	Sb	20 01 10.8	+0.5
	48nm,0.2s						
EKS2	**Erkin-Say**	**2.06**	**13**	⇑*i*P	Pn	20 00 42.3	+0.6
	baz=13						
EKS2				⇑*i*S	Sn	20 01 08.6	+0.6
	baz=13						
MRKS	**Merke**	**2.09**	**1**	*e*P	Pb	20 00 44.5	-0.2
	40nm,0.4s						
MRKS				*e*S	Sg	20 01 12.3	-0.8
	298nm,0.1s						
MRKS	**Merke**	**2.09**	**1**	Pg	Pb	20 00 44.5	-0.2
	40nm,0.4s						
MRKS				Lg	Lg	20 01 12.3	
	167nm,0.5s						
AAK	**Ala-Archa**	**2.22**	**26**	⇑P	Pb	20 00 45.7	-1.2
	14nm,0.2s,SNR=18						
AAK				⇓S	Sb	20 01 15.2	+0.2
	125nm,0.4s						
AAK	**Ala-Archa**	**2.22**	**26**	⇓*i*P	Pn	20 00 44.6	+0.6
	baz=26						
AAK				⇓*i*S	Sn	20 01 12.6	+0.6
	baz=26						
NRN	**Naryn**	**2.29**	**69**	⇑*i*P	Pn	20 00 44.8	-0.2
	baz=69						
NRN				⇑*i*S	Sn	20 01 13.0	-0.9
	baz=69						
KBK	**Karagaybulak**	**2.41**	**33**	⇑P	Pb	20 00 48.7	-1.5
	10nm,0.1s						
KBK				⇓S	Sb	20 01 21.2	+0.8
	98nm,0.3s						
KBK	**Karagaybulak**	**2.41**	**33**	⇑*i*P	Pn	20 00 47.2	+0.6
	baz=33						
KBK				⇑*i*S	Sn	20 01 17.0	+0.3
	baz=33						
FRU1	**Bishkek**	**2.42**	**27**	⇑*i*P	Pn	20 00 47.5	+0.9
	baz=26						
FRU1				⇑*i*S	Sn	20 01 17.4	+0.6
	baz=26						
CHRV	**Charvak**	**2.61**	**293**	P	Pb	20 00 54.4	+0.9
DZA	**Taraz**	**2.62**	**329**	*e*P	Pb	20 00 54.5	+0.9
	52nm,0.1s						
DZA				*e*S	Sg	20 01 29.1	-1.0
	219nm,0.3s						
DZA	**Taraz**	**2.62**	**329**	Pg	Pb	20 00 54.6	+0.9
	52nm,0.1s						
DZA				Lg	Lg	20 01 29.1	
	219nm,0.3s						
CHMS	**Chumysh**	**2.63**	**26**	⇑P	Pn	20 00 51.3	+1.9
	13nm,0.3s						
CHMS				⇑S	Sb	20 01 26.0	-0.6
	57nm,0.5s						
CHMS	**Chumysh**	**2.63**	**26**	⇑*i*P	Pn	20 00 50.2	+0.8
	baz=26						
CHMS				⇑*i*S	Sn	20 01 22.2	+0.3
	baz=26						
CHMS	**Chumysh**	**2.63**	**26**	⇑Pn	Pn	20 00 51.3	+1.9
	5.1nm,0.3s						
CHMS				⇓Lg	Lg	20 01 28.1	
	38nm,0.5s						
GAR	**Garm**	**2.74**	**234**	⇑*i*P	Pn	20 00 50.9	-0.1
	baz=34						
GAR				⇑*i*S	Sn	20 01 23.5	-1.3
	baz=34						
YBZ	**Yangibazar**	**2.78**	**285**	P	Pb	20 00 57.7	+1.4
BOOM	**Boomskoye usch**	**2.78**	**48**	⇓*i*P	Pn	20 00 52.3	+0.6
	baz=47						
BOOM				⇓*i*S	Sn	20 01 25.6	-0.3
	baz=47						
USP	**Ospenovka**	**2.80**	**21**	⇓P	Pn	20 00 53.4	+1.7
	8.3nm,0.2s,SNR=5.6						
USP	**Ospenovka**	**2.80**	**21**	⇑*i*P	Pn	20 00 52.4	+0.6
	baz=21						
USP				⇑*i*S	Sn	20 01 26.1	0.0
	baz=21						
ULHL	**Ulahol**	**2.81**	**55**	⇓*i*P	Pn	20 00 52.6	+0.5
	baz=54						
ULHL				⇓*i*S	Sn	20 01 26.3	-0.4
	baz=54						
TKM2	**Tokmak 2**	**2.91**	**38**	⇓*i*P	Pn	20 00 54.1	+0.6
	baz=38						
TKM2				⇓*i*S	Sn	20 01 28.9	-0.2
	baz=38						
TKM2	**Tokmak 2**	**2.91**	**38**	Pg	Pb	20 00 59.7	+1.0
	7.3nm,0.5s						
TKM2				Lg	Lg	20 01 37.2	
	25nm,0.6s						
TAS	**Tashkent**	**3.00**	**284**	⇑*i*P	Pn	20 00 54.9	+0.4
	baz=85						
TAS				⇑*i*S	Sn	20 01 30.0	-1.0
	baz=85						
NZBK	**Nazarbek**	**3.11**	**282**	P	Sg	20 01 45.1	-0.8
KK31	**Karatay Array**	**3.14**	**322**	⇑Pn	Pb	20 01 02.6	0.0
	3.4nm,0.3s,baz=138,slow=16,SNR=41						
KK31				⇓Lg	Lg	20 01 46.5	
	4.9nm,0.3s,baz=140,slow=28						
KKAR	**Karatay Array**	**3.14**	**322**	⇑*i*P	Pn	20 00 57.0	+0.5
	baz=22						
KKAR				⇑*i*S	Sn	20 01 34.2	-0.4
	baz=22						
KST	**Kastek**	**3.18**	**40**	*e*P	Pb	20 01 05.2	+1.9
	4.2nm,0.4s						
KST				*e*S	Sg	20 01 47.3	-0.8
	27nm,0.4s						
KST	**Kastek**	**3.18**	**40**	Pg	Pb	20 01 05.2	+1.9
	4.2nm,0.4s						
KST				Lg	Lg	20 01 47.3	
	22nm,0.6s						
DGS	**Degeres**	**3.24**	**36**	*e*P	Pb	20 01 05.4	+1.2
	8.0nm,0.6s						
DGS				*e*S	Sg	20 01 48.3	-1.8
	24nm,0.2s						
DGS	**Degeres**	**3.24**	**36**	Pg	Pb	20 01 05.4	+1.2
	8.0nm,0.6s						
DGS				Lg	Lg	20 01 48.3	
	24nm,0.5s						
MTBS	**Maitube**	**3.48**	**44**	*e*P	Pb	20 01 10.0	+1.7
	7.3nm,0.3s						
MTBS				*e*S	Sg	20 01 55.8	-1.9
	29nm,0.3s						
MTBS	**Maitube**	**3.48**	**44**	Pg	Pb	20 01 10.0	+1.7
	2.0nm,0.1s						
MTBS				Lg	Lg	20 01 55.8	
	29nm,0.3s						
KRBS	**Karabastau**	**3.57**	**31**	*e*P	Pb	20 01 11.1	+1.2
	2.9nm,0.4s						
KRBS				*e*S	Sg	20 01 58.0	-2.7
	16nm,0.6s						
KRBS	**Karabastau**	**3.57**	**31**	Pg	Pb	20 01 11.1	+1.2
	2.9nm,0.4s						
KRBS				Lg	Lg	20 01 58.0	
	16nm,0.6s						
CHGR	**Chuyangaron**	**3.67**	**238**	⇓*i*P	Pn	20 01 03.9	+0.1
	baz=39						
CHGR				⇓*i*S	Sn	20 01 46.2	-1.6
	baz=39						
TNSS	**Tian-Shan**	**3.70**	**49**	*e*P	Pb	20 01 13.2	+0.9
	2.6nm,0.5s						
TNSS				*e*S	Sb	20 02 01.1	+3.4
	8.6nm,0.6s						
TNSS	**Tian-Shan**	**3.70**	**49**	Pg	Pb	20 01 13.2	+0.9
	2.6nm,0.5s						
TNSS				Lg	Lg	20 02 01.1	
	8.6nm,0.6s						
MDOK	**Medeo**	**3.84**	**48**	*e*P	Pb	20 01 16.9	+2.4
MDOK				*e*S	Sg	20 02 07.5	-1.8
MDOK	**Medeo**	**3.84**	**48**	Pg	Pb	20 01 16.0	+1.5
	0.4nm,0.2s						
MDOK				Pg	Pb	20 01 16.9	+2.4
MDOK				Lg	Lg	20 02 06.1	
	2.2nm,0.2s						
MDOK				Lg	Lg	20 02 07.5	
KOTS	**Kotyrbulak**	**3.92**	**48**	*e*P	Pb	20 01 18.1	+2.2
	4.8nm,0.6s						
KOTS				*e*S	Sg	20 02 09.4	-2.5
	41nm,1.1s						
KOTS	**Kotyrbulak**	**3.92**	**48**	Pg	Pb	20 01 18.1	+2.2
	4.8nm,0.6s						
KOTS				Lg	Lg	20 02 09.4	
	41nm,1.1s						
KUU	**Kurty**	**4.01**	**35**	*e*P	Pb	20 01 18.8	+1.5
	4.4nm,0.4s						
KUU				*e*S	Sg	20 02 10.8	-3.8
	25nm,0.6s						
KUU	**Kurty**	**4.01**	**35**	Pg	Pb	20 01 18.8	+1.5
	4.4nm,0.4s						
KUU				Lg	Lg	20 02 10.8	
	25nm,0.6s						
KTBS	**Karatobe**	**4.03**	**39**	*e*P	Pb	20 01 19.7	+2.1
	2.1nm,0.3s						
KTBS				*e*S	Sg	20 02 12.9	-2.4
	27nm,0.5s						
KTBS	**Karatobe**	**4.03**	**39**	Pg	Pb	20 01 19.7	+2.1
	2.1nm,0.3s						
KTBS				Lg	Lg	20 02 12.9	
	27nm,0.5s						
CHKK	**Chushkaly**	**4.28**	**40**	*e*P	Pb	20 01 24.2	+2.3
	1.3nm,0.1s						
CHKK				*e*S	Sg	20 02 20.2	-3.2
	15nm,0.4s						
CHKK	**Chushkaly**	**4.28**	**40**	Pg	Pb	20 01 24.2	+2.3
	1.3nm,0.1s						
CHKK				Lg	Lg	20 02 20.2	
	15nm,0.4s						

BTLS Baital 4.43 8 eP Pb 20 01 26.6 +2.1
1.7nm,0.3s
BTLS eS **Sg 20 02 24.5 -3.9**
20nm,1.0s
BTLS Baital 4.43 8 Pg **Pb 20 01 26.6 +2.1**
1.7nm,0.3s
BTLS Lg Lg 20 02 24.5
20nm,1.0s
ARXS Arharly 4.96 43 eP **Pb 20 01 35.5 +2.0**
1.4nm,0.5s
ARXS eS **Sg 20 02 39.9 -5.4**
16nm,0.7s
ARXS Arharly 4.96 43 Pg **Pb 20 01 35.5 +2.0**
1.4nm,0.5s
ARXS Lg Lg 20 02 39.9
16nm,0.7s
PDGK Podgornoye 5.42 58 Lg Lg 20 02 54.6
22nm,1.1s

*NEIC **18** 20:11:31.3±1.8, 25°62S±0°05×70°7W±0°1, h83km±11km, Error ellipse: s-maj=16.7km s-min=7.2km az=92.0*
*IDC **18** 20:11:32.8±3.6, 25°70S×70°29W, h65km±30km, mb3.7/5, mbtmp4.1/7, ML4.1/2, MS2.6/1, Error ellipse: s-maj=34.7km s-min=21.8km az=86.0*
*GUC **18** 20:11:32.4±0.5, 25°65S×70°45W, h76km±4km, ML4.0*
ISC 18 20:11:31.8±0.6, **25°61S**±0°04×**70°52W**±0°06, **h76**km, **n85**, σ1§**60**/85, **mb4.2**/5, **8C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.54**	**187**		**Pn**	**20 11 45.8**	**+0.2**
AC01	**Pan de Azucar**	**0.54**	**187**	⇓*iP*	**Pn**	**20 11 45.8**	**+0.2**
AC01				*i* S	**Sn**	**20 11 55.2**	**-0.5**
AC01				IAML		20 11 56.0	
	comp=E,27μm,0.4s						
GO02	**Mina Guanaco**	**0.95**	**62**		**Pn**	**20 11 50.9**	**+0.6**
GO02	**Mina Guanaco**	**0.95**	**62**	⇑*iP*	**Pn**	**20 11 50.9**	**+0.6**
GO02				*i* S	**Sn**	**20 12 04.6**	**+0.4**
PB14	**IPOC Station P**	**0.99**	**6**	Pn	**Pn**	**20 11 51.7**	**+0.9**
PB14	**IPOC Station P**	**0.99**	**6**	⇓*iP*	**Pn**	**20 11 51.9**	**+1.2**
PB14				*i* S	**Sn**	**20 12 05.3**	**+0.5**
PB14				IAML		20 12 07.0	
	comp=N,3μm,0.7s						
AC06	**Mina Casimiro**	**1.75**	**175**		**Pn**	**20 12 00.4**	**+0.2**
AC06	**Mina Casimiro**	**1.75**	**175**	⇑*iP*	**Pn**	**20 12 00.5**	**+0.2**
AC06				IAML		20 12 22.7	
	comp=E,1μm,0.3s						
AC02	**Maricunga**	**1.75**	**135**	Pn	**Pn**	**20 12 01.8**	**+1.1**
AC02	**Maricunga**	**1.75**	**135**	*eP*	**Pn**	**20 12 01.8**	**+1.1**
AC02				*i* S	**Sn**	**20 12 22.9**	**+0.4**
AC02				IAML		20 12 24.0	
	comp=E,4μm,0.2s						
GO03	**Copiap**	**1.99**	**173**		**Pn**	**20 12 03.7**	**+0.2**
GO03	**Copiap**	**1.99**	**173**	⇑*iP*	**Pn**	**20 12 03.7**	**+0.2**
PB10	**IPOC Station P**	**2.09**	**359**	Pn	**Pn**	**20 12 05.4**	**+0.6**
PB10	**IPOC Station P**	**2.09**	**359**	*iP*	**Pn**	**20 12 05.4**	**+0.6**
PB15	**IPOC Station P**	**2.58**	**22**		**Pn**	**20 12 13.1**	**+1.5**
PB15	**IPOC Station P**	**2.58**	**22**	⇑*iP*	**Pn**	**20 12 13.1**	**+1.5**
AC04	**Llanos de Chal**	**2.63**	**191**	Pn	**Pn**	**20 12 10.9**	**-1.2**
AC04	**Llanos de Chal**	**2.63**	**191**	⇑*iP*	**Pn**	**20 12 10.9**	**-1.2**
AC04				IAML		20 12 41.7	
	comp=E,478nm,0.4s						
PB06	**IPOC Station P**	**3.02**	**17**		**Pn**	**20 12 17.9**	**+0.4**
PB06	**IPOC Station P**	**3.02**	**17**	⇑*iP*	**Pn**	**20 12 18.2**	**+0.7**
AC05	**El Transito**	**3.22**	**176**		**Pn**	**20 12 20.6**	**+0.5**
AC05	**El Transito**	**3.22**	**176**	⇑*iP*	**Pn**	**20 12 20.7**	**+0.5**
PB04	**IPOC Station P**	**3.28**	**6**	Pn	**Pn**	**20 12 21.1**	**0.0**
PB04	**IPOC Station P**	**3.28**	**6**	*eP*	**Pn**	**20 12 21.0**	**0.0**
LVC	**Limon Verde**	**3.33**	**27**	P	**Pn**	**20 12 23.4**	**+1.5**
	comp=E,9.2nm,0.3s,baz=202,slow=7.5,SNR=69						
LVC				S	**Sn**	**20 13 01.7**	**+1.2**
	comp=E,135nm,0.3s,baz=261,slow=7.1,SNR=3.4						
LVC				LR	LR	20 13 51.4	
	comp=E,88nm,18.1s,baz=206,slow=42						
	comp=E,23nm,0.3s						
LVC	**Limon Verde**	**3.33**	**27**	Pn	**Pn**	**20 12 23.0**	**+1.0**
LVC	**Limon Verde**	**3.33**	**27**	*eP*	**Pn**	**20 12 23.0**	**+1.0**
LCO	**Las Campanas**	**3.39**	**183**	Pn	**Pn**	**20 12 21.8**	**-0.9**
LCO	**Las Campanas**	**3.39**	**183**	*eP*	**Pn**	**20 12 21.4**	**-1.2**
AF01	**San Pedro de A**	**3.40**	**39**		**Pn**	**20 12 24.4**	**+1.6**
PB03	**IPOC Station P**	**3.62**	**11**		**Pn**	**20 12 25.0**	**-0.6**
PB03	**IPOC Station P**	**3.62**	**11**	*eP*	**Pn**	**20 12 25.3**	**-0.3**
PB07	**IPOC Station P**	**3.91**	**9**		**Pn**	**20 12 29.3**	**-0.4**
PB07	**IPOC Station P**	**3.91**	**9**	*eP*	**Pn**	**20 12 29.7**	**+0.1**
PB09	**IPOC Station P**	**3.97**	**17**		**Pn**	**20 12 31.1**	**+0.6**
PB09	**IPOC Station P**	**3.97**	**17**	⇑*iP*	**Pn**	**20 12 32.0**	**+1.4**
PB02	**IPOC Station P**	**4.31**	**8**		**Pn**	**20 12 34.8**	**-0.2**
CO05	**La Serena**	**4.34**	**188**	Pn	**Pn**	**20 12 34.8**	**-0.4**
CO01	**Juntas del Tor**	**4.37**	**175**		**Pn**	**20 12 35.3**	**-0.6**
GO04	**Tololo Observa**	**4.55**	**183**		**Pn**	**20 12 37.7**	**-0.7**
PB01	**IPOC Station P**	**4.64**	**12**		**Pn**	**20 12 39.4**	**-0.2**
PATCX	**Punta Patache**	**4.78**	**4**	Pn	**Pn**	**20 12 40.3**	**-1.1**
TA01	**Diego Aracena**	**5.03**	**4**	Pn	**Pn**	**20 12 43.2**	**-1.6**
CO06	**Fray Jorge**	**5.14**	**191**	Pn	**Pn**	**20 12 44.0**	**-2.2**
CO03	**El Pedregal**	**5.21**	**182**		**Pn**	**20 12 46.7**	**-0.6**
TA02	**Huaiquique**	**5.33**	**4**	Pn	**Pn**	**20 12 47.2**	**-1.7**
PB08	**IPOC Station P**	**5.59**	**13**	Pn	**Pn**	**20 12 52.0**	**-0.8**
CO02	**Combarbal**	**5.59**	**184**	Pn	**Pn**	**20 12 50.7**	**-1.8**
GO01	**Chusmiza**	**6.04**	**12**	Pn	**Pn**	**20 12 58.6**	**-0.4**
PB12	**IPOC Station P**	**6.96**	**2**	Pn	**Pn**	**20 13 10.1**	**-1.2**
VA03	**San Esteban**	**7.13**	**180**	Pn	**Pn**	**20 13 10.4**	**-3.1**
PB16	**IPOC Station P**	**7.30**	**8**	Pn	**Pn**	**20 13 15.6**	**-0.8**
MT02	**Curacav**	**7.64**	**184**	Pn	**Pn**	**20 13 18.6**	**-1.8**
MT09	**Talagante**	**8.15**	**183**	Pn	**Pn**	**20 13 24.8**	**-2.6**
MT01	**Popeta**	**8.25**	**184**	Pn	**Pn**	**20 13 26.3**	**-2.3**
BO01	**Tunca**	**8.77**	**183**	Pn	**Pn**	**20 13 33.7**	**-2.0**
LPAZ	**La Paz**	**9.54**	**14**	P	**Pn**	**20 13 47.8**	**+0.9**
	comp=E,1.4nm,0.3s,baz=210,slow=7.0,SNR=22						
	comp=E,4.7nm,0.4s						
LPAZ	**La Paz**	**9.54**	**14**	Pn	**Pn**	**20 13 48.1**	**+1.1**
H03N1	**Juan Fernandez**	**10.69**	**221**	P	**Pn**	**20 14 00.3**	**-1.3**
	baz=109,slow=15,SNR=24						
H03N1				T	T	20 25 01.1	
	baz=46,slow=72,SNR=59						
H03N2	**Juan Fernandez**	**10.70**	**221**	P	**Pn**	**20 14 00.7**	**-1.1**
	baz=109,slow=15,SNR=19						
H03N2				T	T	20 24 58.3	
	baz=46,slow=72,SNR=43						
H03N3	**Juan Fernandez**	**10.70**	**221**	P	**Pn**	**20 14 00.4**	**-1.5**
	baz=109,slow=15,SNR=35						
H03N3				T	T	20 24 54.7	
	baz=46,slow=72,SNR=24						
H03S3	**Juan Fernandez**	**10.96**	**220**	P	**Pn**	**20 14 03.1**	**-2.2**
	baz=44,slow=16,SNR=49						
H03S1	**Juan Fernandez**	**10.97**	**220**	P	**Pn**	**20 14 03.1**	**-2.4**
	baz=44,slow=16,SNR=34						
H03S2	**Juan Fernandez**	**10.97**	**220**	P	**Pn**	**20 14 03.6**	**-2.0**
	baz=44,slow=16,SNR=44						
SIV	**San Ignacio**	**13.02**	**45**	P	**Pn**	**20 14 29.8**	**-4.0**
	comp=E,5.1nm,0.3s,baz=255,slow=7.4,SNR=27						
SIV				S	**Sn**	**20 16 49.0**	**-7.9**
	comp=E,0.5nm,0.3s,baz=303,slow=21,SNR=1.8						
LL05	**Los Muermos**	**15.94**	**188**		**Pn**	**20 15 12.6**	**+1.2**
LL05				IAmb	IAmb	20 15 16.0	
	comp=Z,48nm,0.5s						
ITAB	**Concordia**	**16.56**	**100**	Pn	**Pn**	**20 15 18.5**	**-0.7**
ITAB				IAmb	IAmb	20 15 46.1	
	comp=Z,26nm,1.5s						
BDFB	**Brasilia**	**23.25**	**69**	P	**P**	**20 16 32.2**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=234,slow=13,SNR=1.9						
	comp=Z,1.3nm,0.4s						
MG01	**Puerto William**	**29.37**	**177**	P	**P**	**20 17 26.4**	**-0.9**
DSLB	**Salisbury**	**41.75**	**13**	*eP*	**P**	**20 19 11.7**	**-2.0**
MDCT	**Cottage Hill,**	**41.92**	**13**	*e*	**P**	**20 19 16.3**	**+1.3**
SNAA	**Sanae**	**58.92**	**160**	P	**P**	**20 21 23.6**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=276,slow=7.0,SNR=20						
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**63.22**	**328**	P	**P**	**20 21 55.6**	**+3.3**
	comp=Z,0.3nm,0.7s,baz=153,slow=8.1,SNR=4.0						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.13**	**70**	P	**P**	**20 23 35.4**	**+1.3**
	comp=Z,2.6nm,0.6s,baz=256,slow=4.9,SNR=22						
	comp=Z,2.6nm,0.6s						
MAW	**Mawson**	**80.83**	**164**	P	**P**	**20 23 39.0**	**+2.2**
	comp=Z,2.6nm,0.6s,baz=216,slow=8.4,SNR=14						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**125.60**	**208**	PKP	**PKiKP**	**20 30 26.4**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=137,slow=1.8,SNR=5.2						
H11S2	**WAKE ISLAND Hyt**	**26.82**	**275**	T	T	22 50 14.7	
	baz=108,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hyt**	**26.83**	**275**	T	T	22 50 26.6	
	baz=108,slow=75,SNR=64						
H11S3	**WAKE ISLAND Hyt**	**26.84**	**275**	T	T	22 50 14.1	
	baz=108,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hyt**	**27.02**	**276**	T	T	22 50 36.8	
	baz=108,slow=75,SNR=5.3						
H11N1	**WAKE ISLAND Hyt**	**27.03**	**276**	T	T	22 50 29.9	
	baz=108,slow=75,SNR=4.0						
H11N2	**WAKE ISLAND Hyt**	**27.03**	**276**	T	T	22 50 34.6	
	baz=108,slow=75,SNR=4.4						
WRA	**Warramunga Arr**	**128.68**	**210**	PKP	**PKiKP**	**20 30 32.5**	**+0.9**
	comp=Z,0.3nm,1.0s,baz=174,slow=1.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**146.28**	**26**	PKPbc	**PKPab**	**20 31 05.2**	**+1.0**
	comp=Z,3.9nm,0.6s,baz=308,slow=3.9,SNR=19						
MKAR	**Makanchi Array**	**149.79**	**39**	PKPbc	**PKiKP**	**20 31 15.2**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=326,slow=2.5,SNR=22						

*IDC **18** 20:11:54.5±4.7, 25°64S×70°43W, h90km±37km, mb3.6/3, mbtmp4.0/5, Error ellipse: s-maj=47.3km s-min=39.5km az=59.0*
ISC 18 20:11:55.5±1.0, **25°5S**±0°1×**70°2W**±0°2, **h100**km, **n10**, σ1§**20**/11, **mb3.7**/3, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.12**	**22**	P	**Pn**	**20 12 45.5**	**+2.3**
	208nm,0.3s,baz=206,slow=14,SNR=27						
LVC				S	**Sn**	**20 13 18.4**	**-1.4**
	544nm,0.7s,baz=318,slow=7.7,SNR=14						
LPAZ	**La Paz**	**9.38**	**12**	P	**Pn**	**20 14 08.8**	**+0.4**
	1.5nm,0.4s,baz=220,slow=1.9,SNR=2.9						
SIV	**San Ignacio**	**12.74**	**44**	P	**Pn**	**20 14 51.8**	**-1.3**
	3.6nm,0.5s,baz=228,slow=12,SNR=7.0						
TXAR	**Lajitas Array**	**63.29**	**327**	P	**P**	**20 22 13.2**	**-0.7**
	0.2nm,0.7s,baz=139,slow=8.4,SNR=2.3						
	0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**79.82**	**70**	P	**P**	**20 23 54.0**	**+0.6**
	2.8nm,0.7s,baz=258,slow=5.0,SNR=9.8						
	2.8nm,0.7s						
MAW	**Mawson**	**80.84**	**164**	P	**P**	**20 23 57.7**	**-0.1**
	0.5nm,0.4s,baz=246,slow=10.0,SNR=1.7						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**125.83**	**208**	PKP	**PKPdf**	**20 30 45.5**	**-0.7**
	0.3nm,0.7s,baz=164,slow=1.6,SNR=2.0						
WRA	**Warramunga Arr**	**128.91**	**210**	PKP	**PKPdf**	**20 30 51.6**	**-0.6**
	0.4nm,0.7s,baz=175,slow=1.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**146.06**	**27**	PKPbc	**PKPab**	**20 31 24.8**	**+0.5**
	0.9nm,0.5s,baz=315,slow=4.3,SNR=2.6						
MKAR	**Makanchi Array**	**149.53**	**39**	PKPbc	**PKiKP**	**20 31 34.5**	**+0.3**
	1.0nm,0.7s,baz=334,slow=2.2,SNR=5.2						

*IDC **18** 20:20:14.4±9.6, 13°31N×88°31W, h0km, mb3.5/3, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=226.3km s-min=48.7km az=19.0*
*INET **18** 20:20:22.0±1.5, 12°99N×89°10W, h12km±12km, ML3.9*
*GCG **18** 20:20:22.2±0.6, 13°06N×89°28W, h120km±63km, MD4.0*
*SNET **18** 20:20:22.0±0.8, 12°96N×89°20W, h50km±1km, ML4.3*
ISC 18 20:20:21.9±1.3, **12°95N**±0°07×**89°15W**±0°04, **h48**km±14km, **n58**, σ1§**06**/87, **mb3.4**/3, **2C-1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.68**	**7**	*eP*	**Pn**	**20 20 34.9**	**-0.4**
SJTE	**Alcalda de S**	**0.68**	**12**	*eP*	**Pn**	**20 20 35.0**	**-0.3**
SJTE				*eS*	**Sn**	**20 20 44.7**	**-0.3**
SJTE				*eS*	**Sn**	**20 20 44.9**	**-0.2**
COEG	**Centro de Oper**	**0.72**	**21**	*eP*	**Pn**	**20 20 35.5**	**-0.3**
COEG				*eS*	**Sn**	**20 20 46.9**	**+0.9**
SNVI	**San Vicente**	**0.73**	**25**	*eP*	**Pn**	**20 20 35.7**	**-0.4**
ITCA	**Escuela Especi**	**0.73**	**350**	*iP*	**Pn**	**20 20 35.9**	**-0.2**
ITCA				*eS*	**Sn**	**20 20 46.4**	**+0.1**
SNET	**Serv Nac Est T**	**0.74**	**354**	*eP*	**Pn**	**20 20 35.9**	**-0.2**
SNET				*eS*	**Sn**	**20 20 46.3**	**-0.1**
SNET				IAML		20 20 47.2	
	comp=Z,11μm,0.2s						
SNET	**Serv Nac Est T**	**0.74**	**354**	*eP*	**Pn**	**20 20 36.0**	**-0.2**
AEIL	**Aeropuerto Ilo**	**0.75**	**2**	*eP*	**Pn**	**20 20 35.9**	**-0.3**
UTEC	**Universidad Te**	**0.75**	**356**	*eP*	**Pn**	**20 20 36.1**	**-0.2**
UTEC				*eS*	**Sn**	**20 20 46.8**	**+0.1**
UEES	**Universidad Ev**	**0.77**	**354**	*eS*	**Sn**	**20 20 47.9**	**+0.7**
UESS	**Universidad de**	**0.77**	**356**	*eP*	**Pn**	**20 20 36.6**	**0.0**
UESV	**Universidad de**	**0.77**	**27**	*eP*	**Pn**	**20 20 36.3**	**-0.2**
UESV				*eS*	**Sn**	**20 20 47.4**	**+0.2**
PAVA	**Las Pavas**	**0.79**	**15**	*eP*	**Pn**	**20 20 36.6**	**-0.2**
PAVA				*eS*	**Sn**	**20 20 48.1**	**+0.4**
PAVA				IAML		20 20 50.0	
	comp=Z,10μm,0.4s						
BOQS	**Boqueron**	**0.79**	**351**	⇓*iP*	**Pn**	**20 20 37.0**	**-0.1**
LBRS	**Las Brisas**	**0.79**	**8**	*eP*	**Pn**	**20 20 36.9**	**+0.1**
LFU	**La Fuente**	**0.80**	**3**	*eS*	**Sn**	**20 20 48.1**	**+0.3**
COEB	**Comit de Eme**	**0.81**	**48**	*eP*	**Pn**	**20 20 37.4**	**+0.3**
COEB				*eS*	**Sn**	**20 20 49.2**	**+0.9**
COEB				IAML		20 20 52.2	
	comp=Z,10μm,0.3s						
SCLA	**Alcaldia de Sa**	**0.85**	**29**	*eP*	**Pn**	**20 20 37.8**	**+0.2**
SCLA				*eS*	**Sn**	**20 20 50.2**	**+1.0**
PQSS	**Presa 15 de Se**	**0.88**	**40**	*eP*	**Pn**	**20 20 38.4**	**+0.4**
PQSS				*eS*	**Sn**	**20 20 51.0**	**+1.2**
PACA	**Pacayal**	**0.96**	**57**	*eP*	**Pn**	**20 20 40.0**	**+0.8**
PACA				*eS*	**Sn**	**20 20 53.8**	**+2.1**
PACA	**Pacayal**	**0.96**	**57**	*eP*	**Pn**	**20 20 39.9**	**+0.8**
RANC	**El Ranchito**	**0.97**	**60**	*eP*	**Pn**	**20 20 39.9**	**+0.6**
RANC				*eS*	**Sn**	**20 20 53.6**	**+1.6**
VSM	**San Miguel**	**0.98**	**61**	*eP*	**Pn**	**20 20 40.0**	**+0.5**
CEVE	**Cerro Verde**	**0.99**	**332**	*iP*	**Pn**	**20 20 39.4**	**-0.3**
CEVE				*eS*	**Sn**	**20 20 53.9**	**+1.3**
CEVE				IAML		20 20 57.2	
	comp=Z,19μm,0.3s						
SBLS	**San Blas**	**1.00**	**333**	*iP*	**Pn**	**20 20 39.4**	**-0.3**
SNJE	**San Jose**	**1.02**	**334**	*eP*	**Pn**	**20 20 39.8**	**-0.1**
RTR	**El Retiro**	**1.06**	**333**	*eP*	**Pn**	**20 20 40.6**	**0.0**
CNRM	**Centro Naciona**	**1.09**	**61**	*eS*	**Sn**	**20 20 56.7**	**+2.0**
UNIC	**Universidad Ca**	**1.10**	**339**	*eP*	**Pn**	**20 20 41.2**	**+0.2**
P5NO	**Presa 5 de nov**	**1.10**	**20**	⇑*iP*	**Pn**	**20 20 41.1**	**+0.1**
P5NO				*eS*	**Sn**	**20 20 55.3**	**+0.3**
NUBE	**Las Nubes**	**1.13**	**327**	*iP*	**Pn**	**20 20 41.0**	**-0.5**
NUBE				*eS*	**Sn**	**20 20 55.4**	**-0.5**
LOAL	**Lomas de Alarc**	**1.21**	**330**	*eP*	**Pn**	**20 20 42.6**	**+0.1**
LOAL				*eS*	**Sn**	**20 20 58.3**	**+0.5**
LOAL				*eS*	**Sn**	**20 20 59.4**	**+1.6**
LLGN	**La Laguna**	**1.22**	**9**	*eP*	**Pn**	**20 20 42.8**	**0.0**
LLGN				*eS*	**Sn**	**20 20 59.0**	**+0.8**
CAHU	**Cacacuatique**	**1.23**	**48**	*eP*	**Pn**	**20 20 43.5**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.24**	**330**	*eP*	**Pn**	**20 20 42.8**	**-0.1**
SLOZ				*eS*	**Sn**	**20 20 59.0**	**+0.6**
LCND	**La Caada**	**1.28**	**74**	*eP*	**Pn**	**20 20 44.0**	**+0.7**
LCND				*eS*	**Sn**	**20 21 00.9**	**+1.5**
CNCH	**Conchagua**	**1.32**	**76**	*iP*	**Pn**	**20 20 44.5**	**+0.5**
CNCH				*eS*	**Sn**	**20 21 03.1**	**+2.5**
CNCH				IAML		20 21 04.2	
	comp=Z,6μm,0.3s						
MTO3	**Montecristo**	**1.46**	**352**	⇑*iP*	**Pn**	**20 20 46.0**	**0.0**
MTO3				*eS*	**Sn**	**20 21 04.7**	**+0.6**
MTO3	**Montecristo**	**1.46**	**352**	*eP*	**Pn**	**20 20 46.0**	**0.0**
ESQI	**Esquipulas**	**1.61**	**353**	*iP*	**Pn**	**20 20 48.4**	**+0.3**
ESQI				*eS*	**Sn**	**20 21 08.7**	**+0.9**
NBG	**Las Nubes**	**2.00**	**325**	*eP*	**Pn**	**20 20 55.2**	**+1.7**
PCG	**Pacaya**	**2.02**	**316**	*eP*	**Pn**	**20 20 54.7**	**+1.0**
PCG				*eS*	**Sn**	**20 21 19.3**	**+1.4**
CRIN	**San Cristobal**	**2.06**	**97**	*eP*	**Pn**	**20 20 55.0**	**+0.8**
CRIN				*eS*	**Sn**	**20 21 20.6**	**+1.9**
TGUH	**Tegucigalpa,Un**	**2.13**	**59**	*eP*	**Pn**	**20 20 55.7**	**+0.5**
MRL	**Marmol**	**2.18**	**346**	*eP*	**Pn**	**20 20 57.2**	**+1.3**
FUG	**Fuego 3**	**2.22**	**312**	*eP*	**Pn**	**20 20 57.2**	**+0.8**
FUG				*eS*	**Sn**	**20 21 24.2**	**+1.5**
TEL3	**Telica 3**	**2.28**	**99**	*eP*	**Pn**	**20 20 57.3**	**+0.2**
APG	**El Apazote**	**2.41**	**328**	Pn	**Pn**	**20 20 59.5**	**+0.4**
	comp=Z,6.5nm,0.3s,baz=124,slow=12,SNR=24						
APG				Sn	**Sn**	**20 21 32.7**	**+5.2**
	comp=Z,20nm,0.3s,baz=87,slow=17,SNR=6.3						
	comp=Z,14nm,0.3s						
CNGN	**Cerro Negro**	**2.43**	**100**	*eP*	**Pn**	**20 20 58.6**	**-0.6**
CNGN				IAML		20 21 30.6	
	comp=N,316nm,0.3s						
MOMN	**Momotombo**	**2.60**	**102**	*eP*	**Pn**	**20 21 01.7**	**+0.1**
MOMN				*eS*	**Sn**	**20 21 29.1**	**-2.9**
COPN	**Copaltepe**	**2.61**	**107**	*eP*	**Pn**	**20 21 02.1**	**+0.5**
STG3	**Santiaguito 3,**	**2.93**	**307**	*eP*	**Pn**	**20 21 06.7**	**+0.5**
HUEN		**2.97**	**101**	*eP*	**Pn**	**20 21 06.6**	**+0.1**
MATN	**Matagalpa**	**3.14**	**90**	*eP*	**Pn**	**20 21 09.3**	**+0.3**
BOAB	**BOACO BROADBAN**	**3.44**	**98**	*eP*	**Pn**	**20 21 13.0**	**+0.1**
TXAR	**Lajitas Array**	**21.16**	**323**	P	**P**	**20 25 03.5**	**+0.3**
	comp=N,0.8nm,0.5s,baz=139,slow=11,SNR=16						
	comp=N,0.8nm,0.5s						
PDAR	**Pinedale Array**	**34.57**	**333**	P	**P**	**20 27 06.2**	**-0.1**
	comp=N,0.3nm,0.6s,baz=152,slow=10,SNR=3.1						
	comp=N,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**52.71**	**345**	P	**P**	**20 29 29.0**	**-2.4**
	comp=N,0.5nm,0.4s,baz=147,slow=6.9,SNR=6.6						
	comp=N,0.5nm,0.4s						

*NOU **18** 20:24:06.1, 37°09S×179°28E, h0km, MLv3.8/6, Off E. Coast of N. Island, N.Z.*
*WEL **18** 20:24:12.5±2.7, 37°S±14°×17°9E±1°3, h5km±10km, M3.6/6, ML3.9/6, MLv3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=40.7*
ISC 18 20:24:09.5±4.2, **37°21S**±0°09×**179°1E**±0°2, **h3**km±22km, **n56**, σ0§**99**/63, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.69**	**239**	P	**Pg**	**20 24 23.1**	**+0.4**
MXZ				S	**Sg**	**20 24 29.6**	**-1.9**
MXZ	**Matakaoa Point**	**0.69**	**239**	P	**Pg**	**20 24 23.2**	**+0.6**
WMGZ	**Waiomatatini S**	**0.79**	**220**	P	**Pb**	**20 24 27.0**	**+1.2**
WMGZ				S	**Sg**	**20 24 36.9**	**+2.1**
PKGZ	**Pakihiroa**	**1.02**	**229**	P	**Pg**	**20 24 29.4**	**+0.3**
PKGZ				S	**Sg**	**20 24 42.1**	**-0.3**
PUZ	**Puketiti**	**1.06**	**216**	P	**Pb**	**20 24 31.1**	**+0.6**
PUZ				S	**Sg**	**20 24 44.0**	**+0.3**
HAZ	**Te Kaha**	**1.14**	**241**	P	**Pg**	**20 24 30.2**	**-1.2**
HAZ				S	**Sg**	**20 24 45.9**	**-0.4**
TWGZ	**Tauwhareparae**	**1.28**	**221**	P	**Pg**	**20 24 34.4**	**+0.3**
TWGZ				S	**Sg**	**20 24 49.9**	**-0.8**
RUGZ	**Raukumara Rang**	**1.32**	**235**	P	**Pg**	**20 24 34.4**	**-0.4**
RUGZ				S	**Sg**	**20 24 50.8**	**-1.2**
CNGZ	**Carnagh Statio**	**1.43**	**207**	P	**Pn**	**20 24 36.7**	**+0.4**
WIZ	**White Island**	**1.51**	**257**	P	**Pn**	**20 24 36.8**	**-0.7**
TKGZ	**Te Karaka**	**1.55**	**217**	P	**Pn**	**20 24 37.8**	**-0.1**
MWZ	**Matawai**	**1.64**	**227**	P	**Pn**	**20 24 39.0**	**-0.3**
WHRZ	**Whale Island**	**1.77**	**248**	P	**Pn**	**20 24 41.2**	**+0.2**
RIGZ	**Rimuhau**	**1.80**	**214**	P	**Pn**	**20 24 41.0**	**-0.5**
URZ	**Urewera**	**1.86**	**235**	P	**Pn**	**20 24 42.1**	**-0.1**
URZ	**Urewera**	**1.86**	**235**	P	**Pn**	**20 24 42.1**	**-0.1**
MARZ	**Manawahe**	**2.04**	**247**	P	**Pb**	**20 24 47.8**	**+0.7**
EDRZ	**Edgecumbe**	**2.04**	**243**	P	**Pn**	**20 24 43.6**	**-1.1**
SNGZ	**Shannon Statio**	**2.07**	**220**	P	**Pn**	**20 24 44.6**	**-0.5**
OPRZ	**Ohinepanea**	**2.08**	**252**	P	**Pn**	**20 24 44.6**	**-0.6**
RTZ	**Ruatahuna**	**2.15**	**229**	P	**Pn**	**20 24 46.2**	**-0.1**
MUGZ	**Murupara**	**2.20**	**234**	P	**Pn**	**20 24 46.6**	**-0.3**
MYRZ	**Mayor Island**	**2.24**	**267**	P	**Pn**	**20 24 48.1**	**+0.6**
RAHZ	**Arahi**	**2.30**	**222**	P	**Pn**	**20 24 48.2**	**-0.1**
WHHZ	**Waihua**	**2.35**	**217**	P	**Pn**	**20 24 48.3**	**-0.6**
MTHZ	**Maungataniwha**	**2.39**	**226**	P	**Pn**	**20 24 49.3**	**-0.3**
NMHZ	**Naumai**	**2.58**	**223**	P	**Pn**	**20 24 52.1**	**-0.1**
ARHZ	**Aropaoanui**	**2.61**	**218**	P	**Pn**	**20 24 51.9**	**-0.6**
**K

AUBOZ **BOZOYUK** 1.45 327 PN **Pn** **20 33 59.1 -1.0**
CHBY **Cihanbeyli** 1.45 94 PN **Pb** **20 33 59.6 -1.0**
ALIN **Konya, Altinte** 1.49 105 P **Pb** **20 34 00.6 -0.7**
ALIN S **Sg** **20 34 20.9 +0.3**
ALIN *i* AML AML 20 34 23.0
comp=N,240nm,0.7s
ALIN *i* AML AML 20 34 28.0
comp=E,239nm,0.8s
KKUL **Konya-Kulu** 1.54 71 P **Pg** **20 34 02.4 +0.3**
KKUL *i* AML AML 20 34 33.0
comp=N,203nm,0.9s
KKUL *i* AML AML 20 34 36.0
comp=E,234nm,0.6s
USAK **Uak-Merkez** 1.59 271 P **Pb** **20 34 02.3 -0.5**
USAK S **Sb** **20 34 23.3 -0.2**
USAK *i* AML AML 20 34 29.0
comp=E,126nm,0.7s
SMAA **Simav-Kutahya** 1.66 285 PN **Pn** **20 34 02.6 -0.5**
GPA **Golpazari** 1.69 341 PN **Pn** **20 34 03.1 -0.3**
BILE **Bilecik/Merkez** 1.72 329 P **Pb** **20 34 04.0 -1.1**
BILE S **Sg** **20 34 29.6 +1.6**
BILE *i* AML AML 20 34 35.0
comp=N,830nm,0.9s
YUVA **Yuva-Kibriscik** 1.76 16 PN **Pb** **20 34 04.4 -1.5**
CAVI **Cavuskoy** 1.77 329 PN **Pn** **20 34 04.5 0.0**
MDUB **Mudurnu** 1.78 4 PN **Pn** **20 34 04.3 -0.4**
KORT **Korkueli** 1.78 198 PN **Pn** **20 34 04.5 -0.3**
GULT **Gulveren** 1.78 347 PN **Pb** **20 34 04.7 -1.5**
LOD **Lodumlu** 1.79 48 PN **Pn** **20 34 04.5 -0.3**
ANTO **Ankara** 1.79 49 ⇑P **Pb** **20 34 05.0 -1.4**
ANTO **Ankara** 1.79 49 PN **Pn** **20 34 04.5 -0.4**
KIBS **BOLU** 1.83 20 P **Pg** **20 34 08.3 +0.6**
KIBS S **Sg** **20 34 35.2 +3.7**
KIBS *i* AML AML 20 34 36.0
comp=E,391nm,0.7s
KIBS *i* AML AML 20 34 42.0
comp=N,294nm,0.5s
APMY **Acipayam-Deniz** 1.84 229 PN **Pn** **20 34 05.4 -0.2**
MANT **Manisa** 1.96 265 P **Pn** **20 34 06.9 -0.5**
MANT *i* AML AML 20 34 42.0
comp=N,87nm,0.8s
MANT *i* AML AML 20 34 44.0
comp=E,79nm,1.1s
SERE **Sereflikochisa** 1.98 82 PN **Pn** **20 34 07.6 +0.1**
SULT **Sultanhani-AKS** 2.00 104 PN **Pn** **20 34 07.7 -0.1**
ADVT **Abdulvahap** 2.01 330 PN **Pn** **20 34 07.7 -0.1**
HDMB **Hadim** 2.07 146 PN **Pn** **20 34 08.6 -0.3**
TAVA **DENIZLI_Tavas** 2.08 235 P **Pn** **20 34 08.8 -0.1**
TAVA *i* AML AML 20 34 55.0
comp=N,58nm,1.3s
TAVA *i* AML AML 20 35 02.0
comp=E,52nm,1.7s
DST **Dursunbey** 2.09 296 PN **Pn** **20 34 08.7 -0.3**
KKBE **Karaman, Kazim** 2.10 134 P **Pn** **20 34 09.8 +0.7**
KKBE *i* AML AML 20 34 51.0
comp=E,70nm,1.0s
KKBE *i* AML AML 20 34 56.0
comp=N,58nm,1.1s
SAUV **Serdivan-Sakar** 2.12 345 PN **Pn** **20 34 09.1 -0.1**
ORLT **Orhaneli** 2.14 310 PN **Pn** **20 34 09.7 0.0**
ELL **Elmali** 2.14 205 PN **Pn** **20 34 09.6 -0.2**
YAYX **Yaylak** 2.17 83 PN **Pn** **20 34 09.9 -0.3**
KAMT **Kaman** 2.18 71 PN **Pn** **20 34 10.0 -0.3**
CAME **Cameli-Denizli** 2.23 219 PN **Pn** **20 34 10.9 -0.1**
BRTR **Keskin Array B** 2.26 62 Pn **Pn** **20 34 11.6 +0.2**
3.4nm,0.3s,baz=239,slow=16,SNR=77
BRTR Lg Lg 20 34 42.1
5.8nm,0.3s,baz=235,slow=28,SNR=7.3
27nm,0.6s
BRTR **Keskin Array B** 2.26 62 PN **Pn** **20 34 11.4 0.0**
YLV **Yalova** 2.27 326 PN **Pn** **20 34 11.1 -0.4**
YESY **Yesilyurt** 2.31 112 PN **Pn** **20 34 11.9 -0.2**
KRMN **Karaman** 2.32 130 PN **Pn** **20 34 11.9 -0.3**
MDNY **Mudanya-Bursa** 2.36 316 PN **Pn** **20 34 12.7 +0.1**
HRT **Hereke** 2.37 334 PN **Pn** **20 34 12.7 -0.2**
ARMT **Armutlu** 2.52 319 PN **Pn** **20 34 14.7 -0.1**
FETY **Fethiye** 2.58 218 PN **Pn** **20 34 15.7 0.0**
AYDB **Zeytinkoy-Aydi** 2.59 254 PN **Pn** **20 34 15.9 0.0**
KDZE **Karadeniz Ereo** 2.63 7 ⇑P **Pb** **20 34 20.0 -0.7**
KDZE ⇓S **Sb** **20 34 49.9 -3.6**
DALY **Dalyan (Mula)** 2.67 226 PN **Pn** **20 34 16.8 0.0**
SILT **Sile** 2.68 337 PN **Pn** **20 34 17.1 +0.1**
YER **Yerkesik** 2.68 235 PN **Pn** **20 34 17.1 0.0**
AKAS **Kas** 2.71 205 PN **Pn** **20 34 17.5 -0.1**
GONE **Gonen-Balikesi** 2.93 298 PN **Pn** **20 34 20.8 +0.3**
TURN **Turunc** 2.93 230 PN **Pn** **20 34 20.8 +0.3**
GULN **MERSIN_Gulnar** 3.20 141 P **Pn** **20 34 26.0 +1.8**
GULN *i* AML AML 20 35 22.0
comp=E,62nm,0.7s
GULN *i* AML AML 20 35 25.0
comp=N,54nm,1.2s
RZN **Rozhen** 5.69 304 P **Pn** **20 34 59.3 +0.7**
PLD **Plovdiv** 5.92 307 P **Pn** **20 35 01.7 +0.2**
IDI **Anoyia** 5.99 237 Pn **Pn** **20 35 03.8 +1.3**
0.4nm,0.3s,baz=61,slow=19,SNR=1.6
10nm,0.8s
TIRR **Tirgusor** 6.08 342 ⇑P **Pn** **20 35 05.8 +2.0**
TLBR **Topalu** 6.26 340 ⇑P **Pn** **20 35 08.1 +1.9**
MMB **Musomiste** 6.31 300 P **Pn** **20 35 07.6 +0.7**
TPGR **Topolog** 6.46 343 ⇑P **Pn** **20 35 10.2 +1.2**
MMAI **Mount Meron Ar** 6.68 147 Pn **Pn** **20 35 12.8 +0.7**
2.1nm,0.3s,baz=334,slow=13,SNR=11
MMAI LR LR 20 38 16.2
comp=Z,32nm,18.5s,baz=63,slow=42
2.2nm,0.4s
CFR **Carcaliu** 6.83 342 ⇑P **Pn** **20 35 14.3 +0.3**
VTS **Vitosha** 7.11 306 ⇑P **Pn** **20 35 18.2 +0.1**
VTS **Vitosha** 7.11 306 P **Pn** **20 35 18.8 +0.7**
MLR **Muntele Rosu** 7.78 332 ⇑P **Pn** **20 35 30.1 +2.9**
MLR **Muntele Rosu** 7.78 332 Pn **Pn** **20 35 27.4 +0.3**
0.2nm,0.3s,baz=136,slow=18,SNR=6.3
2.8nm,0.9s
VRI **Vrincioaia** 7.84 337 ⇑P **Pn** **20 35 31.0 +3.0**
COVR **Voineasa-Covas** 7.99 335 ⇑P **Pn** **20 35 31.8 +1.8**
BLKB **Belogradchik** 8.00 311 ⇑P **Pn** **20 35 30.7 +0.6**
ASF **Jabal al Asfar** 8.07 142 Pn Pn 20 35 36.0 +4.8
0.1nm,0.3s,baz=328,slow=19,SNR=1.7
VOIR 8.08 328 ⇑P **Pn** **20 35 32.6 +1.4**
ARR **Arges** 8.20 326 ⇑P **Pn** **20 35 33.8 +1.0**
HERR **Herculane** 8.93 317 ⇓P **Pn** **20 35 42.8 0.0**
EIL **Elat** 9.57 159 Pn **Pn** **20 35 53.0 +1.3**
0.4nm,0.3s,baz=71,slow=4.4,SNR=3.5
3.2nm,0.7s
BZS **Buzias** 9.84 318 ⇑P **Pn** **20 35 56.4 +1.1**
BURAR **Bucovina Array** 9.88 336 ⇑P **Pn** **20 35 59.7 +3.8**
AKASG **Malin Array Be** 12.07 354 Pn **Pn** **20 36 25.5 -0.3**
0.9nm,0.3s,baz=176,slow=12,SNR=4.4
AKASG Sn **Sn** **20 38 44.0 +3.0**
0.5nm,0.3s,baz=182,slow=26,SNR=5.0
0.2nm,0.3s
GEYT **Alibeck** 21.23 84 P **P** **20 38 19.2 -1.0**
1.0nm,0.5s,baz=270,slow=12,SNR=5.1
1.0nm,0.5s
AKTO **Aktyubinsk** 22.38 50 P **P** **20 38 32.7 +0.4**
0.6nm,0.4s,baz=248,slow=16,SNR=3.7
0.6nm,0.4s
FINES **FINESS Array B** 22.98 354 P **P** **20 38 39.2 +0.7**
1.2nm,0.8s,baz=184,slow=11,SNR=1.3
1.2nm,0.8s
NOA **NORSAR Array B** 25.55 337 P **P** **20 39 04.2 +1.3**
0.4nm,0.5s,baz=140,slow=9.5,SNR=2.3
0.4nm,0.5s
TORD **Torodi Ar. Bea** 36.38 234 P **P** **20 40 38.5 -0.2**
1.3nm,0.7s,baz=33,slow=9.9,SNR=10
1.3nm,0.7s
MKAR **Makanchi Array** 37.91 61 P **P** **20 40 50.9 -0.6**
1.1nm,0.9s,baz=272,slow=7.3,SNR=5.7
1.1nm,0.9s
ZALV **Zalesovo Beam** 39.14 49 P **P** **20 40 59.9 -1.8**
0.9nm,0.6s,baz=266,slow=10,SNR=4.6
0.9nm,0.6s
SONM **Songino Array** 53.60 54 P **P** **20 42 54.3 -1.3**
0.3nm,0.8s,baz=282,slow=6.8,SNR=1.9
0.3nm,0.8s
KSRS **Korea Array** 72.39 56 P **P** **20 45 00.7 +0.2**
0.3nm,0.5s,baz=278,slow=12,SNR=4.0
0.3nm,0.5s

IDC 18 20:54:52.7±2.4, 3°.33N×127°.70E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=175.5km s-min=43.5km az=73.0, Talaud Islands

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

WRA **Warramunga Arr** 24.03 164 P P 21 00 09.3 -0.3
1.0nm,0.5s,baz=344,slow=9.9,SNR=30
1.0nm,0.5s
ASAR **Alice Springs** 27.51 168 P P 21 00 41.0 -0.1
0.3nm,0.6s,baz=357,slow=7.8,SNR=5.8
ASAR PcP PcP 21 04 00.4 +0.7
0.2nm,0.5s,baz=348,slow=2.4,SNR=4.4
0.3nm,0.6s
STKA **Stephens Creek** 37.43 160 P P 21 02 07.5 -0.2
0.6nm,0.3s,baz=333,slow=4.5,SNR=3.0
0.6nm,0.3s
VNDA **Vanda** 82.92 173 P P 21 07 18.6 -0.4
0.3nm,0.7s,baz=317,slow=5.9,SNR=2.0
0.3nm,0.7s

MAN 18 20:55:27.9, 9°.90N×123°.97E, h32km, mb4.1, ML2.9, MS2.6, 2C-5D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.23**	**207**	⇑*iP*	Pn	20 55 36.0	+0.9
TBP				*i* S	Sb	20 55 39.5	+0.2
TABP	**Talibon, Bohol**	**0.41**	**62**	⇑*iP*	Pb	20 55 36.0	-1.0
TABP				*i* S	Sb	20 55 40.7	-2.6
LLP	**Lapu-Lapu**	**0.42**	**360**	⇓*iP*	Pn	20 55 38.9	+1.1
LLP				*i* S	Sn	20 55 45.7	+1.4
GHBP	**Garcia Hernand**	**0.44**	**127**	⇓*iP*	Pb	20 55 36.5	-1.0
GHBP				*i* S	Sb	20 55 41.8	-2.2
LSIP	**Lazi, Siquijor**	**0.83**	**204**	⇓*eP*	Pb	20 55 45.9	+2.1
LSIP				*i* S	Sb	20 55 55.0	+0.2
MSLP	**Maasin**	**0.91**	**75**	⇓*eP*	Pn	20 55 44.0	-0.4
MSLP				*e*S	Sb	20 55 56.8	-0.2
DDMP	**Don Marcelino,**	**4.14**	**155**	⇓*eP*	Pn	20 56 23.8	-5.2
DDMP				*e*S	Sn	20 56 50.9	-26

*IDC **18** 20:55:34.0±1.8, 36°.65N×22°.43E, h41km±18km, mb3.6/16, mbtmp3.7/24, ML3.3/8, MS2.6/4, Error ellipse: s-maj=15.9km s-min=12.8km az=2.0*
*ISK **18** 20:55:34.0, 36°.67N×22°.32E, h72km, ML3.7/25*
*ATH **18** 20:55:36.7, 36°.64N×22°.32E, h20km±2km, ML3.6/17, Error ellipse: s-maj=2.7km s-min=0.8km az=212.0*
*THE **18** 20:55:36.6, 36°.59N×22°.29E, h23km±1km, ML3.5/6, Error ellipse: s-maj=1.7km s-min=0.6km az=216.0*

ISC 18 20:55:34.6±0.7, 36°.64N±0°.04×22°.27E±0°.03, h48km±7km, n138, σ2°.01/148, mb3.7/15, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLMT	**Kalamata**	**0.46**	**339**	P	**Pn**	**20 55 46.3**	**+1.1**
KLMT				S	**Sn**	**20 55 55.6**	**+2.8**
6μm,0.3s							
PYL	**PYLOS**	**0.49**	**302**	P	**Pn**	**20 55 46.9**	**+1.2**
PYL				S	**Sn**	**20 55 55.6**	**+2.0**
5μm,0.5s							
PYL	**PYLOS**	**0.49**	**302**	P	**Pn**	**20 55 46.9**	**+1.2**
PYL				S	**Sn**	**20 55 54.8**	**+1.2**
PYL				AML	AML	20 55 56.6	
comp=E,12101μm,0.6s							
PYL				AML	AML	20 55 59.2	
comp=N,7018μm,0.5s							
VLI	**Veliai**	**0.55**	**81**	P	**Pn**	**20 55 47.0**	**+0.7**
VLI				S	**Sn**	**20 55 55.7**	**+1.0**
comp=N,4μm,0.6s							
VLI	**Veliai**	**0.55**	**81**	P	**Pn**	**20 55 47.0**	**+0.7**
VLI				S	**Sn**	**20 55 53.9**	**-0.8**
VLI				AML	AML	20 55 59.4	
comp=E,7709μm,0.6s							
VLI				AML	AML	20 56 05.3	
comp=N,8790μm,0.5s							
ITM	**Ithomi**	**0.61**	**333**	PG	**Pn**	**20 55 48.5**	**+1.4**
ITM				SG	**Sn**	**20 55 59.3**	**+3.2**
ITM	**Ithomi**	**0.61**	**333**	P	**Pn**	**20 55 48.6**	**+1.4**
ITM	**Ithomi**	**0.61**	**333**	P	**Pn**	**20 55 48.5**	**+1.4**
ITM				S	**Sn**	**20 55 57.3**	**+1.2**
ITM				AML	AML	20 56 02.3	
comp=E,10060μm,0.3s							
ITM				AML	AML	20 56 02.7	
comp=N,9338μm,0.3s							
MNVA	**Monemvasia**	**0.62**	**85**	P	**Pn**	**20 55 48.1**	**+0.8**
MNVA				S	**Sn**	**20 55 55.8**	**-0.6**
MNVA				AML	AML	20 55 59.9	
comp=E,6857μm,0.6s							
MNVA				AML	AML	20 56 05.3	
comp=N,4955μm,0.4s							
KTHR	**Kythira**	**0.70**	**122**	P	**Pn**	**20 55 49.0**	**+0.6**
KTHR				S	**Sn**	**20 55 59.0**	**+0.7**
comp=N,4μm,0.4s							
KTHR	**Kythira**	**0.70**	**122**	P	**Pn**	**20 55 49.0**	**+0.6**
KTHR				S	**Sn**	**20 55 59.0**	**+0.7**
KTHR				AML	AML	20 56 05.9	
comp=N,24883μm,0.5s							
KTHR				AML	AML	20 56 06.3	
comp=E,28402μm,0.4s							
KTHA	**Kythira Island**	**0.75**	**120**	PG	**Pn**	**20 55 49.9**	**+1.0**
KTHA				SG	**Sn**	**20 56 01.7**	**+2.4**
KTHA	**Kythira Island**	**0.75**	**120**	P	**Pn**	**20 55 49.8**	**+0.9**
KTHA				S	**Sn**	**20 56 00.2**	**+0.9**
comp=E,6μm,0.6s							
KTHA	**Kythira Island**	**0.75**	**120**	P	**Pn**	**20 55 49.7**	**+0.9**
KTHA				S	**Sn**	**20 56 00.2**	**+0.9**
KTHA				AML	AML	20 56 02.7	
comp=N,8452μm,0.5s							
KTHA				AML	AML	20 56 04.2	
comp=E,16613μm,0.6s							
KRND	**KRANIDI**	**1.03**	**43**	P	**Pn**	**20 55 55.3**	**+2.7**
KRND				S	**Sn**	**20 56 10.0**	**+4.0**
comp=E,4μm,0.7s							
KRND	**KRANIDI**	**1.03**	**43**	P	**Pn**	**20 55 55.3**	**+2.7**
KRND				AML	AML	20 56 12.4	
comp=E,6669μm,0.7s							
KRND				AML	AML	20 56 13.4	
comp=N,6924μm,0.5s							
ANKY	**Antikythira Is**	**1.14**	**132**	P	**Pn**	**20 55 56.6**	**+2.5**
ANKY	**Antikythira Is**	**1.14**	**132**	P	**Pn**	**20 55 56.8**	**+2.6**
ANKY				AML	AML	20 56 16.0	
comp=N,3045μm,0.6s							
ANKY				AML	AML	20 56 19.6	
comp=E,3133μm,0.9s							
YDRA	**Hydra**	**1.20**	**53**	P	**Pn**	**20 55 57.3**	**+2.4**
YDRA				AML	AML	20 56 17.5	
comp=N,3573μm,0.6s							
YDRA				AML	AML	20 56 17.7	
comp=E,5933μm,0.7s							
DRO	**Drossia**	**1.39**	**342**	P	**Pn**	**20 56 01.2**	**+3.6**
DRO	**Drossia**	**1.39**	**342**	P	**Pn**	**20 56 01.3**	**+3.8**
KLV	**Kalavryta, Ach**	**1.41**	**356**	P	**Pn**	**20 56 01.3**	**+3.4**
KLV	**Kalavryta, Ach**	**1.41**	**356**	P	**Pn**	**20 56 01.3**	**+3.4**
THAL	**Thalero**	**1.43**	**13**	P	**Pn**	**20 56 01.3**	**+3.1**
THAL	**Thalero**	**1.43**	**13**	P	**Pn**	**20 56 01.3**	**+3.1**
THAL				AML	AML	20 56 32.5	
comp=E,7988μm,0.8s							
THAL				AML	AML	20 56 37.1	
comp=N,6277μm,0.7s							
RLS	**Riolos of Patr**	**1.56**	**336**	P	**Pn**	**20 56 04.1**	**+4.2**
LTHK	**Lithakia**	**1.56**	**314**	P	**Pn**	**20 56 02.0**	**+2.0**
LTHK	**Lithakia**	**1.56**	**314**	P	**Pn**	**20 56 01.8**	**+1.8**
LAKA	**Lakka**	**1.62**	**352**	P	**Pn**	**20 56 04.4**	**+3.7**
LAKA	**Lakka**	**1.62**	**352**	P	**Pn**	**20 56 04.4**	**+3.7**
LAKA				AML	AML	20 56 36.1	
comp=E,5355μm,0.8s							
LAKA				AML	AML	20 56 36.1	
comp=N,6355μm,0.9s							
MHLO	**Agia Marina, M**	**1.72**	**88**	P	**Pn**	**20 56 04.3**	**+2.2**
MHLO	**Agia Marina, M**	**1.72**	**88**	P	**Pn**	**20 56 03.9**	**+1.8**
MHLO				AML	AML	20 56 30.1	
comp=E,5813μm,0.5s							
MHLO				AML	AML	20 56 32.0	
comp=N,6562μm,0.5s							
VLY	**Voula,Athens**	**1.72**	**45**	P	**Pn**	**20 56 03.8**	**+1.7**
VLY	**Voula,Athens**	**1.72**	**45**	P	**Pn**	**20 56 03.8**	**+1.7**
VLY				AML	AML	20 56 28.1	
comp=E,1806μm,0.3s							
VLY				AML	AML	20 56 37.2	
comp=N,1362μm,1.0s							
VILL	**Villia**	**1.74**	**28**	P	**Pn**	**20 56 04.4**	**+2.0**
VIL2	**Platees**	**1.76**	**27**	P	**Pn**	**20 56 04.4**	**+1.7**
VIL2				AML	AML	20 56 36.4	
comp=N,1855μm,0.6s							
VIL2				AML	AML	20 56 45.0	
comp=E,2298μm,0.7s							
ATH	**Athens Observa**	**1.77**	**41**	P	**Pn**	**20 56 04.8**	**+2.1**
ATH	**Athens Observa**	**1.77**	**41**	P	**Pn**	**20 56 04.8**	**+2.1**
SERG	**Sergoula**	**1.78**	**355**	P	**Pn**	**20 56 06.1**	**+3.1**
SERG	**Sergoula**	**1.78**	**355**	P	**Pn**	**20 56 06.1**	**+3.1**
ATHU	**Athens Univers**	**1.80**	**42**	P	**Pn**	**20 56 04.8**	**+1.6**
ATHU	**Athens Univers**	**1.80**	**42**	P	**Pn**	**20 56 04.8**	**+1.6**
ATHU				AML	AML	20 56 33.6	
comp=E,354μm,0.5s							
ATHU				AML	AML	20 56 34.6	
comp=N,465μm,0.6s							
EFP	**Efpalio**	**1.81**	**351**	P	**Pn**	**20 56 07.9**	**+4.6**
KNDR	**Palaiochora Ch**	**1.81**	**140**	PN	**Pn**	**20 56 03.9**	**+0.5**
IMMV	**Iera Moni Meta**	**1.82**	**130**	PN	**Pn**	**20 56 04.2**	**+0.7**
IMMV	**Iera Moni Meta**	**1.82**	**130**	P	**Pn**	**20 56 05.5**	**+2.0**
IMMV	**Iera Moni Meta**	**1.82**	**130**	P	**Pn**	**20 56 05.5**	**+2.0**
PTL	**Penteli**	**1.90**	**42**	P	**Pn**	**20 56 06.8**	**+2.2**
PTL	**Penteli**	**1.90**	**42**	P	**Pn**	**20 56 06.7**	**+2.1**
PTL				AML	AML	20 56 34.4	
comp=E,1333μm,0.6s							
PTL				AML	AML	20 56 35.0	
comp=N,1585μm,0.6s							
DION	**Dionisos Attik**	**1.96**	**42**	P	**Pn**	**20 56 07.4**	**+2.0**
DION	**Dionisos Attik**	**1.96**	**42**	P	**Pn**	**20 56 07.3**	**+2.0**
VLS	**Valsamata**	**2.04**	**320**	P	**Pn**	**20 56 09.4**	**+2.9**
PVO	**Paravola**	**2.06**	**344**	P	Pn	20 56 12.0	+5.2
LKR	**Lokris**	**2.09**	**16**	P	**Pn**	**20 56 08.4**	**+1.2**
AXAR	**Agios Charalam**	**2.15**	**8**	P	**Pn**	**20 56 10.4**	**+2.4**
AXAR				AML	AML	20 56 49.9	
comp=E,2123μm,0.6s							
AXAR				AML	AML	20 56 53.3	
comp=N,2044μm,0.8s							
KEF4	**Livadi, Kephal**	**2.18**	**318**	P	**Pn**	**20 56 11.2**	**+2.8**
DMLN	**Damoulianata-K**	**2.20**	**317**	P	**Pn**	**20 56 11.2**	**+2.5**
FSK	**Fiskardo**	**2.27**	**324**	P	**Pn**	**20 56 13.0**	**+3.4**
GVDS	**Gavdos**	**2.33**	**140**	PN	**Pn**	**20 56 11.3**	**+0.9**
GVD	**Gavdhos**	**2.33**	**140**	PN	**Pn**	**20 56 11.5**	**+1.1**
EVGI	**Lefkada island**	**2.36**	**328**	P	**Pn**	**20 56 14.7**	**+3.9**
MAKR	**Makrakomi, Fth**	**2.38**	**357**	P	**Pn**	**20 56 14.9**	**+3.8**
MAKR	**Makrakomi, Fth**	**2.38**	**357**	P	**Pn**	**20 56 14.9**	**+3.8**
NYDR	**Nydri-Lefkada**	**2.42**	**330**	P	**Pn**	**20 56 15.5**	**+3.9**
DRAG	**Dragano-Lefkad**	**2.44**	**327**	P	**Pn**	**20 56 15.8**	**+3.7**
KYMI	**Kymi, Euboea I**	**2.47**	**36**	P	**Pn**	**20 56 14.0**	**+1.6**
IDI	**Anoyia**	**2.52**	**122**	P	**Pn**	**20 56 13.0**	**-0.1**
comp=N,2.9nm,0.3s,baz=237,slow=7.9,SNR=34							
IDI				S	**Sn**	**20 56 44.5**	**+1.9**
comp=N,51nm,0.5s,baz=340,slow=15,SNR=6.6							
comp=N,8.1nm,0.3s							
IDI	**Anoyia**	**2.52**	**122**	PN	**Pn**	**20 56 13.5**	**+0.4**
THT2	**Imerovigli**	**2.55**	**94**	PN	**Pn**	**20 56 13.8**	**+0.3**
SANT	**Santorini**	**2.59**	**95**	PN	**Pn**	**20 56 14.5**	**+0.5**
APE	**Apeiranthos**	**2.65**	**80**	PN	**Pn**	**20 56 15.5**	**+0.6**
APE	**Apeiranthos**	**2.65**	**80**	P	**Pn**	**20 56 16.6**	**+1.7**
HRKL	**Herakleio**	**2.65**	**119**	PN	**Pn**	**20 56 15.6**	**+0.7**
CHOS	**Chios island**	**3.48**	**59**	PN	**Pn**	**20 56 26.9**	**+0.6**
ZKR	**Zakros**	**3.55**	**114**	PN	**Pn**	**20 56 28.5**	**+1.3**
SIGR	**SIGRI**	**3.83**	**47**	PN	**Pn**	**20 56 31.9**	**+0.9**
URLA	**Izmir**	**3.85**	**62**	PN	**Pn**	**20 56 32.4**	**+1.1**
OUR	**Ouranopolis**	**3.93**	**20**	PN	**Pn**	**20 56 33.5**	**+1.1**
HORT	**Hortiatis**	**4.01**	**9**	PN	**Pn**	**20 56 34.5**	**+0.9**
BODT	**Bodrum**	**4.07**	**83**	PN	**Pn**	**20 56 35.3**	**+1.0**
KARP	**Karpathos**	**4.11**	**104**	PN	**Pn**	**20 56 36.1**	**+1.2**
BLCB	**Balcova**	**4.18**	**64**	PN	**Pn**	**20 56 36.7**	**+0.9**
GRG	**Griva**	**4.32**	**1**	PN	**Pn**	**20 56 38.9**	**+1.2**
KNT	**Kendrikon**	**4.54**	**6**	PN	**Pn**	**20 56 41.9**	**+1.0**
ARG	**Arkhangelos**	**4.74**	**93**	PN	**Pn**	**20 56 44.7**	**+1.1**
TURN	**Turunc**	**4.80**	**87**	PN	**Pn**	**20 56 45.4**	**+1.0**
GELI	**Tayfur-Gelibol**	**5.00**	**40**	PN	**Pn**	**20 56 47.7**	**+0.7**
DALY	**Dalyan (Mula)**	**5.13**	**86**	PN	**Pn**	**20 56 49.4**	**+0.5**
RDO	**Rodhopi**	**5.17**	**29**	PN	**Pn**	**20 56 50.1**	**+0.6**
CAME	**Cameli-Denizli**	**5.66**	**85**	PN	**Pn**	**20 56 56.9**	**+0.7**
APMY	**Acipayam-Deniz**	**5.69**	**79**	PN	**Pn**	**20 56 57.5**	**+0.9**
AKAS	**Kas**	**5.93**	**92**	PN	**Pn**	**20 57 00.7**	**+0.7**
DRME	**Dracevica, Mon**	**6.03**	**338**	*e*Pn	**Pn**	**20 57 01.9**	**+0.6**
VAE	**Valguarnera**	**6.34**	**280**	P	**Pn**	**20 57 05.3**	**-0.1**
comp=N,1.1nm,0.3s,baz=6.9,slow=23,SNR=1.6							
VAE				S	**Sn**	**20 58 15.5**	**-1.1**
comp=N,10nm,0.4s,baz=94,slow=17,SNR=2.5							
comp=N,3.4nm,0.4s							
HCY	**Herceg Novi**	**6.49**	**334**	*e*Pn	**Pn**	**20 57 08.1**	**+0.5**
BRY	**Bratogost**	**6.88**	**337**	*e*Pn	**Pn**	**20 57 12.3**	**-0.7**
UPM	**Unac-Piva**	**7.05**	**340**	*e*Pn	**Pn**	**20 57 16.4**	**+1.1**
STON	**Ston**	**7.15**	**332**	*e*Pn	**Pn**	**20 57 15.9**	**-0.6**
RUDO	**Rudo**	**7.32**	**343**	*e*Pn	**Pn**	**20 57 18.3**	**-0.6**
BBLS	**Lazići**	**7.54**	**344**	*e*Pn	**Pn**	**20 57 22.1**	**+0.1**
DIVS	**Divibare**	**7.65**	**348**	*e*Pn	**Pn**	**20 57 23.9**	**+0.4**
FRGS	**Fruska Gora**	**8.71**	**348**	*e*Pn	**Pn**	**20 57 38.1**	**+0.1**
MGRS	**Mrkonjic Grad**	**8.71**	**335**	*e*Pn	**Pn**	**20 57 36.6**	**-1.4**
BLY	**Banja Luka**	**8.97**	**336**	*e*Pn	**Pn**	**20 57 42.6**	**+1.1**
MLR	**Muntele Rosu**	**9.27**	**16**	P	**Pn**	**20 57 43.4**	**-2.3**
comp=N,0.2nm,0.3s,baz=198,slow=16,SNR=1.9							
comp=N,1.4nm,0.9s							
A051A	**Mrakovica**	**9.30**	**336**	*e*Pn	**Pn**	**20 57 44.6**	**-1.4**
BRTR	**Keskin Array B**	**9.47**	**68**	P	**Pn**	**20 57 46.1**	**-2.4**
baz=299,slow=12,SNR=2.2							
BRTR				LR	LR	21 02 04.4	
comp=N,57nm,18.6s,baz=292,slow=42							
comp=N,0.1nm,0.3s							
BOJS	**Bojanci**	**10.31**	**331**	*e*Pn	**Pn**	**20 58 00.8**	**+0.9**
CRES	**Cresnjev**	**10.51**	**333**	*e*Pn	**Pn**	**20 58 02.1**	**-0.5**
CEY	**Cerknica**	**10.84**	**329**	*e*Pn	**Pn**	**20 58 06.9**	**-0.1**
SKDS	**Skadanscina**	**10.86**	**328**	*e*Pn	**Pn**	**20 58 06.7**	**-0.6**
MMAI	**Mount Meron Ar**	**11.38**	**105**	P	Pn	20 58 11.0	-3.6
comp=N,0.6nm,0.3s,baz=296,slow=11,SNR=1.6							
comp=N,0.6nm,0.3s							
OBKA	**Obir**	**11.43**	**332**	*e*Pn	**Pn**	**20 58 14.6**	**-0.5**
ABTA	**Abfaltersbach**	**12.45**	**327**	*e*Sn	**Sn**	**21 00 40.4**	**-5.8**
comp=N,1.1nm,0.5s							
EIL	**Elat**	**12.69**	**120**	P	Pn	20 58 28.9	-3.5
comp=N,0.3nm,0.3s,baz=315,slow=11,SNR=1.4							
EIL				S	Sn	21 00 38.9	-13
comp=N,1.7nm,0.5s,baz=34,slow=19,SNR=1.2							
comp=N,3.4nm,0.8s							
MOTA	**Moosalm**	**13.53**	**326**	*e*Sn	**Sn**	**21 01 08.6**	**-4.0**
comp=N,2.6nm,0.7s							
DAVOX	**Davos/Dischmat**	**13.71**	**322**	P	**Pn**	**20 58 47.5**	**+1.2**
comp=N,0.1nm,0.3s,baz=192,slow=9.3,SNR=1.6					

NRIK	**Noril'sk**	**47.56**	**26**	P		**P**	**21 04 04.3**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=188,slow=3.4,SNR=1.8							
	comp=Z,1.3nm,0.4s							
SONM	**Songino Array**	**60.36**	**50**	P		P	21 05 36.2	-2.6
	comp=Z,0.3nm,0.7s,baz=282,slow=8.7,SNR=2.3							
	comp=Z,0.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**68.72**	**82**	P		**P**	**21 06 34.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=204,slow=8.7,SNR=2.3							
	comp=Z,0.3nm,0.3s							
KSRS	**Korea Array**	**79.22**	**51**	P		**P**	**21 07 34.6**	**0.0**
	comp=Z,0.9nm,0.7s,baz=326,slow=4.9,SNR=2.9							
	comp=Z,0.9nm,0.7s							

*JMA **18** 21:02:42.8±0.1, 24.°1N±0.°3×121.°7E±0.°1, h6km, TAIWAN REGION*
*TAP **18** 21:02:42.8, 24.°13N×121.°67E, h9km, ML3.2, C*
ISC 18 21:02:42.9±0.8, 24.°12N±0.°01×121.°69E±0.°02, h9km±5km, n107, σ0°72/175, 10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**304**	P	**Pg**	**21 02 45.1**	**0.0**
	baz=302						
ETL				S	**Sg**	**21 02 46.7**	**0.0**
	baz=302						
TWD	**Chiawan**	**0.10**	**248**	⇓*i*P	**Pg**	**21 02 45.2**	**-0.2**
	baz=229						
TWD				*i* S	**Sg**	**21 02 46.9**	**-0.1**
	baz=229						
NACB	**Ninganchiao**	**0.11**	**303**	⇓P	**Pg**	**21 02 45.4**	**-0.1**
	baz=301						
NACB				S	**Sg**	**21 02 47.2**	**-0.1**
	baz=301						
HWA	**Hwalien**	**0.16**	**210**	*i* P	**Pg**	**21 02 47.0**	**+0.6**
	baz=198						
HWA				*i* S	**Sg**	**21 02 50.3**	**+1.6**
	baz=198						
ETLH	**Xiulin Townshi**	**0.21**	**295**	⇓P	**Pg**	**21 02 47.2**	**-0.1**
	baz=294						
ETLH				S	**Sg**	**21 02 50.6**	**+0.3**
	baz=294						
ETM	**Tongmen**	**0.24**	**231**	P	**Pg**	**21 02 47.5**	**-0.2**
	baz=225						
TEYL	**Yanliau Villag**	**0.26**	**199**	P	**Pb**	**21 02 49.0**	**-0.7**
	baz=196						
ESL	**Shilin**	**0.38**	**218**	*i* P	**Pg**	**21 02 50.1**	**-0.4**
	baz=213						
ESL				S	**Sg**	**21 02 55.9**	**+0.4**
	baz=213						
WHF	**Hehuan Shan**	**0.39**	**274**	*i* P	**Pg**	**21 02 50.5**	**-0.3**
	baz=271						
WHF				*i* S	**Sg**	**21 02 55.7**	**-0.3**
	baz=271						
NNSB	**Datong**	**0.42**	**318**	⇓P	**Pg**	**21 02 51.2**	**+0.1**
	baz=318						
NNSB				S	**Sg**	**21 02 57.1**	**+0.3**
	baz=318						
FUSS	**Fushou**	**0.43**	**288**	*i* P	**Pg**	**21 02 51.5**	**+0.1**
	baz=286						
FUSS				*i* S	**Sg**	**21 02 57.8**	**+0.7**
	baz=286						
NNS	**Nan Shan**	**0.43**	**318**	⇓*i*P	**Pg**	**21 02 50.4**	**-1.1**
	baz=319						
NNS				*i* S	**Sg**	**21 02 56.6**	**-0.6**
	baz=319						
LATG	**Datong**	**0.44**	**340**	⇓P	**Pg**	**21 02 51.6**	**0.0**
	baz=342						
LATG				S	**Sg**	**21 02 57.9**	**+0.4**
	baz=342						
CHGB	**Renai**	**0.48**	**263**	⇓P	**Pg**	**21 02 52.2**	**0.0**
	baz=251						
CHGB				S	**Sg**	**21 02 58.9**	**+0.3**
	baz=251						
TWT	**Tachien**	**0.49**	**286**	*i* P	**Pb**	**21 02 53.0**	**-0.8**
	baz=284						
TWT				*i* S	**Sb**	**21 03 00.1**	**-1.0**
	baz=284						
OWD	**Renai**	**0.50**	**251**	P	**Pg**	**21 02 52.7**	**+0.1**
	baz=248						
OWD				S	**Sg**	**21 02 59.1**	**-0.1**
	baz=248						
EGFH	**Guangfu**	**0.51**	**209**	*i* P	**Pg**	**21 02 52.8**	**0.0**
	baz=213						
EGFH				*i* S	**Sb**	**21 03 01.5**	**+0.1**
	baz=213						
TDCB	**Techi**	**0.51**	**286**	P	**Pg**	**21 02 53.1**	**+0.3**
	baz=284						
TDCB				S	**Sg**	**21 02 59.9**	**+0.4**
	baz=284						
TWC	**Suao**	**0.51**	**16**	*i* P	**Pg**	**21 02 52.8**	**0.0**
	baz=11						
TWC				*i* S	**Sg**	**21 03 00.4**	**+0.8**
	baz=11						
NDT	**Datong Townshi**	**0.51**	**341**	P	**Pg**	**21 02 51.7**	**-1.2**
	baz=343						
NDT				S	**Sg**	**21 02 58.8**	**-0.8**
	baz=343						
ENTT	**Nioudou**	**0.53**	**348**	*i* P	**Pg**	**21 02 52.5**	**-0.8**
	baz=350						
ENTT				*i* S	**Sg**	**21 03 00.3**	**-0.1**
	baz=350						
WUSB	**Renai**	**0.54**	**257**	⇓P	**Pg**	**21 02 53.4**	**-0.1**
	baz=246						
WUSB				S	**Sg**	**21 03 00.6**	**0.0**
	baz=246						
TWE	**Neicheng**	**0.60**	**358**	⇓*i*P	**Pg**	**21 02 54.8**	**+0.2**
	baz=1.0						
TWE				*i* S	**Sg**	**21 03 02.9**	**+0.4**
	baz=1.0						
VWDT	**VWDT**	**0.62**	**235**	P	**Pg**	**21 02 54.9**	**0.0**
	baz=232						
VWDT				S	**Sb**	**21 03 04.3**	**-0.4**
	baz=232						
YHNB	**Yeheng**	**0.62**	**332**	P	**Pb**	**21 02 55.5**	**-0.5**
YHNB	**Yeheng**	**0.62**	**332**	⇓P	**Pg**	**21 02 55.2**	**+0.2**
	baz=333						
YHNB				S	**Sg**	**21 03 03.5**	**+0.3**
	baz=333						
NSK	**Sanguang**	**0.64**	**331**	*i* P	**Pg**	**21 02 54.5**	**-0.8**
	baz=333						
NSK				*i* S	**Sg**	**21 03 02.9**	**-0.7**
	baz=333						
FUSB	**Fushanzhiwuyua**	**0.65**	**352**	P	**Pg**	**21 02 55.5**	**0.0**
	baz=353						
FUSB				S	**Sg**	**21 03 04.3**	**+0.3**
	baz=353						
ILA	**Ilan**	**0.65**	**4**	S	**Sb**	**21 03 04.8**	**-0.8**
	baz=7.0						
HGSD	**Ruisui**	**0.67**	**202**	P	**Pb**	**21 02 56.5**	**-0.2**
	baz=215						
EHY	**Hungye**	**0.70**	**209**	*i* P	**Pg**	**21 02 55.6**	**-0.7**
	baz=213						
EHY				*i* S	**Sb**	**21 03 06.3**	**-0.5**
	baz=213						
WHP	**Taichung City**	**0.70**	**283**	*i* P	**Pb**	**21 02 57.1**	**-0.2**
	baz=282						
WHP				*i* S	**Sb**	**21 03 06.8**	**-0.3**
	baz=282						
WCS	**Beigang Elemen**	**0.72**	**265**	*e*P	**Pg**	**21 02 56.0**	**-0.8**
	baz=255						
WCS				*e*S	**Sg**	**21 03 05.4**	**-0.7**
	baz=255						
NFF	**Wufeng Townshi**	**0.73**	**315**	P	**Pg**	**21 02 56.5**	**-0.6**
	baz=315						
NFF				S	**Sg**	**21 03 06.4**	**-0.3**
	baz=315						
SSLB	**Suanglung**	**0.75**	**244**	P	**Pg**	**21 02 57.4**	**0.0**
SSLB	**Suanglung**	**0.75**	**244**	P	**Pg**	**21 02 57.2**	**-0.2**
	baz=252						
SSLB				S	**Sg**	**21 03 06.8**	**-0.4**
	baz=252						
EGS		**0.76**	**17**	P	**Pg**	**21 02 57.4**	**-0.1**
	baz=28						
EGS				S	**Sb**	**21 03 08.5**	**-0.2**
	baz=28						
SMLT	**Sun Moon Lake**	**0.76**	**252**	*i* P	**Pg**	**21 02 57.5**	**-0.1**
	baz=250						
SMLT				*i* S	**Sg**	**21 03 07.2**	**-0.3**
	baz=250						
TYC	**Yuchr**	**0.79**	**255**	*i* P	**Pg**	**21 02 57.9**	**-0.2**
	baz=252						
TYC				*i* S	**Sg**	**21 03 08.6**	**0.0**
	baz=252						
YULB	**Yu-li**	**0.81**	**207**	P	**Pg**	**21 02 57.3**	**-1.1**
	baz=205						
LIOB	**Emei**	**0.81**	**311**	*i* P	**Pb**	**21 02 59.3**	**+0.1**
	baz=310						
LIOB				*i* S	**Sb**	**21 03 10.4**	**+0.2**
	baz=310						
NSTT	**Nanjuang**	**0.81**	**309**	*i* P	**Pb**	**21 02 59.1**	**-0.1**
	baz=309						
NSTT				*i* S	**Sb**	**21 03 09.7**	**-0.6**
	baz=309						
EYUL	**Yuli**	**0.84**	**204**	*i* P	**Pb**	**21 02 59.8**	**+0.2**
	baz=213						
EYUL				S	**Sn**	**21 03 12.5**	**-0.8**
	baz=213						
NHDH	**Xindian Distri**	**0.86**	**350**	P	**Pn**	**21 03 01.1**	**0.0**
	baz=351						
TIPB	**Shuangxi**	**0.86**	**8**	*i* P	**Pg**	**21 02 59.6**	**+0.1**
	baz=1.0						
TIPB				*i* S	**Sg**	**21 03 10.9**	**+0.2**
	baz=1.0						
TWA	**Mucha**	**0.87**	**353**	*i* P	**Pb**	**21 02 60.0**	**-0.1**
	baz=355						
TWA				*i* S	**Sb**	**21 03 11.5**	**-0.4**
	baz=355						
TWQ1	**Liyutan**	**0.87**	**286**	*i* P	**Pn**	**21 03 01.3**	**-0.1**
	baz=285						
WHYT	**Xinyi Township**	**0.88**	**242**	*i* P	**Pb**	**21 03 00.3**	**0.0**
	baz=246						
WHYT				S	**Sb**	**21 03 12.9**	**+0.8**
	baz=246						
TATO	**Taipei**	**0.88**	**348**	P	**Pb**	**21 03 00.3**	**0.0**
NSY	**Sanyi**	**0.90**	**290**	*i* P	**Pn**	**21 03 01.3**	**-0.5**
	baz=288						
NSY				S	**Sn**	**21 03 14.2**	**-0.7**
	baz=288						
NMLH	**Miaoli**	**0.92**	**297**	*e*P	**Pn**	**21 03 02.9**	**+0.8**
	baz=296						
NMLH				*e*S	**Sn**	**21 03 14.7**	**-0.8**
	baz=296						
TCU	**Taichung**	**0.93**	**272**	P	**Pn**	**21 03 02.6**	**+0.5**
	baz=270						
TCU				*e*S	**Sn**	**21 03 14.8**	**-0.7**
	baz=270						
WJS	**Zhushan**	**0.93**	**252**	*e*P	**Pb**	**21 03 01.6**	**+0.4**
	baz=249						
WJS				S	**Sb**	**21 03 13.3**	**-0.3**
	baz=249						
SBCB	**Hsinchu**	**0.93**	**316**	*e*P	**Pb**	**21 03 01.3**	**+0.1**
	baz=316						
TAP	**Taipei**	**0.94**	**350**	S	**Sb**	**21 03 14.4**	**+0.6**
	baz=341						
WNT	**Mingjian**	**0.95**	**256**	*i* P	**Pn**	**21 03 02.3**	**-0.1**
	baz=248						
WNT				S	**Sn**	**21 03 15.5**	**-0.6**
	baz=248						
NWF	**Wu-fen Shan**	**0.95**	**5**	*e*P	**Pn**	**21 03 02.3**	**-0.2**
	baz=6.0						
NCUH	**Zhongli**	**0.97**	**332**	P	**Pb**	**21 03 02.2**	**+0.4**
	baz=332						
NCU	**National Centr**	**0.97**	**332**	*e*P	**Pn**	**21 03 03.2**	**+0.5**
	baz=332						
FULB	**Fuli**	**0.98**	**202**	P	**Pg**	**21 03 01.9**	**0.0**
	baz=215						
FULB				S	**Sn**	**21 03 17.7**	**+0.8**
	baz=215						
SXI1	**Grass Mountain**	**0.99**	**10**	P	**Pb**	**21 03 02.6**	**+0.4**
	baz=357						
WDJ	**Dajia District**	**0.99**	**284**	*e*P	**Pn**	**21 03 04.0**	**+1.1**
	baz=292						
WDJ				S	**Sb**	**21 03 16.1**	**+0.8**
	baz=292						
ALS	**Alishan**	**1.01**	**234**	*i* P	**Pb**	**21 03 02.6**	**-0.2**
	baz=220						
ALS				S	**Sb**	**21 03 16.4**	**+0.1**
	baz=220						
TWS1	**Kuangyinshan**	**1.01**	**346**	*e*P	**Pn**	**21 03 03.0**	**-0.2**
	baz=347						
TWS1				*e*S	**Sn**	**21 03 17.3**	**-0.3**
	baz=347						
YM01	**YM01**	**1.03**	**354**	P	**Pn**	**21 03 03.8**	**+0.2**
	baz=340						
YM01				S	**Sn**	**21 03 17.9**	**-0.3**
	baz=340						
CHN5	**Tsauling**	**1.06**	**241**	*e*P	**Pb**	**21 03 03.3**	**-0.2**
	baz=239						
CHN5				*e*S	**Sn**	**21 03 18.6**	**-0.4**
	baz=239						
NTST	**Danshui**	**1.07**	**348**	*e*P	**Pn**	**21 03 04.3**	**+0.3**
	baz=358						
NTST				S	**Sn**	**21 03 20.2**	**+1.2**
	baz=358						
ANP	**Anpu**	**1.08**	**352**	P	**Pb**	**21 03 04.0**	**+0.3**
	baz=353						
ELDTW	**Lidau**	**1.11**	**214**	*e*P	**Pg**	**21 03 03.7**	**-0.5**
	baz=221						
ELDTW				*e*S	**Sb**	**21 03 19.0**	**0.0**
	baz=221						
WDLH	**Douliu**	**1.14**	**248**	*e*P	**Pn**	**21 03 05.8**	**+0.8**
	baz=247						
WDLH				*e*S	**Sn**	**21 03 21.2**	**+0.5**
	baz=247						
TWY	**Chenhua**	**1.16**	**356**	P	**Pg**	**21 03 04.9**	**-0.2**
	baz=342						
EDH	**Donghe**	**1.19**	**197**	P	**Pg**	**21 03 04.3**	**-1.5**
	baz=182						
EDH				S	**Sn**	**21 03 22.4**	**+0.3**
	baz=182						
WCKO	**Fanlu**	**1.20**	**236**	P	**Pn**	**21 03 05.9**	**0.0**
	baz=234						
WCKO				S	**Sn**	**21 03 23.4**	**+1.0**
	baz=234						
WRL	**Guolierlin Hig**	**1.22**	**260**	*e*P	**Pb**	**21 03 05.7**	**-0.5**
	baz=259						
WRL				*e*S	**Sn**	**21 03 23.7**	**+0.9**
	baz=259						
YOJ	**Yonaguni jima**	**1.25**	**74**	P	**Pn**	**21 03 06.4**	**-0.1**
YOJ	**Yonaguni jima**	**1.25**	**74**	*e*P	**Pn**	**21 03 05.9**	**-0.6**
	baz=68						
YOJ	**Yonaguni jima**	**1.25**	**74**	P	**Pn**	**21 03 06.1**	**-0.4**
YOJ				S	**Sb**	**21 03 22.8**	**-0.1**
CHN2	**Minshiung**	**1.26**	**243**	*e*P	**Pg**	**21 03 08.4**	**+1.4**
	baz=242						
STYH	**Taoyuan**	**1.26**	**222**	*e*P	**Pn**	**21 03 05.1**	**-1.6**
	baz=220						
STYH				*e*S	**Sb**	**21 03 23.2**	**+0.1**
	baz=220						
TPUB	**Ta-pu**	**1.27**	**230**	P	**Pg**	**21 03 07.2**	**-0.1**
TPUB	**Ta-pu**	**1.27**	**230**	P	**Pb**	**21 03 07.0**	**0.0**
	baz=216						
TPUB				*e*S	**Sn**	**21 03 25.7**	**+1.7**
	baz=216						
LONT	**Longtian**	**1.31**	**203**	*e*P	**Pn**	**21 03 06.4**	**-1.0**
	baz=203						
WTP	**Ta-pu**	**1.31**	**229**	P	**Pg**	**21 03 08.0**	**-0.2**
	baz=229						
CHY	**Chiayi**	**1.31**	**242**	*e*P	**Pg**	**21 03 08.8**	**+0.7**
	baz=240						
CHY				*e*S	**Sn**	**21 03 27.9**	**+2.8**
	baz=240						
TWK	**Hsinying**	**1.39**	**233**	P	**Pg**	**21 03 09.4**	**-0.2**
	baz=232						
TWK				S	**Sg**	**21 03 30.1**	**+2.4**
	baz=232						
TWG	**Pinlang**	**1.41**	**204**	*e*P	**Pn**	**21 03 07.0**	**-1.8**
	baz=203						
CHN1	**Nanshi**	**1.41**	**229**	P	**Pg**	**21 03 09.9**	**-0.2**
	baz=228						
CHN1				S	**Sg**	**21 03 30.8**	**+2.4**
	baz=228						
WSF	**Szhu**	**1.43**	**251**	*e*P	**Pg**	**21 03 10.2**	**-0.2**
	baz=249						
WSF				*e*S	**Sg**	**21 03 30.5**	**+1.6**
	baz=249						
SGST	**Jiashian**	**1.45**	**225**	P	**Pn**	**21 03 09.4**	**+0.2**
	baz=215						
SGST				S	**Sg**	**21 03 30.2**	**+0.7**
	baz=215						
LDUT	**Ludao**	**1.45**	**188**	*e*S	**Sn**	**21 03 25.6**	**-2.8**
	baz=177						
ICHU	**Yijhu**	**1.50**	**240**	*e*P	**Pb**	**21 03 10.9**	**0.0**
	baz=240						
CHN8	**Yiju**	**1.56**	**241**	*e*P	**Pb**	**21 03 11.6**	**-0.3**
	baz=224						
CHN8				*e*S	**Sg**	**21 03 34.1**	**+1.1**
	baz=224						
SCST	**Cishan**	**1.65**	**222**	*e*P	**Pg**	**21 03 13.9**	**-0.6**
	baz=223						
ECL	**Taimali**	**1.66**	**204**	*e*P	**Pn**	**21 03 10.7**	**-1.4**
	baz=190						
SSD	**Sandimen**	**1.68**	**216**	*e*P	**Pb**	**21 03 13.5**	**-0.4**
	baz=206						
TSMG	**Majia**	**1.70**	**215**	*e*P	**Pb**	**21 03 13.9**	**-0.4**
	baz=228						
IRIF	**Iriomote-Funau**	**1.87**	**83**	P	**Pn**	**21 03 15.7**	**+0.6**
IRIF				S	**Sn**	**21 03 39.6**	**+0.7**
HATJ	**Hateruma jima**	**1.93**	**91**	P	**Pn**	**21 03 16.1**	**+0.2**
HATJ				S	**Sn**	**21 03 40.7**	**+0.4**
SCZT	**Fangliau**	**2.00**	**210**	*e*P	**Pb**	**21 03 18.4**	**-0.9**
	baz=211						
PNG	**Penghu**	**2.03**	**255**	*e*P	**Pn**	**21 03 17.0**	**-0.3**
	baz=255						
PHUB	**P'eng-hu**	**2.03**	**253**	*e*P	**Pn**	**21 03 18.1**	**+0.9**
	baz=254						
WDGT	**Dungji**	**2.05**	**246**	*e*P	**Pn**	**21 03 17.7**	**+0.2**
	baz=247						
JKRS	**Kuro-shima**	**2.12**	**86**	P	**Pn**	**21 03 19.0**	**+0.5**
JKRS				S	**Sn**	**21 03 45.6**	**+0.7**
VWUC	**VWUC**	**2.22**	**294**	*e*P	**Pn**	**21 03 18.9**	**-1.0**
	baz=293						
SMST	**Manzhou Townsh**	**2.23**	**201**	*e*P	**Pn**	**21 03 20.3**	**+0.3**
	baz=188						
JIJ	**Ishigaki jima**	**2.25**	**83**	S	**Sn**	**21 03 49.2**	**+1.0**
PTMZ	**Houxiangcun**	**2.52**	**292**	*e*P	**Pn**	**21 03 23.4**	**-0.6**
	baz=291						

IDC 18 21:10:03.9±13.0, 19.°25S×177.°03W, h320km±93km, mb3.0/3, mbtmp3.7/4, Error ellipse: s-maj=280.9km s-min=27.9km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.90**	**287**	P	Pn	21 11 21.2	0.0
	16nm,0.9s,baz=115,slow=11,SNR=7.9						
WRA	**Warramunga Arr**	**45.69**	**261**	P	P	21 17 54.5	+0.4
	0.9nm,0.8s,baz=94,slow=8.4,SNR=31						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**45.70**	**255**	P	P	21 17 53.2	-0.9
	1.1nm,0.8s,baz=92,slow=8.0,SNR=9.3						
	1.1nm,0.8s						
NVAR	**Mina Array Bea**	**79.50**	**43**	P	P	21 21 35.8	0.0
	0.5nm,0.6s,baz=223,slow=8.7,SNR=3.6						
	0.5nm,0.6s						

*IDC **18** 21:31:24.1±2.1, 22.°11N×92.°19E, h0km, mb3.4/3, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=86.2km s-min=28.9km az=58.0*
*NDI **18** 21:31:31.7±2.9, 22.°63N×92.°60E, h10km, ML3.1*
ISC 18 21:31:27.8±1.2, 22.°51N±0.°09×92.°66E±0.°09, h10km, n10, σ2°31/15, mb3.5/3, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.13**	**347**	*e*P	**Pn**	**21 32 20.0**	**+2.6**
SHL				*e*S	**Sn**	**21 32 54.0**	**-1.0**
SHL				IAML		21 32 58.0	
	comp=E,45nm,0.0s						
TEZP	**TEZPUR**	**4.09**	**2**	*e*P	**Pn**	**21 32 30.6**	**+0.1**
TEZP				*i* x	x	21 32 33.2	
MOKO	**MOKOCHONG**	**4.16**	**24**	*e*P	**Pn**	**21 32 36.2**	**+4.6**
MOKO				*e*S	**Sn**	**21 33 20.2**	**-0.1**
DHUB	**DHUBRI**	**4.26**	**326**	*e*P	**Pn**	**21 32 34.2**	**+1.5**
DHUB				*e*S	**Sn**	**21 33 19.7**	**-2.8**
ZIRO	**ZIRO**	**5.12**	**12**	*e*P	**Pn**	**21 32 45.2**	**+0.5**
ZIRO				*e*S	**Sn**	**21 33 41.9**	**-2.0**
ZIRO				IAML		21 33 47.4	
	comp=N,38nm,0.3s						
ZIRO				IAML		21 33 48.2	
	comp=E,51nm,0.4s						
GTK	**Tadong**	**6.04**	**323**	*e*P	**Pn**	**21 33 00.2**	**+2.8**
GTK				*e*S	**Sn**	**21 34 05.0**	**-1.8**
GTK				IAML		21 34 08.4	
	comp=N,20nm,0.8s						
GTK				IAML		21 34 12.0	
	comp=E,26nm,0.5s						
GTK				IAML		21 34 13.2	
	comp=N,30nm,0.2s						
CMAR	**Chiang Mai Arr**	**7.14**	**123**	Pn	**Pn**	**21 33 12.8**	**+0.4**
	comp=N,0.3nm,0.3s,baz=297,slow=14,SNR=12						
	comp=N,1.4nm,0.5s						
MKAR	**Makanchi Array**	**25.64**	**343**	P	**P**	**21 36 57.9**	**+0.3**
	comp=N,0.5nm,0.7s,baz=151,slow=9.2,SNR=2.0						
	comp=N,0.5nm,0.7s						
WRA	**Warramunga Arr**	**58.62**	**133**	P	**P**	**21 41 23.2**	**-2.2**
	comp=N,0.4nm,0.7s,baz=320,slow=7.3,SNR=3.0						
	comp=N,0.4nm,0.7s						
ASAR	**Alice Springs**	**60.95**	**136**	P	**P**	**21 41 39.4**	**-2.0**
	comp=N,0.2nm,0.5s,baz=311,slow=6.6,SNR=4.4						
	comp=N,0.2nm,0.5s						

*KRNET **18** 21:40:12.6±0.1, 41.°79N×77.°64E, h22km, mb2.9*
*SOME **18** 21:40:13.8, 41.°78N×77.°60E, h5km*
*NNC **18** 21:40:16.3±0.5, 41.°86N×77.°56E, h0km, mb3.2, mpv3.1, Error ellipse: s-maj=3.1km s-min=1.8km az=0.0*
ISC 18 21:40:12.9±1.3, 41.°72N±0.°04×77.°53E±0.°02, h2km±12km, n39, σ1°36/69, 5C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.21**	**87**	⇓*i*P	**Pg**	**21 40 15.9**	**-1.0**
	baz=16						
TARG				⇓*i*S	**Sg**	**21 40 18.3**	**-1.3**
	baz=16						
ULHL	**Ulahol**	**1.09**	**299**	⇓*i*P	**Pg**	**21 40 33.9**	**0.0**
	baz=94						
ULHL				⇓*i*S	**Sg**	**21 40 49.4**	**+1.3**
	baz=94						
NRN	**Naryn**	**1.18**	**257**	⇑*i*P	**Pb**	**21 40 36.9**	**+0.7**
	baz=54						
NRN				⇑*i*S	**Sn**	**21 40 54.5**	**+0.9**
	baz=54						
TNSS	**Tian-Shan**	**1.39**	**342**	*e*P	**Pb**	**21 40 39.6**	**-0.1**
	8.4nm,0.1s						
TNSS				*e*S	**Sg**	**21 40 58.1**	**+0.7**
	8.3nm,0.1s						
TNSS	**Tian-Shan**	**1.39**	**342**	P	**Pg**	**21 40 39.8**	**+0.4**
	8.9nm,0.1s						
TNSS				S	**Sn**	**21 40 57.5**	**-1.3**
	8.3nm,0.1s						
BOOM	**Boomskoye usch**	**1.41**	**304**	⇓*i*P	**Pn**	**21 40 39.4**	**-0.4**
	baz=0.0						
BOOM				⇓*i*S	**Sb**	**21 40 58.8**	**+0.2**
	baz=0.0						
MDOK	**Medeo**	**1.49**	**346**	*e*P	**Pb**	**21 40 41.3**	**-0.1**
	8.9nm,0.2s						
MDOK				*e*S	**Sg**	**21 41 01.2**	**+0.6**
	37nm,1.1s						
MDOK	**Medeo**	**1.49**	**346**	⇓P	**Pg**	**21 40 41.6**	**+0.2**
	4.1nm,0.2s						
MDOK				Pg	**Pg**	**21 40 41.6**	**+0.2**
	8.9nm,0.2s						
MDOK				⇑S	**Sb**	**21 41 00.1**	**-0.6**
	3.2nm,0.2s						
MDOK				Lg	Lg	21 41 00.6	
	8.9nm,0.4s						
KOTS	**Kotyrbulak**	**1.54**	**349**	*e*P	**Pg**	**21 40 42.8**	**+0.4**
	16nm,0.2s						
KOTS				*e*S	**Sg**	**21 41 03.2**	**+0.7**
	21nm,0.2s						
KOTS	**Kotyrbulak**	**1.54**	**349**	P	**Pg**	**21 40 42.9**	**+0.4**
	16nm,0.2s						
KOTS				S	**Sg**	**21 41 02.8**	**+0.3**
	11nm,0.5s						
ZHN	**Zhinishke**	**1.59**	**25**	*e*P	**Pg**	**21 40 43.0**	**-0.5**
	3.6nm,0.1s						
ZHN				*e*S	**Sg**	**21 41 03.7**	**-0.4**
	45nm,0.2s						
ZHN	**Zhinishke**	**1.59**	**25**	P	**Pg**	**21 40 43.5**	**+0.1**
	3.6nm,0.1s						
ZHN				S	**Sg**	**21 41 03.7**	**-0.4**
	45nm,0.2s						
MTBS	**Maitube**	**1.63**	**330**	*e*P	**Pg**	**21 40 44.2**	**+0.1**
	4.8nm,0.2s						
MTBS				*e*S	**Sg**	**21 41 05.3**	**+0.1**
	23nm,0.4s						
MTBS	**Maitube**	**1.63**	**330**	P	**Pg**	**21 40 44.2**	**+0.1**
	4.8nm,0.2s						
MTBS				S	**Sg**	**21 41 05.3**	**+0.1**
	23nm,0.4s						
KST	**Kastek**	**1.76**	**319**	*e*P	**Pg**	**21 40 46.8**	**+0.2**
	2.2nm,0.2s						
KST				*e*S	**Sg**	**21 41 10.1**	**

23nm,0.5s
UZB Uzynbulak 1.80 37 *e*P **Pg 21 40 46.9 -0.5**
2.3nm,0.1s
UZB *e*S **Sg 21 41 10.4 -0.4**
17nm,0.3s
UZB Uzynbulak 1.80 37 P **Pg 21 40 47.3 -0.1**
2.3nm,0.1s
UZB S **Sg 21 41 10.4 -0.4**
17nm,0.3s
TKM2 Tokmak 2 1.87 311⇓*e*P **Pb 21 40 47.0 -0.9**
baz=7.0
TKM2 ⇓*e*S **Sb 21 41 11.9 +0.1**
baz=7.0
TKM2 Tokmak 2 1.87 311 ⇓P **Pb 21 40 48.7 +0.8**
1.8nm,0.2s
TKM2 ⇑S **Sg 21 41 13.2 +0.3**
7.4nm,0.2s
DGS Degeres 2.00 320 *e*P **Pb 21 40 51.0 +0.9**
1.6nm,0.2s
DGS *e*S **Sg 21 41 17.1 -0.1**
8.8nm,0.4s
DGS Degeres 2.00 320 Pg **Pg 21 40 51.2 0.0**
1.6nm,0.2s
DGS Lg Lg 21 41 17.1
8.8nm,0.4s
SHLS Shalkode 2.03 44 *e*P **Pg 21 40 55.6 +3.9**
5.3nm,0.2s
SHLS *e*S **Sg 21 41 25.1 +7.1**
14nm,0.6s
SHLS Shalkode 2.03 44 Pg **Pg 21 40 55.6 +3.9**
5.3nm,0.2s
SHLS Lg Lg 21 41 25.1
14nm,0.6s
KTBS Karatobe 2.09 343 *e*P **Pb 21 40 52.1 +0.6**
1.5nm,0.2s
KTBS *e*S **Sg 21 41 19.5 -0.4**
35nm,0.3s
KTBS Karatobe 2.09 343 Pg **Pg 21 40 52.5 -0.4**
1.5nm,0.2s
KTBS Lg Lg 21 41 19.5
35nm,0.3s
PDGK Podgornoye 2.17 41⇑Pg **Pb 21 40 52.9 +0.1**
2.5nm,0.3s
PDGK ⇓Lg Lg 21 41 21.5
16nm,0.6s
CHKK Chushkaly 2.17 350 *e*P **Pg 21 40 53.7 -0.7**
2.1nm,0.2s
CHKK *e*S **Sg 21 41 21.8 -0.8**
22nm,0.2s
CHKK Chushkaly 2.17 350 Pg **Pg 21 40 53.7 -0.7**
2.1nm,0.2s
CHKK Lg Lg 21 41 21.8
22nm,0.4s
KRBS Karabastau 2.40 326 *e*P **Pb 21 40 57.4 +0.5**
1.6nm,0.2s
KRBS *e*S **Sg 21 41 28.8 -1.2**
9.0nm,0.4s
KRBS Karabastau 2.40 326 Pg **Pb 21 40 57.9 +1.0**
1.6nm,0.2s
KRBS Lg Lg 21 41 28.8
9.0nm,0.4s
BLB Baldybastay 2.48 16 *e*P **Pb 21 40 58.6 +0.5**
2.6nm,0.1s
BLB *e*S **Sg 21 41 30.5 -1.9**
84nm,0.2s
BLB Baldybastay 2.48 16 Pg **Pb 21 40 58.9 +0.7**
2.6nm,0.1s
BLB Lg Lg 21 41 30.5
76nm,0.3s
ARXS Arharly 2.50 5 *e*P **Pb 21 40 59.2 +0.6**
1.5nm,0.2s
ARXS *e*S **Sg 21 41 31.2 -2.1**
19nm,0.3s
ARXS Arharly 2.50 5 Pg **Pb 21 40 59.2 +0.6**
1.5nm,0.2s
ARXS Lg Lg 21 41 31.2
19nm,0.3s
KTMS Ketmen 2.71 49 *e*P **Pb 21 41 02.4 +0.3**
1.2nm,0.1s
KTMS *e*S **Sg 21 41 37.5 -2.3**
4.3nm,0.3s
KTMS Ketmen 2.71 49 Pg **Pg 21 41 03.0 -1.7**
1.2nm,0.1s
KTMS Lg Lg 21 41 37.5
4.3nm,0.3s
MRKS Merke 3.36 289 *e*P **Pg 21 41 16.1 -1.1**
1.5nm,0.2s
MRKS *e*S **Sg 21 42 00.4 -0.3**
6.3nm,0.4s
MRKS Merke 3.36 289 Pg **Pg 21 41 16.5 -0.7**
1.5nm,0.2s
MRKS Lg Lg 21 42 00.4
6.3nm,0.4s

*MOS **18** 22:08:12.6±0.8, 15°.25N×61°.51W, h152km, mb5.9/131, MS4.7/13, Error ellipse: s-maj=5.0km s-min=3.7km az=60.4*
*TRN **18** 22:08:12.6, 15°.29N×61°.38W, h155km, MD5.6*
TRN Felt Guadeloupe, Antigua, Saint Lucia MMI IV, III. Felt St. Vincent MMI IV.
*IDC **18** 22:08:14.5±0.6, 15°.22N×61°.54W, h154km±5km, mb5.3/64, mbtmp5.8/67, MS4.4/48, Error ellipse: s-maj=5.8km s-min=5.2km az=103.0*
*NEIC **18** 22:08:14.4±1.7, 15°.22N±0°.04×61°.51W±0°.06, h146km±1km, mb5.7/412, Mwb5.6/30, Mww5.6, Md5.5(TRN), Error ellipse: s-maj=11.0km s-min=6.4km az=68.0*
*NEIC **18** 22:08:14.4, 15°.23N×61°.52W, h146km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=2.52; $M_{\theta\theta}$=2.70; $M_{\phi\phi}$=-0.18; $M_{r\theta}$=-1.41; $M_{\theta\phi}$=0.66; $M_{\phi r}$=0.75; Fault plane solution: M_0=3.14000×10^{17} NP1:ϕ_s=238.51000°, δ=35.97000°, λ=-122.71000°. NP2:ϕ_s=96.94000°, δ=60.38000°, λ=-68.59000°. Principal axes: T 3.1242, Plg=13.0000°, Azm=172.0000°; N 0.0216, Plg=19.0000°, Azm=266.0000°; P -3.1458, Plg=67.0000°, Azm=49.0000°;*
*NEIC **18** 22:08:15, 15°.22N×61°.44W, h150km, Moment Tensor Solution. Duration: 29s Moment tensor: Scale 10^{17}Nm; M_{rr}=2.90; $M_{\theta\theta}$=2.78; $M_{\phi\phi}$=0.12; $M_{r\theta}$=-0.28; $M_{\theta\phi}$=0.61; $M_{\phi r}$=0.32; Fault plane solution: M_0=2.93000×10^{17} NP1: ϕ_s=251.00000°, δ=43.00000°, λ=-100.00000°. NP2: ϕ_s=85.00000°, δ=47.00000°, λ=-80.00000°. Principal axes: T 2.9165, Plg=2.0000°, Azm=168.0000°; N 0.0365, Plg=7.0000°, Azm=258.0000°; P -2.9531, Plg=83.0000°, Azm=62.0000°;*
*GCMT **18** 22:08:16.4±0.1, 15°.38N±0°.01×61°.46W±0°.01, h146km, MW5.6/162, Moment Tensor Solution. s151, c252; s162, c331; Duration: 19s6 Moment tensor: Scale 10^{17} Nm; M_{rr}=3.06±.03; $M_{\theta\theta}$=3.45±.04; $M_{\phi\phi}$=0.39±.04; $M_{r\theta}$=0.35±.03; $M_{\theta\phi}$=0.82±.04; $M_{\phi r}$=0.44±.03; Best double couple: M_0=3.39800×10^{17} NP1:ϕ_s=89.00000°, δ=48.00000°, λ=-75.00000°. NP2:ϕ_s=248.00000°, δ=44.00000°, λ=-106.00000°. Principal axes: T 3.6280, Plg=2.0000°, Azm=169.0000°; N -0.4620, Plg=11.0000°, Azm=259.0000°; P -3.1670, Plg=79.0000°, Azm=67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 22:08:14.3±0.2, 15°.23N±0°.02×61°.51W±0°.03, h156km±1km, h156km:pP-P, n2303, σ1§30/2878, mb5.8/474, 86C-110D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDN	**Morne-Daniel**	**0.15**	**51**	*e*P	**Pn**	**22 08 34.6**	**-0.6**
DSLB	**Salisbury**	**0.23**	**22**	*e*P	**Pn**	**22 08 34.8**	**-0.5**
DSLB				*e*S	**Sn**	**22 08 50.8**	**-0.7**
DLPL	**La Plaine**	**0.28**	**68**		**Pn**	**22 08 34.5**	**-0.9**
DLPL	**La Plaine**	**0.28**	**68**	*e*P	**Pn**	**22 08 34.4**	**-1.1**
DLPL				*e*S	**Sn**	**22 08 51.3**	**-0.3**
MDCT	**Cottage Hill,**	**0.39**	**7**	*e*P	**Pn**	**22 08 35.2**	**-0.6**
MDCT				*e*S	**Sn**	**22 08 51.3**	**-1.0**
MDVC	**Dominica, Viel**	**0.40**	**15**	*e*P	**Pn**	**22 08 35.5**	**-0.4**
MDVC				*e*S	**Sn**	**22 08 52.0**	**-0.4**
PCM	**Pelee Case Pet**	**0.50**	**145**	*e*P	**Pn**	**22 08 35.4**	**-1.0**
PCM	**Pelee Case Pet**	**0.50**	**145**	*e*P	**Pn**	**22 08 35.7**	**-0.6**
SVN	**Savane Anatole**	**0.51**	**139**		**Pn**	**22 08 35.5**	**-0.9**
SVN				Sn	**Sn**	**22 08 52.2**	**-1.1**
SVN	**Savane Anatole**	**0.51**	**139**	*e*P	**Pn**	**22 08 35.7**	**-0.7**
CXM	**Morne La Croix**	**0.53**	**141**	*e*P	**Pn**	**22 08 35.2**	**-1.4**
BAMF	**Morne Balai**	**0.54**	**139**	*e*P	**Pn**	**22 08 35.9**	**-0.7**
GBMF	**Grand Be**	**0.54**	**142**	*e*P	**Pn**	**22 08 35.7**	**-0.9**
PML	**Morne Lenard**	**0.54**	**144**	*e*P	**Pn**	**22 08 35.6**	**-0.9**
FDF	**Fort de France**	**0.60**	**145**		**Pn**	**22 08 36.1**	**-0.7**
FDF				Sn	**Sn**	**22 08 53.1**	**-1.0**
FDF	**Fort de France**	**0.60**	**145**	P	**Pn**	**22 08 36.2**	**-0.7**
FDF				S	**Sn**	**22 08 53.4**	**-0.7**
FDF	**Fort de France**	**0.60**	**145**	*e*P	**Pn**	**22 08 35.8**	**-1.1**
FDF				*e*S	**Sn**	**22 08 53.1**	**-1.0**
TDBA	**Terre de Bas,**	**0.63**	**349**		**Pn**	**22 08 36.3**	**-0.7**
TDBA				Sn	**Sn**	**22 08 53.6**	**-0.8**
TDBA	**Terre de Bas,**	**0.63**	**349**	*e*P	**Pn**	**22 08 36.5**	**-0.5**
TDBA				*e*S	**Sn**	**22 08 53.7**	**-0.7**
TBG	**Guadaloupe-3**	**0.64**	**348**	*e*P	**Pn**	**22 08 36.4**	**-0.6**
MAGL	**Barre de l'ile**	**0.75**	**17**		**Pn**	**22 08 36.5**	**-1.3**
MAGL	**Barre de l'ile**	**0.75**	**17**	*e*P	**Pn**	**22 08 36.6**	**-1.1**
MAGL				*e*S	**Sn**	**22 08 54.0**	**-1.8**
ILAM	**Ilet Lapin Mar**	**0.76**	**126**		**Pn**	**22 08 36.5**	**-1.3**
ILAM	**Ilet Lapin Mar**	**0.76**	**126**	*e*P	**Pn**	**22 08 36.5**	**-1.3**
ILAM				*e*S	**Sn**	**22 08 53.4**	**-2.3**
ZAM	**Aeronautique**	**0.80**	**144**	*e*P	**Pn**	**22 08 37.1**	**-0.9**
TRMF	**Trois Ilets**	**0.82**	**147**	*e*P	**Pn**	**22 08 37.3**	**-0.9**
BIM	**Bigot**	**0.82**	**149**		**Pn**	**22 08 37.4**	**-1.0**
BIM	**Bigot**	**0.82**	**149**	*e*P	**Pn**	**22 08 37.0**	**-1.3**
BIM				*e*S	**Sn**	**22 08 55.5**	**-1.2**
LPMF	**Morne Lapointe**	**0.83**	**141**	*e*P	**Pn**	**22 08 37.0**	**-1.3**
CBE	**Ff, Capester**	**0.84**	**354**		**Pn**	**22 08 37.8**	**-0.6**
CBE	**Ff, Capester**	**0.84**	**354**	*e*P	**Pn**	**22 08 37.8**	**-0.6**
CBE				*e*S	**Sn**	**22 08 56.0**	**-1.0**
MVM	**Montagne Vaucl**	**0.90**	**138**	*e*P	**Pn**	**22 08 37.7**	**-1.1**
MPOM	**Morne Pois Mar**	**1.00**	**141**		**Pn**	**22 08 38.4**	**-1.2**
MPOM	**Morne Pois Mar**	**1.00**	**141**	*e*P	**Pn**	**22 08 38.4**	**-1.2**
MPOM				*e*S	**Sn**	**22 08 57.2**	**-1.8**
H05S1	**Guadeloupe/Mar**	**1.03**	**141**	P	**Pn**	**22 08 39.1**	**-0.7**
H05S1				S	**Sn**	**22 08 57.6**	**-1.8**
GDHS	**Morne Mazeau,**	**1.07**	**347**		**Pn**	**22 08 39.8**	**-0.5**
GDSD	**La Dsirade Is**	**1.16**	**22**		**Pn**	**22 08 39.2**	**-1.8**
H05N1	**Guadeloupe/Mar**	**1.17**	**22**	P	**Pn**	**22 08 40.2**	**-0.9**
H05N1				S	**Sn**	**22 08 58.4**	**-3.3**
ABD	**La Joyeuse, An**	**1.24**	**1**		**Pn**	**22 08 40.6**	**-1.1**
ABD	**La Joyeuse, An**	**1.24**	**1**	*e*P	**Pn**	**22 08 40.6**	**-1.1**
SLBI	**Saint Lucia, B**	**1.30**	**156**	*e*P	**Pn**	**22 08 41.4**	**-1.0**
SLBI				*e*S	**Sn**	**22 09 01.7**	**-2.2**
SLCP	**Castries, St.**	**1.31**	**157**	*e*P	**Pn**	**22 08 41.9**	**-0.6**
SLCP				*e*S	**Sn**	**22 09 02.1**	**-1.9**
SLB	**Belfond**	**1.46**	**162**	*e*P	**Pn**	**22 08 44.8**	**+0.8**
MCLT	**Moule a Chique**	**1.61**	**160**		**Pn**	**22 08 44.6**	**-0.8**
MCLT	**Moule a Chique**	**1.61**	**160**	*e*P	**Pn**	**22 08 44.9**	**-0.5**
MCLT				*e*S	**Sn**	**22 09 08.4**	**-1.0**
MBFL	**Flemmings, Mon**	**1.66**	**336**	*e*P	**Pn**	**22 08 45.8**	**-0.2**
MBFL				*e*S	**Sn**	**22 09 09.9**	**-0.5**
ANBD	**Bethesda, Anti**	**1.83**	**352**	*e*P	**Pn**	**22 08 46.7**	**-1.1**
ANBD				*e*S	**Sn**	**22 09 11.0**	**-2.7**
ANDO	**Antigua, Disas**	**1.90**	**351**	*e*P	**Pn**	**22 08 47.2**	**-1.4**
ANDO				*e*S	**Sn**	**22 09 12.6**	**-2.5**
SSV	**Crater Summit**	**1.91**	**171**	*e*P	**Pn**	**22 08 50.2**	**+1.3**
SVB	**Belmont**	**1.96**	**173**		**Pn**	**22 08 49.0**	**-0.3**
SVB	**Belmont**	**1.96**	**173**	*e*P	**Pn**	**22 08 48.9**	**-0.4**
SVB				*e*S	**Sn**	**22 09 16.6**	**+0.3**
ANWB	**Willy Bob**	**2.44**	**354**		**Pn**	**22 08 52.9**	**-2.0**
ANWB	**Willy Bob**	**2.44**	**354**	*e*P	**Pn**	**22 08 53.1**	**-1.8**
ANWB	**Willy Bob**	**2.44**	**354**	*e*P	**Pn**	**22 08 53.4**	**-1.6**
ANWB				*e*S	**Sn**	**22 09 23.6**	**-2.9**
SEUS	**St. Eustatius**	**2.66**	**328**		**Pn**	**22 08 57.6**	**0.0**
SEUS	**St. Eustatius**	**2.66**	**328**	*e*P	**Pn**	**22 08 57.4**	**-0.2**
SEUS				*e*S	**Sn**	**22 09 29.7**	**-1.5**
GCMP	**Grenada, Carri**	**2.73**	**178**	*e*P	**Pn**	**22 08 58.1**	**-0.3**
GCMP				*e*S	**Sn**	**22 09 32.0**	**-0.6**
BCHC	**Barbados, Cave**	**2.77**	**139**	*e*P	**Pn**	**22 08 58.9**	**-0.1**
BCHC				*e*S	**Sn**	**22 09 31.4**	**-2.1**
BBGH	**Gun Hill**	**2.81**	**137**		**Pn**	**22 08 59.1**	**-0.3**
BBGH	**Gun Hill**	**2.81**	**137**	*e*P	**Pn**	**22 08 57.6**	**-1.8**
BBGH	**Gun Hill**	**2.81**	**137**	*e*P	**Pn**	**22 08 59.0**	**-0.5**
BBGH				*e*S	**Sn**	**22 09 32.2**	**-2.2**
BBSP	**Saint Philip**	**2.90**	**136**	*e*P	**Pn**	**22 09 00.8**	**+0.1**
GRGR	**Grenville**	**3.08**	**183**	Pn	**Pn**	**22 09 02.8**	**-0.1**
GRGR	**Grenville**	**3.08**	**183**	*e*P	**Pn**	**22 09 02.1**	**-0.8**
GRGR				*e*S	**Sn**	**22 09 39.8**	**-0.8**
GRFF	**Grenada Fort F**	**3.17**	**184**	*e*P	**Pn**	**22 09 04.1**	**+0.1**
GRFF				*e*S	**Sn**	**22 09 42.5**	**-0.1**
SMRT	**St. Maarten**	**3.18**	**332**	Pn	**Pn**	**22 09 02.9**	**-1.3**
SMRT	**St. Maarten**	**3.18**	**332**	*e*P	**Pn**	**22 09 02.7**	**-1.5**
SMRT				*e*S	**Sn**	**22 09 41.1**	**-1.8**
CDVI	**St. Croix**	**4.01**	**309**	Pn	**Pn**	**22 09 14.8**	**0.0**
TOSP	**Speyside**	**4.02**	**166**	Pn	**Pn**	**22 09 14.0**	**-1.0**
TOSP	**Speyside**	**4.02**	**166**	*e*P	**Pn**	**22 09 13.9**	**-1.0**
TOSP	**Speyside**	**4.02**	**166**	*e*S	**Sn**	**22 10 00.2**	**-2.0**
STVI	**Saint Thomas**	**4.53**	**314**		**Pn**	**22 09 21.5**	**-0.1**
TRN	**Trinidad (W)**	**4.55**	**179**	*e*P	**Pn**	**22 09 21.3**	**-0.6**
TRN	**Trinidad (W)**	**4.55**	**179**	*e*S	**Sn**	**22 10 13.3**	**-1.4**
CUPR	**Culebra, Puert**	**4.74**	**311**		**Pn**	**22 09 24.1**	**-0.2**
MTP	**Monte Pirata**	**4.81**	**307**		**Pn**	**22 09 25.6**	**+0.3**
HUMP	**Col San Antoni**	**5.07**	**305**		**Pn**	**22 09 29.2**	**+0.5**
CBYP	**Canovanas**	**5.15**	**307**		**Pn**	**22 09 30.3**	**+0.5**
SJG	**San Juan**	**5.29**	**303**	P	**Pn**	**22 09 31.9**	**+0.3**
	6μm,0.7s,baz=110,slow=12,SNR=579						
SJG				S	**Sn**	**22 10 32.1**	**0.0**
	595nm,0.4s,baz=285,slow=22,SNR=1.0						
SJG				ScS	**ScS**	**22 23 14.5**	**-2.5**
	13nm,0.6s,baz=312,slow=24,SNR=10						
SJG	**San Juan**	**5.29**	**303**		**Pn**	**22 09 31.8**	**+0.1**
SJG	**San Juan**	**5.29**	**303**	*e*P	**Pn**	**22 09 31.4**	**-0.2**
GCPR	**Guaynabo City**	**5.35**	**306**		**Pn**	**22 09 33.1**	**+0.7**
CELP	**Cerrillos**	**5.62**	**301**	Pn	**Pn**	**22 09 36.1**	**+0.1**
PCRV	**Puerto La Cruz**	**5.87**	**212**	P	**Pn**	**22 09 40.6**	**+1.2**
	1μm,0.8s,baz=22,slow=4.9,SNR=223						
PCRV				S	**Sn**	**22 10 46.1**	**0.0**
	317nm,0.9s,baz=46,slow=22,SNR=0.9						
AOPR	**Arecibo Observ**	**5.90**	**302**		**Pn**	**22 09 40.2**	**+0.4**
AOPR	**Arecibo Observ**	**5.90**	**302**	*e*P	**Pn**	**22 09 40.2**	**+0.4**
MLPR	**Magueyes Islan**	**5.96**	**298**	Pn	**Pn**	**22 09 40.8**	**+0.2**
PRSN	**Puerto Rico Se**	**6.16**	**300**		**Pn**	**22 09 43.5**	**+0.3**
AGPR	**Aguadilla, PR**	**6.26**	**302**		**Pn**	**22 09 44.9**	**+0.5**
BIRV	**Birongo**	**6.62**	**225**		**Pn**	**22 09 49.8**	**+0.4**
PCDR	**Punta Cana, DR**	**7.34**	**297**	Pn	**Pn**	**22 09 58.0**	**-0.9**
HATO	**Hato, Curacao**	**7.84**	**248**		**Pn**	**22 10 05.5**	**-0.2**
SDD	**Santo Domingo**	**8.66**	**293**	Pn	**Pn**	**22 10 17.0**	**+0.5**
BAUV	**El Baul**	**8.93**	**226**	Pn	**Pn**	**22 10 19.7**	**-0.4**
BAUV	**El Baul**	**8.93**	**226**	*e*	**Pn**	**22 10 18.8**	**-1.3**
SC01	**Santiago de lo**	**9.74**	**297**		**Pn**	**22 10 29.7**	**-1.1**
DABV	**Dabajuro**	**9.87**	**245**	*e*P	**Pn**	**22 10 31.9**	**-0.6**
SDDR	**Presa de Saban**	**10.07**	**293**		**Pn**	**22 10 34.4**	**-0.8**
SDDR	**Presa de Saban**	**10.07**	**293**	*e*P	**Pn**	**22 10 36.6**	**+1.4**
SDDR	**Presa de Saban**	**10.07**	**293**	*e*P	**Pn**	**22 10 35.1**	**-0.1**
SDDR	**Presa de Saban**	**10.07**	**293**	*e*P	**Pn**	**22 10 35.0**	**-0.1**
URIC	**Uribia, Colomb**	**10.78**	**252**	*e*P	**Pn**	**22 10 43.1**	**-1.5**
SDV	**Santo Domingo**	**10.92**	**236**	P	**Pn**	**22 10 46.9**	**+0.3**
	35nm,0.9s,baz=57,slow=10,SNR=15						
SDV				S	**Sn**	**22 12 45.5**	**-2.1**
	59nm,0.7s,baz=60,slow=15,SNR=1.0						
SDV				LR	LR	22 15 28.0	
	comp=Z,2μm,19.4s,baz=62,slow=40						
SDV				ScS	**ScS**	**22 23 21.2**	**-4.4**
	2.6nm,0.3s,baz=38,slow=15,SNR=1.5						
SDV	**Santo Domingo**	**10.92**	**236**	Pn	**Pn**	**22 10 45.8**	**-0.8**
SDV	**Santo Domingo**	**10.92**	**236**	*e*P	**Pn**	**22 10 45.7**	**-0.8**
GRTK	**Grand Turk**	**11.07**	**306**	Pn	**Pn**	**22 10 44.8**	**-3.5**
GRTK	**Grand Turk**	**11.07**	**306**	*e*P	**Pn**	**22 10 43.7**	**-4.5**
SOCV	**Socops**	**11.46**	**234**	*e*P	**Pn**	**22 10 51.8**	**-1.6**
CRJC	**Cerrejon, Guaj**	**11.84**	**251**	*e*P	**Pn**	**22 11 01.2**	**+2.8**
LL1C	**La Loma 1 Cana**	**13.05**	**246**	*e*P	**Pn**	**22 11 13.7**	**-0.3**
LL5C	**La Loma 5 El P**	**13.10**	**247**	*e*P	**P**	**22 11 18.1**	**-1.0**
MDP	**Montagnes des**	**13.31**	**138**	P	**Pn**	**22 11 13.5**	**-3.9**
	529nm,0.4s,baz=333,slow=16,SNR=220						
MDP				S	Sn	22 13 29.9	-15
	895nm,0.5s,baz=314,slow=17,SNR=16						
TAMC	**Tame, Arauca**	**13.35**	**230**	*e*P	**P**	**22 11 20.1**	**-1.8**
PAMC	**Pamplona, Colo**	**13.48**	**236**	*e*P	**Pn**	**22 11 21.1**	**+1.2**
OCAC	**Ocana**	**13.48**	**240**	*e*P	**P**	**22 11 21.9**	**-1.6**
ARGC	**Ariguani, Magd**	**13.53**	**248**	*e*P	**P**	**22 11 25.6**	**+1.8**
GTBY	**Guantanamo Bay**	**13.78**	**292**	Pn	**Pn**	**22 11 21.2**	**-2.1**
GTBY	**Guantanamo Bay**	**13.78**	**292**	*e*P	**Pn**	**22 11 21.8**	**-1.5**
GTBY	**Guantanamo Bay**	**13.78**	**292**	*e*P	**Pn**	**22 11 18.6**	**-4.7**
BARC	**Barichara**	**14.31**	**234**	*e*P	**P**	**22 11 32.2**	**-0.6**
SJCC	**San Jacinto, C**	**14.35**	**250**	*e*P	**Pn**	**22 11 31.1**	**+0.5**
BRRC	**Barranca, Sant**	**14.43**	**237**	*e*P	**Pn**	**22 11 29.8**	**-1.7**
RUSC	**La Rusia**	**14.67**	**232**	*e*P	**P**	**22 11 38.7**	**+1.7**
HLGC	**Holguin**	**14.93**	**294**	*e*P	**Pn**	**22 11 37.1**	**-0.6**
PTGC	**Puerto Gaitan,**	**15.15**	**225**	*e*P	**P**	**22 11 42.7**	**+0.9**
PTBC	**PUERTO BERRIO,**	**15.36**	**237**	*e*P	**Pn**	**22 11 42.9**	**-0.1**
LMGC	**Las Mercedes**	**15.53**	**290**	*e*P	**Pn**	**22 11 42.5**	**-2.5**
LMGC				*e*S	Sn	22 14 26.6	-11
SPBC	**San Pablo de B**	**15.58**	**234**	*e*P	**P**	**22 11 46.4**	**-0.3**
LCBC	**Los crdobas,**	**15.84**	**248**	*e*P	**P**	**22 11 50.9**	**+1.4**
CHIC	**Chingaza**	**15.98**	**230**	*e*P	**P**	**22 11 53.0**	**+1.5**
SGCB	**S:o Gabriel d**	**16.20**	**200**	*e*P	**Pn**	**22 11 53.0**	**-0.3**
NORC	**Norcasia**	**16.26**	**235**	*e*P	**Pn**	**22 11 54.0**	**-0.1**
ROSC	**El Rosal**	**16.29**	**232**	P	**P**	**22 11 56.1**	**+1.3**
	276nm,0.8s,baz=47,slow=9.9,SNR=31						
ROSC				S	**S**	**22 14 55.9**	**+0.2**
	50nm,0.8s,baz=80,slow=23,SNR=1.4						
ROSC	**El Rosal**	**16.29**	**232**	P	**P**	**22 11 55.0**	**+0.1**
ROSC	**El Rosal**	**16.29**	**232**	*e*P	**Pn**	**22 11 54.0**	**-0.7**
VILC	**Villavicencio,**	**16.30**	**229**	*e*P	**Pn**	**22 11 53.0**	**-1.6**
HELC	**Santa Helena**	**16.43**	**238**	*e*P	**Pn**	**22 11 59.9**	**+3.4**
CCCC	**Cccc**	**16.54**	**293**	*e*P	**P**	**22 11 51.8**	**-5.3**
CCCC				*e*S	S	22 14 43.5	-17
DBBC	**Dabeiba**	**16.56**	**242**	*e*P	**Pn**	**22 11 58.8**	**+1.0**
GUVC	**San Jose del G**	**16.70**	**222**	*e*P	**Pn**	**22 11 59.2**	**-0.2**
GUY2C	**Guyana, Caldas**	**16.86**	**235**	*e*P	**Pn**	**22 12 02.5**	**+0.8**
CBOC	**Ciudad Bolivar**	**17.01**	**238**	*e*P	**P**	**22 12 02.0**	**-0.6**
BBSR	**BB Station**	**17.31**	**351**	P	**P**	**22 12 05.3**	**-0.3**
BBSR	**BB Station**	**17.31**	**351**	P	**Pn**	**22 12 06.1**	**-0.4**
	baz=170						
BBSR				S	**Sn**	**22 15 21.2**	**+0.7**
	baz=170						
ANIL	**Santa Ana**	**17.34**	**233**	*e*P	**Pn**	**22 12 07.4**	**+0.1**
PRAC	**Prado**	**17.45**	**230**	*e*P	**P**	**22 12 05.2**	**-2.0**
UPD2	**Meteti**	**17.45**	**250**	*e*P	**P**	**22 12 07.0**	**-0.3**
PLMC	**San Jos del P**	**17.78**	**236**	*e*P	**P**	**22 12 11.4**	**+0.5**
MCPB	**Macapa, AP**	**18.09**	**148**	*e*P	**P**	**22 12 14.2**	**0.0**
LCCY	**Blossom Villag**	**18.26**	**287**	P	**P**	**22 12 16.1**	**0.0**
MACA	**Manacapuru-AM**	**18.29**	**177**	*e*P	**Pn**	**22 12 18.1**	**-0.1**
YOTC	**Yotoco, Valle**	**18.39**	**234**	*e*P	**Pn**	**22 12 19.3**	**-0.2**
MALB	**Monte Alegre**	**18.42**	**156**	*e*P	**P**	**22 12 18.1**	**+0.3**
BETC	**Betania**	**18.55**	**229**	*e*P	**P**	**22 12 19.3**	**0.0**
UPA	**Univ. de Panam**	**18.68**	**253**	*e*P	**Pn**	**22 12 25.0**	**+2.2**
MGV	**Manicaragua**	**18.78**	**294**	*e*P	**P**	**22 12 22.5**	**+0.8**
BCIP	**Isla Barro Col**	**18.89**	**254**		**P**	**22 12 23.6**	**+0.6**
BCIP	**Isla Barro Col**	**18.89**	**254**	*e*P	**P**	**22 12 21.9**	**-1.0**
BCIP	**Isla Barro Col**	**18.89**	**254**	P	**P**	**22 12 23.6**	**+0.6**
GARC	**Garzon, Huila**	**18.92**	**228**	*e*P	**P**	**22 12 23.8**	**+0.2**
MALC	**Bahia Malaga**	**19.15**	**236**	*e*P	**P**	**22 12 26.6**	**+0.8**
PRVC	**Isla de Provid**	**19.33**	**267**	*e*P	**P**	**22 12 28.5**	**+0.9**
FLOC	**Florencia**	**19.46**	**227**	*e*P	**Pn**	**22 12 31.4**	**-0.6**
PNME	**Penonome**	**19.59**	**252**	*e*P	**P**	**22 12 31.8**	**+1.3**
PTLC	**Puerto Leguiza**	**19.90**	**222**	*e*P	**Pn**	**22 12 38.2**	**+0.9**
ITTB	**Itaituba**	**20.29**	**163**	*e*P	**P**	**22 12 39.2**	**+1.2**
BBAC	**Balboa, Cauca**	**20.33**	**231**	*e*P	**P**	**22 12 37.1**	**-1.5**
CRUC	**La Cruz**	**20.41**	**230**	*e*P	Pn	22 12 42.7	-0.9
GR1C	**Gorgona, Isla**	**20.42**	**235**	*e*P	**P**	**22 12 37.5**	**-1.9**
GCUF	**Volcan Galeras**	**20.93**	**230**	*e*P	**P**	**22 12 45.0**	**-0.3**
061Z	**Ochoppi**	**20.99**	**303**	P	**P**	**22 12 45.5**	**+0.1**
061Z	**Ochoppi**	**20.99**	**303**	P	**P**	**22 12 46.8**	**+1.3**
	baz=117,SNR=11						
061Z				S	**S**	**22 16 30.7**	**+0.1**
	baz=117						
TBTG	**Tabatinga, AM**	**21.01**	**204**	*e*P	**P**	**22 12 46.2**	**+0.5**
TBTG	**Tabatinga, AM**	**21.01**	**204**	*e*P	**P**	**22 12 45.1**	**-0.6**
060A	**Indiantown**	**21.11**	**307**	P	**P**	**22 12 46.3**	**-0.4**
060A	**Indiantown**	**21.11**	**307**	S	**S**	**22 16 37.5**	**+4.7**
	baz=120						
CMBC	**Cumbal**	**21.47**	**230**	*e*P	**P**	**22 12 51.3**	**+0.1**
BONI	**La Bonita**	**21.58**	**229**	*e*P	**P**	**22 12 51.7**	**-0.5**
TULM	**Tulcn-Chalpat**	**21.59**	**230**	P	**P**	**22 12 51.8**	**-0.7**
TULM	**Tulcn-Chalpat**	**21.59**	**230**	*e*P	**P**	**22 12 50.0**	**-2.5**
SOR	**Soroa**	**21.66**	**294**	P	**P**	**22 12 52.1**	**-0.5**
SOR	**Soroa**	**21.66**	**294**	P	**P**	**22 12 52.1**	**-0.5**
SOR	**Soroa**	**21.66**	**294**	*e*P	**P**	**22 12 51.4**	**-1.2**
BRU2	**Volcan**	**21.67**	**255**	P	**P**	**22 12 54.8**	**+1.9**
BRU2	**Volc

CNNC	Cliffs of the	24.76 327	P	P	22 13 22.1 +0.6
	baz=140				
Y58A	Scranton	24.80 322	P	P	22 13 22.8 +1.0
	baz=134,SNR=15				
Y58A			P	P	22 13 22.8 +1.0
	baz=134,SNR=15				
Y58A			S	S	22 17 32.5 -0.3
	baz=134				
Y58A			S	S	22 17 32.5 -0.3
	baz=134				
BOSC	San Juan Bosco	24.82 224	P	P	22 13 21.3 -1.2
COHC	Cochancay	24.85 226	P	P	22 13 22.8 +0.3
COHC	Cochancay	24.85 226	eP	P	22 13 18.7 -3.8
CRIN	San Cristobal	24.91 267	P	P	22 13 24.9 +1.7
CRIN	San Cristobal	24.91 267	eP	P	22 13 23.4 +0.3
ROSB	Rosrio	24.91 135	eP	P	22 13 24.6 +1.6
TGUH	Tegucigalpa,Un	24.95 271	P	P	22 13 25.2 +1.7
TGUH			IAmb	IAmb	22 13 29.3
	comp=Z,356nm,0.8s				
TGUH	Tegucigalpa,Un	24.95 271	eP	P	22 13 26.0 +2.4
X58A	Rowland	25.06 323	P	P	22 13 25.0 +0.8
	baz=136				
X58A			P	P	22 13 25.0 +0.8
	baz=136				
X58A			S	S	22 17 37.2 +0.2
	baz=136				
X58A			S	S	22 17 37.2 +0.2
	baz=136				
Y57A	Sumter	25.31 321	P	P	22 13 27.4 +1.0
	baz=133,SNR=6.9				
Y57A			P	P	22 13 27.4 +1.0
	baz=133,SNR=6.9				
ETMB	Extrema	25.31 191	eP	P	22 13 26.4 -0.2
255A	Hazlehurst	25.33 315	P	P	22 13 27.8 +1.1
	baz=126,SNR=7.7				
255A			S	S	22 17 41.3 -0.1
	baz=126				
CZSB	Cruzeiro do Su	25.36 207	eP	P	22 13 26.2 -0.9
U59A	Littleton	25.57 328	P	P	22 13 29.2 +0.4
	baz=141,SNR=13				
U59A			P	P	22 13 29.2 +0.4
	baz=141,SNR=13				
U59A			S	S	22 17 45.6 +0.7
	baz=141				
U59A			S	S	22 17 45.6 +0.7
	baz=141				
CNCH	Conchagua	25.58 269	i P	P	22 13 30.8 +1.5
CNCH	Conchagua	25.58 269	i P	P	22 13 30.8 +1.5
HAW	Hawthorne Fire	25.64 318	P	P	22 13 30.3 +0.9
	baz=130,SNR=23				
HAW			S	S	22 17 46.3 +0.2
	baz=130				
S61A	Accomac	25.64 333	P	P	22 13 30.7 +1.3
	baz=147				
S61A			P	P	22 13 30.7 +1.3
	baz=147				
T60A	Surry	25.68 331	P	P	22 13 30.4 +0.7
T60A	Surry	25.68 331	P	P	22 13 31.0 +1.3
	baz=144,SNR=23				
T60A			P	P	22 13 31.0 +1.3
	baz=144,SNR=23				
T60A			S	S	22 17 48.5 +1.8
	baz=144				
T60A			S	S	22 17 48.5 +1.8
	baz=144				
BIRD	Birdtown, Kers	25.78 322	P	P	22 13 31.7 +1.0
	baz=134				
TIGA	Tifton	25.83 312	P	P	22 13 32.1 +0.9
TIGA	Tifton	25.83 312	P	P	22 13 32.8 +1.6
	baz=124,SNR=12				
TIGA			S	S	22 17 49.8 +0.5
	baz=124				
TIGA	Tifton	25.83 312	P	P	22 13 32.2 +1.0
	baz=124,SNR=12				
V58A	Windy Hill, Pi	25.84 326	P	P	22 13 31.7 +0.5
	baz=138,SNR=26				
V58A			P	P	22 13 31.7 +0.5
	baz=138,SNR=26				
W57A	Gilead	25.86 323	P	P	22 13 32.0 +0.5
	baz=136,SNR=35				
W57A			P	P	22 13 32.0 +0.5
	baz=136,SNR=35				
T59A	Double "B" Far	25.93 330	P	P	22 13 32.2 +0.1
	baz=142,SNR=18				
T59A			P	P	22 13 32.2 +0.1
	baz=142,SNR=18				
T59A			S	S	22 17 51.2 +0.4
	baz=142				
T59A			S	S	22 17 51.2 +0.4
	baz=142				
TEIG	Tepich	25.96 285	P	P	22 13 32.6 +0.1
TEIG			IAmb	IAmb	22 13 34.0
	comp=Z,248nm,1.3s				
TEIG	Tepich	25.96 285	eP	P	22 13 29.6 -2.9
JSC	Jenkinsville	26.02 320	P	P	22 13 33.7 +0.9
	baz=132,SNR=16				
154A	Montrose	26.17 315	P	P	22 13 35.6 +1.4
	baz=126				
154A			S	S	22 17 57.1 +2.5
	baz=126				
ARNL	Arenillas	26.18 226	P	P	22 13 34.7 +0.2
ARNL			IAmb	IAmb	22 13 36.8
	comp=Z,175nm,0.6s				
CLDB	Colider	26.54 167	eP	P	22 13 38.6 +0.9
COEG	Centro de Oper	26.55 270	eP	P	22 13 39.1 +1.2
COEG	Centro de Oper	26.55 270	eP	P	22 13 39.1 +1.2
HODGE	Hodges	26.61 319	P	P	22 13 38.6 +0.5
	baz=130,SNR=13				
KMSC	Kings Mountain	26.64 322	P	P	22 13 38.5 0.0
KMSC	Kings Mountain	26.64 322	P	P	22 13 38.9 +0.4
	baz=133,SNR=28				
KMSC			S	S	22 18 02.7 +0.7
	baz=133				
KMSC	Kings Mountain	26.64 322	P	P	22 13 38.8 +0.3
	baz=133,SNR=28				
KMSC			S	S	22 18 02.0 0.0
	baz=133				
JSRW	J. Sargeant Re	26.66 330	P	P	22 13 39.3 +0.7
PAULI	Pauline	26.72 321	P	P	22 13 39.8 +0.6
	baz=132,SNR=20				
PAULI			S	S	22 18 03.8 +0.6
	baz=132				
T57A	Hurt	26.81 327	P	P	22 13 40.9 +0.9
	baz=139,SNR=27				
T57A			P	P	22 13 40.9 +0.9
	baz=139,SNR=27				
T57A			S	S	22 18 06.5 +1.8
	baz=139				
T57A			S	S	22 18 06.5 +1.8
	baz=139				
352A	Blakely	26.82 311	P	P	22 13 41.3 +1.3
	baz=122,SNR=7.6				
352A			S	S	22 18 08.0 +3.2
	baz=122				
CBN	Corbin Frederi	26.84 332	P	P	22 13 40.4 +0.2
CBN	Corbin Frederi	26.84 332	P	P	22 13 41.1 +1.0
	baz=144				
CBN	Corbin Frederi	26.84 332	P	P	22 13 40.7 +0.6
	baz=144				
R58B	Mineral	26.88 330	P	P	22 13 41.1 +0.6
	baz=143,SNR=18				
R58B			P	P	22 13 41.1 +0.6
	baz=143,SNR=18				
R58B			S	S	22 18 07.6 +1.9
	baz=143				
R58B			S	S	22 18 07.6 +1.9
	baz=143				
SNET	Serv Nac Est T	26.88 270	P	P	22 13 41.4 +0.5
GOGA	Godfrey	26.88 316	P	P	22 13 40.5 -0.1
GOGA	Godfrey	26.88 316	P	P	22 13 40.5 -0.1
GOGA			pmax	pmax	
	comp=Z,78nm,0.8s				
GOGA	Godfrey	26.88 316	P	P	22 13 41.4 +0.7
	baz=127,SNR=16				
GOGA			S	S	22 18 10.8 +5.0
	baz=127				
GOGA	Godfrey	26.88 316	P	P	22 13 41.4 +0.7
	baz=127,SNR=16				
GOGA			S	S	22 18 06.7 +0.9
	baz=127				
ESQI	Esquipulas	26.90 272	P	P	22 13 42.7 +1.7
ESQI	Esquipulas	26.90 272	i P	P	22 13 43.1 +2.0
MTO3	Montecristo	26.93 272	P	P	22 13 42.7 +1.2
U56A	King	26.94 325	P	P	22 13 42.1 +1.0
	baz=136,SNR=19				
U56A			P	P	22 13 42.1 +1.0
	baz=136,SNR=19				
451A	Vernon	26.98 309	P	P	22 13 43.5 +1.9
	baz=119,SNR=9.0				
V55A	Taylorsville	27.06 323	P	P	22 13 43.3 +1.1
	baz=134,SNR=20				
V55A			P	P	22 13 43.3 +1.1
	baz=134,SNR=20				
V55A			S	S	22 18 09.5 +0.9
	baz=134				
V55A			S	S	22 18 09.5 +0.9
	baz=134				
PDRB	Porto dos Gac	27.08 170	eP	P	22 13 43.4 +0.8
CEVE	Cerro Verde	27.24 271	eP	P	22 13 45.7 +1.3
CEVE	Cerro Verde	27.24 271	eP	P	22 13 45.7 +1.3
S57A	Dark Hollow, R	27.24 329	P	P	22 13 44.8 +1.0
	baz=141,SNR=15				
S57A			P	P	22 13 44.8 +1.0
	baz=141,SNR=15				
S57A			S	S	22 18 13.4 +1.9
	baz=141				
S57A			S	S	22 18 13.4 +1.9
	baz=141				
PETF	Flores	27.29 277	P	P	22 13 45.8 +1.3
152A	Waverly Hall	27.31 314	P	P	22 13 45.6 +1.2
	baz=124,SNR=73				
152A			S	S	22 18 13.3 +0.7
	baz=124				
GEDE	Greenville	27.43 336	P	P	22 13 46.3 +0.8
	baz=149				
PSUB	Penn St. - Bra	27.46 336	P	P	22 13 46.4 +0.7
	baz=150				
CASEE	Lake Jocassee	27.52 320	P	P	22 13 47.5 +1.1
	baz=130,SNR=17				
WUPA	West Chester U	27.53 336	P	P	22 13 46.3 0.0
Y52A	Lilburn	27.55 316	P	P	22 13 47.9 +1.3
	baz=127,SNR=14				
Y52A			P	P	22 13 47.9 +1.3
	baz=127,SNR=14				
Y52A			S	S	22 18 14.2 -2.2
	baz=127				
Y52A			S	S	22 18 14.2 -2.2
	baz=127				
SDMD	Soldier's Deli	27.59 334	P	P	22 13 47.7 +0.8
	baz=147,SNR=5.5				
SDMD			S	S	22 18 13.9 -2.9
	baz=147				
BLA	Blacksburg	27.59 326	P	P	22 13 47.7 +0.8
BLA	Blacksburg	27.59 326	P	P	22 13 47.7 +0.8
BLA			pmax	pmax	
	comp=Z,524nm,0.7s				
BLA	Blacksburg	27.59 326	P	P	22 13 48.2 +1.2
	baz=138,SNR=11				
BLA	Blacksburg	27.59 326	P	P	22 13 47.8 +0.8
	baz=138,SNR=11				
BLA			S	S	22 18 19.0 +2.0
	baz=138				
SMTB	Santa Maria do	27.62 149	eP	P	22 13 48.4 +1.0
M63A	Gales Ferry	27.64 343	P	P	22 13 48.3 +1.1
	baz=158				
M63A			P	P	22 13 48.3 +1.1
	baz=158				
M63A			S	S	22 18 19.2 +1.7
	baz=158				
M63A			S	S	22 18 19.2 +1.7
	baz=158				
FOR	Fordham	27.72 340	P	P	22 13 48.8 +0.8
	baz=154				
BRNJ	Basking Ridge	27.79 338	P	P	22 13 49.8 +1.2
	baz=152				
L64A	Middleborough	27.81 345	P	P	22 13 49.6 +0.8
	baz=160				
L64A			P	P	22 13 49.6 +0.8
	baz=160				
ATAH	Atahualpa	27.81 218	P	P	22 13 50.9 +1.3
	comp=Z,90nm,1.0s,baz=30,slow=6.3,SNR=34				
ATAH			PcP	PcP	22 17 03.3 +1.3
	comp=Z,29nm,0.8s,baz=324,slow=14,SNR=3.5				
ATAH			S	S	22 18 20.0 -1.5
	comp=Z,14nm,1.0s,baz=0.0,slow=20,SNR=1.7				
	comp=Z,90nm,1.0s				
PAL	Palisades	27.85 340	P	P	22 13 49.7 +0.6
	baz=154				
PAL	Palisades	27.85 340	P	P	22 13 49.6 +0.5
	baz=154				
PAL			S	S	22 18 22.7 +1.8
	baz=154				
U54A	Nelsons Funny	27.88 323	P	P	22 13 50.6 +1.1
	baz=134,SNR=15				
U54A			P	P	22 13 50.6 +1.1
	baz=134,SNR=15				
V53A	Saluda	27.89 321	P	P	22 13 50.6 +0.9
	baz=132,SNR=19				
V53A			P	P	22 13 50.6 +0.9
	baz=132,SNR=19				
APG	El Apazote	27.95 273	P	P	22 13 51.7 +1.2
	comp=Z,227nm,0.7s,baz=84,slow=5.1,SNR=184				
APG			S	S	22 18 21.1 -2.2
	comp=Z,3.2nm,0.6s,baz=291,slow=8.6,SNR=0.9				
APG			LR	LR	22 25 49.5
	comp=Z,802nm,18.5s,baz=95,slow=38				
	comp=Z,227nm,0.7s				
Z51A	Franklin	27.99 314	P	P	22 13 51.5 +1.0
	baz=124,SNR=11				
VILB	Vilhena	28.03 177	eP	P	22 13 52.4 +1.4
250A	Grady	28.05 311	P	P	22 13 52.2 +1.2
	baz=121				
ODNJ	Ogdensburg	28.16 339	P	P	22 13 53.1 +1.2
	baz=152,SNR=7.5				
ODNJ			S	S	22 18 29.3 +3.6
	baz=152				
P57A	Homestead Farm	28.16 332	P	P	22 13 53.3 +1.3
	baz=145,SNR=6.5				
P57A			P	P	22 13 53.3 +1.3
	baz=145,SNR=6.5				
W52A	Murphy	28.22 319	P	P	22 13 53.6 +1.0
	baz=129,SNR=7.5				
BRAL	Brewton	28.23 309	P	P	22 13 53.5 +0.8
BRAL	Brewton	28.23 309	P	P	22 13 54.4 +1.7
	baz=118,SNR=11				
BRAL			S	S	22 18 27.8 +0.7
	baz=118				
BRAL	Brewton	28.23 309	P	P	22 13 54.0 +1.3
	baz=118,SNR=11				
BRAL			S	S	22 18 29.2 +2.1
	baz=118				
R55A	Marlinton	28.23 328	P	P	22 13 54.3 +1.6
	baz=140,SNR=13				
R55A			P	P	22 13 54.3 +1.6
	baz=140,SNR=13				
R55A			S	S	22 18 30.3 +3.1
	baz=140				
R55A			S	S	22 18 30.3 +3.1
	baz=140				
BRNY	Black Rk. Fore	28.25 340	P	P	22 13 53.3 +0.6
	baz=154,SNR=7.4				
BRNY			S	S	22 18 28.5 +1.3
	baz=154				
BCX	Boston College	28.27 345	P	P	22 13 53.1 +0.3
Q56A	Snyder Ridge,	28.36 330	P	P	22 13 55.1 +1.4
	baz=142,SNR=12				
Q56A			P	P	22 13 55.1 +1.4
	baz=142,SNR=12				
Q56A			S	S	22 18 31.8 +2.9
	baz=142				
Q56A			S	S	22 18 31.8 +2.9
	baz=142				
TKL	Tuckaleechee C	28.48 320	P	P	22 13 55.4 +0.6
	comp=Z,8.4nm,0.4s,baz=136,slow=9.2,SNR=31				
TKL			LR	LR	22 23 37.7
	comp=Z,530nm,21.7s,baz=134,slow=32				
	comp=Z,8.4nm,0.4s				
TKL	Tuckaleechee C	28.48 320	P	P	22 13 55.5 +0.7
TKL	Tuckaleechee C	28.48 320	P	P	22 13 55.5 +0.7
TKL			pmax	pmax	
	comp=Z,621nm,0.8s				
TKL	Tuckaleechee C	28.48 320	P	P	22 13 55.8 +1.0
	baz=130,SNR=11				
V52A	Sevierville	28.48 320	P	P	22 13 55.6 +0.7
	baz=131,SNR=18				
V52A			S	S	22 18 31.9 +0.9
	baz=131				
X51A	Calhoun	28.50 317	P	P	22 13 55.9 +0.8
	baz=127,SNR=8.0				
X51A			P	P	22 13 55.9 +0.8
	baz=127,SNR=8.0				
X51A			S	S	22 18 33.7 +2.5
	baz=127				
X51A			S	S	22 18 33.7 +2.5
	baz=127				
S54A	Dingess, Beckl	28.50 326	P	P	22 13 56.3 +1.2
	baz=137,SNR=10.0				
S54A			P	P	22 13 56.3 +1.2
	baz=137,SNR=10.0				
S54A			S	S	22 18 33.5 +2.1
	baz=137				
S54A			S	S	22 18 33.5 +2.1
	baz=137				
HRV	Adam Dziewonsk	28.53 344	P	P	22 13 55.9 +0.8
HRV			IAmb	IAmb	22 14 48.4
	comp=Z,176nm,0.8s				
HRV	Adam Dziewonsk	28.53 344	P	P	22 13 55.9 +0.8
HRV			pmax	pmax	
	comp=Z,176nm,0.8s				
HRV	Adam Dziewonsk	28.53 344	S	S	22 18 31.8 +0.3
	baz=159				
HRV	Adam Dziewonsk	28.53 344	P	P	22 13 55.9 +0.8
	baz=159				
HRV			S	S	22 18 34.4 +3.0
	baz=159				
QUA2	Belchertown	28.53 343	P	P	22 13 56.1 +1.0
	baz=158				
NPNY	Mohonk Preserv	28.60 340	P	P	22 13 57.2 +1.4
	baz=154,SNR=7.8				
NPNY			S	S	22 18 33.7 +1.0
	baz=154				
N58A	Sunbury	28.74 336	P	P	22 13 58.2 +1.1
	baz=148,SNR=7.1				
N58A			P	P	22 13 58.2 +1.1
	baz=148,SNR=7.1				
N58A			S	S	22 18 33.2 -1.7
	baz=148				
N58A			S	S	22 18 33.2 -1.7
	baz=148				
L61B	Northampton	28.78 343	P	P	22 13 57.9 +0.5
L61B	Northampton	28.78 343	P	P	22 13 58.0 +0.5
	baz=157				
CPCT	Cooper Cave	28.82 319	P	P	22 13 58.7 +0.9
SNDB	Serra Nova Dou	28.86 159	eP	P	22 13 59.8 +1.4
UNH	University of	28.91 346	P	P	22 13 58.8 +0.4
	baz=161				
UNH			S	S	22 18 39.0 +1.7
	baz=161				
TZTN	Tazewell	28.92 321	P	P	22 13 59.0 +0.3
TZTN			IAmb	IAmb	22 14 53.1
	comp=Z,251nm,1.2s				
TZTN	Tazewell	28.92 321	P	P	22 13 59.9 +1.2
	baz=132,SNR=12				
TZTN			S	S	22 18 39.6 +1.9
	baz=132				
TZTN	Tazewell	28.92 321	P	P	22 13 59.5 +0.8
	baz=132,SNR=12				
TZTN			S	S	22 18 39.7 +1.9
	baz=132				
HUEH	Huehuetenango	28.92 274	P	P	22 13 59.7 +0.5
V51A	Loudon	28.93 319	P	P	22 13 59.6 +0.8
	baz=129,SNR=13				
V51A			S	S	22 18 40.6 +2.6
	baz=129				
KSPA	Keystone Colle	29.00 338	P	P	22 14 00.3 +1.0
	baz=151,SNR=7.8				
SSPA	Standing Stone	29.05 334	P	P	22 14 00.8 +0.9
SSPA			IAmb	IAmb	22 14 54.8
	comp=Z,430nm,1.6s				
SSPA	Standing Stone	29.05 334	P	P	22 14 01.2 +1.4
	baz=146,SNR=14				
SSPA			S	S	22 18 41.5 +1.7
	baz=146				
SSPA	Standing Stone	29.05 334	P	P	22 14 00.7 +0.9
	baz=146				
SSPA			S	S	22 18 41.5 +1.7
	baz=146				
LRAL	Lakeview Retre	29.12 312	P	P	22 14 01.5 +1.0
LRAL			IAmb	IAmb	22 14 02.8
	comp=Z,112nm,0.9s				
LRAL	Lakeview Retre	29.12 312	P	P	22 14 01.7 +1.2
	baz=122,SNR=65				
LRAL			S	S	22 18 41.7 +0.7
	baz=122				
LRAL	Lakeview Retre	29.12 312	P	P	22 14 01.7 +1.2
	baz=122,SNR=65				
LRAL			S	S	22 18 42.7 +1.6
	baz=122				
Q54A	Coxs Mills	29.13 328	P	P	22 14 02.2 +1.7
	baz=139,SNR=50				
Q54A			P	P	22 14 02.2 +1.7
	baz=139,SNR=50				
Y49A	Blount Mountai	29.15 314	P	P	22 14 01.7 +0.9
	baz=124,SNR=21				
MCWV	Mont Chateau	29.16 330	P	P	22 14 01.8 +1.0
MCWV			IAmb	IAmb	22 14 57.3
	comp=Z,125nm,0.8s				
MCWV	Mont Chateau	29.16 330	P	P	22 14 02.4 +1.7
	baz=142,SNR=7.5				
MCWV	Mont Chateau	29.16 330	P	P	22 14 02.0 +1.3
	baz=142,SNR=7.5				
MCWV			S	S	22 18 44.9 +3.4
	baz=142				
RTAL	Retalhuleu	29.17 273	P	P	22 14 01.0 -0.2
RTAL			IAmb	IAmb	22 14 25.8
	comp=Z,151nm,0.8s				
W50A	Signal Mountai	29.18 317	P	P	22 14 02.2 +1.2
	baz=127,SNR=24				
R53A	Hurricane	29.24 326	P	P	22 14 03.0 +1.5
	baz=136,SNR=12				
R53A			P	P	22 14 03.0 +1.5
	baz=136,SNR=12				
M57A	Sunshine Farm,	29.33 336	P	P	22 14 03.8 +1.5
	baz=148,SNR=30				
M57A			P	P	22 14 03.8 +1.5
	baz=148,SNR=30				
HAL	Halifax	29.37 357	P	P	22 14 03.7 +1.2
HAL	Halifax	29.37 357	P	P	22 14 03.7 +1.2
HAL			pmax	pmax	
	comp=Z,42nm,0.8s				
CCIG	Comitan	29.48 276	P	P	22 14 04.6 +0.5
HCNY	Howe Caverns	29.53 341	P	P	22 14 05.4 +1.4
	baz=154,SNR=7.5				
J61A	Chester	29.58 344	P	P	22 14 05.5 +1.2
	baz=158				
J61A			P	P	22 14 05.5 +1.2
	baz=158				
BINY	Binghamton	29.64 338	P	P	22 14 06.0 +1.0
BINY			IAmb	IAmb	22 14 52.7
	comp=Z,207nm,1.1s				
BINY	Binghamton	29.64 338	P	P	22 14 06.5 +1.5
	baz=151,SNR=10				
BINY	Binghamton	29.64 338	P	P	22 14 06.3 +1.3
	baz=151,SNR=10				
BINY			S	S	22 18 52.2 +3.3
	baz=151				
S51A	Beattyville	29.68 323	P	P	22 14 06.5 +1.2
	baz=133,SNR=10.0				
S51A			P	P	22 14 06.5 +1.2
	baz=133,SNR=10.0				
P53A	Whipple	29.79 328	P	P	22 14 07.5 +1.2
	baz=139,SNR=7.9				
P53A			P	P	22 14 07.5 +1.2
	baz=139,SNR=7.9				
EMMW	East Machias	29.82 351	S	S	22 18 52.6 +1.1
	baz=168				
O54A	Avella	29.82 330	P	P	22 14 08.3 +1.7
	baz=141,SNR=9.4				
O54A			P	P	22 14 08.3 +1.7
	baz=141,SNR=9.4				
PSDB	Penn State Uni	29.83 333	P	P	22 14 08.3 +1.6
	baz=145				
HNH	Hanover	29.84 344	P	P	22 14 08.2 +1.5
	baz=159				
Q52A	Bidwell	29.86 326	P	P	22 14 08.0 +1.0
	baz=137				
Q52A			P	P	22 14 08.0 +1.0
	baz=137				
UPAO	U. Pittsburgh	29.89 331	P	P	22 14 08.7 +1.5
	baz=142				
X48A	Hartselle	29.91 314	P	P	22 14 08.8 +1.3
	baz=124,SNR=39				
ACCN	Adirondack Com	29.93 342	P	P	22 14 08.7 +1.2
	baz=156,SNR=5.8				
Z47A	Carrollton	29.98 311	P	P	22 14 09.5 +1.4
	baz=120,SNR=115				
T50A	Nancy	30.01 321	P	P	22 14 09.8 +1.4
	baz=130				
T50A			P	P	22 14 09.8 +1.4
	baz=130				
WVL	Waterville	30.05 348	P	P	22 14 10.0 +1.5
	baz=164,SNR=5.3				
GBN	Guysborough	30.09 360	P	P	22 14 09.6 +0.7

GBN PcP 22 17 07.4 +0.7
M55A Ridgway 30.12 334 P P 22 14 10.7 +1.4
baz=145,SNR=27
M55A P P 22 14 10.7 +1.4
baz=145,SNR=27
346A Big Creek Wild 30.17 307 P P 22 14 11.0 +1.2
baz=116,SNR=9.5
L56A Greenwood 30.18 336 P P 22 14 11.1 +1.3
baz=148,SNR=12
L56A P P 22 14 11.1 +1.3
baz=148,SNR=12
LBNH Lisbon 30.25 345 P P 22 14 11.5 +1.2
LBNH Lisbon 30.25 345 P P 22 14 11.5 +1.2
LBNH pmax pmax
comp=Z,50nm,0.7s
LBNH Lisbon 30.25 345 P P 22 14 11.6 +1.2
baz=160,SNR=8.2
LBNH Lisbon 30.25 345 P P 22 14 11.6 +1.2
baz=160,SNR=8.2
J59A Piesco 30.26 341 P P 22 14 12.0 +1.6
baz=154,SNR=10
J59A P P 22 14 12.0 +1.6
baz=154,SNR=10
MCVT Middlebury Col 30.26 343 P P 22 14 11.9 +1.4
baz=158,SNR=9.2
U49A Red Boiling Sp 30.28 319 P P 22 14 11.6 +0.9
baz=128,SNR=21
O53A New Philadelph 30.28 329 P P 22 14 11.6 +1.0
baz=140,SNR=15
O53A S S 22 19 00.6 +1.6
baz=140
P52A Corning 30.29 327 P P 22 14 11.5 +0.8
baz=138,SNR=11
P52A S S 22 18 59.8 +0.7
baz=138
K57A Scipio Center 30.29 338 P P 22 14 11.6 +0.9
baz=150,SNR=7.0
CLTN Cedars of Leba 30.38 318 P P 22 14 12.2 +0.7
H62A Milan 30.38 346 P P 22 14 13.3 +1.8
baz=161,SNR=8.0
H62A P P 22 14 13.3 +1.8
baz=161,SNR=8.0
J58A Remsen 30.41 340 P P 22 14 13.4 +1.6
baz=153,SNR=8.3
J58A P P 22 14 13.4 +1.6
baz=153,SNR=8.3
146A Union 30.43 310 P P 22 14 13.6 +1.5
baz=118
V48A Smith Brothers 30.49 317 P P 22 14 13.8 +1.2
baz=126,SNR=19
O52A Adamsville 30.49 328 P P 22 14 13.7 +1.2
baz=139,SNR=6.6
O52A P P 22 14 13.7 +1.2
baz=139,SNR=6.6
Q51A Peebles 30.50 325 P P 22 14 13.9 +1.3
baz=135,SNR=9.2
Q51A P P 22 14 13.9 +1.3
baz=135,SNR=9.2
N53A Lisbon 30.53 330 P P 22 14 14.5 +1.7
baz=141,SNR=10
N53A P P 22 14 14.5 +1.7
baz=141,SNR=10
R50A Paris 30.54 323 P P 22 14 14.5 +1.6
baz=133,SNR=5.5
R50A P P 22 14 14.5 +1.6
baz=133,SNR=5.5
PTLB Pontes e Lacer 30.57 175 *e*P P 22 14 14.6 +1.2
NCB Newcomb 30.63 342 P P 22 14 15.3 +1.6
baz=155,SNR=12
PKME Peaks-Kenny Pk 30.66 349 P P 22 14 15.0 +1.1
PKME Peaks-Kenny Pk 30.66 349 P P 22 14 15.3 +1.4
baz=165
PKME Peaks-Kenny Pk 30.66 349 P P 22 14 14.8 +0.9
baz=165
P51A Williamsport 30.67 326 P P 22 14 15.4 +1.3
baz=136
P51A P P 22 14 15.4 +1.3
baz=136
J57A Williamstown 30.70 339 P P 22 14 15.7 +1.4
baz=152,SNR=10.0
J57A P P 22 14 15.7 +1.4
baz=152,SNR=10.0
WVNY West Valley, N 30.82 335 P P 22 14 16.8 +1.4
baz=146,SNR=13
G62A West of Eustis 30.85 348 P P 22 14 17.6 +1.9
baz=163,SNR=9.0
G62A P P 22 14 17.6 +1.9
baz=163,SNR=9.0
ALLY Alegheny Colle 30.87 332 P P 22 14 17.2 +1.4
baz=143,SNR=14
J56A Wolcott 30.89 338 P P 22 14 16.9 +0.9
baz=150
J56A P P 22 14 16.9 +0.9
baz=150
M53A Wl Miller and 30.95 331 P P 22 14 17.3 +0.8
baz=142,SNR=6.7
M53A S S 22 19 11.2 +1.8
baz=142
NNA Nana 31.01 210 P P 22 14 18.0 +0.6
comp=Z,14nm,0.5s,baz=0.0,slow=20,SNR=5.1
NNA PcP PcP 22 17 08.8 -0.9
comp=Z,14nm,0.3s,baz=306,slow=8.7,SNR=2.8
comp=Z,14nm,0.5s
NNA Nana 31.01 210 *e*P P 22 14 17.9 +0.5
NNA pmax pmax
comp=Z,37nm,0.7s
SIV San Ignacio 31.02 179 P P 22 14 18.4 +1.0
comp=Z,94nm,0.6s,baz=7.6,slow=8.2,SNR=376
SIV PcP PcP 22 17 10.1 +0.4
comp=Z,13nm,0.5s,baz=0.0,slow=0.0,SNR=2.5
SIV S S 22 19 10.8 -0.2
comp=Z,7.0nm,0.8s,baz=106,slow=24,SNR=1.5
SIV LR LR 22 27 24.3
comp=Z,1μm,20.0s,baz=66,slow=37
comp=Z,94nm,0.6s
R49A Shelbyville 31.04 322 P P 22 14 18.8 +1.5
baz=131,SNR=6.7
R49A P P 22 14 18.8 +1.5
baz=131,SNR=6.7
F63A Nahmakanta, Br 31.05 350 P P 22 14 18.6 +1.3
baz=166,SNR=7.2
F63A P P 22 14 18.6 +1.3
baz=166,SNR=7.2
F64A Sherman 31.08 351 P P 22 14 18.8 +1.2
baz=167
F64A P P 22 14 18.8 +1.2
baz=167
WCNY West Carthage 31.09 340 P P 22 14 19.2 +1.5
baz=153,SNR=6.7
ACSO Alum Creek Sta 31.17 327 P P 22 14 19.7 +1.2
ACSO IAmb IAmb 22 15 27.5
comp=Z,136nm,0.8s
ACSO Alum Creek Sta 31.17 327 P P 22 14 19.6 +1.2
baz=137,SNR=21
ACSO Alum Creek Sta 31.17 327 P P 22 14 19.5 +1.0
baz=137,SNR=21
ACSO S S 22 19 13.7 +0.8
baz=137
ERPA Erie 31.18 333 P P 22 14 19.0 +0.5
ERPA IAmb IAmb 22 15 26.1
comp=Z,278nm,1.3s
ERPA Erie 31.18 333 P P 22 14 19.8 +1.3
baz=144
ERPA Erie 31.18 333 P P 22 14 19.4 +0.9
baz=144
ERPA S S 22 19 14.4 +1.4
baz=144
344A Westbrook Farm 31.18 306 P P 22 14 20.9 +2.2
baz=115,SNR=18
J55A Hilton 31.24 337 P P 22 14 19.9 +0.9
baz=149
J55A P P 22 14 19.9 +0.9
baz=149
LONY Lake Ozonia 31.33 342 P P 22 14 20.3 +0.5
LONY Lake Ozonia 31.33 342 P P 22 14 20.7 +0.8
baz=155,SNR=5.4
VBMS Vicksburg 31.34 308 P P 22 14 22.2 +2.1
baz=116,SNR=9.7
VBMS Vicksburg 31.34 308 P P 22 14 21.6 +1.6
baz=116,SNR=9.7
VBMS S S 22 19 19.5 +3.7
baz=116
M52A Chesterland 31.34 331 P P 22 14 21.1 +1.1
baz=141
M52A P P 22 14 21.1 +1.1
baz=141
N51A Ashland 31.36 329 P P 22 14 21.4 +1.2
baz=139,SNR=8.8
N51A P P 22 14 21.4 +1.2
baz=139,SNR=8.8
Y45A Yeager Farm, C 31.38 311 P P 22 14 21.9 +1.5
baz=120,SNR=44
WVT Waverly 31.38 316 P P 22 14 20.7 +0.3
WVT IAmb IAmb 22 14 21.9
comp=Z,77nm,0.7s
WVT Waverly 31.38 316 P P 22 14 20.7 +0.3
WVT pmax pmax
comp=Z,77nm,0.7s
WVT Waverly 31.38 316 P P 22 14 21.2 +0.8
baz=125,SNR=46
WVT Waverly 31.38 316 P P 22 14 20.9 +0.4
baz=125
WVT S S 22 19 16.4 +0.1
baz=125
WVT Waverly 31.38 316 P P 22 14 20.8 +0.4
WVT pP pwP 22 14 54.4 -0.8
WVT PcP PcP 22 17 10.3 0.0
F62A Pittston Farm, 31.39 349 P P 22 14 22.6 +2.3
baz=164
F62A P P 22 14 22.6 +2.3
baz=164
MEDO Medina 31.40 336 P P 22 14 21.4 +1.0
MEDO IAmb IAmb 22 15 25.1
comp=Z,163nm,1.0s
T47A Sharon Grove 31.41 318 P P 22 14 21.9 +1.3
baz=127,SNR=24
SALV Santo Antonio 31.46 169 *e*P P 22 14 22.7 +1.5
BMNY Brushton-Moira 31.50 342 P P 22 14 22.6 +1.3
baz=156,SNR=6.6
J54A Appleton 31.56 336 P P 22 14 23.1 +1.3
baz=147,SNR=6.4
J54A P P 22 14 23.1 +1.3
baz=147,SNR=6.4
OXF Oxford 31.60 312 P P 22 14 23.3 +1.0
OXF Oxford 31.60 312 P P 22 14 23.3 +1.0
OXF pmax pmax
comp=Z,491nm,1.0s
OXF Oxford 31.60 312 P P 22 14 23.5 +1.1
baz=121
P49A Miami Univ. Ec 31.61 324 P P 22 14 23.8 +1.4
baz=134,SNR=38
P49A Miami Univ. Ec 31.61 324 P P 22 14 23.1 +0.7
baz=134,SNR=38
P49A S S 22 19 21.5 +1.6
baz=134
E63A Oxbow 31.64 351 P P 22 14 24.0 +1.5
baz=167,SNR=5.8
E63A P P 22 14 24.0 +1.5
baz=167,SNR=5.8
WCI Wyandotte Cave 31.67 321 P P 22 14 24.1 +1.2
WCI IAmb IAmb 22 15 32.1
comp=Z,106nm,0.8s
WCI Wyandotte Cave 31.67 321 P P 22 14 24.1 +1.2
WCI pmax pmax
comp=Z,106nm,0.8s
WCI Wyandotte Cave 31.67 321 P P 22 14 24.1 +1.2
baz=130,SNR=18
WCI Wyandotte Cave 31.67 321 P P 22 14 23.9 +1.0
baz=130
WCI S S 22 19 23.5 +2.7
baz=130
WCI Wyandotte Cave 31.67 321 P P 22 14 24.0 +1.0
WCI pP pwP 22 14 58.5 +1.0
WCI PcP PcP 22 17 11.7 +0.6
W45A Hickory Valley 31.78 314 P P 22 14 24.9 +1.0
baz=122,SNR=5.4
PQI Presque Isle 31.82 351 P P 22 14 25.2 +1.1
O49A Covington 31.86 326 P P 22 14 25.6 +1.1
baz=135,SNR=23
O49A P P 22 14 25.6 +1.1
baz=135,SNR=23
P48A Milroy 31.96 324 P P 22 14 26.0 +0.5
baz=132,SNR=17
P48A P P 22 14 26.0 +0.5
baz=132,SNR=17
LPAZ La Paz 31.99 192 P P 22 14 26.8 +0.3
comp=Z,7.0nm,0.8s,baz=5.7,slow=10.0,SNR=16
LPAZ PcP PcP 22 17 13.4 +0.3
comp=Z,27nm,0.8s,baz=22,slow=13,SNR=5.6
LPAZ LR LR 22 29 19.4
comp=Z,688nm,18.4s,baz=14,slow=40
LPAZ P3KPbc 22 45 53.8
comp=Z,2.1nm,0.8s,baz=191,slow=8.1,SNR=7.0
LPAZ La Paz 31.99 192 P P 22 14 26.6 0.0
LPAZ La Paz 31.99 192 *e*P P 22 14 25.2 -1.4
LPAZ La Paz 31.99 192 *e*P P 22 14 27.1 +0.5
LPAZ La Paz 31.99 192 P P 22 14 26.0 -0.6
LPAZ PcP PcP 22 17 13.3 +0.3
SDBA SAO DESIDERIO 32.00 148 *e*P P 22 14 27.1 +1.0
E62A Clayton Lake 32.01 350 P P 22 14 27.1 +1.4
baz=165,SNR=5.4
E62A P P 22 14 27.1 +1.4
baz=165,SNR=5.4
M50A Fremont 32.06 329 P P 22 14 27.6 +1.4
baz=138,SNR=14
M50A P P 22 14 27.6 +1.4
baz=138,SNR=14
CMIG Matias Romero 32.09 278 P P 22 14 23.0 -3.8
comp=Z,26nm,0.6s,baz=95,slow=7.2,SNR=42
CMIG PcP PcP 22 17 11.9 -0.7
comp=Z,7.6nm,0.7s,baz=109,slow=8.1,SNR=2.3
CMIG S S 22 19 23.1 -4.7
comp=Z,8.0nm,1.0s,baz=282,slow=19,SNR=3.8
CMIG PKiKP PKiKP 22 24 38.8 -1.8
comp=Z,1.3nm,0.3s,baz=50,slow=14,SNR=4.5
CMIG LR LR 22 28 51.0
comp=Z,457nm,18.4s,baz=80,slow=39
BATG Bathurst New B 32.18 354 P P 22 14 27.8 +0.5
BATG PcP 22 17 12.8 +0.5
143A Socs Landing, 32.23 308 P P 22 14 28.7 +0.9
baz=116,SNR=6.2
N49A Columbus Grove 32.30 327 P P 22 14 29.2 +0.9
baz=136,SNR=6.6
N49A P P 22 14 29.2 +0.9
baz=136,SNR=6.6
O48B Farmland 32.35 325 P P 22 14 29.5 +0.6
baz=134,SNR=18
O48B Farmland 32.35 325 P P 22 14 29.3 +0.4
baz=134,SNR=18
O48B S S 22 19 32.0 +0.7
baz=134
USIN University of 32.35 319 P P 22 14 29.7 +0.8
D62A Allapoint, All 32.38 350 P P 22 14 30.2 +1.2
baz=166,SNR=7.9
D62A P P 22 14 30.2 +1.2
baz=166,SNR=7.9
342B Flagon Creek P 32.40 305 P P 22 14 31.6 +2.2
baz=113,SNR=43
T45B Paducah 32.43 317 P P 22 14 30.8 +1.3
baz=125
PAYG Puerto Ayora 32.54 243 P P 22 14 31.8 +1.0
PAYG IAmb IAmb 22 14 33.4
comp=Z,124nm,0.7s
PAYG Puerto Ayora 32.54 243 P P 22 14 32.1 +1.3
TRQ Mont Tremblant 32.78 343 P P 22 14 33.2 +0.7
TRQ IAmb IAmb 22 14 42.1
comp=Z,155nm,1.3s
441A DeRidder 32.86 304 P P 22 14 34.7 +1.4
baz=111,SNR=8.4
RCBR Riachuelo 32.89 128 P P 22 14 34.9 +1.0
comp=Z,37nm,1.0s,baz=267,slow=18,SNR=6.6
RCBR PcP PcP 22 17 15.0 +0.1
comp=Z,23nm,0.8s,baz=249,slow=0.7,SNR=5.5
comp=Z,37nm,1.0s
RCBR Riachuelo 32.89 128 P P 22 14 35.0 +1.2
RCBR Riachuelo 32.89 128 P P 22 14 35.0 +1.2
RCBR pmax pmax
comp=Z,71nm,1.2s
RCBR Riachuelo 32.89 128 *e*P P 22 14 35.7 +1.9
K50A Casco 32.89 331 P P 22 14 34.4 +0.9
baz=140
K50A P P 22 14 34.4 +0.9
baz=140
SADO Sadowa 33.02 337 P P 22 14 34.9 +0.2
comp=Z,43nm,0.7s,baz=169,slow=2.9,SNR=18
SADO PP PnPn 22 15 45.2 -5.0
comp=Z,52nm,0.8s,baz=142,slow=5.4,SNR=7.7
SADO PcP PcP 22 17 14.9 +0.2
comp=Z,41nm,0.6s,baz=269,slow=22,SNR=6.4
SADO LR LR 22 29 30.3
comp=Z,520nm,18.0s,baz=182,slow=39
comp=Z,43nm,0.7s
SADO Sadowa 33.02 337 P P 22 14 34.8 +0.2
AAM Ann Arbor 33.04 329 P P 22 14 35.4 +0.7
AAM IAmb IAmb 22 15 51.9
comp=Z,193nm,0.7s
AAM Ann Arbor 33.04 329 P P 22 14 35.4 +0.7
AAM pmax pmax
comp=Z,193nm,0.7s
AAM Ann Arbor 33.04 329 P P 22 14 36.2 +1.5
baz=138,SNR=8.5
AAM Ann Arbor 33.04 329 P P 22 14 35.8 +1.0
baz=138,SNR=8.5
AAM S S 22 19 43.1 +1.3
baz=138
CCAR Cane Creek 33.04 310 P P 22 14 36.1 +1.2
N47A Urbana 33.08 325 P P 22 14 36.3 +1.1
baz=134,SNR=51
N47A P P 22 14 36.3 +1.1
baz=134,SNR=51
OLIL Olney 33.09 320 P P 22 14 36.6 +1.3
baz=128,SNR=18
P46A Rosedale 33.10 322 P P 22 14 36.8 +1.4
baz=130,SNR=20
L48A N Adams 33.16 328 P P 22 14 36.7 +0.8
baz=137,SNR=24
L48A P P 22 14 36.7 +0.8
baz=137,SNR=24
S44A Carbondale 33.21 318 P P 22 14 37.4 +1.1
baz=125,SNR=69
BBRB Robore, Bolivi 33.34 177 *e*P P 22 14 38.8 +1.2
LATQ La Tuque 33.40 346 P P 22 14 38.4 +0.6
BDFB Brasilia 33.44 156 P P 22 14 39.8 +1.2
comp=Z,12nm,0.7s,baz=335,slow=9.4,SNR=21
BDFB PcP PcP 22 17 16.9 +0.4
comp=Z,31nm,0.8s,baz=339,slow=11,SNR=7.1
BDFB LR LR 22 29 15.7
comp=Z,927nm,19.6s,baz=339,slow=38
comp=Z,12nm,0.7s
BDFB Brasilia 33.44 156 P P 22 14 39.3 +0.6
BDFB Brasilia 33.44 156 *e*P P 22 14 40.0 +1.3
PBMO Poplar Bluff 33.49 315 P P 22 14 39.5 +0.7
baz=122
SFIN Lafayette 33.53 323 P P 22 14 40.1 +1.0
baz=131,SNR=7.8
SFIN Lafayette 33.53 323 P P 22 14 39.9 +0.8
baz=131,SNR=7.8
SFIN S S 22 19 50.4 +0.7
baz=131
LCAR Lake Charles 33.62 314 P P 22 14 40.3 +0.4
LCAR IAmb IAmb 22 14 41.5
comp=Z,372nm,1.9s
LCAR Lake Charles 33.62 314 P P 22 14 40.4 +0.4
baz=120,SNR=36
Q44A Meyer Farm, Va 33.77 320 P P 22 14 42.2 +1.0
baz=127,SNR=31
I49A Point Hope 33.89 332 P P 22 14 42.9 +0.7
baz=141
I49A P P 22 14 42.9 +0.7
baz=141
X40A Basin Creek Fa 34.08 310 P P 22 14 44.6 +0.7
baz=116,SNR=120
X40A P P 22 14 44.6 +0.7
baz=116,SNR=120
DRLN Deer Lake 34.09 5 P P 22 14 44.4 +0.5
FVM French Village 34.14 317 P P 22 14 45.1 +0.7
baz=124,SNR=14
L46A Eue Claire 34.19 326 P P 22 14 45.7 +1.0
baz=134
L46A P P 22 14 45.7 +1.0
baz=134
O44A Mansfield 34.19 322 P P 22 14 46.0 +1.2
baz=129,SNR=16
PB16 IPOC Station P 34.27 194 P P 22 14 44.9 -1.3
J47A Sunmer 34.31 329 P P 22 14 47.0 +1.2
baz=137,SNR=14
J47A P P 22 14 47.0 +1.2
baz=137,SNR=14
SLM Saint Louis 34.38 318 P P 22 14 47.0 +0.6
baz=125
NATX Nacogdoches 34.39 304 P P 22 14 47.6 +1.0
NATX Nacogdoches 34.39 304 P P 22 14 48.2 +1.5
baz=111,SNR=23
NATX Nacogdoches 34.39 304 P P 22 14 48.0 +1.3
baz=111,SNR=23
NATX S S 22 20 05.0 +1.9
baz=111
P43A Skaggs, Pawnee 34.52 320 P P 22 14 48.9 +1.3
baz=127,SNR=42
JANB Januaria 34.56 150 *e*P P 22 14 49.4 +1.1
MIAR Mount Ida 34.65 310 P P 22 14 49.2 +0.3
MIAR IAmb IAmb 22 14 50.5
comp=Z,120nm,1.0s
MIAR Mount Ida 34.65 310 P P 22 14 49.2 +0.3
MIAR pmax pmax
comp=Z,120nm,1.0s
MIAR Mount Ida 34.65 310 P P 22 14 49.7 +0.9
baz=116,SNR=71
MIAR Mount Ida 34.65 310 P P 22 14 49.4 +0.5
baz=116,SNR=71
MIAR S S 22 20 07.7 +0.6
baz=116
CCM Cathedral Cave 34.72 317 P P 22 14 49.7 +0.3
CCM IAmb IAmb 22 14 50.7
comp=Z,107nm,0.8s
CCM Cathedral Cave 34.72 317 P P 22 14 49.7 +0.3
CCM pmax pmax
comp=Z,107nm,0.8s
CCM Cathedral Cave 34.72 317 P P 22 14 49.7 +0.3
baz=123,SNR=53
CCM Cathedral Cave 34.72 317 P P 22 14 49.7 +0.3
baz=123
CCM S S 22 20 06.6 -1.3
baz=123
CCM Cathedral Cave 34.72 317 P P 22 14 49.2 -0.2
CCM PcP PcP 22 17 20.7 +1.0
M44A Midewin, Midew 34.74 324 P P 22 14 50.0 +0.5
baz=131,SNR=5.8
HKT Hockley 34.76 301 P P 22 14 50.1 +0.4
HKT IAmb IAmb 22 14 51.7
comp=Z,238nm,1.2s
HKT Hockley 34.76 301 *d*iP P 22 14 50.0 +0.3
HKT pmax pmax
comp=Z,156nm,1.1s
HKT Hockley 34.76 301 P P 22 14 50.7 +1.0
baz=107
HKT Hockley 34.76 301 P P 22 14 50.2 +0.4
HKT PcP PcP 22 17 21.5 +1.6
C2SB Chapadao do Su 34.84 166 *e*P P 22 14 52.3 +1.7
HDIL Hopedale 34.94 322 P P 22 14 51.7 +0.5
HDIL IAmb IAmb 22 14 52.7
comp=Z,91nm,0.6s
HDIL Hopedale 34.94 322 P P 22 14 51.9 +0.7
baz=128,SNR=9.8
HDIL Hopedale 34.94 322 P P 22 14 51.8 +0.5
baz=128,SNR=9.8
HDIL S S 22 20 11.7 +0.5
baz=128
U40A Yellville 34.96 313 P P 22 14 51.8 +0.3
baz=119,SNR=70
U40A P P 22 14 51.8 +0.3
baz=119,SNR=70
NBAN Anadia - AL 35.17 133 *e*P P 22 14 55.0 +1.4
L44A Lake County Fo 35.19 325 P P 22 14 53.8 +0.5
L44A Lake County Fo 35.19 325 P P 22 14 54.2 +0.9
baz=132,SNR=10
L44A Lake County Fo 35.19 325 P P 22 14 54.1 +0.9
baz=132,SNR=10
L44A S S 22 20 15.4 +0.4
baz=132
Z38A Mt. Pleasant 35.20 307 P P 22 14 54.8 +1.2
baz=113,SNR=24
GLMI Grayling 35.39 331 P P 22 14 56.2 +1.2
GLMI Grayling 35.39 331 P P 22 14 56.4 +1.3
baz=139,SNR=30
GLMI Grayling 35.39 331 P P 22 14 56.2 +1.2
baz=139,SNR=30
GLMI S S 22 20 20.4 +2.4
baz=139
237A Washetta, Mont 35.39 304 P P 22 14 56.2 +0.9
baz=110,SNR=37
GO01 Chusmiza 35.49 193 P P 22 14 54.5 -2.2
IPMB Ipameri, GO 35.51 158 *e*P P 22 14 58.0 +1.6
R40A Maddies Statio 35.53 316 P P 22 14 56.3 0.0
baz=122,SNR=37
I45A Fountain 35.59 329 P P 22 14 57.4 +0.7
baz=136,SNR=5.2
I45A P P 22 14 57.4 +0.7
baz=136,SNR=5.2
TLIG Tlapa 35.59 279 P P 22 14 57.8 +0.5
HHAR Hobbs 35.70 312 P P 22 14 58.1 +0.3
baz=118

K43A Burlington 35.77 325 P **P** **22 14 58.8 +0.6**
baz=132,SNR=9.4
KVTX Kingsville 35.89 296 P **P** **22 15 00.3 +0.8**
KVTX Kingsville 35.89 296 P **P** **22 15 00.9 +1.4**
baz=102,SNR=5.8
AQDB Aquidauana 35.94 171 P **P** **22 15 00.8 +1.0**
AQDB Aquidauana 35.94 171 *eP* **P** **22 15 01.1 +1.2**
S39A Bolivar 35.94 315 P **P** **22 15 00.0 +0.2**
baz=120,SNR=45
PB08 IPOC Station P 35.94 192 P **P** **22 14 59.0 -1.4**
N41A Harden Midland 35.98 321 P **P** **22 15 00.1 +0.1**
baz=126,SNR=17
X37A Clayton 36.02 309 **P** **22 15 00.9 +0.4**
X37A IAmb IAmb 22 15 02.1
comp=Z,108nm,0.7s
X37A Clayton 36.02 309 P **P** **22 15 01.0 +0.4**
baz=114,SNR=44
GDU01 Guandu, BA 36.03 142 *eP* **P** **22 15 02.3 +1.5**
G45A Suttons Bay 36.04 330 P **P** **22 15 01.5 +0.9**
baz=138,SNR=5.2
G45A P **P** **22 15 01.5 +0.9**
baz=138,SNR=5.2
P40A Paris 36.05 318 P **P** **22 15 00.8 +0.1**
baz=124,SNR=48
L42A Oliver, Polo 36.06 323 P **P** **22 15 01.4 +0.6**
baz=129,SNR=27
U38A Gravette 36.09 312 P **P** **22 15 01.2 +0.1**
baz=117,SNR=20
735A Kenedy 36.12 298 P **P** **22 15 02.3 +0.8**
baz=104,SNR=14
MC01 Montes Claros 36.16 151 *eP* **P** **22 15 03.3 +1.4**
RPRD Ribas do Rio P 36.30 168 *eP* **P** **22 15 06.3 +3.2**
E46A Sault Ste Mari 36.43 333 P **P** **22 15 04.9 +1.0**
baz=141,SNR=15
435B Jarrell 36.45 301 P **P** **22 15 04.8 +0.5**
baz=107,SNR=22
435B Jarrell 36.45 301 P **P** **22 15 04.8 +0.5**
baz=107
435B S **S** **22 20 34.2 -0.4**
baz=107
SACV Santiago Islan 36.56 85 P **P** **22 15 06.5 +1.1**
SACV IAmb IAmb 22 15 08.0
comp=Z,226nm,0.9s
H43A Windswept, Lux 36.67 328 P **P** **22 15 06.8 +0.9**
baz=134,SNR=14
PMNB Patos De Minas 36.69 156 *eP* **P** **22 15 07.5 +1.1**
WHTX Lake Whitney, 36.71 303 P **P** **22 15 06.9 +0.5**
baz=109,SNR=97
WHTX Lake Whitney, 36.71 303 P **P** **22 15 06.9 +0.5**
baz=109,SNR=97
WHTX S **S** **22 20 37.5 -0.9**
baz=109
PATCX Punta Patache 36.81 194 P **P** **22 15 05.9 -1.5**
MURT Porto Murtinho 36.86 174 *eP* **P** **22 15 09.0 +1.3**
TUL1 Leonard 36.88 310 P **P** **22 15 08.4 +0.5**
baz=115,SNR=80
TUL1 Leonard 36.88 310 P **P** **22 15 08.3 +0.5**
baz=115,SNR=80
TUL1 S **S** **22 20 41.2 +0.3**
baz=115
I42A Draeger Farm, 36.88 326 P **P** **22 15 08.5 +0.9**
baz=132,SNR=13
PB01 IPOC Station P 36.88 192 P **P** **22 15 06.0 -2.0**
JFWS Jewell Farm 36.97 324 P **P** **22 15 08.8 +0.3**
JFWS Jewell Farm 36.97 324 P **P** **22 15 08.8 +0.3**
JFWS pmax pmax
comp=Z,68nm,0.8s
JFWS Jewell Farm 36.97 324 P **P** **22 15 08.9 +0.4**
baz=130,SNR=20
JFWS Jewell Farm 36.97 324 P **P** **22 15 09.0 +0.4**
baz=130,SNR=20
JFWS S **S** **22 20 41.9 -0.3**
baz=130
Z35A Perchaven, San 36.99 306 P **P** **22 15 09.5 +0.7**
baz=110,SNR=59
L40A Anamosa 37.01 322 P **P** **22 15 08.7 -0.1**
baz=128,SNR=16
P38A Dawn 37.07 317 P **P** **22 15 09.6 +0.2**
baz=122,SNR=54
PB02 IPOC Station P 37.24 193 P **P** **22 15 10.1 -1.0**
833A Chaparral WMA, 37.35 297 P **P** **22 15 11.9 -0.1**
baz=102,SNR=49
833A Chaparral WMA, 37.35 297 P **P** **22 15 11.8 -0.1**
baz=102,SNR=49
833A S **S** **22 20 46.6 -1.7**
baz=102
CMC01 Camacan, BA 37.36 143 *eP* **P** **22 15 13.6 +1.6**
ANTJ Antonio Joao (37.39 172 *eP* **P** **22 15 13.8 +1.6**
N38A Joes South For 37.51 319 P **P** **22 15 13.3 +0.2**
baz=124,SNR=27
PB09 IPOC Station P 37.57 192 P **P** **22 15 13.9 0.0**
PB07 IPOC Station P 37.63 193 P **P** **22 15 12.4 -2.1**
E43A Lone Tree Farm 37.66 331 P **P** **22 15 14.9 +0.7**
baz=137,SNR=6.8
I40A Norwalk 37.81 325 P **P** **22 15 15.9 +0.4**
baz=130,SNR=24
T35B Sooner Cattle 37.83 311 P **P** **22 15 16.2 +0.3**
baz=116,SNR=80
PB03 IPOC Station P 37.91 192 P **P** **22 15 15.6 -1.2**
PCMB Pacaembu 37.96 164 *eP* **P** **22 15 18.4 +1.4**
SCIA State Center 38.12 321 P **P** **22 15 18.6 +0.4**
SCIA IAmb IAmb 22 15 27.3
comp=Z,182nm,1.1s
SCIA State Center 38.12 321 P **P** **22 15 18.6 +0.4**
baz=125,SNR=9.1
SCIA State Center 38.12 321 P **P** **22 15 18.6 +0.4**
baz=125,SNR=9.1
SCIA S **S** **22 20 59.2 -0.3**
baz=125
GUA01 Guaratinga, BA 38.19 145 *eP* **P** **22 15 20.3 +1.4**
JCT Junction City 38.20 300 P **P** **22 15 19.3 +0.2**
JCT Junction City 38.20 300 P **P** **22 15 19.3 +0.2**
JCT pmax pmax
comp=Z,529nm,0.9s
JCT Junction City 38.20 300 P **P** **22 15 19.1 0.0**
baz=105,SNR=208
JCT Junction City 38.20 300 P **P** **22 15 19.2 0.0**
baz=105,SNR=208
JCT S **S** **22 20 59.4 -1.8**
baz=105
BB19B Bebedouro 38.25 160 *eP* **P** **22 15 20.7 +1.2**
PB04 IPOC Station P 38.28 193 P **P** **22 15 18.4 -1.4**
K38A Parkersburg 38.28 322 P **P** **22 15 19.4 -0.1**
baz=126,SNR=47
LVC Limon Verde 38.30 191 P **P** **22 15 19.4 -0.8**
comp=Z,14nm,0.6s,baz=6.7,slow=5.0,SNR=16
LVC PcP **PcP** **22 17 32.0 +0.9**
comp=Z,27nm,0.8s,baz=4.6,slow=5.2,SNR=5.6
LVC S S 22 20 54.1 -9.0
comp=Z,3.6nm,0.9s,baz=194,slow=15,SNR=1.7
LVC LR LR 22 32 25.4
comp=Z,595nm,21.3s,baz=351,slow=38
comp=Z,14nm,0.6s
LVC Limon Verde 38.30 191 P **P** **22 15 19.0 -1.2**
LVC Limon Verde 38.30 191 *eP* **P** **22 15 19.6 -0.6**
LVC Limon Verde 38.30 191 P **P** **22 15 19.3 -0.8**
LVC PcP **PcP** **22 17 33.1 +2.0**
COWI Conover 38.50 329 P **P** **22 15 22.2 +0.9**
baz=134
PB06 IPOC Station P 38.52 192 P **P** **22 15 20.8 -1.0**
ABTX Abilene, Hawle 38.67 303 P **P** **22 15 23.0 +0.1**
ABTX Abilene, Hawle 38.67 303 P **P** **22 15 23.0 +0.1**
baz=108,SNR=161
ABTX Abilene, Hawle 38.67 303 P **P** **22 15 23.0 +0.1**
baz=108,SNR=161
ABTX S **S** **22 21 05.8 -2.3**
baz=108
WMOK Wichita Mounta 38.67 307 **P** **22 15 22.4 -0.6**
WMOK Wichita Mounta 38.67 307 P **P** **22 15 22.4 -0.6**
WMOK pmax pmax
comp=Z,218nm,0.7s
WMOK Wichita Mounta 38.67 307 P **P** **22 15 22.6 -0.4**
baz=111,SNR=279
WMOK Wichita Mounta 38.67 307 P **P** **22 15 22.6 -0.4**
baz=111,SNR=279
WMOK S **S** **22 21 06.1 -2.1**
baz=111
TRCB Terra Rica 38.77 167 P **P** **22 15 24.3 +0.5**
TRCB PcP **PcP** **22 17 33.3 +1.1**
TRCB Terra Rica 38.77 167 *eP* **P** **22 15 25.5 +1.7**
KSU1 Kansas State U 38.88 315 P **P** **22 15 24.5 -0.1**
KSU1 IAmb IAmb 22 15 25.7
comp=Z,125nm,0.7s
KSU1 PcP **PcP** **22 17 33.1 +0.8**
KSU1 Kansas State U 38.88 315 P **P** **22 15 24.1 -0.4**
baz=118,SNR=20
KSU1 Kansas State U 38.88 315 P **P** **22 15 23.9 -0.6**
baz=118,SNR=20
KSU1 S **S** **22 21 09.4 -1.6**
baz=118
D41A Chassel 38.90 330 P **P** **22 15 25.8 +1.2**
baz=136,SNR=15
CMLA Cha da Macela 38.90 48 P **P** **22 15 26.6 +1.9**
CMLA Cha da Macela 38.90 48 P **P** **22 15 26.1 +1.3**
PB15 IPOC Station P 38.98 192 P **P** **22 15 25.8 +0.1**
NAN01 Guarapari, ES 39.04 147 *eP* **P** **22 15 27.4 +1.3**
N35A Tabor 39.09 318 P **P** **22 15 26.4 +0.1**
baz=121
SJMB Sao Joao De Ma 39.21 149 *eP* **P** **22 15 29.1 +1.6**
ZAIG Zacatecas 39.44 287 P **P** **22 15 31.4 +1.6**
ZAIG IAmb IAmb 22 15 32.8
comp=Z,166nm,0.9s
ZAIG PcP **PcP** **22 17 36.9 +2.1**
U32A Winter Ranch, 39.44 309 P **P** **22 15 29.7 +0.4**
baz=112,SNR=64
I37B Waseca 39.46 323 P **P** **22 15 29.5 +0.2**
baz=127,SNR=22
SCHQ Schefferville 39.74 355 P **P** **22 15 32.1 +0.7**
comp=Z,52nm,0.5s,baz=180,slow=7.2,SNR=66
SCHQ PcP **PcP** **22 17 34.6 0.0**
comp=Z,26nm,0.7s,baz=198,slow=4.5,SNR=3.6
comp=Z,52nm,0.5s
SCHQ Schefferville 39.74 355 P **P** **22 15 32.2 +0.7**
SCHQ IAmb IAmb 22 15 33.5
comp=Z,128nm,1.1s
SCHQ PcP **PcP** **22 17 34.7 0.0**
RCLB Rio Claro- Sao 39.84 160 *eP* **P** **22 15 34.5 +1.8**
SPMN Marine on St. 39.86 325 P **P** **22 15 32.7 +0.1**
baz=129,SNR=19
SPMN Marine on St. 39.86 325 P **P** **22 15 32.5 -0.1**
baz=129,SNR=19
R32A Long Quarter, 40.05 312 P **P** **22 15 34.5 +0.3**
baz=115,SNR=35
FRTB Fartura 40.08 163 *eP* **P** **22 15 36.0 +1.4**
E38A The Farm, Brul 40.08 328 P **P** **22 15 34.6 +0.3**
baz=131,SNR=27
MCR1 Marechal Candi 40.11 169 *eP* **P** **22 15 36.7 +1.8**
RIB01 Linhares ES 40.12 148 *eP* **P** **22 15 36.4 +1.4**
L34A Svendsen Farm, 40.13 319 P **P** **22 15 35.0 +0.1**
baz=121,SNR=12
N33B J Bar K, Exete 40.22 316 P **P** **22 15 35.3 -0.3**
baz=119
VAO Valinhos 40.57 159 *eP* **P** **22 15 39.9 +1.1**
F36A Milaca 40.65 325 P **P** **22 15 38.8 -0.3**
baz=128,SNR=42
PTGB Pitanga 40.76 167 *eP* **P** **22 15 41.0 +0.8**
GO02 Mina Guanaco 40.91 191 P **P** **22 15 40.7 -1.0**
CBKS Cedar Bluff 40.94 312 P **P** **22 15 41.5 -0.1**
CBKS Cedar Bluff 40.94 312 P **P** **22 15 41.5 -0.1**
CBKS pmax pmax
comp=Z,314nm,0.7s
CBKS Cedar Bluff 40.94 312 P **P** **22 15 41.7 +0.1**
baz=114,SNR=24
CBKS Cedar Bluff 40.94 312 P **P** **22 15 41.7 +0.1**
baz=114,SNR=24
CBKS S **S** **22 21 41.2 -0.7**
baz=114
EYMN Ely 40.94 329 P **P** **22 15 41.0 -0.5**
EYMN Ely 40.94 329 P **P** **22 15 41.4 0.0**
baz=133,SNR=12
EYMN Ely 40.94 329 P **P** **22 15 41.4 0.0**
baz=133,SNR=12
EYMN S **S** **22 21 40.9 -0.7**
baz=133
AMTX Amarillo 40.97 306 P **P** **22 15 41.9 -0.1**
baz=108,SNR=87
AMTX Amarillo 40.97 306 P **P** **22 15 41.8 -0.2**
baz=108
AMTX S **S** **22 21 41.5 -1.0**
baz=108
BGNE Belgrade 41.01 317 P **P** **22 15 42.0 -0.1**
baz=119,SNR=10
BGNE Belgrade 41.01 317 P **P** **22 15 42.1 -0.1**
baz=119,SNR=10
BGNE S **S** **22 21 41.2 -1.5**
baz=119
ALF01 Guarapari-ES 41.06 150 *eP* **P** **22 15 43.8 +1.1**
ECSD EROS Data Cent 41.21 321 P **P** **22 15 43.4 -0.3**
ECSD IAmb IAmb 22 15 44.4
comp=Z,85nm,0.6s
ECSD EROS Data Cent 41.21 321 P **P** **22 15 43.8 0.0**
baz=123,SNR=69
ECSD EROS Data Cent 41.21 321 P **P** **22 15 43.8 0.0**
baz=123,SNR=69
ECSD S **S** **22 21 44.9 -0.8**
baz=123
TXAR Lajitas Array 41.23 297 P **P** **22 15 44.1 0.0**
comp=Z,28nm,0.5s,baz=113,slow=8.2,SNR=294
TXAR PcP **PcP** **22 17 41.9 +1.7**
comp=Z,32nm,0.6s,baz=118,slow=6.0,SNR=13
TXAR ScP **ScP** **22 21 16.0 +0.4**
comp=Z,5.4nm,0.7s,baz=111,slow=5.5,SNR=5.6
TXAR S **S** **22 21 44.7 -1.7**
comp=Z,1.2nm,0.7s,baz=130,slow=4.0,SNR=0.8
TXAR PKiKP **PKiKP** **22 24 46.2 -1.6**
comp=Z,1.1nm,0.7s,baz=134,slow=2.6,SNR=4.0
TXAR PKKP **PKKPdf** **22 39 35.6 +6.7**
comp=Z,0.5nm,0.8s,baz=298,slow=2.7,SNR=5.4
TXAR P4KPbc 22 53 47.7
comp=Z,0.5nm,0.8s,baz=113,slow=6.0,SNR=6.0
comp=Z,28nm,0.5s
TXAR Lajitas Array 41.23 297 P **P** **22 15 44.3 +0.1**
TXAR Lajitas Array 41.23 297 P **P** **22 15 44.3 +0.1**
TX31 Lajitas Ar. Si 41.23 297 P **P** **22 15 44.2 0.0**
baz=101,SNR=16
VAS01 Vassouras-RJ 41.27 154 *eP* **P** **22 15 45.6 +1.3**
PARB Paraibuna 41.36 158 *eP* **P** **22 15 46.8 +1.6**
CPUP Villa Florida 41.51 174 P **P** **22 15 46.0 -0.2**
comp=Z,23nm,0.6s,baz=353,slow=7.9,SNR=68
CPUP PcP **PcP** **22 17 41.8 +0.9**
comp=Z,32nm,0.9s,baz=5.2,slow=2.1,SNR=7.1
CPUP S **S** **22 21 44.5 -5.7**
comp=Z,1.5nm,0.8s,baz=283,slow=19,SNR=1.0
comp=Z,23nm,0.6s
CPUP Villa Florida 41.51 174 P **P** **22 15 46.2 0.0**
CPUP PcP **PcP** **22 17 41.0 +0.1**
CPUP Villa Florida 41.51 174 *eP* **P** **22 15 46.3 +0.1**
CPUP Villa Florida 41.51 174 P **P** **22 15 45.5 -0.7**
CPUP PcP **PcP** **22 17 41.6 +0.8**
DUB01 Friburgo-RJ 41.55 153 *eP* **P** **22 15 48.3 +1.5**
MSTX Muleshoe 41.56 304 P **P** **22 15 46.9 0.0**
baz=106,SNR=313
MSTX Muleshoe 41.56 304 P **P** **22 15 46.9 0.0**
baz=106,SNR=313
MSTX S **S** **22 21 49.6 -1.8**
baz=106
MAN01 Angra dos Reis 41.57 155 *eP* **P** **22 15 48.1 +1.2**
CAM01 Campos-RJ 41.65 152 *eP* **P** **22 15 49.1 +1.6**
PET01 Itanhaem-SP 41.66 160 *eP* **P** **22 15 48.9 +1.3**
FRBT Francisco Belt 41.77 169 *eP* **P** **22 15 49.1 +0.6**
K31A O'Neill 41.99 318 P **P** **22 15 51.0 +0.9**
baz=119,SNR=8.5
TIJ01 Guaruva-PR 42.11 163 *eP* **P** **22 15 52.5 +1.2**
F33A 5 Mile Ranch, 42.19 324 P **P** **22 15 51.7 0.0**
baz=125,SNR=10
B35A Bob, Littlefor 42.34 328 P **P** **22 15 52.8 0.0**
baz=130,SNR=37
GDL2 Guadalupe Moun 42.41 301 P **P** **22 15 54.1 +0.3**
AC02 Maricunga 42.46 190 P **P** **22 15 53.4 -1.2**
HPIG 42.62 293 P **P** **22 15 56.3 +0.7**
HPIG IAmb IAmb 22 15 57.3
comp=Z,262nm,0.8s
SUSD Miller 43.02 320 P **P** **22 15 58.8 +0.4**
baz=121,SNR=9.0
SUSD Miller 43.02 320 P **P** **22 15 58.2 -0.1**
baz=121,SNR=9.0
SUSD S **S** **22 22 10.5 -1.7**
baz=121
MBO M'Bour 43.03 85 P **P** **22 15 59.7 +1.0**
MBO IAmb IAmb 22 16 01.8
comp=Z,683nm,2.0s
CRSM Crissiumal (Br 43.08 170 *eP* **P** **22 15 59.5 +0.6**
KSCO Kaye Shedlock' 43.09 311 P **P** **22 15 59.0 -0.2**
KSCO IAmb IAmb 22 16 00.4
comp=Z,255nm,0.9s
KSCO Kaye Shedlock' 43.09 311 P **P** **22 15 59.3 +0.2**
baz=112,SNR=25
KSCO Kaye Shedlock' 43.09 311 P **P** **22 15 59.4 +0.2**
baz=112,SNR=25
KSCO S **S** **22 22 12.2 -1.5**
baz=112
ITAB Concordia 43.18 168 P **P** **22 16 00.5 +0.8**
ITAB Concordia 43.18 168 *eP* **P** **22 16 00.6 +0.8**
D32B Dogwood Acres, 43.35 325 P **P** **22 16 00.7 -0.2**
baz=125,SNR=6.1
AZCA Azaras, Argent 43.38 173 *eP* **P** **22 15 57.3 -4.1**
BBTS Babate 43.40 85 P **P** **22 16 02.3 +0.6**
baz=312,slow=6.7
AGMN Agassiz Nation 43.41 327 P **P** **22 16 01.3 -0.1**
AGMN Agassiz Nation 43.41 327 P **P** **22 16 01.3 -0.1**
baz=128,SNR=102
AGMN Agassiz Nation 43.41 327 P **P** **22 16 01.3 -0.1**
baz=128,SNR=102
AGMN S **S** **22 22 15.7 -2.0**
baz=128
OGNE Ogallala 43.43 314 P **P** **22 16 01.5 -0.2**
OGNE IAmb IAmb 22 16 02.9
comp=Z,165nm,1.0s
OGNE Ogallala 43.43 314 P **P** **22 16 02.3 +0.5**
baz=114,SNR=7.6
OGNE Ogallala 43.43 314 P **P** **22 16 01.7 -0.1**
baz=114,SNR=7.6
OGNE S **S** **22 22 18.0 -0.4**
baz=114
MACI Morro de la Ar 43.53 65 P **P** **22 16 03.9 +1.1**
MACI IAmb IAmb 22 16 05.7
comp=Z,326nm,1.0s
PMOZ Porto Moniz, M 43.75 58 *eP* **P** **22 16 05.9 +1.5**
comp=Z,924nm,1.0s
PMOZ *ep*P **pP** **22 16 38.6 +0.4**
PMOZ Porto Moniz, M 43.75 58 P **P** **22 16 05.4 +0.9**
PMOZ Porto Moniz, M 43.75 58 P **P** **22 16 06.0 +1.5**
T25A Trinidad 43.78 308 P **P** **22 16 05.1 +0.3**
T25A IAmb IAmb 22 16 06.2
comp=Z,155nm,0.8s
T25A Trinidad 43.78 308 P **P** **22 16 05.3 +0.5**
baz=108,SNR=100
PMAR Madeira 43.96 58 *eP* **P** **22 16 07.2 +1.0**
comp=Z,239nm,1.2s
PMAR *ep*P **pP** **22 16 40.3 +0.3**
FUL Funchal 43.96 59 *eP* **P** **22 16 07.2 +1.2**
comp=Z,152nm,1.0s
KIDD KIDD Seismic O 44.09 300 P **P** **22 16 07.4 +0.2**
baz=101,SNR=46
UNIS Unistalda (Bra 44.47 172 *eP* **P** **22 16 10.3 +0.2**
PMPS Porto Santo 44.51 58 *eP* **P** **22 16 12.1 +1.7**
PMPST Porto Santo, M 44.51 58 *eP* **P** **22 16 11.8 +1.4**
comp=Z,312nm,1.3s
PMPST *ep*P **pwP** **22 16 51.1 +3.5**
ALGR Alto Alegre (B 44.53 169 *eP* **P** **22 16 10.6 +0.1**
AC05 El Transito 44.62 191 P **P** **22 16 10.6 -0.8**
ULM Lac du Bonnet 44.63 329 P **P** **22 16 10.5 -0.5**
comp=Z,135nm,0.5s,baz=130,slow=8.4,SNR=149
ULM PcP **PcP** **22 17 51.0 -0.1**
comp=Z,51nm,0.6s,baz=110,slow=3.3,SNR=5.8
ULM S **S** **22 22 29.8 -5.5**
comp=Z,8.8nm,0.9s,baz=225,slow=22,SNR=8.6
comp=Z,135nm,0.5s
ULM Lac du Bonnet 44.63 329 P **P** **22 16 10.6 -0.5**
ULM IAmb IAmb 22 16 11.5
comp=Z,151nm,0.7s
ULM Lac du Bonnet 44.63 329 P **P** **22 16 10.6 -0.5**
ULM pmax pmax
comp=Z,151nm,0.7s
BNM Barren Site 44.70 303 P **P** **22 16 13.0 +0.8**
ANMO Albuquerque 44.76 304 P **P** **22 16 13.3 +0.8**
comp=Z,89nm,1.0s,baz=110,slow=8.3,SNR=134
comp=Z,89nm,1.0s
ANMO Albuquerque 44.76 304 P **P** **22 16 13.2 +0.6**
ANMO IAmb IAmb 22 16 14.6
comp=Z,158nm,1.2s
ANMO Albuquerque 44.76 304 P **P** **22 16 13.4 +0.8**
baz=104,SNR=101
ANMO Albuquerque 44.76 304 P **P** **22 16 13.3 +0.8**
baz=104
ANMO S **S** **22 22 36.9 -1.1**
baz=104
ANMO Albuquerque 44.76 304 P **P** **22 16 13.3 +0.8**
ANMO pP **pP** **22 16 47.8 +1.3**
ANMO PcP **PcP** **22 17 53.2 +1.1**
SDCO Great Sand Dun 44.79 309 P **P** **22 16 13.0 +0.1**
SDCO IAmb IAmb 22 16 14.2
comp=Z,99nm,0.7s
SDCO Great Sand Dun 44.79 309 P **P** **22 16 13.3 +0.3**
baz=108,SNR=62
SDCO Great Sand Dun 44.79 309 P **P** **22 16 13.3 +0.3**
baz=108,SNR=62
SDCO S **S** **22 22 38.1 -0.6**
baz=108
LCO Las Campanas 44.87 191 P **P** **22 16 12.7 -0.8**
LCO sP **sP** **22 17 07.9 +3.6**
LCO PcP **PcP** **22 17 53.7 +1.2**
ITQB Itaqui 44.88 174 P **P** **22 16 12.9 -0.4**
ITQB Itaqui 44.88 174 *eP* **P** **22 16 13.0 -0.3**
Q24A Divide 44.92 310 P **P** **22 16 13.8 -0.2**
baz=109,SNR=36
Y22D IRIS PASSCAL I 44.92 303 P **P** **22 16 15.1 +1.3**
baz=103,SNR=6.2
Y22D IRIS PASSCAL I 44.92 303 P **P** **22 16 15.2 +1.4**
baz=103,SNR=6.2
Y22D S **S** **22 22 38.3 -2.0**
baz=103
Y22F Passcal Instru 44.92 303 P **P** **22 16 15.2 +1.3**
baz=103,SNR=6.5
Y22F S **S** **22 22 38.6 -1.7**
baz=103
Y22F S S 22 22 41.8 +1.5
baz=103
Y22A Socorro 44.93 303 P **P** **22 16 14.7 +0.8**
baz=103,SNR=67
TER01 Tubaro-SC 45.12 165 *eP* **P** **22 16 16.4 +1.2**
E28A Huff 45.16 322 P **P** **22 16 15.4 0.0**
baz=121,SNR=6.5
MDND Maddock 45.20 324 P **P** **22 16 15.9 +0.3**
baz=123,SNR=10
MDND Maddock 45.20 324 P **P** **22 16 15.7 +0.1**
baz=123,SNR=10
MDND S **S** **22 22 41.3 -2.4**
baz=123
121A Cookes Peak, D 45.31 301 P **P** **22 16 18.5 +1.6**
baz=101,SNR=58
121A Cookes Peak, D 45.31 301 P **P** **22 16 18.5 +1.6**
baz=101,SNR=58
121A S **S** **22 22 48.8 +2.9**
baz=101
CNLB Canela 45.46 167 *eP* **P** **22 16 18.7 +0.8**
ISCO Idaho Springs 45.54 311 S **S** **22 22 51.1 +1.8**
baz=110
CO01 Juntas del Tor 45.70 190 P **P** **22 16 19.4 -0.6**
CO01 PcP **PcP** **22 17 57.1 +1.8**
RODS Rosario do Sul 45.72 172 *eP* **P** **22 16 20.5 +0.7**
S22A 4UR Ranch, Cre 45.80 308 P **P** **22 16 21.4 +0.5**
baz=107,SNR=16
PHWY Pilot Hill 45.95 313 P **P** **22 16 22.6 +0.6**
PHWY IAmb IAmb 22 16 23.5
comp=Z,118nm,0.7s
GO04 Tololo Observa 46.02 191 P **P** **22 16 22.1 -0.3**
CPSB Cacapava Do Su 46.03 170 *eP* **P** **22 16 22.0 -0.3**
RSSD Black Hills 46.10 317 P **P** **22 16 23.5 +0.5**
RSSD Black Hills 46.10 317 P **P** **22 16 23.5 +0.5**
RSSD pmax pmax
comp=Z,54nm,0.9s
RSSD Black Hills 46.10 317 P **P** **22 16 23.1 +0.1**
baz=115,SNR=22
RSSD Black Hills 46.10 317 P **P** **22 16 23.0 0.0**
baz=115
RSSD S **S** **22 23 02.2 +5.1**
baz=115
RSSD Black Hills 46.10 317 P **P** **22 16 22.9 -0.1**
RSSD PcP **PcP** **22 17 57.6 +1.0**
N23A Red Feather La 46.15 313 P **P** **22 16 24.3 +0.7**
N23A Red Feather La 46.15 313 P **P** **22 16 23.9 +0.4**
baz=110,SNR=45
N23A S **S** **22 22 59.0 +1.0**
baz=110
SLBS Sierra La Lagu 46.26 288 P **P** **22 16 25.9 +1.5**
SLBS IAmb IAmb 22 16 27.3
comp=Z,254nm,1.2s
SLBS Sierra La Lagu 46.26 288 P **P** **22 16 25.9 +1.5**
LPIG La Paz 46.60 289 P **P** **22 16 27.8 +0.9**
comp=Z,102nm,0.8s,baz=100,slow=2.0,SNR=22
LPIG S **S** **22 23 06.6 +2.4**
comp=Z,31nm,0.4s,baz=133,slow=8.6,SNR=1.1
comp=Z,102nm,0.8s
CO03 El Pedregal 46.64 191 P **P** **22 16 26.3 -0.9**
MVCO Mesa Verde 46.93 307 P **P** **22 16 29.9 +0.3**
baz=105,SNR=33
MVCO S **S** **22 23 12.9 +3.8**

baz=105
ZON Zonda 47.01 188 P P 22 16 29.2 -0.8
ZON Zonda 47.01 188 P P 22 16 29.2 -0.8
ZON pmax pmax
comp=Z,21nm,0.8s
CO02 Combarbal 47.05 191 P P 22 16 30.0 -0.4
K22A Casper 47.18 315 P P 22 16 31.9 +0.5
baz=112,SNR=56
K22A Casper 47.18 315 P P 22 16 31.9 +0.5
baz=112,SNR=56
K22A S S 22 23 13.8 +1.4
baz=112
PLTB Pedras Altas 47.33 171 P P 22 16 32.4 0.0
PLTB Pedras Altas 47.33 171 eP P 22 16 32.8 +0.4
W18A Petrified Fore 47.41 304 P P 22 16 34.3 +0.9
baz=102,SNR=32
W18A S S 22 23 17.6 +1.6
baz=102
HSIG 47.49 295 P P 22 16 34.0 +0.3
PV11 David Mesa, Pa 47.50 308 P P 22 16 35.2 +1.2
PV11 IAmb IAmb 22 18 03.9
comp=Z,177nm,0.7s
O20A White River Ci 47.56 311 P P 22 16 34.9 +0.5
baz=108,SNR=35
O20A S S 22 23 17.6 -0.3
baz=108
TUC Tucson 47.77 300 P P 22 16 37.0 +1.1
baz=99
TUC S S 22 23 20.2 -0.6
baz=99
TUC Tucson 47.77 300 P P 22 16 37.0 +1.1
TUC PcP PcP 22 18 03.8 +1.2
DGMT Dagmar 48.16 323 P P 22 16 39.8 +1.1
DGMT Dagmar 48.16 323 P P 22 16 39.6 +0.9
baz=119,SNR=36
DGMT Dagmar 48.16 323 P P 22 16 39.6 +0.9
baz=119,SNR=36
TANT Tantan 48.16 65 P P 22 16 41.0 +2.0
SRIG Santa Rosalia 48.49 293 P P 22 16 42.6 +1.1
VA03 San Esteban 48.50 190 P P 22 16 41.7 +0.3
LAO LASA Array 48.58 320 P P 22 16 42.7 +0.8
LAO IAmb IAmb 22 16 44.1
comp=Z,260nm,1.4s
LAO LASA Array 48.58 320 P P 22 16 42.8 +0.8
baz=115,SNR=30
LAO LASA Array 48.58 320 P P 22 16 42.8 +0.8
baz=115,SNR=30
LAO S S 22 23 32.4 +0.6
baz=115
RDMU Red Mountain 48.66 311 P P 22 16 43.3 +0.5
RDMU IAmb IAmb 22 16 44.4
comp=Z,171nm,1.2s
FRB Frobisher Bay 48.71 356 P P 22 16 43.0 +0.5
comp=Z,93nm,0.6s,baz=166,slow=7.5,SNR=76
FRB PcP PcP 22 18 04.7 -0.5
comp=Z,37nm,1.0s,baz=156,slow=1.0,SNR=2.2
FRB LR LR 22 38 21.7
comp=Z,682nm,18.5s,baz=202,slow=37
comp=Z,93nm,0.6s
WUAZ Wupatki 48.81 304 P P 22 16 45.4 +1.4
WUAZ Wupatki 48.81 304 P P 22 16 45.3 +1.4
baz=101,SNR=132
WUAZ S S 22 23 38.5 +3.0
baz=101
P18A Preston Nutter 48.89 310 P P 22 16 45.5 +0.8
P18A IAmb IAmb 22 16 46.6
comp=Z,139nm,0.7s
MT02 Curacav 49.08 191 P P 22 16 45.5 -0.3
MT03 Universidad Ad 49.20 190 P P 22 16 46.5 -0.3
MT03 IAmb IAmb 22 18 09.9
comp=Z,92nm,0.9s
BW06 Boulder Array 49.32 314 P P 22 16 47.9 0.0
BW06 IAmb IAmb 22 16 49.3
comp=Z,165nm,0.7s
BW06 Boulder Array 49.32 314 P P 22 16 48.2 +0.3
baz=109,SNR=258
BW06 S S 22 23 42.8 +0.2
baz=109
PDAR Pinedale Array 49.32 314 P P 22 16 48.1 +0.2
comp=Z,128nm,0.6s,baz=118,slow=9.8,SNR=1098
PDAR PcP PcP 22 18 07.8 -0.5
comp=Z,45nm,0.8s,baz=114,slow=5.5,SNR=6.2
PDAR ScP ScP 22 21 48.8 -0.2
comp=Z,7.7nm,0.9s,baz=115,slow=6.4,SNR=9.3
PDAR S S 22 23 43.0 +0.4
comp=Z,4.1nm,0.8s,baz=118,slow=12,SNR=13
PDAR PKiKP PKiKP 22 24 54.2 -1.3
comp=Z,2.0nm,0.6s,baz=106,slow=4.5,SNR=9.3
PDAR LR LR 22 39 46.7
comp=Z,411nm,19.3s,baz=108,slow=38
PDAR P4KPbc 22 54 22.5
comp=Z,1.8nm,0.7s,baz=112,slow=6.7,SNR=20
comp=Z,128nm,0.6s
PDAR Pinedale Array 49.32 314 P P 22 16 48.0 +0.1
PDAR PcP PcP 22 18 08.1 -0.1
NUUK Nuuk 49.37 6 i P P 22 16 48.9 +1.4
NUUK IAmb IAmb 22 16 49.8
comp=Z,94nm,0.9s
214A Organ Pipe Nat 49.42 299 P P 22 16 49.2 +0.6
214A IAmb IAmb 22 16 50.9
comp=Z,162nm,1.4s
214A PcP PcP 22 18 09.9 +1.3
214A Organ Pipe Nat 49.42 299 P P 22 16 49.7 +1.1
baz=97,SNR=14
214A S S 22 23 46.3 +2.4
baz=97
LMEL Las Melosas 49.50 190 P P 22 16 48.8 -0.3
CGR Cap Guir 49.55 63 P P 22 16 52.0 +2.5
MT09 Talagante 49.56 190 P P 22 16 48.8 -0.8
MT01 Popeta 49.69 191 P P 22 16 49.9 -0.5
BO04 La Punta 49.70 190 P P 22 16 50.0 -0.5
FCC Fort Churchill 49.71 338 P P 22 16 49.9 -0.3
FCC IAmb IAmb 22 16 50.5
comp=Z,82nm,0.7s
FCC Fort Churchill 49.71 338 P P 22 16 49.9 -0.3
FCC pmax pmax
comp=Z,82nm,0.7s
U15A North Rim 49.72 305 P P 22 16 52.3 +1.2
U15A IAmb IAmb 22 16 53.6
comp=Z,120nm,1.0s
PIX Pinacate 49.92 299 P P 22 16 52.8 +0.5
PIX IAmb IAmb 22 16 54.2
comp=Z,117nm,0.9s
RLMT Red Lodge 49.92 317 P P 22 16 53.0 +0.6
baz=111,SNR=125
RLMT S S 22 23 51.5 +0.6
baz=111
MVU Marysvale 50.09 308 P P 22 16 55.0 +1.2
BO01 Tunca 50.18 190 P P 22 16 53.2 -0.9
FFC Flin Flon 50.31 331 P P 22 16 54.5 -0.3
FFC IAmb IAmb 22 18 13.2
comp=Z,100nm,0.9s
FFC Flin Flon 50.31 331 P P 22 16 54.6 -0.3
FFC pmax pmax
comp=Z,100nm,1.0s
FFC Flin Flon 50.31 331 P P 22 16 54.2 -0.6
FFC PcP PcP 22 18 12.3 +1.0
LOHW Long Hollow 50.32 314 P P 22 16 55.6 +0.2
LOHW IAmb IAmb 22 16 57.0
comp=Z,138nm,1.2s
YMP Mirror Lake Pl 50.38 316 P P 22 16 56.4 +0.5
HWUT Hardware Ranch 50.40 312 P P 22 16 56.3 +0.3
HWUT IAmb IAmb 22 16 57.3
comp=Z,152nm,0.9s
AHID Auburn Hatcher 50.40 313 P P 22 16 56.4 +0.4
AHID IAmb IAmb 22 16 57.4
comp=Z,208nm,0.8s
REDW Red Top Meadow 50.41 314 P P 22 16 56.7 +0.6
REDW IAmb IAmb 22 16 58.0
comp=Z,434nm,1.6s
GCMT Greycliff 50.43 317 P P 22 16 56.4 +0.4
LKWY Lake 50.49 316 P P 22 16 57.4 +0.7
LKWY Lake 50.49 316 P P 22 16 57.4 +0.7
LKWY pmax pmax
comp=Z,63nm,0.9s
BO02 Sierra Bellavi 50.52 190 P P 22 16 56.1 -0.6
BO02 IAmb IAmb 22 18 14.7
comp=Z,138nm,1.2s
H17A Grant Village 50.55 315 P P 22 16 57.7 +0.6
baz=109,SNR=8.8
H17A S S 22 24 01.7 +2.0
baz=109
YUF Upper Falls 50.61 316 P P 22 16 58.2 +0.5
ECR Eagle Creek 50.68 314 P P 22 16 58.2 +0.1
W13A Hualapai Mount 50.76 303 P P 22 16 60.0 +1.1
W13A IAmb IAmb 22 17 01.4
comp=Z,107nm,0.8s
TTIG Tnine Tigouga, 50.77 63 P P 22 17 00.0 +1.1
PDMCI Parker Dam,Lak 50.84 302 P P 22 17 00.2 +1.0
baz=98,SNR=32
GO05 Huala 50.93 191 P P 22 16 58.9 -0.8
DUG Dugway, Tooele 50.94 310 P P 22 17 00.6 +0.5
DUG IAmb IAmb 22 17 02.0
comp=Z,183nm,0.8s
DUG Dugway, Tooele 50.94 310 P P 22 17 00.6 +0.5
DUG pmax pmax
comp=Z,183nm,0.9s
DUG Dugway, Tooele 50.94 310 P P 22 17 00.8 +0.8
baz=104,SNR=198
DUG S S 22 24 06.6 +1.7
baz=104
BLYC Blythe 51.08 301 P P 22 17 01.9 +0.9
BLYC IAmb IAmb 22 17 03.1
comp=Z,98nm,0.9s
GLA Glamis 51.24 300 P P 22 17 03.3 +1.0
baz=97,SNR=29
NEE2 Needles Airpor 51.30 302 P P 22 17 03.6 +1.0
baz=98,SNR=11
EGMT Eagleton 51.32 320 P P 22 17 03.3 +0.7
EGMT Eagleton 51.32 320 P P 22 17 03.5 +0.9
baz=113,SNR=109
EGMT S S 22 24 12.2 +2.4
baz=113
OUK Oukaimeden 51.33 62 P P 22 17 05.0 +1.7
PFVI Vila Bisbo 51.35 54 eP P 22 17 03.9 +1.0
comp=Z,156nm,2.1s
PFVI Vila Bisbo 51.35 54 ePcP PcP 22 18 16.1 +0.6
PFVI Vila Bisbo 51.35 54 P P 22 17 03.5 +0.6
PFVI IAmb IAmb 22 17 05.2
comp=Z,107nm,0.8s
PFVI PcP PcP 22 18 15.8 +0.3
PFVI Vila Bisbo 51.35 54 P P 22 17 04.3 +1.4
PMAFR Mafra 51.36 52 eP P 22 17 04.6 +1.6
comp=Z,122nm,1.8s
PMAFR Mafra 51.36 52 ePcP PcP 22 18 16.4 +0.9
PMST Lisbon--Monsan 51.39 52 eP P 22 17 04.4 +1.2
comp=Z,183nm,1.1s
PMST Lisbon--Monsan 51.39 52 ePcP PcP 22 18 17.1 +1.5
LIS Lisbon 51.41 52 eP P 22 17 04.4 +1.1
LIS IAmb IAmb 22 17 05.3
comp=Z,102nm,0.7s
LIS Lisbon 51.41 52 eP P 22 17 04.4 +1.1
SRHM Skhour des Reh 51.42 61 P P 22 17 05.0 +1.4
PTEO Sao Teotonio 51.51 54 eP P 22 17 05.3 +1.2
comp=Z,156nm,1.1s
PTEO Sao Teotonio 51.51 54 ePcP PcP 22 18 17.5 +1.4
MORF Marmelete 51.52 54 eP P 22 17 05.2 +1.1
MORF IAmb IAmb 22 17 06.8
comp=Z,285nm,1.1s
MORF Marmelete 51.52 54 eP P 22 17 05.3 +1.1
comp=Z,271nm,1.0s
MORF Marmelete 51.52 54 ePcP PcP 22 18 17.4 +1.2
MORF Marmelete 51.52 54 eP P 22 17 05.3 +1.1
ML02 Panimavida 51.57 190 P P 22 17 03.8 -0.7
ML02 IAmb IAmb 22 17 16.4
comp=Z,91nm,0.7s
V12A Nelson 51.63 304 P P 22 17 06.2 +1.1
V12A IAmb IAmb 22 17 07.6
comp=Z,195nm,1.4s
IRM Iron Mountain 51.65 302 P P 22 17 06.7 +1.5
baz=98,SNR=162
IRM S S 22 24 16.8 +2.2
baz=98
BOZ Bozeman (W) 51.65 317 P P 22 17 05.7 +0.5
BOZ IAmb IAmb 22 17 07.2
comp=Z,136nm,1.1s
BOZ Bozeman (W) 51.65 317 P P 22 17 05.7 +0.5
BOZ pmax pmax
comp=Z,136nm,1.1s
BOZ Bozeman (W) 51.65 317 P P 22 17 05.8 +0.5
baz=109,SNR=98
PACT Alcochete 51.66 52 eP P 22 17 06.5 +1.3
comp=Z,270nm,1.6s
PACT Alcochete 51.66 52 ePcP PcP 22 18 17.9 +1.3
PNCL Nicolau / Gran 51.77 53 eP P 22 17 06.7 +0.7
comp=Z,210nm,1.3s
PNCL Nicolau / Gran 51.77 53 ePcP PcP 22 18 17.9 +0.8
BC3 Big Chuckawall 51.84 301 P P 22 17 07.7 +0.9
baz=97,SNR=95
PSBE So Bento 51.85 52 eP P 22 17 07.2 +0.6
comp=Z,206nm,1.0s
PSBE So Bento 51.85 52 ePcP PcP 22 18 18.6 +1.2
H10N3 ASCENSION HYDR 51.92 113 T T 23 12 50.5
baz=296,slow=74,SNR=43
AVE Averroes 51.92 60 P P 22 17 06.8 -0.5
AVE S S 22 24 20.8 +2.4
AVE Averroes 51.92 60 P P 22 17 08.2 +1.0
AVE Averroes 51.92 60 P P 22 17 08.7 +1.4
H10N2 ASCENSION HYDR 51.92 113 T T 23 12 51.1
baz=296,slow=74,SNR=64
H10N1 ASCENSION HYDR 51.94 113 T T 23 12 43.3
baz=296,slow=74,SNR=87
MESJ Messejana 51.95 54 eP P 22 17 08.5 +1.1
MESJ IAmb IAmb 22 17 09.5
comp=Z,215nm,1.8s
MESJ Messejana 51.95 54 eP P 22 17 08.6 +1.2
comp=Z,109nm,1.7s
MESJ Messejana 51.95 54 ePcP PcP 22 18 18.3 +0.5
MESJ Messejana 51.95 54 eP P 22 17 08.5 +1.1
SWSC Sam W. Stewart 52.04 300 P P 22 17 09.1 +1.0
baz=96,SNR=23
PCVE Castro Verde 52.06 54 eP P 22 17 09.3 +1.1
comp=Z,123nm,1.1s
PCVE Castro Verde 52.06 54 ePcP PcP 22 18 18.9 +0.7
YUH Yuha Desert 52.12 300 P P 22 17 10.2 +1.5
YUH IAmb IAmb 22 17 11.2
comp=Z,94nm,0.9s
GMRC Granite Mounta 52.15 302 P P 22 17 10.1 +1.0
baz=98,SNR=90
PCAS Casmilo, Conde 52.19 51 eP P 22 17 09.8 +0.7
comp=Z,307nm,1.1s
PCAS Casmilo, Conde 52.19 51 ePcP PcP 22 18 19.9 +1.3
PMTG Montargil 52.19 52 eP P 22 17 09.8 +0.7
comp=Z,251nm,0.9s
PMTG Montargil 52.19 52 ePcP PcP 22 18 19.5 +0.9
DY2G Dye2 52.20 8 i P P 22 17 09.6 +0.6
DY2G IAmb IAmb 22 17 10.5
comp=Z,2μm,1.7s
SFJD Kangerlussuaq 52.23 5 P P 22 17 09.4 +0.6
comp=Z,46nm,0.8s,baz=195,slow=7.5,SNR=19
SFJD LR LR 22 39 45.8
comp=Z,267nm,18.0s,baz=168,slow=36
comp=Z,46nm,0.8s
SFJD Kangerlussuaq 52.23 5 P P 22 17 09.2 +0.4
SFJD Kangerlussuaq 52.23 5 i P P 22 17 09.3 +0.4
SFJD IAmb IAmb 22 17 10.2
comp=Z,79nm,1.0s
SFJD Kangerlussuaq 52.23 5 P P 22 17 09.1 +0.2
EVO Evora 52.24 53 P P 22 17 08.0 -1.6
EVO Evora 52.24 53 eP P 22 17 10.2 +0.7
comp=Z,104nm,1.9s
PBEJ Beja 52.26 54 eP P 22 17 10.4 +0.7
comp=Z,109nm,1.7s
PBEJ Beja 52.26 54 ePcP PcP 22 18 20.2 +1.2
PVAQ Vaqueiros 52.27 54 eP P 22 17 11.0 +1.3
comp=Z,135nm,1.5s
PVAQ Vaqueiros 52.27 54 ePcP PcP 22 18 19.9 +0.9
PVAQ Vaqueiros 52.27 54 P P 22 17 10.8 +1.0
PVAQ Vaqueiros 52.27 54 P P 22 17 11.4 +1.6
H10S3 ASCENSION HYDR 52.27 114 T T 23 13 12.6
baz=293,slow=74,SNR=62
IKP In-Ko-Pah, Jac 52.27 300 P P 22 17 11.1 +1.2
baz=96,SNR=18
IKP S S 22 24 23.5 +0.2
baz=96
H10S2 ASCENSION HYDR 52.29 114 T T 23 13 14.5
baz=287,slow=74,SNR=48
BELC Belle Mtn. Jos 52.33 301 P P 22 17 11.5 +1.1
baz=97,SNR=56
PTO Porto 52.35 50 eP P 22 17 11.3 +1.0
comp=Z,125nm,1.4s
PTO Porto 52.35 50 ePcP PcP 22 18 20.1 +0.9
TUQ Turquoise Moun 52.45 303 P P 22 17 12.5 +1.1
baz=98,SNR=158
TUQ S S 22 24 27.3 +1.5
baz=98
ISOG Isortoq, Green 52.52 12 i P P 22 17 11.6 +0.5
ISOG IAmb IAmb 22 17 12.4
comp=Z,125nm,0.8s
MONP2 Monument Peak 52.56 300 P P 22 17 13.5 +1.3
baz=96,SNR=97
ZHG ZHG 52.58 59 P P 22 17 13.0 +0.8
PESTR Estremoz 52.63 53 eP P 22 17 13.6 +1.2
comp=Z,241nm,1.3s
PESTR Estremoz 52.63 53 P P 22 17 13.3 +0.9
PESTR IAmb IAmb 22 17 15.0
comp=Z,94nm,1.0s
PESTR PcP PcP 22 18 20.7 +0.4
PESTR Estremoz 52.63 53 P P 22 17 14.0 +1.6
R11A Troy Canyon, C 52.66 307 P P 22 17 13.7 +0.9
baz=100,SNR=92
R11A S S 22 24 29.3 +0.8
baz=100
TPFO Pinon Flats 52.66 301 P P 22 17 13.9 +1.1
baz=96,SNR=19
PFO Pinyon Flats O 52.67 301 P P 22 17 13.2 +0.3
comp=Z,34nm,1.0s,baz=96,slow=6.5,SNR=28
PFO PcP PcP 22 18 21.4 +0.7
comp=Z,52nm,0.9s,baz=115,slow=3.1,SNR=9.6
comp=Z,34nm,1.0s
PFO Pinyon Flats O 52.67 301 P P 22 17 13.1 +0.2
PFO Pinyon Flats O 52.67 301 d i P P 22 17 13.8 +0.9
PFO i *PP pP 22 17 48.6 +0.7
PFO Pinyon Flats O 52.67 301 P P 22 17 13.9 +0.9
baz=96,SNR=16
PFO Pinyon Flats O 52.67 301 P P 22 17 13.7 +0.9
PFO PcP PcP 22 18 21.8 +1.1
HEC Hector,Ludlow 52.71 302 P P 22 17 14.3 +1.2
baz=97,SNR=68
HEC S S 22 24 31.9 +2.8
baz=97
PVIS Viseu 52.78 50 eP P 22 17 14.2 +0.7
comp=Z,123nm,1.6s
PVIS Viseu 52.78 50 ePcP PcP 22 18 21.5 +0.6
PGAV Gavieira, Arco 52.79 49 eP P 22 17 14.8 +1.2
comp=Z,146nm,1.1s
SHOC Shoshone, Teco 52.80 304 P P 22 17 14.8 +1.1
baz=98,SNR=24
SHOC S S 22 24 31.9 +1.6
baz=98
ANGG Ammassalik, Gr 52.85 12 P P 22 17 13.8 +0.3
ANGG IAmb IAmb 22 17 14.9
comp=Z,106nm,1.0s
ANGG PcP PcP 22 18 20.3 -0.2
ANGG Ammassalik, Gr 52.85 12 i P P 22 17 13.0 -0.4
ANGG IAmb IAmb 22 17 14.6
comp=Z,116nm,1.1s
BI05 Punta Hualpn 52.86 192 P P 22 17 15.1 +1.2
ELK Elko 52.87 310 P P 22 17 14.9 +0.6
comp=Z,60nm,0.8s,baz=103,slow=4.9,SNR=203
ELK PcP PcP 22 18 22.4 +0.9
comp=Z,32nm,0.9s,baz=93,slow=9.1,SNR=4.8
comp=Z,60nm,0.8s
ELK Elko 52.87 310 P P 22 17 15.0 +0.6
ELK Elko 52.87 310 P P 22 17 15.0 +0.6
ELK pmax pmax
comp=Z,516nm,1.9s
PMRV Marv??o 52.89 52 eP P 22 17 14.8 +0.5
comp=Z,139nm,1.3s
PMRV Marv??o 52.89 52 ePcP PcP 22 18 22.0 +0.7
PCAB Cabril 52.91 49 eP P 22 17 15.2 +0.8
comp=Z,119nm,2.0s
PCAB Cabril 52.91 49 ePcP PcP 22 18 22.7 +1.3
PCBR Castelo Branco 52.91 51 eP P 22 17 15.7 +1.3
comp=Z,121nm,1.7s
PCBR Castelo Branco 52.91 51 ePcP PcP 22 18 22.2 +0.9
PBAR Barrancos 52.93 53 eP P 22 17 15.8 +1.2
comp=Z,132nm,1.8s
PBAR Barrancos 52.93 53 ePcP PcP 22 18 21.8 +0.3
TPNV Topopah Spring 52.94 305 P P 22 17 16.3 +1.4
TPNV IAmb IAmb 22 17 17.5
comp=Z,126nm,0.8s
TPNV Topopah Spring 52.94 305 P P 22 17 16.3 +1.4
TPNV pmax pmax
comp=Z,126nm,0.9s
TPNV Topopah Spring 52.94 305 P P 22 17 16.2 +1.4
baz=99,SNR=138
TPNV S S 22 24 33.4 +1.0
baz=99
HLID Hailey 52.95 313 P P 22 17 15.4 +0.5
HLID IAmb IAmb 22 17 16.8
comp=Z,91nm,0.9s
HLID Hailey 52.95 313 P P 22 17 15.5 +0.6
baz=105,SNR=129
HLID S S 22 24 34.2 +1.9
baz=105
MTE Manteigas 52.97 51 eP P 22 17 15.5 +0.6
comp=Z,154nm,1.3s
MTE Manteigas 52.97 51 P P 22 17 15.5 +0.6
MTE IAmb IAmb 22 17 16.9
comp=Z,114nm,0.9s
ARNO Arenosillo 52.99 55 P P 22 17 14.2 -0.8
ARNO S S 22 24 37.6 +4.9
POLO Lamas de Olo 53.00 49 eP P 22 17 15.9 +0.7
comp=Z,70nm,1.5s
TRQA Tornquist 53.00 180 P P 22 17 15.1 +0.1
TRQA Tornquist 53.00 180 P P 22 17 15.1 +0.1
TRQA pmax pmax
comp=Z,51nm,0.9s
PVRL Vila Real 53.04 50 eP P 22 17 16.0 +0.6
comp=Z,146nm,1.4s
BBRC Big Bear Solar 53.12 302 P P 22 17 17.9 +1.6
baz=97,SNR=11
109C Camp Elliot, M 53.13 300 P P 22 17 17.1 +0.9
109C IAmb IAmb 22 17 18.2
comp=Z,157nm,1.0s
109C Camp Elliot, M 53.13 300 P P 22 17 17.0 +0.9
baz=95,SNR=11
GSC Goldstone, Bar 53.15 303 P P 22 17 17.5 +1.1
baz=97,SNR=49
RRX Edison Barstow 53.25 302 P P 22 17 18.6 +1.6
baz=97,SNR=9.2
MURC Murrieta 53.27 301 P P 22 17 18.4 +1.2
baz=96,SNR=25
FURC Furnace Creek, 53.35 304 P P 22 17 19.1 +1.4
baz=98,SNR=21
FURC S S 22 24 40.3 +2.7
baz=98
RSA Sarsar 53.42 58 P P 22 17 20.0 +1.7
MVO Moncorvo 53.52 50 eP P 22 17 18.9 0.0
comp=Z,129nm,1.1s
MSO Missoula 53.57 317 P P 22 17 19.6 +0.4
MSO IAmb IAmb 22 18 26.1
comp=Z,171nm,1.4s
MSO Missoula 53.57 317 P P 22 17 19.5 +0.3
baz=108,SNR=25
BFSC Mount Baldy Ra 53.72 301 P P 22 17 21.5 +0.9
baz=96,SNR=49
MPMC Manual Prospec 53.80 304 P P 22 17 22.1 +0.9
baz=98,SNR=38
GRAC Grapevine Rang 53.83 305 P P 22 17 22.6 +1.3
baz=98,SNR=119
CHEFC Chefchaouen 53.84 58 P P 22 17 24.0 +2.6
IFR Ifrane 53.85 59 P P 22 17 21.1 -0.5
IFR S S 22 24 47.7 +2.9
PBRG Braganca 53.87 49 eP P 22 17 21.9 +0.5
comp=Z,85nm,1.8s
LRMC Laurel Mtn Rad 53.88 303 P P 22 17 22.6 +0.8
baz=97,SNR=74
CEU Ceuta 53.91 57 P P 22 17 22.4 +0.6
CEU S S 22 24 51.3 +6.2
EDW2 Edwards Air Fo 54.07 302 P P 22 17 24.0 +0.9
baz=96,SNR=79
LCH Last Change Ra 54.09 305 P P 22 17 24.0 +0.8
LCH IAmb IAmb 22 17 25.4
comp=Z,112nm,1.3s
LCRM LCR 54.09 59 P P 22 17 25.0 +1.7
FMP Fort Macarthur 54.20 301 P P 22 17 25.0 +1.1
baz=95
MDT Midelt 54.22 60 LR LR 22 35 41.0
comp=Z,377nm,21.4s,baz=295,slow=30
MDT Midelt 54.22 60 P P 22 17 25.3 +1.1
WALA Waterton Lakes 54.27 320 P P 22 17 24.4 +0.2
CIS Catalina Islan 54.27 300 P P 22 17 25.6 +1.2
baz=95,SNR=20
DECC Green Verdugo 54.28 301 P P 22 17 25.4 +0.9
baz=96,SNR=15
BMN Battle Mountai 54.29 309 P P 22 17 25.5 +0.9
BMN Battle Mountai 54.29 309 P P 22 17 25.5 +0.9
BMN pmax pmax
comp=Z,234nm,0.9s
CWC Cottonwood Cre 54.32 304 P P 22 17 26.0 +1.0
baz=97
SCI2 San Clemente I 54.35 300 P P 22 17 26.2 +1.2
baz=95,SNR=8.1
TIN Tinemaha, Big 54.52 305 P P 22 17 27.4 +1.1
baz=98,SNR=11
ISA Isabella, Lake 54.55 303 P P 22 17 27.6 +1.1

baz=97,SNR=23
OSI Osito Audit: C 54.64 302 P **P 22 17 27.8 +0.7**
baz=96
NV11 Mina Array Sit 54.66 306 P **P 22 17 28.1 +0.8**
NV11 IAmb IAmb 22 17 29.4
comp=Z,242nm,1.2s
PVLZ Peæn de 54.69 58 P **P 22 17 25.8 -1.6**
PVLZ S **S 22 24 58.9 +3.3**
EMAL Malaga-Limoner 54.77 56 P **P 22 17 26.9 -1.1**
EMAL S **S 22 25 04.0 +7.4**
NVAR Mina Array Bea 54.77 306 P **P 22 17 29.2 +0.9**
comp=Z,84nm,0.7s,baz=103,slow=6.4,SNR=399
NVAR PcP **PcP 22 18 30.2 +1.4**
comp=Z,34nm,0.7s,baz=135,slow=4.0,SNR=8.7
NVAR ScP **ScP 22 22 13.5 +0.7**
comp=Z,1.1nm,0.7s,baz=116,slow=4.1,SNR=4.1
NVAR LR LR 22 44 27.5
comp=Z,234nm,18.2s,baz=104,slow=40
NVAR P4KPbc 22 54 47.3
comp=Z,0.8nm,0.6s,baz=112,slow=4.9,SNR=6.1
comp=Z,84nm,0.7s
ARVC Arvin 54.78 302 P **P 22 17 29.4 +1.3**
baz=96,SNR=25
ARVC S **S 22 24 59.5 +2.7**
baz=96
LHV Little Huntoon 54.91 306 P **P 22 17 30.2 +1.3**
LHV IAmb IAmb 22 17 32.2
comp=Z,153nm,1.3s
PALE Palemas 54.99 58 P **P 22 17 31.1 +1.5**
VES Vestal, Richgr 55.06 303 P **P 22 17 31.3 +1.2**
baz=96,SNR=13
MLAC Mammoth, Mammo 55.08 305 P **P 22 17 31.7 +1.3**
baz=98,SNR=18
SNCC San Nicolas Is 55.19 300 P **P 22 17 31.8 +0.8**
baz=94
PAB San Pablo 55.23 52 P **P 22 17 32.3 +1.0**
PAB IAmb IAmb 22 17 35.4
comp=Z,59nm,0.8s
PAB San Pablo 55.23 52 P **P 22 17 32.3 +1.0**
PAB pmax pmax
comp=Z,59nm,0.8s
PAB San Pablo 55.23 52 P **P 22 17 32.7 +1.3**
PAB San Pablo 55.23 52 P **P 22 17 32.4 +1.0**
PAB PcP **PcP 22 18 30.6 +0.2**
BMO Blue Mountains 55.29 314 P **P 22 17 31.6 -0.1**
BMO IAmb IAmb 22 17 32.6
comp=Z,106nm,1.2s
BMO Blue Mountains 55.29 314 P **P 22 17 31.6 -0.1**
BMO pmax pmax
comp=Z,106nm,1.3s
GO06 Curarrehue 55.31 189 P **P 22 17 31.4 -0.4**
GO06 IAmb IAmb 22 18 32.7
comp=Z,79nm,0.9s
SCZ2 Santa Cruz Isl 55.33 301 P **P 22 17 32.8 +0.7**
baz=95,SNR=17
VOG Valley Oaks Go 55.35 304 P **P 22 17 32.4 +0.3**
baz=96
KOWA Kowa 55.43 83 P **P 22 17 33.7 +0.7**
KOWA Kowa 55.43 83 P **P 22 17 34.0 +1.0**
KOWA Kowa 55.43 83 P **P 22 17 33.6 +0.6**
KOWA PcP **PcP 22 18 31.7 +0.2**
SBC Santa Barbara 55.44 301 P **P 22 17 33.6 +0.9**
baz=95,SNR=7.2
EDM Edmonton 55.45 325 P **P 22 17 32.7 +0.1**
EDM Edmonton 55.45 325 P **P 22 17 32.7 +0.1**
EDM pmax pmax
comp=Z,688nm,1.1s
ESDC Sonseca Array 55.55 52 P **P 22 17 34.8 +1.2**
comp=Z,79nm,0.7s,baz=259,slow=7.6,SNR=636
ESDC PcP **PcP 22 18 32.2 +0.7**
comp=Z,21nm,0.9s,baz=274,slow=3.9,SNR=11
ESDC ScP **ScP 22 22 15.2 -0.7**
comp=Z,2.6nm,1.1s,baz=284,slow=5.1,SNR=4.2
ESDC LR LR 22 36 25.4
comp=Z,308nm,21.2s,baz=251,slow=30
ESDC PKPPKP **P'P'df 22 47 34.9 -1.9**
comp=Z,1.5nm,1.1s,baz=88,slow=3.8,SNR=5.6
ESDC PKP2bc 22 47 48.1
comp=Z,1.6nm,0.9s,baz=54,slow=3.1,SNR=7.5
comp=Z,79nm,0.7s
ESDC Sonseca Array 55.55 52 P **P 22 17 34.5 +1.0**
ESDC IAmb IAmb 22 17 36.0
comp=Z,109nm,0.8s
ESBB Sonseca Array 55.55 52 P **P 22 17 34.3 +0.7**
ESBB IAmb IAmb 22 17 36.0
comp=Z,99nm,0.8s
PKM Mcpherson Peak 55.56 302 P **P 22 17 35.0 +1.1**
baz=95,SNR=22
ICESG Greenland Ices 55.58 9 *i* P **P 22 17 33.5 -0.1**
ICESG IAmb IAmb 22 17 34.1
comp=Z,163nm,0.7s
WVOR Wild Horse Val 55.71 311 P **P 22 17 35.0 +0.2**
WVOR IAmb IAmb 22 17 36.2
comp=Z,109nm,1.4s
WVOR Wild Horse Val 55.71 311 P **P 22 17 35.0 +0.2**
WVOR pmax pmax
comp=Z,109nm,1.4s
SMMC Simmler 55.74 302 P **P 22 17 36.3 +1.2**
baz=95,SNR=30
SMMC S **S 22 25 12.3 +2.5**
baz=95
GOG Mont Gurugu 55.76 58 P **P 22 17 37.0 +1.8**
WMELI Melilla 55.81 58 P **P 22 17 34.6 -0.7**
WMELI S **S 22 25 11.5 +1.0**
LR04 Corral 55.94 191 P **P 22 17 35.9 -0.2**
LR04 IAmb IAmb 22 17 36.8
comp=Z,82nm,0.8s
TIC Toumodi 55.98 92‖ *e*P **P 22 17 37.3 +0.3**
comp=Z,213nm,1.0s
JBK JBK 56.04 59 P **P 22 17 39.0 +1.6**
NEW Newport 56.05 318 P **P 22 17 37.0 0.0**
comp=Z,198nm,0.9s,baz=114,slow=6.5,SNR=221
NEW PcP **PcP 22 18 33.5 +0.2**
comp=Z,33nm,0.9s,baz=116,slow=2.6,SNR=1.5
NEW S **S 22 25 10.6 -2.8**
comp=Z,1.5nm,0.8s,baz=26,slow=18,SNR=6.0
NEW LR LR 22 42 23.2
comp=Z,541nm,21.1s,baz=104,slow=37
comp=Z,198nm,0.9s
NEW Newport 56.05 318 P **P 22 17 37.0 0.0**
NEW Newport 56.05 318 P **P 22 17 37.0 0.0**
NEW pmax pmax
comp=Z,212nm,0.9s
NEW Newport 56.05 318 P **P 22 17 36.9 0.0**
baz=106,SNR=175
NEW S **S 22 25 14.0 +0.6**
baz=106
LIC Lamto 56.08 93 *e*P **P 22 17 37.3 -0.4**
comp=Z,245nm,0.7s
DBIC Dimbokro 56.14 92 P **P 22 17 38.3 +0.3**
comp=Z,220nm,1.1s,baz=268,slow=6.5,SNR=116
DBIC PcP **PcP 22 18 34.6 +0.4**
comp=Z,21nm,0.6s,baz=314,slow=7.3,SNR=5.5
DBIC S **S 22 25 12.8 -2.6**
comp=Z,4.2nm,1.0s,baz=314,slow=22,SNR=1.5
DBIC LR LR 22 36 34.1
comp=Z,242nm,21.9s,baz=264,slow=30
comp=Z,220nm,1.1s
DBIC Dimbokro 56.14 92 P **P 22 17 38.7 +0.6**
DBIC Dimbokro 56.14 92 P **P 22 17 38.7 +0.6**
DBIC pmax pmax
comp=Z,283nm,1.2s
DBIC Dimbokro 56.14 92 P **P 22 17 38.5 +0.4**
DBIC pP **pP 22 18 12.8 -0.6**
DBIC PcP **PcP 22 18 33.9 -0.3**
UCM Universidad Co 56.19 52 P **P 22 17 37.7 -0.4**
UCM S **S 22 25 20.0 +4.5**
TAF Taforalt 56.20 58 P **P 22 17 40.2 +1.8**
CHAS Isla Isabel II 56.22 58 P **P 22 17 38.6 +0.3**
PLCA Paso Flores 56.30 188 P **P 22 17 38.6 -0.1**
comp=Z,35nm,0.9s,baz=6.3,slow=7.9,SNR=74
PLCA PcP **PcP 22 18 35.6 +1.3**
comp=Z,40nm,0.8s,baz=12,slow=4.4,SNR=11
PLCA S **S 22 25 11.3 -5.5**
comp=Z,1.2nm,0.6s,baz=16,slow=17,SNR=2.4
PLCA PKKP **PKKPdf 22 39 14.6 -2.5**
comp=Z,0.7nm,0.4s,baz=351,slow=14,SNR=3.1
PLCA LR LR 22 43 02.0
comp=Z,372nm,19.1s,baz=360,slow=37
comp=Z,35nm,0.9s
PLCA Paso Flores 56.30 188 P **P 22 17 38.5 -0.3**
PLCA IAmb IAmb 22 18 36.6
comp=Z,53nm,0.8s
PLCA Paso Flores 56.30 188 *e*P **P 22 17 38.9 +0.1**
PLCA Paso Flores 56.30 188 P **P 22 17 38.4 -0.3**
PLCA PcP **PcP 22 18 35.9 +1.6**

KIC Kosan Boka 56.32 92 *e*P **P 22 17 38.9 -0.5**
comp=Z,102nm,0.6s
CMB Columbia Colle 56.35 306 P **P 22 17 39.7 +0.4**
CMB IAmb IAmb 22 17 41.1
comp=Z,152nm,1.6s
CMB Columbia Colle 56.35 306 P **P 22 17 39.7 +0.4**
CMB pmax pmax
comp=Z,152nm,1.7s
SOEG Soedalen 56.36 13 *i* P **P 22 17 39.1 +0.4**
SOEG IAmb IAmb 22 17 40.2
comp=Z,313nm,2.0s
PMPB Monarch Peak 56.48 303 P **P 22 17 40.4 +0.1**
PMPB IAmb IAmb 22 17 41.7
comp=Z,73nm,1.0s
BORG Borgarnes 56.49 19 P **P 22 17 41.5 +1.9**
BORG Borgarnes 56.49 19 P **P 22 17 41.6 +1.9**
BORG pmax pmax
comp=Z,216nm,1.1s
BORG Borgarnes 56.49 19 P **P 22 17 41.4 +1.7**
BORG PcP **PcP 22 18 36.1 +1.5**
I07A Izee 56.66 313 P **P 22 17 41.9 +0.5**
I07A IAmb IAmb 22 17 43.0
comp=Z,123nm,1.0s
LL04 Puerto Octay 56.76 190 P **P 22 17 40.8 -1.0**
IWEX Carrickbyrne, 56.78 37 *e*P **P 22 17 42.3 +0.3**
MOD Modoc Plateau 56.84 310 P **P 22 17 42.9 +0.1**
LL03 Petrohue 56.98 190 P **P 22 17 42.8 -0.6**
LL03 IAmb IAmb 22 18 38.6
comp=Z,66nm,0.8s
FIGM Figuig 57.00 61 P **P 22 17 45.3 +1.2**
CCA1 Carnmenellis 57.02 40 *e*P **P 22 17 44.6 +0.9**
SAO San Andreas Ge 57.05 304 P **P 22 17 44.4 +0.2**
SAO IAmb IAmb 22 17 46.1
comp=Z,85nm,1.1s
SAO San Andreas Ge 57.05 304 P **P 22 17 44.4 +0.2**
SAO pmax pmax
comp=Z,85nm,1.1s
DSB Dublin 57.30 36 P **P 22 17 46.2 +0.6**
DSB IAmb IAmb 22 17 47.5
comp=Z,145nm,1.0s
CART Cartagena 57.59 55 P **P 22 17 48.6 +0.7**
CART S **S 22 25 37.9 +4.1**
ILTH Belurgan, Co L 57.59 35 *e*P **P 22 17 48.3 +0.7**
PINE Pine Mountain 57.62 312 P **P 22 17 48.9 +0.6**
HTL Hartland 57.70 39 *e*P **P 22 17 49.3 +0.8**
QUIF Quistinic 57.73 43 *e*P **P 22 17 48.9 +0.2**
QUIF pmax pmax
comp=Z,177nm,1.0s
ROSF Rostrenen 57.76 42 *e*P **P 22 17 49.8 +0.9**
ROSF Rostrenen 57.76 42 *e*P **P 22 17 49.0 +0.1**
ROSF pmax pmax
comp=Z,137nm,0.8s
RSBS Rosebush, Pemb 57.83 38 *e*P **P 22 17 50.3 +0.9**
RSBS IAmb IAmb 22 17 51.0
comp=Z,368nm,0.7s
GMM Mts of Mourne 57.88 35 *e*P **P 22 17 50.2 +0.6**
BRLDA Berland Lookou 58.01 325 P **P 22 17 50.8 +0.1**
CLGH Cloghs, Cushen 58.08 34 *e*P **P 22 17 51.7 +0.7**
SJPF Ste Jean 58.12 49 *e*P **P 22 17 52.3 +0.7**
SJPF pmax pmax
comp=Z,231nm,0.8s
SGMF Saint Gilles 58.20 42 *e*P **P 22 17 52.2 +0.2**
SGMF pmax pmax
comp=Z,208nm,1.0s
YRC Rhoscolyn 58.33 36‖ *e*P **P 22 17 53.4 +0.7**
WPS Cemaes, Angles 58.41 36 *e*P **P 22 17 54.1 +0.7**
WPS IAmb IAmb 22 17 54.5
comp=Z,170nm,1.0s
WLF1 Llynfaes 58.44 36 *e*P **P 22 17 54.4 +0.9**
WLF1 IAmb IAmb 22 17 55.2
comp=Z,412nm,0.8s
YLL Llanberis 58.52 36‖ *e*P **P 22 17 55.0 +0.9**
WME Myndd Eilian 58.52 36 *e*P **P 22 17 54.7 +0.6**
WIM Isle of Man 58.55 35‖ *e*P **P 22 17 55.3 +1.0**
ETSF Etsaut 58.57 49 *e*P **P 22 17 55.4 +0.6**
ETSF pmax pmax
comp=Z,51nm,0.8s
YBH Yreka Blue Hor 58.59 310 P **P 22 17 54.0 -1.0**
comp=Z,53nm,0.8s,baz=101,slow=4.2,SNR=64
YBH PcP **PcP 22 18 43.3 -0.2**
comp=Z,38nm,1.1s,baz=143,slow=1.3,SNR=3.8
YBH S **S 22 25 44.8 -2.1**
comp=Z,7.3nm,1.1s,baz=316,slow=17,SNR=6.2
YBH LR LR 22 45 29.3
comp=Z,172nm,21.1s,baz=130,slow=38
comp=Z,53nm,0.8s
YBH Yreka Blue Hor 58.59 310 P **P 22 17 54.2 -0.8**
YBH IAmb IAmb 22 17 55.2
comp=Z,120nm,1.2s
YBH Yreka Blue Hor 58.59 310 P **P 22 17 54.2 -0.8**
YBH pmax pmax
comp=Z,120nm,1.3s
IOMK Kirk Michael 58.65 35 *e*P **P 22 17 55.5 +0.5**
IOMK IAmb IAmb 22 17 56.6
comp=Z,297nm,0.9s
JVM Valle D.L. Mar 58.66 41 *e*P **P 22 17 56.3 +1.2**
JSA Saint Aubin 58.67 41 *e*P **P 22 17 56.2 +1.0**
JSA IAmb IAmb 22 17 56.7
comp=Z,117nm,0.9s
GAL1 Galloway 58.77 34 *e*P **P 22 17 56.3 +0.5**
GAL1 IAmb IAmb 22 17 56.9
comp=Z,154nm,0.6s
LAWE Loch Awe, Argy 58.87 33 *e*P **P 22 17 56.8 +0.3**
MCH1 Michaelchurch 58.88 38 *e*P **P 22 17 57.3 +0.7**
MCH1 IAmb IAmb 22 17 57.7
comp=Z,116nm,0.7s
LL02 Futaleuf 58.90 189 P **P 22 17 56.3 -0.5**
SUMG Summit 58.90 8 P **P 22 17 57.9 +1.0**
SUMG Summit 58.90 8 *i* P **P 22 17 57.5 +0.5**
SUMG IAmb IAmb 22 17 58.9
comp=Z,396nm,1.0s
MONM Monmouth 58.95 38 *e*P **P 22 17 58.0 +0.9**
MONM IAmb IAmb 22 17 58.8
comp=Z,560nm,1.5s
FOEL Foel Wylfa 59.01 37 *e*P **P 22 17 57.4 -0.2**
FOEL IAmb IAmb 22 17 58.0
comp=Z,250nm,0.7s
OLDB Oldbury-Upon-S 59.05 38 *e*P **P 22 17 58.4 +0.6**
OLDB IAmb IAmb 22 17 59.6
comp=Z,273nm,0.8s
HLM1 Long Mynd 59.09 37 *e*P **P 22 17 58.6 +0.5**
HLM1 IAmb IAmb 22 17 59.8
comp=Z,411nm,0.8s
NEWG New Galloway 59.11 34 *e*P **P 22 17 58.7 +0.5**
NEWG IAmb IAmb 22 17 59.7
comp=Z,245nm,0.8s
KPL Plockton 59.13 32 *e*P **P 22 17 58.0 -0.2**
KPL IAmb IAmb 22 17 58.8
comp=Z,77nm,0.9s
PGBU Glenifferbraes 59.20 33 *e*P **P 22 17 59.4 +0.6**
PGBU IAmb IAmb 22 18 00.3
comp=Z,306nm,0.9s
EPF Esparros 59.24 49 *e*P **P 22 18 00.1 +0.7**
EPF pmax pmax
comp=Z,194nm,0.8s
STRD Stroud 59.32 38 *e*P **P 22 18 00.3 +0.7**
STRD IAmb IAmb 22 18 01.2
comp=Z,260nm,0.8s
GRR Gorron 59.34 42 *e*P **P 22 17 59.9 0.0**
GRR pmax pmax
comp=Z,226nm,0.7s
KAC Achnashellach 59.37 31 *e*P **P 22 17 59.9 0.0**
EAB Aberfoyle 59.40 33‖ *e*P **P 22 18 00.4 +0.2**
COR Corvallis 59.43 313 P **P 22 18 01.4 +0.9**
COR IAmb IAmb 22 18 02.3
comp=Z,173nm,1.1s
COR Corvallis 59.43 313 P **P 22 18 01.4 +0.9**
COR pmax pmax
comp=Z,173nm,1.2s
COR Corvallis 59.43 313 P **P 22 18 00.7 +0.1**
MFF Saint Martin d 59.47 45 *e*P **P 22 18 01.0 +0.2**
MFF pmax pmax
comp=Z,125nm,0.8s
SWN1 Swindon 59.47 39 *e*P **P 22 18 01.4 +0.8**
KESW Keswick, Cumbr 59.56 35 *e*P **P 22 18 02.0 +0.7**
INVG Invergeldie, C 59.64 33 *e*P **P 22 18 01.7 0.0**
INVG IAmb IAmb 22 18 02.4
comp=Z,86nm,1.0s
FLN La Foliniere 59.66 42 *e*P **P 22 18 02.2 +0.1**
FLN pmax pmax
comp=Z,266nm,0.8s
ESK Eskdalemuir 59.73 34 P **P 22 18 02.8 +0.4**
ESK Eskdalemuir 59.73 34 P **P 22 18 02.8 +0.4**
ESK pmax pmax

comp=Z,453nm,1.9s
ESK Eskdalemuir 59.73 34 P **P 22 18 02.5 +0.1**
EKA Eskdalemuir Ar 59.76 34 PcP **PcP 22 18 47.7 -0.1**
comp=Z,14nm,0.7s,baz=251,slow=3.5,SNR=6.4
EKA LR LR 22 39 33.3
comp=Z,412nm,19.4s,baz=222,slow=31
LFF La Frestale 59.80 47 *e*P **P 22 18 03.3 +0.2**
LFF pmax pmax
comp=Z,202nm,0.9s
MDO Dochfour 59.82 32 *e*P **P 22 18 03.3 +0.3**
EDI Edinburgh 59.93 34 *e*P **P 22 18 03.6 -0.2**
EBL Broad Law 59.96 34‖ *e*P **P 22 18 04.4 +0.4**
YKA Yellowknife Ar 59.98 335 P **P 22 18 03.7 -0.3**
comp=Z,137nm,0.7s,baz=107,slow=7.4
YKA PcP **PcP 22 18 47.3 -1.1**
YKA S **S 22 26 03.0 -0.9**
comp=Z,12nm,1.1s,baz=109,slow=14,SNR=6.5
YKA LR LR 22 43 19.1
comp=Z,349nm,19.3s,baz=112,slow=35
YKA PKPPKP **P'P'df 22 47 27.2 -1.5**
comp=Z,1.9nm,0.9s,baz=41,slow=12,SNR=2.5
comp=Z,137nm,0.7s
HPK Haverah Park 60.21 36 *e*P **P 22 18 06.5 +0.7**
EDU Dundee 60.22 33‖ *e*P **P 22 18 05.9 +0.2**
AY01 Puyuhuapi 60.22 189 P **P 22 18 05.2 -0.5**
AY01 IAmb IAmb 22 18 06.2
comp=Z,56nm,0.8s
ESY Stoneypath 60.23 34‖ *e*P **P 22 18 06.1 +0.3**
EDMD Edmundbyers 60.27 35 *e*P **P 22 18 06.5 +0.4**
SCO Scoresbysund 60.27 14 P **P 22 18 06.4 +0.6**
SCO IAmb IAmb 22 18 08.8
comp=Z,103nm,1.0s
SCO Scoresbysund 60.27 14 P **P 22 18 06.4 +0.6**
SCO pmax pmax
comp=Z,103nm,1.0s
SCO Scoresbysund 60.27 14 *i* P **P 22 18 06.2 +0.4**
SCO IAmb IAmb 22 18 08.5
comp=Z,101nm,1.0s
NLWA Neilton Lookou 60.28 316 P **P 22 18 07.2 +0.9**
RJF Les Rejaudoux 60.40 46 *e*P **P 22 18 07.1 -0.1**
RJF pmax pmax
comp=Z,185nm,1.0s
MCD Coleburn Disti 60.43 32‖ *e*P **P 22 18 07.2 +0.1**
MLA1 Latheron 60.62 31‖ *e*P **P 22 18 08.8 +0.5**
MTLF Montolieu 60.64 49 *e*P **P 22 18 08.9 0.0**
MTLF pmax pmax
comp=Z,320nm,0.9s
CAF Calviac 60.73 47 *e*P **P 22 18 09.5 0.0**
CAF pmax pmax
comp=Z,210nm,1.1s
GDLE Glaisdale, N Y 60.80 36 *e*P **P 22 18 10.2 +0.6**
GDLE IAmb IAmb 22 18 11.3
comp=Z,377nm,0.8s
LMK Market Rasen 60.83 37 *e*P **P 22 18 10.8 +0.9**
LMK IAmb IAmb 22 18 11.5
comp=Z,573nm,0.9s
TCF Toulx Ste Croi 61.02 45 *e*P **P 22 18 11.3 -0.1**
TCF pmax pmax
comp=Z,183nm,0.9s
TOA0 Torodi Ar. Sit 61.12 83 P **P 22 18 12.5 0.0**
TORD Torodi Ar. Bea 61.12 83 P **P 22 18 12.7 +0.1**
comp=Z,125nm,0.8s,baz=288,slow=5.9,SNR=502
TORD LR LR 22 42 46.7
comp=Z,328nm,20.2s,baz=216,slow=34
TORD PKPPKP **P'P'df 22 47 26.4 -2.6**
comp=Z,4.3nm,1.1s,baz=199,slow=4.4,SNR=4.8
TORD PKP2bc 22 47 34.4
comp=Z,14nm,1.2s,baz=101,slow=3.0,SNR=16
comp=Z,125nm,0.8s
WACR West Acre 61.21 38 *e*P **P 22 18 13.0 +0.5**
COYC Coyhaique 61.26 188 P **P 22 18 12.6 -0.2**
COYC IAmb IAmb 22 18 13.7
comp=Z,63nm,0.8s
COYC Coyhaique 61.26 188 P **P 22 18 12.6 -0.2**
COYC PcP **PcP 22 18 54.8 +1.0**
COYC sP **sP 22 19 03.9 -1.4**
ELMS Elmsett, Ipswi 61.29 39 *e*P **P 22 18 12.9 -0.1**
CLF Chambon-Foret 61.32 43 P **P 22 18 14.4 +1.1**
CLF Chambon-Foret 61.32 43 P **P 22 18 14.6 +1.2**
CLF pP **pP 22 18 51.6 +2.0**
TULEG Thule 61.44 358 P **P 22 18 14.1 +0.4**
TULEG IAmb IAmb 22 18 15.2
comp=Z,129nm,1.0s
TULEG Thule 61.44 358 *i* P **P 22 18 13.4 -0.2**
TULEG IAmb IAmb 22 18 14.8
comp=Z,130nm,1.0s
MAHO Mahon 61.87 53 P **P 22 18 16.3 -0.8**
MAHO S **S 22 26 31.9 +3.3**
MAHO Mahon 61.87 53 P **P 22 18 18.1 +0.9**
AVF Avril sur Loir 61.88 45 *e*P **P 22 18 16.7 -0.4**
AVF pmax pmax
comp=Z,217nm,0.9s
SSF Saint Saulge 62.02 45 *e*P **P 22 18 17.6 -0.4**
SSF pmax pmax
comp=Z,203nm,0.8s
SMF Signal de Mont 62.19 45 *e*P **P 22 18 19.0 -0.2**
SMF pmax pmax
comp=Z,307nm,1.0s
RES Resolute Bay 62.24 350 P **P 22 18 18.9 -0.1**
comp=Z,45nm,0.7s,baz=155,slow=7.8,SNR=62
RES PcP **PcP 22 18 57.2 -0.2**
comp=Z,24nm,0.8s,baz=184,slow=8.3,SNR=3.8
RES LR LR 22 45 22.9
comp=Z,456nm,18.9s,baz=156,slow=36
comp=Z,45nm,0.7s
RES Resolute Bay 62.24 350 P **P 22 18 19.1 +0.1**
RES IAmb IAmb 22 18 21.3
comp=Z,52nm,0.8s
RES Resolute Bay 62.24 350 P **P 22 18 19.1 +0.1**
RES pmax pmax
comp=Z,52nm,0.8s
LOR Lormes 62.28 44 *e*P **P 22 18 19.4 -0.4**
LOR pmax pmax
comp=Z,260nm,0.8s
LRW Lerwick 62.28 29 *e*P **P 22 18 19.1 -0.4**
LRW IAmb IAmb 22 18 20.1
comp=Z,74nm,0.9s
SSB Saint Sauveur 62.52 47 P **P 22 18 22.1 +0.7**
SSB IAmb IAmb 22 18 24.0
comp=Z,116nm,0.8s
SSB Saint Sauveur 62.52 47 P **P 22 18 22.1 +0.7**
SSB pmax pmax
comp=Z,116nm,0.8s
SSB Saint Sauveur 62.52 47 P **P 22 18 22.9 +1.4**
VIVF Saint-Julien-l 62.57 47 *e*P **P 22 18 20.2 -1.6**
VIVF pmax pmax
comp=Z,130nm,0.8s
BAIF Baives 62.91 41 *e*P **P 22 18 23.3 -0.6**
BAIF pmax pmax
comp=Z,95nm,1.0s
SNF Seneffe 63.02 41 *d*P **P 22 18 24.9 +0.3**
comp=Z,159nm,0.7s
SNF *d*PcP **pP 22 19 01.9 +0.7**
FLDN Fort Liard 63.09 330 P **P 22 18 26.1 +1.3**
baz=107
DOU Dourbes 63.16 41 *d*P **P 22 18 26.0 +0.4**
comp=Z,90nm,0.8s
DOU *d*PcP **pP 22 19 02.3 +0.3**
SHEL Horse Pasture 63.19 117 P **P 22 18 27.7 +1.4**
SHEL Horse Pasture 63.19 117 P **P 22 18 27.7 +1.4**
SHEL pmax pmax
comp=Z,186nm,1.0s
SHEL Horse Pasture 63.19 117 P **P 22 18 27.8 +1.6**
BMRD Maredsous 63.30 41 *d*P **P 22 18 26.8 +0.4**
comp=Z,123nm,0.9s
BMRD *d*PcP **pP 22 19 03.5 +0.6**
GIVF Givet 63.31 41 *e*P **P 22 18 26.1 -0.4**
GIVF pmax pmax
comp=Z,212nm,0.8s
KOTAN Kotaneelee Air 63.34 330 P **P 22 18 27.7 +1.2**
baz=107,SNR=99
KOTAN S **S 22 26 47.5 +1.3**
baz=107
DBG Daneborg 63.35 12 *i* P **P 22 18 28.0 +1.6**
DBG IAmb IAmb 22 18 28.4
comp=Z,252nm,1.1s
TAM Tamanrasset 63.38 72 P **P 22 18 29.2 +1.6**
TAM IAmb IAmb 22 18 30.9
comp=Z,111nm,0.9s
TAM Tamanrasset 63.38 72 P **P 22 18 29.2 +1.6**
TAM pmax pmax
comp=Z,111nm,0.9s
TAM Tamanrasset 63.38 72 P **P 22 18 29.3 +1.6**
TAM pP **pP 22 19 04.3 +0.3**
TAM sP **sP 22 19 21.2 +0.6**

ORIF Oris-en-Rattie 63.43 47 *eP* **P 22 18 29.2 +1.7**
ORIF pmax pmax
comp=Z,98nm,1.0s
BGES Gesves 63.52 41 *dP* **P 22 18 28.0 +0.1**
comp=Z,103nm,1.0s
BGES *d*PcP **PcP 22 19 03.8 +0.7**
RCHB Rochefort 63.57 41 *dP* **P 22 18 28.8 +0.5**
comp=Z,158nm,0.8s
RCHB *d*PcP **pP 22 19 04.1 -0.6**
BCLA Clavier 63.66 41 *dP* **P 22 18 29.4 +0.6**
comp=Z,59nm,1.1s
CABF La Chapelle 63.73 45 *eP* **P 22 18 29.2 -0.2**
CABF pmax pmax
comp=Z,155nm,1.2s
BBB Bella Bella 63.79 321 P **P 22 18 30.3 +0.7**
comp=Z,116nm,0.8s,baz=89,slow=5.8,SNR=27
BBB LR LR 22 45 30.6
comp=Z,268nm,21.6s,baz=98,slow=35
comp=Z,116nm,0.8s
BSTI Sart Tilman 63.85 41 *dP* **P 22 18 30.7 +0.7**
comp=Z,24nm,0.8s
BEBN Eben Emael 63.95 41 *dP* **P 22 18 30.9 +0.2**
comp=Z,248nm,0.8s
BNI Bardonecchia 64.00 47 P **P 22 18 32.9 +1.6**
WRGLY Wrigley 64.00 334 P **P 22 18 31.1 +0.3**
baz=109,SNR=16
WRGLY S **S 22 26 54.5 +0.2**
baz=109
HAU Haudompre 64.04 44 *eP* **P 22 18 30.7 -0.7**
HAU pmax pmax
comp=Z,117nm,1.0s
MBDF Montbardon 64.04 47 *eP* **P 22 18 32.1 +0.5**
MBDF pmax pmax
comp=Z,128nm,0.8s
LPL La Plagne 64.08 47 *eP* **P 22 18 32.5 +0.6**
LPL pmax pmax
comp=Z,217nm,0.9s
LPG La Plagne 64.09 47 *eP* **P 22 18 32.7 +0.6**
LPG pmax pmax
comp=Z,248nm,1.0s
JMIC Jan Mayen 64.09 17 P **P 22 18 31.9 +0.7**
comp=Z,76nm,0.8s,baz=205,slow=8.2,SNR=1.7
JMIC LR LR 22 44 54.6
comp=Z,253nm,18.4s,baz=246,slow=34
comp=Z,76nm,0.8s
BHOU Houvegnez 64.09 41 *dP* **P 22 18 32.3 +0.7**
comp=Z,157nm,0.9s
BHOU *d*PcP **PcP 22 19 06.7 +1.2**
HGN Heimansgroeve 64.10 41 *eP* **P 22 18 32.0 +0.3**
WLF Walferdange 64.10 42 P **P 22 18 32.4 +0.7**
WLF Walferdange 64.10 42 P **P 22 18 32.4 +0.7**
WLF pmax pmax
comp=Z,229nm,0.9s
WLF Walferdange 64.10 42 *dP* **P 22 18 32.6 +0.9**
comp=Z,168nm,0.9s
WLF *d*PcP **PcP 22 19 06.4 +0.9**
MEM Membach 64.13 41 *dP* **P 22 18 32.7 +0.9**
comp=Z,115nm,1.0s
LIRD Liard River Hi 64.14 329 P **P 22 18 32.5 +0.7**
baz=104,SNR=12
BTNL Ternell 64.20 41 *dP* **P 22 18 33.2 +0.8**
comp=Z,62nm,1.2s
BTNL *d*PcP **PcP 22 19 06.8 +0.8**
HINF Hinteralfeld 64.36 44 *eP* **P 22 18 32.6 -0.9**
HINF pmax pmax
comp=Z,96nm,0.9s
SBF Sospel 64.47 48 *eP* **P 22 18 34.0 -0.3**
SBF pmax pmax
comp=Z,58nm,0.8s
SENIN Lac Senin/Sane 64.54 46 P **P 22 18 35.8 +0.9**
SENIN IAmb IAmb 22 18 37.2
comp=Z,98nm,0.9s
ECH Echery 64.60 44 P **P 22 18 35.3 +0.2**
ECH Echery 64.60 44 P **P 22 18 35.3 +0.2**
ECH pmax pmax
comp=Z,209nm,1.1s
ECH Echery 64.60 44 P **P 22 18 35.3 +0.2**
CDF Champ du Feu 64.70 43 *eP* **P 22 18 35.1 -0.7**
CDF pmax pmax
comp=Z,156nm,1.0s
GRNB Grenville Isla 65.14 323 P **P 22 18 39.1 +0.7**
GRNB IAmb IAmb 22 18 40.4
comp=Z,84nm,0.9s
KMY Karmoy 65.18 31 *eP* **P 22 18 38.5 0.0**
KMY IAmb IAmb 22 18 39.0
comp=Z,94nm,0.7s
SUE Sulen 65.36 29 *eP* **P 22 18 40.1 +0.6**
SUE IAmb IAmb 22 18 40.6
comp=Z,100nm,0.8s
DAG Danmarks Havn 65.36 10 P **P 22 18 39.5 +0.1**
DAG Danmarks Havn 65.36 10 *i* P **P 22 18 39.2 -0.1**
DAG IAmb IAmb 22 18 40.6
comp=Z,156nm,0.9s
DAG Danmarks Havn 65.36 10 *i* P **P'P'df 22 47 14.0 -5.5**
BFO Black Forest 65.39 44 P **P 22 18 39.8 -0.3**
BFO Black Forest 65.39 44 P **P 22 18 39.8 -0.3**
BFO pmax pmax
comp=Z,60nm,1.0s
BFO Black Forest 65.39 44 P **P 22 18 39.9 -0.3**
ASK Askoy 65.43 30 *eP* **P 22 18 40.3 +0.3**
ASK IAmb IAmb 22 18 40.9
comp=Z,155nm,0.8s
SLE Schleitheim 65.46 44 P **P 22 18 40.7 +0.1**
BER Bergen 65.48 30 *eP* **P 22 18 41.0 +0.6**
BER IAmb IAmb 22 18 41.7
comp=Z,100nm,0.9s
PGF Pioggiola 65.55 50 *eP* **P 22 18 40.9 -0.5**
PGF pmax pmax
comp=Z,146nm,0.9s
FOO Floro 65.61 29 *eP* **P 22 18 42.1 +0.9**
FOO IAmb IAmb 22 18 42.8
comp=Z,71nm,0.7s
WTLY Watson Lake, Y 65.63 330 P **P 22 18 42.5 +1.0**
baz=102,SNR=22
TGTN Hyland Airport 65.69 331 P **P 22 18 43.4 +1.6**
baz=103,SNR=239
TGTN S **S 22 27 17.5 +2.2**
baz=103
T35M Bob Quinn 65.79 326 P **P 22 18 43.6 +1.1**
baz=100,SNR=35
BLS5 Blasjo 65.83 31 *eP* **P 22 18 43.6 +0.9**
BLS5 IAmb IAmb 22 18 44.3
comp=Z,177nm,0.7s
KEST Kesra 65.84 57 P **P 22 18 44.9 +1.6**
comp=Z,290nm,0.8s,baz=282,slow=2.8,SNR=278
KEST PKP2bc 22 47 22.6
comp=Z,7.1nm,1.1s,baz=118,slow=5.5,SNR=5.5
comp=Z,290nm,0.8s
KEST Kesra 65.84 57 P **P 22 18 44.6 +1.3**
DLBC Dease Lake 65.92 328 P **P 22 18 44.6 +1.2**
comp=Z,194nm,0.8s,baz=87,slow=4.4,SNR=254
DLBC LR LR 22 47 09.3
comp=Z,643nm,20.7s,baz=91,slow=35
comp=Z,194nm,0.8s
DLBC Dease Lake 65.92 328 P **P 22 18 44.4 +1.0**
baz=100,SNR=89
TUE Stuetta 65.96 46 P **P 22 18 44.5 +0.4**
TUE IAmb IAmb 22 18 46.2
comp=Z,133nm,1.0s
MSSA Maissana 65.98 48 P **P 22 18 43.8 -0.2**
MSSA IAmb IAmb 22 18 46.0
comp=Z,82nm,1.0s
STU Stuttgart 66.00 43 P **P 22 18 44.2 +0.2**
STU Stuttgart 66.00 43 P **P 22 18 44.2 +0.2**
STU pmax pmax
comp=Z,223nm,0.9s
ODD1 Odda 66.01 31 *eP* **P 22 18 45.0 +1.1**
ODD1 IAmb IAmb 22 18 45.3
comp=Z,104nm,0.9s
SNART Snartemo 66.01 33 *eP* **P 22 18 44.5 +0.7**
SNART IAmb IAmb 22 18 45.3
comp=Z,549nm,1.2s
HYA Hoyanger 66.05 29 *eP* **P 22 18 45.0 +1.0**
HYA IAmb IAmb 22 18 45.8
comp=Z,186nm,0.8s
V35K Ketchikan 66.30 324 P **P 22 18 46.4 +0.7**
baz=98
C36M Paulatuk 66.31 340 P **P 22 18 43.9 -1.6**
baz=111,SNR=6.2
DAVOX Davos/Dischmat 66.34 45 P **P 22 18 47.5 +1.1**
comp=Z,120nm,0.7s,baz=263,slow=6.5,SNR=161
DAVOX PcP **PcP 22 19 15.6 +0.5**
comp=Z,24nm,0.8s,baz=317,slow=2.8,SNR=4.5
DAVOX S **S 22 27 20.7 -3.1**
comp=Z,0.6nm,0.5s,baz=191,slow=19,SNR=1.4
comp=Z,120nm,0.7s

DAVA Damuels 66.37 45 *eP* **P 22 18 47.0 +0.4**
comp=Z,248nm,0.8s,SNR=107
S34M Telegraph Cree 66.41 327 P **P 22 18 47.8 +1.3**
baz=99,SNR=63
DIB Dawson Inlet, 66.55 322 P **P 22 18 48.0 +0.6**
DIB IAmb IAmb 22 18 49.1
comp=Z,72nm,0.7s
PRMA PARMA 66.57 48 P **P 22 18 48.0 +0.4**
R33M Jennings River 66.57 329 P **P 22 18 48.9 +1.3**
baz=100,SNR=134
FUORN Ofenpass-Fuorn 66.60 46 P **P 22 18 49.0 +0.8**
FUORN IAmb IAmb 22 18 50.3
comp=Z,175nm,1.0s
VLC Villacollemand 66.60 48 P **P 22 18 47.6 -0.3**
VLC IAmb IAmb 22 18 48.8
comp=Z,130nm,1.1s
AKN Aaknes 66.64 28 *eP* **P 22 18 49.0 +1.1**
AKN IAmb IAmb 22 18 49.8
comp=Z,155nm,1.0s
HOMB Homborsund 66.68 33 *eP* **P 22 18 49.2 +1.1**
HOMB IAmb IAmb 22 18 49.9
comp=Z,179nm,0.9s
EFI East Falkland 66.69 178 P **P 22 18 48.7 +0.6**
EFI East Falkland 66.69 178 *de*P **P 22 18 48.3 +0.2**
EFI pmax pmax
comp=Z,111nm,1.1s
EFI East Falkland 66.69 178 P **P 22 18 48.5 +0.5**
EFI pP **pP 22 19 22.8 -1.7**
SALO Salr 66.74 47 P **P 22 18 49.1 +0.3**
SALO IAmb IAmb 22 18 51.9
comp=Z,68nm,0.7s
MUD Monsted U'grnd 66.77 35 *i* P **P 22 18 49.9 +1.2**
MUD IAmb IAmb 22 18 50.4
comp=Z,392nm,1.4s
WRAK Wrangell Islan 66.85 325 P **P 22 18 49.8 +0.6**
WRAK IAmb IAmb 22 18 51.0
comp=Z,80nm,0.9s
WRAK Wrangell Islan 66.85 325 P **P 22 18 49.9 +0.7**
baz=97,SNR=7.9
WRAK S **S 22 27 28.8 -0.4**
baz=97
GO09 Cerro Castillo 66.89 187 P **P 22 18 49.9 +0.5**
CASP Castiglione de 66.93 50 P **P 22 18 50.4 +0.3**
CASP IAmb IAmb 22 18 51.7
comp=Z,173nm,0.9s
FETA Feichten 66.93 45 *eP* **P 22 18 50.6 +0.4**
comp=Z,375nm,1.0s,SNR=165
FETA Feichten 66.93 45 *eP* **P'P'df 22 47 18.0 -0.5**
comp=Z,14nm,1.7s
RETA Reutte 66.97 45 *eP* **P 22 18 50.5 +0.2**
comp=Z,169nm,1.1s,SNR=72
RETA Reutte 66.97 45 *eP* **P'P'df 22 47 19.1 +0.7**
comp=Z,8.0nm,1.3s
SKAR Skarslia 66.97 30 *eP* **P 22 18 51.1 +1.1**
SKAR IAmb IAmb 22 18 52.0
comp=Z,166nm,1.0s
MOL Molde 66.98 28 *eP* **P 22 18 49.9 0.0**
MOL IAmb IAmb 22 18 50.7
comp=Z,103nm,1.0s
ZCCA Zocca 67.03 48 P **P 22 18 51.2 +0.5**
ZCCA IAmb IAmb 22 18 52.4
comp=Z,97nm,0.7s
Q32M Nakina River 67.17 328 P **P 22 18 52.7 +1.3**
baz=98,SNR=45
CRAG Craig 67.17 324 P **P 22 18 52.1 +0.8**
CRAG IAmb IAmb 22 18 59.3
comp=Z,198nm,1.4s
CRAG Craig 67.17 324 P **P 22 18 52.0 +0.8**
baz=96
MOTA Moosalm 67.20 45 *eP* **P 22 18 51.8 0.0**
comp=Z,135nm,1.0s,SNR=56
U33K Whale Pass 67.25 325 P **P 22 18 52.2 +0.5**
baz=97
SQTA Sankt Quirin 67.27 45 *eP* **P 22 18 52.4 +0.2**
comp=Z,183nm,0.9s,SNR=80
SQTA Sankt Quirin 67.27 45 *eP* **P'P'df 22 47 18.5 +0.6**
comp=Z,12nm,1.3s
MMPY Sheldon Lake, 67.30 332 P **P 22 18 52.9 +0.9**
baz=101,SNR=30
MG05 Puerto Natales 67.31 187 P **P 22 18 53.0 +1.0**
MG05 IAmb IAmb 22 18 54.9
comp=Z,127nm,0.9s
ALE Alert 67.33 360 P **P 22 18 51.3 -0.5**
GRFO Grafenberg 67.38 42 P **P 22 18 52.9 +0.2**
GRFO IAmb IAmb 22 18 54.4
comp=Z,170nm,1.2s
GRFO Grafenberg 67.38 42 P **P 22 18 52.9 +0.2**
GRFO pmax pmax
comp=Z,171nm,1.2s
GRA1 Grafenberg Arr 67.38 42 P **P 22 18 53.0 +0.2**
GRA1 IAmb IAmb 22 18 54.5
comp=Z,150nm,1.1s
GRF Grafenberg Arr 67.38 42 P **P 22 18 53.0 +0.2**
GRF pmax pmax
comp=Z,150nm,1.1s
KONO Kongsberg 67.45 31 P **P 22 18 53.4 +0.5**
KONO IAmb IAmb 22 18 54.9
comp=Z,116nm,1.1s
KONO Kongsberg 67.45 31 *d i* P **P 22 18 53.2 +0.3**
KONO pmax pmax
comp=Z,89nm,1.0s
KONO Kongsberg 67.45 31 *eP* **P 22 18 53.9 +0.9**
KONO IAmb IAmb 22 18 54.7
comp=Z,115nm,1.1s
KONO Kongsberg 67.45 31 P **P 22 18 53.6 +0.7**
WATA Walderalm 67.52 45 *eP* **P 22 18 53.5 -0.3**
comp=Z,74nm,1.0s,SNR=34
WATA Walderalm 67.52 45 *eP* **P'P'df 22 47 17.3 -0.2**
comp=Z,8.0nm,1.2s
CTI Castel Tesino 67.54 46 P **P 22 18 54.1 +0.1**
CTI IAmb IAmb 22 18 55.1
comp=Z,122nm,0.8s
CTI Castel Tesino 67.54 46 P **P 22 18 54.1 +0.1**
CTI pmax pmax
comp=Z,121nm,0.8s
TEOL Teolo 67.54 47 P **P 22 18 53.8 0.0**
TEOL IAmb IAmb 22 18 54.9
comp=Z,135nm,0.7s
WTTA Wattenberg 67.56 45 *eP* **P 22 18 54.1 -0.1**
comp=Z,85nm,0.8s,SNR=45
DOMB Dombas 67.57 29 *eP* **P 22 18 54.2 +0.5**
DOMB IAmb IAmb 22 18 55.7
comp=Z,152nm,1.3s
A36M Sachs Harbour 67.61 342 P **P 22 18 53.6 -0.1**
A36M IAmb IAmb 22 18 54.4
comp=Z,141nm,0.8s
A36M Sachs Harbour 67.61 342 P **P 22 18 53.5 -0.1**
baz=111,SNR=5.5
P33M Teslin, Yukon 67.63 329 P **P 22 18 54.8 +0.6**
baz=99,SNR=81
N32M Quiet Lake 67.90 330 P **P 22 18 56.9 +1.1**
baz=99
P32M Atlin 67.99 329 P **P 22 18 57.2 +0.8**
baz=98,SNR=22
P32M S **S 22 27 44.8 +1.9**
baz=98
OSL Oslo 68.05 31 *eP* **P 22 18 57.8 +1.1**
OSL IAmb IAmb 22 18 58.4
comp=Z,425nm,1.9s
MG02 Cerro Sombrero 68.05 185 P **P 22 18 57.2 +0.5**
MG02 IAmb IAmb 22 19 14.3
comp=Z,121nm,1.1s
ABTA Abfaltersbach 68.15 45 *eP* **P 22 18 57.5 -0.2**
comp=Z,134nm,0.9s,SNR=81
ABTA Abfaltersbach 68.15 45 *eP* **P'P'df 22 47 15.5 -0.9**
comp=Z,8.7nm,1.2s
MURB Monte Urbino 68.15 49 P **P 22 18 57.2 -0.6**
MURB IAmb IAmb 22 18 58.2
comp=Z,194nm,0.9s
JIS Juneau Island 68.17 327 P **P 22 18 58.4 +0.9**
FARO Faro, Yukon 68.19 331 P **P 22 18 58.7 +1.1**
FARO Faro, Yukon 68.19 331 P **P 22 18 58.5 +0.9**
baz=99,SNR=63
FARO S **S 22 27 46.5 +1.4**
baz=99
S32K Killisnoo 68.19 326 P **P 22 18 58.8 +1.2**
baz=96,SNR=22
CESX Cesi 68.20 50 P **P 22 18 58.3 +0.3**
CESX IAmb IAmb 22 18 59.7
comp=Z,179nm,1.1s
NKC Novy Kostel 68.20 42 *eP* **P 22 18 58.4 +0.5**
NKC *eS* **S 22 27 39.2 -6.4**
NKC MLR MLR
comp=Z,600nm,20.4s
NKC Novy Kostel 68.20 42 *eP* **P 22 18 58.4 +0.5**
NKC *eS* **S 22 27 39.2 -6.4**

NKC AMS AMS 22 46 40.0
comp=Z,600nm,20.4s
NBO00 NORSAR Array S 68.22 30 P **P 22 18 59.1 +1.3**
R32K Eaglecrest 68.24 327 P **P 22 18 59.0 +1.0**
baz=96,SNR=12
STAL STALIGIAL 68.28 46 P **P 22 18 58.4 -0.1**
STAL IAmb IAmb 22 18 59.5
comp=Z,115nm,1.1s
TBLU Trondheim 68.32 28 *eP* **P 22 18 59.1 +0.8**
TBLU IAmb IAmb 22 18 59.8
comp=Z,133nm,0.9s
CLUD Cludinico 68.40 46 P **P 22 18 59.0 -0.2**
NB2 NORSAR Subarra 68.44 30 P **P 22 19 00.1 +0.9**
comp=Z,206nm,0.9s,baz=261,slow=6.5
NB2 NORSAR Subarra 68.44 30 P **P 22 19 00.0 +0.9**
NB2 pmax pmax
comp=Z,63nm,1.0s
NB2 NORSAR Subarra 68.44 30 P **P 22 19 00.1 +0.9**
baz=261,slow=6.5
NOA NORSAR Array B 68.44 30 P **P 22 19 00.3 +1.2**
comp=Z,98nm,0.8s,baz=262,slow=6.3,SNR=199
NOA PcP **PcP 22 19 24.1 +0.7**
comp=Z,14nm,0.8s,baz=258,slow=4.3,SNR=6.6
NOA LR LR 22 43 36.8
comp=Z,245nm,21.5s,baz=260,slow=31
NOA P4KPbc 22 55 37.7
comp=Z,0.4nm,0.4s,baz=342,slow=20,SNR=3.3
comp=Z,98nm,0.8s
COP Copenhagen 68.51 36 *i* P **P 22 19 00.2 +0.6**
COP IAmb IAmb 22 19 00.7
comp=Z,160nm,0.9s
SIT Sitka 68.55 326 P **P 22 19 00.8 +1.0**
SIT IAmb IAmb 22 19 02.0
comp=Z,125nm,0.8s
SIT Sitka 68.55 326 P **P 22 19 00.8 +1.0**
SIT pmax pmax
comp=Z,125nm,0.8s
SIT Sitka 68.55 326 P **P 22 19 00.8 +1.0**
baz=95,SNR=9.3
NC602 NORSAR Array S 68.56 30 *eP* **P 22 19 01.0 +1.2**
NC602 IAmb IAmb 22 19 02.1
comp=Z,170nm,0.9s
NORES NORESS Array B 68.56 30 P **P 22 19 00.9 +1.1**
NRCA Norcia 68.59 50 P **P 22 19 00.0 -0.5**
CLL Collm 68.59 41 P **P 22 19 00.7 +0.5**
CLL IAmb IAmb 22 19 01.9
comp=Z,214nm,1.1s
CLL Collm 68.59 41 ‖ *i P* **P 22 19 00.6 +0.4**
CLL *e**PP **pP 22 19 36.0 -1.4**
CLL *eS* **S 22 27 53.0 +2.8**
CLL pmax pmax
comp=Z,191nm,1.0s
CLL Collm 68.59 41 ‖ *i P* **P 22 19 00.6 +0.4**
comp=Z,191nm,1.0s
CLL *e*pP **pP 22 19 36.0 -1.4**
CLL *e*sP **sP 22 19 53.0 -1.1**
CLL *e*(PP) 22 21 28.0
CLL *eS* **S 22 27 53.0 +2.8**
CLL *e*PS **PnS 22 28 36.0 -1.9**
CLL *e*SS SS 22 32 06.0 -11
CLL *e*SSS SSS 22 35 30.0
CLL *e*SSSS 22 37 12.0
CLL *ex* x 22 47 10.0
CLL *e*PKPPKPdf **P'P'df 22 47 16.0 +0.7**
GO10 Punta Arenas 68.59 186 P **P 22 19 01.5 +1.4**
M31M Drury Creek, Y 68.67 331 P **P 22 19 01.8 +1.2**
baz=98,SNR=216
M31M S **S 22 27 52.6 +1.8**
baz=98
WHY Whitehorse 68.70 330 P **P 22 19 01.4 +0.5**
WHY Whitehorse 68.70 330 P **P 22 19 01.1 +0.2**
baz=97,SNR=26
WHY S **S 22 27 50.0 -1.4**
baz=97
KBA Koelnbreinsper 68.72 45 *eP* **P 22 19 01.0 -0.4**
comp=Z,169nm,0.9s,SNR=112
KBA Koelnbreinsper 68.72 45 *eP* **P'P'df 22 47 11.9 -3.6**
comp=Z,6.3nm,1.6s
SKAG Skagway 68.79 328 P **P 22 19 02.0 +0.7**
SKAG IAmb IAmb 22 19 03.3
comp=Z,257nm,1.9s
SKAG Skagway 68.79 328 P **P 22 19 02.3 +1.0**
baz=96,SNR=10.0
AQU L'Aquila 68.81 50 P **P 22 19 02.6 +0.7**
AQU IAmb IAmb 22 19 18.4
comp=Z,120nm,1.0s
AQU L'Aquila 68.81 50 P **P 22 19 02.6 +0.7**
AQU pmax pmax
comp=Z,120nm,1.0s
CAMP Campotosto 68.81 50 P **P 22 19 02.7 +0.7**
CAMP IAmb IAmb 22 19 03.3
comp=Z,97nm,1.0s
PRED Cave del Predi 68.87 46 P **P 22 19 02.5 +0.3**
KHC Kasperske Hory 68.90 43 P **P 22 19 02.5 +0.2**
KHC IAmb IAmb 22 19 04.2
comp=Z,322nm,1.8s
KHC Kasperske Hory 68.90 43 P **P 22 19 02.5 +0.2**
KHC pmax pmax
comp=Z,323nm,1.8s
KHC Kasperske Hory 68.90 43 *eP* **P 22 19 02.5 +0.2**
KHC *e*PCP **PcP 22 19 26.5 +0.9**
KHC *eS* **S 22 27 52.3 -1.7**
KHC AMS AMS 22 45 50.0
comp=Z,300nm,17.5s
KHC *ex* x 22 47 07.5
MYKA Terra Mystica 68.92 46 *eP* **P 22 19 02.3 -0.2**
comp=Z,151nm,0.8s,SNR=77
MYKA Terra Mystica 68.92 46 *eP* **P'P'df 22 47 14.6 -0.4**
comp=Z,13nm,1.7s
BIOA Bad Ischl, Aus 68.92 44 *eP* **P 22 19 02.2 -0.3**
comp=Z,80nm,1.0s,SNR=45
RGN Rugen 68.94 37 P **P 22 19 03.1 +0.8**
RGN IAmb IAmb 22 19 04.4
comp=Z,224nm,1.0s
NOR Nord 68.97 6 *i* P **P 22 19 02.5 +0.4**
NOR IAmb IAmb 22 19 02.5
comp=Z,95nm,0.8s
GEC2 GERESS Array S 68.98 43 P **P 22 19 03.0 +0.2**
GEC2 IAmb IAmb 22 19 04.2
comp=Z,150nm,1.2s
GERES GERESS Array B 68.98 43 P **P 22 19 03.0 +0.2**
comp=Z,52nm,0.9s,baz=251,slow=12,SNR=218
GERES PKPPKP 22 47 09.1
comp=Z,1.1nm,0.8s,baz=122,slow=9.3,SNR=6.2
comp=Z,52nm,0.9s
GERES GERESS Array B 68.98 43 P **P 22 19 03.0 +0.2**
S31K Pelican 69.12 327 P **P 22 19 04.7 +1.4**
baz=95,SNR=21
RUE Ruedersdorf 69.12 39 *eP* **P 22 19 04.0 +0.6**
SKDS Skadanscina 69.19 47 ‖ *i P* **P 22 19 03.8 -0.3**
INTR Introdacqua 69.19 50 P **P 22 19 04.4 +0.1**
JAVS Javornik 69.22 46 *eP* **P 22 19 04.6 +0.2**
JAVS *eS* **S 22 27 59.4 +1.4**
N31M Braeburn, Yuko 69.23 330 P **P 22 19 04.9 +0.9**
baz=96,SNR=84
F31M Tsiigehtchic 69.24 337 P **P 22 19 03.4 -0.5**
baz=100,SNR=53
F31M S **S 22 27 54.9 -2.2**
baz=100
NSS Namsos 69.27 26 *eP* **P 22 19 05.0 +0.8**
NSS IAmb IAmb 22 19 05.2
comp=Z,81nm,0.9s
O30N Mendenhall 69.31 330 P **P 22 19 05.6 +1.0**
baz=96,SNR=71
PLBC Pleasant Camp 69.32 328 P **P 22 19 05.8 +1.2**
baz=95,SNR=9.4
INK Inuvik 69.32 338 P **P 22 19 03.9 -0.5**
comp=Z,300nm,0.8s,baz=89,slow=6.8,SNR=433
INK S **S 22 27 55.6 -2.5**
comp=Z,7.8nm,1.1s,baz=267,slow=26,SNR=23
comp=Z,300nm,0.8s
INK Inuvik 69.32 338 P **P 22 19 04.1 -0.3**
INK Inuvik 69.32 338 P **P 22 19 04.1 -0.3**
INK pmax pmax
comp=Z,276nm,0.8s
INK Inuvik 69.32 338 P **P 22 19 04.2 -0.3**
baz=101,SNR=203
INK S **S 22 27 55.8 -2.3**
baz=101
MOA Molln 69.35 44 *eP* **P 22 19 04.8 -0.2**
comp=Z,85nm,1.0s,SNR=42
DEL Delary 69.37 35 *eP* **P 22 19 04.7 -0.2**
CKRC Cesky Krumlov 69.38 43 *eP* **P 22 19 05.0 -0.2**
CEY Cerknica 69.48 46 ‖ *i P* **P 22 19 05.9 0.0**
MAYO Mayo, Yukon 69.53 333 P **P 22 19 07.2 +1.3**
baz=97,SNR=19

PRU Pruhonice 69.54 42 eP P 22 19 06.8 +0.7
PRU eS S 22 27 56.4 -5.0
PRU MLR MLR
comp=Z,500nm,17.1s
PRU Pruhonice 69.54 42 eP P 22 19 06.8 +0.7
PRU eS S 22 27 56.4 -5.0
PRU AMS AMS 22 49 00.0
comp=Z,500nm,17.1s
OBKA Obir 69.55 46⇓iP P 22 19 06.4 0.0
OBKA Obir 69.55 46 eP P 22 19 06.4 0.0
comp=Z,157nm,0.8s,SNR=78
HFS Hagfors 69.55 31 P P 22 19 06.1 +0.1
comp=Z,44nm,0.8s,baz=251,slow=4.5,SNR=71
HFS PcP **PcP 22 19 27.6 -0.4**
comp=Z,15nm,0.7s,baz=252,slow=1.4,SNR=4.1
comp=Z,44nm,0.8s
PVCC Panska Ves 69.56 41 eP P 22 19 06.4 +0.1
PVCC MLR MLR
comp=Z,600nm,16.5s
PVCC Panska Ves 69.56 41 eP P 22 19 06.4 +0.1
PVCC AMS AMS 22 47 10.0
comp=Z,600nm,16.5s
VNDS Vrh nad Dolski 69.66 46 eP P 22 19 07.6 +0.6
P30M Million Dollar 69.67 329 P P 22 19 07.8 +0.9
baz=95
GOPC GO Pecny, Ondr 69.70 42 eP P 22 19 07.6 +0.5
GOPC MLR MLR
comp=Z,500nm,16.5s
GOPC GO Pecny, Ondr 69.70 42 eP P 22 19 07.6 +0.5
GOPC AMS AMS 22 49 10.0
comp=Z,500nm,16.5s
PAOL Paolisi 69.73 52 P P 22 19 07.3 -0.2
PAOL IAmb IAmb 22 19 09.3
comp=Z,126nm,1.1s
RAFF Raffo Rosso 69.80 56 P P 22 19 09.0 +1.0
VAE Valguarnera 69.82 55 P P 22 19 09.0 +0.8
comp=Z,32nm,0.9s,baz=328,slow=5.0,SNR=15
VAE LR LR 22 45 21.9
comp=Z,370nm,21.3s,baz=10.0,slow=32
comp=Z,32nm,0.9s
N30M Aishikik Lake 69.86 330 P P 22 19 08.9 +1.0
baz=95,SNR=50
PDKS Podkum 69.87 46 eS S 22 28 00.2 -5.3
SOKA Soboth 69.88 45 eP P 22 19 07.9 -0.5
comp=Z,78nm,0.9s,SNR=34
SOKA Soboth 69.88 45 eP P'P'df 22 47 11.3 -2.1
comp=Z,13nm,1.3s
BSD Bornholm Skovb 69.89 36 eP P 22 19 08.0 -0.1
BSD Bornholm Skovb 69.89 36 iP P 22 19 08.5 +0.4
BSD IAmb IAmb 22 19 09.3
comp=Z,78nm,0.9s
PERS Pernice 69.94 46 eP P 22 19 08.4 -0.3
STOK Stokkvaagen 69.96 24 eP P 22 19 09.7 +1.4
HYT Haines Junctio 70.00 330 P P 22 19 10.1 +1.2
baz=95,SNR=56
HYT S S 22 28 06.5 -0.1
baz=95
KONS Konsvik 70.02 24 eP P 22 19 10.1 +1.4
KONS IAmb IAmb 22 19 10.9
comp=Z,267nm,1.4s
WDD Wied Dalam 70.04 57 P P 22 19 10.1 +0.7
WDD IAmb IAmb 22 19 11.5
comp=Z,167nm,1.0s
BOJS Bojanci 70.06 47⇓iP P 22 19 09.6 +0.2
BOJS Bojanci 70.06 47 eP P 22 19 09.8 +0.4
G30M tAoh Zraii Nji 70.12 336 P P 22 19 08.8 -0.7
baz=98,SNR=60
G30M S S 22 28 05.4 -2.3
baz=98
TREC Trest 70.16 43 eP P 22 19 10.5 +0.6
TREC MLR MLR
comp=Z,200nm,17.2s
TREC Trest 70.16 43 eP P 22 19 10.5 +0.6
TREC AMS AMS 22 48 50.0
comp=Z,200nm,17.2s
CRES Cresnjev 70.20 46⇓iP P 22 19 10.4 +0.2
ARSA Arzberg 70.21 45 eP P 22 19 10.0 -0.3
comp=Z,115nm,0.8s,SNR=30
EPYK Eagle Plains 70.23 336 P P 22 19 09.9 -0.2
baz=97,SNR=42
EPYK S S 22 28 07.4 -1.6
baz=97
K29M Barlow Dome 70.28 333 P P 22 19 11.5 +0.9
baz=96,SNR=185
K29M S S 22 28 10.6 +0.8
baz=96
LOF Lofoten 70.41 23 eP P 22 19 11.9 +0.9
LOF IAmb IAmb 22 19 12.6
comp=Z,138nm,0.9s
CONA Conrad Observa 70.42 44 iP P 22 19 11.6 0.0
comp=Z,90nm,1.1s,SNR=66
YUK6 Outpost Mounta 70.43 330 P P 22 19 13.0 +1.3
baz=94,SNR=34
YUK6 S S 22 28 12.6 +0.8
baz=94
L29M L29M 70.49 332 P P 22 19 12.3 +0.6
baz=95,SNR=118
UPC Upice 70.49 41 eP P 22 19 12.4 +0.5
UPC eS S 22 28 05.7 -6.7
UPC MLR MLR
comp=Z,700nm,17.5s
UPC Upice 70.49 41 eP P 22 19 12.4 +0.5
UPC eS S 22 28 05.7 -6.7
UPC AMS AMS 22 48 10.0
comp=Z,700nm,17.5s
O29M Mount Kennedy 70.49 329 P P 22 19 13.0 +1.1
baz=94,SNR=40
MOR8 Moi Rana 70.51 25 eP P 22 19 13.4 +1.7
MOR8 IAmb IAmb 22 19 13.7
comp=Z,61nm,0.8s
CHVC Chvalec 70.51 41 eP P 22 19 12.3 +0.2
CHVC AMS AMS 22 48 10.0
comp=Z,700nm,19.0s
SGRT San Giovanni R 70.58 51 P P 22 19 11.7 -1.0
M29M Somme Creek 70.58 331 P P 22 19 13.1 +0.7
baz=94,SNR=101
M29M S S 22 28 12.6 -0.7
baz=94
YUK4 Talbot Arm 70.59 330 P P 22 19 13.4 +0.8
baz=94,SNR=79
OSTC Ostas 70.61 41 eP P 22 19 13.1 +0.4
OSTC ex x 22 28 06.6
OSTC AMS AMS 22 48 00.0
comp=Z,600nm,17.9s
J29M Klondike Camp 70.64 333 P P 22 19 13.9 +1.2
baz=95,SNR=9.4
J29M S S 22 28 16.1 +2.3
baz=95
KSP Ksiaz 70.66 41 iP P 22 19 13.5 +0.6
KSP eS S 22 28 15.8 +1.4
KSP eL L 22 48 50.5
comp=Z,549nm,17.5s
DPC Dobruska-Polom 70.69 42 eP P 22 19 13.8 +0.6
DPC eS S 22 28 09.1 -5.7
DPC MLR MLR
comp=Z,500nm,17.9s
DPC Dobruska-Polom 70.69 42 eP P 22 19 13.8 +0.6
DPC eS S 22 28 09.1 -5.7
DPC AMS AMS 22 48 00.0
comp=Z,500nm,17.9s
RONA Rosalia, Austr 70.72 44 eP P 22 19 13.4 0.0
comp=Z,90nm,0.9s,SNR=55
CUC Castrocucco 70.74 53 P P 22 19 13.6 -0.2
CUC IAmb IAmb 22 19 15.2
comp=Z,88nm,0.9s
KRUC Moravsky 70.75 43⇓iP P 22 19 13.6 +0.1
I29M Ogilvie Camp, 70.77 334 P P 22 19 13.4 +0.1
baz=96,SNR=98
I29M S S 22 28 14.7 -0.5
baz=96
PNL Peninsula 70.87 328 P P 22 19 14.8 +0.7
baz=92,SNR=7.3
PNL S S 22 28 17.3 +0.7
baz=92
VRAC Vranov 70.88 43⇑P P 22 19 15.5 +1.2
VRAC Vranov 70.88 43 P P 22 19 14.7 +0.4
comp=Z,117nm,0.8s,baz=274,slow=6.3,SNR=185
comp=Z,117nm,0.8s
VRAC Vranov 70.88 43⇓iP P 22 19 14.5 +0.2
SOP Sopron 70.90 44 P P 22 19 15.0 +0.6
SOP Sopron 70.90 44 P P 22 19 15.1 +0.6
FAUS Fauske 70.98 23 eP P 22 19 15.7 +1.2
FAUS IAmb IAmb 22 19 16.5
comp=Z,200nm,0.9s
KRLC Kraliky 70.98 42 eP P 22 19 15.7 +0.7
KRLC eS SKSac 22 28 58.4 -4.4
KRLC MLR MLR
comp=Z,400nm,15.4s
KRLC Kraliky 70.98 42 eP P 22 19 15.7 +0.7
KRLC ex x 22 28 58.4
KRLC AMS AMS 22 48 10.0
comp=Z,400nm,15.4s
VIKU Vikbolandet 70.99 33 eP P 22 19 15.2 +0.5
STEI Steigen 71.02 23 eP P 22 19 15.7 +0.9
STEI IAmb IAmb 22 19 16.5
comp=Z,144nm,0.7s
DAWY Dawson 71.12 333 P P 22 19 16.4 +0.9
DAWY Dawson 71.12 333 P P 22 19 16.2 +0.7
baz=94,SNR=115
DAWY S S 22 28 21.1 +1.7
baz=94
YUK8 Steele Glacier 71.13 330 P P 22 19 16.5 +0.6
baz=93,SNR=27
GKP Gorka Klasztor 71.23 38 iP P 22 19 17.0 +0.7
GKP eL L 22 48 46.5
comp=Z,465nm,17.3s
GKP Gorka Klasztor 71.23 38 eP P 22 19 17.1 +0.9
ZST Bratislava 71.25 44 eP P 22 19 17.0 +0.5
ZST pmax pmax
comp=Z,508nm,1.1s
A051A Mrakovica 71.25 47⇓iP P 22 19 17.0 +0.3
O28M Mount Upton 71.31 329 P P 22 19 18.1 +1.0
baz=92,SNR=38
PINM Pinnacle 71.32 329 P P 22 19 17.8 +0.9
baz=92,SNR=12
PCA Pinnacle 71.32 329 P P 22 19 17.7 +0.9
PCA IAmb IAmb 22 19 19.1
comp=Z,173nm,1.0s
MODS Modra-Piesok 71.36 44 eP P 22 19 17.8 +0.6
MODS pmax pmax
comp=Z,639nm,1.0s
MATE Matera 71.38 52⇑P P 22 19 17.0 -0.4
MGRS Mrkonjic Grad 71.41 48⇓iP P 22 19 18.6 +1.0
EGYH Egyhazaskeszo 71.43 45 P P 22 19 18.5 +0.8
SMOL Smolenice 71.45 43 eP P 22 19 18.4 +0.6
SMOL pmax pmax
comp=Z,66nm,1.0s
BLY Banja Luka 71.46 47⇓iP P 22 19 17.8 -0.1
YUK3 Moose Creek 71.48 331 P P 22 19 18.6 +0.6
baz=92,SNR=47
MORC Moravsky Berou 71.48 42⇑P P 22 19 19.3 +1.4
MORC Moravsky Berou 71.48 42 P P 22 19 18.8 +0.8
MORC IAmb IAmb 22 19 20.0
comp=Z,130nm,1.0s
MORC Moravsky Berou 71.48 42 P P 22 19 18.8 +0.8
MORC pmax pmax
comp=Z,130nm,1.0s
MORC Moravsky Berou 71.48 42⇓iP P 22 19 18.5 +0.5
TIP Timpagrande 71.53 53⇑P P 22 19 18.6 +0.1
TIP Timpagrande 71.53 53 P P 22 19 17.4 -1.1
MPLH Magyarpolny 71.58 45 P P 22 19 19.2 +0.7
JAVC Velka Javorina 71.60 43⇓iP P 22 19 20.0 +1.3
A052A Srbac 71.67 47⇓iP P 22 19 19.5 +0.4
MAUC Maruska 71.68 43 eP P 22 19 20.7 +1.5
MAUC AMS AMS 22 52 10.0
comp=Z,600nm,15.1s
BVCY Beaver Creek 71.70 331 P P 22 19 19.8 +0.8
baz=92,SNR=21
BVCY S S 22 28 27.7 +1.8
baz=92
TIH Tihany 71.84 45 P P 22 19 21.0 +1.0
OKC Ostrava-Krasne 71.87 42 eP P 22 19 21.0 +0.8
OKC MLR MLR
comp=Z,300nm,15.1s
OKC Ostrava-Krasne 71.87 42 eP P 22 19 21.0 +0.8
OKC AMS AMS 22 49 50.0
comp=Z,300nm,15.1s
CTG Chitna Glacier 71.88 330 P P 22 19 21.6 +1.3
baz=91,SNR=70
EGAK Eagle 71.93 334 P P 22 19 20.9 +0.6
EGAK Eagle 71.93 334 P P 22 19 20.8 +0.5
baz=93,SNR=176
STON Ston 71.95 49⇓iP P 22 19 19.6 -1.2
KBS Kingsbay 71.99 11 P P 22 19 21.6 +1.2
KBS IAmb IAmb 22 19 23.2
comp=Z,183nm,0.9s
KBS Kingsbay 71.99 11 diP P 22 19 21.9 +1.5
KBS pmax pmax
comp=Z,161nm,1.0s
KBS Kingsbay 71.99 11 eP P 22 19 22.2 +1.9
KBS IAmb IAmb 22 19 23.0
comp=Z,181nm,0.9s
KBS Kingsbay 71.99 11 iP P 22 19 22.3 +1.9
KBS Kingsbay 71.99 11 P P 22 19 21.9 +1.5
KOVH Kovagotottos 72.03 46 P P 22 19 22.2 +1.0
BARN Barnard Glacie 72.04 330 P P 22 19 22.7 +1.5
BARN IAmb IAmb 22 19 24.7
comp=Z,119nm,0.8s
CSKK Cskako 72.06 45 P P 22 19 22.3 +0.9
SRO Srobarova 72.08 44 eP P 22 19 22.3 +0.8
SRO pmax pmax
comp=Z,149nm,0.9s
BCAR Beaver Creek A 72.14 332 P P 22 19 22.7 +1.0
H27K Steamboat Moun 72.16 335 P P 22 19 21.5 -0.2
baz=93,SNR=71
H27K S S 22 28 27.7 -3.4
baz=93
I27K Kandik River 72.16 335 P P 22 19 21.8 +0.1
baz=92,SNR=178
I27K S S 22 28 29.8 -1.5
baz=92
L27K Beaver Creek, 72.16 332 P P 22 19 22.6 +0.9
baz=92,SNR=149
L27K S S 22 28 33.3 +2.0
baz=92
M27K Edge Creek, AK 72.17 331 P P 22 19 23.2 +1.3
M27K IAmb IAmb 22 19 24.2
comp=Z,225nm,1.0s
M27K Edge Creek, AK 72.17 331 P P 22 19 22.9 +1.0
baz=91,SNR=69
M27K S S 22 28 31.8 +0.2
baz=91
MESA MESA 72.17 329 P P 22 19 23.4 +1.3
MESA IAmb IAmb 22 19 24.5
comp=Z,120nm,0.8s
MESA MESA 72.17 329 P P 22 19 23.3 +1.3
baz=90,SNR=8.7
G27K Doyon Strip 72.24 336 P P 22 19 21.9 -0.2
baz=93,SNR=185
G27K S S 22 28 28.3 -3.7
baz=93
E27K Coleen River 72.29 337 P P 22 19 22.0 -0.4
baz=93,SNR=82
E27K S S 22 28 28.6 -3.9
baz=93
K27K Chicken 72.30 333 P P 22 19 23.6 +1.1
baz=92
HSPB Hornsund (broa 72.35 13 iP P 22 19 24.5 +1.9
HSPB eS SKiKP 22 28 38.7 -3.4
ISLE Juniper Island 72.37 329 P P 22 19 23.8 +0.7
ISLE IAmb IAmb 22 19 25.2
comp=Z,309nm,1.6s
VYHS Vyhne 72.39 43 eP P 22 19 23.7 +0.3
VYHS pmax pmax
comp=Z,637nm,2.2s
MORH Mrgy, Hungar 72.40 46⇑P P 22 19 24.3 +0.9
MORH Mrgy, Hungar 72.40 46 P P 22 19 24.1 +0.7
HOPE Hope Point 72.45 165 P P 22 19 25.7 +2.4
HOPE IAmb IAmb 22 19 26.4
comp=Z,141nm,1.2s
HOPE Hope Point 72.45 165 P P 22 19 25.7 +2.4
HOPE pmax pmax
comp=Z,141nm,1.2s
TRO Tromso 72.50 21 eP P 22 19 24.6 +1.0
TRO IAmb IAmb 22 19 25.1
comp=Z,230nm,0.6s
BRY Bratogost 72.57 49⇓iP P 22 19 25.4 +0.8
BRY Bratogost 72.57 49⇓iP P 22 19 25.5 +0.8
HCY Herceg Novi 72.57 50⇓iP P 22 19 25.3 +0.8
HCY Herceg Novi 72.57 50 eP P 22 19 25.4 +0.9
BUD Budapest 72.58 45 P P 22 19 25.0 +0.6
BUD Budapest 72.58 45 P P 22 19 25.1 +0.6
M26K Nabesna, AK 72.69 331 P P 22 19 25.6 +0.7
baz=90,SNR=44
M26K S S 22 28 38.5 +1.1
baz=90
AAL Aland 72.70 31 eP P 22 19 24.5 -0.4
MCARA McCarthy VSAT 72.70 330 P P 22 19 26.4 +1.4
MCARA McCarthy VSAT 72.70 330 P P 22 19 26.4 +1.4
baz=90,SNR=91
MCARA S S 22 28 39.4 +2.0
baz=90
SPA0 Spitsbergen Ar 72.71 12 eP P 22 19 25.9 +1.1
SPA0 IAmb IAmb 22 19 26.7
comp=Z,264nm,1.1s
SPITS Spitsbergen Ar 72.71 12 P P 22 19 25.4 +0.7
comp=Z,185nm,0.9s,baz=224,slow=6.0,SNR=92
SPITS LR LR 22 52 27.2
comp=Z,161nm,18.0s,baz=242,slow=36
comp=Z,185nm,0.9s
SPITS Spitsbergen Ar 72.71 12 P P 22 19 25.7 +1.0
SPITS pmax pmax
comp=Z,220nm,1.0s
SPB2 Spitsbergen Ar 72.71 12 P P 22 19 25.8 +1.0
SPB2 IAmb IAmb 22 19 26.9
comp=Z,151nm,0.8s
SCTE Santa Cesarea 72.77 52 P P 22 19 26.2 +0.5
SCTE IAmb IAmb 22 20 35.2
comp=Z,160nm,1.1s
I26K Coal Creek Min 72.80 334 P P 22 19 25.7 +0.3
baz=91
I26K S S 22 28 36.5 -1.8
baz=91
UPM Unac-Piva 72.81 49⇓iP P 22 19 27.2 +1.0
UPM Unac-Piva 72.81 49 eP P 22 19 26.8 +0.6
L26K Log Cabin Wild 72.86 332 P P 22 19 27.0 +1.2
baz=90,SNR=142
L26K S S 22 28 39.4 +0.2
baz=90
CEME Cevo 72.88 50 eP P 22 19 27.1 +0.7
BUM Brajici-Budva 72.88 50 eP P 22 19 27.4 +1.0
NKME Niksic 72.88 49⇓iP P 22 19 27.6 +1.2
BJO1 Bjornoya 72.89 16 eP P 22 19 27.2 +1.4
BJO1 IAmb IAmb 22 19 28.0
comp=Z,132nm,0.9s
VRDI Verde Repeater 72.91 330 P P 22 19 27.0 +0.6
VRDI IAmb IAmb 22 19 28.4
comp=Z,453nm,1.7s
OJC Ojcow 72.92 42 iP P 22 19 25.4 -1.0
OJC eL L 22 49 57.6
comp=Z,575nm,17.6s
OJC Ojcow 72.92 42 P P 22 19 25.6 -0.9
OJC IAmb IAmb 22 19 26.9
comp=Z,150nm,1.0s
OJC Ojcow 72.92 42 P P 22 19 25.6 -0.9
OJC pmax pmax
comp=Z,150nm,1.0s
J26L Joseph Creek 72.96 333 P P 22 19 26.7 +0.2
baz=90,SNR=73
J26L S S 22 28 37.6 -2.8
baz=90
JETT Jettan, Norway 73.02 21 eP P 22 19 27.8 +1.1
JETT IAmb IAmb 22 19 28.6
comp=Z,444nm,0.7s
MENT Mentasta 73.03 332 P P 22 19 27.8 +0.9
BERG Berg Lake 73.04 329 P P 22 19 28.3 +1.3
BERG IAmb IAmb 22 19 29.3
comp=Z,162nm,0.6s
G26K Porcupine Rive 73.08 336 P P 22 19 27.1 0.0
baz=91,SNR=53
G26K S S 22 28 37.3 -4.1
baz=91
DRME Dracevica, Mon 73.10 50⇓iP P 22 19 28.9 +1.2
DRME Dracevica, Mon 73.10 50 eP P 22 19 29.1 +1.4
RUDO Rudo 73.11 49 eP P 22 19 27.9 +0.2
BBLS Lazići 73.11 48⇓iP P 22 19 28.5 +0.7
C27K Jago River 73.12 339 P P 22 19 27.7 +0.4
baz=92,SNR=92
C27K S S 22 28 39.9 -1.9
baz=92
PSZ Piszkesteto 73.13 44⇑P P 22 19 29.0 +1.2
PSZ Piszkesteto 73.13 44 P P 22 19 28.7 +0.9
PSZ Piszkesteto 73.13 44 P P 22 19 28.7 +0.9
PSZ pmax pmax
comp=Z,69nm,1.0s
PSZ Piszkesteto 73.13 44 P P 22 19 28.3 +0.5
PDG Podgorica 73.13 50⇑P P 22 19 29.5 +1.7
PDG Podgorica 73.13 50 P P 22 19 28.9 +1.1
PDG IAmb IAmb 22 19 30.1
comp=Z,194nm,0.9s
TTG Podgorica 73.13 50 eP P 22 19 28.8 +1.0
SCRK Sand Creek 73.14 333 P P 22 19 28.0 +0.4
baz=90,SNR=116
SCRK S S 22 28 41.7 -0.9
baz=90
TEKS Tekeris 73.14 48⇓iP P 22 19 27.9 0.0
PLE Pljevlja 73.15 49 eP P 22 19 28.7 +0.6
ULC Ulcinj 73.17 50 eP P 22 19 29.1 +1.0
F26K Sheenjek River 73.23 337 P P 22 19 28.3 +0.3
baz=91,SNR=27
KOME Kolasin 73.29 49 eP P 22 19 29.7 +0.8
FRGS Fruska Gora 73.29 47⇓P P 22 19 29.6 +0.9
FRGS Fruska Gora 73.29 47⇓iP P 22 19 29.1 +0.3
BMAR Burnt Mountain 73.40 336 P P 22 19 29.5 +0.5
KAIM Kayak Island 73.41 329 P P 22 19 29.9 +0.7
baz=88
BSZH Besenyszg 73.43 45⇑P P 22 19 30.6 +1.2
BSZH Besenyszg 73.43 45 P P 22 19 30.5 +1.0
BEL Belsk 73.44 40 iP P 22 19 30.8 +1.3
BEL eL L 22 50 12.5
comp=Z,410nm,18.7s
N25K Chitina, Valde 73.45 330 P P 22 19 30.3 +0.8
baz=89,SNR=44
N25K S S 22 28 45.5 -0.6
baz=89
BMRM Bremner River 73.47 330 P P 22 19 30.6 +1.0
BMRM Bremner River 73.47 330 P P 22 19 30.5 +0.9
baz=88,SNR=83
BMRM S S 22 28 46.6 +0.4
baz=88
KECS Kecovo 73.48 43 eP P 22 19 31.4 +1.6
KECS pmax pmax
comp=Z,98nm,0.9s
VLO Vlora 73.51 52 P P 22 19 31.0 +0.9
DIVS Divibare 73.52 48 P P 22 19 30.6 +0.5
DIVS IAmb IAmb 22 19 32.5
comp=Z,138nm,0.9s
DIVS Divibare 73.52 48⇓iP P 22 19 31.0 +0.8
RIDG Independent Ri 73.53 333 P P 22 19 30.0 +0.2
RIDG IAmb IAmb 22 19 31.5
comp=Z,189nm,1.0s
RIDG Independent Ri 73.53 333 P P 22 19 30.2 +0.4
baz=89,SNR=38
RIDG S S 22 28 46.6 -0.1
baz=89
C26K Camden Bay 73.55 339 P P 22 19 30.4 +0.7
baz=91,SNR=21
C26K S SKiKP 22 28 44.0 0.0
baz=91
IVA Berane 73.56 49⇓iP P 22 19 31.2 +0.7
RAF Rauma 73.56 30 eP P 22 19 30.4 +0.5
PVY Plav 73.64 50 eP P 22 19 32.4 +1.4
FYU Fort Yukon 73.65 336 P P 22 19 30.4 0.0
FYU IAmb IAmb 22 19 31.9
comp=Z,400nm,1.6s
TIR Tirane 73.69 51 P P 22 19 31.6 +0.5
TIR IAmb IAmb 22 19 34.1
comp=Z,294nm,1.5s
TIR Tirane 73.69 51 P P 22 19 31.6 +0.5
TIR pmax pmax
comp=Z,294nm,1.5s
HARP HAARP 73.70 331 P P 22 19 31.4 +0.6
baz=88,SNR=32
HARP S S 22 28 48.4 -0.2
baz=88
J25K Salcha River, 73.74 333 P P 22 19 30.8 -0.3
J25K Salcha River, 73.74 333 P P 22 19 31.0 -0.1
baz=89,SNR=74
J25K S S 22 28 47.2 -1.9
baz=89
E25K Arctic Village 73.77 337 P P 22 19 31.5 +0.4
baz=90,SNR=63
E25K S S 22 28 47.2 -2.1
baz=90
PRP Porcupine Dome 73.79 334 P P 22 19 31.6 +0.2
PRP Porcupine Dome 73.79 334 P P 22 19 31.7 +0.3
baz=89,SNR=183
PRP S S 22 28 48.1 -1.7
baz=89
F25K Christian Rive 73.81 337 P P 22 19 31.9 +0.6
baz=90,SNR=116
F25K S S 22 28 48.1 -1.7
baz=90
KEK Kerkira 73.82 53 P P 22 19 33.1 +1.2
KEK IAmb IAmb 22 19 34.5
comp=Z,121nm,0.8s

KEK Kerkira 73.82 53 P **P 22 19 32.0 +0.1**
AMBH Ambrzfalva 73.83 46 ⇑P **P 22 19 33.7 +1.9**
AMBH Ambrzfalva 73.83 46 P **P 22 19 33.5 +1.7**
PAX Paxson 73.83 332 P **P 22 19 31.8 +0.2**
baz=88,SNR=61
PAX S **S 22 28 48.7 -1.5**
baz=88
PBUR Paburge 73.86 35 *e*P **P 22 19 32.7 +0.9**
H25K Birch Creek 73.89 335 P **P 22 19 32.5 +0.7**
baz=89,SNR=78
H25K S **S 22 28 51.0 +0.4**
baz=89
STHS Stebnicka Huta 73.91 42 *e*P **P 22 19 33.4 +1.1**
K24K Donnelly Dome 73.94 333 P **P 22 19 32.5 +0.4**
baz=88,SNR=54
SRN Sarande 73.96 52 P **P 22 19 32.2 -0.5**
SLIT Slitere, Latvi 73.97 34 *e*P **P 22 19 32.2 -0.2**
G25K Bearman Lake 74.00 336 P **P 22 19 33.0 +0.6**
baz=89,SNR=42
ABAH Abaujker 74.00 44 P **P 22 19 33.7 +1.0**
KTK1 Kautokeino 74.02 22 *e*P **P 22 19 33.4 +0.9**
KTK1 IAmb IAmb 22 19 34.2
comp=Z,266nm,0.8s
EYAK Cordova Ski Ar 74.05 329 P **P 22 19 33.7 +0.9**
baz=87,SNR=9.8
D25K Kavik River 74.06 338 P **P 22 19 33.0 +0.2**
baz=89
PHP Peshkopia 74.09 50 P **P 22 19 34.3 +0.8**
KLU Klutina 74.09 330 P **P 22 19 33.6 +0.4**
baz=87,SNR=46
CRVS Cervenica-Dubn 74.09 43 *e*P **P 22 19 34.8 +1.4**
CRVS pmax pmax
comp=Z,213nm,1.0s
HAMF Hammerfest 74.16 20 *e*P **P 22 19 34.4 +1.1**
HAMF IAmb IAmb 22 19 34.8
comp=Z,153nm,0.6s
M24K Tolsona, Glenn 74.18 331 P **P 22 19 34.0 +0.4**
baz=87,SNR=17
BANR Banloc 74.20 47 ⇑P **P 22 19 35.6 +1.6**
IGT Igoumenitsa 74.25 53 P **P 22 19 35.1 +0.7**
LSK Leskovik 74.38 52 P **P 22 19 35.7 +0.4**
IL31 74.39 334 P **P 22 19 34.3 -0.4**
ILAR Eielson Array 74.39 334 P **P 22 19 34.5 -0.3**
comp=Z,69nm,0.7s,baz=86,slow=4.5,SNR=263
ILAR S **S 22 28 51.9 -4.3**
comp=Z,0.2nm,0.2s,baz=61,slow=12,SNR=5.6
comp=Z,69nm,0.7s
ILAR Eielson Array 74.39 334 P **P 22 19 34.3 -0.4**
Q23K Middleton Isla 74.41 328 P **P 22 19 35.1 +0.2**
baz=86
Q23K S **S 22 28 51.6 -5.0**
baz=86
OHR Ohrid 74.42 51 *i* P **P 22 19 37.9 +2.4**
HDA Harding Lake 74.43 333 P **P 22 19 34.6 -0.4**
HDA IAmb IAmb 22 19 36.0
comp=Z,288nm,1.6s
HDA Harding Lake 74.43 333 P **P 22 19 34.6 -0.4**
baz=87,SNR=35
HDA S **S 22 28 53.0 -3.7**
baz=87
HDA S **S 22 28 53.0 -3.7**
baz=87
KEF3 Kipouria, Keph 74.43 54 P **P 22 19 35.6 +0.1**
DMLN Damoulianata-K 74.44 54 P **P 22 19 36.2 +0.6**
KBN Korca 74.47 52 P **P 22 19 36.8 +1.0**
KEF4 Livadi, Kephal 74.48 54 P **P 22 19 36.4 +0.7**
HOPEN Hopen 74.49 14 *e*P **P 22 19 36.3 +1.2**
HOPEN IAmb IAmb 22 19 36.5
comp=Z,136nm,0.8s
BZS Buzias 74.52 46 ⇑P **P 22 19 37.1 +1.3**
BZS Buzias 74.52 46 P **P 22 19 36.6 +0.8**
LTVH Ltavrtes, Hu 74.53 44 ⇑P **P 22 19 37.6 +1.7**
LTVH Ltavrtes, Hu 74.53 44 P **P 22 19 37.0 +1.2**
G24K Hadweenzic Riv 74.55 336 P **P 22 19 36.1 +0.5**
baz=88,SNR=75
LKD2 Lefkada island 74.59 53 P **P 22 19 37.2 +0.7**
POKR Poker Plat Res 74.60 334 P **P 22 19 36.4 +0.4**
POKR Poker Plat Res 74.60 334 P **P 22 19 36.2 +0.2**
baz=87,SNR=86
POKR S **S 22 28 56.8 -1.8**
baz=87
EVGI Lefkada island 74.61 54 P **P 22 19 37.0 +0.5**
VLS Valsamata 74.62 54 P **P 22 19 37.0 +0.4**
PSDA Pessada-Kefalo 74.62 54 P **P 22 19 36.9 +0.3**
JAN Janina 74.64 53 P **P 22 19 36.5 -0.2**
NYDR Nydri-Lefkada 74.64 53 P **P 22 19 37.2 +0.6**
UZH Uzhgorod 74.67 43 ⇓*i* P **P 22 19 37.3 +0.7**
F24K Squaw Lake 74.67 337 P **P 22 19 37.1 +0.8**
baz=87,SNR=107
F24K S **S 22 28 57.4 -2.0**
baz=87
MDVR Moldovita 74.67 47 ⇑P **P 22 19 37.9 +1.1**
DHY Denali Highway 74.69 332 P **P 22 19 36.7 0.0**
DHY IAmb IAmb 22 19 37.9
comp=Z,248nm,1.7s
DHY Denali Highway 74.69 332 P **P 22 19 36.6 -0.1**
baz=87,SNR=34
DHY S **S 22 28 58.2 -1.7**
baz=87
GLI Glacier Island 74.69 330 P **P 22 19 36.7 +0.2**
baz=86,SNR=12
NEST Nestorio 74.69 52 P **P 22 19 38.3 +1.2**
MTSE Matsula 74.71 33 *e*P **P 22 19 37.0 +0.4**
SCM Sheep Creek Mo 74.74 331 P **P 22 19 37.3 +0.4**
SCM IAmb IAmb 22 19 38.4
comp=Z,270nm,1.0s
SCM Sheep Creek Mo 74.74 331 P **P 22 19 37.3 +0.4**
SCM pmax pmax
comp=Z,270nm,1.0s
SCM Sheep Creek Mo 74.74 331 P **P 22 19 37.3 +0.4**
baz=86,SNR=37
H24K Noodor Dome 74.75 335 P **P 22 19 37.3 +0.4**
baz=87,SNR=163
H24K S **S 22 28 57.9 -2.4**
baz=87
PENT Pentalofos 74.79 52 P **P 22 19 39.0 +1.4**
COLA College 74.79 334 P **P 22 19 37.2 +0.2**
COLA College 74.79 334 *d* *i*P **P 22 19 36.7 -0.3**
COLA pmax pmax
comp=Z,162nm,1.0s
COLA College 74.79 334 P **P 22 19 37.0 0.0**
baz=87
COLA S **S 22 28 57.4 -3.2**
baz=87
BOVS Bovan 74.80 48 ⇑P **P 22 19 37.9 +0.5**
SKO Skopje 74.80 50 *i* P **P 22 19 33.8 -3.7**
TCOL CIGO, UAF Yank 74.80 334 P **P 22 19 37.0 0.0**
baz=87,SNR=23
TCOL S **S 22 28 57.7 -3.0**
baz=87
ARCES ARCESS Array B 74.81 21 P **P 22 19 37.9 +0.8**
comp=Z,296nm,0.8s,baz=284,slow=4.9,SNR=607
comp=Z,296nm,0.8s
ARCES ARCESS Array B 74.81 21 P **P 22 19 37.6 +0.5**
ARA0 ARCESS Array S 74.81 21 *e*P **P 22 19 37.8 +0.7**
ARA0 IAmb IAmb 22 19 38.6
comp=Z,352nm,0.8s
C24K Franklin Bluff 74.86 339 P **P 22 19 37.9 +0.6**
baz=87
C24K S **S 22 28 59.1 -2.2**
baz=87
E24K Your Creek 74.87 337 P **P 22 19 38.4 +0.9**
baz=87
LTHK Lithakia 74.88 55 P **P 22 19 37.8 -0.2**
TRPA Tarpa 74.88 44 P **P 22 19 39.1 +1.3**
WAT6 Susitna Watana 74.89 331 P **P 22 19 37.6 -0.3**
baz=86,SNR=57
MEF Metsahovi 74.90 31 *e*P **P 22 19 37.8 +0.2**
P23K Montague Islan 74.91 329 P **P 22 19 37.7 -0.1**
baz=86
M23K Glacier View 74.93 331 P **P 22 19 38.0 +0.1**
baz=86,SNR=39
D24K Happy Valley 74.94 338 P **P 22 19 37.7 -0.1**
baz=87
KPRO Kipourio 74.99 52 P **P 22 19 40.8 +2.0**
VSVD Vaisvydziai 74.99 35 *e*P **P 22 19 39.2 +0.9**
PABE Paberze 75.05 36 P **P 22 19 39.2 +0.5**
PABE Paberze 75.05 36 *e*P **P 22 19 39.5 +0.8**
DRGR 75.14 45 ⇑P **P 22 19 40.3 +0.8**
DRGR 75.14 45 P **P 22 19 39.9 +0.4**
HERR Herculane 75.16 47 ⇑P **P 22 19 40.2 +0.7**
TRSU Trosnyk 75.16 44 P **P 22 19 40.8 +1.3**
SML Sawmill 75.22 331 P **P 22 19 39.7 +0.1**
baz=85,SNR=23
TOLK Toolik Lake Re 75.24 338 P **P 22 19 39.7 +0.1**
baz=86,SNR=42
TOLK S **S 22 29 03.5 -2.1**
baz=86
WAT1 Susitna Watana 75.24 332 P **P 22 19 39.9 +0.2**
baz=86
KZN Kozani 75.25 52 P **P 22 19 40.4 +0.1**
DJES Djerdap 75.26 47 ⇑P **P 22 19 41.5 +1.4**
MESR Meseseni 75.26 45 ⇓P **P 22 19 41.3 +1.2**
PVO Paravola 75.29 54 P **P 22 19 39.6 -0.8**
E23K Chandalar 75.29 337 P **P 22 19 40.2 +0.2**
baz=86
E23K S **S 22 29 05.2 -1.1**
baz=86
PWL Port Wells 75.30 330 P **P 22 19 40.4 +0.4**
baz=85,SNR=13
KNK Knik Glacier 75.31 330 P **P 22 19 40.6 +0.4**
baz=85,SNR=19
RLS Riolos of Patr 75.32 54 P **P 22 19 41.5 +0.9**
KEV Kevo 75.32 21 P **P 22 19 40.4 +0.5**
KEV IAmb IAmb 22 19 41.7
comp=Z,153nm,0.7s
KEV Kevo 75.32 21 P **P 22 19 40.4 +0.5**
KEV pmax pmax
comp=Z,153nm,0.7s
RND Reindeer 75.33 332 P **P 22 19 40.7 +0.4**
RND Reindeer 75.33 332 P **P 22 19 40.7 +0.4**
RND pmax pmax
comp=Z,1μm,1.8s
NEA2 Nenana 75.33 334 P **P 22 19 40.3 +0.1**
NEA2 Nenana 75.33 334 P **P 22 19 40.1 -0.1**
baz=86,SNR=245
NEA2 S **S 22 29 02.6 -4.1**
baz=86
MCK McKinley 75.34 333 P **P 22 19 40.8 +0.5**
MCK IAmb IAmb 22 19 41.4
comp=Z,169nm,1.0s
MCK McKinley 75.34 333 P **P 22 19 40.8 +0.5**
MCK pmax pmax
comp=Z,169nm,1.0s
MCK McKinley 75.34 333 P **P 22 19 40.1 -0.2**
baz=85,SNR=51
MCK S **S 22 29 04.3 -2.5**
baz=85
DEV Deva 75.38 46 ⇓P **P 22 19 40.8 0.0**
DEV Deva 75.38 46 P **P 22 19 41.9 +1.1**
I23K Minto, Yukon-K 75.41 334 P **P 22 19 40.8 +0.3**
baz=85,SNR=95
I23K S **S 22 29 04.6 -2.8**
baz=85
H23K Yukon River 75.43 335 P **P 22 19 41.0 +0.3**
baz=85,SNR=68
H23K S **S 22 29 05.5 -2.3**
baz=85
EVR Evrytania 75.47 53 P **P 22 19 42.5 +0.9**
BLKB Belogradchik 75.50 48 ⇑P **P 22 19 42.4 +0.8**
GHO Glory Hole Cre 75.50 331 P **P 22 19 41.7 +0.5**
GHO IAmb IAmb 22 19 42.8
comp=Z,201nm,0.9s
C23K Itkillik River 75.52 339 P **P 22 19 41.9 +0.8**
baz=86,SNR=104
C23K S **S 22 29 06.7 -1.9**
baz=86
DRO Drossia 75.53 54 P **P 22 19 42.7 +0.9**
BWN Browne 75.54 333 P **P 22 19 41.3 0.0**
THL Klokotos Trika 75.54 52 P **P 22 19 41.4 -0.4**
G23K Bananza Creek 75.56 336 P **P 22 19 42.1 +0.7**
baz=85,SNR=89
G23K S **S 22 29 06.7 -2.5**
baz=85
BMR Baia Mare 75.57 44 ⇑P **P 22 19 42.7 +0.8**
BMR Baia Mare 75.57 44 P **P 22 19 42.4 +0.6**
COLD Coldfoot 75.58 336 P **P 22 19 41.9 +0.4**
baz=85
PUNG Punghina 75.60 48 ⇓P **P 22 19 42.3 +0.2**
EFP Efpalio 75.61 54 P **P 22 19 44.3 +2.1**
D23K Nanushuk River 75.61 338 P **P 22 19 42.3 +0.7**
baz=85,SNR=35
D23K S **S 22 29 07.5 -2.1**
baz=85
FINES FINESS Array B 75.62 30 P **P 22 19 42.3 +0.5**
comp=Z,121nm,0.7s,baz=258,slow=4.0,SNR=367
FINES PKKPbc **PKKPbc 22 38 59.3 -2.1**
comp=Z,1.4nm,0.6s,baz=86,slow=7.8,SNR=6.1
FINES LR LR 22 49 08.4
comp=Z,250nm,19.7s,baz=278,slow=32
comp=Z,121nm,0.7s
FIA1 FINESS Array S 75.62 30 P **P 22 19 42.5 +0.7**
FIA1 IAmb IAmb 22 19 43.4
comp=Z,170nm,0.8s
PMR Palmer 75.62 330 P **P 22 19 41.7 -0.1**
PMR IAmb IAmb 22 19 43.2
comp=Z,173nm,1.2s
PMR Palmer 75.62 330 P **P 22 19 41.7 -0.1**
PMR pmax pmax
comp=Z,173nm,1.2s
PMR Palmer 75.62 330 P **P 22 19 41.8 -0.1**
baz=85,SNR=11
GRG Griva 75.64 51 P **P 22 19 42.2 -0.2**
LVV L'vov 75.67 42 *e*P **P 22 19 43.3 +0.9**
LVV *e**PP **pP 22 20 23.7 +3.6**
LVV *e* 22 22 35.3
LVV *e*S **S 22 29 11.0 +0.1**
LVV *e* 22 29 34.6
LVV *e* 22 30 16.4
LVV pmax pmax
comp=Z,210nm,1.2s
LVV MLR MLR
comp=N,200nm,18.0s
LVV MLR MLR
comp=E,300nm,18.0s
LVV MLR MLR
comp=Z,300nm,18.0s
TYRN Tyrnavos 75.69 52 P **P 22 19 42.5 -0.1**
LAKA Lakka 75.70 54 P **P 22 19 44.1 +1.3**
PYL PYLOS 75.70 55 P **P 22 19 42.8 0.0**
CBBR Cluj-Babes-Bol 75.72 45 ⇑P **P 22 19 43.7 +1.0**
VAY Valandovo 75.72 51 *i* P **P 22 19 43.7 +0.9**
SERG Sergoula 75.73 54 P **P 22 19 44.2 +1.2**
SRE Strehaia 75.74 47 ⇑P **P 22 19 44.6 +1.8**
CJR Cluj-Napoca 75.76 45 ⇑P **P 22 19 44.1 +1.2**
CJR Cluj-Napoca 75.76 45 P **P 22 19 43.8 +0.8**
ITM Ithomi 75.81 55 P **P 22 19 44.5 +1.0**
ITM IAmb IAmb 22 19 45.3
comp=Z,114nm,0.9s
ITM Ithomi 75.81 55 P **P 22 19 43.5 +0.1**
LIT Litokhoron 75.83 52 P **P 22 19 43.8 +0.3**
LIT Litokhoron 75.83 52 P **P 22 19 43.0 -0.5**
LIT Litokhoron 75.83 52 P **P 22 19 43.8 +0.3**
KLV Kalavryta, Ach 75.86 54 P **P 22 19 44.6 +0.9**
SEW Seward 75.92 329 P **P 22 19 43.3 -0.2**
baz=84,SNR=11
BAIL Bailesti 75.92 48 ⇑P **P 22 19 44.8 +0.9**
KLMT Kalamata 75.93 55 P **P 22 19 45.5 +1.4**
RC01 Rabbit Creek A 75.96 330 P **P 22 19 43.9 +0.2**
RC01 IAmb IAmb 22 19 45.3
comp=Z,141nm,1.2s
RC01 Rabbit Creek A 75.96 330 P **P 22 19 44.1 +0.4**
baz=84,SNR=8.1
TRF Thorofare Moun 75.97 332 P **P 22 19 44.3 +0.3**
baz=84,SNR=150
TRF S **S 22 29 11.9 -2.2**
baz=84
KNT Kendrikon 75.99 51 P **P 22 19 44.3 0.0**
MLY Manley 76.00 334 P **P 22 19 44.0 -0.1**
baz=84,SNR=203
MLY S **S 22 29 10.1 -4.0**
baz=84
O22K Cooper Landing 76.02 329 P **P 22 19 44.4 +0.3**
O22K IAmb IAmb 22 19 51.9
comp=Z,122nm,0.7s
O22K Cooper Landing 76.02 329 P **P 22 19 44.4 +0.3**
baz=84
KKB Krupnik 76.03 50 P **P 22 19 45.0 +0.4**
VTS Vitosha 76.03 49 ⇑P **P 22 19 46.3 +1.6**
VTS Vitosha 76.03 49 P **P 22 19 45.3 +0.5**
VTS Vitosha 76.03 49 P **P 22 19 45.3 +0.5**
VTS pmax pmax
comp=Z,46nm,0.8s
VTS Vitosha 76.03 49 P **P 22 19 45.1 +0.3**
LOT Lotru 76.04 46 ⇑P **P 22 19 45.6 +0.9**
CUT Chulitna 76.07 331 P **P 22 19 44.3 0.0**
baz=84,SNR=35
M22K Willow 76.07 331 P **P 22 19 44.5 +0.2**
baz=84,SNR=16
THE Thessaloniki 76.11 51 P **P 22 19 45.4 +0.4**
G22K Bettles 76.12 336 P **P 22 19 44.4 -0.2**
baz=84
AXAR Agios Charalam 76.15 53 P **P 22 19 45.8 +0.5**
H22K Ishtalitna Cre 76.18 335 P **P 22 19 45.0 0.0**
baz=84,SNR=33
H22K S **S 22 29 13.9 -2.0**
baz=84
BPAW Bear Paw Mtn. 76.21 333 P **P 22 19 45.0 -0.2**
baz=84,SNR=103
BPAW S **S 22 29 12.8 -3.6**
baz=84
HORT Hortiatis 76.22 51 P **P 22 19 45.9 +0.1**
ARCR ARCALIA 76.22 45 ⇑P **P 22 19 46.7 +1.1**
KTH Kantishna Hill 76.24 333 P **P 22 19 45.7 +0.2**
VSU Vasula 76.26 33 *d* *i*P **P 22 19 45.5 +0.1**
VSU pmax pmax
comp=Z,824nm,0.9s
VSU Vasula 76.26 33 *e*P **P 22 19 45.6 +0.1**
ISAL Salakas 76.27 36 *e*P **P 22 19 46.8 +1.3**
F22K John River 76.32 337 P **P 22 19 45.7 0.0**
baz=83
IIGN Ignalina 76.35 36 *e*P **P 22 19 47.0 +1.0**
MDB Medias 76.37 46 ⇑P **P 22 19 48.0 +1.6**
SOH Sokhos 76.38 51 P **P 22 19 47.4 +0.8**
SUA Susitna One 76.40 330 P **P 22 19 46.7 +0.2**
baz=83,SNR=7.6
TGMR Targu Mures 76.41 45 ⇑P **P 22 19 48.2 +1.6**
LKR Lokris 76.43 53 P **P 22 19 46.0 -0.9**
NEO Neokhori 76.50 53 P **P 22 19 46.9 -0.4**
I21K Tanana 76.51 334 P **P 22 19 46.6 -0.2**
baz=83,SNR=46
I21K S **S 22 29 18.6 -1.0**
baz=83
SRS Serrai 76.51 51 P **P 22 19 47.5 +0.2**
KSV Kosov 76.54 43 P **P 22 19 47.9 +0.6**
BRSE Bradley Lake S 76.61 329 P **P 22 19 47.9 +0.4**
baz=83,SNR=8.3
ARR Arges 76.65 46 ⇑P **P 22 19 49.1 +1.1**
BRLK Bradley Lake 76.68 329 P **P 22 19 48.4 +0.5**
BRLK IAmb IAmb 22 19 49.6
comp=Z,141nm,1.3s
NVR Nevrokopi 76.68 50 P **P 22 19 48.8 +0.5**
VLAD Vladila 76.69 48 ⇑P **P 22 19 49.5 +1.3**
SKT Skwentna 76.71 331 P **P 22 19 48.1 +0.1**
SKT IAmb IAmb 22 19 49.1
comp=Z,260nm,1.5s
SKT Skwentna 76.71 331 P **P 22 19 47.9 -0.1**
baz=83,SNR=35
SKT S **S 22 29 19.1 -2.7**
baz=83
BUR08 Bucovina Ar. S 76.72 44 P **P 22 19 49.7 +1.2**
BUR08 IAmb IAmb 22 19 51.3
comp=Z,232nm,0.9s
NACGM Naroch 76.72 36 ⇓*i*P **P 22 19 48.9 +0.8**
baz=277
BURAR Bucovina Array 76.73 44 ⇑P **P 22 19 50.1 +1.6**
BURAR Bucovina Array 76.73 44 P **P 22 19 49.7 +1.2**
CAST Castle Rocks 76.78 332 P **P 22 19 47.9 -0.4**
baz=82,SNR=66
CAST S **S 22 29 18.9 -3.7**
baz=82
H21K Melozitna Rive 76.79 335 P **P 22 19 48.5 +0.1**
baz=82,SNR=109
H21K S **S 22 29 18.9 -3.8**
baz=82
CHUM Lake Minchumin 76.82 333 P **P 22 19 48.4 -0.1**
baz=82,SNR=32
CHUM S **S 22 29 18.3 -4.6**
baz=82
F21K Alatna River 76.85 336 P **P 22 19 48.9 +0.1**
baz=82,SNR=18
F21K S **S 22 29 19.4 -3.8**
baz=82
KOKK Kokkinochori, 76.86 51 P **P 22 19 49.3 0.0**
PPLA Purkeypile 76.89 332 P **P 22 19 49.3 +0.1**
PPLA Purkeypile 76.89 332 P **P 22 19 49.2 0.0**
baz=82,SNR=26
PPLA S **S 22 29 19.7 -4.4**
baz=82
OUR Ouranopolis 76.92 51 P **P 22 19 50.2 +0.6**
VOIR 76.93 46 ⇑P **P 22 19 50.7 +1.0**
STFAR Stefanesti-Arg 76.95 47 ⇓P **P 22 19 49.6 -0.1**
G21K Allakaket 76.96 336 P **P 22 19 49.9 +0.6**
baz=82,SNR=116
G21K S **S 22 29 22.6 -1.8**
baz=82
MTUR Matau 76.97 46 ⇑P **P 22 19 51.1 +1.2**
HUMR Humele 77.02 47 ⇑P **P 22 19 50.8 +0.8**
HOM Homer 77.07 329 P **P 22 19 51.0 +0.9**
baz=82
HOM S **S 22 29 24.7 -1.1**
baz=82
DOPR Dopca 77.09 46 ⇑P **P 22 19 51.8 +1.3**
IMAR Indian Mountai 77.13 335 P **P 22 19 50.5 +0.2**
N20K Mount Spurr 77.14 330 P **P 22 19 50.4 -0.1**
baz=82,SNR=32
ATHU Athens Univers 77.14 54 P **P 22 19 51.1 +0.2**
VLY Voula,Athens 77.17 54 P **P 22 19 50.7 -0.4**
PTL Penteli 77.19 54 P **P 22 19 51.5 +0.3**
DION Dionisos Attik 77.24 54 P **P 22 19 51.2 -0.3**
RZN Rozhen 77.26 50 P **P 22 19 51.9 +0.2**
HORU Horodok 77.30 42 P **P 22 19 51.6 +0.1**
A21K Barrow 77.33 341 P **P 22 19 52.1 +0.9**
baz=80
OZUR 77.34 45 ⇑P **P 22 19 52.9 +1.0**
MNK Minsk 77.41 37 *i* P **P 22 19 52.2 +0.2**
MNK *i* 22 20 01.8
MNK *i* *PP **pP 22 20 30.6 +0.5**
MNK *i* *SP **sP 22 20 45.4 -1.1**
MNK *i* PPP PPP 22 24 36.3
MNK *i* S **S 22 29 30.6 +1.0**
MNK *i* SSS SSS 22 37 58.0
MNK pmax pmax
comp=N,74nm,1.0s
MNK pmax pmax
comp=E,19nm,1.0s
MNK pmax pmax
comp=Z,308nm,1.0s
MNK Minsk 77.41 37 *i* P **P 22 19 52.2 +0.2**
comp=E,19nm,1.0s,baz=278
MNK *i* P **P 22 19 52.2 +0.2**
comp=N,74nm,1.0s
MNK *i* P **P 22 19 52.2 +0.2**
comp=Z,308nm,1.0s
MNK *i* pP **pP 22 20 30.6 +0.5**
MNK *i* sP **sP 22 20 45.5 -1.1**
MNK *i* PP PP 22 23 01.0 +13
MNK *i* PPP PPP 22 24 36.4
MNK *i* S **S 22 29 30.6 +1.0**
MNK *i* sS sS 22 30 54.9 +22
MNK *i* SS SS 22 34 12.3 -19
MNK *i* SSS SSS 22 37 58.0
MNK *i* LRM MLR 22 52 16.9
comp=E,64nm,19.0s
MNK *i* LRM MLR 22 52 18.6
comp=N,361nm,19.0s
MNK *i* LRM MLR 22 52 19.0
comp=Z,482nm,19.0s
BIZ Bicaz 77.43 45 ⇑P **P 22 19 53.9 +1.6**
THAS Thassos island 77.44 51 P **P 22 19 48.0 -4.4**
M20K Styx River 77.47 331 P **P 22 19 52.1 -0.2**
baz=81
O20K Slope Mountain 77.50 329 P **P 22 19 53.1 +0.6**
baz=81,SNR=7.5
KNDR Palaiochora Ch 77.52 57 P **P 22 19 53.3 +0.3**
MLR Muntele Rosu 77.55 46 ⇑P **P 22 19 54.7 +1.5**
MLR Muntele Rosu 77.55 46 P **P 22 19 53.9 +0.7**
comp=Z,61nm,0.7s,baz=292,slow=6.2,SNR=86
comp=Z,61nm,0.7s
MLR Muntele Rosu 77.55 46 P **P 22 19 53.7 +0.6**
J20K Nowinta River 77.57 333 P **P 22 19 52.5 -0.3**
baz=81,SNR=70
J20K S **S 22 29 25.8 -5.2**
baz=81
Q20K Shuyak Island 77.61 328 P **P 22 19 54.0 +1.0**
baz=81
COVR Voineasa-Covas 77.67 46 ⇓P **P 22 19 55.4 +1.7**
K20K Telida 77.67 333 P **P 22 19 52.9 -0.5**
baz=81,SNR=78
K20K S **S 22 29 27.3 -4.9**
baz=81
GIRR Girov 77.70 44 ⇑P **P 22 19 54.8 +1.0**
SECR 77.70 46 ⇑P **P 22 19 54.2 +0.3**
L20K Farewell, AK 77.73 332 P **P 22 19 53.5 -0.2**
baz=81,SNR=39

L20K S **S** **22 29 28.7 -4.1**
baz=81
SGRR Singureni 77.77 47 ⇑P **P** **22 19 55.2 +1.0**
NEHR Nehoiu 77.80 46 ⇑P **P** **22 19 55.7 +1.3**
DIM Dimitrovgrad 77.81 50 P **P** **22 19 55.0 +0.5**
KDAK Kodiak Island 77.84 327 P **P** **22 19 55.2 +0.9**
comp=Z,109nm,0.6s,baz=74,slow=1.3,SNR=79
KDAK LR LR 22 54 19.8
comp=Z,605nm,20.2s,baz=86,slow=36
comp=Z,109nm,0.6s
KDAK Kodiak Island 77.84 327*d i*P **P** **22 19 55.0 +0.7**
KDAK pmax pmax
comp=Z,205nm,0.9s
KDAK Kodiak Island 77.84 327 P **P** **22 19 55.2 +0.9**
baz=81
TESR Tescani 77.87 45 ⇑P **P** **22 19 56.0 +1.2**
P19K Oil Pt 77.87 329 P **P** **22 19 55.0 +0.5**
baz=81,SNR=5.8
SULR 77.89 47 ⇑P **P** **22 19 55.5 +0.6**
SZH Strazhica 77.89 48 P **P** **22 19 53.3 -1.7**
PUL Pulkovo 77.91 31*d i*P **P** **22 19 55.4 +0.8**
PUL pmax pmax
comp=Z,331nm,0.9s
GVD Gavdhos 77.91 57 P **P** **22 19 55.4 +0.2**
RDO Rodhopi 77.96 50 P **P** **22 19 56.0 +0.7**
RDO IAmb IAmb 22 19 57.4
comp=Z,124nm,0.9s
RDO Rodhopi 77.96 50 P **P** **22 19 54.4 -0.9**
PLOR Plostina 77.98 46 ⇑P **P** **22 19 55.6 +0.2**
VRI Vrincioaia 78.03 46 ⇑P **P** **22 19 57.2 +1.5**
VRI Vrincioaia 78.03 46 P **P** **22 19 55.6 -0.1**
M19K Big River Lodg 78.06 331 P **P** **22 19 55.6 +0.1**
baz=80
Q19K Cape Douglas, 78.20 328 P **P** **22 19 57.1 +0.8**
baz=80
L19K White Mountain 78.22 331 P **P** **22 19 56.3 -0.2**
baz=80,SNR=31
L19K S **S** **22 29 34.5 -3.7**
baz=80
RAZG Razgrad 78.26 48 ⇑P **P** **22 19 58.2 +1.2**
ODBI Odobesti 78.27 46 ⇑P **P** **22 19 57.2 +0.2**
GRER 78.28 46 ⇑P **P** **22 19 57.1 0.0**
N19K Bonanza Creek 78.29 330 P **P** **22 19 56.8 -0.1**
baz=80,SNR=16
OHAK Old Harbor 78.30 326 P **P** **22 19 57.8 +1.0**
baz=80,SNR=8.2
O19K Port Alsworth 78.32 329 P **P** **22 19 56.9 0.0**
baz=80
LVZ Lovozero 78.32 23 P **P** **22 19 57.5 +0.6**
LVZ IAmb IAmb 22 19 58.6
comp=Z,144nm,0.8s
LVZ Lovozero 78.32 23*d i*P **P** **22 19 57.3 +0.4**
LVZ pmax pmax
comp=Z,122nm,0.8s
IAS Iasi 78.37 44 P **P** **22 19 54.4 -3.1**
PGOR Pogoanele 78.37 46 ⇑P **P** **22 19 58.0 +0.5**
IDI Anoyia 78.48 56 P **P** **22 19 59.3 +0.8**
comp=Z,149nm,0.8s,baz=284,slow=8.1,SNR=37
comp=Z,149nm,0.8s
IDI Anoyia 78.48 56 P **P** **22 19 59.2 +0.8**
IDI Anoyia 78.48 56 P **P** **22 19 58.5 +0.1**
SIGR SIGRI 78.53 52 P **P** **22 19 58.7 +0.2**
TTA Tatalina 78.61 332 P **P** **22 19 57.9 -0.8**
baz=79,SNR=12
VASR Vaslui 78.62 45 ⇑P **P** **22 19 59.2 +0.3**
KSTL Kastelli Herak 78.62 56 P **P** **22 20 01.0 +1.9**
APE Apeiranthos 78.67 55⇑*eP* **P** **22 19 59.0 -0.4**
APE pmax pmax
comp=Z,97nm,1.1s
TUDR 78.72 46 ⇑P **P** **22 19 59.4 0.0**
EDRB Edirne 78.73 50 P **P** **22 19 58.6 -1.0**
SANT Santorini 78.74 55 P **P** **22 20 00.1 +0.3**
SANT IAmb IAmb 22 20 01.2
comp=Z,151nm,1.1s
EZN Ezine 78.78 52 P **P** **22 19 59.9 0.0**
IZVR Izvoarele 78.80 46 ⇑P **P** **22 19 59.5 -0.3**
O18K Koktuh Hills 78.82 329 P **P** **22 20 00.2 +0.5**
baz=79
AKASG Malin Array Be 78.84 40 P **P** **22 19 59.9 0.0**
comp=Z,22nm,0.5s,baz=266,slow=4.8,SNR=97
AKASG S **S** **22 29 43.9 -1.1**
comp=Z,0.1nm,0.2s,baz=266,slow=12,SNR=7.8
AKASG PKKPbc **PKKPbc** **22 38 52.6 -1.3**
comp=Z,1.9nm,0.5s,baz=73,slow=2.8,SNR=9.1
comp=Z,22nm,0.5s
AKBB Malin Array Si 78.84 40 P **P** **22 19 60.0 0.0**
AKBB IAmb IAmb 22 20 01.4
comp=Z,198nm,1.5s
AKBB Malin Array Si 78.84 40*d i*P **P** **22 19 59.7 -0.3**
SCHL Schela 78.85 46 ⇑P **P** **22 19 60.0 -0.2**
SII Sitkinak Islan 78.91 326 P **P** **22 20 01.2 +0.9**
baz=79
P18K Big Mountain, 78.92 329 P **P** **22 20 00.4 +0.1**
baz=79
SCTR Scanteiesti 78.93 46 ⇑P **P** **22 20 00.7 +0.1**
Q18K Katmai Hardscr 78.95 328 P **P** **22 20 01.2 +0.7**
baz=79,SNR=28
LEOM Leova 78.96 45 ⇑P **P** **22 20 00.8 +0.1**
VLDR Vladesti 78.96 45 ⇑P **P** **22 20 01.3 +0.6**
PRD Provadia 78.96 48 P **P** **22 20 00.0 -0.8**
TATR Tatarca 78.99 46 ⇑P **P** **22 20 00.9 0.0**
N18K Kilae Creek 78.99 330 P **P** **22 20 00.6 -0.1**
baz=79,SNR=22
HARR Harsova 79.07 47 ⇑P **P** **22 20 01.3 0.0**
ICOR Ion Corvin 79.08 47 ⇑P **P** **22 20 02.5 +1.1**
CFR Carcaliu 79.12 46 ⇑P **P** **22 20 01.4 -0.2**
TLBR Topalu 79.18 47 ⇓P **P** **22 20 02.4 +0.5**
KIS Kishinev 79.25 44 ⇑P **P** **22 20 02.2 -0.1**
KIS Kishinev 79.25 44⇓*i*P **P** **22 20 02.0 -0.3**
comp=Z,240nm,5.4s
KIS *ep*P **pP** **22 20 41.0 +0.4**
KIS *e*S **S** **22 29 51.0 +1.4**
KIS Kishinev 79.25 44*d i*P **P** **22 20 02.0 -0.3**
KIS *e**PP **pP** **22 20 41.0 +0.4**
KIS *e*S **S** **22 29 51.0 +1.4**
KIS pmax pmax
comp=Z,240nm,5.4s
MILM Milestii Mici 79.26 44 ⇓P **P** **22 20 02.7 +0.3**
MILM Milestii Mici 79.26 44⇓*i*P **P** **22 20 02.0 -0.3**
comp=Z,170nm,0.5s
MILM *ep*P **pP** **22 20 41.0 +0.4**
MILM *e*S **S** **22 29 52.0 +2.3**
MILM *es*S pS 22 30 43.0 +8.2
MILM *e*L L 22 49 44.0
MILM LRM MLR 22 54 23.0
comp=Z,300nm,15.0s
MILM Milestii Mici 79.26 44*d i*P **P** **22 20 02.0 -0.3**
MILM *e**PP **pP** **22 20 41.0 +0.4**
MILM *e*S **S** **22 29 52.0 +2.3**
MILM pmax pmax
comp=Z,680nm,6.9s
MILM MLR MLR
comp=Z,300nm,15.0s
TPGR Topolog 79.38 46 ⇑P **P** **22 20 03.4 +0.3**
TIRR Tirgusor 79.45 47 P **P** **22 20 03.9 +0.5**
TIRR IAmb IAmb 22 20 09.9
comp=Z,350nm,1.7s
TIRR Tirgusor 79.45 47 P **P** **22 20 03.9 +0.5**
TIRR pmax pmax
comp=Z,350nm,1.7s
Q17K Contact Creek 79.48 328 P **P** **22 20 04.2 +0.8**
baz=78,SNR=26
P17K Kvichak River 79.57 329 P **P** **22 20 04.1 +0.4**
baz=78
SMG Samos 79.57 54 P **P** **22 20 04.0 -0.2**
TLCR 79.59 46 ⇑P **P** **22 20 04.6 +0.4**
MANR Mangalia 79.70 47 ⇑P **P** **22 20 05.9 +1.1**
O17K Koliganek Bris 79.77 329 P **P** **22 20 05.2 +0.4**
baz=78,SNR=22
PMSA Palmer Station 79.78 181 PKKPbc PKKPbc 22 38 54.0 +0.1
comp=Z,3.8nm,0.4s,baz=51,slow=5.3,SNR=4.6
PMSA LR LR 22 57 38.5
comp=Z,246nm,19.1s,baz=7.0,slow=37
PMSA Palmer Station 79.78 181 P **P** **22 20 06.3 +1.8**
PMSA IAmb IAmb 22 20 07.7
comp=Z,188nm,0.9s
PMSA Palmer Station 79.78 181*eP* **P** **22 20 06.4 +1.8**
Q16K King Salmon 79.79 328 P **P** **22 20 05.8 +1.0**
baz=78,SNR=5.7
CHIR Chirikof Islan 79.84 325 P **P** **22 20 06.6 +1.3**
baz=78
EDC Edincik 79.84 51 P **P** **22 20 06.2 +0.6**
KARP Karpathos 80.25 56 P **P** **22 20 08.3 +0.3**
O16K Kokwok River B 80.30 329 P **P** **22 20 08.2 +0.5**
baz=77,SNR=22

P16K Nushagak River 80.38 329 P **P** **22 20 08.5 +0.4**
baz=77,SNR=9.7
N16K Nishlik Lake 80.43 330 P **P** **22 20 09.8 +1.5**
baz=76,SNR=16
MANT Manisa 80.74 53 P **P** **22 20 11.0 +0.2**
ARG Arkhangelos 80.88 55 P **P** **22 20 11.1 -0.2**
ARG IAmb IAmb 22 20 12.5
comp=Z,141nm,0.9s
ARG Arkhangelos 80.88 55 P **P** **22 20 11.1 -0.2**
ARG pmax pmax
comp=Z,141nm,0.9s
CHGN Chignik 81.26 326 P **P** **22 20 13.6 +0.8**
baz=76,SNR=21
TAOE Nuku Hiva Isla 81.49 258*eP* **P** **22 20 15.5 +0.6**
comp=Z,388nm,1.2s
TAOE *e*S **S** **22 30 14.6 +0.5**
comp=Z,336nm,29.0s
BORA Eskisehir 81.88 51 P **P** **22 20 17.0 +0.4**
BORA IAmb IAmb 22 20 18.3
comp=Z,118nm,0.9s
AKAS Kas 82.05 55 P **P** **22 20 17.0 -0.6**
AKAS IAmb IAmb 22 20 18.2
comp=Z,225nm,0.9s
KLMR Klimovskoe 82.11 29*d i*P **P** **22 20 17.3 +0.1**
KLMR S **S** **22 30 21.6 +2.8**
KLMR pmax pmax
comp=Z,274nm,0.9s
KLMR Klimovskoe 82.11 29⇓*i*P **P** **22 20 17.3 +0.1**
KLMR ⇑*i*P **P** **22 20 17.3 +0.1**
KLMR ⇓*i*P **P** **22 20 17.3 +0.1**
KLMR AMP 22 20 18.7
comp=Z,274nm,0.9s
KLMR S **S** **22 30 21.7 +2.9**
KLMR S **S** **22 30 21.7 +2.9**
ELL Elmali 82.17 54 P **P** **22 20 19.1 +0.9**
ELL Elmali 82.17 54 P **P** **22 20 19.1 +0.9**
ELL pmax pmax
comp=Z,810nm,0.8s
OBN Obninsk 82.20 35 P **P** **22 20 18.4 +0.7**
comp=Z,87nm,0.7s,baz=274,slow=1.1,SNR=127
OBN LR LR 22 53 33.5
comp=Z,113nm,19.8s,baz=282,slow=33
comp=Z,87nm,0.7s
OBN Obninsk 82.20 35 P **P** **22 20 18.5 +0.7**
OBN Obninsk 82.20 35*d i*P **P** **22 20 18.2 +0.4**
OBN *i*S **S** **22 30 18.9 -0.9**
OBN *i*SS **SS** **22 35 43.6 +1.0**
OBN pmax pmax
comp=Z,381nm,0.9s
OBN MLR MLR
comp=Z,483nm,17.0s
ANM Nome 82.21 335 P **P** **22 20 18.8 +1.2**
baz=71,SNR=6.9
CHNA Chernabura Isl 82.28 325 P **P** **22 20 19.0 +0.8**
baz=75,SNR=11
MDUB Mudurnu 82.30 50 P **P** **22 20 18.3 -0.5**
ISP Isparta 82.40 53 P **P** **22 20 19.8 +0.5**
ISP Isparta 82.40 53*de*P **P** **22 20 19.3 -0.1**
ISP pmax pmax
comp=Z,57nm,0.9s
MOS Moscow 82.61 34*eP* **P** **22 20 18.0 -1.9**
MOS *e**PP **pP** **22 20 57.9 -0.6**
MOS *e**SP **sP** **22 21 14.5 -0.4**
MOS *e*S **S** **22 30 23.1 -0.9**
MOS *e*S **pS** **22 31 10.4 0.0**
MOS *e**SS **sS** **22 31 29.3 -0.2**
MOS pmax pmax
comp=Z,900nm,2.0s
MOS pmax pmax
comp=N,200nm,1.8s
MOS pmax pmax
comp=E,200nm,1.8s
MOS pmax pmax
comp=Z,364nm,1.4s
MOS pmax pmax
comp=E,93nm,1.1s
MOS smax smax
comp=E,400nm,3.0s
MOS smax smax
comp=N,400nm,3.0s
SDPT Sand Point 82.63 325 P **P** **22 20 20.8 +0.8**
baz=74,SNR=7.4
TNA Tin City 82.89 336 P **P** **22 20 22.8 +1.7**
baz=69,SNR=16
SMAI San Martin Ant 83.23 182 P **P** **22 20 24.3 +1.7**
SIM Simferopol' 83.31 45*eP* **P** **22 20 24.7 +1.0**
SIM *e*S **S** **22 30 32.0 +0.5**
SIM pmax pmax
comp=Z,145nm,0.9s
SIM pmax pmax
comp=Z,110nm,4.2s
BR231 Keskin MP Arra 83.63 51 P **P** **22 20 26.8 +1.1**
ANTO Ankara 83.63 51 ⇑P **P** **22 20 26.6 +1.0**
ANTO Ankara 83.63 51 P **P** **22 20 26.4 +0.8**
ANTO Ankara 83.63 51 P **P** **22 20 26.4 +0.8**
ANTO pmax pmax
comp=Z,232nm,0.8s
BZK Bozkurt 83.99 48 P **P** **22 20 25.9 -1.4**
ILGA Ilgaz 84.02 49 P **P** **22 20 28.1 +0.3**
ILGA IAmb IAmb 22 20 31.1
comp=Z,78nm,0.8s
LPSR Galich'ya Gora 84.25 37*eP* **P** **22 20 28.4 +0.1**
LPSR *e*S **S** **22 30 35.8 -4.8**
LPSR pmax pmax
comp=Z,540nm,0.8s
LPSR smax smax
comp=N,610nm,7.4s
BR131 Keskin Array S 84.30 51 P **P** **22 20 29.4 +0.3**
BR131 IAmb IAmb 22 20 30.7
comp=Z,148nm,0.8s
BR131 Keskin Array S 84.30 51*d i*P **P** **22 20 28.9 -0.2**
BRTR Keskin Array B 84.30 51 P **P** **22 20 29.5 +0.4**
comp=Z,86nm,0.9s,baz=306,slow=42,SNR=261
BRTR PKKPbc **PKKPbc** **22 38 41.4 -0.1**
comp=Z,2.1nm,0.8s,baz=149,slow=6.5,SNR=8.1
BRTR PKPPKP 22 46 49.1
comp=Z,0.5nm,0.8s,baz=116,slow=2.9,SNR=5.0
BRTR LR LR 22 53 41.1
comp=Z,192nm,22.0s,baz=292,slow=32
comp=Z,86nm,0.9s
BRTR Keskin Array B 84.30 51 P **P** **22 20 29.2 +0.1**
FALS False Pass 84.39 325 P **P** **22 20 29.6 +0.6**
baz=72
PRGR Permogore 84.64 27⇓*i*P **P** **22 20 30.8 +0.7**
PRGR pmax pmax
comp=Z,387nm,0.7s
VORR Voronezh 84.70 38*eP* **P** **22 20 31.2 +0.6**
VORR pmax pmax
comp=Z,290nm,0.7s
VSR Storozhevoye 84.81 38*eP* **P** **22 20 30.5 -0.7**
VSR *e*S **S** **22 30 41.5 -4.7**
VSR pmax pmax
comp=Z,230nm,0.8s
VSR smax smax
comp=N,340nm,3.8s
TSUM Tsumeb 84.99 111 LR LR 22 52 08.5
comp=N,238nm,21.9s,baz=349,slow=31
TSUM Tsumeb 84.99 111 P **P** **22 20 33.3 +0.5**
GAMB Gambell 85.08 335 P **P** **22 20 33.2 +1.0**
baz=65,SNR=6.7
CSS Mathiatis 85.30 55 P **P** **22 20 34.4 +0.4**
CSS IAmb IAmb 22 20 36.1
comp=Z,85nm,0.8s
ANN Anapa 85.62 45*ceP* **P** **22 20 36.4 +1.1**
ANN pmax pmax
comp=Z,329nm,1.7s
KVT Kavak 85.71 49 P **P** **22 20 36.6 +0.7**
BNN Bunyan 86.18 51 P **P** **22 20 37.9 -0.6**
TOKA Tokat 86.23 49 P **P** **22 20 39.0 +0.4**
VRH Novokhopyorsk 86.34 38*eP* **P** **22 20 38.7 0.0**
VRH *e*S **SKSac** **22 30 45.3 -5.1**
VRH pmax pmax
comp=Z,190nm,0.8s
VRH smax smax
comp=N,310nm,2.5s
UNV Unalaska Valle 86.43 325 P **P** **22 20 39.8 +0.6**
baz=69,SNR=12
SPIA Saint Paul Isl 87.13 329 P **P** **22 20 43.7 +1.3**
baz=66
DQRL Deir Qamar 87.42 56*eP* **P** **22 20 45.5 +1.0**
BHL Bhannes 87.43 56*eP* **P** **22 20 44.2 -0.4**
MMAI Mount Meron Ar 87.48 57 P **P** **22 20 46.4 +1.6**
comp=N,71nm,0.8s,baz=298,slow=3.1,SNR=91
MMAI LR LR 22 57 41.2
comp=N,95nm,21.7s,baz=135,slow=34

comp=N,71nm,0.8s
SOC Sochi 87.55 46*eP* **P** **22 20 44.9 +0.1**
SOC *e*S **SKSac** **22 30 58.2 0.0**
SOC *e*SS **SS** **22 36 58.6 -3.2**
SOC *e*SSS SSS 22 40 36.8
QRWL Qaraoun 87.56 56*eP* **P** **22 20 46.1 +1.0**
KIRV Kirov 87.61 29 P **P** **22 20 44.5 -0.2**
comp=N,57nm,0.6s,baz=291,slow=3.3,SNR=40
KIRV LR LR 22 55 18.9
comp=N,234nm,22.0s,baz=303,slow=32
comp=N,57nm,0.6s
KIRV Kirov 87.61 29*d i*P **P** **22 20 44.3 -0.4**
GAZ Gaziantep 87.70 52 P **P** **22 20 46.7 +0.9**
GAZ IAmb IAmb 22 20 48.5
comp=Z,210nm,1.6s
EIL Elat 88.05 60 P **P** **22 20 49.0 +1.5**
comp=Z,92nm,0.9s,baz=271,slow=2.7,SNR=61
EIL LR LR 22 59 48.5
comp=Z,174nm,19.7s,baz=249,slow=35
comp=Z,92nm,0.9s
NIKH Nikolski High 88.06 325 P **P** **22 20 47.5 +0.5**
baz=67,SNR=5.9
GHAJ Ghor Haditha 88.10 58 P **P** **22 20 48.8 +1.2**
GHAJ IAmb IAmb 22 20 57.8
comp=Z,91nm,1.1s
HMH Humu'ula Sheep 88.62 290 P **P** **22 20 51.4 +0.7**
MLOA Mauna Loa Obse 88.73 290 P **P** **22 20 51.8 +0.5**
ASF Jabal al Asfar 88.93 57 P **P** **22 20 53.3 +1.6**
comp=Z,72nm,0.8s,baz=284,slow=2.7,SNR=116
comp=Z,72nm,0.8s
KOPT Kop Dagi 89.26 49 P **P** **22 20 54.0 +0.7**
BELG Belogornoye 89.29 35 P **P** **22 20 53.0 +0.3**
comp=Z,167nm,0.8s,baz=292,slow=2.1,SNR=54
BELG LR LR 22 57 33.4
comp=Z,325nm,21.3s,baz=309,slow=33
comp=Z,167nm,0.8s
BELG Belogornoye 89.29 35*d i*P **P** **22 20 52.8 +0.1**
BELG pmax pmax
comp=Z,35nm,1.0s
GOF Gofitskoye 89.30 43⇑*eP* **P** **22 20 54.0 +1.0**
GOF pmax pmax
comp=Z,421nm,1.4s
KIV Kislovodsk 89.45 44 P **P** **22 20 55.0 +1.2**
KIV Kislovodsk 89.45 44*eP* **P** **22 20 54.9 +1.0**
KIV *e* 22 24 22.4
KIV *e* 22 31 10.5
KIV *e*SS SS 22 37 33.8 +4.2
KIV pmax pmax
comp=Z,179nm,1.1s
KIV pmax pmax
comp=Z,135nm,4.3s
KIV MLR MLR
comp=Z,100nm,20.0s
KVAR Kislovodsk Arr 89.46 44 P **P** **22 20 55.2 +1.3**
comp=Z,32nm,0.9s,baz=270,slow=20,SNR=10
comp=Z,32nm,0.9s
SHA1 Shidzhatmaz 89.51 45*d i*P **P** **22 20 55.6 +1.3**
KBZ Khabaz 89.68 45 P **P** **22 20 56.5 +1.8**
comp=Z,75nm,0.9s,baz=272,slow=4.1,SNR=98
KBZ LR LR 23 01 25.9
comp=Z,129nm,18.3s,baz=296,slow=36
comp=Z,75nm,0.9s
KBZ Khabaz 89.68 45*d i*P **P** **22 20 56.1 +1.4**
KBZ pmax pmax
comp=Z,104nm,1.0s
NEY Neytrino 89.73 45*d i*P **P** **22 20 57.2 +1.9**
NEY pmax pmax
comp=Z,34nm,0.8s
BILL Bilibino 90.12 344 P **P** **22 20 56.5 +0.2**
BILL IAmb IAmb 22 20 57.9
comp=Z,74nm,0.8s
BILL Bilibino 90.12 344*c i*P **P** **22 20 56.5 +0.2**
BILL *i* *PP **pP** **22 21 36.6 +1.4**
BILL pmax pmax
comp=Z,86nm,1.1s
NCK Nalchik 90.23 45*d i*P **P** **22 20 58.9 +1.5**
NCK pmax pmax
comp=Z,143nm,0.9s
MARD Mardin 90.36 51 P **P** **22 20 58.5 +0.2**
ONI Oni 90.46 46 P **P** **22 20 58.8 +0.2**
ONI IAmb IAmb 22 21 01.3
comp=Z,128nm,1.2s
ONI Oni 90.46 46 P **P** **22 20 58.8 +0.2**
ONI pmax pmax
comp=Z,129nm,1.2s
ZEI Tsey 90.70 45*eP* **P** **22 20 59.9 +0.1**
ZEI pmax pmax
comp=Z,50nm,1.2s
GURO Guroymak-BITLI 90.87 50 P **P** **22 21 01.9 +1.2**
KARS Kars 90.90 47 P **P** **22 21 01.6 +0.9**
KARS Kars 90.90 47 P **P** **22 21 01.6 +0.9**
KARS pmax pmax
comp=Z,421nm,1.3s
AKH Akhalkalaki 90.92 47 P **P** **22 21 01.9 +1.1**
GEVA Gevas 91.71 50 P **P** **22 21 05.5 +0.9**
GEVA IAmb IAmb 22 21 07.5
comp=Z,114nm,1.1s
SUR Sutherland 91.72 123 LR LR 22 54 42.7
comp=Z,148nm,21.6s,baz=292,slow=30
SUR Sutherland 91.72 123 P **P** **22 21 05.9 +1.3**
GNI Garni 92.26 47 P **P** **22 21 08.0 +1.0**
comp=Z,63nm,0.8s,baz=313,slow=5.7,SNR=32
comp=Z,63nm,0.8s
GNI Garni 92.26 47 P **P** **22 21 08.4 +1.3**
GNI IAmb IAmb 22 21 09.8
comp=Z,86nm,0.8s
GNI Garni 92.26 47*c i*P **P** **22 21 07.8 +0.7**
GNI pmax pmax
comp=Z,73nm,0.9s
MBAR Mbarara 92.33 90 LR LR 23 03 38.6
comp=Z,136nm,18.7s,baz=278,slow=36
MBAR Mbarara 92.33 90 P **P** **22 21 08.0 +0.2**
MBAR Mbarara 92.33 90*deP* **P** **22 21 08.9 +1.1**
TVO Taravao 92.46 252*eP* **P** **22 21 09.7 +1.5**
comp=Z,32nm,1.1s
TIAR Tiarei 92.49 253*eP* **P** **22 21 09.0 +0.7**
comp=Z,13nm,0.9s
PPT Papeete 92.71 253 P **P** **22 21 10.0 +0.7**
comp=Z,19nm,0.4s,baz=86,slow=4.5,SNR=6.7
comp=Z,19nm,0.4s
PPT Papeete 92.71 253 P **P** **22 21 10.0 +0.7**
PPT2 Papeete2 92.71 253*eP* **P** **22 21 10.3 +0.9**
comp=Z,66nm,1.2s
PPT2 Papeete2 92.71 253*e*SS SS 22 38 19.8 +1.5
comp=Z,167nm,24.8s
PPT2 Papeete2 92.71 253*e*LR LR 22 51 10.7
PAE Paea 92.73 253*eP* **P** **22 21 10.7 +1.4**
comp=Z,33nm,1.1s
NRIK Noril'sk 92.86 11 P **P** **22 21 08.8 -0.1**
comp=Z,20nm,0.8s,baz=357,slow=1.8,SNR=23
NRIK PP **PP** **22 24 52.6 -0.1**
comp=Z,1.7nm,0.3s,baz=296,slow=6.3,SNR=3.8
comp=Z,20nm,0.8s
NRIK Noril'sk 92.86 11 P **P** **22 21 08.9 -0.1**
NRIK IAmb IAmb 22 21 10.5
comp=Z,101nm,1.6s
NRIK Noril'sk 92.86 11*d i*P **P** **22 21 09.1 +0.1**
NRIK pmax pmax
comp=Z,34nm,1.2s
ARU Arti 92.96 29 P **P** **22 21 10.0 +0.3**
comp=Z,18nm,0.7s,baz=303,slow=3.6,SNR=42
ARU LR LR 23 00 23.7
comp=Z,183nm,18.8s,baz=298,slow=34
comp=Z,18nm,0.7s
ARU Arti 92.96 29 P **P** **22 21 10.1 +0.4**
ARU Arti 92.96 29*d i*P **P** **22 21 09.7 0.0**
ARU 22 24 54.5
ARU PPP PPP 22 26 55.5
ARU S **SKSac** **22 31 28.9 0.0**
ARU PS **PS** **22 33 20.7 -14**
ARU pmax pmax
comp=Z,126nm,1.8s
ARU MLR MLR
comp=Z,350nm,18.0s
TIXI Tiksi 93.05 357 LR LR 23 03 30.4
comp=Z,88nm,19.8s,baz=179,slow=36
TIXI Tiksi 93.05 357 P **P** **22 21 09.6 -0.1**
TIXI IAmb IAmb 22 21 10.9
comp=Z,62nm,0.9s
TIXI Tiksi 93.05 357*ceP* **P** **22 21 10.0 +0.2**
TIXI pmax pmax
comp=Z,65nm,1.0s
VNA1 Neumayer--Stat 93.07 164 P **P** **22 21 11.2 +1.5**
VNA1 Neumayer--Stat 93.07 164 PKKPdf PKKPdf 22 38 18.4 -1.2
MAK Makhachkala 93.08 44*eP* **P** **22 21 08.8 -1.7**
MAK *e**PP **pP** **22 21 47.2 -2.4**

MAK e*SP **sP** **22 22 02.6 -3.2**
MAK ePPP PPP 22 26 55.8
MAK e 22 31 28.1
MAK eSS SS 22 38 27.4 +6.1
MAK pmax pmax
comp=Z,254nm,1.1s
VNA3 Neumayer Olymp 93.10 165 P **P** **22 21 10.9 +1.1**
VNA3 Neumayer Olymp 93.10 165 PKKPdf PKKPdf 22 38 17.7 -1.9
VNA2 Neumayer--Watz 93.47 165 P **P** **22 21 12.2 +0.6**
baz=310,slow=6.0
VNA2 Neumayer--Watz 93.47 165 PKKPdf PKKPdf 22 38 17.1 -1.8
baz=108,slow=3.0
SVE Sverdlovsk 93.69 28 ceP **P** **22 21 13.6 +0.6**
SVE pmax pmax
comp=Z,68nm,1.4s
LBTB Lobatse 93.76 115 LR LR 22 56 47.6
comp=Z,129nm,21.4s,baz=290,slow=31
LBTB Lobatse 93.76 115 P **P** **22 21 14.3 +0.2**
LBTB IAmb IAmb 22 21 16.2
comp=Z,38nm,1.1s
LBTB Lobatse 93.76 115 P **P** **22 21 14.3 +0.2**
LBTB pmax pmax
comp=Z,38nm,1.1s
TBI Tubuai 94.08 247 eP **P** **22 21 16.9 +1.5**
comp=Z,230nm,1.0s
TBI Tubuai 94.08 247 eLR LR 22 51 48.9
comp=Z,274nm,34.5s
BELA Belgrano 2 94.19 174 P **P** **22 21 15.4 +0.7**
BOSA Boshof 94.39 118 P **P** **22 21 17.3 +0.4**
comp=Z,20nm,0.8s,baz=297,slow=3.4,SNR=24
BOSA PKiKP **PKiKP** **22 25 59.8 +0.2**
comp=Z,2.5nm,0.8s,baz=259,slow=7.5,SNR=3.1
BOSA PKKPbc **PKKPdf** **22 38 15.7 -0.4**
comp=Z,4.9nm,0.6s,baz=145,slow=2.5,SNR=14
comp=Z,20nm,0.8s
BOSA Boshof 94.39 118 P **P** **22 21 17.4 +0.5**
BOSA Boshof 94.39 118 P **P** **22 21 17.4 +0.5**
BOSA pmax pmax
comp=Z,23nm,0.9s
SNAA Sanae 95.09 164 P **P** **22 21 19.7 +0.6**
SNAA Sanae 95.09 164 PKKPdf PKKPdf 22 38 12.6 -3.5
SNAA Sanae 95.09 164 LR LR 23 08 02.1
comp=Z,68nm,19.0s,baz=306,slow=38
SNAA Sanae 95.09 164 P **P** **22 21 19.3 +0.3**
SNAA Sanae 95.09 164 deP **P** **22 21 19.4 +0.3**
SNAA pmax pmax
comp=Z,18nm,1.1s
MATP Matopo 95.20 110 PKKPbc PKKPbc 22 38 12.7 -1.3
comp=Z,1.7nm,0.5s,baz=20,slow=2.6,SNR=8.0
LODK Lodwar 95.73 85 P **P** **22 21 24.0 +0.7**
AKTO Aktyubinsk 95.95 34 P **P** **22 21 23.6 +0.1**
comp=Z,29nm,0.8s,baz=308,slow=4.9,SNR=88
AKTO PP **PP** **22 25 15.5 -1.8**
comp=Z,2.8nm,0.9s,baz=304,slow=7.3,SNR=4.1
AKTO LR LR 23 01 05.1
comp=Z,290nm,21.5s,baz=310,slow=33
comp=Z,29nm,0.8s
TROLL Troll, Antarti 96.70 164 P **P** **22 21 27.1 +0.6**
TROLL Troll, Antarti 96.70 164 PKKPdf PKKPdf 22 38 08.8 -4.4
SHEM Shemya Is, Ala 97.15 330 P **P** **22 21 27.7 -1.2**
comp=Z,31nm,0.8s,baz=66,slow=20,SNR=4.1
SHEM LR LR 23 06 27.7
comp=Z,147nm,20.7s,baz=57,slow=36
comp=Z,31nm,0.8s
ABKAR Akbulak array 97.64 34 P **P** **22 21 31.1 0.0**
ABKAR IAmb IAmb 22 21 32.8
comp=Z,20nm,0.9s
ABKAR Akbulak array 97.64 34 P **P** **22 21 31.1 0.0**
SEY Seymchan 97.73 345⇑ eP Pdif 22 21 32.3 +1.0
SEY pmax pmax
comp=Z,53nm,0.9s
KMBO Kilima Mbogo 98.75 89 P Pdif 22 21 38.3 +1.1
KMBO Kilima Mbogo 98.75 89 P Pdif 22 21 38.3 +1.1
KMBO pmax pmax
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 98.96 63 P **P** **22 21 37.2 -0.5**
RAYN Ar Rayn 98.96 63 P **P** **22 21 37.2 -0.5**
RAYN pmax pmax
comp=Z,6.0nm,1.1s
BRVK Borovoye 100.38 27 deP **Pdif** **22 21 43.6 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,0.9s
BVAR Borovoye Array 100.45 27 P **Pdif** **22 21 43.8 +0.2**
comp=Z,3.4nm,0.8s,baz=298,slow=3.2,SNR=24
YAK Yakutsk 102.49 355⇑ eP **Pdif** **22 21 53.5 +1.0**
YAK pmax pmax
comp=Z,13nm,1.0s
GEYT Alibeck 102.57 45 P **Pdif** **22 21 53.8 +0.3**
comp=Z,3.2nm,0.7s,baz=293,slow=7.6,SNR=7.2
GEYT PKiKP **PKiKP** **22 26 13.0 -0.9**
comp=Z,1.5nm,0.6s,baz=323,slow=0.7,SNR=2.4
GEYT PKKPbc **PKKPbc** **22 37 53.1 -0.7**
comp=Z,4.0nm,0.8s,baz=172,slow=1.0,SNR=10
PETK Petropavlovsk- 104.05 337 PKKPbc PKKPbc 22 37 48.2 -1.8
comp=Z,3.4nm,0.7s,baz=150,slow=3.3,SNR=3.8
QSPA South Pole Qui 105.19 180 PKKPbc PKKPbc 22 37 43.7 -4.1
comp=Z,3.3nm,0.5s,baz=174,slow=0.3,SNR=28
QSPA PKKPab **PKKPdf** **22 37 59.4 +1.6**
comp=Z,2.6nm,0.8s,baz=249,slow=7.8,SNR=6.8
ZALV Zalesovo Beam 105.33 20 Pdiff **Pdif** **22 22 05.4 +0.1**
comp=Z,2.2nm,0.8s,baz=319,slow=4.3,SNR=7.1
ZALV PKiKP **PKiKP** **22 26 16.9 -1.5**
comp=Z,3.7nm,0.6s,baz=285,slow=2.5,SNR=9.9
ZALV PKKPbc **PKKPbc** **22 37 42.3 -3.9**
comp=Z,2.4nm,0.7s,baz=145,slow=2.7,SNR=8.8
ZALV PKKPab **PKKPdf** **22 37 59.4 +4.2**
comp=Z,1.7nm,0.6s,baz=149,slow=3.2,SNR=5.3
KURBB Kurchatov Arra 105.67 25 Pdiff **Pdif** **22 22 07.3 +0.4**
comp=Z,2.6nm,0.8s,baz=319,slow=4.9,SNR=10
KURBB PKiKP **PKiKP** **22 26 18.8 -0.3**
comp=Z,1.0nm,0.4s,baz=316,slow=2.2,SNR=2.4
AAK Ala-Archa 109.65 33 PKiKP **PKiKP** **22 26 27.0 0.0**
comp=Z,1.9nm,0.6s,baz=285,slow=3.6,SNR=4.0
MKAR Makanchi Array 110.22 26 PKiKP **PKiKP** **22 26 26.7 -1.1**
comp=Z,1.5nm,0.5s,baz=334,slow=1.9,SNR=16
MKAR PKKPbc **PKKPbc** **22 37 28.8 -1.9**
comp=Z,9.1nm,0.7s,baz=111,slow=6.6,SNR=36
OPO Ambohidratompo 112.10 104 PKKPbc PKKPbc 22 37 22.5 -1.3
comp=Z,3.0nm,0.7s,baz=157,slow=2.8,SNR=5.1
VNDA Vanda 114.04 189 PKP **PKiKP** **22 26 34.8 +0.7**
comp=Z,2.9nm,0.9s,baz=166,slow=2.9,SNR=14
VNDA PKKPbc **PKKPbc** **22 37 13.9 -4.9**
comp=Z,1.9nm,1.1s,baz=292,slow=3.7,SNR=7.8
VNDA PKKPab **PKKPab** **22 37 22.1 +0.1**
comp=Z,2.0nm,0.9s,baz=300,slow=3.8,SNR=8.7
KLR Kul'dur 114.76 350⇑ iPKIKP **PKiKP** **22 26 35.4 -0.9**
WMQ Urumqi 114.84 24 ePKP PKPdf 22 26 37.6 +0.8
WMQ LR LR
comp=Z,440nm,18.1s
WMQ LR LR
comp=Z,410nm,19.5s
WMQ LR LR
comp=Z,170nm,21.3s
SONM Songino Array 116.30 9 PKP **PKPdf** **22 26 39.2 -0.3**
comp=Z,9.3nm,0.7s,baz=334,slow=1.2,SNR=55
SONM PP **PP** **22 27 45.2 -1.1**
comp=Z,3.6nm,1.0s,baz=6.3,slow=2.5,SNR=4.0
SONM PKKPbc **PKKPbc** **22 37 06.6 -4.1**
comp=Z,4.5nm,0.7s,baz=169,slow=3.2,SNR=22
SONM SKKP 22 40 52.6
comp=Z,0.7nm,0.9s,baz=182,slow=5.6,SNR=2.9
ULN Ulaanbaatar 116.37 9⇑ iPKIKP **PKPdf** **22 26 38.6 -1.1**
MAW Mawson 116.74 159 PKP **PKiKP** **22 26 39.5 0.0**
comp=Z,25nm,0.7s,baz=221,slow=1.9,SNR=108
MAW PKKPbc **PKKPbc** **22 37 07.8 -1.4**
comp=Z,6.2nm,0.9s,baz=3.7,slow=3.3,SNR=13
MAW Mawson 116.74 159 **PKiKP** **22 26 40.1 +0.7**
MAW Mawson 116.74 159 PKIKP **PKiKP** **22 26 40.2 +0.7**
USA0B Ussuriysk Arra 119.59 349 PKPdf **PKPdf** **22 26 44.9 -0.9**
USA0B Ussuriysk Arra 119.59 349⇑ iPKIKP **PKPdf** **22 26 44.8 -0.9**
USRK Ussuriysk Ar. 119.59 349 PKP **PKPdf** **22 26 45.2 -0.5**
comp=Z,14nm,0.8s,baz=329,slow=0.5,SNR=29
USRK PP **PP** **22 28 05.7 -3.2**
comp=Z,11nm,1.1s,baz=8.6,slow=6.4,SNR=8.1
MDJ Mudanjiang 119.59 351 PKP **PKiKP** **22 26 46.0 +0.2**
MDJ AMB AMB
comp=Z,290nm,4.8s
CN2 Changchun 120.92 354 ePKP **PKPdf** **22 26 46.1 -2.2**
CN2 PP **PP** **22 28 19.6 +1.7**
CN2 AMB AMB
comp=Z,300nm,5.0s
XLT XiLinHaoTe 121.12 2⇑ iPKP **PKPdf** **22 26 48.8 -0.1**
GTA Gaotai 122.92 17⇓ PKP **PKPdf** **22 26 51.9 -0.6**
GTA sPKP 22 27 48.1
GTA PP **PP** **22 28 37.0 +5.2**
GTA AMB AMB
comp=Z,180nm,6.9s
GTA LR LR
comp=Z,240nm,17.8s
GTA LR LR
comp=Z,230nm,17.1s
GTA LR LR
comp=Z,350nm,18.5s
MSVF Nonsavu 123.03 259 PKP **PKiKP** **22 26 54.4 +1.0**
comp=Z,38nm,0.8s,baz=107,slow=14,SNR=12
MSVF Nonsavu 123.03 259⇓ iPKIKP **PKiKP** **22 26 53.8 +0.5**
JMM Marumori 123.18 339 PKPdf **PKPdf** **22 26 52.6 -0.3**
MWZ Matawai 123.49 234 P **PKiKP** **22 26 55.1 +1.5**
RAGZ Rawiri 123.56 234 P **PKiKP** **22 26 55.3 +1.5**
SNGZ Shannon Statio 123.58 233 P **PKiKP** **22 26 55.6 +1.8**
URZ Urewera 123.82 234 PKP **PKPdf** **22 26 54.1 +0.1**
comp=Z,46nm,0.6s,baz=125,slow=3.0,SNR=38
URZ Urewera 123.82 234 P **PKPdf** **22 26 51.3 -2.6**
HHC Hu-ho-hao-te 123.84 6 ePKP **PKiKP** **22 26 54.8 +0.3**
HHC LR LR
comp=Z,520nm,15.2s
HHC LR LR
comp=Z,790nm,15.9s
HHC LR LR
comp=Z,630nm,14.6s
JSD Sado 123.86 341 PKPdf **PKPdf** **22 26 53.6 -0.5**
BKZ Black Stump Fm 124.18 233 PKPdf **PKiKP** **22 26 55.6 +0.6**
BKZ Black Stump Fm 124.18 233 P **PKiKP** **22 26 55.9 +0.8**
BHHZ Black Hill Sta 124.46 232 P **PKiKP** **22 26 57.0 +1.4**
MOVZ Moawhango 124.71 232 P **PKiKP** **22 26 56.7 +0.6**
TMVZ Te Maari 124.80 233 P **PKiKP** **22 26 56.8 +0.5**
BJI Beijing 124.98 2 PKP **PKPdf** **22 26 55.8 -0.4**
BJT Baijiatuau 125.00 2 **PKPdf** **22 26 56.1 -0.2**
BJT Baijiatuau 125.00 2 PKIKP **PKPdf** **22 26 56.1 -0.2**
TWVZ Taurewa 125.01 233 P **PKPdf** **22 26 56.4 0.0**
MJB9 Matsu-Tunnel 125.25 341 **PKPdf** **22 26 56.9 0.0**
MAJO Matsushiro 125.25 341 PKPdf **PKPdf** **22 26 56.4 -0.5**
MAJO Matsushiro 125.25 341 c iPKIKP **PKPdf** **22 26 56.6 -0.3**
MJAR Matsushiro Arr 125.25 341 PKP **PKPdf** **22 26 56.3 -0.6**
comp=Z,42nm,0.7s,baz=58,slow=1.3,SNR=105
MKAZ Moumakai 125.51 235 P **PKPdf** **22 26 57.4 +0.1**
WIAZ Waiheke Island 125.57 236 P **PKiKP** **22 26 58.3 +0.6**
THZ Tophouse 126.40 229 PKPdf **PKPdf** **22 26 58.9 0.0**
INU Inuyama 126.72 341 PKPdf **PKPdf** **22 26 59.5 -0.2**
KS19 Wonju Array Si 126.82 351 **PKPdf** **22 26 59.4 -0.4**
KSRS Korea Array 126.86 351 PKP **PKPdf** **22 26 59.8 -0.1**
comp=Z,25nm,0.8s,baz=23,slow=1.6,SNR=85
KSAR Wonju Array Be 126.87 351 PKPdf **PKPdf** **22 26 59.0 -0.9**
KSAR Wonju Array Be 126.87 351 PKIKP **PKPdf** **22 26 59.0 -0.9**
INCN Inchon 127.02 352 PKPdf **PKPdf** **22 26 59.4 -0.9**
INCN Inchon 127.02 352 PKIKP **PKPdf** **22 26 59.4 -0.9**
TIY Taiyuan 127.04 6 ePKP **PKiKP** **22 27 01.0 +0.1**
TMZ Timaru 127.09 226 P **PKiKP** **22 27 01.1 +0.4**
ARCZ Arundel 127.10 226 P **PKiKP** **22 27 01.2 +0.6**
LZH Lanzhou 127.12 15 PKP **PKiKP** **22 27 01.5 +0.3**
LZH LR LR
comp=Z,400nm,13.7s
LZH LR LR
comp=Z,320nm,14.8s
LZH LR LR
comp=Z,430nm,16.1s
ODZ Otahua Downs 127.15 225 P **PKiKP** **22 27 01.6 +0.9**
RPZ Rata Peaks 127.25 226 PKP **PKiKP** **22 27 00.7 -0.2**
baz=260,slow=6.1
RPZ Rata Peaks 127.25 226 PKPdf **PKiKP** **22 27 01.0 +0.1**
RPZ Rata Peaks 127.25 226 P **PKiKP** **22 27 01.4 +0.5**
HNS HongShan 127.54 4⇓ PKP **PKiKP** **22 27 01.5 -0.2**
WVZ Waitaha Valley 127.64 227 P **PKiKP** **22 27 01.4 -0.2**
LSA Lhasa 128.13 31 **PKPdf** **22 27 03.3 +0.1**
LSA Lhasa 128.13 31 PKP **PKiKP** **22 27 03.5 -0.3**
LSA Lhasa 128.13 31 PKIKP **PKPdf** **22 27 03.3 +0.1**
JHS Saijyo 128.16 345 PKPdf **PKPdf** **22 27 02.2 -0.3**
FOZ Fox Glacier 128.16 226 P **PKiKP** **22 27 02.7 0.0**
WKZ Wanaka 128.32 224 P **PKiKP** **22 27 04.4 +1.3**
WHZ Wether Hill Ro 128.69 223 P **PKiKP** **22 27 04.5 +0.7**
JCZ Jackson Bay 128.71 225 P **PKiKP** **22 27 04.8 +0.8**
CASY Casey 128.72 176 PKPdf **PKiKP** **22 27 03.4 +0.2**
MLZ Mavora Lakes 128.75 224 P **PKiKP** **22 27 04.4 +0.5**
TIA Tai'an 128.83 1 PKP **PKPdf** **22 27 03.8 +0.1**
XAN Xi'an 130.17 10⇑ PKP **PKiKP** **22 27 06.9 -0.3**
LYN LuoYang 130.17 7⇓ PKP **PKPdf** **22 27 06.1 -0.2**
SHL Shillong 131.88 33 PKPdf **PKPdf** **22 27 09.2 -0.8**
SHL Shillong 131.88 33 PKIKP **PKPdf** **22 27 09.2 -0.8**
CD2 Chengdu 131.99 17 PKP **PKPdf** **22 27 09.6 -0.3**
NJ2 Nanjing 132.99 360 ePKP **PKPdf** **22 27 11.6 -0.1**
YATNC Mamie plateau, 133.79 254 P **PKiKP** **22 27 15.4 +0.7**
OUENC Ouen Island, N 133.83 253 **PKiKP** **22 27 14.4 -0.4**
OUENC Ouen Island, N 133.83 253 P **PKiKP** **22 27 15.2 +0.4**
ENH Enshi 133.94 11 **PKPdf** **22 27 13.6 0.0**
ONTNC Ouen Toro 134.19 254 P **PKiKP** **22 27 15.2 -0.3**
DZM Mont Dzumac 134.20 254 eP **PKPdf** **22 27 14.9 +0.6**
comp=Z,107nm,1.0s
DZM Mont Dzumac 134.20 254 PKP **PKiKP** **22 27 15.4 -0.2**
baz=96,slow=12
DZM SKPbc **SKPbc** **22 30 27.6 -1.8**
comp=Z,6.9nm,0.8s,baz=110,slow=11,SNR=4.7
DZM Mont Dzumac 134.20 254 P **PKiKP** **22 27 16.1 +0.4**
WHN Wuhan 134.32 5⇑ PKP **PKPdf** **22 27 14.5 +0.3**
PZH PanZhiHua 135.44 22 PKP **PKPdf** **22 27 15.9 -0.7**
PALK Pallekele 136.39 62 PKPdf **PKPdf** **22 27 18.5 -0.1**
PALK Pallekele 136.39 62 PKIKP **PKPdf** **22 27 18.5 -0.1**
PALK Pallekele 136.39 62 PKP **PKPdf** **22 27 18.2 -0.4**
PALK PKP **PKiKP** **22 27 19.4 -0.9**
GYA Guiyang 137.00 16⇑ PKP **PKPdf** **22 27 20.0 +0.5**
GYA sPKP 22 28 13.5
GYA PP **PP** **22 30 05.3 +2.2**
GYA SKS **SKSdf** **22 34 14.5 -1.7**
GYA AMB AMB
comp=Z,370nm,4.4s
GYA LR LR
comp=Z,420nm,4.2s
GYA LR LR
comp=Z,660nm,4.0s
KMI Kunming 137.06 21⇑ PKP **PKPdf** **22 27 20.1 +0.3**
JOW Kunigami 137.13 347 PKPdf **PKPdf** **22 27 19.1 -0.4**
CHTO Chiang Mai 141.08 30 PKPdf **PKPdf** **22 27 26.3 -0.7**
CHTO Chiang Mai 141.08 30 PKIKP **PKPdf** **22 27 26.3 -0.7**
CMAR Chiang Mai Arr 141.38 31 PKhKP PKPpre 22 27 20.9
comp=Z,8.5nm,0.7s,baz=315,slow=5.0,SNR=34
CMAR PP **PP** **22 30 29.3 -1.1**
comp=Z,4.2nm,0.8s,baz=314,slow=6.7,SNR=7.4
CMAR Chiang Mai Arr 141.38 31 PKPdf **PKPdf** **22 27 28.0 +0.5**
CMAR Chiang Mai Arr 141.38 31 PKIKP **PKPdf** **22 27 28.0 +0.5**
SRDT SRDT 144.92 34 PKP PKPbc 22 27 31.4 -1.9
SRDT PKP **PKPab** **22 27 32.3 -1.0**
RABL Rabaul 145.10 285 **PKPbc** **22 27 33.2 -0.8**
ARMA Armidale 146.07 238 **PKPbc** **22 27 36.6 0.0**
CAN Canberra 146.13 228 **PKPbc** **22 27 36.3 -0.3**
CAN Canberra 146.13 228 PKIKP **PKPbc** **22 27 36.3 -0.3**
UBPT Khong Chiam 147.07 24 PKPdf **PKPdf** **22 27 37.3 -0.1**
UBPT PKPbc **PKPbc** **22 27 40.4 +0.7**
UBPT Khong Chiam 147.07 24 PKP **PKPdf** **22 27 37.0 -0.4**
UBPT PKP **PKPbc** **22 27 37.7 -2.0**
TOO Toolangi 147.34 222 PKPdf **PKPdf** **22 27 38.1 +0.7**
TOO PKPbc **PKPbc** **22 27 41.0 +1.0**
TOO Toolangi 147.34 222 PKIKP **PKPdf** **22 27 38.1 +0.7**
TOO 22 27 41.0
EIDS Eidsvold 147.89 246 PKPdf **PKPdf** **22 27 38.4 -0.2**
EIDS PKPbc **PKPbc** **22 27 42.0 +0.3**
MANU Manus Island 148.65 292 **PKPdf** **22 27 40.5 +0.3**
LHMI Lhok Sumawe 150.53 48 **PKPbc** **22 27 47.5 -1.1**
LHMI Lhok Sumawe 150.53 48 PKP **PKPdf** **22 27 42.4 -0.7**
MLSI Meulaboh, Aceh 150.78 50 PKP **PKPdf** **22 27 42.8 -0.7**
PMG Port Moresby 151.42 278 de PKIKP **PKPdf** **22 27 45.1 +0.7**
PMG Port Moresby 151.42 278 PKP **PKPdf** **22 27 44.2 -0.2**
SKLT Songkhla 151.56 40 PKP **PKPdf** **22 27 44.0 -0.7**
SKLT PKP **PKPbc** **22 27 45.5 -5.5**
KCSI Kotacane, Aceh 152.29 49 PKP **PKPdf** **22 27 45.1 -0.7**
TSI Tuntungan 152.88 48 PKP **PKPdf** **22 27 45.9 -0.7**
KULM Kulim 153.02 42 PKPdf **PKPdf** **22 27 46.8 -0.1**
KULM PKPbc **PKiKP** **22 27 54.6 +0.1**
KULM PKPab **PKPab** **22 28 06.7 +0.6**
KULM Kulim 153.02 42 PKP **PKPdf** **22 27 46.2 -0.7**
KULM PKP **PKPdf** **22 27 47.7 +0.8**
STKA Stephens Creek 153.20 228 **PKPdf** **22 27 47.0 +0.5**
comp=Z,20nm,0.8s,baz=115,slow=1.8,SNR=34
STKA PKPbc **PKiKP** **22 27 54.8 +0.5**
comp=Z,78nm,0.8s,baz=109,slow=3.2,SNR=59
STKA PKPab **PKPab** **22 28 06.4 0.0**
comp=Z,18nm,0.6s,baz=69,slow=8.4,SNR=4.9
STKA Stephens Creek 153.20 228 PKPdf **PKPdf** **22 27 46.8 +0.2**
STKA PKPbc **PKiKP** **22 27 54.6 +0.3**
STKA Stephens Creek 153.20 228⇓ ePKIKP **PKPdf** **22 27 46.9 +0.3**
GSI Gunungsitoli 153.59 53 PKP **PKPdf** **22 27 46.9 -0.8**
GSI PKP **PKPdf** **22 27 49.0 +1.3**
PSI Prapat 153.62 49 PKP **PKPdf** **22 27 47.6 -0.3**
comp=Z,12nm,0.9s,baz=332,slow=18,SNR=2.0
PSI PKPbc **PKPbc** **22 27 55.3 -0.4**
comp=Z,86nm,0.7s,baz=336,slow=9.6,SNR=13
PSI PKPab **PKPab** **22 28 08.5 -0.3**
comp=Z,43nm,0.6s,baz=325,slow=4.1,SNR=7.1
PSI PP **PP** **22 31 44.2 +1.3**
comp=Z,8.9nm,0.7s,baz=271,slow=9.5,SNR=4.6
PSI Prapat 153.62 49 PKP **PKPdf** **22 27 47.1 -0.8**
PSI PKP **PKPdf** **22 27 47.8 -0.1**
RPSI Rantau Prapat 153.69 49 **PKPdf** **22 27 47.0 -0.8**
RPSI PKPbc **PKPbc** **22 27 55.3 -0.4**
IPM Ipoh 153.87 43 PKPdf **PKPdf** **22 27 48.0 -0.1**
IPM **PKPbc** **22 27 55.6 -0.5**
IPM Ipoh 153.87 43 PKP **PKPdf** **22 27 47.1 -1.0**
IPM PKP **PKPdf** **22 27 47.4 -0.7**
IPM PKP **PKPbc** **22 27 55.9 -0.3**
PBSI Pulau Batu 154.98 55 PKP **PKPdf** **22 27 48.8 -0.8**
GENI Genyem 155.22 298 PKP **PKPdf** **22 27 49.6 -0.3**
MNSI Mandailing Nat 155.44 51 PKP **PKPdf** **22 27 49.5 -0.7**
BBOO Buckleboo 156.31 219 PKPdf **PKPdf** **22 27 51.0 +0.1**
BBOO PKPab **PKPab** **22 28 19.7 0.0**
SISI Saibi 156.39 56 PKP **PKPdf** **22 27 50.7 -0.8**
BKNI Bangkinang 156.84 50 PKP **PKPdf** **22 27 51.3 -0.8**
KKM Kota Kinabalu 158.75 6 PKP **PKPdf** **22 27 53.9 -0.6**
TPRI Tanjung Pinang 158.83 42 PKP **PKPdf** **22 27 53.8 -0.7**
RKPI Ransiki, Papua 159.37 310 PKP **PKPdf** **22 27 54.8 -0.4**
MYLDM Lahad Datu 159.72 360 PKP **PKPdf** **22 27 55.1 -0.4**
DSRI Dabo 159.91 44 PKP **PKPdf** **22 27 55.0 -0.8**
MASI Maura Aman, Be 159.99 55 PKP **PKPdf** **22 27 55.1 -0.8**
GAMI Galela, Maluku 160.71 331 PKP **PKPdf** **22 27 56.2 -0.5**
SIJI Sorong 160.96 317 PP **PP** **22 32 19.6 -3.1**
comp=Z,3.7nm,0.6s,baz=42,slow=8.7,SNR=4.0
SIJI Sorong 160.96 317 PKP **PKPdf** **22 27 56.5 -0.4**
SBUM Sibu 161.37 20 PKPdf **PKPdf** **22 27 57.1 -0.2**
SBUM PKPab **PKPab** **22 28 42.6 +0.6**
SBUM Sibu 161.37 20 PKP **PKPdf** **22 27 56.8 -0.6**
KSM Kuching 161.54 27 PKPdf **PKPdf** **22 27 56.5 -1.0**
KSM PKPab **PKPab** **22 28 42.9 +0.1**
KSM Kuching 161.54 27 PKP **PKPdf** **22 27 56.9 -0.6**
FAKI Fak Fak 161.74 311 PKP **PKPdf** **22 27 57.3 -0.4**
TNTI Ternate 161.84 330 PKPdf **PKPdf** **22 27 56.6 -1.3**
TNTI Ternate 161.84 330 PKP **PKPdf** **22 27 57.4 -0.4**
PPBI Pangkal Pinang 162.20 44 PKP **PKPdf** **22 27 57.5 -0.7**
FORT Forrest 162.21 208 PKPdf **PKPdf** **22 27 57.1 -0.6**
FORT PKPab **PKPab** **22 28 45.3 0.0**
NWAO Narrogin (SRO) 162.34 177 PKPab **PKPab** **22 28 45.5 -0.2**
baz=231,slow=12
NWAO Narrogin (SRO) 162.34 177 PKPdf **PKPdf** **22 27 57.0 -0.8**
NWAO PKPab **PKPab** **22 28 46.0 +0.3**
NWAO Narrogin (SRO) 162.34 177 PKP2 **PKPab** **22 28 46.0 +0.3**
NWAO 23 27 57.0
LWLI Liwa 162.56 56 PKP **PKPdf** **22 27 57.8 -0.9**
KLI Kotabumi 163.09 54 PKP **PKPdf** **22 27 58.3 -0.8**
KASI Kota Agung 163.21 56 PKP **PKPdf** **22 27 57.9 -1.3**
KASI PKP **PKPdf** **22 27 59.6 +0.4**
AS31 Alice Springs 163.22 238 **PKPdf** **22 27 59.0 0.0**
AS31 PKPab **PKPab** **22 28 49.5 -0.7**
ASAR Alice Springs 163.22 238 PKP **PKPdf** **22 27 58.6 -0.4**
comp=Z,25nm,0.8s,baz=108,slow=1.2,SNR=193
ASAR PKPab **PKPab** **22 28 49.8 -0.4**
comp=Z,20nm,0.7s,baz=110,slow=4.0,SNR=4.4
ASAR Alice Springs 163.22 238 **PKPdf** **22 27 58.7 -0.3**
ASAR PKPab **PKPab** **22 28 49.3 -0.8**
STKI Sintang 163.30 25 PKP **PKPdf** **22 27 58.2 -1.1**
TOLI2 Tolitoli 163.61 352 **PKPdf** **22 27 58.6 -1.0**
GTOI Gorontalo 163.62 344 PKP **PKPdf** **22 27 57.6 -2.0**
GTOI PKP **PKPdf** **22 27 58.4 -1.2**
WR0 Warramunga Arr 163.99 251 **PKPdf** **22 27 59.8 +0.1**
MRSI Marisa 164.03 347 PKP **PKPdf** **22 27 57.6 -2.3**
MRSI PKP **PKPdf** **22 27 59.9 0.0**
WRAB Tennant Creek 164.17 251 PKPdf **PKPdf** **22 27 59.7 -0.2**
WRAB **PKPab** **22 28 54.8 +0.4**
WRAB Tennant Creek 164.17 251 d iPKIKP **PKPdf** **22 27 59.4 -0.5**
WRA Warramunga Arr 164.18 250 PKP **PKPdf** **22 27 59.4 -0.5**
comp=Z,34nm,0.9s,baz=86,slow=0.6,SNR=167
WRA PKPab **PKPab** **22 28 54.7 +0.2**
comp=Z,84nm,0.9s,baz=102,slow=4.4,SNR=72
WRA PP **PP** **22 32 39.8 -1.2**
comp=Z,6.7nm,1.2s,baz=90,slow=4.8,SNR=4.7
WRA Warramunga Arr 164.18 250 PKPdf **PKPdf** **22 27 59.2 -0.7**
MPSI Mapaga 164.47 355 PKP **PKPdf** **22 27 58.4 -1.9**
MPSI PKP **PKPdf** **22 28 00.4 +0.1**
KRAI Karang Ratu 164.66 320 PKP **PKPdf** **22 27 58.1 -2.4**
KRAI PKP **PKPdf** **22 28 00.6 +0.1**
SANI Sanana 164.96 330 PKP **PKPdf** **22 27 59.7 -1.1**
AAI Ambon 165.07 319 PKP **PKPdf** **22 27 58.5 -2.4**
AAI PKP **PKPdf** **22 28 00.7 -0.2**
SMKI Samarinda 165.26 5 PKP **PKPdf** **22 28 03.5 +2.5**
LUWI Luwuk 165.28 343 **PKPdf** **22 28 00.0 -1.1**
LUWI PKPab **sPKPdf** **22 28 57.0 -0.3**
LUWI Luwuk 165.28 343 PKP **PKPdf** **22 27 59.9 -1.1**
NLAI Namlea 165.38 324 PKP **PKPdf** **22 28 01.9 +0.8**
APSI Ampana 165.44 347 PKP **PKPdf** **22 28 00.0 -1.2**
APSI PKP **PKPdf** **22 28 01.2 0.0**
PBKI Pangkalan Bun 165.86 29 PKP **PKPdf** **22 28 00.6 -0.9**
MORW Morawa 166.04 171 **PKPdf** **22 28 00.3 -0.9**
MORW **PKPab** **22 29 01.6 -0.5**
CNJI Cibinong 166.37 56 PKP **PKPdf** **22 28.7 -3.2**
CNJI PKP **PKPdf** **22 28 02.1 +0.2**
LEM Lembang 166.46 53 PKP **PKPdf** **22 28 01.7 -0.4**
comp=Z,79nm,1.0s,baz=307,slow=20,SNR=18
LEM Lembang 166.46 53 PKP **PKPdf** **22 28 00.8 -1.4**
MTN Manton Dam 167.50 279 PKPdf **PKPdf** **22 28 01.3 -1.4**
MTN PKPab **PKPab** **22 29 09.0 -0.2**
CTJI Waduk Cacaban 167.75 49 PKP **PKPdf** **22 28 01.7 -1.2**
CTJI PKP **PKPdf** **22 28 02.8 -0.1**
BBKI Banjar Baru 167.77 17 PKP **PKPdf** **22 28 01.4 -1.6**
BBKI PKP **PKPdf** **22 28 04.3 +1.4**
TTSI Tana Toraja 167.82 354 PKP **PKPdf** **22 28 01.4 -1.6**
TTSI PKP **PKPdf** **22 28 03.7 +0.7**
PMSI Majene 168.34 358 PKP **PKPdf** **22 28 01.8 -1.6**
PMSI PKP **PKPdf** **22 28 04.5 +1.1**
SMRI Semarang 168.67 45 PKP **PKPdf** **22 28 02.3 -1.2**
SMRI PKP **PKPdf** **22 28 05.0 +1.5**
SPSI Sidrap Palu 168.74 353 PKP **PKPdf** **22 28 02.0 -1.6**
SPSI PKP **PKPdf** **22 28 03.7 +0.1**
BNSI Bone 169.12 351 PKP **PKPdf** **22 28 03.0 -0.8**
UGM Wanagama 169.34 48 **PKPdf** **22 28 02.8 -1.2**
UGM Wanagama 169.34 48 PKP **PKPdf** **22 28 03.0 -1.0**
BBSI Bau Bau 169.52 337 PKP **PKPdf** **22 28 02.9 -1.2**
BBSI PKP **PKPdf** **22 28 05.4 +1.3**
KAPI Kappang 169.78 353 PKP **PKPdf** **22 28 03.4 -0.8**
PCJI Pacitan 170.00 46 PKP **PKPdf** **22 28 01.5 -2.8**
PCJI PKP **PKPdf** **22 28 04.1 -0.2**
KNRA Kununurra 170.08 266 **PKPdf** **22 28 02.9 -1.4**
PWJI Pagerwojo 170.30 43 PKP **PKPdf** **22 28 03.5 -1.0**
KMMI Kalianget 170.74 29 PKP **PKPdf** **22 28 02.0 -2.7**
KMMI PKP **PKPdf** **22 28 04.5 -0.2**
BSSI Bau Bau, Buton 170.76 348 PKP **PKPdf** **22 28 02.0 -2.8**
BSSI PKP **PKPdf** **22 28 06.1 +1.3**
ABJI Asem Bagus 171.52 30 PKP **PKPdf** **22 28 04.2 -0.9**
JAGI Jajag, Banyuwa 172.06 33 **PKPdf** **22 28 03.3 -2.1**
JAGI Jajag, Banyuwa 172.06 33 PKP **PKPdf** **22 28 04.4 -1.0**
SOEI Soe 172.16 313 PKP **PKPdf** **22 28 04.5 -1.1**
SRBI Singaraja 172.21 25 PKP **PKPdf** **22 28 04.5 -0.9**
RTBI Rangdo, Negare 172.43 28 PKP **PKPdf** **22 28 04.6 -1.0**
MMRI Maumere 172.49 330 PKP **PKPdf** **22 28 04.7 -0.9**
KLNI Mataram 172.84 19 PKP **PKPdf** **22 28 04.8 -0.9**

λ160.60000°. Principal axes: T 2.5832, Plg21.0000°, Azm101.0000°; N 0.0915, Plg68.0000°, Azm298.0000°; P -2.6747, Plg6.0000°, Azm193.0000°;
*NCEDC **18** 22:09:07.7±2.3,36°.71N±0°.01×121°.31W±0°.02,h8km±4km, Mwr3.6/5,ML3.5/102(NEIC) Error ellipse: s-maj=2.3km s-min=1.3km az=61.0*
*ANF **18** 22:09:08.5±0.9,36°.62N×121°.22W,h7km±15km,ML3.7/21, Error ellipse: s-maj=15.3km s-min=3.0km az=121.0*
ISC 18 22:09:07.4±0.8,36°.70N±0°.02×121°.35W±0°.02,h14km±4km, n274,σ0°84/289,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLRM	**Lewis Ranch**	**0.07**	**118**		**Pg**	**22 09 09.9**	**-0.4**
BJOM	**Mount Johnson**	**0.08**	**158**		**Pg**	**22 09 11.9**	**+1.6**
BSLM	**Silva Ranch**	**0.08**	**360**		**Pg**	**22 09 10.2**	**-0.1**
SAO	**San Andreas Ge**	**0.10**	**310**	Pg	**Pg**	**22 09 10.4**	**-0.2**
SAO				Sg	**Sg**	**22 09 12.7**	**-0.1**
SCZ	**Santa Cruz**	**0.11**	**204**		**Pg**	**22 09 10.5**	**-0.2**
FRP	**Fremont Peak**	**0.13**	**296**		**Pg**	**22 09 10.8**	**-0.2**
BSRM	**Salinas Radio**	**0.14**	**257**		**Pg**	**22 09 11.2**	**0.0**
BJCM	**Johnson Can.**	**0.15**	**193**		**Pg**	**22 09 11.2**	**-0.1**
HSFM	**Saint Francis**	**0.17**	**313**		**Pg**	**22 09 11.9**	**+0.4**
BVL	**Bear Valley**	**0.18**	**134**		**Pg**	**22 09 11.6**	**0.0**
HLTM	**Lone Tree Road**	**0.19**	**10**		**Pb**	**22 09 12.9**	**+0.2**
HJGM	**San Juan Grade**	**0.21**	**299**		**Pg**	**22 09 12.3**	**+0.2**
HBTM	**San Juan Bauti**	**0.22**	**313**		**Pg**	**22 09 12.9**	**+0.6**
OCR	**O'Connell Ranc**	**0.25**	**330**		**Pg**	**22 09 12.9**	**0.0**
BPCNC	**Pine Canyon**	**0.26**	**241**		**Pg**	**22 09 13.5**	**+0.6**
BAVM	**Antelope Valle**	**0.26**	**101**		**Pg**	**22 09 13.1**	**+0.1**
ANZ	**Anzar Road**	**0.27**	**314**		**Pg**	**22 09 13.5**	**+0.4**
HTUM	**Tustin Road**	**0.27**	**299**		**Pg**	**22 09 13.5**	**+0.4**
BBGB	**Big Mountain B**	**0.28**	**116**		**Pb**	**22 09 13.9**	**-0.3**
BBGB				Sg	**Sb**	**22 09 18.8**	**0.0**
HFEM	**San Felipe**	**0.29**	**352**		**Pg**	**22 09 13.9**	**+0.4**
BBNM	**San Benito**	**0.29**	**131**		**Pg**	**22 09 14.0**	**+0.5**
BSGM	**Shirttail Gulc**	**0.29**	**165**		**Pg**	**22 09 13.5**	**0.0**
HERM	**Elkhorn Road**	**0.31**	**289**		**Pg**	**22 09 14.5**	**+0.7**
PACP	**Pacheco Peak**	**0.31**	**9**		**Pg**	**22 09 14.3**	**+0.4**
PACP					**Sb**	**22 09 19.3**	**-0.5**
CSR	**Chase Ranch**	**0.32**	**324**		**Pb**	**22 09 15.5**	**+0.6**
BSMM	**Soledad Missio**	**0.32**	**191**		**Pg**	**22 09 14.5**	**+0.5**
CDC	**Canada Road**	**0.34**	**342**		**Pg**	**22 09 15.0**	**+0.5**
HAST	**Hastings Reser**	**0.35**	**208**		**Pg**	**22 09 15.0**	**+0.4**
HAST					**Sg**	**22 09 20.4**	**+0.9**
HPCM	**Pacheco Lake**	**0.36**	**9**		**Pg**	**22 09 15.2**	**+0.4**
LRV	**Little Rabbit**	**0.38**	**136**		**Pg**	**22 09 15.6**	**+0.4**
SLD	**San Luis Dam**	**0.39**	**15**		**Pg**	**22 09 15.4**	**+0.1**
GHS	**Gilroy Hot Spr**	**0.40**	**349**		**Pg**	**22 09 16.0**	**+0.4**
BRMM	**Rolling Bench**	**0.44**	**72**		**Pb**	**22 09 17.2**	**+0.2**
JELB	**Ellicott, Saint**	**0.45**	**301**		**Pg**	**22 09 16.9**	**+0.6**
BMSM	**Mercy Hot Spri**	**0.45**	**95**		**Pb**	**22 09 16.8**	**-0.3**
HMOM	**Monterey**	**0.47**	**258**		**Pg**	**22 09 17.2**	**+0.5**
CADM	**Anderson Res.**	**0.52**	**335**		**Pg**	**22 09 17.9**	**+0.3**
SCKWR	**San Luis Creek**	**0.53**	**25**		**Pb**	**22 09 18.6**	**+0.1**
JTGM	**Trout Gulch Ro**	**0.54**	**308**		**Pb**	**22 09 19.4**	**+0.7**
JLAB	**Laurel Hill**	**0.55**	**326**		**Pg**	**22 09 18.6**	**+0.4**
BAPM	**Anderson Peak**	**0.57**	**205**		**Pg**	**22 09 19.1**	**+0.4**
BPOM	**Post Ranch**	**0.58**	**216**		**Pg**	**22 09 19.1**	**+0.3**
JRGM	**Rodeo Gulch Ro**	**0.60**	**305**		**Pg**	**22 09 19.3**	**+0.2**
AMC	**Almaden**	**0.61**	**319**		**Pg**	**22 09 19.7**	**+0.3**
CCOB	**Coe Ranch Numb**	**0.62**	**335**		**Pb**	**22 09 20.4**	**+0.4**
PCCM	**Crazy Canyon**	**0.63**	**166**		**Pg**	**22 09 20.1**	**+0.4**
PMPB	**Monarch Peak**	**0.65**	**137**		**Pg**	**22 09 20.3**	**+0.1**
CMPM	**Mikes Peak**	**0.66**	**2**		**Pb**	**22 09 20.9**	**+0.2**
ARN	**Arnold Ranch**	**0.67**	**347**		**Pg**	**22 09 20.9**	**+0.4**
MHC	**Mount Hamilton**	**0.68**	**340**		**Pg**	**22 09 21.2**	**+0.4**
JJOM	**Saint Joseph's**	**0.71**	**315**		**Pg**	**22 09 21.6**	**+0.2**
SCCB	**Santa Clara Co**	**0.72**	**325**		**Pg**	**22 09 22.0**	**+0.6**
CMMM	**Mount Mocho**	**0.77**	**351**		**Pg**	**22 09 22.7**	**+0.4**
PSAM	**San Ardo**	**0.77**	**151**		**Pg**	**22 09 22.3**	**0.0**
PJUM	**Juniper Ridge**	**0.77**	**127**		**Pg**	**22 09 22.5**	**+0.2**
PPTM	**Peach Tree Val**	**0.78**	**139**		**Pg**	**22 09 22.4**	**-0.1**
PAPM	**Alder Peak**	**0.78**	**181**		**Pg**	**22 09 23.0**	**+0.3**
COSM	**Mount Oso**	**0.81**	**359**		**Pb**	**22 09 23.9**	**+0.6**
JSGM	**Saratoga Golf**	**0.81**	**316**		**Pg**	**22 09 23.5**	**+0.4**
CMLM	**Mount Lewis**	**0.81**	**343**		**Pg**	**22 09 23.7**	**+0.4**
CALM	**Calaveras Res.**	**0.83**	**335**		**Pg**	**22 09 24.0**	**+0.5**
JSCM	**Stevens Creek**	**0.85**	**314**		**Pg**	**22 09 23.6**	**-0.3**
PDRM	**Domengine Ranc**	**0.87**	**114**		**Pb**	**22 09 24.5**	**+0.3**
JSJM	**St Joseph**	**0.87**	**317**		**Pb**	**22 09 25.0**	**+0.7**
PSMM	**Smith Mountain**	**0.87**	**136**		**Pg**	**22 09 24.5**	**+0.2**
JBMM	**Black Mountain**	**0.89**	**314**		**Pg**	**22 09 24.8**	**0.0**
PHSB	**Hesperia Broad**	**0.91**	**165**		**Pg**	**22 09 24.9**	**0.0**
PARM	**Anticline Ridg**	**0.93**	**119**		**Pb**	**22 09 25.7**	**+0.5**
PHPM	**Hope Ranch**	**0.93**	**140**		**Pg**	**22 09 25.1**	**-0.4**
JFP	**Foothills Park**	**0.94**	**315**		**Pg**	**22 09 25.0**	**-0.7**
PWMM	**Westland Maint**	**0.95**	**106**		**Pn**	**22 09 26.6**	**+0.2**
JSFB	**Stanford Teles**	**0.97**	**317**		**Pg**	**22 09 25.6**	**-0.5**
WENL	**Wente Vineyard**	**0.98**	**341**		**Pg**	**22 09 26.3**	**-0.1**
PANM	**San Antonio Re**	**0.98**	**159**		**Pg**	**22 09 26.1**	**-0.3**
PKD	**Bear Valley Ra**	**0.99**	**139**		**Pg**	**22 09 26.2**	**-0.5**
JRSC	**Jasper Ridge**	**1.00**	**315**		**Pb**	**22 09 25.9**	**-0.6**
CVLM	**Vallecito**	**1.00**	**337**		**Pb**	**22 09 26.7**	**+0.1**
MYLM	**Yosemite Lake**	**1.01**	**47**		**Pb**	**22 09 26.4**	**-0.3**
PVCM	**Vineyard Canyo**	**1.02**	**139**		**Pg**	**22 09 26.6**	**-0.4**
BGH	**Bear Gulch**	**1.02**	**309**		**Pb**	**22 09 26.7**	**-0.1**
PPO	**Portuguese Can**	**1.02**	**144**		**Pb**	**22 09 26.9**	**+0.1**
PSTM	**Stockdale Moun**	**1.02**	**138**		**Pb**	**22 09 26.7**	**-0.2**
PHCM	**Hearst Castle**	**1.03**	**171**		**Pb**	**22 09 27.1**	**+0.2**
CNIC	**Niles Canyon**	**1.03**	**332**		**Pb**	**22 09 26.7**	**-0.3**
CDOM	**Doolan Road**	**1.10**	**339**		**Pn**	**22 09 29.4**	**+1.0**
PWKM	**Work Ranch**	**1.11**	**142**		**Pb**	**22 09 28.2**	**-0.2**
PHFM	**Heflinger Ranc**	**1.12**	**137**		**Pb**	**22 09 28.6**	**+0.1**
CTM	**Castle Mountai**	**1.12**	**133**		**Pg**	**22 09 29.1**	**+0.1**
RAMR	**Ramage Ranch**	**1.13**	**160**		**Pb**	**22 09 28.3**	**-0.4**
CBSNC	**Byron Hot Spri**	**1.14**	**348**		**Pb**	**22 09 29.0**	**+0.1**
PHAM	**Harlan Ranch**	**1.15**	**138**		**Pb**	**22 09 28.7**	**-0.4**
JCHM	**Cahill Ridge**	**1.16**	**315**		**Pb**	**22 09 28.4**	**-0.8**
CMOB	**Morgan Territo**	**1.17**	**342**		**Pb**	**22 09 29.0**	**-0.4**
PCMM	**Cholame Hills**	**1.17**	**139**		**Pb**	**22 09 29.2**	**-0.2**
JCPM	**Coyote Point**	**1.18**	**319**		**Pn**	**22 09 28.5**	**-0.9**
GHC	**Gold Hill**	**1.18**	**137**		**Pb**	**22 09 29.2**	**-0.4**
CLCB	**Lake Chabot**	**1.19**	**331**		**Pn**	**22 09 29.1**	**-0.4**
PKEM	**Kettleman Hill**	**1.19**	**122**		**Pn**	**22 09 30.1**	**+0.6**
CSLM	**San Leandro Hi**	**1.19**	**329**		**Pn**	**22 09 29.4**	**-0.2**
PCBM	**Cambria**	**1.20**	**169**		**Pn**	**22 09 29.1**	**-0.6**
PSRM	**Scobie Ranch**	**1.20**	**134**		**Pn**	**22 09 30.0**	**+0.2**
BLDC	**Black Mountain**	**1.22**	**163**		**Pn**	**22 09 29.8**	**-0.2**
BLDC	**Black Mountain**	**1.22**	**163**		**Pn**	**22 09 29.8**	**-0.2**
PKLM	**Kerr Lake**	**1.23**	**138**		**Pn**	**22 09 30.0**	**-0.2**
MHDM	**Hidden Dam**	**1.24**	**70**		**Pn**	**22 09 29.6**	**-0.7**
PSNM	**Stone Corral**	**1.25**	**137**		**Pn**	**22 09 30.2**	**-0.2**
BGC	**Bolinger Road**	**1.25**	**333**		**Pn**	**22 09 30.0**	**-0.5**
CRHM	**Round Hill Res**	**1.27**	**336**		**Pn**	**22 09 30.7**	**+0.1**
TCHL	**Shandon**	**1.27**	**142**		**Pn**	**22 09 30.8**	**+0.1**
ARDC	**Alexander Ranc**	**1.27**	**166**		**Pn**	**22 09 30.1**	**-0.5**
PMRM	**Maxey Ranch**	**1.28**	**135**		**Pn**	**22 09 30.8**	**-0.1**
SMCB	**Saint Mary's C**	**1.29**	**332**		**Pn**	**22 09 30.5**	**-0.5**
JMGM	**Milagra Ridge**	**1.30**	**317**		**Pn**	**22 09 31.1**	**0.0**
BDM	**Black Diamond**	**1.32**	**342**		**Pn**	**22 09 30.7**	**-0.7**
THIS	**South End of C**	**1.33**	**137**		**Pn**	**22 09 31.9**	**+0.3**
MBUM	**Mount Bullion**	**1.33**	**49**		**Pn**	**22 09 31.4**	**-0.3**
TRAM	**Private Proper**	**1.34**	**139**		**Pn**	**22 09 31.9**	**+0.2**
BKS	**Berkeley--Byer**	**1.37**	**329**		**Pn**	**22 09 31.5**	**-0.6**
CVPM	**Vollmer Peak**	**1.37**	**330**		**Pn**	**22 09 31.3**	**-0.9**
CYBM	**Yerba Buena Is**	**1.37**	**324**		**Pn**	**22 09 31.2**	**-0.9**
VAK	**Adit at Lawren**	**1.38**	**329**		**Pn**	**22 09 31.9**	**-0.3**
BRK	**Berkeley--Havi**	**1.38**	**328**		**Pn**	**22 09 31.7**	**-0.5**
MCUB	**Copperopolis B**	**1.40**	**24**		**Pn**	**22 09 31.9**	**-0.6**
PTAM	**Tassajara Cree**	**1.40**	**158**		**Pn**	**22 09 32.5**	**-0.1**
TSCN	**Private Proper**	**1.41**	**145**		**Pn**	**22 09 32.5**	**-0.1**
JPRM	**Presidio of Sa**	**1.42**	**321**		**Pn**	**22 09 31.9**	**-0.9**
LSDC	**Los Osos Digit**	**1.46**	**164**		**Pn**	**22 09 33.2**	**-0.1**
CPIM	**Pinole Ridge**	**1.46**	**332**		**Pn**	**22 09 33.3**	**-0.1**
EFD	**Emergency Oper**	**1.47**	**160**		**Pn**	**22 09 33.5**	**+0.1**
CSPM	**San Pablo Ridg**	**1.47**	**329**		**Pn**	**22 09 33.3**	**-0.2**
MMIM	**Miami Mountain**	**1.47**	**60**		**Pn**	**22 09 33.4**	**-0.2**
CPMM	**Point Molate**	**1.51**	**326**		**Pn**	**22 09 32.9**	**-1.1**
VPDC	**Valencia Peak**	**1.51**	**165**		**Pn**	**22 09 33.5**	**-0.5**
CMB	**Columbia Colle**	**1.54**	**30**	Pn	**Pn**	**22 09 34.2**	**-0.2**
CMB				IAML		22 09 55.4	
	comp=E,401nm,0.7s						
DCD	**Diablo Creek**	**1.54**	**164**		**Pn**	**22 09 34.1**	**-0.3**
VOG	**Valley Oaks Go**	**1.63**	**103**	P	**Pn**	**22 09 35.2**	**-0.4**
	baz=285,SNR=6.5						
VOG				S	**Sb**	**22 09 57.3**	**-0.2**
	baz=285						
YEG	**Yeguas Mountai**	**1.69**	**138**		**Pn**	**22 09 37.0**	**+0.4**
SNT	**Sears Point**	**1.72**	**330**		**Pn**	**22 09 36.5**	**-0.4**
KCC	**Kaiser Creek**	**1.74**	**68**		**Pn**	**22 09 38.2**	**+1.0**
SMMC	**Simmler**	**1.76**	**141**		**Pn**	**22 09 37.8**	**+0.2**
SMMC	**Simmler**	**1.76**	**141**	P	**Pn**	**22 09 37.6**	**0.0**
	baz=323,SNR=32						
SMMC				S	**Sn**	**22 10 00.2**	**+0.4**
	baz=323						
NOLM	**Olema**	**1.77**	**320**		**Pn**	**22 09 35.8**	**-1.7**
BCH	**Branch Mountai**	**1.83**	**145**		**Pn**	**22 09 38.0**	**-0.4**
CARC	**Carrizo Plain**	**1.85**	**138**		**Pn**	**22 09 38.8**	**+0.1**
CVS	**Carmenet Viney**	**1.87**	**332**		**Pn**	**22 09 38.2**	**-0.7**
MRHM	**Rocky Hill**	**1.87**	**102**		**Pn**	**22 09 38.0**	**-0.9**
HELL	**Mitchell Peak,**	**1.87**	**90**		**Pn**	**22 09 39.1**	**0.0**
NAPC	**Atlas Peak**	**1.88**	**338**		**Pn**	**22 09 38.7**	**-0.5**
MCCM	**Marconi Confer**	**1.89**	**320**		**Pn**	**22 09 38.3**	**-0.9**
MCCM				IAML		22 10 20.1	
	comp=E,334nm,0.7s						
MCCM				IAML		22 10 20.2	
	comp=N,254nm,0.9s						
CRGC	**Crocker Grade**	**1.96**	**137**		**Pn**	**22 09 40.7**	**+0.4**
NTYM	**Taylor**	**1.98**	**329**		**Pn**	**22 09 39.9**	**-0.7**
VES	**Vestal, Richgr**	**2.02**	**114**	P	**Pn**	**22 09 40.7**	**-0.3**
	baz=297,SNR=14						
VES				S	**Sn**	**22 10 06.4**	**+0.3**
	baz=297						
MDPB	**Devils Postpil**	**2.04**	**62**		**Pn**	**22 09 42.6**	**+1.0**
MRDM	**Red Cones**	**2.04**	**63**		**Pn**	**22 09 42.5**	**+1.0**
MINS	**Minaret Summit**	**2.06**	**62**		**Pn**	**22 09 43.1**	**+1.2**
MMPM	**Mammoth Pass**	**2.06**	**63**		**Pn**	**22 09 43.2**	**+1.2**
MMSM	**Mammoth Summit**	**2.07**	**63**		**Pn**	**22 09 43.3**	**+1.2**
NBPM	**Berryessa Peak**	**2.08**	**341**		**Pn**	**22 09 42.2**	**+0.4**
MLIM	**Lincoln Peak**	**2.08**	**63**		**Pb**	**22 09 44.1**	**-1.1**
OMMB	**Old Mammoth Mi**	**2.09**	**63**		**Pn**	**22 09 43.2**	**+1.0**
OMMB				IAML		22 10 14.9	
	comp=N,461nm,0.5s						
OMMB				IAML		22 10 15.7	
	comp=E,367nm,0.8s						
MDYM	**Dry Creek**	**2.10**	**62**		**Pn**	**22 09 44.0**	**+1.6**
MDCM	**Deadman Creek**	**2.10**	**61**		**Pn**	**22 09 43.6**	**+1.2**
MMLB	**Mammoth Lakes**	**2.12**	**62**		**Pb**	**22 09 44.8**	**-1.0**
MLCM	**Laurel Creek C**	**2.15**	**64**		**Pn**	**22 09 44.9**	**+1.8**
MEMM	**East Mammoth H**	**2.15**	**63**		**Pb**	**22 09 45.0**	**-1.3**
MGPM	**Gravel Pit**	**2.16**	**64**		**Pb**	**22 09 45.2**	**-1.2**
MCSM	**Casa Diablo Ho**	**2.17**	**63**		**Pb**	**22 09 45.5**	**-1.1**
MCBM	**Casa Benchmark**	**2.17**	**64**		**Pb**	**22 09 45.5**	**-1.2**
LUL	**Lundy Lake**	**2.19**	**51**		**Pb**	**22 09 45.7**	**-1.3**
PKM	**Mcpherson Peak**	**2.19**	**145**	P	**Pn**	**22 09 43.7**	**+0.1**
	baz=327,SNR=21						
PKM				S	**Sn**	**22 10 11.2**	**+0.6**
	baz=327						
NHSM	**Mount Saint He**	**2.20**	**333**		**Pn**	**22 09 44.0**	**+0.4**
MCVM	**Convict Lake**	**2.20**	**65**		**Pn**	**22 09 45.5**	**+1.7**
MLAC	**Mammoth, Mammo**	**2.21**	**64**		**Pn**	**22 09 45.4**	**+1.5**
MLAC	**Mammoth, Mammo**	**2.21**	**64**	Sb	**Sg**	**22 10 16.7**	**-1.9**
	baz=246						
MDRNC	**Doe Ridge**	**2.22**	**64**		**Pb**	**22 09 46.2**	**-1.2**
SCHCA	**Scheelite**	**2.23**	**72**		**Pn**	**22 09 46.1**	**+2.0**
RCCR	**Rock Creek Can**	**2.24**	**69**		**Pn**	**22 09 46.1**	**+1.7**
FIGC	**Figueroa Mtn.**	**2.26**	**150**		**Pn**	**22 09 44.4**	**+0.1**
AFDM	**Forest Hills D**	**2.27**	**7**		**Pn**	**22 09 44.6**	**+0.2**
NMTM	**Middletown**	**2.28**	**338**		**Pn**	**22 09 44.0**	**-0.5**
MTUM	**Tungsten Hills**	**2.32**	**73**		**Pn**	**22 09 46.9**	**+1.6**
ORC	**Owens River**	**2.34**	**66**		**Pb**	**22 09 48.1**	**-1.5**
BCW	**Bitter Crk WRg**	**2.36**	**138**		**Pn**	**22 09 47.2**	**+1.5**
BCW	**Bitter Crk WRg**	**2.36**	**138**	Pn	**Pn**	**22 09 47.0**	**+1.2**
WAKR	**Walker**	**2.36**	**40**		**Pn**	**22 09 47.3**	**+1.5**
WAKR				IAML		22 10 26.5	
	comp=E,302nm,0.8s						
WAKR				IAML		22 10 30.9	
	comp=N,338nm,0.7s						
GBGM	**Boggs Mountain**	**2.36**	**334**		**Pn**	**22 09 45.1**	**-0.7**
MGNR	**McGee Canyon**	**2.39**	**61**		**Pb**	**22 09 49.1**	**-1.2**
GHCM	**House Creek**	**2.40**	**323**		**Pn**	**22 09 45.5**	**-0.9**
GSGM	**Seigler Mounta**	**2.42**	**334**		**Pn**	**22 09 46.7**	**+0.2**
WOFM	**Oak Flat**	**2.43**	**118**		**Pb**	**22 09 52.6**	**+1.6**
BENR	**Benton**	**2.44**	**65**		**Pn**	**22 09 49.1**	**+2.1**
SYP	**Santa Ynez Pea**	**2.44**	**152**		**Pn**	**22 09 46.8**	**-0.1**
MFBM	**Five Bridges**	**2.45**	**72**		**Pn**	**22 09 49.1**	**+2.1**
WASM	**Alta Sierra Ca**	**2.45**	**112**		**Pn**	**22 09 47.8**	**+0.6**
GCVM	**Cloverdale**	**2.45**	**328**		**Pn**	**22 09 46.6**	**-0.3**
MRCM	**Red Rock Canyo**	**2.47**	**66**		**Pb**	**22 09 50.5**	**-1.2**
MCDM	**Chidago Canyon**	**2.47**	**69**		**Pb**	**22 09 50.5**	**-1.2**
EMB	**Emerald Bay**	**2.48**	**23**		**Pn**	**22 09 48.6**	**+1.1**
EMB				IAML		22 10 34.9	
	comp=N,249nm,0.6s						
EMB				IAML		22 10 41.7	
	comp=E,208nm,0.7s						
GACM	**Adobe Creek**	**2.48**	**332**		**Pn**	**22 09 47.5**	**+0.1**
WLHM	**Little Horse**	**2.51**	**102**		**Pn**	**22 09 48.6**	**+0.6**
GWKM	**Walker Ridge**	**2.52**	**339**		**Pn**	**22 09 48.2**	**+0.3**
ISA	**Isabella, Lake**	**2.54**	**113**	Pn	**Pn**	**22 09 49.4**	**+1.0**
ISA				IAML		22 10 25.9	
	comp=E,179nm,0.4s						
ISA				IAML		22 10 29.4	
	comp=N,204nm,0.8s						
ISA	**Isabella, Lake**	**2.54**	**113**	P	**Pn**	**22 09 49.0**	**+0.7**
	baz=296,SNR=61						
ISA				S	**Sn**	**22 10 19.8**	**+0.7**
	baz=296						
SUTB	**Sutter Butte**	**2.55**	**352**		**Pn**	**22 09 47.6**	**-0.8**
MLNR	**Milner Canyon**	**2.56**	**69**		**Pb**	**22 09 51.6**	**-1.7**
ARVC	**Arvin**	**2.58**	**127**		**Pn**	**22 09 48.4**	**-0.3**
ARVC	**Arvin**	**2.58**	**127**	P	**Pn**	**22 09 49.0**	**+0.3**
	baz=309,SNR=9.1						
HCK	**Huntoon Valley**	**2.59**	**57**		**Pb**	**22 09 52.2**	**-1.4**
TEJ	**El Tejon**	**2.61**	**123**		**Pn**	**22 09 49.3**	**+0.2**
SBC	**Santa Barbara**	**2.62**	**149**	P	**Pn**	**22 09 50.3**	**+1.1**
	baz=331						
SBC				S	**Sn**	**22 10 21.1**	**+0.3**
	baz=331						
OHCM	**Honcut**	**2.63**	**358**		**Pn**	**22 09 49.7**	**+0.2**
CWC	**Cottonwood Cre**	**2.64**	**95**		**Pn**	**22 09 51.6**	**+1.9**
CWC	**Cottonwood Cre**	**2.64**	**95**	P	**Pn**	**22 09 51.2**	**+1.4**
	baz=277						
LHV	**Little Huntoon**	**2.74**	**55**		**Pn**	**22 09 53.5**	**+2.5**
PNTR	**Pine Nut**	**2.76**	**30**		**Pn**	**22 09 53.1**	**+1.7**
PNTR				IAML		22 10 38.3	
	comp=N,246nm,0.8s						
MPK	**Martis Peak**	**2.79**	**21**		**Pn**	**22 09 53.5**	**+1.6**
MPK				IAML		22 10 37.1	
	comp=E,251nm,0.8s						
MPK				IAML		22 10 40.6	
	comp=N,222nm,0.9s						
YERR	**Yerington**	**2.83**	**36**		**Pn**	**22 09 53.5**	**+1.2**
YERR				IAML		22 10 40.9	
	comp=N,225nm,0.7s						
ORV	**Oroville**	**2.85**	**358**	Pn	**Pn**	**22 09 53.5**	**+0.9**
CGO	**Cerro Gordo**	**2.86**	**92**		**Pb**	**22 09 56.5**	**-1.8**
VCNR	**Virginia City**	**2.92**	**27**		**Pn**	**22 09 54.3**	**+0.7**
VCNR				IAML		22 10 48.3	
	comp=N,154nm,0.7s						
VCNR				IAML		22 10 49.5	
	comp=E,165nm,0.6s						
RYN	**Ryan**	**2.96**	**48**		**Pn**	**22 09 55.5**	**+1.5**
RYN				IAML		22 10 50.0	
	comp=N,152nm,1.0s						
NVAR	**Mina Array Bea**	**2.97**	**54**		**Pn**	**22 09 55.3**	**+1.0**
LCH	**Last Change Ra**	**3.01**	**79**		**Pn**	**22 09 55.5**	**+0.6**
LCH				IAML		22 10 46.8	
	comp=N,199nm,0.5s						
LCH				IAML		22 10 47.1	
	comp=E,185nm,0.5s						
CCAC	**Calif City Air**	**3.11**	**119**		**Pn**	**22 09 57.1**	**+1.0**
MPMC	**Manual Prospec**	**3.18**	**100**	P	**Pn**	**22 09 57.5**	**+0.3**
	baz=283						
GRAC	**Grapevine Rang**	**3.21**	**84**		**Pn**	**22 09 58.2**	**+0.8**
LRMC	**Laurel Mtn Rad**	**3.21**	**111**	P	**Pn**	**22 09 57.7**	**+0.2**
	baz=294,SNR=25						
LRMC				Sb	**Sb**	**22 10 44.1**	**+0.9**
	baz=294						
BEKR	**Beckworth**	**3.26**	**14**		**Pn**	**22 09 59.3**	**+1.1**
BEKR				IAML		22 10 48.2	
	comp=E,83nm,0.6s						
EDW2	**Edwards Air Fo**	**3.27**	**123**	P	**Pn**	**22 09 59.1**	**+0.7**
	baz=305,SNR=11						
MZP	**Montezuma Peak**	**3.32**	**71**		**Pn**	**22 10 00.2**	**+1.1**
MZP				IAML		22 10 59.7	
	comp=N,89nm,1.4s						
GMN	**Gold Mountain**	**3.33**	**78**		**Pn**	**22 10 00.8**	**+1.6**
GMN				IAML		22 11 00.7	
	comp=E,107nm,1.0s						
GMN				IAML		22 11 01.8	
	comp=N,152nm,0.8s						
PAHR	**Pah Rah Range**	**3.38**	**27**		**Pn**	**22 10 00.8**	**+1.0**
KCPM	**Cahto Peak**	**3.46**	**330**		**Pn**	**22 10 01.5**	**+0.5**
KCPM				IAML		22 10 27.9	
	comp=N,72nm,4.9s						
KCPM				IAML		22 11 54.5	
	comp=E,82nm,3.7s						
KVN	**Kaiserville**	**3.48**	**47**		**Pn**	**22 10 02.4**	**+1.1**
KVN				IAML		22 10 59.5	
	comp=E,96nm,0.6s						
KVN				IAML		22 11 06.3	
	comp=N,78nm,1.1s						
PASC	**Pasadena Art C**	**3.61**	**133**		**Pn**	**22 10 03.9**	**+1.0**
PASC				IAML		22 10 48.2	
	comp=N,53nm,0.7s						
PASC				IAML		22 10 50.4	
	comp=E,69nm,0.5s						
QSM	**Queen of Sheba**	**3.69**	**100**		**Pn**	**22 10 04.7**	**+0.7**
QSM				IAML		22 11 16.0	
	comp=N,57nm,1.3s						
WCT	**Wildcat Mounta**	**3.79**	**87**	Pn	**Pn**	**22 10 06.6**	**+1.1**
WCT				IAML		22 11 17.1	
	comp=E,57nm,0.9s						
GWY	**Greenwater Val**	**3.81**	**96**		**Pn**	**22 10 07.0**	**+1.2**
GWY				IAML		22 11 16.8	
	comp=N,55nm,0.9s						
GWY				IAML		22 11 28.8	
	comp=E,60nm,1.2s						
Q09A	**Carvers**	**3.93**	**56**	Pn	**Pn**	**22 10 09.1**	**+1.7**
GSC	**Goldstone, Bar**	**3.94**	**109**		**Pn**	**22 10 08.2**	**+0.7**
GSC				IAML		22 11 17.5	
	comp=E,98nm,1.0s						
GSC				IAML		22 11 18.3	
	comp=N,52nm,1.0s						
GSC	**Goldstone, Bar**	**3.94**	**109**	P	**Pn**	**22 10 07.5**	**0.0**
	baz=292,SNR=34						
CIS	**Catalina Islan**	**4.08**	**143**	P	**Pn**	**22 10 08.9**	**-0.4**
	baz=325						
CIS				S	**Sn**	**22 10 54.1**	**-2.7**
	baz=325						
TPNV	**Topopah Spring**	**4.10**	**85**		**Pn**	**22 10 11.0**	**+1.2**
TPNV				IAML		22 11 30.4	
	comp=N,68nm,1.2s						
TPNV				IAML		22 11 32.6	
	comp=N,73nm,0.7s						
TPNV	**Topopah Spring**	**4.10**	**85**	P	**Pn**	**22 10 11.1**	**

SNAA					IAmb	IAmb	22 40 39.5	
	comp=Z,5.8nm,1.1s							
VNA3	**Neumayer Olymp**	**78.19**	**175**		P	**P**	**22 40 35.4**	**+2.1**
VNA2	**Neumayer--Watz**	**78.64**	**176**		P	**P**	**22 40 38.3**	**+2.4**
	baz=181,slow=5.0							
VNA1	**Neumayer--Stat**	**78.86**	**176**		P	**P**	**22 40 39.4**	**+2.4**
H03S2	**Juan Fernandez**	**78.96**	**123**		T	T	00 07 26.3	
	baz=240,slow=74,SNR=3.7							
H03S1	**Juan Fernandez**	**78.97**	**123**		T	T	00 07 28.6	
	baz=240,slow=74,SNR=4.0							
H03S3	**Juan Fernandez**	**78.97**	**123**		T	T	00 07 26.8	
	baz=240,slow=74,SNR=3.4							
NVAR	**Mina Array Bea**	**87.02**	**42**		P	**P**	**22 41 17.9**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=215,slow=7.7,SNR=6.3							
	comp=Z,0.9nm,0.6s							
TXAR	**Lajitas Array**	**90.87**	**56**		P	**P**	**22 41 36.3**	**-1.8**
	comp=Z,0.5nm,1.0s,baz=207,slow=9.6,SNR=2.6							
	comp=Z,0.5nm,1.0s							
PDAR	**Pinedale Array**	**94.89**	**43**		P	**P**	**22 41 53.8**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=240,slow=8.9,SNR=1.9							
	comp=Z,0.3nm,0.7s							
H10S3	**ASCENSION HYDR**	**136.93**	**152**		T	T	01 20 53.5	
	baz=21,slow=74							
H10S2	**ASCENSION HYDR**	**136.94**	**152**		T	T	01 20 53.5	
	baz=199,slow=74							
H10N3	**ASCENSION HYDR**	**138.01**	**152**		T	T	01 22 14.1	
	baz=201,slow=75							
H10N1	**ASCENSION HYDR**	**138.01**	**152**		T	T	01 22 15.8	
	baz=201,slow=75							
H10N2	**ASCENSION HYDR**	**138.03**	**152**		T	T	01 22 16.4	
	baz=201,slow=75							
FINES	**FINESS Array B**	**145.73**	**341**		PKPbc	**PKPdf**	**22 48 11.0**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=53,slow=0.7,SNR=9.6							
NOA	**NORSAR Array B**	**148.98**	**353**		PKPbc	**PKPdf**	**22 48 20.1**	**+2.7**
	comp=Z,0.6nm,0.7s,baz=13,slow=4.4,SNR=2.8							
AKASG	**Malin Array Be**	**152.36**	**324**		PKPbc	**PKPbc**	**22 48 27.8**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=66,slow=2.3,SNR=1.6							
TORD	**Torodi Ar. Bea**	**162.70**	**172**		PKPab	**PKPab**	**22 49 26.9**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=191,slow=4.6,SNR=5.0							

NEIC ***18*** *23:09:52.0±1.4, 17°.98N±0°.08×68°.48W±0°.05, h84km±7km,*
Error ellipse: s-maj=11.8km s-min=6.4km az=199.0
OSPL ***18*** *23:09:54.3±2.3, 17°.68N×68°.52W, h31km±25km, ML3.4*
ISC 18 23:09:51.6±0.8, 17°.92N±0°.07×68°.47W±0°.03, h87km±11km,
n41, σ1§12/55, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.60**	**9**		**Pn**	**23 10 06.8**	**-0.1**
PCDR					**Sn**	**23 10 17.2**	**-1.0**
PCDR				IAML		23 10 19.2	
	comp=N,7μm,0.8s						
PRSN	**Puerto Rico Se**	**1.30**	**77**	Pn	**Pn**	**23 10 14.1**	**-0.5**
PRSN				Sn	**Sn**	**23 10 31.6**	**-0.5**
PRSN				IAML		23 10 42.3	
	comp=E,4μm,0.3s						
MLPR	**Magueyes Islan**	**1.36**	**88**		**Pn**	**23 10 15.4**	**0.0**
MLPR				Sn	**Sn**	**23 10 32.8**	**-0.7**
AGPR	**Aguadilla, PR**	**1.41**	**67**	Pn	**Pn**	**23 10 15.9**	**-0.1**
AGPR				Sn	**Sn**	**23 10 34.4**	**0.0**
AGPR				IAML		23 10 38.2	
	comp=E,1μm,0.3s						
AGPR				IAML		23 10 38.3	
	comp=N,2μm,0.2s						
AGPR	**Aguadilla, PR**	**1.41**	**67**	*i* P	**Pn**	**23 10 16.7**	**+0.7**
AGPR				*e*S	**Sn**	**23 10 35.6**	**+1.1**
AGPR				IAML		23 10 38.7	
	comp=Z,612nm,0.2s						
SDD	**Santo Domingo**	**1.47**	**292**	Pn	**Pn**	**23 10 16.3**	**-0.5**
SDD				IAML		23 10 35.3	
	comp=N,982nm,0.8s						
SDD	**Santo Domingo**	**1.47**	**292**	*i* P	**Pn**	**23 10 16.6**	**-0.2**
SDD				*e*S	**Sn**	**23 10 34.3**	**-1.5**
AOPR	**Arecibo Observ**	**1.69**	**75**		**Pn**	**23 10 20.1**	**+0.4**
AOPR				Sn	**Sn**	**23 10 40.2**	**-0.8**
AOPR				IAML		23 10 45.6	
	comp=N,2μm,0.3s						
UUPR	**Utuado, UPR, P**	**1.70**	**79**		**Pn**	**23 10 20.4**	**+0.6**
UUPR					**Sn**	**23 10 40.5**	**-0.7**
CELP	**Cerrillos**	**1.81**	**85**		**Pn**	**23 10 21.7**	**+0.5**
CELP				Sn	**Sn**	**23 10 43.4**	**-0.3**
CELP				IAML		23 10 44.2	
	comp=E,667nm,0.7s						
CELP				IAML		23 10 45.4	
	comp=N,831nm,0.5s						
EMPR	**Esperanza - Ma**	**1.93**	**73**	Pn	**Pn**	**23 10 23.4**	**+0.6**
EMPR				IAML		23 10 53.3	
	comp=E,2μm,0.4s						
EMPR				IAML		23 10 54.7	
	comp=N,1μm,0.4s						
LONA1	**Toro Cenizo, N**	**1.96**	**318**	*i* P	**Pn**	**23 10 25.4**	**+2.2**
LONA1				*e*S	**Sn**	**23 10 49.6**	**+2.4**
LONA1				IAML		23 10 56.0	
	comp=Z,1μm,0.4s						
SJG	**San Juan**	**2.22**	**85**	Pn	**Pn**	**23 10 27.0**	**+0.4**
SJG				IAML		23 10 55.7	
	comp=Z,610nm,0.2s						
SJG				IAML		23 10 57.6	
	comp=Z,635nm,0.3s						
GCPR	**Guaynabo City**	**2.31**	**80**	Pn	**Pn**	**23 10 28.1**	**+0.3**
GCPR				Sn	**Sn**	**23 10 54.3**	**-1.2**
GCPR				IAML		23 10 55.4	
	comp=E,454nm,0.8s						
HUMP	**Col San Antoni**	**2.51**	**85**	Pn	**Pn**	**23 10 31.2**	**+0.8**
CBYP	**Canovanas**	**2.51**	**82**	Pn	**Pn**	**23 10 31.1**	**+0.5**
SC01	**Santiago de lo**	**2.61**	**305**	Pn	**Pn**	**23 10 31.6**	**-0.2**
SC01				IAML		23 11 09.2	
	comp=E,741nm,0.8s						
SC01	**Santiago de lo**	**2.61**	**305**	*i* P	**Pn**	**23 10 33.8**	**+1.9**
SC01				*e*S	**Sn**	**23 11 03.1**	**+0.4**
SC01				IAML		23 11 09.9	
	comp=Z,295nm,0.8s						
MTP	**Monte Pirata**	**2.79**	**86**	Pn	**Pn**	**23 10 34.9**	**+0.7**
MTP				IAML		23 11 14.2	
	comp=E,303nm,0.2s						
MTP				IAML		23 11 14.8	
	comp=N,252nm,0.3s						
SDDR	**Presa de Saban**	**2.87**	**292**	Pn	**Pn**	**23 10 36.7**	**+1.3**
SDDR				IAML		23 11 18.4	
	comp=N,236nm,0.7s						
SDDR	**Presa de Saban**	**2.87**	**292**	*i* P	**Pn**	**23 10 38.7**	**+3.3**
SDDR				*e*S	**Sn**	**23 11 06.8**	**-2.3**
SDDR				IAML		23 11 13.3	
	comp=Z,107nm,0.5s						
CUPR	**Culebra, Puert**	**3.06**	**82**	Pn	**Pn**	**23 10 37.9**	**+0.1**
LOPE2	**Hotel El Peder**	**3.12**	**273**	*i* P	**Pn**	**23 10 40.1**	**+1.5**
LOPE2				*e*S	**Sn**	**23 11 12.9**	**-2.0**
LOPE2				IAML		23 11 20.4	
	comp=Z,94nm,0.9s						
STVI	**Saint Thomas**	**3.38**	**82**	Pn	**Pn**	**23 10 42.2**	**+0.1**
STVI				IAML		23 11 25.0	
	comp=N,309nm,0.3s						
CDVI	**St. Croix**	**3.54**	**92**	Pn	**Pn**	**23 10 43.6**	**-0.7**
CDVI				IAML		23 11 28.8	
	comp=E,386nm,0.5s						
CDVI				IAML		23 11 36.8	
	comp=N,405nm,0.5s						
GRTK	**Grand Turk**	**4.36**	**325**	Pn	**Pn**	**23 10 53.8**	**-1.7**
SMRT	**St. Maarten**	**5.14**	**88**	Pn	**Pn**	**23 11 05.7**	**-0.4**
HATO	**Hato, Curacao**	**5.73**	**185**	Pn	**Pn**	**23 11 15.0**	**+0.8**
GDHS	**Morne Mazeau,**	**6.62**	**103**	Pn	**Pn**	**23 11 27.2**	**+0.8**
CBE	**Ff, Capester**	**6.82**	**105**	Pn	**Pn**	**23 11 29.9**	**+0.8**
TDBA	**Terre de Bas,**	**6.86**	**106**	Pn	**Pn**	**23 11 30.1**	**+0.5**
MAGL	**Barre de l'ile**	**7.16**	**105**	Pn	**Pn**	**23 11 33.2**	**-0.4**
BIM	**Bigot**	**7.88**	**114**	Pn	**Pn**	**23 11 44.0**	**+0.5**
MPOM	**Morne Pois Mar**	**8.09**	**114**	Pn	**Pn**	**23 11 47.3**	**+0.9**
SVB	**Belmont**	**8.35**	**123**	Pn	**Pn**	**23 11 50.3**	**+0.3**
GRGR	**Grenville**	**8.75**	**130**	Pn	**Pn**	**23 11 55.1**	**-0.3**
BAUV	**El Baul**	**8.93**	**177**	Pn	**Pn**	**23 12 00.1**	**+2.2**
BBSR	**BB Station**	**14.79**	**13**	Pn	**Pn**	**23 13 16.1**	**0.0**
SRBA	**San Rafael, Bu**	**16.84**	**241**	Pn	**Pn**	**23 13 42.6**	**+0.4**
SRBA				IAmb	IAmb	23 14 20.8	
	comp=Z,14nm,1.4s						
WMOK	**Wichita Mounta**	**31.74**	**308**	P	**P**	**23 16 07.3**	**-0.2**
WMOK				IAmb	IAmb	23 16 44.5	
	comp=Z,1.4nm,1.1s						
TXAR	**Lajitas Array**	**34.06**	**296**	P	**P**	**23 16 26.9**	**-1.0**

JMA ***18*** *23:24:41.5±0.1, 24°.8N±0°.7×122°.3E±0°.3, h107km±1km,*
MV2.3/10, TAIWAN REGION
TAP ***18*** *23:24:41.4, 24°.78N×122°.30E, h107km, ML3.4, D*
ISC 18 23:24:41.6±1.5, 24°.79N±0°.04×122°.30E±0°.03, h105km±8km,
n81, σ0§75/151, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.34**	**280**	*e*P	**Pn**	**23 24 57.0**	**+0.1**
	baz=273						
TWC	**Suao**	**0.45**	**247**	P	**Pn**	**23 24 57.7**	**+0.2**
	baz=247						
TIPB	**Shuangxi**	**0.47**	**293**	P	**Pn**	**23 24 58.0**	**+0.2**
	baz=281						
TIPB				S	**Sn**	**23 25 09.8**	**-0.1**
	baz=281						
SXI1	**Grass Mountain**	**0.50**	**309**	*e*P	**Pn**	**23 24 58.0**	**0.0**
	baz=298						
SXI1				*e*S	**Sn**	**23 25 10.1**	**-0.2**
	baz=298						
NWF	**Wu-fen Shan**	**0.55**	**301**	P	**Pn**	**23 24 58.6**	**+0.2**
	baz=292						
NWF				S	**Sn**	**23 25 11.2**	**+0.2**
	baz=292						
WFSB	**Wu-fen Shan**	**0.55**	**301**	P	**Pn**	**23 24 58.5**	**+0.2**
	baz=292						
WFSB				*e*S	**Sn**	**23 25 11.2**	**+0.3**
	baz=292						
TWE	**Neicheng**	**0.58**	**264**	P	**Pn**	**23 24 58.9**	**+0.4**
	baz=269						
TWE				S	**Sn**	**23 25 11.5**	**+0.3**
	baz=269						
EWUT	**Wuta**	**0.58**	**235**	*e*P	**Pn**	**23 24 57.9**	**-0.6**
	baz=234						
EWUT				*e*S	**Sn**	**23 25 10.8**	**-0.4**
	baz=234						
FUSB	**Fushanzhiwuyua**	**0.65**	**268**	*e*P	**Pn**	**23 24 59.2**	**+0.1**
	baz=271						
FUSB				*e*S	**Sn**	**23 25 11.7**	**-0.7**
	baz=271						
JYNG	**Yonagunijimaku**	**0.67**	**119**	P	**Pn**	**23 24 59.4**	**+0.2**
JYNG				S	**Sn**	**23 25 12.7**	**+0.3**
TWA	**Mucha**	**0.68**	**287**	*e*P	**Pn**	**23 24 59.4**	**0.0**
	baz=286						
TWA				S	**Sn**	**23 25 12.2**	**-0.5**
	baz=286						
ENTT	**Nioudou**	**0.69**	**258**	P	**Pn**	**23 24 59.3**	**-0.1**
	baz=259						
ENTT				S	**Sn**	**23 25 13.3**	**+0.5**
	baz=259						
YOJ	**Yonaguni jima**	**0.72**	**116**	*i* P	**Pn**	**23 24 60.0**	**+0.3**
	baz=124						
YOJ				*i* S	**Sn**	**23 25 13.1**	**-0.1**
	baz=124						
YOJ	**Yonaguni jima**	**0.72**	**116**	P	**Pn**	**23 24 60.0**	**+0.3**
YOJ				S	**Sn**	**23 25 13.2**	**0.0**
NDT	**Datong Townshi**	**0.74**	**256**	*e*P	**Pn**	**23 24 59.2**	**-0.7**
	baz=257						
NDT				*e*S	**Sn**	**23 25 13.3**	**-0.3**
	baz=257						
LATG	**Datong**	**0.75**	**251**	P	**Pn**	**23 25 00.7**	**+0.6**
	baz=245						
LATG				S	**Sn**	**23 25 14.9**	**+1.0**
	baz=245						
TAP1	**Taipei**	**0.75**	**290**	*e*P	**Pn**	**23 24 59.5**	**-0.4**
	baz=289						
TAP1				*e*S	**Sn**	**23 25 13.2**	**-0.5**
	baz=289						
YM01	**YM01**	**0.76**	**299**	P	**Pn**	**23 25 00.2**	**+0.1**
	baz=291						
YM01				S	**Sn**	**23 25 13.7**	**-0.2**
	baz=291						
YM08	**YM08**	**0.76**	**302**	P	**Pn**	**23 24 59.7**	**-0.3**
	baz=295						
YM08				*e*S	**Sn**	**23 25 13.4**	**-0.5**
	baz=295						
TATO	**Taipei**	**0.76**	**285**	P	**Pn**	**23 25 00.1**	**0.0**
	baz=289						
TATO				S	**Sn**	**23 25 13.1**	**-0.8**
	baz=289						
TWY	**Chenhua**	**0.80**	**308**	*e*P	**Pn**	**23 25 00.6**	**+0.2**
	baz=300						
TWY				S	**Sn**	**23 25 14.7**	**+0.1**
	baz=300						
NSK	**Sanguang**	**0.87**	**263**	*e*P	**Pn**	**23 25 00.5**	**-0.7**
	baz=268						
NSK				*e*S	**Sn**	**23 25 14.9**	**-0.9**
	baz=268						
ETL	**Fush Village**	**0.88**	**225**	P	**Pn**	**23 25 01.4**	**+0.2**
	baz=220						
ETL				*e*S	**Sn**	**23 25 15.7**	**-0.3**
	baz=220						
NACB	**Ninganchiao**	**0.89**	**227**	P	**Pn**	**23 25 01.2**	**-0.1**
	baz=220						
NACB				S	**Sn**	**23 25 15.9**	**-0.1**
	baz=220						
NNSB	**Datong**	**0.91**	**247**	P	**Pn**	**23 25 02.1**	**+0.5**
	baz=241						
NNSB				S	**Sn**	**23 25 17.0**	**+0.3**
	baz=241						
NNS	**Nan Shan**	**0.91**	**248**	*e*P	**Pn**	**23 25 01.3**	**-0.3**
	baz=241						
NNS				*e*S	**Sn**	**23 25 16.2**	**-0.6**
	baz=241						
ETLH	**Xiulin Townshi**	**0.94**	**233**	P	**Pn**	**23 25 02.2**	**+0.3**
	baz=232						
ETLH				S	**Sn**	**23 25 17.2**	**-0.1**
	baz=232						
TWD	**Chiawan**	**0.95**	**223**	P	**Pn**	**23 25 01.9**	**0.0**
	baz=219						
TWD				S	**Sn**	**23 25 17.1**	**0.0**
	baz=219						
HWA	**Hwalien**	**1.03**	**219**	P	**Pn**	**23 25 03.0**	**+0.3**
	baz=218						
HWA				*e*S	**Sn**	**23 25 19.4**	**+0.8**
	baz=218						
NCUH	**Zhongli**	**1.03**	**280**	S	**Sn**	**23 25 19.1**	**+0.5**
	baz=285						
NFF	**Wufeng Townshi**	**1.09**	**262**	*e*P	**Pn**	**23 25 02.4**	**-1.0**
	baz=262						
NFF				*e*S	**Sn**	**23 25 18.6**	**-1.3**
	baz=262						
ETM	**Tongmen**	**1.10**	**222**	P	**Pn**	**23 25 03.2**	**-0.3**
	baz=230						
ETM				*e*S	**Sn**	**23 25 19.0**	**-1.0**
	baz=230						
FUSS	**Fushou**	**1.10**	**241**	*e*P	**Pn**	**23 25 04.6**	**+0.8**
	baz=241						
FUSS				*e*S	**Sn**	**23 25 20.5**	**0.0**
	baz=241						
WHF	**Hehuan Shan**	**1.14**	**236**	P	**Pn**	**23 25 04.8**	**+0.4**
	baz=232						
WHF				S	**Sn**	**23 25 21.5**	**-0.1**
	baz=232						
TWT	**Tachien**	**1.16**	**243**	P	**Pn**	**23 25 05.3**	**+1.0**
	baz=242						
TWT				S	**Sn**	**23 25 22.2**	**+0.8**
	baz=242						
TDCB	**Techi**	**1.17**	**243**	P	**Pn**	**23 25 05.1**	**+0.7**
	baz=243						
TDCB				*e*S	**Sn**	**23 25 22.1**	**+0.4**
	baz=243						
LIOB	**Emei**	**1.18**	**264**	P	**Pn**	**23 25 04.7**	**+0.3**
	baz=263						
LIOB				S	**Sn**	**23 25 21.7**	**+0.1**
	baz=263						
NSTT	**Nanjuang**	**1.19**	**263**	P	**Pn**	**23 25 04.7**	**+0.1**
	baz=262						
NSTT				S	**Sn**	**23 25 21.8**	**0.0**
	baz=262						
SBCB	**Hsinchu**	**1.20**	**271**	P	**Pn**	**23 25 05.2**	**+0.6**
	baz=270						
SBCB				*e*S	**Sn**	**23 25 23.2**	**+1.3**
	baz=270						
CHGB	**Renai**	**1.26**	**235**	P	**Pn**	**23 25 06.1**	**+0.6**
	baz=228						
CHGB				*e*S	**Sn**	**23 25 23.7**	**+0.2**
	baz=228						
OWD	**Renai**	**1.32**	**231**	*e*P	**Pn**	**23 25 06.7**	**+0.5**
	baz=226						
OWD				*e*S	**Sn**	**23 25 24.5**	**-0.2**
	baz=226						
WHP	**Taichung City**	**1.34**	**248**	P	**Pn**	**23 25 07.2**	**+1.0**
	baz=256						
WHP				S	**Sn**	**23 25 25.6**	**+0.7**
	baz=256						
WUSB	**Renai**	**1.34**	**234**	*e*P	**Pn**	**23 25 06.9**	**+0.6**
	baz=229						
WUSB				*e*S	**Sn**	**23 25 25.2**	**+0.2**
	baz=229						
EGFH	**Guangfu**	**1.37**	**216**	*e*P	**Pn**	**23 25 06.0**	**-0.6**
	baz=223						
EGFH				*e*S	**Sn**	**23 25 23.9**	**-1.6**
	baz=223						
IRIF	**Iriomote-Funau**	**1.37**	**109**	P	**Pn**	**23 25 06.6**	**0.0**
IRIF				S	**Sn**	**23 25 25.6**	**+0.1**
NMLH	**Miaoli**	**1.40**	**260**	*e*P	**Pn**	**23 25 07.0**	**0.0**
	baz=260						
NMLH				*e*S	**Sn**	**23 25 26.0**	**-0.1**
	baz=260						
NSY	**Sanyi**	**1.45**	**256**	*e*P	**Pn**	**23 25 08.1**	**+0.6**
	baz=255						
NSY				*e*S	**Sn**	**23 25 27.8**	**+0.5**
	baz=255						
TWQ1	**Liyutan**	**1.46**	**253**	*e*P	**Pn**	**23 25 07.9**	**+0.3**
	baz=253						
TWQ1				*e*S	**Sn**	**23 25 28.2**	**+0.8**
	baz=253						
WCS	**Beigang Elemen**	**1.46**	**241**	*e*P	**Pn**	**23 25 07.2**	**-0.5**
	baz=248						
WCS				*e*S	**Sn**	**23 25 27.4**	**-0.1**
	baz=248						
VWDT	**VWDT**	**1.48**	**226**	*e*P	**Pn**	**23 25 08.2**	**+0.4**
	baz=220						
VWDT				*e*S	**Sn**	**23 25 27.3**	**-0.4**
	baz=220						
HGSD	**Ruisui**	**1.52**	**212**	*e*P	**Pn**	**23 25 08.0**	**-0.4**
	baz=205						
HGSD				*e*S	**Sn**	**23 25 28.2**	**-0.5**
	baz=205						
HATJ	**Hateruma jima**	**1.55**	**118**	S	**Sn**	**23 25 29.5**	**+0.2**
SMLT	**Sun Moon Lake**	**1.56**	**235**	*e*P	**Pn**	**23 25 10.1**	**+1.0**
	baz=231						
SMLT				*e*S	**Sn**	**23 25 31.8**	**+2.0**
	baz=231						
SSLB	**Suanglung**	**1.58**	**231**	*e*P	**Pn**	**23 25 10.3**	**+1.1**
	baz=226						
SSLB				*e*S	**Sn**	**23 25 32.1**	**+2.0**
	baz=226						
TYC	**Yuchr**	**1.58**	**237**	*e*P	**Pn**	**23 25 10.4**	**+1.3**
	baz=243						
TYC				*e*S	**Sn**	**23 25 31.5**	**+1.4**
	baz=243						
WWF	**Wufeng**	**1.64**	**244**	*e*P	**Pn**	**23 25 09.7**	**-0.1**
	baz=251						
WWF				*e*S	**Sn**	**23 25 31.1**	**-0.2**
	baz=251						
JKRS	**Kuro-shima**	**1.65**	**109**	P	**Pn**	**23 25 10.1**	**+0.1**
JKRS				S	**Sn**	**23 25 31.5**	**0.0**
YULB	**Yu-li**	**1.66**	**214**	*e*P	**Pn**	**23 25 09.1**	**-1.1**
	baz=220						
YULB				*e*S	**Sn**	**23 25 30.4**	**-1.5**
	baz=220						
TWF1	**Yuli**	**1.70**	**213**	*e*P	**Pn**	**23 25 09.7**	**-0.9**
	baz=219						
TWF1				*e*S	**Sn**	**23 25 31.4**	**-1.2**
	baz=219						
WHYT	**Xinyi Township**	**1.71**	**231**	*e*P	**Pn**	**23 25 12.1**	**+1.3**
	baz=239						
WHYT				*e*S	**Sn**	**23 25 35.2**	**+2.2**
	baz=239						
JIJ	**Ishigaki jima**	**1.73**	**104**	P	**Pn**	**23 25 11.0**	**+0.1**
JIJ				S	**Sn**	**23 25 33.3**	**+0.1**
WJS	**Zhushan**	**1.73**	**237**	*e*P	**Pn**	**23 25 12.3**	**+1.3**
	baz=245						
WJS				*e*S	**Sn**	**23 25 34.9**	**+1.6**
	baz=245						
WNT	**Mingjian**	**1.73**	**239**	*e*P	**Pn**	**23 25 12.0**	**+1.0**
	baz=238						
WNT				*e*S	**Sn**	**23 25 34.7**	**+1.3**
	baz=238						
WCHH	**Zhanghua**	**1.74**	**247**	*e*P	**Pn**	**23 25 11.1**	**+0.1**
	baz=246						
WCHH				*e*S	**Sn**	**23 25 34.0**	**+0.5**
	baz=246						
YUS	**Yu-Shan**	**1.79**	**224**	*e*P	**Pn**	**23 25 14.3**	**+2.2**
	baz=217						
FULB	**Fuli**	**1.83**	**211**	*e*S	**Sn**	**23 25 35.5**	**-0.1**
	baz=218						
ALS	**Alishan**	**1.87**	**227**	*e*P	**Pn**	**23 25 14.1**	**+1.1**
	baz=220						
ALS				*e*S	**Sn**	**23 25 38.8**	**+1.9**
	baz=220						
WDLH	**Douliu**	**1.95**	**236**	*e*P	**Pn**	**23 25 14.5**	**+0.8**
	baz=237						
WRL	**Guolierlin Hig**	**1.96**	**244**	*e*P	**Pn**	**23 25 12.8**	**-1.1**
	baz=250						
WRL				*e*S	**Sn**	**23 25 37.0**	**-1.6**
	baz=250						
ELDTW	**Lidau**	**1.98**	**217**	*e*P	**Pn**	**23 25 14.3**	**+0.1**
	baz=216						
ELDTW				*e*S	**Sn**	**23 25 38.4**	**-0.7**
	baz=216						
EDH	**Donghe**	**2.02**	**207**	*e*P	**Pn**	**23 25 14.1**	**-0.6**
	baz=215						
EDH				*e*S	**Sn**	**23 25 38.4**	**-1.6**
	baz=215						
CHN4	**Tsaushan**	**2.12**	**228**	*e*P	**Pn**	**23 25 15.7**	**-0.3**
	baz=237						
CHN4				*e*S	**Sn**	**23 25 42.3**	**+0.2**
	baz=237						
TPUB	**Ta-pu**	**2.13**	**226**	*e*P	**Pn**	**23 25 16.8**	**+0.7**
	baz=236						
TPUB				*e*S	**Sn**	**23 25 42.6**	**+0.2**
	baz=236						
STYH	**Taoyuan**	**2.13**	**221**	*e*P	**Pn**	**23 25 16.3**	**+0.3**
	baz=221						
STYH				*e*S	**Sn**	**23 25 42.9**	**+0.5**
	baz=221						
STYT	**Tauyuan**	**2.15**	**222**	P	**Pn**	**23 25 17.4**	**+1.1**
	baz=221						
LONT	**Longtian**	**2.16**	**210**	*e*S	**Sn**	**23 25 42.2**	**-0.8**
	baz=209						
JTJ	**Tarama**	**2.19**	**93**	P	**Pn**	**23 25 16.9**	**+0.2**
JTJ				S	**Sn**	**23 25 43.9**	**+0.3**
TWK	**Hsinying**	**2.25**	**228**	*e*P	**Pn**	**23 25 18.0**	**+0.4**
	baz=227						
TWK				*e*S	**Sn**	**23 25 45.5**	**+0.3**
	baz=227						
VWUC	**VWUC**	**2.60**	**275**	P	**Pn**	**23 25 21.3**	**-0.8**
	baz=275						
TSCK	**Chigu Township**	**2.60**	**232**	P	**Pn**	**23 25 21.3**	**-0.9**
	baz=231						
TSCK				*e*S	**Sn**	**23 25 52.5**	**-0.9**
	baz=231						
PTMZ	**Houxiangcun**	**2.90**	**276**	*e*P	**Pn**	**23 25 25.4**	**-0.8**
	baz=276						

ROM 19 00:07:46.6±0.0, 42°.921N±0°.002×12°.973E±0°.004,
h10km, ML1.1/7, Error ellipse: s-maj=0.3km
s-min=0.2km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**132**	P	Pg	00 07 49.0	+0.4
T1216				S	Sg	00 07 50.4	+0.3
CESI	**CESI - Serrava**	**0.10**	**329**	P	Pg	00 07 49.7	+0.5
CESI				S	Sg	00 07 51.7	+0.6
CESI				AML	AML		
	comp=N,226μm,0.3s						
CESI				AML	AML		
	comp=E,144μm,0.1s						
NRCA	**Norcia**	**0.14**	**130**	P	Pg	00 07 50.3	+0.5
NRCA				S	Sg	00 07 52.8	+0.8
NRCA				AML	AML		
	comp=N,192μm,0.2s						
NRCA				AML	AML		
	comp=E,229μm,0.1s						
T1215	**Vallo di Nera,**	**0.14**	**213**	P	Pg	00 07 50.4	+0.5
T1215				S	Sg	00 07 53.0	+0.9
T1245	**

comp=N,46μm,0.3s
MMO1 Montemonaco 0.26 95 P Pg 00 07 52.5 +0.5
AM05 Amandola Campo 0.28 78 P Pg 00 07 53.0 +0.7
AM05 S Sb 00 07 57.6 -1.1
T1202 Accumoli, Fraz 0.29 139 P Pg 00 07 52.9 +0.5
LNSS Leonessa 0.32 171 P Pg 00 07 53.4 +0.3
LNSS S Sb 00 07 58.6 -1.2
LNSS AML AML
comp=E,54μm,0.2s
LNSS AML AML
comp=N,45μm,0.8s
LNSS AML AML
comp=E,54μm,0.2s
SNTG Esanatoglia 0.33 356 P Pg 00 07 53.6 +0.3
SNTG S Sb 00 07 59.2 -0.9
SNTG AML AML
comp=E,31μm,0.6s
SNTG AML AML
comp=N,25μm,0.7s
ATCC AVT- Casa Cast 0.36 317 P Pg 00 07 54.2 +0.5
ATCC S Sb 00 08 00.1 -0.7
ARRO Arrone 0.37 204 P Pb 00 07 54.9 -0.4
ARRO S Sb 00 08 00.9 -0.3
SMA1 SAN MARTINO 0.40 137 P Pg 00 07 55.0 +0.6
T1211 Morro Reatino 0.40 193 P Pg 00 07 54.8 +0.4
T1211 S Sb 00 08 01.4 -0.6
T1211 AML AML
comp=E,159μm,1.6s
T1211 AML AML
comp=N,244μm,1.6s
T1243 Rocca Santa Ma 0.42 123 P Pg 00 07 55.1 +0.3
T1243 S Sb 00 08 01.6 -0.9
EL6 Elcito 0.42 13 P Pg 00 07 55.2 +0.3
EL6 S Sb 00 08 02.0 -0.5
CING Cingoli 0.48 20 P Pg 00 07 56.3 +0.3
ARVD Arcevia 0.58 358 P Pg 00 07 57.9 +0.1
ARVD S Sb 00 08 07.1 0.0

ATH ***19*** *00:08:25.0, 39°.62N×20°.82E, h30km±2km, ML2.2/4, Error ellipse: s-maj=8.7km s-min=1.2km az=151.0*
TIR ***19*** *00:08:26.1, 39°.77N×20°.71E, h14km, Md2.6, Ml2.3*
THE 19 00:08:26.8, 39.76N×20.70E, h16km±1km, ML2.1/7, **Error ellipse: s-maj=1.1km s-min=0.6km az=165.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**132**	P	Pg	00 08 30.2	-0.7
JAN				S	Sg	00 08 33.4	-0.2
3μm,0.2s							
JAN	**Janina**	**0.15**	**132**	P	Pg	00 08 29.9	-1.0
JAN				S	Sg	00 08 33.4	-0.2
JAN				AML	AML	00 08 33.5	
comp=N,6938μm,0.2s							
JAN				AML	AML	00 08 33.6	
comp=E,5421μm,0.1s							
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	00 08 33.8	-0.5
IGT				S	Sb	00 08 40.8	+0.4
comp=E,480nm,0.3s							
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	00 08 33.9	-0.4
baz=231							
IGT				S	Sb	00 08 40.0	-0.4
baz=231							
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	00 08 33.7	-0.6
IGT				S	Sb	00 08 40.1	-0.3
IGT				AML	AML	00 08 41.5	
comp=N,856μm,0.3s							
IGT				AML	AML	00 08 43.8	
comp=E,1053μm,0.3s							
LSK	**Leskovik**	**0.40**	**349**	P	Pg	00 08 34.5	-0.5
LSK				S	Sb	00 08 41.1	-0.4
comp=E,518nm,0.4s							
LSK	**Leskovik**	**0.40**	**349**	P	Pg	00 08 34.6	-0.3
baz=348							
LSK				S	Sg	00 08 40.4	-0.1
baz=348							
LSK				AMP			
comp=N,2.3nm,0.4s,baz=348							
KPRO	**Kipourio**	**0.54**	**69**	P	Pg	00 08 37.1	-0.5
KPRO				S	Sb	00 08 45.9	+0.3
comp=N,610nm,0.4s							
PENT	**Pentalofos**	**0.55**	**37**	P	Pg	00 08 37.1	-0.7
PENT				S	Sb	00 08 46.5	+0.7
PENT	**Pentalofos**	**0.55**	**37**	P	Pg	00 08 37.1	-0.6
PENT				S	Sb	00 08 45.6	-0.2
SRN	**Sarande**	**0.55**	**283**	P	Pg	00 08 37.1	-0.7
SRN				S	Sb	00 08 46.1	+0.3
SRN	**Sarande**	**0.55**	**283**	P	Pg	00 08 37.2	-0.6
baz=282							
SRN				S	Sb	00 08 45.7	-0.1
baz=282							
SRN				AMP			
comp=N,0.6nm,0.4s,baz=282							
KASA	**Kassiopi**	**0.59**	**269**	P	Pg	00 08 37.6	-0.9
KASA				S	Sb	00 08 47.4	+0.5
KEK	**Kerkira**	**0.70**	**267**	P	Pg	00 08 39.2	-1.3
KEK				S	Sb	00 08 51.0	+1.0
comp=N,138nm,0.2s							
KEK	**Kerkira**	**0.70**	**267**	P	Pg	00 08 39.2	-1.3
KEK				AML	AML	00 08 51.5	
comp=E,331μm,0.2s							
KEK				AML	AML	00 08 51.6	
comp=N,218μm,0.2s							
NEST	**Nestorio**	**0.71**	**22**	P	Pg	00 08 40.0	-0.7
NEST				S	Sg	00 08 50.2	+0.1
comp=N,72nm,0.2s							
NEST	**Nestorio**	**0.71**	**22**	P	Pg	00 08 40.2	-0.5
NEST				AML	AML	00 08 53.4	
comp=N,175μm,0.2s							
NEST				AML	AML	00 08 54.3	
comp=E,198μm,0.5s							
KBN	**Korca**	**0.87**	**4**	P	Pb	00 08 42.5	-1.0
KBN	**Korca**	**0.87**	**4**	P	Pb	00 08 42.4	-1.1
baz=4.0							
KBN				S	Sg	00 08 55.0	0.0
baz=4.0							
TSLK	**Tsoukalades, L**	**0.93**	**182**	P	Pb	00 08 44.2	-0.4
LKD2	**Lefkada island**	**0.97**	**182**	P	Pb	00 08 44.9	-0.3
LKD2	**Lefkada island**	**0.97**	**182**	P	Pb	00 08 44.9	-0.4
baz=183							
KZN	**Kozani**	**0.98**	**56**	P	Pb	00 08 44.7	-0.9
KZN				S	Sn	00 09 00.0	+0.3
comp=E,72nm,0.5s							
THL	**Klokotos Trika**	**1.03**	**100**	P	Pb	00 08 45.8	-0.5
EVR	**Evrytania**	**1.20**	**134**	P	Pn	00 08 48.2	-0.8

IDC ***19*** *00:08:44.2±0.9, 38°.53N×21°.84E, h0km, mb3.8/12, mbtmp3.7/19, ML3.2/6, MS2.9/6, Error ellipse: s-maj=16.6km s-min=14.6km az=160.0*
ATH ***19*** *00:08:45.9, 38°.43N×21°.81E, h8km±1km, ML3.7/23, Error ellipse: s-maj=1.4km s-min=0.7km az=107.0*
PDG ***19*** *00:08:45.9±0.7, 38°.41N×21°.82E, h9km±1km, ML3.7/10, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
NEIC ***19*** *00:08:45.8±1.1, 38°.41N±0°.04×21°.92E±0°.08, h10km±2km, mb4.1/8, ML3.7(THE), ML3.7(ATH), Error ellipse: s-maj=10.3km s-min=7.2km az=255.0*
THE ***19*** *00:08:46.2, 38°.43N×21°.82E, h8km±1km, ML3.7/13, Error ellipse: s-maj=1.7km s-min=0.5km az=147.0*
TIR ***19*** *00:08:47.2, 38°.28N×21°.47E, h2km±2km, Ml4.0*
BEO ***19*** *00:09:04.6±3.0, 39°.79N×22°.24E, h0km, ML3.0/5*
ISC 19 00:08:45.8±0.7, **38°.41N**±0°.02×**21°.81E**±0°.02, **h12**km±4km, **n199**, σ1**s39**/236, **mb3.9**/14, **16C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.08**	**77**	P	**Pg**	**00 08 47.9**	**-0.5**
EFP				S	**Sg**	**00 08 50.0**	**-0.3**
301μm,0.4s							
EFP	**Efpalio**	**0.08**	**77**	P	**Pg**	**00 08 47.9**	**-0.5**
EFP				S	**Sg**	**00 08 49.9**	**-0.4**
EFP				AML	AML	00 08 50.0	
EFP				AML	AML	00 08 50.2	
UPR	**University Cam**	**0.13**	**188**	P	**Pg**	**00 08 49.2**	**+0.2**
UPR				S	**Sg**	**00 08 51.8**	**+0.5**
SERG	**Sergoula**	**0.20**	**89**	P	**Pg**	**00 08 49.8**	**-0.3**
SERG				S	**Sg**	**00 08 53.0**	**-0.1**
32μm,0.3s							
SERG	**Sergoula**	**0.20**	**89**	P	**Pg**	**00 08 49.8**	**-0.3**
SERG				S	**Sg**	**00 08 52.7**	**-0.4**
SERG				AML	AML	00 08 54.1	
comp=E,59962μm,0.3s							
SERG				AML	AML	00 08 54.2	
comp=N,97890μm,0.3s							
TRIZ	**Trizonia**	**0.21**	**102**	P	**Pg**	**00 08 50.2**	**-0.1**
TRIZ				S	**Sg**	**00 08 53.6**	**+0.1**
TRIZ	**Trizonia**	**0.21**	**102**	P	**Pg**	**00 08 50.3**	**-0.1**
TRIZ				S	**Sg**	**00 08 53.8**	**+0.3**
LAKA	**Lakka**	**0.22**	**142**	P	**Pg**	**00 08 50.5**	**0.0**
LAKA				S	**Sg**	**00 08 54.4**	**+0.8**
comp=N,87μm,0.2s							
LAKA	**Lakka**	**0.22**	**142**	P	**Pg**	**00 08 50.4**	**0.0**
LAKA				S	**Sg**	**00 08 53.9**	**+0.3**
LAKA				AML	AML	00 08 54.9	
LAKA				AML	AML	00 08 55.5	
ALIK	**Aliki, Aigiali**	**0.28**	**122**	P	**Pg**	**00 08 51.6**	**0.0**
ALIK				S	**Sb**	**00 08 57.0**	**-0.5**
PVO	**Paravola**	**0.30**	**313**	P	**Pg**	**00 08 51.5**	**-0.5**
PVO				S	**Sg**	**00 08 57.2**	**+1.1**
comp=N,9μm,0.2s							
PVO	**Paravola**	**0.30**	**313**	P	**Pg**	**00 08 51.5**	**-0.5**
PVO				S	**Sg**	**00 08 56.3**	**+0.1**
RLS	**Riolos of Patr**	**0.44**	**218**	P	**Pg**	**00 08 54.9**	**+0.4**
RLS				S	**Sb**	**00 09 02.6**	**+0.5**
comp=N,15μm,0.4s							
RLS	**Riolos of Patr**	**0.44**	**218**	P	**Pg**	**00 08 54.9**	**+0.4**
RLS				S	**Sb**	**00 09 01.9**	**-0.2**
RLS				AML	AML	00 09 02.7	
comp=N,46025μm,0.5s							
RLS				AML	AML	00 09 05.7	
comp=E,15217μm,0.3s							
KLV	**Kalavryta, Ach**	**0.45**	**143**	P	**Pg**	**00 08 54.4**	**-0.4**
KLV				S	**Sb**	**00 09 02.5**	**-0.1**
comp=E,13μm,0.2s							
KLV	**Kalavryta, Ach**	**0.45**	**143**	P	**Pg**	**00 08 54.4**	**-0.4**
KLV				S	**Sg**	**00 09 01.4**	**+0.5**
KLV				AML	AML	00 09 02.8	
comp=N,18868μm,0.3s							
KLV				AML	AML	00 09 03.1	
comp=E,33353μm,0.2s							
DRO	**Drossia**	**0.46**	**190**	P	**Pg**	**00 08 54.8**	**-0.1**
DRO				S	**Sb**	**00 09 02.9**	**+0.1**
comp=E,74μm,0.3s							
DRO	**Drossia**	**0.46**	**190**	P	**Pg**	**00 08 54.8**	**-0.1**
DRO				S	**Sb**	**00 09 02.4**	**-0.4**
DRO				AML	AML	00 09 03.2	
DRO				AML	AML	00 09 03.7	
EVR	**Evrytania**	**0.51**	**0**	P	**Pg**	**00 08 54.8**	**-1.0**
EVR				S	**Sb**	**00 09 03.2**	**-0.9**
comp=E,7μm,0.8s							
EVR	**Evrytania**	**0.51**	**0**	P	**Pg**	**00 08 54.8**	**-1.0**
EVR				AML	AML	00 09 05.1	
comp=E,16047μm,0.8s							
EVR				AML	AML	00 09 13.7	
comp=N,10410μm,0.7s							
DLFA	**Delphi**	**0.54**	**83**	P	**Pg**	**00 08 55.4**	**-1.1**
DLFA				S	**Sg**	**00 09 04.0**	**+0.3**
DLFA				AML	AML	00 09 07.3	
comp=N,9225μm,0.5s							
DLFA				AML	AML	00 09 09.5	
comp=E,6972μm,0.6s							
MAKR	**Makrakomi, Fth**	**0.65**	**23**	P	**Pg**	**00 08 57.8**	**-0.7**
MAKR				S	**Sb**	**00 09 08.1**	**-0.2**
comp=E,13μm,0.3s							
MAKR	**Makrakomi, Fth**	**0.65**	**23**	P	**Pg**	**00 08 57.8**	**-0.7**
MAKR				S	**Sg**	**00 09 07.5**	**+0.3**
MAKR				AML	AML	00 09 10.1	
comp=N,25125μm,0.3s							
MAKR				AML	AML	00 09 10.7	
comp=E,26780μm,0.3s							
AXAR	**Agios Charalam**	**0.76**	**62**	P	**Pg**	**00 08 59.0**	**-1.5**
AXAR				S	**Sb**	**00 09 11.7**	**+0.5**
comp=E,9μm,0.3s							
AXAR	**Agios Charalam**	**0.76**	**62**	P	**Pg**	**00 08 58.9**	**-1.6**
AXAR				AML	AML	00 09 14.2	
comp=E,15161μm,0.3s							
AXAR				AML	AML	00 09 16.9	
comp=N,19574μm,0.4s							
THAL	**Thalero**	**0.77**	**119**	P	**Pg**	**00 08 59.9**	**-0.8**
THAL				S	**Sb**	**00 09 11.7**	**+0.1**
comp=N,17μm,0.2s							
THAL	**Thalero**	**0.77**	**119**	P	**Pg**	**00 09 00.1**	**-0.6**
THAL				AML	AML	00 09 16.0	
comp=N,30867μm,0.2s							
THAL				AML	AML	00 09 17.6	
comp=E,31614μm,0.3s							
NYDR	**Nydri-Lefkada**	**0.92**	**290**	P	**Pg**	**00 09 03.0**	**-0.6**
NYDR				S	**Sn**	**00 09 17.5**	**-0.3**
comp=E,1μm,0.8s							
EVGI	**Lefkada island**	**0.93**	**284**	P	**Pg**	**00 09 03.3**	**-0.4**
EVGI				S	**Sn**	**00 09 17.6**	**-0.4**
comp=E,2μm,0.4s							
EVGI	**Lefkada island**	**0.93**	**284**	P	**Pg**	**00 09 03.3**	**-0.4**
LKR	**Lokris**	**0.96**	**75**	P	**Pg**	**00 09 01.7**	**-2.7**
LKD2	**Lefkada island**	**0.98**	**293**	P	**Pg**	**00 09 03.3**	**-1.3**
baz=309							
LKD2				S	**Sg**	**00 09 16.7**	**-0.7**
baz=309							
LKD2	**Lefkada island**	**0.98**	**293**	P	**Pg**	**00 09 02.7**	**-2.0**
FSK	**Fiskardo**	**0.98**	**273**	P	**Pg**	**00 09 03.7**	**-1.0**
FSK				S	**Sn**	**00 09 19.5**	**+0.3**
FSK	**Fiskardo**	**0.98**	**273**	P	**Pg**	**00 09 04.0**	**-0.7**
FSK				AML	AML	00 09 24.9	
comp=E,5088μm,0.5s							
FSK				AML	AML	00 09 25.1	
comp=N,4054μm,0.4s							
VLS	**Valsamata**	**0.99**	**257**	P	**Pg**	**00 09 03.8**	**-1.1**
VLS				S	**Sn**	**00 09 19.9**	**+0.5**
VLS	**Valsamata**	**0.99**	**257**	P	**Pg**	**00 09 03.8**	**-1.1**
VLS				S	**Sg**	**00 09 18.0**	**+0.3**
VLS				AML	AML	00 09 25.8	
comp=E,4242μm,0.3s							
VLS				AML	AML	00 09 26.9	
comp=N,7366μm,0.4s							
LTHK	**Lithakia**	**1.04**	**228**	P	**Pb**	**00 09 04.8**	**-1.0**
LTHK				AML	AML	00 09 29.6	
comp=N,13396μm,0.4s							
LTHK				AML	AML	00 09 32.0	
comp=E,17419μm,0.4s							
KEF4	**Livadi, Kephal**	**1.10**	**263**	P	**Pb**	**00 09 05.9**	**-0.9**
THL	**Klokotos Trika**	**1.17**	**8**	P	**Pb**	**00 09 07.0**	**-0.9**
VIL2	**Platees**	**1.17**	**99**	P	**Pg**	**00 09 08.6**	**+0.4**
VIL2				AML	AML	00 09 29.6	
comp=N,8613μm,0.7s							
VIL2				AML	AML	00 09 30.6	
comp=E,8781μm,0.6s							
VILL	**Villia**	**1.21**	**101**	P	**Pn**	**00 09 08.6**	**0.0**
VILL				S	**Sn**	**00 09 26.9**	**+1.9**
ITM	**Ithomi**	**1.23**	**176**	Pn	**Pn**	**00 09 08.4**	**-0.5**
ITM	**Ithomi**	**1.23**	**176**	P	**Pn**	**00 09 08.4**	**-0.5**
ITM				AML	AML	00 09 34.0	
comp=E,2720μm,0.3s							
ITM				AML	AML	00 09 34.2	
comp=N,2838μm,0.3s							
NEO	**Neokhori**	**1.42**	**51**	P	**Pn**	**00 09 11.2**	**-0.4**
NEO				AML	AML	00 09 40.4	
comp=N,2286μm,0.5s							
NEO				AML	AML	00 09 41.0	
comp=E,2010μm,0.5s							
XOR	**Xorichti**	**1.44**	**48**	P	**Pn**	**00 09 11.4**	**-0.4**
XOR				AML	AML	00 09 37.5	
comp=N,2188μm,0.7s							
XOR				AML	AML	00 09 39.0	
comp=E,1904μm,0.9s							
KRND	**KRANIDI**	**1.48**	**134**	P	**Pn**	**00 09 12.3**	**+0.1**
KRND				AML	AML	00 09 34.3	
comp=N,5379μm,0.8s							
KRND				AML	AML	00 09 41.1	
comp=E,5732μm,0.7s							
PYL	**PYLOS**	**1.51**	**182**	P	**Pn**	**00 09 13.3**	**+0.5**
PYL				AML	AML	00 09 45.4	
comp=N,1858μm,0.3s							
PYL				AML	AML	00 09 46.4	
comp=E,2929μm,0.8s							
IGT	**Igoumenitsa**	**1.61**	**315**	P	**Pg**	**00 09 16.3**	**-0.4**
baz=325							
IGT				S	**Sg**	**00 09 38.3**	**+0.8**
baz=325							
PTL	**Penteli**	**1.66**	**102**	P	**Pn**	**00 09 15.4**	**+0.6**
VLY	**Voula,Athens**	**1.66**	**109**	P	**Pn**	**00 09 15.0**	**+0.2**
VLY				AML	AML	00 09 41.0	
comp=N,1855μm,0.8s							
VLY				AML	AML	00 09 46.8	
comp=E,2428μm,0.5s							
YDRA	**Hydra**	**1.69**	**128**	P	**Pb**	**00 09 16.0**	**-0.7**
DION	**Dionisos Attik**	**1.71**	**101**	P	**Pn**	**00 09 15.8**	**+0.4**
DION				AML	AML	00 09 44.1	
comp=N,2311μm,0.6s							
DION				AML	AML	00 09 47.4	
comp=E,3364μm,0.7s							
LIT	**Litokhoron**	**1.77**	**17**	Pn	**Pn**	**00 09 14.4**	**-1.9**
VLI	**Veliai**	**1.91**	**152**	P	**Pn**	**00 09 18.5**	**+0.2**
VLI				AML	AML	00 09 53.0	
comp=N,2353μm,0.6s							
VLI				AML	AML	00 09 54.8	
comp=E,2482μm,0.9s							
LSK	**Leskovik**	**1.98**	**332**	P	**Pg**	**00 09 22.8**	**-0.9**
baz=341							
LSK				S	**Sg**	**00 09 49.0**	**-0.4**
baz=341							
LSK				AMP			
comp=N,4.8nm,0.9s,baz=341							
SRN	**Sarande**	**2.03**	**317**	P	**Pb**	**00 09 22.6**	**-0.1**
baz=325							
SRN				S	**Sb**	**00 09 48.4**	**+0.4**
baz=325							
SRN				AMP			
comp=N,0.8nm,0.8s,baz=325							
KEK	**Kerkira**	**2.04**	**310**	Pn	**Pn**	**00 09 20.5**	**+0.6**
KBN	**Korca**	**2.35**	**341**	Pn	**Pn**	**00 09 25.0**	**+0.7**
KBN	**Korca**	**2.35**	**341**	P	**Pb**	**00 09 28.0**	**-0.1**
baz=348							
KBN				S	**Sb**	**00 09 58.9**	**+1.8**
baz=348							
KBN				AMP			
comp=N,1.6nm,1.3s,baz=348							
OHR	**Ohrid**	**2.81**	**344**	*e*Pn	**Pb**	**00 09 35.2**	**-0.8**
OHR	**Ohrid**	**2.81**	**344**	*i* Pn	**Pb**	**00 09 35.1**	**-0.8**
VAY	**Valandovo**	**2.97**	**11**	*e*Pn	**Pn**	**00 09 33.4**	**+0.7**
VAY	**Valandovo**	**2.97**	**11**	*i* Pn	**Pn**	**00 09 33.0**	**+0.2**
SRS	**Serrai**	**3.03**	**26**	*e*Pn	**Pn**	**00 09 34.5**	**+0.8**
APE	**Apeiranthos**	**3.24**	**113**	⇑P	**Pn**	**00 09 38.4**	**+1.9**
TIR	**Tirane**	**3.29**	**334**	*e*Pn	**Pb**	**00 09 45.7**	**+1.5**
PHP	**Peshkopia**	**3.44**	**343**	AMP			
comp=N,0.9nm,1.1s,baz=348							
MMB	**Musomiste**	**3.50**	**24**	P	**Pn**	**00 09 40.8**	**+0.7**
KKB	**Krupnik**	**3.59**	**15**	P	**Pn**	**00 09 41.5**	**+0.2**
RZN	**Rozhen**	**3.96**	**33**	P	**Pn**	**00 09 47.5**	**+0.9**
RDO	**Rodhopi**	**3.97**	**45**	Pn	**Pn**	**00 09 45.0**	**-1.5**
IDI	**Anoyia**	**3.98**	**141**	⇓P	**Pn**	**00 09 49.2**	**+2.5**
IDI	**Anoyia**	**3.98**	**141**	Pn	**Pn**	**00 09 47.5**	**+0.8**
comp=N,2.7nm,0.3s,baz=287,slow=7.2,SNR=18							
IDI				Sn	**Sn**	**00 10 34.0**	**+0.7**
comp=N,6.2nm,0.3s,baz=307,slow=20,SNR=2.3							
comp=N,14nm,0.7s							
IDI	**Anoyia**	**3.98**	**141**	Pn	**Pn**	**00 09 45.9**	**-0.8**
TIP	**Timpagrande**	**4.02**	**283**	⇓P	**Pn**	**00 09 49.5**	**+2.2**
TIP	**Timpagrande**	**4.02**	**283**	Pn	**Pn**	**00 09 48.5**	**+1.2**
DRME	**Dracevica, Mon**	**4.27**	**333**	*e*Pn	**Pn**	**00 09 51.7**	**+1.0**
DRME	**Dracevica, Mon**	**4.27**	**333**	*e*Pn	**Pn**	**00 09 52.5**	**+1.8**
DRME				*i* Sn	**Sn**	**00 10 43.4**	**+2.9**
VTS	**Vitosha**	**4.34**	**14**	⇑P	**Pn**	**00 09 53.2**	**+1.4**
VTS	**Vitosha**	**4.34**	**14**	Pn	**Pn**	**00 09 51.8**	**0.0**
VTS	**Vitosha**	**4.34**	**14**	P	**Pn**	**00 09 53.6**	**+1.8**
BARS	**Barje**	**4.40**	**0**	*e*Pn	**Pn**	**00 09 54.4**	**+1.9**
PVY	**Plav**	**4.41**	**342**	*e*Pn	**Pn**	**00 09 54.3**	**+1.6**
PVY				*i* Sn	**Sn**	**00 10 46.7**	**+2.6**
PDG	**Podgorica**	**4.46**	**335**	⇑P	**Pn**	**00 09 55.0**	**+1.7**
PDG	**Podgorica**	**4.46**	**335**	Pn	**Pn**	**00 09 53.9**	**+0.6**
TTG	**Podgorica**	**4.46**	**335**	*e*Pn	**Pn**	**00 09 55.0**	**+1.7**
TTG				*i* Sn	**Sn**	**00 10 48.0**	**+2.9**
BUM	**Brajici-Budva**	**4.48**	**331**	*e*Pn	**Pn**	**00 09 55.3**	**+1.7**
BUM				*i* Sn	**Sn**	**00 10 48.4**	**+2.7**
CEL	**Celeste**	**4.65**	**270**	Pn	**Pn**	**00 09 57.7**	**+1.7**
IVA	**Berane**	**4.69**	**343**	*e*Pn	**Pn**	**00 09 58.1**	**+1.6**
IVA				*i* Sn	**Sn**	**00 10 53.5**	**+2.6**
HCY	**Herceg Novi**	**4.76**	**329**	*e*Pn	**Pn**	**00 09 53.1**	**-4.3**
HCY	**Herceg Novi**	**4.76**	**329**	*e*Pn	**Pn**	**00 09 59.2**	**+1.8**
HCY				*i* Sn	**Sn**	**00 10 55.3**	**+2.8**
KOME	**Kolasin**	**4.77**	**339**	⇓*i*Pn	**Pn**	**00 09 59.2**	**+1.6**
KOME				*i* Sn	**Sn**	**00 10 55.4**	**+2.6**
SELS	**Selova**	**4.83**	**354**	*e*Pn	**Pn**	**00 09 59.6**	**+1.2**
NKME	**Niksic**	**4.87**	**334**	*e*Pn	**Pn**	**00 10 00.7**	**+1.8**
NKME				*i* Sn	**Sn**	**00 10 57.7**	**+2.6**
ZAPS	**Zavoj**	**4.90**	**7**	*e*Pn	**Pn**	**00 10 01.1**	**+1.8**
CUC	**Castrocucco**	**4.92**	**291**	Pn	**Pn**	**00 10 01.5**	**+2.0**
SJES	**Sjenica**	**5.04**	**345**	*e*Pn	**Pn**	**00 10 05.6**	**+4.2**
BRY	**Bratogost**	**5.13**	**332**	*e*Pn	**Pn**	**00 10 02.7**	**+0.1**
BRY	**Bratogost**	**5.13**	**332**	*e*Pn	**Pn**	**00 10 04.3**	**+1.7**
BRY				*i* Sn	**Sn**	**00 11 04.2**	**+2.4**
BOVS	**Bovan**	**5.22**	**359**	⇑P	**Pn**	**00 10 05.5**	**+1.8**
BOVS	**Bovan**	**5.22**	**359**	*e*Pn	**Pn**	**00 10 04.5**	**+0.8**
PLE	**Pljevlja**	**5.25**	**340**	⇑*i*Pn	**Pn**	**00 10 05.9**	**+1.7**
PLE				*i* Sn	**Sn**	**00 11 06.9**	**+2.3**
BLKB	**Belogradchik**	**5.25**	**7**	⇑P	**Pn**	**00 10 06.8**	**+2.7**
UPM	**Unac-Piva**	**5.27**	**336**	*e*Pn	**Pn**	**00 10 04.7**	**+0.1**
UPM	**Unac-Piva**	**5.27**	**336**	*e*Pn	**Pn**	**00 10 06.3**	**+1.7**
UPM				*i* Sn	**Sn**	**00 11 07.5**	**+2.2**
ZAGS	**Zajecar**	**5.41**	**3**	*e*Pn	**Pn**	**00 10 07.7**	**+1.4**
STON	**Ston**	**5.44**	**326**	*e*Pn	**Pn**	**00 10 05.1**	**-1.6**
RUDO	**Rudo**	**5.52**	**341**	*e*Pn	**Pn**	**00 10 07.9**	**+0.1**
GRUS	**Gruza**	**5.54**	**352**	*e*Pn	**Pn**	**00 10 09.6**	**+1.6**
SGRT	**San Giovanni R**	**5.73**	**308**	Pn	**Pn**	**00 10 11.0**	**+0.3**
BBLS	**Lazi?i**	**5.75**	**342**	*e*Pn	**Pn**	**00 10 11.5**	**+0.5**
BBLS	**Lazi?i**	**5.75**	**342**	*e*Pn	**Pn**	**00 10 14.7**	**+3.7**
DIVS	**Divibare**	**5.85**	**347**	Pn	**Pn**	**00 10 13.1**	**+0.7**
DIVS	**Divibare**	**5.85**	**347**	*e*Pn	**Pn**	**00 10 12.5**	**+0.1**
DIVS	**Divibare**	**5.85**	**347**	*e*Pn	**Pn**	**00 10 13.9**	**+1.5**
TRUS	**Trudelj**	**5.90**	**350**	*e*Pn	**Pn**	**00 10 15.8**	**+2.7**
VAE	**Valguarnera**	**5.92**	**263**	Pn	**Pn**	**00 10 16.1**	**+2.8**
comp=N,0.4nm,0.3s,baz=346,slow=8.3,SNR=1.6							
VAE				Sn	**Sn**	**00 11 21.8**	**+0.6**
comp=N,0.7nm,0.3s,baz=209,slow=10,SNR=1.3							
comp=N,3.1nm,0.8s							
RAFF	**Raffo Rosso**	**6.01**	**261**	Pn	**Pn**	**00 10 15.6**	**+1.0**
PAOL	**Paolisi**	**6.17**	**297**	Pn	**Pn**	**00 10 18.2**	**+1.5**
HERR	**Herculane**	**6.48**	**4**	⇑P	**Pn**	**00 10 23.3**	**+2.2**
ELL	**Elmali**	**6.64**	**102**	Pn	**Pn**	**00 10 21.9**	**-1.5**
FRGS	**Fruska Gora**	**6.91**	**348**	⇑P	**Pn**	**00 10 29.1**	**+2.3**
FRGS	**Fruska Gora**	**6.91**	**348**	*e*Pn	**Pn**	**00 10 25.8**	**-1.1**
FRGS	**Fruska Gora**	**6.91**	**348**	*e*Pn	**Pn**	**00 10 28.9**	**+2.0**
MGRS	**Mrkonjic Grad**	**6.97**	**331**	*e*Pn	**Pn**	**00 10 28.5**	**+0.7**
GZR	**Gura Zlata**	**7.02**	**6**	⇑P	**Pn**	**00 10 31.5**	**+3.0**
INTR	**Introdacqua**	**7.04**	**303**	Pn	**Pn

MOTA Moosalm 11.88 322 *e*Pn **Pn 00 11 34.5 -0.6**
comp=N,2.8nm,0.5s
GERES GERESS Array B 11.96 333 Pn **Pn 00 11 34.4 -1.8**
comp=N,0.1nm,0.3s,baz=155,slow=14,SNR=2.5
GERES LR LR 00 16 58.3
comp=N,119nm,18.8s,baz=128,slow=42
comp=N,0.1nm,0.3s
DAVOX Davos/Dischmat 12.12 317 Pn **Pn 00 11 37.8 -0.7**
comp=N,0.2nm,0.3s,baz=170,slow=19,SNR=2.5
DAVOX LR LR 00 16 55.0
comp=N,37nm,19.1s,baz=92,slow=41
comp=N,0.3nm,0.3s
RETA Reutte 12.14 322 *e*Pn **Pn 00 11 41.2 +2.5**
comp=N,1.1nm,0.5s
MMAI Mount Meron Ar 12.29 112 Pn **Pn 00 11 40.1 -0.5**
comp=N,0.3nm,0.3s,baz=284,slow=14,SNR=2.4
comp=N,2.6nm,0.8s
AKASG Malin Array Be 13.37 21 LR LR 00 17 07.2
comp=N,19nm,21.2s,baz=188,slow=38
CLL Collm 14.31 337 *i* sPP 00 12 21.0
NACGM Naroch 16.84 10 *e*P Pn 00 12 31.6 -10
baz=194
ESBB Sonseca Array 20.04 282 P 00 13 19.6 +0.8
ESDC Sonseca Array 20.04 282 P Pn 00 13 20.2 -0.3
comp=N,2.1nm,0.7s,baz=76,slow=11,SNR=19
comp=N,2.1nm,0.7s
ESDC Sonseca Array 20.04 282 P **P 00 13 19.4 +0.7**
PAB San Pablo 20.35 281 P **P 00 13 23.2 +1.0**
PAB IAmb IAmb 00 13 27.8
comp=Z,11nm,1.4s
MDT Midelt 22.15 263 P **P 00 13 41.8 +0.2**
comp=Z,0.5nm,0.4s,baz=88,slow=16,SNR=1.8
comp=Z,0.5nm,0.4s
HFS Hagfors 22.34 349 P **P 00 13 42.4 -1.0**
comp=Z,1.6nm,0.5s,baz=156,slow=7.6,SNR=9.6
comp=Z,1.6nm,0.5s
FINES FINESS Array B 23.21 5 P **P 00 13 49.9 -2.5**
comp=Z,2.5nm,0.9s,baz=174,slow=14,SNR=2.2
FINES LR LR 00 24 19.6
comp=Z,41nm,18.4s,baz=154,slow=40
comp=Z,2.5nm,0.9s
FINES FINESS Array B 23.21 5 P **P 00 13 52.5 +0.1**
NC602 NORSAR Array S 23.26 347 P **P 00 13 53.1 +0.2**
NB2 NORSAR Subarra 23.61 347 P **P 00 13 55.3 -1.1**
comp=Z,3.2nm,0.8s,baz=153,slow=10
NOA NORSAR Array B 23.61 347 P **P 00 13 55.1 -1.3**
comp=Z,2.1nm,0.9s,baz=167,slow=10,SNR=5.3
comp=Z,2.1nm,0.9s
EKA Eskdalemuir Ar 23.84 323 P **P 00 13 57.9 -0.7**
comp=Z,2.6nm,0.8s,baz=130,slow=11,SNR=3.2
comp=Z,2.6nm,0.8s
KIRV Kirov 26.91 32 LR LR 00 25 12.5
comp=Z,42nm,19.8s,baz=33,slow=37
TOA0 Torodi Ar. Sit 30.86 221 P **P 00 15 02.8 +0.8**
TOA0 IAmb IAmb 00 15 07.6
comp=Z,4.9nm,1.1s
TORD Torodi Ar. Bea 30.86 221 P **P 00 15 02.4 +0.4**
comp=Z,2.5nm,0.6s,baz=33,slow=8.6,SNR=28
comp=Z,2.5nm,0.6s
ARCES ARCESS Array B 31.25 3 P **P 00 15 03.6 -1.4**
comp=Z,0.9nm,0.8s,baz=187,slow=8.4,SNR=5.4
comp=Z,0.9nm,0.8s
ARCES ARCESS Array B 31.25 3 P **P 00 15 04.6 -0.4**
KKAR Karatay Array 36.77 67 P **P 00 15 52.3 -0.9**
MK31 Makanchi Array 44.32 59 P **P 00 16 55.4 -0.1**
MK31 IAmb IAmb 00 16 56.3
comp=Z,2.8nm,0.8s
MKAR Makanchi Array 44.32 59 P **P 00 16 55.4 -0.2**
comp=Z,3.2nm,0.6s,baz=282,slow=7.4,SNR=22
comp=Z,3.2nm,0.6s
MKAR Makanchi Array 44.32 59 P **P 00 16 55.1 -0.5**
ZAA0 Zalesovo Array 44.78 48 P **P 00 16 58.7 -0.4**
ZAA0 IAmb IAmb 00 16 59.5
comp=Z,2.1nm,0.8s
ZALV Zalesovo Beam 44.78 48 P **P 00 16 58.4 -0.7**
comp=Z,1.9nm,0.7s,baz=281,slow=8.5,SNR=9.0
comp=Z,1.9nm,0.7s
ZALV Zalesovo Beam 44.78 48 P **P 00 16 58.1 -1.0**
WMQ Urumqi 48.76 61 *e*P **P 00 17 32.5 +2.0**
SONM Songino Array 59.53 51 P **P 00 18 48.3 -0.7**
comp=Z,0.6nm,0.8s,baz=282,slow=7.2,SNR=4.3
comp=Z,0.6nm,0.8s
HHC Hu-ho-hao-te 66.07 56 *e*P **P 00 19 32.8 +0.1**
PDAR Pinedale Array 87.92 326 P **P 00 21 36.7 +0.9**
comp=Z,0.5nm,0.8s,baz=20,slow=2.9,SNR=3.7
comp=Z,0.5nm,0.8s

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*IDC **19** 00:16:27.4±0.8, 60.°16N×149.°04W, h0km, mb3.7/7, mbtmp3.7/10, ML3.7/3, MS2.7/1, Error ellipse: s-maj=18.7km s-min=13.5km az=154.0*
*AEIC **19** 00:16:30±1.5, 59.°95N±0.°03×148.°92W±0.°05, h11km±6km, ML3.5, ML3.7/172(NEIC), Error ellipse: s-maj=5.0km s-min=3.3km az=144.0*
*NEIC **19** 00:16:30.5±1.5, 59.°94N±0.°04×148.°90W±0.°07, h22km±9km, Error ellipse: s-maj=5.2km s-min=5.0km az=114.0*
ISC 19 00:16:28.3±1.2,**59.°93N**±0.°03×**148.°89W**±0.°03,**h10**km±9km,
n203,σ0**97**/212,**mb3.7**/7,**Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEW	**Seward**	**0.33**	**302**		**Pb**	**00 16 36.9**	**+0.6**
SEW				Sg	**Sb**	**00 16 41.5**	**-0.1**
SEW	**Seward**	**0.33**	**302**	P	**Pb**	**00 16 37.0**	**+0.7**
SEW	baz=120			S	**Sb**	**00 16 41.6**	**-0.1**
O22K	**Cooper Landing**	**0.69**	**323**	Pg	**Pb**	**00 16 42.3**	**-0.1**
O22K				Sg	**Sg**	**00 16 49.9**	**-0.7**
O22K	**Cooper Landing**	**0.69**	**323**	P	**Pb**	**00 16 42.3**	**-0.1**
BRSE	**Bradley Lake S**	**0.95**	**259**	P	**Pb**	**00 16 47.4**	**+0.5**
BRSE	baz=76			S	**Sb**	**00 16 59.9**	**+0.3**
PWL	**Port Wells**	**0.97**	**16**	Pg	**Pg**	**00 16 47.4**	**+0.5**
PWL				Sg	**Sg**	**00 16 59.5**	**-0.1**
BRLK	**Bradley Lake**	**1.02**	**261**	Pg	**Pb**	**00 16 48.3**	**+0.3**
BRLK				Sg	**Sb**	**00 17 02.1**	**+0.5**
BRLK				IAML		00 17 03.8	
RC01	**Rabbit Creek A**	**1.23**	**341**		**Pg**	**00 16 51.4**	**-0.5**
RC01	comp=N,3μm,0.2s			IAML		00 17 08.5	
RC01	comp=E,2μm,0.4s			IAML		00 17 09.5	
RC01	**Rabbit Creek A**	**1.23**	**341**	P	**Pg**	**00 16 51.2**	**-0.7**
CNPM	**China Poot**	**1.25**	**252**	Pn	**Pg**	**00 16 51.8**	**-0.5**
CNPM	comp=E,2μm,0.6s			IAML		00 17 12.8	
CNPM	comp=N,2μm,0.6s			IAML		00 17 13.0	
HIN	**Hinchinbrook I**	**1.28**	**68**	Pn	**Pg**	**00 16 52.7**	**-0.1**
HIN	comp=N,2μm,0.4s			IAML		00 17 12.9	
GLI	**Glacier Island**	**1.30**	**42**	Pn	**Pg**	**00 16 51.9**	**-1.3**
GLI	**Glacier Island**	**1.30**	**42**	P	**Pg**	**00 16 52.1**	**-1.2**
GLI	baz=225			S	**Sg**	**00 17 09.4**	**-0.7**
FIS	**Fire Island**	**1.38**	**332**	Pn	**Pn**	**00 16 54.0**	**+0.4**
Q23K	**Middleton Isla**	**1.39**	**110**	Pn	**Pn**	**00 16 53.2**	**-0.5**
Q23K	**Middleton Isla**	**1.39**	**110**	P	**Pn**	**00 16 55.0**	**+1.4**
MID	**Middleton Isla**	**1.39**	**110**	Pn	**Pn**	**00 16 53.4**	**-0.4**
CAPN	**Captain Cook N**	**1.40**	**308**	Pn	**Pb**	**00 16 55.0**	**+0.5**
CAPN	**Captain Cook N**	**1.40**	**308**	P	**Pb**	**00 16 55.1**	**+0.6**
HOM	**Homer**	**1.42**	**260**	Pn	**Pb**	**00 16 55.4**	**+0.7**
HOM	**Homer**	**1.42**	**260**	P	**Pb**	**00 16 55.5**	**+0.7**
FID	**Port Fidalgo**	**1.45**	**55**	Pn	**Pn**	**00 16 54.1**	**-0.6**
KNK	**Knik Glacier**	**1.50**	**8**	Pn	**Pn**	**00 16 54.8**	**-0.5**
KNK	comp=N,2μm,0.5s			IAML		00 17 19.4	
KNK	**Knik Glacier**	**1.50**	**8**	P	**Pn**	**00 16 55.0**	**-0.3**
PMR	**Palmer**	**1.67**	**356**	Pn	**Pn**	**00 16 57.6**	**+0.1**
PMR	comp=E,873nm,0.5s			IAML		00 17 22.4	
PMR	comp=N,795nm,0.5s			IAML		00 17 23.6	
PMR	**Palmer**	**1.67**	**356**	P	**Pn**	**00 16 57.5**	**0.0**
EYAK	**Cordova Ski Ar**	**1.69**	**67**	Pn	**Pn**	**00 16 57.4**	**-0.4**
EYAK	**Cordova Ski Ar**	**1.69**	**67**	P	**Pn**	**00 16 58.0**	**+0.2**
SUA	**Susitna One**	**1.79**	**330**	Pn	**Pn**	**00 16 59.4**	**0.0**
SUA	**Susitna One**	**1.79**	**330**	P	**Pn**	**00 16 59.0**	**-0.3**
GHO	**Glory Hole Cre**	**1.85**	**360**	Pn	**Pn**	**00 16 59.5**	**-0.6**
GHO	comp=E,967nm,0.8s			IAML		00 17 29.1	
O20K	**Slope Mountain**	**1.88**	**276**	P	**Pn**	**00 17 01.5**	**+0.9**
SML	**Sawmill**	**1.90**	**8**	Pn	**Pn**	**00 17 00.3**	**-0.5**
SML	comp=E,882nm,0.4s			IAML		00 17 30.1	
SML	comp=N,636nm,0.6s			IAML		00 17 38.0	
SML	**Sawmill**	**1.90**	**8**	P	**Pn**	**00 17 01.0**	**+0.1**
M22K	**Willow**	**1.92**	**342**	Pn	**Pn**	**00 17 02.1**	**+1.0**
M22K	**Willow**	**1.92**	**342**	P	**Pn**	**00 17 01.3**	**+0.2**
DIV	**Divide**	**1.96**	**51**	Pn	**Pn**	**00 17 02.1**	**+0.5**
SCM	**Sheep Creek Mo**	**2.06**	**21**	Pn	**Pn**	**00 17 04.1**	**+1.1**
SCM	comp=E,824nm,0.5s			IAML		00 17 34.5	
SCM	comp=N,757nm,0.8s			IAML		00 17 40.0	
SPCR	**Spurr Chakacha**	**2.07**	**309**	P	**Pn**	**00 17 03.0**	**-0.2**
KLU	**Klutina**	**2.14**	**42**	Pn	**Pn**	**00 17 05.1**	**+1.0**
KLU	comp=E,554nm,0.3s			IAML		00 17 37.6	
KLU	comp=N,744nm,0.4s			IAML		00 17 39.7	
KLU	**Klutina**	**2.14**	**42**	P	**Pn**	**00 17 04.8**	**+0.7**
RAGM	**Ragged Mountai**	**2.16**	**76**	Pn	**Pn**	**00 17 05.0**	**+0.6**
P19K	**Oil Pt**	**2.21**	**265**	Pn	**Pn**	**00 17 04.8**	**-0.3**
KAIM	**Kayak Island**	**2.25**	**88**	Pn	**Pn**	**00 17 06.2**	**+0.6**
KAIM	comp=N,374nm,0.9s			IAML		00 17 54.4	
KAIM	comp=E,326nm,2.1s			IAML		00 18 13.3	
KAIM	**Kayak Island**	**2.25**	**88**	P	**Pn**	**00 17 06.1**	**+0.5**
HMT	**Hamilton**	**2.35**	**78**	Pn	**Pn**	**00 17 06.7**	**-0.3**
HMT	comp=N,604nm,0.6s			IAML		00 17 57.6	
BMRM	**Bremner River**	**2.37**	**62**	Pn	**Pn**	**00 17 07.5**	**+0.3**
BMRM	**Bremner River**	**2.37**	**62**	P	**Pn**	**00 17 07.5**	**+0.3**
SKT	**Skwentna**	**2.42**	**329**	Pn	**Pn**	**00 17 09.5**	**+1.5**
SKT	comp=E,484nm,0.5s			IAML		00 17 46.6	
SKT	comp=N,386nm,0.4s			IAML		00 17 48.5	
SKT	**Skwentna**	**2.42**	**329**	P	**Pn**	**00 17 08.6**	**+0.6**
M24K	**Tolsona, Glenn**	**2.55**	**30**	Pn	**Pn**	**00 17 11.1**	**+1.3**
M24K	comp=N,480nm,1.1s			IAML		00 18 07.5	
M24K	**Tolsona, Glenn**	**2.55**	**30**	P	**Pn**	**00 17 11.1**	**+1.3**
CUT	**Chulitna**	**2.57**	**346**	Pn	**Pn**	**00 17 11.6**	**+1.7**
SUCK	**Suckling Hills**	**2.57**	**85**	Pn	**Pn**	**00 17 10.6**	**+0.6**
SUCK	comp=N,230nm,0.5s			IAML		00 17 53.2	
BERG	**Berg Lake**	**2.64**	**78**	Pn	**Pn**	**00 17 11.0**	**+0.2**
BERG	comp=E,524nm,0.5s			IAML		00 17 52.9	
N25K	**Chitina, Valde**	**2.69**	**50**	Pn	**Pn**	**00 17 12.2**	**+0.5**
N25K	comp=E,410nm,0.7s			IAML		00 17 58.9	
N25K	**Chitina, Valde**	**2.69**	**50**	P	**Pn**	**00 17 12.4**	**+0.6**
WAT6	**Susitna Watana**	**2.72**	**11**	P	**Pn**	**00 17 12.8**	**+0.7**
O19K	**Port Alsworth**	**2.73**	**278**	Pn	**Pn**	**00 17 13.1**	**+0.9**
BGLC	**Bering Glacier**	**2.82**	**84**	P	**Pn**	**00 17 14.3**	**+0.9**
M20K	**Styx River**	**2.85**	**315**	Pn	**Pn**	**00 17 15.0**	**+1.2**
M20K	**Styx River**	**2.85**	**315**	P	**Pn**	**00 17 14.6**	**+0.7**
KDAK	**Kodiak Island**	**2.88**	**223**	Pn	**Pn**	**00 17 14.5**	**+0.2**
KDAK	comp=E,12nm,0.3s,baz=72,slow=8.5,SNR=58			Sn	**Sn**	**00 17 45.5**	**-3.5**
KDAK	comp=E,14nm,0.3s,baz=347,slow=12,SNR=5.0			Lg	Lg	00 18 02.2	
KDAK	comp=E,3.9nm,0.3s,baz=287,slow=19,SNR=2.0			LR	LR	00 18 33.9	
KDAK	**Kodiak Island**	**2.88**	**223**	Pn	**Pn**	**00 17 14.4**	**+0.1**
KDAK	**Kodiak Island**	**2.88**	**223**	P	**Pn**	**00 17 14.4**	**+0.1**
WAT1	**Susitna Watana**	**2.91**	**3**	P	**Pn**	**00 17 16.3**	**+1.6**
N19K	**Bonanza Creek**	**2.91**	**290**	Pn	**Pn**	**00 17 14.9**	**+0.1**
N19K	comp=N,308nm,0.6s			IAML		00 17 55.3	
N19K	comp=E,255nm,0.5s			IAML		00 17 58.3	
N19K	**Bonanza Creek**	**2.91**	**290**	P	**Pn**	**00 17 14.8**	**0.0**
GLB	**Gilahina Butte**	**2.92**	**57**	Pn	**Pn**	**00 17 15.5**	**+0.6**
GLB	comp=N,282nm,0.7s			IAML		00 17 59.1	
GLB	comp=E,221nm,0.6s			IAML		00 17 59.8	
VRDI	**Verde Repeater**	**2.98**	**62**	Pn	**Pn**	**00 17 16.6**	**+0.7**
VRDI	comp=N,189nm,0.7s			IAML		00 18 10.5	
SNH	**Sunshine Point**	**3.05**	**83**	Pn	**Pn**	**00 17 17.1**	**+0.5**
SNH	comp=N,193nm,2.4s			IAML		00 18 29.1	
WAX	**Waxell Ridge**	**3.06**	**78**	Pn	**Pn**	**00 17 17.1**	**+0.3**
WAX	comp=E,285nm,0.4s			IAML		00 17 56.9	
WAX	comp=N,308nm,0.5s			IAML		00 18 21.4	
HARP	**HAARP**	**3.07**	**35**	P	**Pn**	**00 17 18.3**	**+1.5**
TGL	**Tana Glacier**	**3.12**	**72**	Pn	**Pn**	**00 17 18.1**	**+0.4**
TGL	comp=E,151nm,0.9s			IAML		00 18 13.6	
TGL	comp=N,210nm,1.2s			IAML		00 18 25.6	
O18K	**Koktuh Hills**	**3.18**	**271**	Pn	**Pn**	**00 17 19.1**	**+0.6**
O18K	comp=N,180nm,0.6s			IAML		00 18 14.1	
O18K	comp=E,141nm,0.8s			IAML		00 18 22.2	
O18K	**Koktuh Hills**	**3.18**	**271**	P	**Pn**	**00 17 19.0**	**+0.6**
DHY	**Denali Highway**	**3.24**	**12**	Pn	**Pn**	**00 17 21.3**	**+2.0**
DHY	comp=E,238nm,0.6s			IAML		00 18 07.4	
DHY	comp=N,169nm,0.5s			IAML		00 18 09.4	
DHY	**Denali Highway**	**3.24**	**12**	P	**Pn**	**00 17 20.8**	**+1.5**
P18K	**Big Mountain,**	**3.26**	**263**	Pn	**Pn**	**00 17 20.8**	**+1.3**
ISLE	**Juniper Island**	**3.33**	**76**	Pn	**Pn**	**00 17 20.6**	**0.0**
ISLE	comp=N,200nm,1.2s			IAML		00 18 29.9	
ISLE	comp=E,140nm,0.9s			IAML		00 18 31.2	
M19K	**Big River Lodg**	**3.33**	**309**	Pn	**Pn**	**00 17 21.3**	**+0.8**
M19K	**Big River Lodg**	**3.33**	**309**	P	**Pn**	**00 17 21.0**	**+0.5**
PPLA	**Purkeypile**	**3.37**	**333**	Pn	**Pn**	**00 17 22.5**	**+1.4**
PPLA	**Purkeypile**	**3.37**	**333**	P	**Pn**	**00 17 22.4**	**+1.4**
PAX	**Paxson**	**3.46**	**27**	Pn	**Pn**	**00 17 24.2**	**+1.9**
PAX	**Paxson**	**3.46**	**27**	P	**Pn**	**00 17 23.9**	**+1.6**
RND	**Reindeer**	**3.49**	**0**	Pn	**Pn**	**00 17 24.3**	**+1.7**
RND	comp=N,178nm,0.7s			IAML		00 18 21.0	
RND	comp=E,125nm,0.7s			IAML		00 18 25.0	
MESA	**MESA**	**3.49**	**83**	Pn	**Pn**	**00 17 23.1**	**+0.4**
MESA	comp=E,123nm,0.9s			IAML		00 18 37.9	
MESA	comp=N,112nm,1.8s			IAML		00 19 08.1	
SVW2	**Sparrevohn**	**3.51**	**292**	Pn	**Pn**	**00 17 23.0**	**+0.1**
SVW2	comp=E,164nm,0.6s			IAML		00 18 15.9	
L20K	**Farewell, AK**	**3.51**	**319**	P	**Pn**	**00 17 24.0**	**+1.1**
OHAK	**Old Harbor**	**3.56**	**222**	Pn	**Pn**	**00 17 23.1**	**-0.4**
OHAK	comp=E,159nm,1.5s			IAML		00 18 37.6	
OHAK	comp=N,168nm,1.4s			IAML		00 18 38.4	
OHAK	**Old Harbor**	**3.56**	**222**	P	**Pn**	**00 17 23.1**	**-0.4**
N18K	**Kilae Creek**	**3.56**	**285**	Pn	**Pn**	**00 17 23.6**	**0.0**
N18K	comp=N,104nm,0.8s			IAML		00 18 20.4	
N18K	**Kilae Creek**	**3.56**	**285**	P	**Pn**	**00 17 23.3**	**-0.3**
TRF	**Thorofare Moun**	**3.59**	**350**	Pn	**Pn**	**00 17 25.7**	**+1.5**
TRF	comp=E,156nm,1.1s			IAML		00 18 23.8	
TRF	comp=N,189nm,0.9s			IAML		00 18 28.7	
TRF	**Thorofare Moun**	**3.59**	**350**	P	**Pn**	**00 17 25.7**	**+1.5**
YAH	**Yahtse**	**3.60**	**80**	Pn	**Pn**	**00 17 25.0**	**+0.7**
L19K	**White Mountain**	**3.67**	**310**	Pn	**Pn**	**00 17 26.0**	**+0.9**
L19K	**White Mountain**	**3.67**	**310**	P	**Pn**	**00 17 25.8**	**+0.7**
BARN	**Barnard Glacie**	**3.75**	**69**	Pn	**Pn**	**00 17 27.1**	**+0.7**
BARN	comp=E,93nm,0.8s			IAML		00 18 40.7	
KTH	**Kantishna Hill**	**3.76**	**346**	Pn	**Pn**	**00 17 27.7**	**+1.4**
KTH	comp=E,128nm,0.9s			IAML		00 18 34.3	
KTH	comp=N,148nm,1.0s			IAML		00 18 41.9	
M26K	**Nabesna, AK**	**3.78**	**47**	Pn	**Pn**	**00 17 27.9**	**+1.2**
M26K	comp=N,94nm,0.7s			IAML		00 18 31.2	
M26K	**Nabesna, AK**	**3.78**	**47**	P	**Pn**	**00 17 27.6**	**+1.0**
MCK	**McKinley**	**3.81**	**360**	Pn	**Pn**	**00 17 29.1**	**+2.0**
MCK	comp=N,169nm,1.0s			IAML		00 18 31.1	
MCK	comp=E,120nm,1.0s			IAML		00 18 36.3	
MCK	**McKinley**	**3.81**	**360**	P	**Pn**	**00 17 29.1**	**+2.0**
CAST	**Castle Rocks**	**3.81**	**338**	Pn	**Pn**	**00 17 27.9**	**+0.8**
CAST	**Castle Rocks**	**3.81**	**338**	P	**Pn**	**00 17 27.7**	**+0.6**
CTG	**Chitna Glacier**	**3.88**	**71**	P	**Pn**	**00 17 28.8**	**+0.7**
CTGM	**Chitina Glacie**	**3.89**	**71**	Pn	**Pn**	**00 17 28.9**	**+0.7**
TABL	**Table Mountain**	**3.90**	**79**	Pn	**Pn**	**00 17 29.3**	**+0.8**
TABL	comp=N,79nm,1.1s			IAML		00 18 47.4	
MENT	**Mentasta**	**3.91**	**37**	Pn	**Pn**	**00 17 29.7**	**+1.4**
LOGN	**Logan Glacier**	**4.02**	**74**	Pn	**Pn**	**00 17 30.5**	**+0.5**
L26K	**Log Cabin Wild**	**4.09**	**38**	Pn	**Pn**	**00 17 31.0**	**+0.2**
L26K	comp=N,107nm,0.8s			IAML		00 18 37.7	
L26K	comp=E,134nm,0.5s			IAML		00 18 39.5	
L26K	**Log Cabin Wild**	**4.09**	**38**	P	**Pn**	**00 17 30.7**	**-0.1**
M27K	**Edge Creek, AK**	**4.18**	**51**	Pn	**Pn**	**00 17 33.5**	**+1.3**
M27K	**Edge Creek, AK**	**4.18**	**51**	P	**Pn**	**00 17 33.4**	**+1.2**
K20K	**Telida**	**4.23**	**327**	Pn	**Pn**	**00 17 33.5**	**+0.7**
BWN	**Browne**	**4.26**	**357**	Pn	**Pn**	**00 17 34.8**	**+1.6**
RIDG	**Independent Ri**	**4.28**	**25**	Pn	**Pn**	**00 17 35.0**	**+1.6**
RIDG	comp=N,109nm,0.9s			IAML		00 18 41.6	
RIDG	**Independent Ri**	**4.28**	**25**	P	**Pn**	**00 17 34.8**	**+1.4**
BPAW	**Bear Paw Mtn.**	**4.30**	**348**	Pn	**Pn**	**00 17 34.7**	**+1.0**
BPAW	comp=N,81nm,1.1s			IAML		00 18 48.2	
BPAW	**Bear Paw Mtn.**	**4.30**	**348**	P	**Pn**	**00 17 34.5**	**+0.8**
PCA	**Pinnacle**	**4.34**	**84**	Pn	**Pn**	**00 17 34.8**	**+0.5**
PINM	**Pinnacle**	**4.34**	**84**	P	**Pn**	**00 17 34.7**	**+0.4**
DOT	**Dot Lake**	**4.38**	**29**	Pn	**Pn**	**00 17 36.1**	**+1.3**
YUK3	**Moose Creek**	**4.52**	**62**	P	**Pn**	**00 17 38.2**	**+1.3**
TTA	**Tatalina**	**4.55**	**314**	Pn	**Pn**	**00 17 37.8**	**+0.5**
TTA	comp=N,46nm,1.1s			IAML		00 19 02.1	
WRH	**Wood River Hil**	**4.57**	**4**	Pn	**Pn**	**00 17 38.5**	**+1.0**
WRH	comp=N,70nm,1.0s			IAML		00 18 56.0	
WRH	comp=E,61nm,1.1s			IAML		00 19 06.8	
HDA	**Harding Lake**	**4.58**	**11**	Pn	**Pn**	**00 17 39.2**	**+1.6**
HDA	comp=E,105nm,1.0s			IAML		00 18 57.8	
BVCY	**Beaver Creek**	**4.62**	**54**	P	**Pn**	**00 17 39.7**	**+1.6**
L27K	**Beaver Creek,**	**4.62**	**44**	Pn	**Pn**	**00 17 39.0**	**+0.9**
L27K	**Beaver Creek,**	**4.62**	**44**	P	**Pn**	**00 17 39.0**	**+0.9**
BCAR	**Beaver Creek A**	**4.63**	**44**	Pn	**Pn**	**00 17 38.9**	**+0.6**
BCPM	**Bancas Point**	**4.66**	**86**	Pn	**Pn**	**00 17 38.8**	**+0.2**
BCPM	comp=N,50nm,1.1s			IAML		00 19 09.8	
BCPM	comp=E,45nm,1.3s			IAML		00 19 11.1	
SCRK	**Sand Creek**	**4.67**	**28**	Pn	**Pn**	**00 17 39.6**	**+0.7**
SCRK	comp=E,78nm,0.8s			IAML		00 19 04.4	
SCRK	**Sand Creek**	**4.67**	**28**	P	**Pn**	**00 17 39.7**	**+0.8**
NEA2	**Nenana**	**4.68**	**359**	Pn	**Pn**	**00 17 40.0**	**+1.1**
NEA2	comp=E,51nm,1.1s			IAML		00 18 57.8	
NEA2	comp=N,55nm,1.1s			IAML		00 18 58.6	
NEA2	**Nenana**	**4.68**	**359**	P	**Pn**	**00 17 40.1**	**+1.2**
CCB	**Clear Creek Bu**	**4.76**	**6**	Pn	**Pn**	**00 17 41.1**	**+1.1**
CCB	comp=E,59nm,1.3s			IAML		00 19 02.6	
J20K	**Nowinta River**	**4.92**	**332**	Pn	**Pn**	**00 17 42.3**	**+0.1**
J20K	comp=N,57nm,1.0s			IAML		00 19 06.1	
J20K	comp=E,52nm,0.7s			IAML		00 19 07.2	
J20K	**Nowinta River**	**4.92**	**332**	P	**Pn**	**00 17 42.4**	**+0.1**
IL31		**4.95**	**10**	Pn	**Pn**	**00 17 43.1**	**+0.6**
ILAR	**Eielson Array**	**4.95**	**10**	Pn	**Pn**	**00 17 43.6**	**+1.1**
ILAR	comp=E,3.0nm,0.3s,baz=191,slow=14,SNR=124			Sn	**Sn**	**00 18 38.6**	**-1.2**
	comp=E,2.3nm,0.3s,baz=186,slow=16,SNR=6.2						
J25K	**Salcha River,**	**4.98**	**18**	Pn	**Pn**	**00 17 44.0**	**+0.9**
J25K	comp=E,59nm,0.6s			IAML		00 19 01.9	
J25K	comp=N,56nm,0.7s			IAML		00 19 02.6	
J25K	**Salcha River,**	**4.98**	**18**	P	**Pn**	**00 17 43.6**	**+0.6**
TCOL	**CIGO, UAF Yank**	**4.98**	**5**	Pn	**Pn**	**00 17 44.2**	**+1.1**
COLA	**College**	**4.98**	**5**	Pn	**Pn**	**00 17 44.5**	**+1.4**
MDM	**Murphy Dome**	**5.05**	**3**	Pn	**Pn**	**00 17 45.2**	**+1.1**
MDM	comp=E,52nm,1.0s			IAML		00 19 08.3	
MDM	comp=N,57nm,1.1s			IAML		00 19 09.0	
MLY	**Manley**	**5.19**	**351**	Pn	**Pn**	**00 17 47.1**	**+1.1**
MLY	comp=N,29nm,0.8s			IAML		00 19 12.0	
MLY	**Manley**	**5.19**	**351**	P	**Pn**	**00 17 46.6**	**+0.7**
K27K	**Chicken**	**5.22**	**35**	Pn	**Pn**	**00 17 47.1**	**+0.8**
K27K	comp=N,30nm,1.5s			IAML		00 19 21.2	
K27K	**Chicken**	**5.22**	**35**	P	**Pn**	**00 17 47.1**	**+0.8**
J26L	**Joseph Creek**	**5.22**	**26**	Pn	**Pn**	**00 17 47.5**	**+1.1**
J26L	comp=E,46nm,0.6s			IAML		00 19 11.3	
J26L	comp=N,38nm,1.0s			IAML		00 19 22.9	
J26L	**Joseph Creek**	**5.22**	**26**	P	**Pn**	**00 17 47.2**	**+0.8**
	baz=211						

YUK4	Talbot Arm	5.24	70	P		Pn		00 17 48.6 +1.8
	baz=258							
I23K	Minto, Yukon-K	5.24	358	Pn		Pn		00 17 47.8 +1.2
I23K				IAML				00 19 17.0
	comp=N,56nm,0.9s							
I23K				IAML				00 19 19.1
	comp=E,40nm,1.8s							
I23K	Minto, Yukon-K	5.24	358	P		Pn		00 17 47.8 +1.2
	baz=178							
POKR	Poker Plat Res	5.25	7	Pn		Pn		00 17 47.9 +1.1
POKR				IAML				00 19 16.9
	comp=N,49nm,1.0s							
POKR				IAML				00 19 17.4
	comp=E,54nm,1.2s							
POKR	Poker Plat Res	5.25	7	P		Pn		00 17 47.8 +1.0
	baz=188							
YUK6	Outpost Mounta	5.31	74	P		Pn		00 17 48.7 +0.8
	baz=264							
I21K	Tanana	5.46	346	Pn		Pn		00 17 50.4 +0.8
I21K	Tanana	5.46	346	P		Pn		00 17 50.6 +1.0
	baz=164							
CHIR	Chirikof Islan	5.46	224	Pn		Pn		00 17 51.3 +1.6
P29M	Windy Craggy	5.64	88	Pn		Pn		00 17 52.9 +0.7
HYT	Haines Junctio	5.72	76	Pn		Pn		00 17 54.7 +1.3
PRP	Porcupine Dome	5.81	14	Pn		Pn		00 17 55.2 +0.5
PRP	Porcupine Dome	5.81	14	P		Pn		00 17 55.2 +0.5
	baz=197							
H23K	Yukon River	5.92	357	Pn		Pn		00 17 57.1 +1.1
H23K	Yukon River	5.92	357	P		Pn		00 17 57.2 +1.1
	baz=177							
H24K	Noodor Dome	5.95	4	Pn		Pn		00 17 57.4 +1.0
H24K	Noodor Dome	5.95	4	P		Pn		00 17 57.4 +1.0
	baz=185							
I26K	Coal Creek Min	6.01	24	Pn		Pn		00 17 58.4 +1.2
I26K	Coal Creek Min	6.01	24	P		Pn		00 17 58.3 +1.2
	baz=209							
H21K	Melozitna Rive	6.02	344	Pn		Pn		00 17 58.0 +0.7
H21K	Melozitna Rive	6.02	344	P		Pn		00 17 57.8 +0.5
	baz=161							
EGAK	Eagle	6.05	33	Pn		Pn		00 17 59.0 +1.3
DAWY	Dawson	6.10	43	Pn		Pn		00 17 59.4 +0.9
DAWY	Dawson	6.10	43	P		Pn		00 17 59.3 +0.9
	baz=232							
IMAR	Indian Mountai	6.46	342	Pn		Pn		00 18 04.0 +0.6
N31M	Braeburn, Yuko	6.62	71	Pn		Pn		00 18 06.2 +0.6
FYU	Fort Yukon	6.86	12	Pn		Pn		00 18 09.2 +0.4
SKAG	Skagway	6.88	88	Pn		Pn		00 18 10.1 +1.0
WHY	Whitehorse	7.00	78	Pn		Pn		00 18 12.1 +1.2
WHY	Whitehorse	7.00	78	P		Pn		00 18 11.5 +0.6
	baz=270							
BESE	Bessie Mountai	7.32	95	Pn		Pn		00 18 16.5 +1.2
COLD	Coldfoot	7.35	356	Pn		Pn		00 18 16.2 +0.7
COLD	Coldfoot	7.35	356	P		Pn		00 18 16.7 +1.1
	baz=175							
M31M	Drury Creek, Y	7.39	66	Pn		Pn		00 18 16.1 -0.1
CNBA	Chernabura Isl	7.72	233	Pn		Pn		00 18 21.1 +0.4
BMAR	Burnt Mountain	7.76	12	Pn		Pn		00 18 21.6 +0.3
P33M	Teslin, Yukon	8.05	81	Pn		Pn		00 18 25.6 +0.5
TOLK	Toolik Lake Re	8.75	358	Pn		Pn		00 18 35.2 +0.4
DLBC	Dease Lake	9.79	91	Pn		Pn		00 18 50.5 +1.3
	comp=E,0.2nm,0.3s,baz=240,slow=4.9,SNR=4.4							
	comp=E,2.5nm,0.7s							
DLBC	Dease Lake	9.79	91	Pn		Pn		00 18 49.5 +0.4
YKA	Yellowknife Ar	16.59	66	Pn		Pn		00 20 20.8 +0.1
	comp=E,0.5nm,0.3s,baz=275,slow=10.0,SNR=7.6							
	comp=E,2.2nm,0.6s							
YKA	Yellowknife Ar	16.59	66	Pn		Pn		00 20 21.2 +0.6
PDAR	Pinedale Array	29.39	108	P		P		00 22 33.7 +2.0
	comp=E,0.5nm,0.7s,baz=329,slow=6.3,SNR=4.7							
	comp=E,0.5nm,0.7s							
TXAR	Lajitas Array	43.05	115	P		P		00 24 30.0 +1.8
	comp=E,0.3nm,0.8s,baz=324,slow=5.6,SNR=3.5							
	comp=E,0.3nm,0.8s							
KSRS	Korea Array	55.20	286	P		P		00 26 00.6 -0.4
	comp=E,1.2nm,0.5s,baz=33,slow=6.7,SNR=5.2							
	comp=E,1.2nm,0.5s							
SONM	Songino Array	56.48	309	P		P		00 26 10.5 +0.3
	comp=E,1.0nm,0.7s,baz=40,slow=6.0,SNR=5.2							
	comp=E,1.0nm,0.7s							
ZALV	Zalesovo Beam	58.62	326	P		P		00 26 24.2 -0.7
	comp=E,0.3nm,0.4s,baz=26,slow=7.7,SNR=2.1							
	comp=E,0.3nm,0.4s							
FINES	FINESS Array B	58.89	3	P		P		00 26 25.2 -1.5
	comp=E,0.6nm,0.4s,baz=352,slow=8.6,SNR=5.5							
	comp=E,0.6nm,0.4s							
MKAR	Makanchi Array	65.74	324	P		P		00 27 10.6 -2.3
	comp=E,0.3nm,0.6s,baz=44,slow=7.3,SNR=1.6							
	comp=E,0.3nm,0.6s							

MOS ***19*** *00:25:59.4±0.8, 4°.86S×108°.20E, h618km, mb6.2/76, MS5.4/6, Error ellipse: s-maj=6.4km s-min=4.0km az=118.4*

BJI ***19*** *00:26:00.4±0.0, 4°.95S×108°.43E, h620km, mb6.0/94, mB6.1/69*

IDC ***19*** *00:26:00.8±0.2, 4°.87S×108°.16E, h615km±2km, mb5.7/57, mbtmp6.6/61, Error ellipse: s-maj=5.6km s-min=5.1km az=44.0*

DJA ***19*** *00:26:00.3±0.1, 5°S±2°×10°8E±°, h614km±2km, M6.2/102, mB6.5/96, mb6.4/102, MLv6.8/34, Mw(mB)6.3/96, MwMwp6.0/83, Mwp6.1/83*

NEIC ***19*** *00:26:01.1±2.5, 4°.86S±0°.07×108°.16E±0°.05, h614km±1km, mb6.2/164, Mwb6.7/60, Mwc6.6/111, Mww6.6, Error ellipse: s-maj=13.4km s-min=7.6km az=151.0*

NEIC ***19*** *00:26:01.2, 4°.91S×108°.16E, h619km, Moment Tensor Solution. Moment tensor: Scale 10^19^Nm; Mrr-1.05; Mθθ0.39; Mφφ0.65; Mrθ-0.55; Mθφ-0.38; Mφr-0.56; Fault plane solution: M0 1.26000×10^19^ NP1:φs351.89000°, δ56.08000°, λ-58.61000°. NP2:φs124.34000°, δ44.90000°, λ-127.76000°. Principal axes: T 0.9374, Plg6.0000°, Azm60.0000°; N 0.4959, Plg26.0000°, Azm153.0000°; P -1.4334, Plg64.0000°, Azm318.0000°;*

KLM ***19*** *00:26:02, 4°.91S×108°.05E, h605km, mb6.3*

GCMT ***19*** *00:26:04.1±0.1, 4°.95S×108°.07E, h623km, MW6.6/177, Moment Tensor Solution. s177,c467; s172,c320; Duration: 4±9 Moment tensor: Scale 10^19^Nm; Mrr-0.89±.00; Mθθ0.40±.01; Mφφ0.49±.01; Mrθ-0.42±.01; Mθφ-0.38±.01; Mφr-0.48±.01; Best double couple: M0 1.02500×10^19^ NP1:φs345.00000°, δ54.00000°, λ-57.00000°. NP2:φs117.00000°, δ47.00000°, λ-127.00000°. Principal axes: T 0.8370, Plg4.0000°, Azm52.0000°; N 0.3770, Plg26.0000°, Azm144.0000°; P -1.2140, Plg63.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***19*** *00:26:06, 5°.11S×108°.26E, h630km, Moment Tensor Solution. Duration: 10±0 Moment tensor: Scale 10^19^Nm; Mrr-0.90; Mθθ0.37; Mφφ0.53; Mrθ-0.35; Mθφ-0.38; Mφr-0.45; Fault plane solution: M0 1.04000×10^19^ NP1: φs121.00000°, δ45.00000°, λ-125.00000°. NP2: φs346.00000°, δ55.00000°, λ-60.00000°. Principal axes: T 0.8499, Plg6.0000°, Azm55.0000°; N 0.3096, Plg24.0000°, Azm147.0000°; P -1.1595, Plg65.0000°, Azm313.0000°;*

NEIC ***19*** *00:26:12.4, 5°.27S×108°.16E, h614km, Moment Tensor Solution. Duration: 11±1 Moment tensor: Scale 10^19^Nm; Mrr-0.88; Mθθ0.43; Mφφ0.45; Mrθ-0.36; Mθφ-0.36; Mφr-0.53; Fault plane solution: M0 1.00000×10^19^ NP1: φs115.74000°, δ44.69000°, λ-127.71000°. NP2: φs343.14000°, δ56.19000°, λ-58.83000°. Principal axes: T 0.8109, Plg6.0000°, Azm52.0000°; N 0.3844, Plg25.0000°, Azm145.0000°; P -1.1953, Plg64.0000°, Azm309.0000°;*

ISC 19 00:26:01.2±0.1, 4°.90S±0°.02×108°.13E±0°.02, h621km±1km, h622km; pP-P, n2834, σ1§69/3403, mb6.1/400, 280C-258D, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNG	Tangerang	1.94	229	P	P	00 27 20.9	+3.7
TNG				P	P	00 27 16.3	-0.9
TNG				S	S	00 28 17.8	-1.2
CBJI	Citeko	1.98	220	P	P	00 27 16.5	-0.8
LEM	Lembang	1.98	195	P	P	00 27 16.2	-1.4
	49μm,0.6s,baz=37,slow=2.6,SNR=260						
LEM				S	S	00 28 18.2	-1.4
	13μm,0.7s,baz=306,slow=21,SNR=7.0						
LEM	Lembang	1.98	195	P	P	00 27 16.2	-1.4
LEM				S	S	00 28 18.2	-1.4
LEM	Lembang	1.98	195	P	P	00 27 15.8	-1.7
SBJI	Serang	2.33	238	P	P	00 27 19.1	+0.4
CTJI	Waduk Cacaban	2.35	153	P	P	00 27 17.6	-1.2
CNJI	Cibinong	2.59	202	P	P	00 27 17.3	-2.7
SKJI	Sukabumi	2.61	217	P	P	00 27 17.8	-2.3
BLSI	Bandar Lampung	2.91	261	P	P	00 27 20.3	-1.3
SCJI	Gunung Srandil	2.96	160	P	P	00 27 18.9	-2.9
SMRI	Semarang	3.14	133	P	P	00 27 21.7	-1.1
SMRI	Semarang	3.14	133	P	P	00 27 21.8	-1.1
SMRI	Semarang	3.14	133	P	P	00 27 22.1	-0.8
KLI	Kotabumi	3.26	270	P	P	00 27 22.3	-1.2
KLI	Kotabumi	3.26	270	P	P	00 27 21.9	-1.6
PPBI	Pangkal Pinang	3.37	324	P	P	00 27 24.9	+0.7
YOGI	Yogyakarta	3.61	144	P	P	00 27 23.1	-2.6
KASI	Kota Agung	3.67	260	P	P	00 27 24.6	-1.4
KASI				S	S	00 28 30.5	-4.6
UGM	Wanagama	3.83	142	P	P	00 27 24.0	-3.0
UGM	Wanagama	3.83	142	P	P	00 27 24.4	-2.7
UGM				S	S	00 28 34.4	-2.7
UGM	Wanagama	3.83	142	P	P	00 27 24.9	-2.2
PMBI	Palembang	3.88	300	P	P	00 27 27.3	-0.1
PMBI	Palembang	3.88	300	P	P	00 27 27.9	+0.5
PMBI	Palembang	3.88	300	P	P	00 27 28.1	+0.7
LWLI	Liwa	4.05	268	P	P	00 27 27.5	-1.2
PBKI	Pangkalan Bun	4.15	59	P	P	00 27 29.3	+0.1
TBJI	Tambak Boyo	4.17	117	P	P	00 27 28.3	-1.0
PCJI	Pacitan	4.46	137	P	P	00 27 28.3	-3.1
BWJI	Bawean	4.61	102	P	P	00 27 30.9	-1.6
PWJI	Pagerwojo	4.79	131	P	P	00 27 31.2	-2.6
MNAI	Manna	5.18	276	P	P	00 27 35.4	-1.5
MNAI	Manna	5.18	276	P	P	00 27 35.3	-1.5
	285nm139μm834μm69μm,0.5s						
MNAI	Manna	5.18	276	P	P	00 27 36.2	-0.6
	66μm,0.6s						
KRKI	Karangkates	5.38	127	P	P	00 27 36.2	-2.2
	109nm182μm97μm12μm,0.7s						
JMBI	JAMBI	5.53	306	P	P	00 27 40.9	+1.3
	92nm267μm27μm,1.0s						
DSRI	Dabo	5.64	321	P	P	00 27 41.0	+0.5
	30nm94μm128μm10μm,1.2s						
KSI	Kapahiang	5.66	282	P	P	00 27 39.5	-1.2
	143μm324μm33μm,0.8s						
UBSI	University, Be	5.95	281	P	P	00 27 41.3	-1.7
	233nm152μm614μm65μm,0.8s						
STKI	Sintang	5.96	34	P	P	00 27 44.7	+1.6
XMI	Christmas Isla	6.02	203	P	P	00 27 44.5	+0.8
	11μm,0.7s						
XMI	Christmas Isla	6.02	203	⇑P	P	00 27 43.2	-0.5
MASI	Maura Aman, Be	6.13	286	P	P	00 27 43.8	-0.8
	114nm61μm276μm32μm,0.7s						
KMMI	Kalianget	6.19	111	P	P	00 27 43.1	-1.9
	162nm265μm377μm51μm,0.9s						
KSM	Kuching	6.69	19	P	P	00 27 49.8	+0.3
KSM	Kuching	6.69	19	P	P	00 27 49.8	+0.3
	23nm155μm118μm7μm,0.9s						
KSM	Kuching	6.69	19	P	P	00 27 51.0	+1.6
	7μm,0.9s						
KSM	Kuching	6.69	19	⇑P	P	00 27 50.0	+0.6
ABJI	Asem Bagus	6.72	116	P	P	00 27 48.7	-0.9
	30μm,1.2s						
TPRI	Tanjung Pinang	6.80	328	P	P	00 27 51.0	+0.6
	34nm88μm145μm11μm,1.1s						
BBKI	Banjar Baru	6.85	78	P	P	00 27 50.7	-0.1
	68nm46μm148μm9μm,0.8s						
JAGI	Jajag, Banyuwa	6.96	121	P	P	00 27 49.0	-2.8
JAGI	Jajag, Banyuwa	6.96	121	P	P	00 27 49.0	-2.8
	120nm160μm320μm33μm,0.9s						
JAGI	Jajag, Banyuwa	6.96	121	P	P	00 27 50.2	-1.6
	33μm,0.9s						
BTDF	Bukit Timah Da	7.59	325	P	P	00 27 58.3	+0.8
	21nm52μm79μm6μm,1.1s						
RTBI	Rangdo, Negare	7.64	118	P	P	00 27 55.3	-2.7
	111nm126μm172μm25μm,1.0s						
SRBI	Singaraja	7.72	115	P	P	00 27 57.3	-1.4
	71nm133μm226μm20μm,0.8s						
SDSI	Sungai Dareh	7.76	300	P	P	00 27 58.1	-1.0
	19nm66μm7μm,1.1s						
MTKI	Muara Teweh, K	7.82	60	P	P	00 28 00.2	+0.6
	56nm154μm180μm11μm,0.6s						
MYKOM	Kota Tinggi	7.90	327	P	P	00 28 00.9	+0.6
MYKOM	Kota Tinggi	7.90	327	P	P	00 28 01.2	+0.9
	30nm79μm126μm9μm,1.2s						
MYKOM	Kota Tinggi	7.90	327	⇑P	P	00 28 01.4	+1.0
DNP	Denpasar	7.97	118	P	P	00 27 58.9	-2.1
	234nm131μm249μm24μm,1.0s						
IGBI	Denpasar	7.98	120	P	P	00 27 58.0	-3.1
	78nm50μm119μm11μm,0.7s						
SBUM	Sibu	8.36	29	P	P	00 28 05.7	+1.1
SBUM	Sibu	8.36	29	P	P	00 28 05.5	+0.8
	86μm79μm10μm,1.0s						
SBUM	Sibu	8.36	29	⇑P	P	00 28 05.8	+1.1
PPSI	Pulau Pagai	8.37	284	P	P	00 28 03.2	-1.6
	103μm441μm34μm,0.5s						
KLNI	Mataram	8.65	114	P	P	00 28 04.4	-3.0
	53μm55μm5μm,0.7s						
BKNI	Bangkinang	8.78	306	P	P	00 28 07.9	-0.7
BKNI	Bangkinang	8.78	306	P	P	00 28 07.8	-0.8
	71μm70μm7μm,1.1s						
BKNI	Bangkinang	8.78	306	P	P	00 28 09.1	+0.5
	7μm,1.2s						
BKB	Balikpapan	9.47	68	P	P	00 28 17.2	+1.9
BKB	Balikpapan	9.47	68	P	P	00 28 17.6	+2.3
	191μm391μm51μm,0.8s						
BKB	Balikpapan	9.47	68	P	P	00 28 18.3	+3.0
	52μm,0.8s						
TWSI	Taliwang, Sumb	9.49	114	P	P	00 28 12.0	-3.5
	32μm88μm9μm,0.7s						
SISI	Saibi	9.69	291	P	P	00 28 14.9	-2.6
	70μm94μm7μm,1.1s						
SMKI	Samarinda	10.09	64	P	P	00 28 23.1	+1.8
	208μm174μm21μm,0.9s						
MNSI	Mandailing Nat	10.24	303	P	P	00 28 19.8	-3.0
	37μm21μm974nm,0.6s						
PLAI	Plampang	10.35	113	P	P	00 28 19.8	-4.0
	22μm70μm5μm,0.7s						
PLAI	Plampang	10.35	113	P	P	00 28 21.6	-2.2
	5μm,0.7s						
PMSI	Majene	10.85	83	P	P	00 28 28.8	0.0
	128μm142μm16μm,1.1s						
PBSI	Pulau Batu	10.95	296	P	P	00 28 27.4	-2.4
	44μm80μm5μm,1.2s						
TRSI	Tarutung	11.45	307	P	P	00 28 34.5	-0.3
	27μm3μm,1.0s						
KAPI	Kappang	11.58	91	P	P	00 28 35.2	-0.7
	5μm,0.6s,baz=263,slow=9.0,SNR=802						
KAPI				S	S	00 30 41.3	-1.6
	206nm,0.7s,baz=38,slow=19,SNR=0.7						
KAPI				ScP	ScP	00 36 03.7	+0.4
	149nm,0.8s,baz=11,slow=1.7,SNR=7.0						
KAPI	Kappang	11.58	91	P	P	00 28 34.8	-1.1
KAPI	Kappang	11.58	91	P	P	00 28 35.2	-0.7
KAPI				S	S	00 30 41.3	-1.6
KAPI	Kappang	11.58	91	P	P	00 28 35.1	-0.9
	82μm177μm21μm,1.2s						
KAPI	Kappang	11.58	91	P	P	00 28 35.8	-0.2
	24μm,1.2s						
KAPI	Kappang	11.58	91	⇓P	P	00 28 35.2	-0.7
SPSI	Sidrap Palu	11.64	86	P	P	00 28 35.2	-1.4
	91μm58μm5μm,1.1s						
IPM	Ipoh	11.71	323	P	P	00 28 37.8	+0.7
IPM	Ipoh	11.71	323	P	P	00 28 37.9	+0.7
	28μm68μm6μm,0.7s						
IPM	Ipoh	11.71	323	P	P	00 28 38.5	+1.3
	6μm,0.7s						
IPM	Ipoh	11.71	323	⇑P	P	00 28 38.2	+1.0
TTSI	Tana Toraja	11.81	81	P	P	00 28 37.9	-0.2
	106μm51μm4μm,1.0s						
RPSI	Rantau Prapat	11.89	309	P	P	00 28 37.8	-1.1
RPSI					ScP	00 36 04.9	+1.2
RPSI	Rantau Prapat	11.89	309	P	P	00 28 37.3	-1.6
BNSI	Bone	11.95	88	P	P	00 28 39.4	-0.1
	64μm72μm8μm,1.0s						
BKSI	Bulukumba	11.96	93	P	P	00 28 38.5	-1.1
	78μm187μm20μm,1.0s						
PSI	Prapat	11.96	310	P	P	00 28 37.8	-1.9
	404nm,0.7s,baz=156,slow=8.3,SNR=150						
PSI				S	S	00 30 47.1	-2.6
	484nm,1.1s,baz=286,slow=15,SNR=1.7						
PSI				ScP	ScP	00 36 04.9	+0.9
	97nm,0.9s,baz=208,slow=4.9,SNR=5.1						
PSI	Prapat	11.96	310	P	P	00 28 37.3	-2.4
PSI	Prapat	11.96	310	P	P	00 28 37.6	-2.1
	14μm13μm1μm,1.4s						
GSI	Gunungsitoli	12.21	300	P	P	00 28 39.7	-2.3
GSI	Gunungsitoli	12.21	300	P	P	00 28 39.5	-2.5
	23μm25μm2μm,0.8s						
GSI	Gunungsitoli	12.21	300	P	P	00 28 40.9	-1.1
	2μm,0.7s						
BSSI	Bau Bau, Buton	12.37	96	P	P	00 28 41.7	-1.9
	73μm183μm21μm,0.7s						
KULM	Kulim	12.57	323	P	P	00 28 45.3	-0.3
KULM	Kulim	12.57	323	P	P	00 28 45.3	-0.3
	21μm47μm4μm,1.2s						
KULM	Kulim	12.57	323	P	P	00 28 46.0	+0.4
KULM	Kulim	12.57	323	⇑P	P	00 28 45.6	0.0
TSI	Tuntungan	12.68	311	P	P	00 28 46.6	0.0
	21μm95μm13μm,0.8s						
MPSI	Mapaga	12.86	66	P	P	00 28 48.8	+0.5
	138μm53μm4μm,0.9s						
KCSI	Kotacane, Aceh	13.30	309	P	P	00 28 50.4	-2.3
	21μm43μm4μm,1.2s						
COCO	West Island	13.31	236	P	P	00 28 53.0	+0.4
COCO	West Island	13.31	236	P	P	00 28 53.1	+0.4
KKSI	Kolaka, Sulawe	13.50	87	P	P	00 28 54.9	+0.2
	89μm104μm8μm,0.5s						
KKM	Kota Kinabalu	13.54	37	P	P	00 28 55.5	+0.4
KKM	Kota Kinabalu	13.54	37	P	P	00 28 55.0	-0.1
	129μm110μm13μm,1.1s						
KKM	Kota Kinabalu	13.54	37	P	P	00 28 56.0	+0.9
	13μm,1.1s						
KKM	Kota Kinabalu	13.54	37	⇑P	P	00 28 55.1	-0.1
LASI	Langsa, Aceh	13.76	312	P	P	00 28 57.7	+0.6
	27μm79μm6μm,0.9s						
TOLI2	Tolitoli	13.98	65	P	P	00 28 59.4	+0.2
TOLI2	Tolitoli	13.98	65	P	P	00 29 00.0	+0.7
	10μm,1.0s						
APSI	Ampana	14.07	74	P	P	00 28 59.5	-0.6
	99μm79μm9μm,1.0s						
SKLT	Songkhla	14.13	328	P	P	00 29 01.0	+0.3
	73μm7μm,0.9s						
BBSI	Bau Bau	14.40	93	P	P	00 29 03.5	+0.4
	115μm11μm,1.2s						
MYLDM	Lahad Datu	14.40	46	P	P	00 29 05.3	+2.1
MYLDM	Lahad Datu	14.40	46	P	P	00 29 05.2	+2.0
	213μm339μm37μm,1.2s						
MYLDM	Lahad Datu	14.40	46	⇑P	P	00 29 05.6	+2.4
MMRI	Maumere	14.49	106	P	P	00 29 00.5	-3.5
MMRI	Maumere	14.49	106	P	P	00 28 59.6	-4.4
	40μm107μm12μm,1.1s						
MMRI	Maumere	14.49	106	P	P	00 29 01.6	-2.4
	12μm,1.1s						
MRSI	Marisa	14.79	69	P	P	00 29 04.5	-2.3
	90μm65μm6μm,0.7s						
MLSI	Meulaboh, Aceh	14.83	308	P	P	00 29 07.4	+0.3
	3μm78μm5μm,0.5s						
LHMI	Lhok Sumawe	15.03	312	P	P	00 29 09.6	+0.7
LHMI	Lhok Sumawe	15.03	312	P	P	00 29 09.7	+0.8
	43μm182μm15μm,0.7s						
LHMI	Lhok Sumawe	15.03	312	P	P	00 29 10.4	+1.5
	15μm,0.8s						
LUWI	Luwuk	15.12	76	P	P	00 29 09.4	-0.2
LUWI	Luwuk	15.12	76	P	P	00 29 09.2	-0.5
	96μm110μm12μm,1.1s						
LUWI	Luwuk	15.12	76	P	P	00 29 09.9	+0.2
	13μm,1.1s						
GTOI	Gorontalo	15.85	70	P	P	00 29 13.1	-3.3
	24μm12μm1μm,1.0s						
SRIT	Nakonsritamara	15.87	328	P	P	00 29 18.2	+1.7
BATI	Baumata	16.28	110	P	P	00 29 18.7	-1.6
	4μm,0.4s,baz=304,slow=1.0,SNR=150						
BATI				S	S	00 31 58.9	-3.4
	4μm,0.5s,baz=331,slow=3.4,SNR=6.6						
BATI				ScP	ScP	00 36 12.4	+1.0
	701nm,1.0s,baz=247,slow=7.7,SNR=6.5						
BATI				ScS	ScS	00 39 53.9	+2.6
	66nm,0.6s,baz=81,slow=22,SNR=2.6						
SOEI	Soe	16.72	108	P	P	00 29 22.3	-2.1
SOEI	Soe	16.72	108	P	P	00 29 21.7	-2.7
	44μm121μm15μm,1.2s						
SOEI	Soe	16.72	108	P	P	00 29 23.6	-0.8
	15μm,1.2s						
SANI	Sanana	18.05	82	P	P	00 29 35.7	-0.8
	73μm31μm2μm,1.0s						
SANI	Sanana	18.05	82	P	P	00 29 36.7	+0.2
	2μm,1.0s						
ZCP	Zamboanga City	18.22	50⇑	eP	P	00 29 40.2	+2.2
GIRL	Giralia	18.61	162	P	P	00 29 42.0	+0.6
	baz=19,SNR=307						
GIRL	Giralia	18.61	162	P	P	00 29 41.6	+0.3
GIRL	Giralia	18.61	162	P	P	00 29 42.5	+1.2
	3μm,1.2s						
GIRL	Giralia	18.61	162	⇑P	P	00 29 42.0	+0.6
NLAI	Namlea	19.00	86	P	P	00 29 45.0	0.0
	20μm2μm,0.9s						
SGSI	Sangihe	19.36	64	P	P	00 29 48.6	+0.2
	469nm,0.7s						
MBWA	Marble Bar	19.70	146	P	P	00 29 50.7	-0.6
MBWA	Marble Bar	19.70	146	P	P	00 29 51.0	-0.3
	1μm,1.2s						
MBWA	Marble Bar	19.70	146	⇑P	P	00 29 50.8	-0.6
LBMI	Labuha	19.80	78	P	P	00 29 52.6	+0.2
	38μm4μm,0.8s						
TNTI	Ternate	20.03	74	P	P	00 29 53.5	-0.9
TNTI	Ternate	20.03	74	P	P	00 29 52.9	-1.5
	30μm50μm5μm,1.0s						
TNTI	Ternate	20.03	74	P	P	00 29 54.6	+0.2
	5μm,1.0s						
GSPH	General Santos	20.03	57⇓	iP	P	00 29 57.2	+2.7
AAI	Ambon	20.05	87	P	P	00 29 52.3	-2.2
AAI				pmax	pmax		
	comp=Z,658nm,1.2s						
AAI	Ambon	20.05	87	P	P	00 29 51.3	-3.2
	comp=Z,48μmcomp=Z,8μmcomp=Z,575nm,1.1s						
CTBH	Cotabato--PC H	20.09	53⇓	eP	P	00 29 56.6	+1.7
PSA00	Pilbara Seismi	20.10	147	P	P	00 29 54.0	-0.9
PSA00	Pilbara Seismi	20.10	147	P	P	00 29 54.6	-0.3
	comp=Z,3μm,0.9s						
UBPT	Khong Chiam	20.22	353	P	P	00 29 55.9	-0.1

SAUI	**Saumlaki**	**23.23**	**99**	P	**P**	**00 30 23.5**	**+0.6**
	comp=Z,2µm,1.2s						
SWI	**Sorong**	**23.44**	**81**	P	**P**	**00 30 24.1**	**-0.7**
SWI				pmax	pmax		
	comp=Z,2µm,0.9s						
SIJI	**Sorong**	**23.45**	**81**	P	**P**	**00 30 24.5**	**-0.4**
	comp=Z,1µm,0.9s,baz=282,slow=5.6,SNR=206						
SIJI				sP	**sP**	**00 33 05.5**	**-1.8**
	comp=Z,134nm,0.9s,baz=203,slow=5.2,SNR=1.2						
SIJI				S	**S**	**00 33 55.1**	**-1.4**
	comp=Z,125nm,1.1s,baz=352,slow=19,SNR=1.2						
SIJI				ScP	**ScP**	**00 36 27.9**	**-0.6**
	comp=Z,74nm,0.7s,baz=350,slow=5.8,SNR=5.6						
SIJI				ScS	**ScS**	**00 40 15.9**	**-0.5**
	comp=Z,19nm,0.8s,baz=308,slow=23,SNR=1.7						
	comp=Z,1µm,0.9s						
SIJI	**Sorong**	**23.45**	**81**	P	**P**	**00 30 23.7**	**-1.2**
	comp=Z,25µmcomp=Z,13µmcomp=Z,1µm,0.9s						
GQP	**Guinayangan**	**23.47**	**37**	⇑*eP*	**P**	**00 30 24.8**	**-0.2**
MEEK	**Meekatharra**	**23.83**	**156**	P	**P**	**00 30 27.5**	**-0.6**
	baz=24						
QIZ	**Qiongzhong**	**23.83**	**4**	P	**P**	**00 30 30.1**	**+1.9**
QIZ				sP	**sP**	**00 33 06.4**	**-5.0**
QIZ				S	**S**	**00 34 07.8**	**+5.5**
QIZ				pmax	pmax		
	comp=Z,370nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,4µm,9.6s						
QIZ	**Qiongzhong**	**23.83**	**4**	P	**P**	**00 30 30.3**	**+2.1**
	comp=Z,405nm,1.3s						
MTN	**Manton Dam**	**24.05**	**111**	P	**P**	**00 30 28.7**	**-1.4**
	baz=24,SNR=117						
MTN	**Manton Dam**	**24.05**	**111**	P	**P**	**00 30 28.4**	**-1.7**
MTN	**Manton Dam**	**24.05**	**111**	P	**P**	**00 30 29.3**	**-0.8**
	comp=Z,2µm,1.2s						
MTN	**Manton Dam**	**24.05**	**111**	⇑P	**P**	**00 30 28.5**	**-1.6**
FAKI	**Fak Fak**	**24.14**	**86**	P	**P**	**00 30 30.3**	**-0.7**
	comp=Z,38µmcomp=Z,33µmcomp=Z,3µm,1.1s						
FAKI	**Fak Fak**	**24.14**	**86**	P	**P**	**00 30 31.2**	**+0.2**
	comp=Z,3µm,1.1s						
CMAR	**Chiang Mai Arr**	**24.91**	**339**	P	**P**	**00 30 39.2**	**+1.6**
	comp=Z,1µm,0.7s,baz=172,slow=8.6,SNR=995						
CMAR				sP	**sP**	**00 33 22.1**	**-0.9**
	comp=Z,19nm,0.7s,baz=182,slow=8.3,SNR=0.7						
CMAR				PcP	**PcP**	**00 33 52.2**	**+1.1**
	comp=Z,143nm,0.9s,baz=202,slow=3.2,SNR=6.0						
CMAR				S	**S**	**00 34 19.2**	**0.0**
	comp=Z,9.4nm,0.7s,baz=167,slow=40,SNR=1.8						
CMAR				ScP	**ScP**	**00 36 32.8**	**+0.3**
	comp=Z,66nm,0.8s,baz=196,slow=3.6,SNR=7.8						
CMAR				ScS	**ScS**	**00 40 23.1**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=112,slow=20,SNR=1.4						
CMAR				PKiKP	**PKiKP**	**00 41 31.2**	**-0.5**
	comp=Z,23nm,1.1s,baz=272,slow=1.6,SNR=6.8						
CMAR				P3KPbc		01 03 18.8	
	comp=Z,1.0nm,0.3s,baz=328,slow=3.2,SNR=4.2						
CMAR				P3KP		01 04 20.2	
	comp=Z,1.0nm,0.3s,baz=265,slow=4.1,SNR=1.5						
	comp=Z,1µm,0.7s						
CMAR	**Chiang Mai Arr**	**24.91**	**339**	P	**P**	**00 30 38.9**	**+1.2**
CMAR				PcP	**PcP**	**00 33 51.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**24.91**	**339**	P	**P**	**00 30 39.3**	**+1.6**
CMAR				*SP	**sP**	**00 33 22.1**	**-0.9**
CMAR						00 33 52.3	
MORW	**Morawa**	**25.18**	**164**	P	**P**	**00 30 40.0**	**0.0**
	baz=25,SNR=344						
MORW	**Morawa**	**25.18**	**164**	P	**P**	**00 30 39.7**	**-0.3**
MORW	**Morawa**	**25.18**	**164**	P	**P**	**00 30 40.2**	**+0.2**
	comp=Z,1µm,1.0s						
MORW	**Morawa**	**25.18**	**164**	⇑P	**P**	**00 30 40.0**	**0.0**
MORW				⇑S	**ScP**	**00 36 34.4**	**+1.2**
CHTO	**Chiang Mai**	**25.24**	**339**	P	**P**	**00 30 41.6**	**+1.0**
CHTO	**Chiang Mai**	**25.24**	**339**	P	**P**	**00 30 41.6**	**+1.0**
KDU	**Kakadu**	**25.25**	**109**	P	**P**	**00 30 39.4**	**-1.3**
	baz=25,SNR=82						
KDU	**Kakadu**	**25.25**	**109**	P	**P**	**00 30 39.2**	**-1.6**
	comp=Z,2µm,0.8s						
KDU	**Kakadu**	**25.25**	**109**	⇑P	**P**	**00 30 39.2**	**-1.6**
APYP	**Conner**	**26.06**	**29**	⇑*eP*	**P**	**00 30 47.9**	**+0.1**
MWPI	**Manokwari, Pap**	**26.17**	**82**	P	**P**	**00 30 49.0**	**+0.1**
	comp=Z,22µmcomp=Z,3µm,1.2s						
RKPI	**Ransiki, Papua**	**26.22**	**83**	P	**P**	**00 30 48.5**	**-0.8**
	comp=Z,28µmcomp=Z,19µmcomp=Z,2µm,0.9s						
PACPP	**Pamplona Cagay**	**26.62**	**29**	⇑*eP*	**P**	**00 30 52.9**	**+0.2**
BLDU	**Ballidu**	**26.83**	**163**	P	**P**	**00 30 54.0**	**-0.3**
	baz=27,SNR=734						
BLDU	**Ballidu**	**26.83**	**163**	P	**P**	**00 30 54.3**	**-0.1**
	comp=Z,1µm,1.0s						
HKPS	**Hong Kong Po S**	**27.64**	**12**	P	**P**	**00 31 03.8**	**+2.3**
	comp=Z,480nm,1.0s						
MTKN	**Mount Kenneth**	**27.84**	**166**	P	**P**	**00 31 04.5**	**+1.4**
	comp=Z,2µm,0.7s						
WRKA	**Warakurna**	**27.86**	**138**	P	**P**	**00 31 02.8**	**-0.7**
	baz=28,SNR=620						
WRKA	**Warakurna**	**27.86**	**138**	P	**P**	**00 31 02.8**	**-0.7**
	comp=Z,864nm,0.7s						
WRKA	**Warakurna**	**27.86**	**138**	⇑P	**P**	**00 31 02.8**	**-0.7**
MUN	**Mundaring**	**27.99**	**165**	P	**P**	**00 31 04.3**	**-0.1**
	baz=28,SNR=528						
MUN	**Mundaring**	**27.99**	**165**	P	**P**	**00 31 04.3**	**-0.1**
MUN	**Mundaring**	**27.99**	**165**	P	**P**	**00 31 04.4**	**-0.1**
	comp=Z,1µm,0.7s						
KLBR	**Kellerberrin**	**28.05**	**162**	P	**P**	**00 31 04.6**	**-0.4**
	baz=28,SNR=63						
KLBR	**Kellerberrin**	**28.05**	**162**	P	**P**	**00 31 04.6**	**-0.4**
	comp=Z,3µm,0.5s						
SRPI	**Serui, Papua**	**28.22**	**85**	P	**P**	**00 31 05.9**	**-0.8**
	comp=Z,13µmcomp=Z,15µmcomp=Z,2µm,0.8s						
AUHAR	**St Anne's Scho**	**28.97**	**166**	P	**P**	**00 31 13.4**	**+0.5**
	comp=Z,1µm,1.3s						
NWAO	**Narrogin (SRO)**	**29.16**	**164**	P	**P**	**00 31 14.0**	**-0.5**
NWAO				IAmb	IAmb	00 31 18.0	
	comp=Z,614nm,0.8s						
NWAO	**Narrogin (SRO)**	**29.16**	**164**	P	**P**	**00 31 14.0**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,614nm,0.8s						
NWAO	**Narrogin (SRO)**	**29.16**	**164**	P	**P**	**00 31 14.3**	**-0.2**
	comp=Z,974nm,1.1s						
WRA	**Warramunga Arr**	**29.57**	**123**	P	**P**	**00 31 17.3**	**-1.0**
	comp=Z,874nm,0.7s,baz=299,slow=9.2,SNR=1203						
WRA				PcP	**PcP**	**00 34 03.2**	**+0.5**
	comp=Z,133nm,0.6s,baz=299,slow=1.9,SNR=3.9						
WRA				S	**S**	**00 35 27.6**	**-4.1**
	comp=Z,205nm,0.8s,baz=294,slow=16,SNR=13						
WRA				ScP	**ScP**	**00 36 47.4**	**+0.4**
	comp=Z,403nm,1.0s,baz=301,slow=2.8,SNR=8.7						
WRA				ScS	**ScS**	**00 40 42.6**	**-1.0**
	comp=Z,96nm,1.2s,baz=303,slow=3.7,SNR=5.5						
WRA				PKiKP	**PKiKP**	**00 41 34.2**	**-0.3**
	comp=Z,8.2nm,0.8s,baz=291,slow=1.4,SNR=1.1						
WRA				P3KPbc		01 03 06.2	
	comp=Z,42nm,1.0s,baz=118,slow=4.4,SNR=36						
	comp=Z,874nm,0.7s						
WRA	**Warramunga Arr**	**29.57**	**123**	P	**P**	**00 31 17.3**	**-1.0**
WRA						00 34 03.3	
WRAB	**Tennant Creek**	**29.58**	**123**	P	**P**	**00 31 17.4**	**-1.0**
WRAB	**Tennant Creek**	**29.58**	**123**	*c iP*	**P**	**00 31 17.6**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,1µm,1.0s						
WRAB	**Tennant Creek**	**29.58**	**123**	P	**P**	**00 31 17.8**	**-0.5**
	comp=Z,2µm,1.3s						
WRAB	**Tennant Creek**	**29.58**	**123**	⇑P	**P**	**00 31 17.4**	**-1.0**
WB2	**Warramunga Arr**	**29.58**	**123**	P	**P**	**00 31 16.9**	**-1.5**
	baz=30						
PALK	**Pallekele**	**29.92**	**294**	P	**P**	**00 31 21.6**	**+0.3**
	comp=Z,618nm,1.0s,baz=211,slow=8.3,SNR=105						
PALK				S	**S**	**00 35 35.4**	**-1.8**
	comp=Z,27nm,1.0s,baz=232,slow=19,SNR=0.9						
PALK				ScP	**ScP**	**00 36 49.1**	**+0.9**
	comp=Z,134nm,0.8s,baz=220,slow=1.2,SNR=9.8						
PALK				ScS	**ScS**	**00 40 46.0**	**+0.5**
	comp=Z,9.0nm,0.8s,baz=336,slow=22,SNR=1.8						
PALK				PKiKP	**PKiKP**	**00 41 34.0**	**-0.9**
	comp=Z,9.6nm,0.6s,baz=355,slow=1.5,SNR=2.1						
	comp=Z,618nm,1.0s						
PALK	**Pallekele**	**29.92**	**294**	P	**P**	**00 31 21.4**	**+0.1**
PALK				IAmb	IAmb	00 31 29.2	
	comp=Z,670nm,0.9s						
PALK	**Pallekele**	**29.92**	**294**	*d iP*	**P**	**00 31 21.5**	**+0.1**
PALK				pmax	pmax		
	comp=Z,837nm,1.1s						
PALK	**Pallekele**	**29.92**	**294**	P	**P**	**00 31 22.4**	**+1.1**
PALK				P	**P**	**00 31 22.4**	**+1.1**
PALK	**Pallekele**	**29.92**	**294**	P	**P**	**00 31 21.7**	**+0.3**
	comp=Z,20µmcomp=Z,9µmcomp=Z,773nm,1.0s						
PALK	**Pallekele**	**29.92**	**294**	⇓P	**P**	**00 31 21.7**	**+0.3**
PALK				⇑S	**ScP**	**00 36 49.9**	**+1.7**
GULI	**GuiLin**	**30.09**	**4**	⇓P	**P**	**00 31 22.8**	**+0.3**
GULI				sP	**sP**	**00 34 11.8**	**-0.7**
GULI				S	**S**	**00 35 40.8**	**+1.5**
GULI				pmax	pmax		
	comp=Z,400nm,1.0s						
KMI	**Kunming**	**30.30**	**350**	⇓P	**P**	**00 31 27.3**	**+2.7**
KMI				sP	sP	00 34 16.8	+2.2
KMI				S	**S**	**00 35 48.3**	**+5.3**
KMI				ScP	**ScP**	**00 36 52.0**	**+2.6**
KMI				pmax	pmax		
	comp=Z,890nm,1.1s						
KMI				pmax	pmax		
	comp=Z,6µm,3.5s						
KMI	**Kunming**	**30.30**	**350**	P	**P**	**00 31 27.7**	**+3.0**
KMI				PP	**PP**	**00 33 07.7**	**+2.4**
KMI				ScP	**ScP**	**00 36 51.8**	**+2.4**
TPUB	**Ta-pu**	**30.57**	**23**	P	**P**	**00 31 28.2**	**+1.5**
	comp=Z,619nm,0.8s						
RKGY	**Rocky Gully**	**30.68**	**166**	P	**P**	**00 31 28.3**	**+0.8**
	baz=31,SNR=188						
RKGY	**Rocky Gully**	**30.68**	**166**	P	**P**	**00 31 28.2**	**+0.7**
	comp=Z,3µm,0.7s						
KNMB	**Chin-men Tao**	**30.85**	**18**	P	**P**	**00 31 29.6**	**+0.5**
YULB	**Yu-li**	**30.92**	**24**	IAmb	IAmb	00 31 43.5	
	comp=Z,360nm,0.7s						
AS31	**Alice Springs**	**31.07**	**129**	P	**P**	**00 31 30.4**	**-0.7**
AS31				IAmb	IAmb	00 31 34.7	
	comp=Z,622nm,0.6s						
ASAR	**Alice Springs**	**31.07**	**129**	P	**P**	**00 31 30.6**	**-0.5**
	comp=Z,1µm,0.6s,baz=302,slow=8.1,SNR=4208						
ASAR				PcP	**PcP**	**00 34 07.5**	**+0.7**
	comp=Z,141nm,0.7s,baz=332,slow=2.6,SNR=5.5						
ASAR				S	**S**	**00 35 51.2**	**-3.4**
	comp=Z,267nm,0.9s,baz=299,slow=15,SNR=10						
ASAR				ScP	**ScP**	**00 36 52.9**	**+1.0**
	comp=Z,613nm,1.0s,baz=314,slow=3.3,SNR=16						
ASAR				P3KPbc		01 02 58.6	
	comp=Z,7.6nm,0.7s,baz=118,slow=3.4,SNR=18						
ASAR				P3KP		01 04 04.8	
	comp=Z,11nm,1.0s,baz=57,slow=3.6,SNR=11						
	comp=Z,1µm,0.6s						
ASAR	**Alice Springs**	**31.07**	**129**	P	**P**	**00 31 30.6**	**-0.5**
ASAR						00 34 07.5	
SSLB	**Suanglung**	**31.13**	**23**	IAmb	IAmb	00 31 36.9	
	comp=Z,1µm,0.9s						
SSLB	**Suanglung**	**31.13**	**23**	P	**P**	**00 31 33.3**	**+1.7**
	comp=Z,987nm,0.9s						
GYA	**Guiyang**	**31.20**	**357**	⇑*iP*	**P**	**00 31 34.3**	**+2.1**
GYA				PcP	**PcP**	**00 34 10.3**	**+3.2**
GYA				sP	sP	00 34 26.3	+3.7
GYA				S	**S**	**00 35 58.6**	**+2.0**
GYA				ScP	**ScP**	**00 36 54.4**	**+2.1**
GYA				pmax	pmax		
	comp=Z,420nm,0.7s						
GYA				pmax	pmax		
	comp=Z,2µm,3.5s						
AUALB	**St Joseph's Co**	**31.29**	**164**	P	**P**	**00 31 33.6**	**+0.9**
	comp=Z,1µm,1.0s						
QZH	**Quanzhou**	**31.36**	**18**	P	**P**	**00 31 36.3**	**+2.9**
QZH				sP	**sP**	**00 34 27.0**	**+3.1**
QZH				S	**S**	**00 35 59.4**	**+0.7**
QZH				ScP	**ScP**	**00 36 53.3**	**+0.6**
QZH				pmax	pmax		
	comp=Z,220nm,0.9s						
QZH				pmax	pmax		
	comp=Z,2µm,3.3s						
NACB	**Ninganchiao**	**31.73**	**24**	IAmb	IAmb	00 31 44.7	
	comp=Z,504nm,0.7s						
BRDH	**Bariadhala**	**31.79**	**330**	P	**P**	**00 31 38.0**	**+0.9**
	comp=Z,1µm,0.6s,baz=82,slow=5.5,SNR=112						
BRDH				S	**S**	**00 36 05.2**	**-0.2**
	comp=Z,124nm,0.4s,baz=269,slow=21,SNR=2.1						
BRDH				ScP	**ScP**	**00 36 56.4**	**+2.2**
	comp=Z,454nm,0.7s,baz=141,slow=9.7,SNR=6.0						
	comp=Z,1µm,0.6s						
PZH	**PanZhiHua**	**31.82**	**349**	⇓P	**P**	**00 31 39.3**	**+1.9**
PZH				sP	**sP**	**00 34 30.3**	**+2.2**
PZH				S	**S**	**00 36 07.6**	**+1.6**
PZH				pmax	pmax		
	comp=Z,660nm,0.8s						
PZH				pmax	pmax		
	comp=Z,6µm,6.2s						
FORT	**Forrest**	**31.86**	**146**	P	**P**	**00 31 37.5**	**0.0**
	baz=32,SNR=274						
FORT	**Forrest**	**31.86**	**146**	P	**P**	**00 31 37.5**	**0.0**
FORT	**Forrest**	**31.86**	**146**	P	**P**	**00 31 38.0**	**+0.4**
	comp=Z,4µm,0.6s						
FORT	**Forrest**	**31.86**	**146**	⇑P	**P**	**00 31 37.6**	**0.0**
GENI	**Genyem**	**32.05**	**87**	P	**P**	**00 31 38.4**	**-1.1**
	comp=Z,24µmcomp=Z,34µmcomp=Z,3µm,1.1s						
GENI	**Genyem**	**32.05**	**87**	P	**P**	**00 31 39.3**	**-0.2**
	comp=Z,3µm,1.2s						
YHNB	**Yeheng**	**32.09**	**23**	IAmb	IAmb	00 31 47.7	
	comp=Z,699nm,0.7s						
YHNB	**Yeheng**	**32.09**	**23**	P	**P**	**00 31 40.8**	**+1.1**
	comp=Z,978nm,0.9s						
TATO	**Taipei**	**32.41**	**23**	P	**P**	**00 31 41.8**	**-0.5**
TATO				IAmb	IAmb	00 31 47.8	
	comp=Z,738nm,0.9s						
TATO	**Taipei**	**32.41**	**23**	P	**P**	**00 31 42.9**	**+0.6**
TATO	**Taipei**	**32.41**	**23**	P	**P**	**00 31 42.8**	**+0.5**
	comp=Z,930nm,0.9s						
TATO	**Taipei**	**32.41**	**23**	P	**P**	**00 31 42.4**	**+0.2**
TATO				PP	**PP**	**00 33 24.0**	**-0.5**
YOJ	**Yonaguni jima**	**32.58**	**26**	P	**P**	**00 31 43.5**	**-0.2**
YOJ	**Yonaguni jima**	**32.58**	**26**	P	**P**	**00 31 43.5**	**-0.2**
YOJ				pmax	pmax		
	comp=Z,1µm,0.7s						
YOJ	**Yonaguni jima**	**32.58**	**26**	P	**P**	**00 31 44.5**	**+0.8**
	comp=Z,2µm,0.7s						
YOJ	**Yonaguni jima**	**32.58**	**26**	⇑P	**P**	**00 31 44.8**	**+1.0**
IMP	**Imphal**	**32.61**	**336**	*eP*	**P**	**00 31 44.8**	**+0.8**
MDRS	**Chennai**	**32.95**	**303**	*eP*	**P**	**00 31 47.7**	**+0.7**
MDRS				IAmb	IAmb	00 31 51.8	
	comp=Z,1µm,0.9s						
AGT	**Agartala**	**33.00**	**331**	*eP*	**P**	**00 31 49.6**	**+2.4**
AGT				IAmb	IAmb	00 31 52.6	
	comp=Z,8µm,1.3s						
AGT				*i* x	x	00 33 29.6	
CNSH	**ChangSha**	**33.21**	**8**	⇓P	**P**	**00 31 50.5**	**+1.6**
CNSH				S	**S**	**00 36 29.8**	**+3.1**
CNSH				pmax	pmax		
	comp=Z,390nm,0.7s						
BWNR	**Bhubaneshwar**	**33.28**	**319**	*eP*	**P**	**00 31 50.4**	**+0.7**
KOHI	**KOHIMA**	**33.34**	**337**	*eP*	**P**	**00 31 51.0**	**+0.7**
KOHI				*i* x	x	00 33 33.5	
MOKO	**MOKOCHONG**	**33.72**	**338**	*eP*	**P**	**00 31 54.9**	**+1.4**
TRD	**Trivandrum**	**33.81**	**293**	*eP*	**P**	**00 31 54.8**	**+0.6**
JMJ	**Miyako jima 2**	**33.93**	**29**	P	**P**	**00 31 57.8**	**+2.8**
	comp=Z,13µm,0.9s						
SALM	**Salem**	**34.01**	**299**	*eP*	**P**	**00 31 56.8**	**+1.0**
KOD	**Kodaikanal**	**34.04**	**296**	*eP*	**P**	**00 31 56.7**	**+0.3**
RAGD	**RAYAGADA**	**34.14**	**315**	*eP*	**P**	**00 31 58.1**	**+1.2**
SHL	**Shillong**	**34.14**	**333**	⇓P	**P**	**00 31 57.6**	**+0.6**
SHL	**Shillong**	**34.14**	**333**	P	**P**	**00 31 57.8**	**+0.8**
	SNR=1159						
SHL	**Shillong**	**34.14**	**333**	*eP*	**P**	**00 31 57.9**	**+0.8**
SHL				*i* x	x	00 33 40.0	
SHL				*ex*	x	00 36 39.2	
LKP	**Lekhapani**	**34.17**	**340**	*eP*	**P**	**00 31 58.2**	**+1.3**
JORH	**JORHAT**	**34.20**	**338**	*eP*	**P**	**00 31 57.7**	**+0.5**
JORH				IAmb	IAmb	00 32 01.3	
	comp=Z,3µm,0.7s						
JORH				*i* x	x	00 33 24.5	
QIS	**Mount Isa**	**34.32**	**120**	P	**P**	**00 31 57.8**	**-0.6**
	baz=34,SNR=856						
QIS	**Mount Isa**	**34.32**	**120**	P	**P**	**00 31 58.0**	**-0.4**
	comp=Z,2µm,1.2s						
VJD	**Vijayawada**	**34.51**	**309**	*eP*	**P**	**00 32 01.4**	**+1.4**
TEZP	**TEZPUR**	**34.66**	**335**	*eP*	**P**	**00 32 01.6**	**+0.5**
TEZP				IAmb	IAmb	00 32 05.4	
	comp=Z,2µm,0.9s						
TEZP				*i* x	x	00 33 44.2	
OOD	**Oodnadatta**	**34.73**	**134**	P	**P**	**00 32 01.3**	**-0.3**
	comp=Z,6µm,0.7s						
ITAN	**ITANAGAR**	**34.76**	**337**	*eP*	**P**	**00 32 03.2**	**+1.3**
ENH	**Enshi**	**34.99**	**2**	IAmb	IAmb	00 32 08.8	
	comp=Z,1µm,0.8s						
ENH	**Enshi**	**34.99**	**2**	P	**P**	**00 32 04.5**	**+0.8**
ZIRO	**ZIRO**	**35.06**	**338**	*eP*	**P**	**00 32 05.5**	**+1.0**
ZIRO				IAmb	IAmb	00 32 08.8	
	comp=Z,2µm,0.9s						
MULG	**Mulgathing**	**35.15**	**139**	P	**P**	**00 32 04.9**	**-0.2**
	comp=Z,2µm,0.8s						
PCHI	**Peechi**	**35.16**	**296**	⇓*eP*	**P**	**00 32 05.6**	**+0.2**
PCHI				*e*S	**S**	**00 36 55.8**	**-0.7**
DHUB	**DHUBRI**	**35.41**	**331**	*e*P	**P**	**00 32 08.5**	**+1.2**
KAAM	**Kaadhehdhoo**	**35.50**	**278**	P	**P**	**00 32 08.4**	**+0.2**
KAAM				PcP	**PcP**	**00 34 19.7**	**0.0**
KAAM	**Kaadhehdhoo**	**35.50**	**278**	P	**P**	**00 32 09.3**	**+1.1**
	SNR=8.9						
KAAM	**Kaadhehdhoo**	**35.50**	**278**	P	**P**	**00 32 07.9**	**-0.3**
	comp=Z,18µmcomp=Z,21µmcomp=Z,3µm,0.9s						
DGAR	**Diego Garcia**	**35.55**	**264**	P	**P**	**00 32 08.7**	**+0.1**
DGAR				IAmb	IAmb	00 32 11.3	
	comp=Z,959nm,0.9s						
DGAR	**Diego Garcia**	**35.55**	**264**	P	**P**	**00 32 08.7**	**+0.1**
DGAR				pmax	pmax		
	comp=Z,959nm,0.9s						
DGAR	**Diego Garcia**	**35.55**	**264**	P	**P**	**00 32 09.4**	**+0.7**
DGAR	**Diego Garcia**	**35.55**	**264**	⇓P	**P**	**00 32 08.9**	**+0.2**
DGAR	**Diego Garcia**	**35.55**	**264**	P	**P**	**00 32 08.8**	**+0.1**
DGAR				ScP	**ScP**	**00 37 10.0**	**+2.1**
JHSG	**JHARSUGUGA**	**35.65**	**319**	*eP*	**P**	**00 32 10.9**	**+1.6**
COEN	**Coen**	**35.68**	**107**	P	**P**	**00 32 08.5**	**-1.3**
	baz=36,SNR=385						
COEN	**Coen**	**35.68**	**107**	P	**P**	**00 32 09.5**	**-0.2**
	comp=Z,1µm,0.9s						
COEN	**Coen**	**35.68**	**107**	⇑P	**P**	**00 32 08.4**	**-1.3**
COEN				⇓S	**S**	**00 37 06.0**	**+1.8**
WHN	**Wuhan**	**35.74**	**9**	⇓P	**P**	**00 32 11.6**	**+1.7**
WHN				sP	**sP**	**00 35 01.6**	**-0.9**
WHN				S	**S**	**00 37 04.8**	**+0.3**
WHN				SS	**SS**	**00 40 10.5**	**-12**
WHN				pmax	pmax		
	comp=Z,380nm,1.1s						
CD2	**Chengdu**	**35.85**	**354**	P	**P**	**00 32 11.6**	**+0.7**
CD2				sP	sP	00 35 03.8	+0.3
CD2				S	**S**	**00 37 06.8**	**+0.5**
CD2				SS	**SS**	**00 40 24.3**	**-0.2**
CD2				pmax	pmax		
	comp=Z,420nm,0.8s						
CD2				pmax	pmax		
	comp=Z,4µm,5.5s						
HYB	**Hyderabad**	**36.67**	**308**	*eP*	**P**	**00 32 18.0**	**+0.3**
HYB				*i* x	x	00 37 11.1	
HYBB	**Hyderabad (bro**	**36.67**	**308**	*eP*	**P**	**00 32 17.8**	**0.0**
HYBB				IVmB_BB		00 32 21.1	
	comp=Z,13µm,0.7s						
HYBB				*e*PP	**PP**	**00 34 03.7**	**-0.4**
HYBB				*e*sP	**sP**	**00 35 09.4**	**-1.4**
HYBB				*e*ScP	**ScP**	**00 37 12.2**	**+0.2**
HYBB				*e*S	**S**	**00 37 19.4**	**+0.6**
HYBB				IVMs_BB	IVMs_BB	00 37 21.1	
	comp=Z,4µm,9.0s						
HYBB				*e*ScS	**ScS**	**00 41 20.9**	**-0.6**
SLGI	**Shiliguri**	**36.75**	**330**	*eP*	**P**	**00 32 20.2**	**+2.0**
BLSP	**Bilaspur**	**37.00**	**318**	*eP*	**P**	**00 32 20.7**	**+0.3**
BLSP				*i* x	x	00 34 03.4	
BLSP				*ex*	x	00 35 11.9	
JOW	**Kunigami**	**37.08**	**31**	P	**P**	**00 32 22.2**	**+1.2**
	comp=Z,604nm,0.9s,baz=244,slow=5.5,SNR=31						
JOW				pP	**pP**	**00 34 01.8**	**-1.7**
	comp=Z,21nm,0.4s,baz=178,slow=18,SNR=1.2						
JOW				sP	**sP**	**00 35 13.1**	**-1.1**
	comp=Z,26nm,0.5s,baz=210,slow=14,SNR=1.3						
JOW				ScP	**ScP**	**00 37 14.3**	**+0.9**
	comp=Z,138nm,1.1s,baz=168,slow=2.4,SNR=4.0						
JOW				S	**S**	**00 37 25.9**	**+1.4**
	comp=Z,34nm,0.7s,baz=30,slow=24,SNR=11						
	comp=Z,604nm,0.9s						
JOW	**Kunigami**	**37.08**	**31**	IAmb	IAmb	00 32 26.4	
	comp=Z,658nm,1.0s						
JOW	**Kunigami**	**37.08**	**31**	P	**P**	**00 32 21.9**	**+0.9**
	comp=Z,682nm,1.0s						
JOW	**Kunigami**	**37.08**	**31**	⇑P	**P**	**00 32 21.9**	**+0.9**
GTK	**Tadong**	**37.17**	**331**	*eP*	**P**	**00 32 23.3**	**+1.5**
GTK				*i* x	x	00 34 09.4	
MNCI	**Minicoy**	**37.34**	**290**	P	**P**	**00 32 23.7**	**+0.4**
MNCI	**Minicoy**	**37.34**	**290**	⇓P	**P**	**00 32 24.4**	**+1.1**
ODAN	**Odare**	**37.41**	**329**	*eP*	**P**	**00 32 24.6**	**+0.7**
	comp=Z,807nm,0.6s						
MNGI	**Mangalore**	**37.53**	**299**	*eP*	**P**	**00 32 25.5**	**+0.7**
TAPN	**Taplejung**	**37.64**	**329**	*eP*	**P**	**00 32 26.9**	**+1.1**
	comp=Z,6µm,0.6s						
MTSU	**Mount Surprise**	**37.73**	**113**	P	**P**	**00 32 26.1**	**-0.3**
	baz=38,SNR=1000						
MTSU	**Mount Surprise**	**37.73**	**113**	P	**P**	**00 32 26.4**	**0.0**
	comp=Z,1µm,0.8s

comp=Z,5μm,0.6s
VLK Valmikinagar 39.69 325 *e*P P 00 32 43.4 +1.5
AKL Akola 39.75 311 *e*P P 00 32 42.8 +0.3
GKN Gorkha 39.79 327 *e*P P 00 32 43.3 +0.4
comp=Z,2μm,0.3s
CTA Charters Tower 40.03 116 P P **00 32 44.6 -0.2**
comp=Z,1μm,1.0s,baz=295,slow=9.3,SNR=338
CTA pP **pP 00 34 28.9 -0.7**
comp=Z,114nm,0.8s,baz=259,slow=5.3,SNR=2.2
CTA ScP **ScP 00 37 25.2 +0.2**
comp=Z,252nm,0.9s,baz=294,slow=6.5,SNR=7.1
CTA S **S 00 38 06.8 -1.2**
comp=Z,60nm,1.1s,baz=16,slow=20,SNR=1.1
comp=Z,1μm,1.0s
CTA Charters Tower 40.03 116 P P **00 32 44.7 -0.2**
CTA *PP **pP 00 34 28.9 -0.7**
CTA Charters Tower 40.03 116 P P **00 32 45.2 +0.3**
comp=Z,2μm,0.9s
CTAO Charters Tower 40.03 116 P P **00 32 44.5 -0.3**
CTAO Charters Tower 40.03 116 P P **00 32 44.5 -0.3**
CTAO pmax pmax
comp=Z,2μm,1.3s
CTAO Charters Tower 40.03 116 P P **00 32 45.1 +0.2**
comp=Z,1μm,0.9s
CTAO Charters Tower 40.03 116 ⇑P P **00 32 44.6 -0.2**
CTAO Charters Tower 40.03 116 P P **00 32 44.7 -0.2**
CTAO pP **pP 00 34 28.5 -1.1**
CTAO PP **PP 00 34 34.3 -0.4**
CTAO ScP **ScP 00 37 27.7 +2.6**
KAD Karad 40.13 304 *e*P P **00 32 45.9 +0.2**
TV1H Townsville Har 40.29 114 P P **00 32 46.9 0.0**
comp=Z,238nm,0.8s
HTT Hallett 40.34 139 P P **00 32 46.8 -0.4**
baz=40,SNR=944
HTT Hallett 40.34 139 P P **00 32 47.2 +0.1**
comp=Z,1μm,1.1s
HTT Hallett 40.34 139 ⇑P P **00 32 46.7 -0.4**
DANN Dangsing 40.54 326 *e*P P **00 32 49.4 +0.4**
comp=Z,9μm,0.6s
QLP Quilpie 40.66 126 P P **00 32 50.0 +0.3**
baz=41,SNR=353
QLP Quilpie 40.66 126 P P **00 32 50.1 +0.4**
comp=Z,3μm,1.2s
QLP Quilpie 40.66 126 ⇑P P **00 32 49.9 +0.3**
GUMO Guam 40.84 63 P P **00 32 49.4 -1.8**
comp=Z,498nm,0.4s,baz=187,slow=7.0,SNR=36
comp=Z,498nm,0.4s
GUMO Guam 40.84 63 P P **00 32 48.9 -2.3**
GUMO lAmb lAmb 00 32 53.6
comp=Z,651nm,0.8s
GUMO Guam 40.84 63 P P **00 32 49.4 -1.8**
GUMO Guam 40.84 63 P P **00 32 49.6 -1.6**
comp=Z,928nm,0.7s
GUMO Guam 40.84 63 ⇑P P **00 32 49.1 -2.1**
GUMO ⇑S **S 00 38 24.2 +4.6**
GUMO Guam 40.84 63 P P **00 32 48.1 -3.1**
GUMO sP **sP 00 35 41.5 -4.9**
AUAYR Ayr State High 40.94 114 P P **00 32 52.3 +0.4**
comp=Z,1μm,0.8s
LZH Lanzhou 40.96 355 ⇓P P **00 32 53.8 +1.7**
LZH pP pP 00 34 39.0 +1.5
LZH sP sP 00 35 48.0 +0.5
LZH ScP **ScP 00 37 32.8 +4.3**
LZH S **S 00 38 22.8 +1.7**
LZH SS **SS 00 41 48.3 +0.2**
LZH pmax pmax
comp=Z,2μm,1.4s
LZH pmax pmax
comp=Z,6μm,6.3s
BHPL Bhopal 40.99 314 *e*P P **00 32 51.2 -1.2**
BHPL lAmb lAmb 00 32 53.4
comp=Z,3μm,0.9s
BHPL *i* x x 00 34 36.5
BHPL *e*x x 00 35 44.3
POO Poona 41.03 306 ⇓*i*P P 00 32 47.0 -5.7
comp=Z,60nm,0.4s
POO *e*P P 00 32 53.0 +0.3
POO lAmb lAmb 00 32 56.1
comp=Z,3μm,0.7s
POO *i* S **S 00 38 19.0 -3.3**
POO *i* x x 00 38 21.1
GHSS Government Hou 41.06 141 P **P 00 32 53.8 +1.1**
comp=Z,711nm,1.0s
BRCI Bahraich 41.21 323 *e*P P **00 32 54.8 +0.9**
STKA Stephens Creek 41.26 135 P P **00 32 53.6 -0.7**
comp=Z,566nm,0.5s,baz=314,slow=7.6,SNR=890
STKA PcP **PcP 00 34 38.4 +0.6**
comp=Z,158nm,0.6s,baz=299,slow=2.1,SNR=3.7
STKA ScP **ScP 00 37 30.1 +0.4**
comp=Z,344nm,1.0s,baz=288,slow=5.9,SNR=6.7
STKA S **S 00 38 23.1 -2.2**
comp=Z,162nm,0.9s,baz=273,slow=14,SNR=5.1
STKA ScS **ScS 00 41 46.0 -2.4**
comp=Z,90nm,1.0s,baz=108,slow=22,SNR=7.2
comp=Z,566nm,0.5s
STKA Stephens Creek 41.26 135 P **P 00 32 54.0 -0.4**
baz=41,SNR=1000
STKA Stephens Creek 41.26 135 P **P 00 32 53.6 -0.7**
STKA Stephens Creek 41.26 135 *c i*P **P 00 32 53.7 -0.7**
STKA Stephens Creek 41.26 135 P **P 00 32 54.2 -0.2**
comp=Z,233nm,0.9s
JHNI Jhansi 41.67 318 *e*P P **00 32 56.9 -0.7**
TIA Tai'an 41.75 11 ⇓P P **00 32 57.9 -0.2**
TIA pmax pmax
comp=Z,410nm,0.8s
TIA pmax pmax
comp=Z,3μm,9.2s
JSU Suzuyama 42.00 29 P **P 00 33 00.9 +0.8**
comp=Z,539nm,0.9s
JSU Suzuyama 42.00 29 ⇑P P **00 32 59.7 -0.4**
BOM Bombay 42.06 305 *e*P P **00 33 01.9 +1.2**
HNS HongShan 42.52 8 ⇓P P **00 33 04.3 +0.3**
HNS PcP **PcP 00 34 42.9 +1.1**
HNS sP **sP 00 36 01.8 +1.6**
HNS ScP **ScP 00 37 37.6 +3.1**
HNS PcS **PcS 00 38 38.1 +3.1**
HNS S **S 00 38 44.8 +1.8**
HNS ScS **ScS 00 41 54.6 -1.3**
HNS pmax pmax
comp=Z,420nm,1.0s
HNS pmax pmax
comp=Z,3μm,7.8s
TIY Taiyuan 42.58 5 ⇓P P **00 33 05.8 +1.2**
TIY PcP **PcP 00 34 43.4 +1.3**
TIY sP **sP 00 36 02.4 +1.6**
TIY ScP **ScP 00 37 37.3 +2.4**
TIY S **S 00 38 45.3 +1.3**
TIY pmax pmax
comp=Z,250nm,0.7s
GOMU GeErMu 42.74 344 *e*P P **00 33 07.9 +1.7**
GOMU PcP **PcP 00 34 43.1 0.0**
GOMU S **S 00 38 45.3 -1.6**
GOMU pmax pmax
comp=Z,180nm,1.0s
AIS Amsterdam Isla 42.99 216 P P **00 33 08.5 +0.8**
AIS Amsterdam Isla 42.99 216 ⇓P P **00 33 10.8 +3.0**
AIS Amsterdam Isla 42.99 216 P P **00 33 10.7 +3.0**
AIS ScP **ScP 00 37 39.2 +2.7**
LGTI Lohaghat 43.39 324 *e*P P **00 33 11.0 +0.1**
PTH Pithoragarh 43.48 324 *e*P P **00 33 11.9 +0.1**
JNU Nakatsue 43.53 28 P P **00 33 11.9 -0.1**
RABL Rabaul 43.90 91 P P **00 33 14.2 -0.9**
RABL lAmb lAmb 00 33 34.0
comp=Z,779nm,0.9s
RABL Rabaul 43.90 91 P P **00 33 15.7 +0.5**
comp=Z,858nm,0.9s
RABL Rabaul 43.90 91 ⇑P P **00 33 13.5 -1.7**
JTU Tsushima 44.04 26 P P **00 33 17.1 +1.3**
comp=Z,241nm,1.5s
JTU Tsushima 44.04 26 ⇓P P **00 33 15.3 -0.5**
CMSA Cobar Meteorol 44.07 132 P P **00 33 16.0 -0.1**
baz=44,SNR=935
CMSA Cobar Meteorol 44.07 132 P P **00 33 16.5 +0.4**
comp=Z,1μm,0.9s
ARPS Mount Arapiles 44.27 140 P P **00 33 17.6 0.0**
baz=44,SNR=215
ARPS Mount Arapiles 44.27 140 P P **00 33 18.1 +0.5**
comp=Z,958nm,0.8s
RMQ Roma 44.33 123 P P **00 33 18.9 +0.7**
baz=44,SNR=144
RMQ Roma 44.33 123 P P **00 33 19.3 +1.0**
comp=Z,671nm,1.1s
SONA Sohna 44.50 320 *e*P P **00 33 19.0 -0.4**
AUMOU Moura State Hi 44.70 120 P P **00 33 22.1 +1.0**
comp=Z,945nm,1.3s

GTA Gaotai 44.75 351 ⇓P **P 00 33 22.9 +1.6**
GTA PcP **PcP 00 34 51.5 +1.8**
GTA PP **PP 00 35 15.1 -2.4**
GTA sP sP 00 36 18.4 -0.3
GTA ScP **ScP 00 37 46.0 +2.2**
GTA S **S 00 39 15.4 +0.7**
GTA ScS **ScS 00 42 08.8 -1.7**
GTA pmax pmax
comp=Z,1μm,1.0s
GTA pmax pmax
comp=Z,8μm,8.4s
RK1H Rockhampton Ha 44.77 118 P **P 00 33 20.9 -0.8**
comp=Z,696nm,0.7s
TJN Taejon 44.83 22 P **P 00 33 21.4 -0.4**
TJN PcP **PcP 00 34 49.8 0.0**
TJN Taejon 44.83 22 *de*P **P 00 33 21.9 +0.1**
TJN Taejon 44.83 22 P **P 00 33 22.9 +1.1**
comp=Z,2μm,1.1s
BHGR Bahadurgarh 44.89 320 *e*P **P 00 33 22.4 0.0**
AJM Ajmer 44.99 316 ⇓*i*P P 00 33 18.0 -5.3
AJM *e*P P 00 33 22.5 -0.8
KHET Khetri 45.22 318 *e*P **P 00 33 24.4 -0.6**
BJT Baijiatuau 45.30 9 lAmb lAmb 00 33 32.3
comp=Z,408nm,0.9s
BJT Baijiatuau 45.30 9 P **P 00 33 25.9 +0.5**
BJT ScP **ScP 00 37 46.5 +0.6**
BTO Baotou 45.31 2 *e*P **P 00 33 26.9 +1.3**
BTO S **S 00 39 27.0 +4.6**
BJI Beijing 45.32 9 P **P 00 33 25.8 +0.3**
BJI PcP **PcP 00 34 52.6 +1.1**
BJI pP **pP 00 35 13.8 -0.5**
BJI sP **sP 00 36 20.8 -2.4**
BJI ScP **ScP 00 37 47.9 +1.9**
BJI S **S 00 39 21.5 -0.8**
BJI ScS **ScS 00 42 15.8 +1.9**
BJI pmax pmax
comp=Z,150nm,1.1s
BJI pmax pmax
comp=Z,3μm,7.1s
DDI Dehra Dun 45.33 322 *e*P **P 00 33 25.6 -0.3**
DL2 Dalian 45.34 15 P **P 00 33 24.6 -1.0**
DL2 pP **pP 00 35 17.8 +3.3**
DL2 S **S 00 39 20.3 -2.3**
DL2 pmax pmax
comp=Z,44nm,0.8s
DL2 pmax pmax
comp=Z,2μm,10.8s
AUHPC Hawkesdale P12 45.39 141 P **P 00 33 27.4 +1.3**
comp=Z,1μm,1.1s
JMN Monobe 45.49 31 P **P 00 33 27.6 +0.7**
comp=Z,442nm,0.9s
JMN Monobe 45.49 31 P **P 00 33 26.7 -0.3**
JMN Monobe 45.49 31 ⇑P **P 00 33 26.6 -0.3**
GD1S Gladstone Soft 45.50 119 P **P 00 33 28.2 +1.0**
comp=Z,883nm,0.9s
INCN Inchon 45.55 21 P **P 00 33 27.6 +0.3**
INCN Inchon 45.55 21 P **P 00 33 27.6 +0.3**
INCN pmax pmax
comp=Z,149nm,0.7s
INCN Inchon 45.55 21 P **P 00 33 29.1 +1.8**
comp=Z,277nm,0.8s
HHC Hu-ho-hao-te 45.63 4 *e*P **P 00 33 29.3 +1.3**
HHC PP **PP 00 35 23.4 -2.0**
HHC sP sP 00 36 25.5 -0.3
HHC S **S 00 39 27.6 +0.7**
HHC pmax pmax
comp=Z,330nm,1.1s
HHC pmax pmax
comp=Z,6μm,7.8s
HJU Haeju 45.74 19 P **P 00 33 27.7 -1.0**
HJU pP **pP 00 35 21.6 +3.7**
HJU S **S 00 39 21.8 -6.5**
JCJ Chichijima 45.77 44 P **P 00 33 26.0 -3.2**
comp=Z,184nm,0.3s,baz=290,slow=22,SNR=19
JCJ Chichijima 45.77 44 P **P 00 33 26.8 -2.4**
JCJ lAmb lAmb 00 33 33.8
comp=Z,770nm,0.9s
JCJ Chichijima 45.77 44 P **P 00 33 27.1 -2.1**
comp=Z,882nm,0.8s
JCJ Chichijima 45.77 44 ⇑P **P 00 33 26.8 -2.4**
EIDS Eidsvold 45.90 121 P **P 00 33 30.1 -0.1**
baz=46,SNR=297
EIDS Eidsvold 45.90 121 lAmb lAmb 00 33 34.7
comp=Z,708nm,0.8s
EIDS Eidsvold 45.90 121 P **P 00 33 30.4 +0.2**
comp=Z,986nm,1.3s
EIDS Eidsvold 45.90 121 ⇑P **P 00 33 30.1 -0.1**
ROCAM Rodrigues Isla 45.98 247 P **P 00 33 31.4 +0.5**
ROCAM Rodrigues Isla 45.98 247 P **P 00 33 32.2 +1.4**
ROCAM ScP **ScP 00 37 49.8 +0.5**
KSRS Korea Array 45.99 22 P **P 00 33 30.6 +0.1**
comp=Z,86nm,0.9s,baz=201,slow=8.2,SNR=94
KSRS PcP **PcP 00 34 54.0 +0.1**
comp=Z,125nm,0.9s,baz=198,slow=3.3,SNR=5.1
KSRS pP **pP 00 35 18.9 -1.0**
comp=Z,23nm,0.8s,baz=203,slow=7.9,SNR=1.5
KSRS ScP **ScP 00 37 50.6 +1.7**
comp=Z,51nm,1.0s,baz=194,slow=4.9,SNR=5.3
KSRS S **S 00 39 29.1 -2.6**
comp=Z,14nm,1.2s,baz=156,slow=42,SNR=2.1
KSRS ScS **ScS 00 42 19.0 +0.6**
comp=Z,0.8nm,0.4s,baz=48,slow=38,SNR=1.0
KSRS Korea Array 45.99 22 P **P 00 33 30.7 +0.1**
KSRS 00 34 54.1
KSRS *PP **pP 00 35 18.9 -1.0**
BRAT Ballarat 46.07 140 P **P 00 33 32.0 +0.7**
comp=Z,289nm,0.8s
JHS Saijyo 46.13 29 P **P 00 33 31.6 -0.2**
JHS lAmb lAmb 00 33 37.8
comp=Z,595nm,0.8s
JHS Saijyo 46.13 29 P **P 00 33 32.7 +0.9**
comp=Z,794nm,0.9s
JHS Saijyo 46.13 29 ⇑P **P 00 33 31.5 -0.2**
SMLA Simla 46.44 322 *e*P **P 00 33 33.9 -0.2**
AUDCS Dubbo College 46.60 131 P **P 00 33 36.1 +0.8**
comp=Z,765nm,1.2s
GEXS Deakin Univers 46.69 140 P **P 00 33 37.4 +1.5**
comp=Z,836nm,1.1s
BHUJ Bhuj 46.83 308 *e*P **P 00 33 37.9 +0.7**
BHUJ *i* x x 00 36 35.2
MLBS Spotswood, Mel 46.86 139 P **P 00 33 40.0 +2.9**
comp=Z,558nm,0.8s
BHK Bhakra 47.10 322 *e*P **P 00 33 38.6 -0.5**
TOO Toolangi 47.10 139 P **P 00 33 39.9 +0.8**
baz=47,SNR=140
TOO Toolangi 47.10 139 P **P 00 33 39.1 +0.1**
TOO lAmb lAmb 00 33 44.4
comp=Z,390nm,0.7s
TOO PcP **PcP 00 34 58.7 +0.7**
TOO Toolangi 47.10 139 P **P 00 33 39.1 +0.1**
TOO 00 34 58.7
TOO pmax pmax
comp=Z,390nm,0.7s
TOO Toolangi 47.10 139 P **P 00 33 40.5 +1.5**
comp=Z,546nm,1.2s
TOO Toolangi 47.10 139 ⇑P **P 00 33 39.9 +0.8**
TOO ⇑S **ScP 00 37 55.7 +2.0**
TOO ⇑S **ScP 00 37 56.2 +2.5**
SUJ Sinuiju 47.24 17 P **P 00 33 39.2 -0.7**
SUJ pP **pP 00 35 32.5 +2.3**
SUJ S **S 00 39 41.6 -7.3**
JWT Wachi 47.48 31 P **P 00 33 41.1 -0.7**
AUPHS Peel High Scho 47.85 128 P **P 00 33 45.0 +0.3**
comp=Z,1μm,0.8s
JASL Jaisalmer 47.92 313 *e*P **P 00 33 44.6 -0.6**
HHU Hamhung 48.05 20 P **P 00 33 45.5 -0.4**
HHU pP **pP 00 35 40.5 +3.6**
HHU S S 00 39 50.6 -9.3
ARMA Armidale 48.16 127 P **P 00 33 48.2 +1.1**
baz=48,SNR=395
ARMA Armidale 48.16 127 lAmb lAmb 00 33 53.4
comp=Z,861nm,0.8s
ARMA Armidale 48.16 127 P **P 00 33 48.6 +1.4**
comp=Z,1μm,1.0s
ARMA Armidale 48.16 127 ⇑P **P 00 33 48.2 +1.1**
THN Thein Dam 48.23 323 *e*P **P 00 33 46.0 -1.4**
THN *e*P P 00 33 47.0 -0.4
THN *e*S **S 00 40 00.0 -2.7**
CAN Canberra 48.32 134 P **P 00 33 47.7 -0.5**
CAN lAmb lAmb 00 33 52.6
comp=Z,474nm,0.9s
CAN Canberra 48.32 134 P **P 00 33 47.7 -0.5**
CAN pmax pmax
comp=Z,474nm,0.9s

CAN Canberra 48.32 134 P **P 00 33 48.2 0.0**
comp=Z,1μm,1.3s
CAN Canberra 48.32 134 ⇑P **P 00 33 48.2 0.0**
CAN Canberra 48.32 134 P **P 00 33 48.2 0.0**
CAN ScP **ScP 00 37 59.6 +0.6**
INU Inuyama 48.37 32 P **P 00 33 48.4 0.0**
comp=Z,190nm,0.9s
INU Inuyama 48.37 32 ⇓P **P 00 33 47.8 -0.6**
AUSSC Sale College, 48.44 138 P **P 00 33 49.6 +0.7**
comp=Z,476nm,1.2s
CNB Canberra Magne 48.58 134 P **P 00 33 49.9 -0.1**
baz=49,SNR=35
CNB Canberra Magne 48.58 134 P **P 00 33 50.0 -0.1**
comp=Z,236nm,1.2s
SNY Shenyang 48.59 15 ⇑P **P 00 33 49.8 -0.1**
SNY pP **pP 00 35 43.3 +2.1**
SNY sP **sP 00 36 52.3 +3.0**
SNY S **S 00 40 10.3 +3.0**
SNY pmax pmax
comp=Z,120nm,1.0s
SNY pmax pmax
comp=Z,2μm,4.5s
JGF Kuroka 48.74 32 P **P 00 33 50.5 -0.7**
comp=Z,261nm,1.2s
JGF Kuroka 48.74 32 P **P 00 33 50.1 -1.1**
JGF Kuroka 48.74 32 ⇑P **P 00 33 50.1 -1.1**
SYDH Sydney Hard Ro 48.87 132 P **P 00 33 52.8 +0.6**
comp=Z,243nm,1.0s
GC1S Gold Coast 1 S 48.88 123 P **P 00 33 53.0 +0.7**
comp=Z,878nm,0.7s
MGCD Mangrove Creek 48.91 131 P **P 00 33 53.1 +0.7**
baz=49,SNR=63
MGCD Mangrove Creek 48.91 131 P **P 00 33 53.2 +0.8**
comp=Z,501nm,1.2s
JMU Jammu 48.93 322 *e*P **P 00 33 53.0 +0.5**
XLT XiLinHaoTe 49.10 8 ⇓*i*P **P 00 33 54.5 +0.8**
XLT PcP **PcP 00 35 06.3 +1.1**
XLT pP pP 00 35 48.9 +3.5
XLT sP sP 00 36 55.1 +1.8
XLT ScP **ScP 00 38 03.8 +1.7**
XLT S **S 00 40 14.3 0.0**
XLT ScS **ScS 00 42 36.0 -3.4**
XLT pmax pmax
comp=Z,450nm,1.5s
XLT pmax pmax
comp=Z,5μm,11.8s
JGN Niukaw 49.19 31 P **P 00 33 53.1 -1.4**
RIV Riverview 49.21 131 P **P 00 33 55.1 +0.5**
baz=49,SNR=18
RIV Riverview 49.21 131 ⇑P **P 00 33 55.1 +0.5**
RIV Riverview 49.21 131 P **P 00 33 55.5 +0.8**
comp=Z,644nm,1.1s
RIV Riverview 49.21 131 ⇑P **P 00 33 55.1 +0.5**
NTLH Newcastle Hard 49.22 130 P **P 00 33 55.1 +0.3**
comp=Z,492nm,0.8s
MILA Mila 49.29 136 P **P 00 33 54.0 -1.3**
baz=49,SNR=7.6
MILA Mila 49.29 136 P **P 00 33 55.3 0.0**
comp=Z,106nm,1.3s
AUUHS Ulladulla High 49.40 134 P **P 00 33 56.2 +0.2**
comp=Z,620nm,0.9s
JRY Ryogami san 49.88 33 P **P 00 33 57.9 -1.6**
MAJO Matsushiro 49.90 32 P **P 00 33 57.9 -1.8**
MAJO Matsushiro 49.90 32 *c i*P **P 00 33 58.3 -1.4**
MAJO pmax pmax
comp=Z,201nm,0.8s
MAJO Matsushiro 49.90 32 P **P 00 33 58.7 -1.0**
comp=Z,298nm,1.2s
MAJO Matsushiro 49.90 32 ⇑P **P 00 33 59.0 -0.6**
MAJO Matsushiro 49.90 32 P **P 00 33 59.1 -0.6**
MAJO ScP **ScP 00 38 09.0 +3.4**
MJAR Matsushiro Arr 49.90 32 P **P 00 33 58.6 -1.1**
comp=Z,85nm,0.6s,baz=208,slow=7.6,SNR=80
MJAR PcP **PcP 00 35 08.8 +0.5**
comp=Z,79nm,0.9s,baz=199,slow=4.8,SNR=2.4
MJAR pP **pP 00 35 50.9 -1.1**
comp=Z,19nm,0.8s,baz=91,slow=25,SNR=0.9
MJAR sP **sP 00 36 59.4 -0.4**
comp=Z,43nm,1.2s,baz=193,slow=3.6,SNR=0.9
MJAR S **S 00 40 24.3 -1.0**
comp=Z,1.6nm,0.4s,baz=76,slow=29,SNR=1.1
MJAR P4KPbc 01 11 21.7
comp=Z,0.5nm,0.3s,baz=208,slow=6.7,SNR=0.9
comp=Z,85nm,0.6s
MJAR Matsushiro Arr 49.90 32 P **P 00 33 58.6 -1.1**
MJAR 00 35 08.8
MJAR *PP **pP 00 35 50.9 -1.1**
MJAR *SP **sP 00 36 59.4 -0.4**
AULHS Lilydale High 50.30 142 P **P 00 34 03.0 +0.6**
comp=Z,294nm,1.1s
CORO Coronation Par 50.37 142 P **P 00 34 04.9 +2.0**
comp=Z,137nm,1.1s
NIL Nilore 50.57 322 P **P 00 34 03.2 -1.4**
NIL Nilore 50.57 322 P **P 00 34 03.2 -1.4**
NIL pmax pmax
comp=Z,3μm,0.8s
NIL Nilore 50.57 322 ⇓P **P 00 34 03.7 -0.9**
NIL ⇓P P 00 34 03.8 -0.8
NIL Nilore 50.57 322 P **P 00 34 03.9 -0.7**
JYT Yasato 50.74 34 P **P 00 34 04.0 -1.7**
comp=Z,391nm,1.0s
JYT Yasato 50.74 34 ⇑P **P 00 34 03.9 -1.7**
CN2 Changchun 50.93 16 *e*P **P 00 34 05.8 -1.1**
CN2 PcP **PcP 00 35 10.9 -1.1**
CN2 pP pP 00 36 03.3 +3.4
CN2 sP sP 00 37 03.5 -4.0
CN2 S **S 00 40 31.0 -7.8**
CN2 ScS **ScS 00 42 47.0 -4.9**
CN2 SS **SS 00 44 25.3 -0.6**
CN2 pmax pmax
comp=Z,700nm,2.0s
MOO Moorlands 50.97 143 P **P 00 34 08.0 +0.7**
baz=51,SNR=9.0
MOO Moorlands 50.97 143 P **P 00 34 08.0 +0.7**
comp=Z,191nm,1.2s
JSD Sado 51.07 31 P **P 00 34 07.2 -0.8**
comp=Z,684nm,0.8s
JSD Sado 51.07 31 ⇑P **P 00 34 06.8 -1.2**
TAU Tasmania Unive 51.33 144 P **P 00 34 09.0 -0.8**
TAU Tasmania Unive 51.33 144 P **P 00 34 09.0 -0.8**
TAU pmax pmax
comp=Z,170nm,0.8s
TAU Tasmania Unive 51.33 144 P **P 00 34 10.4 +0.6**
comp=Z,251nm,1.1s
TAU Tasmania Unive 51.33 144 ⇓P **P 00 34 10.3 +0.4**
TAU Tasmania Unive 51.33 144 P **P 00 34 09.8 -0.1**
TAU ScP **ScP 00 38 13.9 +2.2**
PATS Pohnpei 51.43 77 P **P 00 34 10.7 -0.3**
baz=51,SNR=5.6
PATS Pohnpei 51.43 77 P **P 00 34 10.6 -0.5**
PATS Pohnpei 51.43 77 P **P 00 34 11.1 0.0**
comp=Z,295nm,1.3s
HNR Honiara 51.58 98 P **P 00 34 10.8 -1.3**
HNR Honiara 51.58 98 P **P 00 34 10.8 -1.3**
HNR pmax pmax
comp=Z,2μm,0.8s
HNR Honiara 51.58 98 P **P 00 34 12.1 0.0**
comp=Z,2μm,0.8s
HNR Honiara 51.58 98 ⇑P **P 00 34 11.1 -1.0**
HNR Honiara 51.58 98 P **P 00 34 11.6 -0.5**
HNR pP **pP 00 36 02.9 -2.6**
MSHR Mys Shultsa 51.67 22 *ce*P **P 00 34 12.6 +0.3**
MSHR pmax pmax
comp=Z,111nm,0.9s
WMQ Urumqi 51.88 341 ⇑P **P 00 34 15.8 +2.0**
WMQ PcP **PcP 00 35 17.8 +2.1**
WMQ pP pP 00 36 10.8 +3.3
WMQ PP **PP 00 36 23.6 +2.3**
WMQ sP sP 00 37 11.6 -3.2
WMQ PcS **PcS 00 39 15.3 +0.4**
WMQ S **S 00 40 54.1 +2.5**
WMQ ScS **ScS 00 42 57.3 -1.5**
WMQ pmax pmax
comp=Z,2μm,1.1s
WMQ pmax pmax
comp=Z,8μm,5.3s
WMQ Urumqi 51.88 341 P **P 00 34 15.4 +1.6**
JMM Marumori 52.26 33 P **P 00 34 16.4 -0.2**
comp=Z,317nm,0.9s
JMM Marumori 52.26 33 ⇓P **P 00 34 16.0 -0.6**
VLA Vladivostok 52.41 22 *ce*P **P 00 34 18.1 +0.6**
VLA pmax pmax
comp=Z,195nm,1.0s
MSEY Mahe Island 52.45 268 P **P 00 34 18.3 -0.2**

MSEY	**Mahe Island**	**52.45 268**	P	**P**	**00 34 18.3 -0.2**
MSEY			pmax	pmax	
	comp=Z,168nm,0.6s				
MSEY	**Mahe Island**	**52.45 268**	P	**P**	**00 34 19.0 +0.5**
MSEY			P	**P**	**00 34 19.0 +0.5**
MSEY	**Mahe Island**	**52.45 268**	*i* P	**P**	**00 34 18.5 0.0**
	SNR=20				
MSEY	**Mahe Island**	**52.45 268**	⇓P	**P**	**00 34 18.5 0.0**
MSEY	**Mahe Island**	**52.45 268**	P	**P**	**00 34 18.6 +0.1**
MSEY			ScP	**ScP**	**00 38 16.2 -1.0**
SONM	**Songino Array**	**52.53 359**	P	**P**	**00 34 19.2 +0.8**
	comp=Z,574nm,0.5s,baz=175,slow=8.2,SNR=780				
SONM			PcP	**PcP**	**00 35 18.2 +0.1**
	comp=Z,301nm,0.8s,baz=186,slow=4.0,SNR=20				
SONM			ScP	**ScP**	**00 38 17.1 +0.2**
	comp=Z,54nm,0.7s,baz=176,slow=4.0,SNR=3.6				
SONM			S	**S**	**00 41 01.6 +1.5**
	comp=Z,8.1nm,0.9s,baz=254,slow=24,SNR=2.1				
SONM			PKPPKP		01 04 31.3
	comp=Z,7.3nm,1.0s,baz=290,slow=0.7,SNR=7.6				
SONM			P4KPbc		01 11 33.6
	comp=Z,3.0nm,0.7s,baz=184,slow=3.1,SNR=8.5				
	comp=Z,574nm,0.5s				
SONM	**Songino Array**	**52.53 359**	P	**P**	**00 34 19.2 +0.8**
SONM					00 35 18.2
ULN	**Ulaanbaatar**	**52.55 359**	P	**P**	**00 34 19.2 +0.6**
ULN			IAmb	IAmb	00 34 23.5
	comp=Z,682nm,0.8s				
ULN	**Ulaanbaatar**	**52.55 359***d*	*i* P	**P**	**00 34 19.0 +0.4**
ULN			pmax	pmax	
	comp=Z,330nm,0.8s				
ULN	**Ulaanbaatar**	**52.55 359**	⇓P	**P**	**00 34 19.3 +0.7**
ULN	**Ulaanbaatar**	**52.55 359**	P	**P**	**00 34 19.4 +0.7**
MDJ	**Mudanjiang**	**52.92 19**	P	**P**	**00 34 21.8 +0.7**
MDJ			pP	pP	00 36 15.8 +0.3
MDJ			PP	**PP**	**00 36 33.3 +2.9**
MDJ			S	**S**	**00 41 11.3 +6.1**
MDJ			ScS	**ScS**	**00 43 06.9 +0.9**
MDJ			SS	**SS**	**00 45 01.3 +4.1**
MDJ			pmax	pmax	
	comp=Z,200nm,1.0s				
MDJ			pmax	pmax	
	comp=Z,3μm,10.2s				
MDJ	**Mudanjiang**	**52.92 19**	P	**P**	**00 34 24.0 +2.9**
	comp=Z,257nm,1.0s				
MDJ	**Mudanjiang**	**52.92 19**	P	**P**	**00 34 21.4 +0.3**
MDJ			pP	**pP**	**00 36 15.2 -0.4**
KSH	**Kashi**	**53.22 329**	P	**P**	**00 34 22.4 -1.1**
KSH			PP	**PP**	**00 36 36.8 +3.5**
KSH			sP	sP	00 37 26.1 +1.0
KSH			S	**S**	**00 41 04.1 -5.4**
KSH			pmax	pmax	
	comp=Z,2μm,0.8s				
KSH			pmax	pmax	
	comp=Z,5μm,7.6s				
BNX	**BinXian**	**53.26 17**	⇓P	**P**	**00 34 23.3 -0.2**
BNX			S	**S**	**00 41 09.3 -0.3**
BNX			SS	**SS**	**00 45 05.8 +3.3**
BNX			pmax	pmax	
	comp=Z,220nm,0.8s				
BNX			pmax	pmax	
	comp=Z,4μm,9.2s				
RER	**Riviere de l'E**	**53.26 247**	P	**P**	**00 34 24.2 +0.1**
RER			IAmb	IAmb	00 34 29.9
	comp=Z,504nm,0.8s				
RER	**Riviere de l'E**	**53.26 247**	P	**P**	**00 34 25.7 +1.6**
	SNR=18				
RER	**Riviere de l'E**	**53.26 247**	⇑P	**P**	**00 34 25.3 +1.2**
RER	**Riviere de l'E**	**53.26 247**	P	**P**	**00 34 25.1 +1.0**
RER			ScP	**ScP**	**00 38 21.2 +0.5**
USA0B	**Ussuriysk Arra**	**53.38 21***d*	*i* P	**P**	**00 34 23.8 -0.6**
USRK	**Ussuriysk Ar.**	**53.38 21**	P	**P**	**00 34 23.9 -0.4**
	comp=Z,169nm,0.5s,baz=201,slow=6.6,SNR=91				
USRK			pP	**pP**	**00 36 18.6 -0.5**
	comp=Z,42nm,0.6s,baz=212,slow=2.8,SNR=1.4				
USRK			sP	**sP**	**00 37 25.9 -0.2**
	comp=Z,67nm,0.9s,baz=208,slow=4.9,SNR=2.3				
USRK			S	**S**	**00 41 13.0 +1.8**
	comp=Z,11nm,0.9s,baz=205,slow=17,SNR=4.7				
USRK			ScS	**ScS**	**00 43 08.7 -0.6**
	comp=Z,3.0nm,0.7s,baz=149,slow=37,SNR=1.7				
USRK			PKPPKP	P'P'df	01 04 25.0 -8.1
	comp=Z,4.7nm,0.9s,baz=316,slow=6.0,SNR=3.2				
	comp=Z,169nm,0.5s				
USRK	**Ussuriysk Ar.**	**53.38 21**	P	**P**	**00 34 24.0 -0.4**
USRK			*PP	**pP**	**00 36 18.6 -0.5**
USRK			*SP	**sP**	**00 37 25.9 -0.2**
SHLS	**Shalkode**	**54.41 334**	*e*P	**P**	**00 34 29.8 -1.9**
SHLS			*e*S	**S**	**00 41 22.5 -2.5**
SHLS	**Shalkode**	**54.41 334**	*e*P	**P**	**00 34 29.9 -1.9**
	baz=335				
SHLS			*e*S	**S**	**00 41 22.6 -2.5**
	baz=335				
LHI	**Lord Howe Isla**	**54.52 125**	P	**P**	**00 34 32.9 +0.2**
	baz=54,SNR=11				
LHI	**Lord Howe Isla**	**54.52 125**	P	**P**	**00 34 33.1 +0.4**
	comp=Z,352nm,1.2s				
LHI	**Lord Howe Isla**	**54.52 125**	⇓P	**P**	**00 34 32.0 -0.7**
JTM	**Tenmabayashi**	**54.56 30**	P	**P**	**00 34 33.5 +0.8**
	comp=Z,643nm,0.9s				
JTM	**Tenmabayashi**	**54.56 30**	⇑P	**P**	**00 34 32.0 -0.7**
UZB	**Uzynbulak**	**54.59 334**	*e*P	**P**	**00 34 33.3 +0.2**
UZB			*e*S	**S**	**00 41 27.7 +0.3**
UZB			pmax	pmax	
	comp=Z,243nm,0.7s				
UZB	**Uzynbulak**	**54.59 334**	*e*P	**P**	**00 34 33.3 +0.2**
	comp=Z,243nm,0.7s,baz=335				
UZB			*e*S	**S**	**00 41 27.8 +0.3**
	baz=335				
NGCH	**Negor - Chabah**	**54.63 306**	P	**P**	**00 34 34.6 +1.1**
	SNR=28				
PAF	**Port-aux-Franc**	**54.68 210**	P	**P**	**00 34 34.4 +1.1**
PAF			IAmb	IAmb	00 34 38.8
	comp=Z,857nm,0.8s				
PAF	**Port-aux-Franc**	**54.68 210**	P	**P**	**00 34 34.4 +1.1**
PAF			pmax	pmax	
	comp=Z,857nm,0.8s				
PAF	**Port-aux-Franc**	**54.68 210**	⇑P	**P**	**00 34 35.0 +1.7**
PAF	**Port-aux-Franc**	**54.68 210**	P	**P**	**00 34 34.4 +1.1**
PAF			ScP	**ScP**	**00 38 28.5 +2.4**
ZHN	**Zhinishke**	**54.87 334**	*e*P	**P**	**00 34 35.2 +0.3**
ZHN			*e*S	**S**	**00 41 31.9 +1.0**
ZHN	**Zhinishke**	**54.87 334**	*e*P	**P**	**00 34 35.2 +0.3**
	baz=334				
ZHN			*e*S	**S**	**00 41 32.0 +1.0**
	baz=334				
HIA	**Hailar**	**54.88 9***c*	*i* P	**P**	**00 34 34.8 0.0**
HIA			pmax	pmax	
	comp=Z,319nm,1.1s				
HIA	**Hailar**	**54.88 9**	P	**P**	**00 34 34.4 -0.4**
KPKS	**Kokpek**	**54.99 334***d*	*i* P	**P**	**00 34 35.8 0.0**
KPKS			*e*S	**S**	**00 41 33.2 +0.7**
KPKS			pmax	pmax	
	comp=Z,864nm,0.6s				
KPKS			smax	smax	
	comp=E,354nm,1.7s				
KPKS	**Kokpek**	**54.99 334**	⇓*i* P	**P**	**00 34 35.9 0.0**
	comp=E,864nm,0.6s,baz=334				
KPKS			*e*S	**S**	**00 41 33.2 +0.7**
	comp=E,354nm,1.7s,baz=334				
ULHL	**Ulahol**	**55.15 331**	P	**P**	**00 34 37.5 +0.5**
	SNR=47				
ZAK	**Zakamensk**	**55.22 356**	*e*P	**P**	**00 34 37.9 +0.7**
ZAK			*e*		00 35 30.7
ZAK			*e*		00 36 38.2
ZAK			pmax	pmax	
	comp=Z,555nm,1.4s				
WBK	**Wadi Bani Khal**	**55.27 302**	P	**P**	**00 34 38.0 0.0**
	SNR=71				
WBK			P	**P**	**00 34 38.0 0.0**
	SNR=71				
TNSS	**Tian-Shan**	**55.43 333**	*e*P	**P**	**00 34 39.4 +0.2**
TNSS	**Tian-Shan**	**55.43 333**	*e*P	**P**	**00 34 39.4 +0.2**
	baz=333				
BOOM	**Boomskoye usch**	**55.48 331**	IAmb	IAmb	00 34 45.4
	comp=Z,3μm,1.3s				
MDOK	**Medeo**	**55.48 333**	P	**P**	**00 34 40.9 +1.6**
MDOK	**Medeo**	**55.48 333**	*e*P	**P**	**00 34 39.4 +0.1**
	baz=333				
MDOK			*e*S	**S**	**00 41 39.1 +0.1**
	baz=333				
DQM	**DQM**	**55.50 298**	P	**P**	**00 34 40.0 +0.4**
	SNR=36				
DQM			P	**P**	**00 34 40.0 +0.4**
	SNR=36				
MHTO	**MHTO**	**55.51 299**	P	**P**	**00 34 39.0 -0.6**
	SNR=181				
MHTO			P	**P**	**00 34 39.0 -0.6**
	SNR=181				
AAA	**Alma-Ata**	**55.58 333**	*e*P	**P**	**00 34 39.9 +0.1**
AAA			*e*S	**S**	**00 41 42.2 +2.2**
AAA			pmax	pmax	
	comp=Z,695nm,0.6s				
AAA	**Alma-Ata**	**55.58 333**	*e*P	**P**	**00 34 39.9 +0.1**
	comp=Z,695nm,0.6s,baz=333				
AAA			*e*S	**S**	**00 41 42.2 +2.2**
	baz=333				
WSAR	**Wadi Sarin**	**55.80 302**	P	**P**	**00 34 41.7 0.0**
	comp=Z,872nm,0.8s,baz=143,slow=6.5,SNR=182				
WSAR			S	**S**	**00 41 42.4 -1.1**
	comp=Z,17nm,1.1s,baz=299,slow=15,SNR=6.2				
WSAR			PKPPKP	**P'P'df**	**01 04 36.1 +4.2**
	comp=Z,8.2nm,1.0s,baz=258,slow=6.8,SNR=3.9				
	comp=Z,872nm,0.8s				
TEY	**Ternei**	**55.86 24***ce*	P	**P**	**00 34 40.3 -1.3**
TEY			*e*		00 35 34.4
TEY			*e*		00 37 42.5
TEY			*e*		00 41 37.3
TEY			pmax	pmax	
	comp=N,100nm,3.4s				
TEY			pmax	pmax	
	comp=E,100nm,3.4s				
TEY			pmax	pmax	
	comp=Z,200nm,3.4s				
TEY			pmax	pmax	
	comp=E,500nm,9.6s				
TEY			pmax	pmax	
	comp=N,600nm,11.0s				
TEY			pmax	pmax	
	comp=Z,200nm,15.0s				
JMDO	**Jabal Madar**	**55.91 301**	P	**P**	**00 34 42.5 +0.1**
	SNR=312				
TKM2	**Tokmak 2**	**55.97 332**	P	**P**	**00 34 42.9 +0.2**
	SNR=173				
TKM2	**Tokmak 2**	**55.97 332**	P	**P**	**00 34 43.1 +0.4**
UCH	**Uchtor**	**55.98 330**	P	**P**	**00 34 43.3 +0.2**
	SNR=169				
ZSN	**Zaisan**	**56.01 341***d*	*i* P	**P**	**00 34 42.9 +0.3**
ZSN			*e*S	**S**	**00 41 45.4 +0.1**
ZSN			pmax	pmax	
	comp=Z,1μm,1.2s				
ZSN	**Zaisan**	**56.01 341**	⇓*i* P	**P**	**00 34 42.9 +0.3**
	comp=Z,1μm,1.2s,baz=342				
ZSN			*e*S	**S**	**00 41 45.4 +0.1**
	baz=342				
CHKK	**Chushkaly**	**56.05 333**	⇓*i* P	**P**	**00 34 42.3 -0.7**
CHKK	**Chushkaly**	**56.05 333**	⇓*i* P	**P**	**00 34 42.4 -0.7**
	baz=334				
KBK	**Karagaybulak**	**56.09 331**	P	**P**	**00 34 44.0 +0.6**
	SNR=72				
SMDO	**Samad**	**56.23 302**	P	**P**	**00 34 45.0 +0.3**
	SNR=70				
SMDO			P	**P**	**00 34 45.0 +0.3**
	SNR=70				
AAK	**Ala-Archa**	**56.29 331**	P	**P**	**00 34 44.6 -0.3**
	SNR=249				
AAK	**Ala-Archa**	**56.29 331**	P	**P**	**00 34 45.2 +0.3**
	comp=Z,7μm,1.4s,baz=154,slow=6.8,SNR=228				
AAK			pP	**pP**	**00 36 41.3 -0.2**
	comp=Z,67nm,0.7s,baz=328,slow=22,SNR=1.1				
AAK			sP	**sP**	**00 37 46.1 -1.8**
	comp=Z,174nm,1.1s,baz=270,slow=1.2,SNR=1.9				
AAK			S	**S**	**00 41 49.1 -0.3**
AAK			P4KPbc		01 11 51.2
	comp=Z,4.5nm,0.7s,baz=166,slow=4.2,SNR=8.6				
	comp=Z,7μm,1.4s				
AAK	**Ala-Archa**	**56.29 331**	P	**P**	**00 34 45.6 +0.8**
AAK			IAmb	IAmb	00 34 50.6
	comp=Z,3μm,1.4s				
AAK	**Ala-Archa**	**56.29 331**	P	**P**	**00 34 45.6 +0.8**
AAK			pmax	pmax	
	comp=Z,3μm,1.4s				
AAK	**Ala-Archa**	**56.29 331**	*i* P	**P**	**00 34 45.1 +0.3**
	SNR=653				
AAK	**Ala-Archa**	**56.29 331**	⇓P	**P**	**00 34 45.1 +0.3**
AAK	**Ala-Archa**	**56.29 331**	P	**P**	**00 34 45.1 +0.3**
JEW	**Eniwo**	**56.29 29**	P	**P**	**00 34 46.6 +2.0**
	comp=Z,906nm,1.1s				
JEW	**Eniwo**	**56.29 29**	⇓P	**P**	**00 34 45.9 +1.3**
AML	**Almayashu**	**56.31 330**	P	**P**	**00 34 45.5 +0.2**
	SNR=446				
MK31	**Makanchi Array**	**56.32 339***d*	*i* P	**P**	**00 34 44.8 0.0**
MKAR	**Makanchi Array**	**56.32 339**	P	**P**	**00 34 45.1 +0.3**
	comp=Z,2μm,0.5s,baz=153,slow=7.0,SNR=2325				
MKAR			PP	**PP**	**00 37 00.8 +0.4**
	comp=Z,212nm,1.0s,baz=158,slow=12,SNR=3.0				
MKAR			sP	**sP**	**00 37 47.9 +0.1**
	comp=Z,20nm,0.5s,baz=150,slow=9.8,SNR=0.8				
MKAR			S	**S**	**00 41 50.3 +1.0**
	comp=Z,33nm,0.7s,baz=156,slow=13,SNR=8.2				
MKAR			P4KPbc		01 11 50.5
	comp=Z,4.6nm,0.6s,baz=144,slow=6.5,SNR=16				
	comp=Z,2μm,0.5s				
MKAR	**Makanchi Array**	**56.32 339**	P	**P**	**00 34 45.1 +0.3**
MKAR			*SP	**sP**	**00 37 47.9 +0.1**
BIDO	**Bidbid**	**56.34 302**	P	**P**	**00 34 46.0 +0.6**
	SNR=435				
TDK	**Taldyqorghan**	**56.35 335***d*	*i* P	**P**	**00 34 45.1 +0.1**
TDK			*i* S	**S**	**00 41 49.5 -0.2**
TDK			pmax	pmax	
	comp=Z,1μm,0.7s				
TDK	**Taldyqorghan**	**56.35 335**	⇓*i* P	**P**	**00 34 45.1 +0.1**
	comp=Z,1μm,0.7s,baz=335				
TDK			*i* S	**S**	**00 41 49.5 -0.2**
	baz=335				
KUU	**Kurty**	**56.38 333***d*	*i* P	**P**	**00 34 44.9 -0.3**
KUU			*e*S	**S**	**00 41 49.6 -0.6**
KUU			pmax	pmax	
	comp=Z,776nm,0.5s				
KUU	**Kurty**	**56.38 333**	⇓*i* P	**P**	**00 34 45.0 -0.3**
	comp=Z,776nm,0.5s,baz=333				
KUU			*e*S	**S**	**00 41 49.7 -0.5**
	baz=333				
CHMS	**Chumysh**	**56.44 331**	P	**P**	**00 34 45.5 -0.2**
	SNR=227				
MAKZ	**Makanchi**	**56.44 339**	P	**P**	**00 34 45.5 -0.1**
MAKZ			IAmb	IAmb	00 34 51.7
	comp=Z,1μm,0.9s				
MAKZ	**Makanchi**	**56.44 339**	⇑P	**P**	**00 34 46.2 +0.6**
MAKZ	**Makanchi**	**56.44 339**	⇓P	**P**	**00 34 45.5 -0.1**
MAKZ	**Makanchi**	**56.44 339**	P	**P**	**00 34 45.6 -0.1**
SIMJ	**Simiganj**	**56.46 324**	P	**P**	**00 34 44.2 -1.9**
SIMJ			pP	**pP**	**00 36 42.2 -0.6**
SIMJ			sP	**sP**	**00 37 48.6 -0.5**
ERM	**Erimo**	**56.53 31**	P	**P**	**00 34 46.5 +0.3**
ERM	**Erimo**	**56.53 31***d*	*i* P	**P**	**00 34 47.2 +0.9**
ERM			pmax	pmax	
	comp=Z,291nm,1.0s				
ERM	**Erimo**	**56.53 31**	P	**P**	**00 34 48.0 +1.7**
	comp=Z,351nm,1.3s				
ERM	**Erimo**	**56.53 31**	⇑P	**P**	**00 34 46.5 +0.3**
ERM	**Erimo**	**56.53 31**	P	**P**	**00 34 47.4 +1.2**
ERM			pP	**pP**	**00 36 44.0 +0.9**
ERM			sP	**sP**	**00 37 52.1 +2.6**
JEM	**Erimo**	**56.53 31**	P	**P**	**00 34 48.1 +1.8**
	comp=Z,148nm,1.1s				
JEM	**Erimo**	**56.53 31**	P	**P**	**00 34 47.5 +1.2**
KOUNC	**Koumac, New Ca**	**56.66 111**	P	**P**	**00 34 48.2 +0.6**
	comp=Z,759nm,1.3s				
KOUNC	**Koumac, New Ca**	**56.66 111**	⇑P	**P**	**00 34 47.7 +0.1**
EKS2	**Erkin-Say**	**56.66 330**	P	**P**	**00 34 47.5 +0.2**
	SNR=453				
MOY	**Mondy**	**56.67 355**	*e*P	**P**	**00 34 48.2 +1.0**
MOY			pmax	pmax	
	comp=Z,1μm,1.5s				
USP	**Ospenovka**	**56.76 331**	P	**P**	**00 34 47.8 -0.1**
	SNR=84				
BSY	**Bisya**	**56.83 301**	P	**P**	**00 34 49.0 +0.3**
	SNR=251				
SGDS	**Sogindy**	**56.84 331**	*e*P	**P**	**00 34 48.0 -0.4**
SGDS			*i* S	**S**	**00 41 55.2 -1.0**
SGDS			pmax	pmax	
	comp=Z,1μm,1.3s				
SGDS	**Sogindy**	**56.84 331**	*e*P	**P**	**00 34 48.1 -0.4**
	comp=Z,1μm,1.3s,baz=332				
SGDS			*i* S	**S**	**00 41 55.2 -1.0**
	baz=332				
CIT	**Chita**	**56.89 4**	*e*P	**P**	**00 34 50.3 +1.7**
CIT			*e*		00 35 39.2
CIT			pmax	pmax	
	comp=Z,2μm,1.5s				
IRK	**Irkutsk**	**57.01 357**	*e*P	**P**	**00 34 50.2 +0.8**
IRK			*e*S	**S**	**00 42 02.9 +5.0**
IRK			pmax	pmax	
	comp=Z,1μm,1.4s				
HOQ	**Hoqain**	**57.05 302**	P	**P**	**00 34 51.0 +0.8**
	SNR=306				
HOQ			P	**P**	**00 34 51.0 +0.8**
	SNR=306				
DMTO	**DMTO**	**57.08 295**	P	**P**	**00 34 50.0 -0.4**
	SNR=225				
DMTO			P	**P**	**00 34 50.0 -0.4**
	SNR=225				
DGZ	**Jazzator, Alta**	**57.27 344***d*	*i* P	**P**	**00 34 52.0 +0.7**
DGZ			pmax	pmax	
	comp=Z,2μm,0.8s				
ARQ	**Araqi**	**57.63 301**	P	**P**	**00 34 53.8 -0.4**
	SNR=176				
RBK	**Rabkut**	**57.69 294**	P	**P**	**00 34 54.4 -0.2**
	SNR=671				
RBK			P	**P**	**00 34 54.4 -0.2**
	SNR=671				
KLR	**Kul'dur**	**57.70 18***d*	*i* P	**P**	**00 34 53.3 -0.7**
KLR			pmax	pmax	
	comp=Z,379nm,0.8s				
SBV	**Sambava**	**57.97 257**	⇓*i* P	**P**	**00 34 56.8 +0.3**
SBV	**Sambava**	**57.97 257**	P	**P**	**00 34 56.8 +0.3**
	SNR=18				
DZA	**Taraz**	**58.07 329***d*	*i* P	**P**	**00 34 55.9 -0.8**
DZA			pmax	pmax	
	comp=Z,246nm,0.6s				
DZA	**Taraz**	**58.07 329**	⇓*i* P	**P**	**00 34 56.0 -0.8**
	comp=Z,246nm,0.6s,baz=329				
JMP	**Maruseppu**	**58.09 29**	P	**P**	**00 34 56.9 0.0**
DOK	**Doka**	**58.09 295**	P	**P**	**00 34 57.0 -0.3**
	SNR=925				
DOK			P	**P**	**00 34 57.0 -0.3**
	SNR=925				
WHFO	**Wadi Hawf**	**58.20 294**	P	**P**	**00 34 57.4 -0.7**
	SNR=464				
WHFO			P	**P**	**00 34 57.4 -0.7**
	SNR=464				
IUG	**Iuzhnay**	**58.23 327***d*	*i* P	**P**	**00 34 57.6 -0.4**
IUG			*e*S	**S**	**00 42 12.0 -2.0**
IUG	**Iuzhnay**	**58.23 327**	⇓*i* P	**P**	**00 34 57.7 -0.3**
	baz=328				
IUG			*e*S	**S**	**00 42 12.0 -2.0**
	baz=328				
HRA	**Herat**	**58.27 316**	P	**P**	**00 34 56.7 -1.8**
BTLS	**Baital**	**58.31 332***d*	*i* P	**P**	**00 34 57.6 -0.7**
BTLS			*i* S	**S**	**00 42 13.7 -0.9**
BTLS			pmax	pmax	
	comp=Z,629nm,1.3s				
BTLS			smax	smax	
	comp=N,57nm,1.7s				
BTLS	**Baital**	**58.31 332**	⇓*i* P	**P**	**00 34 57.6 -0.7**
	comp=N,629nm,1.3s,baz=333				
BTLS			*i* S	**S**	**00 42 13.8 -0.9**
	comp=N,57nm,1.7s,baz=333				
ABTO	**Aybut**	**58.47 294**	P	**P**	**00 34 59.4 -0.5**
	SNR=790				
ABTO			P	**P**	**00 34 59.4 -0.5**
	SNR=790				
UOSS	**Minazif**	**58.52 303**	P	**P**	**00 34 58.8 -1.2**
UOSS			IAmb	IAmb	00 35 04.5
	comp=Z,2μm,1.2s				
UOSS	**Minazif**	**58.52 303**	P	**P**	**00 34 59.6 -0.5**
UOSS	**Minazif**	**58.52 303**	*i* P	**P**	**00 34 59.2 -0.8**
	SNR=180				
UOSS	**Minazif**	**58.52 303**	⇓P	**P**	**00 34 58.8 -1.2**
UOSS	**Minazif**	**58.52 303**	P	**P**	**00 34 58.8 -1.2**
HATD	**Hatta, Dubai**	**58.53 303**	P	**P**	**00 34 60.0 -0.2**
	SNR=441				
HATD			P	**P**	**00 34 60.0 -0.2**
	SNR=441				
HATD	**Hatta, Dubai**	**58.53 303**	*i* P	**P**	**00 34 59.7 -0.5**
	SNR=800				
ASHO	**Ashiyiah**	**58.53 303**	P	**P**	**00 35 00.2 -0.1**
	SNR=404				
ASHO			P	**P**	**00 35 00.2 -0.1**
	SNR=404				
ASHO	**Ashiyiah**	**58.53 303**	*i* P	**P**	**00 34 59.8 -0.4**
	SNR=596				
ALNE	**Al Ain**	**58.55 302**	P	**P**	**00 35 00.4 +0.1**
	SNR=354				
ALNE			P	**P**	**00 35 00.4 +0.1**
	SNR=354				
ALNE	**Al Ain**	**58.55 302**	*i* P	**P**	**00 34 59.9 -0.4**
	SNR=179				
UMZA	**Um Al Zommool**	**58.56 300**	P	**P**	**00 34 60.0 -0.4**
UMZA			P	**P**	**00 34 60.0 -0.4**
CHM	**Chimkent**	**58.58 327**	*e*P	**P**	**00 34 59.8 -0.4**
CHM			*e*S	**S**	**00 42 17.2 -1.0**
CHM	**Chimkent**	**58.58 327**	*e*P	**P**	**00 34 59.8 -0.4**
	baz=328				
CHM			*e*S	**S**	**00 42 17.2 -1.0**
	baz=328				
KKAR	**Karatay Array**	**58.64 328**	P	**P**	**00 34 59.6 -0.9**
KKAR	**Karatay Array**	**58.64 328**	P	**P**	**00 34 59.7 -0.9**
KKAR			pmax	pmax	
	comp=Z,1μm,1.4s				
KKAR	**Karatay Array**	**58.64 328**	⇓P	**P**	**00 34 59.7 -0.9**
MSFE	**Esma-Masafi**	**58.71 304**	*i* P	**P**	**00 35 01.0 -0.4**
	SNR=338				
MASF	**Masafi**	**58.72 304**	P	**P**	**00 35 01.5 +0.1**
	SNR=306				
MASF			P	**P**	**00 35 01.5 +0.1**
	SNR=306				
NOUC	**Port Laguerre**	**58.74 113**	P	**P**	**00 35 01.5 -0.1**
	comp=Z,409nm,0.9s				
NOUC	**Port Laguerre**	**58.74 113**	P	**P**	**00 35 01.4 -0.1**
NOUC			pP	**pP**	**00 36 59.6 -0.1**
BANOM	**Banah**	**58.82 304**	P	**P**	**00 35 01.9 -0.2**
	SNR=77				
BANOM			P	**P**	**00 35 01.9 -0.2**
	SNR=77				
BANOM	**Banah**	**58.82 304**	*i* P	**P**	**00 35 01.5 -0.6**
	SNR=174				
DZM	**Mont Dzumac**	**58.86 113**	*e*P	**P**	**00 35 01.5 -1.0**
	comp=Z,804nm,1.2s				
DZM			*e*pP	**pP**	**00 36 57.8 -3.0**
	comp=Z,257nm,1.4s				
DZM			*e*S	**S**	**00 42 25.6 +3.0**
	comp=Z,141nm,1.3s				
DZM			*e*SS	**SS**	**00 46 30.8 -0.3**
	comp=Z,12μm,30.4s				
DZM	**Mont Dzumac**	**58.86 113**	P	**P**	**00 35 02.9 +0.4**
	comp=Z,322nm,1.2s				
DZM	**Mont Dzumac**	**58.86 113**	⇑P	**P**	**00 35 02.5 -0.1**
DZM	**Mont Dzumac**	**58.86 113**	P	**P**	**00 35 02.6 0.0**
DZM			pP	**pP**	**00 37 00.5 -0.3**
ONTNC	**Ouen Toro**	**58.90 113**	P	**P**	**00 35 03.2 +0.5**
	comp=Z,404nm,0.9s				
ONTNC	**Ouen Toro**	**58.90 113**	⇑P	**P**	**00 35 02.7 0.0**
NAZ	**Nazwa, Dubai**	**58.98 303**	P	**P**	**00 35 03.2 0.0**
	SNR=309				
NAZ			P	**P**	**00 35 03.2 0.0**
	SNR=309				
NAZ	**Nazwa, Dubai**	**58.98 303**	*i* P	**P**	**00 35 02.7 -0.5**
	SNR=365				
SHME	**Shamm**	**59.00 304**	P	**P**	**00 35 03.1 -0.2**
	SNR=84				
SHME			P	**P**	**00 35 03.1 -0.2**
	SNR=84				
SHME	**Shamm**	**59.00 304**	*i* P	**P**	**00 35 02.8 -0.5**
	SNR=151				
ASUD	**Al Ashush, Dub**	**59.12 302**	P	**P**	**00 35 04.3 +0.2**
	SNR=155				
ASUD			P	**P**	**00 35 04.3 +0.2**
	SNR=155				
ASUD	**Al Ashush, Dub**	**59.12 302**	*i* P	**P**	**00 35 04.0 -0.1**
	SNR=175				
UMQ	**Umm Al-Quwin**	**59.19 303**	P	**P**	**00 35 04.9 +0.4**
	SNR=51				
UMQ			P	**P**	**00 35 04.9 +0.4**
	SNR=51				
UMQ	**Umm Al-Quwin**	**59.19 303**	*i* P	**P**	**00 35 05.1 +0.6**
	SNR=46				
YATNC	**Mamie plateau,**	**59.27 113**	P	**P**	**00 35 06.1 +0.9**
	comp=Z,569nm,1.3s				
OUENC	**Ouen Island, N**	**59.27 113**	P	**P**	**00 35 05.1 -0.1**
OUENC	**Ouen Island, N**	**59.27 113**	P	**P**	**00 35 05.9 +0.7**
	comp=Z,436nm,1.1s				
YUK	**Yuzh-Kuril'sk**	**59.36 31***c*	*i* P	**P**	**00 35 05.9 +0.7**
YU

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YUK                                  pmax    pmax
     comp=N,592nm,1.1s
YUK                                  pmax    pmax
     comp=Z,995nm,1.1s
YUK                                  pmax    pmax
     comp=E,472nm,0.9s
YUK                                  pmax    pmax
     comp=Z,902nm,2.6s
AJN  Ajban          59.39 302        P       P       00 35 05.6  -0.2
     SNR=83
AJN                                  P       P       00 35 05.6  -0.2
     SNR=83
AJN  Ajban          59.39 302  i P  P       P       00 35 05.2  -0.6
     SNR=35
LIFNC LIFOU         59.43 111        IAmb    IAmb    00 35 11.0
     comp=Z,776nm,0.8s
LIFNC LIFOU         59.43 111        P       P       00 35 07.3 +1.1
     comp=Z,1µm,0.8s
YSS  Yuzh-Sakhalins 60.01  27        P       P       00 35 08.9  -0.5
YSS                                  IAmb    IAmb    00 35 15.7
     comp=Z,1µm,0.8s
YSS  Yuzh-Sakhalins 60.01  27        eP      P       00 35 09.4  0.0
YSS                                  e*PP    pP      00 37 12.5 +4.0
YSS                                  e       00 37 33.7
YSS                                  e*SP    sP      00 38 14.7 +0.5
YSS                                  eS      S       00 42 34.6  -1.1
YSS                                  eSS     SS      00 46 46.2  -1.7
YSS                                  pmax    pmax
     comp=Z,4µm,6.1s
YSS                                  pmax    pmax
     comp=N,1µm,5.9s
YSS                                  pmax    pmax
     comp=Z,1µm,0.8s
YSS                                  smax    smax
     comp=N,12µm,8.6s
YSS  Yuzh-Sakhalins 60.01  27        P       P       00 35 09.9 +0.4
     comp=N,2µm,1.1s
YSS  Yuzh-Sakhalins 60.01  27        ⇑P      P       00 35 09.6 +0.1
YSS                                  ⇑sP     sP      00 38 16.9 +2.7
YSS  Yuzh-Sakhalins 60.01  27        P       P       00 35 09.5  0.0
YSS                                  pP      pP      00 37 09.3 +0.8
YSS                                  sP      sP      00 38 14.4 +0.2
DVP  Devils Point   60.02 108        P       P       00 35 11.2 +1.0
     comp=N,4µm,0.8s
MZWR Madinat Zayed  60.04 301        P       P       00 35 10.0  -0.1
MZWR                                 P       P       00 35 10.0  -0.1
MZR  Muzera         60.11 300        P       P       00 35 10.7  0.0
     SNR=168
MZR                                  P       P       00 35 10.7  0.0
     SNR=168
MZR  Muzera         60.11 300  i P  P       P       00 35 10.2  -0.5
     SNR=382
MARNC Mare, Loyalty 60.25 112        P       P       00 35 11.1  -0.5
MARNC Mare, Loyalty 60.25 112        P       P       00 35 12.7 +1.1
     comp=N,6.8nm,1.1s
MARNC Mare, Loyalty 60.25 112        ⇑P      P       00 35 12.1 +0.5
RTV  Rentapao       60.26 108        P       P       00 35 13.0 +1.3
     comp=N,410nm,0.9s
GRNR Gornyy         60.55  20  i P   P       P       00 35 13.5 +0.5
GRNR                                 eS      S       00 42 43.7 +1.3
GRNR                                 pmax    pmax
     comp=N,30nm,0.8s
GRNR                                 pmax    pmax
     comp=Z,50nm,1.3s
GRNR                                 smax    smax
     comp=N,20nm,1.2s
GRNR                                 MLR     MLR
     comp=N,1µm,16.0s
GRNR                                 MLR     MLR
     comp=Z,2µm,14.0s
ZEA  Zeya           60.59  13        eP      P       00 35 13.6 +0.4
ZEA                                  e*PP    pP      00 37 15.7 +3.2
ZEA                                  e       00 37 34.5
ZEA                                  eS      S       00 42 45.5 +2.8
ZEA                                  e       00 44 00.4
ZEA                                  eSS     SS      00 46 56.1  -0.6
ZEA                                  pmax    pmax
     comp=E,700nm,5.5s
ZEA                                  pmax    pmax
     comp=N,2µm,6.0s
ZEA                                  pmax    pmax
     comp=Z,3µm,6.6s
ZEA                                  pmax    pmax
     comp=N,240nm,0.9s
ZEA                                  pmax    pmax
     comp=E,180nm,0.9s
ZEA                                  pmax    pmax
     comp=Z,620nm,0.8s
ZEA                                  pmax    pmax
     comp=Z,1µm,14.6s
ZEA                                  smax    smax
     comp=E,4µm,8.8s
ZEA                                  smax    smax
     comp=N,10µm,8.9s
ZEA                                  MLR     MLR
     comp=E,2µm,14.0s
KWAJ Kwajalein Atol 60.85  77        P       P       00 35 15.3  -0.3
KWAJ Kwajalein Atol 60.85  77        P       P       00 35 15.3  -0.3
KWAJ                                 pmax    pmax
     comp=Z,576nm,1.1s
KURBB Kurchatov Arra 60.89 339       PKPPKP          01 04 20.1
     comp=Z,9.8nm,1.1s,baz=309,slow=2.8,SNR=4.7
KURBB                                PKP2bc          01 04 30.2
     comp=Z,29nm,1.1s,baz=326,slow=2.5,SNR=14
KURBB                                P4KPbc          01 12 10.7
     comp=Z,2.8nm,0.9s,baz=143,slow=4.0,SNR=14
OPO  Ambohidratompo 60.93 252        P       P       00 35 16.4 +0.1
     comp=Z,289nm,0.7s,baz=82,slow=5.3,SNR=220
     comp=Z,289nm,0.7s
ABPO Ambohimpanom   60.93 251        P       P       00 35 15.8  -0.5
ABPO                                 IAmb    IAmb    00 35 20.4
     comp=Z,1µm,1.5s
ABPO Ambohimpanom   60.93 251        P       P       00 35 15.8  -0.5
ABPO                                 pmax    pmax
     comp=Z,1µm,1.5s
ABPO Ambohimpanom   60.93 251        ⇓P      P       00 35 16.2  -0.1
ABPO Ambohimpanom   60.93 251        P       P       00 35 16.3  0.0
ABPO                                 sP      sP      00 38 19.1  -1.3
KURK Kurchatov      60.93 339        P       P       00 35 15.5 +0.1
KURK Kurchatov      60.93 339  d i P  P       P       00 35 15.6 +0.1
KURK                                 pmax    pmax
     comp=Z,2µm,1.0s
KURK Kurchatov      60.93 339        P       P       00 35 15.9 +0.4
KURK                                 P       P       00 35 15.9 +0.4
KURK Kurchatov      60.93 339        ⇓P      P       00 35 15.7 +0.2
KURK Kurchatov      60.93 339        P       P       00 35 15.8 +0.2
KURK                                 pP      pP      00 37 15.3 +0.3
KURK                                 sP      sP      00 38 21.8 +1.3
GHWR Ruwais         60.97 301        P       P       00 35 16.2  -0.1
GHWR                                 P       P       00 35 16.2  -0.1
KUR  Kuril'sk       61.22  31  d i P  P       P       00 35 19.2 +1.7
KUR                                  e       00 35 53.3
KUR                                  e       00 37 41.4
KUR                                  i S     S       00 42 50.1  -0.6
KUR                                  pmax    pmax
     comp=Z,1µm,1.0s
KUR                                  pmax    pmax
     comp=Z,4µm,6.2s
KUR                                  MLR     MLR
     comp=Z,2µm,12.0s
CASY Casey          61.30 179        P       P       00 35 17.2  -0.4
CASY Casey          61.30 179        ⇑P      P       00 35 17.3  -0.3
CASY Casey          61.30 179        P       P       00 35 17.3  -0.3
UGL  Uglegorsk      61.34  25        eP      P       00 35 20.8 +2.7
UGL                                  e       00 35 57.0
UGL                                  i       00 38 26.6
UGL                                  eS      S       00 42 51.0  -1.0
UGL                                  pmax    pmax
     comp=Z,2µm,2.0s
UGL                                  pmax    pmax
     comp=Z,1µm,0.9s
UGL                                  smax    smax
     comp=E,11µm,11.0s
UGL                                  smax    smax
     comp=N,19µm,8.5s
UGL                                  pmax    pmax
     comp=Z,270nm,1.7s
JRN  Qarnain Island 61.34 302        P       P       00 35 18.7  0.0
     SNR=58
NFK  Norfolk Island 61.34 120        P       P       00 35 19.1 +0.5
     baz=61,SNR=11
NFK  Norfolk Island 61.34 120        P       P       00 35 19.2 +0.5
     comp=Z,449nm,0.9s
NFK  Norfolk Island 61.34 120        ⇓P      P       00 35 19.2 +0.5
VOI  Vohitsoka      61.62 248        P       P       00 35 19.8  -1.0
VOI  Vohitsoka      61.62 248  ⇓i P  P       P       00 35 20.6  -0.1
     SNR=24
VOI  Vohitsoka      61.62 248        P       P       00 35 20.6  -0.1
ZAA0 Zalesovo Array 61.80 345        P       P       00 35 20.2  -0.8
ZAA0                                 IAmb    IAmb    00 35 25.3
     comp=Z,2µm,1.0s
ZALV Zalesovo Beam  61.80 345        P       P       00 35 20.6  -0.4
     comp=Z,568nm,0.4s,baz=154,slow=6.0,SNR=1277
ZALV                                 S       S       00 42 52.8  -4.8
     comp=Z,41nm,0.9s,baz=125,slow=8.4,SNR=3.6
ZALV                                 PKPPKP  P'P'df  01 04 13.8  -6.4
     comp=Z,10nm,1.0s,baz=298,slow=4.2,SNR=5.6
ZALV                                 PKP2bc          01 04 27.9
     comp=Z,27nm,1.0s,baz=308,slow=3.3,SNR=6.6
ZALV                                 P4KPbc          01 12 13.6
     comp=Z,0.9nm,0.5s,baz=155,slow=4.1,SNR=4.1
     comp=Z,568nm,0.4s
ZALV Zalesovo Beam  61.80 345        P       P       00 35 20.7  -0.4
SLWR Sila           62.02 300        P       P       00 35 23.1 +0.1
SLWR                                 P       P       00 35 23.1 +0.1
WAKE Wake Island    62.38  65        P       P       00 35 25.0  -0.5
WAKE Wake Island    62.38  65        P       P       00 35 25.8 +0.3
     comp=Z,363nm,2.0s
WAKE Wake Island    62.38  65        ⇓P      P       00 35 25.8 +0.3
WAKE Wake Island    62.38  65        P       P       00 35 25.4  -0.1
WAKE                                 pP      pP      00 37 23.9  -1.9
BRZS Berezniki      62.66 335  d i P  P       P       00 35 26.9 +0.2
BRZS                                 eS      S       00 43 09.2 +1.0
BRZS                                 pmax    pmax
     comp=Z,412nm,0.6s
BRZS                                 smax    smax
     comp=E,1µm,3.5s
BRZS Berezniki      62.66 335  ⇓i P  P       P       00 35 27.0 +0.2
     comp=E,412nm,0.6s,baz=335
BRZS                                 eS      S       00 43 09.2 +1.0
     comp=E,1µm,3.5s,baz=335
BOD  Bodaibo        62.69   4        eP      P       00 35 26.4  -0.3
BOD                                  pmax    pmax
     comp=Z,1µm,1.4s
TYV  Tymovskoe      62.96  24        eP      P       00 35 29.9 +1.4
TYV                                  eS      S       00 43 12.2 +0.5
TYV                                  pmax    pmax
     comp=Z,1µm,3.9s
TYV                                  pmax    pmax
     comp=Z,115nm,1.5s
TYV                                  smax    smax
     comp=N,12µm,8.3s
TYV                                  smax    smax
     comp=E,6µm,8.3s
GEYT Alibeck        62.97 317        P       P       00 35 28.9  -0.1
     comp=E,1µm,0.9s,baz=143,slow=3.7,SNR=500
GEYT                                 sP      sP      00 38 34.0  -0.9
     comp=E,35nm,0.9s,baz=64,slow=44,SNR=1.4
GEYT                                 S       S       00 43 09.9  -2.5
     comp=E,12nm,1.1s,baz=46,slow=4.3,SNR=1.9
GEYT                                 PKP2bc          01 04 29.4
     comp=E,26nm,1.1s,baz=262,slow=10,SNR=8.1
GEYT                                 P4KPbc          01 12 22.2
     comp=E,6.1nm,1.0s,baz=8.5,slow=2.9,SNR=11
     comp=E,1µm,0.9s
SMRA Abu-Samra      62.99 301        P       P       00 35 29.0  -0.3
SHMA Al-Shehemyia   63.25 302        P       P       00 35 30.7  -0.2
CRZF Crozet Islands 63.64 220        P       P       00 35 33.4 +0.4
SAKB Bahrain        63.66 302        P       P       00 35 33.2  -0.3
MCQ  Macquarie Isla 64.15 150        P       P       00 35 37.4 +1.3
     baz=64,SNR=7.5
MCQ  Macquarie Isla 64.15 150        P       P       00 35 37.2 +1.1
     comp=E,402nm,1.2s
MCQ  Macquarie Isla 64.15 150        ⇑P      P       00 35 37.5 +1.5
PYZ  Puysegur Point 65.03 139        P       P       00 35 41.6  -0.2
PYZ  Puysegur Point 65.03 139        P       P       00 35 42.3 +0.5
     comp=E,434nm,0.7s
TARA Tarawa         65.03  86        P       P       00 35 42.6 +0.2
TARA                                 IAmb    IAmb    00 35 48.4
     comp=Z,1µm,0.9s
TARA Tarawa         65.03  86        P       P       00 35 43.7 +1.3
     comp=Z,1µm,1.0s
TARA Tarawa         65.03  86        ⇑P      P       00 35 43.7 +1.3
TARA Tarawa         65.03  86        P       P       00 35 43.4 +1.0
TARA                                 pP      pP      00 37 41.0  -3.3
DCZ  Deep Cove      65.10 138        P       P       00 35 41.5  -0.7
DRV  Dumont d'Urvil 65.49 167        P       P       00 35 43.9  -0.3
DRV                                  pP      pP      00 37 45.6 +0.4
JCZ  Jackson Bay    65.75 136        P       P       00 35 46.6 +0.1
     comp=Z,859nm,1.2s
BVA0 Borovoye Array 65.89 336        P       P       00 35 47.1 +0.1
BVAR Borovoye Array 65.89 336        P       P       00 35 46.9  -0.1
     comp=Z,720nm,0.6s,baz=139,slow=7.9,SNR=1429
BVAR                                 sP      sP      00 38 53.5  -0.6
     comp=Z,23nm,0.8s,baz=144,slow=11,SNR=1.2
BVAR                                 S       S       00 43 45.5  -1.2
     comp=Z,46nm,0.8s,baz=126,slow=14,SNR=15
BVAR                                 PKP2bc          01 04 19.9
     comp=Z,13nm,1.0s,baz=318,slow=0.0,SNR=9.0
BVAR                                 P4KPbc          01 12 33.4
     comp=Z,3.6nm,1.1s,baz=108,slow=4.7,SNR=7.0
     comp=Z,720nm,0.6s
BVAR Borovoye Array 65.89 336        P       P       00 35 46.9  -0.1
BVAR                                 *SP     sP      00 38 53.5  -0.6
BRVK Borovoye       65.96 336        P       P       00 35 47.0  -0.4
BRVK                                 IAmb    IAmb    00 35 52.0
     comp=Z,2µm,1.1s
BRVK Borovoye       65.96 336  d i P  P       P       00 35 47.2  -0.2
BRVK                                 pmax    pmax
     comp=Z,985nm,0.8s
BRVK Borovoye       65.96 336        P       P       00 35 47.8 +0.4
BRVK                                 P       P       00 35 47.8 +0.4
BRVK Borovoye       65.96 336        ⇓P      P       00 35 47.3  -0.2
BRVK Borovoye       65.96 336        P       P       00 35 47.4  0.0
SYZ  Scrubby Hill   66.75 139        P       P       00 35 51.9  -0.5
     comp=Z,153nm,0.9s
ATD  Arta Tunnel    66.95 285        P       P       00 35 54.1  -0.2
     comp=Z,337nm,0.9s,baz=57,slow=1.6,SNR=5.7
ATD                                  pP      pP      00 37 57.4 +0.1
     comp=Z,21nm,0.9s,baz=270,slow=21,SNR=1.0
ATD                                  S       S       00 44 01.8 +1.2
     comp=Z,12nm,0.9s,baz=182,slow=17,SNR=2.0
     comp=Z,337nm,0.9s
ATD  Arta Tunnel    66.95 285        IAmb    IAmb    00 35 59.4
     comp=Z,529nm,1.0s
ATD  Arta Tunnel    66.95 285        P       P       00 35 54.8 +0.5
ATD                                  pP      pP      00 37 58.9 +1.6
ATD                                  sP      sP      00 39 02.6 +0.8
OUZ  Omahuta        67.21 126        ⇓P      P       00 35 56.6 +1.1
RPZ  Rata Peaks     67.22 136        P       P       00 35 55.0  -0.4
     comp=Z,488nm,1.0s
RAYN Ar Rayn        67.24 298        P       P       00 35 54.9  -1.0
RAYN                                 IAmb    IAmb    00 35 59.6
     comp=Z,981nm,0.8s
RAYN Ar Rayn        67.24 298        P       P       00 35 54.9  -1.0
RAYN                                 pmax    pmax
     comp=Z,981nm,0.9s
RAYN Ar Rayn        67.24 298        P       P       00 35 55.4  -0.6
RAYN Ar Rayn        67.24 298  i P   P       P       00 35 55.0  -1.0
     SNR=242
RAYN Ar Rayn        67.24 298        P       P       00 35 55.2  -0.8
ODZ  Otahua Downs   67.31 137        P       P       00 35 55.7  -0.2
     comp=Z,69nm,1.2s
ODZ  Otahua Downs   67.31 137        ⇑P      P       00 35 55.6  -0.2
QRZ  Quartz Range   67.55 132        P       P       00 35 57.3  -0.2
QRZ                                  IAmb    IAmb    00 36 00.4
     comp=Z,537nm,0.7s
QRZ  Quartz Range   67.55 132        P       P       00 35 57.6 +0.2
     comp=Z,944nm,0.9s
WCZ  Waipu Caves    67.94 127        P       P       00 36 00.9 +1.0
THZ  Tophouse       68.04 133        IAmb    IAmb    00 36 02.9
     comp=Z,506nm,0.7s
ABKAR Akbulak array 68.21 328        P       P       00 36 00.8  -0.3
ABKAR Akbulak array 68.21 328        ⇓P      P       00 36 01.1  -0.1
PKE  Pukeiti        68.28 130        P       P       00 36 04.2 +2.2
WTAZ Waiatarua      68.30 128        P       P       00 36 03.6 +1.5
KHEZ Kahui Hut      68.33 130        P       P       00 36 03.9 +1.6
KHEZ Kahui Hut      68.33 130        P       P       00 36 03.3 +1.0
     comp=Z,896nm,0.9s
MQZ  McQueen's Vall 68.34 135        P       P       00 36 01.4  -0.7
AWAZ Awhitu Peninsu 68.38 128        P       P       00 36 05.7 +3.2
MBAZ Motutapu North 68.53 128        P       P       00 36 04.9 +1.5
LREZ Lake Rotokare  68.65 130        P       P       00 36 07.2 +3.1
KHZ  Kahutara       68.66 134        P       P       00 36 03.4  -0.7
     comp=Z,403nm,1.1s
KHZ  Kahutara       68.66 134        ⇑P      P       00 36 03.0  -1.0
KHZ                                  ⇓p      pP      00 38 11.1 +3.2
WIAZ Waiheke Island 68.72 128        P       P       00 36 06.7 +2.2
YAK  Yakutsk        68.77  11        P       P       00 36 03.9  -0.3
     comp=Z,489nm,0.5s,baz=189,slow=0.5,SNR=115
YAK                                  PKP2ab          01 04 16.6
     comp=Z,9.3nm,0.4s,baz=285,slow=2.1,SNR=6.4
     comp=Z,489nm,0.5s
YAK  Yakutsk        68.77  11        P       P       00 36 03.5  -0.7
YAK  Yakutsk        68.77  11        eP      P       00 36 03.8  -0.5
YAK                                  e       00 36 17.5
YAK                                  e*PP    pP      00 38 11.8 +3.6
YAK                                  e       00 39 13.7
YAK                                  eS      S       00 44 19.8 +0.1
YAK                                  e       00 44 56.2
YAK                                  eSS     SS      00 49 02.8 +0.7
YAK                                  pmax    pmax
     comp=Z,901nm,0.9s
YAK                                  pmax    pmax
     comp=N,425nm,1.3s
YAK                                  pmax    pmax
     comp=E,148nm,1.4s
YAK                                  pmax    pmax
     comp=Z,1µm,2.2s
YAK                                  pmax    pmax
     comp=N,789nm,2.0s
YAK                                  smax    smax
     comp=N,4µm,2.2s
YAK                                  smax    smax
     comp=E,3µm,1.9s
YAK  Yakutsk        68.77  11        ⇑P      P       00 36 03.6  -0.7
YAK  Yakutsk        68.77  11        P       P       00 36 03.8  -0.5
YAK                                  pP      pP      00 38 11.4 +3.2
YAK                                  sP      sP      00 39 13.0 +0.6
MKAZ Moumakai       68.79 128        P       P       00 36 06.1 +1.1
HIZ  Hauiti         68.81 129        IAmb    IAmb    00 36 08.8
     comp=Z,724nm,1.1s
HIZ  Hauiti         68.81 129        P       P       00 36 05.9 +0.8
HIZ  Hauiti         68.81 129        P       P       00 36 05.5 +0.4
     comp=Z,671nm,1.0s
VRZ  Vera Road      68.86 130        P       P       00 36 06.2 +0.8
GRZ  Great Barrier  68.88 127        P       P       00 36 06.3 +0.8
SKR  Severo-Kuril's 68.97  30        eP      P       00 36 06.7 +1.0
SKR                                  e       00 39 09.7
SKR                                  i S     S       00 44 24.1 +1.7
SKR                                  e       00 45 04.6
SKR                                  pmax    pmax
     comp=Z,235nm,1.0s
SKR                                  pmax    pmax
     comp=Z,1µm,12.3s
SKR                                  pmax    pmax
     comp=Z,2µm,11.4s
WAZ  Wanganui       69.15 131        P       P       00 36 07.8 +0.7
TOZ  Tahuroa Road   69.17 128        P       P       00 36 08.2 +0.9
KUZ  Kuaotunu       69.17 127        P       P       00 36 07.8 +0.6
KUZ  Kuaotunu       69.17 127        P       P       00 36 07.6 +0.3
     comp=Z,368nm,1.0s
SNZO South Karori   69.26 132        P       P       00 36 06.2  -1.5
SNZO                                 IAmb    IAmb    00 36 09.2
     comp=Z,483nm,0.6s
SNZO South Karori   69.26 132        P       P       00 36 07.0  -0.7
     comp=Z,932nm,0.9s
SNZO South Karori   69.26 132        ⇑P      P       00 36 06.4  -1.3
SNZO South Karori   69.26 132        P       P       00 36 06.0  -1.7
TLZ  Tolley Road    69.31 129        P       P       00 36 10.0 +1.9
PKVZ Pokaka         69.34 130        P       P       00 36 08.9 +0.6
TWVZ Taurewa        69.37 130        P       P       00 36 06.4  -2.1
MSVF Nonsavu        69.41 107        P       P       00 36 08.9  -0.2
MSVF Nonsavu        69.41 107  c i P  P       P       00 36 09.5 +0.3
MSVF                                 pmax    pmax
     comp=Z,196nm,1.0s
MSVF Nonsavu        69.41 107        P       P       00 36 10.0 +0.8
     comp=Z,300nm,1.4s
MSVF Nonsavu        69.41 107        ⇑P      P       00 36 09.2  0.0
MSVF Nonsavu        69.41 107        P       P       00 36 09.5 +0.3
MSVF                                 pP      pP      00 38 12.0  -1.4
MSVF                                 PP      PP      00 38 54.8 +0.6
MTVZ Mangateitei    69.45 130        P       P       00 36 10.8 +1.8
FWVZ Far West T-bar 69.49 130        P       P       00 36 09.8 +0.3
OHWZ Ohakea         69.49 131        P       P       00 36 10.2 +1.1
WTVZ West Tongariro 69.49 130        P       P       00 36 09.6 +0.3
TRVZ Turoa          69.49 130        P       P       00 36 09.6 +0.1
NGZ  Ngauruhoe      69.51 130        P       P       00 36 09.8 +0.3
NNVZ North Ngauruho 69.51 130        P       P       00 36 09.7 +0.2
WHVZ Whangaehu Hut  69.52 130        P       P       00 36 10.9 +1.3
KRVZ Karewarewa     69.53 130        P       P       00 36 07.9  -1.6
WATZ Wairara        69.53 129        P       P       00 36 11.4 +2.0
WNVZ Wahianoa       69.54 130        P       P       00 36 09.9 +0.3
SNVZ South Ngauruho 69.54 130        P       P       00 36 11.4 +1.7
OTVZ Oturere        69.56 130        P       P       00 36 07.8  -2.0
TUVZ Tukino         69.57 130        P       P       00 36 11.0 +1.2
TMVZ Te Maari       69.58 130        P       P       00 36 11.0 +1.1
RATZ Rangitukua     69.58 130        P       P       00 36 10.5 +0.8
ETVZ East Tongariro 69.59 130        P       P       00 36 10.3 +0.4
ANKE Ethiopia-Afar  69.65 282        eP      P       00 36 10.1  -0.9
ANKE                                 eS      S       00 44 39.2 +6.8
ANKE Ethiopia-Afar  69.65 282        eP      P       00 36 12.6 +1.6
ANKE                                 eS      S       00 44 39.1 +6.8
MOVZ Moawhango      69.67 130        P       P       00 36 09.6  -0.7
RITZ Rihia Road     69.67 130        P       P       00 36 10.7 +0.4
MYRZ Mayor Island   69.67 128        P       P       00 36 12.3 +2.0
MAW  Mawson         69.69 197        P       P       00 36 10.9 +1.2
     comp=Z,532nm,0.6s,baz=53,slow=5.8,SNR=292
MAW                                  pP      pP      00 38 14.1 +0.7
     comp=Z,22nm,0.6s,baz=15,slow=9.2,SNR=1.7
MAW                                  S       S       00 44 30.2 +0.1
     comp=Z,10nm,1.0s,baz=160,slow=19,SNR=5.9
MAW                                  PKP2bc          01 04 07.2
     comp=Z,78nm,1.1s,baz=250,slow=3.8,SNR=25
     comp=Z,532nm,0.6s
MAW  Mawson         69.69 197        P       P       00 36 10.6 +0.9
     baz=70,SNR=1000
MAW  Mawson         69.69 197        P       P       00 36 10.9 +1.2
MAW                                  *PP     pP      00 38 14.1 +0.7
MAW  Mawson         69.69 197        ⇑P      P       00 36 10.6 +0.9
TGRZ Tauranga       69.76 128        P       P       00 36 13.1 +2.4
NGRZ Ngongotaha     69.77 129        P       P       00 36 13.4 +2.5
WPRZ Whakapapatarin 69.82 129        P       P       00 36 13.4 +2.2
HATZ Hinemaiaia     69.83 130        P       P       00 36 11.2  0.0
LKRN Lenkeran, Azer 69.84 314        P       P       00 36 10.5  -0.7
POWZ Post Office Ro 69.87 131        P       P       00 36 11.5 +0.1
AKTO Aktyubinsk     69.91 329        P       P       00 36 11.1  -0.3
     comp=Z,584nm,0.7s,baz=107,slow=3.7,SNR=543
AKTO                                 S       S       00 44 32.0  -1.3
     comp=Z,25nm,1.1s,baz=273,slow=21,SNR=9.1
AKTO                                 PKP2bc          01 04 07.5
     comp=Z,6.5nm,1.0s,baz=321,slow=4.6,SNR=5.2
     comp=Z,584nm,0.7s
AKTO Aktyubinsk     69.91 329        P       P       00 36 11.1  -0.3
OMRZ Omania         69.91 129        P       P       00 36 15.5 +3.8
BHHZ Black Hill Sta 69.92 130        P       P       00 36 11.2  -0.5
TSZ  Takapari Road  69.95 131        P       P       00 36 11.3  -0.6
KIBK Kibwezi        69.96 269        IAmb    IAmb    00 36 17.0
     comp=Z,1µm,1.5s
KIBK Kibwezi        69.96 269        P       P       00 36 13.1 +0.5
     SNR=132
ALRZ Allen Road     69.97 129        P       P       00 36 12.7 +0.7
OPRZ Ohinepanea     70.01 128        P       P       00 36 12.6 +0.4
TARZ Mount Tarawera 70.04 129        P       P       00 36 15.8 +3.3
PRWZ Pori Road      70.05 131        P       P       00 36 12.4  -0.1
PNHZ Pukenui        70.10 131        P       P       00 36 12.4  -0.4
DVHZ Dannevirke     70.15 131        P       P       00 36 12.6  -0.5
KWHZ Kaweka Forest  70.18 130        P       P       00 36 13.1  -0.3
BKZ  Black Stump Fm 70.19 130        P       P       00 36 12.5  -0.9
BKZ  Black Stump Fm 70.19 130        P       P       00 36 12.3  -1.1
     comp=Z,1µm,0.9s
BFZ  Birch Farm     70.28 131        P       P       00 36 12.8  -1.0
BFZ                                  IAmb    IAmb    00 36 16.2
     comp=Z,619nm,0.8s
MUGZ Murupara       70.29 129        P       P       00 36 14.6 +0.8
WPHZ Waipukurau     70.31 131        P       P       00 36 13.7  -0.3
WHRZ Whale Island   70.34 128        P       P       00 36 15.8 +1.6
MTHZ Maungataniwha  70.40 129        P       P       00 36 14.3  -0.3
ANWZ Angora Road    70.41 131        P       P       00 36 14.7 +0.2
NMHZ Naumai         70.42 130        P       P       00 36 14.8 +0.1
RTZ  Ruatahuna      70.47 129        P       P       00 36 14.3  -0.8
PRHZ Porangahau     70.49 131        P       P       00 36 15.2 +0.2
AAE  Adis Abeba     70.51 281        eP      P       00 36 17.9 +1.9
AAE  Adis Abeba     70.51 281        eP      P       00 36 16.8 +0.8
AAE                                  eS      SKiKP   00 44 51.7  -2.4
AAE  Adis Abeba     70.51 281        eP      P       00 36 17.1 +1.1
AAE                                  eS      SKiKP   00 44 49.6  -4.6
AAE  Adis Abeba     70.51 281        eP      P       00 36 17.9 +1.9
URZ  Urewera        70.51 129        P       P       00 36 14.3  -0.9
URZ  Urewera        70.51 129        P       P       00 36 13.6  -1.6
     comp=Z,293nm,0.9s
URZ  Urewera        70.51 129        ⇑P      P       00 36 13.2  -2.0
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FURI	**Furi**	**70.57 281**	P	**P**	**00 36 18.4**	**+2.0**
FURI	**Furi**	**70.57 281**	*e*P	**P**	**00 36 18.7**	**+2.3**
FURI	**Furi**	**70.57 281**	*e*P	**P**	**00 36 16.8**	**+0.4**
FURI	**Furi**	**70.57 281**	*e*P	**P**	**00 36 18.0**	**+1.6**
FURI			*e*S	**SKiKP**	**00 44 49.3**	**-5.0**
FURI	**Furi**	**70.57 281**	*e*P	**P**	**00 36 18.7**	**+2.3**
FURI	**Furi**	**70.57 281**	⇑P	**P**	**00 36 18.8**	**+2.4**
FURI	**Furi**	**70.57 281**	P	**P**	**00 36 19.1**	**+2.7**
FURI			sP	**sP**	**00 39 26.2**	**+0.9**
ARHZ	**Aropaoanui**	**70.59 130**	P	**P**	**00 36 15.1**	**-0.5**
KAHZ	**Kahuranaki**	**70.59 130**	P	**P**	**00 36 15.7**	**0.0**
FUNA	**Funafuti**	**70.60 97**	P	**P**	**00 36 16.1**	**0.0**
FUNA	**Funafuti**	**70.60 97**	P	**P**	**00 36 17.5**	**+1.4**
	comp=Z,286nm,1.7s					
FUNA	**Funafuti**	**70.60 97**	P	**P**	**00 36 17.4**	**+1.2**
FUNA			pP	**pP**	**00 38 20.1**	**-0.9**
RAHZ	**Arahi**	**70.60 129**	P	**P**	**00 36 16.2**	**+0.5**
PXZ	**Pawanui**	**70.62 131**	P	**P**	**00 36 15.5**	**-0.3**
CCD	**Concordia, Ant**	**70.69 176**	P	**P**	**00 36 16.7**	**+0.7**
CCD			pP	**pP**	**00 38 22.0**	**+2.2**
CKHZ	**Cape Kidnapper**	**70.72 130**	P	**P**	**00 36 16.6**	**+0.2**
WHHZ	**Waihua**	**70.74 130**	P	**P**	**00 36 17.9**	**+1.3**
SNGZ	**Shannon Statio**	**70.78 129**	P	**P**	**00 36 16.1**	**-0.6**
RAGZ	**Rawiri**	**70.79 129**	P	**P**	**00 36 16.6**	**-0.3**
MWZ	**Matawai**	**70.85 129**	P	**P**	**00 36 16.1**	**-1.1**
KMBO	**Kilima Mbogo**	**70.85 271**	P	**P**	**00 36 18.4**	**+0.4**
	comp=Z,118nm,0.7s,baz=78,slow=11,SNR=218					
KMBO			pP	**pP**	**00 38 22.9**	**-0.2**
	comp=Z,22nm,1.0s,baz=115,slow=8.7,SNR=1.9					
KMBO			sP	**sP**	**00 39 25.4**	**-1.7**
	comp=Z,5.7nm,0.7s,baz=47,slow=21,SNR=0.9					
KMBO			S	**S**	**00 44 45.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=317,slow=22,SNR=9.8					
	comp=Z,118nm,0.7s					
KMBO	**Kilima Mbogo**	**70.85 271**	P	**P**	**00 36 17.7**	**-0.2**
KMBO			IAmb	IAmb	00 36 22.6	
	comp=Z,626nm,1.4s					
KMBO	**Kilima Mbogo**	**70.85 271**	⇓*i*P	**P**	**00 36 17.9**	**0.0**
KMBO			IAmb	IAmb	00 36 22.2	
	comp=Z,2μm,1.4s					
KMBO	**Kilima Mbogo**	**70.85 271**	*d i*P	**P**	**00 36 18.5**	**+0.5**
KMBO	**Kilima Mbogo**	**70.85 271**	P	**P**	**00 36 18.7**	**+0.7**
KMBO	**Kilima Mbogo**	**70.85 271**	*e*P	**P**	**00 36 18.4**	**+0.4**
KMBO	**Kilima Mbogo**	**70.85 271**	*e*P	**P**	**00 36 16.8**	**-1.2**
KMBO			*e*S	**S**	**00 44 48.4**	**+2.7**
KMBO	**Kilima Mbogo**	**70.85 271**	*e*P	**P**	**00 36 17.7**	**-0.2**
KMBO			*e*S	**S**	**00 44 45.8**	**+0.1**
KMBO	**Kilima Mbogo**	**70.85 271**	*e*P	**P**	**00 36 18.4**	**+0.4**
KMBO	**Kilima Mbogo**	**70.85 271**	*i* P	**P**	**00 36 18.4**	**+0.4**
	SNR=295					
KMBO	**Kilima Mbogo**	**70.85 271**	P	**P**	**00 36 18.3**	**+0.4**
KMBO			pP	**pP**	**00 38 20.8**	**-2.3**
KMBO			sP	**sP**	**00 39 24.3**	**-2.8**
RUGZ	**Raukumara Rang**	**70.91 128**	P	**P**	**00 36 15.8**	**-1.9**
HAZ	**Te Kaha**	**70.96 128**	P	**P**	**00 36 16.6**	**-1.2**
RIGZ	**Rimuhau**	**71.09 129**	P	**P**	**00 36 19.5**	**+0.9**
TKGZ	**Te Karaka**	**71.11 129**	P	**P**	**00 36 18.3**	**-0.4**
TWGZ	**Tauwhareparae**	**71.18 129**	P	**P**	**00 36 18.8**	**-0.4**
PKGZ	**Pakihiroa**	**71.21 128**	P	**P**	**00 36 18.9**	**-0.5**
PEA0B	**Petropavlovsk-**	**71.22 29**	*ce*P	**P**	**00 36 19.6**	**+0.6**
PETK	**Petropavlovsk-**	**71.22 29**	P	**P**	**00 36 18.8**	**-0.2**
	comp=Z,62nm,0.5s,baz=220,slow=1.8,SNR=60					
PETK			pP	**pP**	**00 38 23.4**	**-0.8**
	comp=Z,9.3nm,0.7s,baz=224,slow=6.0,SNR=1.1					
PETK			PKPPKP	**P'P'df**	**01 04 05.2**	**+0.1**
	comp=Z,30nm,1.1s,baz=101,slow=1.5,SNR=11					
	comp=Z,62nm,0.5s					
PETK	**Petropavlovsk-**	**71.22 29**	P	**P**	**00 36 18.8**	**-0.2**
PETK			*PP	**pP**	**00 38 23.4**	**-0.8**
MHGZ	**Mahia Peninsul**	**71.27 130**	P	**P**	**00 36 19.4**	**-0.2**
MXZ	**Matakaoa Point**	**71.34 128**	P	**P**	**00 36 19.9**	**-0.1**
	comp=Z,520nm,0.5s					
PUZ	**Puketiti**	**71.38 128**	P	**P**	**00 36 19.6**	**-0.7**
CNGZ	**Carnagh Statio**	**71.40 129**	P	**P**	**00 36 20.4**	**0.0**
WMGZ	**Waiomatatini S**	**71.46 128**	P	**P**	**00 36 20.5**	**-0.2**
PET	**Petropavlovsk**	**71.64 29**	P	**P**	**00 36 20.2**	**-1.2**
PET			IAmb	IAmb	00 36 27.3	
	comp=Z,378nm,0.8s					
PET	**Petropavlovsk**	**71.64 29**	*e*P	**P**	**00 36 21.5**	**+0.2**
PET			*e*		00 36 42.7	
PET			*e**PP	**pP**	**00 38 28.7**	**+1.9**
PET			*e**SP	**sP**	**00 39 29.9**	**-0.7**
PET			*e*S	**S**	**00 44 50.4**	**-2.0**
PET			pmax	pmax		
	comp=Z,684nm,0.8s					
PET			pmax	pmax		
	comp=Z,3μm,8.4s					
PET			smax	smax		
	comp=E,5μm,9.4s					
PET			smax	smax		
	comp=N,16μm,12.1s					
PET	**Petropavlovsk**	**71.64 29**	P	**P**	**00 36 21.6**	**+0.2**
	comp=N,2μm,0.9s					
PET	**Petropavlovsk**	**71.64 29**	⇓P	**P**	**00 36 21.5**	**+0.2**
PET	**Petropavlovsk**	**71.64 29**	P	**P**	**00 36 21.2**	**-0.1**
MNGR	**Mingechevir, A**	**71.87 316**	P	**P**	**00 36 25.3**	**+2.3**
SEKA	**Sheki**	**71.96 316**	P	**P**	**00 36 23.0**	**-0.6**
ZOMB	**Zomba**	**72.12 255**	⇓P	**P**	**00 36 24.4**	**-0.7**
GANJ	**Ganja**	**72.35 315**	P	**P**	**00 36 26.9**	**+1.1**
NAX	**Nakhchivan**	**72.38 314**	P	**P**	**00 36 26.9**	**+0.8**
MAK	**Makhachkala**	**72.47 318**	*i* P	**P**	**00 36 25.3**	**-1.1**
MAK			*e**PP	**pP**	**00 38 28.5**	**-3.7**
MAK			*e*		00 39 14.3	
MAK			*e**SP	**sP**	**00 39 30.8**	**-5.1**
MAK			*e*PPP	PPP	00 41 06.6	
MAK			*e*S	**SKiKP**	**00 44 58.7**	**+2.9**
MAK			*e*SS	**SS**	**00 49 58.3**	**-0.6**
MAK			*e*SSS	SSS	00 53 25.5	
MAK			pmax	pmax		
	comp=Z,1μm,0.9s					
ZKTA	**Zakatala**	**72.53 316**	P	**P**	**00 36 28.6**	**+1.8**
MA2	**Magadan**	**72.54 21**	P	**P**	**00 36 26.7**	**+0.3**
	comp=Z,268nm,1.0s,baz=206,slow=5.3,SNR=16					
	comp=Z,268nm,1.0s					
MA2	**Magadan**	**72.54 21**	P	**P**	**00 36 25.6**	**-0.9**
MA2			IAmb	IAmb	00 36 32.9	
	comp=Z,423nm,0.9s					
MA2	**Magadan**	**72.54 21**	*c i*P	**P**	**00 36 27.2**	**+0.8**
MA2			*i **PP	**pP**	**00 38 28.7**	**-3.6**
MA2			pmax	pmax		
	comp=Z,239nm,1.0s					
MA2	**Magadan**	**72.54 21**	P	**P**	**00 36 27.0**	**+0.5**
	comp=Z,630nm,1.0s					
MA2	**Magadan**	**72.54 21**	⇑P	**P**	**00 36 26.9**	**+0.5**
SVE	**Sverdlovsk**	**72.58 335**	*c i*P	**P**	**00 36 27.0**	**+0.3**
SVE			*i* S	**S**	**00 45 02.8**	**0.0**
SVE			pmax	pmax		
	comp=Z,2μm,1.0s					
SVE			pmax	pmax		
	comp=Z,4μm,11.3s					
FUTU	**Fugatoga**	**73.08 103**	P	**P**	**00 36 31.9**	**+1.5**
	comp=Z,213nm,1.2s					
LODK	**Lodwar**	**73.16 275**	P	**P**	**00 36 32.0**	**+0.9**
	SNR=162					
LODK	**Lodwar**	**73.16 275**	*e*P	**P**	**00 36 31.8**	**+0.7**
LODK	**Lodwar**	**73.16 275**	*e*P	**P**	**00 36 33.4**	**+2.3**
LODK			*e*S	**S**	**00 45 15.1**	**+4.0**
LODK	**Lodwar**	**73.16 275**	*e*P	**P**	**00 36 30.9**	**-0.2**
LODK			*e*S	**S**	**00 45 13.4**	**+2.4**
LODK	**Lodwar**	**73.16 275**	*e*P	**P**	**00 36 31.8**	**+0.7**
ARU	**Arti**	**73.23 334**	P	**P**	**00 36 30.1**	**-0.3**
	comp=Z,535nm,0.6s,baz=112,slow=3.0,SNR=330					
ARU			S	**S**	**00 45 08.5**	**-1.4**
	comp=Z,9.4nm,0.7s,baz=288,slow=19,SNR=1.8					
ARU			PKPPKP	**P'P'df**	**01 03 60.0**	**-1.4**
	comp=Z,9.7nm,0.9s,baz=238,slow=1.6,SNR=6.7					
	comp=Z,535nm,0.6s					
ARU	**Arti**	**73.23 334**	P	**P**	**00 36 29.7**	**-0.7**
ARU	**Arti**	**73.23 334**	*i* P	**P**	**00 36 30.1**	**-0.3**
ARU			pmax	pmax		
	comp=Z,1μm,1.0s					
ARU	**Arti**	**73.23 334**	⇓P	**P**	**00 36 30.0**	**-0.4**
GNI	**Garni**	**73.28 314**	P	**P**	**00 36 30.8**	**-0.5**
	comp=Z,879nm,1.1s,baz=10,slow=1.2,SNR=50					
GNI			pP	**pP**	**00 38 36.4**	**-1.2**
	comp=Z,48nm,0.9s,baz=70,slow=20,SNR=0.6					
	comp=Z,879nm,1.1s					
GNI	**Garni**	**73.28 314**	P	**P**	**00 36 30.5**	**-0.8**
GNI			IAmb	IAmb	00 36 36.5	
	comp=Z,1μm,1.1s					
GNI	**Garni**	**73.28 314**	*ce*P	**P**	**00 36 32.0**	**+0.7**
GNI			pmax	pmax		
	comp=Z,943nm,1.2s					
GNI	**Garni**	**73.28 314**	P	**P**	**00 36 32.0**	**+0.7**
GNI	**Garni**	**73.28 314**	P	**P**	**00 36 31.1**	**-0.2**
GNI	**Garni**	**73.28 314**	⇑P	**P**	**00 36 31.1**	**-0.2**
GROC	**Groznyy**	**73.71 318**	*e*P	**P**	**00 36 33.2**	**-0.2**
GROC			*e*		00 36 45.3	
GROC			*e**PP	**pP**	**00 38 41.8**	**+1.9**
GROC			*e*		00 39 30.6	
GROC			*e**SP	**sP**	**00 39 44.2**	**+0.8**
GROC			*e*S	**S**	**00 45 13.2**	**-2.5**
GROC			pmax	pmax		
	comp=Z,1μm,0.8s					
GEVA	**Gevas**	**73.86 312**	IAmb	IAmb	00 36 38.9	
	comp=Z,1μm,1.1s					
ZEI	**Tsey**	**74.84 317**	*e*P	**P**	**00 36 38.8**	**-1.3**
ZEI			pmax	pmax		
	comp=Z,820nm,1.2s					
ONI	**Oni**	**75.07 316**	IAmb	IAmb	00 36 59.0	
	comp=Z,506nm,1.2s					
MARD	**Mardin**	**75.24 310**	P	**P**	**00 36 41.8**	**-0.5**
NCK	**Nalchik**	**75.31 317**	*d i*P	**P**	**00 36 42.8**	**+0.4**
NCK			pmax	pmax		
	comp=Z,788nm,0.9s					
NRIK	**Noril'sk**	**75.42 353**	P	**P**	**00 36 41.9**	**-0.5**
	comp=Z,259nm,0.4s,baz=149,slow=5.1,SNR=233					
NRIK			pP	**pP**	**00 38 49.2**	**-0.4**
	comp=Z,51nm,0.8s,baz=178,slow=4.4,SNR=1.0					
NRIK			S	**S**	**00 45 30.2**	**-2.9**
	comp=Z,14nm,0.9s,baz=108,slow=7.6,SNR=2.4					
	comp=Z,259nm,0.4s					
NRIK	**Noril'sk**	**75.42 353**	*i* P	**P**	**00 36 41.9**	**-0.5**
NRIK			pmax	pmax		
	comp=Z,2μm,1.4s					
SEY	**Seymchan**	**75.46 19**	PKPPKP	**P'P'df**	**01 03 57.5**	**+0.4**
	comp=Z,12nm,1.0s,baz=9.0,slow=23,SNR=2.4					
SEY	**Seymchan**	**75.46 19**	*de*P	**P**	**00 36 43.3**	**+0.5**
SEY			pmax	pmax		
	comp=Z,304nm,1.3s					
POGA	**Pongola**	**75.71 243**	IAmb	IAmb	00 36 49.9	
	comp=Z,662nm,0.6s					
POGA	**Pongola**	**75.71 243**	⇓*i*P	**P**	**00 36 45.2**	**+0.2**
POGA			IAmb	IAmb	00 36 49.7	
	comp=Z,649nm,0.7s					
POGA	**Pongola**	**75.71 243**	⇓P	**P**	**00 36 45.1**	**+0.2**
NEY	**Neytrino**	**75.81 317**	*c i*P	**P**	**00 36 46.8**	**+1.4**
NEY			pmax	pmax		
	comp=Z,165nm,0.8s					
KBZ	**Khabaz**	**75.86 317**	P	**P**	**00 36 45.4**	**0.0**
	comp=Z,987nm,1.1s,baz=109,slow=5.7,SNR=191					
KBZ			pP	**pP**	**00 38 52.6**	**-0.3**
	comp=Z,61nm,0.9s,baz=144,slow=4.8,SNR=2.0					
KBZ			S	**S**	**00 45 37.9**	**-1.0**
	comp=Z,7.3nm,0.9s,baz=67,slow=16,SNR=12					
KBZ			PKKPbc	**PKKPbc**	**00 55 56.9**	**-0.7**
	comp=Z,6.0nm,0.9s,baz=267,slow=6.7,SNR=6.4					
KBZ			PKPPKP	**P'P'df**	**01 03 57.4**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=244,slow=6.4,SNR=2.5					
	comp=Z,987nm,1.1s					
KBZ	**Khabaz**	**75.86 317**	P	**P**	**00 36 45.4**	**0.0**
KBZ			*PP	**pP**	**00 38 52.6**	**-0.3**
MOPA	**Mopani**	**75.90 247**	⇓*i*P	**P**	**00 36 45.9**	**-0.2**
MOPA			IAmb	IAmb	00 36 50.8	
	comp=Z,50nm,0.8s					
MOPA	**Mopani**	**75.90 247**	*i* P	**P**	**00 36 47.4**	**+1.2**
MOPA	**Mopani**	**75.90 247**	*i* P	**P**	**00 36 47.4**	**+1.2**
CTZ	**Chatham Island**	**75.98 134**	P	**P**	**00 36 47.5**	**+1.4**
	comp=Z,102nm,1.0s					
SHA1	**Shidzhatmaz**	**76.03 317**	*d i*P	**P**	**00 36 46.5**	**-0.2**
KVAR	**Kislovodsk Arr**	**76.08 317**	P	**P**	**00 36 46.9**	**+0.1**
	comp=Z,61nm,0.8s,baz=270,slow=20,SNR=24					
	comp=Z,61nm,0.8s					
KIV	**Kislovodsk**	**76.09 317**	⇑P	**P**	**00 36 47.6**	**+0.8**
KIV	**Kislovodsk**	**76.09 317**	P	**P**	**00 36 46.8**	**0.0**
KIV			IAmb	IAmb	00 36 52.5	
	comp=Z,860nm,1.1s					
KIV	**Kislovodsk**	**76.09 317**	*e*P	**P**	**00 36 46.5**	**-0.3**
KIV			*e**PP	**pP**	**00 38 52.8**	**-1.6**
KIV			*e**SP	**PP**	**00 39 53.5**	**+3.9**
KIV			*e*PPP	PPP	00 41 37.5	
KIV			*e*S	**S**	**00 45 42.2**	**+0.7**
KIV			pmax	pmax		
	comp=Z,2μm,4.8s					
KIV			pmax	pmax		
	comp=Z,873nm,1.1s					
KIV	**Kislovodsk**	**76.09 317**	P	**P**	**00 36 47.2**	**+0.4**
KIV	**Kislovodsk**	**76.09 317**	*i* P	**P**	**00 36 46.9**	**0.0**
	SNR=34					
KIV	**Kislovodsk**	**76.09 317**	⇓P	**P**	**00 36 46.5**	**-0.3**
MMAL	**MMAL**	**76.12 245**	*e*P	**P**	**00 36 47.2**	**-0.2**
MMAL			IAmb	IAmb	00 36 51.6	
	comp=Z,308nm,0.8s					
GOF	**Gofitskoye**	**76.25 319**	⇑*e*P	**P**	**00 36 47.4**	**-0.1**
GOF			*e*S	**S**	**00 45 43.0**	**+0.1**
GOF			pmax	pmax		
	comp=Z,1μm,0.9s					
GOF			smax	smax		
	comp=E,262nm,1.3s					
KOPT	**Kop Dagi**	**76.30 313**	IAmb	IAmb	00 36 54.2	
	comp=Z,1μm,1.0s					
BELG	**Belogornoye**	**76.49 327**	P	**P**	**00 36 48.1**	**-0.5**
	comp=Z,4μm,1.1s,baz=338,slow=0.8,SNR=229					
BELG			S	**S**	**00 45 43.2**	**-1.9**
	comp=Z,38nm,1.0s,baz=0.0,slow=20,SNR=2.1					
	comp=Z,4μm,1.1s					
BELG	**Belogornoye**	**76.49 327**	*d i*P	**P**	**00 36 48.0**	**-0.6**
BELG			pmax	pmax		
	comp=Z,295nm,1.0s					
ASF	**Jabal al Asfar**	**76.88 304**	P	**P**	**00 36 52.1**	**+0.7**
	comp=Z,1μm,0.9s,baz=116,slow=3.8,SNR=335					
	comp=Z,1μm,0.9s					
ASF	**Jabal al Asfar**	**76.88 304**	P	**P**	**00 36 52.1**	**+0.7**
KTUT	**Trabzon**	**77.13 314**	⇑P	**P**	**00 36 53.3**	**+0.9**
CRLN	**Carolina, Mapu**	**77.19 245**	*e*P	**P**	**00 36 52.2**	**-1.0**
CRLN			IAmb	IAmb	00 36 56.8	
	comp=Z,570nm,1.6s					
MUSN	**Musina, Limpop**	**77.31 248**	⇓*i*P	**P**	**00 36 54.0**	**+0.2**
MUSN			IAmb	IAmb	00 36 58.5	
	comp=Z,413nm,0.8s					
MUSN	**Musina, Limpop**	**77.31 248**	*i* P	**P**	**00 36 55.4**	**+1.5**
MUSN	**Musina, Limpop**	**77.31 248**	*i* P	**P**	**00 36 55.4**	**+1.5**
NWCL	**Newcastle**	**77.33 243**	⇓*i*P	**P**	**00 36 53.9**	**-0.1**
NWCL			IAmb	IAmb	00 36 58.2	
	comp=Z,388nm,0.7s					
MBAR	**Mbarara**	**77.38 270**	P	**P**	**00 36 55.3**	**+0.8**
	comp=Z,588nm,0.7s,baz=97,slow=7.6,SNR=26					
MBAR			S	**S**	**00 45 56.7**	**+0.2**
	comp=Z,3.7nm,0.2s,baz=338,slow=21,SNR=6.2					
	comp=Z,588nm,0.7s					
MBAR	**Mbarara**	**77.38 270**	P	**P**	**00 36 54.7**	**+0.1**
MBAR			IAmb	IAmb	00 36 59.1	
	comp=Z,613nm,0.8s					
MBAR	**Mbarara**	**77.38 270**	*d i*P	**P**	**00 36 54.9**	**+0.3**
MBAR	**Mbarara**	**77.38 270**	P	**P**	**00 36 55.6**	**+1.0**
MBAR	**Mbarara**	**77.38 270**	*e*P	**P**	**00 36 55.0**	**+0.4**
MBAR	**Mbarara**	**77.38 270**	*e*P	**P**	**00 36 53.3**	**-1.3**
MBAR			*e*S	**S**	**00 45 58.2**	**+1.7**
MBAR	**Mbarara**	**77.38 270**	*e*P	**P**	**00 36 54.2**	**-0.4**
MBAR			*e*S	**S**	**00 45 58.2**	**+1.7**
MBAR	**Mbarara**	**77.38 270**	*e*P	**P**	**00 36 55.0**	**+0.4**
MBAR	**Mbarara**	**77.38 270**	⇓P	**P**	**00 36 54.9**	**+0.4**
TIXI	**Tiksi**	**77.60 7**	P	**P**	**00 36 53.3**	**-1.0**
	comp=Z,364nm,0.6s,baz=271,slow=22,SNR=339					
TIXI			pP	**pP**	**00 39 02.2**	**-0.4**
	comp=Z,298nm,1.2s,baz=90,slow=21,SNR=3.0					
TIXI			S	**S**	**00 45 54.6**	**-1.5**
	comp=Z,6.8nm,0.6s,baz=270,slow=23,SNR=5.6					
TIXI			PKPPKP	**P'P'df**	**01 03 53.4**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=90,slow=23,SNR=3.7					
	comp=Z,364nm,0.6s					
TIXI	**Tiksi**	**77.60 7**	P	**P**	**00 36 52.9**	**-1.3**
TIXI			IAmb	IAmb	00 36 59.5	
	comp=Z,768nm,0.8s					
TIXI	**Tiksi**	**77.60 7**	*d i*P	**P**	**00 36 53.2**	**-1.0**
TIXI			pmax	pmax		
	comp=Z,345nm,0.9s					
TIXI	**Tiksi**	**77.60 7**	⇓P	**P**	**00 36 53.2**	**-1.0**
VNDA	**Vanda**	**77.82 170**	P	**P**	**00 36 55.3**	**-0.1**
	comp=Z,118nm,0.6s,baz=309,slow=5.6,SNR=237					
VNDA			pP	**pP**	**00 39 04.8**	**+1.2**
	comp=Z,24nm,0.9s,baz=296,slow=11,SNR=1.9					
VNDA			S	**S**	**00 45 57.1**	**-1.3**
	comp=Z,7.8nm,1.0s,baz=308,slow=19,SNR=7.0					
VNDA			PKPPKP	**P'P'df**	**01 03 51.2**	**-2.1**
	comp=Z,5.3nm,1.0s,baz=139,slow=1.6,SNR=5.9					
	comp=Z,118nm,0.6s					
VNDA	**Vanda**	**77.82 170**	P	**P**	**00 36 55.3**	**-0.1**
VNDA			*PP	**pP**	**00 39 04.9**	**+1.2**
KSTD	**Kokstad**	**77.91 240**	⇓*i*P	**P**	**00 36 58.4**	**+1.4**
KSTD			IAmb	IAmb	00 37 02.0	
	comp=Z,305nm,0.8s					
EIL	**Elat**	**77.92 302**	P	**P**	**00 36 57.0**	**+0.1**
	comp=Z,1μm,0.9s,baz=104,slow=0.9,SNR=221					
	comp=Z,1μm,0.9s					
GAZ	**Gaziantep**	**77.92 309**	IAmb	IAmb	00 37 01.5	
	comp=Z,1μm,1.1s					
GAZ	**Gaziantep**	**77.92 309**	⇓P	**P**	**00 36 57.0**	**+0.1**
SOC	**Sochi**	**77.98 316**	*e*P	**P**	**00 36 54.9**	**-2.0**
SOC			*e**PP	**pP**	**00 39 03.1**	**-2.3**
SOC			*e*		00 40 00.4	
SOC			*e**SP	**PP**	**00 40 03.2**	**-1.9**
SOC			*e*S	**S**	**00 46 00.1**	**-1.1**
SOC			pmax	pmax		
	comp=Z,1μm,1.0s					
RCY	**Rachaya**	**78.07 306**	*e*P	**P**	**00 36 58.5**	**+0.7**
HWQ	**Hawqa**	**78.17 306**	*e*P	**P**	**00 36 58.5**	**+0.2**
QRWL	**Qaraoun**	**78.21 306**	*e*P	**P**	**00 36 59.8**	**+1.3**
MMAI	**Mount Meron Ar**	**78.31 305**	P	**P**	**00 36 59.9**	**+0.9**
	comp=Z,643nm,0.7s,baz=102,slow=7.8,SNR=238					
	comp=Z,643nm,0.7s					
BHL	**Bhannes**	**78.32 306**	*e*P	**P**	**00 36 59.3**	**+0.2**
DQRL	**Deir Qamar**	**78.34 306**	*e*P	**P**	**00 36 60.0**	**+0.8**
KIRV	**Kirov**	**78.53 333**	P	**P**	**00 36 59.3**	**-0.2**
	comp=Z,965nm,0.8s,baz=121,slow=2.1,SNR=210					
KIRV			pP	**pP**	**00 39 08.4**	**+0.2**
	comp=Z,175nm,0.9s,baz=116,slow=4.9,SNR=3.4					
KIRV			S	**S**	**00 46 05.6**	**-0.6**
	comp=Z,15nm,0.9s,baz=238,slow=22,SNR=5.9					
	comp=Z,965nm,0.8s					
KIRV	**Kirov**	**78.53 333**	*d i*P	**P**	**00 36 59.2**	**-0.2**
MATP	**Matopo**	**78.60 250**	*i* P	**P**	**00 37 01.5**	**+0.6**
MATP	**Matopo**	**78.60 250**	*i* P	**P**	**00 37 01.5**	**+0.6**
MIDW	**Midway**	**78.75 60**	P	**P**	**00 37 03.0**	**+1.7**
	comp=Z,231nm,0.8s					
SLR	**Silverton**	**78.75 245**	⇓*i*P	**P**	**00 37 01.6**	**0.0**
SLR			IAmb	IAmb	00 37 05.8	
	comp=Z,499nm,0.6s					
SBA	**Scott Base**	**78.89 169**	P	**P**	**00 37 01.4**	**+0.3**
SBA	**Scott Base**	**78.89 169**	P	**P**	**00 37 01.4**	**+0.3**
SBA			pmax	pmax		
	comp=Z,228nm,1.0s					
LEPH	**Lephalale, Lim**	**79.20 247**	⇓*i*P	**P**	**00 37 04.0**	**0.0**
LEPH			IAmb	IAmb	00 37 08.3	
	comp=Z,465nm,0.7s					
SNKL	**Senekal, Frees**	**79.21 242**	⇓*i*P	**P**	**00 37 03.8**	**-0.2**
SNKL			IAmb	IAmb	00 37 08.2	
	comp=Z,394nm,0.9s					
AFI	**Afiamalu**	**79.24 103**	P	**P**	**00 37 03.7**	**-0.6**
AFI			IAmb	IAmb	00 37 10.4	
	comp=Z,536nm,1.1s					
AFI	**Afiamalu**	**79.24 103**	P	**P**	**00 37 03.7**	**-0.6**
AFI			pmax	pmax		
	comp=Z,537nm,1.1s					
AFI	**Afiamalu**	**79.24 103**	P	**P**	**00 37 05.8**	**+1.5**
	comp=Z,477nm,1.1s					
AFI	**Afiamalu**	**79.24 103**	⇑P	**P**	**00 37 06.4**	**+2.1**
HRAO	**HartRAO**	**79.29 245**	⇓*i*P	**P**	**00 37 04.6**	**+0.1**
TOKA	**Tokat**	**79.33 312**	IAmb	IAmb	00 37 09.2	
	comp=Z,1μm,0.9s					
VRH	**Novokhopyorsk**	**79.34 324**	*e*P	**P**	**00 37 03.4**	**-0.5**
VRH			*e*S	**S**	**00 46 12.1**	**-2.8**
VRH			pmax	pmax		
	comp=Z,2μm,0.7s					
VRH			smax	smax		
	comp=N,2μm,4.7s					
BNN	**Bunyan**	**79.41 311**	⇓P	**P**	**00 37 03.5**	**-1.2**
WDLM	**Western Deep L**	**79.52 244**	*e*P	**P**	**00 37 05.9**	**+0.1**
WDLM			IAmb	IAmb	00 37 09.2	
	comp=Z,383nm,0.5s					
PRYS	**Parys**	**79.58 244**	⇓*i*P	**P**	**00 37 05.5**	**-0.5**
PRYS			IAmb	IAmb	00 37 10.0	
	comp=Z,582nm,0.8s					
ANN	**Anapa**	**79.92 317**	*e*P	**P**	**00 37 06.6**	**-0.5**
ANN			*e**PP	**pP**	**00 39 16.7**	**+0.3**
ANN			*e*		00 40 19.8	
ANN			*e*S	**S**	**00 46 18.7**	**-2.4**
ANN			pmax	pmax		
	comp=Z,2μm,1.2s					
KSR	**Koster**	**80.00 245**	⇓*i*P	**P**	**00 37 08.0**	**-0.2**
KSR			IAmb	IAmb	00 37 12.7	
	comp=Z,336nm,0.7s					
GRHM	**Grahamstown, E**	**80.44 237**	⇓*i*P	**P**	**00 37 11.3**	**+1.1**
GRHM			IAmb	IAmb	00 37 15.3	
	comp=Z,547nm,0.8s					
GRHM	**Grahamstown, E**	**80.44 237**	⇓P	**P**	**00 37 10.8**	**+0.6**
DIKM	**Dikmen**	**80.57 313**	⇓P	**P**	**00 37 11.4**	**+0.8**
NIUE	**Niue**	**80.82 108**	IAmb	IAmb	00 37 18.2	
	comp=Z,691nm,1.3s					
NIUE	**Niue**	**80.82 108**	P	**P**	**00 37 15.0**	**+2.7**
	comp=

PRGR e 00 40 32.4
PRGR eS **S** **00 46 35.0 -2.8**
PRGR pmax pmax
comp=Z,1μm,0.7s
BUFB Buffelsbos 81.80 236 eP **P** **00 37 18.2 +1.2**
BUFB IAmb IAmb 00 37 22.0
comp=Z,303nm,0.8s
KROM Kromhout 81.90 236 eP **P** **00 37 18.7 +1.2**
KROM IAmb IAmb 00 37 22.4
comp=Z,350nm,0.9s
ANTO Ankara 81.95 311 ⇑P **P** **00 37 18.2 +0.4**
ANTO Ankara 81.95 311 P **P** **00 37 17.4 -0.4**
ANTO Ankara 81.95 311 ⇑P **P** **00 37 18.2 +0.4**
ANTO Ankara 81.95 311 P **P** **00 37 18.7 +0.9**
BR231 Keskin MP Arra 81.96 311 IAmb IAmb 00 37 22.3
comp=Z,1μm,1.1s
ROSN Rosenhof 81.97 236 eP **P** **00 37 18.7 +0.8**
ROSN IAmb IAmb 00 37 22.7
comp=Z,403nm,0.9s
GRAF Camdeboo Natio 82.03 238⇓iP **P** **00 37 19.2 +0.8**
GRAF IAmb IAmb 00 37 23.4
comp=Z,383nm,1.0s
SIM Simferopol' 82.23 316 eP **P** **00 37 19.3 +0.4**
SIM e*PP **pP** **00 39 29.0 -0.3**
SIM e 00 40 42.0
SIM eS **S** **00 46 44.0 -0.3**
BFON Badsfontein, M 82.72 239⇓iP **P** **00 37 22.8 +0.8**
ROOI Rooidraai Farm 82.82 238⇓iP **P** **00 37 23.2 +0.9**
ROOI IAmb IAmb 00 37 27.5
comp=Z,533nm,1.1s
BILL Bilibino 83.15 19 P **P** **00 37 22.6 -0.5**
BILL Bilibino 83.15 19c iP **P** **00 37 22.6 -0.5**
BILL i *PP **pP** **00 39 33.9 +0.1**
BILL 00 40 54.0
BILL PPP PPP 00 42 46.0
BILL iS **S** **00 46 46.2 -6.2**
BILL i 00 47 55.0
BILL iSSS SSS 00 56 11.7
BILL pmax pmax
comp=Z,166nm,0.7s
BILL MLR MLR
comp=Z,2μm,21.0s
MOS Moscow 83.21 328 eP **P** **00 37 21.2 -2.4**
MOS e 00 39 34.4
MOS e 00 40 36.4
MOS eS **S** **00 46 45.6 -7.9**
MOS eSS **SS** **00 52 35.5 -2.0**
MOS pmax pmax
comp=Z,400nm,0.6s
MOS pmax pmax
comp=Z,430nm,0.7s
MOS smax smax
comp=N,2μm,4.0s
ISP Isparta 83.25 309d iP **P** **00 37 23.3 -1.0**
ISP pmax pmax
comp=Z,154nm,1.0s
KDZE Karadeniz Ereo 83.27 312 ⇑P **P** **00 37 23.9 -0.4**
MDUB Mudurnu 83.28 312 ⇓P **P** **00 37 23.1 -1.3**
BRAK Brakfontein 83.40 239⇓iP **P** **00 37 26.1 +0.9**
BRAK IAmb IAmb 00 37 30.4
comp=Z,740nm,1.3s
ELL Elmali 83.52 308 ⇓P **P** **00 37 25.3 -0.4**
PKA Prieska 83.58 241 eP **P** **00 37 26.8 +0.6**
PKA IAmb IAmb 00 37 30.9
comp=Z,108nm,0.9s
OBN Obninsk 83.59 327 ⇑P **P** **00 37 25.7 +0.3**
OBN Obninsk 83.59 327 P **P** **00 37 25.1 -0.3**
comp=Z,342nm,1.0s,baz=82,slow=2.1,SNR=113
OBN pP **pP** **00 39 35.8 -0.5**
comp=Z,17nm,0.9s,baz=113,slow=23,SNR=1.2
OBN sP **sP** **00 40 37.1 -1.6**
comp=Z,34nm,1.0s,baz=227,slow=23,SNR=1.9
OBN PP **PP** **00 40 50.6 +0.6**
comp=Z,170nm,1.2s,baz=106,slow=15,SNR=7.8
OBN S S 00 46 47.6 -10
comp=Z,3.9nm,0.5s,baz=115,slow=23,SNR=6.5
comp=Z,342nm,1.0s
OBN Obninsk 83.59 327 P **P** **00 37 24.9 -0.4**
OBN Obninsk 83.59 327d iP **P** **00 37 25.0 -0.4**
OBN i *PP **pP** **00 39 36.0 -0.4**
OBN i *SP **sP** **00 40 39.0 +0.3**
OBN i 00 40 48.2
OBN iS **SKSac** **00 46 46.4 -3.1**
OBN i 00 46 56.4
OBN iSS **SS** **00 52 41.2 -1.7**
OBN pmax pmax
comp=Z,901nm,0.8s
OBN MLR MLR
comp=Z,2μm,17.0s
OBN Obninsk 83.59 327 ⇓P **P** **00 37 25.0 -0.3**
KSL Kastellorizon 83.66 307 P **P** **00 37 25.4 -0.9**
GRAN Grantham 84.00 238 eP **P** **00 37 29.0 +0.9**
GRAN IAmb IAmb 00 37 33.5
comp=Z,296nm,1.1s
KLMR Klimovskoe 84.03 333d iP **P** **00 37 26.9 -0.5**
KLMR e*PP **pP** **00 39 39.4 +0.8**
KLMR 00 40 41.7
KLMR eS **SKSac** **00 46 51.2 -0.9**
KLMR SSS SSS 00 56 34.8
KLMR pmax pmax
comp=Z,4μm,1.4s
KLMR Klimovskoe 84.03 333⇓iP **P** **00 37 27.0 -0.5**
KLMR ⇓iP **P** **00 37 27.0 -0.5**
KLMR eP **P** **00 37 27.0 -0.5**
KLMR AMP 00 37 32.4
comp=Z,4μm,1.4s
KLMR epP **pP** **00 39 39.5 +0.8**
KLMR PP **sP** **00 40 41.7 +0.8**
KLMR eS **SKSac** **00 46 51.2 -0.9**
KLMR eS **SKSac** **00 46 51.2 -0.9**
KLMR sS **sS** **00 50 57.3 +2.4**
KLMR sS **sS** **00 50 57.3 +2.4**
KLMR SSS SSS 00 56 34.8
KLMR SSS SSS 00 56 34.8
JOHN Johnston Islan 84.09 73 P **P** **00 37 28.2 -0.5**
JOHN IAmb IAmb 00 39 47.8
comp=Z,942nm,1.4s
JOHN Johnston Islan 84.09 73 P **P** **00 37 30.5 +1.8**
comp=Z,403nm,0.8s
MERW Merweville 84.53 238⇓iP **P** **00 37 31.6 +0.8**
MERW IAmb IAmb 00 37 35.9
comp=Z,440nm,0.9s
FRAZ Fraserburg 84.66 238⇓iP **P** **00 37 32.7 +1.2**
FRAZ IAmb IAmb 00 37 36.7
comp=Z,641nm,0.8s
ADK Adak 84.76 37 P **P** **00 37 30.3 -0.9**
ADK IAmb IAmb 00 37 36.6
comp=Z,320nm,0.8s
ADK Adak 84.76 37 P **P** **00 37 30.3 -0.9**
ADK pmax pmax
comp=Z,320nm,0.8s
ADK Adak 84.76 37 P **P** **00 37 31.4 +0.2**
comp=Z,472nm,0.9s
ADK Adak 84.76 37 ⇓P **P** **00 37 31.0 -0.2**
ARG Arkhangelos 84.83 307 P **P** **00 37 32.6 +0.6**
ARG Arkhangelos 84.83 307 P **P** **00 37 32.4 +0.4**
ARG Arkhangelos 84.83 307 ⇑P **P** **00 37 32.4 +0.4**
YER Yerkesik 84.87 308 P **P** **00 37 31.9 -0.3**
UPI Upington 84.95 242⇓eP **P** **00 37 34.0 +1.1**
UPI IAmb IAmb 00 37 38.1
comp=Z,178nm,1.1s
ISK Istanbul-Kandi 84.99 312 P **P** **00 37 30.9 -1.7**
QSPA South Pole Qui 85.08 180 S **SKSac** **00 46 54.9 -3.9**
comp=Z,45nm,0.9s,baz=282,slow=3.5,SNR=42
SUR Sutherland 85.14 238 P **P** **00 37 33.9 0.0**
SUR IAmb IAmb 00 37 39.5
comp=Z,579nm,0.7s
SUR Sutherland 85.14 238 P **P** **00 37 35.3 +1.5**
KEIM Keimoes 85.19 242⇓iP **P** **00 37 35.1 +1.1**
KEIM IAmb IAmb 00 37 39.5
comp=Z,454nm,0.9s
MATJ Matjiesfontein 85.30 237⇓iP **P** **00 37 36.2 +1.7**
MATJ IAmb IAmb 00 37 40.1
comp=Z,428nm,1.0s
KARP Karpathos 85.50 306 P **P** **00 37 36.0 +0.7**
BODT Bodrum 85.62 308 P **P** **00 37 34.4 -1.4**
NIS1 Nisyros Isl. 85.65 307 P **P** **00 37 35.6 -0.3**
NISR Nisiros 85.69 307 P **P** **00 37 38.7 +2.6**
AUGR Augrabies 85.75 242 eP **P** **00 37 38.0 +1.3**
AUGR IAmb IAmb 00 37 41.9
comp=Z,593nm,1.3s
GAMM Gam 85.80 250 iP **P** **00 37 39.5 +2.3**
GAMM iS **PcP** **00 37 41.9 +3.0**

JURR Jurilovca 85.82 315 ⇑P **P** **00 37 37.1 +0.6**
KOSK Kos Island 85.83 307 P **P** **00 37 37.3 +0.6**
MANR Mangalia 85.84 314 ⇑P **P** **00 37 37.6 +1.0**
TSCT Constanta Port 85.86 315 ⇑P **P** **00 37 37.9 +1.2**
EFOR EFORIE 85.86 315 ⇑P **P** **00 37 36.5 -0.2**
ELIM Elim 85.92 236 eP **P** **00 37 38.7 +1.4**
ELIM IAmb IAmb 00 37 42.5
comp=Z,307nm,1.3s
TLCR 85.94 316 ⇑P **P** **00 37 37.7 +0.7**
TLCR 85.94 316 ⇑P **PKKPbc** **00 55 34.2 -0.7**
TLCR 85.94 316 ⇑P **P** **00 37 37.7 +0.7**
BLCB Balcova 86.05 309 P **P** **00 37 37.8 +0.1**
CVNA Calvinia 86.08 239⇓iP **P** **00 37 39.4 +1.2**
CVNA IAmb IAmb 00 37 43.4
comp=Z,1μm,1.5s
TIRR Tirgusor 86.09 315 ⇑P **P** **00 37 38.6 +0.8**
TIRR Tirgusor 86.09 315 ⇑P **P** **00 37 38.6 +0.8**
TIRR Tirgusor 86.09 315 ⇑P **P** **00 37 38.6 +0.8**
SMG Samos 86.10 308 P **P** **00 37 37.6 -0.4**
TPGR Topolog 86.16 315 ⇑P **P** **00 37 38.0 -0.2**
ZKR Zakros 86.19 306 P **P** **00 37 36.4 -2.1**
DKL Dikili 86.26 310 ⇑P **P** **00 37 38.9 +0.2**
MILM Milestii Mici 86.28 318 ⇑P **P** **00 37 38.0 -0.5**
MILM Milestii Mici 86.28 318 ⇑P pP 00 39 51.1 +0.3
MILM Milestii Mici 86.28 318⇓iP **P** **00 37 36.0 -2.6**
comp=Z,1μm,1.2s
MILM i pP **pP** **00 39 51.0 +0.3**
MILM Milestii Mici 86.28 318 i PP PP 00 40 49.0 -23
MILM Milestii Mici 86.28 318 i PPP PPP 00 43 56.0
MILM i SKS S 00 47 03.0 -20
MILM i SKKS **SKKSac** **00 47 13.0 -3.9**
MILM i S **S** **00 47 21.0 -2.2**
MILM i sS sS 00 51 10.0 -8.6
MILM eSS **SS** **00 53 17.0 -5.3**
MILM Milestii Mici 86.28 318d iP **P** **00 37 36.0 -2.6**
MILM i *PP **pP** **00 39 51.0 +0.3**
MILM i 00 40 49.0
MILM i 00 47 03.0
MILM i S **S** **00 47 21.0 -2.2**
MILM pmax pmax
comp=Z,1μm,1.2s
KIS Kishinev 86.29 318 ⇑P **P** **00 37 38.7 0.0**
KIS Kishinev 86.29 318⇓eP **P** **00 37 37.0 -1.7**
comp=Z,370nm,1.3s
KIS ⇑ipP **pP** **00 39 52.0 +1.2**
KIS Kishinev 86.29 318 ePP PP 00 40 50.0 -22
KIS Kishinev 86.29 318 ePPP PPP 00 44 07.0
KIS eSKS S 00 47 04.0 -19
KIS eS **SKKSac** **00 47 21.0 +4.0**
KIS esS sS 00 51 10.0 -8.8
KIS Kishinev 86.29 318 ⇑P **P** **00 37 38.7 0.0**
ARMS Ukamas 86.31 242 eP **P** **00 37 40.3 +1.0**
ARMS IAmb IAmb 00 37 44.6
comp=Z,761nm,1.0s
CVDA Cernavoda 86.33 315 ⇑P **P** **00 37 39.7 +0.8**
TLBR Topalu 86.36 315 ⇑P **P** **00 37 39.1 +0.1**
TLBR Topalu 86.36 315 ⇓P **PKKPbc** **00 55 34.0 +0.1**
CER Ceres 86.37 237⇓iP **P** **00 37 41.0 +1.5**
CER IAmb IAmb 00 37 43.4
comp=Z,1μm,1.8s
CFR Carcaliu 86.41 316 ⇑P **P** **00 37 39.3 +0.1**
CFR Carcaliu 86.41 316 ⇑P pP 00 39 53.2 +1.7
CFR Carcaliu 86.41 316 ⇑P **PKKPbc** **00 55 32.4 -1.4**
CFR Carcaliu 86.41 316 ⇑P **P** **00 37 39.3 +0.1**
GIUM Giurgiulesti 86.42 316 ⇑P **P** **00 37 39.8 +0.5**
ICOR Ion Corvin 86.46 315 ⇑P **P** **00 37 39.6 +0.1**
HARR Harsova 86.47 315 ⇑P **P** **00 37 40.5 +0.9**
HARR Harsova 86.47 315 ⇑P **P** **00 37 40.5 +0.9**
TATR Tatarca 86.55 316 ⇓P **P** **00 37 40.3 +0.4**
FRMA Ierapetra Chan 86.57 305 P **P** **00 37 40.4 +0.1**
VLDR Vladesti 86.57 316 ⇑P **P** **00 37 40.4 +0.3**
LEOM Leova 86.58 317 ⇑P **P** **00 37 39.8 -0.2**
LEOM Leova 86.58 317 ⇑P **P** **00 37 39.8 -0.2**
PRD Provadia 86.58 314 P **P** **00 37 40.6 +0.5**
SCTR Scanteiesti 86.60 316 ⇑P **P** **00 37 40.8 +0.7**
SCTR Scanteiesti 86.60 316 ⇑P **PKKPbc** **00 55 32.5 -0.9**
SCHL Schela 86.68 316 ⇑P **P** **00 37 43.8 +3.3**
IZVR Izvoarele 86.73 316 ⇑P **P** **00 37 40.7 -0.1**
SLCR Slobozia Conac 86.74 316 ⇑P **P** **00 37 41.7 +0.9**
VARL Varlezi 86.74 316 ⇑P **P** **00 37 41.8 +0.9**
AKASG Malin Array Be 86.76 321 P **P** **00 37 39.5 -1.3**
comp=Z,243nm,0.7s,baz=82,slow=4.8,SNR=359
AKASG pP **pP** **00 39 50.8 -2.4**
comp=Z,25nm,0.9s,baz=81,slow=4.8,SNR=3.6
AKASG sP **sP** **00 40 53.4 -1.7**
comp=Z,7.9nm,0.7s,baz=124,slow=23,SNR=2.2
AKASG PP **PP** **00 41 10.0 -5.4**
comp=Z,63nm,0.8s,baz=87,slow=6.9,SNR=5.4
AKASG PKiKP **PKiKP** **00 42 42.2 +0.3**
comp=Z,6.4nm,0.6s,baz=86,slow=2.1,SNR=1.3
AKASG S **SKSac** **00 47 07.5 -1.7**
comp=Z,3.7nm,0.9s,baz=99,slow=6.3,SNR=2.7
AKASG PKKPbc **PKKPbc** **00 55 30.8 -2.4**
comp=Z,3.7nm,0.3s,baz=287,slow=3.1,SNR=17
AKASG SKKPbc **SKKPbc** **00 58 13.9 0.0**
comp=Z,2.1nm,0.7s,baz=283,slow=3.0,SNR=6.5
AKASG PKPPKP 01 03 38.6
comp=Z,2.2nm,0.8s,baz=284,slow=2.4,SNR=6.4
comp=Z,243nm,0.7s
AKASG Malin Array Be 86.76 321 P **P** **00 37 39.5 -1.3**
AKASG *PP **pP** **00 39 50.8 -2.4**
AKASG *SP **sP** **00 40 53.4 -1.7**
AKBB Malin Array Si 86.76 321d iP **P** **00 37 39.5 -1.3**
PRK Paraskevi 86.78 310 P **P** **00 37 42.4 +1.3**
EZN Ezine 86.83 310 P **P** **00 37 41.6 +0.3**
EDRB Edirne 86.84 312 P **P** **00 37 41.6 +0.2**
AMRR Amara 86.87 315 ⇑P **P** **00 37 41.5 0.0**
AMRR Amara 86.87 315 ⇓P pP 00 39 56.5 +2.7
AMRR Amara 86.87 315 ⇑P **P** **00 37 41.5 0.0**
VASR Vaslui 86.92 317 ⇑P **P** **00 37 41.7 +0.1**
RASA Rasa 86.94 315 ⇑P **P** **00 37 42.6 +0.8**
BIR Birlad 86.96 317 ⇑P **P** **00 37 42.6 +0.7**
BIR Birlad 86.96 317 ⇑P **P** **00 37 42.6 +0.7**
THR8 Santorini-Mono 86.98 307 P **P** **00 37 41.7 -0.4**
SANT Santorini 86.99 307 ⇑P **P** **00 37 42.6 +0.4**
SANT Santorini 86.99 307 P **P** **00 37 41.6 -0.7**
THT2 Imerovigli 87.03 307 P **P** **00 37 42.8 +0.4**
APE Apeiranthos 87.03 307 ⇓P **P** **00 37 41.9 -0.5**
APE Apeiranthos 87.03 307 P **P** **00 37 40.8 -1.7**
APE Apeiranthos 87.03 307c iP **P** **00 37 42.3 -0.2**
APE pmax pmax
comp=Z,705nm,1.2s
THR6 Thira Island, 87.03 307 P **P** **00 37 42.4 0.0**
CMBO Columbo, Santo 87.04 307 P **P** **00 37 42.6 +0.1**
GHRR 87.07 317 ⇓P **P** **00 37 43.0 +0.6**
GHRR 87.07 317 ⇓P **PKKPbc** **00 55 31.9 -0.4**
THR5 Thira Island, 87.08 307 P **P** **00 37 43.1 +0.5**
SAP3 Santorini-Thir 87.09 307 P **P** **00 37 43.1 +0.4**
SIGR SIGRI 87.09 310 P **P** **00 37 43.2 +0.6**
HRKL Herakleio 87.12 306 P **P** **00 37 43.6 +0.7**
IACM Heraklion 87.15 306 P **P** **00 37 44.2 +1.2**
PGOR Pogoanele 87.17 315 ⇓P **P** **00 37 44.2 +1.4**
IAS Iasi 87.17 318 ⇑P **P** **00 37 42.3 -0.5**
IAS Iasi 87.17 318 ⇑P **P** **00 37 42.3 -0.5**
KANON KANO 87.17 251 iP **P** **00 37 44.3 +0.7**
LEHL Lehliu 87.21 315 ⇑P **P** **00 37 43.6 +0.6**
PANC Panciu 87.22 316 ⇑P **P** **00 37 44.5 +1.4**
ODBI Odobesti 87.27 316 ⇑P **P** **00 37 44.6 +1.4**
RAZG Razgrad 87.29 314 ⇑P **P** **00 37 44.2 +0.8**
IDI Anoyia 87.29 306 ⇑P **P** **00 37 44.7 +1.0**
IDI Anoyia 87.29 306 ⇑P **PKKPbc** **00 55 35.4 +4.0**
IDI Anoyia 87.29 306 P **P** **00 37 44.0 +0.2**
comp=Z,545nm,0.8s,baz=62,slow=7.2,SNR=81
comp=Z,545nm,0.8s
IDI Anoyia 87.29 306 P **P** **00 37 43.4 -0.4**
IDI Anoyia 87.29 306 ⇓P **P** **00 37 44.3 +0.5**
SIVA Sivas 87.32 305 P **P** **00 37 45.0 +1.2**
TMBK Timbaki Herakl 87.36 305 P **P** **00 37 45.4 +1.4**
NVL N'lazarevskaya 87.49 199⇓iP **P** **00 37 45.5 +1.7**
NVL eS **SKSac** **00 47 10.1 -2.8**
NVL pmax pmax
comp=Z,424nm,0.9s
VRI Vrincioaia 87.51 316 ⇓P **P** **00 37 45.3 +0.8**
VRI Vrincioaia 87.51 316 ⇑P pP 00 39 58.5 +1.4
VRI Vrincioaia 87.51 316 ⇓P **PKKPbc** **00 55 31.4 +0.1**
VRI Vrincioaia 87.51 316 ⇓P **P** **00 37 45.3 +0.8**
ISR Istrita 87.51 315 ⇑P **P** **00 37 45.9 +1.4**
ISR Istrita 87.51 315 ⇑P **P** **00 37 45.9 +1.4**
SMTH Samothraki Isl 87.53 311 P **P** **00 37 43.8 -0.9**
PLOR Plostina 87.56 316 ⇑P **P** **00 37 44.9 +0.1**
PLOR Plostina 87.56 316 ⇓P **PKKPbc** **00 55 30.1 -1.1**

PLOR Plostina 87.56 316 ⇑P **P** **00 37 44.9 +0.1**
PRNS Prines Rethymn 87.62 306 P **P** **00 37 46.8 +1.6**
RDO Rodhopi 87.62 311 P **P** **00 37 43.6 -1.4**
RDO Rodhopi 87.62 311 ⇑P **P** **00 37 44.5 -0.6**
SULR 87.64 315 ⇑P **P** **00 37 45.7 +0.7**
SZH Strazhica 87.65 314 P **P** **00 37 42.6 -2.6**
TESR Tescani 87.67 317 ⇑P **P** **00 37 45.2 0.0**
TESR Tescani 87.67 317 ⇑P pP 00 39 58.8 +0.9
TESR Tescani 87.67 317 ⇑P **PKKPbc** **00 55 30.6 -0.3**
INCR INCERC-Sediu C 87.67 315 ⇑P **P** **00 37 45.5 +0.3**
NEHR Nehoiu 87.74 316 ⇓P **P** **00 37 45.8 +0.3**
NEHR Nehoiu 87.74 316 ⇑P pP 00 40 00.3 +2.0
BUC1 Bucharest 87.75 315 ⇑P **P** **00 37 46.3 +0.7**
BUC1 Bucharest 87.75 315 ⇑P **P** **00 37 46.3 +0.7**
DIM Dimitrovgrad 87.76 312 P **P** **00 37 46.0 +0.3**
SGRR Singureni 87.77 315 ⇑P **P** **00 37 46.6 +0.9**
KDZ Kurdzhali 87.79 312 P **P** **00 37 44.5 -1.4**
SECR 87.83 315 ⇑P **P** **00 37 46.5 +0.5**
PLAR PLOIESTI 87.84 315 ⇑P **P** **00 37 45.9 -0.1**
COVR Voineasa-Covas 87.87 316 ⇑P **P** **00 37 45.7 -0.5**
COVR Voineasa-Covas 87.87 316 ⇑P SKKSdf 01 01 55.2 +18
MHLO Agia Marina, M 87.87 307 P **P** **00 37 46.2 -0.1**
GVDS Gavdos 87.88 305 P **P** **00 37 46.9 +0.5**
GVD Gavdhos 87.89 305 P **P** **00 37 46.6 +0.2**
MLR Muntele Rosu 87.99 316 ⇓P **P** **00 37 47.3 +0.4**
MLR Muntele Rosu 87.99 316 ⇑P pP 00 40 01.5 +1.8
MLR Muntele Rosu 87.99 316 ⇑P SKKSdf 01 01 53.4 +16
MLR Muntele Rosu 87.99 316 P **P** **00 37 46.4 -0.4**
comp=Z,240nm,1.0s,baz=252,slow=1.2,SNR=86
MLR pP **pP** **00 39 57.8 -1.9**
comp=Z,64nm,0.9s,baz=7.6,slow=3.8,SNR=2.9
MLR PP **PP** **00 41 24.5 -0.9**
comp=Z,848nm,0.9s,baz=80,slow=2.7,SNR=16
MLR S **SKSac** **00 47 15.7 -1.4**
comp=Z,36nm,0.9s,baz=46,slow=22,SNR=8.3
comp=Z,240nm,1.0s
MLR Muntele Rosu 87.99 316 ⇓P **P** **00 37 47.3 +0.4**
IMMV Iera Moni Meta 88.05 306 P **P** **00 37 45.4 -1.8**
PUL Pulkovo 88.09 330d iP **P** **00 37 47.0 +0.2**
PUL pmax pmax
comp=Z,811nm,1.0s
BIZ Bicaz 88.11 317 ⇑P **PKKPbc** **00 55 29.2 -0.7**
ZIMR 88.12 314 ⇓P **P** **00 37 48.0 +0.7**
ZIMR 88.12 314 ⇓P **P** **00 37 48.0 +0.7**
KOMG Komaggas 88.16 240 eP **P** **00 37 48.5 +0.6**
KOMG IAmb IAmb 00 38 03.5
comp=Z,30nm,1.1s
THAS Thassos island 88.16 311 P **P** **00 37 44.5 -3.1**
OZUR 88.19 316 ⇑P **P** **00 37 47.8 +0.1**
OKAM Okamatapati 88.23 250 iP **P** **00 37 48.3 -0.2**
RODP Rodopos 88.25 306 P **P** **00 37 50.5 +2.4**
KNDR Palaiochora Ch 88.26 305 P **P** **00 37 48.5 +0.3**
MNK Minsk 88.30 325 iP **P** **00 37 48.0 +0.2**
MNK i *PP **pP** **00 40 00.8 0.0**
MNK i 00 41 29.2
MNK i PPP PPP 00 43 31.1
MNK i S **SKSac** **00 47 18.6 +0.4**
MNK i SS **SS** **00 53 55.2 +4.2**
MNK i SSS SSS 00 57 38.3
MNK pmax pmax
comp=Z,1μm,1.3s
MNK pmax pmax
comp=E,129nm,1.3s
MNK pmax pmax
comp=N,393nm,1.3s
MNK Minsk 88.30 325 iP **P** **00 37 48.1 +0.2**
comp=E,129nm,1.3s
MNK iP **P** **00 37 48.1 +0.2**
comp=N,393nm,1.3s
MNK iP **P** **00 37 48.1 +0.2**
comp=Z,1μm,1.3s,baz=281
MNK i pP **pP** **00 40 00.9 0.0**
MNK i PP **PP** **00 41 29.2 +1.8**
MNK i PPP PPP 00 43 31.1
MNK i SKS SKiKP 00 46 05.5 +44
MNK i S **SKSac** **00 47 18.6 +0.4**
MNK i sS sS 00 51 29.5 -9.1
MNK i SS **SS** **00 53 55.2 +4.2**
MNK i SSS SSS 00 57 38.3
LVZ Lovozero 88.35 339 P **P** **00 37 46.7 -1.2**
LVZ IAmb IAmb 00 37 51.5
comp=Z,530nm,0.9s
LVZ Lovozero 88.35 339d iP **P** **00 37 46.9 -1.0**
LVZ pmax pmax
comp=Z,582nm,1.1s
LVZ Lovozero 88.35 339 ⇑P **P** **00 37 45.4 -2.5**
LVZ ⇑P **P** **00 37 46.6 -1.2**
LVZ ⇓P P 00 37 50.3 +2.4
KAVA Kavala 88.37 311 P **P** **00 37 48.3 -0.2**
KYMI Kymi, Euboea I 88.37 309 P **P** **00 37 45.8 -2.8**
PLD Plovdiv 88.38 312 P **P** **00 37 47.7 -0.9**
DION Dionisos Attik 88.42 308 P **P** **00 37 47.7 -1.2**
DOPR Dopca 88.45 316 ⇑P **P** **00 37 48.4 -0.4**
DOPR Dopca 88.45 316 ⇓P pP 00 40 03.4 +1.6
DOPR Dopca 88.45 316 ⇑P **PKKPbc** **00 55 27.9 -1.1**
PTL Penteli 88.47 308 P **P** **00 37 48.1 -1.1**
HOCHN Hochfeld 88.48 249 iP **P** **00 37 50.7 +1.0**
VLY Voula,Athens 88.50 308 P **P** **00 37 48.8 -0.5**
HUMR Humele 88.52 315 ⇑P **P** **00 37 48.9 -0.3**
ATHU Athens Univers 88.53 308 P **P** **00 37 45.5 -3.9**
MTUR Matau 88.56 315 ⇓P **P** **00 37 49.6 +0.1**
MTUR Matau 88.56 315 ⇓P **P** **00 37 49.6 +0.1**
ATH Athens Observa 88.58 308 P **P** **00 37 49.0 -0.6**
STFAR Stefanesti-Arg 88.58 315 ⇑P **P** **00 37 50.2 +0.7**
VOIR 88.60 316 ⇑P **P** **00 37 49.3 -0.3**
VOIR 88.60 316 ⇑P **P** **00 37 49.3 -0.3**
ANKY Antikythira Is 88.65 306 P **P** **00 37 50.5 +0.5**
OUR Ouranopolis 88.68 310 P **P** **00 37 48.9 -1.1**
APA Apatity 88.71 338⇓iP **P** **00 37 48.2 -1.3**
APA i 00 41 01.7
APA iS **S** **00 47 37.0 -7.9**
APA pmax pmax
comp=Z,300nm,1.1s
KOKK Kokkinochori, 88.73 311 P **P** **00 37 49.3 -0.9**
BUR01 Bucovina Ar. S 88.81 318 ⇑P **PKKPbc** **00 55 30.5 +2.1**
BURAR Bucovina Array 88.81 318 ⇑P **P** **00 37 51.7 +1.1**
BURAR Bucovina Array 88.81 318 ⇑P pP 00 40 07.1 +3.4
BURAR Bucovina Array 88.81 318 ⇑P **P** **00 37 51.7 +1.1**
VLAD Vladila 88.86 314 ⇑P **P** **00 37 50.8 +0.1**
ARR Arges 88.88 316 ⇑P **P** **00 37 50.5 -0.4**
ARR Arges 88.88 316 ⇓P pP 00 40 06.2 +2.1
KTHA Kythira Island 88.89 306 P **P** **00 37 48.9 -2.2**
NVR Nevrokopi 88.90 311 P **P** **00 37 49.8 -1.3**
VILL Villia 88.92 308 P **P** **00 37 50.2 -1.1**
TSUM Tsumeb 88.92 251 P **P** **00 37 51.4 -0.4**
TSUM Tsumeb 88.92 251⇓iP **P** **00 37 52.1 +0.3**
TSUM IAmb IAmb 00 37 54.5
comp=Z,925nm,2.3s
TSUM Tsumeb 88.92 251 ⇑P **P** **00 37 52.1 +0.3**
TSUM ⇑P **P** **00 37 52.1 +0.3**
KTHR Kythira 88.94 306 P **P** **00 37 51.2 -0.1**
KRND KRANIDI 88.95 307 P **P** **00 37 48.2 -3.1**
NACGM Naroch 89.00 325⇓iP **P** **00 37 50.7 -0.5**
baz=100
VLI Veliai 89.05 307 P **P** **00 37 50.8 -1.0**
SRS Serrai 89.07 311 P **P** **00 37 50.0 -1.8**
WIN Windhoek 89.09 248⇓iP **P** **00 37 53.7 +1.1**
WIN IAmb IAmb 00 37 57.7
comp=Z,291nm,1.7s
WIN Windhoek 89.09 248 ⇓P **P** **00 37 53.6 +1.1**
WIN ⇑P **P** **00 37 53.8 +1.1**
TGMR Targu Mures 89.12 317 ⇑P **P** **00 37 53.1 +1.2**
NEO Neokhori 89.13 309 P **P** **00 37 50.3 -1.9**
XOR Xorichti 89.16 309 P **P** **00 37 49.0 -3.3**
MDB Medias 89.17 316 ⇑P **P** **00 37 53.4 +1.3**
MDB Medias 89.17 316 ⇑P **P** **00 37 53.4 +1.3**
SOH Sokhos 89.22 311 P **P** **00 37 50.9 -1.7**
LKR Lokris 89.22 309 P **P** **00 37 49.9 -2.7**
ARCR ARCALIA 89.31 317 ⇑P **P** **00 37 52.8 0.0**
ARCR ARCALIA 89.31 317 ⇓P pP 00 40 08.4 +2.4
HORT Hortiatis 89.38 311 P **P** **00 37 52.3 -1.1**
IIGN Ignalina 89.39 326 eP **P** **00 37 53.5 +0.5**
THAL Thalero 89.42 308 P **P** **00 37 52.7 -0.8**
WEWE WEWE 89.48 249 iP **P** **00 37 53.4 -0.9**
ISAL Salakas 89.49 326 eP **P** **00 37 53.7 +0.3**
THE Thessaloniki 89.49 311 P **P** **00 37 53.0 -0.7**
AUSN Aus 89.50 243 eP **P** **00 37 56.0 +1.6**
AUSN IAmb IAmb 00 37 59.6
comp=Z,618nm,1.9s
LOT Lotru 89.50 316 ⇑P **P** **00 37 53.4 -0.4**
AXAR Agios Charalam 89.50 309 P **P** **00 37 52.5 -1.4**

VTS	Vitosha	89.53 313	⇑P	P	00 37 53.8	-0.3
VTS	Vitosha	89.53 313	⇑P	PP	00 41 37.2	-0.3
VTS	Vitosha	89.53 313	⇑P	P	00 37 53.8	-0.3
VTS	Vitosha	89.53 313	P	P	00 37 53.0	-1.1
VTS	Vitosha	89.53 313	⇓P	P	00 37 53.3	-0.8
SPIA	Saint Paul Isl	89.55 33	P	P	00 37 53.7	+0.1
	baz=260					
KKB	Krupnik	89.55 312	P	P	00 37 52.7	-1.3
KNT	Kendrikon	89.60 311	P	P	00 37 52.9	-1.4
BAIL	Bailesti	89.62 314	⇑P	P	00 37 55.0	+0.8
BAIL	Bailesti	89.62 314	⇑P	pP	00 40 07.7	+0.1
VSU	Vasula	89.64 329	*d*/*P*	P	00 37 53.3	-0.7
VSU			pmax	pmax		
	comp=Z,1μm,0.8s					
VSU	Vasula	89.64 329	*e*P	P	00 37 54.1	+0.2
TRIP	Tripoli	89.67 308	P	P	00 37 47.0	-7.8
NIKH	Nikolski High	89.67 37	P	P	00 37 54.3	+0.1
	baz=262,SNR=6.4					
CJR	Cluj-Napoca	89.78 317	⇑P	P	00 37 56.0	+1.0
CJR	Cluj-Napoca	89.78 317	⇑P	pP	00 40 09.7	+1.3
CJR	Cluj-Napoca	89.78 317	⇑P	P	00 37 56.0	+1.0
KLMT	Kalamata	89.78 307	P	P	00 37 54.6	-0.6
LIT	Litokhoron	89.78 310	P	P	00 37 52.7	-2.5
SRE	Strehaia	89.80 315	⇓P	P	00 37 55.6	+0.5
SRE	Strehaia	89.80 315	⇓P	P	00 37 55.6	+0.5
LRSO	Larissa Observ	89.81 310	P	P	00 37 54.2	-1.0
KLV	Kalavryta, Ach	89.82 308	P	P	00 37 54.3	-1.1
CBBR	Cluj-Babes-Bol	89.82 317	⇑P	P	00 37 55.3	+0.2
VAY	Valandovo	89.86 311	*i*P	P	00 37 54.4	-1.1
ALIK	Aliki, Aigiali	89.87 308	P	P	00 37 56.8	+1.2
LVV	L'vov	89.90 320	*e*P	P	00 37 55.9	+0.5
LVV			*e**PP	pP	00 40 09.8	+1.0
LVV			*e*		00 41 35.0	
LVV			*e*		00 47 26.3	
LVV			*e*S	S	00 47 53.9	-2.4
LVV			*e*SSS	SSS	00 54 13.4	
LVV			pmax	pmax		
	comp=Z,1μm,1.2s					
LVV			MLR	MLR		
	comp=E,700nm,18.0s					
LVV			MLR	MLR		
	comp=N,600nm,19.0s					
LVV			MLR	MLR		
	comp=Z,1μm,19.0s					
ITM	Ithomi	89.90 307	P	P	00 37 53.8	-2.0
ITM	Ithomi	89.90 307	⇑P	P	00 37 55.3	-0.5
SERG	Sergoula	89.93 308	P	P	00 37 54.2	-1.7
TYRN	Tyrnavos	89.94 310	P	P	00 37 54.0	-1.8
MAKR	Makrakomi, Fth	89.94 309	P	P	00 37 54.6	-1.3
PUNG	Punghina	89.94 314	⇑P	P	00 37 56.5	+0.7
PUNG	Punghina	89.94 314	⇓P	pP	00 40 11.3	+2.2
GRG	Griva	89.95 311	P	P	00 37 54.5	-1.4
BMR	Baia Mare	89.97 318	⇑P	P	00 37 56.0	+0.2
BMR	Baia Mare	89.97 318	⇑P	P	00 37 56.0	+0.2
LAKA	Lakka	89.97 309	P	P	00 37 55.0	-1.1
PYL	PYLOS	90.02 307	P	P	00 37 53.0	-1.3
GAMB	Gambell	90.02 26	IAmb	IAmb	00 38 02.0	
	comp=Z,338nm,1.1s					
GAMB	Gambell	90.02 26	P	P	00 37 55.9	+0.3
	baz=259					
EFP	Efpalio	90.05 308	P	P	00 37 56.7	+0.3
BLKB	Belogradchik	90.05 314	⇑P	pP	00 40 11.1	+1.4
THL	Klokotos Trika	90.09 310	P	P	00 37 54.6	-1.9
KTI	Kastanea	90.10 310	P	P	00 37 55.4	-1.4
UPR	University Cam	90.13 308	P	P	00 37 59.8	+3.0
TROLL	Troll, Antarti	90.15 197	P	P	00 37 57.7	+1.3
TROLL	Troll, Antarti	90.15 197	P'P'df	P'P'df	01 03 25.8	-5.3
TROLL	Troll, Antarti	90.15 197	PKKPdf	PKKPdf	00 55 22.0	+2.0
TROLL	Troll, Antarti	90.15 197	PKiKP	PKiKP	00 42 47.6	+0.3
DRO	Drossia	90.15 308	P	P	00 37 56.4	-0.5
DEV	Deva	90.16 316	⇑P	P	00 37 57.0	+0.3
DEV	Deva	90.16 316	⇑P	pP	00 40 12.2	+2.0
DEV	Deva	90.16 316	⇑P	P	00 37 57.0	+0.3
EVR	Evrytania	90.18 309	P	P	00 37 56.1	-1.0
GZR	Gura Zlata	90.19 315	⇑P	P	00 37 57.2	+0.2
GZR	Gura Zlata	90.19 315	⇑P	SKKSdf	01 01 43.4	+10
GZR	Gura Zlata	90.19 315	⇑P	P	00 37 57.2	+0.2
MESR	Meseseni	90.27 317	⇓P	P	00 37 57.4	+0.2
DJES	Djerdap	90.28 315	⇑P	P	00 37 57.3	-0.1
KZN	Kozani	90.36 310	P	P	00 37 55.8	-2.1
RLS	Riolos of Patr	90.36 308	P	P	00 37 57.7	-0.1
PVO	Paravola	90.37 309	P	P	00 37 57.7	-0.2
HERR	Herculane	90.38 315	⇑P	P	00 37 57.5	-0.2
DRGR		90.39 317	⇑P	P	00 37 57.5	-0.4
DRGR		90.39 317	⇓P	pP	00 40 14.0	+2.6
DRGR		90.39 317	⇓P	PKKPbc	00 55 23.4	-0.9
DRGR		90.39 317	⇑P	P	00 37 57.5	-0.4
FINES	FINESS Array B	90.47 332	P	P	00 37 57.2	-0.5
	comp=Z,198nm,1.0s,baz=113,slow=5.4,SNR=174					
FINES			pP	pP	00 40 09.7	-1.6
	comp=Z,19nm,0.8s,baz=101,slow=14,SNR=2.2					
FINES			PP	PP	00 41 42.2	-1.9
	comp=Z,16nm,0.6s,baz=128,slow=9.0,SNR=1.7					
FINES			PKiKP	PKiKP	00 42 47.6	-0.2
	comp=Z,7.0nm,0.4s,baz=112,slow=3.9,SNR=8.2					
FINES			S	SKSac	00 47 28.1	-2.2
	comp=Z,7.1nm,0.9s,baz=174,slow=1.7,SNR=1.9					
FINES			PKKPbc	PKKPbc	00 55 23.9	-0.7
	comp=Z,5.9nm,0.4s,baz=318,slow=1.9,SNR=8.5					
	comp=Z,198nm,1.0s					
FINES	FINESS Array B	90.47 332	P	P	00 37 57.3	-0.5
FINES			*PP	pP	00 40 09.7	-1.6
KPRO	Kipourio	90.63 310	P	P	00 37 58.3	-0.8
TRPA	Tarpa	90.66 318	⇑P	P	00 37 58.6	-0.4
TRPA	Tarpa	90.66 318	⇑P	pP	00 40 14.6	+2.1
TRPA	Tarpa	90.66 318	⇑P	SKKSdf	01 01 44.4	+12
TRPA	Tarpa	90.66 318	P	P	00 37 58.1	-0.9
PABE	Paberze	90.69 326	*e*P	P	00 37 58.8	-0.1
WP01	e3381	90.74 249	*i*P	P	00 38 01.2	+1.1
BOVS	Bovan	90.75 314	⇑P	pP	00 40 13.7	+0.7
VSVD	Vaisvydziai	90.77 326	*e*P	P	00 37 58.8	-0.5
SKO	Skopje	90.78 312	*i*P	P	00 37 58.1	-1.6
LTHK	Lithakia	90.82 308	P	P	00 37 59.5	-0.4
PENT	Pentalofos	90.83 310	P	P	00 37 58.9	-1.2
MDVR	Moldovita	90.87 315	⇑P	P	00 37 59.8	-0.3
MDVR	Moldovita	90.87 315	⇓P	pP	00 40 14.0	+0.3
UZH	Uzhgorod	90.88 319	*e*P	P	00 38 00.5	+0.5
UZH			*e*		00 40 16.0	
UZH			*e*		00 41 49.5	
UZH			*e*		00 47 33.0	
UZH			*e*S	S	00 48 02.5	-2.6
UZH			*i*		00 54 30.0	
NEST	Nestorio	90.92 310	P	P	00 37 59.9	-0.6
JAN	Janina	90.99 310	P	P	00 38 00.0	-0.8
LTVH	Ltavrtes, Hu	91.01 317	⇑P	P	00 38 00.5	-0.1
LTVH	Ltavrtes, Hu	91.01 317	⇑P	pP	00 40 15.8	+1.6
LTVH	Ltavrtes, Hu	91.01 317	P	P	00 38 01.1	+0.5
BZS	Buzias	91.02 316	⇑P	P	00 38 00.2	-0.5
BZS	Buzias	91.02 316	⇓P	pP	00 40 15.3	+1.0
BZS	Buzias	91.02 316	⇑P	SKKSdf	01 01 38.8	+7.1
BZS	Buzias	91.02 316	⇑P	P	00 38 00.2	-0.5
NYDR	Nydri-Lefkada	91.02 309	P	P	00 38 00.9	+0.1
EVGI	Lefkada island	91.05 308	P	P	00 38 00.8	-0.2
PSDA	Pessada-Kefalo	91.06 308	P	P	00 38 01.1	+0.1
VLS	Valsamata	91.06 308	P	P	00 38 00.6	-0.5
BORR	Bors	91.06 317	⇑P	P	00 38 01.6	+0.7
SIRR	Siria	91.06 316	⇓P	P	00 38 00.9	0.0
SIRR	Siria	91.06 316	⇓P	pP	00 40 17.0	+2.6
SIRR	Siria	91.06 316	⇑P	SKKSdf	01 01 39.3	+7.7
LKD2	Lefkada island	91.06 309	P	P	00 38 00.9	-0.2
TSLK	Tsoukalades, L	91.07 309	P	P	00 38 01.0	-0.1
MEF	Metsahovi	91.10 330	*e*P	P	00 38 00.8	+0.1
FSK	Fiskardo	91.10 308	P	P	00 38 00.3	-1.0
KBN	Korca	91.13 310	P	P	00 38 00.4	-1.1
OHR	Ohrid	91.17 311	*i*P	P	00 38 01.1	-0.5
UNV	Unalaska Valle	91.18 36	P	P	00 38 01.2	0.0
	baz=263,SNR=17					
UNV	Unalaska Valle	91.18 36	P	P	00 38 01.0	-0.2
	comp=Z,139nm,0.7s					
MTSE	Matsula	91.19 329	*e*P	P	00 38 01.0	-0.1
KEF4	Livadi, Kephal	91.19 308	P	P	00 38 01.6	-0.1
DMLN	Damoulianata-K	91.23 308	P	P	00 38 01.9	0.0
LSK	Leskovik	91.23 310	P	P	00 38 01.3	-0.6
KEF3	Kipouria, Keph	91.25 308	P	P	00 38 01.5	-0.4
TIM	Timisoara	91.31 316	⇑P	P	00 38 03.4	+1.4
TIM	Timisoara	91.31 316	⇑P	P	00 38 03.4	+1.4
BANR	Banloc	91.33 315	⇑P	P	00 38 02.7	+0.6
IGT	Igoumenitsa	91.38 309	P	P	00 38 01.7	-0.8
CRVS	Cervenica-Dubn	91.46 319	*e*P	P	00 38 02.6	-0.1
CRVS			pmax	pmax		
	comp=Z,245nm,1.1s					
KEV	Kevo	91.49 340	P	P	00 38 01.3	-1.0
KEV			IAmb	IAmb	00 38 06.2	
	comp=Z,232nm,1.3s					
KEV	Kevo	91.49 340	P	P	00 38 01.3	-1.0
KEV			pmax	pmax		
	comp=Z,232nm,1.3s					
KEV	Kevo	91.49 340	⇑P	P	00 38 01.1	-1.2
ABAH	Abaujker	91.55 318	P	P	00 38 02.1	-0.9
ABAH			PP	pP	00 40 17.5	+0.8
AKUT	Akutan	91.64 36	⇑P	P	00 38 03.3	0.0
STHS	Stebnicka Huta	91.65 319	*e*P	P	00 38 03.1	-0.5
STHS			*e*		00 47 38.3	
SRN	Sarande	91.67 310	P	P	00 38 03.4	-0.4
AMBH	Ambrzfalva	91.71 316	⇑P	P	00 38 04.4	+0.6
AMBH	Ambrzfalva	91.71 316	P	P	00 38 05.6	+1.8
KEK	Kerkira	91.81 310	P	P	00 38 04.2	-0.3
KEK	Kerkira	91.81 310	⇑P	P	00 38 04.1	-0.4
KEK			⇑P	P	00 38 04.1	-0.4
KEK			⇑P	P	00 38 06.2	+1.7
SNAA	Sanae	91.86 197	P	P	00 38 04.9	+0.8
SNAA	Sanae	91.86 197	P'P'df	P'P'df	01 03 26.9	-0.8
SNAA	Sanae	91.86 197	PKKPdf	PKKPdf	00 55 14.3	-2.7
SNAA	Sanae	91.86 197	PKiKP	PKiKP	00 42 52.7	+2.6
SNAA	Sanae	91.86 197	PKKP		00 55 16.7	
	comp=Z,17nm,0.8s,baz=264,slow=2.3,SNR=11					
SNAA	Sanae	91.86 197	P	P	00 38 04.0	-0.2
SNAA			IAmb	IAmb	00 40 27.5	
	comp=Z,180nm,1.3s					
SNAA	Sanae	91.86 197	⇓*i*P	P	00 38 05.4	+1.3
SNAA	Sanae	91.86 197	*d*/*P*	P	00 38 04.7	+0.6
SNAA			pmax	pmax		
	comp=Z,133nm,1.2s					
SLIT	Slitere, Latvi	91.86 328	*e*P	P	00 38 03.2	-1.0
TIR	Tirane	91.89 311	⇑P	P	00 38 04.6	-0.3
TIR	Tirane	91.89 311	P	P	00 38 03.5	-1.3
TIR	Tirane	91.89 311	⇑P	P	00 38 04.6	-0.3
TIR	Tirane	91.89 311	⇓P	P	00 38 04.5	-0.3
PBUR	Paburge	91.89 326	*e*P	P	00 38 04.1	-0.3
TNA	Tin City	91.91 24	P	P	00 38 04.9	+0.6
	baz=262					
TNA	Tin City	91.91 24	⇓P	P	00 38 05.7	+1.4
TNA			⇑P	P	00 38 05.8	+1.4
TNA			⇓P	P	00 38 08.9	+4.6
PVY	Plav	91.93 312	*e*P	P	00 38 03.7	-1.4
ARA0	ARCESS Array S	91.97 340	*e*P	P	00 38 03.9	-0.7
ARA0			IVmB_BB		00 38 08.4	
	comp=Z,2μm,0.5s					
ARA0			*e*pP	pP	00 40 22.8	+4.6
ARA0			*e*SP	SP	00 49 28.1	-1.5
ARCES	ARCESS Array B	91.97 340	P	P	00 38 03.8	-0.8
	comp=Z,58nm,0.6s,baz=104,slow=5.2,SNR=222					
ARCES			pP	pP	00 40 18.0	-0.2
	comp=Z,22nm,0.9s,baz=93,slow=18,SNR=2.2					
ARCES			PP	PP	00 41 55.6	+0.1
	comp=Z,75nm,1.1s,baz=142,slow=9.2,SNR=3.5					
ARCES			PKiKP	PKiKP	00 42 50.5	+0.3
	comp=Z,14nm,0.9s,baz=127,slow=2.4,SNR=0.5					
ARCES			S	SKSac	00 47 36.5	-2.0
	comp=Z,7.0nm,0.9s,baz=246,slow=5.0,SNR=2.2					
ARCES			PKKP	PKKPdf	00 55 16.1	-1.3
	comp=Z,1.3nm,0.4s,baz=276,slow=3.4,SNR=8.9					
	comp=Z,58nm,0.6s					
ARCES	ARCESS Array B	91.97 340	P	P	00 38 03.8	-0.8
ARCES			*PP	pP	00 40 18.0	-0.2
IVA	Berane	92.00 313	*e*P	P	00 38 04.3	-1.1
DIVS	Divibare	92.03 314	⇓*i*P	P	00 38 04.9	-0.6
DIVS	Divibare	92.03 314	⇓P	P	00 38 04.7	-0.8
KECS	Kecovo	92.06 318	*e*P	P	00 38 05.5	+0.1
KECS			*e*		00 47 40.4	
KECS			pmax	pmax		
	comp=Z,126nm,1.0s					
VLO	Vlora	92.10 310	P	P	00 38 08.2	+2.4
BSZH	Besenyszg	92.11 317	⇓P	P	00 38 05.6	0.0
BSZH	Besenyszg	92.11 317	P	P	00 38 06.0	+0.4
BSZH			PP	pP	00 40 21.5	+2.2
BEL	Belsk	92.17 322	*e*P	P	00 38 06.3	+0.5
BEL			*e*pP	pP	00 40 19.9	+0.4
BEL			*e*PP	PP	00 41 55.7	-1.7
BEL			*e*SKS	SKSac	00 47 40.4	+0.3
BEL			*e*S	S	00 48 12.4	-3.7
BEL			*e*L	L	01 03 03.7	
	comp=Z,4μm,21.9s					
BEL	Belsk	92.17 322	P	P	00 38 06.5	+0.7
BEL	Belsk	92.17 322	⇓P	P	00 38 05.4	-0.4
BEL			⇑P	P	00 38 06.4	+0.7
BEL			⇑P	P	00 38 08.6	+2.8
FRGS	Fruska Gora	92.25 315	⇑P	P	00 38 05.5	-0.9
FRGS	Fruska Gora	92.25 315	⇓P	pP	00 40 20.9	+0.9
FRGS	Fruska Gora	92.25 315	⇓*i*P	P	00 38 05.1	-1.3
TEKS	Tekeris	92.40 314	*e*P	P	00 38 05.7	-1.4
PLE	Pljevija	92.40 313	*e*P	P	00 38 06.6	-0.7
ULC	Ulcinj	92.41 312	*e*P	P	00 38 06.0	-1.2
PSZ	Piszkesteto	92.41 318	⇑P	P	00 38 06.7	-0.5
PSZ	Piszkesteto	92.41 318	⇑P	pP	00 40 23.1	+2.2
PSZ	Piszkesteto	92.41 318	⇑P	P	00 38 06.7	-0.5
PSZ	Piszkesteto	92.41 318	P	P	00 38 06.8	-0.3
BBLS	Lazići	92.43 314	⇓*i*P	P	00 38 06.7	-0.7
PDG	Podgorica	92.43 312	⇑P	P	00 38 06.6	-0.7
PDG	Podgorica	92.43 312	⇑P	P	00 38 06.2	-1.0
TTG	Podgorica	92.43 312	*e*P	P	00 38 06.3	-1.0
RUDO	Rudo	92.44 313	*e*P	P	00 38 06.3	-1.0
DRME	Dracevica, Mon	92.47 312	⇓*i*P	P	00 38 06.2	-1.3
DRME	Dracevica, Mon	92.47 312	*e*P	P	00 38 06.7	-0.8
RAF	Rauma	92.48 331	*e*P	P	00 38 06.8	-0.2
OJC	Ojcow	92.65 320	*e*P	P	00 38 06.5	-1.7
OJC			*e*pP	pP	00 40 21.8	-0.1
OJC			*e*PP	PP	00 41 57.9	-3.4
OJC			*e*SKS	SKSac	00 47 41.5	-1.5
OJC	Ojcow	92.65 320	IAmb	IAmb	00 38 10.2	
	comp=Z,148nm,1.0s					
OJC	Ojcow	92.65 320	P	P	00 38 07.1	-1.0
OJC	Ojcow	92.65 320	⇓P	P	00 38 05.6	-2.5
BUM	Brajici-Budva	92.69 312	*e*P	P	00 38 07.5	-1.1
CEME	Cevo	92.69 312	*e*P	P	00 38 07.6	-1.0
KTK1	Kautokeino	92.70 339	*e*P	P	00 38 06.6	-1.3
KTK1			IVmBBB		00 38 11.5	
	comp=Z,1μm,1.6s					
KTK1			*e*pP	pP	00 40 26.8	+5.2
KTK1			*e*ScS	S	00 48 19.0	-1.2
HAMF	Hammerfest	92.74 341	*e*P	P	00 38 07.2	-0.9
HAMF			IVmB_BB		00 38 10.6	
	comp=Z,1μm,1.1s					
HAMF			*e*pP	pP	00 40 25.1	+3.4
HAMF			*e*sP	sP	00 41 30.2	+7.0
HAMF			*e*ScS	S	00 48 19.2	-1.1
HAMF			*e*SP	SP	00 49 38.8	+0.8
UPM	Unac-Piva	92.75 313	*e*P	P	00 38 07.7	-1.3
UPM	Unac-Piva	92.75 313	*e*P	P	00 38 07.9	-1.1
SCTE	Santa Cesarea	92.86 310	P	P	00 38 09.2	-0.1
SCTE			IAmb	IAmb	00 38 12.8	
	comp=Z,385nm,0.9s					
ANM	Nome	92.88 26	P	P	00 38 09.7	+0.9
	baz=265					
BUD	Budapest	92.96 317	P	P	00 38 09.3	-0.3
BUD			PP	pP	00 40 22.6	-0.7
BRY	Bratogost	92.99 313	*e*P	P	00 38 08.6	-1.4
BRY	Bratogost	92.99 313	*e*P	P	00 38 08.7	-1.3
HCY	Herceg Novi	93.00 312	*e*P	P	00 38 08.8	-1.1
HCY	Herceg Novi	93.00 312	*e*P	P	00 38 08.7	-1.1
FALS	False Pass	93.08 35	P	P	00 38 09.5	-0.4
	baz=266					
HOPEN	Hopen	93.12 347	*e*P	P	00 38 09.5	-0.2
HOPEN			IVmBBB		00 38 12.2	
	comp=Z,1μm,1.6s					
HOPEN			*e*pP	pP	00 40 26.9	+3.5
HOPEN			*e*sP	sP	00 41 30.6	+5.8
HOPEN			*e*ScS	S	00 48 22.7	-0.8
MORH	Mrgy, Hungar	93.14 316	⇑P	P	00 38 09.7	-0.7
MORH	Mrgy, Hungar	93.14 316	⇓P	SKKSdf	01 01 32.0	+4.0
MORH	Mrgy, Hungar	93.14 316	P	P	00 38 09.7	-0.7
MORH			PP	pP	00 40 24.4	+0.3
VYHS	Vyhne	93.16 318	*e*P	P	00 38 09.9	-0.6
VYHS			pmax	pmax		
	comp=Z,134nm,1.4s					
AAL	Aland	93.28 330	*e*P	P	00 38 10.1	-0.6
SRO	Srobarova	93.47 318	*e*P	P	00 38 11.7	-0.1
SRO			pmax	pmax		
	comp=Z,151nm,1.1s					
CSKK	Cskako	93.47 317	P	P	00 38 12.1	+0.2
CSKK			PP	pP	00 40 26.2	+0.5
VNA2	Neumayer--Watz	93.50 197	P	P	00 38 12.2	+0.7
	baz=105,slow=4.0					
VNA2	Neumayer--Watz	93.50 197	P'P'df	P'P'df	01 03 19.6	-5.0
VNA2	Neumayer--Watz	93.50 197	PKKPdf	PKKPdf	00 55 10.6	-3.4
VNA2	Neumayer--Watz	93.50 197	PKiKP	PKiKP	00 42 53.7	+0.8
VNA2			x	x	01 03 19.6	
KOVH	Kovagotottos	93.51 316	P	P	00 38 10.9	-1.2
KOVH			PP	pP	00 40 26.4	+0.6
STON	Ston	93.61 313	⇓*i*P	P	00 38 10.3	-2.3
RAC	Raciborz	93.67 320	*e*P	P	00 38 11.9	-0.8
RAC	Raciborz	93.67 320	*e*P	P	00 38 11.9	-0.8
OKC	Ostrava-Krasne	93.69 320	*e*P	P	00 38 12.7	-0.1
OKC			*e*		00 47 48.3	
OKC	Ostrava-Krasne	93.69 320	*e*PDIFF	P	00 38 12.7	-0.1
OKC			*e*PP	PP	00 42 00.1	-9.1
OKC			*e*SKS	SKSac	00 47 48.3	-0.2
TIH	Tihany	93.70 317	P	P	00 38 12.8	-0.2
TIH			PP	pP	00 40 26.4	-0.3
JETT	Jettan, Norway	93.75 339	*e*P	P	00 38 11.9	-0.9
JETT			IVmBBB		00 38 15.0	
	comp=Z,1μm,0.4s					
JETT			*e*pP	pP	00 40 30.0	+3.5
JETT			*e*sP	sP	00 41 34.9	+6.9
JETT			*e*ScS	S	00 48 28.5	-0.9
A052A	Srbac	93.86 315	⇓*i*P	P	00 38 12.8	-0.9
MAUC	Maruska	93.87 319	*e*PDIFF	P	00 38 13.1	-0.6
MAUC			*e*PP	PP	00 42 03.8	-6.9
VNA1	Neumayer--Stat	93.88 197	P	P	00 38 14.4	+1.1
VNA1	Neumayer--Stat	93.88 197	P'P'df	P'P'df	01 03 17.8	-6.0
JAVC	Velka Javorina	93.95 319	*e*P	P	00 38 14.1	0.0
JAVC			*e*pP	pP	00 40 29.7	+1.7
JAVC			*e*PP	PP	00 42 12.7	+1.4
JAVC			*e*		00 45 10.8	
MPLH	Magyarpolny	93.95 317	P	P	00 38 14.2	+0.1
MPLH			PP	pP	00 40 28.5	+0.6
VNA3	Neumayer Olymp	94.02 197	P	P	00 38 14.5	+0.6
VNA3	Neumayer Olymp	94.02 197	P'P'df	P'P'df	01 03 19.6	-4.0
VNA3	Neumayer Olymp	94.02 197	PKKPdf	PKKPdf	00 55 10.6	-2.4
VNA3	Neumayer Olymp	94.02 197	PKiKP	PKiKP	00 42 54.6	+0.8
MORC	Moravsky Berou	94.08 319	⇑P	P	00 38 14.6	-0.1
MORC	Moravsky Berou	94.08 319	P	P	00 38 14.1	-0.6
MORC			IAmb	IAmb	00 38 18.6	
	comp=Z,241nm,1.3s					
MORC	Moravsky Berou	94.08 319	⇑P	P	00 38 14.6	-0.1
MORC	Moravsky Berou	94.08 319	*e*P	P	00 38 14.1	-0.6
MORC			*e*pP	pP	00 40 29.9	+1.4
MORC			*e*PP	PP	00 42 12.9	+0.6
MORC			*e*		00 45 11.2	
BLY	Banja Luka	94.08 314	⇓*i*P	P	00 38 14.2	-0.5
BLY	Banja Luka	94.08 314	⇑P	P	00 38 13.9	-0.8
SMOL	Smolenice	94.09 318	*e*P	P	00 38 14.4	-0.3
SMOL			pmax	pmax		
	comp=Z,24nm,0.9s					
EGYH	Egyhazaskeszo	94.11 317	P	P	00 38 14.8	0.0
EGYH			PP	pP	00 40 29.1	+0.5
RDOG	Red Dog Mine	94.12 22	P	P	00 38 14.0	-0.4
	baz=267					
TIP	Timpagrande	94.12 309	⇑P	P	00 38 15.9	+0.8
TIP	Timpagrande	94.12 309	IAmb	IAmb	00 38 20.1	
	comp=Z,137nm,1.2s					
TIP	Timpagrande	94.12 309	⇓P	P	00 38 15.3	+0.2
MGRS	Mrkonjic Grad	94.14 314	*e*P	P	00 38 14.7	-0.3
MODS	Modra-Piesok	94.19 318	*e*P	P	00 38 14.3	-0.9
MODS			*e*		00 47 51.4	
MODS			pmax	pmax		
	comp=Z,240nm,1.2s					
MATE	Matera	94.23 310	⇑P	P	00 38 15.8	+0.3
TRO	Tromso	94.27 339	*e*P	P	00 38 11.5	-3.5
TRO			IVmB_BB		00 38 17.0	
	comp=Z,718nm,1.1s					
TRO			*e*pP	pP	00 40 32.4	+3.6
TRO			*e*sP	sP	00 41 37.1	+6.8
TRO			*e*ScS	S	00 48 32.5	-1.2
A051A	Mrakovica	94.29 315	⇓*i*P	P	00 38 14.7	-1.1
ZST	Bratislava	94.30 318	*e*P	P	00 38 15.2	-0.4
ZST			pmax	pmax		
	comp=Z,288nm,1.3s					
GKP	Gorka Klasztor	94.42 323	*e*P	P	00 38 15.7	-0.3
GKP			*e*pP	pP	00 40 31.1	+1.2
GKP			*e*PP	PP	00 42 13.3	-1.3
GKP			*e*SKS	SKSac	00 47 51.5	-0.7
GKP			*e*S	S	00 48 33.1	-2.5
GKP			*e*L	L	01 03 44.6	
	comp=Z,4μm,21.8s					
GKP	Gorka Klasztor	94.42 323	P	P	00 38 16.0	0.0
GKP	Gorka Klasztor	94.42 323	*e*P	P	00 38 15.8	-0.2
PRIJ	Prijedor	94.42 315	*e*P	P	00 38 15.9	-0.4
BJO1	Bjornoya	94.45 344	*e*P	P	00 38 14.7	-1.1
BJO1			IVmB_BB		00 38 17.6	
	comp=Z,803nm,0.9s					
BJO1			*e*pP	pP	00 40 34.3	+4.7
BJO1			*e*sP	sP	00 41 37.6	+6.6
BJO1			*e*ScS	S	00 48 34.4	-0.7
KRLC	Kraliky	94.58 320	*e*P	P	00 38 16.8	-0.2
KRLC			*e*		00 47 51.6	
KRLC	Kraliky	94.58 320	*e*PDIFF	P	00 38 16.8	-0.2
KRLC			*e*PP	PP	00 42 07.3	-8.8
KRLC		

comp=Z,28nm,0.7s,SNR=25
CONA *e*P **PP** **00 42 15.3 -5.0**
comp=Z,250nm,1.5s
CONA *e*P **PKKPdf** **00 55 11.4 +0.1**
comp=Z,9.1nm,0.7s
CONA *e*P **P'P'df** **01 03 25.9 +3.4**
comp=Z,8.3nm,1.2s
SPA0 Spitsbergen Ar 95.12 348 *e*P **P** **00 38 18.1 -0.6**
SPA0 IVmB_BB 00 38 22.8
comp=Z,3μm,1.6s
SPA0 *e*pP **pP** **00 40 36.8 +4.1**
SPA0 *e*SKSac **SKSac** **00 47 52.9 -2.2**
SPITS Spitsbergen Ar 95.12 348 P **P** **00 38 17.7 -1.1**
comp=Z,158nm,0.6s,baz=116,slow=7.5,SNR=93
SPITS pP **pP** **00 40 32.2 -0.5**
comp=Z,31nm,0.9s,baz=75,slow=24,SNR=2.8
SPITS PKiKP **PKiKP** **00 42 56.6 +1.1**
comp=Z,37nm,1.0s,baz=315,slow=20,SNR=1.7
comp=Z,158nm,0.6s
SPITS Spitsbergen Ar 95.12 348 P **P** **00 38 17.7 -1.1**
SPITS *PP **pP** **00 40 32.2 -0.5**
CHNA Chernabura Isl 95.28 35 P **P** **00 38 19.8 -0.1**
baz=269
HSPB Hornsund (broa 95.32 347 *e*P **P** **00 38 19.1 -0.6**
HSPB *e*pP **pP** **00 40 36.4 +2.8**
HSPB *e*SKS **SKSac** **00 47 55.0 -1.0**
HSPB *e*L L 01 04 57.1
comp=Z,5μm,25.6s
ARSA Arzberg 95.33 317 *e*P **P** **00 38 19.8 -0.6**
comp=Z,63nm,0.9s,SNR=28
ARSA *e*P **PP** **00 42 15.4 -6.4**
comp=Z,93nm,1.0s
ARSA *e*P **PKKPdf** **00 55 11.2 +0.3**
comp=Z,6.9nm,1.0s
ARSA *e*P **P'P'df** **01 03 20.3 -1.7**
comp=Z,10nm,1.7s
TREC Trest 95.40 319 *e*P **P** **00 38 20.2 -0.4**
TREC Trest 95.40 319 *e*PDIFF **P** **00 38 20.2 -0.4**
TREC *e*PP **PP** **00 42 16.3 -6.0**
BOJS Bojanci 95.47 315 ⇓*i*P **P** **00 38 20.1 -0.9**
FAUS Fauske 95.58 337 *e*P **P** **00 38 20.1 -0.8**
FAUS IVmB_BB 00 38 25.0
comp=Z,3μm,1.5s
FAUS *e*pP **pP** **00 40 38.7 +3.8**
FAUS *e*sP **sP** **00 41 42.7 +6.4**
FAUS *e*ScS **S** **00 48 43.2 -1.8**
STEI Steigen 95.59 338 *e*P **P** **00 38 20.1 -0.8**
STEI IVmB_BB 00 38 23.5
comp=Z,2μm,0.3s
STEI *e*pP **pP** **00 40 39.5 +4.6**
STEI *e*sP **sP** **00 41 42.2 +5.8**
SOKA Soboth 95.65 316 *e*P **P** **00 38 22.3 +0.4**
comp=Z,56nm,0.9s,SNR=23
SOKA *e*P **PP** **00 42 20.6 -3.8**
comp=Z,227nm,1.3s
WDD Wied Dalam 95.76 305 IAmb IAmb 00 38 31.2
comp=Z,96nm,0.8s
N16K Nishlik Lake 95.76 30 P **P** **00 38 22.0 0.0**
baz=270,SNR=50
BSD Bornholm Skovb 95.82 325 P **P** **00 38 21.2 -1.1**
BSD Bornholm Skovb 95.82 325 *e*P **P** **00 38 22.3 -0.1**
BSD Bornholm Skovb 95.82 325 *i*P **P** **00 38 22.4 +0.1**
BSD IAmb IAmb 00 38 25.8
comp=Z,289nm,1.4s
GOPC GO Pecny, Ondr 95.87 320 *e*P **P** **00 38 22.4 -0.3**
GOPC *e* 00 48 00.1
GOPC GO Pecny, Ondr 95.87 320 *e*PDIFF **P** **00 38 22.4 -0.3**
GOPC *e*PP **PP** **00 42 19.3 -6.5**
GOPC *e*SKS **SKSac** **00 48 00.1 +0.1**
VAE Valguarnera 95.90 307 P **P** **00 38 23.9 +0.7**
comp=Z,13nm,0.9s,baz=63,slow=6.8,SNR=6.2
comp=Z,13nm,0.9s
RAFF Raffo Rosso 95.93 307 IAmb IAmb 00 42 13.7
comp=Z,120nm,1.1s
MOR8 Moi Rana 95.94 336 *e*P **P** **00 38 21.6 -1.1**
MOR8 IVmB_BB 00 38 26.2
comp=Z,2μm,1.9s
MOR8 *e*pP **pP** **00 40 39.5 +2.8**
MOR8 *e*sP **sP** **00 41 43.1 +5.0**
MOR8 *e*ScS **S** **00 48 45.5 -2.7**
CHGN Chignik 95.96 34 P **P** **00 38 22.5 -0.4**
baz=270
KBS Kingsbay 95.97 349 *de*P **P** **00 38 21.3 -1.2**
KBS pmax pmax
comp=Z,93nm,1.0s
KBS Kingsbay 95.97 349 *e*P **P** **00 38 21.3 -1.2**
KBS IVmB_BB 00 38 26.0
comp=Z,861nm,1.5s
KBS *e*pP **pP** **00 40 40.0 +3.5**
KBS *e*sP **sP** **00 41 44.4 +6.5**
KBS Kingsbay 95.97 349 *i*P **P** **00 38 20.6 -1.9**
OBKA Obir 95.98 316 ⇓*i*P **P** **00 38 21.9 -1.5**
OBKA Obir 95.98 316 *e*P **P** **00 38 22.9 -0.5**
comp=Z,69nm,1.1s,SNR=15
OBKA *e*P **PP** **00 42 23.1 -3.8**
comp=Z,234nm,1.3s
OBKA *e*S **SKSac** **00 48 03.5 +2.6**
comp=Z,18nm,1.0s
OBKA *e*P **P'P'df** **01 03 19.9 -1.1**
comp=Z,5.9nm,1.2s
LJU Ljubljana 95.99 316 *i* Pdiff **P** **00 38 23.1 -0.3**
LJU *i* pP **pP** **00 40 38.6 +1.2**
LJU *e*sP **sP** **00 41 35.7 -3.1**
LJU *e*PP **PP** **00 42 25.0 -1.9**
LJU *e*pPP 00 44 14.2
LJU *e*PPP PPP 00 45 23.4
LJU *e*pPPP 00 47 26.4
LJU *e*SKSac **SKSac** **00 48 01.4 +0.6**
LJU *e* 00 51 35.7
LJU *e* 00 54 01.4
PVCC Panska Ves 96.01 320 *e*P **P** **00 38 23.2 -0.1**
PVCC *e* 00 42 21.9
PVCC *e* 00 48 00.9
PVCC Panska Ves 96.01 320 *e*PDIFF **P** **00 38 23.2 -0.1**
PVCC *e*PP **PP** **00 42 21.9 -5.0**
PVCC *e*SKS **SKSac** **00 48 00.9 +0.2**
PRU Pruhonice 96.03 320 *e*P **P** **00 38 23.0 -0.4**
PRU *e* 00 48 01.4
PRU Pruhonice 96.03 320 *e*PDIFF **P** **00 38 23.0 -0.4**
PRU *e*PP **PP** **00 42 21.0 -6.0**
PRU *e*SKS **SKSac** **00 48 01.4 +0.6**
CEY Cerknica 96.06 315 ⇓*i*P **P** **00 38 22.6 -1.1**
O16K Kokwok River B 96.11 31 P **P** **00 38 23.6 +0.1**
baz=271,SNR=11
P16K Nushagak River 96.17 31 P **P** **00 38 22.9 -0.8**
baz=271
CKRC Cesky Krumlov 96.17 318 *e*PDIFF **P** **00 38 24.1 0.0**
CKRC *e*PP **PP** **00 42 20.6 -7.6**
CKRC *e*SKS **SKSac** **00 48 01.6 0.0**
MOA Molln 96.19 317 *e*P **P** **00 38 23.2 -1.0**
comp=Z,28nm,0.7s,SNR=15
MOA *e*P **PP** **00 42 23.5 -4.9**
comp=Z,79nm,0.8s
MOA *e*S **SKSac** **00 48 00.3 -1.5**
comp=Z,16nm,1.2s
LOF Lofoten 96.22 338 *e*P **P** **00 38 22.7 -1.1**
LOF IVmB_BB 00 38 25.8
comp=Z,901nm,0.9s
LOF *e*pP **pP** **00 40 40.9 +3.0**
LOF *e*sP **sP** **00 41 46.3 +7.0**
LOF *e*ScS **S** **00 48 49.7 -0.7**
A21K Barrow 96.30 19 P **P** **00 38 24.3 +0.3**
baz=273
SKDS Skadanscina 96.35 315 ⇓*i*P **P** **00 38 22.0 -3.0**
DEL Delary 96.41 326 *e*P **P** **00 38 25.8 +0.9**
R16K Pilot Point 96.41 33 P **P** **00 38 24.3 -0.5**
baz=271
HFS Hagfors 96.43 330 P **P** **00 38 24.5 -0.5**
comp=Z,304nm,1.0s,baz=106,slow=3.2,SNR=72
HFS pP **pP** **00 40 38.7 -0.3**
comp=Z,31nm,0.8s,baz=161,slow=5.8,SNR=4.0
HFS PP **PP** **00 42 25.1 -4.6**
comp=Z,174nm,1.2s,baz=96,slow=11,SNR=6.0
comp=Z,304nm,1.0s
HFS Hagfors 96.43 330 P **P** **00 38 24.5 -0.5**
HFS *PP **pP** **00 40 38.7 -0.3**
KONS Konsvik 96.46 336 *e*P **P** **00 38 24.6 -0.4**
KONS IVmB_BB 00 38 27.8
comp=Z,1μm,1.0s
RUE Ruedersdorf 96.50 322 *e*P **P** **00 38 25.4 0.0**
STOK Stokkvaagen 96.51 336 *e*P **P** **00 38 24.8 -0.3**
GCSA Galena City Sc 96.53 25 P **P** **00 38 25.1 -0.2**
baz=272
CADS Cadrg 96.54 316 *i* Pdiff **P** **00 38 24.6 -1.3**

GEC2 GERESS Array S 96.57 318 P **P** **00 38 25.2 -0.8**
GEC2 IAmb IAmb 00 38 30.4
comp=Z,100nm,1.2s
GERES GERESS Array B 96.57 318 P **P** **00 38 25.2 -0.8**
comp=Z,35nm,0.9s,baz=90,slow=5.3,SNR=49
GERES PP **PP** **00 42 29.5 -1.8**
comp=Z,31nm,0.9s,baz=86,slow=6.3,SNR=4.5
GERES PKiKP **PKiKP** **00 42 59.0 0.0**
comp=Z,6.8nm,0.8s,baz=129,slow=2.8,SNR=5.9
GERES S **SKSac** **00 48 03.2 -0.7**
comp=Z,1.0nm,0.8s,baz=143,slow=2.7,SNR=1.1
comp=Z,35nm,0.9s
GERES GERESS Array B 96.57 318 P **P** **00 38 25.2 -0.8**
O17K Koliganek Bris 96.61 31 P **P** **00 38 25.0 -0.7**
baz=272
MYKA Terra Mystica 96.61 316 *e*P **P** **00 38 25.2 -1.0**
comp=Z,20nm,0.6s,SNR=6.3
MYKA *e*P **PP** **00 42 26.9 -4.7**
comp=Z,85nm,1.6s
MYKA *e*S **SKSac** **00 48 03.9 -0.2**
comp=Z,19nm,1.0s
BIOA Bad Ischl, Aus 96.61 317 *e*P **P** **00 38 25.0 -1.1**
comp=Z,26nm,0.7s,SNR=23
BIOA *e*P **PP** **00 42 24.4 -7.1**
comp=Z,59nm,1.3s
BIOA *e*S **SKSac** **00 48 01.7 -2.2**
comp=Z,20nm,1.0s
KHC Kasperske Hory 96.65 319 *e*P **P** **00 38 25.4 -0.9**
KHC *e* 00 42 40.0
KHC *e* 00 48 04.1
KHC Kasperske Hory 96.65 319 *e*PDIFF **P** **00 38 25.4 -0.9**
KHC *ex* x 00 38 44.5
KHC *e*PP **PP** **00 42 25.7 -6.1**
KHC *ex* x 00 42 40.0
KHC *e*SKS **SKSac** **00 48 04.1 0.0**
RGN Rugen 96.75 324 IAmb IAmb 00 42 32.3
comp=Z,175nm,1.0s
CAMP Campotosto 96.76 312 P **P** **00 38 26.1 -1.0**
CAMP IAmb IAmb 00 42 27.1
comp=Z,83nm,1.1s
AQU L'Aquila 96.76 312 IAmb IAmb 00 38 30.4
comp=Z,109nm,1.0s
AQU L'Aquila 96.76 312 ⇓P **P** **00 38 26.3 -0.6**
AQU L'Aquila 96.76 312 ⇓P **P** **00 38 26.4 -0.6**
PTCC Patocco-Chiusa 96.81 316 ⇑P **P** **00 38 25.9 -1.2**
PTCC ⇓P **PcP** **00 38 26.1 -1.0**
KBA Koelnbreinsper 96.81 317 *i*P **P** **00 38 25.7 -1.5**
comp=Z,30nm,0.9s,SNR=10
KBA *e*P **PP** **00 42 26.5 -6.8**
comp=Z,129nm,1.2s
KBA *e*S **SKSac** **00 48 02.6 -2.8**
comp=Z,40nm,0.8s
P17K Kvichak River 96.96 31 P **P** **00 38 27.4 0.0**
baz=272
CLL Collm 97.00 321 *e*P **P** **00 38 27.0 -0.7**
CLL *e**PP **pP** **00 40 37.0 -4.9**
CLL *e* 00 48 04.0
CLL pmax pmax
comp=Z,68nm,1.1s
CLL Collm 97.00 321 *e*Pdif **P** **00 38 27.0 -0.7**
comp=Z,68nm,1.1s
CLL *ex* x 00 39 06.0
CLL *e*pP **pP** **00 40 37.0 -4.9**
CLL *e*sP **sP** **00 41 39.0 -4.2**
CLL *ex* x 00 42 09.0
CLL *e*PP **PP** **00 42 32.0 -2.3**
CLL *i* x x 00 42 35.8
CLL *ex* x 00 42 43.0
CLL *e*pPP 00 44 24.0
CLL *e*PPP PPP 00 44 42.0
CLL *e*sPP 00 45 30.0
CLL *e*sPPP 00 47 36.0
CLL *e*SKSac **SKSac** **00 48 04.0 -1.6**
CLL *e*SKKSac **SKKSac** **00 48 33.0 -2.9**
CLL *ex* x 00 49 30.0
CLL *e*sS **sS** **00 52 54.0 -5.5**
CLL *e*sPS 00 54 13.0
CLL *e*PKKPdf **PKKPdf** **00 55 08.0 +0.1**
CLL *e*SS SS 00 55 41.0 -13
CLL *e*SKKPbc **SKKPbc** **00 57 49.0 -0.6**
CLL *e*SS 00 59 12.0
CLL *ex* x 01 00 36.0
CLL *e*SSSS 01 03 00.0
TTA Tatalina 97.00 27 P **P** **00 38 27.7 +0.1**
baz=273,SNR=23
NSS Namsos 97.05 334 *e*Pdif Pdif 00 38 26.8 -0.8
NSS IVmB_BB 00 38 31.8
comp=Z,1μm,1.6s
NSS *e*sP sP 00 41 48.9 +5.7
N18K Kilae Creek 97.18 30 IAmb IAmb 00 38 35.0
comp=Z,75nm,0.8s
N18K Kilae Creek 97.18 30 P **P** **00 38 28.7 +0.4**
baz=273,SNR=9.5
COP Copenhagen 97.23 325 *i*P PKiKP 00 42 37.7 -22
Q17K Contact Creek 97.29 32 P Pdif 00 38 28.6 -0.4
baz=272,SNR=5.4
SVW2 Sparrevohn 97.31 29 IAmb IAmb 00 38 35.6
comp=Z,63nm,0.9s
NKC Novy Kostel 97.37 320 *e*P Pdif 00 38 29.0 -0.4
NKC *e* 00 42 33.9
NKC Novy Kostel 97.37 320 *e*PDIFF Pdif 00 38 29.0 -0.4
NKC *e*PP **PP** **00 42 33.9 -3.3**
ABTA Abfaltersbach 97.39 316 *e*P Pdif 00 38 28.2 -1.5
comp=Z,36nm,1.1s,SNR=24
ABTA *e*S **SKSac** **00 48 03.8 -4.2**
comp=Z,91nm,0.9s
ABTA *e*S SKKPbc 00 57 28.6 -20
comp=Z,12nm,1.5s
NC602 NORSAR Array S 97.47 331 *e*P **P** **00 38 29.6 +0.1**
NC602 IVmB_BB 00 38 33.8
comp=Z,1μm,1.5s
NC602 *e*pP **pP** **00 40 47.9 +4.0**
NC602 *e*sP **sP** **00 41 51.0 +5.8**
NORES NORESS Array B 97.47 331 P Pdif 00 38 28.8 -0.8
CHIR Chirikof Islan 97.54 34 P Pdif 00 38 29.2 -0.8
baz=272
O18K Koktuh Hills 97.56 30 P Pdif 00 38 29.5 -0.5
baz=273
P18K Big Mountain, 97.58 31 P Pdif 00 38 30.1 -0.1
baz=273
L19K White Mountain 97.58 28 P **P** **00 38 30.3 +0.2**
baz=274,SNR=11
NB2 NORSAR Subarra 97.61 331 P Pdif 00 38 29.7 -0.6
comp=Z,162nm,1.2s,baz=87,slow=4.3
NB2 NORSAR Subarra 97.61 331 P Pdif 00 38 29.7 -0.6
baz=87,slow=4.3
NOA NORSAR Array B 97.61 331 P Pdif 00 38 29.6 -0.7
comp=Z,83nm,0.9s,baz=88,slow=4.5,SNR=30
NOA pP pP 00 40 43.8 -0.7
comp=Z,1.7nm,0.7s,baz=318,slow=5.2,SNR=1.7
NOA PP **PP** **00 42 36.1 -2.5**
comp=Z,35nm,0.8s,baz=91,slow=7.2,SNR=6.3
NOA PKKPbc **PKKPbc** **00 55 04.0 -2.1**
comp=Z,3.4nm,0.7s,baz=281,slow=2.3,SNR=6.2
comp=Z,83nm,0.9s
NOA NORSAR Array B 97.61 331 P Pdif 00 38 29.6 -0.7
NOA *PP pP 00 40 43.8 -0.7
MGAB Montegabbione 97.71 312 ⇓P Pdif 00 38 30.2 -0.9
MGAB ⇑P **PcP** **00 38 30.5 -0.6**
Q18K Katmai Hardscr 97.73 32 P Pdif 00 38 30.5 -0.4
baz=273
F21K Alatna River 97.74 23 P **P** **00 38 30.9 +0.2**
baz=276,SNR=36
J20K Nowinta River 97.75 26 P **P** **00 38 31.5 +0.7**
baz=275,SNR=22
IMAR Indian Mountai 97.76 24 Pdif Pdif 00 38 30.2 -0.6
G21K Allakaket 97.80 24 P **P** **00 38 31.4 +0.4**
baz=276,SNR=63
M19K Big River Lodg 97.82 28 P **P** **00 38 31.6 +0.4**
baz=274,SNR=7.5
K20K Telida 97.86 27 P **P** **00 38 31.8 +0.5**
baz=275,SNR=24
N19K Bonanza Creek 97.86 29 P **P** **00 38 31.9 +0.5**
baz=274,SNR=31
TBLU Trondheim 97.89 333 *e*P **P** **00 38 31.4 0.0**
TBLU IVmB_BB 00 38 33.5
comp=Z,784nm,2.0s
TBLU *e*pP **pP** **00 40 48.7 +3.0**
OSL Oslo 97.93 330 *e*P Pdif 00 38 31.1 -0.5
OSL IVmB_BB 00 38 36.4
comp=Z,2μm,1.3s
OSL *e*pP pP 00 40 50.2 +4.3
OSL *e*sP sP 00 41 53.5 +6.3
OSL *e*PP **PP** **00 42 41.6 +0.7**
WTTA Wattenberg 97.98 317 *e*P Pdif 00 38 30.9 -1.5

comp=Z,52nm,0.8s,SNR=46
WTTA *e*P **PP** **00 42 37.6 -4.4**
comp=Z,84nm,0.9s
WTTA *e*S **SKSac** **00 48 10.3 -0.9**
comp=Z,41nm,0.9s
WTTA *e*S SKKPbc 00 57 26.8 -20
comp=Z,14nm,1.2s
WTTA *e*P **P'P'df** **01 03 15.1 -2.2**
comp=Z,9.8nm,1.8s
O19K Port Alsworth 97.98 30 P **P** **00 38 32.3 +0.5**
baz=274
L20K Farewell, AK 98.02 28 P **P** **00 38 32.3 +0.3**
baz=275,SNR=10
WATA Walderalm 98.02 317 *e*P Pdif 00 38 30.9 -1.7
comp=Z,32nm,0.8s,SNR=32
WATA *e*S **SKSac** **00 48 07.8 -3.5**
comp=Z,28nm,0.9s
WATA *e*S SKKPbc 00 57 26.5 -21
comp=Z,11nm,1.0s
H21K Melozitna Rive 98.18 24 P **P** **00 38 33.5 +0.8**
baz=276,SNR=47
F22K John River 98.21 23 P **P** **00 38 33.1 +0.3**
baz=277
SQTA Sankt Quirin 98.27 317 *e*P Pdif 00 38 32.4 -1.3
comp=Z,48nm,0.7s,SNR=36
SQTA S **SKSac** **00 48 04.5 -8.0**
comp=Z,66nm,1.1s
SQTA *e*P **PKKPbc** **00 55 04.0 +0.1**
comp=Z,11nm,0.8s
SQTA *e*P **P'P'df** **01 03 19.1 +2.5**
comp=Z,8.5nm,1.6s
SII Sitkinak Islan 98.30 34 P **P** **00 38 33.7 +0.3**
baz=274
MOTA Moosalm 98.34 317 *e*P Pdif 00 38 32.4 -1.6
comp=Z,103nm,0.9s,SNR=48
MOTA *e*S **SKSac** **00 48 04.5 -8.4**
comp=Z,51nm,1.1s
MOTA *e*P **PKKPdf** **00 55 04.7 -0.9**
comp=Z,8.5nm,0.8s
MOTA *e*P **P'P'df** **01 03 18.5 +1.9**
comp=Z,6.5nm,1.3s
M20K Styx River 98.42 28 P **P** **00 38 34.7 +0.8**
baz=275
Q19K Cape Douglas, 98.42 31 P **P** **00 38 33.9 0.0**
baz=274
C23K Itkillik River 98.45 20 P **P** **00 38 34.5 +0.7**
baz=279,SNR=18
KONO Kongsberg 98.52 329 *de*P **P** **00 38 34.8 +0.5**
KONO pmax pmax
comp=Z,179nm,1.6s
KONO Kongsberg 98.52 329 *e*P **P** **00 38 34.8 +0.5**
KONO IVmB_BB 00 38 38.8
comp=Z,1μm,1.3s
KONO *e*pP **pP** **00 40 50.5 +1.9**
KONO *e*sP **sP** **00 41 55.9 +6.0**
KONO *e*PP **PP** **00 42 45.4 0.0**
KONO Kongsberg 98.52 329 ⇓P **P** **00 38 34.5 +0.2**
KONO ⇓P **P** **00 38 34.5 +0.2**
G22K Bettles 98.55 23 P **P** **00 38 34.7 +0.4**
baz=278
DOMB Dombas 98.55 332 IVmB_BB 00 38 38.9
comp=Z,527nm,1.2s
DOMB *e*pP pP 00 40 51.8 +3.0
DOMB *e*sP sP 00 41 54.9 +4.7
DOMB *e*PP **PP** **00 42 46.4 +0.8**
D23K Nanushuk River 98.56 21 P **P** **00 38 34.8 +0.5**
baz=279,SNR=28
RETA Reutte 98.56 317 *e*P Pdif 00 38 34.3 -0.6
comp=Z,66nm,0.8s,SNR=39
RETA *e*P **PP** **00 42 42.0 -4.3**
comp=Z,186nm,1.5s
RETA *e*S **SKSac** **00 48 11.4 -2.5**
comp=Z,61nm,1.4s
P19K Oil Pt 98.57 31 P Pdif 00 38 34.1 -0.5
baz=275
I21K Tanana 98.58 25 P **P** **00 38 35.1 +0.7**
baz=277,SNR=36
CHUM Lake Minchumin 98.58 26 P **P** **00 38 35.4 +0.9**
baz=276,SNR=7.2
FETA Feichten 98.60 317 *e*P Pdif 00 38 34.5 -0.6
comp=Z,61nm,0.9s,SNR=28
FETA *e*P **PP** **00 42 43.7 -3.0**
comp=Z,50nm,0.9s
FETA *e*S SKKPdf 00 57 25.4 -17
comp=Z,8.1nm,1.1s
FETA *e*P **P'P'df** **01 03 15.3 -0.7**
comp=Z,9.1nm,1.4s
H22K Ishtalitna Cre 98.73 24 P **P** **00 38 35.9 +0.8**
baz=278,SNR=28
CAST Castle Rocks 98.74 27 P **P** **00 38 35.7 +0.4**
baz=277,SNR=24
OHAK Old Harbor 98.75 33 P **P** **00 38 35.8 +0.4**
baz=275
PPLA Purkeypile 98.75 27 P **P** **00 38 35.8 +0.3**
baz=276
SALO Salr 98.80 315 ⇑P **P** **00 38 36.4 +0.4**
SALO ⇓P Pdif 00 38 36.7 +0.8
O20K Slope Mountain 98.84 30 P **P** **00 38 36.2 +0.3**
baz=276
N20K Mount Spurr 98.93 29 P **P** **00 38 36.6 +0.3**
baz=276,SNR=11
VLC Villacollemand 98.94 314 ⇓P Pdif 00 38 36.1 -0.4
VLC ⇓P **P** **00 38 39.6 +3.0**
COLD Coldfoot 99.01 23 P **Pdif** **00 38 36.8 +0.5**
baz=279
MUD Monsted U'grnd 99.01 326 *i*P **Pdif** **00 38 38.4 +1.9**
MUD IAmb IAmb 00 38 41.3
comp=Z,119nm,1.3s
TOLK Toolik Lake Re 99.01 21 P **Pdif** **00 38 36.8 +0.4**
baz=280,SNR=46
SKAR Skarslia 99.06 331 *e*P **Pdif** **00 38 37.4 +0.7**
SKAR IVmB_BB 00 38 41.9
comp=Z,768nm,1.9s
SKAR *e*pP **pP** **00 40 53.7 +2.5**
SKAR *e*sP **sP** **00 41 57.6 +5.1**
SKAR *e*PP **PP** **00 42 50.1 +0.6**
KDAK Kodiak Island 99.08 32 PKKPbc PKKPbc 00 55 00.4 -1.5
comp=Z,33nm,0.8s,baz=153,slow=4.5,SNR=12
KDAK Kodiak Island 99.08 32 Pdif **Pdif** **00 38 36.9 +0.1**
KDAK IAmb IAmb 00 38 42.6
comp=Z,80nm,0.9s
KDAK Kodiak Island 99.08 32 ⇑*e*P **Pdif** **00 38 35.6 -1.2**
KDAK pmax pmax
comp=Z,39nm,1.1s
KDAK Kodiak Island 99.08 32 P **Pdif** **00 38 37.1 +0.4**
baz=275
E23K Chandalar 99.09 22 P **Pdif** **00 38 37.2 +0.4**
baz=280,SNR=40
Q20K Shuyak Island 99.10 32 P **Pdif** **00 38 37.5 +0.6**
baz=276
MLY Manley 99.12 25 P **Pdif** **00 38 37.5 +0.6**
baz=278,SNR=40
C24K Franklin Bluff 99.13 20 P **Pdif** **00 38 37.3 +0.5**
baz=281
BPAW Bear Paw Mtn. 99.14 26 P **Pdif** **00 38 37.5 +0.5**
baz=278,SNR=36
G23K Bananza Creek 99.16 23 P **Pdif** **00 38 37.6 +0.5**
baz=279,SNR=26
SKT Skwentna 99.16 28 P **Pdif** **00 38 37.1 -0.1**
baz=277,SNR=8.0
DAVA Damuels 99.17 317 *e*P **Pdif** **00 38 37.1 -0.6**
comp=Z,112nm,0.9s,SNR=48
DAVA *e*P **PP** **00 42 48.3 -2.5**
comp=Z,292nm,1.0s
DAVA *e*S **SKSac** **00 48 11.1 -5.9**
comp=Z,27nm,1.0s
D24K Happy Valley 99.19 21 P **Pdif** **00 38 37.2 +0.1**
baz=280
DAVOX Davos/Dischmat 99.20 316 P **Pdif** **00 38 37.8 -0.1**
comp=Z,128nm,0.9s,baz=87,slow=10,SNR=64
DAVOX pP **pP** **00 40 52.1 -0.2**
comp=Z,12nm,0.9s,baz=104,slow=2.1,SNR=2.5
DAVOX PP **PP** **00 42 49.1 -2.0**
comp=Z,22nm,0.7s,baz=86,slow=4.7,SNR=3.6
DAVOX PKiKP **PKiKP** **00 43 03.8 0.0**
comp=Z,46nm,0.9s,baz=179,slow=2.8,SNR=2.6
DAVOX S **SKSac** **00 48 16.0 -1.2**
comp=Z,20nm,0.9s,baz=237,slow=14,SNR=6.9
comp=Z,128nm,0.9s
DAVOX Davos/Dischmat 99.20 316 P **Pdif** **00 38 37.8 -0.1**
DAVOX *PP **pP** **00 40 52.1 -0.2**
MOL Molde 99.20 333 *e*P **Pdif** **00 38 36.3 -0.9**
MOL IVmB_BB 00 38 39.9
comp=Z,1μm,1.4s
MOL *e*sP **sP** **00 41 57.9 +5.0**
HOMB Homborsund 99.21 328 *e*P **Pdif** **00 38 36.6 -0.8**
HOMB IVmB_BB 00 38 42.3

comp=Z,2µm,3.0s
HOMB *es*P **sP** 00 41 58.9 +5.9
HOMB *e*PP **PP** 00 42 51.3 +0.7
HOM Homer 99.37 30 P **Pdif** 00 38 38.0 -0.1
baz=276
TBI Tubuai 99.41 115 *e*P **Pdif** 00 38 40.0 +0.9
comp=Z,284nm,17.0s
TBI *ep*P **pP** 00 40 55.6 +2.2
comp=Z,1µm,36.0s
TBI Tubuai 99.41 115 *e*SS SS 00 56 28.0 0.0
comp=Z,9µm,21.8s
CAPN Captain Cook N 99.49 29 P **Pdif** 00 38 38.4 -0.1
baz=277
H23K Yukon River 99.49 24 P **Pdif** 00 38 39.0 +0.5
baz=279,SNR=36
AKN Aaknes 99.50 332 *e*P **Pdif** 00 38 41.2 +2.5
AKN IVmB_BB 00 38 43.6
comp=Z,1µm,1.5s
AKN *ep*P **pP** 00 40 56.1 +3.0
AKN *es*P **sP** 00 41 59.0 +4.6
AKN *e*PP **PP** 00 42 53.9 +1.2
E24K Your Creek 99.51 22 P **Pdif** 00 38 38.4 -0.2
baz=281
TRF Thorofare Moun 99.53 27 P **Pdif** 00 38 39.5 +0.6
baz=278,SNR=14
TUE Stuetta 99.58 316 ⇓P **Pdif** 00 38 38.8 -0.8
SUA Susitna One 99.60 29 P **Pdif** 00 38 38.8 -0.4
baz=277
NOR Nord 99.64 353 *i* P **Pdif** 00 38 39.0 +0.1
NOR IAmb IAmb 00 38 42.1
comp=Z,38nm,1.0s
NOR Nord 99.64 353 *i* P **Pdif** 00 38 38.8 -0.1
I23K Minto, Yukon-K 99.67 25 P **Pdif** 00 38 40.0 +0.7
baz=279,SNR=20
CUT Chulitna 99.69 28 P **Pdif** 00 38 39.5 +0.1
baz=278,SNR=8.6
BRSE Bradley Lake S 99.82 30 P **Pdif** 00 38 40.5 +0.4
baz=277
F24K Squaw Lake 99.84 22 P **Pdif** 00 38 40.4 +0.4
baz=281,SNR=28
M22K Willow 99.85 28 P **Pdif** 00 38 40.2 +0.1
baz=278,SNR=7.8
SNART Snartemo 99.88 328 *e*P **Pdif** 00 38 39.7 -0.6
NEA2 Nenana 99.89 25 P **Pdif** 00 38 40.6 +0.3
baz=280,SNR=6.5
KEST Kesra 99.97 305 P **Pdif** 00 38 41.6 +0.2
comp=Z,67nm,1.1s,baz=153,slow=2.0,SNR=7.3
KEST PP **PP** 00 42 58.5 +1.4
comp=Z,132nm,1.0s,baz=153,slow=2.3,SNR=8.2
KEST PKiKP **PKiKP** 00 43 05.6 +0.2
comp=Z,76nm,1.0s,baz=334,slow=1.5,SNR=5.8
KEST S **SKSac** 00 48 21.7 +0.5
comp=Z,6.3nm,0.9s,baz=18,slow=18,SNR=1.2
KEST PKKP **PKKPdf** 00 55 00.7 -1.5
comp=Z,7.5nm,0.8s,baz=306,slow=1.5,SNR=5.1
comp=Z,67nm,1.1s
ODD1 Odda 99.98 330 *e*P **Pdif** 00 38 40.3 -0.5
ODD1 IVmB_BB 00 38 45.9
comp=Z,616nm,1.7s
ODD1 *ep*P **pP** 00 40 59.1 +3.9
ODD1 *e*PP **PP** 00 42 56.3 -0.1
D25K Kavik River 100.01 20 P **Pdif** 00 38 40.7 -0.1
baz=283
PGF Pioggiola 100.02 312 *e*P **Pdif** 00 38 42.1 +0.6
PGF pmax pmax
comp=Z,26nm,0.9s
HYA Hoyanger 100.03 331 *e*P **Pdif** 00 38 42.3 +1.4
HYA IVmB_BB 00 38 44.5
comp=Z,538nm,1.4s
MCK McKinley 100.09 26 P **Pdif** 00 38 41.4 +0.2
baz=280,SNR=47
RC01 Rabbit Creek A 100.13 29 P **Pdif** 00 38 41.4 0.0
baz=278
BLS5 Blasjo 100.13 329 *e*P **Pdif** 00 38 40.9 -0.6
BLS5 IVmB_BB 00 38 46.6
comp=Z,805nm,1.2s
BLS5 *ep*P pP 00 40 58.0 +2.0
BLS5 *e*PP **PP** 00 42 57.1 -0.4
G24K Hadweenzic Riv 100.16 23 P **Pdif** 00 38 41.9 +0.5
baz=281,SNR=20
H24K Noodor Dome 100.16 24 P **Pdif** 00 38 41.6 0.0
baz=281,SNR=41
PPT2 Papeete2 100.19 109 *e*P **Pdif** 00 38 43.4 +0.6
comp=Z,191nm,17.0s
PPT2 *ep*P **pPdif** 00 40 57.1 +0.1
comp=Z,1µm,16.5s
PPT2 Papeete2 100.19 109 *e*SS SS 00 56 38.7 -0.5
comp=Z,3µm,19.5s
PPT2 Papeete2 100.19 109 *e*LR LR 01 12 25.5
comp=Z,3µm,27.5s
O22K Cooper Landing 100.22 29 P **Pdif** 00 38 41.7 -0.1
baz=278
PMR Palmer 100.34 28 P **Pdif** 00 38 42.5 +0.2
baz=279
TCOL CIGO, UAF Yank 100.35 25 P **Pdif** 00 38 42.5 +0.2
baz=281
COLA College 100.35 25⇓*e*P **Pdif** 00 38 43.7 +1.4
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 100.35 25 P **Pdif** 00 38 42.6 +0.3
baz=281
COLA College 100.35 25 P **Pdif** 00 38 45.1 +2.8
comp=Z,20nm,0.9s
C26K Camden Bay 100.37 20 P **Pdif** 00 38 42.8 +0.5
baz=284
WAT1 Susitna Watana 100.41 27 P **Pdif** 00 38 43.0 +0.3
baz=280
SEW Seward 100.41 30 P **Pdif** 00 38 42.9 +0.3
baz=278,SNR=5.0
POKR Poker Plat Res 100.48 25 P **Pdif** 00 38 42.8 -0.1
baz=281
FOO Floro 100.50 332 *e*P **Pdif** 00 38 43.8 +0.7
FOO IVmB_BB 00 38 48.0
comp=Z,662nm,1.6s
FOO *e*PP **PP** 00 42 60.0 -0.1
BER Bergen 100.55 330 *e*P **Pdif** 00 38 42.6 -0.7
BER IVmB_BB 00 38 44.3
comp=Z,336nm,2.5s
BER *e*PP **PP** 00 42 59.5 -1.0
E25K Arctic Village 100.57 21 P **Pdif** 00 38 43.6 +0.3
baz=283,SNR=10
ASK Askoy 100.61 331 *e*P **Pdif** 00 38 44.2 +0.7
ASK *e*PP **PP** 00 43 02.4 +1.5
F25K Christian Rive 100.67 22 P **Pdif** 00 38 44.4 +0.6
baz=283,SNR=11
G25K Bearman Lake 100.68 23 P **Pdif** 00 38 44.2 +0.5
baz=283,SNR=6.0
SML Sawmill 100.69 28 P **Pdif** 00 38 44.3 +0.4
baz=280,SNR=10
KNK Knik Glacier 100.69 28 P **Pdif** 00 38 44.2 +0.2
baz=280,SNR=7.8
SUE Sulen 100.73 331 *e*P **Pdif** 00 38 45.5 +1.5
SUE IVmB_BB 00 38 48.9
comp=Z,720nm,1.4s
SUE *e*PP **PP** 00 43 02.2 +0.5
KMY Karmoy 100.78 329 *e*P **Pdif** 00 38 42.6 -1.7
KMY IVmB_BB 00 38 44.1
comp=Z,1µm,1.8s
ILAR Eielson Array 100.78 25 P **Pdif** 00 38 43.6 -0.6
comp=Z,6.3nm,0.9s,baz=281,slow=4.5,SNR=21
ILAR pP **pPdif** 00 40 57.6 -0.9
comp=Z,1.3nm,0.7s,baz=289,slow=4.8,SNR=1.3
ILAR PP **PP** 00 43 00.9 -1.1
comp=Z,15nm,1.1s,baz=293,slow=7.2,SNR=5.0
ILAR PKKPbc **PKKPbc** 00 54 54.5 -2.8
comp=Z,15nm,0.5s,baz=111,slow=1.6,SNR=28
ILAR SKKP 00 57 37.5
comp=Z,2.2nm,0.6s,baz=117,slow=1.9,SNR=5.1
ILAR PKPPKP **P'P'df** 01 03 07.5 -3.0
comp=Z,6.1nm,1.1s,baz=124,slow=1.1,SNR=10
ILAR Eielson Array 100.78 25 P **Pdif** 00 38 43.6 -0.6
WAT6 Susitna Watana 100.82 27 P **Pdif** 00 38 44.6 -0.1
baz=280,SNR=20
HDA Harding Lake 100.83 25 P **Pdif** 00 38 45.1 +0.6
baz=281,SNR=6.6
PWL Port Wells 100.84 29 P **Pdif** 00 38 44.6 0.0
baz=280,SNR=7.6
C27K Jago River 100.85 20 P **Pdif** 00 38 45.0 +0.6
baz=285,SNR=23
CDF Champ du Feu 100.85 318 *e*P **Pdif** 00 38 44.4 -0.6
CDF pmax pmax
comp=Z,20nm,0.9s
DHY Denali Highway 100.90 27 P **Pdif** 00 38 45.2 +0.2
baz=281
H25K Birch Creek 100.90 23 P **Pdif** 00 38 45.1 +0.4
baz=283,SNR=10.0
M23K Glacier View 100.97 28 P **Pdif** 00 38 45.3 +0.1
baz=280,SNR=9.1
SBF Sospel 101.08 314 *e*P **Pdif** 00 38 47.9 +1.7
SBF pmax pmax
comp=Z,49nm,1.0s
BMAR Burnt Mountain 101.10 22 Pdif **Pdif** 00 38 46.0 +0.3
SCM Sheep Creek Mo 101.15 28 P **Pdif** 00 38 45.8 -0.2
baz=281
HINF Hinteralfeld 101.18 318 *e*P **Pdif** 00 38 46.3 -0.2
HINF pmax pmax
comp=Z,7.0nm,0.8s
PRP Porcupine Dome 101.18 24 P **Pdif** 00 38 46.0 -0.2
baz=283
F26K Sheenjek River 101.20 22 P **Pdif** 00 38 46.4 +0.3
baz=285,SNR=6.4
BTNL Ternell 101.38 321 *d*Pdif **Pdif** 00 38 47.4 +0.1
BTNL *d*PKP **PP** 00 42 59.8 -7.2
BTNL *d*PP **PP** 00 43 06.3 -0.7
GLI Glacier Island 101.44 29 P **Pdif** 00 38 46.5 -0.7
baz=281
P23K Montague Islan 101.44 30 P **Pdif** 00 38 47.3 0.0
baz=280
LPG La Plagne 101.45 315 *e*P **Pdif** 00 38 47.8 -0.2
LPG pmax pmax
comp=Z,45nm,0.9s
J25K Salcha River, 101.45 25 P **Pdif** 00 38 46.9 -0.4
baz=283
K24K Donnelly Dome 101.45 26 P **Pdif** 00 38 47.7 +0.4
baz=282
MEM Membach 101.46 321 *d*Pdif **Pdif** 00 38 47.2 -0.4
MEM *d*PKP **PP** 00 43 03.5 -4.0
LPL La Plagne 101.46 315 *e*P **Pdif** 00 38 47.8 -0.2
LPL pmax pmax
comp=Z,42nm,0.9s
WLF Walferdange 101.47 320 P **Pdif** 00 38 49.6 +2.0
WLF Walferdange 101.47 320 *d*Pdif **Pdif** 00 38 48.0 +0.4
WLF *d*PKP **PP** 00 43 07.2 -0.4
CMAH Djebel Manchou 101.50 306 P **Pdif** 00 38 34.9 -13
MBDF Montbardon 101.50 315 *e*P **Pdif** 00 38 48.8 +0.7
MBDF pmax pmax
comp=Z,9.0nm,0.8s
HAU Haudompre 101.50 318 *e*P **Pdif** 00 38 47.4 -0.5
HAU pmax pmax
comp=Z,48nm,0.9s
G26K Porcupine Rive 101.52 22 P **Pdif** 00 38 47.9 +0.4
baz=285,SNR=9.1
BNI Bardonecchia 101.54 315 P **Pdif** 00 38 48.0 -0.2
M24K Tolsona, Glenn 101.63 28 P **Pdif** 00 38 48.6 +0.4
baz=282,SNR=9.7
BSTI Sart Tilman 101.74 321 *d*Pdif **Pdif** 00 38 51.8 +3.0
BSTI *d*PKP **PKiKP** 00 43 05.7 -2.3
PAX Paxson 101.77 27 P **Pdif** 00 38 48.7 -0.1
baz=282,SNR=7.9
CABF La Chapelle 101.81 316 *e*P **Pdif** 00 38 49.2 -0.2
CABF pmax pmax
comp=Z,31nm,0.7s
RIDG Independent Ri 101.87 26 Pdif **Pdif** 00 38 48.3 -0.9
RIDG Independent Ri 101.87 26 P **Pdif** 00 38 49.3 +0.1
baz=283,SNR=5.5
KLU Klutina 101.87 28 P **Pdif** 00 38 49.2 -0.1
baz=282
BCLA Clavier 101.92 320 *d*Pdif **Pdif** 00 38 51.3 +1.7
BCLA *d*PKP **PKiKP** 00 43 07.2 -1.2
E27K Coleen River 101.99 21 P **Pdif** 00 38 49.6 0.0
baz=287,SNR=12
RCHB Rochefort 102.00 320 *d*Pdif **Pdif** 00 38 50.1 +0.1
RCHB *d*PKP **PKiKP** 00 43 07.1 -1.4
HARP HAARP 102.03 27 P **Pdif** 00 38 49.7 -0.2
baz=283
BGES Gesves 102.07 320 *d*Pdif **Pdif** 00 38 52.3 +2.0
BGES *d*PKP **PKiKP** 00 43 07.7 -1.0
Q23K Middleton Isla 102.07 30 P **Pdif** 00 38 50.2 +0.1
baz=281
ORIF Oris-en-Rattie 102.11 315 *e*P **Pdif** 00 38 52.3 +1.5
ORIF pmax pmax
comp=Z,37nm,1.1s
EYAK Cordova Ski Ar 102.15 29 P **Pdif** 00 38 50.1 -0.3
baz=282
SCRK Sand Creek 102.19 25 P **Pdif** 00 38 50.8 +0.1
baz=284,SNR=27
I26K Coal Creek Min 102.20 24 P **Pdif** 00 38 50.6 +0.1
baz=285,SNR=23
J26L Joseph Creek 102.23 25 P **Pdif** 00 38 50.6 -0.2
baz=285
BMRD Maredsous 102.28 320 *d*Pdif **Pdif** 00 38 51.5 +0.3
BMRD *d*PP **PP** 00 43 12.5 -1.0
G27K Doyon Strip 102.37 22 P **Pdif** 00 38 51.8 +0.5
baz=287,SNR=36
DOU Dourbes 102.42 320 *d*Pdif **Pdif** 00 38 53.9 +2.0
DOU *d*PKP **PKiKP** 00 43 11.7 +2.4
N25K Chitina, Valde 102.47 28 P **Pdif** 00 38 51.9 0.0
baz=283,SNR=6.2
SNF Seneffe 102.56 321 *d*Pdif **Pdif** 00 38 55.3 +2.9
SNF *d*PKP **PKiKP** 00 43 11.8 +2.4
SNF *d*PP **PP** 00 43 15.4 -0.2
H27K Steamboat Moun 102.59 23 P **Pdif** 00 38 52.6 +0.3
baz=287,SNR=21
BMRM Bremner River 102.61 29 P **Pdif** 00 38 53.0 +0.4
baz=283,SNR=6.0
BAIF Baives 102.67 320 *e*P **Pdif** 00 38 54.0 +1.1
BAIF pmax pmax
comp=Z,59nm,1.2s
L26K Log Cabin Wild 102.70 26 P **Pdif** 00 38 53.9 +1.1
baz=284
DAG Danmarks Havn 102.70 349 P **Pdif** 00 38 51.5 -1.0
DAG Danmarks Havn 102.70 349 *i* P **Pdif** 00 38 51.5 -1.0
DAG IAmb IAmb 00 39 04.3
comp=Z,43nm,1.3s
DAG Danmarks Havn 102.70 349 *i* P PKiKP 00 43 00.4 -8.7
I27K Kandik River 102.73 24 P **Pdif** 00 38 52.6 -0.4
baz=287,SNR=33
KAIM Kayak Island 102.93 30 P **Pdif** 00 38 53.9 0.0
baz=283
VIVF Saint-Julien-l 102.97 315 *e*P **Pdif** 00 38 55.2 +0.7
VIVF pmax pmax
comp=Z,33nm,1.1s
K27K Chicken 102.98 25 P **Pdif** 00 38 54.1 +0.1
baz=286
M26K Nabesna, AK 103.01 27 P **Pdif** 00 38 53.4 -0.9
baz=285,SNR=20
JMIC Jan Mayen 103.09 342 *e*P **Pdif** 00 38 53.8 -0.5
JMIC IAmb IAmb 00 38 57.9
comp=Z,96nm,0.9s
JMIC *e*PP **PP** 00 43 20.0 +1.2
JMIC *e*SP SP 00 51 27.4 -0.6
EGAK Eagle 103.16 24 P **Pdif** 00 38 52.8 -2.0
baz=287
MCARA McCarthy VSAT 103.25 28 P **Pdif** 00 38 54.7 -0.6
baz=284
LOR Lormes 103.26 317 *e*P **Pdif** 00 38 55.3 -0.4
LOR pmax pmax
comp=Z,29nm,0.8s
SMF Signal de Mont 103.35 317 *e*P **Pdif** 00 38 55.7 -0.4
SMF pmax pmax
comp=Z,72nm,0.9s
L27K Beaver Creek, 103.36 26 P **Pdif** 00 38 55.3 -0.5
baz=286,SNR=35
M27K Edge Creek, AK 103.53 27 P **Pdif** 00 38 56.7 0.0
baz=286,SNR=8.1
AVF Avril sur Loir 103.66 317 *e*P **Pdif** 00 38 55.5 -1.9
AVF pmax pmax
comp=Z,37nm,1.0s
MAHO Mahon 103.76 310 Pdif **Pdif** 00 38 59.2 +1.2
MAHO Mahon 103.76 310 PP **PP** 00 43 27.6 +2.9
BVCY Beaver Creek 103.97 27 P **Pdif** 00 38 58.2 -0.3
baz=287
BGF Bois d'Agland 104.04 317 *e*P **Pdif** 00 38 58.5 -0.7
BGF pmax pmax
comp=Z,42nm,1.1s
MESA MESA 104.07 29 P **Pdif** 00 38 59.1 -0.1
baz=285
DAWY Dawson 104.10 25 P **Pdif** 00 38 59.3 +0.2
baz=288,SNR=5.7
I29M Ogilvie Camp, 104.12 23 P **Pdif** 00 38 59.9 +0.8
baz=290,SNR=9.0
CTG Chitna Glacier 104.15 28 P **Pdif** 00 38 58.9 -0.6
baz=286,SNR=6.1
YUK3 Moose Creek 104.33 27 P **Pdif** 00 38 59.6 -0.7
baz=287
G30M tAoh Zraii Nji 104.33 21 P **Pdif** 00 38 59.2 -0.8
baz=292
EPYK Eagle Plains 104.38 22 P **Pdif** 00 38 59.4 -0.8
baz=291,SNR=7.0
J29M Klondike Camp 104.46 24 P **Pdif** 00 38 59.6 -1.1
baz=290
TCF Toulx Ste Croi 104.51 316 *e*P **Pdif** 00 39 01.4 +0.1
TCF pmax pmax
comp=Z,21nm,1.0s
O28M Mount Upton 104.75 28 P **Pdif** 00 39 00.9 -1.5
baz=287
INK Inuvik 104.75 20 PKKPbc PKKPbc 00 54 42.5 -3.3
comp=Z,7.9nm,0.4s,baz=115,slow=4.0,SNR=8.9
INK Inuvik 104.75 20 P **Pdif** 00 39 00.9 -0.9
baz=295,SNR=7.5
YUK8 Steele Glacier 104.79 28 P **Pdif** 00 39 01.1 -1.5
baz=287,SNR=6.4
CAF Calviac 104.80 315 *e*P **Pdif** 00 39 03.0 +0.4
CAF pmax pmax
comp=Z,29nm,1.1s
MTLF Montolieu 104.91 313 *e*P **Pdif** 00 39 05.9 +2.8
MTLF pmax pmax
comp=Z,41nm,1.4s
PINM Pinnacle 104.91 29 P **Pdif** 00 39 02.0 -0.8
baz=287
L29M L29M 104.95 26 P **Pdif** 00 39 01.7 -1.1
baz=289,SNR=26
K29M Barlow Dome 104.96 25 P **Pdif** 00 39 02.4 -0.6
baz=290,SNR=9.2
M29M Somme Creek 105.02 26 P **Pdif** 00 39 02.7 -0.6
baz=289,SNR=5.7
F31M Tsiigehtchic 105.04 21 P **PKiKP** 00 43 13.7 +0.2
baz=294
RJF Les Rejaudoux 105.13 316 *e*P **Pdif** 00 39 05.3 +1.2
RJF pmax pmax
comp=Z,35nm,1.3s
YUK4 Talbot Arm 105.29 27 P **PKiKP** 00 43 15.5 +1.0
baz=288
A36M Sachs Harbour 105.40 15 P **PKiKP** 00 43 15.4 +1.3
baz=304
PNL Peninsula 105.45 29 P **PKiKP** 00 43 14.1 -0.5
baz=287
YUK6 Outpost Mounta 105.55 28 P **PKiKP** 00 43 15.7 +0.7
baz=288
O29M Mount Kennedy 105.65 28 P **PKiKP** 00 43 16.3 +1.2
baz=288
LDF La Druitiere 105.70 319 *e*P **Pdif** 00 39 07.9 +1.4
LDF pmax pmax
comp=Z,34nm,1.1s
LFF La Frestale 105.73 315 *e*P **Pdif** 00 39 08.8 +2.1
LFF pmax pmax
comp=Z,29nm,1.3s
FLN La Foliniere 105.90 319 *e*P **Pdif** 00 39 08.8 +1.4
FLN pmax pmax
comp=Z,37nm,1.1s
N30M Aishikik Lake 105.96 27 P **PKiKP** 00 43 15.6 +0.1
baz=290
HYT Haines Junctio 105.98 28 P **PKiKP** 00 43 16.1 +0.4
baz=289
EKA Eskdalemuir Ar 106.04 326 Pdiff **Pdif** 00 39 08.3 +0.5
comp=Z,13nm,0.8s,baz=85,slow=6.0,SNR=11
EKA PKiKP **PKiKP** 00 43 16.4 +0.6
comp=Z,12nm,0.8s,baz=46,slow=3.1,SNR=3.4
MFF Saint Martin d 106.07 317 *e*P **Pdif** 00 39 09.7 +1.5
MFF pmax pmax
comp=Z,35nm,1.3s
GRR Gorron 106.22 319 *e*P **Pdif** 00 39 12.5 +3.7
GRR pmax pmax
comp=Z,44nm,1.3s
P30M Million Dollar 106.47 28 P **PKiKP** 00 43 15.5 -1.0
baz=290
N31M Braeburn, Yuko 106.54 27 P **PKiKP** 00 43 16.7 +0.1
baz=291
NEEM North Greenlan 106.65 355 *i* P **Pdif** 00 39 10.8 +0.3
NEEM IAmb IAmb 00 39 14.4
comp=Z,141nm,1.6s
NEEM North Greenlan 106.65 355 *e*P **PKiKP** 00 43 17.4 +0.7
O30N Mendenhall 106.65 27 P **PKiKP** 00 43 16.5 -0.3
baz=290
M31M Drury Creek, Y 106.89 26 P **PKiKP** 00 43 17.6 +0.3
baz=292
PLBC Pleasant Camp 106.98 29 P **PKiKP** 00 43 16.5 -0.9
baz=290
TORD Torodi Ar. Bea 107.08 282 Pdiff **Pdif** 00 39 13.8 +0.5
comp=Z,5.1nm,0.8s,baz=122,slow=2.9,SNR=28
TORD PKiKP **PKiKP** 00 43 18.0 -0.9
comp=Z,45nm,0.5s,baz=64,slow=1.1,SNR=55
TORD PP **PP** 00 43 49.4 -0.2
comp=Z,21nm,0.9s,baz=71,slow=8.0,SNR=4.0
TORD PKKPbc **PKKPbc** 00 54 36.4 -0.8
comp=Z,4.2nm,0.8s,baz=299,slow=3.6,SNR=14
TORD SKKPbc SKKPbc 00 57 20.9 -0.4
comp=Z,2.0nm,0.6s,baz=301,slow=3.7,SNR=7.8
C36M Paulatuk 107.21 17 P **PKiKP** 00 43 19.2 +1.7
baz=304
WHY Whitehorse 107.25 27 P **PKiKP** 00 43 19.9 +1.9
baz=292
FARO Faro, Yukon 107.32 26 P **PKiKP** 00 43 19.0 +1.0
baz=294
SKAG Skagway 107.47 29 P **PKiKP** 00 43 19.3 +1.0
baz=291
MMPY Sheldon Lake, 108.04 25 P **PKiKP** 00 43 19.3 -0.1
baz=296
CART Cartagena 108.11 308 Pdif **Pdif** 00 39 19.2 +1.8
CART Cartagena 108.11 308 PP **PP** 00 43 57.7 +1.5
P32M Atlin 108.19 28 P **PKiKP** 00 43 19.4 -0.4
baz=292
R32K Eaglecrest 108.29 30 P **PKiKP** 00 43 18.9 -1.0
baz=291
SIT Sitka 108.32 31 P **PKiKP** 00 43 19.6 -0.3
baz=290
P33M Teslin, Yukon 108.36 27 P **PKiKP** 00 43 20.3 +0.2
baz=293
RES Resolute Bay 108.99 6 Pdiff **Pdif** 00 39 21.8 +1.3
comp=Z,16nm,1.0s,baz=326,slow=8.1,SNR=7.5
RES PKiKP **PKiKP** 00 43 20.7 -0.1
comp=Z,58nm,1.1s,baz=271,slow=2.2,SNR=11
RES PKKPbc **PKKPbc** 00 54 30.9 -2.1
comp=Z,8.8nm,0.5s,baz=168,slow=6.9,SNR=42
Q32M Nakina River 109.12 28 P **PKiKP** 00 43 21.1 -0.6
baz=294
SUMG Summit 109.35 350 *i* P **Pdif** 00 39 26.3 +3.6
SUMG IAmb IAmb 00 39 36.1
comp=Z,22nm,0.9s
SUMG Summit 109.35 350 *i* P **PKiKP** 00 43 22.5 +0.4
R33M Jennings River 109.55 28 P **PKiKP** 00 43 21.9 -0.5
baz=295
CHAS Isla Isabel II 109.59 306 Pdif **Pdif** 00 39 26.9 +2.8
CHAS Isla Isabel II 109.59 306 PP **PP** 00 44 09.2 +2.5
TGTN Hyland Airport 109.80 25 P **PKiKP** 00 43 22.8 +0.1
baz=298
U33K Whale Pass 109.80 31 P **PKiKP** 00 43 23.0 +0.3
baz=292
WMELI Melilla 109.99 306 Pdif **Pdif** 00 39 28.8 +2.9
WMELI Melilla 109.99 306 PP **PP** 00 44 11.9 +2.2
CRAG Craig 110.03 32 P **PKiKP** 00 43 23.3 0.0
baz=292
ESDC Sonseca Array 110.07 310 Pdiff **Pdif** 00 39 26.2 +0.1
comp=Z,2.5nm,0.8s,baz=59,slow=4.5,SNR=14
ESDC PKiKP **PKiKP** 00 43 24.1 +0.2
comp=Z,20nm,0.8s,baz=29,slow=2.2,SNR=37
ESDC PP **PP** 00 44 10.5 +0.4
comp=Z,26nm,0.9s,baz=60,slow=4.2,SNR=5.3
ESDC PKKPbc **PKKPbc** 00 54 27.2 -1.5
comp=Z,7.6nm,0.9s,baz=280,slow=3.2,SNR=15
ESDC PKKP **PKKPdf** 00 54 43.0 -0.6
comp=Z,3.5nm,1.0s,baz=271,slow=4.9,SNR=5.5
ESDC SKKPbc SKKPbc 00 57 14.1 0.0
comp=Z,9.6nm,1.1s,baz=261,slow=3.2,SNR=7.4
WRAK Wrangell Islan 110.08 31 P **PKiKP** 00 43 23.8 +0.5
baz=293
S34M Telegraph Cree 110.09 29 P **PKiKP** 00 43 23.4 +0.1
baz=294
WTLY Watson Lake, Y 110.22 27 P **PKiKP** 00 43 23.6 0.0
baz=297
PMSA Palmer Station 110.27 184 PKiKP **PKiKP** 00 43 23.3 -0.1
comp=Z,20nm,0.9s,baz=80,slow=2.7,SNR=6.6
PMSA SKP 00 46 01.8
comp=Z,6.3nm,0.6s,baz=203,slow=4.0,SNR=4.1
PMSA PKKPab **PKKPab** 00 54 39.5 -2.0
comp=Z,40nm,1.0s,baz=341,slow=3.6,SNR=9.4
BORG Borgarnes 110.38 339 PKiKP **PKiKP** 00 43 24.1 +0.5
comp=Z,50nm,1.1s,baz=0.9,slow=4.5,SNR=2.6
BORG Borgarnes 110.38 339 *i* PKiKP **PKiKP** 00 43 24.1 +0.5
DLBC Dease Lake 110.40 28 PKKPbc PKKPbc 00 54 26.9 -1.4
comp=Z,7.0nm,0.5s,baz=165,slow=4.4,SNR=18
DLBC Dease Lake 110.40 28 P **PKiKP** 00 43 23.9 -0.1
baz=296
TAOE Nuku Hiva Isla 110.58 101 *e*P **Pdif** 00 39 29.3 +0.2
comp=Z,134nm,26.4s
TAOE *ep*P **pPdif** 00 41 41.2 -2.1
comp=Z,560nm,27.5s
TAOE Nuku Hiva Isla 110.58 101 *e*LR LR 01 17 14.1
comp=Z,2µm,24.4s
WRGLY Wrigley 110.85 22 P **PKiKP** 00 43 25.0 +0.4

baz=303
V35K Ketchikan 110.89 32 P PKiKP 00 43 25.7 +0.9
baz=293
T35M Bob Quinn 110.92 30 P PKiKP 00 43 25.3 +0.4
baz=295,SNR=7.0
EMAL Malaga-Limoner 110.94 307 Pdif Pdif 00 39 30.8 +0.7
EMAL Malaga-Limoner 110.94 307 PP PP 00 44 16.8 +0.4
PVLZ Peæn de 111.10 306 Pdif Pdif 00 39 28.9 -1.9
PVLZ Peæn de 111.10 306 PP PP 00 44 18.8 +1.3
PBRG Braganca 111.69 313 ePdif Pdif 00 39 36.7 +3.3
PBRG Braganca 111.69 313 ePKPdf PKiKP 00 43 27.2 +0.3
PBRG Braganca 111.69 313 ePP PP 00 44 22.8 +1.4
PBRG i LQ LQ 00 47 24.1
MDT Midelt 111.71 303 Pdiff Pdif 00 39 35.6 +1.9
comp=Z,1.5nm,0.8s,baz=37,slow=1.9,SNR=2.4
MDT Midelt 111.71 303 P PKiKP 00 43 31.9 +4.6
LIRD Liard River Hi 111.76 27 P PKiKP 00 43 27.1 +0.7
baz=300
LCRM LCR 111.79 304 P PKiKP 00 43 32.0 +4.5
CEU Ceuta 111.84 307 Pdif Pdif 00 39 35.0 +0.9
CEU Ceuta 111.84 307 PP PP 00 44 22.4 -0.3
CHEFC Chefchaouen 111.95 306 P PKiKP 00 43 32.1 +4.4
IFR Ifrane 112.04 304 Pdif Pdif 00 39 37.3 +2.0
IFR Ifrane 112.04 304 PP PP 00 44 26.9 +2.5
MVO Moncorvo 112.05 312 ePdif Pdif 00 39 38.4 +3.4
MVO Moncorvo 112.05 312 ePKPdf PKiKP 00 43 28.4 +0.8
MVO i LQ LQ 00 47 29.1
KOTAN Kotaneelee Air 112.28 25 P PKiKP 00 43 28.3 +0.9
baz=302
ICESG Greenland Ices 112.44 348 i P Pdif 00 39 39.0 +2.6
ICESG IAmb IAmb 00 40 08.2
comp=Z,23nm,1.2s
ICESG Greenland Ices 112.44 348 i P PKiKP 00 43 27.3 -0.6
FLDN Fort Liard 112.47 25 P PKiKP 00 43 28.3 +0.5
baz=302
PVRL Vila Real 112.53 313 ePKPdf PKiKP 00 43 29.0 +0.5
PVRL Vila Real 112.53 313 ePP PP 00 44 25.6 -1.7
POLO Lamas de Olo 112.56 313 ePdif Pdif 00 39 39.8 +2.5
POLO Lamas de Olo 112.56 313 ePKPdf PKiKP 00 43 29.1 +0.5
POLO Lamas de Olo 112.56 313 ePP PP 00 44 29.0 +1.4
MTE Manteigas 112.61 312 ePdif Pdif 00 39 40.5 +3.0
MTE Manteigas 112.61 312 ePKPdf PKiKP 00 43 29.3 +0.6
MTE Manteigas 112.61 312 ePP PP 00 44 22.9 -5.0
MTE i LQ LQ 00 47 31.4
KOWA Kowa 112.64 284 P PKiKP 00 43 28.8 -0.6
PCAB Cabril 112.65 313 ePdif Pdif 00 39 39.8 +2.2
PCAB Cabril 112.65 313 ePKPdf PKiKP 00 43 29.4 +0.7
PCAB Cabril 112.65 313 ePP PP 00 44 29.2 +1.1
PCBR Castelo Branco 112.68 311 ePKPdf PKiKP 00 43 29.4 +0.6
ARNO Arenosillo 112.69 308 Pdif Pdif 00 39 38.4 +0.6
ARNO Arenosillo 112.69 308 PP PP 00 44 28.2 -0.4
PMRV Marv??o 112.71 311 ePdif Pdif 00 39 40.1 +2.2
PMRV Marv??o 112.71 311 ePKPdf PKiKP 00 43 29.3 +0.4
PMRV Marv??o 112.71 311 ePP PP 00 44 29.6 +1.0
PMRV i LQ LQ 00 47 30.8
PBAR Barrancos 112.71 309 ePdif Pdif 00 39 40.7 +2.8
PBAR Barrancos 112.71 309 ePKPdf PKiKP 00 43 29.5 +0.6
PBAR Barrancos 112.71 309 ePP PP 00 44 28.5 -0.2
PBAR i LQ LQ 00 47 31.8
PGAV Gavieira, Arco 112.76 314 ePdif Pdif 00 39 41.5 +3.3
PGAV Gavieira, Arco 112.76 314 ePKPdf PKiKP 00 43 29.3 +0.3
PGAV Gavieira, Arco 112.76 314 ePP PP 00 44 30.8 +1.8
PVIS Viseu 112.79 312 ePKPdf PKiKP 00 43 29.5 +0.4
PESTR Estremoz 112.99 310 ePdif Pdif 00 39 45.7 +6.6
PESTR Estremoz 112.99 310 ePKPdf PKiKP 00 43 30.2 +0.8
PESTR Estremoz 112.99 310 ePP PP 00 44 31.2 +0.6
PESTR i LQ LQ 00 47 33.9
PTO Porto 113.21 313 ePKPdf PKiKP 00 43 30.5 +0.8
KIC Kosan Boka 113.22 275⇓ ePKIKP PKiKP 00 43 29.7 -0.8
comp=Z,102nm,0.4s
DBIC Dimbokro 113.34 275 Pdiff Pdif 00 39 46.0 +4.7
comp=Z,3.9nm,0.6s,baz=80,slow=2.9,SNR=4.5
DBIC PKiKP PKiKP 00 43 29.9 -0.8
comp=Z,53nm,0.5s,baz=88,slow=2.2,SNR=32
DBIC SKP 00 46 07.9
comp=Z,26nm,0.7s,baz=100,slow=2.8,SNR=3.1
DBIC Dimbokro 113.34 275⇓ i P PKiKP 00 43 30.3 -0.5
DBIC Dimbokro 113.34 275 i PKIKP PKiKP 00 43 30.0 -0.8
EVO Evora 113.38 310 Pdif Pdif 00 39 42.9 +2.0
EVO Evora 113.38 310 PP PP 00 44 34.1 +0.8
EVO Evora 113.38 310 ePdif Pdif 00 39 43.9 +3.0
EVO Evora 113.38 310 ePKPdf PKiKP 00 43 30.6 +0.4
EVO Evora 113.38 310 ePP PP 00 44 33.7 +0.4
EVO i LQ LQ 00 47 36.7
PBEJ Beja 113.38 309 ePKPdf PKiKP 00 43 30.8 +0.6
PBEJ Beja 113.38 309 ePP PP 00 44 36.7 +3.4
PCAS Casmilo, Conde 113.40 312 ePdif Pdif 00 39 43.8 +2.9
PCAS Casmilo, Conde 113.40 312 ePKPdf PKiKP 00 43 30.4 +0.2
PCAS Casmilo, Conde 113.40 312 ePP PP 00 44 34.9 +1.5
PVAQ Vaqueiros 113.40 309 ePdif Pdif 00 39 42.8 +1.8
PVAQ Vaqueiros 113.40 309 ePKPdf PKiKP 00 43 30.9 +0.7
PVAQ Vaqueiros 113.40 309 ePP PP 00 44 31.1 -2.4
PVAQ i LQ LQ 00 47 35.8
PMTG Montargil 113.42 311 ePdif Pdif 00 39 43.3 +2.3
LIC Lamto 113.49 275⇓ ePKIKP PKiKP 00 43 30.0 -1.1
comp=Z,300nm,0.8s
TIC Toumodi 113.50 275⇓ ePKIKP PKiKP 00 43 29.3 -1.8
comp=Z,52nm,0.5s
PCVE Castro Verde 113.60 309 ePdif Pdif 00 39 45.7 +3.8
PCVE Castro Verde 113.60 309 ePKPdf PKiKP 00 43 31.3 +0.7
PCVE Castro Verde 113.60 309 ePP PP 00 44 35.2 +0.3
PCVE i LQ LQ 00 47 37.4
MESJ Messejana 113.70 309 ePdif Pdif 00 39 42.7 +0.4
MESJ ePKPdf PKiKP 00 43 31.1 +0.3
MESJ ePP PP 00 44 35.9 +0.4
MESJ Messejana 113.70 309 ePdif Pdif 00 39 46.3 +4.0
MESJ Messejana 113.70 309 ePP PP 00 44 34.0 -1.5
MESJ i LQ LQ 00 47 38.8
PSBE So Bento 113.75 311 ePdif Pdif 00 39 45.5 +3.0
PSBE So Bento 113.75 311 ePKPdf PKiKP 00 43 31.5 +0.6
PSBE So Bento 113.75 311 ePP PP 00 44 33.4 -2.5
PNCL Nicolau / Gran 113.87 310 ePdif Pdif 00 39 46.9 +3.8
PNCL Nicolau / Gran 113.87 310 ePKPdf PKiKP 00 43 31.5 +0.4
PNCL Nicolau / Gran 113.87 310 ePP PP 00 44 37.5 +0.8
PNCL i LQ LQ 00 47 40.1
PACT Alcochete 113.95 310 ePdif Pdif 00 39 51.3 +7.9
PACT Alcochete 113.95 310 ePKPdf PKiKP 00 43 31.8 +0.6
PACT Alcochete 113.95 310 ePP PP 00 44 38.5 +1.3
PACT i LQ LQ 00 47 41.5
AVE Averroes 113.96 304 Pdif Pdif 00 39 46.3 +2.7
AVE Averroes 113.96 304 PP PP 00 44 38.0 +0.5
MORF Marmelete 114.15 309 ePdif Pdif 00 39 44.6 +0.2
MORF ePKPdf PKiKP 00 43 32.0 +0.2
MORF ePP PP 00 44 39.1 +0.3
MORF Marmelete 114.15 309 ePdif Pdif 00 39 50.7 +6.3
MORF Marmelete 114.15 309 ePKPdf PKiKP 00 43 32.5 +0.8
MORF Marmelete 114.15 309 ePP PP 00 44 39.5 +0.8
MORF i LQ LQ 00 47 42.6
PTEO Sao Teotonio 114.15 309 ePKPdf PKiKP 00 43 32.4 +0.7
PTEO Sao Teotonio 114.15 309 ePP PP 00 44 41.0 +2.3
LIS Lisbon 114.21 310 ePdif Pdif 00 39 44.9 +0.4
LIS ePKPdf PKiKP 00 43 32.1 +0.4
LIS ePP PP 00 44 39.5 +0.5
PMST Lisbon--Monsan 114.23 310 ePdif Pdif 00 39 48.6 +4.0
PMST Lisbon--Monsan 114.23 310 ePKPdf PKiKP 00 43 32.3 +0.5
PMST Lisbon--Monsan 114.23 310 ePP PP 00 44 40.9 +1.7
PMAFR Mafra 114.25 311 ePdif Pdif 00 39 49.8 +5.0
PMAFR Mafra 114.25 311 ePKPdf PKiKP 00 43 32.3 +0.5
PMAFR Mafra 114.25 311 ePP PP 00 44 39.0 -0.3
PMAFR i LQ LQ 00 47 43.4
PFVI Vila Bisbo 114.32 309 ePdif Pdif 00 39 47.4 +2.3
PFVI Vila Bisbo 114.32 309 ePKPdf PKiKP 00 43 32.5 +0.5
PFVI Vila Bisbo 114.32 309 ePP PP 00 44 40.7 +0.8
PFVI i LQ LQ 00 47 44.4
PFVI Vila Bisbo 114.32 309 PKPdf 00 43 31.2 -0.8
SRHM Skhour des Reh 114.51 303 P PKiKP 00 43 36.0 +3.4
YKA Yellowknife Ar 114.51 20 Pdiff Pdif 00 39 49.6 +4.2
comp=Z,2.2nm,1.0s,baz=305,slow=3.6,SNR=3.1
YKA PKiKP PKPdf 00 43 31.1 -0.5
comp=Z,36nm,0.6s,baz=328,slow=1.8,SNR=63
YKA PP PP 00 44 39.5 -0.7
comp=Z,10nm,0.9s,baz=324,slow=5.1,SNR=4.2
YKA SKP 00 46 09.9
comp=Z,12nm,0.9s,baz=294,slow=1.9,SNR=4.2
YKA PKKPbc PKKPbc 00 54 12.4 -2.3
comp=Z,2.3nm,0.3s,baz=154,slow=7.9,SNR=31
YKA PKKPab PKKPab 00 54 21.2 -0.4
comp=Z,8.9nm,0.5s,baz=124,slow=4.5,SNR=12
YKA PKKP PKKPdf 00 54 35.2 -0.3
comp=Z,3.7nm,0.6s,baz=121,slow=3.1,SNR=5.0
YKA SKKPbc SKKPbc 00 56 57.9 -4.0
comp=Z,3.7nm,0.7s,baz=135,slow=3.9,SNR=7.1

YKA Yellowknife Ar 114.51 20 i PKIKP PKPdf 00 43 31.1 -0.5
OUK Oukaimeden 114.70 302 P PKiKP 00 43 38.0 +4.6
TTIG Tnine Tigouga, 115.30 301 P PKiKP 00 43 38.0 +3.7
DY2G Dye2 116.00 349 i P PKPdf 00 43 34.6 -0.1
SFJD Kangerlussuaq 116.29 351 PKP PKPdf 00 43 34.0 -0.9
comp=Z,44nm,0.8s,baz=352,slow=1.7,SNR=23
SFJD PP PP 00 44 51.4 -0.7
comp=Z,111nm,1.1s,baz=24,slow=9.1,SNR=6.8
SFJD Kangerlussuaq 116.29 351 PKPdf PKPdf 00 43 34.3 -0.6
SFJD Kangerlussuaq 116.29 351 PKIKP PKPdf 00 43 34.3 -0.6
SFJD Kangerlussuaq 116.29 351 i P PKPdf 00 43 34.2 -0.6
NLWA Neilton Lookou 118.62 38 PKPdf PKPdf 00 43 39.3 -0.8
NUUK Nuuk 119.07 350 i P PKPdf 00 43 40.0 -0.3
USHA Ushuaia 120.42 182 PKP PKPdf 00 43 43.1 -0.1
comp=Z,122nm,0.7s,baz=297,slow=1.1,SNR=24
USHA PKKPbc PKKPbc 00 53 52.1 -2.2
comp=Z,22nm,0.7s,baz=344,slow=3.7,SNR=2.6
HOOD Mount Hood Mea 120.93 39 PKPdf 00 43 44.5 -0.2
IVI Ivigtut 121.06 347 i P PKPdf 00 43 43.7 -0.5
PMPST Porto Santo, M 121.29 306 ePKPdf PKiKP 00 43 46.3 +0.6
PMPST Porto Santo, M 121.29 306 ePP PP 00 45 28.3 +0.9
PMPS Porto Santo 121.30 306 ePKPdf PKiKP 00 43 46.2 +0.5
PMPS Porto Santo 121.30 306 ePP PP 00 45 28.1 +0.7
YBH Yreka Blue Hor 121.82 43 PKKPbc PKKPbc 00 53 47.5 -1.1
comp=Z,5.1nm,0.6s,baz=78,slow=7.6,SNR=8.7
PMAR Madeira 121.86 306 ePKPdf PKiKP 00 43 47.7 +0.6
PMAR Madeira 121.86 306 ePP PP 00 45 30.7 -0.7
FUL Funchal 121.86 306 ePKPdf PKiKP 00 43 47.8 +0.9
KCPM Cahto Peak 122.03 46 PKiKP 00 43 47.2 +0.1
PMOZ Porto Moniz, M 122.06 306 ePKPdf PKiKP 00 43 48.6 +1.2
PMOZ Porto Moniz, M 122.06 306 ePP PP 00 45 34.4 +1.7
PMOZ Porto Moniz, M 122.06 306 P PKiKP 00 43 51.5 +4.1
NEW Newport 122.13 34 PKKPbc PKKPbc 00 53 46.0 -1.6
comp=Z,4.3nm,0.4s,baz=110,slow=4.8,SNR=8.4
NEW Newport 122.13 34 P PKPdf 00 43 46.7 -0.1
baz=303
EFI East Falkland 122.42 190 PKPdf 00 43 46.5 -0.7
EFI East Falkland 122.42 190c i PKIKP PKPdf 00 43 46.6 -0.6
MACI Morro de la Ar 122.65 300 PKPdf 00 43 47.4 -1.1
GO09 Cerro Castillo 124.05 180 PKPdf 00 43 50.1 -0.3
FFC Flin Flon 124.69 21 PKPdf 00 43 51.4 0.0
FFC Flin Flon 124.69 21 PKIKP PKPdf 00 43 51.4 0.0
MSO Missoula 124.72 34 P PKPdf 00 43 51.8 0.0
baz=306
BBTS Babate 124.73 284 PKP PKiKP 00 43 53.0 0.0
comp=Z,464nm,0.9s,baz=134,slow=1.1,SNR=18
MFID Camas Ranch 125.50 38 PKPpre 00 43 44.4
MFID PKPdf PKiKP 00 43 54.3 +0.3
EGMT Eagleton 126.21 31 P PKPdf 00 43 54.2 -0.4
baz=311
MLAC Mammoth, Mammt 126.26 46 P PKiKP 00 43 55.6 -0.2
baz=296
NVAR Mina Array Bea 126.29 45 PKhKP PKPpre 00 43 45.1
comp=Z,2.1nm,0.8s,baz=267,slow=3.7,SNR=6.2
NVAR PKP PKiKP 00 43 56.0 +0.2
comp=Z,92nm,0.9s,baz=280,slow=2.3,SNR=36
NVAR pPKP pPKPdf 00 46 15.7 -2.3
comp=Z,31nm,0.9s,baz=269,slow=4.5,SNR=6.9
NVAR PKKPbc PKKPbc 00 53 32.1 +0.6
comp=Z,8.0nm,0.7s,baz=137,slow=4.0,SNR=11
NVAR SKKPbc SKKPbc 00 56 22.6 -1.0
comp=Z,4.5nm,0.8s,baz=116,slow=4.1,SNR=4.9
NVAR Mina Array Bea 126.29 45 PKPpre PKPpre 00 43 41.7
NVAR PKPdf PKiKP 00 43 56.9 +1.0
HLID Hailey 126.29 38 P PKiKP 00 43 55.9 +0.3
baz=303
SMMC Simmler 126.35 49 P PKPdf 00 43 54.8 -0.5
baz=293,SNR=9.2
BART Pico Bartolome 126.38 314 ePKP PKiKP 00 43 57.1 +1.3
PGRON Lagoa das Cont 126.53 314 ePKP PKiKP 00 43 55.8 -0.3
PSMN Pico do Norte, 126.64 313 ePKP PKiKP 00 43 57.1 +0.9
CMLA Cha da Macela 126.64 314 P PKiKP 00 44 00.3 +4.1
PKM Mcpherson Peak 126.66 50 P PKPdf 00 43 55.6 -0.5
baz=293,SNR=26
PSMA Santa Maria 126.69 313 ePKP PKiKP 00 43 56.7 +0.4
BOZ Bozeman (W) 126.74 34 P PKPdf 00 43 55.7 -0.2
baz=307
PDA Ponta Delgada 126.75 314 ePKP PKiKP 00 43 56.4 0.0
PSET Sete Cidades 126.75 315 ePKP PKPdf 00 43 55.8 -0.1
VES Vestal, Richgr 126.82 48 P PKPdf 00 43 55.9 -0.2
baz=294,SNR=11
SBC Santa Barbara 126.90 50 P PKPdf 00 43 55.0 -1.3
baz=293
TIN Tinemaha, Big 126.94 46 P PKiKP 00 43 56.9 -0.1
baz=296
SCZ2 Santa Cruz Isl 127.13 50 P PKPdf 00 43 56.5 -0.3
baz=292,SNR=7.5
ELK Elko 127.26 41 PKKP PKKPdf 00 54 10.7 -0.5
comp=Z,3.3nm,0.7s,baz=109,slow=0.9,SNR=3.1
ELK SKKPbc SKKPbc 00 56 20.7 +0.3
comp=Z,3.8nm,0.8s,baz=60,slow=1.5,SNR=4.8
ELK Elko 127.26 41 PKPpre PKPpre 00 43 48.0
ELK PKPdf PKiKP 00 43 58.4 +0.7
ELK Elko 127.26 41 PKIKP PKiKP 00 43 58.4 +0.7
ARVC Arvin 127.30 49 P PKiKP 00 43 58.3 +0.6
baz=294,SNR=25
CWC Cottonwood Cre 127.31 47 P PKiKP 00 43 57.9 0.0
baz=295
ISA Isabella, Lake 127.35 48 P PKPdf 00 43 56.4 -0.8
baz=294,SNR=22
PSBA Serra de Santa 127.44 316 ePKP PKiKP 00 44 00.2 +2.4
SNCC San Nicolas Is 127.50 51 P PKiKP 00 43 58.2 +0.1
baz=292
OSI Osito Audit: C 127.59 49 P PKPdf 00 43 57.3 -0.3
baz=294
GRAC Grapevine Rang 127.59 46 P PKPdf 00 43 57.5 -0.1
baz=296
PGRA Graciosa 127.77 317 ePKP PKiKP 00 44 02.4 +4.0
MPMC Manual Prospec 127.91 47 P PKPdf 00 43 58.3 -0.1
baz=296,SNR=65
LRMC Laurel Mtn Rad 128.01 48 P PKiKP 00 43 59.8 +0.6
baz=295,SNR=27
DECC Green Verdugo 128.03 50 P PKPdf 00 43 58.4 -0.1
baz=294,SNR=6.4
EDW2 Edwards Air Fo 128.03 49 P PKPdf 00 43 58.4 -0.1
baz=294,SNR=38
PMAN Manadas 128.03 317 ePKP PKiKP 00 44 02.8 +3.8
H17A Grant Village 128.06 35 P PKiKP 00 43 59.6 +0.4
baz=308
PID Ribeirinha 128.15 316 ePKP PKiKP 00 43 59.8 +0.5
FURC Furnace Creek, 128.19 46 P PKPdf 00 43 57.8 -0.8
baz=296,SNR=37
R11A Troy Canyon, C 128.22 44 P PKiKP 00 43 59.5 -0.1
baz=299
PPNO Prainha do Nor 128.23 316 ePKP PKiKP 00 44 01.9 +2.4
FMP Fort Macarthur 128.27 50 P PKiKP 00 43 59.7 +0.1
baz=293
CIS Catalina Islan 128.30 51 P PKPdf 00 43 58.7 -0.3
baz=293,SNR=8.4
RLMT Red Lodge 128.34 33 PKPpre PKPpre 00 43 48.7
RLMT PKPdf PKPdf 00 43 59.2 +0.2
RLMT Red Lodge 128.34 33 P PKiKP 00 43 59.9 +0.2
baz=310
SCI2 San Clemente I 128.36 51 P PKPdf 00 43 59.0 -0.1
baz=292
PCAN Candelaria 128.39 317 ePKP PKPdf 00 43 57.1 -1.9
TPNV Topopah Spring 128.41 46 P PKPdf 00 43 59.1 -0.2
baz=297,SNR=30
BFSC Mount Baldy Ra 128.54 49 P PKiKP 00 43 60.0 -0.4
baz=294,SNR=23
DGMT Dagmar 128.58 27 P PKPdf 00 43 59.0 -0.1
baz=317
DGMT Dagmar 128.58 27 P PKPdf 00 43 58.1 -1.0
baz=317
GSC Goldstone, Bar 128.74 48 P PKiKP 00 44 00.7 +0.1
baz=296,SNR=32
RRX Edison Barstow 128.78 48 P PKPdf 00 43 59.4 -0.5
baz=295
SHOC Shoshone, Teco 128.86 47 P PKPdf 00 43 59.9 -0.1
baz=296,SNR=12
LAO LASA Array 128.89 30 P PKPdf 00 43 58.3 -1.4
baz=314
LAO LASA Array 128.89 30 P PKPdf 00 43 59.3 -0.5
baz=314
BBRC Big Bear Solar 129.09 49 P PKPdf 00 44 00.6 -0.2
baz=295
DUG Dugway, Tooele 129.13 40 P PKPdf 00 44 00.8 +0.3
baz=303
MURC Murrieta 129.16 50 P PKiKP 00 44 01.1 -0.3
baz=294,SNR=12
HEC Hector,Ludlow 129.29 48 P PKPdf 00 44 00.9 0.0
baz=296,SNR=16
TUQ Turquoise Moun 129.33 47 P PKPdf 00 44 00.4 -0.7
baz=296,SNR=51
109C Camp Elliot, M 129.51 51 P PKiKP 00 44 02.2 +0.1
baz=294,SNR=5.8

BW06 Boulder Array 129.65 36 P PKPdf 00 44 00.7 -0.9
baz=308
PDAR Pinedale Array 129.65 36 PKhKP PKPpre 00 43 45.1
comp=Z,0.7nm,0.6s,baz=66,slow=0.4,SNR=5.4
PDAR PKP PKPdf 00 44 01.4 -0.2
comp=Z,22nm,0.6s,baz=45,slow=0.6,SNR=30
PDAR pPKP PP 00 46 21.8 +0.2
comp=Z,4.4nm,0.9s,baz=267,slow=1.8,SNR=1.2
PDAR PKKPbc PKKPdf 00 53 16.2 -50
comp=Z,2.6nm,0.5s,baz=110,slow=6.3,SNR=11
PDAR SKKPbc SKKPbc 00 56 09.6 -2.6
comp=Z,7.5nm,0.8s,baz=121,slow=5.7,SNR=11
PFO Pinyon Flats O 129.71 50 PKPpre 00 43 49.0
PFO PKPdf PKPdf 00 44 01.8 -0.1
PFO Pinyon Flats O 129.71 50⇓ ePKIKP PKiKP 00 44 04.1 +1.4
PFO Pinyon Flats O 129.71 50 P PKPdf 00 44 01.1 -0.7
baz=295,SNR=18
TPFO Pinon Flats 129.72 50 P PKPdf 00 44 00.7 -1.1
baz=295,SNR=19
H07S1 FLORES T-PHASE 129.74 319 ePKP PKiKP 00 44 02.4 0.0
GMRC Granite Mounta 129.81 48 P PKPdf 00 44 01.7 -0.3
baz=296,SNR=56
BELC Belle Mtn. Jos 129.90 49 P PKPdf 00 44 00.4 -1.8
baz=295,SNR=21
MONP2 Monument Peak 130.03 50 P PKPdf 00 44 01.1 -1.5
baz=294,SNR=9.0
SCHQ Schefferville 130.05 356 PKhKP PKPpre 00 43 48.7
comp=Z,4.7nm,0.6s,baz=37,slow=7.8,SNR=5.9
SCHQ PKP PKPdf 00 44 01.6 -0.1
comp=Z,76nm,0.7s,baz=340,slow=3.5,SNR=31
SCHQ pPKP PP 00 46 22.2 -0.7
comp=Z,68nm,0.9s,baz=15,slow=9.3,SNR=7.5
SCHQ SKKPbc SKKPbc 00 56 08.4 -2.6
comp=Z,7.1nm,0.7s,baz=162,slow=3.3,SNR=3.8
IKP In-Ko-Pah, Jac 130.37 51 P PKPdf 00 44 01.7 -1.3
baz=294,SNR=20
BC3 Big Chuckawall 130.45 49 P PKPdf 00 44 00.8 -2.4
baz=296
IRM Iron Mountain 130.47 48 P PKPdf 00 44 02.5 -0.6
baz=296
SWSC Sam W. Stewart 130.49 50 P PKPdf 00 44 03.4 +0.3
baz=295,SNR=22
ULM Lac du Bonnet 130.49 20 PKhKP PKPpre 00 43 50.4
comp=Z,4.7nm,0.5s,baz=105,slow=3.7,SNR=3.8
ULM PKP PKPdf 00 44 02.6 +0.1
comp=Z,74nm,0.7s,baz=286,slow=1.5,SNR=18
ULM SKPbc SKPbc 00 46 29.0 -0.5
comp=Z,396nm,0.8s,baz=330,slow=4.5,SNR=38
ULM SKKPbc SKKPbc 00 56 06.2 -3.1
comp=Z,16nm,0.8s,baz=150,slow=3.2,SNR=7.9
ULM Lac du Bonnet 130.49 20 PKPdf PKPdf 00 44 02.0 -0.6
ULM Lac du Bonnet 130.49 20 PKIKP PKPdf 00 44 02.7 +0.1
ULM 00 46 29.0
NEE2 Needles Airpor 130.58 47 P PKPdf 00 44 02.3 -0.9
baz=297
MDND Maddock 131.05 25 P PKPdf 00 44 03.2 -0.6
baz=322
MDND Maddock 131.05 25 P PKPdf 00 44 02.9 -0.9
baz=322
PDMCI Parker Dam,Lak 131.14 48 P PKPdf 00 44 03.4 -0.9
baz=297,SNR=25
GLA Glamis 131.19 50 P PKPdf 00 44 03.4 -1.1
baz=296,SNR=11
K22A Casper 131.45 34 P PKPdf 00 44 04.8 -0.1
baz=311
K22A Casper 131.45 34 P PKPdf 00 44 03.9 -1.0
baz=311
E28A Huff 131.57 26 P PKPdf 00 44 03.8 -1.1
baz=320
RWWY Rawlins 131.68 35 PKPpre PKPpre 00 43 56.4
RWWY PKPdf PKPdf 00 44 05.7 +0.2
RSSD Black Hills 131.78 31 P PKPdf 00 44 03.6 -1.9
baz=315
RPN Rapa Nui 131.79 133 PKP PKPdf 00 44 06.2 +0.4
comp=Z,84nm,0.7s,baz=35,slow=1.3,SNR=2.6
RPN SKPab SKPab 00 46 36.6 +0.3
comp=Z,325nm,0.9s,baz=268,slow=3.1,SNR=12
RPN Rapa Nui 131.79 133 PKIKP PKPdf 00 44 06.2 +0.4
O20A White River Ci 132.03 38 P PKPdf 00 44 04.8 -1.3
baz=307,SNR=6.1
AGMN Agassiz Nation 132.14 21 P PKPdf 00 44 06.0 +0.2
baz=327
AGMN Agassiz Nation 132.14 21 P PKPdf 00 44 04.9 -0.9
baz=327
WUAZ Wupatki 132.55 45 P PKPdf 00 44 06.0 -1.2
baz=301,SNR=36
D32B Dogwood Acres, 132.67 23 P PKPdf 00 44 06.0 -0.8
baz=325
N23A Red Feather La 132.92 35 PKPpre PKPpre 00 43 52.7
N23A Red Feather La 132.92 35 P PKPdf 00 44 06.6 -1.2
baz=310
214A Organ Pipe Nat 133.19 50 P PKPdf 00 44 07.4 -0.9
baz=296
MVCO Mesa Verde 133.59 41 P PKPdf 00 44 08.8 -0.4
baz=305,SNR=22
W18A Petrified Fore 133.90 44 P PKPdf 00 44 08.3 -1.5
baz=302,SNR=21
EYMN Ely 133.93 18 P PKPdf 00 44 09.1 -0.1
baz=332
SUSD Miller 134.00 27 P PKiKP 00 44 10.3 -0.6
baz=321
SUSD Miller 134.00 27 P PKPdf 00 44 09.0 -0.4
baz=321
F33A 5 Mile Ranch, 134.02 24 P PKiKP 00 44 10.1 -0.7
baz=325
S22A 4UR Ranch, Cre 134.35 39 P PKPdf 00 44 08.9 -1.8
baz=307
TUC Tucson 134.56 48 PKPpre 00 43 58.2
TUC Tucson 134.56 48 PKHKP PKPpre 00 43 58.2
TUC Tucson 134.56 48 P PKPdf 00 44 08.5 -2.5
baz=299
PLCA Paso Flores 134.58 181 PKhKP PKPpre 00 43 58.8
comp=Z,6.2nm,0.6s,baz=244,slow=1.5,SNR=24
PLCA PKP PKPdf 00 44 11.2 +0.4
comp=Z,44nm,0.8s,baz=195,slow=2.6,SNR=11
PLCA SKPbc SKPbc 00 46 43.5 -0.2
comp=Z,243nm,1.1s,baz=173,slow=5.0,SNR=23
PLCA PKKP PKKPdf 00 53 57.9 +1.2
comp=Z,6.9nm,1.0s,baz=50,slow=3.4,SNR=4.1
PLCA SKKPbc SKKPbc 00 55 51.7 -2.1
comp=Z,6.0nm,0.8s,baz=359,slow=2.5,SNR=3.8
PLCA Paso Flores 134.58 181 PKIKP PKPdf 00 44 11.2 +0.4
Q24A Divide 134.63 37 P PKPdf 00 44 08.5 -2.6
baz=310
F36A Milaca 135.06 21 P PKPdf 00 44 08.8 -2.6
baz=329,SNR=20
OGNE Ogallala 135.07 33 P PKPdf 00 44 10.4 -1.3
baz=315
SDCO Great Sand Dun 135.18 39 P PKPdf 00 44 09.4 -2.9
baz=309,SNR=12
SDCO Great Sand Dun 135.18 39 P PKPdf 00 44 11.3 -0.9
baz=309,SNR=12
ECSD EROS Data Cent 135.59 26 P PKPdf 00 44 10.0 -2.4
baz=324,SNR=25
ECSD EROS Data Cent 135.59 26 P PKPdf 00 44 09.4 -3.0
baz=324
SPMN Marine on St. 135.86 21 P PKPdf 00 44 12.3 -0.5
baz=329
SPMN Marine on St. 135.86 21 P PKPdf 00 44 11.0 -1.9
baz=329,SNR=6.8
KSCO Kaye Shedlock' 136.08 35 P PKPdf 00 44 10.3 -3.3
baz=313
ANMO Albuquerque 136.24 42 SKKPbc SKKPbc 00 55 46.9 -1.1
comp=Z,1.8nm,0.8s,baz=254,slow=8.2,SNR=1.8
ANMO Albuquerque 136.24 42 i PKIKP PKPpre 00 44 08.3
ANMO Albuquerque 136.24 42 P PKPpre 00 44 09.6
baz=305,SNR=17
ANMO Albuquerque 136.24 42 P PKPdf 00 44 13.0 -1.1
baz=305
T25A Trinidad 136.24 38 P PKPdf 00 44 11.5 -2.6
baz=309,SNR=17
COWI Conover 136.30 17 P PKiKP 00 44 14.7 -0.8
baz=335
LENM Lemitar 136.33 44 PKPpre 00 44 04.6
Y22D IRIS PASSCAL I 136.42 44 P PKiKP 00 44 15.4 -0.9
baz=304
Y22D IRIS PASSCAL I 136.42 44 P PKPdf 00 44 13.3 -1.1
baz=304
Y22F Passcal Instru 136.42 44 P PKPdf 00 44 13.3 -1.1
baz=304
Y22A Socorro 136.46 44 P PKPdf 00 44 11.4 -3.1
baz=304,SNR=8.1
121A Cookes Peak, D 136.64 46 P PKPdf 00 44 09.5 -5.4
baz=302,SNR=11
121A Cookes Peak, D 136.64 46 P PKPdf 00 44 13.3 -1.6
baz=302
E43A Lone Tree Farm 136.65 15 P PKPdf 00 44 14.9 +0.7
baz=338

I37B	Waseca	136.67	23	P		PKPdf	00 44 13.6	-0.8
	baz=328							
BGNE	Belgrade	136.71	29	P		PKPpre	00 44 05.4	
	baz=320							
BGNE	Belgrade	136.71	29	P		PKPdf	00 44 13.0	-1.6
	baz=320							
F42A	Maple Grove Fa	136.90	17	P		PKPpre	00 44 06.9	
	baz=336							
L34A	Svendsen Farm,	137.11	27	P		PKPpre	00 44 04.9	
	baz=323,SNR=24							
E46A	Sault Ste Mari	137.30	13	P		PKPpre	00 44 10.1	
	baz=342							
I40A	Norwalk	137.79	20	P		PKPpre	00 44 09.8	
	baz=332							
CBKS	Cedar Bluff	137.82	33	P		PKPpre	00 44 11.9	
	baz=316,SNR=9.1							
CBKS	Cedar Bluff	137.82	33	P		PKPdf	00 44 15.0	-1.7
	baz=316							
D62A	Allapoint, All	137.90	357	P			00 44 09.4	
	baz=4.1							
D62A				P		PKPpre	00 44 09.4	
	baz=4.1							
H43A	Windswept, Lux	138.18	17	P		PKPpre	00 44 11.7	
	baz=336							
G45A	Suttons Bay	138.23	15	P			00 44 11.2	
	baz=339							
G45A				P		PKPpre	00 44 11.2	
	baz=339							
PQI	Presque Isle	138.25	356	PKPpre		PKPpre	00 44 06.4	
PQI				PKPdf		PKPdf	00 44 15.8	-1.4
LPA	La Plata	138.29	197	cePP		PKiKP	00 44 19.0	-0.9
LPA				SKIKP			00 46 54.3	
LPA				PKS		PKSdf	00 47 55.1	+1.4
LPA				pPP			00 49 20.3	
LPA				PPP		PPP	00 50 22.2	
N35A	Tabor	138.32	27	P		PKPpre	00 44 08.5	
	baz=323							
E62A	Clayton Lake	138.38	358	P		PKPdf	00 44 15.4	-2.1
	baz=3.5,SNR=6.3							
E62A				P		PKPdf	00 44 15.4	-2.1
	baz=3.5,SNR=6.3							
SCIA	State Center	138.52	24	P		PKPpre	00 44 12.1	
	baz=327							
SCIA	State Center	138.52	24	P		PKPdf	00 44 16.8	-1.0
	baz=327							
E63A	Oxbow	138.53	356	P			00 44 10.1	
	baz=5.1							
E63A				P		PKPpre	00 44 10.1	
	baz=5.1							
GBN	Guysborough	138.65	349	PKPpre		PKPpre	00 44 08.9	
R32A	Long Quarter,	138.66	32	P		PKPdf	00 44 15.4	-2.9
	baz=317,SNR=30							
GLMI	Grayling	138.69	14	P		PKPpre	00 44 12.2	
	baz=341							
GLMI	Grayling	138.69	14	P		PKPdf	00 44 17.3	-0.8
	baz=341							
JFWS	Jewell Farm	138.78	21	P		PKPpre	00 44 10.2	
	baz=332							
JFWS	Jewell Farm	138.78	21	P		PKPdf	00 44 17.0	-1.3
	baz=332							
I45A	Fountain	139.02	16	P			00 44 10.4	
	baz=338							
I45A				P		PKPpre	00 44 10.4	
	baz=338							
F64A	Sherman	139.08	356	P			00 44 10.1	
	baz=5.3							
F64A				P		PKPpre	00 44 10.1	
	baz=5.3							
F62A	Pittston Farm,	139.12	358	P			00 44 14.2	
	baz=2.8							
F62A				P		PKPpre	00 44 14.2	
	baz=2.8							
L40A	Anamosa	139.17	22	P		PKPpre	00 44 10.3	
	baz=330							
KSU1	Kansas State U	139.24	30	P		PKPpre	00 44 13.0	
	baz=320,SNR=53							
KSU1	Kansas State U	139.24	30	P		PKPdf	00 44 17.7	-1.5
	baz=320							
MSTX	Muleshoe	139.26	41	P		PKPpre	00 44 10.1	
	baz=308							
MSTX	Muleshoe	139.26	41	P		PKPdf	00 44 18.1	-1.5
	baz=308							
F63A	Nahmakanta, Br	139.28	357	P			00 44 10.8	
	baz=4.2							
F63A				P		PKPpre	00 44 10.8	
	baz=4.2							
AMTX	Amarillo	139.38	39	P		PKPpre	00 44 13.1	
	baz=311							
AMTX	Amarillo	139.38	39	P		PKPdf	00 44 18.6	-1.2
	baz=311							
N38A	Joes South For	139.44	25	P		PKPpre	00 44 10.4	
	baz=326,SNR=8.8							
PLTB	Pedras Altas	139.60	204	PKPpre		PKPpre	00 44 12.4	
PLTB				PKPdf		PKiKP	00 44 21.9	-0.8
PLTB	Pedras Altas	139.60	204	eP		PKPdf	00 44 19.6	-0.6
K43A	Burlington	139.61	19	P		PKPpre	00 44 10.2	
	baz=334							
PKME	Peaks-Kenny Pk	139.73	357	P		PKPpre	00 44 13.8	
	baz=3.9,SNR=12							
PKME	Peaks-Kenny Pk	139.73	357	P		PKPdf	00 44 18.8	-1.1
	baz=3.9							
L42A	Oliver, Polo	139.79	21	P		PKPpre	00 44 13.9	
	baz=332,SNR=34							
G62A	West of Eustis	139.82	359	P			00 44 13.7	
	baz=2.0,SNR=14							
G62A				P		PKPpre	00 44 13.7	
	baz=2.0,SNR=14							
I49A	Point Hope	139.93	12	PKPpre		PKPpre	00 44 13.6	
I49A	Point Hope	139.93	12	P			00 44 11.4	
	baz=343							
I49A				P		PKPpre	00 44 11.4	
	baz=343							
U32A	Winter Ranch,	139.97	35	P		PKPpre	00 44 14.6	
	baz=315,SNR=8.7							
BMNY	Brushton-Moira	140.15	3	P		PKPpre	00 44 14.2	
	baz=356,SNR=35							
EMMW	East Machias	140.16	355	P		PKPpre	00 44 13.2	
	baz=6.8							
TER01	Tubaro-SC	140.20	212	eP		PKPdf	00 44 22.1	+0.8
L44A	Lake County Fo	140.22	19	P		PKPpre	00 44 14.3	
	baz=335							
P38A	Dawn	140.27	26			PKPpre	00 44 14.1	
P38A	Dawn	140.27	26	P		PKPpre	00 44 14.6	
	baz=325,SNR=217							
WVL	Waterville	140.44	358	P		PKPpre	00 44 14.2	
	baz=3.4,SNR=33							
CNLB	Canela	140.44	209	eP		PKiKP	00 44 23.2	-1.4
H62A	Milan	140.48	359	P			00 44 16.1	
	baz=1.1,SNR=39							
H62A				P		PKPpre	00 44 16.1	
	baz=1.1,SNR=39							
N41A	Harden Midland	140.48	23	P		PKPpre	00 44 15.5	
	baz=329,SNR=39							
DUB01	Friburgo-RJ	140.60	226	eP		PKPdf	00 44 22.6	+0.4
VT1	Waterbury	140.72	1	P		PKPpre	00 44 16.6	
	baz=359							
LBNH	Lisbon	140.81	0	P		PKPpre	00 44 17.6	
	baz=360,SNR=21							
L46A	Eue Claire	140.87	17	P			00 44 17.1	
	baz=337,SNR=16							
L46A				P		PKPpre	00 44 17.1	
	baz=337,SNR=16							
M44A	Midewin, Midew	140.89	19	P		PKPpre	00 44 16.9	
	baz=334,SNR=39							
WCNY	West Carthage	140.93	4	P		PKPpre	00 44 17.6	
	baz=354,SNR=16							
T35B	Sooner Cattle	140.95	32	P		PKPpre	00 44 18.2	
	baz=319,SNR=176							
I63A	Otisfield	140.99	359	P			00 44 17.2	
	baz=2.0,SNR=28							
I63A				P		PKPpre	00 44 17.2	
	baz=2.0,SNR=28							
P40A	Paris	140.99	25	P		PKPpre	00 44 17.4	
	baz=327,SNR=104							
NCB	Newcomb	141.03	3	P		PKPpre	00 44 17.8	
	baz=356,SNR=113							
MCVT	Middlebury Col	141.09	1	P		PKPpre	00 44 17.7	
	baz=358,SNR=31							
K50A	Casco	141.09	13	P			00 44 17.9	
	baz=343,SNR=16							
K50A				P		PKPpre	00 44 17.9	
	baz=343,SNR=16							
I62A	Tamworth	141.18	359	P			00 44 17.9	
	baz=0.8,SNR=24							
I62A				P		PKPpre	00 44 17.9	
	baz=0.8,SNR=24							
HDIL	Hopedale	141.19	21	P		PKPpre	00 44 18.1	
	baz=332,SNR=56							
MAN01	Angra dos Reis	141.21	224	eP		PKPdf	00 44 23.3	0.0
WMOK	Wichita Mounta	141.25	37	P		PKPpre	00 44 18.9	
	baz=314,SNR=178							
AAM	Ann Arbor	141.30	14	P		PKPpre	00 44 18.7	
	baz=341,SNR=10							
J54A	Appleton	141.31	8	P			00 44 19.2	
	baz=349,SNR=6.2							
J54A				P		PKPpre	00 44 19.2	
	baz=349,SNR=6.2							
TX31	Lajitas Ar. Si	141.33	47			PKPdf	00 44 20.7	-2.8
TX31	Lajitas Ar. Si	141.33	47	P		PKPpre	00 44 18.3	
	baz=303							
TXAR	Lajitas Array	141.33	47	PKP		PKPdf	00 44 20.6	-2.9
	comp=Z,21nm,0.4s,baz=244,slow=1.0,SNR=123							
TXAR				SKP			00 46 59.9	
	comp=Z,16nm,0.5s,baz=240,slow=0.7,SNR=2.8							
TXAR				SKKPbc		SKKPbc	00 55 26.5	-1.6
	comp=Z,6.1nm,1.1s,baz=78,slow=8.4,SNR=2.8							
TXAR	Lajitas Array	141.33	47			PKPpre	00 44 20.3	
TXAR	Lajitas Array	141.33	47	PKIKP		PKPpre	00 44 20.3	
HNH	Hanover	141.35	0	P		PKPpre	00 44 18.9	
	baz=359,SNR=25							
J55A	Hilton	141.43	7	P			00 44 19.5	
	baz=350,SNR=14							
J55A				P		PKPpre	00 44 19.5	
	baz=350,SNR=14							
L48A	N Adams	141.44	15	P			00 44 18.6	
	baz=340,SNR=64							
L48A				P		PKPpre	00 44 18.6	
	baz=340,SNR=64							
J57A	Williamstown	141.47	5	P			00 44 19.2	
	baz=353,SNR=51							
J57A				P		PKPpre	00 44 19.2	
	baz=353,SNR=51							
J59A	Piesco	141.52	3	P			00 44 19.0	
	baz=356,SNR=105							
J59A				P		PKPpre	00 44 19.0	
	baz=356,SNR=105							
J56A	Wolcott	141.53	6	P			00 44 19.4	
	baz=352,SNR=22							
J56A				P		PKPpre	00 44 19.4	
	baz=352,SNR=22							
OKCSW	OKLAHOMA CITY	141.55	35	PKPpre		PKPpre	00 44 19.8	
J58A	Remsen	141.58	4	P			00 44 18.8	
	baz=354,SNR=55							
J58A				P		PKPpre	00 44 18.8	
	baz=354,SNR=55							
ACCN	Adirondack Com	141.64	2	P		PKPpre	00 44 19.1	
	baz=357,SNR=134							
J61A	Chester	141.70	1	P		PKPdf	00 44 21.4	-2.1
	baz=359,SNR=87							
J61A				P		PKPdf	00 44 21.4	-2.1
	baz=359,SNR=87							
SJMB	Sao Joao De Ma	141.73	231	eP		PKPdf	00 44 23.3	-1.0
GUA01	Guaratinga, BA	141.78	235	eP		PKPdf	00 44 23.9	-0.4
O44A	Mansfield	141.84	21	P		PKPdf	00 44 20.8	-3.0
	baz=333,SNR=27							
ALGR	Alto Alegre (B	141.91	207	eP		PKPdf	00 44 24.2	-0.3
P43A	Skaggs, Pawnee	141.91	22	P		PKPdf	00 44 21.0	-3.0
	baz=331,SNR=41							
R40A	Maddies Statio	141.93	26	P		PKPdf	00 44 20.6	-3.5
	baz=326,SNR=365							
S39A	Bolivar	141.94	28	P		PKPdf	00 44 21.4	-2.7
	baz=324,SNR=141							
MMNY	Mt. Morris Dam	141.94	7			PKPpre	00 44 19.8	
UNH	University of	141.95	359	P		PKPdf	00 44 21.6	-2.3
	baz=1.6,SNR=31							
PARB	Paraibuna	142.00	221	eP		PKPdf	00 44 23.9	-0.8
N47A	Urbana	142.08	17	P		PKPdf	00 44 20.6	-3.7
	baz=337,SNR=175							
N47A				P		PKPdf	00 44 20.6	-3.7
	baz=337,SNR=175							
TUL1	Leonard	142.08	32	P		PKPdf	00 44 21.2	-3.3
	baz=319,SNR=112							
TUL1	Leonard	142.08	32	P		PKPdf	00 44 21.4	-3.0
	baz=319							
K57A	Scipio Center	142.10	6	P		PKPdf	00 44 21.1	-3.2
	baz=352,SNR=122							
SFIN	Lafayette	142.11	19	P		PKPdf	00 44 21.2	-3.1
	baz=335,SNR=246							
SFIN	Lafayette	142.11	19	P		PKPdf	00 44 20.7	-3.6
	baz=335							
ABTX	Abilene, Hawle	142.14	40	P		PKPdf	00 44 22.2	-2.5
	baz=311,SNR=130							
ABTX	Abilene, Hawle	142.14	40	P		PKPdf	00 44 22.1	-2.5
	baz=311							
CMC01	Camacan, BA	142.16	237	eP		PKPdf	00 44 23.5	-1.6
WVNY	West Valley, N	142.17	8	P		PKPdf	00 44 21.0	-3.4
	baz=349,SNR=105							
ERPA	Erie	142.24	10	P		PKPdf	00 44 21.5	-3.0
	baz=347,SNR=82							
ERPA	Erie	142.24	10	P		PKPdf	00 44 21.4	-3.1
	baz=347							
TRY	Troy	142.29	2	P		PKPdf	00 44 21.7	-2.8
	baz=357,SNR=102							
HCNY	Howe Caverns	142.29	3	P		PKPdf	00 44 21.4	-3.2
	baz=356,SNR=365							
M50A	Fremont	142.30	14	P		PKPdf	00 44 22.0	-2.6
	baz=342,SNR=84							
M50A				P		PKPdf	00 44 22.0	-2.6
	baz=342,SNR=84							
PET01	Itanhaem-SP	142.38	218	eP		PKPdf	00 44 23.9	-1.3
K62A	Royalston	142.39	0	P		PKPdf	00 44 22.2	-2.5
	baz=359,SNR=162							
K62A				P		PKPdf	00 44 22.2	-2.5
	baz=359,SNR=162							
U38A	Gravette	142.41	30	P		PKPdf	00 44 21.9	-3.1
	baz=321,SNR=357							
N49A	Columbus Grove	142.47	15	P		PKPdf	00 44 21.9	-3.1
	baz=340,SNR=304							
N49A				P		PKPdf	00 44 21.9	-3.1
	baz=340,SNR=304							
SLM	Saint Louis	142.50	24	P		PKPdf	00 44 22.4	-2.7
	baz=329,SNR=58							
RCBR	Riachuelo	142.54	254	SKP			00 47 02.7	
	comp=Z,57nm,1.0s,baz=256,slow=4.2,SNR=2.7							
RCBR	Riachuelo	142.54	254			PKPdf	00 44 23.2	-2.7
RCBR	Riachuelo	142.54	254	PKIKP		PKPdf	00 44 23.2	-2.7
M52A	Chesterland	142.54	12	P		PKPdf	00 44 22.3	-2.8
	baz=344,SNR=138							
M52A				P		PKPdf	00 44 22.3	-2.8
	baz=344,SNR=138							
HRV	Adam Dziewonsk	142.55	360			PKPdf	00 44 22.1	-2.9
HRV	Adam Dziewonsk	142.55	360	PKIKP		PKPdf	00 44 22.1	-2.9
HRV	Adam Dziewonsk	142.55	360	P		PKPdf	00 44 22.4	-2.6
	baz=0.5,SNR=124							
HRV	Adam Dziewonsk	142.55	360	P		PKPdf	00 44 21.9	-3.1
	baz=0.5							
UNIS	Unistalda (Bra	142.57	205	eP		PKPdf	00 44 25.3	-0.3
CCM	Cathedral Cave	142.57	26			PKPdf	00 44 22.8	-2.4
CCM	Cathedral Cave	142.57	26	PKIKP		PKPdf	00 44 22.8	-2.4
CCM	Cathedral Cave	142.57	26	P		PKPdf	00 44 22.3	-2.9
	baz=327,SNR=667							
CCM	Cathedral Cave	142.57	26	P		PKPdf	00 44 22.4	-2.8
	baz=327							
L56A	Greenwood	142.57	7	P		PKPdf	00 44 22.3	-2.8
	baz=351,SNR=111							
L56A				P		PKPdf	00 44 22.3	-2.8
	baz=351,SNR=111							
L61B	Northampton	142.60	1	P		PKPdf	00 44 22.4	-2.8
	baz=359,SNR=95							
L61B	Northampton	142.60	1	P		PKPdf	00 44 22.3	-2.8
	baz=359							
ITQB	Itaqui	142.64	202			PKPdf	00 44 23.4	-2.2
ITQB	Itaqui	142.64	202	eP		PKPdf	00 44 25.7	+0.1
WES	Weston	142.67	359	P		PKPdf	00 44 22.6	-2.7
	baz=0.8,SNR=57							
BINY	Binghamton	142.68	5	P		PKPdf	00 44 22.9	-2.4
	baz=353,SNR=256							
BINY	Binghamton	142.68	5	P		PKPdf	00 44 22.9	-2.4
	baz=353							
Q44A	Meyer Farm, Va	142.74	22	P		PKPdf	00 44 22.9	-2.6
	baz=331,SNR=240							
HHAR	Hobbs	142.76	30	P		PKPdf	00 44 24.7	-1.0
	baz=322							
L59A	Walton	142.76	4	P		PKPdf	00 44 22.9	-2.6
	baz=355,SNR=248							
L59A				P		PKPdf	00 44 22.9	-2.6
	baz=355,SNR=248							
P46A	Rosedale	142.76	20	P		PKPdf	00 44 23.0	-2.5
	baz=334,SNR=220							
M53A	WI Miller and	142.77	11	P		PKPdf	00 44 22.9	-2.6
	baz=345							
QUA2	Belchertown	142.77	1	P		PKPdf	00 44 23.2	-2.2
	baz=359,SNR=295							
ITAB	Concordia	142.79	210	eP		PKPdf	00 44 25.5	-0.5
O48B	Farmland	142.82	17	P		PKPdf	00 44 24.7	-0.8
	baz=338,SNR=481							
O48B	Farmland	142.82	17	P		PKPdf	00 44 23.0	-2.6
	baz=338							
MGMO	Mountain Grove	142.86	27			PKPdf	00 44 23.2	-2.5
N51A	Ashland	142.92	13	P		PKPdf	00 44 23.1	-2.6
	baz=342,SNR=303							
N51A				P		PKPdf	00 44 23.1	-2.6
	baz=342,SNR=303							
FVM	French Village	142.97	25	P		PKPdf	00 44 23.9	-2.1
	baz=328,SNR=67							
M55A	Ridgway	143.07	9	P		PKPab	00 44 23.7	-0.2
	baz=348,SNR=237							
M55A				P		PKPab	00 44 23.7	-0.2
	baz=348,SNR=237							
L64A	Middleborough	143.11	359	P		PKPbc	00 44 24.5	+0.1
	baz=1.6,SNR=68							
L64A				P		PKPbc	00 44 24.5	+0.1
	baz=1.6,SNR=68							
O49A	Covington	143.11	16	P		PKPdf	00 44 25.6	-0.5
	baz=339,SNR=516							
O49A				P		PKPdf	00 44 25.6	-0.5
	baz=339,SNR=516							
Z35A	Perchaven, San	143.13	37	P		PKPdf	00 44 25.8	-0.6
	baz=315,SNR=418							
U40A	Yellville	143.23	29	P		PKPab	00 44 24.5	-0.2
	baz=324,SNR=1000							
U40A				P		PKPab	00 44 24.5	-0.2
	baz=324,SNR=1000							
OLIL	Olney	143.23	21	P		PKPbc	00 44 25.2	+0.3
	baz=332,SNR=452							
NPNY	Mohonk Preserv	143.24	3	P		PKPbc	00 44 25.4	+0.5
	baz=356,SNR=318							
X37A	Clayton	143.30	33	P		PKPdf	00 44 25.9	-0.7
	baz=318,SNR=571							
KSPA	Keystone Colle	143.33	5	P		PKPdf	00 44 26.3	-0.2
	baz=354,SNR=442							
N53A	Lisbon	143.35	11	P		PKPdf	00 44 26.0	-0.6
	baz=345,SNR=622							
N53A				P		PKPdf	00 44 26.0	-0.6
	baz=345,SNR=622							
JCT	Junction City	143.40	43			PKPdf	00 44 26.4	-0.6
JCT	Junction City	143.40	43	PKIKP		PKPdf	00 44 26.4	-0.6
JCT	Junction City	143.40	43	P		PKPdf	00 44 27.5	+0.6
	baz=309,SNR=1000							
JCT	Junction City	143.40	43	P		PKPdf	00 44 26.4	-0.6
	baz=309,SNR=1000							
M57A	Sunshine Farm,	143.41	7	P		PKPab	00 44 25.1	-0.1
	baz=351,SNR=473							
M57A				P		PKPab	00 44 25.1	-0.1
	baz=351,SNR=473							
ACSO	Alum Creek Sta	143.42	14	P		PKPab	00 44 25.1	-0.2
	baz=341,SNR=528							
ACSO	Alum Creek Sta	143.42	14	P		PKPab	00 44 24.5	-0.8
	baz=341,SNR=528							
P48A	Milroy	143.47	18	P		PKPbc	00 44 26.0	+0.3
	baz=337,SNR=564							
P48A				P		PKPbc	00 44 26.0	+0.3
	baz=337,SNR=564							
M65A	Busby, Falmout	143.48	358	P		PKPab	00 44 24.8	-0.6
	baz=2.0							
BRNY	Black Rk. Fore	143.59	3	P		PKPbc	00 44 26.4	+0.4
	baz=356,SNR=332							
P49A	Miami Univ. Ec	143.61	17	P		PKPbc	00 44 26.2	+0.2
	baz=338,SNR=762							
P49A	Miami Univ. Ec	143.61	17	P		PKPab	00 44 25.0	-1.1
	baz=338,SNR=762							
M63A	Gales Ferry	143.65	0	P		PKPab	00 44 26.2	+0.1
	baz=360,SNR=83							
M63A				P		PKPab	00 44 26.2	+0.1
	baz=360,SNR=83							
S44A	Carbondale	143.70	24	P		PKPab	00 44 26.6	+0.1
	baz=330,SNR=603							
O52A	Adamsville	143.80	13	P		PKPbc	00 44 26.1	-0.5
	baz=343,SNR=486							
O52A				P		PKPbc	00 44 26.1	-0.5
	baz=343,SNR=486							
O53A	New Philadelph	143.81	12	P		PKPbc	00 44 26.3	-0.4
	baz=344,SNR=387							
AZCA	Azaras, Argent	143.81	204	eP		PKPdf	00 44 27.9	+0.2
TRNY	Table Rock, Ra	143.85	3			PKPbc	00 44 25.8	-1.0
ODNJ	Ogdensburg	143.89	4	P		PKPdf	00 44 27.3	-0.1
	baz=355,SNR=406							
RCLB	Rio Claro- Sao	143.89	220	eP		PKPab	00 44 27.7	0.0
WHTX	Lake Whitney,	143.94	39	P		PKPdf	00 44 28.0	+0.2
	baz=313							
N58A	Sunbury	143.95	6	P		PKPab	00 44 27.3	0.0
	baz=352,SNR=550							
N58A				P		PKPab	00 44 27.3	0.0
	baz=352,SNR=550							
PBMO	Poplar Bluff	143.99	26	P		PKPbc	00 44 25.5	-1.8
	baz=327,SNR=30							
PAL	Palisades	144.00	3	P		PKPab	00 44 27.5	0.0
	baz=356,SNR=174							
PAL	Palisades	144.00	3	P		PKPbc	00 44 26.8	-0.4
	baz=356,SNR=174							
SSPA	Standing Stone	144.01	8			PKPab	00 44 27.4	-0.2
SSPA	Standing Stone	144.01	8	P		PKPab	00 44 27.5	0.0
	baz=350,SNR=696							
SSPA	Standing Stone	144.01	8	P		PKPbc	00 44 26.4	-0.8
	baz=350							
O54A	Avella	144.04	11	P		PKPbc	00 44 27.0	-0.4
	baz=346,SNR=409							
O54A				P		PKPbc	00 44 27.0	-0.4
	baz=346,SNR=409							
N62A	Caumsett State	144.09	2	P		PKPab	00 44 28.0	+0.2
	baz=357,SNR=31							
N62A				P		PKPab	00 44 28.0	+0.2
	baz=357,SNR=31							
P51A	Williamsport	144.11	15	P		PKPdf	00 44 27.8	0.0
	baz=341,SNR=176							
P51A				P		PKPdf	00 44 27.8	0.0
	baz=341,SNR=176							
FOR	Fordham	144.15	3	P		PKPab	00 44 28.3	+0.3
	baz=356,SNR=57							
P52A	Corning	144.19	14	P		PKPbc	00 44 26.9	-1.0
	baz=342,SNR=482							
LCAR	Lake Charles	144.26	27	P		PKPbc	00 44 27.8	-0.3
	baz=326,SNR=896							
BRNJ	Basking Ridge	144.29	4	P		PKPab	00 44 29.0	+0.4
	baz=355,SNR=151							
MIAR	Mount Ida	144.29	32	P		PKPab	00 44 28.7	-0.1
	baz=321,SNR=1000							
MIAR	Mount Ida	144.29	32	P		PKPbc	00 44 28.4	0.0
	baz=321,SNR=1000							
FRBT	Francisco Belt	144.30	210	eP		PKPbc	00 44 27.9	-0.8
WCI	Wyandotte Cave	144.31	20			PKPdf	00 44 28.0	-0.2
WCI	Wyandotte Cave	144.31	20	PKIKP		PKPdf	00 44 28.0	-0.2
WCI	Wyandotte Cave	144.31	20	P		PKPab	00 44 29.1	+0.3
	baz=335,SNR=194							
WCI	Wyandotte Cave	144.31	20	P		PKPbc	00 44 28.3	0.0
	baz=335							
Q51A	Peebles	144.47	15	P		PKPbc	00 44 29.0	+0.2
	baz=340,SNR=339							
Q51A				P		PKPbc	00 44 29.0	+0.2
	baz=340,SNR=339							
FRTB	Fartura	144.47	217	eP		PKPdf	00 44 28.1	-0.9
Z38A	Mt. Pleasant	144.50	34	P		PKPab	00 44 29.6	0.0
	baz=318,SNR=43							
P53A	Whipple	144.50	13	P		PKPab	00 44 29.5	0.0
	baz=344,SNR=237			

237A Washetta, Mont 144.93 37 P **PKPab 00 44 31.3 -0.1**
baz=315,SNR=442
LNXT Lenox 144.97 25 P PKPbc 00 44 30.7 +0.4
baz=328,SNR=41
PSUB Penn St. - Bra 144.98 5 P **PKPab 00 44 31.0 -0.2**
baz=354
833A Chaparral WMA, 144.99 45 P PKPbc 00 44 31.1 +0.4
baz=307
MC01 Montes Claros 145.03 232 *e*P **PKPdf 00 44 29.4 -0.7**
GEDE Greenville 145.07 5 P **PKPdf 00 44 29.9 +0.5**
baz=353,SNR=351
Q54A Coxs Mills 145.11 12 P **PKPdf 00 44 29.9 +0.3**
baz=344,SNR=458
Q54A P **PKPdf 00 44 29.9 +0.3**
baz=344,SNR=458
P57A Homestead Farm 145.12 8 P **PKPbc 00 44 30.1 -0.5**
baz=349,SNR=310
P57A P **PKPbc 00 44 30.1 -0.5**
baz=349,SNR=310
T47A Sharon Grove 145.14 22 P **PKPdf 00 44 29.9 +0.2**
baz=333,SNR=318
WLAR White Oak Lake 145.20 32 **PKPbc 00 44 31.2 +0.2**
P61A Hammonton 145.28 4 P **PKPbc 00 44 31.5 +0.4**
baz=355,SNR=52
P61A P **PKPbc 00 44 31.5 +0.4**
baz=355,SNR=52
SDMD Soldier's Deli 145.35 7 P **PKPbc 00 44 31.1 -0.3**
baz=351,SNR=202
Q56A Snyder Ridge, 145.37 10 P **PKPbc 00 44 30.7 -0.7**
baz=347,SNR=239
Q56A P **PKPbc 00 44 30.7 -0.7**
baz=347,SNR=239
R53A Hurricane 145.48 14 P **PKPdf 00 44 30.6 +0.3**
baz=342,SNR=494
R53A P **PKPdf 00 44 30.6 +0.3**
baz=342,SNR=494
BB19B Bebedouro 145.50 221 *e*P **PKPdf 00 44 30.5 -0.3**
WVT Waverly 145.62 23 **PKPdf 00 44 30.4 -0.1**
WVT Waverly 145.62 23 PKIKP **PKPdf 00 44 30.4 -0.1**
WVT Waverly 145.62 23 P **PKPdf 00 44 30.9 +0.4**
baz=331,SNR=928
WVT Waverly 145.62 23 P **PKPbc 00 44 31.8 -0.4**
baz=331
S51A Beattyville 145.69 17 P **PKPdf 00 44 30.7 0.0**
baz=339,SNR=312
S51A P **PKPdf 00 44 30.7 0.0**
baz=339,SNR=312
735A Kenedy 145.76 43 P **PKPab 00 44 34.5 -0.2**
baz=309,SNR=116
NATX Nacogdoches 145.78 36 P **PKPab 00 44 33.9 -0.9**
baz=317
NATX Nacogdoches 145.78 36 P **PKPbc 00 44 32.1 -0.7**
baz=317,SNR=28
PMNB Patos De Minas 145.78 226 *e*P **PKPdf 00 44 30.7 -0.7**
T50A Nancy 145.89 19 P **PKPbc 00 44 33.0 +0.1**
baz=337
T50A P **PKPbc 00 44 33.0 +0.1**
baz=337
W45A Hickory Valley 145.90 26 P **PKPbc 00 44 33.2 +0.2**
baz=328,SNR=277
CPUP Villa Florida 145.91 204 PKPbc **PKPbc 00 44 32.7 -0.6**
comp=Z,193nm,0.8s,baz=156,slow=2.0,SNR=116
CPUP pPKPbc pPKPab 00 46 53.0 +0.3
comp=Z,34nm,0.7s,baz=129,slow=4.4,SNR=2.7
CPUP SKPbc **SKPbc 00 47 12.9 -0.9**
comp=Z,75nm,0.8s,baz=125,slow=4.0,SNR=3.3
CPUP SKKPbc **SKKPab 00 55 08.1 -0.9**
comp=Z,14nm,0.9s,baz=352,slow=5.1,SNR=5.1
CPUP Villa Florida 145.91 204 PKP2 **PKPbc 00 44 32.7 -0.6**
CPUP Villa Florida 145.91 204 *e*P **PKPdf 00 44 31.6 +0.3**
R55A Marlinton 145.93 12 P **PKPbc 00 44 32.5 -0.6**
baz=345,SNR=221
R55A P **PKPbc 00 44 32.5 -0.6**
baz=345,SNR=221
MIDE Milford 146.03 5 P **PKPbc 00 44 33.8 +0.6**
baz=354
U49A Red Boiling Sp 146.04 20 P **PKPdf 00 44 31.3 +0.1**
baz=335,SNR=247
S54A Dingess, Beckl 146.13 13 P **PKPbc 00 44 32.9 -0.8**
baz=343,SNR=139
S54A P **PKPbc 00 44 32.9 -0.8**
baz=343,SNR=139
HKT Hockley 146.34 39 **PKPdf 00 44 32.3 +0.5**
HKT Hockley 146.34 39 *de*PKIKP **PKPdf 00 44 32.7 +0.9**
HKT Hockley 146.34 39 P **PKPbc 00 44 35.2 +0.9**
baz=313
OXF Oxford 146.34 27 P **PKPbc 00 44 33.0 -1.2**
baz=327
V48A Smith Brothers 146.35 22 P **PKPdf 00 44 31.7 -0.1**
baz=332,SNR=134
CBN Corbin Frederi 146.47 8 P **PKPbc 00 44 33.8 -0.7**
baz=350
CBN Corbin Frederi 146.47 8 P **PKPbc 00 44 33.4 -1.0**
baz=350
KVTX Kingsville 146.52 45 P **PKPbc 00 44 35.1 +0.2**
baz=308
R61A Willards 146.57 5 P **PKPbc 00 44 34.1 -0.6**
baz=354
R61A P **PKPbc 00 44 34.1 -0.6**
baz=354
R58B Mineral 146.63 9 P **PKPdf 00 44 32.6 +0.5**
baz=349,SNR=110
R58B P **PKPdf 00 44 32.6 +0.5**
baz=349,SNR=110
S57A Dark Hollow, R 146.66 10 P **PKPdf 00 44 32.5 +0.3**
baz=347,SNR=138
S57A P **PKPdf 00 44 32.5 +0.3**
baz=347,SNR=138
TRCB Terra Rica 146.67 214 *e*P **PKPdf 00 44 34.0 +1.2**
TZTN Tazewell 146.73 17 P **PKPdf 00 44 33.2 +0.8**
baz=338,SNR=361
TZTN Tazewell 146.73 17 P **PKPdf 00 44 33.7 +1.3**
baz=338
PCMB Pacaembu 146.81 217 *e*P **PKPbc 00 44 34.9 -1.0**
Y45A Yeager Farm, C 146.82 27 P **PKPdf 00 44 33.5 +0.8**
baz=326,SNR=316
BLA Blacksburg 146.90 13 **PKPdf 00 44 32.5 -0.2**
BLA PKPbc **PKPbc 00 44 35.3 -0.4**
BLA Blacksburg 146.90 13 PKIKP **PKPdf 00 44 32.5 -0.2**
BLA 00 44 35.3
BLA Blacksburg 146.90 13 P **PKPbc 00 44 35.2 -0.6**
baz=344,SNR=46
BLA Blacksburg 146.90 13 P **PKPbc 00 44 34.7 -1.0**
baz=344
AC04 Llanos de Chal 147.08 181 **PKPdf 00 44 33.1 -0.1**
V51A Loudon 147.16 19 P **PKPdf 00 44 33.5 +0.4**
baz=337,SNR=139
S61A Accomac 147.18 6 P **PKPbc 00 44 36.1 -0.2**
baz=353
S61A P **PKPbc 00 44 36.1 -0.2**
baz=353
U54A Nelsons Funny 147.23 15 P **PKPdf 00 44 32.3 -1.0**
baz=342,SNR=75
U54A P **PKPdf 00 44 32.3 -1.0**
baz=342,SNR=75
T57A Hurt 147.34 11 P **PKPdf 00 44 33.8 +0.4**
baz=346,SNR=96
T57A P **PKPdf 00 44 33.8 +0.4**
baz=346,SNR=96
V52A Sevierville 147.36 18 P **PKPbc 00 44 36.4 -0.5**
baz=338,SNR=428
441A DeRidder 147.38 35 P **PKiKP 00 44 38.9 +0.2**
baz=318,SNR=72
W50A Signal Mountai 147.39 21 P **PKPbc 00 44 35.7 -1.4**
baz=335,SNR=187
X48A Hartselle 147.40 24 P **PKPdf 00 44 33.1 -0.4**
baz=331,SNR=154
342B Flagon Creek P 147.40 34 P **PKPbc 00 44 35.5 -1.6**
baz=320,SNR=69
IPMB Ipameri, GO 147.41 225 *e*P **PKPdf 00 44 34.6 +0.5**
CPCT Cooper Cave 147.43 19 PKPdf **PKPdf 00 44 33.9 +0.3**
CPCT PKPbc **PKPbc 00 44 37.5 +0.3**
TKL Tuckaleechee C 147.48 18 pPKPbc pPKPbc 00 46 55.8 -2.1
comp=Z,24nm,0.7s,baz=190,slow=0.8,SNR=1.1
TKL Tuckaleechee C 147.48 18 P **PKPdf 00 44 34.7 +1.0**
baz=338,SNR=220
T60A Surry 147.60 7 P **PKPdf 00 44 34.7 +0.9**
baz=351,SNR=207
T60A P **PKPdf 00 44 34.7 +0.9**
baz=351,SNR=207
T59A Double "B" Far 147.65 9 P **PKPdf 00 44 34.6 +0.7**
baz=349,SNR=483
T59A P **PKPdf 00 44 34.6 +0.7**
baz=349,SNR=483
VBMS Vicksburg 147.70 30 P **PKPbc 00 44 38.0 +0.2**
baz=324,SNR=50
VBMS Vicksburg 147.70 30 P **PKPbc 00 44 37.1 -0.7**
baz=324
U56A King 147.74 13 P **PKPbc 00 44 37.5 -0.4**
baz=344,SNR=112
U56A P **PKPbc 00 44 37.5 -0.4**
baz=344,SNR=112
V53A Saluda 147.76 17 P **PKPbc 00 44 36.3 -1.7**
baz=339,SNR=1000
V53A P **PKPbc 00 44 36.3 -1.7**
baz=339,SNR=1000
W52A Murphy 147.95 19 P **PKPdf 00 44 36.4 +1.9**
baz=337,SNR=595
V55A Taylorsville 148.01 14 P **PKPdf 00 44 35.9 +1.3**
baz=342,SNR=485
V55A P **PKPdf 00 44 35.9 +1.3**
baz=342,SNR=485
Z47A Carrollton 148.05 26 P **PKPdf 00 44 35.1 +0.5**
baz=328,SNR=362
146A Union 148.07 28 **PKPdf 00 44 35.1 +0.4**
146A PKPbc **PKPbc 00 44 39.1 +0.3**
146A Union 148.07 28 P **PKPdf 00 44 35.6 +0.9**
baz=326,SNR=157
X51A Calhoun 148.12 21 P **PKPdf 00 44 35.1 +0.4**
baz=335,SNR=226
X51A P **PKPdf 00 44 35.1 +0.4**
baz=335,SNR=226
SDBA SAO DESIDERIO 148.15 237 *e*P **PKPdf 00 44 36.6 +1.2**
Y49A Blount Mountai 148.17 23 P **PKPdf 00 44 34.9 0.0**
baz=332,SNR=611
344A Westbrook Farm 148.20 32 P **PKPdf 00 44 36.4 +1.5**
baz=322,SNR=46
U59A Littleton 148.22 9 P **PKPdf 00 44 35.3 +0.4**
baz=349,SNR=220
U59A P **PKPdf 00 44 35.3 +0.4**
baz=349,SNR=220
CASEE Lake Jocassee 148.35 17 P **PKPdf 00 44 35.9 +0.8**
baz=339,SNR=187
V58A Windy Hill, Pi 148.53 11 P **PKPdf 00 44 35.5 +0.1**
baz=346,SNR=140
V58A P **PKPdf 00 44 35.5 +0.1**
baz=346,SNR=140
LRAL Lakeview Retre 148.65 25 P **PKPdf 00 44 36.2 +0.6**
baz=330,SNR=140
LRAL Lakeview Retre 148.65 25 P **PKPbc 00 44 39.5 -0.7**
baz=330
KMSC Kings Mountain 148.66 15 P **PKPdf 00 44 36.1 +0.6**
baz=342,SNR=127
KMSC Kings Mountain 148.66 15 P **PKPbc 00 44 39.5 -0.7**
baz=342
BDFB Brasilia 148.78 229 PKP **PKPdf 00 44 37.1 +0.6**
comp=Z,89nm,0.5s,baz=169,slow=1.8,SNR=47
BDFB PKPbc **PKiKP 00 44 41.7 -0.4**
comp=Z,331nm,0.5s,baz=128,slow=2.6,SNR=61
BDFB pPKPbc **pPKPdf 00 46 59.2 -0.5**
comp=Z,44nm,0.8s,baz=28,slow=27,SNR=1.8
BDFB Brasilia 148.78 229 PKHKP PKPpre 00 44 37.1
PAULI Pauline 148.83 16 P **PKPdf 00 44 36.2 +0.3**
baz=341,SNR=236
346A Big Creek Wild 148.90 30 P **PKPdf 00 44 37.2 +1.2**
baz=324,SNR=54
W57A Gilead 148.97 13 P **PKPdf 00 44 36.5 +0.5**
baz=344,SNR=101
W57A P **PKPdf 00 44 36.5 +0.5**
baz=344,SNR=101
Y52A Lilburn 149.03 20 P **PKPdf 00 44 38.5 +2.3**
baz=336,SNR=228
Y52A P **PKPdf 00 44 38.5 +2.3**
baz=336,SNR=228
ANTJ Antonio Joao (149.08 210 *e*P **PKPdf 00 44 37.8 +1.2**
RPRD Ribas do Rio P 149.10 215 *e*P **PKPdf 00 44 38.0 +1.3**
Z51A Franklin 149.12 22 P **PKPdf 00 44 37.1 +0.7**
baz=334,SNR=58
HODGE Hodges 149.26 17 P **PKPdf 00 44 37.4 +0.9**
baz=340,SNR=107
CNNC Cliffs of the 149.30 10 P **PKPdf 00 44 37.9 +1.4**
baz=348,SNR=49
CNNC Cliffs of the 149.30 10 P **PKPbc 00 44 40.2 -1.4**
baz=348
BIRD Birdtown, Kers 149.35 14 P **PKPdf 00 44 37.3 +0.6**
baz=343,SNR=90
JSC Jenkinsville 149.49 15 P **PKPdf 00 44 35.6 -1.3**
baz=341,SNR=148
GOGA Godfrey 149.64 19 P **PKPdf 00 44 37.8 +0.6**
baz=337,SNR=120
GOGA Godfrey 149.64 19 P **PKPbc 00 44 41.5 -1.0**
baz=337
X58A Rowland 149.69 12 P **PKPdf 00 44 37.9 +0.7**
baz=345,SNR=94
X58A P **PKPdf 00 44 37.9 +0.7**
baz=345,SNR=94
250A Grady 149.87 25 P **PKPdf 00 44 38.6 +1.0**
baz=330,SNR=66
152A Waverly Hall 149.87 22 P **PKPdf 00 44 38.3 +0.7**
baz=334,SNR=208
C2SB Chapadao do Su 149.92 218 *e*P **PKPdf 00 44 40.0 +2.0**
Y57A Sumter 149.96 14 **PKPdf 00 44 36.2 -1.5**
Y57A PKPbc **PKPbc 00 44 41.2 -2.1**
Y57A Sumter 149.96 14 P **PKPdf 00 44 38.8 +1.2**
baz=343,SNR=56
Y57A P **PKPdf 00 44 38.8 +1.2**
baz=343,SNR=56
MURT Porto Murtinho 150.14 207 *e*P **PKPdf 00 44 39.4 +1.1**
AQDB Aquidauana 150.20 212 *e*P **PKPdf 00 44 37.8 -0.6**
BRAL Brewton 150.22 27 P **PKPdf 00 44 39.8 +1.7**
baz=328,SNR=88
BRAL Brewton 150.22 27 P **PKPbc 00 44 43.2 -0.8**
baz=328
Y58A Scranton 150.24 13 P **PKiKP 00 44 44.6 +0.1**
baz=344,SNR=41
Y58A P **PKiKP 00 44 44.6 +0.1**
baz=344,SNR=41
HAW Hawthorne Fire 150.26 17 P **PKPdf 00 44 39.2 +1.0**
baz=340,SNR=80
Y59A Loris 150.33 12 P **PKPdf 00 44 40.3 +2.1**
baz=346
Y59A P **PKPdf 00 44 40.3 +2.1**
baz=346
Y60A Bolivia 150.44 11 P **PKPdf 00 44 39.9 +1.5**
baz=347
Y60A P **PKPdf 00 44 39.9 +1.5**
baz=347
154A Montrose 150.49 20 P **PKPdf 00 44 40.4 +1.9**
baz=337
352A Blakely 150.85 23 P **PKPdf 00 44 40.2 +1.2**
baz=333,SNR=57
NHSC New Hope 150.88 14 P **PKPdf 00 44 39.7 +0.6**
baz=343,SNR=27
NHSC New Hope 150.88 14 P **PKPbc 00 44 43.6 -1.9**
baz=343
451A Vernon 151.27 25 P **PKPdf 00 44 41.0 +1.3**
baz=330,SNR=68
255A Hazlehurst 151.33 19 P **PKPdf 00 44 40.8 +1.0**
baz=338,SNR=47
TIGA Tifton 151.39 21 P **PKPdf 00 44 41.0 +1.1**
baz=335,SNR=41
TIGA Tifton 151.39 21 P **PKPbc 00 44 44.1 -2.6**
baz=335
257A Skidaway Islan 151.73 17 P **PKPdf 00 44 42.5 +2.1**
baz=340
BBSR BB Station 151.85 347 P **PKPdf 00 44 41.2 +0.7**
baz=15
LVC Limon Verde 152.51 186 PKP **PKPdf 00 44 43.4 +1.1**
comp=Z,64nm,0.8s,baz=263,slow=2.9,SNR=16
LVC PKPbc **PKiKP 00 44 51.0 +1.0**
comp=Z,232nm,0.7s,baz=229,slow=2.8,SNR=35
LVC PKPab **PKPab 00 45 03.7 +0.6**
comp=Z,293nm,0.7s,baz=251,slow=2.4,SNR=12
LVC pPKPbc **pPKPbc 00 47 09.8 -2.0**
comp=Z,20nm,0.6s,baz=134,slow=5.9,SNR=1.8
LVC Limon Verde 152.51 186 PKIKP **PKPdf 00 44 43.4 +1.1**
LVC 00 45 03.7
LVC Limon Verde 152.51 186 *e*P **PKPdf 00 44 43.1 +0.8**
456A Hilliard 152.59 19 P **PKPdf 00 44 43.1 +1.5**
baz=338
SNDB Serra Nova Dou 153.55 231 *e*P **PKPdf 00 44 45.3 +1.8**
656A Willston 153.65 21 P **PKPdf 00 44 45.2 +2.0**
baz=336
BBRB Robore, Bolivi 154.08 207 *e*P **PKPdf 00 44 45.3 +1.1**
CMIG Matias Romero 154.41 60 PKP **PKPdf 00 44 44.6 0.0**
comp=Z,72nm,0.9s,baz=308,slow=1.4,SNR=36
CMIG PKPbc **PKPbc 00 44 54.4 +0.9**
comp=Z,114nm,0.9s,baz=320,slow=4.2,SNR=18
CMIG PKPab **PKPab 00 45 11.6 +0.4**
comp=Z,79nm,0.8s,baz=250,slow=6.6,SNR=9.4
CMIG pPKP **pPKPdf 00 47 06.7 -1.5**
comp=Z,10.0nm,0.8s,baz=168,slow=6.3,SNR=1.2
TMAB Tom-Au,PA,Br 155.17 254 *e*P **PKPdf 00 44 47.0 +1.3**
DWPF Disney Wildern 155.19 20 P **PKPdf 00 44 45.8 +0.4**
baz=337
PRPB Parauapebas 155.38 244 *e*P **PKPdf 00 44 47.5 +1.4**
BBSD Serra de San D 155.40 207 *e*P **PKPdf 00 44 47.0 +1.1**
PTLB Pontes e Lacer 156.17 212 *e*P **PKPdf 00 44 47.9 +0.9**
060A Indiantown 156.54 19 P **PKPdf 00 44 47.9 +0.8**
baz=338
SIV San Ignacio 156.66 207 PKP **PKPdf 00 44 48.1 +0.5**
comp=Z,66nm,0.8s,baz=116,slow=2.6,SNR=119
SIV PKPab **PKPab 00 45 21.0 +0.3**
comp=Z,183nm,0.7s,baz=136,slow=6.0,SNR=23
SIV SKP 00 47 22.7
comp=Z,34nm,1.0s,baz=200,slow=3.4,SNR=4.5
061Z Ochoppi 157.42 22 P **PKPdf 00 44 47.1 -1.2**
baz=336
CLDB Colider 157.60 226 *e*P **PKPdf 00 44 50.7 +1.9**
PDRB Porto dos Gac 157.73 222 *e*P **PKPdf 00 44 50.1 +1.1**
TEIG Tepich 157.93 45 *e*P **PKPdf 00 44 47.6 -1.4**
LPAZ La Paz 158.63 190 PKP **PKPdf 00 44 51.1 +0.4**
comp=Z,91nm,1.1s,baz=82,slow=1.5,SNR=35
LPAZ PKPab **PKPab 00 45 30.3 +0.3**
comp=Z,92nm,0.7s,baz=252,slow=2.8,SNR=11
LPAZ pPKP **pPKPdf 00 47 12.7 -1.9**
comp=Z,11nm,0.8s,baz=51,slow=6.5,SNR=1.9
LPAZ PP **PP 00 49 14.2 +2.9**
comp=Z,98nm,1.2s,baz=171,slow=4.7,SNR=6.5
LPAZ La Paz 158.63 190 *e*P **PKPdf 00 44 51.1 +0.4**
LPAZ La Paz 158.63 190 PKIKP **PKPdf 00 44 51.1 +0.4**
LPAZ 00 45 30.3
LPAZ 00 47 12.7
LPAZ La Paz 158.63 190 *e*P **PKPdf 00 44 52.2 +1.5**
VILB Vilhena 158.81 213 *e*P **PKPdf 00 44 51.5 +1.2**
APG El Apazote 159.14 60 PKP **PKPdf 00 44 50.5 -0.3**
comp=Z,118nm,1.0s,baz=332,slow=6.7,SNR=16
APG PKPab **PKPab 00 45 33.1 +1.1**
comp=Z,59nm,1.0s,baz=358,slow=8.0,SNR=6.1
APG pPKP **pPKPdf 00 47 13.4 -1.3**
comp=Z,22nm,1.1s,baz=353,slow=14,SNR=1.2
NPGB Novo Progresso 159.69 234 *e*P **PKPdf 00 44 51.7 +0.4**
PAYG Puerto Ayora 160.79 106 *e*P **PKPdf 00 44 54.1 +1.6**
MDP Montagnes des 160.84 271 PKP **PKPdf 00 44 52.2 -0.4**
baz=298,slow=1.4
MDP PKPab **PKPab 00 45 39.6 +0.2**
comp=Z,94nm,0.7s,baz=56,slow=3.5,SNR=15
MDP pPKP **pPKPdf 00 47 15.5 -0.9**
comp=Z,8.2nm,0.9s,baz=49,slow=3.5,SNR=0.9
MDP PP **PP 00 49 25.4 +0.5**
comp=Z,33nm,1.0s,baz=102,slow=7.8,SNR=3.3
MALB Monte Alegre 161.17 250 *e*P **PKPdf 00 44 54.8 +1.9**
ITTB Itaituba 161.44 241 *e*P **PKPdf 00 44 54.5 +1.4**
TGUH Tegucigalpa,Un 162.31 58 *e*P **PKPdf 00 44 51.5 -2.7**
NNA Nana 162.51 164 PKP **PKPdf 00 44 54.6 +0.4**
comp=Z,210nm,1.1s,baz=329,slow=2.9,SNR=18
NNA PKPab **PKPab 00 45 47.2 +0.9**
comp=Z,39nm,0.6s,baz=231,slow=7.0,SNR=6.3
NNA pPKP **pPKPdf 00 47 17.8 -0.4**
comp=Z,30nm,0.9s,baz=106,slow=7.2,SNR=2.5
NNA Nana 162.51 164 *e*P **PKPdf 00 44 55.4 +1.1**
NNA Nana 162.51 164 PKIKP **PKPdf 00 44 54.6 +0.4**
NNA 00 45 47.2
NNA 00 47 17.8
CRIN San Cristobal 163.12 62 *e*P **PKPdf 00 44 57.1 +2.3**
CNGN Cerro Negro 163.52 62 *e*P **PKPdf 00 44 52.8 -2.4**
ANWB Willy Bob 163.92 323 *e*P **PKPdf 00 44 55.0 -0.4**
ANWB Willy Bob 163.92 323 *e*P **PKPdf 00 44 55.8 +0.4**
ETMB Extrema 164.34 201 *e*P **PKPdf 00 44 58.5 +2.6**
SMRT St. Maarten 164.35 327 *e*P **PKPdf 00 44 59.5 +3.8**
ANBD Bethesda, Anti 164.38 321 *e*P **PKPdf 00 44 55.8 0.0**
ANBD Bethesda, Anti 164.38 321 *e* **PKPab 00 45 57.7 +3.2**
GDSD La Dsirade Is 164.47 318 **PKPdf 00 44 54.8 -1.1**
GDSD **PKPab 00 45 54.0 -1.1**
ABD La Joyeuse, An 164.63 319 *e*P **PKPdf 00 44 59.1 +3.1**
ABD La Joyeuse, An 164.63 319 *e* **PKPab 00 46 00.5 +4.8**
GTBY Guantanamo Bay 164.73 12 *e*P **PKPdf 00 44 52.8 -3.2**
SEUS St. Eustatius 164.75 326 *e*P **PKPdf 00 44 50.2 -5.9**
MAGL Barre de l'ile 164.87 317 *e*P **PKPdf 00 44 58.2 +2.0**
MAGL Barre de l'ile 164.87 317 *e* **PKPab 00 45 60.0 +3.1**
MBFL Flemmings, Mon 164.88 322 *e*P **PKPdf 00 44 56.0 -0.3**
MBFL Flemmings, Mon 164.88 322 *e* **PKPab 00 45 57.9 +1.1**
CBE Ff, Capester 165.00 319 *e*P **PKPdf 00 44 57.7 +1.3**
CBE Ff, Capester 165.00 319 *e* **PKPab 00 46 01.0 +3.6**
ACON Acoyapa 165.09 61 *e*P **PKPdf 00 44 55.4 -1.1**
TDBA Terre de Bas, 165.18 318 *e*P **PKPdf 00 44 59.7 +3.2**
MDVC Dominica, Viel 165.19 317 *e*P **PKPdf 00 44 58.2 +1.7**
MDVC Dominica, Viel 165.19 317 *e* **PKPab 00 45 59.3 +1.1**
DSLB Salisbury 165.33 316 *e*P **PKPdf 00 44 57.4 +0.8**
DSLB Salisbury 165.33 316 *e* **PKPab 00 46 03.1 +4.2**
BBGH Gun Hill 165.34 305 *e*P **PKPdf 00 44 53.7 -3.0**
BBGH Gun Hill 165.34 305 *e*P **PKPdf 00 45 03.7 +7.0**
ILAM Ilet Lapin Mar 165.39 313 *e*P **PKPdf 00 44 56.2 -0.4**
ILAM Ilet Lapin Mar 165.39 313 *e* **PKPab 00 45 58.9 -0.2**
MDN Morne-Daniel 165.39 316 *e*P **PKPdf 00 44 57.8 +1.1**
MDN Morne-Daniel 165.39 316 *e* PKPab 00 45 49.8 -9.3
MPOM Morne Pois Mar 165.59 312 *e*P **PKPdf 00 44 57.7 +0.8**
MPOM Morne Pois Mar 165.59 312 *e* **PKPab 00 46 02.4 +2.3**
FDF Fort de France 165.61 314 *e*P **PKPdf 00 44 56.8 -0.1**
BIM Bigot 165.70 313 *e*P **PKPdf 00 44 56.3 -0.7**
BIM Bigot 165.70 313 *e* **PKPab 00 46 01.9 +1.3**
SJG San Juan 165.72 337 PKP **PKPdf 00 44 56.2 -0.7**
comp=Z,170nm,1.0s,baz=35,slow=0.5,SNR=18
SJG PP **PP 00 49 50.4 +2.5**
comp=Z,109nm,1.2s,baz=20,slow=14,SNR=6.0
SJG San Juan 165.72 337 PKIKP **PKPdf 00 44 56.2 -0.7**
SJG San Juan 165.72 337 *e*P **PKPdf 00 44 57.3 +0.4**
SLBI Saint Lucia, B 165.94 311 *e*P **PKPdf 00 44 50.2 -6.9**
JTS Las Juntas de 165.97 67 *e*P **PKPdf 00 44 55.2 -2.1**
SDDR Presa de Saban 165.99 358 *e*P **PKPdf 00 44 56.7 -0.4**
MCLT Moule a Chique 166.11 310 *e*P **PKPdf 00 44 56.2 -1.1**
MCLT Moule a Chique 166.11 310 *e* **PKPab 00 46 00.5 -1.9**
MLPR Magueyes Islan 166.18 340 PKPdf **PKPdf 00 44 55.7 -1.6**
MLPR **PKPab 00 46 00.7 -1.6**
MACA Manacapuru-AM 166.25 235 *e*P **PKPdf 00 44 59.8 +2.3**
ATAH Atahualpa 166.39 151 PKP **PKPdf 00 44 57.1 -1.0**
comp=Z,159nm,1.0s,baz=68,slow=3.8,SNR=19
ATAH pPKP **pPKPdf 00 47 21.2 -1.1**
comp=Z,16nm,1.0s,baz=298,slow=20,SNR=1.8
SVB Belmont 166.62 309 *e*P **PKPdf 00 44 59.5 +1.8**
HDC Heredia 166.85 67 *e*P **PKPdf 00 45 00.6 +2.6**
TOSP Speyside 167.10 300 *e*P **PKPdf 00 45 00.2 +2.2**
GCMP Grenada, Carri 167.22 307 *e*P **PKPdf 00 44 57.4 -0.7**
GCMP Grenada, Carri 167.22 307 *e*P **PKPdf 00 45 02.4 +4.3**
GCMP Grenada, Carri 167.22 307 *e* **PKPab 00 46 07.0 -0.3**
PRVC Isla de Provid 167.40 47 *e*P **PKPdf 00 44 57.0 -1.2**
CZSB Cruzeiro do Su 167.43 176 *e*P **PKPdf 00 44 58.9 +0.6**
GRFF Grenada Fort F 167.72 306 *e* **PKPab 00 46 08.3 -1.3**
TRN Trinidad (W) 168.16 299 *e*P **PKPdf 00 45 00.2 +1.4**
BRU2 Volcan 168.58 70 *e*P **PKPdf 00 44 59.0 -0.3**
COHC Cochancay 169.61 135 *e*P **PKPdf 00 44 59.8 0.0**
MAPC Malpelo 170.25 95 *e*P **PKPdf 00 44 58.3 -1.8**
TBTG Tabatinga, AM 170.77 192 *e*P **PKPdf 00 44 58.1 -2.2**
TBTG Tabatinga, AM 170.77 192 *e*P **PKPdf 00 45 00.2 -0.2**
PNME Penonome 170.88 67 *e*P **PKPdf 00 44 58.2 -2.2**
PTGL Punta Galera 170.89 116 *e*P **PKPdf 00 44 59.7 -0.8**
BCIP Isla Barro Col 171.03 61 *e*P **PKPdf 00 44 59.1 -1.4**
PCRV Puerto La Cruz 171.11 307 PKP **PKPdf 00 44 58.5 -2.1**
comp=Z,57nm,1.0s,baz=256,slow=2.4,SNR=9.4
PCRV PKPab **PKPab 00 46 24.8 +0.1**
comp=Z,25nm,0.5s,baz=80,slow=1.0,SNR=9.4
PCRV PP **PP 00 50 18.4 +2.2**
comp=Z,17nm,0.8s,baz=13,slow=12,SNR=3.9
PIAT Ana Tenorio 171.34 132 *e*P **PKPdf 00 45 00.3 -0.9**
UPA Univ. de Panam 171.38 61 *e*P **PKPdf 00 44 58.0 -2.7**
PAC1 Pacto, Paraso 171.70 123 *e*P **PKPdf 00 44 59.9 -1.1**
CUSE Cuicocha Este 172.05 125 *e*P **PKPdf 00 45 01.6 0.0**
TUMC Tumaco 172.51 114 *e*P **PKPdf 00 45 00.7 -0.5**
TULM Tulcn-Chalpat 172.78 125 *e*P **PKPdf 00 45 00.4 -1.5**
BONI La Bonita 172.83 128 *e*P **PKPdf 00 44 59.5 -2.2**
CMBC Cumbal 172.88 123 *e*P **PKPdf 00 45 02.9 +0.9**
UPD2 Meteti 172.90 59 *e*P **PKPdf 00 45 00.7 -0.6**
SGCB S£o Gabriel d 173.06 224 *e*P **PKPdf 00 45 02.8 +1.4**
URIC Uribia, Colomb 173.24 1 *e*P **PKPdf 00 45 00.5 -0.9**
GCUF Volcan Galeras 173.43 124 *e*P **PKPdf 00 45 02.1 -0.1**
GR1C Gorgona, Isla 173.45 106 *e*P **PKPdf 00 45 01.0 -0.5**
CRJC Cerrejon, Guaj 173.83 9 *e*P **PKPdf 00 45 00.5 -1.2**
DABV Dabajuro 173.89 349 *e*P **PKPdf 00 45 00.7 -0.9**
BBAC Balboa, Cauca 173.92 118 *e*P **PKPdf 00 45 01.0 -1.1**
SJCC San Jacinto, C 174.05 33 *e*P **PKPdf 00 45 01.3 -0.5**
LCBC Los crdobas, 174.05 48 *e*P **PKPdf 00 45 01.5 -0.3**
BAUV El Baul 174.47 317 **PKPdf 00 45 00.3 -1.6**
BAUV PKPab **PKPab 00 46 38.1 -1.4**
BAUV El Baul 174.47 317 *e*P **PKPdf 00 45 05.0 +3.2**
PTLC Puerto Leguiza 174.47 148 *e*P **PKPdf 00 44 60.0 -2.0**
MALC Bahia Malaga 174.48 99 *e*P **PKPdf 00 45 04.5 +2.6**
ARGC Ariguani, Magd 174.54 25 *e*P **PKPdf 00 45 01.8 -0.1**

FLOC	Florencia	174.99	131	eP	PKPdf	00 45 01.3	-0.8
YOTC	Yotoco, Valle	175.45	101	eP	PKPdf	00 44 59.4	-2.9
GARC	Garzon, Huila	175.50	127	eP	PKPdf	00 45 01.6	-0.9
PLMC	San Jos del P	175.61	90	eP	PKPdf	00 44 59.3	-3.0
CBOC	Ciudad Bolivar	175.77	77	eP	PKPdf	00 44 59.7	-2.7
BETC	Betania	175.81	122	eP	PKPdf	00 45 02.4	0.0
SDV	Santo Domingo	175.85	343	PKP	PKPdf	00 45 00.7	-1.8
	comp=Z,102nm,0.9s,baz=116,slow=0.5,SNR=19						
SDV				PKPab	PKPab	00 46 44.9	-0.7
	comp=Z,63nm,0.7s,baz=26,slow=2.3,SNR=13						
SDV				PP	PP	00 50 39.1	+1.7
	comp=Z,187nm,1.2s,baz=3.7,slow=1.5,SNR=12						
SDV	Santo Domingo	175.85	343		PKPdf	00 45 00.8	-1.7
HELC	Santa Helena	176.14	70	eP	PKPdf	00 45 01.8	-1.0
OCAC	Ocana	176.38	23	eP	PKPdf	00 45 01.0	-1.6
SOCV	Socops	176.49	343	eP	PKPdf	00 45 00.8	-1.7
GUY2C	Guyana, Caldas	176.51	84	eP	PKPdf	00 45 01.7	-1.3
PRAC	Prado	176.77	111	eP	PKPdf	00 44 58.5	-4.0
NORC	Norcasia	176.94	77	eP	PKPdf	00 45 00.3	-2.3
PTBC	PUERTO BERRIO	176.96	57	eP	PKPdf	00 44 58.9	-3.6
BRRC	Barranca, Sant	177.14	40	eP	PKPdf	00 45 00.7	-1.8
PAMC	Pamplona, Colo	177.44	19	eP	PKPdf	00 44 59.9	-3.3
ROSC	El Rosal	177.56	91	PKP	PKPdf	00 45 02.4	-0.7
	comp=Z,155nm,1.0s,baz=74,slow=3.1,SNR=21						
ROSC				PKPab	PKPab	00 46 54.1	+0.1
	comp=Z,26nm,0.9s,baz=156,slow=20,SNR=2.4						
ROSC	El Rosal	177.56	91	eP	PKPdf	00 45 01.4	-1.7
ROSC	El Rosal	177.56	91	PKIKP	PKPdf	00 45 02.4	-0.7
SPBC	San Pablo de B	177.69	71	eP	PKPdf	00 44 58.0	-4.7
BARC	Barichara	177.87	38	eP	PKPdf	00 45 01.7	-1.3
VILC	Villavicencio,	178.03	113	eP	PKPdf	00 45 01.4	-1.4
CHIC	Chingaza	178.13	98	eP	PKPdf	00 45 01.0	-2.2
RUSC	La Rusia	178.44	51	eP	PKPdf	00 44 59.9	-3.4
TAMC	Tame, Arauca	178.47	357	eP	PKPdf	00 44 59.5	-3.2
PTGC	Puerto Gaitan,	179.26	159	eP	PKPdf	00 44 58.6	-4.2

TAP 19 00:29:07.3, 24.°13N×121.°66E, h10km, ML3.9, 24D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.05	309	⇓iP		Pg	00 29 09.6	+0.3
	baz=308							
ETL				S		Sg	00 29 11.0	+0.3
	baz=308							
NACB	Ninganchiao	0.07	305	⇓iP		Pg	00 29 09.9	+0.4
	baz=305							
TWD	Chiawan	0.08	230	⇓iP		Pg	00 29 09.7	+0.2
	baz=226							
TWD				iS		Sg	00 29 11.3	+0.1
	baz=226							
HWA	Hwalien	0.16	199	eP		Pg	00 29 11.5	+0.7
	baz=195							
HWA				eS		Sg	00 29 14.6	+1.4
	baz=195							
ETLH	Xiulin Townshi	0.18	295	⇓iP		Pg	00 29 11.8	+0.6
	baz=294							
ETLH				S		Sg	00 29 14.7	+0.8
	baz=294							
ETM	Tongmen	0.23	223	P		Pg	00 29 12.0	+0.1
	baz=213							
ETM				eS		Sg	00 29 15.3	+0.3
	baz=213							
TEYL	Yanliau Villag	0.27	193	eP		Pg	00 29 12.9	+0.2
	baz=193							
TEYL				eS		Sb	00 29 17.8	-1.1
	baz=193							
WHF	Hehuan Shan	0.36	272	⇓iP		Pg	00 29 15.0	+0.4
	baz=272							
WHF				eS		Sg	00 29 20.1	+0.6
	baz=272							
ESL	Shilin	0.38	214	⇓iP		Pg	00 29 14.6	-0.1
	baz=212							
ESL				eS		Sg	00 29 19.8	0.0
	baz=212							
NNSB	Datong	0.39	319	⇓iP		Pb	00 29 15.8	-0.6
	baz=319							
FUSS	Fushou	0.40	287	⇓iP		Pb	00 29 16.1	-0.6
	baz=287							
FUSS				eS		Sb	00 29 22.0	-0.9
	baz=287							
NNS	Nan Shan	0.41	320	⇓iP		Pg	00 29 15.0	-0.3
	baz=320							
NNS				eS		Sg	00 29 20.9	+0.2
	baz=320							
LATG	Datong	0.42	343	⇓iP		Pg	00 29 16.1	+0.5
	baz=333							
TEGC	Jichi Village	0.43	195	eP		Pb	00 29 16.9	-0.2
	baz=182							
TWT	Tachien	0.46	286	⇓iP		Pb	00 29 17.5	-0.2
	baz=284							
TWT				eS		Sb	00 29 24.4	-0.2
	baz=284							
TDCB	Techi	0.48	285	⇓iP		Pb	00 29 17.4	-0.4
	baz=291							
OWD	Renai	0.48	249	⇓iP		Pg	00 29 17.1	+0.4
	baz=248							
OWD				eS		Sg	00 29 23.6	+0.6
	baz=248							
NDT	Datong Townshi	0.49	344	⇓iP		Pg	00 29 16.1	-0.8
	baz=344							
NDT				S		Sg	00 29 23.0	-0.3
	baz=344							
EGFH	Guangfu	0.51	205	⇓P		Pg	00 29 17.2	+0.1
	baz=213							
EGFH				eS		Sg	00 29 23.1	-0.7
	baz=213							
TWC	Suao	0.51	20	⇓iP		Pg	00 29 17.5	+0.3
	baz=12							
TWC				eS		Sg	00 29 24.4	+0.6
	baz=12							
ENTT	Nioudou	0.52	350	⇓iP		Pg	00 29 17.0	-0.3
	baz=351							
ENTT				eS		Sg	00 29 24.3	+0.1
	baz=351							
TWE	Neicheng	0.59	0	⇓iP		Pb	00 29 19.4	-0.3
	baz=2.0							
TWE				S		Sg	00 29 27.2	+0.8
	baz=2.0							
VWDT	VWDT	0.61	232	P		Pg	00 29 19.3	+0.3
	baz=240							
NSK	Sanguang	0.61	333	⇓iP		Pg	00 29 18.8	-0.4
	baz=333							
NSK				eS		Sg	00 29 27.2	0.0
	baz=333							
ILA	Ilan	0.64	7	eP		Pg	00 29 19.8	+0.2
	baz=8.0							
ILA				eS		Sb	00 29 28.9	-0.6
	baz=8.0							
WPL	Puli Township	0.66	260	eP		Pb	00 29 20.7	-0.2
	baz=250							
WPL				eS		Sb	00 29 29.5	-0.5
	baz=250							
WHP	Taichung City	0.67	283	⇓iP		Pb	00 29 21.4	+0.3
	baz=282							
WHP				eS		Sb	00 29 30.8	+0.2
	baz=282							
HGSD	Ruisui	0.67	199	eP		Pb	00 29 21.1	0.0
	baz=215							
DPDB	Guoxing	0.68	262	P		Pb	00 29 21.3	0.0
	baz=253							
DPDB				eS		Sb	00 29 30.6	-0.1
	baz=253							
WCS	Beigang Elemen	0.69	264	eP		Pg	00 29 20.2	-0.4
	baz=255							
WCS				eS		Sb	00 29 30.5	-0.5
	baz=255							
EHY	Hungye	0.69	207	eP		Pg	00 29 20.2	-0.5
	baz=206							
NFF	Wufeng Townshi	0.70	315	eP		Pg	00 29 21.0	+0.1
	baz=315							
NFF				eS		Sg	00 29 30.6	+0.4
	baz=315							
SSLB	Suanglung	0.73	242	⇓iP		Pg	00 29 21.7	+0.3
	baz=243							
SMLT	Sun Moon Lake	0.74	251	⇓iP		Pb	00 29 22.1	-0.2
	baz=250							
SMLT				eS		Sb	00 29 31.9	-0.6
	baz=250							
EGS		0.75	19	eP		Pg	00 29 22.1	+0.3
	baz=28							
EGS				eS		Sg	00 29 31.0	-0.7
	baz=28							
LIOB	Emei	0.78	311	eP		Pb	00 29 23.6	+0.6
	baz=311							
NSTT	Nanjuang	0.78	310	eP		Pb	00 29 23.5	+0.5
	baz=309							
NSTT				eS		Sb	00 29 33.5	-0.2
	baz=309							
NHDH	Xindian Distri	0.84	351	eP		Pb	00 29 24.3	+0.4
	baz=342							
NHDH				eS		Sb	00 29 35.1	-0.2
	baz=342							
EYUL	Yuli	0.84	202	eP		Pb	00 29 24.0	0.0
	baz=215							
TWQ1	Liyutan	0.84	285	eP		Pb	00 29 24.3	+0.3
	baz=285							
TWA	Mucha	0.85	355	eP		Pb	00 29 24.1	-0.1
	baz=355							
TWA				eS		Sb	00 29 35.3	-0.4
	baz=355							
TIPB	Shuangxi	0.85	10	⇓iP		Pb	00 29 24.0	-0.2
	baz=1.0							
TIPB				eS		Sg	00 29 34.8	0.0
	baz=1.0							
WHYT	Xinyi Township	0.86	240	eP		Pb	00 29 24.1	-0.1
	baz=247							
WHYT				eS		Sb	00 29 36.5	+0.6
	baz=247							
NSY	Sanyi	0.87	289	eP		Pn	00 29 25.9	+0.3
	baz=289							
NSY				eS		Sb	00 29 36.9	+0.6
	baz=289							
NMLH	Miaoli	0.89	297	eP		Pn	00 29 26.1	+0.2
	baz=297							
TCU	Taichung	0.90	271	eP		Pn	00 29 26.8	+0.7
	baz=271							
TCU				eS		Sn	00 29 39.3	+0.2
	baz=271							
WJS	Zhushan	0.91	250	eP		Pb	00 29 25.4	+0.3
	baz=245							
WJS				eS		Sn	00 29 40.0	+0.7
	baz=245							
YUS	Yu-Shan	0.91	226	eP		Pg	00 29 25.0	+0.1
	baz=237							
TAP	Taipei	0.92	351	eP		Pn	00 29 26.4	+0.1
	baz=343							
HSN	Hsinchu	0.92	317	eP		Pn	00 29 27.0	+0.7
	baz=319							
WNT	Mingjian	0.93	255	eP		Pb	00 29 25.8	+0.3
	baz=248							
WNT				eS		Sn	00 29 40.3	+0.5
	baz=248							
NCUH	Zhongli	0.94	333	eP		Pn	00 29 26.8	+0.2
	baz=332							
NCU	National Centr	0.94	333	eP		Pn	00 29 27.6	+1.0
	baz=333							
NWF	Wu-fen Shan	0.94	7	eP		Pb	00 29 26.2	+0.4
	baz=6.0							
NWF				eS		Sg	00 29 37.7	-0.1
	baz=6.0							
WDJ	Dajia District	0.96	283	eP		Pn	00 29 27.6	+0.8
	baz=292							
WDJ				eS		Sn	00 29 41.1	+0.6
	baz=292							
FULB	Fuli	0.99	200	eP		Pn	00 29 27.0	-0.2
	baz=215							
FULB				eS		Sb	00 29 40.3	+0.7
	baz=215							
TWS1	Kuangyinshan	0.99	347	eP		Pn	00 29 27.6	+0.3
	baz=347							
TWS1				eS		Sn	00 29 42.2	+0.8
	baz=347							
ALS	Alishan	1.00	232	eP		Pb	00 29 26.7	-0.1
	baz=221							
ALS				eS		Sb	00 29 40.9	+0.7
	baz=221							
WCHH	Zhanghua	1.01	267	eP		Pn	00 29 28.6	+1.1
	baz=267							
WCHH				eS		Sn	00 29 43.3	+1.5
	baz=267							
YM01	YM01	1.01	355	eP		Pn	00 29 28.0	+0.3
	baz=5.0							
CHN5	Tsauling	1.05	240	eP		Pg	00 29 27.2	-0.2
	baz=239							
CHN5				eS		Sn	00 29 43.2	+0.4
	baz=239							
NTST	Danshui	1.05	349	eP		Pn	00 29 30.0	+1.9
	baz=358							
NTST				eS		Sn	00 29 43.4	+0.7
	baz=358							
ANP	Anpu	1.06	353	eP		Pn	00 29 28.5	+0.2
	baz=353							
EHD	Haiduan	1.06	203	eP		Pg	00 29 25.5	-2.2
	baz=213							
EHD				eS		Sg	00 29 40.3	-1.2
	baz=213							
ELDTW	Lidau	1.11	212	eP		Pg	00 29 28.3	-0.3
	baz=203							
ELDTW				eS		Sg	00 29 42.5	-0.5
	baz=203							
WDLH	Douliu	1.12	247	eP		Pn	00 29 29.6	+0.6
	baz=247							
WDLH				eS		Sn	00 29 44.7	+0.2
	baz=247							
TWY	Chenhua	1.14	357	eP		Pn	00 29 29.3	0.0
	baz=343							
WCKO	Fanlu	1.19	235	eP		Pb	00 29 29.6	-0.3
	baz=235							
WCKO				eS		Sn	00 29 49.1	+2.9
	baz=235							
WRL	Guolierlin Hig	1.20	259	eP		Pb	00 29 29.7	-0.4
	baz=259							
WRL				eS		Sn	00 29 48.1	+1.7
	baz=259							
EDH	Donghe	1.20	196	eP		Pb	00 29 28.9	-1.2
	baz=197							
EDH				eS		Sn	00 29 46.4	-0.1
	baz=197							
STYH	Taoyuan	1.25	221	eP		Pn	00 29 29.7	-1.2
	baz=221							
STYH				eS		Sn	00 29 48.1	+0.3
	baz=221							
TPUB	Ta-pu	1.26	229	⇓iP		Pg	00 29 32.4	+1.0
	baz=217							
YOJ	Yonaguni jima	1.27	75	eP		Pn	00 29 30.1	-1.0
	baz=71							
CHY	Chiayi	1.30	241	eP		Pg	00 29 32.7	+0.5
	baz=241							
CHY				eS		Sg	00 29 50.9	+1.9
	baz=241							
WTP	Ta-pu	1.30	228	eP		Pg	00 29 32.2	-0.1
	baz=215							
TWK	Hsinying	1.38	232	eP		Pg	00 29 34.0	+0.3
	baz=232							
CHN1	Nanshi	1.40	228	eP		Pb	00 29 33.8	+0.2
	baz=217							
CHN1				eS		Sg	00 29 55.7	+3.3
	baz=217							
WSF	Szhu	1.41	250	eP		Pb	00 29 33.8	+0.2
	baz=250							
TWG	Pinlang	1.41	203	eP		Pb	00 29 33.9	+0.2
	baz=203							
SGST	Jiashian	1.44	224	eP		Pn	00 29 33.3	-0.2
	baz=224							
LDUT	Ludao	1.46	187	eP		Pn	00 29 30.6	-3.1
	baz=175							
ICHU	Yijhu	1.48	239	eP		Pb	00 29 35.1	+0.2
	baz=240							
SCST	Cishan	1.64	221	eP		Pb	00 29 37.9	+0.3
	baz=223							
SSD	Sandimen	1.67	215	eP		Pb	00 29 37.4	-0.7
	baz=206							
TSMG	Majia	1.70	214	eP		Pn	00 29 37.7	+0.7
	baz=227							
TSCK	Chigu Township	1.75	236	eP		Pn	00 29 37.6	0.0
	baz=221							
MASBT	Mashibuluo	1.78	212	eP		Pn	00 29 38.2	0.0
	baz=205							
EAST	Anshuo	1.89	203	eP		Pn	00 29 40.8	+1.1
	baz=189							
SCZT	Fangliau	2.00	209	eP		Pb	00 29 42.5	-1.2
	baz=203							
PNG	Penghu	2.01	254	eP		Pn	00 29 42.4	+1.1
	baz=255							
PHUB	P'eng-hu	2.01	253	eP		Pn	00 29 42.3	+1.0
	baz=254							
WDGT	Dungji	2.03	245	eP		Pn	00 29 42.6	+1.0
	baz=229							
SLIU	Shizi	2.06	203	eP		Pn	00 29 43.0	+0.9
	baz=194							
VWUC	VWUC	2.19	294	eP		Pn	00 29 44.0	+0.2
	baz=293							
SMST	Manzhou Townsh	2.23	200	eP		Pn	00 29 45.8	+1.5
	baz=186							
VCHM	Qimei	2.24	246	eP		Pn	00 29 45.9	+1.4
	baz=232							

TAP 19 00:29:22.5, 24.°13N×121.°64E, h9km, ML3.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.03	322	eP		Pg	00 29 24.6	+0.3
	baz=323							
ETL				eS		Sg	00 29 25.9	+0.3
	baz=323							
TWD	Chiawan	0.07	219	eP		Pg	00 29 24.7	+0.1
	baz=214							
TWD				eS		Sg	00 29 26.4	+0.3
	baz=214							
ETLH	Xiulin Townshi	0.17	296	eP		Pg	00 29 26.6	+0.5
	baz=296							
ETLH				eS		Sg	00 29 29.8	+1.2
	baz=296							
FUSS	Fushou	0.38	287	eP		Pb	00 29 31.6	-0.1
	baz=287							
NNS	Nan Shan	0.39	321	eP		Pb	00 29 31.4	-0.3
	baz=321							
TWT	Tachien	0.44	286	eP		Pb	00 29 32.6	-0.1
	baz=291							

TAP 19 00:29:30.1, 24.°13N×121.°63E, h10km±1km, ML2.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.03	357	eP		Pg	00 29 32.5	+0.4
	baz=359							
ETL				eS		Sg	00 29 33.7	+0.3
	baz=359							
TWD	Chiawan	0.05	211	eP		Pg	00 29 32.1	0.0
	baz=201							
TWD				eS		Sg	00 29 33.9	+0.3
	baz=201							
NACB	Ninganchiao	0.06	330	eP		Pg	00 29 32.5	+0.3
	baz=331							
NACB				eS		Sg	00 29 34.2	+0.5
	baz=331							
WHF	Hehuan Shan	0.33	274	eP		Pg	00 29 37.1	+0.3
	baz=273							

CRAAG ***19*** *00:35:41.4, 36.°35N×7.°60E, Ml3.3*
LDG ***19*** *00:35:45.2±0.3, 36.°48N×7.°68E, h10km, Ml3.6/10, Error ellipse: s-maj=7.3km s-min=4.2km az=29.0*
ISC 19 00:35:41.4±1.6, 36.°41N±0.°08×7.°63E±0.°09, h23km±12km, n21, σ3°21/31, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ABSA	Djebel Ababsia	0.19	221	P		Pb	00 35 45.4	-1.4
CMAH	Djebel Manchou	0.27	321	P		Pb	00 35 49.0	+1.1
CAEH	'Ain El Ouahch	0.72	300	P		Pb	00 35 57.3	+1.9
CKFL	Kef-Lekhel	0.73	269	P		Pn	00 35 57.0	+0.6
CASM	Ain Smara	0.93	261	P		Pb	00 36 00.2	+1.3
CTEI	Djebel Teioual	1.05	251	P		Pb	00 36 02.5	+1.6
DFRA	Djebel Bou Aff	1.42	276	P		Pb	00 36 07.6	+0.4
PGF	Pioggiola	6.22	9	ePn		Pn	00 37 14.8	+3.0
PGF				eSn		Sn	00 38 19.9	-2.3
	9.7nm,0.5s							
LMR	La Mourre	6.96	353	ePn		Pn	00 37 23.2	+1.3
LMR				eSn		Sn	00 38 37.7	-2.7
	3.8nm,0.2s							
SBF	Sospel	7.44	359	ePn		Pn	00 37 30.4	+1.8
SBF				eSn		Sn	00 38 48.6	-3.6
	97nm,1.0s							
SMRF	Simiane la Rot	7.71	349	ePn		Pn	00 37 34.5	+2.2
SMRF				eSn		Sn	00 38 55.2	-3.7
	7.9nm,0.7s							
MTLF	Montolieu	8.07	331	ePn		Pn	00 37 38.7	+1.6
MTLF				eSn		Sn	00 39 04.7	-2.9
	12nm,0.7s							
LASF	Ste Croix	8.18	341	ePn		Pn	00 37 40.7	+2.1
LASF				eSn		Sn	00 39 06.9	-3.4
	46nm,1.0s							
MBDF	Montbardon	8.33	356	ePn		Pn	00 37 43.1	+2.3
ORIF	Oris-en-Rattie	8.60	352	ePn		Pn	00 37 48.4	+4.0
EPF	Esparros	8.67	322	ePn		Pn	00 37 49.2	+3.8
EPF				eSn		Sn	00 39 19.3	-3.1
	2.6nm,0.5s							
VIVF	Saint-Julien-l	8.73	346	ePn		Pn	00 37 48.5	+2.4
VIVF				eSn		Sn	00 39 19.6	-4.2
ETSF	Etsaut	9.04	318	ePn		Pn	00 37 53.1	+2.6
ETSF				eSn		Sn	00 39 23.8	-7.8
	20nm,0.9s							
LPL	La Plagne	9.12	356	ePn		Pn	00 37 53.3	+1.6
CAF	Calviac	9.49	335	ePn		Pn	00 37 59.3	+2.7
SJPF	Ste Jean	9.55	317	ePn		Pn	00 38 01.7	+4.3
SJPF				eSn		Sn	00 39 39.6	-4.3

KRNET ***19*** *00:54:35.8±0.1, 39.°82N×73.°83E, mb2.8*
NNC ***19*** *00:54:53.0±2.0, 40.°47N×73.°98E, h24km±11km, mb3.9, mpv3.4, Error ellipse: s-maj=13.8km s-min=10.6km az=164.0*
SOME ***19*** *00:54:54.1, 40.°78N×73.°30E, h10km*
ISC 19 00:54:40.4±1.5, 40.°00N±0.°06×73.°50E±0.°04, h7km±12km, n22, σ1°73/37, 12C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	Osh	0.76	314	⇓iP		Pb	00 54 56.2	+0.2
	baz=12							
OHH				⇓iS		Sn	00 55 11.0	+1.6
	baz=12							
DRK	Karamyk	1.41	249	⇓iP		Pn	00 55 05.7	-1.2
	baz=59							
DRK				⇓iS		Sg	00 55 27.9	+2.1
	baz=59							
BTK	Batken	2.06	272	⇑iP		Pb	00 55 17.2	-1.0
	baz=77							
BTK				⇑iS		Sg	00 55 47.6	+1.0
	baz=77							
ARK	Arkit	2.14	327	⇑iP		Pb	00 55 18.7	-0.9
	baz=25							
ARK				⇑iS		Sg	00 55 50.2	+1.0
	baz=25							
UCH	Uchtor	2.35	19	⇑iP		Pn	00 55 19.1	-0.8
	baz=12							
UCH				⇑iS		Sb	00 55 50.5	-2.4
	baz=12							
TRKS	Terek-Say	2.35	311	⇓iP		Pb	00 55 21.2	-2.1
	baz=10.0							
TRKS				⇓iS		Sb	00 55 54.2	+1.5
	baz=10.0							
GAR	Garm	2.66	249	⇑iP		Pn	00 55 24.5	+0.6
	baz=54							
GAR				⇑iS		Sb	00 55 59.8	-1.6
	baz=54							
MRKS	Merke	2.75	356	eP		Pb	00 55 30.5	+0.5
	13nm,0.7s							
MRKS				eS		Sn	00 55 56.5	-2.1
	6.7nm,1.2s							
MRKS	Merke	2.75	356	P		Pb	00 55 30.5	+0.5
	13nm,0.7s							
CHMS	Chumysh	3.14	17	⇑Lg		Lg	00 56 16.1	
	16nm,1.0s							
TKM2	Tokmak 2	3.31	28	⇓Pn		Pn	00 55 34.5	+1.6
TKM2				⇓Pg		Pg	00 55 41.7	-2.2
TKM2				⇓Lg		Lg	00 56 20.0	
	14nm,0.7s							
IUG	Iuzhnay	3.39	310	eP		Pg	00 55 45.8	+0.5
	190nm,0.4s							
IUG				eS		Sb	00 56 23.0	+0.7
	15nm,0.2s							
IUG	Iuzhnay	3.39	310	Pg		Pg	00 55 45.8	+0.5
	190nm,0.4s							
IUG				Lg		Lg	00 56 23.0	
	15nm,0.2s							
DGS	Degeres	3.66	27	eP		Pg	00 55 50.7	+0.2
	3.3nm,0.3s							
DGS				eS		Sb	00 56 31.5	+1.4
	12nm,0.8s							
DGS	Degeres	3.66	27	Pg		Pg	00 55 50.7	+0.2
	3.3nm,0.3s							
DGS				Lg		Lg	00 56 31.5	
	12nm,0.8s							
KK31	Karatay Array	3.83	325	⇑Pn		Pb	00 55 48.8	+0.5
	0.8nm,0.4s,baz=134,slow=16,SNR=3.7							

KK31				⇑Sn	Sb	00 56 32.1	-2.7
	0.8nm,0.3s						
KK31				⇑Lg	Lg	00 56 48.9	
	1.0nm,0.3s,baz=135,slow=30,SNR=3.9						
TNSS	**Tian-Shan**	**3.99**	**39**	*e*P	**Pg**	**00 55 58.6**	**+1.8**
	2.3nm,0.4s						
TNSS				*e*S	**Sg**	**00 56 45.1**	**-3.3**
	6.8nm,1.5s						
KRBS	**Karabastau**	**4.03**	**23**	*e*P	**Pg**	**00 55 56.6**	**-1.1**
	4.8nm,0.8s						
KRBS				*e*S	**Sb**	**00 56 41.6**	**+0.8**
	11nm,0.6s						
KRBS	**Karabastau**	**4.03**	**23**	Pg	**Pg**	**00 55 56.6**	**-1.1**
	4.8nm,0.8s						
KRBS				Lg	Lg	00 56 41.6	
	11nm,0.6s						
KUU	**Kurty**	**4.43**	**28**	*e*P	**Pg**	**00 56 04.5**	**-0.7**
	3.5nm,0.7s						
KUU				*e*S	**Sb**	**00 56 55.4**	**+3.3**
	12nm,0.4s						
KUU	**Kurty**	**4.43**	**28**	Pg	**Pg**	**00 56 04.5**	**-0.7**
	3.5nm,0.7s						
KUU				Lg	Lg	00 56 55.4	
	12nm,0.4s						
CHKK	**Chushkaly**	**4.64**	**33**	*e*P	**Pg**	**00 56 08.9**	**-0.5**
	1.7nm,0.1s						
CHKK				*e*S	**Sb**	**00 57 02.7**	**+4.2**
	9.5nm,0.3s						

*ATH **19** 00:59:22.9, 38.28N×23.79E, h7km±5km, ML2.7/8, Error ellipse: s-maj=5.3km s-min=0.8km az=105.0*
*THE **19** 00:59:23.1, 38.27N×23.82E, h10km±1km, ML2.6/14, Error ellipse: s-maj=1.5km s-min=0.5km az=148.0*
ISC 19 00:59:22.9±0.9, 38.27N±0.02×23.81E±0.03, h11km±7km, n30, σ0.9±36/53, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DION	**Dionisos Attik**	**0.22**	**153**	P	**Pg**	**00 59 27.5**	**0.0**
DION				S	**Sg**	**00 59 30.3**	**-0.3**
	24μm,0.2s						
DION	**Dionisos Attik**	**0.22**	**153**	P	**Pg**	**00 59 27.6**	**0.0**
DION				S	**Sg**	**00 59 30.1**	**-0.5**
DION				AML	AML	00 59 31.0	
	comp=N,32159μm,0.2s						
DION				AML	AML	00 59 31.1	
	comp=E,29834μm,0.2s						
PTL	**Penteli**	**0.23**	**169**	P	**Pg**	**00 59 27.8**	**+0.1**
PTL				S	**Sg**	**00 59 30.9**	**0.0**
	comp=E,2μm,0.3s						
PTL	**Penteli**	**0.23**	**169**	P	**Pg**	**00 59 27.8**	**+0.1**
PTL				S	**Sg**	**00 59 30.5**	**-0.4**
PTL				AML	AML	00 59 31.0	
	comp=N,3692μm,0.3s						
PTL				AML	AML	00 59 31.1	
	comp=E,4351μm,0.3s						
ATHU	**Athens Univers**	**0.31**	**183**	P	**Pg**	**00 59 29.1**	**0.0**
ATHU				S	**Sg**	**00 59 33.5**	**+0.3**
	comp=E,385nm,0.1s						
ATH	**Athens Observa**	**0.31**	**193**	P	**Pg**	**00 59 29.4**	**+0.3**
ATH				S	**Sg**	**00 59 33.8**	**+0.5**
	comp=E,1μm,0.1s						
ATH	**Athens Observa**	**0.31**	**193**	P	**Pg**	**00 59 29.4**	**+0.3**
ATH				S	**Sg**	**00 59 33.4**	**+0.1**
ATH				AML	AML	00 59 34.6	
	comp=E,3396μm,0.2s						
ATH				AML	AML	00 59 35.5	
	comp=N,2195μm,0.1s						
VILL	**Villia**	**0.41**	**254**	P	**Pg**	**00 59 31.3**	**+0.4**
VILL				S	**Sg**	**00 59 36.7**	**+0.4**
	comp=N,965nm,0.2s						
VLY	**Voula,Athens**	**0.42**	**181**	P	**Pg**	**00 59 31.2**	**0.0**
VLY				S	**Sg**	**00 59 36.7**	**-0.1**
	comp=N,795nm,0.2s						
VLY	**Voula,Athens**	**0.42**	**181**	P	**Pg**	**00 59 31.3**	**0.0**
VLY				S	**Sg**	**00 59 36.5**	**-0.2**
KYMI	**Kymi, Euboea I**	**0.43**	**33**	P	**Pg**	**00 59 31.4**	**+0.1**
KYMI				S	**Sg**	**00 59 37.6**	**+0.6**
	comp=N,835nm,0.2s						
KYMI	**Kymi, Euboea I**	**0.43**	**33**	P	**Pg**	**00 59 31.4**	**+0.1**
KYMI				S	**Sg**	**00 59 37.3**	**+0.4**
KYMI				AML	AML	00 59 38.7	
	comp=N,2055μm,0.3s						
KYMI				AML	AML	00 59 39.1	
	comp=E,1260μm,0.2s						
LKR	**Lokris**	**0.74**	**301**	P	**Pg**	**00 59 35.7**	**-1.4**
THAL	**Thalero**	**0.93**	**256**	P	**Pb**	**00 59 41.1**	**0.0**
THAL				S	**Sb**	**00 59 54.4**	**+0.9**
	comp=E,1μm,0.3s						
YDRA	**Hydra**	**0.96**	**196**	P	**Pg**	**00 59 41.3**	**-0.1**
YDRA				S	**Sb**	**00 59 54.6**	**+0.3**
YDRA				AML	AML	00 59 57.1	
	comp=N,1734μm,0.2s						
YDRA				AML	AML	00 59 57.2	
	comp=E,2927μm,0.3s						
AXAR	**Agios Charalam**	**1.03**	**299**	P	**Pg**	**00 59 42.3**	**-0.3**
AXAR				S	**Sn**	**00 59 57.9**	**+0.2**
	comp=E,430nm,0.4s						
KRND	**KRANIDI**	**1.03**	**211**	P	**Pg**	**00 59 42.6**	**-0.1**
KRND				S	**Sn**	**00 59 57.4**	**-0.3**
	comp=E,402nm,0.4s						
KRND	**KRANIDI**	**1.03**	**211**	P	**Pg**	**00 59 42.6**	**-0.1**
KRND				S	**Sb**	**00 59 56.7**	**+0.4**
KRND				AML	AML	00 59 59.4	
	comp=E,855μm,0.6s						
KRND				AML	AML	00 59 59.4	
	comp=N,739μm,0.3s						
NEO	**Neokhori**	**1.13**	**336**	P	**Pb**	**00 59 44.5**	**+0.1**
NEO				S	**Sg**	**00 59 59.6**	**+0.3**
	comp=N,608nm,0.3s						
NEO	**Neokhori**	**1.13**	**336**	P	**Pb**	**00 59 44.3**	**-0.2**
NEO				S	**Sg**	**00 59 59.2**	**0.0**
NEO				AML	AML	01 00 02.2	
	comp=N,1378μm,0.4s						
NEO				AML	AML	01 00 02.7	
	comp=E,1044μm,0.3s						
XOR	**Xorichti**	**1.19**	**336**	P	**Pb**	**00 59 45.6**	**+0.1**
XOR				S	**Sb**	**01 00 00.9**	**-0.1**
	comp=E,222nm,0.4s						
XOR	**Xorichti**	**1.19**	**336**	P	**Pb**	**00 59 45.6**	**+0.1**
XOR				AML	AML	01 00 01.3	
	comp=E,294μm,0.4s						
XOR				AML	AML	01 00 05.6	
	comp=N,601μm,0.4s						
KLV	**Kalavryta, Ach**	**1.33**	**261**	P	**Pn**	**00 59 47.3**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.33**	**270**	P	**Pg**	**00 59 48.6**	**+0.1**
ALIK				S	**Sb**	**01 00 05.1**	**+0.1**
SERG	**Sergoula**	**1.38**	**276**	P	**Pn**	**00 59 48.2**	**0.0**
SERG				S	**Sn**	**01 00 06.7**	**+0.2**
	comp=N,110nm,0.3s						
SERG	**Sergoula**	**1.38**	**276**	P	**Pn**	**00 59 48.3**	**0.0**
EFP	**Efpalio**	**1.50**	**276**	P	**Pb**	**00 59 50.5**	**-0.3**
DRO	**Drossia**	**1.69**	**260**	P	**Pb**	**00 59 53.4**	**-0.5**
APE	**Apeiranthos**	**1.82**	**131**	P	**Pn**	**00 59 53.8**	**-0.4**
APE				S	**Sn**	**01 00 17.3**	**0.0**
	comp=N,312nm,0.2s						
RLS	**Riolos of Patr**	**1.86**	**264**	P	**Pb**	**00 59 56.8**	**-0.1**

IDC 19 01:16:28.4±384.0, 60.32N×138.59W, h0km, Error ellipse: s-maj=176.0km s-min=122.4km az=156.0, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I53US	**FAIRBANKS INFR**	**6.26**	**321**	I		01 53 50.0	
	baz=132,slow=336,SNR=0.8						
I10CA	**LAC DU BONNET**	**25.82**	**94**	I		03 55 10.0	
	baz=307,slow=319,SNR=3.6						
I18DK	**QAANAAQ INFRAS**	**27.77**	**26**	I		04 06 50.0	
	0.1nm,1.1s,baz=268,slow=325,SNR=1.8						

IDC 19 01:16:43.2±3.2, 19.49S×175.91W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=153.2km s-min=55.0km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.00**	**243**	P	P	01 24 19.7	-0.2
	1.5nm,0.5s,baz=96,slow=8.6,SNR=5.4						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**46.67**	**256**	P	P	01 25 14.0	+0.1
	3.5nm,0.6s,baz=94,slow=7.9,SNR=40						
ASAR				PcP	PcP	01 26 46.9	-0.9
	0.5nm,0.7s,baz=116,slow=4.2,SNR=3.2						
	3.5nm,0.6s						
WRA	**Warramunga Arr**	**46.70**	**261**	P	P	01 25 14.3	+0.1
	0.8nm,0.4s,baz=95,slow=7.6,SNR=29						
WRA				PcP	PcP	01 26 46.8	-1.2
	0.3nm,0.7s,baz=89,slow=3.8,SNR=2.3						
	0.8nm,0.4s						
VNA3	**Neumayer Olymp**	**89.01**	**176**	P	P	01 29 42.6	+2.9
VNA2	**Neumayer--Watz**	**89.47**	**176**	P	P	01 29 44.9	+3.0
	baz=182,slow=4.0						
VNA1	**Neumayer--Stat**	**89.69**	**176**	P	P	01 29 45.9	+3.2
BRTR	**Keskin Array B**	**147.57**	**315**	PKPbc	PKPbc	01 36 30.1	+0.2
	0.4nm,0.6s,baz=76,slow=6.1,SNR=2.7						

AUST 19 02:32:16.5±2.6, 36.77S×144.96E, h7km±24km, Error ellipse: s-maj=18.8km s-min=12.4km az=168.0, Victoria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**0.91**	**152**	P	Pb	02 32 34.6	0.0
	baz=0.9						
TOO				S	Sg	02 32 45.6	0.0
	baz=0.9						
AUMTC	**Mt Clear Colle**	**1.20**	**226**	P	Pg	02 32 39.4	-0.2
	baz=1.2						
AUMTC				S	Sg	02 32 53.5	-1.7
	baz=1.2						
ARPS	**Mount Arapiles**	**2.51**	**269**	P	Pn	02 32 57.1	-0.5
	baz=2.5						
ARPS				S	Sn	02 33 29.9	+1.4
	baz=2.5						
CNB	**Canberra Magne**	**3.85**	**69**	P	Pn	02 33 16.7	+0.5
	baz=3.8						
STKA	**Stephens Creek**	**5.62**	**329**	P	Pn	02 33 42.7	+2.2
	baz=5.6						
STKA				S	Sn	02 34 44.7	-0.6
	baz=5.6						

ROM 19 02:37:12.3±0.1, 44.483N±0.008×10.31E±0.01, h30km±1km, ML1.8/5, 2C-4D, Error ellipse: s-maj=0.9km s-min=0.8km az=118.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.17**	**273**	P	Pb	02 37 17.8	-0.5
GRAM				S	Sb	02 37 22.3	0.0
GRAM				AML	AML		
	comp=N,462μm,0.4s						
GRAM				AML	AML		
	comp=E,484μm,0.4s						
GRAM				AML	AML		
	comp=E,484μm,1.6s						
GRAM	**Graiana**	**0.17**	**273**	⇓P	Pb	02 37 17.4	-0.9
GRAM				AML	AML		
	comp=E,484μm,0.4s						
GRAM				AML	AML		
	comp=N,462μm,0.4s						
GRAM				AML	AML		
	comp=E,484μm,0.4s						
GRAM				AML	AML		
	comp=N,462μm,0.4s						
GRAM				AML	AML		
	comp=E,484μm,0.4s						
GRAM				AML	AML		
	comp=N,462μm,0.4s						
GSCL	**Gusciola**	**0.24**	**123**	⇓P	Pb	02 37 18.4	-0.6
GSCL				AML	AML		
	comp=E,104μm,0.9s						
GSCL				AML	AML		
	comp=N,113μm,0.2s						
GSCL				AML	AML		
	comp=E,104μm,0.9s						
GSCL				AML	AML		
	comp=N,113μm,0.2s						
GSCL				AML	AML		
	comp=E,104μm,0.9s						
GSCL				AML	AML		
	comp=N,113μm,0.2s						
FIVI	**Fivizzano**	**0.28**	**208**	P	Pb	02 37 19.2	-0.2
FIVI				S	Sb	02 37 24.9	+0.7
FIVI				AML	AML		
	comp=E,121μm,0.7s						
FIVI				AML	AML		
	comp=N,158μm,1.0s						
PRMA	**PARMA**	**0.28**	**1**	P	Pb	02 37 19.4	-0.1
PRMA				S	Sn	02 37 25.6	-0.1
PRMA				AML	AML		
	comp=E,120μm,0.2s						
PRMA				AML	AML		
	comp=N,130μm,1.6s						
SARO	**Sassorosso**	**0.31**	**167**	AML	AML		
	comp=N,28μm,0.6s						
SARO				AML	AML		
	comp=E,30μm,0.6s						
SARO				AML	AML		
	comp=N,28μm,0.6s						
SARO				AML	AML		
	comp=N,28μm,1.4s						
VLC	**Villacollemand**	**0.33**	**170**	P	Pb	02 37 19.8	-0.3
VLC				S	Sb	02 37 25.9	+0.4
VLC				AML	AML		
	comp=N,42μm,1.2s						
VLC				AML	AML		
	comp=E,42μm,1.1s						
VLC				AML	AML		
	comp=E,41μm,1.1s						
VLC				AML	AML		
	comp=N,42μm,0.8s						
VLC				AML	AML		
	comp=E,41μm,0.9s						
VLC	**Villacollemand**	**0.33**	**170**	⇓P	Pb	02 37 19.9	-0.3
VLC				AML	AML		
	comp=E,42μm,1.1s						
VLC				AML	AML		
	comp=N,42μm,1.2s						
VLC				AML	AML		
	comp=E,42μm,1.1s						
VLC				AML	AML		
	comp=N,42μm,1.2s						
VLC				AML	AML		
	comp=E,41μm,1.1s						
VLC				AML	AML		
	comp=N,42μm,1.2s						
EQUI	**Equi**	**0.34**	**199**	P	Pb	02 37 20.2	-0.1
EQUI				S	Sn	02 37 26.4	-0.6
CARD	**Cardoso**	**0.47**	**164**	P	Pb	02 37 22.5	+0.2
CARD				AML	AML		
	comp=E,41μm,0.8s						
CARD				AML	AML		
	comp=N,37μm,1.2s						
ZCCA	**Zocca**	**0.50**	**105**	P	Pn	02 37 23.5	0.0
ZCCA				AML	AML		
	comp=E,42μm,1.5s						
ZCCA				AML	AML		
	comp=N,40μm,1.6s						
ZCCA	**Zocca**	**0.50**	**105**	P	Pn	02 37 24.1	+0.6
ZCCA				AML	AML		
	comp=E,42μm,1.5s						
ZCCA				AML	AML		
	comp=N,40μm,1.6s						
ZCCA				AML	AML		
	comp=E,42μm,1.5s						
ZCCA				AML	AML		
	comp=N,40μm,1.6s						
ZCCA				AML	AML		
	comp=E,42μm,1.5s						
ZCCA				AML	AML		
	comp=N,41μm,1.6s						
PLMA	**Palmaria, Port**	**0.54**	**217**	P	Pb	02 37 23.5	+0.1
PLMA				S	Sn	02 37 32.2	+0.1
PLMA	**Palmaria, Port**	**0.54**	**217**	P	Pb	02 37 23.1	-0.3
POPM	**Popiglio**	**0.54**	**143**	P	Pb	02 37 23.1	-0.3
POPM				AML	AML		
	comp=E,52μm,0.4s						
POPM				AML	AML		
	comp=N,48μm,0.7s						
MAIM	**Mastiano**	**0.58**	**167**	P	Pn	02 37 24.4	-0.2
MSSA	**Maissana**	**0.59**	**254**	P	Pb	02 37 24.4	+0.2
MSSA				S	Sn	02 37 34.0	+0.6
MTCR	**Monte La Croce**	**0.67**	**132**	P	Pb	02 37 25.7	0.0
MTCR				AML	AML		
	comp=E,46μm,1.6s						
MTCR				AML	AML		
	comp=N,31μm,1.6s						
MTCR	**Monte La Croce**	**0.67**	**132**	P	Pb	02 37 25.8	+0.1
MTCR				AML	AML		
	comp=E,44μm,1.6s						
MTCR				AML	AML		
	comp=N,32μm,1.6s						
SBPO	**S.Benedetto Po**	**0.72**	**37**	P	Pn	02 37 27.1	+0.7
GORR	**Gorreto**	**0.73**	**280**	P	Pn	02 37 27.2	+0.4
PII	**Pisa**	**0.78**	**168**	P	Pb	02 37 27.4	+0.1
PII				S	Sn	02 37 39.0	+1.2
PII				AML	AML		
	comp=E,57μm,1.0s						
PII				AML	AML		
	comp=N,48μm,0.3s						
PII	**Pisa**	**0.78**	**168**	P	Pb	02 37 27.3	0.0
PII				AML	AML		
	comp=E,57μm,1.0s						
PII				AML	AML		
	comp=N,48μm,0.3s						
PII				AML	AML		
	comp=E,57μm,1.0s						
PII				AML	AML		
	comp=N,48μm,0.3s						
PII				AML	AML		
	comp=E,57μm,1.0s						
PII				AML	AML		
	comp=N,48μm,0.3s						
SALO	**Salr**	**1.15**	**8**	P	Pb	02 37 33.5	-0.1
SALO				AML	AML		
	comp=N,78μm,1.1s						
SALO				AML	AML		
	comp=E,58μm,0.8s						
SALO				AML	AML		
	comp=N,78μm,1.1s						
SALO				AML	AML		
	comp=N,78μm,0.9s						
SALO	**Salr**	**1.15**	**8**	⇑P	Pb	02 37 33.7	+0.2
SALO				AML	AML		
	comp=E,58μm,0.8s						
SALO				AML	AML		
	comp=N,78μm,1.1s						
SALO				AML	AML		
	comp=E,58μm,0.8s						
SALO				AML	AML		
	comp=N,78μm,1.1s						
ROVR	**Rover Verones**	**1.28**	**25**	P	Pb	02 37 35.5	-0.4
ZONE	**Zone**	**1.29**	**354**	⇓P	Pb	02 37 35.7	-0.2
ZONE				AML	AML		
	comp=E,32μm,0.4s						
ZONE				AML	AML		
	comp=N,25μm,0.6s						
ZONE				AML	AML		
	comp=E,32μm,0.4s						
ZONE				AML	AML		
	comp=N,25μm,0.6s						
DOSS	**Dosso del Somm**	**1.53**	**24**	P	Pn	02 37 37.6	-0.2
DOSS	**Dosso del Somm**	**1.53**	**24**	⇑P	Pn	02 37 37.8	-0.1
LUSI	**Trento, Gardas**	**1.54**	**17**	P	Pn	02 37 38.0	+0.1
LUSI				AML	AML		
	comp=E,33μm,1.0s						
LUSI				AML	AML		
	comp=N,61μm,1.4s						
LUSI	**Trento, Gardas**	**1.54**	**17**	S	Sn	02 37 58.0	+1.0
CTI	**Castel Tesino**	**1.83**	**31**	P	Pn	02 37 41.8	-0.1
CTI				AML	AML		
	comp=E,35μm,1.4s						
CTI				AML	AML		
	comp=N,29μm,0.2s						
CTI	**Castel Tesino**	**1.83**	**31**	P	Pn	02 37 41.4	-0.5
CTI				AML	AML		
	comp=E,35μm,1.4s						
CTI				AML	AML		
	comp=N,29μm,0.2s						
CTI				AML	AML		
	comp=E,35μm,1.4s						
CTI				AML	AML		
	comp=N,29μm,0.2s						
PIEI	**Pieia**	**1.87**	**120**	P	Pb	02 37 44.8	-0.9
ARRO	**Arrone**	**2.61**	**136**	S	Sb	02 38 37.0	+7.0
SMA1	**SAN MARTINO**	**2.88**	**129**	S	Sn	02 38 32.0	+2.1
OFFI	**Offida**	**2.90**	**121**	S	Sb	02 38 37.0	-1.3
CAMP	**Campotosto**	**2.98**	**130**	S	Sn	02 38 34.0	+1.5
FIAM	**Fiamignano**	**3.02**	**136**	P	Pb	02 38 10.2	+4.8
TERO	**Teramo**	**3.03**	**127**	S	Sn	02 38 34.0	+0.3
MA9	**Marino**	**3.21**	**147**	S	Sn	02 38 38.0	0.0
MA9	**Marino**	**3.21**	**147**	S	Sn	02 38 38.0	0.0
FRES	**Fresagrandinar**	**4.06**	**127**	S	Sn	02 39 01.0	+2.1
FRES	**Fresagrandinar**	**4.06**	**127**	S	Sn	02 39 01.0	+2.1

ROM 19 02:38:27.8±0.0, 42.746N±0.003×13.268E±0.004, h11km, Md1.4/3, Error ellipse: s-maj=0.3km s-min=0.2km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.08**	**153**	P	Pg	02 38 30.9	+0.5
T1204				S	Sg	02 38 33.0	+0.7
T1204				END			
SMA1	**SAN MARTINO**	**0.12**	**157**	P	Pg	02 38 31.4	+0.5
SMA1				S	Sg	02 38 33.9	+0.7
SMA1				END			
T1245	**Castelsantange**	**0.13**	**332**	P	Pg	02 38 31.4	+0.4
T1245				S	Sg	02 38 34.2	+0.8
T1243	**Rocca Santa Ma**	**0.14**	**110**	P	Pg	02 38 31.5	+0.4
T1243				S	Sg	02 38 34.3	+0.7
T1243				END			
NRCA	**Norcia**	**0.14**	**308**	S	Pg	02 38 32.0	+0.8
NRCA	**Norcia**	**0.14**	**308**	P	Pg	02 38 31.6	+0.4
NRCA				S	Sg	02 38 34.4	+0.7
MMO1	**Montemonaco**	**0.16**	**16**	P	Pg	02 38 31.8	+0.3
MMO1				S	Sg	02 38 34.8	+0.7
MC2	**Monte Cornacci**	**0.18**	**341**	P	Pg	02 38 32.1	+0.3
MC2				S	Sg	02 38 35.8	+1.1
LNSS	**Leonessa**	**0.22**	**230**	S	Pg	02 38 33.0	+0.5
LNSS	**Leonessa**	**0.22**	**230**	P	Pg	02 38 32.9	+0.4
LNSS				S	Sg	02 38 37.0	+1.3
CAMP	**Campotosto**	**0.23**	**154**	P	Pg	02 38 33.1	+0.4
CAMP				S	Sg	02 38 37.0	+0.9
T1216	**Preci, Frazion**	**0.23**	**308**	P	Pg	02 38 33.0	+0.2
T1216				S	Sg	02 38 37.0	+1.0
AM05	**Amandola Campo**	**0.24**	**15**	P	Pg	02 38 33.2	+0.4
RM33	**Pellescritta (**	**0.24**	**190**	P	Pg	02 38 33.2	+0.4
RM33				S	Sg	02 38 37.4	+1.2
T1217	**Poggiodomo (PG**	**0.25**	**262**	P	Pg	02 38 33.3	+0.3
T1217				S	Sb	02 38 37.8	-1.0
T1215	**Vallo di Nera,**	**0.30**	**281**	P	Pg	02 38 34.1	+0.2
T1215				S	Sb	02 38 39.2	-1.0
T1247	**Pizzolo (AQ)**	**0.30**	**176**	P	Pb	02 38 34.8	-0.6
T1247				S	Sb	02 38 39.5	-0.9
GUMA	**Gualdo di Mace**	**0.32**	**9**	S	Pg	02 38 35.0	+0.7
GUMA	**Gualdo di Mace**	**0.32**	**9**	P	Pg	02 38 34.8	+0.5
GUMA				S	Sb	02 38 40.5	-0.4
OFFI	**Offida**	**0.36**	**58**	P	Pb	02 38 36.0	-0.3
GIGS	**Gran Sasso**	**0.37**	**143**	S	Pg	02 38 36.0	+0.8
GIGS	**Gran Sasso**	**0.37**	**143**	P	Pg	02 38 35.5	+0.3
GIGS				S	Sg	02 38 41.0	+0.9
T1211	**Morro Reatino**	**0.37**	**235**	P	Pg	02 38 35.3	+0.1
T1211				S	Sb	02 38 41.5	-0.8
ARRO	**Arrone**	**0.41**	**246**	P	Pg	02 38 35.9	+0.1
ARRO				S	Sb	02 38 43.1	-0.1
VCEL	**Villa Celiera**	**0.55**	**129**	S	Sb	02 38 48.0	+0.5

*NORS **19** 03:17:55.5±0.0, 41.43N×44.02E, h1km, MPVA4.6*
*TIF **19** 03:17:55.9, 41.38N×44.01E, h11km*
*NSSP **19** 03:17:55.3, 41.33N×43.95E, h8km, Ms3.4*
*ISK **19** 03:17:56.2, 41.43N×44.04E, h7km, ML3.2/11*
*DDA **19** 03:17:56.1±0.0, 41.36N×43.96E, h5km±5km, MW3.6*
*MOS **19** 03:17:57.0±0.7, 41.35N×43.97E, h6km, mb4.0/1, Error ellipse: s-maj=5.3km s-min=3.6km az=86.6*
*AZER **19** 03:17:57.5±0.1, 41.25N×44.27E, h2km, Error ellipse: s-maj=1.9km s-min=0.9km az=300.0*
*DRS **19** 03:18:04.7±0.0, 41.41N×44.22E, h21km*
ISC 19 03:17:57.9±0.7, 41.36N±0.01×44.03E±0.01, h10km, n149, σ1.9±56/265, 11C-17D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.12**	**102**	P	**Pg**	**03 18 00.0**	**-1.0**
DMNI				S	**Sg**	**03 18 02.3**	**-0.9**
DMNI	**Dmanisi**	**0.12**	**102**	PG	**Pg**	**03 18 00.0**	**-1.0**
BRNG	**Burnasheti**	**0.31**	**331**	P	**Pg**	**03 18 03.0**	**-1.1**
BRNG				S	**Sg**	**03 18 07.9**	**-0.5**

AKH	**Akhalkalaki**	**0.41 278**	PG	**Pg**	**03 18 04.8**	**-1.2**
AKH			SG	**Sg**	**03 18 10.7**	**-0.7**
AKH	**Akhalkalaki**	**0.41 278**	P	**Pg**	**03 18 04.8**	**-1.2**
AKH			S	**Sg**	**03 18 10.5**	**-0.9**
AKH	**Akhalkalaki**	**0.41 278**	PG	**Pg**	**03 18 04.8**	**-1.2**
AKH			S	**Sg**	**03 18 10.5**	**-0.9**
STE	**Stepanavan**	**0.44 144**	⇓*i*P	**Pg**	**03 18 05.9**	**-0.6**
STE			⇓*i*S	**Sg**	**03 18 12.5**	**+0.2**
BKRG	**Bakuriani**	**0.55 317**	P	**Pg**	**03 18 07.5**	**-1.3**
BKRG			S	**Sg**	**03 18 15.4**	**-0.7**
BKRG	**Bakuriani**	**0.55 317**	PG	**Pg**	**03 18 07.5**	**-1.3**
BKRG			S	**Sg**	**03 18 15.4**	**-0.7**
AZMN	**Azmana**	**0.56 266**	P	Pn	03 18 25.1	+13
AZMN			S	Sn	03 18 33.0	+11
SEAG	**Tbilisi Sea**	**0.71 55**	P	**Pg**	**03 18 10.1**	**-1.6**
SEAG			S	**Sg**	**03 18 20.2**	**-0.8**
SEAG	**Tbilisi Sea**	**0.71 55**	PG	**Pg**	**03 18 10.1**	**-1.6**
SEAG			S	**Sg**	**03 18 20.2**	**-0.8**
EAK	**Akyaka**	**0.74 206**	P	**Pg**	**03 18 10.1**	**-2.1**
EAK			S	**Sg**	**03 18 20.5**	**-1.4**
EAK			*i* AML	AML	03 18 27.0	
	comp=N,2μm,0.5s					
EAK			*i* AML	AML	03 18 33.0	
	comp=E,2μm,0.6s					
ALIG	**Mtskhetisjvari**	**0.80 339**	P	**Pg**	**03 18 11.4**	**-2.0**
ALIG			S	**Sg**	**03 18 22.3**	**-1.6**
ABS	**Abastumani**	**0.99 294**	P	**Pg**	**03 18 15.0**	**-2.1**
ABS			S	**Sg**	**03 18 28.9**	**-1.2**
ABS	**Abastumani**	**0.99 294**	PG	**Pg**	**03 18 15.0**	**-2.1**
ABS			S	**Sg**	**03 18 28.9**	**-1.2**
KARS	**Kars**	**1.02 225**	PN	**Pb**	**03 18 17.3**	**-0.5**
KARS	**Kars**	**1.02 225**	PG	**Pb**	**03 18 17.3**	**-0.5**
QZX	**Qazax, Azerbai**	**1.06 106**	P	**Pg**	**03 18 16.0**	**-2.3**
	SNR=1031					
QZX			S	**Sg**	**03 18 30.4**	**-1.6**
DIGO	**Kars**	**1.06 208**	P	**Pg**	**03 18 16.1**	**-2.2**
DIGO			S	**Sg**	**03 18 30.8**	**-1.4**
DIGO			*i* AML	AML	03 18 32.0	
	comp=E,3μm,0.5s					
DIGO			*i* AML	AML	03 18 34.0	
	comp=N,2μm,0.6s					
KAPZ	**Kaputan**	**1.15 153**	⇑*i*P	**Pb**	**03 18 18.6**	**-1.4**
KAPZ			⇑*i*S	**Sg**	**03 18 34.3**	**-0.7**
GUDG	**Gudauri**	**1.16 17**	P	**Pb**	**03 18 18.9**	**-1.3**
GUDG			S	**Sb**	**03 18 35.0**	**-0.4**
GUDG	**Gudauri**	**1.16 17**	PG	**Pb**	**03 18 18.9**	**-1.3**
GUDG			S	**Sb**	**03 18 35.0**	**-0.4**
METS	**Metsamor**	**1.20 178**	⇓*i*P	**Pb**	**03 18 19.7**	**-1.2**
METS			⇓*i*S	**Sn**	**03 18 36.8**	**-0.5**
TKB	**Tkibuli**	**1.26 323**	P	**Pn**	**03 18 19.8**	**-1.8**
TKB			S	**Sb**	**03 18 36.9**	**-1.2**
TKB	**Tkibuli**	**1.26 323**	PG	**Pn**	**03 18 19.8**	**-1.8**
TKB			S	**Sb**	**03 18 36.9**	**-1.2**
VNNZ	**Vanand**	**1.26 187**	⇓*i*P	**Pn**	**03 18 20.4**	**-1.3**
VNNZ			⇑*i*S	**Sn**	**03 18 38.4**	**-0.3**
ONI	**Oni**	**1.31 341**	PN	**Pn**	**03 18 20.4**	**-1.9**
ONI			SN	**Sb**	**03 18 37.8**	**-1.7**
ONI	**Oni**	**1.31 341**	P	**Pn**	**03 18 20.4**	**-1.9**
ONI			S	**Sb**	**03 18 38.1**	**-1.4**
ONI	**Oni**	**1.31 341**	PG	**Pn**	**03 18 20.4**	**-1.9**
ONI			S	**Sb**	**03 18 38.1**	**-1.4**
GNI	**Garni**	**1.32 156**	⇓*i*P	**Pn**	**03 18 22.0**	**-0.6**
GNI			⇓*i*S	**Sg**	**03 18 40.7**	**+0.2**
GNI	**Garni**	**1.32 156**	PN	**Pb**	**03 18 22.4**	**-0.5**
GNI			SN	**Sg**	**03 18 41.8**	**+1.4**
GNI	**Garni**	**1.32 156**	*d i* PG	**Pn**	**03 18 21.9**	**-0.7**
GNI			*i* S	**Sg**	**03 18 41.2**	**+0.8**
GNI			pmax	pmax		
	comp=Z,259nm,0.5s					
PNSH	**Pansheti**	**1.35 19**	P	**Pn**	**03 18 21.5**	**-1.6**
PNSH			S	**Sb**	**03 18 40.1**	**-0.8**
PNSH	**Pansheti**	**1.35 19**	PG	**Pn**	**03 18 21.5**	**-1.6**
PNSH			S	**Sb**	**03 18 40.1**	**-0.8**
TASB	**TASBURUN-IGDIR**	**1.38 173**	PN	**Pn**	**03 18 22.6**	**-0.7**
ZEI	**Tsey**	**1.44 356**	*i* PG	**Pn**	**03 18 23.2**	**-1.0**
ZEI			*e*S	**Sn**	**03 18 42.5**	**-0.8**
ZEI			pmax	pmax		
	comp=Z,273nm,0.2s					
ZEI	**Tsey**	**1.44 356**	*i* Pg	**Pn**	**03 18 23.2**	**-1.0**
ZEI			*e*Sg	**Sg**	**03 18 45.5**	**+1.3**
NRKZ	**NAREK**	**1.44 160**	⇓*i*P	**Pn**	**03 18 22.6**	**-1.5**
NRKZ			⇓*i*S	**Sn**	**03 18 42.6**	**-0.5**
GDB	**GEDABAY**	**1.45 115**	P	**Pn**	**03 18 22.6**	**-1.8**
	SNR=12					
GDB			S	**Sn**	**03 18 41.6**	**-2.0**
LACR	**Lac**	**1.48 8**	*e*PG	**Pn**	**03 18 24.0**	**-0.8**
LACR			*e*S	**Sg**	**03 18 46.8**	**+1.1**
LACR	**Lac**	**1.48 8**	*e*Pg	**Pn**	**03 18 24.0**	**-0.8**
LACR			*e*Sg	**Sg**	**03 18 46.8**	**+1.1**
IGDI	**IGDIR**	**1.49 178**	P	**Pn**	**03 18 23.8**	**-1.0**
IGDI			S	**Sb**	**03 18 44.4**	**-0.2**
IGDI			*i* AML	AML	03 18 45.0	
	comp=Z,229nm,0.3s					
IGDI			*i* AML	AML	03 18 45.0	
	comp=Z,217nm,0.3s					
SENK	**Senkaya-Erzuru**	**1.50 239**	PN	**Pn**	**03 18 24.9**	**-0.2**
SHTL	**Shatili**	**1.55 32**	P	**Pn**	**03 18 25.0**	**-0.7**
SHTL			S	**Sb**	**03 18 45.6**	**-0.9**
DDFL	**Dedoflistskaro**	**1.58 86**	P	**Pg**	**03 18 27.8**	**-0.4**
DDFL	**Dedoflistskaro**	**1.58 86**	PN	**Pg**	**03 18 27.8**	**-0.4**
DIGR	**Digorskoe uzhe**	**1.58 348**	*e*PG	**Pn**	**03 18 25.6**	**-0.6**
DIGR			*e*S	**Sg**	**03 18 47.5**	**-1.3**
DIGR	**Digorskoe uzhe**	**1.58 348**	*e*Pg	**Pn**	**03 18 25.6**	**-0.6**
DIGR			*e*Sg	**Sg**	**03 18 47.5**	**-1.3**
DAGI	**Agillar**	**1.62 261**	P	**Pn**	**03 18 26.4**	**-0.2**
DAGI			S	**Sb**	**03 18 48.3**	**-0.2**
DAGI			*i* AML	AML	03 18 51.0	
	comp=Z,215nm,0.5s					
DAGI			*i* AML	AML	03 18 53.0	
	comp=Z,287nm,0.4s					
KOTA	**Agri, Merkez-K**	**1.67 202**	P	**Pg**	**03 18 29.0**	**-1.0**
KOTA			S	**Sg**	**03 18 55.3**	**+3.6**
KOTA			*i* AML	AML	03 18 59.0	
	comp=Z,60nm,0.7s					
KOTA			*i* AML	AML	03 19 02.0	
	comp=Z,91nm,0.9s					
LGD	**Lagodekhi**	**1.73 73**	P	**Pn**	**03 18 27.6**	**-0.5**
LGD			S	**Sb**	**03 18 51.7**	**+0.1**
LGD	**Lagodekhi**	**1.73 73**	PN	**Pn**	**03 18 27.6**	**-0.5**
LGD			S	**Sb**	**03 18 51.7**	**+0.1**
KORR	**Kora**	**1.73 1**	*e*PN	**Pb**	**03 18 29.4**	**-0.4**
KORR			*e*S	**Sg**	**03 18 56.3**	**+2.7**
KORR	**Kora**	**1.73 1**	*e*Pg	**Pb**	**03 18 29.4**	**-0.4**
KORR			*e*Sg	**Sg**	**03 18 56.3**	**+2.7**
HYR	**Heyderabad**	**1.75 159**	P	**Pb**	**03 18 30.0**	**-0.2**
	SNR=5.2					
HYR			S	**Sg**	**03 18 54.9**	**+0.7**
BATM	**Batumi**	**1.77 279**	P	**Pn**	**03 18 28.6**	**0.0**
BATM			S	**Sn**	**03 18 51.1**	**-0.1**
BATM	**Batumi**	**1.77 279**	PN	**Pn**	**03 18 28.6**	**0.0**
BATM			S	**Sn**	**03 18 51.1**	**-0.1**
DBOC	**Borcka**	**1.78 270**	P	**Pn**	**03 18 28.9**	**+0.2**
DBOC			S	**Sb**	**03 18 52.1**	**-0.9**
DBOC			*i* AML	AML	03 18 56.0	
	comp=Z,248nm,0.4s					
DDEM	**Demirkent**	**1.78 256**	P	**Pn**	**03 18 28.9**	**+0.1**
DDEM			S	**Sb**	**03 18 52.9**	**-0.3**
DDEM			*i* AML	AML	03 18 53.0	
	comp=Z,796nm,0.4s					
DDEM			*i* AML	AML	03 18 55.0	
	comp=Z,1μm,0.4s					
DBAD	**Bademkaya**	**1.79 260**	P	**Pn**	**03 18 29.3**	**+0.3**
DBAD			S	**Sb**	**03 18 53.6**	**+0.1**
DBAD			*i* AML	AML	03 18 54.0	
	comp=Z,457nm,0.5s					
DBAD			*i* AML	AML	03 18 56.0	
	comp=Z,280nm,0.4s					
KMGR	**Komgaron**	**1.81 20**	⇓*i*PN	**Pb**	**03 18 30.7**	**-0.5**
KMGR			*e*S	**Sg**	**03 18 56.7**	**+0.5**
KMGR	**Komgaron**	**1.81 20**	*i* Pg	**Pb**	**03 18 30.7**	**-0.5**
KMGR			*e*Sg	**Sg**	**03 18 56.7**	**+0.5**
ARNR	**Ardon**	**1.83 6**	*e*PN	**Pb**	**03 18 31.3**	**-0.3**
ARNR			*e*S	**Sg**	**03 18 58.2**	**+1.3**
ARNR	**Ardon**	**1.83 6**	*e*Pg	**Pb**	**03 18 31.3**	**-0.3**
ARNR			*e*Sg	**Sg**	**03 18 58.2**	**+1.3**
GANJ	**Ganja**	**1.88 111**	PN	**Pn**	**03 18 29.8**	**-0.3**
GANJ	**Ganja**	**1.88 111**	P	**Pn**	**03 18 29.6**	**-0.5**
	SNR=64					
GANJ			S	**Sn**	**03 18 53.8**	**0.0**
EATA	**Eleskirt**	**1.90 219**	P	**Pb**	**03 18 32.2**	**-0.6**
EATA			S	**Sg**	**03 18 58.5**	**-0.3**
EATA			*i* AML	AML	03 19 00.0	
	comp=Z,119nm,0.5s					
EATA			*i* AML	AML	03 19 01.0	
	comp=Z,109nm,0.4s					
LSNR	**Lesken**	**1.93 356**	*e*PN	**Pb**	**03 18 32.0**	**-1.2**
LSNR			*e*S	**Sg**	**03 19 00.1**	**+0.2**
LSNR			pmax	pmax		
	comp=Z,118nm,0.4s					
LSNR	**Lesken**	**1.93 356**	*e*Pg	**Pb**	**03 18 32.5**	**-0.7**
LSNR			*e*Sg	**Sg**	**03 19 00.1**	**+0.2**
HOPA	**Hopa-Artvin**	**1.94 272**	PN	**Pn**	**03 18 30.6**	**-0.4**
AGRB	**Hanur-Agry**	**1.94 204**	PN	**Pn**	**03 18 31.8**	**+0.6**
ZKTA	**Zakatala**	**1.97 81**	PN	**Pn**	**03 18 31.9**	**+0.5**
ZKTA	**Zakatala**	**1.97 81**	P	**Pn**	**03 18 31.3**	**-0.1**
	SNR=23					
ZKTA			S	**Sb**	**03 18 59.0**	**+0.5**
STDR	**Stavd-Durt**	**2.01 1**	⇓*i*PN	**Pg**	**03 18 35.4**	**-1.1**
STDR			*e*S	**Sg**	**03 19 03.8**	**+1.2**
STDR	**Stavd-Durt**	**2.01 1**	*i* Pg	**Pg**	**03 18 35.4**	**-1.1**
STDR			*e*Sg	**Sg**	**03 19 03.9**	**+1.2**
HOMI	**Horasan**	**2.08 232**	P	**Pn**	**03 18 33.4**	**+0.3**
HOMI			*i* AML	AML	03 19 18.0	
	comp=Z,148nm,0.6s					
HOMI			*i* AML	AML	03 19 26.0	
	comp=Z,137nm,0.9s					
BTLR	**Botlikh**	**2.10 51**	*d i*PN	**Pb**	**03 18 34.4**	**-1.7**
BTLR	**Botlikh**	**2.10 51**	*e*Pg	**Pb**	**03 18 34.8**	**-1.2**
	comp=Z,64nm,0.2s					
BTLR			*e*Sg	**Sb**	**03 19 02.0**	**-0.1**
	comp=Z,150nm,0.6s					
NEY	**Neytrino**	**2.13 333**	*e*PN	**Pb**	**03 18 35.4**	**-1.3**
NEY			*e*S	**Sb**	**03 19 04.0**	**+0.8**
NEY	**Neytrino**	**2.13 333**	*e*Pg	**Pb**	**03 18 35.4**	**-1.3**
NEY			*e*Sg	**Sb**	**03 19 04.0**	**+0.8**
KOPR	**Koprukoy-ERZUR**	**2.14 231**	PN	**Pn**	**03 18 34.3**	**+0.4**
NCK	**Nalchik**	**2.16 352**	*e*PN	**Pb**	**03 18 37.5**	**+0.3**
NCK			*e*S	**Sg**	**03 19 07.9**	**+0.4**
NCK	**Nalchik**	**2.16 352**	*e*Pg	**Pb**	**03 18 37.5**	**+0.3**
NCK			*e*Sg	**Sg**	**03 19 07.9**	**+0.4**
CLDR	**Caldiran**	**2.21 182**	PN	**Pn**	**03 18 35.8**	**+0.9**
DVE	**Vedeno**	**2.24 44**	*ce*PN	**Pb**	**03 18 37.0**	**-1.5**
DVE			*i* S	**Sb**	**03 19 05.2**	**-1.0**
DVE			pmax	pmax		
	comp=Z,94nm,0.5s					
DVE	**Vedeno**	**2.24 44**	*i* Pg	**Pb**	**03 18 37.3**	**-1.2**
DVE			*e*Sg	**Sb**	**03 19 07.1**	**+0.9**
GROC	**Groznyy**	**2.27 35**	⇑*i*PN	**Pb**	**03 18 37.6**	**-1.3**
GROC			*e*S	**Sg**	**03 19 10.2**	**-0.5**
GROC			*e*		03 19 16.0	
GROC			pmax	pmax		
	comp=Z,389nm,0.5s					
GROC			smax	smax		
	comp=E,896nm,0.8s					
GROC			smax	smax		
	comp=N,356nm,0.6s					
GROC			smax	smax		
	comp=E,763nm,0.6s					
GROC			MLR	MLR		
	comp=Z,12nm,1.0s					
GROC	**Groznyy**	**2.27 35**	*e*Pg	**Pb**	**03 18 38.6**	**-0.3**
GROC			*e*Sg	**Sg**	**03 19 10.5**	**-0.2**
SBZ	**Shahbuz**	**2.28 149**	P	**Pb**	**03 18 38.4**	**-0.8**
	SNR=24					
SBZ			S	**Sb**	**03 19 08.1**	**+0.7**
XNZR	**Khunzakh**	**2.32 58**	*e*Pg	**Pb**	**03 18 38.6**	**-1.4**
	comp=Z,46nm,0.4s					
XNZR			*e*Sg	**Sb**	**03 19 09.1**	**+0.3**
	comp=Z,266nm,0.3s					
MNGR	**Mingechevir, A**	**2.38 103**	PN	**Pb**	**03 18 38.9**	**-2.0**
MNGR	**Mingechevir, A**	**2.38 103**	P	**Pn**	**03 18 36.8**	**-0.2**
	SNR=11					
MNGR			S	**Sb**	**03 19 09.4**	**-1.0**
SEKA	**Sheki**	**2.39 92**	PN	**Pn**	**03 18 37.9**	**+0.6**
SEKA	**Sheki**	**2.39 92**	P	**Pn**	**03 18 37.4**	**+0.1**
	SNR=137					
SEKA			S	**Sb**	**03 19 10.5**	**-0.2**
PRTR	**Priterechnaya**	**2.40 4**	*e*PN	**Pn**	**03 18 38.6**	**+1.3**
PRTR			*e*S	**Sb**	**03 19 10.9**	**0.0**
GNBR	**Gunib**	**2.42 64**	*e*PN	**Pb**	**03 18 39.7**	**-1.9**
GNBR			*e*S	**Sb**	**03 19 11.6**	**0.0**
GNBR			*i* S	**Sg**	**03 19 12.5**	**-3.3**
GNBR			pmax	pmax		
	comp=Z,59nm,0.4s					
GNBR			smax	smax		
	comp=E,442nm,0.5s					
GNBR			smax	smax		
	comp=N,266nm,0.3s					
GNBR			smax	smax		
	comp=E,430nm,0.4s					
GNBR	**Gunib**	**2.42 64**	*e*Pg	**Pb**	**03 18 39.8**	**-1.9**
	comp=E,59nm,0.4s					
GNBR			*e*Sg	**Sb**	**03 19 11.7**	**0.0**
	comp=E,554nm,0.6s					
KMKR	**Kumukh**	**2.43 70**	*e*PN	**Pb**	**03 18 40.0**	**-1.7**
KMKR			*e*S	**Sb**	**03 19 12.3**	**+0.5**
KMKR			*i* S	**Sg**	**03 19 12.9**	**-3.0**
KMKR			pmax	pmax		
	comp=Z,4.0nm,0.2s					
KMKR			smax	smax		
	comp=N,554nm,0.6s					
KMKR			smax	smax		
	comp=E,637nm,0.2s					
KMKR			smax	smax		
	comp=E,579nm,0.2s					
KMKR	**Kumukh**	**2.43 70**	*e*Pg	**Pb**	**03 18 40.1**	**-1.7**
	comp=E,4.0nm,0.2s					
KMKR			*e*Sg	**Sb**	**03 19 12.3**	**+0.5**
	comp=E,130nm,0.3s					
NAX	**Nakhchivan**	**2.45 152**	PN	**Pb**	**03 18 41.8**	**-0.3**
NAX	**Nakhchivan**	**2.45 152**	P	**Pb**	**03 18 41.8**	**-0.3**
	SNR=17					
NAX			S	**Sb**	**03 19 12.9**	**+0.5**
UNCR	**Uncukul**	**2.47 56**	*e*PN	**Pb**	**03 18 41.2**	**-1.2**
UNCR			*e*S	**Sb**	**03 19 12.1**	**-0.8**
CHOM	**Cayeli-Rize**	**2.48 265**	PN	**Pn**	**03 18 38.4**	**+0.1**
KBZ	**Khabaz**	**2.52 341**	*d i*PN	**Pn**	**03 18 39.7**	**+0.9**
ARKR	**Arakani**	**2.54 60**	*e*PN	**Pb**	**03 18 41.4**	**-2.2**
ARKR			*e*S	**Sb**	**03 19 15.7**	**+0.8**
GRS	**Goris**	**2.56 136**	⇓*i*P	**Pg**	**03 18 50.0**	**+3.1**
GRS			⇑*i*S	**Sg**	**03 19 23.0**	**+3.0**
KRIK	**Erzurum-spir**	**2.56 248**	P	**Pb**	**03 18 41.7**	**-2.4**
EJDE	**Erzurum, Palan**	**2.57 235**	P	**Pg**	**03 18 45.4**	**-1.8**
SHA1	**Shidzhatmaz**	**2.59 337**	*c i*PN	**Pn**	**03 18 41.4**	**+1.3**
SHA1			*e*S	**Sb**	**03 19 17.3**	**+0.8**
SHA1	**Shidzhatmaz**	**2.59 337**	*e*Pn	**Pb**	**03 18 42.0**	**-2.6**
SHA1			*e*Sn	**Sb**	**03 19 17.3**	**+0.8**
KRNR	**Karanay**	**2.60 55**	*e*PN	**Pb**	**03 18 42.7**	**-1.9**
KRNR			*e*S	**Sb**	**03 19 16.5**	**-0.2**
KRNR			*i* S	**Sg**	**03 19 17.2**	**-4.2**
KRNR			pmax	pmax		
	comp=Z,18nm,0.4s					
KRNR			smax	smax		
	comp=N,131nm,0.3s					
KRNR			smax	smax		
	comp=E,100nm,0.4s					
KRNR			smax	smax		
	comp=N,101nm,0.2s					
KRNR	**Karanay**	**2.60 55**	*e*Pn	**Pb**	**03 18 42.8**	**-1.9**
	comp=N,17nm,0.4s					
KRNR			*e*Sn	**Sb**	**03 19 16.6**	**-0.2**
	comp=N,363nm,0.4s					
BRDA	**Brd**	**2.63 113**	P	**Pn**	**03 18 41.7**	**+1.3**
BRDA			S	**Sb**	**03 19 16.2**	**-1.3**
AGDM	**Agdam**	**2.65 117**	P	**Pb**	**03 18 43.4**	**-2.1**
	SNR=24					
AGDM			S	**Sb**	**03 19 16.9**	**-1.2**
DBC	**Dubki**	**2.67 50**	*ce*PN	**Pn**	**03 18 41.7**	**+0.7**
BUJR	**Buynaksk**	**2.72 56**	*e*PN	**Pb**	**03 18 44.6**	**-2.1**
BUJR			*e*S	**Sb**	**03 19 20.6**	**+0.4**
KIV	**Kislovodsk**	**2.78 340**	⇑*e*PN	**Pn**	**03 18 44.3**	**+1.7**
KIV			pmax	pmax		
	comp=Z,24nm,1.0s					
AKT	**Akhty**	**2.79 86**	*e*PN	**Pn**	**03 18 44.0**	**+1.3**
AKT			*e*S	**Sb**	**03 19 19.9**	**-2.2**
AKT			*i* S	**Sn**	**03 19 20.6**	**+4.1**
AKT			pmax	pmax		
	comp=Z,64nm,0.5s					
AKT			smax	smax		
	comp=N,364nm,0.4s					
AKT			smax	smax		
	comp=E,211nm,0.3s					
AKT			smax	smax		
	comp=N,312nm,0.4s					
AKT	**Akhty**	**2.79 86**	*e*Pn	**Pn**	**03 18 44.0**	**+1.3**
	comp=N,64nm,0.5s					
AKT			*e*Sn	**Sb**	**03 19 19.9**	**-2.2**
	comp=N,363nm,0.4s					
ORD	**Ordubad**	**2.85 147**	P	**Pb**	**03 18 48.4**	**-0.6**
	SNR=13					
ORD			S	**Sb**	**03 19 23.9**	**-0.1**
QBL	**Gabala**	**2.91 97**	P	**Pn**	**03 18 46.3**	**+2.0**
	SNR=13					
QBL			S	**Sb**	**03 19 22.3**	**-3.2**
ZRD	**Zardab**	**2.98 110**	P	**Pb**	**03 18 47.7**	**-3.3**
ZRD			S	**Sb**	**03 19 25.1**	**-2.3**
KOPT	**Kop Dagi**	**3.00 245**	P	**Pg**	**03 18 53.5**	**-1.9**
MAK	**Makhachkala**	**3.04 57**	*e*PN	**Pb**	**03 18 48.9**	**-3.3**
MAK			*e*		03 18 54.4	
MAK			*e*		03 18 57.6	
MAK			*e*S	**Sb**	**03 19 27.4**	**-1.9**
MAK			*e*		03 19 35.0	
MAK			*e*		03 19 43.2	
MAK			pmax	pmax		
	comp=Z,101nm,0.8s					
MAK			smax	smax		
	comp=E,369nm,0.5s					
MAK			smax	smax		
	comp=E,310nm,0.6s					
MAK			MLR	MLR		
	comp=Z,67nm,8.0s					
BAYB	**BAYBURT**	**3.06 250**	P	**Pb**	**03 18 52.0**	**-0.6**
XNQ	**Khinaliq**	**3.11 92**	P	**Pn**	**03 18 48.3**	**+1.1**
	SNR=20					
XNQ			S	**Sb**	**03 19 28.0**	**-3.4**
QRD	**Qoradiz**	**3.15 126**	P	**Pb**	**03 18 50.6**	**-3.4**
	SNR=8.9					
QRD			S	**Sb**	**03 19 30.2**	**-2.2**
BLQ	**Beylaqan**	**3.15 120**	P	**Pn**	**03 18 49.2**	**+1.7**
BLQ			S	**Sb**	**03 19 29.3**	**-3.1**
QSAR	**Qusar**	**3.19 86**	P	**Pn**	**03 18 50.1**	**+1.9**
	SNR=20					
QSAR			S	**Sn**	**03 19 29.0**	**+2.8**
IML	**Ismayilli**	**3.19 99**	P	**Pn**	**03 18 49.4**	**+1.2**
	SNR=5.3					
IML			S	**Sn**	**03 19 28.6**	**+2.3**
GURO	**Guroymak-BITLI**	**3.19 209**	PN	**Pn**	**03 18 49.2**	**+0.9**
MACK	**Trabzon**	**3.24 264**	P	**Pn**	**03 18 49.9**	**+1.0**
MACK			S	**Sb**	**03 19 35.6**	**+0.5**
MACK			*i* AML	AML	03 19 39.0	
	comp=Z,78nm,0.4s					
MACK			*i* AML	AML	03 19 47.0	
	comp=Z,81nm,0.3s					
YEDI	**Yedisu-Bingol**	**3.28 235**	PN	**Pn**	**03 18 50.3**	**+0.8**
KDMR	**Kurdemir**	**3.30 106**	S	**Sb**	**03 19 32.4**	**-4.4**
QUBA	**Quba, Azerbaij**	**3.36 89**	P	**Pn**	**03 18 51.6**	**+1.1**
QUBA			S	**Sn**	**03 19 33.0**	**+2.5**
AHMR	**Akhmetovskaya**	**3.56 323**	⇓*e*PN	**Pn**	**03 18 55.0**	**+1.7**
SIZA	**Siyzn**	**3.69 93**	P	**Pn**	**03 18 57.0**	**+2.0**
	SNR=12					
SIZA			S	**Sn**	**03 19 40.8**	**+2.2**
ATGJ	**Altiaghaj**	**3.74 96**	P	**Pn**	**03 18 56.5**	**+0.7**
ATGJ			S	**Sn**	**03 19 43.5**	**+3.4**
GOF	**Gofitskoye**	**3.77 349**	⇑*e*PN	**Pb**	**03 19 05.5**	**+0.9**
GOF			*e*S	**Sg**	**03 20 06.6**	**+7.6**
GOF			pmax	pmax		
	comp=Z,35nm,0.4s					
GOF			smax	smax		
	comp=N,43nm,0.5s					
GBS	**Qobustan**	**3.81 101**	P	**Pn**	**03 18 57.9**	**+1.2**
SVAN	**Silvan-Diyarba**	**3.87 215**	PN	**Pn**	**03 18 58.7**	**+1.1**
SOC	**Sochi**	**3.89 306**	*e*PN	**Pn**	**03 18 56.8**	**-0.9**
SOC			*e*PPP	PPP	03 19 12.6	
SOC			*e*		03 19 43.6	
SOC			*e*SS	**Sb**	**03 19 56.0**	**+2.3**
SOC			MLR	MLR		
	comp=Z,13nm,7.0s					
GUZR	**Guzeripl'**	**3.91 314**	⇑*e*PN	**Pn**	**03 18 58.8**	**+0.7**
GLBA	**Clilabad**	**3.95 121**	S	**Sn**	**03 19 48.0**	**+3.0**
YRD	**Yardimli**	**4.04 126**	P	**Pn**	**03 18 59.9**	**-0.2**
	comp=Z,0.5nm,0.2s					
YRD			S	**Sn**	**03 19 51.0**	**+3.4**
LRK	**Lerik**	**4.28 128**	P	**Pn**	**03 19 05.3**	**+2.1**
LRK			S	**Sn**	**03 19 57.1**	**+3.8**
ASTR	**Astara**	**4.60 126**	P	**Pn**	**03 19 08.7**	**+1.2**
ASTR			S	**Sn**	**03 20 00.7**	**-0.3**
BRVK	**Borovoye**	**21.20 48**	⇑*e*P	**P**	**03 22 46.0**	**+2.5**
BRVK			pmax	pmax		
	comp=Z,6.0nm,2.1s					

*IDC **19** 03:23:11.4±1.1, 27°.32N×141°.25E, h0km, mb3.6/5, mbtmp3.6/6, ML2.7/1, MS3.1/1, Error ellipse: s-maj=23.8km s-min=17.1km az=84.0*
*JMA **19** 03:23:16.2±0.1, 27°.6N±0°.7×14°.2E±°, h93km, NEAR CHICHIJIMA ISLAND*
ISC 19 03:23:18.6±0.9, 27°.5N±0°.1×141°.6E±0°.2, h64km, n20, σ1⚲94/20, mb3.5/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.68**	**129**	P	**Pn**	**03 23 31.4**	**-1.4**
CBIJ				*e*S	**Sn**	**03 23 43.0**	**-0.2**
JCJ	**Chichijima**	**0.68**	**129**	Pn	**Pn**	**03 23 31.1**	**-1.7**
	425nm,0.3s,baz=278,slow=23,SNR=289						
JHH2	**Haha-jima-NKT2**	**1.03**	**150**	P	**Pn**	**03 23 35.8**	**-1.3**
JHH2				S	**Sn**	**03 23 50.8**	**-0.2**
BSO4	**Boso 4**	**7.52**	**352**	P	**Pn**	**03 25 04.4**	**-1.0**
JKUC	**kamogawauchiur**	**7.70**	**351**	P	**Pn**	**03 25 05.5**	**-2.4**
JOD2	**Odawara 2**	**8.00**	**345**	P	**Pn**	**03 25 10.9**	**-1.3**
JYN	**Shimob**	**8.36**	**343**	*e*P	**Pn**	**03 25 18.1**	**+1.0**
JHU	**Hanno**	**8.53**	**347**	P	**Pn**	**03 25 16.5**	**-2.8**
JRY	**Ryogami san**	**8.77**	**346**	*e*P	**Pn**	**03 25 19.8**	**-2.8**
JAG	**Ashikaga**	**9.05**	**349**	*e*P	**Pn**	**03 25 23.0**	**-3.5

	6.7nm,0.3s,baz=258,slow=23,SNR=1.5					
JHJ			Sn	Sn	03 25 45.8	-7.6
	8.7nm,0.3s,baz=242,slow=20,SNR=2.2					
	122nm,0.8s					
BSO4	**Boso 4**	**7.44 353**	P	**Pn**	**03 25 14.3**	**+1.0**
JOD2	**Odawara 2**	**7.91 346**	P	**Pn**	**03 25 20.7**	**+0.9**
JYN	**Shimob**	**8.26 344**	P	**Pn**	**03 25 28.5**	**+3.9**
JHU	**Hanno**	**8.44 348**	P	**Pn**	**03 25 25.4**	**-1.6**
JRY	**Ryogami san**	**8.68 346**	*e*P	**Pn**	**03 25 29.5**	**-0.7**
JGF	**Kuroka**	**8.71 338**	Pn	**Pn**	**03 25 28.7**	**-2.0**
JAG	**Ashikaga**	**8.97 350**	P	**Pn**	**03 25 31.6**	**-2.7**
JHO	**Hitachi**	**9.03 356**	P	**Pn**	**03 25 32.4**	**-2.7**
MJAR	**Matsushiro Arr**	**9.34 344**	Pn	**Pn**	**03 25 38.6**	**-0.6**
	0.1nm,0.3s,baz=147,slow=11,SNR=6.8					
	1.5nm,0.4s					
JMM	**Marumori**	**10.27 357**	Pn	**Pn**	**03 25 49.0**	**-3.0**
JTU	**Tsushima**	**12.40 307**	Pn	**Pn**	**03 26 18.8**	**-2.2**
KSRS	**Korea Array**	**15.02 314**	Pn	**Pn**	**03 26 56.0**	**0.0**
	0.1nm,0.3s,baz=121,slow=14,SNR=6.1					
	0.9nm,0.5s					
KLR	**Kul'dur**	**22.86 344**	P	**P**	**03 28 24.9**	**-0.5**
	2.1nm,0.6s,baz=148,slow=6.8,SNR=5.2					
	2.1nm,0.6s					
H11N2	**WAKE ISLAND Hy**	**24.59 103**	T	T	03 53 41.7	
	baz=293,slow=74,SNR=12					
H11N1	**WAKE ISLAND Hy**	**24.59 103**	T	T	03 53 40.3	
	baz=293,slow=74,SNR=8.8					
H11N3	**WAKE ISLAND Hy**	**24.61 103**	T	T	03 53 41.4	
	baz=293,slow=74,SNR=9.3					
H11S3	**WAKE ISLAND Hy**	**24.93 106**	T	T	03 54 07.1	
	baz=297,slow=74,SNR=26					
H11S1	**WAKE ISLAND Hy**	**24.93 106**	T	T	03 54 07.5	
	baz=297,slow=74,SNR=18					
H11S2	**WAKE ISLAND Hy**	**24.94 106**	T	T	03 54 08.4	
	baz=297,slow=74,SNR=15					
WB0	**Warramunga Arr**	**47.55 189**	P	**P**	**03 31 56.6**	**0.0**
WR0	**Warramunga Arr**	**47.72 189**	P	**P**	**03 31 58.0**	**0.0**
WB2	**Warramunga Arr**	**47.73 189**	P	**P**	**03 31 58.2**	**+0.1**
WB2			IAmb	IAmb	03 32 40.3	
	comp=Z,4.9nm,1.0s					
WRA	**Warramunga Arr**	**47.73 189**	P	**P**	**03 31 57.9**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=11,slow=8.6,SNR=16					
	comp=Z,1.2nm,0.5s					
WRA	**Warramunga Arr**	**47.73 189**	P	**P**	**03 31 57.9**	**-0.2**
ASAR	**Alice Springs**	**51.46 189**	P	**P**	**03 32 25.7**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=2.5,slow=7.9,SNR=4.1					
	comp=Z,0.2nm,0.5s					
NRN	**Naryn**	**54.45 303**	P	**P**	**03 32 47.2**	**-1.5**
NRN			IAmb	IAmb	03 33 14.9	
	comp=Z,6.8nm,1.4s					
ILAR	**Eielson Array**	**57.62 29**	P	**P**	**03 33 12.1**	**+1.5**
	comp=Z,1.1nm,0.9s,baz=268,slow=6.4,SNR=8.9					
	comp=Z,1.1nm,0.9s					
SCRK	**Sand Creek**	**58.85 30**	P	**P**	**03 33 21.2**	**+1.9**
SCRK			IAmb	IAmb	03 33 36.1	
	comp=Z,3.5nm,0.8s					
J26L	**Joseph Creek**	**59.04 29**	P	**P**	**03 33 22.4**	**+1.8**
J26L			IAmb	IAmb	03 33 23.4	
	comp=Z,4.1nm,0.8s					
STKA	**Stephens Creek**	**59.13 180**	P	**P**	**03 33 20.1**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=354,slow=4.1,SNR=2.0					
	comp=Z,0.6nm,0.4s					
INK	**Inuvik**	**62.88 25**	P	**P**	**03 33 47.9**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=307,slow=6.7,SNR=4.1					
	comp=Z,0.6nm,0.5s					
INK	**Inuvik**	**62.88 25**	P	**P**	**03 33 46.5**	**+0.2**
ABKAR	**Akbulak array**	**64.26 314**	P	**P**	**03 33 58.4**	**+2.6**
FINES	**FINESS Array B**	**77.20 334**	P	**P**	**03 35 15.9**	**+1.7**
	comp=Z,2.4nm,1.0s,baz=55,slow=5.6,SNR=1.9					
	comp=Z,2.4nm,1.0s					
NVAR	**Mina Array Bea**	**80.77 52**	P	**P**	**03 35 36.1**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=282,slow=6.8,SNR=3.6					
	comp=Z,0.5nm,0.6s					
NOA	**NORSAR Array B**	**82.90 338**	P	**P**	**03 35 47.9**	**+2.9**
	comp=Z,0.4nm,0.6s,baz=61,slow=4.6,SNR=1.1					
	comp=Z,0.4nm,0.6s					
PDAR	**Pinedale Array**	**84.36 44**	P	**P**	**03 35 54.9**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=42,slow=2.4,SNR=1.9					
	comp=Z,0.2nm,0.5s					
TXAR	**Lajitas Array**	**95.87 53**	P	**P**	**03 36 49.7**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=248,slow=1.3,SNR=3.6					
	comp=Z,0.3nm,0.6s					
LPAZ	**La Paz**	**150.47 74**	PKPbc	**PKiKP**	**03 43 15.3**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=299,slow=3.0,SNR=3.7					
PLCA	**Paso Flores**	**150.66 125**	PKPbc	**PKPbc**	**03 43 11.3**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=234,slow=4.4,SNR=5.4					

ROM 19 03:40:03.2±0.2, 38°.43N±0°.01×15°.51E±0°.02, h136km±1km, ML2.4/9, 14C-5D, Error ellipse: s-maj=2.0km s-min=0.9km az=124.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSRU	**Castanea**	**0.17**	**180**	P	Pn	03 40 21.7	-0.1
MSRU				S	Sn	03 40 35.4	-0.4
MSRU				AML	AML		
	comp=E,137μm,1.0s						
MSRU				AML	AML		
	comp=N,109μm,1.3s						
MSRU				AML	AML		
	comp=E,137μm,1.0s						
MSRU				AML	AML		
	comp=N,109μm,0.7s						
MSRU	**Castanea**	**0.17**	**180**	⇑P	Pn	03 40 21.7	-0.1
MSRU				AML	AML		
	comp=E,137μm,1.0s						
MSRU				AML	AML		
	comp=N,109μm,1.3s						
MSRU				AML	AML		
	comp=E,137μm,1.0s						
MSRU				AML	AML		
	comp=N,109μm,1.3s						
MILZ	**Milazzo**	**0.27**	**233**	P	Pn	03 40 22.1	+0.1
MILZ				S	Sn	03 40 36.0	-0.2
MILZ	**Milazzo**	**0.27**	**233**	⇑P	Pn	03 40 22.1	+0.1
MSCL	**Scilla**	**0.30**	**132**	P	Pn	03 40 22.2	0.0
MSCL				S	Sn	03 40 36.3	-0.3
MSCL				AML	AML		
	comp=E,281μm,1.0s						
MSCL				AML	AML		
	comp=N,304μm,0.5s						
MSCL				AML	AML		
	comp=E,280μm,1.0s						
MSCL				AML	AML		
	comp=N,305μm,0.5s						
MSCL	**Scilla**	**0.30**	**132**	⇓P	Pn	03 40 22.3	0.0
MSCL				AML	AML		
	comp=E,281μm,1.0s						
MSCL				AML	AML		
	comp=N,304μm,0.5s						
MSCL				AML	AML		
	comp=E,281μm,1.0s						
MSCL				AML	AML		
	comp=N,304μm,0.5s						
MSCL				AML	AML		
	comp=E,280μm,1.0s						
MSCL				AML	AML		
	comp=N,305μm,0.5s						
CEL	**Celeste**	**0.35**	**120**	P	Pn	03 40 22.5	+0.1
GMB	**Gambarie**	**0.37**	**136**	P	Pn	03 40 22.8	+0.3
GMB				S	Sn	03 40 37.8	+0.7
GMB				AML	AML		
	comp=E,558μm,0.4s						
GMB				AML	AML		
	comp=N,590μm,0.5s						
GMB				AML	AML		
	comp=E,558μm,1.6s						
GMB	**Gambarie**	**0.37**	**136**	P	Pn	03 40 22.8	+0.3
GMB				AML	AML		
	comp=E,558μm,0.4s						
GMB				AML	AML		
	comp=N,590μm,0.5s						
GMB				AML	AML		
	comp=E,558μm,0.4s						
GMB				AML	AML		
	comp=N,590μm,0.5s						
VPL	**Vulcano Piano**	**0.42**	**263**	P	Pn	03 40 22.9	+0.3
VPL	**Vulcano Piano**	**0.42**	**263**	⇑P	Pn	03 40 23.0	+0.4
MTTG	**Motta San Giov**	**0.46**	**161**	P	Pn	03 40 23.5	+0.6
MTTG				S	Sn	03 40 38.4	+0.8
MTTG				AML	AML		
	comp=N,108μm,0.6s						
MTTG				AML	AML		
	comp=E,59μm,0.6s						
MTTG				AML	AML		
	comp=N,108μm,0.6s						
MTTG	**Motta San Giov**	**0.46**	**161**	⇑P	Pn	03 40 23.5	+0.7
MTTG				AML	AML		
	comp=E,59μm,0.6s						
MTTG				AML	AML		
	comp=N,108μm,0.6s						
MTTG				AML	AML		
	comp=E,59μm,0.6s						
MTTG				AML	AML		
	comp=N,108μm,0.6s						
MTTG				AML	AML		
	comp=E,59μm,0.6s						
MTTG				AML	AML		
	comp=N,108μm,0.6s						
AIO	**Antillo**	**0.51**	**205**	P	Pn	03 40 23.9	+0.8
AIO				AML	AML		
	comp=N,42μm,1.5s						
AIO				AML	AML		
	comp=E,40μm,0.7s						
AIO				AML	AML		
	comp=E,40μm,0.7s						
AIO				AML	AML		
	comp=N,42μm,0.5s						
AIO	**Antillo**	**0.51**	**205**	P	Pn	03 40 24.1	+0.9
AIO				AML	AML		
	comp=E,40μm,0.7s						
AIO				AML	AML		
	comp=N,42μm,1.5s						
AIO				AML	AML		
	comp=E,40μm,0.7s						
AIO				AML	AML		
	comp=N,42μm,1.5s						
AIO				AML	AML		
	comp=E,40μm,0.7s						
AIO				AML	AML		
	comp=N,42μm,1.5s						
SOI	**Samo**	**0.56**	**130**	P	Pn	03 40 23.8	+0.4
SOI				S	Sn	03 40 38.3	-0.3
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,92μm,0.3s						
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,92μm,0.3s						
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,91μm,0.3s						
SOI				AML	AML		
	comp=E,89μm,1.6s						
SOI	**Samo**	**0.56**	**130**	⇑P	Pn	03 40 23.8	+0.4
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,92μm,0.3s						
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,92μm,0.3s						
SOI				AML	AML		
	comp=E,89μm,0.4s						
SOI				AML	AML		
	comp=N,91μm,0.3s						
PLAC	**Placanica**	**0.73**	**89**	P	Pn	03 40 24.9	+0.4
PLAC				S	Sn	03 40 40.5	-0.1
PLAC				AML	AML		
	comp=E,140μm,1.6s						
PLAC				AML	AML		
	comp=N,138μm,0.4s						
PLAC				AML	AML		
	comp=E,140μm,0.4s						
PLAC	**Placanica**	**0.73**	**89**	⇑P	Pn	03 40 25.0	+0.5
PLAC				AML	AML		
	comp=E,140μm,1.6s						
PLAC				AML	AML		
	comp=N,138μm,0.4s						
PLAC				AML	AML		
	comp=E,140μm,1.6s						
PLAC				AML	AML		
	comp=N,138μm,0.4s						
IFIL	**Filicudi I Eol**	**0.75**	**280**	P	Pn	03 40 25.2	+0.6
IFIL	**Filicudi I Eol**	**0.75**	**280**	⇑P	Pn	03 40 25.2	+0.6
MSFR	**San Fratello**	**0.83**	**241**	P	Pn	03 40 26.0	+0.7
CAR1	**CAROLEI**	**0.98**	**34**	P	Pn	03 40 26.5	-0.1
CAR1				S	Sn	03 40 43.3	-1.1
CAR1				AML	AML		
	comp=N,157μm,0.7s						
CAR1				AML	AML		
	comp=N,158μm,0.7s						
CAR1				AML	AML		
	comp=E,137μm,1.6s						
CAR1				AML	AML		
	comp=E,137μm,0.4s						
CAR1				AML	AML		
	comp=N,158μm,1.3s						
CAR1	**CAROLEI**	**0.98**	**34**	⇓P	Pn	03 40 26.5	-0.1
CAR1				AML	AML		
	comp=E,137μm,1.6s						
CAR1				AML	AML		
	comp=N,158μm,0.7s						
CAR1				AML	AML		
	comp=E,137μm,1.6s						
CAR1				AML	AML		
	comp=N,157μm,0.7s						
CAR1				AML	AML		
	comp=E,137μm,1.6s						
CAR1				AML	AML		
	comp=N,158μm,0.7s						
SPS2	**Spezzano della**	**1.07**	**37**	P	Pn	03 40 26.7	-0.8
SPS2	**Spezzano della**	**1.07**	**37**	⇑P	Pn	03 40 24.9	-2.5
SERS	**Sersale**	**1.10**	**57**	P	Pn	03 40 28.2	+0.5
SERS				S	Sn	03 40 46.5	+0.1
SERS				AML	AML		
	comp=N,49μm,0.4s						
SERS				AML	AML		
	comp=N,49μm,0.4s						
SERS				AML	AML		
	comp=E,42μm,0.3s						
SERS				AML	AML		
	comp=E,42μm,1.7s						
SERS	**Sersale**	**1.10**	**57**	⇑P	Pn	03 40 28.3	+0.6
SERS				AML	AML		
	comp=E,42μm,0.3s						
SERS				AML	AML		
	comp=N,49μm,0.4s						
SERS				AML	AML		
	comp=E,42μm,0.3s						
SERS				AML	AML		
	comp=N,49μm,0.4s						
CET2	**Cetraro**	**1.15**	**18**	P	Pn	03 40 28.2	+0.1
HLNI	**Lentini**	**1.20**	**205**	P	Pn	03 40 28.6	0.0
HLNI	**Lentini**	**1.20**	**205**	⇓P	Pn	03 40 28.7	+0.1
TIP	**Timpagrande**	**1.23**	**52**	P	Pn	03 40 29.3	+0.4
TIP				S	Sn	03 40 48.4	-0.2
TIP	**Timpagrande**	**1.23**	**52**	⇓P	Pn	03 40 29.4	+0.5
CELI	**Celico**	**1.24**	**39**	P	Pn	03 40 29.7	+0.6
CELI				S	Sn	03 40 49.3	+0.4
CELI	**Celico**	**1.24**	**39**	⇑P	Pn	03 40 29.9	+0.8
SSY	**Sortino**	**1.32**	**195**	P	Pn	03 40 30.0	+0.1
SSY	**Sortino**	**1.32**	**195**	P	Pn	03 40 30.0	+0.1
TDS	**Terranova Siba**	**1.38**	**28**	P	Pn	03 40 30.7	+0.2
TDS	**Terranova Siba**	**1.38**	**28**	P	Pn	03 40 28.2	-2.3
HAVL	**Avola**	**1.50**	**192**	P	Pn	03 40 31.8	-0.1
HAVL	**Avola**	**1.50**	**192**	⇓P	Pn	03 40 31.8	0.0
CUC	**Castrocucco**	**1.57**	**9**	P	Pn	03 40 33.0	+0.4
CUC				S	Sn	03 40 54.5	-0.7
CUC	**Castrocucco**	**1.57**	**9**	⇑P	Pn	03 40 33.0	+0.4
SALB	**San Lorenzo Be**	**1.58**	**24**	P	Pn	03 40 33.8	+1.0
SALB				S	Sn	03 40 56.1	+0.7
SALB	**San Lorenzo Be**	**1.58**	**24**	⇑P	Pn	03 40 34.0	+1.2
NOCI	**Noci**	**2.64**	**27**	P	Pn	03 40 43.2	-2.2
NOCI	**Noci**	**2.64**	**27**	P	Pn	03 40 43.2	-2.2
RMP	**Rome, Mte Porz**	**4.00**	**328**	⇑P	Pn	03 41 09.3	+6.2
RMP	**Rome, Mte Porz**	**4.00**	**328**	⇑P	Pn	03 41 09.3	+6.2
SFI	**Santa Sofia**	**6.12**	**334**	P	Pn	03 41 36.4	+5.0
SFI	**Santa Sofia**	**6.12**	**334**	P	Pn	03 41 36.4	+5.0

ROM 19 03:41:11.5±0.1, 42°.687N±0°.003×13°.237E±0°.004, h12km, Md1.9/4, 11C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=229.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.06**	**100**	P	Pg	03 41 14.3	+0.1
T1204	**Amatrice, Fraz**	**0.06**	**100**	P	Pg	03 41 14.4	+0.3
T1204				S	Sg	03 41 16.2	+0.1
SMA1	**SAN MARTINO**	**0.09**	**128**	P	Pg	03 41 14.2	-0.2
SMA1	**SAN MARTINO**	**0.09**	**128**	P	Pg	03 41 14.8	+0.4
SMA1				S	Sg	03 41 16.7	+0.1
T1243	**Rocca Santa Ma**	**0.16**	**86**	⇓P	Pg	03 41 15.5	+0.3
T1243	**Rocca Santa Ma**	**0.16**	**86**	P	Pg	03 41 15.6	+0.3
T1243				S	Sg	03 41 18.9	+1.0
NRCA	**Norcia**	**0.17**	**328**	P	Pg	03 41 13.7	-1.9
NRCA				AML	AML		
	comp=E,1600μm,0.2s						
NRCA				AML	AML		
	comp=N,1327μm,0.1s						
NRCA				AML	AML		
	comp=E,1675μm,0.2s						
NRCA				AML	AML		
	comp=N,1435μm,0.1s						
NRCA				AML	AML		
	comp=E,1600μm,0.2s						
NRCA				AML	AML		
	comp=E,1675μm,0.2s						
NRCA				AML	AML		
	comp=N,1327μm,0.1s						
NRCA				AML	AML		
	comp=N,1435μm,0.1s						
NRCA				AML	AML		
	comp=E,1675μm,1.8s						
NRCA				AML	AML		
	comp=E,1600μm,1.8s						
NRCA				AML	AML		
	comp=N,1327μm,0.1s						
NRCA				AML	AML		
	comp=N,1435μm,0.1s						
NRCA	**Norcia**	**0.17**	**328**	P	Pg	03 41 15.9	+0.4
NRCA				S	Sg	03 41 18.8	+0.5
NRCA				AML	AML		
	comp=E,1600μm,0.2s						
NRCA				AML	AML		
	comp=N,1327μm,0.1s						
NRCA				AML	AML		
	comp=E,1675μm,0.2s						
NRCA				AML	AML		
	comp=N,1435μm,0.1s						
T1245	**Castelsantange**	**0.17**	**348**	P	Pg	03 41 13.0	-2.6
T1245	**Castelsantange**	**0.17**	**348**	P	Pg	03 41 16.1	+0.4
T1245				S	Sg	03 41 19.1	+0.6
RM33	**Pellescritta (**	**0.18**	**185**	⇑P	Pg	03 41 16.2	+0.6
RM33	**Pellescritta (**	**0.18**	**185**	P	Pg	03 41 16.1	+0.5
RM33				S	Sg	03 41 19.4	+0.9
CAMP	**Campotosto**	**0.20**	**140**	⇑P	Pg	03 41 16.3	+0.4
CAMP	**Campotosto**	**0.20**	**140**	P	Pg	03 41 16.3	+0.4
CAMP				S	Sg	03 41 19.6	+0.6
MMO1	**Montemonaco**	**0.22**	**17**	P	Pg	03 41 14.0	-2.4
MMO1	**Montemonaco**	**0.22**	**17**	P	Pg	03 41 16.1	-0.3
MMO1				S	Sg	03 41 20.6	+0.9
T1217	**Poggiodomo (PG**	**0.23**	**276**	⇑P	Pg	03 41 16.8	+0.4
T1217	**Poggiodomo (PG**	**0.23**	**276**	P	Pg	03 41 16.8	+0.4
T1217				S	Sg	03 41 20.5	+0.8
MC2	**Monte Cornacci**	**0.23**	**351**	⇑P	Pb	03 41 21.0	+3.3
MC2	**Monte Cornacci**	**0.23**	**351**	P	Pg	03 41 16.9	+0.3
MC2				S	Sg	03 41 21.0	+1.0
T1216	**Preci, Frazion**	**0.26**	**322**	⇑P	Pg	03 41 17.3	+0.3
T1216	**Preci, Frazion**	**0.26**	**322**	P	Pg	03 41 17.3	+0.3
T1216				S	Sg	03 41 21.6	+1.0
T1216				END			
T1215	**Vallo di Nera,**	**0.29**	**293**	⇓P	Pg	03 41 17.9	+0.3
T1215	**Vallo di Nera,**	**0.29**	**293**	P	Pg	03 41 17.9	+0.3
T1215				END			
AM05	**Amandola Campo**	**0.30**	**16**	⇑P	Pg	03 41 18.2	+0.5
AM05	**Amandola Campo**	**0.30**	**16**	P	Pg	03 41 18.2	+0.5
AM05				S	Sb	03 41 23.0	-0.8
T1211	**Morro Reatino**	**0.32**	**241**	⇑P	Pg	03 41 18.4	+0.3
T1211	**Morro Reatino**	**0.32**	**241**	P	Pg	03 41 18.3	+0.3
T1211				S	Sg	03 41 23.4	+0.9
T1211				END			
GIGS	**Gran Sasso**	**0.34**	**134**	⇓P	Pg	03 41 18.8	+0.4
GIGS	**Gran Sasso**	**0.34**	**134**	P	Pg	03 41 18.8	+0.4
GIGS				S	Sg	03 41 23.8	+0.7
GIGS				END			
ARRO	**Arrone**	**0.36**	**253**	⇑P	Pg	03 41 19.1	+0.3
ARRO	**Arrone**	**0.36**	**253**	⇑P	Pg	03 41 19.1	+0.3
GUMA	**Gualdo di Mace**	**0.38**	**11**	⇑P	Pb	03 41 19.9	-0.3
GUMA	**Gualdo di Mace**	**0.38**	**11**	⇑P	Pb	03 41 19.9	-0.3
CESI	**CESI - Serrava**	**0.40**	**323**	P	Pg	03 41 19.9	+0.3
CESI	**CESI - Serrava**	**0.40**	**323**	P	Pg	03 41 19.9	+0.3
FIAM	**Fiamignano**	**0.43**	**192**	P	Pg	03 41 17.9	-2.1
FIAM	**Fiamignano**	**0.43**	**192**	P	Pg	03 41 20.0	0.0
FIAM				S	Sb	03 41 26.8	-0.6

KRSC 19 04:18:10.1±2.3, 49°.73N×157°.71E, h16km±51km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.40**	**314**	*e*P	Pn	04 18 34.9	0.0
SKR				*e*S	Sn	04 18 53.1	+0.1
PAU	**Pauzhetka**	**1.83**	**342**	P	Pb	04 18 43.8	+0.6
PAU				S	Sb	04 19 06.1	+0.2
KDTR	**Khodutka, Kamc**	**2.10**	**6**	S	Sn	04 19 11.7	+1.5
MTVR	**Mutnovka**	**2.77**	**6**	*e*P	Pn	04 18 55.9	+1.9
MTVR				S	Sn	04 19 29.4	+2.2
GRL	**Gorelyy**	**2.84**	**4**	*e*P	Pn	04 18 57.2	+2.4
UGLR	**Uglovaya**	**3.55**	**11**	*e*P	Pb	04 19 09.2	-3.4
AVH	**Avacha**	**3.60**	**10**	*e*P	Pn	04 19 07.4	+2.2
SMAR	**Somma**	**3.60**	**10**	*e*P	Pb	04 19 09.8	-3.7
KOK	**Koryaka**	**3.62**	**9**	*e*P	Pn	04 19 09.5	+4.0
SDLR	**Sedlovina**	**3.63**	**11**	*e*P	Pn	04 19 09.0	+3.3
KRX	**Arik**	**3.68**	**9**	*e*P	Pn	04 19 09.7	+3.3
GNL	**Ganaly**	**3.98**	**2**	*e*P	Pn	04 19 13.5	+3.1
TUMR	**Tumrok**	**5.76**	**14**	*e*P	Pn	04 19 39.0	+4.1

*SEA **19** 04:46:12.8±1.7, 48°.21N±0°.02×122°.67W±0°.05, h27km±7km, ML2.0/16, ML1.9/11(NEIC), Error ellipse: s-maj=4.6km s-min=3.3km az=77.0*

NEIC 19 04:46:12.1±1.4, 48°.25N±0°.02×122°.73W±0°.04, h32km±8km, Error ellipse: s-maj=4.7km s-min=1.6km az=128.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVOH	**Skagit Valley**	**0.08**	**57**		Pb	04 46 17.3	-0.3
SVOH					Sb	04 46 20.6	-0.7
ERW	**Mount Erie**	**0.22**	**19**		Pb	04 46 18.7	-0.1
ERW					Sn	04 46 23.6	-0.1
SQM	**Sequim**	**0.27**	**231**		Pn	04 46 19.7	-0.1
SQM					Sb	04 46 24.4	+0.1
VGZ	**Gonzales**	**0.43**	**293**		Pb	04 46 21.4	-0.1
MCW	**Mount Constitu**	**0.44**	**351**		Pn	04 46 22.1	-0.1
MCW					Sn	04 46 29.1	0.0
B013	**Quilcene**	**0.45**	**195**		Pb	04 46 21.1	-0.7
B013					Sb	04 46 27.9	-0.6
KINR	**Kitsap County**	**0.50**	**173**		Sn	04 46 30.5	+0.1
B04A	**Port Angeles**	**0.55**	**250**		Pb	04 46 23.2	-0.2
B04A	**Port Angeles**	**0.55**	**250**		Pb	04 46 23.2	-0.2
B04A					Sn	04 46 31.7	0.0
B04A	**Port Angeles**	**0.55**	**250**	IAML		04 46 32.4	
	comp=E,75nm,0.2s						
C04A	**Brinnon**	**0.55**	**197**		Pb	04 46 22.8	-0.7
C04A					Sb	04 46 30.7	-0.5
SNB	**Saturna Island**	**0.60**	**331**		Pn	04 46 24.8	+0.3
SNB					Sn	04 46 33.9	+0.8
B011	**North Saanich**	**0.62**	**310**		Pb	04 46 24.6	0.0
PGC	**Sidney**	**0.63**	**310**		Pb	04 46 24.6	0.0
PGC	**Sidney**	**0.63**	**310**	IAML		04 46 34.2	
	comp=E,52nm,0.2s						
STW	**Striped Peak**	**0.64**	**262**		Pb	04 46 24.7	-0.1
HDW	**Hoodsport**	**0.64**	**200**		Pb	04 46 24.0	-0.9
GNW	**Green Mountain**	**0.69**	**185**		Pn	04 46 24.5	-1.1
GMW	**Gold Mountain**	**0.70**	**183**		Pn	04 46 24.7	-1.1
MBW	**Mount Baker**	**0.77**	**46**		Pb	04 46 27.2	0.0
MBW					Sn	04 46 38.0	+0.5
RPW	**Rockport**	**0.84**	**76**		Pn	04 46 27.7	0.0
C05A	**Tolt Reservoir**	**0.89**	**128**		Pn	04 46 27.7	-0.7
C05A					Sn	04 46 38.9	-1.3
SHUK	**Shuksan-Mt. Ba**	**0.93**	**49**		Pb	04 46 30.0	+0.2
RATT

D05A	**Enumclaw**	**1.17 154**	Pn	Pn	04 46 32.5	+0.3
D05A			IAML		04 47 12.6	
comp=N,24nm,4.6s						
WRW	**Wenatchee Ridg**	**1.30 107**		Pn	04 46 34.8	+0.7
OBSR	**Observation Ro**	**1.48 155**		Pb	04 46 38.7	-0.5
FMW	**Mount Fremont**	**1.50 151**		Pn	04 46 37.5	+0.6
PANH	**Panhandle Gap,**	**1.57 152**		Pb	04 46 39.4	-1.3
LTY	**Liberty**	**1.71 125**	Pn	Pn	04 46 40.0	+0.4
LTY			IAML		04 47 03.5	
comp=N,16nm,0.6s						
LTY			IAML		04 47 04.4	
comp=E,11nm,0.3s						
ETW	**Entiat**	**1.74 111**		Pn	04 46 41.6	+1.5
EBG	**Ellensburg**	**1.98 132**		Pb	04 46 46.3	-1.3

*BJI **19** 04:54:49.0±0.0, 0.°86N×126.°29E, h63km, mb4.7/40, mB5.3/22, Ms4.4/6, Ms7 4.1/5*
*IDC **19** 04:54:50.7±1.9, 1.°05N×126.°22E, h52km±17km, mb4.4/22, mbtmp4.6/24, ML4.3/2, MS3.3/15, Error ellipse: s-maj=17.4km s-min=8.2km az=71.0*
*DJA **19** 04:54:51.8±0.2, 1.°N±2.°×12.°6E±.°, h65km±3km, M4.6/40, mB5.2/12, mb5.0/40, MLv4.5/19, Mw(mB)4.6/12*
*NEIC **19** 04:54:51.0±1.3, 1.°06N±0.°08×126.°26E±0.°06, h53km±8km, mb4.9/40, Error ellipse: s-maj=12.5km s-min=7.8km az=194.0*

ISC 19 04:54:50.9±0.5, 1.°06N±0.°04×126.°22E±0.°05, h53km±4km, n188, σ1°35/200, mb4.8/53, MS3.3/15, 5D, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18 104**		Pn	**Pn**	**04 55 10.6**	**-0.4**
TNTI				Sn	**Sn**	**04 55 25.0**	**-1.1**
TNTI	**Ternate**	**1.18 104**		P	**Pn**	**04 55 10.4**	**-0.7**
TNTI				S	**Sn**	**04 55 25.3**	**-0.8**
TNTI	**Ternate**	**1.18 104**		P	**Pn**	**04 55 10.9**	**-0.2**
GAMI	**Galela, Maluku**	**1.75 64**		P	**Pn**	**04 55 18.0**	**-0.8**
LBMI	**Labuha**	**2.11 143**		P	**Pn**	**04 55 25.2**	**+1.4**
SGSI	**Sangihe**	**2.70 345**		P	**Pn**	**04 55 31.9**	**0.0**
SANI	**Sanana**	**3.10 184**		P	**Pn**	**04 55 36.8**	**-0.5**
SANI	**Sanana**	**3.10 184**		P	**Pn**	**04 55 37.0**	**-0.3**
GTOI	**Gorontalo**	**3.24 263**		P	**Pn**	**04 55 41.1**	**+1.9**
LUWI	**Luwuk**	**4.03 239**		Pn	**Pn**	**04 55 51.9**	**+1.8**
LUWI	**Luwuk**	**4.03 239**		P	**Pn**	**04 55 52.4**	**+2.3**
LUWI	**Luwuk**	**4.03 239**		P	**Pn**	**04 55 53.5**	**+3.4**
MRSI	**Marisa**	**4.32 262**		P	**Pn**	**04 55 55.0**	**+0.9**
NLAI	**Namlea**	**4.36 168**		P	**Pn**	**04 55 55.1**	**+0.5**
KRAI	**Karang Ratu**	**4.86 153**		P	**Pn**	**04 56 03.9**	**+2.4**
APSI	**Ampana**	**4.97 247**		P	**Pn**	**04 56 05.4**	**+2.4**
2.9nm9μm585nm,0.5s							
AAI	**Ambon**	**5.11 157**		P	**Pn**	**04 56 05.7**	**+0.8**
0.4nm137nm,0.7s							
MSAI	**Masohi**	**5.14 148**		P	**Pn**	**04 56 08.6**	**+3.2**
0.1nm1μm26nm,0.6s							
SIJI	**Sorong**	**5.39 111**		P	**Pn**	**04 56 10.0**	**+1.1**
3.9nm,0.3s,baz=258,slow=22,SNR=5.2							
12nm,0.3s							
SIJI	**Sorong**	**5.39 111**		P	**Pn**	**04 56 10.9**	**+2.1**
0.1nm1μm44nm,0.8s							
TOLI2	**Tolitoli**	**5.44 271**		Pn	**Pn**	**04 56 10.1**	**+0.7**
TOLI2	**Tolitoli**	**5.44 271**		P	**Pn**	**04 56 12.0**	**+2.6**
KCP	**Kidapawan**	**6.02 349**		‖eP	**Pn**	**04 56 20.8**	**+3.3**
MPSI	**Mapaga**	**6.36 264**		P	**Pn**	**04 56 23.9**	**+1.8**
0.3nm662nm58nm,0.9s							
KKSI	**Kolaka, Sulawe**	**6.92 221**		P	**Pn**	**04 56 31.0**	**+1.3**
0.5nm2μm120nm,0.9s							
BIPH	**Bislig**	**7.08 1**		‖eP	**Pn**	**04 56 32.6**	**+0.6**
FAKI	**Fak Fak**	**7.20 123**		Pn	**Pn**	**04 56 34.9**	**+1.2**
FAKI	**Fak Fak**	**7.20 123**		P	**Pn**	**04 56 36.1**	**+2.4**
0.2nm68nm,0.9s							
BBSI	**Bau Bau**	**7.46 209**		P	**Pn**	**04 56 39.3**	**+2.2**
0.4nm68nm,0.6s							
TTSI	**Tana Toraja**	**7.59 237**		P	**Pn**	**04 56 40.2**	**+1.3**
0.6nm2μm138nm,0.6s							
SPSI	**Sidrap Palu**	**8.15 232**		P	**Pn**	**04 56 48.8**	**+2.1**
1μm118nm,0.6s							
BNSI	**Bone**	**8.17 228**		P	**Pn**	**04 56 48.2**	**+1.3**
65nm,0.7s							
MYLDM	**Lahad Datu**	**8.73 298**		Pn	**Pn**	**04 56 56.2**	**+1.7**
MYLDM	**Lahad Datu**	**8.73 298**		P	**Pn**	**04 56 57.6**	**+3.0**
181nm,0.8s							
BKSI	**Bulukumba**	**8.79 224**		P	**Pn**	**04 56 57.3**	**+1.9**
693nm52nm,0.6s							
KAPI	**Kappang**	**8.84 227**		P	**Pn**	**04 56 56.7**	**+0.6**
7.7nm,0.3s,baz=47,slow=8.0,SNR=9.3							
KAPI				S	**Sn**	**04 58 27.9**	**-6.4**
7.2nm,0.3s,baz=7.9,slow=11,SNR=1.2							
16nm,0.3s							
KAPI	**Kappang**	**8.84 227**		Pn	**Pn**	**04 56 57.2**	**+1.1**
KAPI	**Kappang**	**8.84 227**		P	**Pn**	**04 56 57.8**	**+1.7**
32nm,0.8s							
KKM	**Kota Kinabalu**	**11.15 297**		P	**Pn**	**04 57 32.4**	**+4.7**
624nm24nm,1.5s							
BATI	**Baumata**	**11.48 193**		LR	LR	05 03 39.6	
comp=Z,166nm,18.1s,baz=29,slow=46							
SBUM	**Sibu**	**14.06 276**		Pn	**Pn**	**04 58 08.1**	**+0.7**
MTN	**Manton Dam**	**14.64 161**		Pn	**Pn**	**04 58 14.2**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.31 232**		Pn	**Pn**	**04 58 24.1**	**+0.4**
JAGI				IAmb	IAmb	04 58 32.4	
comp=Z,62nm,1.0s							
KSM	**Kuching**	**15.92 272**			**P**	**04 58 33.2**	**-1.1**
KSM				IAmb	IAmb	04 58 37.7	
comp=Z,46nm,0.7s							
KSM	**Kuching**	**15.92 272**		P	**P**	**04 58 36.0**	**+1.6**
comp=Z,65nm,0.8s							
KNRA	**Kununurra**	**16.82 172**			**Pn**	**04 58 42.7**	**-0.1**
KNRA				IAmb	IAmb	04 58 43.5	
comp=Z,66nm,0.7s							
KNRA	**Kununurra**	**16.82 172**		P	**Pn**	**04 58 43.0**	**+0.2**
PWJI	**Pagerwojo**	**16.97 238**		P	**P**	**04 58 45.8**	**-0.3**
comp=Z,2μmcomp=Z,126nm,0.8s							
PCJI	**Pacitan**	**17.59 238**		P	**P**	**04 58 54.0**	**+1.1**
comp=Z,146nm,0.8s							
UGM	**Wanagama**	**18.01 240**		P	**Pn**	**04 59 01.3**	**+3.6**
comp=Z,115nm,1.5s							
WB0	**Warramunga Arr**	**22.19 159**		P	**P**	**04 59 41.8**	**-1.1**
GUMO	**Guam**	**22.26 55**		LR	LR	05 07 04.6	
comp=Z,70nm,21.3s,baz=278,slow=33							
WRAB	**Tennant Creek**	**22.33 160**		P	**P**	**04 59 43.3**	**-1.1**
WRAB	**Tennant Creek**	**22.33 160**		P	**P**	**04 59 43.6**	**-0.8**
WRA	**Warramunga Arr**	**22.34 160**		P	**P**	**04 59 43.1**	**-1.3**
comp=Z,50nm,0.5s,baz=333,slow=11,SNR=332							
WRA				S	**S**	**05 03 44.4**	**-2.5**
comp=Z,3.3nm,0.9s,baz=332,slow=18,SNR=5.1							
comp=Z,50nm,0.5s							
WRA	**Warramunga Arr**	**22.34 160**		P	**P**	**04 59 41.6**	**-2.8**
WB2	**Warramunga Arr**	**22.34 160**		P	**P**	**04 59 43.3**	**-1.2**
MYKOM	**Kota Tinggi**	**22.38 272**		P	**P**	**04 59 44.1**	**-0.8**
MYKOM				IAmb	IAmb	04 59 47.5	
comp=Z,32nm,0.8s							
MYKOM	**Kota Tinggi**	**22.38 272**		P	**P**	**04 59 46.9**	**+1.9**
comp=Z,45nm,0.9s							
WR0	**Warramunga Arr**	**22.42 159**		P	**P**	**04 59 44.2**	**-1.2**
WR0				IAmb	IAmb	04 59 46.8	
comp=Z,48nm,0.7s							
BTDF	**Bukit Timah Da**	**22.45 271**		P	**P**	**04 59 47.2**	**+1.5**
comp=Z,24nm,1.3s							
COEN	**Coen**	**22.46 132**		P	**P**	**04 59 44.9**	**-1.0**
COEN				IAmb	IAmb	04 59 56.3	
comp=Z,18nm,0.6s							
COEN	**Coen**	**22.46 132**		P	**P**	**04 59 46.1**	**+0.2**
MBWA	**Marble Bar**	**22.98 196**		P	**P**	**04 59 49.1**	**-2.0**
MBWA				IAmb	IAmb	04 59 51.7	
comp=Z,26nm,0.8s							
PMG	**Port Moresby**	**23.30 117**		LR	LR	05 11 15.4	
comp=Z,101nm,18.4s,baz=340,slow=42							
PSA00	**Pilbara Seismi**	**23.34 195**		P	**P**	**04 59 53.8**	**-0.9**
MASI	**Maura Aman, Be**	**24.33 260**		P	**P**	**05 00 04.7**	**+0.6**
comp=Z,23nm,0.9s							
SDSI	**Sungai Dareh**	**24.87 266**		P	**P**	**05 00 07.7**	**-1.2**
comp=Z,31nm,0.8s							
QIS	**Mount Isa**	**25.16 149**		P	**P**	**05 00 11.4**	**-0.1**
IPM	**Ipoh**	**25.39 278**		P	**P**	**05 00 13.1**	**-0.6**
IPM				IAmb	IAmb	05 00 13.9	
comp=Z,22nm,0.7s							
IPM	**Ipoh**	**25.39 278**		P	**P**	**05 00 13.4**	**-0.3**
comp=Z,34nm,0.9s							
AS31	**Alice Springs**	**25.68 164**		P	**P**	**05 00 15.6**	**-0.6**
ASAR	**Alice Springs**	**25.69 164**		P	**P**	**05 00 15.8**	**-0.4**
comp=Z,21nm,0.6s,baz=345,slow=7.1,SNR=172							
ASAR				PcP	**PcP**	**05 03 46.1**	**+0.4**
comp=Z,2.8nm,0.6s,baz=354,slow=2.5,SNR=6.8							
ASAR				S	**S**	**05 04 40.9**	**-0.4**
comp=Z,0.4nm,0.6s,baz=217,slow=50,SNR=1.8							
ASAR				ScP	**ScP**	**05 07 22.0**	**+1.1**
comp=Z,0.2nm,0.7s,baz=217,slow=41,SNR=2.2							
ASAR				LR	LR	05 11 58.4	
comp=Z,83nm,19.5s,baz=338,slow=40							
comp=Z,21nm,0.6s							
ASAR	**Alice Springs**	**25.69 164**		P	**P**	**05 00 15.7**	**-0.5**
AS01	**Alice Springs**	**25.70 163**		P	**P**	**05 00 16.0**	**-0.3**
KULM	**Kulim**	**25.87 280**		P	**P**	**05 00 17.4**	**-0.6**
comp=Z,16nm,0.8s							
WRKA	**Warakurna**	**26.02 176**		P	**P**	**05 00 19.6**	**+0.4**
RPSI	**Rantau Prapat**	**27.33 274**		P	**P**	**05 00 30.7**	**-0.4**
RPSI				IAmb	IAmb	05 00 31.7	
comp=Z,21nm,0.9s							
PSI	**Prapat**	**27.34 274**		P	**P**	**05 00 30.6**	**-0.8**
comp=Z,18nm,0.8s,baz=75,slow=6.5,SNR=11							
comp=Z,18nm,0.8s							
PSI	**Prapat**	**27.34 274**		P	**P**	**05 00 30.5**	**-0.8**
comp=Z,17nm,1.3s,comp=Z,27nm,0.9s							
PSI				P	**P**	**05 00 30.6**	**-0.8**
comp=Z,17nm,1.3s,comp=Z,27nm,0.9s							
MEEK	**Meekatharra**	**28.50 194**		P	**P**	**05 00 41.6**	**+0.2**
KCSI	**Kotacane, Aceh**	**28.53 275**		P	**P**	**05 00 41.0**	**-0.9**
comp=Z,1μmcomp=Z,22nm,0.7s							
CTA	**Charters Tower**	**28.76 138**		P	**P**	**05 00 44.3**	**+0.5**
comp=Z,1.8nm,0.5s,baz=340,slow=9.9,SNR=4.0							
CTA				LR	LR	05 13 08.7	
comp=Z,72nm,20.6s,baz=266,slow=38							
comp=Z,1.8nm,0.5s							
SRDT	**SRDT**	**29.87 298**		P	**P**	**05 00 52.5**	**-1.2**
comp=Z,13nm,0.8s							
JCJ	**Chichijima**	**30.09 29**		LR	LR	05 15 16.6	
comp=Z,14nm,18.1s,baz=103,slow=41							
OOD	**Oodnadatta**	**30.09 163**		P	**P**	**05 00 55.2**	**-0.3**
MORW	**Morawa**	**31.50 197**		P	**P**	**05 01 08.1**	**+0.2**
NJ2	**Nanjing**	**31.60 348**		*e*P	**P**	**05 01 10.9**	**+2.1**
NJ2				pmax	pmax		
comp=Z,11nm,0.5s							
FORT	**Forrest**	**31.71 177**		P	**P**	**05 01 09.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.87 305**		P	**P**	**05 01 11.2**	**-0.2**
comp=Z,1.4nm,0.4s,baz=134,slow=8.2,SNR=13							
CMAR				PcP	**PcP**	**05 04 02.4**	**+1.1**
comp=Z,1.5nm,0.3s,baz=172,slow=2.4,SNR=11							
CMAR				LR	LR	05 14 31.0	
comp=Z,23nm,20.1s,baz=120,slow=37							
comp=Z,1.4nm,0.4s							
MULG	**Mulgathing**	**32.05 167**		P	**P**	**05 01 12.6**	**-0.1**
BLDU	**Ballidu**	**32.77 195**		P	**P**	**05 01 19.2**	**+0.1**
KMI	**Kunming**	**32.96 318**		‖P	**P**	**05 01 22.9**	**+1.8**
KMI				pmax	pmax		
comp=Z,10.0nm,0.9s							
LCRK	**Leigh Creek**	**33.35 161**		P	**P**	**05 01 24.2**	**+0.1**
KLBR	**Kellerberrin**	**33.45 193**		P	**P**	**05 01 25.9**	**+0.9**
MUN	**Mundaring**	**34.20 195**		P	**P**	**05 01 31.6**	**+0.1**
JHJ	**Hachijo jima 2**	**34.35 20**		LR	LR	05 15 49.5	
comp=Z,45nm,18.5s,baz=91,slow=37							
PZH	**PanZhiHua**	**34.56 319**		P	**P**	**05 01 36.8**	**+2.0**
PZH				pmax	pmax		
comp=Z,10.0nm,0.7s							
PZH				pmax	pmax		
comp=Z,100nm,5.3s							
NWAO	**Narrogin (SRO)**	**34.85 193**		P	**P**	**05 01 36.6**	**-0.4**
NWAO				IAmb	IAmb	05 01 50.7	
comp=Z,40nm,1.3s							
NWAO	**Narrogin (SRO)**	**34.85 193**		P	**P**	**05 01 37.8**	**+0.7**
BBOO	**Buckleboo**	**34.94 165**		P	**P**	**05 01 37.6**	**-0.3**
BBOO	**Buckleboo**	**34.94 165**		P	**P**	**05 01 37.7**	**-0.2**
STKA	**Stephens Creek**	**35.85 157**		P	**P**	**05 01 45.9**	**+0.1**
comp=Z,25nm,0.7s,baz=328,slow=8.4,SNR=50							
comp=Z,25nm,0.7s							
STKA	**Stephens Creek**	**35.85 157**		P	**P**	**05 01 45.8**	**+0.1**
STKA	**Stephens Creek**	**35.85 157**		P	**P**	**05 01 45.8**	**+0.1**
KSRS	**Korea Array**	**36.25 2**		P	**P**	**05 01 48.9**	**-0.1**
comp=Z,1.5nm,0.6s,baz=181,slow=9.6,SNR=9.5							
KSRS				PcP	**PcP**	**05 04 14.6**	**+1.3**
comp=Z,1.2nm,0.5s,baz=174,slow=2.9,SNR=4.3							
KSRS				LR	LR	05 17 54.7	
comp=Z,31nm,19.5s,baz=180,slow=38							
comp=Z,1.5nm,0.6s							
HTT	**Hallett**	**36.33 162**		P	**P**	**05 01 50.1**	**+0.2**
RKGY	**Rocky Gully**	**36.52 193**		P	**P**	**05 01 52.9**	**+1.5**
CD2	**Chengdu**	**36.53 327**		*e*P	**P**	**05 01 52.0**	**+0.4**
XAN	**Xi'an**	**36.59 336**		‖P	**P**	**05 01 52.3**	**+0.2**
XAN				pmax	pmax		
comp=Z,12nm,0.7s							
MAJO	**Matsushiro**	**37.01 16**		P	**P**	**05 01 55.3**	**-0.2**
MJAR	**Matsushiro Arr**	**37.01 16**		P	**P**	**05 01 54.6**	**-1.0**
comp=Z,4.0nm,0.5s,baz=185,slow=9.4,SNR=11							
comp=Z,4.0nm,0.5s							
MJB9	**Matsu-Tunnel**	**37.01 16**		P	**P**	**05 01 55.3**	**-0.3**
MJB9				IAmb	IAmb	05 02 08.5	
comp=Z,8.5nm,0.9s							
CMSA	**Cobar Meteorol**	**37.31 152**		P	**P**	**05 01 58.1**	**0.0**
JMM	**Marumori**	**39.01 18**		P	**P**	**05 02 13.2**	**+0.9**
ARMA	**Armidale**	**39.56 144**		P	**P**	**05 02 18.4**	**+1.2**
ARPS	**Mount Arapiles**	**40.34 160**		P	**P**	**05 02 23.8**	**+0.4**
SHL	**Shillong**	**41.10 309**		P	**P**	**05 02 29.6**	**-0.5**
SHL				IAmb	IAmb	05 02 32.2	
comp=Z,10nm,0.6s							
HHC	**Hu-ho-hao-te**	**41.78 343**		*e*P	**P**	**05 02 38.1**	**+2.8**
HHC				pmax	pmax		
comp=Z,18nm,0.9s							
HHC				pmax	pmax		
comp=Z,440nm,5.0s							
CAN	**Canberra**	**41.99 152**		P	**P**	**05 02 38.0**	**+0.9**
CAN				pP	**pP**	**05 02 50.0**	**-0.1**
CAN				sP	**sP**	**05 02 57.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**43.26 6**		P	**P**	**05 02 47.7**	**+0.5**
comp=Z,5.6nm,0.6s,baz=187,slow=5.4,SNR=12							
comp=Z,5.6nm,0.6s							
USRK	**Ussuriysk Ar.**	**43.26 6**		P	**P**	**05 02 47.1**	**-0.1**
MDJ	**Mudanjiang**	**43.48 3**		P	**P**	**05 02 49.6**	**+0.7**
MDJ				pmax	pmax		
comp=Z,14nm,0.7s							
MDJ				pmax	pmax		
comp=Z,280nm,4.4s							
BNX	**BinXian**	**44.51 1**		‖P	**P**	**05 02 57.3**	**+0.1**
BNX				pmax	pmax		
comp=Z,4.0nm,0.7s							
BNX				pmax	pmax		
comp=Z,280nm,3.9s							
GTA	**Gaotai**	**45.14 331**		*e*P	**P**	**05 03 02.4**	**-0.1**
GTA				pP	pwP	05 03 19.1	+0.7
GTA				sP	sP	05 03 25.5	+3.8
GTA				PcP	**PcP**	**05 04 43.8**	**+1.5**
GTA				pmax	pmax		
comp=Z,4.0nm,0.7s							
GTA				pmax	pmax		
comp=Z,110nm,4.1s							
GTA				LR	LR		
comp=Z,190nm,16.0s							
GTA				LR	LR		
comp=Z,270nm,16.4s							
GTA				LR	LR		
comp=Z,150nm,17.8s							
GOMU	**GeErMu**	**45.49 324**		P	**P**	**05 03 02.9**	**-2.7**
GOMU				pmax	pmax		
comp=Z,2.0nm,0.6s							
GOMU				pmax	pmax		
comp=Z,100nm,5.1s							
RAMN	**Ramite**	**45.92 308**		*e*P	**P**	**05 03 07.9**	**-1.1**
comp=Z,18nm,0.7s							
JIRN	**Jiri**	**46.57 308**		*e*P	**P**	**05 03 12.6**	**-1.6**
GUN	**Gumba**	**46.93 308**		*e*P	**P**	**05 03 16.0**	**-1.0**
comp=Z,25nm,0.7s							
KOLN	**Koldanda**	**48.67 307**		*e*P	**P**	**05 03 29.1**	**-1.2**
comp=Z,2.9nm,0.7s							
DANN	**Dangsing**	**48.79 308**		*e*P	**P**	**05 03 29.6**	**-1.8**
PYUN	**Piuthan**	**49.30 307**		*e*P	**P**	**05 03 33.7**	**-1.4**
comp=Z,24nm,0.6s							
SONM	**Songino Array**	**49.66 343**		P	**P**	**05 03 36.4**	**-1.1**
comp=Z,2.2nm,0.9s,baz=162,slow=7.8,SNR=7.9							
SONM				PcP	**PcP**	**05 04 58.7**	**+0.5**
comp=Z,2.7nm,0.8s,baz=158,slow=3.5,SNR=6.9							
SONM				LR	LR	05 27 58.8	
comp=Z,44nm,18.6s,baz=122,slow=40							
comp=Z,2.2nm,0.9s							
WMQ	**Urumqi**	**54.63 326**		*e*P	**P**	**05 04 15.3**	**+0.9**
WMQ				pmax	pmax		
comp=Z,17nm,0.9s							
PETK	**Petropavlovsk-**	**58.08 22**		P	**P**	**05 04 38.2**	**-0.5**
comp=Z,5.6nm,0.6s,baz=184,slow=5.0,SNR=15							
comp=Z,5.6nm,0.6s							
MK31	**Makanchi Array**	**59.47 326**		P	**P**	**05 04 48.1**	**-0.4**
MK31				IAmb	IAmb	05 04 49.0	
comp=Z,7.5nm,0.9s							
MKAR	**Makanchi Array**	**59.47 326**		P	**P**	**05 04 48.0**	**-0.5**
comp=Z,6.2nm,0.4s,baz=121,slow=8.1,SNR=72							
MKAR				PcP	**PcP**	**05 05 35.2**	**-0.5**
comp=Z,3.4nm,0.7s,baz=115,slow=5.1,SNR=4.8							
comp=Z,6.2nm,0.4s							
MAKZ	**Makanchi**	**59.65 326**		P	**P**	**05 04 49.8**	**0.0**
MAKZ				IAmb	IAmb	05 04 49.8	
comp=Z,8.6nm,0.7s							
MAKZ	**Makanchi**	**59.65 326**		P	**P**	**05 04 48.9**	**-0.9**
MAKZ				pP	**pP**	**05 05 02.6**	**-1.1**
RPZ	**Rata Peaks**	**59.90 144**		LR	LR	05 34 28.4	
comp=Z,39nm,18.5s,baz=263,slow=40							
MA2	**Magadan**	**61.40 14**		LR	LR	05 34 43.4	
comp=Z,15nm,18.6s,baz=136,slow=39							
ZAA0	**Zalesovo Array**	**62.74 334**		P	**P**	**05 05 09.1**	**-1.4**
ZALV	**Zalesovo Beam**	**62.74 334**		P	**P**	**05 05 09.1**	**-1.3**
comp=Z,2.3nm,0.4s,baz=125,slow=5.5,SNR=12							
ZALV				PKP2bc		05 34 16.7	
comp=Z,0.4nm,0.3s,baz=308,slow=7.1,SNR=1.7							
comp=Z,2.3nm,0.4s							
ZALV	**Zalesovo Beam**	**62.74 334**		P	**P**	**05 05 09.4**	**-1.0**
GAR	**Garm**	**63.37 314**		P	**P**	**05 05 14.3**	**-0.9**
KURK	**Kurchatov**	**63.72 328**		P	**P**	**05 05 16.3**	**-0.7**
KURK	**Kurchatov**	**63.72 328**		P	**P**	**05 05 16.3**	**-0.7**
KURK				pP	**pP**	**05 05 30.2**	**-0.9**
CHGR	**Chuyangaron**	**64.09 313**		P	**P**	**05 05 19.6**	**-0.2**
CHGR				IAmb	IAmb	05 05 26.0	
comp=Z,15nm,0.9s							
SIMJ	**Simiganj**	**64.20 313**		P	**P**	**05 05 19.3**	**-1.3**
KK31	**Karatay Array**	**64.85 318**		P	**P**	**05 05 24.2**	**-0.4**
KKAR	**Karatay Array**	**64.85 318**		P	**P**	**05 05 23.8**	**-0.8**
CASY	**Casey**	**68.12 187**		P	**P**	**05 05 45.5**	**+0.5**
CASY				IAmb	IAmb	05 05 46.3	
comp=Z,12nm,0.7s							
CASY	**Casey**	**68.12 187**		P	**P**	**05 05 45.4**	**+0.4**
DRV	**Dumont d'Urvil**	**68.28 174**		P	**P**	**05 05 45.3**	**-0.7**
DRV				pP	**pP**	**05 05 59.5**	**-0.8**
DRV				sP	**sP**	**05 06 05.6**	**-0.4**
WSAR	**Wadi Sarin**	**69.04 294**		LR	LR	05 43 16.8	
comp=Z,13nm,18.4s,baz=148,slow=42							
BRVK	**Borovoye**	**69.35 328**		P	**P**	**05 05 52.1**	**-0.9**
BRVK				IAmb	IAmb	05 05 54.2	
comp=Z,16nm,1.4s							
BRVK	**Borovoye**	**69.35 328**		P	**P**	**05 05 51.4**	**-1.5**
GEYT	**Alibeck**	**72.18 310**		P	**P**	**05 06 10.3**	**-0.2**
comp=Z,4.2nm,0.6s,baz=116,slow=3.4,SNR=9.0							
comp=Z,4.2nm,0.6s							
GEYT	**Alibeck**	**72.18 310**		P	**P**	**05 06 09.5**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**72.18 310**		P	**P**	**05 06 10.1**	**-0.4**
NRIK	**Noril'sk**	**72.89 347**		P	**P**	**05 06 13.6**	**-0.4**
comp=Z,12nm,0.7s,baz=125,slow=6.9,SNR=13							
comp=Z,12nm,0.7s							
NRIK	**Noril'sk**	**72.89 347**		P	**P**	**05 06 13.6**	**-0.4**
NRIK				IAmb	IAmb	05 06 15.1	
comp=Z,10nm,0.7s							
ABKAR	**Akbulak array**	**73.90 321**		P	**P**	**05 06 19.8**	**-0.6**
ARU	**Arti**	**76.92 328**		P	**P**	**05 06 36.9**	**-0.6**
VNDA	**Vanda**	**80.86 173**		P	**P**	**05 06 58.4**	**-0.4**
comp=Z,3.4nm,0.9s,baz=310,slow=6.0,SNR=24							
comp=Z,3.4nm,0.9s							
VNDA	**Vanda**	**80.86 173**		P	**P**	**05 06 59.0**	**+0.2**
RAYN	**Ar Rayn**	**81.07 294**		P	**P**	**05 07 00.4**	**-0.6**
MAW	**Mawson**	**81.09 200**		P	**P**	**05 07 01.0**	**+1.0**
comp=Z,6.8nm,0.6s,baz=82,slow=5.8,SNR=17							
MAW				LR	LR	05 37 41.0	
comp=Z,20nm,20.8s,baz=38,slow=32							
comp=Z,6.8nm,0.6s							
GEVA	**Gevas**	**83.98 308**		P	**P**	**05 07 16.1**	**0.0**
KDAK	**Kodiak Island**	**84.41 32**		LR	LR	05 39 15.5	
comp=Z,30nm,21.2s,baz=121,slow=32							
KBZ	**Khabaz**	**84.44 314**		P	**P**	**05 07 17.3**	**-0.7**
comp=Z,4.9nm,0.7s,baz=86,slow=7.6,SNR=7.5							
comp=Z,4.9nm,0.7s							
GURO	**Guroymak-BITLI**	**84.79 308**		P	**P**	**05 07 20.7**	**+0.5**
MARD	**Mardin**	**85.73 307**		P	**P**	**05 07 24.4**	**-0.5**
KLMR	**Klimovskoe**	**87.47 331**		*e*P	**P**	**05 07 35.7**	**+3.1**
KLMR				AMP		05 07 37.4	
comp=Z,11nm,0.7s							
ILAR	**Eielson Array**	**87.72 25**		P	**P**	**05 07 32.2**	**-1.6**
comp=Z,0.5nm,0.5s,baz=240,slow=5.1,SNR=5.7							
comp=Z,0.5nm,0.5s							
BRTR	**Keskin Array B**	**91.32 310**		P

1.1nm,0.4s,baz=203,slow=9.2,SNR=4.7
1.1nm,0.4s
ZALV Zalesovo Beam 31.91 350 P P 05 18 12.0 +2.6
0.5nm,0.4s,baz=149,slow=9.6,SNR=2.5
0.5nm,0.4s
TIXI Tiksi 52.97 13 P P 05 20 59.5 +0.1
3.5nm,0.4s,baz=270,slow=22,SNR=14
3.5nm,0.4s
AKASG Malin Array Be 56.59 317 P P 05 21 27.6 +1.7
0.2nm,0.3s,baz=85,slow=7.1,SNR=2.7
0.2nm,0.3s
WRA Warramunga Arr 58.16 134 P P 05 21 37.7 +0.4
1.8nm,0.7s,baz=322,slow=7.5,SNR=40
WRA PcP **PcP 05 22 28.6 +0.8**
0.2nm,0.4s,baz=334,slow=3.7,SNR=2.0
1.8nm,0.7s
ASAR Alice Springs 60.52 137 P P 05 21 54.8 +1.3
1.5nm,0.5s,baz=321,slow=6.8,SNR=20
ASAR PcP **PcP 05 22 37.8 +0.6**
0.4nm,0.5s,baz=311,slow=4.3,SNR=2.3
1.5nm,0.5s
ILAR Eielson Array 81.33 22 P P 05 23 58.5 -0.2
0.4nm,0.5s,baz=297,slow=4.8,SNR=6.0
0.4nm,0.5s

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*NAO **19** 05:53:10.7±1.6, 67°.61N×33°.71E, ML2.5*
*KOLA **19** 05:53:10.5, 67°.58N×33°.92E, h0km, ML2.2*
*HEL **19** 05:53:11.1±0.2, 67°.61N×33°.82E, h0km, ML1.9, Explosion*
*BER **19** 05:53:13.3±3.6, 67°.64N×33°.46E, h0km, ML2.5(NAO), Suspected explosion*
ISC 19 05:53:09.5±0.9, 67°.60N±0°.04×33°.82E±0°.04, h0km, n31, σ1§28/62, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.16**	**260**	P	**Pg**	**05 53 13.7**	**+1.1**
APA				S	**Sg**	**05 53 16.3**	**+1.6**
APA0	**Apatity Array**	**0.32**	**272**	Pg	**Pg**	**05 53 16.3**	**+0.7**
APA0	baz=88,slow=16			Lg	Lg	05 53 20.4	
APA0	**Apatity Array**	**0.32**	**272**	Pg	**Pg**	**05 53 16.3**	**+0.7**
APA0	baz=88,slow=16			Sg	**Sg**	**05 53 20.4**	**+0.7**
LVZ	**Lovozero**	**0.44**	**46**	PG	**Pg**	**05 53 18.2**	**+0.3**
LVZ	baz=225			SG	**Sg**	**05 53 24.9**	**+1.4**
VRF	**Varrio**	**1.62**	**277**	PB	**Pn**	**05 53 39.2**	**-0.1**
VRF				MSG		05 53 59.3	
VRF	comp=Z,10nm,0.2s			SG	**Sn**	**05 53 59.4**	**-1.4**
TERR	**Teriberka**	**1.68**	**16**	P	**Pn**	**05 53 40.0**	**-0.2**
TERR				S	**Sn**	**05 54 01.1**	**-1.2**
OLKF	**Oulanka, Finla**	**2.16**	**236**	PG	**Pb**	**05 53 49.4**	**-0.1**
OLKF	baz=55			SN	**Sn**	**05 54 13.5**	**-0.7**
KU6	**Riekki**	**2.22**	**226**	PG	**Pb**	**05 53 50.5**	**+0.1**
KU6				MSG		05 54 16.9	
KU6	comp=Z,4.6nm,0.2s			SG	**Sg**	**05 54 19.9**	**-0.7**
PRVG	**Vayda Guba**	**2.24**	**345**	P	**Pb**	**05 53 50.0**	**-0.8**
PRVG				S	**Sn**	**05 54 17.4**	**+1.2**
MSF	**Maaselka**	**2.54**	**230**	PB	**Pb**	**05 53 55.6**	**-0.4**
MSF	baz=50			SG	**Sg**	**05 54 30.4**	**-0.6**
SGF	**Sodankyl**	**2.81**	**270**	PB	**Pb**	**05 54 00.1**	**-0.4**
SGF				SB	**Sb**	**05 54 35.7**	**+0.3**
RNF	**Rovaniemi**	**3.21**	**256**	PN	**Pn**	**05 54 02.3**	**+1.1**
RNF	baz=67			SN	**Sn**	**05 54 41.5**	**+1.5**
KEV	**Kevo**	**3.30**	**314**	Pn	**Pn**	**05 54 03.0**	**+0.6**
KEV				Sn	**Sn**	**05 54 41.0**	**-1.2**
KEV				Lg	Lg	05 54 51.9	
KEV	**Kevo**	**3.30**	**314**	Pn	**Pn**	**05 54 03.0**	**+0.6**
KEV				Sn	**Sn**	**05 54 41.0**	**-1.2**
KEV				Sg	**Sb**	**05 54 51.9**	**+2.4**
KEV	**Kevo**	**3.30**	**314**	PN	**Pn**	**05 54 03.0**	**+0.6**
KEV				SN	**Sn**	**05 54 41.8**	**-0.4**
ARA0	**ARCESS Array S**	**3.62**	**306**	Pn	**Pn**	**05 54 07.1**	**+0.3**
ARA0	baz=122,slow=16			Pg	**Pb**	**05 54 15.2**	**+0.9**
ARA0	baz=111,slow=16			Sn	**Sn**	**05 54 48.1**	**-2.0**
ARA0	baz=120,slow=28			Lg	Lg	05 54 58.0	
ARA0	**ARCESS Array S**	**3.62**	**306**	Pn	**Pn**	**05 54 07.1**	**+0.3**
ARA0	baz=122,slow=16			Pg	**Pb**	**05 54 15.2**	**+0.9**
ARA0	baz=111,slow=16			Sn	**Sn**	**05 54 48.1**	**-2.0**
ARA0	baz=120,slow=28			Sg	**Sb**	**05 54 58.0**	**-0.8**
ARA0	baz=109,slow=37			PN	**Pn**	**05 54 10.1**	**+1.5**
RMF	**Romuvaara**	**3.75**	**207**	PG	**Pb**	**05 54 18.3**	**+0.6**
KLF	baz=21			SG	**Sg**	**05 55 11.0**	**-1.1**
KLF	**Kolari**	**3.82**	**269**	Pn	**Pn**	**05 54 11.1**	**+0.3**
KLF	baz=82			Pg	**Pb**	**05 54 19.7**	**+0.4**
HEF	**Hetta**	**3.91**	**287**	Sn	**Sn**	**05 54 55.6**	**-1.6**
HEF				Lg	Lg	05 55 08.9	
HEF	**Hetta**	**3.91**	**287**	Pn	**Pn**	**05 54 11.1**	**+0.3**
HEF				Pg	**Pb**	**05 54 19.7**	**+0.4**
HEF				Sn	**Sn**	**05 54 55.6**	**-1.6**
HEF				Sg	**Sb**	**05 55 08.9**	**+1.9**
HEF	**Hetta**	**3.91**	**287**	PG	**Pb**	**05 54 20.4**	**+1.2**
HEF	baz=93			SN	**Sn**	**05 54 57.9**	**+0.6**
TOF	**Tornio**	**4.05**	**252**	PG	**Pb**	**05 54 24.0**	**+2.4**
TOF				SG	**Sg**	**05 55 16.6**	**-2.8**
OUL	**Oulu**	**4.07**	**235**	PB	**Pb**	**05 54 19.6**	**-2.3**
OUL				SG	**Sg**	**05 55 19.2**	**-0.8**
KTK1	**Kautokeino**	**4.18**	**295**	SN	**Sn**	**05 55 03.6**	**-0.2**
PAJU	**Pajala**	**4.19**	**267**	PB	**Pb**	**05 54 24.5**	**+0.4**
PAJU				SN	**Sn**	**05 55 04.2**	**0.0**
KALU	**Kalix**	**4.50**	**252**	SG	**Sg**	**05 55 31.5**	**-2.5**
LANU	**Lannavaara**	**4.51**	**281**	PN	**Pn**	**05 54 19.0**	**0.0**
LANU				SN	**Sn**	**05 55 11.5**	**-0.6**
ERTU	**Ertsjaerv**	**4.67**	**262**	SN	**Sn**	**05 55 15.2**	**-0.8**
SPA0	**Spitsbergen Ar**	**11.71**	**342**	Pn	**Pn**	**05 55 54.9**	**-2.7**
	baz=142,slow=16						
SPA0	**Spitsbergen Ar**	**11.71**	**342**	Pn	**Pn**	**05 55 54.9**	**-2.7**
	baz=142,slow=16						

IDC 19 06:36:26.5±2.8, 32°.33S×178°.54W, h0km, mb3.8/2, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=70.4km s-min=30.9km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.12**	**10**	Pn	Pn	06 37 18.0	+1.2
RAO	31nm,0.3s,baz=52,slow=22,SNR=2.2			Sn	Sn	06 37 51.5	-3.3
URZ	**Urewera**	**6.90**	**210**	Pn	Pn	06 38 08.9	0.0
URZ	62nm,0.3s,baz=95,slow=23,SNR=5.1 76nm,0.3s			Sn	Sn	06 39 26.4	-1.7
ASAR	**Alice Springs**	**42.59**	**269**	P	P	06 44 24.5	0.0
WRA	**Warramunga Arr**	**43.75**	**274**	P	P	06 44 33.8	-0.1
H03S2	**Juan Fernandez**	**79.78**	**123**	T	T	08 17 10.2	
H03S1	**Juan Fernandez**	**79.79**	**124**	T	T	08 17 10.6	
H03S3	**Juan Fernandez**	**79.80**	**123**	T	T	08 17 10.3	
H03N3	**Juan Fernandez**	**79.99**	**123**	T	T	08 17 09.3	
H03N2	**Juan Fernandez**	**79.99**	**123**	T	T	08 17 15.1	
H03N1	**Juan Fernandez**	**80.00**	**123**	T	T	08 17 22.5	
FINES	**FINESS Array B**	**146.78**	**339**	PKPbc	PKPdf	06 56 08.3	+0.4
	2.2nm,0.9s,baz=46,slow=4.0,SNR=6.7						

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*IDC **19** 06:40:10.4±0.7, 12°.33S×77°.98W, h0km, mb4.2/14, mbtmp4.1/16, ML3.4/2, MS3.8/20, Error ellipse: s-maj=19.7km s-min=14.3km az=30.0*
*NEIC **19** 06:40:15.2±1.5, 12°.41S±0°.07×77°.92W±0°.10, h34km±6km, mb4.6/37, Error ellipse: s-maj=14.3km s-min=9.7km az=67.0*
ISC 19 06:40:15.3±0.6, 12°.41S±0°.07×77°.96W±0°.08, h35km, n112, σ1§86/82, mb4.5/28, MS3.9/17, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.17**	**69**	Pn	**Pn**	**06 40 34.0**	**-1.2**
NNA	1μm,0.3s,baz=257,slow=12,SNR=1646			Sn	**Sn**	**06 40 50.7**	**+0.7**
NNA	1μm,0.3s,baz=39,slow=23,SNR=16			LR	LR	06 41 00.4	
NNA	comp=Z,3μm,18.4s,baz=158,slow=43 **Nana**	**1.17**	**69**		**Pn**	**06 40 34.3**	**-0.9**
ATAH	**Atahualpa**	**5.25**	**355**	Pn	**Pn**	**06 41 32.8**	**+1.1**
ATAH	12nm,0.3s,baz=201,slow=3.6,SNR=114			Sn	**Sn**	**06 42 31.0**	**-0.3**
ARNL	**Arenillas**	**9.04**	**347**		**Pn**	**06 42 23.2**	**-0.3**
BOSC	**San Juan Bosco**	**9.21**	**357**		**Pn**	**06 42 22.8**	**-3.0**
PB12	**IPOC Station P**	**9.60**	**131**	Pn	**Pn**	**06 42 29.1**	**-2.1**
COHC	**Cochancay**	**9.96**	**353**		**Pn**	**06 42 35.2**	**-0.8**
COHC	**Cochancay**	**9.96**	**353**	*eP*	**Pn**	**06 42 35.6**	**-0.4**
PB16	**IPOC Station P**	**10.06**	**127**		**Pn**	**06 42 36.4**	**-1.4**
LPAZ	**La Paz**	**10.28**	**113**	Pn	**Pn**	**06 42 42.1**	**+1.3**
LPAZ	0.2nm,0.3s,baz=301,slow=9.8,SNR=7.7 1.9nm,0.6s **La Paz**	**10.28**	**113**	Pn	**Pn**	**06 42 41.5**	**+0.6**
TBTG	**Tabatinga, AM**	**11.40**	**45**	*eP*	**Pn**	**06 42 54.7**	**-1.0**
SLOR	**San Lorenzo -**	**11.61**	**357**		**Pn**	**06 42 59.8**	**+0.8**
PULU	**Pululahua**	**12.36**	**357**		**Pn**	**06 43 08.9**	**-0.3**
IMBA	**Imbabura, San**	**12.60**	**359**		**Pn**	**06 43 09.2**	**-3.4**
PTLC	**Puerto Leguiza**	**12.88**	**14**	*eP*	Pn	06 43 08.9	-7.1
TULM	**Tulcn-Chalpat**	**13.04**	**1**		**Pn**	**06 43 18.4**	**-0.2**
TULM	**Tulcn-Chalpat**	**13.04**	**1**	*eP*	**Pn**	**06 43 21.8**	**+3.3**
CMBC	**Cumbal**	**13.26**	**1**	*eP*	**P**	**06 43 28.7**	**-2.2**
LVC	**Limon Verde**	**13.32**	**141**	LR	LR	06 47 52.9	
GCUF	**Volcan Galeras**	**13.56**	**3**	*eP*	**P**	**06 43 31.9**	**-2.4**
FLOC	**Florencia**	**14.08**	**10**	*eP*	**Pn**	**06 43 29.4**	**-3.1**
BBAC	**Balboa, Cauca**	**14.35**	**3**	*eP*	**Pn**	**06 43 36.4**	**+0.1**
GARC	**Garzon, Huila**	**14.70**	**10**	*eP*	**Pn**	**06 43 37.5**	**-3.5**
GUVC	**San Jose del G**	**15.77**	**20**	*eP*	**P**	**06 44 04.5**	**+6.1**
PRAC	**Prado**	**16.30**	**11**	*eP*	**P**	**06 44 10.2**	**+5.8**
YOTC	**Yotoco, Valle**	**16.36**	**6**	*eP*	**P**	**06 44 08.0**	**+2.9**
SIV	**San Ignacio**	**16.76**	**104**	Pn	**Pn**	**06 44 06.3**	**-1.1**
SIV	baz=281,slow=15,SNR=3.8			LR	LR	06 50 59.1	
VILC	**Villavicencio,**	**16.95**	**15**	*eP*	**Pn**	**06 44 09.6**	**-0.4**
CHIC	**Chingaza**	**17.44**	**14**	*eP*	**P**	**06 44 23.1**	**+5.8**
ROSC	**El Rosal**	**17.51**	**12**	P	**P**	**06 44 21.4**	**+3.3**
ROSC	4.5nm,0.4s,baz=160,slow=15,SNR=4.6			LR	LR	06 51 43.8	
ROSC	**El Rosal**	**17.51**	**12**	Pn	**Pn**	**06 44 15.5**	**-1.7**
GUY2C	**Guyana, Caldas**	**17.70**	**9**	*eP*	**P**	**06 44 20.0**	**-0.3**
NORC	**Norcasia**	**18.11**	**10**	*eP*	**P**	**06 44 26.8**	**+2.4**
CBOC	**Ciudad Bolivar**	**18.25**	**6**	*eP*	**Pn**	**06 44 28.6**	**+2.5**
SPBC	**San Pablo de B**	**18.35**	**12**	*eP*	**Pn**	**06 44 29.4**	**+2.2**
HELC	**Santa Helena**	**18.63**	**8**	*eP*	**Pn**	**06 44 31.9**	**+1.0**
RUSC	**La Rusia**	**18.81**	**15**	*eP*	**Pn**	**06 44 33.7**	**+0.4**
PTBC	**PUERTO BERRIO,**	**19.14**	**11**	*eP*	**Pn**	**06 44 38.4**	**+1.7**
BRRC	**Barranca, Sant**	**19.84**	**13**	*eP*	**P**	**06 44 43.3**	**+0.1**
PAMC	**Pamplona, Colo**	**20.30**	**15**	*eP*	**P**	**06 44 49.1**	**+0.3**
H03N1	**Juan Fernandez**	**20.96**	**182**	T	T	07 06 59.4	
H03N2	baz=3.5,slow=75,SNR=117 **Juan Fernandez**	**20.96**	**182**	T	T	07 06 59.9	
H03N3	baz=3.5,slow=75,SNR=92 **Juan Fernadez**	**20.97**	**182**	T	T	07 07 01.2	
OCAC	baz=3.5,slow=75,SNR=100 **Ocana**	**21.02**	**13**	*eP*	**P**	**06 44 56.8**	**+0.5**
BRU2	**Volcan**	**21.58**	**347**	P	**P**	**06 45 00.5**	**-1.7**
BRU2				IAmb	IAmb	06 45 04.5	
SOCV	comp=Z,27nm,0.8s **Socops**	**21.73**	**19**	*eP*	**P**	**06 45 04.1**	**+0.3**
SJCC	**San Jacinto, C**	**22.33**	**7**	*eP*	**P**	**06 45 11.0**	**+0.8**
SDV	**Santo Domingo**	**22.37**	**19**	P	**P**	**06 45 10.5**	**-0.2**
SDV	comp=Z,4.8nm,0.3s,baz=221,slow=8.9,SNR=5.0			LR	LR	06 55 07.1	
SDV	comp=Z,412nm,19.2s,baz=174,slow=40 comp=Z,4.8nm,0.3s **Santo Domingo**	**22.37**	**19**	P	**P**	**06 45 09.6**	**-1.2**
AQDB	**Aquidauana**	**22.79**	**114**	P	**P**	**06 45 12.7**	**-2.4**
BAUV	**El Baul**	**23.39**	**25**	P	**P**	**06 45 19.9**	**-1.1**
CRJC	**Cerrejon, Guaj**	**23.81**	**12**	*eP*	**P**	**06 45 24.0**	**-1.3**
CPUP	**Villa Florida**	**23.84**	**129**	P	**P**	**06 45 25.8**	**+0.4**
CPUP	comp=Z,4.8nm,0.8s,baz=306,slow=14,SNR=5.5			LR	LR	06 55 02.4	
PCRV	comp=Z,77nm,20.1s,baz=326,slow=37 comp=Z,4.8nm,0.8s **Puerto La Cruz**	**26.05**	**31**	P	**P**	**06 45 46.9**	**+1.3**
PCRV	comp=Z,5.5nm,0.5s,baz=207,slow=16,SNR=7.5			LR	LR	06 57 04.0	
PLCA	comp=Z,347nm,20.3s,slow=39 comp=Z,5.5nm,0.5s **Paso Flores**	**28.96**	**168**	P	**P**	**06 46 13.6**	**+2.1**
BDFB	comp=Z,1.9nm,0.5s,baz=6.8,slow=11,SNR=20 comp=Z,1.9nm,0.5s **Brasilia**	**29.22**	**100**	P	**P**	**06 46 13.6**	**-0.6**
APG	comp=Z,5.5nm,0.8s,baz=263,slow=10,SNR=9.7 comp=Z,5.5nm,0.8s **El Apazote**	**29.91**	**335**	LR	LR	06 57 17.2	
MDP	comp=Z,122nm,18.4s,baz=54,slow=34 **Montagnes des**	**30.59**	**57**	LR	LR	06 58 53.4	
RPN	comp=Z,248nm,21.4s,baz=240,slow=37 **Rapa Nui**	**32.84**	**239**	LR	LR	06 56 20.1	
RCBR	comp=Z,136nm,21.1s,baz=24,slow=30 **Riachuelo**	**42.00**	**85**	LR	LR	07 06 11.8	
LRAL	comp=Z,348nm,19.2s,baz=58,slow=37 **Lakeview Retre**	**46.00**	**349**	IAmb	IAmb	06 48 43.4	
FPAL	comp=Z,7.1nm,1.0s **Fort Paine**	**47.25**	**351**	P	**P**	**06 48 44.5**	**-0.6**
FPAL				IAmb	IAmb	06 48 52.7	
KMSC	comp=Z,4.9nm,0.8s **Kings Mountain**	**47.39**	**356**	IAmb	IAmb	06 48 46.7	
V52A	comp=Z,9.7nm,1.0s **Sevierville**	**48.28**	**354**	IAmb	IAmb	06 48 53.3	
TXAR	comp=Z,6.4nm,0.9s **Lajitas Array**	**48.35**	**330**	P	**P**	**06 48 54.1**	**+0.3**
X37A	comp=Z,0.3nm,0.5s,baz=156,slow=8.5,SNR=11 comp=Z,0.3nm,0.5s **Clayton**	**49.57**	**341**	P	**P**	**06 49 03.2**	**+0.2**
X37A				IAmb	IAmb	06 49 09.6	
LCAR	comp=Z,3.9nm,0.8s **Lake Charles**	**49.80**	**346**	IAmb	IAmb	06 49 05.0	
FCAR	comp=Z,4.0nm,1.0s **Ozark Folk Cen**	**49.86**	**345**	IAmb	IAmb	06 49 13.8	
S57A	comp=Z,5.5nm,1.1s **Dark Hollow, R**	**49.91**	**359**	IAmb	IAmb	06 49 12.0	
S54A	comp=Z,8.0nm,1.1s **Dingess, Beckl**	**50.04**	**357**	IAmb	IAmb	06 49 07.3	
S51A	comp=Z,10.0nm,1.1s **Beattyville**	**50.06**	**354**	IAmb	IAmb	06 49 06.7	
R58B	comp=Z,6.5nm,0.9s **Mineral**	**50.10**	**0**	P	**P**	**06 49 06.7**	**-0.2**
MGMO	**Mountain Grove**	**51.10**	**345**	IAmb	IAmb	06 49 15.2	
R40A	comp=Z,7.0nm,1.1s **Maddies Statio**	**52.18**	**346**	IAmb	IAmb	06 49 22.2	
ANMO	comp=Z,3.7nm,0.8s **Albuquerque**	**54.30**	**331**	P	**P**	**06 49 38.0**	**-0.4**
PDAR	**Pinedale Array**	**62.07**	**334**	P	**P**	**06 50 32.3**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=156,slow=6.7,SNR=2.1 comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**63.08**	**325**	P	**P**	**06 50 40.1**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=133,slow=6.4,SNR=3.8 comp=Z,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**64.33**	**347**	P	**P**	**06 50 46.4**	**-0.8**
	comp=Z,5.1nm,0.6s,baz=167,slow=7.3,SNR=4.7 comp=Z,5.1nm,0.6s						
BBTS	**Babate**	**66.51**	**68**	LR	LR	07 17 39.1	
	comp=Z,123nm,20.9s,baz=240,slow=34						
SCHQ	**Schefferville**	**67.64**	**7**	LR	LR	07 22 11.6	
	comp=Z,34nm,19.8s,baz=132,slow=37						
PPT	**Papeete**	**69.03**	**256**	LR	LR	07 12 44.9	
	comp=Z,29nm,20.0s,baz=86,slow=28						
VNA3	**Neumayer Olymp**	**71.41**	**162**	P	**P**	**06 51 33.3**	**+1.7**
VNA1	**Neumayer--Stat**	**71.69**	**161**	P	**P**	**06 51 35.3**	**+2.1**
VNA2	**Neumayer--Watz**	**72.03**	**161**	P	**P**	**06 51 36.8**	**+1.4**
	baz=296,slow=2.0						
SNAA	**Sanae**	**73.63**	**161**	P	**P**	**06 51 46.3**	**+1.4**
SNAA	**Sanae**	**73.63**	**161**	P	**P**	**06 51 43.3**	**-1.6**
DBIC	**Dimbokro**	**75.08**	**80**	P	**P**	**06 51 54.5**	**+0.2**
DBIC	comp=Z,10nm,0.8s,baz=222,slow=3.5,SNR=7.7			LR	LR	07 22 49.0	
TROLL	comp=Z,129nm,20.1s,baz=214,slow=34 comp=Z,10nm,0.8s **Troll, Antarti**	**75.34**	**162**	P	**P**	**06 51 56.4**	**+1.5**
FRB	**Frobisher Bay**	**76.26**	**4**	LR	LR	07 27 22.0	
KOWA	comp=Z,56nm,20.0s,baz=207,slow=37 **Kowa**	**77.96**	**72**	P	**P**	**06 52 10.2**	**-0.4**
YKA	**Yellowknife Ar**	**79.93**	**344**	P	**P**	**06 52 20.4**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=151,slow=5.9,SNR=2.5 comp=Z,1.9nm,0.8s						
TOA0	**Torodi Ar. Sit**	**82.95**	**75**	P	**P**	**06 52 36.0**	**-1.4**
TOA0				IAmb	IAmb	06 52 39.2	
TORD	comp=Z,5.9nm,1.0s **Torodi Ar. Bea**	**82.95**	**75**	P	**P**	**06 52 38.1**	**+0.8**
TORD	comp=Z,4.2nm,0.9s,baz=260,slow=3.9,SNR=13			LR	LR	07 29 45.2	
MDT	comp=Z,65nm,18.4s,baz=213,slow=36 **Midelt**	**83.08**	**54**	LR	LR	07 26 17.0	
ESDC	comp=Z,4.2nm,0.9s **Sonseca Array**	**85.86**	**48**	P	**P**	**06 52 52.5**	**+0.8**
ESDC	comp=Z,36nm,21.1s,baz=292,slow=33 comp=Z,0.9nm,0.8s,baz=262,slow=4.6,SNR=5.5			LR	LR	07 25 55.2	
INK	comp=Z,42nm,21.6s,baz=247,slow=32 **Inuvik**	**89.58**	**342**	P	**P**	**06 53 08.9**	**+0.2**
SUR	comp=Z,0.9nm,0.8s **Sutherland**	**90.70**	**123**	LR	LR	07 32 50.5	
ILAR	comp=Z,48nm,19.1s,baz=278,slow=35 **Eielson Array**	**92.42**	**336**	P	**P**	**06 53 21.3**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=101,slow=2.8,SNR=5.9 comp=Z,0.5nm,0.8s						
BOSA	**Boshof**	**95.43**	**121**	LR	LR	07 35 23.2	
H11N3	comp=Z,54nm,18.2s,baz=9.0,slow=35 **WAKE ISLAND Hyl**	**17.55**	**286**	T	T	09 07 28.8	
H11N2	baz=95 **WAKE ISLAND Hyl**	**17.56**	**286**	T	T	09 07 30.9	
H11N1	baz=95 **WAKE ISLAND Hyl**	**17.56**	**286**	T	T	09 07 32.8	
H11S2	baz=95 **WAKE ISLAND Hyl**	**17.65**	**284**	T	T	09 07 36.8	
H11S1	baz=94,slow=75,SNR=74 **WAKE ISLAND Hyl**	**17.65**	**284**	T	T	09 07 37.7	
H11S3	baz=94,slow=75,SNR=100 **WAKE ISLAND Hyl**	**17.66**	**284**	T	T	09 07 45.4	
ASAR	baz=94,slow=75,SNR=97 **Alice Springs**	**132.50**	**221**	PKP	**PKiKP**	**06 59 27.1**	**-1.0**
WRA	comp=Z,0.5nm,0.7s,baz=135,slow=2.2,SNR=5.5 **Warramunga Arr**	**134.79**	**225**	PKP	**PKiKP**	**06 59 31.8**	**-0.9**
ZALV	comp=Z,1.1nm,0.8s,baz=123,slow=2.1,SNR=16 **Zalesovo Beam**	**136.37**	**15**	PKP	**PKiKP**	**06 59 33.8**	**-1.1**
MKAR	comp=Z,2.1nm,0.8s,baz=270,slow=1.4,SNR=6.2 **Makanchi Array**	**141.89**	**22**	PKP	**PKPdf**	**06 59 43.3**	**-0.2**
SONM	comp=Z,0.7nm,0.7s,baz=286,slow=3.0,SNR=3.1 **Songino Array**	**144.49**	**355**	PKP	**PKPdf**	**06 59 47.8**	**-0.5**
KSRS	comp=Z,1.9nm,0.9s,baz=0.5,slow=3.0,SNR=8.9 **Korea Array**	**145.97**	**322**	PKPbc	**PKPbc**	**06 59 50.6**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=46,slow=3.6,SNR=4.0						

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*SJA **19** 06:42:20.4±1.1, 23°.07S×66°.73W, h232km±6km, ML4.1, MW3.9*
*NEIC **19** 06:42:21.2±1.4, 23°.12S±0°.08×66°.8W±0°.2, h238km±13km, mb4.1/2, Md4.1(SJA), ML4.5(GUC), Error ellipse: s-maj=21.8km s-min=11.4km az=100.0*
*IDC **19** 06:42:21.0±1.4, 23°.12S×66°.61W, h202km±13km, mb3.3/2, mbtmp3.9/6, Error ellipse: s-maj=31.2km s-min=19.5km az=0.0*
*GUC **19** 06:42:22.9±0.6, 23°.07S×67°.00W, h243km±11km, ML4.5*
ISC 19 06:42:21.2±0.7, 23°.09S±0°.05×66°.75W±0°.05, h222km±7km, n74, σ1§10/98, 7C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.24**	**96**	*i* P	**Pn**	**06 42 56.0**	**+0.6**
AF01	**San Pedro de A**	**1.32**	**276**		**Pn**	**06 42 57.2**	**+1.4**
YJA	**Yavi**	**1.46**	**52**	*i* P	**Pn**	**06 42 58.0**	**+0.9**
YJA				*e*S	**S**	**06 43 25.1**	**+0.2**
AZAP	**Zapla**	**1.92**	**126**	*i* P	**Pn**	**06 43 01.0**	**+0.1**
SLA	**San Lorenzo**	**1.99**	**145**	*i* P	**Pn**	**06 43 02.4**	**+0.9**
SLA				*i* S	**S**	**06 43 33.1**	**+0.4**
LVC	**Limon Verde**	**2.04**	**283**	P	**Pn**	**06 43 02.9**	**+0.7**
LVC	69nm,0.4s,baz=94,slow=7.3,SNR=331 64nm,0.3s,baz=261,slow=21,SNR=40			S	**S**	**06 43 33.8**	**-0.2**
LVC	**Limon Verde**	**2.04**	**283**		**Pn**	**06 43 03.4**	**+1.1**
LVC	**Limon Verde**	**2.04**	**283⇑**	*e*P	**Pn**	**06 43 03.3**	**+1.1**
LVC				*i* S	**S**	**06 43 33.6**	**-0.5**
LVC	**Limon Verde**	**2.04**	**283**	*i* P	**Pn**	**06 43 03.0**	**+0.7**
LVC				*e*S	**S**	**06 43 33.9**	**-0.2**
ASTB	**Santa Barbara**	**2.28**	**113**	*i* P	**Pn**	**06 43 04.4**	**+0.1**
PB15	**IPOC Station P**	**2.50**	**267**		**Pn**	**06 43 07.6**	**+0.9**
PB15	**IPOC Station P**	**2.50**	**267**	*e*P	**Pn**	**06 43 07.6**	**+0.9**
PB15				*i* S	**S**	**06 43 42.0**	**-0.2**
PB15	**IPOC Station P**	**2.50**	**267**	*i* P	**Pn**	**06 43 07.0**	**+0.2**
PB15				*i* S	**S**	**06 43 42.2**	**+0.1**
PB06	**IPOC Station P**	**2.63**	**278**		**Pn**	**06 43 08.8**	**+0.7**
PB06	**IPOC Station P**	**2.63**	**278⇑**	*i* P	**Pn**	**06 43 08.8**	**+0.7**
PB06				*i* S	**S**	**06 43 43.8**	**-0.6**
PB06	**IPOC Station P**	**2.63**	**278**	*i* P	**Pn**	**06 43 09.0**	**+0.9**
PB06				*i* S	**S**	**06 43 44.3**	**-0.2**
PB06				IAML		06 43 45.9	
PB09	comp=Z,455nm,0.3s **IPOC Station P**	**2.64**	**299**		**Pn**	**06 43 09.7**	**+1.5**
PB09	**IPOC Station P**	**2.64**	**299⇑**	*i* P	**Pn**	**06 43 09.6**	**+1.4**
PB09				*i* S	**S**	**06 43 44.9**	**+0.2**
PB09				IAML		06 43 47.3	
PB09	comp=E,566nm,0.8s **IPOC Station P**	**2.64**	**299**	*i* P	**Pn**	**06 43 09.0**	**+0.8**
PB09				*e*S	**S**	**06 43 45.3**	**+0.6**
PB09				IAML		06 43 46.8	
ALOL	comp=Z,462nm,0.8s **LOMAS DE OLMED**	**2.65**	**106**	*i* P	**Pn**	**06 43 08.1**	**0.0**
PB03	**IPOC Station P**	**2.96**	**290**		**Pn**	**06 43 12.4**	**+0.7**
PB03	**IPOC Station P**	**2.96**	**290⇑**	*i* P	**Pn**	**06 43 12.3**	**+0.5**
PB03				*i* S	**S**	**06 43 49.6**	**-1.5**
PB03				IAML		06 43 52.4	
PB03	comp=E,1μm,0.2s **IPOC Station P**	**2.96**	**290**	*i* P	**Pn**	**06 43 12.1**	**+0.3**
PB03				*i* S	**S**	**06 43 50.0**	**-1.2**
PB07	**IPOC Station P**	**3.20**	**294**		**Pn**	**06 43 15.0**	**+0.4**
**PB

GO01	**Chusmiza**	**4.09 326**	⇑*i*P	**Pn**	**06 43 26.3**	**+0.8**
GO01			*i* S	**S**	**06 44 15.8**	**0.0**
GO01	**Chusmiza**	**4.09 326**	*i* P	**Pn**	**06 43 26.0**	**+0.5**
TA02	**Huaiquique**	**4.21 311**		**Pn**	**06 43 26.6**	**+0.2**
TA02	**Huaiquique**	**4.21 311**	⇓*i*P	**Pn**	**06 43 26.8**	**+0.4**
AC02	**Maricunga**	**4.31 210**	Pn	**Pn**	**06 43 28.5**	**+0.4**
AC02	**Maricunga**	**4.31 210**	*i* P	**Pn**	**06 43 28.4**	**+0.4**
AC01	**Pan de Azucar**	**4.64 228**		**Pn**	**06 43 30.9**	**-0.7**
AC06	**Mina Casimiro**	**5.36 217**		**Pn**	**06 43 39.4**	**-1.3**
CYA	**Choya**	**5.40 171**	*i* P	**Pn**	**06 43 41.1**	**-0.1**
GO03	**Copiap**	**5.48 214**		**Pn**	**06 43 41.2**	**-1.0**
AC04	**Llanos de Chal**	**6.41 217**	Pn	**Pn**	**06 43 52.6**	**-1.4**
LCO	**Las Campanas**	**6.88 210**		**Pn**	**06 43 58.5**	**-1.8**
LPAZ	**La Paz**	**6.89 349**	P	**Pn**	**06 44 01.9**	**+1.1**
comp=Z,51nm,0.5s,baz=172,slow=11,SNR=105						
LPAZ	**La Paz**	**6.89 349**	*e*P	**Pn**	**06 44 01.9**	**+1.1**
CO01	**Juntas del Tor**	**7.48 203**	Pn	**Pn**	**06 44 06.8**	**-1.3**
CO03	**El Pedregal**	**8.48 204**		**Pn**	**06 44 18.9**	**-1.8**
ZON	**Zonda**	**8.60 191**		**Pn**	**06 44 20.6**	**-1.6**
SIV	**San Ignacio**	**8.86 38**	P	**Pn**	**06 44 24.4**	**-1.3**
comp=Z,4.2nm,0.4s,baz=245,slow=9.8,SNR=25						
SIV			S	**S**	**06 46 01.0**	**-4.7**
comp=Z,1.8nm,0.7s,baz=119,slow=22,SNR=1.2						
CPUP	**Villa Florida**	**9.16 113**	P	**Pn**	**06 44 27.8**	**-1.5**
comp=Z,1.6nm,1.0s,baz=312,slow=15,SNR=2.1						
VA03	**San Esteban**	**10.21 198**		**Pn**	**06 44 42.0**	**-0.8**
BO01	**Tunca**	**11.88 198**		**Pn**	**06 45 02.9**	**-1.1**
BO02	**Sierra Bellavi**	**12.18 196**	Pn	**Pn**	**06 45 07.3**	**-0.5**
GO06	**Curarrehue**	**16.93 193**	Pn	**P**	**06 46 04.4**	**+0.4**
GO06			IAmb	IAmb	06 46 08.3	
comp=Z,6.1nm,0.7s						
PLCA	**Paso Flores**	**17.88 189**	P	**P**	**06 46 12.9**	**-1.4**
PLCA			IAmb	IAmb	06 46 16.5	
comp=Z,4.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.03 69**	P	**P**	**06 53 44.7**	**+0.1**
comp=Z,1.1nm,0.8s,baz=249,slow=4.3,SNR=1.2						
comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**76.48 329**	P	**P**	**06 53 49.0**	**+2.1**
comp=Z,0.4nm,0.7s,baz=132,slow=6.6,SNR=2.9						
comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**132.54 207**	PKP	**PKiKP**	**07 01 11.7**	**+0.5**
comp=Z,0.2nm,0.6s,baz=154,slow=1.6,SNR=1.7						
MKAR	**Makanchi Array**	**145.68 39**	PKPbc	**PKPab**	**07 01 35.9**	**+1.3**
comp=Z,0.8nm,0.6s,baz=305,slow=3.6,SNR=6.5						

ROM 19 06:44:44.9±0.1, 42°.894N±0°.004×13°.259E±0°.005, h9km, ML1.9/5, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.4km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**291**	P	Pg	06 44 47.0	0.0
MC2				S	Sg	06 44 48.5	-0.2
MC2	**Monte Cornacci**	**0.05**	**291**	P	Pg	06 44 47.0	-0.1
MC2				S	Sg	06 44 48.3	-0.4
T1245	**Castelsantange**	**0.06**	**234**	P	Pg	06 44 47.2	+0.1
T1245				S	Sg	06 44 48.7	0.0
T1245				AML	AML		
comp=E,2845μm,0.5s							
T1245				AML	AML		
comp=N,2135μm,0.2s							
T1245				AML	AML		
comp=E,2610μm,0.5s							
T1245				AML	AML		
comp=N,2050μm,0.2s							
T1245				AML	AML		
comp=N,2050μm,0.2s							
T1245				AML	AML		
comp=N,2135μm,0.2s							
T1245				AML	AML		
comp=E,2610μm,0.5s							
T1245				AML	AML		
comp=E,2845μm,0.5s							
T1245	**Castelsantange**	**0.06**	**234**	P	Pg	06 44 47.2	+0.1
T1245				S	Sg	06 44 48.6	-0.1
NRCA	**Norcia**	**0.12**	**241**	P	Pg	06 44 48.2	+0.5
NRCA				S	Sg	06 44 50.6	+0.8
NRCA				AML	AML		
comp=E,850μm,0.1s							
NRCA				AML	AML		
comp=N,802μm,0.1s							
NRCA				AML	AML		
comp=N,801μm,0.1s							
NRCA				AML	AML		
comp=E,850μm,0.1s							
NRCA	**Norcia**	**0.12**	**241**	P	Pg	06 44 48.2	+0.4
NRCA				S	Sg	06 44 50.5	+0.7
NRCA				AML	AML		
comp=E,782μm,0.1s							
NRCA				AML	AML		
comp=N,750μm,0.1s							
NRCA				AML	AML		
comp=N,802μm,0.1s							
NRCA				AML	AML		
comp=N,801μm,0.1s							
NRCA				AML	AML		
comp=E,850μm,0.1s							
T1216	**Preci, Frazion**	**0.18**	**269**	P	Pg	06 44 49.2	+0.5
T1216				S	Sg	06 44 52.4	+1.2
T1216	**Preci, Frazion**	**0.18**	**269**	P	Pg	06 44 49.2	+0.5
T1216				S	Sg	06 44 52.4	+1.1
GUMA	**Gualdo di Mace**	**0.18**	**18**	P	Pg	06 44 49.4	+0.7
GUMA				S	Sg	06 44 52.9	+1.6
GUMA				AML	AML		
comp=E,552μm,0.3s							
GUMA				AML	AML		
comp=N,294μm,0.3s							
GUMA				AML	AML		
comp=E,552μm,0.3s							
GUMA				AML	AML		
comp=N,294μm,0.3s							
GUMA	**Gualdo di Mace**	**0.18**	**18**	P	Pg	06 44 49.4	+0.8
GUMA				S	Sg	06 44 52.9	+1.6
T1202	**Accumoli, Fraz**	**0.19**	**187**	P	Pg	06 44 49.7	+0.8
T1202				S	Sg	06 44 53.6	+1.9
T1202	**Accumoli, Fraz**	**0.19**	**187**	P	Pg	06 44 49.7	+0.8
T1202				S	Sg	06 44 53.6	+1.9
T1204	**Amatrice, Fraz**	**0.22**	**169**	P	Pg	06 44 50.1	+0.6
T1243	**Rocca Santa Ma**	**0.24**	**145**	P	Pg	06 44 50.2	+0.4
T1243				S	Sg	06 44 54.6	+1.4
T1243	**Rocca Santa Ma**	**0.24**	**145**	P	Pg	06 44 50.2	+0.4
T1243				S	Sg	06 44 54.5	+1.3
SMA1	**SAN MARTINO**	**0.27**	**168**	P	Pg	06 44 50.8	+0.5
SMA1	**SAN MARTINO**	**0.27**	**168**	P	Pg	06 44 50.8	+0.5
CESI	**CESI - Serrava**	**0.28**	**293**	P	Pg	06 44 51.1	+0.5
CESI				S	Sb	06 44 56.0	-1.0
CESI				AML	AML		
comp=N,278μm,0.5s							
CESI				AML	AML		
comp=E,137μm,0.4s							
T1215	**Vallo di Nera,**	**0.30**	**252**	P	Pg	06 44 51.5	+0.5
T1215				S	Sb	06 44 56.6	-0.9
T1217	**Poggiodomo (PG**	**0.30**	**233**	P	Pg	06 44 48.7	-2.2
T1217	**Poggiodomo (PG**	**0.30**	**233**	P	Pg	06 44 48.7	-2.2
LNSS	**Leonessa**	**0.33**	**209**	P	Pg	06 44 52.1	+0.6
LNSS				S	Sb	06 44 58.0	-0.4
LNSS				AML	AML		
comp=E,241μm,0.3s							
LNSS				AML	AML		
comp=N,152μm,0.6s							
LNSS				AML	AML		
comp=E,241μm,0.3s							
LNSS				AML	AML		
comp=N,152μm,0.6s							
LNSS	**Leonessa**	**0.33**	**209**	⇑P	Pg	06 44 52.1	+0.6
T1246	**Crognaleto (TE**	**0.35**	**151**	P	Pg	06 44 52.5	+0.6
T1246				S	Sb	06 44 58.1	-1.0
TERO	**Teramo**	**0.37**	**137**	P	Pg	06 44 52.5	+0.2
TERO				S	Sb	06 44 58.8	-0.7
TERO				AML	AML		
comp=E,57μm,1.2s							
TERO				AML	AML		
comp=N,67μm,1.1s							
TERO				AML	AML		
comp=N,67μm,1.1s							
TERO				AML	AML		
comp=E,57μm,1.2s							
TERO	**Teramo**	**0.37**	**137**	P	Pg	06 44 52.5	+0.3
TERO				S	Sb	06 44 58.8	-0.8
CAMP	**Campotosto**	**0.37**	**163**	P	Pg	06 44 52.8	+0.5
CAMP				S	Sb	06 44 58.9	-0.8
SNTG	**Esanatoglia**	**0.43**	**327**	P	Pg	06 44 53.6	+0.3
SNTG				S	Sb	06 45 00.8	-0.5
SNTG				AML	AML		
comp=N,28μm,1.3s							
SNTG				AML	AML		
comp=E,30μm,0.7s							
EL6	**Elcito**	**0.45**	**345**	P	Pb	06 44 54.9	-0.1
EL6				S	Sb	06 45 02.0	+0.1
ASSB	**Assisi San Ben**	**0.47**	**289**	P	Pg	06 44 54.2	+0.3
ASSB				S	Sb	06 45 01.7	-0.5
ASSB				AML	AML		
comp=E,63μm,1.6s							
ASSB				AML	AML		
comp=N,84μm,0.2s							
T1211	**Morro Reatino**	**0.47**	**220**	P	Pg	06 44 54.1	+0.1
T1211				S	Sb	06 45 02.0	-0.4
GIGS	**Gran Sasso**	**0.50**	**153**	⇓P	Pb	06 44 55.3	-0.5
GIGS	**Gran Sasso**	**0.50**	**153**	⇓P	Pb	06 44 55.3	-0.5

*IDC **19** 07:20:44.0±1.0, 24°.71N×91°.15E, h0km, mb3.7/7, mbtmp3.8/9, ML3.7/1, MS3.3/4, Error ellipse: s-maj=45.1km s-min=12.0km az=71.0*
*NDI **19** 07:20:47.1±3.8, 24°.84N×91°.08E, h14km±12km, ML4.4, mb4.4(NEIC)*
*DMN **19** 07:20:47.7±0.3, 24°.27N×90°.85E, h10km, Ml4.9/4, Error ellipse: s-maj=27.6km s-min=6.0km az=35.0*
*BJI **19** 07:20:48.8±0.0, 25°.06N×91°.45E, h25km, mb4.3/12, mB4.8/4*
*NEIC **19** 07:20:49.2±1.7, 24°.79N±0°.04×91°.22E±0°.09, h30km±5km, mb4.4/19, Error ellipse: s-maj=12.0km s-min=5.5km az=104.0*
ISC 19 07:20:46.9±1.4, 24°.81N±0°.04×91°.11E±0°.03, h16km±10km, n61, σ1°.77/69, mb4.1/14, MS3.4/4, 1C, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.93**	**172**	*e*Pg	**Pg**	**07 21 05.3**	**+0.4**
AGT				*i* Sg	**Sn**	**07 21 19.4**	**+1.1**
AGT				IAML		07 21 21.7	
comp=E,11μm,0.3s							
AGT				IAML		07 21 21.8	
comp=N,9μm,0.3s							
SHL	**Shillong**	**1.03**	**43**	Pn	**Pb**	**07 21 06.0**	**-0.6**
SHL				Sn	**Sb**	**07 21 19.5**	**-0.4**
SHL	**Shillong**	**1.03**	**43**	*e*P	**Pb**	**07 21 06.0**	**-0.6**
SHL				*e*S	**Sb**	**07 21 19.6**	**-0.4**
SHL				IAML		07 21 20.6	
comp=E,8μm,0.2s							
SHL				IAML		07 21 20.9	
comp=N,8μm,0.2s							
SILR	**SILCHAR**	**1.54**	**91**	*e*P	**Pb**	**07 21 15.3**	**+0.2**
SILR				*e*S	**Sg**	**07 21 35.4**	**-1.3**
SILR				IAML		07 21 49.8	
comp=N,4μm,0.3s							
SILR				IAML		07 21 51.1	
comp=E,4μm,0.6s							
DHUB	**DHUBRI**	**1.57**	**321**	*e*Pg	**Pb**	**07 21 15.9**	**+0.4**
DHUB				*i* Sg	**Sb**	**07 21 37.0**	**+1.8**
DHUB				IAML		07 21 38.1	
comp=N,7μm,0.2s							
DHUB				IAML		07 21 38.3	
comp=E,8μm,0.3s							
BRDH	**Bariadhala**	**2.18**	**167**	Pn	**Pn**	**07 21 22.1**	**-0.3**
comp=E,28nm,0.3s,baz=348,slow=20,SNR=1.3							
BRDH				Lg	Lg	07 21 48.6	
comp=E,284nm,0.3s,baz=158,slow=18,SNR=16							
comp=E,104nm,0.3s							
TEZP	**TEZPUR**	**2.36**	**40**	*e*P	**Pn**	**07 21 25.1**	**0.0**
TEZP				*e*S	**Sn**	**07 21 52.6**	**-1.2**
TEZP				IAML		07 22 01.4	
comp=N,3μm,0.2s							
TEZP				IAML		07 22 01.7	
comp=E,2μm,0.1s							
IMP	**Imphal**	**2.58**	**89**	*e*P	**Pn**	**07 21 29.6**	**+1.4**
KOHI	**KOHIMA**	**2.87**	**71**	*e*P	**Pn**	**07 21 33.1**	**+1.0**
KOHI				*e*S	**Sn**	**07 22 05.6**	**-0.8**
ITAN	**ITANAGAR**	**3.31**	**45**	*e*P	**Pn**	**07 21 39.4**	**+1.3**
ITAN				*e*S	**Sn**	**07 22 16.4**	**-0.8**
ITAN				IAML		07 22 18.8	
comp=E,4μm,0.3s							
ITAN				IAML		07 22 19.3	
comp=N,6μm,0.2s							
GTK	**Tadong**	**3.37**	**319**	*e*P	**Pb**	**07 21 43.9**	**-2.4**
RAMN	**Ramite**	**4.59**	**299**	*e*Pn	**Pn**	**07 21 56.5**	**+0.7**
BOK	**Bokaro**	**4.87**	**259**	*e*P	**Pn**	**07 21 59.6**	**+0.1**
BOK				*i* x	x	07 22 08.7	
LSA	**Lhasa**	**4.88**	**0**	Pn	**Pn**	**07 22 02.2**	**+2.2**
LSA	**Lhasa**	**4.88**	**0**	P	**Pn**	**07 22 02.3**	**+2.2**
JIRN	**Jiri**	**5.25**	**304**	*e*Pn	**Pn**	**07 22 06.4**	**+1.3**
JIRN				*e*Sn	**Sn**	**07 23 04.5**	**-1.0**
comp=N,202nm,0.3s							
GUN	**Gumba**	**5.62**	**305**	*e*Pn	**Pn**	**07 22 11.3**	**+1.2**
GUN				*e*Sn	**Sn**	**07 23 13.8**	**-0.7**
comp=N,290nm,0.4s							
PKI	**Pulchoki**	**5.81**	**300**	*e*Pn	**Pn**	**07 22 13.6**	**+0.8**
PKIN	**Phulchoki**	**5.82**	**300**	*e*Pn	**Pn**	**07 22 13.7**	**+0.8**
DMN	**Daman**	**6.07**	**299**	*e*Pn	**Pn**	**07 22 17.1**	**+0.9**
GKN	**Gorkha**	**6.62**	**300**	*e*Pn	**Pn**	**07 22 24.1**	**+0.4**
GKN				*e*Sn	**Sn**	**07 23 35.9**	**-3.0**
comp=N,188nm,0.3s							
BWNR	**Bhubaneshwar**	**6.64**	**229**	*e*S	**Sn**	**07 23 32.9**	**-6.4**
DANN	**Dangsing**	**7.46**	**300**	*e*Pn	**Pn**	**07 22 35.2**	**-0.2**
DANN				*e*Sn	**Sn**	**07 23 56.0**	**-3.9**
PYUN	**Piuthan**	**7.98**	**296**	*e*Pn	**Pn**	**07 22 41.5**	**-0.9**
PYUN				*e*Sn	**Sn**	**07 24 08.0**	**-4.5**
comp=N,112nm,0.5s							
CMAR	**Chiang Mai Arr**	**9.64**	**129**	Pn	**Pn**	**07 23 04.0**	**-1.1**
comp=N,1.5nm,0.3s,baz=311,slow=13,SNR=5.6							
JBP	**Jabalpur**	**10.30**	**263**	*ex*	Pn	07 23 22.8	+8.7
JBP				*ex*	x	07 25 23.1	
GOMU	**GeErMu**	**11.79**	**15**	P	**Pn**	**07 23 34.0**	**-0.8**
GOMU				pP		07 23 37.4	
GOMU				pmax	pmax		
comp=N,8.0nm,0.5s							
GOMU				pmax	pmax		
comp=N,94nm,6.1s							
HYBB	**Hyderabad (bro**	**13.82**	**240**	*e*Pn	**Pn**	**07 24 03.9**	**+1.6**
HYBB				*e*Sn	**Sn**	**07 26 38.6**	**+3.0**
UBPT	**Khong Chiam**	**16.48**	**122**		**Pn**	**07 24 38.3**	**+0.8**
UBPT				IAmb	IAmb	07 25 14.5	
comp=Z,21nm,1.3s							
XAN	**Xi'an**	**18.02**	**55**	⇑P	**Pn**	**07 24 51.3**	**-5.5**
XAN				pP	P	07 24 58.8	+1.6
XAN				pmax	pmax		
comp=Z,6.0nm,0.7s							
KSH	**Kashi**	**19.43**	**323**	P	**Pn**	**07 25 17.8**	**+3.8**
KSH				pmax	pmax		
comp=Z,5.0nm,0.4s							
TARG	**Taragay, Kyrgy**	**20.17**	**330**	P	Pn	07 25 22.7	-0.3
AAK	**Ala-Archa**	**22.45**	**326**	P	**P**	**07 25 46.2**	**+0.8**
comp=Z,0.7nm,0.4s,baz=110,slow=15,SNR=2.0							
comp=Z,0.7nm,0.4s							
GAR	**Garm**	**22.55**	**314**	P	**P**	**07 25 46.8**	**+0.3**
GAR				IAmb	IAmb	07 25 58.3	
comp=Z,24nm,1.4s							
BTK	**Batken**	**22.82**	**317**	P	**P**	**07 25 50.3**	**+1.0**
BTK				IAmb	IAmb	07 26 05.0	
comp=Z,8.1nm,1.0s							
MK31	**Makanchi Array**	**23.05**	**344**	P	**P**	**07 25 52.9**	**+1.5**
MKAR	**Makanchi Array**	**23.05**	**344**	P	**P**	**07 25 50.9**	**-0.6**
comp=Z,1.6nm,0.6s,baz=162,slow=9.3,SNR=13							
comp=Z,1.6nm,0.6s							
MKAR	**Makanchi Array**	**23.05**	**344**	P	**P**	**07 25 52.9**	**+1.5**
KKAR	**Karatay Array**	**24.89**	**322**	P	**P**	**07 26 10.4**	**+1.5**
SONM	**Songino Array**	**25.98**	**24**	P	**P**	**07 26 19.2**	**+0.2**
comp=Z,1.1nm,0.7s,baz=206,slow=9.5,SNR=4.8							
comp=Z,1.1nm,0.7s							
SONM	**Songino Array**	**25.98**	**24**	P	**P**	**07 26 18.1**	**-0.9**
ULN	**Ulaanbaatar**	**26.25**	**25**	P	**P**	**07 26 21.8**	**+0.4**
ULN				IAmb	IAmb	07 26 34.8	
comp=Z,7.4nm,1.1s							
KURBB	**Kurchatov Arra**	**27.55**	**343**	P	**P**	**07 26 33.7**	**+0.9**
comp=Z,0.8nm,0.8s,baz=154,slow=9.9,SNR=4.6							
comp=Z,0.8nm,0.8s							
KSRS	**Korea Array**	**33.73**	**59**	LR	LR	07 42 19.2	
comp=Z,18nm,18.4s,baz=200,slow=38							
ABKAR	**Akbulak array**	**34.44**	**323**	P	**P**	**07 27 33.9**	**+0.2**
ARU	**Arti**	**39.42**	**332**	LR	LR	07 44 43.7	
comp=Z,50nm,19.6s,baz=314,slow=36							
BELG	**Belogornoye**	**42.79**	**322**	LR	LR	07 49 13.7	
comp=Z,46nm,21.4s,baz=118,slow=40							
ARCES	**ARCESS Array B**	**58.49**	**338**	P	**P**	**07 30 42.8**	**+0.8**
comp=Z,0.7nm,0.8s,baz=115,slow=8.0,SNR=1.5							
comp=Z,0.7nm,0.8s							
WB0	**Warramunga Arr**	**61.13**	**132**	P	**P**	**07 30 59.5**	**-1.3**
WRA	**Warramunga Arr**	**61.22**	**133**	P	**P**	**07 31 00.1**	**-1.2**
comp=Z,0.9nm,0.7s,baz=325,slow=7.0,SNR=19							
comp=Z,0.9nm,0.7s							
WRA	**Warramunga Arr**	**61.22**	**133**	P	**P**	**07 31 00.1**	**-1.2**
WRAB	**Tennant Creek**	**61.22**	**133**	P	**P**	**07 31 00.7**	**-0.7**
WRAB				IAmb	IAmb	07 31 24.5	
comp=Z,3.2nm,1.0s							
WB2	**Warramunga Arr**	**61.23**	**133**	P	**P**	**07 31 00.2**	**-1.2**
ASAR	**Alice Springs**	**63.59**	**136**	P	**P**	**07 31 16.1**	**-1.1**
comp=Z,0.6nm,0.7s,baz=320,slow=7.4,SNR=6.9							
comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**63.59**	**136**	P	**P**	**07 31 18.1**	**+1.0**
BMAR	**Burnt Mountain**	**79.22**	**19**	P	**P**	**07 32 50.4**	**-0.6**
MDM	**Murphy Dome**	**79.61**	**22**	P	**P**	**07 32 53.2**	**+0.1**
MDM				IAmb	IAmb	07 32 56.7	
comp=Z,9.8nm,1.4s							
SKT	**Skwentna**	**80.18**	**25**	P	**P**	**07 32 55.7**	**-0.5**
RES	**Resolute Bay**	**80.67**	**2**	LR	LR	08 10 43.1	
comp=Z,30nm,18.4s,baz=21,slow=37							
J25K	**Salcha River,**	**80.79**	**21**	P	**P**	**07 32 58.5**	**-1.1**
J25K				IAmb	IAmb	07 33 16.2	
comp=Z,4.4nm,1.4s							
SCRK	**Sand Creek**	**81.66**	**21**	P	**P**	**07 33 03.9**	**-0.4**
SCRK				IAmb	IAmb	07 33 29.4	
comp=Z,5.9nm,1.2s							

KRSZO 19 07:34:35.2±1.3, 48°.41N×19°.11E, h5km±10km, ML1.9/6, Error ellipse: s-maj=5.9km s-min=4.2km az=25.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
A336A	**Medovarce**	**0.19**	**204**	Pg	Pg	07 34 39.5	+0.6
comp=Z,3.0nm,SNR=98							
A336A				Lg	Lg	07 34 42.4	
VYHS	**Vyhne**	**0.20**	**295**	Pg	Pg	07 34 39.5	+0.3
comp=Z,0.1nm,SNR=37							
VYHS				Lg	Lg	07 34 42.7	
A335A	**Lovce**	**0.52**	**275**	Pg	Pg	07 34 45.5	+0.3
comp=Z,0.1nm,SNR=5.6							
PSZ	**Piszkesteto**	**0.72**	**133**	Pg	Pb	07 34 50.2	0.0
comp=Z,0.1nm,SNR=2.5							
PSZ				Lg	Lg	07 35 00.2	
PSZ	**Piszkesteto**	**0.72**	**133**	P	Pb	07 34 50.2	0.0
PSZ				S	Sb	07 35 00.2	-0.2
KECS	**Kecovo**	**0.92**	**85**	Pg	Pb	07 34 53.6	0.0
comp=Z,0.1nm,SNR=2.3							
KECS				Lg	Lg	07 35 07.5	
JAVC	**Velka Javorina**	**1.06**	**296**	*e*PG	Pb	07 34 56.3	+0.2
JAVC				*e*SG	Sn	07 35 11.9	-0.1
JAVC	**Velka Javorina**	**1.06**	**296**	Pg	Pb	07 34 56.4	+0.4
comp=Z,0.1nm,SNR=2.0							
JAVC				Sn	Sn	07 35 12.0	0.0
CSKK	**Cskako**	**1.19**	**209**	Sn	Sn	07 35 15.2	0.0
CSKK	**Cskako**	**1.19**	**209**	S	Sn	07 35 15.2	0.0
EGYH	**Egyhazaskeszo**	**1.56**	**231**	Sn	Sn	07 35 23.9	-0.3
EGYH	**Egyhazaskeszo**	**1.56**	**231**	S	Sn	07 35 23.9	-0.3
MORC	**Moravsky Berou**	**1.72**	**324**	Sn	Sn	07 35 27.8	-0.4

VIE 19 07:34:55.0±0.9, 47°.85N×16°.75E, h0km, mb1.0/1, ml1.2/2, Error ellipse: s-maj=6.1km s-min=2.7km az=113.0 7 km NE of Rohrbach im Mhlviertel Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RONA	**Rosalia, Austr**	**0.34**	**244**	*e*Pg	Pg	07 35 01.7	+0.2
1.1nm,0.2s							
RONA				*e*Sg	Sg	07 35 06.5	+0.7
3.2nm,0.2s							
CONA	**Conrad Observa**	**0.60**	**278**	*e*Pg	Pg	07 35 06.1	-0.4
0.3nm,0.1s							
CONA				Sg	Sg	07 35 13.7	-0.6
2.8nm,0.4s							

*IDC **19** 07:35:54.5±1.1, 28°.35S×176°.20W, h0km, mb3.9/5, mbtmp3.9/5, MS3.5/5, Error ellipse: s-maj=49.5km s-min=21.3km az=153.0*
ISC 19 07:35:59.6±0.8, 28°.4S±0°.2×176°.2W±0°.1, h36km, n24, σ0°.68/16, mb3.9/5, MS3.7/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.77**	**239**	Pn	**Pn**	**07 36 27.8**	**+0.2**
46nm,0.3s,baz=112,slow=19,SNR=3.9							
RAO				Sn	**Sn**	**07 36 49.1**	**+0.2**
164nm,0.3s,baz=103,slow=23,SNR=12							
URZ	**Urewera**	**11.35**	**208**	Pn	Pn	07 38 30.4	-8.7
0.1nm,0.3s,baz=8.8,slow=16,SNR=1.5							
URZ				Sn	Sn	07 40 34.6	-10
0.6nm,0.3s,baz=67,slow=20,SNR=2.0							
DZM	**Mont Dzumac**	**16.92**	**288**	LR	LR	07 44 45.6	
comp=Z,61nm,19.2s,baz=88,slow=31							
CTA	**Charters Tower**	**35.12**	**275**	P	**P**	**07 42 50.6**	**+0.8**
1.8nm,0.6s,baz=100,slow=12,SNR=1.9							
CTA				LR	LR	07 56 22.4	
comp=Z,45nm,18.8s,baz=80,slow=35							
1.8nm,0.6s							
STKA	**Stephens Creek**	**36.53**	**254**	P	**P**	**07 43 02.0**	**+0.2**
1.7nm,0.8s,baz=138,slow=6.5,SNR=4.3							
1.7nm,0.8s							
ASAR	**Alice Springs**	**44.85**	**264**	P	**P**	**07 44 09.6**	**-1.0**
0.7nm,0.8s,baz=98,slow=6.6,SNR=6.9							
0.7nm,0.8s							
WRA	**Warramunga Arr**	**45.66**	**269**	P	**P**	**07 44 16.3**	**-0.8**
1.0nm,0.6s,baz=108,slow=7.5,SNR=6.7							
1.0nm,0.6s							
SNAA	**Sanae**	**80.14**	**178**	P	**P**	**07 48 05.4**	**-0.2**
VNA3	**Neumayer Olymp**	**80.22**	**176**	P	**P**	**07 48 05.6**	**-0.4**
H03S2	**Juan Fernandez**	**80.25**	**123**	T	T	09 16 12.8	
baz=241							
H03S1	**Juan Fernandez**	**80.27**	**123**	T	T	09 16 15.6	
baz=241							
H03S3	**Juan Fernandez**	**80.27**	**123**	T	T	09 16 16.6	
baz=241							
VNA2	**Neumayer--Watz**	**80.67**	**176**	P	**P**	**07 48 08.5**	**+0.1**
baz=163,slow=6.0							
VNA1	**Neumayer--Stat**	**80.89**	**176**	P	**P**	**07 48 09.6**	**+0.1**
NVAR	**Mina Array Bea**	**85.67**	**42**	P	**P**	**07 48 35.9**	**+1.0**
0.4

*IDC **19** 07:54:19.6±10.0, 8°.57S×116°.19E, h150km±94km, mb2.7/3, mbtmp3.3/4, Error ellipse: s-maj=94.2km s-min=24.3km az=63.0*

ISC 19 07:54:16.4±1.1, 8°.8S±0°.1×116°.11E±0°.05, h103km, n18, σ1§40/18, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNI	**Mataram**	**0.34**	**357**	P	**Pn**	**07 54 32.2**	**+0.6**
KLNI				S	**Sn**	**07 54 43.4**	**+0.5**
TWSI	**Taliwang, Sumb**	**0.76**	**88**	P	**Pn**	**07 54 35.5**	**+0.8**
TWSI				S	**Sn**	**07 54 48.9**	**+0.5**
IGBI	**Denpasar**	**0.96**	**267**	P	**Pn**	**07 54 38.3**	**+1.7**
SRBI	**Singaraja**	**1.12**	**307**	P	**Pn**	**07 54 40.4**	**+2.0**
RTBI	**Rangdo, Negare**	**1.20**	**285**	P	**Pn**	**07 54 40.8**	**+1.5**
PLAI	**Plampang**	**1.65**	**92**	P	**Pn**	**07 54 46.1**	**+1.4**
JAGI	**Jajag, Banyuwa**	**1.96**	**278**	P	**Pn**	**07 54 49.6**	**+0.9**
PCJI	**Pacitan**	**4.92**	**276**	P	**Pn**	**07 55 28.5**	**+0.4**
BSSI	**Bau Bau, Buton** 0.2nm61nm,1.3s	**5.06**	**59**	P	**Pn**	**07 55 31.5**	**+1.4**
KAPI	**Kappang** 7.5nm,0.3s,baz=236,slow=11,SNR=1.3	**5.19**	**44**	P	**Pn**	**07 55 33.2**	**+1.4**
KAPI	3.9nm,0.3s,baz=203,slow=22,SNR=1.5			S	**Sn**	**07 56 30.9**	**+0.4**
BKSI	**Bulukumba** 0.1nm19nm,0.5s	**5.25**	**50**	P	**Pn**	**07 55 34.0**	**+1.4**
UGM	**Wanagama** 0.7nm113nm,1.5s	**5.60**	**278**	P	**Pn**	**07 55 38.6**	**+1.2**
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=300,slow=12,SNR=2.2 0.4nm,0.9s	**20.84**	**124**	P	**P**	**07 58 50.0**	**-0.1**
ASAR	**Alice Springs** 0.5nm,0.7s,baz=305,slow=8.6,SNR=5.2 0.5nm,0.7s	**22.57**	**133**	P	**P**	**07 59 08.4**	**0.0**
H08S2	**Diego Garcia H** baz=95	**43.17**	**268**	T	T	08 47 57.2	
H08S3	**Diego Garcia H** baz=95	**43.18**	**268**	T	T	08 48 08.4	
H08S1	**Diego Carcia H** baz=95	**43.19**	**268**	T	T	08 47 56.3	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=154,slow=7.5,SNR=2.0 0.1nm,0.3s	**62.99**	**335**	P	**P**	**08 04 29.5**	**-2.8**

*NNC **19** 08:27:43.9±2.6, 53°.50N×87°.79E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=20.1km s-min=11.2km az=64.0, Suspected Mining explosion.*

IDC 19 08:27:43.4±2.7, 53°.58N×87°.88E, h0km, mbtmp3.3/2, ML3.1/2, 7C-4D, Error ellipse: s-maj=22.9km s-min=15.4km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=96,slow=343,SNR=3.6	**1.85**	**283**	I		08 40 50.0	
ZAA0	**Zalesovo Array** 0.6nm,0.4s	**1.85**	**283**	⇓Pn	Pn	08 28 15.3	-1.1
ZAA0	2.6nm,0.4s			⇑Sn	Sb	08 28 41.4	-0.5
ZALV	**Zalesovo Beam** 3.7nm,0.3s,baz=101,slow=15,SNR=25	**1.85**	**283**	Pn	Pn	08 28 16.5	+0.1
ZALV	5.3nm,0.3s,baz=106,slow=28,SNR=9.2			Lg	Lg	08 28 41.2	
KURK	**Kurchatov** 5.9nm,1.3s	**6.38**	**247**	⇑Pn	Pn	08 29 19.3	+0.7
KURK	5.7nm,1.2s			⇓Sn	Sn	08 30 30.8	-1.3
KURK	7.9nm,0.9s			⇑Lg	Lg	08 31 05.3	
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=60,slow=14,SNR=13	**6.48**	**247**	Pn	Pn	08 29 20.9	+1.0
KURBB	0.1nm,0.3s,baz=64,slow=25,SNR=5.5			Sn	Sn	08 30 34.2	-0.2
KURBB	0.1nm,0.3s,baz=63,slow=32,SNR=6.4 1.6nm,0.4s			Lg	Lg	08 31 08.4	
KURBB	**Kurchatov Arra** 2.0nm,0.3s	**6.48**	**247**	⇓Pn	Pn	08 29 20.7	+0.8
KURBB	8.9nm,0.8s			⇑Sn	Sn	08 30 33.8	-0.7
KURBB	12nm,0.8s			⇑Lg	Lg	08 31 09.5	
MK31	**Makanchi Array** 0.2nm,0.3s,baz=30,slow=14,SNR=8.7	**7.68**	**210**	⇑Pn	Pn	08 29 37.8	+1.3
MK31	3.8nm,0.9s,baz=28,slow=24,SNR=3.6			⇑Sn	Sn	08 31 01.7	-2.5
MK31	6.2nm,0.9s,baz=30,slow=32,SNR=3.5			⇓Lg	Lg	08 31 42.0	
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=30,slow=14,SNR=13	**7.68**	**210**	Pn	Pn	08 29 37.5	+1.0
MKAR	0.2nm,0.3s,baz=25,slow=22,SNR=5.7			Sn	Sn	08 31 03.6	-0.6
MKAR	0.1nm,0.3s,baz=27,slow=27,SNR=2.2 0.6nm,0.3s			Lg	Lg	08 31 43.6	

*RSPR **19** 08:46:02.5, 18°.38N×67°.96W, h96km±1km, MD3.4/17*
*OSPL **19** 08:46:02.6±2.9, 17°.82N×67°.97W, h7km±12km, ML3.1*
*NEIC **19** 08:46:02.6±1.4, 18°.33N±0°.10×67°.97W±0°.04, h93km±5km, Error ellipse: s-maj=14.4km s-min=5.3km az=191.0*

ISC 19 08:46:03.0±1.0, 18°.25N±0°.07×67°.92W±0°.03, h94km, n71, σ1§25/83, 18C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.45**	**72**	⇑*e*P	**Pn**	**08 46 17.0**	**-0.7**
IDE	**Isla Desecheo**	**0.45**	**72**	*e*S	**Sn**	**08 46 28.3**	**-0.4**
PCDR	**Punta Cana, DR**	**0.51**	**301**	⇑*e*P	**Pn**	**08 46 16.5**	**-1.7**
PCDR	**Punta Cana, DR**	**0.51**	**301**		**Pn**	**08 46 16.5**	**-1.7**
PCDR	**Punta Cana, DR**	**0.51**	**301**	*i* P	**Pn**	**08 46 16.5**	**-1.7**
PCDR				*e*S	**Sn**	**08 46 27.8**	**-1.8**
PCDR	comp=Z,220nm,0.4s			IAML		08 46 30.1	
PRSN	**Puerto Rico Se**	**0.74**	**92**	⇑*e*P	**Pn**	**08 46 20.1**	**-0.1**
PRSN	**Puerto Rico Se**	**0.74**	**92**	*e*S	**Sn**	**08 46 33.4**	**+0.3**
PRSN	**Puerto Rico Se**	**0.74**	**92**		**Pn**	**08 46 20.1**	**-0.1**
PRSN					**Sn**	**08 46 33.4**	**+0.3**
LSP	**Las Mesas**	**0.80**	**95**	⇑*e*P	**Pn**	**08 46 20.7**	**-0.1**
LSP	**Las Mesas**	**0.80**	**95**	*e*S	**Sn**	**08 46 34.8**	**+0.6**
AGPR	**Aguadilla, PR**	**0.80**	**74**	⇑*e*P	**Pn**	**08 46 20.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.80**	**74**	*e*S	**Sn**	**08 46 34.3**	**+0.1**
AGPR	**Aguadilla, PR**	**0.80**	**74**		**Pn**	**08 46 20.5**	**-0.3**
AGPR					**Sn**	**08 46 34.3**	**+0.1**
AGPR	**Aguadilla, PR** comp=E,2μm,0.5s	**0.80**	**74**	IAML		08 46 36.1	
AGPR	comp=N,1μm,0.3s			IAML		08 46 36.7	
AGPR	**Aguadilla, PR**	**0.80**	**74**	*i* P	**Pn**	**08 46 20.5**	**-0.3**
AGPR				*e*S	**Sn**	**08 46 35.0**	**+0.8**
AGPR	comp=Z,561nm,0.3s			IAML		08 46 35.8	
MLPR	**Magueyes Islan**	**0.88**	**108**	⇑*e*P	**Pn**	**08 46 21.4**	**-0.2**
MLPR	**Magueyes Islan**	**0.88**	**108**	*e*S	**Sn**	**08 46 36.5**	**+0.9**
MLPR	**Magueyes Islan**	**0.88**	**108**		**Pn**	**08 46 21.4**	**-0.2**
MLPR					**Sn**	**08 46 36.5**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.03**	**105**	⇑*e*P	**Pn**	**08 46 24.0**	**+0.8**
GBPR	**Guanica, Bosqu**	**1.03**	**105**	*e*S	**Sn**	**08 46 39.4**	**+0.9**
AOPR	**Arecibo Observ**	**1.11**	**85**	⇑*e*P	**Pn**	**08 46 23.8**	**-0.5**
AOPR	**Arecibo Observ**	**1.11**	**85**	*e*S	**Sn**	**08 46 40.6**	**+0.3**
AOPR	**Arecibo Observ**	**1.11**	**85**		**Pn**	**08 46 23.8**	**-0.5**
AOPR					**Sn**	**08 46 40.6**	**+0.3**
CELP	**Cerrillos**	**1.29**	**98**	⇑*e*P	**Pn**	**08 46 26.5**	**+0.2**
CELP	**Cerrillos**	**1.29**	**98**	*e*S	**Sn**	**08 46 44.4**	**+0.5**
CELP	**Cerrillos**	**1.29**	**98**		**Pn**	**08 46 26.5**	**+0.2**
CELP					**Sn**	**08 46 44.4**	**+0.5**
CELP	**Cerrillos** comp=N,292nm,0.4s	**1.29**	**98**	IAML		08 46 48.6	
SJG	**San Juan**	**1.69**	**94**		**Pn**	**08 46 30.8**	**-0.6**
SJG	comp=N,238nm,0.3s			IAML		08 46 55.7	
SJG	comp=N,283nm,0.3s			IAML		08 46 57.3	
GCPR	**Guaynabo City**	**1.75**	**88**	⇑*e*P	**Pn**	**08 46 30.9**	**-1.1**
GCPR	**Guaynabo City**	**1.75**	**88**	*e*S	**Sn**	**08 46 53.8**	**-0.4**
GCPR	**Guaynabo City**	**1.75**	**88**		**Pn**	**08 46 30.9**	**-1.1**
GCPR					**Sn**	**08 46 53.8**	**-0.4**
IGPR	**InterUniversit**	**1.75**	**99**	⇑*e*P	**Pn**	**08 46 32.1**	**+0.1**
IGPR	**InterUniversit**	**1.75**	**99**	*e*S	**Sn**	**08 46 54.1**	**0.0**
SDD	**Santo Domingo**	**1.91**	**277**	Pn	**Pn**	**08 46 33.3**	**-0.8**
SDD	comp=N,245nm,0.3s			IAML		08 47 02.1	
SDD	comp=E,208nm,0.3s			IAML		08 47 04.0	
SDD	**Santo Domingo**	**1.91**	**277**	*i* P	**Pn**	**08 46 33.5**	**-0.6**
SDD				*e*S	**Sn**	**08 46 58.1**	**+0.3**
CBYP	**Canovanas**	**1.96**	**89**	⇑*e*P	**Pn**	**08 46 34.0**	**-0.9**
CBYP	**Canovanas**	**1.96**	**89**	*e*S	**Sn**	**08 46 58.4**	**-0.8**
CBYP	**Canovanas**	**1.96**	**89**		**Pn**	**08 46 34.0**	**-0.9**
CBYP					**Sn**	**08 46 58.4**	**-0.8**
HUMP	**Col San Antoni**	**1.97**	**93**	⇑*e*P	**Pn**	**08 46 34.5**	**-0.4**
HUMP	**Col San Antoni**	**1.97**	**93**	*e*S	**Sn**	**08 46 59.1**	**-0.2**
HUMP	**Col San Antoni**	**1.97**	**93**		**Pn**	**08 46 34.5**	**-0.4**
HUMP					**Sn**	**08 46 59.1**	**-0.2**
HUMP	**Col San Antoni** comp=N,375nm,0.5s	**1.97**	**93**	IAML		08 47 02.3	
LONA1	**Toro Cenizo, N**	**2.16**	**302**	*e*S	**Sn**	**08 47 07.7**	**+4.0**
MTP	**Monte Pirata**	**2.25**	**93**	⇑*e*P	**Pn**	**08 46 38.9**	**+0.2**
MTP	**Monte Pirata**	**2.25**	**93**	*e*S	**Sn**	**08 47 06.6**	**+0.5**
MTP	**Monte Pirata**	**2.25**	**93**		**Pn**	**08 46 38.9**	**+0.2**
MTP					**Sn**	**08 47 06.6**	**+0.5**
MTP	**Monte Pirata** comp=E,111nm,0.2s	**2.25**	**93**	IAML		08 47 10.2	
CUPR	**Culebra, Puert**	**2.51**	**88**	⇑*e*P	**Pn**	**08 46 40.7**	**-1.3**
CUPR	**Culebra, Puert**	**2.51**	**88**	*e*S	**Sn**	**08 47 10.4**	**-1.5**
CUPR	**Culebra, Puert**	**2.51**	**88**		**Pn**	**08 46 40.7**	**-1.3**
CUPR					**Sn**	**08 47 10.4**	**-1.5**
STVI	**Saint Thomas**	**2.82**	**87**	⇑*e*P	**Pn**	**08 46 45.1**	**-1.1**
STVI	**Saint Thomas**	**2.82**	**87**	*e*S	**Sn**	**08 47 18.5**	**-0.9**
STVI	**Saint Thomas**	**2.82**	**87**		**Pn**	**08 46 45.1**	**-1.1**
STVI					**Sn**	**08 47 18.5**	**-0.9**
STVI	**Saint Thomas** comp=N,103nm,0.3s	**2.82**	**87**	IAML		08 47 24.1	
SC01	**Santiago de Io**	**2.91**	**294**		**Pn**	**08 46 47.8**	**+0.5**
SC01	**Santiago de Io**	**2.91**	**294**	*i* P	**Pn**	**08 46 49.1**	**+1.7**
SC01	comp=Z,119nm,0.4s			IAML		08 47 35.9	
SJVI	**Gifft Hill Sch**	**2.99**	**88**	⇑*e*P	**Pn**	**08 46 47.6**	**-0.9**
SJVI	**Gifft Hill Sch**	**2.99**	**88**	*e*S	**Sn**	**08 47 22.5**	**-1.1**
SJVI	**Gifft Hill Sch**	**2.99**	**88**		**Pn**	**08 46 47.6**	**-0.9**
SJVI					**Sn**	**08 47 22.5**	**-1.1**
CDVI	**St. Croix**	**3.04**	**99**	⇑*e*P	**Pn**	**08 46 48.1**	**-1.1**
CDVI	**St. Croix**	**3.04**	**99**		**Pn**	**08 46 48.1**	**-1.1**
CDVI	**St. Croix** comp=E,138nm,0.5s	**3.04**	**99**	IAML		08 47 31.9	
CDVI	comp=N,113nm,0.5s			IAML		08 47 35.0	
SDDR	**Presa de Saban**	**3.28**	**283**		**Pn**	**08 46 54.2**	**+1.8**
SDDR	comp=N,112nm,0.6s			IAML		08 47 40.6	
SDDR	comp=N,82nm,0.7s			IAML		08 47 44.3	
SDDR	**Presa de Saban**	**3.28**	**283**	*i* P	**Pn**	**08 46 54.6**	**+2.2**
SDDR				*e*S	**Sn**	**08 47 31.9**	**+1.3**
SDDR	comp=Z,68nm,1.1s			IAML		08 47 40.7	
LOPE2	**Hotel El Peder**	**3.64**	**267**	*i* P	**Pn**	**08 46 58.6**	**+1.3**
LOPE2				*e*S	**Sn**	**08 47 37.7**	**-1.6**
LOPE2	comp=Z,28nm,0.5s			IAML		08 47 42.0	
ANBD	**Bethesda, Anti**	**5.99**	**101**	*e*P	**Pn**	**08 47 29.9**	**+0.8**
ANBD	**Bethesda, Anti**	**5.99**	**101**	*e*S	**Sn**	**08 48 32.1**	**-4.3**
BIM	**Bigot**	**7.55**	**118**	Pn	**Pn**	**08 47 51.1**	**+0.7**
URIC	**Uribia, Colomb**	**7.61**	**212**	*e*P	**Pn**	**08 47 50.1**	**-1.1**
URIC				*e*S	**Sn**	**08 49 11.9**	**-3.9**
URIC				*i*		08 49 14.9	
CRJC	**Cerrejon, Guaj**	**8.64**	**214**	*e*P	Pn	08 48 13.0	+7.6
CRJC				*e*S	**Sn**	**08 49 38.3**	**-3.0**
CRJC	comp=Z,12nm,0.5s			*i*		08 49 39.5	
BAUV	**El Baul**	**9.25**	**181**	Pn	**Pn**	**08 48 15.3**	**+1.7**

*IDC **19** 08:51:58.4±0.9, 20°.09N×145°.58E, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=33.9km s-min=19.9km az=92.0*
*NEIC **19** 08:52:14.8±0.9, 20°.12N±0°.08×145°.4E±0°.2, h133km±10km, mb4.4/10, Error ellipse: s-maj=27.9km s-min=11.0km az=81.0*

ISC 19 08:52:11.8±0.8, 20°.1N±0°.1×145°.4E±0°.2, h109km, n28, σ0§69/22, mb3.9/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATS	**Pohnpei**	**18.15**	**135**	P	**Pn**	**08 56 17.2**	**+0.3**
JMM	**Marumori**	**18.20**	**348**	Pn	**Pn**	**08 56 17.9**	**+0.6**
JMM	comp=Z,41nm,1.3s			IAmb	IAmb	08 56 26.1	
H11S3	**WAKE ISLAND Hy** baz=278,slow=75,SNR=7.0	**20.16**	**91**	T	T	09 17 57.0	
H11S1	**WAKE ISLAND Hy** baz=278,slow=75,SNR=5.7	**20.16**	**91**	T	T	09 17 56.3	
H11S2	**WAKE ISLAND Hy** baz=278,slow=75,SNR=7.2	**20.17**	**91**	T	T	09 17 58.4	
H11N1	**WAKE ISLAND Hy** baz=274,slow=75,SNR=6.4	**20.21**	**87**	T	T	09 18 02.1	
H11N2	**WAKE ISLAND Hy** baz=274,slow=75,SNR=3.8	**20.22**	**87**	T	T	09 18 01.9	
H11N3	**WAKE ISLAND Hy** baz=274,slow=75,SNR=4.1	**20.23**	**87**	T	T	09 18 00.6	
KSRS	**Korea Array** comp=Z,0.6nm,0.5s,baz=148,slow=8.1,SNR=6.3 comp=Z,0.6nm,0.5s	**23.07**	**322**	P	**P**	**08 57 07.8**	**-0.1**
WB0	**Warramunga Arr**	**41.01**	**196**	P	**P**	**08 59 44.8**	**+0.4**
WB0				IAmb	IAmb	09 00 14.3	
WB2	**Warramunga Arr** comp=Z,6.3nm,1.3s	**41.19**	**196**	P	**P**	**08 59 46.2**	**+0.3**
WB2				IAmb	IAmb	09 00 07.3	
WRA	**Warramunga Arr** comp=Z,6.0nm,1.3s	**41.19**	**196**	P	**P**	**08 59 46.2**	**+0.3**
WRA	**Warramunga Arr** comp=Z,1.0nm,0.6s,baz=14,slow=8.9,SNR=22 comp=Z,1.0nm,0.6s	**41.19**	**196**	P	**P**	**08 59 45.0**	**-0.9**
ASAR	**Alice Springs** comp=Z,0.5nm,0.6s,baz=21,slow=6.3,SNR=11 comp=Z,0.5nm,0.6s	**44.87**	**195**	P	**P**	**09 00 14.7**	**-0.9**
ASAR	**Alice Springs**	**44.87**	**195**	P	**P**	**09 00 15.6**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.5s,baz=105,slow=9.1,SNR=1.7 comp=Z,0.6nm,0.5s	**56.78**	**322**	P	**P**	**09 01 43.5**	**-0.9**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.6s,baz=91,slow=8.8,SNR=5.7 comp=Z,0.7nm,0.6s	**57.33**	**313**	P	**P**	**09 01 49.5**	**+1.0**
MKAR	**Makanchi Array**	**57.33**	**313**	P	**P**	**09 01 49.2**	**+0.7**
SCM	**Sheep Creek Mo**	**61.81**	**30**	P	**P**	**09 02 18.8**	**-0.3**
ILAR	**Eielson Array** comp=Z,0.7nm,0.7s,baz=268,slow=5.4,SNR=7.0 comp=Z,0.7nm,0.7s	**62.57**	**27**	P	**P**	**09 02 22.9**	**-1.0**
J26L	**Joseph Creek**	**63.93**	**27**	P	**P**	**09 02 32.2**	**-0.9**
J26L	comp=Z,4.1nm,1.3s			IAmb	IAmb	09 03 02.1	
BMAR	**Burnt Mountain**	**64.00**	**24**	P	**P**	**09 02 34.0**	**+0.6**
KKAR	**Karatay Array**	**65.70**	**309**	P	**P**	**09 02 45.3**	**+0.5**
P29M	**Windy Craggy**	**66.29**	**33**	P	**P**	**09 02 47.9**	**-0.4**
P29M	comp=Z,23nm,1.4s			IAmb	IAmb	09 02 56.0	
EPYK	**Eagle Plains**	**66.96**	**25**	P	**P**	**09 02 53.1**	**+0.7**
EPYK	comp=Z,7.1nm,1.4s			IAmb	IAmb	09 02 58.1	
ABKAR	**Akbulak array**	**72.17**	**317**	P	**P**	**09 03 24.2**	**-0.5**
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.6s,baz=271,slow=5.4,SNR=8.8 comp=Z,0.8nm,0.6s	**82.53**	**52**	P	**P**	**09 04 23.6**	**+0.6**
FINES	**FINESS Array B** comp=Z,0.7nm,0.4s,baz=44,slow=4.2,SNR=5.1 comp=Z,0.7nm,0.4s	**85.55**	**335**	P	**P**	**09 04 36.7**	**-0.8**

*NEIC **19** 08:59:54.6±0.7, 17°.9S±0°.2×178°.6W±0°.1, h599km±11km, mb4.2/31, Error ellipse: s-maj=31.1km s-min=17.1km az=156.0*
*IDC **19** 08:59:54.8±1.0, 17°.59S×178°.76W, h604km±10km, mb3.4/9, mbtmp4.3/11, Error ellipse: s-maj=29.9km s-min=12.7km az=149.0*

ISC 19 08:59:54.4±0.6, 17°.9S±0°.1×178°.64W±0°.09, h600km, n48, σ0§83/53, mb4.2/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 77nm,0.8s,baz=130,slow=2.8,SNR=82	**3.15**	**272**	P	**P**	**09 01 14.6**	**+0.1**
MSVF	3.5nm,0.7s,baz=305,slow=21,SNR=0.8			S	**S**	**09 02 20.4**	**+0.6**
MSVF	**Nonsavu**	**3.15**	**272**	P	**P**	**09 01 14.9**	**+0.4**
NIUE	**Niue**	**8.36**	**100**	P	**P**	**09 01 56.2**	**-0.9**
OUENC	**Ouen Island, N**	**14.37**	**249**	P	**P**	**09 02 56.5**	**-0.2**
DZM	**Mont Dzumac** 3.1nm,0.6s,baz=70,slow=17,SNR=2.6	**14.63**	**251**	P	**P**	**09 02 59.6**	**+0.3**
KOUNC	**Koumac, New Ca**	**16.35**	**258**	P	**P**	**09 03 15.8**	**+0.9**
OUZ	**Omahuta**	**18.62**	**200**	P	**P**	**09 03 35.8**	**+0.4**
OUZ	comp=Z,17nm,1.3s			IAmb	IAmb	09 04 12.7	
URZ	**Urewera** comp=Z,1.9nm,0.4s,baz=294,slow=17,SNR=2.0 comp=Z,1.9nm,0.4s	**20.66**	**190**	P	**P**	**09 03 56.8**	**+2.9**
EIDS	**Eidsvold**	**29.07**	**250**	P	**P**	**09 05 08.1**	**-0.2**
EIDS	comp=Z,3.3nm,0.8s			IAmb	IAmb	09 05 09.1	
ARMA	**Armidale**	**29.77**	**240**	P	**P**	**09 05 14.7**	**+0.4**
ARMA	comp=Z,14nm,1.4s			IAmb	IAmb	09 05 49.6	
CTAO	**Charters Tower**	**33.23**	**260**	P	**P**	**09 05 43.7**	**-0.1**
CTAO	comp=Z,7.7nm,0.8s			IAmb	IAmb	09 05 44.7	
CAN	**Canberra**	**33.56**	**232**	P	**P**	**09 05 46.0**	**-0.3**
COEN	**Coen**	**36.88**	**270**	P	**P**	**09 06 14.5**	**+0.5**
TOO	**Toolangi**	**37.03**	**231**	P	**P**	**09 06 14.7**	**-0.2**
TOO	comp=Z,10nm,1.1s			IAmb	IAmb	09 06 17.4	
STKA	**Stephens Creek** comp=Z,6.2nm,0.7s,baz=89,slow=10.0,SNR=11 comp=Z,6.2nm,0.7s	**38.46**	**241**	P	**P**	**09 06 27.1**	**+0.6**
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**09 06 27.2**	**+0.6**
BBOO	**Buckleboo**	**43.23**	**241**	P	**P**	**09 07 04.2**	**0.0**
BBOO	comp=Z,13nm,0.9s			IAmb	IAmb	09 07 04.9	
WR0	**Warramunga Arr**	**44.23**	**260**	P	**P**	**09 07 11.5**	**-0.6**
WB0	**Warramunga Arr**	**44.39**	**260**	P	**P**	**09 07 12.9**	**-0.5**
WB0	comp=Z,7.4nm,0.5s			IAmb	IAmb	09 07 13.6	
WB2	**Warramunga Arr**	**44.41**	**260**	P	**P**	**09 07 13.1**	**-0.4**
WB2	comp=Z,8.0nm,0.6s			IAmb	IAmb	09 07 13.9	
WRAB	**Tennant Creek**	**44.41**	**260**	P	**P**	**09 07 13.0**	**-0.5**
WRAB	comp=Z,6.9nm,0.7s			IAmb	IAmb	09 07 13.8	
WRA	**Warramunga Arr** comp=Z,4.1nm,0.5s,baz=94,slow=7.2,SNR=198	**44.42**	**260**	P	**P**	**09 07 13.0**	**-0.6**
WRA	comp=Z,0.1nm,0.3s,baz=87,slow=3.3,SNR=1.5 comp=Z,4.1nm,0.5s			PcP	**PcP**	**09 08 43.7**	**-0.3**
WRA	**Warramunga Arr**	**44.42**	**260**	P	**P**	**09 07 12.9**	**-0.7**
AS31	**Alice Springs**	**44.59**	**254**	P	**P**	**09 07 14.9**	**0.0**
ASAR	**Alice Springs** comp=Z,27nm,0.6s,baz=87,slow=8.6,SNR=493	**44.59**	**254**	P	**P**	**09 07 14.9**	**0.0**
ASAR	comp=Z,0.6nm,0.6s,baz=112,slow=3.7,SNR=1.8			PcP	**PcP**	**09 08 44.1**	**-0.5**
ASAR	comp=Z,0.2nm,0.5s,baz=96,slow=4.8,SNR=2.0			ScP	**ScP**	**09 11 41.7**	**+1.3**
ASAR	comp=Z,0.2nm,0.8s,baz=90,slow=16,SNR=1.4 comp=Z,27nm,0.6s			S	**S**	**09 13 08.4**	**-0.1**
ASAR	**Alice Springs**	**44.59**	**254**	P	**P**	**09 07 15.1**	**+0.2**
FORT	**Forrest**	**49.83**	**245**	P	**P**	**09 07 53.3**	**-0.6**
KNRA	**Kununurra**	**50.27**	**264**	P	**P**	**09 07 57.2**	**-0.1**
KNRA	comp=Z,7.5nm,0.7s			IAmb	IAmb	09 07 57.9	
PSA00	**Pilbara Seismi**	**57.71**	**255**	P	**P**	**09 08 49.1**	**-0.4**
NWAO	**Narrogin (SRO)**	**59.04**	**242**	P	**P**	**09 08 57.2**	**-1.0**
NWAO	comp=Z,31nm,1.2s			IAmb	IAmb	09 09 08.0	
UGM	**Wanagama**	**69.43**	**268**	P	**P**	**09 10 03.7**	**-0.4**
YBH	**Yreka Blue Hor**	**78.63**	**39**	P	**P**	**09 10 55.3**	**-0.1**
YBH	comp=Z,6.5nm,1.4s			IAmb	IAmb	09 11 27.8	
HUMO	**Hull Mountain**	**79.00**	**38**	P	**P**	**09 10 57.0**	**-0.3**
HUMO	comp=Z,8.4nm,1.3s			IAmb	IAmb	09 11 30.7	
BEKR	**Beckworth**	**79.00**	**42**	P	**P**	**09 10 57.3**	**-0.2**
PNTR	**Pine Nut**	**79.06**	**43**	P	**P**	**09 10 57.8**	**-0.1**
PNTR	comp=Z,6.9nm,1.2s			IAmb	IAmb	09 11 38.2	
YERR	**Yerington**	**79.23**	**43**	P	**P**	**09 10 58.8**	**0.0**
YERR	comp=Z,7.0nm,1.2s			IAmb	IAmb	09 10 59.2	
NVAR	**Mina Array Bea** comp=Z,1.0nm,0.7s,baz=224,slow=9.2,SNR=13 comp=Z,1.0nm,0.7s	**79.55**	**44**	P	**P**	**09 11 00.2**	**-0.3**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**09 11 00.6**	**+0.1**
MOD	**Modoc Plateau**	**80.19**	**40**	P	**P**	**09 11 03.8**	**+0.1**
U15A	**North Rim**	**82.65**	**48**	P	**P**	**09 11 16.7**	**+0.2**
U15A	comp=Z,2.8nm,0.8s			IAmb	IAmb	09 11 17.3	
MAW	**Mawson** comp=Z,0.7nm,0.8s,baz=121,slow=5.9,SNR=2.3 comp=Z,0.7nm,0.8s	**83.83**	**200**	P	**P**	**09 11 21.2**	**-0.3**
MCARA	**McCarthy VSAT**	**83.94**	**16**	P	**P**	**09 11 25.4**	**+3.4**
ILAR	**Eielson Array** comp=Z,0.6nm,0.4s,baz=222,slow=4.9,SNR=9.0 comp=Z,0.6nm,0.4s	**85.89**	**13**	P	**P**	**09 11 29.8**	**-1.6**
TX31	**Lajitas Ar. Si**	**86.16**	**58**	P	**P**	**09 11 33.0**	**-0.6**
TX31	comp=Z,5.8nm,0.9s			IAmb	IAmb	09 11 35.0	
TX32	**Lajitas Array**	**86.16**	**58**	P	**P**	**09 11 33.7**	**+0.2**
TXAR	**Lajitas Array** comp=Z,1.2nm,0.7s,baz=219,slow=6.1,SNR=19 comp=Z,1.2nm,0.7s	**86.16**	**58**	P	**P**	**09 11 33.9**	**+0.4**
PDAR	**Pinedale Array** comp=Z,0.8nm,0.5s,baz=212,slow=3.8,SNR=11 comp=Z,0.8nm,0.5s	**87.47**	**44**	P	**P**	**09 11 38.9**	**-0.7**

*IDC **19** 09:11:46.3±1.8, 12°.64S×66°.07E, h0km, mb3.8/4, mbtmp3.8/4, MS3.1/1, Error ellipse: s-maj=66.9km s-min=31.2km az=45.0*

ISC 19 09:11:47.5±1.8, 12°.7S±0°.3×66°.0E±0°.3, h10km, n14, σ0§62/7, mb4.0/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H** baz=231,slow=79	**8.10**	**53**	T	T	09 21 45.6	
H08S2	**Diego Garcia H** baz=231,slow=74	**8.11**	**53**	T	T	09 21 46.8	
H08S3	**Diego Garcia H** baz=231,slow=74

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.28**	**269**	⇑Pg	Pb	09 16 32.9	+0.8
	2.5nm,0.8s						
ZAA0				⇓Lg	Lg	09 17 17.2	
	14nm,1.1s						
KURK	**Kurchatov**	**7.95**	**249**	⇑Pn	Pn	09 17 30.0	+0.3
	2.1nm,0.6s						
KURK				⇓Sn	Sn	09 19 01.7	+1.4
	12nm,0.8s						
KURK				⇓Lg	Lg	09 19 44.5	
	53nm,1.1s						
KURBB	**Kurchatov Arra**	**8.05**	**249**	⇑Pn	Pn	09 17 30.5	-0.5
	4.1nm,0.6s						
KURBB				⇑Sn	Sn	09 19 03.8	+1.1
	43nm,0.8s						
KURBB				⇑Lg	Lg	09 19 49.6	
	43nm,0.9s						
MK31	**Makanchi Array**	**8.96**	**218**	⇑Pn	Pn	09 17 43.7	+0.2
	4.3nm,1.0s,baz=39,slow=12,SNR=4.3						
MK31				Lg	Lg	09 20 17.0	
	19nm,1.0s,baz=38,slow=27,SNR=4.1						
MAKZ	**Makanchi**	**9.06**	**220**	⇓Lg	Lg	09 20 21.7	
	20nm,1.3s						

*ISK **19** 09:21:26.9, 37.87N×29.04E, h10km, ML3.5/26*
*DDA **19** 09:21:26.8±0.0, 37.87N×29.04E, h5km±2km, MW3.5*
*IDC **19** 09:21:26.0±1.7, 37.27N×29.62E, h0km, mb3.7/2, mbtmp3.5/3, ML2.7/1, Error ellipse: s-maj=98.2km s-min=21.8km az=143.0*
*THE **19** 09:21:30.4, 37.83N×28.81E, h1km±1km, ML3.1/4, Error ellipse: s-maj=3.1km s-min=1.5km az=63.0*

ISC 19 09:21:27.3±1.0, 37.88N±0.02×29.05E±0.02, h10km±8km, n51, σ0.9 70/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.43**	**195**	P	**Pg**	**09 21 35.4**	**-0.3**
TAVA				S	**Sg**	**09 21 41.7**	**+0.3**
TAVA				*i* AML	AML	09 21 44.0	
	comp=E,698nm,0.6s						
TAVA				*i* AML	AML	09 21 45.0	
	comp=N,1μm,0.4s						
APMY	**Acipayam-Deniz**	**0.45**	**154**	PG	**Pg**	**09 21 35.9**	**-0.3**
KHL	**Karahalli**	**0.58**	**40**	PG	**Pb**	**09 21 39.3**	**-0.3**
MANT	**Manisa**	**0.73**	**328**	P	**Pg**	**09 21 41.0**	**-0.4**
MANT				S	**Sb**	**09 21 51.9**	**-0.4**
MANT				*i* AML	AML	09 21 53.0	
	comp=N,968nm,0.3s						
MANT				*i* AML	AML	09 21 56.0	
	comp=E,1μm,0.4s						
CAEL	**Denizli, Camel**	**0.78**	**164**	P	**Pg**	**09 21 42.2**	**-0.3**
CAEL				*i* AML	AML	09 22 02.0	
	comp=N,2μm,0.7s						
CAEL				*i* AML	AML	09 22 05.0	
	comp=E,2μm,0.5s						
BASM	**Basmaki-Afyon**	**0.79**	**87**	PG	**Pg**	**09 21 42.3**	**-0.3**
BASM				SG	**Sb**	**09 21 53.9**	**-0.1**
BRDR	**BURDUR-Merkez**	**0.82**	**102**	P	**Pb**	**09 21 43.4**	**-0.3**
BRDR				S	**Sb**	**09 21 55.8**	**+0.9**
BRDR				*i* AML	AML	09 21 59.0	
	comp=E,1μm,0.6s						
BRDR				*i* AML	AML	09 22 00.0	
	comp=N,2μm,0.5s						
USAK	**Uak-Merkez**	**0.84**	**358**	P	**Pg**	**09 21 42.9**	**-0.6**
USAK				S	**Sg**	**09 21 54.9**	**+0.5**
USAK				*i* AML	AML	09 21 59.0	
	comp=E,3μm,0.7s						
MULA	**Mugla, Merkez-**	**0.85**	**223**	P	**Pb**	**09 21 43.5**	**-0.7**
MULA				S	**Sb**	**09 21 55.6**	**-0.1**
MULA				*i* AML	AML	09 21 56.0	
	comp=E,524nm,0.5s						
MULA				*i* AML	AML	09 22 00.0	
	comp=N,313nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.92**	**275**	PG	**Pg**	**09 21 44.9**	**-0.2**
AYDB				SG	**Sb**	**09 21 58.2**	**+0.4**
KZIL	**AFYON_Kizioren**	**0.94**	**66**	P	**Pg**	**09 21 44.8**	**-0.6**
KZIL				S	**Sn**	**09 22 00.1**	**-0.1**
KZIL				*i* AML	AML	09 22 03.0	
	comp=N,1μm,0.3s						
KZIL				*i* AML	AML	09 22 05.0	
	comp=E,1μm,0.3s						
CAME	**Cameli-Denizli**	**0.95**	**168**	PG	**Pg**	**09 21 44.8**	**-0.9**
CAME				SG	**Sb**	**09 21 59.2**	**+0.5**
YER	**Yerkesik**	**0.96**	**220**	PG	**Pb**	**09 21 45.7**	**-0.4**
YER	**Yerkesik**	**0.96**	**220**	P	**Pb**	**09 21 45.5**	**-0.6**
YER				S	**Sb**	**09 21 59.5**	**+0.6**
DALY	**Dalyan (Mula)**	**1.10**	**197**	PN	**Pb**	**09 21 48.3**	**-0.2**
ISP	**Isparta**	**1.16**	**92**	PN	**Pb**	**09 21 49.7**	**+0.1**
GEDZ	**Gediz**	**1.20**	**13**	PN	**Pg**	**09 21 50.2**	**-0.2**
GOMA	**Golmarmara-Man**	**1.22**	**313**	PN	**Pg**	**09 21 50.3**	**-0.5**
SMAA	**Simav-Kutahya**	**1.22**	**357**	PN	**Pg**	**09 21 50.5**	**-0.4**
FETY	**Fethiye**	**1.24**	**179**	PN	**Pg**	**09 21 50.0**	**-1.2**
GDZ	**Gediz**	**1.25**	**15**	P	**Pg**	**09 21 49.3**	**-2.2**
GDZ				S	**Sg**	**09 22 07.5**	**-0.3**
GDZ				*i* AML	AML	09 22 11.0	
	comp=N,510nm,0.8s						
TURN	**Turunc**	**1.27**	**211**	PN	**Pn**	**09 21 51.2**	**0.0**
BCK	**Bucak**	**1.29**	**108**	PN	**Pn**	**09 21 51.5**	**+0.1**
ELL	**Elmali**	**1.32**	**149**	PN	**Pb**	**09 21 52.1**	**-0.1**
KORT	**Korkueli**	**1.35**	**130**	PN	**Pn**	**09 21 52.4**	**0.0**
SHUT	**Suhut-Afyon**	**1.36**	**60**	PN	**Pn**	**09 21 52.4**	**-0.1**
AKS	**Akhisar**	**1.40**	**316**	PN	**Pn**	**09 21 52.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.45**	**264**	PN	**Pn**	**09 21 53.8**	**+0.2**
DDIM	**Aydin, Didim**	**1.50**	**254**	P	**Pg**	**09 21 55.8**	**-0.3**
DDIM				S	**Sg**	**09 22 18.1**	**+2.6**
DDIM				*i* AML	AML	09 22 24.0	
	comp=E,377nm,0.4s						
DDIM				*i* AML	AML	09 22 29.0	
	comp=N,368nm,0.9s						
TVSB	**Tavsanli**	**1.60**	**11**	PN	**Pn**	**09 21 56.0**	**+0.2**
BODT	**Bodrum**	**1.61**	**240**	PN	**Pn**	**09 21 55.8**	**0.0**
BODT	**Bodrum**	**1.61**	**240**	P	**Pn**	**09 21 55.1**	**-0.7**
BODT				S	**Sn**	**09 22 15.0**	**-1.6**
DAT	**Datca**	**1.64**	**226**	PN	**Pn**	**09 21 56.4**	**+0.1**
DAT	**Datca**	**1.64**	**226**	P	**Pn**	**09 21 56.8**	**+0.5**
BLCB	**Balcova**	**1.67**	**288**	PN	**Pn**	**09 21 56.7**	**+0.2**
BLCB	**Balcova**	**1.67**	**288**	P	**Pn**	**09 21 56.3**	**-0.2**
BLCB				S	**Sn**	**09 22 18.4**	**+0.5**
AKAS	**Kas**	**1.70**	**165**	PN	**Pn**	**09 21 57.3**	**+0.1**
DST	**Dursunbey**	**1.76**	**349**	PN	**Pn**	**09 21 58.2**	**+0.3**
ANDZ	**Kutahya, Merke**	**1.76**	**22**	P	**Pn**	**09 21 58.2**	**+0.2**
SMG	**Samos**	**1.76**	**265**	P	**Pn**	**09 21 57.8**	**-0.1**
SMG				S	**Sn**	**09 22 18.6**	**-1.8**
	325nm,0.7s						
KSL	**Kastellorizon**	**1.78**	**166**	P	**Pg**	**09 22 00.5**	**-0.9**
KSL				S	**Sg**	**09 22 24.5**	**+0.1**
	395nm,0.8s						
ARG	**Arkhangelos**	**1.82**	**204**	PN	**Pn**	**09 21 58.9**	**+0.3**
ARG	**Arkhangelos**	**1.82**	**204**	P	**Pb**	**09 22 00.9**	**+0.3**
ARG				S	**Sb**	**09 22 23.5**	**+0.1**
	365nm,0.8s						
NIS1	**Nisyros Isl.**	**1.96**	**230**	PN	**Pn**	**09 22 00.9**	**+0.2**
KOSK	**Kos Island**	**2.00**	**236**	PN	**Pn**	**09 22 01.9**	**+0.8**
SEYD	**Seydisehir-KON**	**2.26**	**101**	PN	**Pn**	**09 22 05.7**	**+0.9**
CHOS	**Chios island**	**2.42**	**283**	P	**Pn**	**09 22 08.2**	**+1.2**
PRK	**Paraskevi**	**2.57**	**303**	P	**Pn**	**09 22 10.2**	**+1.2**
PRK				S	**Sn**	**09 22 40.3**	**0.0**
	415nm,0.8s						
BRTR	**Keskin Array B**	**4.03**	**61**	Pn	**Pn**	**09 22 29.9**	**+0.6**
	0.5nm,0.3s,baz=233,slow=15,SNR=8.1						
BRTR				Sn	**Sn**	**09 23 17.4**	**+0.9**
	0.6nm,0.3s,baz=232,slow=24,SNR=5.0						
	1.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**34.63**	**232**	P	**P**	**09 28 16.8**	**-0.1**
	0.7nm,0.7s,baz=34,slow=7.7,SNR=4.6						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**39.68**	**60**	P	**P**	**09 28 59.6**	**+0.2**
	1.7nm,1.2s,baz=276,slow=9.8,SNR=2.1						
	1.7nm,1.2s						

*IDC **19** 09:45:46.7±1.0, 55.07S×30.32W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=46.4km s-min=23.7km az=76.0*

ISC 19 09:45:48.3±1.0, 55.1S±0.2×30.4W±0.3, h10km, n10, σ0.8 98/7, mb3.9/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.37**	**155**	P	**P**	**09 50 24.2**	**-0.5**
	1.3nm,1.0s,baz=312,slow=9.3,SNR=2.4						
	1.3nm,1.0s						
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**09 52 41.6**	**-0.4**
	0.7nm,0.4s,baz=196,slow=3.5,SNR=6.5						
	0.7nm,0.4s						
VNDA	**Vanda**	**47.44**	**184**	P	**P**	**09 54 23.5**	**+1.2**
	0.7nm,0.7s,baz=189,slow=7.9,SNR=4.3						
	0.7nm,0.7s						
LPAZ	**La Paz**	**48.34**	**308**	P	**P**	**09 54 30.6**	**-0.1**
	1.0nm,0.5s,baz=143,slow=5.5,SNR=7.5						
	1.0nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.79**	**21**	T	T	10 47 27.1	
	baz=193						
H10N3	**ASCENSION HYDR**	**48.79**	**21**	T	T	10 47 34.9	
	baz=193						
H10N2	**ASCENSION HYDR**	**48.81**	**21**	T	T	10 47 28.5	
	baz=193						
TORD	**Torodi Ar. Bea**	**73.16**	**33**	P	**P**	**09 57 19.7**	**+0.7**
	0.5nm,0.6s,baz=198,slow=7.0,SNR=2.6						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**148.12**	**313**	PKPbc	**PKPbc**	**10 05 32.1**	**-0.6**
	0.7nm,0.6s,baz=108,slow=1.8,SNR=7.6						
SONM	**Songino Array**	**152.48**	**87**	PKPbc	**PKPbc**	**10 05 42.8**	**-1.1**
	0.3nm,0.5s,baz=224,slow=3.0,SNR=4.2						

ROM 19 09:59:44.9±0.1, 46.139N±0.009×11.19E±0.01, h0km, ML1.0/3, 10C-3D, Error ellipse: s-maj=1.2km s-min=0.9km az=304.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAGG	**Gaggia**	**0.17**	**251**	P	Pg	09 59 48.9	+0.8
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=E,65μm,1.0s						
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=E,65μm,1.0s						
GAGG	**Gaggia**	**0.17**	**251**	⇑P	Pg	09 59 49.0	+0.8
GAGG				AML	AML		
	comp=E,65μm,1.0s						
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=E,65μm,1.0s						
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=E,65μm,1.0s						
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=N,65μm,0.5s						
GAGG				AML	AML		
	comp=E,65μm,1.0s						
LUSI	**Trento, Gardas**	**0.25**	**223**	P	Pg	09 59 50.4	+0.8
LUSI				AML	AML		
	comp=E,49μm,0.2s						
LUSI				AML	AML		
	comp=N,101μm,0.2s						
LUSI				AML	AML		
	comp=N,101μm,1.8s						
LUSI	**Trento, Gardas**	**0.25**	**223**	⇑P	Pg	09 59 50.4	+0.9
LUSI				AML	AML		
	comp=E,49μm,0.2s						
LUSI				AML	AML		
	comp=N,101μm,0.2s					

KNRA	**Kununurra**	**16.61**	**113**	P	**Pn**	**10 09 48.1**	**+0.8**
MEEK	**Meekatharra**	**17.78**	**163**	P	**Pn**	**10 10 01.9**	**0.0**
FAKI	**Fak Fak**	**20.34**	**72**	P	**P**	**10 10 27.7**	**-2.8**
FAKI				IAmb	IAmb	10 10 33.5	
	comp=Z,11nm,0.9s						
WRKA	**Warakurna**	**21.21**	**138**	P	**P**	**10 10 40.9**	**+0.9**
WB0	**Warramunga Arr**	**23.09**	**118**	P	**P**	**10 11 00.3**	**+0.4**
WB0				IAmb	IAmb	10 11 15.5	
	comp=Z,3.7nm,1.0s						
WRA	**Warramunga Arr**	**23.11**	**119**	P	**P**	**10 11 00.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=290,slow=11,SNR=16						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**23.11**	**119**	P	**P**	**10 11 01.6**	**+1.5**
WRAB	**Tennant Creek**	**23.11**	**119**	P	**P**	**10 11 01.2**	**+1.0**
WRAB				IAmb	IAmb	10 11 20.2	
	comp=Z,6.7nm,1.2s						
WRAB	**Tennant Creek**	**23.11**	**119**	P	**P**	**10 11 01.8**	**+1.6**
WB2	**Warramunga Arr**	**23.12**	**119**	P	**P**	**10 11 00.6**	**+0.4**
WR0	**Warramunga Arr**	**23.29**	**119**	P	**P**	**10 11 01.5**	**-0.4**
WR0				IAmb	IAmb	10 11 04.1	
	comp=Z,8.3nm,1.2s						
AS31	**Alice Springs**	**24.45**	**127**	P	**P**	**10 11 13.9**	**+1.0**
ASAR	**Alice Springs**	**24.45**	**127**	P	**P**	**10 11 13.8**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=304,slow=8.9,SNR=67						
ASAR				LR	LR	10 21 17.4	
	comp=Z,41nm,19.5s,baz=313,slow=37						
	comp=Z,4.4nm,0.8s						
ASAR	**Alice Springs**	**24.45**	**127**	P	**P**	**10 11 13.6**	**+0.7**
AS01	**Alice Springs**	**24.49**	**127**	P	**P**	**10 11 14.4**	**+1.2**
OOD	**Oodnadatta**	**28.07**	**133**	P	**P**	**10 11 46.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**31.10**	**334**	P	**P**	**10 12 12.7**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=168,slow=8.9,SNR=4.7						
CMAR				LR	LR	10 27 07.0	
	comp=Z,36nm,18.9s,baz=120,slow=41						
	comp=Z,1.9nm,0.3s						
STKA	**Stephens Creek**	**34.60**	**134**	P	**P**	**10 12 43.7**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=294,slow=8.7,SNR=5.8						
STKA				LR	LR	10 27 49.5	
	comp=Z,86nm,18.2s,baz=249,slow=38						
	comp=Z,3.3nm,0.8s						
STKA	**Stephens Creek**	**34.60**	**134**	P	**P**	**10 12 44.6**	**+1.7**
STKA				IAmb	IAmb	10 12 45.4	
	comp=Z,1.3nm,1.0s						
JOW	**Kunigami**	**39.18**	**22**	LR	LR	10 31 26.1	
	comp=Z,97nm,19.1s,baz=245,slow=39						
H08S2	**Diego Garcia H**	**39.98**	**270**	T	T	10 55 43.6	
	baz=95,slow=75,SNR=5.2						
H08S3	**Diego Garcia H**	**39.99**	**270**	T	T	10 55 46.1	
	baz=95,slow=75,SNR=5.6						
H08S1	**Diego Carcia H**	**40.00**	**270**	T	T	10 55 44.1	
	baz=95,slow=75,SNR=6.1						
SHL	**Shillong**	**40.51**	**330**	P	**P**	**10 13 32.3**	**-0.8**
USRK	**Ussuriysk Ar.**	**56.28**	**16**	P	**P**	**10 15 33.5**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=201,slow=7.7,SNR=2.4						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**57.48**	**355**	P	**P**	**10 15 41.9**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=176,slow=8.2,SNR=8.1						
	comp=Z,1.6nm,0.6s						
RPZ	**Rata Peaks**	**60.56**	**135**	LR	LR	10 42 15.0	
	comp=Z,50nm,19.2s,baz=224,slow=36						
MK31	**Makanchi Array**	**62.44**	**337**	P	**P**	**10 16 15.7**	**-1.0**
MKAR	**Makanchi Array**	**62.44**	**337**	P	**P**	**10 16 15.5**	**-1.1**
	comp=Z,2.9nm,0.5s,baz=147,slow=7.3,SNR=19						
	comp=Z,2.9nm,0.5s						
MKAR	**Makanchi Array**	**62.44**	**337**	P	**P**	**10 16 15.7**	**-1.0**
AAK	**Ala-Archa**	**62.72**	**329**	P	**P**	**10 16 18.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=117,slow=2.3,SNR=2.5						
	comp=Z,0.6nm,0.3s						
KKAR	**Karatay Array**	**65.13**	**327**	P	**P**	**10 16 33.5**	**-1.0**
KURBB	**Kurchatov Arra**	**67.00**	**337**	P	**P**	**10 16 44.6**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=160,slow=5.5,SNR=4.9						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**67.63**	**342**	P	**P**	**10 16 48.4**	**-1.8**
	comp=Z,1.8nm,0.4s,baz=157,slow=4.1,SNR=10						
	comp=Z,1.8nm,0.4s						
ZALV	**Zalesovo Beam**	**67.63**	**342**	P	**P**	**10 16 48.8**	**-1.4**
GEYT	**Alibeck**	**69.62**	**316**	P	**P**	**10 17 01.9**	**-1.2**
GEYT				IAmb	IAmb	10 17 03.7	
	comp=Z,3.9nm,1.1s						
ABKAR	**Akbulak array**	**74.69**	**327**	P	**P**	**10 17 32.3**	**-0.7**
BOSA	**Boshof**	**83.42**	**242**	LR	LR	10 50 34.4	
	comp=Z,29nm,18.8s,baz=6.5,slow=32						

KRNET ***19*** *10:09:43.2±0.1,43°.37N×71°.80E,h18km,mb2.3*
NNC ***19*** *10:09:47.0±0.2,43°.20N×69°.49E,h0km,mpv2.0,Error ellipse: s-maj=24.1km s-min=1.1km az=6.0,Suspected Mining explosion.*

ISC 19 10:09:42.6±4.7,43°.5N±0°.2×71°.7E±0°.4,h21km,n15, σ0s76/4,16C-14D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK05	**Karatay Array**	**0.98**	**245**	⇑P	Pb	10 10 02.0	+1.0
KK05				⇓S	Sb	10 10 12.5	-1.0
KK06	**Karatay Array**	**0.99**	**244**	⇑P	Pb	10 10 02.0	+0.9
KK06				⇓S	Sb	10 10 12.6	-1.2
KK02	**Karatay Array**	**1.00**	**244**	⇑P	Pb	10 10 01.6	+0.4
KK02				⇑S	Sb	10 10 12.2	-1.7
KK09	**Karatay Array**	**1.00**	**246**	⇑P	Pb	10 10 01.7	+0.5
KK09				⇑S	Sb	10 10 11.9	-2.0
KK31	**Karatay Array**	**1.00**	**244**	⇓P	Pb	10 10 01.7	+0.5
	1.1nm,0.3s,baz=87,slow=79,SNR=19						
KK31				⇓S	Sb	10 10 12.3	-1.6
	2.6nm,0.5s,baz=298,slow=29,SNR=9.2						
KKAR	**Karatay Array**	**1.00**	**244**	⇓*i*P	Pb	10 10 01.6	+0.4
	baz=55						
KKAR				⇓*i*S	Sb	10 10 15.3	+1.4
	baz=55						
KK04	**Karatay Array**	**1.00**	**245**	⇑P	Pb	10 10 01.6	+0.4
KK04				⇑S	Sb	10 10 12.1	-1.8
KK01	**Karatay Array**	**1.00**	**245**	⇑P	Pb	10 10 01.6	+0.4
KK01				⇑S	Sb	10 10 12.4	-1.6
KK03	**Karatay Array**	**1.01**	**245**	⇑P	Pb	10 10 01.6	+0.3
KK03				⇑S	Sb	10 10 12.2	-2.0
KK07	**Karatay Array**	**1.01**	**244**	⇑P	Pb	10 10 01.7	+0.3
KK07				⇓S	Sb	10 10 12.1	-2.2
KK08	**Karatay Array**	**1.01**	**245**	⇑P	Pb	10 10 01.5	+0.1
KK08				⇓S	Sb	10 10 12.0	-2.4
EKS2	**Erkin-Say**	**1.73**	**120**	⇓*i*P	Pn	10 10 13.2	+1.6
	baz=15						
EKS2				⇓*i*S	Sn	10 10 34.7	+1.6
	baz=15						
ARK	**Arkit**	**1.75**	**175**	⇓*i*P	**Pn**	**10 10 12.2**	**+0.3**
	baz=76						
ARK				⇓*i*S	**Sn**	**10 10 33.2**	**-0.4**
	baz=76						
TRKS	**Terek-Say**	**2.06**	**193**	⇓*i*P	**Pb**	**10 10 19.0**	**-0.4**
	baz=94						
TRKS				⇓*i*S	**Sb**	**10 10 45.0**	**+0.4**
	baz=94						
KBK	**Karagaybulak**	**2.51**	**110**	⇑*i*P	Pn	10 10 25.0	+2.7
	baz=6.0						
KBK				⇑*i*S	Sn	10 10 55.7	+3.3
	baz=6.0						

NIC ***19*** *10:36:40.1±0.0,34°.47N×33°.01E,h44km±1km,Ml2.8/6*
ISK ***19*** *10:36:42.9,34°.70N×32°.98E,h30km,ML2.5/13*
GII ***19*** *10:36:42.7±0.0,34°.59N×33°.24E,h40km,Mm2.6/3*

ISC 19 10:36:40.7±1.2,34°.49N±0°.03×32°.95E±0°.03,h44km±10km, n30,σ0s92/49,3C-2D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.27**	**348**	⇑*i*P	**Pn**	**10 36 49.0**	**-0.1**
SZAC				S	**Sn**	**10 36 55.5**	**+0.5**
SZAC				AML	AML	10 36 55.6	
	2.6nm,0.2s						
SZAC				AML	AML	10 36 55.6	
	2.6nm,0.2s						
SZAC				AML	AML	10 36 56.3	
	4.4nm,0.2s						
SZAC				AML	AML	10 36 56.3	
	4.4nm,0.2s						
ASGA	**Asgata**	**0.38**	**39**	⇓*i*P	**Pn**	**10 36 49.7**	**-0.5**
ASGA				AML	AML	10 36 56.3	
	2.7nm,0.2s						
ASGA				AML	AML	10 36 56.3	
	2.7nm,0.2s						
ASGA				AML	AML	10 36 56.4	
	2.0nm,0.2s						
ASGA				AML	AML	10 36 56.4	
	2.0nm,0.2s						
ASGA				S	**Sn**	**10 36 56.6**	**-0.4**
NATA	**Nata**	**0.43**	**313**	P	**Pn**	**10 36 50.9**	**+0.2**
NATA				S	**Sn**	**10 36 59.4**	**+1.5**
NATA				AML	AML	10 37 01.1	
	5.6nm,0.3s						
NATA				AML	AML	10 37 01.1	
	5.6nm,0.3s						
NATA				AML	AML	10 37 03.5	
	3.0nm,0.6s						
NATA				AML	AML	10 37 03.5	
	3.0nm,0.6s						
CSS	**Mathiatis**	**0.56**	**33**	PG	**Pn**	**10 36 52.2**	**-0.3**
CSS				SG	**Sn**	**10 36 59.3**	**-1.6**
CSS	**Mathiatis**	**0.56**	**33**	⇑*e*P	**Pn**	**10 36 51.8**	**-0.7**
CSS				S	**Sn**	**10 37 00.9**	**0.0**
LEF	**Lefka**	**0.63**	**355**	PG	**Pn**	**10 36 53.3**	**0.0**
LEF				SG	**Sn**	**10 37 00.1**	**-2.3**
ALFC	**Alefka**	**0.73**	**336**	⇑*i*P	**Pn**	**10 36 54.3**	**-0.3**
ALFC				S	**Sn**	**10 37 04.7**	**0.0**
ALFC				AML	AML	10 37 06.0	
	2.2nm,0.2s						
ALFC				AML	AML	10 37 06.0	
	2.2nm,0.2s						
ALFC				AML	AML	10 37 06.5	
	2.7nm,0.3s						
ALFC				AML	AML	10 37 06.5	
	2.7nm,0.3s						
AKMS	**Akamas**	**0.73**	**316**	⇓*i*P	**Pn**	**10 36 54.6**	**-0.1**
AKMS				AML	AML	10 37 06.0	
	1.0nm,0.2s						
AKMS				AML	AML	10 37 06.0	
	1.0nm,0.2s						
AKMS				S	**Sn**	**10 37 06.2**	**+1.3**
AKMS				AML	AML	10 37 06.6	
	1.2nm,0.1s						
AKMS				AML	AML	10 37 06.6	
	1.2nm,0.1s						
ATHAL	**Athalassa**	**0.75**	**29**	S	**Sn**	**10 37 06.1**	**+1.0**
MVOU	**Mavrovouni**	**0.77**	**47**	P	**Pn**	**10 36 54.7**	**-0.4**
MVOU				S	**Sn**	**10 37 06.7**	**+1.1**
MVOU				AML	AML	10 37 07.4	
	0.6nm,0.3s						
MVOU				AML	AML	10 37 07.4	
	0.6nm,0.3s						
MVOU				AML	AML	10 37 08.6	
	0.5nm,0.2s						
MVOU				AML	AML	10 37 08.6	
	0.5nm,0.2s						
LFK	**Lefkose**	**0.92**	**31**	PG	**Pn**	**10 36 57.9**	**+0.6**
PARAL	**Paralimni**	**1.03**	**60**	P	**Pn**	**10 36 59.2**	**+0.5**
EREN	**Erenkoy**	**1.44**	**44**	PN	**Pn**	**10 37 05.2**	**+0.9**
OSC2	**CSNet OBS 4**	**1.52**	**202**	P	**Pn**	**10 37 03.0**	**-2.5**
OSC2				S	**Sn**	**10 37 24.4**	**+0.4**
TEKE	**Tekeli-Mersin**	**1.66**	**5**	PN	**Pn**	**10 37 07.5**	**+0.2**
TEKE				SN	**Sn**	**10 37 25.5**	**-1.8**
OSC1	**CSNet OBS 1**	**1.71**	**235**	P	**Pn**	**10 37 07.8**	**-0.2**
OSC1				S	**Sn**	**10 37 29.9**	**+1.3**
AKKU	**Akkuyu-Mersin**	**1.74**	**16**	PN	**Pn**	**10 37 08.7**	**+0.3**
GAZI	**Gazipasa**	**1.82**	**344**	PN	**Pn**	**10 37 09.9**	**+0.4**
GAZI				SN	**Sn**	**10 37 29.9**	**-1.5**
IKL	**Isikli**	**1.84**	**19**	PN	**Pn**	**10 37 10.1**	**+0.2**
BERE	**Bereket-Mersin**	**1.87**	**7**	PN	**Pn**	**10 37 10.7**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.98**	**11**	PN	**Pn**	**10 37 12.1**	**+0.2**
KEBE	**Keben-Mersin**	**2.05**	**17**	PN	**Pn**	**10 37 13.0**	**+0.2**
HNTI	**Hanita**	**2.32**	**127**	Pn	**Pn**	**10 37 16.1**	**-0.3**
HNTI				Sn	**Sn**	**10 37 43.1**	**-0.6**
HDMB	**Hadim**	**2.50**	**351**	PN	**Pn**	**10 37 19.4**	**+0.3**
MMA0B	**Mount Meron ar**	**2.52**	**125**	Pn	**Pn**	**10 37 19.6**	**+0.5**
MMA0B				Sn	**Sn**	**10 37 48.1**	**-0.5**
GEM	**Giv'at Ha'Em**	**2.59**	**119**	Pn	**Pn**	**10 37 20.8**	**+0.7**
GEM				Sn	**Sn**	**10 37 49.6**	**-0.8**
NATI	**Neve Ativ**	**2.62**	**117**	Pn	**Pn**	**10 37 21.0**	**+0.5**
NATI				Sn	**Sn**	**10 37 49.6**	**-1.4**
MMLI	**Mount Malkishu**	**2.91**	**134**	Pn	**Pn**	**10 37 25.2**	**+0.7**
MMLI				Sn	**Sn**	**10 37 58.8**	**+0.6**
YAYL	**Yayladag**	**3.01**	**58**	PN	**Pn**	**10 37 26.2**	**+0.3**
HMDT	**Nahal Hemdat**	**3.10**	**135**	Pn	**Pn**	**10 37 28.0**	**+0.9**
HMDT				Sn	**Sn**	**10 38 03.6**	**+0.7**

BJI ***19*** *11:07:49.0±0.0,43°.60N×138°.80E,h255km,mb4.3/18, mB4.6/15*
MOS ***19*** *11:07:49.7±0.9,43°.63N×138°.85E,h248km,mb4.3/13, Error ellipse: s-maj=8.6km s-min=6.3km az=80.9*
IDC ***19*** *11:07:49.9±1.1,43°.61N×138°.84E,h235km±10km, mb3.7/19,mbtmp4.4/27,Error ellipse: s-maj=10.8km s-min=8.2km az=96.0*
SKHL ***19*** *11:07:50.2±0.3,43°.60N×138°.90E,h241km±6km,mb5.1/5, msh5.2/4*
NEIC ***19*** *11:07:50.8±1.3,43°.58N±0°.07×138°.8E±0°.1,h241km±7km, mb4.2/58,Error ellipse: s-maj=11.1km s-min=9.9km az=108.0*
NIED ***19*** *11:07:50.6,43°.47N×138°.96E,h252km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=1.14; Mθθ2.05; Mφφ-0.90; Mrθ1.14; Mθφ-2.53; Mφr1.01; Fault plane solution: M0 3.44000×10¹⁵ NP1: φs=160.00000°,δ62.00000°,λ-21.00000°. NP2: φs=260.00000°,δ72.00000°,λ-150.00000°.*
JMA ***19*** *11:07:50.6±0.2,43°.5N±0°.8×13°.9E±°,h252km±1km, MV3.6/39,EASTERN SEA OF JAPAN*

ISC 19 11:07:50.1±0.6,43°.50N±0°.04×138°.88E±0°.04,h243km±5km, n325,σ1s25/340,mb4.2/64,11C-1D,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**1.17**	**97**	*e*P	**Pn**	**11 08 26.4**	**+1.0**
JSK				*e*S	**S**	**11 08 53.6**	**+0.6**
JOSM	**Okushiri--Mats**	**1.49**	**163**	P	**Pn**	**11 08 28.9**	**+1.1**
JOSM				*e*S	**S**	**11 08 58.3**	**+1.1**
JEW	**Eniwo**	**1.99**	**109**		**Pn**	**11 08 33.6**	**+1.7**
JEW	**Eniwo**	**1.99**	**109**	P	**Pn**	**11 08 33.6**	**+1.7**
JEW	**Eniwo**	**1.99**	**109**	*e*P	**Pn**	**11 08 33.7**	**+1.7**
JHR	**Hokuryu**	**2.08**	**82**	P	**Pn**	**11 08 34.1**	**+1.4**
JOMM	**Oshimamatsumae**	**2.15**	**157**	P	**Pn**	**11 08 34.4**	**+1.0**
JOMM				*e*S	**S**	**11 09 08.4**	**+1.0**
TEY	**Ternei**	**2.24**	**314**	*e*P	**Pn**	**11 08 34.5**	**+0.2**
TEY				pmax	pmax		
	comp=E,200nm,1.8s						
TEY				pmax	pmax		
	comp=N,200nm,1.5s						
TEY				pmax	pmax		
	comp=Z,500nm,1.5s						
TEY				pmax	pmax		
	comp=Z,360nm,0.6s						
TEY				pmax	pmax		
	comp=N,380nm,0.5s						
TEY				pmax	pmax		
	comp=Z,380nm,0.5s						
TEY	**Ternei**	**2.24**	**314**	*i* P	**Pn**	**11 08 34.4**	**+0.2**
TEY				AMB	AMB	11 08 34.8	
	comp=Z,700nm,2.0s						
TEY				AMB	AMB	11 08 35.1	
	comp=Z,430nm,0.4s						
TEY				*e*S	**S**	**11 09 08.9**	**-0.1**
TEY				A	A	11 09 09.0	
	comp=Z,60nm,0.4s						
TEY				A	A	11 09 09.0	
	comp=Z,40nm,0.4s						
TEY				A	A	11 09 09.6	
	comp=Z,200nm,2.0s						
TEY				A	A	11 09 09.6	
	comp=Z,200nm,2.0s						
JSS	**Shosan**	**2.32**	**66**	P	**Pn**	**11 08 36.5**	**+1.5**
JSS				*e*S	**S**	**11 09 11.4**	**+1.0**
JRBN	**Rebuntou**	**2.47**	**38**	P	**Pn**	**11 08 37.2**	**+0.7**
JRBN				*e*S	**S**	**11 09 13.3**	**+0.2**
JOT	**Ohata**	**2.66**	**142**	*e*P	**Pn**	**11 08 38.9**	**+0.3**
JWK2	**Keihoku**	**2.82**	**49**	P	**Pn**	**11 08 42.0**	**+1.9**
JKK2	**Kamakawa 2**	**2.83**	**81**	P	**Pn**	**11 08 41.5**	**+1.2**
JKK2				*e*S	**S**	**11 09 20.9**	**+1.1**
JSE	**Soyaes**	**3.03**	**60**	P	**Pn**	**11 08 43.6**	**+1.2**
JSE				*e*S	**S**	**11 09 24.5**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.10**	**112**	*e*P	**Pn**	**11 08 43.5**	**+0.3**
JNBK				*e*S	**S**	**11 09 24.5**	**-0.6**
JTM	**Tenmabayashi**	**3.16**	**148**		**Pn**	**11 08 44.5**	**+0.5**
JTM	**Tenmabayashi**	**3.16**	**148**	P	**Pn**	**11 08 44.7**	**+0.7**
JCH	**Churui**	**3.40**	**104**	*e*P	**Pn**	**11 08 45.8**	**-0.8**
JCH				*e*S	**S**	**11 09 28.3**	**-3.0**
ERM	**Erimo**	**3.48**	**114**	Pn	**Pn**	**11 08 49.1**	**+1.6**
ERM	**Erimo**	**3.48**	**114**	*ce*P	**Pn**	**11 08 48.5**	**+1.0**
ERM				pmax	pmax		
	comp=Z,45nm,1.3s						
ERM	**Erimo**	**3.48**	**114**	P	**Pn**	**11 08 48.8**	**+1.3**
JEM	**Erimo**	**3.48**	**114**	P	**Pn**	**11 08 49.0**	**+1.5**
JAR	**Ashorobuto**	**3.57**	**92**	P	**Pn**	**11 08 49.3**	**+0.7**
JAR				*e*S	**S**	**11 09 34.2**	**-0.5**
JTKR	**Abashiri--Toko**	**3.67**	**81**	*e*P	**Pn**	**11 08 50.5**	**+0.9**
JTKR				*e*S	**S**	**11 09 37.0**	**+0.2**
JANG	**Nango**	**3.69**	**147**	*e*P	**Pn**	**11 08 49.4**	**-0.7**
JANG				*e*S	**S**	**11 09 34.8**	**-2.7**
JAK	**Akkeshi**	**4.28**	**95**	*e*P	**Pn**	**11 08 56.6**	**-0.3**
JAK				*e*S	**S**	**11 09 46.6**	**-3.2**
AKK	**Akkeshi**	**4.38**	**94**	*e*P	**Pn**	**11 08 57.8**	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.40**	**37**	Pn	**Pn**	**11 08 59.1**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.40**	**37**	*e*P	**Pn**	**11 08 59.3**	**+1.0**
YSS				*e*S	**S**	**11 09 51.7**	**-0.8**
YSS				pmax	pmax		
	comp=Z,410nm,0.7s						
YSS				pmax	pmax		
	comp=Z,400nm,4.1s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
YSS				smax	smax		
	comp=E,90nm,1.2s						
YSS	**Yuzh-Sakhalins**	**4.40**	**37**	P	**Pn**	**11 08 59.8**	**+1.5**
YSS	**Yuzh-Sakhalins**	**4.40**	**37**	*e*P	**Pn**	**11 08 59.1**	**+0.8**
YSS				AMB	AMB	11 09 00.4	
	comp=E,410nm,0.7s						
YSS				AMB	AMB	11 09 01.6	
	comp=E,400nm,4.0s						
YSS				*e*S	**S**	**11 09 52.4**	**-0.1**
YSS				A	A	11 09 54.0	
	comp=E,50nm,0.7s						
YSS				A	A	11 09 54.0	
	comp=E,90nm,0.7s						
JOM	**Ohasama**	**4.42**	**155**	*e*P	**Pn**	**11 08 58.0**	**-0.6**
JOM				*e*S	**S**	**11 09 50.5**	**-2.5**
RUSJ	**Misakicho**	**4.65**	**80**	*e*P	**Pn**	**11 09 04.8**	**+3.5**
RUSJ				S	**S**	**11 10 06.0**	**+8.2**
NMR	**Nemuro--Hokkai**	**4.99**	**89**	*e*P	**Pn**	**11 09 04.1**	**-1.4**
NMR				*e*S	**S**	**11 10 00.1**	**-5.3**
NMR	**Nemuro--Hokkai**	**4.99**	**89**	*e*P	**Pn**	**11 09 05.3**	**-0.2**
USA0B	**Ussuriysk Arra**	**5.04**	**280**	Pn	**Pn**	**11 09 05.8**	**-0.3**
USA0B	**Ussuriysk Arra**	**5.04**	**280**	P	**Pn**	**11 09 05.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**5.04**	**280**	P	**Pn**	**11 09 06.1**	**0.0**
	comp=E,38nm,0.5s,baz=90,slow=12,SNR=75						
USRK				S	**S**	**11 10 05.6**	**-0.8**
	comp=E,3.7nm,0.5s,baz=95,slow=18,SNR=1.6						
USRK	**Ussuriysk Ar.**	**5.04**	**280**		**Pn**	**11 09 05.8**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**5.08**	**82**	*c i*P	**Pn**	**11 09 08.3**	**+1.7**
YUK				S	**S**	**11 10 08.6**	**+1.1**
YUK				pmax	pmax		
	comp=Z,243nm,0.3s						
YUK				pmax	pmax		
	comp=N,14nm,0.2s						
YUK				smax	smax		
	comp=E,216nm,0.7s						
YUK				smax	smax		
	comp=N,120nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.08**	**82**	*i* P	**Pn**	**11 09 07.8**	**+1.2**
YUK				AMB	AMB	11 09 08.5	
	comp=N,350nm,0.3s						
YUK				AMB	AMB	11 09 09.0	
	comp=N,740nm,2.0s						
YUK				*e*S	**S**	**11 10 08.1**	**+0.6**
YUK				A	A	11 10 10.0	
	comp=N,720nm,2.0s						
YUK				A	A	11 10 10.0	
	comp=N,740nm,2.0s						
YUK				A	A	11 10 16.5	
	comp=N,220nm,0.7s						
YUK				A	A	11 10 16.5	
	comp=N,520nm,0.7s						
JSD	**Sado**	**5.48**	**185**	Pn	**Pn**	**11 09 13.1**	**+1.4**
JSD	**Sado**	**5.48**	**185**	P	**Pn**	**11 09 13.2**	**+1.5**
JMM	**Marumori**	**5.82**	**165**	Pn	**Pn**	**11 09 14.9**	**-0.9**
JMM	**Marumori**	**5.82**	**165**	P	**Pn**	**11 09 15.4**	**-0.4**
UGL	**Uglegorsk**	**6.00**	**20**	*e*P	**Pn**	**11 09 16.3**	**-1.6**
UGL				pmax	pmax		
	comp=Z,130nm,0.9s						
UGL	**Uglegorsk**	**6.00**	**20**	*e*P	**Pn**	**11 09 18.3**	**+0.4**
UGL				AMB	AMB	11 09 19.6	
	comp=Z,70nm,0.6s						
MDJ	**Mudanjiang**	**6.79**	**283**		**Pn**	**11 09 26.6**	**-1.3**
MDJ	**Mudanjiang**	**6.79**	**283**	P	**Pn**	**11 09 28.4**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,34nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,410nm,5.3s						
MJB9	**Matsu-Tunnel**	**6.97**	**185**		**Pn**	**11 09 32.4**	**+2.0**
MAJO	**Matsushiro**	**6.97**	**184**	Pn	**Pn**	**11 09 31.3**	**+0.9**
MAJO	**Matsushiro**	**6.97**	**184**	*c i*P	**Pn**	**11 09 30.9**	**+0.5**
MAJO	**Matsushiro**	**6.97**	**184**	P	**Pn**	**11 09 31.3**	**+0.9**
MJAR	**Matsushiro Arr**	**6.97**	**184**	P	**Pn**	**11 09 31.2**	**+0.8**
	comp=Z,28nm,0.5s,baz=6.0,slow=14,SNR=70						
JYT	**Yasato**	**7.34**	**172**	Pn	**Pn**	**11 09 32.2**	**-2.8**
JYT	**Yasato**	**7.34**	**172**	P	**Pn**	**11 09 33.1**	**-1.9**
KLR	**Kul'dur**	**7.56**	**322**	P	**Pn**	**11 09 37.5**	**-0.2**
	comp=Z,5.1nm,0.7s,baz=128,slow=12,SNR=16						
KLR				S	**S**	**11 11 01.3**	**-2.7**
	comp=Z,2.1nm,0.6s,baz=328,slow=19,SNR=1.4						
KLR	**Kul'dur**	**7.56**	**322**	*ce*P	**Pn**	**11 09 36.6**	**-1.0**
KLR				pmax	pmax		
	comp=Z,11nm,1.3s						
TYV	**Tymovskoe**	**7.80**	**18**	*e*P	**Pn**	**11 09 40.8**	**+0.2**
TYV				AMB	AMB	11 09 46.1	
	comp=Z,400nm,4.0s						
TYV				*e*S	**S**	**11 11 09.1**	**-0.4**
TYV				A	A	11 11 18.6	
	comp=Z,600nm,4.0s						
TYV				A	A	11 11 18.6	
	comp=Z,400nm,4.0s			

MA2 Magadan 17.66 20 *ce*P **P 11 11 38.2 -1.0**
MA2 pmax pmax
comp=Z,93nm,0.7s
MA2 Magadan 17.66 20 P **P 11 11 38.8 -0.4**
YAK Yakutsk 19.34 347 P **P 11 11 54.8 -2.4**
comp=Z,12nm,0.5s,baz=151,slow=3.6,SNR=8.0
YAK Yakutsk 19.34 347 P **P 11 11 55.7 -1.4**
YAK Yakutsk 19.34 347 *ce*P **P 11 11 55.3 -1.8**
YAK pmax pmax
comp=Z,17nm,0.5s
HHC Hu-ho-hao-te 20.39 272 *e*P **P 11 12 07.1 -1.7**
HHC pmax pmax
comp=Z,29nm,0.9s
HHC pmax pmax
comp=Z,390nm,5.6s
SEY Seymchan 20.99 17 P **P 11 12 12.8 -1.9**
comp=Z,9.0nm,0.6s,baz=216,slow=9.1,SNR=18
comp=Z,9.0nm,0.6s
SEY Seymchan 20.99 17 *i* P **P 11 12 12.8 -1.9**
SEY pmax pmax
comp=Z,11nm,0.8s
SONM Songino Array 23.01 292 P **P 11 12 32.8 -1.1**
comp=Z,1.0nm,0.5s,baz=81,slow=9.3,SNR=2.9
comp=Z,1.0nm,0.5s
LZH Lanzhou 27.77 267 *e*P **P 11 13 11.8 -4.9**
LZH pmax pmax
comp=Z,12nm,1.1s
TIXI Tiksi 28.64 353 P **P 11 13 20.8 -3.0**
comp=Z,0.7nm,0.3s,baz=90,slow=20,SNR=6.6
TIXI Tiksi 28.64 353 P **P 11 13 21.9 -1.9**
TIXI IAmb IAmb 11 13 45.9
comp=Z,6.4nm,1.5s
TIXI Tiksi 28.64 353 P **P 11 13 21.9 -1.9**
TIXI pmax pmax
comp=Z,6.0nm,1.5s
PZH PanZhiHua 34.49 253 P **P 11 14 16.8 +1.4**
PZH pmax pmax
comp=Z,9.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.2s
DGZ Jazzator, Alta 35.30 299 *i* P **P 11 14 22.3 +0.2**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 36.32 306 P **P 11 14 30.0 -0.5**
ZAA0 IAmb IAmb 11 14 31.9
comp=Z,4.4nm,0.9s
ZALV Zalesovo Beam 36.32 306 P **P 11 14 30.3 -0.2**
comp=Z,2.2nm,0.4s,baz=81,slow=8.3,SNR=15
ZALV ScP **ScP 11 20 12.6 +0.3**
comp=Z,2.5nm,0.7s,baz=96,slow=4.2,SNR=11
comp=Z,2.2nm,0.4s
ZALV Zalesovo Beam 36.32 306 P **P 11 14 30.4 -0.1**
ZALV Zalesovo Beam 36.32 306 P **P 11 14 30.4 -0.1**
TNA Tin City 36.38 34 P **P 11 14 30.8 0.0**
WMQ Urumqi 36.54 289 *e*P **P 11 14 35.0 +2.4**
NRIK Noril'sk 36.61 332 P **P 11 14 31.6 -1.1**
comp=Z,1.6nm,0.3s,baz=4.4,slow=4.0,SNR=2.8
comp=Z,1.6nm,0.3s
NRIK Noril'sk 36.61 332 P **P 11 14 31.9 -0.9**
NRIK Noril'sk 36.61 332 P **P 11 14 31.9 -0.9**
NRIK pmax pmax
comp=Z,3.0nm,0.8s
ANM Nome 37.29 36 P **P 11 14 39.3 +0.8**
ANM IAmb IAmb 11 14 45.8
comp=Z,20nm,1.2s
ANM Nome 37.29 36 P **P 11 14 39.3 +0.8**
ANM pmax pmax
comp=Z,20nm,1.2s
MK31 Makanchi Array 39.31 295 P **P 11 14 56.0 +0.4**
MK31 Makanchi Array 39.31 295 P **P 11 14 56.0 +0.4**
MK31 pmax pmax
comp=Z,4.0nm,1.3s
MKAR Makanchi Array 39.31 295 P **P 11 14 55.8 +0.1**
comp=Z,0.6nm,0.6s,baz=80,slow=10,SNR=5.5
MKAR PcP **PcP 11 16 59.1 +0.2**
comp=Z,0.2nm,0.5s,baz=92,slow=4.9,SNR=2.0
MKAR ScP **ScP 11 20 23.5 -0.4**
comp=Z,1.0nm,0.7s,baz=63,slow=5.6,SNR=6.7
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 39.31 295 P **P 11 14 56.0 +0.4**
MKAR Makanchi Array 39.31 295 P **P 11 14 56.0 +0.4**
MKAR Makanchi Array 39.31 295 *e*P **P 11 14 55.0 -0.6**
N16K Nishlik Lake 40.26 43 P **P 11 15 03.6 +0.4**
baz=274
KURK Kurchatov 40.63 302 P **P 11 15 06.3 0.0**
KURK Kurchatov 40.63 302 *ce*P **P 11 15 06.0 -0.3**
KURK pmax pmax
comp=Z,15nm,2.5s
KURK Kurchatov 40.63 302 *e*P **P 11 15 06.3 0.0**
CHGN Chignik 40.93 49 P **P 11 15 09.1 +0.5**
baz=279
GCSA Galena City Sc 40.95 36 P **P 11 15 08.5 -0.2**
baz=271
O17K Koliganek Bris 41.15 44 P **P 11 15 10.8 +0.4**
baz=276
N18K Kilae Creek 41.65 42 P **P 11 15 16.4 +1.9**
J20K Nowinta River 42.15 37 P **P 11 15 19.3 +0.8**
J20K IAmb IAmb 11 15 23.4
comp=Z,8.3nm,1.0s
J20K Nowinta River 42.15 37 P **P 11 15 18.3 -0.1**
baz=274
IMAR Indian Mountai 42.23 34 P **P 11 15 19.5 +0.4**
F21K Alatna River 42.30 32 P **P 11 15 19.7 +0.1**
baz=271
G21K Allakaket 42.31 33 P **P 11 15 19.9 +0.2**
baz=272,SNR=9.1
H21K Melozitna Rive 42.63 35 P **P 11 15 22.7 +0.4**
H21K Melozitna Rive 42.63 35 P **P 11 15 21.6 -0.7**
baz=274
F22K John River 42.80 32 P **P 11 15 23.1 -0.4**
baz=272
E22K Anaktuvuk Pass 42.92 31 P **P 11 15 24.7 +0.1**
baz=272
I21K Tanana 43.01 35 P **P 11 15 25.5 +0.2**
baz=275
G22K Bettles 43.08 33 P **P 11 15 25.8 0.0**
baz=273
CAST Castle Rocks 43.13 38 P **P 11 15 27.6 +1.3**
CAST IAmb IAmb 11 15 31.8
comp=Z,13nm,1.2s
CAST Castle Rocks 43.13 38 P **P 11 15 26.4 0.0**
baz=276
H22K Ishtalitna Cre 43.20 34 P **P 11 15 27.2 +0.4**
baz=274
D23K Nanushuk River 43.31 30 P **P 11 15 26.8 -0.8**
baz=272
C23K Itkillik River 43.31 28 P **P 11 15 26.7 -0.9**
baz=271
MLY Manley 43.55 35 P **P 11 15 29.4 -0.3**
baz=276
COLD Coldfoot 43.58 32 IAmb IAmb 11 15 31.1
comp=Z,7.5nm,0.9s
COLD Coldfoot 43.58 32 P **P 11 15 29.9 +0.1**
baz=274
G23K Bananza Creek 43.68 33 P **P 11 15 30.1 -0.6**
baz=275
TOLK Toolik Lake Re 43.73 30 P **P 11 15 30.6 -0.5**
baz=273
E23K Chandalar 43.74 31 P **P 11 15 31.1 -0.2**
baz=274,SNR=6.4
TRF Thorofare Moun 43.93 38 P **P 11 15 33.8 +1.0**
CAPN Captain Cook N 43.94 42 P **P 11 15 32.9 +0.1**
baz=280
H23K Yukon River 43.96 34 IAmb IAmb 11 15 35.4
comp=Z,6.0nm,0.9s
H23K Yukon River 43.96 34 P **P 11 15 32.8 -0.1**
baz=276
C24K Franklin Bluff 43.98 29 P **P 11 15 32.9 0.0**
baz=273
I23K Minto, Yukon-K 44.11 35 IAmb IAmb 11 15 36.0
comp=Z,4.4nm,0.7s
I23K Minto, Yukon-K 44.11 35 P **P 11 15 34.3 +0.3**
baz=277
E24K Your Creek 44.16 31 P **P 11 15 34.8 +0.3**
baz=275
M22K Willow 44.27 40 P **P 11 15 34.9 -0.4**
baz=280
NEA2 Nenana 44.31 36 P **P 11 15 36.0 +0.4**
baz=278
BRSE Bradley Lake S 44.34 43 P **P 11 15 35.7 -0.2**
baz=281
F24K Squaw Lake 44.44 32 P **P 11 15 36.9 +0.2**
baz=276,SNR=6.8
MCK McKinley 44.49 37 P **P 11 15 36.6 -0.5**
baz=279
MDM Murphy Dome 44.61 35 P **P 11 15 38.5 +0.5**
MDM IAmb IAmb 11 15 40.3
comp=Z,9.6nm,1.4s
H24K Noodor Dome 44.64 34 IAmb IAmb 11 15 40.3
comp=Z,7.4nm,1.0s
H24K Noodor Dome 44.64 34 P **P 11 15 38.7 +0.4**
baz=278,SNR=5.9
G24K Hadweenzic Riv 44.69 33 P **P 11 15 39.3 +0.6**
baz=277
TCOL CICO, UAF Yank 44.78 35 P **P 11 15 40.0 +0.7**
baz=279
COLA College 44.78 35 P **P 11 15 39.8 +0.5**
baz=279
WAT1 Susitna Watana 44.81 38 P **P 11 15 39.1 -0.5**
baz=280
D25K Kavik River 44.83 29 P **P 11 15 39.4 -0.3**
baz=275
SEW Seward 44.90 42 P **P 11 15 40.8 +0.5**
baz=282
POKR Poker Plat Res 44.92 35 IAmb IAmb 11 15 43.5
comp=Z,7.8nm,1.1s
POKR Poker Plat Res 44.92 35 P **P 11 15 41.3 +0.8**
baz=279,SNR=5.1
BRVK Borovoye 44.99 307 *i* P **P 11 15 41.6 +0.4**
BRVK pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 44.99 307 *e*P **P 11 15 41.6 +0.4**
SML Sawmill 45.09 40 P **P 11 15 42.5 +0.5**
baz=281
IL31 45.21 36 P **P 11 15 43.4 +0.7**
IL31 IAmb IAmb 11 15 43.9
comp=Z,11nm,1.4s
ILAR Eielson Array 45.21 36 P **P 11 15 42.6 -0.1**
comp=Z,2.6nm,0.6s,baz=280,slow=7.8,SNR=49
comp=Z,2.6nm,0.6s
HDA Harding Lake 45.24 36 P **P 11 15 42.8 -0.2**
baz=280
C26K Camden Bay 45.28 28 P **P 11 15 43.4 +0.3**
baz=276
F25K Christian Rive 45.29 31 P **P 11 15 43.6 +0.3**
baz=278
DHY Denali Highway 45.29 38 IAmb IAmb 11 16 12.7
comp=Z,10nm,1.2s
DHY Denali Highway 45.29 38 P **P 11 15 43.5 -0.1**
baz=281
H25K Birch Creek 45.41 33 P **P 11 15 45.0 +0.7**
baz=279
SCM Sheep Creek Mo 45.56 40 P **P 11 15 46.6 +1.0**
baz=282
PRP Porcupine Dome 45.65 34 IAmb IAmb 11 15 48.4
comp=Z,11nm,0.6s
PRP Porcupine Dome 45.65 34 P **P 11 15 46.8 +0.5**
baz=280,SNR=8.8
C27K Jago River 45.73 29 P **P 11 15 47.4 +0.7**
baz=278,SNR=5.6
F26K Sheenjek River 45.84 31 P **P 11 15 48.6 +1.0**
baz=279,SNR=6.3
K24K Donnelly Dome 45.86 37 P **P 11 15 48.1 +0.3**
baz=281
GLI Glacier Island 45.87 41 P **P 11 15 48.2 +0.3**
baz=283
J25K Salcha River, 45.88 36 P **P 11 15 47.0 -1.0**
baz=281
G26K Porcupine Rive 46.10 32 P **P 11 15 50.3 +0.7**
baz=280,SNR=9.1
PAX Paxson 46.16 38 P **P 11 15 50.0 -0.2**
baz=282
KLU Klutina 46.28 40 P **P 11 15 52.0 +0.8**
baz=283
HARP HAARP 46.43 39 P **P 11 15 53.3 +1.0**
baz=283
SCRK Sand Creek 46.60 36 P **P 11 15 53.8 +0.1**
SCRK Sand Creek 46.60 36 P **P 11 15 53.6 0.0**
baz=283,SNR=5.6
J26L Joseph Creek 46.66 36 P **P 11 15 53.8 -0.4**
baz=282
I26K Coal Creek Min 46.67 34 P **P 11 15 54.3 +0.3**
baz=282
E27K Coleen River 46.71 30 P **P 11 15 55.1 +0.7**
baz=281
G27K Doyon Strip 46.95 32 P **P 11 15 57.2 +1.0**
baz=282
L26K Log Cabin Wild 47.09 37 P **P 11 15 58.1 +0.7**
baz=284
H27K Steamboat Moun 47.13 33 P **P 11 15 59.1 +1.5**
baz=283,SNR=6.2
I27K Kandik River 47.23 34 P **P 11 15 59.7 +1.3**
baz=283
K27K Chicken 47.41 36 IAmb IAmb 11 16 01.8
comp=Z,7.1nm,0.6s
K27K Chicken 47.41 36 P **P 11 16 00.9 +1.1**
baz=284
M26K Nabesna, AK 47.41 38 P **P 11 16 00.8 +0.9**
baz=285
EGAK Eagle 47.61 35 IAmb IAmb 11 16 03.4
comp=Z,12nm,1.1s
EGAK Eagle 47.61 35 P **P 11 16 02.0 +0.8**
baz=284,SNR=9.9
L27K Beaver Creek, 47.76 37 P **P 11 16 03.3 +0.8**
baz=285
M27K Edge Creek, AK 47.92 38 P **P 11 16 04.3 +0.5**
baz=286
KK31 Karatay Array 48.43 294 P **P 11 16 08.1 +0.2**
KK31 Karatay Array 48.43 294 P **P 11 16 08.1 +0.2**
KK31 pmax pmax
comp=Z,1.0nm,0.8s
KKAR Karatay Array 48.43 294 P **P 11 16 07.9 -0.1**
KKAR Karatay Array 48.43 294 IAmb IAmb 11 16 08.7
comp=Z,1.5nm,0.8s
KKAR Karatay Array 48.43 294 P **P 11 16 07.9 -0.1**
DAWY Dawson 48.54 35 P **P 11 16 09.3 +0.9**
DAWY Dawson 48.54 35 P **P 11 16 08.9 +0.5**
baz=286
CTG Chitna Glacier 48.56 40 P **P 11 16 09.7 +0.9**
baz=287
I29M Ogilvie Camp, 48.63 34 P **P 11 16 09.9 +0.8**
baz=286
EPYK Eagle Plains 48.97 32 P **P 11 16 13.1 +1.4**
baz=286,SNR=15
G30M tAoh Zraii Nji 48.99 31 P **P 11 16 12.5 +0.7**
baz=286,SNR=9.5
O28M Mount Upton 49.16 40 P **P 11 16 13.8 +0.4**
baz=288
L29M L29M 49.36 36 P **P 11 16 16.1 +1.5**
baz=288
K29M Barlow Dome 49.39 35 P **P 11 16 16.6 +1.6**
baz=288,SNR=7.0
M29M Somme Creek 49.42 37 P **P 11 16 16.2 +1.0**
baz=288
INK Inuvik 49.60 29 P **P 11 16 17.3 +1.1**
INK Inuvik 49.60 29 P **P 11 16 17.3 +1.1**
INK pmax pmax
comp=Z,17nm,0.5s
INK Inuvik 49.60 29 P **P 11 16 17.4 +1.1**
baz=287,SNR=14
YUK4 Talbot Arm 49.69 39 P **P 11 16 18.0 +0.7**
baz=289
F31M Tsiigehtchic 49.78 30 P **P 11 16 18.7 +1.0**
baz=288,SNR=5.4
MAYO Mayo, Yukon 50.16 35 P **P 11 16 21.7 +1.0**
baz=289
HYT Haines Junctio 50.38 39 IAmb IAmb 11 16 26.9
comp=Z,15nm,1.0s
HYT Haines Junctio 50.38 39 P **P 11 16 23.3 +0.8**
baz=290
P29M Windy Craggy 50.70 41 P **P 11 16 24.7 0.0**
baz=291
P30M Million Dollar 50.88 40 P **P 11 16 26.0 -0.2**
baz=291
N31M Braeburn, Yuko 50.93 38 IAmb IAmb 11 16 31.2
comp=Z,11nm,1.0s
N31M Braeburn, Yuko 50.93 38 P **P 11 16 26.9 +0.4**
baz=291
A36M Sachs Harbour 51.04 23 P **P 11 16 27.3 +0.3**
baz=292
M31M Drury Creek, Y 51.29 37 P **P 11 16 29.3 +0.2**
baz=292
WHY Whitehorse 51.65 39 P **P 11 16 31.8 0.0**
baz=292
FARO Faro, Yukon 51.73 37 P **P 11 16 32.4 +0.1**
baz=292
ABKAR Akbulak array 52.43 306 P **P 11 16 38.2 +0.5**
ABKAR Akbulak array 52.43 306 IAmb IAmb 11 16 46.6
comp=Z,1.8nm,0.6s
C36M Paulatuk 52.43 26 P **P 11 16 38.1 +0.8**
baz=294
MMPY Sheldon Lake, 52.48 36 P **P 11 16 38.5 +0.7**
baz=294
P33M Teslin, Yukon 52.76 39 P **P 11 16 41.2 +1.2**
baz=294
EUNU Eureka 54.09 9 P **P 11 16 49.8 +0.5**
EUNU IAmb IAmb 11 16 50.4
comp=Z,12nm,0.9s
TGTN Hyland Airport 54.21 36 P **P 11 16 51.6 +1.2**
baz=296
NOR Nord 54.47 356 *i* P **P 11 16 50.9 -1.1**
NOR IAmb IAmb 11 16 52.4
comp=Z,3.2nm,0.9s
S34M Telegraph Cree 54.54 41 P **P 11 16 54.6 +1.8**
baz=297
WTLY Watson Lake, Y 54.62 38 P **P 11 16 53.8 +0.5**
baz=297
MTN Manton Dam 56.52 189 P **P 11 17 08.2 +1.0**
MTN IAmb IAmb 11 17 33.7
comp=Z,14nm,1.2s
KEV Kevo 56.72 337 P **P 11 17 08.5 +0.5**
KEV IAmb IAmb 11 17 11.9
comp=Z,8.5nm,0.5s
KEV Kevo 56.72 337 P **P 11 17 08.5 +0.5**
KEV pmax pmax
comp=Z,8.0nm,0.5s
RES Resolute Bay 56.84 15 P **P 11 17 09.3 +0.5**
RES IAmb IAmb 11 17 09.8
comp=Z,9.4nm,0.8s
RES Resolute Bay 56.84 15 P **P 11 17 09.3 +0.5**
RES pmax pmax
comp=Z,9.0nm,0.8s
ARA0 ARCESS Array S 57.27 337 *e*P **P 11 17 12.5 +0.6**
ARA0 IAmb IAmb 11 17 15.8
comp=Z,5.5nm,0.6s
ARCES ARCESS Array B 57.27 337 P **P 11 17 12.4 +0.5**
comp=Z,3.5nm,0.5s,baz=56,slow=8.7,SNR=52
comp=Z,3.5nm,0.5s
ARCES ARCESS Array B 57.27 337 P **P 11 17 12.6 +0.7**
ARCES IAmb IAmb 11 17 26.0
comp=Z,8.9nm,1.2s
ARCES ARCESS Array B 57.27 337 P **P 11 17 12.6 +0.7**
ARCES pmax pmax
comp=Z,9.0nm,1.2s
KTK1 Kautokeino 58.23 338 *e*P **P 11 17 19.0 +0.4**
KTK1 IAmb IAmb 11 17 19.6
comp=Z,9.3nm,1.2s
TRO Tromso 58.98 339 *e*P **P 11 17 23.8 +0.2**
TRO IAmb IAmb 11 17 27.1
comp=Z,14nm,0.9s
DAG Danmarks Havn 59.16 354 *i* P **P 11 17 23.4 -1.4**
DAG IAmb IAmb 11 17 25.8
comp=Z,2.3nm,0.9s
NEEM North Greenlan 59.17 3 *i* P **P 11 17 24.2 -1.0**
NEEM IAmb IAmb 11 17 26.4
comp=Z,7.2nm,1.1s
YKA Yellowknife Ar 59.23 31 P **P 11 17 25.5 0.0**
comp=Z,2.0nm,0.5s,baz=307,slow=6.7,SNR=12
comp=Z,2.0nm,0.5s
KNRA Kununurra 59.62 191 P **P 11 17 30.1 +1.4**
STEI Steigen 61.13 339 *e*P **P 11 17 38.4 +0.2**
STEI IAmb IAmb 11 17 39.5
comp=Z,6.5nm,0.6s
FAUS Fauske 61.52 338 *e*P **P 11 17 41.5 +0.6**
FAUS IAmb IAmb 11 17 42.4
comp=Z,22nm,1.2s
FINES FINESS Array B 62.22 330 P **P 11 17 45.2 -0.3**
comp=Z,3.3nm,0.5s,baz=55,slow=7.7,SNR=18
comp=Z,3.3nm,0.5s
FINES FINESS Array B 62.22 330 P **P 11 17 45.7 +0.1**
FINES FINESS Array B 62.22 330 P **P 11 17 45.7 +0.1**
MOR8 Moi Rana 62.64 338 *e*P **P 11 17 48.1 -0.2**
MOR8 IAmb IAmb 11 17 48.3
comp=Z,9.8nm,0.6s
WB0 Warramunga Arr 63.09 185 P **P 11 17 52.2 +0.3**
WB0 IAmb IAmb 11 17 52.8
comp=Z,5.4nm,0.8s
WRAB Tennant Creek 63.26 185 P **P 11 17 53.1 +0.2**
WRAB IAmb IAmb 11 17 53.9
comp=Z,4.6nm,0.8s
WRAB Tennant Creek 63.26 185 *ce*P **P 11 17 54.3 +1.4**
WRAB pmax pmax
comp=Z,18nm,2.5s
WB2 Warramunga Arr 63.27 185 P **P 11 17 53.3 +0.4**
WB2 IAmb IAmb 11 17 54.0
comp=Z,5.0nm,0.7s
WRA Warramunga Arr 63.27 185 P **P 11 17 53.2 +0.2**
comp=Z,4.3nm,0.6s,baz=4.4,slow=7.0,SNR=108
WRA PcP **PcP 11 18 29.0 +1.1**
comp=Z,1.6nm,0.6s,baz=359,slow=4.7,SNR=10
comp=Z,4.3nm,0.6s
SUMG Summit 64.21 359 *i* P **P 11 17 58.0 -0.9**
SUMG IAmb IAmb 11 18 01.1
comp=Z,11nm,0.6s
MBWA Marble Bar 66.71 199 P **P 11 18 15.9 +0.8**
MBWA IAmb IAmb 11 18 26.3
comp=Z,13nm,1.2s
AS31 Alice Springs 66.99 185 P **P 11 18 18.6 +1.7**
ASAR Alice Springs 66.99 185 P **P 11 18 17.9 +1.1**
comp=Z,4.8nm,0.7s,baz=3.4,slow=4.9,SNR=74
comp=Z,4.8nm,0.7s
ASAR Alice Springs 66.99 185 P **P 11 18 18.1 +1.3**
ASAR Alice Springs 66.99 185 P **P 11 18 18.2 +1.3**
PSA00 Pilbara Seismi 67.08 199 P **P 11 18 18.3 +1.0**
PSA00 IAmb IAmb 11 18 23.0
comp=Z,9.7nm,1.1s
NB2 NORSAR Subarra 67.49 335 P **P 11 18 20.7 +1.1**
comp=Z,1.2nm,0.5s,baz=42,slow=6.9
NB2 NORSAR Subarra 67.49 335 P **P 11 18 20.7 +1.1**
baz=42,slow=6.9
NOA NORSAR Array B 67.49 335 P **P 11 18 19.4 -0.2**
comp=Z,5.5nm,0.5s,baz=38,slow=5.9,SNR=5.3
comp=Z,5.5nm,0.5s
AKASG Malin Array Be 68.05 320 P **P 11 18 23.0 -0.2**
comp=Z,1.0nm,0.5s,baz=44,slow=6.6,SNR=5.8
comp=Z,1.0nm,0.5s
CMB Columbia Colle 71.70 55 P **P 11 18 46.9 +1.2**
CMB IAmb IAmb 11 18 47.0
comp=Z,4.2nm,1.4s
CMB Columbia Colle 71.70 55 P **P 11 18 46.9 +1.2**
CMB pmax pmax
comp=Z,4.0nm,1.5s
KVN Kaiserville 72.37 53 P **P 11 18 51.5 +1.8**
KVN IAmb IAmb 11 18 58.9
comp=Z,3.6nm,0.6s
KVN Kaiserville 72.37 53 P **P 11 18 51.6 +1.8**
KVN pmax pmax
comp=Z,4.0nm,0.6s
NVAR Mina Array Bea 72.67 53 P **P 11 18 53.4 +1.8**
comp=Z,1.3nm,0.6s,baz=301,slow=5.8,SNR=16
comp=Z,1.3nm,0.6s
BRTR Keskin Array B 73.19 309 P **P 11 18 54.8 +0.2**
comp=Z,0.6nm,0.4s,baz=46,slow=8.9,SNR=2.4
comp=Z,0.6nm,0.4s
R11A Troy Canyon, C 74.30 52 P **P 11 19 01.6 +0.6**
baz=314
BW06 Boulder Array 74.50 45 P **P 11 19 02.7 +0.5**
baz=316
PDAR Pinedale Array 74.50 45 P **P 11 19 03.1 +1.0**
comp=Z,0.7nm,0.6s,baz=329,slow=1.7,SNR=10
comp=Z,0.7nm,0.6s
DUG Dugway, Tooele 74.58 49 P **P 11 19 03.1 +0.6**
baz=314
FORT Forrest 74.58 190 P **P 11 19 03.8 +1.6**
MPMC Manual Prospec 74.75 55 P **P 11 19 04.2 +0.6**
baz=313
FURC Furnace Creek, 74.84 54 P **P 11 19 05.0 +1.2**
baz=313
TPNV Topopah Spring 74.87 53 P **P 11 19 05.5 +1.2**
baz=313
STKA Stephens Creek 75.06 178 P **P 11 19 06.6 +1.6**
comp=Z,4.3nm,0.5s,baz=335,slow=7.2,SNR=11
comp=Z,4.3nm,0.5s
ULM Lac du Bonnet 75.14 33 P **P 11 19 05.7 +0.3**
comp=Z,2.5nm,0.4s,baz=53,slow=10,SNR=2.3
comp=Z,2.5nm,0.4s
SDCO Great Sand Dun 80.28 46 P **P 11 19 32.5 -1.9**
baz=318
121A Cookes Peak, D 82.89 51 P **P 11 19 48.2 +0.3**
baz=318
TXAR Lajitas Array 87.62 51 P **P 11 20 12.3 +1.1**
comp=Z,0.4nm,0.5s,baz=287,slow=2.8,SNR=12
comp=Z,0.4nm,0.5s
VNDA Vanda 121.59 174 PKP **PKiKP 11 26 13.5 +0.2**
comp=Z,0.7nm,0.7s,baz=315,slow=2.9,SNR=3.5
MAW Mawson 124.49 207 PKP **PKiKP 11 26 19.8 +0.5**
comp=Z,0.8nm,0.6s,baz=39,slow=3.0,SNR=3.7
LPAZ La Paz 144.46 49 PKP PKPbc 11 26 57.6 0.0
comp=Z,0.8nm,0.5s,baz=342,slow=6.4,SNR=4.0
TROLL Troll, Antarti 144.65 202 PKPdf **PKPdf 11 26 57.2 +0.7**
SNAA Sanae 146.25 201 PKPdf **PKPbc 11 27 01.1 +0.4**
VNA2 Neumayer--Watz 147.87 200 PKPdf **PKPbc 11 27 05.7 +0.6**

baz=107,slow=3.0
VNA3 Neumayer Olymp 148.20 199 PKPdf PKPbc 11 27 06.3 +0.3
VNA1 Neumayer--Stat 148.26 200 PKPdf PKPbc 11 27 06.8 +0.7

JMA 19 11:08:52.2±0.1,35°.2N±0°.1×139°.0E±0°.2,h6km,MV0.8/17, HAKONE REGION,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.07	44	P	Pg	11 08 53.9	0.0
JOD2				S	Sg	11 08 55.4	+0.3
AJI	Ajiro2	0.17	163	P	Pg	11 08 55.9	+0.2
AJI				eS	Sg	11 08 58.5	+0.5
KTJ3	Kamata3	0.28	173	P	Pg	11 08 57.7	+0.1

*KRNET **19** 11:24:02.9±0.1,39°.95N×78°.34E,mb3.6*
*SOME **19** 11:24:06.3,40°.10N×77°.33E,h0km*
*NNC **19** 11:24:07.5±0.9,40°.09N×77°.44E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=6.3km s-min=5.1km az=179.0*

ISC 19 11:24:08.5±2.5,39°.9N±0°.1×77°.47E±0°.05,h28km,n43, σ2°.09/67,10C-13D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.87	8	⇑iP	Pn	11 24 35.7	-3.3
TARG	baz=47			⇑iS	Sn	11 24 59.7	-2.3
ULHL	Ulahol	2.54	339	⇓iP	Pn	11 24 49.4	+1.3
ULHL	baz=26			⇓iS	Sb	11 25 22.9	-1.6
BOOM	Boomskoye usch	2.86	337	⇑iP	Pn	11 24 53.2	+0.8
BOOM	baz=25			⇑iS	Sb	11 25 30.7	-2.8
TNSS	Tian-Shan	3.19	353	eP	Pb	11 25 02.4	-2.2
TNSS	22nm,0.4s			eS	Sb	11 25 42.6	-0.5
TNSS	Tian-Shan	3.19	353	Pg	Pb	11 25 02.4	-2.2
TNSS	22nm,0.4s			Lg	Lg	11 25 42.6	
UCH	Uchtor	3.24	317	⇓iP	Pb	11 25 02.0	-3.6
UCH	baz=9.0			⇓iS	Sb	11 25 44.5	-0.3
SATY	Saty	3.26	12	eP	Pb	11 25 03.2	-2.5
SATY	6.2nm,0.9s			eS	Sb	11 25 43.9	-1.1
SATY	Saty	3.26	12	Pg	Pb	11 25 03.2	-2.5
SATY	6.2nm,0.9s			Lg	Lg	11 25 43.9	
MDOK	Medeo	3.30	355	eP	Pb	11 25 04.2	-2.3
MDOK	20nm,0.4s			eS	Sb	11 25 46.1	-0.1
MDOK	Medeo	3.30	355	Pg	Pb	11 25 04.2	-2.3
MDOK	20nm,0.4s			Lg	Lg	11 25 46.1	
MTBS	Maitube	3.35	347	eP	Pb	11 25 04.9	-2.3
MTBS	8.4nm,0.5s			eS	Sb	11 25 47.1	-0.3
MTBS	Maitube	3.35	347	Pg	Pb	11 25 04.9	-2.3
MTBS	8.4nm,0.5s			Lg	Lg	11 25 47.1	
TKM2	Tokmak 2	3.35	336	⇓iP	Pn	11 25 00.0	+0.8
TKM2	baz=26			⇓iS	Sn	11 25 42.7	+4.5
TKM2	Tokmak 2	3.35	336	⇑Pn	Pn	11 24 59.5	+0.3
TKM2	0.6nm,0.2s			⇓Pg	Pb	11 25 04.7	-2.6
TKM2	5.8nm,0.4s			⇓Lg	Lg	11 25 47.8	
KNDC	Almaty	3.36	354	⇑Lg	Lg	11 25 48.8	
KST	100nm,0.5s						
KST	Kastek	3.36	341	eP	Pb	11 25 05.7	-1.7
KST	6.8nm,0.3s			eS	Sb	11 25 48.1	+0.2
KST	Kastek	3.36	341	Pg	Pb	11 25 05.7	-1.7
KST	6.8nm,0.3s			Lg	Lg	11 25 48.1	
KBK	Karagaybulak	3.37	327	⇓iP	Pn	11 25 02.2	+2.8
KBK	baz=18			⇓iS	Sb	11 25 45.4	-2.7
ZHN	Zhinishke	3.37	12	eP	Pb	11 25 06.3	-1.3
ZHN	9.6nm,0.1s			eS	Sb	11 25 48.9	+0.7
UZB	Uzynbulak	3.47	19	eP	Pb	11 25 08.1	-1.2
UZB	2.1nm,0.3s			eS	Sb	11 25 52.7	+1.5
UZB	Uzynbulak	3.47	19	Pg	Pb	11 25 08.1	-1.2
UZB	2.1nm,0.3s			Lg	Lg	11 25 52.7	
DGS	Degeres	3.60	340	eP	Pb	11 25 09.9	-1.6
DGS	12nm,0.5s			eS	Sb	11 25 55.2	+0.5
DGS	Degeres	3.60	340	Pg	Pb	11 25 09.9	-1.6
DGS	12nm,0.5s			Lg	Lg	11 25 55.2	
SHLS	Shalkode	3.61	24	eP	Pb	11 25 13.1	+1.5
SHLS	7.6nm,0.5s			eS	Sb	11 26 01.4	+6.4
SHLS	Shalkode	3.61	24	Pg	Pb	11 25 13.1	+1.5
SHLS	7.6nm,0.5s			Lg	Lg	11 26 01.4	
KURS	Kuram	3.65	8	eP	Pb	11 25 11.2	-1.2
KURS	2.9nm,0.4s			eS	Sb	11 25 57.2	+1.0
KPKS	Kokpek	3.71	14	eP	Pb	11 25 11.7	-1.5
KPKS	6.5nm,0.4s			eS	Sb	11 25 58.4	+0.6
KPKS	Kokpek	3.71	14	Pg	Pb	11 25 11.7	-1.5
KPKS	6.5nm,0.4s			Lg	Lg	11 25 58.4	
CHMS	Chumysh	3.73	328	⇑Pg	Pb	11 25 10.6	-3.1
CHMS	4.2nm,0.5s			⇓Lg	Lg	11 25 58.4	
PDGK	Podgornoye	3.77	23	⇑Pn	Pn	11 25 03.9	-1.0
PDGK	0.8nm,0.3s			⇓Pg	Pb	11 25 11.2	-3.2
PDGK	6.1nm,0.6s			⇓Lg	Lg	11 26 01.5	
CHKK	Chushkaly	4.00	355	eP	Pb	11 25 17.3	-0.8
CHKK	8.7nm,0.3s			eS	Sb	11 26 08.0	+2.0
CHKK	Chushkaly	4.00	355	Pg	Pb	11 25 17.3	-0.8
CHKK	8.7nm,0.3s			Lg	Lg	11 26 08.0	
KRBS	Karabastau	4.05	341	eP	Pb	11 25 17.6	-1.5
KRBS	4.7nm,0.4s			eS	Sb	11 26 08.4	+0.8
KRBS	Karabastau	4.05	341	Pg	Pb	11 25 17.6	-1.5
KRBS	4.7nm,0.4s			Lg	Lg	11 26 08.4	
KUU	Kurty	4.11	349	eP	Pb	11 25 18.3	-1.7
KUU	5.3nm,0.4s			eS	Sb	11 26 09.7	+0.5
KUU	10nm,0.5s	4.11	349	Pg	Pb	11 25 18.3	-1.7
KUU	5.3nm,0.4s			Lg	Lg	11 26 09.7	
KTMS	Ketmen	4.17	30	eP	Pb	11 25 19.4	-1.8
KTMS	1.5nm,0.5s			eS	Sb	11 26 12.2	+0.9
KTMS	Ketmen	4.17	30	Pg	Pb	11 25 19.4	-1.8
KTMS	1.5nm,0.5s			Lg	Lg	11 26 12.2	
ARXS	Arharly	4.35	3	eP	Pb	11 25 23.4	-0.7
ARXS	4.2nm,0.5s			eS	Sb	11 26 18.5	+2.3
ARXS	Arharly	4.35	3	Pg	Pb	11 25 23.4	-0.7
ARXS	4.2nm,0.5s			Lg	Lg	11 26 18.5	
BTLS	Baital	5.75	335	eP	Pb	11 25 48.6	+0.6
BTLS	2.5nm,0.6s			eS	Sb	11 27 01.4	+5.0
BTLS	Baital	5.75	335	Pg	Pb	11 25 48.6	+0.6
BTLS	2.5nm,0.6s			Lg	Lg	11 27 01.4	
KK31	Karatay Array	6.14	304	⇑Pg	Pb	11 25 55.2	+0.6
KK31	0.5nm,0.4s,baz=125,slow=15,SNR=6.3			⇑Lg	Lg	11 27 17.7	
	2.3nm,0.4s,baz=120,slow=28,SNR=6.2						

IDC 19 11:33:39.8±2.2,6°.51S×149°.14E,h0km,mb3.7/2, mbtmp4.0/4,ML4.2/1,MS2.9/1,Error ellipse: s-maj=60.4km s-min=40.6km az=122.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.48	214	Pn	Pn	11 34 37.3	+2.0
PMG	96nm,0.4s,baz=29,slow=6.0,SNR=68			Sn	Sn	11 35 16.2	-1.0
	28nm,0.3s,baz=43,slow=16,SNR=9.0						
CTA	Charters Tower	13.78	191	LR	LR	11 42 28.3	
	comp=Z,52nm,18.5s,baz=80,slow=38						
WRA	Warramunga Arr	19.62	226	P	P	11 38 09.2	-0.8
	0.8nm,0.3s,baz=52,slow=11,SNR=75						
	2.4nm,0.4s						
ASAR	Alice Springs	22.48	219	P	P	11 38 40.3	-0.7
	2.8nm,0.7s,baz=56,slow=9.3,SNR=29						
ASAR				S	S	11 42 41.5	-7.4
	0.3nm,0.7s,baz=38,slow=21,SNR=4.2						
	2.8nm,0.7s						
VNDA	Vanda	71.29	177	P	P	11 45 01.0	+0.3
	0.6nm,0.7s,baz=325,slow=6.4,SNR=4.5						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	147.28	284	PKPbc	PKPbc	11 53 25.7	-0.7
	0.8nm,0.5s,baz=79,slow=3.6,SNR=6.4						

*NEIC **19** 11:40:50.6±1.6,57°.07N±0°.04×155°.17W±0°.10,h67km±9km, Error ellipse: s-maj=9.4km s-min=0.9km az=125.0*
*IDC **19** 11:40:51.3±0.9,57°.32N×155°.28W,h70km±8km,mb3.8/15, mbtmp4.1/17,MS3.1/1,Error ellipse: s-maj=17.9km s-min=9.3km az=169.0*
*AEIC **19** 11:40:51±1.7,57°.07N±0°.06×155°.21W±0°.07,h49km±7km, ML3.8,mb4.4/20(NEIC),ML4.0/52(NEIC),Error ellipse: s-maj=8.9km s-min=4.6km az=156.0*

ISC 19 11:40:50.0±0.6,57°.14N±0°.05×155°.26W±0°.04,h64km±6km, n156,σ1§40/166,mb4.2/23,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.83	134		Pn	11 41 05.7	-0.4
SII				Sn	Sn	11 41 17.3	-0.5
SII				IAML		11 41 18.1	
	comp=N,7μm,0.5s						
SII	Sitkinak Islan	0.83	134	P	Pn	11 41 05.6	-0.4
SII	baz=313			S	Sn	11 41 17.1	-0.7
OHAK	Old Harbor	1.08	85		Pn	11 41 09.3	+0.1
OHAK				Sn	Sn	11 41 23.0	-0.4
OHAK				IAML		11 41 23.6	
	comp=E,5μm,0.4s						
OHAK	Old Harbor	1.08	85	P	Pn	11 41 09.3	+0.1
OHAK	baz=262			S	Sn	11 41 22.9	-0.4
CHIR	Chirikof Islan	1.33	189		Pn	11 41 11.8	-0.8
CHIR				IAML		11 41 28.1	
	comp=E,3μm,0.5s						
CHIR				IAML		11 41 28.8	
	comp=N,2μm,0.4s						
CHIR	Chirikof Islan	1.33	189	P	Pn	11 41 11.6	-1.0
CHIR	baz=10			S	Sn	11 41 27.4	-1.9
KAHC	Katmai Hardscr	1.52	5	P	Pn	11 41 16.9	+1.8
KDAK	baz=184						
KDAK	Kodiak Island	1.58	65	P	Pn	11 41 16.2	+0.4
	comp=N,455nm,0.3s,baz=235,slow=4.7,SNR=1077						
KDAK				S	Sn	11 41 35.3	-0.1
	comp=N,496nm,0.3s,baz=147,slow=23,SNR=144						
KDAK	Kodiak Island	1.58	65		Pn	11 41 16.3	+0.4
KDAK				IAML		11 41 36.3	
	comp=N,3μm,0.3s						
CHGN	Chignik	1.93	246		Pn	11 41 20.9	+0.5
CHGN				IAML		11 41 44.1	
	comp=E,898nm,0.3s						
CHGN				IAML		11 41 46.8	
	comp=N,936nm,0.5s						
CHGN	Chignik	1.93	246	P	Pn	11 41 20.9	+0.5
CHGN	baz=65			S	Sn	11 41 43.2	-0.5
P18K	Big Mountain,	2.26	0		Pn	11 41 26.7	+1.7
P18K				IAML		11 41 54.0	
	comp=E,382nm,1.4s						
P18K	Big Mountain,	2.26	0	P	Pn	11 41 26.6	+1.5
O18K	baz=180						
O18K	Koktuh Hills	2.73	1		Pn	11 41 33.1	+1.7
O18K	Koktuh Hills	2.73	1	P	Pn	11 41 33.0	+1.7
O19K	baz=180						
O19K	Port Alsworth	3.11	9		Pn	11 41 38.2	+1.8
O19K				IAML		11 42 30.7	
	comp=E,408nm,0.5s						
O19K				IAML		11 42 33.2	
	comp=N,424nm,0.5s						
O19K	Port Alsworth	3.11	9	P	Pn	11 41 37.5	+1.0
HOM	baz=189						
HOM	Homer	3.17	35	Pn	Pn	11 41 39.3	+2.0
HOM				IAML		11 42 16.0	
	comp=E,612nm,0.7s						
HOM	Homer	3.17	35	P	Pn	11 41 39.1	+1.8
CNPM	baz=217						
CNPM	China Poot	3.20	40	Pn	Pn	11 41 39.2	+1.4
CNPM				IAML		11 42 14.9	
	comp=N,268nm,0.9s						
CNPM				IAML		11 42 16.5	
	comp=E,262nm,0.7s						
O20K	Slope Mountain	3.26	24	P	Pn	11 41 40.8	+2.1
SDPT	baz=205						
SDPT	Sand Point	3.42	241		Pn	11 41 41.3	+0.6
SDPT				IAML		11 42 25.6	
	comp=E,265nm,1.9s						
SDPT				IAML		11 42 32.4	
	comp=N,208nm,2.7s						
SDPT	Sand Point	3.42	241	P	Pn	11 41 41.0	+0.2
BRLK	baz=57						
BRLK	Bradley Lake	3.50	39		Pn	11 41 42.5	+0.7
BRLK				IAML		11 42 21.7	
	comp=E,298nm,0.2s						
BRLK				IAML		11 42 21.8	
	comp=N,373nm,0.4s						
BRSE	Bradley Lake S	3.53	40	P	Pn	11 41 43.0	+0.7
N18K	baz=223						
N18K	Kilae Creek	3.57	355	Pn	Pn	11 41 44.6	+1.8
N18K	Kilae Creek	3.57	355	P	Pn	11 41 44.5	+1.7
N19K	baz=174						
N19K	Bonanza Creek	3.71	6	Pn	Pn	11 41 47.0	+2.2
N19K	Bonanza Creek	3.71	6	P	Pn	11 41 47.0	+2.2
	baz=186						
SVW2	Sparrevohn	3.98	358		Pn	11 41 50.3	+1.9
SEW	Seward	4.25	43	Pn	Pn	11 41 52.1	0.0
SEW	Seward	4.25	43	P	Pn	11 41 51.9	-0.2
	baz=227						
O22K	Cooper Landing	4.42	38		Pn	11 41 55.0	+0.6
O22K	Cooper Landing	4.42	38	P	Pn	11 41 54.9	+0.5
	baz=222						
M19K	Big River Lodg	4.80	5	P	Pn	11 42 01.5	+1.9
	baz=185						
RC01	Rabbit Creek A	4.88	33		Pn	11 42 01.6	+0.9
RC01				IAML		11 42 59.5	
	comp=E,119nm,0.4s						
RC01				IAML		11 43 01.4	
	comp=N,118nm,0.3s						
RC01	Rabbit Creek A	4.88	33	P	Pn	11 42 01.7	+0.9
	baz=217						
M20K	Styx River	4.88	12	P	Pn	11 42 03.2	+2.3
	baz=193						
SUA	Susitna One	4.92	26		Pn	11 42 03.0	+1.6
SUA				IAML		11 42 57.9	
	comp=E,170nm,0.8s						
SUA				IAML		11 43 01.3	
	comp=N,99nm,0.8s						
SUA	Susitna One	4.92	26	P	Pn	11 42 02.9	+1.6
	baz=209						
L19K	White Mountain	5.07	2	Pn	Pn	11 42 05.5	+2.2
L19K				IAML		11 43 27.2	
	comp=N,60nm,3.8s						
L19K				IAML		11 43 38.9	
	comp=E,46nm,3.0s						
L19K	White Mountain	5.07	2	P	Pn	11 42 05.2	+1.9
	baz=182						
PWL	Port Wells	5.17	41		Pn	11 42 04.9	+0.2
PWL				IAML		11 43 04.8	
	comp=E,96nm,0.3s						
SKT	Skwentna	5.21	20		Pn	11 42 06.8	+1.5
SKT				IAML		11 43 07.9	
	comp=E,41nm,0.4s						
SKT				IAML		11 43 08.0	
	comp=N,53nm,0.3s						
SKT	Skwentna	5.21	20	P	Pn	11 42 06.8	+1.5
	baz=202						
Q23K	Middleton Isla	5.23	60	Pn	Pn	11 42 06.7	+1.1
Q23K	Middleton Isla	5.23	60	P	Pn	11 42 06.4	+0.9
	baz=247						
MID	Middleton Isla	5.24	60	Pn	Pn	11 42 06.6	+1.0
M22K	Willow	5.32	27	Pn	Pn	11 42 08.4	+1.7
M22K	Willow	5.32	27	P	Pn	11 42 08.2	+1.5
	baz=211						
PMR	Palmer	5.46	32		Pn	11 42 09.1	+0.5
PMR	Palmer	5.46	32	P	Pn	11 42 08.6	+0.1
	baz=217						
KNK	Knik Glacier	5.53	36		Pn	11 42 10.0	+0.4
KNK	Knik Glacier	5.53	36	P	Pn	11 42 09.6	+0.1
	baz=221						
HIN	Hinchinbrook I	5.61	51		Pn	11 42 11.1	+0.4
GLI	Glacier Island	5.64	45	Pn	Pn	11 42 10.6	-0.6
GLI	Glacier Island	5.64	45	P	Pn	11 42 10.5	-0.6
	baz=231						
GHO	Glory Hole Cre	5.66	32		Pn	11 42 12.1	+0.7
TTA	Tatalina	5.82	357	P	Pn	11 42 15.5	+1.8
	baz=176						
SML	Sawmill	5.86	34	P	Pn	11 42 14.6	+0.3
	baz=219						
PPLA	Purkeypile	5.98	14	Pn	Pn	11 42 18.7	+2.8
PPLA	Purkeypile	5.98	14	P	Pn	11 42 18.2	+2.3
	baz=196						
EYAK	Cordova Ski Ar	6.00	51	Pn	Pn	11 42 16.5	+0.4
EYAK	Cordova Ski Ar	6.00	51	P	Pn	11 42 15.8	-0.3
	baz=239						
SCM	Sheep Creek Mo	6.20	37		Pn	11 42 19.5	+0.6
K20K	Telida	6.27	5		Pn	11 42 21.8	+2.1
K20K	Telida	6.27	5	P	Pn	11 42 21.6	+1.9
	baz=186						
DIV	Divide	6.31	47		Pn	11 42 20.5	+0.2
KAIM	Kayak Island	6.33	59		Pn	11 42 22.3	+1.8
KLU	Klutina	6.47	44		Pn	11 42 23.2	+0.6
KLU	Klutina	6.47	44	P	Pn	11 42 22.9	+0.4
	baz=231						
CAST	Castle Rocks	6.50	13	Pn	Pn	11 42 25.0	+2.2
CAST	Castle Rocks	6.50	13	P	Pn	11 42 24.5	+1.6
	baz=195						
WAT1	Susitna Watana	6.62	28	P	Pn	11 42 25.1	+0.4
	baz=213						
WAT6	Susitna Watana	6.64	32	P	Pn	11 42 24.9	0.0
	baz=218						
BMRM	Bremner River	6.70	51		Pn	11 42 25.5	-0.1
BMRM	Bremner River	6.70	51	P	Pn	11 42 25.5	-0.1
	baz=239						
M24K	Tolsona, Glenn	6.78	39		Pn	11 42 28.0	+1.1
M24K	Tolsona, Glenn	6.78	39	P	Pn	11 42 27.9	+1.1
	baz=226						
KTH	Kantishna Hill	6.79	17	Pn	Pn	11 42 27.8	+1.0
TRF	Thorofare Moun	6.80	19	P	Pn	11 42 27.6	+0.6
	baz=203						
N25K	Chitina, Valde	7.05	46	P	Pn	11 42 30.5	0.0
	baz=235						
J20K	Nowinta River	7.08	4	P	Pn	11 42 32.5	+1.6
	baz=185						
DHY	Denali Highway	7.14	30	P	Pn	11 42 31.4	-0.4
	baz=216						
UNV	Unalaska Valle	7.19	247	P	Pn	11 42 31.5	-0.7
	baz=59						
HARP	HAARP	7.33	40	P	Pn	11 42 35.7	+1.4
	baz=228						
MCARA	McCarthy VSAT	7.58	51	P	Pn	11 42 38.0	+0.4
	baz=241						
PAX	Paxson	7.62	36	P	Pn	11 42 38.5	+0.2
	baz=224						
GCSA	Galena City Sc	7.68	355	P	Pn	11 42 40.6	+1.7
	baz=173						
M26K	Nabesna, AK	8.13	44	P	Pn	11 42 45.6	+0.5
	baz=234						
CTG	Chitna Glacier	8.13	56	P	Pn	11 42 45.6	+0.3
	baz=248						
MLY	Manley	8.22	14	P	Pn	11 42 46.1	-0.2
	baz=197						
PINM	Pinnacle	8.37	63	P	Pn	11 42 48.5	-0.1
	baz=255						
I23K	Minto, Yukon-K	8.53	17	P	Pn	11 42 50.4	-0.1
	baz=202						
M27K	Edge Creek, AK	8.54	47	P	Pn	11 42 51.6	+0.8
	baz=238						
ILAR	Eielson Array	8.67	24	P	Pn	11 42 51.9	-0.6
	comp=N,1.8nm,0.5s,baz=216,slow=14,SNR=31						
ILAR				S	Sn	11 44 20.5	-8.0
	comp=N,4.8nm,0.5s,baz=212,slow=22,SNR=13						
YUK3	Moose Creek	8.85	52	P	Pn	11 42 56.2	+1.1
	baz=244						
J25K	Salcha River,	8.90	29	P	Pn	11 42 55.9	+0.1
	baz=217						
L27K	Beaver Creek,	8.95	43	P	Pn	11 42 57.3	+1.0
	baz=234						
H23K	Yukon River	9.13	15	P	Pn	11 42 57.8	-1.0
	baz=200						
J26L	Joseph Creek	9.32	33	P	Pn	11 43 02.1	+0.6
	baz=223						
PRP	Porcupine Dome	9.61	25	P	Pn	11 43 05.4	-0.1
	baz=213						
DAWY	Dawson	10.42	42		Pn	11 43 17.5	+1.1
SKAG	Skagway	10.74	69		Pn	11 43 21.4	+0.7
N31M	Braeburn, Yuko	10.85	58	Pn	Pn	11 43 23.2	+0.9
WHY	Whitehorse	11.10	63		Pn	11 43 26.0	+0.2
JIS	Juneau Island	11.22	75	Pn	Pn	11 43 27.1	-0.2
BMAR	Burnt Mountain	11.44	21	Pn	Pn	11 43 29.4	-0.9
I29M	Ogilvie Camp,	11.56	38	Pn	Pn	11 43 32.4	+0.4
M31M	Drury Creek, Y	11.68	56	Pn	Pn	11 43 33.1	-0.5
FARO	Faro, Yukon	12.16	56	Pn	Pn	11 43 40.9	+0.8
CRAG	Craig	12.40	88	Pn	Pn	11 43 42.0	-1.4
DLBC	Dease Lake	13.50	74	P	Pn	11 44 00.8	+2.5
	comp=N,2.0nm,0.4s,baz=284,slow=8.1,SNR=15						
DLBC				S	Sn	11 46 22.1	-4.3
	comp=N,2.9nm,1.0s,baz=294,slow=20,SNR=2.0						
INK	Inuvik	14.87	32	P	Pn	11 44 17.5	+1.3
	comp=N,1.6nm,0.3s,baz=225,slow=12,SNR=9.0						
INK	Inuvik	14.87	32	Pn	Pn	11 44 17.3	+1.1
C36M	Paulatuk	18.33	36	P	P	11 44 59.8	+1.1
C36M				IAmb	IAmb	11 45 01.8	
	comp=Z,28nm,1.3s						
A36M	Sachs Harbour	19.34	28	P	P	11 45 11.2	+1.5
HILA	High Level	20.22	70	P	P	11 45 20.0	+0.6
YKA	Yellowknife Ar	20.85	58	P	P	11 45 26.7	+0.6
	comp=Z,2.5nm,0.6s,baz=271,slow=10,SNR=10.0						
	comp=Z,2.5nm,0.6s						
G08A	Pilot Rock	25.32	102	P	P	11 46 12.3	+1.7
PETK	Petropavlovsk-	26.77	282	P	P	11 46 22.7	-0.8

comp=Z,4.9nm,1.0s,baz=70,slow=12,SNR=12
comp=Z,4.9nm,1.0s
MA2 Magadan 27.77 298 LR LR 11 58 16.5
comp=Z,36nm,18.8s,baz=109,slow=38
PNTR Pine Nut 29.41 112 P **P** **11 46 48.4 +1.1**
PNTR IAmb IAmb 11 47 14.6
comp=Z,6.9nm,1.3s
YHH Holmes Hill 30.01 95 P **P** **11 46 54.8 +2.0**
NVAR Mina Array Bea 30.56 112 P **P** **11 46 59.5 +1.9**
comp=Z,0.7nm,0.7s,baz=312,slow=9.9,SNR=6.3
NVAR pP **sP** **11 47 16.4 -4.1**
comp=Z,0.5nm,0.7s,baz=291,slow=7.6,SNR=3.2
comp=Z,0.7nm,0.7s
BW06 Boulder Array 32.05 97 P **P** **11 47 11.1 +0.4**
PDAR Pinedale Array 32.05 97 P **P** **11 47 11.6 +0.9**
comp=Z,1.1nm,0.6s,baz=319,slow=4.6,SNR=14
PDAR sP **sP** **11 47 36.8 +3.1**
comp=Z,0.5nm,0.6s,baz=315,slow=4.3,SNR=3.3
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 32.05 97 P **P** **11 47 11.9 +1.2**
SRU San Rafael Swe 34.11 102 P **P** **11 47 30.6 +2.0**
RSSD Black Hills 34.16 90 P **P** **11 47 30.7 +1.8**
RSSD IAmb IAmb 11 47 30.9
comp=Z,3.5nm,0.5s
O20A White River Ci 34.59 99 P **P** **11 47 34.4 +1.7**
O20A IAmb IAmb 11 47 35.3
comp=Z,3.8nm,0.7s
PV13 Radium Mtn., P 35.71 102 IAmb IAmb 11 47 45.1
comp=Z,6.0nm,1.1s
R40A Maddies Statio 44.59 87 P **P** **11 48 54.8 -0.7**
R40A IAmb IAmb 11 49 00.3
comp=Z,6.5nm,1.4s
TXAR Lajitas Array 45.23 105 P **P** **11 49 01.7 +1.0**
comp=Z,0.8nm,0.8s,baz=313,slow=5.6,SNR=9.9
TXAR pP **pP** **11 49 19.6 +2.6**
comp=Z,0.5nm,0.7s,baz=316,slow=7.7,SNR=4.8
comp=Z,0.8nm,0.8s
NRIK Noril'sk 45.95 334 P **P** **11 49 05.7 -0.1**
comp=Z,3.1nm,0.4s,baz=49,slow=9.4,SNR=7.5
comp=Z,3.1nm,0.4s
PLAL Pickwick Lake 49.30 87 P **P** **11 49 32.4 +0.1**
KSRS Korea Array 52.66 283 P **P** **11 49 57.8 +0.4**
comp=Z,1.2nm,0.5s,baz=38,slow=7.9,SNR=6.9
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 53.63 360 P **P** **11 50 03.3 -0.8**
comp=Z,1.1nm,0.5s,baz=18,slow=7.4,SNR=20
comp=Z,1.1nm,0.5s
SONM Songino Array 55.52 306 P **P** **11 50 18.0 -0.2**
comp=Z,1.4nm,0.5s,baz=28,slow=7.4,SNR=6.0
comp=Z,1.4nm,0.5s
ZALV Zalesovo Beam 58.97 323 P **P** **11 50 42.5 +0.2**
comp=Z,2.2nm,0.6s,baz=39,slow=7.1,SNR=8.5
comp=Z,2.2nm,0.6s
NOA NORSAR Array B 61.68 7 P **P** **11 51 00.9 +0.1**
comp=Z,2.9nm,0.3s,baz=352,slow=6.8,SNR=2.4
comp=Z,2.9nm,0.3s
FIA1 FINESS Array S 61.75 359 P **P** **11 51 00.7 -0.4**
FINES FINESS Array B 61.75 359 P **P** **11 51 00.8 -0.3**
comp=Z,5.4nm,0.9s,baz=19,slow=8.7,SNR=14
comp=Z,5.4nm,0.9s
FINES FINESS Array B 61.75 359 P **P** **11 51 01.4 +0.2**
ARU Arti 63.55 340 P **P** **11 51 13.3 +0.2**
KURK Kurchatov 63.72 325 P **P** **11 51 14.4 +0.1**
KURK IAmb IAmb 11 51 15.5
comp=Z,2.6nm,0.9s
BRVK Borovoye 64.03 331 P **P** **11 51 16.6 +0.2**
BRVK IAmb IAmb 11 51 17.0
comp=Z,2.8nm,0.7s
MK31 Makanchi Array 65.91 321 P **P** **11 51 28.5 -0.2**
MKAR Makanchi Array 65.91 321 P **P** **11 51 28.2 -0.5**
comp=Z,1.1nm,0.6s,baz=37,slow=6.7,SNR=14
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 65.91 321 P **P** **11 51 28.4 -0.4**
MAKZ Makanchi 66.01 321 P **P** **11 51 29.0 -0.4**
MAKZ IAmb IAmb 11 51 29.1
comp=Z,6.7nm,1.2s
ABKAR Akbulak array 70.04 336 P **P** **11 51 54.4 -0.1**
AKASG Malin Array Be 72.46 357 P **P** **11 52 08.7 -0.5**
comp=Z,0.7nm,0.5s,baz=2.6,slow=5.2,SNR=2.7
comp=Z,0.7nm,0.5s
KK31 Karatay Array 73.01 327 P **P** **11 52 13.3 +0.8**
KK31 IAmb IAmb 11 52 13.4
comp=Z,4.4nm,1.2s
KKAR Karatay Array P 73.01 327 P **P** **11 52 13.2 +0.6**
CMAR Chiang Mai Arr 82.94 293 P **P** **11 53 07.4 -0.5**
comp=Z,1.1nm,0.6s,baz=6.7,slow=5.5,SNR=8.3
comp=Z,1.1nm,0.6s

WEL 19 11:52:34.4±1.5, 37°S±11°×17°9E±1°0, h15km±8km, M3.2/8, ML3.6/8, MLv3.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=135.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.65**	**228**	P	Pb	11 52 47.3	-0.1
MXZ				S	Sg	11 52 56.0	+0.3
WMGZ	**Waiomatatini S**	**0.80**	**210**	P	Pn	11 52 50.5	-0.5
WMGZ				S	Sn	11 53 02.2	-0.4
PKGZ	**Pakihiroa**	**1.01**	**221**	P	Pb	11 52 53.6	0.0
PKGZ				S	Sn	11 53 07.8	-0.2
PUZ	**Puketiti**	**1.08**	**209**	P	Pb	11 52 54.1	-0.6
PUZ				S	Sb	11 53 08.5	-0.2
HAZ	**Te Kaha**	**1.10**	**235**	P	Pb	11 52 54.2	-0.9
HAZ				S	Sn	11 53 10.8	+0.7
TWGZ	**Tauwhareparae**	**1.28**	**215**	P	Pn	11 52 57.7	-0.1
TWGZ				S	Sn	11 53 15.3	+0.5
RUGZ	**Raukumara Rang**	**1.29**	**229**	P	Pb	11 52 58.3	-0.1
RUGZ				S	Sn	11 53 15.3	+0.3
CNGZ	**Carnagh Statio**	**1.47**	**202**	P	Pn	11 53 00.1	-0.1
TKGZ	**Te Karaka**	**1.56**	**213**	P	Pn	11 53 00.9	-0.6
MWZ	**Matawai**	**1.63**	**222**	P	Pn	11 53 02.3	-0.3
MWZ				S	Sn	11 53 22.2	-1.1
RIGZ	**Rimuhau**	**1.82**	**210**	P	Pn	11 53 04.4	-0.7
URZ	**Urewera**	**1.82**	**231**	P	Pn	11 53 05.3	+0.2
OPRZ	**Ohinepanea**	**2.01**	**248**	P	Pn	11 53 08.1	+0.4
SNGZ	**Shannon Statio**	**2.07**	**217**	P	Pn	11 53 08.0	-0.6
KNZ	**Kokohu**	**2.13**	**207**	P	Pn	11 53 07.7	-1.7
MUGZ	**Murupara**	**2.17**	**231**	P	Pn	11 53 09.6	-0.3
TGRZ	**Tauranga**	**2.20**	**253**	P	Pn	11 53 12.0	+1.7
NMHZ	**Naumai**	**2.58**	**220**	P	Pn	11 53 15.6	+0.1
KUZ	**Kuaotunu**	**2.59**	**278**	P	Pn	11 53 15.3	-0.4
MRHZ	**Matea Rd**	**2.61**	**228**	P	Pn	11 53 14.8	-1.2
TOZ	**Tahuroa Road**	**2.78**	**256**	P	Pn	11 53 18.1	-0.2
BKZ	**Black Stump Fm**	**2.79**	**222**	P	Pn	11 53 17.9	-0.7
CKHZ	**Cape Kidnapper**	**2.91**	**209**	P	Pn	11 53 18.1	-2.0
GRZ	**Great Barrier**	**2.91**	**286**	P	Pn	11 53 21.5	+1.3
MKAZ	**Moumakai**	**3.00**	**269**	P	Pn	11 53 21.6	+0.3
WIAZ	**Waiheke Island**	**3.05**	**275**	P	Pn	11 53 23.2	+1.2
KAHZ	**Kahuranaki**	**3.11**	**210**	P	Pn	11 53 21.0	-1.8
ETAZ	**East Tamaki Re**	**3.19**	**272**	P	Pn	11 53 25.7	+1.6
MBAZ	**Motutapu North**	**3.24**	**275**	P	Pn	11 53 26.2	+1.6
BHHZ	**Black Hill Sta**	**3.25**	**223**	P	Pn	11 53 24.2	-0.7
PXZ	**Pawanui**	**3.31**	**208**	P	Pn	11 53 23.5	-2.2
ABAZ	**Army Bay**	**3.32**	**278**	P	Pn	11 53 27.5	+1.8
AWAZ	**Awhitu Peninsu**	**3.42**	**270**	P	Pn	11 53 28.4	+1.3
RVAZ	**Riverhead Bore**	**3.49**	**275**	P	Pn	11 53 29.3	+1.2
HIZ	**Hauiti**	**3.50**	**245**	P	Pn	11 53 29.7	+1.4
TSZ	**Takapari Road**	**3.73**	**217**	P	Pn	11 53 28.6	-2.8
WCZ	**Waipu Caves**	**3.87**	**287**	P	Pn	11 53 34.6	+1.4
MRZ	**Mangatainoka R**	**4.38**	**215**	P	Pn	11 53 37.4	-3.0
OUZ	**Omahuta**	**4.71**	**292**	P	Pn	11 53 46.4	+1.6
CTZ	**Chatham Island**	**7.43**	**154**	P	Pn	11 54 20.5	-1.6

*IDC **19** 11:55:06.0±2.3, 7°.18S×129°.89E, h124km±23km, mb3.5/2, mbtmp4.1/6, Error ellipse: s-maj=38.3km s-min=22.3km az=90.0*

ISC 19 11:55:07.0±0.7, 7°.17S±0°.06×129°.82E±0°.07, h150km, n22, σ3$54/26, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.67**	**119**	P	**Pn**	**11 55 41.2**	**+2.8**
FAKI	**Fak Fak**	**4.87**	**30**	P	**Pn**	**11 56 19.1**	**+0.4**
MTN	**Manton Dam**	**5.78**	**167**	P	**Pn**	**11 56 32.4**	**+1.6**
SOEI	**Soe**	**6.07**	**245**	P	**Pn**	**11 56 35.0**	**+0.3**
KDU	**Kakadu**	**6.07**	**155**	P	**Pn**	**11 56 35.9**	**+1.3**
SIJI	**Sorong**	**6.42**	**13**	P	**Pn**	**11 56 38.2**	**-1.2**
	4.0nm,0.2s,baz=221,slow=19,SNR=28						
SIJI				S	**Sn**	**11 57 45.0**	**-6.8**
	9.7nm,0.3s,baz=251,slow=23,SNR=3.3						
BATI	**Baumata**	**6.79**	**243**	P	**Pn**	**11 56 44.1**	**-0.2**
	27nm,0.4s,baz=96,slow=9.2,SNR=5.1						
BATI				S	**Sn**	**11 57 57.8**	**-2.8**
	44nm,0.3s,baz=62,slow=21,SNR=11						
KNRA	**Kununurra**	**8.52**	**187**	P	**Pn**	**11 57 07.1**	**-0.2**
PLAI	**Plampang**	**12.04**	**261**	P	**Pn**	**11 57 52.8**	**-1.1**
WRA	**Warramunga Arr**	**13.43**	**161**	P	**Pn**	**11 58 10.3**	**-1.5**
	1.8nm,0.3s,baz=344,slow=13,SNR=82						
WRA				S	**Sn**	**12 00 32.0**	**-8.5**
	3.9nm,0.5s,baz=333,slow=22,SNR=8.4						
COEN	**Coen**	**14.75**	**118**	P	**P**	**11 58 31.8**	**+1.3**
QIS	**Mount Isa**	**16.34**	**146**	P	**P**	**11 58 50.6**	**+2.5**
ASAR	**Alice Springs**	**16.86**	**167**	P	**Pn**	**11 58 55.2**	**+0.9**
	1.3nm,0.5s,baz=341,slow=10,SNR=18						
ASAR				S	**S**	**12 01 54.2**	**-7.7**
	0.8nm,0.5s,baz=345,slow=25,SNR=3.4						
AS01	**Alice Springs**	**16.87**	**167**	P	**Pn**	**11 58 57.1**	**+2.7**
WRKA	**Warakurna**	**17.83**	**185**	P	**Pn**	**11 59 08.2**	**+2.4**
OOD	**Oodnadatta**	**21.25**	**166**	P	**P**	**11 59 44.6**	**+3.2**
MEEK	**Meekatharra**	**22.10**	**208**	P	**P**	**11 59 52.8**	**+2.5**
MULG	**Mulgathing**	**23.33**	**171**	P	**P**	**12 00 05.9**	**+4.1**
FORT	**Forrest**	**23.55**	**184**	P	**P**	**12 00 08.1**	**+4.4**
MKAR	**Makanchi Array**	**68.27**	**327**	P	**P**	**12 05 53.8**	**+2.1**
	1.2nm,0.5s,baz=131,slow=7.9,SNR=25						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**72.56**	**329**	P	**P**	**12 06 19.8**	**+2.2**
	0.2nm,0.4s,baz=124,slow=5.0,SNR=2.6						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**128.67**	**281**	PKP	**PKiKP**	**12 13 59.6**	**+1.5**
	0.7nm,1.0s,baz=73,slow=2.1,SNR=2.2						

IDC 19 12:01:19.6±1.4, 0°.72N×125°.52E, h0km, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=162.2km s-min=21.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.28**	**158**	P	P	12 06 18.2	-0.3
	0.7nm,0.5s,baz=336,slow=11,SNR=7.9						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**25.57**	**162**	P	P	12 06 50.8	+0.2
	0.5nm,0.7s,baz=348,slow=13,SNR=5.7						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.36**	**327**	P	P	12 11 22.9	-0.8
	0.2nm,0.4s,baz=118,slow=8.6,SNR=5.2						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**62.73**	**334**	P	P	12 11 48.2	+1.7
	0.5nm,0.4s,baz=129,slow=11,SNR=1.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.64**	**329**	P	P	12 11 51.6	-0.9
	0.4nm,0.5s,baz=129,slow=6.0,SNR=2.1						
	0.4nm,0.5s						

WBNET 19 12:10:37.7, 50°.37N×12°.49E, h10km, Ml0.0, 7C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRCW	**Kraslice**	**0.04**	**143**	⇓P	Pg	12 10 39.8	+0.1
KRCW				S	Sg	12 10 41.3	0.0
KRCW	**Kraslice**	**0.04**	**143**	⇓P	Pg	12 10 40.1	+0.4
KRCW				S	Sg	12 10 41.6	+0.4
POCW	**Potky**	**0.06**	**219**	S	Sg	12 10 41.6	+0.1
POCW	**Potky**	**0.06**	**219**	⇑P	Pg	12 10 40.4	+0.4
POCW				S	Sg	12 10 41.9	+0.4
STCW	**Studenec**	**0.11**	**169**	⇓P	Pg	12 10 40.6	+0.1
STCW				S	Sg	12 10 42.5	0.0
STCW	**Studenec**	**0.11**	**169**	⇓P	Pg	12 10 40.9	+0.4
STCW				S	Sg	12 10 42.8	+0.3
LBCW	**Luby**	**0.11**	**205**	⇑P	Pg	12 10 40.7	+0.2
LBCW				S	Sg	12 10 42.6	+0.1
LBCW	**Luby**	**0.11**	**205**	⇑P	Pg	12 10 41.0	+0.5
LBCW				S	Sg	12 10 42.9	+0.4
NKC	**Novy Kostel**	**0.14**	**191**	S	Sg	12 10 43.1	-0.1
NKC	**Novy Kostel**	**0.14**	**191**	⇑P	Pg	12 10 41.3	+0.4
NKC				S	Sg	12 10 43.4	+0.3
VAC	**Vackov**	**0.15**	**208**	⇑P	Pg	12 10 41.4	+0.4
VAC				S	Sg	12 10 43.6	+0.2
KVC	**Kvetna**	**0.16**	**174**	S	Sg	12 10 44.3	+0.5
TRCW	**Trojmez**	**0.23**	**254**	⇑P	Pg	12 10 42.3	-0.2
TRCW	**Trojmez**	**0.23**	**254**	⇑P	Pg	12 10 42.6	+0.2
TRCW				S	Sg	12 10 46.1	+0.4

*BJI **19** 12:18:40.4±0.0, 36°.10N×30°.05E, h52km, mb4.8/36, mB5.3/17, Ms4.8/3, Ms7 4.5/4*
*DDA **19** 12:18:45.9±0.0, 36°.12N×30°.38E, h48km, MW4.3*
*ISK **19** 12:18:45.2, 36°.06N×30°.47E, h24km, ML4.7/51*
*MOS **19** 12:18:46.8±1.3, 36°.16N×30°.59E, h19km, mb4.9/29, Error ellipse: s-maj=5.4km s-min=3.2km az=87.7*
*NIC **19** 12:18:46.9±0.0, 36°.06N×30°.47E, h46km±6km, Ml4.7/12*
*NEIC **19** 12:18:47.1±1.7, 36°.09N±0°.04×30°.51E±0°.05, h54km±6km, mb4.7/60, ML4.7(ISK), Error ellipse: s-maj=7.8km s-min=2.9km az=47.0*
*MED_RC **19** 12:18:47.0±0.5, 36°.10N×30°.65E, h47km±3km, MW4.5/21, Moment Tensor Solution.Mantle waves: s21,c26; Duration: 1±1 Moment tensor: Scale 10^{15}Nm; M_{rr}=5.84±.60; $M_{\theta\theta}$=0.03±.56; $M_{\phi\phi}$=5.80±.49; $M_{r\theta}$=3.45±.28; $M_{\theta\phi}$=-3.37±.48; $M_{\phi r}$=-2.62±.31; Best double couple: M_0=7.96000×10^{15} NP1:ϕ_s=318.00000°, δ=62.00000°, λ=-109.00000°. NP2:ϕ_s=175.00000°, δ=33.00000°, λ=-58.00000°. Principal axes: T 8.4100, Plg15.0000°, Azm62.0000°; N -0.9000, Plg17.0000°, Azm327.0000°; P -7.5200, Plg67.0000°, Azm192.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*IDC **19** 12:18:47.5±1.0, 36°.22N×30°.59E, h59km±8km, mb4.4/24, mbtmp4.6/36, MS3.5/41 Error ellipse: s-maj=11.3km s-min=8.7km az=141.0*
*CFUSG **19** 12:18:49.7, 36°.42N×30°.74E, h100km, Southwest Turkey Magtype MSH 3.2 from 2 stations*
*HLW **19** 12:18:50.5, 35°.66N×30°.34E, h31km±18km, Md5.2*
*GII **19** 12:18:51.2±0.4, 35°.74N×30°.67E, h60km, mb4.5/3, MD4.4/3, Mm4.4/5*
*THE **19** 12:18:53.6, 36°.25N×29°.97E, h25km±1km, ML4.5/4, Error ellipse: s-maj=2.5km s-min=1.1km az=145.0*

ISC 19 12:18:47.0±0.5, 36°.07N±0°.03×30°.47E±0°.02, h59km±4km, h61km:pP-P, n584, σ1$76/654, mb4.8/77, MS3.5/36, 53C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.27**	**338**	P	**Pn**	**12 18 54.9**	**-1.9**
AKUM				S	**Sn**	**12 19 01.0**	**-2.9**
AKUM				*i* AML	AML	12 19 02.0	
	comp=E,4μm,0.4s						
AKUM				*i* AML	AML	12 19 05.0	
	comp=N,3μm,0.7s						
AKAS	**Kas**	**0.72**	**283**	PG	**Pn**	**12 18 59.9**	**-1.6**
AKAS				SG	**Sn**	**12 19 10.6**	**-1.5**
AKAS	**Kas**	**0.72**	**283**		**Pn**	**12 18 59.8**	**-1.6**
AKAS					**Sn**	**12 19 10.2**	**-1.9**
AKAS	**Kas**	**0.72**	**283**	P	**Pn**	**12 19 00.1**	**-1.4**
AKAS				S	**Sn**	**12 19 10.1**	**-1.9**
AKAS				*i* AML	AML	12 19 19.0	
	comp=E,3μm,0.8s						
AKAS				*i* AML	AML	12 19 19.0	
	comp=N,5μm,0.6s						
KSL	**Kastellorizon**	**0.72**	**277**	P	**Pn**	**12 19 01.4**	**0.0**
KSL				S	**Sn**	**12 19 06.4**	**-5.5**
KSL	**Kastellorizon**	**0.72**	**277**	⇑*i*P	**Pn**	**12 19 00.9**	**-0.5**
KSL				S	**Sn**	**12 19 11.7**	**-0.3**
KSL				AML	AML	12 19 13.4	
	36nm,0.4s						
KSL				AML	AML	12 19 13.4	
	36nm,0.4s						
KSL				AML	AML	12 19 20.2	
	51nm,0.7s						
KSL				AML	AML	12 19 20.2	
	51nm,0.7s						
ELL	**Elmali**	**0.81**	**326**	PG	**Pn**	**12 19 02.0**	**-0.7**
ELL				SG	**Sn**	**12 19 13.7**	**-0.5**
ELL	**Elmali**	**0.81**	**326**		**Pn**	**12 19 01.8**	**-0.9**
ELL	**Elmali**	**0.81**	**326**	P	**Pn**	**12 19 01.8**	**-0.9**
ELL	**Elmali**	**0.81**	**326**	⇓*i*P	**Pn**	**12 19 01.9**	**-0.7**
ELL				S	**Sn**	**12 19 14.7**	**+0.5**
KORT	**Korkueli**	**0.93**	**354**	PG	**Pn**	**12 19 03.5**	**-0.7**
KORT				SG	**Sn**	**12 19 16.9**	**-0.1**
KORT	**Korkueli**	**0.93**	**354**	P	**Pn**	**12 19 03.6**	**-0.7**
KORT				S	**Sn**	**12 19 16.5**	**-0.5**
KORT				*i* AML	AML	12 19 20.0	
	comp=N,10μm,0.6s						
KORT				*i* AML	AML	12 19 21.0	
	comp=E,1μm,0.6s						
KEPZ	**Antalya-Kepez**	**1.23**	**48**	P	**Pn**	**12 19 07.7**	**-0.4**
KEPZ				S	**Sn**	**12 19 22.4**	**-1.5**
KEPZ				*i* AML	AML	12 19 24.0	
	comp=N,5μm,0.7s						
KEPZ				*i* AML	AML	12 19 25.0	
	comp=E,3μm,0.6s						
FETY	**Fethiye**	**1.25**	**297**	PN	**Pn**	**12 19 08.1**	**-0.2**
FETY				SN	**Sn**	**12 19 23.9**	**-0.4**
BUCA	**Burdur, Bucak-**	**1.26**	**3**	P	**Pn**	**12 19 08.2**	**-0.2**
BUCA				*i* AML	AML	12 19 28.0	
	comp=N,5μm,0.5s						
CAME	**Cameli-Denizli**	**1.28**	**313**	PN	**Pn**	**12 19 08.6**	**-0.2**
CAME				SN	**Sn**	**12 19 25.4**	**+0.2**
GOLH	**Golhisar**	**1.37**	**328**	P	**Pn**	**12 19 11.2**	**+1.2**
BCK	**Bucak**	**1.39**	**4**	PN	**Pn**	**12 19 10.1**	**-0.2**
BCK	**Bucak**	**1.39**	**4**	P	**Pn**	**12 19 10.7**	**+0.4**
CAEL	**Denizli, Camel**	**1.40**	**319**	P	**Pn**	**12 19 10.9**	**+0.5**
CAEL				S	**Sn**	**12 19 36.4**	**+8.4**
CAEL				*i* AML	AML	12 19 45.0	
	comp=E,7μm,0.8s						
GAZI	**Gazipasa**	**1.50**	**83**	PN	**Pn**	**12 19 11.4**	**-0.3**
GAZI	**Gazipasa**	**1.50**	**83**	P	**Pn**	**12 19 10.7**	**-1.0**
GAZI				S	**Sn**	**12 19 29.0**	**-1.3**
GAZI				*i* AML	AML	12 19 30.0	
	comp=E,1μm,0.4s						
GAZI				*i* AML	AML	12 19 30.0	
	comp=N,8μm,0.4s						
DALY	**Dalyan (Mula)**	**1.64**	**298**	PN	**Pn**	**12 19 13.8**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.66**	**349**	P	**Pn**	**12 19 14.7**	**+0.9**
BRDR				S	**Sn**	**12 19 36.3**	**+2.2**
BRDR				*i* AML	AML	12 19 37.0	
	comp=E,3μm,0.5s						
BRDR				*i* AML	AML	12 19 38.0	
	comp=N,4μm,0.5s						
APMY	**Acipayam-Deniz**	**1.68**	**327**	PN	**Pn**	**12 19 14.5**	**+0.3**
SEDI	**Konya, Seydise**	**1.72**	**37**	P	**Pn**	**12 19 15.2**	**+0.4**
SEDI				*i* AML	AML	12 19 37.0	
	comp=N,5μm,0.5s						
SEDI				*i* AML	AML	12 19 38.0	
	comp=E,7μm,0.5s						
SEYD	**Seydisehir-KON**	**1.73**	**39**	PN	**Pn**	**12 19 14.8**	**0.0**
ISP	**Isparta**	**1.75**	**1**	PN	**Pn**	**12 19 15.3**	**+0.2**
ISP	**Isparta**	**1.75**	**1**		**Pn**	**12 19 16.0**	**+0.8**
ISP	**Isparta**	**1.75**	**1**	c *iP*	**Pn**	**12 19 15.9**	**+0.8**
AKMS	**Akamas**	**1.85**	**124**	⇑*i*P	**Pn**	**12 19 16.4**	**0.0**
AKMS				S	**Sn**	**12 19 39.4**	**+0.6**
AKMS				AML	AML	12 19 39.7	
	15nm,0.9s						
AKMS				AML	AML	12 19 39.7	
	15nm,0.9s						
AKMS				AML	AML	12 19 49.7	
	20nm,0.4s						
AKMS				AML	AML	12 19 49.7	
	20nm,0.4s						
HDMB	**Hadim**	**1.85**	**61**	PN	**Pn**	**12 19 16.6**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.87**	**319**	P	**Pn**	**12 19 17.2**	**+0.4**
TAVA				*i* AML	AML	12 20 00.0	
	comp=E,2μm,0.6s						
BASM	**Basmaki-Afyon**	**1.88**	**350**	PN	**Pn**	**12 19 16.9**	**+0.1**
ARG	**Arkhangelos**	**1.90**	**275**	PN	**Pn**	**12 19 17.6**	**+0.5**
ARG	**Arkhangelos**	**1.90**	**275**	Pn	**Pn**	**12 19 17.2**	**+0.1**
ARG	**Arkhangelos**	**1.90**	**275**	P	**Pn**	**12 19 17.2**	**+0.1**
ARG				S	**Sn**	**12 19 36.4**	**-3.5**
	5μm,0.6s						
ARG	**Arkhangelos**	**1.90**	**275**	P	**Pn**	**12 19 17.2**	**+0.1**
ARG	**Arkhangelos**	**1.90**	**275**	⇑*i*P	**Pn**	**12 19 17.1**	**+0.1**
ARG				S	**Sn**	**12 19 40.4**	**+0.5**
TURN	**Turunc**	**1.93**	**292**	PN	**Pn**	**12 19 17.5**	**+0.1**
TURN	**Turunc**	**1.93**	**292**	P	**Pn**	**12 19 18.3**	**+0.9**
TURN				*i* AML	AML	12 19 40.0	
	comp=N,3μm,0.5s						
TURN				*i* AML	AML	12 19 43.0	
	comp=E,3μm,0.3s						
BAGO	**Egridir - ISPA**	**1.93**	**8**	P	**Pn**	**12 19 18.1**	**+0.5**
BAGO				S	**Sn**	**12 19 39.2**	**-1.6**
BAGO				*i* AML	AML	12 19 45.0	
	comp=E,1μm,0.4s						
BAGO				*i* AML	AML	12 19 59.0	
	comp=N,893nm,1.1s						
ALFC	**Alefka**	**1.96**	**117**	⇑*e*P	**Pn**	**12 19 17.3**	**-0.7**
ALFC				S	**Sn**	**12 19 41.7**	**+0.3**
ALFC				AML	AML	12 19 44.0	
	19nm,0.4s						
ALFC				AML	AML	12 19 44.0	
	19nm,0.4s						
ALFC				AML	AML	12 19 46.5	
	16nm,0.3s						
ALFC				AML	AML	12 19 46.5	
	16nm,0.3s						
YER	**Yerkesik**	**2.05**	**302**	PN	**Pn**	**12 19 19.4**	**+0.2**
YER	**Yerkesik**	**2.05**	**302**	P	**Pn**	**12 19 19.6**	**+0.4**
YER				S	**Sn**	**12 19 38.4**	**-5.3**
YER	**Yerkesik**	**2.05**	**302**	P	**Pn**	**12 19 19.9**	**+0.7**
ERMK	**Ermenek**	**2.06**	**73**	P	**Pn**	**12 19 20.1**	**+0.8**
ERMK				S	**Sn**	**12 19 46.4**	**+2.4**
ERMK				*i* AML	AML	12 19 51.0	
	comp=N,5μm,0.5s						
ERMK				*i* AML	AML	12 19 52.0	
	comp=E,3μm,0.8s						
MULA	**Mugla, Merkez-**	**2.09**	**305**	P	**Pn**	**12 19 20.5**	**+0.7**
MULA				*i* AML	AML	12 20 00.0	
	comp=N,1μm,0.6s						
MULA				*i* AML	AML	12 20 03.0	
	comp=E,2μm,0.5s						
TEKE	**Tekeli-Mersin**	**2.14**	**87**	PN	**Pn**	**12 19 20.5**	**+0.1**
NATA	**Nata**	**2.15**	**126**	⇑*e*P	**Pn**	**12 19 20.8**	**+0.4**
NATA				S	**Sn**	**12 19 46.1**	**+0.1**
NATA				AML	AML	12 20 08.0	
	33nm,0.9s						
NATA				AML	AML	12 20 08.0	
	33nm,0.9s						
NATA				AML	AML	12 20 10.9	
	32nm,1.1s						
NATA				AML	AML	12 20 10.9	
	32nm,1.1s						
LEF	**Lefka**	**2.19**	**115**	PN	**Pn**	**12 19 20.3**	**-0.7**
KZIL	**AFYON_Kizioren**	**2.20**	**353**	P	**Pn**	**12 19 21.3**	**+0.1**
KZIL				S	**Sn**	**12 19 47.9**	**+0.5**
KZIL				*i* AML	AML

comp=N,1µm,0.4s
KONT Konya--Tatoy 2.41 38 PN Pn 12 19 24.6 +0.6
DAT Datca 2.42 287 PN Pn 12 19 24.0 -0.3
OREN Orenkoy-Mersin 2.42 86 PN Pn 12 19 24.6 +0.4
TEVE Tevekalti-Mers 2.43 81 PN Pn 12 19 24.7 +0.3
SHUT Suhut-Afyon 2.48 2 PN Pn 12 19 25.8 +0.7
AKK1 Akkuyu-Mersin 2.49 87 PN Pn 12 19 25.8 +0.7
GULN MERSIN_Gulnar 2.49 87 P Pn 12 19 25.6 +0.5
GULN S Sn 12 19 54.1 -0.2
GULN *i* AML AML 12 19 57.0
comp=N,2µm,0.4s
GULN *i* AML AML 12 20 01.0
comp=E,999nm,0.6s
AKK2 Akkuyu-Mersin 2.50 88 PN Pn 12 19 25.6 +0.5
TEPK Tepekoy-MERSIN 2.50 86 PN Pn 12 19 25.8 +0.6
AKKU Akkuyu-Mersin 2.50 87 PN Pn 12 19 25.5 +0.3
KRMN Karaman 2.50 63 PN Pn 12 19 25.9 +0.5
ATHAL Athalassa 2.56 110 P Pn 12 19 26.2 +0.1
ATHAL AML AML 12 20 08.2
15nm,0.6s
ATHAL AML AML 12 20 49.1
16nm,1.3s
YESI Yesilovacik-Me 2.57 86 PN Pn 12 19 26.3 +0.1
CSS Mathiatis 2.58 115 PN Pn 12 19 26.3 -0.1
CSS Mathiatis 2.58 115 Pn Pn 12 19 25.3 -1.1
CSS Mathiatis 2.58 115 P Pn 12 19 26.2 -0.2
CSS AML AML 12 20 01.0
2.0nm,0.5s
CSS AML AML 12 20 24.6
1.9nm,0.5s
TISA Tisan-Mersin 2.60 87 PN Pn 12 19 27.3 +0.7
ASGA Asgata 2.61 119 P Pn 12 19 27.0 +0.3
ASGA S Sn 12 19 58.8 +1.6
ASGA AML AML 12 20 05.3
6.1nm,0.4s
ASGA AML AML 12 20 05.3
6.1nm,0.4s
ASGA AML AML 12 20 09.4
7.0nm,0.4s
ASGA AML AML 12 20 09.4
7.0nm,0.4s
IKL Isikli 2.61 85 PN Pn 12 19 27.2 +0.5
LADK Ladik-KONYA 2.61 35 PN Pn 12 19 26.1 -0.8
AYDN Tasoluk 2.61 308 P Pn 12 19 26.9 +0.1
AYDN *i* AML AML 12 20 10.0
comp=N,1µm,0.5s
AYDN *i* AML AML 12 20 15.0
comp=E,749nm,0.4s
LFK Lefkose 2.62 107 PN Pn 12 19 26.3 -0.6
KARG Kargicak-Mersi 2.63 86 PN Pn 12 19 27.6 +0.6
BDRM Kayabasi 2.63 293 P Pn 12 19 27.6 +0.6
BDRM *i* AML AML 12 19 58.0
comp=E,2µm,0.4s
KEBE Keben-Mersin 2.65 81 PN Pn 12 19 27.9 +0.6
OSC1 CSNet OBS 1 2.65 165⇑ *e*P Pn 12 19 27.8 +0.5
OSC1 S Sn 12 19 59.6 +1.4
NIS1 Nisyros Isl. 2.71 282 PN Pn 12 19 28.6 +0.5
NIS1 Nisyros Isl. 2.71 282 P Pn 12 19 28.1 0.0
NIS1 S Sn 12 19 55.4 -4.3
11µm,0.5s
BODT Bodrum 2.73 292 PN Pn 12 19 28.1 -0.2
BODT Bodrum 2.73 292 P Pn 12 19 28.1 -0.2
BODT S Sn 12 19 55.4 -4.8
KARP Karpathos 2.74 260 PN Pn 12 19 29.2 +0.7
KARP Karpathos 2.74 260 Pn Pn 12 19 29.4 +0.9
KARP Karpathos 2.74 260 P Pn 12 19 29.4 +0.9
KARP S Sn 12 19 57.5 -2.9
11µm,0.5s
KARP Karpathos 2.74 260⇑ *i*P Pn 12 19 29.4 +0.9
KARP S Sn 12 20 01.1 +0.6
KARP AML AML 12 20 02.8
24nm,0.4s
KARP AML AML 12 20 02.8
24nm,0.4s
KARP AML AML 12 20 03.1
18nm,0.6s
KARP AML AML 12 20 03.1
18nm,0.6s
NISR Nisiros 2.75 282 P Pn 12 19 28.7 +0.1
NISR S Sn 12 19 55.6 -5.0
2µm,0.5s
KDHN Kadinhani 2.78 28 P Pn 12 19 29.2 +0.1
KDHN *i* AML AML 12 20 05.0
comp=N,464nm,0.4s
KDHN *i* AML AML 12 20 12.0
comp=E,340nm,0.5s
AYDB Zeytinkoy-Aydi 2.79 313 PN Pn 12 19 28.9 -0.3
MVOU Mavrovouni 2.79 111 P Pn 12 19 27.8 -1.3
MVOU AML AML 12 20 04.5
6.6nm,0.4s
MVOU AML AML 12 20 10.1
7.8nm,0.3s
SILI Silifke-Mersin 2.81 83 PN Pn 12 19 30.1 +0.6
MANT Manisa 2.86 328 P Pn 12 19 29.4 -0.9
USAK Uak-Merkez 2.88 337 P Pn 12 19 30.0 -0.4
KOSK Kos Island 2.90 285 PN Pn 12 19 31.4 +0.8
DDIM Aydin, Didim 2.94 299 P Pn 12 19 31.1 -0.1
DDIM *i* AML AML 12 20 09.0
comp=E,2µm,0.5s
DDIM *i* AML AML 12 20 12.0
comp=N,984nm,0.4s
ALIN Konya, Altinte 2.94 40 P Pn 12 19 31.8 +0.4
KIZK Mersin 3.00 81 PN Pn 12 19 32.7 +0.7
KIZK Mersin 3.00 81 P Pn 12 19 32.4 +0.4
KIZK *i* AML AML 12 20 18.0
comp=N,642nm,0.4s
KIZK *i* AML AML 12 20 23.0
comp=E,784nm,0.6s
KIZT Kizilcal 3.02 21 PN Pn 12 19 32.6 +0.1
EREN Erenkoy 3.06 99 PN Pn 12 19 33.5 +0.7
GCAM G?zelcaml? 3.06 303 PN Pn 12 19 32.9 0.0
GCAM G?zelcaml? 3.06 303 P Pn 12 19 32.7 -0.1
GCAM S Sn 12 20 04.9 -3.3
GEDZ Gediz 3.08 345 PN Pn 12 19 34.1 +0.8
PARAL Paralimni 3.10 109 P Pn 12 19 34.3 +0.8
PARAL AML AML 12 20 15.1
5.2nm,0.8s
PARAL AML AML 12 20 33.4
6.5nm,0.7s
GDZ Gediz 3.11 346 P Pn 12 19 32.1 -1.7
YESY Yesilyurt 3.13 56 PN Pn 12 19 34.8 +0.8
CHBY Cihanbeyli 3.16 37 PN Pn 12 19 35.1 +0.7
KERG Konya-Eregli 3.23 64 P Pn 12 19 35.9 +0.6
KERG *i* AML AML 12 20 20.0
comp=E,869nm,0.7s
KERG *i* AML AML 12 20 24.0
comp=N,771nm,0.4s
SULT Sultanhani-AKS 3.23 48 PN Pn 12 19 36.1 +0.8
SMAA Simav-Kutahya 3.25 339 PN Pn 12 19 36.4 +0.9
DEMI Demirci 3.28 335 P Pn 12 19 35.8 -0.2
DEMI S Sn 12 20 10.2 -3.5
DEMI *i* AML AML 12 20 14.0
comp=E,451nm,0.6s
DEMI *i* AML AML 12 20 18.0
comp=N,454nm,0.3s
CIFT Cifteler, Eski 3.32 8 PN Pn 12 19 37.2 +0.7
GOMA Golmarmara-Man 3.32 323 PN Pn 12 19 37.4 +0.9
SMG Samos 3.34 300 P Pn 12 19 36.4 -0.3
ESKT Eskisehir 3.46 5 PN Pn 12 19 39.0 +0.6
ANDZ Kutahya, Merke 3.46 353 P Pn 12 19 38.5 0.0
SGAZ Eskisehir, Sey 3.46 5 P Pn 12 19 38.5 0.0
TVSB Tavsanli 3.47 347 PN Pn 12 19 38.6 +0.1
AUSIV SIVRIHISAR 3.47 14 PN Pn 12 19 38.7 +0.1
AUSIV SIVRIHISAR 3.47 14 P Pn 12 19 38.0 -0.6
AUSIV *i* AML AML 12 20 05.0
comp=N,98nm,1.1s
AUSIV *i* AML AML 12 20 19.0
comp=E,163nm,0.5s
SVRH Sivrihisar-ESK 3.47 14 PN Pn 12 19 38.9 +0.3
DGB zmir 3.48 306 P Pn 12 19 38.0 -0.6
DGB *i* AML AML 12 20 17.0
comp=N,219nm,0.3s
DGB *i* AML AML 12 20 21.0
comp=E,195nm,0.3s
AKHS Akhisar 3.51 324 P Pn 12 19 38.0 -1.0
AKS Akhisar 3.51 324 PN Pn 12 19 40.1 +1.1
BLCB Balcova 3.58 311 PN Pn 12 19 40.1 +0.1
BLCB Balcova 3.58 311 P Pn 12 19 39.7 -0.3
ZKR Zakros 3.59 256 PN Pn 12 19 40.9 +0.7
ZKR Zakros 3.59 256 P Pn 12 19 41.5 +1.3
ZKR Zakros 3.59 256⇑ *e*P Pn 12 19 41.2 +1.0
ZKR AML AML 12 20 21.9
9.0nm,0.5s
ZKR AML AML 12 20 23.6
4.7nm,0.3s
DED Mersin 3.60 74 P Pn 12 19 40.6 +0.3
DED S Sn 12 20 20.0 -1.6
DED *i* AML AML 12 20 34.0
comp=N,342nm,0.6s
DED *i* AML AML 12 20 40.0
comp=E,350nm,0.8s
KKUL Konya-Kulu 3.66 31 P Pn 12 19 41.3 +0.2
AKSY AKSARAY - Alti 3.67 45 P Pn 12 19 41.5 +0.2
AKSY *i* AML AML 12 20 46.0
comp=N,101nm,0.9s
AKSY *i* AML AML 12 21 13.0
comp=E,84nm,1.1s
BORA Eskisehir 3.80 360 Pn 12 19 43.4 +0.3
BORA Eskisehir 3.80 360 P Pn 12 19 43.0 -0.1
BORA *i* AML AML 12 20 27.0
comp=N,342nm,0.3s
BORA *i* AML AML 12 20 27.0
comp=E,528nm,0.3s
DST Dursunbey 3.82 338 PN Pn 12 19 44.6 +1.3
ZEYE Izmir, Urla-Ze 3.83 306 P Pn 12 19 42.7 -0.7
ZEYE *i* AML AML 12 20 45.0
comp=E,222nm,0.6s
ZEYE *i* AML AML 12 21 01.0
comp=N,308nm,0.9s
URLA Izmir 3.84 308 PN Pn 12 19 43.1 -0.5
URLA Izmir 3.84 308 P Pn 12 19 42.2 -1.4
AUBOZ BOZOYUK 3.85 355 P Pn 12 19 43.0 -0.7
AUBOZ S Sn 12 20 25.5 -2.2
AUBOZ *i* AML AML 12 20 26.0
comp=E,727nm,0.4s
AUBOZ *i* AML AML 12 20 28.0
comp=N,797nm,0.4s
DURS Dursunbey 3.86 336 P Pn 12 19 45.1 +1.1
DURS S Sn 12 20 24.5 -3.6
DURS *i* AML AML 12 20 29.0
comp=E,296nm,0.4s
DURS *i* AML AML 12 20 31.0
comp=N,257nm,0.4s
AUMIH MIHALICIK 3.88 12 P Pn 12 19 43.7 -0.5
AUMIH S Sn 12 20 26.4 -2.1
AUMIH *i* AML AML 12 20 34.0
comp=N,189nm,0.4s
AUMIH *i* AML AML 12 21 03.0
comp=E,145nm,1.1s
NIDE Nigde/Merkez-G 3.95 60 P Pn 12 19 45.9 +0.7
ZEDA zmir-Bergama 3.95 318 P Pn 12 19 44.1 -1.0
ZEDA *i* AML AML 12 20 36.0
comp=E,161nm,0.4s
ZEDA *i* AML AML 12 20 49.0
comp=Z,92nm,0.6s
STEP BALIKESIR_Sava 3.96 327 P Pn 12 19 45.0 -0.2
STEP *i* AML AML 12 20 29.0
comp=N,599nm,0.6s
STEP *i* AML AML 12 20 34.0
comp=E,437nm,0.8s
FOCM Foa 3.98 313 PN Pn 12 19 45.7 +0.3
FRMA Ierapetra Chan 4.00 256 P Pn 12 19 45.5 -0.3
SANT Santorini 4.06 276 ⇓P Pn 12 19 47.7 +1.1
SANT Santorini 4.06 276 PN Pn 12 19 47.9 +1.3
SANT Santorini 4.06 276 Pn Pn 12 19 47.0 +0.4
APE Apeiranthos 4.10 286 ⇑P Pn 12 19 48.4 +1.3
APE Apeiranthos 4.10 286 *i* P Pn 12 19 48.0 +0.9
KIRS Kirsehir-Merke 4.10 41 P Pn 12 19 47.2 -0.1
BILE Bilecik/Merkez 4.11 354 P Pn 12 19 47.4 +0.1
BILE *i* AML AML 12 20 34.0
comp=N,373nm,0.4s
BILE *i* AML AML 12 20 34.0
comp=E,378nm,0.6s
THR9 Santorini-Faro 4.14 275 P Pn 12 19 48.3 +0.6
BR231 Keskin MP Arra 4.18 25 Pn 12 19 48.5 +0.1
ULDT Uludag 4.20 346 P Pn 12 19 48.9 +0.3
ULDT S Sn 12 20 34.8 -1.7
ULDT *i* AML AML 12 20 40.0
comp=N,304nm,0.8s
ULDT *i* AML AML 12 20 43.0
comp=E,298nm,0.4s
ANTO Ankara 4.21 25 ⇑P Pn 12 19 48.7 -0.1
ANTO Ankara 4.21 25 Pn 12 19 48.6 -0.1
ANTO Ankara 4.21 25 ⇑P Pn 12 19 48.7 -0.1
AKO Adana 4.23 69 P Pn 12 19 50.4 +1.5
AKO S Sn 12 20 36.4 -0.7
AKO *i* AML AML 12 20 46.0
comp=N,246nm,0.5s
AKO *i* AML AML 12 21 02.0
comp=E,177nm,0.5s
YURE YUREGIR 4.23 78 P Pn 12 19 48.8 -0.2
YURE *i* AML AML 12 20 41.0
comp=E,251nm,0.5s
YURE *i* AML AML 12 21 06.0
comp=N,268nm,1.2s
BALY Balya 4.30 329 P Pn 12 19 47.6 -2.3
BALY *i* AML AML 12 20 40.0
comp=N,266nm,0.7s
BALY *i* AML AML 12 20 44.0
comp=E,188nm,0.4s
BUHA Balikesir, Bur 4.35 323 P Pn 12 19 50.6 +0.1
BUHA *i* AML AML 12 20 44.0
comp=N,282nm,0.5s
BUHA *i* AML AML 12 20 46.0
comp=E,227nm,0.6s
GEYV SAKARYA_Geyve 4.41 358 P Pn 12 19 51.8 +0.5
GEYV *i* AML AML 12 20 41.0
comp=E,431nm,0.7s
GEYV *i* AML AML 12 20 44.0
comp=N,409nm,0.9s
BR131 Keskin Array S 4.43 34 Pn Pn 12 19 51.5 -0.2
BR131 Keskin Array S 4.43 34 *c i* P Pn 12 19 51.3 -0.4
BRTR Keskin Array B 4.43 34 P Pn 12 19 51.4 -0.3
122nm,0.5s,baz=194,slow=16,SNR=8.8
BRTR S Sn 12 20 39.1 -3.0
65nm,0.6s,baz=202,slow=25,SNR=1.7
BRTR LR LR 12 22 05.6
comp=Z,1µm,20.2s,baz=266,slow=47
AVNS Nevsehir-Avano 4.43 51 P Pn 12 19 51.8 +0.1
MDUB Mudurnu 4.43 7 Pn Pn 12 19 51.5 -0.2
KIBS BOLU 4.48 14 P Pn 12 19 52.4 0.0
BTAS Tasketsi 4.51 5 P Pn 12 19 53.4 +0.6
BTAS S Sn 12 20 42.9 -1.1
BTAS *i* AML AML 12 20 48.0
comp=N,251nm,0.6s
BTAS *i* AML AML 12 20 50.0
comp=E,236nm,0.4s
PRK Paraskevi 4.60 315 P Pn 12 19 55.0 +1.1
PRK Paraskevi 4.60 315 P Pn 12 19 54.9 +1.1
IDI Anoyia 4.61 262 ⇑P Pn 12 19 55.0 +0.9
IDI Anoyia 4.61 262 P Pn 12 19 54.4 +0.3
170nm,0.3s,baz=65,slow=14,SNR=170
IDI S Sn 12 20 44.3 -2.1
716nm,0.4s,baz=167,slow=6.9,SNR=19
IDI LR LR 12 22 20.8
comp=Z,216nm,18.9s,baz=62,slow=45
IDI Anoyia 4.61 262 Pn Pn 12 19 54.5 +0.4
IDI Anoyia 4.61 262 P Pn 12 19 54.6 +0.4
KURT Yalova, Merkez 4.62 348 P Pn 12 19 55.0 +0.8
CMDR Camlidere-ANKA 4.69 19 P Pn 12 19 54.0 -1.3
CMDR *i* AML AML 12 20 50.0
comp=E,185nm,1.2s
CMDR *i* AML AML 12 20 59.0
comp=N,189nm,0.6s
CDAG Cicekdag 4.70 40 P Pn 12 19 55.9 +0.5
DELI KIRIKKALE 4.78 34 P Pn 12 19 56.0 -0.5
DELI *i* AML AML 12 20 52.0
comp=N,69nm,0.4s
DELI *i* AML AML 12 20 54.0
comp=E,92nm,0.7s
BAYC CANAKKALE_Bayr 4.80 321 P Pn 12 19 56.3 -0.4
BAYC S Sn 12 20 44.5 -6.5
BAYC *i* AML AML 12 20 50.0
comp=E,117nm,0.5s
BAYC *i* AML AML 12 20 53.0
comp=N,97nm,0.9s
DQRL Deir Qamar 4.81 118 *e*P Pn 12 19 55.9 -1.1
HWQ Hawqa 4.83 110 *e*P Pn 12 19 56.7 -0.6
KOCA Canakkale, Ayv 4.85 316 P Pn 12 19 56.6 -0.7
KAYN Sakarya, Kayna 4.89 359 P Pn 12 19 58.5 +0.6
KAYN S Sn 12 20 49.9 -3.2
KAYN *i* AML AML 12 20 53.0
comp=E,112nm,1.1s
KAYN *i* AML AML 12 20 53.0
comp=N,110nm,0.9s
HNTI Hanita 4.89 126 Pn Pn 12 19 57.8 -0.2
HNTI Sn Sn 12 20 50.6 -2.8
BCAM Yenicaga 4.90 14 P Pn 12 19 58.2 0.0
BCAM *i* AML AML 12 20 56.0
comp=N,113nm,0.4s
BCAM *i* AML AML 12 20 57.0
comp=E,87nm,0.7s
YIGI Dzce 4.95 9 P Pn 12 19 59.2 +0.5
ANDN Andirin 4.95 71 P Pn 12 19 58.2 -0.6
ANDN *i* AML AML 12 20 57.0
comp=N,164nm,0.6s
ANDN *i* AML AML 12 21 28.0
comp=E,198nm,0.8s
KAND Kocaeli-Kandir 5.02 358 P Pn 12 20 00.4 +0.7
KAND S Sn 12 20 54.4 -1.9
KAND *i* AML AML 12 20 58.0
comp=N,367nm,0.4s
KAND *i* AML AML 12 20 59.0
comp=E,154nm,0.3s
OFRI `Ofer 5.08 131 Pn Pn 12 20 00.1 -0.5
OFRI Sn Sn 12 20 55.4 -2.6
MMA0B Mount Meron ar 5.09 125 Pn Pn 12 20 00.4 -0.3
MMA0B Sn Sn 12 20 55.2 -3.0
MMAI Mount Meron Ar 5.09 125 P Pn 12 20 00.4 -0.3
53nm,0.3s,baz=306,slow=12,SNR=175
MMAI S Sn 12 20 53.5 -4.7
200nm,0.5s,baz=309,slow=29,SNR=21
BNN Bunyan 5.10 55 Pn Pn 12 20 01.3 +0.4
KAMA Osmaniye 5.11 76 P Pn 12 20 00.4 -0.6
KAMA S Sn 12 20 54.3 -4.5
KAMA *i* AML AML 12 21 02.0
comp=E,113nm,0.5s
KAMA *i* AML AML 12 21 06.0
comp=N,86nm,0.9s
RCY Rachaya 5.11 119 *e*P Pn 12 20 00.3 -0.8
BLGI Bet Lehem HaGe 5.13 129 Pn Pn 12 20 01.1 -0.2
BLGI Sn Sn 12 20 56.4 -2.8
GEM Giv'at Ha'Em 5.15 122 Pn Pn 12 20 01.5 0.0
GEM Sn Sn 12 20 56.4 -3.1
NATI Neve Ativ 5.17 121 Pn Pn 12 20 01.4 -0.3
NATI Sn Sn 12 20 56.1 -3.9
DEVR Zonguldak/Devr 5.20 13 P Pn 12 20 02.4 +0.2
KDZE Karadeniz Ereo 5.29 8 ⇑P Pn 12 20 04.3 +0.9
IMMV Iera Moni Meta 5.31 265 P Pn 12 20 04.5 +0.8
GVD Gavdhos 5.35 259 P Pn 12 20 05.1 +0.8
KUZU Kuzuini 5.37 81 P Pn 12 20 03.0 -1.6
KUZU S Sn 12 21 00.2 -5.0
SLTI Sal'it 5.38 134 Pn Pn 12 20 04.3 -0.4
SLTI Sn Sn 12 21 02.1 -3.2
KAHM Kahramanmaras, 5.43 73 P Pn 12 20 04.4 -0.9
KAHM S Sn 12 21 01.3 -5.2
KAHM *i* AML AML 12 21 02.0
comp=E,96nm,0.7s
KAHM *i* AML AML 12 21 12.0
comp=N,67nm,0.3s
KBUK KARABUK-Merkez 5.43 17 P Pn 12 20 04.5 -0.8
MATC Matruh 5.43 211 P Pn 12 20 05.6 +0.3
baz=212
MATC S Sn 12 20 57.9 -8.6
baz=212
MMLI Mount Malkishu 5.47 130 Pn Pn 12 20 06.1 +0.1
MMLI Sn Sn 12 21 05.0 -2.6
COAL Corum-Alaca 5.49 39 P Pn 12 20 06.5 +0.3
COAL *i* AML AML 12 20 45.0
comp=E,56nm,1.0s
COAL *i* AML AML 12 20 49.0
comp=N,59nm,0.9s
HACI Hacifakili, Ak 5.52 47 P Pn 12 20 07.5 +0.9
GAZ Gaziantep 5.53 77 Pn 12 20 06.2 -0.6
ILGA Ilgaz 5.59 26 Pn 12 20 06.9 -0.8
ILGA Ilgaz 5.59 26 P Pn 12 20 06.8 -0.9
KESN Edirne-Kesan 5.60 329 P Pn 12 20 07.5 -0.5
KESN *i* AML AML 12 21 15.0
comp=N,115nm,0.4s
KESN *i* AML AML 12 21 15.0
comp=E,136nm,0.4s
CKRK Yozgat, Cekere 5.63 43 P Pn 12 20 08.6 +0.4
CKRK *i* AML AML 12 20 31.0
comp=E,25nm,0.4s
HMDT Nahal Hemdat 5.66 131 Pn Pn 12 20 09.1 +0.5
HMDT Sn Sn 12 21 10.0 -2.2
BTIN Bartın 5.73 14 P Pn 12 20 09.3 -0.1
GZT Gaziantep 5.84 75 P Pn 12 20 10.8 -0.4
AMAZ Amatzia 5.85 139 Pn Pn 12 20 11.1 0.0
AMAZ Sn Sn 12 21 13.1 -3.7
VIZE Kirklareli, Vi 5.87 340 P Pn 12 20 11.9 +0.6
CUAYA Sivas-Altinyay 5.91 55 P Pn 12 20 14.5 +2.4
KAGI orum-Kargı 5.96 31 P Pn 12 20 12.6 0.0
DSI Dead Sea 6.07 136 Pn Pn 12 20 13.8 -0.3
YTIR Yattir 6.09 139 Pn Pn 12 20 14.2 -0.2
YTIR Sn Sn 12 21 19.3 -3.5
VLI Veliai 6.11 278 P Pn 12 20 15.4 +0.8
KOT Kottamia 6.23 169 P Pn 12 20 17.1 +0.7
baz=167
KOT S Sn 12 21 17.6 -8.7
baz=167
HLW Helwan 6.24 173 P Pn 12 20 17.1 +0.6
baz=171
ARMN Kirklareli, Me 6.25 339 P Pn 12 20 17.0 +0.4
ARMN S Sn 12 21 24.6 -2.0
ARMN *i* AML AML 12 21 28.0
comp=N,44nm,0.4s
ARMN *i* AML AML 12 21 29.0
comp=E,32nm,0.3s
HHAG Hagoal 6.25 167 P Pn 12 20 16.7 0.0
baz=164
HMYD Mayadein 6.26 177 P Pn 12 20 17.6 +0.8
baz=176
KIRK Kırklareli 6.28 336 P Pn 12 20 18.0 +1.1
KIRK *i* AML AML 12 21 28.0
comp=N,34nm,0.5s
KIRK *i* AML AML 12 21 30.0
comp=E,29nm,0.3s
SLUM Salum 6.32 225 P Pn 12 20 17.1 -0.5
baz=228
AKCD Akcadag 6.35 67 P Pn 12 20 17.4 -0.7
HNAT Natroun 6.42 179 P Pn 12 20 19.3 +0.3
baz=177
BZK Bozkurt 6.49 24 Pn Pn 12 20 17.8 -2.0
HSAF As Saff 6.50 172 P Pn 12 20 20.4 +0.4
baz=170
SUZ Suez 6.52 162 P Pn 12 20 20.8 +0.5
baz=159
GLL Jalalah 6.56 170 P Pn 12 20 21.3 +0.4
baz=168
ASF Jabal al Asfar 6.60 124 P Pn 12 20 21.3 -0.2
16nm,0.3s,baz=310,slow=4.8,SNR=50
DIKM Dikmen 6.71 32 ⇑P Pn 12 20 22.9 +0.1
ZFRI Zfri 6.77 143 Pn Pn 12 20 23.3 -0.4
PRNI Paran 6.85 145 Pn Pn 12 20 25.4 +0.5
PRNI Sn Sn 12 21 36.9 -4.6
KRMI Paran Flat 6.93 148 Pn Pn 12 20 25.4 -0.5
KRMI Sn Sn 12 21 38.6 -4.8
ITM Ithomi 6.96 282 Pn Pn 12 20 28.0 +1.7
RYAN Fayoum 6.97 181 P Pn 12 20 27.0 +0.5
baz=181
ZNM Zenema 6.98 162 P Pn 12 20 27.6 +1.0
baz=160
ZAF Zafarana 6.99 165 P Pn 12 20 27.0 +0.3
baz=163
HRFI Mount Harif 7.13 146 Pn Pn 12 20 28.5 -0.3
HRFI Sn Sn 12 21 43.3 -5.1
MBRI Mt Berech 7.29 148 Pn Pn 12 20 30.5 -0.4
MBRI Sn Sn 12 21 48.4 -3.9
EIL Elat 7.41 148 P Pn 12 20 32.4 -0.1
149nm,0.5s,baz=209,slow=2.6,SNR=182
EIL S Sn 12 21 50.5 -4.7
247nm,0.7s,baz=298,slow=19,SNR=16
EIL Elat 7.41 148 Pn Pn 12 20 32.0 -0.5
EIL Sn Sn 12 21 50.7 -4.5
NBNS Bani Suef 7.46 174 P Pn 12 20 33.5 +0.3
baz=173
HRDS Abu Rudays 7.72 161 P Pn 12 20 36.0 -0.7
baz=159
HBST Basata 7.72 151 P Pn 12 20 36.6 -0.2
baz=148
NUB Nuweibaa 7.86 152 P Pn 12 20 38.6 0.0
baz=150
SWA2 8.01 213 P Pn 12 20 39.9 -0.8
baz=215
GRB Gharib 8.02 165 P Pn 12 20 40.2 -0.7
baz=163
RAZG Razgrad 8.08 339 ⇑P Pn 12 20 44.0 +2.4
HKAT Jabal Katrina 8.10 157 P Pn 12 20 41.3 -0.7
baz=155
HKAT S Sn 12 22 04.5 -7.8
baz=155
HDHB Dhahab 8.12 153 P Pn 12 20 42.0 -0.2

baz=151
TR2 Tor 2 8.14 159 P Pn 12 20 42.2 -0.3
baz=157
TAMRE El Minia 8.37 177 P Pn 12 20 45.5 -0.2
baz=176
MARD Mardin 8.38 78 Pn 12 20 44.6 -1.2
TIRR Tirgusor 8.52 350 ⇑P Pn 12 20 49.9 +2.3
TIRR Tirgusor 8.52 350 Pn Pn 12 20 48.5 +0.9
TIRR Tirgusor 8.52 350 ⇑P Pn 12 20 49.9 +2.3
VTS Vitosha 8.61 322 ⇑P Pn 12 20 50.9 +2.0
VTS Vitosha 8.61 322 Pn 12 20 49.8 +0.9
VTS Vitosha 8.61 322 ⇑P Pn 12 20 50.9 +2.0
ASUT 8.70 174 P Pn 12 20 50.6 +0.5
baz=172
JURR Jurilovca 8.77 353 ⇑P Pn 12 20 52.0 +1.0
KTUT Trabzon 8.78 53 ⇑P Pn 12 20 54.6 +3.4
SEV Sevastopol' 8.81 15 *e*P Pn 12 20 49.6 -1.9
SEV Pm 12 20 54.8
comp=Z,7.0nm,0.4s
SEV *e*S **Sn 12 22 23.8 -5.4**
SEV Sm 12 22 27.3
comp=N,1.0nm,0.2s
SEV Sm 12 22 27.3
comp=E,8.0nm,0.3s
SEV Sevastopol' 8.81 15 *e*P Pn 12 20 49.6 -1.9
SEV *e*S **Sn 12 22 23.8 -5.4**
HARR Harsova 8.82 348 ⇑P Pn 12 20 54.5 +2.8
HARR Harsova 8.82 348 ⇑P Pn 12 20 54.5 +2.8
YAL Yalta 8.87 17 *e*P Pn 12 20 51.0 -1.3
YAL Pm 12 20 52.0
comp=Z,27nm,0.2s
YAL *e*S **Sn 12 22 26.1 -4.5**
YAL Sm 12 22 31.5
comp=E,6.0nm,0.2s
YAL Sm 12 22 31.6
comp=N,23nm,0.1s
TPGR Topolog 8.91 351 ⇑P Pn 12 20 55.1 +2.1
HFRF Wahat Farafira 9.08 192 P Pn 12 20 55.1 -0.3
baz=193
ALU Alushta 9.11 18 *e*P Pn 12 20 54.2 -1.4
ALU Pm 12 20 56.7
comp=Z,12nm,0.3s
ALU Alushta 9.11 18 *e*P Pn 12 20 54.2 -1.4
TLCR 9.19 353 ⇑P Pn 12 20 58.4 +1.6
TLCR 9.19 353 ⇑P Pn 12 20 58.4 +1.6
HHRG Al Ghardaqah 9.21 162 P Pn 12 20 58.8 +1.6
baz=161
CFR Carcaliu 9.27 350 ⇓P Pn 12 20 59.2 +1.4
CFR Carcaliu 9.27 350 ⇓P Pn 12 20 59.2 +1.4
SIM Simferopol' 9.29 16 *e*P Pn 12 20 58.5 +0.4
SIM S **Sn 12 22 43.0 +1.9**
EJDE Erzurum, Palan 9.35 63 P Pn 12 21 05.1 +5.8
EJDE S Pn 12 21 15.8 +17
BLKB Belogradchik 9.63 324 ⇑P Pn 12 21 05.2 +2.4
SCTR Scanteiesti 9.77 350 ⇑P Pn 12 21 07.1 +2.4
MLR Muntele Rosu 10.01 341 ⇑P Pn 12 21 10.8 +2.7
MLR Muntele Rosu 10.01 341 P Pn 12 21 08.4 +0.3
comp=Z,7.3nm,0.9s,baz=188,slow=8.9,SNR=7.4
MLR LR LR 12 26 00.2
comp=Z,280nm,20.3s,baz=164,slow=44
MLR Muntele Rosu 10.01 341 Pn 12 21 08.6 +0.4
MLR Muntele Rosu 10.01 341 ⇑P Pn 12 21 10.9 +2.7
BOVS Bovan 10.12 321 ⇑P Pn 12 21 11.4 +2.0
VRI Vrincioaia 10.18 345 ⇓P Pn 12 21 12.8 +2.5
VRI Vrincioaia 10.18 345 ⇓P Pn 12 21 12.8 +2.5
PLOR Plostina 10.19 345 ⇑P Pn 12 21 13.5 +3.1
PLOR Plostina 10.19 345 ⇑P Pn 12 21 13.5 +3.1
ANN Anapa 10.20 29 *e*P Pn 12 21 08.5 -2.1
ANN pmax pmax
comp=Z,43nm,1.0s
VOIR 10.22 338 ⇑P Pn 12 21 12.5 +1.6
VOIR 10.22 338 ⇑P Pn 12 21 12.5 +1.6
COVR Voineasa-Covas 10.28 343 ⇓P Pn 12 21 14.4 +2.7
SOC Sochi 10.33 41 *e*P Pn 12 21 11.8 -0.6
SOC *e* 12 23 07.3
SOC MLR MLR
comp=Z,71nm,18.0s
GTR Jabal at Tayr 10.53 180 P Pn 12 21 15.0 -0.1
baz=178
AKRG Al Kharijah 10.53 180 P Pn 12 21 14.4 -0.8
baz=179
HDK1 Dakhla 10.53 185 P Pn 12 21 14.8 -0.5
baz=185
DOPR Dopca 10.60 340 ⇓P Pn 12 21 18.5 +2.4
OZUR 10.62 342 ⇓P Pn 12 21 19.0 +2.7
LOT Lotru 10.65 334 ⇑P Pn 12 21 12.1 -4.8
HERR Herculane 10.72 328 ⇑P Pn 12 21 20.6 +2.9
TESR Tescani 10.82 346 ⇓P Pn 12 21 20.6 +1.7
MDVR Moldovita 10.96 325 ⇑P Pn 12 21 23.3 +2.3
GZR Gura Zlata 10.98 330 ⇑P Pn 12 21 23.8 +2.4
NADB Abo Dabab 11.24 161 P Pn 12 21 24.6 -0.3
baz=159
TIP Timpagrande 11.31 290 ⇑P Pn 12 21 27.9 +2.1
TIP Timpagrande 11.31 290 Pn 12 21 26.6 +0.8
BIZ Bicaz 11.34 345 ⇑P Pn 12 21 28.9 +2.8
ONI Oni 11.97 53 Pn 12 21 33.9 -0.9
ONI Oni 11.97 53 P Pn 12 21 33.9 -0.9
BURAR Bucovina Array 12.18 343 ⇑P Pn 12 21 40.9 +3.3
BURAR Bucovina Array 12.18 343 Pn Pn 12 21 36.2 -1.4
BURAR Bucovina Array 12.18 343 P Pn 12 21 36.2 -1.4
CUC Castrocucco 12.20 293 Pn 12 21 37.1 -0.8
BUR08 Bucovina Ar. S 12.21 343 Pn 12 21 39.2 +1.2
KBZ Khabaz 12.22 47 P Pn 12 21 38.0 -0.1
comp=Z,19nm,1.0s,baz=259,slow=8.0,SNR=17
KBZ ScP **ScP 12 30 44.0 -0.8**
comp=Z,2.0nm,0.8s,baz=42,slow=7.6,SNR=4.2
KBZ Khabaz 12.22 47 *i* P Pn 12 21 39.3 +1.2
KIV Kislovodsk 12.23 46 ⇑P Pn 12 21 40.2 +1.9
KIV Kislovodsk 12.23 46 Pn 12 21 36.5 -1.8
KIV Kislovodsk 12.23 46 *e*P Pn 12 21 39.2 +0.9
KIV pmax pmax
comp=Z,44nm,1.1s
ZEI Tsey 12.36 53 *e*P Pn 12 21 41.1 +0.9
ZEI pmax pmax
comp=Z,19nm,1.0s
NCK Nalchik 12.52 50 *i* P Pn 12 21 44.5 +2.3
NGMR NGMR 12.62 172 P Pn 12 21 43.6 -0.1
baz=171
KASR Kasr 12.62 169 P Pn 12 21 43.7 0.0
baz=168
AWKL West Kalabsha 12.72 172 P Pn 12 21 45.2 +0.2
baz=170
ASHG Umm Shaghir 12.80 175 P Pn 12 21 45.7 -0.5
baz=174
VAE Valguarnera 12.95 281 S Sn 12 24 04.1 -6.5
comp=Z,33nm,0.4s,baz=262,slow=7.7,SNR=6.1
RAFF Raffo Rosso 12.99 280 Pn 12 21 48.2 -0.4
MABD Mabed 13.15 172 P Pn 12 21 51.0 0.0
baz=171
HMSM Jabal Masmas 13.20 174 P Pn 12 21 50.9 -0.7
baz=173
KIEV Kiev 14.65 357 P Pn 12 22 12.0 +1.3
AKASG Malin Array Be 14.65 357 P Pn 12 22 09.2 -1.6
comp=Z,1.3nm,0.5s,baz=171,slow=9.7,SNR=9.8
AKASG S **Sn 12 24 55.1 +3.4**
comp=Z,12nm,0.9s,baz=180,slow=26,SNR=12
AKASG LR LR 12 28 15.8
comp=Z,209nm,21.7s,baz=188,slow=39
AKASG ScP **ScP 12 30 48.8 +0.3**
comp=Z,1.3nm,0.8s,baz=120,slow=0.5,SNR=4.3
MPLH Magyarpolny 14.69 323 P Pn 12 22 11.4 +0.1
VYHS Vyhne 15.08 329 *e*P P 12 22 26.6 +6.1
SOKA Soboth 15.67 317 Pn P 12 22 28.1 +1.0
comp=Z,4.5nm,0.8s
ARSA Arzberg 15.76 320 *e*Pn P 12 22 33.9 +5.8
comp=Z,5.2nm,0.9s
MAUC Maruska 16.18 329 *e*P P 12 22 47.7 +15
VSR Storozhevoye 16.38 20 *e*P P 12 22 33.7 -1.0
VSR pmax pmax
comp=Z,40nm,0.7s
OKC Ostrava-Krasne 16.42 331 *e*P P 12 22 40.4 +5.2
OKC Ostrava-Krasne 16.42 331 *e*P P 12 22 40.4 +5.2
MYKA Terra Mystica 16.42 315 *e*Pn P 12 22 49.9 +14
comp=Z,4.0nm,0.5s
VRAC Vranov 16.67 327 LR LR 12 28 44.5
comp=Z,84nm,21.5s,baz=134,slow=36
CLUD Cludinico 16.77 314 P P 12 22 39.6 +0.4
VORR Voronezh 16.80 19 *e*P P 12 22 38.7 -0.7
VORR pmax pmax
comp=Z,48nm,1.4s
KBA Koelnbreinsper 16.84 316 P P 12 22 41.6 +1.4
KBA pmax pmax
comp=Z,11nm,1.0s
KBA Koelnbreinsper 16.84 316 *e*Pn P 12 22 41.3 +1.2
comp=Z,7.1nm,0.9s
KEST Kesra 17.12 275 P P 12 22 44.4 +1.2
comp=Z,4.5nm,0.7s,baz=348,slow=1.5,SNR=4.2
KEST Kesra 17.12 275 P P 12 22 43.0 -0.2
ABTA Abfaltersbach 17.14 314 *e*Pn P 12 22 44.5 +1.2
comp=Z,2.1nm,0.5s
VRH Novokhopyorsk 17.15 25 *e*P P 12 22 42.8 -0.4
VRH pmax pmax
comp=Z,20nm,0.5s
KRLC Kraliky 17.16 329 *e*P P 12 22 48.6 +5.1
KRLC Kraliky 17.16 329 *e*P P 12 22 48.6 +5.1
CTI Castel Tesino 17.30 311 P P 12 22 45.4 +0.2
CTI Castel Tesino 17.30 311 P P 12 22 45.4 +0.2
CTI pmax pmax
comp=Z,19nm,1.4s
CKRC Cesky Krumlov 17.40 322 *e*P P 12 22 59.7 +14
DPC Dobruska-Polom 17.56 329 *e*P P 12 22 50.0 +2.1
DPC Dobruska-Polom 17.56 329 *e*P P 12 22 50.0 +2.1
GERES GERESS Array B 17.73 321 P P 12 22 50.3 +0.5
comp=Z,0.9nm,0.4s,baz=130,slow=12,SNR=8.4
GERES LR LR 12 31 00.5
comp=Z,102nm,18.1s,baz=70,slow=42
GERES GERESS Array B 17.73 321 P P 12 22 50.7 +0.9
GERES GERESS Array B 17.73 321 P P 12 22 50.7 +0.9
CHVC Chvalec 17.85 329 *e*P P 12 22 56.0 +4.9
WTTA Wattenberg 17.92 314 P P 12 22 53.9 +1.8
WTTA pmax pmax
comp=Z,15nm,1.0s
WTTA Wattenberg 17.92 314 *e*Pn P 12 22 54.4 +2.3
comp=Z,12nm,1.0s
KHC Kasperske Hory 17.97 322 P P 12 22 51.5 -1.0
KHC Kasperske Hory 17.97 322 *e*P Pn 12 22 54.8 +2.2
KHC Kasperske Hory 17.97 322 *e*P Pn 12 22 54.8 +2.2
RAYN Ar Rayn 18.05 130 P P 12 22 53.4 0.0
RAYN Ar Rayn 18.05 130 P P 12 22 53.4 0.0
RAYN pmax pmax
comp=Z,13nm,1.4s
SQTA Sankt Quirin 18.15 314 *e*Pn Pn 12 22 56.6 +1.8
comp=Z,5.6nm,0.7s
MOTA Moosalm 18.27 314 *e*Pn Pn 12 22 56.7 +0.3
comp=Z,6.3nm,0.6s
FETA Feichten 18.33 313 *e*Pn Pn 12 22 58.3 +1.2
comp=Z,5.0nm,0.8s
WET Wettzell 18.33 321 P Pn 12 22 58.4 +1.4
WET pmax pmax
comp=Z,6.0nm,1.3s
RETA Reutte 18.55 314 *e*Pn Pn 12 22 59.6 0.0
comp=Z,7.6nm,0.4s
DAVOX Davos/Dischmat 18.73 311 P Pn 12 23 02.1 +0.2
comp=Z,7.0nm,0.7s,baz=146,slow=16,SNR=9.5
DAVOX LR LR 12 31 45.0
comp=Z,178nm,21.7s,baz=90,slow=42
DAVA Damuels 18.97 313 *e*Pn Pn 12 23 04.7 0.0
comp=Z,16nm,0.6s
NACGM Naroch 19.00 353⇓*e*P P 12 23 02.9 -0.8
baz=172
OBN Obninsk 19.50 11 P P 12 23 08.3 -0.7
comp=Z,7.5nm,0.3s,baz=182,slow=22,SNR=4.0
OBN Obninsk 19.50 11 P P 12 23 07.8 -1.2
OBN Obninsk 19.50 11⇑*e*P P 12 23 08.1 -1.0
OBN S **S 12 26 45.0 -1.1**
OBN pmax pmax
comp=Z,15nm,0.4s
CLL Collm 19.71 326 P P 12 23 11.8 +0.4
CLL Collm 19.71 326 *e*P Pn 12 23 16.0 +2.7
CLL Collm 19.71 326 *e*P Pn 12 23 13.0 -0.3
CLL *e*pP **pP 12 23 26.0 +1.2**
MOX Moxa 19.92 323 P Pn 12 23 15.6 -0.2
MOX pmax pmax
comp=Z,18nm,1.0s
PABE Paberze 19.94 349 P P 12 23 13.8 0.0
PABE IAmb IAmb 12 23 15.2
comp=Z,34nm,0.8s
PABE Paberze 19.94 349 *e*P P 12 23 12.8 -1.0
SLE Schleitheim 20.02 312 P P 12 23 14.6 -0.3
SLE pmax pmax
comp=Z,14nm,0.7s
BNI Bardonecchia 20.12 304 P Pn 12 23 17.5 -0.9
BNI pmax pmax
comp=Z,7.0nm,1.0s
SENIN Lac Senin/Sane 20.17 308 P P 12 23 17.0 +0.3
MOS Moscow 20.27 12 *e*P P 12 23 15.1 -2.3
MOS *e*S **S 12 26 58.6 -2.7**
MOS pmax pmax
comp=Z,47nm,0.6s
BELG Belogornoye 20.34 31 P P 12 23 17.0 -1.2
comp=Z,35nm,0.5s,baz=181,slow=1.1,SNR=9.5
BELG LR LR 12 32 54.6
comp=Z,52nm,20.2s,baz=266,slow=42
comp=Z,35nm,0.5s
BELG Belogornoye 20.34 31 *i* P P 12 23 16.7 -1.5
BELG pmax pmax
comp=Z,7.0nm,0.7s
BFO Black Forest 20.39 314 P P 12 23 19.3 +0.5
BFO Black Forest 20.39 314 P P 12 23 19.3 +0.5
BFO pmax pmax
comp=Z,15nm,1.0s
PBUR Paburge 20.79 346 *e*P P 12 23 20.5 -2.5
ECH Echery 21.02 312 P P 12 23 25.3 -0.4
ECH Echery 21.02 312 P P 12 23 25.3 -0.4
ECH pmax pmax
comp=Z,12nm,0.8s
GEYT Alibeck 22.13 77 P P 12 23 37.4 -0.3
comp=Z,16nm,0.6s,baz=280,slow=8.7,SNR=22
comp=Z,16nm,0.6s
GYA0 ALIBECK ARRAY 22.13 77 P P 12 23 37.9 +0.2
GYA0B ALIBECK ARRAY 22.13 77 P P 12 23 36.8 -0.8
VSU Vasula 22.54 355 *i* P P 12 23 41.7 0.0
VSU pmax pmax
comp=Z,96nm,0.9s
VSU Vasula 22.54 355 *e*P P 12 23 40.6 -1.1
MTSE Matsula 23.07 351 *e*P P 12 23 45.8 -1.5
MEF Metsahovi 24.48 353 *e*P P 12 23 59.2 -1.0
AKTO Aktyubinsk 24.49 46 P P 12 23 59.6 -0.8
comp=Z,28nm,0.6s,baz=243,slow=8.2,SNR=95
comp=Z,28nm,0.6s
AB31 Akbulak array 25.18 49 *e*P P 12 24 05.8 -0.9
ABKAR Akbulak array 25.18 49 P P 12 24 06.0 -0.7
ABKAR IAmb IAmb 12 24 06.8
comp=Z,21nm,0.7s
VALR Valaam 25.31 0 *i* P P 12 24 07.0 -0.7
VALR pmax pmax
comp=Z,113nm,0.9s
TAM Tamanrasset 25.35 245 P P 12 24 11.9 +3.2
TAM IAmb IAmb 12 24 14.3
comp=Z,20nm,0.9s
TAM Tamanrasset 25.35 245 P P 12 24 11.9 +3.2
TAM pmax pmax
comp=Z,19nm,0.9s
KLMR Klimovskoe 25.47 10 *e*P P 12 24 06.1 -3.1
KLMR *e**PP **pP 12 24 21.8 -1.8**
KLMR pmax pmax
comp=Z,29nm,0.5s
KLMR Klimovskoe 25.47 10 *e*P P 12 24 06.2 -3.0
KLMR AMP 12 24 10.0
comp=Z,29nm,0.5s
KLMR *e*pP **pP 12 24 21.9 -1.7**
FINES FINESS Array B 25.55 355 P P 12 24 08.8 -1.1
comp=Z,24nm,0.5s,baz=158,slow=11,SNR=95
FINES LR LR 12 35 10.1
comp=Z,110nm,19.7s,baz=200,slow=39
comp=Z,24nm,0.5s
FINES FINESS Array B 25.55 355 P P 12 24 08.6 -1.3
FIA1 FINESS Array S 25.55 355 P P 12 24 08.9 -1.0
KIRV Kirov 25.75 23 P P 12 24 09.6 -2.1
comp=Z,56nm,0.5s,baz=212,slow=3.1,SNR=12
KIRV LR LR 12 35 24.3
comp=Z,55nm,18.8s,baz=205,slow=39
comp=Z,56nm,0.5s
HRA Herat 25.95 84 P P 12 24 13.3 -0.9
HFS Hagfors 26.40 341 P P 12 24 17.3 -0.3
comp=Z,4.8nm,0.8s,baz=153,slow=10.0,SNR=5.8
HFS LR LR 12 34 55.5
comp=Z,84nm,21.7s,baz=148,slow=37
comp=Z,4.8nm,0.8s
ESDC Sonseca Array 27.32 288 P P 12 24 26.2 0.0
comp=Z,3.5nm,0.7s,baz=80,slow=9.1,SNR=18
ESDC LR LR 12 35 27.2
comp=Z,81nm,19.0s,baz=94,slow=36
comp=Z,3.5nm,0.7s
PRGR Permogore 27.32 16 *e*P P 12 24 23.1 -2.7
PRGR *e*S **S 12 28 54.4 -6.6**
PRGR pmax pmax
comp=Z,6.0nm,0.4s
WSAR Wadi Sarin 27.50 110 LR LR 12 37 20.0
comp=Z,51nm,21.4s,baz=336,slow=40
ARU Arti 27.81 34 P P 12 24 29.5 -0.9
comp=Z,12nm,0.4s,baz=227,slow=11,SNR=13
ARU LR LR 12 36 20.6
comp=Z,60nm,21.7s,baz=256,slow=38
comp=Z,12nm,0.4s
ARU Arti 27.81 34 P P 12 24 28.8 -1.5
ARU IAmb IAmb 12 24 29.9
comp=Z,10nm,0.6s
ARU Arti 27.81 34*d* *i*P P 12 24 29.4 -0.9
ARU *PP **pP 12 24 43.3 -1.2**
ARU 12 25 16.0
ARU S **S 12 29 09.6 +0.6**
ARU SS **SnSn 12 30 28.5 +1.7**
ARU pmax pmax
comp=Z,9.0nm,0.6s
NB2 NORSAR Subarra 27.83 340 P P 12 24 32.4 +1.9
comp=Z,4.4nm,0.8s,baz=144,slow=10
NB2 NORSAR Subarra 27.83 340 P P 12 24 32.4 +1.9
baz=144,slow=10
NOA NORSAR Array B 27.83 340 LR LR 12 37 27.4
comp=Z,83nm,18.9s,baz=150,slow=40
MDT Midelt 29.01 274 P P 12 24 43.2 +1.8
comp=Z,3.0nm,1.0s,baz=90,slow=10,SNR=4.9
MDT LR LR 12 37 24.3
comp=Z,58nm,19.8s,baz=124,slow=38
comp=Z,3.0nm,1.0s
EKA Eskdalemuir Ar 29.94 321 P P 12 24 50.4 +1.1
comp=Z,0.7nm,0.6s,baz=114,slow=10.0,SNR=3.5
EKA LR LR 12 37 59.2
comp=Z,119nm,19.8s,baz=119,slow=38
comp=Z,0.7nm,0.6s
CHGR Chuyangaron 30.71 73 P P 12 24 57.4 +1.0
CHGR Chuyangaron 30.71 73 P P 12 24 57.4 +1.0
CHGR pmax pmax
comp=Z,67nm,0.7s
KK31 Karatay Array 31.42 65 P P 12 25 02.6 +0.2
KK31 IAmb IAmb 12 25 04.1
comp=Z,8.8nm,0.7s
KK31 Karatay Array 31.42 65 *i* P P 12 25 02.1 -0.4
KKAR Karatay Array 31.42 65 P P 12 25 02.8 +0.3
KKAR Karatay Array 31.42 65 P P 12 25 02.9 +0.4
KKAR IAmb IAmb 12 25 04.1
comp=Z,8.8nm,0.7s
KKAR Karatay Array 31.42 65 P P 12 25 02.9 +0.4
KKAR pmax pmax
comp=Z,9.0nm,0.7s
GAR Garm 31.56 73 P P 12 25 05.1 +1.2
APA Apatity 31.59 2⇓*i* P P 12 25 01.9 -1.7
APA pmax pmax
comp=Z,12nm,0.8s
LVZ Lovozero 31.96 3 P P 12 25 06.1 -0.9
LVZ IAmb IAmb 12 25 06.5
comp=Z,16nm,0.9s
LVZ Lovozero 31.96 3 *i* P P 12 25 05.2 -1.8
FAUS Fauske 32.54 349 *e*P P 12 25 12.8 +0.8
BRVK Borovoye 32.54 46 P P 12 25 12.5 +0.3
BRVK IAmb IAmb 12 25 12.7
comp=Z,10nm,0.7s
BRVK Borovoye 32.54 46*ce*P P 12 25 11.6 -0.6
BRVK pmax pmax
comp=Z,23nm,1.7s
BVA0 Borovoye Array 32.60 46 *i* P P 12 25 11.8 -0.9
BVAR Borovoye Array 32.60 46 LR LR 12 41 34.9
comp=Z,56nm,20.0s,baz=271,slow=42
DRK Karamyk 32.64 71 IAmb IAmb 12 25 14.8
comp=Z,9.5nm,0.7s
LODK Lodwar 32.80 171 P P 12 25 17.5 +2.6
OTUK Ortayu 32.94 55 P P 12 25 14.9 -0.8
STEI Steigen 33.05 350 *e*P P 12 25 17.4 +1.0
KTK1 Kautokeino 33.24 355 *e*P P 12 25 16.9 -1.1
KTK1 IAmb IAmb 12 25 17.9
comp=Z,16nm,1.2s
ARA0 ARCESS Array S 33.63 357 *e*P P 12 25 20.5 -1.0
ARA0 IAmb IAmb 12 25 21.4
comp=Z,17nm,0.9s
ARCES ARCESS Array B 33.63 357 P P 12 25 20.3 -1.2
comp=Z,7.8nm,0.5s,baz=168,slow=8.8,SNR=87
ARCES LR LR 12 38 27.4
comp=Z,75nm,21.9s,baz=134,slow=35
comp=Z,7.8nm,0.5s
ARCES ARCESS Array B 33.63 357 P P 12 25 20.2 -1.3
ARCES IAmb IAmb 12 25 21.2
comp=Z,14nm,0.9s
JETT Jettan, Norway 33.99 354 *e*P P 12 25 23.9 -0.7
AAK Ala-Archa 34.36 65 LR LR 12 41 45.3
comp=Z,120nm,18.9s,baz=290,slow=40
AAK Ala-Archa 34.36 65 P P 12 25 28.7 +0.3
AAK IAmb IAmb 12 25 30.2
comp=Z,6.5nm,0.6s
AAK Ala-Archa 34.36 65*ce*P P 12 25 28.4 0.0
AAK pmax pmax
comp=Z,6.0nm,0.7s
TOA0 Torodi Ar. Sit 34.49 236 P P 12 25 30.6 +1.2
TOA0 IAmb IAmb 12 25 32.2
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 34.49 236 P P 12 25 31.1 +1.7
comp=Z,15nm,0.8s,baz=31,slow=9.1,SNR=68
TORD PcP **PcP 12 28 04.6 +1.1**
comp=Z,0.6nm,0.4s,baz=40,slow=3.1,SNR=6.9
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 34.49 236 P P 12 25 30.7 +1.2
NIL Nilore 34.99 81 P P 12 25 33.4 -0.3
NIL Nilore 34.99 81 P P 12 25 33.4 -0.3
NIL pmax pmax
comp=Z,25nm,1.2s
NRN Naryn 35.59 67 IAmb IAmb 12 25 41.1
comp=Z,8.3nm,0.9s
KSH Kashi 35.83 70 P P 12 25 39.9 -1.1
KSH pmax pmax
comp=Z,10.0nm,0.9s
KURK Kurchatov 37.24 51 P P 12 25 51.7 -1.0
KURK Kurchatov 37.24 51*ce*P P 12 25 51.9 -0.7
KURK pmax pmax
comp=Z,14nm,0.8s
PDGK Podgornoye 37.95 64 P P 12 25 58.1 -0.9
MAKZ Makanchi 39.43 58 P P 12 26 10.4 -0.8
MAKZ IAmb IAmb 12 26 10.9
comp=Z,5.9nm,0.5s
MAKZ Makanchi 39.43 58 P P 12 26 10.4 -0.8
MAKZ pmax pmax
comp=Z,6.0nm,0.5s
MK31 Makanchi Array 39.65 58 P P 12 26 12.4 -0.5
MK31 IAmb IAmb 12 26 13.0
comp=Z,6.2nm,0.8s
MK31 Makanchi Array 39.65 58 *i* P P 12 26 12.0 -1.0
MK31 pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 39.65 58 P P 12 26 12.3 -0.7
comp=Z,6.8nm,0.6s,baz=269,slow=7.9,SNR=73
MKAR ScP **ScP 12 32 01.6 -1.0**
comp=Z,0.8nm,0.6s,baz=274,slow=3.3,SNR=7.5
MKAR LR LR 12 44 01.5
comp=Z,78nm,19.2s,baz=298,slow=38
comp=Z,6.8nm,0.6s
MKAR Makanchi Array 39.65 58 P P 12 26 12.4 -0.5
MKAR Makanchi Array 39.65 58 P P 12 26 12.4 -0.5
JMIC Jan Mayen 40.51 341 LR LR 12 45 38.6
comp=Z,27nm,20.9s,baz=178,slow=40
HOPEN Hopen 40.61 358 *e*P P 12 26 19.9 -0.5
ZAA0 Zalesovo Array 41.24 47 P P 12 26 24.8 -1.2
ZALV Zalesovo Beam 41.24 47 P P 12 26 24.8 -1.2
comp=Z,15nm,0.3s,baz=262,slow=9.0,SNR=80
ZALV ScP **ScP 12 32 07.3 -1.3**
comp=Z,0.5nm,0.4s,baz=242,slow=6.2,SNR=4.1
ZALV S **S 12 32 32.5 -2.9**
comp=Z,1.0nm,0.7s,baz=245,slow=16,SNR=3.9
ZALV LR LR 12 44 54.4
comp=Z,55nm,18.1s,baz=297,slow=38
comp=Z,15nm,0.3s
ZALV Zalesovo Beam 41.24 47 P P 12 26 24.7 -1.3
SPB2 Spitsbergen Ar 42.63 356 P P 12 26 37.2 +0.1
SPB2 IAmb IAmb 12 26 37.2
comp=Z,13nm,0.7s
SPA0 Spitsbergen Ar 42.64 356 *e*P P 12 26 36.6 -0.5
SPA0 IAmb IAmb 12 26 40.1
comp=Z,14nm,1.0s
SPITS Spitsbergen Ar 42.64 356 P P 12 26 36.8 -0.3
SPITS pmax pmax
comp=Z,11nm,0.7s
DGZ Jazzator, Alta 42.90 53 *i* P P 12 26 39.0 -0.7
DGZ pmax pmax
comp=Z,4.0nm,0.5s
DBIC Dimbokro 43.59 236 P P 12 26 46.8 +1.3
comp=Z,8.6nm,0.4s,baz=270,slow=24,SNR=24
DBIC LR LR 12 46 10.2

comp=Z,54nm,18.9s,baz=270,slow=38
comp=Z,8.6nm,0.4s
DBIC Dimbokro 43.59 236 P **P 12 26 47.0 +1.5**
DBIC IAmb IAmb 12 26 47.6
comp=Z,25nm,1.2s
DBIC Dimbokro 43.59 236 P **P 12 26 47.0 +1.5**
DBIC pmax pmax
comp=Z,25nm,1.2s
KBS Kingsbay 43.64 355 P **P 12 26 45.0 -0.2**
KBS Kingsbay 43.64 355 P **P 12 26 45.0 -0.2**
KBS pmax pmax
comp=Z,51nm,1.4s
KBS Kingsbay 43.64 355 *eP* **P 12 26 44.9 -0.2**
KBS IAmb IAmb 12 26 45.7
comp=Z,31nm,1.2s
TIC Toumodi 43.72 237⇓ *eP*KP1 **P 12 26 47.7 +1.1**
comp=Z,19nm,0.5s
KIC Kosan Boka 43.74 236 *eP*KP1 **P 12 26 47.3 +0.6**
comp=Z,35nm,0.4s
WMQ Urumqi 43.79 62 *eP* **P 12 26 45.9 -1.0**
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ LR LR
comp=Z,91nm,22.1s
LIC Lamto 44.04 236 *eP*KP1 **P 12 26 48.3 -0.7**
comp=Z,29nm,0.6s
NRIK Noril'sk 45.23 25 P **P 12 26 56.9 -1.0**
comp=Z,6.1nm,0.4s,baz=235,slow=4.1,SNR=10.0
comp=Z,6.1nm,0.4s
NRIK Noril'sk 45.23 25 P **P 12 26 58.2 +0.4**
NRIK IAmb IAmb 12 26 58.6
comp=Z,9.2nm,0.5s
NRIK Noril'sk 45.23 25 *ceP* **P 12 26 57.9 0.0**
NRIK pmax pmax
comp=Z,24nm,1.6s
DANN Dangsing 45.27 84 *eP* **P 12 26 59.8 +0.6**
comp=Z,69nm,0.4s
GKN Gorkha 46.12 84 *eP* **P 12 27 05.8 +0.1**
DMN Daman 46.66 84 *eP* **P 12 27 10.3 +0.2**
comp=Z,34nm,0.6s
PKIN Phulchoki 46.91 84 *eP* **P 12 27 12.6 +0.6**
comp=Z,17nm,0.5s
PKI Pulchoki 46.92 84 *eP* **P 12 27 12.7 +0.5**
GUN Gumba 47.16 84 *eP* **P 12 27 14.5 +0.4**
JIRN Jiri 47.51 84 *eP* **P 12 27 16.6 -0.2**
comp=Z,24nm,0.7s
RAMN Ramite 48.14 84 *eP* **P 12 27 21.1 -0.5**
comp=Z,31nm,0.9s
TAPN Taplejung 48.87 83 *eP* **P 12 27 26.3 -0.9**
GOMU GeErMu 51.07 70 P **P 12 27 44.8 +0.9**
GOMU pmax pmax
comp=Z,4.0nm,0.8s
GOMU pmax pmax
comp=Z,220nm,6.4s
MOY Mondy 51.18 49 *eP* **P 12 27 44.6 +0.4**
MOY pmax pmax
comp=Z,16nm,1.7s
ZAK Zakamensk 52.87 50 *eP* **P 12 27 56.4 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
GTA Gaotai 53.70 64 *eP* **P 12 28 02.8 -0.2**
GTA pP pP 12 28 14.5 -3.2
GTA pmax pmax
comp=Z,8.0nm,0.7s
SFJD Kangerlussuaq 53.96 331 LR LR 12 51 45.1
comp=Z,57nm,20.0s,baz=132,slow=37
SONM Songino Array 55.53 52 P **P 12 28 15.4 -0.8**
comp=Z,2.5nm,0.6s,baz=289,slow=7.4,SNR=6.6
SONM LR LR 12 54 44.6
comp=Z,110nm,18.8s,baz=238,slow=39
comp=Z,2.5nm,0.6s
SONM Songino Array 55.53 52 P **P 12 28 16.4 +0.2**
SONM IAmb IAmb 12 28 40.0
comp=Z,3.2nm,0.8s
SONM Songino Array 55.53 52 P **P 12 28 16.4 +0.2**
SONM pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 55.95 52 P **P 12 28 18.8 -0.4**
ULN IAmb IAmb 12 28 38.6
comp=Z,4.7nm,1.1s
ULN Ulaanbaatar 55.95 52 *ceP* **P 12 28 18.3 -0.9**
ULN pmax pmax
comp=Z,20nm,2.5s
ULN Ulaanbaatar 55.95 52 P **P 12 28 18.4 -0.8**
TSUM Tsumeb 56.31 195 LR LR 12 56 52.1
comp=Z,53nm,18.4s,baz=327,slow=40
BOD Bodaibo 57.04 39 *eP* **P 12 28 25.0 -1.6**
BOD pmax pmax
comp=Z,18nm,0.9s
LZH Lanzhou 57.89 66 *eP* **P 12 28 30.6 -2.5**
LZH pP pP 12 28 42.8 -5.2
LZH sP pwP 12 28 50.0 -1.5
LZH pmax pmax
comp=Z,24nm,1.4s
TIXI Tiksi 58.77 21 P **P 12 28 37.8 -0.5**
TIXI Tiksi 58.77 21⇑ *eP* **P 12 28 37.9 -0.5**
TIXI pmax pmax
comp=Z,14nm,1.7s
EUNU Eureka 59.10 350 P **P 12 28 40.5 -0.2**
EUNU IAmb IAmb 12 28 49.6
comp=Z,13nm,1.4s
PZH PanZhiHua 60.45 77 P **P 12 28 52.3 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.7s
LBTB Lobatse 60.93 185 P **P 12 28 53.3 -0.6**
LBTB IAmb IAmb 12 28 58.4
comp=Z,12nm,1.1s
LBTB Lobatse 60.93 185 P **P 12 28 53.3 -0.6**
LBTB pmax pmax
comp=Z,12nm,1.1s
HHC Hu-ho-hao-te 61.51 59 *eP* **P 12 28 57.9 +0.1**
HHC pmax pmax
comp=Z,55nm,0.9s
HHC pmax pmax
comp=Z,310nm,5.8s
FRB Frobisher Bay 62.06 330 LR LR 12 58 24.6
comp=Z,35nm,19.2s,baz=40,slow=38
CMAR Chiang Mai Arr 62.19 87 P **P 12 29 02.8 +0.2**
comp=Z,2.8nm,0.7s,baz=298,slow=8.7,SNR=12
comp=Z,2.8nm,0.7s
DRLN Deer Lake 62.51 312 P **P 12 29 04.4 +0.2**
YAK Yakutsk 62.88 32 LR LR 13 00 05.3
comp=Z,43nm,18.7s,baz=269,slow=40
BOSA Boshof 64.53 185 P **P 12 29 20.9 +3.1**
comp=Z,7.6nm,0.7s,baz=3.7,slow=6.5,SNR=12
comp=Z,7.6nm,0.7s
KLR Kul'dur 70.20 43 LR LR 13 03 16.8
comp=Z,70nm,18.3s,baz=253,slow=38
NJ2 Nanjing 70.80 64 *eP* **P 12 29 58.0 +0.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
SEY Seymchan 71.01 24 *ceP* **P 12 29 57.0 -1.1**
SEY pmax pmax
comp=Z,10.0nm,0.9s
BILL Bilibino 71.06 16⇓ *eP* **P 12 29 56.9 -1.4**
BILL 12 30 18.0
BILL *SP **sP** **12 30 25.0 +4.1**
BILL pmax pmax
comp=Z,13nm,1.2s
BILL MLR MLR
comp=Z,32nm,17.0s
MA2 Magadan 72.75 27 LR LR 13 07 26.7
comp=Z,64nm,18.3s,baz=228,slow=40
USRK Ussuriysk Ar. 73.09 47 P **P 12 30 09.9 -1.0**
comp=Z,2.1nm,0.5s,baz=280,slow=5.9,SNR=4.8
comp=Z,2.1nm,0.5s
KSRS Korea Array 74.26 55 P **P 12 30 17.1 -0.7**
comp=Z,2.1nm,0.7s,baz=298,slow=4.7,SNR=9.1
KSRS LR LR 13 07 26.7
comp=Z,20nm,20.6s,baz=200,slow=39
comp=Z,2.1nm,0.7s
RCBR Riachuelo 74.69 251 LR LR 13 03 15.1
comp=Z,53nm,18.9s,baz=148,slow=36
INK Inuvik 75.25 354 P **P 12 30 23.9 +1.0**
INK Inuvik 75.25 354 P **P 12 30 23.9 +1.0**
INK pmax pmax
comp=Z,5.0nm,1.3s
BMAR Burnt Mountain 76.75 358 P **P 12 30 32.9 +1.2**
SADO Sadowa 77.42 317 LR LR 13 05 03.0
comp=Z,27nm,19.3s,baz=24,slow=36
YKA Yellowknife Ar 77.83 344 P **P 12 30 37.2 -0.5**
comp=Z,1.5nm,0.8s,baz=26,slow=4.9,SNR=2.3
comp=Z,1.5nm,0.8s
IMAR Indian Mountai 78.22 2 P **P 12 30 40.6 +0.9**

H21K Melozitna Rive 78.57 1 IAmb IAmb 12 30 43.8
comp=Z,3.4nm,0.7s
EGAK Eagle 79.27 356 P **P 12 30 46.3 +0.8**
EGAK IAmb IAmb 12 30 56.6
comp=Z,6.5nm,1.2s
MDM Murphy Dome 79.30 359 P **P 12 30 46.7 +1.0**
MDM IAmb IAmb 12 30 47.8
comp=Z,4.1nm,0.8s
ILAR Eielson Array 79.47 359 P **P 12 30 46.6 -0.1**
comp=Z,0.6nm,0.7s,baz=341,slow=4.0,SNR=9.0
comp=Z,0.6nm,0.7s
J20K Nowinta River 80.02 2 P **P 12 30 50.7 +1.1**
J20K IAmb IAmb 12 30 52.0
comp=Z,9.4nm,0.9s
K27K Chicken 80.06 357 P **P 12 30 50.5 +0.6**
K27K IAmb IAmb 12 31 08.9
comp=Z,11nm,1.4s
PETK Petropavlovsk- 80.09 29 LR LR 13 11 54.3
comp=Z,36nm,18.7s,baz=282,slow=40
CAST Castle Rocks 80.83 1 P **P 12 30 54.8 +0.7**
CAST IAmb IAmb 12 30 56.3
comp=Z,8.2nm,0.9s
DLBC Dease Lake 84.44 350 LR LR 13 11 00.6
comp=Z,39nm,18.4s,baz=26,slow=37
SHEM Shemya Is, Ala 86.07 21 LR LR 13 12 43.4
comp=Z,16nm,21.4s,baz=174,slow=38
BDFB Brasilia 90.07 251 P **P 12 31 43.2 +2.4**
comp=Z,4.1nm,0.6s,baz=99,slow=3.5,SNR=5.2
comp=Z,4.1nm,0.6s
NEW Newport 91.20 339 LR LR 13 15 19.2
comp=Z,32nm,19.8s,baz=36,slow=37
PDAR Pinedale Array 93.47 332 LR LR 13 15 53.2
comp=Z,47nm,19.4s,baz=64,slow=37
ELK Elko 97.32 334 LR LR 13 21 24.0
comp=Z,30nm,19.2s,baz=28,slow=39
ANMO Albuquerque 98.74 325 LR LR 13 18 14.2
comp=Z,24nm,18.4s,baz=83,slow=36
WRA Warramunga Arr 112.43 99 PKiKP **PKiKP 12 37 16.3 -0.5**
comp=Z,0.2nm,0.4s,baz=319,slow=1.4,SNR=12
WRA SKP 12 40 47.3
comp=Z,0.2nm,0.5s,baz=318,slow=1.9,SNR=5.1
ASAR Alice Springs 113.99 103 PKiKP **PKiKP 12 37 19.4 -0.3**
comp=Z,0.4nm,0.3s,baz=309,slow=1.6,SNR=26
ASAR SKP 12 40 49.9
comp=Z,0.3nm,0.5s,baz=310,slow=1.6,SNR=8.7
PLCA Paso Flores 119.91 239 PKP **PKiKP 12 37 31.3 +0.6**
comp=Z,1.2nm,1.0s,baz=19,slow=4.5,SNR=4.1
STKA Stephens Creek 123.81 107 PKP **PKPdf 12 37 37.9 -0.4**
comp=Z,1.6nm,0.8s,baz=292,slow=4.1,SNR=3.9

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*MDD **19** 12:46:02.1±0.6, 34.°59N×8.°77W, h30km, Mb4.2/16, M_mb3.5/12, Error ellipse: s-maj=5.5km s-min=3.3km az=63.0*
*CNRM **19** 12:46:02.0, 34.°65N×8.°55W, h66km, ml3.0*
*INMG **19** 12:46:02.8±1.1, 34.°54N×8.°76W, h31km, ML2.7, Error ellipse: s-maj=4.6km s-min=1.9km az=71.0*
ISC 19 12:46:01.3±1.5, 34.°61N±0.°05×8.°63W±0.°06, h35km, n50, σ1§62/85, 15C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RSA	**Sarsar**	**2.33**	**83**	P		**Pn**	**12 46 38.8**	**+1.7**
RSA				S		**Sn**	**12 47 05.8**	**+1.2**
PFVI	**Vila Bisbo**	**2.52**	**356**	*e*Pn		**Pn**	**12 46 40.5**	**+0.8**
PFVI				*e*Sn		**Sn**	**12 47 08.5**	**-0.7**
PFVI				A		A	12 47 15.3	
16nm,0.1s								
MORF	**Marmelete**	**2.69**	**360**	*e*P		**Pn**	**12 46 43.5**	**+1.4**
MORF				*e*S		**Sn**	**12 47 12.5**	**-0.8**
MORF				IAML			12 47 16.4	
comp=E,49nm,0.3s								
MORF	**Marmelete**	**2.69**	**360**	*e*Pn		**Pn**	**12 46 43.5**	**+1.4**
MORF				*e*Sn		**Sn**	**12 47 13.6**	**+0.2**
MORF				A		A	12 47 17.0	
comp=E,35nm,0.2s								
PVAQ	**Vaqueiros**	**2.88**	**15**	*e*Pn		**Pn**	**12 46 46.3**	**+1.6**
PVAQ				*e*Sn		**Sn**	**12 47 18.6**	**+0.5**
PVAQ				A		A	12 47 19.6	
comp=E,22nm,0.2s								
PVAQ	**Vaqueiros**	**2.88**	**15**	P		**Pn**	**12 46 46.3**	**+1.6**
PVAQ				S		**Sn**	**12 47 16.8**	**-1.3**
PTEO	**Sao Teotonio**	**2.93**	**359**	*e*Pn		**Pn**	**12 46 46.3**	**+1.0**
PTEO				*e*Sn		**Sn**	**12 47 18.7**	**-0.5**
PTEO				A		A	12 47 23.8	
comp=E,12nm,0.2s								
ECEU	**Ceuta**	**2.95**	**63**	P		**Pn**	**12 46 49.2**	**+3.5**
ECEU				⇑*i*Vmb_V			12 46 49.4	
comp=E,567nm,SNR=0.5								
PCVE	**Castro Verde**	**3.05**	**9**	*e*Pn		**Pn**	**12 46 48.5**	**+1.5**
PCVE				*e*Sn		**Sn**	**12 47 22.5**	**+0.2**
PCVE				A		A	12 47 24.6	
comp=E,12nm,0.4s								
EGRO	**El Granado**	**3.06**	**17**	P		**Pn**	**12 46 48.8**	**+1.7**
EGRO				⇑*i*Vmb_V			12 46 49.5	
comp=E,359nm,SNR=3.3								
EGRO				S		**Sn**	**12 47 22.5**	**0.0**
ESPR	**Espera**	**3.19**	**44**	P		**Pn**	**12 46 51.2**	**+2.3**
ESPR				⇑*i*Vmb_V			12 46 52.0	
comp=E,494nm,SNR=5.4								
ESPR				S		**Sn**	**12 47 26.9**	**+1.2**
MESJ	**Messejana**	**3.24**	**6**	*e*P		**Pn**	**12 46 51.0**	**+1.4**
MESJ				*e*S		**Sn**	**12 47 26.3**	**-0.6**
MESJ				IAML			12 47 29.5	
comp=N,19nm,0.2s								
MESJ	**Messejana**	**3.24**	**6**	*e*Pn		**Pn**	**12 46 51.0**	**+1.4**
MESJ				*e*Sn		**Sn**	**12 47 26.9**	**0.0**
MESJ				A		A	12 47 27.8	
comp=N,16nm,0.3s								
LCRM	**LCR**	**3.26**	**105**	P		**Pn**	**12 46 50.4**	**+0.3**
LCRM				S		**Sn**	**12 47 25.6**	**-2.1**
OUK	**Oukaimeden**	**3.46**	**169**	P		**Pn**	**12 46 53.2**	**+0.2**
OUK				S		**Sn**	**12 47 34.2**	**+1.3**
PBEJ	**Beja**	**3.46**	**10**	*e*Pn		**Pn**	**12 46 54.9**	**+2.2**
PBEJ				*e*Sn		**Sn**	**12 47 32.6**	**+0.2**
PBEJ				A		A	12 47 35.3	
comp=N,7.4nm,0.4s								
PNCL	**Nicolau / Gran**	**3.49**	**1**	*e*Pn		**Pn**	**12 46 53.9**	**+0.8**
PNCL				*e*Sn		**Sn**	**12 47 32.5**	**-0.7**
PNCL				A		A	12 47 35.7	
comp=N,8.7nm,0.3s								
EMIN	**Mina Concepcio**	**3.52**	**26**	P		**Pn**	**12 46 55.0**	**+1.4**
EMIN				⇑*i*Vmb_V			12 46 55.7	
comp=N,164nm,SNR=2.4								
EMIN				S		**Sn**	**12 47 33.7**	**-0.2**
MD31	**MD31**	**3.67**	**117**	P		**Pn**	**12 46 56.6**	**+1.0**
MD31				S		**Sn**	**12 47 37.0**	**-0.6**
EMIJ	**Mijas**	**3.70**	**57**	P		**Pn**	**12 46 58.0**	**+2.1**
EMIJ				⇑*i*Vmb_V			12 46 58.0	
comp=N,188nm,SNR=3.1								
EMIJ				S		**Sn**	**12 47 38.7**	**+0.4**
PBAR	**Barrancos**	**3.78**	**19**	*e*Pn		**Pn**	**12 46 58.6**	**+1.6**
PBAR				*e*Sn		**Sn**	**12 47 40.9**	**+0.7**
PBAR				A		A	12 47 44.5	
comp=N,5.9nm,0.3s								
MDT	**Midelt**	**3.80**	**117**	P		**Pn**	**12 46 58.7**	**+1.2**
MDT				S		**Sn**	**12 47 40.6**	**-0.4**
PALE	**Palemas**	**3.90**	**80**	P		**Pn**	**12 46 59.0**	**+0.3**
PALE				S		**Sn**	**12 47 40.9**	**-2.4**
EVO	**Evora**	**3.94**	**7**	*e*Sn		**Sn**	**12 47 43.7**	**-0.6**
EVO				A		A	12 47 46.5	
comp=N,12nm,0.4s								
ECAB	**El Cabril**	**4.32**	**36**	P		**Pn**	**12 47 05.7**	**+1.2**
ECAB				⇑*i*Vmb_V			12 47 07.5	
comp=N,286nm,SNR=5.6								
ECAB				S		**Sn**	**12 47 51.3**	**-2.3**
PESTR	**Estremoz**	**4.33**	**11**	*e*Pn		**Pn**	**12 47 06.5**	**+1.9**
PESTR				*e*Sn		**Sn**	**12 47 53.3**	**-0.5**
PESTR				A		A	12 47 55.6	
comp=N,2.7nm,0.4s								
PESTR	**Estremoz**	**4.33**	**11**	P		**Pn**	**12 47 05.1**	**+0.5**
PESTR				S		**Sn**	**12 47 52.7**	**-1.1**
EBAD	**Badajoz**	**4.33**	**17**	P		**Pn**	**12 47 03.0**	**-1.6**
EBAD				⇑*i*Vmb_V			12 47 07.1	
comp=N,198nm,SNR=2.3								
EBAD				S		**Sn**	**12 47 52.9**	**-1.0**
PMAFR	**Mafra**	**4.37**	**353**	*e*Pn		**Pn**	**12 47 05.9**	**+0.8**
PMAFR				*e*Sn		**Sn**	**12 47 52.8**	**-1.9**
PMAFR				A		A	12 47 56.8	
comp=N,30nm,0.3s								
EGOR	**Sierra Gorda,**	**4.43**	**55**	P		**Pn**	**12 47 08.7**	**+2.5**
EGOR				⇑*i*Vmb_V			12 47 13.5	
comp=N,48nm,SNR=1.3								
EGOR				S		**Sn**	**12 47 57.1**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELGU	**Los Guajares,**	**4.65**	**60**	P		**Pn**	**12 47 09.7**	**+0.6**
ELGU				⇑*i*Vmb_V			12 47 19.5	
comp=N,76nm,SNR=1.8								
ELGU				S		**Sn**	**12 48 01.7**	**-0.2**
EADA	**Adamuz**	**4.82**	**41**	P		**Pn**	**12 47 13.2**	**+1.8**
EADA				⇑*i*Vmb_V			12 47 14.7	
comp=N,294nm,SNR=4.9								
EADA				S		**Sn**	**12 48 04.6**	**-1.5**
PMRV	**Marv??o**	**4.91**	**11**	*e*Pn		**Pn**	**12 47 13.7**	**+1.2**
PMRV				*e*Sn		**Sn**	**12 48 07.0**	**-1.1**
PMRV				A		A	12 48 10.4	
comp=N,4.6nm,0.6s								
JBK	**JBK**	**5.01**	**91**	P		**Pn**	**12 47 13.5**	**-0.7**
JBK				S		**Sn**	**12 48 08.7**	**-2.4**
EBER	**Berja**	**5.19**	**62**	P		Pn	12 47 14.8	-1.8
PCBR	**Castelo Branco**	**5.30**	**10**	*e*Pn		**Pn**	**12 47 19.7**	**+1.8**
PCBR				*e*Sn		**Sn**	**12 48 16.3**	**-1.4**
PCBR				A		A	12 48 17.7	
comp=N,8.4nm,0.2s								
PCAS	**Casmilo, Conde**	**5.43**	**1**	*e*Sn		**Sn**	**12 48 19.3**	**-1.7**
PCAS				A		A	12 48 20.1	
comp=N,4.6nm,0.3s								
EQES	**Quesada**	**5.51**	**53**	⇑*i*Vmb_V			12 47 24.8	
comp=N,134nm,SNR=2.1								
EQES				S		**Sn**	**12 48 22.4**	**-0.6**
EPLA	**Plasencia**	**5.81**	**20**	P		**Pn**	**12 47 26.5**	**+1.6**
EPLA				⇑*i*Vmb_V			12 47 32.5	
comp=N,93nm,SNR=1.2								
EPLA				S		**Sn**	**12 48 28.1**	**-2.2**
MTE	**Manteigas**	**5.84**	**8**	*e*Sn		**Sn**	**12 48 29.4**	**-1.7**
MTE				A		A	12 48 30.7	
comp=N,4.3nm,0.3s								
PAB	**San Pablo**	**5.99**	**34**	P		**Pn**	**12 47 29.0**	**+1.5**
PAB				⇑*i*Vmb_V			12 47 38.1	
comp=N,83nm,SNR=1.7								
PAB				S		**Sn**	**12 48 32.0**	**-2.9**
PMPST	**Porto Santo, M**	**6.59**	**259**	*e*Sn		Sn	12 48 35.7	-14
PMPST				A		A	12 48 41.0	
comp=N,18nm,0.6s								
PMPS	**Porto Santo**	**6.60**	**259**	*e*Sn		Sn	12 48 37.1	-13
PMPS				A		A	12 48 41.6	
comp=N,10nm,0.2s								
MVO	**Moncorvo**	**6.66**	**10**	*e*Sn		**Sn**	**12 48 48.5**	**-2.9**
MVO				A		A	12 48 48.8	
comp=N,2.6nm,0.3s								
PVRL	**Vila Real**	**6.69**	**6**	*e*Pn		**Pn**	**12 47 37.8**	**+0.7**
PVRL				*e*Sn		**Sn**	**12 48 49.8**	**-2.2**
PVRL				A		A	12 48 51.5	
comp=N,7.0nm,0.2s								
POLO	**Lamas de Olo**	**6.78**	**5**	*e*Sn		**Sn**	**12 48 51.8**	**-2.6**
POLO				A		A	12 48 54.5	
comp=N,0.9nm,0.2s								
ETOB	**Tobarra**	**6.97**	**53**	P		**Pn**	**12 47 41.9**	**+1.0**
ETOB				⇑*i*Vmb_V			12 47 42.9	
comp=N,131nm,SNR=1.9								
ETOB				S		**Sn**	**12 48 55.2**	**-3.8**
GUD	**Guadarrama**	**6.99**	**29**	⇑*i*Vmb_V			12 47 42.4	
comp=N,58nm,SNR=1.3								
GUD				P		**Pn**	**12 47 42.4**	**+1.2**
GUD				S		**Sn**	**12 48 56.9**	**-2.6**
ELOB	**Lobios**	**7.26**	**3**	S		**Sn**	**12 49 02.8**	**-3.2**
PGAV	**Gavieira, Arco**	**7.34**	**2**	*e*Sn		**Sn**	**12 49 04.9**	**-3.4**

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*NEIC **19** 14:40:39.0±1.7, 36.°14N±0.°06×140.°20E±0.°02, h51km±4km, mb4.4/9, Error ellipse: s-maj=8.5km s-min=2.7km az=178.0*
*JMA **19** 14:40:39.2±0.1, 36.°1N±0.°3×140.°1E±0.°5, h49km, MD3.9/35, MV4.1/35, SW IBARAKI PREF*
JMA Felt II J1 at SW IBARAKI PREF .
*NIED **19** 14:40:39.2, 36.°14N×140.°08E, h49km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; M_{rr}4.43; $M_{\theta\theta}$-3.68; $M_{\phi\phi}$-0.75; $M_{r\theta}$3.80; $M_{\theta\phi}$-2.18; $M_{\phi r}$2.96; Fault plane solution: $M_0$6.69000×10^14 NP1: ϕ_s250.00000°, δ23.00000°, λ105.00000°. NP2: ϕ_s55.00000°, δ68.00000°, λ84.00000°.*
*IDC **19** 14:40:40.2±1.9, 36.°05N×140.°06E, h69km±18km, mb3.6/14, mbtmp3.9/16, MS3.1/1 Error ellipse: s-maj=23.9km s-min=9.3km az=63.0*
ISC 19 14:40:38.5±0.6, 36.°15N±0.°04×140.°14E±0.°05, h49km±5km, n77, σ1§13/74, mb3.9/19, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.09**	**30**			**Sn**	**14 40 46.9**	**+0.8**
JYT						**Sn**	**14 40 52.4**	**+0.8**
JYT	**Yasato**	**0.09**	**30**	P		**Pn**	**14 40 47.1**	**+1.0**
JYT	**Yasato**	**0.09**	**30**	P		**Pn**	**14 40 47.2**	**+1.0**
JYT				S		**Sn**	**14 40 52.6**	**+1.1**
JYT	**Yasato**	**0.09**	**30**	A		A	14 40 47.2	
comp=E,62nm,0.3s,comp=E,100nm,0.2s								
JHYU	**Hitachinakayam**	**0.41**	**62**	A		A	14 40 49.8	
comp=E,6.0nm,1.1s,comp=E,21nm,0.3s								
TOK	**Tokyo**	**0.55**	**214**	A		A	14 40 50.7	
comp=E,15nm,1.1s,comp=E,20nm,0.5s								
JHO	**Hitachi**	**0.58**	**37**	A		A	14 40 51.8	
comp=E,8.0nm,0.5s,comp=E,7.0nm,0.5s								
JAG	**Ashikaga**	**0.62**	**297**	⇓P		**Pn**	**14 40 51.4**	**+0.3**
JAG				⇓S		**Sn**	**14 40 59.8**	**-0.4**
JAG	**Ashikaga**	**0.62**	**297**	A		A	14 40 51.4	
comp=E,10.0nm,0.6s,comp=E,9.0nm,0.7s								
JSB	**Shiboa**	**0.84**	**348**	A		A	14 40 54.8	
comp=E,8.0nm,0.9s,comp=E,5.0nm,1.8s								
JSGW	**Sagamiharawaka**	**0.93**	**234**	A		A	14 40 55.6	
comp=E,2.0nm,7.9s,comp=E,3.0nm,1.0s								
JKT	**Katashina**	**0.95**	**311**	⇓P		**Pn**	**14 40 55.7**	**+0.1**
JKT				⇓S		**Sn**	**14 41 07.7**	**-0.3**
JRY	**Ryogami san**	**1.01**	**263**	⇓P		**Pn**	**14 40 56.5**	**+0.2**
JRY				⇓S		**Sn**	**14 41 08.6**	**-0.8**
JOD2	**Odawara 2**	**1.23**	**224**	P		**Pn**	**14 41 00.2**	**+1.0**
JOD2				S		**Sn**	**14 41 15.0**	**+0.2**
JHTM	**Izuhatsuma**	**1.50**	**218**	A		A	14 41 03.8	
comp=E,4.0nm,1.0s,comp=E,5.0nm,0.3s								
MJAR	**Matsushiro Arr**	**1.60**	**285**	P		**Pn**	**14 41 03.5**	**-0.9**
139nm,0.4s,baz=84,slow=9.2,SNR=585								
MJAR				S		**Sn**	**14 41 26.0**	**+2.0**
55nm,0.3s,baz=88,slow=3.9,SNR=4.0								
MAJO	**Matsushiro**	**1.61**	**285**			**Pn**	**14 41 04.2**	**-0.2**
MAJO	**Matsushiro**	**1.61**	**285**	P		**Pn**	**14 41 05.5**	**+1.0**
MJB9	**Matsu-Tunnel**	**1.61**	**285**	Pn		**Pn**	**14 41 05.2**	**+0.7**
JMM	**Marumori**	**1.79**	**17**			**Pn**	**14 41 07.9**	**+0.9**
JMM	**Marumori**	**1.79**	**17**	P		**Pn**	**14 41 08.4**	**+1.4**
JGF	**Kuroka**	**2.32**	**257**			**Pn**	**14 41 16.4**	**+2.1**
JGF	**Kuroka**	**2.32**	**257**	P		**Pn**	**14 41 16.9**	**+2.6**
JSD	**Sado**	**2.41**	**322**	Pn		**Pn**	**14 41 15.8**	**+0.4**
JSD	**Sado**	**2.41**	**322**	P		**Pn**	**14 41 15.9**	**+0.4**
INU	**Inuyama**	**2.66**	**253**	Pn		**Pn**	**14 41 20.5**	**+1.6**
INU	**Inuyama**	**2.66**	**253**	P		**Pn**	**14 41 21.4**	**+2.6**
JHJ	**Hachijo jima 2**	**3.03**	**186**	P		**Pn**	**14 41 24.4**	**+0.3**
133nm,0.3s,baz=320,slow=23,SNR=23								
JHJ				S		**Sn**	**14 41 58.7**	**-0.4**
72nm,0.3s,baz=52,slow=22,SNR=1.4								
JHJ2	**Mitsune**	**3.04**	**185**	Pn		**Pn**	**14 41 24.2**	**+0.2**
JHJ2	**Mitsune**	**3.04**	**185**	P		**Pn**	**14 41 24.5**	**+0.4**
JTM	**Tenmabayashi**	**4.69**	**9**	Pn		**Pn**	**14 41 48.5**	**+1.8**
JTM	**Tenmabayashi**	**4.69**	**9**	P		**Pn**	**14 41 49.2**	**+2.5**
JMN	**Monobe**	**5.68**	**247**	Pn		**Pn**	**14 42 01.1**	**+0.7**
JMN	**Monobe**	**5.68**	**247**	P		**Pn**	**14 42 02.7**	**+2.4**
JHS	**Saijyo**	**5.83**	**261**	Pn		**Pn**	**14 42 04.5**	**+2.1**
JHS	**Saijyo**	**5.83**	**261**	P		**Pn**	**14 42 04.5**	**+2.1**
ERM	**Erimo**	**6.31**	**21**	Pn		**Pn**	**14 42 08.5**	**-0.4**
ERM	**Erimo**	**6.31**	**21**	P		**Pn**	**14 42 08.8**	**-0.1**
22nm,0.8s								
JEM	**Erimo**	**6.31**	**21**	P		**Pn**	**14 42 09.4**	**+0.5**
8.4nm,0.7s								
JCJ	**Chichijima**	**9.19**	**168**	P		**Pn**	**14 42 46.1**	**-2.3**
22nm,0.5s,baz=345,slow=20,SNR=1.3								
JCJ	**Chichijima**	**9.19**	**168**	Pn		**Pn**	**14 42 46.7**	**-1.7**
KSRS	**Korea Array**	**9.88**	**281**	P		**Pn**	**14 42 59.0**	**+1.2**
1.1nm,0.5s,baz=94,slow=14,SNR=

comp=Z,0.9nm,0.5s
ZALV Zalesovo Beam 41.76 313 P P 14 48 23.5 +0.8
MK31 Makanchi Array 43.73 303 P P 14 48 39.0 +0.2
MK31 IAmb IAmb 14 48 39.7
comp=Z,2.4nm,0.9s
MKAR Makanchi Array 43.73 303 P P 14 48 38.6 -0.2
comp=Z,1.8nm,0.8s,baz=91,slow=10,SNR=8.2
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 43.73 303 P P 14 48 38.4 -0.4
KURK Kurchatov 45.68 309 P P 14 48 54.0 -0.2
KURK IAmb IAmb 14 48 56.4
comp=Z,3.9nm,0.6s
KURBB Kurchatov Arra 45.74 309 P P 14 48 53.8 -0.9
comp=Z,1.7nm,0.6s,baz=84,slow=7.8,SNR=14
comp=Z,1.7nm,0.6s
ILAR Eielson Array 50.79 32 P P 14 49 34.2 +0.7
comp=Z,0.4nm,0.6s,baz=273,slow=6.2,SNR=3.5
ILAR pP sP 14 49 51.2 -1.3
comp=Z,0.3nm,0.5s,baz=269,slow=7.1,SNR=5.2
comp=Z,0.4nm,0.6s
EGAK Eagle 53.23 32 P P 14 49 52.4 +0.8
EGAK IAmb IAmb 14 50 28.4
comp=Z,8.2nm,1.4s
WB0 Warramunga Arr 55.87 187 P P 14 50 10.8 -0.4
WB0 IAmb IAmb 14 50 37.7
comp=Z,9.1nm,1.4s
WRA Warramunga Arr 56.05 187 P P 14 50 11.4 -1.1
comp=Z,0.6nm,0.5s,baz=1.6,slow=7.5,SNR=29
comp=Z,0.6nm,0.5s
WRA Warramunga Arr 56.05 187 P P 14 50 11.0 -1.5
ABKAR Akbulak array 57.73 310 P P 14 50 23.4 -0.7
AS31 Alice Springs 59.78 187 P P 14 50 39.8 +1.2
ASAR Alice Springs 59.78 187 P P 14 50 37.8 -0.8
comp=Z,0.2nm,0.6s,baz=0.8,slow=7.1,SNR=6.4
comp=Z,0.2nm,0.6s
ASAR Alice Springs 59.78 187 P P 14 50 39.1 +0.5
ARCES ARCESS Array B 64.46 339 P P 14 51 09.5 +0.1
comp=Z,1.3nm,0.8s,baz=55,slow=10.0,SNR=2.3
comp=Z,1.3nm,0.8s
FINES FINESS Array B 69.12 332 P P 14 51 38.0 -1.2
comp=Z,2.0nm,0.8s,baz=67,slow=6.4,SNR=4.9
comp=Z,2.0nm,0.8s
FINES FINESS Array B 69.12 332 P P 14 51 38.5 -0.6
AKASG Malin Array Be 74.36 322 P P 14 52 10.1 -0.7
comp=Z,0.8nm,0.5s,baz=48,slow=5.8,SNR=7.1
comp=Z,0.8nm,0.5s
HFS Hagfors 74.47 335 P P 14 52 11.9 +0.7
comp=Z,2.0nm,0.7s,baz=105,slow=20,SNR=2.5
comp=Z,2.0nm,0.7s
NB2 NORSAR Subarra 74.60 337 P P 14 52 11.5 -0.6
comp=Z,1.2nm,0.7s,baz=41,slow=5.9
NOA NORSAR Array B 74.60 337 P P 14 52 11.7 -0.4
comp=Z,1.2nm,0.5s,baz=40,slow=5.9,SNR=3.9
comp=Z,1.2nm,0.5s
NVAR Mina Array Bea 76.34 52 P P 14 52 23.4 +0.6
comp=Z,0.3nm,0.6s,baz=276,slow=5.6,SNR=3.6
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 79.02 45 P P 14 52 38.0 +0.4
comp=Z,0.2nm,0.6s,baz=248,slow=1.0,SNR=2.0
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 91.48 52 P P 14 53 40.2 +0.3
comp=Z,0.2nm,0.4s,baz=307,slow=3.4,SNR=4.4
comp=Z,0.2nm,0.4s
H03N2 Juan Fernandez 147.95 97 T T 17 45 35.0
baz=291,slow=76,SNR=7.1
H03N3 Juan Fernandez 147.96 97 T T 17 45 33.8
baz=291,slow=76,SNR=11
H03N1 Juan Fernandez 147.96 97 T T 17 45 33.8
baz=291,slow=76,SNR=10.0

IDC 19 14:54:51.1±3.4, 32°.99S×178°.24W, h0km, mb3.4/2, mbtmp3.4/3, ML2.9/1, MS3.7/1, Error ellipse: s-maj=76.5km s-min=47.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.48**	**214**	Pn	Pn	14 56 26.9	-0.8
URZ	0.3nm,0.3s,baz=333,slow=4.2,SNR=7.2			Sn	Sn	14 57 38.6	-3.7
	0.6nm,0.3s,baz=332,slow=6.5,SNR=6.3 1.2nm,0.3s						
PMG	**Port Moresby**	**39.59**	**298**	LR	LR	15 16 52.8	
	comp=Z,89nm,18.3s,baz=96,slow=33						
ASAR	**Alice Springs**	**42.83**	**270**	P	P	15 02 51.4	+0.3
	0.2nm,0.5s,baz=110,slow=7.5,SNR=8.2 0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.05**	**275**	P	P	15 03 00.6	-0.4
	0.3nm,0.6s,baz=115,slow=8.0,SNR=10 0.3nm,0.6s						
FINES	**FINESS Array B**	**147.48**	**338**	PKPbc	PKPbc	15 14 35.7	-0.6
	2.5nm,1.0s,baz=66,slow=6.5,SNR=3.4						

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*DJA **19** 15:03:47.9±0.3, 6°.5S×3°.3×13°.1E±°, h161km±8km, M4.0/13, mb3.7/6, mB5.0/2, MLv4.1/13, Mw(mB)4.4/2*
ISC 19 15:03:48.3±1.2, 6°.26S±0°.07×130°.63E±0°.09, h150km, n18, σ1§31/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.83**	**159**	P	Pn	15 04 23.4	+1.9
SAUI	**Saumlaki**	**1.83**	**159**	P	Pn	15 04 23.5	+1.9
BNDI	**Bandanaira**	**1.87**	**337**	P	Pn	15 04 21.4	-0.6
MSAI	**Masohi**	**3.35**	**330**	P	Pn	15 04 40.5	+0.3
AAI	**Ambon**	**3.52**	**316**	P	Pn	15 04 41.3	-1.1
KRAI	**Karang Ratu**	**3.67**	**323**	P	Pn	15 04 44.8	+0.4
FAKI	**Fak Fak**	**3.69**	**26**	P	Pn	15 04 45.1	+0.6
FAKI				S	Sn	15 05 27.3	-0.9
NLAI	**Namlea**	**4.62**	**310**	P	Pn	15 04 59.1	+2.3
SIJI	**Sorong**	**5.39**	**7**	P	Pn	15 05 07.5	+0.5
SANI	**Sanana**	**6.24**	**312**	P	Pn	15 05 19.6	+1.4
	0.1nm12nm,1.4s						
SANI	**Sanana**	**6.24**	**312**	P	Pn	15 05 19.9	+1.7
LBMI	**Labuha**	**6.40**	**331**	P	Pn	15 05 21.5	+1.1
	0.1nm29nm,1.0s						
MTN	**Manton Dam**	**6.56**	**176**	P	Pn	15 05 22.9	+0.4
KDU	**Kakadu**	**6.64**	**164**	P	Pn	15 05 24.0	+0.5
SOEI	**Soe**	**7.20**	**241**	P	Pn	15 05 30.1	-1.0
	0.1nm20nm,1.2s						
BATI	**Baumata**	**7.93**	**240**	P	Pn	15 05 40.1	-0.8
KNRA	**Kununurra**	**9.54**	**191**	P	Pn	15 06 00.3	-1.9
WRAB	**Tennant Creek**	**14.06**	**165**	P	Pn	15 07 00.7	-0.4

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*DJA **19** 15:12:39.7±0.4, 6°.5S±4°.4×14°.9E±°, h88km±8km, M4.9/10, mB4.6/2, mb4.5/10, MLv5.1/3, Mw(mB)3.8/2*
*IDC **19** 15:12:40.0±3.1, 6°.01S×148°.97E, h92km±28km, mb4.0/14, mbtmp4.4/18, MS3.4/19, Error ellipse: s-maj=22.0km s-min=12.6km az=82.0*
*NEIC **19** 15:12:39.1±1.8, 6°.08S±0°.03×149°.07E±0°.07, h88km±7km, mb4.7/81, Error ellipse: s-maj=10.8km s-min=1.3km az=66.0*
ISC 19 15:12:40.2±0.4, 6°.10S±0°.05×148°.98E±0°.07, h100km, n141, σ1§30/134, mb4.7/51, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.69**	**59**	Pn	Pn	15 13 32.9	-2.5
RABL	**Rabaul**	**3.69**	**59**	P	Pn	15 13 34.0	-1.3
PMG	**Port Moresby**	**3.75**	**209**	P	Pn	15 13 35.5	-0.7
	1μm,0.7s,baz=351,slow=4.4,SNR=262						
PMG				S	Sn	15 14 18.5	-0.9
	1μm,0.5s,baz=286,slow=21,SNR=14						
PMG	**Port Moresby**	**3.75**	**209**	Pn	Pn	15 13 35.3	-0.8
PMG	**Port Moresby**	**3.75**	**209**	P	Pn	15 13 35.3	-0.8
PMG	**Port Moresby**	**3.75**	**209**	P	Pn	15 13 37.0	+0.9
MANU	**Manus Island**	**4.33**	**338**	Pn	Pn	15 13 43.0	-1.0
GENI	**Genyem**	**9.45**	**291**	P	Pn	15 14 53.7	+0.2
	78nm,1.1s						
COEN	**Coen**	**9.68**	**216**	Pn	Pn	15 14 55.1	-1.5
COEN	**Coen**	**9.68**	**216**	P	Pn	15 14 55.0	-1.7
HNR	**Honiara**	**11.36**	**108**	LR	LR	15 19 11.5	
	comp=Z,1μm,21.3s,baz=270,slow=34						
MTSU	**Mount Surprise**	**12.80**	**200**	P	Pn	15 15 39.3	+0.6
CTA	**Charters Tower**	**14.16**	**191**	P	P	15 15 58.1	-2.7
	3.9nm,0.5s,baz=7.8,slow=13,SNR=11						
CTA				LR	LR	15 21 00.9	
	comp=Z,112nm,21.9s,baz=58,slow=35						
CTA	**Charters Tower**	**14.16**	**191**	P	P	15 15 59.8	-0.9
CTAO	**Charters Tower**	**14.16**	**191**		P	15 15 59.3	-1.5
CTAO	**Charters Tower**	**14.16**	**191**	P	P	15 15 59.8	-0.9
PATS	**Pohnpei**	**15.87**	**36**		P	15 16 18.9	-0.8
FAKI	**Fak Fak**	**16.97**	**280**		Pn	15 16 31.2	-0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIS	**Mount Isa**	**17.01**	**211**	P	P	15 16 33.1	+0.7
KDU	**Kakadu**	**17.55**	**247**	P	P	15 16 33.8	-4.5
SIJI	**Sorong**	**18.42**	**286**	P	Pn	15 16 48.6	-0.6
	5.4nm,0.6s,baz=58,slow=7.9,SNR=6.4						
SIJI				LR	LR	15 25 03.8	
	comp=Z,138nm,21.7s,baz=118,slow=40						
SIJI	**Sorong**	**18.42**	**286**	P	Pn	15 16 50.4	+1.2
	11nm,0.8s						
MTN	**Manton Dam**	**18.83**	**248**	P	P	15 16 52.3	-0.1
MTN				IAmb	IAmb	15 17 09.6	
	comp=Z,18nm,0.7s						
EIDS	**Eidsvold**	**19.27**	**174**	P	P	15 16 55.6	-1.5
WB0	**Warramunga Arr**	**19.64**	**225**		P	15 17 01.5	+0.3
WR0	**Warramunga Arr**	**19.67**	**224**		P	15 17 01.6	+0.1
WR0				IAmb	IAmb	15 17 03.3	
	comp=Z,29nm,1.1s						
WRAB	**Tennant Creek**	**19.78**	**225**	P	P	15 17 02.9	+0.2
WRAB				IAmb	IAmb	15 17 04.4	
	comp=Z,34nm,1.1s						
WB2	**Warramunga Arr**	**19.79**	**225**	P	P	15 17 03.1	+0.3
WB2				IAmb	IAmb	15 17 04.1	
	comp=Z,19nm,0.7s						
WRA	**Warramunga Arr**	**19.80**	**225**	P	P	15 17 03.3	+0.4
	comp=Z,12nm,0.5s,baz=51,slow=11,SNR=102						
WRA				S	S	15 20 37.2	-3.5
	comp=Z,8.5nm,1.1s,baz=41,slow=23,SNR=6.6						
WRA				LR	LR	15 25 23.2	
	comp=Z,126nm,18.1s,baz=32,slow=38						
WRA	**Warramunga Arr**	**19.80**	**225**	P	P	15 17 02.4	-0.5
GUMO	**Guam**	**19.98**	**348**	LR	LR	15 23 24.0	
	comp=Z,70nm,21.9s,baz=188,slow=32						
GUMO	**Guam**	**19.98**	**348**	P	P	15 17 05.0	+0.2
KNRA	**Kununurra**	**22.00**	**243**	P	P	15 17 25.6	-0.9
KNRA	**Kununurra**	**22.00**	**243**	P	P	15 17 23.0	-3.5
AS31	**Alice Springs**	**22.71**	**218**	P	P	15 17 34.3	+0.5
ASAR	**Alice Springs**	**22.71**	**218**	P	P	15 17 34.8	+0.9
	comp=Z,5.1nm,0.7s,baz=53,slow=10.0,SNR=77						
ASAR				S	S	15 21 39.5	+4.5
	comp=Z,11nm,0.9s,baz=30,slow=22,SNR=7.3						
ASAR				LR	LR	15 26 00.9	
	comp=Z,97nm,19.6s,baz=49,slow=35						
	comp=Z,5.1nm,0.7s						
INKA	**Innaminka**	**22.91**	**199**	P	P	15 17 38.0	+2.3
DZM	**Mont Dzumac**	**23.18**	**135**	P	P	15 17 39.6	+1.1
	comp=Z,7.2nm,0.6s,baz=286,slow=6.8,SNR=13						
DZM				LR	LR	15 25 32.4	
	comp=Z,142nm,20.6s,baz=228,slow=33						
	comp=Z,7.2nm,0.6s						
DZM	**Mont Dzumac**	**23.18**	**135**	P	P	15 17 37.2	-1.2
SOEI	**Soe**	**24.74**	**260**	P	P	15 17 52.8	0.0
SOEI				IAmb	IAmb	15 18 23.8	
	comp=Z,33nm,0.9s						
OOD	**Oodnadatta**	**25.00**	**209**	P	P	15 17 57.6	+2.7
BATI	**Baumata**	**25.39**	**259**	P	P	15 17 58.8	+0.2
	comp=Z,17nm,0.6s,baz=32,slow=2.1,SNR=2.2						
	comp=Z,17nm,0.6s						
LCRK	**Leigh Creek**	**26.25**	**201**	P	P	15 18 09.3	+3.1
STKA	**Stephens Creek**	**26.56**	**194**	P	P	15 18 10.8	+1.9
	comp=Z,3.4nm,0.8s,baz=350,slow=10,SNR=7.3						
STKA				LR	LR	15 28 28.1	
	comp=Z,76nm,20.5s,baz=22,slow=36						
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	**26.56**	**194**	P	P	15 18 09.4	+0.4
STKA	**Stephens Creek**	**26.56**	**194**	P	P	15 18 13.4	+4.4
WRKA	**Warakurna**	**27.34**	**224**	P	P	15 18 16.8	+0.7
CAN	**Canberra**	**29.09**	**180**	P	P	15 18 32.2	+0.8
CAN				IAmb	IAmb	15 18 49.2	
	comp=Z,34nm,1.5s						
KAPI	**Kappang**	**29.11**	**271**	LR	LR	15 33 11.8	
	comp=Z,56nm,18.1s,baz=84,slow=42						
BBOO	**Buckleboo**	**29.18**	**203**	P	P	15 18 32.8	+0.6
BBOO				IAmb	IAmb	15 18 47.5	
	comp=Z,34nm,1.5s						
GHSS	**Government Hou**	**30.24**	**197**	P	P	15 18 45.0	+3.4
MSVF	**Nonsavu**	**30.65**	**115**	LR	LR	15 28 59.4	
	comp=Z,54nm,20.7s,baz=257,slow=32						
FORT	**Forrest**	**31.45**	**216**	P	P	15 18 50.6	-1.6
FORT				IAmb	IAmb	15 19 15.4	
	comp=Z,21nm,1.0s						
FORT	**Forrest**	**31.45**	**216**	P	P	15 18 52.1	-0.2
MBWA	**Marble Bar**	**32.04**	**239**	P	P	15 18 57.7	+0.1
MBWA				IAmb	IAmb	15 18 58.7	
	comp=Z,9.6nm,0.8s						
PSA00	**Pilbara Seismi**	**32.11**	**238**	P	P	15 18 57.7	-0.5
PSA00	**Pilbara Seismi**	**32.11**	**238**	P	P	15 18 58.2	0.0
PSA00				IAmb	IAmb	15 18 59.4	
	comp=Z,9.0nm,0.8s						
MORW	**Morawa**	**38.59**	**230**	P	P	15 19 54.2	+0.5
MORW				IAmb	IAmb	15 20 03.2	
	comp=Z,14nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.80**	**224**	LR	LR	15 38 05.5	
	comp=Z,95nm,18.5s,baz=70,slow=38						
JGF	**Kuroka**	**42.89**	**346**	P	P	15 20 29.6	+0.7
JGF				IAmb	IAmb	15 20 55.3	
	comp=Z,8.9nm,1.1s						
MJAR	**Matsushiro Arr**	**43.60**	**347**	P	P	15 20 34.0	-0.7
	comp=Z,4.8nm,0.8s,baz=165,slow=7.1,SNR=13						
	comp=Z,4.8nm,0.8s						
MAJO	**Matsushiro**	**43.60**	**347**	P	P	15 20 34.1	-0.5
MAJO				IAmb	IAmb	15 20 35.0	
	comp=Z,9.6nm,0.9s						
MJB9	**Matsu-Tunnel**	**43.60**	**347**	P	P	15 20 34.9	+0.3
MJB9				IAmb	IAmb	15 20 36.0	
	comp=Z,9.8nm,1.0s						
JSD	**Sado**	**45.03**	**348**	P	P	15 20 44.5	-1.4
JSD				IAmb	IAmb	15 20 48.1	
	comp=Z,10nm,0.6s						
JTM	**Tenmabayashi**	**47.22**	**352**	P	P	15 21 03.3	+0.3
JTM				IAmb	IAmb	15 21 04.7	
	comp=Z,18nm,1.0s						
KSRS	**Korea Array**	**47.57**	**337**	P	P	15 21 06.5	+0.7
	comp=Z,2.7nm,0.8s,baz=148,slow=9.7,SNR=12						
	comp=Z,2.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.36**	**345**	P	P	15 21 43.8	+1.9
	comp=Z,2.9nm,0.6s,baz=211,slow=11,SNR=5.1						
USRK				LR	LR	15 41 30.5	
	comp=Z,40nm,18.3s,baz=185,slow=33						
	comp=Z,2.9nm,0.6s						
PEA0B	**Petropavlovsk-**	**59.44**	**6**	P	P	15 22 32.6	+0.3
PETK	**Petropavlovsk-**	**59.44**	**6**	P	P	15 22 33.1	+0.8
	comp=Z,8.1nm,0.6s,baz=166,slow=6.1,SNR=26						
PETK				LR	LR	15 45 29.4	
	comp=Z,19nm,19.5s,baz=220,slow=33						
	comp=Z,8.1nm,0.6s						
PETK	**Petropavlovsk-**	**59.44**	**6**	P	P	15 22 31.9	-0.4
PET	**Petropavlovsk**	**59.46**	**7**	P	P	15 22 32.7	+0.3
HIA	**Hailar**	**60.74**	**338**	P	P	15 22 40.5	-0.9
HIA				IAmb	IAmb	15 22 44.1	
	comp=Z,6.9nm,0.7s						
SHEM	**Shemya Is, Ala**	**62.37**	**17**	LR	LR	15 44 21.2	
	comp=Z,14nm,19.8s,baz=264,slow=30						
ADK	**Adak**	**64.77**	**23**	P	P	15 23 06.8	-1.2
ULN	**Ulaanbaatar**	**65.15**	**330**	P	P	15 23 09.7	-1.1
SONM	**Songino Array**	**65.46**	**330**	P	P	15 23 13.2	+0.5
	comp=Z,1.5nm,0.7s,baz=148,slow=6.3,SNR=3.3						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**65.46**	**330**	P	P	15 23 12.2	-0.5
MA2	**Magadan**	**65.48**	**1**	LR	LR	15 54 41.7	
	comp=Z,12nm,18.1s,baz=256,slow=39						
CASY	**Casey**	**65.70**	**196**	P	P	15 23 14.3	+0.6
AIS	**Amsterdam Isla**	**71.61**	**232**	P	P	15 23 52.3	+1.2
VNDA	**Vanda**	**71.71**	**177**	P	P	15 23 53.0	+2.1
	comp=Z,1.7nm,0.6s,baz=326,slow=7.4,SNR=19						
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**71.71**	**177**	P	P	15 23 52.7	+1.8
SBA	**Scott Base**	**72.32**	**176**	P	P	15 23 54.6	0.0
MK31	**Makanchi Array**	**78.83**	**320**	P	P	15 24 31.9	-0.5
MKAR	**Makanchi Array**	**78.83**	**320**	P	P	15 24 32.5	+0.1
	comp=Z,0.6nm,0.7s,baz=93,slow=8.9,SNR=6.7						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**78.83**	**320**	P	P	15 24 32.0	-0.3
SVW2	**Sparrevohn**	**79.52**	**24**	P	P	15 24 37.1	+1.4
ZAA0	**Zalesovo Array**	**80.15**	**327**	P	P	15 24 38.6	-0.7
ZALV	**Zalesovo Beam**	**80.15**	**327**	P	P	15 24 38.1	-1.2
	comp=Z,1.8nm,0.6s,baz=117,slow=5.1,SNR=9.3						
ZALV				LR	LR	15 58 54.6	
	comp=Z,23nm,21.9s,baz=75,slow=35						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**80.15**	**327**	P	P	15 24 38.4	-0.9
TTA	**Tatalina**	**80.38**	**22**	P	P	15 24 40.7	+0.3
L19K	**White Mountain**	**80.41**	**23**	P	P	15 24 41.5	+1.0
L19K				IAmb	IAmb	15 24 42.9	
	comp=Z,8.1nm,0.8s						
M19K	**Big River Lodg**	**80.44**	**24**	P	P	15 24 40.5	-0.2
M19K				IAmb	IAmb	15 24 48.5	
	comp=Z,15nm,1.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNPM	**China Poot**	**80.54**	**27**	P	P	15 24 41.2	-0.1
M20K	**Styx River**	**80.94**	**24**	P	P	15 24 44.2	+0.7
M20K				IAmb	IAmb	15 25 15.0	
	comp=Z,28nm,1.5s						
K20K	**Telida**	**81.35**	**22**	P	P	15 24 45.9	+0.4
K20K				IAmb	IAmb	15 24 48.2	
	comp=Z,8.9nm,0.8s						
SEW	**Seward**	**81.61**	**26**	P	P	15 24 47.4	+0.6
BOOM	**Boomskoye usch**	**81.75**	**314**	P	P	15 24 48.3	0.0
J20K	**Nowinta River**	**81.77**	**22**	P	P	15 24 48.1	+0.5
J20K				IAmb	IAmb	15 24 50.3	
	comp=Z,5.9nm,0.9s						
CAST	**Castle Rocks**	**82.15**	**23**	P	P	15 24 49.0	-0.7
CAST				IAmb	IAmb	15 24 50.8	
	comp=Z,11nm,0.8s						
PWL	**Port Wells**	**82.45**	**26**	P	P	15 24 51.4	0.0
KURK	**Kurchatov**	**82.47**	**323**	P	P	15 24 50.8	-0.8
GHO	**Glory Hole Cre**	**82.62**	**25**	P	P	15 24 52.0	-0.3
KTH	**Kantishna Hill**	**82.67**	**23**	P	P	15 24 51.8	-0.6
KTH				IAmb	IAmb	15 24 53.1	
	comp=Z,9.4nm,0.8s						
TRF	**Thorofare Moun**	**82.86**	**23**	P	P	15 24 52.6	-1.0
TRF				IAmb	IAmb	15 24 55.9	
	comp=Z,12nm,0.9s						
SML	**Sawmill**	**82.88**	**25**	P	P	15 24 53.5	-0.1
IMAR	**Indian Mountai**	**82.89**	**20**	P	P	15 24 52.7	-0.8
MAW	**Mawson**	**82.92**	**203**	LR	LR	16 00 18.8	
	comp=Z,19nm,18.2s,baz=52,slow=34						
MAW	**Mawson**	**82.92**	**203**	P	P	15 24 54.4	+0.7
H21K	**Melozitna Rive**	**83.04**	**21**	P	P	15 24 53.9	-0.4
H21K				IAmb	IAmb	15 24 56.2	
	comp=Z,6.1nm,1.1s						
RND	**Reindeer**	**83.41**	**24**	P	P	15 24 54.8	-1.5
MLY	**Manley**	**83.47**	**22**	P	P	15 24 55.4	-1.1
MLY				IAmb	IAmb	15 24 58.4	
	comp=Z,7.2nm,0.8s						
MCK	**McKinley**	**83.53**	**23**	P	P	15 24 56.0	-0.9
DHY	**Denali Highway**	**83.85**	**24**	P	P	15 24 57.8	-0.9
QSPA	**South Pole Qui**	**83.87**	**180**	P	P	15 24 58.9	+0.2
QSPA				IAmb	IAmb	15 25 00.7	
	comp=Z,4.8nm,0.7s						
NEA2	**Nenana**	**83.88**	**23**	P	P	15 24 57.9	-0.7
NEA2				IAmb	IAmb	15 24 59.6	
	comp=Z,7.6nm,0.7s						
H23K	**Yukon River**	**84.29**	**21**	P	P	15 25 00.6	-0.1
CCB	**Clear Creek Bu**	**84.39**	**23**	P	P	15 24 59.7	-1.5
CCB				IAmb	IAmb	15 25 01.1	
	comp=Z,7.5nm,0.8s						
TCOL	**CIGO, UAF Yank**	**84.47**	**23**	P	P	15 25 00.9	-0.6
TCOL				IAmb	IAmb	15 25 02.4	
	comp=Z,9.7nm,0.7s						
COLA	**College**	**84.48**	**23**	P	P	15 25 01.1	-0.4
COLA				IAmb	IAmb	15 25 02.4	
	comp=Z,9.5nm,0.7s						
HDA	**Harding Lake**	**84.62**	**23**	P	P	15 25 01.3	-1.0
HDA				IAmb	IAmb	15 25 03.3	
	comp=Z,4.4nm,0.8s						
COLD	**Coldfoot**	**84.74**	**20**	P	P	15 25 02.9	0.0
COLD				IAmb	IAmb	15 25 05.2	
	comp=Z,13nm,1.5s						
IL31		**84.80**	**23**	P	P	15 25 01.6	-1.6
IL31				IAmb	IAmb	15 25 02.9	
	comp=Z,7.8nm,0.8s						
ILAR	**Eielson Array**	**84.80**	**23**	P	P	15 25 01.8	-1.4
	comp=Z,6.9nm,0.8s,baz=250,slow=5.3,SNR=53						
	comp=Z,6.9nm,0.8s						
ILAR	**Eielson Array**	**84.80**	**23**	P	P	15 25 01.6	-1.7
J25K	**Salcha River,**	**85.32**	**23**	P	P	15 25 05.3	-0.6
DOT	**Dot Lake**	**85.45**	**24**	P	P	15 25 06.1	-0.5
DOT				IAmb	IAmb	15 25 07.8	
	comp=Z,8.0nm,0.8s						
L26K	**Log Cabin Wild**	**85.50**	**25**	P	P	15 25 06.7	-0.1
M27K	**Edge Creek, AK**	**85.88**	**26**	P	P	15 25 09.0	+0.2
J26L	**Joseph Creek**	**85.99**	**24**	P	P	15 25 08.5	-0.8
J26L				IAmb	IAmb	15 25 11.4	
	comp=Z,5.4nm,0.9s						
L27K	**Beaver Creek,**	**86.16**	**25**	P	P	15 25 10.0	-0.1
L27K				IAmb	IAmb	15 25 11.5	
	comp=Z,5.7nm,1.1s						
K27K	**Chicken**	**86.41**	**24**	P	P	15 25 11.3	+0.1
K27K				IAmb	IAmb	15 25 13.3	
	comp=Z,6.7nm,0.8s						
I26K	**Coal Creek Min**	**86.46**	**23**	P	P	15 25 10.9	-0.5
I26K				IAmb	IAmb	15 25 13.5	
	comp=Z,7.8nm,1.1s						
EGAK	**Eagle**	**87.05**	**24**	P	P	15 25 14.5	+0.1
EGAK				IAmb	IAmb	15 25 17.2	
	comp=Z,11nm,1.1s						
HYT	**Haines Junctio**	**87.35**	**28**	P	P	15 25 14.8	-1.2
YBH	**Yreka Blue Hor**	**92.75**	**49**	LR	LR	15 58 33.7	
	comp=Z,24nm,20.2s,baz=312,slow=30						
ARU	**Arti**	**95.26**	**326**	LR	LR	16 12 42.9	
	comp=Z,16nm,18.0s,baz=36,slow=38						
NVAR	**Mina Array Bea**	**95.87**	**52**	P	P	15 25 57.1	+0.8
	comp=Z,0.5nm,0.8s,baz=249,slow=7.5,SNR=2.5						
	comp=Z,0.5nm,0.8s						
PLCA	**Paso Flores**	**120.95**	**146**	PKP	PKiKP	15 31 22.2	+0.5
	comp=Z,1.5nm,0.7s,baz=205,slow=2.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**147.02**	**285**	PKPbc	PKPbc	15 32 12.4	-0.1
	comp=Z,1.4nm,0.6s,baz=60,slow=2.9,SNR=8.8						
BDFB	**Brasilia**	**152.62**	**142**	PKPbc	PKiKP	15 32 26.7	+0.1
	comp=Z,4.4nm,0.5s,baz=80,slow=1.4,SNR=7.7						

**MAN 19 15:30:59.1, 12°.80N×123°.15E, h20km, mb3.9, ML2.7

ZAG				Lg	Lg	16 05 48.2	
BLY	**Banja Luka**	**0.74**	**127**	*e*Pg	**Pg**	**16 05 38.8**	**-0.7**
BLY				*e*Sg	**Sg**	**16 05 49.5**	**+0.4**
BLY	**Banja Luka**	**0.74**	**127**	Pg	**Pg**	**16 05 39.1**	**-0.4**
	comp=Z,0.4nm,SNR=15						
BLY				Lg	Lg	16 05 49.1	
OZLJ	**Ozalj**	**0.75**	**304**	*i* Pg	**Pg**	**16 05 39.1**	**-0.6**
OZLJ				Sg	**Sg**	**16 05 48.9**	**-0.7**
PTJ	**Puntijarka**	**0.76**	**339**	*e*Pg	**Pg**	**16 05 39.2**	**-0.7**
PTJ				Sg	**Sg**	**16 05 49.6**	**-0.3**
PTJ	**Puntijarka**	**0.76**	**339**	Pb	**Pg**	**16 05 39.6**	**-0.3**
	comp=Z,0.5nm,SNR=14						
PTJ				Lg	Lg	16 05 49.6	
UDBI	**Udbina**	**0.79**	**212**	*e*Pg	**Pg**	**16 05 40.5**	**+0.1**
UDBI				Sg	**Sb**	**16 05 51.6**	**-0.6**
A052A	**Srbac**	**0.82**	**96**	*e*Pg	**Pg**	**16 05 40.9**	**-0.3**
A052A				*e*Sg	**Sb**	**16 05 53.2**	**+0.1**
BOJS	**Bojanci**	**0.84**	**292**	*e*Pg	**Pg**	**16 05 40.6**	**-0.8**
BOJS				*e*Sg	**Sg**	**16 05 52.4**	**+0.2**
BOJS	**Bojanci**	**0.84**	**292**	*e*Pg	**Pg**	**16 05 40.9**	**-0.4**
BOJS				*i* Sg	**Sg**	**16 05 52.0**	**-0.2**
BOJS				IAML		16 05 55.9	
	comp=Z,31nm,0.2s						
CRES	**Cresnjev**	**0.89**	**315**	⇑*i*Pg	**Pg**	**16 05 41.7**	**-0.7**
CRES				*e*Sg	**Sb**	**16 05 55.0**	**0.0**
CRES	**Cresnjev**	**0.89**	**315**	Pg	**Pb**	**16 05 43.0**	**0.0**
	comp=Z,1.3nm,SNR=17						
CRES				Lg	Lg	16 05 55.3	
KALN	**Kalnik**	**0.94**	**4**	*i* Pg	**Pg**	**16 05 42.4**	**-0.9**
KALN				Sg	**Sg**	**16 05 55.0**	**-0.5**
MGRS	**Mrkonjic Grad**	**0.94**	**146**	*e*Pg	**Pg**	**16 05 42.8**	**-0.5**
MGRS				*e*Sg	**Sg**	**16 05 55.0**	**-0.4**
LOBO	**Lobor**	**0.98**	**348**	*i* Pg	**Pg**	**16 05 44.2**	**+0.1**
LOBO				Sg	**Sg**	**16 05 56.7**	**-0.1**
A250A	**Rusevo Krmpots**	**1.03**	**264**	*e*Pg	**Pb**	**16 05 45.1**	**-0.3**
A250A				Sg	**Sb**	**16 05 58.9**	**-0.1**
RABC	**Rab**	**1.20**	**249**	*e*Pg	**Pn**	**16 05 48.8**	**+0.5**
RABC				Sg	**Sg**	**16 06 03.4**	**-0.6**
NVLJ	**Novalja**	**1.23**	**240**	*e*Pg	**Pb**	**16 05 48.5**	**-0.2**
KOGS	**Kog**	**1.25**	**357**	Pn	**Pn**	**16 05 49.3**	**+0.3**
	comp=Z,1.0nm,SNR=9.1						
KOGS				Sn	**Sb**	**16 06 05.5**	**+0.1**
SRKY	**Kupres RS**	**1.27**	**153**	*e*Pg	**Pn**	**16 05 48.4**	**-1.0**
SRKY				*e*Sg	**Sg**	**16 06 05.5**	**-0.6**
PDKS	**Podkum**	**1.29**	**313**	*e*Pn	**Pn**	**16 05 49.0**	**-0.6**
PDKS				*i* Sn	**Sn**	**16 06 07.7**	**+0.7**
VIRC	**Vir**	**1.29**	**226**	*e*Pg	**Pg**	**16 05 50.1**	**0.0**
VIRC				Sg	**Sn**	**16 06 07.4**	**+0.4**
MORI	**Morici**	**1.41**	**199**	*e*Pg	**Pg**	**16 05 52.0**	**-0.3**
CEY	**Cerknica**	**1.46**	**292**	*e*Pg	**Pn**	**16 05 51.8**	**-0.1**
CEY				*e*Sg	**Sn**	**16 06 11.3**	**0.0**
KOVH	**Kovagotottos**	**1.51**	**53**	Pn	**Pn**	**16 05 53.2**	**+0.6**
	comp=Z,0.2nm,SNR=6.1						
KOVH				Sn	**Sn**	**16 06 10.2**	**-2.3**
KOVH	**Kovagotottos**	**1.51**	**53**	P	**Pn**	**16 05 53.2**	**+0.6**
KOVH				S	**Sn**	**16 06 10.2**	**-2.3**
DUGI	**Dugi Otok**	**1.52**	**218**	*e*Pn	**Pg**	**16 05 53.9**	**-0.5**
DUGI				Sg	**Sg**	**16 06 14.7**	**+0.5**
SMRN	**Sveta Marina**	**1.57**	**265**	*e*Pn	**Pb**	**16 05 54.4**	**-0.1**
SMRN				Sg	**Sg**	**16 06 15.5**	**-0.1**
SKDS	**Skadanscina**	**1.69**	**283**	*e*Pn	**Pn**	**16 05 54.5**	**-0.5**
SKDS				*e*Sn	**Sn**	**16 06 16.9**	**+0.1**
SOKA	**Soboth**	**1.75**	**329**	*e*Pg	**Pn**	**16 05 56.4**	**+0.5**
	comp=Z,1.1nm,0.3s						
SOKA				*e*Sn	**Sb**	**16 06 20.1**	**+0.4**
	comp=Z,2.9nm,0.3s						
JAVS	**Javornik**	**1.75**	**294**	*e*Pn	**Pb**	**16 05 57.6**	**-0.1**
JAVS				*e*Sn	**Sb**	**16 06 20.1**	**+0.2**
JAVS				IAML		16 06 30.2	
	comp=Z,8.8nm,0.3s						
RICI	**Ricice**	**1.79**	**162**	*e*Pn	**Pb**	**16 05 58.1**	**-0.2**
OBKA	**Obir**	**1.82**	**317**	*e*Pn	**Pb**	**16 05 58.3**	**-0.6**
OBKA				*e*Sn	**Sn**	**16 06 21.1**	**+0.9**
OBKA	**Obir**	**1.82**	**317**	*i* Pn	**Pb**	**16 05 58.9**	**+0.1**
	comp=Z,1.2nm,0.2s						
OBKA				*e*Sn	**Sg**	**16 06 24.1**	**+0.3**
	comp=Z,16nm,0.3s						
MORH	**Mrgy, Hungar**	**1.90**	**57**	⇑*i*Pn	**Pb**	**16 05 59.6**	**-0.5**
MORH				*e*Sn	**Sb**	**16 06 24.3**	**+0.3**
MORH	**Mrgy, Hungar**	**1.90**	**57**	Pg	**Pb**	**16 06 00.0**	**-0.1**
	comp=Z,0.1nm,SNR=5.0						
MORH				Lg	Lg	16 06 24.4	
MORH	**Mrgy, Hungar**	**1.90**	**57**	P	**Pb**	**16 06 00.0**	**-0.1**
MORH				S	**Sb**	**16 06 24.4**	**+0.5**
TIH	**Tihany**	**2.01**	**32**	Pn	**Pn**	**16 06 00.3**	**+0.8**
	comp=Z,0.4nm,SNR=2.8						
TIH	**Tihany**	**2.01**	**32**	P	**Pn**	**16 06 00.3**	**+0.8**
ARSA	**Arzberg**	**2.13**	**345**	*e*Pn	**Pn**	**16 06 01.7**	**+0.5**
ARSA				*e*Sn	**Sn**	**16 06 29.5**	**+1.7**
ARSA	**Arzberg**	**2.13**	**345**	*i* Pn	**Pn**	**16 06 01.0**	**-0.2**
	comp=Z,0.6nm,0.2s						
ARSA				*i* Sn	**Sn**	**16 06 28.6**	**+0.7**
	comp=Z,2.2nm,0.3s						
MYKA	**Terra Mystica**	**2.38**	**308**	*i* Sg	**Sg**	**16 06 40.9**	**-0.7**
	comp=Z,1.6nm,0.2s						
RONA	**Rosalia, Austr**	**2.50**	**359**	*i* Pn	**Pn**	**16 06 06.3**	**0.0**
	comp=Z,2.5nm,0.1s,SNR=14						
STON	**Ston**	**2.52**	**157**	*e*Pn	**Pn**	**16 06 07.3**	**+0.9**
STON				*e*Sn	**Sn**	**16 06 38.5**	**+1.3**
CONA	**Conrad Observa**	**2.75**	**353**	*i* Pn	**Pn**	**16 06 09.7**	**-0.1**
	comp=Z,1.1nm,0.1s,SNR=5.7						
CONA				*i* Sg	**Sg**	**16 06 55.6**	**+1.9**
	comp=Z,2.6nm,0.5s						

*IDC **19** 16:30:46.3±1.6, 34°.13S×58°.64E, h0km, mb3.7/4, mbtmp3.8/5, ML4.2/1, MS3.2/1, Error ellipse: s-maj=49.1km s-min=29.9km az=59.0*
*NEIC **19** 16:30:47.0±0.6, 34°.21S±0°.05×58°.4E±0°.2, h10km±1km, mb4.2/10, Error ellipse: s-maj=29.1km s-min=7.5km az=97.0*

ISC 19 16:30:46.8±0.8, **34°.2S**±0°.1×**58°.5E**±0°.2, **h10**km, **n22, σ0§93/18, mb4.0/8, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**13.18**	**349**	Pn	**Pn**	**16 33 53.5**	**-0.8**
VOI	**Vohitsoka**	**15.99**	**317**	Pn	**Pn**	**16 34 31.1**	**-0.9**
VOI				IAmb	IAmb	16 34 44.7	
	comp=Z,24nm,1.3s						
ABPO	**Ambohidratompo**	**18.13**	**323**		**Pn**	**16 34 59.5**	**+0.5**
OPO	**Ambohidratompo**	**18.53**	**324**	P	**Pn**	**16 35 06.2**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=114,slow=16,SNR=7.0						
	comp=Z,1.4nm,0.3s						
H08S1	**Diego Garcia H**	**29.36**	**29**	T	T	17 07 41.0	
	baz=200						
H08S2	**Diego Garcia H**	**29.37**	**29**	T	T	17 07 41.9	
	baz=200						
H08S3	**Diego Garcia H**	**29.38**	**29**	T	T	17 07 42.5	
	baz=200,SNR=3.7						
SUR	**Sutherland**	**31.46**	**263**	LR	LR	16 48 04.3	
	comp=Z,39nm,18.3s,baz=56,slow=33						
SNAA	**Sanae**	**49.00**	**202**	P	**P**	**16 39 32.9**	**-0.5**
SNAA				IAmb	IAmb	16 39 40.5	
	comp=Z,3.3nm,1.2s						
QSPA	**South Pole Qui**	**56.01**	**180**	P	**P**	**16 40 24.9**	**-0.6**
QSPA				IAmb	IAmb	16 40 36.9	
	comp=Z,4.7nm,1.4s						
VNDA	**Vanda**	**59.74**	**166**	P	**P**	**16 40 52.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=239,slow=5.9,SNR=2.6						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**59.74**	**166**	P	**P**	**16 40 51.6**	**+0.4**
VNDA				IAmb	IAmb	16 41 01.6	
	comp=Z,2.7nm,1.3s						
CMAR	**Chiang Mai Arr**	**64.96**	**43**	P	**P**	**16 41 27.3**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=226,slow=7.8,SNR=6.9						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**65.49**	**103**	P	**P**	**16 41 31.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=236,slow=5.8,SNR=19						
	comp=Z,0.6nm,0.6s						
AS31	**Alice Springs**	**65.49**	**103**	P	**P**	**16 41 30.3**	**-0.2**
AS31				IAmb	IAmb	16 41 37.8	
	comp=Z,1.0nm,1.2s						
WRA	**Warramunga Arr**	**67.63**	**99**	P	**P**	**16 41 44.8**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=240,slow=5.3,SNR=20						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**67.63**	**99**	P	**P**	**16 41 43.9**	**-0.3**
WB2	**Warramunga Arr**	**67.64**	**99**	P	**P**	**16 41 44.0**	**-0.3**
WRAB	**Tennant Creek**	**67.65**	**99**	P	**P**	**16 41 45.3**	**+1.0**
WB0	**Warramunga Arr**	**67.76**	**99**	P	**P**	**16 41 44.6**	**-0.5**
WB0				IAmb	IAmb	16 41 56.4	
	comp=Z,4.5nm,1.1s						
KKAR	**Karatay Array**	**77.67**	**9**	P	**P**	**16 42 43.6**	**+0.3**
ILAR	**Eielson Array**	**145.69**	**19**	PKPbc	**PKPdf**	**16 50 23.5**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=325,slow=2.4,SNR=2.0						

*JMA **19** 16:38:06.2±0.2, 40°.7N±0°.6×140°.8E±0°.9, h137km±1km, MV2.6/36, EASTERN AOMORI PREF*
*IDC **19** 16:38:07.0±6.6, 40°.66N×140°.76E, h149km±49km, mb3.4/3, mbtmp3.6/5, Error ellipse: s-maj=102.3km s-min=38.1km az=68.0*

ISC 19 16:38:05.8±1.0, **40°.70N**±0°.06×**140°.9E**±0°.1, **h140**km±7km, **n16, σ0§58/23, mb3.8/3, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTM	**Tenmabayashi**	**0.19**	**61**	*i* P	**Pn**	**16 38 25.0**	**+0.2**
JTM				S	**Sn**	**16 38 38.9**	**-0.5**
JHHS	**Hirosakihyakuz**	**0.38**	**263**	P	**Pn**	**16 38 26.6**	**+1.1**
JHHS				S	**Sn**	**16 38 41.3**	**+0.9**
JAH	**Hinai**	**0.53**	**198**	P	**Pn**	**16 38 26.3**	**+0.1**
JAH				S	**Sn**	**16 38 41.2**	**-0.6**
JANG	**Nango**	**0.60**	**122**	*i* P	**Pn**	**16 38 26.8**	**+0.1**
JANG				S	**Sn**	**16 38 42.1**	**-0.3**
JIW	**Iwasaki**	**0.65**	**261**	*i* P	**Pn**	**16 38 26.9**	**-0.1**
JOT	**Ohata**	**0.70**	**12**	P	**Pn**	**16 38 27.7**	**+0.5**
JSR	**Shiriuchi**	**0.89**	**339**	P	**Pn**	**16 38 28.6**	**-0.2**
JOMM	**Oshimamatsumae**	**1.04**	**323**	P	**Pn**	**16 38 29.9**	**-0.2**
JOMM				S	**Sn**	**16 38 47.2**	**-1.3**
JOM	**Ohasama**	**1.27**	**164**	*i* P	**Pn**	**16 38 32.3**	**+0.1**
JOM				S	**Sn**	**16 38 52.0**	**-0.3**
JMK	**Ichinoseki**	**1.77**	**171**	*i* P	**Pn**	**16 38 37.7**	**0.0**
JYK	**Kaneyama**	**1.82**	**192**	P	**Pn**	**16 38 38.4**	**+0.1**
JYK				S	**Sn**	**16 39 02.2**	**-0.8**
MJAR	**Matsushiro Arr**	**4.64**	**207**	P	**Pn**	**16 39 14.8**	**+0.5**
	1.2nm,0.5s,baz=20,slow=14,SNR=5.4						
USRK	**Ussuriysk Ar.**	**7.43**	**301**	P	**Pn**	**16 39 52.2**	**+0.7**
	1.6nm,0.5s,baz=113,slow=14,SNR=6.6						
ZALV	**Zalesovo Beam**	**39.19**	**309**	P	**P**	**16 45 19.6**	**-0.2**
	0.8nm,0.4s,baz=88,slow=8.4,SNR=4.5						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**41.89**	**299**	P	**P**	**16 45 42.3**	**+0.1**
	0.3nm,0.6s,baz=88,slow=11,SNR=1.6						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**65.38**	**331**	P	**P**	**16 48 33.0**	**+0.2**
	2.8nm,1.1s,baz=43,slow=4.9,SNR=3.9						
	2.8nm,1.1s						

*DJA **19** 16:42:04.9±0.8, 9°.S±7°.×10°.4E±°, h10km, M4.5/8, mb4.5/6, MLv4.5/8*
*IDC **19** 16:42:11.3±4.4, 8°.06S×105°.70E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=192.9km s-min=24.7km az=51.0*

ISC 19 16:42:07.0±1.9, **8°.6S**±0°.2×**104°.6E**±0°.2, **h10**km, **n21, σ1§45/17, mb3.4/4, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**2.78**	**64**	P	**Pn**	**16 42 50.6**	**-1.0**
KASI	**Kota Agung**	**3.02**	**358**	P	**Pn**	**16 42 53.7**	**-1.1**
CBJI	**Citeko**	**3.07**	**46**	P	**Pn**	**16 42 55.0**	**-0.5**
LEM	**Lembang**	**3.43**	**60**	P	**Pn**	**16 43 01.3**	**+0.6**
LWLI	**Liwa**	**3.56**	**351**	P	**Pn**	**16 43 00.8**	**-1.6**
MNAI	**Manna**	**4.48**	**338**	P	**Pn**	**16 43 13.3**	**-1.7**
CTJI	**Waduk Cacaban**	**4.78**	**72**	P	**Pn**	**16 43 19.1**	**0.0**
KSI	**Kapahiang**	**5.27**	**337**	P	**Pn**	**16 43 23.7**	**-2.2**
UGM	**Wanagama**	**5.88**	**84**	P	**Pn**	**16 43 34.3**	**0.0**
	1.0nm196nm,1.7s						
PCJI	**Pacitan**	**6.50**	**87**	P	**Pn**	**16 43 42.5**	**-0.2**
	0.4nm78nm,1.8s						
PWJI	**Pagerwojo**	**7.13**	**86**	P	**Pn**	**16 43 51.0**	**-0.4**
JAGI	**Jajag, Banyuwa**	**9.43**	**90**	P	**Pn**	**16 44 22.4**	**-0.6**
	47nm,1.1s						
TWSI	**Taliwang, Sumb**	**12.13**	**92**	P	**Pn**	**16 44 58.9**	**-1.1**
	14nm,1.1s						
PLAI	**Plampang**	**13.01**	**92**	P	**Pn**	**16 45 11.1**	**-1.0**
	37nm,1.2s						
CMAR	**Chiang Mai Arr**	**27.42**	**348**	P	**P**	**16 47 56.7**	**+3.6**
	0.6nm,0.8s,baz=181,slow=7.8,SNR=6.4						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**30.89**	**115**	P	**P**	**16 48 23.4**	**-0.6**
	0.6nm,1.0s,baz=286,slow=10,SNR=4.6						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**31.80**	**122**	P	**P**	**16 48 32.0**	**0.0**
	0.5nm,0.9s,baz=301,slow=9.0,SNR=3.8						
H08S2	**Diego Garcia H**	**31.81**	**269**	T	T	17 23 34.1	
	baz=88,slow=74,SNR=3.4						
H08S3	**Diego Garcia H**	**31.82**	**269**	T	T	17 23 28.6	
	baz=88,slow=74,SNR=8.2						
H08S1	**Diego Carcia H**	**31.83**	**269**	T	T	17 23 41.0	
	baz=88						
MKAR	**Makanchi Array**	**58.59**	**342**	P	P	16 52 09.1	+5.1
	0.2nm,0.5s,baz=151,slow=7.7,SNR=1.4						
	0.2nm,0.5s						

IDC 19 16:45:44.2±4.5, **30°.74N**×**141°.06E**, **h0**km, **mb3.4**/1, **mbtmp3.3**/2, **ML2.3**/1, **MS3.7**/1, **Error ellipse: s-maj=239.9km s-min=34.5km az=79.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.25**	**338**	Pn	Pn	16 47 17.4	-0.2
	0.1nm,0.3s,baz=153,slow=11,SNR=5.0						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**50.81**	**188**	P	P	16 54 46.1	-0.3
	0.3nm,0.5s,baz=6.1,slow=7.6,SNR=6.9						
	0.3nm,0.5s						
AAK	**Ala-Archa**	**53.42**	**303**	LR	LR	17 18 06.3	
	comp=Z,69nm,18.1s,baz=102,slow=36						
ASAR	**Alice Springs**	**54.53**	**188**	P	P	16 55 14.2	+0.1
	0.2nm,0.6s,baz=359,slow=5.0,SNR=1.5						

IDC 19 17:01:34.6±4.7, **30°.83N**×**141°.59E**, **h0**km, **mb3.1**/2, **mbtmp3.0**/3, **ML2.2**/1, **MS3.2**/1, **Error ellipse: s-maj=222.8km s-min=35.9km az=77.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.35**	**335**	Pn	Pn	17 03 09.4	-0.1
	baz=148,slow=15,SNR=2.8						
	0.6nm,0.5s						
KLR	**Kul'dur**	**19.83**	**341**	LR	LR	17 13 39.9	
	comp=Z,61nm,18.1s,baz=322,slow=37						
WRA	**Warramunga Arr**	**50.96**	**189**	P	P	17 10 38.1	0.0
	0.2nm,0.7s,baz=5.1,slow=7.5,SNR=5.7						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**54.69**	**189**	P	P	17 11 05.3	-0.3
	0.2nm,0.9s,baz=4.2,slow=5.0,SNR=2.4						
	0.2nm,0.9s						

*DJA **19** 17:16:21.5±1.4, 4°.N±16°.×12°.7E±°, h74km±14km, M4.2/6, mb4.3/6, mB4.5/1, MLv4.2/6, Mw(mB)3.7/1*
*MAN **19** 17:16:23.2, 3°.61N×126°.43E, h4km, mb4.7, ML3.6, MS3.5*
*NEIC **19** 17:16:24.1±2.9, 3°.30N±0°.05×126°.78E±0°.10, h65km±10km, mb4.2/13, Error ellipse: s-maj=14.0km s-min=7.2km az=87.0*
*IDC **19** 17:16:24.2±4.0, 3°.36N×126°.90E, h70km±41km, mb3.7/10, mbtmp4.0/11, ML4.0/1, Error ellipse: s-maj=48.5km s-min=14.3km az=67.0*

ISC 19 17:16:22.4±0.6, **3°.42N**±0°.05×**126°.89E**±0°.07, **h48**km, **n40, σ1§67/46, mb4.1/16, 5C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.39**	**281**	P	**Pn**	**17 16 45.4**	**+0.1**
SGSI				S	**Sn**	**17 17 03.4**	**+0.9**
TNTI	**Ternate**	**2.67**	**170**	Pn	Pn	17 17 01.7	-1.2
DDMP	**Don Marcelino,**	**2.92**	**336**	⇑*e*P	**Pn**	**17 17 06.2**	**-0.1**
DDMP				*e*S	**Sn**	**17 17 36.6**	**-3.5**
SKMP	**Bagumbayan, Su**	**3.87**	**323**	⇑*e*P	**Pn**	**17 17 18.7**	**-0.7**
SKMP				*e*S	**Sn**	**17 18 01.3**	**-2.3**
CTBH	**Cotabato--PC H**	**4.61**	**325**	⇑*i*P	**Pn**	**17 17 32.9**	**+3.3**
BIPH	**Bislig**	**4.77**	**354**	⇑*e*P	**Pn**	**17 17 31.1**	**-0.6**
BIPH				*e*S	**Sn**	**17 18 26.0**	**+0.3**
BUKP	**Musuan**	**4.79**	**338**	⇑*e*P	**Pn**	**17 17 35.2**	**+3.1**
BUKP				*e*S	**Sn**	**17 18 27.8**	**+1.4**
MRSI	**Marisa**	**5.74**	**240**	P	**Pn**	**17 17 48.6**	**+3.5**
	0.1nm475nm36nm,0.8s						
LUWI	**Luwuk**	**6.05**	**223**	Pn	**Pn**	**17 17 48.3**	**-1.0**
LUWI	**Luwuk**	**6.05**	**223**	P	Pn	17 17 54.6	+5.3
	0.2nm44nm,1.1s						
SIJI	**Sorong**	**6.10**	**134**	P	**Pn**	**17 17 52.5**	**+2.4**
	3.7nm,0.3s,baz=172,slow=21,SNR=20						
SIJI				S	**Sn**	**17 18 59.7**	**+1.0**
	6.3nm,0.7s,baz=171,slow=21,SNR=6.5						
	7.9nm,0.3s						
SIJI	**Sorong**	**6.10**	**134**	P	**Pn**	**17 17 52.8**	**+2.7**
	0.1nm13nm,0.8s						
TOLI2	**Tolitoli**	**6.52**	**250**		**Pn**	**17 17 56.1**	**+0.4**
APSI	**Ampana**	**6.78**	**231**	P	Pn	17 18 04.7	+5.4
FAKI	**Fak Fak**	**8.26**	**140**	Pn	**Pn**	**17 18 19.0**	**-0.8**
KNRA	**Kununurra**	**19.06**	**174**	P	**P**	**17 20 40.8**	**-0.1**
KNRA				IAmb	IAmb	17 20 57.1	
	comp=Z,9.8nm,1.1s						
YOJ	**Yonaguni jima**	**21.26**	**350**	P	**P**	**17 21 06.7**	**+2.1**
WB0	**Warramunga Arr**	**24.19**	**163**	P	**P**	**17 21 33.7**	**-0.8**
WB0				IAmb	IAmb	17 21 44.9	
	comp=Z,9.7nm,1.1s						
WRA	**Warramunga Arr**	**24.34**	**163**	P	**P**	**17 21 35.0**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=337,slow=10,SNR=37						
	comp=Z,2.4nm,0.7s						
WRA	**Warramunga Arr**	**24.34**	**163**	P	**P**	**17 21 33.6**	**-2.3**
WB2	**Warramunga Arr**	**24.34**	**163**	P	**P**	**17 21 35.4**	**-0.6**
WB2				IAmb	IAmb	17 22 03.3	
	comp=Z,9.4nm,1.2s						
WR0	**Warramunga Arr**	**24.41**	**162**	P	**P**	**17 21 36.0**	**-0.6**
WR0				IAmb	IAmb	17 21 44.6	
	comp=Z,7.3nm,1.1s						
AS31	**Alice Springs**	**27.77**	**166**	P	**P**	**17 22 06.8**	**-0.2**
ASAR	**Alice Springs**	**27.77**	**166**	P	**P**	**17 22 05.8**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=347,slow=7.1,SNR=20						
ASAR				PcP	**PcP**	**17 25 23.6**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=358,slow=2.8,SNR=4.7						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**27.77**	**166**	P	**P**	**17 22 06.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**31.17**	**301**	P	**P**	**17 22 37.9**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=115,slow=7.4,SNR=5.1						
	comp=Z,0.5nm,0.7s						
KSRS	**Korea Array**	**33.89**	**1**	P	**P**	**17 23 00.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=184,slow=12,SNR=5.0						
	comp=Z,1.0nm,0.8s						
BBOO	**Buckleboo**	**37.06**	**167**	P	**P**	**17 23 25.3**	**-2.7**
STKA	**Stephens Creek**	**37.78**	**159**	P	**P**	**17 23 32.6**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=344,slow=13,SNR=6.4						
	comp=Z,2.1nm,0.6s						
STKA	**Stephens Creek**	**37.78**	**159**	P	**P**	**17 23 32.1**	**-2.0**
MK31	**Makanchi Array**	**57.90**	**325**	P	**P**	**17 26 08.2**	**-1.4**
MK31				IAmb	IAmb	17 26 11.5	
	comp=Z,3.9nm,1.0s						
MKAR	**Makanchi Array**	**57.90**	**325**	P	**P**	**17 26 09.4**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=119,slow=7.4,SNR=21						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**57.90**	**325**		**P**	**17 26 08.1**	**-1.5**
ZALV	**Zalesovo Beam**	**60.94**	**333**	P	**P**	**17 26 29.7**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=135,slow=15,SNR=4.8						
	comp=Z,1.6nm,1.0s						
KURBB	**Kurchatov Arra**	**62.09**	**327**	P	**P**	**17 26 37.7**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=129,slow=6.4,SNR=20						
KURBB				pP	**sP**	**17 26 59.3**	**+2.8**
	comp=Z,0.6nm,0.4s,baz=129,slow=6.1,SNR=7.7						
	comp=Z,1.9nm,0.7s						
KURK	**Kurchatov**	**62.09**	**328**	P	**P**	**17 26 37.6**	**-0.6**
BVAR	**Borovoye Array**	**67.67**	**327**	P	**P**	**17 27 13.4**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=126,slow=7.3,SNR=7.1						
	comp=Z,1.3nm,0.7s						
TIXI	**Tiksi**	**68.15**	**1**	P	**P**	**17 27 17.8**	**+0.6**
TIXI				IAmb	IAmb	17 27 18.5	
	comp=Z,2.7nm,0.5s						
ABKAR	**Akbulak array**	**72.49**	**321**	P	**P**	**17 27 41.7**	**-2.4**
ABKAR				IAmb	IAmb	17 27 44.4	
	comp=Z,1.2nm,0.7s						
AKTO	**Aktyubinsk**	**74.00**	**322**	P	**P**	**17 27 52.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=100,slow=6.1,SNR=2.9						
	comp=Z,1.2nm,0.5s						

NNC 19 17:20:10.7±9.9, **36°.88N**×**70°.30E**, **h0**km, **mb3.6**, **mpv3.5, 1C-2D, Error ellipse: s-maj=90.3km s-min=76.3km az=36.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.22**	**1**	P	Pn	17 21 45.1	+1.3
	0.6nm,0.4s,baz=182,slow=12,SNR=17					

BIPH	**Bislig**	**6.17 348**	*eP*	**Pn**	**17 59 32.1**	**+2.0**
BIPH			*eS*	**Sn**	**18 00 42.4**	**+2.8**
BUKP	**Musuan**	**6.29 336**	*eP*	**Pn**	**17 59 33.6**	**+1.8**
APSI	**Ampana**	**6.73 244**	P	**Pn**	**17 59 38.7**	**+0.9**
	0.3nm1μm42nm,0.4s					
FAKI	**Fak Fak**	**6.77 138**		**Pn**	**17 59 39.5**	**+1.2**
FAKI	**Fak Fak**	**6.77 138**	P	**Pn**	**17 59 40.0**	**+1.6**
	0.1nm24nm,0.7s					
TOLI2	**Tolitoli**	**6.96 262**		**Pn**	**17 59 41.1**	**+0.2**
MPSI	**Mapaga**	**7.97 257**	P	**Pn**	**17 59 56.6**	**+1.8**
	0.1nm13nm,0.7s					
BBSI	**Bau Bau**	**9.11 214**	P	**Pn**	**18 00 12.1**	**+1.7**
	26nm,0.8s					
TTSI	**Tana Toraja**	**9.37 237**	P	**Pn**	**18 00 13.0**	**-1.1**
	15nm,0.6s					
MYLDM	**Lahad Datu**	**9.65 289**	Pn	**Pn**	**18 00 19.6**	**+1.7**
MYLDM	**Lahad Datu**	**9.65 289**	P	**Pn**	**18 00 21.0**	**+3.2**
	40nm,1.0s					
SPSI	**Sidrap Palu**	**9.94 233**	P	**Pn**	**18 00 22.4**	**+0.6**
	16nm,0.7s					
BNSI	**Bone**	**9.95 229**	P	**Pn**	**18 00 21.3**	**-0.7**
	12nm,0.9s					
BKSI	**Bulukumba**	**10.55 226**	P	**Pn**	**18 00 31.2**	**+0.9**
	20nm,0.7s					
BSSI	**Bau Bau, Buton**	**10.89 221**	P	**Pn**	**18 00 36.5**	**+1.6**
	50nm,1.1s					
KKM	**Kota Kinabalu**	**12.08 289**	Pn	**Pn**	**18 00 53.3**	**+2.1**
MTN	**Manton Dam**	**15.25 167**	P	**Pn**	**18 01 36.5**	**+2.3**
MTN			IAmb	IAmb	18 01 49.1	
	comp=Z,23nm,1.4s					
SBUM	**Sibu**	**15.44 272**	P	**P**	**18 01 40.1**	**-0.8**
SBUM	**Sibu**	**15.44 272**	P	**Pn**	**18 01 39.7**	**+2.9**
	comp=Z,4.9nm,1.0s					
KLNI	**Mataram**	**15.58 228**	P	**P**	**18 01 41.1**	**-1.3**
	comp=Z,14nm,0.7s					
JAGI	**Jajag, Banyuwa**	**17.09 232**	P	**Pn**	**18 01 58.3**	**+0.5**
JAGI			IAmb	IAmb	18 02 19.7	
	comp=Z,48nm,1.1s					
KNRA	**Kununurra**	**17.70 177**		**Pn**	**18 02 04.1**	**-1.2**
KNRA			IAmb	IAmb	18 02 47.9	
	comp=Z,22nm,1.2s					
UGM	**Wanagama**	**19.79 240**		**P**	**18 02 29.2**	**+0.3**
GUMO	**Guam**	**20.48 55**	LR	LR	18 10 00.6	
	comp=Z,21nm,19.1s,baz=240,slow=35					
TPUB	**Ta-pu**	**22.14 343**	P	**P**	**18 02 53.2**	**-1.1**
SSLB	**Suanglung**	**22.51 344**	P	**P**	**18 02 58.3**	**+0.1**
SSLB			IAmb	IAmb	18 03 04.3	
	comp=Z,23nm,1.0s					
WB0	**Warramunga Arr**	**22.72 163**	P	**P**	**18 02 59.4**	**-1.0**
WB0			IAmb	IAmb	18 03 01.2	
	comp=Z,8.8nm,0.7s					
WRAB	**Tennant Creek**	**22.86 164**	P	**P**	**18 03 01.0**	**-1.0**
WRAB			IAmb	IAmb	18 03 02.7	
	comp=Z,6.5nm,0.7s					
WRA	**Warramunga Arr**	**22.87 164**	P	**P**	**18 03 01.1**	**-0.9**
	comp=Z,5.6nm,0.7s,baz=338,slow=10,SNR=70					
WRA			LR	LR	18 13 49.8	
	comp=Z,44nm,21.3s,baz=257,slow=42					
	comp=Z,5.6nm,0.7s					
WRA	**Warramunga Arr**	**22.87 164**	P	**P**	**18 03 00.0**	**-2.0**
WB2	**Warramunga Arr**	**22.88 164**	P	**P**	**18 03 00.8**	**-1.3**
WB2			IAmb	IAmb	18 03 02.8	
	comp=Z,7.7nm,0.7s					
WR0	**Warramunga Arr**	**22.95 163**	P	**P**	**18 03 01.6**	**-1.1**
WR0			IAmb	IAmb	18 03 22.0	
	comp=Z,12nm,1.2s					
AS31	**Alice Springs**	**26.33 167**	P	**P**	**18 03 34.0**	**-0.2**
ASAR	**Alice Springs**	**26.33 167**	P	**P**	**18 03 33.7**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=347,slow=13,SNR=51					
ASAR			PcP	**PcP**	**18 07 00.9**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=0.5,slow=2.0,SNR=4.2					
	comp=Z,1.0nm,0.4s					
ASAR	**Alice Springs**	**26.33 167**	P	**P**	**18 03 33.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**32.51 302**	P	**P**	**18 04 28.1**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=118,slow=7.3,SNR=10					
	comp=Z,1.2nm,0.8s					
KSRS	**Korea Array**	**35.17 0**	P	**P**	**18 04 50.5**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=178,slow=9.5,SNR=5.9					
	comp=Z,1.2nm,0.7s					
BBOO	**Buckleboo**	**35.63 168**	P	**P**	**18 04 55.1**	**-0.9**
STKA	**Stephens Creek**	**36.29 160**	P	**P**	**18 05 02.0**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=348,slow=9.4,SNR=7.0					
STKA			LR	LR	18 22 51.6	
	comp=Z,91nm,19.1s,baz=18,slow=41					
	comp=Z,1.3nm,0.8s					
STKA	**Stephens Creek**	**36.29 160**	P	**P**	**18 04 59.4**	**-2.3**
ARMA	**Armidale**	**39.60 147**	P	**P**	**18 05 30.3**	**+0.4**
ARMA			IAmb	IAmb	18 06 05.3	
	comp=Z,16nm,1.4s					
H11N1	**WAKE ISLAND Hy**	**42.13 63**	T	T	18 51 02.7	
	baz=250,slow=75,SNR=4.0					
H11N2	**WAKE ISLAND Hy**	**42.14 63**	T	T	18 50 59.9	
	baz=250					
H11N3	**WAKE ISLAND Hy**	**42.15 63**	T	T	18 51 03.3	
	baz=250,slow=75,SNR=5.0					
PETK	**Petropavlovsk-**	**56.58 21**	P	**P**	**18 07 40.1**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=224,slow=4.0,SNR=2.2					
	comp=Z,2.6nm,0.8s					
MK31	**Makanchi Array**	**59.41 325**	P	**P**	**18 08 01.2**	**+0.7**
MK31			IAmb	IAmb	18 08 04.3	
	comp=Z,5.3nm,1.2s					
MKAR	**Makanchi Array**	**59.41 325**	P	**P**	**18 08 00.8**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=116,slow=7.6,SNR=34					
	comp=Z,2.2nm,0.5s					
MKAR	**Makanchi Array**	**59.41 325**	P	**P**	**18 08 00.1**	**-0.4**
MAKZ	**Makanchi**	**59.60 325**	P	**P**	**18 08 01.4**	**-0.5**
YAK	**Yakutsk**	**59.80 1**	P	**P**	**18 08 02.7**	**-0.1**
ZALV	**Zalesovo Beam**	**62.45 333**	P	**P**	**18 08 19.4**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=131,slow=7.9,SNR=1.9					
	comp=Z,0.5nm,0.4s					
KKAR	**Karatay Array**	**65.05 317**	P	**P**	**18 08 38.2**	**-0.1**
TIXI	**Tiksi**	**69.44 0**	P	**P**	**18 09 04.6**	**-1.0**
TIXI			IAmb	IAmb	18 09 16.4	
	comp=Z,2.6nm,1.1s					
ABKAR	**Akbulak array**	**73.99 321**	P	**P**	**18 09 33.5**	**0.0**
ABKAR	**Akbulak array**	**73.99 321**	P	**P**	**18 09 33.4**	**0.0**
ABKAR			IAmb	IAmb	18 10 06.1	
	comp=Z,1.3nm,0.8s					

KRSC 19 17:59:54.1±1.1, 52°.74N×159°.65E, h59km±13km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.42**	**32**	*eP*	Pn	18 00 07.6	+2.4
SPN				*eS*	Sn	18 00 15.0	+1.7
NLC	**Nalytchevo**	**0.47**	**337**	*eP*	Pn	18 00 07.2	+1.5
NLC				*eS*	Sn	18 00 15.4	+1.3
DALK	**Dalny**	**0.62**	**298**	*eP*	Pn	18 00 08.4	+1.1
DALK				*eS*	Sn	18 00 17.1	+0.2
PET	**Petropavlovsk**	**0.67**	**295**	*eP*	Pn	18 00 09.1	+1.2
PET				*eS*	Sn	18 00 18.3	+0.3
UGLR	**Uglovaya**	**0.68**	**313**	*eP*	Pn	18 00 10.1	+1.8
UGLR				*eS*	Sn	18 00 20.0	+1.4
SDLR	**Sedlovina**	**0.71**	**319**	*eP*	Pn	18 00 10.1	+1.5
SDLR				*eS*	Sn	18 00 19.5	+0.4
SMAR	**Somma**	**0.73**	**316**	*eP*	Pn	18 00 10.3	+1.4
AVH	**Avacha**	**0.76**	**314**	*eP*	Pn	18 00 11.0	+1.8
AVH				*eS*	Sn	18 00 21.6	+1.4
RUS	**Russkaya**	**0.76**	**246**	*eP*	Pn	18 00 10.3	+1.3
RUS				*eS*	Sn	18 00 20.7	+0.7
KRER	**Koryakskii**	**0.78**	**316**	*eP*	Pn	18 00 11.5	+1.9
KRER				*eS*	Sn	18 00 22.3	+1.4
KOK	**Koryaka**	**0.82**	**312**	*eP*	Pn	18 00 11.9	+1.9
KOK				*eS*	Sn	18 00 23.7	+2.1
KRX	**Arik**	**0.86**	**316**	*eP*	Pn	18 00 12.3	+1.8
KRX				*eS*	Sn	18 00 23.6	+1.0
KRMR	**Karymshinskiy**	**0.93**	**276**	*eP*	Pn	18 00 12.3	+1.1
KRMR				*eS*	Sn	18 00 24.1	+0.3
MTVR	**Mutnovka**	**0.93**	**254**	*eP*	Pn	18 00 13.1	+1.7
MTVR				*eS*	Sn	18 00 25.5	+1.4
GRL	**Gorelyy**	**0.98**	**259**	*eP*	Pn	18 00 14.1	+2.1
GRL				*eS*	Sn	18 00 26.9	+1.7
ASAK	**Asacha**	**1.13**	**252**	*eP*	Pn	18 00 16.2	+2.3
ASAK				*eS*	Sn	18 00 31.3	+2.7
KII	**Karymskiy**	**1.30**	**355**	*eP*	Pn	18 00 18.4	+2.2
KII				*eS*	Sn	18 00 34.8	+2.1
KDTR	**Khodutka, Kamc**	**1.35**	**227**	*eP*	Pn	18 00 18.7	+2.0
KDTR				*eS*	Sn	18 00 36.0	+2.4
GNL	**Ganaly**	**1.40**	**314**	*eP*	Pn	18 00 19.6	+2.0
GNL				*eS*	Sn	18 00 37.6	+2.4
APC	**Apacha**	**1.52**	**278**	*eP*	Pn	18 00 21.4	+2.3
APC				*eS*	Sn	18 00 40.5	+2.6
PAU	**Pauzhetka**	**2.17**	**235**	*eP*	Pn	18 00 31.0	+3.2
MKZ	**Mys Kozlova**	**2.20**	**33**	*eP*	Pn	18 00 30.1	+1.9
MKZ				*eS*	Sn	18 00 54.9	+0.7
TUMR	**Tumrok**	**2.56**	**6**	*eP*	Pn	18 00 36.9	+3.6
SKR	**Severo-Kuril's**	**3.02**	**228**	*eP*	Pn	18 00 43.6	+4.2
SKR				*eS*	Sn	18 01 16.3	+2.1
KBTR	**Krutoberegovo**	**3.93**	**27**	*eP*	Pn	18 00 56.3	+4.4
SRKR	**Sorokina**	**4.02**	**12**	*eP*	Pn	18 00 58.4	+5.3
BKI	**Bering**	**4.47**	**54**	*eP*	Pn	18 01 02.1	+2.8
BKI				*eS*	Sn	18 01 47.7	-2.2

*TEH **19** 18:00:11.9, 27°.27N×53°.87E, h15km, ML3.3*
*OMAN **19** 18:00:15.6±0.1, 27°.14N×53°.94E, h15km, mb4.9/5, ml3.0/11, Error ellipse: s-maj=1.5km s-min=1.4km az=296.0*

ISC 19 18:00:11.8±0.9, 27°.25N±0°.03×53°.89E±0°.04, h10km, n54, σ1°.77/71, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.60**	**46**	*ePg*	**Pb**	**18 00 24.2**	**-0.3**
LAR1				*e*		18 00 44.3	
	comp=Z,41μm,0.4s						
LMD1	**Lamerd**	**0.65**	**278**	*ePg*	**Pg**	**18 00 23.6**	**-0.8**
LMD1				*e*		18 00 40.5	
	comp=Z,22μm,0.3s						
JHRM	**Jahrom**	**1.28**	**348**	*ePg*	**Pb**	**18 00 35.9**	**-0.2**
JHRM				*e*		18 00 59.2	
	comp=Z,13μm,0.5s						
QIR1	**Qir**	**1.43**	**329**	*ePg*	**Pb**	**18 00 38.0**	**-0.7**
QIR1				*e*		18 01 03.7	
	comp=Z,6μm,0.3s						
GENO	**Geno**	**2.04**	**85**	*ePn*	**Pn**	**18 00 47.4**	**+1.1**
GENO				*e*		18 01 22.8	
	comp=E,4μm,0.2s						
ESRB	**Sir Abu**	**2.04**	**171**	*ePn*	**Pg**	**18 00 50.6**	**-0.4**
SHME	**Shamm**	**2.34**	**120**	*ePn*	**Pn**	**18 00 51.1**	**+0.7**
SHME	**Shamm**	**2.34**	**120**	P	**Pn**	**18 00 52.0**	**+1.7**
SHME				S	**Sn**	**18 01 21.6**	**+2.3**
IBND	**Bandar-abas**	**2.37**	**85**	*ePn*	**Pn**	**18 00 52.3**	**+1.6**
IBND				*e*		18 01 52.7	
	comp=Z,2μm,0.4s						
JRN	**Qarnain Island**	**2.48**	**202**	*ePn*	**Pb**	**18 00 55.5**	**-0.9**
BANOM	**Banah**	**2.53**	**121**	*ePn*	**Pn**	**18 00 53.7**	**+0.7**
BANOM	**Banah**	**2.53**	**121**	P	**Pn**	**18 00 54.5**	**+1.5**
	SNR=6.3						
BANOM				S	**Sn**	**18 01 23.9**	**0.0**
NAZ	**Nazwa, Dubai**	**2.76**	**144**	*ePn*	**Pn**	**18 00 58.2**	**+2.1**
MASF	**Masafi**	**2.77**	**132**	P	**Pn**	**18 00 57.0**	**+0.7**
MASF				S	**Sn**	**18 01 30.9**	**+1.2**
MSFE	**Esma-Masafi**	**2.77**	**132**	*ePn*	**Pn**	**18 00 56.1**	**-0.2**
AHBU	**AHRAM**	**2.80**	**306**	*ePn*	**Pn**	**18 00 54.8**	**-1.8**
ASUD	**Al Ashush, Dub**	**2.92**	**153**	*ePn*	**Pb**	**18 01 01.7**	**-2.2**
ASUD	**Al Ashush, Dub**	**2.92**	**153**	P	**Pb**	**18 01 02.0**	**-1.9**
	SNR=7.8						
ASUD				S	**Sn**	**18 01 35.3**	**+2.0**
FAQ	**Al Faqa, Dubai**	**2.93**	**148**	P	**Pn**	**18 01 00.8**	**+2.4**
FAQ				S	**Sn**	**18 01 36.3**	**+2.7**
UOSS	**Minazif**	**3.10**	**137**	*ePn*	**Pn**	**18 01 02.3**	**+1.5**
UOSS	**Minazif**	**3.10**	**137**	P	**Pn**	**18 01 02.8**	**+2.0**
UOSS				S	**Sn**	**18 01 38.8**	**+1.0**
HATD	**Hatta, Dubai**	**3.15**	**140**	P	**Pn**	**18 01 03.2**	**+1.8**
HATD				S	**Sn**	**18 01 41.8**	**+2.7**
ASHO	**Ashiyiah**	**3.21**	**142**	*ePn*	**Pn**	**18 01 04.5**	**+2.1**
ASHO	**Ashiyiah**	**3.21**	**142**	P	**Pn**	**18 01 05.0**	**+2.6**
	SNR=12						
ASHO				S	**Sn**	**18 01 43.4**	**+2.5**
NGRK	**Negar Kerman**	**3.46**	**46**	*ePn*	**Pn**	**18 01 07.0**	**+0.9**
NGRK				*e*		18 02 07.6	
	comp=Z,286nm,0.2s						
ALNE	**Al Ain**	**3.59**	**152**	P	**Pn**	**18 01 10.2**	**+2.6**
ALNE				S	**Sn**	**18 01 52.2**	**+2.1**
KRBR	**Kerman**	**3.71**	**42**	*ePn*	**Pn**	**18 01 11.5**	**+2.0**
TVBK	**TV Kerman**	**3.72**	**42**	*ePn*	**Pn**	**18 01 11.1**	**+1.5**
TVBK				*e*		18 01 29.0	
	comp=Z,718nm,0.4s						
JASK	**Jask - Hormozg**	**3.82**	**110**	*ePn*	**Pn**	**18 01 12.0**	**+1.3**
JASK	**Jask - Hormozg**	**3.82**	**110**	P	**Pn**	**18 01 12.9**	**+2.2**
JASK				S	**Sn**	**18 01 53.1**	**-2.6**
KHGB	**Koh Gabri**	**3.86**	**35**	*ePn*	**Pn**	**18 01 12.4**	**+1.0**
KHGB				*e*		18 02 28.2	
	comp=Z,215nm,0.5s						
CHMN	**Cheshme madani**	**4.13**	**50**	*e*	**Pb**	**18 01 22.7**	**-2.2**
	comp=Z,211nm,0.4s						
IMEH	**Mehriz**	**4.18**	**9**	*ePn*	**Pn**	**18 01 16.9**	**+1.1**
IMEH				*e*		18 01 19.0	
	comp=Z,285nm,0.2s						
MZR	**Muzera**	**4.24**	**185**	*ePn*	**Pn**	**18 01 17.4**	**+0.9**
KBAM	**BAM**	**4.45**	**64**	*ePn*	**Pn**	**18 01 21.9**	**+2.5**
KBAM				*e*		18 01 22.9	
	comp=Z,459nm,0.4s						
ARQ	**Araqi**	**4.57**	**148**	P	**Pn**	**18 01 23.1**	**+2.2**
IBAF	**Bafgh**	**4.57**	**18**	*ePn*	**Pn**	**18 01 21.7**	**+0.6**
IBAF				*e*		18 01 23.7	
	comp=Z,303nm,0.1s						
ISAD	**Sadrabad**	**4.65**	**358**	*ePn*	**Pn**	**18 01 23.6**	**+1.2**
ISAD				*e*		18 01 28.9	
	comp=Z,308nm,0.2s						
IRAM	**Ramesheh**	**4.73**	**344**	*ePn*	**Pn**	**18 01 24.1**	**+0.7**
HOQ	**Hoqain**	**4.79**	**139**	P	**Pn**	**18 01 25.7**	**+1.7**
ICHK	**Chekchek**	**5.00**	**5**	*ePn*	**Pn**	**18 01 28.5**	**+1.4**
YZKH	**Yazd**	**5.16**	**7**	*ePn*	**Pn**	**18 01 30.1**	**+0.9**
BSY	**Bisya**	**5.40**	**145**	P	**Pn**	**18 01 34.7**	**+2.3**
BSY				S	**Sn**	**18 02 34.2**	**-0.4**
NASN	**Na'in**	**5.61**	**351**	*ePn*	**Pn**	**18 01 35.4**	**-0.2**
SMDO	**Samad**	**5.62**	**137**	P	**Pn**	**18 01 37.0**	**+1.4**
SMDO				S	**Sn**	**18 02 40.3**	**0.0**
	SNR=11						
IZEF	**Zefreh**	**5.79**	**347**	*ePn*	**Pn**	**18 01 36.9**	**-1.1**
JMDO	**Jabal Madar**	**6.18**	**141**	P	**Pn**	**18 01 45.0**	**+1.7**
JMDO				S	**Sn**	**18 02 49.7**	**-4.4**
TPRV	**Parvadeh(Tabas**	**6.25**	**22**	*ePn*	**Pn**	**18 01 45.2**	**+1.0**
WBK	**Wadi Bani Khal**	**6.53**	**134**	P	**Pn**	**18 01 48.7**	**+0.8**
	SNR=14						
WBK				S	**Sn**	**18 02 59.4**	**-3.0**
BSRN	**Basiran**	**6.55**	**43**	*ePn*	**Pn**	**18 01 50.3**	**+2.0**
NHDN	**Nehbandan**	**6.78**	**51**	*ePn*	**Pn**	**18 01 52.7**	**+1.2**
MHTO	**MHTO**	**7.26**	**148**	P	**Pn**	**18 01 59.3**	**+1.4**
MHTO				S	**Sn**	**18 03 17.2**	**-3.4**
DOK	**Doka**	**8.59**	**178**	P	**Pn**	**18 02 16.0**	**-0.2**
DOK				S	**Sn**	**18 03 54.2**	**+0.9**
WHFO	**Wadi Hawf**	**9.29**	**181**	P	**Pn**	**18 02 24.8**	**-1.0**
	SNR=9.0						
WHFO				S	**Sn**	**18 04 12.6**	**+2.2**

IDC 19 18:06:12.0±999.0, 53°.13N×0°.13E, h0km, Error ellipse: s-maj=517.7km s-min=189.3km az=95.0, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.57**	**111**	I		19 01 02.2	
	0.1nm,1.6s,baz=303,slow=318,SNR=14						
I43RU	**DUBNA INFRASON**	**21.44**	**65**	I		20 17 10.0	
	baz=280,slow=326,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**35.10**	**71**	I		21 41 00.0	
	baz=298,slow=326,SNR=2.2						
I46RU	**ZALESOVO INFRA**	**47.42**	**53**	I		22 59 40.0	
	baz=304,slow=337,SNR=1.0						

IDC 19 18:10:26.4±50.0, 16°.93S×179°.52W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=905.8km s-min=151.3km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.19**	**240**	P	P	18 17 48.2	+0.2
	1.1nm,0.5s,baz=63,slow=8.1,SNR=4.7						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**43.78**	**259**	P	P	18 18 34.0	-0.2
	0.5nm,0.5s,baz=94,slow=7.4,SNR=26						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.05**	**253**	P	P	18 18 36.1	-0.3
	3.3nm,0.7s,baz=86,slow=8.8,SNR=65						
	3.3nm,0.7s						

*NEIC **19** 18:14:41.6±0.8, 17°.31S±0°.09×71°.3W±0°.2, h86km±16km, mb3.9/3, ML4.1(ARE), ML3.6(GUC), Error ellipse: s-maj=24.0km s-min=11.2km az=108.0*
*ARE **19** 18:14:43±1.8, 17°.37S±0°.08×71°.2W±0°.2, h68km±9km, Error ellipse: s-maj=23.3km s-min=10.6km az=100.0*
*GUC **19** 18:14:43.1±0.7, 17°.28S×71°.08W, h71km±8km, ML3.6*
*IDC **19** 18:14:46.9±5.2, 17°.45S×70°.83W, h122km±30km, mb3.8/3, mbtmp4.2/6, MS2.4/1, Error ellipse: s-maj=64.4km s-min=13.9km az=112.0*

ISC 19 18:14:42.5±1.3, 17°.36S±0°.07×71°.2W±0°.1, h100km, n37, σ0°.81/39, mb4.3/4, 3C-1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**1.29**	**141**		**Pn**	**18 15 06.2**	**-0.1**
AP01	**Chacalluta**	**1.29**	**141**	*iP*	**Pn**	**18 15 06.2**	**-0.1**
AP01				*i S*	**Sn**	**18 15 23.6**	**-0.6**
PB12	**IPOC Station P**	**1.49**	**147**		**Pn**	**18 15 08.6**	**-0.3**
PB12	**IPOC Station P**	**1.49**	**147**	*iP*	**Pn**	**18 15 08.4**	**-0.4**
PB12				*i S*	**Sn**	**18 15 28.4**	**-0.4**
PB12				IAML		18 15 33.4	
	comp=N,2μm,0.2s						
PB16	**IPOC Station P**	**1.88**	**121**		**Pn**	**18 15 13.7**	**-0.3**
PB16	**IPOC Station P**	**1.88**	**121**	*iP*	**Pn**	**18 15 14.2**	**+0.1**
PB16				*i S*	**Sn**	**18 15 37.3**	**-0.7**
PB16				IAML		18 15 40.8	
	comp=N,448nm,0.6s						
GO01	**Chusmiza**	**2.98**	**141**		**Pn**	**18 15 28.6**	**+0.1**
GO01	**Chusmiza**	**2.98**	**141**	*i P*	**Pn**	**18 15 29.3**	**+0.9**
GO01				IAML		18 16 17.3	
	comp=N,307nm,0.4s						
TA02	**Huaiquique**	**3.06**	**161**	Pn	**Pn**	**18 15 28.9**	**-0.3**
LPAZ	**La Paz**	**3.12**	**70**	P	**Pn**	**18 15 31.5**	**+1.0**
	comp=N,152nm,0.7s,baz=252,slow=9.6,SNR=503						
LPAZ				S	**Sn**	**18 16 07.2**	**-0.2**
	comp=N,16nm,0.6s,baz=347,slow=19,SNR=1.2						
LPAZ				LR	LR	18 16 25.0	
	comp=N,57nm,19.1s,baz=256,slow=35						
TA01	**Diego Aracena**	**3.33**	**163**		**Pn**	**18 15 32.7**	**0.0**
PB08	**IPOC Station P**	**3.37**	**145**		**Pn**	**18 15 33.9**	**+0.2**
PB08	**IPOC Station P**	**3.37**	**145**	*iP*	**Pn**	**18 15 34.1**	**+0.4**
PB08				IAML		18 16 26.4	
	comp=E,124nm,0.2s						
PATCX	**Punta Patache**	**3.58**	**164**	Pn	**Pn**	**18 15 36.0**	**-0.2**
PB01	**IPOC Station P**	**4.00**	**157**		**Pn**	**18 15 41.5**	**-0.4**
PB02	**IPOC Station P**	**4.12**	**163**		**Pn**	**18 15 43.5**	**-0.1**
PB07	**IPOC Station P**	**4.51**	**164**		**Pn**	**18 15 48.6**	**-0.3**
PB09	**IPOC Station P**	**4.78**	**158**	Pn	**Pn**	**18 15 52.6**	**+0.2**
PB03	**IPOC Station P**	**4.86**	**164**		**Pn**	**18 15 53.3**	**-0.2**
PB04	**IPOC Station P**	**5.04**	**169**	Pn	**Pn**	**18 15 55.7**	**-0.3**
PB06	**IPOC Station P**	**5.53**	**164**	Pn	**Pn**	**18 16 01.9**	**-0.7**
LVC	**Limon Verde**	**5.65**	**158**	P	**Pn**	**18 16 05.1**	**+0.7**
	comp=E,3.8nm,0.2s,baz=5.6,slow=9.0,SNR=22						
LVC				S	**Sn**	**18 17 08.4**	**+0.3**
	comp=E,10nm,0.4s,baz=44,slow=21,SNR=7.6						
LVC	**Limon Verde**	**5.65**	**158**	Pn	**Pn**	**18 16 04.8**	**+0.4**
PB15	**IPOC Station P**	**6.04**	**165**	Pn	**Pn**	**18 16 09.1**	**-0.5**
PB10	**IPOC Station P**	**6.15**	**175**	Pn	**Pn**	**18 16 10.3**	**-0.6**
GO02	**Mina Guanaco**	**7.91**	**169**	Pn	**Pn**	**18 16 33.9**	**-1.1**
AC01	**Pan de Azucar**	**8.76**	**176**	Pn	**Pn**	**18 16 44.7**	**-1.7**
AC02	**Maricunga**	**9.62**	**169**	Pn	**Pn**	**18 16 57.7**	**-0.8**
SIV	**San Ignacio**	**9.79**	**83**	P	**Pn**	**18 16 58.6**	**-1.9**
	comp=E,13nm,0.6s,baz=263,slow=13,SNR=43						
H03N1	**Juan Fernandez**	**17.45**	**202**	T	T	18 36 26.5	
	baz=27,slow=73,SNR=188						
H03N2	**Juan Fernandez**	**17.46**	**202**	T	T	18 36 26.2	
	baz=27,slow=73,SNR=198						
H03N3	**Juan Fernandez**	**17.47**	**202**	T	T	18 36 25.3	
	baz=27,slow=73,SNR=132						
PLCA	**Paso Flores**	**23.30**	**179**	P	**P**	**18 19 44.5**	**+2.9**
	comp=E,0.9nm,0.7s,baz=21,slow=12,SNR=3.5						
	comp=E,0.9nm,0.7s						
PLCA	**Paso Flores**	**23.30**	**179**	P	**P**	**18 19 42.1**	**+0.5**
PLCA				IAmb	IAmb	18 20 10.5	
	comp=Z,7.7nm,1.5s						
BAUV	**El Baul**	**26.32**	**7**	P	**P**	**18 20 08.4**	**-0.8**
BAUV				IAmb	IAmb	18 20 25.8	
	comp=Z,20nm,1.4s						
DBIC	**Dimbokro**	**69.72**	**76**	P	**P**	**18 25 42.5**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=230,slow=3.8,SNR=4.6						
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.07**	**72**	P	**P**	**18 26 31.0**	**+0.1**
	comp=Z,4.0nm,0.6s,baz=255,slow=6.0,SNR=25						
	comp=Z,4.0nm,0.6s						

NOU 19 18:30:21.5, 14°.99S×167°.46E, h0km, MLv4.3/9, Vanuatu Islands, Vanuatu Islands

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC | Time h m s | Res ISC |
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FOCM SG **Sn** **19 17 28.4 -0.5**
APE Apeiranthos 1.00 195 PG **Pb** **19 17 14.7 -0.1**
APE Apeiranthos 1.00 195 P **Pb** **19 17 14.2 -0.6**
APE S **Sb** **19 17 27.6 -0.5**
comp=N,352nm,0.3s
APE Apeiranthos 1.00 195 P **Pb** **19 17 14.0 -0.8**
APE S **Sb** **19 17 26.6 -1.5**
APE AML AML 19 17 29.5
comp=E,794μm,0.4s
APE AML AML 19 17 30.1
comp=N,602μm,0.3s
BLCB Balcova 1.00 69 PG **Pb** **19 17 14.9 0.0**
BLCB Balcova 1.00 69 P **Pb** **19 17 14.4 -0.5**
BLCB S **Sb** **19 17 28.0 -0.2**
GCAM G?zelcaml? 1.15 107 PN **Pg** **19 17 18.1 +0.6**
GCAM G?zelcaml? 1.15 107 P **Pb** **19 17 17.4 0.0**
SIGR SIGRI 1.17 0 PN **Pb** **19 17 17.9 +0.1**
SIGR SIGRI 1.17 0 P **Pn** **19 17 18.1 +0.2**
SIGR S **Sn** **19 17 34.2 +0.3**
comp=N,212nm,0.4s
SIGR SIGRI 1.17 0 P **Pb** **19 17 17.9 +0.1**
SIGR S **Sn** **19 17 34.2 +0.3**
SIGR AML AML 19 17 39.0
comp=N,411μm,0.3s
SIGR AML AML 19 17 41.2
comp=E,431μm,0.8s
PRK Paraskevi 1.25 15 P **Pg** **19 17 19.8 +0.3**
PRK Paraskevi 1.25 15 P **Pg** **19 17 19.7 +0.3**
PRK S **Sg** **19 17 36.3 +0.5**
PRK AML AML 19 17 43.1
comp=N,298μm,0.5s
PRK AML AML 19 17 44.0
comp=E,391μm,0.4s
DKL Dikili 1.32 39 PN **Pn** **19 17 19.8 -0.1**
ZEDA zmir-Bergama 1.34 46 P **Pn** **19 17 20.1 0.0**
ZEDA S **Sb** **19 17 36.6 -1.2**
AYVA Ayvalik 1.43 27 P **Pg** **19 17 23.3 +0.4**
AYVA S **Sg** **19 17 42.1 +0.7**
KOCA Canakkale, Ayv 1.48 9 P **Pn** **19 17 21.1 -1.0**
DION Dionisos Attik 1.51 272 P **Pn** **19 17 22.9 +0.4**
BODT Bodrum 1.52 129 PN **Pn** **19 17 23.5 +0.9**
PTL Penteli 1.56 271 P **Pn** **19 17 23.6 +0.3**
KOSK Kos Island 1.57 145 PN **Pb** **19 17 24.5 0.0**
BDRM Kayabasi 1.60 127 P **Pb** **19 17 26.1 +1.0**
AYDB Zeytinkoy-Aydi 1.62 93 PN **Pn** **19 17 24.9 +0.8**
VLY Voula,Athens 1.63 264 P **Pn** **19 17 24.4 +0.2**
AYDN Tasoluk 1.65 103 P **Pn** **19 17 25.2 +0.7**
SANT Santorini 1.69 191 PN **Pn** **19 17 25.5 +0.4**
BUHA Balikesir, Bur 1.75 33 P **Pn** **19 17 24.6 -1.3**
BAYC CANAKKALE_Bayr 1.79 18 P **Pn** **19 17 25.5 -0.8**
BOZC Bozcaada 1.81 5 PN **Pn** **19 17 26.7 +0.1**
BOZC Bozcaada 1.81 5 P **Pn** **19 17 25.8 -0.8**
EZN Ezine 1.82 12 PN **Pn** **19 17 26.9 +0.1**
DAT Datca 1.90 133 PN **Pn** **19 17 28.8 +0.8**
STEP BALIKESIR_Sava 1.98 47 P **Pb** **19 17 32.0 +0.4**
GADA Gvkgeada 2.15 1 PN **Pn** **19 17 31.7 +0.4**
MANT Manisa 2.18 77 P **Pg** **19 17 36.7 -0.5**
BALY Balya 2.19 39 P **Pb** **19 17 34.9 -0.3**
TURN Turunc 2.29 123 PN **Pn** **19 17 34.7 +1.5**
GELI Tayfur-Gelibol 2.41 12 PN **Pn** **19 17 35.3 +0.5**

IDC 19 19:29:40.1±327.0, 37°.76N×117°.85W, h0km, Error ellipse: s-maj=153.3km s-min=90.7km az=161.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**0.76**	**332**	I		19 30 19.0	
	baz=235,slow=21,SNR=63						
I57US	**PINON FLAT INF**	**4.29**	**164**	I		19 59 00.0	
	0.5nm,0.4s,baz=342,slow=312,SNR=7.9						
I56US	**NEWPORT INFRASI**	**0.52**	**3**	I		20 34 50.0	
	baz=179,slow=323,SNR=1.9						
I10CA	**LAC DU BONNET**	**19.95**	**44**	I		21 33 40.0	
	baz=234,slow=326,SNR=1.1						

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*SOME **19** 19:30:46.9, 39°.13N×73°.00E, h0km*
*NNC **19** 19:30:58.9±6.8, 39°.16N×74°.42E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=51.0km s-min=29.0km az=153.0*
KRNET 19 19:31:08.1±0.1, 39°.38N×73°.60E, mb2.5, 12C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**332**	⇑*iP*	Pg	19 31 32.9	-0.2
	baz=32						
OHH				⇑*iS*	Sb	19 31 50.8	-0.1
	baz=32						
DRK	**Karamyk**	**1.40**	**275**	⇓*iP*	Pg	19 31 34.5	-0.4
	baz=75						
DRK				⇓*iS*	Sb	19 31 53.8	+0.1
	baz=75						
BTK	**Batken**	**2.25**	**288**	⇑*iP*	Pb	19 31 48.3	-1.4
	baz=88						
BTK				⇑*iS*	Sb	19 32 18.0	-0.1
	baz=88						
ARLS	**Aral**	**2.54**	**12**	⇑*iP*	Pn	19 31 52.2	+1.5
	baz=12						
ARLS				⇑*iS*	Sb	19 32 24.6	-1.9
	baz=12						
GAR	**Garm**	**2.58**	**263**	⇓*iP*	Pn	19 31 53.1	+1.9
	baz=63						
GAR				⇓*iS*	Sb	19 32 25.7	-1.9
	baz=63						
ARK	**Arkit**	**2.72**	**333**	⇓*iP*	Pn	19 31 54.7	+1.5
	baz=33						
ARK				⇓*iS*	Sn	19 32 29.2	+2.4
	baz=33						
TRKS	**Terek-Say**	**2.85**	**320**	⇓*iP*	Pn	19 31 56.0	+1.0
	baz=19						
TRKS				⇓*iS*	Sn	19 32 30.9	+0.7
	baz=19						
UCH	**Uchtor**	**2.93**	**13**	⇓*iP*	Pn	19 31 58.1	+1.8
	baz=13						
UCH				⇓*iS*	Sn	19 32 34.8	+2.3
	baz=13						
CHMS	**Chumysh**	**3.72**	**13**	⇑Lg	Lg	19 33 01.6	
	5.2nm,0.8s						
CHMS	**Chumysh**	**3.72**	**13**	⇑Lg	Lg	19 33 01.6	
	5.2nm,0.8s						
TKM2	**Tokmak 2**	**3.85**	**22**	⇓Pg	Pn	19 32 10.3	+1.6
	1.8nm,0.9s						
TKM2				⇑Lg	Lg	19 33 03.5	
	3.7nm,0.9s						
TKM2	**Tokmak 2**	**3.85**	**22**	⇓Pn	Pn	19 32 10.3	+1.6
	1.8nm,0.9s						
TKM2				⇑Lg	Lg	19 33 03.5	
	3.7nm,0.9s						
KST	**Kastek**	**4.07**	**25**	*eP*	Pn	19 32 11.5	-0.3
	1.9nm,0.6s						
KST				*eS*	Sb	19 33 12.5	+1.9
	6.0nm,0.7s						
KST	**Kastek**	**4.07**	**25**	Pg	Pn	19 32 11.5	-0.3
	1.9nm,0.6s						
KST				Lg	Lg	19 33 13.2	
	6.0nm,0.7s						
DGS	**Degeres**	**4.19**	**22**	*eP*	Pn	19 32 12.7	-0.7
	1.2nm,0.8s						
DGS				*eS*	Sb	19 33 14.4	+0.3
	3.8nm,0.7s						
DGS	**Degeres**	**4.19**	**22**	Pg	Pn	19 32 12.7	-0.7
	1.2nm,0.8s						
DGS				Lg	Lg	19 33 15.2	
	3.8nm,0.7s						
KK31	**Karatay Array**	**4.39**	**329**	⇓Pn	Pn	19 32 17.1	+1.1
	0.2nm,0.3s,baz=131,slow=13,SNR=12						
KK31				⇑Sn	Sn	19 33 10.6	+2.8
	0.4nm,0.3s,baz=139,slow=21,SNR=4.7						
KK31	**Karatay Array**	**4.39**	**329**	⇓Pn	Pn	19 32 17.1	+1.1
	0.2nm,0.3s,baz=131,slow=13,SNR=12						
KK31				⇑Sn	Sn	19 33 10.6	+2.8
	0.4nm,0.3s,baz=139,slow=21,SNR=4.7						
TNSS	**Tian-Shan**	**4.44**	**34**	*eP*	Pn	19 32 19.0	+1.9
	1.5nm,0.3s						
TNSS				*eS*	Sb	19 33 25.3	+3.8
	3.9nm,0.9s						
KRBS	**Karabastau**	**4.59**	**19**	*eP*	Pn	19 32 20.4	+1.7
	0.6nm,0.6s						
KRBS				*eS*	Sb	19 33 27.5	+2.2
	1.5nm,0.7s						
KRBS	**Karabastau**	**4.59**	**19**	Pg	Pn	19 32 20.4	+1.7
	0.6nm,0.6s						
KRBS				Lg	Lg	19 33 28.4	
	1.5nm,0.7s						
MDOK	**Medeo**	**4.59**	**33**	*eP*	Pn	19 32 22.1	+3.2
	1.7nm,0.6s						
MDOK				*eS*	Sg	19 33 30.5	-5.0
	2.3nm,0.5s						
KTBS	**Karatobe**	**4.91**	**27**	*eP*	Pn	19 32 26.6	+3.4
	1.6nm,0.6s						
KTBS				*eS*	Sb	19 33 38.5	+3.9
	5.6nm,0.6s						
KTBS	**Karatobe**	**4.91**	**27**	Pg	Pn	19 32 26.6	+3.4
	1.6nm,0.6s						
KTBS				Lg	Lg	19 33 38.5	
	5.6nm,0.6s						

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*ARE **19** 19:31:12±3.7, 13°.64S±0°.06×76°.53W±0°.10, h52km±5km, Error ellipse: s-maj=0.0km s-min=0.0km az=165.0*
*IDC **19** 19:31:15.4±0.6, 13°.51S×76°.16W, h47km±4km, mb4.1/15, mbtmp4.4/19, MS3.5/23, Error ellipse: s-maj=22.7km s-min=11.7km az=55.0*
*NEIC **19** 19:31:16.0±2.0, 13°.58S±0°.07×76°.27W±0°.09, h49km±7km, mb4.7/120, ML5.0(ARE), Error ellipse: s-maj=14.2km s-min=8.7km az=63.0*
ISC 19 19:31:13.6±0.4, 13°.56S±0°.05×76°.34W±0°.10, h33km, n212, σ1818/196, mb4.7/67, MS3.5/20, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.63**	**342**	P	**Pn**	**19 31 41.9**	**+1.8**
	544nm,0.3s,baz=147,slow=10,SNR=80						
NNA				S	**Sb**	**19 32 03.8**	**+0.3**
	2μm,0.3s,baz=201,slow=13,SNR=13						
NNA				LR	LR	19 32 28.1	
	comp=Z,704nm,18.8s,baz=139,slow=44						
NNA	**Nana**	**1.63**	**342**		**Pn**	**19 31 41.7**	**+1.6**
ATAH	**Atahualpa**	**6.69**	**342**	P	**Pn**	**19 32 52.6**	**+2.5**
	9.1nm,0.3s,baz=162,slow=6.9,SNR=13						
ATAH				S	**Sb**	**19 34 23.7**	**-5.5**
	54nm,0.5s,baz=0.0,slow=7.1,SNR=2.3						
AP01	**Chacalluta**	**7.50**	**130**	Pn	**Pn**	**19 33 01.4**	**+0.8**
PB12	**IPOC Station P**	**7.66**	**132**	Pn	**Pn**	**19 33 01.7**	**-1.4**
PB12	**IPOC Station P**	**7.66**	**132**	*i* P	**Pn**	**19 33 01.6**	**-1.4**
PB16	**IPOC Station P**	**8.11**	**127**	Pn	**Pn**	**19 33 10.4**	**+0.7**
PB16	**IPOC Station P**	**8.11**	**127**	*i* P	**Pn**	**19 33 10.3**	**+0.7**
LPAZ	**La Paz**	**8.39**	**110**	P	**Pn**	**19 33 14.8**	**+1.3**
	32nm,0.4s,baz=296,slow=8.9,SNR=85						
LPAZ				S	Sn	19 34 55.3	+7.9
	20nm,0.7s,baz=193,slow=23,SNR=6.7						
LPAZ				LR	LR	19 36 54.7	
	comp=Z,317nm,21.1s,baz=294,slow=41						
LPAZ	**La Paz**	**8.39**	**110**	Pn	**Pn**	**19 33 15.6**	**+2.1**
LPAZ	**La Paz**	**8.39**	**110**	*eP*	**Pn**	**19 33 17.0**	**+3.6**
TA02	**Huaiquique**	**8.94**	**139**	Pn	**Pn**	**19 33 20.5**	**+0.1**
TA01	**Diego Aracena**	**9.12**	**141**	Pn	**Pn**	**19 33 23.3**	**+0.3**
GO01	**Chusmiza**	**9.15**	**133**	Pn	**Pn**	**19 33 23.6**	**-0.3**
GO01	**Chusmiza**	**9.15**	**133**	*i* P	**Pn**	**19 33 23.6**	**-0.3**
GO01				IAmb	IAmb	19 33 38.0	
	comp=Z,93nm,0.9s						
PATCX	**Punta Patache**	**9.33**	**142**		**Pn**	**19 33 25.8**	**-0.2**
PB08	**IPOC Station P**	**9.50**	**135**		**Pn**	**19 33 28.7**	**+0.2**
PB02	**IPOC Station P**	**9.87**	**142**		**Pn**	**19 33 33.1**	**-0.2**
PB01	**IPOC Station P**	**9.91**	**140**		**Pn**	**19 33 34.1**	**+0.2**
PB07	**IPOC Station P**	**10.19**	**144**		**Pn**	**19 33 38.0**	**+0.2**
PB03	**IPOC Station P**	**10.52**	**144**		**Pn**	**19 33 42.6**	**+0.3**
PB04	**IPOC Station P**	**10.53**	**147**	Pn	**Pn**	**19 33 42.4**	**-0.1**
BOSC	**San Juan Bosco**	**10.55**	**348**		**Pn**	**19 33 41.4**	**-1.4**
PB09	**IPOC Station P**	**10.62**	**141**		**Pn**	**19 33 44.7**	**+1.0**
PB06	**IPOC Station P**	**11.14**	**146**	Pn	**Pn**	**19 33 50.0**	**-0.8**
PB10	**IPOC Station P**	**11.32**	**152**	Pn	**Pn**	**19 33 53.0**	**-0.2**
COHC	**Cochancay**	**11.39**	**345**		**Pn**	**19 33 56.1**	**+2.0**
LVC	**Limon Verde**	**11.44**	**143**	P	**Pn**	**19 33 57.1**	**+2.0**
	comp=Z,7.5nm,0.4s,baz=325,slow=12,SNR=13						
LVC				S	**Sn**	**19 36 04.8**	**+2.8**
	comp=Z,20nm,0.5s,baz=126,slow=20,SNR=7.5						
LVC				LR	LR	19 38 03.1	
	comp=Z,127nm,21.0s,baz=322,slow=36						
LVC	**Limon Verde**	**11.44**	**143**	Pn	**Pn**	**19 33 55.9**	**+0.8**
PB15	**IPOC Station P**	**11.60**	**147**		**Pn**	**19 33 57.1**	**-0.1**
PB14	**IPOC Station P**	**12.36**	**154**	Pn	**Pn**	**19 34 07.1**	**-0.5**
SLOR	**San Lorenzo -**	**12.92**	**350**		**Pn**	**19 34 14.8**	**-0.6**
GO02	**Mina Guanaco**	**13.18**	**152**	Pn	**Pn**	**19 34 17.0**	**-1.8**
AC02	**Maricunga**	**14.84**	**154**		**Pn**	**19 34 43.6**	**+2.0**
SIV	**San Ignacio**	**14.96**	**101**	P	**Pn**	**19 34 42.5**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=283,slow=11,SNR=15						
FLOC	**Florencia**	**15.06**	**3**	*eP*	**P**	**19 34 49.3**	**+0.2**
BBAC	**Balboa, Cauca**	**15.50**	**357**	*eP*	**P**	**19 34 55.9**	**+1.7**
GARC	**Garzon, Huila**	**15.66**	**3**	*eP*	**P**	**19 34 55.0**	**-1.1**
AC05	**El Transito**	**16.22**	**161**		**P**	**19 35 00.3**	**-1.7**
GO04	**Tololo Observa**	**17.31**	**164**		**P**	**19 35 14.0**	**-0.3**
GO04				IAmb	IAmb	19 35 28.9	
	comp=Z,77nm,1.5s						
YOTC	**Yotoco, Valle**	**17.43**	**360**	*eP*	**P**	**19 35 16.9**	**+1.4**
CO03	**El Pedregal**	**17.97**	**164**		**P**	**19 35 21.7**	**+0.3**
CHIC	**Chingaza**	**18.25**	**8**	*eP*	**Pn**	**19 35 29.2**	**+4.3**
PLMC	**San Jos del P**	**18.34**	**0**	*eP*	**Pn**	**19 35 27.3**	**+1.7**
ROSC	**El Rosal**	**18.39**	**6**	LR	LR	19 42 21.4	
	comp=Z,110nm,18.9s,baz=195,slow=36						
GUY2C	**Guyana, Caldas**	**18.68**	**3**	*eP*	**Pn**	**19 35 32.9**	**+2.7**
NORC	**Norcasia**	**19.05**	**4**	*eP*	**Pn**	**19 35 36.0**	**+1.7**
ZON	**Zonda**	**19.24**	**160**		**P**	**19 35 34.2**	**-1.1**
RUSC	**La Rusia**	**19.59**	**10**	*eP*	Pn	**19 35 42.4**	**+1.3**
VA03	**San Esteban**	**19.84**	**165**	P	**P**	**19 35 40.9**	**-0.9**
PTBC	**PUERTO BERRIO,**	**20.05**	**5**	*eP*	Pn	19 35 45.5	-0.6
BARC	**Barichara**	**20.26**	**9**	*eP*	Pn	19 35 48.2	-0.5
BRRC	**Barranca, Sant**	**20.69**	**7**	*eP*	**P**	**19 35 51.6**	**+0.5**
MT09	**Talagante**	**20.71**	**167**	P	Pn	19 35 53.0	-0.8
AQDB	**Aquidauana**	**20.89**	**112**	P	**P**	**19 35 52.4**	**-0.8**
LMEL	**Las Melosas**	**20.96**	**166**	P	**P**	**19 35 51.8**	**-2.2**
LMEL				IAmb	IAmb	19 36 15.6	
	comp=Z,21nm,0.9s						
BO04	**La Punta**	**21.00**	**167**	P	**P**	**19 35 54.2**	**-0.2**
PAMC	**Pamplona, Colo**	**21.07**	**10**	*eP*	**P**	**19 35 56.8**	**+1.1**
BO01	**Tunca**	**21.28**	**168**	P	**P**	**19 35 56.8**	**-0.5**
BO02	**Sierra Bellavi**	**21.73**	**168**	P	**P**	**19 36 02.8**	**+0.5**
BO02				IAmb	IAmb	19 36 30.5	
	comp=Z,15nm,0.7s						
CPUP	**Villa Florida**	**21.89**	**128**	P	**P**	**19 36 03.0**	**-0.9**
	comp=Z,3.0nm,0.8s,baz=320,slow=12,SNR=4.0						
CPUP				LR	LR	19 46 30.2	
	comp=Z,115nm,20.5s,baz=328,slow=42						
	comp=Z,3.0nm,0.8s						
CPUP	**Villa Florida**	**21.89**	**128**	P	**P**	**19 36 02.8**	**-1.1**
SDV	**Santo Domingo**	**23.00**	**15**	P	**P**	**19 36 14.3**	**-1.8**
	comp=Z,12nm,0.7s,baz=226,slow=5.3,SNR=9.0						
	comp=Z,12nm,0.7s						
SDV	**Santo Domingo**	**23.00**	**15**	P	**P**	**19 36 15.5**	**-0.5**
SDV				IAmb	IAmb	19 36 47.9	
	comp=Z,14nm,0.8s						
BAUV	**El Baul**	**23.82**	**21**	P	**P**	**19 36 22.7**	**-1.1**
PCRV	**Puerto La Cruz**	**26.28**	**27**	LR	LR	19 48 02.5	
	comp=Z,156nm,19.8s,slow=38						
PLCA	**Paso Flores**	**27.55**	**170**	P	**P**	**19 36 57.1**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=341,slow=11,SNR=12						
PLCA				LR	LR	19 45 50.9	
	comp=Z,40nm,20.0s,baz=360,slow=32						
	comp=Z,2.9nm,0.7s						
PLCA	**Paso Flores**	**27.55**	**170**	P	**P**	**19 36 57.4**	**-0.1**
MDP	**Montagnes des**	**29.95**	**53**	LR	LR	19 49 15.8	
	comp=Z,129nm,19.9s,baz=232,slow=36						
SJG	**San Juan**	**33.03**	**18**	LR	LR	19 51 04.2	
	comp=Z,58nm,20.6s,baz=254,slow=36						
RPN	**Rapa Nui**	**33.64**	**241**	LR	LR	19 47 52.0	
	comp=Z,100nm,20.5s,baz=116,slow=30						
CMIG	**Matias Romero**	**35.53**	**328**	LR	LR	19 50 19.5	
	comp=Z,74nm,19.3s,baz=194,slow=32						
RCBR	**Riachuelo**	**40.55**	**83**	LR	LR	19 54 45.8	
	comp=Z,71nm,19.2s,baz=81,slow=35						
TKL	**Tuckaleechee C**	**49.45**	**352**	LR	LR	20 01 25.2	
	comp=Z,34nm,18.3s,baz=107,slow=37						
TX32	**Lajitas Array**	**50.14**	**329**	P	**P**	**19 40 07.2**	**+1.1**
TXAR	**Lajitas Array**	**50.14**	**329**	P	**P**	**19 40 07.4**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=148,slow=8.4,SNR=17						
TXAR				pP	**sP**	**19 40 19.9**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=149,slow=7.6,SNR=12						
	comp=Z,1.5nm,0.7s						
TXAR	**Lajitas Array**	**50.14**	**329**	P	**P**	**19 40 07.0**	**+0.8**
TX31	**Lajitas Ar. Si**	**50.14**	**329**	P	**P**	**19 40 07.4**	**+1.2**
TX31				IAmb	IAmb	19 40 21.4	
	comp=Z,10nm,0.9s						
T57A	**Hurt**	**50.36**	**357**	P	**P**	**19 40 07.3**	**-0.2**
WCI	**Wyandotte Cave**	**52.35**	**350**	P	**P**	**19 40 22.1**	**-0.3**
S44A	**Carbondale**	**52.40**	**347**	P	**P**	**19 40 21.8**	**-0.9**
SIUC	**Southern Illin**	**52.41**	**347**	P	**P**	**19 40 21.8**	**-1.1**
MGMO	**Mountain Grove**	**52.62**	**344**	P	**P**	**19 40 24.4**	**-0.1**
MGMO				IAmb	IAmb	19 40 25.9	
	comp=Z,10nm,1.1s						
OLIL	**Olney**	**53.17**	**349**	P	**P**	**19 40 27.5**	**-0.9**
P49A	**Miami Univ. Ec**	**53.39**	**352**	P	**P**	**19 40 28.4**	**-1.7**
Q44A	**Meyer Farm, Va**	**53.51**	**348**	P	**P**	**19 40 30.2**	**-0.8**
T35A	**Sooner Cattle**	**53.68**	**340**	P	**P**	**19 40 31.8**	**-0.5**
R40A	**Maddies Statio**	**53.69**	**344**	P	**P**	**19 40 31.8**	**-0.5**
L59A	**Walton**	**55.48**	**1**	P	**P**	**19 40 45.4**	**+0.2**
ANMO	**Albuquerque**	**56.07**	**330**	P	**P**	**19 40 50.0**	**+0.2**
ANMO				IAmb	IAmb	19 41 05.4	
	comp=Z,6.3nm,1.2s						
T25A	**Trinidad**	**56.93**	**333**	P	**P**	**19 40 56.3**	**+0.4**
T25A				IAmb	IAmb	19 40 57.6	
	comp=Z,4.7nm,0.6s						
L40A	**Anamosa**	**57.02**	**347**	P	**P**	**19 40 55.0**	**-1.2**
L40A				IAmb	IAmb	19 40 56.0	
	comp=Z,9.4nm,1.0s						
K43A	**Burlington**	**57.06**	**349**	P	**P**	**19 40 55.0**	**-1.5**
SDCO	**Great Sand Dun**	**57.91**	**333**	P	**P**	**19 41 03.8**	**+0.9**
I42A	**Draeger Farm,**	**58.31**	**349**	P	**P**	**19 41 04.1**	**-1.2**
S22A	**4UR Ranch, Cre**	**58.51**	**332**	P	**P**	**19 41 06.5**	**-0.7**
S22A				IAmb	IAmb	19 41 30.2	
	comp=Z,9.4nm,1.4s						
MNTQ	**Montreal, Queb**	**58.83**	**2**	P	**P**	**19 41 08.3**	**-0.4**
K31A	**O'Neill**	**59.58**	**341**	P	**P**	**19 41 14.2**	**+0.1**
PV15	**Paradox Valley**	**59.76**	**331**	P	**P**	**19 41 17.1**	**+1.4**
PV13	**Radium Mtn., P**	**59.77**	**331**	P	**P**	**19 41 16.2**	**+0.4**
PV13				IAmb	IAmb	19 41 31.4	
	comp=Z,7.8nm,1.1s						
ECSD	**EROS Data Cent**	**59.95**	**343**	P	**P**	**19 41 16.0**	**-0.6**
ECSD				IAmb	IAmb	19 41 17.1	
	comp=Z,7.4nm,1.0s						
W13A	**Hualapai Mount**	**60.07**	**325**	P	**P**	**19 41 19.0**	**+1.1**
W13A				IAmb	IAmb	19 41 34.4	
	comp=Z,7.9nm,1.2s						
U15A	**North Rim**	**60.18**	**327**	P	**P**	**19 41 20.2**	**+1.5**
U15A				IAmb	IAmb	19 41 34.5	
	comp=Z,3.5nm,1.0s						
PFO	**Pinyon Flats O**	**60.51**	**322**	LR	LR	20 02 54.5	
	comp=Z,38nm,21.8s,baz=138,slow=31						
KNB	**Kanab**	**60.91**	**327**	P	**P**	**19 41 25.3**	**+1.7**
KNB				IAmb	IAmb	19 41 39.5	
	comp=Z,5.3nm,0.9s						
LCMT	**Little Creek M**	**61.13**	**327**	P	**P**	**19 41 25.4**	**+0.4**
F36A	**Milaca**	**61.14**	**346**	P	**P**	**19 41 24.4**	**-0.3**
SRU	**San Rafael Swe**	**61.34**	**330**	P	**P**	**19 41 27.5**	**+1.0**
SRU				IAmb	IAmb	19 41 41.9	
	comp=Z,9.6nm,1.5s						
CCUT	**Cedar City**	**61.59**	**327**	P	**P**	**19 41 28.9**	**+0.7**
CCUT				IAmb	IAmb	19 41 30.9	
	comp=Z,5.1nm,1.1s						
P18A	**Preston Nutter**	**61.62**	**331**	P	**P**	**19 41 28.8**	**+0.3**
P18A				IAmb	IAmb	19 41 43.5	
	comp=Z,4.3nm,1.0s						
MSU	**Marysvale**	**61.70**	**329**	P	**P**	**19 41 29.5**	**+0.6**
MVU	**Marysvale**	**61.71**	**329**	P	**P**	**19 41 28.7**	**-0.3**
P17A	**Butcher Ranch,**	**61.73**	**330**	P	**P**	**19 41 28.7**	**-0.3**
P17A				IAmb	IAmb	19 41 30.9	
	comp=Z,5.5nm,0.7s						
SHPR	**Sheep Range**	**61.80**	**325**	P	**P**	**19 41 29.9**	**+0.4**
TMUT	**Trail Mountain**	**61.82**	**330**	P	**P**	**19 41 30.3**	**+0.5**
TMUT				IAmb	IAmb	19 41 31.6	
	comp=Z,2.4nm,0.5s						
RDMU	**Red Mountain**	**62.05**	**332**	P	**P**	**19 41 31.9**	**+0.7**
PSUT	**Pine Spring**	**62.58**	**327**	P	**P**	**19 41 36.2**	**+1.4**
PSUT				IAmb	IAmb	19 41 51.1	
	comp=Z,5.0nm,1.1s						
RSSD	**Black Hills**	**62.71**	**338**	P	**P**	**19 41 35.6**	**0.0**
RSSD				IAmb	IAmb	19 41 36.6	
	comp=Z,5.4nm,1.1s						
WCT	**Wildcat Mounta**	**62.83**	**324**	P	**P**	**19 41 37.4**	**+1.0**
WCT				IAmb	IAmb	19 41 52.8	
	comp=Z,5.4nm,0.7s						
JLU	**Jordanelle**	**62.95**	**331**	P	**P**	**19 41 38.3**	**+1.0**
JLU				IAmb	IAmb	19 41 53.2	
	comp=Z,7.7nm,1.2s						
DUG	**Dugway, Tooele**	**63.30**	**329**	P	**P**	**19 41 40.7**	**+1.2**
DUG				IAmb	IAmb	19 41 42.0	
	comp=Z,5.8nm,0.8s						
TCUT	**Toone Canyon**	**63.33**	**331**	P	**P**	**19 41 39.8**	**-0.1**
TCUT				IAmb	IAmb	19 41 55.0	
	comp=Z,7.1nm,0.9s						
R11A	**Troy Canyon, C**	**63.37**	**326**	P	**P**	**19 41 41.5**	**+1.5**
B35A	**Bob, Littlefor**	**63.55**	**347**	P	**P**	**19 41 40.1**	**-0.7**
B35A				IAmb	IAmb	19 41 54.6	
	comp=Z,7.2nm,0.8s						
E28A	**Huff**	**63.73**	**342**	P	**P**	**19 41 42.2**	**+0.1**
HWUT	**Hardware Ranch**	**63.79**	**331**	P	**P**	**19 41 43.2**	**+0.5**
HWUT				IAmb	IAmb	19 41 44.3	
	comp=Z,8.4nm,0.9s						
PD31	**Pinedale Array**	**63.80**	**333**	P	**P**	**19 41 42.8**	**0.0**
PDAR	**Pinedale Array**	**63.80**	**333**	P	**P**	**19 41 43.0**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=124,slow=9.3,SNR=11						
PDAR				pP	**sP**	**19 41 56.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=121,slow=11,SNR=5.2						
	comp=Z,1.2nm,0.7s						
PDAR	**Pinedale Array**	**63.80**	**333**	P	**P**	**19 41 42.7**	**-0.1**
MZP	**Montezuma Peak**	**63.90**	**325**	P	**P**	**19 41 44.9**	**+1.3**
BGU	**Big Grassy Mou**	**63.97**	**330**	P	**P**	**19 41 44.

MFID	**Camas Ranch**	**67.21**	**330**	P	**P**	**19 42 05.4**	**+0.7**
MFID				IAmb	IAmb	19 42 07.1	
comp=Z,7.5nm,0.9s							
ORV	**Oroville**	**67.52**	**324**	P	**P**	**19 42 08.0**	**+1.4**
ORV				IAmb	IAmb	19 42 22.7	
comp=Z,9.6nm,0.9s							
BELA	**Belgrano 2**	**67.60**	**171**	P	**P**	**19 42 06.9**	**+0.3**
BELA				IAmb	IAmb	19 42 20.8	
comp=Z,4.8nm,0.6s							
MOD	**Modoc Plateau**	**68.43**	**326**	P	**P**	**19 42 12.4**	**-0.1**
MOD				IAmb	IAmb	19 42 30.2	
comp=Z,8.0nm,1.1s							
SCHQ	**Schefferville**	**68.59**	**6**	LR	LR	20 13 18.3	
comp=Z,26nm,18.1s,baz=170,slow=37							
MSO	**Missoula**	**68.92**	**333**	P	**P**	**19 42 16.1**	**+0.8**
MSO				IAmb	IAmb	19 42 43.4	
comp=Z,19nm,1.4s							
BMO	**Blue Mountains**	**68.98**	**330**	P	**P**	**19 42 16.3**	**+0.5**
KMRM	**Mail Ridge**	**69.24**	**323**	P	**P**	**19 42 18.6**	**+1.2**
I07A	**Izee**	**69.53**	**328**	P	**P**	**19 42 20.5**	**+1.3**
I07A				IAmb	IAmb	19 42 21.9	
comp=Z,9.4nm,1.0s							
VNA3	**Neumayer Olymp**	**69.82**	**162**	P	**P**	**19 42 20.6**	**+0.1**
PINE	**Pine Mountain**	**70.07**	**327**	P	**P**	**19 42 24.1**	**+1.4**
PINE				IAmb	IAmb	19 42 44.9	
comp=Z,6.5nm,0.9s							
VNA1	**Neumayer--Stat**	**70.09**	**161**	P	**P**	**19 42 22.4**	**+0.3**
G08A	**Pilot Rock**	**70.11**	**329**	P	**P**	**19 42 23.8**	**+1.0**
VNA2	**Neumayer--Watz**	**70.44**	**161**	P	**P**	**19 42 24.3**	**0.0**
baz=282,slow=6.0							
E09A	**Wood Farm, Sta**	**70.60**	**331**	P	**P**	**19 42 26.9**	**+1.3**
E09A				IAmb	IAmb	19 42 27.6	
comp=Z,6.0nm,1.0s							
SNAA	**Sanae**	**72.04**	**161**	P	**P**	**19 42 34.0**	**0.0**
SNAA	**Sanae**	**72.04**	**161**		**P**	**19 42 33.9**	**-0.2**
SNAA				IAmb	IAmb	19 42 35.0	
comp=Z,15nm,1.4s							
DBIC	**Dimbokro**	**73.75**	**79**	P	**P**	**19 42 44.2**	**-0.9**
comp=Z,6.3nm,0.5s,baz=225,slow=5.8,SNR=14							
comp=Z,6.3nm,0.5s							
DBIC	**Dimbokro**	**73.75**	**79**	P	**P**	**19 42 43.9**	**-1.2**
BRLDA	**Berland Lookou**	**75.89**	**336**	P	**P**	**19 42 55.7**	**-1.1**
QSPA	**South Pole Qui**	**76.59**	**180**	P	**P**	**19 43 01.1**	**+0.5**
QSPA				IAmb	IAmb	19 43 15.6	
comp=Z,4.2nm,0.8s							
KOWA	**Kowa**	**76.82**	**71**	P	**P**	**19 43 02.2**	**-0.5**
KOWA				IAmb	IAmb	19 43 03.0	
comp=Z,6.2nm,0.7s							
FRB	**Frobisher Bay**	**77.30**	**4**	LR	LR	20 21 21.2	
comp=Z,29nm,18.0s,baz=330,slow=39							
YKA	**Yellowknife Ar**	**81.48**	**343**	P	**P**	**19 43 27.0**	**-0.2**
comp=Z,4.6nm,0.9s,baz=143,slow=5.8,SNR=7.2							
comp=Z,4.6nm,0.9s							
TOA0	**Torodi Ar. Sit**	**81.73**	**74**	P	**P**	**19 43 28.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**81.73**	**74**	P	**P**	**19 43 29.1**	**-0.5**
comp=Z,15nm,0.8s,baz=260,slow=4.8,SNR=54							
comp=Z,15nm,0.8s							
VNDA	**Vanda**	**83.35**	**191**	P	**P**	**19 43 38.0**	**+1.1**
comp=Z,0.9nm,0.8s,baz=43,slow=2.8,SNR=6.8							
comp=Z,0.9nm,0.8s							
DLBC	**Dease Lake**	**83.98**	**335**	P	**P**	**19 43 41.2**	**+0.8**
comp=Z,2.7nm,0.4s,baz=108,slow=7.4,SNR=6.2							
comp=Z,2.7nm,0.4s							
ESDC	**Sonseca Array**	**85.46**	**48**	P	**P**	**19 43 48.0**	**-0.3**
comp=Z,0.8nm,0.6s,baz=257,slow=5.6,SNR=9.3							
ESDC				LR	LR	20 18 17.0	
comp=Z,20nm,21.2s,baz=271,slow=33							
comp=Z,0.8nm,0.6s							
TAM	**Tamanrasset**	**87.86**	**66**	P	**P**	**19 44 00.3**	**-0.2**
TAM				IAmb	IAmb	19 44 02.2	
comp=Z,6.0nm,1.1s							
SUR	**Sutherland**	**88.76**	**123**	LR	LR	20 20 35.6	
comp=Z,52nm,20.2s,baz=290,slow=33							
RES	**Resolute Bay**	**88.83**	**355**	LR	LR	20 27 50.4	
comp=Z,18nm,18.4s,baz=12,slow=38							
TSUM	**Tsumeb**	**89.24**	**109**	LR	LR	20 22 54.2	
comp=Z,30nm,18.8s,baz=338,slow=35							
BOSA	**Boshof**	**93.49**	**120**	P	**P**	**19 44 25.8**	**-1.0**
comp=Z,2.4nm,0.9s,baz=318,slow=7.0,SNR=2.3							
BOSA				LR	LR	20 24 27.1	
comp=Z,26nm,18.1s,baz=212,slow=34							
comp=Z,2.4nm,0.9s							
ILAR	**Eielson Array**	**94.11**	**336**	P	**P**	**19 44 27.9**	**-0.5**
comp=Z,0.4nm,0.3s,baz=126,slow=2.7,SNR=6.0							
ILAR				pP	**pP**	**19 44 41.1**	**+2.1**
comp=Z,1.4nm,0.8s,baz=157,slow=3.9,SNR=7.8							
comp=Z,0.4nm,0.3s							
LBTB	**Lobatse**	**94.85**	**117**	LR	LR	20 24 51.1	
comp=Z,23nm,18.8s,baz=248,slow=34							
OXZ	**Oxford**	**95.87**	**223**		**P**	**19 44 35.9**	**-1.2**
LSZ	**Lusaka**	**100.05**	**108**	LR	LR	20 29 12.1	
comp=Z,33nm,18.5s,baz=162,slow=35							
H11N3	**WAKE ISLAND Hyl**	**19.37**	**285**	T	T	22 00 27.3	
baz=96,slow=74,SNR=51							
H11N2	**WAKE ISLAND Hyl**	**19.39**	**285**	T	T	22 00 20.5	
baz=96,slow=74,SNR=44							
H11N1	**WAKE ISLAND Hyl**	**19.39**	**285**	T	T	22 00 29.8	
baz=96,slow=74,SNR=37							
H11S2	**WAKE ISLAND Hyl**	**19.46**	**284**	T	T	22 00 30.3	
baz=93,slow=74,SNR=67							
H11S1	**WAKE ISLAND Hyl**	**19.46**	**284**	T	T	22 00 33.4	
baz=93,slow=74,SNR=85							
H11S3	**WAKE ISLAND Hyl**	**19.47**	**284**	T	T	22 00 30.4	
baz=93,slow=74,SNR=54							
ASAR	**Alice Springs**	**132.64**	**219**	PKP	**PKPdf**	**19 50 24.8**	**-1.1**
comp=Z,0.5nm,0.7s,baz=126,slow=1.8,SNR=7.0							
WRA	**Warramunga Arr**	**135.06**	**223**	PKP	**PKPdf**	**19 50 30.4**	**-0.1**
comp=Z,0.9nm,0.6s,baz=127,slow=2.1,SNR=24							
ZALV	**Zalesovo Beam**	**137.05**	**16**	PKhKP	PKPpre	19 50 26.6	
comp=Z,2.4nm,0.7s,baz=298,slow=3.2,SNR=3.6							
ZALV				PKP	**PKPdf**	**19 50 32.7**	**-0.4**
comp=Z,3.1nm,0.8s,baz=281,slow=2.4,SNR=11							
ZALV				pPKP	sPKPdf	19 50 46.0	-1.7
comp=Z,3.0nm,0.8s,baz=281,slow=2.4,SNR=6.0							
MKAR	**Makanchi Array**	**142.32**	**24**	PKhKP	PKPpre	19 50 37.2	
comp=Z,0.7nm,0.7s,baz=9.5,slow=3.9,SNR=4.2							
MKAR				PKP	**PKPdf**	**19 50 42.4**	**-0.6**
comp=Z,0.7nm,0.7s,baz=0.0,slow=2.4,SNR=2.0							
KSH	**Kashi**	**144.46**	**38**	PKP	**PKPdf**	**19 50 46.8**	**-0.3**
SONM	**Songino Array**	**145.75**	**357**	PKPbc	**PKPbc**	**19 50 49.8**	**+0.4**
comp=Z,6.7nm,0.8s,baz=336,slow=2.3,SNR=23							
SONM				pPKPbc	**sPKPdf**	**19 51 02.9**	**-0.7**
comp=Z,7.1nm,0.9s,baz=327,slow=1.5,SNR=8.4							
KSRS	**Korea Array**	**147.84**	**322**	PKPbc	**PKPdf**	**19 50 53.2**	**+0.6**
comp=Z,1.5nm,0.8s,baz=33,slow=2.3,SNR=6.9							
PZH	**PanZhHua**	**166.99**	**8**	PKP	**PKPdf**	**19 51 15.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**173.34**	**42**	PKP	**PKPdf**	**19 51 19.4**	**-1.1**
comp=Z,0.6nm,0.9s,baz=302,slow=2.6,SNR=4.1							
CMAR				PKPab	**PKPab**	**19 52 46.5**	**-2.2**
comp=Z,0.5nm,0.7s,baz=299,slow=4.8,SNR=4.0							

*KRNET **19** 19:37:05.3±0.1, 39°.69N×70°.07E, h17km, mb2.8*
*ISU **19** 19:37:06, 39°.72N×70°.06E, h25km*
*NNC **19** 19:37:09.1±2.3, 39°.89N×70°.25E, h0km, mb3.1, mpv2.7,*
Error ellipse: s-maj=19.4km s-min=11.9km az=6.0
ISC 19 19:37:05.6±1.3,**39°.64N**±0°.03×**70°.11E**±0°.03,**h5**km±11km,
n25,σ0°.**93**/44,**11C-7D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.66**	**166**	⇑*iP*	**Pb**	**19 37 19.1**	**-0.6**
baz=64							
GAR				⇑*iS*	**Sb**	**19 37 28.8**	**-0.4**
baz=64							
BTK	**Batken**	**0.68**	**52**	⇑*iP*	**Pg**	**19 37 18.6**	**-0.2**
baz=57							
BTK				⇑*iS*	**Sg**	**19 37 27.5**	**-0.2**
baz=57							
BTK	**Batken**	**0.68**	**52**	P	**Pg**	**19 37 17.7**	**-1.1**
BTK				S	**Sg**	**19 37 27.5**	**-0.2**
MINT	**Mingtut**	**1.06**	**38**	P	**Pg**	**19 37 25.3**	**-0.6**
MINT				S	**Sb**	**19 37 40.4**	**-0.2**
CHGR	**Chuyangaron**	**1.23**	**217**	⇑*iP*	**Pg**	**19 37 29.0**	**-0.2**
baz=15							
CHGR				⇑*iS*	**Sb**	**19 37 45.5**	**-0.2**
baz=15							
CHMI	**Chimion**	**1.25**	**59**	P	**Pg**	**19 37 27.9**	**-1.7**
CHMI				S	**Sn**	**19 37 47.1**	**-0.1**
CHMI	**Chimion**	**1.25**	**59**	P	**Pg**	**19 37 28.9**	**-0.7**
CHMI				S	**Sn**	**19 37 47.1**	**-0.1**
DRK	**Karamyk**	**1.31**	**96**	⇑*iP*	**Pg**	**19 37 30.6**	**-0.2**
baz=98							
DRK				⇑*iS*	**Sn**	**19 37 49.2**	**+0.1**
baz=98							
FRG	**Fergana**	**1.48**	**60**	P	**Pg**	**19 37 35.2**	**+1.2**
FRG				S	**Sg**	**19 37 55.4**	**+2.3**
NZBK	**Nazarbek**	**1.75**	**335**	P	**Sn**	**19 38 01.0**	**+1.5**
TAS	**Tashkent**	**1.79**	**340**	⇓*iP*	**Pn**	**19 37 37.6**	**+0.2**
baz=40							
TAS				⇓*iS*	**Sn**	**19 38 00.7**	**+0.1**
baz=40							
TAS	**Tashkent**	**1.79**	**340**	P	**Pn**	**19 37 37.5**	**+0.2**
TAS				S	**Sb**	**19 38 01.5**	**-0.4**
DZI	**Dzhizak**	**1.83**	**286**	P	**Sn**	**19 38 00.8**	**-0.6**
KRSA	**Karasay**	**1.89**	**285**	P	**Pn**	**19 37 38.3**	**-0.3**
KRSA				S	**Sn**	**19 38 02.9**	**+0.1**
CHMG	**Chimgan**	**1.91**	**358**	P	**Pn**	**19 37 38.4**	**-0.6**
CHMG				S	**Sn**	**19 38 03.1**	**-0.5**
CHMG	**Chimgan**	**1.91**	**358**	P	**Pn**	**19 37 39.4**	**+0.4**
CHMG				S	**Sn**	**19 38 04.3**	**+0.7**
CHRV	**Charvak**	**2.00**	**357**	P	**Pn**	**19 37 40.8**	**+0.6**
CHRV				S	**Sb**	**19 38 07.3**	**-0.6**
TSTA	**Tashata**	**2.04**	**62**	P	**Sg**	**19 38 12.6**	**+1.4**
TRKS	**Terek-Say**	**2.04**	**22**	⇓*iP*	**Pn**	**19 37 41.1**	**+0.2**
baz=25							
TRKS				⇓*iS*	**Sn**	**19 38 06.9**	**0.0**
baz=25							
ANR	**Andizhan**	**2.05**	**56**	P	**Sg**	**19 38 13.8**	**+2.3**
ARK	**Arkit**	**2.57**	**33**	P	**Pb**	**19 37 50.7**	**-1.7**
ARK				S	**Sb**	**19 38 24.4**	**0.0**
ZRB	**Zarabog**	**3.36**	**244**	P	**Pn**	**19 37 58.4**	**-0.5**
ZRB				S	**Sn**	**19 38 41.5**	**+2.2**
KK31	**Karatay Array**	**3.47**	**5**	⇑Pn	**Pn**	**19 38 01.2**	**+0.8**
0.9nm,0.4s,baz=199,slow=14,SNR=6.8							
KK31				⇑Pg	**Pb**	**19 38 07.7**	**+0.1**
0.5nm,0.2s,baz=191,slow=18,SNR=11							
KK31				Lg	Lg	19 38 51.3	
6.0nm,0.3s,baz=175,slow=17,SNR=16							
CHMS	**Chumysh**	**4.84**	**45**	⇓Lg	Lg	19 39 35.6	
4.2nm,0.8s							
TKM2	**Tokmak 2**	**5.27**	**50**	⇓Pn	**Pn**	**19 38 25.9**	**+0.6**
1.1nm,0.5s							
TKM2				⇓Sn	**Sn**	**19 39 25.9**	**-0.7**
2.4nm,0.7s							
TKM2				⇑Lg	Lg	19 39 50.4	
1.8nm,0.5s							

*IDC **19** 19:50:33.8±2.3, 7°.15S×129°.76E, h125km±28km, mb3.5/1,*
mbtmp3.8/5, Error ellipse: s-maj=28.9km s-min=20.7km
az=120.0
*DJA **19** 19:50:34.2±0.3, 7°.S±3°×13°.0E±°, h164km±7km, M4.1/8,*
mb4.0/6, mBA4.9/2, MLv4.1/8, Mw(mB)4.2/2
*NEIC **19** 19:50:34.4±2.5, 7°.02S±0°.06×129°.8E±0°.1, h156km±23km,*
mb3.9/3, Error ellipse: s-maj=19.6km s-min=7.4km
az=71.0
ISC 19 19:50:33.2±0.8,**7°.04S**±0°.05×**129°.75E**±0°.06,**h150**km,**n27,**
σ2°.**36**/33,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.80**	**121**	Pn	**Pn**	**19 51 07.9**	**+1.9**
SAUI				Sn	**Sn**	**19 51 27.2**	**-4.1**
SAUI	**Saumlaki**	**1.80**	**121**	P	**Pn**	**19 51 08.5**	**+2.4**
SAUI				S	**Sn**	**19 51 33.2**	**+1.9**
BNDI	**Bandanaira**	**2.51**	**4**	P	**Pn**	**19 51 14.8**	**+0.3**
FAKI	**Fak Fak**	**4.79**	**31**	Pn	**Pn**	**19 51 44.2**	**+0.2**
FAKI					**Sn**	**19 52 35.1**	**-4.0**
FAKI	**Fak Fak**	**4.79**	**31**	P	**Pn**	**19 51 44.1**	**+0.1**
MTN	**Manton Dam**	**5.92**	**167**	Pn	**Pn**	**19 51 59.1**	**+0.2**
SOEI	**Soe**	**6.06**	**243**	Pn	**Pn**	**19 52 02.7**	**+1.8**
SOEI	**Soe**	**6.06**	**243**	P	**Pn**	**19 52 03.1**	**+2.3**
0.1nm35nm,0.6s							
SIJI	**Sorong**	**6.32**	**14**	P	**Pn**	**19 52 05.6**	**+1.4**
2.3nm,0.3s,baz=130,slow=5.9,SNR=30							
SIJI				S	**Sn**	**19 53 11.5**	**-4.0**
12nm,0.2s,baz=265,slow=24,SNR=9.1							
SIJI	**Sorong**	**6.32**	**14**	P	**Pn**	**19 52 05.7**	**+1.5**
BATI	**Baumata**	**6.79**	**242**	P	**Pn**	**19 52 11.7**	**+1.2**
20nm,0.4s,baz=81,slow=2.2,SNR=14							
BATI				S	**Sn**	**19 53 25.9**	**-0.8**
11nm,0.5s,baz=88,slow=17,SNR=2.2							
BATI	**Baumata**	**6.79**	**242**	P	**Pn**	**19 52 12.7**	**+2.2**
0.1nm26nm,0.5s							
RKPI	**Ransiki, Papua**	**7.05**	**39**	P	**Pn**	**19 52 16.5**	**+2.5**
0.2nm14nm,0.6s							
KNRA	**Kununurra**	**8.64**	**186**		**Pn**	**19 52 34.7**	**-0.4**
KNRA				Sn	**Sn**	**19 54 04.2**	**-7.0**
PLAI	**Plampang**	**11.99**	**261**	P	**Pn**	**19 53 19.8**	**+0.3**
16nm,1.2s							
WB0	**Warramunga Arr**	**13.43**	**161**	Pn	**Pn**	**19 53 36.4**	**-1.6**
WRAB	**Tennant Creek**	**13.57**	**161**	Pn	**Pn**	**19 53 38.8**	**-1.0**
WRA	**Warramunga Arr**	**13.58**	**161**	P	**Pn**	**19 53 38.5**	**-1.4**
0.8nm,0.3s,baz=337,slow=10,SNR=41							
WRA				S	Sn	19 56 01.4	-8.9
0.9nm,0.5s,baz=332,slow=23,SNR=7.2							
WRA	**Warramunga Arr**	**13.58**	**161**	Pn	**Pn**	**19 53 38.9**	**-1.0**
WB2	**Warramunga Arr**	**13.58**	**161**	Pn	**Pn**	**19 53 38.9**	**-1.0**
WR0	**Warramunga Arr**	**13.66**	**161**		**Pn**	**19 53 40.6**	**-0.3**
AS31	**Alice Springs**	**17.00**	**167**	Pn	**Pn**	**19 54 23.6**	**+1.3**
AS31				IAmb	IAmb	19 54 41.4	
comp=Z,2.4nm,1.5s							
ASAR	**Alice Springs**	**17.01**	**167**	P	**Pn**	**19 54 23.6**	**+1.3**
comp=Z,0.5nm,0.5s,baz=343,slow=8.5,SNR=26							
ASAR	**Alice Springs**	**17.01**	**167**	Pn	**P**	**19 54 23.0**	**+1.3**
PSA00	**Pilbara Seismi**	**17.33**	**213**	P	**P**	**19 54 24.9**	**-0.3**
PSA00				IAmb	IAmb	19 54 59.5	
comp=Z,6.7nm,1.3s							
FORT	**Forrest**	**23.67**	**184**	P	**P**	**19 55 29.4**	**-1.7**
FORT				IAmb	IAmb	19 56 07.9	
comp=Z,37nm,1.2s							
MKAR	**Makanchi Array**	**68.12**	**327**	P	**P**	**20 01 20.9**	**+3.9**
comp=Z,1.3nm,1.1s,baz=118,slow=7.9,SNR=1.8							
comp=Z,1.3nm,1.1s							

*ISU **19** 20:00:18, 39°.70N×70°.07E, h6km*
*KRNET **19** 20:00:18.0±0.1, 39°.71N×70°.03E, h16km, mb3.5*
*NNC **19** 20:00:23.7±3.2, 39°.95N×70°.05E, h17km±11km, mb3.5,*
mpv3.2, Error ellipse: s-maj=24.9km s-min=13.1km az=9.0
ISC 19 20:00:18.1±1.1,**39°.63N**±0°.03×**70°.03E**±0°.02,**h8**km±9km,
n26,σ1°.**32**/50,**23C-6D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.67**	**160**	⇑*iP*	**Pb**	**20 00 32.3**	**+0.2**
baz=62							
GAR				⇑*iS*	**Sb**	**20 00 42.3**	**+0.7**
baz=62							
BTK	**Batken**	**0.74**	**55**	⇓*eP*	**Pg**	**20 00 31.4**	**-1.0**
baz=60							
BTK				⇓*iS*	**Sg**	**20 00 40.9**	**-1.2**
baz=60							
BTK	**Batken**	**0.74**	**55**	P	**Pg**	**20 00 31.5**	**-1.0**
BTK				S	**Sg**	**20 00 41.2**	**-0.9**
MINT	**Mingtut**	**1.11**	**41**	P	**Pg**	**20 00 39.1**	**-0.3**
MINT				S	**Sb**	**20 00 54.1**	**0.0**
CHGR	**Chuyangaron**	**1.18**	**215**	⇑*eP*	**Pb**	**20 00 41.4**	**+0.5**
baz=13							
CHGR				⇑*iS*	**Sn**	**20 00 58.3**	**+0.9**
baz=13							
CHMI	**Chimion**	**1.31**	**61**	P	**Pn**	**20 00 42.5**	**-0.3**
CHMI				S	**Sn**	**20 01 00.4**	**-0.2**
DRK	**Karamyk**	**1.38**	**96**	⇑*iP*	**Pb**	**20 00 44.2**	**-0.1**
baz=99							
DRK				⇑*iS*	**Sg**	**20 01 03.1**	**+0.6**
baz=99							
FRG	**Fergana**	**1.54**	**61**	P	**Pg**	**20 00 48.6**	**+0.9**
FRG				S	**Sg**	**20 01 09.2**	**+1.6**
NZBK	**Nazarbek**	**1.73**	**337**	P	**Sg**	**20 01 15.8**	**+2.0**
TAS	**Tashkent**	**1.78**	**342**	⇑*iP*	**Pn**	**20 00 49.8**	**+0.6**
baz=41							
TAS				⇑*iS*	**Sn**	**20 01 12.6**	**+0.5**
baz=41							
TAS	**Tashkent**	**1.78**	**342**	P	**Pb**	**20 00 51.2**	**+0.2**
TAS				S	**Sg**	**20 01 14.9**	**-0.5**
KRSA	**Karasay**	**1.82**	**286**	P	**Pb**	**20 00 51.4**	**-0.3**
KRSA				S	**Sg**	**20 01 16.6**	**-0.1**
CHMG	**Chimgan**	**1.92**	**360**	P	**Pn**	**20 00 52.1**	**+0.9**
CHMG				S	**Sb**	**20 01 18.1**	**+0.5**
CHRV	**Charvak**	**2.01**	**358**	P	**Pn**	**20 00 53.5**	**+1.1**
CHRV				S	**Sb**	**20 01 20.8**	**+0.7**
TRKS	**Terek-Say**	**2.08**	**24**	⇑*iP*	**Pn**	**20 00 53.6**	**+0.2**
baz=26							
TRKS				⇑*iS*	**Sn**	**20 01 19.8**	**+0.2**
baz=26							
TSTA	**Tashata**	**2.10**	**63**	P	**Sg**	**20 01 24.6**	**-1.1**
ANR	**Andizhan**	**2.11**	**57**	P	**Pg**	**20 00 58.3**	**-0.3**
ANR				S	**Sg**	**20 01 27.0**	**+1.1**
OHH	**Osh**	**2.30**	**66**	⇑*eP*	**Pn**	**20 00 57.9**	**+1.5**
baz=68							
OHH				⇑*iS*	**Sb**	**20 01 26.9**	**-1.5**
baz=68							
AGL	**Agalyk**	**2.43**	**268**	P	**Pb**	**20 01 02.9**	**+0.7**
AGL				S	**Sg**	**20 01 38.1**	**+1.8**
ARK	**Arkit**	**2.62**	**34**	⇑*eP*	**Pn**	**20 01 02.3**	**+1.5**
baz=35							
ARK				⇑*iS*	**Sn**	**20 01 34.1**	**+1.2**
baz=35							
NUT	**Nurota**	**3.46**	**287**	P	**Sg**	**20 02 09.3**	**+0.1**
KK31	**Karatay Array**	**3.49**	**6**	⇑Pn	**Pn**	**20 01 14.2**	**+1.5**
1.7nm,0.4s,baz=154,slow=43,SNR=21							
KK31				⇑Pg	**Pb**	**20 01 21.3**	**+1.2**
1.2nm,0.3s,baz=188,slow=16,SNR=20							
KK31				Lg	Lg	20 02 05.0	
15nm,0.3s,baz=174,slow=16,SNR=17							
ARLS	**Aral**	**3.95**	**54**	⇑*iP*	**Pn**	**20 01 20.9**	**+1.7**
baz=55							
ARLS				⇑*iS*	**Sn**	**20 02 06.5**	**+0.7**
baz=55							
CHMS	**Chumysh**	**4.90**	**45**	⇓Pn	**Pn**	**20 01 33.8**	**+1.7**
6.4nm,0.8s							
CHMS				⇓Pg	**Pb**	**20 01 48.0**	**+3.9**
5.0nm,0.8s							
CHMS				⇑Lg	Lg	20 02 52.1	
4.8nm,0.5s							
TKM2	**Tokmak 2**	**5.33**	**50**	⇑Pn	**Pn**	**20 01 39.6**	**+1.5**
1.6nm,0.5s							
TKM2				⇑Pg	**Pg**	**20 01 57.2**	**-3.0**
3.7nm,0.8s							
TKM2				⇓Sn	**Sn**	**20 02 38.8**	**-1.1**
3.1nm,0.5s							
TKM2				⇓Lg	Lg	20 03 05.7	
4.1nm,0.5s							
AB31	**Akbulak array**	**12.01**	**327**	⇑Pn	**Pn**	**20 03 07.7**	**-1.7**
0.3nm,0.4s,baz=0.0,slow=0.1,SNR=9.3							
AB31				⇑Sn	**Sn**	**20 05 20.9**	**-2.6**
0.4nm,0.5s							

*TRN **19** 20:22:18.2, 15°.29N×61°.45W, h156km, MD3.6*
*IDC **19** 20:22:19.0±0.9, 15°.32N×61°.43W, h148km±6km, mb3.0/3,*
mbtmp3.4/3, Error ellipse: s-maj=27.7km s-min=5.9km
az=82.0
ISC 19 20:22:19.1±0.9,**15°.30N**±0°.04×**61°.47W**±0°.08,**h158**km±5km,
n46,σ0°.**98**/69,**mb3.3**/3,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDN	**Morne-Daniel**	**0.08**	**72**	*iP*	**Pn**	**20 22 40.4**	**+0.2**
DSLB	**Salisbury**	**0.15**	**18**	*eP*	**Pn**	**20 22 40.5**	**+0.1**
DSLB				*eS*	**Sn**	**20 22 56.5**	**0.0**
DLPL	**La Plaine**	**0.22**	**80**	*eP*	**Pn**	**20 22 40.3**	**-0.1**
DLPL				*eS*	**Sn**	**20 22 56.2**	**-0.4**
MDCT	**Cottage Hill,**	**0.32**	**1**	*eP*	**Pn**	**20 22 41.1**	**+0.4**
MDCT				*eS*	**Sn**	**20 22 57.7**	**+0.5**
MDVC	**Dominica, Viel**	**0.32**	**11**	*eP*	**Pn**	**20 22 41.0**	**+0.4**
MDVC				*eS*	**Sn**	**20 22 57.3**	**+0.1**
SVN	**Savane Anatole**	**0.54**	**147**	*eP*	**Pn**	**20 22 41.5**	**-0.1**
PCM	**Pelee Case Pet**	**0.54**	**152**	*eP*	**Pn**	**20 22 41.2**	**-0.5**
TDBA	**Terre de Bas,**	**0.57**	**344**	*eP*	**Pn**	**20 22 42.0**	**+0.3**
TDBA				*eS*	**Sn**	**20 22 58.8**	**-0.3**
TBG	**Guadaloupe-3**	**0.58**	**343**	*eP*	**Pn**	**20 22 42.0**	**+0.2**
TBG				*eS*	**Sn**	**20 22 59.8**	**+0.6**
FDF	**Fort de France**	**0.64**	**151**	*eP*	**Pn**	**20 22 42.0**	**-0.1**
FDF				*eS*	**Sn**	**20 22 59.3**	**-0.5**
MAGL	**Barre de l'ile**	**0.68**	**16**	*eP*	**Pn**	**20 22 42.4**	**+0.1**
MAGL				*eS*	**Sn**	**20 22 59.4**	**-0.8**
ILAM	**Ilet Lapin Mar**	**0.77**	**132**	*i P*	**Pn**	**20 22 42.5**	**-0.5**
ILAM				*eS*	**Sn**	**20 22 59.7**	**-1.4**
CBE	**Ff, Capester**	**0.78**	**350**	*eP*	**Pn**	**20 22 43.6**	**+0.5**
CBE				*eS*	**Sn**	**20 23 01.4**	**-0.1**
ZAM	**Aeronautique**	**0.83**	**149**	*eP*	**Pn**	**20 22 43.1**	**-0.2**
TRMF	**Trois Ilets**	**0.86**	**152**	*eP*	**Pn**	**20 22 43.3**	**-0.3**
BIM	**Bigot**	**0.86**	**153**	*eP*	**Pn**	**20 22 43.3**	**-0.4**
BIM				*eS*	**Sn**	**20 23 01.6**	**-0.8**
LPMF	**Morne Lapointe**	**0.87**	**146**	*eP*	**Pn**	**20 22 43.1**	**-0.6**
MVM	**Montagne Vaucl**	**0.92**	**143**	*eP*	**

mb4.5/13, Error ellipse: s-maj=16.5km s-min=14.3km az=132.0

ISC 19 20:31:37.6±0.5, 60°32S±0°07×47°31W±0°09, h10km, n37, σ0.83/31, mb4.4/12, MS3.1/5, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.42**	**49**	Pn	**Pn**	**20 33 38.2**	**-1.2**
PMSA	**Palmer Station**	**8.91**	**233**	Pn	**Pn**	**20 33 45.0**	**-1.2**
	2.4nm,0.3s,baz=49,slow=10,SNR=16						
	5.1nm,0.3s						
PMSA	**Palmer Station**	**8.91**	**233**	Pn	**Pn**	**20 33 44.8**	**-1.3**
EFI	**East Falkland**	**10.54**	**321**	Pn	**Pn**	**20 34 09.2**	**+0.7**
BELA	**Belgrano 2**	**18.12**	**171**	P	**P**	**20 35 50.1**	**+1.0**
VNA3	**Neumayer Olymp**	**18.52**	**142**	P	**Pn**	**20 35 55.4**	**+1.5**
VNA1	**Neumayer--Stat**	**18.81**	**139**	P	**Pn**	**20 35 57.7**	**+0.4**
VNA2	**Neumayer--Watz**	**19.15**	**140**	P	**Pn**	**20 36 01.9**	**+0.5**
	baz=293,slow=14						
SNAA	**Sanae**	**20.74**	**141**	P	Pn	20 36 20.6	+0.2
SNAA	**Sanae**	**20.74**	**141**	P	**P**	**20 36 18.2**	**+0.2**
	2.1nm,0.8s,baz=277,slow=10,SNR=1.8						
SNAA				LR	LR	20 43 17.5	
	comp=Z,44nm,18.4s,baz=2.5,slow=34						
	2.1nm,0.8s						
SNAA	**Sanae**	**20.74**	**141**	P	**P**	**20 36 17.7**	**-0.3**
TRQA	**Tornquist**	**24.15**	**331**	P	**P**	**20 36 54.8**	**+1.2**
TRQA				IAmb	IAmb	20 36 56.7	
	comp=Z,11nm,0.8s						
PLCA	**Paso Flores**	**24.32**	**313**	P	**P**	**20 36 54.9**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=154,slow=7.2,SNR=6.6						
PLCA				LR	LR	20 45 59.7	
	comp=Z,66nm,18.8s,baz=176,slow=36						
	comp=Z,3.6nm,1.0s						
PLCA	**Paso Flores**	**24.32**	**313**	P	**P**	**20 36 55.4**	**+0.2**
PLCA				IAmb	IAmb	20 36 56.9	
	comp=Z,8.1nm,1.1s						
QSPA	**South Pole Qui**	**29.91**	**180**	P	**P**	**20 37 46.2**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=180,slow=2.8,SNR=12						
	comp=Z,2.9nm,0.8s						
QSPA	**South Pole Qui**	**29.91**	**180**	P	**P**	**20 37 46.4**	**+1.1**
MT09	**Talagante**	**30.73**	**319**	P	**P**	**20 37 51.4**	**-1.3**
CO01	**Juntas del Tor**	**33.97**	**323**	P	**P**	**20 38 21.6**	**+0.3**
CO01				IAmb	IAmb	20 38 24.3	
	comp=Z,6.5nm,1.0s						
CPUP	**Villa Florida**	**34.67**	**344**	LR	LR	20 54 49.4	
	comp=Z,30nm,18.3s,baz=172,slow=40						
PB10	**IPOC Station P**	**40.20**	**326**	P	**P**	**20 39 14.1**	**+0.2**
MAW	**Mawson**	**42.66**	**148**	P	**P**	**20 39 32.8**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=230,slow=16,SNR=4.0						
MAW				LR	LR	20 56 51.5	
	comp=Z,57nm,18.1s,baz=184,slow=36						
	comp=Z,2.0nm,0.9s						
BDFB	**Brasilia**	**44.62**	**359**	P	**P**	**20 39 50.7**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=205,slow=8.9,SNR=5.5						
	comp=Z,3.5nm,0.7s						
SIV	**San Ignacio**	**45.38**	**341**	P	**P**	**20 39 56.3**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=152,slow=10,SNR=10						
SIV				LR	LR	20 59 55.6	
	comp=Z,30nm,18.9s,baz=78,slow=37						
	comp=Z,1.4nm,0.5s						
LPAZ	**La Paz**	**46.49**	**332**	P	**P**	**20 40 05.9**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=181,slow=5.9,SNR=2.2						
	comp=Z,0.9nm,0.7s						
SUR	**Sutherland**	**51.74**	**89**	P	**P**	**20 40 45.9**	**+0.8**
	comp=Z,8.5nm,1.0s,baz=149,slow=9.3,SNR=2.9						
	comp=Z,8.5nm,1.0s						
SUR	**Sutherland**	**51.74**	**89**	P	**P**	**20 40 45.4**	**+0.3**
BOSA	**Boshof**	**57.02**	**91**	P	**P**	**20 41 23.2**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=204,slow=10.0,SNR=3.0						
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**57.02**	**91**	P	**P**	**20 41 23.2**	**-0.3**
BOSA				IAmb	IAmb	20 42 00.5	
	comp=Z,14nm,1.4s						
H10N3	**ASCENSION HYDR**	**57.87**	**39**	T	T	21 44 35.7	
	baz=200,slow=75,SNR=4.9						
H10N1	**ASCENSION HYDR**	**57.87**	**39**	T	T	21 44 34.8	
	baz=200,slow=75,SNR=5.9						
H10N2	**ASCENSION HYDR**	**57.88**	**39**	T	T	21 44 34.0	
	baz=200,slow=75,SNR=5.3						
LBTB	**Lobatse**	**60.17**	**89**	P	**P**	**20 41 45.2**	**-0.2**
LBTB				IAmb	IAmb	20 42 21.6	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**83.00**	**48**	P	**P**	**20 44 02.8**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=216,slow=5.1,SNR=9.9						
	comp=Z,2.3nm,0.8s						
AKASG	**Malin Array Be**	**126.57**	**50**	PKP	**PKPdf**	**20 50 38.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=282,slow=0.3,SNR=4.1						
ARCES	**ARCESS Array B**	**139.49**	**31**	PKhKP	PKPpre	20 50 52.5	
	comp=Z,0.4nm,0.4s,baz=198,slow=2.6,SNR=7.9						
ILAR	**Eielson Array**	**145.00**	**313**	PKPbc	**PKPbc**	**20 51 12.3**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=149,slow=1.9,SNR=25						
MKAR	**Makanchi Array**	**148.02**	**92**	PKPbc	**PKPbc**	**20 51 21.0**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=224,slow=2.3,SNR=11						

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*KEA **19** 20:51:08.1, 33°80N×120°48E, h14km, ML4.2/2*
*IDC **19** 20:51:09.3±0.6, 33°63N×120°41E, h0km, mb4.0/21, mbtmp3.9/24, ML3.3/3, MS3.4/25, Error ellipse: s-maj=16.3km s-min=13.9km az=54.0*
*BJI **19** 20:51:10.9±0.0, 33°63N×120°32E, h25km, mb4.4/31, mB4.7/17, ML4.6/25, Ms4.3/30, Ms7 4.1/28*
*MOS **19** 20:51:11.4±1.1, 33°64N×120°42E, h26km, mb4.8/25, Error ellipse: s-maj=8.5km s-min=5.9km az=133.7*
*NEIC **19** 20:51:11.8±1.3, 33°62N±0°08×120°34E±0°09, h10km±1km, mb4.7/42, Error ellipse: s-maj=13.5km s-min=11.9km az=138.0*

ISC 19 20:51:12.6±0.3, 33°64N±0°02×120°28E±0°02, h10km, n207, σ2.9/10/195, mb4.6/63, MS3.4/21, 9C-4D, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**1.98**	**217**	*e*Pn	**Pn**	**20 51 44.3**	**-1.9**
NJ2				Pg	**Pb**	**20 51 49.1**	**+0.4**
NJ2				Sg	**Sn**	**20 52 15.0**	**+3.9**
NJ2				smax	smax		
	comp=N,5μm,0.4s						
NJ2				smax	smax		
	comp=E,7μm,0.4s						
SSE	**Sheshan**	**2.65**	**163**	Pn	**Pn**	**20 51 53.4**	**-1.9**
SSE				Pg	**Pb**	**20 51 59.6**	**-0.5**
SSE				Sg	**Sn**	**20 52 31.5**	**+4.0**
SSE				smax	smax		
	comp=N,860nm,0.8s						
SSE				smax	smax		
	comp=E,750nm,0.7s						
TIA	**Tai'an**	**3.65**	**316**	Pn	**Pn**	**20 52 07.8**	**-1.2**
TIA				Pg	**Pb**	**20 52 19.2**	**+2.1**
TIA				Sn	Sn	20 52 43.8	-8.3
TIA				Sg	**Sb**	**20 53 04.5**	**+3.1**
TIA				smax	smax		
	comp=N,3μm,0.9s						
TIA				smax	smax		
	comp=E,2μm,0.8s						
DL2	**Dalian**	**5.37**	**11**	Pg	**Pb**	**20 52 48.1**	**+1.7**
DL2				Sg	**Sb**	**20 53 54.9**	**+4.0**
DL2				smax	smax		
	comp=N,610nm,0.6s						
DL2				smax	smax		
	comp=E,710nm,0.7s						
DL2				LR	LR		
	comp=N,720nm,5.2s						
DL2				LR	LR		
	comp=E,2μm,5.6s						
DL2				LR	LR		
	comp=Z,460nm,4.2s						
HNS	**HongShan**	**5.89**	**311**	⇑Pn	**Pn**	**20 52 38.8**	**-1.1**
HNS				Pg	**Pg**	**20 53 03.3**	**-2.0**
HNS				Sn	**Sn**	**20 53 45.5**	**-1.9**
HNS				Sg	Sb	20 54 15.8	+10
HNS	**HongShan**	**5.89**	**311**	⇑Pn	**Pn**	**20 52 38.7**	**-1.1**
HNS				Pg	**Pg**	**20 53 03.3**	**-2.0**
HNS				Sn	**Sn**	**20 53 45.5**	**-1.9**
HNS				Sg	Sb	20 54 15.8	+10
HNS				smax	smax		
	comp=N,1μm,1.0s						
HNS				smax	smax		
	comp=E,980nm,0.9s						
WHN	**Wuhan**	**5.90**	**240**	Pn	Pn	20 52 36.8	-3.2
WHN				Pg	Pb	20 53 00.5	+5.0
WHN				Sg	**Sb**	**20 54 14.2**	**+8.0**
WHN				smax	smax		
	comp=N,2μm,0.6s						
WHN				smax	smax		
	comp=E,2μm,0.7s						
HJU	**Haeju**	**6.24**	**44**	Pg	**Pb**	**20 53 02.3**	**+1.1**
HJU				Sg	**Sb**	**20 54 22.4**	**+6.6**
HJU				AML	AML		
	comp=N,325nm,0.5s						
HJU				AML	AML		
	comp=E,279nm,0.7s						
HJU				AML	AML		
	comp=Z,395nm,1.0s						
TJN	**Taejon**	**6.43**	**63**	Pn	**Pn**	**20 52 44.7**	**-2.6**
TJN	**Taejon**	**6.43**	**63**	*e*P	**Pn**	**20 52 48.8**	**+1.6**
INCN	**Inchon**	**6.45**	**52**		**Pn**	**20 52 45.2**	**-2.3**
INCN	**Inchon**	**6.45**	**52**	P	**Pn**	**20 52 45.2**	**-2.3**
LYN	**LuoYang**	**6.54**	**280**	⇓Pn	**Pn**	**20 52 48.3**	**-0.6**
LYN				Pg	Pb	20 53 11.6	+5.2
LYN				Sn	**Sn**	**20 54 00.0**	**-3.5**
LYN				Sg	**Sg**	**20 54 36.5**	**-6.0**
LYN	**LuoYang**	**6.54**	**280**	⇓Pn	**Pn**	**20 52 48.2**	**-0.6**
LYN				Pg	Pb	20 53 11.6	+5.2
LYN				Sn	**Sn**	**20 54 00.0**	**-3.5**
LYN				Sg	**Sg**	**20 54 36.5**	**-6.0**
LYN				smax	smax		
	comp=Z,180nm,0.7s						
LYN				smax	smax		
	comp=Z,130nm,0.9s						
LYN				LR	LR		
	comp=Z,710nm,11.1s						
LYN				LR	LR		
	comp=Z,890nm,7.7s						
LYN				LR	LR		
	comp=Z,900nm,13.9s						
BJT	**Baijiatuau**	**7.17**	**334**	Pn	**Pn**	**20 52 56.3**	**-1.1**
BJT	**Baijiatuau**	**7.17**	**334**	P	**Pn**	**20 52 56.3**	**-1.1**
PYS	**Pyongsong**	**7.18**	**37**	Sg	Sb	20 54 52.6	+10
BJI	**Beijing**	**7.18**	**334**	Pn	**Pn**	**20 52 56.0**	**-1.6**
BJI				Sn	**Sn**	**20 54 20.0**	**+0.7**
BJI				Sg	**Sg**	**20 55 00.0**	**-3.1**
BJI				smax	smax		
	comp=Z,38nm,0.9s						
BJI				smax	smax		
	comp=Z,260nm,0.7s						
KSAR	**Wonju Array Be**	**7.27**	**56**		**Pn**	**20 52 57.3**	**-1.5**
KSAR	**Wonju Array Be**	**7.27**	**56**	P	**Pn**	**20 52 57.3**	**-1.5**
SUJ	**Sinuiju**	**7.28**	**26**	Pg	**Pb**	**20 53 22.4**	**+3.4**
SUJ				Sg	Sb	20 54 55.8	+10
SUJ				AML	AML		
	comp=N,207nm,0.7s						
SUJ				AML	AML		
	comp=E,219nm,0.6s						
SUJ				AML	AML		
	comp=Z,273nm,0.5s						
KS19	**Wonju Array Si**	**7.29**	**56**	Pn	Pn	20 52 56.2	-2.9
KSRS	**Korea Array**	**7.30**	**56**	Pn	Pn	20 52 55.6	-3.7
	comp=Z,1.3nm,0.3s,baz=241,slow=14,SNR=12						
KSRS				Sn	**Sn**	**20 54 20.0**	**-2.2**
	comp=Z,3.2nm,0.3s,baz=234,slow=20,SNR=5.9						
KSRS				Lg	Lg	20 54 57.1	
	comp=Z,6.2nm,0.3s,baz=348,slow=37,SNR=2.3						
KSRS				LR	LR	20 55 50.4	
	comp=Z,83nm,19.5s,baz=210,slow=39						
	comp=Z,1.9nm,0.3s						
KSRS	**Korea Array**	**7.30**	**56**	*e*P	**Pn**	**20 52 57.9**	**-1.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JTU	**Tsushima**	**7.62**	**81**		**Pn**	**20 53 02.2**	**-1.4**
CNSH	**ChangSha**	**8.33**	**231**	Pn	Pn	20 53 18.5	+5.1
CNSH				⇑Pg	Pg	20 53 48.9	-3.1
CNSH				Sn	Sn	20 54 57.8	+10
CNSH				Sg	**Sg**	**20 55 35.3**	**-4.5**
YHNB	**Yeheng**	**8.99**	**174**	Pn	Pn	20 53 19.6	-3.0
KNMB	**Chin-men Tao**	**9.29**	**191**	Pn	Pn	20 53 23.8	-2.7
XAN	**Xi'an**	**9.45**	**276**	⇑P	**Pn**	**20 53 29.8**	**+0.9**
XAN				pP		20 53 34.1	
XAN				sP		20 53 37.1	
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN				LR	LR		
	comp=Z,1μm,12.1s						
XAN				LR	LR		
	comp=Z,1μm,12.1s						
XAN				LR	LR		
	comp=Z,1μm,14.3s						
NACB	**Ninganchiao**	**9.50**	**173**	Pn	Pn	20 53 27.0	-2.5
JOW	**Kunigami**	**9.69**	**132**	LR	LR	20 57 52.9	
	comp=Z,316nm,21.7s,baz=4.5,slow=42						
ENH	**Enshi**	**9.76**	**253**	Pn	**Pn**	**20 53 32.6**	**-0.4**
SSLB	**Suanglung**	**9.83**	**176**	Pn	**Pn**	**20 53 32.7**	**-1.4**
HHC	**Hu-ho-hao-te**	**10.00**	**319**	*e*P	**Pn**	**20 53 36.3**	**0.0**
YULB	**Yu-li**	**10.25**	**175**	Pn	**Pn**	**20 53 38.5**	**-1.2**
TPUB	**Ta-pu**	**10.31**	**178**	Pn	**Pn**	**20 53 38.5**	**-2.0**
JHS	**Saijyo**	**10.71**	**79**		**Pn**	**20 53 45.6**	**-0.4**
BTO	**Baotou**	**10.73**	**313**	*e*P	**Pn**	**20 53 47.0**	**+0.6**
BTO				S	**Sn**	**20 55 52.5**	**+5.8**
BTO				LR	LR		
	comp=Z,3μm,5.9s						
BTO				LR	LR		
	comp=Z,2μm,5.3s						
LZH	**Lanzhou**	**13.71**	**285**	*e*P	**Pn**	**20 54 28.9**	**+1.7**
LZH				sP	P	20 54 37.2	+1.2
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				LR	LR		
	comp=Z,990nm,16.1s						
LZH				LR	LR		
	comp=Z,960nm,16.5s						
LZH				LR	LR		
	comp=Z,1μm,18.2s						
GYA	**Guiyang**	**13.78**	**242**	⇓P	**Pn**	**20 54 30.0**	**+1.8**
GYA				S	**Sn**	**20 57 02.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,370nm,7.2s						
GYA				LR	LR		
	comp=Z,420nm,6.5s						
GYA				LR	LR		
	comp=Z,360nm,4.1s						
GYA				LR	LR		
	comp=Z,340nm,9.9s						
USRK	**Ussuriysk Ar.**	**13.93**	**37**	Lg	Lg	20 58 25.5	
	comp=Z,0.4nm,0.3s,baz=221,slow=19,SNR=2.1						
CD2	**Chengdu**	**14.24**	**263**	P	**Pn**	**20 54 32.9**	**-1.4**
CD2				S	**Sn**	**20 57 12.1**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1μm,9.4s						
CD2				LR	LR		
	comp=Z,2μm,9.8s						
CD2				LR	LR		
	comp=Z,2μm,10.8s						
MJAR	**Matsushiro Arr**	**14.97**	**74**	Pn	**Pn**	**20 54 41.8**	**-2.4**
	baz=257,slow=11,SNR=1.7						
MJAR				LR	LR	21 00 53.7	
	comp=Z,66nm,19.9s,baz=262,slow=39						
	comp=Z,0.6nm,0.6s						
HIA	**Hailar**	**15.62**	**359**	*i* P	**Pn**	**20 54 55.1**	**+2.4**
JHJ	**Hachijo jima 2**	**16.31**	**86**	LR	LR	21 00 21.5	
	comp=Z,68nm,19.8s,baz=242,slow=34						
QIZ	**Qiongzhong**	**17.28**	**215**	P	**Pn**	**20 55 10.9**	**-3.1**
QIZ				S	**Sn**	**20 58 19.9**	**-6.4**
QIZ				LR	LR		
	comp=Z,630nm,11.5s						
QIZ				LR	LR		
	comp=Z,1μm,14.0s						
QIZ				LR	LR		
	comp=Z,620nm,11.5s						
ULN	**Ulaanbaatar**	**17.35**	**329**	P	**Pn**	**20 55 12.8**	**-2.0**
ULN	**Ulaanbaatar**	**17.35**	**329**	*i* P	**Pn**	**20 55 16.4**	**+1.5**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	**Ulaanbaatar**	**17.35**	**329**	P	**Pn**	**20 55 16.8**	**+1.9**
	comp=Z,38nm,1.6s						
ULN				pP	**pP**	**20 55 21.2**	**+2.1**
	comp=Z,38nm,1.6s						
GTA	**Gaotai**	**17.41**	**295**	⇑P	**Pn**	**20 55 13.8**	**-2.0**
GTA				pP	sP	20 55 23.3	+2.2
GTA				sP	pP	20 55 26.8	+7.0
GTA	**Gaotai**	**17.41**	**295**	⇑P	**Pn**	**20 55 13.7**	**-2.0**
GTA				pP	sP	20 55 23.2	+2.1
GTA				sP	pP	20 55 26.8	+7.0
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,230nm,5.1s						
GTA				LR	LR		
	comp=Z,650nm,16.7s						
GTA				LR	LR		
	comp=Z,510nm,14.5s						
GTA				LR	LR		
	comp=Z,410nm,17.1s						
PZH	**PanZhiHua**	**17.53**	**251**	P	**Pn**	**20 55 19.3**	**+2.0**
PZH	**PanZhiHua**	**17.53**	**251**	P	**Pn**	**20 55 19.2**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
SONM	**Songino Array**	**17.61**	**328**	P	**Pn**	**20 55 15.4**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=4.1						
SONM				Lg	Lg	21 00 28.9	
	comp=Z,0.4nm,0.3s,baz=294,slow=19,SNR=4.1						
SONM				LR	LR	21 01 59.8	
	comp=Z,138nm,19.2s,baz=327,slow=37						
	comp=Z,3.3nm,0.8s						
SONM	**Songino Array**	**17.61**	**328**	P	**Pn**	**20 55 15.8**	**-2.4**
SONM	**Songino Array**	**17.61**	**328**	P	**Pn**	**20 55 15.8**	**-2.4**
SONM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLR	**Kul'dur**	**17.76**	**25**	P	**Pn**	**20 55 21.4**	**+1.6**
	comp=Z,2.7nm,0.9s,baz=202,slow=11,SNR=2.4						
KLR				Lg	Lg	21 00 30.1	
	comp=Z,0.1nm,0.3s,baz=186,slow=2.7,SNR=2.8						
KLR	**Kul'dur**	**17.76**	**25**	*i* P	**Pn**	**20 55 21.0**	**+1.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JCJ	**Chichijima**	**19.98**	**103**	LR	LR	21 03 56.6	
	comp=Z,91nm,18.8s,baz=294,slow=39						
ZEA	**Zeya**	**20.70**	**12**	*e*P	Pn	20 55 56.6	+1.6
ZEA				*e*		20 56 11.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAK	**Zakamensk**	**20.88**	**328**	*e*P	**P**	**20 55 54.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	**Chiang Mai**	**24.10**	**238**	P	**P**	**20 56 28.1**	**-0.4**
CHTO	**Chiang Mai**	**24.10**	**238**	P	**P**	**20 56 28.1**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CM31	**Chiang Mai Arr**	**24.34**	**237**	P	**P**	**20 56 30.1**	**-0.6**
CM31				IAmb	IAmb	20 56 39.4	
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**24.34**	**237**	P	**P**	**20 56 30.4**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=37,slow=8.6,SNR=23						
CMAR				LR	LR	21 07 39.1	
	comp=Z,68nm,20.3s,baz=40,slow=40						
	comp=Z,2.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.34**	**237**	P	**P**	**20 56 29.1**	**-1.6**
LSA	**Lhasa**	**25.06**	**269**	P	**P**	**20 56 37.5**	**-0.2**
LSA				IAmb	IAmb	20 56 41.2	
	comp=Z,8.0nm,0.8s						
LSA	**Lhasa**	**25.06**	**269**	P	**P**	**20 56 39.8**	**+2.1**
LSA	**Lhasa**	**25.06**	**269**	P	**P**	**20 56 37.5**	**-0.2**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SHL	**Shillong**	**25.90**	**259**	P	**P**	**20 56 43.7**	**-1.4**
SHL				IAmb	IAmb	20 56 46.2	
	comp=Z,15nm,0.9s						
SHL	**Shillong**	**25.90**	**259**	P	**P**	**20 56 43.7**	**-1.4**
SHL				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ	**Urumqi**	**27.22**	**302**	*e*P	**P**	**20 56 57.3**	**+0.7**
WMQ				pP	sP	20 57 02.7	+1.8
WMQ				pmax	pmax		
	comp=Z,24nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.5s						
WMQ				LR	LR		
	comp=Z,470nm,15.9s						
WMQ				LR	LR		
	comp=Z,360nm,16.7s						
WMQ				LR	LR		
	comp=Z,150nm,17.5s						
BRDH	**Bariadhala**	**27.42**	**254**	LR	LR	21 07 51.7	
	comp=Z,108nm,20.0s,baz=104,slow=36						
DGZ	**Jazzator, Alta**	**29.02**	**313**	*i* P	**P**	**20 57 14.3**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GUMO	**Guam**	**29.96**	**126**	LR	LR	21 10 11.2	
	comp=Z,57nm,18.4s,baz=300,slow=38						
GUN	**Gumba**	**30.01**	**268**	*e*P	**P**	**20 57 22.4**	**+0.5**
PKI	**Pulchoki**	**30.52**	**268**	*e*P	**P**	**20 57 25.8**	**-0.6**
PKIN	**Phulchoki**	**30.52**	**268**	*e*P	**P**	**20 57 25.9**	**-0.5**
KKN	**Kakani**	**30.55**	**269**	*e*P	**P**	**20 57 26.5**	**-0.1**
MK31	**Makanchi Array**	**31.53**	**306**	P	**P**	**20 57 33.8**	**-0.9**
MK31	**Makanchi Array**	**31.53**	**306**	*e*P	**P**	**20 57 34.3**	**-0.5**
MKAR	**Makanchi Array**	**31.53**	**306**	P	**P**	**20 57 34.4**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=92,slow=11,SNR=22						
MKAR				LR	LR	21 11 37.4	
	comp=Z,61nm,20.2s,baz=86,slow=39						
	comp=Z,3.3nm,0.7s						
MKAR	**Makanchi Array**	**31.53**	**306**	P	**P**	**20 57 33.5**	**-1.3**
DANN	**Dangsing**	**31.63**	**270**	*e*P	**P**	**20 57 36.2**	**0.0**
MAKZ	**Makanchi**	**31.74**	**306**	P	**P**	**20 57 36.2**	**-0.5**
MAKZ				IAmb	IAmb	20 57 47.9	
	comp=Z,6.9nm,0.9s						
MAKZ	**Makanchi**	**31.74**	**306**	P	**P**	**20 57 36.2**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZAA0	**Zalesovo Array**	**32.17**	**320**	P	**P**	**20 57 39.1**	**-1.3**
ZAA0				IAmb	IAmb	20 57 45.5	
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**32.17**	**320**	P	**P**	**20 57 39.5**	**-0.9**
	comp=Z,7.9nm,0.9s,baz=109,slow=7.9,SNR=21						
	comp=Z,7.9nm,0.9s						
ZALV	**Zalesovo Beam**	**32.17**	**320**	P	**P**	**20 57 38.8**	**-1.5**
ZALV	**Zalesovo Beam**	**32.17**	**320**	*e*P	**P**	**20 57 39.6**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MA2	**Magadan**	**32.81**	**28**	LR	LR	21 12 06.2	
	comp=Z,53nm,19.2s,baz=286,slow=38						
PETK	**Petropavlovsk-**	**32.93**	**42**	LR	LR	21 11 27.7	
	comp=Z,44nm,19.3s,baz=190,slow=37						
MRSI	**Marisa**	**33.02**	**177**	P	**P**	**20 57 47.8**	**-0.3**
	comp=Z,28nm,0.8s						
KURK	**Kurchatov**	**34.73**	**312**	P	**P**	**20 58 01.9**	**-0.7**
KURK	**Kurchatov**	**34.73**	**312**	*i* P	**P**	**20 58 02.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
NRN	**Naryn**	**35.65**	**296**	P	**P**	**20 58 10.7**	**-0.3**
NRN				IAmb	IAmb	20 58 18.1	
	comp=Z,14nm,0.8s						
NRN	**Naryn**	**35.65**	**296**	P	**P**	**20 58 10.7**	**-0.3**
NRN				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH	**Kashi**	**35.78**	**292**	P	**P**	**20 58 16.3**	**+4.3**
KSH				sP	sP	20 58 21.8	+5.5
KSH	**Kashi**	**35.78**	**292**	P	**P**	**20 58 16.2**	**+4.3**
KSH				sP	sP	20 58 21.7	+5.4
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SIJI	**Sorong**	**35.85**	**

TIXI	Tiksi	38.35	4	*i* P	P	20 58 31.1	-2.1
TIXI				pmax	pmax		
comp=Z,5.0nm,1.2s							
NIL	Nilore	38.88	284	P	P	20 58 36.8	-1.4
NIL				IAmb	IAmb	20 58 45.1	
comp=Z,11nm,0.8s							
NIL	Nilore	38.88	284	P	P	20 58 36.8	-1.4
NIL				pmax	pmax		
comp=Z,11nm,0.8s							
DRK	Karamyk	38.99	293	P	P	20 58 38.8	-0.7
TRKS	Terek-Say	39.28	296	P	P	20 58 41.5	-0.2
TRKS				pmax	pmax		
comp=Z,16nm,1.2s							
KK31	Karatay Array	39.64	299	P	P	20 58 43.9	-0.6
KK31				IAmb	IAmb	20 58 51.3	
comp=Z,12nm,0.8s							
KK31	Karatay Array	39.64	299	P	P	20 58 43.9	-0.6
KK31				pmax	pmax		
comp=Z,12nm,0.9s							
KKAR	Karatay Array	39.64	299	P	P	20 58 43.6	-0.8
KKAR	Karatay Array	39.64	299	P	P	20 58 44.0	-0.5
KKAR				IAmb	IAmb	20 58 51.3	
comp=Z,12nm,0.8s							
KKAR	Karatay Array	39.64	299	P	P	20 58 44.0	-0.5
KKAR				pmax	pmax		
comp=Z,12nm,0.9s							
BTK	Batken	39.68	294	P	P	20 58 44.1	-0.8
BTK	Batken	39.68	294	P	P	20 58 44.1	-0.8
BTK				pmax	pmax		
comp=Z,6.0nm,0.9s							
NRIK	Noril'sk	40.13	343	P	P	20 58 46.3	-1.8
comp=Z,0.8nm,0.3s,baz=117,slow=9.0,SNR=2.1							
NRIK				LR	LR	21 17 22.3	
comp=Z,83nm,19.8s,baz=106,slow=39							
comp=Z,0.8nm,0.3s							
NRIK	Noril'sk	40.13	343	P	P	20 58 47.5	-0.7
NRIK	Noril'sk	40.13	343	*i* P	P	20 58 47.9	-0.2
NRIK				pmax	pmax		
comp=Z,5.0nm,1.0s							
BVAR	Borovoye Array	40.17	314	LR	LR	21 16 44.7	
comp=Z,217nm,18.8s,baz=97,slow=38							
GAR	Garm	40.20	292	P	P	20 58 48.8	-0.5
GAR				IAmb	IAmb	20 58 55.4	
comp=Z,29nm,1.4s							
BRVK	Borovoye	40.24	314	P	P	20 58 49.1	-0.3
BRVK				IAmb	IAmb	20 58 55.3	
comp=Z,9.3nm,0.8s							
BRVK	Borovoye	40.24	314	*ce*P	P	20 58 49.0	-0.3
BRVK				pmax	pmax		
comp=Z,10.0nm,0.8s							
TAS	Tashkent	40.69	296	P	P	20 58 52.5	-0.7
TAS	Tashkent	40.69	296	P	P	20 58 52.5	-0.7
TAS				pmax	pmax		
comp=Z,36nm,0.5s							
CHGR	Chuyangaron	41.15	292	P	P	20 58 56.5	-0.6
CHGR	Chuyangaron	41.15	292	P	P	20 58 56.5	-0.6
CHGR				pmax	pmax		
comp=Z,41nm,1.0s							
KBL	Kabul	42.06	286	P	P	20 59 04.7	-0.1
KBL				IAmb	IAmb	20 59 13.2	
comp=Z,11nm,0.8s							
KBL	Kabul	42.06	286	P	P	20 59 04.7	-0.1
KBL				pmax	pmax		
comp=Z,11nm,0.8s							
PALK	Pallekele	44.98	243	LR	LR	21 18 24.8	
comp=Z,21nm,20.2s,baz=173,slow=36							
SVE	Sverdlovsk	46.18	319	*e*P	P	20 59 42.1	+4.9
ABKAR	Abkulak array	46.60	308	P	P	20 59 39.4	-1.2
ABKAR	Abkulak array	46.60	308	P	P	20 59 39.5	-1.1
ABKAR				IAmb	IAmb	20 59 46.0	
comp=Z,4.8nm,0.8s							
ARU	Arti	47.30	318	LR	LR	21 21 18.2	
comp=Z,110nm,18.1s,baz=94,slow=38							
ARU	Arti	47.30	318	P	P	20 59 44.4	-1.6
ARU				IAmb	IAmb	20 59 51.3	
comp=Z,7.3nm,0.8s							
ARU	Arti	47.30	318	*d* P	P	20 59 44.4	-1.6
ARU				S	S	21 06 39.7	+0.4
ARU				SS	SS	21 10 05.4	-1.0
ARU				pmax	pmax		
comp=Z,4.0nm,1.0s							
HRA	Herat	47.52	288	P	P	20 59 47.3	-1.0
HRA				IAmb	IAmb	20 59 55.2	
comp=Z,9.1nm,0.8s							
GEYT	Alibeck	49.79	294	P	P	21 00 05.0	-0.5
comp=Z,1.7nm,0.8s,baz=83,slow=4.5,SNR=4.8							
comp=Z,1.7nm,0.8s							
PMG	Port Moresby	49.86	144	LR	LR	21 19 49.5	
comp=Z,41nm,20.5s,baz=75,slow=35							
PRGR	Permogore	53.85	325	*e*P	P	21 00 32.7	-2.7
PRGR				pmax	pmax		
comp=Z,12nm,1.2s							
WRA	Warramunga Arr	54.95	164	P	P	21 00 41.1	-2.7
comp=Z,1.2nm,0.8s,baz=349,slow=8.0,SNR=8.7							
comp=Z,1.2nm,0.8s							
WRA	Warramunga Arr	54.95	164	*e*P	P	21 00 40.8	-3.0
WRA				pmax	pmax		
comp=Z,1.0nm,0.8s							
KLMR	Klimovskoe	56.88	325	*e*P	P	21 00 54.9	-2.3
KLMR				pmax	pmax		
comp=Z,11nm,2.0s							
KLMR	Klimovskoe	56.88	325	*e*P	P	21 00 54.9	-2.3
KLMR				AMP		21 01 03.5	
comp=Z,11nm,2.0s							
VRH	Novokhopyorsk	57.81	313	*e*P	P	21 01 05.6	+1.7
VRH				pmax	pmax		
comp=Z,10.0nm,0.8s							
ASAR	Alice Springs	58.45	165	P	P	21 01 06.5	-2.2
comp=Z,1.1nm,0.9s,baz=350,slow=5.9,SNR=11							
comp=Z,1.1nm,0.9s							
ZEI	Tsey	58.81	303	*e*P	P	21 01 15.3	+3.9
ZEI				pmax	pmax		
comp=Z,10.0nm,1.0s							
CTA	Charters Tower	58.89	151	P	P	21 01 10.1	-1.8
comp=Z,2.2nm,0.7s,baz=354,slow=10,SNR=1.7							
CTA				LR	LR	21 28 34.6	
comp=Z,25nm,18.6s,baz=268,slow=38							
comp=Z,2.2nm,0.7s							
GNI	Garni	59.08	300	P	P	21 01 13.7	+0.5
comp=Z,0.7nm,0.3s,baz=121,slow=5.9,SNR=2.3							
comp=Z,0.7nm,0.3s							
ONI	Oni	59.19	303	P	P	21 01 14.0	+0.2
ONI	Oni	59.19	303	P	P	21 01 14.0	+0.2
ONI				pmax	pmax		
comp=Z,10.0nm,0.9s							
VORR	Voronezh	59.20	314	*e*P	P	21 01 11.7	-1.9
VORR				pmax	pmax		
comp=Z,20nm,0.4s							
KBZ	Khabaz	59.20	305	P	P	21 01 13.4	-0.4
comp=Z,0.8nm,0.7s,baz=85,slow=11,SNR=1.6							
comp=Z,0.8nm,0.7s							
KBZ	Khabaz	59.20	305	*i* P	P	21 01 13.2	-0.6
KBZ				pmax	pmax		
comp=Z,6.0nm,1.1s							
KVAR	Kislovodsk Arr	59.27	305	P	P	21 01 14.2	-0.3
comp=Z,3.2nm,0.9s,baz=24,slow=10.0,SNR=1.6							
comp=Z,3.2nm,0.9s							
KIV	Kislovodsk	59.28	305	P	P	21 01 13.8	-0.7
KIV	Kislovodsk	59.28	305	*e*P	P	21 01 11.9	-2.6
KIV				pmax	pmax		
comp=Z,32nm,1.1s							
KIV				MLR	MLR		
comp=Z,67nm,17.0s							
VSR	Storozhevoye	59.35	314	*e*P	P	21 01 15.3	+0.6
VSR				pmax	pmax		
comp=Z,5.0nm,0.5s							
KARS	Kars	60.11	301	P	P	21 01 19.2	-1.1
KARS	Kars	60.11	301	P	P	21 01 19.2	-1.1
KARS				pmax	pmax		
comp=Z,36nm,0.9s							
KDAK	Kodiak Island	60.80	38	LR	LR	21 27 47.0	
comp=Z,14nm,19.1s,baz=139,slow=36							
ILAR	Eielson Array	61.28	29	P	P	21 01 26.6	-1.1
comp=Z,0.3nm,0.3s,baz=286,slow=6.5,SNR=2.3							
ILAR				LR	LR	21 30 06.1	
comp=Z,43nm,20.8s,baz=260,slow=38							
comp=Z,0.3nm,0.3s							
FINES	FINESS Array B	62.99	327	P	P	21 01 37.2	-1.9
comp=Z,1.6nm,0.8s,baz=132,slow=5.4,SNR=4.4							
comp=Z,1.6nm,0.8s							
INK	Inuvik	64.83	23	LR	LR	21 31 56.1	
comp=Z,27nm,18.9s,baz=222,slow=38							
AKASG	Malin Array Be	65.43	316	P	P	21 01 52.6	-2.7
comp=Z,0.4nm,0.5s,baz=63,slow=6.4,SNR=2.0							
comp=Z,0.4nm,0.5s							
BR131	Keskin Array S	67.12	303	P	P	21 02 05.6	-1.1
BR131				pmax	pmax		
comp=Z,15nm,0.8s							
BRTR	Keskin Array B	67.12	303	P	P	21 02 05.1	-1.6
comp=Z,1.5nm,0.8s,baz=105,slow=4.6,SNR=8.4							
comp=Z,1.5nm,0.8s							
BRTR	Keskin Array B	67.12	303	P	P	21 02 05.5	-1.2
BRTR	Keskin Array B	67.12	303	P	P	21 02 05.5	-1.1
STKA	Stephens Creek	68.20	161	P	P	21 02 11.0	-2.1
comp=Z,0.6nm,0.3s,baz=318,slow=12,SNR=1.7							
comp=Z,0.6nm,0.3s							
BUR08	Bucovina Ar. S	69.13	314	P	P	21 02 17.8	-1.2
BUR08				IAmb	IAmb	21 02 24.0	
comp=Z,3.0nm,0.8s							
BURAR	Bucovina Array	69.13	314	P	P	21 02 16.8	-2.3
BURAR				IAmb	IAmb	21 02 23.8	
comp=Z,3.0nm,0.8s							
BURAR	Bucovina Array	69.13	314	P	P	21 02 16.8	-2.3
BURAR				pmax	pmax		
comp=Z,3.0nm,0.7s							
CSS	Mathiatis	69.45	299	P	P	21 02 20.2	-0.9
CSS				IAmb	IAmb	21 02 25.9	
comp=Z,7.3nm,0.8s							
NB2	NORSAR Subarra	69.57	331	P	P	21 02 24.3	+2.8
comp=Z,1.4nm,0.8s,baz=59,slow=6.9							
NOA	NORSAR Array B	69.57	331	P	P	21 02 20.8	-0.6
comp=Z,0.5nm,0.4s,baz=56,slow=6.1,SNR=5.5							
comp=Z,0.5nm,0.4s							
GKP	Gorka Klasztor	70.86	322	*e*P	P	21 02 23.6	-5.8
GKP				*e*L	L	21 36 19.9	
comp=Z,343nm,17.7s							
OJC	Ojcow	71.03	318	*e*P	P	21 02 32.0	+1.5
OJC	Ojcow	71.03	318	P	P	21 02 27.4	-3.1
OJC				IAmb	IAmb	21 02 33.9	
comp=Z,6.5nm,0.8s							
OJC	Ojcow	71.03	318	P	P	21 02 27.4	-3.1
OJC				pmax	pmax		
comp=Z,7.0nm,0.8s							
VYHS	Vyhne	72.44	317	*e*P	P	21 02 37.8	-1.3
VYHS				*e*		21 02 43.5	
KRLC	Kraliky	72.77	319	*e*P	P	21 02 43.9	+2.9
KRLC	Kraliky	72.77	319	*e*P	P	21 02 43.9	+2.9
DPC	Dobruska-Polom	72.87	319	*e*P	P	21 02 46.0	+4.3
DPC	Dobruska-Polom	72.87	319	*e*P	P	21 02 46.0	+4.3
PRU	Pruhonice	74.03	320	*e*P	P	21 02 52.4	+4.0
PRU	Pruhonice	74.03	320	*e*P	P	21 02 52.4	+4.0
YKA	Yellowknife Ar	74.60	23	P	P	21 02 49.4	-2.1
comp=Z,1.4nm,0.7s,baz=305,slow=4.7,SNR=3.4							
YKA				LR	LR	21 41 17.4	
comp=Z,69nm,18.3s,baz=354,slow=40							
comp=Z,1.4nm,0.7s							
CKRC	Cesky Krumlov	74.80	319	*e*P	P	21 02 57.2	+4.2
KHC	Kasperske Hory	75.03	319	*e*P	P	21 03 01.1	+6.8
KHC	Kasperske Hory	75.03	319	*e*P	P	21 03 01.1	+6.8
GERES	GERESS Array B	75.12	319	P	P	21 02 53.5	-1.5
comp=Z,0.3nm,0.7s,baz=68,slow=8.7,SNR=4.7							
comp=Z,0.3nm,0.7s							
GERES	GERESS Array B	75.12	319	P	P	21 02 50.8	-4.1
GERES	GERESS Array B	75.12	319	*e*P	P	21 02 53.9	-1.0
KMBO	Kilima Mbogo	84.81	265	P	P	21 03 47.0	-1.0
comp=Z,0.2nm,0.5s,baz=52,slow=20,SNR=3.8							
comp=Z,0.2nm,0.5s							
NVAR	Mina Array Bea	90.02	42	P	P	21 04 12.1	-0.7
comp=Z,0.3nm,0.5s,baz=296,slow=4.9,SNR=2.2							
comp=Z,0.3nm,0.5s							

IDC ***19*** *20:59:22.8±5.2,5.˚46S×153.˚39E,h65km±46km,mb3.6/10, mbtmp3.9/11,ML2.2/1,MS2.8/2,Error ellipse: s-maj=32.3km s-min=23.7km az=47.0*

ISC 19 20:59:20.6±1.0,5.˚4S±0.˚1×153.˚5E±0.˚1,h43km,n16, σ1§04/13,mb3.9/9,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.45	237	P	Pn	21 01 08.0	+1.3
2.5nm,0.3s,baz=65,slow=8.7,SNR=3.8							
PMG				S	Sn	21 02 29.3	-0.6
9.2nm,0.5s,baz=28,slow=22,SNR=1.8							
PMG				LR	LR	21 03 13.9	
comp=Z,68nm,21.6s,baz=90,slow=32							
7.5nm,0.3s							
CTA	Charters Tower	16.25	205	LR	LR	21 09 06.3	
comp=Z,42nm,18.3s,baz=68,slow=36							
DZM	Mont Dzumac	20.84	144	P	P	21 03 59.3	+0.5
7.2nm,0.6s,baz=343,slow=11,SNR=10							
7.2nm,0.6s							
SIJI	Sorong	22.61	281	P	P	21 04 17.9	0.0
1.6nm,0.3s,baz=74,slow=20,SNR=1.8							
1.6nm,0.3s							
WRA	Warramunga Arr	23.60	230	P	P	21 04 25.6	-2.2
0.4nm,0.5s,baz=55,slow=10,SNR=8.4							
0.4nm,0.5s							
ASAR	Alice Springs	26.21	224	P	P	21 04 51.0	-0.6
0.8nm,0.9s,baz=54,slow=9.6,SNR=5.7							
0.8nm,0.9s							
H11S3	WAKE ISLAND Hy	27.04	29	T	T	21 33 17.4	
baz=210							
H11S2	WAKE ISLAND Hy	27.04	29	T	T	21 33 14.3	
baz=210							
H11S1	WAKE ISLAND Hy	27.06	29	T	T	21 33 18.9	
baz=210							
KSRS	Korea Array	48.79	333	P	P	21 08 01.0	-0.4
0.4nm,0.4s,baz=146,slow=8.5,SNR=2.5							
0.4nm,0.4s							
CMAR	Chiang Mai Arr	58.71	295	P	P	21 09 15.4	+1.0
1.3nm,0.8s,baz=113,slow=5.8,SNR=8.1							
1.3nm,0.8s							
SONM	Songino Array	67.14	328	P	P	21 10 10.7	+0.6
0.5nm,0.6s,baz=134,slow=6.2,SNR=1.5							
0.5nm,0.6s							
MKAR	Makanchi Array	81.17	319	P	P	21 11 32.0	+0.2
1.0nm,0.8s,baz=96,slow=6.6,SNR=7.9							
1.0nm,0.8s							
ZALV	Zalesovo Beam	81.97	326	P	P	21 11 35.2	-0.6
0.8nm,0.5s,baz=96,slow=7.2,SNR=4.4							
0.8nm,0.5s							
BVAR	Borovoye Array	90.08	323	P	P	21 12 14.9	-1.0
1.1nm,0.7s,baz=108,slow=9.4,SNR=7.7							
1.1nm,0.7s							
TORD	Torodi Ar. Bea	151.11	288	PKPbc	PKPbc	21 19 09.7	-0.4
1.4nm,0.7s,baz=49,slow=2.5,SNR=9.1							

DJA ***19*** *21:03:55.1±0.6,2.˚S±4.˚×10.˚2E±.˚,h228km±5km,M3.6/9, MLv3.6/9*

IDC ***19*** *21:04:05.7±14.0,1.˚70S×103.˚36E,h308km±134km, mb2.8/5,mbtmp3.5/5,Error ellipse: s-maj=217.8km s-min=15.9km az=56.0*

ISC 19 21:03:55.4±0.9,2.˚35S±0.˚07×102.˚46E±0.˚08,h232km±8km, n16,σ0§75/21,mb3.1/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.82	196	P	Pn	21 04 28.1	+0.5
MASI				S	S	21 04 53.5	+0.7
KSI	Kapahiang	1.30	174	P	Pn	21 04 30.8	+0.2
KSI				S	S	21 04 58.4	+0.2
JMBI	JAMBI	1.38	59	P	Pn	21 04 31.1	0.0
JMBI				S	S	21 04 58.4	-0.5
UBSI	University, Be	1.41	188	P	Pn	21 04 31.5	+0.1
UBSI				S	S	21 04 59.3	-0.3
SDSI	Sungai Dareh	1.75	324	P	Pn	21 04 34.1	0.0
MNAI	Manna	2.06	166	P	Pn	21 04 36.6	-0.4
MNAI				S	S	21 05 08.3	-1.3
PPSI	Pulau Pagai	2.48	260	P	Pn	21 04 41.4	+0.2
SISI	Saibi	3.52	287	P	Pn	21 04 52.5	-0.3
KASI	Kota Agung	3.75	147	P	Pn	21 04 53.5	-2.0
PBSI	Pulau Batu	4.76	299	P	Pn	21 05 06.9	-0.9
GSI	Gunungsitoli	6.09	307	P	Pn	21 05 23.5	-0.9
CMAR	Chiang Mai Arr	20.96	351	P	P	21 08 21.2	+0.2
1.0nm,0.8s,baz=183,slow=9.3,SNR=11							
1.0nm,0.8s							
WRA	Warramunga Arr	35.71	122	P	P	21 10 32.2	0.0
0.3nm,0.9s,baz=299,slow=10,SNR=5.6							
0.3nm,0.9s							
ASAR	Alice Springs	37.07	127	P	P	21 10 44.9	+1.0
0.3nm,0.6s,baz=305,slow=8.2,SNR=4.3							
0.3nm,0.6s							
MKAR	Makanchi Array	52.06	343	P	P	21 12 41.7	+0.1
0.3nm,0.4s,baz=153,slow=8.1,SNR=4.2							
0.3nm,0.4s							
ZALV	Zalesovo Beam	58.00	348	P	P	21 13 23.9	+0.1
0.5nm,0.4s,baz=144,slow=5.2,SNR=2.5							
0.5nm,0.4s							

IDC ***19*** *21:23:54.8±0.6,39.˚77N×20.˚52E,h0km,mb4.1/21, mbtmp4.1/36,ML3.8/12,MS3.7/45,Error ellipse: s-maj=10.0km s-min=9.4km az=124.0*

MOS ***19*** *21:23:55.6±1.1,39.˚73N×20.˚47E,h19km,mb4.6/23,Error ellipse: s-maj=3.8km s-min=2.4km az=91.4*

NEIC ***19*** *21:23:56.8±2.4,39.˚73N±0.˚03×20.˚59E±0.˚06,h10km±1km, mb4.5/46,ML4.3(THE),Error ellipse: s-maj=8.6km s-min=4.0km az=239.0*

BEO ***19*** *21:23:56.1±0.8,39.˚60N×20.˚64E,h8km±4km,ML4.1/7*

MED_RC ***19*** *21:23:57.0±0.3,39.˚76N×20.˚67E,h10km,MW4.4/19, Moment Tensor Solution.Mantle waves: s19,c33; Duration: 1§0 Moment tensor: Scale 10^15^Nm; Mrr1.96±.23; Mθθ-1.81±.21; Mφφ-0.14±.20; Mrθ1.77±.55; Mθφ4.39±.15; Mφr0.96±.58; Best double couple: M0:5.14000×10^15^ NP1:φs90.00000°,δ71.00000°, λ30.00000°. NP2:φs350.00000°,δ62.00000°,λ159.00000°. Principal axes: T 4.7600, Plg34.0000°, Azm312.0000°; N 0.7700, Plg55.0000°, Azm120.0000°; P -5.5200, Plg6.0000°, Azm218.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***19*** *21:23:57.7,39.˚73N×20.˚68E,h7km±1km,ML4.3/10 Error ellipse: s-maj=1.1km s-min=0.4km az=288.0*

ROM ***19*** *21:23:58.0,39.˚77N×20.˚58E,h11km,mb4.5/18,Mwp4.6/9, Error ellipse: s-maj=1.5km s-min=0.6km az=24.0*

PDG ***19*** *21:23:57.3±0.8,39.˚74N×20.˚55E,h22km±1km,MD4.5/5, ML4.4/13,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ATH ***19*** *21:23:57.8,39.˚75N×20.˚68E,h4km,Mw4.3,Moment Tensor Solution. s7 Moment tensor: Mrr2.50; Mθθ-0.97; Mφφ-1.53; Mrθ1.42; Mθφ2.47; Mφr0.59; Fault plane solution: NP1:φs110.00000°,δ58.00000°,λ50.00000°. NP2: φs347.00000°,δ49.00000°,λ135.00000°.*

LDG ***19*** *21:23:58.0±0.3,39.˚74N×20.˚63E,h10km,Ml4.4/15 Error ellipse: s-maj=10.3km s-min=6.2km az=16.0*

ISC 19 21:23:56.8±0.7,39.˚72N±0.˚02×20.˚65E±0.˚02,h13km±4km, n653,σ1§52/697,mb4.4/55,MS3.8/41,81C-49D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.17	111	P	Pg	21 24 00.9	+0.2
JAN				S	Sg	21 24 03.6	+0.1
152μm,0.4s							
JAN	Janina	0.17	111	P	Pg	21 24 00.8	0.0
JAN				S	Sg	21 24 03.7	+0.2
JAN	Janina	0.17	111	P	Pg	21 24 01.0	+0.2
JAN				S	Sg	21 24 03.1	-0.4
JAN				AML	AML	21 24 04.8	
JAN				AML	AML	21 24 05.8	
IGT	Igoumenitsa	0.31	233	P	Pb	21 24 04.2	+0.1
IGT				S	Sb	21 24 09.6	+0.6
103μm,0.6s							
IGT	Igoumenitsa	0.31	233	P	Pb	21 24 04.4	+0.3
IGT				S	Sb	21 24 09.3	+0.3
IGT	Igoumenitsa	0.31	233	P	Pb	21 24 04.3	+0.3
IGT				S	Sb	21 24 09.4	+0.5
IGT				AML	AML	21 24 12.2	
IGT				AML	AML	21 24 14.2	
LSK	Leskovik	0.43	355	P	Pb	21 24 05.8	-0.5
LSK				S	Sb	21 24 12.4	-0.4
129μm,0.7s							
SRN	Sarande	0.53	288	P	Pb	21 24 07.8	0.0
SRN				S	Sb	21 24 16.0	+0.7
71μm,0.6s							
KASA	Kassiopi	0.55	273	P	Pb	21 24 08.2	0.0
KASA				S	Sb	21 24 17.0	+1.0
KASA				AML	AML	21 24 18.8	
KASA				AML	AML	21 24 19.6	
KPRO	Kipourio	0.60	66	P	Pg	21 24 08.4	-0.1
KPRO				S	Sg	21 24 16.6	+0.1
26μm,0.4s							
PENT	Pentalofos	0.61	38	P	Pg	21 24 08.6	-0.1
PENT				S	Sb	21 24 17.9	+0.1
PENT	Pentalofos	0.61	38	P	Pg	21 24 08.7	-0.1
PENT				S	Sg	21 24 16.6	-0.2
PENT				AML	AML	21 24 22.7	
comp=E,16250μm,0.4s							
PENT				AML	AML	21 24 23.7	
comp=N,6255μm,0.3s							
KEK	Kerkira	0.66	270	Pg	Pg	21 24 09.5	0.0
KEK	Kerkira	0.66	270	P	Pb	21 24 10.1	+0.1
KEK				S	Sb	21 24 20.4	+1.3
comp=N,66μm,0.3s							
KEK	Kerkira	0.66	270	⇓P	Pg	21 24 09.6	0.0
KEK	Kerkira	0.66	270	P	Pb	21 24 10.2	+0.1
KEK				S	Sb	21 24 20.0	+0.9
KEK				AML	AML	21 24 22.5	
KEK				AML	AML	21 24 24.0	
comp=E,93197μm,0.3s							
NEST	Nestorio	0.76	24	P	Pg	21 24 11.6	+0.1
NEST				S	Sb	21 24 23.1	+0.9
NEST	Nestorio	0.76	24	P	Pg	21 24 11.7	+0.1
NEST				S	Sg	21 24 21.4	-0.2
NEST				AML	AML	21 24 26.7	
comp=E,23984μm,0.5s							
NEST				AML	AML	21 24 28.6	
comp=N,24809μm,0.7s							
TSLK	Tsoukalades, L	0.89	180	P	Pb	21 24 14.7	+0.7
TSLK	Tsoukalades, L	0.89	180	P	Pn	21 24 14.8	-0.1
TSLK				S	Sn	21 24 27.5	-0.2
KBN	Korca	0.91	7	P	Pg	21 24 13.6	-0.8
KBN	Korca	0.91	7	P	Pg	21 24 13.9	-0.5
KBN				S	Sn	21 24 27.4	-1.0
comp=N,15μm,0.9s							
KBN	Korca	0.91	7	P	Pg	21 24 13.6	-0.8
LKD2	Lefkada island	0.93	180	P	Pb	21 24 15.1	+0.4
LKD2				S	Sn	21 24 29.4	+0.8
comp=N,11μm,0.8s							
LKD2	Lefkada island	0.93	180	P	Pn	21 24 15.7	+0.2
LKD2				S	Sn	21 24 28.8	+0.3
NYDR	Nydri-Lefkada	1.00	178	P	Pg	21 24 16.3	+0.2
DRAG	Dragano-Lefkad	1.03	183	P	Pg	21 24 16.9	+0.2
KZN	Kozani	1.04	55	P	Pb	21 24 16.6	-0.1
KZN				S	Sn	21 24 32.5	+0.9
KZN	Kozani	1.04	55	P	Pb	21 24 15.8	-0.9
KZN				S	Sn	21 24 32.5	+0.9
KZN	Kozani	1.04	55	P	Pb	21 24 16.6	-0.1
THL	Klokotos Trika	1.06	98	P	Pb	21 24 16.6	-0.4
THL				S	Sn	21 24 32.0	+0.1
THL	Klokotos Trika	1.06	98	P	Pb	21 24 16.9	-0.1
THL				S	Sn	21 24 32.1	+0.2
EVGI	Lefkada island	1.09	180	P	Pn	21 24 18.3	+0.6
EVGI				S	Sn	21 24 34.7	+2.0
comp=N,10μm,0.5s							
EVGI	Lefkada island	1.09	180	P	Pn	21 24 19.1	+1.4
EVGI				S	Sn	21 24 34.5	+1.8
VLO	Vlora	1.16	311	P	Pg	21 24 19.5	+0.4
VLO	Vlora	1.16	311	P	Pg	21 24 20.3	+1.2
VLO	Vlora	1.16	311	P	Pg	21 24 19.5	+0.4
EVR	Evrytania	1.20	131	P	Pb	21 24 19.8	+0.4
EV

TIR Tirane 1.74 340 P Pb 21 24 28.2 -0.3
TIR Tirane 1.74 340 ePn Pb 21 24 28.6 +0.1
TIR eSn Sg 21 24 52.5 -0.1
TIR Tirane 1.74 340 ⇑P Pb 21 24 28.7 +0.3
GRG Griva 1.82 47 P Pn 21 24 28.4 +0.6
GRG Griva 1.82 47 P Pn 21 24 28.4 +0.6
PHP Peshkopia 1.97 355 P Pb 21 24 32.4 -0.1
THE Thessaloniki 2.00 62 P Pn 21 24 30.9 +0.8
VAY Valandovo 2.17 42 P Pn 21 24 33.3 +0.8
VAY Valandovo 2.17 42 ePn Pn 21 24 33.4 +0.9
VAY Valandovo 2.17 42 i Pn Pn 21 24 33.4 +0.9
VAY i Sn Sb 21 25 02.9 +0.3
KNT Kendrikon 2.24 49 P Pn 21 24 34.0 +0.5
STIP Stip 2.29 30 i Pn Pb 21 24 37.4 -0.6
SKO Skopje 2.33 15 P Pb 21 24 37.1 -1.5
SKO Skopje 2.33 15 ePn Pb 21 24 37.4 -1.2
SKO eSn Sb 21 25 06.2 -1.1
SKO Skopje 2.33 15 i Pn Pb 21 24 37.5 -1.2
SKO i Sn Sb 21 25 06.9 -0.4
SOH Sokhos 2.34 61 P Pn 21 24 36.2 +1.2
ULC Ulcinj 2.48 335 P Pn 21 24 37.9 +1.0
ULC Ulcinj 2.48 335 ePn Pn 21 24 37.3 +0.4
ULC i Sn Sn 21 25 07.2 +0.1
SRS Serrai 2.65 57 P Pn 21 24 39.5 +0.4
SRS Serrai 2.65 57 ePn Pn 21 24 39.8 +0.7
SRS eSn Sn 21 25 13.2 +2.2
DRME Dracevica, Mon 2.71 336 ⇑i Pn Pn 21 24 41.0 +1.1
DRME Dracevica, Mon 2.71 336 ePn Pn 21 24 40.4 +0.5
DRME i Sn Sn 21 25 12.5 0.0
ITM Ithomi 2.72 158 Pb 21 24 43.3 -2.0
ITM Ithomi 2.72 158 ⇑P Pn 21 24 42.8 +2.6
BUM Brajici-Budva 2.90 333 ePn Pn 21 24 43.1 +0.4
BUM i Sn Sn 21 25 17.1 -0.4
PDG Podgorica 2.91 339 ⇑P Pn 21 24 43.8 +1.1
PDG Podgorica 2.91 339 Pn Pn 21 24 43.5 +0.9
PDG Podgorica 2.91 339 ⇑P Pn 21 24 43.6 +1.0
TTG Podgorica 2.91 339 ePn Pn 21 24 43.2 +0.5
TTG i Sn Sn 21 25 17.3 -0.1
PVY Plav 2.92 350 ePn Pn 21 24 43.5 +0.5
PVY i Sn Sn 21 25 17.8 -0.2
TIP Timpagrande 3.06 261 ⇑P Pn 21 24 45.3 +0.4
TIP Timpagrande 3.06 261 Pn Pn 21 24 45.1 +0.3
TIP Timpagrande 3.06 261 ⇑P Pn 21 24 45.1 +0.3
CEME Cevo 3.12 336 ⇓i Pn Pn 21 24 46.1 +0.5
CEME i Sn Sn 21 25 22.2 -0.5
MATE Matera 3.16 288 ⇑P Pn 21 24 46.2 0.0
HCY Herceg Novi 3.18 330 ⇑i Pn Pn 21 24 46.3 -0.1
HCY Herceg Novi 3.18 330 P Pn 21 24 46.7 +0.3
HCY Herceg Novi 3.18 330 ePn Pn 21 24 46.9 +0.5
HCY i Sn Sn 21 25 23.6 -0.5
IVA Berane 3.20 350 ePn Pn 21 24 47.4 +0.6
IVA i Sn Sn 21 25 24.6 -0.3
BARS Barje 3.22 15 ePn Pn 21 24 48.9 +1.9
KOME Kolasin 3.25 345 ePn Pn 21 24 48.0 +0.6
KOME i Sn Sn 21 25 25.5 -0.4
NKME Niksic 3.31 338 ePn Pn 21 24 48.6 +0.4
NKME i Sn Sn 21 25 26.8 -0.5
VTS Vitosha 3.50 33 ⇑P Pn 21 24 52.7 +1.8
VTS Vitosha 3.50 33 Pn Pn 21 24 52.2 +1.3
VTS Vitosha 3.50 33 P Pn 21 24 52.2 +1.3
VTS Vitosha 3.50 33 ⇓P Pn 21 24 52.3 +1.4
SELS Selova 3.52 6 ePn Pn 21 24 52.8 +1.7
BRY Bratogost 3.56 334 ⇑i Pn Pn 21 24 51.5 -0.2
BRY Bratogost 3.56 334 P Pn 21 24 52.3 +0.5
BRY Bratogost 3.56 334 ⇓i Pn Pn 21 24 52.2 +0.5
BRY i Sn Sn 21 25 32.7 -1.0
SJES Sjenica 3.58 352 ePn Pn 21 24 53.8 +1.8
UPM Unac-Piva 3.72 340 ePn Pn 21 24 55.4 +1.4
UPM Unac-Piva 3.72 340 ePn Pn 21 24 54.5 +0.5
UPM i Sn Sn 21 25 36.7 -1.1
CUC Castrocucco 3.73 276 Pn Pn 21 24 54.6 +0.5
PLE Pljevlja 3.73 346 P Pn 21 24 57.0 +2.9
PLE Pljevlja 3.73 346 ePn Pn 21 24 54.6 +0.5
PLE i Sn Sn 21 25 37.1 -0.9
ZAPS Zavoj 3.85 22 ePn Pn 21 24 58.2 +2.5
STON Ston 3.86 326 ⇑i Pn Pn 21 24 54.1 -1.6
IVAS Ivanjica 3.88 355 ePn Pn 21 24 56.8 +0.8
PLD Plovdiv 3.89 51 P Pn 21 24 58.9 +2.7
CEL Celeste 3.98 250 Pn 21 24 57.6 +0.1
CEL Celeste 3.98 250 ⇑P Pn 21 24 58.1 +0.6
BOVS Bovan 4.00 11 ⇑P Pn 21 24 59.0 +1.4
BOVS Bovan 4.00 11 ePn Pn 21 24 58.5 +0.9
BOVS eSn Sn 21 25 44.5 +0.3
RDO Rodhopi 4.00 67 Pn 21 24 58.1 +0.5
RDO Rodhopi 4.00 67 ⇑P Pn 21 24 58.5 +0.9
RUDO Rudo 4.01 347 ePn Pn 21 24 58.1 +0.2
KDZ Kurdzhali 4.11 60 P Pn 21 24 59.7 +0.5
GRUS Gruza 4.17 1 ePn Pn 21 25 01.3 +1.3
BLKB Belogradchik 4.19 21 ⇓P Pn 21 25 02.6 +2.3
SGRT San Giovanni R 4.25 300 Pn Pn 21 25 01.1 0.0
BBLS Lazići 4.25 348 ⇑i Pn Pn 21 25 01.8 +0.6
BBLS Lazići 4.25 348 ePn Pn 21 25 01.8 +0.6
ZAGS Zajecar 4.26 16 ePn Pn 21 25 02.7 +1.4
EZN Ezine 4.38 87 P Pn 21 25 05.5 +2.7
DIVS Divibare 4.41 354 Pn Pn 21 25 04.1 +0.7
DIVS Divibare 4.41 354 ⇑i Pn Pn 21 25 04.1 +0.7
DIVS Divibare 4.41 354 ePn Pn 21 25 04.0 +0.7
DIVS Divibare 4.41 354 ⇑P Pn 21 25 04.1 +0.7
TRUS Trudelj 4.51 358 ePn Pn 21 25 06.0 +1.3
APE Apeiranthos 4.66 123 ⇑P Pn 21 25 08.0 +1.2
APE Apeiranthos 4.66 123 i P Pn 21 25 09.0 +2.2
BAIL Bailesti 4.75 24 ⇑P Pn 21 25 10.2 +2.2
KUBS Kucevo 4.75 9 ePn Pn 21 25 08.4 +0.3
PAOL Paolisi 4.83 288 Pn 21 25 10.1 +1.0
PUNG Punghina 4.87 20 ⇓P Pn 21 25 11.9 +2.3
DKL Dikili 4.89 96 ⇓P Pn 21 25 14.2 +4.3
TEKS Tekeris 4.90 351 ⇑i Pn Pn 21 25 09.4 -0.6
TEKS Tekeris 4.90 351 ePn Pn 21 25 09.5 -0.6
SANT Santorini 5.06 130 Pn Pn 21 25 14.1 +1.9
SRKY Kupres RS 5.07 330 ⇑i Pn Pn 21 25 13.3 +0.9
BEO Beograd 5.09 359 P Pn 21 25 13.1 +0.4
VLAD Vladila 5.12 32 ⇑P Pn 21 25 14.7 +1.8
MDVR Moldovita 5.12 9 ⇓P Pn 21 25 14.9 +1.7
DJES Djerdap 5.14 15 ⇓P Pn 21 25 15.3 +2.0
DJES Djerdap 5.14 15 ePn Pn 21 25 15.2 +1.9
BLJ Bljeljina 5.17 349 ⇑i Pn Pn 21 25 12.9 -0.8
HERR Herculane 5.33 14 ⇑P Pn 21 25 17.7 +1.9
DOB Doboj 5.36 340 ⇑i Pn Pn 21 25 16.1 -0.2
VAE Valguarnera 5.37 247 Pn Pn 21 25 17.4 +0.8
comp=N,4.2nm,0.5s,baz=154,slow=12,SNR=9.5
VAE Sn Sn 21 26 14.2 -4.1
comp=N,6.0nm,0.3s,baz=180,slow=23,SNR=3.2
MGRS Mrkonjic Grad 5.39 332 ⇑i Pn Pn 21 25 17.8 +0.9
FRGS Fruska Gora 5.47 354 ⇑P Pn 21 25 18.3 +0.3
FRGS Fruska Gora 5.47 354 ⇑i Pn Pn 21 25 18.2 +0.3
FRGS Fruska Gora 5.47 354 ePn Pn 21 25 18.1 +0.2
RAFF Raffo Rosso 5.53 245 Pn 21 25 17.9 -0.7
IDI Anoyia 5.56 141 ⇓P Pn 21 25 19.6 +0.4
IDI Anoyia 5.56 141 Pn Pn 21 25 19.1 -0.1
comp=N,2.6nm,0.3s,baz=311,slow=17,SNR=21
IDI Sn Sn 21 26 20.2 -2.7
comp=N,4.7nm,0.3s,baz=250,slow=22,SNR=1.7
comp=N,4.0nm,0.3s
IDI Anoyia 5.56 141 Pn 21 25 19.4 +0.2
IDI Anoyia 5.56 141 ⇑P Pn 21 25 20.0 +0.8
INTR Introdacqua 5.60 296 Pn 21 25 21.2 +1.4
BLY Banja Luka 5.65 334 ⇑i Pn Pn 21 25 20.5 +0.2
BLY Banja Luka 5.65 334 ⇑P Pn 21 25 20.6 +0.2
BANR Banloc 5.67 3 ⇓P Pn 21 25 22.1 +1.4
HUMR Humele 5.79 32 ⇑P Pn 21 25 24.0 +1.7
A052A Srbac 5.86 338 ⇑i Pn Pn 21 25 21.9 -1.3
GZR Gura Zlata 5.89 15 ⇑P Pn 21 25 26.1 +2.5
GZR Gura Zlata 5.89 15 P Pn 21 25 26.1 +2.5
BZS Buzias 5.94 7 ⇑P Pn 21 25 25.3 +1.0
BZS Buzias 5.94 7 P Pn 21 25 25.2 +0.9
BZS pmax pmax
comp=Z,16nm,1.1s
A051A Mrakovica 5.97 334 ⇑i Pn Pn 21 25 24.9 0.0
SGRR Singureni 6.00 40 ⇓P Pn 21 25 27.3 +2.1
PRIJ Prijedor 6.01 332 ⇑i Pn Pn 21 25 25.3 0.0
STFAR Stefanesti-Arg 6.05 30 ⇑P Pn 21 25 28.1 +2.2
AQU L'Aquila 6.08 298 Pn 21 25 26.9 +0.6
AQU L'Aquila 6.08 298 P Pn 21 25 26.9 +0.6
AQU L'Aquila 6.08 298 ⇑P Pn 21 25 27.2 +0.9
CAMP Campotosto 6.15 300 Pn 21 25 28.4 +1.0
LOT Lotru 6.17 21 ⇓P Pn 21 25 28.9 +1.2
WDD Wied Dalam 6.21 233 Pn Pn 21 25 27.2 -0.8
MANT Manisa 6.27 99 Pn Pn 21 25 31.6 +2.5
ARR Arges 6.37 26 ⇓P Pn 21 25 31.7 +1.4
DEV Deva 6.38 14 ⇓P Pn 21 25 31.8 +1.4
DEV Deva 6.38 14 P Pn 21 25 34.0 +3.6
DEV pmax pmax
comp=Z,53nm,1.0s
MTUR Matau 6.40 29 ⇓P Pn 21 25 33.3 +2.6
MTUR Matau 6.40 29 P Pn 21 25 33.3 +2.6
SULR 6.47 38 ⇑P Pn 21 25 34.2 +2.6
NRCA Norcia 6.47 301 Pn 21 25 32.6 +0.9
VOIR 6.57 28 ⇓P Pn 21 25 35.0 +1.9
VOIR 6.57 28 P Pn 21 25 36.6 +3.5
VOIR pmax pmax
comp=Z,82nm,1.1s
SIRR Siria 6.59 6 ⇑P Pn 21 25 34.4 +1.1
LEHL Lehliu 6.61 42 ⇓P Pn 21 25 35.0 +1.6
RASA Rasa 6.61 45 ⇓P Pn 21 25 36.4 +2.9
AMBH Ambrzfalva 6.63 0 ⇓P Pn 21 25 35.9 +2.1
AMBH Ambrzfalva 6.63 0 P Pn 21 25 36.3 +2.5
KARP Karpathos 6.63 127 Pn Pn 21 25 36.9 +3.0
KOVH Kovagotottos 6.64 344 P Pn 21 25 33.7 -0.2
KOVH S Sn 21 26 45.3 -4.1
MORH Mrgy, Hungar 6.66 348 ⇓P Pn 21 25 34.1 -0.1
MORH Mrgy, Hungar 6.66 348 P Pn 21 25 33.9 -0.3
MORH S Sn 21 26 46.1 -3.7
CESX Cesi 6.74 298 Pn 21 25 35.9 +0.6
ARG Arkhangelos 6.86 118 Pn Pn 21 25 40.5 +3.5
ARG Arkhangelos 6.86 118 P Pn 21 25 40.5 +3.5
ISR Istrita 6.94 37 ⇓P Pn 21 25 40.9 +2.8
ISR Istrita 6.94 37 P Pn 21 25 42.6 +4.5
ISR pmax pmax
comp=Z,104nm,0.9s
MLR Muntele Rosu 6.97 32 ⇓P Pn 21 25 41.5 +2.9
MLR Muntele Rosu 6.97 32 Pn Pn 21 25 41.5 +2.9
comp=Z,1.2nm,0.3s,baz=354,slow=10,SNR=19
MLR Sn Sn 21 26 58.2 +0.6
baz=36,slow=22
comp=Z,12nm,0.7s
MLR Muntele Rosu 6.97 32 Pn 21 25 40.4 +1.9
MLR Muntele Rosu 6.97 32 P Pn 21 25 40.4 +1.9
AMRR Amara 6.97 43 ⇑P Pn 21 25 40.5 +2.0
PGOR Pogoanele 7.00 40 ⇓P Pn 21 25 41.1 +2.3
BOJS Bojanci 7.02 327 ⇑i Pn Pn 21 25 39.0 -0.1
BOJS Bojanci 7.02 327 ePn Pn 21 25 39.0 -0.1
BOJS eSn Sn 21 26 57.9 -0.8
BOJS IAML 21 28 20.6
comp=Z,536nm,1.8s
MURB Monte Urbino 7.05 303 Pn 21 25 40.5 +0.8
NEHR Nehoiu 7.07 34 ⇓P Pn 21 25 42.2 +2.4
PTJ Puntijarka 7.08 332 P Pn 21 25 39.0 -1.0
DOPR Dopca 7.15 28 ⇑P Pn 21 25 43.2 +2.2
MGAB Montegabbione 7.17 299 ⇑P Pn 21 25 42.4 +1.1
CRES Cresnjev 7.20 330 ⇑i Pn Pn 21 25 41.1 -0.5
DRGR 7.23 11 ⇑P Pn 21 25 44.0 +1.9
DRGR 7.23 11 P Pn 21 25 44.9 +2.8
LATE Laterza 7.27 296 Pn 21 25 44.5 +1.8
CJR Cluj-Napoca 7.32 16 ⇓P Pn 21 25 44.9 +1.6
CJR Cluj-Napoca 7.32 16 P Pn 21 25 44.8 +1.6
GRER 7.34 37 ⇓P Pn 21 25 46.9 +3.4
HARR Harsova 7.34 45 ⇑P Pn 21 25 45.5 +2.0
HARR Harsova 7.34 45 P Pn 21 25 45.5 +2.0
COVR Voineasa-Covas 7.36 32 ⇑P Pn 21 25 45.8 +1.9
OZUR 7.41 29 ⇑P Pn 21 25 47.7 +3.2
TIH Tihany 7.46 345 P Pn 21 25 46.1 +1.0
TIRR Tirgusor 7.47 48 Pn Pn 21 25 47.1 +1.8
TIRR Tirgusor 7.47 48 P Pn 21 25 47.1 +1.8
BORA Eskisehir 7.55 86 Pn 21 25 49.3 +2.7
PLOR Plostina 7.55 34 ⇓P Pn 21 25 49.0 +2.4
PLOR Plostina 7.55 34 P Pn 21 25 48.9 +2.4
CEY Cerknica 7.56 325 ⇑i Pn Pn 21 25 46.3 -0.3
BSZH Besenyszg 7.58 358 ⇑P Pn 21 25 48.2 +1.3
BSZH Besenyszg 7.58 358 P Pn 21 25 48.7 +1.8
VRI Vrincioaia 7.60 34 ⇓P Pn 21 25 50.2 +3.1
VRI Vrincioaia 7.60 34 P Pn 21 25 50.4 +3.3
SKDS Skadanscina 7.61 322 ⇑i Pn Pn 21 25 46.0 -1.2
MESR Meseseni 7.62 12 ⇑P Pn 21 25 48.6 +1.2
ODBI Odbesti 7.66 36 ⇑P Pn 21 25 49.7 +1.7
TPGR Topolog 7.72 46 ⇓P Pn 21 25 50.1 +1.4
LTVH Ltavrtes, Hu 7.72 6 ⇓P Pn 21 25 49.8 +1.1
LTVH Ltavrtes, Hu 7.72 6 P Pn 21 25 51.8 +3.0
CFR Carcaliu 7.77 43 ⇓P Pn 21 25 52.1 +2.6
CFR Carcaliu 7.77 43 P Pn 21 25 52.0 +2.6
MPLH Magyarpolny 7.79 344 P Pn 21 25 50.4 +0.7
CSKK Cskako 7.84 348 P Pn 21 25 51.9 +1.6
BUD Budapest 7.85 352 P Pn 21 25 51.4 +0.8
BUD pmax pmax
comp=Z,32nm,0.7s
BUD Budapest 7.85 352 P Pn 21 25 51.2 +0.7
CASP Castiglione de 7.99 296 Pn Pn 21 25 52.9 +0.5
OSSC Osservatorio P 8.00 301 Pn 21 25 50.0 -2.7
TATR Tatarca 8.02 40 ⇓P Pn 21 25 54.9 +2.1
EGYH Egyhazaskeszo 8.06 344 P Pn 21 25 54.3 +0.9
SOKA Soboth 8.07 331 i Pn Pn 21 25 52.8 -0.9
comp=Z,17nm,0.9s,SNR=26
SOKA eSn Sn 21 27 25.6 +0.7
comp=Z,16nm,0.7s
TESR Tescani 8.08 31 ⇓P Pn 21 25 55.6 +1.9
OBKA Obir 8.12 329 ⇑i Pn Pn 21 25 53.1 -1.3
OBKA Obir 8.12 329 i Pn Pn 21 25 54.2 -0.1
comp=Z,12nm,0.4s,SNR=18
VARL Varlezi 8.13 38 ⇓P Pn 21 25 57.2 +2.8
TLCR 8.14 45 ⇓P Pn 21 25 56.5 +2.0
TLCR 8.14 45 P Pn 21 25 56.5 +2.0
VLDR Vladesti 8.21 39 ⇑P Pn 21 25 57.4 +2.0
BMR Baia Mare 8.22 14 ⇓P Pn 21 25 58.6 +3.0
BMR Baia Mare 8.22 14 P Pn 21 25 59.9 +4.3
BMR pmax pmax
comp=Z,24nm,1.2s
PSZ Piszkesteto 8.22 356 ⇑P Pn 21 25 56.6 +1.0
PSZ Piszkesteto 8.22 356 Pn 21 25 56.1 +0.4
PSZ Piszkesteto 8.22 356 P Pn 21 25 56.1 +0.4
PSZ Piszkesteto 8.22 356 P Pn 21 25 56.7 +1.1
SRO Srobarova 8.27 349 P Pn 21 25 58.0 +1.8
SRO pmax pmax
comp=Z,150nm,0.9s
ARSA Arzberg 8.40 335 i Pn Pn 21 25 57.6 -0.6
comp=Z,5.5nm,0.3s,SNR=8.8
ARSA Arzberg 8.40 335 ⇑P Pn 21 25 57.1 -1.0
PRED Cave del Predi 8.49 325 Pn 21 25 58.5 -0.8
SOP Sopron 8.50 341 P Pn 21 25 59.6 +0.2
SOP pmax pmax
comp=Z,18nm,1.0s
SOP Sopron 8.50 341 P Pn 21 26 00.0 +0.6
TRPA Tarpa 8.52 9 ⇑P Pn 21 26 01.6 +1.9
TRPA Tarpa 8.52 9 P Pn 21 26 02.3 +2.6
PTCC Patocco-Chiusa 8.55 324 ⇓P Pn 21 25 59.1 -1.1
ZCCA Zocca 8.56 306 Pn 21 26 00.9 +0.7
BUR01 Bucovina Ar. S 8.56 21 ⇓P Pn 21 26 02.1 +1.7
BURAR Bucovina Array 8.56 21 ⇑P Pn 21 26 02.5 +2.1
BURAR Bucovina Array 8.56 21 Pn 21 26 02.4 +2.0
BURAR Bucovina Array 8.56 21 P Pn 21 26 02.8 +2.4
RONA Rosalia, Austr 8.58 340 i Pn Pn 21 26 00.5 -0.1
comp=Z,1.9nm,0.3s,SNR=7.3
BUR08 Bucovina Ar. S 8.58 21 Pn 21 26 02.9 +2.3
ABAH Abaujker 8.59 3 P Pn 21 26 02.7 +2.0
MYKA Terra Mystica 8.60 326 i Pn Pn 21 26 00.4 -0.4
comp=Z,7.2nm,0.5s
MYKA eSn Sn 21 27 39.0 +1.3
comp=Z,18nm,0.7s
TEOL Teolo 8.70 313 Pn 21 26 00.9 -1.3
STAL STALIGIAL 8.75 321 Pn 21 26 01.6 -1.3
KECS Kecovo 8.77 359 eP Pn 21 26 04.8 +1.7
CLUD Cludinico 8.81 322 Pn 21 26 02.6 -1.1
VLC Villacollemand 8.84 303 Pn Pn 21 26 04.4 +0.2
VLC Villacollemand 8.84 303 ⇑P Pn 21 26 04.9 +0.7
ZST Bratislava 8.85 344 P Pn 21 26 04.8 +0.5
ZST pmax pmax
comp=Z,92nm,0.9s
VYHS Vyhne 8.87 352 eP Pn 21 26 05.3 +0.7
VYHS e 21 27 41.0
CONA Conrad Observa 8.91 339 i Pn Pn 21 26 05.9 +0.8
comp=Z,1.2nm,0.3s
UZH Uzhgorod 8.99 7 eP Pn 21 26 08.0 +1.9
UZH eS Sn 21 27 49.0 +1.8
SLUM Salum 9.01 154 P Pn 21 26 05.5 -1.0
baz=228
SLUM S Sn 21 27 39.4 -8.3
baz=228
KBA Koelnbreinsper 9.07 327 P Pn 21 26 07.1 -0.4
KBA pmax pmax
comp=Z,36nm,1.0s
KBA Koelnbreinsper 9.07 327 i Pn Pn 21 26 07.3 -0.2
comp=Z,7.4nm,0.6s,SNR=14
KBA eSn Sn 21 27 47.2 -2.4
comp=Z,21nm,0.8s
KBA Koelnbreinsper 9.07 327 ⇓P Pn 21 26 06.8 -0.7
CTI Castel Tesino 9.14 317 Pn 21 26 07.0 -1.4
CTI Castel Tesino 9.14 317 P Pn 21 26 07.0 -1.4
ABTA Abfaltersbach 9.20 322 i Pn Pn 21 26 08.4 -0.7
comp=Z,4.3nm,0.2s,SNR=10.0
ABTA eSn Sn 21 27 52.0 -0.4
comp=Z,44nm,0.6s
CRVS Cervenica-Dubn 9.20 3 eP Pn 21 26 11.5 +2.4
PGF Pioggiola 9.23 292 ePn Pn 21 26 11.6 +2.0
MILM Milestii Mici 9.33 37 ⇓P Pn 21 26 12.7 +1.9
MILM Milestii Mici 9.33 37 eP Pn 21 26 13.0 +2.1
MILM Milestii Mici 9.33 37 ePP Pn 21 26 20.0 +9.1
MILM eS Sn 21 27 58.0 +2.4
MILM eL L 21 29 26.0
MILM LqM 21 30 10.0
comp=Z,800nm,14.0s
MILM LRM MLR 21 30 41.0
comp=Z,600nm,11.5s
MILM Milestii Mici 9.33 37 eP Pn 21 26 13.0 +2.1
MILM eS Sn 21 27 58.0 +2.4
MILM MLR MLR
comp=Z,900nm,12.0s
MILM MLR MLR
comp=E,600nm,11.5s
MOA Molln 9.35 333 i Pn Pn 21 26 11.1 0.0
comp=E,7.0nm,0.2s,SNR=13
MOA i Sn Sn 21 27 55.5 -0.5
comp=E,12nm,0.6s
JAVC Velka Javorina 9.39 348 ePN Pn 21 26 11.9 +0.3
KIS Kishinev 9.39 37 eP Pn 21 26 14.0 +2.3
KIS eS Sn 21 27 59.0 +1.9
KIS eL L 21 30 05.0
KIS LRM MLR 21 30 45.0
comp=E,400nm,11.0s
BIOA Bad Ischl, Aus 9.45 330 i Pn Pn 21 26 12.1 -0.3
comp=E,13nm,0.4s,SNR=36
BIOA eSn Sn 21 28 00.1 +1.6
comp=E,18nm,0.5s
SALO Salr 9.50 312 Pn 21 26 12.3 -1.0
SALO Salr 9.50 312 ⇑P Pn 21 26 12.0 -1.2
STHS Stebnicka Huta 9.71 2 eP Pn 21 26 17.8 +1.8
BOB Bobbio (Coli) 9.72 305 P Pn 21 26 17.9 +1.7
BOB pmax pmax
comp=Z,26nm,0.7s
KEST Kesra 9.80 250 Pn Pn 21 26 17.8 +0.5
comp=Z,0.2nm,0.3s,baz=39,slow=9.5,SNR=5.7
KEST Sn Sn 21 28 03.9 -3.3
baz=343,slow=8.6,SNR=1.5
comp=Z,2.7nm,0.7s
KRUC Moravsky 9.82 343 P Pn 21 26 17.8 +0.2
KRUC pmax pmax
comp=Z,5.0nm,0.8s
KRUC Moravsky 9.82 343 ePN Pn 21 26 16.7 -0.9
MAUC Maruska 9.86 349 ePN Pn 21 26 18.3 +0.3
MAUC AMS AMS 21 30 20.0
comp=Z,1µm,13.7s
WTTA Wattenberg 9.98 322 P Pn 21 26 20.2 +0.2
WTTA pmax pmax
comp=Z,31nm,1.1s
WTTA Wattenberg 9.98 322 i Pn Pn 21 26 19.9 -0.1
comp=Z,5.5nm,0.2s,SNR=23
WTTA eSn Sn 21 28 09.9 -2.0
comp=Z,64nm,0.9s
BR131 Keskin Array S 10.01 86 Pn Pn 21 26 22.1 +1.8
BR131 Keskin Array S 10.01 86 P Pn 21 26 22.1 +1.8
BRTR Keskin Array B 10.01 86 Pn Pn 21 26 23.4 +3.1
comp=Z,0.2nm,0.3s,baz=266,slow=12,SNR=6.6
BRTR LR LR 21 30 32.7
comp=Z,245nm,21.4s,baz=283,slow=39
comp=Z,0.6nm,0.5s
BRTR Keskin Array B 10.01 86 Pn Pn 21 26 22.4 +2.1
BRTR Keskin Array B 10.01 86 P Pn 21 26 22.4 +2.1
VRAC Vranov 10.02 345 Pn Pn 21 26 20.1 -0.1
comp=Z,1.8nm,0.4s,baz=175,slow=14,SNR=4.0
VRAC LR LR 21 30 42.6
comp=Z,310nm,18.6s,baz=170,slow=41
VRAC Vranov 10.02 345 ePN Pn 21 26 19.8 -0.4
WATA Walderalm 10.06 322 Pn Pn 21 26 21.1 +0.1
comp=Z,18nm,0.4s,SNR=30
WATA eSn Sn 21 28 13.2 -0.6
comp=Z,19nm,0.6s
SQTA Sankt Quirin 10.16 321 i Pn Pn 21 26 22.9 +0.6
comp=Z,8.4nm,0.2s,SNR=19
SQTA eSn Sn 21 28 14.7 -1.4
comp=Z,18nm,0.6s
CKRC Cesky Krumlov 10.17 336 ePN Pn 21 26 22.0 -0.3
FUORN Ofenpass-Fuorn 10.25 316 Pn 21 26 23.4 -0.2
TREC Trest 10.26 341 AMS AMS 21 30 40.0
comp=Z,800nm,12.9s
FETA Feichten 10.26 319 Pn Pn 21 26 24.0 +0.2
comp=Z,8.2nm,0.8s,SNR=12
FETA eSn Sn 21 28 16.2 -2.4
comp=Z,17nm,0.6s
OKC Ostrava-Krasne 10.27 351 P Pn 21 26 25.0 +1.3
OKC pmax pmax
comp=Z,16nm,1.2s
OKC Ostrava-Krasne 10.27 351 AMS AMS 21 30 40.0
comp=Z,500nm,12.2s
MOTA Moosalm 10.30 321 i Pn Pn 21 26 24.1 -0.1
comp=Z,25nm,0.7s,SNR=28
MOTA eSn Sn 21 28 17.9 -1.6
comp=Z,40nm,0.9s
MORC Moravsky Berou 10.30 349 ⇓P Pn 21 26 25.0 +0.9
MORC Moravsky Berou 10.30 349 Pn 21 26 24.1 0.0
MORC Moravsky Berou 10.30 349 P Pn 21 26 24.1 0.0
MORC Moravsky Berou 10.30 349 ePN Pn 21 26 24.1 0.0
LVV L'vov 10.38 12 eP Pn 21 26 34.4 +9.2
GEC2 GERESS Array S 10.39 334 Pn 21 26 24.3 -1.2
GEC2 GERESS Array S 10.39 334 P Pn 21 26 24.7 -0.8
GEC2 pmax pmax
comp=Z,12nm,0.9s
GERES GERESS Array B 10.39 334 Pn Pn 21 26 24.3 -1.2
comp=Z,0.9nm,0.3s,baz=159,slow=14,SNR=23
GERES Sn Sn 21 28 18.7 -3.0
comp=Z,1.0nm,0.3s,baz=154,slow=25,SNR=2.2
comp=Z,1.5nm,0.3s
GERES GERESS Array B 10.39 334 Pn 21 26 24.2 -1.3
OJC Ojcow 10.52 357 Pn 21 26 26.3 -0.8
OJC Ojcow 10.52 357 P Pn 21 26 26.3 -0.8
DAVOX Davos/Dischmat 10.55 315 Pn Pn 21 26 27.0 -0.7
comp=Z,2.2nm,0.3s,baz=135,slow=16,SNR=30
DAVOX Sn Sn 21 28 27.3 +1.4
comp=Z,2.1nm,0.3s,baz=156,slow=20,SNR=3.3
DAVOX LR LR 21 30 50.6
comp=Z,221nm,20.8s,baz=122,slow=40
comp=Z,25nm,0.8s
RETA Reutte 10.56 321 i Pn Pn 21 26 27.8 +0.1
comp=Z,3.3nm,0.4s,SNR=5.9
RETA eSn Sn 21 28 27.2 +1.3
comp=Z,19nm,0.6s
TUE Stuetta 10.66 313 Pn 21 26 28.7 -0.7
KHC Kasperske Hory 10.68 334 Pn 21 26 28.0 -1.3
KHC Kasperske Hory 10.68 334 eP Pn 21 26 29.1 -0.2
KHC e 21 28 28.6
KHC MLR MLR
comp=Z,1µm,10.0s
KHC Kasperske Hory 10.68 334 ePN Pn 21 26 29.1 -0.2
KHC eSN Sn 21 28 28.6 -0.1
KHC AMS AMS 21 31 10.0
comp=Z,1µm,10.0s
KHC Kasperske Hory 10.68 334 ⇑P Pn 21 26 29.1 -0.2
SBF Sospel 10.70 297 ePn Pn 21 26 32.6 +2.9
SBF eSn Sn 21 28 19.4 -10
comp=Z,22nm,0.6s
SBF Sospel 10.70 297 P Pn 21 26 30.6 +0.9
KRLC Kraliky 10.71 346 eP Pn 21 26 29.6 -0.2
KRLC MLR MLR
comp=Z,700nm,11.0s
KRLC Kraliky 10.71 346 ePN Pn 21 26 29.6 -0.2
KRLC AMS AMS 21 31 10.0
comp=Z,700nm,11.0s
MONC Moncucco Torin 10.82 304 ⇑P Pn 21 26 32.8 +1.6
DAVA Damuels 10.88 318 Pn Pn 21 26 32.9 +0.8
comp=Z,3.1nm,0.3s,SNR=7.9
DAVA eSn Sn 21 28 33.9 +0.2
comp=Z,18nm,0.5s
DAVA Damuels 10.88 318 ⇑P Pn 21 26 33.3 +1.2
WET Wettzell 10.93 332 P Pn 21 26 31.4 -1.4
WET pmax pmax
comp=Z,11nm,0.7s
GOPC GO Pecny, Ondr 11.01 340 AMS AMS 21 31 10.0
comp=Z,700nm,11.9s
DPC Dobruska-Polom 11.06 345 eP Pn 21 26 33.8 -0.8
DPC MLR MLR
comp=Z,1µm,11.4s

DPC Dobruska-Polom 11.06 345 *e*PN **Pn 21 26 33.8 -0.8**
DPC AMS AMS 21 31 30.0
comp=Z,1µm,11.4s
LLS Linth-Limmern 11.07 314 P **Pn 21 26 35.6 +0.7**
LLS pmax pmax
comp=Z,19nm,0.9s
PRU Pruhonice 11.14 339 *e*P **Pn 21 26 35.8 +0.2**
PRU MLR MLR
comp=Z,900nm,10.6s
PRU Pruhonice 11.14 339 *e*PN **Pn 21 26 35.8 +0.2**
PRU AMS AMS 21 31 20.0
comp=Z,900nm,10.6s
CSS Mathiatis 11.15 111 **Pn 21 26 37.3 +1.5**
SWA2 11.17 158 P **Pn 21 26 35.7 -0.4**
baz=217
LMR La Mourre 11.20 293 *e*Pn **Pn 21 26 37.9 +1.5**
LMR La Mourre 11.20 293 *e*P Pn 21 26 44.9 +8.5
LMR La Mourre 11.20 293 P **Pn 21 26 38.8 +2.4**
UPC Upice 11.27 345 AMS AMS 21 31 30.0
comp=Z,900nm,15.9s
OSTC Ostas 11.28 345 AMS AMS 21 31 20.0
comp=Z,1µm,13.2s
CHVC Chvalec 11.34 345 AMS AMS 21 31 30.0
comp=Z,900nm,11.2s
MBDF Montbardon 11.44 300 *e*Pn **Pn 21 26 40.9 +1.0**
MBDF *e*Sn Sn 21 28 35.9 -12
comp=Z,12nm,0.5s
MBDF Montbardon 11.44 300 P **Pn 21 26 38.6 -1.3**
ZUR Degenried 11.62 315 P **Pn 21 26 45.6 +3.4**
ZUR pmax pmax
comp=Z,15nm,0.5s
BNI Bardonecchia 11.62 302 Pn **Pn 21 26 41.6 -0.7**
BNI Bardonecchia 11.62 302 P **Pn 21 26 41.6 -0.7**
BNI Bardonecchia 11.62 302 ⇑P **Pn 21 26 45.0 +2.6**
PVCC Panska Ves 11.63 340 AMS AMS 21 31 30.0
comp=Z,700nm,9.9s
LPG La Plagne 11.75 304 *e*Pn **Pn 21 26 42.7 -1.6**
LPG *e*Sn Sn 21 28 42.0 -13
comp=Z,10.0nm,0.4s
LPG La Plagne 11.75 304 P **Pn 21 26 40.7 -3.6**
LPL La Plagne 11.77 304 *e*Pn **Pn 21 26 44.5 0.0**
LPL *e*Sn Sn 21 28 42.8 -13
comp=Z,6.1nm,0.3s
LPL La Plagne 11.77 304 P **Pn 21 26 41.8 -2.7**
SENIN Lac Senin/Sane 11.80 309 **Pn 21 26 43.6 -1.3**
SLE Schleitheim 11.91 316 P **Pn 21 26 46.3 +0.2**
SLE pmax pmax
comp=Z,8.0nm,0.6s
RSL Roselend 11.91 305 P **Pn 21 26 49.1 +2.8**
NKC Novy Kostel 12.00 334 AMS AMS 21 32 20.0
comp=Z,800nm,13.8s
SMRF Simiane la Rot 12.02 296 *e*P Pn 21 26 54.0 +6.3
ORIF Oris-en-Rattie 12.10 300 *e*Pn **Pn 21 26 48.5 -0.3**
ORIF *e*Sn Sn 21 28 52.1 -12
comp=Z,9.1nm,0.5s
ORIF Oris-en-Rattie 12.10 300 P **Pn 21 26 49.1 +0.3**
STU Stuttgart 12.21 322 Pn **Pn 21 26 47.9 -2.3**
STU Stuttgart 12.21 322 P **Pn 21 26 47.9 -2.3**
BFO Black Forest 12.35 318 **Pn 21 26 49.4 -2.7**
BFO Black Forest 12.35 318 P **Pn 21 26 49.4 -2.7**
BFO Black Forest 12.35 318 ⇑P **Pn 21 26 51.1 -1.1**
AKASG Malin Array Be 12.53 26 Pn **Pn 21 26 55.4 +0.9**
comp=Z,0.6nm,0.3s,baz=213,slow=12,SNR=7.1
comp=Z,0.3nm,0.4s
AKBB Malin Array Si 12.53 26 Pn **Pn 21 26 54.7 +0.2**
AKBB Malin Array Si 12.53 26 *i* P **Pn 21 26 56.3 +1.8**
MOX Moxa 12.64 333 P **Pn 21 26 56.0 -0.1**
MOX pmax pmax
comp=Z,18nm,0.8s
CABF La Chapelle 12.66 308 *e*Pn **Pn 21 26 55.9 -0.6**
CABF *e*Sn Sn 21 29 03.5 -14
comp=Z,43nm,1.0s
CABF La Chapelle 12.66 308 P **Pn 21 26 55.3 -1.2**
CLL Collm 12.76 338 Pn **Pn 21 26 54.6 -3.1**
CLL Collm 12.76 338 P **Pn 21 26 54.6 -3.1**
CLL Collm 12.76 338 *i* sPP 21 27 09.9
CLL *i* sPPP 21 27 15.5
CLL Lmax 21 33 00.0
HINF Hinteralfeld 12.83 314 *e*Pn **Pn 21 26 58.3 -0.5**
HINF *e*Sn Sn 21 29 06.9 -14
comp=Z,15nm,0.5s
HINF Hinteralfeld 12.83 314 P **Pn 21 26 56.3 -2.5**
VIVF Saint-Julien-l 12.89 299 *e*Pn **Pn 21 27 00.2 +0.6**
VIVF Saint-Julien-l 12.89 299 P **Pn 21 27 00.4 +0.8**
ECH Echery 12.89 316 Pn **Pn 21 26 57.3 -2.3**
ECH Echery 12.89 316 P **Pn 21 26 58.3 -1.3**
ECH pmax pmax
comp=Z,107nm,1.2s
ECH Echery 12.89 316 ⇑P **Pn 21 26 58.1 -1.5**
ECH ⇑S **Sn 21 29 18.4 -4.5**
CDF Champ du Feu 12.95 317 *e*Pn **Pn 21 26 59.7 -0.7**
CDF Champ du Feu 12.95 317 P **Pn 21 26 58.7 -1.7**
HAU Haudompre 13.22 313 *e*Pn **Pn 21 27 02.7 -1.3**
HAU *e*Sn Sn 21 29 17.6 -13
comp=Z,26nm,0.6s
HAU Haudompre 13.22 313 P **Pn 21 27 03.4 -0.6**
GAZ Gaziantep 13.23 96 Pn **Pn 21 27 03.7 -0.6**
RYAN Fayoum 13.24 140 P **Pn 21 27 02.5 -1.9**
baz=191
ANN Anapa 13.42 62 *e*P **Pn 21 27 05.7 -1.1**
ANN pmax pmax
comp=Z,53nm,1.0s
TNS Taunus Mts 13.58 325 P **Pn 21 27 08.4 -0.6**
TNS pmax pmax
comp=Z,13nm,0.9s
GLL Jalalah 13.60 135 P Pn 21 27 03.7 -5.6
baz=182
MMAI Mount Meron Ar 13.63 115 Pn **Pn 21 27 09.7 -0.1**
comp=Z,1.3nm,0.3s,baz=304,slow=12,SNR=7.1
comp=Z,0.4nm,0.3s
PAGF Fort de Pagny 13.87 314 *e*Pn **Pn 21 27 11.3 -1.6**
HFRF Wahat Farafira 14.06 151 P **Pn 21 27 12.4 -3.2**
baz=199
HFRF S Sn 21 29 17.9 -34
baz=199
SFTF Sexfontaines 14.07 312 *e*Pn **Pn 21 27 14.4 -1.2**
SMF Signal de Mont 14.07 305 *e*Pn **Pn 21 27 14.0 -1.7**
SMF *e*Sn Sn 21 29 38.1 -13
comp=Z,12nm,0.5s
SMF Signal de Mont 14.07 305 P **Pn 21 27 13.9 -1.7**
MEZF Maizieres J'vi 14.21 313 *e*Pn **Pn 21 27 15.8 -1.8**
WLF Walferdange 14.30 319 **Pn 21 27 18.0 -0.8**
WLF Walferdange 14.30 319 P **Pn 21 27 18.0 -0.8**
WLF Walferdange 14.30 319 *d*P **P 21 27 26.5 +0.5**
LOR Lormes 14.32 307 *e*Pn **Pn 21 27 17.3 -1.8**
baz=114
LOR *e*Sn Sn 21 29 43.3 -14
comp=Z,33nm,0.9s
LOR Lormes 14.32 307 P **Pn 21 27 16.9 -2.2**
LOR S **Sn 21 30 01.8 +4.2**
AVF Avril sur Loir 14.44 305 *e*Pn **Pn 21 27 19.0 -1.6**
AVF Avril sur Loir 14.44 305 P **Pn 21 27 18.4 -2.2**
SSF Saint Saulge 14.45 306 *e*Pn **Pn 21 27 19.5 -1.3**
SSF *e*Sn Sn 21 29 46.8 -14
comp=Z,10nm,0.6s
SSF Saint Saulge 14.45 306 P **Pn 21 27 18.2 -2.6**
BGF Bois d'Agland 14.67 304 *e*Pn **Pn 21 27 22.0 -1.9**
BGF *e*Sn Sn 21 29 52.6 -14
comp=Z,7.5nm,0.4s
BGF Bois d'Agland 14.67 304 P **Pn 21 27 22.4 -1.5**
GHAJ Ghor Haditha 14.75 120 Pn **Pn 21 27 24.7 -0.3**
BTNL Ternell 14.90 322 *d*P **P 21 27 33.7 +1.0**
MEM Membach 14.98 321 *d*P **P 21 27 34.8 +1.3**
TCF Toulx Ste Croi 14.99 302 *e*Pn **Pn 21 27 28.3 +0.1**
TCF *e*Sn Sn 21 30 00.9 -13
comp=Z,2.1nm,0.4s
TCF Toulx Ste Croi 14.99 302 P **Pn 21 27 26.9 -1.3**
HYF Humbligny 15.07 306 *e*P **P 21 27 32.0 -2.6**
RCHB Rochefort 15.07 319 *d*P **P 21 27 34.2 -0.4**
ASF Jabal al Asfar 15.15 115 Pn **P 21 27 35.5 0.0**
comp=Z,0.4nm,0.3s,baz=306,slow=6.1,SNR=2.7
BSTI Sart Tilman 15.18 321 *d*P **P 21 27 37.6 +1.9**
DOU Dourbes 15.36 318 *d*P **P 21 27 38.2 +0.4**
EIL Elat 15.44 126 Pn **Pn 21 27 33.4 -0.8**
comp=Z,0.4nm,0.3s,baz=337,slow=23,SNR=1.8
EIL Sn Sn 21 30 13.2 -12
comp=Z,0.3nm,0.3s,baz=9.1,slow=22,SNR=1.3
comp=Z,2.0nm,0.5s
MNK Minsk 15.58 16*c i*P **Pn 21 27 34.5 -1.3**
MNK Minsk 15.58 16 *i* P **Pn 21 27 34.5 -1.3**
comp=E,2.0nm,1.0s
MNK *i* P **Pn 21 27 34.5 -1.3**
comp=N,47nm,1.3s
MNK *i* P **Pn 21 27 34.5 -1.3**
comp=Z,32nm,1.3s,baz=20
MNK *i* PP **pP 21 27 42.8 -1.2**
MNK *i* S **Sn 21 30 28.0 -0.1**
MNK *i* SS **SnSn 21 30 41.7 +0.8**
MNK *i* LQ LQ 21 32 08.8
MNK *i* LR LR 21 33 19.7
MNK *i* LRM MLR 21 33 55.7
comp=Z,189nm,13.8s
MNK *i* LRM MLR 21 33 59.3
comp=E,22nm,12.2s
MNK *i* LRM MLR 21 34 19.0
comp=N,212nm,13.0s
CLF Chambon-Foret 15.62 308 Pn **Pn 21 27 34.7 -1.7**
NACGM Naroch 15.74 13⇑*e*P **Pn 21 27 39.5 +1.6**
baz=197
MARD Mardin 15.94 92 Pn **Pn 21 27 42.0 +1.2**
PABE Paberze 15.95 7 **Pn 21 27 40.3 -0.4**
PABE Paberze 15.95 7 *e*P **P 21 27 44.1 0.0**
IIGN Ignalina 16.08 12 *e*P **P 21 27 46.7 +1.1**
ISAL Salakas 16.28 11 *e*P **P 21 27 48.8 +1.0**
PBUR Paburge 16.34 3 *e*P **Pn 21 27 45.8 +0.1**
GURO Guroymak-BITLI 16.63 87 **P 21 27 51.1 -0.9**
KIV Kislovodsk 16.95 68 *e*P **P 21 27 55.0 -0.5**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 17.07 69 P **P 21 27 56.9 +0.2**
comp=Z,0.1nm,0.3s,baz=284,slow=13,SNR=3.0
comp=Z,3.0nm,1.1s
KBZ Khabaz 17.07 69 *i* P **P 21 27 58.6 +1.9**
VSR Storozhevoye 17.29 42 *e*P **P 21 27 58.5 -0.6**
VSR pmax pmax
comp=Z,10.0nm,1.1s
LDF La Druitiere 17.30 308 *e*P **P 21 28 01.8 +2.6**
GOF Gofitskoye 17.36 65⇑*e*P **P 21 28 03.7 +3.8**
ONI Oni 17.40 73 P **P 21 28 01.8 +1.3**
ONI Oni 17.40 73 P **P 21 28 01.8 +1.3**
ONI pmax pmax
comp=Z,8.0nm,1.1s
VORR Voronezh 17.57 41 *e*P **P 21 28 02.9 +0.7**
VORR pmax pmax
comp=Z,20nm,0.4s
FLN La Foliniere 17.59 308 *e*P **P 21 28 06.1 +3.7**
ZEI Tsey 17.74 73 *e*P **P 21 28 10.9 +6.5**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 18.47 81 P **Pn 21 28 14.6 +2.1**
comp=Z,5.0nm,1.0s,baz=252,slow=3.2,SNR=2.7
GNI LR LR 21 35 40.4
comp=Z,165nm,18.3s,baz=247,slow=38
GNI Garni 18.47 81 *i* P **Pn 21 28 15.7 +3.2**
VRH Novokhopyorsk 18.64 45 *e*P **Pn 21 28 17.4 +3.1**
VRH pmax pmax
comp=Z,40nm,1.9s
OBN Obninsk 18.72 29 P **P 21 28 14.3 -0.5**
comp=Z,0.4nm,0.3s,baz=246,slow=20,SNR=3.1
OBN LR LR 21 36 16.2
comp=Z,104nm,19.7s,baz=190,slow=40
comp=Z,1.7nm,0.3s
OBN Obninsk 18.72 29 P **P 21 28 13.6 -1.2**
OBN IAmb IAmb 21 28 27.5
comp=Z,40nm,1.2s
OBN Obninsk 18.72 29⇓*i* P **P 21 28 14.0 -0.8**
OBN pmax pmax
comp=Z,8.0nm,0.6s
OBN MLR MLR
comp=Z,436nm,17.0s
ESBB Sonseca Array 18.93 278 P **P 21 28 16.0 -1.3**
ESDC Sonseca Array 18.93 278 P **P 21 28 16.5 -0.8**
comp=Z,0.1nm,0.3s,baz=70,slow=11,SNR=32
ESDC LR LR 21 35 36.9
comp=Z,186nm,19.1s,baz=76,slow=37
comp=Z,8.7nm,1.1s
ESDC Sonseca Array 18.93 278 P **P 21 28 16.3 -1.0**
MTSE Matsula 19.12 5 *e*P **Pn 21 28 20.1 +0.1**
VSU Vasula 19.17 10 *i* P **P 21 28 18.5 -1.1**
VSU pmax pmax
comp=Z,22nm,0.4s
VSU Vasula 19.17 10 *e*P **P 21 28 19.3 -0.3**
PAB San Pablo 19.24 278 P **P 21 28 19.7 -1.1**
PAB IAmb IAmb 21 28 23.4
comp=Z,31nm,1.1s
PAB San Pablo 19.24 278 P **P 21 28 19.7 -1.1**
PAB pmax pmax
comp=Z,31nm,1.1s
PAB San Pablo 19.24 278 ⇑P **Pn 21 28 22.0 +0.2**
MOS Moscow 19.59 30 *e*P **P 21 28 24.5 +0.2**
MOS pmax pmax
comp=Z,39nm,1.2s
UPP Uppsala 20.25 356 *e*P **P 21 28 30.8 -0.7**
MAK Makhachkala 20.39 72 *e*P **P 21 28 30.8 -2.3**
MAK *e*S **S 21 32 18.5 -2.7**
MAK pmax pmax
comp=Z,143nm,1.0s
MAK MLR MLR
comp=Z,211nm,10.0s
AAL Aland 20.49 359 *e*P **P 21 28 33.0 -1.0**
MEF Metsahovi 20.66 5 *e*P **P 21 28 36.3 +0.5**
PBRG Braganca 20.82 285 *e*P **P 21 28 38.5 +0.6**
HFS Hagfors 20.90 350 P **P 21 28 36.6 -1.9**
comp=Z,2.9nm,0.3s,baz=168,slow=12,SNR=37
HFS LR LR 21 37 47.9
comp=Z,174nm,18.0s,baz=168,slow=40
comp=Z,2.9nm,0.3s
MVO Moncorvo 21.09 283 *e*P **P 21 28 40.5 -0.3**
comp=Z,19nm,1.2s
KONO Kongsberg 21.14 344 P **P 21 28 41.0 -0.1**
KONO IAmb IAmb 21 28 41.3
comp=Z,27nm,1.2s
KONO Kongsberg 21.14 344*ce*P **P 21 28 41.8 +0.7**
KONO pmax pmax
comp=Z,10.0nm,0.8s
TAM Tamanrasset 21.20 222 P **P 21 28 42.4 +0.1**
TAM Tamanrasset 21.20 222 P **P 21 28 42.4 +0.1**
TAM pmax pmax
comp=Z,8.0nm,0.9s
RAF Rauma 21.34 1 *e*P **P 21 28 42.8 -0.4**
MDT Midelt 21.46 259 P **P 21 28 43.5 -1.3**
comp=Z,4.2nm,0.9s,baz=91,slow=11,SNR=11
MDT LR LR 21 36 51.7
comp=Z,97nm,18.9s,baz=88,slow=36
comp=Z,4.2nm,0.9s
MTE Manteigas 21.56 281 *e*P **P 21 28 45.7 -0.2**
comp=Z,26nm,1.6s
MTE Manteigas 21.56 281 P **P 21 28 44.2 -1.6**
MTE IAmb IAmb 21 28 47.3
comp=Z,37nm,1.3s
PBAR Barrancos 21.56 275 *e*P **P 21 28 45.6 -0.2**
comp=Z,36nm,1.7s
PCBR Castelo Branco 21.59 279 *e*P **P 21 28 47.1 +1.0**
comp=Z,21nm,1.3s
PMRV Marv??o 21.59 278 *e*P **P 21 28 46.7 +0.6**
comp=Z,30nm,1.4s
NC602 NORSAR Array S 21.79 348 P **P 21 28 46.5 -1.6**
NC602 NORSAR Array S 21.79 348 *e*P **P 21 28 46.9 -1.2**
NC602 IAmb IAmb 21 28 47.8
comp=Z,15nm,0.7s
PESTR Estremoz 21.84 277 *e*P **P 21 28 48.7 -0.1**
comp=Z,16nm,1.7s
FINES FINESS Array B 22.01 7 P **P 21 28 48.9 -1.5**
comp=Z,3.5nm,0.3s,baz=174,slow=12,SNR=62
FINES LR LR 21 37 21.5
comp=Z,118nm,20.1s,baz=190,slow=37
comp=Z,3.5nm,0.3s
FINES FINESS Array B 22.01 7 P **P 21 28 48.7 -1.7**
FIA1 FINESS Array S 22.01 7 P **P 21 28 48.9 -1.6**
FIA1 IAmb IAmb 21 28 59.9
comp=Z,30nm,1.0s
NB2 NORSAR Subarra 22.13 348 P **P 21 28 50.2 -1.6**
comp=Z,31nm,1.1s,baz=165,slow=11
NB2 NORSAR Subarra 22.13 348 P **P 21 28 50.2 -1.6**
baz=165,slow=11
NOA NORSAR Array B 22.13 348 P **P 21 28 50.2 -1.6**
comp=Z,11nm,0.9s,baz=164,slow=11,SNR=6.9
NOA LR LR 21 38 31.7
comp=Z,98nm,21.0s,baz=165,slow=40
comp=Z,11nm,0.9s
EVO Evora 22.23 276 *e*P **P 21 28 52.4 -0.6**
EKA Eskdalemuir Ar 22.25 322 P **P 21 28 52.0 -1.1**
comp=Z,7.2nm,0.7s,baz=121,slow=10.0,SNR=21
EKA LR LR 21 39 05.1
comp=Z,168nm,18.9s,baz=119,slow=41
comp=Z,7.2nm,0.7s
ESK Eskdalemuir 22.26 322 P **P 21 28 52.3 -0.9**
ESK IAmb IAmb 21 28 53.9
comp=Z,30nm,1.1s
ESK Eskdalemuir 22.26 322 P **P 21 28 52.3 -0.9**
ESK pmax pmax
comp=Z,30nm,1.1s
ESK Eskdalemuir 22.26 322 ⇑P **P 21 28 52.8 -0.4**
PVAQ Vaqueiros 22.27 273 *e*P **P 21 28 52.6 -0.8**
comp=Z,47nm,1.5s
PVAQ Vaqueiros 22.27 273 P **P 21 28 52.3 -1.1**
PVAQ IAmb IAmb 21 28 53.8
comp=Z,18nm,1.1s
PVAQ Vaqueiros 22.27 273 ⇑P **P 21 28 52.7 -0.8**
PMTG Montargil 22.29 278 *e*P **P 21 28 53.0 -0.6**
comp=Z,20nm,1.4s
PCAS Casmilo, Conde 22.33 280 *e*P **P 21 28 53.8 -0.3**
SKAR Skarslia 22.35 344 *e*P **P 21 28 55.5 +1.4**
BELG Belogornoye 22.45 47 P **P 21 28 56.4 +1.1**
comp=Z,16nm,1.0s,baz=64,slow=4.1,SNR=7.7
BELG LR LR 21 38 43.8
comp=Z,206nm,18.6s,baz=220,slow=40
comp=Z,16nm,1.0s
BELG Belogornoye 22.45 47 *i* P **P 21 28 56.1 +0.9**
BELG pmax pmax
comp=Z,7.0nm,1.0s
PCVE Castro Verde 22.46 274 *e*P **P 21 28 54.7 -0.8**
PNCL Nicolau / Gran 22.72 275 *e*P **P 21 28 58.2 0.0**
comp=Z,47nm,1.7s
DOMB Dombas 23.45 346 *e*P **P 21 29 04.9 -0.6**
DOMB IAmb IAmb 21 29 13.1
comp=Z,23nm,1.1s
KLMR Klimovskoe 24.18 23 *e*P **P 21 29 17.8 +5.3**
KLMR pmax pmax
comp=Z,36nm,1.5s
KLMR Klimovskoe 24.18 23 *e*P **P 21 29 17.9 +5.5**
KLMR AMP 21 29 21.4
comp=Z,36nm,1.5s
NSS Namsos 25.37 351 *e*P **P 21 29 23.7 +0.5**
KIRV Kirov 26.32 35 P **P 21 29 33.0 +1.1**
comp=Z,4.1nm,0.6s,baz=214,slow=19,SNR=2.8
comp=Z,4.1nm,0.6s
KIRV Kirov 26.32 35 *i* P **P 21 29 33.3 +1.4**
PRGR Permogore 26.74 27 *e*P **P 21 29 39.2 +3.6**
PRGR pmax pmax
comp=Z,12nm,0.8s
AKTO Aktyubinsk 28.20 55 P **P 21 29 49.6 +0.8**
comp=Z,1.2nm,0.5s,baz=256,slow=18,SNR=2.3
comp=Z,1.2nm,0.5s
GEYT Alibeck 29.11 81 P **P 21 29 59.0 +1.8**
comp=Z,1.7nm,0.7s,baz=287,slow=15,SNR=4.4
comp=Z,1.7nm,0.7s
KTK1 Kautokeino 29.39 2 *e*P **P 21 29 58.0 -1.3**
ARU Arti 29.86 43 P **P 21 30 04.3 +0.9**
comp=Z,1.0nm,0.3s,baz=243,slow=11,SNR=3.9
comp=Z,1.0nm,0.3s
ARU Arti 29.86 43 *i* P **P 21 30 04.4 +0.9**
ARU pmax pmax
comp=Z,6.0nm,1.5s
ARA0 ARCESS Array S 29.99 3 *e*P **P 21 30 02.6 -2.0**
ARA0 IAmb IAmb 21 30 06.6
comp=Z,36nm,1.9s
ARCES ARCESS Array B 29.99 3 P **P 21 30 02.6 -2.0**
comp=Z,0.9nm,0.3s,baz=188,slow=11,SNR=29
ARCES LR LR 21 42 58.9
comp=Z,131nm,19.0s,baz=154,slow=38
comp=Z,0.9nm,0.3s
ARCES ARCESS Array B 29.99 3 P **P 21 30 02.6 -2.0**
ARCES IAmb IAmb 21 30 20.0
comp=Z,7.7nm,1.2s
ARCES ARCESS Array B 29.99 3 P **P 21 30 02.6 -2.0**
ARCES pmax pmax
comp=Z,8.0nm,1.2s
KEV Kevo 30.29 4 P **P 21 30 05.3 -1.9**
KEV IAmb IAmb 21 30 23.6
comp=Z,17nm,1.4s
KEV Kevo 30.29 4 P **P 21 30 05.3 -1.9**
KEV pmax pmax
comp=Z,17nm,1.4s
SVE Sverdlovsk 31.07 43 *e*P **P 21 30 13.6 -0.6**
SVE pmax pmax
comp=Z,8.0nm,0.9s
SVE MLR MLR
comp=Z,216nm,14.0s
TOA0 Torodi Ar. Sit 31.30 218 P **P 21 30 17.2 +0.6**
TORD Torodi Ar. Bea 31.30 218 P **P 21 30 17.2 +0.6**
comp=Z,4.3nm,0.8s,baz=33,slow=9.3,SNR=29
comp=Z,4.3nm,0.8s
KOWA Kowa 33.15 228 P **P 21 30 32.9 0.0**
HRA Herat 33.40 86 P **P 21 30 36.2 +1.0**
HRA IAmb IAmb 21 30 51.0
comp=Z,13nm,1.4s
BRVK Borovoye 36.01 51 *i* P **P 21 30 56.1 -1.1**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
KKAR Karatay Array 37.11 68 P **P 21 31 07.5 +0.7**
KKAR Karatay Array 37.11 68 P **P 21 31 07.4 +0.7**
KKAR IAmb IAmb 21 31 17.0
comp=Z,5.9nm,0.9s
KKAR Karatay Array 37.11 68 P **P 21 31 07.5 +0.7**
KKAR pmax pmax
comp=Z,6.0nm,1.0s
CHGR Chuyangaron 37.25 76 P **P 21 31 08.8 +0.7**
CHGR Chuyangaron 37.25 76 P **P 21 31 08.8 +0.7**
CHGR pmax pmax
comp=Z,16nm,1.1s
GAR Garm 38.01 75 P **P 21 31 15.0 +0.4**
BTK Batken 38.08 73 P **P 21 31 16.1 +1.0**
BTK IAmb IAmb 21 31 26.0
comp=Z,5.1nm,0.8s
BTK Batken 38.08 73 P **P 21 31 16.1 +1.0**
BTK pmax pmax
comp=Z,5.0nm,0.9s
SPITS Spitsbergen Ar 38.61 359 LR LR 21 49 54.4
comp=Z,106nm,19.2s,baz=144,slow=40
SPITS Spitsbergen Ar 38.61 359 P **P 21 31 18.8 -0.3**
SPITS pmax pmax
comp=Z,31nm,1.4s
DRK Karamyk 38.97 73 P **P 21 31 23.9 +1.1**
AAK Ala-Archa 40.06 68 LR LR 21 52 32.5
comp=Z,90nm,19.8s,baz=281,slow=43
AAK Ala-Archa 40.06 68 P **P 21 31 32.3 +0.5**
AAK IAmb IAmb 21 31 42.6
comp=Z,12nm,1.4s
AAK Ala-Archa 40.06 68 *i* P **P 21 31 32.4 +0.6**
AAK pmax pmax
comp=Z,9.0nm,1.1s
DBIC Dimbokro 40.10 222 P **P 21 31 32.1 0.0**
comp=Z,1.6nm,0.5s,baz=24,slow=9.3,SNR=2.2
DBIC LR LR 21 49 30.1
comp=Z,108nm,18.3s,baz=14,slow=38
comp=Z,1.6nm,0.5s
DBIC Dimbokro 40.10 222 P **P 21 31 32.0 0.0**
DBIC IAmb IAmb 21 31 41.1
comp=Z,6.9nm,0.9s
DBIC Dimbokro 40.10 222 P **P 21 31 32.1 0.0**
DBIC pmax pmax
comp=Z,7.0nm,0.9s
BBTS Babate 40.99 243 LR LR 21 51 58.5
comp=Z,83nm,18.5s,baz=46,slow=41
BOOM Boomskoye usch 41.13 68 P **P 21 31 40.7 +0.1**
BOOM Boomskoye usch 41.13 68 P **P 21 31 40.7 +0.1**
BOOM pmax pmax
comp=Z,6.0nm,1.0s
MBAR Mbarara 41.17 165 LR LR 21 51 31.1
comp=Z,48nm,19.1s,baz=337,slow=40
NRN Naryn 41.47 69 P **P 21 31 43.9 +0.3**
NRN Naryn 41.47 69 P **P 21 31 43.9 +0.3**
NRN pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 44.21 60 P **P 21 32 04.7 -0.7**
MAKZ IAmb IAmb 21 32 05.6
comp=Z,6.5nm,1.1s
MAKZ Makanchi 44.21 60 P **P 21 32 04.7 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
MK31 Makanchi Array 44.43 60 P **P 21 32 06.4 -0.7**
MK31 IAmb IAmb 21 32 16.2
comp=Z,6.4nm,1.0s
MK31 Makanchi Array 44.43 60 *i* P **P 21 32 06.5 -0.6**
MKAR Makanchi Array 44.43 60 P **P 21 32 06.5 -0.7**
comp=Z,2.0nm,0.4s,baz=274,slow=7.6,SNR=61
MKAR LR LR 21 52 49.6
comp=Z,72nm,19.5s,baz=274,slow=39
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 44.43 60 P **P 21 32 06.7 -0.4**
ZAA0 Zalesovo Array 44.60 49 P **P 21 32 07.8 -0.6**
ZAA0 IAmb IAmb 21 32 31.8
comp=Z,3.2nm,0.7s
ZALV Zalesovo Beam 44.60 49 P **P 21 32 07.2 -1.1**
comp=Z,1.2nm,0.4s,baz=288,slow=7.9,SNR=9.0

ZALV LR LR 21 52 59.0
comp=Z,123nm,18.5s,baz=264,slow=39
comp=Z,1.2nm,0.4s
ZALV Zalesovo Beam 44.60 49 P P 21 32 07.8 -0.6
NRIK Noril'sk 45.38 27 P P 21 32 14.5 +0.2
comp=Z,1.4nm,0.5s,baz=267,slow=6.7,SNR=3.8
NRIK LR LR 21 53 50.3
comp=Z,217nm,18.3s,baz=274,slow=40
comp=Z,1.4nm,0.5s
NRIK Noril'sk 45.38 27 P P 21 32 14.7 +0.4
NRIK IAmb IAmb 21 32 24.6
comp=Z,8.6nm,1.2s
NRIK Noril'sk 45.38 27 *ce*P **P 21 32 15.8 +1.5**
NRIK pmax pmax
comp=Z,8.0nm,1.5s
DGZ Jazzator, Alta 47.04 55 *i* P **P 21 32 27.6 -0.3**
DGZ pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 48.94 62 *e*P **P 21 32 44.5 +1.9**
WMQ pP sP 21 32 49.3 +0.6
EUNU Eureka 54.03 348 P **P 21 33 19.4 -0.7**
EUNU IAmb IAmb 21 33 26.5
comp=Z,9.2nm,1.4s
FRB Frobisher Bay 54.91 327 LR LR 22 00 13.8
comp=Z,106nm,18.6s,baz=30,slow=40
LSZ Lusaka 55.16 171 LR LR 22 00 25.7
comp=Z,78nm,19.1s,baz=25,slow=40
TIXI Tiksi 58.18 21 LR LR 22 02 30.7
comp=Z,165nm,18.4s,baz=184,slow=40
TIXI Tiksi 58.18 21 P **P 21 33 50.0 +0.3**
TIXI Tiksi 58.18 21 *ce*P **P 21 33 49.0 -0.8**
TIXI pmax pmax
comp=Z,8.0nm,2.5s
TSUM Tsumeb 58.68 183 LR LR 22 02 02.1
comp=Z,41nm,18.2s,baz=324,slow=39
GTA Gaotai 59.02 63 *e*P **P 21 33 54.4 -1.9**
GTA pP pP 21 33 59.3 -1.5
GTA sP sP 21 34 02.3 -0.3
SONM Songino Array 59.41 51 P **P 21 33 58.1 -0.8**
comp=Z,1.6nm,0.9s,baz=298,slow=9.9,SNR=6.7
SONM LR LR 22 02 15.3
comp=Z,112nm,19.1s,baz=248,slow=39
comp=Z,1.6nm,0.9s
SONM Songino Array 59.41 51 P **P 21 33 58.6 -0.3**
SONM IAmb IAmb 21 34 06.6
comp=Z,4.4nm,1.1s
PALK Pallekele 62.48 104 LR LR 22 03 39.0
comp=Z,27nm,18.9s,baz=49,slow=38
YAK Yakutsk 63.72 30 LR LR 22 05 32.3
comp=Z,135nm,19.0s,baz=269,slow=39
WVL Waterville 63.76 307 P **P 21 34 27.6 -0.5**
LBTB Lobatse 64.56 175 LR LR 22 04 13.4
comp=Z,47nm,18.6s,baz=357,slow=37
HHC Hu-ho-hao-te 66.09 56 *e*P **P 21 34 44.4 +0.9**
PZH PanZhiHua 67.08 74 P **P 21 34 52.8 +2.7**
BOSA Boshof 68.11 176 P **P 21 34 58.5 +2.2**
comp=Z,1.8nm,1.0s,baz=26,slow=11,SNR=1.4
BOSA LR LR 22 07 46.4
comp=Z,108nm,18.1s,baz=10.0,slow=39
comp=Z,1.8nm,1.0s
BOSA Boshof 68.11 176 P **P 21 34 57.0 +0.7**
BOSA Boshof 68.11 176 P **P 21 34 57.0 +0.7**
BOSA pmax pmax
comp=Z,12nm,1.5s
SADO Sadowa 69.31 311 LR LR 22 05 17.5
comp=Z,37nm,18.5s,baz=24,slow=36
CMAR Chiang Mai Arr 69.58 83 P **P 21 35 07.8 +2.0**
comp=Z,0.3nm,0.3s,baz=303,slow=8.4,SNR=2.0
comp=Z,0.3nm,0.3s
SUR Sutherland 71.73 180 LR LR 22 09 07.2
comp=Z,106nm,18.2s,baz=344,slow=38
BMAR Burnt Mountain 72.59 354 P **P 21 35 24.1 +0.9**
MA2 Magadan 72.85 24 LR LR 22 10 48.7
comp=Z,55nm,19.0s,baz=306,slow=39
ULM Lac du Bonnet 74.52 323 LR LR 22 07 50.8
comp=Z,62nm,21.5s,baz=14,slow=35
H21K Melozitna Rive 74.84 357 P **P 21 35 37.4 +1.0**
H21K IAmb IAmb 21 35 54.9
comp=Z,8.8nm,1.2s
BCAR Beaver Creek A 76.60 352 P **P 21 35 47.4 +0.9**
DHY Denali Highway 77.10 354 P **P 21 35 49.3 -0.2**
PPLA Purkeypile 77.57 357 P **P 21 35 52.3 +0.1**
TKL Tuckaleechee C 77.71 306 LR LR 22 09 42.6
comp=Z,58nm,19.1s,baz=51,slow=35
KSRS Korea Array 78.28 51 LR LR 22 13 52.9
comp=Z,75nm,19.1s,baz=270,slow=38
PETK Petropavlovsk- 80.36 25 LR LR 22 16 05.3
comp=Z,78nm,19.6s,baz=302,slow=39
NEW Newport 84.73 333 LR LR 22 16 10.1
comp=Z,27nm,20.1s,baz=31,slow=37
SDV Santo Domingo 85.38 278 LR LR 22 14 18.9
comp=Z,25nm,18.2s,baz=52,slow=36
PDAR Pinedale Array 86.33 326 P **P 21 36 37.7 -1.0**
comp=Z,0.4nm,0.8s,baz=59,slow=5.4,SNR=2.8
comp=Z,0.4nm,0.8s
ELK Elko 90.40 328 LR LR 22 19 01.8
comp=Z,57nm,18.8s,baz=40,slow=37
ANMO Albuquerque 91.11 319 LR LR 22 17 17.4
comp=Z,46nm,18.9s,baz=46,slow=35
YBH Yreka Blue Hor 92.36 333 LR LR 22 20 39.1
comp=Z,49nm,18.2s,baz=23,slow=37
TXAR Lajitas Array 93.98 314 P **P 21 37 15.1 +0.4**
comp=Z,0.9nm,0.8s,baz=75,slow=5.3,SNR=8.1
comp=Z,0.9nm,0.8s
PFO Pinyon Flats O 96.94 325 LR LR 22 24 12.1
comp=Z,42nm,18.4s,baz=22,slow=37
CMIG Matias Romero 97.59 299 LR LR 22 18 54.3
comp=Z,16nm,19.5s,baz=22,slow=34
CPUP Villa Florida 97.85 242 LR LR 22 24 10.0
comp=Z,28nm,18.7s,baz=40,slow=37
WRA Warramunga Arr 120.49 91 PKP **PKPdf 21 42 46.5 -1.7**
comp=Z,0.6nm,0.9s,baz=320,slow=1.4,SNR=3.0
ASAR Alice Springs 122.23 95 PKP **PKPdf 21 42 50.0 -1.5**
comp=Z,0.6nm,0.8s,baz=337,slow=2.1,SNR=5.5

RSNC 19 21:24:34.5±0.9, 6.79N×73.14W, h144km±3km, ML3.1, Mw3.5, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.20**	**192**	*i*P	Pn	21 24 53.9	-0.4
BARC				*e*S	Sn	21 25 08.7	-0.7
BARC				*i*		21 25 10.0	
comp=Z,484nm,0.4s							
BRRC	**Barranca, Sant**	**0.65**	**299**	*e*P	Pn	21 24 55.7	-0.3
BRRC				*e*S	Sn	21 25 12.4	+0.1
BRRC				*i*		21 25 16.8	
comp=Z,284nm,0.4s							
PAMC	**Pamplona, Colo**	**0.70**	**39**	*e*P	Pn	21 24 56.8	-0.1
PAMC				*e*S	Sn	21 25 13.8	-0.1
PAMC				*i*		21 25 16.2	
comp=Z,287nm,0.5s							
RUSC	**La Rusia**	**0.90**	**176**	*e*P	Pn	21 24 57.9	-0.6
RUSC				*e*S	Sn	21 25 16.6	0.0
RUSC				*i*		21 25 18.4	
comp=Z,109nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.33**	**259**	*e*P	Pn	21 25 00.4	-1.4
PTBC				*e*S	Sn	21 25 21.7	-1.1
PTBC				*i*		21 25 28.8	
comp=Z,132nm,0.2s							
TAMC	**Tame, Arauca**	**1.39**	**105**	*i*P	Pn	21 25 02.4	0.0
TAMC				*e*S	Sn	21 25 22.7	-1.0
TAMC				*i*		21 25 23.3	
comp=Z,92nm,0.4s							
OCAC	**Ocana**	**1.45**	**353**	*e*P	Pn	21 25 02.0	-1.2
OCAC				*e*S	Sn	21 25 24.7	-0.4
OCAC				*i*		21 25 32.3	
comp=Z,271nm,0.5s							
SPBC	**San Pablo de B**	**1.47**	**219**	*e*P	Pn	21 25 02.9	-0.5
SPBC				*e*S	Sn	21 25 25.0	-0.4
SPBC				*i*		21 25 29.8	
comp=Z,269nm,0.3s							
NORC	**Norcasia**	**2.11**	**235**	*e*P	Pn	21 25 10.1	-0.6
NORC				*e*S	Sn	21 25 37.7	-0.7
NORC				*i*		21 25 40.9	
comp=Z,80nm,0.2s							
CHIC	**Chingaza**	**2.23**	**195**	*e*P	Pn	21 25 12.1	-0.4
CHIC				*e*S	Sn	21 25 41.4	-0.2
CHIC				*i*		21 25 45.0	
comp=Z,117nm,0.6s							
ROSC	**El Rosal**	**2.27**	**211**	*e*P	Pn	21 25 13.8	+0.9
ROSC				*e*S	Sn	21 25 42.0	-0.4
ROSC				*i*		21 25 48.6	
comp=Z,265nm,0.4s							
HELC	**Santa Helena**	**2.45**	**256**	*e*P	Pn	21 25 16.0	+1.0
HELC				*e*S	Sn	21 25 46.1	-0.1
HELC				*i*		21 25 52.0	
comp=Z,59nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*e*P	Pn	21 25 18.1	-0.3
GUY2C				*e*S	Sn	21 25 51.4	-0.8
GUY2C				*i*		21 26 00.3	
comp=Z,83nm,0.6s							
VILC	**Villavicencio,**	**2.72**	**192**	*e*P	Pn	21 25 17.2	-1.1
VILC				*e*S	Sn	21 25 51.3	-0.7
VILC				*i*		21 25 54.7	
comp=Z,186nm,0.4s							
LL1C	**La Loma 1 Cana**	**2.76**	**351**	*e*P	Pn	21 25 18.1	-0.5
LL1C				*e*S	Sn	21 25 54.8	+2.1
PTGC	**Puerto Gaitan,**	**2.77**	**159**	*e*P	Pn	21 25 17.1	-1.6
PTGC				*e*S	Sn	21 25 50.5	-2.3
PTGC				*i*		21 25 53.2	
comp=Z,73nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*e*P	Pn	21 25 22.1	+0.3
CBOC				*e*S	Sn	21 25 58.1	-0.2
CBOC				*i*		21 26 08.9	
comp=Z,19nm,0.3s							
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	Pn	21 25 22.6	+0.1
DBBC				*e*S	Sn	21 25 57.6	-1.8
ANIL	**Santa Ana**	**3.21**	**225**	*e*P	Pn	21 25 25.1	+0.4
ANIL				*e*S	Sn	21 26 03.9	+0.6
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	Pn	21 25 24.5	-0.2
ARGC				*e*S	Sn	21 26 02.5	-1.0
ARGC				*i*		21 26 11.3	
comp=Z,31nm,0.4s							
PRAC	**Prado**	**3.52**	**210**	*e*P	Pn	21 25 27.9	-0.5
PRAC				*e*S	Sn	21 26 09.1	-1.0
PRAC				*i*		21 26 14.3	
comp=N,108nm,0.6s							
PLMC	**San Jos del P**	**3.65**	**239**	*e*P	Pn	21 25 29.5	-0.6
PLMC				*e*S	Sn	21 26 12.6	-0.5
PLMC				*i*		21 26 17.5	
comp=Z,20nm,0.2s							
SJCC	**San Jacinto, C**	**3.69**	**327**	*e*P	Pn	21 25 28.2	-2.4
SJCC				*e*S	Sn	21 26 09.1	-4.9
SJCC				*i*		21 26 18.0	
comp=Z,34nm,0.5s							
CRJC	**Cerrejon, Guaj**	**4.21**	**3**	*e*P	Pn	21 25 34.4	-3.1
CRJC				*e*S	Sn	21 26 22.8	-3.5
CRJC				*i*		21 26 29.2	
comp=Z,42nm,0.3s							
YOTC	**Yotoco, Valle**	**4.24**	**229**	*e*P	Pn	21 25 36.6	-1.3
YOTC				*e*S	Sn	21 26 28.1	+0.9
URIC	**Uribia, Colomb**	**5.01**	**13**	*e*P	Pn	21 25 44.5	-3.5
URIC				*e*S	Sn	21 26 39.4	-5.8
URIC				*i*		21 26 47.0	
comp=Z,7.1nm,0.6s							
GARC	**Garzon, Huila**	**5.14**	**207**	*e*P	Pn	21 25 49.2	-0.8
GARC				*e*S	Sn	21 26 45.8	-3.0
GARC				*i*		21 26 49.5	
comp=Z,26nm,0.3s							
FLOC	**Florencia**	**5.75**	**206**	*e*P	Pn	21 25 57.6	-0.4
FLOC				*e*S	Sn	21 27 03.1	0.0
FLOC				*i*		21 27 08.0	
comp=Z,4.2nm,0.5s							
BBAC	**Balboa, Cauca**	**6.26**	**221**	*e*P	Pn	21 26 04.9	0.0
BBAC				*i*		21 27 07.8	
comp=Z,3.2nm,0.1s							

*NEIC **19** 22:33:35.7±0.5, 36.76N±0.01×97.77W±0.01, h3km±7km, Error ellipse: s-maj=2.1km s-min=1.5km az=202.0*
*TUL **19** 22:33:35.1±0.7, 36.76N±0.02×97.77W±0.01, h8km±7km, ML3.8, mb_Lg3.5/88(NEIC), Mwr3.1/12(SLM), Error ellipse: s-maj=2.6km s-min=0.9km az=164.0*
*ANF **19** 22:33:35.9±0.3, 36.76N×97.75W, h8km, ML4.3/16, Error ellipse: s-maj=4.1km s-min=3.6km az=178.0*
*NEIC **19** 22:33:35.1, 36.76N×97.78W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}0.34; $M_{\theta\theta}$3.23; $M_{\phi\phi}$-3.57; $M_{r\theta}$-1.16; $M_{\theta\phi}$3.07; $M_{\phi r}$-1.81; Fault plane solution: $M_0$5.07000×10^{13} NP1:ϕ_s295.00000°, δ65.00000°, λ5.00000°. NP2:ϕ_s203.00000°, δ85.00000°, λ155.00000°. Principal axes: T 5.0691, Plg21.0000°, Azm156.0000°; N -0.0005, Plg65.0000°, Azm13.0000°; P -5.0685, Plg14.0000°, Azm252.0000°;*
ISC 19 22:33:35.2±1.0, 36.75N±0.02×97.77W±0.02, h6km±9km, n126, σ0.58/58/124, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.26**	**324**		**Pg**	**22 33 40.3**	**0.0**
KAN14				Sg	**Sg**	**22 33 44.0**	**+0.2**
KAN17	**Caldwell West**	**0.30**	**1**		**Pg**	**22 33 41.0**	**-0.1**
KAN17				Sg	**Sg**	**22 33 45.0**	**0.0**
KAN13	**South Haven SW**	**0.35**	**42**		**Pg**	**22 33 42.0**	**-0.1**
KAN13				Sg	**Sg**	**22 33 46.9**	**+0.1**
OK032	**Salt Plains WL**	**0.36**	**279**	Pg	**Pg**	**22 33 42.2**	**+0.1**
OK032				Sg	**Sg**	**22 33 47.2**	**+0.3**
KAN01	**Argonia South**	**0.41**	**1**		**Pg**	**22 33 43.0**	**-0.1**
KAN09	**Caldwell North**	**0.41**	**18**		**Pg**	**22 33 43.0**	**-0.2**
KAN09				Sg	**Sg**	**22 33 48.5**	**0.0**
KAN10	**Anthony SW Sta**	**0.46**	**326**		**Pg**	**22 33 44.0**	**-0.1**
KAN06	**Argonia West S**	**0.50**	**352**		**Pg**	**22 33 44.8**	**-0.2**
KAN06				Sg	**Sg**	**22 33 51.8**	**+0.2**
KAN08	**Anthony NE Sta**	**0.50**	**342**		**Pg**	**22 33 44.8**	**-0.1**
OK049	**E0420 Rd and N**	**0.51**	**132**	Pg	**Pg**	**22 33 45.2**	**+0.2**
OK049				Sg	**Sg**	**22 33 52.2**	**+0.6**
KS20	**Mayfield South**	**0.51**	**20**		**Pg**	**22 33 44.9**	**-0.2**
KS20				Sg	**Sg**	**22 33 51.7**	**-0.1**
KAN16	**Harper SW Stat**	**0.53**	**334**		**Pg**	**22 33 45.4**	**-0.1**
KS21	**Milan North St**	**0.55**	**9**		**Pg**	**22 33 45.5**	**-0.3**
KAN12	**Harper NE Stat**	**0.58**	**342**	Pg	**Pg**	**22 33 46.1**	**-0.3**
OK050	**Pawnee Station**	**0.73**	**119**		**Pg**	**22 33 49.1**	**-0.1**
OK048	**Pawnee Station**	**0.74**	**116**		**Pg**	**22 33 49.4**	**-0.1**
OK048				Sg	**Sg**	**22 33 59.4**	**+0.2**
OK045	**Pawnee Station**	**0.74**	**113**		**Pg**	**22 33 49.4**	**-0.1**
OK045				Sg	**Sg**	**22 33 59.4**	**+0.2**
OK035	**E0210 Rd and N**	**0.75**	**267**		**Pg**	**22 33 49.4**	**-0.3**
OK046	**Pawnee Station**	**0.78**	**116**		**Pg**	**22 33 50.0**	**-0.2**
OK051	**E0350 and S346**	**0.79**	**108**		**Pg**	**22 33 50.1**	**-0.3**
OK038	**West end E0370**	**0.82**	**251**	Pg	**Pg**	**22 33 49.8**	**-1.3**
OK044	**Pawnee Station**	**0.87**	**115**		**Pg**	**22 33 51.6**	**-0.3**
OK033	**Mehan**	**0.97**	**136**	Pg	**Pg**	**22 33 53.6**	**-0.3**
OK029	**Liberty Lake**	**0.98**	**165**	Pg	**Pg**	**22 33 53.8**	**-0.2**
T35A	**Sooner Cattle**	**1.02**	**80**		**Pg**	**22 33 54.3**	**-0.6**
T35B	**Sooner Cattle**	**1.02**	**80**	P	**Pg**	**22 33 54.3**	**-0.6**
baz=262							
T35B				S	**Sg**	**22 34 08.0**	**-0.1**
baz=262							
U32A	**Winter Ranch,**	**1.06**	**250**	Pg	**Pg**	**22 33 54.9**	**-0.6**
U32A	**Winter Ranch,**	**1.06**	**250**	P	**Pg**	**22 33 55.0**	**-0.6**
baz=68,SNR=104							
U32A				S	**Sg**	**22 34 09.9**	**+0.7**
baz=68							
OK031	**S. Brethren Rd**	**1.09**	**136**	Pg	**Pg**	**22 33 55.8**	**-0.4**
OK034	**N. Norfolk Rd.**	**1.13**	**130**	Pg	**Pg**	**22 33 56.4**	**-0.5**
OK005	**Luther M Schoo**	**1.19**	**157**		**Pb**	**22 33 57.6**	**-0.5**
OK009	**Oakdale Elemen**	**1.20**	**166**		**Pb**	**22 33 57.8**	**-0.5**
OK025	**Westminster Rd**	**1.22**	**163**		**Pb**	**22 33 58.1**	**-0.5**
OKCSW	**OKLAHOMA CITY**	**1.37**	**168**		**Pn**	**22 34 00.7**	**-0.1**
FNO	**Franklin**	**1.52**	**168**		**Pn**	**22 34 03.0**	**+0.1**
TUL1	**Leonard**	**1.80**	**117**		**Pn**	**22 34 07.4**	**+0.6**
TUL1	**Leonard**	**1.80**	**117**	P	**Pn**	**22 34 07.5**	**+0.7**
baz=299,SNR=99							
TUL1				S	**Sb**	**22 34 32.1**	**+0.6**
baz=299							
R32A	**Long Quarter,**	**1.83**	**336**		**Pn**	**22 34 07.7**	**+0.4**
R32A	**Long Quarter,**	**1.83**	**336**	P	**Pn**	**22 34 07.7**	**+0.4**
baz=155,SNR=168							
R32A				S	**Sb**	**22 34 32.6**	**+0.3**
baz=155							
X34A	**Smith Ranch, M**	**2.14**	**181**		**Pn**	**22 34 12.6**	**+1.1**
X34A				IAmb_Lg		22 34 46.1	
comp=Z,192nm,0.7s							
WMOK	**Wichita Mounta**	**2.17**	**203**	Pn	**Pn**	**22 34 12.2**	**+0.4**
WMOK	**Wichita Mounta**	**2.17**	**203**	P	**Pn**	**22 34 12.3**	**+0.4**
baz=22,SNR=110							
WMOK				S	**Sb**	**22 34 42.3**	**+0.4**
baz=22							
KSU1	**Kansas State U**	**2.52**	**21**		**Pn**	**22 34 16.7**	**-0.1**
KSU1	**Kansas State U**	**2.52**	**21**	P	**Pn**	**22 34 17.2**	**+0.5**
baz=202,SNR=6.6							
CBKS	**Cedar Bluff**	**2.58**	**324**		**Pn**	**22 34 17.3**	**-0.3**
CBKS	**Cedar Bluff**	**2.58**	**324**	P	**Pn**	**22 34 18.0**	**+0.4**
baz=142,SNR=9.1							
CBKS				S	**Sb**	**22 34 55.3**	**+1.2**
baz=142							
U38A	**Gravette**	**2.74**	**95**	Pn	**Pn**	**22 34 20.3**	**+0.6**
U38A				IAmb_Lg		22 35 07.9	
comp=Z,116nm,0.8s							
U38A	**Gravette**	**2.74**	**95**	P	**Pn**	**22 34 20.4**	**+0.6**
baz=278,SNR=36							
X37A	**Clayton**	**2.91**	**137**	Pn	**Pn**	**22 34 22.5**	**+0.5**
X37A				IAmb_Lg		22 35 11.7	
comp=Z,145nm,0.7s							
X37A	**Clayton**	**2.91**	**137**	P	**Pn**	**22 34 22.7**	**+0.7**
baz=319,SNR=77							
HHAR	**Hobbs**	**3.12**	**97**		**Pn**	**22 34 25.5**	**+0.5**
Z35A	**Perchaven, San**	**3.44**	**173**		**Pn**	**22 34 29.6**	**+0.4**
S39A	**Bolivar**	**3.67**	**74**		**Pn**	**22 34 32.9**	**+0.4**
S39A	**Bolivar**	**3.67**	**74**	P	**Pn**	**22 34 33.1**	**+0.6**
baz=257,SNR=9.5							
AMTX	**Amarillo**	**3.68**	**241**	Pn	**Pn**	**22 34 33.8**	**+1.0**
AMTX				IAmb_Lg		22 35 31.3	
comp=Z,89nm,0.8s							
N33B	**J Bar K, Exete**	**3.99**	**4**	S	**Sn**	**22 35 23.9**	**-0.1**
baz=184							
N33A	**J Bar K, Exete**	**3.99**	**4**	IAmb_Lg		22 35 48.3	
comp=Z,96nm,0.8s							
MIAR	**Mount Ida**	**4.06**	**122**		**Pn**	**22 34 38.5**	**+0.7**
MIAR				IAmb_Lg		22 35 47.1	
comp=Z,115nm,0.8s							
MIAR	**Mount Ida**	**4.06**	**122**	P	**Pn**	**22 34 38.7**	**+0.9**
baz=304							
Z38A	**Mt. Pleasant**	**4.16**	**146**		**Pn**	**22 34 39.7**	**+0.4**
Z38A				IAmb_Lg		22 35 49.2	
comp=Z,69nm,0.7s							
ABTX	**Abilene, Hawle**	**4.39**	**201**		**Pn**	**22 34 42.4**	**0.0**
P38A	**Dawn**	**4.41**	**48**	Pn	**Pn**	**22 34 42.2**	**-0.4**
MGMO	**Mountain Grove**	**4.43**	**83**	Pn	**Pn**	**22 34 43.5**	**+0.6**
MGMO				IAmb_Lg		22 36 06.5	
comp=Z,83nm,0.7s							
N35A	**Tabor**	**4.43**	**21**	Pn	**Pn**	**22 34 43.0**	**0.0**
KSCO	**Kaye Shedlock'**	**4.46**	**302**		**Pn**	**22 34 43.7**	**+0.2**
KSCO				IAmb_Lg		22 36 05.3	
comp=Z,75nm,0.7s							
R40A	**Maddies Statio**	**4.64**	**69**		**Pn**	**22 34 45.6**	**-0.1**
R40A	**Maddies Statio**	**4.64**	**69**	P	**Pn**	**22 34 45.7**	**-0.1**
baz=252,SNR=22							
FCAR	**Ozark Folk Cen**	**4.64**	**99**		**Pn**	**22 34 46.2**	**+0.4**
FCAR				IAmb_Lg		22 36 05.8	
comp=Z,60nm,0.7s							
BGNE	**Belgrade**	**4.66**	**357**		**Pn**	**22 34 45.6**	**-0.6**
BGNE	**Belgrade**	**4.66**	**357**	P	**Pn**	**22 34 45.9**	**-0.2**
baz=176,SNR=7.2							
WHAR	**Wooly Hollow**	**4.68**	**106**		**Pn**	**22 34 45.9**	**-0.4**
WHAR				IAmb_Lg		22 36 16.7	
comp=Z,76nm,0.7s							
WHTX	**Lake Whitney,**	**4.75**	**177**		**Pn**	**22 34 47.2**	**-0.1**
WHTX	**Lake Whitney,**	**4.75**	**177**	P	**Pn**	**22 34 47.6**	**+0.2**
baz=357,SNR=17							
UALR	**University of**	**4.83**	**112**	Pn	**Pn**	**22 34 48.2**	**-0.3**
UALR				IAmb_Lg		22 36 08.1	
comp=Z,80nm,0.9s							
WLAR	**White Oak Lake**	**4.89**	**127**	IAmb_Lg		22 36 12.3	
comp=Z,60nm,0.8s							
MSTX	**Muleshoe**	**4.94**	**237**		**Pn**	**22 34 50.1**	**+0.1**
237A	**Washetta, Mont**	**5.00**	**161**		**Pn**	**22 34 50.2**	**-0.6**
P40A	**Paris**	**5.30**	**57**		**Pn**	**22 34 55.0**	**+0.2**
P40A				IAmb_Lg		22 36 30.9	
comp=Z,56nm,0.9s							
L34A	**Svendsen Farm,**	**5.32**	**11**	Pn	**Pn**	**22 34 54.5**	**-0.7**
T25A	**Trinidad**	**5.33**	**276**		**Pn**	**22 34 55.6**	**+0.1**
T25A				IAmb_Lg		22 36 24.2	
comp=Z,65nm,0.7s							
OGNE	**Ogallala**	**5.35**	**323**		**Pn**	**22 34 56.4**	**+0.7**
OGNE				IAmb_Lg		22 36 31.5	
comp=Z,63nm,0.7s							
OGNE	**Ogallala**	**5.35**	**323**	P	**Pn**	**22 34 56.8**	**+1.1**
baz=140,SNR=9.2							
CCM	**Cathedral Cave**	**5.36**	**74**	Pn	**Pn**	**22 34 55.3**	**-0.4**
CCM				IAmb_Lg		22 36 30.6	
comp=Z,76nm,0.7s							
N38A	**Joes South For**	**5.37**	**40**	Pn	**Pn**	**22 34 55.0**	**-0.9**
LCAR	**Lake Charles**	**5.38**	**95**	Pn	**Pn**	**22 34 56.3**	**+0.3**
LCAR				IAmb_Lg		22 36 30.2	
comp=Z,71nm,0.9s							
LCAR	**Lake Charles**	**5.38**	**95**	P	**Pn**	**22 34 56.6**	**+0.6**
baz=279,SNR=8.6							
CCAR	**Cane Creek**	**5.66**	**118**	IAmb_Lg		22 36 47.6	
comp=Z,106nm,0.8s							
PBMO	**Poplar Bluff**	**5.89**	**88**	IAmb_Lg		22 36 44.1	
comp=Z,92nm,0.7s							
K31A	**O'Neill**	**5.92**	**353**	Pn	**Pn**	**22 35 03.1**	**-0.2**
435B	**Jarrell**	**5.95**	**178**	Pn	**Pn**	**22 35 03.4**	**-0.4**
435B				IAmb_Lg		22 36 53.0	
comp=Z,102nm,0.9s							
FVM	**French Village**	**5.98**	**76**	Pn	**Pn**	**22 35 02.1**	**-2.2**
CPRX	**Cap Rock**	**6.23**	**235**	Pn	**Pn**	**22 35 07.1**	**-0.7**
Q24A	**Divide**	**6.24**	**293**		**Pn**	**22 35 07.7**	**-0.4**
Q24A				IAmb_Lg		22 37 01.0	
comp=Z,57nm,0.8s							
SDCO	**Great Sand Dun**	**6.25**	**281**		**Pn**	**22 35 08.9**	**+0.8**
SDCO				IAmb_Lg		22 37 01.5	
comp=Z,55nm,1.2s							
SLM	**Saint Louis**	**6.27**	**70**	IAmb_Lg		22 36 50.5	
comp=Z,49nm,0.8s							
BRIGG	**Briggsdale**	**6.39**	**309**	IAmb_Lg		22 37 04.2	
comp=Z,98nm,0.9s							
HTMS	**Hat Mesa**	**6.44**	**230**		**Pn**	**22 35 10.6**	**-0.1**
JCT	**Junction City**	**6.48**	**196**		**Pn**	**22 35 10.4**	**-0.7**
JCT				IAmb_Lg		22 37 07.9	
comp=Z,56nm,0.8s							
CLN7	**Carlsbad 7**	**6.59**	**231**	Pn	**Pn**	**22 35 12.8**	**+0.1**
143A	**Socs Landing,**	**6.62**	**126**	IAmb_Lg		22 37 22.4	
comp=Z,55nm,0.8s							
N41A	**Harden Midland**	**6.70**	**52**		**Pn**	**22 35 13.7**	**-0.4**
S44A	**Carbondale**	**6.86**	**80**		**Pn**	**22 35 16.2**	**-0.1**
S44A	**Carbondale**	**6.86**	**80**	P	**Pn**	**22 35 16.4**	**+0.1**
baz=265							
SIUC	**Southern Illin**	**6.89**	**79**	Pn	**Pn**	**22 35 16.1**	**-0.7**
ECSD	**EROS Data Cent**	**7.03**	**7**		**Pn**	**22 35 16.1**	**-2.6**
ECSD	**EROS Data Cent**	**7.03**	**7**	P	**Pn**	**22 35 17.7**	**-1.0**
baz=188							
P43A	**Skaggs, Pawnee**	**7.11**	**64**	IAmb_Lg		22 37 20.9	
comp=Z,81nm,0.9s							
OXF	**Oxford**	**7.17**	**106**	IAmb_Lg		22 37 24.1	
comp=Z,60nm,0.8s							
Q44A	**Meyer Farm, Va**	**7.26**	**70**	Pn	**Pn**	**22 35 21.3**	**-0.4**
Q44A				IAmb_Lg		22 37 31.9

az=146.0

ISC 19 23:15:24.2±2.4, 36°.5N±0°.2×70°.4E±0°.1, h100km, n7, σ3832/10, 1C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.57**	**1**	P	**Pn**	**23 16 58.8**	**+0.6**
	3.8nm,0.3s,baz=200,slow=14,SNR=72						
KK31				S	**Sn**	**23 18 11.8**	**+0.2**
	2.9nm,0.3s,baz=189,slow=18,SNR=7.8						
AAK	**Ala-Archa**	**6.87**	**26**	P	**Pn**	**23 17 04.9**	**+2.5**
	4.5nm,0.4s,baz=212,slow=11,SNR=24						
AAK				S	**Sn**	**23 18 24.9**	**+5.9**
	2.1nm,0.4s,baz=157,slow=17,SNR=2.3						
GEYT	**Alibeck**	**9.91**	**282**	P	**Pn**	**23 17 45.4**	**+1.7**
	1.4nm,0.5s,baz=89,slow=15,SNR=3.8						
GEYT				S	Sn	23 19 19.8	-13
	1.6nm,0.5s,baz=16,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**13.55**	**37**	P	**Pn**	**23 18 31.3**	**-0.9**
	1.1nm,1.0s,baz=220,slow=13,SNR=2.1						
MKAR				S	**Sn**	**23 20 58.2**	**-2.9**
	1.5nm,1.0s,baz=190,slow=24,SNR=5.9						
AB31	**Akbulak array**	**14.84**	**332**	⇑P	**Pn**	**23 18 44.8**	**-3.9**
	0.7nm,0.5s,baz=152,slow=13,SNR=15						
KURBB	**Kurchatov Arra**	**15.25**	**20**	P	**Pn**	**23 18 56.9**	**+3.0**
	2.0nm,0.2s,baz=212,slow=9.7,SNR=7.2						
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**23 19 49.1**	**-0.5**
	3.6nm,0.6s,baz=217,slow=11,SNR=17						
	3.6nm,0.6s						

NDI ***19*** *23:57:16.9±3.4, 33°.00N×94°.79E, h10km±438km, ML4.3, mb4.5(NEIC)*

IDC ***19*** *23:57:17.2±0.5, 32°.78N×94°.94E, h0km, mb4.1/20, mbtmp4.1/24, ML3.9/3, MS3.4/8, Error ellipse: s-maj=20.0km s-min=11.4km az=54.0*

NEIC ***19*** *23:57:18.9±1.6, 32°.86N±0°.07×94°.76E±0°.09, h10km±1km, mb4.5/56, Error ellipse: s-maj=12.7km s-min=11.3km az=79.0*

BJI ***19*** *23:57:19.0±0.0, 32°.83N×94°.89E, h5km, mb4.4/25, mB4.8/12, ML3.8/4, Ms3.9/21, Ms7 3.9/21*

ISC 19 23:57:19.0±0.3, 32°.81N±0°.04×94°.69E±0°.05, h10km, n126, σ1851/131, mb4.3/39, MS3.4/5, 1C-2D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.34**	**225**		**Pn**	**23 58 28.0**	**+2.6**
LSA	**Lhasa**	**4.34**	**225**	Pn	Pn	23 58 30.8	+5.4
LSA				Sn	**Sb**	**23 59 29.1**	**+0.9**
LSA				LR	LR		
	comp=N,850nm,7.1s						
LSA				LR	LR		
	comp=E,800nm,8.2s						
LSA				LR	LR		
	comp=Z,2μm,7.8s						
ZIRO	**ZIRO**	**5.32**	**188**	*e*P	**Pn**	**23 58 40.9**	**+2.3**
ZIRO				*e*S	**Sn**	**23 59 42.0**	**+2.0**
ZIRO				IAML		23 59 48.0	
	comp=N,541nm,0.5s						
ZIRO				IAML		23 59 52.6	
	comp=E,629nm,0.4s						
ITAN	**ITANAGAR**	**5.71**	**189**	*e*P	**Pn**	**23 58 46.0**	**+2.2**
TEZP	**TEZPUR**	**6.39**	**195**	*e*P	**Pn**	**23 58 54.3**	**+1.2**
MOKO	**MOKOCHONG**	**6.47**	**181**	*e*P	**Pn**	**23 58 55.8**	**+1.4**
MOKO				*e*S	**Sn**	**00 00 07.7**	**-0.7**
KOHI	**KOHIMA**	**7.08**	**184**	*e*P	**Pn**	**23 59 03.4**	**+0.5**
KOHI				*e*S	**Sn**	**00 00 23.4**	**-0.1**
SHL	**Shillong**	**7.62**	**199**		**Pn**	**23 59 10.3**	**0.0**
SHL	**Shillong**	**7.62**	**199**	*e*P	**Pn**	**23 59 09.7**	**-0.6**
SHL				*e*S	**Sn**	**00 00 32.9**	**-4.0**
GTA	**Gaotai**	**7.78**	**31**	*e*Pn	**Pn**	**23 59 13.3**	**+0.9**
GTA				Sn	Sn	00 00 47.8	+7.2
GTA				LR	LR		
	comp=E,320nm,11.3s						
GTA				LR	LR		
	comp=E,270nm,13.1s						
GTA				LR	LR		
	comp=E,390nm,11.6s						
DHUB	**DHUBRI**	**7.91**	**212**	*e*P	**Pn**	**23 59 17.0**	**+3.0**
DHUB				*e*S	**Sn**	**00 00 42.7**	**-0.8**
LZH	**Lanzhou**	**8.23**	**64**	*e*P	**Pn**	**23 59 19.8**	**+1.2**
LZH				pP	Pb	23 59 24.3	-17
LZH				S	**Sn**	**00 00 53.9**	**+2.1**
LZH				pmax	pmax		
	comp=E,25nm,1.1s						
LZH				smax	smax		
	comp=E,20nm,1.4s						
LZH				smax	smax		
	comp=E,23nm,1.7s						
LZH				LR	LR		
	comp=E,950nm,9.7s						
LZH				LR	LR		
	comp=E,800nm,9.3s						
LZH				LR	LR		
	comp=E,850nm,10.4s						
PZH	**PanZhiHua**	**8.78**	**134**	P	**Pn**	**23 59 28.8**	**+2.7**
PZH				pmax	pmax		
	comp=E,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=E,90nm,4.3s						
KMI	**Kunming**	**10.40**	**135**	⇓P	**Pn**	**23 59 48.9**	**+0.4**
KMI				pP		23 59 50.1	
KMI				pmax	pmax		
	comp=E,8.0nm,0.7s						
KMI				pmax	pmax		
	comp=E,280nm,4.7s						
KMI				LR	LR		
	comp=E,470nm,8.0s						
KMI				LR	LR		
	comp=E,410nm,8.0s						
KMI				LR	LR		
	comp=E,480nm,10.7s						
BRDH	**Bariadhala**	**10.45**	**196**	Pn	**Pn**	**23 59 49.8**	**+0.9**
	comp=E,36nm,0.3s,baz=166,slow=8.6,SNR=3.7						
BRDH				Sn	**Sn**	**00 01 46.3**	**+0.3**
	baz=186,slow=23						
XAN	**Xi'an**	**11.95**	**80**	⇑P	**Pn**	**00 00 09.1**	**-0.4**
XAN				pP		00 00 13.8	
XAN				pmax	pmax		
	comp=E,10.0nm,0.9s						
GYA	**Guiyang**	**12.18**	**118**	⇓*i*P	**Pn**	**00 00 13.3**	**+0.6**
GYA				S	**Sn**	**00 02 33.0**	**+4.3**
GYA				pmax	pmax		
	comp=E,31nm,1.0s						
GYA				LR	LR		
	comp=E,1μm,10.5s						
WMQ	**Urumqi**	**12.28**	**336**	*e*P	**Pn**	**00 00 14.9**	**+0.9**
WMQ				sP		00 00 21.5	
WMQ				pmax	pmax		
	comp=E,21nm,1.3s						
WMQ				LR	LR		
	comp=E,350nm,17.3s						
WMQ				LR	LR		
	comp=E,260nm,14.3s						
WMQ				LR	LR		
	comp=E,92nm,16.3s						
ENH	**Enshi**	**12.87**	**97**	Pn	**Pn**	**00 00 20.5**	**-1.6**
CMAR	**Chiang Mai Arr**	**14.79**	**164**	Pn	**Pn**	**00 00 48.7**	**+0.3**
	comp=E,1.2nm,0.4s,baz=341,slow=13,SNR=10						
CMAR				LR	LR	00 07 06.7	
	comp=E,93nm,18.7s,baz=80,slow=40						
CMAR	**Chiang Mai Arr**	**14.79**	**164**	Pn	**Pn**	**00 00 49.1**	**+0.8**
HHC	**Hu-ho-hao-te**	**15.70**	**54**	*e*P	**Pn**	**00 00 59.5**	**-0.8**
HHC				pmax	pmax		
	comp=E,20nm,0.8s						
HHC				pmax	pmax		
	comp=E,310nm,5.6s						
KSH	**Kashi**	**16.52**	**299**	P	**P**	**00 01 17.3**	**+3.8**
KSH				pmax	pmax		
	comp=E,7.0nm,0.9s						
MK31	**Makanchi Array**	**16.88**	**329**	Pn	**Pn**	**00 01 14.1**	**-1.1**
MKAR	**Makanchi Array**	**16.88**	**329**	P	**Pn**	**00 01 15.7**	**+0.5**
	comp=E,0.3nm,0.3s,baz=135,slow=14,SNR=11						
MKAR				LR	LR	00 07 52.9	
	comp=E,70nm,18.8s,baz=140,slow=37						
	comp=E,1.7nm,0.7s						
MKAR	**Makanchi Array**	**16.88**	**329**		**Pn**	**00 01 13.3**	**-2.0**
MAKZ	**Makanchi**	**17.02**	**329**	Pn	**Pn**	**00 01 15.5**	**-1.6**
NRN	**Naryn**	**17.19**	**305**		**Pn**	**00 01 18.1**	**-1.4**
SONM	**Songino Array**	**17.43**	**27**	P	**Pn**	**00 01 21.0**	**-1.3**
	comp=E,0.2nm,0.3s,baz=212,slow=15,SNR=16						
	comp=E,6.7nm,1.0s						
SONM	**Songino Array**	**17.43**	**27**	Pn	**Pn**	**00 01 19.6**	**-2.7**
BOOM	**Boomskoye usch**	**17.68**	**308**	P	**Pn**	**00 01 25.6**	**+0.1**
BOOM				IAmb	IAmb	00 01 34.7	
	comp=Z,21nm,0.9s						
ULN	**Ulaanbaatar**	**17.71**	**28**	Pn	**Pn**	**00 01 22.8**	**-2.9**
NIL	**Nilore**	**17.96**	**279**		**Pn**	**00 01 27.3**	**-1.5**
NIL				IAmb	IAmb	00 01 35.2	
	comp=Z,12nm,0.8s						
AAK	**Ala-Archa**	**18.71**	**307**	P	**Pn**	**00 01 41.4**	**+3.3**
	comp=Z,1.6nm,0.3s,baz=91,slow=4.0,SNR=11						
AAK				LR	LR	00 10 17.3	
	comp=Z,273nm,19.0s,baz=123,slow=41						
	comp=Z,3.0nm,0.3s						
AAK	**Ala-Archa**	**18.71**	**307**		**P**	**00 01 35.4**	**-2.3**
DRK	**Karamyk**	**19.62**	**296**	P	**P**	**00 01 47.7**	**-0.2**
DRK				IAmb	IAmb	00 01 54.8	
	comp=Z,18nm,1.0s						
UBPT	**Khong Chiam**	**20.01**	**148**	P	**P**	**00 01 52.0**	**+0.1**
UBPT				IAmb	IAmb	00 01 56.2	
	comp=Z,13nm,0.8s						
BTK	**Batken**	**20.49**	**297**	P	**P**	**00 01 56.7**	**-0.4**
BTK				IAmb	IAmb	00 02 04.0	
	comp=Z,16nm,0.7s						
GAR	**Garm**	**20.66**	**294**	P	**P**	**00 01 58.5**	**-0.5**
GAR				IAmb	IAmb	00 02 06.9	
	comp=Z,19nm,0.9s						
KBL	**Kabul**	**21.40**	**282**	P	**P**	**00 02 07.6**	**+0.4**
KBL				IAmb	IAmb	00 02 12.2	
	comp=Z,27nm,0.8s						
KURBB	**Kurchatov Arra**	**21.42**	**331**	P	**P**	**00 02 07.4**	**+0.5**
	comp=Z,18nm,0.8s,baz=137,slow=11,SNR=37						
KURBB				ScP	**ScP**	**00 09 46.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=139,slow=1.6,SNR=4.1						
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**21.45**	**331**	P	**P**	**00 02 07.1**	**-0.2**
KURK				IAmb	IAmb	00 02 11.3	
	comp=Z,21nm,0.8s						
CHGR	**Chuyangaron**	**21.50**	**293**	P	**P**	**00 02 07.2**	**-0.9**
CHGR				IAmb	IAmb	00 02 12.2	
	comp=Z,26nm,1.0s						
KK31	**Karatay Array**	**21.59**	**305**	P	**P**	**00 02 09.3**	**+0.4**
KKAR	**Karatay Array**	**21.59**	**305**	P	**P**	**00 02 09.5**	**+0.6**
KKAR	**Karatay Array**	**21.59**	**305**	P	**P**	**00 02 09.2**	**+0.3**
TAS	**Tashkent**	**21.92**	**300**	P	**P**	**00 02 12.8**	**+0.4**
ZAA0	**Zalesovo Array**	**22.27**	**344**	P	**P**	**00 02 15.6**	**-0.4**
ZALV	**Zalesovo Beam**	**22.27**	**344**	P	**P**	**00 02 15.3**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=159,slow=9.1,SNR=14						
	comp=Z,3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**22.27**	**344**	P	**P**	**00 02 14.8**	**-1.3**
BVAR	**Borovoye Array**	**26.70**	**326**	P	**P**	**00 02 59.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=130,slow=10,SNR=9.2						
BVAR				LR	LR	00 14 26.8	
	comp=Z,48nm,19.1s,baz=99,slow=38						
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**26.77**	**326**	P	**P**	**00 02 58.4**	**-0.4**
HRA	**Herat**	**27.01**	**282**	P	**P**	**00 03 01.5**	**+0.1**
HRA				IAmb	IAmb	00 03 08.9	
	comp=Z,3.3nm,0.8s						
KSRS	**Korea Array**	**27.48**	**71**	P	**P**	**00 03 04.6**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=344,slow=18,SNR=2.1						
KSRS				LR	LR	00 14 11.4	
	comp=Z,62nm,18.3s,baz=195,slow=37						
	comp=Z,0.6nm,0.4s						
GEYT	**Alibeck**	**30.13**	**290**	P	**P**	**00 03 31.7**	**+2.7**
	comp=Z,1.2nm,0.5s,baz=120,slow=14,SNR=3.7						
	comp=Z,1.2nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**30.13**	**290**	P	**P**	**00 03 28.5**	**-0.5**
GYA0B				IAmb	IAmb	00 03 35.1	
	comp=Z,3.2nm,0.7s						
ABKAR	**Akbulak array**	**30.60**	**313**	P	**P**	**00 03 32.7**	**-0.3**
AKTO	**Aktyubinsk**	**32.16**	**314**	LR	LR	00 18 26.5	
	comp=Z,82nm,18.6s,baz=93,slow=39						
KSM	**Kuching**	**34.46**	**152**	P	**P**	**00 04 06.6**	**-0.4**
YAK	**Yakutsk**	**36.79**	**27**	LR	LR	00 18 53.7	
	comp=Z,55nm,18.9s,baz=266,slow=35						
NRIK	**Noril'sk**	**36.80**	**356**	P	**P**	**00 04 28.3**	**+1.8**
	comp=Z,2.8nm,0.7s,baz=160,slow=8.8,SNR=7.9						
	comp=Z,2.8nm,0.7s						
NRIK	**Noril'sk**	**36.80**	**356**	P	**P**	**00 04 26.7**	**+0.1**
NRIK				IAmb	IAmb	00 04 30.3	
	comp=Z,4.4nm,0.9s						
DAV	**Davao City (W)**	**38.45**	**125**	LR	LR	00 22 38.7	
	comp=Z,104nm,18.6s,baz=351,slow=40						
GURO	**Goroymak-BITLI**	**42.67**	**293**	P	**P**	**00 05 16.9**	**+0.8**
MARD	**Mardin**	**43.86**	**292**	P	**P**	**00 05 25.9**	**+0.2**
MARD				IAmb	IAmb	00 05 30.9	
	comp=Z,8.0nm,1.1s						
RAYN	**Ar Rayn**	**44.01**	**271**	P	**P**	**00 05 26.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**45.05**	**152**	P	**P**	**00 05 34.0**	**-1.1**
KLMR	**Klimovskoe**	**45.12**	**325**	*e*	**P**	**00 05 34.3**	**-0.9**
KLMR				AMP		00 05 48.9	
	comp=Z,9.0nm,1.2s						
BRTR	**Keskin Array B**	**48.88**	**296**	P	**P**	**00 06 06.1**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=108,slow=7.9,SNR=8.9						
	comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	**48.88**	**296**	P	**P**	**00 06 05.0**	**-0.1**
AKASG	**Malin Array Be**	**50.32**	**311**	P	**P**	**00 06 16.7**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=75,slow=6.8,SNR=11						
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**	**51.65**	**325**	P	**P**	**00 06 27.2**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=98,slow=5.8,SNR=8.3						
	comp=Z,0.7nm,0.5s						
FINES	**FINESS Array B**	**51.65**	**325**	P	**P**	**00 06 25.9**	**+0.4**
ARCES	**ARCESS Array B**	**52.41**	**335**	P	**P**	**00 06 31.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=86,slow=7.4,SNR=5.6						
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**52.41**	**335**	P	**P**	**00 06 30.9**	**-0.2**
ARCES				IAmb	IAmb	00 06 42.6	
	comp=Z,7.1nm,1.4s						
MLR	**Muntele Rosu**	**53.27**	**305**	P	**P**	**00 06 39.2**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=139,slow=16						
	comp=Z,2.5nm,0.8s						
MLR	**Muntele Rosu**	**53.27**	**305**	P	**P**	**00 06 38.9**	**+0.9**
MLR				IAmb	IAmb	00 06 55.0	
	comp=Z,6.3nm,0.8s						
BURAR	**Bucovina Array**	**53.35**	**308**	P	**P**	**00 06 38.8**	**+0.3**
OJC	**Ojcow**	**56.34**	**312**	P	**P**	**00 06 59.6**	**-0.4**
OJC				IAmb	IAmb	00 07 03.3	
	comp=Z,3.8nm,0.6s						
KRLC	**Kraliky**	**58.26**	**312**	*e*P	**P**	**00 07 17.2**	**+3.6**
DPC	**Dobruska-Polom**	**58.48**	**313**	*e*P	**P**	**00 07 13.0**	**-2.1**
CHVC	**Chvalec**	**58.58**	**313**	*e*P	**P**	**00 07 20.1**	**+4.3**
NC303	**NORSAR Array S**	**58.71**	**326**	P	**P**	**00 07 16.2**	**-0.3**
NB2	**NORSAR Subarra**	**58.82**	**326**	P	**P**	**00 07 19.4**	**+2.0**
	comp=Z,2.5nm,0.7s,baz=79,slow=7.4						
NOA	**NORSAR Array B**	**58.82**	**326**	P	**P**	**00 07 17.6**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=78,slow=6.9,SNR=9.3						
	comp=Z,4.4nm,0.7s						
CONA	**Conrad Observa**	**59.41**	**310**	*e*P	**P**	**00 07 24.1**	**+2.3**
	comp=Z,1.5nm,0.6s						
PRU	**Pruhonice**	**59.68**	**313**	*e*P	**P**	**00 07 27.5**	**+4.1**
CKRC	**Cesky Krumlov**	**60.15**	**311**	*e*P	**P**	**00 07 26.2**	**-0.5**
MOA	**Molln**	**60.47**	**310**	*i* P	**P**	**00 07 29.9**	**+1.1**
	comp=Z,0.5nm,0.3s						
KHC	**Kasperske Hory**	**60.52**	**312**	*e*P	**P**	**00 07 28.3**	**-1.0**
GERES	**GERESS Array B**	**60.53**	**311**	P	**P**	**00 07 30.3**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=78,slow=7.0,SNR=8.4						
	comp=Z,0.9nm,0.7s						
GERES	**GERESS Array B**	**60.53**	**311**	P	**P**	**00 07 29.5**	**+0.1**
LODK	**Lodwar**	**62.56**	**255**	P	**P**	**00 07 41.7**	**-1.9**
LODK				IAmb	IAmb	00 07 46.2	
	comp=Z,6.7nm,1.4s						
FETA	**Feichten**	**63.01**	**310**	*e*P	**P**	**00 07 49.1**	**+3.0**
	comp=Z,1.9nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**63.44**	**310**	P	**P**	**00 07 49.3**	**+0.1**
FUORN				IAmb	IAmb	00 08 00.0	
	comp=Z,2.8nm,0.9s						
DAVOX	**Davos/Dischmat**	**63.63**	**310**	LR	LR	00 40 12.3	
	comp=Z,2μm,19.7s,baz=242,slow=40						
KMBO	**Kilima Mbogo**	**63.73**	**250**	P	**P**	**00 07 51.3**	**-0.2**
KMBO				IAmb	IAmb	00 08 06.2	
	comp=Z,3.4nm,1.1s						
WB0	**Warramunga Arr**	**64.60**	**138**	P	**P**	**00 07 55.1**	**-1.6**
WB0				IAmb	IAmb	00 07 56.6	
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**64.71**	**138**	P	**P**	**00 07 56.4**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=332,slow=6.7,SNR=22						
WRA				PcP	**PcP**	**00 08 30.1**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=323,slow=4.2,SNR=4.7						
	comp=Z,1.7nm,0.7s						
WRA	**Warramunga Arr**	**64.71**	**138**	P	**P**	**00 07 55.6**	**-1.9**
WR0	**Warramunga Arr**	**64.84**	**138**	P	**P**	**00 07 57.6**	**-0.7**
WR0				IAmb	IAmb	00 08 17.2	
	comp=Z,9.2nm,1.5s						
EUNU	**Eureka**	**67.38**	**0**	P	**P**	**00 08 14.4**	**+0.5**
AS31	**Alice Springs**	**67.48**	**141**	P	**P**	**00 08 14.1**	**-1.2**
AS31				IAmb	IAmb	00 08 14.7	
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**67.48**	**141**	P	**P**	**00 08 14.3**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=326,slow=6.6,SNR=30						
ASAR				PcP	**PcP**	**00 08 41.3**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=323,slow=6.1,SNR=4.4						
	comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**67.48**	**141**	P	**P**	**00 08 13.7**	**-1.5**
TOLK	**Toolik Lake Re**	**68.42**	**21**	P	**P**	**00 08 19.8**	**-0.8**
IMAR	**Indian Mountai**	**68.57**	**24**	P	**P**	**00 08 19.9**	**-1.6**
J20K	**Nowinta River**	**69.41**	**26**	P	**P**	**00 08 26.4**	**-0.4**
J20K				IAmb	IAmb	00 08 30.7	
	comp=Z,4.8nm,0.9s						
BPAW	**Bear Paw Mtn.**	**70.60**	**25**	P	**P**	**00 08 33.5**	**-0.6**
BPAW				IAmb	IAmb	00 08 38.0	
	comp=Z,5.3nm,1.1s						
BMAR	**Burnt Mountain**	**70.65**	**21**	P	**P**	**00 08 34.5**	**+0.1**
PPLA	**Purkeypile**	**70.86**	**26**	P	**P**	**00 08 35.4**	**-0.5**
ILAR	**Eielson Array**	**71.61**	**23**	P	**P**	**00 08 38.8**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=293,slow=5.1,SNR=14						
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**71.61**	**23**	P	**P**	**00 08 38.9**	**-1.3**
CTAO	**Charters Tower**	**72.07**	**129**	P	**P**	**00 08 42.4**	**-1.1**
SUA	**Susitna One**	**72.25**	**27**	P	**P**	**00 08 43.1**	**-1.1**
SML	**Sawmill**	**72.95**	**26**	P	**P**	**00 08 47.1**	**-1.3**
INK	**Inuvik**	**73.02**	**17**	P	**P**	**00 08 48.7**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=329,slow=12,SNR=3.1						
	comp=Z,2.0nm,0.8s						
BCAR	**Beaver Creek A**	**74.44**	**23**	P	**P**	**00 08 56.0**	**-1.1**
ESDC	**Sonseca Array**	**75.81**	**308**	P	**P**	**00 09 07.3**	**+1.9**
	comp=Z,0.8nm,1.0s,baz=45,slow=7.4,SNR=4.9						
	comp=Z,0.8nm,1.0s						
STKA	**Stephens Creek**	**78.11**	**141**	P	**P**	**00 09 16.9**	**-1.3**
	comp=Z,4.2nm,1.0s,baz=327,slow=5.5,SNR=5.4						
	comp=Z,4.2nm,1.0s						
STKA	**Stephens Creek**	**78.11**	**141**	P	**P**	**00 09 16.8**	**-1.3**
EIDS	**Eidsvold**	**78.94**	**130**	P	**P**	**00 09 21.8**	**-1.1**
EIDS				IAmb	IAmb	00 09 36.7	
	comp=Z,14nm,1.5s						
TORD	**Torodi Ar. Bea**	**85.47**	**283**	P	**P**	**00 09 57.0**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=59,slow=6.5,SNR=6.6						
	comp=Z,0.9nm,0.6s						
LBTB	**Lobatse**	**87.37**	**238**	P	**P**	**00 10 06.0**	**-0.6**
BBB	**Bella Bella**	**87.45**	**25**	LR	LR	00 51 55.0	
	comp=Z,2μm,19.1s,baz=84,slow=38						
SUR	**Sutherland**	**95.14**	**235**	LR	LR	00 48 14.5	
	comp=Z,2μm,21.4s,baz=298,slow=32						

IDC ***20*** *00:09:23.8±0.3, 13°.45N×44°.88W, h0km, mb4.7/41, mbtmp4.8/43, ML4.5/2, MS5.2/82, Error ellipse: s-maj=9.7km s-min=7.5km az=144.0*

MOS ***20*** *00:09:24.1±0.9, 13°.37N×44°.86W, h10km, mb5.5/115, MS5.2/21, Error ellipse: s-maj=5.8km s-min=3.8km az=49.5*

NEIC ***20*** *00:09:26.8, 13°.31N×44°.85W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=2.50; $M_{\theta\theta}$=1.02; $M_{\phi\phi}$3.52; $M_{r\theta}$1.15; $M_{\theta\phi}$0.16; $M_{\phi r}$1.08; Fault plane solution: M_o3.51000×10^{17} NP1:ϕ_s336.33000°, δ40.93000°, λ-131.02000°. NP2:ϕ_s205.35000°, δ60.38000°, λ-60.36000°. Principal axes: T 3.7347, Plg11.0000°, Azm275.0000°; N -0.4921, Plg25.0000°, Azm10.0000°; P -3.2426, Plg62.0000°, Azm164.0000°;*

NEIC ***20*** *00:09:26.5±1.5, 13°.31N±0°.09×44°.88W±0°.08, h10km±1km, mb5.4/348, Ms_20 5.4/351, Mwb5.6/74, Mww5.6 Error ellipse: s-maj=14.7km s-min=13.5km az=151.0*

GCMT ***20*** *00:09:29.5±0.1, 13°.44N±0°.01×44°.81W, h12km, MW5.7/162, Moment Tensor Solution. s136,c252; s162,c378; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; M_{rr}-4.50±.04; $M_{\theta\theta}$-0.36±.04; $M_{\phi\phi}$4.86±.03; $M_{r\theta}$-0.41±.11; $M_{\theta\phi}$0.04±.03; $M_{\phi r}$-0.23±.10; Best double couple: M_o4.70500×10^{17} NP1:ϕ_s6.00000°, δ47.00000°, λ-82.00000°. NP2:ϕ_s175.00000°, δ44.00000°, λ-98.00000°. Principal axes: T 4.8660, Plg1.0000°, Azm91.0000°; N -0.3190, Plg6.0000°, Azm181.0000°; P -4.5450, Plg84.0000°, Azm346.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *00:09:30, 13°.40N×44°.75W, h12km, Moment Tensor Solution. Duration: 7s6 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.08; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$3.44; $M_{r\theta}$0.97; $M_{\theta\phi}$0.24; $M_{\phi r}$0.86; Fault plane solution: M_o3.53000×10^{17} NP1: ϕ_s347.00000°, δ39.00000°, λ-115.00000°. NP2: ϕ_s199.00000°, δ55.00000°, λ-70.00000°. Principal axes: T 3.5895, Plg8.0000°, Azm275.0000°; N -0.1138, Plg16.0000°, Azm8.0000°; P -3.4758, Plg72.0000°, Azm159.0000°;*

ISC 20 00:09:25.3±0.9, 13°.27N±0°.04×44°.92W±0°.04, h9km±4km, n1448, σ1963/1396, mb5.3/317, MS5.4/285, 41C-35D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.13**	**224**	Pn	**Pn**	**00 12 05.5**	**+0.7**
	8.8nm,0.3s,baz=32,slow=15,SNR=64						
MDP				Sn	**Sn**	**00 14 03.1**	**-6.5**
	4.1nm,0.3s,baz=107,slow=20,SNR=4.2						
MDP				LR	LR	00 15 45.2	
	comp=Z,22μm,20.4s,baz=30,slow=34						
	22nm,0.3s						
BBGH	**Gun Hill**	**14.26**	**271**	Pn	**Pn**	**00 12 49.5**	**+1.9**
BBGH	**Gun Hill**	**14.26**	**271**	*e*P	**Pn**	**00 12 45.6**	**-2.0**
TOSP	**

GDHS Morne Mazeau, 16.56 282 Pn 00 13 18.2 +0.1
GDHS IAmb IAmb 00 13 25.3
comp=Z,264nm,1.1s
ANBD Bethesda, Anti 16.69 285 *e*P Pn 00 13 12.7 -6.9
ANWB Willy Bob 16.83 287 Pn **Pn 00 13 20.9 -0.5**
ANWB IAmb IAmb 00 13 26.5
comp=Z,394nm,1.6s
ANWB Willy Bob 16.83 287 *e*P **Pn 00 13 18.5 -2.9**
ANWB Willy Bob 16.83 287 *e*P **Pn 00 13 18.9 -2.5**
MBFL Flemmings, Mon 17.06 284 *e*P **Pn 00 13 20.4 -3.9**
SEUS St. Eustatius 17.91 286 *e*P **Pn 00 13 33.2 -1.7**
SMRT St. Maarten 18.11 288 *e*P **Pn 00 13 31.4 -6.0**
PCRV Puerto La Cruz 19.55 263 P **P 00 13 54.4 +0.8**
comp=Z,0.5nm,0.3s,baz=70,slow=12,SNR=4.4
PCRV LR LR 00 21 30.9
comp=Z,3μm,20.0s,slow=37
comp=Z,48nm,1.0s
CDVI St. Croix 19.63 286 P 00 13 54.3 -0.2
CDVI IAmb IAmb 00 14 00.6
comp=Z,175nm,0.9s
CDVI St. Croix 19.63 286 *e*P **P 00 13 51.9 -2.6**
STVI Saint Thomas 19.92 287 P **P 00 13 57.3 -0.3**
STVI IAmb IAmb 00 14 04.7
comp=Z,411nm,1.8s
CUPR Culebra, Puert 20.22 287 P **P 00 14 00.8 0.0**
MTP Monte Pirata 20.43 286 P **P 00 14 04.2 +1.0**
MTP IAmb IAmb 00 14 09.5
comp=Z,229nm,1.2s
HUMP Col San Antoni 20.72 286 P **P 00 14 06.1 -0.2**
SACV Santiago Islan 20.74 83 P 00 14 06.2 -0.3
SACV IAmb IAmb 00 14 12.0
comp=Z,177nm,0.8s
CBYP Canovanas 20.75 287 P **P 00 14 06.7 0.0**
GCPR Guaynabo City 20.97 287 P 00 14 09.4 +0.4
RCBR Riachuelo 20.98 154 P **P 00 14 10.6 +1.4**
comp=Z,18nm,0.9s,baz=267,slow=18,SNR=4.8
RCBR S **S 00 18 05.6 +2.4**
comp=Z,7.4nm,0.8s,baz=174,slow=18,SNR=1.9
RCBR LR LR 00 20 17.8
comp=Z,10μm,20.0s,baz=123,slow=31
comp=Z,18nm,0.9s
RCBR Riachuelo 20.98 154 P 00 14 10.0 +0.8
SJG San Juan 20.99 286 P **P 00 14 10.1 +0.9**
comp=Z,34nm,0.8s,baz=100,slow=8.6,SNR=14
SJG S **S 00 18 01.6 -1.8**
comp=Z,4.6nm,0.5s,baz=34,slow=23,SNR=1.4
SJG LR LR 00 21 00.7
comp=Z,10μm,21.4s,baz=102,slow=33
comp=Z,34nm,0.8s
SJG San Juan 20.99 286 P **P 00 14 09.8 +0.5**
SJG IAmb IAmb 00 14 19.2
comp=Z,339nm,1.2s
SJG San Juan 20.99 286 *e*P Pn 00 14 11.7 -0.2
CELP Cerrillos 21.39 286 P **P 00 14 13.5 -0.1**
CELP IAmb IAmb 00 14 21.7
comp=Z,218nm,1.1s
EMPR Esperanza - Ma 21.41 287 P **P 00 14 12.2 -1.6**
EMPR IAmb IAmb 00 14 28.1
comp=Z,157nm,1.1s
AOPR Arecibo Observ 21.60 286 P **P 00 14 15.3 -0.5**
AOPR Arecibo Observ 21.60 286 *e*P **P 00 14 14.1 -1.8**
MLPR Magueyes Islan 21.81 285 P **P 00 14 18.4 +0.4**
PRSN Puerto Rico Se 21.94 286 P **P 00 14 19.2 -0.3**
BAUV El Baul 23.09 262 P **P 00 14 31.5 -0.2**
BAUV El Baul 23.09 262 *e*P **P 00 14 25.5 -6.2**
SC01 Santiago de lo 25.49 287 P **P 00 14 54.1 -0.1**
SDV Santo Domingo 25.60 263 P **P 00 14 56.4 +0.9**
comp=Z,41nm,1.0s,baz=78,slow=9.1,SNR=14
comp=Z,41nm,1.0s
SDV Santo Domingo 25.60 263 P **P 00 14 55.2 -0.3**
SDV IAmb IAmb 00 15 07.4
comp=Z,130nm,1.2s
SDDR Presa de Saban 25.94 286 P **P 00 14 58.2 -0.2**
SDDR IAmb IAmb 00 15 12.2
comp=Z,103nm,1.3s
SDDR IAMs_20 IAMs_20 00 23 42.7
comp=Z,12μm,21.0s
SDDR Presa de Saban 25.94 286 *e*P **P 00 15 01.0 +2.5**
URIC Uribia, Colomb 26.48 270 *e*P **P 00 15 03.2 0.0**
MBO M'Bour 27.17 84 P **P 00 15 08.5 -0.9**
MBO IAMs_20 IAMs_20 00 22 52.3
comp=Z,15μm,21.0s
TAMC Tame, Arauca 27.32 258 *e*P **P 00 15 15.6 +4.8**
CRJC Cerrejon, Guaj 27.42 268 *e*P **P 00 15 11.8 -0.1**
BBTS Babate 27.57 84 P **P 00 15 13.9 +0.8**
comp=Z,14nm,0.5s,baz=321,slow=19,SNR=3.5
BBTS S **S 00 19 58.5 +3.6**
comp=Z,18nm,0.8s,baz=129,slow=23,SNR=3.7
BBTS LR LR 00 23 25.8
comp=Z,16μm,21.2s,baz=238,slow=31
comp=Z,14nm,0.5s
PAMC Pamplona, Colo 27.95 261 *e*P **P 00 15 18.0 +1.1**
LL1C La Loma 1 Cana 28.30 266 *e*P **P 00 15 23.1 +3.4**
OCAC Ocana 28.33 263 *e*P **P 00 15 19.0 -1.1**
PTGC Puerto Gaitan, 28.34 254 *e*P **P 00 15 22.0 +2.0**
BARC Barichara 28.60 259 *e*P **P 00 15 26.3 +3.8**
RUSC La Rusia 28.70 258 *e*P **P 00 15 25.9 +2.2**
BDFB Brasilia 28.89 186 P **P 00 15 26.1 +1.3**
comp=Z,21nm,0.8s,baz=6.3,slow=8.9,SNR=18
BDFB S **S 00 20 17.0 +1.5**
comp=Z,1.1nm,0.3s,baz=6.5,slow=19,SNR=1.0
BDFB LR LR 00 27 00.1
comp=Z,4μm,18.2s,baz=349,slow=36
comp=Z,21nm,0.8s
BDFB Brasilia 28.89 186 P **P 00 15 25.2 +0.4**
ARGC Ariguani, Magd 28.92 266 *e*P **P 00 15 25.3 +0.2**
BRRC Barranca, Sant 28.98 261 *e*P **P 00 15 26.3 +0.7**
CHIC Chingaza 29.70 256 *e*P **P 00 15 32.5 0.0**
SPBC San Pablo de B 29.71 258 *e*P **P 00 15 33.1 +0.9**
SJCC San Jacinto, C 29.82 267 *e*P **P 00 15 32.4 -0.8**
VILC Villavicencio, 29.83 255 *e*P **P 00 15 34.9 +1.6**
PTBC PUERTO BERRIO, 29.83 260 *e*P **P 00 15 31.7 -1.5**
ROSC El Rosal 30.19 257 P **P 00 15 39.2 +2.4**
comp=Z,12nm,0.7s,baz=93,slow=4.2,SNR=8.1
ROSC S S 00 20 46.5 +10
comp=Z,4.0nm,0.3s,baz=120,slow=22,SNR=1.7
ROSC LR LR 00 29 00.4
comp=Z,8μm,18.9s,baz=88,slow=39
comp=Z,12nm,0.7s
ROSC El Rosal 30.19 257 P **P 00 15 37.3 +0.5**
ROSC IAmb IAmb 00 16 31.4
comp=Z,58nm,1.2s
ROSC El Rosal 30.19 257 *e*P **P 00 15 38.9 +2.1**
TBTG Tabatinga, AM 30.27 237 *e*P **P 00 15 38.0 +0.9**
NORC Norcasia 30.50 258 *e*P **P 00 15 39.0 -0.1**
HELC Santa Helena 30.95 260 *e*P **P 00 15 44.0 +0.4**
GUY2C Guyana, Caldas 31.07 258 *e*P **P 00 15 45.5 +0.9**
PRAC Prado 31.08 255 *e*P **P 00 15 43.2 -1.2**
LCBC Los crdobas, 31.16 265 *e*P P 00 15 50.5 +5.6
ANIL Santa Ana 31.32 257 *e*P **P 00 15 46.6 -0.1**
CBOC Ciudad Bolivar 31.50 259 *e*P **P 00 15 49.7 +1.5**
MTDJ Mount Denham 31.75 283 *e*P **P 00 15 52.1 +1.9**
PMOZ Porto Moniz, M 31.93 48 *e*P **P 00 15 52.7 +1.1**
comp=Z,80nm,1.5s
PMOZ *e*S **S 00 21 08.3 +5.2**
PMOZ *e*LR LR 00 23 10.7
comp=Z,3μm,20.0s
BETC Betania 31.96 253 *e*P **P 00 15 56.6 +4.5**
PLMC San Jos del P 32.03 258 *e*P **P 00 15 53.0 +0.3**
FUL Funchal 32.06 48 *e*P **P 00 15 53.6 +1.0**
PMAR Madeira 32.08 48 *e*P **P 00 15 53.7 +0.6**
comp=Z,72nm,1.5s
GARC Garzon, Huila 32.19 253 *e*P **P 00 15 53.8 -0.5**
PTLC Puerto Leguiza 32.34 249 *e*P **P 00 15 56.7 +1.3**
YOTC Yotoco, Valle 32.37 256 *e*P **P 00 15 54.1 -1.7**
FLOC Florencia 32.56 252 *e*P P 00 15 50.4 -6.9
UPD2 Meteti 32.82 265 *e*P **P 00 16 02.5 +2.9**
PTAC Punta Ardita, 32.91 263 *e*P P 00 16 05.3 +4.9
SIV San Ignacio 33.17 209 S **S 00 21 27.2 +4.7**
comp=Z,1.6nm,0.8s,baz=296,slow=12,SNR=1.6
SIV LR LR 00 29 12.2
comp=Z,4μm,21.0s,baz=43,slow=36
BBAC Balboa, Cauca 33.88 253 *e*P P 00 16 00.8 -8.3
UPA Univ. de Panam 34.21 266 *e*P **P 00 16 14.4 +2.7**
GCUF Volcan Galeras 34.26 252 *e*P **P 00 16 15.4 +2.7**
BCIP Isla Barro Col 34.47 267 P **P 00 16 15.3 +1.3**
BCIP Isla Barro Col 34.47 267 *e*P **P 00 16 13.5 -0.4**
BCIP Isla Barro Col 34.47 267 P **P 00 16 15.3 +1.3**
BCIP pmax pmax
comp=Z,156nm,1.7s
BCIP MLR MLR
comp=Z,2μm,21.0s
BONI La Bonita 34.72 251 *e*P **P 00 16 16.8 +0.4**
TULM Tulcn-Chalpat 34.86 252 P **P 00 16 18.3 +0.4**

TULM IAmb IAmb 00 16 41.2
comp=Z,101nm,1.2s
TULM Tulcn-Chalpat 34.86 252 *e*P **P 00 16 21.2 +3.3**
PNME Penonome 35.07 266 *e*P **P 00 16 22.9 +3.8**
AQDB Aquidauana 35.17 198 P **P 00 16 21.3 +1.5**
AQDB IAmb IAmb 00 16 24.0
comp=Z,66nm,1.4s
IMBA Imbabura, San 35.41 251 P **P 00 16 23.7 +1.2**
CUSE Cuicocha Este 35.58 251 *e*P **P 00 16 24.2 +0.1**
PULU Pululahua 35.78 251 P **P 00 16 26.9 +1.2**
PIAT Ana Tenorio 35.97 249 *e*P **P 00 16 30.8 +3.5**
SLOR San Lorenzo - 36.08 250 P **P 00 16 29.6 +1.3**
SLOR IAmb IAmb 00 16 35.5
comp=Z,49nm,1.0s
V61A Roper 36.24 314 P **P 00 16 29.9 +1.0**
TRCB Terra Rica 36.63 192 P **P 00 16 33.1 +0.7**
TRCB IAmb IAmb 00 16 44.8
comp=Z,154nm,1.6s
H10N3 ASCENSION HYDR 36.77 123 T T 00 55 33.1
baz=305,slow=75,SNR=535
H10N2 ASCENSION HYDR 36.78 123 T T 00 55 31.9
baz=305,slow=75,SNR=704
H10N1 ASCENSION HYDR 36.80 123 T T 00 55 34.4
baz=305,slow=75,SNR=583
CNNC Cliffs of the 36.91 312 P **P 00 16 36.5 +1.9**
baz=118
PTGL Punta Galera 36.92 253 *e*P **P 00 16 38.6 +3.6**
T60A Surry 37.04 316 P **P 00 16 35.9 +0.2**
T60A IAmb IAmb 00 16 42.6
comp=Z,80nm,1.4s
DWPF Disney Wildern 37.05 299 IAMs_20 IAMs_20 00 28 15.1
comp=Z,8μm,21.0s
Y59A Loris 37.07 310 P **P 00 16 36.6 +0.6**
Y59A IAmb IAmb 00 16 46.5
comp=Z,62nm,1.1s
BOSC San Juan Bosco 37.10 246 P **P 00 16 36.7 0.0**
HRV Adam Dziewonsk 37.15 327 P **P 00 16 38.8 +2.2**
baz=134
LPAZ La Paz 37.27 219 P **P 00 16 39.8 +1.3**
comp=Z,64nm,1.2s,baz=28,slow=8.6,SNR=36
LPAZ PP **PP 00 18 04.1 +0.6**
comp=Z,7.3nm,1.0s,baz=42,slow=9.9,SNR=1.2
LPAZ S **S 00 22 28.6 +1.9**
comp=Z,1.4nm,0.9s,baz=258,slow=14,SNR=2.0
LPAZ LR LR 00 31 55.9
comp=Z,10μm,20.1s,baz=33,slow=36
comp=Z,64nm,1.2s
LPAZ La Paz 37.27 219 P **P 00 16 39.2 +0.7**
LPAZ La Paz 37.27 219 *e*P **P 00 16 41.7 +3.2**
H10S3 ASCENSION HYDR 37.28 125 T T 00 56 11.9
baz=303,slow=74,SNR=772
H10S2 ASCENSION HYDR 37.30 125 T T 00 56 13.2
baz=277,slow=74,SNR=369
BRU2 Volcan 37.31 267 P **P 00 16 39.1 +0.6**
BRU2 Volcan 37.31 267 *e*P **P 00 16 42.8 +4.3**
U59A Littleton 37.37 314 P **P 00 16 39.3 +0.7**
U59A IAmb IAmb 00 16 45.6
comp=Z,101nm,1.6s
PAL Palisades 37.48 323 P **P 00 16 41.2 +1.9**
baz=129
COHC Cochancay 37.49 248 P **P 00 16 40.5 +0.7**
COHC Cochancay 37.49 248 *e*P **P 00 16 39.5 -0.3**
T59A Double "B" Far 37.51 315 P **P 00 16 40.3 +0.6**
X58A Rowland 37.66 310 P **P 00 16 41.7 +0.7**
X58A IAmb IAmb 00 16 48.2
comp=Z,157nm,1.9s
WVL Waterville 37.67 331 IAMs_20 IAMs_20 00 28 22.5
comp=Z,5μm,21.0s
NHSC New Hope 37.70 308 IAMs_20 IAMs_20 00 28 12.6
comp=Z,9μm,22.0s
NHSC New Hope 37.70 308 P **P 00 16 42.2 +0.9**
baz=113
TRNY Table Rock, Ra 37.75 323 P **P 00 16 41.8 +0.1**
SRBA San Rafael, Bu 37.89 268 P **P 00 16 44.0 +0.7**
PKME Peaks-Kenny Pk 38.02 332 P **P 00 16 46.0 +2.1**
baz=139
CBN Corbin Frederi 38.03 317 P **P 00 16 44.3 +0.3**
CBN Corbin Frederi 38.03 317 P **P 00 16 45.3 +1.3**
baz=122
V58A Windy Hill, Pi 38.05 312 P **P 00 16 45.6 +1.3**
baz=117,SNR=8.0
V58A P **P 00 16 45.6 +1.3**
baz=117,SNR=8.0
JSRW J. Sargeant Re 38.10 316 P **P 00 16 44.9 +0.2**
Y57A Sumter 38.22 309 P **P 00 16 46.0 +0.2**
R58B Mineral 38.24 316 P **P 00 16 47.3 +1.4**
baz=121,SNR=9.8
R58B P **P 00 16 47.3 +1.4**
baz=121,SNR=9.8
RIMA Rio Macho 38.29 269 P **P 00 16 48.0 +1.1**
RIMA IAmb IAmb 00 17 03.2
comp=Z,96nm,1.4s
SDMD Soldier's Deli 38.33 319 P **P 00 16 47.1 +0.4**
ESPN Las Esperanzas 38.40 273 P **P 00 16 48.4 +0.9**
OUK Oukaimeden 38.43 56 P **P 00 16 50.0 +2.0**
PPLP Puerto Lpez 38.49 250 *e*P **P 00 16 50.7 +2.4**
BIRD Birdtown, Kers 38.53 310 P **P 00 16 48.7 +0.3**
BIRD IAmb IAmb 00 16 55.7
comp=Z,153nm,1.8s
BIRD Birdtown, Kers 38.53 310 P **P 00 16 49.4 +1.0**
baz=115,SNR=7.9
PQI Presque Isle 38.55 334 IAMs_20 IAMs_20 00 28 53.0
comp=Z,5μm,21.0s
LBNH Lisbon 38.55 328 P **P 00 16 49.6 +1.2**
baz=135
COVE Coope Vega, Sa 38.68 271 P **P 00 16 50.9 +1.0**
COVE IAmb IAmb 00 17 00.4
comp=Z,93nm,1.0s
ARNL Arenillas 38.69 247 P **P 00 16 51.1 +1.2**
ARNL IAmb IAmb 00 16 55.2
comp=Z,129nm,0.9s
PAGS Pennsylvania G 38.72 320 P **P 00 16 50.5 +0.6**
S57A Dark Hollow, R 38.87 315 P **P 00 16 52.8 +1.5**
baz=120,SNR=12
S57A P **P 00 16 52.8 +1.5**
baz=120,SNR=12
HAW Hawthorne Fire 38.90 307 P **P 00 16 53.6 +2.1**
baz=112,SNR=7.9
ATAH Atahualpa 38.94 241 LR LR 00 33 23.4
comp=Z,15μm,19.8s,baz=57,slow=37
JSC Jenkinsville 38.99 309 P **P 00 16 54.0 +1.8**
baz=114,SNR=7.1
ACON Acoyapa 39.28 273 *e*P **P 00 16 56.9 +2.0**
KMSC Kings Mountain 39.39 310 P **P 00 16 56.2 +0.6**
KMSC Kings Mountain 39.39 310 P **P 00 16 56.8 +1.2**
baz=114
KMSC Kings Mountain 39.39 310 P **P 00 16 57.0 +1.4**
baz=114
BINY Binghamton 39.44 323 P **P 00 16 57.0 +1.1**
baz=128
AVE Averroes 39.51 53 P **P 00 16 54.5 -2.2**
AVE S **S 00 23 00.5 +1.3**
AVE Averroes 39.51 53 IAMs_20 IAMs_20 00 29 14.0
comp=Z,7μm,21.0s
V55A Taylorsville 39.60 311 P **P 00 17 00.3 +2.9**
baz=115,SNR=14
V55A P **P 00 17 00.3 +2.9**
baz=115,SNR=14
M57A Sunshine Farm, 39.61 321 P **P 00 16 58.3 +1.0**
baz=126,SNR=5.3
M57A P **P 00 16 58.3 +1.0**
baz=126,SNR=5.3
BLA Blacksburg 39.63 313 P **P 00 16 58.3 +0.6**
BLA IAmb IAmb 00 17 08.5
comp=Z,95nm,1.4s
BLA Blacksburg 39.63 313 P **P 00 16 58.3 +0.6**
BLA pmax pmax
comp=Z,95nm,1.5s
BLA Blacksburg 39.63 313 P **P 00 16 59.1 +1.4**
baz=118,SNR=8.2
BLA Blacksburg 39.63 313 P **P 00 16 58.7 +1.1**
baz=118,SNR=8.2
PB16 IPOC Station P 39.68 218 P **P 00 16 58.9 +0.1**
Q56A Snyder Ridge, 39.68 317 P **P 00 17 02.1 +4.2**
baz=121,SNR=8.6
Q56A P **P 00 17 02.1 +4.2**
baz=121,SNR=8.6
SSPA Standing Stone 39.68 320 P **P 00 16 58.0 0.0**
SSPA Standing Stone 39.68 320 P **P 00 16 59.9 +1.9**
baz=124,SNR=7.8
SSPA Standing Stone 39.68 320 P **P 00 16 59.0 +1.0**
baz=124
KOWA Kowa 39.69 83 P **P 00 16 57.5 -0.8**
KOWA Kowa 39.69 83 P **P 00 16 57.5 -0.8**
BOAB BOACO BROADBAN 39.70 274 P **P 00 16 59.4 +0.9**
BOAB IAmb IAmb 00 17 09.2

comp=Z,75nm,1.0s
HODGE Hodges 39.73 308 P **P 00 16 59.9 +1.4**
HODGE Hodges 39.73 308 P **P 00 16 59.7 +1.3**
baz=112,SNR=11
J58A Remsen 39.76 325 P **P 00 17 00.1 +1.5**
baz=130,SNR=5.5
J58A P **P 00 17 00.1 +1.5**
baz=130,SNR=5.5
TIC Toumodi 39.80 96⇑ *e*P **P 00 16 58.4 -0.9**
comp=Z,62nm,1.1s
TIGA Tifton 39.81 303 P **P 00 16 59.9 +0.7**
baz=108
LIC Lamto 39.89 96⇑ *e*P **P 00 16 58.8 -1.2**
comp=Z,120nm,1.1s
MATN Matagalpa 39.91 274 P **P 00 17 01.1 +0.8**
R55A Marlinton 39.93 315 P **P 00 17 02.2 +2.1**
baz=119,SNR=9.9
R55A P **P 00 17 02.2 +2.1**
baz=119,SNR=9.9
DBIC Dimbokro 39.96 95 P **P 00 16 59.7 -0.8**
comp=Z,48nm,1.1s,baz=268,slow=10.0,SNR=15
DBIC PP **PP 00 18 26.1 -6.3**
comp=Z,4.0nm,0.7s,baz=302,slow=3.8,SNR=1.2
DBIC S S 00 22 52.9 -13
comp=Z,2.4nm,0.9s,baz=72,slow=17,SNR=1.2
DBIC LR LR 00 29 54.1
comp=Z,7μm,21.2s,baz=236,slow=31
comp=Z,48nm,1.1s
DBIC Dimbokro 39.96 95 P **P 00 16 59.8 -0.8**
DBIC IAmb IAmb 00 17 03.4
comp=Z,85nm,1.1s
DBIC Dimbokro 39.96 95 *e*P **P 00 17 00.1 -0.5**
DBIC Dimbokro 39.96 95 P **P 00 16 59.8 -0.8**
DBIC pmax pmax
comp=Z,85nm,1.2s
PFVI Vila Bisbo 40.02 47 *e*S **S 00 23 12.6 +5.9**
K57A Scipio Center 40.07 323 P **P 00 17 04.7 +3.5**
baz=128,SNR=6.8
KIC Kosan Boka 40.14 96⇑ *e*P **P 00 17 01.2 -0.9**
comp=Z,17nm,1.0s
ZHG ZHG 40.17 53 P **P 00 17 03.0 +0.8**
LONY Lake Ozonia 40.20 327 P **P 00 17 03.2 +1.0**
baz=132
MORF Marmelete 40.22 47 *e*P **P 00 17 03.1 +0.6**
MORF IAmb IAmb 00 17 12.2
comp=Z,139nm,2.1s
MORF *e*S **S 00 23 10.8 +1.0**
MORF Marmelete 40.22 47 *e*P **P 00 17 02.3 -0.2**
comp=Z,50nm,2.1s
MORF *e*S **S 00 23 13.9 +4.1**
MORF Marmelete 40.22 47 *e*P **P 00 17 03.1 +0.6**
MORF *e*S **S 00 23 10.8 +1.0**
MNTQ Montreal, Queb 40.30 329 P **P 00 17 03.7 +0.8**
U54A Nelsons Funny 40.33 312 P **P 00 17 04.8 +1.4**
baz=115
U54A P **P 00 17 04.8 +1.4**
baz=115
L56A Greenwood 40.34 322 P **P 00 17 06.6 +3.2**
baz=126,SNR=5.9
L56A P **P 00 17 06.6 +3.2**
baz=126,SNR=5.9
WCNY West Carthage 40.36 325 P **P 00 17 05.1 +1.5**
baz=130
GOGA Godfrey 40.37 306 P **P 00 17 05.0 +1.3**
GOGA Godfrey 40.37 306 IAMs_20 IAMs_20 00 30 19.4
comp=Z,6μm,21.0s
GOGA Godfrey 40.37 306 P **P 00 17 05.0 +1.3**
GOGA pmax pmax
comp=Z,41nm,1.2s
GOGA Godfrey 40.37 306 P **P 00 17 05.1 +1.4**
baz=110,SNR=7.5
GOGA Godfrey 40.37 306 P **P 00 17 04.6 +0.9**
baz=110,SNR=7.5
NNA Nana 40.40 233 LR LR 00 34 15.3
comp=Z,2μm,18.3s,baz=48,slow=37
NNA Nana 40.40 233 *i* P **P 00 17 05.0 +0.8**
NNA pmax pmax
comp=Z,87nm,1.5s
MCWV Mont Chateau 40.43 317 P **P 00 17 05.3 +1.1**
MCWV Mont Chateau 40.43 317 P **P 00 17 05.0 +0.9**
baz=121
PSDB Penn State Uni 40.50 320 P **P 00 17 07.1 +2.4**
baz=123
LIS Lisbon 40.53 45 *e*P **P 00 17 05.8 +0.8**
LIS IAmb IAmb 00 17 10.4
comp=Z,62nm,1.3s
LIS *e*S **S 00 23 15.3 +1.0**
LIS Lisbon 40.53 45 *e*P **P 00 17 05.6 +0.6**
LIS *e*S **S 00 23 15.3 +1.0**
CASEE Lake Jocassee 40.53 309 P **P 00 17 07.1 +1.9**
baz=113,SNR=12
PMAFR Mafra 40.55 44 *e*S **S 00 23 17.6 +2.9**
PNCL Nicolau / Gran 40.67 46 *e*S **S 00 23 22.3 +5.8**
CNGN Cerro Negro 40.70 274 P **P 00 17 06.9 +0.2**
CNGN IAmb IAmb 00 17 24.2
comp=Z,86nm,1.2s
CNGN Cerro Negro 40.70 274 *e*P **P 00 17 09.3 +2.5**
V53A Saluda 40.71 310 P **P 00 17 09.2 +2.6**
baz=114,SNR=10
V53A P **P 00 17 09.2 +2.6**
baz=114,SNR=10
PCVE Castro Verde 40.80 47 *e*P **P 00 17 07.5 +0.2**
comp=Z,42nm,2.2s
PCVE *e*S **S 00 23 21.4 +3.0**
ITAB Concordia 40.87 190 P **P 00 17 09.5 +1.8**
ITAB IAmb IAmb 00 17 54.9
comp=Z,130nm,1.9s
MMNY Mt. Morris Dam 40.90 322 P **P 00 17 08.4 +0.4**
352A Blakely 40.92 303 P **P 00 17 10.3 +2.0**
baz=107,SNR=5.8
PVAQ Vaqueiros 40.93 47 *e*S **S 00 23 22.9 +2.6**
PVAQ *e*LR LR 00 27 38.3
comp=Z,4μm,22.0s
Y52A Lilburn 40.99 307 P **P 00 17 10.7 +1.8**
baz=110,SNR=8.0
Y52A P **P 00 17 10.7 +1.8**
baz=110,SNR=8.0
CRIN San Cristobal 41.02 274 *e*P **P 00 17 12.7 +3.2**
PECO Prince Edward 41.09 324 P **P 00 17 10.2 +0.7**
152A Waverly Hall 41.11 305 P **P 00 17 11.9 +2.0**
baz=109,SNR=13
TGUH Tegucigalpa,Un 41.12 276 P **P 00 17 11.8 +1.5**
TGUH IAmb IAmb 00 17 21.8
comp=Z,122nm,1.3s
TGUH IAMs_20 IAMs_20 00 32 56.1
comp=Z,6μm,21.0s
TGUH Tegucigalpa,Un 41.12 276 *e*P **P 00 17 10.1 -0.3**
PSBE So Bento 41.16 44 *e*S **S 00 23 29.4 +5.7**
CPUP Villa Florida 41.17 197 P **P 00 17 12.3 +2.0**
comp=Z,5.2nm,0.7s,baz=28,slow=8.6,SNR=11
CPUP S **S 00 23 18.9 -5.0**
comp=Z,0.8nm,0.8s,baz=71,slow=20,SNR=1.0
CPUP LR LR 00 34 20.7
comp=Z,941nm,21.8s,baz=22,slow=36
comp=Z,5.2nm,0.7s
CPUP Villa Florida 41.17 197 P **P 00 17 11.5 +1.2**
R53A Hurricane 41.23 314 P **P 00 17 13.7 +3.0**
baz=117,SNR=5.2
R53A P **P 00 17 13.7 +3.0**
baz=117,SNR=5.2
EVO Evora 41.23 46 P **P 00 17 10.5 -0.3**
EVO S **S 00 23 30.8 +6.1**
EVO Evora 41.23 46 *e*P **P 00 17 10.7 -0.1**
comp=Z,38nm,1.6s
PMTG Montargil 41.33 45 *e*P **P 00 17 11.5 -0.1**
comp=Z,27nm,1.8s
PMTG *e*S **S 00 23 30.5 +4.2**
V52A Sevierville 41.36 310 P **P 00 17 14.2 +2.3**
baz=113
IFR Ifrane 41.38 54 P **P 00 17 09.6 -2.7**
IFR S **S 00 23 28.9 +1.4**
P53A Whipple 41.38 316 P **P 00 17 13.6 +1.6**
baz=119,SNR=11
P53A P **P 00 17 13.6 +1.6**
baz=119,SNR=11
TKL Tuckaleechee C 41.43 309 S **S 00 23 22.4 -5.4**
comp=Z,2.8nm,0.9s,baz=269,slow=20,SNR=2.8
TKL LR LR 00 31 32.6
comp=Z,4μm,20.9s,baz=119,slow=32
TKL Tuckaleechee C 41.43 309 P **P 00 17 13.4 +0.9**
TKL Tuckaleechee C 41.43 309 P **P 00 17 13.4 +0.9**
TKL pmax pmax
comp=Z,58nm,1.4s
ARNO Arenosillo 41.51 48 P **P 00 17 11.0 -2.1**
ARNO S **S 00 23 35.6 +6.7**
MDT Midelt 41.57 55 P **P 00 17 13.8 0.0**

comp=Z,14nm,1.3s,baz=262,slow=7.5,SNR=9.6
MDT S **S** **00 23 29.3 -0.8**
comp=Z,0.3nm,0.5s,baz=96,slow=6.0,SNR=1.3
MDT LR LR 00 30 56.1
comp=Z,7μm,21.4s,baz=272,slow=31
comp=Z,14nm,1.3s
MDT Midelt 41.57 55 P **P** **00 17 14.7 +0.9**
TZTN Tazewell 41.61 311 P **P** **00 17 15.0 +1.0**
TZTN IAmb IAmb 00 17 21.4
comp=Z,162nm,1.6s
TZTN Tazewell 41.61 311 P **P** **00 17 15.7 +1.7**
baz=114,SNR=14
TZTN Tazewell 41.61 311 P **P** **00 17 15.3 +1.4**
baz=114,SNR=14
PCAS Casmilo, Conde 41.62 43 *e*P **P** **00 17 16.6 +2.6**
comp=Z,40nm,1.8s
PCAS *e*S **S** **00 23 33.2 +2.6**
O53A New Philadelph 41.63 317 P **P** **00 17 15.3 +1.2**
baz=120
LCRM LCR 41.65 54 P **P** **00 17 16.0 +1.5**
ALLY Alegheny Colle 41.66 319 P **P** **00 17 14.7 +0.4**
ALLY IAmb IAmb 00 17 18.7
comp=Z,99nm,1.4s
N53A Lisbon 41.67 318 P **P** **00 17 15.0 +0.7**
baz=121
N53A P **P** **00 17 15.0 +0.7**
baz=121
PESTR Estremoz 41.68 45 *e*S **S** **00 23 35.6 +4.2**
PBAR Barrancos 41.75 47 *e*P **P** **00 17 15.1 0.0**
comp=Z,36nm,1.6s
PBAR *e*S **S** **00 23 34.9 +2.4**
COI Coimbra 41.76 43 *e*S **S** **00 23 38.7 +6.2**
COI Coimbra 41.76 43 IAMs_20 IAMs_20 00 30 13.1
comp=Z,5μm,20.0s
PB01 IPOC Station P 41.78 216 P **P** **00 17 16.0 +0.5**
DELO Deloro Mine 41.80 325 P **P** **00 17 15.7 +0.3**
DELO IAmb IAmb 00 17 18.9
comp=Z,106nm,1.7s
ERPA Erie 41.82 320 P **P** **00 17 16.3 +0.7**
ERPA IAmb IAmb 00 17 19.2
comp=Z,175nm,1.8s
ERPA IAMs_20 IAMs_20 00 31 09.3
comp=Z,5μm,20.0s
ERPA Erie 41.82 320 P **P** **00 17 16.6 +1.0**
baz=123
X51A Calhoun 41.85 307 P **P** **00 17 17.4 +1.4**
baz=110,SNR=9.3
X51A P **P** **00 17 17.4 +1.4**
baz=110,SNR=9.3
M53A WI Miller and 41.89 319 IAMs_20 IAMs_20 00 32 00.3
comp=Z,5μm,19.0s
M53A WI Miller and 41.89 319 P **P** **00 17 17.0 +0.9**
baz=122
CPCT Cooper Cave 41.91 309 P **P** **00 17 17.3 +0.9**
P52A Corning 41.95 316 IAMs_20 IAMs_20 00 31 33.1
comp=Z,4μm,20.0s
P52A Corning 41.95 316 P **P** **00 17 17.2 +0.5**
baz=118,SNR=8.8
PATCX Punta Patache 41.98 217 P **P** **00 17 17.5 +0.3**
PATCX IAmb IAmb 00 17 21.0
comp=Z,98nm,1.4s
O52A Adamsville 41.98 316 P **P** **00 17 18.6 +1.7**
baz=119,SNR=7.6
O52A P **P** **00 17 18.6 +1.7**
baz=119,SNR=7.6
CEU Ceuta 42.04 51 P **P** **00 17 20.6 +3.2**
CEU S **S** **00 23 38.8 +2.0**
PMRV Marv??o 42.07 45 *e*P **P** **00 17 19.8 +2.1**
comp=Z,25nm,1.4s
PMRV *e*S **S** **00 23 40.2 +2.9**
PMRV *e*LR LR 00 28 22.7
comp=Z,4μm,20.0s
S51A Beattyville 42.09 312 P **P** **00 17 18.6 +0.8**
baz=115
S51A P **P** **00 17 18.6 +0.8**
baz=115
250A Grady 42.15 303 P **P** **00 17 19.5 +1.1**
baz=107,SNR=6.9
PCBR Castelo Branco 42.21 44 *e*P **P** **00 17 18.8 0.0**
comp=Z,32nm,1.4s
PB02 IPOC Station P 42.23 216 P **P** **00 17 20.1 +0.9**
PVIS Viseu 42.35 43 *e*P **P** **00 17 19.7 -0.3**
M52A Chesterland 42.38 319 P **P** **00 17 22.0 +1.8**
baz=121
M52A P **P** **00 17 22.0 +1.8**
baz=121
W50A Signal Mountai 42.42 308 P **P** **00 17 22.5 +1.8**
baz=111,SNR=10
FPAL Fort Paine 42.43 307 P **P** **00 17 21.2 +0.5**
MTE Manteigas 42.43 43 *e*P **P** **00 17 20.3 -0.3**
comp=Z,54nm,1.5s
MTE *e*S **S** **00 23 39.1 -3.5**
MTE *e*LR LR 00 28 11.3
comp=Z,6μm,22.0s
MTE Manteigas 42.43 43 P **P** **00 17 20.4 -0.3**
MTE IAMs_20 IAMs_20 00 30 52.9
comp=Z,6μm,21.0s
Q51A Peebles 42.51 314 P **P** **00 17 22.4 +1.2**
baz=116
Q51A P **P** **00 17 22.4 +1.2**
baz=116
PB07 IPOC Station P 42.54 215 P **P** **00 17 22.2 +0.4**
PB07 IAmb IAmb 00 17 23.9
comp=Z,82nm,1.4s
BRAL Brewton 42.58 302 P **P** **00 17 22.4 +0.6**
BRAL Brewton 42.58 302 P **P** **00 17 22.1 +0.2**
baz=105
PVLZ Peæn de 42.59 52 P **P** **00 17 22.5 +0.6**
PVLZ S **S** **00 23 49.8 +4.9**
AKLM AKL 42.70 53 P **P** **00 17 24.0 +1.0**
LVC Limon Verde 42.71 214 S **S** **00 23 43.0 -4.6**
comp=Z,1.9nm,0.6s,baz=202,slow=8.5,SNR=1.2
LVC LR LR 00 36 00.9
comp=Z,3μm,19.7s,baz=17,slow=37
LVC Limon Verde 42.71 214 P **P** **00 17 23.8 +0.4**
LVC Limon Verde 42.71 214 P **P** **00 17 23.8 +0.4**
LVC pmax pmax
comp=Z,17nm,1.0s
LVC MLR MLR
comp=Z,3μm,20.0s
PB03 IPOC Station P 42.72 215 P **P** **00 17 24.2 +1.0**
PB03 IAmb IAmb 00 17 28.4
comp=Z,82nm,1.3s
PGAV Gavieira, Arco 42.73 41 *e*P **P** **00 17 24.3 +1.1**
comp=Z,45nm,1.5s
PGAV *e*S **S** **00 23 50.4 +3.3**
PGAV *e*LR LR 00 28 47.3
comp=Z,6μm,20.0s
POLO Lamas de Olo 42.74 42 *e*P **P** **00 17 22.4 -0.8**
comp=Z,16nm,1.5s
POLO *e*S **S** **00 23 49.0 +1.8**
T50A Nancy 42.75 311 P **P** **00 17 24.4 +1.2**
baz=113
T50A P **P** **00 17 24.4 +1.2**
baz=113
ACSO Alum Creek Sta 42.81 316 P **P** **00 17 24.1 +0.4**
ACSO IAMs_20 IAMs_20 00 31 27.8
comp=Z,4μm,21.0s
ACSO Alum Creek Sta 42.81 316 P **P** **00 17 24.5 +0.8**
baz=118
SADO Sadowa 42.82 324 LR LR 00 31 27.3
comp=Z,3μm,20.9s,baz=156,slow=31
Y49A Blount Mountai 42.83 306 P **P** **00 17 24.8 +0.8**
baz=108
PALE Palemas 42.88 52 P **P** **00 17 26.0 +1.6**
SWET Sewanee 42.91 308 P **P** **00 17 25.5 +0.9**
LRAL Lakeview Retre 43.05 304 P **P** **00 17 26.4 +0.7**
LRAL IAMs_20 IAMs_20 00 31 42.5
comp=Z,7μm,21.0s
LRAL Lakeview Retre 43.05 304 P **P** **00 17 27.4 +1.6**
baz=107,SNR=15
LRAL Lakeview Retre 43.05 304 P **P** **00 17 26.1 +0.4**
baz=107,SNR=15
SNET Serv Nac Est T 43.05 276 IAMs_20 IAMs_20 00 34 06.1
comp=Z,5μm,21.0s
EMAL Malaga-Limoner 43.07 50 P **P** **00 17 22.4 -3.4**
EMAL S **S** **00 23 52.5 +0.6**
ESQI Esquipulas 43.09 277 P **P** **00 17 27.5 +1.1**
MTO3 Montecristo 43.12 277 P **P** **00 17 28.0 +1.2**
MTO3 IAmb IAmb 00 17 41.2
comp=Z,106nm,1.4s
MVO Moncorvo 43.14 43 *e*P **P** **00 17 27.3 +0.9**
comp=Z,38nm,1.5s
MVO *e*S **S** **00 24 00.5 +7.4**
MVO *e*LR LR 00 29 12.9
comp=Z,5μm,22.0s

PB06 IPOC Station P 43.15 214 P **P** **00 17 27.8 +1.0**
PB06 IAmb IAmb 00 17 29.7
comp=Z,73nm,1.0s
U49A Red Boiling Sp 43.25 310 P **P** **00 17 28.5 +1.2**
baz=112,SNR=16
PETF Flores 43.48 281 P **P** **00 17 30.2 +0.8**
PETF IAmb IAmb 00 17 35.0
comp=Z,52nm,0.9s
R49A Shelbyville 43.49 312 P **P** **00 17 31.1 +1.9**
baz=114,SNR=12
R49A P **P** **00 17 31.1 +1.9**
baz=114,SNR=12
PB15 IPOC Station P 43.49 214 P **P** **00 17 30.1 +0.5**
PB15 IAmb IAmb 00 17 32.1
comp=Z,90nm,1.2s
X48A Hartselle 43.52 306 P **P** **00 17 31.0 +1.5**
baz=108,SNR=9.7
PBRG Braganca 43.64 42 *e*P **P** **00 17 32.8 +2.4**
comp=Z,30nm,1.7s
PBRG *e*S **S** **00 24 04.5 +4.2**
JBK JBK 43.66 54 P **P** **00 17 32.0 +1.1**
WMELI Melilla 43.67 52 P **P** **00 17 31.3 +0.6**
WMELI S **S** **00 24 02.3 +1.4**
P49A Miami Univ. Ec 43.69 314 P **P** **00 17 31.8 +0.9**
baz=116,SNR=9.0
P49A Miami Univ. Ec 43.69 314 P **P** **00 17 31.2 +0.4**
baz=116,SNR=9.0
O49A Covington 43.71 315 P **P** **00 17 31.8 +0.8**
baz=116
O49A P **P** **00 17 31.8 +0.8**
baz=116
V48A Smith Brothers 43.77 308 P **P** **00 17 33.0 +1.5**
baz=110,SNR=11
Z47A Carrollton 43.96 304 P **P** **00 17 34.9 +1.9**
baz=106,SNR=9.0
CHAS Isla Isabel II 44.03 53 P **P** **00 17 35.0 +1.4**
CHAS S **S** **00 24 08.1 +1.9**
FIGM Figuig 44.08 57 P **P** **00 17 35.0 +0.8**
P48A Milroy 44.16 314 P **P** **00 17 35.2 +0.7**
baz=115
P48A P **P** **00 17 35.2 +0.7**
baz=115
ITQB Itaqui 44.16 195 P **P** **00 17 35.1 +0.6**
ITQB IAmb IAmb 00 17 57.5
comp=Z,84nm,1.3s
PAB San Pablo 44.24 46 P **P** **00 17 35.5 +0.2**
PAB San Pablo 44.24 46 IAMs_20 IAMs_20 00 32 45.8
comp=Z,4μm,19.0s
PAB San Pablo 44.24 46 P **P** **00 17 35.5 +0.2**
PAB pmax pmax
comp=Z,24nm,1.7s
AAM Ann Arbor 44.25 318 P **P** **00 17 35.6 +0.4**
AAM IAMs_20 IAMs_20 00 32 01.7
comp=Z,5μm,22.0s
AAM Ann Arbor 44.25 318 P **P** **00 17 35.6 +0.4**
AAM pmax pmax
comp=Z,214nm,1.8s
AAM Ann Arbor 44.25 318 P **P** **00 17 35.8 +0.6**
baz=119
WCI Wyandotte Cave 44.28 312 P **P** **00 17 35.9 +0.3**
WCI Wyandotte Cave 44.28 312 P **P** **00 17 35.9 +0.3**
WCI pmax pmax
comp=Z,22nm,0.9s
WCI Wyandotte Cave 44.28 312 P **P** **00 17 36.0 +0.5**
baz=113
O48B Farmland 44.31 315 P **P** **00 17 36.4 +0.6**
baz=116
T47A Sharon Grove 44.42 310 P **P** **00 17 38.6 +1.9**
baz=111,SNR=11
PLAL Pickwick Lake 44.49 307 IAMs_20 IAMs_20 00 32 36.5
comp=Z,5μm,22.0s
ESDC Sonseca Array 44.56 46 P **P** **00 17 36.0 -1.9**
comp=Z,2.3nm,0.7s,baz=244,slow=8.5,SNR=15
ESDC PcP **PcP** **00 19 20.8 -0.2**
comp=Z,1.7nm,1.2s,baz=270,slow=3.9,SNR=4.5
ESDC S **S** **00 24 11.2 -2.6**
comp=Z,0.2nm,0.6s,baz=294,slow=6.4,SNR=2.2
ESDC LR LR 00 33 17.2
comp=Z,4μm,19.0s,baz=237,slow=32
comp=Z,2.3nm,0.7s
ESDC Sonseca Array 44.56 46 P **P** **00 17 37.3 -0.6**
ESBB Sonseca Array 44.56 46 P **P** **00 17 37.2 -0.6**
WVT Waverly 44.67 308 P **P** **00 17 39.1 +0.4**
WVT IAmb IAmb 00 17 49.0
comp=Z,61nm,1.1s
WVT Waverly 44.67 308 IAMs_20 IAMs_20 00 32 29.2
comp=Z,4μm,22.0s
WVT Waverly 44.67 308 P **P** **00 17 39.1 +0.4**
WVT pmax pmax
comp=Z,61nm,1.1s
WVT Waverly 44.67 308 P **P** **00 17 39.6 +0.9**
baz=109,SNR=22
WVT Waverly 44.67 308 P **P** **00 17 39.1 +0.4**
baz=109
BLO Bloomington 44.81 313 P **P** **00 17 40.1 +0.4**
BLO IAmb IAmb 00 17 49.9
comp=Z,112nm,1.9s
BLO Bloomington 44.81 313 P **P** **00 17 40.2 +0.4**
BLO pmax pmax
comp=Z,112nm,1.9s
SCHQ Schefferville 44.88 342 P **P** **00 17 39.3 -0.8**
comp=Z,42nm,0.9s,baz=139,slow=6.3,SNR=15
SCHQ LR LR 00 33 35.4
comp=Z,3μm,21.3s,baz=158,slow=32
comp=Z,42nm,0.9s
SCHQ Schefferville 44.88 342 P **P** **00 17 40.2 +0.1**
SCHQ IAmb IAmb 00 17 43.6
comp=Z,60nm,1.0s
N47A Urbana 44.95 315 P **P** **00 17 42.0 +1.1**
baz=116
N47A P **P** **00 17 42.0 +1.1**
baz=116
GO02 Mina Guanaco 45.14 212 P **P** **00 17 43.4 +0.5**
UCM Universidad Co 45.33 46 P **P** **00 17 41.4 -2.5**
UCM S **S** **00 24 24.4 -0.5**
Y45A Yeager Farm, C 45.33 305 P **P** **00 17 45.8 +1.8**
baz=106,SNR=8.0
TOA0 Torodi Ar. Sit 45.33 85 P **P** **00 17 43.0 -1.2**
TORD Torodi Ar. Bea 45.33 85 P **P** **00 17 43.1 -1.1**
comp=Z,13nm,1.1s,baz=279,slow=7.4,SNR=26
TORD S **S** **00 24 18.2 -7.2**
comp=Z,0.2nm,0.4s,baz=327,slow=0.5,SNR=1.6
TORD ScS **ScS** **00 27 44.6 +2.5**
comp=Z,0.2nm,0.4s,baz=264,slow=1.4,SNR=0.9
TORD LR LR 00 34 22.3
comp=Z,10μm,20.8s,baz=250,slow=33
comp=Z,13nm,1.1s
OXF Oxford 45.40 306 P **P** **00 17 44.6 +0.1**
OXF IAMs_20 IAMs_20 00 33 13.7
comp=Z,7μm,21.0s
OXF Oxford 45.40 306 P **P** **00 17 44.6 +0.1**
OXF pmax pmax
comp=Z,135nm,1.3s
OXF Oxford 45.40 306 P **P** **00 17 45.2 +0.7**
baz=107
OXF Oxford 45.40 306 P **P** **00 17 44.9 +0.4**
baz=107
W45A Hickory Valley 45.41 307 P **P** **00 17 45.4 +0.8**
baz=107
P46A Rosedale 45.48 313 P **P** **00 17 45.5 +0.4**
P46A IAmb IAmb 00 17 55.9
comp=Z,69nm,1.2s
PLTB Pedras Altas 45.54 190 P **P** **00 17 46.4 +0.8**
PLTB IAmb IAmb 00 18 18.7
comp=Z,63nm,1.6s
CCIG Comitan 45.68 280 P **P** **00 17 47.4 +0.2**
CCIG IAmb IAmb 00 18 04.3
comp=Z,82nm,1.3s
VBMS Vicksburg 45.70 302 P **P** **00 17 47.6 +0.7**
VBMS Vicksburg 45.70 302 P **P** **00 17 47.4 +0.4**
baz=104
SFIN Lafayette 45.70 314 P **P** **00 17 47.8 +0.9**
SFIN IAmb IAmb 00 17 57.4
comp=Z,59nm,1.2s
SFIN Lafayette 45.70 314 P **P** **00 17 48.1 +1.3**
baz=114
SFIN Lafayette 45.70 314 P **P** **00 17 47.6 +0.8**
baz=114
OLIL Olney 45.78 312 P **P** **00 17 49.1 +1.6**
baz=112
CART Cartagena 45.92 50 S **S** **00 24 31.6 -1.7**
LNXT Lenox 45.93 308 P **P** **00 17 49.7 +1.0**
GLMI Grayling 46.11 321 P **P** **00 17 50.5 +0.6**
GLMI IAmb IAmb 00 17 58.3
comp=Z,72nm,1.2s
GLMI IAMs_20 IAMs_20 00 33 18.7

comp=Z,4μm,21.0s
GLMI Grayling 46.11 321 P **P** **00 17 50.6 +0.6**
baz=120
AC02 Maricunga 46.28 210 P **P** **00 17 52.9 +0.7**
AC02 IAmb IAmb 00 18 13.1
comp=Z,71nm,1.6s
Q44A Meyer Farm, Va 46.51 312 P **P** **00 17 54.8 +1.5**
baz=111,SNR=24
L44A Lake County Fo 47.01 316 P **P** **00 17 57.5 +0.5**
L44A IAMs_20 IAMs_20 00 34 08.1
comp=Z,4μm,21.0s
L44A Lake County Fo 47.01 316 P **P** **00 17 58.0 +1.0**
baz=115
CCAR Cane Creek 47.13 304 P **P** **00 17 59.1 +1.0**
LCAR Lake Charles 47.21 307 P **P** **00 17 59.9 +1.1**
LCAR IAmb IAmb 00 18 05.2
comp=Z,38nm,1.4s
FVM French Village 47.24 310 P **P** **00 18 00.2 +1.2**
FVM French Village 47.24 310 P **P** **00 18 00.2 +1.2**
HDIL Hopedale 47.32 314 P **P** **00 18 00.5 +1.0**
HDIL IAMs_20 IAMs_20 00 35 11.1
comp=Z,4μm,21.0s
HDIL Hopedale 47.32 314 P **P** **00 18 00.3 +0.8**
baz=112
T42A Van Buren 47.45 308 P **P** **00 18 00.8 +0.2**
T42A IAmb IAmb 00 18 06.6
comp=Z,47nm,1.4s
T42A Van Buren 47.45 308 P **P** **00 18 00.0 -0.5**
baz=108
NRS Narsarsuaq 47.82 360 *i* P **P** **00 17 59.4 -3.6**
CCM Cathedral Cave 47.88 310 P **P** **00 18 04.6 +0.7**
CCM IAmb IAmb 00 18 13.9
comp=Z,64nm,1.2s
CCM Cathedral Cave 47.88 310 IAMs_20 IAMs_20 00 34 29.3
comp=Z,4μm,21.0s
CCM Cathedral Cave 47.88 310 P **P** **00 18 04.6 +0.7**
CCM pmax pmax
comp=Z,64nm,1.3s
CCM Cathedral Cave 47.88 310 P **P** **00 18 05.4 +1.5**
baz=108,SNR=16
CCM Cathedral Cave 47.88 310 P **P** **00 18 05.1 +1.2**
baz=108
ETSF Etsaut 48.23 44 *e*P **P** **00 18 06.6 0.0**
ETSF pmax pmax
comp=Z,57nm,1.7s
CMIG Matias Romero 48.27 281 LR LR 00 40 49.2
comp=Z,942nm,18.4s,baz=110,slow=39
SHEL Horse Pasture 48.41 126 IAMs_20 IAMs_20 00 32 37.7
comp=Z,6μm,21.0s
N41A Harden Midland 48.48 313 P **P** **00 18 08.6 0.0**
baz=111
AC05 El Transito 48.51 210 P **P** **00 18 09.3 +0.3**
AC05 IAmb IAmb 00 18 17.7
comp=Z,46nm,1.4s
TAM Tamanrasset 48.70 71 P **P** **00 18 10.4 -0.2**
TAM IAmb IAmb 00 18 16.7
comp=Z,36nm,1.4s
TAM Tamanrasset 48.70 71 P **P** **00 18 10.4 -0.2**
TAM pmax pmax
comp=Z,36nm,1.4s
R40A Maddies Statio 48.72 310 P **P** **00 18 10.8 +0.4**
baz=108,SNR=14
MIAR Mount Ida 48.73 304 P **P** **00 18 11.8 +1.2**
MIAR Mount Ida 48.73 304 P **P** **00 18 11.8 +1.2**
MIAR pmax pmax
comp=Z,138nm,1.9s
MIAR Mount Ida 48.73 304 P **P** **00 18 11.6 +1.1**
baz=103,SNR=10
MIAR Mount Ida 48.73 304 P **P** **00 18 11.4 +0.8**
baz=103,SNR=10
EPF Esparros 48.88 44 *e*P **P** **00 18 11.8 +0.1**
EPF pmax pmax
comp=Z,68nm,1.6s
JFWS Jewell Farm 48.88 316 P **P** **00 18 12.7 +1.1**
JFWS Jewell Farm 48.88 316 IAMs_20 IAMs_20 00 36 52.7
comp=Z,4μm,19.0s
JFWS Jewell Farm 48.88 316 P **P** **00 18 12.7 +1.1**
JFWS pmax pmax
comp=Z,163nm,1.9s
JFWS Jewell Farm 48.88 316 P **P** **00 18 12.8 +1.1**
baz=113
P40A Paris 48.94 311 P **P** **00 18 12.7 +0.6**
baz=109,SNR=9.0
NATX Nacogdoches 49.05 301 P **P** **00 18 14.2 +1.1**
NATX Nacogdoches 49.05 301 P **P** **00 18 13.4 +0.3**
baz=100
L40A Anamosa 49.23 315 P **P** **00 18 15.1 +0.9**
baz=112
CO01 Juntas del Tor 49.37 209 P **P** **00 18 16.4 +0.7**
COWI Conover 49.51 320 P **P** **00 18 16.5 +0.1**
COWI IAmb IAmb 00 18 23.3
comp=Z,90nm,1.6s
COWI IAMs_20 IAMs_20 00 36 15.1
comp=Z,4μm,20.0s
HKT Hockley 49.76 298 P **P** **00 18 19.2 +0.8**
HKT IAmb IAmb 00 18 33.9
comp=Z,63nm,1.6s
HKT Hockley 49.76 298 IAMs_20 IAMs_20 00 37 18.9
comp=Z,5μm,22.0s
HKT Hockley 49.76 298 P **P** **00 18 19.2 +0.8**
HKT pmax pmax
comp=Z,63nm,1.7s
G40A Rib Lake 49.82 319 P **P** **00 18 21.2 +2.5**
baz=115,SNR=13
LFF La Frestale 49.92 42 *e*P **P** **00 18 21.2 +1.7**
LFF pmax pmax
comp=Z,46nm,1.6s
ZON Zonda 50.05 207 P **P** **00 18 21.7 +1.0**
ZON Zonda 50.05 207 P **P** **00 18 21.7 +1.0**
ZON pmax pmax
comp=Z,38nm,1.3s
P38A Dawn 50.06 311 P **P** **00 18 21.2 +0.6**
baz=108,SNR=14
MFF Saint Martin d 50.08 39 *e*P **P** **00 18 20.1 -0.6**
MFF pmax pmax
comp=Z,23nm,1.0s
X37A Clayton 50.18 304 P **P** **00 18 22.1 +0.4**
baz=102,SNR=12
MTLF Montolieu 50.27 44 *e*P **P** **00 18 21.4 -0.8**
MTLF pmax pmax
comp=Z,29nm,1.2s
CO03 El Pedregal 50.37 209 P **P** **00 18 23.6 +0.5**
GRR Gorron 50.48 37 *e*P **P** **00 18 26.3 +2.6**
GRR pmax pmax
comp=Z,81nm,1.8s
MAHO Mahon 50.56 49 P **P** **00 18 21.1 -3.3**
MAHO S **S** **00 25 43.7 +4.7**
SCIA State Center 50.56 314 P **P** **00 18 24.6 +0.2**
SCIA IAMs_20 IAMs_20 00 38 07.2
comp=Z,3μm,19.0s
SCIA State Center 50.56 314 P **P** **00 18 25.5 +1.1**
baz=110
RJF Les Rejaudoux 50.57 41 *e*P **P** **00 18 24.6 +0.2**
RJF pmax pmax
comp=Z,32nm,1.4s
CO06 Fray Jorge 50.69 210 P **P** **00 18 25.9 +0.5**
CO06 IAmb IAmb 00 18 27.4
comp=Z,59nm,1.4s
CAF Calviac 50.77 42 *e*P **P** **00 18 25.3 -0.7**
CAF pmax pmax
comp=Z,73nm,1.5s
TUL1 Leonard 50.81 306 P **P** **00 18 26.7 +0.3**
TUL1 IAMs_20 IAMs_20 00 36 21.2
comp=Z,4μm,22.0s
TUL1 Leonard 50.81 306 P **P** **00 18 27.4 +1.1**
baz=103,SNR=10
TUL1 Leonard 50.81 306 P **P** **00 18 28.0 +1.6**
baz=103,SNR=10
NUUK Nuuk 51.07 356 *i* P **P** **00 18 26.0 -1.8**
NUUK IAmb IAmb 00 18 43.5
comp=Z,15nm,1.0s
KVTX Kingsville 51.28 295 IAMs_20 IAMs_20 00 40 57.6
comp=Z,5μm,21.0s
435B Jarrell 51.37 299 P **P** **00 18 32.2 +1.6**
baz=98
TCF Toulx Ste Croi 51.42 41 *e*P **P** **00 18 30.3 -0.5**
TCF pmax pmax
comp=Z,107nm,1.6s
WHTX Lake Whitney, 51.43 300 P **P** **00 18 32.1 +1.0**
baz=99
SPMN Marine on St. 51.48 318 P **P** **00 18 31.4 +0.2**
OK034 N. Norfolk Rd. 51.56 306 IAMs_20 IAMs_20 00 36 32.1
comp=Z,5μm,22.0s
T35B Sooner Cattle 51.60 307 P **P** **00 18 35.3 +2.9**
baz=103,SNR=11
OK031 S. Brethren Rd 51.65 305 IAMs_20 IAMs_20 00 36 49.4

comp=Z,5μm,22.0s
OK044 Pawnee Station 51.70 306 IAMs_20 IAMs_20 00 36 49.8
comp=Z,4μm,22.0s
OK033 Mehan 51.74 306 IAMs_20 IAMs_20 00 36 50.0
comp=Z,5μm,22.0s
TLIG Tlapa 51.76 282 P **P** **00 18 34.6 +0.7**
OK051 E0350 and S346 51.76 306 IAMs_20 IAMs_20 00 36 26.4
comp=Z,5μm,22.0s
EYMN Ely 51.77 322 P **P** **00 18 33.9 +0.5**
baz=116
OK046 Pawnee Station 51.79 306 IAMs_20 IAMs_20 00 36 50.3
comp=Z,4μm,22.0s
OK045 Pawnee Station 51.82 306 IAMs_20 IAMs_20 00 36 52.0
comp=Z,4μm,22.0s
OK048 Pawnee Station 51.83 306 IAMs_20 IAMs_20 00 36 54.2
comp=Z,4μm,22.0s
OK050 Pawnee Station 51.85 306 IAMs_20 IAMs_20 00 36 52.8
comp=Z,4μm,22.0s
VA03 San Esteban 51.92 208 P **P** **00 18 35.2 +0.4**
OK029 Liberty Lake 52.10 305 IAMs_20 IAMs_20 00 36 49.5
comp=Z,5μm,22.0s
OK049 E0420 Rd and N 52.11 306 IAMs_20 IAMs_20 00 37 00.6
comp=Z,4μm,22.0s
CLF Chambon-Foret 52.17 39 IAMs_20 IAMs_20 00 35 21.7
comp=Z,4μm,22.0s
F36A Milaca 52.19 318 P **P** **00 18 36.4 -0.1**
baz=112,SNR=13
KSU1 Kansas State U 52.20 309 P **P** **00 18 36.5 -0.3**
KSU1 Kansas State U 52.20 309 IAMs_20 IAMs_20 00 36 40.9
comp=Z,3μm,22.0s
KSU1 Kansas State U 52.20 309 P **P** **00 18 36.9 +0.1**
baz=105,SNR=14
KSU1 Kansas State U 52.20 309 P **P** **00 18 37.0 +0.2**
baz=105,SNR=14
ROC1 El Roble 52.31 208 P **P** **00 18 38.8 +1.0**
AVF Avril sur Loir 52.34 40 *eP* **P** **00 18 36.9 -0.7**
AVF pmax pmax
comp=Z,85nm,1.8s
VIVF Saint-Julien-l 52.47 43 *eP* **P** **00 18 38.8 +0.1**
VIVF pmax pmax
comp=Z,31nm,1.3s
SSB Saint Sauveur 52.53 43 P **P** **00 18 40.2 +1.0**
SSB IAmb IAmb 00 18 44.1
comp=Z,108nm,2.0s
SSB Saint Sauveur 52.53 43 IAMs_20 IAMs_20 00 36 41.8
comp=Z,4μm,20.0s
SSB Saint Sauveur 52.53 43 P **P** **00 18 40.2 +1.0**
SSB pmax pmax
comp=Z,108nm,2.0s
SSF Saint Saulge 52.54 40 *eP* **P** **00 18 41.6 +2.4**
SSF pmax pmax
comp=Z,26nm,1.3s
MT02 Curacav 52.60 208 P **P** **00 18 40.4 +0.7**
833A Chaparral WMA, 52.67 296 P **P** **00 18 40.4 0.0**
833A IAmb IAmb 00 18 54.6
comp=Z,75nm,1.4s
833A Chaparral WMA, 52.67 296 P **P** **00 18 40.5 +0.1**
baz=95,SNR=6.1
833A Chaparral WMA, 52.67 296 P **P** **00 18 40.6 +0.2**
baz=95,SNR=6.1
KAN14 Manchester OK 52.74 306 P **P** **00 18 41.5 +0.7**
L34A Svendsen Farm, 52.82 313 P **P** **00 18 41.6 +0.3**
baz=107
LOR Lormes 52.85 40 *eP* **P** **00 18 43.1 +1.7**
LOR pmax pmax
comp=Z,39nm,1.5s
OK032 Salt Plains WL 52.91 306 IAMs_20 IAMs_20 00 37 35.7
comp=Z,4μm,22.0s
MT09 Talagante 52.97 207 P **P** **00 18 42.5 0.0**
MT09 IAmb IAmb 00 19 46.2
comp=Z,55nm,1.6s
WMOK Wichita Mounta 52.97 304 P **P** **00 18 42.7 +0.1**
WMOK IAmb IAmb 00 18 51.2
comp=Z,115nm,1.9s
WMOK Wichita Mounta 52.97 304 P **P** **00 18 42.7 +0.1**
WMOK pmax pmax
comp=Z,115nm,1.9s
WMOK Wichita Mounta 52.97 304 P **P** **00 18 42.9 +0.3**
baz=100,SNR=21
WMOK Wichita Mounta 52.97 304 P **P** **00 18 42.9 +0.3**
baz=100,SNR=21
EKA Eskdalemuir Ar 52.98 28 P **P** **00 18 40.5 -1.8**
comp=Z,3.8nm,1.0s,baz=231,slow=6.3,SNR=5.4
EKA LR LR 00 36 02.1
comp=Z,1μm,21.2s,baz=232,slow=30
comp=Z,3.8nm,1.0s
BO04 La Punta 52.98 207 P **P** **00 18 43.5 +1.0**
FRB Frobisher Bay 53.06 347 LR LR 00 41 26.7
comp=Z,831nm,18.3s,baz=151,slow=36
MT01 Popeta 53.16 207 P **P** **00 18 44.1 +0.3**
DY2G Dye2 53.16 359 *i* P **P** **00 18 43.4 -0.3**
DY2G IAmb IAmb 00 18 46.5
comp=Z,13nm,0.9s
JCT Junction City 53.23 298 P **P** **00 18 45.1 +0.5**
JCT IAmb IAmb 00 18 58.9
comp=Z,109nm,1.8s
JCT IAMs_20 IAMs_20 00 38 57.7
comp=Z,4μm,22.0s
JCT Junction City 53.23 298 P **P** **00 18 45.1 +0.5**
JCT pmax pmax
comp=Z,109nm,1.8s
JCT Junction City 53.23 298 P **P** **00 18 45.3 +0.8**
baz=96
OK038 West end E0370 53.26 306 IAMs_20 IAMs_20 00 37 24.1
comp=Z,4μm,22.0s
OK035 E0210 Rd and N 53.28 306 IAMs_20 IAMs_20 00 37 47.6
comp=Z,4μm,21.0s
ABTX Abilene, Hawle 53.35 301 P **P** **00 18 46.1 +0.7**
ABTX Abilene, Hawle 53.35 301 P **P** **00 18 45.5 +0.1**
baz=98,SNR=7.7
ABTX Abilene, Hawle 53.35 301 P **P** **00 18 47.4 +1.9**
baz=98,SNR=7.7
KEST Kesra 53.47 55 P **P** **00 18 45.6 -0.7**
comp=Z,13nm,0.9s,baz=244,slow=6.8,SNR=11
KEST S **S** **00 26 17.2 -2.1**
comp=Z,1.2nm,0.8s,baz=86,slow=16,SNR=1.5
KEST LR LR 00 39 37.2
comp=Z,3μm,21.0s,baz=210,slow=34
comp=Z,13nm,0.9s
KEST Kesra 53.47 55 P **P** **00 18 46.0 -0.3**
ECSD EROS Data Cent 53.52 315 P **P** **00 18 46.6 +0.2**
ECSD EROS Data Cent 53.52 315 IAMs_20 IAMs_20 00 39 39.4
comp=Z,3μm,19.0s
ECSD EROS Data Cent 53.52 315 P **P** **00 18 46.2 -0.2**
baz=108
BO01 Tunca 53.53 207 P **P** **00 18 47.4 +0.9**
BO02 Sierra Bellavi 53.73 206 P **P** **00 18 49.2 +1.1**
SFJD Kangerlussuaq 53.81 357 P **P** **00 18 49.9 +1.8**
comp=Z,16nm,0.9s,baz=187,slow=12,SNR=3.6
SFJD LR LR 00 37 05.8
comp=Z,3μm,20.6s,baz=175,slow=31
MBDF Montbardon 53.83 44 *eP* **P** **00 18 50.5 +1.6**
MBDF pmax pmax
comp=Z,27nm,1.3s
BNI Bardonecchia 53.87 43 P **P** **00 18 49.6 +0.4**
BNI pmax pmax
comp=Z,138nm,2.0s
BORG Borgarnes 53.93 12 LR LR 00 35 39.3
comp=Z,3μm,21.2s,baz=215,slow=29
BGNE Belgrade 53.94 312 P **P** **00 18 49.0 -0.5**
baz=105
CABF La Chapelle 54.02 41 *eP* **P** **00 18 49.7 -0.4**
CABF pmax pmax
comp=Z,45nm,1.3s
LPL La Plagne 54.06 43 *eP* **P** **00 18 50.8 +0.1**
LPL pmax pmax
comp=Z,40nm,1.6s
LPG La Plagne 54.07 43 *eP* **P** **00 18 53.6 +2.8**
LPG pmax pmax
comp=Z,63nm,1.8s
BAIF Baives 54.20 37 *eP* **P** **00 18 52.6 +1.4**
BAIF pmax pmax
comp=Z,45nm,1.3s
SNF Seneffe 54.43 36 *dP* **P** **00 18 54.1 +1.2**
DOU Dourbes 54.44 37 *dx* x 00 19 00.2
CBKS Cedar Bluff 54.51 308 P **P** **00 18 54.5 +0.7**
CBKS IAMs_20 IAMs_20 00 38 34.5
comp=Z,4μm,22.0s
CBKS Cedar Bluff 54.51 308 P **P** **00 18 54.5 +0.7**
CBKS pmax pmax
comp=Z,172nm,1.2s
CBKS Cedar Bluff 54.51 308 P **P** **00 18 55.4 +1.6**
baz=102,SNR=8.9
CBKS Cedar Bluff 54.51 308 P **P** **00 18 54.3 +0.5**
baz=102,SNR=8.9
AGMN Agassiz Nation 54.59 320 P **P** **00 18 54.3 +0.1**
AGMN IAmb IAmb 00 19 02.5
comp=Z,75nm,1.6s
AGMN IAMs_20 IAMs_20 00 37 56.5
comp=Z,3μm,22.0s
AGMN Agassiz Nation 54.59 320 P **P** **00 18 54.2 0.0**
baz=112
BMRD Maredsous 54.62 37 *dP* **P** **00 18 54.5 +0.1**
BMRD *dPcP* **PcP** **00 19 55.3 -2.0**
HAU Haudompre 54.68 40 *eP* **P** **00 18 53.7 -1.2**
HAU pmax pmax
comp=Z,51nm,1.7s
SENIN Lac Senin/Sane 54.72 42 P **P** **00 18 55.1 -0.3**
SENIN IAmb IAmb 00 18 60.0
comp=Z,101nm,2.0s
SENIN IAMs_20 IAMs_20 00 37 24.6
comp=Z,3μm,22.0s
ML02 Panimavida 54.83 206 P **P** **00 18 56.8 +0.8**
ML02 IAmb IAmb 00 19 08.2
comp=Z,45nm,1.0s
RCHB Rochefort 54.83 37 *dP* **P** **00 18 56.1 +0.2**
BGES Gesves 54.84 37 *dx* x 00 18 58.3
BGES *dx* x 00 19 08.5
HINF Hinteralfeld 54.93 40 *eP* **P** **00 18 57.7 +1.0**
HINF pmax pmax
comp=Z,21nm,1.4s
BCLA Clavier 54.98 37 *dP* **P** **00 18 56.5 -0.5**
BCLA *dx* x 00 19 01.4
BSTI Sart Tilman 55.21 37 *dP* **P** **00 18 58.5 0.0**
ECH Echery 55.27 40 P **P** **00 18 59.4 +0.3**
ECH IAmb IAmb 00 19 02.5
comp=Z,89nm,1.9s
ECH IAMs_20 IAMs_20 00 37 49.1
comp=Z,3μm,20.0s
ECH Echery 55.27 40 P **P** **00 18 59.4 +0.3**
ECH pmax pmax
comp=Z,89nm,1.9s
SUSD Miller 55.34 315 P **P** **00 18 59.5 -0.3**
baz=107
ZAIG Zacatecas 55.34 289 P **P** **00 19 00.6 +0.2**
ULM Lac du Bonnet 55.35 323 P **P** **00 18 57.0 -2.6**
comp=Z,21nm,1.0s,baz=112,slow=6.9,SNR=7.9
ULM LR LR 00 38 51.7
comp=Z,4μm,21.9s,baz=111,slow=32
comp=Z,21nm,1.0s
ULM Lac du Bonnet 55.35 323 P **P** **00 18 58.8 -0.8**
ULM IAmb IAmb 00 19 05.9
comp=Z,30nm,1.1s
ULM Lac du Bonnet 55.35 323 *i* P **P** **00 18 58.1 -1.5**
AMTX Amarillo 55.35 303 P **P** **00 19 00.7 +0.6**
baz=98,SNR=13
AMTX Amarillo 55.35 303 P **P** **00 19 00.2 +0.2**
baz=98
MEM Membach 55.47 37 *dP* **P** **00 19 00.3 -0.2**
BTNL Terneli 55.54 37 *dP* **P** **00 19 00.9 0.0**
ICESG Greenland Ices 55.88 2 *i* P **P** **00 19 05.2 +1.7**
ICESG IAmb IAmb 00 19 14.5
comp=Z,17nm,1.5s
BFO Black Forest 56.04 40 P **P** **00 19 04.2 -0.5**
BFO Black Forest 56.04 40 P **P** **00 19 04.2 -0.5**
BFO pmax pmax
comp=Z,126nm,1.9s
TUE Stuetta 56.09 43 IAMs_20 IAMs_20 00 38 00.0
comp=Z,3μm,21.0s
MSTX Muleshoe 56.13 302 P **P** **00 19 07.1 +1.4**
baz=97,SNR=14
MSTX Muleshoe 56.13 302 P **P** **00 19 06.2 +0.6**
baz=97,SNR=14
PRMA PARMA 56.25 45 P **P** **00 19 06.0 -0.2**
TXAR Lajitas Array 56.48 296 P **P** **00 19 08.6 +0.4**
comp=Z,3.5nm,0.8s,baz=101,slow=6.0,SNR=27
TXAR PcP **PcP** **00 20 05.1 0.0**
comp=Z,4.3nm,0.9s,baz=128,slow=5.0,SNR=5.7
TXAR LR LR 00 41 53.7
comp=Z,3μm,21.9s,baz=62,slow=34
comp=Z,3.5nm,0.8s
TXAR Lajitas Array 56.48 296 P **P** **00 19 08.8 +0.5**
TXAR Lajitas Array 56.48 296 P **P** **00 19 08.8 +0.5**
TX31 Lajitas Ar. Si 56.48 296 P **P** **00 19 08.8 +0.5**
TX31 Lajitas Ar. Si 56.48 296 P **P** **00 19 08.8 +0.5**
baz=93,SNR=12
ZCCA Zocca 56.60 45 P **P** **00 19 08.7 0.0**
OGNE Ogallala 56.68 310 IAMs_20 IAMs_20 00 40 37.3
comp=Z,4μm,20.0s
OGNE Ogallala 56.68 310 P **P** **00 19 09.3 -0.1**
baz=102
DAVA Damuels 56.69 42 *eP* **P** **00 19 09.8 +0.3**
comp=Z,27nm,1.1s
STU Stuttgart 56.73 40 P **P** **00 19 09.1 -0.4**
STU IAmb IAmb 00 19 22.1
comp=Z,38nm,1.2s
STU IAMs_20 IAMs_20 00 38 51.8
comp=Z,3μm,21.0s
STU Stuttgart 56.73 40 P **P** **00 19 09.1 -0.4**
STU pmax pmax
comp=Z,38nm,1.2s
FUORN Ofenpass-Fuorn 56.74 43 P **P** **00 19 09.7 -0.3**
FUORN IAmb IAmb 00 19 15.0
comp=Z,46nm,1.4s
FUORN IAMs_20 IAMs_20 00 38 33.2
comp=Z,3μm,22.0s
KSCO Kaye Shedlock' 56.76 308 P **P** **00 19 10.1 0.0**
baz=100
LATE Laterza 56.76 48 P **P** **00 19 09.8 -0.1**
LATE IAmb IAmb 00 19 39.9
comp=Z,66nm,1.3s
MDND Maddock 56.79 319 P **P** **00 19 09.8 -0.2**
baz=108
CLNB Carlsbad 56.87 300 P **P** **00 19 11.6 +0.6**
FETA Feichten 57.17 42 *i* P **P** **00 19 12.8 -0.1**
comp=Z,36nm,1.4s,SNR=17
CESX Cesi 57.31 48 P **P** **00 19 14.1 +0.3**
RETA Reutte 57.32 42 *i* P **P** **00 19 13.3 -0.6**
comp=Z,67nm,1.5s,SNR=18
TEOL Teolo 57.34 44 P **P** **00 19 13.1 -0.8**
TEOL IAmb IAmb 00 19 18.2
comp=Z,53nm,0.9s
MURB Monte Urbino 57.42 47 P **P** **00 19 14.0 -0.6**
MURB IAmb IAmb 00 19 33.2
comp=Z,40nm,1.2s
CTI Castel Tesino 57.50 44 P **P** **00 19 14.7 -0.5**
CTI IAmb IAmb 00 19 29.0
comp=Z,51nm,1.0s
CTI Castel Tesino 57.50 44 P **P** **00 19 14.7 -0.5**
CTI pmax pmax
comp=Z,51nm,1.0s
MOTA Moosalm 57.50 42 *i* P **P** **00 19 14.9 -0.3**
comp=Z,79nm,1.4s,SNR=23
SQTA Sankt Quirin 57.54 42 *i* P **P** **00 19 15.2 -0.2**
comp=Z,75nm,1.4s,SNR=21
NRCA Norcia 57.75 48 P **P** **00 19 16.3 -0.7**
NRCA IAmb IAmb 00 19 42.7
comp=Z,43nm,1.5s
VAE Valguarnera 57.77 54 LR LR 00 44 10.9
comp=Z,2μm,18.0s,baz=306,slow=36
WATA Walderalm 57.81 42 *i* P **P** **00 19 17.0 -0.4**
comp=Z,63nm,1.6s,SNR=17
WTTA Wattenberg 57.83 42 *i* P **P** **00 19 17.3 -0.3**
comp=Z,47nm,1.3s,SNR=6.9
AQU L'Aquila 57.85 48 P **P** **00 19 17.1 -0.6**
AQU IAMs_20 IAMs_20 00 41 53.7
comp=Z,3μm,20.0s
AQU L'Aquila 57.85 48 P **P** **00 19 17.1 -0.6**
AQU pmax pmax
comp=Z,136nm,1.4s
T25A Trinidad 57.85 306 P **P** **00 19 17.8 -0.2**
T25A IAmb IAmb 00 19 27.9
comp=Z,36nm,1.1s
T25A Trinidad 57.85 306 P **P** **00 19 17.6 -0.3**
baz=98,SNR=15
CAMP Campotosto 57.90 48 P **P** **00 19 16.1 -1.9**
GO06 Curarrehue 58.11 204 P **P** **00 19 19.8 +0.3**
GO06 IAmb IAmb 00 19 23.5
comp=Z,33nm,0.8s
INTR Introdacqua 58.15 49 P **P** **00 19 20.5 +0.7**
INTR IAmb IAmb 00 19 35.1
comp=Z,46nm,1.5s
HPIG 58.16 294 P **P** **00 19 21.2 +0.9**
HPIG IAmb IAmb 00 19 34.9
comp=Z,58nm,1.5s
ABTA Abfaltersbach 58.27 43 *i* P **P** **00 19 20.2 -0.4**
comp=Z,62nm,1.4s,SNR=16
STAL STALIGIAL 58.27 44 P **P** **00 19 21.1 +0.6**
STAL IAmb IAmb 00 19 24.6
comp=Z,94nm,1.7s
GRFO Grafenberg 58.28 39 P **P** **00 19 20.6 +0.2**
GRFO IAmb IAmb 00 19 33.5
comp=Z,38nm,1.5s
GRFO IAMs_20 IAMs_20 00 39 28.8
comp=Z,3μm,21.0s
GRFO Grafenberg 58.28 39 P **P** **00 19 20.7 +0.2**
GRFO pmax pmax
comp=Z,38nm,1.5s
GRA1 Grafenberg Arr 58.28 39 P **P** **00 19 20.6 +0.1**
GRA1 IAmb IAmb 00 19 33.6
comp=Z,41nm,1.5s
GRF Grafenberg Arr 58.28 39 P **P** **00 19 20.6 +0.1**
GRF pmax pmax
comp=Z,41nm,1.5s
BRIGG Briggsdale 58.31 310 P **P** **00 19 21.6 +0.5**
BRIGG IAMs_20 IAMs_20 00 44 31.7
comp=Z,3μm,19.0s
CLUD Cludinico 58.44 43 P **P** **00 19 21.2 -0.5**
PAOL Paolisi 58.46 50 P **P** **00 19 21.1 -0.8**
PAOL IAmb IAmb 00 19 26.7
comp=Z,58nm,1.5s
Q24A Divide 58.69 308 P **P** **00 19 23.5 -0.4**
baz=98,SNR=5.8
PLCA Paso Flores 58.74 203 P **P** **00 19 23.9 +0.1**
comp=Z,16nm,0.8s,baz=31,slow=7.7,SNR=20
PLCA S **S** **00 27 27.5 -1.6**
comp=Z,0.3nm,0.4s,baz=290,slow=2.5,SNR=1.3
PLCA LR LR 00 46 25.5
comp=Z,2μm,21.2s,baz=17,slow=38
comp=Z,16nm,0.8s
PLCA Paso Flores 58.74 203 P **P** **00 19 24.1 +0.3**
PLCA IAmb IAmb 00 19 26.6
comp=Z,65nm,1.4s
PLCA Paso Flores 58.74 203 P **P** **00 19 24.1 +0.3**
PLCA pmax pmax
comp=Z,65nm,1.5s
RSSD Black Hills 58.79 314 P **P** **00 19 24.2 -0.2**
RSSD Black Hills 58.79 314 IAMs_20 IAMs_20 00 42 19.1
comp=Z,4μm,20.0s
RSSD Black Hills 58.79 314 P **P** **00 19 24.2 -0.2**
RSSD pmax pmax
comp=Z,19nm,1.2s
RSSD Black Hills 58.79 314 P **P** **00 19 24.7 +0.3**
baz=102
SDCO Great Sand Dun 58.79 306 P **P** **00 19 24.7 0.0**
SDCO IAmb IAmb 00 19 34.7
comp=Z,25nm,0.9s
SDCO IAMs_20 IAMs_20 00 40 38.6
comp=Z,3μm,22.0s
SDCO Great Sand Dun 58.79 306 P **P** **00 19 26.4 +1.8**
baz=97,SNR=26
SDCO Great Sand Dun 58.79 306 P **P** **00 19 24.2 -0.4**
baz=97,SNR=26
PRED Cave del Predi 58.89 44 P **P** **00 19 24.2 -0.7**
KBA Koelnbreinsper 58.90 43 *i* P **P** **00 19 24.8 -0.2**
comp=Z,48nm,1.1s,SNR=12
MYKA Terra Mystica 58.99 43 *i* P **P** **00 19 25.6 0.0**
comp=Z,92nm,1.4s,SNR=24
VOJS Vojsko 59.01 44 *i* P **P** **00 19 25.8 +0.1**
CEL Celeste 59.04 53 IAMs_20 IAMs_20 00 42 32.6
comp=Z,3μm,22.0s
GORS Gorjuse 59.15 44 *eP* **P** **00 19 26.9 +0.2**
GORS *eS* **S** **00 27 35.2 +0.8**
NKC Novy Kostel 59.20 39 *eP* **P** **00 19 26.7 -0.2**
NKC *eS* **S** **00 27 41.3 +6.5**
NKC MLR MLR
comp=Z,2μm,21.3s
NKC Novy Kostel 59.20 39 *eP* **P** **00 19 26.7 -0.2**
NKC *eS* **S** **00 27 41.3 +6.5**
NKC AMS AMS 00 39 30.0
comp=Z,2μm,21.3s
CUC Castrocucco 59.23 51 P **P** **00 19 26.4 -0.9**
CUC IAmb IAmb 00 19 33.0
comp=Z,55nm,1.3s
BIOA Bad Ischl, Aus 59.25 42 *i* P **P** **00 19 26.7 -0.6**
comp=Z,56nm,1.5s,SNR=21
ANMO Albuquerque 59.26 303 LR LR 00 42 19.3
comp=Z,8μm,21.5s,baz=91,slow=33
ANMO Albuquerque 59.26 303 P **P** **00 19 28.0 +0.2**
ANMO IAmb IAmb 00 19 37.8
comp=Z,54nm,1.8s
ANMO Albuquerque 59.26 303 *ceP* **P** **00 19 29.1 +1.3**
ANMO pmax pmax
comp=Z,36nm,1.9s
ANMO Albuquerque 59.26 303 P **P** **00 19 29.7 +1.9**
baz=95,SNR=16
ANMO Albuquerque 59.26 303 P **P** **00 19 28.3 +0.5**
baz=95
PHWY Pilot Hill 59.29 310 P **P** **00 19 28.4 +0.4**
PHWY IAMs_20 IAMs_20 00 41 41.4
comp=Z,4μm,21.0s
BNM Barren Site 59.33 302 P **P** **00 19 28.2 -0.1**
CRNM Carthage 59.40 302 P **P** **00 19 29.3 +0.5**
BLS5 Blasjo 59.56 28 *eP* **P** **00 19 30.2 +1.1**
Y22D IRIS PASSCAL I 59.56 302 P **P** **00 19 30.9 +1.0**
baz=94
Y22F Passcal Instru 59.56 302 P **P** **00 19 30.9 +1.0**
baz=94
OBKA Obir 59.57 44 *eP* **P** **00 19 29.4 -0.2**
comp=Z,59nm,1.7s
N23A Red Feather La 59.58 310 P **P** **00 19 31.1 +1.1**
baz=99,SNR=13
KHC Kasperske Hory 59.59 40 P **P** **00 19 29.1 -0.6**
KHC IAmb IAmb 00 19 42.6
comp=Z,78nm,1.7s
KHC Kasperske Hory 59.59 40 *eP* **P** **00 19 28.0 -1.6**
KHC *eS* **S** **00 27 35.9 -4.1**
KHC MLR MLR
comp=Z,2μm,18.2s
KHC smax smax
comp=N,2.0nm,0.5s
KHC Kasperske Hory 59.59 40 *eP* **P** **00 19 28.0 -1.6**
KHC *ex* x 00 19 40.0
KHC *eS* **S** **00 27 35.9 -4.1**
KHC AMS AMS 00 40 00.0
comp=N,2μm,18.2s
GEC2 GERESS Array S 59.59 41 P **P** **00 19 29.5 -0.2**
GEC2 IAmb IAmb 00 19 33.9
comp=Z,33nm,1.3s
GERES GERESS Array B 59.59 41 P **P** **00 19 28.5 -1.3**
comp=Z,1.9nm,0.8s,baz=258,slow=4.6,SNR=13
GERES PcP **PcP** **00 20 14.9 -2.1**
comp=Z,1.6nm,0.9s,baz=205,slow=2.1,SNR=1.5
GERES S **S** **00 27 32.5 -7.7**
comp=Z,0.2nm,0.3s,baz=285,slow=13,SNR=1.3
GERES LR LR 00 41 22.7
comp=Z,2μm,21.7s,baz=244,slow=32
comp=Z,1.9nm,0.8s
GERES GERESS Array B 59.59 41 P **P** **00 19 28.9 -0.8**
GERES GERESS Array B 59.59 41 P **P** **00 19 28.9 -0.8**
LL04 Puerto Octay 59.61 204 P **P** **00 19 29.6 -0.1**
LL04 IAmb IAmb 00 19 41.5
comp=Z,34nm,1.3s
SUE Sulen 59.62 25 *eP* **P** **00 19 29.8 +0.3**
MOA Molln 59.70 42 *i* P **P** **00 19 29.5 -0.9**
comp=Z,38nm,1.3s,SNR=18
LL03 Petrohue 59.80 204 P **P** **00 19 32.3 +1.2**
BOJS Bojanci 59.82 45 *eS* **S** **00 27 46.3 +3.4**
TIP Timpagrande 59.83 52 P **P** **00 19 31.1 -0.4**
TIP IAmb IAmb 00 20 17.6
comp=Z,52nm,1.9s
TIP IAMs_20 IAMs_20 00 45 56.5
comp=Z,4μm,20.0s
S22A 4UR Ranch, Cre 59.84 306 P **P** **00 19 32.7 +0.8**
baz=96,SNR=39
CLL Collm 59.86 38 P **P** **00 19 30.9 -0.4**
CLL IAmb IAmb 00 19 44.5
comp=Z,67nm,1.7s
CLL IAMs_20 IAMs_20 00 40 19.1
comp=Z,3μm,22.0s
CLL Collm 59.86 38 *i* P **P** **00 19 31.0 -0.4**
CLL *i* 00 19 33.6
CLL *eS* **S** **00 27 47.0 +3.8**
CLL pmax pmax
comp=Z,17nm,1.4s
CLL MLR MLR
comp=Z,3μm,21.7s
CLL Collm 59.86 38 *i* P **P** **00 19 31.0 -0.4**
comp=Z,17nm,1.4s
CLL *i* pP **pP** **00 19 33.6 +0.6**
CLL *i* x x 00 19 38.3
CLL *i* x x 00 19 41.7
CLL *e*PP **PP** **00 21 45.0 +1.6**
CLL *eS* **S** **00 27 47.0 +3.8**
comp=N,800nm,27.4s
CLL *eS* **S** **00 27 47.0 +3.8**
comp=E,1μm,27.5s
CLL *eS* **S** **00 27 47.0 +3.8**

comp=Z,700nm,18.6s
CLL *e*SS **SS** **00 31 36.0 -3.3**
CLL *e*SSS SSS 00 34 18.0
CLL Lm MLR 00 40 00.0
comp=N,1μm,21.3s
CLL Lm MLR 00 40 00.0
comp=E,2μm,22.0s
CLL Lm MLR 00 40 00.0
comp=Z,3μm,21.7s
CLL Lmax 00 40 00.0
ODD1 Odda 59.86 27 *e*P **P** **00 19 31.8 +0.5**
DGMT Dagmar 59.92 319 P **P** **00 19 31.7 -0.2**
DGMT Dagmar 59.92 319 P **P** **00 19 32.4 +0.5**
baz=105
SOKA Soboth 59.93 44 *e*P **P** **00 19 31.6 -0.4**
comp=Z,20nm,1.2s
CKRC Cesky Krumlov 59.98 41 *e*P **P** **00 19 31.0 -1.3**
CKRC *e*S S 00 27 33.3 -12
SMCO Snowmass 60.12 308 P **P** **00 19 33.5 -0.4**
SMCO IAmb IAmb 00 19 44.0
comp=Z,66nm,1.4s
121A Cookes Peak, D 60.19 300 P **P** **00 19 36.2 +1.9**
baz=93,SNR=8.1
121A Cookes Peak, D 60.19 300 P **P** **00 19 35.2 +1.0**
baz=93,SNR=8.1
HYA Hoyanger 60.28 26 *e*P **P** **00 19 34.6 +0.6**
K22A Casper 60.30 312 P **P** **00 19 35.2 +0.5**
baz=100
ARSA Arzberg 60.39 43 *i*P **P** **00 19 34.3 -0.8**
comp=Z,54nm,1.4s,SNR=26
PRU Pruhonice 60.43 40 *e*P **P** **00 19 34.8 -0.5**
PRU *e*S **S** **00 27 45.5 -5.1**
PRU MLR MLR
comp=Z,2μm,19.1s
PRU smax smax
comp=N,2.0nm,0.5s
PRU Pruhonice 60.43 40 *e*P **P** **00 19 34.8 -0.5**
PRU *e*S **S** **00 27 45.5 -5.1**
PRU AMS AMS 00 40 20.0
comp=N,2μm,19.1s
FFC Flin Flon 60.47 326 P **P** **00 19 35.0 -0.5**
FFC IAmb IAmb 00 19 38.5
comp=Z,39nm,1.3s
FFC Flin Flon 60.47 326 IAMs_20 IAMs_20 00 41 46.7
comp=Z,3μm,20.0s
FFC Flin Flon 60.47 326 P **P** **00 19 35.0 -0.5**
FFC pmax pmax
comp=Z,39nm,1.3s
GOPC GO Pecny, Ondr 60.56 40 *e*S **S** **00 27 47.2 -5.1**
GOPC AMS AMS 00 40 30.0
comp=Z,2μm,21.8s
PVCC Panska Ves 60.59 39 *e*P **P** **00 19 36.2 -0.2**
PVCC *e*S **S** **00 27 58.7 +6.1**
PVCC MLR MLR
comp=Z,2μm,19.5s
PVCC Panska Ves 60.59 39 *e*P **P** **00 19 36.2 -0.2**
PVCC *e*S **S** **00 27 58.7 +6.1**
PVCC AMS AMS 00 40 40.0
comp=Z,2μm,19.5s
RWWY Rawlins 60.65 310 IAMs_20 IAMs_20 00 43 25.4
comp=Z,4μm,20.0s
CONA Conrad Observa 60.76 42 *i*P **P** **00 19 37.3 -0.4**
comp=Z,58nm,1.2s,SNR=32
LAO LASA Array 60.84 316 P **P** **00 19 38.3 0.0**
LAO IAmb IAmb 00 19 48.4
comp=Z,33nm,0.9s
LAO IAMs_20 IAMs_20 00 44 43.1
comp=Z,3μm,19.0s
LAO LASA Array 60.84 316 P **P** **00 19 38.6 +0.3**
baz=102
TREC Trest 60.84 41 *e*S **S** **00 27 53.6 -2.4**
TREC AMS AMS 00 41 30.0
comp=Z,2μm,18.3s
SKAR Skarslia 60.96 27 *e*P **P** **00 19 39.2 +0.4**
RONA Rosalia, Austr 61.00 43 *i*P **P** **00 19 38.9 -0.4**
comp=Z,86nm,1.5s,SNR=34
RGN Rugen 61.06 34 IAMs_20 IAMs_20 00 43 31.8
comp=Z,2μm,19.0s
KONO Kongsberg 61.09 28 *ce*P **P** **00 19 40.2 +0.6**
KONO pmax pmax
comp=Z,37nm,1.5s
MVCO Mesa Verde 61.11 305 IAMs_20 IAMs_20 00 42 45.9
comp=Z,3μm,21.0s
MVCO Mesa Verde 61.11 305 P **P** **00 19 41.3 +0.8**
baz=95,SNR=11
AKN Aaknes 61.11 25 *e*P **P** **00 19 40.2 +0.5**
SOP Sopron 61.17 43 P **P** **00 19 40.3 -0.1**
SOP Sopron 61.17 43 P **P** **00 19 39.6 -0.8**
O20A White River Ci 61.21 309 P **P** **00 19 41.2 +0.1**
O20A IAmb IAmb 00 19 51.7
comp=Z,58nm,1.2s
O20A White River Ci 61.21 309 P **P** **00 19 42.5 +1.3**
baz=97
LL02 Futaleuf 61.36 202 P **P** **00 19 41.9 +0.3**
KRUC Moravsky 61.37 41 *e*P **P** **00 19 40.5 -1.2**
319A Douglas 61.41 299 P **P** **00 19 43.0 +0.4**
319A IAmb IAmb 00 19 56.9
comp=Z,32nm,1.3s
UPC Upice 61.47 39 *e*P **P** **00 19 42.1 -0.3**
UPC *e*S **S** **00 27 59.3 -4.6**
UPC MLR MLR
comp=Z,2μm,21.3s
UPC smax smax
comp=N,2.0nm,0.3s
UPC Upice 61.47 39 *e*P **P** **00 19 42.1 -0.3**
UPC *e*S **S** **00 27 59.3 -4.6**
UPC AMS AMS 00 40 50.0
comp=N,2μm,21.3s
CHVC Chvalec 61.52 39 *e*P **P** **00 19 42.6 -0.2**
CHVC AMS AMS 00 40 50.0
comp=N,2μm,23.0s
VRAC Vranov 61.55 41 ⇑P **P** **00 19 42.3 -0.7**
VRAC Vranov 61.55 41 LR LR 00 43 11.9
comp=N,2μm,20.8s,baz=242,slow=33
VRAC Vranov 61.55 41 P **P** **00 19 42.2 -0.7**
VRAC Vranov 61.55 41 *e*P **P** **00 19 42.1 -0.9**
OSTC Ostas 61.61 39 *e*P **P** **00 19 42.6 -0.8**
OSTC *e*S **S** **00 28 02.2 -3.5**
OSTC AMS AMS 00 40 50.0
comp=N,2μm,22.1s
EGYH Egyhazaskeszo 61.62 43 P **P** **00 19 44.1 +0.6**
DPC Dobruska-Polom 61.63 40 *e*P **P** **00 19 43.2 -0.3**
DPC *e*S **S** **00 28 05.0 -1.0**
DPC MLR MLR
comp=Z,2μm,21.1s
DPC Dobruska-Polom 61.63 40 *e*P **P** **00 19 43.2 -0.3**
DPC *e*S **S** **00 28 05.0 -1.0**
DPC AMS AMS 00 41 20.0
comp=Z,2μm,21.1s
ZST Bratislava 61.63 42 *e*P **P** **00 19 43.8 +0.3**
ZST pmax pmax
comp=Z,320nm,1.8s
MPLH Magyarpolny 61.71 43 P **P** **00 19 43.6 -0.5**
KSP Ksiaz 61.73 39 *i*P **P** **00 19 44.2 +0.1**
KSP *e*S **S** **00 28 10.8 +3.6**
KSP *e*L L 00 41 25.4
comp=Z,3μm,21.7s
MODS Modra-Piesok 61.79 42 *e*P **P** **00 19 44.2 -0.4**
MODS pmax pmax
comp=Z,201nm,1.6s
JMIC Jan Mayen 61.82 13 LR LR 00 39 28.1
comp=Z,968nm,21.9s,baz=222,slow=29
KRLC Kraliky 61.85 40 *e*P **P** **00 19 43.9 -1.1**
KRLC *e*S **S** **00 28 03.9 -4.9**
KRLC MLR MLR
comp=Z,2μm,20.1s
KRLC Kraliky 61.85 40 *e*P **P** **00 19 43.9 -1.1**
KRLC *e*S **S** **00 28 03.9 -4.9**
KRLC AMS AMS 00 41 40.0
comp=Z,2μm,20.1s
KOVH Kovagotottos 61.89 45 P **P** **00 19 44.5 -0.8**
DOMB Dombas 61.90 26 *e*P **P** **00 19 45.9 +0.8**
SMOL Smolenice 61.91 42 *e*P **P** **00 19 45.2 -0.2**
SMOL pmax pmax
comp=Z,26nm,1.7s
W18A Petrified Fore 61.95 303 P **P** **00 19 46.9 +0.8**
baz=93
X18A Snowflake 62.10 302 P **P** **00 19 47.1 0.0**
PDG Podgorica 62.14 49 P **P** **00 19 47.6 +0.6**
PDG IAmb IAmb 00 19 52.2
comp=Z,49nm,1.4s
JAVC Velka Javorina 62.14 42 *e*P **P** **00 19 47.5 +0.5**
CSKK Cskako 62.23 43 P **P** **00 19 47.7 +0.1**
MORC Moravsky Berou 62.26 41 ⇓P **P** **00 19 47.8 0.0**
MORC Moravsky Berou 62.26 41 P **P** **00 19 47.6 -0.2**
MORC Moravsky Berou 62.26 41 P **P** **00 19 47.6 -0.2**
MORC pmax pmax
comp=Z,70nm,1.6s
MORC Moravsky Berou 62.26 41 *e*P **P** **00 19 48.0 +0.2**
RDMU Red Mountain 62.27 309 P **P** **00 19 48.5 +0.2**
RDMU IAmb IAmb 00 19 58.4
comp=Z,48nm,1.1s
MORH Mrgy, Hungar 62.28 45 ⇑P **P** **00 19 48.1 +0.2**
MORH Mrgy, Hungar 62.28 45 P **P** **00 19 47.9 0.0**
NC204 NORSAR Array S 62.30 27 P **P** **00 19 48.1 +0.3**
MAUC Maruska 62.35 41 *e*P **P** **00 19 48.5 +0.1**
MAUC *e*S **S** **00 28 09.7 -5.4**
MAUC AMS AMS 00 45 20.0
comp=Z,3μm,18.3s
SRO Srobarova 62.35 43 *e*P **P** **00 19 48.3 0.0**
SRO pmax pmax
comp=Z,122nm,1.8s
NB2 NORSAR Subarra 62.40 27 P **P** **00 19 48.2 -0.3**
comp=Z,160nm,2.5s,baz=247,slow=6.9
NB2 NORSAR Subarra 62.40 27 P **P** **00 19 48.2 -0.3**
baz=247,slow=6.9
NOA NORSAR Array B 62.40 27 P **P** **00 19 46.9 -1.6**
comp=Z,2.7nm,0.8s,baz=246,slow=6.9,SNR=12
NOA LR LR 00 41 28.9
comp=Z,1μm,21.0s,baz=245,slow=31
comp=Z,2.7nm,0.8s
LPIG La Paz 62.41 290 LR LR 00 46 17.2
comp=Z,1μm,21.6s,baz=68,slow=36
TIR Tirane 62.46 50 IAMs_20 IAMs_20 00 46 01.6
comp=Z,3μm,20.0s
BW06 Boulder Array 62.52 311 IAMs_20 IAMs_20 00 43 56.0
comp=Z,3μm,20.0s
BW06 Boulder Array 62.52 311 P **P** **00 19 50.5 +0.6**
baz=97,SNR=14
PD31 Pinedale Array 62.52 311 P **P** **00 19 50.0 +0.1**
PD31 IAmb IAmb 00 19 59.4
comp=Z,46nm,1.4s
PDAR Pinedale Array 62.52 311 P **P** **00 19 48.4 -1.5**
comp=Z,2.5nm,1.0s,baz=98,slow=10,SNR=16
PDAR LR LR 00 44 28.3
comp=Z,2μm,21.1s,baz=118,slow=34
comp=Z,2.5nm,1.0s
PDAR Pinedale Array 62.52 311 P **P** **00 19 49.9 0.0**
RLMT Red Lodge 62.65 314 P **P** **00 19 50.8 +0.1**
RLMT IAMs_20 IAMs_20 00 44 08.1
comp=Z,3μm,20.0s
RLMT Red Lodge 62.65 314 P **P** **00 19 51.1 +0.4**
baz=99
OKC Ostrava-Krasne 62.66 41 *e*P **P** **00 19 50.7 +0.4**
OKC *e*S **S** **00 28 18.5 -0.3**
OKC MLR MLR
comp=Z,1μm,22.0s
OKC Ostrava-Krasne 62.66 41 *e*P **P** **00 19 50.7 +0.4**
OKC *e*S **S** **00 28 18.5 -0.3**
OKC AMS AMS 00 42 50.0
comp=Z,1μm,22.0s
AY01 Puyuhuapi 62.71 202 P **P** **00 19 51.1 +0.5**
TUC Tucson 62.72 300 P **P** **00 19 53.2 +2.0**
TUC Tucson 62.72 300 P **P** **00 19 52.4 +1.2**
baz=91
RAC Raciborz 62.74 40 *e*P **P** **00 19 51.2 +0.3**
RAC LMZ LR 00 43 03.0
comp=Z,2.0nm,20.8s
RAC Raciborz 62.74 40 *e*P **P** **00 19 51.2 +0.3**
BUD Budapest 62.76 43 P **P** **00 19 52.1 +1.0**
BUD Budapest 62.76 43 P **P** **00 19 51.5 +0.4**
VYHS Vyhne 62.83 42 *e*P **P** **00 19 51.3 -0.2**
VYHS pmax pmax
comp=Z,95nm,1.7s
HSIG 62.84 296 P **P** **00 19 52.7 +0.7**
DIVS Divibare 62.90 47 P **P** **00 19 51.8 -0.4**
DIVS IAmb IAmb 00 19 55.6
comp=Z,34nm,1.3s
GCMT Greycliff 63.03 315 P **P** **00 19 53.3 +0.2**
KBN Korca 63.08 51 P **P** **00 19 53.7 +0.3**
KBN Korca 63.08 51 P **P** **00 19 53.7 +0.3**
KBN pmax pmax
comp=Z,155nm,1.9s
HFS Hagfors 63.18 29 P **P** **00 19 51.5 -2.1**
comp=Z,13nm,0.9s,baz=238,slow=2.8,SNR=13
HFS LR LR 00 43 03.4
comp=Z,1μm,19.7s,baz=248,slow=32
comp=Z,13nm,0.9s
WUAZ Wupatki 63.31 303 P **P** **00 19 55.9 +0.7**
WUAZ Wupatki 63.31 303 P **P** **00 19 57.2 +2.0**
baz=92,SNR=11
LOHW Long Hollow 63.39 312 IAMs_20 IAMs_20 00 45 29.8
comp=Z,3μm,20.0s
PSZ Piszkesteto 63.42 43 P **P** **00 19 55.5 0.0**
PSZ IAmb IAmb 00 20 09.0
comp=Z,46nm,1.4s
PSZ Piszkesteto 63.42 43 P **P** **00 19 55.6 0.0**
PSZ pmax pmax
comp=Z,46nm,1.4s
PSZ Piszkesteto 63.42 43 P **P** **00 19 56.1 +0.6**
EGMT Eagleton 63.45 317 P **P** **00 19 55.7 -0.1**
EGMT IAmb IAmb 00 20 03.9
comp=Z,29nm,1.0s
EGMT Eagleton 63.45 317 P **P** **00 19 56.2 +0.4**
baz=100
H17A Grant Village 63.47 313 P **P** **00 19 57.2 +1.0**
baz=97
SNOW Snow King Moun 63.48 312 IAMs_20 IAMs_20 00 45 42.0
comp=Z,3μm,20.0s
COYC Coyhaique 63.50 201 P **P** **00 19 56.6 +0.7**
COYC Coyhaique 63.50 201 IAMs_20 IAMs_20 00 49 21.4
comp=Z,3μm,20.0s
REDW Red Top Meadow 63.54 312 IAMs_20 IAMs_20 00 48 16.4
comp=Z,3μm,19.0s
BSZH Besenyszg 63.56 44 ⇑P **P** **00 19 57.2 +0.8**
BSZH Besenyszg 63.56 44 P **P** **00 19 57.4 +1.0**
YNR Norris Junctio 63.58 313 P **P** **00 19 56.9 -0.1**
AHID Auburn Hatcher 63.65 311 P **P** **00 19 56.9 -0.5**
AHID IAmb IAmb 00 20 07.0
comp=Z,38nm,1.1s
FXWY Fox Creek 63.70 312 IAMs_20 IAMs_20 00 45 50.1
comp=Z,3μm,19.0s
ITM Ithomi 63.70 55 P **P** **00 19 57.9 +0.3**
AMBH Ambrzfalva 63.73 45 ⇑P **P** **00 19 58.4 +0.9**
AMBH Ambrzfalva 63.73 45 P **P** **00 19 59.5 +2.0**
OJC Ojcow 63.77 40 *i*P **P** **00 19 56.9 -0.9**
OJC *e*S **S** **00 28 35.3 +2.5**
OJC *e*L L 00 43 24.6
comp=Z,2μm,21.3s
OJC Ojcow 63.77 40 P **P** **00 19 56.6 -1.2**
OJC Ojcow 63.77 40 P **P** **00 19 56.6 -1.2**
OJC pmax pmax
comp=Z,90nm,1.4s
HWUT Hardware Ranch 63.88 310 P **P** **00 19 58.6 -0.3**
BOVS Bovan 64.07 48 ⇓P **P** **00 19 59.4 -0.4**
QLMT Earthquake Lak 64.13 314 P **P** **00 20 01.4 +0.9**
NSS Namsos 64.17 24 *e*P **P** **00 20 02.4 +2.3**
BZS Buzias 64.24 46 ⇑P **P** **00 20 00.6 -0.4**
BZS Buzias 64.24 46 P **P** **00 20 00.5 -0.4**
NEEM North Greenlan 64.26 359 *i*P **P** **00 19 59.6 -1.2**
NEEM IAmb IAmb 00 20 38.2
comp=Z,7.1nm,0.9s
SIRR Siria 64.36 45 ⇓P **P** **00 20 01.9 +0.2**
BOZ Bozeman (W) 64.36 314 P **P** **00 20 01.9 0.0**
BOZ IAmb IAmb 00 20 11.6
comp=Z,19nm,0.9s
BOZ IAMs_20 IAMs_20 00 45 44.5
comp=Z,2μm,20.0s
BOZ Bozeman (W) 64.36 314 P **P** **00 20 01.9 0.0**
BOZ pmax pmax
comp=Z,19nm,1.0s
BOZ Bozeman (W) 64.36 314 P **P** **00 20 03.3 +1.4**
baz=97,SNR=9.7
ABAH Abaujker 64.37 43 P **P** **00 20 01.2 -0.5**
214A Organ Pipe Nat 64.43 299 P **P** **00 20 03.1 +0.6**
214A IAmb IAmb 00 20 17.7
comp=Z,60nm,1.6s
214A Organ Pipe Nat 64.43 299 P **P** **00 20 04.2 +1.7**
baz=90,SNR=7.6
CRVS Cervenica-Dubn 64.61 42 *e*P **P** **00 20 04.0 +0.7**
CRVS pmax pmax
comp=Z,249nm,2.2s
HRY Holter Researc 64.65 316 P **P** **00 20 03.8 +0.1**
LTVH Ltavrtes, Hu 64.68 44 ⇑P **P** **00 20 03.9 +0.2**
LTVH Ltavrtes, Hu 64.68 44 P **P** **00 20 04.4 +0.7**
BEL Belsk 64.70 39 *e*P **P** **00 20 04.5 +0.7**
BEL *e*S **S** **00 28 48.9 +4.7**
BEL *e*L L 00 43 29.5
comp=Z,3μm,22.1s
DUG Dugway, Tooele 64.71 308 P **P** **00 20 04.4 +0.1**
DUG IAMs_20 IAMs_20 00 44 49.0
comp=Z,3μm,22.0s
DUG Dugway, Tooele 64.71 308 P **P** **00 20 04.4 +0.1**
DUG pmax pmax
comp=Z,122nm,2.0s
DUG Dugway, Tooele 64.71 308 P **P** **00 20 05.4 +1.1**
baz=94,SNR=11
HERR Herculane 64.72 47 ⇓P **P** **00 20 04.2 +0.1**
DJES Djerdap 64.77 47 ⇓P **P** **00 20 03.9 -0.5**
BLKB Belogradchik 64.77 48 ⇓P **P** **00 20 04.4 0.0**
KKB Krupnik 64.91 50 *i*P **P** **00 20 06.4 +1.0**
KKB Krupnik 64.91 50 *i*P **P** **00 20 06.4 +1.0**
DAG Danmarks Havn 64.98 6 *i*P **P** **00 20 04.0 -1.2**
DAG IAmb IAmb 00 20 08.2
comp=Z,9.0nm,1.0s
PIX Pinacate 64.99 299 P **P** **00 20 06.7 +0.7**
PIX IAmb IAmb 00 20 21.7
comp=Z,36nm,1.6s
GZR Gura Zlata 65.03 46 ⇓P **P** **00 20 06.9 +0.8**
VTS Vitosha 65.08 49 ⇓P **P** **00 20 06.1 -0.6**
VTS Vitosha 65.08 49 P **P** **00 20 06.6 -0.1**
VTS Vitosha 65.08 49 P **P** **00 20 06.6 -0.1**
VTS pmax pmax
comp=Z,19nm,1.2s
UZH Uzhgorod 65.11 42 *e*P **P** **00 20 08.0 +1.5**
UZH *i*S **S** **00 28 48.0 -1.4**
KOLS Kolonicke sedl 65.14 42 *e*P **P** **00 20 07.4 +0.6**
KOLS pmax pmax
comp=Z,21nm,1.3s
DRGR 65.15 44 ⇑P **P** **00 20 06.7 -0.3**
DRGR 65.15 44 P **P** **00 20 06.6 -0.3**
DEV Deva 65.17 45 ⇓P **P** **00 20 07.8 +0.8**
DEV Deva 65.17 45 P **P** **00 20 07.7 +0.8**
TRPA Tarpa 65.21 43 ⇑P **P** **00 20 07.2 +0.1**
TRPA Tarpa 65.21 43 P **P** **00 20 06.9 -0.3**
113A Mohawk Valley, 65.24 300 P **P** **00 20 08.4 +0.8**
MESR Meseseni 65.35 44 ⇑P **P** **00 20 08.3 +0.2**
MMB Musomiste 65.37 50 *i*P **P** **00 20 07.0 -1.4**
MMB Musomiste 65.37 50 *i*P **P** **00 20 07.0 -1.4**
BCYI Bear Canyon 65.48 313 P **P** **00 20 09.5 +0.2**
MPEP Malo Peshtene 65.52 48 P **P** **00 20 04.9 -4.4**
PDMCI Parker Dam,Lak 65.55 302 P **P** **00 20 10.5 +0.9**
baz=90
EFI East Falkland 65.67 189 *i*P **P** **00 20 10.7 +0.8**
EFI pmax pmax
comp=Z,33nm,1.0s
CJR Cluj-Napoca 65.74 45 ⇑P **P** **00 20 10.6 -0.2**
CJR Cluj-Napoca 65.74 45 P **P** **00 20 10.5 -0.2**
PGB Panagyurishte 65.77 49 *i*P **P** **00 20 11.2 +0.2**
PGB Panagyurishte 65.77 49 *i*P **P** **00 20 11.2 +0.2**
BMR Baia Mare 65.78 44 ⇓P **P** **00 20 10.3 -0.7**
BMR Baia Mare 65.78 44 P **P** **00 20 10.2 -0.7**
MOR8 Moi Rana 65.80 23 *e*P **P** **00 20 11.3 +0.6**
IDI Anoyia 66.04 57 ⇑P **P** **00 20 14.2 +1.3**
IDI Anoyia 66.04 57 LR LR 00 47 22.0
comp=Z,2μm,21.2s,baz=278,slow=35
IDI Anoyia 66.04 57 IAMs_20 IAMs_20 00 47 10.2
comp=Z,2μm,20.0s
MSO Missoula 66.10 315 IAMs_20 IAMs_20 00 48 30.1
comp=Z,3μm,19.0s
MSO Missoula 66.10 315 P **P** **00 20 13.8 +0.6**
baz=96
RZN Rozhen 66.12 50 *i*P **P** **00 20 13.9 +0.5**
RZN Rozhen 66.12 50 *i*P **P** **00 20 13.9 +0.5**
GLA Glamis 66.13 300 P **P** **00 20 14.9 +1.4**
baz=89
HLID Hailey 66.14 312 P **P** **00 20 13.5 -0.1**
HLID IAmb IAmb 00 20 23.7
comp=Z,24nm,1.1s
HLID IAMs_20 IAMs_20 00 46 23.6
comp=Z,3μm,20.0s
HLID Hailey 66.14 312 P **P** **00 20 14.4 +0.8**
baz=94
ARCR ARCALIA 66.30 44 ⇑P **P** **00 20 14.4 +0.2**
ARR Arges 66.33 46 ⇑P **P** **00 20 14.7 +0.2**
WALA Waterton Lakes 66.34 318 P **P** **00 20 14.6 0.0**
WALA IAmb IAmb 00 20 30.2
comp=Z,22nm,1.2s
IRM Iron Mountain 66.39 302 P **P** **00 20 16.7 +1.6**
baz=90
LVV L'vov 66.41 41 *e*P **P** **00 20 14.9 0.0**
LVV *e* 00 20 38.9
LVV *e*PPP PPP 00 24 13.6
LVV *e*S **S** **00 29 00.9 -4.3**
LVV MLR MLR
comp=E,700nm,19.0s
LVV MLR MLR
comp=Z,800nm,19.0s
LVV MLR MLR
comp=N,200nm,17.0s
HUMR Humele 66.50 47 ⇓P **P** **00 20 15.1 -0.5**
SANT Santorini 66.51 56 IAMs_20 IAMs_20 00 48 20.6
comp=Z,3μm,21.0s
EDM Edmonton 66.58 322 P **P** **00 20 15.7 -0.3**
EDM Edmonton 66.58 322 P **P** **00 20 15.7 -0.3**
EDM pmax pmax
comp=Z,100nm,1.4s
FAUS Fauske 66.58 21 *e*P **P** **00 20 14.6 -1.1**
ELK Elko 66.58 309 LR LR 00 46 32.3
comp=Z,3μm,21.8s,baz=94,slow=34
ELK Elko 66.58 309 P **P** **00 20 16.6 +0.1**
ELK IAmb IAmb 00 20 26.8
comp=Z,32nm,1.0s
ELK IAMs_20 IAMs_20 00 46 09.6
comp=Z,3μm,22.0s
ELK Elko 66.58 309 P **P** **00 20 16.6 +0.1**
ELK pmax pmax
comp=Z,32nm,1.0s
VOIR 66.62 46 ⇑P **P** **00 20 15.8 -0.7**
VOIR 66.62 46 P **P** **00 20 15.7 -0.7**
KDZ Kurdzhali 66.64 50 *i*P **P** **00 20 16.4 -0.2**
KDZ Kurdzhali 66.64 50 *i*P **P** **00 20 16.4 -0.2**
COPA Copaceanca 66.64 48 ⇑P **P** **00 20 15.7 -0.8**
BC3 Big Chuckawall 66.65 301 P **P** **00 20 17.9 +1.0**
baz=89
RDO Rodhopi 66.70 51 P **P** **00 20 16.7 -0.3**
RDO IAmb IAmb 00 20 31.4
comp=Z,52nm,1.3s
R11A Troy Canyon, C 66.78 306 P **P** **00 20 18.7 +1.0**
baz=91,SNR=14
STEI Steigen 66.78 21 *e*P **P** **00 20 17.8 +0.9**
GMRC Granite Mounta 66.81 302 P **P** **00 20 19.6 +1.7**
baz=90,SNR=12
DOPR Dopca 66.91 46 ⇑P **P** **00 20 17.8 -0.4**
BUR08 Bucovina Ar. S 66.93 44 P **P** **00 20 18.0 -0.4**
BUR01 Bucovina Ar. S 66.94 44 ⇑P **P** **00 20 19.2 +0.7**
BURAR Bucovina Array 66.94 44 P **P** **00 20 18.6 +1.1**
SWSC Sam W. Stewart 66.95 300 P **P** **00 20 20.4 +1.7**
baz=89
TUQ Turquoise Moun 67.02 303 P **P** **00 20 21.1 +1.9**
baz=90
YUH Yuha Desert 67.06 300 P **P** **00 20 20.4 +1.0**
YUH IAmb IAmb 00 20 34.7
comp=Z,31nm,1.4s
BELC Belle Mtn. Jos 67.09 301 P **P** **00 20 21.2 +1.4**
baz=89
SZH Strazhica 67.11 49 *i*P P 00 20 13.4 -6.1
SZH Strazhica 67.11 49 *i*P P 00 20 13.4 -6.1
OZUR 67.19 45 ⇑P **P** **00 20 20.3 +0.2**
IKP In-Ko-Pah, Jac 67.22 300 P **P** **00 20 22.7 +2.2**
baz=88
PABE Paberze 67.23 35 P **P** **00 20 18.8 -1.2**
PABE Paberze 67.23 35 *e*P **P** **00 20 19.8 -0.1**
RAF Rauma 67.24 29 *e*P **P** **00 20 20.0 +0.1**
MLR Muntele Rosu 67.26 46 ⇓P **P** **00 20 21.7 +1.1**
MLR Muntele Rosu 67.26 46 LR LR 00 48 51.4
comp=Z,2μm,19.1s,baz=267,slow=35
MLR Muntele Rosu 67.26 46 P **P** **00 20 20.3 -0.3**
MLR IAMs_20 IAMs_20 00 49 27.0
comp=Z,2μm,20.0s
MLR Muntele Rosu 67.26 46 P **P** **00 20 20.3 -0.3**
MLR pmax pmax
comp=Z,129nm,1.4s
MLR MLR MLR
comp=Z,2μm,20.0s
RES Resolute Bay 67.28 347 LR LR 00 46 50.1
comp=Z,2μm,19.5s,baz=127,slow=34
TPNV Topopah Spring 67.28 305 P **P** **00 20 20.7 -0.3**
TPNV IAmb IAmb 00 20 31.7
comp=Z,29nm,1.1s
TPNV Topopah Spring 67.28 305 P **P** **00 20 20.7 -0.3**
TPNV pmax pmax
comp=Z,29nm,1.2s
TPNV Topopah Spring 67.28 305 P **P** **00 20 23.0 +2.1**

baz=90
SHOC Shoshone, Teco 67.30 304 P **P 00 20 23.1 +2.2**
baz=90
HEC Hector,Ludlow 67.36 302 P **P 00 20 23.0 +1.6**
baz=89
SULR 67.42 47 ⇓P **P 00 20 21.2 -0.3**
COVR Voineasa-Covas 67.46 46 ⇓P **P 00 20 21.4 -0.4**
MONP2 Monument Peak 67.47 300 P **P 00 20 23.5 +1.2**
baz=88
BIZ Bicaz 67.48 45 ⇑P **P 00 20 22.3 +0.5**
TPFO Pinon Flats 67.48 301 P **P 00 20 23.7 +1.4**
baz=89
PFO Pinyon Flats O 67.49 301 LR LR 00 50 06.5
comp=Z,3μm,18.7s,baz=99,slow=36
PFO Pinyon Flats O 67.49 301 P **P 00 20 22.7 +0.4**
PFO IAmb IAmb 00 20 43.3
comp=Z,55nm,1.8s
PFO Pinyon Flats O 67.49 301 *i*P **P 00 20 24.4 +2.2**
PFO pmax pmax
comp=Z,45nm,1.9s
PFO Pinyon Flats O 67.49 301 P **P 00 20 23.7 +1.4**
baz=89
JMB Yambol 67.54 49 *i*P P 00 20 12.4 -10
JMB Yambol 67.54 49 *i*P P 00 20 12.4 -10
GSC Goldstone, Bar 67.74 303 P **P 00 20 25.3 +1.5**
baz=89,SNR=7.8
PLOR Plostina 67.78 46 ⇓P **P 00 20 24.4 +0.7**
PLOR Plostina 67.78 46 P **P 00 20 24.4 +0.7**
FURC Furnace Creek, 67.78 304 P **P 00 20 25.6 +1.7**
baz=90
TESR Tescani 67.82 45 ⇓P **P 00 20 24.7 +0.8**
VRI Vrincioaia 67.83 46 ⇑P **P 00 20 23.6 -0.4**
VRI Vrincioaia 67.83 46 P **P 00 20 23.6 -0.4**
109C Camp Elliot, M 68.05 300 IAMs_20 IAMs_20 00 50 30.6
comp=Z,2μm,20.0s
TPH Tonopah 68.06 306 P **P 00 20 26.8 +0.9**
TPH Tonopah 68.06 306 P **P 00 20 26.8 +0.9**
TPH pmax pmax
comp=Z,92nm,1.0s
MURC Murrieta 68.10 301 P **P 00 20 27.4 +1.4**
baz=88
GRAC Grapevine Rang 68.18 305 P **P 00 20 27.6 +1.1**
baz=90
MPMC Manual Prospec 68.29 304 P **P 00 20 28.7 +1.4**
baz=89
BMO Blue Mountains 68.29 313 P **P 00 20 27.6 +0.5**
BMO IAmb IAmb 00 20 36.8
comp=Z,40nm,1.6s
BMO IAMs_20 IAMs_20 00 49 25.3
comp=Z,3μm,20.0s
BMO Blue Mountains 68.29 313 P **P 00 20 27.6 +0.5**
BMO pmax pmax
comp=Z,40nm,1.7s
GHRR 68.31 46 ⇓P **P 00 20 28.1 +1.0**
MEF Metsahovi 68.33 30 *e*P **P 00 20 26.2 -0.6**
NEW Newport 68.38 317 LR LR 00 48 55.4
comp=Z,4μm,19.0s,baz=91,slow=35
NEW Newport 68.38 317 P **P 00 20 27.3 -0.2**
NEW Newport 68.38 317 P **P 00 20 27.3 -0.2**
NEW pmax pmax
comp=Z,52nm,1.1s
NEW Newport 68.38 317 P **P 00 20 27.9 +0.5**
baz=94,SNR=18
ISAL Salakas 68.45 35 *e*P **P 00 20 27.4 -0.3**
LRMC Laurel Mtn Rad 68.45 303 P **P 00 20 29.2 +0.9**
baz=89
BFSC Mount Baldy Ra 68.47 302 P **P 00 20 29.6 +1.2**
baz=88
IIGN Ignalina 68.47 36 *e*P **P 00 20 27.6 -0.2**
IAS Iasi 68.48 44 P **P 00 20 30.6 +2.5**
ICOR Ion Corvin 68.50 48 ⇓P **P 00 20 29.2 +1.0**
HEL Helsinki 68.59 30 P **P 00 20 25.4 -3.1**
HEL pmax pmax
comp=Z,80nm,1.9s
VASR Vaslui 68.61 45 ⇓P **P 00 20 28.1 -0.9**
HARR Harsova 68.62 47 ⇑P **P 00 20 28.1 -0.9**
HARR Harsova 68.62 47 P **P 00 20 28.0 -0.9**
TRO Tromso 68.66 20 *e*P **P 00 20 29.0 +0.2**
TRO IAmb IAmb 00 20 32.5
comp=Z,36nm,0.8s
EDW2 Edwards Air Fo 68.72 302 P **P 00 20 31.3 +1.4**
baz=88,SNR=9.1
NACGM Naroch 68.73 36⇑*e*P **P 00 20 30.0 +0.5**
baz=262
CWC Cottonwood Cre 68.76 304 P **P 00 20 31.5 +1.3**
baz=89
VLDR Vladesti 68.77 46 ⇑P **P 00 20 28.7 -1.2**
NV11 Mina Array Sit 68.80 306 P **P 00 20 31.0 +0.6**
NVAR Mina Array Bea 68.91 306 P **P 00 20 31.8 +0.5**
comp=Z,1.5nm,0.6s,baz=82,slow=6.5,SNR=13
NVAR LR LR 00 50 25.9
comp=Z,620nm,18.9s,baz=110,slow=36
comp=Z,1.5nm,0.6s
NVAR Mina Array Bea 68.91 306 P **P 00 20 31.5 +0.3**
TIRR Tirgusor 68.95 47 P **P 00 20 31.6 +0.6**
TIRR Tirgusor 68.95 47 P **P 00 20 31.6 +0.6**
TIRR pmax pmax
comp=Z,294nm,1.9s
TIRR MLR MLR
comp=Z,4μm,20.0s
YKA Yellowknife Ar 68.97 332 P **P 00 20 28.7 -2.1**
comp=Z,8.6nm,0.9s,baz=106,slow=7.3,SNR=11
comp=Z,8.6nm,0.9s
YKA Yellowknife Ar 68.97 332 P **P 00 20 29.5 -1.3**
YKA Yellowknife Ar 68.97 332 P **P 00 20 29.5 -1.3**
MANT Manisa 68.98 54 P **P 00 20 30.6 -1.1**
MANT IAmb IAmb 00 20 34.0
comp=Z,20nm,1.0s
ISA Isabella, Lake 69.10 303 P **P 00 20 33.3 +1.0**
baz=88,SNR=6.5
C09A Chrisman Ranch 69.12 316 P **P 00 20 31.9 -0.2**
JETT Jettan, Norway 69.13 20 *e*P **P 00 20 32.2 +0.4**
JETT IAmb IAmb 00 20 34.5
comp=Z,35nm,1.2s
WVOR Wild Horse Val 69.18 311 P **P 00 20 33.0 +0.3**
WVOR IAmb IAmb 00 20 46.2
comp=Z,48nm,1.6s
WVOR IAMs_20 IAMs_20 00 49 02.0
comp=Z,3μm,20.0s
WVOR Wild Horse Val 69.18 311 P **P 00 20 33.0 +0.3**
WVOR pmax pmax
comp=Z,48nm,1.7s
VSU Vasula 69.20 32 *i*P **P 00 20 30.6 -1.7**
VSU pmax pmax
comp=Z,54nm,1.0s
VSU Vasula 69.20 32 *e*P **P 00 20 32.3 0.0**
MNK Minsk 69.32 37 *i*P **P 00 20 31.8 -1.3**
MNK *i* 00 23 03.7
MNK *i*PPP PPP 00 24 44.3
MNK *i*S **S 00 29 37.8 -2.1**
MNK *i*SS **SS 00 34 05.3 -1.1**
MNK pmax pmax
comp=N,31nm,0.8s
MNK pmax pmax
comp=Z,50nm,1.4s
MNK pmax pmax
comp=E,7.0nm,1.4s
MNK Minsk 69.32 37 *i*P **P 00 20 31.8 -1.3**
comp=N,31nm,0.8s,baz=264
MNK *i*P **P 00 20 31.8 -1.3**
comp=E,7.0nm,1.4s
MNK *i*P **P 00 20 31.8 -1.3**
comp=Z,50nm,1.4s
MNK *i*PP **PP 00 23 03.7 -2.4**
MNK *i*PPP PPP 00 24 44.3
MNK *i*S **S 00 29 37.8 -2.1**
MNK *i*SS **SS 00 34 05.3 -1.1**
MNK *i*SSS SSS 00 37 22.9
MNK *i*LQ LQ 00 43 49.0
MNK *i*LR LR 00 46 42.0
MNK *i*LRM MLR 00 48 55.5
comp=Z,2μm,20.4s
MNK *i*LRM MLR 00 48 58.5
comp=E,236nm,18.1s
MILM Milestii Mici 69.33 45 ⇑P **P 00 20 32.5 -0.8**
MILM Milestii Mici 69.33 45⇓*i*P **P 00 20 32.0 -1.3**
comp=E,430nm,7.6s
MILM Milestii Mici 69.33 45 *e*PP PP 00 23 14.0 +7.6
MILM *e*S **S 00 29 34.0 -6.2**
MILM Milestii Mici 69.33 45*d*iP **P 00 20 32.0 -1.3**
MILM *e* 00 23 14.0
MILM *e*S **S 00 29 34.0 -6.2**
MILM pmax pmax
comp=Z,430nm,7.6s
KIS Kishinev 69.34 45⇓*e*P **P 00 20 32.0 -1.4**
comp=Z,100nm,2.8s
KIS Kishinev 69.34 45 *e*PcP PcP 00 20 48.0 -8.9
KIS Kishinev 69.34 45 *e*PP PP 00 23 18.0 +12
KIS *e*L L 00 42 13.0
KIS LRM MLR 00 50 55.0
comp=Z,400nm,19.0s
FINES FINESS Array B 69.37 29 P **P 00 20 31.1 -2.2**
comp=Z,8.7nm,0.8s,baz=256,slow=5.0,SNR=20
FINES LR LR 00 45 48.2
comp=Z,1μm,21.8s,baz=257,slow=32
comp=Z,8.7nm,0.8s
FINES FINESS Array B 69.37 29 P **P 00 20 32.2 -1.1**
FINES FINESS Array B 69.37 29 P **P 00 20 32.2 -1.1**
FIA1 FINESS Array S 69.37 29 P **P 00 20 32.3 -1.0**
ARVC Arvin 69.40 303 P **P 00 20 35.0 +0.9**
baz=88
NOR Nord 69.41 4 *i*P **P 00 20 32.5 -0.7**
NOR IAmb IAmb 00 20 36.0
comp=Z,8.5nm,0.9s
TSUM Tsumeb 69.50 116 LR LR 00 44 56.9
comp=Z,2μm,19.4s,baz=308,slow=31
TSUM Tsumeb 69.50 116 P **P 00 20 35.0 0.0**
TSUM IAmb IAmb 00 20 40.0
comp=Z,44nm,1.6s
TSUM Tsumeb 69.50 116 IAMs_20 IAMs_20 00 44 25.8
comp=Z,2μm,20.0s
TSUM Tsumeb 69.50 116 *e*P **P 00 20 35.7 +0.8**
TSUM IAmb IAmb 00 20 38.6
comp=Z,53nm,1.9s
AK05 Malin Array Si 69.79 41 P **P 00 20 35.4 -0.8**
AKASG Malin Array Be 69.81 41 P **P 00 20 34.6 -1.6**
comp=Z,3.3nm,0.6s,baz=269,slow=5.8,SNR=23
AKASG S **S 00 29 41.4 -4.4**
comp=Z,0.4nm,0.5s,baz=348,slow=40,SNR=1.4
AKASG LR LR 00 49 22.2
comp=Z,981nm,19.9s,baz=254,slow=34
comp=Z,3.3nm,0.6s
AKASG Malin Array Be 69.81 41 P **P 00 20 35.0 -1.2**
AKASG IAmb IAmb 00 20 48.6
comp=Z,43nm,1.9s
AKASG Malin Array Be 69.81 41 P **P 00 20 35.0 -1.2**
AKASG pmax pmax
comp=Z,43nm,1.9s
AKBB Malin Array Si 69.81 41 P **P 00 20 34.8 -1.4**
AKBB IAmb IAmb 00 20 49.0
comp=Z,65nm,1.7s
AKBB Malin Array Si 69.81 41 *i*P **P 00 20 35.1 -1.1**
AKBB pmax pmax
comp=Z,13nm,0.7s
HAWA Hanford 69.92 315 P **P 00 20 36.7 -0.3**
HAWA IAMs_20 IAMs_20 00 49 19.1
comp=Z,2μm,20.0s
KTK1 Kautokeino 69.92 21 *e*P **P 00 20 36.1 -0.5**
KTK1 IAmb IAmb 00 20 39.2
comp=Z,53nm,1.3s
SNCC San Nicolas Is 70.06 301 P **P 00 20 39.5 +1.3**
baz=87
ELL Elmali 70.09 56 P **P 00 20 38.7 +0.3**
ELL Elmali 70.09 56 P **P 00 20 38.7 +0.3**
ELL pmax pmax
comp=Z,507nm,1.8s
PKM Mcpherson Peak 70.22 302 P **P 00 20 39.8 +0.4**
baz=87
SMMC Simmler 70.35 303 P **P 00 20 40.3 +0.4**
baz=87
WIN Windhoek 70.41 120 *e*P **P 00 20 40.0 -0.6**
WIN IAmb IAmb 00 20 44.4
comp=Z,21nm,1.8s
MOD Modoc Plateau 70.42 310 IAMs_20 IAMs_20 00 50 58.7
comp=Z,3μm,19.0s
BORA Eskisehir 70.44 52 P **P 00 20 40.3 -0.1**
BORA IAmb IAmb 00 20 56.8
comp=Z,29nm,1.4s
HAMF Hammerfest 70.52 19 *e*P **P 00 20 40.2 0.0**
HAMF IAmb IAmb 00 20 43.2
comp=Z,100nm,1.4s
ISP Isparta 70.54 54 IAMs_20 IAMs_20 00 52 48.3
comp=Z,2μm,20.0s
CMB Columbia Colle 70.56 306 P **P 00 20 42.3 +1.1**
CMB IAMs_20 IAMs_20 00 49 14.8
comp=Z,3μm,22.0s
CMB Columbia Colle 70.56 306 P **P 00 20 42.3 +1.1**
HSPB Hornsund (broa 70.68 12 *e*P **P 00 20 42.9 +1.8**
HSPB *e*L L 00 43 10.4
comp=Z,3μm,24.1s
USHA Ushuaia 70.70 194 LR LR 00 55 24.4
comp=Z,1μm,18.6s,baz=10,slow=39
ARA0 ARCESS Array S 70.84 21 *e*P **P 00 20 43.1 +0.8**
ARA0 IAmb IAmb 00 20 45.3
comp=Z,80nm,1.4s
ARCES ARCESS Array B 70.84 21 P **P 00 20 40.2 -2.0**
comp=Z,26nm,1.1s,baz=256,slow=2.2,SNR=31
ARCES LR LR 00 44 56.9
comp=Z,778nm,21.1s,baz=252,slow=30
comp=Z,26nm,1.1s
ARCES ARCESS Array B 70.84 21 P **P 00 20 41.0 -1.2**
ARCES ARCESS Array B 70.84 21 P **P 00 20 41.0 -1.2**
ARCES pmax pmax
comp=Z,69nm,1.4s
KBS Kingsbay 70.94 10*ce*P **P 00 20 43.9 +1.3**
KBS pmax pmax
comp=Z,55nm,1.2s
MDUB Mudurnu 70.99 52 P **P 00 20 42.8 -1.0**
PUL Pulkovo 71.20 31 *i*P **P 00 20 46.4 +1.9**
PUL pmax pmax
comp=Z,49nm,1.1s
SPITS Spitsbergen Ar 71.36 11 LR LR 00 44 06.5
comp=Z,1μm,20.0s,baz=197,slow=29
SPITS Spitsbergen Ar 71.36 11 P **P 00 20 45.3 0.0**
SPITS pmax pmax
comp=Z,69nm,1.5s
SPB2 Spitsbergen Ar 71.36 11 P **P 00 20 45.4 +0.1**
ORV Oroville 71.38 307 P **P 00 20 45.5 -0.6**
ORV IAmb IAmb 00 20 55.7
comp=Z,45nm,1.6s
ORV IAMs_20 IAMs_20 00 51 21.3
comp=Z,2μm,20.0s
ORV Oroville 71.38 307 P **P 00 20 45.5 -0.6**
ORV pmax pmax
comp=Z,45nm,1.6s
KEV Kevo 71.40 20 P **P 00 20 45.4 -0.2**
KEV IAmb IAmb 00 20 48.5
comp=Z,57nm,1.3s
KEV Kevo 71.40 20 P **P 00 20 45.4 -0.2**
KEV pmax pmax
comp=Z,57nm,1.3s
AUSN Aus 71.45 124 *e*P **P 00 20 43.6 -3.2**
AUSN IAmb IAmb 00 20 50.7
comp=Z,59nm,1.6s
VALR Valaam 71.65 29 *i*P **P 00 20 46.3 -0.9**
VALR pmax pmax
comp=Z,72nm,1.5s
YBH Yreka Blue Hor 72.22 310 LR LR 00 53 12.5
comp=Z,2μm,18.1s,baz=97,slow=36
YBH Yreka Blue Hor 72.22 310 IAMs_20 IAMs_20 00 48 57.5
comp=Z,3μm,22.0s
ANTO Ankara 72.24 52 P **P 00 20 51.2 -0.1**
ANTO IAmb IAmb 00 21 03.9
comp=Z,69nm,1.8s
ANTO Ankara 72.24 52 P **P 00 20 51.2 -0.1**
ANTO pmax pmax
comp=Z,69nm,1.8s
HUMO Hull Mountain 72.37 311 P **P 00 20 51.9 -0.2**
MCCM Marconi Confer 72.52 306 IAMs_20 IAMs_20 00 50 34.7
comp=Z,2μm,21.0s
COR Corvallis 72.57 313 IAMs_20 IAMs_20 00 51 51.3
comp=Z,2μm,20.0s
DBO Dodson Butte 72.57 311 P **P 00 20 54.0 +0.7**
DBO IAmb IAmb 00 21 02.7
comp=Z,79nm,1.7s
HOPS Hopland Field 72.62 307 IAMs_20 IAMs_20 00 51 16.3
comp=Z,3μm,22.0s
ILGA Ilgaz 72.89 51 P **P 00 20 56.0 +0.6**
BR131 Keskin Array S 72.89 52 P **P 00 20 54.5 -0.8**
BR131 Keskin Array S 72.89 52 P **P 00 20 54.5 -0.8**
BR131 pmax pmax
comp=Z,15nm,1.0s
BRTR Keskin Array B 72.89 52 P **P 00 20 54.0 -1.3**
comp=Z,3.3nm,0.8s,baz=289,slow=4.8,SNR=14
BRTR LR LR 00 52 13.8
comp=Z,812nm,19.8s,baz=242,slow=35
comp=Z,3.3nm,0.8s
BRTR Keskin Array B 72.89 52 P **P 00 20 54.5 -0.8**
BRTR Keskin Array B 72.89 52 P **P 00 20 54.5 -0.8**
CSS Mathiatis 72.97 57 P **P 00 20 56.2 +0.5**
CSS IAmb IAmb 00 21 09.7
comp=Z,38nm,1.6s
SIM Simferopol' 73.02 47 *e*P **P 00 20 57.6 +1.8**
SIM *e* 00 23 41.9
SIM *e*S **S 00 30 25.0 +1.9**
SIM pmax pmax
comp=Z,32nm,1.2s
SIM pmax pmax
comp=Z,40nm,15.4s
WRGLY Wrigley 73.09 332 P **P 00 20 55.4 -0.3**
baz=94,SNR=12
KOTAN Kotaneelee Air 73.19 329 P **P 00 20 56.6 +0.1**
baz=93
JCC Jacoby Creek, 73.26 309 P **P 00 20 57.1 -0.1**
APA Apatity 73.37 23⇓*i*P **P 00 20 56.4 -1.0**
APA pmax pmax
comp=Z,15nm,1.0s
KOMG Komaggas 73.78 127 *e*P **P 00 20 56.9 -3.5**
KOMG IAmb IAmb 00 21 04.4
comp=Z,54nm,1.6s
C36M Paulatuk 73.85 339 IAMs_20 IAMs_20 00 52 01.7
comp=Z,2μm,18.0s
LVZ Lovozero 73.87 23 P **P 00 21 01.5 +1.1**
LVZ IAmb IAmb 00 21 08.1
comp=Z,92nm,1.8s
LVZ Lovozero 73.87 23*ce*P **P 00 21 02.0 +1.6**
LVZ pmax pmax
comp=Z,34nm,1.3s
RPN Rapa Nui 74.26 237 LR LR 00 51 30.5
comp=Z,2μm,19.0s,baz=70,slow=34
OBN Obninsk 74.37 36 P **P 00 21 01.9 -1.5**
comp=Z,1.8nm,0.5s,baz=280,slow=12,SNR=7.9
OBN LR LR 00 50 34.5
comp=Z,243nm,21.1s,baz=256,slow=33
comp=Z,1.8nm,0.5s
OBN Obninsk 74.37 36 P **P 00 21 03.0 -0.4**
OBN IAmb IAmb 00 21 09.1
comp=Z,60nm,1.3s
OBN IAMs_20 IAMs_20 00 48 28.6
comp=Z,2μm,22.0s
OBN Obninsk 74.37 36 *e*P **P 00 21 02.2 -1.2**
OBN *e* 00 21 16.3
OBN *e* 00 23 49.0
OBN *e*PPP PPP 00 25 42.6
OBN *e*S **S 00 30 39.6 +1.7**
OBN SS **SS 00 35 21.3 -2.3**
OBN pmax pmax
comp=Z,55nm,1.3s
OBN MLR MLR
comp=Z,1μm,16.0s
BNN Bunyan 74.66 53 P **P 00 21 04.3 -1.4**
ARMS Ukamas 74.83 124 *e*P **P 00 21 02.7 -4.0**
ARMS IAmb IAmb 00 21 14.9
comp=Z,28nm,1.3s
EIL Elat 74.85 63 P **P 00 21 07.2 +0.4**
comp=Z,18nm,1.1s,baz=301,slow=1.8,SNR=8.7
EIL LR LR 00 52 47.9
comp=Z,3μm,21.9s,baz=268,slow=35
comp=Z,18nm,1.1s
MMAI Mount Meron Ar 74.86 59 P **P 00 21 07.4 +0.5**
comp=Z,6.0nm,0.9s,baz=296,slow=2.7,SNR=8.8
MMAI LR LR 00 54 60.0
comp=Z,926nm,21.4s,baz=166,slow=37
comp=Z,6.0nm,0.9s
MOS Moscow 74.96 35 *e*P **P 00 21 06.3 -0.6**
MOS *e* 00 23 57.7
MOS *e*S **S 00 30 47.0 +2.5**
MOS pmax pmax
comp=Z,105nm,2.0s
MOS MLR MLR
comp=Z,700nm,19.0s
GHAJ Ghor Haditha 75.19 61 IAMs_20 IAMs_20 00 54 03.9
comp=Z,2μm,21.0s
TGTN Hyland Airport 75.28 331 P **P 00 21 08.5 -0.2**
baz=89
WTLY Watson Lake, Y 75.56 329 P **P 00 21 10.1 -0.2**
baz=88
KLMR Klimovskoe 75.81 30 *e*P **P 00 21 10.2 -1.5**
KLMR S **S 00 30 54.5 +0.6**
KLMR pmax pmax
comp=Z,129nm,1.3s
KLMR Klimovskoe 75.81 30 *e*P **P 00 21 10.2 -1.5**
KLMR *e*P **P 00 21 10.2 -1.5**
KLMR *e*P **P 00 21 10.2 -1.5**
KLMR AMP 00 21 16.9
comp=Z,129nm,1.3s
KLMR S **S 00 30 54.5 +0.6**
KLMR S **S 00 30 54.5 +0.6**
KLMR LR LR 00 45 02.4
KLMR AMP 00 50 12.4
comp=Z,1μm,19.8s
GAZ Gaziantep 75.90 55 P **P 00 21 12.7 -0.1**
GAZ IAmb IAmb 00 21 18.2
comp=Z,39nm,1.2s
KEIM Keimoes 76.08 124 *e*P **P 00 21 11.4 -2.5**
KEIM IAmb IAmb 00 21 51.1
comp=Z,103nm,2.3s
VORR Voronezh 76.09 40 *e*P **P 00 21 13.8 +0.4**
VORR pmax pmax
comp=Z,55nm,1.5s
VSR Storozhevoye 76.09 40 *e*P **P 00 21 12.8 -0.7**
VSR pmax pmax
comp=Z,40nm,1.1s
UPI Upington 76.18 124 *e*P **P 00 21 12.9 -1.6**
UPI IAmb IAmb 00 21 36.6
comp=Z,44nm,1.7s
MBAR Mbarara 76.18 94 LR LR 00 54 12.2
comp=Z,1μm,19.9s,baz=282,slow=35
MBAR Mbarara 76.18 94 P **P 00 21 15.1 +0.2**
MBAR IAmb IAmb 00 21 21.1
comp=Z,35nm,1.4s
MBAR Mbarara 76.18 94 IAMs_20 IAMs_20 00 55 10.8
comp=Z,2μm,18.0s
MBAR Mbarara 76.18 94 *i*P **P 00 21 16.0 +1.1**
MBAR pmax pmax
comp=Z,31nm,1.3s
ASF Jabal al Asfar 76.21 60 P **P 00 21 14.6 0.0**
comp=Z,3.4nm,0.8s,baz=321,slow=6.5,SNR=13
ASF LR LR 00 55 27.3
comp=Z,1μm,21.0s,baz=244,slow=36
comp=Z,3.4nm,0.8s
DLBC Dease Lake 76.25 327 LR LR 00 51 51.6
comp=Z,3μm,21.3s,baz=90,slow=34
DLBC Dease Lake 76.25 327 P **P 00 21 14.6 +0.2**
baz=87
T35M Bob Quinn 76.45 326 P **P 00 21 15.5 0.0**
baz=86
MMPY Sheldon Lake, 76.65 332 P **P 00 21 16.4 -0.1**
baz=87
R33M Jennings River 76.69 328 P **P 00 21 17.6 +0.7**
baz=86
CER Ceres 76.72 129 *e*P **P 00 21 17.0 -0.3**
CER IAmb IAmb 00 21 30.6
comp=Z,36nm,1.2s
S34M Telegraph Cree 76.87 327 P **P 00 21 18.5 +0.7**
baz=86
SOC Sochi 77.13 48 *e*P **P 00 21 20.6 +1.1**
SOC *e* 00 24 08.3
SOC *e*S **S 00 31 11.6 +2.7**
SOC *e*SSS SSS 00 39 30.0
SOC pmax pmax
comp=Z,57nm,1.3s
SOC MLR MLR
comp=Z,664nm,21.0s
INK Inuvik 77.26 338 LR LR 00 52 29.8
comp=Z,3μm,21.7s,baz=90,slow=34
INK Inuvik 77.26 338 P **P 00 21 18.8 -1.0**
INK IAmb IAmb 00 21 26.4
comp=Z,30nm,1.1s
INK Inuvik 77.26 338 P **P 00 21 18.8 -1.0**
INK pmax pmax
comp=Z,30nm,1.2s
INK Inuvik 77.26 338 P **P 00 21 19.7 0.0**
baz=86,SNR=12
Q32M Nakina River 77.39 328 P **P 00 21 20.6 -0.3**
baz=85
F31M Tsiigehtchic 77.40 337 P **P 00 21 19.7 -0.9**
baz=86
P33M Teslin, Yukon 77.56 329 P **P 00 21 21.1 -0.6**
baz=85
ELIM Elim 77.59 130 *e*P **P 00 21 20.4 -1.9**
ELIM IAmb IAmb 00 21 24.4
comp=Z,385nm,2.7s
N32M Quiet Lake 77.61 330 P **P 00 21 21.7 -0.3**
baz=85
FARO Faro, Yukon 77.64 331 P **P 00 21 21.6 -0.4**
baz=85

WRAK Wrangell Islan 77.65 325 P P 00 21 21.8 -0.3
baz=85
LSZ Lusaka 77.68 109 S S 00 31 21.7 +5.7
comp=Z,1.3nm,0.2s,baz=178,slow=23,SNR=6.8
LSZ LR LR 00 50 00.1
comp=Z,3µm,20.8s,baz=308,slow=31
VRH Novokhopyorsk 77.69 40 eP P 00 21 21.5 -1.0
VRH pmax pmax
comp=Z,20nm,0.8s
FRAZ Fraserburg 77.74 127 eP P 00 21 20.4 -2.9
P32M Atlin 78.07 329 P P 00 21 24.5 0.0
baz=84
U33K Whale Pass 78.11 325 P P 00 21 24.4 -0.3
baz=84
KOPT Kop Dagi 78.12 51 P P 00 21 24.4 -1.1
KOPT IAmb IAmb 00 21 38.9
comp=Z,83nm,1.9s
MERW Merweville 78.13 128 eP P 00 21 23.1 -2.3
MERW IAmb IAmb 00 21 33.6
comp=Z,86nm,1.6s
M31M Drury Creek, Y 78.13 331 IAMs_20 IAMs_20 00 53 01.5
comp=Z,2µm,20.0s
M31M Drury Creek, Y 78.13 331 P P 00 21 25.1 +0.3
baz=84
G30M tAoh Zraii Nji 78.41 336 P P 00 21 26.6 +0.4
baz=84
GRAN Grantham 78.48 127 eP P 00 21 29.1 +1.8
GRAN IAmb IAmb 00 21 39.8
comp=Z,12nm,1.1s
WHY Whitehorse 78.53 330 P P 00 21 27.0 -0.1
baz=83
LBTB Lobatse 78.54 119 LR LR 00 49 27.9
comp=Z,2µm,21.2s,baz=292,slow=31
LBTB Lobatse 78.54 119 P P 00 21 27.2 -0.6
LBTB Lobatse 78.54 119 eP P 00 21 27.4 -0.4
LBTB IAmb IAmb 00 21 35.0
comp=Z,21nm,1.2s
LBTB Lobatse 78.54 119 P P 00 21 27.2 -0.6
LBTB pmax pmax
comp=Z,23nm,1.2s
EPYK Eagle Plains 78.68 336 IAMs_20 IAMs_20 00 53 08.5
comp=Z,2µm,21.0s
EPYK Eagle Plains 78.68 336 P P 00 21 28.3 +0.6
baz=83
PRGR Permogore 78.70 29 eP P 00 21 27.7 -0.2
PRGR pmax pmax
comp=Z,78nm,1.1s
MARD Mardin 78.70 54 P P 00 21 28.2 -0.4
MARD IAmb IAmb 00 21 33.5
comp=Z,50nm,1.6s
S32K Killisnoo 78.75 327 P P 00 21 28.4 +0.1
baz=83
BRAK Brakfontein 78.84 127 eP P 00 21 27.6 -1.7
BRAK IAmb IAmb 00 21 36.7
comp=Z,43nm,1.4s
N31M Braeburn, Yuko 78.87 331 P P 00 21 29.0 +0.1
N31M IAmb IAmb 00 21 35.6
comp=Z,53nm,1.4s
N31M Braeburn, Yuko 78.87 331 P P 00 21 29.2 +0.3
baz=83
SKAG Skagway 78.90 329 P P 00 21 29.2 +0.2
baz=83
SWZ Schweizer 79.08 121 eP P 00 21 31.4 +0.6
SWZ IAmb IAmb 00 21 38.8
comp=Z,52nm,1.7s
O30N Mendenhall 79.11 330 P P 00 21 30.2 0.0
baz=82
KIV Kislovodsk 79.22 47 P P 00 21 30.2 -1.0
KIV Kislovodsk 79.22 47 eP P 00 21 31.6 +0.4
KIV e 00 24 30.2
KIV eS S 00 31 31.8 +0.2
KIV eSS SS 00 36 38.9 +1.2
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,775nm,19.0s
KVAR Kislovodsk Arr 79.22 47 LR LR 00 54 51.6
comp=Z,936nm,21.2s,baz=229,slow=34
GOF Gofitskoye 79.31 46 eP P 00 21 32.6 +1.0
K29M Barlow Dome 79.35 333 P P 00 21 31.5 0.0
baz=82
KBZ Khabaz 79.40 47 P P 00 21 31.0 -1.0
comp=Z,5.7nm,1.2s,baz=344,slow=1.9,SNR=3.9
KBZ S S 00 31 32.6 -0.7
comp=Z,1.3nm,0.9s,baz=234,slow=13,SNR=2.1
KBZ LR LR 00 57 04.1
comp=Z,786nm,19.7s,baz=288,slow=36
comp=Z,5.7nm,1.2s
KBZ Khabaz 79.40 47 ceP P 00 21 32.6 +0.6
KBZ pmax pmax
comp=Z,8.0nm,1.3s
I29M Ogilvie Camp, 79.46 335 IAMs_20 IAMs_20 00 55 03.3
comp=Z,2µm,20.0s
I29M Ogilvie Camp, 79.46 335 P P 00 21 32.3 +0.3
baz=81
BFON Badsfontein, M 79.47 126 eP P 00 21 34.2 +1.4
BFON IAmb IAmb 00 21 45.9
comp=Z,18nm,0.9s
N30M Aishikik Lake 79.50 331 P P 00 21 32.7 +0.4
baz=82
GURO Guroymak-BITLI 79.50 53 P P 00 21 32.2 -0.8
BOSA Boshof 79.53 123 P P 00 21 33.3 +0.1
comp=Z,5.1nm,0.9s,baz=324,slow=9.5,SNR=8.3
BOSA S S 00 31 33.8 -1.7
comp=Z,1.7nm,0.9s,baz=9.7,slow=14,SNR=1.5
BOSA LR LR 00 49 28.7
comp=Z,3µm,21.1s,baz=288,slow=30
comp=Z,5.1nm,0.9s
BOSA Boshof 79.53 123 P P 00 21 32.5 -0.7
BOSA IAmb IAmb 00 21 37.7
comp=Z,47nm,1.6s
BOSA Boshof 79.53 123 eP P 00 21 31.2 -2.0
BOSA IAmb IAmb 00 21 36.3
comp=Z,75nm,1.9s
MATP Matopo 79.54 114 LR LR 00 52 32.4
comp=Z,2µm,18.3s,baz=248,slow=32
J29M Klondike Camp 79.56 334 IAMs_20 IAMs_20 00 54 02.0
comp=Z,2µm,20.0s
S31K Pelican 79.57 327 P P 00 21 32.1 -0.6
baz=82
P30M Million Dollar 79.63 329 P P 00 21 33.7 +0.6
baz=82
ROOI Rooidraai Farm 79.63 127 eP P 00 21 31.6 -1.9
L29M L29M 79.73 333 P P 00 21 33.6 0.0
baz=81
LODK Lodwar 79.77 89 P P 00 21 34.8 +0.1
LODK Lodwar 79.77 89 eP P 00 21 31.7 -3.0
HYT Haines Junctio 79.79 330 P P 00 21 33.5 -0.5
baz=81
ONI Oni 79.97 49 P P 00 21 34.9 -0.4
ONI Oni 79.97 49 P P 00 21 34.9 -0.4
ONI pmax pmax
comp=Z,20nm,1.5s
M29M Somme Creek 79.99 332 P P 00 21 34.4 -0.6
baz=81
KARS Kars 79.99 51 P P 00 21 35.4 -0.2
KARS Kars 79.99 51 P P 00 21 35.4 -0.2
KARS pmax pmax
comp=Z,166nm,1.5s
LEPH Lephalale, Lim 80.03 117 eP P 00 21 35.9 -0.1
P29M Windy Craggy 80.09 329 IAMs_20 IAMs_20 00 55 29.5
comp=Z,2µm,20.0s
P29M Windy Craggy 80.09 329 P P 00 21 35.3 -0.3
baz=81
DAWY Dawson 80.13 334 P P 00 21 35.4 -0.3
baz=80,SNR=9.0
YUK6 Outpost Mounta 80.19 330 P P 00 21 36.1 -0.2
baz=80
YUK4 Talbot Arm 80.25 331 P P 00 21 36.6 -0.1
baz=80
E27K Coleen River 80.26 338 P P 00 21 36.4 +0.1
baz=79,SNR=28
ZEI Tsey 80.26 48 eP P 00 21 32.7 -4.4
ZEI pmax pmax
comp=Z,9.0nm,1.1s
GRAF Camdeboo Natio 80.28 126 eP P 00 21 34.8 -2.3
O29M Mount Kennedy 80.40 330 P P 00 21 36.8 -0.6
baz=80
HVD Gariep Dam 80.45 125 eP P 00 21 38.9 +0.7
HVD IAmb IAmb 00 21 46.6
comp=Z,41nm,1.2s
G27K Doyon Strip 80.55 337 P P 00 21 37.7 -0.3
baz=78,SNR=14
H27K Steamboat Moun 80.62 336 P P 00 21 37.9 -0.4
baz=78,SNR=6.7
C27K Jago River 80.71 339 P P 00 21 39.2 +0.6
baz=77,SNR=13

EGAK Eagle 80.75 334 IAMs_20 IAMs_20 00 58 21.5
comp=Z,1µm,20.0s
EGAK Eagle 80.75 334 P P 00 21 38.5 -0.5
baz=79
I27K Kandik River 80.78 335 P P 00 21 39.4 +0.3
baz=78
PNL Peninsula 80.92 329 P P 00 21 39.9 -0.1
baz=79
YUK3 Moose Creek 81.03 331 P P 00 21 40.5 -0.3
baz=79
KIRV Kirov 81.04 32 P P 00 21 39.7 -0.9
comp=Z,8.3nm,0.4s,baz=301,slow=6.9,SNR=8.0
KIRV LR LR 00 54 15.3
comp=Z,2µm,20.4s,baz=279,slow=33
comp=Z,8.3nm,0.4s
KIRV Kirov 81.04 32 ceP P 00 21 40.8 +0.2
C26K Camden Bay 81.05 340 P P 00 21 40.7 +0.2
baz=76
SLR Silverton 81.06 119 eP P 00 21 42.6 +1.1
SLR IAmb IAmb 00 22 03.6
comp=Z,59nm,1.5s
BVCY Beaver Creek 81.09 332 P P 00 21 40.6 -0.3
baz=78
O28M Mount Upton 81.10 330 P P 00 21 41.0 -0.3
baz=79
BELG Belogornoye 81.16 38 P P 00 21 41.0 -0.3
comp=Z,22nm,1.2s,baz=263,slow=7.1,SNR=9.9
BELG LR LR 00 53 37.1
comp=Z,2µm,21.2s,baz=295,slow=33
comp=Z,22nm,1.2s
BELG Belogornoye 81.16 38 iP P 00 21 40.6 -0.7
BELG pmax pmax
comp=Z,10.0nm,1.8s
PINM Pinnacle 81.26 330 P P 00 21 41.5 -0.3
baz=79
K27K Chicken 81.30 334 IAMs_20 IAMs_20 00 56 04.9
comp=Z,2µm,21.0s
K27K Chicken 81.30 334 P P 00 21 42.0 +0.1
baz=78
F26K Sheenjek River 81.31 338 P P 00 21 42.3 +0.3
baz=76,SNR=11
GNI Garni 81.32 51 P P 00 21 42.5 -0.2
comp=Z,6.0nm,1.0s,baz=294,slow=18,SNR=10.0
GNI LR LR 00 56 34.5
comp=Z,661nm,22.0s,baz=273,slow=35
comp=Z,6.0nm,1.0s
GNI Garni 81.32 51 P P 00 21 42.6 -0.1
GNI IAmb IAmb 00 21 57.6
comp=Z,83nm,1.4s
GNI Garni 81.32 51 iP P 00 21 42.7 -0.1
GNI pmax pmax
comp=Z,79nm,1.6s
MUSN Musina, Limpop 81.33 115 eP P 00 21 43.3 +0.4
MUSN IAmb IAmb 00 21 51.6
comp=Z,36nm,1.2s
G26K Porcupine Rive 81.34 337 P P 00 21 41.9 -0.1
baz=77,SNR=30
BCAR Beaver Creek A 81.37 333 P P 00 21 42.0 -0.3
L27K Beaver Creek, 81.39 333 P P 00 21 42.2 -0.3
baz=78,SNR=12
I26K Coal Creek Min 81.47 335 IAMs_20 IAMs_20 00 56 33.7
comp=Z,1µm,18.0s
I26K Coal Creek Min 81.47 335 P P 00 21 42.3 -0.5
baz=77
SNKL Senekal, Frees 81.49 122 eP P 00 21 43.6 -0.1
SNKL IAmb IAmb 00 21 52.0
comp=Z,76nm,1.2s
BMAR Burnt Mountain 81.53 337 P P 00 21 43.2 0.0
M27K Edge Creek, AK 81.56 332 IAMs_20 IAMs_20 00 54 40.2
comp=Z,2µm,22.0s
M27K Edge Creek, AK 81.56 332 P P 00 21 43.1 -0.5
baz=78
GROC Groznyy 81.57 48 eP P 00 21 42.5 -1.2
GROC pmax pmax
comp=Z,17nm,0.5s
CTG Chitna Glacier 81.61 331 P P 00 21 42.9 -0.9
baz=78
D25K Kavik River 81.69 339 P P 00 21 44.4 +0.4
baz=75
E25K Arctic Village 81.72 338 P P 00 21 44.5 +0.4
baz=75,SNR=9.4
FURI Furi 81.82 83 eP P 00 21 45.0 -1.0
J26L Joseph Creek 81.82 334 P P 00 21 44.5 -0.3
J26L IAMs_20 IAMs_20 00 56 58.8
comp=Z,2µm,20.0s
J26L Joseph Creek 81.82 334 P P 00 21 45.0 +0.1
baz=76
AAE Adis Abeba 81.87 83 eP P 00 21 45.0 -1.3
F25K Christian Rive 81.89 338 P P 00 21 46.2 +1.2
baz=75,SNR=13
FYU Fort Yukon 81.99 337 IAMs_20 IAMs_20 00 54 28.2
comp=Z,3µm,21.0s
M26K Nabesna, AK 82.06 332 IAMs_20 IAMs_20 00 55 06.3
comp=Z,3µm,21.0s
L26K Log Cabin Wild 82.08 333 P P 00 21 46.0 -0.1
L26K IAMs_20 IAMs_20 00 55 03.6
comp=Z,2µm,21.0s
L26K Log Cabin Wild 82.08 333 P P 00 21 46.1 0.0
baz=76
GRHM Grahamstown, E 82.12 127 eP P 00 21 44.0 -2.8
GRHM IAmb IAmb 00 21 59.6
comp=Z,29nm,1.0s
SCRK Sand Creek 82.13 334 P P 00 21 46.1 -0.3
SCRK Sand Creek 82.13 334 P P 00 21 46.7 +0.2
baz=76
MENT Mentasta 82.26 333 P P 00 21 47.1 +0.1
MENT IAmb IAmb 00 22 01.1
comp=Z,31nm,1.2s
G25K Bearman Lake 82.28 337 P P 00 21 47.1 +0.1
baz=74
H25K Birch Creek 82.30 336 P P 00 21 47.4 +0.3
baz=75,SNR=17
MCARA McCarthy VSAT 82.31 331 IAMs_20 IAMs_20 00 56 27.0
comp=Z,2µm,19.0s
MCARA McCarthy VSAT 82.31 331 P P 00 21 47.3 0.0
baz=76
C24K Franklin Bluff 82.36 340 P P 00 21 47.6 +0.2
baz=72
PRP Porcupine Dome 82.38 336 P P 00 21 47.8 0.0
PRP IAmb IAmb 00 21 59.8
comp=Z,40nm,1.1s
PRP Porcupine Dome 82.38 336 P P 00 21 48.1 +0.3
baz=75,SNR=25
VRDI Verde Repeater 82.55 331 IAMs_20 IAMs_20 00 56 24.9
comp=Z,2µm,20.0s
J25K Salcha River, 82.55 335 IAMs_20 IAMs_20 01 00 15.1
comp=Z,2µm,18.0s
J25K Salcha River, 82.55 335 P P 00 21 48.4 -0.2
baz=75
RIDG Independent Ri 82.56 334 IAMs_20 IAMs_20 00 56 54.2
comp=Z,2µm,20.0s
D24K Happy Valley 82.58 339 P P 00 21 49.2 +0.7
baz=72
KMBO Kilima Mbogo 82.64 93 P P 00 21 51.2 +1.0
comp=Z,0.1nm,0.4s,baz=280,slow=23,SNR=4.2
KMBO S S 00 32 09.9 +1.3
baz=27,slow=23,SNR=1.1
KMBO LR LR 00 56 10.1
comp=Z,47nm,21.7s,baz=281,slow=34
KMBO Kilima Mbogo 82.64 93 P P 00 21 49.7 -0.5
KMBO Kilima Mbogo 82.64 93 eP P 00 21 52.2 +1.9
KMBO IAmb IAmb 00 21 55.6
comp=Z,273nm,2.5s
KMBO Kilima Mbogo 82.64 93 eP P 00 21 48.3 -1.9
GLB Gilahina Butte 82.67 331 IAMs_20 IAMs_20 00 56 47.6
comp=Z,2µm,20.0s
ANKE Ethiopia-Afar 82.69 82 eP P 00 21 51.6 +1.0
F24K Squaw Lake 82.73 338 P P 00 21 50.7 +1.3
baz=73,SNR=5.9
SMAI San Martin Ant 82.74 188 P P 00 21 50.3 +1.1
SMAI IAmb IAmb 00 22 01.1
comp=Z,26nm,1.3s
E24K Your Creek 82.79 338 P P 00 21 50.6 +0.9
baz=72
G24K Hadweenzic Riv 82.82 337 P P 00 21 50.1 +0.2
baz=73,SNR=11
K24K Donnelly Dome 82.94 334 P P 00 21 51.4 +0.8
baz=74
C23K Itkillik River 82.96 340 P P 00 21 51.5 +1.0
baz=71,SNR=8.4
N25K Chitina, Valde 82.99 332 IAMs_20 IAMs_20 00 55 38.9
comp=Z,2µm,22.0s
N25K Chitina, Valde 82.99 332 P P 00 21 51.0 0.0
baz=75
TOLK Toolik Lake Re 83.00 339 P P 00 21 51.6 +0.8
baz=72,SNR=6.2
PAX Paxson 83.03 333 P P 00 21 51.4 +0.3

baz=75,SNR=5.8
HARP HAARP 83.04 332 P P 00 21 51.5 +0.4
baz=75
NWCL Newcastle 83.08 120 eP P 00 21 49.7 -2.4
NWCL IAmb IAmb 00 22 00.3
comp=Z,424nm,2.9s
IL31 83.14 335 P P 00 21 51.2 -0.3
ILAR Eielson Array 83.14 335 P P 00 21 50.5 -1.1
comp=Z,14nm,0.9s,baz=70,slow=4.6,SNR=70
ILAR LR LR 00 57 26.3
comp=Z,526nm,20.2s,baz=74,slow=35
comp=Z,14nm,0.9s
ILAR Eielson Array 83.14 335 P P 00 21 51.1 -0.4
ILAR Eielson Array 83.14 335 P P 00 21 51.1 -0.4
BMRM Bremner River 83.16 331 P P 00 21 52.3 +0.5
baz=75
E23K Chandalar 83.20 339 P P 00 21 52.4 +0.5
baz=72,SNR=9.8
H24K Noodor Dome 83.23 336 IAMs_20 IAMs_20 00 56 12.8
comp=Z,2µm,21.0s
H24K Noodor Dome 83.23 336 P P 00 21 52.0 -0.1
baz=73,SNR=12
POKR Poker Plat Res 83.26 335 IAMs_20 IAMs_20 00 57 39.7
comp=Z,1µm,18.0s
POKR Poker Plat Res 83.26 335 P P 00 21 52.3 +0.1
baz=73
HDA Harding Lake 83.27 335 P P 00 21 52.9 +0.7
HDA IAmb IAmb 00 22 05.5
comp=Z,30nm,1.3s
HDA IAMs_20 IAMs_20 01 00 37.2
comp=Z,2µm,19.0s
HDA Harding Lake 83.27 335 P P 00 21 52.6 +0.4
baz=73
D23K Nanushuk River 83.27 340 P P 00 21 52.4 +0.3
baz=71,SNR=6.2
COLA College 83.50 335 P P 00 21 53.5 +0.1
COLA College 83.50 335 iP P 00 21 54.0 +0.6
COLA pmax pmax
comp=Z,45nm,1.2s
COLA College 83.50 335 P P 00 21 53.7 +0.3
baz=73
TCOL CIGO, UAF Yank 83.51 335 P P 00 21 53.8 +0.4
baz=73
CCB Clear Creek Bu 83.55 335 IAMs_20 IAMs_20 01 00 46.8
comp=Z,1µm,18.0s
MDM Murphy Dome 83.63 335 P P 00 21 53.7 -0.4
MDM IAmb IAmb 00 22 00.9
comp=Z,29nm,1.0s
KLU Klutina 83.63 332 IAMs_20 IAMs_20 00 56 40.4
comp=Z,2µm,21.0s
KLU Klutina 83.63 332 P P 00 21 54.9 +0.7
baz=74
COLD Coldfoot 83.68 338 P P 00 21 54.4 +0.2
baz=71,SNR=8.1
KIBK Kibwezi 83.69 94 P P 00 21 55.3 -0.2
KIBK IAmb IAmb 00 22 10.6
comp=Z,52nm,1.8s
KIBK IAMs_20 IAMs_20 00 54 35.7
comp=Z,2µm,22.0s
G23K Bananza Creek 83.78 337 P P 00 21 55.1 +0.2
baz=71,SNR=8.9
EYAK Cordova Ski Ar 83.81 331 P P 00 21 55.2 +0.1
baz=74
DHY Denali Highway 83.83 333 P P 00 21 55.9 +0.5
baz=73
H23K Yukon River 83.88 336 IAMs_20 IAMs_20 00 56 43.1
comp=Z,2µm,20.0s
H23K Yukon River 83.88 336 P P 00 21 55.2 -0.2
baz=71,SNR=15
E22K Anaktuvuk Pass 83.95 339 P P 00 21 55.8 +0.1
baz=70
I23K Minto, Yukon-K 84.03 336 IAMs_20 IAMs_20 00 55 42.0
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 84.03 336 P P 00 21 56.3 +0.2
baz=71,SNR=10
NEA2 Nenana 84.09 335 P P 00 21 57.4 +1.0
baz=72,SNR=11
WAT6 Susitna Watana 84.14 333 P P 00 21 57.2 +0.2
baz=72,SNR=6.5
G22K Bettles 84.26 338 P P 00 21 57.8 +0.6
baz=70
A21K Barrow 84.27 342 IAMs_20 IAMs_20 00 59 21.8
comp=Z,2µm,20.0s
F22K John River 84.30 338 P P 00 21 58.0 +0.6
baz=69
MCK McKinley 84.30 334 IAMs_20 IAMs_20 00 56 50.4
comp=Z,1µm,20.0s
MCK McKinley 84.30 334 P P 00 21 57.5 0.0
baz=72
GLI Glacier Island 84.35 331 P P 00 21 57.8 0.0
baz=73
M23K Glacier View 84.37 332 P P 00 21 57.8 -0.2
baz=72
BWN Browne 84.38 335 P P 00 21 58.2 +0.3
BWN IAMs_20 IAMs_20 01 01 08.6
comp=Z,2µm,18.0s
Q23K Middleton Isla 84.41 330 P P 00 21 58.2 +0.1
baz=73
WAT1 Susitna Watana 84.42 333 P P 00 21 58.7 +0.5
baz=72
H22K Ishtalitna Cre 84.57 337 P P 00 21 59.5 +0.6
baz=70,SNR=10
MLY Manley 84.62 336 IAMs_20 IAMs_20 00 58 14.9
comp=Z,1µm,20.0s
MLY Manley 84.62 336 P P 00 21 59.4 +0.3
baz=70,SNR=11
SML Sawmill 84.64 332 P P 00 21 59.6 +0.3
baz=72
KNK Knik Glacier 84.82 332 P P 00 22 01.0 +0.8
baz=72
F21K Alatna River 84.87 338 P P 00 22 00.9 +0.5
baz=68
PWL Port Wells 84.94 331 P P 00 22 01.2 +0.4
baz=72
TRF Thorofare Moun 84.97 334 P P 00 22 00.9 -0.2
TRF IAMs_20 IAMs_20 00 57 23.2
comp=Z,1µm,21.0s
TRF Thorofare Moun 84.97 334 P P 00 22 01.2 +0.1
baz=70,SNR=10
BPAW Bear Paw Mtn. 85.04 335 P P 00 22 01.0 -0.3
BPAW IAmb IAmb 00 22 06.0
comp=Z,24nm,0.9s
BPAW Bear Paw Mtn. 85.04 335 P P 00 22 01.2 0.0
baz=70,SNR=16
I21K Tanana 85.06 336 P P 00 22 01.3 0.0
I21K IAMs_20 IAMs_20 00 56 24.2
comp=Z,2µm,22.0s
I21K Tanana 85.06 336 P P 00 22 01.7 +0.5
baz=69,SNR=7.4
PMR Palmer 85.07 332 P P 00 22 01.9 +0.5
baz=71
G21K Allakaket 85.15 338 P P 00 22 01.2 -0.5
baz=68,SNR=16
RAYN Ar Rayn 85.19 67 P P 00 22 02.8 -0.1
RAYN IAmb IAmb 00 22 08.3
comp=Z,40nm,1.6s
RAYN Ar Rayn 85.19 67 IAMs_20 IAMs_20 01 01 31.3
comp=Z,2µm,19.0s
RAYN Ar Rayn 85.19 67 P P 00 22 02.8 -0.1
RAYN pmax pmax
comp=Z,40nm,1.6s
RAYN MLR MLR
comp=Z,2µm,19.0s
KTH Kantishna Hill 85.20 334 P P 00 22 01.6 -0.6
KTH IAmb IAmb 00 22 13.7
comp=Z,34nm,1.0s
KTH IAMs_20 IAMs_20 01 02 14.4
comp=Z,2µm,19.0s
H21K Melozitna Rive 85.21 337 IAMs_20 IAMs_20 00 57 34.1
comp=Z,2µm,21.0s
H21K Melozitna Rive 85.21 337 P P 00 22 02.3 +0.3
baz=68,SNR=7.3
ATD Arta Tunnel 85.27 79 LR LR 00 58 29.6
comp=Z,5µm,20.9s,baz=284,slow=35
CUT Chulitna 85.31 333 IAMs_20 IAMs_20 00 57 40.3
comp=Z,2µm,19.0s
CUT Chulitna 85.31 333 P P 00 22 02.7 +0.1
baz=70
IMAR Indian Mountai 85.44 337 P P 00 22 03.6 +0.4
M22K Willow 85.46 333 P P 00 22 03.6 +0.3
baz=70
RC01 Rabbit Creek A 85.51 332 IAMs_20 IAMs_20 00 56 15.5
comp=Z,2µm,21.0s
RC01 Rabbit Creek A 85.51 332 P P 00 22 03.9 +0.3
baz=71
CHUM Lake Minchumin 85.66 335 P P 00 22 04.9 +0.5
baz=69,SNR=6.8
CAST Castle Rocks 85.73 334 P P 00 22 05.3 +0.6

baz=69
SUA Susitna One 85.84 332 IAMs_20 IAMs_20 00 57 27.5
comp=Z,2μm,19.0s
SUA Susitna One 85.84 332 P **P** **00 22 05.5 +0.1**
baz=70
PPLA Purkeypile 85.97 334 P **P** **00 22 05.7 -0.4**
PPLA Purkeypile 85.97 334 P **P** **00 22 06.7 +0.6**
baz=69,SNR=12
SKT Skwentna 86.01 333 P **P** **00 22 06.2 +0.1**
SKT IAMs_20 IAMs_20 00 58 22.0
comp=Z,2μm,20.0s
SKT Skwentna 86.01 333 P **P** **00 22 06.4 +0.3**
baz=69,SNR=8.9
J20K Nowinta River 86.30 336 IAMs_20 IAMs_20 00 57 13.0
comp=Z,2μm,22.0s
J20K Nowinta River 86.30 336 P **P** **00 22 07.8 +0.3**
baz=67
ARU Arti 86.36 33 LR LR 00 58 29.5
comp=Z,2μm,19.6s,baz=281,slow=34
ARU Arti 86.36 33 P **P** **00 22 07.3 -0.7**
ARU IAmb IAmb 00 22 12.2
comp=Z,83nm,1.9s
ARU IAMs_20 IAMs_20 00 57 57.1
comp=Z,2μm,20.0s
ARU Arti 86.36 33*c i*P **P** **00 22 07.6 -0.3**
ARU 00 25 24.2
ARU S **SKSac** **00 32 33.0 -1.5**
ARU pmax pmax
comp=Z,33nm,1.6s
BRSE Bradley Lake S 86.44 331 P **P** **00 22 08.4 +0.1**
baz=70
SPU Mount Spurr 86.53 332 P **P** **00 22 08.7 0.0**
K20K Telida 86.59 335 IAMs_20 IAMs_20 01 02 28.7
comp=Z,1μm,20.0s
K20K Telida 86.59 335 P **P** **00 22 09.0 +0.1**
baz=67,SNR=6.0
N20K Mount Spurr 86.59 332 P **P** **00 22 09.5 +0.4**
baz=68
SPCR Spurr Chakacha 86.59 332 P **P** **00 22 08.9 -0.2**
baz=68
M20K Styx River 86.75 333 IAMs_20 IAMs_20 00 59 33.2
comp=Z,2μm,20.0s
M20K Styx River 86.75 333 P **P** **00 22 09.9 0.0**
baz=68
L20K Farewell, AK 86.85 334 P **P** **00 22 09.9 -0.3**
baz=67,SNR=6.2
GCSA Galena City Sc 87.15 337 P **P** **00 22 12.3 +0.8**
baz=65
M19K Big River Lodg 87.29 333 P **P** **00 22 12.3 -0.1**
baz=67
SVE Sverdlovsk 87.31 32 *e*P **P** **00 22 12.6 0.0**
SVE *e*S **SKSac** **00 32 40.0 -0.4**
SVE pmax pmax
comp=Z,29nm,1.7s
SVE MLR MLR
comp=Z,2μm,20.0s
L19K White Mountain 87.38 334 P **P** **00 22 12.8 0.0**
baz=66
VNA1 Neumayer--Stat 87.40 169 P **P** **00 22 13.7 +1.1**
TTA Tatalina 87.57 335 P **P** **00 22 13.5 -0.3**
baz=65
VNA3 Neumayer Olymp 87.62 169 P **P** **00 22 14.3 +0.7**
RDOG Red Dog Mine 87.73 341 IAMs_20 IAMs_20 01 09 05.6
comp=Z,1μm,20.0s
N19K Bonanza Creek 87.77 332 IAMs_20 IAMs_20 01 05 17.4
comp=Z,1μm,19.0s
N19K Bonanza Creek 87.77 332 P **P** **00 22 15.1 +0.3**
baz=67
VNA2 Neumayer--Watz 87.79 168 P **P** **00 22 15.2 +0.7**
baz=328,slow=4.0
AKTO Aktyubinsk 87.94 39 LR LR 00 57 42.5
comp=Z,1μm,22.0s,baz=288,slow=33
KDAK Kodiak Island 88.03 329 LR LR 01 00 20.7
comp=Z,2μm,19.5s,baz=81,slow=35
KDAK Kodiak Island 88.03 329 P **P** **00 22 16.8 +0.8**
baz=68
Q19K Cape Douglas, 88.12 331 IAMs_20 IAMs_20 00 57 30.3
comp=Z,2μm,22.0s
N18K Kilae Creek 88.45 333 IAMs_20 IAMs_20 01 02 53.2
comp=Z,2μm,19.0s
O18K Koktuh Hills 88.48 332 P **P** **00 22 18.5 +0.4**
baz=66
P18K Big Mountain, 88.68 331 P **P** **00 22 19.5 +0.3**
baz=66
SNAA Sanae 89.30 168 P **P** **00 22 21.9 +0.3**
SNAA Sanae 89.30 168 P **P** **00 22 22.0 +0.3**
comp=Z,15nm,0.9s,baz=307,slow=4.5,SNR=34
SNAA LR LR 00 55 04.1
comp=Z,2μm,20.3s,baz=343,slow=31
comp=Z,15nm,0.9s
SNAA Sanae 89.30 168 P **P** **00 22 21.9 +0.3**
SNAA IAmb IAmb 00 22 27.2
comp=Z,17nm,0.9s
SNAA IAMs_20 IAMs_20 00 54 32.5
comp=Z,2μm,21.0s
SNAA Sanae 89.30 168 *e*P **P** **00 22 21.8 +0.2**
SNAA Sanae 89.30 168*ce*P **P** **00 22 22.2 +0.6**
SNAA pmax pmax
comp=Z,35nm,1.7s
Q17K Contact Creek 89.46 330 P **P** **00 22 23.4 +0.6**
baz=65
ABKAR Akbulak array 89.50 39 P **P** **00 22 22.7 -0.4**
ABKAR IAmb IAmb 00 22 28.2
comp=Z,36nm,1.6s
ABKAR Akbulak array 89.50 39 P **P** **00 22 22.6 -0.5**
N16K Nishlik Lake 89.82 333 P **P** **00 22 25.6 +1.1**
baz=63,SNR=5.6
ANM Nome 90.43 338 IAMs_20 IAMs_20 01 01 02.2
comp=Z,2μm,21.0s
TROLL Troll, Antarti 90.69 167 P **P** **00 22 29.0 +0.8**
NRIK Noril'sk 91.15 15 P **P** **00 22 29.3 -1.1**
comp=Z,8.4nm,1.1s,baz=300,slow=16,SNR=8.8
NRIK LR LR 01 00 07.8
comp=Z,661nm,19.2s,baz=310,slow=34
comp=Z,8.4nm,1.1s
NRIK Noril'sk 91.15 15 P **P** **00 22 30.6 +0.1**
NRIK IAmb IAmb 00 22 44.2
comp=Z,49nm,1.9s
NRIK Noril'sk 91.15 15*ce*P **P** **00 22 30.5 +0.1**
NRIK pmax pmax
comp=Z,15nm,1.2s
BELA Belgrano 2 91.17 178 P **P** **00 22 30.2 +0.1**
BELA IAmb IAmb 00 22 31.8
comp=Z,41nm,1.8s
GEYT Alibeck 91.95 50 P **P** **00 22 35.4 +0.6**
comp=Z,1.9nm,0.8s,baz=286,slow=11,SNR=6.1
comp=Z,1.9nm,0.8s
NVL N'lazarevskaya 92.19 164 *e*P **P** **00 22 34.8 -0.2**
NVL pmax pmax
comp=Z,18nm,1.0s
BRVK Borovoye 93.92 33 IAMs_20 IAMs_20 01 02 20.3
comp=Z,2μm,21.0s
BRVK Borovoye 93.92 33 *i* P **P** **00 22 42.3 -1.2**
BRVK pmax pmax
comp=Z,11nm,3.4s
BVAR Borovoye Array 94.00 33 LR LR 01 02 33.8
comp=Z,2μm,21.0s,baz=295,slow=34
TIXI Tiksi 95.18 2 LR LR 01 01 19.4
comp=Z,429nm,21.0s,baz=358,slow=33
TIXI Tiksi 95.18 2 P **P** **00 22 48.6 -0.3**
TIXI IAmb IAmb 00 22 52.2
comp=Z,9.7nm,0.9s
TIXI Tiksi 95.18 2*ce*P **P** **00 22 47.9 -1.0**
TIXI pmax pmax
comp=Z,12nm,1.0s
BILL Bilibino 95.85 349 *e*P **P** **00 22 51.9 -0.2**
BILL *e* 00 26 42.4
BILL *e*S **SKSac** **00 33 28.4 -0.1**
BILL *e*SS **SS** **00 40 43.9 +5.2**
BILL pmax pmax
comp=Z,25nm,1.6s
BILL MLR MLR
comp=Z,730nm,20.0s
OPO Ambohidratompo 96.09 108 LR LR 00 59 55.8
comp=Z,838nm,21.1s,baz=167,slow=32
ABPO Ambohimpanom 96.22 108 IAMs_20 IAMs_20 01 00 42.2
comp=Z,2μm,20.0s
VOI Vohitsoka 96.41 111 IAMs_20 IAMs_20 01 02 40.3
comp=Z,1μm,20.0s
WSAR Wadi Sarin 96.91 64 LR LR 01 08 51.3
comp=Z,3μm,19.7s,baz=298,slow=37
TAOE Nuku Hiva Isla 97.04 263 *e*SS SS 00 41 00.2 +0.9
comp=Z,728nm,26.2s
TAOE Nuku Hiva Isla 97.04 263 *e*LR LR 00 54 25.4
comp=Z,3μm,32.5s
KURK Kurchatov 99.55 33 *i* P **Pdif** **00 23 10.2 +1.1**
KURK pmax pmax
comp=Z,18nm,3.8s
KURBB Kurchatov Arra 99.56 33 LR LR 01 07 58.6
comp=Z,501nm,19.5s,baz=283,slow=35
ZALV Zalesovo Beam 100.60 28 PP **PP** **00 27 15.9 -4.1**
comp=Z,0.5nm,0.5s,baz=304,slow=11,SNR=5.1
AAK Ala-Archa 101.47 41 IAMs_20 IAMs_20 01 07 11.6
comp=Z,1μm,21.0s
ADK Adak 102.89 332 IAMs_20 IAMs_20 01 09 16.6
comp=Z,1μm,19.0s
QSPA South Pole Qui 103.25 180 PKiKP **PKiKP** **00 27 47.0 +2.5**
comp=Z,1.7nm,0.6s,baz=186,slow=2.1,SNR=5.4
MKAR Makanchi Array 103.82 34 PKKPbc PKKPbc 00 39 19.2 -1.1
comp=Z,0.4nm,0.8s,baz=106,slow=2.6,SNR=4.2
NIL Nilore 104.93 50 IAMs_20 IAMs_20 01 12 57.2
comp=Z,1μm,21.0s
PPT2 Papeete2 107.67 256 *e*P **Pdif** **00 23 47.1 +1.2**
comp=Z,19nm,22.0s
PPT2 Papeete2 107.67 256 *e*PP **PP** **00 28 14.0 -0.4**
comp=Z,75nm,24.0s
PPT2 Papeete2 107.67 256 *e*SS SS 00 43 27.0 +0.7
comp=Z,842nm,28.8s
PPT2 Papeete2 107.67 256 *e*LR LR 00 59 20.0
comp=Z,2μm,33.5s
TBI Tubuai 108.33 250 *e*PP **PP** **00 28 18.9 -0.2**
comp=Z,95nm,42.0s
TBI Tubuai 108.33 250 *e*SS SS 00 43 35.8 +0.9
comp=Z,555nm,30.0s
TBI Tubuai 108.33 250 *e*LR LR 00 59 39.4
comp=Z,2μm,32.5s
PET Petropavlovsk 110.94 345 IAMs_20 IAMs_20 01 13 58.6
comp=Z,882nm,18.0s
ULN Ulaanbaatar 114.21 20 IAMs_20 IAMs_20 01 15 44.1
comp=Z,1μm,22.0s
GTA Gaotai 118.14 30 *e*PKP **PKiKP** **00 28 15.3 +1.7**
GTA LR LR
comp=Z,490nm,17.8s
GTA LR LR
comp=Z,750nm,18.5s
GTA LR LR
comp=Z,1μm,20.7s
LSA Lhasa 119.85 44 IAMs_20 IAMs_20 01 27 47.8
comp=Z,962nm,20.0s
XLT XiLinHaoTe 120.53 16 *e*PKP **PKiKP** **00 28 18.6 +0.6**
XLT PP **PP** **00 29 47.4 +3.9**
XLT AMB AMB
comp=Z,250nm,5.3s
XLT LR LR
comp=Z,71nm,18.9s
XLT LR LR
comp=Z,550nm,19.0s
XLT LR LR
comp=Z,800nm,20.5s
HHC Hu-ho-hao-te 121.92 21 *e*PKP **PKPdf** **00 28 16.0 -4.7**
HHC LR LR
comp=Z,1μm,18.4s
HHC LR LR
comp=Z,920nm,18.4s
HHC LR LR
comp=Z,2μm,19.0s
MDJ Mudanjiang 122.18 5 IAMs_20 IAMs_20 01 27 07.5
comp=Z,761nm,20.0s
CN2 Changchun 122.53 8 *e*PKP **PKPdf** **00 28 19.8 -1.8**
CN2 SKKS 00 36 51.3
CN2 LR LR
comp=Z,600nm,20.0s
CN2 LR LR
comp=Z,430nm,20.0s
CN2 LR LR
comp=Z,640nm,21.0s
BJT Baijiatuan 124.15 18 IAMs_20 IAMs_20 01 18 23.8
comp=Z,810nm,22.0s
SNY Shenyang 124.16 10 ⇑PKP **PKiKP** **00 28 28.5 +3.4**
SNY PP **PP** **00 30 14.4 +6.4**
SNY SS SS 00 47 04.6 +6.4
SNY AMB AMB
comp=Z,320nm,5.7s
SNY LR LR
comp=Z,870nm,21.8s
SNY LR LR
comp=Z,530nm,19.1s
SNY LR LR
comp=Z,1μm,18.1s
CASY Casey 124.53 168 IAMs_20 IAMs_20 01 17 10.7
comp=Z,1μm,20.0s
CD2 Chengdu 126.75 34 PKP **PKPdf** **00 28 29.0 -1.2**
XAN Xi'an 126.77 27 ⇑PKP **PKPdf** **00 28 29.8 -0.3**
XAN LR LR
comp=Z,820nm,22.9s
XAN LR LR
comp=Z,1μm,21.3s
XAN LR LR
comp=Z,1μm,22.8s
PZH PanZhiHua 128.88 39 PKP **PKPdf** **00 28 33.9 -0.6**
PZH SS SS 00 47 59.8 +0.8
PZH AMB AMB
comp=Z,220nm,6.8s
PZH LR LR
comp=Z,2μm,19.0s
PZH LR LR
comp=Z,1μm,20.3s
PZH LR LR
comp=Z,2μm,19.7s
INCN Inchon 128.90 9 IAMs_20 IAMs_20 01 28 32.5
comp=Z,853nm,21.0s
MAJO Matsushiro 130.37 357 IAMs_20 IAMs_20 01 27 39.5
comp=Z,598nm,18.0s
MJAR Matsushiro Arr 130.37 357 PKP **PKPdf** **00 28 35.9 -1.0**
comp=Z,2.6nm,0.7s,baz=3.7,slow=1.0,SNR=6.3
GYA Guiyang 131.81 35 ⇑PKP **PKiKP** **00 28 41.8 +0.8**
GYA PP PP 00 31 07.8 +8.7
GYA AMB AMB
comp=Z,450nm,5.4s
GYA LR LR
comp=Z,910nm,17.7s
NJ2 Nanjing 132.33 19 *e*PKP **PKPdf** **00 28 39.0 -1.7**
CMAR Chiang Mai Arr 132.42 49 PKP **PKPdf** **00 28 40.7 -0.5**
comp=Z,1.2nm,0.3s,baz=289,slow=3.2,SNR=12
CMAR Chiang Mai Arr 132.42 49 PKPdf **PKPdf** **00 28 40.8 -0.4**
QIZ Qiongzhong 139.40 38 PKP **PKPdf** **00 28 51.5 -2.6**
QIZ PP **PP** **00 31 46.8 -0.2**
QIZ SS SS 00 50 02.6 -3.1
QIZ LR LR
comp=Z,670nm,20.7s
QIZ LR LR
comp=Z,810nm,19.1s
QIZ LR LR
comp=Z,850nm,19.1s
DZM Mont Dzumac 148.91 249 *e*P **PKPdf** **00 29 10.3 -0.4**
comp=Z,144nm,24.7s
DZM Mont Dzumac 148.91 249 *e*PP **PP** **00 32 45.3 -0.1**
comp=Z,112nm,23.3s
DZM Mont Dzumac 148.91 249 *e*SS SS 00 51 57.8 +0.3
comp=Z,533nm,31.4s
DZM Mont Dzumac 148.91 249 *e*LR LR 01 18 27.2
comp=Z,2μm,25.9s
DZM Mont Dzumac 148.91 249 **PKPdf** **00 29 11.0 +0.3**
KOUNC Koumac, New Ca 151.17 251 IAMs_20 IAMs_20 01 29 40.0
comp=Z,852nm,21.0s
SBUM Sibu 152.46 57 **PKPbc** **00 29 22.1 -1.1**
SBUM IAMs_20 IAMs_20 01 39 05.1
comp=Z,855nm,20.0s
KKM Kota Kinabalu 153.18 45 PKPdf **PKPdf** **00 29 16.9 -0.6**
TOLI2 Tolitoli 159.87 46 IAMs_20 IAMs_20 01 47 28.9
comp=Z,733nm,20.0s
STKA Stephens Creek 160.54 197 PKP **PKPdf** **00 29 25.3 -0.9**
comp=Z,4.9nm,1.0s,baz=196,slow=3.4,SNR=4.6
ASAR Alice Springs 169.60 174 PKP **PKPdf** **00 29 32.4 -1.9**
comp=Z,1.4nm,0.9s,baz=191,slow=0.9,SNR=8.4
ASAR PKPab **PKPab** **00 30 42.4 -5.0**
comp=Z,1.0nm,1.0s,baz=180,slow=1.5,SNR=2.2
ASAR PP **PP** **00 34 40.2 +4.6**
comp=Z,0.7nm,0.8s,baz=176,slow=5.1,SNR=4.5
ASAR Alice Springs 169.60 174 **PKPdf** **00 29 33.0 -1.2**
ASAR Alice Springs 169.60 174 PKIKP **PKPdf** **00 29 33.0 -1.2**
WRA Warramunga Arr 173.32 174 PKP **PKPdf** **00 29 34.0 -2.2**
comp=Z,3.4nm,1.2s,baz=209,slow=0.2,SNR=6.4
WRA PKPab **PKPab** **00 31 00.7 -3.3**
comp=Z,1.3nm,1.0s,baz=185,slow=4.1,SNR=3.5
WRA PP PP 00 35 05.9 +12
comp=Z,1.1nm,1.2s,baz=225,slow=7.0,SNR=4.8
WRA Warramunga Arr 173.32 174 **PKPdf** **00 29 35.0 -1.1**
WRA Warramunga Arr 173.32 174 PKIKP **PKPdf** **00 29 35.1 -1.1**

*PDG **20** 00:09:54.7±0.6, 40.°76N×15.°68E, h19km, ML3.7/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*ROM **20** 00:09:54.5±0.1, 40.°755N±0.°006×15.°644E±0.°007, h17km±1km, ML3.4/56, Mw3.4, Error ellipse: s-maj=0.8km s-min=0.1km az=217.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.52; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-0.34; $M_{r\theta}$0.74; $M_{\theta\phi}$0.11; $M_{\phi r}$-1.58; Fault plane solution: $M_0$1.79991×10^{14} NP1:ϕ_s333.00000°, δ7.00000°, λ88.00000°. NP2:ϕ_s155.00000°, δ83.00000°, λ90.00000°.*
*PRU **20** 00:09:56.8±0.0, 41.°02N×15.°82E, h0km*
*IDC **20** 00:09:59.4±1.9, 40.°89N×15.°48E, h59km±29km, mb3.4/3, mbtmp3.6/9, ML3.3/4, MS2.6/1, Error ellipse: s-maj=32.1km s-min=21.8km az=103.0*

ISC 20 00:09:54.3±0.8, 40.°75N±0.°02×15.°61E±0.°02, h18km±2km, n153, σ1^{s}55/175, mb3.8/3, 15C-12D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRLC	**Muro Lucano**	**0.09**	**276**	⇑P	**Pg**	**00 09 58.5**	**+0.5**
MRLC				S	**Sg**	**00 10 01.7**	**+1.1**
MRLC				AML	AML		
	comp=N,37100μm,1.4s						
MRLC				AML	AML		
	comp=E,35950μm,0.6s						
MRLC				AML	AML		
	comp=N,40700μm,0.4s						
MRLC				AML	AML		
	comp=E,42600μm,0.4s						
PZUN	**Potenza**	**0.18**	**124**	⇓P	**Pg**	**00 09 59.2**	**+0.2**
PZUN				S	**Sg**	**00 10 02.7**	**+0.5**
PZUN				AML	AML		
	comp=N,21150μm,0.5s						
PZUN				AML	AML		
	comp=E,22850μm,0.6s						
PZUN				AML	AML		
	comp=E,23250μm,0.5s						
PZUN				AML	AML		
	comp=N,22150μm,0.5s						
PZUN				AML	AML		
	comp=N,21100μm,0.5s						
PZUN				AML	AML		
	comp=E,22850μm,1.4s						
PZUN				AML	AML		
	comp=E,23250μm,1.5s						
VULT	**Monte Vulture**	**0.21**	**1**	⇓P	**Pb**	**00 09 59.4**	**+0.1**
VULT				S	**Sg**	**00 10 03.0**	**-0.1**
VULT				AML	AML		
	comp=E,34250μm,0.1s						
VULT				AML	AML		
	comp=N,38000μm,0.4s						
VULT				AML	AML		
	comp=N,38050μm,0.4s						
VULT				AML	AML		
	comp=N,40200μm,0.4s						
VULT				AML	AML		
	comp=E,34250μm,0.1s						
VULT				AML	AML		
	comp=E,37700μm,0.1s						
VULT				AML	AML		
	comp=N,38000μm,0.4s						
ACER	**Acerenza**	**0.26**	**81**	⇓P	**Pb**	**00 09 59.9**	**-0.4**
ACER				S	**Sb**	**00 10 04.1**	**-0.1**
ACER				AML	AML		
	comp=N,62500μm,0.6s						
ACER				AML	AML		
	comp=E,97600μm,0.3s						
ACER				AML	AML		
	comp=E,91050μm,0.3s						
ACER				AML	AML		
	comp=N,62450μm,0.6s						
ACER				AML	AML		
	comp=N,65650μm,0.6s						
PALZ	**Palazzo San Ge**	**0.33**	**53**	⇓P	**Pg**	**00 10 00.9**	**-0.6**
PALZ				S	**Sg**	**00 10 05.9**	**-0.4**
PALZ				AML	AML		
	comp=N,19700μm,0.9s						
PALZ				AML	AML		
	comp=E,26100μm,0.3s						
PALZ				AML	AML		
	comp=E,26100μm,1.7s						
MCRV	**Calabrutti - M**	**0.34**	**276**	P	**Pg**	**00 10 01.8**	**+0.2**
MCRV				AML	AML		
	comp=N,7975μm,0.4s						
MCRV				AML	AML		
	comp=E,6135μm,0.5s						
MCRV				AML	AML		
	comp=N,7975μm,1.6s						
CDRU	**Civita di Ruta**	**0.35**	**222**	P	**Pg**	**00 10 02.0**	**+0.2**
CDRU				AML	AML		
	comp=E,5435μm,0.5s						
CDRU				AML	AML		
	comp=N,2595μm,0.2s						
SNAL	**S. Angelo Dei**	**0.35**	**300**	P	**Pb**	**00 10 02.3**	**+0.1**
SNAL				S	**Sb**	**00 10 08.6**	**+1.1**
SNAL				AML	AML		
	comp=N,9260μm,0.8s						
SNAL				AML	AML		
	comp=E,8830μm,1.0s						
SNAL				AML	AML		
	comp=N,9125μm,0.8s						
SNAL				AML	AML		
	comp=E,8290μm,1.0s						
CAFE	**Carife**	**0.40**	**315**	P	**Pg**	**00 10 03.0**	**+0.3**
CAFE				AML	AML		
	comp=E,6525μm,0.4s						
CAFE				AML	AML		
	comp=N,4665μm,0.6s						
CAFE				AML	AML		
	comp=N,4575μm,0.6s						
CAFE				AML	AML		
	comp=E,6325μm,0.4s						
PTRP	**Pietrapertosa**	**0.41**	**123**	P	**Pg**	**00 10 03.1**	**+0.2**
PTRP				S	**Sb**	**00 10 09.6**	**+0.5**
PTRP				AML	AML		
	comp=N,8450μm,0.6s						
PTRP				AML	AML		
	comp=E,5955μm,0.7s						
SGTA	**Sant Agata di**	**0.43**	**334**	P	**Pg**	**00 10 03.3**	**+0.1**
SGTA				AML	AML		
	comp=N,3360μm,0.6s						
SGTA				AML	AML		
	comp=E,5265μm,0.4s						
SGTA				AML	AML		
	comp=N,3385μm,0.6s						
SGTA				AML	AML		
	comp=E,5080μm,0.4s						
SGTA				AML	AML		
	comp=N,3365μm,0.6s						
SGTA				AML	AML		
	comp=E,5080μm,1.6s						
SGTA				AML	AML		
	comp=E,5265μm,1.6s						
CAPA	**Cerignola FG**	**0.44**	**21**	P	**Pg**	**00 10 02.6**	**-0.7**
CAPA				AML	AML		
	comp=N,11900μm,0.4s						
CAPA				AML	AML		
	comp=E,8740μm,0.9s						
CAPA				AML	AML		
	comp=E,8740μm,1.1s						
MCEL	**Monticello**	**0.45**	**161**	P	**Pg**	**00 10 03.1**	**-0.4**
MCEL				S	**Sg**	**00 10 10.2**	**+0.5**
MCEL				AML	AML		
	comp=E,2770μm,0.8s						
MCEL				AML	AML		
	comp=E,2730μm,0.8s						
MCEL				AML	AML		
	comp=N,3225μm,1.1s						
MCEL				AML	AML		
	comp=N,3305μm,1.1s						
MCEL				AML	AML		
	comp=N,3225μm,0.9s						
MCEL				AML	AML		
	comp=N,3305μm,0.9s						
MCEL				AML	AML		
	comp=E,2770μm,1.2s						
MCEL				AML	AML		
	comp=E,2730μm,1.2s						
AG11	**Viggiano (PZ)**	**0.49**	**148**	AML	AML		
	comp=E,9910μm,0.4s						
AG11				AML	AML		
	comp=E,9885μm,0.4s						
AG11				AML	AML		
	comp=N,4500μm,0.7s						
AG11				AML	AML		
	comp=N,4505μm,0.7s						
CMPR	**Campora**	**0.49**	**209**	P	**Pg**	**00 10 04.0**	**-0.2**
CMPR				AML	AML		
	comp=N,2520μm,0.5s						

CMPR				AML	AML	
	comp=E,2400μm,0.7s					
CMPR				AML	AML	
	comp=N,2520μm,1.5s					
CMPR				AML	AML	
	comp=E,2400μm,1.3s					
MTSN	**Montesano sull**	**0.49**	**167**	P	**Pg**	**00 10 04.1 -0.2**
MTSN				AML	AML	
	comp=E,2825μm,0.4s					
MTSN				AML	AML	
	comp=N,2315μm,0.9s					
SIRI	**Monte Sirino -**	**0.60**	**161**	P	**Pb**	**00 10 05.4 -0.8**
SIRI				AML	AML	
	comp=N,3285μm,0.9s					
SIRI				AML	AML	
	comp=N,3215μm,0.9s					
SIRI				AML	AML	
	comp=E,3065μm,0.4s					
SIRI				AML	AML	
	comp=E,3160μm,0.4s					
MGR	**Morigerati**	**0.61**	**184**	P	**Pb**	**00 10 05.8 -0.6**
MGR				AML	AML	
	comp=E,2610μm,0.4s					
MGR				AML	AML	
	comp=N,2295μm,1.3s					
MGR				AML	AML	
	comp=N,2540μm,1.3s					
MGR				AML	AML	
	comp=N,2295μm,1.4s					
MGR				AML	AML	
	comp=E,2480μm,0.4s					
MGR				AML	AML	
	comp=E,2615μm,0.4s					
MRB1	**Monte Rocchett**	**0.61**	**308**	P	**Pb**	**00 10 06.5 0.0**
MRB1				AML	AML	
	comp=N,8595μm,0.5s					
MRB1				AML	AML	
	comp=E,5470μm,1.3s					
MRB1				AML	AML	
	comp=N,8920μm,0.5s					
MRB1				AML	AML	
	comp=E,5430μm,1.3s					
MRB1				AML	AML	
	comp=N,8915μm,0.5s					
MRB1				AML	AML	
	comp=E,5470μm,0.7s					
MRB1				AML	AML	
	comp=E,5430μm,0.7s					
MRB1				AML	AML	
	comp=N,8595μm,1.5s					
MRB1				AML	AML	
	comp=N,8915μm,1.5s					
MIGL	**Miglionico**	**0.65**	**102**	P	**Pb**	**00 10 06.2 -0.9**
MIGL				S	**Sg**	**00 10 16.2 +0.4**
MIGL				AML	AML	
	comp=E,12605μm,0.3s					
MIGL				AML	AML	
	comp=N,10195μm,0.3s					
MIGL				AML	AML	
	comp=N,10190μm,0.3s					
SCHR	**S. Chirico Rap**	**0.65**	**147**	P	**Pb**	**00 10 06.3 -0.8**
SCHR				AML	AML	
	comp=E,2570μm,1.0s					
SCHR				AML	AML	
	comp=N,2710μm,0.4s					
MOCO	**Biccari - m.te**	**0.71**	**331**	AML	AML	
	comp=E,2030μm,0.6s					
MOCO				AML	AML	
	comp=N,1285μm,0.7s					
MOCO				AML	AML	
	comp=E,2050μm,0.6s					
MOCO				AML	AML	
	comp=N,1350μm,0.7s					
MOCO				AML	AML	
	comp=N,1350μm,1.3s					
MOCO				AML	AML	
	comp=N,1285μm,1.3s					
CRAC	**Craco**	**0.73**	**121**	P	**Pb**	**00 10 08.0 -0.6**
CRAC				AML	AML	
	comp=N,7930μm,1.3s					
CRAC				AML	AML	
	comp=N,7930μm,0.7s					
CRAC				AML	AML	
	comp=E,5840μm,0.3s					
AMUR	**Altamura**	**0.77**	**78**	P	**Pb**	**00 10 08.4 -0.8**
AMUR				AML	AML	
	comp=E,7115μm,0.3s					
AMUR				AML	AML	
	comp=N,5630μm,0.3s					
AMUR				AML	AML	
	comp=N,5630μm,1.7s					
CUC	**Castrocucco**	**0.77**	**168**	P	**Pb**	**00 10 08.7 -0.5**
CUC				AML	AML	
	comp=E,1960μm,0.6s					
CUC				AML	AML	
	comp=N,1655μm,0.8s					
CUC				AML	AML	
	comp=N,1650μm,0.8s					
CUC				AML	AML	
	comp=E,2430μm,0.6s					
CUC				AML	AML	
	comp=N,2015μm,0.8s					
MATE	**Matera**	**0.84**	**96**	P	**Pb**	**00 10 09.6 -0.7**
MATE				S	**Sg**	**00 10 21.6 -0.1**
MATE				AML	AML	
	comp=E,12150μm,0.4s					
MATE				AML	AML	
	comp=N,6105μm,0.7s					
MATE				AML	AML	
	comp=E,12150μm,1.6s					
PAOL	**Paolisi**	**0.84**	**290**	P	**Pn**	**00 10 11.8 +0.5**
PAOL				AML	AML	
	comp=E,2945μm,0.5s					
PAOL				AML	AML	
	comp=E,3130μm,0.5s					
PAOL				AML	AML	
	comp=N,3055μm,1.6s					
PAOL				AML	AML	
	comp=N,2920μm,1.6s					
PAOL				AML	AML	
	comp=N,3055μm,0.4s					
PAOL				AML	AML	
	comp=N,2920μm,0.4s					
VITU	**Vitulano (BN)**	**0.86**	**301**	P	**Pb**	**00 10 11.1 +0.3**
VITU				AML	AML	
	comp=N,4275μm,0.4s					
VITU				AML	AML	
	comp=N,4280μm,0.4s					
VITU				AML	AML	
	comp=E,4440μm,0.5s					
VITU				AML	AML	
	comp=N,4495μm,0.4s					
VITU				AML	AML	
	comp=E,1650μm,0.9s					
VITU				AML	AML	
	comp=N,4495μm,1.6s					
VITU				AML	AML	
	comp=N,4280μm,1.6s					
VBKN	**Vesuvio Bunker**	**0.90**	**276**	P	**Pn**	**00 10 12.7 +0.5**
VBKN				AML	AML	
	comp=N,6245μm,0.8s					
VBKN				AML	AML	
	comp=N,6250μm,0.8s					
VBKN				AML	AML	
	comp=E,5170μm,0.5s					
MMN	**Mormanno**	**0.90**	**161**	P	**Pn**	**00 10 12.6 +0.5**
MMN				AML	AML	
	comp=E,420μm,0.5s					
MMN				AML	AML	
	comp=N,916μm,0.5s					
MMN				AML	AML	
	comp=N,916μm,1.5s					
CRTO	**Cratere Ovest,**	**0.91**	**275**	P	**Pn**	**00 10 12.7 +0.5**
CRTO				AML	AML	
CRTO				AML	AML	
CRTO				AML	AML	
VVDG	**Vesuvio Valle**	**0.91**	**276**	P	**Pn**	**00 10 12.8 +0.6**
VVDG				AML	AML	
	comp=N,3020μm,1.4s					
VVDG				AML	AML	
	comp=E,1800μm,0.5s					
VVDG				AML	AML	
	comp=N,3020μm,0.6s					
LTRZ	**Laterza**	**0.93**	**99**	P	**Pb**	**00 10 11.4 -0.5**
LTRZ				S	**Sg**	**00 10 24.3 -0.4**
LTRZ				AML	AML	
	comp=N,5400μm,1.2s					
LTRZ				AML	AML	
	comp=E,4855μm,0.3s					
LTRZ				AML	AML	
	comp=N,5395μm,1.2s					
ORI	**Oriolo Calabro**	**0.94**	**137**	P	**Pb**	**00 10 11.7 -0.3**
ORI				AML	AML	
	comp=E,3985μm,0.5s					
ORI				AML	AML	
	comp=N,3755μm,0.4s					
SACR	**S. Croce Del S**	**0.94**	**314**	P	**Pg**	**00 10 13.6 +0.8**
SACR				AML	AML	
	comp=E,962μm,1.5s					
SACR				AML	AML	
	comp=N,1220μm,1.6s					
SACR				AML	AML	
	comp=E,962μm,0.5s					
SACR				AML	AML	
	comp=N,1220μm,0.4s					
APRC	**Apricena**	**1.01**	**357**	⇑P	**Pb**	**00 10 13.0 -0.3**
APRC				AML	AML	
	comp=N,6745μm,0.7s					
APRC				AML	AML	
	comp=E,5010μm,0.4s					
APRC				AML	AML	
	comp=N,6745μm,1.3s					
SGRT	**San Giovanni R**	**1.01**	**6**	⇑P	**Pb**	**00 10 13.0 -0.3**
SGRT				AML	AML	
	comp=E,6100μm,1.2s					
SGRT				AML	AML	
	comp=N,6780μm,0.3s					
MELA	**Melanico ??? S**	**1.02**	**339**	P	**Pb**	**00 10 13.2 -0.3**
MELA				AML	AML	
	comp=E,3235μm,1.6s					
MELA				AML	AML	
	comp=E,3230μm,1.6s					
MELA				AML	AML	
	comp=N,3105μm,0.6s					
MELA				AML	AML	
	comp=N,3315μm,0.6s					
MELA				AML	AML	
	comp=E,3410μm,1.6s					
MELA				AML	AML	
	comp=N,3105μm,1.4s					
MELA				AML	AML	
	comp=N,3315μm,1.4s					
MELA				AML	AML	
	comp=E,3230μm,0.4s					
MELA				AML	AML	
	comp=E,3410μm,0.4s					
SALB	**San Lorenzo Be**	**1.03**	**147**	P	**Pb**	**00 10 13.3 -0.4**
SALB				AML	AML	
	comp=E,1285μm,1.6s					
SALB				AML	AML	
	comp=E,1315μm,0.7s					
SALB				AML	AML	
	comp=N,1090μm,0.7s					
SALB				AML	AML	
	comp=E,1285μm,0.4s					
SALB				AML	AML	
	comp=N,1024μm,0.7s					
CIGN	**Sant'Elia a Pi**	**1.05**	**330**	P	**Pg**	**00 10 15.2 +0.4**
CIGN				AML	AML	
	comp=N,756μm,1.6s					
CIGN				AML	AML	
	comp=E,667μm,0.9s					
CIGN				AML	AML	
	comp=N,756μm,0.4s					
NOCI	**Noci**	**1.10**	**87**	P	**Pb**	**00 10 14.0 -0.8**
NOCI				S	**Sg**	**00 10 30.1 -0.2**
NOCI				AML	AML	
	comp=E,12000μm,1.5s					
NOCI				AML	AML	
	comp=N,11850μm,0.2s					
NOCI				AML	AML	
	comp=E,12000μm,0.5s					
BSSO	**Busso**	**1.11**	**316**	P	**Pg**	**00 10 15.6 -0.2**
BSSO				AML	AML	
	comp=E,428μm,1.6s					
BSSO				AML	AML	
	comp=N,654μm,0.7s					
BSSO				AML	AML	
	comp=E,428μm,0.4s					
PIGN	**Pignataro Magg**	**1.17**	**293**	P	**Pn**	**00 10 15.7 -0.1**
PIGN				AML	AML	
	comp=E,832μm,0.5s					
PIGN				AML	AML	
	comp=N,1315μm,0.7s					
PIGN				AML	AML	
	comp=E,890μm,0.9s					
PIGN				AML	AML	
	comp=N,1140μm,1.2s					
PIGN				AML	AML	
	comp=N,1140μm,0.8s					
VAGA	**Valle Agricola**	**1.24**	**303**	P	**Pb**	**00 10 17.5 +0.4**
VAGA				AML	AML	
	comp=E,1058μm,0.6s					
VAGA				AML	AML	
	comp=N,1420μm,1.1s					
VAGA				AML	AML	
	comp=N,1445μm,1.1s					
VAGA				AML	AML	
	comp=N,1420μm,0.9s					
VAGA				AML	AML	
	comp=E,1089μm,0.6s					
VAGA				AML	AML	
	comp=N,1445μm,0.9s					
CET2	**Cetraro**	**1.25**	**168**	P	**Pb**	**00 10 17.7 +0.4**
CET2				AML	AML	
	comp=N,2075μm,0.6s					
CET2				AML	AML	
	comp=E,1675μm,0.7s					
TAR1	**Taranto**	**1.29**	**99**	AML	AML	
	comp=E,4715μm,0.4s					
TAR1				AML	AML	
	comp=N,3825μm,0.5s					
TRIV	**Trivento**	**1.29**	**322**	P	**Pb**	**00 10 18.8 +0.6**
TRIV				AML	AML	
	comp=E,978μm,1.5s					
TRIV				AML	AML	
	comp=N,1495μm,0.7s					
TRIV				AML	AML	
	comp=N,1495μm,1.3s					
TREM	**Isole Tremiti**	**1.38**	**357**	P	**Pn**	**00 10 18.7 +0.1**
TREM				AML	AML	
	comp=E,3745μm,0.5s					
TREM				AML	AML	
	comp=N,5655μm,0.3s					
CERA	**Filignano**	**1.47**	**306**	P	**Pb**	**00 10 21.1 -0.1**
CERA				AML	AML	
	comp=E,852μm,0.9s					
CERA				AML	AML	
	comp=N,958μm,0.8s					
CERA				AML	AML	
	comp=N,958μm,1.2s					
CELI	**Celico**	**1.51**	**153**	P	**Pg**	**00 10 23.1 -0.3**
CELI				AML	AML	
	comp=E,1335μm,0.7s					
CELI				AML	AML	
	comp=E,1335μm,1.3s					
CELI				AML	AML	
	comp=N,1310μm,0.7s					
SPS2	**Spezzano della**	**1.56**	**159**	P	**Pn**	**00 10 21.1 -0.1**
SPS2				AML	AML	
	comp=E,222μm,0.4s					
SPS2				AML	AML	
	comp=N,173μm,1.6s					
SPS2				AML	AML	
	comp=E,222μm,1.6s					
SPS2				AML	AML	
	comp=N,173μm,0.4s					
CAR1	**CAROLEI**	**1.56**	**163**	P	**Pn**	**00 10 22.0 +0.8**
CAR1				AML	AML	
	comp=N,854μm,0.7s					
CAR1				AML	AML	
	comp=N,854μm,1.3s					
CAR1				AML	AML	
	comp=E,781μm,0.8s					
VENT	**Ventotene**	**1.66**	**272**	P	**Pn**	**00 10 22.5 0.0**
LPEL	**Lama dei Pelig**	**1.69**	**321**	AML	AML	
	comp=N,499μm,0.8s					
LPEL				AML	AML	
	comp=N,499μm,1.2s					
LPEL				AML	AML	
	comp=E,532μm,1.1s					
LPEL				AML	AML	
	comp=E,532μm,0.9s					
LRP	**Arpino**	**1.77**	**301**	AML	AML	
	comp=E,218μm,0.8s					
LRP				AML	AML	
	comp=N,240μm,0.7s					
LRP				AML	AML	
	comp=N,240μm,1.3s					
TIP	**Timpagrande**	**1.80**	**150**	P	**Pb**	**00 10 26.4 -0.4**
INTR	**Introdacqua**	**1.80**	**315**	P	**Pb**	**00 10 26.2 -0.6**
INTR				AML	AML	
	comp=E,378μm,0.6s					
INTR				AML	AML	
	comp=N,1340μm,0.7s					
SERS	**Sersale**	**1.90**	**154**	P	**Pb**	**00 10 28.7 +0.2**
SERS				AML	AML	
	comp=N,246μm,1.0s					
SERS				AML	AML	
	comp=N,209μm,0.8s					
SERS				AML	AML	
	comp=N,209μm,1.2s					
SERS				AML	AML	
	comp=E,260μm,1.0s					
SERS				AML	AML	
	comp=E,208μm,0.9s					
IST3	**Stromboli F**	**1.97**	**189**	AML	AML	
	comp=E,431μm,0.7s					
IST3				AML	AML	
	comp=N,432μm,0.7s					
T0110	**Collepietro**	**2.02**	**318**	P	**Pb**	**00 10 29.7 -0.8**
T0110				AML	AML	
	comp=N,458μm,0.5s					
T0110				AML	AML	
	comp=E,462μm,0.9s					
CERT	**Cerreto**	**2.31**	**302**	AML	AML	
	comp=E,156μm,0.6s					
CERT				AML	AML	
	comp=N,88μm,1.0s					
CERT				AML	AML	
	comp=N,88μm,1.0s					
IFIL	**Filicudi I Eol**	**2.33**	**201**	AML	AML	
	comp=E,416μm,0.8s					
IFIL				AML	AML	
	comp=N,124μm,0.9s					
IFIL				AML	AML	
	comp=N,124μm,1.1s					
MSRU	**Castanea**	**2.48**	**182**	P	**Pn**	**00 10 34.7 +0.8**
MSRU				AML	AML	
	comp=N,401μm,1.2s					
MSRU				AML	AML	
	comp=N,401μm,0.8s					
MSRU				AML	AML	
	comp=E,568μm,0.7s					
MILZ	**Milazzo**	**2.49**	**187**	P	**Pn**	**00 10 34.8 +0.9**
MILZ				AML	AML	
	comp=E,272μm,0.9s					
MILZ				AML	AML	
	comp=N,228μm,0.7s					
GMB	**Gambarie**	**2.58**	**176**	AML	AML	
	comp=N,672μm,1.1s					
GMB				AML	AML	
	comp=E,756μm,0.7s					
STON	**Ston**	**2.63**	**36**	*e*Pn	**Pn**	**00 10 34.1 -1.8**
STON	**Ston**	**2.63**	**36**	AML	AML	
	comp=N,360μm,0.4s					
STON				AML	AML	
	comp=E,465μm,0.4s					
SOI	**Samo**	**2.69**	**173**	P	**Pn**	**00 10 37.9 +1.2**
SOI				AML	AML	
	comp=N,160μm,0.8s					
SOI				AML	AML	
	comp=N,160μm,1.2s					
SOI				AML	AML	
	comp=E,143μm,0.6s					
MTTG	**Motta San Giov**	**2.74**	**179**	P	**Pn**	**00 10 38.6 +1.2**
MTTG				AML	AML	
	comp=E,454μm,1.1s					
MTTG				AML	AML	
	comp=N,374μm,0.6s					
MTTG				AML	AML	
	comp=E,454μm,0.9s					
HCY	**Herceg Novi**	**2.75**	**51**	*e*Pn	**Pn**	**00 10 36.8 -0.7**
HCY	**Herceg Novi**	**2.75**	**51**	*e*Pn	**Pn**	**00 10 38.4 +0.9**
HCY				*i* Sn	**Sn**	**00 11 11.8 +1.6**
BUM	**Brajici-Budva**	**2.91**	**57**	*e*Pn	**Pn**	**00 10 40.7 +0.9**
BUM				*i* Sn	**Sn**	**00 11 15.7 +1.4**
ULC	**Ulcinj**	**2.99**	**65**	*e*Pn	**Pn**	**00 10 41.7 +0.9**
ULC				*i* Sn	**Sn**	**00 11 17.6 +1.4**
DRME	**Dracevica, Mon**	**3.05**	**61**	*e*Pn	**Pn**	**00 10 41.9 +0.3**
DRME	**Dracevica, Mon**	**3.05**	**61**	⇑*i* Pn	**Pn**	**00 10 42.6 +1.0**
DRME				*i* Sn	**Sn**	**00 11 19.0 +1.5**
CEME	**Cevo**	**3.06**	**53**	*e*Pn	**Pn**	**00 10 42.1 +0.3**
CEME				*i* Sn	**Sn**	**00 11 19.4 +1.4**
BRY	**Bratogost**	**3.07**	**45**	*e*Pn	**Pn**	**00 10 41.8 -0.2**
BRY	**Bratogost**	**3.07**	**45**	⇓*i* Pn	**Pn**	**00 10 43.0 +1.0**
BRY				*i* Sn	**Sn**	**00 11 19.6 +1.3**
PETRA	**Petralia Sopra**	**3.13**	**202**	AML	AML	
	comp=N,56μm,0.8s					
PETRA				AML	AML	
	comp=E,73μm,0.8s					
PETRA				AML	AML	
	comp=N,56μm,1.2s					
PETRA				AML	AML	
	comp=E,73μm,1.2s					
PDG	**Podgorica**	**3.21**	**57**	⇓P	**Pn**	**00 10 45.0 +1.2**
PDG	**Podgorica**	**3.21**	**57**	AML	AML	
	comp=N,246μm,0.9s					
PDG				AML	AML	
	comp=N,320μm,1.1s					
PDG				AML	AML	
	comp=E,320μm,0.5s					
PDG				AML	AML	
	comp=E,410μm,0.5s					
PDG				AML	AML	
	comp=N,246μm,1.1s					
TTG	**Podgorica**	**3.21**	**57**	*e*Pn	**Pn**	**00 10 44.9 +1.2**
TTG				*i* Sn	**Sn**	**00 11 22.9 +1.4**
NKME	**Niksic**	**3.21**	**50**	*e*Pn	**Pn**	**00 10 44.9 +1.0**
NKME				*i* Sn	**Sn**	**00 11 23.0 +1.3**
TIR	**Tirane**	**3.27**	**78**	⇑P	**Pn**	**00 10 47.2 +2.5**
VAE	**Valguarnera**	**3.40**	**196**	P	**Pb**	**00 10 50.8 -3.2**
	comp=N,15nm,0.9s,baz=27,slow=4.5,SNR=7.9					
UPM	**Unac-Piva**	**3.47**	**44**	*e*Pn	**Pn**	**00 10 46.1 -1.5**
UPM	**Unac-Piva**	**3.47**	**44**	⇑*i* Pn	**Pn**	**00 10 48.5 +0.9**
UPM				*i* Sn	**Sn**	**00 11 29.4 +1.1**
SRKY	**Kupres RS**	**3.51**	**19**	*e*Pn	**Pn**	**00 10 49.1 +1.0**
KOME	**Kolasin**	**3.60**	**53**	*e*Pn	**Pn**	**00 10 50.2 +1.0**
KOME				*i* Sn	**Sn**	**00 11 32.3 +1.1**
PVY	**Plav**	**3.74**	**59**	*e*Pn	**Pn**	**00 10 52.3 +1.0**
PVY				*i* Sn	**Sn**	**00 11 35.8 +0.9**
PLE	**Pljevlja**	**3.82**	**46**	*e*Pn	**Pn**	**00 10 53.3 +1.0**
PLE				*i* Sn	**Sn**	**00 11 37.7 +1.0**
MGRS	**Mrkonjic Grad**	**3.83**	**16**	*e*Pn	**Pn**	**00 10 53.6 +1.3**
IVA	**Berane**	**3.84**	**55**	*e*Pn	**Pn**	**00 10 53.6 +1.0**
IVA				*i* Sn	**Sn**	**00 11 38.2 +1.0**
OHR	**Ohrid**	**3.95**	**83**	*i* Pn	**Pn**	**00 10 55.8 +1.8**
RUDO	**Rudo**	**4.00**	**43**	*e*Pn	**Pn**	**00 10 54.5 -0.2**
BLY	**Banja Luka**	**4.16**	**16**	*e*Pn	**Pn**	**00 10 57.8 +0.9**
BLY	**Banja Luka**	**4.16**	**16**	AML	AML	
	comp=E,241μm,0.8s					
BLY				AML	AML	
	comp=E,241μm,0.5s					
BLY				AML	AML	
	comp=N,176μm,0.7s					
BLY				AML	AML	
	comp=E,241μm,1.5s					
BLY				AML	AML	
	comp=N,170μm,0.7s					
BBLS	**Lazići**	**4.20**	**41**	*e*Pn	**Pn**	**00 10 58.6 +1.1**
A051A	**Mrakovica**	**4.37**	**12**	*e*Pn	**Pn**	**00 11 00.5 +0.7**
A052A	**Srbac**	**4.57**	**17**	*e*Pn	**Pn**	**00 11 02.5 0.0**
DIVS	**Divibare**	**4.66**	**43**	*e*Pn	**Pn**	**00 11 02.7 -1.1**
DIVS	**Divibare**	**4.66**	**43**	AML	AML	
	comp=N,65μm,0.9s					
DIVS				AML	AML	
	comp=E,53μm,0.7s					
DIVS				AML	AML	
	comp=N,65μm,1.1s					
BOJS	**Bojanci**	**4.76**	**357**	*e*Pn	**Pn**	**00 11 05.5 +0.4**
BOJS	**Bojanci**	**4.76**	**357**	AML	AML	
	comp=N,166μm,0.8s					
BOJS				AML	AML	
	comp=E,162μm,0.7s					
TEKS	**Tekeris**	**4.77**	**36**	*e*Pn	**Pn**	**00 11 03.8 -1.5**
SKDS	**Skadanscina**	**4.94**	**347**	*e*Pn	**Pn**	**00 11 07.1 -0.5**
STIP	**Stip**	**5.05**	**77**	*i* Pn	**Pn**	**00 11 12.2 +3.1**
CEY	**Cerknica**	**5.06**	**351**	*e*Pn	**Pn**	**00 11 09.9 +0.6**
CRES	**Cresnjev**	**5.08**	**359**	*e*Pn	**Pn**	**00 11 09.5 0.0**

BOVS	Bovan	5.37	55	⇑P		Pn	00 11 13.6 +0.2
FRGS	Fruska Gora	5.38	34	*e*Pn		Pn	00 11 12.1 -1.5
OBKA	Obir	5.81	353	*e*Pn		Pn	00 11 19.1 -0.5
OBKA	Obir	5.81	353	*e*Pn		Pn	00 11 20.1 +0.4
	comp=E,4.6nm,0.3s						
SOKA	Soboth	5.94	356	*e*Pn		Pn	00 11 22.5 +1.1
	comp=E,1.4nm,0.3s						
BLKB	Belogradchik	5.98	59	⇑P		Pn	00 11 22.4 +0.4
VTS	Vitosha	6.01	69	⇑P		Pn	00 11 23.0 +0.6
MYKA	Terra Mystica	6.05	347	*e*Pn		Pn	00 11 25.8 +2.9
	comp=E,1.1nm,0.4s						
MYKA				*e*Sn		Sn	00 12 31.4 -0.3
	comp=E,5.7nm,0.4s						
ABTA	Abfaltersbach	6.40	341	*e*Pn		Pn	00 11 30.6 +2.8
	comp=E,0.4nm,0.2s						
ABTA				*e*Sn		Sn	00 12 37.0 -3.3
	comp=E,18nm,0.6s						
DJES	Djerdap	6.42	50	⇓P		Pn	00 11 29.3 +1.4
HERR	Herculane	6.49	48	⇑P		Pn	00 11 28.6 -0.2
ARSA	Arzberg	6.50	359	*e*Pn		Pn	00 11 28.7 -0.4
	comp=E,2.5nm,0.3s						
KBA	Koelnbreinsper	6.54	346	*e*Pn		Pn	00 11 33.5 +3.8
	comp=E,2.1nm,0.3s						
KBA				*e*Sn		Sn	00 12 41.7 -2.1
	comp=E,3.7nm,0.3s						
BZS	Buzias	6.55	40	⇓P		Pn	00 11 30.9 +1.2
RONA	Rosalia, Austr	6.97	4	*e*Pn		Pn	00 11 36.4 +0.9
	comp=E,0.7nm,0.2s						
GZR	Gura Zlata	7.00	46	⇑P		Pn	00 11 35.8 -0.2
KEST	Kesra	7.03	227	P		Pn	00 11 40.6 +4.3
	comp=E,0.4nm,0.3s,baz=58,slow=13,SNR=9.1						
KEST				LR		LR	00 14 43.0
	comp=E,43nm,19.5s,baz=5.5,slow=40						
	comp=E,1.7nm,0.5s						
BIOA	Bad Ischl, Aus	7.08	349	*e*Pn		Pn	00 11 39.7 +2.7
	comp=E,3.0nm,0.3s						
BIOA				*e*Sn		Sn	00 12 56.9 -0.1
	comp=E,18nm,0.6s						
WTTA	Wattenberg	7.12	338	*e*Sn		Sn	00 12 58.4 +0.3
	comp=E,20nm,0.8s						
MOA	Molln	7.17	353	*e*Pn		Pn	00 11 39.4 +1.3
	comp=E,4.6nm,0.3s						
MOA				*e*Sn		Sn	00 12 55.4 -3.7
	comp=E,10nm,0.5s						
CONA	Conrad Observa	7.18	1	*e*Pn		Pn	00 11 38.5 +0.1
	comp=E,1.9nm,0.4s						
CONA				*e*Sn		Sn	00 13 00.2 +0.6
	comp=E,2.1nm,0.4s						
FETA	Feichten	7.19	332	*e*Pn		Pn	00 11 44.8 +6.2
	comp=E,0.8nm,0.4s						
FETA				*e*Sn		Sn	00 12 59.1 -0.8
	comp=E,5.1nm,0.5s						
WATA	Walderalm	7.20	338	*i* Pn		Pn	00 11 44.9 +6.2
	comp=E,3.1nm,0.3s						
SQTA	Sankt Quirin	7.21	335	*e*Pn		Pn	00 11 42.7 +3.9
	comp=E,1.7nm,0.4s						
SQTA				*e*Sn		Sn	00 13 01.1 +1.0
	comp=E,9.8nm,0.5s						
DAVOX	Davos/Dischmat	7.32	327	P		Pn	00 11 42.6 +2.2
	comp=E,0.3nm,0.3s,baz=155,slow=17,SNR=2.6						
DAVOX				S		Sn	00 12 57.8 -5.3
	comp=E,1.5nm,0.6s,baz=356,slow=23,SNR=1.1						
	comp=E,1.1nm,0.4s						
MOTA	Moosalm	7.35	335	*e*Pn		Pn	00 11 44.6 +3.8
	comp=E,1.6nm,0.5s						
MOTA				*e*Sn		Sn	00 13 02.2 -1.6
	comp=E,13nm,0.6s						
RETA	Reutte	7.59	334	*e*Pn		Pn	00 11 48.6 +4.6
	comp=E,0.5nm,0.2s						
RETA				*e*Sn		Sn	00 13 11.8 +2.3
	comp=E,6.1nm,0.4s						
LOT	Lotru	7.59	49	⇓P		Pn	00 11 45.7 +1.6
DAVA	Damuels	7.73	330	*e*Pn		Pn	00 11 51.1 +5.1
	comp=E,1.6nm,0.4s						
DAVA				*i* Sn		Sn	00 13 13.6 +0.5
	comp=E,5.6nm,0.5s						
CKRC	Cesky Krumlov	8.12	354	*e*PN		Pn	00 11 51.2 -0.1
CKRC				*e*SN		Sn	00 13 17.1 -5.5
GERES	GERESS Array B	8.21	351	P		Pn	00 11 53.2 +0.7
	comp=E,0.3nm,0.3s,baz=172,slow=13,SNR=9.5						
GERES				S		Sn	00 13 18.3 -6.5
	comp=E,1.9nm,0.4s,baz=161,slow=24,SNR=9.2						
	comp=E,0.6nm,0.3s						
VOIR		8.34	53	⇓P		Pn	00 11 56.0 +1.6
KHC	Kasperske Hory	8.51	351	*e*PN		Pn	00 11 56.2 -0.3
KHC				*e*SN		Sn	00 13 27.5 -4.5
DOPR	Dopca	8.83	51	⇓P		Pn	00 12 00.7 -0.3
MLR	Muntele Rosu	8.92	54	⇑P		Pn	00 12 02.4 +0.1
MLR	Muntele Rosu	8.92	54	P		Pn	00 12 05.0 +2.7
	comp=E,1.7nm,0.4s,baz=239,slow=5.9						
ARCR	ARCALIA	8.94	42	⇓P		Pn	00 12 04.7 +2.3
OZUR		9.13	51	⇑P		Pn	00 12 06.8 +1.7
PLOR	Plostina	9.53	54	⇑P		Pn	00 12 11.0 +0.5
VRI	Vrincioaia	9.58	54	⇑P		Pn	00 12 12.7 +1.4
BRTR	Keskin Array B	13.81	88	P		P	00 13 15.6 -2.0
	comp=E,0.1nm,0.3s,baz=307,slow=11,SNR=2.7						
	comp=E,0.9nm,1.0s						
FINES	FINESS Array B	21.69	14	P		P	00 14 43.3 -0.5
	comp=E,2.1nm,0.6s,baz=186,slow=11,SNR=9.8						
	comp=E,2.1nm,0.6s						
ZALV	Zalesovo Beam	46.85	49	P		P	00 18 23.1 +0.2
	comp=E,0.9nm,0.6s,baz=288,slow=5.9,SNR=4.6						
	comp=E,0.9nm,0.6s						
MKAR	Makanchi Array	47.23	59	P		P	00 18 26.3 +0.3
	comp=E,0.4nm,0.5s,baz=288,slow=7.5,SNR=7.7						
	comp=E,0.4nm,0.5s						

*IDC **20** 00:10:18.7±1.4,4°.07S×129°.69E,h0km,mb4.0/3, mbtmp3.8/6,ML3.4/3,Error ellipse: s-maj=39.4km s-min=23.3km az=84.0*
*DJA **20** 00:10:21.7±0.5,4°.5S±.5°×13°.0E±.°,h11km±5km,M4.1/9, mb5.0/1,mB6.3/1,MLv3.7/9,Mw(mB)6.1/1*

ISC 20 00:10:23.3±0.9,4°.14S±0°.06×129°.57E±0°.05,h36km,n15, σ1°.22/18,mb4.1/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.51	139	P	Pn	00 10 33.4	-0.6
MSAI	Masohi	1.01	321	P	Pn	00 10 40.3	-0.7
MSAI				S	Sn	00 10 52.5	-1.5
KRAI	Karang Ratu	1.43	305	P	Pn	00 10 46.8	+0.1
AAI	Ambon	1.45	288	P	Pn	00 10 46.2	-0.7
AAI				S	Sn	00 11 03.3	-1.3
NLAI	Namlea	2.62	290	P	Pn	00 11 04.5	+1.4
FAKI	Fak Fak	2.93	66	P	Pn	00 11 08.5	+1.1
SIJI	Sorong	3.66	28	Pn	Pn	00 11 16.2	-1.2
	7.7nm,0.3s,baz=201,slow=17,SNR=19						
SIJI				Sn	Sn	00 11 57.0	-2.3
	2.8nm,0.3s,baz=211,slow=5.1,SNR=4.8						
	13nm,0.3s						
SIJI	Sorong	3.66	28	P	Pn	00 11 17.5	+0.1
SWI	Sorong	3.66	27	P	Pn	00 11 18.2	+0.8
RKPI	Ransiki, Papua	5.29	61	P	Pn	00 11 40.6	+0.8
WRA	Warramunga Arr	16.38	164	Pn	Pn	00 14 09.6	-1.0
	0.1nm,0.3s,baz=346,slow=13,SNR=1.9						
	0.3nm,0.5s						
ASAR	Alice Springs	19.86	168	P	Pn	00 14 52.5	-0.7
	0.3nm,0.3s,baz=348,slow=10,SNR=22						
	1.2nm,0.5s						
CMAR	Chiang Mai Arr	37.62	308	P	P	00 17 36.6	+1.7
	1.0nm,0.3s,baz=147,slow=7.9,SNR=4.9						
	1.0nm,0.3s						
MKAR	Makanchi Array	65.62	326	P	P	00 21 04.8	+1.1
	0.9nm,0.5s,baz=117,slow=8.2,SNR=12						
	0.9nm,0.5s						
ZALV	Zalesovo Beam	68.85	333	P	P	00 21 23.7	-0.3
	0.5nm,0.5s,baz=148,slow=8.5,SNR=1.9						
	0.5nm,0.5s						

IDC 20 00:17:52.5±1.5,13°.26N×44°.92W,h0km,mb4.1/4, mbtmp4.1/5,ML3.5/1,Error ellipse: s-maj=44.3km s-min=30.7km az=173.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	11.13	224	Pn	Pn	00 20 33.7	+0.6
	0.3nm,0.3s,baz=32,slow=15,SNR=14						
	8.3nm,1.1s						
H10N3	ASCENSION HYDR	36.77	123	T	T	01 03 58.0	
	baz=305						
H10N2	ASCENSION HYDR	36.77	123	T	T	01 03 59.4	
	baz=305						
H10N1	ASCENSION HYDR	36.79	123	T	T	01 03 52.3	
	baz=305						
TORD	Torodi Ar. Bea	45.33	85	P	P	00 26 12.2	-0.6
	2.7nm,1.1s,baz=262,slow=7.1,SNR=6.0						
	2.7nm,1.1s						
PDAR	Pinedale Array	62.53	311	P	P	00 28 17.6	-1.0
	1.9nm,1.1s,baz=101,slow=8.5,SNR=6.3						
	1.9nm,1.1s						
ARCES	ARCESS Array B	70.84	21	P	P	00 29 11.3	+0.4
	1.8nm,0.8s,baz=255,slow=7.1,SNR=6.5						
	1.8nm,0.8s						
ILAR	Eielson Array	83.14	335	P	P	00 30 20.9	+0.7
	2.2nm,1.0s,baz=68,slow=4.0,SNR=11						
	2.2nm,1.0s						

*SOME **20** 00:39:53.7,37°.73N×72°.17E,h0km*
*NNC **20** 00:39:57.1±1.2,36°.73N×71°.07E,h0km,mb5.8,mpv5.8, Error ellipse: s-maj=11.0km s-min=8.3km az=157.0*
*MOS **20** 00:39:58.4±1.1,36°.43N×71°.47E,h95km,mb5.3/81, MS4.4/7,Error ellipse: s-maj=3.8km s-min=2.6km az=107.2*
*IDC **20** 00:40:00.8±0.4,36°.35N×71°.36E,h110km±3km,mb4.5/36, mbtmp4.9/39,MS3.7/6,Error ellipse: s-maj=8.7km s-min=6.6km az=28.0*
*BJI **20** 00:40:00.7±0.0,36°.65N×71°.44E,h100km,mb4.7/43, mB5.2/26*
*GCMT **20** 00:40:01.7±0.3,36°.43N±0°.02×71°.07E±0°.02,h107km±3km, MW5.0/89,Moment Tensor Solution. s25,c29; s89,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.70±.15; $M_{\theta\theta}$-4.18±.15; $M_{\phi\phi}$1.49±.15; $M_{r\theta}$1.23±.13; $M_{\theta\phi}$-0.84±.18; $M_{r\phi}$1.65±.11; Best double couple: $M_0$4.24700×10^{16} NP1:ϕ_s54.00000°,δ64.00000°,λ55.00000°. NP2: ϕ_s292.00000°,δ43.00000°,λ139.00000°. Principal axes: T 3.8890, Plg56.0000°, Azm277.0000°; N 0.7260, Plg31.0000°, Azm72.0000°; P -4.6050, Plg12.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 00:40:01.7±2.4,36°.44N±0°.05×71°.27E±0°.07,h107km±5km, mb5.1/146 Error ellipse: s-maj=8.3km s-min=7.8km az=116.0*

ISC 20 00:40:00.2±0.3,36°.43N±0°.03×71°.38E±0°.03,h101km±2km, h101km:pP-P,n1028,σ1°.70/1135,mb5.2/279,66C-106D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.63	170	P	Pn	00 40 43.2	+1.9
CEP				S	Sn	00 41 16.0	+3.2
KBL	Kabul	2.68	226	Pn	Pn	00 40 41.5	-0.4
KBL	Kabul	2.68	226	PN	Pn	00 40 41.5	-0.4
KBL	Kabul	2.68	226	P	Pn	00 40 42.3	+0.4
	SNR=183						
KBL				S	Sn	00 41 15.5	+1.6
GAR	Garm	2.70	342		Pn	00 40 41.3	-0.8
GAR				Sn	Sn	00 41 13.3	-1.0
CHGR	Chuyangaron	2.84	322		Pn	00 40 42.2	-1.7
CHGR	Chuyangaron	2.84	322	PN	Pn	00 40 42.2	-1.7
DRK	Karamyk	3.06	6		Pn	00 40 47.7	+0.6
NIL	Nilore	3.17	150	Pn	Pn	00 40 49.6	+1.3
NIL	Nilore	3.17	150	PN	Pn	00 40 49.6	+1.3
THW	Thamme Wali	3.64	175	P	Pn	00 40 54.5	-0.1
BTK	Batken	3.65	353	Pn	Pn	00 40 55.4	+0.6
BTK	Batken	3.65	353	PN	Pn	00 40 55.4	+0.6
OHH	Osh	4.24	15	PN	Pn	00 41 03.6	+1.0
JMU	Jammu	4.71	141	*e*P	Pn	00 41 08.7	-0.3
JMU				*ex*	Sn	00 41 59.9	-2.5
KSH	Kashi	4.76	48	P	Pn	00 41 06.5	-3.3
KSH				S	Sn	00 41 55.9	-8.0
KSH				smax	smax		
	comp=N,12μm,0.6s						
KSH				smax	smax		
	comp=E,6μm,0.6s						
TRKS	Terek-Say	5.10	358	PN	Pn	00 41 13.1	-1.3
TAS	Tashkent	5.15	342	Pn	Pn	00 41 14.1	-0.9
TAS	Tashkent	5.15	342	PN	Pn	00 41 14.1	-0.9
THN	Thein Dam	5.36	137	⇑*i*P	Pn	00 41 18.0	+0.2
THN				*e*P	Pn	00 41 18.0	+0.2
ARK	Arkit	5.38	5	PN	Pn	00 41 17.3	-0.9
ARK				pmax	pmax		
	comp=Z,464nm,0.8s						
IUG	Iuzhnay	5.80	350	*d i*PN	Pn	00 41 23.1	-0.8
IUG	Iuzhnay	5.80	350	*e*P	Pn	00 41 23.2	-0.7
	comp=Z,5μm,0.2s						
IUG				*e*S	Sn	00 42 26.3	-2.9
	comp=Z,4μm,0.6s						
IUG	Iuzhnay	5.80	350	⇓*i*P	Pn	00 41 23.1	-0.8
	baz=349						
IUG				*e*S	Sn	00 42 25.4	-3.8
	baz=349						
AML	Almayashu	5.97	17	P	Pn	00 41 26.5	0.0
	SNR=1273						
CHM	Chimkent	6.04	347	*e*PN	Pn	00 41 26.9	-0.1
CHM	Chimkent	6.04	347	*e*P	Pn	00 41 26.0	-1.0
	comp=Z,2.0nm,0.1s						
CHM				*e*S	Sn	00 42 30.9	-3.9
	comp=Z,3μm,0.4s						
CHM	Chimkent	6.04	347	*e*P	Pn	00 41 26.9	-0.1
	baz=346						
CHM				*e*S	Sn	00 42 30.8	-3.9
	baz=346						
NRN	Naryn	6.16	34	Pn	Pn	00 41 28.6	-0.4
NRN	Naryn	6.16	34	PN	Pn	00 41 28.6	-0.4
UCH	Uchtor	6.28	22	P	Pn	00 41 30.7	0.0
	SNR=643						
DZA	Taraz	6.46	360	*e*PN	Pn	00 41 32.1	-0.5
DZA	Taraz	6.46	360	*e*P	Pn	00 41 33.0	+0.3
	comp=Z,3μm,0.6s						
DZA				*e*S	Sn	00 42 43.1	-1.7
	comp=Z,3μm,0.3s						
DZA	Taraz	6.46	360	*e*P	Pn	00 41 32.2	-0.5
	baz=359						
DZA				*e*S	Sn	00 42 40.8	-4.0
	baz=359						
EKS2	Erkin-Say	6.50	16	P	Pn	00 41 33.6	+0.3
	SNR=427						
BHK	Bhakra	6.52	139	*e*P	Pn	00 41 32.7	-0.9
BHK				*ex*	Sn	00 42 42.9	-3.7
AAK	Ala-Archa	6.65	20	P	Pn	00 41 36.0	+0.5
	SNR=676						
AAK	Ala-Archa	6.65	20	P	Pn	00 41 36.0	+0.5
	comp=Z,584nm,0.7s,baz=205,slow=9.9,SNR=1223						
AAK				S	Sn	00 42 46.2	-3.7
	comp=Z,385nm,0.9s,baz=339,slow=22,SNR=9.1						
AAK	Ala-Archa	6.65	20	Pn	Pn	00 41 36.0	+0.5
AAK	Ala-Archa	6.65	20	PN	Pn	00 41 36.0	+0.5
AAK	Ala-Archa	6.65	20	P	Pn	00 41 36.4	+0.9
AAK	Ala-Archa	6.65	20	*i* P	Pn	00 41 36.0	+0.5
	SNR=926						
KK31	Karatay Array	6.70	355		Pn	00 41 35.0	-0.9
KK31	Karatay Array	6.70	355	*i* PN	Pn	00 41 34.9	-1.1
KK31	Karatay Array	6.70	355	⇓P	Pn	00 41 33.3	-2.6
	comp=Z,277nm,0.4s,baz=178,slow=13,SNR=4116						
KK31				⇓S	Sn	00 42 47.1	-3.7
	comp=Z,462nm,0.6s,baz=176,slow=23,SNR=4.5						
KKAR	Karatay Array	6.70	355	Pn	Pn	00 41 35.1	-1.0
KKAR	Karatay Array	6.70	355	Pn	Pn	00 41 35.0	-1.0
KKAR	Karatay Array	6.70	355	PN	Pn	00 41 35.0	-1.0
KBK	Karagaybulak	6.80	23	P	Pn	00 41 38.2	+0.7
	SNR=207						
ULHL	Ulahol	6.92	31	P	Pn	00 41 40.1	+0.9
	SNR=46						
BOOM	Boomskoye usch	7.01	29	Pn	Pn	00 41 40.1	-0.2
BOOM	Boomskoye usch	7.01	29	PN	Pn	00 41 40.1	-0.2
CHMS	Chumysh	7.06	21	P	Pn	00 41 41.0	+0.2
	SNR=466						
CHMS	Chumysh	7.06	21	*i* PN	Pn	00 41 40.9	0.0
CHMS				pmax	pmax		
	comp=Z,1μm,1.0s						
CHMS	Chumysh	7.06	21	⇓P	Pn	00 41 39.1	-1.7
	comp=Z,1μm,1.0s						
CHMS				⇓S	Sn	00 42 58.8	-0.8
	comp=Z,472nm,1.0s						
SMLA	Simla	7.15	136	*e*P	Pn	00 41 40.8	-1.3
SMLA				*ex*	Sn	00 42 56.9	-5.0
SMLA				IAML		00 43 01.5	
	comp=E,2μm,0.1s						
SMLA				IAML		00 43 03.6	
	comp=N,2μm,0.6s						
USP	Ospenovka	7.24	18	P	Pn	00 41 43.1	-0.3
	SNR=108						
TKM2	Tokmak 2	7.25	25	P	Pn	00 41 44.4	+0.7
	SNR=25						
TKM2	Tokmak 2	7.25	25	*i* PN	Pn	00 41 43.6	-0.1
TKM2				pmax	pmax		
	comp=Z,725nm,0.9s						
TKM2	Tokmak 2	7.25	25	⇓P	Pn	00 41 42.5	-1.2
	comp=Z,725nm,0.9s						
TKM2				⇓S	Sn	00 43 04.9	+0.3
	comp=Z,322nm,1.2s						
TARG	Taragay, Kyrgy	7.28	41		Pn	00 41 41.9	-2.3
TARG	Taragay, Kyrgy	7.28	41	PN	Pn	00 41 41.9	-2.3
SGDS	Sogindy	7.45	19	*d i*PN	Pn	00 41 45.4	-0.7
SGDS				pmax	pmax		
	comp=Z,127nm,1.0s						
SGDS	Sogindy	7.45	19	⇓*i*P	Pn	00 41 45.4	-0.7
	comp=Z,126nm,1.0s,baz=19						
SGDS				*e*S	Sn	00 43 05.2	-3.9
	baz=19						
KST	Kastek	7.49	27	*e*P	Pn	00 41 47.2	+0.4
	comp=Z,226nm,1.4s						
KST				*e*S	Sn	00 43 07.9	-2.3
	comp=Z,291nm,2.2s						
DGS	Degeres	7.60	25	*e*P	Pn	00 41 48.5	+0.2
	comp=Z,430nm,1.0s						
DGS				*e*S	Sn	00 43 10.1	-2.7
	comp=Z,116nm,1.0s						
HRA	Herat	7.73	257	Pn	Pn	00 41 49.6	-0.6
TNSS	Tian-Shan	7.87	31	*e*PN	Pn	00 41 51.2	-1.0
TNSS	Tian-Shan	7.87	31	*e*P	Pn	00 41 51.2	-1.0
	baz=32						
AAA	Alma-Ata	8.00	30	*de*PN	Pn	00 41 54.4	+0.7
AAA	Alma-Ata	8.00	30	⇓*e*P	Pn	00 41 54.4	+0.7
	baz=32						
MDOK	Medeo	8.02	31	PN	Pn	00 41 54.0	0.0
MDOK				S	Sn	00 43 30.3	+7.3
MDOK	Medeo	8.02	31	*e*P	Pn	00 41 53.6	-0.4
	baz=32						
MDOK				*e*S	Sn	00 43 20.4	-2.6
	baz=32						
MDOK	Medeo	8.02	31	⇑P	Pn	00 41 54.1	0.0
	comp=Z,149nm,0.7s						
MDOK				⇓S	Sn	00 43 25.2	+2.2
	comp=Z,293nm,1.3s						
KNDC	Almaty	8.03	31	PN	Pn	00 41 55.0	+0.9
KNDC	Almaty	8.03	31	⇓P	Pn	00 41 55.2	+1.1
	comp=Z,950nm,0.8s						
KNDC				⇓S	Sn	00 43 24.9	+1.8
	comp=Z,718nm,1.1s						
DDI	Dehra Dun	8.26	136	*e*P	Pn	00 41 56.2	-1.1
KUU	Kurty	8.37	25	*d i*PN	Pn	00 41 57.2	-1.4
KUU	Kurty	8.37	25	⇓*i*P	Pn	00 41 57.3	-1.4
	baz=26						
SATY	Saty	8.55	37	*d i*PN	Pn	00 42 00.2	-1.0
SATY	Saty	8.55	37	⇓*i*P	Pn	00 42 00.3	-1.0
	baz=38						
CHKK	Chushkaly	8.57	28	*e*PN	Pn	00 42 00.2	-1.2
CHKK	Chushkaly	8.57	28	*e*P	Pn	00 42 00.2	-1.2
	baz=29						
ZHN	Zhinishke	8.65	37	*e*PN	Pn	00 42 01.8	-0.7
ZHN	Zhinishke	8.65	37	*e*P	Pn	00 42 01.9	-0.7
	baz=38						
BTLS	Baital	8.84	12	*d i*PN	Pn	00 42 03.5	-1.5
BTLS				pmax	pmax		
	comp=Z,56nm,1.2s						
BTLS	Baital	8.84	12	⇓*i*P	Pn	00 42 03.5	-1.5
	comp=Z,56nm,1.2s,baz=13						
BTLS				*e*S	Sn	00 43 38.1	-4.7
	baz=13						
UZB	Uzynbulak	8.92	39	*d i*PN	Pn	00 42 05.2	-1.1
UZB	Uzynbulak	8.92	39	⇓*i*P	Pn	00 42 05.3	-1.1
	baz=40						
KPKS	Kokpek	8.99	36	*d i*PN	Pn	00 42 06.5	-0.7
KPKS				pmax	pmax		
	comp=Z,105nm,0.9s						
KPKS	Kokpek	8.99	36	⇓*i*P	Pn	00 42 06.5	-0.7
	comp=Z,104nm,0.9s,baz=38						
KHET	Khetri	9.13	155	*e*P	Pn	00 42 06.0	-3.1
SHLS	Shalkode	9.15	40	*d i*P	Pn	00 42 11.7	+2.3
SHLS				*e*S	Sn	00 43 51.8	+1.1
SHLS				pmax	pmax		
	comp=Z,16nm,0.8s						
SHLS	Shalkode	9.15	40	⇓*i*P	Pn	00 42 11.8	+2.3
	comp=Z,16nm,0.8s,baz=43						
SHLS				*e*S	Sn	00 43 51.8	+1.1
	baz=43						
NDI	New Delhi	9.16	146	*e*P	Pn	00 42 08.0	-1.5
PDGK	Podgornoye	9.29	40	P	Pn	00 42 09.8	-1.5
PDGK				S	Sn	00 43 52.3	-1.7
PDGK	Podgornoye	9.29	40	⇓P	Pn	00 42 10.1	-1.2
	comp=Z,179nm,0.9s						
PDGK				⇑S	Sn	00 43 56.5	+2.5
	comp=Z,254nm,1.2s						
SONA	Sohna	9.47	148	*e*P	Pn	00 42 11.4	-2.3
JASL	Jaisalmer	9.48	183	*e*P	Pn	00 42 11.2	-2.7
TDK	Taldyqorghan	10.09	30	*d i*P	Pn	00 42 20.6	-1.4
TDK	Taldyqorghan	10.09	30	⇓*i*P	Pn	00 42 20.6	-1.4
	baz=30						
PTH	Pithoragarh	10.10	130	*e*P	Pn	00 42 17.9	-4.6
PTH				*e*P	Pn	00 42 19.0	-3.5
PTH				*e*S	Sn	00 44 04.3	-10
LGTI	Lohaghat	10.19	131	*e*P	Pn	00 42 20.4	-3.1
AJM	Ajmer	10.30	163	⇓*i*P	Pn	00 42 19.0	-6.1
AJM				*e*P	Pn	00 42 23.0	-2.1
AJM				*i* S	Sn	00 44 07.0	-12
GEYT	Alibeck	10.69	282	P	Pn	00 42 25.3	-4.9
	comp=Z,37nm,0.8s,baz=107,slow=9.9,SNR=70						
GEYT				S	Sn	00 44 19.3	-8.5
	comp=Z,205nm,0.8s,baz=129,slow=24,SNR=13						
GEYT				LR	LR	00 48 19.3	
	comp=Z,387nm,18.3s,baz=133,slow=47						
GYA0B	ALIBECK ARRAY	10.69	282	Pn	Pn	00 42 26.0	-4.2
OTUK	Ortayu	11.83	3	P	Pn	00 42 42.6	-2.9
OTUK				S	Sn	00 44 59.4	+4.0
OTUK	Ortayu	11.83	3	⇓P	Pn	00 42 42.7	-2.9
	comp=Z,142nm,0.8s						
OTUK				⇑S	Sn	00 44 55.2	-0.2
	comp=Z,394nm,1.2s						
JHNI	Jhansi	12.53	149	*e*P	Pn	00 42 50.7	-4.2
MAKZ	Makanchi	13.04	34		Pn	00 42 59.7	-1.8
MAKZ	Makanchi

comp=Z,285nm,0.6s
PKI Pulchoki 14.81 123 *e*P Pn 00 43 19.8 -5.0
ZSN Zaisan 14.88 38 *e*P **Pn 00 43 23.0 -2.2**
ZSN *e*S **Sn 00 46 05.0 -4.2**
ZSN Zaisan 14.88 38 *e*P **Pn 00 43 23.0 -2.2**
baz=39
ZSN *e*S **Sn 00 46 05.0 -4.2**
baz=39
GUN Gumba 14.92 121 *e*P Pn 00 43 21.0 -5.2
comp=Z,142nm,0.4s
KURBB Kurchatov Arra 15.10 18 P **Pn 00 43 22.7 -5.2**
comp=Z,12nm,0.8s,baz=210,slow=12,SNR=53
KURBB S **Sn 00 46 16.1 +1.7**
comp=Z,2.1nm,0.6s,baz=306,slow=48,SNR=0.9
KURBB LR LR 00 50 11.8
comp=Z,72nm,18.6s,baz=204,slow=40
KURBB Kurchatov Arra 15.10 18 P **Pn 00 43 28.3 +0.4**
KURBB Kurchatov Arra 15.10 18 ⇓P **Pn 00 43 28.3 +0.4**
comp=Z,58nm,0.7s
JBP Jabalpur 15.17 148 *e*P **Pn 00 43 24.3 -4.7**
KURK Kurchatov 15.20 18 **Pn 00 43 25.3 -4.0**
KURK Kurchatov 15.20 18 *i*P **P 00 43 30.7 -1.2**
KURK Kurchatov 15.20 18 ⇑P **Pn 00 43 29.4 +0.2**
comp=Z,56nm,0.8s
JIRN Jiri 15.29 121 *e*P **Pn 00 43 25.9 -5.0**
comp=Z,444nm,0.4s
AB31 Akbulak array 15.29 331 P **Pn 00 43 28.5 -1.9**
AB31 Akbulak array 15.29 331 ⇓P **Pn 00 43 28.5 -1.9**
comp=Z,87nm,0.8s,baz=136,slow=9.3,SNR=975
ABKAR Akbulak array 15.29 331 **Pn 00 43 26.4 -4.0**
ABKAR Akbulak array 15.29 331 **Pn 00 43 26.5 -3.9**
SEM Semipalatinsk 15.37 22 *e*P **Pn 00 43 30.7 -0.9**
SEM Semipalatinsk 15.37 22 *e*P **Pn 00 43 30.8 -0.9**
baz=22
RAMN Ramite 16.02 122 *e*P **Pn 00 43 35.1 -4.8**
AKL Akola 16.43 161 *e*P **Pn 00 43 42.4 -2.3**
TAPN Taplejung 16.55 119 *e*P **Pn 00 43 41.9 -4.6**
comp=Z,132nm,0.4s
BANOM Banah 16.59 235 P **P 00 43 47.3 -0.3**
BANOM Banah 16.59 235 *i*P **Pn 00 43 47.1 +0.3**
SNR=11
BVA0 Borovoye Array 16.61 358 P **Pn 00 43 46.3 -0.5**
BVA0 Borovoye Array 16.61 358 ⇑P **Pn 00 43 46.2 -0.5**
comp=Z,81nm,1.3s,baz=99,slow=12,SNR=192
BVAR Borovoye Array 16.61 358 P **Pn 00 43 43.5 -3.2**
comp=Z,38nm,0.7s,baz=172,slow=12,SNR=85
BVAR S **Sn 00 46 51.4 +0.5**
comp=Z,21nm,1.0s,baz=180,slow=24,SNR=5.4
SHME Shamm 16.61 236 P **P 00 43 48.2 +0.5**
ODAN Odare 16.62 121 *e*P **Pn 00 43 43.0 -4.3**
NGP Nagpur 16.63 154 *e*P **Pn 00 43 44.8 -2.4**
BRVK Borovoye 16.65 358 **Pn 00 43 43.9 -3.3**
BRVK Borovoye 16.65 358 *ce*P **Pn 00 43 44.5 -2.7**
BRVK pmax pmax
comp=Z,112nm,1.7s
BRVK Borovoye 16.65 358 P **Pn 00 43 44.8 -2.4**
BRVK Borovoye 16.65 358 ⇑P **Pn 00 43 47.0 -0.2**
comp=Z,68nm,0.8s
AKTO Aktyubinsk 16.99 330 P **Pn 00 43 49.5 -2.0**
comp=Z,155nm,0.8s,baz=135,slow=13,SNR=206
AKTO S Sn 00 46 44.0 -16
comp=Z,25nm,0.8s,baz=181,slow=14,SNR=2.4
AKTO Aktyubinsk 16.99 330 *i*P **Pn 00 43 49.4 -2.0**
AKTO pmax pmax
comp=Z,241nm,0.7s
AKTO Aktyubinsk 16.99 330 ⇓P **Pn 00 43 51.1 -0.4**
comp=Z,241nm,0.8s
BLSP Bilaspur 17.04 144 *e*P **Pn 00 43 50.4 -1.9**
MSFE Esma-Masafi 17.07 234 P **Pn 00 43 52.5 -0.1**
WSAR Wadi Sarin 17.15 223 P **P 00 43 54.1 +0.4**
comp=Z,15nm,0.9s,baz=30,slow=10,SNR=7.4
WSAR S **Sn 00 47 01.9 -2.6**
comp=Z,3.5nm,0.8s,baz=122,slow=12,SNR=1.2
UOSS Minazif 17.33 233 **P 00 43 54.2 -1.4**
UOSS Minazif 17.33 233 P **Pn 00 43 57.0 +1.2**
HATD Hatta, Dubai 17.46 233 P **Pn 00 44 01.1 +3.7**
SNR=6.2
HATD Hatta, Dubai 17.46 233 P **P 00 43 56.6 -0.5**
WBK Wadi Bani Khal 17.47 221 P **Pn 00 44 01.1 +3.6**
SNR=5.7
ASHO Ashiyiah 17.61 233 P **Pn 00 44 01.1 +1.9**
SNR=15
ASHO Ashiyiah 17.61 233 *i*P **Pn 00 44 01.0 +1.8**
SNR=8.5
HOQ Hoqain 17.64 227 P **Pn 00 44 03.5 +3.9**
NAZ Nazwa, Dubai 17.65 234 P **Pn 00 44 00.7 +1.0**
DGZ Jazzator, Alta 17.66 36 *d*iP **P 00 43 57.4 -1.8**
DGZ pmax pmax
comp=Z,76nm,0.9s
FAQ Al Faqa, Dubai 17.87 234 P **Pn 00 44 01.9 -0.3**
LSA Lhasa 17.87 106 P **P 00 44 01.5 -0.5**
LSA Lhasa 17.87 106 P **P 00 44 01.9 -0.1**
LSA Lhasa 17.87 106 P **P 00 44 01.5 -0.5**
LSA Lhasa 17.87 106 P **P 00 44 01.7 -0.3**
LKRN Lenkeran, Azer 18.05 284 P **Pn 00 44 04.4 +0.1**
ASUD Al Ashush, Dub 18.12 234 P **Pn 00 44 06.5 +1.2**
ALNE Al Ain 18.25 232 P **Pn 00 44 07.1 +0.2**
SNR=10
ARQ Araqi 18.30 229 P **Pn 00 44 09.6 +2.1**
SNR=13
BSY Bisya 18.35 226 P **Pn 00 44 09.8 +1.7**
SNR=10
GOMU GeErMu 18.89 84 P **Pn 00 44 15.0 +0.3**
GOMU pmax pmax
comp=Z,51nm,0.7s
DHUB DHUBRI 18.98 118 *e*P **P 00 44 11.9 -1.7**
KAD Karad 19.21 172 *e*P **Pn 00 44 17.3 -1.0**
MHTO MHTO 19.33 221 P **Pn 00 44 20.1 +0.5**
SNR=12
SEKA Sheki 19.41 292 P **P 00 44 19.1 +0.7**
MNGR Mingechevir, A 19.45 290 P **Pn 00 44 20.9 0.0**
JRN Qarnain Island 19.58 239 P **P 00 44 19.1 -1.1**
SNR=5.1
MZWR Madinat Zayed 19.67 235 P **Pn 00 44 23.7 +0.1**
ZAA0 Zalesovo Array 19.86 24 P **P 00 44 22.3 -0.7**
ZALV Zalesovo Beam 19.86 24 P **P 00 44 22.3 -0.7**
comp=Z,79nm,0.5s,baz=226,slow=9.7,SNR=371
ZALV S **S 00 47 57.3 -3.5**
comp=Z,10nm,0.7s,baz=209,slow=14,SNR=4.4
ZALV Zalesovo Beam 19.86 24 P **P 00 44 22.2 -0.8**
ZKTA Zakatala 19.89 293 P **P 00 44 24.1 +0.6**
HYBB Hyderabad (bro 19.97 160 *e*P **P 00 44 24.6 +0.1**
HYBB IVmB_BB 00 44 26.2
comp=Z,620nm,1.4s
HYBB *es*P **sP 00 44 60.0 +2.7**
HYBB *e*S **S 00 48 06.4 +2.6**
HYBB IVMs_BB IVMs_BB 00 51 05.2
comp=Z,244nm,3.8s
HYB Hyderabad 19.98 160 *e*P **P 00 44 25.0 +0.4**
HYB IAmb IAmb 00 44 27.8
comp=Z,71nm,1.0s
GANJ Ganja 20.02 290 P **P 00 44 25.9 +1.0**
RAGD RAYAGADA 20.14 145 *e*P **P 00 44 27.3 +0.9**
DQM DQM 20.43 220 P Pn 00 44 32.6 +0.1
SNR=7.2
BWNR Bhubaneshwar 20.44 138 *e*P **P 00 44 30.8 +1.3**
SHL Shillong 20.61 116 P **P 00 44 31.1 -0.4**
SHL Shillong 20.61 116 P **P 00 44 31.1 -0.4**
SHL Shillong 20.61 116 P **P 00 44 31.7 +0.2**
SNR=36
SHL Shillong 20.61 116 *e*P **P 00 44 32.0 +0.5**
SHL *ex* x 00 48 05.7
NAX Nakhchivan 20.61 285 P Pn 00 44 33.8 -0.7
TEZP TEZPUR 20.68 112 *e*P **P 00 44 32.4 +0.4**
GROC Groznyy 20.73 297 *e*P Pn 00 44 34.4 -1.4
GROC *e**PP pP 00 44 53.7 +1.4
GROC *e**SP sP 00 45 07.2 +2.0
GROC *e*S **S 00 48 20.8 +2.5**
GROC *e**SS sS 00 48 51.2 -0.8
GROC pmax pmax
comp=Z,320nm,0.7s
ZIRO ZIRO 20.99 109 *e*P **P 00 44 36.4 +0.7**
ZIRO IAmb IAmb 00 44 38.1
comp=Z,59nm,0.7s
ITAN ITANAGAR 21.09 110 *e*P **P 00 44 38.1 +1.6**
ITAN IAmb IAmb 00 44 41.6
comp=Z,197nm,1.0s
AGT Agartala 21.20 121 *e*P **P 00 44 39.6 +1.9**
AGT *i*x x 00 44 54.1
AGT *ex* x 00 45 04.3
GNI Garni 21.20 288 P **P 00 44 38.5 +0.7**
comp=Z,143nm,1.0s,baz=89,slow=1.4,SNR=71
GNI S Sn 00 48 36.9 -4.5
comp=Z,12nm,0.8s,baz=127,slow=22,SNR=1.2
comp=Z,143nm,1.0s
GNI Garni 21.20 288 P **P 00 44 39.0 +1.2**
GNI Garni 21.20 288 *ce*P **P 00 44 40.7 +2.9**
GNI pmax pmax
comp=Z,695nm,1.7s
GNI Garni 21.20 288 P **P 00 44 40.5 +2.7**
VJD Vijayawada 21.48 155 *e*P **P 00 44 42.5 +1.9**
SVE Sverdlovsk 21.65 344 *ce*P **P 00 44 41.9 -0.2**
SVE *e*S **S 00 48 35.3 -0.5**
SVE pmax pmax
comp=Z,154nm,1.3s
SILR SILCHAR 21.74 116 *e*P **P 00 44 45.5 +2.1**
ARU Arti 21.80 341 P **P 00 44 43.8 +0.1**
comp=Z,120nm,0.8s,baz=158,slow=6.8,SNR=94
ARU S **S 00 48 39.2 +0.6**
comp=Z,16nm,0.8s,baz=327,slow=24,SNR=1.9
comp=Z,120nm,0.8s
ARU Arti 21.80 341 P **P 00 44 43.1 -0.6**
ARU Arti 21.80 341 ⇑*e*P **P 00 44 43.8 +0.1**
ARU pmax pmax
comp=Z,347nm,1.2s
ZEI Tsey 22.04 295 *e*P **P 00 44 47.1 +0.4**
ZEI pmax pmax
comp=Z,104nm,1.2s
MOKO MOKOCHONG 22.13 111 *e*P **P 00 44 48.5 +0.8**
KOHI KOHIMA 22.15 112 *e*P **P 00 44 49.0 +1.0**
KOHI IAmb IAmb 00 44 53.9
comp=Z,246nm,1.2s
BRDH Bariadhala 22.27 122 P **P 00 44 49.1 +0.1**
comp=Z,66nm,0.3s,baz=270,slow=20,SNR=11
BRDH S **S 00 48 47.9 +0.5**
comp=Z,76nm,0.4s,baz=273,slow=22,SNR=1.6
BRDH LR LR 00 54 04.5
comp=Z,271nm,19.5s,baz=319,slow=38
comp=Z,66nm,0.3s
ONI Oni 22.35 295 P **P 00 44 50.4 +0.6**
ONI Oni 22.35 295 P **P 00 44 50.4 +0.6**
NCK Nalchik 22.36 297 *i*P **P 00 44 50.6 +0.7**
NCK pmax pmax
comp=Z,212nm,0.9s
KARS Kars 22.49 289 P **P 00 44 53.0 +1.7**
KARS Kars 22.49 289 P **P 00 44 53.0 +1.7**
IMP Imphal 22.54 115 *e*P **P 00 44 52.8 +0.9**
GEVA Gevas 22.55 283 P **P 00 44 52.8 +0.7**
GTA Gaotai 22.59 74 ⇑P **P 00 44 54.6 +2.2**
GTA pP pP 00 45 17.3 +3.8
GTA sP sP 00 45 31.4 +4.6
GTA pmax pmax
comp=Z,31nm,0.9s
GTA pmax pmax
comp=Z,160nm,6.2s
GTA LR LR
comp=Z,260nm,17.1s
GTA LR LR
comp=Z,270nm,14.9s
GTA LR LR
comp=Z,230nm,15.6s
LKP Lekhapani 22.62 107 IAmb IAmb 00 45 03.5
comp=Z,71nm,1.0s
KBZ Khabaz 22.90 297 P **P 00 44 55.2 0.0**
comp=Z,72nm,1.2s,baz=108,slow=5.8,SNR=40
KBZ S **S 00 48 59.2 +2.0**
comp=Z,4.6nm,1.0s,baz=165,slow=23,SNR=1.0
comp=Z,72nm,1.2s
KBZ Khabaz 22.90 297 *ce*P **P 00 44 56.6 +1.4**
KBZ pmax pmax
comp=Z,82nm,1.1s
NEY Neytrino 22.96 296 *d*iP **P 00 44 59.2 +3.1**
NEY pmax pmax
comp=Z,30nm,1.3s
GOF Gofitskoye 23.04 301 ⇑*i*P **P 00 44 58.3 +1.7**
GOF pmax pmax
comp=Z,370nm,1.0s
KVAR Kislovodsk Arr 23.08 298 P **P 00 44 56.1 -1.0**
comp=Z,18nm,1.1s,baz=90,slow=20,SNR=7.1
KVAR S **S 00 49 05.2 +4.9**
comp=Z,12nm,0.8s,baz=307,slow=14,SNR=2.1
comp=Z,18nm,1.1s
KIV Kislovodsk 23.09 298 P **P 00 44 57.5 +0.3**
KIV Kislovodsk 23.09 298 *e*P **P 00 44 58.5 +1.3**
KIV *e*S **S 00 49 01.9 +1.5**
KIV pmax pmax
comp=Z,76nm,1.1s
KIV Kislovodsk 23.09 298 P **P 00 44 59.0 +1.8**
KIV Kislovodsk 23.09 298 *i*P **P 00 44 57.5 +0.3**
SNR=16
BELG Belogornoye 23.14 321 P **P 00 44 57.4 0.0**
comp=Z,107nm,0.8s,baz=139,slow=19,SNR=45
BELG S **S 00 49 03.4 +2.7**
comp=Z,42nm,1.1s,baz=186,slow=10,SNR=2.6
comp=Z,107nm,0.8s
BELG Belogornoye 23.14 321 *c*iP **P 00 44 57.5 +0.1**
BELG pmax pmax
comp=Z,38nm,1.3s
GURO Guroymak-BITLI 23.34 284 P **P 00 45 01.3 +1.7**
DOK Doka 23.36 225 P **P 00 45 00.2 +0.5**
SNR=12
KNGR Kungurtug, Tuv 23.51 45 *i*P **P 00 45 02.7 +1.7**
KNGR pmax pmax
comp=Z,36nm,0.8s
WHFO Wadi Hawf 24.12 225 P **P 00 45 06.4 -0.2**
SNR=8.3
RBK Rabkut 24.21 223 P **P 00 45 07.9 +0.4**
MARD Mardin 24.45 281 P **P 00 45 10.9 +1.3**
KOPT Kop Dagi 24.46 288 P **P 00 45 11.4 +1.5**
ABTO Aybut 24.84 225 P **P 00 45 14.9 +1.6**
SNR=12
SOC Sochi 25.17 296 *e*P **P 00 45 16.1 +0.1**
SOC *e*S **S 00 49 33.8 +0.2**
SOC pmax pmax
comp=Z,61nm,0.9s
SOC MLR MLR
comp=Z,690nm,21.0s
RAYN Ar Rayn 25.75 247 P **P 00 45 20.3 -1.2**
RAYN IAmb IAmb 00 45 58.8
comp=Z,46nm,1.1s
RAYN Ar Rayn 25.75 247 P **P 00 45 20.3 -1.2**
RAYN pmax pmax
comp=Z,46nm,1.2s
RAYN Ar Rayn 25.75 247 *i*P **P 00 45 19.1 -2.4**
SNR=29
VRH Novokhopyorsk 25.77 314 *e*P **P 00 45 21.5 +0.1**
VRH *e*S **S 00 49 38.6 -4.3**
VRH pmax pmax
comp=Z,30nm,0.8s
VRH smax smax
comp=N,270nm,2.4s
LZH Lanzhou 26.12 81 *e*P **P 00 45 30.8 +5.9**
LZH pP pP 00 45 50.0 +1.6
LZH sP sP 00 46 02.8 +2.1
LZH pmax pmax
comp=N,22nm,1.1s
LZH pmax pmax
comp=N,300nm,5.8s
LZH LR LR
comp=N,400nm,17.1s
LZH LR LR
comp=N,500nm,14.9s
LZH LR LR
comp=N,440nm,15.6s
KIRV Kirov 26.44 334 P **P 00 45 28.2 +1.0**
comp=N,72nm,0.6s,baz=142,slow=1.6,SNR=31
KIRV pP **pP 00 45 51.7 +1.5**
comp=N,52nm,0.7s,baz=144,slow=7.6,SNR=4.2
KIRV S **S 00 49 53.6 +0.4**
comp=N,7.0nm,0.5s,baz=252,slow=22,SNR=2.1
comp=N,72nm,0.6s
KIRV Kirov 26.44 334 *ce*P **P 00 45 28.6 +1.4**
ZAK Zakamensk 26.81 49 *e*P **P 00 45 32.3 +1.5**
ZAK pmax pmax
comp=Z,14nm,1.3s
ANN Anapa 26.93 299 *e*P **P 00 45 32.2 +0.3**
ANN *e**PP **pP 00 45 54.7 -0.6**
ANN *e* 00 46 20.4
ANN *e*S **S 00 50 01.9 +0.6**
ANN pmax pmax
comp=Z,60nm,0.7s
VSR Storozhevoye 27.27 313 *e*P **P 00 45 34.8 0.0**
VSR *e*S **S 00 50 11.6 +5.0**
VSR pmax pmax
comp=Z,70nm,1.7s
VSR smax smax
comp=N,150nm,1.5s
GAZ Gaziantep 27.28 282 P **P 00 45 36.1 +0.9**
GAZ IAmb IAmb 00 45 39.0
comp=Z,47nm,1.3s
VORR Voronezh 27.41 314 *e*P **P 00 45 36.0 0.0**
VORR pmax pmax
comp=Z,170nm,1.9s
CD2 Chengdu 27.43 92 *e*P **P 00 45 37.5 +1.0**
TOKA Tokat 27.52 289 P **P 00 45 38.2 +0.9**
SONM Songino Array 28.13 55 P **P 00 45 43.4 +0.7**
comp=Z,3.5nm,0.7s,baz=256,slow=9.8,SNR=13
SONM pP **pP 00 46 07.7 +1.1**
comp=Z,7.8nm,0.8s,baz=257,slow=10.0,SNR=8.4
SONM ScS ScS 00 56 12.5 -6.2
comp=Z,0.3nm,0.4s,baz=145,slow=34,SNR=1.4
comp=Z,3.5nm,0.7s
SONM Songino Array 28.13 55 P **P 00 45 43.7 +1.0**
SONM Songino Array 28.13 55 P **P 00 45 43.7 +1.0**
SONM pmax pmax
comp=Z,10.0nm,1.0s
BNN Bunyan 28.13 286 P **P 00 45 43.5 +0.7**
BNN IAmb IAmb 00 46 44.0
comp=Z,87nm,1.5s
ULN Ulaanbaatar 28.57 55 P **P 00 45 47.0 +0.4**
ULN Ulaanbaatar 28.57 55 *ce*P **P 00 45 48.4 +1.8**
ULN pmax pmax
comp=Z,11nm,1.7s
ASF Jabal al Asfar 28.70 272 P **P 00 45 48.6 +0.8**
comp=Z,2.0nm,0.8s,baz=74,slow=9.7,SNR=4.0
comp=Z,2.0nm,0.8s
KMI Kunming 29.09 104 ⇑P P 00 45 56.5 +5.0
KMI pP pP 00 46 17.4 +2.4
KMI sP sP 00 46 27.8 +0.7
KMI pmax pmax
comp=Z,8.0nm,1.5s
SIM Simferopol' 29.30 299 *e*P **P 00 45 55.2 +2.3**
SIM S **S 00 50 32.0 -6.6**
SIM pmax pmax
comp=Z,73nm,1.3s
SIM smax smax
comp=N,38nm,1.2s
ILGA Ilgaz 29.58 291 P **P 00 45 55.7 0.0**
ILGA IAmb IAmb 00 45 59.5
comp=Z,81nm,1.1s
MMAI Mount Meron Ar 29.66 274 P **P 00 45 57.4 +1.1**
comp=Z,1.5nm,0.6s,baz=74,slow=9.9,SNR=4.4
MMAI PcP **PcP 00 48 58.3 0.0**
comp=Z,2.7nm,0.7s,baz=82,slow=6.0,SNR=5.0
comp=Z,1.5nm,0.6s
BR131 Keskin Array S 29.74 288 P **P 00 45 57.6 +0.5**
BR131 Keskin Array S 29.74 288 *d*iP **P 00 45 58.6 +1.5**
BRTR Keskin Array B 29.74 288 P **P 00 45 58.2 +1.1**
comp=Z,7.1nm,0.9s,baz=97,slow=8.6,SNR=36
BRTR pP **pP 00 46 20.5 -0.3**
comp=Z,2.9nm,0.7s,baz=95,slow=8.8,SNR=2.8
BRTR PcP **PcP 00 48 57.7 -0.8**
comp=Z,1.5nm,0.7s,baz=139,slow=4.0,SNR=2.0
comp=Z,7.1nm,0.9s
BRTR Keskin Array B 29.74 288 P **P 00 45 57.8 +0.7**
MOS Moscow 29.91 321 *e*P **P 00 45 58.0 -0.1**
MOS *e* 00 46 20.6
MOS *e* 00 46 32.1
MOS *e* 00 46 57.3
MOS *e*S **S 00 50 47.9 +0.1**
MOS *e**SS **sS 00 51 27.3 -1.6**
MOS pmax pmax
comp=Z,38nm,0.7s
CHTO Chiang Mai 29.92 118 P **P 00 45 60.0 +1.3**
CHTO Chiang Mai 29.92 118 P **P 00 46 00.0 +1.3**
CHTO pmax pmax
comp=Z,15nm,1.0s
PRGR Permogore 29.96 335 ⇑*i*P **P 00 45 59.0 +0.5**
PRGR *e**PP **pP 00 46 21.8 -0.2**
PRGR pmax pmax
comp=Z,40nm,0.6s
CM31 Chiang Mai Arr 30.16 119 P **P 00 46 02.0 +1.3**
CMAR Chiang Mai Arr 30.16 119 P **P 00 46 01.4 +0.6**
comp=Z,2.4nm,0.4s,baz=300,slow=8.4,SNR=20
comp=Z,2.4nm,0.4s
CMAR Chiang Mai Arr 30.16 119 P **P 00 46 01.6 +0.9**
CMAR Chiang Mai Arr 30.16 119 P **P 00 46 01.6 +0.9**
OBN Obninsk 30.19 319 ⇑P **P 00 46 02.3 +1.7**
OBN Obninsk 30.19 319 P **P 00 46 00.2 -0.4**
OBN Obninsk 30.19 319 *ce*P **P 00 46 01.4 +0.8**
OBN *e**PP **pP 00 46 25.9 +2.0**
OBN *e* 00 47 01.7
OBN *e*S **S 00 50 51.7 -0.5**
OBN *e*SS **ScP 00 52 36.5 +4.4**
OBN pmax pmax
comp=Z,123nm,1.7s
OBN MLR MLR
comp=Z,778nm,17.0s
BTO Baotou 30.36 70 *e*P **P 00 45 58.8 -3.7**
BTO S **S 00 50 46.8 -8.7**
ANTO Ankara 30.38 288 P **P 00 46 03.6 +1.0**
ANTO IAmb IAmb 00 46 06.2
comp=Z,71nm,1.9s
ANTO Ankara 30.38 288 P **P 00 46 03.6 +1.0**
ANTO pmax pmax
comp=Z,71nm,2.0s
BR231 Keskin MP Arra 30.39 288 P **P 00 46 03.8 +1.0**
BR231 IAmb IAmb 00 46 57.3
comp=Z,75nm,2.0s
HHC Hu-ho-hao-te 31.50 70 *e*P **P 00 46 16.6 +4.0**
HHC pmax pmax
comp=Z,31nm,0.8s
HHC pmax pmax
comp=Z,580nm,7.2s
GYA Guiyang 31.55 98 *e*P **P 00 46 14.0 +0.9**
GYA pP pP 00 46 39.4 +2.8
GYA PP **PP 00 47 26.6 +0.4**
GYA S **S 00 51 11.6 -2.9**
GYA pmax pmax
comp=Z,590nm,4.4s
KLMR Klimovskoe 31.69 331 *e*P **P 00 46 13.4 -0.4**
KLMR *e**SP **sP 00 46 47.0 -2.4**
KLMR *e* 00 47 19.6
KLMR *e* 00 53 36.6
KLMR pmax pmax
comp=Z,49nm,1.3s
KLMR Klimovskoe 31.69 331 *e*P **P 00 46 13.4 -0.4**
KLMR AMP 00 46 16.2
comp=Z,49nm,1.3s
KLMR *es*P **sP 00 46 47.1 -2.4**
KLMR *e*PP **PnPn 00 47 19.6 -2.0**
KLMR *e*ScP **SS 00 53 36.7 +1.5**
BORA Eskisehir 32.16 289 P **P 00 46 17.3 -1.0**
BORA IAmb IAmb 00 46 21.1
comp=Z,27nm,1.2s
ENH Enshi 32.27 90 P **P 00 46 20.9 +1.6**
ENH IAmb IAmb 00 46 47.0
comp=Z,38nm,1.1s
JURR Jurilovca 33.02 298 ⇓P **P 00 46 27.8 +2.3**
TLCR 33.06 299 ⇑P **P 00 46 27.6 +1.7**
TLCR 33.06 299 ⇑P **P 00 46 27.6 +1.7**
KIS Kishinev 33.11 302 ⇓P **P 00 46 28.4 +2.1**
KIS Kishinev 33.11 302 ⇓P **P 00 46 28.4 +2.1**
MILM Milestii Mici 33.11 302 ⇑P **P 00 46 27.8 +1.5**
ELL Elmali 33.11 283 P **P 00 46 27.3 +0.7**
ELL Elmali 33.11 283 P **P 00 46 27.3 +0.7**
ELL pmax pmax
comp=Z,142nm,0.8s
SRDT SRDT 33.13 124 P **P 00 46 27.7 +0.8**
comp=Z,48nm,0.9s
AKASG Malin Array Be 33.23 309 P **P 00 46 27.4 +0.1**
comp=Z,20nm,0.6s,baz=84,slow=7.1,SNR=121
AKASG pP **pP 00 46 51.0 0.0**
comp=Z,9.7nm,0.8s,baz=77,slow=11,SNR=3.8
AKASG PP **PnPn 00 47 41.7 +0.7**
comp=Z,2.7nm,0.6s,baz=83,slow=11,SNR=1.3
AKASG PcP **PcP 00 49 06.3 -1.1**
comp=Z,3.1nm,0.7s,baz=80,slow=3.1,SNR=3.2
comp=Z,20nm,0.6s
AKASG Malin Array Be 33.23 309 P **P 00 46 27.4 +0.1**
AKASG Malin Array Be 33.23 309 P **P 00 46 27.5 +0.1**
AKASG pmax pmax
comp=Z,101nm,0.9s
AKBB Malin Array Si 33.23 309 P **P 00 46 27.3 0.0**
AKBB Malin Array Si 33.23 309 *ce*P **P 00 46 27.6 +0.3**
TPGR Topolog 33.34 298 ⇑P **P 00 46 29.8 +1.4**
LEOM Leova 33.48 301 ⇓P **P 00 46 31.8 +2.3**
LEOM Leova 33.48 301 ⇓P **P 00 46 31.8 +2.3**
CFR Carcaliu 33.54 299 ⇓P **P 00 46 31.6 +1.5**
CFR Carcaliu 33.54 299 ⇓P **P 00 46 31.6 +1.5**
VLDR Vladesti 33.58 300 ⇓P **P 00 46 32.4 +2.0**
TATR Tatarca 33.60 299 ⇑P **P 00 46 32.8 +2.2**
TLBR Topalu 33.61 298 ⇓P **P 00 46 32.2 +1.5**
SCTR Scanteiesti 33.64 300 ⇓P **P 00 46 33.2 +2.3**
HARR Harsova 33.69 298 ⇑P **P 00 46 33.4 +2.0**

HARR Harsova 33.69 298 ⇑P **P 00 46 33.4 +2.0**
VARL Varlezi 33.74 300 ⇓P **P 00 46 34.0 +2.2**
VASR Vaslui 33.80 301 ⇓P **P 00 46 34.2 +1.9**
ICOR Ion Corvin 33.80 297 ⇑P **P 00 46 34.4 +2.1**
MANT Manisa 33.83 287 P **P 00 46 33.3 +0.3**
MANT IAmb IAmb 00 46 35.6
comp=Z,87nm,1.7s
TUDR 33.87 299 ⇑P **P 00 46 35.8 +2.9**
IAS Iasi 33.98 302 P **P 00 46 36.3 +2.4**
GHRR 34.05 300 ⇑P **P 00 46 37.2 +2.7**
NRIK Noril'sk 34.14 10 P **P 00 46 35.5 +0.4**
comp=Z,20nm,0.6s,baz=198,slow=5.6,SNR=32
comp=Z,20nm,0.6s
NRIK Noril'sk 34.14 10 P **P 00 46 35.4 +0.4**
NRIK IAmb IAmb 00 46 38.3
comp=Z,20nm,0.7s
NRIK Noril'sk 34.14 10 *ceP* **P 00 46 36.0 +1.0**
NRIK pmax pmax
comp=Z,20nm,0.7s
PANC Panciu 34.23 300 ⇓P **P 00 46 38.9 +2.8**
ODBI Odobesti 34.30 300 ⇓P **P 00 46 39.5 +2.8**
GRER 34.36 299 ⇑P **P 00 46 41.1 +3.9**
PGOR Pogoanele 34.36 298 ⇑P **P 00 46 40.1 +2.9**
HNS HongShan 34.44 75 ⇓P P 00 46 44.5 +6.6
HNS pmax pmax
comp=Z,13nm,0.9s
LEHL Lehliu 34.49 298 ⇑P **P 00 46 40.9 +2.5**
VRI Vrincioaia 34.52 300 ⇓P **P 00 46 41.3 +2.6**
VRI Vrincioaia 34.52 300 ⇓P **P 00 46 41.3 +2.6**
PLOR Plostina 34.58 300 ⇓P **P 00 46 41.9 +2.7**
PLOR Plostina 34.58 300 ⇓P **P 00 46 41.9 +2.7**
TESR Tescani 34.58 301 ⇓P **P 00 46 40.9 +1.7**
ISR Istrita 34.67 299 ⇓P **P 00 46 43.5 +3.5**
ISR Istrita 34.67 299 ⇓P **P 00 46 43.5 +3.5**
RAZG Razgrad 34.76 296 ⇓P **P 00 46 42.3 +1.5**
MNK Minsk 34.76 315 *i* P **P 00 46 41.1 +0.6**
MNK *i* *PP **pP 00 46 58.4 -5.8**
MNK *i* 00 47 59.3
MNK *i* S **S 00 52 03.4 +0.1**
MNK *i* SS **SnSn 00 54 26.1 -1.2**
MNK pmax pmax
comp=Z,166nm,1.9s
MNK pmax pmax
comp=N,97nm,1.9s
MNK pmax pmax
comp=E,49nm,1.9s
MNK MLR MLR
comp=Z,552nm,22.0s
MNK MLR MLR
comp=N,547nm,15.0s
MNK Minsk 34.76 315 *i* P **P 00 46 41.2 +0.6**
comp=E,49nm,1.9s
MNK *i* P **P 00 46 41.2 +0.6**
comp=N,97nm,1.9s
MNK *i* P **P 00 46 41.2 +0.6**
comp=Z,166nm,1.9s,baz=103
MNK *i* pP **pP 00 46 58.4 -5.8**
MNK *i* PP **PP 00 47 59.3 -1.8**
MNK *i* S **S 00 52 03.4 +0.1**
MNK *i* SS **SnSn 00 54 26.1 -1.2**
MNK *i* LQ LQ 00 57 38.6
MNK *i* LR LR 01 00 15.7
MNK *i* LRM MLR 01 02 29.9
comp=E,47nm,15.3s
MNK *i* LRM MLR 01 02 46.5
comp=Z,552nm,21.6s
MNK *i* LRM MLR 01 02 51.5
comp=N,547nm,15.3s
NEHR Nehoiu 34.83 299 ⇑P **P 00 46 44.9 +3.5**
SULR 34.89 298 ⇑P **P 00 46 44.7 +3.0**
COVR Voineasa-Covas 34.89 300 ⇓P **P 00 46 44.3 +2.4**
BIZ Bicaz 34.96 302 ⇓P **P 00 46 44.3 +1.9**
SECR 35.01 299 ⇓P **P 00 46 47.1 +4.3**
MLR Muntele Rosu 35.08 299 ⇓P **P 00 46 46.7 +3.1**
MLR Muntele Rosu 35.08 299 P **P 00 46 45.8 +2.2**
MLR Muntele Rosu 35.08 299 ⇓P **P 00 46 46.7 +3.1**
OZUR 35.18 300 ⇑P **P 00 46 47.1 +2.8**
BOD Bodaibo 35.21 39 *eP* **P 00 46 45.8 +1.4**
BOD pmax pmax
comp=Z,24nm,1.7s
DOPR Dopca 35.46 300 ⇓P **P 00 46 48.3 +1.6**
NACGM Naroch 35.48 316 ⇓*eP* **P 00 46 48.0 +1.4**
baz=103
BURAR Bucovina Array 35.58 303 ⇓P **P 00 46 50.5 +2.7**
BURAR Bucovina Array 35.58 303 P **P 00 46 48.8 +1.0**
BURAR IAmb IAmb 00 46 51.1
comp=Z,39nm,0.9s
BURAR Bucovina Array 35.58 303 ⇓P **P 00 46 50.5 +2.7**
BUR08 Bucovina Ar. S 35.59 303 P **P 00 46 49.0 +1.1**
BUR08 IAmb IAmb 00 46 51.0
comp=Z,33nm,0.9s
COPA Copaceanca 35.66 297 ⇑P **P 00 46 50.9 +2.5**
VOIR 35.71 299 ⇑P **P 00 46 50.3 +1.4**
VOIR 35.71 299 ⇑P **P 00 46 50.3 +1.4**
RDO Rodhopi 35.72 292 P **P 00 46 49.8 +0.9**
RDO IAmb IAmb 00 46 51.9
comp=Z,30nm,1.4s
IIGN Ignalina 35.89 316 *eP* **P 00 46 52.4 +2.2**
ISAL Salakas 35.99 317 *eP* **P 00 46 52.6 +1.6**
ARR Arges 36.01 299 ⇑P **P 00 46 53.1 +1.7**
ARCR ARCALIA 36.16 302 ⇓P **P 00 46 55.7 +3.1**
VSU Vasula 36.43 322 *i* P **P 00 46 55.4 +0.7**
VSU pmax pmax
comp=Z,167nm,0.8s
VSU Vasula 36.43 322 *eP* **P 00 46 56.6 +1.9**
LVV L'vov 36.45 307 *eP* **P 00 46 56.0 +1.0**
LVV MLR MLR
comp=N,300nm,15.0s
LVV MLR MLR
comp=E,400nm,15.0s
LVV MLR MLR
comp=Z,600nm,15.0s
TIA Tai'an 36.59 76 ⇓P **P 00 46 58.6 +2.1**
TIA pmax pmax
comp=Z,5.0nm,0.3s
TIA LR LR
comp=Z,590nm,13.7s
TIA LR LR
comp=Z,760nm,16.7s
TIA LR LR
comp=Z,900nm,16.9s
LOT Lotru 36.61 299 ⇓P **P 00 46 58.5 +1.9**
CJR Cluj-Napoca 36.68 301 ⇓P **P 00 46 59.9 +2.8**
CJR Cluj-Napoca 36.68 301 ⇓P **P 00 46 59.9 +2.8**
CBBR Cluj-Babes-Bol 36.72 302 ⇑P **P 00 47 00.3 +3.0**
BMR Baia Mare 36.74 303 ⇓P **P 00 47 00.7 +3.2**
BMR Baia Mare 36.74 303 ⇓P **P 00 47 00.7 +3.2**
BAIL Bailesti 37.01 297 ⇓P **P 00 47 02.2 +2.3**
MESR Meseseni 37.12 302 ⇑P **P 00 47 03.6 +2.8**
PABE Paberze 37.18 316 P **P 00 47 01.8 +0.7**
PABE Paberze 37.18 316 *eP* **P 00 47 02.6 +1.4**
DEV Deva 37.20 300 ⇑P **P 00 47 03.6 +2.1**
DEV Deva 37.20 300 ⇑P **P 00 47 03.6 +2.1**
VTS Vitosha 37.24 295 ⇑P **P 00 47 04.2 +2.2**
VTS Vitosha 37.24 295 P **P 00 47 02.9 +0.9**
VTS Vitosha 37.24 295 ⇑P **P 00 47 04.2 +2.2**
DRGR 37.29 302 ⇑P **P 00 47 04.4 +2.0**
DRGR 37.29 302 ⇑P **P 00 47 04.4 +2.0**
VSVD Vaisvydziai 37.29 317 *eP* **P 00 47 03.4 +1.4**
GZR Gura Zlata 37.31 299 ⇑P **P 00 47 04.4 +1.8**
TRPA Tarpa 37.38 304 ⇓P **P 00 47 05.2 +2.2**
TRPA Tarpa 37.38 304 P **P 00 47 04.8 +1.8**
IDI Anoyia 37.41 282 P **P 00 47 02.1 -1.3**
IDI IAmb IAmb 00 47 06.5
comp=Z,78nm,1.6s
BLKB Belogradchik 37.53 296 ⇑P **P 00 47 06.4 +2.0**
UZH Uzhgorod 37.55 305 ⇓*iP* **P 00 47 05.0 +0.6**
UZH *e* 00 47 29.4
UZH *e* 00 48 42.2
UZH *e* 00 48 52.3
KOLS Kolonicke sedl 37.56 305 *eP* **P 00 47 06.4 +1.9**
KOLS pmax pmax
comp=Z,57nm,0.9s
LVZ Lovozero 37.64 338 P **P 00 47 05.1 +0.2**
LVZ IAmb IAmb 00 47 07.1
comp=Z,38nm,0.8s
LVZ Lovozero 37.64 338 *ceP* **P 00 47 06.8 +1.9**
LVZ pmax pmax
comp=Z,24nm,0.7s
LVZ Lovozero 37.64 338 P **P 00 47 05.7 +0.8**
LVZ sP **sP 00 47 41.9 +1.0**
FIA1 FINESS Array S 37.71 326 P **P 00 47 06.2 +0.7**
FIA1 IAmb IAmb 00 47 08.2
comp=Z,34nm,0.8s
FINES FINESS Array B 37.71 326 P **P 00 47 06.2 +0.6**
comp=Z,29nm,0.7s,baz=116,slow=9.6,SNR=119
FINES S **S 00 52 47.3 -0.8**
comp=Z,2.5nm,0.8s,baz=95,slow=21,SNR=1.9
comp=Z,29nm,0.7s
FINES FINESS Array B 37.71 326 P **P 00 47 06.5 +0.9**
FINES FINESS Array B 37.71 326 P **P 00 47 06.5 +0.9**
APA Apatity 37.82 337 ⇓*iP* **P 00 47 05.7 -0.7**
APA pmax pmax
comp=Z,10.0nm,0.6s
LTVH Ltavrtes, Hu 37.83 303 ⇑P **P 00 47 09.6 +2.9**
LTVH Ltavrtes, Hu 37.83 303 P **P 00 47 09.3 +2.6**
MTSE Matsula 37.97 321 *eP* **P 00 47 08.9 +1.2**
SIRR Siria 38.04 301 ⇓P **P 00 47 11.0 +2.4**
MEF Metsahovi 38.09 324 *eP* **P 00 47 10.2 +1.4**
CRVS Cervenica-Dubn 38.10 305 *eP* **P 00 47 11.1 +2.1**
BZS Buzias 38.11 300 ⇓P **P 00 47 11.2 +2.0**
BZS Buzias 38.11 300 ⇓P **P 00 47 11.2 +2.0**
BOVS Bovan 38.23 297 ⇑P **P 00 47 11.6 +1.4**
STHS Stebnicka Huta 38.24 306 *eP* **P 00 47 10.7 +0.4**
ABAH Abaujker 38.25 304 P **P 00 47 12.1 +1.8**
BANR Banloc 38.47 299 ⇑P **P 00 47 15.2 +3.1**
SLIT Silitere, Latvi 38.51 319 *eP* **P 00 47 13.6 +1.3**
BEL Belsk 38.61 310 *eP* **P 00 47 14.8 +1.6**
BEL Belsk 38.61 310 P **P 00 47 16.9 +3.7**
AMBH Ambrzfalva 38.68 301 ⇑P **P 00 47 17.0 +3.1**
AMBH Ambrzfalva 38.68 301 P **P 00 47 16.6 +2.8**
BSZH Besenyszg 38.94 303 ⇓P **P 00 47 19.2 +3.2**
BSZH Besenyszg 38.94 303 P **P 00 47 18.8 +2.7**
PSZ Piszkesteto 39.16 304 ⇓P **P 00 47 20.4 +2.4**
PSZ Piszkesteto 39.16 304 P **P 00 47 18.9 +0.9**
PSZ IAmb IAmb 00 47 21.0
comp=Z,40nm,1.1s
PSZ Piszkesteto 39.16 304 ⇓P **P 00 47 20.4 +2.4**
PSZ Piszkesteto 39.16 304 P **P 00 47 20.2 +2.1**
NJ2 Nanjing 39.19 82 *eP* **P 00 47 17.6 -0.7**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
OJC Ojcow 39.19 307 *eP* **P 00 47 17.0 -1.1**
OJC Ojcow 39.19 307 P **P 00 47 17.3 -0.8**
OJC Ojcow 39.19 307 P **P 00 47 17.3 -0.8**
OJC pmax pmax
comp=Z,114nm,1.1s
DIVS Divibare 39.41 298 P **P 00 47 20.9 +0.8**
DIVS IAmb IAmb 00 47 23.2
comp=Z,85nm,1.6s
FRGS Fruska Gora 39.42 299 ⇑P **P 00 47 22.0 +1.9**
RAF Rauma 39.57 324 *eP* **P 00 47 22.0 +1.0**
BUD Budapest 39.77 303 P **P 00 47 25.5 +2.5**
BUD Budapest 39.77 303 P **P 00 47 24.9 +1.9**
VYHS Vyhne 39.85 305 *eP* **P 00 47 25.7 +2.1**
VYHS pmax pmax
comp=Z,60nm,1.3s
MORH Mrgy, Hungar 40.13 301 ⇑P **P 00 47 28.1 +2.1**
MORH Mrgy, Hungar 40.13 301 P **P 00 47 27.4 +1.5**
PDG Podgorica 40.18 295 P **P 00 47 25.9 -0.4**
AAL Aland 40.21 323 *eP* **P 00 47 26.7 +0.3**
SRO Srobarova 40.23 303 *eP* **P 00 47 29.1 +2.3**
SRO pmax pmax
comp=Z,129nm,1.2s
OKC Ostrava-Krasne 40.26 307 *eP* **P 00 47 28.8 +1.9**
OKC Ostrava-Krasne 40.26 307 *eP* **P 00 47 28.8 +1.9**
CSKK Cskako 40.30 303 P **P 00 47 29.2 +1.8**
MAUC Maruska 40.48 306 *eP* **P 00 47 30.5 +1.7**
KOVH Kovagotottos 40.52 301 P **P 00 47 29.7 +0.6**
JAVC Velka Javorina 40.60 305 *eP* **P 00 47 32.2 +2.3**
MORC Moravsky Berou 40.65 307 ⇓P **P 00 47 32.3 +2.0**
MORC Moravsky Berou 40.65 307 P **P 00 47 31.4 +1.1**
MORC IAmb IAmb 00 47 33.6
comp=Z,57nm,1.0s
MORC Moravsky Berou 40.65 307 ⇓P **P 00 47 32.3 +2.0**
MORC Moravsky Berou 40.65 307 *eP* **P 00 47 31.6 +1.4**
SMOL Smolenice 40.78 305 *eP* **P 00 47 33.4 +2.1**
SMOL pmax pmax
comp=Z,13nm,1.1s
MPLH Magyarpolny 40.80 303 P **P 00 47 33.1 +1.6**
GKP Gorka Klasztor 40.84 312 *eP* **P 00 47 32.5 +0.8**
GKP Gorka Klasztor 40.84 312 P **P 00 47 32.9 +1.2**
GKP Gorka Klasztor 40.84 312 *eP* **P 00 47 33.2 +1.5**
MODS Modra-Piesok 40.89 304 *eP* **P 00 47 33.7 +1.5**
MODS pmax pmax
comp=Z,95nm,1.3s
EGYH Egyhazasksezo 40.92 303 P **P 00 47 34.6 +2.1**
KEV Kevo 40.98 338 P **P 00 47 33.2 +0.6**
KEV IAmb IAmb 00 47 35.3
comp=Z,32nm,0.8s
KEV Kevo 40.98 338 P **P 00 47 33.2 +0.6**
KEV pmax pmax
comp=Z,32nm,0.8s
KEV Kevo 40.98 338 P **P 00 47 33.6 +1.0**
ZST Bratislava 41.02 304 *eP* **P 00 47 34.9 +1.7**
ZST pmax pmax
comp=Z,50nm,1.2s
KRLC Kraliky 41.13 307 *eP* **P 00 47 35.5 +1.3**
KRLC Kraliky 41.13 307 *eP* **P 00 47 35.5 +1.3**
VRAC Vranov 41.29 306 ⇑P **P 00 47 38.1 +2.7**
VRAC Vranov 41.29 306 ⇑P **P 00 47 38.1 +2.7**
VRAC Vranov 41.29 306 *eP* **P 00 47 37.1 +1.7**
UPP Uppsala 41.31 322 *eP* **P 00 47 37.0 +1.6**
ARA0 ARCESS Array S 41.33 338 *eP* **P 00 47 36.5 +1.0**
ARA0 IAmb IAmb 00 47 38.2
comp=Z,55nm,0.8s
ARCES ARCESS Array B 41.33 338 P **P 00 47 35.9 +0.4**
comp=Z,44nm,0.8s,baz=114,slow=7.4,SNR=156
ARCES pP **pP 00 48 00.8 +1.0**
comp=Z,13nm,0.7s,baz=111,slow=9.2,SNR=3.3
ARCES PP **PP 00 49 09.4 -3.1**
comp=Z,7.0nm,0.7s,baz=115,slow=11,SNR=1.9
comp=Z,44nm,0.8s
ARCES ARCESS Array B 41.33 338 P **P 00 47 36.3 +0.8**
ARCES ARCESS Array B 41.33 338 P **P 00 47 36.3 +0.8**
ARCES pmax pmax
comp=Z,50nm,0.8s
CN2 Changchun 41.37 63 *eP* **P 00 47 32.9 -3.3**
CN2 sP sP 00 48 11.3 -1.7
CN2 S **S 00 53 37.9 -5.4**
CN2 sS sS 00 54 22.3 -3.2
CN2 LR LR
comp=Z,220nm,15.0s
CN2 LR LR
comp=Z,300nm,15.0s
CN2 LR LR
comp=Z,410nm,16.0s
DPC Dobruska-Polom 41.41 307 *eP* **P 00 47 38.3 +1.8**
DPC Dobruska-Polom 41.41 307 *eP* **P 00 47 38.3 +1.8**
KSP Ksiaz 41.42 308 *eP* **P 00 47 37.5 +1.0**
KSP Ksiaz 41.42 308 P **P 00 47 39.4 +2.9**
SOP Sopron 41.42 303 P **P 00 47 38.2 +1.7**
SOP Sopron 41.42 303 P **P 00 47 38.2 +1.7**
KRUC Moravsky 41.43 306 *eP* **P 00 47 38.1 +1.5**
OSTC Ostas 41.48 308 *eP* **P 00 47 38.9 +1.9**
CHVC Chvalec 41.58 308 *eP* **P 00 47 39.2 +1.4**
VIKU Vikbolandet 41.58 320 *eP* **P 00 47 38.9 +1.3**
RONA Rosalia, Austr 41.60 303 *i* P **P 00 47 39.2 +1.2**
comp=Z,29nm,1.0s,SNR=22
UPC Upice 41.61 308 *eP* **P 00 47 40.0 +2.0**
UPC Upice 41.61 308 *eP* **P 00 47 40.0 +2.0**
KOGS Kog 41.76 302 *i* P **P 00 47 40.4 +1.1**
KTK1 Kautokeino 41.80 336 *eP* **P 00 47 40.4 +1.0**
KTK1 IAmb IAmb 00 47 41.6
comp=Z,49nm,0.7s
CONA Conrad Observa 41.87 304 *i* P **P 00 47 41.8 +1.5**
comp=Z,102nm,1.3s,SNR=53
IPM Ipoh 41.87 132 P **P 00 47 40.9 +0.4**
IPM IAmb IAmb 00 48 21.2
comp=Z,30nm,1.1s
TREC Trest 42.01 306 *eP* **P 00 47 42.7 +1.3**
TREC Trest 42.01 306 *eP* **P 00 47 42.7 +1.3**
PTJ Puntijarka 42.02 301 P **P 00 47 43.5 +2.0**
PSI Prapat 42.02 136 P **P 00 47 41.8 -0.1**
PSI pmax pmax
comp=Z,14nm,0.7s
RPSI Rantau Prapat 42.11 136 P **P 00 47 41.8 -0.7**
RPSI IAmb IAmb 00 48 29.0
comp=Z,14nm,0.7s
ARSA Arzberg 42.16 303 *i* P **P 00 47 44.3 +1.6**
comp=Z,23nm,1.1s,SNR=10
BSD Bornholm Skovb 42.27 315 *eP* **P 00 47 43.4 0.0**
BSD Bornholm Skovb 42.27 315 *i* P **P 00 47 42.0 -1.3**
BSD IAmb IAmb 00 47 44.6
comp=Z,53nm,0.9s
HAMF Hammerfest 42.40 339 *eP* **P 00 47 45.7 +1.5**
HAMF IAmb IAmb 00 47 46.7
comp=Z,78nm,0.8s
GOPC GO Pecny, Ondr 42.42 307 *eP* **P 00 47 46.5 +1.8**
GOPC GO Pecny, Ondr 42.42 307 *eP* **P 00 47 46.5 +1.8**
PERS Pernice 42.51 302 *eP* **P 00 47 46.8 +1.3**
PVCC Panska Ves 42.53 308 *eP* **P 00 47 47.5 +2.0**
PVCC Panska Ves 42.53 308 *eP* **P 00 47 47.5 +2.0**
GSI Gunungsitoli 42.54 139 P **P 00 47 47.3 +1.3**
GSI Gunungsitoli 42.54 139 P **P 00 47 47.9 +2.0**
comp=Z,89nm,1.1s
SOKA Soboth 42.56 302 *i* P **P 00 47 47.3 +1.4**
comp=Z,80nm,1.5s,SNR=28
PRU Pruhonice 42.58 307 *eP* **P 00 47 47.0 +1.1**
PRU Pruhonice 42.58 307 *eP* **P 00 47 47.0 +1.1**
TRSI Tarutung 42.68 137 P **P 00 47 49.6 +2.4**
comp=Z,19µmcomp=Z,185nm,0.5s
TIP Timpagrande 42.70 291 P **P 00 47 47.3 +0.2**
CKRC Cesky Krumlov 42.82 305 *eP* **P 00 47 48.9 +1.0**
OBKA Obir 42.92 302 *i* P **P 00 47 50.4 +1.6**
comp=Z,47nm,1.3s,SNR=11
DEL Delary 42.92 317 *eP* **P 00 47 50.1 +1.6**
DEL Delary 42.92 317 *i* P **P 00 47 49.0 +0.4**
RUE Ruedersdorf 42.94 311 *eP* **P 00 47 49.5 +0.8**
JETT Jettan, Norway 42.95 336 *eP* **P 00 47 49.7 +1.1**
JETT IAmb IAmb 00 47 52.9
comp=Z,46nm,0.8s
MOA Molln 42.95 304 *i* P **P 00 47 49.9 +1.0**
comp=Z,71nm,1.4s,SNR=25
LJU Ljubljana 42.99 301 *i* P **P 00 47 51.3 +2.0**
LUNU Lund 43.13 315 *i* P **P 00 47 50.0 -0.2**
CUC Castrocucco 43.21 292 P **P 00 47 51.9 +0.7**
CUC IAmb IAmb 00 48 17.7
comp=Z,20nm,1.0s
GEC2 GERESS Array S 43.22 305 P **P 00 47 51.9 +0.7**
GEC2 IAmb IAmb 00 47 54.2
comp=Z,38nm,1.4s
GERES GERESS Array B 43.22 305 P **P 00 47 52.1 +0.9**
comp=Z,9.6nm,1.1s,baz=90,slow=9.3,SNR=40
GERES PP **PP 00 49 31.2 -2.1**
comp=Z,4.9nm,1.0s,baz=75,slow=10,SNR=3.9
GERES ScP **ScP 00 53 18.4 -2.2**
comp=Z,1.4nm,1.0s,baz=86,slow=5.5,SNR=4.6
GERES ScS **SS 00 57 32.8 +5.9**
comp=Z,0.7nm,0.4s,baz=180,slow=24,SNR=5.3
comp=Z,9.6nm,1.1s
GERES GERESS Array B 43.22 305 P **P 00 47 52.0 +0.7**
KHC Kasperske Hory 43.27 306 P **P 00 47 52.4 +0.8**
KHC IAmb IAmb 00 47 54.7
comp=Z,31nm,1.2s
KHC Kasperske Hory 43.27 306 P **P 00 47 52.4 +0.8**
KHC pmax pmax
comp=Z,31nm,1.2s
KHC Kasperske Hory 43.27 306 *eP* **P 00 47 52.4 +0.8**
KHC *ex* x 00 48 04.5
KHC *eP*P **PP 00 49 31.5 -2.3**
BIOA Bad Ischl, Aus 43.38 304 *i* P **P 00 47 53.8 +1.3**
comp=Z,40nm,1.3s,SNR=16
TRO Tromso 43.45 336 *eP* **P 00 47 53.6 +1.0**
TRO IAmb IAmb 00 47 55.0
comp=Z,28nm,0.8s
CLL Collm 43.47 309 P **P 00 47 53.8 +0.7**
CLL IAmb IAmb 00 47 55.8
comp=Z,41nm,1.0s
CLL Collm 43.47 309 ⇓*iP* **P 00 47 54.3 +1.2**
CLL pmax pmax
comp=Z,82nm,1.4s
CLL Collm 43.47 309 ⇓*iP* **P 00 47 54.3 +1.2**
comp=Z,82nm,1.4s
CLL *ex* x 00 48 12.0
CLL *es*P **sP 00 48 28.0 -1.3**
CLL *eP*P **PP 00 49 35.0 -0.9**
CLL *eP*PP PPP 00 50 13.0
CLL *ex* x 00 50 25.0
MYKA Terra Mystica 43.52 302 *eP* **P 00 47 55.4 +1.8**
comp=Z,17nm,1.3s
PRED Cave del Predi 43.60 302 P **P 00 47 55.4 +1.1**
KBA Koelnbreinsper 43.66 303 *i* P **P 00 47 56.2 +1.3**
comp=Z,25nm,0.9s,SNR=6.8
COP Copenhagen 43.70 315 *i* P **P 00 47 56.7 +1.9**
COP IAmb IAmb 00 47 57.8
comp=Z,196nm,0.9s
YAK Yakutsk 43.85 35 P **P 00 47 57.3 +1.4**
YAK Yakutsk 43.85 35 *ce*P **P 00 47 59.9 +4.0**
YAK pmax pmax
comp=Z,12nm,0.5s
NKC Novy Kostel 43.90 308 *eP* **P 00 47 58.1 +1.5**
NKC Novy Kostel 43.90 308 *eP* **P 00 47 58.1 +1.5**
FAUS Fauske 44.01 332 *eP* **P 00 47 58.1 +1.0**
FAUS IAmb IAmb 00 47 59.6
comp=Z,81nm,0.9s
MOR8 Moi Rana 44.03 331 *eP* **P 00 47 57.6 +0.2**
MOR8 IAmb IAmb 00 47 59.4
comp=Z,105nm,0.7s
MNSI Mandailing Nat 44.04 137 P **P 00 47 58.6 +0.6**
CLUD Cludinico 44.06 302 P **P 00 47 58.1 +0.1**
CLUD IAmb IAmb 00 48 00.2
comp=Z,59nm,1.5s
STEI Steigen 44.17 333 *eP* **P 00 47 59.4 +1.0**
STEI IAmb IAmb 00 48 00.9
comp=Z,44nm,0.8s
STAL STALIGIAL 44.21 302 P **P 00 47 59.7 +0.5**
STAL IAmb IAmb 00 48 01.3
comp=Z,84nm,1.4s
ABTA Abfaltersbach 44.27 303 *i* P **P 00 48 00.4 +0.7**
comp=Z,17nm,1.2s,SNR=6.0
NC405 NORSAR Array S 44.38 323 P **P 00 48 00.3 0.0**
NC602 NORSAR Array S 44.43 323 P **P 00 48 00.6 0.0**
NC602 NORSAR Array S 44.43 323 *eP* **P 00 48 00.7 0.0**
NC602 IAmb IAmb 00 48 01.7
comp=Z,74nm,1.2s
NRCA Norcia 44.55 297 P **P 00 48 03.0 +1.0**
NRCA IAmb IAmb 00 48 37.3
comp=Z,48nm,1.7s
NC303 NORSAR Array S 44.56 323 P **P 00 48 02.1 +0.5**
NB201 NORSAR Array S 44.58 323 P **P 00 48 02.2 +0.4**
KSRS Korea Array 44.62 71 P **P 00 48 03.0 +0.6**
comp=Z,7.9nm,0.3s,baz=275,slow=7.0,SNR=8.9
comp=Z,7.9nm,0.3s
KSRS Korea Array 44.62 71 P **P 00 48 03.0 +0.6**
NB2 NORSAR Subarra 44.62 323 P **P 00 48 02.4 +0.2**
comp=Z,199nm,1.7s,baz=94,slow=7.9
NB2 NORSAR Subarra 44.62 323 P **P 00 47 59.0 -3.2**
NB2 pmax pmax
comp=Z,21nm,1.0s
NB2 NORSAR Subarra 44.62 323 P **P 00 48 02.4 +0.2**
baz=94,slow=7.9
NOA NORSAR Array B 44.62 323 P **P 00 48 01.9 -0.3**
comp=Z,44nm,0.8s,baz=96,slow=7.8,SNR=24
NOA LR LR 01 08 52.5
comp=Z,140nm,18.2s,baz=95,slow=39
comp=Z,44nm,0.8s
KONS Konsvik 44.62 331 *eP* **P 00 48 03.2 +1.2**
STOK Stokkvaagen 44.62 331 *eP* **P 00 48 03.0 +1.0**
NSS Namsos 44.72 328 *eP* **P 00 48 03.9 +1.1**
NSS IAmb IAmb 00 48 04.9
comp=Z,12nm,0.8s
GRA1 Grafenberg Arr 44.74 307 P **P 00 48 04.0 +0.7**
GRF Grafenberg Arr 44.74 307 P **P 00 48 04.0 +0.7**
GRF pmax pmax
comp=Z,187nm,1.5s
GRFO Grafenberg 44.74 307 P **P 00 48 04.1 +0.8**
GRFO Grafenberg 44.74 307 P **P 00 48 04.1 +0.8**
GRFO pmax pmax
comp=Z,156nm,1.4s
NAO01 NORSAR Array S 44.76 323 P **P 00 48 03.5 +0.3**
OSL Oslo 44.78 321 *eP* **P 00 48 04.3 +0.9**
WTTA Wattenberg 44.79 303 *i* P **P 00 48 04.7 +0.8**
comp=Z,31nm,0.9s,SNR=17
WATA Walderalm 44.82 303 *i* P **P 00 48 04.7 +0.6**
comp=Z,47nm,1.2s,SNR=17
LOF Lofoten 44.84 333 *eP* **P 00 48 04.3 +0.6**
LOF IAmb IAmb 00 48 06.7
comp=Z,21nm,0.8s
NC204 NORSAR Array S 44.86 323 P **P 00 48 04.5 +0.4**
KLR Kul'dur 44.94 54 P **P 00 48 04.6 -0.2**
comp=Z,2.7nm,0.8s,baz=271,slow=8.1,SNR=5.7
KLR pP **pP 00 48 31.3 +1.5**
comp=Z,1.8nm,0.5s,baz=292,slow=8.9,SNR=3.1
comp=Z,2.7nm,0.8s
KLR Kul'dur 44.94 54 *ce*P **P 00 48 08.0 +3.2**
KLR pmax pmax
comp=Z,4.0nm,1.0s
CTI Castel Tesino 44.97 302 P **P 00 48 05.6 +0.3**
CTI IAmb IAmb 00 48 07.0
comp=Z,29nm,1.1s

CTI	**Castel Tesino**	**44.97 302**	P	**P**	**00 48 05.6 +0.3**
CTI			pmax	pmax	
	comp=Z,29nm,1.1s				
TEOL	**Teolo**	**45.08 301**	P	**P**	**00 48 06.2 +0.2**
SQTA	**Sankt Quirin**	**45.08 303**	*i* P	**P**	**00 48 06.8 +0.7**
	comp=Z,67nm,1.7s,SNR=18				
MOTA	**Moosalm**	**45.13 304**	*i* P	**P**	**00 48 07.0 +0.4**
	comp=Z,42nm,1.4s,SNR=14				
KONO	**Kongsberg**	**45.33 321**	P	**P**	**00 48 08.1 +0.3**
KONO			IAmb	IAmb	00 48 09.9
	comp=Z,45nm,0.8s				
KONO	**Kongsberg**	**45.33 321**	*ce*P	**P**	**00 48 08.9 +1.2**
KONO			pmax	pmax	
	comp=Z,78nm,1.3s				
KONO	**Kongsberg**	**45.33 321**	*e*P	**P**	**00 48 08.1 +0.3**
KONO			*e*		00 48 09.8
KONO			IAmb	IAmb	00 48 09.8
	comp=Z,38nm,0.6s				
KONO	**Kongsberg**	**45.33 321**	P	**P**	**00 48 08.0 +0.3**
RETA	**Reutte**	**45.34 304**	*i* P	**P**	**00 48 08.8 +0.7**
	comp=Z,23nm,1.2s,SNR=9.6				
BJO1	**Bjornoya**	**45.42 343**	*e*P	**P**	**00 48 09.4 +1.1**
BJO1			IAmb	IAmb	00 48 10.8
	comp=Z,81nm,0.8s				
FETA	**Feichten**	**45.44 303**	*i* P	**P**	**00 48 09.6 +0.6**
	comp=Z,25nm,1.0s,SNR=12				
MUD	**Monsted U'grnd**	**45.53 317**	*i* P	**P**	**00 48 10.5 +1.2**
MUD			IAmb	IAmb	00 48 11.4
	comp=Z,95nm,1.3s				
DOMB	**Dombas**	**45.73 324**	*e*P	**P**	**00 48 11.6 +0.7**
DOMB			IAmb	IAmb	00 48 13.0
	comp=Z,45nm,1.0s				
TIXI	**Tiksi**	**45.73 22**	P	**P**	**00 48 10.3 -0.4**
	comp=Z,4.6nm,0.4s,baz=270,slow=19,SNR=23				
TIXI			ScP	**ScP**	**00 53 28.0 -2.4**
	comp=Z,1.0nm,0.3s,baz=270,slow=23,SNR=3.6				
	comp=Z,4.6nm,0.4s				
TIXI	**Tiksi**	**45.73 22**	P	**P**	**00 48 10.3 -0.4**
TIXI			IAmb	IAmb	00 48 37.7
	comp=Z,19nm,0.8s				
TIXI	**Tiksi**	**45.73 22**	*i* P	**P**	**00 48 10.6 -0.1**
TIXI			pmax	pmax	
	comp=Z,5.0nm,0.6s				
TIXI	**Tiksi**	**45.73 22**	P	**P**	**00 48 10.6 -0.1**
TIXI			pP	**pP**	**00 48 36.8 +1.0**
FUORN	**Ofenpass-Fuorn**	**45.82 303**	P	**P**	**00 48 12.2 +0.1**
FUORN			IAmb	IAmb	00 48 14.3
	comp=Z,45nm,1.6s				
SALO	**Salr**	**45.82 301**	P	**P**	**00 48 12.7 +0.8**
HOMB	**Homborsund**	**45.87 319**	*e*P	**P**	**00 48 12.3 +0.3**
HOMB			IAmb	IAmb	00 48 14.1
	comp=Z,68nm,0.9s				
HOMB	**Homborsund**	**45.87 319**	*i* P	**P**	**00 48 11.0 -1.0**
DAVA	**Damuels**	**45.97 304**	*i* P	**P**	**00 48 13.9 +0.7**
	comp=Z,85nm,1.1s,SNR=23				
SKAR	**Skarslia**	**46.02 322**	*e*P	**P**	**00 48 14.7 +1.4**
SKAR			IAmb	IAmb	00 48 15.3
	comp=Z,56nm,1.3s				
STU	**Stuttgart**	**46.18 306**	P	**P**	**00 48 15.0 +0.4**
STU			IAmb	IAmb	00 48 17.7
	comp=Z,49nm,1.2s				
STU	**Stuttgart**	**46.18 306**	P	**P**	**00 48 15.0 +0.4**
STU			pmax	pmax	
	comp=Z,49nm,1.2s				
MOL	**Molde**	**46.47 325**	*e*P	**P**	**00 48 16.7 0.0**
SNART	**Snartemo**	**46.55 319**	*e*P	**P**	**00 48 19.6 +2.2**
LODK	**Lodwar**	**46.66 234**	P	**P**	**00 48 20.0 +1.1**
AKN	**Aaknes**	**46.70 324**	*e*P	**P**	**00 48 19.4 +0.8**
AKN			IAmb	IAmb	00 48 20.9
	comp=Z,20nm,0.9s				
BFO	**Black Forest**	**46.82 305**	P	**P**	**00 48 20.3 +0.6**
BFO			IAmb	IAmb	00 48 22.1
	comp=Z,53nm,1.4s				
BFO	**Black Forest**	**46.82 305**	P	**P**	**00 48 20.3 +0.6**
BFO			pmax	pmax	
	comp=Z,53nm,1.4s				
BFO	**Black Forest**	**46.82 305**	P	**P**	**00 48 20.7 +1.1**
BFO			pP	**pP**	**00 48 46.5 +2.2**
ODD1	**Odda**	**46.84 321**	*e*P	**P**	**00 48 21.4 +1.7**
ODD1			IAmb	IAmb	00 48 22.3
	comp=Z,49nm,1.1s				
BLS5	**Blasjo**	**46.93 321**	*e*P	**P**	**00 48 21.8 +1.4**
BLS5			IAmb	IAmb	00 48 23.2
	comp=Z,87nm,1.0s				
HYA	**Hoyanger**	**47.06 323**	*e*P	**P**	**00 48 22.2 +0.9**
HYA			IAmb	IAmb	00 48 23.0
	comp=Z,50nm,1.3s				
HSPB	**Hornsund (broa**	**47.28 345**	*e*P	**P**	**00 48 24.9 +2.1**
HSPB	**Hornsund (broa**	**47.28 345**	*e*P	**P**	**00 48 25.1 +2.4**
HSPB			IAmb	IAmb	00 48 26.1
	comp=Z,64nm,1.0s				
BER	**Bergen**	**47.48 322**	*e*P	**P**	**00 48 25.0 +0.5**
BER			IAmb	IAmb	00 48 26.9
	comp=Z,60nm,0.9s				
CDF	**Champ du Feu**	**47.50 306**	*e*P	**P**	**00 48 26.2 +1.2**
CDF			pmax	pmax	
	comp=Z,26nm,1.2s				
ASK	**Askoy**	**47.55 322**	*e*P	**P**	**00 48 26.2 +1.2**
ASK			IAmb	IAmb	00 48 26.5
	comp=Z,345nm,1.5s				
KMY	**Karmoy**	**47.55 320**	*e*P	**P**	**00 48 26.7 +1.6**
KMY			IAmb	IAmb	00 48 28.1
	comp=Z,66nm,1.1s				
PGF	**Pioggiola**	**47.57 297**	*e*P	**P**	**00 48 26.9 +1.2**
PGF			pmax	pmax	
	comp=Z,30nm,1.0s				
ECH	**Echery**	**47.61 305**	P	**P**	**00 48 26.4 +0.6**
ECH			IAmb	IAmb	00 48 29.3
	comp=Z,37nm,1.4s				
ECH	**Echery**	**47.61 305**	P	**P**	**00 48 26.4 +0.6**
ECH			pmax	pmax	
	comp=Z,37nm,1.4s				
ECH	**Echery**	**47.61 305**	P	**P**	**00 48 26.8 +1.0**
ECH			pP	**pP**	**00 48 52.2 +1.7**
ECH			sP	**sP**	**00 49 03.9 +1.7**
FOO	**Floro**	**47.62 324**	*e*P	**P**	**00 48 26.5 +0.9**
FOO			IAmb	IAmb	00 48 27.9
	comp=Z,46nm,1.0s				
SPB2	**Spitsbergen Ar**	**47.63 347**	P	**P**	**00 48 27.0 +1.5**
SPB2			IAmb	IAmb	00 48 28.9
	comp=Z,37nm,0.8s				
SPA0	**Spitsbergen Ar**	**47.63 347**	*e*P	**P**	**00 48 27.5 +2.0**
SPA0			IAmb	IAmb	00 48 28.8
	comp=Z,66nm,1.2s				
SPITS	**Spitsbergen Ar**	**47.63 347**	P	**P**	**00 48 26.9 +1.4**
	comp=Z,22nm,0.7s,baz=114,slow=9.3,SNR=12				
SPITS			PcP	**PcP**	**00 49 54.1 +0.6**
	comp=Z,2.6nm,0.5s,baz=112,slow=11,SNR=1.6				
	comp=Z,22nm,0.7s				
SUE	**Sulen**	**47.76 323**	*e*P	**P**	**00 48 28.5 +1.9**
BTNL	**Ternell**	**47.87 309**	*d*P	**P**	**00 48 28.1 +0.4**
	comp=Z,20nm,1.1s				
SENIN	**Lac Senin/Sane**	**47.88 303**	P	**P**	**00 48 28.3 +0.2**
SENIN			IAmb	IAmb	00 48 30.2
	comp=Z,94nm,1.6s				
HINF	**Hinteralfeld**	**47.89 305**	*e*P	**P**	**00 48 28.0 0.0**
HINF			pmax	pmax	
	comp=Z,44nm,1.2s				
MEM	**Membach**	**47.94 309**	*d*P	**P**	**00 48 29.5 +1.2**
	comp=Z,21nm,1.0s				
BHOU	**Houvegnez**	**47.99 308**	*d*P	**P**	**00 48 29.5 +0.9**
	comp=Z,8.8nm,1.4s				
WLF	**Walferdange**	**48.01 307**	P	**P**	**00 48 29.5 +0.7**
WLF	**Walferdange**	**48.01 307**	P	**P**	**00 48 29.5 +0.7**
WLF			pmax	pmax	
	comp=Z,108nm,1.2s				
WLF	**Walferdange**	**48.01 307**	*d*P	**P**	**00 48 30.8 +2.0**
	comp=Z,43nm,1.1s				
BEBN	**Eben Emael**	**48.12 309**	*d*P	**P**	**00 48 30.6 +1.0**
HAU	**Haudompre**	**48.18 305**	*e*P	**P**	**00 48 30.4 +0.2**
HAU			pmax	pmax	
	comp=Z,118nm,1.7s				
BSTI	**Sart Tilman**	**48.23 309**	*d*P	**P**	**00 48 30.8 +0.4**
	comp=Z,2.5nm,1.1s				
SBF	**Sospel**	**48.35 300**	*e*P	**P**	**00 48 33.3 +1.7**
SBF			pmax	pmax	
	comp=Z,19nm,0.8s				
BCLA	**Clavier**	**48.42 309**	*d*P	**P**	**00 48 33.7 +1.8**
	comp=Z,9.4nm,1.2s				
LPG	**La Plagne**	**48.44 302**	*e*P	**P**	**00 48 33.1 +0.6**
LPG			pmax	pmax	
	comp=Z,21nm,0.8s				
LPL	**La Plagne**	**48.45 302**	*e*P	**P**	**00 48 33.1 +0.6**
LPL			pmax	pmax	
	comp=Z,55nm,1.3s				
RCHB	**Rochefort**	**48.51 308**	*d*P	**P**	**00 48 33.6 +0.9**
	comp=Z,11nm,1.2s				
BGES	**Gesves**	**48.56 309**	*d*P	**P**	**00 48 34.0 +1.0**
	comp=Z,9.5nm,1.2s				
BNI	**Bardonecchia**	**48.59 301**	P	**P**	**00 48 34.0 +0.5**
BNI			pmax	pmax	
	comp=Z,31nm,1.2s				
MBDF	**Montbardon**	**48.61 301**	*e*P	**P**	**00 48 34.1 +0.4**
MBDF			pmax	pmax	
	comp=Z,22nm,0.8s				
CABF	**La Chapelle**	**48.65 303**	*e*P	**P**	**00 48 34.5 +0.7**
CABF			pmax	pmax	
	comp=Z,149nm,1.5s				
KBS	**Kingsbay**	**48.75 347**	P	**P**	**00 48 34.8 +0.8**
KBS	**Kingsbay**	**48.75 347**	*ce*P	**P**	**00 48 36.7 +2.6**
KBS			pmax	pmax	
	comp=Z,74nm,1.3s				
KBS	**Kingsbay**	**48.75 347**	*e*P	**P**	**00 48 36.1 +2.0**
KBS			IAmb	IAmb	00 48 36.6
	comp=Z,66nm,0.9s				
KBS	**Kingsbay**	**48.75 347**	*i* P	**P**	**00 48 35.6 +1.6**
KBS	**Kingsbay**	**48.75 347**	P	**P**	**00 48 35.8 +1.7**
KBS			sP	**sP**	**00 49 13.0 +1.9**
JOW	**Kunigami**	**48.78 84**	P	**P**	**00 48 35.3 +0.3**
BMRD	**Maredsous**	**48.78 309**	*d*P	**P**	**00 48 36.1 +1.4**
	comp=Z,31nm,1.2s				
GIVF	**Givet**	**48.78 308**	*e*P	**P**	**00 48 35.8 +1.1**
GIVF			pmax	pmax	
	comp=Z,119nm,1.5s				
DOU	**Dourbes**	**48.92 308**	*d*P	**P**	**00 48 37.1 +1.4**
	comp=Z,26nm,1.3s				
KMBO	**Kilima Mbogo**	**49.01 228**	P	**P**	**00 48 36.8 -0.3**
KMBO	**Kilima Mbogo**	**49.01 228**	*e*P	**P**	**00 48 39.3 +2.2**
KMBO			IAmb	IAmb	00 48 45.0
	comp=Z,57nm,1.6s				
KMBO	**Kilima Mbogo**	**49.01 228**	P	**P**	**00 48 36.8 -0.3**
KMBO			pmax	pmax	
	comp=Z,12nm,1.2s				
SNF	**Seneffe**	**49.04 309**	*d*P	**P**	**00 48 38.1 +1.5**
	comp=Z,37nm,1.0s				
BAIF	**Baives**	**49.17 308**	*e*P	**P**	**00 48 38.8 +1.1**
BAIF			pmax	pmax	
	comp=Z,107nm,1.2s				
ORIF	**Oris-en-Rattie**	**49.18 301**	*e*P	**P**	**00 48 40.7 +2.8**
ORIF			pmax	pmax	
	comp=Z,7.0nm,0.8s				
KEST	**Kesra**	**49.34 289**	P	**P**	**00 48 39.6 +0.3**
	comp=Z,9.3nm,0.8s,baz=65,slow=3.6,SNR=9.7				
	comp=Z,9.3nm,0.8s				
KEST	**Kesra**	**49.34 289**	P	**P**	**00 48 40.0 +0.7**
KEST			IAmb	IAmb	00 48 42.3
	comp=Z,28nm,1.4s				
KIBK	**Kibwezi**	**49.51 226**	P	**P**	**00 48 41.6 +0.8**
KIBK			IAmb	IAmb	00 48 48.6
	comp=Z,11nm,0.7s				
LOR	**Lormes**	**49.99 305**	*e*P	**P**	**00 48 43.9 -0.1**
LOR			pmax	pmax	
	comp=Z,24nm,1.2s				
SSB	**Saint Sauveur**	**50.01 302**	P	**P**	**00 48 44.7 +0.5**
SSB			IAmb	IAmb	00 48 46.9
	comp=Z,64nm,1.6s				
SSB	**Saint Sauveur**	**50.01 302**	P	**P**	**00 48 44.7 +0.5**
SSB			pmax	pmax	
	comp=Z,64nm,1.6s				
SSB	**Saint Sauveur**	**50.01 302**	P	**P**	**00 48 45.1 +1.0**
VIVF	**Saint-Julien-l**	**50.02 302**	*e*P	**P**	**00 48 44.8 +0.5**
VIVF			pmax	pmax	
	comp=Z,133nm,1.7s				
KSM	**Kuching**	**50.04 125**	P	**P**	**00 48 46.5 +1.8**
KSM			IAmb	IAmb	00 49 14.1
	comp=Z,15nm,1.0s				
SMF	**Signal de Mont**	**50.14 304**	*e*P	**P**	**00 48 45.3 +0.2**
SMF			pmax	pmax	
	comp=Z,66nm,1.1s				
SSF	**Saint Saulge**	**50.27 305**	*e*P	**P**	**00 48 46.2 +0.1**
SSF			pmax	pmax	
	comp=Z,61nm,1.4s				
AVF	**Avril sur Loir**	**50.44 304**	*e*P	**P**	**00 48 47.4 +0.1**
AVF			pmax	pmax	
	comp=Z,40nm,1.0s				
SBUM	**Sibu**	**50.60 122**	P	**P**	**00 48 50.7 +1.7**
SBUM	**Sibu**	**50.60 122**	P	**P**	**00 48 50.4 +1.5**
	comp=Z,6.3nm,1.2s				
LRW	**Lerwick**	**50.74 322**	*e*P	**P**	**00 48 49.7 +0.4**
LRW			IAmb	IAmb	00 48 51.3
	comp=Z,64nm,0.9s				
ELMS	**Elmsett, Ipswi**	**50.78 311**	*e*P	**P**	**00 48 51.0 +1.3**
ELMS			IAmb	IAmb	00 48 51.3
	comp=Z,182nm,1.2s				
CLF	**Chambon-Foret**	**50.86 306**	P	**P**	**00 48 50.9 +0.4**
CLF	**Chambon-Foret**	**50.86 306**	P	**P**	**00 48 51.4 +1.0**
WACR	**West Acre**	**50.87 312**	*e*P	**P**	**00 48 51.2 +0.8**
WACR			IAmb	IAmb	00 48 52.4
	comp=Z,213nm,1.0s				
KKM	**Kota Kinabalu**	**50.91 115**	P	**P**	**00 48 53.3 +2.0**
TCF	**Toulx Ste Croi**	**51.33 304**	*e*P	**P**	**00 48 54.6 +0.6**
TCF			pmax	pmax	
	comp=Z,72nm,1.2s				
CAF	**Calviac**	**51.79 302**	*e*P	**P**	**00 48 58.2 +0.7**
CAF			pmax	pmax	
	comp=Z,32nm,1.2s				
DRUM	**Mains of Drumt**	**51.88 318**	*e*P	**P**	**00 48 58.2 +0.3**
HPK	**Haverah Park**	**51.95 314**	*e*P	**P**	**00 48 59.3 +0.7**
RJF	**Les Rejaudoux**	**52.06 303**	*e*P	**P**	**00 49 00.3 +0.8**
RJF			pmax	pmax	
	comp=Z,74nm,1.7s				
MTLF	**Montolieu**	**52.14 300**	*e*P	**P**	**00 49 00.5 +0.4**
MTLF			pmax	pmax	
	comp=Z,15nm,1.0s				
MCD	**Coleburn Disti**	**52.17 319**	*e*P	**P**	**00 49 00.7 +0.6**
LDF	**La Druitiere**	**52.26 307**	*e*P	**P**	**00 49 00.9 0.0**
LDF			pmax	pmax	
	comp=Z,39nm,1.0s				
BIGH	**Upper Bighouse**	**52.36 320**	*e*P	**P**	**00 49 02.3 +0.8**
BIGH			IAmb	IAmb	00 49 03.5
	comp=Z,85nm,1.0s				
EBL	**Broad Law**	**52.40 317**	*e*P	**P**	**00 49 02.8 +1.0**
EDI	**Edinburgh**	**52.45 317**	*e*P	**P**	**00 49 03.5 +1.4**
EDI			IAmb	IAmb	00 49 03.9
	comp=Z,39nm,0.8s				
FLN	**La Foliniere**	**52.45 308**	*e*P	**P**	**00 49 02.1 -0.2**
FLN			pmax	pmax	
	comp=Z,88nm,1.4s				
EKA	**Eskdalemuir Ar**	**52.55 316**	P	**P**	**00 49 03.0 +0.1**
ESK	**Eskdalemuir**	**52.58 316**	*e*P	**P**	**00 49 03.3 +0.2**
ESK			IAmb	IAmb	00 49 04.8
	comp=Z,79nm,1.1s				
ESK	**Eskdalemuir**	**52.58 316**	P	**P**	**00 49 03.4 +0.3**
ESK	**Eskdalemuir**	**52.58 316**	P	**P**	**00 49 03.4 +0.3**
ESK			pmax	pmax	
	comp=Z,84nm,1.2s				
ESK	**Eskdalemuir**	**52.58 316**	P	**P**	**00 49 03.5 +0.3**
SWN1	**Swindon**	**52.59 311**	*e*P	**P**	**00 49 04.6 +1.3**
YSS	**Yuzh-Sakhalins**	**52.62 55**	*e*P	**P**	**00 49 07.1 +3.6**
LFF	**La Frestale**	**52.69 303**	*e*P	**P**	**00 49 04.7 +0.6**
LFF			pmax	pmax	
	comp=Z,17nm,0.9s				
MAJO	**Matsushiro**	**52.70 69**	P	**P**	**00 49 04.4 0.0**
MAJO			IAmb	IAmb	00 49 35.7
	comp=Z,13nm,0.9s				
MAJO	**Matsushiro**	**52.70 69**	P	**P**	**00 49 04.4 0.0**
MAJO			pmax	pmax	
	comp=Z,13nm,0.9s				
MJAR	**Matsushiro Arr**	**52.70 69**	P	**P**	**00 49 04.8 +0.5**
	comp=Z,7.2nm,0.9s,baz=293,slow=9.2,SNR=13				
MJAR			pP	**pP**	**00 49 30.7 +0.5**
	comp=Z,5.7nm,0.8s,baz=292,slow=11,SNR=3.6				
	comp=Z,7.2nm,0.9s				
MBAR	**Mbarara**	**52.71 235**	P	**P**	**00 49 04.1 -0.7**
MBAR	**Mbarara**	**52.71 235**	P	**P**	**00 49 04.1 -0.7**
MBAR			pmax	pmax	
	comp=Z,52nm,0.3s				
MBAR	**Mbarara**	**52.71 235**	*e*P	P	00 49 10.1 +5.3
MBAR	**Mbarara**	**52.71 235**	P	**P**	**00 49 04.7 -0.2**
STRD	**Stroud**	**52.75 312**	*e*P	**P**	**00 49 04.6 +0.1**
STRD			IAmb	IAmb	00 49 05.8
	comp=Z,74nm,1.0s				
MFF	**Saint Martin d**	**52.81 305**	*e*P	**P**	**00 49 04.9 -0.1**
MFF			pmax	pmax	
	comp=Z,58nm,1.4s				
OLDB	**Oldbury-Upon-S**	**53.01 311**	*e*P	**P**	**00 49 06.9 +0.6**
MONM	**Monmouth**	**53.12 312**	*e*P	**P**	**00 49 07.8 +0.6**
MONM			IAmb	IAmb	00 49 08.7
	comp=Z,142nm,1.2s				
PGBU	**Glenifferbraes**	**53.18 317**	*e*P	**P**	**00 49 07.9 +0.3**
PGBU			IAmb	IAmb	00 49 09.5
	comp=Z,55nm,0.9s				
NEWG	**New Galloway**	**53.19 316**	*e*P	**P**	**00 49 08.3 +0.6**
NEWG			IAmb	IAmb	00 49 09.7
	comp=Z,67nm,0.9s				
MCH1	**Michaelchurch**	**53.20 312**	*e*P	**P**	**00 49 08.0 +0.3**
MCH1			IAmb	IAmb	00 49 09.4
	comp=Z,106nm,1.0s				
KAC	**Achnashellach**	**53.27 319**	*e*P	**P**	**00 49 08.9 +0.7**
KPL	**Plockton**	**53.49 319**	*e*P	**P**	**00 49 10.2 +0.5**
KPL			IAmb	IAmb	00 49 11.6
	comp=Z,73nm,1.0s				
EPF	**Esparros**	**53.55 300**	*e*P	**P**	**00 49 10.7 +0.2**
EPF			pmax	pmax	
	comp=Z,4.0nm,0.7s				
IOMK	**Kirk Michael**	**53.58 315**	*e*P	**P**	**00 49 11.0 +0.5**
IOMK			IAmb	IAmb	00 49 12.5
	comp=Z,230nm,1.1s				
LAWE	**Loch Awe, Argy**	**53.59 318**	*e*P	**P**	**00 49 11.3 +0.8**
LAWE			IAmb	IAmb	00 49 11.9
	comp=Z,110nm,1.3s				
WIM	**Isle of Man**	**53.67 315**	*e*P	**P**	**00 49 12.0 +0.9**
YRC	**Rhoscolyn**	**53.83 314**	*e*P	**P**	**00 49 13.0 +0.7**
SGMF	**Saint Gilles**	**53.91 307**	*e*P	**P**	**00 49 13.2 +0.2**
SGMF			pmax	pmax	
	comp=Z,118nm,1.5s				
NOR	**Nord**	**53.93 350**	*i* P	**P**	**00 49 13.5 +0.8**
NOR			IAmb	IAmb	00 49 14.8
	comp=Z,20nm,1.0s				
LEWI	**Lewis, Hebride**	**53.96 320**	*e*P	**P**	**00 49 13.0 -0.2**
LEWI			IAmb	IAmb	00 49 13.8
	comp=Z,66nm,1.2s				
ETSF	**Etsaut**	**54.21 301**	*e*P	**P**	**00 49 15.7 +0.3**
ETSF			pmax	pmax	
	comp=Z,8.0nm,0.5s				
SEY	**Seymchan**	**54.31 34**	P	**P**	**00 49 16.4 +0.8**
	comp=Z,4.9nm,0.8s,baz=284,slow=17,SNR=2.2				
	comp=Z,4.9nm,0.8s				
ROSF	**Rostrenen**	**54.35 308**	*e*P	**P**	**00 49 16.2 0.0**
ROSF			pmax	pmax	
	comp=Z,109nm,1.4s				
HTL	**Hartland**	**54.36 311**	*e*P	**P**	**00 49 16.6 +0.4**
HTL			IAmb	IAmb	00 49 17.1
	comp=Z,102nm,1.2s				
GMM	**Mts of Mourne**	**54.37 315**	*e*P	**P**	**00 49 16.5 +0.2**
QUIF	**Quistinic**	**54.40 307**	*e*P	**P**	**00 49 16.4 -0.2**
QUIF			pmax	pmax	
	comp=Z,391nm,1.6s				
SJPF	**Ste Jean**	**54.60 301**	*e*P	**P**	**00 49 20.9 +2.8**
SJPF			pmax	pmax	
	comp=Z,8.0nm,1.0s				
DAG	**Danmarks Havn**	**54.88 344**	*i* P	**P**	**00 49 20.7 +1.0**
DAG			IAmb	IAmb	00 49 22.1
	comp=Z,73nm,0.9s				
DBG	**Daneborg**	**55.75 341**	*i* P	**P**	**00 49 25.9 0.0**
DBG			IAmb	IAmb	00 49 28.9
	comp=Z,22nm,1.0s				
MPSI	**Mapaga**	**57.48 117**	P	**P**	**00 49 40.8 +1.9**
	comp=Z,24nm,1.0s				
MPSI			pP	**pP**	**00 50 07.7 +2.8**
	comp=Z,24nm,1.0s				
ESBB	**Sonseca Array**	**57.76 298**	P	**P**	**00 49 40.6 -0.1**
ESBB			IAmb	IAmb	00 50 40.5
	comp=Z,20nm,1.4s				
ESDC	**Sonseca Array**	**57.76 298**	P	**P**	**00 49 39.9 -0.8**
	comp=Z,3.8nm,0.8s,baz=54,slow=7.3,SNR=29				
	comp=Z,3.8nm,0.8s				
ESDC	**Sonseca Array**	**57.76 298**	P	**P**	**00 49 40.4 -0.3**
TAM	**Tamanrasset**	**57.84 276**	P	**P**	**00 49 41.2 -0.4**
TAM	**Tamanrasset**	**57.84 276**	P	**P**	**00 49 41.2 -0.4**
TAM			pmax	pmax	
	comp=Z,8.0nm,0.9s				
TAM	**Tamanrasset**	**57.84 276**	P	**P**	**00 49 41.1 -0.6**
TAM			pP	**pP**	**00 50 08.4 +1.0**
PAB	**San Pablo**	**58.08 298**	P	**P**	**00 49 43.0 0.0**
PAB			IAmb	IAmb	00 50 19.6
	comp=Z,21nm,1.4s				
PAB	**San Pablo**	**58.08 298**	P	**P**	**00 49 43.0 0.0**
PAB			pmax	pmax	
	comp=Z,21nm,1.4s				
PAB	**San Pablo**	**58.08 298**	P	**P**	**00 49 45.4 +2.4**
BILL	**Bilibino**	**58.54 26**	*e*P	**P**	**00 49 46.4 +0.8**
BILL			*e**PP	**pP**	**00 50 12.4 +0.8**
BILL			*e**SP	**sP**	**00 50 22.7 -0.6**
BILL			*e*		00 50 37.4
BILL			*e*		00 51 56.7
BILL			*e*S	**S**	**00 57 40.1 -1.0**
BILL			*e*SS	**SS**	**01 01 40.0 +5.6**
BILL			pmax	pmax	
	comp=Z,4.0nm,0.9s				
BILL			MLR	MLR	
	comp=Z,320nm,15.0s				
BORG	**Borgarnes**	**58.82 330**	P	**P**	**00 49 49.1 +1.6**
BORG	**Borgarnes**	**58.82 330**	P	**P**	**00 49 49.1 +1.6**
BORG			pmax	pmax	
	comp=Z,603nm,1.9s				
MRSI	**Marisa**	**58.86 116**	P	**P**	**00 49 51.4 +2.9**
	comp=Z,59nm,1.0s				
ALE	**Alert**	**59.14 354**	P	**P**	**00 49 50.9 +1.3**
ABPO	**Ambohimpanom**	**59.69 207**	P	**P**	**00 49 54.5 +0.2**
ABPO			IAmb	IAmb	00 50 35.4
	comp=Z,16nm,1.2s				
ABPO	**Ambohimpanom**	**59.69 207**	P	**P**	**00 49 54.5 +0.2**
ABPO			pmax	pmax	
	comp=Z,16nm,1.3s				
MTE	**Manteigas**	**60.00 300**	P	**P**	**00 49 56.8 +0.7**
MTE			IAmb	IAmb	00 50 33.4
	comp=Z,16nm,1.0s				
COI	**Coimbra**	**60.68 300**	P	**P**	**00 50 01.8 +1.1**
COI			IAmb	IAmb	00 50 37.8
	comp=Z,23nm,1.1s				
COI	**Coimbra**	**60.68 300**	P	**P**	**00 50 01.8 +1.1**
COI			pmax	pmax	
	comp=Z,23nm,1.1s				
NEEM	**North Greenlan**	**61.17 348**	*i* P	**P**	**00 50 04.6 +0.7**
NEEM			IAmb	IAmb	00 50 06.3
	comp=Z,80nm,1.3s				
PVAQ	**Vaqueiros**	**61.37 297**	P	**P**	**00 50 05.8 +0.3**
PVAQ			IAmb	IAmb	00 51 27.9
	comp=Z,24nm,1.7s				
VOI	**Vohitsoka**	**62.50 206**	P	**P**	**00 50 13.4 +0.3**
VOI			IAmb	IAmb	00 51 16.9
	comp=Z,61nm,1.5s				
EUNU	**Eureka**	**63.10 356**	P	**P**	**00 50 17.4 +1.0**
EUNU			IAmb	IAmb	00 51 22.8
	comp=Z,24nm,1.5s				
ICESG	**Greenland Ices**	**63.39 338**	*i* P	**P**	**00 50 20.0 +1.2**
ICESG			IAmb	IAmb	00 50 21.7
	comp=Z,51nm,0.9s				
TOA0	**Torodi Ar. Sit**	**66.02 269**	P	**P**	**00 50 34.1 -2.2**
TOA0			IAmb	IAmb	00 50 36.7
	comp=Z,18nm,0.7s				
TORD	**Torodi Ar. Bea**	**66.02 269**	P	**P**	**00 50 34.3 -2.0**
	comp=Z,19nm,0.7s,baz=46,slow=5.5,SNR=75				
	comp=Z,19nm,0.7s				
ILULI	**Ilulissat**	**66.57 341**	P	**P**	**00 50 39.9 +1.0**
ILULI	**Ilulissat**	**66.57 341**	P	**P**	**00 50 39.9 +1.0**
ILULI			pmax	pmax	
	comp=Z,208nm,1.4s				
ILULI	**Ilulissat**	**66.57 341**	*i* P	**P**	**00 50 40.2 +1.3**
ILULI			IAmb	IAmb	00 50 40.6
	comp=Z,178nm,1.3s				
DY2G	**Dye2**	**66.96 337**	*i* P	**

ANM	Nome	69.98	23	P	P	00 51 01.2	+0.9
	baz=314						
C24K	Franklin Bluff	70.19	14	P	P	00 51 00.7	-0.8
	baz=327						
MUSN	Musina, Limpop	70.34	221	eP	P	00 51 02.9	-0.2
MUSN				IAmb	IAmb	00 51 06.1	
	comp=Z,111nm,2.4s						
MUSN	Musina, Limpop	70.34	221	i P	P	00 51 01.9	-1.1
MUSN	Musina, Limpop	70.34	221	i P	P	00 51 01.9	-1.1
D23K	Nanushuk River	70.42	15	P	P	00 51 03.7	+0.8
	baz=325						
D24K	Happy Valley	70.64	14	P	P	00 51 04.7	+0.5
	baz=327						
C26K	Camden Bay	70.71	13	P	P	00 51 04.7	0.0
	baz=330						
E22K	Anaktuvuk Pass	70.86	16	P	P	00 51 05.7	+0.1
	baz=324						
TOLK	Toolik Lake Re	70.92	15	P	P	00 51 06.7	+0.7
TOLK				IAmb	IAmb	00 51 07.5	
	comp=Z,24nm,1.1s						
TOLK	Toolik Lake Re	70.92	15	P	P	00 51 05.8	-0.2
	baz=326						
D25K	Kavik River	70.96	13	P	P	00 51 06.0	-0.3
	baz=329						
IVI	Ivigtut	71.05	334	P	P	00 51 07.3	+0.5
C27K	Jago River	71.17	12	P	P	00 51 07.1	-0.4
	baz=331						
F21K	Alatna River	71.22	17	P	P	00 51 07.9	+0.1
	baz=323						
F22K	John River	71.29	16	P	P	00 51 08.5	+0.3
	baz=324						
E23K	Chandalar	71.39	15	P	P	00 51 09.5	+0.6
	baz=326						
E24K	Your Creek	71.61	15	P	P	00 51 10.0	-0.2
	baz=327						
G21K	Allakaket	71.78	17	P	P	00 51 10.7	-0.5
	baz=323						
G22K	Bettles	71.92	16	P	P	00 51 11.5	-0.4
	baz=325						
COLD	Coldfoot	71.96	16	P	P	00 51 12.8	+0.5
COLD	Coldfoot	71.96	16	P	P	00 51 12.5	+0.3
	baz=326,SNR=10						
E25K	Arctic Village	72.15	14	P	P	00 51 13.0	-0.4
	baz=330						
IMAR	Indian Mountai	72.15	18	P	P	00 51 13.2	-0.2
F24K	Squaw Lake	72.20	15	P	P	00 51 14.0	+0.3
	baz=328						
GCSA	Galena City Sc	72.32	20	P	P	00 51 14.3	0.0
	baz=321						
G23K	Bananza Creek	72.43	16	P	P	00 51 15.2	+0.2
	baz=326						
F25K	Christian Rive	72.59	14	P	P	00 51 16.6	+0.6
	baz=330,SNR=6.7						
H21K	Melozitna Rive	72.64	18	P	P	00 51 16.5	+0.1
H21K	Melozitna Rive	72.64	18	P	P	00 51 16.4	+0.1
	baz=324,SNR=6.5						
LEPH	Lephalale, Lim	72.72	221	eP	P	00 51 17.1	-0.3
LEPH				IAmb	IAmb	00 51 18.7	
	comp=Z,47nm,1.5s						
F26K	Sheenjek River	72.79	13	P	P	00 51 17.2	0.0
	baz=331						
H22K	Ishtalitna Cre	72.79	17	P	P	00 51 16.9	-0.4
	baz=325						
E27K	Coleen River	72.81	12	P	P	00 51 17.7	+0.4
	baz=333,SNR=5.6						
BMAR	Burnt Mountain	72.94	14	P	P	00 51 19.1	+1.0
G24K	Hadweenzic Riv	72.99	15	P	P	00 51 18.6	+0.3
	baz=328,SNR=5.4						
G25K	Bearman Lake	73.22	15	P	P	00 51 20.6	+0.9
	baz=329						
I21K	Tanana	73.23	18	P	P	00 51 20.5	+0.7
	baz=325						
MBWA	Marble Bar	73.26	133	P	P	00 51 20.7	+0.2
MBWA				IAmb	IAmb	00 51 48.4	
	comp=Z,25nm,1.2s						
H23K	Yukon River	73.27	16	P	P	00 51 20.5	+0.5
H23K	Yukon River	73.27	16	P	P	00 51 20.7	+0.6
	baz=327,SNR=6.7						
CRLN	Carolina, Mapu	73.31	218	eP	P	00 51 21.7	+0.8
J20K	Nowinta River	73.50	19	P	P	00 51 21.9	+0.5
J20K	Nowinta River	73.50	19	P	P	00 51 21.7	+0.4
	baz=323,SNR=7.7						
POGA	Pongola	73.62	216	eP	P	00 51 20.5	-2.0
POGA				IAmb	IAmb	00 51 23.5	
	comp=Z,78nm,1.6s						
H24K	Noodor Dome	73.64	16	P	P	00 51 22.6	+0.3
	baz=328,SNR=5.6						
PSA00	Pilbara Seismi	73.64	133	P	P	00 51 22.8	0.0
MLY	Manley	73.66	17	P	P	00 51 22.6	+0.2
MLY	Manley	73.66	17	P	P	00 51 22.7	+0.4
	baz=326						
H25K	Birch Creek	73.70	15	P	P	00 51 22.6	+0.1
	baz=330						
I23K	Minto, Yukon-K	73.88	17	P	P	00 51 24.5	+0.9
I23K	Minto, Yukon-K	73.88	17	P	P	00 51 23.8	+0.2
	baz=327,SNR=5.6						
C36M	Paulatuk	73.92	6	P	P	00 51 23.8	+0.1
C36M				IAmb	IAmb	00 51 24.8	
	comp=Z,21nm,0.6s						
C36M	Paulatuk	73.92	6	P	P	00 51 23.7	+0.1
	baz=347						
INK	Inuvik	73.93	9	P	P	00 51 24.4	+0.7
INK				IAmb	IAmb	00 51 25.4	
	comp=Z,18nm,0.9s						
INK	Inuvik	73.93	9	P	P	00 51 24.5	+0.7
INK				pmax	pmax		
	comp=Z,18nm,0.9s						
INK	Inuvik	73.93	9	P	P	00 51 23.8	+0.1
	baz=339,SNR=12						
TTA	Tatalina	73.98	21	P	P	00 51 24.2	-0.1
	baz=322						
SLR	Silverton	73.99	220	eP	P	00 51 25.4	+0.6
SLR				IAmb	IAmb	00 51 30.3	
	comp=Z,46nm,1.7s						
G27K	Doyon Strip	74.03	13	P	P	00 51 25.1	+0.6
	baz=333,SNR=9.1						
K20K	Telida	74.18	20	P	P	00 51 25.9	+0.5
	baz=323,SNR=6.1						
CHUM	Lake Minchumin	74.21	19	P	P	00 51 25.4	-0.1
	baz=325						
MDM	Murphy Dome	74.30	16	P	P	00 51 26.2	+0.1
POKR	Poker Plat Res	74.35	16	P	P	00 51 26.5	+0.2
POKR				IAmb	IAmb	00 51 27.9	
	comp=Z,32nm,1.1s						
POKR	Poker Plat Res	74.35	16	P	P	00 51 26.7	+0.4
	baz=328,SNR=5.7						
BPAW	Bear Paw Mtn.	74.37	18	P	P	00 51 26.3	-0.2
BPAW	Bear Paw Mtn.	74.37	18	P	P	00 51 26.6	+0.1
	baz=326,SNR=5.7						
PRP	Porcupine Dome	74.41	15	P	P	00 51 27.5	+0.6
PRP	Porcupine Dome	74.41	15	P	P	00 51 27.1	+0.2
	baz=330						
NEA2	Nenana	74.42	17	P	P	00 51 26.2	-0.5
	baz=327,SNR=9.2						
TCOL	CIGO, UAF Yank	74.46	16	P	P	00 51 27.3	+0.4
TCOL				IAmb	IAmb	00 51 28.1	
	comp=Z,31nm,1.1s						
TCOL	CIGO, UAF Yank	74.46	16	P	P	00 51 26.7	-0.2
	baz=328						
COLA	College	74.46	16	P	P	00 51 27.2	+0.3
COLA				IAmb	IAmb	00 51 28.1	
	comp=Z,20nm,0.8s						
COLA	College	74.46	16	P	P	00 51 27.2	+0.3
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
COLA	College	74.46	16	P	P	00 51 26.9	0.0
	baz=328						
H27K	Steamboat Moun	74.57	13	P	P	00 51 28.2	+0.5
	baz=333,SNR=6.6						
CAST	Castle Rocks	74.65	19	P	P	00 51 28.3	+0.2
CAST				IAmb	IAmb	00 51 29.4	
	comp=Z,31nm,1.0s						
CAST	Castle Rocks	74.65	19	P	P	00 51 27.9	-0.3
	baz=325,SNR=11						
F31M	Tsiigehtchic	74.71	10	P	P	00 51 28.6	+0.3
	baz=339,SNR=7.0						
IL31		74.77	16	P	P	00 51 27.9	-0.8
ILAR	Eielson Array	74.77	16	P	P	00 51 27.8	-0.9
	comp=Z,5.7nm,0.9s,baz=316,slow=5.1,SNR=38						
ILAR				pP	pP	00 51 56.2	+0.6
	comp=Z,2.9nm,0.9s,baz=324,slow=5.1,SNR=4.0						
	comp=Z,5.7nm,0.9s						
ILAR	Eielson Array	74.77	16	P	P	00 51 28.0	-0.7
ILAR	Eielson Array	74.77	16	P	P	00 51 28.0	-0.7
G30M	tAoh Zraii Nji	74.78	11	P	P	00 51 28.9	+0.1
	baz=337,SNR=6.9						
NWCL	Newcastle	74.82	217	eP	P	00 51 27.8	-1.9
NWCL				IAmb	IAmb	00 51 29.0	
	comp=Z,123nm,2.1s						
LBTB	Lobatse	74.83	222	P	P	00 51 29.6	-0.1
LBTB				IAmb	IAmb	00 51 31.5	
	comp=Z,30nm,0.9s						
LBTB	Lobatse	74.83	222	eP	P	00 51 30.1	+0.4
LBTB				IAmb	IAmb	00 51 30.6	
	comp=Z,60nm,1.4s						
LBTB	Lobatse	74.83	222	P	P	00 51 29.6	-0.1
LBTB				pmax	pmax		
	comp=Z,30nm,1.0s						
LBTB	Lobatse	74.83	222	i P	P	00 51 27.0	-2.7
LBTB	Lobatse	74.83	222	i P	P	00 51 27.0	-2.7
KTH	Kantishna Hill	74.84	18	P	P	00 51 29.4	+0.1
L19K	White Mountain	74.91	21	P	P	00 51 29.7	+0.1
	baz=323						
KNRA	Kununurra	74.93	123	P	P	00 51 30.5	+0.2
L20K	Farewell, AK	74.94	20	P	P	00 51 29.8	-0.1
	baz=324						
DBIC	Dimbokro	75.00	267	P	P	00 51 29.1	-1.8
	comp=Z,5.6nm,0.8s,baz=33,slow=5.8,SNR=8.9						
	comp=Z,5.6nm,0.8s						
DBIC	Dimbokro	75.00	267	P	P	00 51 28.9	-2.0
DBIC	Dimbokro	75.00	267	eP	P	00 51 29.3	-1.5
PPLA	Purkeypile	75.06	19	P	P	00 51 30.5	-0.1
	baz=325						
HDA	Harding Lake	75.06	16	P	P	00 51 29.6	-0.9
	baz=329						
N16K	Nishlik Lake	75.07	23	P	P	00 51 30.7	+0.1
	baz=320						
I26K	Coal Creek Min	75.08	14	P	P	00 51 30.5	-0.1
	baz=332,SNR=6.0						
TRF	Thorofare Moun	75.08	18	P	P	00 51 30.2	-0.6
	baz=326						
TSUM	Tsumeb	75.11	232	P	P	00 51 30.8	-0.7
TSUM	Tsumeb	75.11	232	eP	P	00 51 30.1	-1.4
TSUM				IAmb	IAmb	00 51 33.6	
	comp=Z,23nm,1.1s						
I27K	Kandik River	75.12	14	P	P	00 51 31.4	+0.5
	baz=333						
MCK	McKinley	75.18	17	P	P	00 51 30.9	-0.3
	baz=328						
J25K	Salcha River,	75.23	15	P	P	00 51 30.9	-0.6
	baz=330						
EPYK	Eagle Plains	75.27	11	P	P	00 51 30.9	-0.7
	baz=337						
PRYS	Parys	75.43	220	eP	P	00 51 32.5	-0.7
PRYS				IAmb	IAmb	00 51 33.3	
	comp=Z,12nm,0.9s						
RND	Reindeer	75.47	17	P	P	00 51 32.4	-0.5
RND				IAmb	IAmb	00 51 36.1	
	comp=Z,79nm,1.9s						
RND	Reindeer	75.47	17	P	P	00 51 32.4	-0.5
RND				pmax	pmax		
	comp=Z,79nm,1.9s						
J26L	Joseph Creek	75.71	15	P	P	00 51 33.9	-0.4
	baz=332,SNR=6.0						
K24K	Donnelly Dome	75.85	16	P	P	00 51 34.3	-0.7
	baz=330						
I29M	Ogilvie Camp,	75.93	12	P	P	00 51 35.4	0.0
	baz=336,SNR=6.8						
EGAK	Eagle	75.94	14	P	P	00 51 35.7	+0.2
EGAK				IAmb	IAmb	00 52 23.2	
	comp=Z,33nm,1.6s						
EGAK	Eagle	75.94	14	P	P	00 51 35.7	+0.2
	baz=334						
CUT	Chulitna	75.96	19	P	P	00 51 35.0	-0.6
	baz=327						
O16K	Kokwok River B	75.97	23	P	P	00 51 36.0	+0.3
	baz=321						
SKT	Skwentna	75.98	19	P	P	00 51 35.7	-0.1
	baz=326						
WAT1	Susitna Watana	76.03	18	P	P	00 51 35.5	-0.6
	baz=328						
SCRK	Sand Creek	76.09	15	P	P	00 51 36.2	-0.2
	baz=331						
DHY	Denali Highway	76.11	17	P	P	00 51 36.2	-0.5
	baz=329						
RIDG	Independent Ri	76.11	16	P	P	00 51 35.7	-0.8
	baz=331						
N19K	Bonanza Creek	76.11	21	P	P	00 51 36.5	-0.1
	baz=324						
O17K	Koliganek Bris	76.15	23	P	P	00 51 37.1	+0.4
	baz=322						
SNKL	Senekal, Frees	76.32	219	eP	P	00 51 37.7	-0.6
SNKL				IAmb	IAmb	00 51 38.7	
	comp=Z,25nm,0.7s						
K27K	Chicken	76.43	14	P	P	00 51 39.1	+0.8
	baz=333,SNR=5.2						
N20K	Mount Spurr	76.44	20	P	P	00 51 38.0	-0.5
	baz=325						
SPCR	Spurr Chakacha	76.44	20	P	P	00 51 38.1	-0.4
	baz=325						
WAT6	Susitna Watana	76.44	17	P	P	00 51 37.8	-0.7
	baz=329						
M22K	Willow	76.55	19	P	P	00 51 37.8	-1.1
	baz=327						
SUA	Susitna One	76.62	19	P	P	00 51 38.4	-1.1
	baz=326						
PAX	Paxson	76.64	16	P	P	00 51 38.7	-0.8
PAX				IAmb	IAmb	00 51 42.7	
	comp=Z,28nm,1.4s						
PAX	Paxson	76.64	16	P	P	00 51 38.7	-0.8
PAX				pmax	pmax		
	comp=Z,28nm,1.4s						
PAX	Paxson	76.64	16	P	P	00 51 38.8	-0.8
	baz=330						
O18K	Koktuh Hills	76.67	22	P	P	00 51 40.3	+0.6
	baz=323						
SWZ	Schweizer	76.70	221	eP	P	00 51 39.3	-1.1
SWZ				IAmb	IAmb	00 51 40.8	
	comp=Z,20nm,0.8s						
DAWY	Dawson	76.92	13	P	P	00 51 41.2	+0.1
DAWY	Dawson	76.92	13	P	P	00 51 40.8	-0.3
	baz=335,SNR=5.4						
PMR	Palmer	76.94	19	P	P	00 51 40.9	-0.2
	baz=328						
SML	Sawmill	76.96	18	P	P	00 51 40.6	-0.7
	baz=328						
P18K	Big Mountain,	77.03	22	P	P	00 51 41.6	-0.2
	baz=323						
L26K	Log Cabin Wild	77.06	15	P	P	00 51 41.5	-0.4
	baz=332						
CAPN	Captain Cook N	77.09	20	P	P	00 51 41.4	-0.6
	baz=326						
M23K	Glacier View	77.12	18	P	P	00 51 42.0	-0.2
	baz=329						
SCM	Sheep Creek Mo	77.19	18	P	P	00 51 42.4	-0.3
	baz=329						
HARP	HAARP	77.21	17	P	P	00 51 42.5	-0.2
	baz=331						
M24K	Tolsona, Glenn	77.23	17	P	P	00 51 42.8	0.0
	baz=330						
KNK	Knik Glacier	77.26	18	P	P	00 51 42.7	-0.3
	baz=328						
L27K	Beaver Creek,	77.35	15	P	P	00 51 43.0	-0.5
	baz=333						
BCAR	Beaver Creek A	77.36	15	P	P	00 51 44.1	+0.6
K29M	Barlow Dome	77.47	13	P	P	00 51 44.4	+0.2
	baz=337,SNR=5.7						
BOSA	Boshof	77.89	220	P	P	00 51 46.2	-0.7
	comp=Z,18nm,0.9s,baz=46,slow=5.9,SNR=21						
BOSA				pP	pP	00 52 15.0	+0.5
	comp=Z,16nm,0.7s,baz=37,slow=6.5,SNR=6.0						
	comp=Z,18nm,0.9s						
BOSA	Boshof	77.89	220	P	P	00 51 46.5	-0.5
BOSA				IAmb	IAmb	00 51 47.4	
	comp=Z,21nm,0.9s						
BOSA	Boshof	77.89	220	eP	P	00 51 46.8	-0.2
BOSA				IAmb	IAmb	00 51 47.1	
	comp=Z,22nm,0.9s						
BOSA	Boshof	77.89	220	P	P	00 51 46.5	-0.5
BOSA				pmax	pmax		
	comp=Z,21nm,0.9s						
BOSA	Boshof	77.89	220	i P	P	00 51 44.4	-2.6
BOSA	Boshof	77.89	220	i P	P	00 51 44.4	-2.6
WIN	Windhoek	77.90	230	eP	P	00 51 48.8	+1.5
M27K	Edge Creek, AK	77.97	15	P	P	00 51 47.7	+0.6
	baz=333,SNR=5.7						
L29M	L29M	78.03	13	P	P	00 51 47.4	+0.1
	baz=336						
BVCY	Beaver Creek	78.13	15	P	P	00 51 48.2	+0.4
	baz=334						
M29M	Somme Creek	78.58	14	P	P	00 51 50.6	+0.2
	baz=336						
BMRM	Bremner River	78.59	17	P	P	00 51 50.2	-0.2
	baz=331						
YUK3	Moose Creek	78.79	15	P	P	00 51 51.3	-0.4
	baz=334						
KDAK	Kodiak Island	79.15	22	P	P	00 51 53.8	+0.4
	comp=Z,14nm,0.8s,baz=309,slow=6.1,SNR=4.4						
	comp=Z,14nm,0.8s						
BARN	Barnard Glacie	79.18	16	P	P	00 51 54.2	+0.4
M31M	Drury Creek, Y	79.53	12	P	P	00 51 55.7	+0.3
	baz=339						
MMPY	Sheldon Lake,	79.62	10	P	P	00 51 56.4	+0.4
	baz=342						
FARO	Faro, Yukon	79.67	11	P	P	00 51 56.6	+0.3
	baz=340						
N30M	Aishikik Lake	79.74	13	P	P	00 51 57.0	+0.3
	baz=337						
UPI	Upington	79.84	223	eP	P	00 51 56.6	-1.0
UPI				IAmb	IAmb	00 52 01.3	
	comp=Z,8.3nm,0.8s						
N31M	Braeburn, Yuko	79.96	13	P	P	00 51 58.5	+0.7
	baz=338						
YUK6	Outpost Mounta	79.97	14	P	P	00 51 58.0	-0.1
	baz=336						
WRGLY	Wrigley	79.97	7	P	P	00 51 58.3	+0.5
	baz=348						
HYT	Haines Junctio	80.25	14	P	P	00 52 00.4	+0.9
HYT	Haines Junctio	80.25	14	P	P	00 51 59.6	+0.1
	baz=337						
KEIM	Keimoes	80.27	223	eP	P	00 51 59.2	-0.6
KEIM				IAmb	IAmb	00 51 60.0	
	comp=Z,48nm,1.5s						
PNL	Peninsula	80.92	15	P	P	00 52 03.3	+0.3
	baz=335						
TGTN	Hyland Airport	81.09	9	P	P	00 52 04.2	+0.4
	baz=344						
WB0	Warramunga Arr	81.61	122	P	P	00 52 06.2	-0.9
P33M	Teslin, Yukon	81.67	12	P	P	00 52 07.1	+0.1
P33M				IAmb	IAmb	00 52 08.6	
	comp=Z,94nm,2.0s						
P33M	Teslin, Yukon	81.67	12	P	P	00 52 06.9	-0.1
	baz=341						
WRA	Warramunga Arr	81.70	122	P	P	00 52 06.0	-1.6
	comp=Z,3.6nm,0.7s,baz=322,slow=5.0,SNR=32						
WRA				pP	pP	00 52 34.6	-0.3
	comp=Z,8.4nm,0.8s,baz=322,slow=5.0,SNR=9.2						
WRA				PKKPbc	PKKPbc	01 10 37.4	-1.1
	comp=Z,0.4nm,0.6s,baz=130,slow=2.2,SNR=5.3						
	comp=Z,3.6nm,0.7s						
WRA	Warramunga Arr	81.70	122	P	P	00 52 06.5	-1.1
WRA	Warramunga Arr	81.70	122	P	P	00 52 06.5	-1.1
PLBC	Pleasant Camp	81.73	14	P	P	00 52 07.6	+0.4
	baz=338						
SKAG	Skagway	81.93	13	P	P	00 52 08.6	+0.4
	baz=339						
SCHQ	Schefferville	82.28	337	P	P	00 52 10.6	+0.4
	comp=Z,7.8nm,0.7s,baz=39,slow=6.9,SNR=8.0						
	comp=Z,7.8nm,0.7s						
SCHQ	Schefferville	82.28	337	P	P	00 52 10.5	+0.4
SCHQ				IAmb	IAmb	00 52 12.1	
	comp=Z,27nm,1.2s						
WTLY	Watson Lake, Y	82.38	10	P	P	00 52 11.0	+0.4
	baz=344						
GRAN	Grantham	82.43	220	eP	P	00 52 14.2	+3.0
R33M	Jennings River	82.74	11	P	P	00 52 12.3	-0.4
	baz=342						
Q32M	Nakina River	82.94	12	P	P	00 52 12.9	-0.9
	baz=341						
SUR	Sutherland	83.20	221	P	P	00 52 15.2	-0.2
SUR				IAmb	IAmb	00 53 51.3	
	comp=Z,83nm,1.9s						
DLBC	Dease Lake	83.81	11	P	P	00 52 18.0	-0.1
	baz=343						
AS31	Alice Springs	83.97	125	P	P	00 52 18.6	-0.6
ASAR	Alice Springs	83.97	125	P	P	00 52 18.1	-1.2
	comp=Z,5.7nm,0.9s,baz=317,slow=5.0,SNR=30						
ASAR				pP	pP	00 52 46.6	-0.3
	comp=Z,8.4nm,0.9s,baz=321,slow=5.2,SNR=9.7						
	comp=Z,5.7nm,0.9s						
ASAR	Alice Springs	83.97	125	P	P	00 52 18.3	-1.0
ASAR	Alice Springs	83.97	125	P	P	00 52 18.3	-1.0
S34M	Telegraph Cree	84.13	12	P	P	00 52 20.0	+0.3
	baz=342						
CER	Ceres	84.77	222	eP	P	00 52 25.4	+2.3
T35M	Bob Quinn	85.17	12	P	P	00 52 25.2	+0.3
	baz=343						
FORT	Forrest	85.40	134	P	P	00 52 25.4	-0.9
FORT				IAmb	IAmb	00 52 55.2	
	comp=Z,40nm,0.9s						
FFC	Flin Flon	89.03	356	P	P	00 52 43.8	+0.3
FFC				IAmb	IAmb	00 52 45.0	
	comp=Z,20nm,1.0s						
FFC	Flin Flon	89.03	356	P	P	00 52 43.8	+0.3
FFC				pmax	pmax		
	comp=Z,20nm,1.0s						
ULM	Lac du Bonnet	92.96	352	P	P	00 53 01.7	-0.2
	comp=Z,4.5nm,0.8s,baz=355,slow=11,SNR=3.4						
	comp=Z,4.5nm,0.8s						
EYMN	Ely	94.62	349	P	P	00 53 09.2	-0.4
	baz=14						
AGMN	Agassiz Nation	94.88	351	P	P	00 53 10.5	-0.2
	baz=10						
NEW	Newport	95.34	6	LR	LR	01 39 32.1	
	comp=Z,99nm,19.8s,baz=28,slow=37						
NEW	Newport	95.34	6	P	P	00 53 12.7	-0.2
	baz=353						
DGMT	Dagmar	95.38	357	P	P	00 53 13.3	+0.2
	baz=3.7						
EGMT	Eagleton	95.92	1	P	P	00 53 15.3	-0.3
	baz=359						
GLMI	Grayling	96.25	343	P	P	00 53 17.2	+0.1
	baz=19						
SSPA	Standing Stone	98.28	337	P	Pdif	00 53 26.4	+0.1
	baz=25						
BOZ	Bozeman (W)	98.31	2	P	P	00 53 26.4	0.0
	baz=358						
JFWS	Jewell Farm	99.27	346	P	Pdif	00 53 30.9	+0.2
	baz=15						
ECSD	EROS Data Cent	99.47	351	P	Pdif	00 53 31.7	+0.2
	baz=9.8						
PDAR	Pinedale Array	101.18	1	P	Pdif	00 53 40.4	+0.9
	comp=Z,0.6nm,0.9s,baz=36,slow=3.8,SNR=4.8						
NVAR	Mina Array Bea	104.98	8	PKiKP	PKiKP	00 58 10.6	-0.1
	comp=Z,0.5nm,0.7s,baz=298,slow=2.5,SNR=3.8						
VNA2	Neumayer--Watz	120.45	202	PKPdf	PKPdf	00 58 37.1	-1.4
	baz=14,slow=4.0						
VNA1	Neumayer--Stat	120.60	202	PKPdf	PKPdf	00 58 35.8	-3.0
CAM01	Campos-RJ	120.78	264	eP	PKiKP	00 58 42.2	+1.5
VNA3	Neumayer Olymp	121.25	202	PKPdf	PKPdf	00 58 38.5	-1.7
VNDA	Vanda	125.35	165	PKP	PKPdf	00 58 46.4	-1.5
	comp=Z,0.4nm,0.6s,baz=277,slow=4.7,SNR=4.2						
ROSC	El Rosal	127.90	315	PKP	PKPdf	00 58 53.7	-1.5
	comp=Z,4.3nm,0.3s,baz=113,slow=12,SNR=3.7						
SALV	Santo Antonio	128.96	279	eP	PKiKP	00 59 00.2	+3.0
SIV	San Ignacio	133.27	283	PKP	PKPdf	00 59 03.5	-1.2
	comp=Z,1.4nm,0.7s,baz=27,slow=2.3,SNR=6.8						
SIV				SKPbc	SKPbc	01 02 22.4	-1.2
	comp=Z,0.8nm,0.4s,baz=55,slow=3.7,SNR=3.5						
CRSM	Crissiumal (Br	133.37	265	eP	PKiKP	00 59 08.1	+2.3
CPUP	Villa Florida	135.51	268	PKP	PKPdf	00 59 06.5	-2.0
	comp=Z,2.4nm,0.8s,baz=78,slow=19,SNR=5.7						
PLCA	Paso Flores	150.09	250	PKPbc	PKPbc	00 59 38.0	-1.0
	comp=Z,15nm,1.0s,baz=90,slow=2.0,SNR=25						
PLCA	Paso Flores	150.09	250	PKIKP	PKPbc	00 59 38.0	-1.0
PLCA	Paso Flores	150.09	250	eP	PKPbc	00 59 37.7	-1.2

**IDC 20 00:58:47.7±3.6, 24°.23S×

explosion
*DNK **20** 01:07:08.5±2.1, 51°.64N×16°.58E, h0km±141km, ML2.0*
*PRU **20** 01:07:08.7±0.0, 51°.44N×16°.22E, h0km*
*IDC **20** 01:07:09.1±0.6, 51°.44N×16°.10E, h0km, mb3.4/1, mbtmp3.3/9, ML2.9/8, Error ellipse: s-maj=11.1km s-min=6.1km az=108.0*
*BGR **20** 01:07:11.7±0.4, 51°.34N×16°.02E, h1km, ML3.0/12, Error ellipse: s-maj=5.6km s-min=3.3km az=25.0*
*VIE **20** 01:07:12.1±1.0, 51°.24N×16°.04E, h0km, mb2.8/16, ml2.9/14, ms3.5/1, Error ellipse: s-maj=5.8km s-min=5.1km az=34.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 20 01:07:06.8±0.6, 51°.47N±0°.02×16°.25E±0°.02, h0km, n92, σ1°66/154, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**177**	*i* Pg	**Pb**	**01 07 20.5**	**-0.2**
KSP				*e*Sg	**Sg**	**01 07 28.2**	**+1.1**
KSP	**Ksiaz**	**0.63**	**177**	*e*Pg	**Pb**	**01 07 20.6**	**-0.2**
KSP				*e*Sg	**Sg**	**01 07 28.3**	**+1.1**
CHVC	**Chvalec**	**0.90**	**188**	*e*PG	**Pb**	**01 07 25.4**	**+0.1**
CHVC				*e*SG	**Sg**	**01 07 36.4**	**+0.9**
	comp=Z,87nm,0.4s						
OSTC	**Ostas**	**0.92**	**181**	*e*PG	**Pb**	**01 07 25.9**	**+0.3**
OSTC				*e*SG	**Sg**	**01 07 37.2**	**+0.9**
	comp=Z,132nm,0.7s						
UPC	**Upice**	**0.98**	**189**	*e*PG	**Pb**	**01 07 26.9**	**+0.2**
UPC				*e*SG	**Sg**	**01 07 39.4**	**+1.2**
	comp=Z,324nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**178**	*e*PG	**Pb**	**01 07 29.5**	**+0.3**
DPC				*e*SG	**Sg**	**01 07 43.5**	**+0.5**
	comp=Z,118nm,0.5s						
DPC	**Dobruska-Polom**	**1.13**	**178**	*e*Pg	**Pb**	**01 07 29.5**	**+0.3**
DPC				*e*Sg	**Sb**	**01 07 44.7**	**+0.3**
PVCC	**Panska Ves**	**1.42**	**229**	*e*PG	**Pb**	**01 07 34.7**	**+0.5**
PVCC				*e*SG	**Sb**	**01 07 53.2**	**+0.3**
	comp=Z,390nm,0.3s						
KRLC	**Kraliky**	**1.44**	**166**	*e*PG	**Pg**	**01 07 34.8**	**+0.4**
KRLC				*e*SG	**Sg**	**01 07 53.7**	**+0.6**
	comp=Z,122nm,1.2s						
GOPC	**GO Pecny, Ondr**	**1.82**	**211**	*e*PG	**Pb**	**01 07 40.5**	**-0.5**
GOPC				*e*SG	**Sb**	**01 08 05.1**	**+0.8**
	comp=Z,65nm,0.5s						
RUE	**Ruedersdorf**	**1.83**	**304**	*e*P	**Pn**	**01 07 40.2**	**+0.7**
RUE				IAML		01 07 46.2	
	comp=Z,79nm,0.6s						
PRU	**Pruhonice**	**1.84**	**217**	*e*PN	**Pn**	**01 07 40.3**	**+0.6**
PRU				*e*PG	**Pb**	**01 07 41.9**	**+0.6**
PRU				*e*SG	**Sb**	**01 08 05.6**	**+0.7**
	comp=Z,106nm,0.6s						
RAC	**Raciborz**	**1.86**	**138**	*e*PG	**Pg**	**01 07 43.5**	**+1.0**
RAC				*e*SG	**Sg**	**01 08 08.7**	**+2.1**
MORC	**Moravsky Berou**	**1.89**	**154**	*e*PN	**Pn**	**01 07 41.1**	**+0.7**
MORC				*e*SG	**Sb**	**01 08 07.0**	**+0.6**
MORC	**Moravsky Berou**	**1.89**	**154**	*e*Pn	**Pn**	**01 07 41.1**	**+0.7**
	baz=336						
MORC				*e*Sg	**Sb**	**01 08 06.9**	**+0.6**
	comp=Z,70nm,0.7s,baz=336						
GKP	**Gorka Klasztor**	**1.90**	**18**	*e*P	**Pg**	**01 07 47.7**	**+4.5**
GKP	**Gorka Klasztor**	**1.90**	**18**	*e*Pn	**Pg**	**01 07 47.2**	**+4.0**
FBE	**Freiberg**	**1.90**	**254**	*e*Pn	**Pb**	**01 07 42.3**	**-0.1**
FBE				*e*Sg	**Sb**	**01 08 06.7**	**0.0**
OKC	**Ostrava-Krasne**	**2.04**	**143**	*e*PG	**Pg**	**01 07 46.5**	**+0.7**
OKC				*e*SG	**Sg**	**01 08 12.7**	**+0.5**
	comp=Z,64nm,0.6s						
OKC	**Ostrava-Krasne**	**2.04**	**143**	*e*Pn	**Pg**	**01 07 46.2**	**+0.3**
CLL	**Collm**	**2.04**	**267**	*e*Pn	**Pn**	**01 07 43.0**	**+0.6**
CLL				*e*Pg	**Pg**	**01 07 46.0**	**+0.1**
CLL				*e*Sg	**Sg**	**01 08 13.0**	**+0.7**
	comp=Z,45nm,0.6s						
CLL	**Collm**	**2.04**	**267**	*e*Pn	**Pn**	**01 07 42.5**	**+0.1**
VRAC	**Vranov**	**2.18**	**174**	Pn	**Pn**	**01 07 45.4**	**+1.1**
	comp=Z,3.3nm,0.3s,baz=350,slow=17,SNR=27						
VRAC				Lg	Lg	01 08 15.5	
	comp=Z,11nm,0.3s,baz=242,slow=22,SNR=11						
	comp=Z,11nm,0.4s						
VRAC	**Vranov**	**2.18**	**174**	*e*PN	**Pn**	**01 07 45.5**	**+1.2**
VRAC				*e*SG	**Sg**	**01 08 16.5**	**-0.3**
VRAC	**Vranov**	**2.18**	**174**	*e*Pn	**Pn**	**01 07 45.4**	**+1.1**
	baz=355						
VRAC				*e*Sg	**Sg**	**01 08 16.4**	**-0.3**
	comp=Z,68nm,0.8s,baz=355						
TREC	**Trest**	**2.23**	**193**	*e*PN	**Pn**	**01 07 46.3**	**+1.2**
TREC				*e*SG	**Sb**	**01 08 17.4**	**+1.1**
	comp=Z,49nm,0.3s						
MAUC	**Maruska**	**2.34**	**154**	*e*PN	**Pb**	**01 07 48.7**	**-1.2**
MAUC				*e*PG	**Pg**	**01 07 51.6**	**-0.1**
MAUC				*e*SG	**Sg**	**01 08 23.7**	**+1.7**
	comp=Z,264nm,1.2s						
KRUC	**Moravsky**	**2.42**	**178**	*e*PN	**Pn**	**01 07 48.8**	**+1.2**
KRUC				*e*SG	**Sg**	**01 08 23.7**	**-0.7**
KRUC	**Moravsky**	**2.42**	**178**	*e*Pn	**Pn**	**01 07 48.7**	**+1.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**01 08 23.7**	**-0.7**
	comp=Z,56nm,0.8s,baz=358						
OJC	**Ojcow**	**2.58**	**118**	*e*Pn	**Pn**	**01 07 48.0**	**-1.8**
OJC				*e*Pg	**Pg**	**01 07 55.6**	**-0.6**
OJC				*e*Sg	**Sg**	**01 08 29.9**	**+0.3**
TANN	**Tannenbergstha**	**2.62**	**248**	*e*Pn	**Pn**	**01 07 51.6**	**+1.1**
TANN				*e*Sg	**Sg**	**01 08 29.4**	**-1.6**
WERD	**Werda**	**2.70**	**249**	*e*Sg	**Sb**	**01 08 31.3**	**+1.8**
NKC	**Novy Kostel**	**2.71**	**244**	*e*PN	**Pn**	**01 07 52.9**	**+1.2**
NKC				*e*PG	**Pb**	**01 07 57.6**	**+1.4**
NKC				*e*SG	**Sg**	**01 08 34.3**	**+0.5**
	comp=Z,54nm,0.4s						
JAVC	**Velka Javorina**	**2.77**	**160**	*e*PN	**Pn**	**01 07 53.8**	**+1.3**
JAVC	**Velka Javorina**	**2.77**	**160**	*e*Pn	**Pn**	**01 07 53.8**	**+1.3**
	baz=342						
KHC	**Kasperske Hory**	**2.90**	**217**	*e*PN	**Pn**	**01 07 55.6**	**+1.3**
KHC				*e*PG	**Pg**	**01 08 01.3**	**-1.2**
KHC				*e*SG	**Sg**	**01 08 38.8**	**-1.3**
	comp=Z,22nm,0.6s						
CKRC	**Cesky Krumlov**	**2.94**	**206**	*e*PN	**Pn**	**01 07 56.3**	**+1.6**
CKRC				*e*PG	**Pb**	**01 08 01.2**	**+1.2**
CKRC				*e*SG	**Sg**	**01 08 39.8**	**-1.3**
MANZ	**Manzenberg**	**3.02**	**242**	*e*Pn	**Pn**	**01 07 57.2**	**+1.2**
MOX	**Moxa**	**3.04**	**256**	*e*Pn	**Pn**	**01 07 56.9**	**+0.7**
ROTZ	**Rotzenmuhle**	**3.09**	**238**	*e*Pn	**Pn**	**01 07 57.8**	**+1.0**
GEC2	**GERESS Array S**	**3.10**	**213**	*e*Pn	**Pn**	**01 07 58.8**	**+1.7**
GEC2				*e*Sg	**Sb**	**01 08 43.8**	**+2.6**
GERES	**GERESS Array B**	**3.10**	**213**	Pn	**Pn**	**01 07 58.6**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=34,slow=13,SNR=19						
GERES				Pg	**Pb**	**01 08 04.6**	**+1.7**
	comp=Z,13nm,0.3s,baz=31,slow=19,SNR=33						
GERES				Lg	Lg	01 08 44.3	
	comp=Z,12nm,0.3s,baz=40,slow=30,SNR=12						
	comp=Z,2.0nm,0.4s						
WET	**Wettzell**	**3.18**	**224**	*e*Pn	**Pn**	**01 07 59.1**	**+1.0**
CONA	**Conrad Observa**	**3.56**	**184**	*i* Pn	**Pn**	**01 08 05.3**	**+2.0**
	comp=Z,1.6nm,0.4s,SNR=6.3						
CONA				*e*Sg	**Sg**	**01 09 01.0**	**-0.1**
	comp=Z,30nm,0.4s						
BSD	**Bornholm Skovb**	**3.73**	**348**	*e*P	**Pn**	**01 08 06.3**	**+0.7**
BSD	**Bornholm Skovb**	**3.73**	**348**	*i* P	**Pn**	**01 08 06.2**	**+0.5**
BSD				*i* S	**Sn**	**01 08 47.4**	**-2.9**
BSD				IAML		01 08 52.3	
	comp=Z,1.5nm,0.1s						
RONA	**Rosalia, Austr**	**3.78**	**180**	*e*Sg	**Sg**	**01 09 10.5**	**+2.3**
	comp=Z,12nm,0.4s						
MOA	**Molln**	**3.85**	**200**	*i* Pn	**Pn**	**01 08 08.7**	**+1.4**
	comp=Z,3.1nm,0.3s,SNR=14						
MOA				*e*Sg	**Sg**	**01 09 12.4**	**+1.9**
	comp=Z,20nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.15**	**205**	*i* Pn	**Pn**	**01 08 13.0**	**+1.6**
	comp=Z,4.6nm,0.3s						
BIOA				*e*Sg	**Sg**	**01 09 20.3**	**+0.2**
	comp=Z,34nm,0.6s						
ARSA	**Arzberg**	**4.25**	**187**	*i* Pn	**Pn**	**01 08 15.1**	**+2.3**
	comp=Z,0.9nm,0.2s						
ARSA				*e*Sg	**Sg**	**01 09 25.2**	**+1.8**
	comp=Z,11nm,0.4s						
PSZ	**Piszkesteto**	**4.27**	**145**	P	**Pn**	**01 08 15.3**	**+2.1**
MPLH	**Magyarpolny**	**4.39**	**168**	P	**Pn**	**01 08 17.4**	**+2.7**
LUNU	**Lund**	**4.49**	**339**	*i* P	**Pn**	**01 08 15.8**	**-0.3**
LUNU				P	**Pn**	**01 08 16.0**	**-0.1**
LUNU				*i* S	**Sn**	**01 09 05.5**	**-3.4**
LUNU				S	**Sn**	**01 09 08.1**	**-0.8**
LUNU	**Lund**	**4.49**	**339**	P	**Pn**	**01 08 16.0**	**-0.1**
LUNU				S	**Sn**	**01 09 08.1**	**-0.8**
KBA	**Koelnbreinsper**	**4.79**	**204**	*i* Pn	**Pn**	**01 08 22.2**	**+1.8**
	comp=Z,2.3nm,0.4s						
KBA				*e*Sg	**Sg**	**01 09 40.2**	**-0.5**
	comp=Z,9.3nm,0.4s						
BLEU	**Blekinge**	**4.85**	**357**	*i* P	**Pn**	**01 08 21.9**	**+0.9**
BLEU				*i* S	**Sn**	**01 09 13.0**	**-4.7**
SOKA	**Soboth**	**4.87**	**190**	*i* Pn	**Pn**	**01 08 24.3**	**+2.9**
	comp=Z,0.8nm,0.4s						
SOKA				*e*Sg	**Sg**	**01 09 42.2**	**-0.8**
	comp=Z,7.8nm,0.6s						
BJUU	**Bjuv**	**4.99**	**339**	*i* P	**Pn**	**01 08 22.3**	**-0.6**
BJUU				P	**Pn**	**01 08 22.7**	**-0.2**
BJUU				*i* S	**Sn**	**01 09 16.9**	**-4.3**
BJUU				S	**Sn**	**01 09 18.7**	**-2.5**
BJUU	**Bjuv**	**4.99**	**339**	P	**Pn**	**01 08 22.7**	**-0.2**
BJUU				S	**Sn**	**01 09 18.7**	**-2.5**
MYKA	**Terra Mystica**	**5.14**	**200**	*e*Sg	**Sg**	**01 09 54.3**	**+2.4**
	comp=Z,6.3nm,0.5s						
WATA	**Walderalm**	**5.14**	**218**	*i* Pn	**Pn**	**01 08 27.4**	**+2.2**
	comp=Z,2.6nm,0.3s,SNR=4.2						
WTTA	**Wattenberg**	**5.18**	**217**	*i* Pn	**Pn**	**01 08 27.5**	**+1.8**
	comp=Z,1.5nm,0.2s						
DEL	**Delary**	**5.20**	**345**	*e*P	**Pn**	**01 08 26.3**	**+0.5**
DEL				IAML		01 09 27.5	
	comp=Z,2.5nm,0.5s						
DEL	**Delary**	**5.20**	**345**	*i* P	**Pn**	**01 08 26.0**	**+0.2**
DEL				P	**Pn**	**01 08 26.0**	**+0.2**
DEL				*i* S	**Sn**	**01 09 23.9**	**-2.5**
DEL				S	**Sn**	**01 09 24.2**	**-2.2**
DEL	**Delary**	**5.20**	**345**	P	**Pn**	**01 08 26.0**	**+0.2**
DEL				S	**Sn**	**01 09 24.2**	**-2.2**
TRPA	**Tarpa**	**5.27**	**127**	P	**Pn**	**01 08 26.9**	**+0.2**
MOTA	**Moosalm**	**5.32**	**221**	*i* Pn	**Pn**	**01 08 30.1**	**+2.4**
	comp=Z,0.7nm,0.3s						
ABTA	**Abfaltersbach**	**5.33**	**209**	*e*Pn	**Pn**	**01 08 30.1**	**+2.4**
	comp=Z,0.8nm,0.3s						
ABTA				*e*Sg	**Sg**	**01 09 57.1**	**-0.8**
	comp=Z,19nm,0.8s						
RETA	**Reutte**	**5.36**	**224**	*i* Pn	**Pn**	**01 08 29.0**	**+0.9**
	comp=Z,2.8nm,0.4s,SNR=6.2						
RETA				*e*Sg	**Sg**	**01 10 00.3**	**+1.5**
	comp=Z,5.9nm,0.4s						
SQTA	**Sankt Quirin**	**5.38**	**220**	Pn	**Pn**	**01 08 30.7**	**+2.3**
	comp=Z,1.7nm,0.2s,SNR=7.4						
MORH	**Mrgy, Hungar**	**5.50**	**162**	P	**Pn**	**01 08 31.7**	**+1.8**
KOVH	**Kovagotottos**	**5.53**	**166**	P	**Pn**	**01 08 31.7**	**+1.4**
DAVA	**Damuels**	**5.90**	**227**	*i* Pn	**Pn**	**01 08 36.4**	**+0.7**
	comp=Z,2.0nm,0.5s						
GNOU	**Gnosjoe**	**6.01**	**347**	P	**Pn**	**01 08 37.5**	**+0.6**
GNOU	**Gnosjoe**	**6.01**	**347**	P	**Pn**	**01 08 37.5**	**+0.6**
PABE	**Paberze**	**6.12**	**46**	*e*P	**Pn**	**01 08 41.2**	**+2.7**
DAVOX	**Davos/Dischmat**	**6.29**	**224**	Pn	**Pn**	**01 08 42.4**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=83,slow=17,SNR=2.8						
DAVOX				Lg	Lg	01 10 25.7	
	comp=Z,0.5nm,0.3s,baz=197,slow=19,SNR=4.1						
	comp=Z,0.9nm,0.3s						
BORU	**Boraas**	**6.50**	**343**	*i* P	**Pn**	**01 08 44.6**	**+1.0**
VIKU	**Vikbolandet**	**7.05**	**2**	*e*P	**Pn**	**01 08 52.3**	**+1.2**
VIKU				IAML		01 09 21.2	
	comp=Z,4.0nm,0.8s						
SLIT	**Slitere, Latvi**	**7.10**	**27**	*e*P	**Pn**	**01 08 52.8**	**+1.0**
SLIT				IAML		01 09 23.6	
	comp=Z,32nm,0.7s						
AKASG	**Malin Array Be**	**8.21**	**90**	Pn	**Pn**	**01 09 08.1**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=279,slow=12,SNR=4.8						
AKASG				Sn	**Sn**	**01 10 37.3**	**-3.2**
	comp=Z,0.5nm,0.3s,baz=275,slow=35,SNR=1.4						
AKASG				Lg	Lg	01 11 33.6	
	comp=Z,0.3nm,0.3s,baz=274,slow=27,SNR=1.7						
	comp=Z,0.3nm,0.3s						
MTSE	**Matsula**	**8.45**	**28**	*e*P	**Pn**	**01 09 12.1**	**+1.7**
HFS	**Hagfors**	**8.80**	**352**	Pn	**Pn**	**01 09 15.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=7.8						
HFS				Sn	**Sn**	**01 10 51.6**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=173,slow=25,SNR=2.0						
	comp=Z,0.9nm,0.5s						
AAL	**Aland**	**8.97**	**12**	*e*P	**Pn**	**01 09 18.4**	**+0.9**
VSU	**Vasula**	**9.23**	**37**	*e*P	**Pn**	**01 09 23.5**	**+2.4**
MEF	**Metsahovi**	**9.88**	**24**	*e*P	**Pn**	**01 09 32.1**	**+2.2**
NOA	**NORSAR Array B**	**9.99**	**346**	Pn	**Pn**	**01 09 30.5**	**-1.0**
	baz=162,slow=12,SNR=2.2						
	comp=Z,1.0nm,0.5s						
RAF	**Rauma**	**10.05**	**16**	*e*P	**Pn**	**01 09 32.9**	**+0.7**
FINES	**FINESS Array B**	**11.36**	**25**	Pn	**Pn**	**01 09 49.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=213,slow=11,SNR=12						
FINES				Sn	**Sn**	**01 11 50.1**	**-7.5**
	comp=Z,0.1nm,0.3s,baz=217,slow=22,SNR=2.1						
	comp=Z,0.8nm,0.3s						
EKA	**Eskdalemuir Ar**	**12.20**	**296**	Pn	**Pn**	**01 10 00.3**	**-1.4**
	baz=101,slow=13						
ARCES	**ARCESS Array B**	**18.64**	**10**	Pn	**P**	**01 11 23.3**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=192,slow=12,SNR=13						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**40.00**	**202**	P	**P**	**01 14 44.4**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=14,slow=8.2,SNR=2.8						
	comp=Z,0.6nm,0.9s						

AUST 20 01:10:18.0±2.5, 32°.48S×151°.14E, h13km±16km, Error ellipse: s-maj=24.7km s-min=10.9km az=98.0, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.73**	**182**	P	Pg	01 10 32.0	-0.2
	baz=0.7						
MGCD				S	Sb	01 10 43.5	+1.0
	baz=0.7						
AUKHS	**Kincumber High**	**1.00**	**168**	P	Pb	01 10 37.1	-0.1
	baz=1.0						
AUKHS				S	Sn	01 10 52.5	+0.8
	baz=1.0						
RIV	**Riverview**	**1.35**	**179**	P	Pn	01 10 40.8	-1.8
	baz=1.4						
RIV				S	Sg	01 11 01.3	-0.1
	baz=1.4						
ARMA	**Armidale**	**2.10**	**12**	P	Pb	01 10 54.6	-1.4
	baz=2.1						
ARMA				S	Sn	01 11 19.7	+0.7
	baz=2.1						

*IDC **20** 01:15:37.9±1.0, 3°.64N×126°.66E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=144.5km s-min=19.4km az=67.0*
*NEIC **20** 01:15:42.1±0.9, 4°.1N±0°.1×127°.72E±0°.08, h35km±8km, mb4.2/10, Error ellipse: s-maj=16.0km s-min=11.3km az=198.0*

ISC 20 01:15:42.3±0.6, 4°.03N±0°.07×127°.7E±0°.2, h35km, n26, σ1°08/29, mb4.2/13, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.26**	**186**	Pn	**Pn**	**01 16 30.7**	**-0.2**
KCP	**Kidapawan**	**3.94**	**319**	*i* eP	**Pn**	**01 16 40.7**	**+0.4**
BIPH	**Bislig**	**4.33**	**342**	*i* eP	**Pn**	**01 16 47.6**	**+1.9**
LUWI	**Luwuk**	**7.05**	**224**	Pn	**Pn**	**01 17 23.1**	**+0.1**
FAKI	**Fak Fak**	**8.27**	**147**	Pn	**Pn**	**01 17 39.7**	**-0.1**
KNRA	**Kununurra**	**19.61**	**177**	P	**P**	**01 20 07.4**	**-0.4**
KNRA				IAmb	IAmb	01 20 18.3	
	comp=Z,8.0nm,0.8s						
TPUB	**Ta-pu**	**20.34**	**341**	P	**P**	**01 20 14.4**	**-1.3**
WB0	**Warramunga Arr**	**24.55**	**165**	P	**P**	**01 20 58.5**	**-0.5**
WB0				IAmb	IAmb	01 21 11.7	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**24.70**	**165**	P	**P**	**01 20 59.5**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=342,slow=10,SNR=21						
WRA				PcP	**PcP**	**01 24 38.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=338,slow=1.5,SNR=1.5						
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**24.70**	**165**	P	**P**	**01 20 59.9**	**-0.4**
WB2	**Warramunga Arr**	**24.71**	**165**	P	**P**	**01 20 59.9**	**-0.4**
WB2				IAmb	IAmb	01 21 10.3	
	comp=Z,8.2nm,0.8s						
WR0	**Warramunga Arr**	**24.77**	**164**	P	**P**	**01 21 00.8**	**-0.2**
WR0				IAmb	IAmb	01 21 26.6	
	comp=Z,8.8nm,1.2s						
ASAR	**Alice Springs**	**28.19**	**168**	P	**P**	**01 21 34.2**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=347,slow=7.6,SNR=2.6						
ASAR				PcP	**PcP**	**01 24 46.4**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=0.6,slow=2.2,SNR=5.9						
STKA	**Stephens Creek**	**38.08**	**161**	P	**P**	**01 22 58.7**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=343,slow=9.2,SNR=5.4						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**38.08**	**161**	P	**P**	**01 22 57.5**	**-0.3**
OUENC	**Ouen Island, N**	**46.41**	**126**	P	**P**	**01 24 04.5**	**-1.3**
SONM	**Songino Array**	**47.33**	**341**	P	**P**	**01 24 13.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=159,slow=7.1,SNR=2.0						
SONM				PcP	**PcP**	**01 25 44.7**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=154,slow=5.1,SNR=4.2						
	comp=Z,0.3nm,0.5s						
MK31	**Makanchi Array**	**57.86**	**325**	P	**P**	**01 25 30.1**	**-0.5**
MK31				IAmb	IAmb	01 25 44.5	
	comp=Z,2.1nm,1.0s						
MKAR	**Makanchi Array**	**57.86**	**325**	P	**P**	**01 25 29.8**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=122,slow=8.3,SNR=10						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**57.86**	**325**	P	**P**	**01 25 29.3**	**-1.4**
ZALV	**Zalesovo Beam**	**60.76**	**333**	P	**P**	**01 25 50.3**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=146,slow=8.3,SNR=1.8						
	comp=Z,0.4nm,0.3s						
ABKAR	**Akbulak array**	**72.53**	**321**	P	**P**	**01 27 05.2**	**-0.5**
ABKAR	**Akbulak array**	**72.53**	**321**	P	**P**	**01 27 04.5**	**-1.2**
ABKAR				IAmb	IAmb	01 27 12.6	
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**90.50**	**340**	P	**P**	**01 28 41.8**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=82,slow=6.5,SNR=4.2						
	comp=Z,1.6nm,0.8s						
BRTR	**Keskin Array B**	**90.57**	**310**	P	**P**	**01 28 40.0**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=106,slow=5.1,SNR=2.6						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**123.74**	**289**	PKP	**PKiKP**	**01 34 37.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=82,slow=2.0,SNR=2.7						

*IDC **20** 01:37:29.2±1.1, 13°.37N×44°.89W, h0km, mb4.0/7, mbtmp4.0/8, ML3.7/1, MS3.6/8, Error ellipse: s-maj=35.6km s-min=20.7km az=148.0*

ISC 20 01:37:31.4±0.9, 13°.3N±0°.2×44°.9W±0°.2, h15km, n18, σ0°73/8, mb4.0/7, MS3.7/6, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.18**	**224**	Pn	**Pn**	**01 40 10.0**	**-0.9**
	0.6nm,0.3s,baz=39,slow=15,SNR=14						
MDP				Sn	Sn	01 42 03.6	-12
	0.2nm,0.3s,baz=68,slow=19,SNR=1.3						
MDP				LR	LR	01 43 36.6	
	comp=Z,251nm,21.3s,baz=62,slow=33						
	1.2nm,0.3s						
H05S1	**Guadeloupe/Mar**	**15.53**	**276**	T	T	01 57 03.1	
	SNR=30						
PCRV	**Puerto La Cruz**	**19.59**	**263**	LR	LR	01 48 46.4	
	comp=Z,79nm,19.6s,slow=35						
SJG	**San Juan**	**21.02**	**286**	LR	LR	01 49 02.1	
	comp=Z,140nm,21.3s,baz=83,slow=33						
SDV	**Santo Domingo**	**25.64**	**263**	P	**P**	**01 43 01.0**	**0.0**
	4.2nm,0.3s,baz=53,slow=10,SNR=5.6						
	4.2nm,0.3s						
BBTS	**Babate**	**27.53**	**84**	LR	LR	01 51 06.3	
	comp=Z,194nm,19.1s,baz=346,slow=30						
H10N3	**ASCENSION HYDR**	**36.76**	**123**	T	T	02 23 28.4	
	baz=305,slow=76,SNR=46						
H10N2	**ASCENSION HYDR**	**36.77**	**123**	T	T	02 23 28.8	
	baz=305,slow=76,SNR=54						
H10N1	**ASCENSION HYDR**	**36.78**	**123**	T	T	02 23 29.5	
	baz=305,slow=76,SNR=46						
H10S3	**ASCENSION HYDR**	**37.27**	**125**	T	T	02 24 08.0	
	baz=303,slow=74,SNR=37						
H10S2	**ASCENSION HYDR**	**37.29**	**125**	T	T	02 24 08.8	
	baz=277,slow=74,SNR=16						
LPAZ	**La Paz**	**37.32**	**219**	P	**P**	**01 44 44.5**	**+0.4**
	2.7nm,1.1s,baz=22,slow=11,SNR=3.5						
LPAZ				LR	LR	01 59 57.1	
	comp=Z,122nm,18.1s,baz=18,slow=36						
	2.7nm,1.1s						
ATAH	**Atahualpa**	**38.99**	**241**	P	**P**	**01 44 59.0**	**+1.0**
	4.3nm,0.7s,baz=61,slow=10,SNR=3.7						
ATAH				LR	LR	02 01 14.7	
	comp=Z,135nm,19.2s,baz=61,slow=36						
	4.3nm,0.7s						
TKL	**Tuckaleechee C**	**41.43**	**309**	LR	LR	01 57 51.1	
	comp=Z,83nm,22.0s,baz=34,slow=30						
ESDC	**Sonseca Array**	**44.51**	**46**	P	**P**	**01 45 42.7**	**+0.2**
	0.3nm,0.6s,baz=235,slow=8.9,SNR=2.4						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**45.29**	**85**	P	**P**	**01 45 48.7**	**-0.3**
	1.0nm,1.0s,baz=269,slow=8.6,SNR=4.8						
TORD				LR	LR	02 02 24.9	
	comp=Z,124nm,18.4s,baz=262,slow=33					

DDFL					S		Sn	01 51 34.5	+3.7
DDFL	**Dedoflistskaro**	**0.63**	**174**	*e*Pg			**Pn**	**01 51 20.2**	**-0.4**
DDFL				*e*Sg			**Sn**	**01 51 34.5**	**+3.7**
XNZR	**Khunzakh**	**0.69**	**47**	*i* Pg			**Pb**	**01 51 19.2**	**-0.5**
XNZR				*e*Sg			**Sb**	**01 51 29.1**	**-0.3**
GNBR	**Gunib**	**0.76**	**65**	*i* Pg			**Pg**	**01 51 20.2**	**+0.1**
GNBR				*e*Sg			**Sb**	**01 51 31.1**	**-0.3**
KMKR	**Kumukh**	**0.80**	**85**	*e*Pg			**Pg**	**01 51 20.8**	**0.0**
KMKR				*e*Sg			**Sb**	**01 51 31.8**	**-0.8**
UNCR	**Uncukul**	**0.86**	**41**	*e*Pg			**Pg**	**01 51 21.8**	**-0.1**
UNCR				*e*Sg			**Sb**	**01 51 34.0**	**-0.1**
SHTL	**Shatili**	**0.88**	**312**	P			**Pg**	**01 51 20.7**	**-1.6**
SHTL				S			**Sg**	**01 51 32.6**	**-1.1**
DVE	**Vedeno**	**0.89**	**4**	*e*Pg			**Pg**	**01 51 22.2**	**-0.3**
DVE				*e*Sg			**Sb**	**01 51 35.0**	**-0.1**
ARKR	**Arakani**	**0.89**	**53**	*e*Pg			**Pg**	**01 51 22.3**	**-0.2**
ARKR				*e*Sg			**Sb**	**01 51 34.7**	**-0.4**
SEAG	**Tbilisi Sea**	**0.97**	**252**	P			**Pg**	**01 51 23.4**	**-0.5**
SEAG				S			**Sg**	**01 51 36.5**	**0.0**
SEAG	**Tbilisi Sea**	**0.97**	**252**	*e*Pg			**Pg**	**01 51 23.4**	**-0.5**
SEAG				*e*Sg			**Sg**	**01 51 36.5**	**0.0**
KRNR	**Karanay**	**0.99**	**40**	*e*Pg			**Pg**	**01 51 24.0**	**-0.6**
KRNR				*e*Sg			**Sg**	**01 51 37.5**	**+0.1**
DLMR	**Dylym**	**1.09**	**24**	*e*Pg			**Pb**	**01 51 26.1**	**-0.4**
DLMR				*e*Sg			**Sn**	**01 51 41.7**	**-0.5**
BUJR	**Buynaksk**	**1.10**	**46**	*e*Pg			**Pg**	**01 51 26.6**	**+0.2**
BUJR				*e*Sg			**Sn**	**01 51 41.6**	**-0.8**
DBC	**Dubki**	**1.12**	**32**	*e*Pg			**Pb**	**01 51 26.6**	**-0.4**
DBC				*e*Sg			**Sn**	**01 51 42.2**	**-0.7**
GROC	**Groznyy**	**1.14**	**351**	*e*Pg			**Pg**	**01 51 28.1**	**+0.7**
GROC				*e*Sg			**Sn**	**01 51 44.7**	**+1.2**
URKR	**Urkarakh**	**1.20**	**85**	*e*Pg			**Pb**	**01 51 27.8**	**-0.5**
URKR				*e*Sg			**Sn**	**01 51 44.7**	**-0.2**
GUDG	**Gudauri**	**1.22**	**289**	P			**Pn**	**01 51 27.5**	**-1.4**
GUDG				S			**Sb**	**01 51 44.2**	**-0.5**
GUDG	**Gudauri**	**1.22**	**289**	*e*Pg			**Pn**	**01 51 27.5**	**-1.4**
GUDG				*e*Sg			**Sb**	**01 51 44.2**	**-0.5**
SGKR	**Sergokala**	**1.27**	**72**	*e*Pg			**Pn**	**01 51 29.1**	**-0.3**
SGKR				*e*Sg			**Sg**	**01 51 46.7**	**+0.5**
KMGR	**Komgaron**	**1.31**	**319**	*e*Pg			**Pb**	**01 51 30.4**	**+0.2**
KMGR				*e*Sg			**Sg**	**01 51 49.8**	**+2.3**
AKT	**Akhty**	**1.40**	**114**	*e*Pg			**Pn**	**01 51 30.4**	**-0.9**
AKT				*e*Sg			**Sg**	**01 51 50.2**	**-0.3**
MAK	**Makhachkala**	**1.41**	**50**	*e*Pg			**Pn**	**01 51 30.0**	**-1.2**
MAK				*e*Sg			**Sg**	**01 51 50.9**	**+0.3**
LACR	**Lac**	**1.49**	**301**	*e*Pg			**Pn**	**01 51 32.8**	**+0.3**
LACR				*e*Sg			**Sg**	**01 51 53.8**	**+0.5**
DMNI	**Dmanisi**	**1.57**	**242**	P			**Pn**	**01 51 31.5**	**-2.0**
DMNI				S			**Sn**	**01 51 52.1**	**-1.9**
ARNR	**Ardon**	**1.70**	**311**	*e*Sg			**Sg**	**01 52 01.3**	**+1.3**
BRNG	**Burnasheti**	**1.71**	**256**	P			**Pn**	**01 51 34.8**	**-0.7**
BRNG				S			**Sb**	**01 51 58.1**	**-0.6**
ZEI	**Tsey**	**1.73**	**295**	*e*Pg			**Pb**	**01 51 37.0**	**-0.5**
ZEI				*e*Sg			**Sg**	**01 52 01.5**	**+0.4**
KORR	**Kora**	**1.77**	**306**	*e*Pg			**Pb**	**01 51 38.4**	**+0.3**
KORR				*e*Sg			**Sg**	**01 52 02.7**	**+0.4**
ALIG	**Mtskhetisjvari**	**1.77**	**272**	P			**Pn**	**01 51 35.3**	**-1.1**
ALIG				S			**Sn**	**01 51 59.0**	**-0.1**
ALIG	**Mtskhetisjvari**	**1.77**	**272**	*e*Pg			**Pn**	**01 51 35.3**	**-1.1**
ALIG				*e*Sg			**Sn**	**01 51 59.0**	**-0.1**
BKRG	**Bakuriani**	**1.90**	**261**	P			**Pn**	**01 51 37.7**	**-0.4**
BKRG				S			**Sb**	**01 52 03.7**	**-0.6**
BKRG	**Bakuriani**	**1.90**	**261**	*e*Pg			**Pn**	**01 51 37.7**	**-0.4**
BKRG				*e*Sg			**Sb**	**01 52 03.7**	**-0.6**
STDR	**Stavd-Durt**	**1.95**	**312**	*e*Pg			**Pb**	**01 51 40.5**	**-0.5**
STDR				*e*Sg			**Sg**	**01 52 08.8**	**+0.8**
ONI	**Oni**	**1.98**	**286**	P			**Pn**	**01 51 39.6**	**+0.4**
ONI				S			**Sb**	**01 52 05.8**	**-0.8**
ONI	**Oni**	**1.98**	**286**	*e*Pg			**Pn**	**01 51 39.6**	**+0.4**
ONI				*e*Sg			**Sb**	**01 52 05.8**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.99**	**295**	*e*Pg			**Pb**	**01 51 41.0**	**-1.0**
DIGR				*e*Sg			**Sb**	**01 52 07.6**	**+0.6**
AKH	**Akhalkalaki**	**2.01**	**252**	P			**Pn**	**01 51 39.3**	**-0.4**
AKH				S			**Sn**	**01 52 05.7**	**+0.6**
AKH	**Akhalkalaki**	**2.01**	**252**	*e*Pg			**Pn**	**01 51 39.3**	**-0.4**
AKH				*e*Sg			**Sn**	**01 52 05.7**	**+0.6**
AMBZ	**Amberd**	**2.15**	**219**	*e*Pg			**Pn**	**01 51 42.6**	**+0.9**
AMBZ				*e*Sg			**Sb**	**01 52 10.6**	**-0.9**
GNI	**Garni**	**2.15**	**207**	*e*Pg			**Pn**	**01 51 41.1**	**-0.6**
TKB	**Tkibuli**	**2.27**	**278**	P			**Pn**	**01 51 44.3**	**+1.1**
TKB				S			**Sb**	**01 52 13.2**	**-1.7**
TKB	**Tkibuli**	**2.27**	**278**	*e*Pn			**Pn**	**01 51 44.3**	**+1.1**
TKB				*e*Sn			**Sb**	**01 52 13.2**	**-1.7**
NEY	**Neytrino**	**2.71**	**297**	*e*Pn			**Pb**	**01 51 54.9**	**+0.7**
NEY				*e*Sn			**Sb**	**01 52 29.1**	**+1.5**
KBZ	**Khabaz**	**2.84**	**307**	*e*Pn			**Pn**	**01 51 52.3**	**+1.4**
KBZ				*e*Sn			**Sn**	**01 52 27.0**	**+1.9**
KIV	**Kislovodsk**	**3.09**	**309**	*e*Pn			**Pn**	**01 51 57.3**	**+2.8**
KIV				*e*Sn			**Sn**	**01 52 32.9**	**+1.2**

*IDC **20** 02:02:07.8±1.3,39°.36N×73°.47E, h0km,mb3.6/5,*
mbtmp3.5/11,ML3.0/6,Error ellipse: s-maj=21.6km
s-min=17.4km az=126.0
*SOME **20** 02:02:08.3,39°.63N×73°.60E, h5km*
*KRNET **20** 02:02:09.0±0.1,39°.50N×73°.56E, mb3.9*
*NNC **20** 02:02:15.7±0.8,39°.82N×73°.53E, h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=7.1km s-min=4.8km az=162.0
ISC 20 02:02:09.0±0.7,39°.63N±0'.04×73°.58E±0'.03,h10km,n72,
σ1§70/98,mb3.6/6,20C-19D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**326**	⇓*e*P		**Pn**	**02 02 31.5**	**+1.1**
OHH	baz=30			⇓*e*S		**Sn**	**02 02 48.1**	**+2.6**
DRK	**Karamyk**	**1.39**	**265**	⇑*e*P		**Pb**	**02 02 34.9**	**-0.3**
DRK	baz=70			⇑*e*S		**Sg**	**02 02 53.8**	**+0.2**
BTK	**Batken**	**2.17**	**282**	⇓*e*P		**Pb**	**02 02 48.7**	**+0.3**
BTK	baz=86			⇓*e*S		**Sg**	**02 03 17.5**	**-1.3**
ARLS	**Aral**	**2.30**	**14**	⇑*e*P		**Pg**	**02 02 52.0**	**-1.2**
ARLS	baz=14			⇑*e*S		**Sg**	**02 03 23.4**	**+0.4**
AML	**Almayashu**	**2.50**	**2**	P		**Pb**	**02 02 55.3**	**+1.0**
GAR	SNR=68 **Garm**	**2.61**	**257**	⇓*e*P		**Pb**	**02 02 53.9**	**-2.0**
GAR	baz=60			⇓*e*S		**Sb**	**02 03 26.7**	**-1.4**
TRKS	**Terek-Say**	**2.66**	**316**	⇑*e*P		**Pb**	**02 02 55.6**	**-1.2**
TRKS	baz=18			⇑*e*S		**Sb**	**02 03 29.3**	**-0.3**
UCH	**Uchtor**	**2.69**	**15**	P		**Pb**	**02 02 58.4**	**+0.8**
UCH	SNR=24 **Uchtor**	**2.69**	**15**	⇑*i*P		**Pb**	**02 02 57.8**	**+0.2**
UCH	baz=15			⇑*i*S		**Sb**	**02 03 33.1**	**+2.3**
EKS2	**Erkin-Say**	**3.04**	**3**	P		**Pb**	**02 03 03.2**	**0.0**
EKS2	SNR=26 **Erkin-Say**	**3.04**	**3**	⇑*e*P		**Pb**	**02 03 02.2**	**-1.0**
EKS2	baz=3.0			⇑*e*S		**Sb**	**02 03 41.0**	**+0.6**
AAK	**Ala-Archa**	**3.09**	**13**	P		**Pb**	**02 03 04.1**	**0.0**
AAK	SNR=10 **Ala-Archa**	**3.09**	**13**	Pn		**Pb**	**02 03 04.4**	**+0.3**
AAK	3.2nm,0.3s,baz=175,slow=7.2,SNR=24			Sn		**Sg**	**02 03 46.7**	**-1.4**
	2.8nm,0.3s,baz=105,slow=20,SNR=2.0 5.8nm,0.3s							
AAK	**Ala-Archa**	**3.09**	**13**	⇑*e*P		**Pb**	**02 03 03.0**	**-1.1**
AAK	baz=12			⇑*e*S		**Sb**	**02 03 42.3**	**+0.4**
MRKS	**Merke**	**3.13**	**355**	Pg		**Pg**	**02 03 08.5**	**-0.5**
MRKS	30nm,0.4s 190nm,0.4s			Lg		Lg	02 03 48.1	
KBK	**Karagaybulak**	**3.20**	**18**	P		**Pb**	**02 03 06.3**	**+0.3**
KBK	SNR=12 **Karagaybulak**	**3.20**	**18**	⇓*e*P		**Pb**	**02 03 04.6**	**-1.4**
KBK	baz=18			⇓*e*S		**Sb**	**02 03 45.0**	**-0.1**
	baz=18							
ULHL	**Ulahol**	**3.30**	**37**	⇓*e*P		**Pb**	**02 03 05.6**	**-2.2**
ULHL	baz=36			⇓*e*S		**Sb**	**02 03 47.3**	**-0.8**
BOOM	**Boomskoye usch**	**3.37**	**31**	⇓*e*P		**Pb**	**02 03 06.7**	**-2.3**
BOOM	baz=30			⇓*e*S		**Sb**	**02 03 49.1**	**-1.0**
CHMS	**Chumysh**	**3.48**	**14**	P		**Pb**	**02 03 09.9**	**-0.8**
CHMS	SNR=5.6 **Chumysh**	**3.48**	**14**	⇑Pn		**Pb**	**02 03 09.1**	**-1.6**
CHMS	5.2nm,0.4s 53nm,0.6s			⇓Lg		Lg	02 04 01.8	
CHGR	**Chuyangaron**	**3.57**	**256**	⇑*e*P		**Pn**	**02 03 06.8**	**+2.2**
CHGR	baz=58			⇑*e*S		**Sn**	**02 03 49.5**	**+2.6**
TKM2	**Tokmak 2**	**3.62**	**24**	P		**Pb**	**02 03 10.8**	**-2.5**
TKM2	SNR=7.8 **Tokmak 2**	**3.62**	**24**	⇑Pn		**Pb**	**02 03 11.2**	**-2.1**
TKM2	5.7nm,0.6s 20nm,0.5s			⇑Lg		Lg	02 04 06.0	
TAS	**Tashkent**	**3.68**	**299**	⇓*e*P		**Pb**	**02 03 10.1**	**-4.1**
TAS	baz=1.0			⇓*e*S		**Sb**	**02 03 54.6**	**-4.3**
USP	**Ospenovka**	**3.70**	**10**	P		**Pb**	**02 03 15.3**	**+0.7**
KST	SNR=5.3 **Kastek**	**3.86**	**27**	*e*P		**Pg**	**02 03 21.1**	**-1.7**
KST	13nm,0.3s 69nm,0.8s			*e*S		**Sg**	**02 04 13.6**	**+0.8**
KST	**Kastek**	**3.86**	**27**	Pg		**Pg**	**02 03 23.4**	**+0.5**
KST	13nm,0.3s 52nm,0.6s			Lg		Lg	02 04 12.9	
SGDS	**Sogindy**	**3.90**	**11**	*e*P		**Pg**	**02 03 22.2**	**-1.6**
SGDS	4.7nm,0.6s 30nm,0.9s			*e*S		**Sg**	**02 04 15.2**	**+0.8**
DGS	**Degeres**	**3.97**	**24**	*e*P		**Pg**	**02 03 23.1**	**-1.9**
DGS	19nm,0.5s 52nm,0.6s			*e*S		**Sg**	**02 04 17.4**	**+0.9**
DGS	**Degeres**	**3.97**	**24**	Pg		**Pg**	**02 03 26.6**	**+1.6**
DGS	19nm,0.5s 52nm,0.6s			Lg		Lg	02 04 18.9	
IZV	**Izvestkoviy**	**4.10**	**33**	*e*P		**Pg**	**02 03 26.2**	**-1.3**
IZV	7.5nm,0.3s 86nm,0.8s			*e*S		**Sg**	**02 04 22.1**	**+1.4**
IZV	**Izvestkoviy**	**4.10**	**33**	Pg		**Pg**	**02 03 28.5**	**+0.9**
IZV	7.5nm,0.3s 86nm,0.8s			Lg		Lg	02 04 21.9	
MTBS	**Maitube**	**4.10**	**31**	*e*P		**Pg**	**02 03 24.8**	**-2.8**
MTBS	11nm,0.4s 15nm,0.4s			*e*S		**Sg**	**02 04 19.8**	**-1.0**
MTBS	**Maitube**	**4.10**	**31**	Pg		**Pg**	**02 03 26.8**	**-0.8**
MTBS	11nm,0.4s 15nm,0.4s			Lg		Lg	02 04 20.2	
KK31	**Karatay Array**	**4.17**	**327**	Pn		Pb	02 03 17.9	-4.6
KK31	3.2nm,0.4s,baz=134,slow=11,SNR=65 15nm,0.8s,baz=149,slow=12,SNR=14			⇓Pg		**Pg**	**02 03 26.6**	**-2.3**
KK31				⇓Lg		Lg	02 04 24.7	
TNSS	**Tian-Shan**	**4.25**	**36**	*e*P		**Pg**	**02 03 29.0**	**-1.4**
TNSS	11nm,0.5s,baz=144,slow=29,SNR=4.9 16nm,0.6s 23nm,0.7s			*e*S		**Sg**	**02 04 27.2**	**+1.8**
TNSS	**Tian-Shan**	**4.25**	**36**	Pg		**Pg**	**02 03 31.4**	**+1.0**
TNSS	16nm,0.6s 23nm,0.7s			Lg		Lg	02 04 26.6	
KRBS	**Karabastau**	**4.36**	**20**	*e*P		**Pg**	**02 03 30.9**	**-1.6**
KRBS	11nm,0.4s 23nm,0.6s			*e*S		**Sg**	**02 04 30.5**	**+1.6**
KRBS	**Karabastau**	**4.36**	**20**	Pg		**Pg**	**02 03 33.6**	**+1.1**
KRBS	11nm,0.4s 23nm,0.6s			Lg		Lg	02 04 30.5	
MDOK	**Medeo**	**4.39**	**35**	*e*P		**Pg**	**02 03 30.3**	**-2.8**
MDOK	8.1nm,0.6s 29nm,0.8s			*e*S		**Sg**	**02 04 29.5**	**-0.5**
MDOK	**Medeo**	**4.39**	**35**	Pn		**Pb**	**02 03 22.7**	**-3.7**
MDOK	9.8nm,0.6s 8.1nm,0.6s			Pg		**Pg**	**02 03 33.9**	**+0.7**
MDOK				Lg		Lg	02 04 30.3	
MDOK	71nm,1.2s 29nm,0.8s			Lg		Lg	02 04 30.9	
KOTS	**Kotyrbulak**	**4.48**	**35**	*e*P		**Pg**	**02 03 32.0**	**-2.7**
KOTS	15nm,0.5s 101nm,0.6s			*e*S		**Sg**	**02 04 32.4**	**-0.3**
KOTS	**Kotyrbulak**	**4.48**	**35**	Pg		**Pg**	**02 03 35.2**	**+0.5**
KOTS	15nm,0.5s 101nm,0.6s			Lg		Lg	02 04 33.4	
KUU	**Kurty**	**4.74**	**25**	*e*P		**Pg**	**02 03 37.0**	**-2.7**
KUU	6.2nm,0.6s 48nm,0.7s			*e*S		**Sg**	**02 04 40.8**	**-0.2**
KUU	**Kurty**	**4.74**	**25**	Pg		**Pg**	**02 03 39.4**	**-0.3**
KUU	6.2nm,0.6s 48nm,0.7s			Lg		Lg	02 04 40.3	
CHKK	**Chushkaly**	**4.93**	**30**	*e*P		**Pg**	**02 03 41.1**	**-2.4**
CHKK	1.4nm,0.1s 24nm,0.5s			*e*S		**Sg**	**02 04 47.6**	**+0.2**
CHKK	**Chushkaly**	**4.93**	**30**	Pg		**Pg**	**02 03 43.3**	**-0.2**
CHKK	1.4nm,0.1s 24nm,0.5s			Lg		Lg	02 04 47.5	
UZB	**Uzynbulak**	**5.40**	**48**	*e*P		**Pg**	**02 03 48.3**	**-4.0**
UZB	4.8nm,0.6s 9.5nm,0.8s			*e*S		**Sg**	**02 05 00.4**	**-1.8**
UZB	**Uzynbulak**	**5.40**	**48**	Pg		**Pg**	**02 03 51.6**	**-0.8**
UZB	4.8nm,0.6s 9.5nm,0.8s			Lg		Lg	02 05 01.2	
KPKS	**Kokpek**	**5.42**	**43**	*e*P		**Pg**	**02 03 49.5**	**-3.2**
KPKS	6.7nm,0.4s 21nm,0.7s			*e*S		**Sg**	**02 05 02.1**	**-0.8**
KPKS	**Kokpek**	**5.42**	**43**	Pg		**Pg**	**02 03 52.2**	**-0.6**
KPKS	6.7nm,0.4s 21nm,0.7s			Lg		Lg	02 05 02.5	
BTLS	**Baital**	**5.42**	**3**	*e*P		**Pg**	**02 03 49.7**	**-3.2**
BTLS	3.1nm,0.4s 7.5nm,0.3s			*e*S		**Sg**	**02 05 02.8**	**-0.2**
BTLS	**Baital**	**5.42**	**3**	Pg		**Pg**	**02 03 52.1**	**-0.7**
BTLS	3.1nm,0.4s 7.5nm,0.3s			Lg		Lg	02 05 03.3	
ARXS	**Arharly**	**5.57**	**33**	*e*P		Pg	02 03 50.8	-4.8
ARXS	9.5nm,0.7s 15nm,0.5s			*e*S		**Sg**	**02 05 04.7**	**-3.1**
ARXS	**Arharly**	**5.57**	**33**	Pg		**Pg**	**02 03 54.0**	**-1.6**
ARXS	9.5nm,0.7s 15nm,0.5s			Lg		Lg	02 05 05.9	
PDGK	**Podgornoye**	**5.78**	**48**	⇑Pg		**Pg**	**02 03 58.1**	**-1.5**
PDGK	5.5nm,0.6s 21nm,0.9s			⇓Lg		Lg	02 05 14.9	
OTUK	**Ortayu**	**8.66**	**354**	⇑Lg		Lg	02 06 45.8	
MKAR	5.8nm,0.7s **Makanchi Array**	**9.57**	**39**	Pn		Pn	02 04 33.5	+6.6
	baz=238,slow=14,SNR=1.7 0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**11.54**	**16**	⇓Lg		Lg	02 08 16.6	
KURK	11nm,0.8s **Kurchatov**	**11.64**	**16**	⇑Lg		Lg	02 08 20.7	
	13nm,1.4s							
BVAR	**Borovoye Array**	**13.58**	**352**	Pn		**Pn**	**02 05 23.0**	**+1.4**
	0.1nm,0.3s,baz=167,slow=13,SNR=5.2 0.6nm,0.7s							
AKTO	**Aktyubinsk**	**15.39**	**320**	Pn		**Pn**	**02 05 47.5**	**+1.4**
	0.1nm,0.3s,baz=122,slow=15,SNR=5.6 1.2nm,0.7s							
ZALV	**Zalesovo Beam**	**16.23**	**24**	Pn		**P**	**02 06 01.3**	**+1.2**
	0.1nm,0.3s,baz=208,slow=15,SNR=1.6 0.6nm,0.5s							
ARU	**Arti**	**19.51**	**334**	P		**Pn**	**02 06 37.2**	**-0.2**
	baz=96,slow=19,SNR=1.6 1.9nm,0.3s							
SONM	**Songino Array**	**24.94**	**60**	P		**P**	**02 07 35.5**	**+3.0**
	0.3nm,0.7s,baz=278,slow=10.0,SNR=2.0 0.3nm,0.7s							
FINES	**FINESS Array B**	**36.12**	**323**	P		**P**	**02 09 12.4**	**+1.6**
	2.4nm,0.9s,baz=114,slow=10.0,SNR=10 2.4nm,0.9s							
ARCES	**ARCESS Array B**	**39.09**	**335**	P		**P**	**02 09 37.7**	**+1.8**
	1.1nm,0.6s,baz=107,slow=8.6,SNR=5.9 1.1nm,0.6s							
NB2	**NORSAR Subarra**	**43.18**	**321**	P		**P**	**02 10 10.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.18**	**321**	P		**P**	**02 10 11.0**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=91,slow=7.9,SNR=2.3							
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**02 13 07.5**	**0.0**
	comp=Z,0.3nm,0.6s,baz=51,slow=6.7,SNR=4.6 comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**81.98**	**124**	P		**P**	**02 14 28.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=329,slow=4.8,SNR=2.1 comp=Z,0.3nm,0.6s							

IDC 20 02:03:25.7±5.8,5°.21S×133°.71E,h0km,mb3.5/1,
mbtmp3.6/3,ML3.4/2,Error ellipse: s-maj=329.0km
s-min=33.4km az=78.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.66**	**178**	Pn		Pn	02 06 53.0	-1.6
WRA	0.1nm,0.3s,baz=355,slow=13,SNR=7.9 0.1nm,0.3s,baz=354,slow=24,SNR=2.6			Sn		Sn	02 09 24.5	-13
WRA	baz=358,slow=26 0.3nm,0.4s			Lg		Lg	02 11 04.8	
ASAR	**Alice Springs**	**18.36**	**179**	P		P	02 07 42.5	+0.5
ASAR	0.3nm,0.3s,baz=4.7,slow=11,SNR=28 0.3nm,0.3s,baz=359,slow=29,SNR=2.6 4.0nm,0.8s			S		Sn	02 10 56.3	-11
MKAR	**Makanchi Array**	**68.83**	**325**	P		P	02 14 32.0	0.0
	0.2nm,0.4s,baz=119,slow=7.0,SNR=2.1 0.2nm,0.4s							

*UCR **20** 02:13:10.1±2.1,8°.26N×82°.81W,h13km±21km,MW4.1*
*UPA **20** 02:13:11.3±1.6,8°.34N×82°.78W,h6km±4km,MW3.7*
ISC 20 02:13:10.5±1.1,8°.30N±0'.05×82°.82W±0'.03,h13km,n30,
σ0§81/48,2C-11D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.18**	**306**	⇑*i*P		**Pg**	**02 13 15.4**	**+0.7**
CCOL				*e*S		**Sb**	**02 13 20.6**	**+1.3**
CDITO	**Canoas**	**0.28**	**350**	⇓*e*P		**Pg**	**02 13 16.7**	**+0.3**
CDITO				*e*S		**Sb**	**02 13 22.2**	**+0.2**
CDITO	**Canoas**	**0.28**	**350**	⇓*i*P		**Pg**	**02 13 16.7**	**+0.3**
CDITO				*i* S		**Sg**	**02 13 21.7**	**+1.4**
DVD	**David**	**0.39**	**69**	*e*P		**Pg**	**02 13 18.3**	**-0.1**
DVD				*i* S		**Sb**	**02 13 24.8**	**-0.5**
CHIR3	**Chiriqui UPA,**	**0.50**	**79**	⇑*e*P		**Pb**	**02 13 21.0**	**-0.1**
CHIR3				*i* S		**Sb**	**02 13 28.3**	**0.0**
PTAR3	**Potrerillos Ar**	**0.51**	**39**	⇓*i*P		**Pg**	**02 13 20.5**	**-0.1**
PTAR3				*i* S		**Sb**	**02 13 28.8**	**+0.1**
BCO2	**Palmira**	**0.51**	**35**	⇓*i*P		**Pg**	**02 13 20.6**	**0.0**
BCO2				*i* S		**Sb**	**02 13 28.9**	**0.0**
BRU2	**Volcan**	**0.51**	**15**	*i* P		**Pg**	**02 13 20.4**	**-0.2**
BRU2				*e*S		**Sb**	**02 13 29.2**	**+0.3**
BRU2	**Volcan**	**0.51**	**15**	⇓*i*P		**Pg**	**02 13 20.6**	**0.0**
BRU2				*i* S		**Sb**	**02 13 29.1**	**+0.3**
PIRO	**Carate, Puerto**	**0.52**	**282**	*e*P		**Pg**	**02 13 19.9**	**-0.8**
EDSV	**San Vito**	**0.54**	**344**	⇓*i*P		**Pg**	**02 13 21.2**	**0.0**
EDSV				*e*S		**Sb**	**02 13 30.8**	**+1.1**
BC3P	**Paso Ancho**	**0.56**	**22**	⇓*i*P		**Pg**	**02 13 21.1**	**-0.4**
BC3P				*i* S		**Sb**	**02 13 30.0**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.62**	**38**	⇓*i*P		**Pg**	**02 13 21.8**	**-0.8**
LNBQ3				*e*S		**Sg**	**02 13 30.9**	**0.0**
POTG	**Potrero Grande**	**0.81**	**339**	⇓*e*P		**Pg**	**02 13 25.3**	**-0.9**
POTG				*e*S		**Sg**	**02 13 37.3**	**+0.5**
REME3	**Remedios, Chir**	**0.98**	**94**	*e*P		**Pg**	**02 13 29.8**	**+0.3**
REME3				*e*S		**Sb**	**02 13 42.1**	**-0.2**
SRBA	**San Rafael, Bu**	**1.07**	**330**	⇓*e*P		**Pb**	**02 13 29.1**	**-1.9**
SRBA				*e*S		**Sb**	**02 13 43.5**	**-1.4**
PEZE	**Perez Zeledon,**	**1.37**	**322**	*e*P		**Pn**	**02 13 35.1**	**-0.4**
EDDO	**Dominical**	**1.40**	**313**	*e*P		**Pn**	**02 13 35.2**	**-0.6**
CDM	**Cerro de Muert**	**1.56**	**323**	*e*P		**Pn**	**02 13 37.0**	**-1.4**
MRVA	**Moravia de Chi**	**1.64**	**338**	*e*P		**Pn**	**02 13 37.8**	**-1.4**
RIMA	**Rio Macho**	**1.79**	**325**	*e*P		**Pn**	**02 13 40.4**	**-0.9**
LCR2	**La Lucha 2**	**1.85**	**321**	*e*P		**Pn**	**02 13 42.0**	**-0.2**
BATAN	**Batan**	**1.87**	**343**	*e*P		**Pn**	**02 13 43.1**	**+0.8**
BATAN				*e*S		**Sn**	**02 14 06.4**	**+0.6**
HAYA	**Volcan Irazu**	**1.95**	**329**	*e*P		**Pn**	**02 13 44.8**	**+1.1**
HDC3	**Heredia 3**	**2.12**	**323**	*e*P		**Pn**	**02 13 46.7**	**+0.9**
HDC	**Heredia**	**2.12**	**323**	⇓*i*P		**Pn**	**02 13 46.9**	**+1.1**
HDC				*i* S		**Sb**	**02 14 15.2**	**0.0**
FORC	**Fortuna**	**2.82**	**320**	*e*P		**Pn**	**02 13 56.6**	**+1.2**
JTS	**Las Juntas de**	**2.89**	**313**	*e*P		**Pn**	**02 13 55.6**	**-0.7**
JTS	**Las Juntas de**	**2.89**	**313**	*e*P		**Pn**	**02 13 57.8**	**+1.4**
JTS				*e*S		**Sn**	**02 14 31.7**	**+0.8**
CUI	**Cuipilapa**	**3.29**	**316**	*e*P		**Pn**	**02 14 03.0**	**+1.1**

*IDC **20** 02:32:08.8±1.4,39°.39N×73°.31E, h0km,mb3.6/5,*
mbtmp3.4/11,ML2.8/6,MS3.7/1,Error ellipse:
s-maj=22.8km s-min=17.5km az=121.0
*KRNET **20** 02:32:08.3±0.1,39°.37N×73°.54E, mb4.0*
*SOME **20** 02:32:08.0,39°.48N×73°.65E, h10km*
*NNC **20** 02:32:13.8±1.5,39°.61N×73°.85E, h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=12.4km s-min=6.8km az=169.0
**ISC 20 02:

EKS2	Erkin-Say	3.32	5	⇑iP		Pn	02 33 03.5 +1.5
	baz=3.0						
EKS2				⇑eS		Sn	02 33 43.6 +2.0
	baz=3.0						
CHGR	Chuyangaron	3.38	260	⇑eP		Pb	02 33 06.0 -3.8
	baz=60						
CHGR				⇑eS		Sb	02 33 48.3 -2.7
	baz=60						
AAK	Ala-Archa	3.39	14	P		Pn	02 33 04.9 +2.0
	SNR=9.2						
AAK	Ala-Archa	3.39	14	Pn		Pn	02 33 05.6 +2.7
	2.8nm,0.3s,baz=190,slow=8.5,SNR=25						
AAK				Sn		Sb	02 33 48.6 -2.7
	2.7nm,0.3s,baz=60,slow=20,SNR=1.9						
	6.1nm,0.3s						
AAK	Ala-Archa	3.39	14	⇑eP		Pn	02 33 04.0 +1.1
	baz=12						
AAK				⇑eS		Sn	02 33 44.8 +1.6
	baz=12						
MRKS	Merke	3.40	358	Pg		Pb	02 33 06.4 -3.7
	12nm,0.4s						
MRKS				Lg		Lg	02 33 49.5
	196nm,0.6s						
KBK	Karagaybulak	3.51	19	P		Pb	02 33 10.3 -1.7
	SNR=13						
KBK	Karagaybulak	3.51	19	⇓eP		Pn	02 33 05.5 +1.0
	baz=18						
KBK				⇓eS		Sn	02 33 47.5 +1.3
	baz=18						
ULHL	Ulahol	3.61	36	P		Pb	02 33 13.0 -0.9
	SNR=9.4						
ULHL	Ulahol	3.61	36	⇓eP		Pn	02 33 06.7 +0.7
	baz=35						
ULHL				⇓eS		Sn	02 33 49.3 +0.5
	baz=35						
BOOM	Boomskoye usch	3.68	31	⇓eP		Pn	02 33 08.0 +1.1
	baz=29						
BOOM				⇓eS		Sn	02 33 51.3 +0.8
	baz=29						
TAS	Tashkent	3.71	303	⇑eP		Pn	02 33 10.1 +3.0
	baz=3.0						
TAS				⇑eS		Sn	02 33 55.5 +4.6
	baz=3.0						
CHMS	Chumysh	3.79	15	⇑Pn		Pn	02 33 10.6 +2.4
	7.9nm,0.4s						
CHMS				⇓Lg		Lg	02 34 04.5
	119nm,1.1s						
IUG	Iuzhnay	3.79	319	eP		Pb	02 33 16.0 -0.9
	190nm,0.8s						
IUG				eS		Sb	02 34 05.7 +2.8
	66nm,0.6s						
TKM2	Tokmak 2	3.94	24	P		Pn	02 33 13.3 +2.8
	SNR=7.5						
TKM2	Tokmak 2	3.94	24	⇑eP		Pn	02 33 11.7 +1.2
	baz=23						
TKM2				⇑eS		Sn	02 33 57.6 +0.8
	baz=23						
TKM2	Tokmak 2	3.94	24	⇓Pn		Pn	02 33 12.3 +1.9
	7.5nm,0.7s						
TKM2				⇓Lg		Lg	02 34 07.8
	30nm,0.6s						
USP	Ospenovka	4.00	12	P		Pb	02 33 21.9 +1.4
	SNR=8.5						
USP	Ospenovka	4.00	12	⇑eP		Pn	02 33 12.8 +1.6
	baz=10.0						
USP				⇑iS		Sn	02 33 59.7 +1.5
	baz=10.0						
KST	Kastek	4.17	27	eP		Pb	02 33 22.3 -1.0
	9.3nm,0.4s						
KST				eS		Sb	02 34 16.1 +2.3
	70nm,0.8s						
KST	Kastek	4.17	27	Pg		Pb	02 33 21.4 -1.9
	9.3nm,0.4s						
KST				Lg		Lg	02 34 15.0
	70nm,0.8s						
DGS	Degeres	4.28	24	eP		Pb	02 33 26.2 +1.0
	21nm,0.6s						
DGS				eS		Sg	02 34 22.5 -4.7
	46nm,0.8s						
DGS	Degeres	4.28	24	Pg		Pb	02 33 25.7 +0.5
	21nm,0.6s						
DGS				Lg		Lg	02 34 23.6
	46nm,0.8s						
KK31	Karatay Array	4.34	331	⇑Pn		Pn	02 33 18.9 +3.1
	2.2nm,0.4s,baz=133,slow=12,SNR=121						
KK31				⇑Pg		Pg	02 33 31.9 -1.0
	12nm,0.6s,baz=144,slow=16,SNR=29						
KK31				⇓Sn		Sb	02 34 13.6 -4.9
	12nm,0.6s,baz=141,slow=26						
KK31				⇑Lg		Lg	02 34 29.5
	9.4nm,0.4s,baz=140,slow=31,SNR=4.1						
KKAR	Karatay Array	4.34	331	⇑eP		Pn	02 33 18.4 +2.6
	baz=30						
KKAR				⇑eS		Sn	02 34 09.6 +3.2
	baz=30						
IZV	Izvestkoviy	4.41	32	eP		Pb	02 33 26.3 -1.1
	8.8nm,0.6s						
IZV				eS		Sb	02 34 23.9 +3.1
	80nm,0.9s						
IZV	Izvestkoviy	4.41	32	Pg		Pb	02 33 27.1 -0.3
	8.8nm,0.6s						
IZV				Lg		Lg	02 34 24.9
	80nm,0.9s						
MTBS	Maitube	4.41	30	eP		Pb	02 33 26.3 -1.2
	12nm,0.5s						
MTBS				eS		Sb	02 34 23.0 +2.2
	23nm,0.5s						
MTBS	Maitube	4.41	30	Pg		Pb	02 33 25.1 -2.3
	12nm,0.5s						
MTBS				Lg		Lg	02 34 21.5
	23nm,0.5s						
TNSS	Tian-Shan	4.55	35	eP		Pb	02 33 29.5 -0.6
	17nm,0.5s						
TNSS				eS		Sb	02 34 28.4 +3.3
	17nm,0.8s						
TNSS	Tian-Shan	4.55	35	Pg		Pb	02 33 29.1 -0.9
	17nm,0.5s						
TNSS				Lg		Lg	02 34 27.9
	17nm,0.8s						
KRBS	Karabastau	4.67	21	eP		Pb	02 33 31.3 -0.4
	8.4nm,0.4s						
KRBS				eS		Sb	02 34 31.1 +3.1
	28nm,0.7s						
KRBS	Karabastau	4.67	21	Pg		Pb	02 33 31.1 -0.6
	8.4nm,0.4s						
KRBS				Lg		Lg	02 34 31.8
	28nm,0.7s						
MDOK	Medeo	4.70	35	eP		Pb	02 33 30.9 -1.5
	16nm,0.6s						
MDOK				eS		Sb	02 34 31.2 +2.2
	37nm,0.9s						
MDOK	Medeo	4.70	35	Pg		Pb	02 33 30.9 -1.5
	16nm,0.6s						
MDOK				⇑Pg		Pg	02 33 31.5 -8.3
	19nm,0.8s						
MDOK				Lg		Lg	02 34 31.4
	37nm,0.9s						
MDOK				Lg		Lg	02 34 32.0
	68nm,1.1s						
KOTS	Kotyrbulak	4.78	35	eP		Pb	02 33 33.2 -0.6
	18nm,0.4s						
KOTS				eS		Sb	02 34 34.1 +2.6
	84nm,0.6s						
KOTS	Kotyrbulak	4.78	35	Pg		Pb	02 33 31.9 -1.9
	18nm,0.4s						
KOTS				Lg		Lg	02 34 33.1
	84nm,0.6s						
KUU	Kurty	5.05	25	eP		Pb	02 33 37.7 -0.5
	8.3nm,0.6s						
KUU				eS		Sb	02 34 42.3 +3.4
	1μm,0.7s						
KUU	Kurty	5.05	25	Pg		Pb	02 33 37.2 -1.0
	8.3nm,0.6s						
KUU				Lg		Lg	02 34 42.1
	1μm,0.7s						
CHKK	Chushkaly	5.24	30	eP		Pb	02 33 41.3 -0.3
	4.7nm,0.3s						
CHKK				eS		Sb	02 34 48.4 +3.8
	36nm,0.5s						
CHKK	Chushkaly	5.24	30	Pg		Pb	02 33 40.4 -1.1
	2.1nm,0.1s						
CHKK				Lg		Lg	02 34 48.1
	36nm,0.5s						
SATY	Saty	5.29	44	eP		Pb	02 33 41.4 -1.0
	7.3nm,0.9s						
SATY				eS		Sb	02 34 48.5 +2.5
	43nm,1.1s						
SATY	Saty	5.29	44	Pg		Pb	02 33 41.9 -0.5
	7.3nm,0.9s						
SATY				Lg		Lg	02 34 50.2
	43nm,1.1s						
KURS	Kuram	5.47	39	eP		Pb	02 33 46.4 +0.9
	8.3nm,0.8s						
KURS				eS		Sb	02 34 56.0 +4.8
	18nm,1.0s						
KURS	Kuram	5.47	39	Pg		Pb	02 33 45.4 -0.1
	8.3nm,0.8s						
KURS				Lg		Lg	02 34 56.3
	18nm,1.0s						
UZB	Uzynbulak	5.69	46	eP		Pb	02 33 49.3 +0.1
	3.5nm,0.4s						
UZB				eS		Sb	02 35 01.7 +4.3
	18nm,0.8s						
UZB	Uzynbulak	5.69	46	Pg		Pb	02 33 50.7 +1.5
	3.5nm,0.4s						
UZB				Lg		Lg	02 35 04.8
	18nm,0.8s						
BTLS	Baital	5.71	5	eP		Pb	02 33 50.5 +1.0
	6.3nm,0.6s						
BTLS				eS		Sb	02 35 04.3 +6.3
	12nm,0.6s						
BTLS	Baital	5.71	5	Pg		Pb	02 33 50.1 +0.6
	6.3nm,0.6s						
BTLS				Lg		Lg	02 35 04.4
	12nm,0.6s						
KPKS	Kokpek	5.72	42	eP		Pb	02 33 50.0 +0.4
	12nm,0.5s						
KPKS				eS		Sb	02 35 03.2 +4.9
	18nm,0.6s						
KPKS	Kokpek	5.72	42	Pg		Pb	02 33 49.7 0.0
	12nm,0.5s						
KPKS				Lg		Lg	02 35 03.6
	18nm,0.6s						
ARXS	Arharly	5.88	33	eP		Pb	02 33 50.5 -1.9
	7.9nm,0.5s						
ARXS				eS		Sb	02 35 04.1 +1.2
	14nm,0.5s						
ARXS	Arharly	5.88	33	Pg		Pb	02 33 52.1 -0.3
	7.9nm,0.5s						
ARXS				Lg		Lg	02 35 07.8
	14nm,0.5s						
SHLS	Shalkode	5.94	48	eP		Pg	02 33 59.8 -3.8
	7.7nm,0.8s						
SHLS				eS		Sg	02 35 20.1 -0.4
	14nm,0.8s						
SHLS	Shalkode	5.94	48	Pg		Pg	02 33 60.0 -3.7
	7.7nm,0.8s						
SHLS				Lg		Lg	02 35 20.6
	14nm,0.8s						
PDGK	Podgornoye	6.07	47	⇑Pg		Pb	02 33 55.5 -0.1
	4.7nm,0.6s						
PDGK				⇑Lg		Lg	02 35 13.0
	38nm,1.1s						
KTMS	Ketmen	6.64	50	Pg		Pg	02 34 10.5 -6.4
	2.2nm,0.6s						
TDK	Taldyqorghan	6.76	32	Pg		Pb	02 34 10.7 +3.3
	47nm,0.4s						
TDK				Lg		Lg	02 35 39.2
	56nm,0.8s						
OTUK	Ortayu	8.93	355	⇑Pn		Pn	02 34 19.3 +0.5
	1.9nm,0.8s						
OTUK				⇓Lg		Lg	02 36 48.5
	20nm,1.1s						
MKAR	Makanchi Array	9.88	38	Pn		Pn	02 34 34.6 +2.8
	baz=228,slow=16,SNR=1.6						
MKAR				Lg		Lg	02 37 13.4
	baz=228,slow=25,SNR=2.0						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	11.84	16	Pn		Pn	02 34 58.0 -0.6
	baz=208,slow=14,SNR=2.3						
KURBB				Lg		Lg	02 38 16.7
	baz=204,slow=33,SNR=11						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	11.84	16	⇑Lg		Lg	02 38 16.5
	17nm,1.1s						
KURK	Kurchatov	11.95	16	⇑Lg		Lg	02 38 19.0
	16nm,1.3s						
BVAR	Borovoye Array	13.84	352	Pn		Pn	02 35 23.9 -1.9
	0.1nm,0.3s,baz=168,slow=16,SNR=7.6						
BVAR				Lg		Lg	02 39 22.5
	0.1nm,0.3s,baz=152,slow=28,SNR=3.1						
	1.2nm,0.8s						
AKTO	Aktyubinsk	15.51	321	Pn		Pn	02 35 43.7 -4.8
	0.1nm,0.3s,baz=143,slow=15,SNR=1.4						
AKTO				Sn		Sn	02 38 38.4 -1.9
	0.1nm,0.3s,baz=180,slow=20,SNR=2.4						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	16.54	24	Pn		Pn	02 36 01.1 -0.6
	0.2nm,0.3s,baz=211,slow=8.2,SNR=2.0						
	0.5nm,0.5s						
SONM	Songino Array	25.20	59	P		P	02 37 35.4 -0.2
	0.3nm,0.4s,baz=273,slow=10.0,SNR=2.8						
	0.3nm,0.4s						
ASF	Jabal al Asfar	30.32	268	LR		LR	02 53 50.3
	comp=Z,132nm,19.7s,baz=110,slow=43						
FINES	FINESS Array B	36.26	323	P		P	02 39 13.4 +0.6
	1.1nm,0.8s,baz=105,slow=9.1,SNR=3.8						
	1.1nm,0.8s						
ARCES	ARCESS Array B	39.29	336	P		P	02 39 37.8 -0.6
	0.9nm,0.7s,baz=102,slow=8.4,SNR=5.0						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	67.68	269	P		P	02 43 08.2 +0.8
	0.5nm,0.8s,baz=44,slow=5.6,SNR=2.8						
	0.5nm,0.8s						
WRA	Warramunga Arr	81.94	124	P		P	02 44 30.7 +0.9
	0.2nm,0.8s,baz=322,slow=4.0,SNR=1.3						
	0.2nm,0.8s						

*IDC **20** 02:46:03.8±1.3, 5.°38N×126.°22E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=160.1km s-min=19.2km az=68.0*
*NEIC **20** 02:46:05.0±2.1, 5.°89N±0.°04×126.°4E±0.°1, h20km±9km, mb4.2/6, Error ellipse: s-maj=20.7km s-min=6.2km az=85.0.*
*MAN **20** 02:46:10.9, 4.°83N×126.°34E, h68km, mb4.0, ML2.7, MS2.3*
ISC 20 02:46:15.1±1.1, 5.°07N±0.°06×126.°18E±0.°08, h87km±10km, n27, σ2s71/31, mb4.1/11, 5C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.13	336	⇓eP		Pn	02 46 34.8 -1.3
DDMP				eS		Sn	02 46 49.8 -2.1
GSPH	General Santos	1.59	310	⇑iP		Pn	02 46 40.5 -1.4
GSPH				i S		Sn	02 47 00.6 -1.7
MATI	Mati	1.87	2	⇓eP		Pn	02 46 44.0 -1.4
MATI				eS		Sn	02 47 09.6 +1.0
SKMP	Bagumbayan, Su	2.17	312	⇓eP		Pn	02 46 49.8 +0.3
SKMP				eS		Sn	02 47 17.6 +1.8
KCP	Kidapawan	2.21	331	⇑iP		Pn	02 46 50.1 +0.1
KCP				i S		Sn	02 47 19.8 +3.0
BUKP	Musuan	3.00	338	⇑eP		Pn	02 47 00.7 0.0
BUKP				eS		Sn	02 47 44.4 +8.6
BUKP	Musuan	3.00	338	⇑iP		Pn	02 47 01.3 +0.6
BUKP				eS		Sn	02 47 42.5 +6.7
BIPH	Bislig	3.10	3	⇑eP		Pn	02 47 01.1 -0.8
BIPH				eS		Sn	02 47 41.1 +3.1
TNTI	Ternate	4.43	164			Pn	02 47 20.5 +0.5
TOLI2	Tolitoli	6.67	234	Pn		Pn	02 47 51.1 +0.6
WB0	Warramunga Arr	25.97	162	P		P	02 51 42.2 +2.5
WRA	Warramunga Arr	26.12	162	P		P	02 51 43.6 +2.5
	0.8nm,0.4s,baz=340,slow=10,SNR=50						
	0.8nm,0.4s						
WRA	Warramunga Arr	26.12	162	P		P	02 51 42.2 +1.2
WB2	Warramunga Arr	26.12	162	P		P	02 51 43.4 +2.3
WB2				IAmb	IAmb		02 51 44.2
	comp=Z,7.7nm,1.2s						
WR0	Warramunga Arr	26.20	162	P		P	02 51 44.1 +2.4
WR0				IAmb	IAmb		02 52 27.4
	comp=Z,6.8nm,1.3s						
ASAR	Alice Springs	29.54	166	P		P	02 52 11.8 +0.2
	comp=Z,0.3nm,0.5s,baz=355,slow=7.0,SNR=5.4						
	comp=Z,0.3nm,0.5s						
KSAR	Wonju Array Be	32.26	3	P		P	02 52 25.1 -10
MK31	Makanchi Array	56.15	325	P		P	02 55 40.1 -5.7
MK31				IAmb	IAmb		02 55 51.1
	comp=Z,3.9nm,1.5s						
MKAR	Makanchi Array	56.15	325	P		P	02 55 44.5 -1.2
	comp=Z,0.7nm,0.4s,baz=114,slow=7.5,SNR=18						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	56.15	325	P		P	02 55 37.8 -7.9
ZALV	Zalesovo Beam	59.15	333	P		P	02 56 04.1 -2.5
	comp=Z,0.7nm,0.4s,baz=134,slow=7.2,SNR=3.0						
	comp=Z,0.7nm,0.4s						
KURBB	Kurchatov Arra	60.32	327	P		P	02 56 12.8 -1.9
	comp=Z,0.3nm,0.4s,baz=131,slow=6.2,SNR=11						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	60.32	327	P		P	02 56 13.3 -1.4
KURK				IAmb	IAmb		02 56 34.0
	comp=Z,2.3nm,1.2s						
ABKAR	Akbulak array	70.77	321	P		P	02 57 15.5 -6.6
ARCES	ARCESS Array B	89.01	340	P		P	02 58 58.6 -1.3
	comp=Z,2.0nm,0.9s,baz=92,slow=6.3,SNR=2.4						
	comp=Z,2.0nm,0.9s						
SPITS	Spitsbergen Ar	89.07	349	P		P	02 58 59.3 -0.8
	comp=Z,6.5nm,0.8s,baz=87,slow=11,SNR=2.3						
	comp=Z,6.5nm,0.8s						
TORD	Torodi Ar. Bea	121.98	289	PKP	PKPdf		03 04 59.7 -0.7
	comp=Z,0.1nm,0.3s,baz=74,slow=2.2,SNR=5.8						

*NOU **20** 02:46:23.9, 41.°12S×175.°99E, h66km, MLv3.6/8, North Island, New Zealand*
*WEL **20** 02:46:26.1±0.6, 41.°S±3.°×17.°6E±.°, h19km±4km, M3.5/13, ML3.7/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=134.8*
ISC 20 02:46:26.4±0.9, 40.°91S±0.°02×175.°62E±0.°03, h27km±6km, n97, σ1s22/104, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOWZ	Holdsworth Sta	0.08	278	P		Pb	02 46 31.1 -0.1
HOWZ				S		Sb	02 46 34.5 0.0
TIWZ	Tintock	0.24	57	P		Pb	02 46 33.1 +0.3
TIWZ				S		Sb	02 46 38.1 +0.9
MRZ	Mangatainoka R	0.25	353	P		Pb	02 46 32.1 -0.8
MRZ				S		Sb	02 46 36.2 -1.0
MTW	Mount Morrison	0.27	199	P		Pb	02 46 34.0 +0.9
MTW				S		Sn	02 46 39.6 -0.1
TMWZ	Te Maipa	0.29	134	P		Pb	02 46 35.0 +1.5
TMWZ				S		Sn	02 46 41.5 +1.2
OGWZ	Otaki Gorge	0.35	285	P		Pb	02 46 33.8 -0.5
OGWZ				S		Sb	02 46 38.9 -0.8
CPWZ	Castlepoint	0.44	90	P		Pn	02 46 37.4 +0.4
CPWZ				S		Sn	02 46 46.9 +2.8
PRWZ	Pori Road	0.44	37	P		Pb	02 46 35.8 +0.1
CAW	Cannon Point	0.46	244	P		Pb	02 46 36.2 +0.1
CAW				S		Sb	02 46 43.0 +0.3
TRWZ	Traveller	0.49	174	P		Pn	02 46 38.2 +0.5
PAWZ	Paruwai Farm	0.49	197	P		Pb	02 46 37.9 +1.2
POWZ	Post Office Ro	0.53	13	P		Pb	02 46 36.4 -0.7
BFZ	Birch Farm	0.53	65	P		Pb	02 46 37.6 +0.5
BFZ	Birch Farm	0.53	65	P		Pb	02 46 37.7 +0.5
KIW	Kapiti Island	0.54	275	P		Pb	02 46 37.0 -0.3
MSWZ	Moikau Station	0.58	209	P		Pb	02 46 38.7 +0.7
PLWZ	Palliser	0.71	202	P		Pb	02 46 40.4 +0.1
DVHZ	Dannevirke	0.74	35	P		Pb	02 46 40.1 -0.5
OHWZ	Ohakea	0.74	342	P		Pb	02 46 40.3 -0.3
WEL	Wellington	0.74	239	P		Pb	02 46 40.9 +0.2
ANWZ	Angora Road	0.79	56	P		Pb	02 46 41.1 -0.4
SNZO	South Karori	0.80	239	P		Pb	02 46 41.8 +0.2
TSZ	Takapari Road	0.89	17	P		Pb	02 46 42.3 -0.8
PRHZ	Porangahau	1.01	51	P		Pn	02 46 43.9 -0.8
WPHZ	Waipukurau	1.05	37	P		Pn	02 46 44.9 -0.4
TCW	Tory Channel	1.06	253	P		Pn	02 46 45.1 -0.4
PNHZ	Pukenui	1.09	24	P		Pn	02 46 45.2 -0.7
WAZ	Wanganui	1.25	337	P		Pn	02 46 48.8 +0.7
DUWZ	D'Urville Isla	1.29	274	P		Pn	02 46 48.4 -0.2
PXZ	Pawanui	1.29	48	P		Pn	02 46 47.4 -1.2
CMWZ	Cape Campbell	1.35	231	P		Pn	02 46 49.6 +0.2
TUWZ	Tuamarina	1.37	247	P		Pn	02 46 48.8 -0.9
BHHZ	Black Hill Sta	1.46	14	P		Pn	02 46 50.6 -0.4
KAHZ	Kahuranaki	1.47	41	P		Pn	02 46 50.1 -1.0
MOVZ	Moawhango	1.50	4	P		Pn	02 46 51.3 -0.3
MTVZ	Mangateitei	1.52	356	P		Pn	02 46 53.4 +1.4
BSWZ	Blackbirch Sta	1.54	238	P		Pn	02 46 51.4 -0.6
WNVZ	Wahianoa	1.58	359	P		Pn	02 46 54.1 +1.4
KWHZ	Kaweka Forest	1.60	23	P		Pn	02 46 52.1 -0.9
TRVZ	Turoa	1.61	358	P		Pn	02 46 54.4 +1.2
WHVZ	Whangaehu Hut	1.62	359	P		Pn	02 46 55.0 +1.6
TUVZ	Tukino	1.64	1	P		Pn	02 46 54.3 +0.7
FWVZ	Far West T-bar	1.65	358	P		Pn	02 46 55.1 +1.3
LREZ	Lake Rotokare	1.72	327	P		Pn	02 46 56.1 +1.5
SNVZ	South Ngauruho	1.72	1	P		Pn	02 46 55.5 +0.8
NNZ	Nelson	1.72	259	P		Pn	02 46 54.2 -0.4
NGZ	Ngauruhoe	1.73	360	P		Pn	02 46 55.8 +1.0
OTVZ	Oturere	1.74	1	P		Pn	02 46 55.3 +0.3
ETVZ	East Tongariro	1.77	2	P		Pn	02 46 55.8 +0.4
NNVZ	North Ngauruho	1.77	360	P		Pn	02 46 56.0 +0.6
WTVZ	West Tongariro	1.79	359	P		Pn	02 46 56.2 +0.6
TMVZ	Te Maari	1.79	2	P		Pn	02 46 56.0 +0.4
KRVZ	Karewarewa	1.81	1	P		Pn	02 46 57.2 +1.3
TWVZ	Taurewa	1.84	356	P		Pn	02 46 56.7 +0.4
BKZ	Black Stump Fm	1.86	21	P		Pn	02 46 55.4 -1.1
BKZ	Black Stump Fm	1.86	21	P		Pn	02 46 55.5 -1.1
VRZ	Vera Road	1.90	339	P		Pn	02 46 58.4 +1.4
PREZ	Palmer Road	1.92	324	P		Pn	02 46 59.1 +1.8
KATZ	Kakaramea	1.93	2	P		Pn	02 46 58.0 +0.4
RITZ	Rihia Road	1.94	6	P		Pn	02 46 58.3 +0.8
NMEZ	Namu Road	2.00	318	P		Pn	02 46 59.7 +1.4
NEZ	North Egmont	2.01	324	P		Pn	02 47 00.2 +1.6
TKNZ	Takaka Hill	2.02	266	P		Pn	02 46 58.6 0.0
KHEZ	Kahui Hut	2.03	322	P		Pn	02 47 00.1 +1.3
KHEZ	Kahui Hut	2.03	322	P		Pn	02 47 00.6 +1.8
NMHZ	Naumai	2.03	27	P		Pn	02 46 57.9 -1.0
RATZ	Rangitukua	2.04	3	P		Pb	02 47 03.7 +0.9
NBEZ	Newall Road No	2.12	320	P		Pn	02 47 02.0 +2.0
PKE	Pukeiti	2.12	323	P		Pn	02 47 02.1 +2.0
KHZ	Kahutara	2.17	225	P		Pn	02 46 59.2 -1.4
KHZ	Kahutara	2.17	225	P		Pn	02 46 59.4 -1.3
THZ	Tophouse	2.21	246	P		Pn	02 47 00.3 -1.1
MTHZ	Maungataniwha	2.26	25	P		Pn	02 47 00.6 -1.4
RAHZ	Arahi	2.29	30	P		Pn	02 47 01.0 -1.4
QRZ	Quartz Range	2.34	271	P		Pn	02 47 03.3 +0.2
HIZ	Hauiti	2.46	346	P		Pn	02 47 06.1 +1.4
HIZ	Hauiti	2.46	346	P		Pn	02 47 06.1 +1.4
MHGZ	Mahia Peninsul	2.48	46	P		Pn	02 47 03.1 -1.9
SNGZ	Shannon Statio	2.50	33	P		Pn	02 47 03.9 -1.5
MUGZ	Murupara	2.58	21	P		Pn	02 47 08.1 +1.6
RIGZ	Rimuhau	2.75	38	P		Pn	02 47 10.3 +1.5
RAGZ	Rawiri	2.78	31	P		Pn	02 47 07.4 -1.8
URZ	Urewera	2.89	24	P		Pn	02 47 08.0 -2.6
MWZ	Matawai	2.96	30	P		Pn	02 47 09.0 -2.7
DSZ	Denniston Nort	2.99	253	P		Pn	02 47 10.8 -1.2
LTZ	Lake Taylor	3.12	232	P		Pn	02 47 12.4 -1.5
TOZ	Tahuroa Road	3.17	358	P		Pn	02 47 18.6 +4.1
TWGZ	Tauwhareparae	3.28	35	P		Pn	02 47 14.6 -1.5
RUGZ	Raukumara Rang	3.34	29	P		Pn	02 47 15.0 -2.0
MQZ	McQueen's Vall	3.56	217	P		Pn	02 47 17.6 -2.1
PKGZ	Pakihiroa	3.57

λ104.58000°. Principal axes: T 7.3219, Plg61.0000°, Azm6.0000°; N 1.9593, Plg14.0000°, Azm250.0000°; P -9.2812, Plg25.0000°, Azm153.0000°;

GCMT **20** 02:49:56.4±0.1, 35°.89N±0°.01×140°.57E±0°.01, h30km, MW5.3/134, Moment Tensor Solution. s114, c181; s134, c233; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.84±.02; $M_{\theta\theta}$-0.74±.01; $M_{\phi\phi}$-0.10±.01; $M_{r\theta}$0.59±.02; $M_{\theta\phi}$-0.36±.01; $M_{\phi r}$0.43±.02; Best double couple: $M_0$1.13700×10^{17} NP1:ϕ_s58.00000°, δ65.00000°, λ83.00000°. NP2:ϕ_s255.00000°, δ26.00000°, λ105.00000°. Principal axes: T 1.1180, Plg69.0000°, Azm314.0000°; N 0.0380, Plg6.0000°, Azm61.0000°; P -1.1570, Plg20.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **20** 02:49:57, 35°.86N×140°.71E, h36km, Moment Tensor Solution. Duration: 6s6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.92; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-0.07; $M_{r\theta}$0.47; $M_{\theta\phi}$-0.41; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.17000×10^{17} NP1: ϕ_s259.00000°, δ30.00000°, λ111.00000°. NP2: ϕ_s55.00000°, δ62.00000°, λ78.00000°. Principal axes: T 1.1380, Plg71.0000°, Azm300.0000°; N 0.0642, Plg10.0000°, Azm61.0000°; P -1.2022, Plg16.0000°, Azm154.0000°;

KEA **20** 02:49:57.6, 35°.75N×140°.72E, h38km, MS4.2/2

ISC 20 02:49:53.7±0.4, 35°.85N±0°.02×140°.60E±0°.03, h27km±2km, h27km:pP-P, n1266, σ1°54/1079, mb5.3/406, MS4.7/118, 55C-50D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JIHU	**Itakohorinouch**	**0.13**	**333**	*eP*		**Pn**	**02 50 00.5**	**+0.5**
JIHU				*eS*		**Sb**	**02 50 05.4**	**+3.1**
JIHU	**Itakohorinouch**	**0.13**	**333**	A		A	02 50 00.5	
comp=E,4μm,1.0s,comp=E,5μm,1.6s								
JSMT	**Sammumatsuo**	**0.24**	**211**	*i* P		**Pn**	**02 50 01.2**	**-0.2**
JSMT				S		**Sb**	**02 50 07.0**	**+2.7**
JSMT	**Sammumatsuo**	**0.24**	**211**	A		A	02 50 01.2	
comp=E,2μm,2.9s,comp=E,634nm,0.7s								
CHOJ	**Chosi**	**0.26**	**125**	*i* P		**Pn**	**02 50 01.6**	**-0.1**
CHOJ				S		**Sn**	**02 50 07.1**	**+0.4**
CHOJ	**Chosi**	**0.26**	**125**	A		A	02 50 01.6	
comp=E,309nm,3.0s,comp=E,649nm,0.9s								
JHYU	**Hitachinakayam**	**0.49**	**359**	A		A	02 50 03.9	
comp=E,480nm,0.5s,comp=E,544nm,0.6s								
JYT	**Yasato**	**0.50**	**319**	Pg		**Pb**	**02 50 03.7**	**-0.2**
JYT				Sg		**Sb**	**02 50 10.4**	**-0.5**
JYT	**Yasato**	**0.50**	**319**	⇓*i*P		**Pb**	**02 50 03.8**	**-0.2**
JYT				⇓*e*S		**Sb**	**02 50 10.6**	**-0.4**
JYT	**Yasato**	**0.50**	**319**	A		A	02 50 03.8	
comp=E,327nm,0.4s,comp=E,390nm,0.7s								
JCN	**Nagara**	**0.54**	**217**	A		A	02 50 04.3	
comp=E,732nm,2.7s,comp=E,674nm,1.4s								
I30JP	**ISUMI INFRASON**	**0.59**	**203**	Pg		**Pb**	**02 50 05.2**	**-0.2**
baz=33,slow=13								
I30JP				Lg		Lg	02 50 17.1	
baz=35,slow=24								
TOK	**Tokyo**	**0.70**	**257**	A		A	02 50 06.3	
comp=E,369nm,1.6s,comp=E,392nm,2.6s								
JHO	**Hitachi**	**0.76**	**358**	⇓*i*P		**Pb**	**02 50 07.6**	**-0.7**
JHO				⇓*e*S		**Sb**	**02 50 17.1**	**-1.2**
JHO	**Hitachi**	**0.76**	**358**	A		A	02 50 07.6	
comp=E,80nm,3.4s,comp=E,78nm,2.3s								
JKUC	**kamogawauchiur**	**0.76**	**206**	A		A	02 50 07.8	
comp=E,253nm,2.0s,comp=E,221nm,3.2s								
BSO4	**Boso 4**	**0.88**	**194**	⇓*i*P		**Pn**	**02 50 10.5**	**+0.3**
JYO	**Yokosk**	**0.98**	**231**	A		A	02 50 10.8	
comp=E,298nm,1.8s,comp=E,352nm,1.8s								
JHU	**Hanno**	**1.07**	**271**	A		A	02 50 11.8	
comp=E,71nm,1.8s,comp=E,108nm,3.4s								
JAG	**Ashikaga**	**1.09**	**302**	⇓*i*P		**Pn**	**02 50 11.6**	**-1.6**
JAG	**Ashikaga**	**1.09**	**302**	A		A	02 50 11.6	
comp=E,48nm,2.9s,comp=E,54nm,2.5s								
JSGW	**Sagamiharawaka**	**1.16**	**258**	A		A	02 50 13.1	
comp=E,65nm,1.5s,comp=E,137nm,3.7s								
JFFD	**Fukushimafurud**	**1.24**	**359**	A		A	02 50 15.0	
comp=E,72nm,0.8s,comp=E,123nm,0.8s								
JSB	**Shiboa**	**1.25**	**334**	A		A	02 50 14.7	
comp=E,137nm,1.6s,comp=E,178nm,1.5s								
JOD2	**Odawara 2**	**1.36**	**245**	A		A	02 50 16.3	
comp=E,76nm,2.1s,comp=E,92nm,1.4s								
JRY	**Ryogami san**	**1.39**	**277**	A		A	02 50 16.5	
comp=E,46nm,3.2s,comp=E,52nm,5.9s								
JIM2	**Oshima 3**	**1.48**	**221**	A		A	02 50 18.3	
comp=E,145nm,5.1s,comp=E,119nm,1.6s								
JFK	**Kawauchi**	**1.53**	**8**	A		A	02 50 19.4	
comp=E,44nm,7.0s,comp=E,29nm,1.1s								
JHTM	**Izuhatsuma**	**1.57**	**236**	A		A	02 50 19.4	
comp=E,185nm,3.7s,comp=E,114nm,1.2s								
JFNN	**Fujinakano**	**1.69**	**248**	A		A	02 50 21.0	
comp=E,146nm,3.2s,comp=E,124nm,3.0s								
JTHY	**Toshimahigashi**	**1.70**	**219**	A		A	02 50 21.5	
comp=E,139nm,3.4s,comp=E,122nm,4.1s								
JYN	**Shimo**	**1.71**	**259**	A		A	02 50 21.2	
comp=E,57nm,6.4s,comp=E,84nm,1.6s								
JFY	**Yanaizu**	**1.71**	**335**	A		A	02 50 21.6	
comp=E,33nm,4.5s,comp=E,45nm,3.3s								
JOTO	**OTAMA OYAMA**	**1.72**	**353**	A		A	02 50 21.9	
comp=E,112nm,1.1s,comp=E,187nm,1.1s								
JGK	**Kuni**	**1.74**	**295**	A		A	02 50 21.6	
comp=E,41nm,1.3s,comp=E,36nm,2.7s								
JIZS	**Izushimoda**	**1.80**	**232**	A		A	02 50 22.8	
comp=E,44nm,2.4s,comp=E,54nm,1.7s								
JUON	**Uonuma**	**1.84**	**318**	A		A	02 50 23.2	
comp=E,31nm,1.3s,comp=E,33nm,1.2s								
JNIO	**Niijimaoohara**	**1.84**	**216**	A		A	02 50 23.6	
comp=E,103nm,1.8s,comp=E,106nm,2.0s								
JMST	**Minamisoumatoc**	**1.89**	**7**	A		A	02 50 24.5	
comp=E,45nm,1.5s,comp=E,27nm,1.2s								
JSKK	**Shikinejimakit**	**1.89**	**217**	A		A	02 50 24.3	
comp=E,85nm,3.7s,comp=E,41nm,4.1s								
JMYK	**Miyake Tsubota**	**1.98**	**206**	A		A	02 50 25.8	
comp=E,92nm,3.0s,comp=E,71nm,2.4s								
JNT	**Takato**	**2.00**	**271**	A		A	02 50 25.4	
comp=E,35nm,3.4s,comp=E,46nm,4.8s								
JMM	**Marumori**	**2.02**	**4**			**Pn**	**02 50 26.0**	**+0.1**
JMM				Sn		**Sn**	**02 50 49.7**	**-0.6**
JMM	**Marumori**	**2.02**	**4**	A		A	02 50 26.4	
comp=E,65nm,1.7s,comp=E,59nm,0.8s								
JKO	**Kozu shima**	**2.05**	**216**	A		A	02 50 26.5	
comp=E,131nm,4.3s,comp=E,96nm,3.5s								
MJAR	**Matsushiro Arr**	**2.05**	**290**	Pn		**Pn**	**02 50 25.7**	**-0.7**
24nm,0.3s,baz=91,slow=12,SNR=1303								
MJAR				Sn		**Sn**	**02 50 50.1**	**-1.1**
33nm,0.3s,baz=139,slow=12,SNR=3.9								
MAJO	**Matsushiro**	**2.06**	**290**	Pn		**Pn**	**02 50 26.0**	**-0.4**
MAJO	**Matsushiro**	**2.06**	**290**	*d* iP		**Pn**	**02 50 26.4**	**0.0**
MJB9	**Matsu-Tunnel**	**2.06**	**290**			**Pn**	**02 50 26.3**	**-0.2**
JYAR	**Yonezawaarcadi**	**2.09**	**350**	A		A	02 50 27.2	
comp=E,86nm,1.4s,comp=E,86nm,1.1s								
JNG	**Nsakai**	**2.10**	**286**	A		A	02 50 26.8	
comp=E,31nm,2.0s,comp=E,33nm,1.5s								
SHZ3	**Shizuoka 3**	**2.10**	**249**	A		A	02 50 26.9	
comp=E,51nm,1.6s,comp=E,66nm,1.5s								
JMKN	**Mikurajimanish**	**2.12**	**203**	A		A	02 50 27.8	
comp=E,42nm,7.1s,comp=E,34nm,3.0s								
JNS	**Sasagawa**	**2.22**	**333**	A		A	02 50 28.8	
comp=E,23nm,4.5s,comp=E,29nm,2.4s								
JIZZ	**Izumozaki**	**2.27**	**318**	A		A	02 50 29.3	
comp=E,106nm,1.9s,comp=E,148nm,3.3s								
JNY	**Yasuok**	**2.28**	**258**	A		A	02 50 29.5	
comp=E,42nm,1.3s,comp=E,46nm,1.8s								
JSG	**Sagara**	**2.30**	**240**	A		A	02 50 29.8	
comp=E,91nm,3.9s,comp=E,71nm,3.3s								
JJN	**Nakama**	**2.33**	**303**	A		A	02 50 30.1	
comp=E,43nm,2.8s,comp=E,58nm,4.3s								
JKKS	**Kakegawashinom**	**2.40**	**244**	A		A	02 50 31.3	
comp=E,69nm,5.0s,comp=E,86nm,3.4s								
JYS	**Shiratake**	**2.41**	**350**	A		A	02 50 31.7	
comp=E,86nm,1.6s,comp=E,82nm,1.2s								
JOU	**Okura**	**2.51**	**1**	A		A	02 50 33.4	
comp=E,66nm,0.9s,comp=E,59nm,1.3s								
HMMJ	**Hamamatsu 2**	**2.55**	**248**	A		A	02 50 33.4	
comp=E,27nm,2.4s,comp=E,32nm,3.4s								
JIKH	**Ishinomakikobu**	**2.55**	**15**	A		A	02 50 34.2	
comp=E,26nm,5.5s,comp=E,15nm,1.2s								
JGF	**Kuroka**	**2.65**	**266**	Pn		**Pn**	**02 50 36.4**	**+1.7**
JGF	**Kuroka**	**2.65**	**266**	A		A	02 50 34.7	
comp=E,24nm,2.6s,comp=E,29nm,3.1s								
JIO	**Ouri**	**2.67**	**13**	A		A	02 50 35.8	
comp=E,26nm,5.6s,comp=E,13nm,1.2s								
JGN	**Niukaw**	**2.69**	**279**	A		A	02 50 35.2	
comp=E,14nm,3.4s,comp=E,21nm,3.5s								
JSSY	**Shinshiroyabe**	**2.69**	**251**	A		A	02 50 35.4	
comp=E,22nm,3.5s,comp=E,34nm,2.6s								
JTT	**Ttatey**	**2.75**	**287**	A		A	02 50 36.0	
comp=E,29nm,1.9s,comp=E,27nm,2.3s								
JOFO	**Osakifurukawao**	**2.76**	**5**	A		A	02 50 37.0	
comp=E,187nm,4.3s,comp=E,137nm,1.9s								
JAO	**Obara**	**2.79**	**259**	A		A	02 50 36.7	
comp=E,32nm,4.4s,comp=E,38nm,4.9s								
JHJ	**Hachijo jima 2**	**2.81**	**194**	Pn		**Pn**	**02 50 35.5**	**-1.3**
188nm,0.3s,baz=322,slow=19,SNR=44								
JHJ				Sn		**Sn**	**02 51 06.7**	**-2.9**
609nm,0.3s,baz=108,slow=22,SNR=7.4								
JHJ				LR		LR	02 51 41.3	
comp=Z,8μm,19.6s,baz=67,slow=41 750nm,0.6s								
JHJ2	**Mitsune**	**2.81**	**194**	Pn		**Pn**	**02 50 35.5**	**-1.2**
JHJ2	**Mitsune**	**2.81**	**194**	A		A	02 50 37.7	
comp=E,28nm,3.3s,comp=E,22nm,3.2s								
JAW	**Awa shima**	**2.82**	**338**	A		A	02 50 37.4	
comp=E,16nm,4.0s,comp=E,21nm,7.4s								
JYA	**Atsumi**	**2.83**	**346**	A		A	02 50 37.7	
comp=E,61nm,1.1s,comp=E,29nm,0.8s								
JHCJ	**Hachijojimakas**	**2.85**	**194**	A		A	02 50 38.3	
comp=E,15nm,3.8s,comp=E,19nm,4.0s								
JSD	**Sado**	**2.88**	**320**	Pn		**Pn**	**02 50 37.4**	**-0.3**
JSD	**Sado**	**2.88**	**320**	A		A	02 50 38.1	
comp=E,15nm,7.7s,comp=E,15nm,4.1s								
INU	**Inuyama**	**2.96**	**261**	Pn		**Pn**	**02 50 39.3**	**+0.4**
JKMT	**Keennumamotoy**	**3.04**	**13**	A		A	02 50 41.0	
comp=E,22nm,3.2s,comp=E,10.0nm,0.9s								
JSZ	**Suzu**	**3.05**	**302**	A		A	02 50 40.5	
comp=E,12nm,2.5s,comp=E,12nm,4.0s								
JYK	**Kaneyama**	**3.07**	**356**	A		A	02 50 41.3	
comp=E,46nm,2.3s,comp=E,31nm,2.5s								
JAA	**Atsumi**	**3.08**	**248**	A		A	02 50 40.9	
comp=E,14nm,4.9s,comp=E,16nm,6.6s								
JICN	**Ichinomiyachia**	**3.11**	**261**	A		A	02 50 41.2	
comp=E,48nm,2.1s,comp=E,48nm,3.4s								
JMK	**Ichinoseki**	**3.14**	**9**	A		A	02 50 42.4	
comp=E,18nm,6.9s,comp=E,14nm,4.8s								
JYTA	**Yamagatataniai**	**3.15**	**266**	A		A	02 50 41.8	
comp=E,14nm,3.6s,comp=E,27nm,5.8s								
JYYZ	**Yamagatayuza**	**3.21**	**351**	A		A	02 50 43.1	
comp=E,106nm,3.1s,comp=E,104nm,4.1s								
JJH	**Hakui**	**3.26**	**290**	A		A	02 50 43.4	
comp=E,12nm,5.8s,comp=E,14nm,2.3s								
OFUJ	**Ofunato**	**3.34**	**14**	A		A	02 50 45.3	
comp=E,22nm,7.1s,comp=E,12nm,1.1s								
JTB	**Tobi-shima**	**3.44**	**346**	A		A	02 50 46.4	
comp=E,22nm,2.3s,comp=E,15nm,1.8s								
JAOM	**Aogashimamukai**	**3.45**	**192**	A		A	02 50 46.8	
comp=E,26nm,2.9s,comp=E,22nm,4.5s								
JKG	**Kaga**	**3.48**	**278**	A		A	02 50 46.5	
comp=E,14nm,5.6s,comp=E,11nm,1.8s								
JIE	**Ise**	**3.51**	**247**	A		A	02 50 47.0	
comp=E,12nm,5.2s,comp=E,16nm,4.3s								
JEG	**Eigenji**	**3.51**	**260**	A		A	02 50 46.9	
comp=E,11nm,3.8s,comp=E,20nm,4.5s								
JRG	**Rokugo**	**3.54**	**0**	A		A	02 50 48.0	
comp=E,58nm,4.7s,comp=E,27nm,2.3s								
JHG	**Hegura jima**	**3.56**	**305**	A		A	02 50 47.7	
comp=E,11nm,5.4s,comp=E,12nm,1.9s								
TSUJ	**Tsu 2**	**3.60**	**253**	A		A	02 50 48.3	
comp=E,17nm,5.0s,comp=E,18nm,3.9s								
JOM	**Ohasama**	**3.66**	**8**	A		A	02 50 49.8	
comp=E,20nm,4.5s,comp=E,11nm,1.4s								
JYW	**Yuwa**	**3.70**	**355**	A		A	02 50 50.2	
comp=E,65nm,4.1s,comp=E,112nm,1.9s								
JFM	**Mihama**	**3.77**	**266**	A		A	02 50 50.6	
comp=E,16nm,2.7s,comp=E,21nm,1.9s								
MIYJ	**Miyakonagasawa**	**3.84**	**14**	A		A	02 50 52.5	
comp=E,16nm,5.4s,comp=E,13nm,5.5s								
JKN2	**Miekihoku**	**3.90**	**247**	A		A	02 50 52.4	
comp=E,8.0nm,6.4s,comp=E,11nm,3.0s								
JSZI	**Iwateshizukuis**	**3.90**	**4**	A		A	02 50 53.0	
comp=E,59nm,3.3s,comp=E,51nm,1.6s								
JKZ	**Kuzumaki**	**4.17**	**8**	A		A	02 50 57.0	
comp=E,16nm,5.5s,comp=E,9.0nm,1.6s								
JNTK	**Naratenkawa**	**4.18**	**249**	A		A	02 50 56.4	
comp=E,9.0nm,4.2s,comp=E,12nm,4.3s								
JHE	**Heguri**	**4.20**	**255**	A		A	02 50 56.6	
comp=E,10.0nm,5.4s,comp=E,14nm,7.1s								
JTH	**Tanohata**	**4.20**	**13**	A		A	02 50 57.5	
comp=E,17nm,1.8s,comp=E,11nm,0.9s								
JOG3	**Oga3**	**4.24**	**344**	A		A	02 50 55.9	
comp=E,27nm,4.4s,comp=E,21nm,2.0s								
JWT	**Wachi**	**4.28**	**264**	A		A	02 50 57.7	
comp=E,10.0nm,2.9s,comp=E,14nm,7.9s								
JAH	**Hinai**	**4.33**	**0**	A		A	02 50 59.2	
comp=E,32nm,2.4s,comp=E,13nm,6.3s								
JNTW	**Noshirotokiwa**	**4.43**	**356**	A		A	02 51 00.4	
comp=E,46nm,2.6s,comp=E,73nm,2.2s								
JKEN	**Kujiedanarisaw**	**4.44**	**11**	A		A	02 51 00.7	
comp=E,35nm,2.1s,comp=E,35nm,1.2s								
JKY	**Yasaka**	**4.47**	**269**	A		A	02 51 00.5	
comp=E,12nm,2.5s,comp=E,22nm,2.4s								
JANG	**Nango**	**4.58**	**9**	A		A	02 51 02.7	
comp=E,11nm,4.8s,comp=E,9.0nm,1.5s								
JTNC	**Tanabenakahech**	**4.58**	**245**	A		A	02 51 02.0	
comp=E,8.0nm,4.6s,comp=E,12nm,3.7s								
JMIK	**Miki**	**4.65**	**259**	A		A	02 51 03.0	
comp=E,16nm,5.9s,comp=E,16nm,3.7s								
JTM	**Tenmabayashi**	**4.94**	**4**	Pn		**Pn**	**02 51 07.5**	**+1.4**
JMN	**Monobe**	**5.92**	**251**	Pn		**Pn**	**02 51 21.4**	**+1.8**
JHS	**Saijyo**	**6.17**	**264**	Pn		**Pn**	**02 51 24.3**	**+1.3**
ERM	**Erimo**	**6.47**	**17**	Pn		**Pn**	**02 51 26.9**	**-0.2**
ERM	**Erimo**	**6.47**	**17**	*i* P		**Pn**	**02 51 27.7**	**+0.6**
JEW	**Eniwo**	**7.01**	**5**	Pn		**Pn**	**02 51 34.0**	**-0.5**
NMR	**Nemuro--Hokkai**	**8.49**	**26**	⇑*i*P		**Pn**	**02 51 52.2**	**-2.5**
JCJ	**Chichijima**	**8.83**	**171**	Pn		**Pn**	**02 51 57.6**	**-1.9**
276nm,0.4s,baz=315,slow=9.6,SNR=19								
JCJ				Sn		**Sn**	**02 53 33.0**	**-5.1**
32nm,0.3s,baz=90,slow=20,SNR=1.6								
JCJ	**Chichijima**	**8.83**	**171**	Pn		**Pn**	**02 51 57.5**	**-2.1**
RUSJ	**Misakicho**	**8.98**	**22**	P		**Pn**	**02 52 00.7**	**-0.8**
RUSJ				*e*S		**Sn**	**02 53 39.6**	**-2.1**
YUK	**Yuzh-Kuril'sk**	**9.12**	**25**	⇓*i*P		**Pn**	**02 52 04.8**	**+1.5**
YUK				pmax		pmax		
comp=Z,336nm,0.3s								
YUK				pmax		pmax		
comp=E,120nm,0.2s								
YUK				MLR		MLR		
comp=Z,2μm,15.0s								
JSU	**Suzuyama**	**9.50**	**246**	Pn		**Pn**	**02 52 10.8**	**+2.1**
TEY	**Ternei**	**9.67**	**343**	⇑*e*P		Pn	02 52 21.6	+11
TEY				pmax		pmax		
comp=N,50nm,0.8s								
TEY				pmax		pmax		
comp=Z,80nm,0.8s								
KSRS	**Korea Array**	**10.31**	**283**	Pn		**Pn**	**02 52 17.4**	**-2.3**
comp=Z,0.5nm,0.3s,baz=97,slow=13,SNR=1.6								
KSRS				LR		LR	02 56 11.0	
comp=Z,4μm,21.1s,baz=90,slow=37								
KSAR	**Wonju Array Be**	**10.34**	**283**	Pn		**Pn**	**02 52 23.1**	**+3.0**
KSAR	**Wonju Array Be**	**10.34**	**283**	P		**Pn**	**02 52 23.2**	**+3.0**
KS19	**Wonju Array Si**	**10.36**	**283**	Pn		**Pn**	**02 52 20.4**	**-0.1**
USA0B	**Ussuriysk Arra**	**10.63**	**324**	Pn		**Pn**	**02 52 23.8**	**-0.3**
USA0B	**Ussuriysk Arra**	**10.63**	**324**	P		**Pn**	**02 52 23.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**10.63**	**324**	Pn		**Pn**	**02 52 27.4**	**+3.3**
comp=Z,1.3nm,0.3s,baz=138,slow=12,SNR=83								
USRK				LR		LR	02 56 14.3	
comp=Z,4μm,20.0s,baz=132,slow=36								
USRK	**Ussuriysk Ar.**	**10.63**	**324**	Pn		**Pn**	**02 52 23.6**	**-0.4**
USRK	**Ussuriysk Ar.**	**10.63**	**324**	P		**Pn**	**02 52 23.7**	**-0.4**
TJN	**Taejon**	**10.72**	**277**	*ce*P		**Pn**	**02 52 29.5**	**+4.1**
KUR	**Kuril'sk**	**10.88**	**28**	*e*P		**Pn**	**02 52 27.4**	**0.0**
KUR				*e*S		**Sn**	**02 54 25.5**	**-2.7**
KUR				pmax		pmax		
comp=N,127nm,0.6s								
KUR				pmax		pmax		
comp=E,124nm,0.6s								
KUR				pmax		pmax		
comp=Z,250nm,0.6s								
KUR				smax		smax		
comp=E,377nm,0.5s								
KUR				smax		smax		
comp=N,256nm,0.4s								
KUR				MLR		MLR		
comp=Z,2μm,8.0s								
HHU	**Hamhung**	**11.10**	**295**	P		Pn	02 52 35.3	+4.8
YSS	**Yuzh-Sakhalins**	**11.21**	**8**	Pn		**Pn**	**02 52 33.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**11.21**	**8**	*e*P		**Pn**	**02 52 32.3**	**+0.3**
YSS				*e*S		**Sn**	**02 54 36.2**	**-0.2**
YSS				pmax		pmax		
comp=Z,120nm,1.0s								
YSS				MLR		MLR		
comp=Z,4μm,14.0s								
YSS				MLR		MLR		
comp=N,3μm,16.0s								
HJU	**Haeju**	**12.10**	**285**	P		**Pn**	**02 52 48.8**	**+4.5**
HJU				pP		**P**	**02 52 56.4**	**-0.3**
HJU				S		**Sn**	**02 55 03.2**	**+5.0**
HJU				AMS		AMS		
comp=N,1μm,11.3s								
HJU				AMS		AMS		
comp=E,961nm,8.5s								
HJU				AMS		AMS		
comp=Z,293nm,2.6s								
MDJ	**Mudanjiang**	**12.13**	**320**	Pn		**Pn**	**02 52 44.2**	**-0.4**
MDJ	**Mudanjiang**	**12.13**	**320**	P		**Pn**	**02 52 47.5**	**+2.9**
MDJ				S		**Sn**	**02 55 06.9**	**+8.0**
MDJ				pmax		pmax		
comp=Z,48nm,1.6s								
MDJ				pmax		pmax		
comp=Z,1μm,4.7s								
MDJ				LR		LR		
comp=Z,3μm,17.4s								
MDJ				LR		LR		
comp=Z,2μm,21.8s								
MDJ				LR		LR		
comp=Z,4μm,19.4s								
SUJ	**Sinuiju**	**13.39**	**293**	P		**P**	**02 53 06.5**	**-4.6**
SUJ				pP		Pn	02 53 14.3	+12
SUJ				S		**Sn**	**02 55 36.9**	**+7.1**
SUJ				AMS		AMS		
comp=N,720nm,6.5s								
SUJ				AMS		AMS		
comp=E,237nm,2.1s								
SUJ				AMS		AMS		
comp=Z,478nm,4.3s								
JOW	**Kunigami**	**13.84**	**233**	Pn		**Pn**	**02 53 10.7**	**+2.7**
comp=Z,0.8nm,0.3s,baz=55,slow=11,SNR=1.0								
BNX	**BinXian**	**14.04**	**319**	⇑P		**Pn**	**02 53 11.6**	**+1.0**
BNX				pP		**P**	**02 53 20.3**	**+2.1**
BNX				sP			02 53 27.8	
BNX				S		**Sn**	**02 55 48.9**	**+3.5**
BNX				sS		**S**	**02 56 00.3**	**-6.0**
BNX				pmax		pmax		
comp=Z,91nm,1.5s								
BNX				pmax		pmax		
comp=Z,680nm,4.4s								
BNX				LR		LR		
comp=Z,2μm,12.0s								
BNX				LR		LR		
comp=Z,2μm,12.2s								
BNX				LR		LR		
comp=Z,2μm,12.8s								
CN2	**Changchun**	**14.08**	**309**	*e*P		**Pn**	**02 53 11.0**	**-0.2**
CN2				*es*P		P	02 53 26.1	+7.4
CN2				*e*S		**Sn**	**02 55 45.8**	**-0.7**
CN2				pmax		pmax		
comp=Z,30nm,1.6s								
CN2				LR		LR		
comp=Z,1μm,18.0s								
CN2				LR		LR		
comp=Z,2μm,18.0s								
CN2				LR		LR		
comp=Z,2μm,20.0s								
SNY	**Shenyang**	**14.54**	**299**	⇓P		**P**	**02 53 20.9**	**-2.9**
SNY				pmax		pmax		
comp=Z,150nm,1.3s								
SNY				pmax		pmax		
comp=Z,780nm,3.6s								
SNY				LR		LR		
comp=Z,3μm,13.3s								
SNY				LR		LR		
comp=Z,3μm,18.2s								
SNY				LR		LR		
comp=Z,5μm,17.3s								
KLR	**Kul'dur**	**14.86**	**337**	Pn		**Pn**	**02 53 20.0**	**-1.9**
comp=Z,0.5nm,0.3s,baz=139,slow=13,SNR=16								
KLR				LR		LR	02 58 58.5	
comp=Z,3μm,19.8s,baz=160,slow=37 comp=Z,7.3nm,0.7s								
KLR	**Kul'dur**	**14.86**	**337**	*i* P		**Pn**	**02 53 19.4**	**-2.4**
TYV	**Tymovskoe**	**15.08**	**5**	*e*P		**P**	**02 53 27.8**	**-1.9**
TYV				*e*S		**Sn**	**02 56 17.9**	**+7.1**
TYV				pmax		pmax		
comp=Z,500nm,2.2s								
TYV				pmax		pmax		
comp=Z,132nm,1.0s								
TYV				smax		smax		
comp=N,700nm,4.5s								
TYV				smax		smax		
comp=E,500nm,4.5s								
GRNR	**Gornyy**	**15.22**	**350**	⇑*i*P		**Pn**	**02 53 25.2**	**-1.3**
GRNR				*e*S		**S

BJT pmax pmax
comp=Z,121nm,1.0s
ZEA Zeya 20.18 337 *e*P **P 02 54 24.1 -1.8**
ZEA *e* 02 54 43.1
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=N,30nm,0.9s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA pmax pmax
comp=Z,300nm,4.8s
ZEA MLR MLR
comp=E,600nm,16.0s
ZEA MLR MLR
comp=N,1μm,12.0s
HIA Hailar 20.30 318 P **P 02 54 25.3 -2.0**
HIA **Hailar 20.30 318** P **P 02 54 25.3 -2.0**
HIA pmax pmax
comp=Z,101nm,1.5s
XLT XiLinHaoTe 20.41 301 ⇓*i*P **P 02 54 26.6 -2.0**
XLT pmax pmax
comp=Z,120nm,1.0s
XLT pmax pmax
comp=Z,330nm,4.9s
HNS HongShan 20.82 282 ⇓P **P 02 54 30.6 -2.4**
HNS PP **PnPn 02 54 55.5 +3.9**
HNS *e*S **S 02 58 20.3 -3.6**
HNS pmax pmax
comp=Z,51nm,1.2s
HNS LR LR
comp=Z,1μm,18.2s
HNS LR LR
comp=Z,2μm,21.8s
HNS LR LR
comp=Z,2μm,21.8s
PEA0B Petropavlovsk- 21.04 30 **P 02 54 37.2 +2.0**
PEA0B IAmb IAmb 02 54 40.3
comp=Z,238nm,1.4s
PEA0B Petropavlovsk- 21.04 30 P **P 02 54 37.2 +2.0**
PEA0B pmax pmax
comp=Z,239nm,1.5s
PETK Petropavlovsk- 21.04 30 P **P 02 54 35.0 -0.2**
comp=Z,37nm,0.8s,baz=213,slow=11,SNR=32
PETK LR LR 03 03 44.1
comp=Z,680nm,18.7s,baz=222,slow=40
comp=Z,37nm,0.8s
PETK Petropavlovsk- 21.04 30 P **P 02 54 35.0 -0.2**
TPUB Ta-pu 21.35 240 P **P 02 54 37.4 -1.5**
TPUB IAmb IAmb 02 54 39.5
comp=Z,213nm,1.7s
PET Petropavlovsk 21.37 31 P **P 02 54 39.3 +0.6**
PET IAmb IAmb 02 54 54.1
comp=Z,187nm,1.2s
PET Petropavlovsk 21.37 31*ce*P **P 02 54 41.5 +2.8**
PET pmax pmax
comp=Z,78nm,0.8s
GUMO Guam 22.50 169 P **P 02 54 49.6 -1.4**
comp=Z,22nm,0.3s,baz=171,slow=9.1,SNR=5.9
comp=Z,22nm,0.3s
WHN Wuhan 22.56 264 ⇓P **P 02 54 51.3 -0.4**
WHN pmax pmax
comp=Z,120nm,0.8s
WHN LR LR
comp=Z,3μm,10.3s
WHN LR LR
comp=Z,4μm,10.4s
WHN LR LR
comp=Z,5μm,11.2s
TIY Taiyuan 22.61 283 *e*P **P 02 54 52.3 +0.1**
TIY pmax pmax
comp=Z,21nm,0.7s
TIY LR LR
comp=Z,1μm,19.1s
TIY LR LR
comp=Z,2μm,17.7s
LYN LuoYang 23.00 275 ⇑P **P 02 54 53.3 -3.0**
LYN pP pP 02 55 02.3 -1.4
LYN sP sP 02 55 06.0 -1.2
LYN PP **PnPn 02 55 30.9 +10**
LYN S **S 02 59 01.5 -3.6**
LYN pmax pmax
comp=Z,30nm,1.1s
LYN pmax pmax
comp=Z,610nm,6.9s
LYN LR LR
comp=Z,1μm,14.5s
LYN LR LR
comp=Z,1μm,21.7s
LYN LR LR
comp=Z,2μm,22.0s
HHC Hu-ho-hao-te 23.26 291 *e*P **P 02 54 57.5 -1.5**
HHC S **S 02 59 03.6 -5.9**
HHC pmax pmax
comp=Z,110nm,1.2s
HHC pmax pmax
comp=Z,640nm,4.1s
HHC LR LR
comp=Z,900nm,14.9s
HHC LR LR
comp=Z,2μm,15.2s
HHC LR LR
comp=Z,2μm,15.2s
BTO Baotou 24.42 290 *e*P **P 02 55 09.8 -0.2**
BTO LR LR
comp=Z,2μm,17.8s
BTO LR LR
comp=Z,3μm,22.1s
CNSH ChangSha 24.62 260 ⇓P **P 02 55 11.1 -0.7**
CNSH S **S 02 59 31.8 +0.4**
CNSH pmax pmax
comp=Z,50nm,0.8s
CNSH LR LR
comp=Z,1μm,15.6s
CNSH LR LR
comp=Z,2μm,14.0s
CNSH LR LR
comp=Z,1μm,13.4s
MA2 Magadan 24.65 12 P **P 02 55 12.2 +0.5**
comp=Z,84nm,0.7s,baz=202,slow=9.2,SNR=16
MA2 LR LR 03 05 51.6
comp=Z,1μm,18.5s,baz=196,slow=39
comp=Z,84nm,0.7s
MA2 Magadan 24.65 12 P **P 02 55 12.2 +0.5**
MA2 Magadan 24.65 12*ce*P **P 02 55 13.0 +1.3**
MA2 pmax pmax
comp=Z,97nm,0.7s
CIT Chita 25.10 319 *e*P **P 02 55 14.0 -2.0**
CIT *e* 02 55 21.2
CIT *e* 02 55 54.6
CIT *e* 02 56 02.8
XAN Xi'an 25.97 275 ⇑P **P 02 55 22.3 -1.8**
XAN pP sP 02 55 34.8 -0.6
XAN pmax pmax
comp=Z,24nm,1.0s
XAN LR LR
comp=Z,2μm,19.4s
XAN LR LR
comp=Z,1μm,19.7s
XAN LR LR
comp=Z,2μm,16.8s
ENH Enshi 26.59 267 P **P 02 55 27.8 -1.9**
YAK Yakutsk 27.09 349 P **P 02 55 33.2 -0.5**
comp=Z,120nm,0.7s,baz=152,slow=1.5,SNR=22
YAK LR LR 03 06 05.8
comp=Z,1μm,21.4s,baz=242,slow=36
comp=Z,120nm,0.7s
YAK Yakutsk 27.09 349 P **P 02 55 32.9 -0.9**
YAK Yakutsk 27.09 349*d i*P **P 02 55 33.9 +0.1**
YAK *e**PP **pP 02 55 38.3 -3.4**
YAK *e* 02 56 15.5
YAK *e*PPP PPP 02 56 27.0
YAK *e* 02 59 02.0
YAK *e*S **S 03 00 13.9 +4.0**
YAK *e**SS **sS 03 00 20.3 -2.8**
YAK *e*SS **SnSn 03 01 21.4 +3.8**
YAK *e*SSS SSS 03 01 37.1
YAK pmax pmax
comp=Z,160nm,0.8s
YAK pmax pmax
comp=N,57nm,1.0s
YAK pmax pmax
comp=E,22nm,0.9s
YAK pmax pmax
comp=Z,164nm,2.0s
YAK pmax pmax
comp=N,128nm,1.7s
YAK pmax pmax
comp=E,166nm,1.9s
YAK smax smax
comp=N,255nm,2.2s
YAK smax smax
comp=E,92nm,2.2s
YAK MLR MLR
comp=Z,605nm,20.0s
YAK MLR MLR
comp=N,869nm,20.0s
YAK MLR MLR
comp=E,792nm,20.0s
ULN Ulaanbaatar 27.50 306 P **P 02 55 36.5 -1.3**
ULN IAmb IAmb 02 55 41.5
comp=Z,99nm,1.2s
ULN Ulaanbaatar 27.50 306*ce*P **P 02 55 37.0 -0.8**
ULN pmax pmax
comp=Z,136nm,1.7s
ULN Ulaanbaatar 27.50 306 P **P 02 55 36.2 -1.6**
comp=Z,4μmcomp=Z,285nm,1.4s
SONM Songino Array 27.93 306 P **P 02 55 40.5 -1.1**
comp=Z,50nm,1.2s,baz=103,slow=9.1,SNR=35
SONM ScP **ScP 03 02 36.1 +0.7**
comp=Z,3.4nm,1.0s,baz=124,slow=2.6,SNR=8.9
SONM LR LR 03 07 15.4
comp=Z,2μm,18.3s,baz=103,slow=38
comp=Z,50nm,1.2s
SONM Songino Array 27.93 306 P **P 02 55 41.1 -0.4**
SONM IAmb IAmb 02 55 45.6
comp=Z,91nm,1.3s
SONM Songino Array 27.93 306 P **P 02 55 41.2 -0.4**
SONM pmax pmax
comp=Z,91nm,1.3s
SEY Seymchan 28.08 11 P **P 02 55 43.2 +0.6**
comp=Z,26nm,0.8s,baz=203,slow=6.3,SNR=21
comp=Z,26nm,0.8s
SEY Seymchan 28.08 11*ce*P **P 02 55 43.9 +1.3**
SEY pmax pmax
comp=Z,67nm,1.4s
H11N2 WAKE ISLAND Hy 28.14 118 T T 03 24 56.0
baz=311,slow=75
H11N1 WAKE ISLAND Hy 28.15 118 T T 03 25 04.9
baz=311,slow=75
H11N3 WAKE ISLAND Hy 28.16 118 T T 03 24 57.5
baz=311,slow=75
BOD Bodaibo 28.20 330 *e*P **P 02 55 43.4 -0.3**
BOD pmax pmax
comp=Z,92nm,1.6s
H11S1 WAKE ISLAND Hy 28.80 120 T T 03 25 39.3
baz=312,slow=75
H11S3 WAKE ISLAND Hy 28.80 120 T T 03 25 43.0
baz=312,slow=75
H11S2 WAKE ISLAND Hy 28.82 120 T T 03 25 40.2
baz=312,slow=75
SHEM Shemya Is, Ala 28.97 44 LR LR 03 05 24.9
comp=Z,318nm,19.9s,baz=296,slow=32
LZH Lanzhou 29.64 281 *e*P **P 02 55 57.6 +0.6**
LZH pP pP 02 56 04.8 -0.2
LZH sP sP 02 56 08.8 +0.5
LZH PcP **PcP 02 59 01.3 +0.2**
LZH S **S 03 00 49.4 -1.5**
LZH SS **SnSn 03 02 25.3 +4.8**
LZH pmax pmax
comp=Z,54nm,1.1s
LZH LR LR
comp=Z,2μm,16.1s
LZH LR LR
comp=Z,910nm,16.1s
LZH LR LR
comp=Z,2μm,17.7s
GYA Guiyang 30.39 262 ⇓*i*P **P 02 56 01.9 -1.7**
GYA pP pP 02 56 12.1 +0.4
GYA sP sP 02 56 18.0 +3.0
GYA pmax pmax
comp=Z,91nm,1.1s
GYA pmax pmax
comp=Z,530nm,4.6s
GYA LR LR
comp=Z,1μm,14.6s
IRK Irkutsk 30.43 314 *e*P **P 02 56 02.6 -1.0**
IRK pmax pmax
comp=Z,71nm,2.2s
ZAK Zakamensk 30.51 310 *e*P **P 02 56 03.8 -0.7**
ZAK pmax pmax
comp=Z,15nm,1.2s
CD2 Chengdu 31.03 272 P **P 02 56 08.3 -0.9**
CD2 S **S 03 01 12.3 -0.4**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 LR LR
comp=Z,1μm,12.2s
CD2 LR LR
comp=Z,2μm,13.2s
CD2 LR LR
comp=Z,2μm,13.7s
DAV Davao City (W) 31.78 209 LR LR 03 08 19.0
comp=Z,700nm,21.5s,baz=60,slow=35
QIZ Qiongzhong 31.85 246 P **P 02 56 16.0 -0.4**
QIZ S **S 03 01 31.8 +6.3**
QIZ LR LR
comp=Z,880nm,14.3s
QIZ LR LR
comp=Z,850nm,17.5s
QIZ LR LR
comp=Z,680nm,11.9s
GTA Gaotai 32.30 289 ⇑P **P 02 56 21.0 +0.6**
GTA pP sP 02 56 34.4 +2.6
GTA sP pP 02 56 39.8 +11
GTA pmax pmax
comp=Z,26nm,1.0s
GTA pmax pmax
comp=Z,210nm,7.3s
GTA LR LR
comp=Z,800nm,21.1s
GTA LR LR
comp=Z,890nm,20.7s
GTA LR LR
comp=Z,1μm,22.9s
KMI Kunming 34.14 262 ⇓P **P 02 56 35.5 -1.2**
KMI pP pP 02 56 45.5 +0.7
KMI sP sP 02 56 49.9 +1.8
KMI pmax pmax
comp=Z,41nm,1.1s
KMI pmax pmax
comp=Z,190nm,6.3s
KMI LR LR
comp=Z,1μm,21.7s
KMI LR LR
comp=Z,720nm,20.4s
KMI LR LR
comp=Z,1μm,22.0s
PZH PanZhiHua 34.34 265 ⇓P **P 02 56 36.8 -1.5**
PZH pP **sP 02 56 48.1 -1.5**
PZH sP pP 02 56 55.4 +9.1
PZH S **S 03 02 06.0 +1.7**
PZH pmax pmax
comp=Z,60nm,1.0s
PZH pmax pmax
comp=Z,230nm,6.8s
PZH LR LR
comp=Z,4μm,16.7s
PZH LR LR
comp=Z,3μm,18.3s
PZH LR LR
comp=Z,4μm,17.4s
BILL Bilibino 35.35 16 P **P 02 56 47.1 +0.8**
BILL IAmb IAmb 02 56 48.9
comp=Z,28nm,0.8s
BILL Bilibino 35.35 16⇑*e*P **P 02 56 47.2 +0.8**
BILL pmax pmax
comp=Z,36nm,1.0s
TIXI Tiksi 36.39 354 P **P 02 56 55.1 -0.1**
comp=Z,34nm,0.9s,baz=90,slow=23,SNR=66
TIXI LR LR 03 12 34.1
comp=Z,656nm,18.6s,baz=352,slow=38
comp=Z,34nm,0.9s
TIXI Tiksi 36.39 354 P **P 02 56 55.2 0.0**
TIXI IAmb IAmb 02 57 00.3
comp=Z,34nm,0.9s
TIXI Tiksi 36.39 354*ce*P **P 02 56 54.8 -0.4**
TIXI pmax pmax
comp=Z,42nm,1.0s
MYLDM Lahad Datu 36.68 219 P **P 02 56 56.9 -1.4**
MYLDM IAmb IAmb 02 56 59.3
comp=Z,50nm,1.2s
MYLDM Lahad Datu 36.68 219 P **P 02 56 55.3 -3.0**
comp=Z,26nm,1.1s
GOMU GeErMu 36.77 284 P **P 02 56 56.9 -2.4**
GOMU pmax pmax
comp=Z,28nm,0.6s
GOMU pmax pmax
comp=Z,120nm,3.7s
GOMU LR LR
comp=Z,630nm,17.5s
GOMU LR LR
comp=Z,540nm,19.6s
UBPT Khong Chiam 37.44 246 P **P 02 57 03.2 -1.6**
UBPT Khong Chiam 37.44 246 P **P 02 57 04.8 0.0**
SIJI Sorong 37.55 195 P **P 02 57 03.8 -1.9**
comp=Z,22nm,0.7s,baz=16,slow=5.9,SNR=6.3
SIJI LR LR 03 10 42.6
comp=Z,1μm,21.0s,baz=50,slow=34
comp=Z,22nm,0.7s
SIJI Sorong 37.55 195 P **P 02 57 03.5 -2.2**
comp=Z,33nm,0.9s
GENI Genyem 38.24 181 P **P 02 57 12.1 +0.6**
comp=Z,142nm,1.0s
GTOI Gorontalo 38.66 209 P **P 02 57 12.4 -2.6**
NIKH Nikolski High 39.05 48 P **P 02 57 17.6 -0.3**
baz=265
TOLI2 Tolitoli 39.16 212 P **P 02 57 19.2 +0.1**
MRSI Marisa 39.24 210 P **P 02 57 18.0 -1.8**
comp=Z,43nm,1.3s
FAKI Fak Fak 39.35 193 P **P 02 57 19.6 -1.2**
FAKI IAmb IAmb 02 57 23.0
comp=Z,86nm,1.1s
FAKI Fak Fak 39.35 193 P **P 02 57 19.1 -1.7**
comp=Z,2μmcomp=Z,81nm,0.9s
SANI Sanana 40.10 203 P **P 02 57 25.3 -1.7**
comp=Z,80nm,0.8s
CHTO Chiang Mai 40.37 256 P **P 02 57 28.4 -0.9**
CHTO Chiang Mai 40.37 256 P **P 02 57 28.4 -0.9**
DGZ Jazzator, Alta 40.56 307 *i* P **P 02 57 31.6 +0.8**
DGZ pmax pmax
comp=Z,196nm,1.2s
CMAR Chiang Mai Arr 40.57 256 P **P 02 57 29.5 -1.4**
comp=Z,2.2nm,0.3s,baz=46,slow=6.0,SNR=13
CMAR PcP **PcP 02 59 34.0 +1.0**
comp=Z,5.7nm,0.8s,baz=28,slow=2.2,SNR=8.6
CMAR LR LR 03 15 06.4
comp=Z,390nm,20.2s,baz=55,slow=38
comp=Z,2.2nm,0.3s
CMAR Chiang Mai Arr 40.57 256 P **P 02 57 30.0 -0.9**
CMAR Chiang Mai Arr 40.57 256 P **P 02 57 30.0 -0.9**
KRAI Karang Ratu 40.60 199 P **P 02 57 31.5 +0.3**
comp=Z,154nm,0.8s
APSI Ampana 40.62 210 P **P 02 57 28.6 -2.7**
comp=Z,81nm,1.3s
WMQ Urumqi 40.80 298 *e*P **P 02 57 34.1 +1.4**
WMQ pP sP 02 57 44.0 -0.2
WMQ PP **PnPn 02 59 11.3 +0.2**
WMQ S **S 03 03 43.5 +1.6**
WMQ pmax pmax
comp=Z,94nm,1.1s
WMQ pmax pmax
comp=Z,500nm,3.9s
WMQ LR LR
comp=Z,410nm,14.9s
WMQ LR LR
comp=Z,620nm,19.9s
WMQ LR LR
comp=Z,570nm,20.7s
NLAI Namlea 40.89 201 P **P 02 57 31.9 -1.6**
comp=Z,8μmcomp=Z,27nm,0.9s
AAI Ambon 41.01 199 P P 02 57 39.5 +5.0
PCI Palu 41.37 212 P **P 02 57 33.8 -3.7**
comp=Z,4μmcomp=Z,86nm,1.0s
BNDI Bandanaira 41.39 196 P **P 02 57 37.6 -0.1**
comp=Z,276nm,0.9s
LSA Lhasa 41.67 276 P **P 02 57 40.5 0.0**
LSA IAmb IAmb 02 57 43.3
comp=Z,120nm,1.2s
LSA Lhasa 41.67 276 P **P 02 57 41.4 +0.9**
LSA pmax pmax
comp=Z,81nm,1.1s
LSA Lhasa 41.67 276 P **P 02 57 40.5 0.0**
LSA pmax pmax
comp=Z,120nm,1.2s
TNA Tin City 42.21 29 P **P 02 57 43.2 -0.6**
baz=251
ZAA0 Zalesovo Array 42.24 313 P **P 02 57 44.0 -0.3**
ZALV Zalesovo Beam 42.24 313 P **P 02 57 44.2 -0.1**
comp=Z,127nm,1.1s,baz=93,slow=6.4,SNR=123
ZALV PcP **PcP 02 59 37.9 +0.1**
comp=Z,11nm,0.9s,baz=125,slow=4.0,SNR=3.0
ZALV LR LR 03 16 07.5
comp=Z,658nm,18.4s,baz=80,slow=37
comp=Z,127nm,1.1s
ZALV Zalesovo Beam 42.24 313 P **P 02 57 44.0 -0.2**
ZSN Zaisan 42.38 304*c i*P **P 02 57 45.0 -0.5**
ZSN pmax pmax
comp=Z,78nm,1.3s
ZSN Zaisan 42.38 304⇑*i*P **P 02 57 45.0 -0.5**
comp=Z,78nm,1.3s,baz=303
SHL Shillong 42.74 270 P **P 02 57 46.3 -2.6**
SHL Shillong 42.74 270 P **P 02 57 46.3 -2.6**
SHL pmax pmax
comp=Z,23nm,0.9s
ANM Nome 42.95 31 P **P 02 57 49.0 -0.9**
baz=255
NRIK Noril'sk 44.07 336 P **P 02 57 59.1 +0.3**
comp=Z,53nm,1.1s,baz=105,slow=8.3,SNR=40
NRIK LR LR 03 17 14.5
comp=Z,1μm,18.8s,baz=94,slow=37
comp=Z,53nm,1.1s
NRIK Noril'sk 44.07 336 P **P 02 57 58.6 -0.3**
NRIK IAmb IAmb 02 58 00.5
comp=Z,90nm,1.2s
NRIK Noril'sk 44.07 336⇑*e*P **P 02 57 58.6 -0.3**
SDPT Sand Point 44.10 45 P **P 02 57 58.0 -1.2**
baz=269
MK31 Makanchi Array 44.20 303 P **P 02 58 00.2 -0.1**
MK31 Makanchi Array 44.20 303 *i* P **P 02 57 59.8 -0.5**
MK31 pmax pmax
comp=Z,147nm,1.0s
MKAR Makanchi Array 44.20 303 P **P 02 58 00.0 -0.2**
comp=Z,86nm,1.0s,baz=88,slow=7.9,SNR=192
MKAR LR LR 03 17 09.7
comp=Z,2μm,18.1s,baz=93,slow=37
comp=Z,86nm,1.0s
MKAR Makanchi Array 44.20 303 P **P 02 58 00.3 +0.1**
MKAR Makanchi Array 44.20 303 P **P 02 58 00.3 +0.1**
BRDH Bariadhala 44.26 267 P **P 02 58 00.3 -0.6**
comp=Z,86nm,0.3s,baz=60,slow=12,SNR=9.2
BRDH LR LR 03 16 34.7
comp=Z,606nm,20.6s,baz=84,slow=36
comp=Z,86nm,0.3s
BNSI Bone 44.41 210 P **P 02 58 00.8 -1.3**
comp=Z,23nm,0.9s
MAKZ Makanchi 44.41 303 P **P 02 58 01.9 0.0**
MAKZ Makanchi 44.41 303 P **P 02 58 01.9 0.0**
MAKZ pmax pmax
comp=Z,116nm,1.1s
SAUI Saumlaki 44.47 193 P **P 02 58 02.7 +0.2**
KAPI Kappang 45.11 210 LR LR 03 15 00.9
comp=Z,162nm,21.7s,baz=32,slow=34
KAPI Kappang 45.11 210 P **P 02 58 06.4 -1.3**
KAPI IAmb IAmb 02 58 23.4
comp=Z,106nm,1.7s
KAPI Kappang 45.11 210 P **P 02 58 06.4 -1.3**
KAPI pmax pmax
comp=Z,106nm,1.7s
KAPI Kappang 45.11 210 P **P 02 58 04.5 -3.2**
comp=Z,30nm,1.0s
SEM Semipalatinsk 45.15 308 *e*P **P 02 58 06.2 -1.8**
SEM pmax pmax
comp=Z,64nm,1.1s
SEM Semipalatinsk 45.15 308 *e*P **P 02 58 06.3 -1.8**
comp=Z,64nm,1.1s,baz=308
N16K Nishlik Lake 45.26 37 P **P 02 58 09.5 +1.0**
baz=265
CHGN Chignik 45.27 43 P **P 02 58 09.0 +0.4**
baz=270
TAPN Taplejung 45.38 275 *e*P **P 02 58 10.3 +0.1**
PMG Port Moresby 45.43 171 LR LR 03 17 06.8
comp=Z,125nm,18.8s,baz=333,slow=36
O16K Kokwok River B 45.54 39 P **P 02 58 11.3 +0.6**
baz=267
P16K Nushagak River 45.56 39 P **P 02 58 12.9 +2.1**
baz=268
R16K Pilot Point 45.74 42 P **P 02 58 14.9 +2.7**
baz=269
ODAN Odare 45.84 274 *e*P **P 02 58 13.7 -0.1**

BBKI	Banjar Baru	45.94	217	P		P	02 58 17.4 +3.1
	comp=Z,64nm,1.0s						
O17K	Koliganek Bris	46.06	38	P		P	02 58 15.5 +0.8
	baz=268						
KURK	Kurchatov	46.16	309	P		P	02 58 15.2 -0.5
KURK	Kurchatov	46.16	309	*ce*P		P	02 58 15.1 -0.5
KURK				pmax		pmax	
	comp=Z,261nm,1.0s						
KURBB	Kurchatov Arra	46.22	309	P		P	02 58 15.6 -0.6
	comp=Z,140nm,1.0s,baz=84,slow=8.4,SNR=154						
KURBB				LR		LR	03 18 18.3
	comp=Z,884nm,18.5s,baz=58,slow=37						
	comp=Z,140nm,1.0s						
KURBB	Kurchatov Arra	46.22	309	P		P	02 58 15.3 -0.9
Q16K	King Salmon	46.25	40	P		P	02 58 17.5 +1.2
	baz=269						
RAMN	Ramite	46.44	275	*e*P		P	02 58 17.7 -0.8
	comp=Z,117nm,0.8s						
JIRN	Jiri	46.48	276	*e*P		P	02 58 18.4 -0.5
	comp=Z,107nm,0.7s						
GUN	Gumba	46.63	276	*e*P		P	02 58 19.7 -0.4
	comp=Z,105nm,0.9s						
Q17K	Contact Creek	46.65	41	P		P	02 58 20.0 +0.5
	baz=270						
N18K	Kilae Creek	46.69	37	P		P	02 58 22.2 +2.5
N18K				IAmb		IAmb	02 58 42.7
	comp=Z,42nm,1.1s						
N18K	Kilae Creek	46.69	37	P		P	02 58 21.3 +1.6
	baz=268						
PDGK	Podgornoye	46.76	299	P		P	02 58 20.2 -0.5
TTA	Tatalina	46.77	34	P		P	02 58 21.8 +1.4
TTA	Tatalina	46.77	34	P		P	02 58 21.8 +1.4
TTA				pmax		pmax	
	comp=Z,16nm,1.0s						
TTA	Tatalina	46.77	34	P		P	02 58 20.3 -0.1
	baz=266						
SHLS	Shalkode	46.81	298	*e*P		P	02 58 17.7 -3.4
SHLS				pmax		pmax	
	comp=Z,13nm,0.8s						
SHLS	Shalkode	46.81	298	*e*P		P	02 58 17.7 -3.4
	comp=Z,13nm,0.8s,baz=298						
CHIR	Chirikof Islan	46.85	44	P		P	02 58 21.6 +0.6
	baz=273						
P18K	Big Mountain,	46.99	39	P		P	02 58 24.2 +2.1
P18K				IAmb		IAmb	02 58 37.1
	comp=Z,41nm,1.1s						
P18K	Big Mountain,	46.99	39	P		P	02 58 23.9 +1.8
	baz=270						
O18K	Koktuh Hills	47.01	38	P		P	02 58 22.6 +0.3
O18K	Koktuh Hills	47.01	38	P		P	02 58 24.2 +2.0
	baz=269						
Q18K	Katmai Hardscr	47.11	40	P		P	02 58 25.0 +1.9
	baz=270						
UZB	Uzynbulak	47.13	299	*e*P		P	02 58 22.4 -1.2
UZB				*e*S		S	03 05 12.8 -1.6
UZB				pmax		pmax	
	comp=Z,14nm,1.0s						
UZB	Uzynbulak	47.13	299	*e*P		P	02 58 22.5 -1.2
	comp=Z,14nm,1.0s,baz=298						
UZB				*e*S		S	03 05 12.8 -1.6
	baz=298						
PKI	Pulchoki	47.15	276	*e*P		P	02 58 23.2 -0.9
	comp=Z,108nm,1.2s						
PKIN	Phulchoki	47.15	276	*e*P		P	02 58 23.6 -0.5
	comp=Z,64nm,0.7s						
KKN	Kakani	47.16	276	*e*P		P	02 58 23.4 -0.7
TDK	Taldyqorghan	47.17	301	*e*P		P	02 58 23.0 -0.7
TDK				pmax		pmax	
	comp=Z,115nm,1.3s						
TDK	Taldygorghan	47.17	301	*e*P		P	02 58 23.1 -0.7
	comp=Z,115nm,1.3s,baz=301						
L19K	White Mountain	47.26	35	P		P	02 58 25.4 +1.2
L19K	White Mountain	47.26	35	P		P	02 58 25.5 +1.4
	baz=267						
KPKS	Kokpek	47.30	299	*e*P		P	02 58 23.6 -1.3
KPKS				*e*S		S	03 05 14.5 -2.2
KPKS				pmax		pmax	
	comp=Z,27nm,1.2s						
KPKS	Kokpek	47.30	299	*e*P		P	02 58 23.6 -1.3
	comp=Z,27nm,1.2s,baz=299						
KPKS				*e*S		S	03 05 14.5 -2.2
	baz=299						
DMN	Daman	47.37	276	*e*P		P	02 58 25.3 -0.5
N19K	Bonanza Creek	47.39	37	P		P	02 58 27.2 +1.9
	baz=269						
ZHN	Zhinishke	47.54	299	*e*P		P	02 58 25.4 -1.4
ZHN	Zhinishke	47.54	299	*e*P		P	02 58 25.4 -1.4
	baz=298						
SATY	Saty	47.59	299	*e*P		P	02 58 26.3 -0.9
SATY				pmax		pmax	
	comp=Z,34nm,1.6s						
SATY	Saty	47.59	299	*e*P		P	02 58 26.3 -0.9
	comp=Z,34nm,1.6s,baz=298						
GKN	Gorkha	47.59	277	*e*P		P	02 58 26.6 -0.8
	comp=Z,304nm,1.1s						
K20K	Telida	47.68	34	P		P	02 58 28.8 +1.4
K20K				IAmb		IAmb	02 58 44.6
	comp=Z,35nm,1.0s						
K20K	Telida	47.68	34	P		P	02 58 29.2 +1.8
	baz=267,SNR=8.9						
J20K	Nowinta River	47.69	33	P		P	02 58 28.4 +1.0
J20K				IAmb		IAmb	02 58 45.1
	comp=Z,47nm,1.1s						
J20K	Nowinta River	47.69	33	P		P	02 58 30.4 +2.9
	baz=266,SNR=12						
L20K	Farewell, AK	47.72	35	P		P	02 58 29.5 +1.8
	baz=268						
ARXS	Arharly	47.74	300	*e*P		P	02 58 28.4 +0.1
A21K	Barrow	47.80	23	P		P	02 58 29.9 +1.7
	baz=257						
SOEI	Soe	47.91	202	P		P	02 58 29.7 -0.1
SOEI	Soe	47.91	202	P		P	02 58 31.0 +1.3
	comp=Z,1µmcomp=Z,142nm,1.0s						
IMAR	Indian Mountai	48.00	30	P		P	02 58 31.0 +1.1
P19K	Oil Pt	48.01	39	P		P	02 58 31.5 +1.5
	baz=271						
G21K	Allakaket	48.15	29	P		P	02 58 32.4 +1.4
	baz=265,SNR=12						
DANN	Dangsing	48.16	278	*e*P		P	02 58 31.3 -0.6
	comp=Z,297nm,0.9s						
F21K	Alatna River	48.23	28	P		P	02 58 33.8 +2.2
	baz=264,SNR=10						
TARG	Taragay, Kyrgy	48.34	297	P		P	02 58 31.5 -1.9
TARG	Taragay, Kyrgy	48.34	297	P		P	02 58 31.5 -1.9
TARG				pmax		pmax	
	comp=Z,74nm,0.7s						
H21K	Melozitna Rive	48.37	31	P		P	02 58 34.1 +1.4
H21K				IAmb		IAmb	02 58 45.4
	comp=Z,49nm,1.4s						
H21K	Melozitna Rive	48.37	31	P		P	02 58 35.2 +2.6
	baz=266,SNR=9.4						
CHKK	Chushkaly	48.41	300	*e*P		P	02 58 32.4 -0.9
CHKK	Chushkaly	48.41	300	*e*P		P	02 58 32.5 -0.9
	baz=300						
KDAK	Kodiak Island	48.42	41	P		P	02 58 34.1 +0.9
	comp=Z,14nm,0.6s,baz=292,slow=6.9,SNR=8.6						
KDAK				LR		LR	03 18 51.3
	comp=Z,205nm,21.2s,baz=265,slow=36						
	comp=Z,14nm,0.6s						
KDAK	Kodiak Island	48.42	41	P		P	02 58 34.0 +0.8
	baz=273						
Q20K	Shuyak Island	48.48	40	P		P	02 58 34.7 +1.1
	baz=273						
N20K	Mount Spurr	48.50	37	P		P	02 58 35.3 +1.5
	baz=270						
SPCR	Spurr Chakacha	48.50	37	P		P	02 58 34.4 +0.5
	baz=270						
PPLA	Purkeypile	48.51	34	P		P	02 58 36.5 +2.4
PPLA				IAmb		IAmb	02 58 51.4
	comp=Z,57nm,1.2s						
PPLA	Purkeypile	48.51	34	P		P	02 58 35.6 +1.6
	baz=269						
BATI	Baumata	48.52	203	LR		LR	03 18 36.6
	comp=Z,467nm,21.9s,baz=32,slow=36						
BATI	Baumata	48.52	203	P		P	02 58 34.9 +0.5
	comp=Z,112nm,0.9s						
MDOK	Medeo	48.53	299	P		P	02 58 34.1 -0.4
MDOK	Medeo	48.53	299	*e*P		P	02 58 33.3 -1.2
	baz=299						
MDOK				*e*S		S	03 05 30.6 -3.7
	baz=299						
CAST	Castle Rocks	48.57	34	P		P	02 58 36.0 +1.7
CAST				IAmb		IAmb	02 58 51.5
	comp=Z,32nm,1.2s						
CAST	Castle Rocks	48.57	34	P		P	02 58 34.9 +0.6
	baz=269						
HNR	Honiara	48.59	154	LR		LR	03 17 04.4
	comp=Z,4µm,21.8s,baz=337,slow=34						
TNSS	Tian-Shan	48.63	299	*e*P		P	02 58 35.0 -0.5
TNSS	Tian-Shan	48.63	299	*e*P		P	02 58 35.0 -0.5
	baz=299						
I21K	Tanana	48.68	31	P		P	02 58 37.1 +2.0
I21K				IAmb		IAmb	02 58 53.0
	comp=Z,39nm,1.1s						
I21K	Tanana	48.68	31	P		P	02 58 36.5 +1.4
	baz=267,SNR=10						
F22K	John River	48.76	28	P		P	02 58 37.5 +1.8
	baz=265						
SKT	Skwentna	48.82	36	P		P	02 58 37.3 +1.1
	baz=270						
HOM	Homer	48.82	39	P		P	02 58 37.7 +1.6
	baz=272						
KUU	Kurty	48.86	300	*e*P		P	02 58 34.9 -1.9
KUU				*e*S		S	03 05 35.6 -3.0
KUU				pmax		pmax	
	comp=Z,96nm,1.4s						
KUU	Kurty	48.86	300	*e*P		P	02 58 35.0 -1.9
	comp=Z,96nm,1.4s,baz=300						
KUU				*e*S		S	03 05 35.6 -3.0
	baz=300						
E22K	Anaktuvuk Pass	48.96	27	P		P	02 58 39.2 +2.0
	baz=265						
H22K	Ishtalitna Cre	48.97	30	P		P	02 58 39.1 +1.8
	baz=267,SNR=7.4						
G22K	Bettles	48.98	29	P		P	02 58 39.0 +1.6
	baz=266,SNR=18						
CAPN	Captain Cook N	49.02	37	P		P	02 58 38.9 +1.2
	baz=272						
BPAW	Bear Paw Mtn.	49.07	33	P		P	02 58 39.6 +1.4
BPAW				IAmb		IAmb	02 58 50.9
	comp=Z,42nm,1.5s						
BPAW	Bear Paw Mtn.	49.07	33	P		P	02 58 39.5 +1.4
	baz=269						
KTH	Kantishna Hill	49.10	33	P		P	02 58 39.2 +0.8
SUA	Susitna One	49.20	36	P		P	02 58 40.3 +1.0
	baz=272						
MLY	Manley	49.20	31	P		P	02 58 40.6 +1.4
MLY				IAmb		IAmb	02 58 52.1
	comp=Z,71nm,1.4s						
MLY	Manley	49.20	31	P		P	02 58 40.5 +1.3
	baz=268,SNR=14						
MTN	Manton Dam	49.25	192	P		P	02 58 40.4 +0.5
BRSE	Bradley Lake S	49.27	38	P		P	02 58 40.3 +0.6
	baz=273						
ULHL	Ulahol	49.34	298	P		P	02 58 41.4 +0.7
	SNR=6.5						
TRF	Thorofare Moun	49.38	34	P		P	02 58 41.2 +0.6
	baz=270						
D23K	Nanushuk River	49.44	26	P		P	02 58 42.3 +1.4
	baz=265,SNR=6.9						
BOOM	Boomskoye usch	49.49	298	P		P	02 58 41.4 -0.5
BOOM				IAmb		IAmb	02 58 54.4
	comp=Z,41nm,0.9s						
BOOM	Boomskoye usch	49.49	298	P		P	02 58 41.4 -0.5
BOOM				pmax		pmax	
	comp=Z,41nm,0.9s						
COLD	Coldfoot	49.51	29	P		P	02 58 41.6 +0.2
COLD	Coldfoot	49.51	29	P		P	02 58 42.0 +0.6
	baz=267						
C23K	Itkillik River	49.55	25	P		P	02 58 42.7 +1.1
	baz=264,SNR=19						
G23K	Bananza Creek	49.55	29	P		P	02 58 43.1 +1.4
	baz=268,SNR=7.2						
COEN	Coen	49.59	177	P		P	02 58 43.1 +0.5
TKM2	Tokmak 2	49.62	299	P		P	02 58 43.5 +0.6
	SNR=52						
TWSI	Taliwang, Sumb	49.66	211	P		P	02 58 40.6 -2.5
	comp=Z,41nm,1.0s						
RC01	Rabbit Creek A	49.70	37	P		P	02 58 44.9 +2.0
	baz=273						
KLNI	Mataram	49.72	213	P		P	02 58 43.7 +0.2
	comp=Z,113nm,1.0s						
H23K	Yukon River	49.72	30	P		P	02 58 44.7 +1.6
H23K				IAmb		IAmb	02 58 57.0
	comp=Z,48nm,0.9s						
H23K	Yukon River	49.72	30	P		P	02 58 44.6 +1.6
	baz=269,SNR=20						
NRN	Naryn	49.73	297	P		P	02 58 42.5 -1.4
NRN				IAmb		IAmb	02 58 54.4
	comp=Z,27nm,0.9s						
NRN	Naryn	49.73	297	P		P	02 58 42.5 -1.4
NRN				pmax		pmax	
	comp=Z,27nm,0.9s						
BWN	Browne	49.74	33	P		P	02 58 43.4 +0.2
E23K	Chandalar	49.77	28	P		P	02 58 45.0 +1.5
	baz=267,SNR=29						
I23K	Minto, Yukon-K	49.79	31	P		P	02 58 44.6 +1.1
I23K				IAmb		IAmb	02 59 11.9
	comp=Z,27nm,1.1s						
I23K	Minto, Yukon-K	49.79	31	P		P	02 58 45.3 +1.8
	baz=270						
SRBI	Singaraja	49.81	214	P		P	02 58 58.1 +14
TOLK	Toolik Lake Re	49.82	27	P		P	02 58 45.4 +1.5
TOLK				IAmb		IAmb	02 58 56.5
	comp=Z,29nm,0.9s						
TOLK	Toolik Lake Re	49.82	27	P		P	02 58 45.2 +1.4
	baz=266,SNR=13						
SEW	Seward	49.90	38	P		P	02 58 45.5 +1.1
	baz=274						
NEA2	Nenana	49.91	32	P		P	02 58 46.3 +1.8
NEA2				IAmb		IAmb	02 58 57.3
	comp=Z,49nm,1.1s						
NEA2	Nenana	49.91	32	P		P	02 58 46.1 +1.6
	baz=270,SNR=14						
PMR	Palmer	49.97	36	P		P	02 58 46.5 +1.6
	baz=273						
MCK	McKinley	49.98	33	P		P	02 58 46.2 +1.1
MCK				IAmb		IAmb	02 59 14.9
	comp=Z,29nm,1.1s						
MCK	McKinley	49.98	33	P		P	02 58 46.2 +1.1
MCK				pmax		pmax	
	comp=Z,29nm,1.1s						
MCK	McKinley	49.98	33	P		P	02 58 46.6 +1.5
	baz=271						
RND	Reindeer	50.03	34	P		P	02 58 46.1 +0.7
RND				IAmb		IAmb	02 59 02.0
	comp=Z,52nm,1.2s						
RND	Reindeer	50.03	34	P		P	02 58 46.2 +0.7
RND				pmax		pmax	
	comp=Z,52nm,1.2s						
BRZS	Berezniki	50.03	309	*e*P		P	02 58 44.5 -1.1
BRZS				*e*S		S	03 05 51.8 -2.9
BRZS				pmax		pmax	
	comp=Z,29nm,1.3s						
BRZS	Berezniki	50.03	309	*e*P		P	02 58 44.5 -1.1
	comp=Z,29nm,1.3s,baz=308						
BRZS				*e*S		S	03 05 51.9 -2.9
	baz=308						
GHO	Glory Hole Cre	50.06	36	P		P	02 58 47.6 +1.9
KBK	Karagaybulak	50.15	299	P		P	02 58 47.3 +0.5
	SNR=27						
SGDS	Sogindy	50.17	300	*e*P		P	02 58 45.7 -1.1
SGDS				pmax		pmax	
	comp=Z,13nm,1.1s						
SGDS	Sogindy	50.17	300	*e*P		P	02 58 45.8 -1.1
	comp=Z,13nm,1.1s,baz=300						
BTLS	Baital	50.18	302	*e*P		P	02 58 46.2 -0.6
BTLS				*e*S		S	03 05 55.7 -1.3
BTLS				pmax		pmax	
	comp=Z,41nm,1.4s						
BTLS	Baital	50.18	302	*e*P		P	02 58 46.2 -0.6
	comp=Z,41nm,1.4s,baz=302						
BTLS				*e*S		S	03 05 55.8 -1.3
	baz=302						
WAT1	Susitna Watana	50.18	34	P		P	02 58 46.9 +0.3
	baz=272						
E24K	Your Creek	50.20	28	P		P	02 58 47.4 +0.7
	baz=268,SNR=23						
C24K	Franklin Bluff	50.20	25	P		P	02 58 47.6 +1.1
	baz=266						
CHMS	Chumysh	50.20	299	P		P	02 58 47.1 +0.1
	SNR=7.0						
MDM	Murphy Dome	50.27	32	P		P	02 58 48.2 +1.0
KSH	Kashi	50.30	295	P		P	02 58 51.4 +3.4
KSH				pP		sP	02 59 00.4 +0.9
KSH				pmax		pmax	
	comp=Z,18nm,1.2s						
KSH				LR		LR	
	comp=Z,360nm,14.1s						
KSH				LR		LR	
	comp=Z,590nm,15.1s						
KSH				LR		LR	
	comp=Z,820nm,15.5s						
USP	Ospenovka	50.31	300	P		P	02 58 47.3 -0.6
	SNR=27						
SML	Sawmill	50.34	36	P		P	02 58 48.6 +0.8
SML				IAmb		IAmb	02 59 17.9
	comp=Z,39nm,0.9s						
WRH	Wood River Hil	50.34	32	P		P	02 58 49.1 +1.4
WRH				IAmb		IAmb	02 59 01.3
	comp=Z,26nm,0.9s						
PWL	Port Wells	50.40	37	IAmb		IAmb	02 59 07.7
	comp=Z,64nm,1.2s						
PWL	Port Wells	50.40	37	P		P	02 58 48.7 +0.5
	baz=274						
H24K	Noodor Dome	50.41	30	IAmb		IAmb	02 59 01.5
	comp=Z,64nm,1.4s						
H24K	Noodor Dome	50.41	30	P		P	02 58 49.6 +1.3
	baz=270,SNR=13						
F24K	Squaw Lake	50.41	28	P		P	02 58 49.0 +0.7
	baz=269						
COLA	College	50.43	32	P		P	02 58 48.5 +0.1
COLA	College	50.43	32	P		P	02 58 48.5 +0.1
COLA				pmax		pmax	
	comp=Z,238nm,0.5s						
AAK	Ala-Archa	50.48	299	P		P	02 58 49.5 +0.2
	SNR=13						
AAK	Ala-Archa	50.48	299	P		P	02 58 49.4 0.0
	comp=Z,16nm,0.9s,baz=106,slow=6.7,SNR=20						
	comp=Z,16nm,0.9s						
AAK	Ala-Archa	50.48	299	P		P	02 58 49.1 -0.3
AAK				IAmb		IAmb	02 59 01.6
	comp=Z,28nm,0.9s						
AAK	Ala-Archa	50.48	299	*ce*P		P	02 58 48.0 -1.3
AAK				pmax		pmax	
	comp=Z,36nm,1.7s						
G24K	Hadweenzic Riv	50.56	29	P		P	02 58 51.0 +1.6
	baz=270,SNR=14						
WAT6	Susitna Watana	50.57	35	P		P	02 58 51.0 +1.3
	baz=273						
UCH	Uchtor	50.58	298	P		P	02 58 51.0 +0.5
	SNR=19						
OTUK	Ortayu	50.59	307	P		P	02 58 49.6 -0.4
POKR	Poker Plat Res	50.60	31	P		P	02 58 50.5 +0.7
POKR	Poker Plat Res	50.60	31	P		P	02 58 50.9 +1.1
	baz=271,SNR=29						
PSI	Prapat	50.62	239	LR		LR	03 20 39.7
	comp=Z,257nm,18.6s,baz=36,slow=37						
PSI	Prapat	50.62	239	P		P	02 58 51.1 +0.5
	comp=Z,15nm,0.8s						
DHY	Denali Highway	50.71	34	P		P	02 58 52.9 +2.2
	baz=273						
HDA	Harding Lake	50.83	32	P		P	02 58 52.0 +0.5
HDA	Harding Lake	50.83	32	P		P	02 58 52.2 +0.7
	baz=272,SNR=10						
IL31		50.84	32	P		P	02 58 51.8 +0.3
IL31				IAmb		IAmb	02 59 05.5
	comp=Z,46nm,1.1s						
ILAR	Eielson Array	50.84	32	P		P	02 58 52.3 +0.7
	comp=Z,10nm,0.7s,baz=270,slow=6.2,SNR=69						
ILAR				LR		LR	03 23 29.9
	comp=Z,119nm,18.1s,baz=264,slow=40						
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	50.84	32	P		P	02 58 52.4 +0.8
BVA0	Borovoye Array	50.89	313	*i* P		P	02 58 50.9 -1.2
BVAR	Borovoye Array	50.89	313	LR		LR	03 21 27.2
	comp=Z,679nm,19.4s,baz=77,slow=37						
BRVK	Borovoye	50.95	313	P		P	02 58 52.2 -0.3
BRVK				IAmb		IAmb	02 58 56.4
	comp=Z,57nm,1.1s						
BRVK	Borovoye	50.95	313	*ce*P		P	02 58 52.3 -0.2
BRVK				pmax		pmax	
	comp=Z,73nm,1.3s						
EKS2	Erkin-Say	50.98	299	P		P	02 58 53.4 +0.3
	SNR=7.0						
D25K	Kavik River	51.00	26	P		P	02 58 53.7 +0.9
	baz=269,SNR=16						
G25K	Bearman Lake	51.11	29	P		P	02 58 54.7 +1.2
	baz=271,SNR=6.7						
AML	Almayashu	51.19	299	P		P	02 58 55.7 +0.7
	SNR=58						
H25K	Birch Creek	51.24	30	P		P	02 58 56.3 +1.8
	baz=272,SNR=6.6						
F25K	Christian Rive	51.27	28	P		P	02 58 56.5 +1.7
	baz=271,SNR=12						
E25K	Arctic Village	51.29	27	P		P	02 58 55.8 +0.9
	baz=271,SNR=16						
M24K	Tolsona, Glenn	51.33	35	P		P	02 58 55.7 +0.4
	baz=275						
K24K	Donnelly Dome	51.38	33	P		P	02 58 55.9 +0.3
	baz=274						
PRP	Porcupine Dome	51.39	31	P		P	02 58 56.9 +1.1
PRP	Porcupine Dome	51.39	31	P		P	02 58 56.2 +0.4
	baz=273,SNR=6.0						
FYU	Fort Yukon	51.46	29	P		P	02 58 57.0 +0.9
FYU				IAmb		IAmb	02 59 09.0
	comp=Z,72nm,1.2s						
J25K	Salcha River,	51.50	32	P		P	02 58 57.5 +1.0
J25K	Salcha River,	51.50	32	P		P	02 58 56.6 0.0
	baz=274						
KLU	Klutina	51.51	36	P		P	02 58 57.8 +1.2
KLU				IAmb		IAmb	02 59 13.3
	comp=Z,35nm,1.0s						
KLU	Klutina	51.51	36	P		P	02 58 57.1 +0.4
	baz=276						
C26K	Camden Bay	51.52	25	P		P	02 58 57.6 +1.0
	baz=270,SNR=9.7						
Q23K	Middleton Isla	51.52	39	P		P	02 58 56.0 -0.7
	baz=277						
PAX	Paxson	51.58	34	P		P	02 58 57.6 +0.4
	baz=275						
DIV	Divide	51.62	36	P		P	02 58 57.2 -0.3
DIV				IAmb		IAmb	02 59 18.4
	comp=Z,53nm,1.0s						
BMAR	Burnt Mountain	51.69	28	P		P	02 58 59.3 +1.4
F26K	Sheenjek River	51.84	28	P		P	02 59 01.2 +2.1
	baz=272,SNR=34						
C27K	Jago River	51.94	26	P		P	02 59 01.3 +1.6
	baz=271,SNR=13						
G26K	Porcupine Rive	52.02	29	P		P	02 59 02.1 +1.8
	baz=273,SNR=16						
N25K	Chitina, Valde	52.12	36	P		P	02 59 02.3 +1.0
	baz=277						
DOT	Dot Lake	52.15	33	P		P	02 59 02.5 +1.1
SCRK	Sand Creek	52.16	33	P		P	02 59 02.5 +0.9
SCRK	Sand Creek	52.16	33	P		P	02 59 02.5 +0.9
	baz=275,SNR=7.0						
BMRM	Bremner River	52.20	37	P		P	02 59 02.3 +0.5
BMRM				IAmb		IAmb	02 59 18.1
	comp=Z,70nm,1.0s						
BMRM	Bremner River	52.20	37	P		P	02 59 03.4 +1.6
	baz=277						
J26L	Joseph Creek	52.29	32	P		P	02 59 03.7 +1.2
J26L	Joseph Creek	52.29	32	P		P	02 59 03.9 +1.4
	baz=275						
MENT	Mentasta	52.38	34	P		P	02 59 04.0 +0.9
I26K	Coal Creek Min	52.39	31	P		P	02 59 03.9 +0.8
I26K	Coal Creek Min	52.39	31	P		P	02 59 04.4 +1.3
	baz=275						
KNRA	Kununurra	52.46	194	P		P	02 59 03.0 -1.0
L26K	Log Cabin Wild	52.54	34	P		P	02 59 05.0 +0.7
L26K	Log Cabin Wild	52.54	34	P		P	02 59 06.2 +1.9
	baz=277,SNR=14						
LEM	Lembang	52.56	223	LR		LR	03 21 42.1
	comp=Z,172nm,21.3s,baz=28,slow=36						
GSI	Gunungsitoli	52.63	239	P		P	02 59 04.1 -1.4
GSI				IAmb		IAmb	02 59 19.1
	comp=Z,55nm,0.9s						
DZA	Taraz	52.64	300	*e*P		P	02 59 04.1 -1.3
DZA				pmax		pmax	
	comp=Z,37nm,1.4s						
DZA	Taraz	52.64	300	*e*P		P	02 59 04.1 -1.3
	comp=Z,37nm,1.4s,baz=300						
E27K	Coleen River	52.77	27	P		P	02 59 07.5 +1.5
	baz=274,SNR=14						
M26K	Nabesna, AK	52.78	35	P		P	02 59 07.5 +1.4
M26K				IAmb		IAmb	02 59 23.2
	comp=Z,35nm,1.2s						
M26K	Nabesna, AK	52.78	35	P		P	02 59 07.3 +1.2
	baz=277,SNR=5.4						
G27K	Doyon Strip	52.87	29	P		P	02 59

baz=277
I27K Kandik River 53.00 31 P P 02 59 09.8 +2.1
baz=276
KK31 Karatay Array 53.16 301 P P 02 59 08.9 -0.2
KK31 Karatay Array 53.16 301 *i* P **P 02 59 08.7 -0.4**
KKAR Karatay Array 53.16 301 P P 02 59 08.9 -0.2
KKAR Karatay Array 53.16 301 P P 02 59 08.9 -0.2
KKAR pmax pmax
comp=Z,115nm,1.1s
L27K Beaver Creek, 53.22 34 P P 02 59 10.8 +1.5
L27K IAmb IAmb 02 59 21.8
comp=Z,39nm,1.2s
L27K Beaver Creek, 53.22 34 P P 02 59 10.8 +1.5
baz=278,SNR=10.0
BCAR Beaver Creek A 53.24 34 P P 02 59 10.7 +1.2
EGAK Eagle 53.29 32 P P 02 59 11.2 +1.5
EGAK Eagle 53.29 32 P P 02 59 10.8 +1.1
baz=277,SNR=7.1
M27K Edge Creek, AK 53.30 35 P P 02 59 10.7 +0.7
M27K IAmb IAmb 02 59 33.4
comp=Z,31nm,0.9s
M27K Edge Creek, AK 53.30 35 P P 02 59 11.3 +1.3
baz=278
DRK Karamyk 53.37 296 P P 02 59 10.7 -0.4
MESA MESA 53.61 37 P P 02 59 13.1 +0.7
baz=280
BVCY Beaver Creek 53.76 34 P P 02 59 14.5 +1.2
baz=279
CTG Chitna Glacier 53.77 36 P P 02 59 14.4 +0.9
baz=280
IUG Iuzhnay 53.79 300 *e*P **P 02 59 14.1 +0.2**
BTK Batken 53.90 297 P P 02 59 13.1 -1.6
BTK IAmb IAmb 02 59 45.6
comp=Z,38nm,1.1s
BTK Batken 53.90 297 P P 02 59 13.1 -1.6
BTK pmax pmax
comp=Z,38nm,1.1s
YUK3 Moose Creek 54.05 35 P P 02 59 16.6 +0.9
baz=280
DAWY Dawson 54.15 32 P P 02 59 18.0 +1.9
DAWY Dawson 54.15 32 P P 02 59 17.1 +1.0
baz=279
NIL Nilore 54.37 289 P P 02 59 17.0 -1.2
NIL IAmb IAmb 02 59 58.6
comp=Z,38nm,0.9s
NIL Nilore 54.37 289 P P 02 59 17.0 -1.2
NIL pmax pmax
comp=Z,38nm,0.9s
I29M Ogilvie Camp, 54.40 31 P P 02 59 17.8 -0.1
I29M IAmb IAmb 02 59 25.9
comp=Z,32nm,0.9s
I29M Ogilvie Camp, 54.40 31 P P 02 59 18.3 +0.4
baz=279,SNR=8.0
GAR Garm 54.62 296 P P 02 59 18.6 -1.4
M29M Somme Creek 54.85 34 P P 02 59 22.8 +1.5
baz=281,SNR=10
L29M L29M 54.88 33 P P 02 59 23.0 +1.6
baz=281,SNR=11
EPYK Eagle Plains 54.88 29 P P 02 59 21.6 +0.2
EPYK Eagle Plains 54.88 29 P P 02 59 21.6 +0.2
baz=280,SNR=26
G30M tAoh Zrail Nji 54.97 28 P P 02 59 22.0 0.0
baz=280,SNR=23
PNL Peninsula 54.97 38 P P 02 59 22.8 +0.7
baz=282
YUK4 Talbot Arm 54.99 36 P P 02 59 24.0 +1.6
baz=282
K29M Barlow Dome 55.00 32 P P 02 59 22.7 +0.3
baz=281,SNR=6.7
YUK6 Outpost Mounta 55.20 36 P P 02 59 25.4 +1.4
baz=282
O29M Mount Kennedy 55.24 37 P P 02 59 25.4 +1.3
baz=283
CHGR Chuyangaron 55.59 296 P P 02 59 26.7 -0.3
CHGR Chuyangaron 55.59 296 P P 02 59 26.7 -0.3
CHGR pmax pmax
comp=Z,157nm,0.8s
SVE Sverdlovsk 55.60 319 *de*P **P 02 59 26.9 +0.2**
SVE *e*S **S 03 07 11.4 +0.8**
SVE pmax pmax
comp=Z,113nm,1.5s
SVE MLR MLR
comp=Z,1μm,16.0s
WB0 Warramunga Arr 55.62 187 P P 02 59 26.4 -0.7
HYT Haines Junctio 55.64 36 P P 02 59 28.6 +1.6
HYT IAmb IAmb 02 59 51.1
comp=Z,27nm,0.8s
HYT Haines Junctio 55.64 36 P P 02 59 28.5 +1.5
baz=283,SNR=10
INK Inuvik 55.74 27 P P 02 59 28.9 +1.4
comp=Z,12nm,0.7s,baz=302,slow=5.4,SNR=23
INK LR LR 03 25 04.7
comp=Z,286nm,20.3s,baz=275,slow=38
comp=Z,12nm,0.7s
INK Inuvik 55.74 27 P P 02 59 27.2 -0.2
INK IAmb IAmb 02 59 40.3
comp=Z,26nm,0.8s
INK Inuvik 55.74 27 P P 02 59 27.7 +0.3
baz=281,SNR=9.8
WRAB Tennant Creek 55.79 187 P P 02 59 27.8 -0.6
WRAB Tennant Creek 55.79 187 P P 02 59 27.8 -0.6
WRAB pmax pmax
comp=Z,94nm,1.2s
WR0 Warramunga Arr 55.80 187 P P 02 59 26.8 -1.6
WB2 Warramunga Arr 55.80 187 P P 02 59 27.9 -0.6
WRA Warramunga Arr 55.80 187 P P 02 59 27.1 -1.3
comp=Z,42nm,0.9s,baz=3.8,slow=7.4,SNR=118
WRA LR LR 03 22 15.1
comp=Z,429nm,21.9s,baz=358,slow=35
comp=Z,42nm,0.9s
WRA Warramunga Arr 55.80 187 P P 02 59 26.6 -1.8
P29M Windy Craggy 55.80 37 P P 02 59 29.1 +1.0
P29M Windy Craggy 55.80 37 P P 02 59 29.1 +1.0
baz=284
F31M Tsiigehtchic 55.83 28 P P 02 59 28.4 +0.3
baz=282,SNR=9.9
CTA Charters Tower 55.89 174 LR LR 03 23 18.7
comp=Z,228nm,21.8s,baz=17,slow=36
CTAO Charters Tower 55.89 174 P P 02 59 29.0 0.0
CTAO Charters Tower 55.89 174 P P 02 59 29.0 0.0
CTAO pmax pmax
comp=Z,12nm,0.8s
P30M Million Dollar 56.07 37 P P 02 59 31.8 +1.8
baz=284
N31M Braeburn, Yuko 56.30 35 P P 02 59 32.8 +1.1
N31M IAmb IAmb 02 59 45.5
comp=Z,35nm,1.1s
N31M Braeburn, Yuko 56.30 35 P P 02 59 33.0 +1.4
baz=284
O30N Mendenhall 56.33 36 P P 02 59 33.2 +1.4
baz=284
PLBC Pleasant Camp 56.52 37 P P 02 59 34.2 +1.0
baz=285
M31M Drury Creek, Y 56.76 34 P P 02 59 35.4 +0.5
M31M Drury Creek, Y 56.76 34 P P 02 59 36.3 +1.4
baz=285
ARU Arti 56.82 319 P P 02 59 34.8 -0.5
comp=Z,25nm,0.5s,baz=74,slow=4.1,SNR=70
ARU LR LR 03 26 06.7
comp=Z,557nm,19.7s,baz=68,slow=38
comp=Z,25nm,0.5s
ARU Arti 56.82 319 P P 02 59 35.2 -0.1
ARU Arti 56.82 319 *ce*P **P 02 59 35.0 -0.3**
ARU pmax pmax
comp=Z,156nm,1.7s
WHY Whitehorse 56.93 36 P P 02 59 37.6 +1.4
WHY IAmb IAmb 02 59 50.4
comp=Z,22nm,0.8s
WHY Whitehorse 56.93 36 P P 02 59 37.7 +1.5
baz=285,SNR=6.1
SKAG Skagway 57.03 37 P P 02 59 38.4 +1.7
baz=286
FARO Faro, Yukon 57.23 34 P P 02 59 40.4 +2.2
FARO Faro, Yukon 57.23 34 P P 02 59 40.2 +2.0
baz=286,SNR=6.4
KBL Kabul 57.23 291 P P 02 59 37.0 -1.9
KBL IAmb IAmb 03 00 03.7
comp=Z,24nm,0.9s
KBL Kabul 57.23 291 P P 02 59 37.0 -1.9
KBL pmax pmax
comp=Z,24nm,0.9s
HYBB Hyderabad (bro 57.52 269 *e*P **P 02 59 40.5 -0.4**
HYBB *es*P **pP 02 59 49.6 +0.3**
HYBB *e*PP **PP 03 01 49.3 +0.7**
HYBB *e*S **S 03 07 35.2 -1.7**
HYBB *e*ScS **ScS 03 09 28.9 0.0**

A36M Sachs Harbour 57.60 22 P P 02 59 41.1 +0.5
A36M Sachs Harbour 57.60 22 P P 02 59 40.7 +0.1
baz=286
N32M Quiet Lake 57.64 35 P P 02 59 42.1 +0.9
baz=286
SIT Sitka 57.71 40 P P 02 59 43.0 +1.4
baz=287
P32M Atlin 57.79 37 P P 02 59 43.5 +1.3
baz=287
P33M Teslin, Yukon 58.04 36 P P 02 59 45.2 +1.3
P33M IAmb IAmb 02 59 58.2
comp=Z,34nm,0.9s
P33M Teslin, Yukon 58.04 36 P P 02 59 45.1 +1.1
baz=287,SNR=9.2
MMPY Sheldon Lake, 58.05 33 P P 02 59 45.1 +1.1
baz=287
AB31 Abkulak array 58.20 310 *i* P **P 02 59 44.4 -0.8**
ABKAR Abkulak array 58.20 310 P P 02 59 44.8 -0.4
ABKAR Abkulak array 58.20 310 IAmb IAmb 02 59 46.1
comp=Z,86nm,1.3s
Q32M Nakina River 58.69 37 P P 02 59 50.4 +1.8
baz=288
C36M Paulatuk 58.78 24 IAmb IAmb 03 00 00.3
comp=Z,44nm,0.9s
C36M Paulatuk 58.78 24 P P 02 59 50.2 +1.3
baz=289
AKTO Aktyubinsk 58.98 312 P P 02 59 49.8 -0.8
comp=Z,28nm,1.1s,baz=69,slow=7.4,SNR=29
AKTO LR LR 03 26 26.0
comp=Z,632nm,19.5s,baz=67,slow=37
comp=Z,28nm,1.1s
AKTO Aktyubinsk 58.98 312 *i* P **P 02 59 49.8 -0.8**
AKTO pmax pmax
comp=Z,58nm,1.2s
R33M Jennings River 59.18 37 P P 02 59 53.6 +1.6
baz=289
WRAK Wrangell Islan 59.47 40 P P 02 59 54.9 +1.0
baz=290
ASAR Alice Springs 59.53 187 P P 02 59 53.9 -0.7
comp=Z,24nm,0.8s,baz=8.4,slow=5.2,SNR=65
ASAR LR LR 03 24 31.1
comp=Z,299nm,21.7s,baz=360,slow=35
ASAR PKPPKP **P'P'df 03 29 24.6 +7.5**
comp=Z,0.4nm,0.8s,baz=18,slow=0.3,SNR=1.8
ASAR PKP2bc 03 29 34.8
comp=Z,1.9nm,1.0s,baz=168,slow=2.5,SNR=5.1
ASAR PKP2ab 03 29 43.7
comp=Z,2.6nm,1.1s,baz=192,slow=2.3,SNR=4.3
comp=Z,24nm,0.8s
S34M Telegraph Cree 59.59 38 P P 02 59 56.1 +1.4
baz=290
TGTN Hyland Airport 59.73 34 P P 02 59 57.2 +1.5
baz=290,SNR=11
DLBC Dease Lake 59.96 37 IAmb IAmb 03 00 14.3
comp=Z,29nm,1.1s
DLBC Dease Lake 59.96 37 P P 02 59 59.0 +1.7
baz=290
WTLY Watson Lake, Y 59.98 35 IAmb IAmb 03 00 19.4
comp=Z,47nm,1.4s
WTLY Watson Lake, Y 59.98 35 P P 02 59 58.7 +1.3
baz=290
MBWA Marble Bar 60.04 203 P P 02 59 56.7 -1.5
T35M Bob Quinn 60.36 39 P P 03 00 02.3 +2.2
baz=291
PSA00 Pilbara Seismi 60.40 202 P P 02 59 59.7 -0.9
PSA00 IAmb IAmb 03 00 14.1
comp=Z,36nm,0.8s
PSA00 Pilbara Seismi 60.40 202 P P 03 00 00.3 -0.3
PSA00 IAmb IAmb 03 00 14.9
comp=Z,82nm,1.8s
KIRV Kirov 60.80 323 P P 03 00 02.9 0.0
comp=Z,44nm,0.6s,baz=92,slow=2.2,SNR=64
KIRV LR LR 03 28 32.0
comp=Z,734nm,18.7s,baz=65,slow=38
comp=Z,44nm,0.6s
WRGLY Wrigley 61.20 31 P P 03 00 07.0 +1.4
baz=293
PRGR Permogore 61.40 327 *e*P **P 03 00 05.6 -1.4**
PRGR pmax pmax
comp=Z,60nm,1.3s
PALK Pallekele 61.47 258 LR LR 03 28 51.3
comp=Z,248nm,20.2s,baz=156,slow=38
LIRD Liard River Hi 61.50 36 P P 03 00 10.1 +2.4
baz=293
SPA0 Spitsbergen Ar 61.56 349 *e*P **P 03 00 09.0 +1.2**
SPITS Spitsbergen Ar 61.56 349 P P 03 00 08.1 +0.3
comp=Z,10nm,0.8s,baz=82,slow=6.8,SNR=5.3
SPITS LR LR 03 27 38.5
comp=Z,317nm,21.5s,baz=13,slow=37
comp=Z,10nm,0.8s
EIDS Eidsvold 61.69 169 IAmb IAmb 03 00 12.1
comp=Z,31nm,0.9s
KBS Kingsbay 61.71 350 P P 03 00 09.8 +1.0
KBS Kingsbay 61.71 350 P P 03 00 09.8 +1.0
KBS pmax pmax
comp=Z,94nm,1.2s
KBS Kingsbay 61.71 350 *e*P **P 03 00 10.0 +1.2**
KBS IAmb IAmb 03 00 13.2
comp=Z,85nm,1.1s
KBS Kingsbay 61.71 350 *i* P **P 03 00 09.5 +0.6**
NOR Nord 62.19 356 *i* P **P 03 00 12.5 +0.4**
NOR IAmb IAmb 03 00 25.6
comp=Z,64nm,1.7s
HSPB Hornsund (broa 62.47 348 *e*P **P 03 00 13.7 -0.2**
DZM Mont Dzumac 62.59 153 *e*P **P 03 00 15.6 +0.1**
comp=Z,145nm,1.2s
DZM *e*S **S 03 08 43.0 +1.2**
comp=Z,323nm,31.9s
DZM *e*SS **SS 03 12 48.9 +2.0**
DZM *e*LR LR 03 18 54.4
comp=Z,976nm,23.5s
DZM Mont Dzumac 62.59 153 LR LR 03 24 54.2
comp=Z,416nm,21.8s,baz=26,slow=34
DZM Mont Dzumac 62.59 153 P P 03 00 16.3 +0.8
LVZ Lovozero 62.92 336 P P 03 00 17.7 +0.6
LVZ IAmb IAmb 03 00 27.1
comp=Z,31nm,1.0s
LVZ Lovozero 62.92 336 *ce*P **P 03 00 18.4 +1.3**
LVZ pmax pmax
comp=Z,55nm,1.7s
PCHI Peechi 63.07 263 *e*P **P 03 00 19.4 +0.6**
PCHI *e*S **S 03 08 54.3 +6.1**
BBB Bella Bella 63.37 44 LR LR 03 25 25.1
comp=Z,71nm,20.3s,baz=294,slow=34
BJO1 Bjornoya 63.44 345 *e*P **P 03 00 20.9 +0.5**
APA Apatity 63.50 336 ⇓ *i* P **P 03 00 19.2 -1.7**
APA pmax pmax
comp=Z,18nm,1.2s
GEYT Alibeck 63.84 299 P P 03 00 23.9 +0.2
comp=Z,21nm,1.1s,baz=45,slow=2.5,SNR=25
comp=Z,21nm,1.1s
RES Resolute Bay 63.91 14 P P 03 00 24.0 +0.5
comp=Z,25nm,0.8s,baz=306,slow=6.3,SNR=33
RES LR LR 03 29 54.3
comp=Z,301nm,20.4s,baz=0.0,slow=38
comp=Z,25nm,0.8s
RES Resolute Bay 63.91 14 P P 03 00 24.4 +0.9
RES IAmb IAmb 03 00 25.8
comp=Z,42nm,1.1s
RES Resolute Bay 63.91 14 P P 03 00 24.4 +0.9
RES pmax pmax
comp=Z,42nm,1.1s
MSVF Nonsavu 64.01 140 LR LR 03 25 06.9
comp=Z,158nm,19.4s,baz=353,slow=33
MSVF Nonsavu 64.01 140 P P 03 00 26.3 +1.4
MSVF Nonsavu 64.01 140 P P 03 00 26.3 +1.4
MSVF pmax pmax
comp=Z,98nm,1.8s
BELG Belogornoye 64.22 317 P P 03 00 25.4 -0.4
comp=Z,103nm,1.0s,baz=2.9,slow=0.3,SNR=45
BELG LR LR 03 30 44.7
comp=Z,904nm,18.8s,baz=15,slow=38
comp=Z,103nm,1.0s
BELG Belogornoye 64.22 317 *c i* P **P 03 00 25.4 -0.4**
BELG pmax pmax
comp=Z,28nm,1.1s
KEV Kevo 64.31 339 P P 03 00 27.0 +0.8
KEV Kevo 64.31 339 P P 03 00 27.0 +0.8
KLMR Klimovskoe 64.41 328 *c i* P **P 03 00 26.4 -0.5**
KLMR *e* 03 02 43.6
KLMR pmax pmax
comp=Z,85nm,1.3s
KLMR MLR MLR
comp=Z,492nm,16.0s
KLMR Klimovskoe 64.41 328 ⇑ *i* P **P 03 00 26.5 -0.5**
KLMR AMP 03 00 30.0
comp=Z,85nm,1.3s

KLMR *e*PP **PP 03 02 43.6 -4.7**
KLMR LR LR 03 26 19.0
KLMR AMP 03 30 45.0
comp=Z,492nm,15.6s
HAMF Hammerfest 64.72 341 *e*P **P 03 00 28.7 -0.2**
ARA0 ARCESS Array S 64.87 339 *e*P **P 03 00 30.1 +0.2**
ARA0 IAmb IAmb 03 00 31.6
comp=Z,28nm,1.1s
ARCES ARCESS Array B 64.87 339 P P 03 00 29.8 -0.2
comp=Z,11nm,0.8s,baz=51,slow=7.9,SNR=18
ARCES LR LR 03 31 58.6
comp=Z,823nm,19.7s,baz=60,slow=39
comp=Z,11nm,0.8s
ARCES ARCESS Array B 64.87 339 IAmb IAmb 03 00 44.8
comp=Z,33nm,1.1s
YKA Yellowknife Ar 65.16 30 P P 03 00 32.3 +0.4
comp=Z,4.6nm,0.8s,baz=295,slow=6.8,SNR=4.7
comp=Z,4.6nm,0.8s
KTK1 Kautokeino 65.83 339 *e*P **P 03 00 36.5 +0.4**
KTK1 IAmb IAmb 03 00 37.9
comp=Z,44nm,1.3s
JETT Jettan, Norway 66.28 341 *e*P **P 03 00 39.4 +0.4**
JETT IAmb IAmb 03 00 53.5
comp=Z,46nm,1.0s
TRO Tromso 66.62 341 *e*P **P 03 00 41.2 +0.1**
TRO IAmb IAmb 03 00 53.8
comp=Z,33nm,1.0s
ARMA Armidale 66.73 170 IAmb IAmb 03 00 44.5
comp=Z,43nm,1.1s
NEEM North Greenlan 66.74 3 *i* P **P 03 00 41.2 -1.0**
NEEM IAmb IAmb 03 00 57.0
comp=Z,689nm,2.7s
AFI Afiamalu 66.89 129 LR LR 03 25 03.3
comp=Z,324nm,20.5s,baz=332,slow=32
DAG Danmarks Havn 66.89 355 *i* P **P 03 00 42.8 0.0**
DAG IAmb IAmb 03 00 44.8
comp=Z,29nm,1.0s
FORT Forrest 67.32 192 P P 03 00 46.2 +0.3
STKA Stephens Creek 67.38 179 P P 03 00 46.4 0.0
comp=Z,36nm,0.9s,baz=349,slow=8.1,SNR=39
STKA LR LR 03 29 57.0
comp=Z,249nm,20.9s,baz=17,slow=36
comp=Z,36nm,0.9s
STKA Stephens Creek 67.38 179 P P 03 00 46.9 +0.6
STKA Stephens Creek 67.38 179 P P 03 00 46.9 +0.6
STKA pmax pmax
comp=Z,9.0nm,0.9s
VALR Valaam 67.74 331 *c i* P **P 03 00 48.0 -0.3**
VALR pmax pmax
comp=Z,65nm,1.0s
MOS Moscow 67.81 323 *e*P **P 03 00 47.9 -1.0**
MOS *e* 03 01 14.0
MOS *e* 03 03 16.8
MOS *e*S **S 03 09 43.0 -2.0**
MOS pmax pmax
comp=Z,90nm,1.4s
MOS MLR MLR
comp=Z,600nm,15.0s
VRH Novokhopyorsk 68.02 318 *e*P **P 03 00 49.3 -1.0**
VRH pmax pmax
comp=Z,50nm,0.7s
VRH MLR MLR
comp=Z,750nm,15.0s
BRLDA Berland Lookou 68.18 38 IAmb IAmb 03 01 06.1
comp=Z,28nm,1.2s
MORW Morawa 68.59 203 P P 03 00 54.2 +0.2
MORW IAmb IAmb 03 00 58.6
comp=Z,22nm,0.8s
OBN Obninsk 68.65 323 P P 03 00 54.3 +0.2
comp=Z,4.4nm,0.4s,baz=45,slow=3.3,SNR=15
OBN LR LR 03 33 17.7
comp=Z,110nm,18.1s,baz=42,slow=38
comp=Z,4.4nm,0.4s
OBN Obninsk 68.65 323 ⇑ *e*P **P 03 00 54.0 -0.1**
OBN pmax pmax
comp=Z,86nm,1.4s
STEI Steigen 68.77 341 *e*P **P 03 00 54.8 +0.2**
STEI IAmb IAmb 03 01 08.9
comp=Z,30nm,0.8s
VORR Voronezh 69.13 319 *e*P **P 03 00 57.3 +0.1**
VORR pmax pmax
comp=Z,90nm,1.6s
FAUS Fauske 69.14 340 *e*P **P 03 00 57.4 +0.4**
FAUS IAmb IAmb 03 01 07.4
comp=Z,48nm,0.9s
VSR Storozhevoye 69.39 319 *e*P **P 03 00 57.9 -0.9**
VSR pmax pmax
comp=Z,110nm,1.8s
VSR MLR MLR
comp=Z,640nm,15.0s
FINES FINESS Array B 69.55 332 P P 03 00 59.5 -0.2
comp=Z,17nm,0.9s,baz=60,slow=7.7,SNR=32
FINES LR LR 03 36 17.3
comp=Z,484nm,18.1s,baz=38,slow=40
comp=Z,17nm,0.9s
GROC Groznyy 69.64 309 *e*P **P 03 00 59.7 -0.8**
GROC pmax pmax
comp=Z,32nm,0.6s
SEKA Sheki 69.74 307 P P 03 01 00.3 -1.0
ZKTA Zakatala 69.90 307 P P 03 01 01.9 -0.3
LKRN Lenkeran, Azer 69.94 304 P P 03 01 01.7 -0.8
LTY Liberty 69.95 46 IAmb IAmb 03 01 51.2
comp=Z,45nm,1.7s
MNGR Mingechevir, A 70.03 306 P P 03 01 02.3 -0.7
LGD Lagodekhi 70.04 308 P P 03 01 02.5 -0.6
MOR8 Moi Rana 70.24 340 *e*P **P 03 01 02.8 -1.1**
MOR8 IAmb IAmb 03 01 12.9
comp=Z,65nm,0.9s
DDFL Dedoflistskaro 70.32 307 P P 03 01 07.3 +2.4
GOF Gofitskoye 70.39 312 ⇑ *e*P **P 03 01 05.1 0.0**
WSAR Wadi Sarin 70.54 285 LR LR 03 37 41.6
comp=Z,95nm,18.5s,baz=88,slow=41
GANJ Ganja 70.60 306 P P 03 01 06.1 -0.4
PNSH Pansheti 70.67 309 P P 03 01 06.4 -0.7
GUDG Gudauri 70.85 309 P P 03 01 09.6 +1.4
MEF Metsahovi 70.97 332 *e*P **P 03 01 09.3 +1.0**
ZEI Tsey 71.04 309 *e*P **P 03 01 07.5 -1.9**
ZEI pmax pmax
comp=Z,15nm,0.9s
VSU Vasula 71.14 329 *e*P **P 03 01 09.9 +0.5**
KBZ Khabaz 71.17 311 P P 03 01 09.9 +0.1
comp=Z,32nm,0.9s,baz=54,slow=2.9,SNR=36
KBZ LR LR 03 36 00.9
comp=Z,294nm,19.2s,baz=47,slow=39
comp=Z,32nm,0.9s
KVAR Kislovodsk Arr 71.18 311 LR LR 03 36 04.3
comp=Z,334nm,18.3s,baz=267,slow=39
KIV Kislovodsk 71.19 311 ⇓ **P P 03 01 10.9 +0.8**
KIV Kislovodsk 71.19 311 P P 03 01 10.2 +0.1
KIV Kislovodsk 71.19 311 *e*P **P 03 01 10.0 -0.1**
KIV *e*S **S 03 10 24.3 -1.1**
KIV pmax pmax
comp=Z,74nm,1.0s
KIV pmax pmax
comp=Z,17nm,3.7s
JMIC Jan Mayen 71.19 350 LR LR 03 34 06.2
comp=Z,173nm,18.9s,baz=160,slow=37
KHMM Horse Mountain 71.38 53 IAmb IAmb 03 01 28.3
comp=Z,32nm,1.2s
ONI Oni 71.43 309 IAmb IAmb 03 01 13.3
comp=Z,40nm,1.2s
ONI Oni 71.43 309 P P 03 01 12.2 +0.6
RAF Rauma 71.43 333 *e*P **P 03 01 10.9 -0.1**
NEW Newport 71.44 44 LR LR 03 28 19.4
comp=Z,52nm,21.2s,baz=318,slow=32
NEW Newport 71.44 44 IAmb IAmb 03 01 28.1
comp=Z,50nm,1.7s
NEW Newport 71.44 44 P P 03 01 13.4 +1.9
baz=303,SNR=9.3
UOSS Minazif 71.54 288 P P 03 01 12.3 -0.2
YBH Yreka Blue Hor 71.59 52 LR LR 03 24 42.5
comp=Z,93nm,21.6s,baz=318,slow=29
DMNI Dmanisi 71.62 308 P P 03 01 13.2 +0.4
BKRG Bakuriani 71.82 309 P P 03 01 14.8 +0.7
TKB Tkibuli 71.84 309 P P 03 01 14.3 +0.3
GNI Garni 71.89 307 P P 03 01 13.7 -0.8
GNI Garni 71.89 307 *ce*P **P 03 01 15.1 +0.6**
GNI pmax pmax
comp=Z,94nm,1.7s
NAX Nakhchivan 71.90 305 P P 03 01 13.7 -0.8
NSS Namsos 72.16 339 *e*P **P 03 01 15.9 +0.5**
NSS IAmb IAmb 03 01 25.0
comp=Z,24nm,1.0s
MTSE Matsula 72.16 331 *e*P **P 03 01 15.8 +0.3**
ABS Abastumani 72.27 309 P P 03 01 17.3 +0.5
AAL Aland 72.65 333 *e*P **P 03 01 19.3 +0.9**

WALA	Waterton Lakes	72.76	42	IAmb	IAmb	03 01 35.4		
	comp=Z,52nm,1.6s							
MOD	Modoc Plateau	73.02	50	IAmb	IAmb	03 01 38.3		
	comp=Z,52nm,1.8s							
MNK	Minsk	73.11	326	*i* P	P		03 01 21.1	-0.1
MNK				*i*			03 04 02.6	
MNK				*i* PPP	PPP		03 05 47.0	
MNK				*i* S	S		03 10 46.8	0.0
MNK				*i* SS	SS		03 15 28.5	+1.4
MNK				pmax	pmax			
	comp=Z,26nm,0.8s							
MNK				pmax	pmax			
	comp=E,4.0nm,1.4s							
MNK				pmax	pmax			
	comp=N,50nm,1.2s							
MNK				MLR	MLR			
	comp=N,718nm,21.0s							
MNK				MLR	MLR			
	comp=Z,565nm,17.0s							
MNK				MLR	MLR			
	comp=E,72nm,16.0s							
MNK	Minsk	73.11	326	*i* P	P		03 01 21.1	-0.1
	comp=E,4.0nm,1.4s							
MNK				*i* P	P		03 01 21.1	-0.1
	comp=N,50nm,1.2s							
MNK				*i* P	P		03 01 21.1	-0.1
	comp=Z,26nm,0.8s,baz=52							
MNK				*i* PP	PP		03 04 02.6	-1.0
MNK				*i* PPP	PPP		03 05 47.0	
MNK				*i* S	S		03 10 46.8	0.0
MNK				*i* SS	SS		03 15 28.6	+1.4
MNK				*i* SSS	SSS		03 18 47.4	
MNK				*i* LQ	LQ		03 28 32.7	
MNK				*i* LR	LR		03 34 06.0	
MNK				*i* LRM	MLR		03 35 55.6	
	comp=N,718nm,21.3s							
MNK				*i* LRM	MLR		03 36 03.5	
	comp=Z,565nm,17.4s							
MNK				*i* LRM	MLR		03 36 08.6	
	comp=E,72nm,16.1s							
TOO	Toolangi	73.19	176	P	P		03 01 21.8	0.0
TOO				IAmb	IAmb		03 01 24.4	
	comp=Z,46nm,1.0s							
TOO	Toolangi	73.19	176	P	P		03 01 21.8	0.0
TOO				pmax	pmax			
	comp=Z,46nm,1.0s							
SOC	Sochi	73.20	312	*e*P	P		03 01 19.6	-2.4
SOC				*e*			03 04 02.7	
SOC				*e*PPP	PPP		03 05 46.8	
SOC				*e*S	S		03 10 44.8	-3.5
SOC				*e*SS	SS		03 15 28.1	-1.1
SOC				pmax	pmax			
	comp=Z,65nm,1.3s							
SOC				MLR	MLR			
	comp=Z,284nm,16.0s							
BMO	Blue Mountains	73.22	47	IAmb	IAmb		03 01 39.1	
	comp=Z,72nm,1.8s							
ISAL	Salakas	73.22	327	*e*P	P		03 01 21.7	-0.1
IIGN	Ignalina	73.32	327	*e*P	P		03 01 23.4	+0.9
NACGM	Naroch	73.35	327	⇓*e*P	P		03 01 23.2	+0.5
	baz=51							
ORV	Oroville	73.53	53	IAmb	IAmb		03 01 41.2	
	comp=Z,35nm,1.6s							
TBLU	Trondheim	73.62	339	*e*P	P		03 01 22.7	-1.4
TBLU				IAmb	IAmb		03 01 32.8	
	comp=Z,39nm,1.0s							
UPP	Uppsala	73.73	334	*e*P	P		03 01 24.4	-0.3
ANN	Anapa	73.88	314	*e*P	P		03 01 24.2	-1.7
ANN				*e**PP	pP		03 01 34.5	-0.1
ANN				*e*PPP	PPP		03 05 54.1	
ANN				*e*S	SKiKP		03 10 53.8	+1.0
ANN				pmax	pmax			
	comp=Z,75nm,1.3s							
ANN				MLR	MLR			
	comp=N,762nm,19.0s							
ANN				MLR	MLR			
	comp=Z,618nm,20.0s							
GEVA	Gevas	73.97	306	IAmb	IAmb		03 01 32.3	
	comp=Z,27nm,1.0s							
MSO	Missoula	74.03	44	P	P		03 01 28.6	+1.6
	baz=306,SNR=6.5							
PABE	Paberze	74.20	328	*e*P	P		03 01 27.4	-0.2
GURO	Guroymak-BITLI	74.52	306	IAmb	IAmb		03 01 31.9	
	comp=Z,24nm,1.0s							
KTUT	Trabzon	74.61	310	⇑P	P		03 01 30.7	+0.4
KOPT	Kop Dagi	74.69	308	IAmb	IAmb		03 01 59.4	
	comp=Z,43nm,1.3s							
PBUR	Paburge	74.71	329	*e*P	P		03 01 31.2	+0.6
AKASG	Malin Array Be	74.83	322	P	P		03 01 30.8	-0.6
	comp=Z,17nm,0.6s,baz=47,slow=6.2,SNR=82							
AKASG				PP	PP		03 04 18.6	+0.2
	comp=Z,0.9nm,0.6s,baz=51,slow=9.3,SNR=4.2							
AKASG				LR	LR		03 37 22.4	
	comp=Z,1μm,18.6s,baz=44,slow=38							
	comp=Z,17nm,0.6s							
AKASG	Malin Array Be	74.83	322	IAmb	IAmb		03 01 41.6	
	comp=Z,37nm,0.9s							
AKBB	Malin Array Si	74.83	322	IAmb	IAmb		03 01 41.6	
	comp=Z,40nm,0.9s							
AKBB	Malin Array Si	74.83	322	*ce*P	P		03 01 30.7	-0.7
AKBB				pmax	pmax			
	comp=Z,39nm,0.8s							
NC303	NORSAR Array S	74.83	337	IAmb	IAmb		03 01 42.1	
	comp=Z,32nm,0.9s							
ILULI	Ilulissat	74.89	4	*i* P	P		03 01 33.4	+1.9
ILULI				IAmb	IAmb		03 01 46.6	
	comp=Z,2μm,3.1s							
HFS	Hagfors	74.89	336	P	P		03 01 31.1	-0.5
	comp=Z,8.7nm,0.7s,baz=79,slow=3.2,SNR=34							
HFS				LR	LR		03 36 43.7	
	comp=Z,1μm,21.0s,baz=30,slow=38							
	comp=Z,8.7nm,0.7s							
DOMB	Dombas	74.91	339	*e*P	P		03 01 31.7	0.0
DOMB				IAmb	IAmb		03 01 42.3	
	comp=Z,24nm,0.8s							
MOL	Molde	74.93	339	*e*P	P		03 01 31.9	+0.1
MOL				IAmb	IAmb		03 01 35.8	
	comp=Z,29nm,0.9s							
NB2	NORSAR Subarra	75.02	337	P	P		03 01 32.1	-0.3
	comp=Z,78nm,1.7s,baz=40,slow=5.9							
NB2	NORSAR Subarra	75.02	337	P	P		03 01 33.6	+1.2
NB2	NORSAR Subarra	75.02	337	P	P		03 01 32.1	-0.3
	baz=40,slow=5.9							
NOA	NORSAR Array B	75.02	337	P	P		03 01 31.4	-0.9
	comp=Z,18nm,0.8s,baz=39,slow=5.8,SNR=5.7							
NOA				LR	LR		03 37 12.2	
	comp=Z,748nm,19.9s,baz=45,slow=38							
	comp=Z,18nm,0.8s							
FFC	Flin Flon	75.06	32	P	P		03 01 33.3	+0.7
FFC				IAmb	IAmb		03 01 46.8	
	comp=Z,23nm,0.9s							
FFC	Flin Flon	75.06	32	P	P		03 01 33.3	+0.7
FFC				pmax	pmax			
	comp=Z,23nm,1.0s							
CMB	Columbia Colle	75.09	54	IAmb	IAmb		03 01 37.7	
	comp=Z,34nm,1.4s							
NC602	NORSAR Array S	75.15	337	*e*P	P		03 01 32.6	-0.4
NC602				IAmb	IAmb		03 01 43.2	
	comp=Z,18nm,1.0s							
NORES	NORESS Array B	75.15	337	P	P		03 01 32.6	-0.5
YERR	Yerington	75.31	52	IAmb	IAmb		03 01 51.6	
	comp=Z,91nm,1.8s							
AKN	Aaknes	75.40	339	*e*P	P		03 01 34.8	+0.3
AKN				IAmb	IAmb		03 01 38.4	
	comp=Z,34nm,1.0s							
EGMT	Eagleton	75.59	41	IAmb	IAmb		03 01 52.4	
	comp=Z,45nm,1.0s							
EGMT	Eagleton	75.59	41	P	P		03 01 36.5	+0.5
	baz=308,SNR=14							
RAO	Raoul Island	75.62	143	LR	LR		03 30 04.2	
	comp=Z,128nm,18.7s,baz=30,slow=32							
DLMT	Dillon	75.65	44	IAmb	IAmb		03 01 53.0	
	comp=Z,34nm,1.1s							
HLID	Hailey	75.66	46	P	P		03 01 37.8	+1.2
	baz=306,SNR=11							
SIM	Simferopol'	75.71	315	*e*P	P		03 01 36.7	+0.1
SIM				*e*			03 04 28.5	
SIM				*e*S	S		03 11 07.8	-8.6
SIM				pmax	pmax			
	comp=Z,39nm,0.8s							
SIM				smax	smax			
	comp=E,34nm,15.3s							
SIM				MLR	MLR			
	comp=Z,184nm,15.9s							
RYN	Ryan	75.97	52	IAmb	IAmb		03 01 55.6	
	comp=Z,51nm,1.7s							

KVN	Kaiserville	76.00	52	IAmb	IAmb		03 01 55.6	
	comp=Z,67nm,1.6s							
BOZ	Bozeman (W)	76.05	44	IAmb	IAmb		03 01 55.3	
	comp=Z,25nm,1.1s							
BOZ	Bozeman (W)	76.05	44	P	P		03 01 40.0	+1.3
	baz=307,SNR=21							
LHV	Little Huntoon	76.20	53	IAmb	IAmb		03 01 57.1	
	comp=Z,39nm,1.2s							
SKAR	Skarslia	76.20	338	*e*P	P		03 01 39.4	+0.2
SKAR				IAmb	IAmb		03 01 40.6	
	comp=Z,44nm,1.4s							
NVAR	Mina Array Bea	76.23	53	P	P		03 01 41.4	+1.5
	comp=Z,7.9nm,0.7s,baz=285,slow=5.2,SNR=57							
	comp=Z,7.9nm,0.7s							
NV11	Mina Array Sit	76.32	52	IAmb	IAmb		03 01 57.5	
	comp=Z,32nm,1.4s							
MLAC	Mammoth, Mammo	76.34	53	P	P		03 01 41.8	+1.2
	baz=305							
FOO	Floro	76.42	340	*e*P	P		03 01 40.6	+0.4
HYA	Hoyanger	76.45	339	*e*P	P		03 01 41.0	+0.6
HYA				IAmb	IAmb		03 01 45.5	
	comp=Z,36nm,1.0s							
KONO	Kongsberg	76.61	337	*e*P	P		03 01 41.6	+0.2
YHB	Horse Butte	76.81	44	IAmb	IAmb		03 02 00.1	
	comp=Z,37nm,1.3s							
ELK	Elko	76.82	49	IAmb	IAmb		03 02 00.5	
	comp=Z,58nm,1.8s							
YMR	Madison River	76.99	44	IAmb	IAmb		03 02 02.3	
	comp=Z,91nm,1.9s							
TOKA	Tokat	77.04	310	IAmb	IAmb		03 01 46.0	
	comp=Z,36nm,1.2s							
OUZ	Omahuta	77.11	153	IAmb	IAmb		03 02 15.5	
	comp=Z,27nm,1.2s							
YNR	Norris Junctio	77.12	44	IAmb	IAmb		03 02 01.8	
	comp=Z,41nm,1.4s							
VES	Vestal, Richgr	77.19	55	P	P		03 01 46.9	+1.8
	baz=305							
PKM	Mcpherson Peak	77.25	56	P	P		03 01 47.0	+1.3
	baz=305							
ASK	Askoy	77.29	339	*e*P	P		03 01 45.6	+0.5
ASK				IAmb	IAmb		03 01 47.6	
	comp=Z,49nm,0.8s							
YPP	Pitchstone Pla	77.32	44	IAmb	IAmb		03 02 04.3	
	comp=Z,45nm,1.7s							
ODD1	Odda	77.32	338	*e*P	P		03 01 45.7	+0.2
ODD1				IAmb	IAmb		03 01 51.2	
	comp=Z,28nm,1.0s							
BER	Bergen	77.33	339	*e*P	P		03 01 46.1	+0.7
BER				IAmb	IAmb		03 01 48.2	
	comp=Z,27nm,0.9s							
KIS	Kishinev	77.36	319	*e*P	P		03 01 46.0	+0.1
	comp=Z,4.0nm,0.2s							
KIS				*e*L	L		03 37 52.0	
KIS				LRM	MLR		03 38 42.0	
	comp=Z,400nm,15.5s							
H17A	Grant Village	77.37	44	P	P		03 01 48.3	+1.9
	baz=308,SNR=20							
YMP	Mirror Lake Pl	77.40	44	IAmb	IAmb		03 02 03.2	
	comp=Z,60nm,1.4s							
MILM	Milestii Mici	77.42	319	⇓P	P		03 01 46.0	-0.2
MILM	Milestii Mici	77.42	319	⇑*i*P	P		03 01 45.0	-1.2
	comp=Z,12nm,0.6s							
MILM	Milestii Mici	77.42	319	*e*PcP	PcP		03 01 54.0	-2.6
MILM	Milestii Mici	77.42	319	*e*PP	PP		03 04 50.0	+10
MILM				*e*S	S		03 11 28.0	-7.0
MILM				*e*L	L		03 34 52.0	
MILM				LRM	MLR		03 38 34.0	
	comp=Z,600nm,15.0s							
MILM	Milestii Mici	77.42	319	*c i*P	P		03 01 45.0	-1.2
MILM				*e*			03 01 54.0	
MILM				*e*S	S		03 11 28.0	-7.0
MILM				pmax	pmax			
	comp=Z,12nm,0.6s							
MILM				MLR	MLR			
	comp=E,600nm,15.0s							
MILM				MLR	MLR			
	comp=Z,1μm,15.0s							
CWC	Cottonwood Cre	77.51	54	P	P		03 01 48.1	+0.9
	baz=306							
FXWY	Fox Creek	77.58	45	IAmb	IAmb		03 02 04.9	
	comp=Z,41nm,1.6s							
RLMT	Red Lodge	77.66	43	IAmb	IAmb		03 02 04.9	
	comp=Z,50nm,1.5s							
RLMT	Red Lodge	77.66	43	P	P		03 01 49.2	+1.4
	baz=309,SNR=11							
GRAC	Grapevine Rang	77.66	53	P	P		03 01 50.4	+2.6
	baz=306,SNR=12							
MOOW	Moose Ponds	77.68	45	IAmb	IAmb		03 02 05.6	
	comp=Z,54nm,1.7s							
ISA	Isabella, Lake	77.70	55	P	P		03 01 48.1	0.0
	baz=305							
BLS5	Blasjo	77.77	338	*e*P	P		03 01 48.1	+0.2
BLS5				IAmb	IAmb		03 01 50.9	
	comp=Z,40nm,1.0s							
ARVC	Arvin	77.77	56	P	P		03 01 48.9	+0.5
	baz=305							
REDW	Red Top Meadow	77.85	45	IAmb	IAmb		03 02 06.2	
	comp=Z,34nm,1.4s							
DY2G	Dye2	77.86	3	*i* P	P		03 01 49.0	+0.4
DY2G				IAmb	IAmb		03 01 58.4	
	comp=Z,2μm,3.6s							
LVV	L'vov	77.94	324	*e*P	P		03 01 49.2	+0.1
LVV				MLR	MLR			
	comp=E,400nm,17.0s							
LVV				MLR	MLR			
	comp=N,300nm,18.0s							
LVV				MLR	MLR			
	comp=Z,500nm,17.0s							
R11A	Troy Canyon, C	78.01	51	IAmb	IAmb		03 02 07.0	
	comp=Z,47nm,1.6s							
R11A	Troy Canyon, C	78.01	51	P	P		03 01 50.8	+0.9
	baz=306,SNR=24							
FRB	Frobisher Bay	78.07	13	LR	LR		03 38 36.1	
	comp=Z,230nm,20.3s,baz=1.0,slow=37							
MPMC	Manual Prospec	78.12	54	P	P		03 01 51.3	+0.7
	baz=306,SNR=8.8							
VASR	Vaslui	78.14	320	⇓P	P		03 01 50.8	+0.6
SPUT	South Promonto	78.17	47	IAmb	IAmb		03 02 08.0	
	comp=Z,34nm,1.5s							
BSD	Bornholm Skovb	78.17	332	*e*P	P		03 01 50.6	+0.4
BSD				IAmb	IAmb		03 02 46.7	
	comp=Z,65nm,1.1s							
DGMT	Dagmar	78.17	38	IAmb	IAmb		03 02 06.6	
	comp=Z,54nm,1.3s							
DGMT	Dagmar	78.17	38	P	P		03 01 51.2	+0.8
	baz=311							
DGMT	Dagmar	78.17	38	P	P		03 01 50.4	-0.1
	baz=311							
FURC	Furnace Creek,	78.30	53	P	P		03 01 52.4	+1.2
	baz=306,SNR=8.3							
LAO	LASA Array	78.30	40	IAmb	IAmb		03 02 08.0	
	comp=Z,43nm,1.2s							
LAO	LASA Array	78.30	40	P	P		03 01 52.9	+1.6
	baz=310							
LAO	LASA Array	78.30	40	P	P		03 01 52.4	+1.1
	baz=310,SNR=12							
KMY	Karmoy	78.31	338	*e*P	P		03 01 51.3	+0.4
KMY				IAmb	IAmb		03 01 56.2	
	comp=Z,22nm,0.9s							
S11A	Rachel	78.32	52	IAmb	IAmb		03 01 57.6	
	comp=Z,18nm,0.8s							
LRMC	Laurel Mtn Rad	78.33	55	P	P		03 01 53.3	+1.6
	baz=306							
SNART	Snartemo	78.41	337	*e*P	P		03 01 51.7	+0.2
SNART				IAmb	IAmb		03 01 53.7	
	comp=Z,97nm,1.0s							
TPNV	Topopah Spring	78.41	53	P	P		03 01 53.5	+1.3
	baz=306,SNR=17							
GAZ	Gaziantep	78.43	308	IAmb	IAmb		03 01 54.2	
	comp=Z,36nm,1.0s							
EDW2	Edwards Air Fo	78.47	55	P	P		03 01 53.7	+1.3
	baz=306							
VLDR	Vladesti	78.50	319	⇑P	P		03 01 52.3	+0.1
HWUT	Hardware Ranch	78.52	47	IAmb	IAmb		03 02 09.1	
	comp=Z,36nm,1.2s							
GWY	Greenwater Val	78.59	54	IAmb	IAmb		03 02 10.0	
	comp=Z,68nm,1.7s							
DUG	Dugway, Tooele	78.63	48	IAmb	IAmb		03 02 11.2	
	comp=Z,45nm,1.4s							
DUG	Dugway, Tooele	78.63	48	P	P		03 01 54.1	+0.9
	baz=308,SNR=20							
SCTR	Scanteiesti	78.65	319	⇑P	P		03 01 53.9	+0.9
BORG	Borgarnes	78.73	352	LR	LR		03 38 15.6	
	comp=Z,133nm,18.9s,baz=154,slow=37							
TESR	Tescani	78.82	320	⇑P	P		03 01 53.8	-0.2
BIZ	Bicaz	78.82	321	⇓P	P		03 01 54.3	+0.3
BURAR	Bucovina Array	78.83	321	⇓P	P		03 01 53.9	-0.3

BURAR	Bucovina Array	78.83	321	P	P		03 01 53.9	-0.3
CFR	Carcaliu	78.89	318	⇑P	P		03 01 53.8	-0.6
CFR	Carcaliu	78.89	318	P	P		03 01 53.7	-0.6
TCUT	Toone Canyon	78.91	47	IAmb	IAmb		03 02 01.2	
	comp=Z,23nm,0.8s							
TPGR	Topolog	78.95	318	⇓P	P		03 01 54.8	+0.1
BW06	Boulder Array	78.97	45	P	P		03 01 56.4	+1.2
	baz=309,SNR=16							
PDAR	Pinedale Array	78.97	45	P	P		03 01 56.2	+1.1
	comp=Z,6.8nm,0.6s,baz=270,slow=2.4,SNR=55							
	comp=Z,6.8nm,0.6s							
PSUT	Pine Spring	78.99	50	IAmb	IAmb		03 02 12.4	
	comp=Z,53nm,1.6s							
SHOC	Shoshone, Teco	79.01	54	P	P		03 01 57.2	+1.9
	baz=306							
GSC	Goldstone, Bar	79.02	54	P	P		03 01 56.6	+1.2
	baz=306							
CIS	Catalina Islan	79.05	57	P	P		03 01 56.5	+0.9
	baz=306							
BFSC	Mount Baldy Ra	79.07	56	P	P		03 01 57.4	+1.6
	baz=306							
BR131	Keskin Array S	79.14	311	*c i*P	P		03 01 55.7	-0.3
BRTR	Keskin Array B	79.14	311	P	P		03 01 55.8	-0.3
	comp=Z,7.1nm,0.9s,baz=104,slow=4.1,SNR=36							
BRTR				PP	PP		03 04 54.5	-0.6
	comp=Z,4.0nm,1.1s,baz=79,slow=6.4,SNR=4.6							
BRTR				LR	LR		03 42 43.1	
	comp=Z,216nm,18.2s,baz=42,slow=40							
	comp=Z,7.1nm,0.9s							
VRI	Vrincioaia	79.20	319	⇑P	P		03 01 57.1	+0.9
VRI	Vrincioaia	79.20	319	P	P		03 01 57.0	+0.9
JLU	Jordanelle	79.20	48	IAmb	IAmb		03 02 13.6	
	comp=Z,38nm,1.5s							
MUD	Monsted U'grnd	79.25	335	*i* P	P		03 01 53.5	-2.6
MUD				IAmb	IAmb		03 02 31.5	
	comp=Z,431nm,3.0s							
PLOR	Plostina	79.25	319	⇓P	P		03 01 56.9	+0.4
PLOR				⇑P	P		03 01 57.4	+0.9
PLOR	Plostina	79.25	319	P	P		03 01 56.8	+0.4
HARR	Harsova	79.32	318	⇑P	P		03 01 57.3	+0.5
HARR	Harsova	79.32	318	P	P		03 01 57.2	+0.5
KOLS	Kolonicke sedl	79.39	324	*e*P	P		03 01 57.7	+0.6
KOLS				pmax	pmax			
	comp=Z,15nm,0.9s							
MPU	Maple Canyon	79.45	48	IAmb	IAmb		03 02 14.7	
	comp=Z,52nm,1.5s							
COVR	Voineasa-Covas	79.49	320	⇓P	P		03 01 58.2	+0.5
TUQ	Turquoise Moun	79.52	54	P	P		03 01 58.9	+0.7
	baz=307							
OZUR		79.54	320	⇓P	P		03 01 59.1	+1.0
STHS	Stebnicka Huta	79.55	325	*e*P	P		03 01 58.1	+0.2
ANTO	Ankara	79.57	312	⇓P	P		03 01 58.4	+0.1
ANTO	Ankara	79.57	312	P	P		03 01 58.4	+0.1
ANTO				IAmb	IAmb		03 02 13.6	
	comp=Z,38nm,1.2s							
ANTO	Ankara	79.57	312	P	P		03 01 58.4	+0.1
ANTO				pmax	pmax			
	comp=Z,38nm,1.2s							
UZH	Uzhgorod	79.59	324	*e*P	P		03 01 59.1	+1.0
UZH				*i*			03 02 02.9	
UZH				*e*S	S		03 11 56.0	-2.1
UZH				*e*			03 13 01.3	
ARCR	ARCALIA	79.62	321	⇓P	P		03 01 57.8	-0.5
OJC	Ojcow	79.65	326	*e*P	P		03 01 56.8	-1.7
OJC	Ojcow	79.65	326	IAmb	IAmb		03 02 03.3	
	comp=Z,60nm,1.3s							
OJC	Ojcow	79.65	326	P	P		03 01 56.9	-1.6
NEHR	Nehoiu	79.72	319	⇓P	P		03 02 00.2	+1.2
MURC	Murrieta	79.76	56	P	P		03 02 00.5	+1.1
	baz=306,SNR=5.9							
CRVS	Cervenica-Dubn	79.80	324	*e*P	P		03 01 59.8	+0.5
CRVS				pmax	pmax			
	comp=Z,57nm,1.6s							
TRPA	Tarpa	79.81	323	⇑P	P		03 01 59.7	+0.3
TCRU	Three Creeks R	79.82	50	IAmb	IAmb		03 04 14.7	
	comp=Z,21nm,0.4s							
NUUK	Nuuk	79.83	5	*e*P	P		03 02 00.6	+1.5
NUUK				IAmb	IAmb		03 02 01.6	
	comp=Z,2μm,3.5s							
DOPR	Dopca	79.84	320	⇓P	P		03 02 00.6	+1.0
MLR	Muntele Rosu	79.86	320	⇑P	P		03 02 00.5	+0.6
MLR	Muntele Rosu	79.86	320	LR	LR		03 40 24.3	
	comp=Z,789nm,18.6s,baz=46,slow=38							
MLR	Muntele Rosu	79.86	320	P	P		03 02 00.4	+0.6
CCUT	Cedar City	79.89	51	IAmb	IAmb		03 02 17.6	
	comp=Z,56nm,1.8s							
RAR	Rarotonga	80.01	125	LR	LR		03 30 42.0	
	comp=Z,414nm,19.6s,baz=280,slow=31							
MVU	Marysvale	80.03	50	IAmb	IAmb		03 02 17.9	
	comp=Z,58nm,1.1s							
GMRC	Granite Mounta	80.08	54	P	P		03 02 02.1	+0.9
	baz=307							
109C	Camp Elliot, M	80.24	57	IAmb	IAmb		03 02 18.8	
	comp=Z,54nm,1.6s							
109C	Camp Elliot, M	80.24	57	P	P		03 02 03.3	+1.3
	baz=306							
PFO	Pinyon Flats O	80.25	56	P	P		03 02 03.2	+1.0
PFO	Pinyon Flats O	80.25	56	P	P		03 02 03.2	+1.0
PFO				pmax	pmax			
	comp=Z,23nm,1.2s							
PFO	Pinyon Flats O	80.25	56	P	P		03 02 03.1	+1.0
	baz=307,SNR=9.0							
TPFO	Pinon Flats	80.25	56	P	P		03 02 02.6	+0.4
	baz=307,SNR=9.5							
MESR	Meseseni	80.28	322	⇑P	P		03 02 02.7	+0.8
BELC	Belle Mtn. Jos	80.32	55	P	P		03 02 03.7	+1.1
	baz=307							
ABAH	Abaujker	80.33	324	P	P		03 02 02.7	+0.6
P17A	Butcher Ranch,	80.33	48	IAmb	IAmb		03 02 18.9	
	comp=Z,56nm,1.4s							
RDMU	Red Mountain	80.34	47	IAmb	IAmb		03 02 19.6	
	comp=Z,51nm,1.2s							
Q16A	Castle Valley	80.41	49	IAmb	IAmb		03 02 20.4	
	comp=Z,54nm,1.4s							
RAYN	Ar Rayn	80.49	292	P	P		03 02 03.1	-0.5
RAYN				IAmb	IAmb		03 02 04.5	
	comp=Z,26nm,1.1s							
RAYN	Ar Rayn	80.49	292	P	P		03 02 03.1	-0.5
RAYN				pmax	pmax			
	comp=Z,26nm,1.1s							
KNB	Kanab	80.56	51	IAmb	IAmb		03 02 21.4	
	comp=Z,66nm,1.4s							
PKCU	Pink Cliffs	80.62	50	IAmb	IAmb		03 02 09.9	
	comp=Z,42nm,1.3s							
ARR	Arges	80.63	320	⇓P	P		03 02 04.9	+1.0
DRGR		80.65	322	⇓P	P		03 02 04.4	+0.3

comp=Z,800nm,12.8s
CHVC Chvalec 81.05 328 *e*P **P 03 02 06.2 +0.2**
CHVC AMS AMS 03 42 10.0
comp=Z,600nm,16.7s
IKP In-Ko-Pah, Jac 81.05 56 P **P 03 02 07.1 +0.6**
baz=307,SNR=11
SWSC Sam W. Stewart 81.09 56 P **P 03 02 07.4 +0.9**
baz=307,SNR=6.0
DPC Dobruska-Polom 81.11 328 *e*P **P 03 02 06.8 +0.4**
DPC *e* 03 05 11.5
DPC MLR MLR
comp=Z,500nm,13.6s
DPC Dobruska-Polom 81.11 328 *e*P **P 03 02 06.8 +0.4**
DPC *e*PP **PP 03 05 11.5 +0.6**
DPC AMS AMS 03 42 10.0
comp=Z,500nm,13.6s
KRLC Kraliky 81.11 327 *e*P **P 03 02 06.3 -0.1**
KRLC MLR MLR
comp=Z,400nm,20.6s
KRLC Kraliky 81.11 327 *e*P **P 03 02 06.3 -0.1**
KRLC AMS AMS 03 40 10.0
comp=Z,400nm,20.6s
URZ Urewera 81.11 152 LR LR 03 33 36.6
comp=Z,143nm,21.8s,baz=47,slow=32
UPC Upice 81.13 328 *e*P **P 03 02 06.9 +0.5**
UPC MLR MLR
comp=Z,800nm,14.3s
UPC Upice 81.13 328 *e*P **P 03 02 06.9 +0.5**
UPC AMS AMS 03 42 10.0
comp=Z,800nm,14.3s
CCX Cicese 81.14 57 IAmb IAmb 03 02 09.8
comp=Z,28nm,1.0s
RSSD Black Hills 81.15 41 P **P 03 02 07.4 +0.5**
RSSD IAmb IAmb 03 02 22.9
comp=Z,59nm,1.9s
RSSD Black Hills 81.15 41 P **P 03 02 07.4 +0.5**
RSSD pmax pmax
comp=Z,59nm,1.9s
RSSD Black Hills 81.15 41 P **P 03 02 08.1 +1.1**
baz=312
RSSD Black Hills 81.15 41 P **P 03 02 07.2 +0.3**
baz=312
MAUC Maruska 81.16 326 *e*P **P 03 02 07.2 +0.6**
MAUC AMS AMS 03 41 30.0
comp=Z,1μm,17.0s
E28A Huff 81.20 38 IAmb IAmb 03 02 10.9
comp=Z,86nm,1.8s
PSZ Piszkesteto 81.23 324 ⇓P **P 03 02 07.3 +0.1**
PSZ Piszkesteto 81.23 324 IAmb IAmb 03 02 30.0
comp=Z,32nm,1.0s
PSZ Piszkesteto 81.23 324 P **P 03 02 07.2 +0.1**
PSZ Piszkesteto 81.23 324 P **P 03 02 08.0 +0.8**
U15A North Rim 81.26 51 IAmb IAmb 03 02 25.0
comp=Z,54nm,1.6s
VYHS Vyhne 81.32 325 *e*P **P 03 02 07.4 -0.1**
VYHS pmax pmax
comp=Z,31nm,1.2s
PDMCI Parker Dam,Lak 81.37 54 P **P 03 02 08.9 +0.9**
baz=308
O20A White River Ci 81.40 46 IAmb IAmb 03 02 24.6
comp=Z,26nm,1.1s
O20A White River Ci 81.40 46 P **P 03 02 08.9 +0.6**
baz=310,SNR=11
SIRR Siria 81.53 322 ⇑P **P 03 02 08.1 -0.5**
GZR Gura Zlata 81.57 321 ⇑P **P 03 02 09.3 +0.3**
GZR Gura Zlata 81.57 321 P **P 03 02 09.2 +0.3**
JAVC Velka Javorina 81.60 326 *e*P **P 03 02 10.0 +1.0**
BKZ Black Stump Fm 81.67 153 IAmb IAmb 03 02 20.1
comp=Z,30nm,1.2s
GLA Glamis 81.67 55 P **P 03 02 10.5 +0.9**
baz=308
PVCC Panska Ves 81.73 329 *e*P **P 03 02 10.0 +0.4**
PVCC MLR MLR
comp=Z,600nm,17.9s
PVCC Panska Ves 81.73 329 *e*P **P 03 02 10.0 +0.4**
PVCC AMS AMS 03 40 50.0
comp=Z,600nm,17.9s
VRAC Vranov 81.75 327 P **P 03 02 09.1 -0.6**
comp=Z,4.7nm,0.5s,baz=40,slow=5.4,SNR=12
VRAC LR LR 03 41 09.3
comp=Z,347nm,20.2s,baz=30,slow=38
comp=Z,4.7nm,0.5s
VRAC Vranov 81.75 327 *e*P **P 03 02 10.0 +0.2**
CLL Collm 81.79 330 IAmb IAmb 03 02 15.3
comp=Z,45nm,1.1s
CLL Collm 81.79 330 *i* P **P 03 02 09.5 -0.4**
CLL *i* *PP **sP 03 02 21.1 -0.7**
CLL pmax pmax
comp=Z,45nm,1.1s
CLL Collm 81.79 330 *i* P **P 03 02 09.5 -0.4**
comp=Z,25nm,1.1s
CLL *i* pP **PcP 03 02 14.2 -1.4**
comp=Z,45nm,1.1s
CLL *i* (sP) **sP 03 02 21.1 -0.7**
CLL *e*x x 03 02 25.0
CLL *e*(PP) 03 05 10.0
comp=Z,11nm,1.1s
CLL *e*PPP PPP 03 07 04.0
CLL *e*S **S 03 12 24.0 +2.9**
CLL *e*PPS PPS 03 13 24.0
CLL *e*SS SS 03 18 12.0 +34
CLL *e*x x 03 22 30.0
CLL *e*x x 03 23 18.0
CLL LmH 03 38 00.0
comp=N,400nm,19.4s
CLL LmH 03 38 00.0
comp=E,500nm,20.2s
SMOL Smolenice 81.96 326 *e*P **P 03 02 11.4 +0.6**
SMOL pmax pmax
comp=Z,11nm,1.0s
BZS Buzias 82.01 322 ⇑P **P 03 02 10.8 -0.3**
BZS Buzias 82.01 322 P **P 03 02 10.8 -0.3**
KRUC Moravsky 82.02 327 *e*P **P 03 02 11.2 0.0**
SRO Srobarova 82.06 325 *e*P **P 03 02 12.2 +0.9**
MCD Coleburn Disti 82.08 341 *e*P **P 03 02 12.8 +1.5**
GOPC GO Pecny, Ondr 82.09 328 *e*P **P 03 02 11.3 -0.3**
GOPC MLR MLR
comp=Z,700nm,16.2s
GOPC GO Pecny, Ondr 82.09 328 *e*P **P 03 02 11.3 -0.3**
GOPC AMS AMS 03 43 00.0
comp=Z,700nm,16.2s
HERR Herculane 82.11 321 ⇑P **P 03 02 11.5 -0.2**
MODS Modra-Piesok 82.13 326 *e*P **P 03 02 12.2 +0.4**
MODS pmax pmax
comp=Z,51nm,1.2s
PRU Pruhonice 82.14 328 *e*P **P 03 02 11.4 -0.4**
PRU *e* 03 05 19.7
PRU MLR MLR
comp=Z,700nm,14.4s
PRU Pruhonice 82.14 328 *e*P **P 03 02 11.4 -0.4**
PRU *e*PP **PP 03 05 19.7 +0.3**
PRU AMS AMS 03 43 00.0
comp=Z,700nm,14.4s
N23A Red Feather La 82.24 45 IAmb IAmb 03 02 17.5
comp=Z,48nm,1.3s
N23A Red Feather La 82.24 45 P **P 03 02 13.3 +0.5**
baz=311,SNR=19
PV07 Paradox Valley 82.25 48 IAmb IAmb 03 02 29.6
comp=Z,28nm,1.2s
TREC Trest 82.25 327 *e*P **P 03 02 12.6 +0.2**
TREC MLR MLR
comp=Z,500nm,22.7s
TREC Trest 82.25 327 *e*P **P 03 02 12.6 +0.2**
TREC AMS AMS 03 43 50.0
comp=Z,500nm,22.7s
AGMN Agassiz Nation 82.28 34 P **P 03 02 13.2 +0.7**
baz=317
PV13 Radium Mtn., P 82.32 48 IAmb IAmb 03 02 29.4
comp=Z,43nm,1.0s
ZST Bratislava 82.34 326 *e*P **P 03 02 13.3 +0.5**
WUAZ Wupatki 82.41 51 IAmb IAmb 03 02 30.1
comp=Z,24nm,1.1s
WUAZ Wupatki 82.41 51 P **P 03 02 14.3 +0.7**
baz=309,SNR=13
113A Mohawk Valley, 82.55 55 IAmb IAmb 03 02 31.1
comp=Z,71nm,2.0s
KAC Achnashellach 82.67 342 *e*P **P 03 02 14.7 +0.4**
EGYH Egyhazaskeszo 82.80 325 P **P 03 02 18.1 +2.9**
NKC Novy Kostel 82.84 329 *e*P **P 03 02 15.4 0.0**
NKC MLR MLR
comp=Z,900nm,17.0s
NKC Novy Kostel 82.84 329 *e*P **P 03 02 15.4 0.0**
NKC AMS AMS 03 42 50.0
comp=Z,900nm,17.0s
BLKB Belogradchik 82.85 320 ⇑P **P 03 02 15.6 -0.1**

MPLH Magyarpolny 82.88 325 P **P 03 02 15.6 0.0**
KPL Plockton 82.90 342 *e*P **P 03 02 15.9 +0.4**
KPL IAmb IAmb 03 02 18.6
comp=Z,57nm,1.0s
BFZ Birch Farm 82.91 153 IAmb IAmb 03 02 17.7
comp=Z,34nm,0.9s
SOP Sopron 82.96 326 P **P 03 02 16.3 +0.2**
RDO Rodhopi 82.98 316 IAmb IAmb 03 02 37.0
comp=Z,33nm,1.2s
GHAJ Ghor Haditha 83.05 304 IAmb IAmb 03 02 41.0
comp=Z,36nm,0.9s
MORH Mrgy, Hungar 83.05 324 ⇑P **P 03 02 16.2 -0.4**
MORH Mrgy, Hungar 83.05 324 P **P 03 02 15.8 -0.8**
RONA Rosalia, Austr 83.07 326 *i* P **P 03 02 17.8 +1.1**
comp=Z,37nm,1.4s,SNR=14
CONA Conrad Observa 83.10 326 *i* P **P 03 02 17.4 +0.5**
comp=Z,15nm,1.4s,SNR=15
CKRC Cesky Krumlov 83.12 328 *e*P **P 03 02 16.5 -0.4**
CKRC *e*PP **PP 03 05 26.2 -1.2**
MVCO Mesa Verde 83.13 49 IAmb IAmb 03 02 22.1
comp=Z,21nm,1.1s
MVCO Mesa Verde 83.13 49 P **P 03 02 17.2 -0.2**
baz=310
KHC Kasperske Hory 83.20 328 *e*P **P 03 02 17.2 -0.2**
KHC *e* 03 02 22.0
KHC *e* 03 05 25.8
KHC MLR MLR
comp=Z,600nm,16.3s
KHC Kasperske Hory 83.20 328 *e*P **P 03 02 17.2 -0.2**
KHC *e*pP **PcP 03 02 22.0 +0.1**
KHC *e*PP **PP 03 05 25.8 -2.3**
KHC AMS AMS 03 43 10.0
comp=Z,600nm,16.3s
VTS Vitosha 83.24 319 ⇑P **P 03 02 18.3 +0.5**
VTS Vitosha 83.24 319 IAmb IAmb 03 02 36.2
comp=Z,36nm,1.3s
VTS Vitosha 83.24 319 P **P 03 02 18.3 +0.5**
INVG Invergeldie, C 83.30 341 *e*P **P 03 02 18.1 +0.5**
INVG IAmb IAmb 03 02 20.0
comp=Z,21nm,1.0s
BOVS Bovan 83.34 320 ⇓P **P 03 02 17.8 -0.3**
GEC2 GERESS Array S 83.37 328 IAmb IAmb 03 02 33.2
comp=Z,31nm,1.5s
GERES GERESS Array B 83.37 328 P **P 03 02 17.9 -0.4**
comp=Z,3.7nm,0.8s,baz=49,slow=2.6,SNR=19
GERES PP **PP 03 05 29.6 +0.1**
comp=Z,0.5nm,0.5s,baz=68,slow=6.5,SNR=4.1
GERES LR LR 03 43 32.5
comp=Z,282nm,18.4s,baz=34,slow=39
comp=Z,3.7nm,0.8s
KOVH Kovagotottos 83.40 324 P **P 03 02 18.4 0.0**
214A Organ Pipe Nat 83.69 55 IAmb IAmb 03 02 23.0
comp=Z,15nm,0.9s
214A Organ Pipe Nat 83.69 55 P **P 03 02 21.2 +1.1**
baz=309,SNR=9.0
W18A Petrified Fore 83.70 51 IAmb IAmb 03 02 36.8
comp=Z,20nm,1.1s
W18A Petrified Fore 83.70 51 P **P 03 02 21.0 +0.6**
baz=310
ARSA Arzberg 83.75 326 *e*P **P 03 02 20.9 +0.7**
comp=Z,12nm,0.9s
GRFO Grafenberg 83.76 330 P **P 03 02 20.5 +0.3**
GRFO Grafenberg 83.76 330 P **P 03 02 20.5 +0.3**
GRFO pmax pmax
comp=Z,77nm,1.3s
S22A 4UR Ranch, Cre 83.79 47 IAmb IAmb 03 02 37.5
comp=Z,31nm,1.2s
S22A 4UR Ranch, Cre 83.79 47 P **P 03 02 22.0 +1.1**
baz=311,SNR=24
OXZ Oxford 83.85 157 IAmb IAmb 03 02 25.4
comp=Z,39nm,1.1s
MOA Molln 83.87 327 *e*P **P 03 02 21.7 +0.9**
comp=Z,20nm,1.3s
F33A 5 Mile Ranch, 83.88 36 IAmb IAmb 03 02 35.9
comp=Z,26nm,1.1s
F33A 5 Mile Ranch, 83.88 36 P **P 03 02 22.5 +1.7**
baz=317,SNR=7.9
DIVS Divibare 83.90 321 IAmb IAmb 03 02 41.7
comp=Z,21nm,1.0s
RPZ Rata Peaks 83.90 158 LR LR 03 32 50.1
comp=Z,231nm,21.9s,baz=327,slow=31
X18A Snowflake 83.94 52 IAmb IAmb 03 02 25.6
comp=Z,24nm,1.1s
PGBU Glenifferbraes 83.96 341 *e*P **P 03 02 21.4 +0.4**
PGBU IAmb IAmb 03 02 23.9
comp=Z,31nm,0.8s
Q24A Divide 83.97 46 P **P 03 02 23.3 +1.4**
baz=312,SNR=5.3
EKA Eskdalemuir Ar 84.02 340 P **P 03 02 21.5 +0.1**
comp=Z,7.6nm,0.8s,baz=36,slow=5.0,SNR=13
EKA LR LR 03 43 10.7
comp=Z,457nm,18.7s,baz=30,slow=38
comp=Z,7.6nm,0.8s
EKA Eskdalemuir Ar 84.02 340 P **P 03 02 21.2 -0.2**
ESK Eskdalemuir 84.05 340 *e*P **P 03 02 22.2 +0.7**
LBZ Lake Benmore 84.25 159 P **P 03 02 22.6 +0.1**
LBZ IAmb IAmb 03 02 34.9
comp=Z,36nm,1.1s
BIOA Bad Ischl, Aus 84.27 327 *i* P **P 03 02 23.4 +0.6**
comp=Z,29nm,1.3s,SNR=8.4
SOKA Soboth 84.41 326 *i* P **P 03 02 23.6 -0.1**
comp=Z,36nm,1.2s,SNR=9.5
STIP Stip 84.44 319 *i* P **P 03 02 22.6 -1.2**
EYMN Ely 84.49 32 IAmb IAmb 03 02 36.0
comp=Z,29nm,1.2s
EYMN Ely 84.49 32 P **P 03 02 25.0 +1.1**
baz=320
VAY Valandovo 84.49 318 *i* P **P 03 02 24.1 +0.1**
SDCO Great Sand Dun 84.58 47 IAmb IAmb 03 02 29.5
comp=Z,20nm,1.2s
SDCO Great Sand Dun 84.58 47 P **P 03 02 26.8 +1.8**
baz=312
SDCO Great Sand Dun 84.58 47 P **P 03 02 26.0 +1.1**
baz=312,SNR=14
SKO Skopje 84.65 319 *i* P **P 03 02 25.5 +0.6**
PPT2 Papeete2 84.71 116 *e*S **S 03 12 51.8 +0.2**
comp=Z,110nm,24.8s
PPT2 Papeete2 84.71 116 *e*LR LR 03 29 09.0
comp=Z,408nm,23.2s
PPT2 *e*LR LR 03 29 09.6
comp=Z,424nm,22.0s
PPT2 Papeete2 84.71 116 *e*T T 04 35 35.3
comp=Z,5.2nm,0.3s
TUC Tucson 84.81 54 P **P 03 02 26.9 +1.0**
baz=310
TIAR Tiarei 84.86 116 *e*T T 04 35 37.9
comp=Z,1.2nm,0.2s
K31A O'Neill 84.97 40 P **P 03 02 27.4 +1.0**
baz=316
CLGH Cloghs, Cushen 85.03 342 *e*P **P 03 02 27.0 +0.5**
CLGH IAmb IAmb 03 02 28.9
comp=Z,40nm,1.0s
BEBN Eben Emael 85.04 333 *d*P **P 03 02 26.6 +0.1**
comp=Z,21nm,0.9s
BTNL Ternell 85.04 333 *d*P **P 03 02 25.9 -0.8**
comp=Z,10nm,1.1s
MEM Membach 85.07 333 *d*P **P 03 02 26.4 -0.3**
comp=Z,13nm,0.9s
MYKA Terra Mystica 85.07 326 *e*P **P 03 02 26.6 -0.4**
comp=Z,6.9nm,0.6s
BSTI Sart Tilman 85.25 333 *d*PcP **PcP 03 02 30.9 +0.1**
ECSD EROS Data Cent 85.25 38 IAmb IAmb 03 02 30.8
comp=Z,15nm,0.9s
ECSD EROS Data Cent 85.25 38 P **P 03 02 28.2 +0.4**
baz=317,SNR=11
ECSD EROS Data Cent 85.25 38 P **P 03 02 28.8 +0.9**
baz=317,SNR=11
BHOU Houvegnez 85.28 333 *d*P **P 03 02 27.8 0.0**
KSCO Kaye Shedlock' 85.39 44 P **P 03 02 29.6 +0.8**
baz=313
PDG Podgorica 85.47 321 ⇑P **P 03 02 28.6 -0.3**
BCLA Clavier 85.48 333 *d*P **P 03 02 28.6 -0.2**
comp=Z,9.2nm,1.1s
ABTA Abfaltersbach 85.49 327 *e*P **P 03 02 28.3 -0.8**
comp=Z,7.4nm,1.0s
WIM Isle of Man 85.49 340 *e*P **P 03 02 29.0 +0.2**
CLUD Cludinico 85.55 327 IAmb IAmb 03 02 39.0
comp=Z,27nm,1.1s
BGES Gesves 85.59 333 *d*P **P 03 02 28.9 -0.5**
comp=Z,9.3nm,1.0s
OHR Ohrid 85.59 319 *i* P **P 03 02 31.2 +1.6**
T25A Trinidad 85.63 47 IAmb IAmb 03 02 33.4
comp=Z,29nm,0.9s
T25A Trinidad 85.63 47 P **P 03 02 30.8 +0.7**
baz=312,SNR=24
MOTA Moosalm 85.64 328 *e*P **P 03 02 30.6 +0.8**
comp=Z,18nm,1.5s

RETA Reutte 85.67 329 *e*P **P 03 02 29.7 -0.2**
comp=Z,8.6nm,0.8s
SQTA Sankt Quirin 85.69 328 *e*P **P 03 02 32.9 +2.8**
comp=Z,6.0nm,1.0s
RCHB Rochefort 85.73 333 *d*P **P 03 02 29.6 -0.5**
comp=Z,14nm,1.1s
GMM Mts of Mourne 85.75 341 *e*P **P 03 02 29.7 -0.3**
STAL STALIGIAL 85.77 327 IAmb IAmb 03 02 40.8
comp=Z,41nm,1.3s
BMRD Maresisous 85.77 333 *d*P **P 03 02 30.1 -0.1**
comp=Z,15nm,1.0s
SNF Seneffe 85.78 334 *d*P **P 03 02 30.1 -0.1**
WLF Walferdange 85.78 332 *d*P **P 03 02 30.7 +0.4**
comp=Z,14nm,1.3s
ANMO Albuquerque 85.85 49 P **P 03 02 31.2 0.0**
ANMO IAmb IAmb 03 02 35.3
comp=Z,20nm,1.0s
ANMO Albuquerque 85.85 49 *c*eP **P 03 02 33.3 +2.1**
ANMO pmax pmax
comp=Z,27nm,1.3s
ANMO Albuquerque 85.85 49 P **P 03 02 32.9 +1.7**
baz=312
ANMO Albuquerque 85.85 49 P **P 03 02 32.4 +1.2**
baz=312
SPMN Marine on St. 85.97 35 IAmb IAmb 03 02 46.3
comp=Z,32nm,1.4s
SPMN Marine on St. 85.97 35 P **P 03 02 32.7 +1.3**
baz=319
DOU Dourbes 86.01 333 *d*P **P 03 02 31.0 -0.5**
comp=Z,9.1nm,1.4s
BFO Black Forest 86.01 330 P **P 03 02 31.4 -0.1**
BFO Black Forest 86.01 330 P **P 03 02 31.4 -0.1**
BFO pmax pmax
comp=Z,54nm,1.3s
FETA Feichten 86.05 328 *e*P **P 03 02 31.9 0.0**
comp=Z,11nm,1.3s
BGNE Belgrade 86.15 40 P **P 03 02 32.9 +0.5**
baz=316
BAIF Baives 86.18 334 *e*P **P 03 02 32.1 -0.2**
BAIF pmax pmax
comp=Z,24nm,1.3s
FOEL Foel Wylfa 86.18 339 *e*P **P 03 02 31.6 -0.6**
FOEL IAmb IAmb 03 02 34.5
comp=Z,42nm,0.9s
DAVA Damuels 86.20 329 *e*P **P 03 02 31.3 -1.3**
comp=Z,15nm,1.1s
Y22A Socorro 86.20 50 P **P 03 02 34.2 +1.3**
baz=311
YRC Rhoscolyn 86.25 340 *e*P **P 03 02 33.2 +0.7**
CDF Champ du Feu 86.36 331 *e*P **P 03 02 32.6 -0.8**
CDF pmax pmax
comp=Z,21nm,1.0s
319A Douglas 86.39 54 IAmb IAmb 03 02 50.8
comp=Z,46nm,1.6s
TAOE Nuku Hiva Isla 86.53 103 *e*S **S 03 13 09.4 -0.4**
comp=Z,220nm,26.9s
TAOE Nuku Hiva Isla 86.53 103 *e*LR LR 03 29 59.4
comp=Z,572nm,32.5s
FUORN Ofenpass-Fuorn 86.56 328 IAmb IAmb 03 02 52.3
comp=Z,57nm,1.7s
DAVOX Davos/Dischmat 86.60 329 LR LR 03 44 40.2
comp=Z,553nm,18.6s,baz=67,slow=38
121A Cookes Peak, D 86.60 52 IAmb IAmb 03 02 55.8
comp=Z,18nm,1.1s
121A Cookes Peak, D 86.60 52 P **P 03 02 37.0 +2.0**
baz=311
121A Cookes Peak, D 86.60 52 P **P 03 02 35.4 +0.4**
baz=311,SNR=5.1
I37B Waseca 86.61 36 P **P 03 02 35.6 +1.1**
baz=319
SCHQ Schefferville 86.65 15 P **P 03 02 36.9 +2.3**
comp=Z,4.5nm,0.9s,baz=285,slow=12,SNR=2.0
SCHQ LR LR 03 44 58.4
comp=Z,72nm,18.0s,baz=4.0,slow=38
comp=Z,4.5nm,0.9s
L34A Svendsen Farm, 86.66 39 P **P 03 02 36.3 +1.4**
baz=317,SNR=6.3
MCH1 Michaelchurch 86.91 338 *e*P **P 03 02 35.6 -0.2**
MCH1 IAmb IAmb 03 02 38.7
comp=Z,45nm,0.9s
MONM Monmouth 86.99 338 *e*P **P 03 02 36.2 0.0**
MONM IAmb IAmb 03 02 38.7
comp=Z,48nm,0.9s
HINF Hinteralfeld 87.01 331 *e*P **P 03 02 35.2 -1.3**
HINF pmax pmax
comp=Z,13nm,1.4s
HAU Haudompre 87.06 331 *e*P **P 03 02 35.5 -1.2**
HAU pmax pmax
comp=Z,33nm,1.6s
CBKS Cedar Bluff 87.14 43 IAmb IAmb 03 02 39.2
comp=Z,33nm,1.2s
CBKS Cedar Bluff 87.14 43 P **P 03 02 38.2 +0.9**
baz=315
CBKS Cedar Bluff 87.14 43 P **P 03 02 37.9 +0.6**
baz=315
N35A Tabor 87.85 39 P **P 03 02 42.4 +1.8**
baz=318,SNR=6.0
INTR Introdacqua 88.45 323 IAmb IAmb 03 02 56.4
comp=Z,16nm,0.9s
TBI Tubuai 88.49 120 *e*LR LR 03 30 54.2
comp=Z,11μm,21.2s
TBI *e*LR LR 03 30 54.4
comp=Z,511nm,21.8s
TBI Tubuai 88.49 120 *e*T T 04 40 17.1
comp=Z,7.7nm,0.4s
LOR Lormes 88.62 332 *e*P **P 03 02 44.5 +0.3**
LOR pmax pmax
comp=Z,33nm,1.7s
KSU1 Kansas State U 88.63 41 P **P 03 02 45.3 +1.0**
baz=317,SNR=7.8
KSU1 Kansas State U 88.63 41 P **P 03 02 45.1 +0.7**
baz=317,SNR=7.8
MSTX Muleshoe 88.76 48 P **P 03 02 46.4 +1.3**
baz=314
AMTX Amarillo 88.78 47 P **P 03 02 47.4 +2.2**
baz=314
AMTX Amarillo 88.78 47 P **P 03 02 45.9 +0.7**
baz=314
FLN La Foliniere 88.92 335 *e*P **P 03 02 45.6 +0.1**
FLN pmax pmax
comp=Z,81nm,1.8s
LPL La Plagne 88.92 330 *e*P **P 03 02 45.0 -0.9**
LPL pmax pmax
comp=Z,5.0nm,0.8s
JFWS Jewell Farm 88.93 35 P **P 03 02 47.0 +1.3**
baz=321
LPG La Plagne 88.93 330 *e*P **P 03 02 45.1 -0.9**
LPG pmax pmax
comp=Z,4.0nm,0.7s
LDF La Druitiere 88.94 335 *e*P **P 03 02 45.8 +0.2**
LDF pmax pmax
comp=Z,100nm,2.3s
N38A Joes South For 89.11 38 IAmb IAmb 03 02 49.5
comp=Z,24nm,1.1s
L40A Anamosa 89.13 36 IAmb IAmb 03 03 03.6
comp=Z,30nm,1.2s
L40A Anamosa 89.13 36 P **P 03 02 47.7 +1.1**
baz=320
SMF Signal de Mont 89.15 332 *e*P **P 03 02 46.8 +0.2**
SMF pmax pmax
comp=Z,11nm,1.2s
OK035 E0210 Rd and N 89.21 44 IAmb IAmb 03 02 50.3
comp=Z,30nm,1.0s
U32A Winter Ranch, 89.28 44 IAmb IAmb 03 02 51.3
comp=Z,29nm,1.1s
OK038 West end E0370 89.36 44 IAmb IAmb 03 02 50.1
comp=Z,27nm,1.0s
GRR Gorron 89.36 335 *e*P **P 03 02 49.1 +1.5**
GRR pmax pmax
comp=Z,21nm,1.0s
KAN14 Manchester OK 89.45 43 IAmb IAmb 03 03 02.9
comp=Z,19nm,1.0s
ATD Arta Tunnel 89.52 284 LR LR 03 45 15.5
comp=Z,97nm,20.7s,baz=30,slow=37
MBDF Montbardon 89.55 329 *e*P **P 03 02 47.1 -1.6**
MBDF pmax pmax
comp=Z,4.0nm,0.6s
BGF Bois d'Agland 89.60 332 *e*P **P 03 02 52.7 +4.0**
BGF pmax pmax
comp=Z,10.0nm,1.1s
ORIF Oris-en-Rattie 89.76 330 *e*P **P 03 02 50.8 +1.1**
ORIF pmax pmax
comp=Z,17nm,1.5s
P38A Dawn 89.84 39 P **P 03 02 50.9 +0.9**
baz=319
GLMI Grayling 89.86 30 P **P 03 02 50.3 +0.2**
baz=325

SBF	Sospel	89.97	328	eP	P	03 02 51.2	+0.6
SBF	comp=Z,9.0nm,0.8s			pmax	pmax		
TCF	Toulx Ste Croi	90.06	333	eP	P	03 02 51.8	+0.8
TCF	comp=Z,9.0nm,1.0s			pmax	pmax		
ROSF	Rostrenen	90.20	337	eP	P	03 02 52.4	+0.9
ROSF	comp=Z,51nm,1.2s			pmax	pmax		
T35A	Sooner Cattle	90.28	42	IAmb	IAmb	03 02 54.7	
	comp=Z,15nm,0.9s						
T35B	Sooner Cattle	90.28	42	P	P	03 02 53.2	+1.1
	baz=317,SNR=5.4						
VIVF	Saint-Julien-l	90.30	330	eP	P	03 02 51.3	-0.8
VIVF	comp=Z,11nm,1.1s			pmax	pmax		
LPIG	La Paz	90.35	60	LR	LR	03 42 52.8	
	comp=Z,42nm,18.1s,baz=323,slow=35						
OK044	Pawnee Station	90.52	43	IAmb	IAmb	03 02 55.9	
	comp=Z,19nm,0.9s						
QUIF	Quistinic	90.54	337	eP	P	03 02 53.7	+0.7
QUIF	comp=Z,49nm,1.5s			pmax	pmax		
WMOK	Wichita Mounta	90.58	45	P	P	03 02 54.0	+0.5
	baz=316,SNR=7.6						
WMOK	Wichita Mounta	90.58	45	P	P	03 02 54.4	+0.9
	baz=316						
MFF	Saint Martin d	90.66	334	eP	P	03 02 53.4	-0.2
MFF	comp=Z,20nm,1.0s			pmax	pmax		
P40A	Paris	90.66	38	P	P	03 02 55.4	+1.6
	baz=320						
OK033	Mehan	90.68	43	IAmb	IAmb	03 02 57.1	
	comp=Z,35nm,1.2s						
LMR	La Mourre	90.79	328	eP	P	03 02 55.3	+1.0
LMR	comp=Z,38nm,1.1s			pmax	pmax		
OK031	S. Brethren Rd	90.80	43	IAmb	IAmb	03 02 57.7	
	comp=Z,20nm,0.9s						
FNO	Franklin	90.99	44	IAmb	IAmb	03 02 58.8	
	comp=Z,21nm,0.9s						
J47A	Sunmer	91.07	31	P	P	03 02 57.6	+1.9
	baz=325						
J47A				P	P	03 02 57.6	+1.9
	baz=325						
RJF	Les Rejaudoux	91.16	332	eP	P	03 02 55.7	-0.3
RJF	comp=Z,13nm,1.0s			pmax	pmax		
HDIL	Hopedale	91.21	36	P	P	03 02 57.4	+1.1
	baz=322						
X34A	Smith Ranch, M	91.22	45	IAmb	IAmb	03 03 00.1	
	comp=Z,24nm,1.0s						
CAF	Calviac	91.27	332	eP	P	03 02 56.6	0.0
CAF	comp=Z,11nm,0.9s			pmax	pmax		
TX31	Lajitas Ar. Si	91.36	52	P	P	03 02 58.9	+1.4
	baz=313,SNR=32						
TX32	Lajitas Array	91.36	52	IAmb	IAmb	03 03 00.9	
	comp=Z,14nm,1.0s						
TXAR	Lajitas Array	91.36	52	P	P	03 02 59.2	+1.8
	comp=Z,10nm,0.9s,baz=289,slow=3.2,SNR=60						
	comp=Z,10nm,0.9s						
TUL1	Leonard	91.41	43	IAmb	IAmb	03 03 02.8	
	comp=Z,15nm,0.7s						
TUL1	Leonard	91.41	43	P	P	03 02 58.6	+1.2
	baz=318,SNR=6.7						
TUL1	Leonard	91.41	43	P	P	03 02 58.9	+1.5
	baz=319,SNR=6.7						
R40A	Maddies Statio	91.50	39	IAmb	IAmb	03 03 09.4	
	comp=Z,13nm,1.1s						
R40A	Maddies Statio	91.50	39	P	P	03 02 58.8	+1.1
	baz=320						
ABTX	Abilene, Hawle	91.57	47	IAmb	IAmb	03 03 01.2	
	comp=Z,21nm,0.9s						
ABTX	Abilene, Hawle	91.57	47	P	P	03 02 59.8	+1.6
	baz=315,SNR=7.7						
ABTX	Abilene, Hawle	91.57	47	P	P	03 02 58.7	+0.5
	baz=315,SNR=7.7						
VAE	Valguarnera	91.62	320	LR	LR	03 47 55.4	
	comp=Z,317nm,19.0s,baz=32,slow=38						
LFF	La Frestale	91.76	333	eP	P	03 02 58.6	-0.2
LFF	comp=Z,11nm,0.8s			pmax	pmax		
U38A	Gravette	91.78	41	IAmb	IAmb	03 03 01.7	
	comp=Z,16nm,0.9s						
U38A	Gravette	91.78	41	P	P	03 03 00.3	+1.2
	baz=318,SNR=8.7						
SADO	Sadowa	92.05	27	LR	LR	03 45 03.9	
	comp=Z,105nm,22.0s,baz=324,slow=36						
HHAR	Hobbs	92.14	41	IAmb	IAmb	03 03 52.2	
	comp=Z,18nm,1.0s						
HHAR	Hobbs	92.14	41	P	P	03 03 01.9	+1.2
	baz=319						
CCM	Cathedral Cave	92.19	38	P	P	03 03 02.0	+1.0
	baz=320						
MGMO	Mountain Grove	92.36	40	IAmb	IAmb	03 03 04.1	
	comp=Z,11nm,1.1s						
Z35A	Perchaven, San	92.47	45	P	P	03 03 03.9	+1.6
	baz=317,SNR=13						
MTLF	Montolieu	92.54	331	eP	P	03 03 02.2	-0.3
MTLF	comp=Z,21nm,1.2s			pmax	pmax		
N47A	Urbana	92.61	33	IAmb	IAmb	03 03 15.0	
	comp=Z,27nm,1.2s						
JCT	Junction City	92.99	49	P	P	03 03 05.9	+1.1
	baz=315,SNR=5.5						
JCT	Junction City	92.99	49	P	P	03 03 05.7	+0.9
	baz=315,SNR=5.5						
OLIL	Olney	93.21	36	IAmb	IAmb	03 03 18.3	
	comp=Z,23nm,1.2s						
WHTX	Lake Whitney,	93.32	46	P	P	03 03 08.5	+2.2
	baz=316,SNR=9.1						
WHTX	Lake Whitney,	93.32	46	P	P	03 03 07.4	+1.1
	baz=316,SNR=9.1						
O48B	Farmland	93.35	33	P	P	03 03 07.0	+0.7
	baz=324						
FCAR	Ozark Folk Cen	93.40	40	IAmb	IAmb	03 03 18.4	
	comp=Z,12nm,1.2s						
EPF	Esparros	93.53	332	eP	P	03 03 06.2	-0.9
EPF	comp=Z,7.0nm,1.2s			pmax	pmax		
MIAR	Mount Ida	93.63	42	P	P	03 03 09.3	+1.6
	baz=319						
MIAR	Mount Ida	93.63	42	P	P	03 03 08.9	+1.3
	baz=319						
WHAR	Wooly Hollow	93.77	41	IAmb	IAmb	03 03 20.4	
	comp=Z,16nm,1.2s						
LONY	Lake Ozonia	93.79	24	P	P	03 03 09.5	+1.4
	baz=332						
ETSF	Etsaut	93.99	332	eP	P	03 03 09.1	-0.1
P49A	Miami Univ. Ec	94.14	33	P	P	03 03 10.1	+0.3
	baz=325						
ACSO	Alum Creek Sta	94.33	32	IAmb	IAmb	03 03 13.8	
	comp=Z,17nm,1.0s						
ACSO	Alum Creek Sta	94.33	32	P	P	03 03 11.5	+0.8
	baz=326						
WCI	Wyandotte Cave	94.47	35	P	P	03 03 12.6	+1.2
	baz=324						
WLAR	White Oak Lake	94.53	42	IAmb	IAmb	03 03 15.9	
	comp=Z,21nm,0.9s						
833A	Chaparral WMA,	94.76	50	P	P	03 03 13.7	+0.7
	baz=315						
PKME	Peaks-Kenny Pk	94.85	21	P	P	03 03 11.9	-1.1
	baz=336						
O53A	New Philadelph	95.06	31	P	P	03 03 14.8	+0.7
	baz=327						
T47A	Sharon Grove	95.08	36	IAmb	IAmb	03 03 26.6	
	comp=Z,33nm,1.6s						
Q51A	Peebles	95.16	33	IAmb	IAmb	03 03 26.9	
	comp=Z,21nm,1.2s						
P52A	Corning	95.19	32	P	P	03 03 14.1	-0.6
	baz=326						
WVT	Waverly	95.40	37	P	P	03 03 17.1	+1.4
	baz=322						
KEST	Kesra	95.56	322	LR	LR	03 51 28.4	
	comp=Z,457nm,18.1s,baz=317,slow=39						
SSPA	Standing Stone	96.07	28	P	P	03 03 20.2	+1.5
	baz=330						
SSPA	Standing Stone	96.07	28	P	P	03 03 20.0	+1.3
	baz=330						
U49A	Red Boiling Sp	96.09	36	IAmb	IAmb	03 03 31.2	
	comp=Z,13nm,1.1s						
U49A	Red Boiling Sp	96.09	36	P	P	03 03 20.3	+1.4
	baz=324						
T50A	Nancy	96.12	35	IAmb	IAmb	03 03 30.6	
	comp=Z,20nm,1.4s						
ZAIG	Zacatecas	96.55	56	IAmb	IAmb	03 03 38.9	
	comp=Z,21nm,1.7s						
TZTN	Tazewell	97.11	34	P	Pdif	03 03 24.6	+1.0
	baz=325						
TKL	Tuckaleechee C	97.73	35	LR	LR	03 48 48.1	
	comp=Z,129nm,21.5s,baz=338,slow=36						
TKL	Tuckaleechee C	97.73	35	IAmb	IAmb	03 03 38.9	
	comp=Z,8.7nm,1.0s						
BLA	Blacksburg	97.95	32	P	Pdif	03 03 29.0	+1.6
	baz=328						
ESDC	Sonseca Array	98.05	333	P	P	03 03 27.1	-0.6
	comp=Z,1.1nm,0.9s,baz=28,slow=3.9,SNR=7.5						
ESDC				PP	PP	03 07 25.8	-0.1
	comp=Z,3.4nm,1.1s,baz=19,slow=5.9,SNR=4.9						
ESDC				LR	LR	03 51 53.1	
	comp=Z,423nm,18.6s,baz=11,slow=38						
	comp=Z,1.1nm,0.9s						
TORD	Torodi Ar. Bea	117.69	314	PKP	PKPdf	03 08 37.0	-0.9
	comp=Z,1.1nm,0.9s,baz=5.2,slow=2.2,SNR=5.6						
TORD				PP	PP	03 09 48.4	-1.5
	comp=Z,5.0nm,1.1s,baz=26,slow=7.6,SNR=6.7						
TORD				PKKPbc	PKKPbc	03 18 59.2	+1.0
	comp=Z,2.8nm,1.0s,baz=211,slow=3.1,SNR=7.8						
KOWA	Kowa	119.77	320	PKPdf	PKiKP	03 08 42.1	+0.2
LBTB	Lobatse	123.83	262	PKPdf	PKPdf	03 08 49.1	-0.3
LBTB	Lobatse	123.83	262	PKIKP	PKPdf	03 08 49.1	-0.3
BOSA	Boshof	125.70	258	PKP	PKPdf	03 08 51.5	-1.5
	comp=Z,5.3nm,1.0s,baz=187,slow=4.9,SNR=4.4						
DBIC	Dimbokro	126.69	315	PKP	PKPdf	03 08 55.2	0.0
	comp=Z,4.5nm,1.0s,baz=45,slow=5.6,SNR=2.9						
BAUV	El Baul	127.91	37	PKPdf	PKPdf	03 08 57.5	0.0
VNA2	Neumayer--Watz	141.00	196	PKPdf	PKPdf	03 09 13.6	-6.5
	baz=104,slow=3.0						
VNA3	Neumayer Olymp	141.25	195	PKPdf	PKPdf	03 09 14.3	-6.3
VNA1	Neumayer--Stat	141.40	196	PKPdf	PKPdf	03 09 15.0	-5.9
SMAI	San Martin Ant	144.10	163		PKPbc	03 09 24.7	+0.9
H03N2	Juan Fernandez	147.54	97	T	T	05 54 19.0	
	baz=290,slow=76						
H03N3	Juan Fernandez	147.55	97	T	T	05 54 19.6	
	baz=290,slow=76						
H03N1	Juan Fernandez	147.55	97	T	T	05 54 22.0	
	baz=290,slow=76						
LPAZ	La Paz	147.85	60	PKPbc	PKPbc	03 09 36.4	-1.0
	comp=Z,19nm,0.9s,baz=341,slow=2.7,SNR=38						
GO09	Cerro Castillo	151.88	134		PKiKP	03 09 46.8	+1.0
LCO	Las Campanas	152.79	84		PKiKP	03 09 50.0	+1.2
CO01	Juntas del Tor	153.64	86		PKPab	03 10 03.4	+0.3
PLCA	Paso Flores	155.14	111		PKPab	03 10 09.5	+0.5
PLCA	Paso Flores	155.14	111	PKP2	PKPab	03 10 09.5	+0.5

IDC 20 03:05:38.4±463.0, 42°.18N×118°.71W, h0km, Error ellipse: s-maj=170.6km s-min=111.6km az=8.0, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	6.19	10	I		03 43 10.0	
	baz=191,slow=321,SNR=1.2						
I57US	PINON FLAT INF	8.74	167	I		04 02 40.0	
	0.2nm,0.3s,baz=348,slow=318,SNR=9.7						
I10CA	LAC DU BONNET	17.59	55	I		04 55 40.0	
	baz=248,slow=328,SNR=1.4						

IDC 20 03:27:02.1±8.2, 5°.60S×150°.20E, h119km±55km, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=126.3km s-min=58.4km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.83	218	P	Pn	03 28 13.1	+0.2
	10nm,0.5s,baz=45,slow=5.7,SNR=2.2						
PMG				S	Sn	03 29 08.3	+0.5
	21nm,0.4s,baz=168,slow=15,SNR=5.5						
WRA	Warramunga Arr	21.00	226	P	P	03 31 36.3	0.0
	0.5nm,0.4s,baz=52,slow=11,SNR=18						
	0.5nm,0.4s						
ASAR	Alice Springs	23.85	220	P	P	03 32 04.8	+0.2
	0.6nm,0.4s,baz=54,slow=8.5,SNR=11						
	0.6nm,0.4s						
TORD	Torodi Ar. Bea	148.06	286	PKPbc	PKPbc	03 46 33.9	-0.9
	0.1nm,0.4s,baz=63,slow=4.1,SNR=1.8						

*IDC **20** 03:41:38.9±8.5, 19°.07S×177°.70W, h566km±40km, mb2.5/3, mbtmp3.5/4, Error ellipse: s-maj=247.4km s-min=29.2km az=144.0*

ISC 20 03:41:39.1±2.4, 19°.0S±0°.6×177°.7W±0°.4, h570km, n7, σ0°60/8, mb3.1/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.24	287	P	P	03 43 04.6	+0.3
	4.7nm,0.3s,baz=137,slow=4.3,SNR=19						
WRA	Warramunga Arr	45.11	261	P	P	03 49 04.9	-0.7
	0.2nm,0.3s,baz=97,slow=7.7,SNR=8.4						
WRA				ScP	ScP	03 53 33.7	+1.1
	0.2nm,0.9s,baz=90,slow=4.2,SNR=1.3						
	0.2nm,0.3s						
ASAR	Alice Springs	45.16	255	P	P	03 49 05.8	-0.1
	0.3nm,0.4s,baz=84,slow=8.2,SNR=5.7						
	0.3nm,0.4s						
ILAR	Eielson Array	86.80	13	P	P	03 53 22.8	-0.1
	0.3nm,0.7s,baz=211,slow=5.1,SNR=2.4						
	0.3nm,0.7s						
ARCES	ARCESS Array B	127.51	350	PKP	PKPdf	03 59 39.2	+0.1
	1.1nm,0.9s,baz=23,slow=2.9,SNR=4.1						
BRTR	Keskin Array B	146.04	314	PKPbc	PKPbc	04 00 15.9	-0.2
	0.3nm,0.6s,baz=80,slow=3.5,SNR=1.9						
GERES	GERESS Array B	148.84	345	PKPbc	PKPbc	04 00 23.0	0.0
	0.3nm,0.6s,baz=38,slow=3.2,SNR=2.1						

*KRNET **20** 04:08:18.0±0.1, 43°.04N×74°.94E, h14km, mb2.5*
*SOME **20** 04:08:18.1, 43°.00N×74°.90E*
*NNC **20** 04:08:18.8±0.1, 43°.01N×74°.93E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=4.5km s-min=0.7km az=177.0, Suspected Mining explosion.*
*KNET **20** 04:08:18.2±0.4, 43°.04N×74°.89E, h13km±2km, ml1.5, Error ellipse: s-maj=2.6km s-min=2.0km az=11.0*

ISC 20 04:08:18.7±0.8, 43°.04N±0°.03×74°.92E±0°.02, h0km, n32, σ0°66/60, 26C-11D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	Chumysh	0.13	254	⇑P	Pg	04 08 21.1	-0.1
	54nm,0.1s,SNR=73						
CHMS				⇑S	Sg	04 08 23.4	+0.6
	283nm,0.3s						
CHMS	Chumysh	0.13	254	⇑eP	Pg	04 08 21.5	+0.3
CHMS	baz=52			⇑eS	Sg	04 08 23.5	+0.6
	baz=52						
CHMS	Chumysh	0.13	254	⇑P	Pg	04 08 21.1	-0.1
	20nm,0.3s						
CHMS				⇓S	Sg	04 08 23.6	+0.6
	102nm,0.3s						
KBK	Karagaybulak	0.38	177	⇓P	Pg	04 08 26.6	+0.6
	29nm,0.1s,SNR=64						
KBK				⇓S	Sg	04 08 32.8	+1.9
	54nm,0.2s						
KBK	Karagaybulak	0.38	177	⇑eP	Pg	04 08 25.8	-0.2
	baz=79						
KBK				⇑eS	Sg	04 08 31.3	+0.4
	baz=79						
USP	Ospenovka	0.39	307	⇑P	Pg	04 08 26.0	-0.2
	8.4nm,0.1s,SNR=53						
USP				⇓S	Sg	04 08 31.7	+0.5
	15nm,0.1s						
USP	Ospenovka	0.39	307	⇑eP	Pg	04 08 25.8	-0.3
	baz=5.0						
USP				⇑eS	Sg	04 08 31.3	+0.1
	baz=5.0						
TKM2	Tokmak 2	0.51	103	⇑P	Pg	04 08 28.6	+0.1
	6.4nm,0.1s,SNR=18						
TKM2				⇓S	Sg	04 08 36.0	+1.0
	13nm,0.1s						
TKM2	Tokmak 2	0.51	103	⇑eP	Pg	04 08 27.8	-0.6
	baz=4.0						
TKM2				⇑eS	Sg	04 08 34.7	-0.3
	baz=4.0						
TKM2	Tokmak 2	0.51	103	⇑P	Pg	04 08 28.6	+0.1
	9.0nm,0.6s						
TKM2				⇓S	Sg	04 08 35.7	+0.7
	16nm,0.6s						
AAK	Ala-Archa	0.51	219	⇑P	Pg	04 08 28.7	+0.2
	5.2nm,0.2s,SNR=7.2						
AAK				⇓S	Sg	04 08 36.1	+1.1
	26nm,0.3s						
AAK	Ala-Archa	0.51	219	⇑eP	Pg	04 08 28.3	-0.1
	baz=19						
AAK				⇑eS	Sg	04 08 35.4	+0.4
	baz=19						
DGS	Degeres	0.65	71	P	Pg	04 08 31.8	+0.6
	6.8nm,0.5s						
DGS				S	Sb	04 08 41.2	-1.6
	9.1nm,0.3s						
KST	Kastek	0.76	89	P	Pg	04 08 33.7	+0.4
	9.0nm,0.5s						
KST				S	Sg	04 08 44.3	+1.1
	11nm,0.5s						
KRBS	Karabastau	0.86	39	P	Pg	04 08 35.5	+0.3
	4.6nm,0.3s						
KRBS				S	Sb	04 08 47.5	-1.2
	5.9nm,0.5s						
UCH	Uchtor	0.86	201	⇑P	Pg	04 08 35.0	-0.2
	0.8nm,0.1s,SNR=9.5						
UCH				⇓S	Sg	04 08 47.2	+0.8
	2.4nm,0.3s						
UCH	Uchtor	0.86	201	⇑eP	Pg	04 08 34.6	-0.6
	baz=1.0						
UCH				⇑eS	Sg	04 08 46.6	+0.2
	baz=1.0						
EKS2	Erkin-Say	0.92	246	⇑P	Pg	04 08 36.1	-0.3
	3.2nm,0.1s,SNR=18						
EKS2				⇓S	Sg	04 08 49.4	+1.1
	8.5nm,0.4s						
EKS2	Erkin-Say	0.92	246	⇑eP	Pg	04 08 35.5	-0.9
	baz=46						
EKS2				⇑eS	Sg	04 08 48.4	+0.1
	baz=46						
BOOM	Boomskoye usch	0.93	126	⇑eP	Pg	04 08 35.3	-1.2
	baz=26						
BOOM				⇑iS	Sg	04 08 48.0	-0.4
	baz=26						
IZV	Izvestkoviy	1.24	89	P	Pg	04 08 42.5	+0.1
	3.7nm,0.1s						
IZV				S	Sb	04 08 59.5	-0.2
	7.5nm,0.4s						
AML	Almayashu	1.28	226	⇓P	Pg	04 08 43.1	-0.1
	1.3nm,0.1s						
AML				⇑S	Sg	04 09 00.1	+0.2
	6.7nm,0.3s						
MRKS	Merke	1.28	257	P	Pg	04 08 43.1	-0.2
	1.6nm,0.1s						
MRKS				S	Sg	04 09 00.5	+0.6
	6.0nm,0.2s						
KUU	Kurty	1.34	50	P	Pg	04 08 44.2	-0.2
	7.1nm,0.4s						
KUU				S	Sb	04 09 02.4	-0.1
	19nm,0.4s						
TNSS	Tian-Shan	1.48	89	P	Pn	04 08 46.8	-0.2
	12nm,0.3s						
TNSS				S	Sb	04 09 06.8	-0.1
	10nm,0.5s						
MDOK	Medeo	1.56	85	P	Pn	04 08 47.9	0.0
	8.5nm,0.4s						
MDOK				Pg	Pb	04 08 48.1	-0.5
	11nm,0.2s						
MDOK				S	Sb	04 09 09.0	0.0
	8.2nm,0.6s						
MDOK				Lg	Lg	04 09 09.1	
	7.4nm,0.4s						
KOTS	Kotyrbulak	1.61	82	P	Pg	04 08 50.0	+0.3
	6.6nm,0.4s						
KOTS				S	Sg	04 09 12.2	+1.7
	12nm,0.7s						
ARXS	Arharly	2.42	60	Pg	Pb	04 09 03.1	+0.1
	2.8nm,0.2s						
ARXS				Lg	Lg	04 09 34.8	
	6.7nm,0.4s						
SATY	Saty	2.55	88	Pg	Pb	04 09 05.2	-0.3
	6.2nm,0.3s						
SATY				Lg	Lg	04 09 38.3	
	5.1nm,0.2s						
KPKS	Kokpek	2.78	80	Pg	Pb	04 09 08.6	-0.8
	4.9nm,0.4s						
KPKS				Lg	Lg	04 09 45.1	
	14nm,0.6s						
UZB	Uzynbulak	3.00	86	Pg	Pb	04 09 13.2	+0.1
	3.5nm,0.4s						
UZB				Lg	Lg	04 09 52.1	
	4.6nm,0.5s						
KK31	Karatay Array	3.23	273	⇓Pg	Pb	04 09 17.8	+0.8
	0.3nm,0.4s,baz=90,slow=16,SNR=8.7						
KK31				Lg	Lg	04 09 59.9	
	0.6nm,0.3s,baz=90,slow=27,SNR=5.4						

*GUC **20** 04:11:19.3±0.7, 21°.16S×68°.92W, h112km±4km, ML3.7*
*IDC **20** 04:11:20.9±1.5, 21°.24S×68°.40W, h102km±19km, mb3.6/2, mbtmp3.8/5, Error ellipse: s-maj=49.2km s-min=15.8km az=110.0*

ISC 20 04:11:19.7±1.0, 21°.16S±0°.04×68°.91W±0°.09, h113km±10km, n16, σ0°78/26, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.55	282	eP	Pn	04 11 37.2	-0.1
PB01				iS	Sn	04 11 50.5	-0.1
PB01				IAML		04 11 51.8	
	comp=E,4μm,0.2s						
PB09	IPOC Station P	0.70	206	eP	Pn	04 11 38.6	0.0
PB09				iS	Sn	04 11 53.4	+0.6
PB02	IPOC Station P	0.93	260	eP	Pn	04 11 40.8	+0.2
PB02				iS	Sn	04 11 56.7	+0.4
PB02				IAML		04 11 58.3	
	comp=E,3μm,0.4s						
PB08	IPOC Station P	1.04	347	eP	Pn	04 11 42.2	+0.2
PB08				iS	Sn	04 11 59.2	+0.5
PB07	IPOC Station P	1.07	238	eP	Pn	04 11 42.1	+0.1
PB07				iS	Sn	04 11 59.4	+0.4
PB03	IPOC Station P	1.18	221	eP	Pn	04 11 43.3	+0.1
PB03				iS	Sn	04 12 00.9	-0.1
PB03				IAML		04 12 02.0	
	comp=E,1μm,0.4s						
PATCX	Punta Patache	1.21	286	eP	Pn	04 11 43.6	+0.2
PATCX				iS	Sn	04 12 01.9	+0.5
TA01	Diego Aracena	1.33	296	eP	Pn	04 11 44.5	-0.2
TA01				iS	Sn	04 12 03.7	+0.1
TA01				IAML		04 12 04.9	
	comp=N,2μm,0.3s						
LVC	Limon Verde	1.44	180	P	Pn	04 11 46.8	+0.5
	comp=N,91nm,0.5s,baz=8.8,slow=11,SNR=195						
LVC				S	Sn	04 12 06.5	-0.1
	comp=N,123nm,0.3s,baz=267,slow=17,SNR=34						
TA02	Huaiquique	1.45	308	eP	Pn	04 11 45.7	-0.3
TA02				iS	Sn	04 12 05.7	-0.3
PB06	IPOC Station P	1.65	202	eP	Pn	04 11 49.0	+0.3
PB06				iS	Sn	04 12 11.2	+0.4
LPAZ	La Paz	4.90	9	P	Pn	04 12 33.2	+1.3
	comp=N,1.9nm,0.4s,baz=173,slow=8.3,SNR=26						
SIV	San Ignacio	9.04	57	P	Pn	04 13 23.5	-3.9
	comp=N,4.4nm,0.4s,baz=247,slow=9.5,SNR=46						
PLCA	Paso Flores	19.56	184	P	P	04 15 39.6	+1.0
	comp=N,1.0nm,0.7s,baz=15,slow=20,SNR=4.9						
BDFB	Brasilia	20.57	78	P	P	04 15 46.8	-2.9
	comp=N,2.2nm,0.5s,baz=237,slow=9.1,SNR=5.7						
	comp=N,2.2nm,0.5s						
TORD	Torodi Ar. Bea	77.24	70	P	P	04 23 02.5	+0.5
	comp=N,0.7nm,0.4s,baz=247,slow=5.1,SNR=1.6						
	comp=N,0.7nm,0.4s						

*VIE **20** 04:18:44.4±0.9, 50°.32N×18°.83E, h0km, ml2.4/2, Error ellipse: s-maj=9.4km s-min=2.9km az=160.0 13 km WNW of Katowice Suspected Mining induced.*
*IPEC **20** 04:18:44.9±0.2, 50°.25N×18°.87E, h0km±1km, ML2.4/4, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*
*PRU **20** 04:18:45.0±0.0, 50°.28N×18°.78E, h0km*
*IDC **20** 04:18:47.3±1.3, 50°.19N×18°.64E, h0km, mbtmp3.1/3, ML2.3/3, Error ellipse: s-maj=21.7km s-min=10.4km az=147.0*

ISC 20 04:18:44.2±0.8, 50°.30N±0°.04×18°.82E±0°.03, h0km, n33, σ1°00/57, Poland

| Code | Station Name | Δ° | AZ° | Phase

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,36nm,0.2s						
MORC	**Moravsky Berou**	**0.98**	**238**	*e*PG	**Pg**	**04 19 03.5**	**+0.6**
MORC				*e*SG	**Sg**	**04 19 15.4**	**-0.1**
MORC	**Moravsky Berou**	**0.98**	**238**	*e*Pg	**Pg**	**04 19 03.5**	**+0.6**
	baz=61						
MORC				*e*Sg	**Sg**	**04 19 15.4**	**-0.1**
	52nm,0.3s,baz=61						
MAUC	**Maruska**	**1.13**	**215**	*e*PG	**Pg**	**04 19 06.5**	**+0.6**
MAUC				*e*SG	**Sg**	**04 19 20.3**	**-0.2**
	comp=Z,106nm,0.4s						
KRLC	**Kraliky**	**1.33**	**261**	*e*PG	**Pg**	**04 19 09.5**	**-0.2**
KRLC				*e*SG	**Sg**	**04 19 26.5**	**-0.4**
	comp=Z,31nm,0.5s						
DPC	**Dobruska-Polom**	**1.60**	**273**	*e*PG	**Pn**	**04 19 14.4**	**+0.6**
DPC				*e*SG	**Sn**	**04 19 35.5**	**+0.2**
	comp=Z,28nm,0.5s						
JAVC	**Velka Javorina**	**1.62**	**208**	*e*PN	**Pn**	**04 19 14.3**	**+0.2**
JAVC	**Velka Javorina**	**1.62**	**208**	*e*Pn	**Pn**	**04 19 14.3**	**+0.2**
	baz=29						
OSTC	**Ostas**	**1.69**	**280**	*e*PG	**Pn**	**04 19 15.6**	**+0.6**
OSTC				*e*SG	**Sg**	**04 19 38.7**	**+0.3**
	comp=Z,19nm,0.7s						
KSP	**Ksiaz**	**1.70**	**290**	*e*Pg	**Pg**	**04 19 17.9**	**+1.0**
KSP				*e*Sg	**Sg**	**04 19 40.3**	**+1.4**
VRAC	**Vranov**	**1.75**	**236**	Pg	**Pn**	**04 19 16.9**	**+1.1**
	2.0nm,0.3s,baz=51,slow=14,SNR=11						
VRAC				Lg	Lg	04 19 39.8	
	5.7nm,0.3s,baz=150,slow=22,SNR=8.6						
VRAC	**Vranov**	**1.75**	**236**	*e*PN	**Pn**	**04 19 16.8**	**+0.9**
VRAC				*e*SG	**Sn**	**04 19 39.4**	**+0.6**
VRAC	**Vranov**	**1.75**	**236**	*e*Pn	**Pn**	**04 19 16.7**	**+0.9**
	baz=57						
VRAC				*e*Sg	**Sn**	**04 19 39.3**	**+0.5**
	23nm,0.4s,baz=57						
CHVC	**Chvalec**	**1.79**	**280**	*e*PG	**Pb**	**04 19 18.1**	**+0.2**
CHVC				*e*SG	**Sb**	**04 19 41.1**	**+0.1**
	comp=Z,12nm,0.6s						
UPC	**Upice**	**1.81**	**278**	*e*PG	**Pb**	**04 19 18.6**	**+0.4**
UPC				*e*SG	**Sb**	**04 19 41.8**	**+0.3**
	comp=Z,20nm,0.7s						
KRUC	**Moravsky**	**2.00**	**233**	*e*PN	**Pn**	**04 19 19.8**	**+0.5**
KRUC				*e*SG	**Sb**	**04 19 47.2**	**+0.2**
KRUC	**Moravsky**	**2.00**	**233**	*e*Pn	**Pn**	**04 19 19.7**	**+0.5**
	baz=53						
KRUC				*e*Sg	**Sb**	**04 19 47.2**	**+0.2**
	32nm,0.6s,baz=53						
TREC	**Trest**	**2.38**	**246**	*e*PG	**Pb**	**04 19 28.5**	**+0.5**
TREC				*e*SG	**Sb**	**04 19 59.1**	**+1.2**
	comp=Z,14nm,0.5s						
GOPC	**GO Pecny, Ondr**	**2.63**	**263**	*e*PG	**Pb**	**04 19 31.9**	**-0.2**
GOPC				*e*SG	**Sg**	**04 20 07.3**	**-1.2**
	comp=Z,22nm,1.1s						
PVCC	**Panska Ves**	**2.73**	**277**	*e*SG	**Sg**	**04 20 11.0**	**-0.9**
	comp=Z,25nm,0.5s						
PRU	**Pruhonice**	**2.77**	**265**	*e*PG	**Pb**	**04 19 34.9**	**+0.3**
PRU				*e*SG	**Sb**	**04 20 11.1**	**+2.0**
	comp=Z,6.1nm,0.3s						
CONA	**Conrad Observa**	**3.07**	**221**	*i* Pn	**Pn**	**04 19 35.0**	**+1.0**
	0.2nm,0.1s						
CONA				*e*Sn	**Sn**	**04 20 11.2**	**-0.2**
	3.9nm,0.3s						
RONA	**Rosalia, Austr**	**3.09**	**214**	*e*Pn	**Pn**	**04 19 35.5**	**+1.3**
	0.4nm,0.1s						
RONA				*e*Sn	**Sn**	**04 20 12.3**	**+0.5**
	2.4nm,0.3s						
CKRC	**Cesky Krumlov**	**3.29**	**245**	*e*SG	**Sg**	**04 20 28.3**	**-1.5**
KHC	**Kasperske Hory**	**3.60**	**253**	*e*PN	**Pn**	**04 19 42.0**	**+0.8**
KHC				*e*PG	**Pb**	**04 19 49.4**	**+0.7**
KHC				*e*SG	**Sg**	**04 20 37.3**	**-2.4**
	comp=Z,11nm,0.6s						
GERES	**GERESS Array B**	**3.64**	**248**	Pn	**Pn**	**04 19 43.0**	**+1.2**
	0.1nm,0.3s,baz=69,slow=16,SNR=2.3						
GERES				Pg	**Pb**	**04 19 51.5**	**+2.1**
	0.5nm,0.3s,baz=66,slow=17,SNR=7.7						
GERES				Sn	**Sn**	**04 20 23.0**	**-2.5**
	0.7nm,0.3s,baz=65,slow=26,SNR=5.5						
GERES				Lg	Lg	04 20 38.7	
	2.6nm,0.3s,baz=66,slow=27,SNR=14						
	0.2nm,0.3s						
CLL	**Collm**	**3.83**	**288**	*e*Sg	**Sg**	**04 20 46.0**	**-1.1**
	comp=Z,12nm,0.9s						
NKC	**Novy Kostel**	**4.09**	**272**	*e*SG	**Sg**	**04 20 53.1**	**-2.5**
	comp=Z,10nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.90**	**243**	Lg	Lg	04 22 22.5	
	comp=Z,0.2nm,0.3s,baz=155,slow=20,SNR=2.0						
FINES	**FINESS Array B**	**11.88**	**17**	Pn	**Pn**	**04 21 33.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=5.4						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**14.85**	**130**	Pn	**P**	**04 22 20.4**	**-1.2**
	baz=318,slow=19,SNR=2.0						
	comp=Z,0.2nm,0.4s						

*SJA **20** 04:38:13.0±0.5, 36°.40S×73°.00W, h40km±7km, ML4.1, MW4.1*
*NEIC **20** 04:38:17.3±1.5, 36°.47S±0°.05×72°.57W±0°.09, h54km±8km, mb4.4/9, ML4.3(GUC), Error ellipse: s-maj=10.4km s-min=7.3km az=110.0*
*GUC **20** 04:38:17.3±0.6, 36°.46S×72°.58W, h69km±5km, ML4.3*
*IDC **20** 04:38:18.1±0.8, 36°.39S×72°.44W, h51km±7km, mb3.4/7, mbtmp3.7/10, MS3.0/2, Error ellipse: s-maj=30.8km s-min=15.8km az=94.0*

ISC 20 04:38:17.6±0.6, 36°.37S±0°.04×72°.74W±0°.04, h55km±6km, n101, σ1§54/130, mb3.9/8, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.52**	**224**	**Pn**	**Pn**	**04 38 30.5**	**+1.1**
BI05				Sn	**Sn**	**04 38 39.6**	**+1.8**
BI05	**Punta Hualpn**	**0.52**	**224**	*e*P	**Pn**	**04 38 30.6**	**+1.2**
BI05				*i* S	**Sn**	**04 38 40.2**	**+2.3**
BI05				IAML		04 38 41.3	
	comp=N,16μm,0.2s						
CCSP	**San Pedro de C**	**0.56**	**212**	*e*P	**Pn**	**04 38 30.5**	**+0.7**
CCSP				*i* S	**Sn**	**04 38 39.9**	**+1.3**
CCSP				IAML		04 38 42.0	
	comp=N,32μm,0.3s						
ML02	**Panimavida**	**1.23**	**61**	Pn	**Pn**	**04 38 37.5**	**-1.0**
ML02	**Panimavida**	**1.23**	**61**	*e*P	**Pn**	**04 38 37.7**	**-0.8**
ML02				*i* S	**Sn**	**04 38 52.6**	**-1.6**
ML02				IAML		04 38 53.9	
	comp=N,11μm,0.5s						
GO05	**Huala**	**1.51**	**26**	Pn	**Pn**	**04 38 42.7**	**+0.3**
GO05	**Huala**	**1.51**	**26**	*e*P	**Pn**	**04 38 42.8**	**+0.5**
GO05				*i* S	**Sn**	**04 39 02.4**	**+1.4**
GO05				IAML		04 39 08.3	
	comp=N,3μm,0.4s						
GO05	**Huala**	**1.51**	**26**	*e*P	Pn	04 38 58.1	+16
GO05				*e*S	**Sn**	**04 39 00.5**	**-0.4**
BO03	**Pichilemu**	**1.98**	**19**	*e*P	**Pn**	**04 38 49.0**	**+0.3**
BO02	**Sierra Bellavi**	**2.24**	**46**	Pn	**Pn**	**04 38 51.8**	**-0.6**
BO02	**Sierra Bellavi**	**2.24**	**46**	*e*P	**Pn**	**04 38 52.0**	**-0.4**
BO02				*i* S	**Sn**	**04 39 18.4**	**-0.5**
BO02	**Sierra Bellavi**	**2.24**	**46**	*e*P	**Pn**	**04 38 52.0**	**-0.4**
BO02				*e*S	**Sn**	**04 39 21.3**	**+2.4**
BO02				IAML		04 39 28.4	
	comp=Z,2μm,0.2s						
BO01	**Tunca**	**2.40**	**35**	Pn	**Pn**	**04 38 54.0**	**-0.4**
BO01	**Tunca**	**2.40**	**35**	*e*P	**Pn**	**04 38 53.9**	**-0.4**
BO01				*e*S	Sn	04 39 12.6	-10
BO01				IAML		04 39 37.9	
	comp=Z,620nm,0.4s						
EDS3	**Malargue**	**2.77**	**78**	*e*P	**Pn**	**04 39 00.2**	**+0.5**
MT01	**Popeta**	**2.79**	**26**	Pn	**Pn**	**04 38 59.5**	**-0.2**
MT01	**Popeta**	**2.79**	**26**	*e*P	**Pn**	**04 38 59.7**	**0.0**
MT01	**Popeta**	**2.79**	**26**	*e*P	**Pn**	**04 38 59.0**	**-0.7**
MT01				IAML		04 39 49.4	
	comp=Z,554nm,0.3s						
VA05	**Santo Domingo**	**2.86**	**19**	Pn	**Pn**	**04 38 60.0**	**-0.8**
VA05	**Santo Domingo**	**2.86**	**19**	*e*P	**Pn**	**04 39 00.1**	**-0.6**
VA05				*i* S	**Sn**	**04 39 33.9**	**-0.1**
BO04	**La Punta**	**2.95**	**37**	Pn	**Pn**	**04 39 01.3**	**-0.7**
MT09	**Talagante**	**2.96**	**30**	Pn	**Pn**	**04 39 02.1**	**-0.1**
MT09	**Talagante**	**2.96**	**30**	*e*P	**Pn**	**04 39 02.1**	**-0.1**
MT09				IAML		04 39 42.2	
	comp=N,1μm,0.3s						
LMEL	**Las Melosas**	**3.27**	**40**	Pn	**Pn**	**04 39 06.9**	**+0.4**
LMEL	**Las Melosas**	**3.27**	**40**	*e*P	**Pn**	**04 39 06.6**	**+0.1**
LR03	**Panguipulli**	**3.27**	**175**	Pn	**Pn**	**04 39 04.8**	**-1.5**
LR03	**Panguipulli**	**3.27**	**175**	*e*P	**Pn**	**04 39 05.0**	**-1.3**
GO06	**Curarrehue**	**3.36**	**163**	Pn	**Pn**	**04 39 06.0**	**-1.6**
GO06	**Curarrehue**	**3.36**	**163**	*e*P	**Pn**	**04 39 06.0**	**-1.6**
MT02	**Curacav**	**3.37**	**23**	Pn	**Pn**	**04 39 07.3**	**-0.4**
MT02	**Curacav**	**3.37**	**23**	*e*P	**Pn**	**04 39 07.4**	**-0.4**
MT02				*i* S	**Sn**	**04 39 46.4**	**-0.2**
MT02	**Curacav**	**3.37**	**23**	*e*P	**Pn**	**04 39 07.4**	**-0.4**
MT02				*e*S	**Sn**	**04 39 47.3**	**+0.7**
MT02				IAML		04 40 13.7	
	comp=Z,244nm,0.6s						
MT05	**Renca**	**3.40**	**30**	Pn	**Pn**	**04 39 08.0**	**-0.2**
MT05	**Renca**	**3.40**	**30**	*e*P	**Pn**	**04 39 08.3**	**+0.1**
MT05	**Renca**	**3.40**	**30**	*e*P	**Pn**	**04 39 08.0**	**-0.2**
MT05				*e*P	**Pn**	**04 39 08.3**	**+0.1**
MT05				IAML		04 40 06.8	
	comp=Z,475nm,0.8s						
MT03	**Universidad Ad**	**3.41**	**33**	Pn	**Pn**	**04 39 08.0**	**-0.3**
MT03	**Universidad Ad**	**3.41**	**33**	*e*P	**Pn**	**04 39 08.1**	**-0.3**
MT03				*i* S	**Sn**	**04 39 47.2**	**-0.3**
MT03	**Universidad Ad**	**3.41**	**33**	*e*P	**Pn**	**04 39 08.0**	**-0.3**
MT03				*e*P	**Pn**	**04 39 08.3**	**0.0**
MT03				*e*S	**Sn**	**04 39 52.7**	**+5.2**
MT03				IAML		04 40 09.3	
	comp=Z,508nm,0.8s						
LR02	**Universidad Au**	**3.45**	**187**	*e*P	**Pn**	**04 39 07.3**	**-1.4**
LR04	**Corral**	**3.54**	**189**	Pn	**Pn**	**04 39 08.2**	**-1.8**
LR04	**Corral**	**3.54**	**189**	*e*P	**Pn**	**04 39 08.2**	**-1.8**
PEL	**Peldehue**	**3.64**	**28**	*e*P	**Pn**	**04 39 11.3**	**-0.1**
PEL	**Peldehue**	**3.64**	**28**	*e*P	**Pn**	**04 39 11.5**	**+0.1**
PEL				*e*S	**Sn**	**04 39 55.8**	**+2.7**
ROC1	**El Roble**	**3.67**	**23**	Pn	**Pn**	**04 39 12.1**	**-0.1**
ROC1	**El Roble**	**3.67**	**23**	*e*P	**Pn**	**04 39 12.0**	**-0.1**
ROCH	**El Roble**	**3.68**	**23**	*e*P	**Pn**	**04 39 12.1**	**0.0**
ROCH				*e*P	**Pn**	**04 39 12.2**	**0.0**
ROCH				*i* S	**Sn**	**04 39 54.6**	**+0.2**
ROCH				*i* S	**Sn**	**04 39 54.8**	**+0.4**
RFA	**San Rafael**	**3.83**	**67**	*e*P	**Pn**	**04 39 14.4**	**+0.3**
VA06	**Catapilco**	**3.98**	**18**	Pn	**Pn**	**04 39 15.8**	**-0.3**
VA03	**San Esteban**	**4.03**	**27**		**Pn**	**04 39 16.7**	**-0.1**
VA03	**San Esteban**	**4.03**	**27**	*e*P	**Pn**	**04 39 16.6**	**-0.3**
VA03				*i* S	**Sn**	**04 40 02.3**	**-0.5**
VA03	**San Esteban**	**4.03**	**27**	*e*P	**Pn**	**04 39 16.8**	**-0.1**
VA03				*e*S	**Sn**	**04 40 03.7**	**+0.9**
VA03				IAML		04 40 32.7	
	comp=Z,290nm,0.7s						
LL04	**Puerto Octay**	**4.54**	**177**		**Pn**	**04 39 21.5**	**-2.2**
AAGR	**Agrelo**	**4.60**	**46**	*e*P	**Pn**	**04 39 25.9**	**+1.3**
PLCA	**Paso Flores**	**4.68**	**159**	P	**Pn**	**04 39 24.9**	**-0.8**
	comp=Z,34nm,0.4s,baz=328,slow=12,SNR=626						
PLCA				LR	LR	04 41 20.3	
	comp=Z,158nm,19.1s,baz=36,slow=40						
PLCA	**Paso Flores**	**4.68**	**159**	Pn	**Pn**	**04 39 24.3**	**-1.4**
PLCA	**Paso Flores**	**4.68**	**159**	*e*P	**Pn**	**04 39 24.9**	**-0.8**
ARCO	**CERRO ARCO**	**4.72**	**43**	*e*P	**Pn**	**04 39 29.0**	**+2.6**
LL03	**Petrohue**	**4.77**	**177**	Pn	**Pn**	**04 39 25.4**	**-1.4**
ASAL	**Salagasta**	**4.96**	**42**	*e*P	**Pn**	**04 39 31.0**	**+1.4**
LL05	**Los Muermos**	**5.06**	**186**		**Pn**	**04 39 28.1**	**-2.7**
CO02	**Combarbal**	**5.36**	**16**		**Pn**	**04 39 34.5**	**-0.5**
H03S1	**Juan Fernandez**	**5.65**	**295**	P	**Pn**	**04 39 41.4**	**+2.8**
H03S1				S	**Sn**	**04 40 38.5**	**-3.5**
	baz=224,slow=74,SNR=78						
H03S1				T	T	04 45 18.1	
	baz=113,slow=76						
H03S3	**Juan Fernandez**	**5.66**	**295**	P	**Pn**	**04 39 41.7**	**+2.8**
H03S3				S	**Sn**	**04 40 39.3**	**-3.0**
	baz=224,slow=74,SNR=145						
H03S3				T	T	04 45 26.8	
	baz=113,slow=76						
H03S2	**Juan Fernandez**	**5.67**	**295**	P	**Pn**	**04 39 41.4**	**+2.5**
H03S2				S	**Sn**	**04 40 40.0**	**-2.5**
	baz=224,slow=74,SNR=114						
H03S2				T	T	04 45 29.3	
	baz=113,slow=76						
VA04	**Juan Fernndez**	**5.69**	**297**	Pn	**Pn**	**04 39 41.6**	**+2.1**
CO06	**Fray Jorge**	**5.76**	**10**	Pn	**Pn**	**04 39 39.4**	**-1.0**
CO03	**El Pedregal**	**5.78**	**18**		**Pn**	**04 39 40.8**	**0.0**
H03N1	**Juan Fernandez**	**5.85**	**298**	P	**Pn**	**04 39 44.9**	**+3.4**
H03N1				S	**Sn**	**04 40 44.7**	**-2.4**
	SNR=281						
H03N3	**Juan Fernandez**	**5.86**	**298**	P	**Pn**	**04 39 45.0**	**+3.4**
H03N3				S	**Sn**	**04 40 45.2**	**-2.0**
	SNR=15						
H03N2	**Juan Fernandez**	**5.87**	**298**	P	**Pn**	**04 39 45.1**	**+3.4**
H03N2				S	**Sn**	**04 40 46.0**	**-1.5**
	SNR=182						
ZON	**Zonda**	**5.88**	**36**	Pn	**Pn**	**04 39 41.5**	**-0.6**
GO04	**Tololo Observa**	**6.39**	**15**		**Pn**	**04 39 48.8**	**-0.6**
LL07	**Hotel Espejo d**	**6.48**	**185**	Pn	**Pn**	**04 39 46.9**	**-3.4**
CO05	**La Serena**	**6.56**	**11**		**Pn**	**04 39 50.7**	**-0.7**
CO01	**Juntas del Tor**	**6.75**	**20**	Pn	**Pn**	**04 39 53.9**	**-0.4**
GO07	**Milladeo Hill,**	**6.77**	**186**		**Pn**	**04 39 51.1**	**-3.2**
LL02	**Futaleuf**	**6.84**	**175**	Pn	**Pn**	**04 39 53.5**	**-1.8**
AC05	**El Transito**	**7.80**	**16**	Pn	**Pn**	**04 40 07.5**	**-1.0**
AY01	**Puyuhuapi**	**8.04**	**180**		**Pn**	**04 40 10.0**	**-1.6**
COYC	**Coyhaique**	**9.20**	**177**	Pn	**Pn**	**04 40 26.3**	**-1.3**
LVC	**Limon Verde**	**14.11**	**15**	P	**Pn**	**04 41 34.6**	**-0.4**
	comp=Z,5.6nm,1.0s,baz=166,slow=12,SNR=2.3						
PB01	**IPOC Station P**	**15.54**	**11**	Pn	**Pn**	**04 41 54.0**	**+0.8**
PB01				IAmb	IAmb	04 42 18.8	
	comp=Z,12nm,0.7s						
CPUP	**Villa Florida**	**16.52**	**57**	P	**Pn**	**04 42 05.0**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=285,slow=16,SNR=1.6						
EFI	**East Falkland**	**18.53**	**150**	P	**P**	**04 42 25.7**	**-3.6**
EFI				IAmb	IAmb	04 43 00.9	
	comp=Z,46nm,1.1s						
LPAZ	**La Paz**	**20.42**	**13**	P	**P**	**04 42 50.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=194,slow=6.5,SNR=1.7						
	comp=Z,0.4nm,0.5s						
LPAZ	**La Paz**	**20.42**	**13**	P	**P**	**04 42 47.9**	**-3.0**
AQDB	**Aquidauana**	**21.75**	**48**	P	**P**	**04 43 03.8**	**-0.7**
SIV	**San Ignacio**	**22.80**	**30**	P	**P**	**04 43 13.8**	**-2.0**
	comp=Z,1.4nm,0.8s,baz=204,slow=15,SNR=6.1						
SIV				pP	**pP**	**04 43 28.2**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=240,slow=7.4,SNR=7.0						
	comp=Z,1.4nm,0.8s						
NNA	**Nana**	**24.56**	**350**	LR	LR	04 49 52.0	
	comp=Z,35nm,21.0s,baz=126,slow=28						
BAUV	**El Baul**	**45.29**	**7**	P	**P**	**04 46 30.3**	**+0.4**
BAUV				IAmb	IAmb	04 46 31.0	
	comp=Z,7.0nm,0.7s						
VNA3	**Neumayer Olymp**	**47.40**	**157**	P	**P**	**04 46 45.5**	**-0.4**
VNA2	**Neumayer--Watz**	**48.06**	**156**	P	**P**	**04 46 49.3**	**-1.8**
	baz=280,slow=8.0						
SNAA	**Sanae**	**49.62**	**157**	P	**P**	**04 47 02.3**	**-0.7**
SNAA	**Sanae**	**49.62**	**157**	P	**P**	**04 47 02.4**	**-0.7**
SNAA				IAmb	IAmb	04 47 24.3	
	comp=Z,3.5nm,1.1s						
QSPA	**South Pole Qui**	**53.87**	**180**	P	**P**	**04 47 35.2**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=116,slow=3.2,SNR=17						
QSPA				pP	**pP**	**04 47 49.7**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=168,slow=6.1,SNR=5.0						
	comp=Z,0.9nm,0.4s						
QSPA	**South Pole Qui**	**53.87**	**180**	P	**P**	**04 47 35.1**	**+0.2**
QSPA				IAmb	IAmb	04 48 01.7	
	comp=Z,3.1nm,0.8s						
TXAR	**Lajitas Array**	**71.53**	**332**	P	**P**	**04 49 34.3**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=154,slow=9.0,SNR=7.0						
TXAR				pP	**pP**	**04 49 49.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=156,slow=9.5,SNR=2.5						
	comp=Z,0.6nm,0.6s						
V48A	**Smith Brothers**	**72.93**	**348**	P	**P**	**04 49 41.5**	**+0.7**
NVAR	**Mina Array Bea**	**85.51**	**326**	P	**P**	**04 50 52.0**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=158,slow=6.3,SNR=6.8						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**85.56**	**70**	P	**P**	**04 50 51.9**	**+1.7**
	comp=Z,0.5nm,1.0s,baz=204,slow=4.4,SNR=1.8						
TORD				pP	**pP**	**04 51 03.9**	**-2.0**
	comp=Z,0.6nm,0.7s,baz=222,slow=5.5,SNR=3.7						
	comp=Z,0.5nm,1.0s						
PDAR	**Pinedale Array**	**85.62**	**334**	P	**P**	**04 50 51.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=139,slow=4.8,SNR=2.0						
	comp=Z,0.1nm,0.3s						

*NNC **20** 04:53:43.5±4.8, 30°.90N×68°.73E, h0km, mb5.0, Error ellipse: s-maj=68.7km s-min=43.2km az=107.0*
*IDC **20** 04:53:48.6±0.5, 30°.86N×69°.81E, h0km, mb4.5/34, mbtmp4.5/38, ML4.4/4, MS4.2/79, Error ellipse: s-maj=11.3km s-min=10.1km az=29.0*
*NDI **20** 04:53:48.9±4.3, 30°.85N×69°.60E, h10km±44km, mb4.7, ML4.2, mb4.8(NEIC)*
*GCMT **20** 04:53:53.4±0.3, 30°.83N±0°.02×69°.93E±0°.02, h24km±1km, MW5.0/104, Moment Tensor Solution. s30,c33; s104,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.13; $M_{\theta\theta}$0.59±.13; $M_{\phi\phi}$-0.10±.12; $M_{r\theta}$1.01±.25; $M_{\theta\phi}$-2.81±.09; $M_{\phi r}$-2.06±.29; Best double couple: $M_0$3.55000×10^{16} NP1:ϕ_s353.00000°, δ90.00000°, λ-38.00000°. NP2:ϕ_s84.00000°, δ52.00000°, λ-180.00000°. Principal axes: T 4.0850, Plg25.0000°, Azm45.0000°; N -1.0710, Plg52.0000°, Azm173.0000°; P -3.0140, Plg26.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 04:53:53.4±1.5, 30°.90N±0°.08×69°.81E±0°.06, h30km±5km, mb4.8/54 Error ellipse: s-maj=12.2km s-min=7.3km az=195.0*
*BJI **20** 04:53:54.0±0.0, 31°.14N×70°.35E, h10km, mb4.7/39, mB5.0/22, Ms4.7/32, Ms7 4.4/30*
*MOS **20** 04:53:54.1±1.3, 31°.13N×69°.93E, h45km, mb5.0/52, MS4.3/12, Error ellipse: s-maj=5.3km s-min=3.2km az=92.1*

ISC 20 04:53:53.1±0.4, 30°.86N±0°.04×69°.91E±0°.03, h27km±2km, h27km:pP-P, n471, σ1§99/469, mb4.8/127, MS4.3/92, 40C-20D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**2.48**	**39**	P	**Pn**	**04 54 33.4**	**+1.6**
CEP	**Cherat**	**3.40**	**29**	P	**Pn**	**04 54 47.4**	**+2.8**
KBL	**Kabul**	**3.74**	**349**	Pn	**Pn**	**04 54 50.9**	**+1.7**
KBL	**Kabul**	**3.74**	**349**	P	**Pn**	**04 54 50.9**	**+1.7**
KBL	**Kabul**	**3.74**	**349**	P	**Pn**	**04 54 51.4**	**+2.1**
	SNR=31						
KBL				S	**Sn**	**04 55 35.3**	**+2.8**
NIL	**Nilore**	**3.97**	**45**	Pn	**Pn**	**04 54 54.4**	**+2.2**
NIL	**Nilore**	**3.97**	**45**	P	**Pn**	**04 54 54.4**	**+2.2**
NIL	**Nilore**	**3.97**	**45**	P	**Pn**	**04 54 54.6**	**+2.4**
NIL				S	**Sb**	**04 55 45.6**	**-4.3**
JASL	**Jaisalmer**	**4.02**	**167**	*e*P	**Pn**	**04 54 53.0**	**+0.1**
JMU	**Jammu**	**4.64**	**65**	*e*P	**Pn**	**04 55 03.2**	**+1.9**
JMU				*e*S	**Sn**	**04 55 59.3**	**+5.0**
THN	**Thein Dam**	**5.20**	**71**	*e*P	**Pn**	**04 55 11.5**	**+2.5**
THN				*e*P	**Pn**	**04 55 12.0**	**+3.0**
THN				*ex*	x	04 56 13.4	
THN				*e*S	**Sn**	**04 56 15.0**	**+6.9**
BHK	**Bhakra**	**5.61**	**83**	*e*P	**Pn**	**04 55 17.0**	**+2.2**
KHET	**Khetri**	**5.85**	**117**	*ex*	**Pn**	**04 55 17.0**	**-1.1**
AJM	**Ajmer**	**6.03**	**135**	*e*P	**Pn**	**04 55 19.0**	**-1.6**
AJM				*e*P	Pb	04 55 23.7	-14
NDI	**New Delhi**	**6.72**	**107**	*e*P	**Pn**	**04 55 32.0**	**+2.0**
SONA	**Sohna**	**6.77**	**111**	*e*P	**Pn**	**04 55 32.0**	**+1.3**
DDI	**Dehra Dun**	**7.05**	**92**	*e*P	**Pn**	**04 55 36.4**	**+1.8**
HRA	**Herat**	**7.36**	**301**		**Pn**	**04 55 39.1**	**+0.2**
BHUJ	**Bhuj**	**7.58**	**182**	*e*P	**Pn**	**04 55 40.6**	**-1.3**
BHUJ				IAML		04 58 26.9	
	comp=E,216nm,2.0s						
BHUJ				IAML		04 58 34.4	
	comp=N,181nm,1.0s						
CHGR	**Chuyangaron**	**7.80**	**356**		**Pn**	**04 55 44.9**	**0.0**
CHGR	**Chuyangaron**	**7.80**	**356**	P	**Pn**	**04 55 44.9**	**0.0**
GAR	**Garm**	**8.12**	**2**	Pn	**Pn**	**04 55 49.4**	**0.0**
DRK	**Karamyk**	**8.74**	**10**		**Pn**	**04 55 58.4**	**+0.5**
LGTI	**Lohaghat**	**9.06**	**96**	*e*P	**Pn**	**04 56 01.1**	**-1.1**
BTK	**Batken**	**9.21**	**4**	Pn	**Pn**	**04 56 04.2**	**+0.1**
BTK	**Batken**	**9.21**	**4**	P	**Pn**	**04 56 04.2**	**+0.1**
BHV	**Bhavnagar**	**9.29**	**167**	*ex*	**Pn**	**04 56 09.0**	**+3.6**
JHNI	**Jhansi**	**9.32**	**123**	*e*P	**Pn**	**04 56 07.1**	**+1.3**
JHNI				*e*S	**Sn**	**04 57 49.2**	**-0.6**
NGCH	**Negor - Chabah**	**9.48**	**237**	P	**Pn**	**04 56 07.5**	**-0.5**
NGCH				S	**Sn**	**04 57 54.2**	**+0.5**
KSH	**Kashi**	**9.96**	**28**	P	**Pn**	**04 56 10.5**	**-4.0**
KSH				pP		04 56 14.1	
KSH				S	**Sn**	**04 57 57.3**	**-8.1**
KSH				pmax	pmax		
	comp=N,96nm,0.6s						
KSH				smax	smax		
	comp=N,490n

TKM2	**Tokmak 2**	**12.86**	**19**	⇑Pn		**Pn**	**04 56 52.6**	**-1.7**
	comp=N,34nm,0.8s							
TKM2				⇑Sn		**Sn**	**04 59 20.2**	**+3.6**
	comp=N,29nm,0.8s							
USP	**Ospenovka**	**12.91**	**15**	P		**Pn**	**04 56 54.1**	**-0.7**
	SNR=9.4							
BANOM	**Banah**	**12.95**	**251**	P		**Pn**	**04 56 55.7**	**+0.3**
	SNR=19							
BANOM	**Banah**	**12.95**	**251**	P		**Pn**	**04 56 53.3**	**-2.0**
SHME	**Shamm**	**13.02**	**252**	P		**Pn**	**04 56 55.0**	**-1.3**
	SNR=6.5							
SHME				P		**Pn**	**04 56 55.0**	**-1.3**
	SNR=6.5							
SHME	**Shamm**	**13.02**	**252**	P		**Pn**	**04 56 53.4**	**-2.9**
SGDS	**Sogindy**	**13.12**	**15**	*e*P		**Pn**	**04 56 54.6**	**-3.0**
SGDS				pmax		pmax		
	comp=Z,1.0nm,0.3s							
SGDS	**Sogindy**	**13.12**	**15**	*e*P		**Pn**	**04 56 54.7**	**-3.0**
	comp=Z,1.2nm,0.3s,baz=15							
GKN	**Gorkha**	**13.15**	**99**	*e*P		**Pn**	**04 56 56.0**	**-2.3**
	comp=Z,43nm,0.3s							
MASF	**Masafi**	**13.30**	**249**	P		**Pn**	**04 57 00.1**	**-0.1**
	SNR=24							
MSFE	**Esma-Masafi**	**13.31**	**249**	P		**Pn**	**04 56 57.9**	**-2.5**
TNSS	**Tian-Shan**	**13.38**	**23**	*e*P		**Pn**	**04 56 59.0**	**-2.6**
TNSS	**Tian-Shan**	**13.38**	**23**	*e*P		**Pn**	**04 56 59.0**	**-2.6**
	baz=23							
UOSS	**Minazif**	**13.47**	**247**	Pn		**Pn**	**04 56 59.0**	**-3.5**
UOSS	**Minazif**	**13.47**	**247**	P		**Pn**	**04 56 59.2**	**-3.3**
MDOK	**Medeo**	**13.53**	**23**	*e*P		**Pn**	**04 56 59.8**	**-3.5**
MDOK	**Medeo**	**13.53**	**23**	*e*P		**Pn**	**04 56 59.9**	**-3.5**
	baz=23							
MDOK	**Medeo**	**13.53**	**23**	⇑Pn		**Pn**	**04 57 01.8**	**-1.5**
	comp=Z,39nm,0.7s							
MDOK				⇓Sn		**Sn**	**04 59 39.1**	**+6.2**
	comp=Z,44nm,1.0s							
KNDC	**Almaty**	**13.55**	**23**	P		**Pn**	**04 57 03.0**	**-0.5**
KNDC	**Almaty**	**13.55**	**23**	⇓Pn		**Pn**	**04 57 03.0**	**-0.5**
	comp=Z,72nm,0.8s							
HATD	**Hatta, Dubai**	**13.58**	**247**	P		**Pn**	**04 57 01.1**	**-3.0**
SOHO	**SOHO**	**13.62**	**244**	P		**Pn**	**04 56 59.9**	**-4.6**
DMN	**Daman**	**13.66**	**100**	*e*P		**Pn**	**04 57 02.8**	**-2.6**
ASHO	**Ashiyiah**	**13.71**	**247**	P		**Pn**	**04 57 05.7**	**-0.1**
	SNR=16							
ASHO				P		**Pn**	**04 57 05.7**	**-0.1**
	SNR=16							
ASHO	**Ashiyiah**	**13.71**	**247**	P		**Pn**	**04 57 03.7**	**-2.1**
KKN	**Kakani**	**13.76**	**99**	*e*P		**Pn**	**04 57 03.7**	**-2.9**
	comp=Z,7.9nm,0.5s							
NAZ	**Nazwa, Dubai**	**13.88**	**249**	P		**Pn**	**04 57 09.4**	**+1.3**
	SNR=9.0							
PKIN	**Phulchoki**	**13.92**	**100**	*e*P		**Pn**	**04 57 05.7**	**-3.2**
BSY	**Bisya**	**13.92**	**238**	P		**Pn**	**04 57 10.0**	**+1.2**
	SNR=12							
BSY				P		**Pn**	**04 57 10.0**	**+1.2**
	SNR=12							
SATY	**Saty**	**13.93**	**27**	*e*P		**Pn**	**04 57 06.9**	**-1.9**
SATY	**Saty**	**13.93**	**27**	*e*P		**Pn**	**04 57 07.0**	**-1.9**
	baz=27							
PKI	**Pulchoki**	**13.93**	**100**	*e*P		**Pn**	**04 57 06.1**	**-3.0**
KUU	**Kurty**	**13.97**	**20**	*e*P		**Pn**	**04 57 05.1**	**-4.1**
KUU	**Kurty**	**13.97**	**20**	*e*P		**Pn**	**04 57 05.2**	**-4.1**
	baz=20							
FAQ	**Al Faqa, Dubai**	**14.05**	**248**	P		**Pn**	**04 57 11.4**	**+0.9**
FAQ	**Al Faqa, Dubai**	**14.05**	**248**	P		**Pn**	**04 57 10.1**	**-0.4**
ARQ	**Araqi**	**14.07**	**241**	P		**Pn**	**04 57 11.1**	**+0.4**
GUN	**Gumba**	**14.23**	**98**	*e*P		**Pn**	**04 57 10.4**	**-2.9**
	comp=Z,160nm,0.5s							
UZB	**Uzynbulak**	**14.25**	**28**	*e*P		**Pn**	**04 57 10.1**	**-3.0**
UZB	**Uzynbulak**	**14.25**	**28**	*e*P		**Pn**	**04 57 10.2**	**-3.0**
	baz=28							
ASUD	**Al Ashush, Dub**	**14.32**	**248**	P		**Pn**	**04 57 16.1**	**+2.0**
ASUD	**Al Ashush, Dub**	**14.32**	**248**	P		**Pn**	**04 57 12.6**	**-1.5**
KPKS	**Kokpek**	**14.38**	**27**	*e*P		**Pn**	**04 57 11.6**	**-3.4**
KPKS				pmax		pmax		
	comp=Z,4.0nm,0.5s							
KPKS	**Kokpek**	**14.38**	**27**	*e*P		**Pn**	**04 57 11.6**	**-3.4**
	comp=Z,4.4nm,0.5s,baz=26							
SHLS	**Shalkode**	**14.44**	**29**	*e*P		**Pn**	**04 57 15.4**	**-0.3**
SHLS				pmax		pmax		
	comp=Z,14nm,0.8s							
SHLS	**Shalkode**	**14.44**	**29**	*e*P		**Pn**	**04 57 15.4**	**-0.3**
	comp=Z,14nm,0.8s,baz=30							
BTLS	**Baital**	**14.52**	**12**	*e*P		**Pn**	**04 57 13.2**	**-3.5**
BTLS	**Baital**	**14.52**	**12**	*e*P		**Pn**	**04 57 13.2**	**-3.5**
	baz=12							
JIRN	**Jiri**	**14.57**	**99**	*e*P		**Pn**	**04 57 14.6**	**-3.2**
	comp=Z,43nm,0.4s							
PDGK	**Podgornoye**	**14.59**	**29**	P		**Pn**	**04 57 15.2**	**-2.6**
PDGK	**Podgornoye**	**14.59**	**29**	⇓Pn		**Pn**	**04 57 15.2**	**-2.6**
	comp=Z,24nm,0.8s							
PDGK				⇑Sn		**Sn**	**05 00 06.7**	**+8.0**
	comp=Z,123nm,1.3s							
HYBB	**Hyderabad (bro**	**15.53**	**148**	*e*P		**P**	**04 57 35.8**	**+1.4**
HYBB				*es*P		**sP**	**04 57 46.8**	**+1.2**
HYBB				*e*S		**S**	**05 00 38.2**	**+1.5**
HYBB				IVMs_BB	IVMs_BB		05 02 11.0	
	comp=Z,747nm,3.2s							
TDK	**Taldyqorghan**	**15.61**	**23**	*e*P		**Pn**	**04 57 28.7**	**-2.6**
TDK	**Taldyqorghan**	**15.61**	**23**	*e*P		**Pn**	**04 57 28.7**	**-2.6**
	baz=23							
ODAN	**Odare**	**15.83**	**100**	*e*P		**Pn**	**04 57 31.4**	**-3.0**
TAPN	**Taplejung**	**15.95**	**98**	*e*P		**Pn**	**04 57 33.1**	**-2.9**
OTUK	**Ortayu**	**17.46**	**5**	P		**Pn**	**04 57 51.4**	**-3.2**
OTUK	**Ortayu**	**17.46**	**5**	⇑Pn		**Pn**	**04 57 51.5**	**-3.2**
	comp=Z,36nm,0.9s							
LSA	**Lhasa**	**18.39**	**88**	P		**P**	**04 58 06.3**	**-0.2**
LSA	**Lhasa**	**18.39**	**88**	P		**P**	**04 58 03.4**	**-3.1**
LSA				LR		LR		
	comp=Z,1μm,15.0s							
LSA				LR		LR		
	comp=Z,2μm,13.5s							
LSA				LR		LR		
	comp=Z,2μm,13.5s							
LSA	**Lhasa**	**18.39**	**88**	P		**P**	**04 58 06.3**	**-0.2**
LSA				pmax		pmax		
	comp=Z,15nm,0.8s							
MAKZ	**Makanchi**	**18.45**	**27**	P		**P**	**04 58 04.8**	**-1.7**
MAKZ				IAmb		IAmb	04 58 07.4	
	comp=Z,31nm,0.7s							
MAKZ	**Makanchi**	**18.45**	**27**	P		**P**	**04 58 04.9**	**-1.7**
MAKZ	**Makanchi**	**18.45**	**27**	⇓Pn		**P**	**04 58 04.9**	**-1.7**
	comp=Z,26nm,0.7s							
MK31	**Makanchi Array**	**18.57**	**28**			**P**	**04 58 06.5**	**-1.4**
MK31	**Makanchi Array**	**18.57**	**28**	⇑*e*P		**P**	**04 58 06.4**	**-1.4**
MK31	**Makanchi Array**	**18.57**	**28**	⇓Pn		**P**	**04 58 06.4**	**-1.4**
	comp=Z,16nm,0.7s,baz=200,slow=8.8,SNR=140							
MKAR	**Makanchi Array**	**18.57**	**28**	P		**P**	**04 58 06.5**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=209,slow=11,SNR=86							
MKAR				S		**Sn**	**05 01 33.2**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=129,slow=35,SNR=1.0							
MKAR				Lg		Lg	05 03 47.8	
	comp=Z,0.1nm,0.3s,baz=207,slow=32,SNR=1.4							
MKAR				LR		LR	05 06 22.3	
	comp=Z,2μm,19.3s,baz=226,slow=40							
	comp=Z,14nm,0.7s							
DOK	**Doka**	**18.79**	**233**	P		**Pn**	**04 58 11.5**	**+0.4**
	SNR=16							
WMQ	**Urumqi**	**19.11**	**42**	*e*P		**P**	**04 58 14.1**	**+0.1**
BRZS	**Berezniki**	**19.21**	**5**	*e*P		**P**	**04 58 13.1**	**-1.8**
BRZS	**Berezniki**	**19.21**	**5**	*e*P		**P**	**04 58 13.2**	**-1.8**
	baz=5.3							
WHFO	**Wadi Hawf**	**19.51**	**232**	P		**Pn**	**04 58 19.4**	**-0.4**
WHFO				P		**Pn**	**04 58 19.4**	**-0.4**
AB31	**Akbulak array**	**19.86**	**341**	*i*P		**P**	**04 58 21.4**	**-0.5**
ABKAR	**Akbulak array**	**19.86**	**341**	P		**P**	**04 58 20.9**	**-1.0**
ABKAR	**Akbulak array**	**19.86**	**341**	P		**P**	**04 58 21.4**	**-0.5**
ABKAR				IAmb		IAmb	04 58 29.0	
	comp=Z,23nm,0.8s							
SHL	**Shillong**	**20.06**	**100**	P		**P**	**04 58 22.9**	**-1.7**
SHL	**Shillong**	**20.06**	**100**	P		**P**	**04 58 22.9**	**-1.7**
SHL				pmax		pmax		
	comp=Z,30nm,1.2s							
SHL	**Shillong**	**20.06**	**100**	P		Pn	04 58 31.0	+4.5
	SNR=9.1							
SHL	**Shillong**	**20.06**	**100**	*e*P		**P**	**04 58 25.2**	**+0.6**
SHL				IAmb		IAmb	04 58 29.6	
	comp=Z,11nm,0.7s							
ABTO	**Aybut**	**20.23**	**232**	P		Pn	04 58 27.8	-0.6
	SNR=6.7							
ABTO				P		Pn	04 58 27.8	-0.6
	SNR=6.7							
TEZP	**TEZPUR**	**20.51**	**96**	*e*P		Pn	04 58 30.4	-1.0
TEZP				IAmb		IAmb	04 58 50.0	
	comp=Z,23nm,0.7s							
KURBB	**Kurchatov Arra**	**20.77**	**16**	P		**P**	**04 58 30.1**	**-1.7**
	comp=Z,22nm,0.9s,baz=209,slow=9.2,SNR=26							
KURBB				S		**S**	**05 02 21.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=57,slow=47,SNR=1.0							
KURBB				Lg		Lg	05 04 47.5	
	baz=135,slow=28							
KURBB				LR		LR	05 07 32.7	
	comp=Z,1μm,20.1s,baz=180,slow=40							
	comp=Z,22nm,0.9s							
KURBB	**Kurchatov Arra**	**20.77**	**16**	P		**P**	**04 58 31.4**	**-0.3**
KURBB	**Kurchatov Arra**	**20.77**	**16**	⇑Pn		**P**	**04 58 31.5**	**-0.3**
	comp=Z,25nm,0.6s							
KURK	**Kurchatov**	**20.87**	**16**	P		**P**	**04 58 31.0**	**-1.9**
KURK				IAmb		IAmb	04 58 44.0	
	comp=Z,35nm,0.8s							
KURK	**Kurchatov**	**20.87**	**16**	*ce*P		**P**	**04 58 31.7**	**-1.2**
KURK				pmax		pmax		
	comp=Z,26nm,1.0s							
KURK	**Kurchatov**	**20.87**	**16**	⇓Pn		**P**	**04 58 31.3**	**-1.6**
	comp=Z,23nm,1.0s							
BRDH	**Bariadhala**	**21.03**	**108**	P		**P**	**04 58 39.9**	**+5.1**
	comp=Z,47nm,0.3s,baz=41,slow=16,SNR=3.8							
BRDH				LR		LR	05 07 00.2	
	comp=Z,685nm,19.2s,baz=332,slow=38							
GOMU	**GeErMu**	**21.41**	**69**	P		**P**	**04 58 41.4**	**+2.1**
GOMU				pP		pP	04 58 46.6	-0.3
GOMU				sP		sP	04 58 48.5	-2.2
GOMU				pmax		pmax		
	comp=Z,24nm,0.8s							
GOMU				LR		LR		
	comp=Z,940nm,12.4s							
GOMU				LR		LR		
	comp=Z,510nm,15.0s							
GANJ	**Ganja**	**21.43**	**304**	P		**P**	**04 58 39.9**	**+0.8**
AKTO	**Aktyubinsk**	**21.48**	**339**	P		**P**	**04 58 38.5**	**-1.0**
	comp=Z,5.3nm,0.6s,baz=143,slow=11,SNR=13							
AKTO				S		**S**	**05 02 37.1**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=18,slow=23,SNR=0.9							
AKTO				Lg		Lg	05 05 03.3	
	comp=Z,0.1nm,0.3s,baz=215,slow=22,SNR=1.3							
AKTO				LR		LR	05 08 18.5	
	comp=Z,595nm,20.7s,baz=148,slow=40							
	comp=Z,5.3nm,0.6s							
NAX	**Nakhchivan**	**21.60**	**299**	P		**P**	**04 58 41.7**	**+0.8**
KOD	**Kodaikanal**	**21.70**	**159**	*e*P		**P**	**04 58 46.5**	**+4.2**
KOHI	**KOHIMA**	**21.90**	**98**	*e*P		**P**	**04 58 47.4**	**+3.0**
KOHI				IAmb		IAmb	04 58 53.3	
	comp=Z,33nm,0.5s							
BVA0	**Borovoye Array**	**22.15**	**1**	*i*P		**P**	**04 58 45.6**	**-1.0**
BVAR	**Borovoye Array**	**22.15**	**1**	P		**P**	**04 58 45.9**	**-0.7**
	comp=Z,8.0nm,0.6s,baz=170,slow=10,SNR=30							
BVAR				S		**S**	**05 02 50.9**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=228,slow=40,SNR=1.7							
	comp=Z,8.0nm,0.6s							
BRVK	**Borovoye**	**22.18**	**1**	P		**P**	**04 58 45.7**	**-1.2**
BRVK	**Borovoye**	**22.18**	**1**	*ce*P		**P**	**04 58 45.9**	**-1.1**
BRVK				pmax		pmax		
	comp=Z,36nm,0.8s							
GNI	**Garni**	**22.42**	**301**	P		**P**	**04 58 50.0**	**+0.1**
	comp=Z,36nm,1.0s,baz=135,slow=4.3,SNR=9.5							
GNI				LR		LR	05 08 25.3	
	comp=Z,357nm,18.8s,baz=127,slow=39							
	comp=Z,36nm,1.0s							
GNI	**Garni**	**22.42**	**301**	P		**P**	**04 58 49.8**	**0.0**
GNI	**Garni**	**22.42**	**301**	*ce*P		**P**	**04 58 51.6**	**+1.7**
GNI				pmax		pmax		
	comp=Z,97nm,1.3s							
GROC	**Groznyy**	**22.76**	**309**	*e*P		**P**	**04 58 51.1**	**-2.1**
GROC				*e*			04 59 14.9	
GROC				pmax		pmax		
	comp=Z,83nm,0.5s							
RAYN	**Ar Rayn**	**22.87**	**257**	P		**P**	**04 58 54.0**	**-0.6**
RAYN				IAmb		IAmb	04 59 11.6	
	comp=Z,66nm,1.9s							
RAYN	**Ar Rayn**	**22.87**	**257**	P		**P**	**04 58 56.0**	**+1.3**
RAYN	**Ar Rayn**	**22.87**	**257**	P		**P**	**04 58 54.5**	**-0.1**
DGZ	**Jazzator, Alta**	**22.98**	**30**	*c i*P		**P**	**04 58 56.1**	**+0.4**
DGZ				pmax		pmax		
	comp=Z,46nm,0.7s							
AKH	**Akhalkalaki**	**23.70**	**304**	P		**P**	**04 59 07.3**	**+4.4**
ZEI	**Tsey**	**23.88**	**307**	*e*P		**P**	**04 58 59.2**	**-5.4**
ZEI				pmax		pmax		
	comp=Z,7.0nm,0.8s							
ONI	**Oni**	**24.12**	**306**	P		**P**	**04 59 05.6**	**-1.1**
ONI				IAmb		IAmb	04 59 27.6	
	comp=Z,30nm,1.6s							
ONI	**Oni**	**24.12**	**306**	P		**P**	**04 59 05.6**	**-1.1**
ONI				pmax		pmax		
	comp=Z,30nm,1.6s							
MARD	**Mardin**	**24.91**	**293**	P		**P**	**04 59 12.9**	**-1.1**
MARD				IAmb		IAmb	04 59 16.0	
	comp=Z,17nm,0.7s							
KBZ	**Khabaz**	**24.91**	**309**	P		**P**	**04 59 12.3**	**-1.4**
	comp=Z,5.3nm,0.7s,baz=128,slow=10,SNR=8.6							
KBZ				LR		LR	05 11 49.2	
	comp=Z,514nm,19.4s,baz=98,slow=44							
	comp=Z,5.3nm,0.7s							
KBZ	**Khabaz**	**24.91**	**309**	*ce*P		**P**	**04 59 13.1**	**-0.6**
KBZ				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KVAR	**Kislovodsk Arr**	**25.13**	**309**	LR		LR	05 12 30.9	
	comp=Z,417nm,18.5s,baz=214,slow=45							
KIV	**Kislovodsk**	**25.13**	**309**	*e*P		**P**	**04 59 16.2**	**+0.3**
KIV				*e*S		**S**	**05 03 42.0**	**+2.8**
KIV				pmax		pmax		
	comp=Z,21nm,1.1s							
KIV				MLR		MLR		
	comp=Z,282nm,15.0s							
ZAA0	**Zalesovo Array**	**25.46**	**21**	P		**P**	**04 59 18.1**	**-0.5**
ZAA0				IAmb		IAmb	04 59 20.7	
	comp=Z,30nm,0.9s							
ZALV	**Zalesovo Beam**	**25.46**	**21**	P		**P**	**04 59 18.5**	**-0.1**
	comp=Z,20nm,0.6s,baz=217,slow=7.7,SNR=46							
ZALV				LR		LR	05 10 24.1	
	comp=Z,919nm,20.1s,baz=216,slow=39							
	comp=Z,20nm,0.6s							
ZALV	**Zalesovo Beam**	**25.46**	**21**	P		**P**	**04 59 17.7**	**-0.9**
PALK	**Pallekele**	**25.55**	**154**	LR		LR	05 10 28.7	
	comp=Z,576nm,18.5s,baz=91,slow=39							
PALK	**Pallekele**	**25.55**	**154**	P		**P**	**04 59 22.8**	**+2.9**
	comp=Z,22nm,2.0s							
GTA	**Gaotai**	**25.81**	**63**	⇑P		**P**	**04 59 24.3**	**+2.1**
GTA				pmax		pmax		
	comp=Z,17nm,0.9s							
GTA				LR		LR		
	comp=Z,2μm,19.6s							
GTA				LR		LR		
	comp=Z,670nm,17.8s							
GTA				LR		LR		
	comp=Z,310nm,17.8s							
SVE	**Sverdlovsk**	**26.75**	**349**	*e*P		**P**	**04 59 37.1**	**+6.8**
SVE				pmax		pmax		
	comp=Z,26nm,0.9s							
SVE				MLR		MLR		
	comp=Z,845nm,14.0s							
ARU	**Arti**	**26.77**	**346**	P		**P**	**04 59 30.4**	**0.0**
	comp=Z,8.8nm,0.5s,baz=167,slow=8.5,SNR=13							
ARU				LR		LR	05 11 24.6	
	comp=Z,614nm,19.2s,baz=156,slow=40							
	comp=Z,8.8nm,0.5s							
ARU	**Arti**	**26.77**	**346**	P		**P**	**04 59 29.4**	**-1.0**
ARU				IAmb		IAmb	04 59 57.3	
	comp=Z,19nm,0.9s							
ARU	**Arti**	**26.77**	**346**	*c i*P		**P**	**04 59 30.7**	**+0.2**
ARU							05 00 11.7	
ARU				SS			05 05 13.9	
ARU				pmax		pmax		
	comp=Z,9.0nm,0.7s							
ARU				MLR		MLR		
	comp=Z,678nm,15.0s							
BELG	**Belogornoye**	**27.00**	**329**	P		**P**	**04 59 32.5**	**0.0**
	comp=Z,20nm,0.6s,baz=102,slow=20,SNR=14							
BELG				LR		LR	05 13 37.7	
	comp=Z,906nm,19.5s,baz=131,slow=44							
	comp=Z,20nm,0.6s							
BELG	**Belogornoye**	**27.00**	**329**	*d i*P		**P**	**04 59 31.9**	**-0.7**
BELG				pmax		pmax		
	comp=Z,2.0nm,0.6s							
SOC	**Sochi**	**27.03**	**306**	*e*P		**P**	**04 59 31.2**	**-1.7**
SOC				*e*			05 00 12.0	
SOC				*e*PPP		PPP	05 00 26.5	
SOC				*e*S		**S**	**05 04 10.2**	**+1.3**
SOC				*e*SS		**SnSn**	**05 05 17.9**	**+1.9**
SOC				*e*SSS		SSS	05 05 35.1	
SOC				pmax		pmax		
	comp=Z,30nm,0.9s							
SOC				MLR		MLR		
	comp=Z,434nm,19.0s							
ASF	**Jabal al Asfar**	**28.11**	**281**	P		**P**	**04 59 43.2**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=55,slow=12,SNR=1.7							
ASF				LR		LR	05 12 45.3	
	comp=Z,580nm,19.2s,baz=92,slow=41							
	comp=Z,1.4nm,0.6s							
PBA	**Port Blair**	**28.50**	**127**	P		P	04 59 51.8	+5.5
	SNR=5.2							
LZH	**Lanzhou**	**28.69**	**70**	*e*P		**P**	**04 59 50.3**	**+2.2**
LZH				pmax		pmax		
	comp=Z,20nm,1.0s							
LZH				LR		LR		
	comp=Z,920nm,12.9s							
LZH				LR		LR		
	comp=Z,720nm,12.2s							
LZH				LR		LR		
	comp=Z,720nm,13.7s							
CHTO	**Chiang Mai**	**28.86**	**108**	P		**P**	**04 59 49.5**	**-0.1**
CHTO	**Chiang Mai**	**28.86**	**108**	P		**P**	**04 59 49.5**	**-0.1**
ANN	**Anapa**	**28.96**	**308**	*e*P		**P**	**04 59 47.7**	**-2.5**
ANN				*e*			05 00 41.7	
ANN				*e*S		**S**	**05 04 39.1**	**-0.2**
ANN				*e*SSS		SSS	05 06 20.6	
ANN				pmax		pmax		
	comp=Z,27nm,1.0s							
CMAR	**Chiang Mai Arr**	**29.04**	**108**	P		**P**	**04 59 51.5**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=293,slow=11,SNR=14							
CMAR				LR		LR	05 14 57.1	
	comp=Z,329nm,18.3s,baz=320,slow=44							
	comp=Z,1.6nm,0.3s							
VRH	**Novokhopyorsk**	**29.12**	**322**	*e*P		**P**	**04 59 55.5**	**+4.0**
VRH				pmax		pmax		
	comp=Z,20nm,0.7s							
VRH				MLR		MLR		
	comp=Z,540nm,16.0s							
MMAI	**Mount Meron Ar**	**29.28**	**283**	LR		LR	05 13 20.3	
	comp=Z,926nm,18.7s,baz=305,slow=40							
EIL	**Elat**	**30.14**	**277**	LR		LR	05 13 42.4	
	comp=Z,602nm,20.4s,baz=68,slow=40							
VSR	**Storozhevoye**	**30.49**	**321**	*e*P		**P**	**05 00 02.0**	**-1.7**
VSR				pmax		pmax		
	comp=Z,3.0nm,0.5s							
VSR				MLR		MLR		
	comp=Z,890nm,18.0s							
BR131	**Keskin Array S**	**30.72**	**297**	P		**P**	**05 00 04.0**	**-2.0**
BR131				IAmb		IAmb	05 00 27.9	
	comp=Z,8.1nm,0.8s							
BR131	**Keskin Array S**	**30.72**	**297**	*c i*P		**P**	**05 00 05.6**	**-0.4**
BRTR	**Keskin Array B**	**30.72**	**297**	P		**P**	**05 00 05.2**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=114,slow=9.4,SNR=21							
BRTR				LR		LR	05 14 07.2	
	comp=Z,569nm,18.2s,baz=118,slow=40							
	comp=Z,3.1nm,0.7s							
BRTR	**Keskin Array B**	**30.72**	**297**	P		**P**	**05 00 04.3**	**-1.8**
KIRV	**Kirov**	**31.05**	**339**	LR		LR	05 14 49.3	
	comp=Z,244nm,19.3s,baz=147,slow=41							
KIRV	**Kirov**	**31.05**	**339**	*ce*P		**P**	**05 00 08.5**	**+0.1**
LPSR	**Galich'ya Gora**	**31.33**	**323**	*e*P		**P**	**05 00 15.8**	**+4.8**
LPSR				pmax		pmax		
	comp=Z,20nm,0.8s							
LPSR				MLR		MLR		
	comp=Z,620nm,19.0s							
ATD	**Arta Tunnel**	**31.58**	**238**	LR		LR	05 15 20.0	
	comp=Z,290nm,19.1s,baz=18,slow=41							
ZAK	**Zakamensk**	**31.59**	**42**	*e*P		**P**	**05 00 15.2**	**+1.7**
ZAK				pmax		pmax		
	comp=Z,18nm,1.2s							
SONM	**Songino Array**	**32.54**	**48**	P		**P**	**05 00 23.3**	**+1.4**
	comp=Z,14nm,0.9s,baz=248,slow=9.2,SNR=67							
SONM				LR		LR	05 16 03.9	
	comp=Z,2μm,18.6s,baz=246,slow=41							
	comp=Z,14nm,0.9s							
SONM	**Songino Array**	**32.54**	**48**	P		**P**	**05 00 22.1**	**+0.2**
SONM				IAmb		IAmb	05 00 25.5	
	comp=Z,19nm,1.0s							
XAN	**Xi'an**	**32.94**	**74**	⇑P		**P**	**05 00 25.9**	**+0.4**
XAN				pP		pP	05 00 30.8	-3.1
XAN				sP		sP	05 00 33.5	-3.8
XAN				pmax		pmax		
	comp=Z,9.0nm,0.9s							
XAN				LR		LR		
	comp=Z,3μm,20.3s							
XAN				LR		LR		
	comp=Z,1μm,20.6s							
XAN				LR		LR		
	comp=Z,870nm,19.7s							
ULN	**Ulaanbaatar**	**32.97**	**48**	P		**P**	**05 00 25.6**	**-0.2**
ULN				IAmb		IAmb	05 00 28.4	
	comp=Z,9.7nm,0.9s							
ULN	**Ulaanbaatar**	**32.97**	**48**	*ce*P		**P**	**05 00 27.1**	**+1.4**
ULN				pmax		pmax		
	comp=Z,11nm,0.9s							
ULN	**Ulaanbaatar**	**32.97**	**48**	P		**P**	**05 00 26.8**	**+1.1**
ULN	**Ulaanbaatar**	**32.97**	**48**	P		**P**	**05 00 27.8**	**+2.1**
ULN				pP		**pP**	**05 00 34.6**	**+0.4**
ULN				sP		**sP**	**05 00 38.7**	**+1.0**
MOS	**Moscow**	**33.68**	**327**	*e*P		P	05 00 36.9	+5.3
MOS				*e*			05 01 55.8	

HNS *e*S **S** **05 06 53.1 +3.1**
HNS pmax pmax
comp=Z,12nm,0.9s
HNS LR LR
comp=Z,660nm,12.8s
HNS LR LR
comp=Z,580nm,13.3s
HNS LR LR
comp=Z,490nm,16.3s
DOPR Dopca 37.49 307 ⇑P **P** **05 01 05.0 +0.5**
VOIR 37.66 306 ⇑P **P** **05 01 06.2 +0.2**
VOIR 37.66 306 ⇑P **P** **05 01 06.2 +0.2**
IDI Anoyia 37.73 289 LR LR 05 19 55.6
comp=Z,185nm,20.0s,baz=131,slow=42
BURAR Bucovina Array 37.86 309 ⇑P **P** **05 01 07.9 +0.2**
BURAR Bucovina Array 37.86 309 P **P** **05 01 05.8 -1.9**
BURAR IAmb IAmb 05 01 15.8
comp=Z,6.9nm,0.7s
BURAR Bucovina Array 37.86 309 ⇑P **P** **05 01 07.9 +0.2**
BUR08 Bucovina Ar. S 37.88 309 P **P** **05 01 05.5 -2.3**
MNK Minsk 38.07 321 *i* P **P** **05 01 11.4 +2.2**
MNK *i* 05 02 38.5
MNK *i* PPP PPP 05 02 56.7
MNK *i* SSS SSS 05 10 07.7
MNK pmax pmax
comp=N,3.0nm,0.6s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK pmax pmax
comp=Z,23nm,1.1s
MNK MLR MLR
comp=E,102nm,19.0s
MNK MLR MLR
comp=N,630nm,17.0s
MNK MLR MLR
comp=Z,559nm,16.0s
MNK Minsk 38.07 321 *i* P **P** **05 01 11.5 +2.2**
comp=E,2.0nm,1.1s
MNK *i* P **P** **05 01 11.5 +2.2**
comp=N,3.0nm,0.6s
MNK *i* P **P** **05 01 11.5 +2.2**
comp=Z,23nm,1.1s,baz=111
MNK *i* PP **PnPn** **05 02 38.5 +0.7**
MNK *i* PPP PPP 05 02 56.8
MNK *i* S **S** **05 07 07.0 +6.9**
MNK *i* SS **SS** **05 09 49.0 +1.2**
MNK *i* SSS SSS 05 10 07.8
MNK *i* LQ LQ 05 13 52.3
MNK *i* LR LR 05 16 56.3
MNK *i* LRM MLR 05 19 49.8
comp=E,102nm,19.2s
MNK *i* LRM MLR 05 20 08.9
comp=N,630nm,17.2s
MNK *i* LRM MLR 05 20 21.1
comp=Z,559nm,16.0s
XLT XiLinHaoTe 38.45 57⇓*i*P **P** **05 01 15.6 +2.9**
XLT pmax pmax
comp=Z,36nm,0.9s
XLT pmax pmax
comp=Z,280nm,4.4s
VTS Vitosha 38.75 301⇓P **P** **05 01 15.1 -0.1**
VTS Vitosha 38.75 301 P **P** **05 01 13.5 -1.8**
VTS Vitosha 38.75 301⇓P **P** **05 01 15.1 -0.1**
NACGM Naroch 38.81 321⇓*e*P **P** **05 01 19.9 +4.4**
baz=110
PSI Prapat 39.12 130 LR LR 05 19 33.1
comp=Z,334nm,18.4s,baz=294,slow=39
BLKB Belogradchik 39.20 302⇓P **P** **05 01 19.2 +0.3**
GZR Gura Zlata 39.25 305⇑P **P** **05 01 19.4 +0.1**
TRPA Tarpa 39.72 310⇓P **P** **05 01 23.6 +0.5**
TRPA Tarpa 39.72 310 P **P** **05 01 23.0 -0.1**
NRIK Noril'sk 39.82 10 P **P** **05 01 23.7 0.0**
comp=Z,6.1nm,0.6s,baz=196,slow=5.5,SNR=8.6
NRIK LR LR 05 20 36.0
comp=Z,382nm,19.0s,baz=199,slow=40
comp=Z,6.1nm,0.6s
NRIK Noril'sk 39.82 10 P **P** **05 01 23.0 -0.7**
NRIK IAmb IAmb 05 01 42.2
comp=Z,15nm,0.8s
NRIK Noril'sk 39.82 10*ce*P **P** **05 01 23.9 +0.2**
NRIK pmax pmax
comp=Z,10.0nm,1.0s
UZH Uzhgorod 39.96 310⇓*i*P **P** **05 01 22.0 -3.1**
UZH *i* 05 01 31.8
KOLS Kolonicke sedl 40.02 311 *e*P **P** **05 01 26.4 +0.8**
BZS Buzias 40.08 306⇓P **P** **05 01 25.8 -0.3**
BZS Buzias 40.08 306⇓P **P** **05 01 25.8 -0.3**
SIRR Siria 40.10 307⇓P **P** **05 01 26.8 +0.4**
CRVS Cervenica-Dubn 40.54 311 *e*P **P** **05 01 29.9 0.0**
KBN Korca 40.58 298 P **P** **05 01 28.9 -1.6**
KBN Korca 40.58 298 P **P** **05 01 28.9 -1.6**
KBN pmax pmax
comp=Z,27nm,0.9s
ABAH Abaujker 40.60 310 P **P** **05 01 30.3 -0.1**
DIVS Divibare 41.15 303 P **P** **05 01 33.5 -1.7**
PSZ Piszkesteto 41.46 309⇑P **P** **05 01 35.8 -1.8**
PSZ Piszkesteto 41.46 309 P **P** **05 01 36.6 -1.0**
PSZ IAmb IAmb 05 01 48.5
comp=Z,15nm,0.9s
PSZ Piszkesteto 41.46 309 P **P** **05 01 36.6 -1.0**
PSZ pmax pmax
comp=Z,15nm,0.9s
PSZ Piszkesteto 41.46 309 P **P** **05 01 37.3 -0.3**
NJ2 Nanjing 41.48 75 *e*P **P** **05 01 37.5 -0.4**
NJ2 pmax pmax
comp=Z,13nm,0.6s
FINES FINESS Array B 41.78 330 P **P** **05 01 38.3 -1.6**
comp=Z,4.3nm,0.5s,baz=113,slow=9.0,SNR=24
FINES LR LR 05 20 58.7
comp=Z,796nm,19.1s,baz=112,slow=39
comp=Z,4.3nm,0.5s
MORH Mrgy, Hungar 42.19 306⇑P P 05 01 38.1 -5.3
MORH Mrgy, Hungar 42.19 306 P **P** **05 01 43.2 -0.3**
VYHS Vyhne 42.22 310 *e*P **P** **05 01 45.4 +1.7**
LVZ Lovozero 42.42 341 P **P** **05 01 44.2 -0.9**
LVZ pP **pP** **05 01 52.5 -1.1**
LVZ sP **sP** **05 01 58.0 +0.9**
LVZ ScP **ScP** **05 07 26.7 0.0**
KOVH Kovagotottos 42.56 306 P **P** **05 01 45.6 -0.9**
MPLH Magyarpolny 42.99 308 P **P** **05 01 49.2 -0.8**
MORC Moravsky Berou 43.19 311⇑P **P** **05 01 50.1 -1.5**
MORC Moravsky Berou 43.19 311 P **P** **05 01 50.7 -0.9**
MORC Moravsky Berou 43.19 311 P **P** **05 01 50.7 -0.9**
MORC pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 43.19 311 *e*P **P** **05 01 51.3 -0.3**
KRLC Kraliky 43.71 312 *e*P **P** **05 01 55.7 -0.1**
KRLC Kraliky 43.71 312 *e*P **P** **05 01 55.7 -0.1**
VRAC Vranov 43.76 311 LR LR 05 23 33.3
comp=Z,288nm,20.5s,baz=108,slow=41
DPC Dobruska-Polom 44.03 312 *e*P **P** **05 01 58.4 0.0**
DPC Dobruska-Polom 44.03 312 *e*P **P** **05 01 58.4 0.0**
CONA Conrad Observa 44.16 309 *e*P **P** **05 02 01.6 +2.1**
comp=Z,3.6nm,1.0s
CHVC Chvalec 44.22 312 *e*P **P** **05 01 59.5 -0.4**
ARSA Arzberg 44.37 308 *e*P **P** **05 02 02.2 +1.1**
comp=Z,4.9nm,0.7s
CUC Castrocucco 44.42 297 P **P** **05 01 59.5 -2.2**
SOKA Soboth 44.70 307 *e*P **P** **05 02 06.6 +2.8**
comp=Z,10nm,1.3s
OBKA Obir 45.03 307 *e*P **P** **05 02 11.2 +4.7**
comp=Z,14nm,1.2s
PRU Pruhonice 45.14 311 *e*P P 05 02 13.7 +6.5
PRU Pruhonice 45.14 311 *e*pP pP 05 02 13.7 -2.1
CN2 Changchun 45.22 57 *e*P P 05 02 02.3 -5.6
CN2 *es*P pP 05 02 09.3 -7.2
CN2 *e*S **S** **05 08 39.8 -6.5**
CN2 *es*S pS 05 08 47.3 -8.7
CKRC Cesky Krumlov 45.24 310 *e*P P 05 02 13.6 +5.6
MOA Molln 45.24 308 *e*P **P** **05 02 07.5 -0.5**
comp=Z,4.1nm,0.5s
GEC2 GERESS Array S 45.64 310 P **P** **05 02 08.5 -2.8**
GEC2 IAmb IAmb 05 02 18.5
comp=Z,9.3nm,1.2s
GERES GERESS Array B 45.64 310 P **P** **05 02 10.1 -1.2**
comp=Z,1.6nm,0.6s,baz=95,slow=7.2,SNR=16
comp=Z,1.6nm,0.6s
GERES GERESS Array B 45.64 310 P **P** **05 02 09.4 -1.8**
KHC Kasperske Hory 45.73 310 *e*P **P** **05 02 12.3 +0.4**
KHC Kasperske Hory 45.73 310 *e*P **P** **05 02 12.3 +0.4**
KHC *e*pP **pP** **05 02 17.6 -2.9**
KEV Kevo 45.75 341 P **P** **05 02 11.7 0.0**
KEV pP **pP** **05 02 21.9 +1.6**
KEV sP **sP** **05 02 25.9 +2.3**

ARA0 ARCESS Array S 46.06 340 *e*P **P** **05 02 14.5 +0.4**
ARA0 IAmb IAmb 05 02 17.4
comp=Z,24nm,1.3s
ARCES ARCESS Array B 46.06 340 P **P** **05 02 15.3 +1.1**
comp=Z,8.0nm,0.8s,baz=138,slow=8.3,SNR=33
ARCES LR LR 05 23 15.6
comp=Z,397nm,18.0s,baz=124,slow=38
comp=Z,8.0nm,0.8s
ARCES ARCESS Array B 46.06 340 P **P** **05 02 14.4 +0.3**
ARCES IAmb IAmb 05 02 30.5
comp=Z,12nm,0.8s
CLL Collm 46.20 313 *e*P **P** **05 02 16.0 +0.5**
CLL pmax pmax
comp=Z,4.0nm,0.5s
CLL MLR MLR
comp=Z,400nm,18.9s
CLL Collm 46.20 313 *e*P **P** **05 02 16.0 +0.5**
comp=Z,4.0nm,0.5s
CLL *e*PcP **PcP** **05 03 49.0 -2.0**
CLL *ex* x 05 03 53.0
CLL *e*PP **PP** **05 04 02.0 -2.0**
CLL *e*PPP PPP 05 04 42.0
CLL Lm MLR 05 25 00.0
comp=Z,400nm,18.9s
KTK1 Kautokeino 46.47 339 *e*P **P** **05 02 17.4 0.0**
KTK1 IAmb IAmb 05 02 25.8
comp=Z,15nm,1.1s
NKC Novy Kostel 46.50 312 *e*P P 05 02 24.3 +6.3
NKC Novy Kostel 46.50 312 *e*pP pP 05 02 24.3 -2.3
MURB Monte Urbino 46.59 302 P **P** **05 02 17.5 -1.4**
ZEA Zeya 46.67 43 *e*P **P** **05 02 22.1 +3.0**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
WTTA Wattenberg 47.02 308 *e*P **P** **05 02 26.5 +4.3**
comp=Z,4.2nm,0.5s
HFS Hagfors 47.06 325 LR LR 05 25 28.4
comp=Z,828nm,18.4s,baz=100,slow=40
HAMF Hammerfest 47.19 341 *e*P **P** **05 02 23.5 +0.6**
HAMF IAmb IAmb 05 02 32.2
comp=Z,22nm,0.8s
SQTA Sankt Quirin 47.31 308 *e*P **P** **05 02 23.4 -1.0**
comp=Z,3.3nm,0.4s
MOTA Moosalm 47.38 308 *e*P **P** **05 02 23.2 -1.8**
comp=Z,5.6nm,0.8s
RETA Reutte 47.60 308 P **P** **05 02 28.5 +1.9**
comp=Z,3.2nm,0.5s
JETT Jettan, Norway 47.61 339 *e*P **P** **05 02 27.0 +0.6**
JETT IAmb IAmb 05 02 36.2
comp=Z,15nm,0.7s
FETA Feichten 47.64 307 *e*P **P** **05 02 30.7 +3.6**
comp=Z,8.0nm,0.8s
KSAR Wonju Array Be 47.78 66 P **P** **05 02 28.1 0.0**
KSAR Wonju Array Be 47.78 66 P **P** **05 02 28.1 0.0**
KSRS Korea Array 47.81 66 P **P** **05 02 27.2 -1.1**
comp=Z,3.7nm,0.9s,baz=282,slow=6.1,SNR=7.5
KSRS LR LR 05 26 59.8
comp=Z,148nm,18.1s,baz=260,slow=42
comp=Z,3.7nm,0.9s
FUORN Ofenpass-Fuorn 47.98 307 P **P** **05 02 28.0 -1.8**
FUORN IAmb IAmb 05 02 36.5
comp=Z,6.3nm,0.8s
TRO Tromso 48.11 339 *e*P **P** **05 02 30.3 +0.2**
DAVA Damuels 48.21 308 *e*P **P** **05 02 30.3 -1.2**
comp=Z,6.9nm,0.6s
NC405 NORSAR Array S 48.22 326 P **P** **05 02 29.8 -1.3**
NC602 NORSAR Array S 48.23 326 *e*P **P** **05 02 30.3 -0.8**
NORES NORESS Array B 48.23 326 P **P** **05 02 30.2 -1.0**
DAVOX Davos/Dischmat 48.24 307 LR LR 05 25 42.5
comp=Z,193nm,20.2s,baz=76,slow=40
NC303 NORSAR Array S 48.40 327 P **P** **05 02 31.2 -1.3**
NB2 NORSAR Subarra 48.44 326 P **P** **05 02 31.0 -1.9**
comp=Z,2.2nm,0.5s,baz=104,slow=7.9
NB2 NORSAR Subarra 48.44 326 P **P** **05 02 28.6 -4.3**
NB2 NORSAR Subarra 48.44 326 P **P** **05 02 31.0 -1.9**
baz=104,slow=7.9
NOA NORSAR Array B 48.44 326 P **P** **05 02 30.7 -2.2**
comp=Z,20nm,0.5s,baz=104,slow=7.8,SNR=13
NOA LR LR 05 25 13.1
comp=Z,462nm,20.1s,baz=125,slow=39
comp=Z,20nm,0.5s
FAUS Fauske 48.45 335 *e*P **P** **05 02 32.8 0.0**
FAUS IAmb IAmb 05 02 45.1
comp=Z,10nm,0.9s
MBAR Mbarara 48.60 237 LR LR 05 25 28.8
comp=Z,208nm,19.6s,baz=40,slow=39
NC204 NORSAR Array S 48.70 326 P **P** **05 02 34.0 -0.9**
NSS Namsos 48.88 331 *e*P **P** **05 02 35.5 -0.7**
NSS IAmb IAmb 05 02 35.8
comp=Z,25nm,1.5s
KONS Konsvik 48.97 334 *e*P **P** **05 02 36.9 +0.1**
KONO Kongsberg 49.00 324 *e*P **P** **05 02 37.2 +0.1**
YAK Yakutsk 49.14 33 LR LR 05 24 57.3
comp=Z,518nm,19.0s,baz=269,slow=38
BFO Black Forest 49.21 309 P **P** **05 02 41.9 +2.9**
KLR Kul'dur 49.35 50 P **P** **05 02 40.4 +0.4**
comp=Z,4.5nm,0.7s,baz=267,slow=7.7,SNR=5.6
KLR LR LR 05 26 47.7
comp=Z,526nm,18.2s,baz=266,slow=40
comp=Z,4.5nm,0.7s
KLR Kul'dur 49.35 50⇑*e*P **P** **05 02 40.4 +0.4**
KLR pmax pmax
comp=Z,16nm,1.0s
DOMB Dombas 49.63 327 *e*P **P** **05 02 41.9 -0.1**
DOMB IAmb IAmb 05 02 51.3
comp=Z,31nm,1.8s
SKAR Skarslia 49.79 325 *e*P **P** **05 02 43.0 -0.2**
USRK Ussuriysk Ar. 49.89 56 P **P** **05 02 45.1 +0.9**
comp=Z,3.2nm,0.7s,baz=270,slow=6.8,SNR=3.0
USRK LR LR 05 26 07.3
comp=Z,196nm,20.7s,baz=261,slow=39
comp=Z,3.2nm,0.7s
CDF Champ du Feu 49.91 309 *e*P **P** **05 02 47.7 +3.4**
CDF pmax pmax
comp=Z,15nm,1.4s
ECH Echery 50.00 309 P P 05 02 50.2 +5.3
SENIN Lac Senin/Sane 50.04 307 P **P** **05 02 44.3 -1.2**
SNART Snartemo 50.08 322 *e*P **P** **05 02 45.3 -0.1**
KEST Kesra 50.16 293 P **P** **05 02 46.3 -0.1**
comp=Z,4.7nm,0.7s,baz=38,slow=3.4,SNR=7.7
comp=Z,4.7nm,0.7s
KEST Kesra 50.16 293 P **P** **05 02 45.7 -0.7**
KEST IAmb IAmb 05 02 54.1
comp=Z,7.8nm,0.8s
HINF Hinteralfeld 50.23 309 *e*P **P** **05 02 51.2 +4.5**
HINF pmax pmax
comp=Z,4.0nm,0.6s
BJO1 Bjornoya 50.40 344 *e*P **P** **05 02 48.0 +0.4**
BJO1 IAmb IAmb 05 02 56.5
comp=Z,104nm,1.3s
LPG La Plagne 50.51 306 *e*P **P** **05 02 48.1 -1.1**
LPG pmax pmax
comp=Z,12nm,0.8s
LPL La Plagne 50.52 306 *e*P **P** **05 02 48.0 -1.2**
LPL pmax pmax
comp=Z,10.0nm,0.8s
ODD1 Odda 50.52 324 *e*P **P** **05 02 48.7 -0.1**
BLS5 Blasjo 50.56 324 *e*P **P** **05 02 49.2 +0.1**
MBDF Montbardon 50.58 305 *e*P **P** **05 02 48.4 -1.2**
MBDF pmax pmax
comp=Z,10.0nm,0.8s
AKN Aaknes 50.62 327 *e*P **P** **05 02 49.5 +0.1**
JOW Kunigami 50.79 79 LR LR 05 26 54.0
comp=Z,370nm,21.2s,baz=351,slow=39
CABF La Chapelle 50.85 307 *e*P **P** **05 02 52.4 +0.9**
CABF pmax pmax
comp=Z,26nm,1.0s
HYA Hoyanger 50.87 326 *e*P **P** **05 02 51.4 +0.1**
ASK Askoy 51.29 325 *e*P **P** **05 02 54.5 +0.1**
TIXI Tiksi 51.35 20 P **P** **05 02 55.1 +0.4**
comp=Z,9.1nm,0.7s,baz=270,slow=23,SNR=24
TIXI LR LR 05 26 31.9
comp=Z,282nm,18.3s,baz=274,slow=38
comp=Z,9.1nm,0.7s
TIXI Tiksi 51.35 20*ce*P **P** **05 02 54.2 -0.5**
TIXI pmax pmax
comp=Z,13nm,0.8s
TIXI Tiksi 51.35 20 P **P** **05 02 54.3 -0.4**
LEM Lembang 52.03 130 LR LR 05 26 23.0
comp=Z,180nm,20.5s,baz=232,slow=38
VIVF Saint-Julien-l 52.05 305 *e*P **P** **05 02 59.3 -1.1**
VIVF pmax pmax
comp=Z,28nm,1.4s
SSB Saint Sauveur 52.08 306 P **P** **05 02 59.7 -1.0**
SSB IAmb IAmb 05 03 07.2
comp=Z,9.9nm,0.8s
SSB Saint Sauveur 52.08 306 P **P** **05 02 59.7 -1.0**

SSB pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 52.08 306 P **P** **05 02 59.9 -0.8**
LOR Lormes 52.30 308 *e*P **P** **05 03 03.7 +1.4**
LOR pmax pmax
comp=Z,18nm,1.1s
SMF Signal de Mont 52.39 307 *e*P **P** **05 03 01.9 -1.0**
SMF pmax pmax
comp=Z,13nm,0.7s
SSF Saint Saulge 52.56 308 *e*P **P** **05 03 03.2 -1.0**
SSF pmax pmax
comp=Z,14nm,0.8s
AVF Avril sur Loir 52.70 308 *e*P **P** **05 03 04.3 -0.9**
AVF pmax pmax
comp=Z,18nm,1.1s
SPA0 Spitsbergen Ar 52.78 348 *e*P **P** **05 03 05.9 +0.6**
SPITS Spitsbergen Ar 52.78 348 P **P** **05 03 06.5 +1.1**
comp=Z,6.3nm,0.6s,baz=91,slow=12,SNR=10
comp=Z,6.3nm,0.6s
CAF Calviac 53.87 305 *e*P **P** **05 03 13.2 -0.7**
CAF pmax pmax
comp=Z,12nm,1.1s
MTLF Montolieu 54.04 303 *e*P **P** **05 03 13.9 -1.2**
MTLF pmax pmax
comp=Z,41nm,1.6s
RJF Les Rejaudoux 54.19 306 *e*P **P** **05 03 15.5 -0.7**
RJF pmax pmax
comp=Z,10.0nm,1.0s
LDF La Druitiere 54.78 310 *e*P **P** **05 03 19.4 -1.0**
LDF pmax pmax
comp=Z,63nm,1.7s
LFF La Frestale 54.79 306 *e*P **P** **05 03 21.7 +1.2**
LFF pmax pmax
comp=Z,14nm,1.1s
MFF Saint Martin d 55.11 308 *e*P **P** **05 03 21.0 -1.8**
MFF pmax pmax
comp=Z,11nm,0.9s
EKA Eskdalemuir Ar 55.80 319 LR LR 05 33 42.0
comp=Z,348nm,18.4s,baz=78,slow=43
EKA Eskdalemuir Ar 55.80 319 P **P** **05 03 25.7 -1.9**
MJAR Matsushiro Arr 56.04 64 P **P** **05 03 31.3 +1.6**
comp=Z,1.8nm,0.7s,baz=280,slow=8.7,SNR=5.0
MJAR LR LR 05 30 10.5
comp=Z,151nm,19.8s,baz=268,slow=39
comp=Z,1.8nm,0.7s
ETSF Etsaut 56.12 303 *e*P **P** **05 03 29.2 -1.0**
ETSF pmax pmax
comp=Z,7.0nm,0.8s
ROSF Rostrenen 56.89 310 *e*P **P** **05 03 34.5 -1.0**
ROSF pmax pmax
comp=Z,22nm,1.0s
QUIF Quistinic 56.90 310 *e*P **P** **05 03 34.5 -1.1**
QUIF pmax pmax
comp=Z,66nm,1.6s
DAV Davao City (W) 57.07 102 LR LR 05 31 04.2
comp=Z,172nm,18.1s,baz=342,slow=39
TAM Tamanrasset 57.34 279 P **P** **05 03 42.5 +3.3**
TAM pP **sP** **05 03 51.6 +0.2**
JMIC Jan Mayen 57.39 338 LR LR 05 28 12.6
comp=Z,128nm,18.8s,baz=265,slow=36
JHJ Hachijo jima 2 58.27 68 LR LR 05 30 44.6
comp=Z,166nm,20.8s,baz=322,slow=38
NOR Nord 59.17 350 *i* P **P** **05 03 50.5 -0.5**
NOR IAmb IAmb 05 04 03.9
comp=Z,4.0nm,0.9s
ESDC Sonseca Array 59.40 301 P **P** **05 03 52.1 -1.3**
comp=Z,2.5nm,0.8s,baz=64,slow=7.3,SNR=15
comp=Z,2.5nm,0.8s
ESDC Sonseca Array 59.40 301 P **P** **05 03 51.6 -1.7**
MA2 Magadan 59.41 36 LR LR 05 31 06.1
comp=Z,332nm,18.3s,baz=270,slow=38
KAPI Kappang 59.46 118 LR LR 05 32 23.5
comp=Z,71nm,20.2s,baz=279,slow=39
SEY Seymchan 59.64 32 P **P** **05 03 54.8 +0.3**
comp=Z,3.1nm,0.6s,baz=251,slow=9.2,SNR=4.2
comp=Z,3.1nm,0.6s
PAB San Pablo 59.73 300 P **P** **05 03 53.9 -1.7**
PAB IAmb IAmb 05 05 58.4
comp=Z,18nm,1.6s
PAB San Pablo 59.73 300 P **P** **05 03 53.9 -1.7**
PAB pmax pmax
comp=Z,18nm,1.6s
PAB San Pablo 59.73 300 P **P** **05 03 56.4 +0.8**
PAB pP **sP** **05 04 07.0 -0.7**
DAG Danmarks Havn 59.89 345 *i* P **P** **05 03 55.0 -1.0**
DAG IAmb IAmb 05 04 05.2
comp=Z,6.2nm,0.9s
LSZ Lusaka 60.93 227 LR LR 05 32 04.9
comp=Z,160nm,19.3s,baz=358,slow=38
MDT Midelt 62.05 293 LR LR 05 34 30.2
comp=Z,76nm,18.8s,baz=80,slow=39
BORG Borgarnes 63.05 331 LR LR 05 34 09.0
comp=Z,262nm,18.1s,baz=168,slow=38
BILL Bilibino 64.08 25 *e*P **P** **05 04 25.8 +1.5**
BILL *e* 05 04 59.2
BILL *e* 05 06 46.1
BILL *e*PPP PPP 05 08 11.9
BILL pmax pmax
comp=Z,46nm,2.7s
BILL MLR MLR
comp=Z,385nm,18.0s
PETK Petropavlovsk- 64.71 42 LR LR 05 35 45.0
comp=Z,507nm,19.7s,baz=290,slow=39
TOA0 Torodi Ar. Sit 64.77 271 P **P** **05 04 28.1 -1.4**
TOA0 IAmb IAmb 05 04 48.9
comp=Z,7.9nm,0.9s
TORD Torodi Ar. Bea 64.77 271 P **P** **05 04 28.1 -1.4**
comp=Z,3.7nm,0.8s,baz=55,slow=5.5,SNR=12
TORD LR LR 05 34 17.8
comp=Z,152nm,19.2s,baz=206,slow=38
comp=Z,3.7nm,0.8s
NEEM North Greenlan 66.34 348 *i* P **P** **05 04 37.2 -2.0**
NEEM IAmb IAmb 05 05 12.4
comp=Z,7.0nm,0.8s
KOWA Kowa 69.05 275 P **P** **05 04 55.5 -1.3**
KOWA IAmb IAmb 05 05 00.7
comp=Z,7.9nm,0.7s
KOWA Kowa 69.05 275 P **P** **05 04 55.7 -1.1**
KOWA sP **sP** **05 05 09.0 -0.1**
LBTB Lobatse 69.90 222 LR LR 05 36 24.1
comp=Z,145nm,18.8s,baz=10.0,slow=37
LBTB Lobatse 69.90 222 P **P** **05 05 05.1 +3.2**
LBTB pP **sP** **05 05 15.2 +1.0**
TSUM Tsumeb 70.74 232 LR LR 05 38 52.3
comp=Z,229nm,18.8s,baz=356,slow=38
DY2G Dye2 71.62 338 *i* P **P** **05 05 12.9 +0.8**
DY2G IAmb IAmb 05 05 23.9
comp=Z,8.8nm,1.0s
SFJD Kangerlussuaq 72.68 339 LR LR 05 39 30.4
comp=Z,219nm,18.6s,baz=68,slow=38
BOSA Boshof 72.86 220 P **P** **05 05 17.4 -2.4**
comp=Z,4.6nm,1.2s,baz=33,slow=8.1,SNR=2.4
BOSA LR LR 05 37 06.7
comp=Z,216nm,19.8s,baz=23,slow=36
comp=Z,4.6nm,1.2s
DBIC Dimbokro 73.54 268 P **P** **05 05 23.4 -0.7**
comp=Z,2.3nm,0.7s,baz=19,slow=3.4,SNR=4.0
DBIC LR LR 05 40 18.3
comp=Z,300nm,19.0s,baz=30,slow=38
comp=Z,2.3nm,0.7s
SHEM Shemya Is, Ala 73.92 38 LR LR 05 41 27.3
comp=Z,146nm,19.2s,baz=306,slow=39
RES Resolute Bay 74.24 356 LR LR 05 42 23.0
comp=Z,157nm,18.9s,baz=20,slow=39
COLD Coldfoot 77.63 15 P **P** **05 05 46.8 +0.1**
COLD IAmb IAmb 05 06 25.7
comp=Z,16nm,1.3s
SUR Sutherland 78.21 221 LR LR 05 40 34.4
comp=Z,124nm,19.8s,baz=44,slow=36
H21K Melozitna Rive 78.31 17 P **P** **05 05 49.4 -1.0**
H21K IAmb IAmb 05 06 01.0
comp=Z,9.8nm,1.2s
INK Inuvik 79.60 9 P **P** **05 05 57.4 0.0**
INK IAmb IAmb 05 06 16.0
comp=Z,6.3nm,0.8s
INK Inuvik 79.60 9 P **P** **05 05 57.4 0.0**
INK pmax pmax
comp=Z,6.0nm,0.8s
BBTS Babate 79.62 281 LR LR 05 45 57.7
comp=Z,235nm,18.2s,baz=61,slow=39
WB0 Warramunga Arr 79.79 120 P **P** **05 05 58.9 -0.4**
WB0 IAmb IAmb 05 06 08.5
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 79.86 120 P **P** **05 05 59.8 +0.2**
comp=Z,3.6nm,0.8s,baz=321,slow=5.0,SNR=31
WRA LR LR 05 47 16.5

comp=Z,74nm,18.9s,baz=298,slow=40
comp=Z,3.6nm,0.8s
WRA Warramunga Arr 79.86 120 P **P 05 05 59.3 -0.3**
WB2 Warramunga Arr 79.87 120 P **P 05 05 59.4 -0.2**
WB2 IAmb IAmb 05 06 09.5
comp=Z,9.9nm,0.9s
FRB Frobisher Bay 80.16 343 LR LR 05 42 21.8
comp=Z,46nm,18.2s,baz=29,slow=36
CAST Castle Rocks 80.31 18 P **P 05 06 01.4 +0.1**
ILAR Eielson Array 80.44 15 P **P 05 06 00.9 -1.1**
comp=Z,0.8nm,0.9s,baz=316,slow=3.0,SNR=6.3
ILAR LR LR 05 46 44.1
comp=Z,158nm,18.5s,baz=312,slow=40
comp=Z,0.8nm,0.9s
ILAR Eielson Array 80.44 15 P **P 05 06 01.0 -1.1**
ASAR Alice Springs 81.84 124 P **P 05 06 09.8 -0.3**
comp=Z,1.9nm,0.8s,baz=311,slow=5.3,SNR=14
ASAR LR LR 05 45 34.6
comp=Z,105nm,20.6s,baz=316,slow=38
comp=Z,1.9nm,0.8s
PMG Port Moresby 84.01 105 LR LR 05 46 35.1
comp=Z,28nm,21.8s,baz=325,slow=38
KDAK Kodiak Island 84.76 21 LR LR 05 48 23.6
comp=Z,141nm,19.3s,baz=314,slow=39
YKA Yellowknife Ar 86.90 2 P **P 05 06 35.0 -0.1**
comp=Z,2.3nm,0.7s,baz=335,slow=4.2,SNR=2.2
YKA LR LR 05 48 51.6
comp=Z,101nm,20.7s,baz=338,slow=38
comp=Z,2.3nm,0.7s
SCHQ Schefferville 86.90 337 LR LR 05 46 26.2
comp=Z,171nm,18.3s,baz=137,slow=36
CTA Charters Tower 89.06 114 LR LR 05 53 53.5
comp=Z,41nm,19.1s,baz=260,slow=40
DLBC Dease Lake 89.49 10 LR LR 05 53 33.4
comp=Z,78nm,18.2s,baz=328,slow=40
STKA Stephens Creek 92.20 126 LR LR 05 51 53.2
comp=Z,82nm,18.4s,baz=251,slow=38
HNR Honiara 94.80 98 LR LR 05 52 03.1
comp=Z,283nm,20.3s,baz=301,slow=37
BBB Bella Bella 95.81 11 LR LR 05 57 08.4
comp=Z,74nm,18.0s,baz=346,slow=40
ULM Lac du Bonnet 98.27 351 LR LR 05 55 24.3
comp=Z,90nm,19.6s,baz=0.5,slow=38
MAW Mawson 98.31 183 LR LR 05 44 28.6
comp=Z,113nm,20.9s,baz=4.0,slow=31
SADO Sadowa 99.61 338 LR LR 05 53 24.6
comp=Z,149nm,19.1s,baz=12,slow=36

TRN 20 05:04:54.8, 19°.63N×62°.73W, h71km, MD4.0, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**2.15**	**155**	*e*P	Pn	05 05 29.8	+1.3
CDVI	**St. Croix**	**2.69**	**226**	*e*P	Pn	05 05 38.5	+2.6
CDVI				*e*S	Sn	05 06 09.1	+1.7
ANBD	**Bethesda, Anti**	**2.73**	**160**	*e*P	Pn	05 05 37.8	+1.5
ANBD				*e*S	Sn	05 06 09.1	+0.8
CBE	**Ff, Capester**	**3.70**	**163**	*e*P	Pn	05 05 51.8	+2.1
TDBA	**Terre de Bas,**	**3.90**	**164**	*e*P	Pn	05 05 54.3	+1.9
MAGL	**Barre de l'ile**	**3.91**	**159**	*e*P	Pn	05 05 54.7	+2.2
AOPR	**Arecibo Observ**	**4.02**	**252**	*e*P	Pn	05 05 55.3	+1.2
AOPR				*e*S	Sn	05 06 39.8	-0.1
MPOM	**Morne Pois Mar**	**5.46**	**161**	*e*P	Pn	05 06 15.6	+2.0

IDC ***20*** *06:01:56.8±1.1, 39°.47N×20°.64E, h0km, mb3.6/6, mbtmp3.6/10, ML3.8/3, Error ellipse: s-maj=18.5km s-min=15.1km az=111.0*
ATH ***20*** *06:01:58.2, 39°.61N×20°.64E, h10km±2km, ML3.5/18, Error ellipse: s-maj=2.2km s-min=0.8km az=308.0*
THE ***20*** *06:01:58.1, 39°.60N×20°.63E, h0km, ML3.6/24, Error ellipse: s-maj=0.9km s-min=0.3km az=320.0*
PDG ***20*** *06:01:58.7±0.4, 39°.62N×20°.61E, h10km, ML3.7/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
BEO ***20*** *06:01:58.0±0.7, 39°.47N×20°.53E, h7km±4km, ML3.5/8*
ISC 20 06:01:58.2±1.0, 39°.59N±0°.01×20°.63E±0°.02, h5km±7km, n132, σ1°19/189, mb3.5/6, 8C-7D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**68**	P	**Pg**	**06 02 01.3**	**-0.5**
JAN				S	**Sg**	**06 02 04.5**	**+0.2**
42μm,0.3s							
JAN	**Janina**	**0.18**	**68**	P	**Pg**	**06 02 01.3**	**-0.5**
JAN				S	**Sg**	**06 02 04.8**	**+0.6**
JAN				AML	AML	06 02 05.2	
comp=E,68980μm,0.4s							
JAN				AML	AML	06 02 05.3	
comp=N,98108μm,0.2s							
IGT	**Igoumenitsa**	**0.24**	**257**	P	**Pg**	**06 02 03.0**	**+0.1**
IGT				S	**Sg**	**06 02 06.6**	**+0.5**
comp=N,63μm,0.4s							
IGT	**Igoumenitsa**	**0.24**	**257**	P	**Pg**	**06 02 02.8**	**-0.1**
IGT				S	**Sg**	**06 02 07.4**	**+1.3**
IGT				AML	AML	06 02 08.0	
IGT				AML	AML	06 02 08.2	
KASA	**Kassiopi**	**0.56**	**287**	P	**Pg**	**06 02 09.1**	**+0.1**
KASA				S	**Sg**	**06 02 16.0**	**-0.3**
LSK	**Leskovik**	**0.56**	**357**	P	**Pg**	**06 02 08.6**	**-0.5**
LSK				S	**Sg**	**06 02 16.5**	**+0.1**
comp=N,11μm,0.5s							
SRN	**Sarande**	**0.57**	**301**	P	**Pg**	**06 02 08.7**	**-0.5**
SRN				S	**Sg**	**06 02 17.0**	**+0.4**
comp=N,3μm,0.6s							
KEK	**Kerkira**	**0.66**	**281**	P	**Pg**	**06 02 10.5**	**-0.3**
KEK				S	**Sg**	**06 02 20.2**	**+0.8**
comp=N,8μm,0.6s							
KEK	**Kerkira**	**0.66**	**281**	P	**Pg**	**06 02 10.9**	**0.0**
KEK				S	**Sb**	**06 02 20.7**	**-0.9**
KEK				AML	AML	06 02 29.8	
comp=E,18466μm,0.5s							
KEK				AML	AML	06 02 29.9	
comp=N,12915μm,0.5s							
KPRO	**Kipourio**	**0.67**	**57**	P	**Pg**	**06 02 10.8**	**-0.3**
KPRO				S	**Sg**	**06 02 20.9**	**+1.0**
comp=N,4μm,0.4s							
PENT	**Pentalofos**	**0.72**	**32**	P	**Pg**	**06 02 11.5**	**-0.6**
PENT				S	**Sg**	**06 02 21.8**	**+0.3**
comp=N,2μm,0.3s							
PENT	**Pentalofos**	**0.72**	**32**	P	**Pg**	**06 02 11.8**	**-0.2**
PENT				S	**Sg**	**06 02 21.1**	**-0.4**
PENT				AML	AML	06 02 25.6	
comp=E,6351μm,0.3s							
PENT				AML	AML	06 02 26.3	
comp=N,1959μm,0.3s							
TSLK	**Tsoukalades, L**	**0.76**	**179**	P	**Pg**	**06 02 13.0**	**+0.1**
TSLK				S	**Sg**	**06 02 24.2**	**+1.5**
comp=N,4μm,0.5s							
TSLK	**Tsoukalades, L**	**0.76**	**179**	P	**Pg**	**06 02 13.0**	**+0.1**
TSLK				S	**Sb**	**06 02 24.6**	**0.0**
TSLK				AML	AML	06 02 30.1	
comp=N,9573μm,0.5s							
TSLK				AML	AML	06 02 30.8	
comp=E,5725μm,0.5s							
LKD2	**Lefkada island**	**0.80**	**179**	P	**Pg**	**06 02 13.4**	**-0.1**
LKD2				S	**Sb**	**06 02 25.7**	**0.0**
comp=E,4μm,0.4s							
LKD2	**Lefkada island**	**0.80**	**179**	P	**Pg**	**06 02 13.5**	**0.0**
LKD2				AML	AML	06 02 32.1	
comp=E,8012μm,0.4s							
LKD2				AML	AML	06 02 34.8	
comp=N,6425μm,0.4s							
NYDR	**Nydri-Lefkada**	**0.88**	**177**	P	**Pg**	**06 02 14.6**	**-0.4**
NYDR				S	**Sb**	**06 02 28.1**	**+0.3**
comp=N,3μm,0.5s							
NEST	**Nestorio**	**0.89**	**21**	P	**Pg**	**06 02 14.6**	**-0.6**
NEST				S	**Sg**	**06 02 27.4**	**+0.7**
comp=N,2μm,0.4s							
NEST	**Nestorio**	**0.89**	**21**	P	**Pg**	**06 02 14.9**	**-0.4**
NEST				S	**Sg**	**06 02 26.2**	**-0.5**
NEST				AML	AML	06 02 32.4	
comp=E,5264μm,0.6s							
NEST				AML	AML	06 02 34.7	
comp=N,5264μm,0.4s							
DRAG	**Dragano-Lefkad**	**0.90**	**183**	P	**Pg**	**06 02 14.9**	**-0.7**
DRAG				S	**Sb**	**06 02 28.9**	**+0.2**
comp=N,66μm,0.5s							
EVGI	**Lefkada island**	**0.97**	**179**	P	**Pg**	**06 02 16.2**	**-0.5**
EVGI				S	**Sb**	**06 02 30.9**	**+0.4**
comp=N,4μm,0.4s							
EVGI	**Lefkada island**	**0.97**	**179**	P	**Pg**	**06 02 16.1**	**-0.6**

KBN	**Korca**	**1.04**	**6**	P	**Pg**	**06 02 17.0**	**-1.2**
KBN				S	**Sb**	**06 02 32.5**	**-0.2**
comp=N,2μm,0.9s							
THL	**Klokotos Trika**	**1.07**	**91**	P	**Pg**	**06 02 18.2**	**-0.5**
THL				S	**Sb**	**06 02 34.2**	**+0.8**
comp=N,1μm,0.6s							
THL	**Klokotos Trika**	**1.07**	**91**	P	**Pg**	**06 02 18.3**	**-0.5**
THL				S	**Sg**	**06 02 32.3**	**-0.2**
THL				AML	AML	06 02 39.1	
comp=E,2886μm,0.7s							
THL				AML	AML	06 02 43.7	
comp=N,2278μm,0.6s							
FSK	**Fiskardo**	**1.13**	**183**	P	**Pg**	**06 02 19.5**	**-0.4**
FSK				S	**Sb**	**06 02 36.2**	**+1.1**
comp=N,5μm,0.4s							
FSK	**Fiskardo**	**1.13**	**183**	P	**Pg**	**06 02 19.1**	**-0.8**
FSK				AML	AML	06 02 38.0	
comp=E,13490μm,0.4s							
FSK				AML	AML	06 02 38.6	
comp=N,6803μm,0.4s							
KZN	**Kozani**	**1.13**	**50**	P	**Pg**	**06 02 19.1**	**-0.8**
KZN				S	**Sb**	**06 02 35.9**	**+0.6**
comp=N,1μm,0.6s							
KZN	**Kozani**	**1.13**	**50**	P	**Pg**	**06 02 19.2**	**-0.8**
KZN				AML	AML	06 02 44.1	
comp=N,2480μm,0.6s							
KZN				AML	AML	06 02 45.7	
comp=E,3283μm,0.7s							
EVR	**Evrytania**	**1.13**	**126**	P	**Pg**	**06 02 19.2**	**-0.7**
EVR				S	**Sb**	**06 02 36.4**	**+1.1**
comp=E,2μm,0.5s							
EVR	**Evrytania**	**1.13**	**126**	P	**Pg**	**06 02 19.4**	**-0.6**
EVR				S	**Sg**	**06 02 35.1**	**+0.5**
EVR				AML	AML	06 02 41.8	
comp=E,3358μm,0.4s							
EVR				AML	AML	06 02 42.2	
comp=N,4885μm,0.5s							
PVO	**Paravola**	**1.19**	**144**	P	**Pg**	**06 02 20.7**	**-0.4**
PVO				S	**Sn**	**06 02 38.5**	**+0.4**
comp=N,2μm,0.6s							
PVO	**Paravola**	**1.19**	**144**	P	**Pg**	**06 02 21.0**	**-0.1**
TYRN	**Tyrnavos**	**1.24**	**84**	P	**Pb**	**06 02 21.3**	**-0.8**
TYRN				S	**Sn**	**06 02 39.4**	**+0.2**
comp=N,4μm,0.8s							
MAKR	**Makrakomi, Fth**	**1.30**	**116**	P	**Pn**	**06 02 22.3**	**-0.7**
MAKR				S	**Sn**	**06 02 41.4**	**+0.7**
comp=N,5μm,0.7s							
MAKR	**Makrakomi, Fth**	**1.30**	**116**	P	**Pn**	**06 02 22.3**	**-0.7**
MAKR				AML	AML	06 02 49.2	
comp=N,10235μm,0.6s							
MAKR				AML	AML	06 02 50.7	
comp=E,6898μm,0.4s							
KEF4	**Livadi, Kephal**	**1.34**	**187**	P	**Pn**	**06 02 23.1**	**-0.4**
KEF4				S	**Sn**	**06 02 43.0**	**+1.4**
KEF4	**Livadi, Kephal**	**1.34**	**187**	P	**Pn**	**06 02 23.1**	**-0.4**
LRSO	**Larissa Observ**	**1.36**	**86**	P	**Pn**	**06 02 23.1**	**-0.7**
DMLN	**Damoulianata-K**	**1.36**	**189**	P	**Pn**	**06 02 23.7**	**-0.2**
DMLN				S	**Sg**	**06 02 43.6**	**+1.6**
comp=E,3μm,0.3s							
KEF3	**Kipouria, Keph**	**1.40**	**189**	P	**Pn**	**06 02 24.1**	**-0.3**
KEF3				S	**Sg**	**06 02 44.9**	**+1.7**
comp=E,5μm,0.6s							
KEF3	**Kipouria, Keph**	**1.40**	**189**	P	**Pn**	**06 02 23.5**	**-0.9**
VLS	**Valsamata**	**1.41**	**181**	P	**Pn**	**06 02 24.1**	**-0.4**
VLS				S	**Sg**	**06 02 44.3**	**+0.8**
comp=E,2μm,0.4s							
VLS	**Valsamata**	**1.41**	**181**	P	**Pn**	**06 02 24.0**	**-0.6**
VLS				AML	AML	06 02 46.3	
comp=N,4305μm,0.3s							
VLS				AML	AML	06 02 49.0	
comp=E,5579μm,0.4s							
PSDA	**Pessada-Kefalo**	**1.47**	**182**	P	**Pn**	**06 02 25.5**	**+0.1**
PSDA				S	**Sg**	**06 02 46.1**	**+0.6**
PSDA	**Pessada-Kefalo**	**1.47**	**182**	P	**Pn**	**06 02 25.5**	**+0.1**
LIT	**Litokhoron**	**1.52**	**70**	P	**Pn**	**06 02 26.4**	**+0.3**
OHR	**Ohrid**	**1.53**	**5**	*e*Pg	**Pg**	**06 02 27.7**	**+0.2**
OHR				*e*Sg	**Sg**	**06 02 50.5**	**+3.2**
OHR	**Ohrid**	**1.53**	**5**	*i* Pn	**Pg**	**06 02 27.5**	**0.0**
SCTE	**Santa Cesarea**	**1.74**	**287**	P	**Pn**	**06 02 29.5**	**+0.5**
AXAR	**Agios Charalam**	**1.77**	**117**	P	**Pn**	**06 02 29.9**	**+0.3**
TIR	**Tirane**	**1.85**	**342**	*e*Pn	**Pb**	**06 02 32.5**	**-0.1**
TIR				*e*Sn	**Sb**	**06 02 55.9**	**-0.1**
LTHK	**Lithakia**	**1.88**	**175**	P	**Pn**	**06 02 31.7**	**+0.8**
GRG	**Griva**	**1.92**	**44**	P	**Pn**	**06 02 32.0**	**+0.4**
GRG				AML	AML	06 03 07.6	
comp=N,757μm,0.6s							
GRG				AML	AML	06 03 12.7	
comp=E,820μm,0.6s							
XOR	**Xorichti**	**1.99**	**96**	P	**Pb**	**06 02 34.5**	**-0.4**
XOR				AML	AML	06 03 06.2	
comp=N,1738μm,0.7s							
XOR				AML	AML	06 03 09.8	
comp=E,848μm,1.2s							
NEO	**Neokhori**	**2.02**	**97**	P	**Pn**	**06 02 34.2**	**+1.2**
NEO				AML	AML	06 03 05.3	
comp=E,1206μm,0.6s							
NEO				AML	AML	06 03 05.6	
comp=N,2147μm,0.5s							
THE	**Thessaloniki**	**2.07**	**59**	P	**Pn**	**06 02 33.7**	**+0.2**
HORT	**Hortiatis**	**2.14**	**61**	P	**Pn**	**06 02 35.8**	**+1.1**
HORT				AML	AML	06 03 12.5	
comp=N,272μm,0.6s							
HORT				AML	AML	06 03 13.6	
comp=E,307μm,0.5s							
VAY	**Valandovo**	**2.28**	**40**	*e*Pn	**Pn**	**06 02 37.8**	**+1.4**
VAY				*e*Sn	**Sb**	**06 03 07.8**	**-0.4**
VAY	**Valandovo**	**2.28**	**40**	*i* Pn	**Pn**	**06 02 37.5**	**+1.1**
STIP	**Stip**	**2.41**	**29**	*i* Pn	**Pb**	**06 02 41.2**	**-0.9**
SOH	**Sokhos**	**2.42**	**59**	P	**Pn**	**06 02 39.7**	**+1.2**
SOH				AML	AML	06 03 15.5	
comp=N,772μm,0.4s							
SOH				AML	AML	06 03 15.7	
comp=E,1081μm,0.6s							
SKO	**Skopje**	**2.46**	**14**	*e*Pn	**Pn**	**06 02 40.8**	**+1.8**
SKO				*e*Sn	**Sb**	**06 03 12.5**	**-1.0**
SKO	**Skopje**	**2.46**	**14**	*i* Pn	**Pb**	**06 02 42.5**	**-0.4**
ULC	**Ulcinj**	**2.60**	**336**	*e*Pn	**Pn**	**06 02 41.1**	**+0.2**
ULC				*i* Sn	**Sn**	**06 03 14.4**	**+1.6**
SRS	**Serrai**	**2.73**	**55**	*e*Pn	**Pn**	**06 02 43.0**	**+0.3**
SRS				*e*Sn	**Sb**	**06 03 19.1**	**-2.1**
DRME	**Dracevica, Mon**	**2.82**	**338**	*e*Pn	**Pn**	**06 02 43.9**	**0.0**
DRME	**Dracevica, Mon**	**2.82**	**338**	⇑*i*Pn	**Pn**	**06 02 44.3**	**+0.4**
DRME				*i* Sn	**Sn**	**06 03 19.7**	**+1.5**
BUM	**Brajici-Budva**	**3.01**	**335**	*e*Pn	**Pn**	**06 02 46.8**	**+0.2**
BUM				*i* Sn	**Sn**	**06 03 23.2**	**+0.1**
PDG	**Podgorica**	**3.02**	**340**	⇓P	**Pn**	**06 02 49.1**	**+2.4**
TTG	**Podgorica**	**3.02**	**340**	*e*Pn	**Pn**	**06 02 47.2**	**+0.5**
TTG				*i* Sn	**Sn**	**06 03 24.7**	**+1.4**
TIP	**Timpagrande**	**3.03**	**263**	⇑P	**Pn**	**06 02 46.0**	**-0.8**
PVY	**Plav**	**3.05**	**351**	*e*Pn	**Pn**	**06 02 47.6**	**+0.5**
PVY				*i* Sn	**Sn**	**06 03 25.4**	**+1.4**
MATE	**Matera**	**3.19**	**291**	⇑P	**Pg**	**06 02 59.1**	**-0.3**
CEME	**Cevo**	**3.23**	**337**	*e*Pn	**Pn**	**06 02 49.2**	**-0.4**
CEME				*i* Sn	**Sn**	**06 03 29.5**	**+1.1**
HCY	**Herceg Novi**	**3.28**	**331**	*e*Pn	**Pn**	**06 02 48.9**	**-1.4**
HCY	**Herceg Novi**	**3.28**	**331**	*e*Pn	**Pn**	**06 02 50.7**	**+0.4**
HCY				*i* Sn	**Sn**	**06 03 30.9**	**+1.2**
IVA	**Berane**	**3.33**	**351**	⇓*i*Pn	**Pn**	**06 02 51.5**	**+0.5**
IVA				*i* Sn	**Sn**	**06 03 32.2**	**+1.3**
BARS	**Barje**	**3.35**	**15**	*e*Pn	**Pn**	**06 02 52.9**	**+1.7**
KOME	**Kolasin**	**3.37**	**346**	*e*Pn	**Pn**	**06 02 52.0**	**+0.5**
KOME				*i* Sn	**Sn**	**06 03 33.1**	**+1.2**
NKME	**Niksic**	**3.42**	**339**	*e*Pn	**Pn**	**06 02 52.7**	**+0.5**
NKME				*i* Sn	**Sn**	**06 03 34.3**	**+1.2**
VTS	**Vitosha**	**3.61**	**32**	⇓P	**Pn**	**06 02 56.4**	**+1.5**
SELS	**Selova**	**3.65**	**6**	*e*Pn	**Pn**	**06 02 56.2**	**+0.9**
BRY	**Bratogost**	**3.67**	**335**	*e*Pn	**Pn**	**06 02 55.7**	**0.0**
BRY	**Bratogost**	**3.67**	**335**	*e*Pn	**Pn**	**06 02 56.1**	**+0.4**
BRY				*i* Sn	**Sn**	**06 03 39.9**	**+0.5**
SJES	**Sjenica**	**3.70**	**353**	*e*Pn	**Pn**	**06 02 57.6**	**+1.4**
UPM	**Unac-Piva**	**3.84**	**341**	*e*Pn	**Pn**	**06 02 57.9**	**-0.2**
UPM	**Unac-Piva**	**3.84**	**341**	⇑*i*Pn	**Pn**	**06 02 58.5**	**+0.4**
UPM				*i* Sn	**Sn**	**06 03 44.5**	**+0.9**
STON	**Ston**	**3.96**	**327**	*e*Pn	**Pn**	**06 02 57.2**	**-2.3**
ZAPS	**Zavoj**	**3.98**	**22**	*e*Pn	**Pn**	**06 03 01.7**	**+1.9**
ZAPS				*e*Sn	**Sn**	**06 03 48.7**	**+1.9**
BOVS	**Bovan**	**4.12**	**11**	⇑P	**Pn**	**06 03 03.1**	**+1.3**
BOVS	**Bovan**	**4.12**	**11**	*e*Pn	**Pn**	**06 03 02.3**	**+0.5**
BOVS				*e*Sn	**Sn**	**06 03 51.5**	**+1.1**
RUDO	**Rudo**	**4.14**	**347**	*e*Pn	**Pn**	**06 03 02.9**	**+0.9**
GRUS	**Gruza**	**4.30**	**1**	*e*Pn	**Pn**	**06 03 05.1**	**+0.9**
BLKB	**Belogradchik**	**4.31**	**20**	⇑P	**Pn**	**06 03 05.8**	**+1.4**
BBLS	**Lazići**	**4.37**	**348**	*e*Pn	**Pn**	**06 03 06.9**	**+1.6**

BBLS	**Lazići**	**4.37**	**348**	*e*Pn	**Pn**	**06 03 06.4**	**+1.1**
ZAGS	**Zajecar**	**4.39**	**15**	*e*Pn	**Pn**	**06 03 06.7**	**+1.3**
ZAGS				*e*Sn	**Sn**	**06 03 58.5**	**+1.6**
DIVS	**Divibare**	**4.53**	**354**	*e*Pn	**Pn**	**06 03 07.5**	**0.0**
DIVS	**Divibare**	**4.53**	**354**	*e*Pn	**Pn**	**06 03 07.1**	**-0.4**
DIVS				*e*Sn	**Sn**	**06 04 00.0**	**-0.6**
TRUS	**Trudelj**	**4.63**	**358**	*e*Pn	**Pn**	**06 03 10.1**	**+1.2**
IDI	**Anoyia**	**5.47**	**140**	Pn	**Pn**	**06 03 19.4**	**-0.9**
comp=E,1.4nm,0.3s,baz=324,slow=15,SNR=12							
IDI				Sn	**Sn**	**06 04 19.2**	**-4.5**
comp=E,4.1nm,0.3s,baz=90,slow=23,SNR=6.5							
comp=E,4.3nm,0.3s							
MGRS	**Mrkonjic Grad**	**5.50**	**332**	*e*Pn	**Pn**	**06 03 21.1**	**+0.3**
FRGS	**Fruska Gora**	**5.60**	**354**	⇓P	**Pn**	**06 03 23.4**	**+1.3**
FRGS	**Fruska Gora**	**5.60**	**354**	*e*Pn	**Pn**	**06 03 20.9**	**-1.2**
FRGS	**Fruska Gora**	**5.60**	**354**	*e*Pn	**Pn**	**06 03 22.6**	**+0.5**
BLY	**Banja Luka**	**5.76**	**335**	*e*Pn	**Pn**	**06 03 22.0**	**-2.3**
GZR	**Gura Zlata**	**6.01**	**15**	⇓P	**Pn**	**06 03 31.7**	**+3.9**
A051A	**Mrakovica**	**6.08**	**334**	*e*Pn	**Pn**	**06 03 27.9**	**-0.9**
VOIR		**6.69**	**28**	⇓P	**Pn**	**06 03 41.7**	**+4.5**
MORH	**Mrgy, Hungar**	**6.78**	**348**	⇑P	Pn	06 03 45.2	+6.9
MLR	**Muntele Rosu**	**7.08**	**32**	⇓P	**Pn**	**06 03 46.1**	**+3.5**
MLR	**Muntele Rosu**	**7.08**	**32**	Pn	**Pn**	**06 03 45.1**	**+2.5**
comp=E,0.8nm,0.3s,baz=295,slow=18,SNR=5.1							
MLR				Sn	**Sn**	**06 05 08.4**	**+5.0**
baz=83,slow=21							
comp=E,2.7nm,0.4s							
BOJS	**Bojanci**	**7.12**	**328**	*e*Pn	**Pn**	**06 03 41.6**	**-1.4**
CRES	**Cresnjev**	**7.31**	**330**	*e*Pn	**Pn**	**06 03 44.1**	**-1.4**
CEY	**Cerknica**	**7.66**	**325**	*e*Pn	**Pn**	**06 03 49.6**	**-0.8**
SKDS	**Skadanscina**	**7.70**	**323**	*e*Pn	**Pn**	**06 03 48.9**	**-2.0**
VRI	**Vrincioaia**	**7.71**	**34**	⇑P	**Pn**	**06 03 53.8**	**+2.8**
OBKA	**Obir**	**8.22**	**329**	*e*Pn	**Pn**	**06 03 57.0**	**-1.2**
OBKA	**Obir**	**8.22**	**329**	*e*Pn	**Pn**	**06 03 58.5**	**+0.3**
comp=E,2.2nm,0.2s							
ARSA	**Arzberg**	**8.51**	**336**	*e*Pn	**Pn**	**06 04 02.1**	**0.0**
comp=E,3.6nm,0.4s							
KBA	**Koelnbreinsper**	**9.18**	**327**	*e*Pn	**Pn**	**06 04 11.4**	**+0.1**
comp=E,2.4nm,0.4s							
WTTA	**Wattenberg**	**10.08**	**323**	*e*Pn	**Pn**	**06 04 24.1**	**+0.4**
comp=E,1.6nm,0.3s							
GERES	**GERESS Array B**	**10.50**	**334**	Pn	**Pn**	**06 04 31.3**	**+1.9**
comp=E,0.4nm,0.3s,baz=159,slow=14,SNR=5.8							
comp=E,0.6nm,0.3s							
ESDC	**Sonseca Array**	**18.94**	**278**	P	**Pn**	**06 06 21.0**	**+0.4**
comp=E,1.1nm,1.1s,baz=70,slow=11,SNR=2.0							
HFS	**Hagfors**	**21.02**	**350**	P	**P**	**06 06 43.6**	**+1.1**
comp=E,1.3nm,0.6s,baz=161,slow=6.1,SNR=4.5							
comp=E,1.3nm,0.6s							
FINES	**FINESS Array B**	**22.14**	**7**	P	**P**	**06 06 54.1**	**-0.3**
comp=E,0.9nm,0.5s,baz=192,slow=12,SNR=6.0							
comp=E,0.9nm,0.5s							
NB2	**NORSAR Subarra**	**22.26**	**348**	P	**P**	**06 06 55.3**	**-0.5**
comp=Z,1.1nm,0.7s,baz=160,slow=11							
NOA	**NORSAR Array B**	**22.26**	**348**	P	**P**	**06 06 55.5**	**-0.2**
comp=Z,0.4nm,0.6s,baz=165,slow=11,SNR=2.7							
comp=Z,0.4nm,0.6s							
EKA	**Eskdalemuir Ar**	**22.34**	**323**	P	**P**	**06 06 55.6**	**-1.1**
comp=Z,1.2nm,0.6s,baz=114,slow=9.8,SNR=8.2							
comp=Z,1.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**31.19**	**218**	P	**P**	**06 08 18.0**	**-0.3**
comp=Z,1.4nm,0.7s,baz=15,slow=7.4,SNR=7.4							
comp=Z,1.4nm,0.7s							
MKAR	**Makanchi Array**	**44.50**	**60**	P	**P**	**06 10 08.9**	**-1.5**
comp=Z,1.1nm,0.5s,baz=271,slow=8.3,SNR=11							
comp=Z,1.1nm,0.5s							

IDC ***20*** *06:22:30.6±1.5, 39°.90N×20°.74E, h0km, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=45.5km s-min=25.8km az=113.0*
THE ***20*** *06:22:33.0, 39°.75N×20°.67E, h6km, ML3.3/31, Error ellipse: s-maj=0.9km s-min=0.4km az=304.0*
ATH ***20*** *06:22:33.0, 39°.76N×20°.67E, h8km±3km, ML3.2/9, Error ellipse: s-maj=3.5km s-min=1.1km az=358.0*
BEO ***20*** *06:22:34.2±0.8, 39°.69N×20°.65E, h18km±5km, ML3.0/8*
ISC 20 06:22:32.8±0.8, 39°.75N±0°.02×20°.68E±0°.02, h12km±5km, n76, σ0°99/125, mb3.6/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**123**	P	**Pg**	**06 22 36.2**	**-0.4**
JAN				S	**Sg**	**06 22 39.4**	**+0.1**
88μm,0.4s							
JAN	**Janina**	**0.16**	**123**	P	**Pg**	**06 22 36.3**	**-0.4**
JAN				S	**Sg**	**06 22 39.6**	**+0.3**
JAN				AML	AML	06 22 40.1	
JAN				AML	AML	06 22 40.3	
comp=N,87625μm,0.2s							
IGT	**Igoumenitsa**	**0.34**	**231**	P	**Pg**	**06 22 39.3**	**-0.4**
IGT				S	**Sg**	**06 22 44.9**	**+0.6**
comp=N,7μm,0.4s							
IGT	**Igoumenitsa**	**0.34**	**231**	P	**Pg**	**06 22 39.8**	**+0.1**
IGT				S	**Sg**	**06 22 45.3**	**+1.1**
IGT				AML	AML	06 22 49.1	
comp=E,16561

THL			AML	AML	06 23 15.5	
	comp=E,1590μm,0.3s					
DRAG	**Dragano-Lefkad**	**1.06 184**	P	**Pg**	**06 22 52.7**	**-0.6**
DRAG			S	**Sb**	**06 23 08.1**	**+1.1**
	comp=E,17μm,0.4s					
EVGI	**Lefkada island**	**1.12 181**	P	**Pg**	**06 22 53.6**	**-0.8**
EVGI			S	**Sb**	**06 23 10.1**	**+1.4**
	comp=E,1μm,0.3s					
EVGI	**Lefkada island**	**1.12 181**	P	**Pg**	**06 22 54.4**	**-0.1**
VLO	**Vlora**	**1.16 309**	P	**Pn**	**06 22 55.5**	**+0.7**
VLO			S	**Sn**	**06 23 11.2**	**+0.7**
	comp=E,3μm,0.6s					
TYRN	**Tyrnavos**	**1.20 91**	P	**Pb**	**06 22 54.4**	**-1.1**
TYRN			S	**Sn**	**06 23 12.8**	**+1.2**
	comp=E,3μm,0.6s					
EVR	**Evrytania**	**1.21 133**	P	**Pb**	**06 22 55.1**	**-0.5**
EVR			S	**Sg**	**06 23 12.0**	**+0.2**
	comp=E,992nm,0.4s					
KTI	**Kastanea**	**1.28 59**	P	**Pn**	**06 22 56.0**	**-0.6**
FSK	**Fiskardo**	**1.29 184**	P	**Pn**	**06 22 56.5**	**-0.1**
FSK			S	**Sb**	**06 23 14.4**	**+1.0**
	comp=E,1μm,0.4s					
FSK	**Fiskardo**	**1.29 184**	P	**Pn**	**06 22 56.6**	**+0.1**
FSK			AML	AML	06 23 16.7	
	comp=N,2100μm,0.4s					
FSK			AML	AML	06 23 18.5	
	comp=E,2768μm,0.5s					
LRSO	**Larissa Observ**	**1.33 93**	P	**Pn**	**06 22 57.1**	**0.0**
LRSO			S	**Sg**	**06 23 15.9**	**+0.4**
	comp=E,1μm,0.5s					
MAKR	**Makrakomi, Fth**	**1.34 122**	P	**Pn**	**06 22 57.7**	**+0.3**
MAKR			S	**Sg**	**06 23 16.6**	**+0.5**
	comp=E,3μm,0.5s					
MAKR	**Makrakomi, Fth**	**1.34 122**	P	**Pn**	**06 22 57.9**	**+0.5**
OHR	**Ohrid**	**1.37 4**	*e*Pg	**Pg**	**06 23 00.3**	**+1.2**
OHR			*e*Sg	**Sg**	**06 23 19.1**	**+2.2**
OHR	**Ohrid**	**1.37 4**	*i* Pn	**Pg**	**06 22 59.5**	**+0.4**
LIT	**Litokhoron**	**1.44 75**	P	**Pn**	**06 22 58.8**	**+0.1**
LIT			S	**Sb**	**06 23 18.8**	**+1.0**
	comp=E,788nm,0.5s					
KEF4	**Livadi, Kephal**	**1.50 188**	P	**Pn**	**06 23 00.6**	**+1.2**
KEF4			S	**Sn**	**06 23 19.2**	**+0.3**
DMLN	**Damoulianata-K**	**1.52 189**	P	**Pn**	**06 23 00.1**	**+0.3**
DMLN			S	**Sn**	**06 23 20.9**	**+1.4**
	comp=E,1μm,0.5s					
VLS	**Valsamata**	**1.57 182**	P	**Pn**	**06 23 00.5**	**+0.1**
VLS			S	**Sn**	**06 23 21.2**	**+0.6**
	comp=E,885nm,0.3s					
EFP	**Efpalio**	**1.63 144**	P	**Pb**	**06 23 03.4**	**+0.7**
EFP			S	**Sn**	**06 23 23.4**	**+1.3**
	comp=E,988nm,0.5s					
PSDA	**Pessada-Kefalo**	**1.63 183**	P	**Pn**	**06 23 01.2**	**-0.1**
PSDA			S	**Sn**	**06 23 22.8**	**+0.7**
	comp=E,1μm,0.2s					
SERG	**Sergoula**	**1.71 141**	P	**Pb**	**06 23 04.4**	**+0.2**
SERG			S	**Sn**	**06 23 25.6**	**+1.4**
	comp=E,580nm,0.5s					
TIR	**Tirane**	**1.71 339**	*e*Pn	**Pn**	**06 23 03.6**	**+1.1**
TIR			*e*Sn	**Sb**	**06 23 26.9**	**+1.2**
LAKA	**Lakka**	**1.81 146**	P	**Pb**	**06 23 05.9**	**0.0**
LAKA			S	**Sb**	**06 23 29.6**	**+1.0**
	comp=E,750nm,0.7s					
AXAR	**Agios Charalam**	**1.82 122**	P	**Pb**	**06 23 05.8**	**-0.3**
AXAR			S	**Sn**	**06 23 28.1**	**+1.1**
	comp=E,825nm,0.4s					
PHP	**Peshkopia**	**1.94 355**	P	**Pb**	**06 23 08.0**	**-0.2**
DRO	**Drossia**	**1.96 155**	P	**Pn**	**06 23 07.0**	**+1.1**
DRO			S	**Sb**	**06 23 33.0**	**+0.1**
	comp=E,562nm,0.5s					
THE	**Thessaloniki**	**1.96 62**	P	**Pn**	**06 23 06.7**	**+0.8**
THE			S	**Sn**	**06 23 31.9**	**+1.5**
XOR	**Xorichti**	**1.98 100**	P	**Pn**	**06 23 07.7**	**+1.5**
XOR			S	**Sn**	**06 23 32.1**	**+1.2**
	comp=E,285nm,0.6s					
KLV	**Kalavryta, Ach**	**2.05 145**	P	**Pn**	**06 23 09.4**	**+2.2**
KNT	**Kendrikon**	**2.21 49**	P	**Pn**	**06 23 09.4**	**+0.1**
KNT			S	**Sn**	**06 23 37.5**	**+1.0**
STIP	**Stip**	**2.26 30**	*i* Pn	**Pb**	**06 23 12.5**	**-1.0**
SKO	**Skopje**	**2.30 14**	*e*Pn	**Pb**	**06 23 13.4**	**-0.8**
SKO			*e*Sn	**Sn**	**06 23 40.8**	**+2.1**
SKO	**Skopje**	**2.30 14**	*i* Pn	**Pb**	**06 23 13.2**	**-1.0**
SOH	**Sokhos**	**2.31 61**	P	**Pn**	**06 23 11.9**	**+1.2**
SRS	**Serrai**	**2.61 57**	P	**Pn**	**06 23 16.1**	**+1.3**
SRS			S	**Sn**	**06 23 48.1**	**+1.6**
SRS	**Serrai**	**2.61 57**	*e*Pn	**Pn**	**06 23 16.6**	**+1.8**
SRS			*e*Sn	**Sn**	**06 23 47.9**	**+1.4**
BARS	**Barje**	**3.19 15**	*e*Pn	**Pn**	**06 23 24.0**	**+1.3**
BARS			*e*Sn	**Sn**	**06 24 01.8**	**+1.2**
SELS	**Selova**	**3.49 5**	*e*Pn	**Pn**	**06 23 28.1**	**+1.3**
SJES	**Sjenica**	**3.55 352**	*e*Pn	**Pn**	**06 23 29.7**	**+1.9**
ZAPS	**Zavoj**	**3.82 22**	*e*Pn	**Pn**	**06 23 33.4**	**+2.0**
BOVS	**Bovan**	**3.96 11**	*e*Pn	**Pn**	**06 23 33.6**	**+0.3**
BOVS			*e*Sn	**Sn**	**06 24 19.1**	**-0.6**
GRUS	**Gruza**	**4.14 0**	*e*Pn	**Pn**	**06 23 37.1**	**+1.3**
ZAGS	**Zajecar**	**4.23 15**	*e*Pn	**Pn**	**06 23 38.4**	**+1.4**
ZAGS			*e*Sn	**Sn**	**06 24 27.9**	**+1.7**
DIVS	**Divibare**	**4.38 354**	*e*Pn	**Pn**	**06 23 39.8**	**+0.6**
DIVS			*e*Sn	**Sn**	**06 24 29.5**	**-0.6**
TRUS	**Trudelj**	**4.48 358**	*e*Pn	**Pn**	**06 23 41.1**	**+0.7**
SOKA	**Soboth**	**8.06 331**	*e*Pn	**Pn**	**06 24 29.2**	**-0.4**
	comp=E,1.5nm,0.2s					
OBKA	**Obir**	**8.11 328**	*e*Pn	**Pn**	**06 24 29.5**	**-0.9**
	comp=E,0.9nm,0.1s					
OBKA			*e*Sn	**Sn**	**06 26 00.8**	**-1.1**
	comp=E,2.1nm,0.4s					
FINES	**FINESS Array B**	**21.98 7**	P	**P**	**06 27 24.6**	**-1.7**
	comp=E,1.1nm,0.5s,baz=181,slow=11,SNR=7.3					
	comp=E,1.1nm,0.5s					
NOA	**NORSAR Array B**	**22.11 348**	P	**P**	**06 27 26.3**	**-1.4**
	comp=E,0.3nm,0.6s,baz=164,slow=11,SNR=3.2					
	comp=E,0.3nm,0.6s					
ARCES	**ARCESS Array B**	**29.96 3**	P	**P**	**06 28 38.0**	**-2.5**
	comp=E,1.4nm,0.8s,baz=184,slow=11,SNR=4.5					
	comp=E,1.4nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.34 218**	P	**P**	**06 28 54.1**	**+1.0**
	comp=E,0.2nm,0.4s,baz=44,slow=8.1,SNR=4.8					
	comp=E,0.2nm,0.4s					
MKAR	**Makanchi Array**	**44.39 60**	P	**P**	**06 30 41.9**	**-1.2**
	comp=E,0.7nm,0.5s,baz=280,slow=7.3,SNR=8.7					
	comp=E,0.7nm,0.5s					

NEIC ***20*** *06:25:56.0±1.8, 22°.24N×0°.07×143°.76E±0°.09, h104km±3km, mb5.7/571, Mwb5.6/91, Mww5.6, Error ellipse: s-maj=12.4km s-min=9.2km az=73.0*

BJI ***20*** *06:25:56.3±0.0, 22°.32N×143°.75E, h126km, mb5.4/90, mB5.3/56*

NEIC ***20*** *06:25:56, 22°.26N×143°.77E, h107km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.62; $M_{\theta\theta}$0.40; $M_{\phi\phi}$-3.02; $M_{r\theta}$-1.99; $M_{\theta\phi}$1.10; $M_{\phi r}$-0.53; Fault plane solution: $M_0$3.68000×10^{17} NP1:ϕ_s191.86000°, δ52.94000°, λ132.54000°. NP2:ϕ_s315.16000°, δ53.99000°, λ48.16000°. Principal axes: T 3.9363, Plg57.0000°, Azm164.0000°; N -0.5940, Plg33.0000°, Azm343.0000°; P -3.3423, Plg1.0000°, Azm73.0000°;*

MOS ***20*** *06:25:56.0±0.9, 22°.19N×143°.66E, h128km, mb5.5/60, MS4.6/5 Error ellipse: s-maj=7.3km s-min=3.7km az=116.3*

GCMT ***20*** *06:25:57.0±0.1, 22°.26N±0°.01×143°.97E±0°.01, h122km, MW5.7/168, Moment Tensor Solution. s157, c286; s168, c364; Duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.53±.03; $M_{\theta\theta}$1.03±.04; $M_{\phi\phi}$-3.56±.04; $M_{r\theta}$-2.21±.03; $M_{\theta\phi}$1.07±.04; $M_{\phi r}$-0.88±.03; Best double couple: $M_0$4.08300×10^{17} NP1:ϕ_s199.00000°, δ59.00000°, λ135.00000°. NP2:ϕ_s317.00000°, δ52.00000°, λ40.00000°. Principal axes: T 4.3420, Plg53.0000°, Azm164.0000°; N -0.5170, Plg37.0000°, Azm353.0000°; P -3.8250, Plg4.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***20*** *06:25:58.8±0.8, 22°.24N×143°.72E, h138km±7km, mb5.1/49, mbtmp5.5/51, MS4.5/74 Error ellipse: s-maj=9.5km s-min=6.1km az=70.0*

NEIC ***20*** *06:25:58, 22°.37N×143°.86E, h120km, Moment Tensor Solution. Duration: 3s6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.49; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-2.68; $M_{r\theta}$-2.00; $M_{\theta\phi}$0.46; $M_{\phi r}$-0.64; Fault plane solution: $M_0$3.37000×10^{17} NP1: ϕ_s326.00000°, δ48.00000°, λ47.00000°. NP2: ϕ_s200.00000°, δ57.00000°, λ127.00000°. Principal axes:*

T 3.7458, Plg59.0000°, Azm166.0000°; N -0.9648, Plg30.0000°, Azm357.0000°; P -2.7809, Plg5.0000°, Azm264.0000°;

JMA ***20*** *06:25:59.1±0.2, 22°.6N±0°.7×14°.4E±°, h132km±2km, MD5.8/60, MV6.2/60, IOTO ISLANDS REGION*

JMA Felt I J1 at IOTO ISLANDS REGION .

ISC 20 06:25:56.9±0.2, 22°.26N±0°.02×143°.74E±0°.03, h125km±1km, h125km:pP-P, n1626, σ1°51/1663, mb5.6/489, 64C-32D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.58**	**342**	*e*P	**Pn**	**06 27 04.3**	**+0.1**
JHH2				*e*S	**Sn**	**06 27 55.0**	**-1.7**
JHH2	**Haha-jima-NKT2**	**4.58**	**342**	A	A	06 27 04.3	
	comp=E,88nm,1.1s,comp=E,93nm,2.7s						
CBIJ	**Chichi jima**	**5.02**	**344**	P	**Pn**	**06 27 09.6**	**-0.6**
CBIJ				*e*S	**Sn**	**06 28 04.7**	**-2.5**
CBIJ	**Chichi jima**	**5.02**	**344**	A	A	06 27 09.6	
	comp=E,52nm,1.2s,comp=E,50nm,1.2s						
JCJ	**Chichijima**	**5.02**	**344**	P	**Pn**	**06 27 09.2**	**-0.9**
	5μm,0.5s,baz=232,slow=4.8,SNR=220						
JCJ				S	**Sn**	**06 28 04.4**	**-2.8**
	6μm,0.4s,baz=194,slow=24,SNR=13						
JCJ	**Chichijima**	**5.02**	**344**	Pn	**Pn**	**06 27 10.1**	**-0.1**
JCJ	**Chichijima**	**5.02**	**344**	P	**Pn**	**06 27 11.8**	**+1.6**
GUMO	**Guam**	**8.69**	**173**	P	**Pn**	**06 28 02.3**	**+2.6**
	3μm,1.1s,baz=253,slow=0.5,SNR=89						
GUMO				S	Sn	06 29 45.9	+10
	168nm,0.3s,baz=161,slow=23,SNR=1.6						
GUMO				LR	LR	06 30 09.5	
	comp=Z,6μm,20.1s,baz=14,slow=29						
GUMO	**Guam**	**8.69**	**173**	Pn	**Pn**	**06 27 58.3**	**-1.4**
GUMO	**Guam**	**8.69**	**173**	P	**Pn**	**06 27 58.3**	**-1.4**
GUMO	**Guam**	**8.69**	**173**	P	**Pn**	**06 28 02.6**	**+2.9**
JHCJ	**Hachijojimakas**	**11.32**	**343**	*e*P	**Pn**	**06 28 35.3**	**+0.3**
JHJ2	**Mitsune**	**11.35**	**343**	Pn	**Pn**	**06 28 33.5**	**-1.9**
JHJ2	**Mitsune**	**11.35**	**343**	P	**Pn**	**06 28 37.1**	**+1.7**
JHJ	**Hachijo jima 2**	**11.37**	**343**	P	**Pn**	**06 28 34.9**	**-0.7**
	242nm,0.6s,baz=319,slow=21,SNR=16						
JHJ				S	**Sn**	**06 30 34.7**	**-6.1**
	135nm,0.3s,baz=265,slow=24,SNR=2.8						
JHJ				LR	LR	06 33 10.4	
	comp=Z,2μm,18.7s,baz=165,slow=38						
BSO1	**Boso 1**	**12.58**	**350**	*e*P	**Pn**	**06 28 50.5**	**-0.4**
BSO1				*e*S	**Sn**	**06 31 05.0**	**-4.4**
BSO3	**Boso 3**	**12.81**	**348**	*e*P	**Pn**	**06 28 52.3**	**-1.9**
JIM2	**Oshima 3**	**12.97**	**344**	A	A	06 28 55.9	
	comp=E,5.0nm,7.2s,comp=E,5.0nm,5.3s						
BSO4	**Boso 4**	**13.03**	**348**	*e*P	**Pn**	**06 28 56.0**	**-1.1**
BSO4				*e*S	**Sn**	**06 31 15.5**	**-5.2**
JHTM	**Izuhatsuma**	**13.31**	**343**	A	A	06 29 00.3	
	comp=E,8.0nm,4.5s,comp=E,6.0nm,4.3s						
JTNC	**Tanabenakahech**	**13.56**	**330**	*e*P	**Pn**	**06 29 04.0**	**-0.2**
JIE	**Ise**	**13.57**	**334**	*e*P	**Pn**	**06 29 04.6**	**+0.3**
JOD2	**Odawara 2**	**13.58**	**344**	*e*P	**Pn**	**06 29 03.3**	**-1.1**
JOD2	**Odawara 2**	**13.58**	**344**	A	A	06 29 03.3	
	comp=E,3.0nm,7.1s,comp=E,2.0nm,5.5s						
HMMJ	**Hamamatsu 2**	**13.61**	**339**	*e*P	**Pn**	**06 29 04.8**	**0.0**
JKN2	**Miekihoku**	**13.62**	**333**	*e*P	**Pn**	**06 29 04.4**	**-0.5**
JNY	**Yasuok**	**14.03**	**340**	*e*P	**Pn**	**06 29 09.1**	**-1.1**
JHU	**Hanno**	**14.09**	**345**	*e*P	**Pn**	**06 29 09.6**	**-1.4**
JHU				*e*S	**Sn**	**06 31 39.4**	**-7.1**
JHU	**Hanno**	**14.09**	**345**	A	A	06 29 09.6	
	comp=E,2.0nm,6.7s,comp=E,2.0nm,4.6s						
JAO	**Obara**	**14.14**	**338**	*e*P	**Pn**	**06 29 11.2**	**-0.5**
JYT	**Yasato**	**14.26**	**348**	Pn	**Pn**	**06 29 13.6**	**+0.5**
INU	**Inuyama**	**14.30**	**337**	Pn	**Pn**	**06 29 13.7**	**+0.1**
INU	**Inuyama**	**14.30**	**337**	P	**Pn**	**06 29 14.4**	**+0.8**
JTO	**Tosashimizu**	**14.32**	**320**	*e*P	**Pn**	**06 29 15.3**	**+1.4**
JRY	**Ryogami san**	**14.34**	**344**	*e*P	**Pn**	**06 29 12.9**	**-1.3**
JMN	**Monobe**	**14.35**	**325**	Pn	**Pn**	**06 29 15.1**	**+0.8**
JMN	**Monobe**	**14.35**	**325**	P	**Pn**	**06 29 15.7**	**+1.4**
JGF	**Kuroka**	**14.41**	**339**	Pn	**Pn**	**06 29 14.3**	**-0.8**
JGF	**Kuroka**	**14.41**	**339**	P	**Pn**	**06 29 15.4**	**+0.3**
JAG	**Ashikaga**	**14.60**	**346**	*e*P	**Pn**	**06 29 15.9**	**-1.5**
JAG				*e*S	**Sn**	**06 31 51.2**	**-7.6**
JOW	**Kunigami**	**14.79**	**291**	P	**P**	**06 29 21.2**	**-1.3**
	187nm,0.4s,baz=130,slow=12,SNR=48						
JOW	**Kunigami**	**14.79**	**291**	P	**Pn**	**06 29 20.3**	**+0.5**
JSU	**Suzuyama**	**14.99**	**311**		**P**	**06 29 24.3**	**-0.5**
JSU				IAmb	IAmb	06 29 29.2	
	comp=Z,495nm,0.9s						
MJAR	**Matsushiro Arr**	**15.02**	**343**	P	**Pn**	**06 29 21.2**	**-1.5**
	comp=Z,95nm,0.8s,baz=158,slow=10,SNR=48						
MJAR				S	**Sn**	**06 32 03.4**	**-5.6**
	comp=Z,17nm,0.8s,baz=160,slow=19,SNR=3.0						
MJAR				ScP	**ScP**	**06 37 42.2**	**-3.0**
	comp=Z,7.9nm,0.9s,baz=157,slow=2.2,SNR=6.3						
MAJO	**Matsushiro**	**15.02**	**343**	Pn	**Pn**	**06 29 21.4**	**-1.3**
MAJO	**Matsushiro**	**15.02**	**343**	*i* P	**Pn**	**06 29 21.1**	**-1.6**
MJB9	**Matsu-Tunnel**	**15.03**	**343**	Pn	**Pn**	**06 29 22.4**	**-0.4**
JFK	**Kawauchi**	**15.26**	**351**	*e*P	**Pn**	**06 29 24.9**	**-0.7**
JFK				*e*S	**Sn**	**06 32 05.2**	**-10**
JSJ	**Shimokoshiki**	**15.61**	**310**	*e*P	**P**	**06 29 32.0**	**+0.3**
JHS	**Saijyo**	**15.73**	**326**		**P**	**06 29 32.8**	**-0.1**
JHS				IAmb	IAmb	06 29 38.2	
	comp=Z,462nm,0.9s						
JHS	**Saijyo**	**15.73**	**326**	*e*P	**P**	**06 29 34.0**	**+1.0**
JMM	**Marumori**	**15.76**	**351**	P	**Pn**	**06 29 32.4**	**+0.5**
JMM				IAmb	IAmb	06 29 38.8	
	comp=Z,460nm,0.8s						
JKE	**Kume jima 2**	**15.97**	**288**	*e*P	**P**	**06 29 37.7**	**+2.0**
JTU	**Tsushima**	**17.54**	**317**	P	**Pn**	**06 29 54.9**	**+1.4**
JTU				IAmb	IAmb	06 29 57.1	
	comp=Z,884nm,1.2s						
JTU	**Tsushima**	**17.54**	**317**	*e*P	**Pn**	**06 29 55.5**	**+2.0**
JTM	**Tenmabayashi**	**18.61**	**354**	Pn	**Pn**	**06 30 08.9**	**+2.7**
JTM				IAmb	IAmb	06 30 18.8	
	comp=Z,478nm,0.9s						
JTM	**Tenmabayashi**	**18.61**	**354**	P	**Pn**	**06 30 05.5**	**-0.8**
YOJ	**Yonaguni jima**	**19.15**	**281**	P	**Pn**	**06 30 12.2**	**-0.6**
YOJ	**Yonaguni jima**	**19.15**	**281**	P	**Pn**	**06 30 12.2**	**-0.6**
YOJ				pmax	pmax		
	comp=Z,509nm,0.8s						
YOJ	**Yonaguni jima**	**19.15**	**281**	P	**Pn**	**06 30 14.3**	**+1.5**
ERM	**Erimo**	**19.70**	**359**	P	**Pn**	**06 30 18.2**	**-0.9**
ERM	**Erimo**	**19.70**	**359**	*i* P	**Pn**	**06 30 19.7**	**+0.7**
TJN	**Taejon**	**20.00**	**318**	P	**P**	**06 30 20.2**	**+0.6**
TJN				IAmb	IAmb	06 31 00.1	
	comp=Z,428nm,1.0s						
TJN	**Taejon**	**20.00**	**318**	*ce*P	**P**	**06 30 19.7**	**+0.1**
KSRS	**Korea Array**	**20.39**	**321**	P	**P**	**06 30 25.2**	**+1.4**
	comp=Z,57nm,0.7s,baz=143,slow=40,SNR=22						
KSRS				S	**S**	**06 34 11.3**	**+6.1**
	comp=Z,17nm,1.0s,baz=148,slow=16,SNR=6.2						
KSRS				LR	LR	06 37 29.1	
	comp=Z,1μm,19.1s,baz=130,slow=34						
KSRS				ScP	**ScP**	**06 37 54.5**	**-1.8**
	comp=Z,9.2nm,0.8s,baz=142,slow=2.3,SNR=11						
	comp=Z,57nm,0.7s						
KSAR	**Wonju Array Be**	**20.40**	**321**	P	**P**	**06 30 24.1**	**+0.2**
KSAR	**Wonju Array Be**	**20.40**	**321**	P	**P**	**06 30 24.1**	**+0.2**
NACB	**Ninganchiao**	**20.44**	**280**	P	**P**	**06 30 23.7**	**-0.8**
TATO	**Taipei**	**20.56**	**282**	Pn	**Pn**	**06 30 29.9**	**+0.6**
TATO	**Taipei**	**20.56**	**282**	P	**P**	**06 30 29.4**	**+0.6**
JEW	**Eniwo**	**20.61**	**355**	P	**P**	**06 30 26.9**	**+0.8**
YHNB	**Yeheng**	**20.65**	**281**	P	**P**	**06 30 26.6**	**-0.2**
YULB	**Yu-li**	**20.71**	**277**	P	**P**	**06 30 28.4**	**+0.9**
PATS	**Pohnpei**	**20.80**	**135**	P	**P**	**06 30 28.8**	**+0.3**
PATS	**Pohnpei**	**20.80**	**135**	P	**P**	**06 30 28.8**	**+0.3**
TWG	**Pinlang**	**20.94**	**276**	IAmb	IAmb	06 30 34.4	
	comp=Z,332nm,1.2s						
SSLB	**Suanglung**	**21.02**	**279**	P	**P**	**06 30 34.1**	**+3.3**
INCN	**Inchon**	**21.16**	**320**	P	**P**	**06 30 31.5**	**-0.7**
INCN	**Inchon**	**21.16**	**320**	P	**P**	**06 30 31.5**	**-0.7**
INCN				pmax	pmax		
	comp=Z,223nm,1.3s						
INCN	**Inchon**	**21.16**	**320**	P	**P**	**06 30 32.2**	**0.0**
TPUB	**Ta-pu**	**21.33**	**277**	P	**P**	**06 30 34.7**	**+0.6**
TPUB				IAmb	IAmb	06 30 38.1	
	comp=Z,447nm,1.0s						
JCNP	**Jose Panganiba**	**21.48**	**252**	⇑*e*P	pP	06 31 00.4	+2.7
WAKE	**Wake Island**	**21.63**	**94**	P	**P**	**06 30 36.9**	**-0.3**
WAKE				IAmb	IAmb	06 31 04.1	
	comp=Z,384nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**21.76**	**92**	T	T	06 53 56.3	
	baz=234,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hy**	**21.77**	**92**	T	T	06 53 53.9	
	SNR=12						
H11N3	**WAKE ISLAND Hy**	**21.78**	**92**	T	T	06 53 34.8	
	baz=279,slow=74,SNR=8.8						
BIPH	**Bislig**	**21.80**	**233**	⇑*e*P	**P**	**06 30 39.5**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**21.83**	**96**	P	**P**	**06 30 41.5**	**+2.3**
	SNR=12						
H11S3				T	T	06 54 05.7	
	baz=284,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**21.84**	**96**	P	**P**	**06 30 37.0**	**-2.3**
	baz=346,slow=76,SNR=8.3						
H11S1				T	T	06 54 01.7	
	baz=284,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	**21.85**	**96**	P	**P**	**06 30 41.5**	**+2.1**
	baz=344,slow=76,SNR=14						
H11S2				T	T	06 54 07.6	
	baz=284,slow=75,SNR=70						
SSE	**Sheshan**	**21.96**	**298**	P	**P**	**06 30 41.0**	**+0.4**
SSE				S	**S**	**06 34 32.0**	**-2.9**
SSE				pmax	pmax		
	comp=Z,87nm,1.0s						
SSE				pmax	pmax		
	comp=Z,460nm,7.6s						
SSE				LR	LR		
	comp=Z,1μm,21.3s						
SSE				LR	LR		
	comp=Z,820nm,21.8s						
HJU	**Haeju**	**22.07**	**319**	P	**P**	**06 30 40.4**	**-1.3**
HJU				pP	pP	06 30 47.0	-17
HJU				S	**S**	**06 34 34.1**	**-2.7**
TABP	**Talibon, Bohol**	**22.18**	**240**	⇑*i*P	**P**	**06 30 44.7**	**+1.6**
TABP				*i* S	**pP**	**06 31 12.5**	**+7.2**
HHU	**Hamhung**	**22.36**	**326**	P	**P**	**06 30 43.8**	**-0.9**
HHU				pP	pP	06 30 56.4	-11
HHU				S	**S**	**06 34 40.9**	**-0.6**
GHBP	**Garcia Hernand**	**22.46**	**239**	⇑*i*P	**P**	**06 30 46.9**	**+1.0**
LQP	**Lukban**	**22.57**	**253**	⇓*e*P	**P**	**06 30 49.0**	**+1.8**
RCP	**Roxas**	**22.70**	**245**	⇓*e*P	**P**	**06 30 49.9**	**+1.7**
TBP	**Tagbilaran**	**22.79**	**240**	*e*P	**P**	**06 30 46.9**	**-2.2**
MSHR	**Mys Shultsa**	**22.83**	**336**	*ce*P	**P**	**06 30 50.4**	**+1.3**
MSHR				pmax	pmax		
	comp=Z,151nm,1.3s						
CGP	**Cagayan de Oro**	**22.88**	**236**	⇓*e*P	**P**	**06 30 52.8**	**+2.8**
BUKP	**Musuan**	**22.97**	**234**	⇓*e*P	**P**	**06 30 52.8**	**+2.0**
DAV	**Davao City (W)**	**23.12**	**232**	P	**P**	**06 30 53.8**	**+1.6**
	comp=Z,214nm,0.4s,baz=44,slow=5.3,SNR=8.0						
DAV				S	**S**	**06 34 54.8**	**+0.7**
	comp=Z,205nm,0.4s,baz=18,slow=15,SNR=1.7						
DAV				LR	LR	06 39 06.5	
	comp=Z,2μm,20.9s,baz=56,slow=34						
	comp=Z,214nm,0.4s						
DAV	**Davao City (W)**	**23.12**	**232**	P	**P**	**06 30 53.2**	**+1.0**
QZH	**Quanzhou**	**23.19**	**282**	⇑*i*P	**P**	**06 30 54.0**	**+1.3**
QZH				S	**S**	**06 34 58.5**	**+3.5**
QZH				SS	**SnSn**	**06 35 43.4**	**-0.4**
QZH				pmax	pmax		
	comp=Z,120nm,0.7s						
LSIP	**Lazi, Siquijor**	**23.30**	**239**	⇑*e*P	**P**	**06 30 54.3**	**+0.4**
KNMB	**Chin-men Tao**	**23.36**	**280**	P	**P**	**06 30 55.7**	**+1.3**
KNMB				IAmb	IAmb	06 30 57.8	
	comp=Z,261nm,0.7s						
TEY	**Ternei**	**23.46**	**347**	⇑*e*P	**P**	**06 30 57.6**	**+2.6**
TEY				*e*		06 34 56.1	
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
TEY				pmax	pmax		
	comp=N,30nm,1.1s						
KCP	**Kidapawan**	**23.52**	**233**	⇑*e*P	**P**	**06 30 56.4**	**+0.5**
KCP	**Kidapawan**	**23.52**	**233**	⇓*e*P	**S**	**06 34 54.5**	**-6.2**
CNOP	**Candoni, Negro**	**23.70**	**242**	⇑*e*P	**P**	**06 30 58.4**	**+0.9**
LUBP	**Lubang**	**23.87**	**253**	⇑*i*P	sP	06 31 38.9	+0.7
USA0B	**Ussuriysk Arra**	**23.94**	**339**	P	**P**	**06 31 00.7**	**+1.4**
USA0B				IAmb	IAmb	06 31 45.5	
	comp=Z,276nm,1.2s						
USA0B	**Ussuriysk Arra**	**23.94**	**339**	P	**P**	**06 31 00.7**	**+1.4**
USA0B				pmax	pmax		
	comp=Z,276nm,1.2s						
USRK	**Ussuriysk Ar.**	**23.94**	**339**	P	**P**	**06 31 01.1**	**+1.8**
	comp=Z,75nm,0.8s,baz=158,slow=9.3,SNR=63						
USRK				S	**S**	**06 35 05.9**	**-0.8**
	comp=Z,5.2nm,1.0s,baz=163,slow=10,SNR=1.5						
USRK				LR	LR	06 40

SIJI	**Sorong**	**26.01 209**	P	**P**	**06 31 18.3 -0.1**
	comp=Z,4μmcomp=Z,2μmcomp=Z,76nm,1.1s				
CN2	**Changchun**	**26.28 329**	*e*P	**P**	**06 31 20.5 -0.1**
CN2			*e*PP	sP	06 32 08.3 +8.2
CN2			*e*S	**S**	**06 35 41.3 -2.6**
CN2			*e*sS	sS	06 36 28.0 -1.3
CN2			*e*SS	**SnSn**	**06 37 00.1 +1.4**
CN2			pmax	pmax	
	comp=Z,20nm,1.2s				
CN2			LR	LR	
	comp=Z,1μm,14.0s				
CN2			LR	LR	
	comp=Z,1μm,14.0s				
CN2			LR	LR	
	comp=Z,1μm,15.0s				
TNTI	**Ternate**	**26.65 219**	P	**P**	**06 31 23.7 -0.4**
TNTI	**Ternate**	**26.65 219**	P	**P**	**06 31 24.7 +0.6**
	comp=Z,2μmcomp=Z,92nm,0.9s				
BNX	**BinXian**	**26.95 334**	⇑P	**P**	**06 31 27.9 +1.4**
BNX			pP	**pP**	**06 31 52.8 +0.8**
BNX			sP	**sP**	**06 32 08.8 +2.8**
BNX			S	**S**	**06 35 56.6 +2.2**
BNX			sS	**sS**	**06 36 44.6 +4.8**
BNX			pmax	pmax	
	comp=Z,42nm,1.1s				
BNX			pmax	pmax	
	comp=Z,290nm,4.5s				
BNX			LR	LR	
	comp=Z,630nm,17.1s				
BNX			LR	LR	
	comp=Z,1μm,13.9s				
BNX			LR	LR	
	comp=Z,840nm,14.1s				
TIA	**Tai'an**	**26.96 307**	⇓P	**P**	**06 31 27.6 +0.8**
TIA			S	**S**	**06 35 52.9 -1.9**
TIA			pmax	pmax	
	comp=Z,97nm,0.9s				
TIA			pmax	pmax	
	comp=Z,190nm,3.5s				
TIA			LR	LR	
	comp=Z,2μm,15.7s				
TIA			LR	LR	
	comp=Z,1μm,11.2s				
TIA			LR	LR	
	comp=Z,1μm,15.7s				
FAKI	**Fak Fak**	**27.43 206**	P	**P**	**06 31 30.2 -0.8**
FAKI	**Fak Fak**	**27.43 206**	P	**P**	**06 31 30.4 -0.6**
	comp=Z,3μmcomp=Z,1μmcomp=Z,136nm,1.1s				
FAKI	**Fak Fak**	**27.43 206**	P	**P**	**06 31 30.5 -0.6**
WHN	**Wuhan**	**27.52 294**	⇑P	**P**	**06 31 33.3 +1.5**
WHN			PcP	**PcP**	**06 34 47.3 +0.4**
WHN			S	**S**	**06 36 10.8 +7.0**
WHN			ScP	**ScP**	**06 38 17.1 +1.1**
WHN			pmax	pmax	
	comp=Z,260nm,1.2s				
WHN			LR	LR	
	comp=Z,3μm,10.1s				
WHN			LR	LR	
	comp=Z,8μm,20.0s				
RABL	**Rabaul**	**27.55 162**	P	**P**	**06 31 30.2 -2.0**
RABL			IAmb	IAmb	06 31 33.4
	comp=Z,221nm,0.8s				
LBMI	**Labuha**	**27.72 217**	P	**P**	**06 31 34.3 +0.6**
	comp=Z,4μmcomp=Z,257nm,0.8s				
CNSH	**ChangSha**	**28.44 288**	⇑P	**P**	**06 31 41.8 +1.8**
CNSH			S	**S**	**06 36 23.4 +5.2**
CNSH			pmax	pmax	
	comp=Z,86nm,1.0s				
CNSH			LR	LR	
	comp=Z,3μm,21.2s				
CNSH			LR	LR	
	comp=Z,2μm,22.2s				
CNSH			LR	LR	
	comp=Z,2μm,24.9s				
KLR	**Kul'dur**	**28.55 343**	P	**P**	**06 31 42.2 +1.5**
	comp=Z,42nm,0.7s,baz=146,slow=7.6,SNR=85				
KLR			LR	LR	06 43 39.5
	comp=Z,400nm,21.4s,baz=164,slow=37				
	comp=Z,42nm,0.7s				
KLR	**Kul'dur**	**28.55 343**	*ce*P	**P**	**06 31 41.4 +0.7**
KLR			pmax	pmax	
	comp=Z,40nm,0.7s				
TYV	**Tymovskoe**	**28.56 359**	*e*P	**P**	**06 31 38.2 -2.6**
TYV			*e*S	**S**	**06 36 23.7 +4.1**
TYV			pmax	pmax	
	comp=Z,17nm,1.2s				
TYV			pmax	pmax	
	comp=Z,400nm,3.2s				
TYV			smax	smax	
	comp=E,32nm,1.5s				
TYV			smax	smax	
	comp=E,1μm,3.8s				
GRNR	**Gornyy**	**29.03 350**	⇑*i*P	**P**	**06 31 47.8 +2.8**
GRNR			pmax	pmax	
	comp=Z,10.0nm,0.7s				
HNS	**HongShan**	**29.21 308**	⇓P	**P**	**06 31 47.8 +1.1**
HNS			pP	**pP**	**06 32 12.8 -0.2**
HNS			S	**S**	**06 36 29.8 -0.3**
HNS			ScP	**ScP**	**06 38 21.0 -0.1**
HNS			ScS	**ScS**	**06 42 15.8 +0.3**
HNS			pmax	pmax	
	comp=Z,88nm,1.5s				
HNS			LR	LR	
	comp=Z,1μm,16.3s				
HNS			LR	LR	
	comp=Z,1μm,16.8s				
HNS			LR	LR	
	comp=Z,1μm,17.0s				
MSAI	**Masohi**	**29.28 211**	P	**P**	**06 31 47.9 +0.4**
	comp=Z,2μmcomp=Z,16nm,0.7s				
BJT	**Baijiatuau**	**29.32 313**	P	**P**	**06 31 48.8 +1.1**
BJI	**Beijing**	**29.33 314**	P	**P**	**06 31 48.3 +0.5**
BJI			pP	**pP**	**06 32 11.8 -2.0**
BJI			S	**S**	**06 36 31.1 -0.8**
BJI			ScP	**ScP**	**06 38 21.0 -0.5**
BJI			PcS	**PcS**	**06 38 32.8 -1.4**
BJI			pmax	pmax	
	comp=Z,21nm,1.6s				
BJI			LR	LR	
	comp=Z,190nm,15.7s				
BJI			LR	LR	
	comp=Z,1μm,17.2s				
BJI			LR	LR	
	comp=Z,670nm,14.5s				
GTOI	**Gorontalo**	**29.48 226**	P	**P**	**06 31 50.1 +0.8**
	comp=Z,1μmcomp=Z,102nm,1.0s				
KRAI	**Karang Ratu**	**29.52 212**	P	**P**	**06 31 50.0 +0.4**
	comp=Z,57nm,1.1s				
MYLDM	**Lahad Datu**	**29.73 239**	P	**P**	**06 31 52.7 +1.1**
	comp=Z,3μmcomp=Z,250nm,1.2s				
SKR	**Severo-Kuril's**	**29.98 16**	*e*P	**P**	**06 31 55.1 +1.8**
SKR			pmax	pmax	
	comp=Z,100nm,6.4s				
LYN	**LuoYang**	**29.98 301**	⇓*i*P	**P**	**06 31 54.0 +0.4**
LYN			pP	pP	06 32 20.0 0.0
LYN			sP	sP	06 32 39.0 +4.9
LYN			PcP	**PcP**	**06 34 53.8 +0.8**
LYN			S	**S**	**06 36 41.3 -1.0**
LYN			ScP	**ScP**	**06 38 24.1 +0.4**
LYN			ScS	**ScS**	**06 42 19.3 0.0**
LYN			pmax	pmax	
	comp=Z,30nm,0.9s				
LYN			pmax	pmax	
	comp=Z,190nm,4.5s				
LYN			LR	LR	
	comp=Z,3μm,17.8s				
LYN			LR	LR	
	comp=Z,2μm,17.8s				
LYN			LR	LR	
	comp=Z,2μm,28.6s				
NLAI	**Namlea**	**30.11 215**	P	**P**	**06 31 55.3 +0.4**
	comp=Z,31nm,0.8s				
MRSI	**Marisa**	**30.32 227**	P	**P**	**06 31 57.7 +1.0**
	comp=Z,4μmcomp=Z,357nm,0.9s				
TOLI2	**Tolitoli**	**30.67 230**	P	**P**	**06 32 00.8 +0.9**
TOLI2			IAmb	IAmb	06 32 03.9
	comp=Z,139nm,0.8s				
LUWI	**Luwuk**	**30.90 224**	P	**P**	**06 32 01.3 -0.5**
	comp=Z,4μmcomp=Z,239nm,0.9s				
TIY	**Taiyuan**	**31.00 307**	*e*P	**P**	**06 32 06.3 +3.6**
TIY			sP	**sP**	**06 32 49.4 +6.3**
TIY			S	**S**	**06 37 00.5 +2.1**
TIY			LR	LR	
	comp=Z,1μm,12.7s				
TIY			LR	LR	
	comp=Z,1μm,16.2s				
TIY			LR	LR	
	comp=Z,910nm,15.2s				
KKM	**Kota Kinabalu**	**31.08 243**	P	**P**	**06 32 03.7 +0.1**
KKM	**Kota Kinabalu**	**31.08 243**	P	**P**	**06 32 04.6 +1.0**
	comp=Z,1μmcomp=Z,114nm,1.0s				
XLT	**XiLinHaoTe**	**31.42 320**	*e*P	**P**	**06 32 04.3 -2.0**
XLT			pP	pP	06 32 29.8 -2.4
XLT			PcP	**PcP**	**06 34 57.6 +0.8**
XLT			S	**S**	**06 37 02.8 -2.0**
XLT			ScP	**ScP**	**06 38 28.5 +0.1**
XLT			SS	**SnSn**	**06 38 57.3 -6.2**
XLT			pmax	pmax	
	comp=Z,23nm,1.5s				
XLT			pmax	pmax	
	comp=Z,120nm,5.5s				
XLT			LR	LR	
	comp=Z,150nm,16.4s				
XLT			LR	LR	
	comp=Z,1μm,12.9s				
XLT			LR	LR	
	comp=Z,1μm,15.4s				
APSI	**Ampana**	**31.53 226**	P	**P**	**06 32 07.4 0.0**
	comp=Z,2μmcomp=Z,167nm,1.2s				
SPMM	**Sapulut**	**31.64 241**	P	**P**	**06 32 10.0 +1.6**
ENH	**Enshi**	**31.64 292**	P	**P**	**06 32 08.7 +0.4**
ENH	**Enshi**	**31.64 292**	P	**P**	**06 32 08.7 +0.4**
ENH			pP	**pP**	**06 32 32.8 -2.2**
ENH			sP	**sP**	**06 32 43.5 -5.7**
ENH			PcP	**PcP**	**06 34 58.0 +0.5**
PMG	**Port Moresby**	**31.65 174**	P	**P**	**06 32 07.7 -0.6**
	comp=Z,418nm,0.8s,baz=360,slow=6.7,SNR=84				
PMG			PcP	**PcP**	**06 34 57.5 -0.1**
	comp=Z,77nm,0.9s,baz=0.4,slow=6.1,SNR=4.7				
PMG			S	**S**	**06 37 05.4 -3.1**
	comp=Z,19nm,0.7s,baz=156,slow=22,SNR=2.1				
PMG			ScP	**ScP**	**06 38 27.2 -2.2**
	comp=Z,30nm,0.9s,baz=318,slow=7.6,SNR=4.8				
	comp=Z,418nm,0.8s				
PMG	**Port Moresby**	**31.65 174**	P	**P**	**06 32 08.5 +0.2**
PMG	**Port Moresby**	**31.65 174**	*ce*P	**P**	**06 32 07.4 -1.0**
PMG			pmax	pmax	
	comp=Z,643nm,1.0s				
PMG	**Port Moresby**	**31.65 174**	P	**P**	**06 32 07.3 -1.1**
	comp=Z,5μmcomp=Z,612nm,0.8s				
PMG	**Port Moresby**	**31.65 174**	P	**P**	**06 32 07.8 -0.6**
PMG	**Port Moresby**	**31.65 174**	P	**P**	**06 32 07.6 -0.8**
PMG			pP	**pP**	**06 32 31.0 -3.6**
PMG			PcP	**PcP**	**06 34 57.8 +0.1**
PMG			ScP	**ScP**	**06 38 28.6 -0.8**
MPSI	**Mapaga**	**31.84 230**	P	**P**	**06 32 10.7 +0.6**
	comp=Z,2μmcomp=Z,1μmcomp=Z,57nm,1.4s				
QIZ	**Qiongzhong**	**31.84 270**	P	**P**	**06 32 11.9 +1.8**
QIZ			S	**S**	**06 37 13.8 +2.1**
QIZ			sS	**sS**	**06 37 59.3 +1.8**
QIZ			pmax	pmax	
	comp=Z,26nm,1.6s				
QIZ			LR	LR	
	comp=Z,2μm,15.9s				
QIZ			LR	LR	
	comp=Z,1μm,13.5s				
QIZ			LR	LR	
	comp=Z,2μm,23.9s				
PEA0B	**Petropavlovsk-**	**32.60 16**	*i*P	**P**	**06 32 19.8 +3.5**
PETK	**Petropavlovsk-**	**32.60 16**	P	**P**	**06 32 16.7 +0.4**
	comp=Z,2.0nm,0.6s,baz=227,slow=7.7,SNR=2.4				
PETK			PcP	**PcP**	**06 35 00.0 +0.3**
	comp=Z,40nm,0.8s,baz=182,slow=4.2,SNR=12				
PETK			ScP	**ScP**	**06 38 29.1 -3.0**
	comp=Z,6.8nm,0.8s,baz=189,slow=8.4,SNR=4.4				
PETK	**Petropavlovsk-**	**32.60 16**	P	**P**	**06 32 17.8 +1.4**
PETK	**Petropavlovsk-**	**32.60 16**	P	**P**	**06 32 17.8 +1.4**
XAN	**Xi'an**	**32.71 299**	⇓P	**P**	**06 32 18.3 +0.6**
XAN			PcP	**PcP**	**06 35 00.8 +0.4**
XAN			S	**S**	**06 37 24.8 -0.2**
XAN			ScP	**ScP**	**06 38 33.9 +0.9**
XAN			ScS	**ScS**	**06 42 31.8 -1.3**
XAN			pmax	pmax	
	comp=Z,39nm,0.9s				
XAN			LR	LR	
	comp=Z,3μm,18.4s				
XAN			LR	LR	
	comp=Z,2μm,16.2s				
XAN			LR	LR	
	comp=Z,2μm,20.0s				
XAN	**Xi'an**	**32.71 299**	P	**P**	**06 32 17.8 +0.1**
XAN			PcP	**PcP**	**06 35 00.8 +0.4**
XAN			ScP	**ScP**	**06 38 33.0 0.0**
PET	**Petropavlovsk**	**32.77 17**	P	**P**	**06 32 16.6 -1.2**
PET	**Petropavlovsk**	**32.77 17**	*e*P	**P**	**06 32 19.6 +1.8**
PET			*e**PP	**pP**	**06 32 44.7 +1.0**
PET			*e**SP	**sP**	**06 32 58.0 +0.4**
PET			*e*		06 33 32.2
PET			*e*		06 35 00.2
PET			*e*S	**S**	**06 37 27.8 +2.5**
PET			*e*SS	**SnSn**	**06 39 33.7 -2.0**
PET			pmax	pmax	
	comp=Z,58nm,1.4s				
PET			MLR	MLR	
	comp=Z,800nm,14.0s				
HHC	**Hu-ho-hao-te**	**32.84 312**	*e*P	**P**	**06 32 20.0 +1.3**
HHC			S	**S**	**06 37 25.3 -1.6**
HHC			pmax	pmax	
	comp=Z,110nm,1.0s				
HHC			pmax	pmax	
	comp=Z,350nm,4.3s				
HHC			LR	LR	
	comp=Z,2μm,15.2s				
HHC			LR	LR	
	comp=Z,2μm,14.6s				
HHC			LR	LR	
	comp=Z,2μm,15.2s				
BTO	**Baotou**	**33.81 311**	*e*P	**P**	**06 32 29.5 +2.3**
ZEA	**Zeya**	**33.83 342**	*e*P	**P**	**06 32 28.5 +1.4**
ZEA			*e**PP	**pwP**	**06 32 58.1 -1.1**
ZEA			*e*S	**S**	**06 37 40.9 -0.9**
ZEA			*e**SS	**sS**	**06 38 27.3 -0.5**
ZEA			*e*SS	**SnSn**	**06 40 01.1 -0.3**
ZEA			pmax	pmax	
	comp=N,30nm,0.7s				
ZEA			pmax	pmax	
	comp=Z,400nm,0.9s				
ZEA			smax	smax	
	comp=N,400nm,11.4s				
ZEA			MLR	MLR	
	comp=N,600nm,15.0s				
ZEA			MLR	MLR	
	comp=Z,500nm,14.0s				
GYA	**Guiyang**	**33.95 285**	⇑*i*P	**P**	**06 32 30.1 +1.5**
GYA			pP	pP	06 32 55.5 +0.1
GYA			sP	sP	06 33 15.6 +6.1
GYA			PP	**PP**	**06 33 49.8 +1.9**
GYA			PcP	**PcP**	**06 35 05.6 +1.4**
GYA			S	**S**	**06 37 45.3 +0.7**
GYA			ScP	**ScP**	**06 38 37.6 +0.1**
GYA			pmax	pmax	
	comp=Z,71nm,1.0s				
GYA			pmax	pmax	
	comp=Z,780nm,5.1s				
GYA			LR	LR	
	comp=Z,1μm,19.1s				
SMKI	**Samarinda**	**34.32 232**	P	**P**	**06 32 32.5 +0.8**
	comp=Z,3μmcomp=Z,435nm,0.8s				
TTSI	**Tana Toraja**	**34.33 226**	P	**P**	**06 32 32.7 +0.9**
	comp=Z,2μmcomp=Z,213nm,0.8s				
SPSI	**Sidrap Palu**	**35.05 225**	P	**P**	**06 32 38.7 +0.7**
	comp=Z,5μmcomp=Z,392nm,0.8s				
BKB	**Balikpapan**	**35.10 232**	P	**P**	**06 32 38.4 0.0**
	comp=Z,10μmcomp=Z,1μm,0.9s				
BNSI	**Bone**	**35.16 224**	P	**P**	**06 32 39.9 +1.0**
	comp=Z,2μmcomp=Z,189nm,1.5s				
TARA	**Tarawa**	**35.18 122**	P	**P**	**06 32 38.6 -0.5**
TARA	**Tarawa**	**35.18 122**	P	**P**	**06 32 38.4 -0.7**
HNR	**Honiara**	**35.28 152**	P	**P**	**06 32 39.2 -0.7**
	comp=Z,3μm,0.8s,baz=193,slow=8.5,SNR=3.7				
HNR			LR	LR	06 45 36.9
	comp=Z,7μm,20.9s,baz=334,slow=33				
BKSI	**Bulukumba**	**35.86 223**	P	**P**	**06 32 45.2 +0.3**
	comp=Z,1μmcomp=Z,73nm,0.9s				
KAPI	**Kappang**	**35.86 224**	P	**P**	**06 32 45.8 +0.9**
KAPI			IAmb	IAmb	06 32 48.4
	comp=Z,122nm,1.0s				
KAPI	**Kappang**	**35.86 224**	*c*P	**P**	**06 32 45.5 +0.6**
KAPI			pmax	pmax	
	comp=Z,142nm,1.1s				
KAPI	**Kappang**	**35.86 224**	P	**P**	**06 32 46.3 +1.5**
KAPI	**Kappang**	**35.86 224**	P	**P**	**06 32 45.9 +1.1**
	comp=Z,1μmcomp=Z,114nm,1.2s				
KAPI	**Kappang**	**35.86 224**	P	**P**	**06 32 45.9 +1.1**
KAPI			PcP	**PcP**	**06 35 10.2 +0.5**
KAPI			ScP	**ScP**	**06 38 43.8 -0.5**
COEN	**Coen**	**36.00 181**	P	**P**	**06 32 46.3 +0.3**
COEN	**Coen**	**36.00 181**	P	**P**	**06 32 46.3 +0.3**
BSSI	**Bau Bau, Buton**	**36.26 222**	P	**P**	**06 32 48.8 +0.5**
	comp=Z,2μmcomp=Z,135nm,1.0s				
MTKI	**Muara Teweh, K**	**36.37 234**	P	**P**	**06 32 50.3 +1.0**
	comp=Z,410nm,0.8s				
SBUM	**Sibu**	**36.39 242**	P	**P**	**06 32 50.9 +1.5**
	comp=Z,704nmcomp=Z,49nm,0.9s				
SBUM	**Sibu**	**36.39 242**	P	**P**	**06 32 52.0 +2.6**
CD2	**Chengdu**	**36.62 292**	P	**P**	**06 32 52.0 +0.7**
CD2			S	**S**	**06 38 22.3 -2.8**
CD2			pmax	pmax	
	comp=Z,250nm,0.7s				
CD2			LR	LR	
	comp=Z,3μm,17.1s				
CD2			LR	LR	
	comp=Z,2μm,17.2s				
CD2			LR	LR	
	comp=Z,1μm,19.1s				
MTN	**Manton Dam**	**37.01 201**	P	**P**	**06 32 53.8 -0.8**
MTN			IAmb	IAmb	06 32 56.2
	comp=Z,224nm,1.4s				
SOEI	**Soe**	**37.10 213**	P	**P**	**06 32 54.6 -1.0**
SOEI			IAmb	IAmb	06 33 12.4
	comp=Z,79nm,0.8s				
SOEI	**Soe**	**37.10 213**	P	**P**	**06 32 54.3 -1.3**
	comp=Z,2μmcomp=Z,125nm,0.8s				
LZH	**Lanzhou**	**37.20 301**	*e*P	**P**	**06 32 58.0 +1.7**
LZH			PcP	**PcP**	**06 35 15.0 +1.3**
LZH			S	**S**	**06 38 33.4 -0.6**
LZH			ScP	**ScP**	**06 38 51.5 +2.2**
LZH			PcS	**PcS**	**06 39 02.1 -0.2**
LZH			sS	sS	06 39 20.1 -0.3
LZH			ScS	**ScS**	**06 42 56.1 -1.4**
LZH			pmax	pmax	
	comp=Z,140nm,1.2s				
LZH			pmax	pmax	
	comp=Z,470nm,4.5s				
LZH			LR	LR	
	comp=Z,3μm,14.9s				
LZH			LR	LR	
	comp=Z,2μm,15.6s				
LZH			LR	LR	
	comp=Z,3μm,18.2s				
KMI	**Kunming**	**37.55 283**	⇑P	**P**	**06 33 01.9 +2.4**
KMI			pP	pP	06 33 27.0 +0.4
KMI			sP	sP	06 33 38.5 -2.1
KMI			PP	**PnPn**	**06 34 32.3 +2.3**
KMI			PcP	**PcP**	**06 35 16.3 +1.3**
KMI			S	**S**	**06 38 34.4 -5.3**
KMI			ScP	**ScP**	**06 38 51.3 +0.4**
KMI			sS	sS	06 39 25.9 -0.3
KMI			ScS	**ScS**	**06 43 00.8 +0.8**
KMI			pmax	pmax	
	comp=Z,30nm,1.1s				
KMI			pmax	pmax	
	comp=Z,250nm,3.8s				
KMI			LR	LR	
	comp=Z,750nm,17.2s				
KMI			LR	LR	
	comp=Z,920nm,17.3s				
KMI			LR	LR	
	comp=Z,950nm,18.1s				
MA2	**Magadan**	**37.62 6**	P	**P**	**06 33 01.4 +2.2**
	comp=Z,26nm,0.8s,baz=181,slow=10,SNR=6.3				
	comp=Z,26nm,0.8s				
BATI	**Baumata**	**37.80 213**	LR	LR	06 46 05.6
	comp=Z,815nm,21.9s,baz=90,slow=32				
BBKI	**Banjar Baru**	**38.09 231**	P	**P**	**06 33 04.4 +0.6**
	comp=Z,112nm,0.8s				
SHEM	**Shemya Is, Ala**	**38.27 30**	LR	LR	06 48 01.4
	comp=Z,594nm,19.7s,baz=166,slow=34				
PZH	**PanZhiHua**	**38.36 285**	⇓P	**P**	**06 33 07.4 +1.3**
PZH			sP	**sP**	**06 33 51.5 +4.3**
PZH			PcP	**PcP**	**06 35 18.9 +1.5**
PZH			sS	**sS**	**06 39 37.3 -1.0**
PZH			pmax	pmax	
	comp=Z,60nm,0.8s				
PZH			pmax	pmax	
	comp=Z,330nm,4.8s				
PZH			LR	LR	
	comp=Z,5μm,18.6s				
PZH			LR	LR	
	comp=Z,4μm,20.7s				
PZH			LR	LR	
	comp=Z,4μm,21.2s				
STKI	**Sintang**	**38.39 239**	P	**P**	**06 33 06.8 +0.5**
	comp=Z,213nm,0.8s				
KSM	**Kuching**	**38.51 242**	P	**P**	**06 33 07.6 +0.2**
KSM	**Kuching**	**38.51 242**	P	**P**	**06 33 07.8 +0.5**
	comp=Z,747nmcomp=Z,54nm,1.1s				
KSM	**Kuching**	**38.51 242**	P	**P**	**06 33 08.0 +0.7**
ULN	**Ulaanbaatar**	**38.86 320**	P	**P**	**06 33 11.4 +1.3**
ULN	**Ulaanbaatar**	**38.86 320**	P	**P**	**06 33 11.4 +1.3**
ULN			pmax	pmax	
	comp=Z,82nm,1.3s				
ULN	**Ulaanbaatar**	**38.86 320**	P	**P**	**06 33 11.5 +1.4**
ULN	**Ulaanbaatar**	**38.86 320**	P	**P**	**06 33 10.7 +0.6**
	comp=Z,4μmcomp=Z,161nm,0.8s				
ULN	**Ulaanbaatar**	**38.86 320**	P	**P**	**06 33 11.2 +1.2**
ULN			pP	**pP**	**06 33 37.6 +0.8**
ULN			sP	**sP**	**06 33 48.7 -1.8**
ULN			ScP	**ScP**	**06 38 55.5 +0.2**
SONM	**Songino Array**	**39.24 320**	P	**P**	**06 33 14.3 +1.1**
	comp=Z,15nm,0.5s,baz=128,slow=7.4,SNR=48				
SONM			ScP	**ScP**	**06 38 56.0 -0.8**
	comp=Z,7.6nm,0.9s,baz=103,slow=3.4,SNR=5.3				
SONM			LR	LR	06 51 19.4
	comp=Z,546nm,18.7s,baz=108,slow=39				
SONM			P3KPbc		07 03 11.1
	comp=Z,2.9nm,0.9s,baz=269,slow=3.9,SNR=12				
SONM			PKP2ab		07 07 11.6
	comp=Z,2.0nm,1.1s,baz=236,slow=1.6,SNR=4.6				
	comp=Z,15nm,0.5s				
SONM	**Songino Array**	**39.24 320**	P	**P**	**06 33 14.5 +1.3**
SONM	**Songino Array**	**39.24 320**	P	**P**	**06 33 14.5 +1.3**
SONM			pmax	pmax	
	comp=Z,92nm,1.4s				
PBKI	**Pangkalan Bun**	**39.96 236**	P	**P**	**06 33 20.0 +0.7**
	comp=Z,13μmcomp=Z,436nm,1.0s				
PLAI	**Plampang**	**40.03 222**	P	**P**	**06 33 18.9 -1.0**
	comp=Z,4μmcomp=Z,304nm,1.2s				
PLAI	**Plampang**	**40.03 222**	P	**P**	**06 33 20.2 +0.3**
MTSU	**Mount Surprise**	**40.15 179**	P	**P**	**06 33 22.1 +1.3**
KNRA	**Kununurra**	**40.46 203**	P	**P**	**06 33 23.1 -0.2**
KNRA			IAmb	IAmb	06 33 24.9
	comp=Z,120nm,0.7s				
KNRA	**Kununurra**	**40.46 203**	P	**P**	**06 33 23.2 -0.1**
TWSI	**Taliwang, Sumb**	**40.52 223**	P	**P**	**06 33 23.3 -0.7**
	comp=Z,2μmcomp=Z,110nm,1.1s				
KLNI	**Mataram**	**40.79 225**	P	**P**	**06 33 26.4 +0.2**
	comp=Z,4μmcomp=Z,315nm,1.0s				
YAK	**Yakutsk**	**40.91 350**	LR	LR	06 50 21.8
	comp=Z,419nm,20.7s,baz=110,slow=36				
YAK	**Yakutsk**	**40.91 350**	P	**P**	**06 33 26.7 +0.2**
YAK			IAmb	IAmb	06 33 54.1
	comp=Z,170nm,1.0s				
YAK	**Yakutsk**	**40.91 350**	*e*P	**P**	**06 33 27.1 +0.6**
YAK			*e*		06 35 05.8
YAK			*e*		06 35 22.8
YAK			*e*PPP	PPP	06 35 42.6
YAK			*e*S	**S**	**06 39 25.3 -3.2**
YAK			*e*SS	**SS**	**06 42 37.9 +3.0**
YAK			*e*		06 43 09.3
YAK			pmax	pmax	
	comp=Z,59nm,0.9s				
YAK			pmax	pmax	
	comp=N,15nm,1.1s				
YAK			pmax	pmax	
	comp=E,16nm,1.5s				
YAK			pmax	pmax	
	comp=Z,151nm,1.9s				
YAK			pmax	pmax	
	comp=N,197nm,1.9s				
YAK			pmax	pmax	
	comp=E,134nm,1.9s				
YAK			smax	smax	
	comp=N,278nm,1.5s				
YAK			smax	smax	
	comp=E,238nm,1.9s				

YAK	Yakutsk	40.91	350	P	P	06 33 27.6 +1.1
YAK				pP	pP	06 33 52.0 -1.2
YAK				PcP	PcP	06 35 24.3 -0.3
GTA	Gaotai	40.97	305	⇓P	P	06 33 28.6 +1.0
GTA				pP	pP	06 33 54.8 -0.1
GTA				sP	sP	06 34 11.3 +2.5
GTA				PcP	PcP	06 35 26.8 +1.3
GTA				ScP	ScP	06 39 04.5 +0.8
GTA				S	S	06 39 30.0 -0.4
GTA				ScS	ScS	06 43 18.8 -0.6
GTA				pmax	pmax	
	comp=E,85nm,1.5s					
GTA				pmax	pmax	
	comp=E,370nm,5.5s					
GTA				LR	LR	
	comp=E,2μm,20.0s					
GTA				LR	LR	
	comp=E,970nm,20.4s					
GTA				LR	LR	
	comp=E,1μm,22.9s					
SEY	Seymchan	41.07	6	P	P	06 33 29.5 +1.6
	comp=E,31nm,1.0s,baz=187,slow=10,SNR=19					
	comp=E,31nm,1.0s					
SEY	Seymchan	41.07	6	*c*eP	P	06 33 30.3 +2.4
SEY				pmax	pmax	
	comp=Z,37nm,1.0s					
SRBI	Singaraja	41.12	226	P	P	06 33 29.8 +0.9
	comp=Z,2μmcomp=Z,96nm,1.1s					
KMMI	Kalianget	41.22	228	P	P	06 33 30.0 +0.3
	comp=Z,9μmcomp=Z,780nm,1.0s					
BOD	Bodaibo	41.53	336	*e*P	P	06 33 33.8 +2.1
BOD				pmax	pmax	
	comp=Z,16nm,1.7s					
ABJI	Asem Bagus	41.57	227	P	P	06 33 33.1 +0.6
RTBI	Rangdo, Negare	41.58	226	P	P	06 33 32.5 -0.1
	comp=Z,163nm,1.3s					
CHTO	Chiang Mai	41.97	274	P	P	06 33 36.5 +0.6
CHTO	Chiang Mai	41.97	274	P	P	06 33 36.5 +0.6
CMAR	Chiang Mai Arr	42.05	273	P	P	06 33 37.0 +0.5
	comp=Z,7.4nm,0.4s,baz=57,slow=8.7,SNR=32					
CMAR				PcP	PcP	06 35 30.4 +1.2
	comp=Z,21nm,1.1s,baz=182,slow=2.1,SNR=8.4					
CMAR				ScP	ScP	06 39 08.2 0.0
	comp=Z,5.0nm,0.5s,baz=97,slow=2.1,SNR=7.3					
CMAR				LR	LR	06 49 01.9
	comp=Z,584nm,21.5s,baz=85,slow=33					
	comp=Z,7.4nm,0.4s					
JAGI	Jajag, Banyuwa	42.11	227	P	P	06 33 37.2 +0.3
JAGI				IAmb	IAmb	06 33 38.7
	comp=Z,173nm,0.9s					
JAGI	Jajag, Banyuwa	42.11	227	P	P	06 33 37.1 +0.1
	comp=Z,2μmcomp=Z,212nm,0.9s					
JAGI	Jajag, Banyuwa	42.11	227	P	P	06 33 37.3 +0.3
CTA	Charters Tower	42.16	176	P	P	06 33 37.5 +0.3
	comp=Z,821nm,0.8s,baz=357,slow=7.9,SNR=382					
CTA				PcP	PcP	06 35 29.5 +0.1
	comp=Z,30nm,0.9s,baz=339,slow=5.9,SNR=2.1					
CTA				ScP	ScP	06 39 07.1 -1.3
	comp=Z,15nm,1.0s,baz=41,slow=6.0,SNR=3.7					
CTA				LR	LR	06 51 17.6
	comp=Z,296nm,20.5s,baz=346,slow=36					
CTA	Charters Tower	42.16	176	P	P	06 33 37.7 +0.4
CTAO	Charters Tower	42.16	176	P	P	06 33 37.7 +0.4
CTAO	Charters Tower	42.16	176	P	P	06 33 37.7 +0.4
CTAO				pmax	pmax	
	comp=Z,1μm,0.9s					
CTAO	Charters Tower	42.16	176	P	P	06 33 37.6 +0.4
CTAO	Charters Tower	42.16	176	P	P	06 33 37.4 +0.1
CTAO				pP	pP	06 34 03.7 -0.8
CTAO				sP	sP	06 34 16.2 -1.9
CTAO				PcP	PcP	06 35 29.8 +0.4
CTAO				ScP	ScP	06 39 07.2 -1.3
ZAK	Zakamensk	42.22	322	*e*P	P	06 33 38.7 +1.1
ZAK				pmax	pmax	
	comp=Z,59nm,1.4s					
ADK	Adak	42.43	36	P	P	06 33 40.3 +1.2
ADK	Adak	42.43	36	P	P	06 33 39.9 +0.8
ADK				pP	pP	06 34 05.2 -1.2
ADK				PcP	PcP	06 35 29.7 -0.2
IRK	Irkutsk	42.54	325	*e*P	P	06 33 41.2 +1.1
IRK				pmax	pmax	
	comp=Z,158nm,2.0s					
QIS	Mount Isa	42.75	186	P	P	06 33 41.6 -0.4
	comp=Z,228nm,1.0s					
WB0	Warramunga Arr	42.76	193	P	P	06 33 41.6 -0.5
WB0				IAmb	IAmb	06 33 44.2
	comp=Z,81nm,0.8s					
WR0	Warramunga Arr	42.91	193	IAmb	IAmb	06 33 44.7
	comp=Z,219nm,1.4s					
WRAB	Tennant Creek	42.93	193	P	P	06 33 43.1 -0.3
WRAB				IAmb	IAmb	06 33 44.8
	comp=Z,142nm,0.8s					
WRAB	Tennant Creek	42.93	193	P	P	06 33 43.1 -0.3
WRAB				pmax	pmax	
	comp=Z,142nm,0.8s					
WRAB	Tennant Creek	42.93	193	P	P	06 33 43.1 -0.3
WRAB	Tennant Creek	42.93	193	P	P	06 33 43.2 -0.2
WRAB				PcP	PcP	06 35 32.6 +0.7
WRAB				ScP	ScP	06 39 11.1 -0.4
WB2	Warramunga Arr	42.94	193	P	P	06 33 43.3 -0.2
WB2				IAmb	IAmb	06 33 44.9
	comp=Z,156nm,0.8s					
WRA	Warramunga Arr	42.94	193	P	P	06 33 43.0 -0.5
	comp=Z,56nm,0.5s,baz=13,slow=8.5,SNR=598					
WRA				PcP	PcP	06 35 32.7 +0.7
	comp=Z,59nm,0.8s,baz=8.0,slow=3.5,SNR=11					
WRA				ScP	ScP	06 39 11.0 -0.5
	comp=Z,46nm,1.0s,baz=10.0,slow=4.1,SNR=24					
WRA				S	S	06 39 57.2 -2.2
	comp=Z,10nm,1.1s,baz=10.0,slow=14,SNR=1.4					
WRA				LR	LR	06 50 24.2
	comp=Z,991nm,20.1s,baz=5.0,slow=34					
WRA				P4KPbc		07 11 39.8
	comp=Z,1.4nm,0.8s,baz=14,slow=5.2,SNR=12					
	comp=Z,56nm,0.5s					
WRA	Warramunga Arr	42.94	193	P	P	06 33 43.2 -0.3
WRA	Warramunga Arr	42.94	193	P	P	06 33 43.2 -0.3
WRA				pmax	pmax	
	comp=Z,19nm,1.0s					
SRDT	SRDT	42.96	267	P	P	06 33 44.5 +0.7
	comp=Z,41nm,0.9s					
KRKI	Karangkates	43.06	229	P	P	06 33 44.9 +0.3
	comp=Z,122nm,1.1s					
SMRI	Semarang	43.73	232	IAmb	IAmb	06 34 19.0
	comp=Z,139nm,1.0s					
SMRI	Semarang	43.73	232	P	P	06 33 50.4 +0.4
	comp=Z,4μmcomp=Z,158nm,1.1s					
ATKA	Atka Island	43.94	36	P	P	06 33 52.0 +0.8
PCJI	Pacitan	43.98	230	P	P	06 33 52.0 0.0
	comp=Z,4μmcomp=Z,416nm,1.0s					
PPBI	Pangkal Pinang	44.00	241	P	P	06 33 52.4 +0.2
	comp=Z,12μmcomp=Z,83nm,1.0s					
MOY	Mondy	44.08	323	*e*P	P	06 33 54.7 +2.2
MOY				pmax	pmax	
	comp=Z,54nm,1.8s					
SKLT	Songkhla	44.13	257	P	P	06 33 54.2 +0.9
	comp=Z,848nmcomp=Z,41nm,1.1s					
UGM	Wanagama	44.25	231	P	P	06 33 54.7 +0.5
UGM	Wanagama	44.25	231	P	P	06 33 54.0 -0.2
UGM	Wanagama	44.25	231	P	P	06 33 55.1 +0.9
DSRI	Dabo	44.34	245	P	P	06 33 55.9 +0.9
	comp=Z,116nm,1.5s					
CTJI	Waduk Cacaban	44.63	233	P	P	06 33 56.9 -0.3
	comp=Z,134nm,1.3s					
KULM	Kulim	44.91	254	P	P	06 34 01.5 +2.0
KULM	Kulim	44.91	254	P	P	06 34 00.0 +0.5
	comp=Z,1μmcomp=Z,80nm,1.5s					
KULM	Kulim	44.91	254	P	P	06 34 02.0 +2.5
IPM	Ipoh	44.94	253	P	P	06 34 00.3 +0.6
	comp=Z,806nmcomp=Z,55nm,1.4s					
IPM	Ipoh	44.94	253	P	P	06 34 02.0 +2.3
LEM	Lembang	45.68	235	P	P	06 34 06.2 +0.5
	comp=Z,5μmcomp=Z,356nm,1.2s					
RK1H	Rockhampton Ha	45.85	171	P	P	06 34 06.0 -0.6
CBJI	Citeko	46.01	236	P	P	06 34 08.7 +0.6
	comp=Z,23μmcomp=Z,395nm,1.1s					
FUNA	Funafuti	46.30	127	P	P	06 34 11.2 +0.8
FUNA	Funafuti	46.30	127	P	P	06 34 12.3 +2.0
FUNA				pP	pP	06 34 36.3 -2.0
FUNA				sP	sP	06 34 47.7 -4.3
SBJI	Serang	46.38	237	P	P	06 34 11.3 +0.3
	comp=Z,9μmcomp=Z,659nm,1.3s					
DVP	Devils Point	46.39	147	P	P	06 34 09.9 -1.0
AS01	Alice Springs	46.63	192	P	P	06 34 12.6 -0.2
AS31	Alice Springs	46.64	192	P	P	06 34 12.7 -0.2
ASAR	Alice Springs	46.64	192	P	P	06 34 12.2 -0.7
	comp=Z,54nm,0.7s,baz=15,slow=7.9,SNR=276					
ASAR				PcP	PcP	06 35 45.4 +0.6
	comp=Z,27nm,0.7s,baz=21,slow=3.8,SNR=10					
ASAR				ScP	ScP	06 39 26.6 -0.2
	comp=Z,11nm,0.8s,baz=17,slow=4.7,SNR=8.8					
ASAR				S	S	06 40 49.7 -3.1
	comp=Z,10.0nm,0.9s,baz=19,slow=20,SNR=12					
ASAR				LR	LR	06 52 53.3
	comp=Z,444nm,20.5s,baz=28,slow=35					
ASAR				P4KPbc		07 11 55.7
	comp=Z,1.6nm,0.9s,baz=12,slow=3.3,SNR=10					
	comp=Z,54nm,0.7s					
ASAR	Alice Springs	46.64	192	P	P	06 34 12.5 -0.4
ASAR	Alice Springs	46.64	192	P	P	06 34 12.5 -0.4
BKNI	Bangkinang	46.92	248	P	P	06 34 16.7 +1.4
BKNI				IAmb	IAmb	06 34 18.3
	comp=Z,126nm,1.0s					
KOUNC	Koumac, New Ca	47.04	153	P	P	06 34 15.6 -0.4
NIKH	Nikolski High	47.23	37	P	P	06 34 17.4 +0.3
	baz=248					
SHL	Shillong	47.28	285	P	P	06 34 18.6 +0.5
SHL	Shillong	47.28	285	P	P	06 34 18.6 +0.5
SHL				pmax	pmax	
	comp=Z,63nm,0.8s					
SHL	Shillong	47.28	285	P	P	06 34 19.0 +0.9
	SNR=9.8					
KASI	Kota Agung	47.30	239	P	P	06 34 16.3 -1.8
LWLI	Liwa	47.35	240	P	P	06 34 17.6 -1.1
	comp=Z,162nm,1.3s					
LSA	Lhasa	47.52	290	P	P	06 34 23.0 +2.7
LSA				S	S	06 40 59.8 -6.4
LSA				pmax	pmax	
	comp=Z,36nm,0.8s					
LSA				LR	LR	
	comp=Z,880nm,22.8s					
LSA				LR	LR	
	comp=Z,980nm,32.0s					
LSA				LR	LR	
	comp=Z,1μm,32.7s					
LSA	Lhasa	47.52	290	P	P	06 34 22.2 +1.9
LSA	Lhasa	47.52	290	P	P	06 34 22.7 +2.4
PSI	Prapat	47.57	253	P	P	06 34 20.7 +0.3
PSI				pmax	pmax	
	comp=Z,37nm,1.0s					
PSI	Prapat	47.57	253	P	P	06 34 21.4 +1.0
	comp=Z,27nm,1.0s,comp=Z,45nm,1.4s					
PSI				P	P	06 34 21.0 +0.6
	comp=Z,27nm,1.0s,comp=Z,45nm,1.4s					
RPSI	Rantau Prapat	47.62	252	P	P	06 34 20.7 +0.1
MASI	Maura Aman, Be	47.75	243	P	P	06 34 22.3 +0.6
	comp=Z,2μmcomp=Z,257nm,1.1s					
BILL	Bilibino	47.87	11	P	P	06 34 23.2 +1.3
BILL	Bilibino	47.87	11	*c*eP	P	06 34 23.0 +1.2
BILL				*e**PP	pwP	06 34 52.8 -1.9
BILL				*e**SP	sP	06 35 07.2 +4.2
BILL				*e*		06 35 49.7
BILL				*e*		06 36 19.0
BILL				*e*S	S	06 41 10.2 +1.0
BILL				*e*SS	SS	06 44 42.1 +3.0
BILL				pmax	pmax	
	comp=Z,113nm,1.7s					
BILL	Bilibino	47.87	11	P	P	06 34 23.2 +1.3
BILL				pP	pP	06 34 47.8 -1.7
EIDS	Eidsvold	47.88	171	P	P	06 34 21.5 -0.8
EIDS				IAmb	IAmb	06 34 22.2
	comp=Z,140nm,0.7s					
EIDS	Eidsvold	47.88	171	P	P	06 34 21.7 -0.7
SPIA	Saint Paul Isl	48.22	32	P	P	06 34 25.8 +1.1
SPIA	Saint Paul Isl	48.22	32	P	P	06 34 25.2 +0.6
	baz=243					
LIFNC	LIFOU	48.54	150	P	P	06 34 26.6 -1.0
LIFNC	LIFOU	48.54	150	P	P	06 34 26.8 -0.7
QLP	Quilpie	48.55	179	P	P	06 34 26.9 -0.7
RMQ	Roma	48.70	174	P	P	06 34 28.2 -0.5
UNV	Unalaska Valle	48.85	37	P	P	06 34 30.0 +0.4
	baz=250					
MBWA	Marble Bar	49.10	210	P	P	06 34 31.9 +0.1
MBWA	Marble Bar	49.10	210	P	P	06 34 31.8 0.0
MBWA	Marble Bar	49.10	210	P	P	06 34 32.1 +0.3
MBWA	Marble Bar	49.10	210	P	P	06 34 31.6 -0.2
MBWA				ScP	ScP	06 39 36.8 -0.4
NOUC	Port Laguerre	49.27	152	P	P	06 34 32.3 -0.8
NOUC	Port Laguerre	49.27	152	P	P	06 34 32.4 -0.8
NOUC				ScP	ScP	06 39 38.2 +0.3
DZM	Mont Dzumac	49.31	152	*e*P	P	06 34 32.9 -0.5
DZM				*e*S	S	06 41 32.5 +1.9
	comp=Z,336nm,0.8s					
DZM				*e*LR	LR	06 48 46.6
	comp=Z,246nm,30.2s					
DZM				*e*LR	LR	06 48 46.6
	comp=Z,2μm,26.8s					
DZM	Mont Dzumac	49.31	152	P	P	06 34 33.1 -0.4
	comp=Z,200nm,0.7s,baz=352,slow=6.8,SNR=75					
DZM				PcP	PcP	06 35 55.5 +1.0
	comp=Z,113nm,1.1s,baz=38,slow=4.8,SNR=4.8					
DZM				LR	LR	06 52 30.3
	comp=Z,687nm,21.7s,baz=23,slow=32					
	comp=Z,200nm,0.7s					
DZM	Mont Dzumac	49.31	152	P	P	06 34 33.0 -0.5
DZM	Mont Dzumac	49.31	152	P	P	06 34 33.1 -0.4
DZM				pP	pP	06 34 55.2 -6.5
DZM				sP	pwP	06 35 07.4 +2.4
DZM				ScP	ScP	06 39 39.2 +1.0
WRKA	Warakurna	49.35	199	P	P	06 34 34.3 +0.6
PSA00	Pilbara Seismi	49.41	210	P	P	06 34 34.2 +0.1
PSA00	Pilbara Seismi	49.41	210	IAmb	IAmb	06 34 36.1
	comp=Z,98nm,0.8s					
PSA00	Pilbara Seismi	49.41	210	P	P	06 34 34.2 +0.1
GSI	Gunungsitoli	49.46	252	P	P	06 34 35.3 +0.6
GSI				IAmb	IAmb	06 35 10.9
	comp=Z,165nm,1.3s					
YATNC	Mamie plateau,	49.49	151	P	P	06 34 34.5 -0.3
	comp=Z,191nm,0.9s					
ONTNC	Ouen Toro	49.52	152	P	P	06 34 34.5 -0.5
OUENC	Ouen Island, N	49.79	152	P	P	06 34 36.6 -0.4
OUENC				IAmb	IAmb	06 34 37.5
	comp=Z,98nm,0.8s					
OUENC	Ouen Island, N	49.79	152	P	P	06 34 36.6 -0.4
	comp=Z,139nm,0.8s					
INKA	Innaminka	49.79	183	P	P	06 34 36.2 -0.7
TIXI	Tiksi	50.15	354	P	P	06 34 39.6 +0.5
TIXI	Tiksi	50.15	354	*c*eP	P	06 34 39.7 +0.5
TIXI				pmax	pmax	
	comp=Z,16nm,1.0s					
TIXI	Tiksi	50.15	354	P	P	06 34 39.5 +0.5
OOD	Oodnadatta	50.36	189	P	P	06 34 41.0 -0.2
WMQ	Urumqi	50.62	309	P	P	06 34 45.4 +2.2
WMQ				pP	pP	06 35 10.7 -0.8
TAPN	Taplejung	50.76	288	*e*P	P	06 34 46.1 +1.3
	comp=Z,39nm,0.5s					
GAMB	Gambell	50.90	24	P	P	06 34 46.0 +1.2
	baz=237					
ODAN	Odare	51.11	287	*e*P	P	06 34 48.7 +1.4
DGZ	Jazzator, Alta	51.67	316	*c i*P	P	06 34 52.5 +1.4
DGZ				pmax	pmax	
	comp=Z,84nm,1.1s					
RAMN	Ramite	51.79	287	*e*P	P	06 34 53.4 +0.9
	comp=Z,41nm,0.5s					
MSVF	Nonsavu	52.03	137	P	P	06 34 55.5 +1.5
	comp=Z,190nm,0.8s,baz=293,slow=4.1,SNR=133					
MSVF				LR	LR	06 56 09.9
	comp=Z,290nm,18.6s,baz=8.9,slow=35					
	comp=Z,190nm,0.8s					
MSVF	Nonsavu	52.03	137	P	P	06 34 55.2 +1.2
MSVF	Nonsavu	52.03	137	P	P	06 34 55.5 +1.5
MSVF	Nonsavu	52.03	137	P	P	06 34 55.2 +1.2
MSVF				ScP	ScP	06 39 50.7 +0.7
JIRN	Jiri	52.06	288	*e*P	P	06 34 56.1 +1.5
KEKH	Kekaha	52.12	79	P	P	06 34 54.9 +0.3
FUTU	Fugatoga	52.14	131	P	P	06 34 55.7 +1.0
GUN	Gumba	52.30	289	*e*P	P	06 34 57.9 +1.6
	comp=Z,80nm,0.4s					
SDPT	Sand Point	52.65	36	P	P	06 34 58.5 +0.5
SDPT	Sand Point	52.65	36	P	P	06 34 58.0 0.0
	baz=254,SNR=5.6					
LCRK	Leigh Creek	52.67	186	P	P	06 34 58.0 -0.4
PKI	Pulchoki	52.76	288	*e*P	P	06 35 00.7 +1.0
	comp=Z,37nm,0.4s					
PKIN	Phulchoki	52.77	288	*e*P	P	06 35 00.9 +1.2
	comp=Z,30nm,0.5s					
ARMA	Armidale	52.92	171	P	P	06 35 00.4 +0.1
ARMA	Armidale	52.92	171	P	P	06 35 00.1 -0.3
CNBA	Chernabura Isl	53.01	37	P	P	06 35 01.1 +0.5
CNBA				IAmb	IAmb	06 35 02.2
	comp=Z,84nm,1.0s					
CHNA	Chernabura Isl	53.01	37	P	P	06 35 01.3 +0.6
	baz=256					
ZSN	Zaisan	53.01	313	*e*P	P	06 35 01.1 +0.3
ZSN				*e**PP	pP	06 35 28.2 -1.1
ZSN				*i* S	S	06 42 21.3 +0.3
ZSN				smax	smax	
	comp=E,206nm,4.1s					
ZSN	Zaisan	53.01	313	*e*P	P	06 35 01.1 +0.3
	baz=313					
ZSN				*e*pP	pP	06 35 28.2 -1.1
	baz=313					
ZSN				*i* S	S	06 42 21.4 +0.3
	comp=E,206nm,4.1s,baz=313					
DMN	Daman	53.02	288	*e*P	P	06 35 03.0 +1.5
	comp=E,38nm,0.4s					
MULG	Mulgathing	53.06	190	P	P	06 35 01.3 0.0
GIRL	Giralia	53.08	215	P	P	06 35 03.6 +2.0
GIRL	Giralia	53.08	215	P	P	06 35 03.8 +2.3
TNA	Tin City	53.23	23	IAmb	IAmb	06 35 35.8
	comp=Z,62nm,1.0s					
TNA	Tin City	53.23	23	P	P	06 35 03.4 +1.3
	baz=240					
GKN	Gorkha	53.38	289	*e*P	P	06 35 05.2 +1.2
CMSA	Cobar Meteorol	53.52	178	P	P	06 35 04.9 +0.3
ANM	Nome	53.70	25	P	P	06 35 07.0 +1.5
	baz=243					
KIP	Kipapa	53.77	79	P	P	06 35 08.0 +1.2
KIP	Kipapa	53.77	79	*c*eP	P	06 35 07.8 +1.0
KIP				pmax	pmax	
	comp=Z,233nm,1.7s					
KIP	Kipapa	53.77	79	P	P	06 35 07.4 +0.6
KIP				sP	pwP	06 35 42.9 +2.7
HON	Honolulu	53.81	79	P	P	06 35 08.9 +1.9
HON				pmax	pmax	
	comp=Z,295nm,0.9s					
STKA	Stephens Creek	53.87	182	P	P	06 35 06.6 -0.5
	comp=Z,294nm,0.7s,baz=349,slow=8.1,SNR=357					
STKA				LR	LR	06 58 44.2
	comp=Z,542nm,19.5s,baz=357,slow=36					
	comp=Z,294nm,0.7s					
STKA	Stephens Creek	53.87	182	P	P	06 35 07.1 0.0
STKA				IAmb	IAmb	06 35 07.9
	comp=Z,63nm,0.8s					
STKA	Stephens Creek	53.87	182	*c i*P	P	06 35 06.8 -0.3
STKA	Stephens Creek	53.87	182	P	P	06 35 06.6 -0.5
CHGN	Chignik	54.02	36	P	P	06 35 07.8 -0.2
CHGN	Chignik	54.02	36	P	P	06 35 07.8 -0.2
	baz=256					
ZAA0	Zalesovo Array	54.09	321	P	P	06 35 08.9 +0.3
ZAA0				IAmb	IAmb	06 35 36.0
	comp=Z,61nm,0.9s					
ZALV	Zalesovo Beam	54.09	321	P	P	06 35 09.1 +0.6
	comp=Z,15nm,0.4s,baz=108,slow=8.5,SNR=45					
ZALV				PcP	PcP	06 36 11.6 -0.2
	comp=Z,44nm,0.9s,baz=113,slow=5.0,SNR=5.9					
ZALV				S	S	06 42 34.1 -1.1
	comp=Z,5.6nm,0.9s,baz=114,slow=15,SNR=6.7					
ZALV				LR	LR	06 59 36.1
	comp=Z,457nm,19.1s,baz=87,slow=37					
	comp=Z,15nm,0.4s					
DANN	Dangsing	54.09	290	*e*P	P	06 35 11.1 +1.7
	comp=Z,203nm,0.4s					
KOLN	Koldanda	54.32	289	*e*P	P	06 35 11.8 +0.9
MEEK	Meekatharra	54.35	208	P	P	06 35 11.1 +0.3
MK31	Makanchi Array	54.70	312	P	P	06 35 14.3 +1.1
MK31	Makanchi Array	54.70	312	*i* P	P	06 35 14.0 +0.9
MKAR	Makanchi Array	54.70	312	P	P	06 35 14.5 +1.3
	comp=Z,18nm,0.6s,baz=90,slow=8.9,SNR=137					
MKAR				PcP	PcP	06 36 14.9 +0.5
	comp=Z,54nm,0.7s,baz=130,slow=2.0,SNR=12					
MKAR				S	S	06 42 44.4 +0.6
	comp=Z,21nm,1.1s,baz=94,slow=18,SNR=20					
MKAR				LR	LR	06 59 28.8
	comp=Z,683nm,20.9s,baz=94,slow=37					
MKAR				PKPPKP	P'P'df	07 05 19.9 -4.6
	comp=Z,1.5nm,0.9s,baz=332,slow=2.1,SNR=5.7					
MKAR				PKP2bc		07 05 35.4
	comp=Z,2.5nm,0.8s,baz=289,slow=3.7,SNR=6.8					
MKAR				PKP2ab		07 05 58.2
	comp=Z,2.6nm,1.0s,baz=272,slow=3.3,SNR=4.3					
	comp=Z,18nm,0.6s					
MKAR	Makanchi Array	54.70	312	P	P	06 35 14.1 +0.9
PYUN	Piuthan	54.80	289	*e*P	P	06 35 15.2 +0.8
	comp=Z,93nm,0.5s					
FORT	Forrest	54.84	197	P	P	06 35 14.8 +0.6
FORT	Forrest	54.84	197	P	P	06 35 14.8 +0.6
MAKZ	Makanchi	54.91	312	P	P	06 35 15.7 +1.0
MAKZ	Makanchi	54.91	312	P	P	06 35 15.7 +1.0
MAKZ				pmax	pmax	
	comp=Z,188nm,1.1s					
MAKZ	Makanchi	54.91	312	P	P	06 35 16.0 +1.3
MAKZ				pP	pP	06 35 41.7 -1.6
P16K	Nushagak River	54.95	32	P	P	06 35 16.0 +1.4
	baz=254,SNR=5.8					
N16K	Nishlik Lake	54.99	31	P	P	06 35 16.4 +1.4
	baz=252,SNR=25					
O16K	Kokwok River B	55.06	32	P	P	06 35 16.6 +1.1
	baz=254,SNR=10					
BBOO	Buckleboo	55.25	188	P	P	06 35 17.0 -0.1
CHIR	Chirikof Islan	55.44	37	P	P	06 35 19.9 +1.7
	baz=259					
Q16K	King Salmon	55.53	33	P	P	06 35 19.7 +0.9
	baz=256					
HTT	Hallett	55.57	185	P	P	06 35 19.9 +0.5
O17K	Koliganek Bris	55.59	32	P	P	06 35 20.7 +1.4
	baz=255,SNR=24					
MGCD	Mangrove Creek	55.60	173	P	P	06 35 20.3 +0.7
P17K	Kvichak River	55.77	33	P	P	06 35 21.8 +1.3
	baz=256					
Q17K	Contact Creek	55.82	34	P	P	06 35 22.4 +1.3
	baz=257					
RDOG	Red Dog Mine	56.16	21	P	P	06 35 24.9 +1.6
	baz=243					
RIV	Riverview	56.22	173	P	P	06 35 24.7 +0.7
SEM	Semipalatinsk	56.35	317	*e*P	P	06 35 24.7 -0.4
SEM				pmax	pmax	
	comp=Z,20nm,0.6s					
SEM	Semipalatinsk	56.35	317	*e*P	P	06 35 24.8 -0.4
	comp=Z,20nm,0.6s,baz=316					
Q18K	Katmai Hardscr	56.36	33	P	P	06 35 24.1 -0.8
	baz=257,SNR=13					
SII	Sitkinak Islan	56.37	36	P	P	06 35 25.7 +0.8
	baz=259,SNR=6.4					
SII	Sitkinak Islan	56.37	36	P	P	06 35 26.0 +1.1
	comp=Z,176nm,0.8s					
N18K	Kilae Creek	56.41	31	P	P	06 35 26.3 +1.2
N18K	Kilae Creek	56.41	31	P	P	06 35 26.7 +1.5
	baz=255,SNR=9.6					
P18K	Big Mountain,	56.42	33	P	P	06 35 25.7 +0.5
	baz=257					
POHA	Pohakuloa	56.42	80	P	P	06 35 26.2 +0.2
POHA	Pohakuloa	56.42	80	P	P	06 35 25.9 -0.2
AFI	Afiamalu	56.51	125	LR	LR	06 57 56.5
	comp=Z,424nm,18.2s,baz=321,slow

comp=Z,70nm,0.9s
N19K Bonanza Creek 57.11 31 P **P 06 35 31.7 +1.5**
baz=256,SNR=16
Q19K Cape Douglas, 57.11 33 IAmb IAmb 06 35 40.4
comp=Z,129nm,1.1s
Q19K Cape Douglas, 57.11 33 P **P 06 35 30.3 +0.1**
baz=258
KPKS Kokpek 57.13 308 *e*P **P 06 35 31.1 +0.5**
KPKS *e**PP **pP 06 35 58.5 -1.1**
KPKS *e*S **S 06 43 16.5 +0.3**
KPKS pmax pmax
comp=Z,13nm,0.5s
KPKS Kokpek 57.13 308 *e*P **P 06 35 31.1 +0.5**
comp=Z,13nm,0.5s,baz=308
KPKS *e*pP **pP 06 35 58.5 -1.1**
baz=308
KPKS *e*S **S 06 43 16.6 +0.3**
baz=308
GCSA Galena City Sc 57.14 26 P **P 06 35 31.0 +0.8**
baz=252,SNR=5.3
L19K White Mountain 57.28 29 P **P 06 35 31.6 +0.4**
L19K IAmb IAmb 06 36 26.7
comp=Z,59nm,1.0s
L19K White Mountain 57.28 29 P **P 06 35 32.5 +1.3**
baz=255,SNR=18
ZHN Zhinishke 57.32 308 *e*P **P 06 35 31.5 -0.5**
ZHN *e**PP **pP 06 35 59.9 -1.0**
ZHN Zhinishke 57.32 308 *e*P **P 06 35 31.6 -0.5**
baz=307
ZHN *e*pP **pP 06 35 60.0 -1.0**
baz=307
COCO West Island 57.33 238 P **P 06 35 33.0 +0.8**
COCO West Island 57.33 238 P **P 06 35 33.0 +0.8**
COCO pmax pmax
comp=Z,359nm,0.9s
TDK Taldyqorghan 57.33 310 *e*P **P 06 35 32.1 +0.2**
TDK *e**PP **pP 06 35 58.7 -1.9**
TDK *e*S **S 06 43 18.9 +0.2**
TDK Taldyqorghan 57.33 310 *e*P **P 06 35 32.2 +0.2**
baz=310
TDK *e*pP **pP 06 35 58.7 -1.9**
baz=310
TDK *e*S **S 06 43 18.9 +0.2**
baz=310
SATY Saty 57.34 308 *e*P **P 06 35 32.8 +0.7**
SATY *e**PP **pP 06 36 00.3 -0.8**
SATY *e*S **S 06 43 18.9 -0.1**
SATY pmax pmax
comp=Z,29nm,1.1s
SATY Saty 57.34 308 *e*P **P 06 35 32.9 +0.7**
comp=Z,29nm,1.1s,baz=307
SATY *e*pP **pP 06 36 00.3 -0.8**
baz=307
SATY *e*S **S 06 43 19.0 -0.1**
baz=307
KURK Kurchatov 57.42 317 P **P 06 35 32.9 +0.6**
KURK Kurchatov 57.42 317 *ce*P **P 06 35 32.8 +0.5**
KURK pmax pmax
comp=Z,69nm,0.7s
KURK Kurchatov 57.42 317 P **P 06 35 33.3 +1.0**
KURK Kurchatov 57.42 317 P **P 06 35 32.9 +0.6**
KURK pP **pP 06 35 59.7 -1.3**
M19K Big River Lodg 57.42 30 P **P 06 35 33.7 +1.5**
baz=256
KDAK Kodiak Island 57.45 35 LR LR 06 58 02.0
comp=Z,544nm,21.0s,baz=266,slow=34
KDAK Kodiak Island 57.45 35 P **P 06 35 33.4 +1.0**
KDAK IAmb IAmb 06 36 26.2
comp=Z,99nm,1.1s
KDAK Kodiak Island 57.45 35 P **P 06 35 33.4 +1.0**
KDAK pmax pmax
comp=Z,99nm,1.1s
KDAK Kodiak Island 57.45 35 P **P 06 35 33.8 +1.4**
baz=260
KDAK Kodiak Island 57.45 35 P **P 06 35 33.0 +0.6**
KURBB Kurchatov Arra 57.47 317 S **S 06 43 18.8 -1.3**
comp=Z,10nm,1.2s,baz=92,slow=11,SNR=9.3
KURBB LR LR 07 01 43.5
comp=Z,772nm,18.1s,baz=74,slow=37
P19K Oil Pt 57.47 32 P **P 06 35 32.9 +0.2**
baz=258,SNR=6.4
CAN Canberra 57.48 175 P **P 06 35 33.7 +0.8**
CAN Canberra 57.48 175 P **P 06 35 33.7 +0.8**
CAN pmax pmax
comp=Z,564nm,1.2s
CAN Canberra 57.48 175 P **P 06 35 33.4 +0.5**
CAN Canberra 57.48 175 P **P 06 35 32.4 -0.6**
CNB Canberra Magne 57.51 175 P **P 06 35 33.5 +0.4**
MORW Morawa 57.59 209 P **P 06 35 34.7 +0.9**
MORW Morawa 57.59 209 P **P 06 35 34.4 +0.6**
NRIK Noril'sk 57.65 340 P **P 06 35 34.0 +0.4**
comp=Z,18nm,0.8s,baz=107,slow=9.6,SNR=19
NRIK LR LR 07 01 10.7
comp=Z,534nm,19.1s,baz=112,slow=37
NRIK PKPPKP **P'P'df 07 05 19.6 +0.7**
comp=Z,1.6nm,0.5s,baz=155,slow=2.4,SNR=4.4
comp=Z,18nm,0.8s
NRIK Noril'sk 57.65 340 IAmb IAmb 06 36 02.5
comp=Z,101nm,1.1s
NRIK Noril'sk 57.65 340 *ce*P **P 06 35 33.9 +0.2**
NRIK pmax pmax
comp=Z,24nm,0.9s
Q20K Shuyak Island 57.69 34 P **P 06 35 34.4 +0.3**
baz=260
L20K Farewell, AK 57.79 29 P **P 06 35 35.9 +1.1**
baz=256,SNR=11
O20K Slope Mountain 57.85 32 P **P 06 35 35.9 +0.5**
baz=259
K20K Telida 57.93 28 IAmb IAmb 06 35 38.6
comp=Z,65nm,0.9s
K20K Telida 57.93 28 P **P 06 35 37.5 +1.7**
baz=255,SNR=33
M20K Styx River 57.99 30 P **P 06 35 37.8 +1.5**
baz=257
J20K Nowinta River 58.11 27 P **P 06 35 38.7 +1.7**
J20K IAmb IAmb 06 35 39.9
comp=Z,73nm,0.8s
J20K Nowinta River 58.11 27 P **P 06 35 38.8 +1.9**
baz=255,SNR=50
HOM Homer 58.26 33 P **P 06 35 37.8 -0.3**
baz=260
SPCR Spurr Chakacha 58.28 31 P **P 06 35 38.6 +0.3**
baz=258,SNR=5.8
N20K Mount Spurr 58.28 31 P **P 06 35 39.1 +0.8**
baz=258,SNR=6.5
MDOK Medeo 58.34 308 *e*P **P 06 35 40.1 +1.0**
MDOK *i* *PP **pP 06 36 07.6 -0.6**
MDOK *i* S **S 06 43 33.6 +1.6**
MDOK Medeo 58.34 308 *e*P **P 06 35 40.1 +1.0**
baz=307
MDOK *i* pP **pP 06 36 07.7 -0.6**
baz=307
MDOK *i* S **S 06 43 33.7 +1.6**
baz=307
AAA Alma-Ata 58.43 308 *e*P **P 06 35 39.6 -0.1**
AAA *e**PP **pP 06 36 07.5 -1.2**
AAA Alma-Ata 58.43 308 *e*P **P 06 35 39.6 -0.1**
baz=308
AAA *e*pP **pP 06 36 07.5 -1.2**
baz=308
CNPM China Poot 58.44 33 IAmb IAmb 06 35 40.4
comp=Z,118nm,1.0s
BLDU Ballidu 58.63 207 P **P 06 35 41.6 +0.6**
PPLA Purkeypile 58.65 29 IAmb IAmb 06 36 37.9
comp=Z,84nm,1.2s
PPLA Purkeypile 58.65 29 P **P 06 35 42.0 +1.1**
baz=257,SNR=11
BRLK Bradley Lake 58.66 33 IAmb IAmb 06 35 41.5
comp=Z,68nm,1.0s
CAPN Captain Cook N 58.70 31 P **P 06 35 42.0 +0.9**
baz=260
BRSE Bradley Lake S 58.73 33 P **P 06 35 41.5 +0.1**
baz=260
ARPS Mount Arapiles 58.74 182 P **P 06 35 42.0 +0.4**
SKT Skwentna 58.75 30 IAmb IAmb 06 36 30.6
comp=Z,71nm,1.0s
SKT Skwentna 58.75 30 P **P 06 35 41.7 +0.2**
baz=258,SNR=18
CAST Castle Rocks 58.81 28 IAmb IAmb 06 35 44.2
comp=Z,71nm,0.8s
CAST Castle Rocks 58.81 28 P **P 06 35 43.0 +1.1**
baz=257,SNR=49
CHUM Lake Minchumin 58.82 28 P **P 06 35 43.1 +1.3**
baz=257,SNR=9.6
KUU Kurty 58.83 309 *e*P **P 06 35 42.5 +0.2**
KUU *e**PP **pP 06 36 10.0 -1.5**
KUU *i* S **S 06 43 38.8 +0.7**
KUU Kurty 58.83 309 *e*P **P 06 35 42.6 +0.2**
baz=308
KUU *e*pP **pP 06 36 10.0 -1.5**
KUU *i* S **S 06 43 38.9 +0.7**
baz=308
ULHL Ulahol 58.97 307 P **P 06 35 45.7 +2.1**
SNR=13
G21K Allakaket 59.00 25 P **P 06 35 44.7 +1.5**
baz=254
SUA Susitna One 59.02 31 P **P 06 35 43.4 -0.1**
baz=260,SNR=5.5
H21K Melozitna Rive 59.05 26 IAmb IAmb 06 35 46.3
comp=Z,92nm,1.0s
H21K Melozitna Rive 59.05 26 P **P 06 35 44.9 +1.4**
baz=255,SNR=47
KLBR Kellerberrin 59.05 206 P **P 06 35 44.3 +0.4**
BOOM Boomskoye usch 59.18 307 IAmb IAmb 06 36 14.9
comp=Z,72nm,0.8s
NRN Naryn 59.19 306 IAmb IAmb 06 36 15.9
comp=Z,93nm,1.3s
F21K Alatna River 59.21 24 P **P 06 35 45.8 +1.2**
baz=254,SNR=25
MILA Mila 59.22 175 P **P 06 35 45.4 +0.4**
I21K Tanana 59.26 26 IAmb IAmb 06 35 47.8
comp=Z,94nm,1.0s
I21K Tanana 59.26 26 P **P 06 35 46.5 +1.5**
baz=258,SNR=31
KSH Kashi 59.34 304 P **P 06 35 50.5 +4.4**
KSH pP pwP 06 36 17.6 -1.4
KSH S **S 06 43 53.3 +8.1**
KSH pmax pmax
comp=Z,50nm,0.9s
KSH LR LR
comp=Z,1μm,19.6s
KSH LR LR
comp=Z,450nm,15.1s
KSH LR LR
comp=Z,800nm,18.9s
O22K Cooper Landing 59.35 32 P **P 06 35 45.8 +0.2**
baz=261,SNR=6.2
KTH Kantishna Hill 59.35 28 IAmb IAmb 06 36 33.8
comp=Z,68nm,1.0s
M22K Willow 59.37 30 P **P 06 35 45.3 -0.3**
baz=260,SNR=12
TKM2 Tokmak 2 59.41 308 P **P 06 35 48.3 +1.7**
SNR=37
CUT Chulitna 59.42 30 IAmb IAmb 06 36 33.8
comp=Z,92nm,0.9s
CUT Chulitna 59.42 30 P **P 06 35 45.7 -0.3**
baz=259,SNR=8.6
SEW Seward 59.42 32 P **P 06 35 46.3 +0.2**
baz=262,SNR=5.5
BPAW Bear Paw Mtn. 59.44 28 IAmb IAmb 06 35 47.9
comp=Z,48nm,0.6s
BPAW Bear Paw Mtn. 59.44 28 P **P 06 35 47.2 +1.1**
baz=258,SNR=35
RC01 Rabbit Creek A 59.44 31 IAmb IAmb 06 35 47.4
comp=Z,87nm,1.0s
RC01 Rabbit Creek A 59.44 31 P **P 06 35 46.2 -0.1**
baz=261,SNR=7.8
TOO Toolangi 59.53 178 P **P 06 35 47.8 +0.7**
TOO Toolangi 59.53 178 P **P 06 35 47.8 +0.7**
TOO pmax pmax
comp=Z,231nm,1.0s
TOO Toolangi 59.53 178 P **P 06 35 47.5 +0.4**
TRF Thorofare Moun 59.61 28 IAmb IAmb 06 35 49.0
comp=Z,86nm,0.9s
TRF Thorofare Moun 59.61 28 P **P 06 35 47.8 +0.2**
baz=259,SNR=23
H22K Ishtalitna Cre 59.68 26 P **P 06 35 49.6 +1.8**
baz=256,SNR=25
NDI New Delhi 59.73 291 *e*P **P 06 35 51.0 +2.3**
MLY Manley 59.74 27 IAmb IAmb 06 35 50.7
comp=Z,68nm,1.1s
MLY Manley 59.74 27 P **P 06 35 49.6 +1.4**
baz=257,SNR=37
F22K John River 59.77 24 P **P 06 35 50.1 +1.6**
baz=255
PMR Palmer 59.81 31 P **P 06 35 48.8 +0.1**
baz=261,SNR=14
G22K Bettles 59.88 24 P **P 06 35 50.2 +1.1**
baz=256
KBK Karagaybulak 59.90 307 P **P 06 35 51.7 +1.7**
SNR=7.9
GHO Glory Hole Cre 59.93 30 IAmb IAmb 06 36 36.5
comp=Z,67nm,0.8s
CHMS Chumysh 60.02 308 P pP 06 36 19.9 +0.1
SNR=5.5
MUN Mundaring 60.02 207 P **P 06 35 51.4 +0.9**
E22K Anaktuvuk Pass 60.08 23 P **P 06 35 52.0 +1.5**
baz=255
PWL Port Wells 60.08 32 P **P 06 35 50.8 +0.1**
baz=262,SNR=9.2
SGDS Sogindy 60.09 308 *e*P **P 06 35 51.5 +0.5**
SGDS *e**PP **pP 06 36 18.8 -1.5**
SGDS pmax pmax
comp=Z,7.0nm,0.5s
SGDS Sogindy 60.09 308 *e*P **P 06 35 51.6 +0.5**
comp=Z,6.7nm,0.5s,baz=308
SGDS *e*pP **pP 06 36 18.9 -1.5**
baz=308
KNK Knik Glacier 60.10 31 P **P 06 35 51.0 +0.3**
baz=262,SNR=15
USP Ospenovka 60.19 308 P **P 06 35 53.1 +1.3**
SNR=19
SML Sawmill 60.22 30 P **P 06 35 52.0 +0.4**
baz=262,SNR=25
RND Reindeer 60.23 29 IAmb IAmb 06 36 37.1
comp=Z,99nm,1.0s
AAK Ala-Archa 60.23 307 P **P 06 35 53.9 +1.7**
SNR=11
AAK Ala-Archa 60.23 307 LR LR 07 05 02.6
comp=Z,418nm,18.6s,baz=98,slow=39
AAK Ala-Archa 60.23 307 P **P 06 35 53.2 +1.1**
AAK IAmb IAmb 06 36 28.0
comp=Z,79nm,1.4s
AAK Ala-Archa 60.23 307 *ce*P **P 06 35 53.4 +1.2**
AAK pmax pmax
comp=Z,44nm,1.7s
AAK Ala-Archa 60.23 307 P **P 06 35 53.7 +1.5**
AAK Ala-Archa 60.23 307 *i* P **P 06 35 53.4 +1.2**
SNR=12
AAK Ala-Archa 60.23 307 P **P 06 35 53.6 +1.4**
AAK pP **pP 06 36 19.5 -1.9**
UCH Uchtor 60.25 307 P **P 06 35 54.8 +2.2**
SNR=41
MCK McKinley 60.25 28 IAmb IAmb 06 35 53.1
comp=Z,83nm,1.1s
MCK McKinley 60.25 28 P **P 06 35 51.9 +0.2**
baz=260,SNR=20
WAT1 Susitna Watana 60.27 29 P **P 06 35 52.0 0.0**
baz=261
I23K Minto, Yukon-K 60.34 27 IAmb IAmb 06 36 38.5
comp=Z,68nm,1.0s
I23K Minto, Yukon-K 60.34 27 P **P 06 35 53.4 +1.2**
baz=259,SNR=18
NEA2 Nenana 60.35 27 IAmb IAmb 06 35 54.5
comp=Z,48nm,1.0s
NEA2 Nenana 60.35 27 P **P 06 35 53.3 +0.9**
baz=259,SNR=10
G23K Bananza Creek 60.40 25 P **P 06 35 54.6 +1.8**
baz=257,SNR=33
H23K Yukon River 60.40 26 IAmb IAmb 06 35 55.5
comp=Z,74nm,1.0s
H23K Yukon River 60.40 26 P **P 06 35 54.4 +1.6**
baz=258,SNR=40
BTLS Baital 60.42 310 *e*P **P 06 35 53.3 +0.1**
BTLS *e**PP **pP 06 36 21.3 -1.3**
BTLS *e*S **S 06 43 58.4 -0.1**
BTLS pmax pmax
comp=Z,6.0nm,0.5s
BTLS Baital 60.42 310 *e*P **P 06 35 53.3 +0.1**
comp=Z,6.3nm,0.5s,baz=310
BTLS *e*pP **pP 06 36 21.3 -1.3**
baz=310
BTLS *e*S **S 06 43 58.4 -0.1**
baz=310
NWAO Narrogin (SRO) 60.43 206 P **P 06 35 53.7 +0.4**
NWAO Narrogin (SRO) 60.43 206 P **P 06 35 53.7 +0.4**
NWAO pmax pmax
comp=Z,192nm,0.9s
NWAO Narrogin (SRO) 60.43 206 P **P 06 35 53.9 +0.6**
NWAO Narrogin (SRO) 60.43 206 P **P 06 35 54.1 +0.8**
NWAO Narrogin (SRO) 60.43 206 P **P 06 35 52.8 -0.5**
COLD Coldfoot 60.45 24 IAmb IAmb 06 36 28.9
comp=Z,77nm,1.0s
COLD Coldfoot 60.45 24 P **P 06 35 54.7 +1.7**
baz=257,SNR=51
M23K Glacier View 60.50 31 P **P 06 35 53.8 +0.4**
baz=262,SNR=15
WAT6 Susitna Watana 60.60 30 P **P 06 35 54.7 +0.4**
baz=262,SNR=22
GLI Glacier Island 60.68 32 P **P 06 35 55.3 +0.6**
baz=263
SCM Sheep Creek Mo 60.69 31 P **P 06 35 55.6 +0.8**
baz=262,SNR=15
D23K Nanushuk River 60.69 22 P **P 06 35 56.7 +2.0**
baz=255,SNR=37
WRH Wood River Hil 60.75 27 IAmb IAmb 06 36 39.2
comp=Z,105nm,1.0s
EKS2 Erkin-Say 60.76 307 P **P 06 35 57.3 +1.6**
SNR=12
DHY Denali Highway 60.84 29 IAmb IAmb 06 36 40.6
comp=Z,74nm,1.0s
DHY Denali Highway 60.84 29 P **P 06 35 55.9 0.0**
baz=262,SNR=7.8
E23K Chandalar 60.86 23 P **P 06 35 57.9 +2.1**
baz=257,SNR=86
AML Almayashu 60.86 307 P **P 06 35 58.7 +2.0**
SNR=28
CCB Clear Creek Bu 60.90 27 IAmb IAmb 06 36 39.5
comp=Z,58nm,0.9s
TCOL CIGO, UAF Yank 60.91 27 P **P 06 35 56.3 +0.2**
baz=260,SNR=8.6
COLA College 60.92 27 P **P 06 35 56.6 +0.4**
COLA College 60.92 27 *e*P **P 06 35 56.8 +0.6**
COLA pmax pmax
comp=Z,21nm,0.8s
COLA College 60.92 27 P **P 06 35 56.5 +0.4**
baz=260
COLA College 60.92 27 P **P 06 35 57.1 +0.9**
COLA College 60.92 27 P **P 06 35 55.9 -0.3**
C23K Itkillik River 60.94 21 P **P 06 35 58.0 +1.8**
baz=255,SNR=50
FID Port Fidalgo 60.97 32 IAmb IAmb 06 36 49.6
comp=Z,138nm,1.2s
TOLK Toolik Lake Re 61.01 23 IAmb IAmb 06 36 31.5
comp=Z,109nm,1.1s
TOLK Toolik Lake Re 61.01 23 P **P 06 35 58.5 +1.7**
baz=257,SNR=34
H24K Noodor Dome 61.07 26 IAmb IAmb 06 36 41.6
comp=Z,67nm,0.9s
H24K Noodor Dome 61.07 26 P **P 06 35 58.7 +1.4**
baz=260,SNR=24
HYBB Hyderabad (bro 61.10 278 *e*P **P 06 35 59.1 +0.8**
HYBB *e*pP **pP 06 36 24.8 -3.0**
HYBB *e*PcP **sP 06 36 40.7 -0.5**
HYBB *e*PP **PP 06 38 14.1 -0.2**
HYBB *e*PcS **PcS 06 40 43.6 +0.3**
HYBB *e*S **S 06 44 08.3 +0.3**
HYBB *e*ScS **ScS 06 45 40.0 +2.0**
POKR Poker Plat Res 61.13 27 P **P 06 35 57.7 0.0**
baz=260,SNR=8.8
NIUE Niue 61.15 129 P **P 06 35 58.8 +0.4**
NIUE Niue 61.15 129 P **P 06 35 59.4 +1.0**
BRZS Berezniki 61.20 316 *e*P **P 06 35 57.4 -1.0**
BRZS *e**PP **pP 06 36 25.1 -2.3**
BRZS *e*S **S 06 44 07.5 -0.8**
BRZS pmax pmax
comp=Z,13nm,0.7s
BRZS smax smax
comp=E,160nm,2.6s
BRZS Berezniki 61.20 316 *e*P **P 06 35 57.4 -1.0**
comp=E,13nm,0.7s,baz=316
BRZS *e*pP **pP 06 36 25.1 -2.3**
baz=316
BRZS *e*S **S 06 44 07.5 -0.8**
comp=E,160nm,2.6s,baz=316
HDA Harding Lake 61.23 28 IAmb IAmb 06 36 41.3
comp=Z,73nm,1.2s
HDA Harding Lake 61.23 28 P **P 06 35 58.0 -0.3**
baz=261,SNR=16
M24K Tolsona, Glenn 61.27 30 P **P 06 35 59.5 +0.8**
baz=263
E24K Your Creek 61.27 23 P **P 06 36 00.2 +1.6**
baz=258,SNR=46
EYAK Cordova Ski Ar 61.31 32 IAmb IAmb 06 36 00.5
comp=Z,61nm,1.0s
EYAK Cordova Ski Ar 61.31 32 P **P 06 35 59.7 +0.9**
baz=265
IL31 61.31 27 P **P 06 35 58.3 -0.5**
IL31 IAmb IAmb 06 35 59.5
comp=Z,65nm,1.1s
ILAR Eielson Array 61.31 27 P **P 06 35 58.3 -0.6**
comp=Z,34nm,0.9s,baz=259,slow=5.6,SNR=170
ILAR S **S 06 44 07.9 -1.2**
comp=Z,1.1nm,1.1s,baz=248,slow=7.3,SNR=4.4
ILAR LR LR 07 01 50.0
comp=Z,184nm,19.5s,baz=240,slow=35
comp=Z,34nm,0.9s
KLU Klutina 61.32 31 IAmb IAmb 06 36 01.1
comp=Z,85nm,1.1s
KLU Klutina 61.32 31 P **P 06 36 00.1 +1.0**
baz=264,SNR=12
DIV Divide 61.35 31 IAmb IAmb 06 36 42.9
comp=Z,155nm,1.4s
F24K Squaw Lake 61.38 24 P **P 06 36 01.1 +1.7**
baz=259,SNR=28
G24K Hadweenzic Riv 61.39 25 P **P 06 36 00.8 +1.4**
baz=260,SNR=29
OTUK Ortayu 61.47 314 P **P 06 36 01.2 +0.9**
C24K Franklin Bluff 61.56 22 P **P 06 36 01.7 +1.3**
baz=257
K24K Donnelly Dome 61.65 28 P **P 06 36 02.8 +1.6**
baz=263,SNR=12
PAX Paxson 61.69 29 IAmb IAmb 06 36 44.2
comp=Z,71nm,1.0s
PAX Paxson 61.69 29 P **P 06 36 02.3 +0.8**
baz=264,SNR=19
HARP HAARP 61.77 30 P **P 06 36 03.2 +1.2**
baz=264,SNR=11
RAGM Ragged Mountai 61.82 32 IAmb IAmb 06 36 05.2
comp=Z,118nm,1.2s
BMRM Bremner River 61.90 32 P **P 06 36 04.1 +1.1**
baz=265,SNR=15
KAIM Kayak Island 61.92 33 P **P 06 36 04.2 +1.2**
baz=266
J25K Salcha River, 61.93 27 P **P 06 36 03.9 +0.8**
baz=263,SNR=19
G25K Bearman Lake 61.94 25 P **P 06 36 04.6 +1.5**
baz=261,SNR=7.4
N25K Chitina, Valde 61.96 31 IAmb IAmb 06 36 45.4
comp=Z,62nm,1.0s
N25K Chitina, Valde 61.96 31 P **P 06 36 04.2 +0.8**
baz=265,SNR=8.2
H25K Birch Creek 61.97 26 P **P 06 36 04.6 +1.3**
baz=261
PRP Porcupine Dome 61.98 26 P **P 06 36 03.4 -0.2**
baz=262,SNR=9.8
RKGY Rocky Gully 62.01 205 P **P 06 36 05.2 +1.3**
RIDG Independent Ri 62.05 29 P **P 06 36 04.3 +0.3**
baz=264,SNR=5.1
NIL Nilore 62.23 297 P **P 06 36 07.1 +1.4**
NIL Nilore 62.23 297 P **P 06 36 07.1 +1.4**
NIL pmax pmax
comp=Z,219nm,1.3s
NIL Nilore 62.23 297 P **P 06 36 06.9 +1.2**
NIL pP **pP 06 36 33.9 -1.4**
F25K Christian Rive 62.24 24 P **P 06 36 07.1 +2.0**
baz=261,SNR=53
FYU Fort Yukon 62.25 25 IAmb IAmb 06 36 44.2
comp=Z,125nm,1.2s
D25K Kavik River 62.28 22 P **P 06 36 07.0 +1.6**
baz=259,SNR=32
BERG Berg Lake 62.31 32 IAmb IAmb 06 36 07.8
comp=Z,108nm,1.0s
GLB Gilahina Butte 62.32 31 IAmb IAmb 06 36 07.9
comp=Z,130nm,1.4s
PALK Pallekele 62.35 267 LR LR 06 59 46.0
comp=Z,191nm,21.2s,baz=169,slow=32
PALK Pallekele 62.35 267 P **P 06 36 07.2 +0.5**
PALK Pallekele 62.35 267 *i* P **P 06 36 06.3 -0.4**
PALK pmax pmax
comp=Z,39nm,1.1s
PALK Pallekele 62.35 267 P **P 06 36 07.4 +0.7**
E25K Arctic Village 62.36 24 P **P 06 36 07.9 +2.0**
baz=261,SNR=49
SCRK Sand Creek 62.46 28 IAmb IAmb 06 36 08.3
comp=Z,105nm,1.0s
SCRK Sand Creek 62.46 28 P **P 06 36 07.3 +0.6**
baz=264,SNR=23
DRK Karamyk 62.56 304 IAmb IAmb 06 36 46.8

comp=Z,44nm,0.7s
BVA0 **Borovoye Array** 62.58 319 *i* P P 06 36 08.0 +0.4
BVAR **Borovoye Array** 62.58 319 P P 06 36 08.3 +0.8
comp=Z,84nm,0.8s,baz=91,slow=7.5,SNR=7.0
BVAR S S 06 44 24.6 -0.9
comp=Z,14nm,1.0s,baz=96,slow=9.4,SNR=15
BVAR LR LR 07 05 38.7
comp=Z,466nm,18.2s,baz=86,slow=38
comp=Z,84nm,0.8s
BRVK **Borovoye** 62.64 319 P P 06 36 09.0 +1.1
BRVK **Borovoye** 62.64 319 *ce*P P 06 36 08.7 +0.7
BRVK pmax pmax
comp=Z,177nm,1.3s
BRVK **Borovoye** 62.64 319 P P 06 36 09.1 +1.1
BRVK **Borovoye** 62.64 319 P P 06 36 08.7 +0.7
BRVK pP pP 06 36 35.6 -1.6
L26K **Log Cabin Wild** 62.66 29 P P 06 36 08.9 +0.9
baz=265,SNR=18
J26L **Joseph Creek** 62.69 28 IAmb IAmb 06 36 09.7
comp=Z,93nm,0.9s
J26L **Joseph Creek** 62.69 28 P P 06 36 08.7 +0.4
baz=264,SNR=63
MCARA **McCarthy VSAT** 62.70 31 IAmb IAmb 06 36 49.3
comp=Z,114nm,1.0s
MCARA **McCarthy VSAT** 62.70 31 P P 06 36 09.1 +0.9
baz=267,SNR=12
WAX **Waxell Ridge** 62.73 32 IAmb IAmb 06 36 10.6
comp=Z,59nm,0.7s
TGL **Tana Glacier** 62.76 32 IAmb IAmb 06 36 10.7
comp=Z,106nm,1.1s
M26K **Nabesna, AK** 62.77 30 P P 06 36 09.6 +0.8
baz=266,SNR=10
F26K **Sheenjek River** 62.83 24 P P 06 36 11.2 +2.2
baz=262,SNR=36
G26K **Porcupine Rive** 62.87 25 P P 06 36 11.1 +1.9
baz=263,SNR=37
C26K **Camden Bay** 62.89 22 P P 06 36 11.7 +2.4
baz=260,SNR=54
I26K **Coal Creek Min** 62.95 27 P P 06 36 09.3 -0.4
baz=264,SNR=11
ISLE **Juniper Island** 62.99 32 IAmb IAmb 06 37 06.6
comp=Z,85nm,1.0s
KK31 **Karatay Array** 63.11 308 P P 06 36 12.6 +1.2
KK31 IAmb IAmb 06 36 46.0
comp=Z,76nm,0.8s
KK31 **Karatay Array** 63.11 308 *i* P P 06 36 12.2 +0.9
KKAR **Karatay Array** 63.11 308 P P 06 36 12.4 +1.1
KKAR **Karatay Array** 63.11 308 IAmb IAmb 06 36 46.0
comp=Z,76nm,0.8s
KKAR **Karatay Array** 63.11 308 P P 06 36 12.4 +1.1
RAO **Raoul Island** 63.14 143 LR LR 07 02 38.5
comp=Z,133nm,18.1s,baz=316,slow=35
RAO **Raoul Island** 63.14 143 P P 06 36 10.9 -0.6
RAO **Raoul Island** 63.14 143 P P 06 36 11.7 +0.2
RAO pmax pmax
comp=Z,400nm,0.9s
MESA **MESA** 63.17 33 IAmb IAmb 06 36 13.9
comp=Z,97nm,1.0s
MESA **MESA** 63.17 33 P P 06 36 12.7 +1.1
baz=268
C27K **Jago River** 63.25 22 P P 06 36 13.6 +1.8
baz=262,SNR=20
YAH **Yahtse** 63.27 32 IAmb IAmb 06 36 14.6
comp=Z,85nm,1.1s
M27K **Edge Creek, AK** 63.29 30 P P 06 36 13.3 +1.0
baz=267,SNR=11
K27K **Chicken** 63.30 28 P P 06 36 13.4 +1.3
baz=266
L27K **Beaver Creek,** 63.35 29 P P 06 36 13.4 +0.9
baz=267,SNR=24
CTG **Chitna Glacier** 63.49 32 P P 06 36 14.7 +1.1
baz=268,SNR=7.8
IUG **Iuzhnay** 63.57 307 *e*P P 06 36 15.3 +0.8
IUG *e**PP pP 06 36 43.2 -0.8
IUG *e*S S 06 44 39.3 +0.9
IUG **Iuzhnay** 63.57 307 *e*P P 06 36 15.3 +0.8
baz=307
IUG *e*pP pP 06 36 43.2 -0.8
baz=307
IUG *e*S S 06 44 39.4 +0.9
baz=307
TABL **Table Mountain** 63.58 32 IAmb IAmb 06 36 16.3
comp=Z,69nm,0.9s
I27K **Kandik River** 63.61 27 P P 06 36 14.6 +0.4
baz=266,SNR=17
G27K **Doyon Strip** 63.69 25 P P 06 36 16.2 +1.5
baz=265,SNR=18
H27K **Steamboat Moun** 63.70 26 P P 06 36 16.3 +1.5
baz=266,SNR=78
EGAK **Eagle** 63.75 27 P P 06 36 15.4 +0.3
baz=267,SNR=13
GAR **Garm** 63.77 304 IAmb IAmb 06 36 50.5
comp=Z,167nm,1.2s
BVCY **Beaver Creek** 63.77 30 P P 06 36 16.2 +0.9
baz=268,SNR=12
OUZ **Omahuta** 63.80 153 P P 06 36 16.6 +1.0
OUZ IAmb IAmb 06 36 17.7
comp=Z,105nm,1.0s
OUZ **Omahuta** 63.80 153 P P 06 36 17.2 +1.5
E27K **Coleen River** 63.84 24 P P 06 36 17.2 +1.6
baz=264,SNR=28
YUK3 **Moose Creek** 63.94 31 P P 06 36 17.3 +0.7
baz=269,SNR=14
PINM **Pinnacle** 64.02 33 P P 06 36 17.9 +0.9
baz=270
O28M **Mount Upton** 64.05 32 P P 06 36 18.4 +0.9
baz=269,SNR=10
YUK8 **Steele Glacier** 64.26 31 P P 06 36 20.1 +1.3
baz=270,SNR=10
PNL **Peninsula** 64.45 33 P P 06 36 20.8 +1.1
baz=271
MOO **Moorlands** 64.45 177 P P 06 36 20.4 +0.6
DAWY **Dawson** 64.48 28 IAmb IAmb 06 36 55.9
comp=Z,79nm,1.1s
DAWY **Dawson** 64.48 28 P P 06 36 21.1 +1.2
baz=268,SNR=23
YUK4 **Talbot Arm** 64.80 31 P P 06 36 24.3 +2.0
baz=270,SNR=17
SIMJ **Simiganj** 64.83 303 P P 06 36 23.7 +0.9
SIMJ pP pP 06 36 51.2 -1.4
O29M **Mount Kennedy** 64.85 33 P P 06 36 24.5 +2.0
baz=271,SNR=22
M29M **Somme Creek** 64.89 30 P P 06 36 24.4 +1.7
baz=270,SNR=42
TAU **Tasmania Unive** 64.93 177 P P 06 36 23.4 +0.5
TAU **Tasmania Unive** 64.93 177 P P 06 36 23.4 +0.5
TAU pmax pmax
comp=Z,337nm,1.2s
TAU **Tasmania Unive** 64.93 177 P P 06 36 23.2 +0.3
TAU **Tasmania Unive** 64.93 177 P P 06 36 22.8 -0.1
YUK6 **Outpost Mounta** 64.95 32 P P 06 36 24.7 +1.5
baz=271,SNR=6.3
I29M **Ogilvie Camp,** 64.98 27 IAmb IAmb 06 36 57.5
comp=Z,76nm,1.0s
I29M **Ogilvie Camp,** 64.98 27 P P 06 36 24.2 +1.0
baz=269,SNR=33
J29M **Klondike Camp** 65.00 28 IAmb IAmb 06 36 58.4
comp=Z,101nm,1.3s
J29M **Klondike Camp** 65.00 28 P P 06 36 24.6 +1.2
baz=269
L29M **L29M** 65.04 29 P P 06 36 25.4 +1.8
baz=270,SNR=50
POO **Poona** 65.09 281 *e*P P 06 36 20.0 -4.6
PCHI **Peechi** 65.25 272 *e*P P 06 36 25.8 +0.1
PCHI *e*S S 06 44 56.3 -3.4
P29M **Windy Craggy** 65.29 33 IAmb IAmb 06 36 28.1
comp=Z,140nm,1.0s
P29M **Windy Craggy** 65.29 33 P P 06 36 27.1 +1.8
baz=272,SNR=16
K29M **Barlow Dome** 65.31 29 P P 06 36 26.8 +1.4
baz=270,SNR=42
HYT **Haines Junctio** 65.37 32 P P 06 36 27.0 +1.1
HYT IAmb IAmb 06 36 28.7
comp=Z,109nm,1.0s
HYT **Haines Junctio** 65.37 32 P P 06 36 27.6 +1.8
baz=272,SNR=26
KBL **Kabul** 65.52 299 P P 06 36 28.1 +0.7
KBL IAmb IAmb 06 36 29.2
comp=Z,74nm,0.8s
KBL **Kabul** 65.52 299 P P 06 36 28.1 +0.7
KBL pmax pmax
comp=Z,74nm,0.9s
KBL **Kabul** 65.52 299 P P 06 36 28.3 +1.0
SNR=35
N30M **Aishikik Lake** 65.55 31 P P 06 36 28.5 +1.6
baz=272,SNR=21
EPYK **Eagle Plains** 65.64 26 IAmb IAmb 06 36 29.7
comp=Z,148nm,1.0s
EPYK **Eagle Plains** 65.64 26 P P 06 36 28.6 +1.2
baz=270,SNR=54
P30M **Million Dollar** 65.66 33 P P 06 36 29.3 +1.6
baz=272
G30M **tAoh Zraii Nji** 65.84 25 P P 06 36 29.6 +1.0
baz=270,SNR=68
KUZ **Kuaotunu** 66.00 152 P P 06 36 30.5 +0.6
PLBC **Pleasant Camp** 66.00 33 P P 06 36 31.2 +1.5
baz=273,SNR=18
MAYO **Mayo, Yukon** 66.04 29 IAmb IAmb 06 36 32.5
comp=Z,136nm,0.9s
MAYO **Mayo, Yukon** 66.04 29 P P 06 36 31.4 +1.5
baz=272,SNR=20
O30N **Mendenhall** 66.06 32 P P 06 36 31.5 +1.3
baz=273,SNR=11
S31K **Pelican** 66.16 35 P P 06 36 31.0 +0.2
baz=274
N31M **Braeburn, Yuko** 66.18 31 P P 06 36 32.3 +1.4
baz=273,SNR=18
R31K **City Hall, Gus** 66.39 35 P P 06 36 33.4 +1.3
baz=274
SKAG **Skagway** 66.53 33 P P 06 36 34.4 +1.4
baz=274,SNR=13
WHY **Whitehorse** 66.66 32 P P 06 36 35.0 +0.9
WHY **Whitehorse** 66.66 32 P P 06 36 35.4 +1.3
baz=274,SNR=15
SIT **Sitka** 66.72 36 P P 06 36 35.4 +1.1
baz=275
M31M **Drury Creek, Y** 66.79 30 P P 06 36 35.9 +1.1
baz=274,SNR=28
F31M **Tsiigehtchic** 66.80 25 P P 06 36 35.1 +0.5
baz=272,SNR=31
BESE **Bessie Mountai** 66.84 34 IAmb IAmb 06 36 37.8
comp=Z,120nm,1.0s
INK **Inuvik** 66.85 24 P P 06 36 35.5 +0.5
comp=Z,60nm,0.8s,baz=270,slow=6.3,SNR=81
comp=Z,60nm,0.8s
INK **Inuvik** 66.85 24 P P 06 36 35.5 +0.5
INK IAmb IAmb 06 36 36.7
comp=Z,85nm,0.9s
INK **Inuvik** 66.85 24 P P 06 36 35.5 +0.5
INK pmax pmax
comp=Z,85nm,1.0s
INK **Inuvik** 66.85 24 P P 06 36 35.7 +0.8
baz=272,SNR=42
R32K **Eaglecrest** 67.04 35 P P 06 36 37.8 +1.4
baz=275,SNR=13
S32K **Killisnoo** 67.09 35 P P 06 36 38.0 +1.3
baz=276,SNR=6.9
JIS **Juneau Island** 67.11 35 IAmb IAmb 06 36 39.5
comp=Z,112nm,1.0s
HIZ **Hauiti** 67.13 154 P P 06 36 38.1 +1.0
FARO **Faro, Yukon** 67.28 30 P P 06 36 39.0 +1.1
baz=275,SNR=19
P32M **Atlin** 67.33 33 P P 06 36 39.5 +1.3
baz=276,SNR=13
KHEZ **Kahui Hut** 67.47 155 P P 06 36 40.3 +1.0
N32M **Quiet Lake** 67.50 31 P P 06 36 40.3 +1.0
baz=275
P33M **Teslin, Yukon** 67.72 32 P P 06 36 42.0 +1.2
baz=276,SNR=26
MXZ **Matakaoa Point** 67.82 151 IAmb IAmb 06 36 40.4
comp=Z,105nm,0.7s
MXZ **Matakaoa Point** 67.82 151 P P 06 36 39.7 -1.7
URZ **Urewera** 67.87 152 LR LR 07 06 08.3
comp=Z,233nm,18.1s,baz=52,slow=36
URZ **Urewera** 67.87 152 P P 06 36 40.6 -1.1
SVE **Sverdlovsk** 67.93 324 *d i* P P 06 36 42.6 +0.6
SVE *e*S S 06 45 29.0 -1.6
SVE pmax pmax
comp=Z,126nm,1.0s
U33K **Whale Pass** 68.04 37 P P 06 36 43.7 +1.1
baz=277
T33K **Petersburg** 68.04 36 P P 06 36 43.6 +1.0
baz=277
CRAG **Craig** 68.12 38 P P 06 36 44.3 +1.1
baz=278
Q32M **Nakina River** 68.14 34 P P 06 36 45.0 +1.5
baz=277,SNR=6.5
MMPY **Sheldon Lake,** 68.21 30 P P 06 36 45.1 +1.4
baz=276,SNR=12
QRZ **Quartz Range** 68.23 157 P P 06 36 44.0 0.0
BKZ **Black Stump Fm** 68.36 153 P P 06 36 43.8 -1.1
WRAK **Wrangell Islan** 68.43 36 P P 06 36 46.3 +1.2
baz=278,SNR=9.6
R33M **Jennings River** 68.75 33 P P 06 36 48.8 +1.6
baz=278,SNR=16
S34M **Telegraph Cree** 68.87 35 P P 06 36 49.5 +1.7
baz=278,SNR=23
V35K **Ketchikan** 69.00 38 P P 06 36 49.4 +0.8
baz=279
ARU **Arti** 69.12 324 P P 06 36 49.6 +0.2
comp=Z,83nm,0.8s,baz=100,slow=2.8,SNR=95
ARU S S 06 45 42.4 -2.3
comp=Z,5.6nm,0.2s,baz=336,slow=21,SNR=8.9
ARU LR LR 07 10 00.8
comp=Z,532nm,18.2s,baz=88,slow=38
comp=Z,83nm,0.8s
ARU **Arti** 69.12 324 P P 06 36 49.5 +0.2
ARU **Arti** 69.12 324 *ce*P P 06 36 49.5 +0.1
ARU pmax pmax
comp=Z,126nm,1.0s
ARU **Arti** 69.12 324 P P 06 36 49.5 +0.1
ARU pP pP 06 37 16.5 -2.4
ARU pwP pwP 06 37 22.5 -1.5
A36M **Sachs Harbour** 69.34 19 IAmb IAmb 06 36 53.1
comp=Z,95nm,1.0s
A36M **Sachs Harbour** 69.34 19 P P 06 36 51.1 +0.6
baz=278
DLBC **Dease Lake** 69.37 34 LR LR 07 02 32.3
comp=Z,174nm,21.9s,baz=277,slow=32
DLBC **Dease Lake** 69.37 34 IAmb IAmb 06 36 53.9
comp=Z,151nm,1.1s
DLBC **Dease Lake** 69.37 34 P P 06 36 52.7 +1.6
baz=279,SNR=41
SNZO **South Karori** 69.47 156 P P 06 36 50.5 -1.0
SNZO **South Karori** 69.47 156 P P 06 36 50.2 -1.4
SNZO **South Karori** 69.47 156 P P 06 36 50.0 -1.6
T35M **Bob Quinn** 69.49 36 P P 06 36 53.1 +1.4
baz=279,SNR=16
AB31 **Akbulak array** 69.50 316 *i* P P 06 36 52.0 +0.1
ABKAR **Akbulak array** 69.50 316 P P 06 36 52.9 +1.0
ABKAR IAmb IAmb 06 37 26.1
comp=Z,214nm,1.2s
BFZ **Birch Farm** 69.54 154 P P 06 36 51.3 -0.8
FOZ **Fox Glacier** 69.72 160 P P 06 36 53.2 +0.1
WTLY **Watson Lake, Y** 69.73 32 IAmb IAmb 06 36 55.7
comp=Z,104nm,1.0s
WTLY **Watson Lake, Y** 69.73 32 P P 06 36 54.7 +1.5
baz=279,SNR=38
TGTN **Hyland Airport** 69.75 31 P P 06 36 54.8 +1.6
baz=279,SNR=40
LTZ **Lake Taylor** 69.86 158 IAmb IAmb 06 36 54.0
comp=Z,92nm,1.0s
JCZ **Jackson Bay** 69.89 161 P P 06 36 54.0 -0.2
RUBB **Prince Rupert** 69.94 38 IAmb IAmb 06 36 56.6
comp=Z,112nm,1.2s
KHZ **Kahutara** 69.99 157 P P 06 36 53.0 -1.7
RAR **Rarotonga** 70.02 124 LR LR 06 59 13.4
comp=Z,465nm,21.6s,baz=292,slow=28
RAR **Rarotonga** 70.02 124 P P 06 36 56.0 +0.6
C36M **Paulatuk** 70.15 22 P P 06 36 55.9 +0.5
baz=280,SNR=10
OXZ **Oxford** 70.26 158 IAmb IAmb 06 36 55.5
comp=Z,124nm,0.8s
RPZ **Rata Peaks** 70.28 159 LR LR 07 04 16.8
comp=Z,304nm,21.8s,baz=330,slow=33
RPZ **Rata Peaks** 70.28 159 P P 06 36 55.2 -1.3
AKTO **Aktyubinsk** 70.50 317 P P 06 36 58.0 0.0
comp=Z,14nm,0.7s,baz=93,slow=7.5,SNR=48
AKTO S S 06 45 59.0 -2.1
comp=Z,1.3nm,0.4s,baz=75,slow=18,SNR=3.7
AKTO LR LR 07 09 31.1
comp=Z,373nm,18.8s,baz=82,slow=37
comp=Z,14nm,0.7s
AKTO **Aktyubinsk** 70.50 317 P P 06 36 58.0 0.0
LBZ **Lake Benmore** 70.60 160 P P 06 36 57.6 -0.9
LBZ IAmb IAmb 06 36 58.7
comp=Z,151nm,0.8s
DCZ **Deep Cove** 70.69 163 IAmb IAmb 06 36 59.3
comp=Z,130nm,0.9s
MQZ **McQueen's Vall** 70.81 158 IAmb IAmb 06 37 00.8
comp=Z,151nm,1.1s
MLZ **Mavora Lakes** 70.87 162 IAmb IAmb 06 37 00.5
comp=Z,220nm,1.1s
LIRD **Liard River Hi** 71.20 33 P P 06 37 03.5 +1.5
baz=282,SNR=36
WHZ **Wether Hill Ro** 71.31 162 IAmb IAmb 06 37 02.6
comp=Z,95nm,0.9s
ODZ **Otahua Downs** 71.34 160 P P 06 37 02.6 -0.3
WRGLY **Wrigley** 71.62 28 P P 06 37 05.8 +1.4
baz=283,SNR=34
BBB **Bella Bella** 71.63 40 LR LR 07 03 48.8
comp=Z,167nm,19.4s,baz=284,slow=32
KOTAN **Kotaneelee Air** 72.05 32 P P 06 37 08.5 +1.4
baz=283,SNR=5.2
SYZ **Scrubby Hill** 72.23 162 P P 06 37 08.0 -0.2
FLDN **Fort Liard** 72.31 32 P P 06 37 09.8 +1.2
baz=284
GEYT **Alibeck** 73.35 305 P P 06 37 16.2 +1.0
comp=Z,24nm,0.9s,baz=38,slow=2.6,SNR=33
GEYT LR LR 07 13 11.7
comp=Z,428nm,18.3s,baz=95,slow=39
comp=Z,24nm,0.9s
GEYT **Alibeck** 73.35 305 P P 06 37 16.4 +1.2
GYA0B **ALIBECK ARRAY** 73.35 305 P P 06 37 16.2 +0.9
KIRV **Kirov** 73.48 327 P P 06 37 16.0 +0.5
comp=Z,100nm,0.8s,baz=69,slow=2.8,SNR=48
KIRV S SKiKP 06 46 32.1 -1.4
comp=Z,5.5nm,0.5s,baz=290,slow=21,SNR=9.5
KIRV LR LR 07 10 41.9
comp=Z,425nm,20.6s,baz=74,slow=36
comp=Z,100nm,0.8s
KIRV **Kirov** 73.48 327 *ce*P P 06 37 15.6 +0.1
OZB **Mount Ozzard** 74.04 43 IAmb IAmb 06 37 21.7
comp=Z,99nm,0.9s
PRGR **Permogore** 74.42 331 *e*P P 06 37 20.4 -0.6
PRGR *e* 06 37 32.8
PRGR *e**PP pP 06 37 48.0 -2.9
PRGR *e*S S 06 46 42.0 -3.3
PRGR pmax pmax
comp=Z,94nm,0.9s
EUNU **Eureka** 74.47 8 P P 06 37 21.8 +0.7
EUNU IAmb IAmb 06 37 56.2
comp=Z,190nm,1.4s
CTZ **Chatham Island** 75.07 151 P P 06 37 25.9 +1.1
SPA0 **Spitsbergen Ar** 75.37 350 *e*P P 06 37 27.0 +0.8
SPA0 IAmb IAmb 06 37 27.6
comp=Z,157nm,1.6s
SPB2 **Spitsbergen Ar** 75.37 350 P P 06 37 26.7 +0.5
SPB2 IAmb IAmb 06 38 01.4
comp=Z,145nm,1.5s
KBS **Kingsbay** 75.51 351 P P 06 37 28.1 +1.1
KBS **Kingsbay** 75.51 351 P P 06 37 28.1 +1.1
KBS pmax pmax
comp=Z,38nm,0.8s
KBS **Kingsbay** 75.51 351 *e*P P 06 37 27.8 +0.8
KBS IAmb IAmb 06 37 34.8
comp=Z,30nm,0.9s
KBS **Kingsbay** 75.51 351 *i* P P 06 37 27.6 +0.6
NLWA **Neilton Lookou** 75.52 45 IAmb IAmb 06 37 30.7
comp=Z,143nm,1.1s
WISH **Wishkah** 75.67 45 IAmb IAmb 06 37 31.8
comp=Z,148nm,1.1s
YKA **Yellowknife Ar** 75.72 28 P P 06 37 28.7 +0.3
comp=Z,56nm,0.9s,baz=289,slow=5.6,SNR=59
YKA LR LR 07 10 35.3
comp=Z,179nm,20.5s,baz=268,slow=35
comp=Z,56nm,0.9s
YKA **Yellowknife Ar** 75.72 28 P P 06 37 28.9 +0.5
YKA **Yellowknife Ar** 75.72 28 P P 06 37 28.9 +0.5
LLLB **Lilloet** 75.81 41 P P 06 37 30.5 +1.2
LLLB IAmb IAmb 06 37 31.7
comp=Z,92nm,0.7s
NOR **Nord** 75.87 357 *i* P P 06 37 29.1 +0.2
NOR IAmb IAmb 06 37 30.3
comp=Z,33nm,1.3s
WAPA **Wapiti River** 75.90 36 IAmb IAmb 06 37 31.2
comp=Z,99nm,1.0s
MANA **Manning** 76.21 34 IAmb IAmb 06 37 32.8
comp=Z,150nm,0.9s
BELG **Belogornoye** 76.28 321 P P 06 37 32.4 +0.7
comp=Z,196nm,0.8s,baz=25,slow=0.8,SNR=49
BELG S S 06 47 03.4 -2.7
comp=Z,8.7nm,0.8s,baz=321,slow=23,SNR=8.2
BELG LR LR 07 13 22.1
comp=Z,305nm,18.9s,baz=19,slow=37
comp=Z,196nm,0.8s
BELG **Belogornoye** 76.28 321 *c i* P P 06 37 32.1 +0.4
BELG pmax pmax
comp=Z,45nm,0.9s
PPT **Papeete** 76.31 116 P P 06 37 33.1 +0.7
comp=Z,188nm,0.9s,baz=315,slow=5.0,SNR=11
PPT LR LR 07 04 46.0
comp=Z,425nm,18.7s,baz=303,slow=30
comp=Z,188nm,0.9s
PPT2 **Papeete2** 76.32 116 *e*P P 06 37 33.0 +0.4
comp=Z,163nm,1.0s
PPT2 *e*S S 06 47 09.0 +1.4
comp=Z,347nm,27.8s
PPT2 **Papeete2** 76.32 116 *e*LR LR 07 01 17.2
comp=Z,2μm,33.5s
PPTF **Pamatai, Papee** 76.33 116 P P 06 37 33.1 +0.4
PPTF IAmb IAmb 06 37 38.0
comp=Z,201nm,1.0s
PAE **Paea** 76.35 116 *e*P P 06 37 33.9 +1.2
comp=Z,34nm,1.1s
RES **Resolute Bay** 76.41 14 LR LR 07 11 30.5
comp=Z,195nm,21.9s,baz=326,slow=36
RES **Resolute Bay** 76.41 14 P P 06 37 32.7 +0.6
RES **Resolute Bay** 76.41 14 P P 06 37 32.7 +0.6
RES pmax pmax
comp=Z,55nm,0.9s
LVZ **Lovozero** 76.47 338 P P 06 37 32.5 -0.1
LVZ **Lovozero** 76.47 338 *ce*P P 06 37 32.4 -0.2
LVZ pmax pmax
comp=Z,62nm,1.0s
TIAR **Tiarei** 76.49 116 *e*P P 06 37 34.7 +1.2
comp=Z,40nm,1.0s
PMOR **Pomariorio Ree** 76.52 113 *e*P P 06 37 34.4 +0.7
comp=Z,483nm,1.1s
TVO **Taravao** 76.68 116 *e*P P 06 37 35.6 +1.0
comp=Z,27nm,1.0s
B06A **Marblemount** 76.70 43 P P 06 37 35.0 +0.8
COR **Corvallis** 76.75 47 P P 06 37 35.4 +0.8
COR **Corvallis** 76.75 47 P P 06 37 35.4 +0.8
COR pmax pmax
comp=Z,256nm,1.2s
D05A **Enumclaw** 76.80 44 IAmb IAmb 06 37 37.8
comp=Z,117nm,1.0s
KBO **Bosley Butte** 76.84 50 IAmb IAmb 06 37 38.2
comp=Z,141nm,1.1s
VAH **Vaihoa** 76.86 113 *e*P P 06 37 35.7 +0.1
comp=Z,125nm,1.1s
WBK **Wadi Bani Khal** 77.17 289 P P 06 37 38.6 +1.2
WSAR **Wadi Sarin** 77.26 290 LR LR 07 12 21.4
comp=Z,163nm,21.5s,baz=102,slow=36
BRLDA **Berland Lookou** 77.27 37 IAmb IAmb 06 37 39.4
comp=Z,97nm,1.0s
KRPM **Rodgers** 77.32 51 IAmb IAmb 06 37 41.1
comp=Z,134nm,1.1s
JCC **Jacoby Creek,** 77.42 51 IAmb IAmb 06 37 41.5
comp=Z,184nm,1.3s
KLMR **Klimovskoe** 77.47 331 *d i* P P 06 37 38.0 -0.3
KLMR S S 06 47 15.3 -3.4
KLMR pmax pmax
comp=Z,102nm,1.0s
KLMR **Klimovskoe** 77.47 331 *j i* P P 06 37 38.0 -0.3
KLMR *e*P P 06 37 38.0 -0.3
KLMR *e*P P 06 37 38.0 -0.3
KLMR AMP 06 37 39.2
comp=Z,102nm,1.0s
KLMR *e*pP pP 06 38 04.2 -4.1
KLMR S S 06 47 15.4 -3.3
KLMR S S 06 47 15.4 -3.3
H04A **Detroit Lake** 77.47 47 P P 06 37 39.5 +0.9
H04A IAmb IAmb 06 37 41.0
comp=Z,199nm,1.1s
KMPM **Mount Pierce** 77.48 51 IAmb IAmb 06 37 41.9
comp=Z,175nm,1.0s
BIDO **Bidbid** 77.61 290 P P 06 37 41.1 +1.3
SNR=6.6
KHMM **Horse Mountain** 77.62 51 IAmb IAmb 06 37 42.8
comp=Z,166nm,1.0s
HOOD **Mount Hood Mea** 77.62 46 IAmb IAmb 06 37 42.2
comp=Z,187nm,1.1s
SMDO **Samad** 77.83 290 P P 06 37 42.4 +1.2
SNR=5.5
KMRM **Mail Ridge** 77.84 51 IAmb IAmb 06 37 43.9
comp=Z,115nm,1.1s
KEV **Kevo** 77.99 341 P P 06 37 41.6 +0.6
KEV **Kevo** 77.99 341 P P 06 37 41.6 +0.6

KEV pmax pmax
comp=Z,49nm,0.9s
YBH Yreka Blue Hor 78.07 50 LR LR 07 04 06.7
comp=Z,169nm,21.2s,baz=292,slow=29
YBH Yreka Blue Hor 78.07 50 IAmb IAmb 06 37 44.8
comp=Z,129nm,1.1s
B08A Colville Reser 78.11 43 IAmb IAmb 06 37 44.2
comp=Z,104nm,0.9s
HOQ Hoqain 78.30 291 P **P 06 37 44.6 +1.0**
SNR=14
BANOM Banah 78.40 293 P **P 06 37 45.6 +1.4**
SNR=7.7
BANOM Banah 78.40 293 *i* P **P 06 37 45.2 +1.0**
SNR=12
HAMF Hammerfest 78.44 343 *e*P **P 06 37 43.6 +0.1**
HAMF IAmb IAmb 06 37 45.2
comp=Z,28nm,0.8s
SHME Shamm 78.49 293 P **P 06 37 46.0 +1.4**
SNR=7.4
SHME Shamm 78.49 293 *i* P **P 06 37 45.7 +1.1**
SNR=18
ARA0 ARCESS Array S 78.55 342 *e*P **P 06 37 44.5 +0.4**
ARA0 IAmb IAmb 06 37 45.4
comp=Z,57nm,0.9s
ARCES ARCESS Array B 78.55 342 P **P 06 37 44.5 +0.3**
comp=Z,38nm,0.7s,baz=60,slow=7.2,SNR=85
ARCES PKKPbc **PKKPbc 06 56 37.5 -3.5**
comp=Z,2.4nm,0.7s,baz=250,slow=2.5,SNR=8.5
ARCES LR LR 07 17 02.8
comp=Z,213nm,18.1s,baz=62,slow=39
comp=Z,38nm,0.7s
ARCES ARCESS Array B 78.55 342 P **P 06 37 44.1 0.0**
F07A Phinny Hill Vi 78.57 45 IAmb IAmb 06 37 47.3
comp=Z,117nm,1.3s
MHTO MHTO 78.58 288 P **P 06 37 45.6 +0.4**
SNR=19
BSY Bisya 78.67 290 P **P 06 37 46.8 +1.1**
SNR=8.7
MASF Masafi 78.70 293 P **P 06 37 47.2 +1.4**
SNR=13
MSFE Esma-Masafi 78.70 293 *i* P **P 06 37 47.1 +1.3**
SNR=15
SOHO SOHO 78.79 292 P **P 06 37 47.4 +1.1**
SOHO SOHO 78.79 292 *i* P **P 06 37 47.0 +0.7**
SNR=15
UOSS Minazif 78.80 292 P **P 06 37 47.1 +0.7**
UOSS Minazif 78.80 292 P **P 06 37 47.2 +0.9**
UOSS Minazif 78.80 292 *i* P **P 06 37 46.9 +0.5**
SNR=20
D08A Wollman Farm, 78.82 44 IAmb IAmb 06 37 48.3
comp=Z,104nm,1.1s
HATD Hatta, Dubai 78.90 292 P **P 06 37 48.1 +1.2**
SNR=14
HATD Hatta, Dubai 78.90 292 *i* P **P 06 37 47.6 +0.7**
SNR=23
C09A Chrisman Ranch 78.97 43 P **P 06 37 47.8 +1.0**
ASHO Ashiyiah 79.02 292 P **P 06 37 48.7 +1.2**
SNR=19
ASHO Ashiyiah 79.02 292 *i* P **P 06 37 48.4 +0.9**
SNR=36
ARQ Araqi 79.06 291 P **P 06 37 49.1 +1.3**
SNR=9.9
MCCM Marconi Confer 79.13 53 IAmb IAmb 06 37 49.3
comp=Z,165nm,1.3s
TBI Tubuai 79.23 121 *e*P **P 06 37 49.6 +1.1**
comp=Z,356nm,1.1s
TBI *e*S **S 06 47 40.6 +2.0**
comp=Z,256nm,28.2s
TBI Tubuai 79.23 121 *e*LR LR 07 02 37.7
comp=Z,711nm,25.2s
NAZ Nazwa, Dubai 79.25 293 P **P 06 37 49.9 +1.1**
SNR=11
NAZ Nazwa, Dubai 79.25 293 *i* P **P 06 37 49.1 +0.3**
SNR=6.6
DQM DQM 79.31 287 P **P 06 37 50.3 +1.1**
SNR=12
FAQ Al Faqa, Dubai 79.39 292 P **P 06 37 50.4 +0.8**
SNR=6.9
FAQ Al Faqa, Dubai 79.39 292 *i* P **P 06 37 50.0 +0.5**
SNR=15
TULEG Thule 79.44 7 *i* P **P 06 37 48.0 -0.9**
TULEG IAmb IAmb 06 38 23.4
comp=Z,342nm,1.4s
ALNE Al Ain 79.49 292 P **P 06 37 51.2 +1.2**
SNR=19
ALNE Al Ain 79.49 292 *i* P **P 06 37 51.3 +1.2**
SNR=11
E09A Wood Farm, Sta 79.51 44 IAmb IAmb 06 37 52.1
comp=Z,126nm,1.1s
KTK1 Kautokeino 79.52 342 *e*P **P 06 37 49.6 +0.2**
KTK1 IAmb IAmb 06 37 49.8
comp=Z,31nm,0.8s
NEW Newport 79.52 42 IAmb IAmb 06 37 51.9
comp=Z,107nm,0.9s
NEW Newport 79.52 42 P **P 06 37 50.9 +1.0**
baz=292,SNR=114
ASUD Al Ashush, Dub 79.66 292 P **P 06 37 52.5 +1.4**
SNR=8.1
ASUD Al Ashush, Dub 79.66 292 *i* P **P 06 37 52.6 +1.6**
SNR=18
ORV Oroville 79.67 52 IAmb IAmb 06 37 52.6
comp=Z,130nm,1.1s
MOD Modoc Plateau 79.70 49 IAmb IAmb 06 37 53.3
comp=Z,120nm,1.2s
EDM Edmonton 79.84 37 IAmb IAmb 06 37 53.5
comp=Z,138nm,1.1s
AJN Ajban 79.97 292 P **P 06 37 53.7 +1.0**
SNR=7.5
AJN Ajban 79.97 292 *i* P **P 06 37 53.5 +0.9**
SNR=8.0
JETT Jettan, Norway 79.99 343 *e*P **P 06 37 51.9 -0.1**
JETT IAmb IAmb 06 37 53.0
comp=Z,56nm,0.7s
NEEM North Greenlan 80.12 3 *i* P **P 06 37 53.5 +0.6**
NEEM IAmb IAmb 06 37 54.4
comp=Z,117nm,0.9s
VRH Novokhopyorsk 80.13 321 *e*P **P 06 37 52.8 -0.2**
VRH *e**PP **pP 06 38 21.4 -1.9**
VRH *e*S **S 06 47 43.4 -3.9**
VRH pmax pmax
comp=Z,140nm,0.8s
VRH smax smax
comp=E,1μm,4.2s
AFDM Forest Hills D 80.26 52 IAmb IAmb 06 37 56.1
comp=Z,106nm,1.2s
TRO Tromso 80.35 343 *e*P **P 06 37 53.7 -0.1**
TRO IAmb IAmb 06 37 54.0
comp=Z,37nm,0.7s
BEKR Beckworth 80.38 51 IAmb IAmb 06 37 56.8
comp=Z,179nm,0.9s
J08A Circle Bar Ran 80.44 47 P **P 06 37 55.5 +0.5**
J08A IAmb IAmb 06 37 57.4
comp=Z,146nm,1.0s
UMZA Um Al Zommool 80.45 291 P **P 06 37 55.8 +0.5**
MOS Moscow 80.49 327 *e*P **P 06 37 54.1 -0.7**
MOS *e**PP **pP 06 38 21.8 -3.4**
MOS *e* 06 41 01.3
MOS *e*S **S 06 47 47.2 -3.7**
MOS *e**SS **pS 06 48 33.4 +4.8**
MOS pmax pmax
comp=Z,93nm,1.2s
GROC Groznyy 80.60 313 *e*P **P 06 37 55.3 -0.4**
GROC *e**PP **pP 06 38 27.4 +1.1**
GROC *e**SP **sP 06 38 40.7 +1.4**
GROC *e* 06 40 59.4
GROC *e*S **S 06 47 50.7 -1.9**
GROC pmax pmax
comp=Z,134nm,0.6s
DAG Danmarks Havn 80.61 356 *i* P **P 06 37 55.1 0.0**
DAG IAmb IAmb 06 37 55.4
comp=Z,39nm,1.0s
BMO Blue Mountains 80.67 45 IAmb IAmb 06 37 58.3
comp=Z,106nm,1.1s
TAOE Nuku Hiva Isla 80.67 104 *e*S **S 06 47 55.4 +1.0**
comp=Z,458nm,28.4s
TAOE Nuku Hiva Isla 80.67 104 *e*LR LR 07 03 18.2
comp=Z,348nm,21.8s
LGD Lagodekhi 80.79 311 P **P 06 37 57.3 +0.5**
EMB Emerald Bay 80.89 52 IAmb IAmb 06 37 59.8
comp=Z,132nm,1.0s
CMB Columbia Colle 81.02 53 IAmb IAmb 06 38 00.2
comp=Z,131nm,0.9s
DDFL Dedoflistskaro 81.02 311 P **P 06 38 01.8 +3.7**
DDFL S **sP 06 38 34.5 -7.2**
BBGB Big Mountain B 81.05 54 IAmb IAmb 06 38 00.9
comp=Z,193nm,1.0s
LPSR Galich'ya Gora 81.14 323 *e*P **P 06 37 58.2 -0.2**
LPSR *e**PP **pP 06 38 27.0 -1.8**
LPSR *e*S **S 06 47 53.6 -4.2**
LPSR pmax pmax
comp=Z,110nm,1.0s
LPSR smax smax
comp=N,410nm,2.2s
PAHR Pah Rah Range 81.14 51 IAmb IAmb 06 38 00.9
comp=Z,111nm,1.1s
WALA Waterton Lakes 81.18 41 IAmb IAmb 06 38 01.4
comp=Z,124nm,1.0s
MZWR Madinat Zayed 81.20 292 P **P 06 38 00.6 +1.4**
PNTR Pine Nut 81.21 51 IAmb IAmb 06 38 01.7
comp=Z,116nm,0.8s
OBN Obninsk 81.31 326 P **P 06 37 59.3 +0.1**
comp=Z,7.1nm,0.6s,baz=78,slow=4.3,SNR=15
OBN LR LR 07 16 26.3
comp=Z,120nm,18.6s,baz=48,slow=37
OBN Obninsk 81.31 326 P **P 06 37 59.3 +0.1**
OBN Obninsk 81.31 326 *c e*P **P 06 37 59.1 -0.1**
OBN *e**PP **pP 06 38 30.1 +0.5**
OBN *e**SP **sP 06 38 44.4 +1.9**
OBN *e* 06 41 06.9
OBN *e*PPP PPP 06 42 59.7
OBN *e*S **S 06 47 56.1 -3.3**
OBN *e*SS **SS 06 53 24.6 +7.6**
OBN pmax pmax
comp=Z,57nm,1.0s
PMPB Monarch Peak 81.36 55 IAmb IAmb 06 38 02.4
comp=Z,122nm,1.1s
VORR Voronezh 81.38 322 ⇓ *i* P **P 06 38 00.5 +0.9**
VORR *e**SP **pwP 06 38 33.6 -1.5**
VORR *e*S **S 06 47 56.9 -3.4**
VORR pmax pmax
comp=Z,160nm,1.4s
YERR Yerington 81.51 51 IAmb IAmb 06 38 03.1
comp=Z,116nm,1.0s
VSR Storozhevoye 81.59 322 *e*P **P 06 38 01.1 +0.3**
VSR *e**PP **pP 06 38 29.8 -1.4**
VSR *e*S **S 06 47 57.6 -4.9**
VSR pmax pmax
comp=Z,240nm,1.0s
VSR smax smax
comp=N,2μm,5.8s
PNSH Pansheti 81.61 313 P **P 06 38 00.9 -0.5**
GOF Gofitskoye 81.73 315 ⇑ *e*P **P 06 38 02.3 +0.6**
MZR Muzera 81.81 291 P **P 06 38 03.6 +1.1**
SNR=19
MZR Muzera 81.81 291 *i* P **P 06 38 03.2 +0.8**
SNR=18
BTNK Botanikuri 81.85 312 P P 06 37 56.1 -6.3
GHWR Ruwais 81.99 293 P **P 06 38 04.5 +1.1**
ZEI Tsey 82.04 313 *e*P **P 06 38 01.7 -1.9**
ZEI pmax pmax
comp=Z,114nm,1.3s
MSO Missoula 82.06 43 P **P 06 38 03.7 +0.1**
baz=294,SNR=14
MDPB Devils Postpil 82.12 53 IAmb IAmb 06 38 06.5
comp=Z,123nm,1.3s
OMMB Old Mammoth Mi 82.19 53 IAmb IAmb 06 38 06.9
comp=Z,135nm,1.4s
MFID Camas Ranch 82.20 46 IAmb IAmb 06 38 06.6
comp=Z,132nm,1.0s
SMMC Simmler 82.30 55 P **P 06 38 06.3 +1.4**
baz=292,SNR=20
MLAC Mammoth, Mammo 82.31 53 P **P 06 38 06.6 +1.4**
baz=292,SNR=38
KVN Kaiserville 82.31 51 IAmb IAmb 06 38 07.2
comp=Z,117nm,1.1s
LHV Little Huntoon 82.31 52 IAmb IAmb 06 38 07.6
comp=Z,84nm,0.9s
KBZ Khabaz 82.35 314 P **P 06 38 05.9 +1.0**
comp=Z,190nm,0.9s,baz=88,slow=3.0,SNR=249
KBZ S **S 06 48 10.6 +0.1**
comp=Z,2.9nm,0.9s,baz=286,slow=18,SNR=12
KBZ PKKPbc **PKKPbc 06 56 32.0 +0.5**
comp=Z,2.7nm,0.8s,baz=316,slow=3.2,SNR=4.7
KBZ LR LR 07 17 42.3
comp=Z,403nm,19.4s,baz=76,slow=38
comp=Z,190nm,0.9s
KBZ Khabaz 82.35 314 *c e*P **P 06 38 05.8 +0.9**
KBZ pmax pmax
comp=Z,271nm,0.9s
DMTO DMTO 82.38 286 P **P 06 38 06.3 +0.7**
SNR=19
VOG Valley Oaks Go 82.39 54 P **P 06 38 05.9 +0.7**
baz=292,SNR=11
KVAR Kislovodsk Arr 82.39 314 P **P 06 38 06.7 +1.4**
comp=Z,37nm,0.9s,baz=355,slow=7.8,SNR=9.7
KVAR LR LR 07 15 20.7
comp=Z,387nm,21.4s,baz=270,slow=36
comp=Z,37nm,0.9s
NVAR Mina Array Bea 82.39 52 P **P 06 38 06.5 +1.0**
comp=Z,62nm,0.7s,baz=269,slow=5.9,SNR=502
NVAR PKKPbc **PKKPbc 06 56 32.2 +0.6**
comp=Z,0.7nm,0.7s,baz=162,slow=1.9,SNR=4.2
NVAR LR LR 07 09 28.0
comp=Z,254nm,20.1s,baz=268,slow=32
comp=Z,62nm,0.7s
KIV Kislovodsk 82.40 314 ⇓ P **P 06 38 06.4 +1.1**
KIV Kislovodsk 82.40 314 P **P 06 38 06.0 +0.7**
KIV IAmb IAmb 06 38 42.1
comp=Z,192nm,1.1s
KIV Kislovodsk 82.40 314 *e*P **P 06 38 06.0 +0.7**
KIV *e**PP **pP 06 38 34.6 -1.5**
KIV *e*S **S 06 48 12.1 +0.8**
KIV *e*SS **SS 06 53 36.3 +2.2**
KIV pmax pmax
comp=Z,175nm,1.1s
KIV pmax pmax
comp=Z,68nm,3.9s
KIV MLR MLR
comp=Z,322nm,19.0s
KIV Kislovodsk 82.40 314 P **P 06 38 06.6 +1.3**
KIV Kislovodsk 82.40 314 *i* P **P 06 38 06.5 +1.1**
SNR=20
ONI Oni 82.42 313 P **P 06 38 06.6 +1.2**
GNI Garni 82.48 310 P **P 06 38 07.3 +1.5**
comp=Z,73nm,1.1s,baz=180,slow=3.4,SNR=30
GNI LR LR 07 18 45.4
comp=Z,142nm,18.9s,baz=86,slow=38
comp=Z,73nm,1.1s
GNI Garni 82.48 310 P **P 06 38 07.0 +1.1**
GNI IAmb IAmb 06 38 42.9
comp=Z,246nm,1.4s
GNI Garni 82.48 310 *c i* P **P 06 38 07.1 +1.2**
GNI pmax pmax
comp=Z,185nm,1.4s
GNI Garni 82.48 310 P **P 06 38 07.4 +1.5**
STEI Steigen 82.48 343 *e*P **P 06 38 04.9 -0.2**
STEI IAmb IAmb 06 38 05.8
comp=Z,80nm,0.9s
SHA1 Shidzhatmaz 82.50 314 *c i* P **P 06 38 06.9 +0.9**
PKM Mcpherson Peak 82.59 55 P **P 06 38 07.9 +1.3**
baz=292,SNR=29
NEY Neytrino 82.66 314 *i* P **P 06 38 07.8 +1.0**
NEY pmax pmax
comp=Z,34nm,1.2s
DOK Doka 82.79 287 P **P 06 38 08.0 +0.4**
SNR=52
VES Vestal, Richgr 82.79 54 P **P 06 38 07.7 +0.4**
baz=292,SNR=60
LOF Lofoten 82.81 343 *e*P **P 06 38 07.2 +0.4**
TKB Tkibuli 82.83 313 P **P 06 38 08.4 +0.9**
SBC Santa Barbara 82.84 56 P **P 06 38 08.8 +1.2**
baz=292,SNR=9.9
FAUS Fauske 82.85 342 *e*P **P 06 38 06.8 -0.1**
FAUS IAmb IAmb 06 38 07.0
comp=Z,58nm,1.2s
AKH Akhalkalaki 82.86 312 P **P 06 38 09.4 +1.5**
FIA1 FINESS Array S 82.89 335 P **P 06 38 06.6 -0.7**
FIA1 IAmb IAmb 06 38 07.7
comp=Z,85nm,0.9s
FINES FINESS Array B 82.90 335 P **P 06 38 06.6 -0.8**
comp=Z,51nm,0.8s,baz=73,slow=4.3,SNR=146
FINES PKKPbc **PKKPbc 06 56 26.8 -4.1**
comp=Z,2.4nm,1.0s,baz=17,slow=2.0,SNR=4.0
FINES LR LR 07 19 52.2
comp=Z,388nm,18.0s,baz=54,slow=39
comp=Z,51nm,0.8s
SHMA Al-Shehemyia 82.94 295 P **P 06 38 09.0 +0.7**
SLWR Sila 82.96 293 P **P 06 38 09.3 +0.8**
TIN Tinemaha, Big 82.97 53 P **P 06 38 09.6 +1.2**
baz=292,SNR=24
SCZ2 Santa Cruz Isl 83.06 56 P **P 06 38 09.3 +0.5**
baz=292
HLID Hailey 83.09 46 P **P 06 38 09.9 +0.9**
baz=294,SNR=51
RBK Rabkut 83.12 286 P **P 06 38 10.0 +0.5**
SNR=33
ABS Abastumani 83.19 312 P **P 06 38 10.7 +1.2**
ABS S **pP 06 38 43.9 +3.5**
SAKB Bahrain 83.25 295 P **P 06 38 10.5 +0.6**
ARVC Arvin 83.25 55 P **P 06 38 10.4 +0.6**
baz=292,SNR=23
CWC Cottonwood Cre 83.32 53 P **P 06 38 10.9 +0.6**
baz=293
ISA Isabella, Lake 83.32 54 P **P 06 38 10.2 0.0**
ISA Isabella, Lake 83.32 54 P **P 06 38 10.2 0.0**
ISA pmax pmax
comp=Z,85nm,1.2s
ISA Isabella, Lake 83.32 54 P **P 06 38 10.4 +0.2**
baz=293,SNR=32
LCH Last Change Ra 83.33 53 IAmb IAmb 06 38 12.4
comp=Z,89nm,1.1s
WHFO Wadi Hawf 83.36 287 P **P 06 38 10.7 0.0**
SNR=27
SNCC San Nicolas Is 83.43 57 P **P 06 38 11.3 +0.6**
baz=292,SNR=5.7
SMRA Abu-Samra 83.45 294 P **P 06 38 11.5 +0.6**
OSI Osito Audit: C 83.53 55 P **P 06 38 12.2 +0.9**
baz=292
GMN Gold Mountain 83.59 52 IAmb IAmb 06 38 13.8
comp=Z,66nm,0.9s
GRAC Grapevine Rang 83.63 53 P **P 06 38 12.9 +1.1**
baz=293,SNR=25
ELK Elko 83.67 49 LR LR 07 11 35.2
comp=Z,161nm,18.8s,baz=312,slow=33
ELK Elko 83.67 49 IAmb IAmb 06 38 14.3
comp=Z,88nm,1.1s
CCAC Calif City Air 83.86 55 IAmb IAmb 06 38 14.6
comp=Z,88nm,0.8s
MPMC Manual Prospec 83.90 54 P **P 06 38 14.2 +0.8**
baz=293,SNR=128
MOR8 Moi Rana 83.93 342 *e*P **P 06 38 10.9 -1.7**
MOR8 IAmb IAmb 06 38 13.8
comp=Z,27nm,0.8s
DECC Green Verdugo 83.97 56 P **P 06 38 13.9 +0.4**
baz=293,SNR=8.2
ABTO Aybut 83.98 286 P **P 06 38 14.6 +0.7**
SNR=47
EDW2 Edwards Air Fo 83.98 55 P **P 06 38 14.6 +1.0**
baz=293,SNR=47
LRMC Laurel Mtn Rad 83.98 54 P **P 06 38 14.5 +0.8**
baz=293,SNR=65
BATM Batumi 84.02 312 P **P 06 38 14.6 +1.0**
BOZ Bozeman (W) 84.04 43 P **P 06 38 14.4 +0.6**
baz=296,SNR=34
PASC Pasadena Art C 84.11 56 IAmb IAmb 06 38 15.8
comp=Z,88nm,1.2s
EGMT Eagleton 84.12 40 IAmb IAmb 06 38 16.0
comp=Z,79nm,1.1s
EGMT Eagleton 84.12 40 P **P 06 38 14.7 +0.6**
baz=297,SNR=18
FMP Fort Macarthur 84.20 56 P **P 06 38 15.0 +0.4**
baz=293
FURC Furnace Creek, 84.21 53 P **P 06 38 15.6 +1.0**
baz=293,SNR=83
STOK Stokkvaagen 84.22 342 *e*P **P 06 38 14.8 +0.7**
CIS Catalina Islan 84.23 56 P **P 06 38 15.0 +0.2**
baz=293,SNR=9.9
UPNV Upernavik 84.26 6 *i* P **P 06 38 14.2 0.0**
UPNV IAmb IAmb 06 38 15.6
comp=Z,129nm,1.0s
WCT Wildcat Mounta 84.26 53 IAmb IAmb 06 38 17.1
comp=Z,168nm,1.3s
MEF Metsahovi 84.28 334 *e*P **P 06 38 13.1 -1.3**
SCI2 San Clemente I 84.29 57 P **P 06 38 15.4 +0.3**
baz=293
VSU Vasula 84.30 332 *c i* P **P 06 38 13.8 -0.8**
VSU pmax pmax
comp=Z,223nm,1.0s
VSU Vasula 84.30 332 *e*P **P 06 38 13.3 -1.3**
R11A Troy Canyon, C 84.39 51 IAmb IAmb 06 38 18.0
comp=Z,210nm,1.5s
R11A Troy Canyon, C 84.39 51 P **P 06 38 16.6 +0.9**
baz=294,SNR=141
QSM Queen of Sheba 84.40 54 IAmb IAmb 06 38 17.7
comp=Z,169nm,1.1s
GEVA Gevas 84.41 309 IAmb IAmb 06 38 51.2
comp=Z,177nm,1.1s
TPNV Topopah Spring 84.47 52 IAmb IAmb 06 38 18.2
comp=Z,186nm,1.2s
TPNV Topopah Spring 84.47 52 P **P 06 38 17.0 +0.9**
baz=294,SNR=90
BFSC Mount Baldy Ra 84.49 55 P **P 06 38 16.5 +0.3**
baz=293,SNR=16
SOC Sochi 84.51 315 *e*P **P 06 38 15.0 -1.0**
SOC *e**PP **pP 06 38 43.3 -3.6**
SOC *e**SP **sP 06 38 59.1 -0.8**
SOC *e* 06 41 27.8
SOC *e*PPP PPP 06 43 25.8
SOC *e*S **S 06 48 28.7 -3.6**
SOC *e*SS **SS 06 54 02.8 -2.2**
SOC *e*SSS SSS 06 57 29.6
SOC pmax pmax
comp=Z,27nm,0.8s
S11A Rachel 84.56 52 IAmb IAmb 06 38 20.9
comp=Z,119nm,1.1s
YHL Hebgen Lake 84.65 44 IAmb IAmb 06 38 19.8
comp=Z,161nm,1.0s
YHB Horse Butte 84.68 44 IAmb IAmb 06 38 19.9
comp=Z,146nm,1.0s
GSC Goldstone, Bar 84.71 54 IAmb IAmb 06 38 18.8
comp=Z,81nm,0.9s
GSC Goldstone, Bar 84.71 54 P **P 06 38 18.0 +0.7**
baz=294,SNR=79
RRX Edison Barstow 84.74 55 P **P 06 38 18.4 +1.0**
baz=293
RAF Rauma 84.83 335 *e*P **P 06 38 15.0 -2.2**
SHOC Shoshone, Teco 84.87 53 P **P 06 38 18.7 +0.7**
baz=294,SNR=14
YHH Holmes Hill 84.89 44 IAmb IAmb 06 38 21.0
comp=Z,112nm,1.3s
HVU Hansel Valley 84.93 47 IAmb IAmb 06 38 20.9
comp=Z,187nm,1.3s
YNR Norris Junctio 85.03 44 IAmb IAmb 06 38 22.4
comp=Z,172nm,1.1s
BBRC Big Bear Solar 85.04 55 P **P 06 38 19.3 +0.2**
baz=294
GURO Guroymak-BITLI 85.04 310 IAmb IAmb 06 38 54.6
comp=Z,179nm,1.4s
YFT Old Faithful 85.05 44 IAmb IAmb 06 38 23.1
comp=Z,112nm,1.0s
FFC Flin Flon 85.08 32 P **P 06 38 19.2 +0.6**
FFC Flin Flon 85.08 32 P **P 06 38 19.2 +0.6**
FFC pmax pmax
comp=Z,217nm,1.0s
MURC Murrieta 85.09 56 P **P 06 38 19.6 +0.4**
baz=293,SNR=28
YUF Upper Falls 85.14 44 IAmb IAmb 06 38 22.7
comp=Z,183nm,1.4s
PRN Pahroc Range 85.16 52 IAmb IAmb 06 38 21.9
comp=Z,104nm,1.0s
IMW Indian Meadow 85.23 44 IAmb IAmb 06 38 22.6
comp=Z,65nm,0.8s
H17A Grant Village 85.24 44 IAmb IAmb 06 38 24.1
comp=Z,197nm,1.4s
H17A Grant Village 85.24 44 P **P 06 38 22.8 +2.8**
baz=297,SNR=55
HEC Hector,Ludlow 85.25 54 P **P 06 38 20.7 +0.7**
baz=294,SNR=30
LKWY Lake 85.28 44 IAmb IAmb 06 38 24.2
comp=Z,105nm,1.1s
TUQ Turquoise Moun 85.32 54 P **P 06 38 21.2 +0.8**
baz=294,SNR=14
YMP Mirror Lake Pl 85.35 43 IAmb IAmb 06 38 23.8
comp=Z,134nm,1.0s
SPUT South Promonto 85.35 47 IAmb IAmb 06 38 22.7
comp=Z,103nm,1.1s
SUMG Summit 85.40 1 *i* P **P 06 38 21.7 +1.4**
SUMG IAmb IAmb 06 38 22.4
comp=Z,132nm,0.9s
MTSE Matsula 85.40 333 *e*P **P 06 38 17.9 -2.2**
109C Camp Elliot, M 85.44 56 IAmb IAmb 06 38 22.6
comp=Z,135nm,1.2s
109C Camp Elliot, M 85.44 56 P **P 06 38 21.4 +0.6**
baz=294,SNR=13
ANN Anapa 85.45 317 *e*P **P 06 38 19.5 -1.1**
ANN *e**PP **pP 06 38 50.5 -0.9**
ANN *e*S **SKSac 06 48 32.5 -1.8**
ANN pmax pmax
comp=Z,107nm,1.2s
KOPT Kop Dagi 85.51 311 IAmb IAmb 06 39 01.6

comp=Z,92nm,1.3s
PSUT Pine Spring 85.55 50 IAmb IAmb 06 38 23.5
comp=Z,128nm,1.0s
DUG Dugway, Tooele 85.58 48 IAmb IAmb 06 38 23.7
comp=Z,128nm,1.1s
DUG Dugway, Tooele 85.58 48 P **P 06 38 22.4 +0.8**
baz=295,SNR=117
AHID Auburn Hatcher 85.62 45 IAmb IAmb 06 38 23.8
comp=Z,64nm,1.0s
PFO Pinyon Flats O 85.65 56 P **P 06 38 22.3 +0.3**
PFO IAmb IAmb 06 38 23.8
comp=Z,152nm,1.1s
PFO Pinyon Flats O 85.65 56 P **P 06 38 22.3 +0.3**
PFO pmax pmax
comp=Z,152nm,1.1s
PFO Pinyon Flats O 85.65 56 P **P 06 38 22.6 +0.6**
baz=294,SNR=88
TPFO Pinon Flats 85.66 56 P **P 06 38 22.6 +0.6**
baz=294,SNR=78
RLMT Red Lodge 85.74 43 IAmb IAmb 06 38 25.0
comp=Z,116nm,0.9s
RLMT Red Lodge 85.74 43 P **P 06 38 24.0 +1.6**
baz=297,SNR=94
GMRC Granite Mounta 85.78 54 P **P 06 38 23.5 +0.8**
baz=294,SNR=77
HWUT Hardware Ranch 85.82 47 IAmb IAmb 06 38 24.9
comp=Z,131nm,1.0s
NSS Namsos 85.83 341 *e*P **P 06 38 21.2 -0.9**
NSS IAmb IAmb 06 38 21.8
comp=Z,43nm,0.9s
BELC Belle Mtn. Jos 85.84 55 P **P 06 38 23.5 +0.5**
baz=294,SNR=26
BAR Barrett 85.86 56 IAmb IAmb 06 38 24.6
comp=Z,100nm,1.2s
TKX Tecate 85.95 57 IAmb IAmb 06 38 25.1
comp=Z,83nm,1.1s
MONP2 Monument Peak 85.97 56 P **P 06 38 24.3 +0.6**
baz=294,SNR=60
MNK Minsk 85.97 328 *i* P **P 06 38 22.1 -0.9**
MNK *i* *PP **pP 06 38 51.1 -2.5**
MNK *i* 06 41 41.0
MNK *i* S **SKSac 06 48 35.9 -1.3**
MNK *i* SS **SS 06 54 26.1 +0.4**
MNK *i* SSS SSS 06 57 59.6
MNK pmax pmax
comp=Z,98nm,1.2s
MNK pmax pmax
comp=N,41nm,1.0s
MNK pmax pmax
comp=E,8.0nm,1.2s
MNK MLR MLR
comp=Z,163nm,12.0s
MNK MLR MLR
comp=E,166nm,20.0s
MNK MLR MLR
comp=N,516nm,14.0s
MNK Minsk 85.97 328 *i* P **P 06 38 22.1 -0.9**
comp=E,8.0nm,1.2s
MNK *i* P **P 06 38 22.1 -0.9**
comp=N,41nm,1.0s
MNK *i* P **P 06 38 22.1 -0.9**
comp=Z,98nm,1.2s,baz=57
MNK *i* pP **pP 06 38 51.2 -2.5**
MNK *i* PP **PP 06 41 41.0 -3.0**
MNK *i* PPP PPP 06 43 36.0
MNK *i* S **SKSac 06 48 35.9 -1.3**
MNK *i* SS **SS 06 54 26.2 +0.4**
MNK *i* SSS SSS 06 57 59.6
MNK *i* LRM MLR 07 19 12.4
comp=Z,163nm,12.0s
MNK *i* LRM MLR 07 19 23.6
comp=E,166nm,19.6s
MNK *i* LRM MLR 07 19 30.5
comp=N,516nm,13.8s
V12A Nelson 86.00 53 IAmb IAmb 06 38 25.4
comp=Z,92nm,1.0s
CTU Camp Tracy 86.10 48 IAmb IAmb 06 38 26.1
comp=Z,101nm,1.0s
TCUT Toone Canyon 86.14 47 IAmb IAmb 06 38 26.3
comp=Z,89nm,0.9s
NLU North Lily Min 86.19 48 IAmb IAmb 06 38 26.7
comp=Z,71nm,1.0s
ISAL Salakas 86.21 330 *e*P **P 06 38 23.2 -0.9**
NACGM Naroch 86.28 329 ⇑*i* P **P 06 38 24.2 -0.3**
baz=56
IIGN Ignalina 86.29 329 *e*P **P 06 38 23.2 -1.3**
IKP In-Ko-Pah, Jac 86.31 56 P **P 06 38 25.9 +0.7**
baz=294,SNR=35
FCC Fort Churchill 86.31 26 IAmb IAmb 06 38 26.0
comp=Z,81nm,0.9s
CCUT Cedar City 86.32 51 IAmb IAmb 06 38 27.9
comp=Z,134nm,1.3s
RMX La Rumorosa 86.35 56 IAmb IAmb 06 38 27.7
comp=Z,107nm,1.1s
BC3 Big Chuckawall 86.40 55 P **P 06 38 26.7 +1.0**
baz=294,SNR=26
SWSC Sam W. Stewart 86.42 56 P **P 06 38 26.2 +0.5**
baz=294,SNR=26
IRM Iron Mountain 86.43 55 P **P 06 38 26.6 +0.9**
baz=294,SNR=74
YUH Yuha Desert 86.45 56 IAmb IAmb 06 38 27.6
comp=Z,108nm,1.1s
MPU Maple Canyon 86.47 48 IAmb IAmb 06 38 28.0
comp=Z,96nm,1.1s
SZCU Shurtz Canyon 86.50 51 IAmb IAmb 06 38 28.4
comp=Z,64nm,1.1s
NEE2 Needles Airpor 86.57 54 P **P 06 38 27.5 +1.1**
baz=295,SNR=15
BW06 Boulder Array 86.63 45 P **P 06 38 27.0 +0.1**
baz=297,SNR=27
PDAR Pinedale Array 86.64 45 P **P 06 38 26.9 0.0**
comp=Z,12nm,0.8s,baz=251,slow=2.1,SNR=118
PDAR PKKPbc **PKKPdf 06 56 16.6 +2.2**
comp=Z,2.2nm,0.9s,baz=96,slow=8.3,SNR=9.2
PDAR LR LR 07 12 34.0
comp=Z,262nm,19.8s,baz=300,slow=32
comp=Z,12nm,0.8s
LCMT Little Creek M 86.64 51 IAmb IAmb 06 38 29.2
comp=Z,120nm,1.0s
ESJX Sierra Juarez 86.69 57 IAmb IAmb 06 38 29.4
comp=Z,95nm,1.3s
LAO LASA Array 86.87 40 P **P 06 38 28.9 +1.2**
baz=299
LAO LASA Array 86.87 40 P **P 06 38 28.8 +1.1**
baz=299,SNR=83
MTPU Mount Pierson 86.95 50 IAmb IAmb 06 38 31.2
comp=Z,112nm,1.4s
BLYC Blythe 87.06 55 IAmb IAmb 06 38 31.0
comp=Z,133nm,1.1s
PDMCI Parker Dam,Lak 87.12 54 P **P 06 38 30.1 +1.1**
baz=295,SNR=34
PKCU Pink Cliffs 87.12 51 IAmb IAmb 06 39 01.5
comp=Z,130nm,1.4s
GLA Glamis 87.12 56 P **P 06 38 30.2 +1.0**
baz=295,SNR=35
UPP Uppsala 87.16 336 *e*P **P 06 38 26.8 -1.8**
DGMT Dagmar 87.16 38 IAmb IAmb 06 38 30.5
comp=Z,68nm,0.9s
DGMT Dagmar 87.16 38 P **P 06 38 29.0 0.0**
baz=301
DGMT Dagmar 87.16 38 P **P 06 38 29.4 +0.4**
baz=301,SNR=7.9
PABE Paberze 87.25 330 IAmb IAmb 06 39 03.2
comp=Z,74nm,0.8s
PABE Paberze 87.25 330 *e*P **P 06 38 27.6 -1.6**
AKASG Malin Array Be 87.35 325 P **P 06 38 28.6 -1.1**
comp=Z,8.7nm,0.5s,baz=46,slow=5.4,SNR=107
AKASG PKKP **PKKPdf 06 56 13.2 +0.4**
comp=Z,1.1nm,0.3s,baz=265,slow=2.3,SNR=4.7
AKASG LR LR 07 21 06.6
comp=Z,530nm,18.1s,baz=1.0,slow=38
comp=Z,8.7nm,0.5s
SIM Simferopol' 87.46 318 *e*P **P 06 38 29.7 -0.8**
SIM *e* 06 41 58.0
SIM pmax pmax
comp=Z,154nm,0.8s
U15A North Rim 87.58 52 IAmb IAmb 06 38 33.9
comp=Z,100nm,0.9s
P18A Preston Nutter 87.60 48 IAmb IAmb 06 38 34.8
comp=Z,77nm,1.2s
SRU San Rafael Swe 87.64 49 IAmb IAmb 06 38 33.4
comp=Z,104nm,1.1s
SFX San Felipe 87.94 57 IAmb IAmb 06 38 34.9
comp=Z,135nm,1.3s
113A Mohawk Valley, 88.05 55 IAmb IAmb 06 38 35.6
comp=Z,137nm,1.2s
Y14A Wickenburg 88.13 54 IAmb IAmb 06 38 36.2
comp=Z,63nm,0.9s
ILULI Ilulissat 88.16 5 *i* P **P 06 38 33.2 0.0**
ILULI IAmb IAmb 06 38 33.8
comp=Z,68nm,0.9s
HFS Hagfors 88.41 337 P **P 06 38 33.3 -1.3**
comp=Z,11nm,0.5s,baz=45,slow=4.3,SNR=6.8
HFS PKKPbc **PKKPdf 06 56 14.3 +3.2**
comp=Z,5.5nm,0.7s,baz=174,slow=3.0,SNR=12
HFS LR LR 07 20 29.1
comp=Z,283nm,19.5s,baz=50,slow=37
comp=Z,11nm,0.5s
RAYN Ar Rayn 88.41 295 P **P 06 38 35.6 +0.2**
RAYN IAmb IAmb 06 39 11.6
comp=Z,129nm,1.3s
RAYN Ar Rayn 88.41 295 P **P 06 38 35.6 +0.2**
RAYN pmax pmax
comp=Z,129nm,1.3s
RAYN Ar Rayn 88.41 295 P **P 06 38 35.8 +0.4**
RAYN Ar Rayn 88.41 295 *i* P **P 06 38 35.6 +0.2**
SNR=51
VIKU Vikbolandet 88.42 335 *e*P **P 06 38 32.1 -2.5**
DOMB Dombas 88.55 340 *e*P **P 06 38 34.6 -0.7**
DOMB IAmb IAmb 06 38 35.2
comp=Z,26nm,0.9s
NB201 NORSAR Array S 88.58 339 IAmb IAmb 06 39 08.9
comp=Z,59nm,0.7s
NC204 NORSAR Array S 88.58 339 IAmb IAmb 06 39 09.8
comp=Z,72nm,1.0s
NB2 NORSAR Subarra 88.61 339 P **P 06 38 34.1 -1.5**
comp=Z,50nm,1.1s,baz=43,slow=5.1
NB2 NORSAR Subarra 88.61 339 P **P 06 38 32.0 -3.6**
NB2 pmax pmax
comp=Z,15nm,1.1s
NB2 NORSAR Subarra 88.61 339 P **P 06 38 34.1 -1.5**
baz=43,slow=5.1
NOA NORSAR Array B 88.61 339 P **P 06 38 34.0 -1.5**
comp=Z,15nm,0.8s,baz=51,slow=4.2,SNR=46
NOA PKKPbc **PKKPbc 06 56 15.8 -1.8**
comp=Z,4.6nm,0.9s,baz=227,slow=2.6,SNR=5.6
NOA LR LR 07 21 57.5
comp=Z,268nm,19.4s,baz=45,slow=38
comp=Z,15nm,0.8s
WUAZ Wupatki 88.65 52 P **P 06 38 37.8 +1.3**
baz=296,SNR=107
K22A Casper 88.66 44 P **P 06 38 36.7 +0.3**
baz=299
K22A Casper 88.66 44 P **P 06 38 36.9 +0.5**
baz=299,SNR=18
NORES NORESS Array B 88.72 339 P **P 06 38 37.1 +1.0**
O20A White River Ci 88.73 47 IAmb IAmb 06 38 38.6
comp=Z,104nm,1.2s
O20A White River Ci 88.73 47 P **P 06 38 37.4 +0.5**
baz=298,SNR=35
ICESG Greenland Ices 88.88 1 *i* P **P 06 38 37.3 +0.2**
ICESG IAmb IAmb 06 39 11.6
comp=Z,197nm,1.3s
GAZ Gaziantep 89.08 310 IAmb IAmb 06 38 39.6
comp=Z,72nm,1.0s
AKN Aaknes 89.08 341 *e*P **P 06 38 37.8 0.0**
AKN IAmb IAmb 06 38 38.3
comp=Z,26nm,1.0s
214A Organ Pipe Nat 89.13 56 P **P 06 38 40.0 +1.3**
baz=296,SNR=58
PV13 Radium Mtn., P 89.27 49 IAmb IAmb 06 38 41.1
comp=Z,73nm,1.0s
PV15 Paradox Valley 89.42 48 IAmb IAmb 06 38 41.9
comp=Z,52nm,1.0s
RSSD Black Hills 89.49 42 P **P 06 38 40.9 +0.5**
RSSD IAmb IAmb 06 38 42.9
comp=Z,54nm,1.1s
RSSD Black Hills 89.49 42 P **P 06 38 40.9 +0.5**
RSSD pmax pmax
comp=Z,54nm,1.1s
RSSD Black Hills 89.49 42 P **P 06 38 40.7 +0.3**
baz=301
RSSD Black Hills 89.49 42 P **P 06 38 40.7 +0.3**
baz=301
KIS Kishinev 89.58 322 *e*P **P 06 38 39.0 -1.4**
comp=Z,20nm,0.7s
KIS Kishinev 89.58 322 *e*PP PP 06 42 01.0 -12
MILM Milestii Mici 89.62 322 *e*P **P 06 38 39.0 -1.6**
comp=Z,70nm,1.2s
MILM Milestii Mici 89.62 322 *e*PP PP 06 42 09.0 -4.4
MILM Milestii Mici 89.62 322 *e*P **P 06 38 39.0 -1.6**
MILM *e* 06 42 09.0
MILM *e*S **S 06 49 14.0 -7.2**
MILM pmax pmax
comp=Z,70nm,1.2s
ILGA Ilgaz 89.62 315 IAmb IAmb 06 38 42.0
comp=Z,66nm,0.9s
SKAR Skarslia 89.83 340 *e*P **P 06 38 40.9 -0.5**
N23A Red Feather La 89.90 45 P **P 06 38 43.8 +1.4**
baz=300,SNR=56
MVCO Mesa Verde 89.94 49 IAmb IAmb 06 38 44.7
comp=Z,124nm,1.4s
MVCO Mesa Verde 89.94 49 P **P 06 38 43.3 +0.7**
baz=298,SNR=34
W18A Petrified Fore 90.02 52 P **P 06 38 44.0 +1.0**
baz=298
SMCO Snowmass 90.05 47 IAmb IAmb 06 38 45.5
comp=Z,81nm,1.0s
MDND Maddock 90.09 37 IAmb IAmb 06 38 44.6
comp=Z,79nm,0.8s
MDND Maddock 90.09 37 P **P 06 38 43.4 +0.6**
baz=304
MDND Maddock 90.09 37 P **P 06 38 43.4 +0.6**
baz=304,SNR=17
E28A Huff 90.18 38 P **P 06 38 43.9 +0.6**
baz=303
BR131 Keskin Array S 90.33 314 IAmb IAmb 06 38 44.6
comp=Z,66nm,0.8s
BRTR Keskin Array B 90.33 314 P **P 06 38 43.5 -0.8**
comp=Z,34nm,0.8s,baz=94,slow=3.7,SNR=116
BRTR PKKP **PKKPbc 06 56 12.4 -0.3**
comp=Z,2.2nm,0.8s,baz=200,slow=3.4,SNR=8.8
BRTR LR LR 07 25 42.7
comp=Z,206nm,18.7s,baz=76,slow=40
comp=Z,34nm,0.8s
SFJD Kangerlussuaq 90.37 6 LR LR 07 23 31.5
comp=Z,70nm,18.2s,baz=350,slow=38
SFJD Kangerlussuaq 90.37 6 *i* P **P 06 38 43.3 -0.3**
SFJD IAmb IAmb 06 38 44.8
comp=Z,36nm,0.8s
TUC Tucson 90.52 55 P **P 06 38 46.3 +1.1**
TUC IAmb IAmb 06 38 47.9
comp=Z,105nm,1.2s
TUC Tucson 90.52 55 P **P 06 38 46.3 +1.1**
TUC pmax pmax
comp=Z,105nm,1.2s
TUC Tucson 90.52 55 P **P 06 38 46.5 +1.3**
baz=297
LVV L'vov 90.60 326 *e*P **P 06 38 44.2 -0.9**
LVV *e**PP **pP 06 39 16.1 +0.1**
LVV *e* 06 49 04.7
LVV *e*S **S 06 49 25.8 -4.3**
LVV *e*PS **PS 06 50 40.6 -13**
LVV pmax pmax
comp=Z,60nm,1.4s
ULM Lac du Bonnet 90.69 34 P **P 06 38 45.6 +0.1**
comp=Z,26nm,0.9s,baz=308,slow=5.2,SNR=26
ULM LR LR 07 19 32.0
comp=Z,201nm,20.0s,baz=310,slow=35
comp=Z,26nm,0.9s
ULM Lac du Bonnet 90.69 34 IAmb IAmb 06 38 46.3
comp=Z,44nm,1.0s
ANTO Ankara 90.82 314 ⇓P **P 06 38 46.6 +0.2**
ANTO Ankara 90.82 314 P **P 06 38 46.3 -0.2**
ANTO IAmb IAmb 06 38 47.0
comp=Z,38nm,0.9s
ANTO Ankara 90.82 314 P **P 06 38 46.3 -0.2**
ANTO pmax pmax
comp=Z,38nm,0.9s
ANTO Ankara 90.82 314 P **P 06 38 46.2 -0.2**
S22A 4UR Ranch, Cre 90.85 48 IAmb IAmb 06 38 49.2
comp=Z,82nm,1.2s
S22A 4UR Ranch, Cre 90.85 48 P **P 06 38 47.9 +1.0**
baz=299,SNR=94
CFR Carcaliu 90.97 320 ⇑P **P 06 38 46.7 -0.2**
TPGR Topolog 90.97 320 ⇑P **P 06 38 47.1 +0.2**
TESR Tescani 91.09 322 ⇓P **P 06 38 47.0 -0.5**
BRIGG Briggsdale 91.12 45 IAmb IAmb 06 38 49.5
comp=Z,54nm,1.1s
BIZ Bicaz 91.15 323 ⇑P **P 06 38 48.1 +0.3**
PANC Panciu 91.16 321 ⇑P **P 06 38 48.6 +0.9**
TIRR Tirgusor 91.20 320 ⇑P **P 06 38 48.1 +0.2**
TIRR Tirgusor 91.20 320 P **P 06 38 48.1 +0.2**
DY2G Dye2 91.22 4 *i* P **P 06 38 47.8 -0.1**
DY2G IAmb IAmb 06 38 49.8
comp=Z,84nm,1.4s
BURAR Bucovina Array 91.26 324 ⇓P **P 06 38 48.3 0.0**
BURAR Bucovina Array 91.26 324 P **P 06 38 48.0 -0.4**
BURAR Bucovina Array 91.26 324 P **P 06 38 47.9 -0.4**
HARR Harsova 91.36 320 ⇑P **P 06 38 48.5 -0.2**
Q24A Divide 91.39 47 IAmb IAmb 06 38 51.5
comp=Z,48nm,0.9s
Q24A Divide 91.39 47 P **P 06 38 50.5 +1.1**
baz=300,SNR=26
VRI Vrincioaia 91.41 321 ⇓P **P 06 38 49.8 +0.9**
PLOR Plostina 91.46 322 ⇓P **P 06 38 49.3 +0.1**
ASF Jabal al Asfar 91.61 306 P **P 06 38 50.1 -0.1**
comp=Z,22nm,1.0s,baz=56,slow=2.9,SNR=18
ASF LR LR 07 23 16.1
comp=Z,304nm,21.7s,baz=97,slow=38
comp=Z,22nm,1.0s
COVR Voineasa-Covas 91.72 322 ⇓P **P 06 38 50.7 +0.3**
SDCO Great Sand Dun 91.76 48 IAmb IAmb 06 38 53.1
comp=Z,48nm,1.1s
SDCO Great Sand Dun 91.76 48 P **P 06 38 51.9 +0.8**
baz=300
SDCO Great Sand Dun 91.76 48 P **P 06 38 52.0 +0.9**
baz=300,SNR=36
CASY Casey 91.77 193 P **P 06 38 50.4 +0.6**
OZUR 91.81 322 ⇑P **P 06 38 51.2 +0.3**
AGMN Agassiz Nation 91.87 35 P **P 06 38 51.6 +0.6**
baz=307,SNR=28
AGMN Agassiz Nation 91.87 35 P **P 06 38 51.2 +0.2**
baz=307,SNR=28
D32B Dogwood Acres, 91.94 37 P **P 06 38 51.7 +0.3**
baz=306,SNR=5.0
KOLS Kolonicke sedl 92.05 326 *e*P **P 06 38 52.1 +0.3**
KOLS pmax pmax
comp=Z,18nm,1.0s
MLR Muntele Rosu 92.07 321 ⇓P **P 06 38 51.7 -0.5**
MLR Muntele Rosu 92.07 321 P **P 06 38 50.7 -1.5**
comp=Z,5.6nm,0.9s,baz=344,slow=7.2,SNR=6.9
MLR LR LR 07 21 41.4
comp=Z,400nm,20.1s,baz=48,slow=36
comp=Z,5.6nm,0.9s
DOPR Dopca 92.11 322 ⇑P **P 06 38 52.7 +0.5**
STHS Stebnicka Huta 92.28 327 *e*P **P 06 38 52.3 -0.6**
MMAI Mount Meron Ar 92.33 307 P **P 06 38 53.4 -0.1**
comp=Z,37nm,1.0s,baz=51,slow=6.6,SNR=31
MMAI S **SKSac 06 49 13.2 -2.4**
comp=Z,1.2nm,0.2s,baz=28,slow=6.5,SNR=4.8
MMAI LR LR 07 25 45.4
comp=Z,264nm,19.2s,baz=283,slow=39
comp=Z,37nm,1.0s
BORA Eskisehir 92.36 315 IAmb IAmb 06 39 27.9
comp=Z,58nm,1.4s
SUSD Miller 92.39 40 P **P 06 38 53.7 +0.1**
baz=305
SUSD Miller 92.39 40 P **P 06 38 53.6 +0.1**
baz=305,SNR=14
TRPA Tarpa 92.40 325 ⇓P **P 06 38 53.5 +0.1**
TRPA Tarpa 92.40 325 P **P 06 38 53.5 +0.1**
OGNE Ogallala 92.42 44 P **P 06 38 54.3 +0.5**
baz=302
OGNE Ogallala 92.42 44 P **P 06 38 54.1 +0.3**
baz=302,SNR=7.6
ANMO Albuquerque 92.47 51 LR LR 07 13 05.8
comp=Z,150nm,21.2s,baz=296,slow=31
ANMO Albuquerque 92.47 51 P **P 06 38 55.1 +0.8**
ANMO IAmb IAmb 06 38 56.6
comp=Z,73nm,1.2s
ANMO Albuquerque 92.47 51 P **P 06 38 55.1 +0.8**
ANMO pmax pmax
comp=Z,73nm,1.2s
ANMO Albuquerque 92.47 51 P **P 06 38 55.3 +1.0**
baz=299,SNR=87
ANMO Albuquerque 92.47 51 P **P 06 38 55.4 +1.0**
baz=299
CRVS Cervenica-Dubn 92.49 326 *e*P **P 06 38 53.8 -0.1**
CRVS pmax pmax
comp=Z,107nm,1.2s
OJC Ojcow 92.50 328 IAmb IAmb 06 38 52.8
comp=Z,46nm,1.3s
BORG Borgarnes 92.51 354 LR LR 07 21 23.2
comp=Z,60nm,21.8s,baz=343,slow=36
Y22D IRIS PASSCAL I 92.56 52 IAmb IAmb 06 38 59.5
comp=Z,45nm,0.9s
Y22D IRIS PASSCAL I 92.56 52 P **P 06 38 56.2 +1.5**
baz=299
Y22D IRIS PASSCAL I 92.56 52 P **P 06 38 56.1 +1.5**
baz=299
Y22F Passcal Instru 92.56 52 P **P 06 38 56.1 +1.4**
baz=299
Y22A Socorro 92.59 52 P **P 06 38 56.0 +1.1**
baz=299,SNR=24
VOIR 92.62 322 ⇑P **P 06 38 54.7 +0.1**
121A Cookes Peak, D 92.66 53 P **P 06 38 56.9 +1.6**
baz=298,SNR=41
121A Cookes Peak, D 92.66 53 P **P 06 38 56.9 +1.6**
baz=298,SNR=41
T25A Trinidad 92.82 48 P **P 06 38 56.9 +1.0**
baz=301,SNR=42
CSS Mathiatis 92.89 310 IAmb IAmb 06 39 30.0
comp=Z,60nm,1.3s
B35A Bob, Littlefor 92.96 34 P **P 06 38 56.4 +0.3**
baz=309,SNR=14
ABAH Abaujker 92.98 326 P **P 06 38 56.1 0.0**
NUUK Nuuk 93.00 7 *i* P **P 06 38 55.7 -0.1**
KSCO Kaye Shedlock' 93.05 46 P **P 06 38 57.6 +0.8**
baz=302
KSCO Kaye Shedlock' 93.05 46 P **P 06 38 57.6 +0.8**
baz=302,SNR=14
F33A 5 Mile Ranch, 93.11 37 P **P 06 38 57.2 +0.5**
baz=307,SNR=39
DRGR 93.12 324 P **P 06 38 57.3 +0.4**
K31A O'Neill 93.54 41 P **P 06 38 59.2 +0.4**
baz=305,SNR=10
MORC Moravsky Berou 93.89 328 ⇓P **P 06 39 00.1 -0.3**
MORC Moravsky Berou 93.89 328 P **P 06 38 59.5 -0.9**
MORC Moravsky Berou 93.89 328 P **P 06 38 59.5 -0.9**
MORC pmax pmax
comp=Z,9.0nm,1.0s
MORC Moravsky Berou 93.89 328 *e*P **P 06 38 59.2 -1.2**
MORC *e* 06 39 33.0
PSZ Piszkesteto 93.92 326 ⇓P **P 06 39 00.5 -0.1**
PSZ Piszkesteto 93.92 326 IAmb IAmb 06 39 01.4
comp=Z,36nm,1.3s
GZR Gura Zlata 93.93 323 ⇓P **P 06 38 60.0 -0.7**
OSTC Ostas 94.00 330 *e*P **P 06 39 00.1 -0.7**
OSTC *e*pP **pP 06 39 33.0 +1.3**
SIRR Siria 94.01 324 ⇓P **P 06 39 00.3 -0.7**
MAUC Maruska 94.03 328 *e*P **P 06 39 01.1 +0.1**
CHVC Chvalec 94.06 330 *e*P **P 06 39 00.2 -0.9**
KRLC Kraliky 94.06 329 *e*P **P 06 39 00.3 -0.8**
KRLC *e* 06 39 33.4
KRLC Kraliky 94.06 329 *e*P **P 06 39 00.3 -0.8**
KRLC *e*pP **pP 06 39 33.4 +1.2**
VYHS Vyhne 94.09 327 *e*P **P 06 39 01.0 -0.3**
VYHS pmax pmax
comp=Z,38nm,1.2s
DPC Dobruska-Polom 94.09 329 *e*P **P 06 39 00.8 -0.5**
DPC *e* 06 39 35.2
DPC Dobruska-Polom 94.09 329 *e*P **P 06 39 00.8 -0.5**
DPC *e*pP **pwP 06 39 35.2 -2.4**
UPC Upice 94.13 330 *e*P **P 06 39 00.9 -0.5**
UPC Upice 94.13 330 *e*P **P 06 39 00.9 -0.5**
ECSD EROS Data Cent 94.17 39 P **P 06 39 01.9 +0.2**
baz=306,SNR=27
ECSD EROS Data Cent 94.17 39 P **P 06 39 01.9 +0.2**
baz=306,SNR=27
EIL Elat 94.25 304 P **P 06 39 01.9 -0.5**
comp=Z,21nm,1.0s,baz=27,slow=3.8,SNR=5.9
EIL LR LR 07 25 40.0
comp=Z,131nm,21.2s,baz=46,slow=38
comp=Z,21nm,1.0s
EYMN Ely 94.38 34 IAmb IAmb 06 39 04.8
comp=Z,32nm,1.2s
EYMN Ely 94.38 34 P **P 06 39 02.9 +0.3**
baz=310
EYMN Ely 94.38 34 P **P 06 39 02.7 +0.1**
baz=310
JAVC Velka Javorina 94.44 328 *e*P **P 06 39 03.1 +0.2**
JAVC *e* 06 39 36.6
HERR Herculane 94.44 322 ⇑P **P 06 39 02.0 -0.9**
LPIG La Paz 94.58 62 LR LR 07 16 42.7
comp=Z,122nm,19.0s,baz=290,slow=32
BGNE Belgrade 94.60 42 P **P 06 39 03.6 -0.2**
baz=305,SNR=6.6
BGNE Belgrade 94.60 42 P **P 06 39 03.1 -0.7**
baz=305,SNR=6.6

F36A **Milaca** 94.63 36 IAmb IAmb 06 39 05.0
comp=Z,39nm,1.1s
F36A **Milaca** 94.63 36 P **P** 06 39 03.8 0.0
baz=309,SNR=15
VRAC **Vranov** 94.67 328 ⇑P **P** 06 39 03.0 -0.9
VRAC **Vranov** 94.67 328 P **P** 06 39 03.4 -0.5
comp=Z,3.6nm,0.4s,baz=54,slow=5.1,SNR=12
VRAC LR LR 07 26 20.0
comp=Z,260nm,18.3s,baz=43,slow=38
comp=Z,3.6nm,0.4s
VRAC **Vranov** 94.67 328 *e*P **P** 06 39 03.2 -0.7
VRAC *e* 06 39 36.7
SMOL **Smolenice** 94.79 327 *e*P **P** 06 39 04.3 -0.1
SMOL pmax pmax
comp=Z,13nm,1.2s
MDVR **Moldovita** 94.90 323 ⇑P **P** 06 39 04.7 -0.4
KRUC **Moravsky** 94.93 328 *e*P **P** 06 39 04.1 -1.0
KRUC *e* 06 39 38.1
CLL **Collm** 94.95 331 ⇑*i*P **P** 06 39 03.9 -1.2
CLL *i* *PP **pP** 06 39 37.3 +1.3
CLL *e* 06 49 27.0
CLL pmax pmax
comp=Z,18nm,1.1s
CLL **Collm** 94.95 331 LmV 07 26 00.0
comp=Z,300nm,19.3s
CLL **Collm** 94.95 331 ⇑*i*P **P** 06 39 03.9 -1.2
comp=Z,18nm,1.1s
CLL **Collm** 94.95 331 *i* pP pP 06 39 37.3 +1.3
comp=Z,18nm,0.9s
CLL **Collm** 94.95 331 *i* x x 06 39 46.0
CLL **Collm** 94.95 331 *e*sP sP 06 39 51.0 +2.3
CLL **Collm** 94.95 331 *e*pPP 06 43 22.0
comp=Z,34nm,1.4s
CLL **Collm** 94.95 331 *e*SKSac **SKSac** 06 49 27.0 -2.0
CLL **Collm** 94.95 331 *e*S **S** 06 50 06.0 -2.6
CLL **Collm** 94.95 331 *e*SP SP 06 51 23.0 -1.9
CLL **Collm** 94.95 331 *e*SS SS 06 56 35.0 -0.1
CLL **Collm** 94.95 331 LmH 07 19 00.0
comp=N,300nm,20.3s
CLL **Collm** 94.95 331 LmH 07 19 00.0
comp=E,600nm,21.5s
MODS **Modra-Piesok** 94.95 327 *e*P **P** 06 39 05.9 +0.7
MODS pmax pmax
comp=Z,62nm,1.4s
CBKS **Cedar Bluff** 95.06 45 P **P** 06 39 06.1 +0.2
baz=304,SNR=8.0
CBKS **Cedar Bluff** 95.06 45 P **P** 06 39 05.5 -0.5
baz=304,SNR=8.0
BLKB **Belogradchik** 95.06 321 ⇑P **P** 06 39 06.0 +0.2
SLBS **Sierra La Lagu** 95.06 62 P **P** 06 39 06.0 -0.2
SLBS IAmb IAmb 06 39 08.5
comp=Z,33nm,0.9s
ZST **Bratislava** 95.16 327 *e*P **P** 06 39 06.2 +0.1
PRU **Pruhonice** 95.18 330 *e*P **P** 06 39 05.3 -0.9
PRU *e* 06 39 39.5
PRU **Pruhonice** 95.18 330 *e*P **P** 06 39 05.3 -0.9
PRU *e*pP **pP** 06 39 39.5 +2.4
VTS **Vitosha** 95.33 320 ⇑P **P** 06 39 07.9 +0.7
VTS **Vitosha** 95.33 320 IAmb IAmb 06 39 08.3
comp=Z,26nm,1.1s
VTS **Vitosha** 95.33 320 P **P** 06 39 07.4 +0.1
L34A **Svendsen Farm,** 95.36 40 IAmb IAmb 06 39 07.8
comp=Z,42nm,0.9s
L34A **Svendsen Farm,** 95.36 40 P **P** 06 39 06.9 -0.3
baz=306,SNR=8.0
N33B **J Bar K, Exete** 95.42 42 P **P** 06 39 06.5 -1.0
baz=306
SPMN **Marine on St.** 95.42 36 P **P** 06 39 07.8 +0.4
baz=309,SNR=15
SPMN **Marine on St.** 95.42 36 P **P** 06 39 07.6 +0.2
baz=309,SNR=15
ATD **Arta Tunnel** 95.55 285 LR LR 07 19 21.7
comp=Z,62nm,21.2s,baz=47,slow=34
MSTX **Muleshoe** 95.59 50 P **P** 06 39 08.5 0.0
baz=302
MORH **Mrgy, Hungar** 95.67 325 ⇓P **P** 06 39 07.6 -0.8
MORH **Mrgy, Hungar** 95.67 325 P **P** 06 39 07.7 -0.8
I37A **Lemond, Waseca** 95.85 38 IAmb IAmb 06 39 10.4
comp=Z,37nm,0.9s
I37B **Waseca** 95.85 38 P **P** 06 39 09.9 +0.6
baz=309,SNR=6.7
AMTX **Amarillo** 95.88 49 IAmb IAmb 06 39 12.9
comp=Z,34nm,0.9s
AMTX **Amarillo** 95.88 49 P **P** 06 39 10.6 +0.8
baz=302,SNR=10
AMTX **Amarillo** 95.88 49 P **P** 06 39 10.0 +0.2
baz=302
R32A **Long Quarter,** 95.94 44 IAmb IAmb 06 39 10.9
comp=Z,27nm,1.0s
R32A **Long Quarter,** 95.94 44 P **P** 06 39 10.2 +0.2
baz=304,SNR=6.5
NKC **Novy Kostel** 95.96 331 *e*P **P** 06 39 09.6 -0.2
NKC *e* 06 39 42.1
NKC **Novy Kostel** 95.96 331 *e*P **P** 06 39 09.6 -0.2
NKC *e*pP **pP** 06 39 42.1 +1.4
KOVH **Kovagotottos** 96.04 325 P **P** 06 39 09.5 -0.6
CKRC **Cesky Krumlov** 96.10 329 *e*P **P** 06 39 09.4 -1.0
CKRC *e*pP **pP** 06 39 43.8 +2.3
KHC **Kasperske Hory** 96.22 330 *e*P **P** 06 39 10.3 -0.7
KHC *e* 06 39 43.3
KHC **Kasperske Hory** 96.22 330 *e*P **P** 06 39 10.3 -0.7
KHC *e*pP **pP** 06 39 43.3 +1.2
KHC *e*x x 06 43 31.5
GERES **GERESS Array B** 96.37 329 P **P** 06 39 10.7 -1.1
comp=Z,2.5nm,0.7s,baz=45,slow=4.2,SNR=17
GERES PKKPbc **PKKPdf** 06 55 54.2 -3.0
comp=Z,2.4nm,0.8s,baz=212,slow=4.7,SNR=11
GERES LR LR 07 26 06.0
comp=Z,268nm,19.3s,baz=53,slow=37
comp=Z,2.5nm,0.7s
GERES **GERESS Array B** 96.37 329 P **P** 06 39 10.9 -0.8
GERES **GERESS Array B** 96.37 329 P **P** 06 39 10.9 -0.8
N35A **Tabor** 96.46 41 IAmb IAmb 06 39 12.9
comp=Z,42nm,1.2s
N35A **Tabor** 96.46 41 P **P** 06 39 12.2 0.0
baz=307
G40A **Rib Lake** 96.80 35 IAmb IAmb 06 39 15.0
comp=Z,25nm,1.1s
KSU1 **Kansas State U** 96.90 43 P **P** 06 39 14.2 0.0
baz=306,SNR=14
KSU1 **Kansas State U** 96.90 43 P **P** 06 39 14.2 0.0
baz=306,SNR=14
K38A **Parkersburg** 97.06 38 P Pdif 06 39 15.3 +0.3
baz=309
OK032 **Salt Plains WL** 97.18 46 IAmb IAmb 06 39 17.2
comp=Z,19nm,1.0s
SCIA **State Center** 97.27 39 P Pdif 06 39 16.8 +0.9
baz=309
SCIA **State Center** 97.27 39 P **P** 06 39 15.8 0.0
baz=309
TX31 **Lajitas Ar. Si** 97.31 54 P Pdif 06 39 16.9 +0.5
baz=301
TXAR **Lajitas Array** 97.31 54 P Pdif 06 39 16.9 +0.5
comp=Z,7.7nm,0.9s,baz=318,slow=2.8,SNR=65
TXAR PKiKP **PKiKP** 06 43 51.1 0.0
comp=Z,1.9nm,0.9s,baz=236,slow=1.6,SNR=7.2
TXAR PKKPbc **PKKPdf** 06 55 55.0 -0.6
comp=Z,5.1nm,0.8s,baz=133,slow=5.7,SNR=46
TXAR LR LR 07 20 13.0
comp=Z,194nm,18.9s,baz=308,slow=33
comp=Z,7.7nm,0.9s
TXAR **Lajitas Array** 97.31 54 P Pdif 06 39 17.0 +0.5
I40A **Norwalk** 97.48 36 IAmb IAmb 06 39 17.1
comp=Z,19nm,1.1s
EKA **Eskdalemuir Ar** 97.72 342 LR LR 07 27 23.9
comp=Z,154nm,19.4s,baz=38,slow=38
PDG **Podgorica** 97.76 322 ⇑P **P** 06 39 17.9 -0.1
PDG **Podgorica** 97.76 322 IAmb IAmb 06 39 18.3
comp=Z,37nm,1.1s
MYKA **Terra Mystica** 97.95 328 *e*P **PKKPbc** 06 55 51.8 -1.3
comp=Z,7.6nm,0.8s
N38A **Joes South For** 97.95 40 IAmb IAmb 06 39 19.8
comp=Z,27nm,1.1s
N38A **Joes South For** 97.95 40 P **P** 06 39 18.7 -0.2
baz=308
WMOK **Wichita Mounta** 97.96 48 P Pdif 06 39 19.3 +0.2
baz=304
WMOK **Wichita Mounta** 97.96 48 P Pdif 06 39 19.2 0.0
baz=304,SNR=11
OK029 **Liberty Lake** 98.26 46 IAmb IAmb 06 39 22.8
comp=Z,19nm,1.0s
JFWS **Jewell Farm** 98.32 37 P **P** 06 39 19.7 -0.8
baz=311
JFWS **Jewell Farm** 98.32 37 P **P** 06 39 20.2 -0.4
baz=311
ABTA **Abfaltersbach** 98.42 328 *e*P **PKKPbc** 06 55 50.4 -1.4
comp=Z,8.1nm,0.9s
WTTA **Wattenberg** 98.47 329 *e*P **PKKPbc** 06 55 50.4 -1.4
comp=Z,14nm,0.8s
P38A **Dawn** 98.49 41 IAmb IAmb 06 39 22.1
comp=Z,46nm,1.4s
P38A **Dawn** 98.49 41 P **P** 06 39 21.0 -0.3
baz=308
ABTX **Abilene, Hawle** 98.52 50 P Pdif 06 39 21.7 0.0
baz=303
ABTX **Abilene, Hawle** 98.52 50 P Pdif 06 39 22.0 +0.3
baz=303,SNR=7.8
IDI **Anoyia** 98.57 314 LR LR 07 29 55.2
comp=Z,129nm,19.1s,baz=51,slow=39
MOTA **Moosalm** 98.66 330 *e*P **PKKPbc** 06 55 50.2 -1.1
comp=Z,11nm,1.1s
SQTA **Sankt Quirin** 98.70 329 *e*P **PKKPbc** 06 55 49.6 -1.5
comp=Z,9.8nm,0.9s
SCHQ **Scheffreville** 98.88 17 P **P** 06 39 22.6 -0.2
comp=Z,9.9nm,0.9s,baz=353,slow=6.7,SNR=3.9
SCHQ LR LR 07 28 39.1
comp=Z,116nm,19.4s,baz=354,slow=38
comp=Z,9.9nm,0.9s
E46A **Sault Ste Mari** 99.04 31 IAmb IAmb 06 39 25.3
comp=Z,31nm,1.0s
FETA **Feichten** 99.07 330 *e*P **PKKPbc** 06 55 48.5 -1.6
comp=Z,9.1nm,0.9s
DAVA **Damuels** 99.27 330 *e*P **PKKPbc** 06 55 47.5 -2.0
comp=Z,10nm,0.9s
TUL1 **Leonard** 99.29 45 P **Pdif** 06 39 25.2 +0.2
baz=306
P40A **Paris** 99.45 40 P **Pdif** 06 39 25.1 -0.5
baz=309
JCT **Junction City** 99.57 52 P **Pdif** 06 39 26.8 +0.3
baz=303
JCT **Junction City** 99.57 52 P **Pdif** 06 39 26.4 0.0
baz=303,SNR=11
DAVOX **Davos/Dischmat** 99.64 330 P **Pdif** 06 39 26.0 -0.6
comp=Z,1.8nm,0.4s,baz=263,slow=4.7,SNR=3.2
DAVOX LR LR 07 30 17.7
comp=Z,193nm,18.1s,baz=30,slow=39
comp=Z,1.8nm,0.4s
VNDA **Vanda** 100.14 176 P **Pdif** 06 39 27.6 -0.1
comp=Z,8.1nm,1.0s,baz=323,slow=5.3,SNR=30
HDIL **Hopedale** 100.40 38 P **Pdif** 06 39 30.2 +0.4
baz=311
HDIL **Hopedale** 100.40 38 P **Pdif** 06 39 29.7 -0.1
baz=311
WHTX **Lake Whitney,** 100.41 49 P **Pdif** 06 39 31.2 +1.1
baz=304
WHTX **Lake Whitney,** 100.41 49 P **Pdif** 06 39 30.4 +0.3
baz=304
SBA **Scott Base** 100.81 175 Pdif **Pdif** 06 39 32.0 +1.4
SBA **Scott Base** 100.81 175 P **Pdif** 06 39 32.0 +1.4
CCM **Cathedral Cave** 100.86 41 P **Pdif** 06 39 31.1 -0.8
baz=310
CCM **Cathedral Cave** 100.86 41 P **Pdif** 06 39 31.7 -0.3
baz=310
833A **Chaparral WMA,** 101.03 53 P **Pdif** 06 39 33.6 +0.7
baz=303
TIP **Timpagrande** 101.31 321 ⇓P **Pdif** 06 39 34.4 +0.4
TIP **Timpagrande** 101.31 321 Pdif **Pdif** 06 39 34.3 +0.3
MIAR **Mount Ida** 101.56 45 P **Pdif** 06 39 35.3 +0.2
baz=307
P49A **Miami Univ. Ec** 103.67 37 P **Pdif** 06 39 44.4 0.0
baz=315
P52A **Corning** 105.00 35 P **Pdif** 06 39 50.3 0.0
baz=317
O53A **New Philadelph** 105.03 34 P **Pdif** 06 39 50.6 +0.1
baz=317
O54A **Avella** 105.52 34 P **PKiKP** 06 44 05.1 -0.3
baz=318
O54A P **PKiKP** 06 44 05.1 -0.3
baz=318
BINY **Binghamton** 106.11 30 P **PKiKP** 06 44 06.6 0.0
baz=322
SSPA **Standing Stone** 106.42 32 P **PKiKP** 06 44 07.0 -0.1
baz=320
TZTN **Tazewell** 106.43 38 P **PKiKP** 06 44 06.7 -0.6
baz=315
LRAL **Lakeview Retre** 106.75 43 P **PKiKP** 06 44 07.4 -0.5
baz=312
LRAL **Lakeview Retre** 106.75 43 P **PKiKP** 06 44 08.0 +0.1
baz=312
MAW **Mawson** 106.95 203 Pdiff **Pdif** 06 39 59.7 +1.6
comp=Z,12nm,0.9s,baz=68,slow=5.0,SNR=30
MAW PKiKP **PKiKP** 06 44 07.7 +0.6
comp=Z,4.5nm,0.8s,baz=18,slow=0.8,SNR=8.5
BLA **Blacksburg** 107.69 36 P **PKiKP** 06 44 08.9 -0.8
baz=318
BRAL **Brewton** 107.94 44 P **PKiKP** 06 44 10.4 +0.2
baz=311
PAL **Palisades** 108.00 29 P **PKiKP** 06 44 10.3 +0.2
baz=324
CBN **Corbin Frederi** 108.54 33 P **PKiKP** 06 44 11.2 +0.1
baz=320
GOGA **Godfrey** 108.66 40 P **PKiKP** 06 44 11.6 +0.1
baz=314
KMSC **Kings Mountain** 108.69 38 P **PKiKP** 06 44 11.5 0.0
baz=316
TIGA **Tifton** 109.95 42 P **PKiKP** 06 44 14.2 +0.2
baz=314
NHSC **New Hope** 110.82 39 P **PKiKP** 06 44 15.6 +0.1
baz=317
MVO **Moncorvo** 111.31 337 *e*PKPdf **PKiKP** 06 44 17.1 +0.7
MVO **Moncorvo** 111.31 337 *e*PKKPbc PKKPbc 06 55 12.1 -0.9
MVO **Moncorvo** 111.31 337 *e*PKKPab PKKPab 06 55 22.9 -2.1
ESDC **Sonseca Array** 111.40 334 PKKPbc PKKPbc 06 55 11.9 -0.7
comp=Z,5.5nm,1.1s,baz=218,slow=2.6,SNR=15
ESDC PKKPab **PKKPab** 06 55 21.6 -2.8
comp=Z,6.0nm,0.8s,baz=208,slow=2.9,SNR=4.2
POLO **Lamas de Olo** 112.40 337 *e*PKKPab PKKPab 06 55 22.5 -2.1
MTE **Manteigas** 112.17 337 *e*PKKPab PKKPab 06 55 19.0 -2.1
PCBR **Castelo Branco** 112.63 336 *e*PKPdf **PKiKP** 06 44 19.3 +0.5
PCBR **Castelo Branco** 112.63 336 *e*PKKPbc PKKPbc 06 55 07.7 -0.8
PCBR **Castelo Branco** 112.63 336 *e*PKKPab PKKPab 06 55 17.0 -1.9
PMRV **Marv??o** 112.96 336 *e*PKKPab PKKPab 06 55 15.6 -1.9
PMTG **Montargil** 113.58 336 *e*PKPdf **PKiKP** 06 44 20.4 -0.3
PMTG **Montargil** 113.58 336 *e*PKKPbc PKKPbc 06 55 04.4 -0.9
PBAR **Barrancos** 113.91 335 *e*PKPdf **PKiKP** 06 44 21.9 +0.6
PBAR **Barrancos** 113.91 335 *e*PKKPbc PKKPbc 06 55 03.4 -0.7
PBAR **Barrancos** 113.91 335 *e*PKKPab PKKPab 06 55 11.4 -1.8
PBAR **Barrancos** 113.91 335 *e*PKKPdf PKKPdf 06 55 27.9 +3.0
PBEJ **Beja** 114.36 336 *e*PKKPbc PKKPbc 06 55 02.3 -0.3
PBEJ **Beja** 114.36 336 *e*PKKPab PKKPab 06 55 09.8 -1.5
PNCL **Nicolau / Gran** 114.54 336 *e*PKPdf PKPdf 06 44 22.6 +0.1
PNCL **Nicolau / Gran** 114.54 336 *e*PKKPbc PKKPbc 06 55 02.3 +0.3
PNCL **Nicolau / Gran** 114.54 336 *e*PKKPab PKKPab 06 55 08.6 -1.9
PCVE **Castro Verde** 114.77 336 *e*PKPdf PKPdf 06 44 23.6 +0.6
PCVE **Castro Verde** 114.77 336 *e*PKKPbc PKKPbc 06 55 00.7 -0.5
MORF **Marmelete** 115.29 336 *e*PKPdf **PKPdf** 06 44 24.7 +0.6
MORF **Marmelete** 115.29 336 *e*PKKPbc PKKPbc 06 54 59.2 -0.3
ESPN **Las Esperanzas** 121.78 59 **PKiKP** 06 44 37.1 -0.1
JTS **Las Juntas de** 122.34 61 PKIKP **PKPdf** 06 44 37.7 -0.5
MTDJ **Mount Denham** 123.00 48 **PKPdf** 06 44 39.0 -0.4
HDC **Heredia** 123.19 61 *e*P **PKiKP** 06 44 40.2 +0.1
PRVC **Isla de Provid** 123.35 56 *e*P **PKPdf** 06 44 39.6 -0.4
GTBY **Guantanamo Bay** 123.45 45 **PKPdf** 06 44 40.0 -0.1
LBTB **Lobatse** 123.69 254 **PKiKP** 06 44 41.1 +0.3
LBTB **Lobatse** 123.69 254 PKIKP **PKiKP** 06 44 41.1 +0.3
NVL **N'lazarevskaya** 124.08 197 ⇓*i*PKIKP **PKPdf** 06 44 39.2 -0.5
NVL pmax pmax
comp=Z,74nm,1.1s
BOSA **Boshof** 124.60 250 PKP **PKiKP** 06 44 42.5 0.0
comp=Z,34nm,0.8s,baz=90,slow=1.8,SNR=41
BOSA **Boshof** 124.60 250 **PKiKP** 06 44 42.7 +0.2
BOSA **Boshof** 124.60 250 PKIKP **PKiKP** 06 44 42.7 +0.2
TROLL **Troll, Antarti** 125.62 194 PKPdf **PKPdf** 06 44 43.0 +0.2
SDDR **Presa de Saban** 126.59 43 **PKPdf** 06 44 46.5 +0.2
SNAA **Sanae** 127.00 193 PKPdf **PKPdf** 06 44 44.8 -0.7
BCIP **Isla Barro Col** 127.09 59 **PKPdf** 06 44 46.5 -0.7
BCIP **Isla Barro Col** 127.09 59 PKIKP **PKPdf** 06 44 46.5 -0.7
VNA2 **Neumayer--Watz** 128.49 192 PKPdf **PKPdf** 06 44 48.1 -0.1
baz=129,slow=2.0
VNA3 **Neumayer Olymp** 128.63 191 PKPdf **PKPdf** 06 44 48.1 -0.4
TORD **Torodi Ar. Bea** 128.78 310 PKP **PKPdf** 06 44 49.7 -0.7
comp=Z,12nm,0.5s,baz=43,slow=1.2,SNR=91
TORD PKKP **PKKPdf** 06 54 57.4 +0.5
comp=Z,1.9nm,0.9s,baz=300,slow=0.2,SNR=4.6
TORD SKKPbc SKKPbc 06 57 46.7 -0.9
comp=Z,5.3nm,0.9s,baz=237,slow=4.1,SNR=4.2
VNA1 **Neumayer--Stat** 128.88 192 PKPdf **PKPdf** 06 44 48.7 -0.2
TSUM **Tsumeb** 129.76 263 **PKiKP** 06 44 53.4 +0.3
SJCC **San Jacinto, C** 130.23 54 *e*P **PKPdf** 06 44 52.8 -0.5
SJG **San Juan** 130.35 38 PKP **PKPdf** 06 44 53.2 -0.1
comp=Z,20nm,0.7s,baz=314,slow=4.9,SNR=3.4
SJG SKPbc **SKPab** 06 48 03.6 -1.6
comp=Z,24nm,0.8s,baz=323,slow=3.5,SNR=7.4
SJG **San Juan** 130.35 38 **PKPdf** 06 44 52.5 -0.8
CRJC **Cerrejon, Guaj** 131.18 51 *e*P **PKPdf** 06 44 55.4 +0.3
KOWA **Kowa** 131.69 316 PKPdf **PKPdf** 06 44 56.1 +0.1
CBOC **Ciudad Bolivar** 132.09 59 *e*P **PKPdf** 06 44 56.7 -0.3
HELC **Santa Helena** 132.28 58 *e*P **PKPdf** 06 44 57.3 -0.3
PLMC **San Jos del P** 132.45 60 *e*P **PKPdf** 06 44 56.5 -1.0
OCAC **Ocana** 132.70 54 *e*P **PKPdf** 06 44 56.3 -1.7
PTBC **PUERTO BERRIO** 132.91 57 *e*P **PKPdf** 06 44 57.1 -1.3
GUY2C **Guyana, Caldas** 132.99 59 *e*P **PKPdf** 06 44 58.3 -0.8
BRRC **Barranca, Sant** 133.12 56 *e*P **PKPdf** 06 44 58.6 -0.1
BBAC **Balboa, Cauca** 133.29 64 *e*P PKPpre 06 44 46.2
ANIL **Santa Ana** 133.40 60 *e*P **PKPdf** 06 44 56.3 -3.3
GCUF **Volcan Galeras** 133.64 65 *e*P **PKiKP** 06 45 01.1 -0.5
PAMC **Pamplona, Colo** 133.75 55 *e*P **PKPdf** 06 45 00.3 -0.2
PMSA **Palmer Station** 133.75 164 *e*P **PKiKP** 06 44 59.3 -0.3
BARC **Barichara** 133.85 56 *e*P PKPpre 06 44 48.5
ROSC **El Rosal** 134.05 59 PKP **PKPdf** 06 44 59.0 -2.0
comp=Z,15nm,0.6s,baz=53,slow=5.1,SNR=7.1
ROSC SKPbc **SKPbc** 06 48 17.5 -1.3
comp=Z,5.0nm,0.5s,baz=286,slow=2.8,SNR=5.3
ROSC **El Rosal** 134.05 59 *e*P **PKPdf** 06 45 01.3 +0.4
ROSC **El Rosal** 134.05 59 PKIKP **PKPdf** 06 44 59.0 -2.0
SDV **Santo Domingo** 134.25 51 PKP **PKPdf** 06 45 00.3 -0.8
baz=291,slow=2.2
SDV SKPbc **SKPbc** 06 48 17.5 -1.7
comp=Z,22nm,0.7s,baz=311,slow=5.0,SNR=12
SDV **Santo Domingo** 134.25 51 *e*P **PKPdf** 06 45 01.3 +0.2
PRAC **Prado** 134.27 60 *e*P **PKPdf** 06 44 59.0 -2.0
RUSC **La Rusia** 134.37 57 *e*P **PKPdf** 06 44 59.4 -2.2
GARC **Garzon, Huila** 134.65 63 *e*P **PKPdf** 06 45 00.1 -1.8
PTLC **Puerto Leguiza** 136.35 64 *e*P PKPpre 06 44 54.7
ATAH **Atahualpa** 136.74 76 PKhKP PKPpre 06 44 55.1
comp=Z,14nm,0.9s,baz=233,slow=2.8,SNR=5.7
ATAH PKP **PKPdf** 06 45 03.8 -2.2
comp=Z,35nm,1.0s,baz=299,slow=3.1,SNR=10
ATAH SKPbc **SKPbc** 06 48 27.5 +0.2
comp=Z,18nm,0.9s,baz=298,slow=3.0,SNR=11
PCRV **Puerto La Cruz** 137.42 44 PKP **PKPdf** 06 45 05.2 -1.6
comp=Z,40nm,0.8s,baz=209,slow=4.8,SNR=9.1
DBIC **Dimbokro** 137.89 309 PKhKP PKPpre 06 44 56.4
comp=Z,1.5nm,0.3s,baz=1.5,slow=5.2,SNR=4.1
DBIC PKP **PKPdf** 06 45 07.5 -0.1
comp=Z,9.0nm,0.8s,baz=132,slow=6.4,SNR=4.9
DBIC SKPbc **SKPbc** 06 48 27.6 -2.6
comp=Z,34nm,1.1s,baz=28,slow=5.5,SNR=8.1
KIC **Kosan Boka** 138.02 309 ⇓*e*P **PKiKP** 06 45 09.7 -0.2
comp=Z,28nm,0.4s
TIC **Toumodi** 138.03 310 ⇑*e*P **PKPdf** 06 45 07.4 -0.5
LIC **Lamto** 138.32 309 ⇑*e*P **PKPdf** 06 45 07.9 -0.5
comp=Z,102nm,0.9s
MG05 **Puerto Natales** 139.46 146 PKPdf **PKPdf** 06 45 10.2 +0.9
USHA **Ushuaia** 139.54 152 PKP **PKPdf** 06 45 10.3 +1.0
comp=Z,69nm,0.8s,baz=251,slow=1.1,SNR=5.7
NNA **Nana** 140.01 82 PKP **PKPdf** 06 45 11.3 -0.1
comp=Z,34nm,1.0s,baz=259,slow=4.9,SNR=5.6
PLCA **Paso Flores** 145.74 131 PKPbc **PKPab** 06 45 22.2 +0.1
comp=Z,218nm,0.7s,baz=245,slow=3.6,SNR=955
PLCA **Paso Flores** 145.74 131 *e*P **PKPdf** 06 45 20.7 -0.1
BOAV **Boa Vista** 145.91 47 *e*P **PKPdf** 06 45 21.2 -0.7
MDP **Montagnes des** 148.43 32 PKPbc **PKPbc** 06 45 30.3 +0.6
comp=Z,266nm,0.8s,baz=306,slow=2.4,SNR=92
ETMB **Extrema** 148.74 71 *e*P **PKPdf** 06 45 26.4 -0.1
LPAZ **La Paz** 149.38 84 PKP **PKPdf** 06 45 28.4 +0.2
comp=Z,239nm,0.8s,baz=342,slow=2.4,SNR=178
LPAZ PKPbc **PKiKP** 06 45 33.5 -0.3
baz=316,slow=4.5
LPAZ **La Paz** 149.38 84 *e*P **PKPdf** 06 45 29.2 +1.0
MACA **Manacapuru-AM** 149.64 55 *e*P **PKPdf** 06 45 28.2 +0.2
LVC **Limon Verde** 149.85 97 PKPbc **PKPbc** 06 45 33.7 +0.2
comp=Z,126nm,0.9s,baz=227,slow=2.9,SNR=4.2
LVC **Limon Verde** 149.85 97 PKPdf **PKPdf** 06 45 27.4 -1.1
LVC PKPbc **PKiKP** 06 45 34.4 +0.1
LVC **Limon Verde** 149.85 97 *e*P **PKPdf** 06 45 29.7 +1.2
MALB **Monte Alegre** 153.21 43 *e*P **PKPdf** 06 45 34.5 +1.0
MCPB **Macapa, AP** 153.35 37 *e*P **PKPdf** 06 45 34.9 +1.3
ITTB **Itaituba** 154.08 49 *e*P **PKPdf** 06 45 35.0 +0.4
VILB **Vilhena** 155.41 72 *e*P **PKPdf** 06 45 37.6 +1.2
SIV **San Ignacio** 155.76 79 PKP **PKPdf** 06 45 36.7 -0.2
comp=Z,24nm,0.9s,baz=277,slow=1.1,SNR=87
SIV PKPab **PKPab** 06 46 03.6 -0.4
comp=Z,28nm,0.9s,baz=254,slow=1.0,SNR=13
NPGB **Novo Progresso** 156.17 53 *e*P **PKPdf** 06 45 38.1 +0.6
BBSD **Serra de San D** 156.55 82 *e*P **PKPdf** 06 45 38.0 +0.1
TMAB **Tom-Au,PA,Br** 157.13 32 *e*P **PKPdf** 06 45 40.1 +1.4
PTLB **Pontes e Lacer** 157.34 77 *e*P **PKPdf** 06 45 39.4 +0.6
BBRB **Robore, Bolivi** 157.57 84 *e*P **PKPdf** 06 45 40.5 +1.3
PDRB **Porto dos Gac** 157.77 65 *e*P **PKPdf** 06 45 40.2 +0.7
CLDB **Colider** 158.15 62 *e*P **PKPdf** 06 45 41.0 +1.0
ROSB **Rosrio** 159.29 23 *e*P **PKPdf** 06 45 40.3 -1.0
PRPB **Paraua pebas** 159.33 41 *e*P **PKPdf** 06 45 41.9 +0.5
MURT **Porto Murtinho** 160.19 92 *e*P **PKPdf** 06 45 42.7 +0.6
CPUP **Villa Florida** 160.38 106 PKP **PKPdf** 06 45 42.1 -0.1
comp=Z,12nm,1.1s,baz=254,slow=1.3,SNR=9.0
CPUP PKPab **PKPab** 06 46 23.7 -0.1
comp=Z,29nm,0.9s,baz=278,slow=5.2,SNR=19
CPUP **Villa Florida** 160.38 106 PKPdf **PKPdf** 06 45 41.2 -1.0
CPUP PKPab **PKPab** 06 46 23.6 -0.1
CPUP **Villa Florida** 160.38 106 *e*P **PKPdf** 06 45 42.0 -0.1
SALV **Santo Antonio** 160.59 74 *e*P **PKPdf** 06 45 43.9 +1.2
RODS **Rosario do Sul** 161.23 119 *e*P **PKPdf** 06 45 45.3 +2.3
AZCA **Azaras, Argent** 161.24 112 *e*P **PKPdf** 06 45 44.2 +1.1
ANTJ **Antonio Joao (** 161.71 93 *e*P **PKPdf** 06 45 44.6 +0.8
UNIS **Unistalda (Bra** 161.75 116 *e*P **PKPdf** 06 45 45.0 +1.4
AQDB **Aquidauana** 161.81 88 *e*P **PKPdf** 06 45 44.6 +0.8
PLTB **Pedras Altas** 161.90 125 PKPdf **PKPdf** 06 45 44.0 +0.3
PLTB **Pedras Altas** 161.90 125 *e*P **PKPdf** 06 45 44.9 +1.2
SNDB **Serra Nova Dou** 162.38 57 *e*P **PKPdf** 06 45 45.7 +1.0
CPSB **Cacapava Do Su** 162.61 121 *e*P **PKPdf** 06 45 45.0 +0.6
SMTB **Santa Maria do** 162.80 41 *e*P **PKPdf** 06 45 46.2 +1.1
CRSM **Crissiumal (Br** 163.05 115 *e*P **PKPdf** 06 45 45.5 +0.6
MCR1 **Marechal Candi** 163.53 101 *e*P **PKPdf** 06 45 46.1 +0.6
ALGR **Alto Alegre (B** 163.54 117 *e*P **PKPdf** 06 45 46.1 +0.7
RCBR **Riachuelo** 163.66 359 PKP **PKPdf** 06 45 46.1 +0.1
comp=Z,14nm,0.9s,baz=105,slow=0.8,SNR=4.4
RCBR **Riachuelo** 163.66 359 *e*P **PKPdf** 06 45 47.2 +1.3
RPRD **Ribas do Rio P** 163.66 87 *e*P **PKPdf** 06 45 46.6 +0.8
C2SB **Chapadao do Su** 164.09 80 *e*P **PKPdf** 06 45 47.5 +1.4
FRBT **Francisco Belt** 164.22 107 *e*P **PKPdf** 06 45 47.5 +1.3
ITAB **Concordia** 164.76 112 *e*P **PKPdf** 06 45 47.5 +1.0
TRCB **Terra Rica** 164.86 95 *e*P **PKPdf** 06 45 47.4 +0.6
CNLB **Canela** 165.11 121 *e*P **PKPdf** 06 45 48.5 +1.7
PTGB **Pitanga** 165.30 103 *e*P **PKPdf** 06 45 48.0 +0.9
PCMB **Pacaembu** 166.07 90 *e*P **PKPdf** 06 45 49.0 +1.3
ITRB **Iturama** 166.59 82 *e*P **PKPdf** 06 45 49.3 +1.1
TER01 **Tubaro-SC** 166.81 121 *e*P **PKPdf** 06 45 49.3 +1.4
BDFB **Brasilia** 167.09 61 PKP **PKPdf** 06 45 48.9 +0.1
comp=Z,36nm,1.2s,baz=206,slow=1.2,SNR=19
BDFB PKPab **PKPab** 06 46 53.5 0.0
comp=Z,31nm,0.9s,baz=302,slow=5.8,SNR=13
BDFB **Brasilia** 167.09 61 *e*P **PKPdf** 06 45 50.0 +1.2
SDBA **SAO DESIDERIO** 167.20 41 *e*P **PKPdf** 06 45 49.0 +0.2
FRTB **Fartura** 167.69 98 *e*P **PKPdf** 06 45 49.4 +0.4
TIJ01 **Guaruva-PR** 167.94 107 *e*P **PKPdf** 06 45 50.6 +1.5
IPMB **Ipameri, GO** 168.00 71 *e*P **PKPdf** 06 45 50.1 +0.7
BB19B **Bebedouro** 168.53 86 *e*P **PKPdf** 06 45 51.8 +2.2
JANB **Januaria** 169.54 48 *e*P **PKPdf** 06 45 50.3 -0.1
RCLB **Rio Claro- Sao** 169.57 93 *e*P **PKPdf** 06 45 51.3 +1.1
PET01 **Itanhaem-SP** 169.68 103 *e*P **PKPdf** 06 45 51.2 +1.0
PMNB **Patos De Minas** 169.77 71 *e*P **PKPdf** 06 45 50.9 +0.4
VAO **Valinhos** 170.09 96 *e*P **PKPdf** 06 45 51.2 +0.6
GUA01 **Guaratinga, BA** 173.44 31 *e*P **PKPdf** 06 45 51.6 -0.5
SJMB **Sao Joao De Ma** 174.19 53 *e*P **PKPdf** 06 45 51.5 -0.9
NAN01 **Guarapari, ES** 174.30 40 *e*P **PKPdf** 06 45 52.7 +0.2
DUB01 **Friburgo-RJ** 174.33 89 *e*P **PKPdf** 06 45 53.6 +1.1
RIB01 **Linhares ES** 175.15 54 *e*P **PKPdf** 06 45 51.8 -0.9

ROM 20 06:36:39.4±0.1, 42°844N±0°004×13°146E±0°003,
h7km, Md0.4/2, Error ellipse: s-maj=0.5km s-min=0.1km
az=163.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**247**	P	Pg	06 36 41.2	+0.3
NRCA				S	Sg	06 36 42.1	+0.1
NRCA				AML	AML		
	comp=E,726μm,0.1s						
NRCA				AML	AML		
	comp=N,476μm,1.2s						
NRCA				END			
T1245	**Castelsantange**	**0.03**	**68**	P	Pg	06 36 41.2	+

```
T1245                                  AML   AML
     comp=E,330μm,0.8s
T1245                                  AML   AML
     comp=N,364μm,0.6s
T1245                                  END
MC2   Monte Cornacci      0.08  25     P     Pg    06 36 41.6  0.0
MC2                                    S     Sg    06 36 43.3 +0.2
T1216 Preci, Frazion      0.10 297     P     Pg    06 36 42.2 +0.4
T1216                                  S     Sg    06 36 44.1 +0.6
T1216                                  AML   AML
     comp=E,94μm,1.6s
T1216                                  AML   AML
     comp=N,74μm,0.2s
MMO1  Montemonaco         0.14  67     P     Pg    06 36 42.9 +0.4
MMO1                                   S     Sg    06 36 45.4 +0.7
T1215 Vallo di Nera,      0.21 259     P     Pg    06 36 44.1 +0.5
T1215                                  S     Sg    06 36 47.8 +1.3
```

*NNC **20** 06:45:31.7±6.9, 53°.69N×88°.16E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=55.0km s-min=29.7km az=63.0, Suspected Mining explosion.*

IDC 20 06:45:33.7±2.9, 53°.69N×88°.16E, h0km, mbtmp3.1/2, ML2.8/2, 8C-2D, Error ellipse: s-maj=24.1km s-min=16.8km az=59.0, Southwestern Siberia

```
Code  Station Name        Δ°   AZ°  Phase ID                Time     Res
                                    Op    ISC             h m s    ISC
I46RU ZALESOVO INFRA      2.00 279 I                     07 00 18.5
     baz=92,slow=325,SNR=4.4
ZAA0  Zalesovo Array      2.00 279 ⇑Pn   Pn              06 46 08.0 -0.6
     2.5nm,0.7s
ZAA0                               ⇑Sn   Sb              06 46 35.3 -0.9
     6.2nm,0.8s
ZALV  Zalesovo Beam       2.00 279 Pn    Pn              06 46 08.4 -0.2
     2.4nm,0.3s,baz=96,slow=13,SNR=24
ZALV                               Lg    Lg              06 46 36.3
     4.9nm,0.3s,baz=94,slow=23,SNR=22
KURBB Kurchatov Arra      6.67 247 Pn    Pn              06 47 13.8 +1.0
     0.2nm,0.3s,baz=63,slow=14,SNR=12
KURBB                              Sn    Sn              06 48 28.5 -1.0
     baz=61,slow=27,SNR=1.8
KURBB                              Lg    Lg              06 49 05.0
     baz=63,slow=33,SNR=2.6
     1.5nm,0.4s
KURBB Kurchatov Arra      6.67 247 ⇑Pn   Pn              06 47 13.1 +0.3
     2.9nm,0.5s
KURBB                              ⇓Sn   Sn              06 48 27.2 -2.3
     2.8nm,0.7s
KURBB                              ⇑Lg   Lg              06 49 02.9
     7.3nm,0.9s
MK31  Makanchi Array      7.86 211 ⇑Pn   Pn              06 47 29.1  0.0
     1.0nm,0.7s,baz=35,slow=14,SNR=4.9
MK31                               ⇑Sn   Sn              06 48 59.3 +0.5
     1.0nm,0.8s
MK31                               ⇑Lg   Lg              06 49 40.5
     6.8nm,1.4s,baz=35,slow=32,SNR=4.1
MKAR  Makanchi Array      7.86 211 Pn    Pn              06 47 30.3 +1.1
     0.1nm,0.3s,baz=31,slow=14,SNR=6.3
MKAR                               Sn    Sn              06 48 57.5 -1.3
     0.1nm,0.3s,baz=21,slow=14,SNR=2.0
MKAR                               Lg    Lg              06 49 42.8
     0.1nm,0.3s,baz=32,slow=33,SNR=3.0
     0.3nm,0.4s
MAKZ  Makanchi            7.94 212 ⇓Sn   Sn              06 49 01.1 +0.3
     5.0nm,1.3s
MAKZ                               ⇑Lg   Lg              06 49 46.4
     5.4nm,1.2s
```

KRSC 20 06:56:09.9±0.6, 48°.62N×158°.01E, h7km±12km, ML3.6, East of Kuril Islands

```
Code  Station Name        Δ°   AZ°  Phase ID                Time     Res
                                    Op    ISC             h m s    ISC
PAU   Pauzhetka           2.95 345 S     Sn              06 57 35.4 +2.5
KDTR  Khodutka, Kamc      3.19   1 P     Pn              06 57 03.3 +2.8
KDTR                               S     Sb              06 57 42.6 -3.5
RUS   Russkaya            3.83   5 P     Pn              06 57 12.9 +3.6
RUS                                S     Sb              06 57 59.7 -4.7
MTVR  Mutnovka            3.87   2 P     Pn              06 57 13.3 +3.3
MTVR                               S     Sn              06 57 59.8 +4.1
GRL   Gorelyy             3.94   1 P     Pn              06 57 14.7 +3.8
GRL                                S     Sn              06 58 01.8 +4.4
UGLR  Uglovaya            4.63   6 P     Pn              06 57 24.6 +4.3
AVH   Avacha              4.68   5 P     Pn              06 57 25.3 +4.3
SMAR  Somma               4.68   6 P     Pn              06 57 25.2 +4.1
KOK   Koryaka             4.70   5 P     Pn              06 57 25.9 +4.6
SDLR  Sedlovina           4.70   6 P     Pn              06 57 25.6 +4.3
KRER  Koryakskii          4.71   5 P     Pn              06 57 25.6 +4.0
KRX   Arik                4.76   5 P     Pn              06 57 26.6 +4.4
KRX                                S     Sn              06 58 22.8 +5.1
GNL   Ganaly              5.08 360 P     Pn              06 57 30.8 +4.2
MKZ   Mys Kozlova         6.38  20 P     Pn              06 57 49.1 +4.8
```

*NOU **20** 07:49:40.9, 18°.02S×179°.47W, h643km, ML5.0/102, Fiji Islands Region*

*IDC **20** 07:49:41.4±0.4, 18°.04S×179°.53W, h642km±4km, mb4.2/34, mbtmp5.2/38, Error ellipse: s-maj=9.0km s-min=6.9km az=120.0*

*GCMT **20** 07:49:41.9±0.3, 18°.02S±0°.02×179°.40W±0°.04, h650km±3km, MW5.5/79, Moment Tensor Solution. s79,c109; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.53±.06; $M_{\theta\theta}$=1.50±.09; $M_{\phi\phi}$=-0.97±.10; $M_{r\theta}$=1.22±.08; $M_{\theta\phi}$=0.97±.10; $M_{r\phi}$=-0.59±.09; Best double couple: M_0=2.12000×10^{17} NP1:ϕ_s=290.00000°, δ=80.00000°, λ=-43.00000°. NP2:ϕ_s=29.00000°, δ=48.00000°, λ=-167.00000°. Principal axes: T 2.2100, Plg21.0000°, Azm347.0000°; N -0.1780, Plg46.0000°, Azm100.0000°; P -2.0300, Plg37.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BJI **20** 07:49:42.6±0.0, 17°.31S×179°.70W, h633km, mb4.6/24, mB5.0/13*

*NEIC **20** 07:49:42.9±2.4, 17°.98S±0°.10×179°.5W±0°.1, h653km±8km, mb5.0/139, Error ellipse: s-maj=15.9km s-min=13.5km az=128.0*

ISC 20 07:49:42.0±0.3, 17°.99S±0°.04×179°.51W±0°.05, h648km±3km, h650km:pP-P, n747, σ1§10/803, mb5.0/122, 20C-44D, Fiji Islands region

```
Code  Station Name        Δ°   AZ°  Phase ID                Time     Res
                                    Op    ISC             h m s    ISC
MSVF  Nonsavu             2.34 276 P     P               07 51 01.9 -0.3
     700nm,0.5s,baz=168,slow=2.0,SNR=1235
MSVF                               S     S               07 52 08.1 +0.7
     119nm,0.9s,baz=284,slow=23,SNR=32
MSVF  Nonsavu             2.34 276 P     P               07 51 01.4 -0.8
MSVF  Nonsavu             2.34 276 P     P               07 51 02.1 -0.1
FUTU  Fugatoga            3.90  20 P     P               07 51 08.7 -1.8
AFI   Afiamalu            8.47  62 P     P               07 51 44.7 -2.7
     685nm,0.8s,baz=25,slow=4.3,SNR=42
AFI   Afiamalu            8.47  62       P               07 51 44.1 -3.3
AFI   Afiamalu            8.47  62 P     P               07 51 44.8 -2.7
NIUE  Niue                9.15  98 P     P               07 51 52.9 -0.8
     baz=9.2,SNR=4.8
NIUE  Niue                9.15  98       P               07 51 52.8 -0.9
NIUE  Niue                9.15  98 P     P               07 51 53.1 -0.6
     398nm,1.2s
RAO   Raoul Island       11.30 173 P     P               07 52 11.1 -3.0
     267nm,0.4s,baz=240,slow=2.7,SNR=8.2
RAO                                S     S               07 54 16.8 -1.7
     217nm,0.5s,baz=102,slow=22,SNR=4.2
RAO   Raoul Island       11.30 173 P     P               07 52 12.1 -2.0
RTV   Rentapao           11.49 269 P     P               07 52 15.7 -0.3
DVP   Devils Point       11.72 269 P     P               07 52 17.6 -0.5
MARNC Mare, Loyalty      12.24 251 P     P               07 52 20.8 -2.1
MARNC Mare, Loyalty      12.24 251 P     P               07 52 21.0 -1.8
LIFNC LIFOU              12.81 255 P     P               07 52 26.3 -1.8
LIFNC LIFOU              12.81 255 P     P               07 52 26.5 -1.6
YATNC Mamie plateau,     13.41 250 P     P               07 52 32.9 -0.8
OUENC Ouen Island, N     13.55 249 P     P               07 52 34.3 -0.7
OUENC Ouen Island, N     13.55 249 P     P               07 52 35.1 +0.1
DZM   Mont Dzumac        13.81 251 ePn   P               07 52 35.5 -2.0
     364nm,1.3s
DZM                                eSn   S               07 55 09.1 +8.4
     119nm,1.4s
DZM   Mont Dzumac        13.81 251 P     P               07 52 36.2 -1.3
     59nm,0.6s,baz=84,slow=12,SNR=57
DZM   Mont Dzumac        13.81 251 P     P               07 52 37.7 +0.2
DZM   Mont Dzumac        13.81 251 P     P               07 52 37.2 -0.3
ONTNC Ouen Toro          13.87 250 P     P               07 52 38.0 +0.2
ONTNC Ouen Toro          13.87 250 P     P               07 52 37.7 -0.2
NOUC  Port Laguerre      13.95 251 P     P               07 52 38.3 -0.3
KOUNC Koumac, New Ca     15.52 258 P     P               07 52 54.3 +1.3
KOUNC Koumac, New Ca     15.52 258 P     P               07 52 54.2 +1.2
NFK   Norfolk Island     15.91 224 P     P               07 52 58.4 +1.9
     baz=16,SNR=8.4
OUZ   Omahuta            18.23 198 P     P               07 53 19.2 +1.8
OUZ   Omahuta            18.23 198 P     P               07 53 18.0 +0.5
RAR   Rarotonga          18.86 103 P     P               07 53 21.8 -1.7
     41nm,1.0s,baz=227,slow=5.6,SNR=4.4
KUZ   Kuaotunu           19.15 192 P     P               07 53 25.0 -0.8
URZ   Urewera            20.41 188 P     P               07 53 35.0 -2.1
     9.8nm,0.6s,baz=22,slow=1.0,SNR=11
URZ                                S     S               07 56 42.1 -4.3
     16nm,0.6s,baz=124,slow=23,SNR=5.5
     9.8nm,0.6s
URZ   Urewera            20.41 188 P     P               07 53 35.0 -2.1
TARA  Tarawa             20.62 338 P     P               07 53 37.8 -1.5
HIZ   Hauiti             21.03 192 P     P               07 53 42.0 -0.7
BKZ   Black Stump Fm     21.39 189 P     P               07 53 43.9 -2.0
BKZ   Black Stump Fm     21.39 189 P     P               07 53 43.9 -2.0
BFZ   Birch Farm         22.91 188 P     P               07 53 58.1 -1.2
LHI   Lord Howe Isla     23.61 231 P     P               07 54 06.5 +0.9
     baz=24
SNZO  South Karori       23.77 191 P     P               07 54 07.0 +0.2
QRZ   Quartz Range       23.77 195 P     P               07 54 07.5 +0.6
KHZ   Kahutara           25.06 192 P     P               07 54 17.1 -1.1
OXZ   Oxford             26.25 194 P     P               07 54 27.1 -1.6
RPZ   Rata Peaks         26.86 195 P     P               07 54 32.1 -1.8
     18nm,0.6s,baz=232,slow=5.2,SNR=10
     18nm,0.6s
RPZ   Rata Peaks         26.86 195       P               07 54 32.8 -1.1
RPZ                                IAmb  IAmb            07 54 36.9
     comp=Z,20nm,0.7s
RPZ   Rata Peaks         26.86 195 P     P               07 54 33.2 -0.8
JCZ   Jackson Bay        27.81 198 P     P               07 54 42.0 -0.3
ODZ   Otahua Downs       28.21 195 P     P               07 54 44.5 -1.1
EIDS  Eidsvold           28.26 250 P     P               07 54 45.6 -0.8
     baz=28,SNR=44
EIDS  Eidsvold           28.26 250 P     P               07 54 45.6 -0.8
EIDS  Eidsvold           28.26 250 P     P               07 54 46.0 -0.4
PPT2  Papeete2           28.49  94 eP    P               07 54 49.3 +0.8
     comp=Z,94nm,1.4s
PPT   Papeete            28.49  94 P     P               07 54 47.7 -0.8
     comp=Z,45nm,0.7s,baz=86,slow=22,SNR=4.3
     comp=Z,45nm,0.7s
RK1H  Rockhampton Ha     28.54 254 P     P               07 54 48.0 -0.8
TIAR  Tiarei             28.71  94 eP    P               07 54 51.6 +1.2
     comp=Z,7.1nm,0.9s
ARMA  Armidale           29.00 239 P     P               07 54 53.3 +0.5
     baz=29,SNR=60
ARMA  Armidale           29.00 239 P     P               07 54 53.3 +0.5
MLZ   Mavora Lakes       29.19 198 P     P               07 54 54.2 +0.2
DCZ   Deep Cove          29.57 199 P     P               07 54 57.0 -0.3
DCZ                                IAmb  IAmb            07 54 58.6
     comp=Z,44nm,0.9s
WHZ   Wether Hill Ro     29.71 198 P     P               07 54 58.4 -0.2
NTLH  Newcastle Hard     29.82 235 P     P               07 55 00.5 +0.9
     comp=Z,307nm,0.8s
MEH   Mehetia            29.89  95 eP    P               07 54 53.3 -7.2
     comp=Z,78nm,0.8s
SYZ   Scrubby Hill       29.98 196 P     P               07 55 01.1 +0.4
PMOR  Pomariorio Ree     30.44  89 eP    P               07 55 07.7 +2.6
     comp=Z,129nm,1.1s
RMQ   Roma               30.50 248 P     P               07 55 05.9 +0.3
     baz=30,SNR=21
RMQ   Roma               30.50 248 P     P               07 55 06.2 +0.6
RIV   Riverview          30.60 233 P     P               07 55 06.8 +0.5
     baz=31,SNR=4.6
TV1H  Townsville Har     31.93 262 P     P               07 55 17.1 -0.7
     comp=Z,66nm,0.9s
CTA   Charters Tower     32.40 261 P     P               07 55 21.2 -0.6
     comp=Z,80nm,0.8s,baz=88,slow=9.9,SNR=70
     comp=Z,80nm,0.8s
CTA   Charters Tower     32.40 261 P     P               07 55 21.2 -0.6
CTAO  Charters Tower     32.40 261 P     P               07 55 21.0 -0.8
CTAO  Charters Tower     32.40 261 P     P               07 55 21.2 -0.6
CTAO  Charters Tower     32.40 261 P     P               07 55 21.2 -0.6
CNB   Canberra Magne     32.55 232 P     P               07 55 23.4 +0.5
     baz=33,SNR=139
CNB   Canberra Magne     32.55 232 P     P               07 55 23.3 +0.5
CAN   Canberra           32.83 232 P     P               07 55 25.1 -0.1
CAN   Canberra           32.83 232 P     P               07 55 25.6 +0.5
CAN   Canberra           32.83 232 P     P               07 55 25.3 +0.2
CAN                                pP    pwP             07 57 12.1 -0.4
MILA  Mila               33.44 229 P     P               07 55 30.5 +0.3
     baz=34,SNR=19
MILA  Mila               33.44 229 P     P               07 55 30.5 +0.3
PMG   Port Moresby       33.44 280 P     P               07 55 29.1 -1.4
     comp=Z,2μmcomp=Z,252nm,1.0s
PMG   Port Moresby       33.44 280 P     P               07 55 31.1 +0.6
PMG   Port Moresby       33.44 280 P     P               07 55 30.9 +0.4
CMSA  Cobar Meteorol     34.20 240 P     P               07 55 36.6 +0.1
     baz=34,SNR=112
CMSA  Cobar Meteorol     34.20 240 P     P               07 55 36.4 -0.2
MTSU  Mount Surprise     34.36 264 P     P               07 55 37.6 -0.5
     baz=34,SNR=27
QLP   Quilpie            34.53 249 P     P               07 55 39.0 -0.4
     baz=34,SNR=58
QLP   Quilpie            34.53 249 P     P               07 55 38.9 -0.4
JOHN  Johnston Islan     35.87  16 P     P               07 55 50.5  0.0
JOHN  Johnston Islan     35.87  16 P     P               07 55 49.4 -1.0
COEN  Coen               36.06 271 P     P               07 55 52.2 +0.1
     baz=36,SNR=45
COEN  Coen               36.06 271 P     P               07 55 52.1  0.0
COEN  Coen               36.06 271 P     P               07 55 52.3 +0.2
TOO   Toolangi           36.31 230 P     P               07 55 54.4 +0.5
     baz=36,SNR=70
TOO   Toolangi           36.31 230 P     P               07 55 54.3 +0.5
TOO   Toolangi           36.31 230 P     P               07 55 54.6 +0.7
MOO   Moorlands          37.33 222 P     P               07 56 02.5 +0.5
     baz=37,SNR=12
MOO   Moorlands          37.33 222 P     P               07 56 02.8 +0.8
BRAT  Ballarat           37.45 231 P     P               07 56 04.2 +1.2
TAU   Tasmania Unive     37.49 221 P     P               07 56 03.2  0.0
TAU   Tasmania Unive     37.49 221 P     P               07 56 03.6 +0.4
TAU   Tasmania Unive     37.49 221 P     P               07 56 03.3 +0.1
STKA  Stephens Creek     37.68 241 P     P               07 56 04.8 -0.2
     comp=Z,248nm,0.9s,baz=91,slow=8.4,SNR=225
     comp=Z,248nm,0.9s
STKA  Stephens Creek     37.68 241 P     P               07 56 05.5 +0.5
     baz=38,SNR=205
STKA  Stephens Creek     37.68 241 P     P               07 56 05.2 +0.3
STKA                               IAmb  IAmb            07 56 06.6
     comp=Z,55nm,0.9s
STKA  Stephens Creek     37.68 241 P     P               07 56 05.5 +0.5
INKA  Innaminka          37.75 248 P     P               07 56 06.5 +0.9
QIS   Mount Isa          38.61 259 P     P               07 56 11.6 -1.1
     baz=39,SNR=20
QIS   Mount Isa          38.61 259 P     P               07 56 11.9 -0.8
ARPS  Mount Arapiles     38.76 233 P     P               07 56 13.6  0.0
     baz=39,SNR=26
ARPS  Mount Arapiles     38.76 233 P     P               07 56 13.5 -0.1
WAKE  Wake Island        39.46 339 P     P               07 56 18.7 -0.6
WAKE  Wake Island        39.46 339 P     P               07 56 18.7 -0.6
WAKE  Wake Island        39.46 339 P     P               07 56 18.6 -0.7
WAKE                               pP    PP              07 58 09.0 -0.2
HTT   Hallett            40.21 239 P     P               07 56 25.5 +0.3
     baz=40,SNR=67
HTT   Hallett            40.21 239 P     P               07 56 25.6 +0.3
LCRK  Leigh Creek        40.28 244 P     P               07 56 25.8  0.0
PTPS  Port Pirie         40.92 240 P     P               07 56 31.5 +0.8
     comp=Z,516nm,0.9s
WHYH  Whyalla            41.24 240 P     P               07 56 33.5 +0.3
OOD   Oodnadatta         42.22 248 P     P               07 56 41.7 +0.7
GENI  Genyem             42.39 286 P     P               07 56 40.2 -2.3
     comp=Z,3μmcomp=Z,144nm,0.8s
BBOO  Buckleboo          42.45 241 P     P               07 56 42.8  0.0
     baz=42,SNR=149
BBOO  Buckleboo          42.45 241 P     P               07 56 42.0 -0.8
BBOO  Buckleboo          42.45 241 P     P               07 56 42.9 +0.1
WR0   Warramunga Arr     43.40 260 P     P               07 56 49.5 -0.8
WR0                                IAmb  IAmb            07 56 50.3
     comp=Z,85nm,1.1s
WB2   Warramunga Arr     43.58 260 P     P               07 56 50.4 -1.3
     baz=44
WRAB  Tennant Creek      43.58 260 P     P               07 56 50.6 -1.1
WRAB  Tennant Creek      43.58 260 P     P               07 56 50.4 -1.3
WRA   Warramunga Arr     43.59 260 P     P               07 56 50.5 -1.3
     comp=Z,90nm,1.0s,baz=92,slow=7.6,SNR=620
WRA                                PcP   PcP             07 58 24.2 +0.1
     comp=Z,4.9nm,0.4s,baz=98,slow=4.7,SNR=5.5
WRA                                ScP   ScP             08 01 17.8 +2.5
     comp=Z,4.6nm,1.0s,baz=92,slow=3.8,SNR=5.6
WRA                                S     S               08 02 32.3 -4.2
     comp=Z,4.9nm,1.0s,baz=92,slow=13,SNR=4.6
WRA                                PKiKP PKiKP           08 05 22.3 -1.5
     comp=Z,0.4nm,0.3s,baz=63,slow=0.4,SNR=9.6
     comp=Z,90nm,1.0s
WRA   Warramunga Arr     43.59 260 P     P               07 56 50.5 -1.3
AS01  Alice Springs      43.72 254 P     P               07 56 52.6 -0.1
AS31  Alice Springs      43.76 254 P     P               07 56 52.5 -0.5
ASAR  Alice Springs      43.76 254 P     P               07 56 52.7 -0.4
     comp=Z,520nm,0.7s,baz=90,slow=7.9,SNR=2708
ASAR                               PcP   PcP             07 58 24.8  0.0
     comp=Z,7.7nm,0.4s,baz=103,slow=3.9,SNR=6.0
ASAR                               ScP   ScP             08 01 18.8 +2.8
     comp=Z,7.4nm,0.9s,baz=105,slow=3.6,SNR=7.6
ASAR                               S     S               08 02 36.4 -2.5
     comp=Z,11nm,1.1s,baz=88,slow=16,SNR=17
ASAR                               PKiKP PKiKP           08 05 22.4 -1.4
     comp=Z,0.4nm,0.3s,baz=98,slow=1.6,SNR=5.6
ASAR  Alice Springs      43.76 254 P     P               07 56 52.4 -0.7
MULG  Mulgathing         43.83 245 P     P               07 56 53.0 -0.4
KHLU  Kahalu`u           43.96  33 P     P               07 56 54.8 +0.2
HMH   Humu'ula Sheep     44.18  33 P     P               07 56 57.3 +0.8
POHA  Pohakuloa          44.28  33 P     P               07 56 57.2  0.0
     comp=Z,116nm,1.3s
KIP   Kipapa             44.47  29 P     P               07 56 59.4 +1.1
KIP   Kipapa             44.47  29 P     P               07 56 58.6 +0.3
KDU   Kakadu             46.51 269 P     P               07 57 13.1 -0.9
     baz=46,SNR=32
KDU   Kakadu             46.51 269 P     P               07 57 13.0 -0.9
MTN   Manton Dam         47.75 269 P     P               07 57 22.1 -1.1
     baz=48,SNR=19
WRKA  Warakurna          48.83 252 P     P               07 57 30.7 -0.3
     baz=49,SNR=183
WRKA  Warakurna          48.83 252 P     P               07 57 30.5 -0.5
FORT  Forrest            49.03 245 P     P               07 57 31.6 -0.8
     baz=49,SNR=54
FORT  Forrest            49.03 245 P     P               07 57 31.3 -1.1
FORT  Forrest            49.03 245 P     P               07 57 31.5 -0.8
KNRA  Kununurra          49.44 265 P     P               07 57 34.8 -0.7
     baz=49,SNR=46
KNRA  Kununurra          49.44 265 P     P               07 57 34.6 -0.9
KNRA  Kununurra          49.44 265 P     P               07 57 34.9 -0.7
FAKI  Fak Fak            49.57 282 P     P               07 57 35.8 -0.8
FAKI                               IAmb  IAmb            07 57 37.1
     comp=Z,73nm,1.3s
FAKI  Fak Fak            49.57 282 P     P               07 57 33.7 -2.9
     comp=Z,44nm,1.3s
FAKI  Fak Fak            49.57 282 P     P               07 57 36.4 -0.2
SIJI  Sorong             51.24 284 P     P               07 57 46.1 -2.5
     comp=Z,2μmcomp=Z,125nm,1.1s
SWI   Sorong             51.25 284 P     P               07 57 46.4 -2.3
     comp=Z,1μmcomp=Z,153nm,1.0s
KRAI  Karang Ratu        53.04 280 P     P               07 57 59.4 -2.0
     comp=Z,60nm,1.2s
AAI   Ambon              53.10 279 P     P               07 57 59.3 -2.5
     comp=Z,4μmcomp=Z,110nm,0.5s
NLAI  Namlea             54.28 279 P     P               07 58 07.9 -2.2
     comp=Z,51nm,1.3s
SOEI  Soe                55.03 271 P     P               07 58 16.3 +0.9
SOEI  Soe                55.03 271 P     P               07 58 13.3 -2.1
     comp=Z,3μmcomp=Z,292nm,1.2s
SOEI  Soe                55.03 271 P     P               07 58 16.3 +0.9
DRV   Dumont d'Urvil     55.26 198 P     P               07 58 16.3 +0.4
DRV                                pP    pwP             08 00 17.6 -1.6
DRV                                sP    sP              08 01 26.8 +3.4
TNTI  Ternate            55.47 284 P     P               07 58 15.9 -2.4
     comp=Z,67nm,1.2s
SANI  Sanana             55.73 280 P     P               07 58 17.8 -2.3
     comp=Z,1μmcomp=Z,99nm,1.1s
PSA00 Pilbara Seismi     56.88 256 P     P               07 58 26.8 -1.1
PSA00                              IAmb  IAmb            07 58 28.2
     comp=Z,164nm,1.0s
PSA00 Pilbara Seismi     56.88 256 P     P               07 58 26.9 -0.9
PSA00                              IAmb  IAmb            07 58 28.3
     comp=Z,87nm,1.0s
PSA00 Pilbara Seismi     56.88 256 P     P               07 58 27.0 -0.9
MBWA  Marble Bar         57.04 256 P     P               07 58 27.9 -1.1
MBWA                               IAmb  IAmb            07 58 29.3
     comp=Z,150nm,1.2s
MBWA  Marble Bar         57.04 256 P     P               07 58 28.3 -0.7
MBWA  Marble Bar         57.04 256 P     P               07 58 28.0 -0.9
MEEK  Meekatharra        57.43 250 P     P               07 58 30.6 -1.0
KLBR  Kellerberrin       57.86 244 P     P               07 58 33.5 -0.9
     baz=58,SNR=30
KLBR  Kellerberrin       57.86 244 P     P               07 58 33.5 -0.9
NWAO  Narrogin (SRO)     58.25 242 P     P               07 58 36.2 -0.7
     baz=58,SNR=11
NWAO                               P     P               07 58 36.2 -0.7
     baz=58,SNR=11
NWAO  Narrogin (SRO)     58.25 242 P     P               07 58 36.1 -0.8
NWAO  Narrogin (SRO)     58.25 242 P     P               07 58 34.9 -2.0
RKGY  Rocky Gully        58.42 240 P     P               07 58 37.2 -0.9
     baz=58,SNR=6.2
BLDU  Ballidu            58.80 245 P     P               07 58 39.8 -0.9
     baz=59,SNR=23
BLDU  Ballidu            58.80 245 P     P               07 58 39.8 -0.9
MUN   Mundaring          59.16 243 P     P               07 58 42.3 -0.7
     baz=59,SNR=8.1
MUN   Mundaring          59.16 243 P     P               07 58 42.8 -0.2
MORW  Morawa             59.49 246 P     P               07 58 44.4 -0.8
     baz=60,SNR=15
MORW  Morawa             59.49 246 P     P               07 58 44.1 -1.2
MORW                               IAmb  IAmb            07 58 45.6
     comp=Z,45nm,0.8s
MORW  Morawa             59.49 246 P     P               07 58 44.8 -0.5
SBA   Scott Base         60.28 183 P     P               07 58 51.3 +1.8
SBA                                IAmb  IAmb            07 58 53.0
     comp=Z,71nm,0.9s
SBA   Scott Base         60.28 183 P     P               07 58 51.7 +2.2
SBA                                pP    pwP             08 00 56.4 +1.5
SBA                                sP    sP              08 02 06.4 +6.6
VNDA  Vanda              60.28 185 P     P               07 58 50.8 +1.3
     comp=Z,9.2nm,0.4s,baz=1.2,slow=6.6,SNR=129
     comp=Z,9.2nm,0.4s
VNDA  Vanda              60.28 185 P     P               07 58 51.2 +1.7
VNDA  Vanda              60.28 185 P     P               07 58 50.8 +1.3
VNDA                               pP    pwP             08 00 56.2 +1.3
KAPI  Kappang            60.66 274 P     P               07 58 51.8 -1.3
     comp=Z,7.7nm,0.4s,baz=82,slow=8.6,SNR=5.1
     comp=Z,7.7nm,0.4s
H01W1 Cape Leeuwin H     60.74 240 P     P               07 58 54.3 +1.3
     baz=113,slow=6.4,SNR=8.0
H01W3 Cape Leeuwin H     60.76 240 P     P               07 58 54.4 +1.2
     baz=113,slow=6.4,SNR=9.9
H01W2 Cape Leeuwin H     60.76 240 P     P               07 58 54.4 +1.2
     baz=113,slow=6.4,SNR=9.3
PLAI  Plampang           61.45 270 P     P               07 58 58.1 -0.2
TOLI2 Tolitoli           61.71 281 P     P               07 58 59.4 -0.6
TOLI2 Tolitoli           61.71 281 P     P               07 59 00.1 +0.2
GIRL  Giralia            61.87 254 P     P               07 59 01.4 +0.6
     baz=62,SNR=16
GIRL  Giralia            61.87 254 P     P               07 59 01.0 +0.2
GIRL  Giralia            61.87 254 P     P               07 59 01.3 +0.4
JHJ2  Mitsune            63.97 322 P     P               07 59 14.3 +0.4
CCD   Concordia, Ant     64.54 194 P     P               07 59 17.9 +0.5
CCD                                pP    pwP             08 01 26.6 -0.1
JAGI  Jajag, Banyuwa     65.00 269 P     P               07 59 19.1 -1.7
JAGI  Jajag, Banyuwa     65.00 269 P     P               07 59 19.4 -1.4
CASY  Casey              65.63 205 P     P               07 59 23.8  0.0
CASY                               IAmb  IAmb            07 59 25.4
     comp=Z,106nm,1.0s
CASY  Casey              65.63 205 P     P               07 59 24.2 +0.4
CASY                               pP    pwP             08 01 32.3 -1.8
JYT   Yasato             66.03 325 P     P               07 59 26.2 -0.5
JYT                                IAmb  IAmb            07 59 28.4
     comp=Z,49nm,0.6s
JMM   Marumori           66.93 327 P     P               07 59 32.6 +0.4
JGF   Kuroka             67.17 323 P     P               07 59 33.1 -0.7
MJAR  Matsushiro Arr     67.35 324 P     P               07 59 34.1 -0.8
     comp=Z,10nm,0.5s,baz=153,slow=5.4,SNR=22
     comp=Z,10nm,0.5s
MAJO  Matsushiro         67.36 324 P     P               07 59 34.2 -0.6
MAJO  Matsushiro         67.36 324 P     P               07 59 35.0 +0.1
MAJO  Matsushiro         67.36 324 P     P               07 59 33.9 -1.0
MJB9  Matsu-Tunnel       67.36 324 P     P               07 59 35.1 +0.2
JOW   Kunigami           67.47 310 P     P               07 59 35.4 -0.3
     comp=Z,23nm,0.9s,baz=116,slow=6.6,SNR=4.1
     comp=Z,23nm,0.9s
JMN   Monobe             67.97 319 P     P               07 59 39.0 +0.4
JMN                                IAmb  IAmb            07 59 40.9
     comp=Z,36nm,1.0s
UGM   Wanagama           68.60 268 P     P               07 59 42.2 -0.7
UGM   Wanagama           68.60 268 P     P               07 59 42.9  0.0
JHS   Saijyo             69.28 320 P     P               07 59 46.7 +0.3
JHS                                IAmb  IAmb            07 59 48.0
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comp=Z,45nm,0.9s
JHS Saijyo 69.28 320 P P 07 59 47.2 +0.7
ADK Adak 69.62 2 P P 07 59 47.5 -0.5
ADK Adak 69.62 2 P P 07 59 46.2 -1.8
ATKA Atka Island 70.05 3 P P 07 59 49.8 -0.7
SHEM Shemya Is, Ala 70.64 356 P P 07 59 53.4 -0.6
comp=Z,36nm,0.5s,baz=45,slow=6.6,SNR=6.6
comp=Z,36nm,0.5s
NIKH Nikolski High 71.26 7 P P 07 59 57.2 -0.5
NIKH Nikolski High 71.26 7 P P 07 59 56.6 -1.0
baz=191,SNR=7.7
SSLB Suanglung 71.41 304 P P 07 59 58.4 -0.8
LEM Lembang 71.67 269 P P 08 00 00.5 -0.6
comp=Z,96nm,0.7s,baz=113,slow=6.1,SNR=18
comp=Z,96nm,0.7s
UNV Unalaska Valle 72.41 8 P P 08 00 03.1 -1.1
baz=193,SNR=5.9
UNV Unalaska Valle 72.41 8 P P 08 00 03.5 -0.7
PET Petropavlovsk 73.20 346 P P 08 00 08.5 -0.2
PET IAmb IAmb 08 00 09.4
comp=Z,88nm,1.4s
PET Petropavlovsk 73.20 346 P P 08 00 08.3 -0.4
PEA0B Petropavlovsk- 73.50 346 P P 08 00 10.2 -0.3
PETK Petropavlovsk- 73.50 346 P P 08 00 09.5 -0.9
comp=Z,34nm,0.8s,baz=140,slow=6.9,SNR=94
comp=Z,34nm,0.8s
PETK Petropavlovsk- 73.50 346 P P 08 00 09.8 -0.7
KSRS Korea Array 74.07 319 P P 08 00 14.6 +0.6
comp=Z,4.5nm,0.9s,baz=133,slow=6.2,SNR=8.0
comp=Z,4.5nm,0.9s
USRK Ussuriysk Ar. 76.10 326 P P 08 00 25.7 +0.6
comp=Z,5.8nm,0.6s,baz=116,slow=4.4,SNR=11
comp=Z,5.8nm,0.6s
USRK Ussuriysk Ar. 76.10 326 P P 08 00 24.9 -0.2
MNAI Manna 76.82 270 P P 08 00 30.0 +0.2
comp=Z,156nm,1.6s
SCZ2 Santa Cruz Isl 76.94 48 P P 08 00 31.0 +1.1
baz=238
SBC Santa Barbara 77.12 47 P P 08 00 32.2 +1.4
baz=237
SCI2 San Clemente I 77.17 49 P P 08 00 32.1 +0.9
baz=238
NJ2 Nanjing 77.19 310 *e*P **P 08 00 29.9 -1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
SAO San Andreas Ge 77.21 44 P P 08 00 32.2 +0.9
SAO IAmb IAmb 08 00 33.8
comp=Z,47nm,1.1s
SII Sitkinak Islan 77.25 14 P P 08 00 31.1 0.0
SII Sitkinak Islan 77.25 14 P P 08 00 33.3 +2.2
baz=205
SII Sitkinak Islan 77.25 14 P P 08 00 31.6 +0.5
PKM Mcpherson Peak 77.29 47 P P 08 00 33.0 +1.0
baz=237
PMPB Monarch Peak 77.34 45 P P 08 00 33.2 +1.1
PMPB IAmb IAmb 08 00 34.3
comp=Z,38nm,1.1s
SMMC Simmler 77.39 46 P P 08 00 33.5 +1.1
baz=237
HOPS Hopland Field 77.43 42 P P 08 00 33.1 +0.7
HOPS IAmb IAmb 08 00 35.0
comp=Z,84nm,1.3s
CIS Catalina Islan 77.49 49 P P 08 00 33.7 +0.8
baz=238
KCPM Cahto Peak 77.51 41 P P 08 00 34.1 +1.1
KCPM IAmb IAmb 08 01 49.0
comp=Z,53nm,1.4s
BCW Bitter Crk WRg 77.59 47 P P 08 00 34.6 +1.0
BCW IAmb IAmb 08 00 36.4
comp=Z,57nm,1.2s
KMPM Mount Pierce 77.61 40 P P 08 00 34.9 +1.4
KMPM IAmb IAmb 08 00 36.3
comp=Z,67nm,1.1s
MDJ Mudanjiang 77.66 325 P P 08 00 34.3 +0.8
MDJ S **S 08 09 38.6 +4.3**
MDJ pmax pmax
comp=Z,33nm,1.3s
MDJ pmax pmax
comp=Z,320nm,5.5s
KMRM Mail Ridge 77.75 40 P P 08 00 35.9 +1.6
KMRM IAmb IAmb 08 00 37.1
comp=Z,91nm,1.0s
ARVC Arvin 78.10 47 P P 08 00 37.0 +0.9
baz=238
KHMM Horse Mountain 78.12 40 P P 08 00 37.8 +1.5
KHMM IAmb IAmb 08 00 39.1
comp=Z,40nm,1.1s
109C Camp Elliot, M 78.17 50 P P 08 00 37.1 +0.6
baz=239
CBX Cerro Bola 78.20 50 P P 08 00 38.2 +1.4
VES Vestal, Richgr 78.30 46 P P 08 00 38.1 +0.9
baz=238,SNR=14
ELS Elsinore Mount 78.32 49 P P 08 00 38.5 +1.0
VOG Valley Oaks Go 78.36 46 P P 08 00 38.4 +1.0
baz=237
Q17K Contact Creek 78.44 12 P P 08 00 37.2 -0.4
baz=203
BFSC Mount Baldy Ra 78.46 48 P P 08 00 39.0 +0.8
baz=239
MURC Murrieta 78.46 49 P P 08 00 39.0 +0.9
baz=239
EDW2 Edwards Air Fo 78.55 47 P P 08 00 39.5 +0.9
baz=238,SNR=21
ESJX Sierra Juarez 78.57 51 P P 08 00 40.1 +1.2
CMB Columbia Colle 78.62 44 P P 08 00 39.5 +0.6
CMB IAmb IAmb 08 00 41.0
comp=Z,33nm,1.0s
ISA Isabella, Lake 78.63 47 P P 08 00 39.5 +0.5
ISA IAmb IAmb 08 00 41.5
comp=Z,36nm,1.1s
ISA Isabella, Lake 78.63 47 P P 08 00 39.7 +0.7
baz=238,SNR=18
MONP2 Monument Peak 78.66 50 P P 08 00 40.2 +0.7
baz=240,SNR=12
Q16K King Salmon 78.67 12 P P 08 00 38.3 -0.3
baz=202,SNR=5.9
CCAC Calif City Air 78.68 47 P P 08 00 40.4 +1.1
CCAC IAmb IAmb 08 00 41.7
comp=Z,42nm,1.4s
KDAK Kodiak Island 78.73 14 P P 08 00 39.0 +0.1
comp=Z,36nm,1.1s,baz=269,slow=9.2,SNR=11
comp=Z,36nm,1.1s
KDAK Kodiak Island 78.73 14 P P 08 00 38.2 -0.8
KDAK Kodiak Island 78.73 14 P P 08 00 39.1 +0.2
baz=206
AFDM Forest Hills D 78.74 43 P P 08 00 40.1 +0.6
AFDM IAmb IAmb 08 00 41.6
comp=Z,32nm,1.0s
ORV Oroville 78.75 42 P P 08 00 40.0 +0.5
P16K Nushagak River 78.75 11 P P 08 00 38.7 -0.3
baz=201
IKP In-Ko-Pah, Jac 78.77 50 P P 08 00 40.7 +0.9
baz=240,SNR=8.2
Q18K Katmai Hardscr 78.98 13 P P 08 00 39.9 -0.5
baz=204,SNR=14
PFO Pinyon Flats O 79.00 49 P P 08 00 41.4 +0.3
comp=Z,4.8nm,1.2s,baz=268,slow=7.4,SNR=4.5
comp=Z,4.8nm,1.2s
PFO Pinyon Flats O 79.00 49 P P 08 00 42.1 +1.0
PFO Pinyon Flats O 79.00 49 P P 08 00 41.7 +0.6
baz=240
TPFO Pinon Flats 79.00 49 P P 08 00 41.8 +0.7
baz=240
LRMC Laurel Mtn Rad 79.08 47 P P 08 00 42.9 +1.4
baz=239
SWSC Sam W. Stewart 79.14 50 P P 08 00 42.8 +1.1
baz=240,SNR=6.5
YBH Yreka Blue Hor 79.25 40 P P 08 00 43.6 +1.4
comp=Z,15nm,0.7s,baz=202,slow=2.9,SNR=15
YBH pP **pP 08 02 56.0 +1.0**
comp=Z,5.9nm,1.1s,baz=182,slow=6.4,SNR=4.0
comp=Z,15nm,0.7s
YBH Yreka Blue Hor 79.25 40 P P 08 00 43.1 +0.9
YBH IAmb IAmb 08 00 44.8
comp=Z,19nm,0.7s
O16K Kokwok River B 79.26 11 P P 08 00 40.8 -0.9
baz=201,SNR=7.2
MDPB Devils Postpil 79.26 45 P P 08 00 43.4 +0.9
MDPB IAmb IAmb 08 00 44.9
comp=Z,42nm,1.0s
OMMB Old Mammoth Mi 79.31 45 P P 08 00 43.7 +0.8
CWC Cottonwood Cre 79.31 46 P P 08 00 43.6 +0.9
baz=238
MLAC Mammoth, Mammo 79.43 45 P P 08 00 44.7 +1.3
baz=237
CN2 Changchun 79.45 323 *e*P **P 08 00 43.6 +0.6**
CN2 *e*S **S 08 09 56.9 +4.0**
CN2 pmax pmax
comp=Z,30nm,1.2s
WAKR Walker 79.50 44 P P 08 00 44.7 +1.0
WAKR IAmb IAmb 08 00 46.4
comp=Z,59nm,1.1s
MPMC Manual Prospec 79.52 47 P P 08 00 45.1 +1.3
baz=239,SNR=19
Q20K Shuyak Island 79.52 14 P P 08 00 43.6 +0.6
baz=206
BELC Belle Mtn. Jos 79.52 49 P P 08 00 44.6 +0.7
baz=240
TIN Tinemaha, Big 79.53 46 P P 08 00 45.0 +1.2
baz=238
MPK Martis Peak 79.55 43 P P 08 00 44.9 +0.9
MPK IAmb IAmb 08 00 46.5
comp=Z,75nm,1.0s
BNX BinXian 79.56 325 ⇓P **P 08 00 44.1 +0.5**
BNX pmax pmax
comp=Z,33nm,1.0s
BNX pmax pmax
comp=Z,200nm,5.8s
GSC Goldstone, Bar 79.60 48 P P 08 00 44.8 +0.6
GSC Goldstone, Bar 79.60 48 P P 08 00 45.3 +1.1
baz=239,SNR=12
O17K Koliganek Bris 79.61 11 P P 08 00 43.3 -0.2
baz=202,SNR=6.2
HUMO Hull Mountain 79.61 39 P P 08 00 45.1 +1.1
HUMO IAmb IAmb 08 00 46.7
comp=Z,27nm,0.9s
P18K Big Mountain, 79.62 12 P P 08 00 43.3 -0.3
baz=203
BEKR Beckworth 79.65 42 P P 08 00 44.7 +0.3
BEKR IAmb IAmb 08 00 46.7
comp=Z,41nm,1.1s
HEC Hector,Ludlow 79.70 48 P P 08 00 45.6 +0.9
baz=240,SNR=6.3
PNTR Pine Nut 79.71 43 P P 08 00 45.8 +0.9
PNTR IAmb IAmb 08 00 47.3
comp=Z,82nm,1.1s
BC3 Big Chuckawall 79.75 50 P P 08 00 46.1 +1.1
baz=240
VCNR Virginia City 79.79 43 P P 08 00 45.9 +0.7
VCNR IAmb IAmb 08 00 47.6
comp=Z,35nm,1.1s
DSP Deep Springs 79.87 45 P P 08 00 46.6 +1.2
DSP IAmb IAmb 08 00 48.1
comp=Z,28nm,1.0s
YERR Yerington 79.89 43 P P 08 00 46.4 +0.7
YERR IAmb IAmb 08 00 48.0
comp=Z,33nm,0.7s
QSM Queen of Sheba 79.90 47 P P 08 00 46.8 +1.2
GLA Glamis 79.91 50 P P 08 00 47.3 +1.6
baz=241
N16K Nishlik Lake 79.97 10 P P 08 00 45.8 +0.4
baz=200,SNR=6.8
LHV Little Huntoon 79.98 44 P P 08 00 46.9 +1.0
LHV IAmb IAmb 08 00 48.8
comp=Z,56nm,1.1s
LCH Last Change Ra 80.02 46 P P 08 00 47.1 +0.7
O18K Koktuh Hills 80.05 12 P P 08 00 45.7 -0.1
O18K Koktuh Hills 80.05 12 P P 08 00 45.8 -0.1
baz=203
GRAC Grapevine Rang 80.09 46 P P 08 00 47.7 +1.1
GRAC IAmb IAmb 08 00 49.3
comp=Z,33nm,0.9s
GRAC Grapevine Rang 80.09 46 P P 08 00 47.9 +1.3
baz=239,SNR=19
GWY Greenwater Val 80.15 47 P P 08 00 47.6 +0.5
GMRC Granite Mounta 80.16 49 P P 08 00 48.0 +0.9
baz=240,SNR=10
FURC Furnace Creek, 80.16 47 P P 08 00 47.7 +0.8
baz=239,SNR=10
RYN Ryan 80.17 44 P P 08 00 48.1 +1.0
RYN IAmb IAmb 08 00 49.5
comp=Z,41nm,1.2s
PAHR Pah Rah Range 80.19 43 P P 08 00 48.0 +0.8
PAHR IAmb IAmb 08 00 49.5
comp=Z,46nm,1.1s
NVAR Mina Array Bea 80.21 44 P P 08 00 48.5 +1.1
comp=Z,17nm,0.9s,baz=226,slow=8.5,SNR=94
NVAR pP **pP 08 03 00.2 -0.5**
comp=Z,2.2nm,1.1s,baz=228,slow=8.6,SNR=5.2
comp=Z,17nm,0.9s
NVAR Mina Array Bea 80.21 44 P P 08 00 47.9 +0.5
IRM Iron Mountain 80.22 49 P P 08 00 48.2 +0.8
baz=240,SNR=14
SHOC Shoshone, Teco 80.28 47 P P 08 00 48.8 +1.2
baz=239,SNR=5.5
TUQ Turquoise Moun 80.29 48 P P 08 00 48.7 +0.9
baz=240
NV11 Mina Array Sit 80.31 44 P P 08 00 48.3 +0.5
NV11 IAmb IAmb 08 00 50.2
comp=Z,40nm,1.1s
GMN Gold Mountain 80.32 46 P P 08 00 48.9 +0.9
MZP Montezuma Peak 80.44 45 P P 08 00 49.0 +0.3
BLYC Blythe 80.47 50 P P 08 00 49.2 +0.6
WCT Wildcat Mounta 80.49 46 P P 08 00 49.4 +0.7
O19K Port Alsworth 80.54 12 P P 08 00 47.5 -0.7
O19K Port Alsworth 80.54 12 P P 08 00 47.6 -0.7
baz=204,SNR=36
113A Mohawk Valley, 80.55 51 P P 08 00 49.9 +0.9
N18K Kilae Creek 80.68 12 P P 08 00 48.9 -0.2
baz=203
TPH Tonopah 80.75 45 P P 08 00 51.2 +1.1
TPNV Topopah Spring 80.83 46 P P 08 00 51.4 +0.8
baz=239,SNR=24
214A Organ Pipe Nat 80.89 52 P P 08 00 52.2 +1.4
baz=242,SNR=6.6
BRSE Bradley Lake S 80.92 14 P P 08 00 50.7 +0.4
baz=208,SNR=6.7
MA2 Magadan 81.00 345 P P 08 00 49.8 -0.9
comp=Z,20nm,0.8s,baz=76,slow=6.2,SNR=4.0
comp=Z,20nm,0.8s
PDMCI Parker Dam,Lak 81.01 50 P P 08 00 52.6 +1.2
baz=241
N19K Bonanza Creek 81.07 12 P P 08 00 50.5 -0.6
baz=204,SNR=8.9
SEW Seward 81.55 15 P P 08 00 53.4 0.0
baz=209
O22K Cooper Landing 81.81 14 P P 08 00 54.6 -0.2
baz=208
N20K Mount Spurr 81.90 13 P P 08 00 54.3 -1.0
baz=206,SNR=12
SPCR Spurr Chakacha 81.90 13 P P 08 00 54.3 -1.0
baz=206,SNR=11
BMN Battle Mountai 81.98 43 P P 08 00 57.1 +0.8
BMN IAmb IAmb 08 00 58.6
comp=Z,37nm,1.0s
R11A Troy Canyon, C 81.99 45 P P 08 00 56.6 +0.1
R11A Troy Canyon, C 81.99 45 P P 08 00 56.6 +0.1
baz=240,SNR=20
M19K Big River Lodg 82.09 12 P P 08 00 55.7 -0.5
baz=204
BELA Belgrano 2 82.21 173 P P 08 00 55.9 -0.8
L19K White Mountain 82.26 11 P P 08 00 56.8 -0.2
L19K White Mountain 82.26 11 P P 08 00 57.5 +0.5
baz=204,SNR=21
RC01 Rabbit Creek A 82.35 14 P P 08 00 57.2 -0.3
baz=208,SNR=5.9
SUA Susitna One 82.45 13 P P 08 00 57.5 -0.6
SUA IAmb IAmb 08 00 58.7
comp=Z,56nm,1.0s
SUA Susitna One 82.45 13 P P 08 00 57.3 -0.8
baz=207,SNR=6.8
PWL Port Wells 82.48 15 P P 08 00 57.2 -0.9
baz=210,SNR=6.6
TUC Tucson 82.58 53 P P 08 00 59.9 +0.5
TUC Tucson 82.58 53 P P 08 01 01.2 +1.8
baz=243
L20K Farewell, AK 82.72 12 P P 08 00 59.5 +0.2
baz=204,SNR=13
TTA Tatalina 82.74 11 P P 08 00 59.6 +0.2
TTA IAmb IAmb 08 01 00.9
comp=Z,39nm,1.0s
TTA Tatalina 82.74 11 P P 08 00 59.8 +0.3
baz=202,SNR=14
SKT Skwentna 82.74 13 P P 08 00 58.0 -1.5
baz=207
J08A Circle Bar Ran 82.75 40 P P 08 01 00.8 +0.7
J08A IAmb IAmb 08 01 02.3
comp=Z,38nm,0.9s
GLI Glacier Island 82.80 15 P P 08 00 58.9 -0.8
baz=211
M22K Willow 82.85 14 P P 08 00 59.7 -0.2
baz=208,SNR=7.7
EYAK Cordova Ski Ar 82.87 16 P P 08 00 59.6 -0.4
baz=212
BBB Bella Bella 82.89 29 P P 08 01 01.2 +0.9
comp=Z,15nm,0.6s,baz=306,slow=4.9,SNR=9.0
comp=Z,15nm,0.6s
PMR Palmer 82.93 14 P P 08 01 00.0 -0.3
baz=209,SNR=7.9
KNK Knik Glacier 82.93 14 P P 08 01 00.0 -0.4
baz=210,SNR=6.1
CRAG Craig 83.02 25 P P 08 01 01.7 +0.8
baz=224
LYN LuoYang 83.07 310 ⇑P **P 08 01 02.8 +1.1**
LYN pmax pmax
comp=Z,10.0nm,0.5s
BJI Beijing 83.11 316 P P 08 01 02.6 +0.9
BJI pmax pmax
comp=Z,10.0nm,1.0s
CUT Chulitna 83.39 13 P P 08 01 02.2 -0.4
baz=208,SNR=10
MAW Mawson 83.43 200 P P 08 01 04.0 +1.2
comp=Z,52nm,0.8s,baz=128,slow=6.2,SNR=129
comp=Z,52nm,0.8s
MAW Mawson 83.43 200 P P 08 01 04.0 +1.2
baz=83,SNR=111
MAW Mawson 83.43 200 P P 08 01 03.6 +0.8
PPLA Purkeypile 83.43 12 P P 08 01 02.9 0.0
baz=206
ELK Elko 83.43 44 P P 08 01 04.2 +0.6
M23K Glacier View 83.44 15 P P 08 01 03.1 +0.2
baz=210
K20K Telida 83.48 11 P P 08 01 03.0 -0.1
baz=204,SNR=21
U33K Whale Pass 83.49 24 P P 08 01 03.8 +0.6
baz=224
BMRM Bremner River 83.52 16 P P 08 01 03.2 -0.2
BMRM IAmb IAmb 08 01 04.3
comp=Z,88nm,1.2s
BMRM Bremner River 83.52 16 P P 08 01 03.2 -0.2
baz=213,SNR=10
V35K Ketchikan 83.52 25 P P 08 01 04.2 +0.8
baz=225
SCM Sheep Creek Mo 83.57 15 P P 08 01 03.2 -0.4
SCM Sheep Creek Mo 83.57 15 P P 08 01 03.2 -0.4
baz=211,SNR=7.6
WUAZ Wupatki 83.59 50 P P 08 01 04.5 0.0
WUAZ IAmb IAmb 08 01 07.2
comp=Z,26nm,1.1s
WUAZ Wupatki 83.59 50 P P 08 01 06.0 +1.5
baz=243,SNR=18
MESA MESA 83.61 18 P P 08 01 04.2 +0.2
baz=216
KLU Klutina 83.62 15 P P 08 01 03.8 -0.1
baz=212,SNR=7.7
SEY Seymchan 83.62 347 P P 08 01 03.6 -0.1
comp=Z,20nm,0.5s,baz=145,slow=5.6,SNR=43
comp=Z,20nm,0.5s
S31K Pelican 83.70 22 P P 08 01 04.6 +0.4
baz=221
TNA Tin City 83.76 5 P P 08 01 04.8 +0.5
baz=191
HAWA Hanford 83.80 37 P P 08 01 05.3 +0.3
HAWA IAmb IAmb 08 01 07.2
comp=Z,52nm,1.0s
PKCU Pink Cliffs 83.81 48 P P 08 01 07.8 +2.1
PKCU IAmb IAmb 08 01 09.1
comp=Z,48nm,1.3s
CAST Castle Rocks 83.92 12 P P 08 01 03.4 -1.8
baz=206,SNR=23
S32K Killisnoo 83.93 23 P P 08 01 05.0 -0.3
baz=222
PNL Peninsula 83.98 19 P P 08 01 05.8 +0.2
baz=218
WRAK Wrangell Islan 84.01 24 P P 08 01 06.5 +0.8
baz=224
PINM Pinnacle 84.05 19 P P 08 01 06.9 +0.9
baz=217
T33K Petersburg 84.06 24 P P 08 01 06.4 +0.5
baz=224
N25K Chitina, Valde 84.06 16 P P 08 01 05.5 -0.5
N25K Chitina, Valde 84.06 16 P P 08 01 06.2 +0.2
baz=213,SNR=13
M24K Tolsona, Glenn 84.08 15 P P 08 01 06.4 +0.2
baz=212,SNR=7.5
WAT6 Susitna Watana 84.12 14 P P 08 01 05.8 -0.6
baz=210,SNR=15
E08A Dider Farm, El 84.12 37 P P 08 01 07.5 +0.9
E08A IAmb IAmb 08 01 08.7
comp=Z,44nm,1.2s
WAT1 Susitna Watana 84.15 14 P P 08 01 05.9 -0.5
baz=209
MTPU Mount Pierson 84.18 47 P P 08 01 09.3 +1.8
J20K Nowinta River 84.22 11 P P 08 01 06.6 -0.1
baz=204,SNR=13
BMO Blue Mountains 84.26 39 P P 08 01 07.3 -0.2
GCSA Galena City Sc 84.29 10 P P 08 01 06.7 -0.2
baz=202,SNR=5.5
CHUM Lake Minchumin 84.29 12 P P 08 01 06.0 -1.0
baz=206,SNR=13
MCARA McCarthy VSAT 84.30 17 P P 08 01 07.1 0.0
baz=215,SNR=7.6
TRF Thorofare Moun 84.31 13 P P 08 01 06.5 -0.9
baz=208,SNR=12
BARN Barnard Glacie 84.41 17 P P 08 01 07.8 -0.1
BARN IAmb IAmb 08 01 09.2
comp=Z,84nm,1.2s
CTG Chitna Glacier 84.43 18 P P 08 01 08.1 +0.2
baz=216,SNR=5.4
P29M Windy Craggy 84.47 20 P P 08 01 09.0 +0.9
baz=220,SNR=7.1
D08A Wollman Farm, 84.52 37 P P 08 01 09.1 +0.6
D08A IAmb IAmb 08 01 10.6
comp=Z,41nm,1.0s
HARP HAARP 84.59 15 P P 08 01 09.2 +0.7
baz=213
W18A Petrified Fore 84.61 51 P P 08 01 10.7 +1.2
baz=244,SNR=5.8
O28M Mount Upton 84.61 18 P P 08 01 09.0 0.0
baz=217,SNR=7.7
DHY Denali Highway 84.63 14 P P 08 01 08.4 -0.5
baz=210,SNR=5.7
O29M Mount Kennedy 84.73 19 P P 08 01 09.5 +0.1
baz=219
BPAW Bear Paw Mtn. 84.75 12 P P 08 01 08.7 -0.6
baz=207
DUG Dugway, Tooele 84.77 45 P P 08 01 10.1 0.0
baz=241
PLBC Pleasant Camp 84.79 21 P P 08 01 10.0 +0.5
baz=221,SNR=5.4
MCK McKinley 84.85 13 P P 08 01 09.0 -0.7
baz=209,SNR=16
121A Cookes Peak, D 84.96 54 P P 08 01 12.8 +1.6
baz=245
PAX Paxson 84.99 15 P P 08 01 09.7 -0.8
baz=212,SNR=5.6
B08A Colville Reser 85.01 36 P P 08 01 10.5 -0.4
B08A IAmb IAmb 08 01 12.2
comp=Z,41nm,1.1s
SKAG Skagway 85.14 21 P P 08 01 12.2 +1.1
SKAG IAmb IAmb 08 01 13.6
comp=Z,49nm,1.4s
SKAG Skagway 85.14 21 P P 08 01 12.4 +1.2
baz=222,SNR=6.3
YUK8 Steele Glacier 85.14 18 P P 08 01 11.8 +0.3
baz=218,SNR=7.0
M26K Nabesna, AK 85.15 16 P P 08 01 11.3 0.0
baz=215,SNR=12
PLID Pearl Lake 85.17 40 P P 08 01 12.2 +0.1
T35M Bob Quinn 85.23 25 P P 08 01 12.7 +1.0
baz=226
YUK3 Moose Creek 85.33 17 P P 08 01 12.6 +0.3
baz=217,SNR=18
HLID Hailey 85.38 41 P P 08 01 13.8 +0.9
HLID Hailey 85.38 41 P P 08 01 13.9 +0.9
baz=240,SNR=28
M27K Edge Creek, AK 85.41 17 P P 08 01 13.1 +0.4
baz=216,SNR=12
HYT Haines Junctio 85.47 19 P P 08 01 13.1 +0.2
HYT IAmb IAmb 08 01 14.6
comp=Z,32nm,1.2s
HYT Haines Junctio 85.47 19 P P 08 01 13.5 +0.6
baz=220,SNR=6.4
YUK4 Talbot Arm 85.53 18 P P 08 01 13.8 +0.5
baz=219
I21K Tanana 85.53 11 P P 08 01 12.6 -0.3
baz=206,SNR=10
S34M Telegraph Cree 85.53 24 P P 08 01 14.3 +1.2
baz=226,SNR=13
L26K Log Cabin Wild 85.57 16 P P 08 01 13.3 +0.1
baz=214,SNR=9.2

NEA2 Nenana 85.58 13 P **P 08 01 12.5 -0.7**
baz=209
K24K Donnelly Dome 85.63 14 P **P 08 01 13.1 -0.3**
baz=212,SNR=15
MLY Manley 85.63 12 P **P 08 01 12.2 -1.2**
baz=207,SNR=8.9
KIDD KIDD Seismic O 85.63 55 P **P 08 01 16.1 +1.7**
baz=246
BVCY Beaver Creek 85.74 17 P **P 08 01 14.2 +0.2**
baz=216,SNR=8.0
P32M Atlin 85.80 21 P **P 08 01 15.1 +0.7**
baz=223,SNR=6.4
RIDG Independent Ri 85.80 15 P **P 08 01 13.7 -0.6**
baz=213
H21K Melozitna Rive 85.81 11 P **P 08 01 14.1 -0.2**
baz=205,SNR=11
SRU San Rafael Swe 85.83 47 P **P 08 01 16.3 +1.1**
Q32M Nakina River 85.85 22 P **P 08 01 15.1 +0.2**
baz=224,SNR=6.7
HDA Harding Lake 85.88 14 P **P 08 01 13.9 -0.7**
baz=211,SNR=11
O30N Mendenhall 85.88 20 P **P 08 01 15.2 +0.5**
baz=221,SNR=7.0
IMAR Indian Mountai 85.94 10 P **P 08 01 14.4 -0.4**
L27K Beaver Creek, 86.00 16 P **P 08 01 15.3 0.0**
L27K IAmb IAmb 08 01 16.5
comp=Z,24nm,1.4s
L27K Beaver Creek, 86.00 16 P **P 08 01 15.3 0.0**
baz=216,SNR=6.0
I23K Minto, Yukon-K 86.01 12 P **P 08 01 14.4 -0.8**
baz=209,SNR=8.5
TCOL CIGO, UAF Yank 86.08 13 P **P 08 01 14.2 -1.3**
baz=210,SNR=7.6
COLA College 86.08 13 P **P 08 01 14.7 -0.8**
baz=210
COLA College 86.08 13 P **P 08 01 14.8 -0.7**
N30M Aishikik Lake 86.09 19 P **P 08 01 15.6 -0.1**
baz=220
Y22A Socorro 86.17 53 P **P 08 01 18.1 +1.1**
baz=245
WHY Whitehorse 86.19 20 P **P 08 01 16.6 +0.3**
baz=222,SNR=7.7
NEW Newport 86.19 36 P **P 08 01 16.7 +0.2**
comp=Z,5.7nm,0.6s,baz=242,slow=3.7,SNR=12
comp=Z,5.7nm,0.6s
NEW Newport 86.19 36 P **P 08 01 17.0 +0.5**
baz=238,SNR=9.0
ILAR Eielson Array 86.20 13 P **P 08 01 15.2 -1.0**
comp=Z,15nm,0.9s,baz=211,slow=5.7,SNR=76
ILAR pP **pP 08 03 31.1 -1.1**
comp=Z,5.9nm,1.1s,baz=222,slow=8.6,SNR=4.1
ILAR PP **PP 08 04 52.9 +2.8**
comp=Z,7.1nm,1.3s,baz=230,slow=6.7,SNR=4.1
ILAR PKKPbc **PKKPbc 08 19 09.6 -3.4**
comp=Z,0.3nm,0.3s,baz=332,slow=2.9,SNR=6.6
comp=Z,15nm,0.9s
SCRK Sand Creek 86.20 15 P **P 08 01 16.1 -0.2**
baz=214,SNR=7.9
H22K Ishtalitna Cre 86.28 11 P **P 08 01 16.3 -0.2**
baz=207,SNR=20
DLBC Dease Lake 86.32 24 P **P 08 01 17.0 +0.1**
comp=Z,13nm,1.0s,baz=224,slow=7.3,SNR=10
comp=Z,13nm,1.0s
DLBC Dease Lake 86.32 24 P **P 08 01 17.6 +0.7**
baz=226,SNR=5.6
POKR Poker Plat Res 86.38 13 P **P 08 01 16.1 -0.9**
baz=210,SNR=5.9
J25K Salcha River, 86.41 14 P **P 08 01 16.8 -0.4**
J25K IAmb IAmb 08 01 17.9
comp=Z,39nm,1.2s
J25K Salcha River, 86.41 14 P **P 08 01 16.9 -0.4**
baz=212,SNR=15
MVCO Mesa Verde 86.42 49 P **P 08 01 18.2 +0.1**
baz=244
M29M Somme Creek 86.44 18 P **P 08 01 17.8 +0.4**
baz=219,SNR=6.3
G21K Allakaket 86.47 10 P **P 08 01 17.1 -0.3**
baz=205
N31M Braeburn, Yuko 86.52 19 P **P 08 01 18.2 +0.4**
N31M IAmb IAmb 08 01 19.4
comp=Z,65nm,1.2s
N31M Braeburn, Yuko 86.52 19 P **P 08 01 18.6 +0.8**
baz=221,SNR=7.4
P33M Teslin, Yukon 86.56 21 P **P 08 01 18.1 0.0**
baz=224,SNR=5.3
H23K Yukon River 86.57 12 P **P 08 01 17.5 -0.3**
baz=208,SNR=5.6
HHC Hu-ho-hao-te 86.59 315 *e*P **P 08 01 22.4 +3.8**
R33M Jennings River 86.64 23 P **P 08 01 19.5 +1.1**
baz=226,SNR=13
K27K Chicken 86.72 16 P **P 08 01 19.2 +0.6**
baz=215
J26L Joseph Creek 86.74 15 P **P 08 01 18.6 -0.2**
J26L IAmb IAmb 08 01 20.3
comp=Z,63nm,1.2s
J26L Joseph Creek 86.74 15 P **P 08 01 19.2 +0.4**
baz=214,SNR=23
TX31 Lajitas Ar. Si 86.92 58 P **P 08 01 22.5 +2.1**
baz=247
TXAR Lajitas Array 86.92 58 P **P 08 01 22.5 +2.0**
comp=Z,15nm,1.0s,baz=228,slow=4.2,SNR=106
TXAR pP **pP 08 03 37.4 +0.7**
comp=Z,2.5nm,1.1s,baz=240,slow=4.0,SNR=7.5
TXAR PKKPbc **PKKPbc 08 19 11.0 +1.2**
comp=Z,0.1nm,0.4s,baz=139,slow=2.9,SNR=7.1
comp=Z,15nm,1.0s
TXAR Lajitas Array 86.92 58 P **P 08 01 22.3 +1.9**
ANMO Albuquerque 86.97 52 P **P 08 01 21.7 +1.0**
baz=246
ANMO Albuquerque 86.97 52 P **P 08 01 21.6 +1.0**
baz=246
MCMT McKenzie Canyo 86.98 41 P **P 08 01 21.7 +1.1**
L29M L29M 87.06 18 P **P 08 01 20.9 +0.7**
baz=219,SNR=14
F21K Alatna River 87.12 10 P **P 08 01 20.1 -0.4**
baz=205,SNR=12
PRP Porcupine Dome 87.14 13 P **P 08 01 21.1 +0.4**
baz=212,SNR=19
N32M Quiet Lake 87.15 21 P **P 08 01 21.1 +0.4**
baz=224
G22K Bettles 87.18 11 P **P 08 01 20.7 +0.1**
baz=206
G23K Bananza Creek 87.26 11 P **P 08 01 21.1 0.0**
baz=208,SNR=8.1
MSO Missoula 87.30 39 P **P 08 01 21.7 -0.1**
baz=240,SNR=7.4
DLMT Dillon 87.39 40 P **P 08 01 22.9 +0.5**
DLMT IAmb IAmb 08 01 24.7
comp=Z,31nm,1.1s
DAWY Dawson 87.46 16 P **P 08 01 22.2 +0.1**
baz=218,SNR=19
M31M Drury Creek, Y 87.50 19 P **P 08 01 22.1 -0.2**
baz=222,SNR=10
I26K Coal Creek Min 87.51 14 P **P 08 01 22.1 -0.1**
baz=214
EGAK Eagle 87.57 15 P **P 08 01 22.1 -0.4**
EGAK IAmb IAmb 08 01 23.6
comp=Z,37nm,1.1s
EGAK Eagle 87.57 15 P **P 08 01 22.6 +0.1**
baz=216,SNR=13
F22K John River 87.59 10 P **P 08 01 22.5 -0.1**
baz=206,SNR=9.4
COLD Coldfoot 87.69 11 P **P 08 01 22.9 -0.1**
COLD IAmb IAmb 08 01 24.9
comp=Z,33nm,0.9s
COLD Coldfoot 87.69 11 P **P 08 01 23.2 +0.2**
baz=208,SNR=33
G24K Hadweenzic Riv 87.75 12 P **P 08 01 22.8 -0.5**
baz=210,SNR=5.1
K29M Barlow Dome 87.80 17 P **P 08 01 24.2 +0.4**
baz=220,SNR=13
FARO Faro, Yukon 87.85 20 P **P 08 01 23.8 -0.1**
FARO IAmb IAmb 08 01 25.0
comp=Z,71nm,2.0s
FARO Faro, Yukon 87.85 20 P **P 08 01 25.8 +1.8**
baz=223,SNR=5.7
S22A 4UR Ranch, Cre 87.85 49 P **P 08 01 26.3 +1.4**
baz=245,SNR=20
O20A White River Ci 87.86 47 P **P 08 01 25.7 +1.0**
baz=244,SNR=17
CMAR Chiang Mai Arr 87.93 290 P **P 08 01 26.8 +1.5**
comp=Z,2.3nm,0.3s,baz=112,slow=3.1,SNR=16
comp=Z,2.3nm,0.3s
WTLY Watson Lake, Y 87.93 23 P **P 08 01 25.3 +0.9**
baz=227,SNR=11
MAYO Mayo, Yukon 88.08 18 P **P 08 01 25.2 +0.2**
MAYO Mayo, Yukon 88.08 18 P **P 08 01 25.6 +0.6**
baz=221,SNR=14

J29M Klondike Camp 88.08 17 P **P 08 01 25.5 +0.5**
baz=219
G25K Bearman Lake 88.08 13 P **P 08 01 25.1 +0.3**
baz=212
BOZ Bozeman (W) 88.11 41 P **P 08 01 26.6 +0.9**
baz=242,SNR=19
I27K Kandik River 88.12 15 P **P 08 01 25.0 -0.1**
baz=216,SNR=11
BW06 Boulder Array 88.13 44 P **P 08 01 26.6 +0.6**
baz=243,SNR=19
PDAR Pinedale Array 88.13 44 P **P 08 01 26.4 +0.4**
comp=Z,8.1nm,0.9s,baz=204,slow=3.3,SNR=53
PDAR pP **pP 08 03 42.4 -0.4**
comp=Z,0.8nm,0.8s,baz=197,slow=1.5,SNR=3.8
PDAR PP **PP 08 05 03.5 -2.5**
comp=Z,0.4nm,0.4s,baz=240,slow=4.8,SNR=7.6
PDAR PKKPbc **PKKPbc 08 19 06.7 -1.0**
comp=Z,0.2nm,0.3s,baz=86,slow=5.8,SNR=4.1
comp=Z,8.1nm,0.9s
PDAR Pinedale Array 88.13 44 P **P 08 01 26.6 +0.7**
H17A Grant Village 88.21 42 P **P 08 01 28.9 +2.5**
baz=243,SNR=8.2
E22K Anaktuvuk Pass 88.22 10 P **P 08 01 25.5 0.0**
baz=206
PZH PanZhiHua 88.28 298 P **P 08 01 28.3 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.8s
SMCO Snowmass 88.34 48 P **P 08 01 28.1 +0.8**
SMCO IAmb IAmb 08 01 29.5
comp=Z,19nm,1.1s
F24K Squaw Lake 88.38 12 P **P 08 01 26.5 +0.2**
baz=210,SNR=18
LIRD Liard River Hi 88.49 24 P **P 08 01 27.3 +0.4**
baz=230,SNR=7.3
E23K Chandalar 88.53 11 P **P 08 01 26.9 -0.2**
baz=208,SNR=18
H27K Steamboat Moun 88.66 14 P **P 08 01 27.6 0.0**
baz=216,SNR=15
G26K Porcupine Rive 88.73 13 P **P 08 01 28.3 +0.4**
baz=214,SNR=21
E24K Your Creek 88.75 11 P **P 08 01 28.5 +0.5**
baz=209,SNR=7.5
I29M Ogilvie Camp, 88.77 16 P **P 08 01 27.8 -0.4**
baz=219,SNR=12
MMPY Sheldon Lake, 88.81 20 P **P 08 01 29.3 +0.9**
baz=225,SNR=19
SDCO Great Sand Dun 88.81 50 P **P 08 01 29.7 +0.4**
baz=246
SDCO Great Sand Dun 88.81 50 P **P 08 01 30.0 +0.6**
baz=246
F25K Christian Rive 88.89 12 P **P 08 01 29.2 +0.5**
baz=212,SNR=11
BMAR Burnt Mountain 88.97 13 P **P 08 01 29.4 +0.4**
TOLK Toolik Lake Re 89.05 11 P **P 08 01 29.4 0.0**
TOLK IAmb IAmb 08 03 11.6
comp=Z,23nm,0.9s
TOLK Toolik Lake Re 89.05 11 P **P 08 01 29.4 0.0**
baz=208,SNR=6.4
TGTN Hyland Airport 89.07 22 P **P 08 01 30.4 +0.7**
baz=228,SNR=15
G27K Doyon Strip 89.10 14 P **P 08 01 29.6 0.0**
baz=216
D23K Nanushuk River 89.15 10 P **P 08 01 30.3 +0.5**
baz=207,SNR=14
F26K Sheenjek River 89.28 13 P **P 08 01 31.0 +0.6**
baz=213,SNR=10.0
E25K Arctic Village 89.35 12 P **P 08 01 31.1 +0.4**
baz=212,SNR=10
RLMT Red Lodge 89.37 42 P **P 08 01 32.5 +0.9**
baz=244,SNR=5.4
MSTX Muleshoe 89.38 54 P **P 08 01 32.3 +0.4**
baz=248
MSTX Muleshoe 89.38 54 P **P 08 01 32.5 +0.7**
baz=248
Q24A Divide 89.55 49 P **P 08 01 32.9 +0.2**
baz=246
KOTAN Kotaneelee Air 89.75 24 P **P 08 01 33.7 +1.0**
baz=232
N23A Red Feather La 89.77 47 P **P 08 01 35.0 +1.3**
baz=246,SNR=16
C23K Itkillik River 89.94 10 P **P 08 01 33.6 +0.2**
baz=207
EPYK Eagle Plains 89.96 16 P **P 08 01 33.5 -0.2**
baz=220,SNR=15
FLDN Fort Liard 90.04 24 P **P 08 01 35.4 +1.3**
baz=232
833A Chaparral WMA, 90.05 60 P **P 08 01 35.4 +0.5**
baz=250
833A Chaparral WMA, 90.05 60 P **P 08 01 36.1 +1.2**
baz=250
K22A Casper 90.10 45 P **P 08 01 35.2 +0.2**
baz=245
K22A Casper 90.10 45 P **P 08 01 35.6 +0.6**
baz=245
C24K Franklin Bluff 90.15 10 P **P 08 01 34.5 +0.2**
baz=209
TROLL Troll, Antarti 90.22 181 P **P 08 01 35.1 0.0**
D25K Kavik River 90.22 11 P **P 08 01 35.4 +0.6**
baz=211
E27K Coleen River 90.23 13 P **P 08 01 35.1 +0.3**
baz=216,SNR=7.7
EGMT Eagleton 90.37 39 P **P 08 01 37.0 +1.0**
baz=243
JCT Junction City 90.46 58 P **P 08 01 37.2 +0.4**
baz=249
SNAA Sanae 90.54 179 P **P 08 01 36.0 -0.4**
SNAA Sanae 90.54 179 P **P 08 01 36.5 0.0**
comp=Z,17nm,0.7s,baz=194,slow=4.0,SNR=21
comp=Z,17nm,0.7s
SNAA Sanae 90.54 179 P **P 08 01 35.9 -0.5**
G30M tAoh Zraii Nji 90.56 16 P **P 08 01 36.2 -0.2**
baz=221,SNR=25
VNA3 Neumayer Olymp 90.72 177 P **P 08 01 36.9 -0.4**
C27K Jago River 90.98 12 P **P 08 01 38.3 +0.1**
baz=214,SNR=7.0
C26K Camden Bay 91.00 11 P **P 08 01 39.0 +0.7**
baz=213
VNA2 Neumayer--Watz 91.15 177 P **P 08 01 39.0 -0.2**
baz=184,slow=4.0
ABTX Abilene, Hawle 91.34 56 P **P 08 01 41.2 +0.4**
baz=250
KSCO Kaye Shedlock' 91.38 49 P **P 08 01 41.9 +0.9**
baz=248
VNA1 Neumayer--Stat 91.38 177 P **P 08 01 40.2 0.0**
F31M Tsiigehtchic 91.55 16 P **P 08 01 40.5 -0.3**
baz=223,SNR=14
WRGLY Wrigley 91.89 22 P **P 08 01 42.1 -0.4**
baz=232
LAO LASA Array 91.96 41 P **P 08 01 44.4 +1.1**
baz=246
LAO LASA Array 91.96 41 P **P 08 01 44.8 +1.5**
baz=246,SNR=10
PLCA Paso Flores 92.03 134 P **P 08 01 45.0 +1.0**
comp=Z,1.3nm,0.5s,baz=253,slow=4.4,SNR=11
comp=Z,1.3nm,0.5s
INK Inuvik 92.24 16 P **P 08 01 43.2 -0.8**
comp=Z,14nm,1.0s,baz=221,slow=7.3,SNR=10
comp=Z,14nm,1.0s
INK Inuvik 92.24 16 P **P 08 01 43.4 -0.6**
baz=223,SNR=9.6
RSSD Black Hills 92.35 44 P **P 08 01 45.9 +0.4**
baz=247
RSSD Black Hills 92.35 44 P **P 08 01 45.8 +0.4**
baz=247
CBKS Cedar Bluff 93.41 50 P **P 08 01 51.5 +1.3**
baz=250
CBKS Cedar Bluff 93.41 50 P **P 08 01 51.6 +1.3**
baz=250
DGMT Dagmar 93.93 40 P **P 08 01 53.2 +1.0**
baz=247
DGMT Dagmar 93.93 40 P **P 08 01 53.6 +1.3**
baz=247,SNR=7.3
R32A Long Quarter, 94.04 51 P **P 08 01 54.4 +1.4**
baz=250
YKA Yellowknife Ar 94.84 25 P **P 08 01 55.9 -0.1**
comp=Z,4.9nm,0.9s,baz=247,slow=4.5,SNR=6.6
comp=Z,4.9nm,0.9s
KSU1 Kansas State U 95.81 51 P **P 08 02 01.9 +1.0**
baz=252
TIXI Tiksi 95.97 346 P **P 08 01 59.0 -1.9**
comp=Z,2.0nm,0.8s,baz=270,slow=24,SNR=4.5
comp=Z,2.0nm,0.8s
MDND Maddock 96.57 42 P **P 08 02 05.3 +1.1**
baz=250
MIAR Mount Ida 96.75 56 P **P 08 02 06.7 +1.5**
baz=253

ECSD EROS Data Cent 97.24 46 P **P 08 02 08.5 +1.3**
baz=252
MKAR Makanchi Array 108.44 314 PKiKP **PKiKP 08 06 57.5 -1.1**
comp=Z,1.1nm,0.4s,baz=122,slow=0.4,SNR=22
MKAR PKKPbc **PKKPbc 08 18 10.6 -0.9**
comp=Z,0.6nm,0.3s,baz=293,slow=2.5,SNR=13
KURBB Kurchatov Arra 111.24 318 PKiKP **PKiKP 08 07 02.6 -1.0**
comp=Z,1.1nm,0.5s,baz=100,slow=1.6,SNR=15
KURBB PP **PP 08 07 55.9 -1.1**
comp=Z,0.3nm,0.2s,baz=91,slow=6.6,SNR=6.0
THN Thein Dam 111.66 298 *e*P **Pdif 08 03 12.0 +0.4**
SPA0 Spitsbergen Ar 119.28 356 *e*PKPdf **PKiKP 08 07 18.5 0.0**
SPA0 IAmb IAmb 08 07 28.9
comp=Z,51nm,1.4s
SPITS Spitsbergen Ar 119.28 356 PKP **PKPdf 08 07 17.5 -0.9**
comp=Z,2.5nm,0.5s,baz=74,slow=5.1,SNR=8.1
BDFB Brasilia 121.68 122 PKP **PKPdf 08 07 23.7 -1.2**
comp=Z,1.2nm,0.4s,baz=206,slow=7.7,SNR=4.0
ARU Arti 122.34 326 PKP **PKPdf 08 07 24.5 -0.3**
comp=Z,12nm,0.3s,baz=122,slow=2.3,SNR=12
HAMF Hammerfest 125.53 351 *e*PKPdf **PKPdf 08 07 29.6 -0.9**
ARA0 ARCESS Array S 126.21 349 *e*PKPdf **PKPdf 08 07 31.6 -0.3**
ARA0 IAmb IAmb 08 07 32.5
comp=Z,6.3nm,0.5s
ARCES ARCESS Array B 126.21 349 PKP **PKPdf 08 07 31.6 -0.2**
comp=Z,3.8nm,0.4s,baz=50,slow=1.2,SNR=86
ARCES PKKPbc **PKKPab 08 17 07.4 +0.2**
comp=Z,0.9nm,0.3s,baz=205,slow=2.1,SNR=25
GEYT Alibeck 126.22 304 PKP **PKPdf 08 07 32.3 -0.6**
comp=Z,1.5nm,0.3s,baz=302,slow=2.8,SNR=5.1
SUR Sutherland 126.27 201 PKP **PKiKP 08 07 34.4 +0.5**
comp=Z,12nm,0.7s,baz=241,slow=2.7,SNR=15
KTK1 Kautokeino 127.06 350 *e*PKPdf **PKPdf 08 07 32.9 -0.5**
KTK1 IAmb IAmb 08 07 33.7
comp=Z,2.2nm,0.6s
BOSA Boshof 127.85 208 PKP **PKiKP 08 07 37.6 +0.5**
comp=Z,3.0nm,0.4s,baz=28,slow=3.8,SNR=6.4
LBTB Lobatse 130.76 211 PKP **PKPdf 08 07 42.4 +0.4**
comp=Z,3.5nm,0.6s,baz=183,slow=3.6,SNR=5.0
LBTB SKPbc **SKPab 08 10 09.4 +1.5**
comp=Z,8.5nm,1.1s,baz=82,slow=1.0,SNR=4.5
KONS Konsvik 130.82 353 *e*PKPdf **PKiKP 08 07 41.1 -0.5**
MATP Matopo 132.97 217 PKP **PKPdf 08 07 46.5 +0.1**
comp=Z,4.5nm,0.6s,baz=212,slow=2.1,SNR=8.9
MATP SKPbc **SKPab 08 10 16.9 -0.7**
comp=Z,16nm,1.2s,baz=198,slow=3.4,SNR=7.5
FINES FINESS Array B 132.97 344 PKhKP PKPpre 08 07 31.0
comp=Z,0.4nm,0.4s,baz=9.5,slow=4.6,SNR=4.5
FINES PKP **PKPdf 08 07 44.1 -0.8**
comp=Z,3.1nm,0.4s,baz=75,slow=2.9,SNR=10
FINES SKPbc **SKPab 08 10 14.9 -1.2**
comp=Z,3.7nm,0.4s,baz=43,slow=3.4,SNR=21
OBN Obninsk 133.88 332 SKPbc **SKPab 08 10 18.3 -2.0**
comp=Z,4.9nm,0.4s,baz=83,slow=6.3,SNR=7.9
KBZ Khabaz 136.13 315 SKPbc **SKPbc 08 10 25.6 +1.7**
comp=Z,1.3nm,0.4s,baz=104,slow=2.4,SNR=3.6
NB2 NORSAR Subarra136.32 352 PKPdf **PKiKP 08 07 52.6 -0.5**
comp=Z,0.5nm,0.3s,baz=14,slow=1.8
NOA NORSAR Array B136.32 352 PKP **PKiKP 08 07 52.6 -0.5**
comp=Z,1.0nm,0.4s,baz=14,slow=3.9,SNR=5.1
NOA SKPbc **SKPbc 08 10 25.3 +1.3**
comp=Z,4.4nm,0.9s,baz=15,slow=4.5,SNR=4.6
HFS Hagfors 136.84 350 PKhKP PKPpre 08 07 41.3
comp=Z,2.3nm,0.3s,baz=66,slow=3.7,SNR=21
HFS PKP **PKPdf 08 07 52.2 +0.1**
comp=Z,1.0nm,0.4s,baz=207,slow=1.0,SNR=4.2
HFS SKPbc **SKPbc 08 10 26.8 +1.3**
comp=Z,5.5nm,0.6s,baz=36,slow=2.8,SNR=5.2
LSZ Lusaka 137.13 221 PKP **PKiKP 08 07 55.2 -1.0**
comp=Z,4.6nm,0.4s,baz=88,slow=5.6,SNR=5.7
NACGM Naroch 138.02 338⇓ *e*PKP **PKPdf 08 07 50.3 -4.1**
comp=Z,18nm,1.0s,baz=39
TSUM Tsumeb 139.41 205 PKP **PKPdf 08 07 58.7 +0.4**
comp=Z,5.0nm,0.7s,baz=150,slow=5.1,SNR=6.3
AKASG Malin Array Be 140.14 332 PKhKP PKPpre 08 07 51.5
comp=Z,1.2nm,0.3s,baz=42,slow=4.1,SNR=7.5
AKASG PKP **PKPdf 08 07 59.6 +1.2**
comp=Z,2.0nm,0.4s,baz=45,slow=3.9,SNR=5.4
AKASG SKPbc **SKPbc 08 10 35.8 +1.0**
comp=Z,2.4nm,0.4s,baz=37,slow=3.4,SNR=17
EKA Eskdalemuir Ar 142.62 3 PKhKP PKPpre 08 07 59.7
comp=Z,3.7nm,0.5s,baz=351,slow=3.3,SNR=19
EKA SKPbc **SKPbc 08 10 42.8 +1.9**
comp=Z,1.2nm,0.4s,baz=352,slow=3.2,SNR=7.8
VASR Vaslui 143.63 328 ⇓P **PKPdf 08 08 04.6 -0.1**
VLDR Vladesti 144.01 327 ⇑P PKPab 08 08 05.9 +0.3
TLCR 144.05 325 ⇑P **PKPab 08 08 05.6 -0.1**
BRTR Keskin Array B 144.09 314 PKP PKPbc 08 08 05.6 -0.2
comp=Z,5.6nm,0.5s,baz=67,slow=3.1,SNR=23
BRTR SKPbc **SKPbc 08 10 46.6 +1.5**
comp=Z,1.7nm,0.8s,baz=114,slow=1.5,SNR=5.1
SCTR Scanteiesti 144.17 326 ⇑P PKPbc 08 08 03.5 -2.1
BURAR Bucovina Array 144.19 331 ⇓P **PKPab 08 08 06.6 +0.3**
GHRR 144.22 327 ⇓P **PKPab 08 08 06.5 +0.1**
TESR Tescani 144.29 329 ⇓P PKPbc 08 08 05.9 -0.1
OJC Ojcow 144.32 339 *e*PKP **PKPdf 08 08 04.4 -1.4**
CFR Carcaliu 144.42 326 ⇓P **PKPdf 08 08 05.8 -0.4**
TPGR Topolog 144.47 325 ⇑P **PKPdf 08 08 06.1 -0.2**
PANC Panciu 144.48 327 ⇑P **PKPab 08 08 07.0 -0.4**
ANTO Ankara 144.60 315 ⇓P PKPbc 08 08 07.5 +0.2
VRI Vrincioaia 144.70 328 ⇓P PKPbc 08 08 07.0 -0.3
PLOR Plostina 144.75 328 ⇓P **PKPdf 08 08 07.0 +0.2**
HARR Harsova 144.85 325 ⇓P PKPbc 08 08 07.8 +0.1
TLBR Topalu 144.88 325 ⇑P PKPbc 08 08 08.0 +0.1
KSP Ksiaz 144.88 343 *e*PKP **PKPab 08 08 08.5 -0.3**
TRPA Tarpa 144.97 334 ⇓P **PKPdf 08 08 06.3 -0.6**
COVR Voineasa-Covas 144.98 328 ⇓P PKPbc 08 08 08.2 0.0
TSMN Mangalia Port- 145.04 323 ⇑P **PKPdf 08 08 00.5 -6.7**
OSTC Ostas 145.16 342 *e*PKP **PKPbc 08 08 09.0 +0.5**
OSTC *ep*PKP **SKPbc 08 10 49.2 +2.2**
CHVC Chvalec 145.18 343 *e*PKP **PKPbc 08 08 09.1 +0.5**
OKC Ostrava-Krasne 145.20 340 *e*PKP **PKPdf 08 08 07.7 +0.4**
UPC Upice 145.26 343 *e*PKP **PKPbc 08 08 09.3 +0.5**
UPC *ep*PKP **SKPbc 08 10 48.8 +1.6**
ISR Istrita 145.30 327 ⇑P **PKPbc 08 08 09.7 +0.6**
CLL Collm 145.30 346 ⇑ *i*PKPbc **PKPbc 08 08 09.1 +0.3**
comp=Z,46nm,0.5s
CLL *i* SKPbc **SKPbc 08 10 49.4 +2.1**
comp=Z,24nm,1.2s
MMAI Mount Meron Ar 145.31 302 PKPbc **PKPbc 08 08 10.0 +0.5**
comp=Z,12nm,0.4s,baz=77,slow=5.4,SNR=39
DPC Dobruska-Polom 145.31 342 *e*PKP **PKPbc 08 08 09.6 +0.6**
DPC *ex* x 08 08 11.7
DPC *ep*PKP **SKPbc 08 10 49.5 +2.1**
MLR Muntele Rosu 145.35 328 ⇓P **PKPdf 08 08 08.5 +0.6**
KRLC Kraliky 145.42 341 *e*PKP **PKPbc 08 08 09.0 -0.3**
KRLC *ep*PKP **SKPbc 08 10 49.7 +2.0**
MORC Moravsky Berou 145.45 340 ⇓P **PKPbc 08 08 09.3 -0.1**
MORC Moravsky Berou 145.45 340 *e*PKP **PKPbc 08 08 09.6 +0.2**
SECR 145.60 327 ⇑P **PKPbc 08 08 09.4 -0.6**
PVCC Panska Ves 145.64 344 *e*PKP **PKPbc 08 08 10.4 +0.6**
MAUC Maruska 145.71 340 *e*PKP **PKPbc 08 08 10.7 +0.6**
MAUC *ep*PKP **SKPbc 08 10 50.7 +2.4**
VOIR 145.84 329 ⇑P **PKPbc 08 08 10.4 -0.3**
DRGR 145.94 332 ⇓ **PKPbc 08 08 11.2 +0.3**
ARR Arges 146.09 329 ⇓P **PKPbc 08 08 12.4 +1.0**
PRU Pruhonice 146.14 344 *e*PKP **PKPbc 08 08 11.5 +0.3**
PRU *ex* x 08 08 14.3
GOPC GO Pecny, Ondr 146.14 343 *e*PKP **PKPbc 08 08 11.7 +0.4**
VRAC Vranov 146.16 341 ⇑P **PKPbc 08 08 12.0 +0.7**
VRAC Vranov 146.16 341 *e*PKP **PKPbc 08 08 11.7 +0.4**
PSZ Piszkesteto 146.20 336 ⇓P **PKPbc 08 08 11.2 -0.4**
JAVC Velka Javorina 146.20 339 *e*PKP **PKiKP 08 08 13.1 -0.6**
NKC Novy Kostel 146.43 346 *e*PKP **PKPbc 08 08 12.4 +0.3**
KRUC Moravsky 146.44 341 *e*PKP **PKPbc 08 08 12.4 +0.3**
LOT Lotru 146.46 330 ⇑P **PKPbc 08 08 12.0 -0.4**
SIRR Siria 146.80 333 ⇓P **PKPbc 08 08 13.3 +0.2**
GZR Gura Zlata 146.97 331 ⇑P **PKPbc 08 08 13.7 0.0**
MEM Membach 147.16 354 *d*PKPbc **PKPbc 08 08 14.2 +0.3**
MEM *d*PKiKP **PKiKP 08 08 15.9 +0.3**
MEM *d*PKPab **PKPab 08 08 17.5 -0.4**
BTNL Ternell 147.17 353 *d*PKPbc **PKPbc 08 08 14.3 +0.3**
BTNL *d*PKPab **PKPab 08 08 18.1 +0.2**
KHC Kasperske Hory 147.18 344 *e*PKP **PKPbc 08 08 14.6 +0.5**
KHC *ex* x 08 08 18.7
KHC *ep*PKP **SKPbc 08 10 53.4 +1.8**
BSTI Sart Tilman 147.23 354 *d*PKPbc **PKPbc 08 08 14.6 +0.5**
BSTI *d*PKPab **PKPab 08 08 17.9 -0.2**
CKRC Cesky Krumlov 147.27 343 *e*PKP **PKPbc 08 08 14.5 +0.2**
CKRC *ex* x 08 08 19.1
GERES GERESS Array B 147.41 344 PKPbc **PKPbc 08 08 15.1 +0.3**
comp=Z,6.0nm,0.5s,baz=29,slow=3.0,SNR=44
GERES SKP 08 10 43.9
comp=Z,0.3nm,0.3s,baz=46,slow=2.8,SNR=4.1

GERES SKPbc **SKPbc** **08 10 54.1 +2.0**
comp=Z,0.3nm,0.4s,baz=270,slow=0.4,SNR=3.4
BHOU Houvegnez 147.41 353 *d*PKPab **PKPab** **08 08 18.7 -0.3**
SNF Seneffe 147.41 356 *d*PKPab **PKPab** **08 08 18.7 -0.2**
BCLA Clavier 147.42 354 *d*PKiKP **PKiKP** **08 08 16.3 +0.2**
BCLA *d*PKPab **PKPab** **08 08 18.7 -0.3**
BGES Gesves 147.47 355 *d*PKPbc **PKPbc** **08 08 14.8 +0.1**
BGES *d*PKiKP **PKiKP** **08 08 16.5 +0.3**
BGES *d*PKPab **PKPab** **08 08 18.7 -0.5**
HERR Herculane 147.52 330 ⇑P **PKPbc** **08 08 14.1 -1.0**
BMRD Maredsous 147.58 355 *d*PKPbc **PKPbc** **08 08 15.2 +0.2**
BMRD *d*PKPab **PKPab** **08 08 19.4 -0.2**
CONA Conrad Observa 147.60 341 *i* P **PKiKP** **08 08 16.0 -0.7**
comp=Z,5.4nm,0.4s,SNR=7.4
RONA Rosalia, Austr 147.66 340 *e*P **PKPbc** **08 08 15.9 +0.5**
comp=Z,6.4nm,0.5s
DOU Dourbes 147.80 355 *d*PKPbc **PKPbc** **08 08 15.8 +0.2**
DOU *d*PKiKP **PKiKP** **08 08 17.2 +0.3**
DOU *d*PKPab **PKPab** **08 08 20.2 -0.3**
WLF Walferdange 148.07 353 *d*PKPbc **PKiKP** **08 08 17.0 -0.5**
WLF *d*PKPab **PKPab** **08 08 21.9 +0.2**
MORH Mrgy, Hungar 148.09 336 ⇓P **PKPbc** **08 08 15.9 -0.5**
MOA Molln 148.16 342 *e*P **PKPbc** **08 08 16.8 +0.2**
comp=Z,2.5nm,0.4s
BLKB Belogradchik 148.32 329 ⇑P **PKPbc** **08 08 17.3 +0.1**
FRGS Fruska Gora 148.47 333 ⇑P **PKPbc** **08 08 17.8 +0.3**
BOVS Bovan 148.79 330 ⇓P **PKPbc** **08 08 17.6 -0.7**
SOKA Soboth 148.97 340 *e*P **PKPbc** **08 08 18.5 -0.2**
comp=Z,2.3nm,0.3s
KBA Koelnbreinsper 149.12 343 *i* P **PKPbc** **08 08 18.6 -0.6**
comp=Z,10.0nm,0.4s,SNR=6.0
OBKA Obir 149.28 341 *e*P **PKPbc** **08 08 19.7 +0.2**
comp=Z,3.1nm,0.4s
WATA Walderalm 149.35 345 *e*P **PKPbc** **08 08 19.6 0.0**
comp=Z,7.9nm,0.3s
RETA Reutte 149.40 346 *e*P **PKPbc** **08 08 19.8 +0.1**
comp=Z,4.6nm,0.4s
WTTA Wattenberg 149.40 345 *i* P **PKPbc** **08 08 19.8 -0.1**
comp=Z,20nm,0.3s,SNR=8.5
MYKA Terra Mystica 149.44 342 *e*P **PKPbc** **08 08 19.2 -0.6**
comp=Z,9.9nm,0.4s
MOTA Moosalm 149.45 346 *e*P **PKPbc** **08 08 19.8 -0.1**
comp=Z,6.1nm,0.3s
SQTA Sankt Quirin 149.54 346 *e*P **PKPbc** **08 08 20.3 +0.2**
comp=Z,12nm,0.5s
ABTA Abfaltersbach 149.65 344 *i* P **PKPbc** **08 08 20.0 -0.3**
comp=Z,3.1nm,0.2s,SNR=5.2
DAVA Damuels 149.78 347 *e*P **PKiKP** **08 08 21.4 +0.1**
comp=Z,2.9nm,0.3s
FETA Feichten 149.84 346 *e*P **PKiKP** **08 08 21.1 -0.4**
comp=Z,3.3nm,0.4s
IDI Anoyia 152.33 313 ⇓P **PKPbc** **08 08 24.9 -1.8**
PGAV Gavieira, Arco 154.96 16 *e*PKPab **PKPab** **08 08 51.5 +0.4**
POLO Lamas de Olo 155.63 15 *e*PKPab **PKPab** **08 08 54.8 +0.8**
PVIS Viseu 156.23 16 *e*PKPab **PKPab** **08 08 56.9 +0.3**
MTE Manteigas 156.61 16 *e*PKPab **PKPab** **08 08 58.8 +0.5**
PCAS Casmilo, Conde 156.68 18 *e*PKPab **PKPab** **08 08 58.7 +0.2**
PCBR Castelo Branco 157.16 16 *e*PKPab **PKPab** **08 09 00.7 +0.2**
PMRV Marv??o 157.57 16 *e*PKPab **PKPab** **08 09 02.6 +0.2**
PESTR Estremoz 158.04 17 *e*PKPab **PKPab** **08 09 04.5 +0.1**
ESDC Sonseca Array 158.05 9 PKPab **PKPab** **08 09 03.8 -0.8**
comp=Z,2.2nm,0.7s,baz=340,slow=4.2,SNR=18
PNCL Nicolau / Gran 158.45 20 *e*PKPab **PKPab** **08 09 06.4 +0.2**
PBAR Barrancos 158.84 17 *e*PKPab **PKPab** **08 09 08.3 +0.4**
PCVE Castro Verde 159.05 19 *e*PKPab **PKPab** **08 09 09.4 +0.5**
PFVI Vila Bisbo 159.24 21 *e*PKPab **PKPab** **08 09 10.0 +0.3**
PVAQ Vaqueiros 159.36 19 *e*PKPab **PKPab** **08 09 10.6 +0.4**
LIC Lamto 167.12 155 ⇓*e*P **PKPab** **08 09 45.6 +0.6**
comp=Z,71nm,1.2s
KIC Kosan Boka 167.36 156 ⇑*i*P **PKPab** **08 09 46.9 +0.9**
comp=Z,21nm,0.6s
TIC Toumodi 167.51 154 ⇑*i*P **PKPab** **08 09 47.5 +0.8**
comp=Z,38nm,0.9s
DBIC Dimbokro 167.60 154 PKP **PKPdf** **08 08 35.2 -1.1**
comp=Z,7.1nm,1.1s,baz=219,slow=6.5,SNR=3.1
DBIC PKPab **PKPab** **08 09 47.2 +0.2**
comp=Z,11nm,0.8s,baz=185,slow=5.9,SNR=9.6
TORD Torodi Ar. Bea 175.05 194 PKP **PKPdf** **08 08 39.1 -0.8**
comp=Z,2.1nm,0.8s,baz=17,slow=0.8,SNR=12
TORD PKPab **PKPab** **08 10 19.9 0.0**
comp=Z,4.6nm,0.9s,baz=175,slow=5.1,SNR=13
TORD PP **PP** **08 14 12.6 +0.9**
comp=Z,2.8nm,1.0s,baz=142,slow=3.2,SNR=5.3

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*IDC **20** 07:59:27.1±1.0, 54°.64N×161°.97W, h0km, mb4.4/24, mbtmp4.4/27, ML3.6/2, MS3.6/21, Error ellipse: s-maj=25.8km s-min=12.6km az=170.0*
*ANF **20** 07:59:27.6±0.4, 54°.25N×161°.64W, h0km, ML4.7/9, Error ellipse: s-maj=4.4km s-min=1.2km az=5.0*
*NEIC **20** 07:59:30.1±1.4, 54°.3N±0°.1×161°.61W±0°.07, h23km±7km, Error ellipse: s-maj=18.4km s-min=2.3km az=162.0*
*AEIC **20** 07:59:31±1.9, 54°.3N±0°.1×161°.65W±0°.09, h15km±3km, ML4.1, mb4.3/13(NEIC), ML4.3/12(NEIC), Error ellipse: s-maj=15.0km s-min=7.2km az=165.0*
ISC 20 07:59:29.5±0.5, 54°.32N±0°.08×161°.72W±0°.04, h23km, n219, σ1$37/204, mb4.5/28, MS3.6/19, 1D, Alaska Peninsula

Code	Station Name	Δ°	ΔZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.12**	**299**		**Pb**	**07 59 50.7**	**+0.4**
FALS	**False Pass**	**1.12**	**299**	P	**Pb**	**07 59 50.5**	**+0.2**
	baz=118						
FALS				S	**Sn**	**08 00 07.0**	**+2.5**
	baz=118						
SDPT	**Sand Point**	**1.25**	**34**	Pn	**Pn**	**07 59 52.3**	**+0.7**
SDPT				IAML		08 00 10.4	
	comp=N,9μm,0.5s						
SDPT	**Sand Point**	**1.25**	**34**	P	**Pn**	**07 59 52.3**	**+0.7**
	baz=213						
SDPT				S	**Sb**	**08 00 09.0**	**+0.8**
	baz=213						
CNBA	**Chernabura Isl**	**1.33**	**67**	Pn	**Pn**	**07 59 52.7**	**0.0**
CHNA	**Chernabura Isl**	**1.34**	**67**	P	**Pn**	**07 59 52.8**	**0.0**
	baz=247						
AKUT	**Akutan**	**2.39**	**267**		**Pn**	**08 00 08.5**	**+1.3**
AKUT				IAML		08 00 50.0	
	comp=N,791nm,1.4s						
CHGN	**Chignik**	**2.74**	**42**		**Pn**	**08 00 13.4**	**+1.4**
CHGN				IAML		08 00 54.6	
	comp=N,875nm,0.8s						
CHGN				IAML		08 00 59.2	
	comp=E,2μm,0.7s						
CHGN	**Chignik**	**2.74**	**42**	S	**Sn**	**08 00 46.8**	**+2.5**
	baz=224						
UNV	**Unalaska Valle**	**2.86**	**262**	Pn	**Pn**	**08 00 14.7**	**+1.1**
UNV	**Unalaska Valle**	**2.86**	**262**	P	**Pn**	**08 00 15.2**	**+1.5**
	baz=79						
UNV				S	**Sb**	**08 00 51.0**	**-3.3**
	baz=79						
CHIR	**Chirikof Islan**	**3.81**	**64**	Pn	**Pn**	**08 00 25.2**	**-1.5**
CHIR				IAML		08 01 13.8	
	comp=N,485nm,2.3s						
CHIR				IAML		08 01 34.2	
	comp=E,477nm,1.8s						
CHIR	**Chirikof Islan**	**3.81**	**64**	S	**Sn**	**08 01 09.0**	**-1.8**
	baz=249						
R16K	**Pilot Point**	**4.00**	**34**	P	**Pn**	**08 00 30.9**	**+1.5**
	baz=217						
NIKH	**Nikolski High**	**4.46**	**255**	Pn	**Pn**	**08 00 37.3**	**+1.7**
SII	**Sitkinak Islan**	**4.84**	**59**	Pn	**Pn**	**08 00 41.4**	**+0.5**
SII	**Sitkinak Islan**	**4.84**	**59**	P	**Pn**	**08 00 41.6**	**+0.7**
	baz=245						
P16K	**Nushagak River**	**5.15**	**22**	P	**Pn**	**08 00 46.6**	**+1.5**
	baz=205						
SPIA	**Saint Paul Isl**	**5.60**	**304**	Pn	**Pn**	**08 00 54.0**	**+2.7**
O16K	**Kokwok River B**	**5.64**	**19**	P	**Pn**	**08 00 53.2**	**+1.3**
	baz=202						
Q18K	**Katmai Hardscr**	**5.71**	**38**	P	**Pn**	**08 00 54.1**	**+1.2**
	baz=223						
O17K	**Koliganek Bris**	**6.02**	**23**	P	**Pn**	**08 00 58.9**	**+1.9**
	baz=206						
KDAK	**Kodiak Island**	**6.18**	**52**	Pn	**Pn**	**08 00 58.7**	**-0.6**
	comp=E,2.0nm,0.3s,baz=200,slow=4.8,SNR=22						
KDAK				Sn	**Sn**	**08 02 04.5**	**-4.5**
	comp=E,1.8nm,0.3s,baz=354,slow=20,SNR=1.1						
	comp=E,5.7nm,0.3s						
KDAK	**Kodiak Island**	**6.18**	**52**	Pn	**Pn**	**08 00 59.5**	**+0.2**
KDAK	**Kodiak Island**	**6.18**	**52**	P	**Pn**	**08 00 59.8**	**+0.6**
	baz=239						
P18K	**Big Mountain,**	**6.20**	**32**	Pn	**Pn**	**08 01 01.4**	**+1.7**
P18K	**Big Mountain,**	**6.20**	**32**	P	**Pn**	**08 01 01.3**	**+1.7**
	baz=217						
N16K	**Nishlik Lake**	**6.37**	**13**	P	**Pn**	**08 01 03.8**	**+1.9**
	baz=195						
Q19K	**Cape Douglas,**	**6.41**	**41**	Pn	**Pn**	**08 01 03.5**	**+1.0**
Q19K	**Cape Douglas,**	**6.41**	**41**	P	**Pn**	**08 01 03.8**	**+1.3**
	baz=227						
O18K	**Koktuh Hills**	**6.58**	**30**	Pn	**Pn**	**08 01 06.7**	**+2.0**
O18K	**Koktuh Hills**	**6.58**	**30**	P	**Pn**	**08 01 07.0**	**+2.2**
	baz=215						
O19K	**Port Alsworth**	**7.12**	**31**	Pn	**Pn**	**08 01 14.2**	**+2.1**
O19K	**Port Alsworth**	**7.12**	**31**	P	**Pn**	**08 01 14.2**	**+2.1**
	baz=217						
N19K	**Bonanza Creek**	**7.58**	**28**	Pn	**Pn**	**08 01 21.3**	**+2.8**
N19K	**Bonanza Creek**	**7.58**	**28**	P	**Pn**	**08 01 20.8**	**+2.3**
	baz=214						
M19K	**Big River Lodg**	**8.53**	**24**		**Pn**	**08 01 34.2**	**+2.8**
M19K	**Big River Lodg**	**8.53**	**24**	P	**Pn**	**08 01 33.4**	**+2.0**
	baz=210						
N20K	**Mount Spurr**	**8.56**	**33**	P	**Pn**	**08 01 33.9**	**+1.9**
	baz=220						
L19K	**White Mountain**	**8.66**	**22**	Pn	**Pn**	**08 01 35.0**	**+1.7**
L19K	**White Mountain**	**8.66**	**22**	P	**Pn**	**08 01 35.1**	**+1.7**
	baz=207						
SEW	**Seward**	**8.81**	**44**	Pn	**Pn**	**08 01 35.7**	**+0.4**
SEW	**Seward**	**8.81**	**44**	P	**Pn**	**08 01 36.3**	**+0.9**
	baz=234						
M20K	**Styx River**	**8.83**	**27**	P	**Pn**	**08 01 37.9**	**+2.2**
	baz=214						
TTA	**Tatalina**	**9.12**	**17**	Pn	**Pn**	**08 01 40.8**	**+1.1**
TTA	**Tatalina**	**9.12**	**17**	P	**Pn**	**08 01 40.9**	**+1.1**
	baz=201						
SUA	**Susitna One**	**9.23**	**35**	Pn	**Pn**	**08 01 41.2**	**0.0**
SUA	**Susitna One**	**9.23**	**35**	P	**Pn**	**08 01 41.8**	**+0.6**
	baz=224						
RC01	**Rabbit Creek A**	**9.32**	**39**	P	**Pn**	**08 01 43.7**	**+1.4**
	baz=228						
ADK	**Adak**	**9.33**	**261**	Pn	**Pn**	**08 01 44.8**	**+2.3**
SKT	**Skwentna**	**9.37**	**31**	Pn	**Pn**	**08 01 44.8**	**+1.9**
SKT	**Skwentna**	**9.37**	**31**	P	**Pn**	**08 01 44.4**	**+1.5**
	baz=219						
P23K	**Montague Islan**	**9.62**	**48**	P	**Pn**	**08 01 47.6**	**+1.2**
	baz=240						
M22K	**Willow**	**9.64**	**35**	P	**Pn**	**08 01 48.3**	**+1.6**
	baz=224						
PWL	**Port Wells**	**9.71**	**42**	P	**Pn**	**08 01 47.9**	**+0.3**
	baz=233						
K20K	**Telida**	**9.88**	**20**	Pn	**Pn**	**08 01 50.5**	**+0.5**
K20K	**Telida**	**9.88**	**20**	P	**Pn**	**08 01 50.8**	**+0.8**
	baz=207						
KNK	**Knik Glacier**	**10.00**	**39**	P	**Pn**	**08 01 51.5**	**-0.2**
	baz=230						
GHO	**Glory Hole Cre**	**10.07**	**37**	Pn	**Pn**	**08 01 53.5**	**+0.9**
CUT	**Chulitna**	**10.07**	**32**	P	**Pn**	**08 01 53.3**	**+0.7**
	baz=221						
HIN	**Hinchinbrook I**	**10.21**	**47**	Pn	**Pn**	**08 01 54.7**	**+0.1**
ANM	**Nome**	**10.44**	**351**	Pn	**Pn**	**08 01 58.9**	**+1.3**
M23K	**Glacier View**	**10.52**	**39**	P	**Pn**	**08 01 58.8**	**+0.2**
	baz=231						
J20K	**Nowinta River**	**10.61**	**18**	Pn	**Pn**	**08 02 01.6**	**+1.7**
J20K	**Nowinta River**	**10.61**	**18**	P	**Pn**	**08 02 02.0**	**+2.1**
	baz=204						
EYAK	**Cordova Ski Ar**	**10.61**	**48**	P	**Pn**	**08 02 00.1**	**+0.2**
	baz=241						
SCM	**Shep Creek Mo**	**10.69**	**39**	P	**Pn**	**08 02 01.3**	**+0.2**
	baz=231						
WAT1	**Susitna Watana**	**10.93**	**33**	P	**Pn**	**08 02 04.3**	**0.0**
	baz=224						
KAIM	**Kayak Island**	**10.93**	**52**	Pn	**Pn**	**08 02 04.9**	**+0.5**
WAT6	**Susitna Watana**	**11.03**	**36**	P	**Pn**	**08 02 04.4**	**-1.4**
	baz=227						
KLU	**Klutina**	**11.03**	**43**	P	**Pn**	**08 02 04.7**	**-1.1**
	baz=236						
BPAW	**Bear Paw Mtn.**	**11.22**	**25**	Pn	**Pn**	**08 02 09.1**	**+0.8**
BPAW	**Bear Paw Mtn.**	**11.22**	**25**	P	**Pn**	**08 02 09.0**	**+0.8**
	baz=214						
M24K	**Tolsona, Glenn**	**11.29**	**40**	P	**Pn**	**08 02 09.0**	**-0.3**
	baz=233						
BMRM	**Bremner River**	**11.30**	**47**	Pn	**Pn**	**08 02 09.7**	**+0.1**
BMRM	**Bremner River**	**11.30**	**47**	P	**Pn**	**08 02 09.6**	**+0.1**
	baz=241						
DHY	**Denali Highway**	**11.48**	**34**	P	**Pn**	**08 02 11.0**	**-1.0**
	baz=226						
TNA	**Tin City**	**11.69**	**347**	P	**Pn**	**08 02 16.4**	**+1.8**
	baz=162						
HARP	**HAARP**	**11.84**	**40**	P	**Pn**	**08 02 17.8**	**+0.9**
	baz=234						
I21K	**Tanana**	**11.92**	**20**	Pn	**Pn**	**08 02 19.8**	**+1.9**
I21K	**Tanana**	**11.92**	**20**	P	**Pn**	**08 02 19.9**	**+2.1**
	baz=208						
PAX	**Paxson**	**12.07**	**38**	Pn	**Pn**	**08 02 20.7**	**+0.6**
PAX	**Paxson**	**12.07**	**38**	P	**Pn**	**08 02 19.6**	**-0.4**
	baz=231						
H21K	**Melozitna Rive**	**12.19**	**18**		**Pn**	**08 02 22.8**	**+1.2**
H21K	**Melozitna Rive**	**12.19**	**18**	P	**Pn**	**08 02 22.5**	**+0.9**
	baz=205						
K24K	**Donnelly Dome**	**12.51**	**34**	P	**Pn**	**08 02 26.0**	**0.0**
	baz=228						
TABL	**Table Mountain**	**12.64**	**53**	Pn	**Pn**	**08 02 28.3**	**+0.4**
H22K	**Ishtalitna Cre**	**12.67**	**20**	P	**Pn**	**08 02 29.3**	**+1.1**
	baz=208						
M26K	**Nabesna, AK**	**12.69**	**43**	P	**Pn**	**08 02 28.5**	**+0.1**
	baz=239						
ILAR	**Eielson Array**	**12.85**	**30**	Pn	**Pn**	**08 02 26.0**	**-4.6**
	comp=E,0.6nm,0.6s,baz=123,slow=38,SNR=1.2						
ILAR				LR	LR	08 07 53.2	
	comp=E,254nm,19.0s,baz=227,slow=40						
G21K	**Allakaket**	**12.87**	**15**	P	**Pn**	**08 02 32.4**	**+1.6**
	baz=202						
PINM	**Pinnacle**	**12.96**	**55**	P	**Pn**	**08 02 33.5**	**+1.5**
	baz=253						
J25K	**Salcha River,**	**13.19**	**32**	P	**Pn**	**08 02 34.2**	**-1.1**
	baz=226						
O28M	**Mount Upton**	**13.20**	**52**	P	**Pn**	**08 02 35.6**	**+0.1**
	baz=250						
PNL	**Peninsula**	**13.26**	**57**	P	**Pn**	**08 02 36.8**	**+0.7**
	baz=256						
L27K	**Beaver Creek,**	**13.49**	**42**	P	**Pn**	**08 02 39.9**	**+0.6**
	baz=238						
F21K	**Alatna River**	**13.53**	**14**	P	**Pn**	**08 02 41.5**	**+1.7**
	baz=201						
G22K	**Bettles**	**13.56**	**17**	P	**Pn**	**08 02 41.6**	**+1.3**
	baz=206						
YUK8	**Steele Glacier**	**13.57**	**50**	P	**Pn**	**08 02 41.6**	**+1.0**
	baz=249						
G23K	**Bananza Creek**	**13.66**	**20**	P	**Pn**	**08 02 42.5**	**+1.0**
	baz=210						
J26L	**Joseph Creek**	**13.70**	**35**	P	**Pn**	**08 02 42.2**	**-0.1**
	baz=230						
O29M	**Mount Kennedy**	**13.82**	**55**	P	**Pn**	**08 02 44.1**	**+0.3**
	baz=254						
P29M	**Windy Craggy**	**14.07**	**58**	P	**Pn**	**08 02 47.1**	**-0.1**
	baz=258						
COLD	**Coldfoot**	**14.07**	**19**	P	**Pn**	**08 02 47.8**	**+0.6**
	baz=208						
G24K	**Hadweenzic Riv**	**14.20**	**24**	P	**Pn**	**08 02 49.9**	**+0.9**
	baz=216						
I26K	**Coal Creek Min**	**14.36**	**33**	P	**Pn**	**08 02 50.9**	**-0.2**
	baz=229						
M29M	**Somme Creek**	**14.58**	**47**	P	**Pn**	**08 02 54.5**	**+0.2**
	baz=246						
E22K	**Anaktuvuk Pass**	**14.62**	**15**	P	**Pn**	**08 02 56.3**	**+1.6**
	baz=203						
S31K	**Pelican**	**14.63**	**65**	P	**Pn**	**08 02 54.8**	**+0.1**
	baz=266						
PLBC	**Pleasant Camp**	**14.72**	**59**	P	**Pn**	**08 02 56.3**	**+0.1**
	baz=260						
E23K	**Chandalar**	**14.91**	**18**	P	**Pn**	**08 02 59.1**	**+0.4**
	baz=208						
DAWY	**Dawson**	**14.94**	**40**	P	**Pn**	**08 02 58.7**	**-0.4**
	baz=239						
L29M	**L29M**	**15.00**	**45**	P	**Pn**	**08 03 01.5**	**+1.7**
	baz=245						
I27K	**Kandik River**	**15.04**	**33**	P	**Pn**	**08 03 01.6**	**+1.2**
	baz=231						
E24K	**Your Creek**	**15.14**	**19**	P	**Pn**	**08 03 03.0**	**+1.3**
	baz=211						
SKAG	**Skagway**	**15.25**	**60**	P	**Pn**	**08 03 04.3**	**+1.3**
	baz=262						
F25K	**Christian Rive**	**15.35**	**24**	P	**Pn**	**08 03 06.2**	**+1.8**
	baz=218						
TOLK	**Toolik Lake Re**	**15.44**	**17**		**P**	**08 03 09.3**	**-0.6**
TOLK	**Toolik Lake Re**	**15.44**	**17**	P	**Pn**	**08 03 07.1**	**+1.5**
	baz=207						
N31M	**Braeburn, Yuko**	**15.46**	**52**		**Pn**	**08 03 06.1**	**+0.2**
N31M				IAmb	IAmb	08 03 15.0	
	comp=Z,16nm,0.9s						
H27K	**Steamboat Moun**	**15.47**	**32**	P	**Pn**	**08 03 07.5**	**+1.4**
	baz=229						
D23K	**Nanushuk River**	**15.55**	**15**	P	**Pn**	**08 03 08.3**	**+1.2**
	baz=204						
WHY	**Whitehorse**	**15.68**	**55**		**Pn**	**08 03 10.1**	**+1.2**
WHY				IAmb	IAmb	08 03 16.5	
	comp=Z,19nm,1.1s						
G27K	**Doyon Strip**	**15.82**	**30**	P	**Pn**	**08 03 12.0**	**+1.5**
	baz=227						
I29M	**Ogilvie Camp,**	**16.02**	**37**		**Pn**	**08 03 12.9**	**-0.2**
I29M	**Ogilvie Camp,**	**16.02**	**37**	P	**Pn**	**08 03 13.6**	**+0.5**
	baz=237						
MAYO	**Mayo, Yukon**	**16.12**	**45**		**P**	**08 03 16.6**	**-0.8**
MAYO	**Mayo, Yukon**	**16.12**	**45**	P	**Pn**	**08 03 15.8**	**+1.5**
	baz=247						
C23K	**Itkillik River**	**16.36**	**14**	P	**Pn**	**08 03 18.2**	**+0.8**
	baz=203						
C24K	**Franklin Bluff**	**16.54**	**16**	P	**Pn**	**08 03 19.9**	**+0.2**
	baz=207						
P33M	**Teslin, Yukon**	**16.61**	**58**	P	**P**	**08 03 22.8**	**-0.2**
D25K	**Kavik River**	**16.61**	**19**	P	**P**	**08 03 22.0**	**-0.9**
	baz=213						
FARO	**Faro, Yukon**	**16.77**	**50**	P	**P**	**08 03 23.8**	**-0.9**
FARO				IAmb	IAmb	08 03 40.1	
	comp=Z,23nm,1.4s						
FARO	**Faro, Yukon**	**16.77**	**50**	P	**Pn**	**08 03 23.4**	**+0.8**
	baz=255						
EPYK	**Eagle Plains**	**17.12**	**35**	P	**P**	**08 03 28.1**	**-0.5**
EPYK				IAmb	IAmb	08 03 29.6	
	comp=Z,16nm,0.9s						
EPYK	**Eagle Plains**	**17.12**	**35**	P	**Pn**	**08 03 27.8**	**+0.8**
	baz=237						
C26K	**Camden Bay**	**17.39**	**20**	P	**Pn**	**08 03 29.5**	**-0.8**
	baz=214						
C27K	**Jago River**	**17.40**	**21**	P	**Pn**	**08 03 30.7**	**+0.2**
	baz=217						
G30M	**tAoh Zraii Nji**	**17.62**	**34**	P	**Pn**	**08 03 33.2**	**0.0**
	baz=236						
MMPY	**Sheldon Lake,**	**17.80**	**50**	P	**Pn**	**08 03 35.7**	**+0.2**
	baz=256						
DLBC	**Dease Lake**	**17.92**	**64**	LR	LR	08 10 06.5	
	comp=Z,103nm,18.4s,baz=240,slow=36						
WTLY	**Watson Lake, Y**	**18.60**	**59**	P	**Pn**	**08 03 46.0**	**+0.8**
	baz=266						
TGTN	**Hyland Airport**	**18.99**	**54**	P	**P**	**08 03 49.6**	**+0.4**
	baz=263						
INK	**Inuvik**	**19.21**	**32**	P	**P**	**08 03 48.8**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=250,slow=15,SNR=3.0						
	comp=Z,2.4nm,0.6s						
INK	**Inuvik**	**19.21**	**32**	P	**Pn**	**08 03 52.4**	**-0.1**
	baz=237						
WRGLY	**Wrigley**	**21.43**	**50**	P	**P**	**08 04 17.4**	**+1.9**
	baz=263						
PETK	**Petropavlovsk-**	**23.82**	**284**	P	**P**	**08 04 38.7**	**-1.8**
	comp=Z,5.3nm,0.6s,baz=89,slow=13,SNR=12						
	comp=Z,5.3nm,0.6s						
YKA	**Yellowknife Ar**	**25.46**	**52**	P	**P**	**08 04 56.3**	**+1.0**
	comp=Z,4.9nm,0.9s,baz=268,slow=8.6,SNR=7.0						
YKA				LR	LR	08 16 13.3	
	comp=Z,124nm,20.2s,baz=170,slow=40						
	comp=Z,4.9nm,0.9s						
YBH	**Yreka Blue Hor**	**28.58**	**100**	LR	LR	08 14 13.3	
	comp=Z,93nm,19.6s,baz=303,slow=31						
RES	**Resolute Bay**	**32.58**	**27**	LR	LR	08 20 30.4	
	comp=Z,106nm,19.0s,baz=302,slow=39						
NVAR	**Mina Array Bea**	**33.29**	**100**	P	**P**	**08 06 07.8**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=277,slow=7.1,SNR=3.2						
NVAR				LR	LR	08 16 57.3	
	comp=Z,127nm,20.2s,baz=352,slow=31						
	comp=Z,0.4nm,0.7s						
TIXI	**Tiksi**	**33.49**	**327**	LR	LR	08 20 36.4	
	comp=Z,98nm,20.6s,baz=359,slow=38						
FFC	**Flin Flon**	**33.76**	**64**	P	**P**	**08 06 09.2**	**+0.2**
YAK	**Yakutsk**	**35.36**	**311**	LR	LR	08 21 27.0	
	comp=Z,125nm,21.0s,baz=87,slow=38						
MDND	**Maddock**	**38.41**	**73**	P	**P**	**08 06 50.0**	**+1.1**
	baz=304						
ULM	**Lac du Bonnet**	**39.17**	**68**	P	**P**	**08 06 55.1**	**-0.1**
	comp=Z,4.7nm,0.4s,baz=311,slow=8.8,SNR=6.2						
	comp=Z,4.7nm,0.4s						
B35A	**Bob, Littlefor**	**41.38**	**69**	P	**P**	**08 07 14.1**	**+0.5**
B35A				IAmb	IAmb	08 07 15.0	
	comp=Z,7.1nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**42.01**	**227**	T	T	08 52 04.9	
	baz=27,slow=76,SNR=79						
H11N3	**WAKE ISLAND Hy**	**42.01**	**227**	T	T	08 52 07.3	
	baz=27,slow=76,SNR=115						
H11N1	**WAKE ISLAND Hy**	**42.02**	**227**	T	T	08 52 07.1	
	baz=27,slow=76,SNR=112						
EYMN	**Ely**	**42.84**	**68**	P	**P**	**08 07 25.3**	**-0.2**
EYMN	**Ely**	**42.84**	**68**	P	**P**	**08 07 25.7**	**+0.2**
	baz=306						
USRK	**Ussuriysk Ar.**	**42.91**	**285**	LR	LR	08 24 52.9	
	comp=Z,78nm,21.4s,baz=24,slow=36						
H11S1	**WAKE ISLAND Hy**	**43.18**	**227**	T	T	08 53 35.4	
	baz=26,slow=76,SNR=206						
H11S2	**WAKE ISLAND Hy**	**43.19**	**227**	T	T	08 53 36.9	
	baz=26,slow=76,SNR=128						
H11S3	**WAKE ISLAND Hy**	**43.19**	**227**	T	T	08 53 36.7	
	baz=26,slow=76,SNR=88						
MJAR	**Matsushiro Arr**	**44.29**	**272**	P	**P**	**08 07 37.1**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=44,slow=6.0,SNR=4.2						
MJAR				LR	LR	08 23 42.6	
	comp=Z,60nm,21.9s,baz=17,slow=33						
	comp=Z,2.5nm,0.9s						
FRB	**Frobisher Bay**	**44.64**	**39**	P	**P**	**08 07 39.5**	**-0.1**
	comp=Z,14nm,0.8s,baz=316,slow=8.8,SNR=6.9						
	comp=Z,14nm,0.8s						
G40A	**Rib Lake**	**45.17**	**71**	P	**P**	**08 07 44.

NB2	NORSAR Subarra	64.84	4	P		P	08 10 05.3	-0.8
	comp=Z,8.8nm,1.0s,baz=355,slow=6.5							
NOA	NORSAR Array B	64.84	4	P		P	08 10 05.3	-0.8
	comp=Z,6.2nm,0.9s,baz=356,slow=6.6,SNR=15							
	comp=Z,6.2nm,0.9s							
MKAR	Makanchi Array	65.64	317	P		P	08 10 10.6	-0.9
	comp=Z,1.9nm,0.8s,baz=52,slow=7.9,SNR=7.1							
MKAR				LR		LR	08 40 14.9	
	comp=Z,77nm,19.1s,baz=38,slow=38							
	comp=Z,1.9nm,0.8s							
WMQ	Urumqi	65.79	312	*e*P		P	08 10 14.8	+2.3
HFS	Hagfors	65.83	3	P		P	08 10 11.6	-0.8
	comp=Z,13nm,0.8s,baz=32,slow=5.9,SNR=16							
	comp=Z,13nm,0.8s							
EKA	Eskdalemuir Ar	69.29	13	P		P	08 10 34.1	-0.2
	comp=Z,7.3nm,0.7s,baz=343,slow=4.4,SNR=16							
	comp=Z,7.3nm,0.7s							
BELG	Belogornoye	70.88	341	LR		LR	08 46 01.0	
	comp=Z,59nm,18.6s,baz=297,slow=40							
AAK	Ala-Archa	72.15	320	LR		LR	08 44 10.4	
	comp=Z,83nm,19.7s,baz=39,slow=37							
KSH	Kashi	74.25	317	P		P	08 11 08.0	+3.4
CLL	Collm	74.65	3	*i* P		P	08 11 05.9	-0.6
	comp=Z,7.0nm,0.7s							
AKASG	Malin Array Be	74.94	353	P		P	08 11 06.3	-1.9
	comp=Z,4.0nm,0.6s,baz=11,slow=5.8,SNR=14							
	comp=Z,4.0nm,0.6s							
DPC	Dobruska-Polom	75.69	1	*e*P		P	08 11 12.6	0.0
KRLC	Kraliky	75.97	1	*e*P		P	08 11 13.7	-0.5
MAUC	Maruska	76.68	0	*e*P		P	08 11 17.1	-1.2
KHC	Kasperske Hory	76.84	3	*e*P		P	08 11 19.1	-0.1
GERES	GERESS Array B	77.13	3	P		P	08 11 20.2	-0.7
	comp=Z,2.4nm,0.8s,baz=20,slow=4.3,SNR=7.7							
	comp=Z,2.4nm,0.8s							
KBZ	Khabaz	80.08	342	P		P	08 11 37.5	+0.5
	comp=Z,7.7nm,0.9s,baz=357,slow=2.0,SNR=9.0							
KBZ				LR		LR	08 52 35.3	
	comp=Z,34nm,18.1s,baz=10,slow=40							
	comp=Z,7.7nm,0.9s							
CMAR	Chiang Mai Arr	80.51	288	P		P	08 11 39.9	+0.1
	comp=Z,3.1nm,0.7s,baz=17,slow=5.4,SNR=13							
	comp=Z,3.1nm,0.7s							
GEYT	Alibeck	81.93	329	P		P	08 11 47.0	-0.1
	comp=Z,1.8nm,0.5s,baz=272,slow=8.8,SNR=5.1							
	comp=Z,1.8nm,0.5s							
GNI	Garni	83.19	340	LR		LR	08 51 52.4	
	comp=Z,30nm,21.9s,baz=7.0,slow=38							
ESDC	Sonseca Array	84.44	17	P		P	08 11 59.8	-0.2
	comp=Z,1.9nm,0.8s,baz=342,slow=4.9,SNR=10							
ESDC				LR		LR	08 50 41.6	
	comp=Z,28nm,19.4s,baz=316,slow=36							
	comp=Z,1.9nm,0.8s							
BRTR	Keskin Array B	85.40	348	P		P	08 12 05.0	+0.1
	comp=Z,3.8nm,0.9s,baz=79,slow=2.6,SNR=7.6							
	comp=Z,3.8nm,0.9s							
H03N2	Juan Fernandez	112.52	116	T		T	10 20 35.9	
	baz=323,slow=77,SNR=42							
H03N1	Juan Fernandez	112.53	116	T		T	10 20 35.1	
	baz=323,slow=77,SNR=45							
H03N3	Juan Fernandez	112.54	116	T		T	10 20 36.4	
	baz=323,slow=77,SNR=45							

*IDC **20** 08:04:53.7±10.0, 17°.64S×179°.22W, h665km±43km, mb3.4/4, mbtmp4.4/6, Error ellipse: s-maj=215.1km s-min=92.2km az=79.0*
*NEIC **20** 08:04:55.1±1.6, 17°.9S±0°.2×179°.45W±0°.09, h640km±15km, mb4.1/14, Error ellipse: s-maj=29.8km s-min=11.4km az=171.0*
ISC 20 08:04:54.6±0.9, 17°.7S±0°.2×179°.4W±0°.1, h650km, n27, σ0s80/27, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.42	269	P	P	08 06 16.3	+1.1
	17nm,0.5s,baz=154,slow=8.9,SNR=33						
MSVF	Nonsavu	2.42	269	P	P	08 06 15.6	+0.4
AFI	Afiamalu	8.27	64	P	P	08 06 57.7	-0.7
MARNC	Mare, Loyalty	12.41	250	P	P	08 07 35.2	-1.8
DZM	Mont Dzumac	13.99	250	P	P	08 07 53.2	+1.6
	2.7nm,0.4s,baz=87,slow=22,SNR=8.0						
DZM	Mont Dzumac	13.99	250	P	P	08 07 51.3	-0.4
FOZ	Fox Glacier	27.30	197	P	P	08 09 48.8	-1.5
EIDS	Eidsvold	28.43	249	P	P	08 09 60.0	-0.5
EIDS				IAmb	IAmb	08 10 00.8	
	comp=Z,5.6nm,0.9s						
ARMA	Armidale	29.21	239	P	P	08 10 07.5	+0.4
ARMA				IAmb	IAmb	08 10 37.2	
	comp=Z,18nm,1.4s						
MLZ	Mavora Lakes	29.46	198	P	P	08 10 08.1	-0.9
CTA	Charters Tower	32.53	260	P	P	08 10 35.3	-0.1
	comp=Z,2.8nm,0.6s,baz=97,slow=11,SNR=2.4						
	comp=Z,2.8nm,0.6s						
CTAO	Charters Tower	32.53	260	P	P	08 10 35.3	-0.1
COEN	Coen	36.15	270	P	P	08 11 06.1	+0.8
COEN				IAmb	IAmb	08 11 08.9	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	37.88	241	P	P	08 11 19.2	0.0
	comp=Z,3.2nm,0.6s,baz=88,slow=10,SNR=12						
	comp=Z,3.2nm,0.6s						
STKA	Stephens Creek	37.88	241	P	P	08 11 19.5	+0.3
STKA				IAmb	IAmb	08 11 28.8	
	comp=Z,1.9nm,1.3s						
BBOO	Buckleboo	42.66	241	P	P	08 11 56.6	-0.3
WB0	Warramunga Arr	43.69	260	P	P	08 12 04.7	-0.4
WB0				IAmb	IAmb	08 12 24.8	
	comp=Z,5.4nm,1.1s						
WRA	Warramunga Arr	43.73	259	P	P	08 12 04.8	-0.5
	comp=Z,2.4nm,0.5s,baz=94,slow=7.3,SNR=37						
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	43.73	259	P	P	08 12 04.6	-0.7
AS31	Alice Springs	43.92	254	P	P	08 12 06.6	-0.2
AS31				IAmb	IAmb	08 12 07.5	
	comp=Z,6.2nm,0.6s						
ASAR	Alice Springs	43.92	254	P	P	08 12 07.0	+0.1
	comp=Z,22nm,0.6s,baz=88,slow=8.2,SNR=267						
	comp=Z,22nm,0.6s						
ASAR	Alice Springs	43.92	254	P	P	08 12 06.3	-0.5
KNRA	Kununurra	49.56	264	P	P	08 12 48.6	-0.3
KNRA				IAmb	IAmb	08 12 54.8	
	comp=Z,17nm,1.3s						
VNDA	Vanda	60.55	185	P	P	08 14 05.2	+1.4
CASY	Casey	65.91	205	P	P	08 14 37.7	-0.3
QSPA	South Pole Qui	72.33	180	P	P	08 15 16.9	+0.6
QSPA				IAmb	IAmb	08 15 47.4	
	comp=Z,3.7nm,1.4s						
BR231	Keskin MP Arra	144.50	315	PKPdf	PKPdf	08 23 19.3	+0.2

*DJA **20** 08:06:06.6±1.7, 9°.5±12°.×12°.5E±1°.1, h142km±20km, M3.4/4, MLv3.4/4*
*IDC **20** 08:06:08.4±2.0, 8°.57S×124°.47E, h0km, mb3.4/1, mbtmp3.2/3, ML3.3/2, MS3.4/1, Error ellipse: s-maj=46.0km s-min=26.0km az=90.0*
ISC 20 08:06:10.5±1.3, 8°.55S±0°.08×124°.57E±0°.09, h20km, n8, σ1s91/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.23	194	P	Pb	08 06 32.7	-0.5
SOEI				S	Sn	08 06 53.4	+4.6
BATI	Baumata	1.87	208	Pn	Pn	08 06 41.7	+0.3
BATI				Sn	Sn	08 07 04.0	-0.5
	31nm,0.3s,baz=255,slow=3.5,SNR=4.2						
BATI	Baumata	1.87	208	P	Pn	08 06 40.3	-1.1
BATI				S	Sb	08 07 06.1	-0.9
MMRI	Maumere	2.30	268	P	Pn	08 06 46.7	-0.7
WRA	Warramunga Arr	14.75	141	Pn	Pn	08 09 38.8	+0.6
	0.2nm,0.3s,baz=316,slow=15,SNR=28						
WRA				Sn	Sn	08 12 19.2	-2.1
	0.3nm,0.3s,baz=325,slow=21,SNR=6.1						
	0.4nm,0.7s						
ASAR	Alice Springs	17.49	150	P	P	08 10 14.3	-0.1
	0.1nm,0.3s,baz=322,slow=12,SNR=5.3						
	0.3nm,0.6s						
MSVF	Nonsavu	52.73	106	LR	LR	08 36 45.3	
	comp=Z,40nm,19.6s,baz=359,slow=35						
MKAR	Makanchi Array	66.71	330	P	P	08 17 00.9	+0.7
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.4						
	0.3nm,0.6s						

*IDC **20** 08:12:02.6±0.9, 2°.90N×84°.61W, h0km, mb3.9/11, mbtmp4.0/13, ML3.0/2, MS3.7/19, Error ellipse: s-maj=31.1km s-min=15.6km az=48.0*
*NEIC **20** 08:12:05.6±2.1, 3°.08N±0°.08×84°.20W±0°.08, h10km±2km, mb4.3/11, Error ellipse: s-maj=14.2km s-min=12.0km az=235.0*
*SNET **20** 08:12:09.6±1.1, 2°.87N×85°.04W, h32km±999km, ML4.9*
ISC 20 08:12:05.1±0.5, 3°.01N±0°.06×84°.24W±0°.08, h10km, n121, σ1s79/106, mb3.9/10, MS3.8/15, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	Canoas	5.69	14	Pn	Pn	08 13 27.1	-2.7
BRU2	Volcan	5.95	15	Pn	Pn	08 13 31.2	-2.2
SRBA	San Rafael, Bu	6.24	8		Pn	08 13 35.2	-2.2
PEZE	Perez Zeledon,	6.35	5	Pn	Pn	08 13 37.1	-1.9
CUSE	Cuicocha Este	6.43	115	*e*P	Pn	08 13 39.2	-1.1
PULU	Pululahua	6.46	117		Pn	08 13 40.8	0.0
CDM	Cerro de Muert	6.52	4	*e*P	Pn	08 13 39.6	-1.9
IMBA	Imbabura, San	6.62	114		Pn	08 13 42.9	-0.1
LCR2	La Lucha 2	6.69	2	*e*P	Pn	08 13 41.6	-2.1
RIMA	Rio Macho	6.72	3		Pn	08 13 42.2	-1.9
RIMA	Rio Macho	6.72	3	*e*P	Pn	08 13 42.5	-1.6
CMBC	Cumbal	6.74	108	*e*P	Pn	08 13 46.9	+2.3
MRVA	Moravia de Chi	6.81	7	*e*P	Pn	08 13 43.7	-1.7
OCM	Ochomogo	6.84	2	*e*P	Pn	08 13 44.3	-1.5
SLOR	San Lorenzo -	6.84	123		Pn	08 13 46.3	+0.3
TULM	Tulcn-Chalpat	6.84	109		Pn	08 13 46.3	+0.2
INDI	Punta indio, G	6.92	350	*e*P	Pn	08 13 44.0	-2.8
HAYA	Volcan Irazu	6.93	3	*e*P	Pn	08 13 46.3	-0.9
HDC	Heredia	6.94	1		Pn	08 13 45.4	-1.7
HDC3	Heredia 3	6.95	1	*e*P	Pn	08 13 45.2	-1.9
GRZA	Playa Garza	7.00	349	*e*P	Pn	08 13 44.8	-3.0
BBAC	Balboa, Cauca	7.06	98	*e*P	Pn	08 13 48.3	-0.5
PAYG	Puerto Ayora	7.06	239	Pn	Pn	08 13 50.5	+1.8
POPE	POPE, Guanacas	7.08	352	*e*P	Pn	08 13 46.5	-2.3
BATAN	Batan	7.09	7		Pn	08 13 47.8	-1.3
GCUF	Volcan Galeras	7.12	104	*e*P	Pn	08 13 50.5	+0.6
DUNO	Dulce Nombre,	7.13	350		Pn	08 13 47.2	-2.3
DUNO	Dulce Nombre,	7.13	350	*e*P	Pn	08 13 46.9	-2.7
SAJU	San Juanillo,	7.16	348	*e*P	Pn	08 13 47.2	-2.7
RIFO	Rio Frio, Sara	7.26	2	*e*P	Pn	08 13 50.6	-0.8
JTS	Las Juntas de	7.26	354	Pn	Pn	08 13 50.2	-1.2
JTS	Las Juntas de	7.26	354	*e*P	Pn	08 13 50.3	-1.2
JTS	Las Juntas de	7.26	354	*e*P	Pn	08 13 49.9	-1.5
COHC	Cochancay	7.38	137	Pn	Pn	08 13 52.3	-0.7
ORTG	Ortega, Santa	7.40	351	Pn	Pn	08 13 51.7	-1.7
ORTG	Ortega, Santa	7.40	351	*e*P	Pn	08 13 51.2	-2.1
FORC	Fortuna	7.42	357	*e*P	Pn	08 13 53.4	-0.1
VACR	Volcan Arenal	7.42	357	*e*P	Pn	08 13 54.1	+0.5
CRUC	La Cruz	7.43	101	*e*P	Pn	08 13 50.5	-3.5
BCIP	Isla Barro Col	7.52	35	Pn	Pn	08 13 55.4	+0.5
CUI	Cuipilapa	7.65	353	*e*P	Pn	08 13 55.8	-1.0
COVE	Coope Vega, Sa	7.66	359		Pn	08 13 56.2	-0.6
COVE	Coope Vega, Sa	7.66	359	*e*P	Pn	08 13 56.4	-0.5
COLC	Colonia	7.66	353	*e*P	Pn	08 13 56.5	-0.4
HORNC	Hornillas	7.71	353	*e*P	Pn	08 13 56.4	-1.2
GUAB	Guayabo de Bag	7.71	353	*e*P	Pn	08 13 56.6	-0.9
ARNL	Arenillas	7.74	147		Pn	08 13 57.4	-0.5
VMAR	Armenia, Volca	7.80	354	*e*P	Pn	08 13 58.0	-0.8
VERA	Finca Concepci	7.81	355	*e*P	Pn	08 13 59.0	0.0
YOTC	Yotoco, Valle	7.94	83	*e*P	Pn	08 14 01.3	+0.5
UPD2	Meteti	8.28	48	*e*P	Pn	08 14 09.2	+3.8
BOSC	San Juan Bosco	8.40	137		Pn	08 14 09.5	+2.4
CBOC	Ciudad Bolivar	8.68	71	*e*P	Pn	08 14 12.4	+1.3
FLOC	Florencia	8.70	99	*e*P	Pn	08 14 13.2	+2.0
GARC	Garzon, Huila	8.78	95	*e*P	Pn	08 14 14.8	+2.3
ANIL	Santa Ana	8.94	80	*e*P	Pn	08 14 17.3	+2.6
ACON	Acoyapa	8.95	354		Pn	08 14 13.7	-0.8
ESPN	Las Esperanzas	9.12	360		Pn	08 14 17.2	+0.3
ESPN	Las Esperanzas	9.12	360	*e*P	Pn	08 14 17.5	+0.6
GUY2C	Guyana, Caldas	9.12	76	*e*P	Pn	08 14 19.8	+2.4
BOAB	BOACO BROADBAN	9.48	352	Pn	Pn	08 14 20.9	-0.9
CNGN	Cerro Negro	9.73	346		Pn	08 14 25.2	-0.1
CNGN	Cerro Negro	9.73	346	*e*P	Pn	08 14 26.9	+1.6
MATN	Matagalpa	9.99	351		Pn	08 14 28.3	-0.6
CRIN	San Cristobal	10.02	344		Pn	08 14 30.2	+1.0
ROSC	El Rosal	10.06	79	Pn	Pn	08 14 33.9	+3.7
	1.5nm,0.3s,baz=162,slow=22,SNR=11						
	8.5nm,0.4s						
ROSC	El Rosal	10.06	79	Pn	Pn	08 14 31.3	+1.1
PTBC	PUERTO BERRIO,	10.36	70	*e*P	Pn	08 14 36.0	+2.0
LCND	La Caada	10.85	341	*e*P	Pn	08 14 42.5	+1.9
LCND	La Caada	10.85	341	*e*P	Pn	08 14 42.5	+1.9
COEB	Comit de Eme	11.25	338	*e*P	Pn	08 14 47.9	+1.8
COEB	Comit de Eme	11.25	338	*e*P	Pn	08 14 47.9	+1.8
COEB				*e*P	Pn	08 14 49.0	+2.9
PQSS	Presa 15 de Se	11.37	338	*e*P	Pn	08 14 50.5	+2.7
TGUH	Tegucigalpa,Un	11.37	345	Pn	Pn	08 14 47.8	-0.1
SCLA	Alcaldia de Sa	11.51	338	IAML		08 14 56.9	
	comp=Z,16nm,0.3s						
SCLA				*e*S	Sn	08 16 58.8	+0.4
SCLA	Alcaldia de Sa	11.51	338	IAML		08 14 56.9	
	comp=Z,16nm,0.3s						
SCLA				*e*S	Sn	08 16 58.8	+0.4
BARC	Barichara	11.58	72	*e*P	Pn	08 14 53.3	+2.4
ATAH	Atahualpa	11.65	150	LR	LR	08 19 15.7	
	comp=Z,568nm,20.1s,baz=358,slow=37						
NUBE	Las Nubes	12.12	334	*e*P	Pn	08 15 00.6	+2.4
NUBE				IAML		08 15 08.9	
	comp=Z,12nm,0.4s						
NUBE	Las Nubes	12.12	334	*e*P	Pn	08 15 00.6	+2.4
NUBE				IAML		08 15 08.9	
	comp=Z,12nm,0.4s						
PAMC	Pamplona, Colo	12.27	69	*e*P	Pn	08 15 04.5	+4.0
MTO3	Montecristo	12.39	336		Pn	08 15 03.2	+1.3
ESQI	Esquipulas	12.53	337		Pn	08 15 03.6	-0.1
SDV	Santo Domingo	14.74	66	Pn	P	08 15 38.7	-1.5
	comp=Z,1.3nm,0.3s,baz=221,slow=7.9,SNR=7.6						
SDV				LR	LR	08 20 56.1	
	comp=Z,244nm,20.0s,baz=244,slow=35						
	comp=Z,10nm,0.4s						
CCIG	Comitan	15.30	330		Pn	08 15 40.2	-1.3
CCIG				IAmb	IAmb	08 16 12.1	
	comp=Z,14nm,0.8s						
NNA	Nana	16.62	154	LR	LR	08 21 56.5	
	comp=Z,127nm,21.5s,baz=3.5,slow=36						
BAUV	El Baul	17.15	69		Pn	08 16 03.8	-1.3
BAUV				IAmb	IAmb	08 16 22.2	
	comp=Z,16nm,0.9s						
CMIG	Matias Romero	17.46	324	P	P	08 16 14.6	+4.5
	comp=Z,2.0nm,0.3s,baz=169,slow=13,SNR=19						
CMIG				LR	LR	08 21 42.3	
	comp=Z,205nm,19.4s,baz=147,slow=33						
PCRV	Puerto La Cruz	20.73	69	P	Pn	08 16 49.5	+1.1
	comp=Z,19nm,1.0s,baz=247,slow=7.5,SNR=3.9						
	comp=Z,19nm,1.0s						
LPAZ	La Paz	24.93	141	P	P	08 17 30.1	+0.6
	comp=Z,2.4nm,0.8s,baz=324,slow=8.3,SNR=6.0						
	comp=Z,2.4nm,0.8s						
LPAZ	La Paz	24.93	141	P	P	08 17 29.3	-0.1
LPAZ				IAmb	IAmb	08 17 34.4	
	comp=Z,5.4nm,1.1s						
LVC	Limon Verde	29.54	150	LR	LR	08 28 46.3	
	comp=Z,87nm,20.6s,baz=314,slow=34						
SIV	San Ignacio	29.69	130	P	P	08 18 11.7	+0.1
	comp=Z,0.8nm,0.7s,baz=292,slow=11,SNR=4.6						
SIV				LR	LR	08 30 15.7	
	comp=Z,331nm,21.1s,baz=296,slow=37						
	comp=Z,0.8nm,0.7s						
TXAR	Lajitas Array	32.03	327	P	P	08 18 30.9	-1.2
	comp=Z,0.2nm,0.8s,baz=154,slow=9.0,SNR=1.8						
TXAR				LR	LR	08 30 53.2	
	comp=Z,75nm,19.8s,baz=102,slow=35						
	comp=Z,0.2nm,0.8s						
H03N2	Juan Fernandez	36.60	173	T	T	08 57 54.4	
	baz=351,slow=76,SNR=30						
H03N1	Juan Fernandez	36.61	173	T	T	08 57 55.4	
	baz=351,slow=76,SNR=18						
H03N3	Juan Fernandez	36.62	173	T	T	08 57 55.0	
	baz=351,slow=76,SNR=26						
CRNM	Carthage	37.25	328	P	P	08 19 17.1	-0.2
ANMO	Albuquerque	37.88	330	P	P	08 19 21.9	-0.8
RPN	Rapa Nui	38.52	217	LR	LR	08 31 02.8	
	comp=Z,84nm,21.5s,baz=101,slow=30						
CPUP	Villa Florida	39.09	140	LR	LR	08 37 30.7	
	comp=Z,138nm,18.8s,baz=344,slow=39						
SDCO	Great Sand Dun	39.68	333	P	P	08 19 37.9	0.0
BDFB	Brasilia	40.35	118	P	P	08 19 44.4	+0.9
	comp=Z,1.2nm,0.4s,baz=336,slow=5.3,SNR=3.0						
	comp=Z,1.2nm,0.4s						
PFO	Pinyon Flats O	42.79	319	LR	LR	08 36 24.4	
	comp=Z,131nm,19.2s,baz=123,slow=34						
PLCA	Paso Flores	45.30	165	P	P	08 20 21.9	-1.4
	comp=Z,1.5nm,1.0s,baz=16,slow=5.0,SNR=4.3						
	comp=Z,1.5nm,1.0s						
PDAR	Pinedale Array	45.56	334	P	P	08 20 23.7	-1.9
	comp=Z,1.4nm,1.0s,baz=132,slow=10,SNR=6.5						
PDAR				LR	LR	08 40 23.6	
	comp=Z,153nm,18.9s,baz=149,slow=37						
	comp=Z,1.4nm,1.0s						
HWUT	Hardware Ranch	45.58	331	P	P	08 20 24.1	-1.6
ELK	Elko	46.81	328	LR	LR	08 40 12.4	
	comp=Z,100nm,18.5s,baz=135,slow=36						
NVAR	Mina Array Bea	46.99	323	P	P	08 20 35.3	-1.5
	comp=Z,1.2nm,0.6s,baz=132,slow=7.6,SNR=13						
NVAR				LR	LR	08 38 46.9	
	comp=Z,85nm,20.9s,baz=82,slow=34						
	comp=Z,1.2nm,0.6s						
ULM	Lac du Bonnet	48.09	350	P	P	08 20 43.1	-1.7
	comp=Z,3.7nm,0.8s,baz=154,slow=6.6,SNR=3.0						
	comp=Z,3.7nm,0.8s						
RCBR	Riachuelo	49.07	100	LR	LR	08 41 58.4	
	comp=Z,164nm,20.0s,baz=79,slow=36						
YBH	Yreka Blue Hor	51.69	324	LR	LR	08 42 19.3	
	comp=Z,75nm,18.7s,baz=142,slow=35						
NEW	Newport	53.19	333	LR	LR	08 46 02.3	
	comp=Z,52nm,18.8s,baz=119,slow=38						
YKA	Yellowknife Ar	63.49	345	LR	LR	08 52 40.0	
	comp=Z,93nm,18.4s,baz=60,slow=38						
INK	Inuvik	73.10	343	LR	LR	08 59 11.7	
	comp=Z,54nm,18.3s,baz=223,slow=39						
ILAR	Eielson Array	75.89	337	P	P	08 23 50.0	-1.6
	comp=Z,0.9nm,1.0s,baz=122,slow=2.5,SNR=4.1						
ILAR				LR	LR	08 59 08.8	
	comp=Z,59nm,20.3s,baz=130,slow=37						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	85.37	77	P	P	08 24 46.1	+2.6
	comp=Z,0.2nm,0.5s,baz=276,slow=5.7,SNR=1.5						
	comp=Z,0.2nm,0.5s						
SNAA	Sanae	90.13	162	P	P	08 25 07.3	+2.1
ASAR	Alice Springs	137.81	237	PKP	PKPdf	08 31 30.5	-0.3
	comp=Z,0.3nm,0.7s,baz=95,slow=3.2,SNR=2.3						
WRA	Warramunga Arr	138.77	243	PKP	PKPdf	08 31 30.4	-2.2
	comp=Z,0.2nm,0.6s,baz=101,slow=1.5,SNR=1.8						
PZH	PanZhiHua	150.09	349	PKPbc	PKPdf	08 31 50.8	-1.4

IDC 20 08:24:51.4±26.0, 22°.35S×172°.75W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=491.6km s-min=157.2km az=77.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	38.20	266	P	P	08 32 13.8	+0.6
	2.9nm,0.4s,baz=92,slow=9.4,SNR=7.4						
	2.9nm,0.4s						
STKA	Stephens Creek	41.48	247	P	P	08 32 38.7	-1.6
	2.6nm,1.0s,baz=73,slow=9.6,SNR=3.4						
	2.6nm,1.0s						
ASAR	Alice Springs	48.88	258	P	P	08 33 39.0	-0.3
	0.6nm,0.8s,baz=99,slow=7.6,SNR=8.4						
	0.6nm,0.8s						
WRA	Warramunga Arr	49.20	262	P	P	08 33 42.2	+0.4
	1.2nm,0.5s,baz=98,slow=8.1,SNR=24						
	1.2nm,0.5s						

*IDC **20** 08:31:30.5±11.0, 7°.22S×128°.17E, h75km±107km, mb3.6/2, mbtmp3.8/4, ML4.3/3, Error ellipse: s-maj=128.6km s-min=27.4km az=48.0*
*DJA **20** 08:31:36.6±0.8, 8°.5±7°.×12°.8E±°.1, h170km±28km, M4.3/6, mb4.1/3, mB4.8/2, MLv4.4/6, Mw(mB)4.0/2*
ISC 20 08:31:37.6±1.1, 7°.89S±0°.09×127°.88E±0°.08, h150km, n9, σ2s45/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.38	92	P	Pn	08 32 31.5	+1.6
SOEI	Soe	4.03	242	P	Pn	08 32 37.8	-0.6
BATI	Baumata	4.76	241	P	Pn	08 32 48.1	+0.1
	77nm,0.3s,baz=105,slow=3.9,SNR=24						
BATI				S	Sn	08 33 41.7	-1.1
	96nm,0.4s,baz=21,slow=22,SNR=5.9						
BATI	Baumata	4.76	241	P	Pn	08 32 47.8	-0.2
FAKI	Fak Fak	6.57	42	P	Pn	08 33 10.4	-1.7
	0.1nm15nm,0.9s						
WRA	Warramunga Arr	13.52	153	P	Pn	08 34 43.4	-0.2
	0.7nm,0.3s,baz=331,slow=12,SNR=26						
WRA				S	Sn	08 37 10.4	-2.9
	1.0nm,0.5s,baz=335,slow=22,SNR=5.2						
	0.6nm,0.4s						
ASAR	Alice Springs	16.72	160	P	Pn	08 35 27.0	+3.7
	0.5nm,0.3s,baz=340,slow=11,SNR=23						
ASAR				S	S	08 38 27.6	-1.7
	0.3nm,0.5s,baz=314,slow=18,SNR=2.9						
	1.2nm,0.4s						
STKA	Stephens Creek	27.07	154	P	P	08 37 10.7	+4.4
	4.2nm,1

DBBC			eS	Sn	08 36 36.5	-1.5
ANIL	**Santa Ana**	**3.20 225**	eP	Pn	08 36 03.8	+0.7
ANIL			i Sg	Sn	08 36 42.7	+1.0
ANIL			eS	Sn	08 36 43.6	+1.9
ARGC	**Ariguani, Magd**	**3.25 340**	eP	Pn	08 36 04.2	+1.0
ARGC			eS	Sn	08 36 42.4	+0.1
ARGC			i		08 36 48.4	
comp=Z,24nm,0.3s						
PRAC	**Prado**	**3.51 210**	eP	Pn	08 36 06.0	-0.8
PRAC			eS	Sn	08 36 48.3	-0.2
PRAC			i		08 36 53.0	
comp=Z,81nm,0.4s						
PLMC	**San Jos del P**	**3.64 239**	eP	Pn	08 36 08.0	-0.4
PLMC			eS	Sn	08 36 53.3	+1.8
PLMC			i		08 36 57.9	
comp=Z,19nm,0.3s						
SJCC	**San Jacinto, C**	**3.69 327**	eP	Pn	08 36 06.2	-3.0
SJCC			eS	Sn	08 36 47.5	-5.2
SJCC			i		08 36 52.1	
comp=Z,20nm,0.4s						
LCBC	**Los crdobas,**	**3.80 303**	eP	Pn	08 36 13.8	+3.3
LCBC			eS	Sn	08 36 54.0	-1.2
LCBC			i		08 36 58.4	
comp=Z,31nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.22 3**	eP	Pn	08 36 12.9	-3.1
CRJC			eS	Sn	08 37 00.6	-4.5
CRJC			i		08 37 03.9	
comp=Z,27nm,0.2s						
YOTC	**Yotoco, Valle**	**4.23 229**	eP	Pn	08 36 15.1	-1.2
URIC	**Uribia, Colomb**	**5.02 13**	eP	Pn	08 36 23.1	-3.4
URIC			eS	Sn	08 37 17.5	-6.4
URIC			i		08 37 25.4	
comp=Z,5.0nm,0.4s						
GARC	**Garzon, Huila**	**5.13 207**	eP	Pn	08 36 26.7	-1.6
GARC			eS	Sn	08 37 23.9	-3.2
FLOC	**Florencia**	**5.74 206**	eP	Pn	08 36 35.4	-0.9
FLOC			eS	Sn	08 37 40.6	-0.7
FLOC			i		08 37 45.6	
comp=Z,2.8nm,0.5s						
BBAC	**Balboa, Cauca**	**6.25 221**	eP	Pn	08 36 43.6	+0.3
BBAC			eS	Sn	08 37 52.1	-1.8
BBAC			i		08 37 56.5	
comp=Z,1.6nm,0.4s						

*NOU **20** 08:36:58.8, 33°.57S×177°.33W, h272km, mb4.2/9, South of Kermadec Islands*
*WEL **20** 08:37:18.0±0.5, 34°.S±4°.×17°.9E±°, h33km, M4.5/28, mB5.0/16, ML5.1/30, MLv4.8/28, Mw(mB)4.3/16, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3*

ISC 20 08:37:19.8±4.2, 33°.7S±0°.2×178°.3E±0°.1, h10km, n49, σ1§96/75, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.81**	**180**	P	**Pn**	**08 38 19.4**	**+0.8**
MXZ				S	**Sn**	**08 39 04.4**	**+1.0**
MXZ	**Matakaoa Point**	**3.81**	**180**	P	**Pn**	**08 38 19.6**	**+1.0**
HAZ	**Te Kaha**	**4.03**	**186**	P	**Pn**	**08 38 24.6**	**+3.0**
HAZ				S	**Sn**	**08 39 11.3**	**+2.5**
WMGZ	**Waiomatatini S**	**4.07**	**179**	P	**Pn**	**08 38 22.8**	**+0.7**
WMGZ				S	**Sn**	**08 39 10.6**	**+0.8**
PKGZ	**Pakihiroa**	**4.14**	**183**	P	**Pn**	**08 38 24.8**	**+1.6**
PKGZ				S	**Sn**	**08 39 12.6**	**+0.9**
RUGZ	**Raukumara Rang**	**4.25**	**187**	P	**Pn**	**08 38 28.3**	**+3.6**
RUGZ				S	**Sn**	**08 39 15.0**	**+0.7**
PUZ	**Puketiti**	**4.32**	**181**	P	**Pn**	**08 38 25.5**	**-0.1**
PUZ				S	**Sn**	**08 39 14.9**	**-1.1**
TWGZ	**Tauwhareparae**	**4.43**	**184**	P	**Pn**	**08 38 28.7**	**+1.5**
TWGZ				S	**Sn**	**08 39 19.9**	**+1.0**
URZ	**Urewera**	**4.61**	**192**	P	**Pn**	**08 38 32.2**	**+2.6**
URZ				S	**Sn**	**08 39 26.6**	**+3.3**
URZ	**Urewera**	**4.61**	**192**	P	**Pn**	**08 38 33.6**	**+4.0**
MWZ	**Matawai**	**4.63**	**188**	P	**Pn**	**08 38 31.3**	**+1.5**
MWZ				S	**Sn**	**08 39 25.7**	**+2.0**
TKGZ	**Te Karaka**	**4.70**	**185**	P	**Pn**	**08 38 31.2**	**+0.4**
TKGZ				S	**Sn**	**08 39 25.1**	**-0.3**
CNGZ	**Carnagh Statio**	**4.73**	**181**	P	**Pn**	**08 38 30.9**	**-0.3**
RAGZ	**Rawiri**	**4.80**	**189**	P	**Pn**	**08 38 35.6**	**+3.3**
RAGZ				S	**Sn**	**08 39 29.2**	**+1.3**
MUGZ	**Murupara**	**4.89**	**195**	P	**Pn**	**08 38 36.0**	**+2.5**
MUGZ				S	**Sn**	**08 39 32.1**	**+2.0**
RIGZ	**Rimuhau**	**4.97**	**185**	P	**Pn**	**08 38 34.1**	**-0.5**
RIGZ				S	**Sn**	**08 39 32.5**	**+0.3**
RTZ	**Ruatahuna**	**4.98**	**192**	P	**Pn**	**08 38 34.8**	**0.0**
RTZ				S	**Sn**	**08 39 34.1**	**+1.6**
ALRZ	**Allen Road**	**5.07**	**198**	P	Pn	08 38 41.1	+5.2
SNGZ	**Shannon Statio**	**5.09**	**189**	P	**Pn**	**08 38 37.1**	**+0.9**
SNGZ				S	**Sn**	**08 39 36.2**	**+1.1**
MTHZ	**Maungataniwha**	**5.24**	**193**	P	**Pn**	**08 38 40.5**	**+2.2**
MTHZ				S	**Sn**	**08 39 40.6**	**+1.8**
RAHZ	**Arahi**	**5.26**	**191**	P	**Pn**	**08 38 39.1**	**+0.6**
RAHZ				S	**Sn**	**08 39 39.4**	**+0.2**
KNZ	**Kokohu**	**5.29**	**186**	P	**Pn**	**08 38 38.8**	**-0.1**
MRHZ	**Matea Rd**	**5.31**	**196**	P	**Pn**	**08 38 42.3**	**+3.0**
WHHZ	**Waihua**	**5.40**	**189**	P	**Pn**	**08 38 40.5**	**+0.1**
WHHZ				S	**Sn**	**08 39 43.0**	**+0.4**
MHGZ	**Mahia Peninsul**	**5.41**	**184**	P	**Pn**	**08 38 39.1**	**-1.5**
MHGZ				S	Sn	08 39 36.4	-6.5
NMHZ	**Naumai**	**5.48**	**193**	P	**Pn**	**08 38 43.0**	**+1.4**
NMHZ				S	**Sn**	**08 39 46.8**	**+2.0**
GLKZ	**Green Lake**	**5.49**	**37**	P	Pn	08 38 30.0	-12
GLKZ				S	Sn	08 39 23.6	-21
HIZ	**Hauiti**	**5.53**	**210**	P	Pb	08 38 52.4	-4.1
BKZ	**Black Stump Fm**	**5.61**	**195**	P	**Pn**	**08 38 45.0**	**+1.6**
ARHZ	**Aropaoanui**	**5.61**	**191**	P	**Pn**	**08 38 42.6**	**-0.8**
ARHZ				S	**Sn**	**08 39 48.0**	**+0.1**
KHEZ	**Kahui Hut**	**6.54**	**211**	P	Pn	08 39 04.5	+8.3
BFZ	**Birch Farm**	**7.12**	**193**	P	**Pn**	**08 39 01.7**	**-2.4**
MRZ	**Mangatainoka R**	**7.25**	**197**	P	**Pn**	**08 39 03.5**	**-2.3**
MRZ				S	**Sn**	**08 40 23.7**	**-4.4**
HOWZ	**Holdsworth Sta**	**7.49**	**197**	P	**Pn**	**08 39 06.8**	**-2.3**
HOWZ				S	Sn	08 40 28.0	-6.0
OGWZ	**Otaki Gorge**	**7.50**	**199**	P	**Pn**	**08 39 07.6**	**-1.6**
OGWZ				S	**Sn**	**08 40 30.1**	**-4.2**
KIW	**Kapiti Island**	**7.61**	**200**	P	**Pn**	**08 39 09.6**	**-1.2**
KIW				S	**Sn**	**08 40 33.8**	**-3.3**
MTW	**Mount Morrison**	**7.74**	**196**	P	**Pn**	**08 39 09.4**	**-3.1**
MTW				S	Sn	08 40 32.6	-7.6
DUWZ	**D'Urville Isla**	**7.87**	**205**	P	**Pn**	**08 39 15.0**	**+0.6**
DUWZ				S	**Sn**	**08 40 44.1**	**+0.5**
WEL	**Wellington**	**8.04**	**200**	P	**Pn**	**08 39 15.5**	**-1.2**
TCW	**Tory Channel**	**8.12**	**202**	P	**Pn**	**08 39 16.5**	**-1.3**
TCW				S	**Sn**	**08 40 46.3**	**-3.3**
TUWZ	**Tuamarina**	**8.43**	**203**	P	**Pn**	**08 39 20.8**	**-1.2**
TUWZ				S	**Sn**	**08 40 54.3**	**-2.8**
NNZ	**Nelson**	**8.44**	**206**	P	**Pn**	**08 39 22.4**	**+0.4**
NNZ				S	**Sn**	**08 40 57.7**	**+0.4**
QRZ	**Quartz Range**	**8.45**	**212**	P	**Pn**	**08 39 23.9**	**+1.6**
QRZ				S	**Sn**	**08 41 01.1**	**+3.4**
QRZ	**Quartz Range**	**8.45**	**212**	P	Pn	08 39 28.3	+6.0
BSWZ	**Blackbirch Sta**	**8.71**	**203**	P	**Pn**	**08 39 24.4**	**-1.4**
BSWZ				S	**Sn**	**08 41 01.1**	**-2.9**
MRNZ	**Matariki Terra**	**8.83**	**208**	P	**Pn**	**08 39 27.8**	**+0.2**
MRNZ				S	**Sn**	**08 41 08.2**	**+1.1**
THZ	**Tophouse**	**9.09**	**207**	P	**Pn**	**08 39 30.6**	**-0.5**
THZ				S	**Sn**	**08 41 13.2**	**-0.2**
KHZ	**Kahutara**	**9.45**	**202**	P	**Pn**	**08 39 34.3**	**-1.6**
RPZ	**Rata Peaks**	**11.46**	**208**	P	**Pn**	**08 40 00.8**	**-2.7**

*NEIC **20** 08:38:33.6±1.9, 1°.4N±0°.1×127°.23E±0°.10, h151km±5km, mb4.3/15, Error ellipse: s-maj=17.7km s-min=10.9km az=217.0*
*IDC **20** 08:38:34.0±1.9, 1°.55N×127°.45E, h160km±18km, mb3.6/8, mbtmp4.1/10, Error ellipse: s-maj=32.5km s-min=10.1km az=69.0*
*DJA **20** 08:38:34.0±0.4, 2°.N±2°.×12°.7E±°, h131km±5km, M4.5/13, mb4.7/4, mB5.4/2, MLv4.5/13, Mw(mB)4.8/2*

ISC 20 08:38:33.0±0.5, 1°.45N±0°.05×127°.28E±0°.06, h150km, n46, σ1§34/54, mb4.1/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.64**	**53**	P	**Pn**	**08 38 55.1**	**0.0**
GAMI				S	**Sn**	**08 39 11.2**	**-0.8**
TNTI	**Ternate**	**0.68**	**172**		**Pn**	**08 38 56.0**	**+0.6**
TNTI	**Ternate**	**0.68**	**172**	P	**Pn**	**08 38 56.2**	**+0.8**
TNTI				S	**Sn**	**08 39 12.2**	**-0.3**
LBMI	**Labuha**	**2.09**	**174**	P	**Pn**	**08 39 11.0**	**+1.8**
LBMI				S	**Sn**	**08 39 38.0**	**+0.9**
SGSI	**Sangihe**	**2.82**	**322**	P	**Pn**	**08 39 17.6**	**-0.6**
SGSI				S	**Sn**	**08 39 51.3**	**-1.8**
SANI	**Sanana**	**3.71**	**200**	P	**Pn**	**08 39 29.2**	**-0.3**
SANI				S	**Sn**	**08 40 09.0**	**-4.4**
GTOI	**Gorontalo**	**4.34**	**259**	P	**Pn**	**08 39 40.2**	**+2.4**
GTOI				S	**Sn**	**08 40 29.8**	**+1.7**
SIJI	**Sorong**	**4.61**	**120**	P	**Pn**	**08 39 42.6**	**+1.3**
21nm,0.7s,baz=302,slow=8.0,SNR=5.2							
NLAI	**Namlea**	**4.66**	**182**	P	**Pn**	**08 39 42.7**	**+0.7**
NLAI				S	**Sn**	**08 40 32.5**	**-3.3**
LUWI	**Luwuk**	**5.14**	**241**		**Pn**	**08 39 48.8**	**+0.5**
LUWI	**Luwuk**	**5.14**	**241**	P	**Pn**	**08 39 49.6**	**+1.3**
3.3nm8μm174nm,0.6s							
APSI	**Ampana**	**6.10**	**247**	P	**Pn**	**08 40 01.4**	**+0.3**
1.4nm2μm98nm,0.5s							
TOLI2	**Tolitoli**	**6.50**	**267**		**Pn**	**08 40 06.3**	**-0.2**
FAKI	**Fak Fak**	**6.60**	**131**	Pn	**Pn**	**08 40 08.0**	**+0.2**
FAKI	**Fak Fak**	**6.60**	**131**	P	**Pn**	**08 40 08.9**	**+1.1**
MYLDM	**Lahad Datu**	**9.51**	**293**	Pn	**Pn**	**08 40 46.0**	**-0.6**
KAPI	**Kappang**	**9.89**	**229**	P	Pn	08 40 56.5	+4.9
9.7nm,0.4s,baz=301,slow=2.3,SNR=4.4							
KAPI	**Kappang**	**9.89**	**229**	Pn	**Pn**	**08 40 53.3**	**+1.6**
MTN	**Manton Dam**	**14.71**	**165**	Pn	**Pn**	**08 41 53.1**	**-0.8**
KNRA	**Kununurra**	**17.08**	**175**	P	**P**	**08 42 22.6**	**+0.3**
KNRA				IAmb	IAmb	08 42 26.5	
comp=Z,14nm,1.2s							
COEN	**Coen**	**21.97**	**135**	P	**P**	**08 43 14.7**	**-0.4**
COEN				IAmb	IAmb	08 43 50.4	
comp=Z,15nm,1.2s							
WB0	**Warramunga Arr**	**22.21**	**162**	P	**P**	**08 43 16.3**	**-1.2**
WB0				IAmb	IAmb	08 43 17.5	
comp=Z,16nm,1.1s							
WRAB	**Tennant Creek**	**22.36**	**162**	P	**P**	**08 43 18.0**	**-0.9**
WRAB				IAmb	IAmb	08 43 26.5	
comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**22.36**	**162**	P	**P**	**08 43 18.4**	**-0.6**
comp=Z,5.7nm,0.7s,baz=343,slow=11,SNR=29							
WRA				S	**S**	**08 47 13.5**	**-0.3**
comp=Z,0.6nm,0.6s,baz=336,slow=20,SNR=3.8							
comp=Z,5.7nm,0.7s							
WRA	**Warramunga Arr**	**22.36**	**162**	P	**P**	**08 43 17.5**	**-1.5**
SSLB	**Suanglung**	**23.03**	**345**	P	**P**	**08 43 26.5**	**+1.3**
AS31	**Alice Springs**	**25.79**	**166**	P	**P**	**08 43 49.4**	**-0.8**
ASAR	**Alice Springs**	**25.79**	**166**	P	**P**	**08 43 50.1**	**-0.1**
comp=Z,1.5nm,0.5s,baz=350,slow=7.3,SNR=25							
ASAR				S	**S**	**08 48 13.1**	**+4.6**
comp=Z,0.4nm,0.8s,baz=335,slow=18,SNR=1.5							
comp=Z,1.5nm,0.5s							
ASAR	**Alice Springs**	**25.79**	**166**	P	**P**	**08 43 49.7**	**-0.5**
STKA	**Stephens Creek**	**35.82**	**159**	P	**P**	**08 45 18.4**	**+0.2**
comp=Z,4.6nm,0.6s,baz=328,slow=9.4,SNR=9.2							
comp=Z,4.6nm,0.6s							
STKA	**Stephens Creek**	**35.82**	**159**	P	**P**	**08 45 17.8**	**-0.4**
STKA				IAmb	IAmb	08 45 39.7	
comp=Z,3.4nm,1.5s							
KSRS	**Korea Array**	**35.83**	**1**	P	**P**	**08 45 18.3**	**+0.1**
comp=Z,0.8nm,0.5s,baz=180,slow=8.4,SNR=2.1							
comp=Z,0.8nm,0.5s							
ARMA	**Armidale**	**39.28**	**146**	P	**P**	**08 45 48.6**	**+1.1**
ARMA				IAmb	IAmb	08 45 49.7	
comp=Z,8.4nm,0.8s							
CAN	**Canberra**	**41.85**	**153**	P	**P**	**08 46 09.2**	**+0.9**
SONM	**Songino Array**	**49.62**	**342**	P	**P**	**08 47 08.2**	**-1.0**
comp=Z,0.6nm,0.6s,baz=134,slow=6.2,SNR=2.2							
comp=Z,0.6nm,0.6s							
LBZ	**Lake Benmore**	**59.51**	**145**	P	**P**	**08 48 20.3**	**-0.2**
MK31	**Makanchi Array**	**59.73**	**326**	P	**P**	**08 48 22.2**	**+0.2**
MK31				IAmb	IAmb	08 48 23.8	
comp=Z,1.4nm,0.8s							
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**08 48 22.8**	**+0.8**
comp=Z,1.7nm,0.6s,baz=121,slow=8.6,SNR=15							
comp=Z,1.7nm,0.6s							
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**08 48 22.1**	**+0.1**
GAR	**Garm**	**63.86**	**313**	P	**P**	**08 48 50.6**	**+0.7**
GAR				IAmb	IAmb	08 48 52.2	
comp=Z,5.2nm,0.8s							
BVAR	**Borovoye Array**	**69.52**	**327**	P	**P**	**08 49 24.9**	**-0.5**
baz=151,slow=9.5,SNR=4.2							
ABKAR	**Akbulak array**	**74.25**	**321**	P	**P**	**08 49 53.0**	**-0.6**
AKTO	**Aktyubinsk**	**75.77**	**322**	P	**P**	**08 50 01.9**	**-0.5**
comp=Z,0.9nm,0.4s,baz=123,slow=6.8,SNR=4.1							
comp=Z,0.9nm,0.4s							
VNDA	**Vanda**	**81.11**	**173**	P	**P**	**08 50 30.6**	**-0.5**
comp=Z,0.6nm,0.7s,baz=320,slow=5.3,SNR=5.5							
comp=Z,0.6nm,0.7s							
VNDA	**Vanda**	**81.11**	**173**	P	**P**	**08 50 30.7**	**-0.3**
QSPA	**South Pole Qui**	**91.37**	**180**	P	**P**	**08 51 21.6**	**-0.2**
QSPA				IAmb	IAmb	08 52 02.5	
comp=Z,4.0nm,1.2s							

MAN 20 08:46:07.9, 7°.49N×123°.63E, h6km, mb4.1, ML2.9, MS2.5, 5C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.44**	**325**	⇑iP	Pg	08 46 15.9	-0.5
PAGZ				eS	Sg	08 46 21.4	-0.6
CTBH	**Cotabato--PC H**	**0.66**	**114**	⇓iP	Pn	08 46 23.4	-0.5
CTBH				i S	Sn	08 46 35.1	+0.6
SKMP	**Bagumbayan, Su**	**1.32**	**137**	⇓eP	Pn	08 46 32.6	-0.2
SKMP				eS	Sb	08 46 49.8	-0.4
CGP	**Cagayan de Oro**	**1.42**	**47**	⇓eP	Pg	08 46 36.3	+1.1
CGP				eS	Sg	08 46 57.6	+3.9
BUKP	**Musuan**	**1.47**	**75**	⇑iP	Pg	08 46 36.4	+0.3
BUKP				eS	Sg	08 47 01.1	+6.0
KCP	**Kidapawan**	**1.52**	**108**	⇑eP	Pn	08 46 31.2	-4.5
LSIP	**Lazi, Siquijor**	**1.63**	**360**	⇑eP	Pn	08 46 37.0	-0.2
LSIP				i S	Sb	08 46 59.5	+0.1
ZCP	**Zamboanga City**	**1.64**	**250**	⇑iP	Pn	08 46 36.9	-0.4
ZCP				i S	Sn	08 46 52.6	-6.2
TABP	**Talibon, Bohol**	**2.68**	**15**	⇓iP	Pb	08 46 57.0	+0.8
TABP				i S	Sn	08 47 26.3	+1.9

IDC 20 09:02:00.2±4.0, 4°.57S×145°.13E, h0km, mb3.5/2, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=64.7km s-min=49.7km az=25.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.21**	**157**	Pn	Pn	09 03 18.2	-1.3
5.7nm,0.4s,baz=300,slow=14,SNR=1.6							
PMG				Sn	Sn	09 04 22.4	+2.1
3.6nm,0.3s,baz=129,slow=22,SNR=8.9							
WRA	**Warramunga Arr**	**18.55**	**214**	P	P	09 06 18.1	-0.5
0.2nm,0.3s,baz=37,slow=11,SNR=15							
0.9nm,0.6s							
ASAR	**Alice Springs**	**21.86**	**209**	P	P	09 06 53.9	-0.8
0.5nm,0.5s,baz=36,slow=13,SNR=14							
0.5nm,0.5s							
VNDA	**Vanda**	**73.45**	**176**	P	P	09 13 34.7	+0.8
0.6nm,0.6s,baz=326,slow=7.9,SNR=6.1							
0.6nm,0.6s							

*MEX **20** 09:16:11.9±0.4, 25°.61N×109°.79W, h4km±13km, MD3.9*
*ECX **20** 09:16:11.0±0.5, 25°.57N×109°.83W, h18km±13km, MD3.3, ML3.5*

ISC 20 09:16:09.5±1.2, 25°.62N±0°.05×109°.85W±0°.05, h10km, n15, σ1§18/22, 1C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.73**	**91**	i P	**Pg**	**09 16 23.8**	**+0.2**
TSIG				i S	**Sb**	**09 16 33.4**	**-0.8**
TSIG	**Topolobambo**	**0.73**	**91**	eP	**Pg**	**09 16 23.7**	**+0.2**
TSIG				eS	**Sb**	**09 16 33.5**	**-0.8**
TSIG				IAML		09 16 34.2	
comp=E,2μm,0.3s							
TSIG				e		09 16 34.2	
NE80	**Navojoa**	**1.41**	**23**	⇑eP	**Pn**	**09 16 34.9**	**-0.3**
NE80				eS	**Sn**	**09 16 54.7**	**+0.9**
NE80				IAML		09 16 57.0	
comp=E,871nm,0.1s							
NE80				⇓e		09 16 57.0	
NE77	**Loreto B.C.S**	**1.42**	**287**	eP	**Pn**	**09 16 35.3**	**-0.1**
LPIG	**La Paz**	**1.56**	**196**	eP	**Pn**	**09 16 37.3**	**0.0**
SNIRB	**San Nicol¡s**	**1.79**	**301**	eP	**Pn**	**09 16 41.8**	**+1.4**
CSIG	**Choix**	**1.79**	**47**	eP	**Pn**	**09 16 40.0**	**-0.5**
CSIG				eS	**Sn**	**09 17 01.2**	**-2.1**
SLBS	**Sierra La Lagu**	**1.92**	**183**	eP	**Pn**	**09 16 42.5**	**+0.1**
SLBS	**Sierra La Lagu**	**1.92**	**183**	eP	**Pn**	**09 16 41.7**	**-0.6**
GUYB	**Guaymas**	**2.45**	**338**	eP	**Pn**	**09 16 49.2**	**-0.3**
GUYB	**Guaymas**	**2.45**	**338**	eP	**Pn**	**09 16 50.0**	**+0.5**
SSIG	**Sanalona**	**2.57**	**107**	eP	**Pn**	**09 16 53.5**	**+2.3**
SSIG				eS	**Sn**	**09 17 20.4**	**-2.2**
NOVRB	**El Novillo Son**	**3.32**	**3**	eP	**Pn**	**09 17 02.5**	**+1.0**
HPIG		**3.98**	**70**	eP	**Pn**	**09 17 10.9**	**+0.2**
HPIG				eS	**Sn**	**09 17 57.0**	**-0.5**
PDIG	**Papasquiaro**	**4.07**	**97**	eP	**Pn**	**09 17 13.0**	**+1.1**
PDIG				eS	**Sn**	**09 18 01.8**	**+2.1**

*IDC **20** 09:23:59.7±1.2, 37°.24N×135°.58E, h360km±15km, mb3.1/2, mbtmp3.7/5, Error ellipse: s-maj=42.3km s-min=19.8km az=39.0*
*JMA **20** 09:23:59.7±0.3, 37°N±1°.×13°.6E±°, h358km±3km, MV3.3/26, NW OFF HOKURIKU DISTRICT*

ISC 20 09:23:59.8±1.1, 37°.20N±0°.08×135°.62E±0°.08, h350km, n29, σ1§09/36, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.97**	**106**	P	**Pn**	**09 24 46.5**	**+1.1**
JJH				eS	**S**	**09 25 22.5**	**+0.6**
JKG	**Kaga**	**1.08**	**148**	P	**Pn**	**09 24 46.6**	**+0.7**
JKG				eS	**S**	**09 25 22.2**	**-0.6**
JHG	**Hegura jima**	**1.22**	**57**	eP	**Pn**	**09 24 47.7**	**+1.3**
JSZ	**Suzu**	**1.41**	**79**	P	**Pn**	**09 24 48.7**	**+1.3**
JYTA	**Yamagatataniai**	**1.83**	**150**	P	**Pn**	**09 24 51.0**	**+0.9**
JWT	**Wachi**	**1.92**	**185**	P	**Pn**	**09 24 51.2**	**+0.6**
JWT				eS	**S**	**09 25 31.3**	**-0.1**
JOI	**OKI**	**2.11**	**245**	eP	**Pn**	**09 24 52.3**	**+0.4**
JGF	**Kuroka**	**2.12**	**138**	P	**Pn**	**09 24 53.4**	**+1.3**
MAJO	**Matsushiro**	**2.17**	**107**	P	**Pn**	**09 24 53.7**	**+1.3**
MAT	**Matsushiro**	**2.17**	**107**	P	**Pn**	**09 24 53.4**	**+1.1**
MJAR	**Matsushiro Arr**	**2.18**	**107**	P	**Pn**	**09 24 53.8**	**+1.4**
33nm,0.7s,baz=288,slow=8.8,SNR=67							
MJAR				S	**S**	**09 25 37.8**	**+3.1**
3.8nm,1.0s,baz=293,slow=17,SNR=4.8							
JSD	**Sado**	**2.26**	**67**	P	**Pn**	**09 24 53.8**	**+0.9**
JSD	**Sado**	**2.26**	**67**	P	**Pn**	**09 24 53.7**	**+0.9**
JIE	**Ise**	**2.94**	**162**	eP	**Pn**	**09 24 59.0**	**+0.4**
JHS	**Saijyo**	**2.99**	**224**	P	**Pn**	**09 24 59.8**	**+0.7**
JHS	**Saijyo**	**2.99**	**224**	P	**Pn**	**09 24 59.4**	**+0.2**
JNS	**Sasagawa**	**3.00**	**77**	eP	**Pn**	**09 24 59.9**	**+0.8**
JOD2	**Odawara 2**	**3.40**	**124**	P	**Pn**	**09 25 04.1**	**+1.2**
JOD2				eS	**S**	**09 25 54.4**	**+0.6**
JYT	**Yasato**	**3.80**	**103**	P	**Pn**	**09 25 07.6**	**+0.9**
JMM	**Marumori**	**4.17**	**79**	P	**Pn**	**09 25 11.2**	**+0.8**
JMK	**Ichinoseki**	**4.75**	**67**	eP	**Pn**	**09 25 17.1**	**+0.5**
JMK				eS	**S**	**09 26 16.8**	**-1.9**
BSO1	**Boso 1**	**5.03**	**119**	P	**Pn**	**09 25 19.2**	**0.0**
BSO1				eS	**S**	**09 26 21.8**	**-1.8**
JTM	**Tenmabayashi**	**5.55**	**48**	P	**Pn**	**09 25 26.3**	**+0.9**
KSRS	**Korea Array**	**6.14**	**275**	P	**Pn**	**09 25 32.3**	**+0.2**
9.1nm,0.7s,baz=93,slow=12,SNR=23							
USRK	**Ussuriysk Ar.**	**7.52**	**340**	P	**Pn**	**09 25 47.8**	**-0.2**
1.8nm,0.6s,baz=150,slow=13,SNR=2.9							
ERM	**Erimo**	**7.55**	**48**	P	**Pn**	**09 25 48.4**	**0.0**
JEM	**Erimo**	**7.55**	**48**	P	**Pn**	**09 25 48.4**	**0.0**
WRA	**Warramunga Arr**	**56.84**	**181**	P	**P**	**09 33 08.0**	**-1.0**
0.8nm,0.4s,baz=357,slow=7.5,SNR=31							
0.8nm,0.4s							
ASAR	**Alice Springs**	**60.56**	**182**	P	**P**	**09 33 33.5**	**-0.8**
0.5nm,0.7s,baz=0.1,slow=7.0,SNR=6.7							
0.5nm,0.7s							

KRSC 20 09:32:08.1±1.9, 54°.72N×167°.64E, h33km±25km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.08**	**297**	P	Pb	09 32 28.0	-0.2
BKI				S	Sb	09 32 43.4	+1.4
KBTR	**Krutoberegovo**	**3.12**	**300**	P	Pn	09 32 56.7	+1.7
KBTR				S	Sn	09 33 34.6	+3.5
KBG	**Krutoberegovo**	**3.20**	**301**	P	Pb	09 33 00.1	-4.1
MKZ	**Mys Kozlova**	**3.44**	**270**	P	Pn	09 33 03.0	+3.8
MKZ				S	Sn	09 33 43.5	+4.7
SMKR	**Semkarok**	**3.96**	**301**	P	Pn	09 33 10.2	+3.6
BDR	**Baidarnaya**	**4.09**	**300**	P	Pn	09 33 12.9	+4.6
SRKR	**Sorokina**	**4.15**	**301**	P	Pn	09 33 13.0	+4.0
KLY	**Klyuchi**	**4.28**	**295**	P	Pn	09 33 14.1	+3.3
TUMR	**Tumrok**	**4.35**	**281**

comp=Z,3.2nm,0.8s
STKA **Stephens Creek** 28.02 236 P P 09 38 36.2 +1.0
GEXS **Deakin Univers** 29.10 223 P P 09 38 44.3 -0.4
comp=Z,34nm,0.6s
OOD **Oodnadatta** 31.87 247 P P 09 39 09.8 +0.6
WR0 **Warramunga Arr** 32.50 262 P P 09 39 14.3 -0.5
WR0 IAmb IAmb 09 39 25.4
comp=Z,8.2nm,1.4s
WB0 **Warramunga Arr** 32.65 262 P P 09 39 15.5 -0.6
WB2 **Warramunga Arr** 32.67 262 P P 09 39 15.6 -0.7
WB2 IAmb IAmb 09 39 52.7
comp=Z,9.3nm,1.5s
WRAB **Tennant Creek** 32.68 262 P P 09 39 15.5 -0.8
WRAB **Tennant Creek** 32.68 262 P P 09 39 15.6 -0.8
WRA **Warramunga Arr** 32.69 262 P P 09 39 15.3 -1.1
comp=Z,0.2nm,0.3s,baz=81,slow=6.0,SNR=30
WRA PcP PcP 09 41 56.6 -0.7
comp=Z,1.0nm,0.9s,baz=89,slow=2.5,SNR=6.3
WRA S S 09 44 14.6 -3.3
comp=Z,1.1nm,1.0s,baz=89,slow=15,SNR=7.4
comp=Z,0.2nm,0.3s
WRA **Warramunga Arr** 32.69 262 P P 09 39 15.0 -1.4
BBOO **Buckleboo** 32.74 238 P P 09 39 16.5 -0.2
BBOO **Buckleboo** 32.74 238 P P 09 39 17.4 +0.7
AS01 **Alice Springs** 33.01 255 P P 09 39 19.5 +0.3
AS31 **Alice Springs** 33.05 255 P P 09 39 19.7 +0.2
AS31 IAmb IAmb 09 39 20.2
comp=Z,2.9nm,0.3s
ASAR **Alice Springs** 33.05 255 P P 09 39 19.6 +0.1
comp=Z,2.4nm,0.4s,baz=82,slow=8.5,SNR=94
ASAR PcP PcP 09 41 57.0 -1.4
comp=Z,0.6nm,1.1s,baz=103,slow=2.6,SNR=5.2
ASAR S S 09 44 20.9 -2.7
comp=Z,2.0nm,1.0s,baz=84,slow=17,SNR=7.0
comp=Z,2.4nm,0.4s
ASAR **Alice Springs** 33.05 255 P P 09 39 19.4 -0.2
MULG **Mulgathing** 33.74 243 P P 09 39 26.1 +0.7
WRKA **Warakurna** 38.21 253 P P 09 40 03.7 +0.3
KNRA **Kununurra** 38.47 268 P P 09 40 07.0 +1.4
KNRA IAmb IAmb 09 40 48.3
comp=Z,18nm,1.4s
MBWA **Marble Bar** 46.24 258 P P 09 41 08.3 +0.1
MBWA IAmb IAmb 09 41 43.2
comp=Z,16nm,1.1s
VNDA **Vanda** 59.14 182 P P 09 42 41.5 -0.4
comp=Z,0.3nm,0.5s,baz=0.0,slow=7.7,SNR=6.0
comp=Z,0.3nm,0.5s
VNDA **Vanda** 59.14 182 P P 09 42 41.2 -0.7
SBA **Scott Base** 59.38 181 P P 09 42 42.8 -0.7
CASY **Casey** 60.68 203 P P 09 42 52.2 -0.3
QSPA **South Pole Qui** 71.54 180 P P 09 44 01.2 -0.4
QSPA IAmb IAmb 09 44 02.1
comp=Z,9.8nm,0.9s
PEA0B **Petropavlovsk-** 71.98 353 P P 09 44 04.6 +0.4
PETK **Petropavlovsk-** 71.98 353 P P 09 44 03.9 -0.3
comp=Z,5.2nm,0.8s,baz=153,slow=6.2,SNR=6.6
comp=Z,5.2nm,0.8s
PETK **Petropavlovsk-** 71.98 353 P P 09 44 04.3 +0.1
CMAR **Chiang Mai Arr** 77.97 294 P P 09 44 40.2 +1.1
comp=Z,1.5nm,0.4s,baz=137,slow=4.6,SNR=4.5
comp=Z,1.5nm,0.4s
MAW **Mawson** 79.00 202 P P 09 44 45.4 +1.4
comp=Z,4.6nm,0.8s,baz=126,slow=7.3,SNR=11
comp=Z,4.6nm,0.8s
MAW **Mawson** 79.00 202 P P 09 44 44.2 +0.2
BELA **Belgrano 2** 82.84 175 P P 09 45 02.7 -1.4
SMAI **San Martin Ant** 84.60 162 P P 09 45 12.3 -0.8
M19K **Big River Lodg** 85.27 16 P P 09 45 16.9 +0.5
M19K IAmb IAmb 09 45 34.6
comp=Z,12nm,1.4s
L19K **White Mountain** 85.38 16 P P 09 45 18.2 +1.2
KHMM **Horse Mountain** 85.88 45 P P 09 45 20.6 +0.5
SONM **Songino Array** 86.48 323 P P 09 45 22.5 -0.4
comp=Z,2.1nm,0.8s,baz=143,slow=5.2,SNR=5.9
comp=Z,2.1nm,0.8s
WAKR **Walker** 87.75 48 P P 09 45 29.8 +0.5
WAKR IAmb IAmb 09 45 29.9
comp=Z,3.3nm,0.9s
PNTR **Pine Nut** 87.89 48 P P 09 45 30.0 +0.1
PNTR IAmb IAmb 09 45 30.9
comp=Z,5.8nm,0.9s
NVAR **Mina Array Bea** 88.52 49 P P 09 45 32.9 -0.1
comp=Z,1.3nm,0.8s,baz=227,slow=8.2,SNR=11
comp=Z,1.3nm,0.8s
K05A **Summer Lake** 88.62 44 P P 09 45 33.4 +0.2
NV11 **Mina Array Sit** 88.63 49 P P 09 45 33.5 +0.1
NV11 IAmb IAmb 09 45 34.1
comp=Z,5.3nm,1.1s
MOD **Modoc Plateau** 88.64 45 P P 09 45 33.2 -0.1
MOD IAmb IAmb 09 45 33.6
comp=Z,3.8nm,0.8s
KVN **Kaiserville** 88.93 48 P P 09 45 34.5 -0.3
KVN IAmb IAmb 09 45 34.9
comp=Z,2.3nm,0.8s
WCT **Wildcat Mounta** 89.06 51 P P 09 45 35.3 0.0
WCT IAmb IAmb 09 45 36.0
comp=Z,6.5nm,1.5s
PINE **Pine Mountain** 89.07 43 P P 09 45 35.8 +0.5
TROLL **Troll, Antarti** 89.24 184 P P 09 45 34.7 -1.0
ILAR **Eielson Array** 89.62 17 P P 09 45 35.0 -2.2
comp=Z,1.2nm,0.7s,baz=233,slow=5.1,SNR=10
comp=Z,1.2nm,0.7s
SNAA **Sanae** 89.87 183 P P 09 45 36.9 -1.7
VNA3 **Neumayer Olymp** 90.47 180 P P 09 45 39.8 -1.5
VNA2 **Neumayer--Watz** 90.76 181 P P 09 45 41.3 -1.3
baz=169,slow=4.0
VNA1 **Neumayer--Stat** 91.05 181 P P 09 45 42.6 -1.3
DLBC **Dease Lake** 91.52 27 P P 09 45 45.7 -0.5
comp=Z,3.2nm,0.9s,baz=206,slow=4.1,SNR=3.3
comp=Z,3.2nm,0.9s
TXAR **Lajitas Array** 96.65 61 P P 09 46 09.7 -0.8
comp=Z,0.4nm,0.8s,baz=222,slow=5.5,SNR=5.1
comp=Z,0.4nm,0.8s
ARCES **ARCESS Array B** 124.30 345 PKP PKPdf 09 51 35.6 -1.4
comp=Z,0.7nm,0.3s,baz=56,slow=2.1,SNR=9.2
GERES **GERESS Array B** 143.73 332 PKP PKPab 09 52 10.8 -0.4
comp=Z,0.5nm,0.3s,baz=297,slow=0.9,SNR=8.7
MOA **Molln** 144.20 331 *eP* PKPab 09 52 13.2 +0.3
comp=Z,4.2nm,0.4s
SOKA **Soboth** 144.66 328 *eP* PKPab 09 52 14.5 -0.3
comp=Z,9.3nm,0.5s
OBKA **Obir** 145.02 329 *eP* PKPbc 09 52 15.5 -0.5
comp=Z,2.5nm,0.5s
KBA **Koelnbreinsper** 145.19 330 *eP* PKPdf 09 52 15.7 -0.9
comp=Z,2.7nm,0.5s
WTTA **Wattenberg** 145.83 332 *eP* PKPbc 09 52 18.7 +0.1
comp=Z,2.3nm,0.4s
MOTA **Moosalm** 146.00 333 *eP* PKPdf 09 52 18.8 +0.9
comp=Z,0.9nm,0.3s
FETA **Feichten** 146.42 333 *eP* PKPdf 09 52 19.8 +1.1
comp=Z,5.0nm,0.8s
DAVA **Damuels** 146.57 334 *eP* PKPbc 09 52 20.4 -0.3
comp=Z,1.8nm,0.3s
DAVOX **Davos/Dischmat** 146.97 333 PKPbc PKPbc 09 52 21.6 -0.2
comp=Z,7.4nm,0.6s,baz=37,slow=3.0,SNR=11
TORD **Torodi Ar. Bea** 166.64 248 PKP PKPdf 09 52 43.8 -1.2
comp=Z,2.1nm,1.0s,baz=74,slow=0.7,SNR=8.3

*NNC **20** 09:49:12.3±2.8, 51°.46N×75°.12E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=153.7km s-min=13.4km az=24.0, Suspected Mining explosion.*
*IDC **20** 09:49:16.1±1.1, 51°.76N×75°.87E, h0km, mbtmp2.6/3, ML2.3/2, Error ellipse: s-maj=30.4km s-min=8.3km az=30.0*
ISC 20 09:49:12.1±1.1, 51°.7N±0°.1×75°.29E±0°.08, h0km, n11, σ1.9 30/11, 6C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.33 117**		Pg	**Pn**	**09 49 52.5**	**+0.9**
	0.3nm,0.3s,baz=302,slow=18,SNR=8.4						
KURBB				Lg	Lg	09 50 21.2	
	0.4nm,0.3s,baz=309,slow=34,SNR=9.1						
KURBB	**Kurchatov Arra**	**2.33 117**		⇑Pn	**Pn**	**09 49 52.6**	**+1.0**
	1.3nm,0.2s						
KURBB				⇑Sn	**Sn**	**09 50 20.5**	**-0.4**
	24nm,0.7s						
KURK	**Kurchatov**	**2.33 115**		⇑Pn	**Pn**	**09 49 52.2**	**+0.5**
	1.6nm,0.5s						
KURK				⇑Sn	**Sn**	**09 50 18.4**	**-2.6**
	8.3nm,0.7s						
BVA0	**Borovoye Array**	**3.27 295**		⇓Pg	**Pb**	**09 50 10.8**	**-0.1**
	2.6nm,0.9s,baz=110,slow=20,SNR=9.8						
BVA0				⇓Lg	Lg	09 50 56.7	
	3.4nm,0.8s,baz=320,slow=39,SNR=5.9						
BVAR	**Borovoye Array**	**3.27 295**		Pn	**Pb**	**09 50 12.2**	**+1.2**
	0.2nm,0.3s,baz=113,slow=17,SNR=7.4						
BVAR				Sn	**Sg**	**09 50 56.0**	**-1.0**
	0.7nm,0.3s,baz=107,slow=29,SNR=8.8						
	0.9nm,0.6s						
BRVK	**Borovoye**	**3.34 295**		⇑Pg	**Pb**	**09 50 11.7**	**-0.5**
	1.4nm,0.7s						
BRVK				⇓Lg	Lg	09 50 57.8	
	6.6nm,0.7s						
ZALV	**Zalesovo Beam**	**6.18 65**		Pn	**Pn**	**09 50 45.5**	**+0.9**
	0.5nm,0.3s,baz=254,slow=15,SNR=1.2						
I46RU	**ZALESOVO INFRA**	**6.18 65**		I		10 25 50.0	
	baz=251,slow=323,SNR=4.5						
MAKZ	**Makanchi**	**6.59 136**		⇓Lg	Lg	09 52 37.9	
	3.0nm,0.8s						
MK31	**Makanchi Array**	**6.74 134**		⇑Lg	Lg	09 52 42.6	
	2.1nm,0.8s,baz=318,slow=26,SNR=4.1						
MKAR	**Makanchi Array**	**6.74 134**		Pn	**Pn**	**09 50 53.4**	**+1.1**
	0.1nm,0.3s,baz=328,slow=10,SNR=1.5						
MKAR				Lg	Lg	09 52 41.0	
	0.2nm,0.3s,baz=328,slow=29,SNR=4.4						
	0.1nm,0.4s						

*ISK **20** 09:52:29.3, 40°.27N×31°.24E, h5km, ML2.9/20*
*DDA **20** 09:52:30.0±0.0, 40°.24N×31°.23E, h8km±2km, ML2.6*
ISC 20 09:52:30.0±1.0, 40°.26N±0°.02×31°.24E±0°.02, h10km±8km, n50, σ0.9 72/80, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDUB	**Mudurnu**	**0.21 352**		PG	**Pg**	**09 52 34.2**	**-0.3**
MDUB				SG	**Sg**	**09 52 38.0**	**+0.5**
BTAS	**Taskesti**	**0.36 330**		P	**Pb**	**09 52 37.9**	**-0.6**
BTAS				S	**Sb**	**09 52 43.6**	**-0.7**
BTAS				*i* AML	AML	09 52 44.0	
	comp=E,734nm,0.5s						
BTAS				*i* AML	AML	09 52 44.0	
	comp=N,461nm,0.2s						
YUVA	**Yuva-Kibriscik**	**0.37 69**		PG	**Pg**	**09 52 37.6**	**+0.2**
YUVA				SG	**Sb**	**09 52 43.9**	**-0.7**
AUMIH	**MIHALICIK**	**0.44 154**		PG	**Pg**	**09 52 38.6**	**-0.1**
AUMIH	**MIHALICIK**	**0.44 154**		P	**Pg**	**09 52 38.3**	**-0.3**
KIBS	**BOLU**	**0.50 71**		P	**Pg**	**09 52 40.0**	**+0.3**
KIBS				S	**Sb**	**09 52 47.3**	**-1.0**
KIBS				*i* AML	AML	09 52 48.0	
	comp=E,350nm,0.4s						
GULT	**Gulveren**	**0.58 287**		PG	**Pb**	**09 52 41.8**	**-0.5**
GULT				SG	**Sb**	**09 52 51.0**	**+0.4**
SAHE	**Sakarya_HENDEK**	**0.66 334**		P	**Pb**	**09 52 44.0**	**+0.4**
SAHE				S	**Sb**	**09 52 52.9**	**+0.1**
GPA	**Golpazari**	**0.71 272**		PG	**Pb**	**09 52 43.9**	**-0.6**
BORA	**Eskisehir**	**0.71 238**		PG	**Pg**	**09 52 43.7**	**-0.1**
BORA	**Eskisehir**	**0.71 238**		P	**Pg**	**09 52 43.5**	**-0.3**
BORA				S	**Sb**	**09 52 54.2**	**-0.3**
BORA				*i* AML	AML	09 53 00.0	
	comp=E,490nm,0.4s						
BORA				*i* AML	AML	09 53 00.0	
	comp=N,206nm,0.5s						
YIGI	**Dzce**	**0.72 13**		P	**Pb**	**09 52 44.6**	**-0.1**
YIGI				*i* AML	AML	09 52 52.0	
	comp=E,297nm,1.1s						
YIGI				S	**Sb**	**09 52 54.5**	**-0.1**
GEYV	**SAKARYA_Geyve**	**0.75 287**		P	**Pb**	**09 52 44.8**	**-0.5**
GEYV				S	**Sn**	**09 52 57.3**	**-0.9**
GEYV				*i* AML	AML	09 53 01.0	
	comp=N,255nm,0.5s						
SGAZ	**Eskisehir, Sey**	**0.79 203**		P	**Pb**	**09 52 45.3**	**-0.7**
SGAZ				S	**Sn**	**09 52 58.3**	**-1.1**
SGAZ				*i* AML	AML	09 53 02.0	
	comp=N,381nm,0.4s						
ESKT	**Eskisehir**	**0.80 202**		PG	**Pb**	**09 52 45.9**	**-0.2**
ESKT				SG	**Sn**	**09 52 58.2**	**-1.3**
BCAM	**Yenicaga**	**0.84 49**		P	**Pg**	**09 52 46.2**	**0.0**
BCAM				S	**Sb**	**09 52 58.8**	**+0.6**
SAUV	**Serdivan-Sakar**	**0.84 305**		PG	**Pb**	**09 52 46.6**	**-0.2**
SVRH	**Sivrihisar-ESK**	**0.84 165**		PG	**Pb**	**09 52 46.9**	**0.0**
AUSIV	**SIVRIHISAR**	**0.85 164**		PG	**Pb**	**09 52 47.4**	**+0.3**
CIFT	**Cifteler, Eski**	**0.91 189**		PG	**Pb**	**09 52 48.2**	**+0.2**
CMDR	**Camlidere-ANKA**	**0.97 76**		P	**Pg**	**09 52 48.4**	**-0.4**
CMDR				S	**Sb**	**09 53 02.6**	**+0.5**
CMDR				*i* AML	AML	09 53 08.0	
	comp=N,220nm,0.6s						
CMDR				*i* AML	AML	09 53 09.0	
	comp=E,199nm,0.4s						
KAYN	**Sakarya, Kayna**	**0.98 316**		P	**Pn**	**09 52 50.6**	**+0.7**
KAYN				S	**Sb**	**09 53 02.6**	**+0.5**
AUBOZ	**BOZOYUK**	**0.99 250**		PG	**Pn**	**09 52 49.6**	**-0.5**
AUBOZ	**BOZOYUK**	**0.99 250**		P	**Pg**	**09 52 48.1**	**-1.0**
AUBOZ				S	**Sb**	**09 53 02.8**	**+0.4**
AUBOZ				*i* AML	AML	09 53 05.0	
	comp=E,277nm,0.4s						
DEVR	**Zonguldak/Devr**	**1.04 32**		P	**Pb**	**09 52 50.3**	**+0.1**
DEVR				S	**Sg**	**09 53 02.8**	**-0.9**
BILE	**Bilecik/Merkez**	**1.05 265**		P	**Pb**	**09 52 50.5**	**+0.1**
BILE				S	**Sb**	**09 53 04.6**	**+0.5**
KDZE	**Karadeniz Ereo**	**1.06 8**		PG	**Pb**	**09 52 50.6**	**+0.1**
CAVI	**Cavuskoy**	**1.07 267**		PG	**Pb**	**09 52 50.6**	**-0.1**
CAVI				SG	**Sn**	**09 53 06.7**	**+0.6**
KAND	**Kocaeli-Kandir**	**1.15 317**		P	**Pg**	**09 52 50.7**	**-1.4**
KAND				S	**Sn**	**09 53 08.8**	**+0.8**
ADVT	**Abdulvahap**	**1.16 279**		PN	**Pn**	**09 52 52.7**	**+0.4**
ADVT				SN	**Sn**	**09 53 09.7**	**+1.5**
LOD	**Lodumlu**	**1.23 107**		PN	**Pb**	**09 52 53.3**	**-0.1**
ANTO	**Ankara**	**1.26 108**		PN	**Pn**	**09 52 54.5**	**+0.7**
ANDZ	**Kutahya, Merke**	**1.27 234**		P	**Pb**	**09 52 54.6**	**+0.4**
ANDZ				S	**Sn**	**09 53 13.0**	**+1.8**
HRT	**Hereke**	**1.32 296**		PN	**Pg**	**09 52 55.5**	**+0.1**
KBUK	**KARABUK-Merkez**	**1.44 47**		P	**Pn**	**09 52 56.6**	**+0.4**
KBUK				S	**Sg**	**09 53 16.5**	**+0.3**
YLV	**Yalova**	**1.46 283**		PN	**Pg**	**09 52 57.9**	**-0.1**
KIZT	**Kizilcal**	**1.47 160**		PN	**Pg**	**09 52 58.2**	**0.0**
SILT	**Sile**	**1.50 307**		PN	**Pg**	**09 52 58.6**	**-0.3**
IGD	**Bursa**	**1.56 271**		P	**Pg**	**09 53 00.1**	**+0.1**
IGD				S	**Sg**	**09 53 19.4**	**-0.7**
KURT	**Yalova, Merkez**	**1.58 283**		P	**Pg**	**09 53 00.1**	**-0.3**
KURT				S	**Sg**	**09 53 20.5**	**-0.4**
KURT				*i* AML	AML	09 53 26.0	
	comp=E,71nm,0.5s						
ULDT	**Uludag**	**1.61 266**		P	**Pg**	**09 53 01.1**	**+0.1**
ULDT				S	**Sg**	**09 53 21.4**	**-0.6**
AFYO	**Afyonkarahisar**	**1.64 207**		P	**Pg**	**09 53 01.5**	**-0.1**
AFYO				S	**Sg**	**09 53 25.5**	**+2.6**
AFYO				*i* AML	AML	09 53 29.0	
	comp=N,156nm,0.8s						
ELDT	**Eldivan**	**1.69 82**		P	**Pb**	**09 53 00.7**	**-0.7**
ELDT				S	**Sg**	**09 53 25.2**	**+0.9**
GDZ	**Gediz**	**1.79 230**		P	**Pb**	**09 53 03.0**	**-0.1**
GDZ				S	**Sb**	**09 53 25.7**	**+0.1**
BRTR	**Keskin Array B**	**1.92 105**		PN	**Pb**	**09 53 04.5**	**-0.8**
YVAC	**Isparta, Yalva**	**1.99 180**		P	**Pn**	**09 53 02.7**	**-1.1**
DELI	**KIRIKKALE**	**2.07 96**		P	**Pb**	**09 53 06.4**	**-1.4**
DURS	**Dursunbey**	**2.23 254**		P	**Pg**	**09 53 11.8**	**-0.9**
DURS				S	**Sg**	**09 53 42.3**	**+0.7**
DURS				*i* AML	AML	09 53 48.0	
	comp=N,41nm,0.4s						
USAK	**Uak-Merkez**	**2.31 229**		P	**Pb**	**09 53 12.7**	**+0.8**
USAK				*i* AML	AML	09 53 39.0	
	comp=E,51nm,1.4s						
USAK				S	**Sg**	**09 53 44.6**	**+0.4**
PASA	**Karahalli, USA**	**2.34 216**		P	**Pg**	**09 53 13.7**	**-1.3**

DDA 20 09:52:54.8±0.0, 38°.81N×32°.69E, h7km±23km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKUL	**Konya-Kulu**	**0.41 26**		P	Pg	09 53 00.8	-1.9
KKUL				*i* AML	AML	09 53 33.0	
	comp=E,21nm,0.6s						
KKUL				*i* AML	AML	09 53 34.0	
	comp=N,20nm,0.8s						
KIRS	**Kirsehir-Merke**	**1.01 71**		P	Pg	09 53 13.9	-0.2
KIRS	**Kirsehir-Merke**	**1.01 71**		P	Pg	09 53 14.4	+0.2
KIRS				*i* AML	AML	09 53 58.0	
	comp=E,5.9nm,0.6s						
KIRS				*i* AML	AML	09 54 01.0	
	comp=N,12nm,1.1s						
KIRS	**Kirsehir-Merke**	**1.01 71**		P	Pb	09 53 14.7	+0.1

*ISK **20** 09:53:07.5, 36°.20N×33°.42E, h0km, ML1.8/14, Suspected Mining explosion.*
DDA 20 09:53:07.4±0.0, 36°.22N×33°.40E, h7km±1km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OREN	**Orenkoy-Mersin**	**0.05 102**		PG	Pg	09 53 08.8	-0.1
YORU	**Yoruktepe-Mers**	**0.06 175**		PG	Pg	09 53 09.1	0.0
TEPK	**Tepekoy-MERSIN**	**0.12 87**		PG	Pg	09 53 10.5	+0.5
GULN	**MERSIN_Gulnar**	**0.12 106**		P	Pg	09 53 10.3	+0.3
GULN				S	Sg	09 53 12.3	+0.4
GULN	**MERSIN_Gulnar**	**0.12 106**		P	Pg	09 53 10.3	+0.3
GULN				S	Sg	09 53 12.3	+0.5
GULN				*i* AML	AML	09 53 14.0	
	comp=N,114nm,0.4s						
AKK1	**Akkuyu-Mersin**	**0.14 123**		PG	Pg	09 53 10.6	+0.3
AKKU	**Akkuyu-Mersin**	**0.14 116**		PG	Pg	09 53 10.4	+0.1
AKK2	**Akkuyu-Mersin**	**0.15 123**		PG	Pg	09 53 10.6	+0.2
BERE	**Bereket-Mersin**	**0.19 312**		PG	Pg	09 53 12.4	+1.1
YESI	**Yesilovacik-Me**	**0.20 96**		PG	Pg	09 53 11.6	+0.2
TEVE	**Tevekalti-Mers**	**0.22 9**		PG	Pg	09 53 12.9	+1.1
IKL	**Isikli**	**0.23 85**		PG	Pg	09 53 12.6	+0.6
IKL				SG	Sg	09 53 15.9	+0.8
TISA	**Tisan-Mersin**	**0.23 104**		PG	Pg	09 53 12.3	+0.3
TISA				SG	Sg	09 53 16.2	+1.0
TEKE	**Tekeli-Mersin**	**0.24 252**		PG	Pg	09 53 12.9	+0.7
KARG	**Kargicak-Mersi**	**0.25 93**		PG	Pg	09 53 13.1	+0.7
KEBE	**Keben-Mersin**	**0.34 48**		PG	Pg	09 53 14.8	+0.7
KIZK	**Mersin**	**0.66 66**		PG	Pg	09 53 20.3	+0.3
KIZK	**Mersin**	**0.66 66**		P	Pg	09 53 19.6	-0.5
KIZK				S	Sb	09 53 30.9	+0.4
GAZI	**Gazipasa**	**0.88 271**		P	Pg	09 53 23.7	-0.5
GAZI				S	Sb	09 53 37.3	+0.5
GAZI	**Gazipasa**	**0.88 271**		P	Pg	09 53 24.1	-0.1
GAZI				S	Sb	09 53 37.4	+0.5
GAZI				*i* AML	AML	09 53 40.0	
	comp=E,19nm,0.4s						
GAZI				*i* AML	AML	09 53 40.0	
	comp=N,29nm,0.4s						
KKBE	**Karaman, Kazim**	**1.06 340**		P	Pb	09 53 28.4	+0.1
KKBE				S	Sn	09 53 43.5	-0.5
KKBE				*i* AML	AML	09 53 49.0	
	comp=E,5.9nm,0.4s						
KKBE				*i* AML	AML	09 53 49.0	
	comp=N,6.9nm,0.3s						
KKBE	**Karaman, Kazim**	**1.06 340**		P	Pb	09 53 28.1	-0.2
KKBE				S	Sb	09 53 42.9	+0.4
KERG	**Konya-Eregli**	**1.33 26**		P	Pg	09 53 33.1	+0.2
KERG				*i* AML	AML	09 53 48.0	
	comp=N,9.6nm,1.0s						
KERG				S	Sn	09 53 52.6	+2.0
KERG				*i* AML	AML	09 53 55.0	
	comp=E,7.2nm,0.4s						
KERG	**Konya-Eregli**	**1.33 26**		P	Pg	09 53 32.8	-0.1
KERG				S	Sn	09 53 50.5	-0.2
KERG				*i* AML	AML	09 53 55.0	
	comp=E,7.2nm,0.4s						
KERG				*i* AML	AML	09 54 07.0	
	comp=N,23nm,1.0s						

*IDC **20** 09:53:16.2±8.0, 31°.04S×179°.87E, h384km±94km, mb3.1/3, mbtmp4.0/4, Error ellipse: s-maj=95.8km s-min=42.9km az=0.0*
ISC 20 09:53:19.3±3.0, 31°.6S±0°.1×179°.8W±0°.4, h450km, n18, σ2.9 03/18, mb3.5/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**6.48 197**		P	**S**	**09 56 22.4**	**+2.9**
PKGZ	**Pakihiroa**	**6.54 195**		P	**S**	**09 56 19.3**	**-1.5**
RUGZ	**Raukumara Rang**	**6.71 197**		P	**S**	**09 56 22.6**	**-1.5**
TWGZ	**Tauwhareparae**	**6.84 195**		P	**S**	**09 56 29.8**	**+3.3**
MWZ	**Matawai**	**7.09 197**		P	**S**	**09 56 33.0**	**+1.6**
TKGZ	**Te Karaka**	**7.12 195**		P	**S**	**09 56 32.5**	**+0.7**
URZ	**Urewera**	**7.14 200**		S	**S**	**09 56 32.8**	**+0.6**
	22nm,0.6s,baz=158,slow=21,SNR=24						
URZ	**Urewera**	**7.14 200**		P	**S**	**09 56 33.3**	**+1.2**
RIGZ	**Rimuhau**	**7.39 195**		P	**S**	**09 56 34.5**	**-2.8**
SNGZ	**Shannon Statio**	**7.56 197**		P	**S**	**09 56 42.5**	**+1.9**
KNZ	**Kokohu**	**7.72 195**		P	**S**	**09 56 41.9**	**-1.6**
RAHZ	**Arahi**	**7.76 198**		P	**S**	**09 56 45.4**	**+1.0**
MTHZ	**Maungataniwha**	**7.76 200**		P	**S**	**09 56 41.9**	**-2.7**
BKZ	**Black Stump Fm**	**8.16 201**		P	**S**	**09 56 49.4**	**-3.0**
STKA	**Stephens Creek**	**32.70 259**		P	**P**	**09 59 14.2**	**+1.2**
	2.6nm,1.0s,baz=90,slow=17,SNR=1.9						
	2.6nm,1.0s						
ASAR	**Alice Springs**	**41.50 269**		P	**P**	**10 00 25.4**	**-0.5**
	0.6nm,0.6s,baz=104,slow=7.1,SNR=5.2						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**42.59 274**		P	**P**	**10 00 33.8**	**-0.8**
	0.7nm,0.3s,baz=111,slow=7.9,SNR=6.5						
	0.7nm,0.3s						
FINES	**FINESS Array B**	**145.67 338**		PKPbc	**PKPab**	**10 12 07.0**	**-0.3**
	3.5nm,0.8s,baz=57,slow=5.1,SNR=5.2						

WEL 20 09:54:29.6, 38°S±11°×177°E±1°3, h122km±27km, M2.2/14, ML2.2/8, MLv2.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.62 132**		P	Pn	09 54 49.3	+0.7
URZ	**Urewera**	**0.62 132**		P	Sn	09 55 07.0	+4.1
	12nm,0.3s,baz=341,slow=3.8,SNR=32						
MUGZ	**Murupara**	**0.66 163**		P	Pn	09 54 50.4	+1.5
TOZ	**Tahuroa Road**	**0.82 278**		P	Pn	09 54 50.6	+0.5
RUGZ	**Raukumara Rang**	**0.92 98**		P	Pn	09 54 50.5	-0.8
MWZ	**Matawai**	**0.93 122**		P	Pn	09 54 52.0	+0.7
HAZ	**Te Kaha**	**1.00 85**		P	Pn	09 54 51.0	-0.8
MTHZ	**Maungataniwha**	**1.04 166**		P	Pn	09 54 53.5	+1.2
PKGZ	**Pakihiroa**	**1.23 92**		P	Pn	09 54 54.3	+0.1
RIGZ	**Rimuhau**	**1.30 132**		P	Pn	09 54 55.5	+0.5
MKAZ	**Moumakai**	**1.31 304**		P	Pn	09 54 54.2	-0.9
BKZ	**Black Stump Fm**	**1.32 181**		P	Pn	09 54 56.1	+0.9
PUZ	**Puketiti**	**1.39 100**		P	Pn	09 54 55.2	-0.8
PUZ				P	Pn	09 54 55.2	-0.8
MXZ	**Matakaoa Point**	**1.44 79**		P	Pn	09 54 55.8	-0.7
CNGZ	**Carnagh Statio**	**1.47 116**		P	Pn	09 54 57.4	+0.5
OTVZ	**Oturere**	**1.48 207**		P	Pn	09 54 58.4	+1.3
WMGZ	**Waiomatatini S**	**1.50 90**		P	Pn	09 54 56.2	-0.9
SNVZ	**South Ngauruho**	**1.51 207**		P	Pn	09 54 58.7	+1.2
KWHZ	**Kaweka Forest**	**1.58 183**		P	Pn	09 54 58.9	+0.7
BHHZ	**Black Hill Sta**	**1.68 192**		P	Pn	09 54 59.4	+0.1
MBAZ	**Motutapu North**	**1.68 309**		P	Pn	09 54 58.0	-1.3
MHGZ	**Mahia Peninsul**	**1.70 141**		P	Pn	09 54 59.9	+0.4
KAHZ	**Kahuranaki**	**1.96 172**		P	Pn	09 55 02.9	+0.1
PXZ	**Pawanui**	**2.20 173**		P	Pn	09 55 05.5	-0.1
PRHZ	**Porangahau**	**2.42 178**		P	Pn	09 55

RCP Roxas 3.65 296⇑ *eP* Pn 09 56 50.0 +1.0

*IDC **20** 09:57:54.8±3.3, 6°52.5S×146°.93E, h85km±30km, mb3.9/5, mbtmp4.2/8, MS2.4/1, Error ellipse: s-maj=46.0km s-min=16.0km az=116.0*

ISC 20 09:57:56.2±1.0, 6°57.5±0°.09×146°.8E±0°.1, h100km, n30, σ1§84/31, mb4.0/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.85 172**		P	**Pn**	**09 58 39.5**	**-0.4**
	97nm,0.3s,baz=343,slow=6.5,SNR=68						
PMG				S	**Sn**	**09 59 10.6**	**-3.0**
	144nm,0.3s,baz=164,slow=22,SNR=30						
PMG				LR	LR	09 59 46.3	
	comp=Z,55nm,18.4s,baz=24,slow=39						
PMG	**Port Moresby**	**2.85 172**		P	**Pn**	**09 58 39.6**	**-0.4**
COEN	**Coen**	**8.15 205**		P	**Pn**	**09 59 52.2**	**+0.3**
CTA	**Charters Tower**	**13.45 182**		P	**Pn**	**10 01 04.6**	**+1.5**
	1.4nm,0.3s,baz=356,slow=17,SNR=2.1						
CTA	**Charters Tower**	**13.45 182**		P	**P**	**10 01 06.6**	**-2.3**
CTAO	**Charters Tower**	**13.45 182**		P	**P**	**10 01 06.5**	**-2.3**
SAUI	**Saumlaki**	**15.42 264**		P	**Pn**	**10 01 24.3**	**-4.0**
QIS	**Mount Isa**	**15.55 206**		P	**P**	**10 01 31.9**	**-0.3**
	6.2nm,0.7s						
WRAB	**Tennant Creek**	**17.95 221**		P	**P**	**10 01 58.8**	**+0.1**
WRA	**Warramunga Arr**	**17.96 221**		P	**P**	**10 01 58.1**	**-0.7**
	1.8nm,0.3s,baz=48,slow=11,SNR=36						
KNRA	**Kununurra**	**19.84 241**		P	**P**	**10 02 20.2**	**+0.9**
QLP	**Quilpie**	**20.05 187**		P	Pn	10 02 23.1	-1.1
AS01	**Alice Springs**	**21.00 215**		P	**P**	**10 02 32.4**	**+0.6**
ASAR	**Alice Springs**	**21.03 215**		P	**P**	**10 02 31.9**	**-0.3**
	2.4nm,0.5s,baz=51,slow=8.3,SNR=41						
ASAR				S	**S**	**10 06 24.9**	**+4.1**
	0.4nm,0.6s,baz=50,slow=18,SNR=4.1						
	2.4nm,0.5s						
INKA	**Innaminka**	**21.82 195**		P	**P**	**10 02 40.7**	**+0.2**
OOD	**Oodnadatta**	**23.59 205**		P	**P**	**10 02 59.0**	**+1.0**
LCRK	**Leigh Creek**	**25.08 198**		P	**P**	**10 03 12.8**	**+1.3**
WRKA	**Warakurna**	**25.50 222**		P	**P**	**10 03 15.2**	**-0.3**
STKA	**Stephens Creek**	**25.64 190**		P	**P**	**10 03 17.1**	**+0.5**
	1.1nm,0.3s,baz=350,slow=9.9,SNR=13						
	1.1nm,0.3s						
STKA	**Stephens Creek**	**25.64 190**		P	**P**	**10 03 18.3**	**+1.7**
MULG	**Mulgathing**	**26.45 205**		P	**P**	**10 03 24.7**	**+0.8**
	28nm,2.7s						
HTT	**Hallett**	**27.71 194**		P	**P**	**10 03 38.6**	**+3.4**
BBOO	**Buckleboo**	**27.95 200**		P	**P**	**10 03 41.1**	**+3.8**
JAGI	**Jajag, Banyuwa**	**32.39 265**		P	**P**	**10 04 16.4**	**-0.4**
	29nm,1.2s						
MEEK	**Meekatharra**	**33.42 230**		P	**P**	**10 04 25.8**	**+0.2**
KLBR	**Kellerberrin**	**36.81 224**		P	**P**	**10 04 54.4**	**-0.3**
VNDA	**Vanda**	**71.36 177**		P	**P**	**10 09 05.4**	**+0.6**
	0.5nm,0.6s,baz=328,slow=6.3,SNR=4.8						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**86.09 23**		P	**P**	**10 10 24.4**	**-1.2**
	1.0nm,0.6s,baz=251,slow=4.7,SNR=15						
	1.0nm,0.6s						
AKTO	**Aktyubinsk**	**94.22 320**		P	**P**	**10 11 05.8**	**+1.8**
	4.6nm,0.8s,baz=108,slow=12,SNR=9.9						
	4.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**145.01 283**		PKPbc	**PKPdf**	**10 17 23.5**	**+0.6**
	1.0nm,0.5s,baz=73,slow=4.5,SNR=7.1						

NNC 20 10:09:23.0±1.9, 52°.06N×62°.49E, h0km, mb2.9, mpv2.6, 2C-3D, Error ellipse: s-maj=27.5km s-min=10.3km az=154.0, Suspected Mining explosion., Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AB31	**Akbulak array**	**3.24 211**		⇓Pg	Pb	10 10 22.8	+1.4
	1.4nm,0.6s,baz=26,slow=14,SNR=7.3						
AB31				⇑Lg	Lg	10 11 04.1	
	5.9nm,0.8s,baz=23,slow=25,SNR=6.1						
AKTO	**Aktyubinsk**	**3.25 242**		⇓Pg	Pb	10 10 22.4	+0.9
	1.0nm,0.6s						
BRVK	**Borovoye**	**4.86 75**		⇓Lg	Lg	10 11 55.9	
	1.6nm,0.8s						
BVA0	**Borovoye Array**	**4.92 76**		⇑Lg	Lg	10 11 59.4	
	0.7nm,0.6s,baz=270,slow=28,SNR=3.7						

*NOU **20** 10:09:59.4, 10°.93S×164°.30E, h124km, mb4.8/8, Santa Cruz Islands Region*
*NEIC **20** 10:10:02.0±2.0, 11°.2S±0°.1×164°.1E±0°.1, h51km±12km, mb4.4/11, Error ellipse: s-maj=19.3km s-min=13.8km az=57.0*
*IDC **20** 10:10:05.6±4.7, 11°.58S×163°.59E, h37km±38km, mb3.9/7, mbtmp4.1/9, ML4.3/2, MS3.2/8, Error ellipse: s-maj=30.8km s-min=23.4km az=83.0*

ISC 20 10:10:03.7±0.9, 11°.46S±0°.08×163°.8E±0°.1, h35km, n41, σ1§58/32, mb4.3/12, MS3.0/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.32 297**		Pn	**Pn**	**10 11 06.2**	**-0.8**
	912nm,0.3s,baz=140,slow=3.0,SNR=22						
HNR				Sn	**Sn**	**10 11 56.3**	**+0.1**
	718nm,0.3s,baz=90,slow=21,SNR=6.5						
HNR				LR	LR	10 12 57.8	
	comp=Z,3μm,21.0s,baz=46,slow=41						
HNR	**Honiara**	**4.32 297**		Pn	**Pn**	**10 11 06.1**	**-0.9**
HNR	**Honiara**	**4.32 297**		P	**Pn**	**10 11 06.2**	**-0.8**
DVP	**Devils Point**	**7.52 146**		P	**Pn**	**10 11 49.7**	**-1.2**
KOUNC	**Koumac, New Ca**	**9.05 177**		Pn	**Pn**	**10 12 13.4**	**+1.5**
KOUNC	**Koumac, New Ca**	**9.05 177**		P	**Pn**	**10 12 14.1**	**+2.2**
MARNC	**Mare, Loyalty**	**10.75 159**		Pn	**Pn**	**10 12 33.5**	**-1.7**
MARNC	**Mare, Loyalty**	**10.75 159**		P	**Pn**	**10 12 34.9**	**-0.2**
DZM	**Mont Dzumac**	**10.84 167**		Pn	**Pn**	**10 12 36.9**	**+0.3**
	2.8nm,0.3s,baz=32,slow=10,SNR=120						
DZM				Sn	**Sn**	**10 14 35.2**	**-1.6**
	0.7nm,0.3s,baz=303,slow=18,SNR=3.2						
	8.0nm,0.4s						
DZM	**Mont Dzumac**	**10.84 167**			**Pn**	**10 12 36.7**	**+0.1**
YATNC	**Mamie plateau,**	**10.94 165**		P	**Pn**	**10 12 36.8**	**-1.0**
ONTNC	**Ouen Toro**	**11.07 167**		Pn	**Pn**	**10 12 41.0**	**+1.3**
OUENC	**Ouen Island, N**	**11.27 166**		Pn	**Pn**	**10 12 43.4**	**+1.0**
MSVF	**Nonsavu**	**15.10 116**		LR	LR	10 18 47.2	
	comp=Z,63nm,18.6s,baz=273,slow=34						
PMG	**Port Moresby**	**16.53 276**		LR	LR	10 19 34.1	
	comp=Z,39nm,18.9s,baz=100,slow=35						
CTA	**Charters Tower**	**18.96 241**		P	**Pn**	**10 14 22.6**	**-0.3**
	0.6nm,0.3s,baz=64,slow=12,SNR=8.4						
CTA				LR	LR	10 21 03.2	
	comp=Z,72nm,18.3s,baz=79,slow=35						
	5.2nm,0.6s						
CTAO	**Charters Tower**	**18.96 241**		P	**Pn**	**10 14 24.2**	**+1.3**
CTAO				IAmb	IAmb	10 14 28.8	
	comp=Z,13nm,0.8s						
PATS	**Pohnpei**	**18.99 343**		Pn	**P**	**10 14 18.7**	**-3.6**
COEN	**Coen**	**20.31 261**		P	Pn	10 14 37.8	-1.3
COEN				IAmb	IAmb	10 14 43.3	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**28.87 222**		P	**P**	**10 15 59.3**	**+0.1**
	comp=Z,3.9nm,0.9s,baz=20,slow=12,SNR=5.0						
STKA				LR	LR	10 25 12.0	
	comp=Z,19nm,21.7s,baz=23,slow=32						
	comp=Z,3.9nm,0.9s						
STKA	**Stephens Creek**	**28.87 222**		P	**P**	**10 15 59.7**	**+0.5**
WR0	**Warramunga Arr**	**29.40 250**		P	**P**	**10 16 02.8**	**-1.2**
WR0				IAmb	IAmb	10 16 10.3	
	comp=Z,7.4nm,1.1s						
WB0	**Warramunga Arr**	**29.50 250**		P	**P**	**10 16 03.9**	**-1.0**
WB0				IAmb	IAmb	10 16 08.5	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**29.57 250**		P	**P**	**10 16 04.3**	**-1.2**
WRAB				IAmb	IAmb	10 16 10.2	
	comp=Z,9.0nm,1.2s						
WB2	**Warramunga Arr**	**29.57 250**		P	**P**	**10 16 04.3**	**-1.3**
WB2				IAmb	IAmb	10 16 09.2	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**29.58 250**		P	**P**	**10 16 04.5**	**-1.2**
	comp=Z,5.8nm,0.9s,baz=80,slow=9.3,SNR=24						
WRA				LR	LR	10 25 52.8	
	comp=Z,50nm,20.5s,baz=70,slow=32						
	comp=Z,5.8nm,0.9s						
WRA	**Warramunga Arr**	**29.58 250**		P	**P**	**10 16 04.0**	**-1.7**
H11S2	**WAKE ISLAND Hy**	**29.89 5**		T	T	10 47 32.5	
	baz=184,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**29.89 5**		T	T	10 47 18.8	
	baz=184,slow=76,SNR=9.4						
H11S1	**WAKE ISLAND Hy**	**29.91 5**		T	T	10 47 26.7	
	baz=184,slow=76,SNR=11						
ASAR	**Alice Springs**	**30.94 243**		P	**P**	**10 16 16.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=63,slow=10,SNR=8.7						
ASAR				LR	LR	10 28 47.9	
	comp=Z,73nm,18.3s,baz=68,slow=37						
	comp=Z,0.5nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**31.12 6**		T	T	10 48 51.6	
	baz=184,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**31.13 6**		T	T	10 48 46.2	
	baz=184,slow=76,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**31.14 6**		T	T	10 48 39.7	
	baz=184,slow=76,SNR=9.2						
GUMO	**Guam**	**31.20 322**		LR	LR	10 27 46.3	
	comp=Z,27nm,20.6s,baz=161,slow=34						
KNRA	**Kununurra**	**34.33 259**		P	**P**	**10 16 44.5**	**-2.8**
SONM	**Songino Array**	**77.90 324**		P	**P**	**10 21 59.3**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=167,slow=12,SNR=4.3						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**84.50 19**		P	**P**	**10 22 36.7**	**+4.1**
	comp=Z,0.3nm,0.6s,baz=246,slow=6.2,SNR=4.3						
	comp=Z,0.3nm,0.6s						
ELS	**Elsinore Mount**	**87.08 55**		P	P	10 22 40.3	-6.0
ELS				IAmb	IAmb	10 22 40.9	
	comp=Z,7.5nm,1.1s						
MKAR	**Makanchi Array**	**92.54 317**		P	**P**	**10 23 12.5**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=129,slow=5.7,SNR=4.1						
	comp=Z,0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**92.80 324**		P	**P**	**10 23 11.9**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=110,slow=6.4,SNR=2.1						
	comp=Z,0.5nm,0.4s						

*IDC **20** 10:39:21.7±1.8, 2°.19N×126°.57E, h0km, mb4.0/4, mbtmp4.0/4, MS2.3/1, Error ellipse: s-maj=180.6km s-min=20.3km az=66.0*
*DJA **20** 10:39:26.5±1.2, 3°N±4°×12°8E±°, h18km±12km, M4.1/7, mb4.5/2, MLv3.9/7*

ISC 20 10:39:27.8±1.3, 2°.6N±0°.1×127°.6E±0°.1, h64km, n12, σ1§08/13, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.80 164**		P	**Pn**	**10 39 42.4**	**-1.1**
GAMI				S	**Sn**	**10 39 53.8**	**-1.2**
TNTI	**Ternate**	**1.84 186**		P	**Pn**	**10 39 56.9**	**-0.2**
SGSI	**Sangihe**	**2.30 298**		P	**Pn**	**10 40 02.3**	**-1.1**
SGSI				S	**Sn**	**10 40 29.6**	**-1.0**
LBMI	**Labuha**	**3.23 181**		P	**Pn**	**10 40 16.6**	**+0.5**
GTOI	**Gorontalo**	**4.96 247**		P	**Pn**	**10 40 40.0**	**+0.2**
SIJI	**Sorong**	**5.06 133**		LR	LR	10 43 10.1	
	comp=Z,29nm,20.4s,baz=98,slow=41						
KRAI	**Karang Ratu**	**5.95 172**		P	**Pn**	**10 40 53.8**	**+0.5**
MRSI	**Marisa**	**6.01 249**		P	**Pn**	**10 40 54.2**	**0.0**
	0.1nm31nm,0.5s						
WRA	**Warramunga Arr**	**23.38 164**		P	**P**	**10 44 30.0**	**-1.0**
	1.0nm,0.6s,baz=339,slow=10.0,SNR=30						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**26.84 167**		P	**P**	**10 45 01.9**	**-0.5**
	0.1nm,0.3s,baz=344,slow=12,SNR=1.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.95 325**		P	**P**	**10 49 22.1**	**+1.5**
	4.1nm,0.4s,baz=117,slow=8.0,SNR=53						
	4.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.13 327**		P	**P**	**10 49 50.3**	**+1.5**
	2.7nm,0.8s,baz=127,slow=5.9,SNR=14						
	2.7nm,0.8s						

*ASRS **20** 10:39:38.0±0.2, 51°N±1°×9°8E±°, h4km, MLh4.5/12, Error ellipse: s-maj=3.2km s-min=2.2km az=10.5, confirmed*
*IDC **20** 10:39:42.1±1.9, 50°.94N×97°.82E, h0km, mb3.7/1, mbtmp3.3/4, ML2.9/3, MS2.9/3, Error ellipse: s-maj=82.5km s-min=16.5km az=20.0*

ISC 20 10:39:40.5±0.9, 51°.08N±0°.04×97°.51E±0°.03, h10km, n34, σ3§01/52, 3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**0.47 180**		⇓Pg	**Pn**	**10 39 52.4**	**-1.1**
KNGR				Sg	**Sn**	**10 39 58.7**	**+2.8**
KZLR	**Kyzyl**	**2.02 289**		Pg	**Pg**	**10 40 21.6**	**+2.4**
KZLR				Sg	**Sg**	**10 40 49.9**	**+4.6**
MOY	**Mondy**	**2.26 73**		⇓Pg	**Pg**	**10 40 21.1**	**-2.7**
MOY				Sg	**Sg**	**10 40 49.1**	**-3.9**
ARDR	**Aradan**	**2.95 302**		⇓Pg	**Pg**	**10 40 37.3**	**+0.4**
ARDR				Sg	**Sg**	**10 41 17.1**	**+2.0**
ZAK	**Zakamensk**	**3.73 98**		Pg	Pg	10 40 46.1	-5.8
ZAK				Sg	**Sg**	**10 41 34.8**	**-5.4**
DJOS	**Djoyskaya Sosn**	**4.16 297**		Pg	**Pg**	**10 41 03.0**	**+2.9**
DJOS				Sg	**Sg**	**10 41 54.0**	**+0.1**
CERR	**Cheremushki**	**4.17 298**		Pg	**Pg**	**10 41 01.1**	**+0.8**
CERR				Sg	**Sg**	**10 41 54.8**	**+0.4**
DJO	**Djoy, Khakassi**	**4.25 296**		Pg	**Pg**	**10 41 02.5**	**+0.5**
DJO				Sg	**Sg**	**10 41 55.9**	**-1.1**
MINR	**Mina**	**4.32 334**		Pg	**Pg**	**10 41 05.3**	**+2.0**
MINR				Sg	**Sb**	**10 41 45.4**	**-3.4**
MINR				Sg	**Sg**	**10 42 04.3**	**+5.1**
IRK	**Irkutsk**	**4.37 72**		Sg	**Sg**	**10 41 54.7**	**-5.9**
GZL	**Zheleznogorsk**	**5.71 337**		Sg	**Sg**	**10 42 49.6**	**+6.0**
GZLN	**Zheleznogorsk**	**5.76 339**		Pg	**Pg**	**10 41 27.8**	**-2.9**
GZLN				Sg	**Sg**	**10 42 45.2**	**0.0**
LUZB	**Luzhba, Kemero**	**5.88 299**		Pg	**Pg**	**10 41 31.5**	**-1.4**
LUZB				Sg	**Sg**	**10 42 43.9**	**-5.1**
CUR	**Chagan-Uzun**	**5.92 264**		Pn	**Pn**	**10 41 08.2**	**-0.1**
CUR				Pg	**Pg**	**10 41 32.4**	**-1.4**
CUR				Sg	**Sg**	**10 42 50.8**	**+0.4**
ULGR	**Ulagan, Altay**	**6.07 269**		Pg	**Pg**	**10 41 34.3**	**-2.3**
ULGR				Sg	**Sg**	**10 42 55.8**	**+0.6**
TASR	**Tashtagol**	**6.20 290**		Sg	**Sg**	**10 42 56.2**	**-3.1**
CHBI	**Chibit, Altay**	**6.41 267**		Pn	Pn	10 41 20.3	+5.4
CHBI				Pg	**Pg**	**10 41 40.7**	**-2.4**
CHBI				S	**Sn**	**10 42 32.6**	**+4.5**
CHBI				Sg	**Sg**	**10 43 03.4**	**-2.6**
ARTR	**Artybash**	**6.44 280**		Pg	**Pg**	**10 41 41.7**	**-2.0**
ARTR				Sg	**Sg**	**10 43 04.6**	**-2.5**
DGZ	**Jazzator, Alta**	**6.59 262**		Pn	**Pn**	**10 41 16.7**	**-0.8**
DGZ				Pg	**Pg**	**10 41 43.0**	**-3.6**
DGZ				Sg	**Sg**	**10 43 14.1**	**+2.1**
SONM	**Songino Array**	**6.63 116**		Pn	**Pn**	**10 41 17.7**	**-0.4**
	0.3nm,0.3s,baz=297,slow=14,SNR=2.3						
SONM				Pg	Pg	10 41 38.9	-8.6
	1.3nm,0.3s,baz=305,slow=15,SNR=5.9						
SONM				Lg	Lg	10 43 06.6	
	5.1nm,0.3s,baz=305,slow=27,SNR=25						
	0.4nm,0.3s						
ERU	**Erunakovo, Kuz**	**6.89 300**		Sg	**Sg**	**10 43 22.3**	**+0.9**
KOTO	**Kotino, Kuzbas**	**7.16 300**		Sg	**Sg**	**10 43 28.9**	**-1.2**
ELT	**Eltsovka**	**7.27 292**		S	**Sn**	**10 42 51.4**	**+2.2**
ELT				Sg	**Sg**	**10 43 27.3**	**-6.4**
VCHU	**Verkh-Chumysh,**	**7.34 297**		Sg	**Sg**	**10 43 36.5**	**+0.4**
BJR1	**Bachatsky 1, K**	**7.66 299**		Sg	**Sg**	**10 43 44.6**	**-1.6**
SALR	**Pechorkino, Sa**	**7.91 300**		Sg	**Sg**	**10 43 49.1**	**-5.0**
UKR	**Ust'-Kan**	**8.04 274**		Pg	**Pg**	**10 42 11.3**	**-3.0**
UKR				S	**Sn**	**10 43 07.7**	**-0.6**
UKR				Sg	**Sg**	**10 43 55.2**	**-3.2**
ZALV	**Zalesovo Beam**	**8.26 295**		Pg	**Pg**	**10 42 18.6**	**+0.1**
	0.2nm,0.3s,baz=104,slow=17,SNR=4.0						
ZALV				Lg	Lg	10 44 04.8	
	0.7nm,0.3s,baz=100,slow=24,SNR=8.7						
MKAR	**Makanchi Array**	**10.89 253**		Pg	Pn	10 43 04.0	+48
	0.1nm,0.3s,baz=69,slow=20,SNR=2.8						
MKAR				Lg	Lg	10 45 25.6	
	0.1nm,0.3s,baz=63,slow=31,SNR=5.2						
MKAR				LR	LR	10 46 54.5	
	comp=Z,34nm,20.3s,baz=62,slow=39						
KURBB	**Kurchatov Arra**	**12.01 275**		Pn	Pn	10 42 36.4	+4.8
	baz=80,slow=15,SNR=3.3						
KURBB				Lg	Lg	10 46 03.8	
	0.1nm,0.3s,baz=78,slow=29,SNR=4.8						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**16.76 287**		Pn	**P**	**10 43 39.0**	**+1.6**
	0.2nm,0.3s,baz=84,slow=13,SNR=2.2						
	0.3nm,0.5s						
AAK	**Ala-Archa**	**17.80 251**		LR	LR	10 51 29.6	
	comp=Z,33nm,19.7s,baz=13,slow=39						
AKTO	**Aktyubinsk**	**24.80 284**		P	**P**	**10 45 06.4**	**+4.1**
	1.3nm,0.8s,baz=85,slow=12,SNR=4.4						
	1.3nm,0.8s						
KIRV	**Kirov**	**28.16 304**		LR	LR	10 57 27.6	
	comp=Z,39nm,19.2s,baz=296,slow=38						

*NCEDC **20** 10:45:02.6±1.0, 38°.83N±0°.02×122°.80W±0°.06, h3km±6km, ML3.3/53, ML3.1/84(NEIC), Error ellipse: s-maj=6.7km s-min=2.2km az=73.0*
*IDC **20** 10:45:03.2±2.0, 38°.73N×122°.82W, h0km, mbtmp3.1/6, ML3.2/6, Error ellipse: s-maj=24.2km s-min=10.4km az=50.0*
*NEIC **20** 10:45:03.1±1.7, 38°.84N±0°.02×122°.75W±0°.02, h6km±3km, Error ellipse: s-maj=2.9km s-min=1.7km az=55.0*

ISC 20 10:45:01.6±0.9, 38°.80N±0°.02×122°.78W±0°.02, h6km±6km, n154, σ1§29/151, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.02 314**			**Pg**	**10 45 03.5**	**+0.6**
GCRM	**Castle Rock Sp**	**0.06 114**			**Pg**	**10 45 04.5**	**+1.4**
GBGM	**Boggs Mountain**	**0.08 77**			**Pg**	**10 45 05.0**	**+1.4**
GAXM	**Alexander Vall**	**0.09 168**			**Pg**	**10 45 05.2**	**+1.6**
GSGM	**Seigler Mounta**	**0.09 37**			**Pg**	**10 45 04.9**	**+1.2**
GMKM	**Mount Konoctai**	**0.17 358**			**Pg**	**10 45 06.2**	**+1.0**
GCVM	**Cloverdale**	**0.19 262**			**Pg**	**10 45 06.6**	**+1.2**
NHSM	**Mount Saint He**	**0.19 137**			**Pg**	**10 45 07.2**	**+1.7**
GSSM	**Skaggs Springs**	**0.21 243**			**Pg**	**10 45 07.1**	**+1.4**
MAC	**Mark West Spri**	**0.25 170**			**Pb**	**10 45 08.6**	**+2.1**
NMTM	**Middletown**	**0.26 88**			**Pb**	**10 45 08.5**	**-0.3**
HOPS	**Hopland Field**	**0.30 311**		Pg	**Pg**	**10 45 08.2**	**+0.7**
HOPS					**Sg**	**10 45 08.5**	**-3.1**
HOPS				IAML		10 45 16.0	
	comp=N,4μm,0.6s						
GHLM	**Highland Sprin**	**0.31 323**			**Pg**	**10 45 08.3**	**+0.6**
GHGM	**Hogback Ridge**	**0.33 354**			**Pb**	**10 45 08.9**	**-1.1**
GWKM	**Walker Ridge**	**0.34 41**			**Pb**	**10 45 09.7**	**-0.5**
GBMM	**Baldy Mountain**	**0.41 33**			**Pb**	**10 45 10.9**	**-0.5**
NTYM	**Taylor**	**0.42 167**			**Pb**	**10 45 11.7**	**+0.3**
NBPM	**Berryessa Peak**	**0.48 105**			**Pn**	**10 45 13.4**	**-1.6**
CVS	**Carmenet Viney**	**0.52 151**			**Pb**	**10 45 13.5**	**+0.4**
GTSM	**Trough Springs**	**0.53 15**			**Pb**	**10 45 13.3**	**-0.2**
NAPC	**Atlas Peak**	**0.55 131**			**Pb**	**10 45 13.9**	**+0.3**
NBRB	**Beebe Ranch Br**	**0.56 162**			**Pb**	**10 45 14.4**	**+0.5**
GGUM	**Gualala**	**0.56 276**			**Pb**	**10 45 13.9**	**-0.1**
GWRM	**Wonder Ranch**	**0.58 315**			**Pb**	**10 45 13.5**	**-0.7**
GHOM	**Hamilton Openi**	**0.64 293**			**Pb**	**10 45 15.3**	**-0.1**
MCCM	**Marconi Confer**	**0.66 187**			**Pn**	**10 45 16.6**	**-0.9**
MCCM	**Marconi Confer**	**0.66 187**			**Sg**	**10 45 16.7**	**-6.0**
MCCM				IAML		10 45 29.6	
	comp=E,2μm,1.1s						
MCCM				IAML		10 45 32.7	
	comp=N,1μm,1.0s						
SNT	**Sears Point**	**0.66 157**			**Pb**	**10 45 15.9**	**+0.3**
NGVM		**0.68 139**			**Pn**	**10 45 16.5**	**-1.3**
GHMM	**Hull Mountain**	**0.71 350**			**Pb**	**10 45 16.7**	**+0.2**
NOLM	**Olema**	**0.76 181**			**Pb**	**10 45 18.1**	**-0.8**
GNAM	**Navarro Ridge**	**0.78 301**			**Pb**	**10 45 17.6**	**0.0**
NPRM	**Point Reyes**	**0.82 193**			**Pn**	**10 45 19.3**	**-0.4**
GTC	**Three Chop Rid**	**0.85 315**			**Pb**	**10 45 18.9**	**0.0**
OSUM	**Sutter Buttes**	**0.86 56**			**Pn**	**10 45 19.2**	**-1.1**
HERB	**Hercules**	**0.88 152**			**Pn**	**10 45 20.5**	**0.0**
SUTB	**Sutter Butte**	**0.89 60**			**Pb**	**10 45 19.3**	**-0.1**
CPMM	**Point Molate**	**0.89 161**			**Pn**	**10 45 20.6**	**-0.2**
CSPM	**San Pablo Ridg**	**0.91 156**			**Pn**	**10 45 21.0**	**-0.1**
CPIM	**Pinole Ridge**	**0.92 151**			**Pn**	**10 45 20.8**	**-0.4**
RFSB	**Richmond Field**	**0.94 158**			**Pn**	**10 45 21.7**	**+0.3**
CTAM	**Taylor**	**0.97 142**			**Pn**	**10 45 22.1**	**+0.2**
KFPM	**Farley Peak**	**0.98 329**			**Pn**	**10 45 21.6**	**-0.5**
BRK	**Berkeley--Havi**	**1.01 156**			**Pn**	**10 45 22.3**	**0.0**
VAK	**Adit at Lawren**	**1.01 155**			**Pn**	**10 45 22.2**	**-0.1**
BL67	**Building 67, L**	**1.01 156**			**Pn**	**10 45 22.3**	**-0.1**
CVPM	**Vollmer Peak**	**1.01 154**			**Pn**	**10 45 21.9**	**-0.6**
BKS	**Berkeley--Byer**	**1.01 155**			**Pn**	**10 45 21.6**	**-0.8**
JPRM	**Presidio of Sa**	**1.03 166**			**Pn**	**10 45 22.6**	**0.0**
CYBM	**Yerba Buena Is**	**1.04 161**			**Pn**	**10 45 22.6**	**-0.1**
KCPM	**Cahto Peak**	**1.09 325**			**Pn**	**10 45 23.9**	**+0.4**
KCPM	**Cahto Peak**	**1.09 325**		IAML		10 45 33.0	
	comp=E,650nm,0.5s						
KCPM				IAML		10 45 46.1	
	comp=N,438nm,0.6s						
BDM	**Black Diamond**	**1.10 139**			**Pn**	**10 45 23.3**	**-0.4**
FARB	**Farallon Islan**	**1.11 189**			**Pn**	**10 45 23.8**	**+0.1**
CRPB	**Russellman Par**	**1.12 142**			**Pn**	**10 45 23.7**	**-0.1**
CMCM

BJCM	**Johnson Can.**	**2.50**	**153**		**Pn**	**10 45 42.3**	**-0.6**
BAVM	**Antelope Valle**	**2.56**	**147**		**Pn**	**10 45 44.1**	**+0.4**
HAST	**Hastings Reser**	**2.59**	**158**		**Pn**	**10 45 43.7**	**-0.5**
BBGB	**Big Mountain B**	**2.61**	**148**		**Pn**	**10 45 45.2**	**+0.8**
BPIM	**Pinnacles**	**2.63**	**150**		**Pn**	**10 45 44.2**	**-0.5**
WAKR	**Walker**	**2.63**	**95**		**Pb**	**10 45 47.5**	**-1.8**
WAKR				IAML		10 46 25.4	
	comp=E,71nm,1.0s						
WAKR				IAML		10 46 35.9	
	comp=N,58nm,1.6s						
BMSM	**Mercy Hot Spri**	**2.65**	**143**		**Pn**	**10 45 45.6**	**+0.6**
YERR	**Yerington**	**2.77**	**85**		**Pn**	**10 45 48.4**	**+1.6**
YERR				IAML		10 46 33.6	
	comp=N,98nm,0.6s						
KRMB	**Red Mountain**	**2.86**	**343**	Pn	**Pn**	**10 45 49.5**	**+1.6**
YBH	**Yreka Blue Hor**	**2.93**	**1**	Pn	**Pb**	**10 45 54.5**	**+0.1**
	comp=N,1.1nm,0.3s,baz=182,slow=11,SNR=13						
YBH				Sn	**Sb**	**10 46 29.3**	**-1.3**
	comp=N,0.5nm,0.3s,baz=92,slow=7.9,SNR=3.5						
	comp=N,3.7nm,0.4s						
YBH	**Yreka Blue Hor**	**2.93**	**1**	Pn	**Pn**	**10 45 49.2**	**+0.3**
PMPB	**Monarch Peak**	**3.02**	**148**		**Pn**	**10 45 51.3**	**+1.2**
PMPB				IAML		10 47 07.7	
	comp=N,66nm,1.5s						
PMPB				IAML		10 47 08.7	
	comp=E,68nm,1.8s						
MDPB	**Devils Postpil**	**3.14**	**111**	IAML		10 46 38.5	
	comp=N,62nm,0.7s						
MDPB				IAML		10 46 42.9	
	comp=E,55nm,1.4s						
OMMB	**Old Mammoth Mi**	**3.20**	**110**	IAML		10 46 40.4	
	comp=N,32nm,1.0s						
OMMB				IAML		10 46 47.7	
	comp=E,35nm,1.5s						
RYN	**Ryan**	**3.33**	**92**		**Pn**	**10 45 56.1**	**+1.6**
RYN				IAML		10 46 51.0	
	comp=E,40nm,1.7s						
RYN				IAML		10 46 54.4	
	comp=N,37nm,1.7s						
LHV	**Little Huntoon**	**3.40**	**98**		**Pn**	**10 45 57.8**	**+2.6**
NVAR	**Mina Array Bea**	**3.52**	**95**	Pn	**Pn**	**10 45 59.1**	**+2.0**
	comp=N,1.4nm,0.3s,baz=271,slow=15,SNR=38						
NVAR				Pg	**Pb**	**10 46 06.4**	**+1.8**
	comp=N,5.5nm,0.3s,baz=273,slow=16,SNR=31						
NVAR				Lg	Lg	10 46 55.0	
	comp=N,2.5nm,0.3s,baz=282,slow=29,SNR=5.7						
	comp=N,2.0nm,0.5s						
MOD	**Modoc Plateau**	**3.63**	**31**		**Pn**	**10 45 59.0**	**+0.4**
NV11	**Mina Array Sit**	**3.64**	**94**	IAML		10 47 02.8	
	comp=E,48nm,1.8s						
NV11				IAML		10 47 05.6	
	comp=N,36nm,1.9s						
KVN	**Kaiserville**	**3.66**	**85**		**Pn**	**10 45 59.9**	**+0.9**
KVN				IAML		10 47 03.8	
	comp=N,22nm,1.5s						
KVN				IAML		10 47 21.2	
	comp=E,20nm,1.4s						
DSP	**Deep Springs**	**4.05**	**109**	Pn	**Pb**	**10 46 10.1**	**-3.3**
DSP				IAML		10 47 21.6	
	comp=N,19nm,2.4s						
DSP				IAML		10 47 29.7	
	comp=E,16nm,2.1s						
K05A	**Summer Lake**	**4.18**	**19**	Pn	**Pn**	**10 46 09.7**	**+3.6**
K05A				IAML		10 47 38.5	
	comp=E,25nm,4.7s						
K05A				IAML		10 48 28.3	
	comp=N,23nm,4.7s						
LCH	**Last Change Ra**	**4.34**	**109**		**Pn**	**10 46 12.5**	**+4.1**
LCH				IAML		10 47 21.6	
	comp=N,13nm,2.2s						
LCH				IAML		10 47 56.8	
	comp=E,11nm,1.9s						
ISA	**Isabella, Lake**	**4.64**	**131**		**Pn**	**10 46 14.3**	**+1.9**
ISA				IAML		10 47 24.9	
	comp=N,10nm,1.4s						
ISA				IAML		10 47 27.8	
	comp=E,16nm,1.8s						
PINE	**Pine Mountain**	**5.18**	**15**	Pn	**Pn**	**10 46 20.9**	**+1.0**
CCAC	**Calif City Air**	**5.27**	**132**		**Pn**	**10 46 23.0**	**+2.0**
R11A	**Troy Canyon, C**	**5.66**	**92**	Pn	**Pn**	**10 46 29.7**	**+3.3**
ELK	**Elko**	**6.13**	**69**	Pn	**Pn**	**10 46 36.1**	**+3.1**
	comp=E,0.2nm,0.3s,baz=262,slow=12,SNR=5.2						
	comp=E,1.2nm,0.7s						
ELK	**Elko**	**6.13**	**69**	Pn	**Pn**	**10 46 34.4**	**+1.5**
PFO	**Pinyon Flats O**	**7.27**	**133**	Pn	**Pn**	**10 46 50.5**	**+2.0**
	comp=E,0.2nm,0.3s,baz=302,slow=13,SNR=2.2						
	comp=E,0.8nm,0.5s						
PDAR	**Pinedale Array**	**10.78**	**64**	Pn	Pn	10 47 41.6	+4.9
	comp=E,0.1nm,0.3s,baz=245,slow=14,SNR=6.6						
	comp=E,1.2nm,1.0s						
TXAR	**Lajitas Array**	**18.40**	**115**	P	**P**	**10 49 21.4**	**+3.9**
	baz=293,slow=7.6,SNR=3.8						
	comp=E,0.8nm,1.1s						

IDC 20 11:11:35.2±847.0, 53°.26N×4°.05E, h0km, Error ellipse: s-maj=373.6km s-min=145.9km az=109.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.52**	**122**	I		11 53 16.9	
	baz=311,slow=324,SNR=3.9						
I43RU	**DUBNA INFRASON**	**9.23**	**66**	I		13 11 50.0	
	baz=278,slow=328,SNR=1.6						
I31KZ	**AKTYUBINSK INF**	**32.82**	**73**	I		14 37 30.0	
	baz=296,slow=331,SNR=2.4						
I46RU	**ZALESOVO INFRA**	**45.43**	**55**	I		15 49 10.0	
	baz=301,slow=335,SNR=1.0						

*IDC **20** 11:12:50.2±1.1, 36°.60N×139°.31E, h0km, mb3.8/4, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=17.0km s-min=11.5km az=5.0*

*NIED **20** 11:12:52.5, 36°.59N×139°.25E, h11km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.99; $M_{\phi\phi}$-0.55; $M_{r\theta}$1.19; $M_{\theta\phi}$-1.92; $M_{\phi r}$0.28; Fault plane solution: $M_0$2.55000×10^{14} NP1: ϕ_s197.00000°, δ40.00000°, λ42.00000°. NP2:ϕ_s73.00000°, δ65.00000°, λ122.00000°.*

*JMA **20** 11:12:52.5±0.0, 36°.6N±0°.1×139°.3E±0°.1, h1km, MD3.8/20, MV4.0/20, TOCHIGI GUNMA BORDER*

JMA Felt III J1 at TOCHIGI GUNMA BORDER .

ISC 20 11:12:52.2±0.9, 36°.60N±0°.03×139°.23E±0°.03, h12km±6km, n39, σ0§97/33, mb3.8/5, 4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.17**	**6**	*i* P	**Pg**	**11 12 56.4**	**+0.3**
JKT				S	**Sg**	**11 12 59.0**	**+0.2**
JAG	**Ashikaga**	**0.25**	**133**	⇓*i* P	**Pg**	**11 12 57.4**	**0.0**
JAG				⇓S	**Sg**	**11 13 00.6**	**-0.3**
JAG	**Ashikaga**	**0.25**	**133**	A	A	11 12 57.4	
	comp=E,23nm,1.0s,comp=E,16nm,0.7s						
JGK	**Kuni**	**0.47**	**266**	*i* P	**Pb**	**11 13 02.2**	**-0.4**
JGK				S	**Sb**	**11 13 09.0**	**-0.6**
JGK	**Kuni**	**0.47**	**266**	A	A	11 13 02.2	
	comp=E,8.0nm,0.5s,comp=E,12nm,0.2s						
JUON	**Uonuma**	**0.62**	**347**	⇓*i* P	**Pb**	**11 13 04.5**	**-0.7**
JUON				⇓S	**Sb**	**11 13 12.6**	**-1.3**
JUON	**Uonuma**	**0.62**	**347**	A	A	11 13 04.5	
	comp=E,5.0nm,1.0s,comp=E,3.0nm,0.5s						
JRY	**Ryogami san**	**0.64**	**204**	*i* P	**Pg**	**11 13 04.4**	**-0.2**
JRY				S	**Sg**	**11 13 13.0**	**0.0**
JRY	**Ryogami san**	**0.64**	**204**	A	A	11 13 04.4	
	comp=E,1.0nm,10.0s,comp=E,3.0nm,5.8s						
JHU	**Hanno**	**0.75**	**177**	A		11 13 06.6	
	comp=E,3.0nm,1.0s,comp=E,4.0nm,0.4s						
MJAR	**Matsushiro Arr**	**0.82**	**266**	Pg	**Pg**	**11 13 07.5**	**-0.5**
	32nm,0.3s,baz=82,slow=18,SNR=862						
MJAR				Lg	Lg	11 13 18.3	
	44nm,0.3s,baz=279,slow=8.1,SNR=9.6						
MAJO	**Matsushiro**	**0.82**	**266**	P	**Pb**	**11 13 08.4**	**-0.1**
MAT	**Matsushiro**	**0.82**	**266**	*i* P	**Pg**	**11 13 08.1**	**0.0**
MAT				*i* S	**Sg**	**11 13 18.7**	**-0.2**
JYT	**Yasato**	**0.86**	**115**	P	**Pb**	**11 13 08.8**	**-0.4**
JYT	**Yasato**	**0.86**	**115**	A	A	11 13 08.5	
	comp=E,14nm,0.4s,comp=E,38nm,0.3s						
JFY	**Yanaizu**	**0.89**	**25**	*i* P	**Pn**	**11 13 09.7**	**-1.0**
JFY				S	**Sg**	**11 13 21.1**	**0.0**
JSGW	**Sagamiharawaka**	**0.99**	**181**	A	A	11 13 11.1	
	comp=E,4.0nm,3.0s,comp=E,5.0nm,0.4s						
TOK	**Tokyo**	**1.01**	**155**	A	A	11 13 11.2	
	comp=E,20nm,0.3s,comp=E,14nm,0.7s						
JIZZ	**Izumozaki**	**1.02**	**336**	P	**Pn**	**11 13 12.7**	**+0.3**
JIZZ				S	**Sn**	**11 13 28.1**	**+1.4**
JIZZ	**Izumozaki**	**1.02**	**336**	A	A	11 13 12.7	
	comp=E,7.0nm,0.2s,comp=E,14nm,0.3s						
JHO	**Hitachi**	**1.08**	**89**	A	A	11 13 12.3	
	comp=E,4.0nm,0.5s,comp=E,4.0nm,7.9s						
JHYU	**Hitachinakayam**	**1.13**	**103**	A	A	11 13 13.2	
	comp=E,5.0nm,8.4s,comp=E,8.0nm,0.8s						
JNS	**Sasagawa**	**1.22**	**3**	A	A	11 13 15.1	
	comp=E,2.0nm,0.3s,comp=E,2.0nm,0.3s						
JIHU	**Itakohorinouch**	**1.23**	**121**	A	A	11 13 14.9	
	comp=E,12nm,6.3s,comp=E,10.0nm,3.4s						
JSD	**Sado**	**1.63**	**332**	P	**Pb**	**11 13 21.7**	**-0.6**
JSD	**Sado**	**1.63**	**332**	A	A	11 13 21.7	
	comp=E,4.0nm,13.2s,comp=E,4.0nm,6.5s						
JHTM	**Izuhatsuma**	**1.65**	**186**	A	A	11 13 21.7	
	comp=E,5.0nm,22.3s,comp=E,6.0nm,1.5s						
JMM	**Marumori**	**1.78**	**44**	P	**Pb**	**11 13 24.0**	**-0.8**
JGF	**Kuroka**	**1.81**	**237**	P	**Pb**	**11 13 25.6**	**+0.2**
INU	**Inuyama**	**2.18**	**236**	P	**Pb**	**11 13 31.6**	**-0.1**
JHJ	**Hachijo jima 2**	**3.50**	**172**	Pn	**Pn**	**11 13 47.5**	**+1.0**
	39nm,0.3s,baz=333,slow=19,SNR=12						
JHJ				Sn	**Sn**	**11 14 28.4**	**+0.5**
	20nm,0.3s,baz=70,slow=23,SNR=1.5						
	78nm,0.3s						
JHJ2	**Mitsune**	**3.51**	**172**	P	**Pn**	**11 13 47.6**	**+0.9**
JTM	**Tenmabayashi**	**4.42**	**18**	P	**Pn**	**11 14 03.0**	**+3.8**
JHS	**Saijyo**	**5.22**	**254**	P	**Pn**	**11 14 10.9**	**+0.8**
ZALV	**Zalesovo Beam**	**40.92**	**313**	P	**P**	**11 20 34.3**	**0.0**
	0.5nm,0.4s,baz=97,slow=12,SNR=2.4						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**44.89**	**308**	P	**P**	**11 21 06.2**	**-0.3**
	1.3nm,0.2s,baz=70,slow=8.0,SNR=2.5						
	1.3nm,0.2s						
ILAR	**Eielson Array**	**50.80**	**32**	P	**P**	**11 21 52.1**	**0.0**
	0.4nm,0.8s,baz=295,slow=6.9,SNR=4.5						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**56.42**	**186**	P	**P**	**11 22 32.3**	**-1.5**
	1.2nm,0.7s,baz=1.7,slow=7.5,SNR=25						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**60.15**	**186**	P	**P**	**11 22 59.8**	**0.0**
	0.5nm,0.7s,baz=13,slow=8.7,SNR=3.6						

*IDC **20** 11:19:37.5±1.2, 46°.07N×53°.34E, h0km, mb3.6/5, mbtmp3.7/11, ML3.7/6, Error ellipse: s-maj=30.6km s-min=9.0km az=154.0*

*NNC **20** 11:19:39.6±1.6, 46°.14N×53°.84E, h0km, mb3.9, mpv3.2, Error ellipse: s-maj=13.7km s-min=9.4km az=96.0*

ISC 20 11:19:37.6±0.8, 46°.12N±0°.09×53°.36E±0°.05, h10km, n17, σ1§98/24, mb3.5/5, 7C-4D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**5.32**	**34**	Pn	**Pn**	**11 20 58.5**	**+1.5**
	0.9nm,0.3s,baz=198,slow=12,SNR=19						
AKTO				Sn	**Sn**	**11 21 57.3**	**-1.0**
	3.2nm,0.3s,baz=360,slow=21,SNR=15						
	2.7nm,0.2s						
AKTO	**Aktyubinsk**	**5.32**	**34**	⇑Pn	**Pn**	**11 20 56.9**	**-0.1**
	1.0nm,0.3s						
AKTO				⇑Sn	**Sn**	**11 21 58.3**	**0.0**
	13nm,0.5s						
AKTO				⇑Lg	Lg	11 22 23.6	
	19nm,0.8s						
AB31	**Akbulak array**	**5.44**	**52**	Pn	**Pn**	**11 20 58.7**	**0.0**
	1.6nm,0.4s,baz=231,slow=13,SNR=88						
AB31				⇓Sn	**Sn**	**11 22 00.1**	**-1.2**
	14nm,0.6s						
AB31				⇑Lg	Lg	11 22 22.9	
	14nm,0.6s						
BELG	**Belogornoye**	**7.31**	**331**	Sn	**Sn**	**11 22 44.8**	**-2.6**
	3.0nm,0.3s,baz=115,slow=23,SNR=9.3						
KBZ	**Khabaz**	**7.80**	**256**	Pn	**Pn**	**11 21 31.7**	**+0.6**
	1.7nm,0.3s,baz=134,slow=2.5,SNR=27						
KBZ				Sn	**Sn**	**11 22 57.5**	**-2.0**
	2.5nm,0.3s,baz=301,slow=20,SNR=8.4						
	7.2nm,0.5s						
KK31	**Karatay Array**	**12.59**	**98**	⇓Pn	**Pn**	**11 22 36.5**	**-0.2**
	0.8nm,0.5s,baz=298,slow=14,SNR=5.4						
KK31				⇑Sn	**Sn**	**11 24 52.7**	**-4.2**
	1.6nm,0.5s,baz=288,slow=24,SNR=4.4						
BRVK	**Borovoye**	**12.97**	**52**	⇓Pn	**Pn**	**11 22 40.9**	**-0.9**
	1.9nm,0.6s						
BRVK				⇓Sn	**Sn**	**11 25 04.7**	**-1.3**
	1.0nm,0.4s						
BVA0	**Borovoye Array**	**13.01**	**52**	⇑Pn	**Pn**	**11 22 42.4**	**0.0**
	4.5nm,1.3s						
BVA0				⇑Sn	**Sn**	**11 25 04.6**	**-2.5**
	4.3nm,0.8s						
BVAR	**Borovoye Array**	**13.01**	**52**	Pn	**Pn**	**11 22 41.0**	**-1.4**
	0.5nm,0.3s,baz=244,slow=13,SNR=9.1						
BVAR				Sn	Sn	11 25 00.4	-6.7
	0.5nm,0.3s,baz=239,slow=26,SNR=6.8						
	1.0nm,0.4s						
AKASG	**Malin Array Be**	**16.64**	**295**	Pn	**Pn**	**11 23 28.3**	**-2.5**
	0.7nm,0.3s,baz=93,slow=12,SNR=1.4						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**17.28**	**66**	P	**Pn**	**11 23 39.9**	**+1.1**
	0.3nm,0.3s,baz=272,slow=12,SNR=5.5						
	1.7nm,0.2s						
MKAR	**Makanchi Array**	**19.90**	**78**	P	**P**	**11 24 12.3**	**+3.2**
	0.1nm,0.3s,baz=285,slow=9.5,SNR=4.3						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**21.53**	**57**	P	**P**	**11 24 29.3**	**+2.7**
	1.4nm,0.6s,baz=266,slow=10.0,SNR=6.1						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**22.01**	**324**	P	**P**	**11 24 32.2**	**+0.5**
	2.2nm,0.4s,baz=127,slow=12,SNR=24						
	2.2nm,0.4s						
GERES	**GERESS Array B**	**26.73**	**290**	P	**P**	**11 25 17.8**	**+0.6**
	0.5nm,0.5s,baz=72,slow=10.0,SNR=4.4						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**27.27**	**339**	P	**P**	**11 25 25.4**	**+3.6**
	0.3nm,0.4s,baz=148,slow=12,SNR=6.1						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**54.37**	**250**	P	**P**	**11 29 05.0**	**+0.3**
	0.3nm,0.4s,baz=43,slow=8.3,SNR=5.5						
	0.3nm,0.4s						

*BJI **20** 11:23:49.3±0.0, 52°.54N×172°.87W, h137km, mb4.8/23, mB5.2/11*

*MOS **20** 11:23:51.6±0.9, 52°.73N×172°.77W, h143km, mb4.4/23, Error ellipse: s-maj=10.6km s-min=6.7km az=95.9*

*GCMT **20** 11:23:51.9±0.5, 52°.75N±0°.03×172°.76W±0°.05, h129km±7km, MW4.9/82, Moment Tensor Solution. s5,c5; s82,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.86±.13; $M_{\theta\theta}$0.57±.23; $M_{\phi\phi}$0.29±.20; $M_{r\theta}$-1.62±.10; $M_{\theta\phi}$-1.55±.12; $M_{\phi r}$-0.58±.08; Best double couple: $M_0$2.42100×10^{16} NP1:ϕ_s94.00000°, δ74.00000°, λ-133.00000°. NP2:ϕ_s348.00000°, δ45.00000°, λ-22.00000°. Principal axes: T 2.2510, Plg18.0000°, Azm214.0000°; N 0.3390, Plg41.0000°, Azm108.0000°; P -2.5910, Plg43.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 11:23:51.9±2.4, 52°.59N±0°.10×172°.7W±0°.1, h131km±7km, mb4.9/106, ML4.7/6, ML4.4(AEIC) Error ellipse: s-maj=14.6km s-min=8.5km az=163.0*

*IDC **20** 11:23:52.2±0.5, 52°.73N×172°.82W, h134km±4km, mb3.9/32, mbtmp4.4/35, MS3.3/16, Error ellipse: s-maj=12.5km s-min=7.9km az=176.0*

*AEIC **20** 11:23:53±2.6, 52°.4N±0°.1×172°.6W±0°.1, h124km±6km, Error ellipse: s-maj=16.3km s-min=8.6km az=166.0*

ISC 20 11:23:52.1±0.4, 52°.66N±0°.07×172°.70W±0°.04, h136km±3km, h136km:pP-P, n467, σ0§96/456, mb4.8/110, 12C-9D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**2.35**	**81**	Pn	**Pn**	**11 24 30.3**	**-0.3**
NIKH	**Nikolski High**	**2.35**	**81**	P	**Pn**	**11 24 30.5**	**-0.1**
	baz=258,SNR=31						
ADK	**Adak**	**2.57**	**254**		**Pn**	**11 24 33.2**	**-0.1**
ADK				IAML		11 25 09.4	
	5μm,0.3s						
ADK	**Adak**	**2.57**	**254**	P	**Pn**	**11 24 33.2**	**-0.1**
UNV	**Unalaska Valle**	**3.91**	**70**	Pn	**Pn**	**11 24 51.2**	**+0.6**
UNV	**Unalaska Valle**	**3.91**	**70**	P	**Pn**	**11 24 50.7**	**+0.1**
	baz=251,SNR=30						
AKUT	**Akutan**	**4.40**	**68**	Pn	**Pn**	**11 24 58.0**	**+0.9**
AKUT				IAML		11 26 11.2	
	comp=E,336nm,1.9s						
SPIA	**Saint Paul Isl**	**4.74**	**16**	Pn	**Pn**	**11 25 03.7**	**+2.1**
SPIA	**Saint Paul Isl**	**4.74**	**16**	P	**Pn**	**11 25 03.8**	**+2.1**
	baz=197,SNR=14						
AMKA	**Amchitka**	**5.10**	**259**	Pn	**Pn**	**11 25 06.7**	**+0.1**
FALS	**False Pass**	**5.93**	**65**		**Pn**	**11 25 17.4**	**-0.1**
FALS	**False Pass**	**5.93**	**65**	P	**Pn**	**11 25 18.0**	**+0.5**
	baz=250,SNR=8.9						
SDPT	**Sand Point**	**7.69**	**65**		**Pn**	**11 25 39.9**	**-1.3**
SDPT	**Sand Point**	**7.69**	**65**	P	**Pn**	**11 25 40.6**	**-0.5**
	baz=253						
SHEM	**Shemya Is, Ala**	**8.02**	**276**	P	**Pn**	**11 25 46.3**	**+0.6**
	comp=E,36nm,0.8s,baz=302,slow=20,SNR=1.3						
CNBA	**Chernabura Isl**	**8.07**	**69**	Pn	**Pn**	**11 25 44.6**	**-1.6**
CHNA	**Chernabura Isl**	**8.07**	**69**	P	**Pn**	**11 25 45.2**	**-1.0**
	baz=258						
CHGN	**Chignik**	**9.08**	**61**	P	**Pn**	**11 25 59.5**	**-0.2**
	baz=251						
P16K	**Nushagak River**	**10.43**	**46**	P	**Pn**	**11 26 17.9**	**+0.1**
	baz=237						
CHIR	**Chirikof Islan**	**10.48**	**66**	P	**Pn**	**11 26 17.2**	**-1.3**
	baz=258						
O16K	**Kokwok River B**	**10.69**	**44**	P	**Pn**	**11 26 22.3**	**+1.1**
	baz=235,SNR=7.1						
Q16K	**King Salmon**	**10.87**	**50**	P	**Pn**	**11 26 24.0**	**+0.4**
	baz=242						
N16K	**Nishlik Lake**	**10.95**	**39**	P	**Pn**	**11 26 26.0**	**+1.2**
	baz=229						
Q17K	**Contact Creek**	**11.06**	**53**	P	**Pn**	**11 26 26.6**	**+0.3**
	baz=246						
GAMB	**Gambell**	**11.16**	**2**	P	**Pn**	**11 26 29.6**	**+2.2**
	baz=183						
P17K	**Kvichak River**	**11.21**	**48**	P	**Pn**	**11 26 29.0**	**+0.9**
	baz=240						
O17K	**Koliganek Bris**	**11.22**	**44**	P	**Pn**	**11 26 29.6**	**+1.4**
	baz=236						
Q18K	**Katmai Hardscr**	**11.63**	**52**	P	**Pn**	**11 26 34.2**	**+0.3**
	baz=245						
P18K	**Big Mountain,**	**11.85**	**48**	P	**Pn**	**11 26 37.4**	**+0.8**
	baz=242						
O18K	**Koktuh Hills**	**12.08**	**46**	P	**Pn**	**11 26 40.4**	**+0.9**
	baz=240						
N18K	**Kilae Creek**	**12.22**	**42**	P	**Pn**	**11 26 41.9**	**+0.5**
	baz=235						
Q19K	**Cape Douglas,**	**12.40**	**52**	P	**Pn**	**11 26 43.7**	**0.0**
	baz=247						
KDAK	**Kodiak Island**	**12.56**	**58**	P	**Pn**	**11 26 42.9**	**-2.8**
	comp=E,7.3nm,0.3s,baz=341,slow=1.2,SNR=26						
KDAK				S	**S**	**11 29 13.6**	**-7.4**
	comp=E,6.0nm,0.4s,baz=156,slow=22,SNR=9.5						
KDAK				LR	LR	11 32 29.9	
	comp=E,51nm,19.4s,baz=218,slow=41						
KDAK	**Kodiak Island**	**12.56**	**58**	‖*e*P	**Pn**	**11 26 42.6**	**-3.1**
KDAK	**Kodiak Island**	**12.56**	**58**	P	**Pn**	**11 26 46.2**	**+0.5**
	baz=253						
N19K	**Bonanza Creek**	**12.87**	**43**	Pn	**Pn**	**11 26 51.7**	**+1.8**
N19K	**Bonanza Creek**	**12.87**	**43**	P	**Pn**	**11 26 51.7**	**+1.8**
	baz=238,SNR=5.9						
P19K	**Oil Pt**	**12.88**	**49**	P	**Pn**	**11 26 50.4**	**+0.5**
	baz=244						
Q20K	**Shuyak Island**	**12.90**	**54**	P	**Pn**	**11 26 50.4**	**+0.3**
	baz=250						
L19K	**White Mountain**	**13.49**	**38**	Pn	**Pn**	**11 26 58.7**	**+0.9**
L19K	**White Mountain**	**13.49**	**38**	P	**Pn**	**11 26 59.3**	**+1.4**
	baz=232						
M19K	**Big River Lodg**	**13.51**	**40**		**Pn**	**11 26 59.6**	**+1.6**
M19K	**Big River Lodg**	**13.51**	**40**	P	**Pn**	**11 26 59.5**	**+1.5**
	baz=234						
M20K	**Styx River**	**13.99**	**41**	P	**P**	**11 27 08.0**	**+0.2**
M20K	**Styx River**	**13.99**	**41**	P	**Pn**	**11 27 06.0**	**+1.8**
	baz=237						
N20K	**Mount Spurr**	**14.03**	**44**	P	**Pn**	**11 27 05.5**	**+0.8**
	baz=241						
L20K	**Farewell, AK**	**14.04**	**38**	P	**Pn**	**11 27 05.2**	**+0.5**
	baz=233						
BRSE	**Bradley Lake S**	**14.08**	**51**	P	**Pn**	**11 27 05.4**	**+0.1**
	baz=248						
K20K	**Telida**	**14.51**	**35**	P	**P**	**11 27 13.0**	**-0.4**
K20K	**Telida**	**14.51**	**35**	P	**Pn**	**11 27 11.1**	**+0.5**
	baz=230						
GCSA	**Galena City Sc**	**14.58**	**28**	P	**Pn**	**11 27 11.9**	**+0.4**
	baz=221,SNR=9.1						
SKT	**Skwentna**	**14.69**	**42**		**P**	**11 27 15.3**	**-0.2**
SUA	**Susitna One**	**14.77**	**45**	P	**Pn**	**11 27 14.2**	**+0.2**
	baz=242						
SEW	**Seward**	**14.82**	**51**	P	**Pn**	**11 27 13.9**	**-0.5**
	baz=249						
O22K	**Cooper Landing**	**14.82**	**49**	P	**Pn**	**11 27 13.5**	**-1.1**
O22K	**Cooper Landing**	**14.82**	**49**	P	**Pn**	**11 27 14.7**	**+0.1**
	baz=247						
PPLA	**Purkeypile**	**14.92**	**39**	P	**P**	**11 27 19.3**	**+1.2**
PPLA	**Purkeypile**	**14.92**	**39**	P	**Pn**	**11 27 16.5**	**+0.6**
	baz=235						
J20K	**Nowinta River**	**15.01**	**33**	P	**Pn**	**11 27 17.0**	**+0.1**
J20K	**Nowinta River**	**15.01**	**33**	P	**Pn**	**11 27 17.3**	**+0.4**
	baz=228						
M22K	**Willow**	**15.17**	**44**	P	**Pn**	**11 27 18.7**	**-0.1**
	baz=242						
CAST	**Castle Rocks**	**15.25**	**37**	P	**P**	**11 27 21.4**	**-0.3**
CAST	**Castle Rocks**	**15.25**	**37**	P	**Pn**	**11 27 20.4**	**+0.5**
	baz=234						
CHUM	**Lake Minchumin**	**15.45**	**35**	P	**Pn**	**11 27 23.3**	**+1.0**
	baz=232						
PMR	**Palmer**	**15.53**	**46**	P	**Pn**	**11 27 23.8**	**+0.5**
	baz=245						
**

baz=248
H23K Yukon River 17.57 32 P Pn 11 27 48.7 +0.5
baz=232,SNR=8.8
TCOL CIGO, UAF Yank 17.61 36 P Pn 11 27 49.1 +0.6
baz=237,SNR=6.6
COLA College 17.61 36 P P 11 27 47.9 +0.3
COLA College 17.61 36 *ceP* Pn 11 27 49.5 +0.9
COLA College 17.61 36 P Pn 11 27 49.5 +0.9
baz=237
PAX Paxson 17.65 44 P Pn 11 27 49.3 +0.1
baz=246
G22K Bettles 17.69 28 P Pn 11 27 50.1 +0.6
baz=226
HDA Harding Lake 17.70 38 P Pn 11 27 50.0 +0.3
baz=240,SNR=20
PEA0B Petropavlovsk- 17.82 283⇓ *eP* Pn 11 27 52.4 +1.2
PETK Petropavlovsk- 17.82 283 P P 11 27 49.2 -0.8
comp=Z,19nm,0.9s,baz=91,slow=15,SNR=29
PETK LR LR 11 35 12.2
comp=Z,25nm,19.4s,baz=76,slow=38
K24K Donnelly Dome 17.88 41 P P 11 27 51.5 +1.0
baz=243,SNR=11
POKR Poker Plat Res 17.89 36 P Pn 11 27 52.1 +0.1
baz=237,SNR=5.4
ILAR Eielson Array 17.91 37 P P 11 27 50.5 -0.4
comp=Z,14nm,0.4s,baz=237,slow=9.3,SNR=403
ILAR LR LR 11 35 08.3
comp=Z,12nm,20.4s,baz=240,slow=38
ILAR ScP ScP 11 35 41.4 -0.8
comp=Z,1.3nm,0.8s,baz=259,slow=3.4,SNR=9.4
F22K John River 17.92 26 P Pn 11 27 52.6 +0.4
baz=223
G23K Bananza Creek 17.98 30 P Pn 11 27 53.2 +0.1
baz=229,SNR=8.3
H24K Noodor Dome 18.13 34 P P 11 27 54.3 +0.9
baz=235,SNR=24
MCARA McCarthy VSAT 18.21 50 P P 11 27 55.0 +0.8
baz=254
RIDG Independent Ri 18.22 42 P P 11 27 55.1 +0.6
baz=245
COLD Coldfoot 18.27 28 P P 11 27 56.2 +1.3
baz=227,SNR=11
J25K Salcha River, 18.40 39 P P 11 27 56.4 +0.1
baz=242,SNR=32
BILL Bilibino 18.43 335 P P 11 27 58.1 +1.5
BILL Bilibino 18.43 335 *c iP* Pn 11 27 58.8 +0.4
BILL pmax pmax
comp=Z,153nm,1.1s
E22K Anaktuvuk Pass 18.47 25 P P 11 27 58.1 +1.1
baz=223
DOT Dot Lake 18.50 42 P P 11 27 57.7 +0.2
M26K Nabesna, AK 18.52 47 P P 11 27 56.5 -1.2
M26K Nabesna, AK 18.52 47 P P 11 27 57.7 +0.1
baz=251
L26K Log Cabin Wild 18.57 45 P P 11 27 58.9 +0.7
baz=249
SCRK Sand Creek 18.67 41 P P 11 27 59.6 +0.3
baz=245,SNR=80
G24K Hadweenzic Riv 18.77 32 P P 11 28 01.7 +1.4
baz=233,SNR=13
PRP Porcupine Dome 18.78 36 P P 11 28 01.1 +0.5
baz=239,SNR=7.6
CTG Chitna Glacier 18.91 52 P P 11 28 02.3 +0.3
baz=257
E23K Chandalar 19.00 27 P P 11 28 04.2 +1.4
baz=227,SNR=14
M27K Edge Creek, AK 19.00 47 P P 11 28 03.5 +0.5
baz=253
J26L Joseph Creek 19.05 40 P P 11 28 03.7 +0.2
baz=245,SNR=70
H25K Birch Creek 19.07 34 P P 11 28 04.8 +1.2
baz=237,SNR=5.1
F24K Squaw Lake 19.14 29 P P 11 28 05.5 +1.1
baz=231,SNR=12
L27K Beaver Creek, 19.24 45 P Pn 11 28 07.2 -0.6
baz=251
G25K Bearman Lake 19.25 33 P P 11 28 06.3 +0.8
baz=235
E24K Your Creek 19.33 28 P P 11 28 07.4 +1.0
baz=228,SNR=25
D23K Nanushuk River 19.36 24 P P 11 28 07.5 +0.9
baz=223,SNR=12
TOLK Toolik Lake Re 19.41 26 P P 11 28 08.8 +1.6
baz=226,SNR=23
O28M Mount Upton 19.42 52 P P 11 28 07.8 +0.1
baz=259
BVCY Beaver Creek 19.47 47 P P 11 28 08.4 +0.4
baz=254
YUK3 Moose Creek 19.50 49 P P 11 28 08.7 +0.2
baz=256
I26K Coal Creek Min 19.56 38 P P 11 28 09.2 +0.3
baz=243
PNL Peninsula 19.66 56 P P 11 28 10.0 0.0
baz=263
YUK8 Steele Glacier 19.72 51 P P 11 28 11.3 +0.3
baz=258
F25K Christian Rive 19.88 31 P P 11 28 13.9 +1.6
baz=234,SNR=7.3
C23K Itkillik River 20.02 22 P P 11 28 15.0 +1.3
baz=222,SNR=21
EGAK Eagle 20.11 41 P P 11 28 15.3 +0.5
EGAK Eagle 20.11 41 P P 11 28 14.9 +0.1
baz=247,SNR=46
BMAR Burnt Mountain 20.12 32 P P 11 28 16.1 +1.2
G26K Porcupine Rive 20.12 34 P P 11 28 15.9 +1.0
baz=238,SNR=17
O29M Mount Kennedy 20.14 54 P P 11 28 14.9 -0.4
baz=262
E25K Arctic Village 20.21 30 P P 11 28 16.9 +1.1
baz=233,SNR=13
I27K Kandik River 20.27 38 P P 11 28 17.3 +0.8
baz=245,SNR=16
YUK6 Outpost Mounta 20.33 52 P P 11 28 17.7 +0.2
baz=261
C24K Franklin Bluff 20.39 24 P P 11 28 18.8 +1.1
baz=225
F26K Sheenjek River 20.41 32 P P 11 28 20.1 +2.1
baz=236,SNR=19
P29M Windy Craggy 20.49 56 P P 11 28 19.4 +0.4
baz=265
M29M Somme Creek 20.56 48 P P 11 28 20.5 +0.7
baz=257
H27K Steamboat Moun 20.57 37 P P 11 28 20.4 +0.6
baz=243
DAWY Dawson 20.59 43 P P 11 28 19.7 -0.2
DAWY Dawson 20.59 43 P P 11 28 21.5 +1.5
baz=251,SNR=9.1
D25K Kavik River 20.73 26 P P 11 28 22.3 +0.9
baz=229,SNR=7.5
HYT Haines Junctio 20.73 53 P P 11 28 21.3 -0.4
baz=262
G27K Doyon Strip 20.79 35 P P 11 28 22.0 -0.1
baz=242
L29M L29M 20.87 46 P P 11 28 23.9 +0.9
baz=255,SNR=6.7
SEY Seymchan 20.98 313 P P 11 28 24.7 +0.6
comp=Z,17nm,0.8s,baz=101,slow=9.1,SNR=22
SEY PcP PcP 11 32 26.0 +0.7
comp=Z,3.4nm,0.6s,baz=124,slow=6.0,SNR=5.3
comp=Z,17nm,0.8s
SEY Seymchan 20.98 313⇑ *iP* P 11 28 25.3 +1.2
SEY pmax pmax
comp=Z,56nm,1.7s
N30M Aishikik Lake 21.02 51 P P 11 28 23.8 -0.8
baz=261
S31K Pelican 21.23 61 P P 11 28 26.6 -0.2
baz=271
MA2 Magadan 21.29 303 P P 11 28 28.2 +0.8
comp=Z,18nm,0.9s,baz=122,slow=9.6,SNR=3.8
comp=Z,18nm,0.9s
K29M Barlow Dome 21.32 45 P P 11 28 28.2 +0.4
baz=254,SNR=12
O30N Mendenhall 21.41 53 P P 11 28 28.6 -0.3
baz=264
I29M Ogilvie Camp, 21.45 40 P P 11 28 28.5 -0.6
I29M Ogilvie Camp, 21.45 40 P P 11 28 28.6 -0.6
baz=250,SNR=26
E27K Coleen River 21.48 32 P P 11 28 30.8 +1.3
baz=239,SNR=14
C26K Camden Bay 21.50 26 P P 11 28 30.2 +0.5
baz=230
C27K Jago River 21.65 27 P P 11 28 32.0 +0.8
baz=233
SKAG Skagway 21.71 57 P P 11 28 31.0 -0.8
SKAG Skagway 21.71 57 P P 11 28 31.1 -0.8
baz=268
R32K Eaglecrest 22.13 60 P P 11 28 36.0 -0.3
baz=271
S32K Killisnoo 22.14 62 P P 11 28 36.1 -0.3
baz=273
M31M Drury Creek, Y 22.39 50 P P 11 28 39.0 +0.1
baz=262
EPYK Eagle Plains 22.41 38 P P 11 28 37.5 -1.5
EPYK Eagle Plains 22.41 38 P P 11 28 38.6 -0.4
baz=249,SNR=8.9
G30M tAoh Zraii Nji 22.81 37 P P 11 28 42.3 -0.5
baz=248,SNR=8.4
P33M Teslin, Yukon 23.00 55 P P 11 28 44.0 -0.7
Q32M Nakina River 23.29 58 P P 11 28 47.5 0.0
baz=272
WRAK Wrangell Islan 23.46 65 P P 11 28 49.0 +0.1
baz=277
F31M Tsiigehtchic 23.88 37 P P 11 28 52.6 +0.1
baz=251,SNR=7.7
MMPY Sheldon Lake, 23.89 49 P P 11 28 53.0 +0.2
baz=264,SNR=8.0
INK Inuvik 24.25 35 P P 11 28 55.9 +0.1
comp=Z,21nm,0.7s,baz=229,slow=9.0,SNR=29
INK pP pwP 11 29 25.1 -1.8
comp=Z,25nm,1.0s,baz=226,slow=12,SNR=7.6
INK PcP PcP 11 32 32.7 +0.8
comp=Z,6.6nm,0.8s,baz=151,slow=5.0,SNR=5.2
INK ScP ScP 11 35 57.0 -0.6
comp=Z,3.4nm,0.9s,baz=220,slow=4.4,SNR=3.8
comp=Z,21nm,0.7s
INK Inuvik 24.25 35 P P 11 28 56.0 +0.1
INK IAmb IAmb 11 29 29.7
comp=Z,34nm,1.1s
INK Inuvik 24.25 35 P P 11 28 56.0 +0.1
INK pmax pmax
comp=Z,34nm,1.1s
INK Inuvik 24.25 35 P P 11 28 56.3 +0.4
baz=249,SNR=15
DLBC Dease Lake 24.49 59 P P 11 28 59.4 +1.1
comp=Z,2.1nm,0.6s,baz=234,slow=8.2,SNR=7.7
DLBC pP pwP 11 29 28.2 +0.1
comp=Z,47nm,1.3s,baz=270,slow=11,SNR=10
comp=Z,2.1nm,0.6s
DLBC Dease Lake 24.49 59 P P 11 28 57.9 -0.3
baz=274
T35M Bob Quinn 24.53 63 P P 11 28 58.0 -0.6
baz=277
WTLY Watson Lake, Y 25.01 55 P P 11 29 03.1 +0.2
baz=272
TGTN Hyland Airport 25.24 52 P P 11 29 04.7 -0.3
baz=269
KOTAN Kotaneelee Air 27.38 55 P P 11 29 22.8 -1.3
baz=276
WRGLY Wrigley 27.48 48 P P 11 29 25.0 0.0
baz=270
C36M Paulatuk 27.83 35 P P 11 29 28.2 +0.1
baz=258
TIXI Tiksi 31.44 329 PcP PcP 11 32 49.3 -0.2
comp=Z,4.3nm,0.7s,baz=90,slow=24,SNR=9.3
TIXI LR LR 11 43 50.9
comp=Z,51nm,18.8s,baz=4.0,slow=38
TIXI Tiksi 31.44 329 P P 11 30 09.4 +10
YAK Yakutsk 31.44 310 P P 11 29 58.6 -1.4
comp=Z,7.4nm,0.5s,baz=182,slow=5.2,SNR=4.2
YAK LR LR 11 43 35.0
comp=Z,33nm,18.9s,baz=90,slow=38
comp=Z,7.4nm,0.5s
YAK Yakutsk 31.44 310⇓ *eP* P 11 29 59.8 -0.2
YAK pmax pmax
comp=Z,18nm,0.8s
YKA Yellowknife Ar 31.58 49 P P 11 30 01.3 +0.1
comp=Z,1.4nm,0.7s,baz=274,slow=9.2,SNR=8.0
YKA ScP ScP 11 36 20.7 +0.4
comp=Z,2.4nm,0.8s,baz=297,slow=2.9,SNR=3.8
comp=Z,1.4nm,0.7s
YKA Yellowknife Ar 31.58 49 *i* P P 11 30 01.2 -0.1
YKA pmax pmax
comp=Z,1.0nm,0.7s
BRLDA Berland Lookou 32.31 65 IAmb IAmb 11 30 48.2
comp=Z,62nm,2.0s
B08A Colville Reser 33.56 76 P P 11 30 20.1 +1.4
B08A IAmb IAmb 11 30 52.9
comp=Z,19nm,1.1s
KLR Kul'dur 34.44 287 P P 11 30 24.6 -1.5
comp=Z,0.9nm,0.3s,baz=44,slow=11,SNR=3.8
comp=Z,0.9nm,0.3s
NEW Newport 34.90 74 P P 11 30 30.8 +0.5
comp=Z,2.0nm,0.5s,baz=289,slow=3.9,SNR=9.6
NEW pP pP 11 31 00.8 +1.0
comp=Z,12nm,0.9s,baz=304,slow=5.9,SNR=9.0
comp=Z,2.0nm,0.5s
NEW Newport 34.90 74 P P 11 30 31.1 +0.9
NEW IAmb IAmb 11 31 04.2
comp=Z,17nm,1.1s
NEW Newport 34.90 74 P P 11 30 31.2 +0.9
NEW pmax pmax
comp=Z,17nm,1.1s
NEW Newport 34.90 74 P P 11 30 30.7 +0.5
baz=298
YBH Yreka Blue Hor 35.01 88 LR LR 11 42 14.6
comp=Z,41nm,19.4s,baz=332,slow=31
H11N2 WAKE ISLAND Hy 36.49 214 T T 12 09 13.4
baz=21,slow=76,SNR=347
H11N3 WAKE ISLAND Hy 36.50 213 T T 12 09 14.0
baz=21,slow=76,SNR=358
H11N1 WAKE ISLAND Hy 36.51 214 T T 12 09 14.8
baz=21,slow=76,SNR=192
USRK Ussuriysk Ar. 36.84 279 PcP PcP 11 33 06.4 +0.9
comp=Z,10nm,0.9s,baz=62,slow=2.7,SNR=9.1
RES Resolute Bay 36.99 26 P P 11 30 47.2 -0.4
comp=Z,1.6nm,0.4s,baz=265,slow=10,SNR=9.6
RES PcP PcP 11 33 05.7 +0.2
comp=Z,4.0nm,0.7s,baz=226,slow=10.0,SNR=5.5
RES LR LR 11 49 25.0
comp=Z,48nm,18.2s,baz=2.0,slow=42
comp=Z,1.6nm,0.4s
MSO Missoula 37.49 75 P P 11 30 52.7 +0.4
baz=301
MJAR Matsushiro Arr 37.69 265 PcP PcP 11 33 09.1 +0.8
comp=Z,6.4nm,0.8s,baz=64,slow=2.7,SNR=11
H11S1 WAKE ISLAND Hy 37.69 213 T T 12 10 23.7
baz=20,slow=76,SNR=144
H11S2 WAKE ISLAND Hy 37.71 213 T T 12 10 24.8
baz=20,slow=76,SNR=137
H11S3 WAKE ISLAND Hy 37.71 213 T T 12 10 24.9
baz=20,slow=76,SNR=52
PAHR Pah Rah Range 38.24 88 P P 11 31 00.5 +1.7
PAHR IAmb IAmb 11 31 32.2
comp=Z,14nm,0.9s
PNTR Pine Nut 38.49 89 P P 11 31 03.7 +2.7
PNTR IAmb IAmb 11 31 35.1
comp=Z,22nm,0.7s
HLID Hailey 38.98 79 P P 11 31 05.3 +0.4
baz=304
EGMT Eagleton 39.30 71 P P 11 31 08.0 +0.6
baz=301
BOZ Bozeman (W) 39.50 75 P P 11 31 09.7 +0.5
baz=303
NVAR Mina Array Bea 39.70 89 P P 11 31 11.9 +0.9
comp=Z,1.3nm,0.7s,baz=301,slow=7.7,SNR=12
NVAR pP pP 11 31 42.1 +1.2
comp=Z,6.3nm,0.8s,baz=296,slow=8.2,SNR=22
NVAR ScP ScP 11 36 52.3 +1.6
comp=Z,0.4nm,0.7s,baz=226,slow=2.4,SNR=4.0
comp=Z,1.3nm,0.7s
FFC Flin Flon 40.30 58 P P 11 31 14.8 -0.7
FFC pP pP 11 31 46.8 +1.7
YHH Holmes Hill 40.41 76 P P 11 31 17.8 +0.9
YMR Madison River 40.41 76 IAmb IAmb 11 31 52.1
comp=Z,16nm,1.1s
ALE Alert 40.68 11 P P 11 31 18.5 +0.2
VES Vestal, Richgr 40.89 92 P P 11 31 21.2 +0.6
baz=311
CN2 Changchun 40.97 283 *eP* P 11 31 19.1 -2.0
CN2 *e*PP PP 11 32 58.6 +0.5
CN2 *e*S S 11 37 19.1 -3.6
CN2 *es*S sS 11 38 13.8 -1.0
CWC Cottonwood Cre 41.11 91 P P 11 31 22.9 +0.3
baz=311
RLMT Red Lodge 41.15 74 P P 11 31 24.3 +1.5
RLMT IAmb IAmb 11 31 57.9
comp=Z,40nm,1.4s
RLMT Red Lodge 41.15 74 P P 11 31 23.1 +0.2
baz=304
GRAC Grapevine Rang 41.19 90 P P 11 31 24.4 +1.4
baz=310
R11A Troy Canyon, C 41.40 87 P P 11 31 26.5 +1.5
baz=309
MPMC Manual Prospec 41.72 91 P P 11 31 28.6 +1.0
baz=311
FURC Furnace Creek, 41.84 90 P P 11 31 29.3 +1.0
baz=311
TPNV Topopah Spring 41.90 89 P P 11 31 30.8 +1.8
TPNV IAmb IAmb 11 32 02.8
comp=Z,11nm,0.8s
TPNV Topopah Spring 41.90 89 P P 11 31 30.8 +1.8
TPNV pmax pmax
comp=Z,11nm,0.8s
TPNV Topopah Spring 41.90 89 P P 11 31 30.0 +1.0
baz=310
DUG Dugway, Tooele 41.93 83 P P 11 31 30.4 +1.2
DUG IAmb IAmb 11 32 04.6
comp=Z,16nm,1.1s
DUG Dugway, Tooele 41.93 83 P P 11 31 30.4 +1.2
DUG pmax pmax
comp=Z,16nm,1.1s
DUG Dugway, Tooele 41.93 83 P P 11 31 30.0 +0.8
baz=308
LAO LASA Array 42.05 70 P P 11 31 31.1 +1.2
LAO IAmb IAmb 11 32 06.5
comp=Z,35nm,1.7s
LAO LASA Array 42.05 70 P P 11 31 31.1 +1.2
baz=303
JCJ Chichijima 42.05 251 P P 11 31 30.6 +0.5
comp=Z,46nm,0.4s,baz=267,slow=24,SNR=9.0
EDW2 Edwards Air Fo 42.20 93 P P 11 31 31.5 +0.2
baz=312
DGMT Dagmar 42.23 67 IAmb IAmb 11 31 32.9
comp=Z,27nm,1.2s
DGMT Dagmar 42.23 67 P P 11 31 32.1 +0.8
baz=302
PRN Pahroc Range 42.33 87 IAmb IAmb 11 32 05.7
comp=Z,19nm,1.1s
BW06 Boulder Array 42.34 77 P P 11 31 32.9 +0.3
baz=306
PDAR Pinedale Array 42.34 77 P P 11 31 33.2 +0.7
comp=Z,1.3nm,0.6s,baz=316,slow=4.1,SNR=15
PDAR pP pP 11 32 03.0 +0.1
comp=Z,12nm,0.9s,baz=309,slow=5.2,SNR=9.9
PDAR ScP ScP 11 37 01.6 +0.6
comp=Z,0.6nm,0.6s,baz=318,slow=2.0,SNR=5.6
comp=Z,1.3nm,0.6s
SHOC Shoshone, Teco 42.57 90 P P 11 31 35.2 +1.0
baz=311
GSC Goldstone, Bar 42.64 91 IAmb IAmb 11 32 07.2
comp=Z,20nm,1.0s
GSC Goldstone, Bar 42.64 91 P P 11 31 35.4 +0.5
baz=312
FMP Fort Macarthur 42.81 94 P P 11 31 36.3 +0.2
baz=313
BFSC Mount Baldy Ra 42.83 93 P P 11 31 36.6 0.0
baz=312
HEC Hector,Ludlow 43.24 91 P P 11 31 39.7 0.0
baz=312
GMRC Granite Mounta 43.68 91 P P 11 31 43.5 +0.1
baz=312
PFO Pinyon Flats O 43.99 93 pP pP 11 32 16.1 -0.2
comp=Z,5.0nm,1.0s,baz=308,slow=7.1,SNR=5.5
PFO LR LR 11 46 42.1
comp=Z,34nm,18.3s,baz=347,slow=31
PFO Pinyon Flats O 43.99 93 P P 11 31 45.9 +0.1
baz=313
PFO Pinyon Flats O 43.99 93 P P 11 31 46.3 +0.5
PFO pP pP 11 32 16.7 +0.5
PFO sP sP 11 32 30.6 -0.9
TPFO Pinon Flats 44.00 93 P P 11 31 45.9 0.0
baz=313
K22A Casper 44.20 75 P P 11 31 48.0 +0.5
baz=307
IRM Iron Mountain 44.42 91 P P 11 31 49.3 +0.2
baz=312
MONP2 Monument Peak 44.51 93 P P 11 31 49.7 -0.3
baz=314
O20A White River Ci 44.72 79 IAmb IAmb 11 32 26.6
comp=Z,36nm,0.9s
O20A White River Ci 44.72 79 P P 11 31 51.7 +0.1
baz=308
RSSD Black Hills 44.78 72 P P 11 31 52.6 +0.5
baz=306
MDND Maddock 45.13 65 P P 11 31 55.3 +0.7
baz=304,SNR=13
NRIK Noril'sk 45.18 330 P P 11 31 54.9 +0.2
comp=Z,1.9nm,0.4s,baz=78,slow=16,SNR=4.2
comp=Z,1.9nm,0.4s
NRIK Noril'sk 45.18 330 P P 11 31 54.6 -0.1
NRIK Noril'sk 45.18 330⇓ *eP* P 11 31 54.7 +0.1
NRIK pmax pmax
comp=Z,9.0nm,1.2s
N23A Red Feather La 45.62 77 P P 11 31 58.8 0.0
baz=308
PV13 Radium Mtn., P 45.62 82 IAmb IAmb 11 32 33.6
comp=Z,28nm,1.0s
ULM Lac du Bonnet 45.80 61 pP pP 11 32 30.7 +0.7
comp=Z,6.0nm,0.8s,baz=306,slow=9.5,SNR=4.0
WUAZ Wupatki 45.80 87 P P 11 31 59.5 -0.6
baz=312
MVCO Mesa Verde 46.43 83 P P 11 32 05.1 0.0
baz=311
AGMN Agassiz Nation 46.92 63 IAmb IAmb 11 32 09.7
comp=Z,24nm,1.1s
AGMN Agassiz Nation 46.92 63 P P 11 32 08.5 -0.1
baz=305,SNR=6.0
D32A Dogwood Acres, 46.98 65 IAmb IAmb 11 32 09.3
comp=Z,27nm,1.0s
S22A 4UR Ranch, Cre 47.09 81 P P 11 32 10.1 -0.3
baz=310
214A Organ Pipe Nat 47.35 91 P P 11 32 11.3 -0.8
baz=314
SUSD Miller 47.50 69 IAmb IAmb 11 32 14.6
comp=Z,35nm,1.1s
SUSD Miller 47.50 69 P P 11 32 13.4 +0.2
baz=307
SDCO Great Sand Dun 47.89 80 P P 11 32 17.3 +0.8
baz=311
OGNE Ogallala 47.90 74 P P 11 32 16.8 +0.5
baz=309
TUC Tucson 48.34 89 P P 11 32 20.5 +0.7
TUC Tucson 48.34 89 P P 11 32 20.5 +0.7
TUC pmax pmax
comp=Z,7.0nm,0.9s
TUC Tucson 48.34 89 P P 11 32 20.5 +0.7
baz=314
TUC Tucson 48.34 89 P P 11 32 21.7 +1.9
TUC pP pP 11 32 50.6 -0.2
T25A Trinidad 48.94 80 P P 11 32 25.2 +0.7
baz=311
ULN Ulaanbaatar 49.02 298⇑ *eP* P 11 32 24.6 -0.3
ULN pmax pmax
comp=Z,10.0nm,2.5s
ANMO Albuquerque 49.17 84⇓ *eP* P 11 32 26.9 +0.7
ANMO pmax pmax
comp=Z,13nm,3.2s
ANMO Albuquerque 49.17 84 P P 11 32 26.5 +0.3
baz=312
ANMO Albuquerque 49.17 84 P P 11 32 26.6 +0.3
ANMO pP pP 11 32 57.5 +0.2
ECSD EROS Data Cent 49.27 68 P P 11 32 26.6 0.0
baz=308,SNR=5.2
SPITS Spitsbergen Ar 49.31 358 P P 11 32 26.8 +0.3
comp=Z,8.3nm,0.8s,baz=40,slow=11,SNR=3.8
comp=Z,8.3nm,0.8s
SONM Songino Array 49.39 299 P P 11 32 27.6 0.0
comp=Z,0.9nm,0.7s,baz=60,slow=8.9,SNR=4.6
SONM PcP PcP 11 33 47.9 0.0
comp=Z,3.4nm,0.8s,baz=72,slow=2.2,SNR=9.6
comp=Z,0.9nm,0.7s
EYMN Ely 49.48 61 P P 11 32 27.8 -0.4
baz=307
F36A Milaca 49.67 64 IAmb IAmb 11 33 50.4
comp=Z,31nm,1.8s
FRB Frobisher Bay 49.90 34 P P 11 32 31.7 +0.6
FRB pmax pmax
comp=Z,32nm,1.6s
SPMN Marine on St. 50.46 64 P P 11 32 35.1 -0.5
baz=309
L34A Svendsen Farm, 50.52 70 IAmb IAmb 11 32 37.2
comp=Z,27nm,1.1s
CBKS Cedar Bluff 50.62 75 P P 11 32 36.3 -0.6
baz=311
HHC Hu-ho-hao-te 50.91 289 *eP* P 11 32 39.6 +0.5
HHC pmax pmax
comp=Z,21nm,0.8s
HHC pmax pmax
comp=Z,660nm,5.8s
N35A Tabor 51.66 70 IAmb IAmb 11 32 48.1
comp=Z,16nm,0.6s
G40A Rib Lake 51.85 63 IAmb IAmb 11 32 46.4
comp=Z,16nm,0.9s
NJ2 Nanjing 52.49 275 *eP* P 11 32 49.8 -1.0

NJ2 pmax pmax
comp=Z,7.0nm,0.5s
JFWS Jewell Farm 53.36 65 P P 11 32 56.6 -0.5
baz=311
WMOK Wichita Mounta 53.93 78 P P 11 33 01.6 +0.3
TXAR Lajitas Array 54.77 87 P P 11 33 08.4 +0.8
comp=Z,0.9nm,0.5s,baz=284,slow=5.0,SNR=8.7
TXAR pP **pP 11 33 38.9 -0.4**
comp=Z,6.8nm,0.7s,baz=296,slow=4.9,SNR=15
TXAR PcP **PcP 11 34 08.9 +0.6**
comp=Z,1.0nm,0.6s,baz=239,slow=0.7,SNR=4.0
TXAR ScP **ScP 11 37 54.5 +0.7**
comp=Z,1.2nm,0.8s,baz=300,slow=5.5,SNR=4.1
comp=Z,0.9nm,0.5s
HDIL Hopedale 55.46 67 P P 11 33 11.7 -0.6
baz=312
ZALV Zalesovo Beam 55.82 316 P P 11 33 14.5 -0.1
comp=Z,0.6nm,0.3s,baz=42,slow=6.9,SNR=3.6
ZALV PcP **PcP 11 34 11.8 -0.1**
comp=Z,3.4nm,0.6s,baz=32,slow=4.2,SNR=12
comp=Z,0.6nm,0.3s
CCM Cathedral Cave 56.06 70 P P 11 33 15.7 -0.9
baz=313
JMIC Jan Mayen 56.14 6 LR LR 11 57 53.5
comp=Z,113nm,18.1s,baz=248,slow=36
JCT Junction City 56.30 83 P P 11 33 18.1 -0.3
baz=315
WHTX Lake Whitney, 56.63 80 P P 11 33 20.5 -0.2
baz=315
Q44A Meyer Farm, Va 56.75 68 IAmb IAmb 11 33 21.9
comp=Z,14nm,0.8s
SFIN Lafayette 56.81 66 P P 11 33 21.8 0.0
baz=313,SNR=6.3
FCAR Ozark Folk Cen 57.05 73 IAmb IAmb 11 33 24.8
comp=Z,8.9nm,1.1s
MIAR Mount Ida 57.14 75 IAmb IAmb 11 35 21.9
comp=Z,12nm,0.8s
MIAR Mount Ida 57.14 75 P P 11 33 23.7 -0.6
baz=314
ARCES ARCESS Array B 57.39 353 P P 11 33 25.1 -0.4
comp=Z,3.7nm,1.0s,baz=14,slow=7.2,SNR=7.6
ARCES PcP **PcP 11 34 17.2 -0.6**
comp=Z,1.5nm,0.6s,baz=19,slow=4.1,SNR=4.7
ARCES LR LR 12 01 20.0
comp=Z,45nm,18.1s,baz=342,slow=39
comp=Z,3.7nm,1.0s
DGZ Jazzator, Alta 57.63 311 ⇓*i*P **P 11 33 27.6 -0.1**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
O48B Farmland 57.96 64 P P 11 33 28.9 -1.0
baz=314
P49A Miami Univ. Ec 58.71 65 P P 11 33 34.1 -1.0
baz=314
WCI Wyandotte Cave 58.75 67 P P 11 33 35.2 -0.2
baz=314
ACSO Alum Creek Sta 59.17 63 P P 11 33 37.7 -0.5
baz=315
WVT Waverly 59.36 70 P P 11 33 39.2 -0.5
baz=315
M53A WI Miller and 59.55 61 P P 11 33 40.6 -0.3
baz=315
OXF Oxford 59.60 72 P P 11 33 40.9 -0.4
baz=315
R50A Paris 59.81 66 IAmb IAmb 11 33 43.5
comp=Z,15nm,1.0s
Q51A Peebles 59.82 64 IAmb IAmb 11 33 45.0
comp=Z,22nm,1.1s
P52A Corning 60.05 63 P P 11 33 43.7 -0.6
baz=315
LONY Lake Ozonia 60.41 54 P P 11 33 46.0 -0.8
baz=316
M55A Ridgway 60.54 59 P P 11 33 47.9 +0.2
M55A IAmb IAmb 11 34 21.8
comp=Z,21nm,1.1s
S51A Beattyville 60.67 66 IAmb IAmb 11 34 16.0
comp=Z,18nm,1.4s
KURK Kurchatov 60.78 316 P P 11 33 48.5 -0.5
KURK IAmb IAmb 11 33 50.3
comp=Z,12nm,0.8s
KURK Kurchatov 60.78 316*d i*P **P 11 33 48.2 -0.9**
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 60.78 316 P **P 11 33 49.2 +0.1**
KURK pP **pwP 11 34 24.7 +0.2**
KURK pwP **PcP 11 34 31.1 -0.5**
KURBB Kurchatov Arra 60.89 316 P **P 11 33 49.0 -0.8**
comp=Z,11nm,0.8s,baz=43,slow=7.0,SNR=60
KURBB PcP **PcP 11 34 31.7 -0.3**
comp=Z,1.5nm,0.4s,baz=43,slow=3.9,SNR=6.4
comp=Z,11nm,0.8s
MCWV Mont Chateau 61.27 62 P P 11 33 52.6 +0.1
baz=316
BINY Binghamton 61.46 57 P P 11 33 54.1 +0.3
baz=316
TZTN Tazewell 61.48 66 P P 11 33 54.0 -0.1
baz=316
SSPA Standing Stone 61.60 60 P P 11 33 54.8 0.0
baz=316
SSPA Standing Stone 61.60 60 P **P 11 33 54.5 -0.3**
SSPA pP **pP 11 34 26.8 0.0**
SSPA pwP **PcP 11 34 35.6 +0.5**
WMQ Urumqi 61.73 306 *eP* **P 11 33 59.6 +3.9**
WMQ pmax pmax
comp=Z,19nm,0.7s
TKL Tuckaleechee C 61.99 67 IAmb IAmb 11 33 58.8
comp=Z,20nm,1.2s
LBNH Lisbon 61.99 53 P P 11 33 57.4 0.0
baz=317
MK31 Makanchi Array 62.11 311*c i*P **P 11 33 57.4 -0.7**
MKAR Makanchi Array 62.11 311 P **P 11 33 57.3 -0.8**
comp=Z,2.7nm,0.6s,baz=51,slow=6.8,SNR=27
comp=Z,2.7nm,0.6s
MKAR Makanchi Array 62.11 311 P **P 11 33 57.5 -0.7**
MKAR Makanchi Array 62.11 311 *i* P **P 11 33 57.2 -0.9**
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MAKZ Makanchi 62.24 312 P **P 11 33 58.5 -0.5**
MAKZ Makanchi 62.24 312 P **P 11 33 58.5 -0.5**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 62.26 323 LR LR 12 02 33.5
comp=Z,34nm,18.6s,baz=340,slow=37
BRVK Borovoye 62.27 323 P **P 11 34 00.2 +1.2**
BRVK IAmb IAmb 11 34 00.9
comp=Z,7.8nm,0.9s
BRVK Borovoye 62.27 323*c i*P **P 11 33 59.7 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 62.27 323 P **P 11 33 59.7 +0.6**
CD2 Chengdu 62.34 285 *eP* **P 11 33 58.3 -1.6**
U54A Nelsons Funny 62.46 65 IAmb IAmb 11 34 02.1
comp=Z,18nm,1.1s
V53A Saluda 62.52 67 IAmb IAmb 11 34 02.8
comp=Z,28nm,1.6s
BLA Blacksburg 62.73 64 P **P 11 34 02.7 +0.3**
BLA Blacksburg 62.73 64 P **P 11 34 02.7 +0.3**
BLA pmax pmax
comp=Z,27nm,1.1s
BLA Blacksburg 62.73 64 P **P 11 34 02.8 +0.3**
baz=317
LUPA Lehigh Univers 62.94 58 IAmb IAmb 11 34 04.7
comp=Z,16nm,0.8s
BG3 Lake Jocassee 62.95 67 IAmb IAmb 11 34 04.9
comp=Z,11nm,1.0s
S57A Dark Hollow, R 63.12 62 IAmb IAmb 11 34 06.3
comp=Z,13nm,0.9s
V55A Taylorsville 63.28 65 IAmb IAmb 11 34 07.8
comp=Z,12nm,0.9s
U56A King 63.38 64 IAmb IAmb 11 34 07.8
comp=Z,13nm,0.8s
ARU Arti 63.41 331 LR LR 12 06 31.7
comp=Z,39nm,18.0s,baz=346,slow=40
ARU Arti 63.41 331*c i*P **P 11 34 06.9 +0.4**
ARU *PP **PcP 11 34 42.5 +0.3**
ARU 11 36 22.9
ARU S **S 11 42 30.1 +2.1**
ARU SS **SS 11 46 36.3 +0.2**
ARU pmax pmax
comp=Z,7.0nm,1.7s
T57A Hurt 63.52 63 IAmb IAmb 11 34 08.4
comp=Z,11nm,0.9s
KMSC Kings Mountain 63.73 66 IAmb IAmb 11 34 10.0
comp=Z,17nm,1.0s
KMSC Kings Mountain 63.73 66 P **P 11 34 09.2 +0.2**
baz=317
GOGA Godfrey 63.80 69 P **P 11 34 09.3 -0.2**
baz=317

HODGE Hodges 63.88 67 IAmb IAmb 11 34 11.2
comp=Z,9.1nm,0.9s
JSC Jenkinsville 64.41 67 IAmb IAmb 11 34 14.4
comp=Z,8.3nm,0.8s
T59A Double "B" Far 64.46 62 P **P 11 34 14.0 +0.3**
T59A IAmb IAmb 11 34 15.0
comp=Z,16nm,0.8s
V58A Windy Hill, Pi 64.48 64 IAmb IAmb 11 34 15.1
comp=Z,12nm,0.8s
BIRD Birdtown, Kers 64.58 66 IAmb IAmb 11 34 15.5
comp=Z,9.3nm,0.9s
FINES FINESS Array B 65.27 350 P **P 11 34 18.1 -0.4**
comp=Z,1.9nm,0.8s,baz=44,slow=14,SNR=3.9
comp=Z,1.9nm,0.8s
NB2 NORSAR Subarra 66.61 358 P **P 11 34 26.6 -0.6**
comp=Z,1.0nm,0.5s,baz=2.4,slow=6.5
NOA NORSAR Array B 66.61 358 P **P 11 34 27.0 -0.2**
comp=Z,2.4nm,0.7s,baz=2.6,slow=6.4,SNR=9.2
comp=Z,2.4nm,0.7s
NOA NORSAR Array B 66.61 358 P **P 11 34 27.0 -0.2**
PZH PanZhiHua 66.78 284 P **P 11 34 29.8 +0.9**
PZH pmax pmax
comp=Z,7.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.7s
HFS Hagfors 67.44 357 P **P 11 34 31.7 -0.7**
comp=Z,3.3nm,0.4s,baz=8.5,slow=3.0,SNR=26
HFS LR LR 12 05 26.9
comp=Z,40nm,18.1s,baz=296,slow=37
comp=Z,3.3nm,0.4s
VSU Vasula 68.11 349⇑*eP* **P 11 34 34.3 -2.3**
TKM2 Tokmak 2 68.12 313 P **P 11 34 37.7 +0.4**
SNR=5.2
USP Ospenovka 68.33 314 P **P 11 34 38.6 +0.2**
SNR=12
KBK Karagaybulak 68.62 313 P **P 11 34 40.9 +0.6**
SNR=5.8
AAK Ala-Archa 68.84 313 P **P 11 34 42.2 +0.6**
SNR=9.0
AAK Ala-Archa 68.84 313 P **P 11 34 42.1 +0.5**
comp=Z,18nm,0.7s,baz=161,slow=2.7,SNR=15
comp=Z,18nm,0.7s
AAK Ala-Archa 68.84 313 P **P 11 34 41.7 0.0**
AAK IAmb IAmb 11 34 43.2
comp=Z,16nm,0.8s
AAK Ala-Archa 68.84 313*d i*P **P 11 34 41.6 0.0**
AAK pmax pmax
comp=Z,15nm,0.7s
AAK Ala-Archa 68.84 313 P **P 11 34 42.1 +0.5**
ABKAR Abkulak array 69.09 326 P **P 11 34 42.9 0.0**
ABKAR Abkulak array 69.09 326 P **P 11 34 42.7 -0.2**
EKS2 Erkin-Say 69.14 314 P **P 11 34 44.2 +0.8**
SNR=7.1
UCH Uchtor 69.16 313 P **P 11 34 44.6 +0.7**
SNR=5.8
AML Almayashu 69.60 313 P **P 11 34 47.4 +0.8**
SNR=10.0
BELG Belogornoye 70.00 335*ce*P **P 11 34 47.4 -0.9**
BELG pmax pmax
comp=Z,2.0nm,0.9s
ARK Arkit 70.63 314 P **P 11 34 53.1 +0.6**
ARK pmax pmax
comp=Z,3.0nm,1.3s
KSH Kashi 70.66 310 P **P 11 34 56.4 +3.6**
KSH pmax pmax
comp=Z,25nm,0.8s
TRKS Terek-Say 71.20 315 P **P 11 34 56.6 +0.5**
TRKS pmax pmax
comp=Z,10.0nm,0.9s
BTK Batken 72.55 314 IAmb IAmb 11 35 04.9
comp=Z,14nm,0.9s
BTK Batken 72.55 314 P **P 11 35 04.4 +0.4**
BTK pmax pmax
comp=Z,17nm,0.9s
MYLDM Lahad Datu 73.11 256 P **P 11 35 09.2 +1.6**
MYLDM IAmb IAmb 11 35 10.5
comp=Z,27nm,1.0s
GAR Garm 73.64 314 IAmb IAmb 11 35 11.3
comp=Z,24nm,0.8s
CHGR Chuyangaron 74.43 314 P **P 11 35 14.9 -0.2**
CHGR pmax pmax
comp=Z,65nm,0.9s
CMAR Chiang Mai Arr 74.57 280 P **P 11 35 15.0 -1.0**
comp=Z,0.9nm,0.4s,baz=26,slow=7.4,SNR=9.7
comp=Z,0.9nm,0.4s
CMAR Chiang Mai Arr 74.57 280 *i* P **P 11 35 16.2 +0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 75.36 346 P **P 11 35 18.4 -1.6**
comp=Z,0.7nm,0.5s,baz=18,slow=5.9,SNR=6.3
AKASG LR LR 12 11 47.7
comp=Z,43nm,20.2s,baz=296,slow=38
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 75.36 346 *i* P **P 11 35 19.2 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 75.36 346⇑*i*P **P 11 35 18.9 -1.1**
NIL Nilore 76.68 308 P **P 11 35 27.9 0.0**
NIL IAmb IAmb 11 35 28.9
comp=Z,25nm,0.8s
NIL Nilore 76.68 308 P **P 11 35 27.9 0.0**
NIL pmax pmax
comp=Z,25nm,0.8s
DPC Dobruska-Polom 77.08 354 P **P 11 35 29.7 -0.2**
DPC pmax pmax
comp=Z,8.0nm,2.9s
KBL Kabul 77.90 312 P **P 11 35 33.6 -1.3**
KBL pmax pmax
comp=Z,16nm,0.8s
KHC Kasperske Hory 78.45 356 P **P 11 35 37.6 +0.2**
KHC pmax pmax
comp=Z,7.0nm,2.5s
GERES GERESS Array B 78.73 356 P **P 11 35 39.0 -0.1**
comp=Z,1.4nm,0.7s,baz=32,slow=5.3,SNR=11
comp=Z,1.4nm,0.7s
GERES GERESS Array B 78.73 356 P **P 11 35 39.0 -0.1**
VYHS Vyhne 78.75 352 *eP* **P 11 35 39.8 +0.7**
KBZ Khabaz 79.21 335⇑*eP* **P 11 35 42.0 +0.4**
KBZ pmax pmax
comp=Z,4.0nm,1.1s
ECH Echery 79.50 0 P **P 11 35 42.8 -0.4**
ECH pmax pmax
comp=Z,43nm,1.5s
GEYT Alibeck 79.56 321 P **P 11 35 44.1 +0.4**
comp=Z,3.5nm,0.8s,baz=343,slow=4.6,SNR=4.7
comp=Z,3.5nm,0.8s
KBA Koelnbreinsper 80.51 356 P **P 11 35 49.1 +0.3**
KBA pmax pmax
comp=Z,14nm,0.9s
CTAO Charters Tower 80.73 219 P **P 11 35 50.4 +0.4**
CTAO pmax pmax
comp=Z,9.0nm,1.4s
MFF Saint Martin d 80.91 5 P **P 11 35 50.4 -0.3**
DAVOX Davos/Dischmat 80.92 358 P **P 11 35 50.7 -0.3**
comp=Z,3.0nm,0.7s,baz=347,slow=7.7,SNR=5.1
DAVOX LR LR 12 14 56.6
comp=Z,32nm,18.1s,baz=266,slow=38
comp=Z,3.0nm,0.7s
KSM Kuching 80.95 261 P **P 11 35 51.8 +0.5**
KSM IAmb IAmb 11 35 53.0
comp=Z,14nm,0.9s
GNI Garni 82.03 332 LR LR 12 18 26.3
comp=Z,14nm,18.0s,baz=318,slow=40
SSB Saint Sauveur 82.41 2 P **P 11 35 59.2 +0.5**
BNI Bardonecchia 82.67 0 P **P 11 36 00.9 +0.8**
BNI pmax pmax
comp=Z,7.0nm,0.7s
IPM Ipoh 84.20 270 P **P 11 36 08.7 +0.4**
IPM IAmb IAmb 11 36 09.7
comp=Z,24nm,1.1s
BR131 Keskin Array S 85.19 340⇑*eP* **P 11 36 13.0 0.0**
BRTR Keskin Array B 85.19 340 P **P 11 36 13.2 +0.2**
comp=Z,1.7nm,0.7s,baz=63,slow=3.0,SNR=7.2
comp=Z,1.7nm,0.7s
WRAB Tennant Creek 85.61 229⇓*eP* **P 11 36 14.7 -0.3**
WRAB pmax pmax
comp=Z,10.0nm,1.6s
WRA Warramunga Arr 85.62 229 P **P 11 36 15.2 +0.1**
comp=Z,1.6nm,0.7s,baz=30,slow=5.5,SNR=28
WRA pP **pP 11 36 47.9 -1.4**
comp=Z,2.2nm,0.8s,baz=38,slow=6.2,SNR=7.9
comp=Z,1.6nm,0.7s
WRA Warramunga Arr 85.62 229 *i* P **P 11 36 15.1 0.0**
WRA pmax pmax
comp=Z,2.0nm,0.6s
GRG Griva 85.85 349 P **P 11 36 16.0 -0.1**
LIT Litokhoron 86.68 348 P **P 11 36 19.1 -1.1**

PSI Prapat 86.81 270 P **P 11 36 21.4 +0.1**
PSI pmax pmax
comp=Z,39nm,0.9s
RPSI Rantau Prapat 86.89 270 P **P 11 36 21.4 -0.1**
ESDC Sonseca Array 87.52 9 P **P 11 36 23.6 -0.7**
comp=Z,1.1nm,0.8s,baz=355,slow=4.5,SNR=8.3
comp=Z,1.1nm,0.8s
AS31 Alice Springs 89.06 227 P **P 11 36 32.2 +0.7**
ASAR Alice Springs 89.06 227 P **P 11 36 32.1 +0.6**
comp=Z,8.3nm,0.7s,baz=31,slow=4.8,SNR=33
ASAR pP **pP 11 37 04.9 -1.0**
comp=Z,7.1nm,0.9s,baz=35,slow=4.6,SNR=8.9
comp=Z,8.3nm,0.7s
ASAR Alice Springs 89.06 227 P **P 11 36 32.4 +0.9**
ASAR Alice Springs 89.06 227 P **P 11 36 32.4 +0.9**
TORD Torodi Ar. Bea 114.29 6 PKP **PKiKP 11 42 14.9 -0.6**
comp=Z,0.6nm,0.6s,baz=358,slow=2.4,SNR=4.6
DBIC Dimbokro 120.00 14 PKP **PKPdf 11 42 25.1 -1.5**
comp=Z,1.1nm,0.4s,baz=90,slow=2.0,SNR=1.8
PLCA Paso Flores 127.80 110 PKP **PKPdf 11 42 40.9 +0.1**
comp=Z,1.9nm,0.9s,baz=2.0,slow=3.7,SNR=4.2
MAW Mawson 149.83 219 PKPbc **PKiKP 11 43 26.0 +0.7**
comp=Z,5.7nm,0.8s,baz=114,slow=3.2,SNR=19
MAW Mawson 149.83 219 PKP2 **PKiKP 11 43 26.0 +0.7**
BOSA Boshof 152.54 324 PKPbc **PKPbc 11 43 31.7 -0.4**
comp=Z,6.0nm,0.4s,baz=29,slow=2.3,SNR=30

IDC 20 11:39:13.9±2.1,2°.02S×140°.51E,h0km,mb3.5/3,
mbtmp3.5/4,ML3.5/1,MS2.9/5,Error ellipse:
s-maj=85.9km s-min=31.4km az=84.0,Near north coast
of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**9.31**	**277**	LR	LR	11 45 02.8	
comp=Z,17nm,19.4s,baz=232,slow=38							
GUMO	**Guam**	**16.09**	**15**	LR	LR	11 48 17.0	
comp=Z,56nm,22.0s,baz=194,slow=34							
WRA	**Warramunga Arr**	**18.81**	**198**	P	P	11 43 35.0	-0.3
0.2nm,0.3s,baz=21,slow=12,SNR=7.4							
WRA				LR	LR	11 51 52.3	
comp=Z,70nm,21.5s,baz=26,slow=40							
1.3nm,0.7s							
CTA	**Charters Tower**	**18.82**	**163**	LR	LR	11 51 43.1	
comp=Z,54nm,18.5s,baz=67,slow=40							
ASAR	**Alice Springs**	**22.45**	**196**	P	P	11 44 14.3	-0.5
0.9nm,0.6s,baz=26,slow=12,SNR=8.7							
0.9nm,0.6s							
KSRS	**Korea Array**	**40.97**	**345**	LR	LR	12 01 46.6	
comp=Z,14nm,20.3s,baz=135,slow=33							
MKAR	**Makanchi Array**	**70.35**	**322**	P	P	11 50 29.8	+0.1
0.3nm,0.7s,baz=124,slow=7.2,SNR=2.4							
0.3nm,0.7s							
VNDA	**Vanda**	**76.32**	**175**	P	P	11 51 04.6	+0.3
0.5nm,0.7s,baz=325,slow=7.5,SNR=6.1							
0.5nm,0.7s							

GCG ***20*** *11:39:39.7±0.3, 13°.47N×91°.09W, h20km±6km, MD3.4*
SNET ***20*** *11:39:39.9±1.2, 13°.66N×90°.92W, h11km±17km, ML2.6*
ISC 20 11:39:42.7±3.5,13°.6N±0°.2×90°.9W±0°.2,h29km,n11,
σ1°28/14,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.84**	**18**	*eP*	**Pb**	**11 39 59.0**	**+0.1**
FUG	**Fuego 3**	**0.85**	**2**	*eP*	**Pb**	**11 39 58.3**	**-0.9**
FUG				*eS*	**Sn**	**11 40 12.8**	**+2.2**
NUBE	**Las Nubes**	**1.10**	**73**	*eP*	**Pn**	**11 39 59.9**	**-2.5**
NUBE				*eS*	**Sn**	**11 40 16.5**	**-0.2**
NUBE				IAML		11 40 23.2	
comp=Z,52nm,0.3s							
NBG	**Las Nubes**	**1.11**	**27**	*eP*	**Pb**	**11 40 03.8**	**+0.2**
SBLS	**San Blas**	**1.24**	**78**	*eP*	**Pn**	**11 40 02.5**	**-1.7**
PMON	**Piamonte**	**1.52**	**85**	*eP*	**Pn**	**11 40 07.7**	**-0.3**
PMON				*eS*	**Sn**	**11 40 28.3**	**+1.5**
MTO3	**Montecristo**	**1.67**	**61**	*eP*	**Pn**	**11 40 09.6**	**-0.6**
MTO3				IAML		11 40 39.9	
comp=Z,17nm,0.4s							
LFRS	**El Faro**	**1.76**	**89**	*eP*	**Pn**	**11 40 11.1**	**-0.2**
SJTE	**Alcalda de S**	**1.81**	**89**	*eP*	**Pn**	**11 40 11.6**	**-0.4**
SJTE				IAML		11 40 42.3	
comp=Z,36nm,0.3s							
SCLA	**Alcaldia de Sa**	**2.08**	**87**	*eP*	**Pn**	**11 40 16.2**	**+0.4**
PACA	**Pacayal**	**2.48**	**92**	*eP*	**Pn**	**11 40 21.8**	**+0.5**
PACA				IAML		11 40 58.5	
comp=Z,280nm,0.3s							

INET ***20*** *11:43:21.2±1.0, 9°.74N×83°.83W, h1km±5km, MW2.8*
UCR ***20*** *11:43:22.3±1.6, 9°.75N×83°.88W, h1km±1km, MW3.6*
UPA ***20*** *11:43:23.0±0.9, 9°.76N×83°.93W, h4km±3km, MW3.5*
ISC 20 11:43:22.6±0.8,9°.75N±0°.02×83°.88W±0°.02,h4km±5km,n64,
σ0°79/93,18C-7D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIMA	**Rio Macho**	**0.03**	**45**⇑	*eP*	**Pg**	**11 43 23.9**	**+0.1**
RIMA				*eS*	**Sg**	**11 43 24.5**	**0.0**
RIMA	**Rio Macho**	**0.03**	**45**	*eP*	**Pg**	**11 43 23.9**	**+0.1**
RIMA				*eS*	**Sg**	**11 43 24.5**	**0.0**
LCR2	**La Lucha 2**	**0.12**	**268**⇑	*iP*	**Pg**	**11 43 25.6**	**+0.5**
LCR2				*eS*	**Sg**	**11 43 27.8**	**+1.0**
OCM	**Ochomogo**	**0.17**	**333**⇑	*iP*	**Pg**	**11 43 26.5**	**+0.6**
OCM				*eS*	**Sg**	**11 43 29.3**	**+1.1**
CDM	**Cerro de Muert**	**0.23**	**148**⇑	*iP*	**Pg**	**11 43 27.7**	**+0.6**
CDM				*eS*	**Sg**	**11 43 31.3**	**+1.3**
CDM	**Cerro de Muert**	**0.23**	**148**	*eP*	**Pg**	**11 43 27.7**	**+0.6**
CDM				*eS*	**Sg**	**11 43 31.4**	**+1.3**
HAYA	**Volcan Irazu**	**0.23**	**10**⇓	*iP*	**Pg**	**11 43 28.2**	**+0.9**
HAYA				*eS*	**Sg**	**11 43 32.1**	**+1.7**
SJS	**Escuela Geolog**	**0.26**	**319**⇑	*iP*	**Pg**	**11 43 28.4**	**+0.8**
SJS				*eS*	**Sg**	**11 43 32.5**	**+1.6**
VTCV	**VTCV, Calle Va**	**0.28**	**33**⇓	*iP*	**Pb**	**11 43 29.0**	**-1.4**
HDC3	**Heredia 3**	**0.34**	**319**⇑	*iP*	**Pg**	**11 43 30.1**	**+0.9**
HDC3				*eS*	**Sg**	**11 43 35.4**	**+1.7**
HDC3	**Heredia 3**	**0.34**	**319**	*eP*	**Pg**	**11 43 30.1**	**+0.9**
HDC	**Heredia**	**0.34**	**318**⇑	*eP*	**Pg**	**11 43 30.0**	**+0.7**
HDC				*eS*	**Sb**	**11 43 35.4**	**-1.7**
HDC	**Heredia**	**0.34**	**318**⇑	*iP*	**Pb**	**11 43 30.2**	**-1.2**
HDC				*i* S	**Sb**	**11 43 35.6**	**-1.6**
PEZE	**Perez Zeledon,**	**0.41**	**151**	*eP*	**Pg**	**11 43 30.6**	**0.0**
PEZE				*eS*	**Sg**	**11 43 36.8**	**+0.7**
PEZE	**Perez Zeledon,**	**0.41**	**151**	*eP*	**Pg**	**11 43 30.6**	**0.0**
MRVA	**Moravia de Chi**	**0.44**	**80**⇑	*iP*	**Pg**	**11 43 31.6**	**+0.4**
MRVA				*eS*	**Sg**	**11 43 37.9**	**+1.0**
EDDO	**Dominical**	**0.49**	**178**⇓	*iP*	**Pb**	**11 43 33.0**	**-0.8**
EDDO				*eS*	**Sb**	**11 43 41.0**	**-0.4**
CRPO	**Crater poas**	**0.56**	**323**⇑	*iP*	**Pg**	**11 43 34.1**	**+0.7**
CRPO				*eS*	**Sb**	**11 43 42.5**	**-1.2**
RIFO	**Rio Frio, Sara**	**0.57**	**356**⇑	*eP*	**Pb**	**11 43 34.3**	**-0.8**
RIFO				*eS*	**Sb**	**11 43 42.6**	**-1.0**
BATAN	**Batan**	**0.61**	**55**⇓	*iP*	**Pb**	**11 43 35.1**	**-0.7**
BATAN				*eS*	**Sb**	**11 43 44.9**	**+0.1**
BATAN	**Batan**	**0.61**	**55**⇓	*iP*	**Pb**	**11 43 35.2**	**-0.7**
BATAN				*eS*	**Sb**	**11 43 46.3**	**+1.5**
SRBA	**San Rafael, Bu**	**0.73**	**135**	*eP*	**Pg**	**11 43 35.9**	**-0.7**
JACO	**JACO, Garabito**	**0.77**	**264**⇑	*iP*	**Pg**	**11 43 37.5**	**+0.1**
JACO	**JACO, Garabito**	**0.77**	**264**	*eP*	**Pg**	**11 43 37.5**	**+0.1**
EDPN	**Palmar Norte**	**0.89**	**152**	*eP*	**Pb**	**11 43 40.5**	**0.0**
POTG	**Potrero Grande**	**1.02**	**132**	*eP*	**Pg**	**11 43 41.1**	**-1.1**
FORC	**Fortuna**	**1.05**	**313**⇓	*iP*	**Pg**	**11 43 43.0**	**+0.1**
VACR	**Volcan Arenal**	**1.06**	**313**	*eP*	**Pg**	**11 43 42.8**	**-0.2**
CASO	**Castillo**	**1.08**	**309**⇑	*iP*	**Pg**	**11 43 43.0**	**-0.4**
CASO				*eS*	**Sb**	**11 43 58.1**	**-0.4**
CEDE	**Laguna Cedeo**	**1.09**	**312**	*eP*	**Pg**	**11 43 43.6**	**0.0**
CEDE				*eS*	**Sb**	**11 43 59.4**	**+0.6**
COVE	**Coope Vega, Sa**	**1.09**	**332**	*eP*	**Pg**	**11 43 42.8**	**-0.8**
JTS	**Las Juntas de**	**1.18**	**297**⇑	*iP*	**Pg**	**11 43 44.5**	**-0.8**
JTS	**Las Juntas de**	**1.18**	**297**	*eP*	**Pg**	**11 43 44.5**	**-0.8**
JTS				*eS*	**Sg**	**11 44 00.9**	**+0.2**
JTS	**Las Juntas de**	**1.18**	**297**	*eP*	**Pg**	**11 43 44.5**	**-0.8**
POPE	**POPE, Guanacas**	**1.40**	**283**⇑	*iP*	**Pn**	**11 43 47.8**	**-1.1**
CNI2	**El Empalme, Bo**	**1.43**	**103**	*eP*	**Pn**	**11 43 47.9**	**-1.5**
CNI2				*eS*	**Sg**	**11 44 08.1**	**-0.5**
ACAL	**Aguas Claras**	**1.44**	**308**	*eP*	**Pn**	**11 43 49.0**	**-0.5**
PTEN	**Parque Tenorio**	**1.45**	**312**	*eP*	**Pn**	**11 43 49.1**	**-0.6**
VERA	**Finca Concepci**	**1.47**	**319**	*eP*	**Pn**	**11 43 49.7**	**-0.2**
BRU2	**Volcan**	**1.51**	**129**	*eP*	**Pn**	**11 43 50.2**	**-0.4**
BRU2	**Volcan**	**1.51**	**129**	*eP*	**Pn**	**11 43 50.4**	**-0.3**
BRU2				*eS*	**Sn**	**11 44 12.7**	**+1.9**
CUI	**Cuipilapa**	**1.55**	**306**⇑	*eP*	**Pn**	**11 43 51.0**	**-0.1**

BC3P	**Paso Ancho**	**1.56 126**	⇑*iP*	**Pb**	**11 43 51.9**	**-0.3**
BC3P			*eS*	**Sg**	**11 44 13.2**	**+0.3**
COLC	**Colonia**	**1.59 305**	*eP*	**Pn**	**11 43 51.2**	**-0.4**
HORNC	**Hornillas**	**1.59 307**	*eP*	**Pn**	**11 43 51.7**	**0.0**
INDI	**Punta indio, G**	**1.60 274**	*eP*	**Pn**	**11 43 51.9**	**+0.2**
VMAR	**Armenia, Volca**	**1.61 311**	*eP*	**Pn**	**11 43 52.1**	**+0.2**
DUNO	**Dulce Nombre,**	**1.62 282**	*eP*	**Pn**	**11 43 51.5**	**-0.5**
MESS	**Mesas**	**1.62 308**	*eP*	**Pn**	**11 43 52.2**	**0.0**
MESS			*eS*	**Sg**	**11 44 15.8**	**+0.9**
GUAB	**Guayabo de Bag**	**1.63 306**	*eP*	**Pn**	**11 43 52.4**	**+0.2**
LIM1	**Limonal**	**1.65 305**	*eP*	**Pn**	**11 43 52.5**	**+0.1**
ORTG	**Ortega, Santa**	**1.67 292**	*eP*	**Pn**	**11 43 52.5**	**-0.2**
ORTG	**Ortega, Santa**	**1.67 292**	*eP*	**Pn**	**11 43 52.5**	**-0.2**
BCO2	**Palmira**	**1.68 127**	*eP*	**Pn**	**11 43 53.4**	**+0.4**
BCO2			*iS*	**Sg**	**11 44 16.9**	**+0.1**
LNBQ3	**Los Naranjos,**	**1.71 124**	*eP*	**Pn**	**11 43 53.8**	**+0.4**
LNBQ3			*eS*	**Sb**	**11 44 16.6**	**-0.1**
PTAR3	**Potrerillos Ar**	**1.72 127**	*eP*	**Pb**	**11 43 54.4**	**-0.5**
PTAR3			*eS*	**Sg**	**11 44 18.4**	**+0.3**
GPS1	**Guardaparques**	**1.77 305**	*eP*	**Pn**	**11 43 55.0**	**+0.9**
GPS3	**Bodega del ICE**	**1.77 305**	*eP*	**Pn**	**11 43 54.8**	**+0.7**
VRLE	**La Escondida,**	**1.79 305**	*eP*	**Pn**	**11 43 54.9**	**+0.5**
BUEV	**Buena Vista**	**1.83 305**	⇓*iP*	**Pn**	**11 43 55.7**	**+0.8**
BUEV			*eS*	**Sg**	**11 44 20.8**	**-0.6**
SAJU	**San Juanillo,**	**1.83 280**	*eP*	**Pn**	**11 43 55.6**	**+0.8**
LAPC	**Finca la Perla**	**1.83 304**	⇑*eP*	**Pn**	**11 43 55.4**	**+0.4**
GB1A	**Borinquen Arri**	**1.83 306**	*eP*	**Pb**	**11 43 56.4**	**-0.3**
GBS3	**Finca Las Img**	**1.86 304**	*eP*	**Pn**	**11 43 55.9**	**+0.6**

*ISU **20** 11:58:02, 40.°44N×73.°21E, h14km*
*KRNET **20** 11:58:03.6±0.1, 40.°39N×73.°20E, h12km, mb2.9*
*SOME **20** 11:58:06.4, 40.°47N×73.°17E, h15km*
*NNC **20** 11:58:14.9±4.2, 40.°88N×73.°13E, h0km, mb3.2, mpv2.9,*
Error ellipse: s-maj=36.8km s-min=13.4km az=178.0
ISC 20 11:58:02.9±1.3, 40.°40N±0.°05×73.°20E±0.°03, h16km±13km, n25, σ1§05/42, 21C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.34**	**292**	⇑*eP*	**Pb**	**11 58 10.5**	**-0.2**
	baz=93						
OHH				⇑*eS*	**Sb**	**11 58 15.6**	**-0.3**
	baz=93						
TSTA	**Tashata**	**0.58**	**288**	P	**Pg**	**11 58 13.9**	**-0.6**
TSTA				S	**Sb**	**11 58 22.6**	**-0.1**
FRG	**Fergana**	**1.08**	**269**	P	**Sg**	**11 58 38.8**	**+0.7**
CHMI	**Chimion**	**1.29**	**265**	P	**Pb**	**11 58 26.8**	**0.0**
CHMI				S	**Sg**	**11 58 44.9**	**+0.3**
ARK	**Arkit**	**1.68**	**327**	⇑*eP*	**Pg**	**11 58 35.1**	**-0.2**
	baz=27						
ARK				⇑*eS*	**Sg**	**11 58 58.2**	**+1.0**
	baz=27						
ARLS	**Aral**	**1.69**	**30**	⇑*eP*	**Pg**	**11 58 35.2**	**-0.2**
	baz=30						
ARLS				⇑*iS*	**Sg**	**11 58 58.5**	**+1.1**
	baz=30						
MINT	**Mingtut**	**1.70**	**273**	P	**Sg**	**11 59 00.2**	**+2.5**
TRKS	**Terek-Say**	**1.93**	**307**	⇑*eP*	**Pb**	**11 58 38.5**	**+0.7**
	baz=6.0						
TRKS				⇑*eS*	**Sg**	**11 59 04.0**	**-1.0**
	baz=6.0						
UCH	**Uchtor**	**2.08**	**28**	⇑*eP*	**Pg**	**11 58 42.0**	**-0.9**
	baz=28						
UCH				⇑*eS*	**Sg**	**11 59 09.8**	**-0.1**
	baz=28						
EKS2	**Erkin-Say**	**2.30**	**11**	⇑*iP*	**Pb**	**11 58 45.0**	**+0.9**
	baz=11						
EKS2				⇑*iS*	**Sg**	**11 59 15.0**	**-2.0**
	baz=11						
MRKS	**Merke**	**2.35**	**0**	*eP*	**Pg**	**11 58 48.2**	**+0.3**
	6.5nm,0.5s						
MRKS				*eS*	**Sg**	**11 59 19.5**	**+1.1**
	13nm,0.5s						
MRKS	**Merke**	**2.35**	**0**	Pg	**Pg**	**11 58 48.2**	**+0.3**
	6.5nm,0.5s						
MRKS				Lg	Lg	11 59 20.4	
	13nm,0.5s						
AAK	**Ala-Archa**	**2.44**	**23**	⇑*eP*	**Pb**	**11 58 47.0**	**+0.5**
	baz=23						
AAK				⇑*eS*	**Sb**	**11 59 18.4**	**+2.0**
	baz=23						
KBK	**Karagaybulak**	**2.61**	**30**	⇑*iP*	**Pb**	**11 58 49.1**	**-0.3**
	baz=29						
KBK				⇑*iS*	**Sb**	**11 59 22.7**	**+1.4**
	baz=29						
GAR	**Garm**	**2.63**	**239**	⇑*eP*	**Pb**	**11 58 49.2**	**-0.4**
	baz=39						
GAR				⇑*eS*	**Sb**	**11 59 22.6**	**+0.9**
	baz=39						
IUG	**Iuzhnay**	**2.96**	**307**	*eP*	**Pg**	**11 58 59.3**	**-0.4**
	86nm,0.2s						
IUG				*eS*	**Sg**	**11 59 39.0**	**+0.9**
	8.8nm,0.3s						
IUG	**Iuzhnay**	**2.96**	**307**	Pg	**Pg**	**11 58 59.3**	**-0.4**
IUG				Lg	Lg	11 59 39.0	
TKM2	**Tokmak 2**	**3.10**	**35**	⇑Pn	**Pg**	**11 59 01.7**	**-0.6**
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	11 59 43.2	
	2.4nm,0.6s						
KK31	**Karatay Array**	**3.37**	**324**	Pn	**Pg**	**11 59 06.0**	**-1.4**
	0.8nm,0.3s,baz=134,slow=14,SNR=17						
KK31				⇓Sn	**Sb**	**11 59 40.3**	**-2.7**
	1.2nm,0.4s,baz=142,slow=25,SNR=3.5						
KK31				⇑Lg	Lg	11 59 50.3	
	1.0nm,0.2s,baz=141,slow=30,SNR=4.1						
DGS	**Degeres**	**3.43**	**33**	*eP*	**Pg**	**11 59 07.8**	**-0.8**
	2.1nm,0.4s						
DGS				*eS*	**Sg**	**11 59 53.5**	**+0.3**
	2.7nm,0.5s						
DGS	**Degeres**	**3.43**	**33**	Pg	**Pg**	**11 59 07.9**	**-0.8**
	2.1nm,0.4s						
DGS				Lg	Lg	11 59 53.4	
	2.7nm,0.5s						
MTBS	**Maitube**	**3.65**	**40**	*eP*	**Pg**	**11 59 11.7**	**-1.1**
	1.9nm,0.2s						
MTBS				*eS*	**Sg**	**11 59 59.9**	**-0.1**
	3.8nm,0.2s						
MTBS	**Maitube**	**3.65**	**40**	Pg	**Pg**	**11 59 11.7**	**-1.1**
	1.9nm,0.2s						
MTBS				Lg	Lg	11 59 59.9	
	3.8nm,0.2s						
KRBS	**Karabastau**	**3.78**	**28**	*eP*	**Pg**	**11 59 14.2**	**-1.0**
	0.6nm,0.5s						
KRBS				*eS*	**Sg**	**12 00 04.5**	**+0.4**
	2.1nm,0.8s						
KRBS	**Karabastau**	**3.78**	**28**	Pg	**Pg**	**11 59 14.2**	**-1.0**
KRBS				Lg	Lg	12 00 04.5	

*NEIC **20** 12:14:07.9, 36.°92N×97.°65W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.58; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.60; $M_{r\theta}$1.05; $M_{\theta\phi}$1.12; $M_{\phi r}$0.03; Fault plane solution: $M_0$1.64000×10^{14} NP1:ϕ_s0.00000°, δ47.00000°, λ159.00000°. NP2:ϕ_s105.00000°, δ75.00000°, λ45.00000°. Principal axes: T 1.6443, Plg42.0000°, Azm333.0000°; N 0.0012, Plg43.0000°, Azm119.0000°; P -1.6455, Plg17.0000°, Azm227.0000°;*
*TUL **20** 12:14:07.9±0.8, 36.°93N±0.°02×97.°64W±0.°02, h5km±6km, ML3.4, mb_Lg3.6/101(NEIC), Mwr3.4/16(SLM) Error ellipse: s-maj=2.7km s-min=1.6km az=216.0*
*IDC **20** 12:14:08.5±2.3, 37.°08N×97.°77W, h0km, mb3.4/1, mbtmp3.4/5, ML3.8/4, Error ellipse: s-maj=29.2km s-min=15.4km az=89.0*
*NEIC **20** 12:14:08.2±0.7, 36.°90N±0.°02×97.°663W±0.°009, h6km±7km, Error ellipse: s-maj=2.4km s-min=0.8km az=199.0*
*ANF **20** 12:14:08.2±0.2, 36.°91N×97.°65W, h4km, ML4.2/15, Error ellipse: s-maj=2.5km s-min=2.1km az=163.0*
ISC 20 12:14:08.0±1.1, 36.°91N±0.°02×97.°65W±0.°02, h4km±9km, n110, σ0§57/67, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN17	**Caldwell West**	**0.16**	**326**	Pg	**Pg**	**12 14 11.5**	**+0.2**
KAN17				Sg	**Sg**	**12 14 13.8**	**+0.5**
KAN13	**South Haven SW**	**0.17**	**53**	Pg	**Pg**	**12 14 11.6**	**+0.2**
KAN09	**Caldwell North**	**0.23**	**6**	Pg	**Pg**	**12 14 12.6**	**+0.1**
KAN14	**Manchester OK**	**0.26**	**281**		**Pg**	**12 14 13.3**	**+0.4**
KAN01	**Argonia South**	**0.26**	**340**	Pg	**Pg**	**12 14 13.2**	**+0.1**
KAN01				Sg	**Sg**	**12 14 16.8**	**+0.4**
KS20	**Mayfield South**	**0.33**	**13**	Pg	**Pg**	**12 14 14.5**	**+0.1**
KAN06	**Argonia West S**	**0.38**	**334**		**Pg**	**12 14 15.4**	**+0.1**
KS21	**Milan North St**	**0.38**	**358**	Pg	**Pg**	**12 14 15.3**	**0.0**
KAN08	**Anthony NE Sta**	**0.41**	**321**		**Pg**	**12 14 16.1**	**+0.3**
KAN10	**Anthony SW Sta**	**0.41**	**301**	Pg	**Pg**	**12 14 16.3**	**+0.3**
KAN16	**Harper SW Stat**	**0.46**	**314**	Pg	**Pg**	**12 14 17.1**	**+0.2**
OK032	**Salt Plains WL**	**0.46**	**257**	Pg	**Pg**	**12 14 17.3**	**+0.4**
KAN12	**Harper NE Stat**	**0.48**	**324**	Pg	**Pg**	**12 14 17.4**	**+0.2**
OK049	**E0420 Rd and N**	**0.57**	**151**	Pg	**Pg**	**12 14 19.5**	**+0.5**
OK045	**Pawnee Station**	**0.74**	**128**		**Pg**	**12 14 22.4**	**+0.1**
OK050	**Pawnee Station**	**0.74**	**134**		**Pg**	**12 14 22.5**	**+0.2**
OK048	**Pawnee Station**	**0.75**	**131**		**Pg**	**12 14 22.6**	**+0.1**
OK051	**E0350 and S346**	**0.77**	**121**	Pg	**Pg**	**12 14 22.9**	**+0.1**
OK046	**Pawnee Station**	**0.79**	**130**	Pg	**Pg**	**12 14 23.2**	**+0.1**
OK044	**Pawnee Station**	**0.87**	**128**	Pg	**Pg**	**12 14 24.7**	**0.0**
OK035	**E0210 Rd and N**	**0.87**	**257**	Pg	**Pg**	**12 14 24.7**	**-0.1**
T35A	**Sooner Cattle**	**0.91**	**89**		**Pg**	**12 14 25.3**	**-0.2**
T35B	**Sooner Cattle**	**0.91**	**89**	P	**Pg**	**12 14 25.1**	**-0.4**
	baz=270,SNR=349						
T35B				S	**Sg**	**12 14 37.5**	**+0.1**
	baz=270						
OK038	**West end E0370**	**0.98**	**244**	Pg	**Pg**	**12 14 25.6**	**-1.2**
OK033	**Mehan**	**1.04**	**146**	Pg	**Pg**	**12 14 27.9**	**0.0**
OK029	**Liberty Lake**	**1.12**	**172**	Pg	**Pg**	**12 14 29.5**	**-0.1**
OK031	**S. Brethren Rd**	**1.16**	**145**	Pg	**Pg**	**12 14 30.1**	**-0.2**
OK034	**N. Norfolk Rd.**	**1.17**	**140**	Pg	**Pg**	**12 14 30.3**	**-0.3**
U32A	**Winter Ranch,**	**1.21**	**244**	Pg	**Pg**	**12 14 30.8**	**-0.5**
U32A	**Winter Ranch,**	**1.21**	**244**	P	**Pg**	**12 14 30.8**	**-0.5**
	baz=63,SNR=221						
U32A				S	**Sg**	**12 14 47.5**	**+0.6**
	baz=63						
OK025	**Westminster Rd**	**1.35**	**169**	Pn	**Pn**	**12 14 33.6**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.51**	**173**		**Pn**	**12 14 36.2**	**+0.2**
FNO	**Franklin**	**1.66**	**173**		**Pn**	**12 14 38.6**	**+0.6**
R32A	**Long Quarter,**	**1.73**	**331**		**Pb**	**12 14 39.5**	**-0.9**
R32A	**Long Quarter,**	**1.73**	**331**	P	**Pn**	**12 14 39.4**	**+0.4**
	baz=150,SNR=123						
R32A				S	**Sb**	**12 15 02.3**	**-0.2**
	baz=150						
TUL1	**Leonard**	**1.80**	**123**	Pn	**Pn**	**12 14 40.3**	**+0.4**
TUL1				IAmb_Lg		12 15 08.8	
	comp=Z,330nm,0.8s						
TUL1	**Leonard**	**1.80**	**123**	P	**Pn**	**12 14 40.3**	**+0.4**
	baz=304,SNR=153						
TUL1				S	**Sb**	**12 15 05.1**	**+0.6**
	baz=304						
KSU1	**Kansas State U**	**2.34**	**20**	P	**Pn**	**12 14 47.7**	**+0.4**
	baz=201,SNR=23						
WMOK	**Wichita Mounta**	**2.35**	**203**	Pn	**Pn**	**12 14 47.9**	**+0.4**
WMOK	**Wichita Mounta**	**2.35**	**203**	P	**Pn**	**12 14 47.9**	**+0.4**
	baz=23,SNR=114						
WMOK				S	**Sn**	**12 15 19.0**	**+2.1**
	baz=23						
CBKS	**Cedar Bluff**	**2.52**	**320**	P	**Pn**	**12 14 50.2**	**+0.4**
	baz=138,SNR=55						
X37A	**Clayton**	**2.97**	**141**	IAmb_Lg		12 15 45.6	
	comp=Z,128nm,0.7s						
X37A	**Clayton**	**2.97**	**141**	P	**Pn**	**12 14 56.5**	**+0.6**
	baz=322,SNR=95						
HHAR	**Hobbs**	**3.05**	**101**	IAmb_Lg		12 15 50.8	
	comp=Z,221nm,0.8s						
HHAR	**Hobbs**	**3.05**	**101**	P	**Pn**	**12 14 57.9**	**+0.7**
	baz=283						
S39A	**Bolivar**	**3.54**	**76**	IAmb_Lg		12 16 05.7	
	comp=Z,124nm,0.8s						
S39A	**Bolivar**	**3.54**	**76**	P	**Pn**	**12 15 04.2**	**+0.4**
	baz=259						
Z35A	**Perchaven, San**	**3.59**	**175**	P	**Pn**	**12 15 04.8**	**+0.3**
	baz=355						
N33B	**J Bar K, Exete**	**3.82**	**2**	P	**Pn**	**12 15 07.7**	**-0.1**
	baz=182,SNR=10						
MIAR	**Mount Ida**	**4.07**	**124**	IAmb_Lg		12 16 20.9	
	comp=Z,198nm,0.9s						
Z38A	**Mt. Pleasant**	**4.25**	**148**	IAmb_Lg		12 16 29.4	
	comp=Z,123nm,1.0s						
MGMO	**Mountain Grove**	**4.31**	**85**	IAmb_Lg		12 16 22.8	
	comp=Z,168nm,0.8s						
R40A	**Maddes Statio**	**4.49**	**71**	IAmb_Lg		12 16 35.0	
	comp=Z,130nm,1.0s						
R40A	**Maddes Statio**	**4.49**	**71**	P	**Pn**	**12 15 16.9**	**0.0**
	baz=254,SNR=39						
BGNE	**Belgrade**	**4.51**	**355**	IAmb_Lg		12 16 36.1	
	comp=Z,161nm,0.7s						
BGNE	**Belgrade**	**4.51**	**355**	P	**Pn**	**12 15 17.3**	**+0.2**
	baz=175,SNR=16						
FCAR	**Ozark Folk Cen**	**4.57**	**101**	IAmb_Lg		12 16 29.8	
	comp=Z,164nm,0.7s						
ABTX	**Abilene, Hawle**	**4.58**	**202**	IAmb_Lg		12 16 32.9	
	comp=Z,106nm,1.3s						
UALR	**University of**	**4.81**	**115**	IAmb_Lg		12 16 50.0	
	comp=Z,109nm,0.9s						
WHTX	**Lake Whitney,**	**4.91**	**178**	P	**Pn**	**12 15 23.0**	**+0.4**
	baz=358,SNR=11						
WHTX				S	**Sn**	**12 16 19.3**	**-0.6**
	baz=358						
WLAR	**White Oak Lake**	**4.91**	**130**	IAmb_Lg		12 16 56.5	
	comp=Z,97nm,0.8s						
237A	**Washetta, Mont**	**5.13**	**162**	P	**Pn**	**12 15 26.0**	**+0.3**
	baz=343						
P40A	**Paris**	**5.13**	**58**	IAmb_Lg		12 16 52.0	
	comp=Z,69nm,0.7s						
L34A	**Svendsen Farm,**	**5.14**	**11**	IAmb_Lg		12 17 00.2	
	comp=Z,165nm,0.8s						
N38A	**Joes South For**	**5.19**	**40**	IAmb_Lg		12 16 56.9	
	comp=Z,74nm,0.8s						
CCM	**Cathedral Cave**	**5.22**	**75**	IAmb_Lg		12 16 59.4	
	comp=Z,103nm,0.7s						
OGNE	**Ogallala**	**5.28**	**321**	IAmb_Lg		12 17 00.3	
	comp=Z,84nm,0.9s						
LCAR	**Lake Charles**	**5.30**	**97**	IAmb_Lg		12 16 59.9	
	comp=Z,94nm,1.0s						
LCAR	**Lake Charles**	**5.30**	**97**	P	**Pn**	**12 15 28.2**	**+0.2**
	baz=281,SNR=8.3						
T25A	**Trinidad**	**5.41**	**274**	IAmb_Lg		12 17 12.5	
	comp=Z,109nm,1.0s						
CCAR	**Cane Creek**	**5.65**	**120**	IAmb_Lg		12 17 11.3	
	comp=Z,113nm,1.0s						
PBMO	**Poplar Bluff**	**5.79**	**89**	IAmb_Lg		12 17 10.8	
	comp=Z,117nm,0.8s						
SCIA	**State Center**	**6.06**	**33**	IAmb_Lg		12 17 31.3	
	comp=Z,120nm,1.0s						
SCIA	**State Center**	**6.06**	**33**	S	**Sn**	**12 16 48.4**	**+0.2**
	baz=216						
435B	**Jarrell**	**6.11**	**179**	IAmb_Lg		12 17 26.1	
	comp=Z,100nm,0.8s						
435B	**Jarrell**	**6.11**	**179**	P	**Pn**	**12 15 38.9**	**-0.3**
	baz=360						
SLM	**Saint Louis**	**6.12**	**71**	IAmb_Lg		12 17 30.8	
	comp=Z,57nm,0.7s						
SDCO	**Great Sand Dun**	**6.31**	**280**	P	**Pn**	**12 15 43.2**	**+1.0**
	baz=95,SNR=16						
BRIGG	**Briggsdale**	**6.37**	**307**	IAmb_Lg		12 17 46.4	
	comp=Z,74nm,0.7s						
N41A	**Harden Midland**	**6.52**	**52**	IAmb_Lg		12 17 44.7	
	comp=Z,90nm,1.1s						
143A	**Socs Landing,**	**6.63**	**127**	IAmb_Lg		12 17 53.6	
	comp=Z,60nm,0.8s						
JCT	**Junction City**	**6.66**	**196**	IAmb_Lg		12 17 55.8	
	comp=Z,85nm,0.8s						
L40A	**Anamosa**	**7.15**	**42**	IAmb_Lg		12 17 54.2	
	comp=Z,90nm,1.1s						
Y45A	**Yeager Farm, C**	**7.28**	**112**	IAmb_Lg		12 18 11.5	
	comp=Z,80nm,0.8s						
ANMO	**Albuquerque**	**7.41**	**257**	Pn	**Pn**	**12 15 58.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=51,slow=14,SNR=2.8						
ANMO				Pg	Pg	12 16 24.2	-5.8
	comp=Z,0.8nm,0.3s,baz=58,slow=16,SNR=5.8						
ANMO				Lg	Lg	12 18 01.5	
	comp=Z,2.6nm,0.3s,baz=324,slow=22,SNR=11 comp=Z,0.3nm,0.3s						
HDIL	**Hopedale**	**7.48**	**58**	IAmb_Lg		12 18 22.4	
	comp=Z,88nm,0.7s						
VBMS	**Vicksburg**	**7.52**	**126**	IAmb_Lg		12 18 28.2	
	comp=Z,45nm,1.1s						
SUSD	**Miller**	**7.59**	**353**	IAmb_Lg		12 18 16.0	
	comp=Z,56nm,0.8s						
N23A	**Red Feather La**	**7.59**	**304**	IAmb_Lg		12 18 22.5	
	comp=Z,80nm,0.9s						
I37A	**Lemond, Waseca**	**7.80**	**23**	IAmb_Lg		12 18 30.8	
	comp=Z,46nm,0.8s						
WVT	**Waverly**	**7.95**	**93**	IAmb_Lg		12 18 27.0	
	comp=Z,38nm,0.7s						
L42A	**Oliver, Polo**	**8.00**	**48**	IAmb_Lg		12 18 27.6	
	comp=Z,87nm,0.9s						
PLAL	**Pickwick Lake**	**8.00**	**101**	IAmb_Lg		12 18 28.4	
	comp=Z,49nm,0.9s						
735A	**Kenedy**	**8.03**	**181**	IAmb_Lg		12 18 44.8	
	comp=Z,45nm,1.1s						
Y22D	**IRIS PASSCAL I**	**8.07**	**252**	IAmb_Lg		12 18 47.1	
	comp=Z,90nm,1.0s						
JFWS	**Jewell Farm**	**8.26**	**41**	IAmb_Lg		12 18 43.0	
	comp=Z,54nm,0.8s						
Z47A	**Carrollton**	**8.68**	**112**	IAmb_Lg		12 18 51.5	
	comp=Z,43nm,1.0s						
M44A	**Midewin, Midew**	**8.70**	**56**	IAmb_Lg		12 19 00.6	
	comp=Z,64nm,1.0s						
I40A	**Norwalk**	**8.79**	**35**	IAmb_Lg		12 18 51.8	
	comp=Z,38nm,1.2s						
RWWY	**Rawlins**	**8.81**	**306**	IAmb_Lg		12 19 08.0	
	comp=Z,56nm,1.1s						
K22A	**Casper**	**8.91**	**313**	IAmb_Lg		12 19 02.5	
	comp=Z,41nm,1.2s						
F33A	**5 Mile Ranch,**	**8.98**	**6**	IAmb_Lg		12 18 52.1	
	comp=Z,34nm,1.0s						
TXAR	**Lajitas Array**	**9.08**	**215**	Pn	**Pn**	**12 16 19.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=41,slow=10,SNR=7.4						
TXAR				Lg	Lg	12 18 53.0	
	comp=Z,0.9nm,0.3s,baz=36,slow=29,SNR=5.2 comp=Z,0.7nm,0.4s						
K43A	**Burlington**	**9.21**	**48**	IAmb_Lg		12 19 09.0	
	comp=Z,69nm,1.0s						
I42A	**Draeger Farm,**	**9.64**	**41**	IAmb_Lg		12 19 15.1	
	comp=Z,36nm,0.9s						
E28A	**Huff**	**9.92**	**348**	IAmb_Lg		12 19 33.6	
	comp=Z,50nm,1.1s						
PDAR	**Pinedale Array**	**10.86**	**306**	Pn	**Pn**	**12 16 42.3**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=115,slow=14,SNR=7.0						
PDAR				Lg	Lg	12 19 44.6	
	comp=Z,0.5nm,0.3s,baz=123,slow=33,SNR=7.4 comp=Z,0.5nm,0.5s						
TKL	**Tuckaleechee C**	**11.27**	**92**	Lg	Lg	12 19 58.4	
	comp=Z,1.8nm,0.3s,baz=8.8,slow=20,SNR=14						
YBH	**Yreka Blue Hor**	**19.95**	**292**	P	**Pn**	**12 18 42.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=90,slow=7.1,SNR=5.7 comp=Z,2.7nm,1.0s						
ILAR	**Eielson Array**	**40.13**	**330**	P	**P**	**12 21 45.5**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=117,slow=6.5,SNR=4.8 comp=Z,0.5nm,0.9s						

*GUC **20** 12:15:10.5±0.7, 21.°31S×67.°44W, h219km±7km, ML3.5*
*SCB **20** 12:15:11.0±1.0, 21.°26S×67.°18W, h204km, ML3.1/4, MW3.0, Error ellipse: s-maj=4.4km s-min=4.3km az=2.0*
ISC 20 12:15:08.6±1.9, 21.°27S±0.°04×67.°25W±0.°05, h203km±16km, n25, σ1§46/42, 4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.51**	**89**	P	**Pn**	**12 15 43.4**	**+0.2**
MOCB				S	**Sn**	**12 16 07.4**	**-2.4**
MOCB				IAML		12 16 08.8	
	76nm,0.3s						
YJA	**Yavi**	**1.85**	**119**	P	**Pn**	**12 15 47.2**	**+0.9**
PB09	**IPOC Station P**	**1.92**	**254**	*eP*	**Pn**	**12 15 48.1**	**+1.3**
PB09				*i* S	**Sn**	**12 16 16.8**	**+0.4**
LVC	**Limon Verde**	**2.03**	**229**	*eP*	**Pn**	**12 15 49.2**	**+1.1**
LVC				*i* S	**Sn**	**12 16 19.5**	**+0.8**
LVC	**Limon Verde**	**2.03**	**229**	P	**Pn**	**12 15 49.7**	**+1.6**
PB01	**IPOC Station P**	**2.10**	**276**	*eP*	**Pn**	**12 15 48.9**	**+0.4**
PB08	**IPOC Station P**	**2.10**	**302**	⇓*iP*	**Pn**	**12 15 49.9**	**+1.0**
PB08				*i* S	**Sn**	**12 16 20.6**	**+0.5**
PB08				IAML		12 16 22.4	
	comp=E,67nm,0.3s						
GO01	**Chusmiza**	**2.42**	**311**	*eP*	**Pn**	**12 15 53.3**	**+0.9**
GO01				*eS*	**Sn**	**12 16 27.6**	**+1.3**
GO01				IAML		12 16 31.8	
	comp=N,147nm,0.2s						
PB03	**IPOC Station P**	**2.45**	**251**	*eP*	**Pn**	**12 15 53.1**	**+0.8**
PB03				*i* S	**Sn**	**12 16 25.2**	**-1.1**
PB03				IAML		12 16 26.1	
	comp=E,130nm,0.2s						
PB02	**IPOC Station P**	**2.46**	**268**	⇓*iP*	**Pn**	**12 15 53.0**	**+0.6**
PB02				*i* S	**Sn**	**12 16 25.1**	**-1.4**
PB02				IAML		12 16 27.0	
	comp=E,118nm,0.1s						
PB02	**IPOC Station P**	**2.46**	**268**	P	**Pn**	**12 15 53.5**	**+1.1**
PB07	**IPOC Station P**	**2.49**	**259**	*eP*	**Pn**	**12 15 53.3**	**+0.5**
PB07				*i* S	**Sn**	**12 16 25.8**	**-1.4**
PB07				IAML		12 16 27.0	
	comp=N,136nm,0.1s						
PB06	**IPOC Station P**	**2.58**	**236**	*eP*	**Pn**	**12 15 54.2**	**+0.4**
PB06				*eS*	**Sn**	**12 16 27.9**	**-1.0**
PB06				IAML		12 16 30.4	
	comp=E,107nm,0.3s						
PB06	**IPOC Station P**	**2.58**	**236**	P	**Pn**	**12 15 55.5**	**+1.7**
PB06				S	**Sn**	**12 16 28.2**	**-0.8**
PB06				IAML		12 16 31.5	
	comp=E,56nm,0.2s						
PATCX	**Punta Patache**	**2.75**	**279**	*eP*	**Pn**	**12 15 55.8**	**+0.2**
PATCX				*i* S	**Sn**	**12 16 30.6**	**-1.6**
PATCX				IAML		12 16 32.9	
	comp=E,72nm,0.3s						
PB15	**IPOC Station P**	**2.81**

0.8nm,0.2s

IDC 20 12:49:31.3±2.0, 1°.61N×123°.03E, h0km, mb3.4/3, mbtmp3.4/3, MS3.1/1, Error ellipse: s-maj=323.0km s-min=27.2km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.12**	**153**	P	P	12 54 49.4	+0.3
	0.4nm,0.5s,baz=333,slow=9.5,SNR=6.6						
	0.4nm,0.5s						
PMG	**Port Moresby**	**26.41**	**115**	LR	LR	13 08 48.9	
	comp=Z,39nm,21.6s,baz=6.5,slow=44						
ASAR	**Alice Springs**	**27.26**	**158**	P	P	12 55 16.8	-0.7
	0.2nm,0.4s,baz=337,slow=9.9,SNR=6.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**57.27**	**328**	P	P	12 59 21.1	+0.3
	0.4nm,0.6s,baz=134,slow=8.3,SNR=3.7						
	0.4nm,0.6s						

IDC 20 13:00:08.5±5.8, 8°.93S×124°.16E, h55km±69km, mb3.2/1, mbtmp3.3/3, ML3.1/2, Error ellipse: s-maj=50.8km s-min=39.6km az=16.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.36**	**201**	P	Pn	13 00 31.9	+0.6
	54nm,0.3s,baz=6.5,slow=7.4,SNR=52						
BATI				S	Sn	13 00 48.0	-0.3
	56nm,0.4s,baz=111,slow=13,SNR=4.8						
WRA	**Warramunga Arr**	**14.73**	**139**	P	Pn	13 03 33.6	-0.2
	0.1nm,0.3s,baz=319,slow=13,SNR=6.8						
WRA				S	Sn	13 06 07.4	-8.4
	0.3nm,0.4s,baz=317,slow=24,SNR=8.4						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.37**	**149**	P	P	13 04 07.7	-0.3
	0.1nm,0.3s,baz=318,slow=12,SNR=6.5						
ASAR				S	Sn	13 07 10.7	-9.3
	0.4nm,0.9s,baz=310,slow=20,SNR=4.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**66.83**	**330**	P	P	13 10 54.5	-0.1
	0.4nm,0.8s,baz=123,slow=7.6,SNR=2.7						
	0.4nm,0.8s						

*IDC **20** 13:27:55.5±1.3, 35°.55N×107°.47W, h0km, mbtmp2.7/2, ML3.6/2, Error ellipse: s-maj=25.8km s-min=8.8km az=52.0*

*NEIC **20** 13:28:01.5±1.0, 35°.24N±0°.03×107°.41W±0°.04, h5km±2km, ML3.5/23, Error ellipse: s-maj=5.8km s-min=5.3km az=10.0*

ISC 20 13:28:02.2±0.9, 35°.27N±0°.03×107°.38W±0°.04, h10km, n34, σ1°.27/39, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANMO	**Albuquerque**	**0.82**	**113**	Pg	**Pg**	**13 28 17.0**	**-1.1**
	34nm,0.3s,baz=292,slow=10,SNR=287						
ANMO				Lg	Lg	13 28 28.3	
	80nm,0.3s,baz=39,slow=21,SNR=22						
ANMO	**Albuquerque**	**0.82**	**113**	Pg	**Pg**	**13 28 17.0**	**-1.1**
ANMO				Sg	**Sg**	**13 28 28.2**	**-0.6**
ANMO				IAML		13 28 28.6	
	529nm,0.3s						
LENM	**Lemitar**	**1.15**	**163**		**Pn**	**13 28 25.3**	**+0.7**
Y22D	**IRIS PASSCAL I**	**1.25**	**162**		**Pn**	**13 28 24.8**	**-1.2**
Y22D				Sg	**Sn**	**13 28 41.8**	**-1.1**
Y22D				IAML		13 28 42.2	
	comp=E,3μm,0.3s						
BNM	**Barren Site**	**1.28**	**151**	Pn	**Pn**	**13 28 24.9**	**-1.4**
SBM	**South Baldy**	**1.30**	**173**		**Pn**	**13 28 25.4**	**-1.4**
SBM				Pn	**Pg**	**13 28 29.0**	**+1.7**
CRNM	**Carthage**	**1.42**	**158**	Pn	**Pb**	**13 28 27.5**	**-1.4**
W18A	**Petrified Fore**	**1.94**	**266**		**Pn**	**13 28 35.3**	**-0.1**
W18A				Sn	**Sn**	**13 28 59.4**	**-0.5**
W18A				IAML		13 29 01.6	
	comp=N,530nm,1.0s						
W18A				IAML		13 29 02.1	
	comp=E,419nm,0.3s						
MVCO	**Mesa Verde**	**2.14**	**335**		**Pn**	**13 28 38.0**	**-0.2**
MVCO				IAML		13 29 08.4	
	comp=E,548nm,0.5s						
MVCO				IAML		13 29 08.8	
	comp=E,424nm,0.6s						
X18A	**Snowflake**	**2.24**	**251**	Pn	**Pn**	**13 28 39.1**	**-0.4**
S22A	**4UR Ranch, Cre**	**2.51**	**10**		**Pb**	**13 28 45.8**	**-1.8**
S22A				IAML		13 29 19.8	
	comp=E,163nm,0.8s						
S22A				IAML		13 29 20.0	
	comp=N,161nm,0.6s						
121A	**Cookes Peak, D**	**2.75**	**187**		**Pn**	**13 28 45.5**	**-1.1**
121A				IAML		13 29 27.9	
	comp=E,379nm,0.5s						
SDCO	**Great Sand Dun**	**2.90**	**31**		**Pn**	**13 28 48.9**	**+0.2**
SDCO				Pg	**Pb**	**13 28 53.3**	**-0.9**
T25A	**Trinidad**	**3.04**	**51**		**Pn**	**13 28 51.6**	**+1.0**
T25A				Pg	**Pb**	**13 28 57.1**	**+0.5**
PV13	**Radium Mtn., P**	**3.11**	**339**		**Pn**	**13 28 51.5**	**-0.1**
PV15	**Paradox Valley**	**3.19**	**344**		**Pn**	**13 28 52.7**	**0.0**
WUAZ	**Wupatki**	**3.27**	**275**		**Pn**	**13 28 54.3**	**+0.5**
PV10	**Paradox Valley**	**3.37**	**337**	Pn	**Pn**	**13 28 53.8**	**-1.4**
PV23	**Carpenter Ridg**	**3.44**	**338**	Pn	**Pn**	**13 28 56.4**	**+0.3**
PV23				Pg	**Pb**	**13 29 03.3**	**0.0**
SMCO	**Snowmass**	**3.91**	**5**		**Pn**	**13 29 04.0**	**+1.3**
SMCO				IAML		13 30 04.8	
	comp=E,35nm,0.4s						
SMCO				IAML		13 30 05.9	
	comp=E,55nm,0.6s						
U15A	**North Rim**	**4.16**	**288**	Pn	**Pn**	**13 29 06.8**	**+0.8**
PKCU	**Pink Cliffs**	**4.53**	**300**	Pn	**Pn**	**13 29 11.6**	**+0.4**
SRU	**San Rafael Swe**	**4.58**	**328**		**Pn**	**13 29 10.8**	**-1.0**
MTPU	**Mount Pierson**	**4.75**	**307**		**Pn**	**13 29 14.6**	**+0.3**
P18A	**Preston Nutter**	**4.91**	**333**		**Pn**	**13 29 16.0**	**-0.4**
MSU	**Marysvale**	**5.03**	**311**		**Pn**	**13 29 18.4**	**+0.5**
MVU	**Marysvale**	**5.04**	**311**		**Pn**	**13 29 18.9**	**+0.7**
TMUT	**Trail Mountain**	**5.05**	**324**		**Pn**	**13 29 18.4**	**+0.1**
LCMT	**Little Creek M**	**5.05**	**292**		**Pn**	**13 29 18.7**	**+0.5**
LCMT				IAML		13 30 41.4	
	comp=E,32nm,0.7s						
LCMT				IAML		13 30 43.3	
	comp=N,37nm,1.1s						
TXAR	**Lajitas Array**	**6.70**	**151**	Pn	**Pn**	**13 29 41.1**	**+0.3**
	comp=N,0.2nm,0.3s,baz=334,slow=11,SNR=2.6						
TXAR				Pg	Pb	13 29 52.3	-6.6
	comp=N,0.2nm,0.3s,baz=328,slow=13,SNR=2.5						
TXAR				Sn	**Sn**	**13 31 02.7**	**+5.4**
	baz=332,slow=36						
TXAR				Lg	Lg	13 31 30.6	
	comp=N,0.4nm,0.3s,baz=328,slow=32,SNR=2.3						
	comp=N,0.3nm,0.4s						
ABTX	**Abilene, Hawle**	**6.95**	**110**	Pg	**Pb**	**13 30 03.6**	**+0.5**
PDAR	**Pinedale Array**	**7.67**	**348**	Pn	Pn	13 29 47.3	-6.9
	comp=N,0.1nm,0.3s,baz=156,slow=16,SNR=3.7						
PDAR				Pg	Pb	13 30 04.0	-11
	comp=N,0.2nm,0.3s,baz=164,slow=15,SNR=5.3						
PDAR				Lg	Lg	13 31 47.4	
	comp=N,0.2nm,0.3s,baz=157,slow=35,SNR=3.2						
	comp=N,0.1nm,0.3s						
PFO	**Pinyon Flats O**	**7.68**	**260**	Lg	Lg	13 31 57.6	
	comp=N,0.1nm,0.3s,baz=53,slow=20,SNR=1.5						
NVAR	**Mina Array Bea**	**9.31**	**293**	Pg	Pn	13 30 32.8	+16
	comp=N,0.1nm,0.3s,baz=116,slow=11,SNR=1.8						
NVAR				Lg	Lg	13 32 42.3	
	baz=112,slow=17,SNR=1.5						

*IDC **20** 14:19:00.4±2.0, 41°.55S×84°.90E, h0km, mb4.1/12, mbtmp4.1/12, MS3.7/26, Error ellipse: s-maj=25.8km s-min=17.9km az=108.0*

ISC 20 14:19:02.0±0.7, 41°.65S±0°.1×84°.9E±0°.2, h10km, n38, σ0°.45/15, mb4.1/12, MS3.8/26, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**23.82**	**83**	T	T	14 48 48.0	
	baz=245,slow=74,SNR=149						
H01W3	**Cape Leeuwin H**	**23.82**	**83**	T	T	14 48 48.6	
	baz=245,slow=74,SNR=182						
H01W1	**Cape Leeuwin H**	**23.83**	**83**	T	T	14 48 49.3	
	baz=245,slow=74,SNR=161						
NWAO	**Narrogin (SRO)**	**27.00**	**82**	LR	LR	14 32 51.8	
	comp=Z,132nm,21.4s,baz=71,slow=31						
MAW	**Mawson**	**28.73**	**197**	P	**P**	**14 24 59.5**	**+0.4**
	2.3nm,1.0s,baz=12,slow=14,SNR=3.9						
MAW				LR	LR	14 34 06.1	
	comp=Z,88nm,18.9s,baz=33,slow=32						
	2.3nm,1.0s						
H08S2	**Diego Garcia H**	**35.52**	**338**	T	T	15 03 23.6	
	baz=164,slow=76,SNR=212						
H08S1	**Diego Garcia H**	**35.52**	**338**	T	T	15 03 24.9	
	baz=164,slow=76,SNR=203						
H08S3	**Diego Garcia H**	**35.54**	**338**	T	T	15 03 26.2	
	baz=164,slow=76,SNR=322						
LEM	**Lembang**	**40.03**	**37**	LR	LR	14 39 17.7	
	comp=Z,80nm,20.9s,baz=190,slow=30						
ASAR	**Alice Springs**	**44.32**	**82**	P	**P**	**14 27 12.2**	**-0.1**
	2.8nm,1.0s,baz=220,slow=6.4,SNR=14						
ASAR				PcP	**PcP**	**14 28 56.6**	**+0.3**
	0.6nm,0.8s,baz=246,slow=2.4,SNR=6.0						
ASAR				LR	LR	14 43 49.8	
	comp=Z,169nm,19.5s,baz=240,slow=34						
	2.8nm,1.0s						
STKA	**Stephens Creek**	**45.72**	**97**	P	**P**	**14 27 23.8**	**+0.5**
	4.6nm,0.8s,baz=200,slow=5.4,SNR=9.2						
STKA				LR	LR	14 42 31.1	
	comp=Z,98nm,20.4s,baz=209,slow=31						
	4.6nm,0.8s						
PSI	**Prapat**	**45.94**	**20**	LR	LR	14 42 15.1	
	comp=Z,241nm,20.5s,baz=208,slow=30						
WRA	**Warramunga Arr**	**46.89**	**78**	P	**P**	**14 27 32.6**	**+0.1**
	4.3nm,1.1s,baz=232,slow=7.6,SNR=7.7						
WRA				LR	LR	14 44 55.2	
	comp=Z,35nm,20.6s,baz=228,slow=33						
	4.3nm,1.1s						
VNDA	**Vanda**	**47.01**	**163**	P	**P**	**14 27 32.4**	**-0.4**
	0.4nm,0.6s,baz=264,slow=5.6,SNR=7.2						
VNDA				LR	LR	14 44 55.6	
	comp=Z,121nm,21.2s,baz=276,slow=33						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**48.61**	**180**	P	**P**	**14 27 44.9**	**-0.6**
	6.5nm,1.1s,baz=280,slow=4.3,SNR=13						
QSPA				LR	LR	14 46 09.4	
	comp=Z,115nm,21.3s,baz=309,slow=34						
	6.5nm,1.1s						
PALK	**Pallekele**	**48.73**	**354**	LR	LR	14 43 23.9	
	comp=Z,211nm,21.8s,baz=288,slow=30						
BOSA	**Boshof**	**49.60**	**265**	LR	LR	14 45 26.0	
	comp=Z,123nm,18.1s,baz=192,slow=32						
SNAA	**Sanae**	**50.50**	**204**	P	**P**	**14 27 59.9**	**+0.2**
SNAA	**Sanae**	**50.50**	**204**	P	**P**	**14 27 59.9**	**+0.2**
	0.8nm,0.6s,baz=139,slow=12,SNR=7.0						
SNAA				LR	LR	14 46 01.6	
	comp=Z,35nm,19.7s,baz=174,slow=32						
	0.8nm,0.6s						
SUR	**Sutherland**	**50.99**	**258**	LR	LR	14 44 43.9	
	comp=Z,61nm,20.2s,baz=148,slow=30						
LBTB	**Lobatse**	**51.30**	**269**	LR	LR	14 46 11.9	
	comp=Z,90nm,18.9s,baz=140,slow=32						
VNA3	**Neumayer Olymp**	**52.72**	**204**	P	**P**	**14 28 16.7**	**+0.4**
CTA	**Charters Tower**	**55.66**	**87**	LR	LR	14 50 05.9	
	comp=Z,37nm,19.5s,baz=262,slow=34						
SIJI	**Sorong**	**58.12**	**58**	LR	LR	14 54 06.5	
	comp=Z,18nm,18.3s,baz=220,slow=36						
RPZ	**Rata Peaks**	**60.54**	**124**	LR	LR	14 49 54.6	
	comp=Z,66nm,18.1s,baz=266,slow=31						
TSUM	**Tsumeb**	**60.71**	**270**	LR	LR	14 52 27.6	
	comp=Z,92nm,18.1s,baz=149,slow=33						
CMAR	**Chiang Mai Arr**	**61.09**	**15**	P	**P**	**14 29 16.5**	**+0.3**
	0.8nm,0.3s,baz=209,slow=6.3,SNR=8.3						
CMAR				LR	LR	14 52 23.6	
	comp=Z,32nm,19.1s,baz=200,slow=33						
	0.8nm,0.3s						
PMG	**Port Moresby**	**63.11**	**78**	LR	LR	14 53 53.8	
	comp=Z,72nm,21.6s,baz=66,slow=33						
MBAR	**Mbarara**	**63.51**	**295**	LR	LR	14 53 17.5	
	comp=Z,35nm,18.2s,baz=134,slow=32						
BRDH	**Bariadhala**	**64.20**	**7**	LR	LR	14 53 27.0	
	comp=Z,120nm,19.7s,baz=265,slow=32						
DZM	**Mont Dzumac**	**69.54**	**102**	LR	LR	14 59 40.9	
	comp=Z,50nm,18.0s,baz=220,slow=35						
PMSA	**Palmer Station**	**71.26**	**193**	LR	LR	15 00 46.2	
	comp=Z,99nm,19.2s,baz=142,slow=35						
JOW	**Kunigami**	**78.98**	**39**	LR	LR	15 06 02.7	
	comp=Z,23nm,18.7s,baz=228,slow=36						
GEYT	**Alibeck**	**82.80**	**339**	P	**P**	**14 31 26.5**	**+0.5**
	1.8nm,0.8s,baz=208,slow=8.2,SNR=5.1						
	1.8nm,0.8s						
KSRS	**Korea Array**	**87.89**	**33**	P	**P**	**14 31 50.8**	**-0.6**
	0.5nm,0.5s,baz=290,slow=3.5,SNR=2.3						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**87.99**	**358**	P	**P**	**14 31 51.0**	**-0.7**
	0.5nm,0.8s,baz=152,slow=6.5,SNR=3.0						
	0.5nm,0.8s						
BRTR	**Keskin Array B**	**93.36**	**323**	P	**P**	**14 32 17.0**	**-0.1**
	0.3nm,0.3s,baz=156,slow=7.7,SNR=2.1						
	0.3nm,0.3s						
PLCA	**Paso Flores**	**95.13**	**198**	LR	LR	15 15 37.6	
	comp=Z,51nm,18.6s,baz=196,slow=36						

*BEO **20** 14:20:47.8±0.7, 39°.60N×20°.59E, h11km±4km, ML3.7/8*
*TIR **20** 14:20:48.4, 39°.71N×20°.70E, h8km±8km, Md3.9, Ml4.0*
*NEIC **20** 14:20:48.3±2.1, 39°.79N±0°.05×20°.58E±0°.07, h10km±2km, Error ellipse: s-maj=9.9km s-min=7.5km az=222.0*
*PDG **20** 14:20:49.0±0.6, 39°.78N×20°.62E, h14km, ML3.8/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*THE **20** 14:20:49.6, 39°.75N×20°.67E, h2km±1km, ML3.7/48, Error ellipse: s-maj=1.2km s-min=0.5km az=304.0*
*ATH **20** 14:20:49.3, 39°.76N×20°.65E, h7km±1km, ML3.7/20, Error ellipse: s-maj=1.8km s-min=0.9km az=316.0*
*IDC **20** 14:20:50.4±2.3, 39°.79N×20°.58E, h37km±22km, mb3.6/9, mbtmp3.8/14, ML3.8/5, MS3.1/9, Error ellipse: s-maj=16.8km s-min=15.3km az=164.0*

ISC 20 14:20:48.7±0.8, 39°.75N±0°.01×20°.64E±0°.01, h14km±6km, n254, σ1°.48/339, mb4.0/12, MS3.1/5, 23C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.19**	**120**	P	**Pg**	**14 20 52.7**	**-0.4**
JAN				S	**Sg**	**14 20 55.1**	**-1.0**
JAN				AML	AML	14 20 57.0	
JAN				AML	AML	14 20 57.0	
IGT	**Igoumenitsa**	**0.32**	**227**	P	**Pg**	**14 20 56.0**	**+0.7**
IGT				S	**Sb**	**14 21 02.0**	**+0.7**
	23μm,0.3s						
IGT	**Igoumenitsa**	**0.32**	**227**	P	**Pg**	**14 20 55.5**	**+0.2**
	baz=239						
IGT				S	**Sb**	**14 21 02.2**	**+0.9**
	baz=239						
IGT	**Igoumenitsa**	**0.32**	**227**	P	**Pg**	**14 20 55.5**	**+0.2**
IGT				S	**Sb**	**14 21 01.2**	**-0.1**
IGT				AML	AML	14 21 02.7	
	comp=N,28161μm,0.6s						
IGT				AML	AML	14 21 03.6	
	comp=E,62467μm,0.3s						
LSK	**Leskovik**	**0.40**	**356**	P	**Pg**	**14 20 57.3**	**+0.6**
LSK				S	**Sg**	**14 21 02.2**	**0.0**
	comp=E,30μm,0.5s						
LSK	**Leskovik**	**0.40**	**356**	P	**Pg**	**14 20 57.3**	**+0.6**
	baz=351						
LSK				S	**Sb**	**14 21 03.3**	**-0.2**
	baz=351						
LSK				AMP			
	comp=N,113nm,0.4s,baz=351						
SRN	**Sarande**	**0.50**	**285**	P	**Pb**	**14 20 59.4**	**+0.1**
SRN				S	**Sb**	**14 21 06.4**	**-0.1**
	comp=N,8μm,0.3s						
SRN	**Sarande**	**0.50**	**285**	P	**Pg**	**14 20 59.1**	**+0.4**
	baz=288						
SRN				S	**Sb**	**14 21 07.0**	**+0.5**
	baz=288						
SRN				AMP			
	comp=N,29nm,0.4s,baz=288						
KASA	**Kassiopi**	**0.54**	**269**	P	**Pg**	**14 20 59.6**	**+0.3**
KASA				S	**Sb**	**14 21 07.8**	**+0.3**
KASA				AML	AML	14 21 10.9	
	comp=N,42522μm,0.5s						
KASA				AML	AML	14 21 12.1	
	comp=E,26007μm,0.3s						
PENT	**Pentalofos**	**0.59**	**41**	P	**Pg**	**14 21 00.1**	**-0.2**
PENT				S	**Sg**	**14 21 08.3**	**+0.2**
	comp=E,3μm,0.4s						
PENT	**Pentalofos**	**0.59**	**41**	P	**Pg**	**14 21 00.1**	**-0.2**
PENT				AML	AML	14 21 11.0	
	comp=E,8821μm,0.3s						
PENT				AML	AML	14 21 16.6	
	comp=N,2983μm,0.6s						
KPRO	**Kipourio**	**0.60**	**70**	P	**Pg**	**14 21 00.1**	**-0.3**
KPRO				S	**Sg**	**14 21 07.7**	**-0.6**
	comp=N,14μm,0.4s						
KEK	**Kerkira**	**0.65**	**267**	Pg	**Pg**	**14 21 01.2**	**-0.1**
KEK	**Kerkira**	**0.65**	**267**	P	**Pg**	**14 21 01.2**	**-0.1**
KEK				S	**Sb**	**14 21 11.1**	**+0.5**
	comp=N,7μm,0.2s						
KEK	**Kerkira**	**0.65**	**267**	P	**Pg**	**14 21 01.1**	**-0.1**
KEK				S	**Sb**	**14 21 10.9**	**+0.3**
KEK				AML	AML	14 21 13.8	
	comp=N,14940μm,0.3s						
KEK				AML	AML	14 21 18.1	
	comp=E,13931μm,0.3s						
NEST	**Nestorio**	**0.73**	**26**	P	**Pg**	**14 21 02.9**	**-0.1**
NEST				S	**Sg**	**14 21 13.2**	**+0.5**
	comp=E,4μm,0.4s						
NEST	**Nestorio**	**0.73**	**26**	P	**Pg**	**14 21 02.9**	**-0.1**
NEST				AML	AML	14 21 18.9	
	comp=E,10360μm,0.4s						
NEST				AML	AML	14 21 19.9	
	comp=N,8456μm,0.4s						
KBN	**Korca**	**0.88**	**8**		**Pg**	**14 21 05.2**	**-0.5**
KBN	**Korca**	**0.88**	**8**	P	**Pg**	**14 21 05.4**	**-0.3**
KBN				S	**Sn**	**14 21 20.0**	**+0.7**
	comp=N,3μm,0.5s						
KBN	**Korca**	**0.88**	**8**	P	**Pg**	**14 21 05.6**	**-0.1**
	baz=4.0						
KBN				S	**Sn**	**14 21 19.7**	**+0.4**
	baz=4.0						
TSLK	**Tsoukalades, L**	**0.93**	**179**	P	**Pg**	**14 21 06.4**	**-0.2**
TSLK				S	**Sn**	**14 21 22.2**	**+1.8**
	comp=N,5μm,0.4s						
TSLK	**Tsoukalades, L**	**0.93**	**179**	P	**Pg**	**14 21 06.2**	**-0.4**
TSLK				AML	AML	14 21 25.6	
	comp=N,9809μm,0.3s						
TSLK				AML	AML	14 21 26.2	
	comp=E,8904μm,0.5s						
LKD2	**Lefkada island**	**0.96**	**179**	P	**Pg**	**14 21 07.7**	**+0.4**
LKD2				S	**Sb**	**14 21 20.8**	**+1.0**
	comp=E,4μm,0.4s						
LKD2	**Lefkada island**	**0.96**	**179**	P	**Pg**	**14 21 06.7**	**-0.7**
LKD2				AML	AML	14 21 27.6	
	comp=E,7726μm,0.4s						
LKD2				AML	AML	14 21 31.7	
	comp=N,7514μm,0.5s						
KZN	**Kozani**	**1.03**	**57**	P	**Pg**	**14 21 08.1**	**-0.5**
KZN				S	**Sn**	**14 21 24.8**	**+1.7**
	comp=N,4μm,0.5s						
KZN	**Kozani**	**1.03**	**57**	P	**Pg**	**14 21 07.4**	**-1.3**
KZN				AML	AML	14 21 26.7	
	comp=E,8769μm,0.5s						
KZN				AML	AML	14 21 27.9	
	comp=N,8310μm,0.6s						
NYDR	**Nydri-Lefkada**	**1.04**	**177**	P	**Pg**	**14 21 08.7**	**0.0**
NYDR				S	**Sn**	**14 21 24.2**	**+1.1**
	comp=N,4μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.07**	**183**	P	**Pg**	**14 21 09.3**	**0.0**
DRAG				S	**Sn**	**14 21 26.3**	**+2.4**
THL	**Klokotos Trika**	**1.08**	**100**	P	**Pb**	**14 21 08.9**	**-0.3**
THL				S	**Sg**	**14 21 23.1**	**-0.6**
	comp=N,2μm,0.5s						
THL	**Klokotos Trika**	**1.08**	**100**	P	**Pb**	**14 21 08.1**	**-1.1**
THL				AML	AML	14 21 29.9	
	comp=N,5731μm,0.6s						
THL				AML	AML	14 21 30.4	
	comp=E,4045μm,0.4s						
VLO	**Vlora**	**1.13**	**310**		**Pb**	**14 21 08.5**	**-1.4**
VLO	**Vlora**	**1.13**	**310**	P	**Pn**	**14 21 12.3**	**+2.2**
VLO				S	**Sn**	**14 21 28.9**	**+3.6**
	comp=E,11μm,0.5s						
EVGI	**Lefkada island**	**1.13**	**179**	P	**Pb**	**14 21 10.5**	**+0.5**
EVGI				S	**Sn**	**14 21 27.7**	**+2.3**
	comp=E,4μm,0.3s						
EVGI	**Lefkada island**	**1.13**	**179**	P	**Pb**	**14 21 09.6**	**-0.5**
TYRN	**Tyrnavos**	**1.23**	**91**	P	**Pn**	**14 21 11.2**	**-0.3**
TYRN				S	**Sg**	**14 21 28.8**	**+0.3**
EVR	**Evrytania**	**1.24**	**132**	P	**Pn**	**14 21 12.4**	**+0.8**
EVR				S	**Sb**	**14 21 28.7**	**+1.0**
	comp=E,3μm,0.5s						
EVR	**Evrytania**	**1.24**	**132**	P	**Pn**	**14 21 11.6**	**0.0**
EVR				S	**Sb**	**14 21 28.7**	**+1.0**
EVR				AML	AML	14 21 34.6	
	comp=E,4583μm,0.4s						
EVR				AML	AML	14 21 39.4	
	comp=N,5477μm,0.5s						
FSK	**Fiskardo**	**1.29**	**183**	P	**Pn**	**14 21 13.3**	**+1.0**
FSK				S	**Sn**	**14 21 30.6**	**+1.2**
	comp=N,3μm,0.3s						
FSK	**Fiskardo**	**1.29**	**183**	P	**Pn**	**14 21 12.2**	**-0.1**
FSK				S	**Sb**	**14 21 29.5**	**+0.3**
FSK				AML	AML	14 21 33.1	
	comp=N,5459μm,0.4s						
FSK				AML	AML	14 21 36.1	
	comp=E,7144μm,0.5s						
KTI	**Kastanea**	**1.30**	**60**	P	**Pn**	**14 21 13.2**	**+0.6**
PVO	**Paravola**	**1.33**	**148**	P	**Pb**	**14 21 14.2**	**+0.8**
PVO				S	**Sg**	**14 21 33.0**	**+1.4**
	comp=E,4μm,0.5s						
PVO	**Paravola**	**1.33**	**148**	P	**Pn**	**14 21 13.6**	**+0.8**
LRSO	**Larissa Observ**	**1.36**	**93**	P	**Pn**	**14 21 13.0**	**-0.2**
LRSO				S	**Sb**	**14 21 31.9**	**+0.8**
	comp=E,6μm,0.5s						
OHR	**Ohrid**	**1.36**	**5**	*e*Pg	**Pg**	**14 21 15.1**	**+0.2**
OHR				*e*Sg	**Sg**	**14 21 36.2**	**+3.6**
OHR	**Ohrid**	**1.36**	**5**	*i* Pn	**Pg**	**14 21 15.5**	**+0.6**
OHR				*i* Sn	**Sg**	**14 21 36.9**	**+4.3**
MAKR	**Makrakomi, Fth**	**1.38**	**122**	P	**Pb**	**14 21 14.8**	**+0.6**
MAKR				S	**Sg**	**14 21 34.6**	**+1.6**
	comp=E,6μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.38**	**122**	P	**Pn**	**14 21 14.4**	**+0.9**
MAKR				AML	AML	14 21 43.4	
	comp=E,14141μm,0.4s						
MAKR				AML	AML	14 21 43.9	
	comp=N,11504μm,0.5s						
LIT	**Litokhoron**	**1.47**	**76**	Pn	**Pn**	**14 21 15.3**	**+0.5**
LIT	**Litokhoron**	**1.47**	**76**	P	**Pg**	**14 21 17.0**	**+0.1**
KEF4	**Livadi, Kephal**	**1.50**	**186**	P	**Pb**	**14 21 17.0**	**+0.7**
KEF4				S	**Sb**	**14 21 36.3**	**+1.1**
	comp=N,11μm,0.3s						
KEF4	**Livadi, Kephal**	**1.50**	**186**	P	**Pn**	**14 21 15.4**	**+0.3**
DMLN	**Damoulianata-K**	**1.53**	**188**	P	**Pn**	**14 21 16.9**	**+1.3**
DMLN				S	**Sg**	**14 21 38.4**	**+0.6**
	comp=N,3μm,0.5s						
KEF3	**Kipouria, Keph**	**1.56**	**188**	P	**Pn**	**14 21 16.2**	**+0.2**
KEF3				S

RLS	Riolos of Patr	1.81 159	P	Pb	14 21 22.0 +0.4
LAKA	Lakka	1.84 145	P	Pb	14 21 23.3 +1.2
LAKA			S	Sb	14 21 46.3 +1.3
	comp=E,3μm,0.6s				
LAKA	Lakka	1.84 145	P	Pn	14 21 20.5 +0.6
AXAR	Agios Charalam	1.85 121	P	Pb	14 21 22.6 +0.2
AXAR			S	Sn	14 21 45.1 +1.8
	comp=E,3μm,0.5s				
ALIK	Aliki, Aigiali	1.88 142	P	Pb	14 21 22.9 +0.1
PHP	Peshkopia	1.94 356	P	Pb	14 21 23.9 +0.2
PHP			S	Sb	14 21 47.8 0.0
PHP	Peshkopia	1.94 356	P	Pb	14 21 24.0 +0.2
	baz=355				
PHP			S	Sg	14 21 52.7 +1.8
	baz=355				
DRO	Drossia	1.98 155	P	Pb	14 21 24.9 +0.3
DRO			S	Sb	14 21 49.6 +0.4
	comp=E,2μm,0.6s				
THE	Thessaloniki	1.99 63	P	Pn	14 21 23.1 +1.2
THE			S	Sn	14 21 48.9 +2.3
	comp=E,368nm,0.6s				
THE	Thessaloniki	1.99 63	P	Pn	14 21 22.6 +0.8
XOR	Xorichti	2.01 100	P	Pn	14 21 24.5 +2.2
XOR			S	Sb	14 21 51.0 +1.0
	comp=E,1μm,0.7s				
XOR	Xorichti	2.01 100	P	Pn	14 21 23.1 +0.8
XOR			AML	AML	14 21 59.6
	comp=N,3604μm,0.6s				
XOR			AML	AML	14 22 00.2
	comp=E,1728μm,0.7s				
LTHK	Lithakia	2.05 176	P	Pb	14 21 26.2 +0.6
LTHK			S	Sb	14 21 50.7 -0.2
	comp=E,1μm,0.7s				
LTHK	Lithakia	2.05 176	P	Pn	14 21 24.4 +1.7
NEO	Neokhori	2.05 102	P	Pn	14 21 25.0 +2.2
NEO			S	Sb	14 21 52.1 +1.0
	comp=E,1μm,0.5s				
NEO	Neokhori	2.05 102	P	Pn	14 21 24.0 +1.2
NEO			AML	AML	14 21 58.8
	comp=E,2338μm,0.5s				
NEO			AML	AML	14 22 04.1
	comp=N,3141μm,0.5s				
HORT	Hortiatis	2.07 65	P	Pn	14 21 24.0 +0.9
HORT			S	Sb	14 21 51.8 +0.1
	comp=N,302nm,0.4s				
HORT	Hortiatis	2.07 65	P	Pn	14 21 23.7 +0.7
HORT			AML	AML	14 21 54.1
	comp=N,726μm,0.4s				
HORT			AML	AML	14 21 56.8
	comp=E,590μm,0.6s				
KLV	Kalavryta, Ach	2.08 145	P	Pb	14 21 26.2 0.0
KLV			S	Sb	14 21 52.6 +0.7
	comp=E,640nm,0.6s				
KLV	Kalavryta, Ach	2.08 145	P	Pn	14 21 25.1 +1.9
KLV			AML	AML	14 22 08.2
	comp=N,1241μm,0.7s				
KLV			AML	AML	14 22 10.5
	comp=E,1316μm,0.6s				
LKR	Lokris	2.14 120	P	Pn	14 21 25.6 +1.6
LKR			S	Sb	14 21 53.3 -0.4
	comp=E,412nm,0.8s				
VAY	Valandovo	2.15 43	*e*Pn	Pn	14 21 25.1 +1.0
VAY			*e*Sn	Sb	14 21 54.0 +0.1
VAY	Valandovo	2.15 43	*i* Pn	Pn	14 21 25.2 +1.0
VAY			*i* Sn	Sb	14 21 54.9 +1.0
KNT	Kendrikon	2.23 50	P	Pn	14 21 25.7 +0.5
KNT			S	Sn	14 21 54.8 +2.3
	comp=E,235nm,0.5s				
KNT	Kendrikon	2.23 50	P	Pn	14 21 25.6 +0.5
STIP	Stip	2.27 31	*i* Pn	Pb	14 21 29.1 -0.3
SKO	Skopje	2.30 15	*e*Pn	Pb	14 21 28.9 -1.0
SKO			*e*Sn	Sb	14 21 58.3 +0.1
SKO	Skopje	2.30 15	*i* Pn	Pb	14 21 29.4 -0.6
THAL	Thalero	2.33 137	P	Pn	14 21 28.6 +2.0
SOH	Sokhos	2.34 62	P	Pn	14 21 28.2 +1.5
SOH			S	Sn	14 21 57.7 +2.4
	comp=E,630nm,0.6s				
SOH	Sokhos	2.34 62	P	Pn	14 21 28.0 +1.3
ULC	Ulcinj	2.45 335	*e*Pn	Pn	14 21 29.3 +1.1
ULC			*i* Sn	Sn	14 22 00.7 +2.7
LOUT	Loutraki	2.54 133	P	Pn	14 21 32.2 +2.7
LOUT			S	Sb	14 22 03.9 -1.2
	comp=E,502nm,0.7s				
VILL	Villia	2.62 126	P	Pn	14 21 33.2 +2.5
VILL			S	Sn	14 22 05.7 +3.4
	comp=E,850nm,0.7s				
OUR	Ouranopolis	2.63 76	P	Pn	14 21 31.6 +0.8
OUR			S	Sn	14 22 04.7 +2.2
SRS	Serrai	2.64 58	P	Pn	14 21 31.7 +0.9
SRS			S	Sn	14 22 03.7 +1.1
	comp=E,215nm,0.4s				
SRS	Serrai	2.64 58	*e*Pn	Pn	14 21 31.6 +0.8
SRS			*e*Sn	Sn	14 22 05.3 +2.7
BCI	Bajram Curri	2.65 351	P	Pb	14 21 34.3 -1.6
	baz=351				
DRME	Dracevica, Mon	2.67 336	*e*Pn	Pn	14 21 32.5 +1.3
DRME	Dracevica, Mon	2.67 336	*e*Pn	Pn	14 21 32.5 +1.3
DRME			*i* Sn	Sn	14 22 06.0 +2.6
ITM	Ithomi	2.76 158	Pn	Pn	14 21 35.5 +3.0
ITM	Ithomi	2.76 158	P	Pn	14 21 35.5 +3.0
ITM			S	Sb	14 22 10.5 -1.1
	comp=E,438nm,0.9s				
KOKK	Kokkinochori,	2.78 66	P	Pn	14 21 34.1 +1.3
KOKK			S	Sn	14 22 08.0 +1.8
	comp=E,118nm,0.4s				
BUM	Brajici-Budva	2.87 333	*e*Pn	Pn	14 21 34.8 +0.8
BUM			*i* Sn	Sn	14 22 11.0 +2.7
PDG	Podgorica	2.87 339	⇑P	Pn	14 21 34.9 +0.9
PDG	Podgorica	2.87 339	Pn	Pn	14 21 34.4 +0.4
TTG	Podgorica	2.87 339	⇑*i*Pn	Pn	14 21 35.2 +1.2
TTG			*i* Sn	Sn	14 22 11.0 +2.7
PVY	Plav	2.88 350	*e*Pn	Pn	14 21 35.5 +1.2
PVY			*i* Sn	Sn	14 22 11.3 +2.4
NVR	Nevrokopi	2.93 56	P	Pn	14 21 36.2 +1.3
NVR			S	Sn	14 22 12.4 +2.5
	comp=E,222nm,0.7s				
TIP	Timpagrande	3.06 260	⇑P	Pn	14 21 36.7 +0.1
TIP	Timpagrande	3.06 260	Pn	Pn	14 21 36.6 0.0
DION	Dionisos Attik	3.07 122	P	Pn	14 21 39.0 +2.2
DION			S	Sn	14 22 16.9 +3.6
	comp=E,828nm,0.8s				
CEME	Cevo	3.08 336	*e*Pn	Pn	14 21 38.1 +1.2
CEME			*i* Sn	Sn	14 22 16.0 +2.4
VLY	Voula,Athens	3.11 127	P	Pn	14 21 39.6 +2.2
VLY			S	Sn	14 22 18.6 +4.2
	comp=E,355nm,0.6s				
HCY	Herceg Novi	3.14 330	*e*Pn	Pn	14 21 37.7 0.0
HCY	Herceg Novi	3.14 330	*e*Pn	Pn	14 21 38.2 +0.5
HCY			*i* Sn	Sn	14 22 17.2 +2.2
MATE	Matera	3.14 288	⇑P	Pn	14 21 38.2 +0.5
IVA	Berane	3.17 350	*e*Pn	Pn	14 21 39.4 +1.2
IVA			*i* Sn	Sn	14 22 18.1 +2.3
BARS	Barje	3.19 16	*e*Pn	Pn	14 21 40.7 +2.3
KOME	Kolasin	3.21 345	*e*Pn	Pn	14 21 39.9 +1.2
KOME			*i* Sn	Sn	14 22 19.0 +2.2
NKME	Niksic	3.27 338	⇑*i*Pn	Pn	14 21 40.7 +1.2
NKME			*i* Sn	Sn	14 22 20.6 +2.4
VTS	Vitosha	3.47 34	⇑P	Pn	14 21 44.2 +1.8
VTS	Vitosha	3.47 34	Pn	Pn	14 21 43.6 +1.2
SELS	Selova	3.48 6	*e*Pn	Pn	14 21 44.0 +1.5
BRY	Bratogost	3.52 334	*e*Pn	Pn	14 21 43.7 +0.7
BRY	Bratogost	3.52 334	*e*Pn	Pn	14 21 43.8 +0.7
BRY			*i* Sn	Sn	14 22 26.6 +2.0
VLI	Veliai	3.53 148	P	Pn	14 21 44.9 +1.8
VLI			S	Sn	14 22 28.4 +3.7
	comp=E,240nm,0.9s				
SJES	Sjenica	3.54 352	*e*Pn	Pn	14 21 45.2 +1.9
UPM	Unac-Piva	3.68 340	*e*Pn	Pn	14 21 46.8 +1.4
UPM	Unac-Piva	3.68 340	*e*Pn	Pn	14 21 46.5 +1.1
UPM			*i* Sn	Sn	14 22 30.7 +2.0
PLE	Pljevlja	3.69 346	*e*Pn	Pn	14 21 46.7 +1.2
PLE			*i* Sn	Sn	14 22 30.8 +2.0
CUC	Castrocucco	3.72 275	Pn	Pn	14 21 46.4 +0.7
STON	Ston	3.82 326	*e*Pn	Pn	14 21 45.4 -1.6
ZAPS	Zavoj	3.82 22	*e*Pn	Pn	14 21 50.1 +2.9
ZAPS			*e*Sn	Sn	14 22 34.9 +3.0
BOVS	Bovan	3.96 11	⇑P	Pn	14 21 50.2 +1.2
BOVS	Bovan	3.96 11	*e*Pn	Pn	14 21 50.1 +1.1
BOVS			*e*Sn	Sn	14 22 37.4 +2.2
CEL	Celeste	3.98 250		Pn	14 21 49.6 +0.2
RDO	Rodhopi	3.99 68	Pn	Pn	14 21 50.5 +1.1
GRUS	Gruza	4.13 1	*e*Pn	Pn	14 21 52.9 +1.5
BLKB	Belogradchik	4.16 21	⇑P	Pn	14 21 54.1 +2.3
BBLS	Lazići	4.21 348	*e*Pn	Pn	14 21 53.3 +0.8
BBLS	Lazići	4.21 348	*e*Pn	Pn	14 21 53.4 +0.9
SGRT	San Giovanni R	4.22 300	Pn	Pn	14 21 52.8 +0.1
ZAGS	Zajecar	4.23 16	*e*Pn	Pn	14 21 54.2 +1.5
ZAGS			*e*Sn	Sn	14 22 43.1 +1.3
DIVS	Divibare	4.37 354	Pn	Pn	14 21 55.5 +0.8
DIVS	Divibare	4.37 354	*e*Pn	Pn	14 21 55.5 +0.8
DIVS	Divibare	4.37 354	*e*Pn	Pn	14 21 55.6 +0.9
DIVS			*e*Sn	Sn	14 22 46.6 +1.2
TRUS	Trudelj	4.47 358	*e*Pn	Pn	14 21 57.6 +1.6
HAPS	Han Pijesak,BI	4.51 344	*e*Pn	Pn	14 21 57.2 +0.6
APE	Apeiranthos	4.69 123	⇑P	Pn	14 22 02.6 +3.6
KUBS	Kucevo	4.72 9	*e*Pn	Pn	14 21 59.5 +0.1
PAOL	Paolisi	4.80 287		Pn	14 21 59.9 -0.8
TEKS	Tekeris	4.86 351	*e*Pn	Pn	14 22 01.2 -0.2
TEKS	Tekeris	4.86 351	*e*Pn	Pn	14 22 01.7 +0.3
MDVR	Moldovita	5.09 9	⇓P	Pn	14 22 06.7 +2.2
DJES	Djerdap	5.11 15	⇑P	Pn	14 22 07.0 +2.3
HERR	Herculane	5.29 14	⇓P	Pn	14 22 09.1 +1.8
MGRS	Mrkonjic Grad	5.36 332	*e*Pn	Pn	14 22 09.3 +1.1
VAE	Valguarnera	5.38 247	Sn	Sn	14 23 10.2 0.0
	comp=E,3.1nm,0.3s,baz=141,slow=20,SNR=1.9				
FRGS	Fruska Gora	5.43 354	⇑P	Pn	14 22 10.2 +0.9
FRGS	Fruska Gora	5.43 354	*e*Pn	Pn	14 22 10.2 +0.9
FRGS	Fruska Gora	5.43 354	*e*Pn	Pn	14 22 10.0 +0.7
RAFF	Raffo Rosso	5.53 245	Pn	Pn	14 22 09.3 -1.3
INTR	Introdacqua	5.58 296	Pn	Pn	14 22 11.8 +0.5
IDI	Anoyia	5.59 141	⇓P	Pn	14 22 15.8 +4.3
IDI	Anoyia	5.59 141	Pn	Pn	14 22 11.0 -0.6
	comp=E,1.3nm,0.3s,baz=307,slow=4.0,SNR=7.3				
IDI			Sn	Sn	14 23 12.2 -3.5
	comp=E,1.5nm,0.3s,baz=52,slow=22,SNR=2.0				
	comp=E,2.9nm,0.3s				
IDI	Anoyia	5.59 141	Pn	Pn	14 22 11.9 +0.3
BLY	Banja Luka	5.61 334	*e*Pn	Pn	14 22 11.9 +0.2
GZR	Gura Zlata	5.85 15	⇑P	Pn	14 22 17.3 +2.2
BZS	Buzias	5.90 7	⇑P	Pn	14 22 17.0 +1.3
A051A	Mrakovica	5.94 334	*e*Pn	Pn	14 22 16.2 0.0
AQU	L'Aquila	6.05 298	Pn	Pn	14 22 16.3 -1.5
CAMP	Campotosto	6.12 299		Pn	14 22 19.7 +0.9
LOT	Lotru	6.14 21	⇑P	Pn	14 22 21.5 +2.4
ARR	Arges	6.34 26	⇑P	Pn	14 22 24.3 +2.5
NRCA	Norcia	6.45 301		Pn	14 22 22.0 -1.2
VOIR		6.55 28	⇑P	Pn	14 22 27.9 +3.3
FDMO	Fiordimonte	6.55 302		Pn	14 22 23.9 -0.8
SIRR	Siria	6.55 6	⇑P	Pn	14 22 25.1 +0.5
KOVH	Kovagotottos	6.60 344	P	Pn	14 22 25.5 +0.3
KOVH			S	Sn	14 23 36.3 -3.9
MORH	Mrgy, Hungar	6.62 348	⇑P	Pn	14 22 25.9 +0.4
MORH	Mrgy, Hungar	6.62 348	P	Pn	14 22 25.6 +0.1
CESX	Cesi	6.71 298		Pn	14 22 25.1 -1.7
MLR	Muntele Rosu	6.94 33	⇑P	Pn	14 22 32.2 +2.1
MLR	Muntele Rosu	6.94 33	Pn	Pn	14 22 31.7 +1.6
	comp=E,1.0nm,0.3s,baz=247,slow=15,SNR=40				
	comp=E,1.5nm,0.3s				
BOJS	Bojanci	6.98 327	*i* Pn	Pn	14 22 30.5 0.0
MURB	Monte Urbino	7.02 303		Pn	14 22 31.6 +0.5
NEHR	Nehoiu	7.04 35	⇑P	Pn	14 22 34.5 +3.2
CEY	Cerknica	7.53 325	*e*Pn	Pn	14 22 37.8 -0.2
CEY	Cerknica	7.53 325	*i* Pn	Pn	14 22 38.1 +0.2
PLOR	Plostina	7.53 34	⇑P	Pn	14 22 40.6 +2.5
VRI	Vrincioaia	7.57 34	⇑P	Pn	14 22 40.4 +1.8
MPLH	Magyarpolny	7.75 344	P	Pb	14 22 57.5 -5.2
CASP	Castiglione de	7.96 296	Pn	Pn	14 22 43.0 -0.9
VOJS	Vojsko	7.99 324	*i* Pn	Pn	14 22 43.9 -0.5
SOKA	Soboth	8.04 331	*e*Pn	Pn	14 22 44.9 -0.2
	comp=E,5.8nm,0.4s				
OBKA	Obir	8.08 329	*e*Pn	Pn	14 22 44.8 -0.9
OBKA	Obir	8.08 329	Pn	Pn	14 22 46.3 +0.6
	comp=E,7.1nm,0.7s,SNR=6.1				
OBKA			*i* Sn	Sn	14 24 19.5 +2.5
	comp=E,6.1nm,0.4s				
PSZ	Piszkesteto	8.18 356	⇑P	Pn	14 22 48.5 +1.5
PSZ	Piszkesteto	8.18 356	Pn	Pn	14 22 45.4 -1.6
PSZ	Piszkesteto	8.18 356	P	Pn	14 22 48.0 +1.0
ARSA	Arzberg	8.36 335	*e*Pn	Pn	14 22 50.2 +0.7
	comp=E,4.8nm,0.6s				
BURAR	Bucovina Array	8.53 21	⇓P	Pn	14 22 54.7 +2.9
RONA	Rosalia, Austr	8.54 340	*e*Pn	Pn	14 22 53.2 +1.3
	comp=E,2.6nm,0.7s				
MYKA	Terra Mystica	8.56 326	Pn	Pn	14 22 52.5 +0.3
	comp=E,3.0nm,0.3s				
TEOL	Teolo	8.67 313		Pn	14 22 52.6 -1.0
STAL	STALIGIAL	8.71 321	Pn	Pn	14 22 52.5 -1.8
CLUD	Cludinico	8.77 322		Pn	14 22 53.5 -1.6
CTI	Castel Tesino	9.11 317	Pn	Pn	14 22 58.6 -1.2
BIOA	Bad Ischl, Aus	9.41 330	*e*Pn	Pn	14 23 04.1 +0.3
	comp=E,9.8nm,0.8s				
MSSA	Maissana	9.44 302	Pn	Pn	14 23 04.9 +0.6
SALO	Salr	9.47 312	Pn	Pn	14 23 04.3 -0.3
WTTA	Wattenberg	9.95 322	*e*Pn	Pn	14 23 12.5 +1.2
	comp=E,3.5nm,0.2s,SNR=5.6				
VRAC	Vranov	9.98 345	LR	LR	14 27 59.0
	comp=E,148nm,18.5s,baz=180,slow=43				
BRTR	Keskin Array B	10.02 86	Pn	Pn	14 23 13.8 +1.5
	comp=E,0.2nm,0.3s,baz=264,slow=13,SNR=1.9				
BRTR			LR	LR	14 26 42.3
	comp=E,38nm,20.4s,baz=290,slow=35				
	comp=E,0.5nm,0.4s				
WATA	Walderalm	10.03 322	*e*Pn	Pn	14 23 14.0 +1.6
	comp=E,3.5nm,0.2s				
SQTA	Sankt Quirin	10.12 321	*e*Pn	Pn	14 23 14.6 +1.0
	comp=E,3.8nm,0.2s				
MOTA	Moosalm	10.26 321	*e*Pn	Pn	14 23 14.1 -1.5
	comp=E,1.1nm,0.2s				
GERES	GERESS Array B	10.35 334	Pn	Pn	14 23 15.8 -0.9
	comp=E,0.5nm,0.3s,baz=159,slow=15,SNR=5.1				
GERES			LR	LR	14 28 35.1
	comp=E,107nm,18.9s,baz=172,slow=45				
	comp=E,0.6nm,0.3s				
DAVOX	Davos/Dischmat	10.52 315	LR	LR	14 27 52.5
	comp=E,80nm,20.8s,baz=266,slow=40				
ESDC	Sonseca Array	18.91 278	P	P	14 25 09.1 +0.1
	comp=E,0.1nm,0.3s,baz=72,slow=10,SNR=5.1				
	comp=E,1.2nm,0.9s				
HFS	Hagfors	20.86 350	P	P	14 25 28.7 -1.3
	comp=E,3.2nm,0.6s,baz=158,slow=9.6,SNR=12				
	comp=E,3.2nm,0.6s				
MDT	Midelt	21.45 259	P	P	14 25 35.4 -1.2
	comp=E,1.0nm,0.7s,baz=79,slow=5.2,SNR=2.5				
MDT			LR	LR	14 33 44.7
	comp=E,32nm,20.9s,baz=31,slow=36				
	comp=E,1.0nm,0.7s				
NC602	NORSAR Array S	21.75 348	P	P	14 25 36.9 -2.6
FINES	FINESS Array B	21.97 7	P	P	14 25 39.2 -2.6
	comp=E,1.7nm,0.3s,baz=175,slow=11,SNR=25				
	comp=E,1.7nm,0.3s				
FINES	FINESS Array B	21.97 7	P	P	14 25 40.2 -1.7
FIA1	FINESS Array S	21.98 7	P	P	14 25 40.7 -1.2
FIA1			IAmb	IAmb	14 25 56.1
	comp=E,16nm,1.1s				
NC405	NORSAR Array S	22.09 348	P	P	14 25 42.0 -1.1
NB201	NORSAR Array S	22.09 348	P	P	14 25 42.7 -0.5
NB201			IAmb	IAmb	14 25 43.9
	comp=E,8.8nm,0.8s				
NB2	NORSAR Subarra	22.10 348	P	P	14 25 41.8 -1.5
	comp=E,8.8nm,1.2s,baz=160,slow=11				
NOA	NORSAR Array B	22.10 348	P	P	14 25 41.5 -1.7
	comp=E,1.6nm,0.8s,baz=164,slow=11,SNR=8.2				
NOA			LR	LR	14 34 43.0
	comp=E,15nm,20.1s,baz=280,slow=38				
	comp=E,1.6nm,0.8s				
EKA	Eskdalemuir Ar	22.21 322	P	P	14 25 43.1 -1.5
	comp=E,2.1nm,0.6s,baz=118,slow=10,SNR=12				
	comp=E,2.1nm,0.6s				
ESK	Eskdalemuir	22.23 322	P	P	14 25 42.6 -2.0
ESK			IAmb	IAmb	14 26 00.6
	comp=E,16nm,1.1s				
NC303	NORSAR Array S	22.25 348	P	P	14 25 43.3 -1.5
NC204	NORSAR Array S	22.39 347	P	P	14 25 45.3 -1.1
NC204			IAmb	IAmb	14 25 56.9
	comp=E,7.6nm,0.8s				
ARCES	ARCESS Array B	29.96 3	P	P	14 26 53.9 -2.3
	comp=Z,0.9nm,0.5s,baz=186,slow=11,SNR=14				
	comp=Z,0.9nm,0.5s				
TORD	Torodi Ar. Bea	31.32 217	P	P	14 27 07.0 -1.6
	comp=Z,1.1nm,0.7s,baz=29,slow=7.9,SNR=8.8				
	comp=Z,1.1nm,0.7s				
BORG	Borgarnes	34.79 330	LR	LR	14 44 45.9
	comp=Z,200nm,19.9s,baz=203,slow=41				
BBTS	Babate	40.99 243	LR	LR	14 46 01.0
	comp=Z,26nm,20.1s,baz=17,slow=37				
MK31	Makanchi Array	44.42 60	P	P	14 28 58.2 -0.6
MKAR	Makanchi Array	44.42 60	P	P	14 28 57.8 -1.1
	comp=Z,1.8nm,0.5s,baz=277,slow=7.7,SNR=38				
	comp=Z,1.8nm,0.5s				
MKAR	Makanchi Array	44.42 60	P	P	14 28 58.2 -0.7
ZALV	Zalesovo Beam	44.59 49	P	P	14 28 58.6 -1.4
	comp=Z,0.7nm,0.3s,baz=284,slow=8.6,SNR=4.3				
	comp=Z,0.7nm,0.3s				
NRIK	Noril'sk	45.35 27	LR	LR	14 52 14.6
	comp=Z,28nm,18.3s,baz=4.5,slow=42				

NOU 20 14:34:35.4, 15°.14S×167°.73E, h112km, MLv4.3/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	2.61 170		P	Pn	14 35 16.7	+0.4
RTV	Rentapao	2.72 166		P	Pn	14 35 18.2	+0.4
LIFNC	LIFOU	5.63 185		P	Pn	14 35 55.3	-1.4
KOUNC	Koumac, New Ca	6.30 211		P	Pn	14 36 05.6	-0.3
MARNC	Mare, Loyalty	6.31 177		P	Pn	14 36 04.5	-1.5
YATNC	Mamie plateau,	6.93 186		P	Pn	14 36 13.4	-1.0
DZM	Mont Dzumac	7.00 190		P	Pn	14 36 15.7	+0.3
NOUC	Port Laguerre	7.05 191		P	Pn	14 36 16.7	+0.6
ONTNC	Ouen Toro	7.23 189		P	Pn	14 36 19.1	+0.6
OUENC	Ouen Island, N	7.29 186		P	Pn	14 36 20.6	+1.4

IDC 20 14:55:02.4±5.1, 9°.04N×140°.10E, h0km, mb3.5/3, mbtmp3.5/3, MS3.5/1, Error ellipse: s-maj=242.3km s-min=30.2km az=81.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.35 191		P	P	15 01 07.2	0.0
	1.3nm,0.7s,baz=13,slow=9.7,SNR=13						
	1.3nm,0.7s						
ASAR	Alice Springs	33.06 190		P	P	15 01 39.9	0.0
	0.2nm,0.4s,baz=22,slow=11,SNR=13						
	0.2nm,0.4s						
SONM	Songino Array	48.01 330		P	P	15 03 43.2	-0.1
	0.2nm,0.3s,baz=127,slow=7.1,SNR=1.6						
	0.2nm,0.3s						
AFI	Afiamalu	52.91 115		LR	LR	15 23 08.5	
	comp=Z,51nm,21.2s,baz=165,slow=32						

BJI ***20*** *15:10:26.9±0.0, 30°.64N×56°.35E, h10km, mb4.6/47, mB5.1/26, Ms4.7/23, Ms7 4.4/22*
IDC ***20*** *15:10:29.1±0.5, 30°.76N×56°.62E, h0km, mb4.6/32, mbtmp4.6/41, mL4.1/8, MS3.9/73, Error ellipse: s-maj=12.2km s-min=10.4km az=171.0*
MOS ***20*** *15:10:29.9±1.3, 30°.80N×56°.61E, h14km, mb4.9/56, Error ellipse: s-maj=4.7km s-min=3.5km az=104.2*
THR ***20*** *15:10:29.3±0.6, 30°.80N×56°.56E, h10km±7km, ML4.8*
TEH ***20*** *15:10:29.6, 30°.80N×56°.57E, h9km, ML4.9*
NEIC ***20*** *15:10:31.0±1.9, 30°.78N±0°.04×56°.52E±0°.06, h10km±1km, mb4.8/74, mb_Lg4.8(TEH), Error ellipse: s-maj=8.6km s-min=6.5km az=67.0*
DSN ***20*** *15:10:32.5±1.2, 30°.75N×56°.03E, h10km, ML4.7/14, Error ellipse: s-maj=17.2km s-min=7.4km az=65.0*
GCMT ***20*** *15:10:32.0±0.4, 30°.72N±0°.02×56°.46E±0°.02, h15km±2km, MW4.8/66, Moment Tensor Solution. s15,c16; s66,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.39±.09; $M_{\theta\theta}$-1.69±.08; $M_{\phi\phi}$1.30±.06; $M_{r\theta}$1.21±.33; $M_{\theta\phi}$-0.03±.07; $M_{\phi r}$-1.34±.41; Best double couple: $M_0$2.36800×10^{16} NP1:ϕ_s131.00000°, δ84.00000°, λ129.00000°. NP2: ϕ_s229.00000°, δ40.00000°, λ10.00000°. Principal axes: T 2.4020, Plg38.0000°, Azm76.0000°; N -0.0640, Plg39.0000°, Azm306.0000°; P -2.3340, Plg28.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
OMAN ***20*** *15:10:33.4±2.0, 30°.83N×56°.46E, h23km±93km, mb6.1/17, ml4.9/3, ms3.5/5 Error ellipse: s-maj=121.0km s-min=11.0km az=7.0*

ISC 20 15:10:30.1±0.7, 30°.81N±0°.03×56°.58E±0°.03, h4km±4km, n538, σ1§26/532, mb4.7/129, MS3.9/74, 24C-27D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.45 192		Pg	Pg	15 10 37.8	-1.0
KHGB	Koh Gabri	0.45 192		*e*Pg	Pg	15 10 37.9	-0.9
KHGB				*e*Sg	Sg	15 10 44.0	-0.6
TVBK	TV Kerman	0.84 169		Pg	Pg	15 10 45.5	-0.8
TVBK	TV Kerman	0.84 169		*e*Pg	Pg	15 10 45.7	-0.6
TVBK				*e*Sg	Sb	15 10 57.2	-2.0
TVBK				*e*		15 11 04.9	
	comp=Z,9μm,0.2s						
KRBR	Kerman	0.84 169		*e*Pn	Pg	15 10 45.7	-0.6
KRBR	Kerman	0.84 169		*e*Pg	Pg	15 10 45.7	-0.6
KRBR				*e*Sg	Sb	15 10 57.8	-1.5
KRBR				IAML		15 11 01.9	
	comp=N,24μm,0.3s						
KRBR				IAML		15 11 02.9	
	comp=E,25μm,0.2s						
IBAF	Bafgh	1.16 312			Pb	15 10 50.3	-2.6
IBAF				Sg	Sg	15 11 05.5	-2.1
IBAF	Bafgh	1.16 312		*e*Pg	Pb	15 10 50.8	-2.1
IBAF				*e*		15 11 09.6	
	comp=Z,63μm,0.4s						
NGRK	Negar Kerman	1.17 174		*e*Pg	Pg	15 10 51.8	-0.8
NGRK				*e*Sg	Sn	15 11 08.1	-2.2
NGRK				*e*		15 11 13.1	
	comp=Z,45μm,0.2s						
CHMN	Cheshme madani	1.26 139		*e*Pg	Pn	15 10 53.1	-1.8
CHMN				*e*Sg	Sb	15 11 10.3	-1.1
CHMN				*e*		15 11 16.1	
	comp=Z,82μm,0.4s						
IMEH	Mehriz	1.78 289		Pn	Pb	15 11 01.5	-2.0
IMEH	Mehriz	1.78 289		*e*Pn	Pb	15 11 01.7	-1.8
IMEH				*e*		15 11 30.4	
	comp=Z,

LAR1 **LAR** 3.68 212 *e*Pn Pn 15 11 28.4 +0.5
SHI **Shiraz** 3.71 253 *e*Pn Pn 15 11 28.6 +0.2
SHI *e* 15 12 37.9
comp=Z,21µm,0.7s
IRAM **Ramesheh** 3.73 287 *e*Pn Pn 15 11 29.3 +0.6
IRAM *e* 15 12 28.6
comp=Z,20µm,0.6s
NASN **Na'in** 3.77 303 *e*Pn Pn 15 11 29.6 +0.2
NASN **Na'in** 3.77 303 *e*Pn Pn 15 11 29.6 +0.2
NASN IAML 15 12 30.0
comp=N,1µm,0.5s
NASN IAML 15 12 32.9
comp=E,1µm,0.5s
ZHSF **Zahedan** 3.82 107 *e*Pn Pn 15 11 31.2 +1.2
ZHSF **Zahedan** 3.82 107 *e*Pn Pn 15 11 31.2 +1.2
ZHSF IAML 15 12 40.9
comp=N,657nm,0.6s
ZHSF IAML 15 12 44.1
comp=E,487nm,0.7s
QIR1 **Qir** 3.86 234 *e*Pn Pn 15 11 30.9 +0.5
QIR1 *e* 15 12 44.5
comp=Z,14µm,0.8s
ZHDN **Zahedan** 3.93 110 *e*Pn Pn 15 11 32.3 +0.9
IZEF **Zefreh** 4.17 301 *e*Pn Pn 15 11 35.4 +0.6
IZEF *e* 15 12 46.0
comp=Z,17µm,0.6s
IGAR **Gharneh** 4.18 293 *e*Pn Pn 15 11 35.4 +0.4
IGAR *e* 15 12 45.9
comp=Z,18µm,0.8s
SHRT **Shahrakht** 4.23 47 *e*Pn Pn 15 11 36.4 +1.0
SHRT **Shahrakht** 4.23 47 *e*Pn Pn 15 11 36.4 +1.0
KLNJ **Kolanjah** 4.29 274 *e*Pn Pn 15 11 37.3 +0.7
KLNJ *e* 15 13 00.5
comp=Z,8µm,0.7s
KAZ1 **Kazerun** 4.44 256 *e*Pn Pn 15 11 39.6 +1.3
LMD1 **Lamerd** 4.57 222 *e*Pn Pn 15 11 40.9 +0.8
IBRJ **Brojen** 4.68 285 *e*Pn Pn 15 11 43.0 +1.2
IBRJ *e* 15 13 06.9
comp=Z,5µm,0.6s
SHME **Shamm** 4.76 185 P Pn 15 11 44.0 +1.3
SHME=9.5
SHME S Sn 15 12 39.8 +1.4
SHME **Shamm** 4.76 185 *i* P Pn 15 11 42.6 -0.1
SHME=10.0
BANOM **Banah** 4.88 183 P Pn 15 11 45.7 +1.3
BANOM=67
BANOM S Sn 15 12 43.9 +2.6
BANOM **Banah** 4.88 183 *i* P Pn 15 11 45.4 +1.0
BANOM=67
BANOM S Sn 15 12 42.9 +1.7
KRSH **Karshahi** 4.90 311 *e*Pn Pn 15 11 45.2 +0.4
KRSH *e* 15 13 11.1
comp=Z,18µm,0.6s
IKLH **Kolahrood** 4.93 302 *e*Pn Pn 15 11 46.5 +1.3
IKLH *e* 15 13 09.2
comp=Z,19µm,1.0s
AHBU **AHRAM** 4.99 248 *e*Pn Pn 15 11 46.1 +0.3
ISFB **Sefidab** 5.09 315 *e*Pn Pn 15 11 47.8 +0.6
ISFB *e* 15 13 23.4
comp=Z,11µm,1.0s
SHK1 **Shahrekord** 5.09 289 *e*Pn Pn 15 11 49.1 +1.7
TBHD **Torbat heydari** 5.10 25 *e*Pn Pn 15 11 48.6 +1.1
IANJ **Anjilo** 5.15 335 *e*Pn Pn 15 11 48.5 +0.2
SHRO **Shahrood** 5.18 355 *e*Pn Pn 15 11 49.4 +0.8
SHRO **Shahrood** 5.18 355 *e*Pn Pn 15 11 49.4 +0.8
SHRO IAML 15 13 28.5
comp=E,467nm,0.5s
SHRO IAML 15 13 36.7
comp=N,372nm,0.6s
IPIR **Pirpir** 5.19 293 *e*Pn Pn 15 11 50.6 +1.7
IPIR *e* 15 13 24.6
comp=Z,9µm,0.8s
QAMS **Qamsar** 5.27 305 *e*Pn Pn 15 11 50.7 +0.8
QAMS *e* 15 13 27.9
comp=Z,7µm,0.4s
UMQ **Umm Al-Quwin** 5.33 189 P Pn 15 11 52.9 +2.4
SNR=7.1
UMQ S Sn 15 12 57.6 +5.3
UMQ **Umm Al-Quwin** 5.33 189 *i* P Pn 15 11 51.2 +0.7
SNR=5.7
MASF **Masafi** 5.43 184 P Pn 15 11 54.0 +2.0
SNR=16
MASF S Sn 15 12 56.1 +1.1
TBJM **Torbat-e-JAM** 5.44 34 *e*Pn Pn 15 11 53.3 +1.1
MSFE **Esma-Masafi** 5.45 184 *i* P Pn 15 11 52.0 -0.1
SNR=100
MSFE S Sn 15 12 55.4 +0.1
ABEH **Behbahan** 5.45 269 *e*Pn Pn 15 11 52.8 +0.6
ILAS **Lasjerd** 5.48 327 *e*Pn Pn 15 11 53.7 +0.9
ISHM **Shahmirzad** 5.69 332 *e*Pn Pn 15 11 56.4 +0.7
IMOG **Moghan** 5.76 23 *e*Pn Pn 15 11 58.6 +1.9
GHVR **GHOM** 5.76 311 *e*Pn Pn 15 11 57.5 +0.9
GHVR **GHOM** 5.76 311 *e*Pn Pn 15 11 57.5 +0.9
IFIR **Firoozkooh** 5.79 327 *e*Pn Pn 15 11 57.4 +0.4
IVRN **Varamin** 5.83 317 *e*Pn Pn 15 11 58.1 +0.6
IVRN *e* 15 14 06.0
comp=Z,4µm,0.8s
UOSS **Minazif** 5.86 183 Pn 15 11 58.1 +0.4
UOSS Sn Sn 15 13 04.9 -0.4
UOSS **Minazif** 5.86 183 *i* P Pn 15 11 58.9 +1.2
SNR=19
NAZ **Nazwa, Dubai** 5.86 188 P Pn 15 11 59.5 +1.7
SNR=12
NAZ S Sn 15 13 05.6 +0.2
NAZ **Nazwa, Dubai** 5.86 188 *i* P Pn 15 11 58.5 +0.7
SNR=74
HRA **Herat** 5.96 52 Pn Pn 15 12 00.5 +1.1
IPAY **Payeh** 5.97 19 *e*Pn Pn 15 12 02.5 +3.0
HATD **Hatta, Dubai** 5.98 184 P Pn 15 12 00.8 +1.4
SNR=21
HATD **Hatta, Dubai** 5.98 184 *i* P Pn 15 12 00.5 +1.0
SNR=40
JRKH **Jarkhoshk** 5.98 31 *e*Pn Pn 15 12 00.6 +1.1
IAKL **Akhelmad** 6.05 17 *e*Pn Pn 15 12 02.1 +1.4
IDMV **Damavand** 6.09 322 *e*Pn Pn 15 12 02.0 +0.8
FAQ **Al Faqa, Dubai** 6.11 188 P Pn 15 12 02.2 +1.0
SNR=7.5
FAQ S Sn 15 13 11.6 +0.1
FAQ **Al Faqa, Dubai** 6.11 188 *i* P Pn 15 12 01.7 +0.5
SNR=80
SRVN **Saravan** 6.12 122 *e*Pn Pn 15 12 02.7 +1.2
IGLO **Ghaloghah** 6.12 339 *e*Pn Pn 15 12 02.8 +1.2
ASHO **Ashiyiah** 6.12 184 P Pn 15 12 03.0 +1.5
SNR=26
ASHO S Sn 15 13 14.6 +2.6
ASHO **Ashiyiah** 6.12 184 *i* P Pn 15 12 01.9 +0.4
SNR=26
IQOM **Qom** 6.14 312 *e*Pn Pn 15 12 02.1 +0.3
DAMV **Damavand** 6.16 322 *e*Pn Pn 15 12 02.5 +0.3
DAMV **Damavand** 6.16 322 *e*Pn Pn 15 12 02.5 +0.3
CHBR **Chabahar** 6.23 146 *e*Pn Pn 15 12 03.2 +0.2
CHBR **Chabahar** 6.23 146 *e*Pn Pn 15 12 03.1 +0.2
IMYA **Miami** 6.25 27 *e*Pn Pn 15 12 04.6 +1.3
ASUD **Al Ashush, Dub** 6.26 190 P Pn 15 12 05.0 +1.6
SNR=20
ASUD S Sn 15 13 15.5 +0.2
ASUD **Al Ashush, Dub** 6.26 190 *i* P Pn 15 12 04.3 +1.0
SNR=21
AMIS **Naft Sefid** 6.30 280 *e*Pn Pn 15 12 04.5 +0.6
KHMZ **Khomeyn** 6.32 299 *e*Pn Pn 15 12 05.2 +0.9
KHMZ **Khomeyn** 6.32 299 *e*Pn Pn 15 12 05.2 +0.9
AJN **Ajban** 6.38 193 P Pn 15 12 07.8 +2.8
SNR=34
AJN S Sn 15 13 19.2 +0.9
AJN **Ajban** 6.38 193 *i* P Pn 15 12 05.8 +0.9
SNR=33
IHSB **Hasanabad** 6.41 317 *e*Pn Pn 15 12 06.2 +0.8
IKRD **Kardeh** 6.43 22 *e*Pn Pn 15 12 08.8 +3.0
IPRN **Peran** 6.47 328 *e*Pn Pn 15 12 05.4 -0.9
IMND **Minoodasht** 6.50 352 *e*Pn Pn 15 12 07.6 +1.0
ASAO **Ashtian** 6.66 306 *e*Pn Pn 15 12 09.8 +0.7
ASAO **Ashtian** 6.66 306 *e*Pn Pn 15 12 09.8 +0.7
NGCH **Negor - Chabah** 6.76 142 *e*Pn Pn 15 12 10.5 +0.3
ALNE **Al Ain** 6.77 186 P Pn 15 12 11.8 +1.4
SNR=23
ALNE **Al Ain** 6.77 186 *i* P Pn 15 12 11.1 +0.8
SNR=22
IEMG **Emamgholi** 6.81 14 *e*Pn Pn 15 12 12.3 +1.3
CHTH **Charan** 6.83 320 *e*Pn Pn 15 12 11.9 +0.6
CHTH **Charan** 6.83 320 *e*Pn Pn 15 12 11.9 +0.6
MRVT **Maraveh tapeh** 6.84 357 *e*Pn Pn 15 12 12.1 +0.8
MRVT **Maraveh tapeh** 6.84 357 *e*Pn Pn 15 12 12.6 +1.3
BJRD **Bojnurd** 6.90 5 *e*Pn Pn 15 12 13.0 +0.8
BJRD **Bojnurd** 6.90 5 *e*Pn Pn 15 12 13.0 +0.8

IMHD **Mahdasht** 6.94 316 *e*Pn Pn 15 12 13.4 +0.7
GEYT **Alibeck** 7.21 10 Pn Pn 15 12 17.9 +1.5
comp=Z,3.7nm,0.3s,baz=192,slow=13,SNR=98
GEYT LR LR 15 15 33.6
comp=Z,2µm,18.3s,baz=199,slow=42
comp=Z,58nm,0.8s
GEYT **Alibeck** 7.21 10 Pn Pn 15 12 18.1 +1.7
GYA0B **ALIBECK ARRAY** 7.21 10 Pn Pn 15 12 18.1 +1.7
IRAZ **Razeghan** 7.22 311 *e*Pn Pn 15 12 17.2 +0.6
HOQ **Hoqain** 7.23 175 P Pn 15 12 16.4 -0.2
SNR=23
HOQ P Pn 15 12 16.4 -0.2
SNR=23
KLST **Kelardasht - M** 7.32 323 *e*Pn Pn 15 12 19.1 +1.0
BIDO **Bidbid** 7.39 169 P Pn 15 12 18.4 -0.5
SNR=12
BIDO S Sn 15 13 41.6 -1.6
HAGD **Aghdareh** 7.43 305 *e*Pn Pn 15 12 21.1 +1.5
ARQ **Araqi** 7.45 180 P Pn 15 12 21.0 +1.4
SNR=11
IKMR **Kamar-syah** 7.46 293 *e*Pn Pn 15 12 19.7 0.0
QALM **Alamut, Qazvin** 7.47 320 *e*Pn Pn 15 12 21.2 +1.0
HSAM **Samen** 7.54 299 *e*Pn Pn 15 12 22.8 +1.7
QABG **Abgarm-Qazvin** 7.63 312 *e*Pn Pn 15 12 22.3 0.0
IGZV **Ghazvin** 7.68 318 *e*Pn Pn 15 12 24.5 +1.5
IDOB **Doab** 7.71 295 *e*Pn Pn 15 12 24.1 +0.8
WSAR **Wadi Sarin** 7.76 166 Pn Pn 15 12 24.6 +0.6
comp=Z,7.1nm,0.3s,baz=12,slow=13,SNR=85
WSAR Sn Sn 15 13 51.2 -1.1
comp=Z,12nm,0.3s,baz=132,slow=22,SNR=3.7
comp=Z,32nm,0.3s
SMDO **Samad** 7.83 170 P Pn 15 12 25.1 +0.1
SNR=31
SMDO P Pn 15 12 25.1 +0.1
SNR=31
IKFM **Kafar-mosalman** 7.88 292 *e*Pn Pn 15 12 26.1 +0.6
BSY **Bisya** 8.05 176 P Pn 15 12 30.5 +2.5
SNR=16
BSY P Pn 15 12 30.5 +2.5
SNR=16
JIR1 **Jirandeh** 8.15 318 *e*Pn Pn 15 12 30.5 +1.2
GIDE **GILAN DEYLAMAN** 8.24 319 *e*Pn Pn 15 12 31.9 +1.2
MZR **Muzera** 8.26 200 P Pn 15 12 31.0 +0.2
SNR=16
MZR **Muzera** 8.26 200 *i* P Pn 15 12 29.9 -0.8
SNR=16
IKOM **Komasi** 8.36 296 *e*Pn Pn 15 12 32.2 -0.1
WBK **Wadi Bani Khal** 8.44 165 P Pn 15 12 33.3 0.0
SNR=48
ZNJK **Zanjan** 8.79 314 *e*Pn Pn 15 12 39.4 +1.1
ZNJK **Zanjan** 8.79 314 *e*Pn Pn 15 12 39.4 +1.1
SNGE **Sanandaj** 8.85 301 *e*Pn Pn 15 12 39.6 +0.5
SNGE **Sanandaj** 8.85 301 *e*Pn Pn 15 12 39.6 +0.5
IDHR **Dehrash** 9.42 297 *e*Pn Pn 15 12 47.0 +0.2
MHTO **MHTO** 9.87 172 P Pn 15 12 53.3 +0.5
SNR=48
MHTO P Pn 15 12 53.3 +0.5
SNR=48
IHSH **Hashtrud** 10.08 312 *e*Pn Pn 15 12 54.4 -1.6
ISRB **Sarab** 10.16 316 *e*Pn Pn 15 12 58.1 +1.2
IBST **Bostanabad** 10.55 313 *e*Pn Pn 15 13 03.0 +0.6
GRMI **Germi** 10.70 321 *e*Pn Pn 15 13 05.4 +1.1
GRMI **Germi** 10.70 321 *e*Pn Pn 15 13 05.4 +1.1
IHRS **Heris** 10.85 316 *e*Pn Pn 15 13 08.1 +1.6
KBL **Kabul** 11.14 67 Pn Pn 15 13 11.5 +1.1
KBL **Kabul** 11.14 67 P Pn 15 13 11.5 +1.1
RAYN **Ar Rayn** 12.24 236 Pn Pn 15 13 20.5 -4.9
RAYN **Ar Rayn** 12.24 236 P Pn 15 13 20.5 -4.9
RAYN **Ar Rayn** 12.24 236 *i* P Pn 15 13 20.4 -4.9
SNR=11
NAX **Nakhchivan** 12.33 316 P Pn 15 13 27.9 +1.4
DOK **Doka** 12.34 191 P Pn 15 13 24.0 -2.7
SNR=28
DOK P Pn 15 13 24.0 -2.7
SNR=28
MNGR **Mingechevir, A** 12.57 325 P Pn 15 13 31.4 +1.7
SEKA **Sheki** 12.85 326 P Pn 15 13 34.6 +1.0
GANJ **Ganja** 12.86 323 P Pn 15 13 35.4 +1.6
MAKU **Maku** 12.93 314 *e*Pn Pn 15 13 36.9 +2.0
MAKU **Maku** 12.93 314 *e*Pn Pn 15 13 36.9 +2.0
CHGR **Chuyangaron** 12.96 49 Pn Pn 15 13 33.2 -2.0
CHGR **Chuyangaron** 12.96 49 P Pn 15 13 33.2 -2.0
CEP **Cherat** 13.31 73 P Pn 15 13 43.9 +3.9
GNI **Garni** 13.40 317 Pn Pn 15 13 43.0 +1.8
comp=Z,3.1nm,0.6s,baz=149,slow=8.2,SNR=2.2
GNI LR LR 15 18 35.1
comp=Z,320nm,18.6s,baz=122,slow=36
GNI **Garni** 13.40 317 P Pn 15 13 43.0 +1.8
GEVA **Gevas** 13.41 308 Pn 15 13 39.4 -2.0
GAR **Garm** 13.91 50 Pn Pn 15 13 46.1 -2.0
GURO **Guroymak-BITLI** 14.23 307 Pn 15 13 54.1 +1.5
NIL **Nilore** 14.39 74 Pn Pn 15 13 55.7 +1.0
NIL **Nilore** 14.39 74 P Pn 15 13 55.7 +1.0
CHCP **Chirah Chowk** 14.40 74 P Pn 15 13 56.2 +1.3
MARD **Mardin** 14.61 301 Pn Pn 15 13 54.8 -2.9
KARS **Kars** 14.69 315 Pn 15 13 56.1 -2.7
KARS **Kars** 14.69 315 P Pn 15 13 56.1 -2.7
BTK **Batken** 14.81 48 Pn 15 13 58.6 -1.8
BTK **Batken** 14.81 48 P Pn 15 13 58.6 -1.8
GROC **Groznyy** 15.05 328 P Pn 15 14 04.8 +1.2
GROC pmax pmax
comp=Z,33nm,0.5s
DRK **Karamyk** 15.14 51 Pn 15 14 03.5 -1.6
IUG **Iuzhnay** 15.63 40 *e*P Pn 15 14 10.1 -1.2
IUG **Iuzhnay** 15.63 40 *e*P Pn 15 14 10.1 -1.2
baz=40
ZEI **Tsey** 15.66 323 *e*P P 15 14 13.3 -2.8
ZEI pmax pmax
comp=Z,27nm,0.7s
ONI **Oni** 15.76 322 Pn 15 14 13.3 +0.4
ONI **Oni** 15.76 322 P Pn 15 14 13.3 +0.4
ONI pmax pmax
comp=Z,13nm,1.2s
KOPT **Kop Dagi** 15.99 309 P P 15 14 17.3 -2.5
OHH **Osh** 16.33 49 P P 15 14 24.7 +1.4
OHH pmax pmax
comp=Z,22nm,1.0s
KK31 **Karatay Array** 16.54 38 Pn 15 14 21.4 -1.6
KK31 **Karatay Array** 16.54 38 *i* P P 15 14 24.7 -0.9
KKAR **Karatay Array** 16.54 38 Pn 15 14 21.5 -1.5
KKAR **Karatay Array** 16.54 38 Pn 15 14 21.6 -1.3
KKAR IAmb IAmb 15 14 27.2
comp=Z,9.2nm,1.1s
KKAR **Karatay Array** 16.54 38 P Pn 15 14 21.6 -1.3
KKAR pmax pmax
comp=Z,9.0nm,1.1s
ASF **Jabal al Asfar** 16.85 280 Pn Pn 15 14 25.0 -2.0
comp=Z,1.0nm,0.3s,baz=101,slow=10.0,SNR=15
ASF LR LR 15 22 17.0
comp=Z,850nm,20.4s,baz=99,slow=42
comp=Z,12nm,0.9s
KBZ **Khabaz** 16.85 324 Pn P 15 14 28.6 -0.3
comp=Z,0.1nm,0.3s,baz=180,slow=8.6,SNR=5.7
comp=Z,3.3nm,0.7s
KBZ **Khabaz** 16.85 324⇑ *e*P P 15 14 27.4 -1.5
KIV **Kislovodsk** 17.11 324 Pn 15 14 28.4 -1.9
KIV IAmb IAmb 15 14 38.4
comp=Z,49nm,0.9s
KIV **Kislovodsk** 17.11 324 *e*P P 15 14 32.7 +0.7
KIV *e*S Sn 15 17 43.6 +2.6
KIV pmax pmax
comp=Z,59nm,1.0s
GAZ **Gaziantep** 17.26 297 P P 15 14 33.4 -0.2
GAZ IAmb IAmb 15 14 38.7
comp=Z,61nm,1.0s
GOF **Gofitskoye** 17.75 327⇑ *e*P P 15 14 41.4 +2.5
AML **Almayashu** 17.77 46 P Pn 15 14 38.8 +0.1
SNR=7.8
GHAJ **Ghor Haditha** 18.01 277 P P 15 14 41.3 -0.6
NDI **New Delhi** 18.05 92 *e*P P 15 14 43.0 +0.7
KSH **Kashi** 18.05 56 P Pn 15 14 36.9 -5.1
KSH pP P 15 14 39.9 -2.6
KSH pmax pmax
comp=Z,31nm,1.4s
KSH LR LR
comp=Z,500nm,9.3s
KSH LR LR
comp=Z,360nm,8.6s
KSH LR LR
comp=Z,410nm,11.0s
MMAI **Mount Meron Ar** 18.11 282 P P 15 14 43.2 +0.1
comp=Z,0.8nm,0.3s,baz=98,slow=15,SNR=26
MMAI LR LR 15 22 47.9
comp=Z,354nm,20.2s,baz=314,slow=41
comp=Z,18nm,0.7s
EKS2 **Erkin-Say** 18.12 45 P P 15 14 43.1 -0.1
SNR=14
UCH **Uchtor** 18.33 47 P Pn 15 14 45.2 -0.5
SNR=8.6
SOC **Sochi** 18.47 318 *e*P P 15 14 44.7 -2.2
SOC *e* 15 18 10.6
SOC MLR MLR
comp=Z,227nm,15.0s
AAK **Ala-Archa** 18.54 46 P Pn 15 14 48.5 +0.5
SNR=7.9
AAK **Ala-Archa** 18.54 46 P P 15 14 47.5 -0.4
comp=Z,0.2nm,0.3s,baz=236,slow=14,SNR=16
AAK LR LR 15 22 44.6
comp=Z,259nm,21.6s,baz=255,slow=40
comp=Z,6.4nm,1.0s
AAK **Ala-Archa** 18.54 46 P P 15 14 47.1 -0.8
AAK **Ala-Archa** 18.54 46*c* *i*P Pn 15 14 47.8 -0.2
AAK pmax pmax
comp=Z,19nm,1.2s
AB31 **Akbulak array** 18.60 7 P Pn 15 14 47.9 -0.5
ABKAR **Akbulak array** 18.60 7 P P 15 14 47.5 -0.8
EIL **Elat** 18.72 272 P Pn 15 14 49.6 -0.5
comp=Z,0.6nm,0.3s,baz=35,slow=4.0,SNR=11
EIL LR LR 15 23 15.9
comp=Z,613nm,21.5s,baz=56,slow=41
comp=Z,19nm,0.8s
BNN **Bunyan** 18.79 301 Pn 15 14 50.8 -0.2
BNN IAmb IAmb 15 14 55.7
comp=Z,78nm,1.0s
KBK **Karagaybulak** 18.83 46 P Pn 15 14 52.1 +0.5
SNR=9.2
NRN **Naryn** 18.89 51 P 15 14 50.2 -1.7
NRN IAmb IAmb 15 14 55.9
comp=Z,65nm,1.6s
NRN **Naryn** 18.89 51 P P 15 14 50.2 -1.7
NRN pmax pmax
comp=Z,65nm,1.6s
SGDS **Sogindy** 19.09 44 *e*P P 15 14 52.5 -1.3
SGDS **Sogindy** 19.09 44 *e*P P 15 14 52.5 -1.3
baz=44
TKM2 **Tokmak 2** 19.38 46 P Pn 15 14 57.9 -0.2
SNR=7.7
TKM2 **Tokmak 2** 19.38 46 *i* P Pn 15 15 00.1 +1.9
TKM2 pmax pmax
comp=Z,16nm,1.2s
AKTO **Aktyubinsk** 19.63 3 P P 15 14 59.1 -0.4
comp=Z,1.1nm,0.3s,baz=183,slow=11,SNR=62
AKTO LR LR 15 24 12.4
comp=Z,542nm,18.5s,baz=175,slow=42
comp=Z,23nm,0.7s
BTLS **Baital** 19.73 39 *e*P P 15 15 00.1 -0.6
BTLS **Baital** 19.73 39 *e*P P 15 15 00.2 -0.6
baz=39
CSS **Mathiatis** 19.95 288 P P 15 15 01.6 -1.6
CSS IAmb IAmb 15 15 07.9
comp=Z,52nm,1.1s
TARG **Taragay, Kyrgy** 20.23 52 P P 15 15 04.7 -2.0
TARG IAmb IAmb 15 15 09.4
comp=Z,34nm,0.8s
TARG **Taragay, Kyrgy** 20.23 52 P P 15 15 04.7 -2.0
TARG pmax pmax
comp=Z,34nm,0.8s
KUU **Kurty** 20.36 45 *e*P P 15 15 07.0 -0.6
KUU pmax pmax
comp=Z,26nm,1.6s
KUU **Kurty** 20.36 45 *e*P P 15 15 07.0 -0.6
comp=Z,26nm,1.6s,baz=45
MDOK **Medeo** 20.41 47 *e*P P 15 15 08.2 -0.1
MDOK **Medeo** 20.41 47 *e*P P 15 15 08.2 -0.1
baz=47
ANN **Anapa** 20.52 318 *e*P Pn 15 15 09.2 -2.2
ANN *e**PP pP 15 15 11.8 +0.9
ANN *e*PPP PPP 15 15 35.2
ANN *e*S Sn 15 19 00.6 -2.4
ANN pmax pmax
comp=Z,75nm,1.1s
BR131 **Keskin Array S** 20.69 302 P P 15 15 10.7 -0.7
BR131 **Keskin Array S** 20.69 302⇓ *i*P Pn 15 15 11.4 -2.3
BRTR **Keskin Array B** 20.69 302 P Pn 15 15 11.5 -2.2
comp=Z,35nm,0.9s,baz=122,slow=12,SNR=88
BRTR LR LR 15 23 22.2
comp=Z,215nm,20.6s,baz=105,slow=37
comp=Z,35nm,0.9s
BRTR **Keskin Array B** 20.69 302 P P 15 15 10.2 -1.2
ILGA **Ilgaz** 21.09 305 P P 15 15 16.5 +0.7
OTUK **Ortayu** 21.16 30 P P 15 15 17.0 +0.8
SATY **Saty** 21.23 49 *e*P P 15 15 17.3 +0.2
SATY **Saty** 21.23 49 *e*P P 15 15 17.4 +0.2
baz=49
ANTO **Ankara** 21.36 302 P P 15 15 19.3 +0.8
ANTO IAmb IAmb 15 15 21.8
comp=Z,64nm,1.1s
ANTO **Ankara** 21.36 302 P P 15 15 19.3 +0.8
ANTO pmax pmax
comp=Z,64nm,1.1s
ARXS **Arharly** 21.44 45 *e*P P 15 15 20.1 +0.8
KPKS **Kokpek** 21.60 48 *e*P P 15 15 20.6 -0.5
KPKS **Kokpek** 21.60 48 *e*P P 15 15 20.6 -0.5
baz=48
UZB **Uzynbulak** 21.67 49 *e*P P 15 15 22.9 +1.0
UZB **Uzynbulak** 21.67 49 *e*P P 15 15 22.9 +1.0
baz=49
SHLS **Shalkode** 21.96 50 *e*P P 15 15 27.6 +2.6
SHLS **Shalkode** 21.96 50 *e*P P 15 15 27.6 +2.6
baz=50
PDGK **Podgornoye** 22.06 49 P P 15 15 26.1 0.0
BELG **Belogornoye** 22.54 346 P P 15 15 30.5 -0.5
comp=Z,24nm,0.8s,baz=301,slow=3.1,SNR=7.0
BELG LR LR 15 27 11.7
comp=Z,230nm,19.0s,baz=129,slow=44
comp=Z,24nm,0.8s
BELG **Belogornoye** 22.54 346*c* *i*P P 15 15 30.8 -0.2
BELG pmax pmax
comp=Z,22nm,1.2s
SIM **Simferopol'** 22.56 315 *e*P P 15 15 34.0 +2.7
SIM *e* 15 16 02.0
SIM *e*S S 15 19 39.3 +0.1
SIM *e*SS SnSn 15 20 32.8 +25
SIM pmax pmax
comp=Z,96nm,1.2s
BRZS **Berezniki** 22.65 28 *e*P P 15 15 31.2 -0.9
BRZS **Berezniki** 22.65 28 *e*P P 15 15 31.3 -0.9
baz=28
ELL **Elmali** 22.91 292 P P 15 15 35.0 -0.2
ELL **Elmali** 22.91 292 P P 15 15 35.0 -0.2
ELL pmax pmax
comp=Z,212nm,0.9s
ATD **Arta Tunnel** 23.02 217 P P 15 15 36.9 +0.4
comp=Z,9.3nm,0.7s,baz=47,slow=5.9,SNR=5.5
ATD LR LR 15 26 23.9
comp=Z,276nm,19.7s,baz=10,slow=42
comp=Z,9.3nm,0.7s
BORA **Eskisehir** 23.09 300 P P 15 15 36.8 -0.2
BORA IAmb IAmb 15 16 00.6
comp=Z,29nm,1.3s
PYUN **Piuthan** 23.14 90 *e*P P 15 15 37.3 -0.4
comp=Z,36nm,0.9s
VRH **Novokhopyorsk** 23.17 336 *e*P P 15 15 35.3 -2.2
VRH pmax pmax
comp=Z,20nm,0.7s
KOLN **Koldanda** 23.74 91 *e*P P 15 15 42.5 -1.2
DANN **Dangsing** 23.74 89 *e*P P 15 15 43.7 -0.2
VSR **Storozhevoye** 24.14 333 *e*P P 15 15 45.4 -1.6
VSR pmax pmax
comp=Z,10.0nm,1.2s
BRVK **Borovoye** 24.37 20 P P 15 15 48.7 -0.5
BRVK **Borovoye** 24.37 20*c* *i*P P 15 15 49.3 +0.1
BRVK pmax pmax
comp=Z,20nm,1.7s
BVA0 **Borovoye Array** 24.37 20 *i*P P 15 15 49.2 0.0
BVAR **Borovoye Array** 24.37 20 P P 15 15 49.2 0.0
comp=Z,5.5nm,0.7s,baz=201,slow=7.9,SNR=42
comp=Z,5.5nm,0.7s
VORR **Voronezh** 24.48 333 *e*P P 15 15 50.2 +0.1
VORR pmax pmax
comp=Z,66nm,1.9s
GKN **Gorkha** 24.58 89 *e*P P 15 15 51.1 -0.4
KARP **Karpathos** 25.02 289 P P 15 15 55.3 0.0
DMN **Daman** 25.07 90 *e*P P 15 15 55.8 -0.3
KKN **Kakani** 25.18 90 *e*P P 15 15 56.9 -0.1
MAKZ **Makanchi** 25.27 44 P P 15 15 57.5 +0.1
MAKZ **Makanchi** 25.27 44 P P 15 15 58.2 +0.8
LPSR **Galich'ya Gora** 25.32 334 *e*P P 15 15 55.8 -1.9
LPSR pmax pmax
comp=Z,10.0nm,1.0s

PKIN Phulchoki 25.33 90 *eP* **P 15 15 58.0 -0.4**
PKI Pulchoki 25.34 90 *eP* **P 15 15 58.2 -0.4**
comp=Z,116nm,1.2s
MK31 Makanchi Array 25.45 44 P **P 15 15 59.3 +0.2**
MK31 IAmb IAmb 15 16 01.6
comp=Z,46nm,1.3s
MK31 Makanchi Array 25.45 44*c i*P **P 15 15 59.8 +0.7**
MKAR Makanchi Array 25.45 44 P **P 15 15 59.9 +0.8**
comp=Z,10nm,0.6s,baz=232,slow=9.5,SNR=108
MKAR LR LR 15 27 27.3
comp=Z,242nm,18.1s,baz=257,slow=40
comp=Z,10nm,0.6s
MKAR Makanchi Array 25.45 44 P **P 15 15 59.6 +0.5**
MKAR Makanchi Array 25.45 44 P **P 15 15 59.6 +0.5**
ARU Arti 25.65 3 P **P 15 16 01.9 +1.2**
comp=Z,6.4nm,0.8s,baz=165,slow=5.3,SNR=9.4
ARU LR LR 15 27 29.5
comp=Z,266nm,19.2s,baz=182,slow=40
comp=Z,6.4nm,0.8s
ARU Arti 25.65 3 P **P 15 16 01.4 +0.7**
ARU Arti 25.65 3⇓*i*P **P 15 16 03.2 +2.5**
ARU pmax pmax
comp=Z,21nm,1.7s
GUN Gumba 25.67 89 *eP* **P 15 16 01.4 -0.2**
comp=Z,92nm,0.9s
KURBB Kurchatov Arra 25.68 33 P **P 15 16 02.0 +0.9**
comp=Z,23nm,0.9s,baz=233,slow=9.7,SNR=62
KURBB LR LR 15 26 34.2
comp=Z,233nm,19.9s,baz=206,slow=38
comp=Z,23nm,0.9s
KURK Kurchatov 25.79 33 P **P 15 16 02.5 +0.5**
KURK IAmb IAmb 15 16 06.5
comp=Z,35nm,0.9s
KURK Kurchatov 25.79 33*c i*P **P 15 16 02.7 +0.7**
KURK pmax pmax
comp=Z,41nm,1.0s
JIRN Jiri 25.99 89 *eP* **P 15 16 04.2 -0.4**
comp=Z,63nm,1.0s
TPGR Topolog 26.13 310⇑P **P 15 16 07.1 +1.9**
SVE Sverdlovsk 26.16 5 *eP* **P 15 16 08.4 +3.1**
SVE pmax pmax
comp=Z,22nm,1.4s
HARR Harsova 26.39 310⇑P **P 15 16 09.9 +2.4**
HARR Harsova 26.39 310 P **P 15 16 09.9 +2.4**
RAMN Ramite 26.53 91 *eP* **P 15 16 08.4 -0.9**
comp=Z,27nm,0.8s
IDI Anoyia 26.87 288⇑P **P 15 16 13.0 +0.9**
IDI Anoyia 26.87 288 P **P 15 16 13.7 +1.6**
comp=Z,15nm,1.1s,baz=124,slow=9.7,SNR=3.4
IDI LR LR 15 30 53.5
comp=Z,61nm,19.7s,baz=100,slow=46
comp=Z,15nm,1.1s
RDO Rodhopi 27.03 301 P **P 15 16 13.2 -0.1**
RDO IAmb IAmb 15 16 15.7
comp=Z,18nm,1.1s
TAPN Taplejung 27.38 89 *eP* **P 15 16 16.3 -0.7**
VRI Vrincioaia 27.62 311⇓P **P 15 16 21.3 +2.6**
VRI Vrincioaia 27.62 311 P **P 15 16 21.2 +2.6**
WMQ Urumqi 27.77 53 *eP* **P 15 16 21.3 +1.2**
WMQ pP sP 15 16 25.4 +2.8
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ LR LR
comp=Z,910nm,16.3s
WMQ LR LR
comp=Z,360nm,10.9s
WMQ LR LR
comp=Z,330nm,19.5s
MLR Muntele Rosu 27.99 310⇑P **P 15 16 24.5 +2.4**
MLR Muntele Rosu 27.99 310 P **P 15 16 23.4 +1.3**
comp=Z,6.1nm,0.8s,baz=278,slow=1.2,SNR=8.4
MLR LR LR 15 27 37.4
comp=Z,192nm,20.5s,baz=127,slow=37
comp=Z,6.1nm,0.8s
MLR Muntele Rosu 27.99 310 P **P 15 16 20.9 -1.2**
MLR IAmb IAmb 15 16 50.5
comp=Z,11nm,1.0s
OBN Obninsk 28.16 335 P **P 15 16 24.8 +1.5**
comp=Z,3.0nm,0.3s,baz=94,slow=6.0,SNR=4.4
OBN LR LR 15 30 40.5
comp=Z,22nm,18.4s,baz=176,slow=43
comp=Z,3.0nm,0.3s
OBN Obninsk 28.16 335⇓*eP* **P 15 16 24.7 +1.5**
OBN *e* 15 17 11.3
OBN *e*PPP PPP 15 17 20.6
OBN pmax pmax
comp=Z,33nm,1.3s
OBN MLR MLR
comp=Z,119nm,19.0s
KIRV Kirov 28.20 352 P **P 15 16 23.8 +0.2**
comp=Z,10nm,0.6s,baz=22,slow=17,SNR=3.7
KIRV LR LR 15 30 11.2
comp=Z,472nm,18.1s,baz=162,slow=42
comp=Z,10nm,0.6s
KIRV Kirov 28.20 352*ce*P **P 15 16 24.3 +0.7**
MOS Moscow 28.29 337 *eP* **P 15 16 25.5 +1.0**
AKASG Malin Array Be 28.44 322 P **P 15 16 25.7 -0.2**
comp=Z,3.0nm,0.8s,baz=124,slow=8.6,SNR=25
AKASG LR LR 15 29 23.8
comp=Z,185nm,20.4s,baz=127,slow=40
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 28.44 322 *i*P **P 15 16 27.6 +1.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 28.44 322 P **P 15 16 25.3 -0.6**
AKBB IAmb IAmb 15 16 51.5
comp=Z,12nm,0.9s
AKBB Malin Array Si 28.44 322*c i*P **P 15 16 27.6 +1.7**
BUR01 Bucovina Ar. S 29.27 314⇓P **P 15 16 35.6 +2.2**
BURAR Bucovina Array 29.27 314 P **P 15 16 33.2 -0.2**
BURAR Bucovina Array 29.27 314 P **P 15 16 33.2 -0.2**
BURAR pmax pmax
comp=Z,4.0nm,0.8s
DGZ Jazzator, Alta 29.86 42*c i*P **P 15 16 39.7 +1.0**
DGZ pmax pmax
comp=Z,11nm,0.8s
KBN Korca 30.49 299 P **P 15 16 44.7 +0.5**
KBN Korca 30.49 299 P **P 15 16 44.7 +0.5**
KBN pmax pmax
comp=Z,35nm,1.0s
ZAA0 Zalesovo Array 30.78 33 P **P 15 16 46.3 -0.3**
ZAA0 IAmb IAmb 15 16 47.7
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 30.78 33 P **P 15 16 46.8 +0.2**
comp=Z,12nm,0.6s,baz=240,slow=9.1,SNR=66
ZALV LR LR 15 31 38.2
comp=Z,97nm,21.2s,baz=232,slow=41
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 30.78 33 P **P 15 16 46.0 -0.5**
SIRR Siria 31.08 310⇑P **P 15 16 51.1 +1.7**
MNK Minsk 31.33 327 *i P* **P 15 16 49.8 -1.6**
MNK *i* PPP PPP 15 18 00.4
MNK *i* S **S 15 21 57.8 -1.0**
MNK *i* SS **SnSn 15 23 42.4 +0.9**
MNK pmax pmax
comp=N,32nm,0.8s
MNK pmax pmax
comp=Z,18nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=Z,125nm,14.0s
MNK MLR MLR
comp=N,757nm,16.0s
MNK MLR MLR
comp=E,24nm,17.0s
MNK Minsk 31.33 327 *i* P **P 15 16 49.9 -1.6**
comp=E,3.0nm,0.9s
MNK *i* P **P 15 16 49.9 -1.6**
comp=N,32nm,0.8s
MNK *i* P **P 15 16 49.9 -1.6**
comp=Z,18nm,0.9s,baz=128
MNK *i* PP **PnPn 15 17 51.1 -2.3**
MNK *i* PPP PPP 15 18 00.5
MNK *i* S **S 15 21 57.8 -1.0**
MNK *i* SS **SnSn 15 23 42.4 +0.9**
MNK *i* SSS SSS 15 23 58.3
MNK *i* LR LR 15 28 24.5
MNK *i* LRM MLR 15 30 09.7
comp=Z,125nm,14.0s
MNK *i* LRM MLR 15 30 16.5
comp=N,757nm,15.7s
MNK *i* LRM MLR 15 30 17.7
comp=E,24nm,16.9s
KOLS Kolonicke sedl 31.59 315 *eP* **P 15 16 55.6 +1.8**
KOLS pmax pmax
comp=Z,27nm,0.9s
PRGR Permogore 31.66 350 *eP* **P 15 16 53.4 -0.8**
PRGR pmax pmax
comp=Z,5.0nm,0.9s
NACGM Naroch 32.08 327⇓*eP* **P 15 17 00.1 +2.0**
baz=126
KLMR Klimovskoe 32.10 344 *eP* **P 15 16 58.9 +0.8**
KLMR pmax pmax
comp=Z,12nm,1.4s
KLMR Klimovskoe 32.10 344 *eP* **P 15 16 58.9 +0.8**
KLMR AMP 15 17 01.3
comp=Z,12nm,1.4s
BRDH Bariadhala 32.24 96 LR LR 15 31 48.0
comp=Z,179nm,18.5s,baz=290,slow=40
PALK Pallekele 32.53 131 LR LR 15 31 09.0
comp=Z,275nm,20.6s,baz=63,slow=38
MORH Mrgy, Hungar 33.08 309⇑P **P 15 17 07.8 +1.0**
OJC Ojcow 33.56 316 P **P 15 17 10.4 -0.7**
OJC Ojcow 33.56 316 P **P 15 17 10.4 -0.7**
OJC pmax pmax
comp=Z,27nm,1.0s
VYHS Vyhne 33.58 313 *eP* **P 15 17 12.2 +1.0**
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VRAC Vranov 35.23 313 LR LR 15 33 58.4
comp=Z,145nm,19.1s,baz=112,slow=40
VAE Valguarnera 35.30 292 LR LR 15 33 37.2
comp=Z,73nm,19.4s,baz=262,slow=39
KRLC Kraliky 35.34 315 *eP* **P 15 17 26.7 +0.2**
KRLC Kraliky 35.34 315 *eP* **P 15 17 26.7 +0.2**
DPC Dobruska-Polom 35.71 315 *eP* **P 15 17 31.0 +1.3**
DPC Dobruska-Polom 35.71 315 *eP* **P 15 17 31.0 +1.3**
CHVC Chvalec 35.95 315 *eP* **P 15 17 32.4 +0.7**
GTA Gaotai 36.11 64⇑P **P 15 17 34.5 +1.1**
GTA pP sP 15 17 42.1 +6.2
GTA sP pP 15 17 45.6 +10
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,190nm,6.2s
GTA LR LR
comp=Z,340nm,15.3s
GTA LR LR
comp=Z,350nm,15.6s
GTA LR LR
comp=Z,360nm,17.8s
FDMO Fiordimonte 36.46 302 P **P 15 17 36.2 0.0**
CKRC Cesky Krumlov 36.56 312 *eP* **P 15 17 38.3 +1.4**
FINES FINESS Array B 36.56 336 P **P 15 17 36.0 -0.8**
comp=Z,2.0nm,0.6s,baz=144,slow=11,SNR=8.7
FINES LR LR 15 34 11.3
comp=Z,117nm,19.2s,baz=139,slow=39
comp=Z,2.0nm,0.6s
FINES FINESS Array B 36.56 336 P **P 15 17 36.0 -0.8**
GEC2 GERESS Array S 36.95 312 P **P 15 17 39.8 -0.6**
GERES GERESS Array B 36.95 312 P **P 15 17 39.6 -0.7**
comp=Z,2.8nm,0.8s,baz=115,slow=9.0,SNR=22
GERES PcP **PcP 15 20 02.4 +0.8**
comp=Z,1.2nm,0.7s,baz=116,slow=3.1,SNR=5.0
GERES LR LR 15 35 41.5
comp=Z,107nm,18.1s,baz=116,slow=41
comp=Z,2.8nm,0.8s
GERES GERESS Array B 36.95 312 P **P 15 17 40.0 -0.4**
GERES GERESS Array B 36.95 312 P **P 15 17 40.0 -0.4**
KHC Kasperske Hory 37.10 312 P **P 15 17 41.5 -0.1**
KHC Kasperske Hory 37.10 312 *eP* **P 15 17 40.2 -1.3**
KHC Kasperske Hory 37.10 312 *eP* **P 15 17 40.2 -1.3**
KHC *ex* x 15 17 56.0
CLL Collm 38.00 315 P **P 15 17 49.0 -0.1**
CLL Collm 38.00 315 *i* P **P 15 17 50.1 +1.0**
CLL pmax pmax
comp=Z,12nm,1.2s
CLL Collm 38.00 315 *i* P **P 15 17 50.1 +1.0**
comp=Z,12nm,1.2s
CLL *e*PP **PnPn 15 19 18.0 +1.0**
CLL *e*SS SS 15 26 30.0 +1.7
WTTA Wattenberg 38.01 309 *i* P **P 15 17 49.2 -0.2**
comp=Z,16nm,1.1s
WATA Walderalm 38.06 309 *i* P **P 15 17 49.9 +0.1**
comp=Z,25nm,1.5s
SQTA Sankt Quirin 38.29 308 *i* P **P 15 17 51.9 +0.2**
comp=Z,9.6nm,0.7s
MOTA Moosalm 38.38 309 *i* P **P 15 17 52.7 +0.2**
comp=Z,11nm,0.8s
FETA Feichten 38.58 308 *i* P **P 15 17 54.6 +0.4**
comp=Z,14nm,0.8s,SNR=7.7
MOY Mondy 38.60 44 *eP* **P 15 17 55.9 +1.6**
MOY pmax pmax
comp=Z,27nm,1.7s
RETA Reutte 38.63 309 *i* P **P 15 17 54.5 -0.1**
comp=Z,7.2nm,0.7s
FUORN Ofenpass-Fuorn 38.84 307 P **P 15 17 55.4 -1.2**
DAVOX Davos/Dischmat 39.13 308 LR LR 15 35 16.5
comp=Z,158nm,19.9s,baz=83,slow=38
DAVA Damuels 39.19 308 *i* P **P 15 17 59.0 -0.4**
comp=Z,16nm,0.9s,SNR=5.7
LZH Lanzhou 39.48 69 *eP* **P 15 18 02.5 +0.6**
LZH sP sP 15 18 09.4 +4.9
LZH pmax pmax
comp=Z,11nm,1.2s
LZH LR LR
comp=Z,550nm,14.3s
LZH LR LR
comp=Z,500nm,15.6s
LZH LR LR
comp=Z,440nm,17.8s
KEST Kesra 39.50 290 P **P 15 18 03.1 +1.1**
comp=Z,13nm,1.0s,baz=135,slow=4.0,SNR=8.2
KEST LR LR 15 38 50.3
comp=Z,88nm,18.2s,baz=176,slow=43
comp=Z,13nm,1.0s
KEST Kesra 39.50 290 P **P 15 18 01.7 -0.3**
KEST IAmb IAmb 15 18 05.1
comp=Z,13nm,0.9s
PZH PanZhiHua 39.66 85 P **P 15 18 04.8 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.2s
ZAK Zakamensk 39.71 47 *eP* P 15 17 57.5 -6.1
ZAK pmax pmax
comp=Z,7.0nm,1.4s
MBAR Mbarara 39.74 223 LR LR 15 33 58.2
comp=Z,290nm,19.0s,baz=27,slow=36
MBAR Mbarara 39.74 223⇓*eP* **P 15 18 06.8 +2.6**
MBAR pmax pmax
comp=Z,7.0nm,1.1s
CHTO Chiang Mai 40.04 97 P **P 15 18 05.4 -1.2**
CHTO Chiang Mai 40.04 97 P **P 15 18 05.4 -1.2**
CHTO pmax pmax
comp=Z,1.0nm,1.0s
CM31 Chiang Mai Arr 40.20 98 P **P 15 18 06.8 -1.1**
CM31 IAmb IAmb 15 18 08.3
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 40.20 98 P **P 15 18 07.5 -0.3**
comp=Z,5.0nm,0.8s,baz=296,slow=8.2,SNR=30
CMAR LR LR 15 36 39.2
comp=Z,116nm,18.5s,baz=290,slow=39
comp=Z,5.0nm,0.8s
CD2 Chengdu 40.26 77 *eP* **P 15 18 07.0 -1.3**
BFO Black Forest 40.37 310 *i* P **P 15 18 10.9 +1.9**
HFS Hagfors 40.82 329 LR LR 15 39 00.5
comp=Z,106nm,19.1s,baz=114,slow=42
KMI Kunming 40.94 86⇓P **P 15 18 11.8 -2.4**
KMI pmax pmax
comp=Z,18nm,0.8s
CDF Champ du Feu 41.08 310 *eP* **P 15 18 14.0 -0.9**
CDF pmax pmax
comp=Z,9.0nm,1.0s
MBDF Montbardon 41.13 304 *eP* **P 15 18 14.8 -0.7**
MBDF pmax pmax
comp=Z,12nm,1.0s
ECH Echery 41.13 309 P **P 15 18 14.5 -0.8**
ECH Echery 41.13 309 P **P 15 18 14.5 -0.8**
ECH pmax pmax
comp=Z,12nm,1.1s
LPG La Plagne 41.18 305 *eP* **P 15 18 15.5 -0.5**
LPG pmax pmax
comp=Z,8.0nm,0.9s
LPL La Plagne 41.19 305 *eP* **P 15 18 15.5 -0.6**
LPL pmax pmax
comp=Z,14nm,0.9s
BNI Bardonecchia 41.21 305 P **P 15 18 15.3 -0.8**
BNI pmax pmax
comp=Z,13nm,0.9s
SONM Songino Array 41.35 51 P **P 15 18 17.3 +0.1**
comp=Z,5.8nm,1.0s,baz=264,slow=9.6,SNR=23
SONM LR LR 15 36 01.2
comp=Z,238nm,18.0s,baz=264,slow=37
comp=Z,5.8nm,1.0s
CABF La Chapelle 41.71 307 *eP* **P 15 18 20.1 0.0**
CABF pmax pmax
comp=Z,12nm,0.9s
ULN Ulaanbaatar 41.79 51 P **P 15 18 20.8 -0.1**
ULN IAmb IAmb 15 18 22.7
comp=Z,15nm,1.3s
ULN Ulaanbaatar 41.79 51*c i*P **P 15 18 21.5 +0.6**
ULN pmax pmax
comp=Z,18nm,1.7s
WLF Walferdange 41.96 311 *dP* **P 15 18 21.5 -0.6**
comp=Z,8.2nm,1.2s
BTNL Ternell 42.10 313 *d*pP pP 15 18 25.6 +0.6
MEM Membach 42.19 313 *dP* **P 15 18 23.3 -0.5**
MEM *d*pP **pP 15 18 26.7 +1.0**
MEM *d*sP **sP 15 18 28.2 +1.8**
NB2 NORSAR Subarra 42.31 329 P **P 15 18 23.6 -1.2**
comp=Z,7.5nm,0.9s,baz=115,slow=8.6
NOA NORSAR Array B 42.31 329 P **P 15 18 24.1 -0.8**
comp=Z,4.6nm,0.9s,baz=115,slow=8.0,SNR=7.5
NOA PcP **PcP 15 20 19.1 +0.7**
comp=Z,2.0nm,0.8s,baz=103,slow=3.8,SNR=3.7
NOA LR LR 15 39 36.7
comp=Z,96nm,18.4s,baz=260,slow=41
comp=Z,4.6nm,0.9s
NRIK Noril'sk 42.41 16 LR LR 15 37 21.2
comp=Z,173nm,19.2s,baz=216,slow=38
NRIK Noril'sk 42.41 16⇑*eP* **P 15 18 27.0 +1.6**
NRIK pmax pmax
comp=Z,9.0nm,1.3s
BSTI Sart Tilman 42.46 313 *dx* x 15 18 27.9
ARCES ARCESS Array B 42.58 344 P **P 15 18 27.9 +1.1**
comp=Z,2.6nm,0.7s,baz=148,slow=7.1,SNR=7.1
ARCES LR LR 15 38 55.8
comp=Z,226nm,18.5s,baz=136,slow=40
comp=Z,2.6nm,0.7s
BCLA Clavier 42.60 312 *dP* **P 15 18 28.8 +1.6**
BCLA *dx* x 15 18 35.3
BCLA *dx* x 15 18 43.5
RCHB Rochefort 42.62 312 *d*pP pP 15 18 29.7 +0.5
SSB Saint Sauveur 42.73 305 P **P 15 18 27.5 -0.9**
SSB PcP **PcP 15 20 20.1 0.0**
SSB Saint Sauveur 42.73 305 P **P 15 18 27.5 -0.9**
SSB 15 20 20.1
SSB pmax pmax
comp=Z,10.0nm,1.0s
BGES Gesves 42.74 312 *dx* x 15 18 30.2
GIVF Givet 42.87 312 *eP* **P 15 18 30.9 +1.5**
GIVF pmax pmax
comp=Z,9.0nm,0.8s
BMRD Maredsous 42.93 312 *dx* x 15 18 31.3
DOU Dourbes 43.02 312 *dP* **P 15 18 31.5 +0.9**
comp=Z,7.0nm,1.1s
SMF Signal de Mont 43.26 307 *eP* **P 15 18 32.3 -0.3**
SMF pmax pmax
comp=Z,23nm,1.1s
BAIF Baives 43.26 312 *eP* **P 15 18 34.3 +1.7**
BAIF pmax pmax
comp=Z,31nm,1.2s
LOR Lormes 43.27 308 *eP* **P 15 18 32.3 -0.5**
LOR pmax pmax
comp=Z,13nm,1.0s
SSF Saint Saulge 43.50 307 *eP* **P 15 18 34.4 -0.2**
SSF pmax pmax
comp=Z,17nm,1.0s
AVF Avril sur Loir 43.60 307 *eP* **P 15 18 35.1 -0.2**
AVF pmax pmax
comp=Z,11nm,1.1s
BTO Baotou 43.89 62 *eP* **P 15 18 38.5 +0.5**
BTO LR LR
comp=Z,2μm,15.0s
BTO LR LR
comp=Z,1μm,12.6s
TCF Toulx Ste Croi 44.37 306 *eP* **P 15 18 41.6 -0.1**
TCF pmax pmax
comp=Z,8.0nm,0.9s
CAF Calviac 44.48 304 *eP* **P 15 18 42.4 -0.1**
CAF pmax pmax
comp=Z,9.0nm,1.1s
RJF Les Rejaudoux 44.86 305 *eP* **P 15 18 45.7 +0.2**
RJF pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 45.04 61 *eP* **P 15 18 48.3 +1.2**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.8s
HHC LR LR
comp=Z,680nm,15.2s
HHC LR LR
comp=Z,640nm,16.5s
HHC LR LR
comp=Z,610nm,15.9s
LFF La Frestale 45.42 304 *eP* **P 15 18 49.9 0.0**
LFF pmax pmax
comp=Z,14nm,0.8s
TAM Tamanrasset 45.94 273 P **P 15 18 54.4 -0.2**
TAM IAmb IAmb 15 18 57.8
comp=Z,9.4nm,1.0s
TAM Tamanrasset 45.94 273 P **P 15 18 54.4 -0.2**
TAM pmax pmax
comp=Z,9.0nm,1.0s
ETSF Etsaut 46.47 302 *eP* **P 15 18 58.7 +0.3**
ETSF pmax pmax
comp=Z,6.0nm,1.0s
BOD Bodaibo 47.27 38 *eP* **P 15 19 04.4 +0.1**
BOD pmax pmax
comp=Z,21nm,1.7s
HNS HongShan 47.93 66⇓P **P 15 19 11.9 +2.2**
HNS pmax pmax
comp=Z,8.0nm,1.5s
XLT XiLinHaoTe 48.10 57⇓*i*P **P 15 19 12.8 +1.7**
XLT sP sP 15 19 19.4 +5.7
XLT PcP **PcP 15 20 41.1 +2.3**
XLT ScP **ScP 15 24 33.4 -0.7**
XLT pmax pmax
comp=Z,19nm,1.1s
XLT pmax pmax
comp=Z,130nm,3.5s
XLT LR LR
comp=Z,49nm,14.7s
XLT LR LR
comp=Z,470nm,12.6s
XLT LR LR
comp=Z,430nm,19.4s
PSI Prapat 48.71 116 LR LR 15 41 27.8
comp=Z,86nm,19.2s,baz=298,slow=38
ESDC Sonseca Array 49.41 298 P **P 15 19 19.7 -1.5**
comp=Z,3.6nm,1.0s,baz=65,slow=8.3,SNR=18
ESDC PcP **PcP 15 20 44.2 +0.6**
comp=Z,3.6nm,1.0s,baz=62,slow=3.0,SNR=10
ESDC LR LR 15 42 05.2
comp=Z,78nm,18.1s,baz=62,slow=38
comp=Z,3.6nm,1.0s
ESDC Sonseca Array 49.41 298 P **P 15 19 19.6 -1.5**
ESDC **PcP 15 20 44.1 +0.6**
SPITS Spitsbergen Ar 50.64 350 LR LR 15 45 06.9
comp=Z,131nm,18.4s,baz=116,slow=41
MDT Midelt 51.39 289 LR LR 15 46 15.8
comp=Z,57nm,18.6s,baz=57,slow=42
MTE Manteigas 51.99 299 *eP* **P 15 19 41.8 +1.1**
comp=Z,21nm,1.0s
PCBR Castelo Branco 52.05 299 *eP* **P 15 19 41.9 +0.9**
comp=Z,23nm,1.4s
PBAR Barrancos 52.05 296 *eP* **P 15 19 41.5 +0.5**
comp=Z,21nm,1.4s
NJ2 Nanjing 52.48 71 *eP* **P 15 19 45.4 +1.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
JMIC Jan Mayen 53.11 338 LR LR 15 43 10.3
comp=Z,51nm,20.2s,baz=232,slow=37
PNCL Nicolau / Gran 53.21 297 *eP* **P 15 19 50.1 +0.5**
TOA0 Torodi Ar. Sit 53.33 263 P **P 15 19 49.1 -1.7**
TORD Torodi Ar. Bea 53.33 263 P **P 15 19 49.5 -1.3**
comp=Z,35nm,0.9s,baz=59,slow=6.7,SNR=63
TORD LR LR 15 44 47.9
comp=Z,196nm,19.1s,baz=225,slow=39
comp=Z,35nm,0.9s
LSZ Lusaka 53.34 215 LR LR 15 44 34.8
comp=Z,169nm,20.7s,baz=14,slow=38
ZEA Zeya 54.61 43⇓*i*P **P 15 20 02.2 +2.6**
CN2 Changchun 54.82 56 *eP* **P 15 19 58.8 -2.5**
CN2 *es*P sP 15 20 05.9 +2.0

CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,270nm,12.0s
CN2 LR LR
comp=Z,270nm,13.0s
YAK Yakutsk 55.43 33 LR LR 15 45 08.8
comp=Z,110nm,19.1s,baz=233,slow=38
YAK **Yakutsk 55.43 33⇈** *eP* **P 15 20 07.2 +1.8**
YAK pmax pmax
comp=Z,68nm,3.6s
TIXI Tiksi 55.50 21 P **P 15 20 04.8 -1.0**
comp=Z,0.7nm,0.4s,baz=90,slow=22,SNR=6.7
TIXI LR LR 15 45 49.7
comp=Z,87nm,18.1s,baz=182,slow=38
comp=Z,0.7nm,0.4s
TIXI **Tiksi 55.50 21⇊** *eP* **P 15 20 07.6 +1.8**
TIXI pmax pmax
comp=Z,6.0nm,1.4s
KOWA Kowa 57.59 268 P **P 15 20 20.1 -1.5**
KLR Kul'dur 58.04 48 LR LR 15 45 49.4
comp=Z,154nm,18.3s,baz=268,slow=36
KLR **Kul'dur 58.04 48⇊** *eP* **P 15 20 24.0 -0.2**
KLR pmax pmax
comp=Z,26nm,3.4s
KSRS Korea Array 58.15 63 P **P 15 20 23.4 -1.7**
comp=Z,3.3nm,0.8s,baz=280,slow=7.2,SNR=6.3
KSRS LR LR 15 48 12.8
comp=Z,178nm,20.1s,baz=275,slow=39
comp=Z,3.3nm,0.8s
LEM Lembang 61.51 119 LR LR 15 49 20.5
comp=Z,112nm,20.5s,baz=348,slow=38
JOW Kunigami 61.95 74 LR LR 15 52 46.2
comp=Z,164nm,19.2s,baz=310,slow=41
DBIC Dimbokro 62.13 261 P **P 15 20 52.3 -0.5**
comp=Z,19nm,1.0s,baz=37,slow=5.1,SNR=11
comp=Z,19nm,1.0s
DBIC Dimbokro 62.13 261 P **P 15 20 51.4 -1.4**
KIC Kosan Boka 62.20 260⇈ *eP* **P 15 20 52.5 -0.7**
comp=Z,14nm,0.8s
TSUM Tsumeb 62.27 222 LR LR 15 51 05.7
comp=Z,163nm,18.9s,baz=329,slow=39
TSUM Tsumeb 62.27 222 P **P 15 20 54.3 +0.7**
TSUM IAmb IAmb 15 21 08.3
comp=Z,6.4nm,0.8s
TIC Toumodi 62.28 261⇈ *eP* **P 15 20 52.9 -0.9**
comp=Z,32nm,0.9s
LIC Lamto 62.51 260⇈ *eP* **P 15 20 55.1 -0.2**
comp=Z,48nm,1.0s
LBTB Lobatse 62.94 212 LR LR 15 48 43.2
comp=Z,201nm,18.5s,baz=2.0,slow=36
SEY Seymchan 65.58 30⇊ *iP* **P 15 21 17.1 +2.4**
SEY pmax pmax
comp=Z,20nm,1.3s
MA2 Magadan 66.00 34 LR LR 15 53 11.7
comp=Z,96nm,18.1s,baz=278,slow=39
BOSA Boshof 66.21 210 P **P 15 21 19.6 +0.3**
comp=Z,2.5nm,0.7s,baz=18,slow=7.0,SNR=6.3
BOSA LR LR 15 50 11.1
comp=Z,63nm,18.6s,baz=20,slow=36
comp=Z,2.5nm,0.7s
MJAR Matsushiro Arr 66.23 61 LR LR 15 51 02.1
comp=Z,104nm,21.9s,baz=311,slow=37
DAV Davao City (W) 68.39 95 LR LR 15 55 27.3
comp=Z,66nm,16.5s,baz=334,slow=40
JHJ Hachijo jima 2 68.74 63 LR LR 15 54 30.3
comp=Z,122nm,19.2s,baz=296,slow=38
KAPI Kappang 69.97 109 LR LR 15 56 18.1
comp=Z,45nm,18.1s,baz=292,slow=39
SUR Sutherland 71.40 211 LR LR 15 53 39.0
comp=Z,171nm,18.7s,baz=8.5,slow=36
RES Resolute Bay 73.11 352 LR LR 15 59 00.8
comp=Z,46nm,18.2s,baz=9.0,slow=40
JCJ Chichijima 73.16 68 LR LR 15 57 49.7
comp=Z,56nm,19.3s,baz=102,slow=39
BATI Baumata 76.11 111 P **P 15 22 18.4 -1.1**
comp=Z,16nm,0.6s,baz=37,slow=3.8,SNR=2.9
BATI LR LR 15 59 23.4
comp=Z,223nm,18.1s,baz=277,slow=39
comp=Z,16nm,0.6s
TOLK Toolik Lake Re 78.97 9 P **P 15 22 34.2 -0.5**
TOLK IAmb IAmb 15 22 38.2
comp=Z,10nm,0.9s
COLD Coldfoot 80.18 10 P **P 15 22 41.3 0.0**
COLD IAmb IAmb 15 22 45.2
comp=Z,7.1nm,1.0s
BMAR Burnt Mountain 80.77 8 P **P 15 22 44.7 +0.2**
INK Inuvik 80.89 4 LR LR 16 02 33.5
comp=Z,35nm,19.2s,baz=300,slow=39
H21K Melozitna Rive 81.19 12 P **P 15 22 46.6 -0.2**
H21K IAmb IAmb 15 22 50.6
comp=Z,7.1nm,1.1s
H23K Yukon River 81.58 11 P **P 15 22 48.5 -0.3**
H23K IAmb IAmb 15 22 53.3
comp=Z,8.1nm,1.1s
GUMO Guam 81.72 79 LR LR 16 01 11.9
comp=Z,29nm,19.5s,baz=359,slow=37
SCHQ Schefferville 81.86 331 P **P 15 22 51.0 +0.5**
comp=Z,10nm,0.8s,baz=21,slow=3.8,SNR=4.6
comp=Z,10nm,0.8s
MLY Manley 82.12 11 P **P 15 22 51.2 -0.5**
MLY IAmb IAmb 15 23 35.7
comp=Z,7.4nm,0.6s
I23K Minto, Yukon-K 82.24 11 P **P 15 22 51.6 -0.6**
J20K Nowinta River 82.28 13 P **P 15 22 52.5 +0.1**
J20K IAmb IAmb 15 22 56.3
comp=Z,11nm,1.1s
POKR Poker Plat Res 82.57 10 P **P 15 22 53.5 -0.5**
POKR IAmb IAmb 15 22 57.9
comp=Z,8.0nm,0.9s
MDM Murphy Dome 82.60 10 P **P 15 22 53.2 -0.9**
MDM IAmb IAmb 15 22 57.8
comp=Z,11nm,1.0s
COLA College 82.73 10⇈ *eP* **P 15 22 54.2 -0.6**
COLA pmax pmax
comp=Z,5.0nm,0.8s
BPAW Bear Paw Mtn. 82.94 12 P **P 15 22 55.4 -0.6**
BPAW IAmb IAmb 15 23 00.1
comp=Z,15nm,1.3s
ILAR Eielson Array 82.98 10 P **P 15 22 55.0 -1.1**
comp=Z,1.4nm,0.8s,baz=323,slow=4.2,SNR=14
ILAR LR LR 16 04 43.4
comp=Z,72nm,19.4s,baz=316,slow=39
comp=Z,1.4nm,0.8s
K20K Telida 83.03 13 P **P 15 22 56.0 -0.5**
K20K IAmb IAmb 15 23 40.3
comp=Z,7.9nm,0.7s
J25K Salcha River, 83.34 9 P **P 15 22 56.9 -1.2**
J25K IAmb IAmb 15 23 01.5
comp=Z,14nm,1.4s
CAST Castle Rocks 83.36 13 P **P 15 22 57.5 -0.7**
MCK McKinley 83.63 11 P **P 15 23 00.1 +0.6**
MCK McKinley 83.63 11 P **P 15 23 00.1 +0.6**
MCK pmax pmax
comp=Z,15nm,1.2s
J26L Joseph Creek 83.69 9 P **P 15 22 59.1 -0.8**
J26L IAmb IAmb 15 23 03.3
comp=Z,7.4nm,0.9s
EGAK Eagle 83.72 8 P **P 15 22 59.3 -0.6**
EGAK IAmb IAmb 15 23 02.8
comp=Z,7.0nm,1.0s
SCRK Sand Creek 84.14 9 P **P 15 23 01.7 -0.6**
SCRK IAmb IAmb 15 23 06.2
comp=Z,11nm,1.1s
K27K Chicken 84.33 8 P **P 15 23 02.6 -0.4**
K27K IAmb IAmb 15 23 06.6
comp=Z,8.4nm,1.0s
DOT Dot Lake 84.44 9 P **P 15 23 03.1 -0.6**
DOT IAmb IAmb 15 24 00.2
comp=Z,13nm,1.2s
DAWY Dawson 84.60 7 P **P 15 23 02.4 -2.1**
BCAR Beaver Creek A 85.30 8 P **P 15 23 04.8 -3.2**
M27K Edge Creek, AK 85.97 9 P **P 15 23 10.9 -0.6**
M27K IAmb IAmb 15 23 15.3
comp=Z,12nm,1.1s
YKA Yellowknife Ar 86.75 356 P **P 15 23 14.1 -1.0**
comp=Z,5.4nm,1.0s,baz=0.1,slow=5.4,SNR=8.2
YKA LR LR 16 06 19.4
comp=Z,52nm,19.9s,baz=8.0,slow=39
comp=Z,5.4nm,1.0s
YKA Yellowknife Ar 86.75 356 P **P 15 23 13.8 -1.4**
YKA Yellowknife Ar 86.75 356 *i* P **P 15 23 17.7 +2.6**
YKA pmax pmax
comp=Z,10.0nm,1.1s
HYT Haines Junctio 87.97 7 P **P 15 23 18.9 -2.4**
KDAK Kodiak Island 88.40 15 LR LR 16 08 45.1
comp=Z,51nm,19.0s,baz=339,slow=40

WRA Warramunga Arr 90.07 113 P **P 15 23 29.6 -2.0**
comp=Z,1.5nm,1.0s,baz=319,slow=3.8,SNR=7.8
comp=Z,1.5nm,1.0s
WRA Warramunga Arr 90.07 113 *i* P **P 15 23 31.6 0.0**
WRA pmax pmax
comp=Z,1.0nm,0.9s
DLBC Dease Lake 90.92 3 LR LR 16 09 20.0
comp=Z,49nm,18.0s,baz=318,slow=39
ASAR Alice Springs 91.74 116 P **P 15 23 37.7 -1.6**
comp=Z,1.6nm,0.7s,baz=305,slow=5.0,SNR=14
ASAR LR LR 16 05 38.7
comp=Z,34nm,21.8s,baz=341,slow=36
comp=Z,1.6nm,0.7s
LONY Lake Ozonia 92.73 327 P **P 15 23 43.8 +0.2**
SADO Sadowa 94.65 330 LR LR 16 07 19.0
comp=Z,39nm,19.4s,baz=22,slow=36
RCBR Riachuelo 95.08 266 LR LR 16 07 31.7
comp=Z,126nm,18.1s,baz=196,slow=36
PMG Port Moresby 95.24 98 LR LR 16 14 56.0
comp=Z,21nm,18.5s,baz=26,slow=41
ULM Lac du Bonnet 95.68 343 LR LR 16 11 45.4
comp=Z,50nm,18.2s,baz=7.5,slow=38
BBB Bella Bella 97.25 3 LR LR 16 14 54.3
comp=Z,39nm,18.1s,baz=3.0,slow=40
MAW Mawson 98.23 178 LR LR 16 03 21.5
comp=Z,53nm,20.1s,baz=340,slow=32
CTA Charters Tower 99.75 108 LR LR 16 15 33.1
comp=Z,44nm,19.2s,baz=259,slow=39

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*IDC **20** 15:13:08.9±1.7, 14°.91N×91°.19W, h66km±14km, mb4.0/19, mbtmp4.3/21, MS3.5/6, Error ellipse: s-maj=22.1km s-min=11.1km az=54.0*
*NEIC **20** 15:13:13.9±2.1, 14°.72N±0°.07×91°.61W±0°.08, h102km±4km, mb4.6/207, Error ellipse: s-maj=13.1km s-min=6.9km az=46.0*
*GCG **20** 15:13:16.9±0.6, 14°.63N×91°.58W, h58km±42km, MD4.2*
ISC 20 15:13:12.0±0.7, **14°.62N**±0°.05×**91°.69W**±0.05, **h99**km±5km,
n412, σ1§**13**/413, **mb4.6**/94, **1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.10**	**183**		**Pn**	**15 13 24.6**	**-1.3**
RTAL				Sn	**Sn**	15 13 34.7	-1.5
HUEH	**Huehuetenango**	**0.72**	**15**		**Pn**	**15 13 30.9**	**+1.0**
HUEH				Sn	**Sn**	15 13 43.8	+0.6
FUG	**Fuego 3**	**0.84**	**102**	*eP*	**Pn**	**15 13 32.1**	**+1.2**
PCG	**Pacaya**	**1.07**	**102**	*eP*	**Pn**	**15 13 35.2**	**+1.7**
NBG	**Las Nubes**	**1.30**	**91**	*eP*	**Pn**	**15 13 38.8**	**+2.7**
CCIG	**Comitan**	**1.71**	**345**		**Pn**	**15 13 42.4**	**+1.3**
CCIG				Sn	**Sn**	15 14 04.3	+1.2
MRL	**Marmol**	**1.99**	**76⇊**	*iP*	**Pn**	**15 13 47.6**	**+2.9**
MRL				*eS*	**Sn**	15 14 11.7	+2.1
SBLS	**San Blas**	**2.15**	**111**	*eP*	**Pn**	**15 13 49.6**	**+2.9**
SBLS	**San Blas**	**2.15**	**111**	*eP*	**Pn**	**15 13 49.6**	**+2.9**
MTO3	**Montecristo**	**2.27**	**95**		**Pn**	**15 13 49.5**	**+1.3**
MTO3				Sn	**Sn**	15 14 15.3	-0.7
MTO3	**Montecristo**	**2.27**	**95**	*eP*	**Pn**	**15 13 49.5**	**+1.3**
MTO3	**Montecristo**	**2.27**	**95**	*eP*	**Pn**	**15 13 49.5**	**+1.3**
ESQI	**Esquipulas**	**2.27**	**91**		**Pn**	**15 13 50.0**	**+1.8**
ESQI				Sn	**Sn**	15 14 15.5	-0.5
ESQI	**Esquipulas**	**2.27**	**91**	*eP*	**Pn**	**15 13 50.0**	**+1.8**
SNET	**Serv Nac Est T**	**2.56**	**111**		**Pn**	**15 13 52.5**	**+0.5**
PETF	**Flores**	**2.88**	**37**		**Pn**	**15 13 58.2**	**+2.1**
PETF	**Flores**	**2.88**	**37**	*i* P	**Pn**	**15 13 58.3**	**+2.1**
PETF	**Flores**	**2.88**	**37**	*i* P	**Pn**	**15 13 58.3**	**+2.1**
CMIG	**Matias Romero**	**3.94**	**309**	P	**Pn**	**15 14 09.5**	**-0.8**
	64nm,0.3s,baz=141,slow=9.3,SNR=74						
CMIG				S	**Sn**	**15 14 53.9**	**-1.7**
	106nm,0.3s,baz=104,slow=21,SNR=5.7						
CMIG				LR	LR	15 15 50.5	
	comp=Z,130nm,19.9s,baz=150,slow=39						
TGUH	**Tegucigalpa,Un**	**4.32**	**97**		**Pn**	**15 14 16.6**	**+1.0**
CRIN	**San Cristobal**	**4.90**	**112**		**Pn**	**15 14 26.6**	**+3.1**
CRIN				Sn	**Sn**	15 15 17.9	-1.1
CNGN	**Cerro Negro**	**5.29**	**113**		**Pn**	**15 14 29.6**	**+0.8**
MATN	**Matagalpa**	**5.85**	**106**		**Pn**	**15 14 37.3**	**+1.0**
BOAB	**BOACO BROADBAN**	**6.24**	**110**	Pn	**Pn**	**15 14 41.9**	**+0.2**
TEIG	**Tepich**	**6.46**	**30**	Pn	**Pn**	**15 14 44.3**	**-0.2**
ACON	**Acoyapa**	**6.87**	**112**		**Pn**	**15 14 49.5**	**-0.7**
TLIG	**Tlapa**	**7.23**	**295**		**Pn**	**15 14 55.4**	**+0.2**
ORTG	**Ortega, Santa**	**7.41**	**124**	Pn	**Pn**	**15 14 59.8**	**+2.2**
DUNO	**Dulce Nombre,**	**7.55**	**126**		**Pn**	**15 15 01.2**	**+1.7**
ESPN	**Las Esperanzas**	**7.58**	**108**	Pn	**Pn**	**15 15 01.5**	**+1.6**
JTS	**Las Juntas de**	**7.86**	**122**	Pn	**Pn**	**15 15 05.5**	**+1.8**
COVE	**Coope Vega, Sa**	**8.10**	**118**	Pn	**Pn**	**15 15 08.5**	**+1.5**
JACO	**JACO, Garabito**	**8.46**	**125**	Pn	**Pn**	**15 15 14.2**	**+2.4**
RIMA	**Rio Macho**	**9.04**	**121**		**Pn**	**15 15 21.8**	**+1.8**
PEZE	**Perez Zeledon,**	**9.41**	**123**		**Pn**	**15 15 26.4**	**+1.6**
SRBA	**San Rafael, Bu**	**9.75**	**122**		**Pn**	**15 15 31.8**	**+2.2**
MOIG	**Morelia**	**10.38**	**300**	Pn	**Pn**	**15 15 39.2**	**+1.0**
BRU2	**Volcan**	**10.54**	**122**	Pn	**Pn**	**15 15 42.3**	**+2.0**
SOR	**Soroa**	**11.56**	**44**	Pn	**Pn**	**15 15 52.7**	**-1.2**
LCCY	**Blossom Villag**	**12.18**	**64**		**Pn**	**15 16 03.1**	**+1.1**
BCIP	**Isla Barro Col**	**12.80**	**114**	Pn	**Pn**	**15 16 11.4**	**+1.0**
ZAIG	**Zacatecas**	**13.11**	**310**	Pn	**Pn**	**15 16 16.2**	**+1.5**
MTDJ	**Mount Denham**	**14.04**	**73**		**P**	**15 16 32.0**	**+0.6**
735A	**Kenedy**	**15.26**	**339**	Pn	**Pn**	**15 16 43.0**	**+1.0**
735A				IAmb	IAmb	15 17 05.0	
	comp=Z,29nm,0.8s						
833A	**Chaparral WMA,**	**15.40**	**334**	P	**Pn**	**15 16 44.3**	**+0.5**
833A	**Chaparral WMA,**	**15.40**	**334**	P	**Pn**	**15 16 45.3**	**+1.4**
	baz=150						
HKT	**Hockley**	**15.73**	**347**	Pn	**Pn**	**15 16 48.3**	**+0.4**
060A	**Indiantown**	**16.25**	**39**	Pn	**Pn**	**15 16 53.2**	**-1.3**
DWPF	**Disney Wildern**	**16.46**	**34**		**Pn**	**15 16 56.9**	**-0.1**
GTBY	**Guantanamo Bay**	**16.68**	**69**		**Pn**	**15 16 59.4**	**-0.5**
GTBY				IAmb	IAmb	15 17 04.2	
	comp=Z,87nm,1.4s						
342A	**Flagon Creek P**	**16.69**	**358**	Pn	**Pn**	**15 16 59.0**	**-0.8**
342A				IAmb	IAmb	15 17 35.8	
	comp=Z,63nm,1.1s						
346A	**Big Creek Wild**	**16.82**	**7**		**Pn**	**15 17 01.1**	**-0.3**
346A				IAmb	IAmb	15 17 08.7	
	comp=Z,42nm,0.9s						
451A	**Vernon**	**16.83**	**18**		**Pn**	**15 17 00.9**	**-0.7**
656A	**Willston**	**16.94**	**28**	P	**Pn**	**15 17 01.3**	**-1.7**
435B	**Jarrell**	**16.98**	**342**	P	**Pn**	**15 17 02.2**	**-1.1**
435B				IAmb	IAmb	15 17 37.9	
	comp=Z,19nm,0.5s						
BRAL	**Brewton**	**17.01**	**14**	P	**Pn**	**15 17 03.6**	**-0.2**
JCT	**Junction City**	**17.46**	**336**	P	**P**	**15 17 09.3**	**+0.2**
VBMS	**Vicksburg**	**17.55**	**3**	P	**P**	**15 17 08.9**	**-1.1**
352A	**Blakely**	**17.89**	**19**	P	**Pn**	**15 17 14.9**	**+0.4**
352A				IAmb	IAmb	15 17 49.0	
	comp=Z,36nm,0.6s						
HPIG		**17.89**	**315**	P	**P**	**15 17 15.1**	**+1.0**
250A	**Grady**	**17.98**	**15**	P	**P**	**15 17 13.7**	**-1.0**
250A				IAmb	IAmb	15 17 19.4	
	comp=Z,98nm,1.4s						
146A	**Union**	**18.10**	**7**	P	**Pn**	**15 17 17.2**	**+0.3**
146A				IAmb	IAmb	15 17 25.3	
	comp=Z,40nm,0.9s						
TIGA	**Tifton**	**18.31**	**23**	P	**Pn**	**15 17 19.8**	**+0.2**
TIGA	**Tifton**	**18.31**	**23**	P	**Pn**	**15 17 19.3**	**-0.2**
	baz=206,SNR=5.3						
TXAR	**Lajitas Array**	**18.36**	**325**	P	**P**	**15 17 20.3**	**+1.2**
	comp=Z,6.4nm,0.8s,baz=151,slow=11,SNR=30						
TXAR				PcP	**PcP**	**15 21 47.4**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=169,slow=2.6,SNR=4.6						
TXAR	**Lajitas Array**	**18.36**	**325**	P	**P**	**15 17 20.0**	**+1.0**
TX31	**Lajitas Ar. Si**	**18.36**	**325**	P	**P**	**15 17 19.7**	**+0.7**
TX31				IAmb	IAmb	15 17 22.2	
	comp=Z,24nm,0.9s						
TX32	**Lajitas Array**	**18.36**	**325**	P	**P**	**15 17 20.3**	**+1.2**
Z47A	**Carrollton**	**18.79**	**9**	P	**Pn**	**15 17 24.8**	**-0.4**
Z38A	**Mt. Pleasant**	**18.80**	**351**	P	**P**	**15 17 23.7**	**0.0**
Z38A				IAmb	IAmb	15 17 25.9	
	comp=Z,28nm,1.2s						
LRAL	**Lakeview Retre**	**18.82**	**12**	P	**P**	**15 17 24.7**	**+0.8**
LRAL				IAmb	IAmb	15 17 29.5	
	comp=Z,53nm,1.4s						
LRAL	**Lakeview Retre**	**18.82**	**12**	P	**P**	**15 17 23.9**	**-0.1**
	baz=194,SNR=6.0						
WLAR	**White Oak Lake**	**19.03**	**356**	P	**P**	**15 17 26.3**	**+0.1**
152A	**Waverly Hall**	**19.06**	**18**	P	**P**	**15 17 27.2**	**+0.7**
255A	**Hazlehurst**	**19.18**	**24**	P	**P**	**15 17 28.7**	**+0.9**
Y45A	**Yeager Farm, C**	**19.26**	**5**	P	**P**	**15 17 29.5**	**+0.8**
Z35A	**Perchaven, San**	**19.30**	**346**	P	**P**	**15 17 29.4**	**+0.2**
Z35A				IAmb	IAmb	15 17 30.5	
	comp=Z,29nm,0.7s						
ABTX	**Abilene, Hawle**	**19.33**	**339**	P	**P**	**15 17 29.9**	**+0.3**
ABTX	**Abilene, Hawle**	**19.33**	**339**	P	**P**	**15 17 29.8**	**+0.2**
	baz=156						
SLBS	**Sierra La Lagu**	**19.44**	**300**	P	**P**	**15 17 33.1**	**+2.2**
SLBS				IAmb	IAmb	15 17 50.9	
	comp=Z,33nm,1.5s						
Z51A	**Franklin**	**19.53**	**17**	P	**P**	**15 17 32.0**	**+0.3**
Z51A				IAmb	IAmb	15 17 37.3	
	comp=Z,22nm,0.7s						
154A	**Montrose**	**19.55**	**22**	P	**P**	**15 17 32.6**	**+0.8**
Y49A	**Blount Mountai**	**19.74**	**13**	P	**P**	**15 17 34.3**	**+0.3**
MIAR	**Mount Ida**	**19.91**	**355**	P	**P**	**15 17 35.4**	**-0.4**
MIAR				IAmb	IAmb	15 18 09.7	
	comp=Z,18nm,0.8s						
MIAR	**Mount Ida**	**19.91**	**355**	P	**P**	**15 17 36.2**	**+0.4**
	baz=174						
OXF	**Oxford**	**19.91**	**6**	P	**P**	**15 17 36.5**	**+0.8**
OXF				IAmb	IAmb	15 17 43.5	
	comp=Z,65nm,1.2s						
OXF	**Oxford**	**19.91**	**6**	P	**P**	**15 17 36.0**	**+0.3**
	baz=186						
SDDR	**Presa de Saban**	**20.00**	**75**	P	**P**	**15 17 38.1**	**+1.1**
SDDR				IAmb	IAmb	15 17 41.1	
	comp=Z,15nm,0.7s						
UALR	**University of**	**20.08**	**358**	P	**P**	**15 17 38.0**	**+0.4**
UALR				IAmb	IAmb	15 18 11.8	
	comp=Z,27nm,1.1s						
GOGA	**Godfrey**	**20.14**	**20**	P	**P**	**15 17 39.0**	**+0.7**
GOGA				IAmb	IAmb	15 17 40.5	
	comp=Z,25nm,0.6s						
GOGA	**Godfrey**	**20.14**	**20**	P	**P**	**15 17 39.5**	**+1.2**
	baz=204,SNR=13						
X37A	**Clayton**	**20.16**	**351**	P	**P**	**15 17 38.9**	**+0.4**
X37A				IAmb	IAmb	15 17 40.6	
	comp=Z,17nm,0.7s						
X48A	**Hartselle**	**20.19**	**11**	P	**P**	**15 17 38.9**	**+0.1**
Y52A	**Lilburn**	**20.37**	**18**	P	**P**	**15 17 41.5**	**+0.8**
PLAL	**Pickwick Lake**	**20.54**	**8**	P	**P**	**15 17 41.7**	**-0.8**
FPAL	**Fort Paine**	**20.58**	**14**	P	**P**	**15 17 43.1**	**+0.1**
FPAL				IAmb	IAmb	15 17 46.5	
	comp=Z,30nm,1.1s						
WHAR	**Wooly Hollow**	**20.59**	**359**	P	**P**	**15 17 43.5**	**+0.5**
SC01	**Santiago de lo**	**20.60**	**74**	P	**P**	**15 17 44.2**	**+0.8**
X34A	**Smith Ranch, M**	**20.65**	**346**	P	**P**	**15 17 44.5**	**+0.7**
CLNB	**Carlsbad**	**20.79**	**330**	P	**P**	**15 17 45.8**	**+0.4**
X51A	**Calhoun**	**20.80**	**16**	P	**P**	**15 17 45.4**	**+0.1**
X51A				IAmb	IAmb	15 17 54.0	
	comp=Z,32nm,1.1s						
HTMS	**Hat Mesa**	**20.84**	**331**	P	**P**	**15 17 45.4**	**-0.6**
CLN7	**Carlsbad 7**	**20.88**	**330**	P	**P**	**15 17 46.2**	**-0.1**
COHC	**Cochancay**	**20.97**	**143**	P	**P**	**15 17 47.8**	**+0.4**
GDL2	**Guadalupe Moun**	**20.98**	**329**	P	**P**	**15 17 47.9**	**+0.5**
WMOK	**Wichita Mounta**	**21.03**	**344**	P	**P**	**15 17 46.6**	**-1.2**
WMOK	**Wichita Mounta**	**21.03**	**344**	P	**P**	**15 17 48.6**	**+0.8**
	baz=160						
SWET	**Sewanee**	**21.15**	**13**	P	**P**	**15 17 48.6**	**-0.6**
NHSC	**New Hope**	**21.17**	**28**	P	**P**	**15 17 49.1**	**-0.2**
NHSC	**New Hope**	**21.17**	**28**	P	**P**	**15 17 50.8**	**+1.5**
	baz=212						
FCAR	**Ozark Folk Cen**	**21.18**	**359**	P	**P**	**15 17 47.9**	**-1.6**
W50A	**Signal Mountai**	**21.28**	**15**	P	**P**	**15 17 49.9**	**-0.6**
HODGE	**Hodges**	**21.31**	**22**	P	**P**	**15 17 51.2**	**+0.5**
HODGE				IAmb	IAmb	15 17 53.3	
	comp=Z,50nm,1.2s						
LCAR	**Lake Charles**	**21.37**	**1**	P	**P**	**15 17 50.1**	**-1.3**
LCAR				IAmb	IAmb	15 17 53.1	
	comp=Z,14nm,0.6s						
SDV	**Santo Domingo**	**21.38**	**103**	P	**P**	**15 17 50.8**	**-1.2**
	comp=Z,5.9nm,0.4s,baz=333,slow=5.1,SNR=5.5						
SDV	**Santo Domingo**	**21.38**	**103**	P	**P**	**15 17 52.1**	**+0.1**
OK025	**Westminster Rd**	**21.48**	**347**	P	**P**	**15 17 51.5**	**-1.1**
V48A	**Smith Brothers**	**21.48**	**11**	P	**P**	**15 17 51.6**	**-1.0**
W52A	**Murphy**	**21.55**	**18**	P	**P**	**15 17 53.7**	**+0.3**
W52A				IAmb	IAmb	15 17 56.1	
	comp=Z,15nm,0.6s						
HHAR	**Hobbs**	**21.67**	**355**	P	**P**	**15 17 53.5**	**-1.1**
GLAT	**Glass**	**21.67**	**5**	P	**P**	**15 17 54.5**	**-0.1**
WVT	**Waverly**	**21.70**	**8**	P	**P**	**15 17 54.9**	**-0.1**
WVT				IAmb	IAmb	15 17 56.1	
	comp=Z,21nm,0.6s						
WVT	**Waverly**	**21.70**	**8**	P	**P**	**15 17 55.0**	**+0.1**
	baz=190						
OK029	**Liberty Lake**	**21.71**	**347**	P	**P**	**15 17 53.6**	**-1.5**
OK029				IAmb	IAmb	15 17 55.3	
	comp=Z,27nm,0.8s						
CPCT	**Cooper Cave**	**21.72**	**16**	P	**P**	**15 17 55.4**	**+0.2**
CPCT				IAmb	IAmb	15 18 14.5	
	comp=Z,17nm,0.6s						
MSTX	**Muleshoe**	**21.72**	**334**	P	**P**	**15 17 54.4**	**-1.0**
MSTX				IAmb	IAmb	15 17 56.5	
	comp=Z,17nm,0.5s						
MSTX	**Muleshoe**	**21.72**	**334**	P	**P**	**15 17 54.0**	**-1.4**
	baz=150,SNR=7.2						
JSC	**Jenkinsville**	**21.73**	**24**	P	**P**	**15 17 55.9**	**+0.6**
JSC				IAmb	IAmb	15 17 57.0	
	comp=Z,21nm,0.8s						
BG3	**Lake Jocassee**	**21.77**	**20**	P	**P**	**15 17 56.6**	**+0.9**
BG3				IAmb	IAmb	15 17 58.3	
	comp=Z,18nm,0.7s						
Y57A	**Sumter**	**21.85**	**26**	P	**P**	**15 17 57.8**	**+1.2**
U38A	**Gravette**	**21.86**	**354**	P	**P**	**15 17 55.6**	**-1.1**
CLTN	**Cedars of Leba**	**21.91**	**12**	P	**P**	**15 17 57.0**	**-0.2**
CLTN				IAmb	IAmb	15 17 58.7	
	comp=Z,22nm,0.6s						
HICK	**Hickman**	**21.94**	**5**	P	**P**	**15 17 57.5**	**0.0**
BOSC	**San Juan Bosco**	**21.97**	**142**	P	**P**	**15 18 01.1**	**+2.9**
PAULI	**Pauline**	**22.00**	**22**	P	**P**	**15 17 58.6**	**+0.5**
PAULI				IAmb	IAmb	15 18 00.4	
	comp=Z,33nm,1.2s						
PARMO	**Parma**	**22.02**	**4**	P	**P**	**15 17 58.2**	**-0.1**
AMTX	**Amarillo**	**22.10**	**338**	P	**P**	**15 17 58.4**	**-0.9**
AMTX				IAmb	IAmb	15 18 00.4	
	comp=Z,33nm,0.7s						
AMTX	**Amarillo**	**22.10**	**338**	P	**P**	**15 17 58.2**	**-1.0**
	baz=153						
PBMO	**Poplar Bluff**	**22.10**	**3**	P	**P**	**15 17 58.0**	**-1.1**
V51A	**Loudon**	**22.10**	**16**	P	**P**	**15 17 59.7**	**+0.5**
TKL	**Tuckaleechee C**	**22.12**	**17**	P	**P**	**15 17 58.2**	**-1.2**
	comp=Z,12nm,0.6s,baz=187,slow=11,SNR=15						
TKL				LR	LR	15 27 46.5	
	comp=Z,136nm,18.9s,baz=196,slow=40						
TKL	**Tuckaleechee C**	**22.12**	**17**	P	**P**	**15 17 59.9**	**+0.5**
TKL				IAmb	IAmb	15 18 37.0	
	comp=Z,23nm,1.1s						
OK044	**Pawnee Station**	**22.14**	**349**	P	**P**	**15 17 58.6**	**-1.0**
OK044				IAmb	IAmb	15 18 34.5	
	comp=Z,23nm,0.7s						
V52A	**Sevierville**	**22.34**	**18**	P	**P**	**15 18 01.9**	**+0.1**
BIRD	**Birdtown, Kers**	**22.36**	**25**	P	**P**	**15 18 02.5**	**+0.5**
BIRD				IAmb	IAmb	15 18 03.4	
	comp=Z,27nm,0.6s						
V53A	**Saluda**	**22.43**	**19**	P	**P**	**15 18 03.1**	**+0.4**
V53A				IAmb	IAmb	15 18 04.7	
	comp=Z,42nm,1.4s						
U49A	**Red Boi

319A	Douglas	23.19	319	P	P	15 18 11.7	+1.3
319A				IAmb	IAmb	15 18 13.4	
	comp=Z,36nm,1.4s						
CCM	Cathedral Cave	23.35	1	P	P	15 18 10.6	-1.0
CCM				IAmb	IAmb	15 18 11.4	
	comp=Z,29nm,0.9s						
CCM	Cathedral Cave	23.35	1	P	P	15 18 10.4	-1.2
	baz=181						
USIN	University of	23.52	8	P	P	15 18 12.5	-0.7
U54A	Nelsons Funny	23.53	20	P	P	15 18 13.3	0.0
U54A				IAmb	IAmb	15 18 15.3	
	comp=Z,38nm,1.1s						
R40A	Maddies Statio	23.58	359	P	P	15 18 12.1	-1.6
R40A				IAmb	IAmb	15 18 46.8	
	comp=Z,22nm,1.1s						
BNM	Barren Site	23.68	328	P	P	15 18 16.8	+1.9
BAUV	El Baul	23.82	101	P	P	15 18 15.1	-1.0
BAUV				IAmb	IAmb	15 18 17.7	
	comp=Z,11nm,0.6s						
SBM	South Baldy	23.83	327	P	P	15 18 15.7	-0.8
LEMM	Lemitar	23.87	327	P	P	15 18 18.0	+1.4
U56A	King	23.88	23	P	P	15 18 16.0	-0.5
V58A	Windy Hill, Pi	23.91	26	P	P	15 18 16.4	-0.4
V58A				IAmb	IAmb	15 18 17.6	
	comp=Z,18nm,0.6s						
SLM	Saint Louis	23.96	3	P	P	15 18 16.2	-0.8
WCI	Wyandotte Cave	24.00	10	P	P	15 18 16.7	-0.8
WCI				IAmb	IAmb	15 18 18.2	
	comp=Z,31nm,0.8s						
WCI	Wyandotte Cave	24.00	10	P	P	15 18 16.5	-0.9
	baz=193						
S51A	Beattyville	24.03	16	P	P	15 18 17.1	-0.7
S51A				IAmb	IAmb	15 18 46.4	
	comp=Z,18nm,0.8s						
ANMO	Albuquerque	24.22	329	P	P	15 18 21.0	+1.3
	comp=Z,1.7nm,0.5s,baz=147,slow=11,SNR=6.4						
	comp=Z,1.7nm,0.5s						
ANMO	Albuquerque	24.22	329	P	P	15 18 18.9	-0.8
ANMO	Albuquerque	24.22	329	P	P	15 18 20.1	+0.3
	baz=143						
OLIL	Olney	24.23	7	P	P	15 18 18.6	-1.0
R49A	Shelbyville	24.27	13	P	P	15 18 18.7	-1.2
R49A				IAmb	IAmb	15 18 20.5	
	comp=Z,43nm,1.4s						
Q44A	Meyer Farm, Va	24.30	5	P	P	15 18 19.0	-1.2
R50A	Paris	24.45	14	P	P	15 18 20.2	-1.4
R50A				IAmb	IAmb	15 18 21.8	
	comp=Z,17nm,0.6s						
BLA	Blacksburg	24.64	22	P	P	15 18 23.1	-0.2
	baz=207						
TUC	Tucson	24.77	319	P	P	15 18 26.1	+1.5
	baz=131						
P40A	Paris	24.82	359	P	P	15 18 24.1	-0.8
P40A				IAmb	IAmb	15 18 26.1	
	comp=Z,13nm,0.7s						
S54A	Dingess, Beckl	24.86	20	P	P	15 18 24.6	-0.7
S54A				IAmb	IAmb	15 18 26.0	
	comp=Z,17nm,0.9s						
BLO	Bloomington	24.88	10	P	P	15 18 24.8	-0.7
BLO				IAmb	IAmb	15 18 26.0	
	comp=Z,24nm,0.7s						
V61A	Roper	25.06	30	P	P	15 18 26.7	-0.4
T25A	Trinidad	25.13	336	P	P	15 18 29.5	+1.4
T25A	Trinidad	25.13	336	P	P	15 18 29.6	+1.6
	baz=150						
P46A	Rosedale	25.21	8	P	P	15 18 27.9	-0.6
ATAH	Atahualpa	25.32	148	P	P	15 18 31.7	+1.6
	comp=Z,15nm,0.8s,baz=337,slow=6.0,SNR=9.4						
ATAH				LR	LR	15 26 47.8	
	comp=Z,93nm,18.4s,baz=254,slow=32						
	comp=Z,15nm,0.8s						
Q51A	Peebles	25.40	15	P	P	15 18 30.0	-0.2
Q51A				IAmb	IAmb	15 18 30.7	
	comp=Z,30nm,0.8s						
P49A	Miami Univ. Ec	25.57	13	P	P	15 18 31.0	-0.7
	baz=196						
T59A	Double "B" Far	25.58	27	P	P	15 18 31.4	-0.5
T59A				IAmb	IAmb	15 18 32.7	
	comp=Z,12nm,0.6s						
Q52A	Bidwell	25.63	17	P	P	15 18 31.9	-0.4
Q52A				IAmb	IAmb	15 18 33.6	
	comp=Z,18nm,0.6s						
R55A	Marlinton	25.70	21	P	P	15 18 33.2	+0.2
R55A				IAmb	IAmb	15 18 34.7	
	comp=Z,30nm,1.3s						
214A	Organ Pipe Nat	25.88	315	P	P	15 18 35.1	+0.4
	baz=127						
P51A	Williamsport	25.90	15	IAmb	IAmb	15 18 35.0	
	comp=Z,22nm,0.6s						
HDIL	Hopedale	25.93	4	P	P	15 18 34.0	-1.0
HDIL				IAmb	IAmb	15 18 35.0	
	comp=Z,28nm,0.8s						
HDIL	Hopedale	25.93	4	P	P	15 18 33.9	-1.0
	baz=185						
SFIN	Lafayette	25.98	8	P	P	15 18 34.8	-0.6
	baz=190,SNR=7.3						
O48B	Farmland	26.17	11	P	P	15 18 36.2	-0.9
	baz=194						
P52A	Corning	26.29	17	P	P	15 18 37.6	-0.7
	baz=201						
ACSO	Alum Creek Sta	26.63	15	P	P	15 18 40.0	-1.3
ACSO	Alum Creek Sta	26.63	15	P	P	15 18 40.9	-0.4
	baz=199,SNR=5.5						
S22A	4UR Ranch, Cre	26.67	333	P	P	15 18 42.5	+0.5
	baz=146						
Q56A	Snyder Ridge,	26.70	22	IAmb	IAmb	15 19 23.4	
	comp=Z,17nm,1.1s						
O52A	Adamsville	26.83	17	IAmb	IAmb	15 19 08.0	
	comp=Z,14nm,0.7s						
WUAZ	Wupatki	27.30	323	P	P	15 18 48.7	+1.1
WUAZ	Wupatki	27.30	323	P	P	15 18 48.7	+1.1
	baz=135,SNR=6.1						
P57A	Homestead Farm	27.53	23	IAmb	IAmb	15 18 50.7	
	comp=Z,19nm,0.6s						
PV13	Radium Mtn., P	27.92	330	P	P	15 18 54.0	+0.9
PDMCI	Parker Dam,Lak	28.20	318	P	P	15 18 57.0	+1.6
	baz=128,SNR=5.5						
M53A	WI Miller and	28.38	18	P	P	15 18 56.7	-0.2
	baz=203						
SWSC	Sam W. Stewart	28.51	314	P	P	15 19 00.4	+2.2
	baz=124						
SSPA	Standing Stone	28.58	22	P	P	15 18 58.5	-0.2
SSPA				IAmb	IAmb	15 18 59.4	
	comp=Z,16nm,0.6s						
SSPA	Standing Stone	28.58	22	P	P	15 18 59.2	+0.5
	baz=209						
BC3	Big Chuckawall	28.68	316	P	P	15 19 01.9	+2.1
	baz=126						
IRM	Iron Mountain	28.77	317	P	P	15 19 03.0	+2.5
	baz=127						
MONP2	Monument Peak	28.92	313	P	P	15 19 03.2	+1.2
	baz=123						
KNB	Kanab	29.18	324	P	P	15 19 05.6	+1.2
KNB				IAmb	IAmb	15 19 07.3	
	comp=Z,10nm,0.8s						
ERPA	Erie	29.21	18	P	P	15 19 04.7	+0.4
	baz=204						
BELC	Belle Mtn. Jos	29.25	316	P	P	15 19 07.3	+2.5
	baz=125						
TPFO	Pinon Flats	29.34	314	P	P	15 19 08.5	+2.8
	baz=124						
PFO	Pinyon Flats O	29.34	314	P	P	15 19 07.6	+1.9
	comp=Z,1.8nm,0.5s,baz=143,slow=12,SNR=4.2						
	comp=Z,1.8nm,0.5s						
PFO	Pinyon Flats O	29.34	314	P	P	15 19 07.7	+2.0
	baz=124						
GMRC	Granite Mounta	29.48	317	P	P	15 19 08.7	+1.7
	baz=127,SNR=6.9						
SZCU	Shurtz Canyon	29.74	324	P	P	15 19 10.5	+1.2
CCUT	Cedar City	29.86	324	P	P	15 19 12.4	+2.0
CCUT				IAmb	IAmb	15 19 14.3	
	comp=Z,8.2nm,0.9s						
CCUT					PcP	15 22 12.1	+0.8
MSU	Marysvale	29.90	327	P	P	15 19 12.8	+2.1
MSU					PcP	15 22 12.2	+0.9
MVU	Marysvale	29.91	327	P	P	15 19 12.4	+1.6
MVU				IAmb	IAmb	15 19 14.9	
	comp=Z,10nm,1.1s						
MVU					PcP	15 22 12.5	+1.1
HEC	Hector,Ludlow	29.96	317	P	P	15 19 12.9	+1.9
	baz=126						
SHPR	Sheep Range	30.23	320	P	P	15 19 14.8	+1.3
SCI2	San Clemente I	30.48	312	P	P	15 19 16.9	+1.3
	baz=120						
BFSC	Mount Baldy Ra	30.52	314	P	P	15 19 17.7	+1.6
	baz=123						
GSC	Goldstone, Bar	30.55	317	P	P	15 19 18.0	+1.7
	baz=126						
BINY	Binghamton	30.65	23	P	P	15 19 17.2	+0.2
	baz=211						
PRN	Pahroc Range	30.75	322		PcP	15 22 13.5	0.0
PSUT	Pine Spring	30.83	325	P	P	15 19 20.7	+1.8
PSUT					PcP	15 22 13.8	0.0
GWY	Greenwater Val	30.98	318	P	P	15 19 22.0	+1.8
GWY					PcP	15 22 15.4	+1.2
TPNV	Topopah Spring	31.19	320		PcP	15 22 15.1	+0.4
TPNV	Topopah Spring	31.19	320	P	P	15 19 24.4	+2.4
	baz=129						
LRMC	Laurel Mtn Rad	31.23	316	P	P	15 19 24.6	+2.3
	baz=125						
S11A	Rachel	31.33	322	IAmb	IAmb	15 19 26.7	
	comp=Z,10nm,0.8s						
MPMC	Manual Prospec	31.44	317	P	P	15 19 26.4	+2.2
	baz=126,SNR=13						
R11A	Troy Canyon, C	31.69	323	P	P	15 19 28.1	+1.6
R11A	Troy Canyon, C	31.69	323	P	P	15 19 28.2	+1.8
	baz=132,SNR=6.8						
ISA	Isabella, Lake	31.87	316	P	P	15 19 30.3	+2.5
	baz=124						
SADO	Sadowa	31.89	17	P	P	15 19 26.0	-1.8
	comp=Z,8.3nm,0.6s,baz=252,slow=8.2,SNR=9.3						
SADO				LR	LR	15 33 06.4	
	comp=Z,97nm,19.2s,baz=194,slow=38						
	comp=Z,8.3nm,0.6s						
J58A	Remsen	31.91	23	IAmb	IAmb	15 19 28.2	
	comp=Z,11nm,0.6s						
GRAC	Grapevine Rang	31.92	319	IAmb	IAmb	15 19 31.7	
	comp=Z,12nm,0.8s						
GRAC	Grapevine Rang	31.92	319	P	P	15 19 31.0	+2.7
	baz=127						
PDAR	Pinedale Array	31.99	335	PcP	PcP	15 22 16.8	0.0
	comp=Z,0.7nm,0.5s,baz=158,slow=5.5,SNR=5.1						
CWC	Cottonwood Cre	32.05	318	P	P	15 19 31.6	+2.0
	baz=126						
SBC	Santa Barbara	32.06	313	P	P	15 19 32.5	+3.0
	baz=121						
ELK	Elko	33.14	326	P	P	15 19 40.5	+1.4
	comp=Z,2.2nm,0.5s,baz=149,slow=7.7,SNR=15						
ELK				PcP	PcP	15 22 20.7	+0.6
	comp=Z,2.0nm,0.9s,baz=194,slow=3.6,SNR=6.4						
	comp=Z,2.2nm,0.5s						
ELK	Elko	33.14	326	P	P	15 19 40.5	+1.4
ELK				PcP	PcP	15 22 20.9	+0.8
TPAW	Teton Pass	33.16	334	IAmb	IAmb	15 19 41.0	
	comp=Z,4.4nm,0.5s						
LONY	Lake Ozonia	33.25	23	P	P	15 19 39.6	-0.1
	baz=211						
NV11	Mina Array Sit	33.30	320	P	P	15 19 41.9	+1.4
NV11				IAmb	IAmb	15 19 43.8	
	comp=Z,12nm,0.7s						
NVAR	Mina Array Bea	33.39	320	P	P	15 19 42.9	+1.6
	comp=Z,16nm,0.6s,baz=131,slow=8.7,SNR=171						
NVAR				PcP	PcP	15 22 22.3	+1.5
	comp=Z,3.0nm,0.7s,baz=133,slow=3.1,SNR=12						
NVAR				ScP	ScP	15 25 58.7	+2.3
	comp=Z,0.6nm,0.6s,baz=114,slow=4.4,SNR=6.7						
MDPB	Devils Postpil	33.40	318	IAmb	IAmb	15 19 44.5	
	comp=Z,6.3nm,0.8s						
RYN	Ryan	33.64	320	P	P	15 19 45.1	+1.7
KVN	Kaiserville	33.65	321	IAmb	IAmb	15 19 46.4	
	comp=Z,12nm,1.1s						
RLMT	Red Lodge	33.85	337	P	P	15 19 44.8	-0.4
	baz=148						
BMN	Battle Mountai	34.02	324	IAmb	IAmb	15 19 49.5	
	comp=Z,8.1nm,0.8s						
YERR	Yerington	34.30	320	IAmb	IAmb	15 19 52.2	
	comp=Z,9.0nm,0.6s						
PNTR	Pine Nut	34.59	320	IAmb	IAmb	15 19 55.9	
	comp=Z,9.3nm,0.7s						
HLID	Hailey	34.78	331	P	P	15 19 54.3	+1.0
HLID	Hailey	34.78	331	P	P	15 19 53.7	+0.5
	baz=139,SNR=6.2						
PAHR	Pah Rah Range	34.83	321	IAmb	IAmb	15 19 56.2	
	comp=Z,4.2nm,0.8s						
EMB	Emerald Bay	34.84	320	P	P	15 19 54.4	+0.5
EMB				IAmb	IAmb	15 19 57.2	
	comp=Z,11nm,0.8s						
BOZ	Bozeman (W)	35.16	335	P	P	15 19 56.6	+0.1
	baz=145						
BEKR	Beckworth	35.53	321	IAmb	IAmb	15 20 02.2	
	comp=Z,3.5nm,0.6s						
ULM	Lac du Bonnet	35.70	355	P	P	15 19 58.9	-1.8
	comp=Z,2.3nm,0.5s,baz=208,slow=3.8,SNR=2.9						
	comp=Z,2.3nm,0.5s						
PKME	Peaks-Kenny Pk	35.94	27	P	P	15 20 02.4	-0.4
	baz=219						
WVOR	Wild Horse Val	36.15	325	P	P	15 20 06.0	+1.1
WVOR				IAmb	IAmb	15 20 07.7	
	comp=Z,5.9nm,0.8s						
WVOR					PcP	15 22 29.7	+1.1
EGMT	Eagleton	36.51	340	P	P	15 20 07.3	-0.5
	baz=150						
PLID	Pearl Lake	36.68	331	IAmb	IAmb	15 20 11.5	
	comp=Z,9.2nm,1.1s						
MOD	Modoc Plateau	36.75	323	IAmb	IAmb	15 20 11.3	
	comp=Z,3.7nm,0.7s						
MSO	Missoula	37.11	334	P	P	15 20 12.8	-0.2
	baz=142						
I07A	Izee	37.73	327	IAmb	IAmb	15 20 20.7	
	comp=Z,5.1nm,0.9s						
YBH	Yreka Blue Hor	38.07	321	P	P	15 20 20.8	-0.3
	comp=Z,1.2nm,0.4s,baz=166,slow=5.3,SNR=7.6						
	comp=Z,1.2nm,0.4s						
H04A	Detroit Lake	39.58	325	P	P	15 20 34.0	+0.4
C09A	Chrisman Ranch	39.75	332	P	P	15 20 35.4	+0.4
C09A				IAmb	IAmb	15 20 37.5	
	comp=Z,8.0nm,0.5s						
SIV	San Ignacio	42.90	134	P	P	15 21 00.7	-0.4
	comp=Z,3.9nm,0.5s,baz=304,slow=7.2,SNR=22						
SIV				PcP	PcP	15 22 51.5	+1.2
	comp=Z,3.9nm,0.6s,baz=284,slow=3.4,SNR=9.2						
	comp=Z,3.9nm,0.5s						
SCHQ	Schefferville	44.54	20	P	P	15 21 11.7	-2.0
	comp=Z,4.1nm,0.5s,baz=223,slow=8.4,SNR=7.8						
SCHQ				LR	LR	15 40 42.8	
	comp=Z,113nm,19.3s,baz=186,slow=38						
	comp=Z,4.1nm,0.5s						
YKA	Yellowknife Ar	50.50	346	P	P	15 21 58.9	-0.8
	comp=Z,6.5nm,0.6s,baz=150,slow=7.6,SNR=21						
	comp=Z,6.5nm,0.6s						
DLBC	Dease Lake	52.22	336	P	P	15 22 13.5	+0.8
	baz=130						
BDFB	Brasilia	52.60	123	P	P	15 22 14.6	-1.6
	comp=Z,2.5nm,0.6s,baz=109,slow=12,SNR=4.2						
	comp=Z,2.5nm,0.6s						
WTLY	Watson Lake, Y	52.86	338	P	P	15 22 17.9	+0.5
	baz=133						
R33M	Jennings River	53.21	336	P	P	15 22 21.2	+1.1
	baz=130						
Q32M	Nakina River	53.45	335	P	P	15 22 23.4	+1.4
	baz=128						
TGTN	Hyland Airport	53.66	339	P	P	15 22 24.2	+1.0
	baz=134						
P32M	Atlin	54.43	335	P	P	15 22 30.1	+1.3
	baz=127						
MMPY	Sheldon Lake,	55.43	339	P	P	15 22 36.9	+0.9
	baz=131						
P30M	Milion Dollar	56.07	335	P	P	15 22 41.6	+0.9
	baz=124						
O30N	Mendenhall	56.08	336	P	P	15 22 41.7	+1.0
	baz=125						
P29M	Windy Craggy	56.12	334	P	P	15 22 42.0	+1.0
	baz=123						
N31M	Braeburn, Yuko	56.38	336	P	P	15 22 43.3	+0.5
	baz=126						
O29M	Mount Kennedy	56.84	334	P	P	15 22 46.7	+0.4
	baz=122						
PNL	Peninsula	56.86	333	P	P	15 22 46.7	+0.5
	baz=121						
YUK6	Outpost Mounta	57.10	335	P	P	15 22 48.4	+0.3
	baz=123						
YUK4	Talbot Arm	57.44	335	P	P	15 22 51.0	+0.5
	baz=123						
O28M	Mount Upton	57.77	334	P	P	15 22 53.5	+0.6
	baz=121						
YUK8	Steele Glacier	57.86	335	P	P	15 22 53.6	+0.1
	baz=122						
M29M	Somme Creek	57.97	336	P	P	15 22 54.8	+0.7
	baz=124,SNR=5.4						
L29M	L29M	58.22	337	P	P	15 22 56.0	+0.3
	baz=124						
MESA	MESA	58.23	333	P	P	15 22 56.1	+0.1
	baz=119						
K29M	Barlow Dome	58.41	338	P	P	15 22 57.1	0.0
	baz=125						
PLCA	Paso Flores	58.46	161	P	P	15 22 57.6	-0.1
	comp=Z,2.1nm,0.9s,baz=5.6,slow=12,SNR=4.5						
	comp=Z,2.1nm,0.9s						
BGLC	Bering Glacier	58.79	333	P	P	15 23 00.0	+0.4
	baz=117						
KAIM	Kayak Island	59.21	332	P	P	15 23 03.1	+0.5
	baz=116						
DAWY	Dawson	59.22	338	P	P	15 23 03.2	+0.6
	baz=124						
L27K	Beaver Creek,	59.61	336	P	P	15 23 05.4	0.0
	baz=120						
BMRM	Bremner River	59.76	333	P	P	15 23 06.5	+0.2
	baz=116						
INK	Inuvik	59.94	343	P	P	15 23 07.3	-0.1
	baz=132						
KLU	Klutina	60.56	333	P	P	15 23 12.2	+0.4
	baz=116						
M23K	Glacier View	61.47	333	P	P	15 23 18.0	+0.1
	baz=114						
K24K	Donnelly Dome	61.53	336	P	P	15 23 18.8	+0.4
	baz=117						
SEW	Seward	61.59	331	P	P	15 23 18.7	0.0
	baz=111						
SML	Sawmill	61.74	333	P	P	15 23 20.2	+0.4
	baz=113						
J25K	Salcha River,	61.74	337	P	P	15 23 19.7	-0.1
	baz=118						
WAT6	Susitna Watana	61.80	334	P	P	15 23 20.3	0.0
	baz=114						
DHY	Denali Highway	61.85	335	P	P	15 23 20.3	-0.4
	baz=115						
O22K	Cooper Landing	61.86	332	P	P	15 23 20.7	+0.2
	baz=111						
BRSE	Bradley Lake S	62.07	331	P	P	15 23 21.3	-0.7
	baz=110						
RC01	Rabbit Creek A	62.09	332	P	P	15 23 21.8	-0.2
	baz=112						
PRP	Porcupine Dome	62.22	338	P	P	15 23 22.2	-0.9
	baz=118						
WAT1	Susitna Watana	62.24	334	P	P	15 23 22.5	-0.6
	baz=114						
E27K	Coleen River	62.25	341	P	P	15 23 22.5	-0.6
	baz=123						
HDA	Harding Lake	62.26	336	P	P	15 23 22.0	-1.1
	baz=116						
G26K	Porcupine Rive	62.31	339	P	P	15 23 23.5	+0.1
	baz=120						
IL31		62.39	337	IAmb	IAmb	15 23 25.6	
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	62.39	337	P	P	15 23 22.9	-1.2
	comp=Z,2.2nm,0.6s,baz=110,slow=5.6,SNR=23						
	comp=Z,2.2nm,0.6s						
HOM	Homer	62.47	330	P	P	15 23 24.9	+0.3
	baz=109						
SUA	Susitna One	62.68	332	P	P	15 23 26.2	0.0
	baz=111						
CUT	Chulitna	62.81	333	P	P	15 23 27.1	+0.3
	baz=112						
O20K	Slope Mountain	63.08	331	P	P	15 23 28.9	+0.1
	baz=108						
NEA2	Nenana	63.17	336	P	P	15 23 28.8	-0.4
	baz=114						
SKT	Skwentna	63.21	333	P	P	15 23 29.4	-0.2
	baz=110						
TRF	Thorofare Moun	63.21	335	P	P	15 23 29.8	+0.1
TRF				IAmb	IAmb	15 23 31.2	
	comp=Z,8.8nm,0.6s						
TRF	Thorofare Moun	63.21	335	P	P	15 23 29.8	+0.1
	baz=112						
Q19K	Cape Douglas,	63.22	329	P	P	15 23 29.9	+0.2
	baz=107						
H24K	Noodor Dome	63.24	337	P	P	15 23 29.3	-0.4
	baz=116						
P19K	Oil Pt	63.24	330	P	P	15 23 29.5	-0.3
	baz=108						
N20K	Mount Spurr	63.25	332	P	P	15 23 29.8	-0.1
	baz=109						
SPCR	Spurr Chakacha	63.25	332	P	P	15 23 29.8	-0.1
	baz=109						
F25K	Christian Rive	63.25	340	P	P	15 23 29.4	-0.4
	baz=119						
CHIR	Chirikof Islan	63.44	325	P	P	15 23 30.6	-0.5
	baz=104						
I23K	Minto, Yukon-K	63.51	336	IAmb	IAmb	15 23 33.3	
	comp=Z,9.3nm,1.1s						
I23K	Minto, Yukon-K	63.51	336	P	P	15 23 30.6	-0.8
	baz=114						
C27K	Jago River	63.67	342	P	P	15 23 30.8	-1.7
	baz=122						
BPAW	Bear Paw Mtn.	63.74	335	P	P	15 23 32.1	-1.0
	baz=112						
PPLA	Purkeypile	63.81	334	P	P	15 23 32.7	-1.0
	baz=110						
Q18K	Katmai Hardscr	63.83	329	P	P	15 23 33.1	-0.7
	baz=105						
H23K	Yukon River	63.85	337	P	P	15 23 33.4	-0.3
	baz=114						
M20K	Styx River	63.89	332	P	P	15 23 34.2	+0.1
M20K				IAmb	IAmb	15 23 35.0	
	comp=Z,7.5nm,0.7s						
M20K	Styx River	63.89	332	P	P	15 23 34.0	-0.1
	baz=109						
O19K	Port Alsworth	63.92	330	P	P	15 23 33.7	-0.5
	baz=107						
CAST	Castle Rocks	63.95	334	P	P	15 23 33.4	-1.0
	baz=110						
MLY	Manley	64.00	336	P	P	15 23 34.3	-0.4
	baz=112,SNR=6.3						
P18K	Big Mountain,	64.14	329	P	P	15 23 35.0	-0.7
	baz=106						
Q17K	Contact Creek	64.17	328	P	P	15 23 36.3	+0.2
	baz=104						
N19K	Bonanza Creek	64.18	331	P	P	15 23 35.5	-0.5
	baz=107						
O18K	Koktuh Hills	64.25	330	P	P	15 23 36.4	0.0
	baz=106						
D25K	Kavik River	64.33	341	P	P	15 23 36.1	-0.7
	baz=119						
G23K	Bananza Creek	64.39	338	P	P	15 23 36.4	-0.9
	baz=114						
L20K	Farewell, AK	64.41	333	P	P	15 23 37.2	-0.3
	baz=108,SNR=5.2						
E24K	Your Creek	64.44	340	P	P	15 23 37.6	+0.1
	baz=116						
M19K	Big River Lodg	64.46	332	P	P	15 23 37.8	0.0
	baz=108						
I21K	Tanana	64.54	336	P	P	15 23 38.0	-0.2
	baz=111						
H22K	Ishtalitna Cre	64.57	337	P	P	15 23 38.5	+0.1
	baz=112						
COLD	Coldfoot	64.67	338	P	P	15 23 39.0	0.0
	baz=114						
Q16K	King Salmon	64.67	328	P	P	15 23 38.9	-0.2
	baz=104						
L19K	White Mountain	64.75	332	P	P	15 23 39.7	0.0
	baz=107						
K20K	Telida	64.77	334	P	P	15 23 39.3	-0.5
	baz=108						
N18K	Kilae Creek	64.81	331	P	P	15 23 39.8	-0.2
	baz=106						
E23K	Chandalar	64.81	339	P	P	15 23 40.3	+0.2
	baz=115						
R16K	Pilot Point	64.89	327	P	P	15 23 40.1	-0.4
	baz=102						
G22K	Bettles	65.02	338	P	P	15 23 41.3	+0.1
	baz=112						
H21K	Melozitna Rive	65.03	336	P	P	15 23 40.5	-1.0
	baz=111						
TOLK	Toolik Lake Re	65.04	340	P	P	15 23 40.8	-0.7
	baz=115						
J20K	Nowinta River	65.07	335	P	P	15 23 40.9	-0.8
J20K				IAmb	IAmb	15 23 41.9	
	comp=Z,3.4nm,0.6s						
J20K	Nowinta River	65.07	335	P	P	15 23 40.8	-0.8
	baz

F21K	Alatna River	65.85 338	P	P	15 23 46.9	+0.3
	baz=111,SNR=12					
C23K	Itkillik River	65.89 341	P	P	15 23 46.4	-0.4
	baz=115					
N16K	Nishlik Lake	66.13 330	P	P	15 23 48.5	-0.1
	baz=103					
UNV	Unalaska Valle	69.37 322	P	P	15 24 09.1	+0.1
	baz=93					
NIKH	Nikolski High	70.74 321	P	P	15 24 17.3	-0.2
	baz=91					
ESDC	Sonseca Array	79.10 52	P	P	15 25 03.3	-2.6
	comp=Z,0.9nm,0.7s,baz=290,slow=6.0,SNR=6.5					
	comp=Z,0.9nm,0.7s					
SHEM	Shemya Is, Ala	81.03 322	LR	LR	16 00 47.4	
	comp=Z,64nm,20.4s,baz=270,slow=35					
PMSA	Palmer Station	81.90 168	P	P	15 25 22.6	+2.6
NOA	NORSAR Array B	83.46 29	P	P	15 25 26.9	-1.6
	comp=Z,0.8nm,0.7s,baz=288,slow=5.4,SNR=3.6					
	comp=Z,0.8nm,0.7s					
ARCES	ARCESS Array B	85.46 18	P	P	15 25 36.2	-2.1
	comp=Z,0.5nm,0.4s,baz=283,slow=3.9,SNR=11					
	comp=Z,0.5nm,0.4s					
FINES	FINESS Array B	89.81 25	P	P	15 25 56.7	-2.6
	comp=Z,0.9nm,0.6s,baz=304,slow=4.4,SNR=5.0					
	comp=Z,0.9nm,0.6s					
TORD	Torodi Ar. Bea	89.94 77	P	P	15 25 57.7	-3.2
	comp=Z,0.2nm,0.5s,baz=304,slow=3.0,SNR=1.8					
	comp=Z,0.2nm,0.5s					
PETK	Petropavlovsk-	90.31 326	P	P	15 26 02.0	+0.2
	comp=Z,4.5nm,0.8s,baz=115,slow=6.5,SNR=4.0					
	comp=Z,4.5nm,0.8s					
MKAR	Makanchi Array	118.63 5	PKP	PKPdf	15 31 46.8	-1.9
	comp=Z,0.4nm,0.4s,baz=346,slow=2.5,SNR=4.9					
MAW	Mawson	124.52 168	PKP	PKPdf	15 31 60.0	+0.9
	comp=Z,0.4nm,0.4s,baz=179,slow=3.1,SNR=10					
WRA	Warramunga Arr	135.84 256	PKhKP	PKPpre	15 32 15.2	
	comp=Z,0.2nm,0.5s,baz=89,slow=3.1,SNR=8.6					
WRA			PKP	PKPdf	15 32 23.8	+1.7
	comp=Z,0.7nm,0.6s,baz=10,slow=0.8,SNR=19					
WRA			SKPbc	SKPab	15 35 51.4	+1.5
	comp=Z,0.5nm,0.8s,baz=93,slow=2.2,SNR=4.9					
ASAR	Alice Springs	136.15 251	PKhKP	PKPpre	15 32 16.7	
	comp=Z,0.4nm,0.6s,baz=109,slow=3.0,SNR=8.3					
ASAR			PKP	PKPdf	15 32 23.6	+1.0
	comp=Z,0.8nm,0.8s,baz=89,slow=2.3,SNR=8.1					
ASAR			SKPbc	SKiKP	15 35 52.2	+0.7
	comp=Z,0.3nm,0.7s,baz=85,slow=3.2,SNR=2.7					
PZH	PanZhiHua	137.09 342	PKP	PKPdf	15 32 24.8	+0.4
CMAR	Chiang Mai Arr	145.50 342	PKPbc	PKPdf	15 32 39.0	-0.5
	comp=Z,9.4nm,0.7s,baz=336,slow=3.5,SNR=56					

*IDC **20** 15:21:15.5±0.6, 17°.61N×94°.37W, h134km±7km, mb3.9/15, mbtmp4.3/16, Error ellipse: s-maj=23.6km s-min=12.0km az=66.0*

*NEIC **20** 15:21:16.4±1.9, 17°.60N±0°.04×94°.64W±0°.05, h141km±7km, Error ellipse: s-maj=8.2km s-min=3.8km az=55.0*

*GCMT **20** 15:21:17.1±0.6, 17°.70N±0°.04×94°.60W±0°.03, h176km±5km, MW4.9/85, Moment Tensor Solution. s8,c8; s85,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.11; $M_{\theta\theta}$-0.76±.12; $M_{\phi\phi}$2.52±.12; $M_{r\theta}$0.99±.09; $M_{\theta\phi}$-1.10±.15; $M_{\phi r}$-0.49±.09; Best double couple: $M_0$2.67300×10^{16} NP1:ϕ_s193.00000°, δ45.00000°, λ-43.00000°. Principal axes: T 2.9790, Plg9.0000°, Azm71.0000°; N -0.6050, Plg31.0000°, Azm335.0000°; P -2.3670, Plg57.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **20** 15:21:18.1±0.8, 17°.59N×94°.75W, h148km±8km, MD4.7*

ISC 20 15:21:16.7±0.5,**17°.55N**±0°.04×**94°.68W**±0°.03,**h151**km±5km, **n438**,σ1§**44**/459,**mb4.5**/62,**Chiapas**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.49 203	P	Pn	15 21 37.9	-0.4
	2μm,0.4s,baz=55,slow=2.0,SNR=3638					
CMIG			S	Sn	15 21 53.1	-1.5
	3μm,0.4s,baz=71,slow=23,SNR=21					
CMIG	Matias Romero	0.49 203	eP	Pn	15 21 37.9	-0.4
CMIG			eS	Sn	15 21 53.4	-1.2
TUIG	Tuzandepetl	0.55 27	eP	Pn	15 21 38.2	-0.3
TUIG			eS	Sn	15 21 53.9	-1.2
UXUV	UXUV	0.56 114	i P	Pn	15 21 38.5	0.0
UXUV			eS	Sn	15 21 53.9	-1.2
NILT	Santiago Nilte	0.98 176	eP	Pn	15 21 41.6	+0.1
NILT			eS	Sn	15 21 59.8	-0.6
NEUV	Arroyo Zacate	1.08 279	eP	Pn	15 21 41.4	-0.9
TGBT	Tuxtla Gutierr	1.71 116		Pn	15 21 48.8	+0.2
TGBT				Sn	15 22 12.3	-0.7
TGBT	Tuxtla Gutierr	1.71 116	eP	Pn	15 21 48.8	+0.2
TGBT			eS	Sn	15 22 12.3	-0.7
OXLC	Oaxaca	1.99 256	eP	Pn	15 21 51.9	-0.2
OXLC			i S	Sn	15 22 19.2	+0.2
OXBJ	Oaxaca	2.01 257		Pn	15 21 52.2	0.0
OXBJ				Sn	15 22 19.6	+0.2
OXBJ	Oaxaca	2.01 257	eP	Pn	15 21 52.2	0.0
OXBJ			i S	Sn	15 22 19.6	+0.2
OXIG	Oaxaca	2.01 257		Pn	15 21 52.1	-0.2
OXIG				Sn	15 22 20.1	+0.5
VHO	Vista Hermosa	2.01 257	eP	Pn	15 21 52.1	-0.2
VHO			eS	Sn	15 22 20.1	+0.5
HUIG	Huatulco	2.23 218		Pn	15 21 52.5	-2.2
HUIG				Sn	15 22 23.0	-1.0
HUIG	Huatulco	2.23 218	eP	Pn	15 21 52.5	-2.2
HUIG			eS	Sn	15 22 23.0	-1.0
PCIG		2.31 142		Pn	15 21 55.2	-0.3
PCIG				Sn	15 22 24.2	-1.3
PCIG		2.31 142	eP	Pn	15 21 55.2	-0.3
PCIG			eS	Sn	15 22 24.2	-1.3
TOIG	Toxpalan	2.33 284		Pn	15 21 55.9	-0.1
TOIG				Sn	15 22 24.8	-1.4
TOIG	Toxpalan	2.33 284	eP	Pn	15 21 55.9	-0.1
TOIG			eS	Sn	15 22 24.8	-1.4
PANG	Puerto Angel	2.54 223		Pn	15 21 56.1	-2.3
PANG				Sn	15 22 29.4	-1.1
PANG	Puerto Angel	2.54 223	eP	Pn	15 21 56.1	-2.3
PANG			eS	Sn	15 22 29.4	-1.1
OZST	Orizaba	2.64 300	eP	Pn	15 21 59.0	-0.8
OZST			eS	Sn	15 22 30.1	-2.9
TPIG	Tehuac#an	2.69 289		Pn	15 22 00.4	-0.1
TPIG				Sn	15 22 32.8	-1.5
TPIG	Tehuac#an	2.69 289	eP	Pn	15 22 00.4	-0.1
TPIG			eS	Sn	15 22 32.8	-1.5
JAUV	Jalcomulco	2.71 312	eP	Pn	15 21 59.4	-1.1
JAUV			eS	Sn	15 22 31.6	-2.8
CCIG	Comitan	2.74 117		Pn	15 22 01.4	+0.4
CCIG			Sn	Sn	15 22 33.8	-1.5
CCIG	Comitan	2.74 117	eP	Pn	15 22 01.5	+0.4
CCIG			i S	Sn	15 22 29.8	-5.5
PEIG	Puerto Escondi	2.82 237		Pn	15 21 59.1	-2.8
PEIG				Sn	15 22 33.2	-3.6
PEIG	Puerto Escondi	2.82 237	eP	Pn	15 21 59.1	-2.8
PEIG			i S	Sn	15 22 33.2	-3.6
YOIG	Yosondua	2.82 256		Pn	15 22 00.9	-1.3
YOIG				Sn	15 22 32.8	-4.4
YOIG	Yosondua	2.82 256	eP	Pn	15 22 00.9	-1.3
YOIG			eS	Sn	15 22 32.8	-4.4
FTIG	Fresnillo de T	3.31 277		Pn	15 22 07.9	-0.2
FTIG				Sn	15 22 44.3	-3.7
FTIG	Fresnillo de T	3.31 277	eP	Pn	15 22 07.9	-0.2
FTIG			i S	Sn	15 22 44.3	-3.7
PNIG	Pinotepa	3.49 251		Pn	15 22 07.7	-2.7
PNIG				Sn	15 22 46.2	-5.9
PNIG	Pinotepa	3.49 251	eP	Pn	15 22 07.7	-2.7
PNIG			i S	Sn	15 22 46.2	-5.9
SCIG	Sabancuy	3.61 66	i P	Pn	15 22 11.0	-1.0
SCIG			eS	Sn	15 22 51.6	-3.2
TLIG	Tlapa	3.70 271		Pn	15 22 12.6	-0.7
TLIG			Sn	Sn	15 22 54.0	-3.2
HUEH	Huehuetenango	3.77 125		Pn	15 22 14.0	-0.3
HUEH			Sn	Sn	15 22 55.7	-3.3
RTAL	Retalhuleu	4.16 136		Pn	15 22 19.0	-0.1
UNM	Universidad Na	4.62 293		Pn	15 22 26.2	+0.8
UNM			Sn	Sn	15 23 18.2	-0.7
PETF	Flores	4.64 97		Pn	15 22 24.9	-0.6
PETF			Sn	Sn	15 23 14.7	-4.4
ESQI	Esquipulas	5.93 119	Pn	Pn	15 22 42.3	-0.3
MTO3	Montecristo	6.00 121		Pn	15 22 42.3	-1.4
SNET	Serv Nac Est T	6.50 125	Pn	Pn	15 22 48.5	-1.8
MOIG	Morelia	6.52 290	Pn	Pn	15 22 52.1	+1.5
TEIG	Tepich	6.63 65	Pn	Pn	15 22 49.2	-2.6
TGUH	Tegucigalpa,Un	7.93 115	Pn	Pn	15 23 09.1	-0.2
CRIN	San Cristobal	8.80 122	Pn	Pn	15 23 22.6	+1.6
ZAIG	Zacatecas	9.04 306	Pn	Pn	15 23 25.6	+1.2
CNGN	Cerro Negro	9.20 122	Pn	Pn	15 23 27.2	+1.0
MATN	Matagalpa	9.62 117		Pn	15 23 34.2	+2.4
BOAB	BOACO BROADBAN	10.08 119	Pn	Pn	15 23 39.1	+1.4
ESPN	Las Esperanzas	11.36 117		Pn	15 23 54.2	-0.5
ORTG	Ortega, Santa	11.45 127	Pn	Pn	15 23 56.5	+0.6
833A	Chaparral WMA,	11.57 339	Pn	Pn	15 23 57.1	-0.3
833A	Chaparral WMA,	11.57 339	P	Pn	15 23 57.7	+0.4
	baz=157					
DUNO	Dulce Nombre,	11.60 129		Pn	15 23 57.7	-0.2
JTS	Las Juntas de	11.88 126	Pn	Pn	15 24 01.1	-0.5
COVE	Coope Vega, Sa	12.06 123	Pn	Pn	15 24 02.8	-1.0
SOR	Soroa	12.14 63	Pn	Pn	15 24 04.0	-0.8
HKT	Hockley	12.39 355	Pn	Pn	15 24 08.8	+0.9
JACO	JACO, Garabito	12.50 128	Pn	Pn	15 24 09.6	+0.1
545A	Edgard	13.02 16	Pn	Pn	15 24 17.6	+1.5
RIMA	Rio Macho	13.05 125		Pn	15 24 16.7	-0.1
RIMA				Sn	15 26 43.4	+2.1
BATAN	Batan	13.24 123	Pn	Pn	15 24 18.8	-0.2
PEZE	Perez Zeledon,	13.43 126	Pn	Pn	15 24 21.6	+0.1
435B	Jarrell	13.44 349	Pn	Pn	15 24 21.0	-0.5
JCT	Junction City	13.70 341	Pn	Pn	15 24 25.5	+0.8
JCT	Junction City	13.70 341	P	Pn	15 24 25.2	+0.5
	baz=159					
SRBA	San Rafael, Bu	13.76 125		Pn	15 24 25.3	-0.5
HPIG		13.80 315	Pn	Pn	15 24 26.8	+0.5
LCCY	Blossom Villag	14.00 79	Pn	Pn	15 24 28.6	-0.1
NATX	Nacogdoches	14.15 0		P	15 24 32.8	-0.6
TX32	Lajitas Array	14.33 327	P	Pn	15 24 34.0	+1.1
TXAR	Lajitas Array	14.33 327	P	Pn	15 24 34.5	+1.6
	4.8nm,0.8s,baz=152,slow=14,SNR=13					
TXAR	Lajitas Array	14.33 327		Pn	15 24 32.9	+0.1
TX31	Lajitas Ar. Si	14.33 327	P	Pn	15 24 33.6	+0.8
WHTX	Lake Whitney,	14.60 351		P	15 24 37.9	-0.5
WHTX	Lake Whitney,	14.60 351	P	P	15 24 37.5	-0.9
	baz=170					
BRAL	Brewton	15.23 26		P	15 24 44.5	-0.9
Z38A	Mt. Pleasant	15.65 359		P	15 24 50.2	+0.2
Z38A			IAmb	IAmb	15 24 51.9	
	comp=Z,26nm,0.9s					
ABTX	Abilene, Hawle	15.67 344	P	Pn	15 24 49.6	+0.2
ABTX			IAmb	IAmb	15 25 13.0	
	comp=Z,26nm,1.1s					
ABTX	Abilene, Hawle	15.67 344	P	Pn	15 24 48.5	-0.8
	baz=162					
WLAR	White Oak Lake	16.14 5		Pn	15 24 53.9	-1.1
060A	Indiantown	16.26 52		Pn	15 24 54.9	-1.7
MTDJ	Mount Denham	16.34 85		Pn	15 24 57.1	-0.6
352A	Blakely	16.46 31	P	Pn	15 24 58.3	-0.6
BCIP	Isla Barro Col	16.66 118		P	15 25 00.4	-1.0
Z47A	Carrollton	16.69 20	P	P	15 25 00.6	-0.8
Z47A			IAmb	IAmb	15 25 03.5	
	comp=Z,25nm,0.8s					
CLNB	Carlsbad	16.85 332		P	15 25 01.7	-1.6
LRAL	Lakeview Retre	16.91 23	P	P	15 25 03.5	-0.3
LRAL	Lakeview Retre	16.91 23	P	P	15 25 02.8	-1.0
	baz=206					
CLN7	Carlsbad 7	16.94 333	P	P	15 25 04.0	-0.4
MIAR	Mount Ida	16.96 3	P	P	15 25 03.4	-1.0
MIAR			IAmb	IAmb	15 25 05.6	
	comp=Z,15nm,0.8s					
MIAR	Mount Ida	16.96 3	P	P	15 25 04.5	+0.1
	baz=184,SNR=10					
X37A	Clayton	16.99 358	P	P	15 25 04.8	+0.1
X37A			IAmb	IAmb	15 25 31.4	
	comp=Z,45nm,1.1s					
GDL2	Guadalupe Moun	17.02 331		P	15 25 05.0	-0.2
TIGA	Tifton	17.11 34	P	P	15 25 04.7	-1.4
X34A	Smith Ranch, M	17.22 351		P	15 25 06.3	-1.0
UALR	University of	17.29 6	P	P	15 25 07.4	-0.6
WMOK	Wichita Mounta	17.51 349	P	Pn	15 25 11.3	-0.3
WMOK	Wichita Mounta	17.51 349	P	Pn	15 25 11.6	0.0
	baz=167					
152A	Waverly Hall	17.54 29	P	P	15 25 10.0	-0.8
OXF	Oxford	17.54 15	P	P	15 25 10.1	-0.7
OXF	Oxford	17.54 15	P	P	15 25 10.3	-0.6
	baz=197					
WHAR	Wooly Hollow	17.80 6	P	P	15 25 12.6	-1.1
WHAR			IAmb	IAmb	15 25 25.9	
	comp=Z,29nm,1.0s					
FNO	Franklin	17.81 353	P	Pn	15 25 15.2	+0.1
FNO			IAmb	IAmb	15 25 32.4	
	comp=Z,20nm,0.6s					
Y49A	Blount Mountai	17.86 23	P	P	15 25 13.6	-0.7
Z51A	Franklin	17.88 27	P	P	15 25 13.2	-1.4
Z51A			IAmb	IAmb	15 25 15.0	
	comp=Z,13nm,0.6s					
MSTX	Muleshoe	17.89 338	P	P	15 25 14.5	-0.3
MSTX	Muleshoe	17.89 338	P	P	15 25 15.5	+0.7
	baz=154					
255A	Hazlehurst	18.09 35	P	P	15 25 16.7	-0.1
255A			IAmb	IAmb	15 25 23.2	
	comp=Z,35nm,0.9s					
OK025	Westminster Rd	18.12 353	P	P	15 25 16.9	-0.2
OK025			IAmb	IAmb	15 25 20.8	
	comp=Z,43nm,0.9s					
X48A	Hartselle	18.17 21	P	P	15 25 16.3	-1.4
W45A	Hickory Valley	18.21 15	P	P	15 25 17.0	-1.2
154A	Montrose	18.28 33	P	P	15 25 19.2	+0.3
TUL1	Leonard	18.32 357		P	15 25 17.7	-1.6
TUL1			IAmb	IAmb	15 25 57.5	
	comp=Z,34nm,1.1s					
TUL1	Leonard	18.32 357	P	P	15 25 19.7	+0.4
	baz=177					
PLAL	Pickwick Lake	18.34 17	P	P	15 25 18.2	-1.3
OK029	Liberty Lake	18.35 353		P	15 25 18.7	-0.9
OK029			IAmb	IAmb	15 25 21.5	
	comp=Z,22nm,0.6s					
AMTX	Amarillo	18.36 341	P	P	15 25 18.1	-1.8
AMTX	Amarillo	18.36 341	P	P	15 25 20.6	+0.7
	baz=159					
FCAR	Ozark Folk Cen	18.41 7	P	P	15 25 19.8	-0.5
FCAR			IAmb	IAmb	15 25 22.0	
	comp=Z,28nm,0.8s					
OK031	S. Brethren Rd	18.44 354		P	15 25 20.1	-0.5
OK034	N. Norfolk Rd.	18.48 355		P	15 25 20.6	-0.5
OK033	Mehan	18.54 354		P	15 25 21.2	-0.5
OK033			IAmb	IAmb	15 25 25.2	
	comp=Z,24nm,0.7s					
HHAR	Hobbs	18.68 2	P	P	15 25 21.3	-1.9
HHAR			IAmb	IAmb	15 25 26.5	
	comp=Z,17nm,0.7s					
GTBY	Guantanamo Bay	18.69 80	P	P	15 25 24.1	+0.6
GTBY			IAmb	IAmb	15 25 35.1	
	comp=Z,38nm,1.1s					
LCAR	Lake Charles	18.72 9	P	P	15 25 22.8	-0.9
LCAR			IAmb	IAmb	15 25 24.1	
	comp=Z,21nm,1.1s					
GOGA	Godfrey	18.74 30	P	P	15 25 22.5	-1.4
GOGA			IAmb	IAmb	15 25 36.0	
	comp=Z,28nm,0.8s					
GOGA	Godfrey	18.74 30	P	P	15 25 22.2	-1.7
	baz=215,SNR=5.1					
FPAL	Fort Paine	18.77 24	P	P	15 25 22.8	-1.4
HSIG		18.78 310	P	P	15 25 24.4	-0.1
U38A	Gravette	18.82 1	P	P	15 25 24.0	-0.8
U38A			IAmb	IAmb	15 25 28.0	
	comp=Z,14nm,0.8s					
Y52A	Lilburn	18.84 28	P	P	15 25 23.4	-1.5
OK044	Pawnee Station	18.85 355		P	15 25 23.6	-1.4
OK044			IAmb	IAmb	15 25 26.1	
	comp=Z,24nm,0.5s					
OK046	Pawnee Station	18.88 354		P	15 25 23.7	-1.8
OK046			IAmb	IAmb	15 25 53.3	
	comp=Z,35nm,1.2s					
OK050	Pawnee Station	18.89 354	P	P	15 25 23.9	-1.5
OK050			IAmb	IAmb	15 25 28.4	
	comp=Z,47nm,1.3s					
SRIG	Santa Rosalia	18.90 304	P	P	15 25 24.8	-0.9
SRIG			IAmb	IAmb	15 25 30.2	
	comp=Z,37nm,0.8s					
OK048	Pawnee Station	18.90 354	P	P	15 25 24.9	-0.8
OK048			IAmb	IAmb	15 25 53.6	
	comp=Z,28nm,1.1s					
OK049	E0420 Rd and N	18.93 353		P	15 25 24.9	-1.1
OK049			IAmb	IAmb	15 25 30.4	
	comp=Z,28nm,0.8s					
OK045	Pawnee Station	18.93 354	P	P	15 25 24.8	-1.2
OK045			IAmb	IAmb	15 25 43.8	
	comp=Z,30nm,1.0s					
OK051	E0350 and S346	18.98 355	P	P	15 25 25.4	-1.2
OK051			IAmb	IAmb	15 25 28.9	
	comp=Z,52nm,1.5s					
PEBM	Pemiscott Bayo	18.98 12	P	P	15 25 24.9	-1.6
121A	Cookes Peak, D	19.04 324	P	P	15 25 28.0	+0.6
LNXT	Lenox	19.05 13	P	P	15 25 25.5	-1.7
X51A	Calhoun	19.09 26	P	P	15 25 26.1	-1.6
X51A			IAmb	IAmb	15 25 30.5	
	comp=Z,25nm,1.1s					
319A	Douglas	19.11 319	P	P	15 25 28.4	+0.4
OK038	West end E0370	19.20 350	P	P	15 25 28.1	-0.8
OK038			IAmb	IAmb	15 25 32.6	
	comp=Z,24nm,0.9s					
SWET	Sewanee	19.25 22	P	P	15 25 27.9	-1.6
SWET			IAmb	IAmb	15 25 30.1	
	comp=Z,25nm,0.8s					
GLAT	Glass	19.25 13	P	P	15 25 28.8	-0.7
T35A	Sooner Cattle	19.36 356		P	15 25 29.6	-1.1
T35A			IAmb	IAmb	15 25 31.7	
	comp=Z,29nm,0.9s					
V48A	Smith Brothers	19.42 20	P	P	15 25 29.0	-2.3
OK032	Salt Plains WL	19.44 351	P	P	15 25 30.1	-1.4
OK032			IAmb	IAmb	15 26 02.3	
	comp=Z,29nm,1.1s					
W50A	Signal Mountai	19.47 24	P	P	15 25 29.8	-2.0
W50A			IAmb	IAmb	15 25 31.3	
	comp=Z,26nm,0.7s					
WVT	Waverly	19.48 17	P	P	15 25 30.6	-1.3
WVT			IAmb	IAmb	15 25 34.4	
	comp=Z,16nm,0.7s					
WVT	Waverly	19.48 17	P	P	15 25 31.1	-0.9
	baz=200					
PBMO	Poplar Bluff	19.52 10	P	P	15 25 30.0	-2.4
KAN17	Caldwell West	19.61 353	P	P	15 25 30.9	-2.5
KAN17			IAmb	IAmb	15 25 31.3	
	comp=Z,30nm,1.0s					
MGMO	Mountain Grove	19.65 6	P	P	15 25 33.3	-0.5
MGMO			IAmb	IAmb	15 25 36.3	
	comp=Z,16nm,0.8s					
BNM	Barren Site	19.69 329	P	P	15 25 34.5	0.0
SBM	South Baldy	19.83 328	P	P	15 25 34.4	-1.7
LENM	Lemitar	19.88 329	P	P	15 25 38.0	+1.6
KAN12	Harper NE Stat	19.89 352	P	P	15 25 35.8	-0.6
KAN12			IAmb	IAmb	15 25 40.9	
	comp=Z,30nm,0.9s					
CLTN	Cedars of Leba	19.90 20	P	P	15 25 33.9	-2.6
CLTN			IAmb	IAmb	15 25 35.7	
	comp=Z,14nm,0.8s					
W52A	Murphy	19.93 27	P	P	15 25 35.4	-1.4
W52A			IAmb	IAmb	15 25 36.9	
	comp=Z,29nm,0.8s					
CPCT	Cooper Cave	19.99 25	P	P	15 25 34.7	-2.8
CPCT			IAmb	IAmb	15 25 39.4	
	comp=Z,11nm,0.8s					
HODGE	Hodges	20.00 31	P	P	15 25 35.9	-1.6
HODGE			IAmb	IAmb	15 25 37.2	
	comp=Z,19nm,0.9s					
S39A	Bolivar	20.11 3	P	P	15 25 37.6	-1.0
S39A			IAmb	IAmb	15 25 40.2	
	comp=Z,14nm,1.0s					
ANMO	Albuquerque	20.26 331	P	P	15 25 42.5	+1.9
	comp=Z,6.3nm,0.8s,baz=152,slow=12,SNR=12					
	comp=Z,6.3nm,0.8s					
ANMO	Albuquerque	20.26 331	P	P	15 25 41.7	+1.1
ANMO	Albuquerque	20.26 331	P	P	15 25 42.0	+1.4
	baz=146					
BG3	Lake Jocassee	20.29 29	P	P	15 25 39.3	-1.4
V51A	Loudon	20.37 25	P	P	15 25 39.8	-1.7
V51A			IAmb	IAmb	15 25 40.7	
	comp=Z,14nm,0.8s					
V51A				S	15 29 20.8	-0.7
U49A	Red Boiling Sp	20.47 21	P	P	15 25 40.5	-2.0
TKL	Tuckaleechee C	20.48 26	P	P	15 25 41.7	-0.9
	comp=Z,26nm,0.8s,baz=197,slow=12,SNR=10					
	comp=Z,26nm,0.8s					
TKL	Tuckaleechee C	20.48 26	P	P	15 25 42.0	-0.7
TKL			IAmb	IAmb	15 25 47.0	
	comp=Z,26nm,0.8s					
T47A	Sharon Grove	20.49 18	P	P	15 25 40.8	-2.0
JSC	Jenkinsville	20.55 33	P	P	15 25 41.6	-1.7
JSC			IAmb	IAmb	15 25 43.2	
	comp=Z,16nm,0.8s					
S44A	Carbondale	20.63 12	P	P	15 25 42.8	-1.4
S44A			IAmb	IAmb	15 25 47.1	
	comp=Z,14nm,0.7s					
CCM	Cathedral Cave	20.66 8	P	P	15 25 42.4	-2.1
CCM			IAmb	IAmb	15 25 44.9	
	comp=Z,19nm,0.7s					
CCM	Cathedral Cave	20.66 8	P	P	15 25 43.9	-0.6
	baz=190					
TUC	Tucson	20.68 318	P	P	15 25 46.8	+1.9
	baz=132					
PAULI	Pauline	20.69 31	P	P	15 25 43.3	-1.6
PAULI			IAmb	IAmb	15 25 45.0	
	comp=Z,32nm,1.3s					
V52A	Sevierville	20.71 26	P	P	15 25 44.2	-1.0
R40A	Maddies Statio	20.78 5	P	P	15 25 44.2	-1.6
R40A			IAmb	IAmb	15 26 21.6	
	comp=Z,23nm,1.1s					
V53A	Saluda	20.91 28	P	P	15 25 45.5	-1.8
V53A			IAmb	IAmb	15 25 48.1	
	comp=Z,19nm,0.8s					
KMSC	Kings Mountain	21.18 32	P	P	15 25 48.4	-1.8
KMSC			IAmb	IAmb	15 25 50.1	
	comp=Z,29nm,0.8s					
KMSC	Kings Mountain	21.18 32	P	P	15 25 48.8	-1.4
	baz=218,SNR=9.6					
T50A	Nancy	21.26 22	P	P	15 25 48.3	-2.6
T50A			IAmb	IAmb	15 25 51.5	
	comp=Z,14nm,0.8s					
T25A	Trinidad	21.32 338	P	P	15 25 51.8	-0.1
T25A	Trinidad	21.32 338	P	P	15 25 53.0	+1.1
	baz=154					
TZTN	Tazewell	21.33 25	P	P	15 25 50.2	-1.6
TZTN			IAmb	IAmb	15 26 26.2	
	comp=Z,28nm,1.3s					
TZTN	Tazewell	21.33 25	P	P	15 25 50.7	-1.2
	baz=210					
CBKS	Cedar Bluff	21.65 349	P	P	15 25 56.0	+0.9
	baz=167					
X18A	Snowflake	21.73 324	P	P	15 25 56.9	+0.7
X18A			IAmb	IAmb	15 26 00.0	
	comp=Z,13nm,0.9s					
214A	Organ Pipe Nat	21.79 315	P	P	15 25 56.5	-0.2
214A	Organ Pipe Nat	21.79 315	P	P	15 25 58.3	+1.6
	baz=127					
V55A	Taylorsville

Q24A	Divide	23.21 339	P	P	15 26 11.9 +1.3
	baz=154				
WUAZ	Wupatki	23.25 324	P	P	15 26 10.0 -0.8
WUAZ			IAmb	IAmb	15 26 15.4
	comp=Z,20nm,1.0s				
WUAZ	Wupatki	23.25 324	P	P	15 26 12.5 +1.6
	baz=136,SNR=11				
BLA	Blacksburg	23.27 30	P	P	15 26 10.4 -0.4
	baz=217,SNR=5.7				
HDIL	Hopedale	23.40 10	P	P	15 26 11.6 -0.3
	baz=193				
P49A	Miami Univ. Ec	23.56 20	P	P	15 26 12.0 -1.4
	baz=204,SNR=7.9				
Q51A	Peebles	23.58 23	IAmb	IAmb	15 26 13.8
	comp=Z,21nm,0.8s				
T57A	Hurt	23.68 32	P	P	15 26 13.1 -1.4
T57A			IAmb	IAmb	15 26 15.1
	comp=Z,25nm,1.2s				
SFIN	Lafayette	23.68 15	IAmb	IAmb	15 26 14.4
	comp=Z,18nm,0.8s				
SFIN	Lafayette	23.68 15	P	P	15 26 13.7 -0.8
	baz=198				
PV15	Paradox Valley	23.98 333	IAmb	IAmb	15 26 21.8
	comp=Z,21nm,1.4s				
PV13	Radium Mtn., P	23.98 332	IAmb	IAmb	15 26 21.3
	comp=Z,14nm,0.8s				
SMCO	Snowmass	24.07 336	P	P	15 26 18.6 +0.1
SMCO			IAmb	IAmb	15 26 58.0
	comp=Z,20nm,1.4s				
O48B	Farmland	24.09 18	P	P	15 26 17.0 -1.2
	baz=203,SNR=14				
PDMCI	Parker Dam,Lak	24.11 318	P	P	15 26 19.7 +1.3
	baz=129				
PV11	David Mesa, Pa	24.12 332	IAmb	IAmb	15 26 22.6
	comp=Z,20nm,0.8s				
PV07	Paradox Valley	24.14 332	IAmb	IAmb	15 26 21.8
	comp=Z,12nm,1.0s				
OGNE	Ogallala	24.16 346	P	P	15 26 20.2 +1.2
	baz=163				
PV23	Carpenter Ridg	24.31 332	IAmb	IAmb	15 26 23.4
	comp=Z,20nm,0.8s				
U15A	North Rim	24.42 324	P	P	15 26 21.9 +0.4
IKP	In-Ko-Pah, Jac	24.48 312	P	P	15 26 22.6 +0.7
	baz=123				
N47A	Urbana	24.51 17	P	P	15 26 20.8 -1.3
N47A			IAmb	IAmb	15 26 23.5
	comp=Z,28nm,1.0s				
P52A	Corning	24.56 24	IAmb	IAmb	15 26 55.8
	comp=Z,19nm,0.9s				
P52A	Corning	24.56 24	P	P	15 26 20.9 -1.6
	baz=210				
BC3	Big Chuckawall	24.59 315	P	P	15 26 24.3 +1.4
	baz=126				
P53A	Whipple	24.73 25	IAmb	IAmb	15 26 25.3
	comp=Z,20nm,1.0s				
ACSO	Alum Creek Sta	24.77 22	IAmb	IAmb	15 26 25.3
	comp=Z,17nm,0.8s				
ACSO	Alum Creek Sta	24.77 22	P	P	15 26 23.5 -0.9
	baz=208				
O52A	Adamsville	25.09 24	IAmb	IAmb	15 26 26.9
	comp=Z,27nm,1.1s				
BELC	Belle Mtn. Jos	25.16 315	P	P	15 26 30.2 +2.0
	baz=126				
TPFO	Pinon Flats	25.24 313	P	P	15 26 30.9 +2.0
	baz=124				
PFO	Pinyon Flats O	25.25 313	P	P	15 26 31.1 +2.1
	baz=124				
GMRC	Granite Mounta	25.39 317	P	P	15 26 32.1 +1.9
	baz=127				
O53A	New Philadelph	25.45 25	P	P	15 26 28.9 -1.7
	baz=211				
V12A	Nelson	25.46 319	P	P	15 26 32.0 +1.2
JFWS	Jewell Farm	25.57 8	P	P	15 26 32.1 +0.5
	baz=190,SNR=6.6				
Q16A	Castle Valley	25.70 329	IAmb	IAmb	15 27 13.7
	comp=Z,13nm,1.4s				
MURC	Murrieta	25.76 313	P	P	15 26 35.7 +2.2
	baz=123				
HEC	Hector,Ludlow	25.86 316	P	P	15 26 36.4 +2.0
	baz=126				
ECSD	EROS Data Cent	26.16 357	P	P	15 26 37.5 +0.6
	baz=176				
CIS	Catalina Islan	26.52 311	P	P	15 26 42.5 +2.2
	baz=121				
PSUT	Pine Spring	26.79 325	P	P	15 26 43.8 +0.9
EDW2	Edwards Air Fo	27.01 314	P	P	15 26 46.4 +1.7
	baz=124				
TPNV	Topopah Spring	27.11 320	P	P	15 26 47.9 +2.2
	baz=130				
SSPA	Standing Stone	27.20 29	P	P	15 26 45.1 -1.1
	baz=217				
MPMC	Manual Prospec	27.35 317	P	P	15 26 49.6 +1.7
	baz=127				
R11A	Troy Canyon, C	27.64 323	P	P	15 26 52.2 +1.9
	baz=133				
ISA	Isabella, Lake	27.77 315	P	P	15 26 53.5 +2.0
	baz=124				
ELK	Elko	29.13 327	P	P	15 27 05.6 +1.9
	comp=Z,2.3nm,0.7s,baz=136,slow=7.5,SNR=13				
ELK			PcP	PcP	15 30 08.2 +0.5
	comp=Z,1.4nm,0.8s,baz=227,slow=3.3,SNR=4.7				
	comp=Z,2.3nm,0.7s				
ELK	Elko	29.13 327	P	P	15 27 05.0 +1.3
NV11	Mina Array Sit	29.22 320	IAmb	IAmb	15 27 07.8
	comp=Z,7.3nm,1.0s				
TPAW	Teton Pass	29.30 335	IAmb	IAmb	15 27 10.9
	comp=Z,12nm,1.4s				
NVAR	Mina Array Bea	29.31 320	P	P	15 27 08.1 +2.8
	comp=Z,9.3nm,0.9s,baz=136,slow=9.2,SNR=49				
NVAR			PcP	PcP	15 30 08.9 +0.7
	comp=Z,1.4nm,0.8s,baz=133,slow=3.3,SNR=6.7				
	comp=Z,9.3nm,0.9s				
NVAR	Mina Array Bea	29.31 320	P	P	15 27 07.0 +1.8
LHV	Little Huntoon	29.32 320	IAmb	IAmb	15 27 16.6
	comp=Z,12nm,1.3s				
RLMT	Red Lodge	30.09 339	P	P	15 27 13.4 +1.3
	baz=152				
SADO	Sadowa	30.11 22	P	P	15 27 09.5 -2.5
	comp=Z,2.7nm,0.3s,baz=266,slow=8.6,SNR=3.5				
	comp=Z,2.7nm,0.3s				
MDND	Maddock	30.49 353	P	P	15 27 15.9 +0.6
	baz=171				
LAO	LASA Array	30.59 344	P	P	15 27 17.1 +0.8
	baz=158				
EMB	Emerald Bay	30.75 319	IAmb	IAmb	15 27 21.7
	comp=Z,11nm,1.0s				
HLID	Hailey	30.84 331	P	P	15 27 20.3 +1.6
	baz=141				
L61B	Northampton	31.11 32	P	P	15 27 19.7 -1.2
	baz=224				
BEKR	Beckworth	31.45 320	P	P	15 27 24.5 +0.4
ULM	Lac du Bonnet	32.64 359	P	P	15 27 32.8 -1.3
	comp=Z,1.6nm,0.3s,baz=176,slow=8.1,SNR=4.6				
	comp=Z,1.6nm,0.3s				
MSO	Missoula	33.25 336	P	P	15 27 40.9 +1.3
	baz=145				
PKME	Peaks-Kenny Pk	34.83 32	P	P	15 27 52.1 -1.0
	baz=226				
NEW	Newport	35.70 334	P	P	15 28 01.1 +0.6
	comp=Z,2.5nm,0.6s,baz=54,slow=1.4,SNR=5.4				
	comp=Z,2.5nm,0.6s				
NEW	Newport	35.70 334	P	P	15 28 01.8 +1.2
	baz=142				
WAPA	Wapiti River	42.01 339	P	P	15 28 52.7 -0.2
WAPA			IAmb	IAmb	15 28 54.0
	comp=Z,9.3nm,0.9s				
LPAZ	La Paz	42.60 141	P	P	15 28 59.0 +0.2
	comp=Z,1.9nm,0.4s,baz=346,slow=6.9,SNR=8.7				
	comp=Z,1.9nm,0.4s				
PB16	IPOC Station P	43.41 144	P	P	15 29 06.3 +1.1
GO01	Chusmiza	44.66 145	P	P	15 29 15.8 +0.7
GO01			IAmb	IAmb	15 29 26.1
	comp=Z,15nm,1.4s				
YKA	Yellowknife Ar	47.01 348	P	P	15 29 32.4 -0.1
	comp=Z,2.8nm,0.7s,baz=152,slow=7.4,SNR=6.5				
	comp=Z,2.8nm,0.7s				
V35K	Ketchikan	47.02 332	P	P	15 29 34.1 +1.5
	baz=128				
KOTAN	Kotaneelee Air	47.50 341	P	P	15 29 37.5 +1.2
	baz=141				
LIRD	Liard River Hi	47.63 339	P	P	15 29 39.3 +2.0
	baz=138				
DLBC	Dease Lake	48.38 336	P	P	15 29 45.4 +2.3
DLBC			IAmb	IAmb	15 29 46.5
	comp=Z,10nm,0.8s				
DLBC	Dease Lake	48.38 336	P	P	15 29 45.6 +2.4
	baz=132,SNR=5.0				
S34M	Telegraph Cree	48.47 335	P	P	15 29 45.9 +2.2
	baz=131				
WTLY	Watson Lake, Y	49.09 338	P	P	15 29 48.6 +0.2
WTLY			IAmb	IAmb	15 29 50.7
	comp=Z,14nm,1.1s				
WTLY	Watson Lake, Y	49.09 338	P	P	15 29 50.1 +1.6
	baz=135				
R33M	Jennings River	49.39 336	P	P	15 29 52.3 +1.4
	baz=132				
Q32M	Nakina River	49.61 335	P	P	15 29 54.4 +1.8
	baz=130				
TGTN	Hyland Airport	49.92 340	P	P	15 29 56.5 +1.8
	baz=136				
P32M	Atlin	50.58 336	P	P	15 29 59.1 -0.7
	baz=129				
P33M	Teslin, Yukon	50.63 336	P	P	15 30 01.8 +1.7
	baz=130				
N32M	Quiet Lake	51.34 337	P	P	15 30 06.4 +1.0
	baz=131				
PLBC	Pleasant Camp	51.57 334	P	P	15 30 09.2 +2.1
	baz=126				
MMPY	Sheldon Lake,	51.69 339	P	P	15 30 09.8 +1.8
	baz=134,SNR=7.0				
WHY	Whitehorse	51.71 336	P	P	15 30 09.6 +1.3
	baz=128				
FARO	Faro, Yukon	52.15 338	P	P	15 30 12.4 +1.1
FARO			IAmb	IAmb	15 30 13.7
	comp=Z,6.6nm,0.9s				
FARO	Faro, Yukon	52.15 338	P	P	15 30 13.0 +1.6
	baz=131				
O30N	Mendenhall	52.25 336	P	P	15 30 13.8 +1.7
	baz=127				
M31M	Drury Creek, Y	52.50 338	P	P	15 30 15.5 +1.5
	baz=130				
N31M	Braeburn, Yuko	52.56 337	P	P	15 30 15.8 +1.4
	baz=128				
O29M	Mount Kennedy	52.97 334	P	P	15 30 18.8 +1.2
	baz=124				
YUK6	Outpost Mounta	53.25 335	P	P	15 30 21.0 +1.2
	baz=125				
YUK4	Talbot Arm	53.59 335	P	P	15 30 23.5 +1.3
	baz=125				
YUK8	Steele Glacier	54.01 335	P	P	15 30 26.9 +1.6
	baz=124				
M29M	Somme Creek	54.16 337	P	P	15 30 27.8 +1.7
	baz=126,SNR=15				
L29M	L29M	54.42 337	P	P	15 30 29.4 +1.4
	baz=126,SNR=7.8				
YUK3	Moose Creek	54.55 335	P	P	15 30 30.4 +1.3
	baz=123				
K29M	Barlow Dome	54.64 338	P	P	15 30 30.8 +1.2
	baz=127				
BVCY	Beaver Creek	55.06 336	P	P	15 30 33.9 +1.4
	baz=123				
MCARA	McCarthy VSAT	55.40 334	P	P	15 30 36.6 +1.6
	baz=120				
M27K	Edge Creek, AK	55.43 335	P	P	15 30 37.2 +1.9
	baz=122				
DAWY	Dawson	55.44 338	P	P	15 30 36.2 +0.9
	baz=126				
L27K	Beaver Creek,	55.79 336	IAmb	IAmb	15 30 40.1
	comp=Z,7.6nm,0.9s				
L27K	Beaver Creek,	55.79 336	P	P	15 30 39.1 +1.4
	baz=122,SNR=5.0				
F31M	Tsiigehtchic	55.79 343	P	P	15 30 38.1 +0.5
	baz=134				
I29M	Ogilvie Camp,	55.84 340	P	P	15 30 39.1 +1.0
	baz=127				
BMRM	Bremner River	55.86 333	P	P	15 30 39.9 +1.5
	baz=118				
M26K	Nabesna, AK	55.90 335	P	P	15 30 39.8 +1.2
	baz=121				
Q23K	Middleton Isla	55.95 331	P	P	15 30 39.4 +0.6
	baz=116				
EPYK	Eagle Plains	55.96 341	P	P	15 30 39.4 +0.5
	baz=130				
N25K	Chitina, Valde	56.16 334	P	P	15 30 41.7 +1.2
	baz=119				
G30M	tAoh Zraii Nji	56.20 342	P	P	15 30 40.2 -0.4
	baz=130				
BO01	Tunca	56.32 157	P	P	15 30 42.9 +1.1
INK	Inuvik	56.33 344	P	P	15 30 41.8 +0.3
	baz=134				
K27K	Chicken	56.40 337	P	P	15 30 43.0 +1.0
	baz=123				
EGAK	Eagle	56.48 338	P	P	15 30 43.3 +0.7
	baz=124				
KLU	Klutina	56.67 333	P	P	15 30 45.8 +1.8
	baz=117				
HARP	HAARP	56.77 335	P	P	15 30 45.3 +0.6
	baz=118				
GLI	Glacier Island	56.91 332	P	P	15 30 46.4 +0.8
	baz=116				
M24K	Tolsona, Glenn	57.06 334	P	P	15 30 48.1 +1.3
	baz=117				
SCRK	Sand Creek	57.09 337	P	P	15 30 48.2 +1.2
	baz=121				
I27K	Kandik River	57.10 339	P	P	15 30 48.1 +1.1
	baz=124				
PAX	Paxson	57.17 335	P	P	15 30 48.8 +1.2
	baz=118				
J26L	Joseph Creek	57.20 337	IAmb	IAmb	15 30 50.1
	comp=Z,6.5nm,1.1s				
J26L	Joseph Creek	57.20 337	P	P	15 30 49.2 +1.4
	baz=121				
H27K	Steamboat Moun	57.42 339	P	P	15 30 50.6 +1.3
	baz=124				
M23K	Glacier View	57.58 333	P	P	15 30 50.8 +0.4
	baz=116				
SEW	Seward	57.66 331	P	P	15 30 52.0 +1.1
	baz=113				
K24K	Donnelly Dome	57.70 336	P	P	15 30 52.3 +1.1
	baz=119,SNR=5.0				
G27K	Doyon Strip	57.80 340	P	P	15 30 52.6 +0.8
	baz=125				
SML	Sawmill	57.84 333	P	P	15 30 53.7 +1.4
	baz=115				
WAT6	Susitna Watana	57.92 334	P	P	15 30 54.3 +1.4
	baz=116				
J25K	Salcha River,	57.93 337	IAmb	IAmb	15 30 54.8
	comp=Z,8.0nm,1.1s				
J25K	Salcha River,	57.93 337	P	P	15 30 53.8 +0.9
	baz=120				
WAT1	Susitna Watana	58.37 334	P	P	15 30 57.3 +1.4
	baz=115				
HDA	Harding Lake	58.44 336	P	P	15 30 56.9 +0.6
	baz=118				
PRP	Porcupine Dome	58.44 338	P	P	15 30 57.1 +0.6
	baz=120,SNR=9.5				
Q20K	Stuyak Island	58.53 329	P	P	15 30 57.8 +0.8
	baz=109				
E27K	Coleen River	58.57 341	P	P	15 30 58.1 +1.0
	baz=125				
G26K	Porcupine Rive	58.58 340	P	P	15 30 57.8 +0.6
	baz=122,SNR=8.4				
ILAR	Eielson Array	58.58 337	P	P	15 30 57.6 +0.3
	comp=Z,3.2nm,0.9s,baz=136,slow=5.2,SNR=24				
	comp=Z,3.2nm,0.9s				
MCK	McKinley	58.91 335	P	P	15 31 00.6 +1.0
	baz=115				
H25K	Birch Creek	58.92 338	P	P	15 31 00.5 +1.0
	baz=120				
CUT	Chulitna	58.92 333	P	P	15 31 00.8 +1.2
	baz=113				
POKR	Poker Plat Res	58.95 337	P	P	15 31 01.1 +1.3
	baz=118				
COLA	College	58.99 337	P	P	15 31 00.6 +0.5
	baz=117				
TCOL	CIGO, UAF Yank	59.00 336	P	P	15 31 00.4 +0.3
	baz=117				
F26K	Sheenjek River	59.09 340	P	P	15 31 01.4 +0.6
	baz=122				
O20K	Slope Mountain	59.13 330	P	P	15 31 01.6 +0.4
	baz=110				
SKT	Skwentna	59.30 333	P	P	15 31 03.3 +1.0
	baz=112				
BWN	Browne	59.31 335	P	P	15 31 02.7 +0.4
N20K	Mount Spurr	59.32 332	P	P	15 31 03.5 +1.0
	baz=111				
SPCR	Spurr Chakacha	59.32 332	P	P	15 31 03.7 +1.2
	baz=111				
NEA2	Nenana	59.34 336	IAmb	IAmb	15 31 34.0
	comp=Z,5.2nm,1.2s				
NEA2	Nenana	59.34 336	P	P	15 31 03.0 +0.5
	baz=116				
TRF	Thorofare Moun	59.35 334	P	P	15 31 03.5 +0.7
	baz=114,SNR=7.2				
CHIR	Chirikof Islan	59.41 325	P	P	15 31 04.2 +1.1
	baz=104				
H24K	Noodor Dome	59.45 337	P	P	15 31 03.9 +0.6
	baz=118,SNR=5.5				
F25K	Christian Rive	59.53 340	P	P	15 31 04.8 +0.9
	baz=121				
I23K	Minto, Yukon-K	59.69 336	P	P	15 31 05.8 +0.9
	baz=116,SNR=8.3				
G24K	Hadweenzic Riv	59.71 338	P	P	15 31 06.0 +1.0
	baz=118				
Q18K	Katmai Hardscr	59.84 328	P	P	15 31 07.2 +1.0
	baz=107				
BPAW	Bear Paw Mtn.	59.89 335	P	P	15 31 06.7 +0.4
	baz=114,SNR=5.6				
M20K	Styx River	59.98 332	P	P	15 31 07.7 +0.7
	baz=110				
C27K	Jago River	60.02 342	P	P	15 31 08.0 +1.0
	baz=124				
H23K	Yukon River	60.05 337	P	P	15 31 08.0 +0.6
	baz=116				
CAST	Castle Rocks	60.08 334	P	P	15 31 07.7 +0.1
CAST			IAmb	IAmb	15 31 08.3
	comp=Z,5.9nm,0.9s				
CAST	Castle Rocks	60.08 334	P	P	15 31 08.3 +0.7
	baz=112				
MLY	Manley	60.17 336	P	P	15 31 08.4 +0.1
MLY	Manley	60.17 336	P	P	15 31 08.9 +0.6
	baz=114,SNR=12				
N19K	Bonanza Creek	60.24 331	P	P	15 31 09.5 +0.7
	baz=108				
F24K	Squaw Lake	60.24 339	P	P	15 31 09.7 +1.0
	baz=118				
O18K	Koktuh Hills	60.29 330	P	P	15 31 10.0 +0.9
	baz=107				
CHUM	Lake Minchumin	60.35 335	P	P	15 31 10.2 +0.8
	baz=112				
L20K	Farewell, AK	60.51 333	P	P	15 31 11.2 +0.6
	baz=110				
G23K	Bananza Creek	60.62 338	P	P	15 31 12.0 +0.8
	baz=116,SNR=5.2				
D25K	Kavik River	60.65 341	P	P	15 31 12.4 +1.0
	baz=121				
Q16K	King Salmon	60.68 328	P	P	15 31 13.3 +1.6
	baz=105				
E24K	Your Creek	60.71 340	P	P	15 31 12.9 +1.0
	baz=118				
I21K	Tanana	60.71 336	IAmb	IAmb	15 31 13.3
	comp=Z,11nm,1.2s				
I21K	Tanana	60.71 336	P	P	15 31 13.0 +1.2
	baz=113				
H22K	Ishtalitna Cre	60.77 337	P	P	15 31 12.5 +0.3
	baz=114				
L19K	White Mountain	60.84 332	P	P	15 31 14.2 +1.4
	baz=109				
K20K	Telida	60.89 334	IAmb	IAmb	15 31 13.9
	comp=Z,9.6nm,0.9s				
K20K	Telida	60.89 334	P	P	15 31 13.8 +0.7
	baz=110				
COLD	Coldfoot	60.91 338	P	P	15 31 14.4 +1.2
	baz=116				
E23K	Chandalar	61.08 339	P	P	15 31 15.8 +1.5
	baz=117				
O17K	Koliganek Bris	61.19 329	P	P	15 31 15.8 +0.8
	baz=105				
J20K	Nowinta River	61.21 335	P	P	15 31 15.3 +0.1
J20K			IAmb	IAmb	15 31 16.4
	comp=Z,9.5nm,0.9s				
J20K	Nowinta River	61.21 335	P	P	15 31 15.7 +0.5
	baz=110				
H21K	Melozitna Rive	61.22 336	P	P	15 31 15.8 +0.6
	baz=112				
G22K	Bettles	61.24 338	P	P	15 31 16.6 +1.3
	baz=114				
TOLK	Toolik Lake Re	61.33 340	P	P	15 31 17.0 +1.0
	baz=117				
C24K	Franklin Bluff	61.56 341	P	P	15 31 18.1 +0.7
	baz=119				
F22K	John River	61.72 338	P	P	15 31 19.7 +1.1
	baz=114				
LL04	Puerto Octay	61.73 161	P	P	15 31 19.2 +0.3
LL04			IAmb	IAmb	15 31 20.9
	comp=Z,13nm,1.3s				
G21K	Allakaket	61.81 337	P	P	15 31 20.2 +1.0
	baz=112				
D23K	Nanushuk River	61.83 340	P	P	15 31 20.6 +1.3
	baz=116				
E22K	Anaktuvuk Pass	61.85 339	P	P	15 31 20.2 +0.6
	baz=115				
F21K	Alatna River	62.07 338	P	P	15 31 22.2 +1.3
	baz=113,SNR=13				
PLCA	Paso Flores	62.17 159	P	P	15 31 21.9 -0.1
	comp=Z,6.5nm,0.9s,baz=337,slow=8.3,SNR=13				
	comp=Z,6.5nm,0.9s				
PLCA	Paso Flores	62.17 159	P	P	15 31 22.2 +0.3
N16K	Nishlik Lake	62.17 330	P	P	15 31 22.9 +1.1
	baz=104				
C23K	Itkillik River	62.20 341	P	P	15 31 22.9 +1.2
	baz=117,SNR=5.8				
LL02	Futaleuf	63.98 162	P	P	15 31 34.7 +0.9
LL02			IAmb	IAmb	15 31 36.3
	comp=Z,12nm,1.4s				
AY01	Puyuhuapi	64.87 163	P	P	15 31 40.5 +1.0
AY01			IAmb	IAmb	15 31 41.7
	comp=Z,10.0nm,0.9s				
COYC	Coyhaique	66.08 163	P	P	15 31 48.6 +1.4
BILL	Bilibino	77.22 338	P	P	15 32 54.2 +0.5
BILL			IAmb	IAmb	15 32 55.4
	comp=Z,16nm,1.1s				
ESDC	Sonseca Array	79.56 52	P	P	15 33 06.5 -0.6
	comp=Z,1.1nm,1.0s,baz=278,slow=4.6,SNR=4.9				
	comp=Z,1.1nm,1.0s				
NB2	NORSAR Subarra	82.27 28	P	P	15 33 21.6 +0.6
	comp=Z,0.9nm,0.8s,baz=290,slow=5.1				
NOA	NORSAR Array B	82.27 28	P	P	15 33 20.9 -0.2
	comp=Z,1.1nm,0.8s,baz=293,slow=5.0,SNR=5.9				
	comp=Z,1.1nm,0.8s				
ARCES	ARCESS Array B	83.58 18	P	P	15 33 27.3 -0.3
	comp=Z,1.8nm,0.7s,baz=297,slow=5.0,SNR=11				
	comp=Z,1.8nm,0.7s				
TORD	Torodi Ar. Bea	92.04 76	P	P	15 34 08.6 -0.6
	comp=Z,0.3nm,0.6s,baz=267,slow=6.7,SNR=1.6				
	comp=Z,0.3nm,0.6s				
PZH	PanZhiHua	133.40 340	PKP	PKPdf	15 40 16.1 +0.3
WRA	Warramunga Arr	133.64 259	PKP	PKPdf	15 40 16.8 +0.6
	comp=Z,1.1nm,0.8s,baz=86,slow=2.4,SNR=12				
ASAR	Alice Springs	134.28 254	PKP	PKPdf	15 40 17.7 +0.4
	comp=Z,1.1nm,0.8s,baz=91,slow=1.8,SNR=10.0				
CMAR	Chiang Mai Arr	141.80 339	PKP	PKPdf	15 40 31.0 -0.2
	comp=Z,0.8nm,0.5s,baz=309,slow=2.1,SNR=7.6				

*IDC **20** 15:38:22.4±2.4, 21.°59N×143.°14E, h291km±23km, mb3.1/10, mbtmp3.9/13, Error ellipse: s-maj=23.5km s-min=13.3km az=96.0*

ISC 20 15:38:24.0±0.8, 21.°6N±0.°1×143.°1E±0.°2, h311km, n16, σ0°82/16, mb3.3/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.52	351	P	Pn	15 39 46.0	-1.9
	29nm,0.3s,baz=270,slow=18,SNR=2.5						
JHJ	Hachijo jima 2	11.83	346	P	Pn	15 41 04.0	-0.2
	48nm,0.7s,baz=240,slow=23,SNR=7.4						
MJAR	Matsushiro Arr	15.47	345	P	P	15 41 45.5	-0.1
	0.7nm,0.3s,baz=163,slow=10,SNR=6.1						
KLR	Kul'dur	29.00	345	P	P	15 43 56.0	+0.5
	0.4nm,0.3s,baz=142,slow=12,SNR=1.6						
	0.4nm,0.3s						
CMAR	Chiang Mai Arr	41.53	274	P	P	15 45 42.9	+0.8
	0.4nm,0.4s,baz=91,slow=5.7,SNR=5.6						
	0.4nm,0.4s						
WRA	Warramunga Arr	42.20	192	P	P	15 45 46.8	-0.5
	0.3nm,0.4s,baz=14,slow=9.1,SNR=19						
	0.3nm,0.4s						
ASAR	Alice Springs	45.91	192	P	P	15 46 15.6	-0.9
	0.2nm,0.8s,baz=11,slow=7.1,SNR=5.4						
	0.2nm,0.8s						
ZALV	Zalesovo Beam	54.24	322	PcP	PcP	15 48 17.3	-0.8
	0.7nm,0.3s,baz=118,slow=5.8,SNR=3.2						
MKAR	Makanchi Array	54.71	313	P	P	15 47 22.0	+0.2
	0.4nm,0.7s,baz=84,slow=6.9,SNR=4.2						
	0.4nm,0.7s						
ILAR	Eielson Array	62.12	27	P	P	15 48 12.2	-0.1
	0.5nm,0.6s,baz=264,slow=5.7,SNR=6.9						
	0.5nm,0.6s						
YKA	Yellowknife Ar	76.54	28	P	P	15 49 40.1	+0.1
	0.9nm,0.5s,baz=293,slow=6.1,SNR=2.5						
	0.9nm,0.5s						
ARCES	ARCESS Array B	78.98	341	P	P	15 49 54.1	+0.8
	0.5nm,0.4s,baz=73,slow=7.9,SNR=11						

0.5nm,0.4s
NVAR Mina Array Bea 83.22 51 P P 15 50 17.4 +1.0
0.5nm,0.7s,baz=280,slow=4.4,SNR=4.4
0.5nm,0.7s
FINES FINESS Array B 83.23 334 P P 15 50 15.1 -0.6
1.1nm,0.5s,baz=71,slow=5.3,SNR=13
1.1nm,0.5s
PLCA Paso Flores 145.74 132 PKPbc PKPab 15 57 27.6 -0.3
3.3nm,0.7s,baz=251,slow=3.2,SNR=6.5
LPAZ La Paz 149.99 85 PKPbc PKiKP 15 57 40.7 +0.5

*JMA **20** 15:40:10.8±0.1,24°.1N±0°.5×121°.7E±0°.4,h4km,MV2.9/8, TAIWAN REGION*
*TAP **20** 15:40:11.9,24°.14N×121°.67E,h11km,ML3.5,C*
ISC 20 15:40:11.6±0.8,24°.12N±0°.01×121°.71E±0°.02,h13km±4km, n103,σ0°64/162,18D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=297	**0.09**	**295**	P	**Pg**	**15 40 14.4**	**-0.2**
ETL	baz=297			S	**Sg**	**15 40 15.8**	**-0.9**
TWD	**Chiawan** baz=228	**0.12**	**249**	*i* P	**Pg**	**15 40 14.5**	**-0.3**
TWD	baz=228			*i* S	**Sg**	**15 40 16.3**	**-0.7**
NACB	**Ninganchiao** baz=298	**0.12**	**296**	⇓*i*P	**Pg**	**15 40 14.6**	**-0.3**
NACB	baz=298			*i* S	**Sg**	**15 40 16.4**	**-0.9**
HWA	**Hwalien** baz=199	**0.17**	**215**	*i* P	**Pg**	**15 40 16.4**	**+0.7**
HWA	baz=199			*e*S	**Sg**	**15 40 19.4**	**+0.9**
EHP	**Heping Village** baz=22	**0.19**	**8**	P	**Pg**	**15 40 16.3**	**+0.3**
EHP	baz=22			S	**Sg**	**15 40 19.3**	**+0.4**
ETLH	**Xiulin Townshi** baz=292	**0.23**	**292**	⇓*i*P	**Pg**	**15 40 16.5**	**-0.2**
ETLH	baz=292			*i* S	**Sg**	**15 40 19.6**	**-0.4**
ETM	**Tongmen** baz=225	**0.25**	**233**	P	**Pg**	**15 40 17.0**	**0.0**
ETM	baz=225			S	**Sg**	**15 40 20.1**	**-0.6**
TEYL	**Yanliau Villag** baz=196	**0.27**	**203**	*e*P	**Pb**	**15 40 18.3**	**-0.1**
TEYL	baz=196			*e*S	**Sb**	**15 40 23.0**	**+0.2**
ESL	**Shilin** baz=221	**0.40**	**220**	*e*P	**Pg**	**15 40 19.6**	**0.0**
ESL	baz=221			S	**Sg**	**15 40 24.7**	**-0.3**
WHF	**Hehuan Shan** baz=271	**0.41**	**273**	⇓*i*P	**Pg**	**15 40 19.9**	**-0.1**
WHF	baz=271			*e*S	**Sg**	**15 40 24.9**	**-0.7**
NNSB	**Datong** baz=317	**0.43**	**315**	⇓*i*P	**Pb**	**15 40 20.5**	**-0.6**
NNSB	baz=317			S	**Sg**	**15 40 26.1**	**+0.1**
TEGC	**Jichi Village** baz=184	**0.44**	**201**	*e*P	**Pn**	**15 40 23.0**	**-0.6**
NNS	**Nan Shan** baz=318	**0.44**	**316**	⇓*i*P	**Pg**	**15 40 19.7**	**-0.8**
NNS	baz=318			*e*S	**Sg**	**15 40 25.5**	**-1.0**
LATG	**Datong** baz=341	**0.45**	**338**	⇓*i*P	**Pb**	**15 40 20.8**	**-0.7**
LATG	baz=341			*e*S	**Sg**	**15 40 26.7**	**+0.1**
FUSS	**Fushou** baz=286	**0.45**	**286**	⇓*i*P	**Pb**	**15 40 20.8**	**-0.7**
FUSS	baz=286			*e*S	**Sg**	**15 40 26.5**	**-0.2**
CHGB	**Renai** baz=255	**0.50**	**263**	⇓*i*P	**Pb**	**15 40 21.6**	**-0.7**
CHGB	baz=255			S	**Sg**	**15 40 28.0**	**-0.2**
TWC	**Suao** baz=13	**0.50**	**14**	*e*P	**Pb**	**15 40 22.0**	**-0.3**
TWC	baz=13			S	**Sb**	**15 40 29.2**	**-0.3**
TWT	**Tachien** baz=284	**0.51**	**285**	⇓*i*P	**Pb**	**15 40 22.2**	**-0.3**
TWT	baz=284			*e*S	**Sb**	**15 40 29.4**	**-0.5**
NDT	**Datong Townshi** baz=342	**0.51**	**339**	⇓*i*P	**Pg**	**15 40 20.7**	**-1.0**
NDT	baz=342			S	**Sg**	**15 40 27.2**	**-1.4**
OWD	**Renai** baz=249	**0.52**	**251**	*e*P	**Pg**	**15 40 21.9**	**0.0**
OWD	baz=249			*e*S	**Sg**	**15 40 28.6**	**-0.2**
EGFH	**Guangfu** baz=212	**0.52**	**210**	*e*P	**Pb**	**15 40 22.2**	**-0.4**
EGFH	baz=212			*e*S	**Sb**	**15 40 30.8**	**+0.8**
TDCB	**Techi** baz=284	**0.52**	**285**	⇓P	**Pb**	**15 40 22.3**	**-0.5**
TDCB	baz=284			S	**Sg**	**15 40 29.0**	**0.0**
ENTT	**Nioudou** baz=349	**0.53**	**345**	⇓*i*P	**Pg**	**15 40 21.6**	**-0.5**
ENTT	baz=349			*e*S	**Sg**	**15 40 29.1**	**-0.2**
WUSB	**Renai** baz=249	**0.56**	**257**	⇓*i*P	**Pb**	**15 40 22.9**	**-0.5**
WUSB	baz=249			*e*S	**Sg**	**15 40 29.0**	**-1.1**
TWE	**Neicheng**	**0.60**	**356**	⇓*i*P	**Pb**	**15 40 23.9**	**0.0**
TWE				*e*S	**Sb**	**15 40 31.8**	**-0.5**
YHNB	**Yeheng** baz=332	**0.63**	**331**	⇓*i*P	**Pb**	**15 40 24.4**	**-0.1**
YHNB	baz=332			*e*S	**Sg**	**15 40 32.3**	**+0.1**
VWDT	**VWDT** baz=232	**0.64**	**235**	P	**Pb**	**15 40 24.2**	**-0.4**
VWDT	baz=232			*e*S	**Sg**	**15 40 32.0**	**-0.6**
NSK	**Sanguang** baz=332	**0.64**	**330**	⇓*i*P	**Pg**	**15 40 23.6**	**-0.6**
NSK	baz=332			*e*S	**Sg**	**15 40 31.8**	**-0.9**
ILA	**Ilan** baz=359	**0.64**	**3**	*e*P	**Pb**	**15 40 24.6**	**0.0**
ILA	baz=359			*e*S	**Sb**	**15 40 33.8**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=352	**0.65**	**350**	⇓*i*P	**Pb**	**15 40 24.9**	**0.0**
FUSB	baz=352			*e*S	**Sg**	**15 40 32.9**	**0.0**
HGSD	**Ruisui** baz=213	**0.68**	**203**	*e*P	**Pn**	**15 40 26.1**	**-0.8**
HGSD	baz=213			*e*S	**Sb**	**15 40 35.8**	**+1.1**
WPL	**Puli Township** baz=251	**0.70**	**261**	P	**Pb**	**15 40 25.5**	**-0.1**
WPL	baz=251			*e*S	**Sg**	**15 40 34.0**	**-0.4**
EHY	**Hungye** baz=207	**0.71**	**210**	*e*P	**Pb**	**15 40 25.5**	**-0.3**
WHP	**Taichung City** baz=282	**0.72**	**283**	P	**Pb**	**15 40 26.2**	**+0.2**
WHP	baz=282			*e*S	**Sb**	**15 40 35.5**	**-0.3**
DPDB	**Guoxing** baz=253	**0.72**	**263**	*e*P	**Pb**	**15 40 26.2**	**+0.1**
DPDB	baz=253			*e*S	**Sg**	**15 40 34.8**	**-0.5**
WCS	**Beigang Elemen** baz=255	**0.73**	**265**	*e*P	**Pg**	**15 40 25.2**	**-0.7**
WCS	baz=255			*e*S	**Sg**	**15 40 34.5**	**-1.1**
NFF	**Wufeng Townshi** baz=305	**0.74**	**313**	⇓*i*P	**Pg**	**15 40 25.7**	**-0.4**
NFF	baz=305			*e*S	**Sg**	**15 40 33.9**	**-2.0**
EGS	baz=27	**0.75**	**15**	*e*P	**Pn**	**15 40 27.5**	**-0.3**
SSLB	**Suanglung** baz=253	**0.77**	**245**	*i* P	**Pb**	**15 40 26.6**	**-0.3**
SSLB				*e*S	**Sg**	**15 40 35.6**	**-1.1**
SMLT	**Sun Moon Lake** baz=251	**0.78**	**253**	P	**Pb**	**15 40 26.9**	**-0.3**
SMLT	baz=251			*e*S	**Sg**	**15 40 36.6**	**-0.5**
TYC	**Yuchr** baz=245	**0.81**	**255**	*e*P	**Pb**	**15 40 27.4**	**-0.2**
TYC	baz=245			*e*S	**Sg**	**15 40 37.1**	**-1.0**
YULB	**Yu-li** baz=215	**0.82**	**208**	*e*P	**Pb**	**15 40 27.4**	**-0.3**
YULB	baz=215			*e*S	**Sg**	**15 40 37.7**	**-0.6**
LIOB	**Emei** baz=310	**0.82**	**310**	P	**Pn**	**15 40 28.5**	**-0.4**
LIOB	baz=310			*e*S	**Sg**	**15 40 37.5**	**-0.9**
NSTT	**Nanjuang** baz=309	**0.82**	**308**	P	**Pb**	**15 40 28.1**	**+0.3**
NSTT	baz=309			*e*S	**Sg**	**15 40 38.0**	**-0.4**
NJD	**Zhudong** baz=318	**0.84**	**317**	*e*P	**Pn**	**15 40 29.2**	**+0.1**
EYUL	**Yuli** baz=214	**0.85**	**205**	*e*P	**Pb**	**15 40 27.9**	**-0.3**
TIPB	**Shuangxi** baz=359	**0.85**	**7**	*e*P	**Pb**	**15 40 28.7**	**+0.4**
TIPB	baz=359			*e*S	**Sg**	**15 40 39.0**	**-0.4**
NHDH	**Xindian Distri** baz=341	**0.86**	**348**	*e*P	**Pn**	**15 40 28.9**	**-0.5**
NHDH	baz=341			*e*S	**Sg**	**15 40 39.1**	**-0.3**
TWA	**Mucha** baz=354	**0.86**	**352**	*e*P	**Pb**	**15 40 28.8**	**+0.3**
TWA	baz=354			*e*S	**Sb**	**15 40 39.8**	**-0.2**
TWQ1	**Liyutan** baz=285	**0.89**	**285**	*e*P	**Pn**	**15 40 29.5**	**-0.3**
WHYT	**Xinyi Township** baz=247	**0.89**	**242**	*e*P	**Pb**	**15 40 28.8**	**-0.2**
WHYT	baz=247			*e*S	**Sb**	**15 40 40.8**	**0.0**
TAP	**Taipei** baz=341	**0.93**	**348**	*e*P	**Pn**	**15 40 30.7**	**+0.3**
TAP	baz=341			*e*S	**Sb**	**15 40 42.4**	**+0.5**
NMLH	**Miaoli** baz=296	**0.94**	**296**	*e*P	**Pn**	**15 40 31.0**	**+0.6**
YUS	**Yu-Shan** baz=215	**0.94**	**228**	*e*P	**Pn**	**15 40 30.3**	**-0.6**
YUS	baz=215			*e*S	**Sb**	**15 40 42.6**	**0.0**
SBCB	**Hsinchu** baz=316	**0.94**	**315**	*e*P	**Pb**	**15 40 29.9**	**+0.2**
NWF	**Wu-fen Shan** baz=355	**0.95**	**4**	*e*P	**Pn**	**15 40 30.4**	**-0.3**
NWF	baz=355			*e*S	**Sb**	**15 40 42.4**	**0.0**
TCU	**Taichung** baz=271	**0.95**	**272**	*e*P	**Pn**	**15 40 31.4**	**+0.8**
TCU	baz=271			*e*S	**Sn**	**15 40 45.6**	**+1.6**
WJS	**Zhushan** baz=244	**0.95**	**252**	*e*P	**Pn**	**15 40 30.7**	**+0.1**
HSN	**Hsinchu** baz=319	**0.96**	**315**	*e*P	**Pn**	**15 40 30.7**	**0.0**
NCUH	**Zhongli** baz=331	**0.97**	**330**	*e*P	**Pn**	**15 40 31.5**	**+0.6**
WNT	**Mingjian** baz=251	**0.97**	**256**	*e*P	**Pn**	**15 40 31.8**	**+0.9**
WNT	baz=251			*e*S	**Sn**	**15 40 45.6**	**+1.1**
SXI1	**Grass Mountain** baz=3.0	**0.98**	**9**	*e*P	**Pn**	**15 40 30.8**	**-0.3**
SXI1	baz=3.0			*e*S	**Sb**	**15 40 43.5**	**+0.1**
FULB	**Fuli** baz=213	**0.99**	**203**	*e*P	**Pn**	**15 40 31.3**	**0.0**
WDJ	**Dajia District** baz=283	**1.00**	**283**	*e*P	**Pn**	**15 40 32.7**	**+1.3**
TWS1	**Kuangyinshan** baz=346	**1.01**	**345**	*e*P	**Pn**	**15 40 32.2**	**+0.7**
TWS1	baz=346			*e*S	**Sb**	**15 40 45.2**	**+0.9**
YM01	**YM01** baz=338	**1.03**	**353**	*e*P	**Pn**	**15 40 32.1**	**+0.4**
YM01	baz=338			*e*S	**Sn**	**15 40 45.9**	**-0.2**
ALS	**Alishan** baz=218	**1.03**	**234**	P	**Pn**	**15 40 32.0**	**0.0**
ALS	baz=218			*e*S	**Sn**	**15 40 46.2**	**-0.2**
WCHH	**Zhanghua** baz=267	**1.06**	**268**	*e*P	**Pn**	**15 40 33.1**	**+1.0**
EHD	**Haiduan** baz=205	**1.07**	**206**	*e*P	**Pg**	**15 40 30.5**	**-1.8**
ANP	**Anpu** baz=352	**1.07**	**351**	*e*P	**Pn**	**15 40 33.1**	**+0.6**
CHN5	**Tsauling** baz=240	**1.08**	**241**	*e*P	**Pn**	**15 40 32.5**	**-0.1**
ELDTW	**Lidau** baz=203	**1.13**	**215**	*e*P	**Pb**	**15 40 32.8**	**-0.2**
TWY	**Chenhua** baz=343	**1.16**	**355**	*e*P	**Pn**	**15 40 34.7**	**+1.3**
WDLH	**Douliu** baz=248	**1.16**	**248**	*e*P	**Pn**	**15 40 34.6**	**+1.1**
JYNG	**Yonagunijimaku**	**1.17**	**73**	*e*S	**Sg**	**15 40 48.7**	**-0.7**
EDH	**Donghe** baz=212	**1.20**	**198**	*e*P	**Pg**	**15 40 34.4**	**-0.4**
WCKO	**Fanlu** baz=236	**1.22**	**236**	*e*P	**Pg**	**15 40 34.9**	**-0.3**
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P	**Pg**	**15 40 34.5**	**-0.9**
YOJ				*e*S	**Sn**	**15 40 52.0**	**+1.0**
WRL	**Guolierlin Hig** baz=260	**1.24**	**260**	*e*P	**Pn**	**15 40 34.6**	**0.0**
CHN2	**Minshiung** baz=243	**1.28**	**243**	*e*P	**Pg**	**15 40 36.6**	**+0.4**
STYH	**Taoyuan** baz=222	**1.28**	**222**	*e*P	**Pn**	**15 40 34.3**	**-0.8**
CHN4	**Tsaushan** baz=221	**1.28**	**233**	P	**Pg**	**15 40 36.0**	**-0.3**
CHN4	baz=221			*e*S	**Sn**	**15 40 53.9**	**+1.7**
TPUB	**Ta-pu** baz=217	**1.29**	**231**	*e*P	**Pg**	**15 40 36.4**	**+0.1**
WTP	**Ta-pu** baz=218	**1.33**	**229**	*e*P	**Pg**	**15 40 37.7**	**+0.4**
WTP	baz=218			*e*S	**Sg**	**15 40 54.5**	**-0.1**
CHY	**Chiayi** baz=242	**1.33**	**243**	*e*P	**Pg**	**15 40 37.4**	**+0.2**
TWK	**Hsinying** baz=233	**1.41**	**233**	*e*P	**Pg**	**15 40 38.7**	**0.0**
TWGBT	**Beinan** baz=186	**1.42**	**204**	*e*P	**Pn**	**15 40 35.7**	**-1.4**
CHN1	**Nanshi** baz=230	**1.43**	**230**	*e*P	**Pg**	**15 40 39.0**	**-0.1**
WSF	**Szhu** baz=250	**1.45**	**251**	*e*P	**Pg**	**15 40 39.2**	**-0.2**
SGST	**Jiashian** baz=224	**1.46**	**225**	*e*P	**Pb**	**15 40 38.9**	**+0.1**
WSL	**Shuilin Townsh** baz=246	**1.48**	**247**	*e*P	**Pb**	**15 40 39.0**	**-0.1**
ICHU	**Yijhu** baz=241	**1.52**	**240**	*e*P	**Pg**	**15 40 40.2**	**-0.6**
SCST	**Cishan** baz=223	**1.66**	**223**	*e*P	**Pg**	**15 40 42.6**	**-1.0**
SSD	**Sandimen** baz=216	**1.69**	**216**	*e*P	**Pb**	**15 40 42.0**	**-0.5**
TSMG	**Majia** baz=228	**1.72**	**215**	*e*P	**Pb**	**15 40 43.1**	**+0.1**
TSCK	**Chigu Township** baz=238	**1.78**	**237**	*e*P	**Pn**	**15 40 42.2**	**+0.2**
MASBT	**Mashibuluo** baz=214	**1.80**	**214**	*e*P	**Pn**	**15 40 43.1**	**+0.8**
IRIF	**Iriomote-Funau**	**1.85**	**83**	*e*S	**Sb**	**15 41 07.7**	**-0.7**
EAST	**Anshuo** baz=190	**1.90**	**205**	*e*P	**Pb**	**15 40 45.7**	**-0.5**
PNG	**Penghu** baz=256	**2.05**	**255**	*e*P	**Pn**	**15 40 46.6**	**+0.8**
SLIU	**Shizi** baz=190	**2.07**	**204**	*e*P	**Pn**	**15 40 46.9**	**+0.8**
JIJ	**Ishigaki jima**	**2.23**	**83**	P	**Pn**	**15 40 49.2**	**+1.0**
JIJ				*e*S	**Sn**	**15 41 16.1**	**+0.4**
JISG	**Ishigakijimahi**	**2.41**	**78**	P	**Pn**	**15 40 51.8**	**+1.0**
JISG				*e*S	**Sn**	**15 41 21.1**	**+1.0**

*AEIC **20** 15:40:42±2.1,54°.57N±0°.05×164°.40W±0°.07,h5km±7km, Error ellipse: s-maj=7.2km s-min=5.4km az=186.0*
NEIC 20 15:40:43.9±1.8,54°.56N±0°.06×164°.50W±0°.07,h10km±2km, ML3.9/12,ML3.4(AEIC),Error ellipse: s-maj=9.8km s-min=6.7km az=338.0,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.70**	**64**		Pg	15 40 54.6	-2.8
AKUT	**Akutan**	**0.86**	**241**		Pg	15 40 59.5	-0.9
AKUT				Sg	Sb	15 41 12.6	+0.3
UNV	**Unalaska Valle**	**1.38**	**240**		Pn	15 41 08.7	-0.5
SDPT	**Sand Point**	**2.45**	**70**		Pn	15 41 24.1	+0.1
SDPT				Sn	Sn	15 41 53.3	-0.6
SDPT				IAML		15 41 58.8	
	comp=E,813nm,1.5s						
SDPT				IAML		15 42 05.1	
	comp=N,685nm,0.7s						
CNBA	**Chernabura Isl**	**2.86**	**83**		Pn	15 41 28.6	-1.0
CNBA				Sn	Sn	15 42 04.3	+0.2
CNBA				IAML		15 42 17.9	
	comp=E,170nm,1.0s						
NIKH	**Nikolski High**	**3.03**	**240**		Pn	15 41 31.6	-0.3
CHGN	**Chignik**	**3.88**	**61**		Pn	15 41 43.9	+0.3
CHGN				IAML		15 42 54.4	
	comp=N,152nm,0.9s						
CHGN				IAML		15 42 56.8	
	comp=E,146nm,1.0s						
SPIA	**Saint Paul Isl**	**4.17**	**311**	Pn	Pn	15 41 46.5	-1.0
CHIR	**Chirikof Islan**	**5.24**	**72**	Pn	Pn	15 42 01.8	-0.5
SII	**Sitkinak Islan**	**6.19**	**67**	Pn	Pn	15 42 15.0	-0.3
P18K	**Big Mountain,**	**7.01**	**43**	Pn	Pn	15 42 26.6	+0.1
Q18K	**Koktuh Hills**	**7.32**	**40**	Pn	Pn	15 42 31.2	+0.4
KDAK	**Kodiak Island**	**7.39**	**59**	Pn	Pn	15 42 32.0	+0.2
Q19K	**Cape Douglas,**	**7.40**	**49**	Pn	Pn	15 42 32.1	+0.2
N18K	**Kilae Creek**	**7.68**	**33**	Pn	Pn	15 42 35.2	-0.5
ADK	**Adak**	**7.79**	**255**	Pn	Pn	15 42 36.9	-0.3
SVW2	**Sparrevohn**	**8.10**	**32**	Pn	Pn	15 42 41.4	0.0
N19K	**Bonanza Creek**	**8.25**	**36**	Pn	Pn	15 42 43.4	-0.2
RSO	**Redoubt South**	**8.65**	**42**	Pn	Pn	15 42 49.7	+0.5
CNPM	**China Poot**	**8.77**	**50**	Pn	Pn	15 42 51.2	+0.5
BRLK	**Bradley Lake**	**9.04**	**49**	Pn	Pn	15 42 54.0	-0.4
M19K	**Big River Lodg**	**9.08**	**32**	Pn	Pn	15 42 53.8	-1.1
L19K	**White Mountain**	**9.16**	**30**	Pn	Pn	15 42 55.2	-0.9
M20K	**Styx River**	**9.47**	**35**	Pn	Pn	15 43 00.1	-0.2
SUA	**Susitna One**	**10.04**	**41**	Pn	Pn	15 43 06.0	-2.2
K20K	**Telida**	**10.32**	**27**	Pn	Pn	15 43 09.7	-2.2
PPLA	**Purkeypile**	**10.51**	**32**	Pn	Pn	15 43 15.5	+0.9
KNK	**Knik Glacier**	**10.92**	**45**	Pn	Pn	15 43 21.6	+1.6
CAST	**Castle Rocks**	**10.93**	**31**	Pn	Pn	15 43 20.6	+0.4
J20K	**Nowinta River**	**10.98**	**24**	Pn	Pn	15 43 17.8	-3.0
KTH	**Kantishna Hill**	**11.38**	**32**	Pn	Pn	15 43 23.6	-2.8
FID	**Port Fidalgo**	**11.45**	**50**	Pn	Pn	15 43 26.1	-1.3
SCM	**Sheep Creek Mo**	**11.60**	**44**	Pn	Pn	15 43 27.6	-1.9
BPAW	**Bear Paw Mtn.**	**11.76**	**30**	Pn	Pn	15 43 29.0	-2.6
KLU	**Klutina**	**12.02**	**47**	Pn	Pn	15 43 34.5	-0.6
H21K	**Melozitna Rive**	**12.54**	**23**	Pn	Pn	15 43 42.8	+0.6
MLY	**Manley**	**12.54**	**28**	Pn	Pn	15 43 43.2	+1.0
IMAR	**Indian Mountai**	**12.61**	**20**	Pn	Pn	15 43 40.5	-2.7
N25K	**Chitina, Valde**	**12.64**	**48**	Pn	Pn	15 43 42.1	-1.5
I23K	**Minto, Yukon-K**	**13.02**	**29**	Pn	Pn	15 43 50.0	+1.3
ISLE	**Juniper Island**	**13.30**	**54**	Pn	Pn	15 43 51.1	-1.6
M26K	**Nabesna, AK**	**13.66**	**46**	Pn	Pn	15 43 59.9	+2.3
CTGM	**Chitina Glacie**	**13.88**	**53**	Pn	Pn	15 43 58.4	-2.2
J25K	**Salcha River,**	**13.91**	**36**	Pn	Pn	15 43 58.2	-2.8
H24K	**Noodor Dome**	**13.94**	**29**	Pn	Pn	15 44 00.6	-0.8
SCRK	**Sand Creek**	**14.04**	**40**	Pn	Pn	15 43 58.9	-3.8
M27K	**Edge Creek, AK**	**14.12**	**47**	Pn	Pn	15 44 05.0	+1.1
BCAR	**Beaver Creek A**	**14.45**	**45**	Pn	Pn	15 44 09.2	+0.9
J26L	**Joseph Creek**	**14.48**	**38**	Pn	Pn	15 44 11.3	+2.6
I26K	**Coal Creek Min**	**15.08**	**36**	Pn	Pn	15 44 17.8	+1.0
P29M	**Windy Craggy**	**15.34**	**60**	Pn	Pn	15 44 19.6	-0.7

*AEIC **20** 15:50:17±1.4,52°.1N±0°.1×171°.5W±0°.1,h46km±10km, Error ellipse: s-maj=19.7km s-min=5.5km az=147.0*
NEIC 20 15:50:17.2±2.2,51°.84N±0°.08×171°.4W±0°.1,h37km±23km, ML3.6/6,ML2.9(AEIC),Error ellipse: s-maj=14.7km s-min=6.1km az=136.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.92**	**53**		Pn	15 50 46.4	-1.0
ADK	**Adak**	**3.28**	**273**	Pn	Pn	15 51 05.9	-0.1
ADK				Sn	Sn	15 51 42.6	-1.2
ADK				IAML		15 51 52.5	
	85nm,0.8s						
UNV	**Unalaska Valle**	**3.58**	**54**	Pn	Pn	15 51 10.8	+0.8
AKUT	**Akutan**	**4.10**	**54**	Pn	Pn	15 51 18.9	+1.7
AKUT				IAML		15 53 10.2	
	comp=E,107nm,4.0s						
AMKA	**Amchitka**	**5.82**	**269**	Pn	Pn	15 51 41.2	+0.3
CNBA	**Chernabura Isl**	**7.67**	**62**	Pn	Pn	15 52 05.4	-0.8
CHGN	**Chignik**	**8.84**	**55**	Pn	Pn	15 52 22.2	0.0

*THE **20** 15:54:28.4,41°.66N×20°.04E,h0km±4km,ML2.3/4,Error ellipse: s-maj=6.2km s-min=1.7km az=326.0*
*PDG **20** 15:54:28.9±0.3,41°.63N×20°.11E,h7km,MD3.1/1, ML3.0/13,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*TIR **20** 15:54:28.3,41°.61N×20°.12E,h21km±2km,Md2.9,Ml2.7*
*SKO **20** 15:54:29.8,41°.61N×20°.08E,h10km*
*BEO **20** 15:54:29.9±0.3,41°.59N×20°.15E,h9km±2km,ML2.2/10*
ISC 20 15:54:29.2±1.0,41°.61N±0°.02×20°.08E±0°.02,h8km±8km, n58,σ1°.27/102,15C-7D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.28**	**74**	P	**Pg**	**15 54 34.8**	**0.0**
PHP				S	**Sg**	**15 54 38.1**	**-0.5**
PHP	**Peshkopia** baz=72	**0.28**	**74**	P	**Pg**	**15 54 34.7**	**-0.2**
PHP	baz=72			S	**Sg**	**15 54 38.9**	**+0.3**
PHP				AMP			
	comp=N,11nm,0.1s,baz=72						
TIR	**Tirane**	**0.31**	**212**	⇑P	**Pg**	**15 54 35.5**	**+0.2**
TIR				⇓S	**Sb**	**15 54 41.3**	**-0.8**
TIR	**Tirane**	**0.31**	**212**	P	**Pg**	**15 54 35.6**	**+0.3**
TIR				S	**Sg**	**15 54 39.1**	**-0.3**
	comp=N,262nm,0.1s						
TIR	**Tirane**	**0.31**	**212**	*e*Pg	**Pg**	**15 54 35.4**	**+0.2**
TIR				*e*Sg	**Sb**	**15 54 41.4**	**-0.7**
TIR	**Tirane**	**0.31**	**212**	*i* Pg	**Pg**	**15 54 35.6**	**+0.3**
TIR				*i* Sg	**Sb**	**15 54 41.7**	**-0.4**
TIR	**Tirane** baz=217	**0.31**	**212**	P	**Pg**	**15 54 35.3**	**0.0**
TIR	baz=217			S	**Sb**	**15 54 41.1**	**-1.0**
TIR				AMP			
	comp=N,1.0nm,0.1s,baz=217						
ULC	**Ulcinj**	**0.72**	**300**	⇑*i*Pg	**Pg**	**15 54 42.4**	**-0.6**
ULC				*i* Sg	**Sb**	**15 54 53.8**	**-0.2**
OHR	**Ohrid**	**0.74**	**132**	*e*Pg	**Pg**	**15 54 42.9**	**-0.5**
OHR				*e*Sg	**Sg**	**15 54 53.5**	**+0.5**
OHR	**Ohrid**	**0.74**	**132**	*i* Pg	**Pg**	**15 54 42.6**	**-0.8**
OHR				*i* Sg	**Sb**	**15 54 54.3**	**-0.2**
OHR				*e*Lg	Lg	15 54 54.4	
	comp=N,152nm,0.7s						
OHR				*e*Lg	Lg	15 54 55.1	
	comp=E,82nm,0.4s						
BCI	**Bajram Curri** baz=358	**0.76**	**359**	P	**Pg**	**15 54 42.3**	**-1.5**
BCI	baz=358			S	**Sb**	**15 54 54.4**	**-0.7**
BCI				AMP			
	comp=N,1.2nm,0.4s,baz=358						
DRME	**Dracevica, Mon**	**0.88**	**311**	*e*Pg	**Pg**	**15 54 45.3**	**-0.9**
DRME				*i* Sg	**Sb**	**15 54 59.2**	**+0.5**
PVY	**Plav**	**0.99**	**355**	⇑*i*Pg	**Pg**	**15 54 46.7**	**-1.5**
PVY				*i* Sg	**Sb**	**15 55 01.8**	**-0.1**
PDG	**Podgorica**	**1.02**	**323**	⇑P	**Pg**	**15 54 48.2**	**-0.8**
PDG				⇑S	**Sg**	**15 55 02.0**	**-0.2**
PDG	**Podgorica**	**1.02**	**323**	*e*Pg	**Pg**	**15 54 48.1**	**-0.8**
PDG				*e*Sg	**Sn**	**15 55 04.8**	**+0.5**
PDG	**Podgorica**	**1.02**	**323**	*i* Pg	**Pg**	**15 54 48.0**	**-0.9**
TTG	**Podgorica**	**1.02**	**323**	*e*Pg	**Pg**	**15 54 47.7**	**-1.2**
TTG				*i* Sg	**Sn**	**15 55 03.7**	**-0.6**
SKO	**Skopje**	**1.08**	**70**	*e*Pg	**Pg**	**15 54 48.9**	**-1.1**
SKO				*e*Sg	**Sg**	**15 55 03.1**	**-0.9**
SKO	**Skopje**	**1.08**	**70**	*i* Pg	**Pg**	**15 54 49.6**	**-0.3**

SKO				*i* Sg	Sg	15 55 03.7	-0.3
SKO				*e*Lg	Lg	15 55 04.9	
	comp=N,27nm,0.4s						
SKO				*e*Lg	Lg	15 55 05.3	
	comp=E,8.5nm,0.3s						
KBN	**Korca**	**1.12**	**151**	P	**Pg**	**15 54 49.1**	**-1.6**
KBN				S	**Sn**	**15 55 07.9**	**+1.1**
	comp=E,258nm,0.5s						
KBN	**Korca**	**1.12**	**151**	P	**Pg**	**15 54 48.8**	**-2.0**
	baz=152						
KBN				S	**Sn**	**15 55 10.2**	**+3.4**
	baz=152						
BUM	**Brajici-Budva**	**1.12**	**308**	⇓*i*Pg	**Pg**	**15 54 49.7**	**-1.1**
BUM				*i* Sg	**Sn**	**15 55 07.3**	**+0.4**
IVA	**Berane**	**1.27**	**354**	⇓*i*Pg	**Pn**	**15 54 51.9**	**-1.4**
IVA				*i* Sg	**Sn**	**15 55 11.4**	**+0.8**
CEME	**Cevo**	**1.27**	**318**	⇑*i*Pg	**Pn**	**15 54 52.4**	**-0.9**
CEME				*i* Sg	**Sn**	**15 55 12.4**	**+1.8**
KOME	**Kolasin**	**1.31**	**342**	⇑*i*Pg	**Pn**	**15 54 52.7**	**-1.2**
KOME				*i* Sg	**Sn**	**15 55 12.9**	**+1.4**
NEST	**Nestorio**	**1.40**	**148**	P	**Pn**	**15 54 55.0**	**-0.1**
NEST				S	**Sg**	**15 55 15.6**	**+1.3**
	comp=E,95nm,0.5s						
NKME	**Niksic**	**1.43**	**324**	*e*Pg	**Pn**	**15 54 55.2**	**-0.2**
NKME				*i* Sg	**Sg**	**15 55 17.4**	**+2.3**
HCY	**Herceg Novi**	**1.45**	**306**	*e*Pg	**Pn**	**15 54 55.6**	**-0.1**
HCY				*i* Sg	**Sg**	**15 55 18.4**	**+2.6**
LSK	**Leskovik**	**1.51**	**165**	P	**Pg**	**15 54 58.1**	**-0.1**
LSK				S	**Sg**	**15 55 19.7**	**+1.9**
LSK	**Leskovik**	**1.51**	**165**	P	**Pn**	**15 54 52.7**	**-3.9**
	baz=165						
STIP	**Stip**	**1.58**	**86**	*i* Pn	**Pg**	**15 55 00.5**	**+0.9**
STIP				*i* Sn	**Sg**	**15 55 26.2**	**+6.2**
STIP				*e*Lg	Lg	15 55 26.3	
	comp=N,9.1nm,0.3s						
STIP				*e*Lg	Lg	15 55 27.8	
	comp=E,11nm,0.5s						
PENT	**Pentalofos**	**1.62**	**150**	P	**Pb**	**15 54 58.9**	**-0.6**
PENT				S	**Sg**	**15 55 23.1**	**+1.7**
SJES	**Sjenica**	**1.65**	**357**	*e*Pg	**Pb**	**15 55 00.1**	**+0.1**
SJES				*e*Sg	**Sg**	**15 55 22.5**	**+0.1**
BRY	**Bratogost**	**1.73**	**319**	⇑*i*Pn	**Pb**	**15 55 00.3**	**-0.9**
BRY				*i* Sn	**Sg**	**15 55 25.4**	**+0.7**
SRN	**Sarande**	**1.73**	**182**	S	**Sb**	**15 55 22.7**	**-0.3**
BARS	**Barje**	**1.77**	**46**	*e*Pn	**Pb**	**15 55 01.2**	**-0.6**
BARS				*e*Sn	**Sb**	**15 55 23.4**	**-0.7**
SELS	**Selova**	**1.78**	**25**	*e*Pn	**Pn**	**15 55 00.3**	**0.0**
SELS				*e*Sn	**Sb**	**15 55 23.7**	**-1.0**
PLE	**Pljevlja**	**1.79**	**344**	*e*Pn	**Pn**	**15 55 01.1**	**+0.6**
PLE				*i* Sn	**Sg**	**15 55 26.7**	**-0.2**
UPM	**Unac-Piva**	**1.81**	**332**	*e*Pn	**Pn**	**15 55 01.5**	**+0.6**
UPM				*i* Sn	**Sg**	**15 55 27.3**	**-0.3**
KZN	**Kozani**	**1.83**	**135**	P	**Pn**	**15 55 00.1**	**-0.8**
KZN				S	**Sg**	**15 55 27.0**	**-0.9**
	comp=E,65nm,0.6s						
VAY	**Valandovo**	**1.89**	**98**	*e*Pn	**Pn**	**15 55 00.8**	**-1.0**
VAY				*e*Sn	**Sn**	**15 55 24.6**	**-1.2**
KEK	**Kerkira**	**1.91**	**187**	P	**Pn**	**15 55 01.5**	**-0.5**
KEK				S	**Sb**	**15 55 28.9**	**+0.8**
KNT	**Kendrikon**	**2.17**	**101**	P	**Pn**	**15 55 03.8**	**-1.8**
BBLS	**Lazići**	**2.31**	**348**	*e*Pn	**Pn**	**15 55 09.2**	**+1.6**
BBLS				*e*Sn	**Sb**	**15 55 39.0**	**-0.8**
GRUS	**Gruza**	**2.33**	**11**	*e*Pn	**Pn**	**15 55 08.5**	**+0.8**
BOVS	**Bovan**	**2.35**	**30**	*e*Pn	**Pn**	**15 55 08.1**	**0.0**
BOVS				*e*Sn	**Sn**	**15 55 37.1**	**-0.1**
DIVS	**Divibare**	**2.49**	**359**	*e*Pn	**Pn**	**15 55 11.3**	**+1.2**
ZAPS	**Zavoj**	**2.52**	**48**	*e*Pn	**Pn**	**15 55 11.3**	**+0.9**
ZAPS				*e*Sn	**Sn**	**15 55 40.3**	**-1.0**
VTS	**Vitosha**	**2.56**	**66**	⇓P	**Pn**	**15 55 12.2**	**+1.1**
VTS				⇑S	**Sb**	**15 55 45.5**	**-1.5**
ZAGS	**Zajecar**	**2.71**	**35**	*e*Pn	**Pn**	**15 55 13.6**	**+0.5**
BLKB	**Belogradchik**	**2.78**	**43**	⇑P	**Pn**	**15 55 14.3**	**+0.3**
BLKB				⇓S	**Sn**	**15 55 49.7**	**+2.0**
HERR	**Herculane**	**3.69**	**27**	⇑P	**Pn**	**15 55 27.8**	**+1.3**
BZS	**Buzias**	**4.16**	**15**	⇑P	**Pn**	**15 55 32.9**	**0.0**
GZR	**Gura Zlata**	**4.26**	**27**	⇑P	**Pn**	**15 55 35.5**	**+1.1**
LOT	**Lotru**	**4.68**	**34**	⇓P	**Pn**	**15 55 41.3**	**+1.0**
SIRR	**Siria**	**4.79**	**13**	⇑P	**Pn**	**15 55 43.1**	**+1.4**
MLR	**Muntele Rosu**	**5.76**	**46**	⇓P	**Pn**	**15 55 56.2**	**+1.1**
TESR	**Tescani**	**6.81**	**42**	⇑P	**Pn**	**15 56 10.2**	**+0.8**

KRSC 20 16:01:35.4±1.4, 56°.18N×163°.15E, h9km±5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.19**	**279**	*e*P	Pg	16 01 40.7	+1.5
KBTR				S	Sg	16 01 42.7	+0.8
KBG	**Krutoberegovo**	**0.26**	**287**	S	Sg	16 01 45.0	+1.0
SMKR	**Semkarok**	**1.02**	**294**	*e*P	Pg	16 01 55.0	+0.1
SMKR				*e*S	Sb	16 02 09.1	+0.3
BDR	**Baidarnaya**	**1.15**	**291**	*e*P	Pg	16 01 57.4	0.0
BDR				*e*S	Sn	16 02 13.2	-0.4
SRKR	**Sorokina**	**1.20**	**294**	*e*P	Pb	16 01 58.2	-0.1
SRKR				*e*S	Sn	16 02 15.1	+0.2
CIRR	**Tsirk**	**1.34**	**268**	*e*P	Pg	16 02 01.5	+0.3
BZGR	**Bezymyannyi-Gr**	**1.40**	**261**	*e*P	Pb	16 02 01.6	-0.1
BZGR				S	Sb	16 02 17.9	-1.8
KLY	**Klyuchi**	**1.40**	**276**	*e*P	Pn	16 01 59.6	-1.5
KLY				*e*S	Sb	16 02 16.6	-3.0
KRSR	**Krestovskiy**	**1.44**	**273**	*e*P	Pb	16 02 02.2	-0.3
KRSR				*e*S	Sn	16 02 20.4	-0.6
BZWR	**Bezymyannyi-We**	**1.50**	**263**	*e*P	Pb	16 02 03.4	-0.2
BZMR	**Bezymyannaya**	**1.51**	**262**	*e*P	Pb	16 02 03.8	+0.1
BZMR				*e*S	Sg	16 02 24.0	+0.1
KIRR	**Kirishev**	**1.59**	**263**	*e*P	Pb	16 02 04.6	-0.4
KPT	**Kopyto**	**1.65**	**264**	*e*P	Pn	16 02 04.8	+0.1
KMNR	**Kamenistaya**	**1.69**	**257**	*e*P	Pg	16 02 07.4	-0.4
KOZ	**Kozyrevsk**	**1.84**	**268**	*e*P	Pb	16 02 08.9	-0.3
KOZ				S	Sb	16 02 32.5	+0.2
SRDR	**Sredinnyy**	**1.92**	**276**	*e*P	Pb	16 02 09.8	-0.8
SRDR				*e*S	Sb	16 02 34.0	-0.7
TUMR	**Tumrok**	**1.92**	**243**	*e*P	Pb	16 02 10.5	-0.2
ESO	**Esso**	**2.51**	**266**	*e*P	Pn	16 02 18.4	+2.0
KII	**Karymskiy**	**3.02**	**226**	*e*P	Pb	16 02 27.0	-2.4
OSSR	**Ossora**	**3.08**	**359**	*e*P	Pn	16 02 26.5	+2.3
OSSR				*e*S	Sn	16 03 01.5	+0.4
SPN	**Mys Shipunski**	**3.58**	**212**	*e*P	Pn	16 02 34.0	+2.9
SPN				*e*S	Sn	16 03 14.3	+0.8
NLC	**Nalytchevo**	**3.74**	**218**	*e*S	Sn	16 03 20.1	+2.8
SDLR	**Sedlovina**	**3.82**	**222**	*e*P	Pn	16 02 37.4	+2.9
SDLR				*e*S	Sn	16 03 24.1	+4.6
KRX	**Arik**	**3.84**	**225**	*e*P	Pn	16 02 38.0	+3.1
UGLR	**Uglovaya**	**3.89**	**222**	*e*P	Pb	16 02 40.7	-3.6
GNL	**Ganaly**	**3.90**	**232**	*e*P	Pn	16 02 39.1	+3.5
DALK	**Dalny**	**4.06**	**221**	*e*P	Pn	16 02 40.6	+2.9
DALK				*e*S	Sn	16 03 27.5	+2.2
GRL	**Gorelyy**	**4.69**	**221**	*e*P	Pn	16 02 51.5	+5.0

*ISN **20** 16:40:41.1±1.7, 34°.77N×44°.63E, h5km±18km, ML3.7*
*TEH **20** 16:40:43.2, 34°.34N×44°.19E, h9km, ML3.9*
ISC 20 16:40:40.9±1.0, 34°.77N±0°.03×44°.43E±0°.06, h10km, n38, σ2°21/33, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.63**	**354**	*e*Pg	**Pn**	**16 40 56.0**	**0.0**
IKRK				*e*Sg	**Sn**	**16 41 07.0**	**+0.9**
BHD	**Baghdad**	**1.50**	**181**	*e*Pn	**Pb**	**16 41 09.0**	**+0.1**
BHD				*e*Sn	**Sg**	**16 41 29.0**	**-0.2**
IDHR	**Dehrash**	**1.62**	**92**	*e*Pn	**Pg**	**16 41 15.4**	**+3.4**
IGHG	**Ghaleghazi**	**1.82**	**103**	*e*Pn	**Pg**	**16 41 18.3**	**+2.4**
IBDR	**Badra**	**2.08**	**143**	*e*Pn	**Pn**	**16 41 16.0**	**+0.2**
IBDR				*e*Sn	**Sn**	**16 41 39.4**	**-2.4**
IBDR				AML	AML	16 42 04.2	
	comp=E,760nm,0.6s						
IBDR				AML	AML	16 42 05.7	
	comp=N,600nm,0.7s						
ILIN	**Lien**	**2.09**	**85**	*e*Pn	**Pg**	**16 41 23.1**	**+2.1**
ILIN				*e*		16 42 00.8	
	comp=Z,8μm,0.8s						
KCHF	**Cheshme Sefid,**	**2.21**	**102**	*e*Pn	**Pg**	**16 41 23.3**	**-0.1**
MAHB	**Mahabad**	**2.24**	**27**	*e*Pn	Pg	16 41 28.5	+4.5
MAHB				*e*		16 42 08.7	
	comp=Z,3μm,0.7s						
KER	**Kermanshah**	**2.27**	**99**	*e*Pn	**Pg**	**16 41 23.4**	**-1.0**
SNGE	**Sanandaj**	**2.42**	**82**	*e*Pn	**Pg**	**16 41 26.5**	**-0.9**
IKOM	**Komasi**	**2.62**	**102**	*e*Pn	**Pg**	**16 41 29.1**	**-2.0**
IKOM				*e*		16 42 25.5	
	comp=Z,7μm,0.6s						
IBZA	**Bozab**	**2.85**	**95**	*e*Pn	**Pb**	**16 41 32.4**	**+0.4**
IBZA				*e*		16 42 34.2	
	comp=Z,3μm,0.6s						
IKFM	**Kafar-mosalman**	**3.10**	**113**	*e*Pn	**Pb**	**16 41 34.0**	**-2.1**
IAZR	**Azarshahr**	**3.16**	**23**	*e*Pn	**Pg**	**16 41 41.3**	**-0.2**
DHL1	**Dehloran**	**3.16**	**130**	*e*Pn	**Pb**	**16 41 34.0**	**-3.3**
IDOB	**Doab**	**3.26**	**107**	*e*Pn	**Pb**	**16 41 36.8**	**-2.2**
RAFI	**Al-Rafai**	**3.35**	**155**	*e*Pn	**Pn**	**16 41 35.0**	**+1.6**
RAFI				*e*Sn	**Sn**	**16 42 13.0**	**-0.3**
RAFI				AML	AML	16 42 39.1	
	comp=E,412nm,0.4s						
IHSH	**Hashtrud**	**3.42**	**41**	*e*Pn	**Pg**	**16 41 44.9**	**-1.5**
HSAM	**Samen**	**3.49**	**98**	*e*Pn	**Pb**	**16 41 40.6**	**-2.5**
IKMR	**Kamar-syah**	**3.51**	**110**	*e*Pn	**Pb**	**16 41 40.2**	**-2.9**
IKMR				*e*		16 42 44.7	
	comp=Z,2μm,0.4s						
IBST	**Bostanabad**	**3.54**	**34**	*e*Pn	**Pg**	**16 41 46.8**	**-1.9**
IBST				*e*		16 42 45.8	
	comp=Z,558nm,0.9s						
ISHB	**Shabestar**	**3.63**	**15**	*e*Pn	**Pb**	**16 41 46.4**	**+1.0**
HAGD	**Aghdareh**	**3.88**	**88**	*e*Pn	**Pb**	**16 41 46.7**	**-2.9**
HAGD				*e*		16 43 09.9	
	comp=Z,803nm,1.0s						
ZNJK	**Zanjan**	**3.95**	**60**	*e*Pn	**Pb**	**16 41 47.3**	**-3.5**
ISRB	**Sarab**	**4.01**	**40**	*e*Pn	**Pb**	**16 41 53.3**	**+1.4**
IHRS	**Heris**	**4.12**	**30**	*e*Pn	**Pg**	**16 41 56.9**	**-2.9**
QSDN	**Sirdan**	**4.23**	**65**	*e*Pn	**Pb**	**16 41 55.0**	**-0.6**
ASAO	**Ashtian**	**4.62**	**91**	*e*Pn	**Pn**	**16 41 55.0**	**+3.9**
KHMZ	**Khomeyn**	**4.70**	**101**	*e*Pn	Pn	16 41 56.7	+4.6
AMIS	**Naft Sefid**	**5.12**	**126**	*e*Pn	**Pn**	**16 42 00.7**	**+3.0**
IPIR	**Pirpir**	**5.78**	**109**	*e*Pn	Pn	16 42 11.2	+4.2
QAMS	**Qamsar**	**5.86**	**98**	*e*Pn	Pn	16 42 13.1	+4.9
IKLH	**Kolahrood**	**6.11**	**102**	*e*Pn	Pn	16 42 16.6	+5.0
KRSH	**Karshahi**	**6.42**	**95**	*e*Pn	Pn	16 42 20.6	+4.8
ISFB	**Sefidab**	**6.46**	**92**	*e*Pn	Pn	16 42 20.5	+4.3
IZEF	**Zefreh**	**6.84**	**104**	*e*Pn	Pn	16 42 25.9	+4.4
NASN	**Na'in**	**7.25**	**103**	*e*Pn	Pn	16 42 32.2	+4.9
IRAM	**Ramesheh**	**7.29**	**112**	*e*Pn	**Pn**	**16 42 31.1**	**+3.4**

IDC 20 16:50:18.5±601.0, 53°.59N×1°.30E, h0km, Error ellipse: s-maj=331.0km s-min=186.6km az=105.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.12**	**116**	I		17 42 30.0	
	baz=308,slow=320,SNR=1.1						
I43RU	**DUBNA INFRASON**	**20.61**	**67**	I		18 57 10.0	
	baz=278,slow=328,SNR=1.5						
I31KZ	**AKTYUBINSK INF**	**34.29**	**72**	I		20 23 50.0	
	baz=297,slow=334,SNR=1.3						

IDC 20 17:04:21.7±773.0, 53°.79N×2°.23E, h0km, Error ellipse: s-maj=392.1km s-min=175.8km az=107.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.72**	**120**	I		17 51 44.5	
	baz=311,slow=321,SNR=1.0						
I43RU	**DUBNA INFRASON**	**20.02**	**67**	I		19 09 50.0	
	baz=279,slow=329,SNR=1.5						
I31KZ	**AKTYUBINSK INF**	**33.70**	**73**	I		20 35 23.8	
	baz=299,slow=333,SNR=0.9						

*UPP **20** 17:06:22.5±0.1, 67°.05N×20°.97E, h0km, ML2.4, Explosion*
*BER **20** 17:06:23.7±2.0, 66°.84N×21°.42E, h0km, ML1.7, Suspected explosion*
*HEL **20** 17:06:23.1±0.1, 67°.05N×20°.94E, h0km, ML2.1, ML2.4(UPP), Explosion*
*IDC **20** 17:06:23.6±1.0, 67°.03N×21°.19E, h0km, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=19.1km s-min=8.4km az=112.0*
*KOLA **20** 17:06:25.1, 67°.15N×20°.78E, h0km, ML2.3*
ISC 20 17:06:22.4±0.7, 67°.05N±0°.02×20°.97E±0°.02, h0km, n52, σ0°93/77, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**295**	P	**Pg**	**17 06 26.1**	**+0.4**
DUNU				S	**Sg**	**17 06 28.1**	**+0.2**
DUNU	**Dundret**	**0.17**	**295**	*i* P	**Pg**	**17 06 26.1**	**+0.4**
DUNU				*i* S	**Sg**	**17 06 28.1**	**+0.2**
MASU	**Masugnsbyn**	**0.57**	**44**	P	**Pg**	**17 06 33.5**	**+0.2**
MASU	**Masugnsbyn**	**0.57**	**44**	*i* P	**Pg**	**17 06 33.5**	**+0.2**
ERTU	**Ertsjaerv**	**0.69**	**135**	P	**Pg**	**17 06 35.5**	**0.0**
ERTU				S	**Sg**	**17 06 44.9**	**+0.4**
ERTU	**Ertsjaerv**	**0.69**	**135**	*i* P	**Pg**	**17 06 35.5**	**0.0**
ERTU				*i* S	**Sg**	**17 06 44.9**	**+0.4**
PAJU	**Pajala**	**0.84**	**91**	P	**Pg**	**17 06 38.2**	**-0.2**
PAJU				S	**Sg**	**17 06 50.1**	**+0.8**
PAJU	**Pajala**	**0.84**	**91**	*i* P	**Pg**	**17 06 38.2**	**-0.2**
PAJU				*i* S	**Sg**	**17 06 50.1**	**+0.8**
HARU	**Harads**	**0.89**	**180**	P	**Pg**	**17 06 39.1**	**-0.2**
HARU	**Harads**	**0.89**	**180**	*i* P	**Pg**	**17 06 39.1**	**-0.2**
KUA	**Kurravaara**	**0.94**	**345**	P	**Pg**	**17 06 39.8**	**-0.6**
KUA	**Kurravaara**	**0.94**	**345**	*e*P	**Pg**	**17 06 39.8**	**-0.6**
SALU	**Saltoluokta**	**1.02**	**290**	P	**Pg**	**17 06 41.4**	**-0.4**
SALU	**Saltoluokta**	**1.02**	**290**	*e*P	**Pg**	**17 06 41.4**	**-0.4**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 06 42.2**	**-0.8**
LANU	**Lannavaara**	**1.08**	**21**	*e*P	**Pg**	**17 06 42.2**	**-0.8**
NIKU	**Nikkaluokta**	**1.11**	**319**	P	**Pg**	**17 06 42.9**	**-0.7**
NIKU	**Nikkaluokta**	**1.11**	**319**	*e*P	**Pg**	**17 06 42.9**	**-0.7**
KLF	**Kolari**	**1.18**	**80**	*e*P	**Pg**	**17 06 44.6**	**-0.4**
KLF				*e*S	**Sg**	**17 07 00.8**	**+0.4**
KOVU	**Salmi**	**1.22**	**346**	P	**Pg**	**17 06 44.9**	**-0.8**
KOVU	**Salmi**	**1.22**	**346**	*e*P	**Pg**	**17 06 44.9**	**-0.8**
KALU	**Kalix**	**1.53**	**140**	P	**Pn**	**17 06 50.5**	**-0.4**
KALU	**Kalix**	**1.53**	**140**	*e*P	**Pn**	**17 06 50.5**	**-0.4**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 06 51.3**	**-0.1**
SJUU	**Sjulsmark**	**1.57**	**170**	*e*P	**Pn**	**17 06 51.3**	**-0.1**
TOF	**Tornio**	**1.66**	**124**	*e*P	**Pn**	**17 06 53.0**	**+0.4**
TOF				*e*S	**Sn**	**17 07 14.5**	**-0.1**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 06 53.2**	**-0.2**
HEF				*e*S	**Sn**	**17 07 15.8**	**-0.1**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 06 53.1**	**-0.2**
HEF				*e*S	**Sn**	**17 07 16.4**	**+0.5**
HEF				MSG		17 07 19.4	
	comp=Z,14nm,0.2s						
KIF	**Kilpisjarvi**	**1.97**	**358**	*e*P	**Pb**	**17 06 58.5**	**-0.5**
KIF	**Kilpisjarvi**	**1.97**	**358**	*e*P	**Pb**	**17 06 58.4**	**-0.5**
KIF				*e*S	**Sb**	**17 07 24.3**	**+0.3**
KTK1	**Kautokeino**	**2.15**	**22**	*e*P	**Pb**	**17 07 01.2**	**-0.9**
KTK1				*e*S	**Sb**	**17 07 28.7**	**-0.6**
KTK1				IAML		17 07 34.7	
	comp=Z,7.5nm,0.2s						
SGF	**Sodankyl**	**2.20**	**77**	*e*PB	**Pn**	**17 07 01.5**	**+1.5**
SGF				*e*SG	**Sb**	**17 07 31.7**	**+1.1**
FAUS	**Fauske**	**2.24**	**281**	*e*P	**Pn**	**17 07 01.6**	**+1.0**
FAUS				*e*S	**Sb**	**17 07 31.9**	**+0.2**
FAUS				IAML		17 07 37.8	
	comp=Z,9.5nm,0.1s						
STEI	**Steigen**	**2.38**	**295**	*e*S	**Sb**	**17 07 37.2**	**+1.5**
STEI				IAML		17 07 43.3	
	comp=Z,4.2nm,0.2s						
JETT	**Jettan, Norway**	**2.53**	**356**	*e*P	**Pb**	**17 07 07.5**	**-1.1**
JETT				*e*S	**Sb**	**17 07 40.2**	**0.0**
JETT				IAML		17 07 48.2	
	comp=Z,14nm,0.2s						
TRO	**Tromso**	**2.71**	**345**	*e*P	**Pn**	**17 07 08.2**	**+1.2**
TRO				*e*S	**Sb**	**17 07 43.6**	**-1.6**
TRO				IAML		17 07 50.6	
	comp=Z,5.8nm,0.2s						
MOR8	**Moi Rana**	**2.75**	**254**	*e*P	**Pn**	**17 07 08.4**	**+0.7**
MOR8				*e*		17 07 43.2	
MOR8				IAML		17 07 47.7	
	comp=Z,4.4nm,0.2s						
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 07 11.9**	**+0.6**
ARA0				*e*S	**Sn**	**17 07 48.5**	**+0.4**
ARA0				IAML		17 07 56.9	
	comp=Z,4.1nm,0.2s						
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**17 07 11.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=211,slow=14,SNR=43						
ARCES				Sn	**Sn**	**17 07 50.5**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=211,slow=21,SNR=8.3						
	comp=Z,0.8nm,0.2s						
ARCES	**ARCESS Array B**	**3.01**	**32**	P	**Pn**	**17 07 11.8**	**+0.5**
ARCES				S	**Sn**	**17 07 48.1**	**+0.1**
OUF	**Merijarvi**	**3.11**	**148**	*e*P	**Pn**	**17 07 13.4**	**+0.9**
OUF				*e*SG	**Sg**	**17 08 01.5**	**-0.6**
OUF				MSG		17 08 07.0	
	comp=Z,3.4nm,0.2s						
KONS	**Konsvik**	**3.16**	**264**	*e*P	**Pn**	**17 07 15.0**	**+1.7**
STOK	**Stokkvaagen**	**3.24**	**261**	*e*P	**Pn**	**17 07 15.0**	**+0.6**
KEV	**Kevo**	**3.52**	**37**	*e*P	**Pn**	**17 07 18.3**	**+0.2**
KEV				*e*S	**Sn**	**17 07 59.6**	**-0.8**
KU6	**Riekki**	**3.71**	**102**	*e*P	**Pn**	**17 07 21.5**	**+0.6**
KU6				*e*S	**Sn**	**17 08 07.1**	**+1.9**
KU6				MSG		17 08 21.5	
	comp=Z,6.3nm,0.2s						
HAMF	**Hammerfest**	**3.74**	**14**	*e*P	**Pn**	**17 07 23.3**	**+2.1**
NSS	**Namsos**	**4.49**	**240**	*e*P	**Pn**	**17 07 32.7**	**+1.2**
APA0	**Apatity Array**	**4.69**	**78**	S	**Sn**	**17 08 29.5**	**+0.3**
PRVG	**Vayda Guba**	**4.95**	**52**	P	**Pn**	**17 07 40.5**	**+2.7**
PRVG				S	**Sn**	**17 08 35.9**	**+0.3**
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**17 07 54.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=9.0						
FINES				Sn	**Sn**	**17 09 02.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=6.5						
	comp=Z,0.7nm,0.7s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**17 08 12.2**	**+0.9**
	baz=7.2,slow=18,SNR=1.5						
	comp=Z,0.3nm,0.6s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**17 08 13.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=28,slow=15,SNR=6.3						
HFS				Sn	**Sn**	**17 09 39.2**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=36,slow=25,SNR=2.1						
	comp=Z,0.6nm,0.6s						

*NEIC **20** 17:12:12.1±1.2, 46°.66N±0°.02×147°.1E±0°.2, h332km±9km, mb4.0/49, Error ellipse: s-maj=19.1km s-min=3.6km az=90.0*
*IDC **20** 17:12:15.0±2.9, 46°.95N×147°.09E, h342km±30km, mb3.1/12, mbtmp3.9/17, Error ellipse: s-maj=20.1km s-min=14.7km az=125.0*
ISC 20 17:12:14.1±0.7, 46°.76N±0°.08×147°.1E±0°.1, h346km, n72, σ1°12/71, mb3.8/34, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**2.97**	**275**	Pn	**Pn**	**17 13 10.6**	**-2.3**
ERM	**Erimo**	**5.51**	**212**	Pn	**Pn**	**17 13 35.8**	**-3.5**
JTM	**Tenmabayashi**	**7.38**	**218**	Pn	Pn	17 13 57.0	-3.9
JMM	**Marumori**	**10.03**	**210**	P	**Pn**	**17 14 30.9**	**-1.4**
KLR	**Kul'dur**	**10.57**	**289**	P	**Pn**	**17 14 39.0**	**+0.3**
	0.8nm,0.4s,baz=84,slow=10,SNR=2.2						
MJAR	**Matsushiro Arr**	**12.16**	**216**	P	**P**	**17 14 58.4**	**+0.6**
	1.3nm,0.4s,baz=21,slow=11,SNR=5.8						
MA2	**Magadan**	**13.03**	**8**	P	**P**	**17 15 05.6**	**-1.3**
	5.9nm,0.8s,baz=210,slow=16,SNR=1.5						
SEY	**Seymchan**	**16.49**	**9**	P	**P**	**17 15 44.5**	**-0.1**
	1.4nm,0.4s,baz=172,slow=11,SNR=8.9						
YAK	**Yakutsk**	**18.25**	**333**	P	**P**	**17 16 03.2**	**-0.2**
	2.8nm,0.5s,baz=109,slow=2.0,SNR=6.3						
YAK	**Yakutsk**	**18.25**	**333**	P	**P**	**17 16 03.5**	**0.0**
YAK				IAmb	IAmb	17 16 04.4	
	comp=Z,9.4nm,0.9s						
TIXI	**Tiksi**	**26.41**	**347**	P	**P**	**17 17 18.5**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=90,slow=24,SNR=1.8						
	comp=Z,0.3nm,0.3s						
TPUB	**Ta-pu**	**31.62**	**231**	P	**P**	**17 18 04.3**	**-1.8**
N18K	**Kilae Creek**	**35.29**	**46**	P	**P**	**17 18 36.0**	**-1.0**
N18K				IAmb	IAmb	17 19 08.5	
	comp=Z,9.9nm,1.1s						
J20K	**Nowinta River**	**36.01**	**40**	P	**P**	**17 18 43.0**	**0.0**
J20K				IAmb	IAmb	17 18 46.2	
	comp=Z,12nm,1.5s						
IMAR	**Indian Mountai**	**36.22**	**36**

comp=Z,1.7nm,0.5s,baz=36,slow=7.9,SNR=13
comp=Z,1.7nm,0.5s
NC405 NORSAR Array S 66.59 338 P **P 17 22 27.9 +0.3**
NC204 NORSAR Array S 66.69 339 P **P 17 22 28.6 +0.4**
NB201 NORSAR Array S 66.75 338 P **P 17 22 29.0 +0.4**
NB2 NORSAR Subarra 66.78 338 P **P 17 22 28.9 +0.1**
comp=Z,0.6nm,0.4s,baz=28,slow=6.5
NOA NORSAR Array B 66.78 338 P **P 17 22 29.0 +0.2**
comp=Z,0.7nm,0.5s,baz=31,slow=6.7,SNR=5.5
comp=Z,0.7nm,0.5s
HFS Hagfors 66.90 337 P **P 17 22 29.4 -0.1**
comp=Z,1.3nm,0.3s,baz=59,slow=5.7,SNR=13
comp=Z,1.3nm,0.3s
NBO00 NORSAR Array S 66.90 339 P **P 17 22 29.6 +0.1**
WRA Warramunga Arr 67.38 193 P **P 17 22 35.2 +2.3**
comp=Z,0.4nm,1.2s,baz=8.4,slow=6.5,SNR=1.3
comp=Z,0.4nm,1.2s
AKASG Malin Array Be 69.14 323 P **P 17 22 43.8 +0.4**
comp=Z,0.6nm,0.4s,baz=40,slow=6.7,SNR=5.1
comp=Z,0.6nm,0.4s
ASAR Alice Springs 71.10 193 P **P 17 22 58.7 +3.2**
comp=Z,0.4nm,1.0s,baz=10,slow=6.6,SNR=1.9
comp=Z,0.4nm,1.0s
BUR08 Bucovina Ar. S 73.17 323 P **P 17 23 08.6 +1.0**
BUR08 IAmb IAmb 17 23 27.1
comp=Z,3.1nm,1.4s
BURAR Bucovina Array 73.19 323 P **P 17 23 08.1 +0.4**

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*IDC **20** 17:15:18.2±0.9, 85°.66N×84°.08E, h0km, mb3.6/9, mbtmp3.7/13, ML3.6/3, MS3.3/14, Error ellipse: s-maj=25.4km s-min=18.2km az=148.0*

ISC 20 17:15:20.1±0.9, 85°.5N±0°.1×81°.82E±0°.08, h10km, n23, σ2§30/17, mb3.5/9, MS3.2/12, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI	**Zemlya Franca-**	**6.07**	**239**	*e*P	**Pn**	**17 16 50.1**	**+0.3**
ZFI				*e*S	**Sn**	**17 17 54.7**	**-4.4**
27nm,1.7s							
OMEGA	**Omega**	**6.09**	**238**	*e*P	**Pn**	**17 16 50.1**	**+0.2**
OMEGA				*e*S	**Sn**	**17 17 54.6**	**-5.0**
SPITS	**Spitsbergen Ar**	**10.82**	**267**	Pn	**Pn**	**17 17 54.3**	**-0.5**
baz=67,slow=24							
5.2nm,0.8s							
TIXI	**Tiksi**	**15.73**	**121**	Pn	**Pn**	**17 18 59.8**	**-1.6**
0.2nm,0.3s,baz=270,slow=20,SNR=1.1							
TIXI				LR	LR	17 24 20.9	
comp=Z,52nm,19.2s,baz=261,slow=35							
NRIK	**Noril'sk**	**16.31**	**173**	Pn	**Pn**	**17 19 08.2**	**-0.5**
0.3nm,0.3s,baz=38,slow=9.3,SNR=4.0							
4.7nm,0.7s							
ARCES	**ARCESS Array B**	**18.46**	**248**	P	**P**	**17 19 35.7**	**+0.2**
0.1nm,0.3s,baz=21,slow=10,SNR=7.1							
ARCES				LR	LR	17 27 11.2	
comp=Z,113nm,19.2s,baz=330,slow=38							
2.7nm,0.9s							
INK	**Inuvik**	**25.63**	**30**	P	**P**	**17 20 46.7**	**-2.4**
5.7nm,0.9s,baz=11,slow=10,SNR=4.4							
INK				LR	LR	17 32 12.5	
comp=Z,35nm,18.1s,baz=301,slow=40							
5.7nm,0.9s							
FINES	**FINESS Array B**	**26.42**	**243**	P	**P**	**17 20 57.6**	**+1.2**
0.6nm,0.6s,baz=359,slow=11,SNR=3.7							
FINES				LR	LR	17 31 28.9	
comp=Z,74nm,19.8s,baz=338,slow=36							
0.6nm,0.6s							
KIRV	**Kirov**	**27.88**	**217**	LR	LR	17 33 25.4	
comp=Z,79nm,18.9s,baz=7.4,slow=39							
NOA	**NORSAR Array B**	**27.92**	**259**	LR	LR	17 32 09.8	
comp=Z,28nm,19.1s,baz=300,slow=36							
ILAR	**Eielson Array**	**28.54**	**42**	P	**P**	**17 21 12.8**	**-2.5**
0.7nm,1.0s,baz=354,slow=7.4,SNR=5.7							
ILAR				LR	LR	17 33 41.7	
comp=Z,38nm,18.0s,baz=98,slow=39							
0.7nm,1.0s							
HFS	**Hagfors**	**28.63**	**256**	LR	LR	17 31 50.3	
comp=Z,97nm,20.1s,baz=310,slow=34							
BELG	**Belogornoye**	**34.15**	**218**	LR	LR	17 38 50.8	
comp=Z,50nm,18.6s,baz=129,slow=41							
KDAK	**Kodiak Island**	**35.19**	**49**	LR	LR	17 36 47.4	
comp=Z,23nm,19.4s,baz=21,slow=37							
AKASG	**Malin Array Be**	**36.90**	**237**	P	**P**	**17 22 29.8**	**+1.5**
0.5nm,0.6s,baz=5.3,slow=8.8,SNR=2.7							
AKASG				LR	LR	17 37 48.9	
comp=Z,39nm,18.0s,baz=354,slow=36							
0.5nm,0.6s							
SHEM	**Shemya Is, Ala**	**37.86**	**82**	LR	LR	17 38 29.8	
comp=Z,24nm,18.8s,baz=259,slow=37							
SONM	**Songino Array**	**38.30**	**153**	P	**P**	**17 22 40.5**	**+0.1**
0.8nm,1.0s,baz=358,slow=13,SNR=3.5							
0.8nm,1.0s							
MKAR	**Makanchi Array**	**38.89**	**179**	P	**P**	**17 22 46.1**	**+0.8**
0.6nm,0.8s,baz=357,slow=5.8,SNR=4.7							
0.6nm,0.8s							
VRAC	**Vranov**	**39.17**	**250**	LR	LR	17 39 02.9	
comp=Z,98nm,18.1s,baz=328,slow=36							
GERES	**GERESS Array B**	**39.85**	**253**	P	**P**	**17 22 55.7**	**+2.4**
0.1nm,0.2s,baz=360,slow=13,SNR=2.3							
0.1nm,0.2s							
KBZ	**Khabaz**	**43.03**	**222**	LR	LR	17 44 02.0	
comp=Z,40nm,18.6s,baz=28,slow=40							
BRTR	**Keskin Array B**	**47.55**	**231**	P	**P**	**17 23 57.1**	**+1.8**
0.3nm,0.5s,baz=1.4,slow=5.8,SNR=2.2							
0.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.20**	**261**	P	**P**	**17 27 09.2**	**+1.0**
0.8nm,1.0s,baz=330,slow=5.0,SNR=2.7							
0.8nm,1.0s							

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*IDC **20** 17:28:21.7±2.6, 55°.94N×113°.88E, h0km, mb3.3/2, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=51.4km s-min=35.4km az=151.0*

*BYKL **20** 17:28:24.6±0.2, 55°.99N×113°.67E, FELT I=II MSK at Severomuisk*

*MOS **20** 17:28:24.2±2.0, 55°.86N×113°.71E, h11km, mb3.9/3, Error ellipse: s-maj=13.1km s-min=8.0km az=70.8*

MOS Felt (II) at Severomuisk.

ISC 20 17:28:23.8±0.6, 55°.90N±0°.02×113°.54E±0°.02, h10km, n52, σ2§51/102, mb3.6/3, 5C-6D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.42**	**173**	⇑*i*PG	**Pn**	**17 28 34.0**	**-2.0**
UKT				*e*		17 28 41.6	
UKT				pmax	pmax		
comp=Z,322nm,0.1s							
UKT				smax	smax		
comp=N,2μm,0.1s							
UKT	**Uakit**	**0.42**	**173**	⇑*i*Pg	**Pn**	**17 28 34.0**	**-2.0**
UKT				*e*Sg	**Sb**	**17 28 41.3**	**+1.6**
UKT				Pmax			
comp=N,938nm,0.2s							
UKT				Smax			
comp=N,2μm,0.2s							
YOA	**Uoyan**	**1.05**	**284**	*e*PG	**Pn**	**17 28 44.6**	**0.0**
YOA				*e*		17 28 59.7	
YOA				pmax	pmax		
comp=Z,1μm,0.2s							
YOA				smax	smax		
comp=E,9μm,0.5s							
YOA	**Uoyan**	**1.05**	**284**	*e*Pg	**Pn**	**17 28 44.6**	**0.0**
YOA				*e*Sg	**Sn**	**17 29 00.0**	**+0.7**
YOA				*e*Sb	**Sb**	**17 29 02.9**	**+5.1**
YOA				Pmax			
comp=E,1μm,0.2s							
YOA				max			
comp=E,9μm,0.5s							
KMO	**Kumora**	**1.32**	**270**	⇑*i*PN	**Pg**	**17 28 49.4**	**+0.3**
KMO				*e*		17 29 06.8	
KMO				pmax	pmax		
comp=Z,381nm,0.3s							
KMO				smax	smax		
comp=N,4μm,1.1s							
KMO	**Kumora**	**1.32**	**270**	⇑*i*Pg	**Pg**	**17 28 49.4**	**+0.3**
KMO				*e*Sg	**Sg**	**17 29 07.8**	**+1.5**
KMO				Pmax			
comp=N,459nm,0.3s							
KMO				Smax			
comp=N,4μm,1.1s							
NLYR	**Nelyaty**	**1.34**	**63**	*e*PN	**Pn**	**17 28 47.3**	**-1.4**
NLYR				*e*		17 29 03.8	
NLYR				pmax	pmax		
comp=Z,289nm,0.6s							
NLYR				smax	smax		
comp=E,1μm,1.2s							
NLYR	**Nelyaty**	**1.34**	**63**	*e*Pg	**Pn**	**17 28 47.0**	**-1.7**
NLYR				*e*		17 28 52.4	
NLYR				*e*		17 28 55.1	
NLYR				*e*Sg	**Sb**	**17 29 04.2**	**-2.2**
NLYR				Pmax			
comp=E,274nm,0.5s							
NLYR				Smax			
comp=E,1μm,1.0s							
BOD	**Bodaibo**	**1.94**	**7**	*e*PN	**Pn**	**17 28 56.2**	**-0.6**
BOD				*e*		17 29 21.0	
BOD				pmax	pmax		
comp=Z,297nm,0.3s							
BOD				smax	smax		
comp=E,2μm,0.3s							
BOD	**Bodaibo**	**1.94**	**7**	*e*Pn	**Pn**	**17 28 55.5**	**-1.3**
BOD				⇑*i*Pg	**Pb**	**17 28 56.8**	**-2.4**
BOD				*e*Sg	**Sb**	**17 29 21.3**	**-2.1**
BOD				Pmax			
comp=E,298nm,0.3s							
BOD				Smax			
comp=E,2μm,0.1s							
NIZ	**Nizh Angarsk**	**2.26**	**268**	*e*PN	**Pb**	**17 29 03.1**	**-1.6**
NIZ				*e*		17 29 06.3	
NIZ				*e*S	**Sb**	**17 29 32.8**	**+0.1**
NIZ				*e*		17 29 37.5	
NIZ				pmax	pmax		
comp=Z,85nm,0.7s							
NIZ				smax	smax		
comp=N,611nm,0.3s							
NIZ	**Nizh Angarsk**	**2.26**	**268**	*e*Pn	**Pb**	**17 29 03.1**	**-1.6**
NIZ				*e*Pg	**Pg**	**17 29 06.3**	**-0.8**
NIZ				*e*Sn	**Sb**	**17 29 32.9**	**+0.2**
NIZ				*e*Sg	**Sg**	**17 29 37.3**	**+0.9**
NIZ				Pmax			
comp=N,84nm,0.4s							
NIZ				Smax			
comp=N,611nm,0.3s							
CRS	**Chara**	**2.81**	**67**	*e*PN	**Pb**	**17 29 14.1**	**0.0**
CRS				*e*		17 29 49.4	
CRS				pmax	pmax		
comp=Z,192nm,0.6s							
CRS				smax	smax		
comp=E,491nm,0.6s							
CRS	**Chara**	**2.81**	**67**	*e*Pn	**Pn**	**17 29 07.9**	**-0.9**
CRS				*e*Pg	**Pb**	**17 29 14.1**	**0.0**
CRS				*e*Sg	**Sb**	**17 29 49.0**	**+0.4**
CRS				Pmax			
comp=E,193nm,0.5s							
CRS				Smax			
comp=E,491nm,0.4s							
SYVR	**Suvo**	**3.04**	**224**	*e*PN	**Pn**	**17 29 13.8**	**+1.8**
SYVR				*e*		17 29 23.2	
SYVR				*e*		17 30 01.6	
SYVR				pmax	pmax		
comp=Z,51nm,0.6s							
SYVR				smax	smax		
comp=E,296nm,0.9s							
SYVR	**Suvo**	**3.04**	**224**	*e*Pn	**Pn**	**17 29 13.9**	**+1.9**
SYVR				*e*Pg	**Pg**	**17 29 21.3**	**-0.8**
SYVR				*e*PgPg	**PbPb**	**17 29 23.3**	**+2.1**
SYVR				*e*		17 29 30.9	
SYVR				*e*Sn	**Sn**	**17 29 49.8**	**+1.3**
SYVR				*e*Sg	**Sg**	**17 30 01.7**	**+0.2**
SYVR				*e*SgSg	**SbSb**	**17 30 07.4**	**+7.0**
SYVR				max			
comp=E,38nm,0.4s							
SYVR				Smax			
comp=E,333nm,1.1s							
VTMR	**Vitim**	**3.59**	**352**	*e*Pn	**Pn**	**17 29 17.9**	**-1.5**
VTMR				*e*		17 29 19.0	
VTMR				*e*Pg	**Pb**	**17 29 28.1**	**+0.8**
VTMR				*e*Sn	**Sn**	**17 30 00.8**	**-1.0**
VTMR				*e*Sg	**Sb**	**17 30 12.6**	**+1.8**
KHNR	**Khani**	**3.72**	**71**	*e*Pn	**Pn**	**17 29 20.1**	**-1.2**
KHNR				*e*Pg	**Pb**	**17 29 29.4**	**-0.2**
KHNR				*e*Sg	**Sb**	**17 30 16.8**	**+2.1**
MXMB	**Maximikha**	**3.84**	**229**	*e*Pn	**Pn**	**17 29 24.5**	**+1.5**
MXMB				*e*Pg	**Pg**	**17 29 34.5**	**-2.9**
MXMB				*e*Sn	**Sn**	**17 30 09.7**	**+1.5**
MXMB				*e*Sg	**Sg**	**17 30 26.2**	**-1.0**
CIT	**Chita**	**3.89**	**180**	*e*PN	**Pn**	**17 29 25.8**	**+2.1**
CIT				*e*		17 29 36.4	
CIT				*e*S	**Sn**	**17 30 12.5**	**+3.1**
CIT				*e*		17 30 28.1	
CIT				pmax	pmax		
comp=Z,44nm,0.2s							
CIT				smax	smax		
comp=E,306nm,1.2s							
CIT	**Chita**	**3.89**	**180**	*e*Pg	**Pg**	**17 29 36.1**	**-2.2**
CIT				*e*Sn	**Sn**	**17 30 11.8**	**+2.4**
CIT				*e*Sg	**Sg**	**17 30 28.1**	**-0.5**
CIT				Pmax			
comp=E,44nm,0.2s							
CIT				Smax			
comp=E,553nm,0.2s							
TUP	**Tupik**	**3.96**	**109**	*e*PN	**Pn**	**17 29 24.0**	**-0.6**
TUP				*e*		17 29 34.1	
TUP				*e*S	**Sn**	**17 30 10.1**	**-1.1**
TUP				*e*		17 30 26.2	
TUP				pmax	pmax		
comp=Z,31nm,0.3s							
TUP				smax	smax		
comp=E,539nm,0.4s							
TUP	**Tupik**	**3.96**	**109**	*e*Pn	**Pn**	**17 29 24.1**	**-0.6**
TUP				*e*		17 29 31.3	
TUP				*e*Pg	**Pb**	**17 29 35.2**	**+1.5**
TUP				*e*		17 30 08.7	
TUP				*e*Sg	**Sg**	**17 30 26.4**	**-4.6**
TUP				*e*		17 30 39.6	
TUP				Pmax			
comp=E,45nm,0.5s							
TUP				Smax			
comp=E,699nm,0.6s							
OGRR	**Ongureny**	**4.12**	**239**	⇓*i*PN	**Pn**	**17 29 30.5**	**+3.6**
OGRR				*e*		17 29 41.4	
OGRR				*e*		17 30 35.7	
OGRR				pmax	pmax		
comp=Z,41nm,1.1s							
OGRR				smax	smax		
comp=N,140nm,1.7s							
OGRR	**Ongureny**	**4.12**	**239**	*e*Pn	**Pn**	**17 29 30.4**	**+3.6**
OGRR				*e*Pg	**Pg**	**17 29 41.4**	**-1.3**
OGRR				*e*Sg	**Sg**	**17 30 35.4**	**-0.7**
OGRR				Pmax			
comp=N,41nm,0.7s							
OGRR				Smax			
comp=N,116nm,1.0s							
KELR	**Kotokel**	**4.49**	**228**	*e*Pn	**Pn**	**17 29 33.8**	**+2.0**
KELR				*e*Pg	**Pg**	**17 29 47.5**	**-2.2**
KELR				*e*Sg	**Sg**	**17 30 47.6**	**-0.2**
YKLR	**Yuktali**	**4.58**	**78**	*e*Pg	**Pb**	**17 29 45.8**	**+1.6**
YKLR				*e*Sg	**Sb**	**17 30 43.1**	**+3.8**
TRG	**Tyrgan**	**5.26**	**236**	*e*PN	**Pn**	**17 29 44.9**	**+2.5**
TRG				*e*		17 30 00.8	
TRG				*e*S	**Sn**	**17 30 46.1**	**+3.1**
TRG				*e*		17 31 10.4	
TRG				pmax	pmax		
comp=Z,15nm,0.7s							
TRG				smax	smax		
comp=E,58nm,0.5s							
TRG	**Tyrgan**	**5.26**	**236**	*e*Pn	**Pn**	**17 29 44.3**	**+1.9**
TRG				*e*Pg	**Pg**	**17 30 01.0**	**-3.4**
TRG				*e*Sg	**Sg**	**17 31 10.2**	**-2.3**
TRG				Pmax			
comp=E,6.0nm,0.3s							
TRG				Smax			
comp=E,58nm,0.5s							
UUDB	**Ulan-Yde**	**5.33**	**223**	*e*Pn	**Pn**	**17 29 45.4**	**+1.9**
UUDB				*e*Pg	**Pg**	**17 30 02.0**	**-3.9**
UUDB				*e*Sg	**Sg**	**17 31 13.8**	**-1.1**
UUDB				Pmax			
comp=E,45nm,1.2s							
UUDB				Smax			
comp=E,286nm,0.8s							
FFNB	**Fofonovo**	**5.56**	**229**	*e*Sg	**Sg**	**17 31 20.6**	**-1.6**
BGT	**Bolshoye Golou**	**6.16**	**235**	*e*Sg	**Sg**	**17 31 38.0**	**-3.4**
BGT				Smax			
comp=E,80nm,0.9s							
KPC	**Khapcheranga**	**6.25**	**187**	*e*Pn	**Pn**	**17 29 58.9**	**+2.8**
KPC				*e*Pg	**Pg**	**17 30 19.0**	**-4.4**
KPC				*e*Sn	**Sn**	**17 31 09.6**	**+2.1**
KPC				*e*Sg	**Sg**	**17 31 40.9**	**-3.4**
KPC				Pmax			
comp=E,3.0nm,0.4s							
KPC				Smax			
comp=E,164nm,0.8s							
CLNS	**Chul'man**	**6.38**	**77**	*e*Pn	**Pn**	**17 29 57.2**	**-0.6**
CLNS				*e*Pg	**Pb**	**17 30 17.5**	**+2.7**
CLNS				*e*Sn	**Sn**	**17 31 06.4**	**-4.2**
CLNS				*e*Sg	**Sb**	**17 31 38.5**	**+7.4**
LSTR	**Listvyanka**	**6.54**	**235**	*e*Sg	**Sg**	**17 31 51.8**	**-1.9**
LSTR				Smax			
comp=E,74nm,1.7s							
IRK	**Irkutsk**	**6.57**	**240**	*e*Sg	**Sg**	**17 31 50.4**	**-4.2**
IRK				Smax			
comp=E,137nm,0.6s							
IVK	**Ivanovka**	**6.78**	**237**	*e*Sg	**Sg**	**17 31 58.4**	**-3.0**
IVK				Smax			
comp=E,47nm,1.0s							
TLY	**Talaya**	**7.23**	**238**	*e*Sg	**Sg**	**17 32 11.3**	**-4.3**
TLY				Smax			
comp=E,40nm,1.0s							
ARS	**Arshan**	**7.68**	**243**	*e*Pg	Pg	17 30 44.8	-6.0
ARS				*e*Sg	**Sg**	**17 32 25.3**	**-4.8**
ARS				Pmax			
comp=E,6.0nm,0.1s							
ARS				Smax			
comp=E,208nm,1.0s							
ZEA	**Zeya**	**8.21**	**100**	⇓*e*PN	**Pn**	**17 30 20.7**	**-2.2**
MOY	**Mondy**	**8.55**	**245**	*e*Pn	Pn	17 30 31.7	+4.0
MOY				*e*Pg	Pg	17 31 01.4	-6.1
MOY				*e*Sg	**Sg**	**17 32 53.0**	**-5.1**
MOY				Pmax			
comp=E,16nm,0.9s							
MOY				Smax			
comp=E,77nm,1.3s							
ORL	**Orlik**	**8.72**	**253**	*e*Pn	**Pn**	**17 30 31.3**	**+1.3**
ORL				*e*Sn	**Sn**	**17 32 09.3**	**+0.9**
ORL				*e*Sg	**Sg**	**17 32 57.7**	**-5.8**
ORL				Smax			
comp=E,48nm,1.4s							
ULN	**Ulaanbaatar**	**8.99**	**209**	⇓*e*P	**Pn**	**17 30 33.4**	**-0.3**
SONM	**Songino Array**	**9.21**	**212**	Pn	**Pn**	**17 30 38.4**	**+1.7**
comp=E,0.1nm,0.3s,baz=23,slow=14,SNR=4.2							
SONM				Pg		17 31 13.1	
comp=E,0.3nm,0.3s,baz=23,slow=17,SNR=5.1							
SONM				Lg	Lg	17 33 16.5	
comp=E,1.8nm,0.3s,baz=23,slow=28,SNR=10							
comp=E,0.4nm,0.5s							
KLR	**Kul'dur**	**12.91**	**114**	⇓*e*P	**Pn**	**17 31 27.3**	**+0.1**
KLR				pmax	pmax		
comp=Z,20nm,2.0s							
TIXI	**Tiksi**	**17.09**	**17**	⇓*e*P	**Pn**	**17 32 21.6**	**-0.9**
TIXI				pmax	pmax		
comp=Z,14nm,2.6s							
MK31	**Makanchi Array**	**21.38**	**258**	⇓*e*P	**P**	**17 33 11.9**	**+0.6**
MKAR	**Makanchi Array**	**21.38**	**258**	P	**P**	**17 33 12.3**	**+1.1**
comp=Z,0.6nm,0.7s,baz=58,slow=10,SNR=5.4							
comp=Z,0.6nm,0.7s							
MKAR	**Makanchi Array**	**21.38**	**258**	*i* P	**P**	**17 33 15.8**	**+4.5**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.9s							
BILL	**Bilibino**	**26.63**	**42**	*e*P	**P**	**17 34 02.8**	**+0.7**
BILL				pmax	pmax		
comp=Z,6.0nm,1.1s							
WRA	**Warramunga Arr**	**77.58**	**160**	P	**P**	**17 40 19.1**	**-0.7**
comp=Z,0.3nm,0.6s,baz=353,slow=6.7,SNR=5.1							
comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**77.58**	**160**	*i* P	**P**	**17 40 18.2**	**-1.6**
WRA				pmax	pmax		
comp=Z,1.0nm,1.0s							

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*NEIC **20** 17:37:55.5±1.4, 37°.14S±0°.04×179°.7E±0°.1, h10km±2km, mb4.3/11, Error ellipse: s-maj=18.9km s-min=5.9km az=84.0*

*NOU **20** 17:38:01.6, 37°.13S×179°.01E, h9km, MLv3.6/6, Off E. Coast of N. Island, N.Z.*

*IDC **20** 17:38:02.3±3.1, 36°.81S×178°.38E, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=64.5km s-min=28.7km az=108.0*

*WEL **20** 17:38:02.1±1.3, 37°S±8°×17°9E±1°0, h14km±6km, M3.5/12, ML3.8/12, MLv3.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=124.2*

ISC 20 17:37:59.3±2.2, 37°.20S±0°.06×179°.24E±0°.08, h15km±10km, n106, σ1§23/109, mb4.3/9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.83**	**244**		**Pg**	**17 38 15.2**	**-0.2**
MXZ	**Matakaoa Point**	**0.83**	**244**	P	**Pg**	**17 38 15.3**	**-0.1**
MXZ				S	**Sg**	**17 38 24.4**	**-1.8**
MXZ	**Matakaoa Point**	**0.83**	**244**	P	**Pg**	**17 38 15.5**	**+0.1**
WMGZ	**Waiomatatini S**	**0.90**	**227**	P	**Pb**	**17 38 18.8**	**+2.2**
WMGZ				S	**Sb**	**17 38 31.0**	**+2.5**
PKGZ	**Pakihiroa**	**1.15**	**233**	P	**Pg**	**17 38 21.9**	**+0.4**
PKGZ				S	**Sg**	**17 38 36.4**	**-0.2**
PUZ	**Puketiti**	**1.17**	**222**	P	**Pb**	**17 38 22.7**	**+1.5**
PUZ				S	**Sg**	**17 38 37.6**	**+0.5**
HAZ	**Te Kaha**	**1.29**	**244**	P	**Pb**	**17 38 22.2**	**-1.0**
HAZ				S	**Sg**	**17 38 39.9**	**-0.9**
TWGZ	**Tauwhareparae**	**1.40**	**225**	P	**Pn**	**17 38 25.9**	**+1.6**
TWGZ				S	**Sb**	**17 38 44.0**	**+1.2**
RUGZ	**Raukumara Rang**	**1.46**	**238**	P	**Pn**	**17 38 26.4**	**+1.1**
RUGZ				S	**Sb**	**17 38 44.3**	**-0.3**
TKGZ	**Te Karaka**	**1.66**	**221**	P	**Pn**	**17 38 29.4**	**+1.5**
TKGZ				S	**Sn**	**17 38 49.3**	**+0.4**
WIZ	**White Island**	**1.67**	**258**	P	**Pn**	**17 38 28.5**	**+0.5**
MWZ	**Matawai**	**1.77**	**230**	P	**Pn**	**17 38 30.6**	**+1.2**
MWZ				S	**Sn**	**17 38 51.5**	**-0.2**
RIGZ	**Rimuhau**	**1.90**	**218**	P	**Pn**	**17 38 32.6**	**+1.4**
WHRZ	**Whale Island**	**1.92**	**249**	P	**Pn**	**17 38 32.5**	**+1.1**
RAGZ	**Rawiri**	**1.94**	**228**	P	**Pn**	**17 38 33.1**	**+1.3**
URZ	**Urewera**	**1.99**	**237**	Pn	**Pn**	**17 38 33.5**	**+1.0**
34nm,0.3s,baz=350,slow=3.8,SNR=170							
URZ				Sn	**Sn**	**17 38 56.4**	**-0.8**
29nm,0.3s,baz=344,slow=23,SNR=26							
URZ	**Urewera**	**1.99**	**237**	P	**Pn**	**17 38 33.6**	**+1.1**
URZ	**Urewera**	**1.99**	**237**	P	**Pn**	**17 38 33.8**	**+1.3**
SNGZ	**Shannon Statio**	**2.18**	**223**	P	**Pn**	**17 38 36.3**	**+1.2**
MARZ	**Manawahe**	**2.18**	**248**	P	**Pn**	**17 38 36.1**	**+0.9**
KNZ	**Kokohu**	**2.20**	**214**	P	**Pn**	**17 38 35.7**	**+0.4**
MHGZ	**Mahia Peninsul**	**2.21**	**208**	P	**Pn**	**17 38 37.0**	**+1.4**
OPRZ	**Ohinepanea**	**2.23**	**253**	P	**Pn**	**17 38 36.6**	**+0.8**
RTZ	**Ruatahuna**	**2.28**	**231**	P	**Pn**	**17 38 37.7**	**+1.2**
MYRZ	**Mayor Island**	**2.40**	**267**	P	**Pn**	**17 38 38.3**	**+0.3**
TARZ	**Mount Tarawera**	**2.40**	**244**	P	**Pn**	**17 38 39.7**	**+1.5**
RAHZ	**Arahi**	**2.41**	**224**	P	**Pn**	**17 38 39.6**	**+1.4**
WHHZ	**Waihua**	**2.45**	**220**	P	**Pn**	**17 38 40.0**	**+1.2**
MTHZ	**Maungataniwha**	**2.51**	**228**	P	**Pn**	**17 38 40.9**	**+1.2**
PRRZ	**Plateau Road**	**2.60**	**239**	P	**Pn**	**17 38 41.6**	**+0.7**
NMHZ	**Naumai**	**2.69**	**225**	P	**Pn**	**17 38 43.4**	**+1.2**
ARHZ	**Aropaoanui**	**2.71**	**220**	P	**Pn**	**17 38 43.1**	**+0.7**
MRHZ	**Matea Rd**	**2.76**	**233**	P	**Pn**	**17 38 44.2**	**+1.1**
KUZ	**Kuaotunu**	**2.86**	**278**	P	**Pn**	**17 38 43.3**	**-1.1**
KUZ	**Kuaotunu**	**2.86**	**278**	P	**Pn**	**17 38 43.3**	**-1.1**
BKZ	**Black Stump Fm**	**2.92**	**227**		**Pn**	**17 38 45.6**	**+0.3**
BKZ	**Black Stump Fm**	**2.92**	**227**	P	**Pn**	**17 38 45.9**	**+0.6**
BKZ	**Black Stump Fm**	**2.92**	**227**	P	**Pn**	**17 38 46.6**	**+1.3**
CKHZ	**Cape Kidnapper**	**2.98**	**214**	P	**Pn**	**17 38 46.0**	**-0.1**
TOZ	**Tahuroa Road**	**3.02**	**259**	P	**Pn**	**17 38 46.

PKVZ Pokaka 3.71 235 P **Pn 17 38 57.1 +1.0**
HIZ Hauiti 3.71 248 Pn **Pn 17 38 57.8 +1.8**
HIZ Hauiti 3.71 248 P **Pn 17 38 57.9 +1.8**
HIZ Hauiti 3.71 248 P **Pn 17 38 58.0 +1.9**
DVHZ Dannevirke 3.92 217 P **Pn 17 38 57.8 -1.1**
VRZ Vera Road 4.02 240 P **Pn 17 39 01.9 +1.5**
WCZ Waipu Caves 4.14 286 P **Pn 17 39 03.9 +1.9**
BFZ Birch Farm 4.19 213 Pn **Pn 17 39 01.0 -1.6**
WAZ Wanganui 4.20 231 P **Pn 17 39 03.9 +1.1**
TIWZ Tintock 4.42 215 P **Pn 17 39 04.8 -1.1**
NEZ North Egmont 4.55 241 P **Pn 17 39 09.9 +2.3**
KHEZ Kahui Hut 4.62 242 P **Pn 17 39 11.2 +2.6**
OUZ Omahuta 4.98 292 Pn **Pn 17 39 14.0 +0.5**
OUZ Omahuta 4.98 292 P **Pn 17 39 14.4 +0.9**
OUZ Omahuta 4.98 292 P **Pn 17 39 14.4 +0.9**
TUWZ Tuamarina 5.89 223 Pn Pn 17 39 23.5 -2.5
BSWZ Blackbirch Sta 6.13 221 Pn **Pn 17 39 27.5 -1.8**
QRZ Quartz Range 6.36 233 Pn **Pn 17 39 31.4 -1.0**
QRZ Quartz Range 6.36 233 P **Pn 17 39 30.7 -1.7**
THZ Tophouse 6.69 225 Pn **Pn 17 39 36.0 -1.0**
KHZ Kahutara 6.81 218 Pn **Pn 17 39 37.5 -1.1**
CTZ Chatham Island 7.25 155 P **Pn 17 39 47.4 +2.8**
LTZ Lake Taylor 7.72 222 Pn **Pn 17 39 49.8 -1.4**
MQZ McQueen's Vall 8.21 216 Pn Pn 17 39 55.5 -2.4
OXZ Oxford 8.23 220 Pn **Pn 17 39 56.4 -1.7**
RPZ Rata Peaks 9.01 221 Pn Pn 17 40 05.8 -3.1
ODZ Otahua Downs 10.16 217 Pn **Pn 17 40 23.0 -1.6**
BBOO Buckleboo 35.42 264 P **P 17 44 54.3 -0.5**
AS31 Alice Springs 40.98 276 P **P 17 45 39.9 -1.9**
AS31 IAmb IAmb 17 45 45.1
comp=Z,1.3nm,1.0s
ASAR Alice Springs 40.98 276 P **P 17 45 41.5 -0.4**
comp=Z,1.1nm,0.5s,baz=120,slow=8.0,SNR=20
comp=Z,1.1nm,0.5s
ASAR Alice Springs 40.98 276 P **P 17 45 40.0 -1.8**
VNDA Vanda 41.11 186 P P 17 45 31.0 -11
FORT Forrest 42.50 263 P **P 17 45 52.5 -1.6**
FORT IAmb IAmb 17 45 58.6
comp=Z,34nm,1.0s
WB2 Warramunga Arr 42.59 281 P **P 17 45 53.5 -1.5**
WB2 IAmb IAmb 17 46 25.4
comp=Z,9.1nm,1.4s
WRAB Tennant Creek 42.59 281 P P 17 45 51.1 -3.9
WRAB IAmb IAmb 17 46 04.1
comp=Z,6.9nm,1.1s
WRA Warramunga Arr 42.59 281 P **P 17 45 54.1 -0.9**
comp=Z,0.5nm,0.3s,baz=119,slow=8.6,SNR=38
comp=Z,0.5nm,0.3s
WRA Warramunga Arr 42.59 281 **P 17 45 54.1 -0.9**
WB0 Warramunga Arr 42.65 281 P **P 17 45 54.3 -1.1**
WB0 IAmb IAmb 17 46 23.8
comp=Z,9.7nm,1.4s
PTCN Pitcairn Islan 44.54 89 P P 17 46 03.9 -6.7
CASY Casey 48.09 210 P **P 17 46 36.9 -1.1**
CASY IAmb IAmb 17 47 19.9
comp=Z,4.5nm,1.3s
QSPA South Pole Qui 52.92 180 P P 17 47 12.3 -2.4
QSPA IAmb IAmb 17 47 22.3
comp=Z,7.5nm,1.5s
FINES FINESS Array B 150.50 334 PKPbc **PKPbc 17 57 52.5 +3.1**
comp=Z,1.2nm,0.8s,baz=72,slow=6.2,SNR=3.7

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*DNK **20** 17:49:42.3±4.8, 62°.10N×60°.81W, h6km±36km, ML2.5*
*IDC **20** 17:49:43.4±1.9, 62°.09N×61°.47W, h0km, mb3.6/5,*
mbtmp3.8/8, ML3.2/3, MS3.1/4, Error ellipse: s-maj=31.9km
s-min=14.4km az=89.0
*OTT **20** 17:49:45.2±0.1, 62°.18N×61°.62W, h18km, ML4.1/4, 198km*
northeast from Resolution Island, Nu LAlbertaRADOR Sea
Seismic Zone.
ISC 20 17:49:40.9±0.7, 62°.08N±0°.05×60°.96W±0°.05, h10km, n28,
σ3§49/38, mb3.5/5, MS3.1/3, Davis Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRB	**Frobisher Bay**	**3.86**	**299**	Pn	**Pn**	**17 50 40.1**	**-0.1**
	2.5nm,0.3s,baz=120,slow=12,SNR=17						
FRB				Sn	**Sn**	**17 51 19.9**	**-5.6**
	9.0nm,0.3s,baz=228,slow=13,SNR=6.3						
FRB				LR	LR	17 51 43.3	
	comp=Z,90nm,18.8s,baz=64,slow=33						
	7.3nm,0.4s						
FRB	**Frobisher Bay**	**3.86**	**299**	PN	**Pn**	**17 50 40.0**	**-0.2**
FRB				SN	**Sn**	**17 51 18.9**	**-6.5**
FRB				Trac		17 51 48.5	
	comp=Z,188nm,0.4s						
NUUK	**Nuuk**	**4.69**	**59**	*i* P	**Pn**	**17 50 51.0**	**-0.7**
NUUK				*i* S	**Sn**	**17 51 43.5**	**-2.5**
NUUK				IAML		17 51 49.6	
	comp=Z,14nm,0.1s						
NANL	**Nain**	**5.57**	**184**	PN	**Pn**	**17 51 07.1**	**+3.4**
NANL				SN	**Sn**	**17 52 09.3**	**+1.6**
NANL				Trac		17 52 19.7	
	comp=Z,0.8nm,0.0s						
IVI	**Ivigtut**	**6.16**	**92**	*i* P	**Pn**	**17 51 14.2**	**+2.5**
IVI				*i* S	**Sn**	**17 52 18.7**	**-3.4**
IVI				IAML		17 52 30.1	
	comp=Z,30nm,0.5s						
SFJD	**Kangerlussuaq**	**6.64**	**38**	Pn	**Pn**	**17 51 22.6**	**+4.1**
	comp=Z,3.6nm,0.3s,baz=227,slow=14,SNR=12						
SFJD				Sn	**Sn**	**17 52 34.3**	**+0.2**
	comp=Z,4.4nm,0.3s,baz=344,slow=23,SNR=9.5						
	comp=Z,10.0nm,0.3s						
SFJD	**Kangerlussuaq**	**6.64**	**38**	*i* P	**Pn**	**17 51 22.6**	**+4.1**
SFJD				*i* S	**Sn**	**17 52 26.8**	**-7.3**
SFJD				IAML		17 52 39.3	
	comp=Z,30nm,0.7s						
SFJD	**Kangerlussuaq**	**6.64**	**38**	PN	**Pn**	**17 51 22.8**	**+4.3**
SFJD				SN	**Sn**	**17 52 34.9**	**+0.8**
SFJD				Trac		17 52 38.1	
	comp=Z,53nm,1.9s						
DY2G	**Dye2**	**7.76**	**49**	*e*P	**Pn**	**17 51 34.2**	**+0.3**
DY2G				*i* S	**Sn**	**17 52 55.5**	**-6.3**
DY2G				IAML		17 53 17.2	
	comp=Z,8.5nm,0.7s						
SCHQ	**Schefferville**	**7.89**	**206**	Pn	**Pn**	**17 51 36.6**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=24,slow=11,SNR=15						
SCHQ				Sn	**Sn**	**17 53 02.3**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=163,slow=18,SNR=1.9						
	comp=Z,7.6nm,0.6s						
SCHQ	**Schefferville**	**7.89**	**206**	PN	**Pn**	**17 51 37.4**	**+1.8**
SCHQ				SN	**Sn**	**17 53 00.7**	**-4.2**
SCHQ				Trac		17 53 40.3	
	comp=Z,705nm,3.0s						
LG4Q	**La Grande 4**	**10.96**	**225**	PN	**Pn**	**17 52 16.4**	**-1.2**
LG4Q				SN	Sn	17 54 08.7	-12
LG4Q				Trac		17 54 47.0	
	comp=Z,12nm,0.4s						
ILON	**Igloolik, Nuna**	**11.22**	**320**	PN	**Pn**	**17 52 19.3**	**-1.8**
ILON				SN	Sn	17 54 13.3	-13
ILON				Trac		17 55 40.7	
	comp=Z,213nm,1.5s						
NATG	**Natashquan Que**	**11.86**	**186**	PN	**Pn**	**17 52 32.9**	**+3.0**
NATG				SN	**Sn**	**17 54 37.2**	**-5.0**
NATG				Trac		17 54 44.6	
	comp=Z,1μm,3.2s						
SMQ	**Clarke City**	**12.30**	**198**	PN	**Pn**	**17 52 36.6**	**+0.6**
SMQ				SN	**Sn**	**17 54 46.7**	**-6.2**
SMQ				Trac		17 55 12.3	
	comp=Z,3.8nm,0.3s						
PMAQ	**Port Menier**	**12.42**	**190**	PN	**Pn**	**17 52 39.2**	**+1.7**
PCAQ	**Pointe Carleto**	**12.42**	**186**	PN	**Pn**	**17 52 40.6**	**+3.0**
WEMQ	**Wemindji, Queb**	**12.81**	**233**	PN	**Pn**	**17 52 41.9**	**-0.9**
WEMQ				SN	Sn	17 54 53.5	-12
WEMQ				LG	Lg	17 56 21.1	
WEMQ				Trac		17 56 24.1	
	comp=Z,436nm,3.1s						
FCC	**Fort Churchill**	**16.58**	**273**	PN	**Pn**	**17 53 31.5**	**-1.6**
FCC				SN	Sn	17 56 21.4	-16
RES	**Resolute Bay**	**17.39**	**330**	P	**Pn**	**17 53 39.5**	**-3.6**
	comp=Z,4.4nm,1.1s,baz=164,slow=4.3,SNR=3.7						
SADO	**Sadowa**	**20.31**	**220**	LR	LR	18 01 15.4	
	comp=Z,46nm,18.9s,baz=165,slow=34						
ULM	**Lac du Bonnet**	**22.44**	**254**	P	**P**	**17 54 39.7**	**0.0**
	comp=Z,3.9nm,0.5s,baz=40,slow=15,SNR=5.2						
	comp=Z,3.9nm,0.5s						
YKA	**Yellowknife Ar**	**24.36**	**295**	P	**P**	**17 55 01.6**	**+2.9**
	comp=Z,0.5nm,0.6s,baz=67,slow=12,SNR=2.9						
	comp=Z,0.5nm,0.6s						
TKL	**Tuckaleechee C**	**30.07**	**219**	LR	LR	18 08 28.1	
	comp=Z,41nm,19.0s,baz=314,slow=38						
NEW	**Newport**	**33.74**	**272**	LR	LR	18 09 03.7	
	comp=Z,60nm,18.4s,baz=34,slow=35						
PDAR	**Pinedale Array**	**34.30**	**259**	P	**P**	**17 56 29.4**	**+2.0**
	comp=Z,1.7nm,0.8s,baz=62,slow=10,SNR=12						
	comp=Z,1.7nm,0.8s						
ILAR	**Eielson Array**	**35.76**	**313**	P	**P**	**17 56 42.8**	**+3.3**
	comp=Z,0.6nm,0.9s,baz=52,slow=8.6,SNR=4.4						
	comp=Z,0.6nm,0.9s						
NVAR	**Mina Array Bea**	**41.79**	**263**	P	**P**	**17 57 33.5**	**+3.0**
	comp=Z,0.4nm,0.5s,baz=49,slow=6.7,SNR=4.1						
	comp=Z,0.4nm,0.5s						

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*HLW **20** 17:51:16.6, 34°.29N×25°.40E, h11km±29km, Md3.9, Ml3.9*
*ISK **20** 17:51:18.4, 34°.30N×25°.31E, h17km, ML3.7/18*
*THE **20** 17:51:20.2, 34°.30N×25°.26E, h9km±2km, ML3.4/11, Error*
ellipse: s-maj=2.8km s-min=1.1km az=167.0
*IDC **20** 17:51:20.4±1.8, 34°.29N×25°.44E, h44km±17km, mb3.6/7,*
mbtmp3.7/13, ML3.7/6, MS2.8/3, Error ellipse:
s-maj=20.4km s-min=13.4km az=44.0
*ATH **20** 17:51:21.9, 34°.42N×25°.28E, h25km±2km, ML3.5/11, Error*
ellipse: s-maj=4.8km s-min=1.7km az=352.0
*DDA **20** 17:51:22.6±0.0, 34°.63N×25°.92E, h7km±4km, MW3.7*
*NIC **20** 17:51:26.8±0.0, 34°.21N×26°.17E, h32km±34km, Ml4.4/7*
*GII **20** 17:51:27.3±0.0, 33°.87N×26°.14E, h10km, MD3.3/4*
ISC 20 17:51:17.9±1.2, 34°.18N±0°.04×25°.40E±0°.03, h28km±10km,
n131, σ1§86/174, mb3.7/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.88**	**18**	P	**Pn**	**17 51 36.1**	**+1.8**
FRMA				S	**Sn**	**17 51 49.9**	**+3.7**
	1μm,0.6s						
FRMA	**Ierapetra Chan**	**0.88**	**18**	P	**Pn**	**17 51 35.7**	**+1.4**
FRMA				AML	AML	17 52 00.8	
	comp=N,7391μm,0.6s						
FRMA				AML	AML	17 52 05.8	
	comp=E,5610μm,0.8s						
SIVA	**Sivas**	**0.97**	**330**	P	**Pb**	**17 51 35.3**	**-0.7**
SIVA				S	**Sb**	**17 51 47.2**	**-1.3**
	comp=E,8μm,0.5s						
SIVA	**Sivas**	**0.97**	**330**	P	**Pb**	**17 51 34.8**	**-1.2**
SIVA				AML	AML	17 51 59.1	
	comp=E,16298μm,0.4s						
SIVA				AML	AML	17 52 00.7	
	comp=N,15996μm,0.6s						
TMBK	**Timbaki Herakl**	**1.03**	**330**	P	**Pn**	**17 51 36.7**	**+0.2**
TMBK				S	**Sb**	**17 51 50.6**	**+0.3**
	comp=N,2μm,0.5s						
TMBK	**Timbaki Herakl**	**1.03**	**330**	P	**Pn**	**17 51 36.7**	**+0.2**
TMBK				S	**Sb**	**17 51 47.1**	**-3.3**
TMBK				AML	AML	17 51 59.7	
	comp=N,12176μm,0.5s						
TMBK				AML	AML	17 52 07.8	
	comp=E,9130μm,0.6s						
ZKR	**Zakros**	**1.15**	**35**	PN	**Pb**	**17 51 39.8**	**+0.7**
ZKR				SN	**Sn**	**17 51 55.1**	**+2.2**
ZKR	**Zakros**	**1.15**	**35**	P	**Pb**	**17 51 40.6**	**+1.5**
ZKR				S	**Sn**	**17 51 57.5**	**+4.6**
	comp=E,2μm,0.6s						
ZKR	**Zakros**	**1.15**	**35**	P	**Pb**	**17 51 40.1**	**+1.0**
ZKR				S	**Sn**	**17 51 55.3**	**+2.4**
ZKR				AML	AML	17 52 04.5	
	comp=E,1.6nm,0.4s						
ZKR				AML	AML	17 52 04.5	
	comp=E,1.6nm,0.4s						
ZKR				AML	AML	17 52 10.7	
	comp=E,5.4nm,0.8s						
ZKR				AML	AML	17 52 10.7	
	comp=E,5.4nm,0.8s						
ZKR	**Zakros**	**1.15**	**35**	P	**Pb**	**17 51 40.1**	**+1.0**
ZKR				AML	AML	17 52 05.7	
	comp=N,1742μm,0.4s						
ZKR				AML	AML	17 52 12.3	
	comp=E,5542μm,0.8s						
KSTL	**Kastelli Herak**	**1.16**	**346**	P	**Pn**	**17 51 37.0**	**-1.1**
KSTL				AML	AML	17 51 54.0	
	comp=E,3682μm,0.6s						
KSTL				AML	AML	17 51 58.1	
	comp=N,9125μm,1.0s						
HRKL	**Herakleio**	**1.16**	**348**	PG	**Pn**	**17 51 38.7**	**+0.5**
HRKL				SG	**Sb**	**17 51 53.2**	**-0.6**
HRKL	**Herakleio**	**1.16**	**348**	P	**Pb**	**17 51 39.1**	**-0.1**
HRKL				AML	AML	17 52 09.2	
	comp=N,34300μm,1.0s						
HRKL				AML	AML	17 52 10.8	
	comp=E,36053μm,1.1s						
IDI	**Anoyia**	**1.18**	**339**	P	**Pn**	**17 51 38.7**	**+0.1**
	comp=E,78nm,0.3s,baz=328,slow=17,SNR=288						
IDI				S	**Sb**	**17 51 53.6**	**-1.1**
	comp=E,339nm,0.4s,baz=237,slow=18,SNR=11						
IDI	**Anoyia**	**1.18**	**339**	PG	**Pn**	**17 51 38.9**	**+0.2**
IDI				SG	**Sb**	**17 51 53.6**	**-1.1**
IDI	**Anoyia**	**1.18**	**339**	P	**Pn**	**17 51 38.8**	**+0.1**
IDI				S	**Sb**	**17 51 53.8**	**-0.9**
	comp=E,1μm,0.4s						
IDI	**Anoyia**	**1.18**	**339**	P	**Pn**	**17 51 38.7**	**+0.1**
IDI				AML	AML	17 52 01.2	
	comp=N,2055μm,0.4s						
IDI				AML	AML	17 52 02.6	
	comp=E,2633μm,0.5s						
GVD	**Gavdhos**	**1.27**	**302**	PN	**Pn**	**17 51 40.4**	**+0.6**
GVD	**Gavdhos**	**1.27**	**302**	P	**Pn**	**17 51 40.4**	**+0.6**
GVD				S	**Sn**	**17 51 56.1**	**+0.2**
	comp=E,3μm,0.4s						
GVD	**Gavdhos**	**1.27**	**302**	P	**Pn**	**17 51 40.4**	**+0.6**
GVD				AML	AML	17 52 04.2	
	comp=N,6038μm,0.4s						
GVD				AML	AML	17 52 12.5	
	comp=E,7296μm,0.5s						
GVDS	**Gavdos**	**1.27**	**302**	PN	**Pn**	**17 51 40.4**	**+0.6**
GVDS	**Gavdos**	**1.27**	**302**	P	**Pn**	**17 51 40.7**	**+0.9**
GVDS				S	**Sb**	**17 51 57.7**	**+0.6**
	comp=E,2μm,0.5s						
PRNS	**Prines Rethymn**	**1.40**	**328**	P	**Pn**	**17 51 42.4**	**+0.9**
PRNS				S	**Sn**	**17 51 58.5**	**-0.5**
	comp=E,528nm,0.8s						
IMMV	**Iera Moni Meta**	**1.73**	**318**	PN	**Pn**	**17 51 46.7**	**+0.6**
IMMV	**Iera Moni Meta**	**1.73**	**318**	P	**Pn**	**17 51 46.9**	**+0.8**
IMMV				S	**Sn**	**17 52 06.0**	**-1.3**
	comp=E,2μm,0.8s						
IMMV	**Iera Moni Meta**	**1.73**	**318**	P	**Pn**	**17 51 46.7**	**+0.6**
IMMV				AML	AML	17 52 26.0	
	comp=E,3444μm,0.7s						
IMMV				AML	AML	17 52 33.2	
	comp=N,2705μm,0.9s						
CHAN	**Chania**	**1.74**	**320**	P	**Pn**	**17 51 47.2**	**+0.9**
CHAN				AML	AML	17 52 32.7	
	comp=E,2918μm,0.9s						
CHAN				AML	AML	17 52 38.0	
	comp=N,2266μm,1.4s						
KNDR	**Palaiochora Ch**	**1.76**	**307**	PN	**Pn**	**17 51 47.6**	**+1.1**
KNDR	**Palaiochora Ch**	**1.76**	**307**	P	**Pn**	**17 51 47.6**	**+1.1**
KARP	**Karpathos**	**1.99**	**46**	PN	**Pb**	**17 51 52.4**	**-1.0**
KARP	**Karpathos**	**1.99**	**46**	P	**Pb**	**17 51 53.4**	**0.0**
KARP				S	**Sb**	**17 52 17.8**	**+0.1**
	comp=N,620nm,0.5s						
KARP	**Karpathos**	**1.99**	**46**	P	**Pb**	**17 51 53.5**	**+0.2**
KARP				S	**Sn**	**17 52 11.4**	**-2.3**
KARP				AML	AML	17 52 19.6	
	comp=N,1.4nm,1.0s						
KARP				AML	AML	17 52 19.6	
	comp=N,1.4nm,1.0s						
KARP				AML	AML	17 52 40.6	
	comp=N,1.4nm,1.0s						
KARP				AML	AML	17 52 40.6	
	comp=N,1.4nm,1.0s						
KARP	**Karpathos**	**1.99**	**46**	P	**Pb**	**17 51 52.9**	**-0.4**
THR6	**Thira Island,**	**2.17**	**360**	P	**Pn**	**17 51 53.0**	**+0.9**
SANT	**Santorini**	**2.19**	**1**	PN	**Pn**	**17 51 53.1**	**+0.7**
SANT	**Santorini**	**2.19**	**1**	P	**Pn**	**17 51 52.7**	**+0.3**
THR8	**Santorini-Mono**	**2.22**	**2**	P	**Pn**	**17 51 53.4**	**+0.5**
THR3	**Thira Island,**	**2.23**	**360**	P	**Pn**	**17 51 54.3**	**+1.4**
THR3	**Thira Island,**	**2.23**	**360**	P	**Pn**	**17 51 53.7**	**+0.9**
THR5	**Thira Island,**	**2.23**	**359**	P	**Pn**	**17 51 53.8**	**+0.8**
THR5	**Thira Island,**	**2.23**	**359**	P	**Pn**	**17 51 53.5**	**+0.5**
ANKY	**Antikythira Is**	**2.41**	**315**	P	**Pn**	**17 51 56.0**	**+0.6**
ANKY				AML	AML	17 52 56.1	
	comp=E,863μm,0.7s						
ANKY				AML	AML	17 53 09.8	
	comp=N,773μm,1.0s						
MHLO	**Agia Marina, M**	**2.63**	**342**	P	**Pn**	**17 51 59.2**	**+0.7**
MHLO				S	**Sn**	**17 52 27.6**	**-2.0**
	comp=N,1μm,0.4s						
MHLO	**Agia Marina, M**	**2.63**	**342**	P	**Pn**	**17 51 58.4**	**-0.1**
SLUM	**Salum**	**2.69**	**183**	P	**Pn**	**17 52 00.3**	**+1.1**
	baz=184						
SLUM				S	**Sn**	**17 52 31.6**	**+0.8**
	baz=184						
NIS1	**Nisyros Isl.**	**2.82**	**30**	PN	**Pn**	**17 52 03.0**	**+1.9**
KTHA	**Kythira Island**	**2.82**	**318**	PN	**Pn**	**17 52 01.8**	**+0.7**
KTHA	**Kythira Island**	**2.82**	**318**	P	**Pn**	**17 52 01.0**	**-0.1**
KTHR	**Kythira**	**2.86**	**317**	P	**Pn**	**17 52 02.4**	**+0.8**
KOSK	**Kos Island**	**2.87**	**26**	PN	**Pn**	**17 52 03.6**	**+1.9**
APE	**Apeiranthos**	**2.88**	**2**	PN	**Pn**	**17 52 03.0**	**+1.0**
APE	**Apeiranthos**	**2.88**	**2**	P	**Pn**	**17 52 02.0**	**0.0**
ARG	**Arkhangelos**	**3.02**	**47**	PN	**Pn**	**17 52 06.4**	**+2.7**
ARG	**Arkhangelos**	**3.02**	**47**	P	**Pn**	**17 52 07.0**	**+3.2**
ARG	**Arkhangelos**	**3.02**	**47**	P	**Pn**	**17 52 06.4**	**+2.7**
ARG				S	**Sn**	**17 52 37.0**	**-2.0**
ARG	**Arkhangelos**	**3.02**	**47**	P	**Pn**	**17 52 06.5**	**+2.7**
VLI	**Veliai**	**3.24**	**322**	P	**Pn**	**17 52 06.6**	**-0.2**
BODT	**Bodrum**	**3.27**	**28**	PN	**Pn**	**17 52 09.3**	**+2.0**
BDRM	**Kayabasi**	**3.33**	**29**	P	**Pn**	**17 52 09.8**	**+1.8**
BDRM				*i* AML	AML	17 52 44.0	
	comp=N,1.6nm,1.2s						
BDRM				S	**Sn**	**17 52 44.9**	**-1.8**
BDRM				*i* AML	AML	17 53 19.0	
	comp=N,27nm,0.9s						
BDRM				*i* AML	AML	17 53 20.0	
	comp=N,26nm,1.1s						
TURN	**Turunc**	**3.48**	**41**	PN	**Pn**	**17 52 12.8**	**+2.7**
TURN	**Turunc**	**3.48**	**41**	P	**Pn**	**17 52 11.6**	**+1.6**
TURN				S	**Sn**	**17 52 48.9**	**-1.4**
TURN				*i* AML	AML	17 52 59.0	
	comp=N,49nm,0.2s						
TURN				*i* AML	AML	17 53 00.0	
	comp=N,36nm,0.3s						
TURN				*i* AML	AML	17 53 02.0	
	comp=N,42nm,0.5s						
KRND	**KRANIDI**	**3.68**	**331**	P	**Pn**	**17 52 12.6**	**-0.3**
SMG	**Samos**	**3.71**	**18**	P	**Pn**	**17 52 14.1**	**+0.8**
DALY	**Dalyan (Mula)**	**3.74**	**44**	PN	**Pn**	**17 52 16.6**	**+3.0**
YER	**Yerkesik**	**3.77**	**38**	PN	**Pn**	**17 52 16.5**	**+2.3**
FETY	**Fethiye**	**3.88**	**50**	PN	**Pn**	**17 52 18.8**	**+3.2**
MULA	**Mugla, Merkez-**	**3.88**	**37**	P	**Pn**	**17 52 18.6**	**+2.9**
MULA				S	**Sn**	**17 52 59.0**	**-1.4**
MULA				*i* AML	AML	17 53 42.0	
	comp=N,33nm,0.9s						
MULA				*i* AML	AML	17 53 47.0	
	comp=N,40nm,0.7s						
MULA				*i* AML	AML	17 54 08.0	
	comp=N,30nm,1.7s						
VLY	**Voula,Athens**	**3.89**	**341**	P	**Pn**	**17 52 15.7**	**-0.1**
AKAS	**Kas**	**4.00**	**58**	P	**Pn**	**17 52 18.1**	**+0.6**
AKAS				S	**Sn**	**17 53 01.0**	**-2.6**
AKAS				*i* AML	AML	17 53 05.0	
	comp=N,108nm,0.8s						
AKAS				*i* AML	AML	17 53 07.0	
	comp=N,186nm,0.3s						
AKAS				*i* AML	AML	17 53 08.0	
	comp=N,63nm,0.4s						
AYDN	**Tasoluk**	**4.01**	**29**	P	**Pn**	**17 52 19.2**	**+1.7**
AYDN				S	**Sn**	**17 53 01.2**	**-2.5**
AYDN				*i* AML	AML	17 53 12.0	
	comp=N,26nm,0.6s						
AYDN				*i* AML	AML	17 53 33.0	
	comp=N,22nm,1.8s						
AYDN				*i* AML	AML	17 53 39.0	
	comp=N,28nm,1.1s						
DION	**Dionisos Attik**	**4.07**	**343**	P	**Pn**	**17 52 18.4**	**+0.2**
ITM	**Ithomi**	**4.12**	**318**	PN	**Pn**	**17 52 20.1**	**+1.1**
CAEL	**Denizli, Camel**	**4.33**	**46**	P	**Pn**	**17 52 23.9**	**+1.8**
CAEL				S	**Sn**	**17 53 11.3**	**-0.4**
CAEL				*i* AML	AML	17 53 22.0	
	comp=N,98nm,0.5s						
CAEL				*i* AML	AML	17 53 34.0	
	comp=N,97nm,0.5s						
CAEL				*i* AML	AML	17 53 53.0	
	comp=N,134nm,1.2s						
TAVA	**DENIZLI_Tavas**	**4.34**	**40**	P	**Pn**	**17 52 24.8**	**+2.6**
TAVA				S	**Sn**	**17 53 08.7**	**-3.2**
TAVA				*i* AML	AML	17 53 16.0	
	comp=N,25nm,0.6s						
TAVA				*i* AML	AML	17 53 20.0	
	comp=N,26nm,0.3s						
TAVA				*i* AML	AML	17 53 23.0	
	comp=N,18nm,0.4s						
GOLH	**Golhisar**	**4.55**	**47**	P	**Pn**	**17 52 27.5**	**+2.5**
GOLH				S	**Sn**	**17 53 16.6**	**-0.5**
GOLH				*i* AML	AML	17 53 21.0	
	comp=N,32nm,0.4s						
GOLH				*i* AML	AML	17 53 22.0	
	comp=N,65nm,0.3s						
GOLH				*i* AML	AML	17 53 24.0	
	comp=N,59nm,0.4s						
AKUM	**Antalya-Kumluc**	**4.57**	**61**	P	**Pn**	**17 52 27.1**	**+2.0**
AKUM				S	**Sn**	**17 53 16.3**	**-1.1**
AKUM				*i* AML	AML	17 53 20.0	
	comp=N,52nm,0.5s						
AKUM				*i* AML	AML	17 53 21.0	
	comp=N,73nm,0.4s						
AKUM				*i* AML	AML	17 53 23.0	
	comp=N,38nm,0.5s						
KORT	**Korkueli**	**4.92**	**54**	P	**Pn**	**17 52 32.9**	**+2.9**
KORT				S	**Sn**	**17 53 26.6**	**+0.6**
KORT				*i* AML	AML	17 53 30.0	
	comp=N,85nm,0.5s						
KORT				*i* AML	AML	17 53 33.0	
	comp=N,44nm,1.3s						
KORT				*i* AML	AML	17 53 34.0	
	comp=N,32nm,0.6s						
SWA2		**4.92**	**179**	P	**Pn**	**17 52 32.9**	**+2.9**
	baz=179						
SWA2				S	**Sn**	**17 53 27.2**	**+1.2**
	baz=179						
OSC1	**CSNet OBS 1**	**4.93**	**96**	P	**Pn**	**17 52 30.2**	**+0.1**
MANT	**Manisa**	**5.00**	**30**	P	**Pn**	**17 52 32.4**	**+1.1**
MANT				S	**Sn**	**17 53 25.5**	**-2.7**
MANT				*i* AML	AML	17 53 52.0	
	comp=N,12nm,1.2s						
MANT				*i* AML	AML	17 53 56.0	
	comp=N,9.6nm,1.0s						
MANT				*i* AML	AML	17 54 21.0	
	comp=N,9.9nm,1.7s						
PASA	**Karahalli, USA**	**5.31**	**37**	P	**Pn**	**17 52 36.4**	**+1.1**
PASA				S	**Sn**	**17 53 32.7**	**-3.0**
PASA				*i* AML	AML	17 53 36.0	
	comp=N,14nm,0.4s						
PASA				*i* AML	AML	17 53 37.0	
	comp=N,6.1nm,0.4s						
PASA				*i* AML	AML	17 53 37.0	
	comp=N,7.8nm,0.3s						
USAK	**

SZAC	**Souni**	**6.20**	**83**	P	**Pn**	**17 52 48.6**	**+0.9**
SZAC				AML	AML	17 54 00.4	
	comp=N,0.6nm,0.2s						
SZAC				AML	AML	17 54 06.1	
	comp=N,0.8nm,0.2s						
ASGA	**Asgata**	**6.51**	**82**	P	**Pn**	**17 52 52.9**	**+1.1**
ASGA				AML	AML	17 54 05.9	
	comp=N,0.9nm,0.3s						
ASGA				AML	AML	17 54 09.2	
	comp=N,0.8nm,0.4s						
RYAN	**Fayoum**	**6.56**	**139**	P	**Pn**	**17 52 55.1**	**+2.5**
	baz=140						
RYAN				S	**Sn**	**17 54 06.0**	**-0.5**
	baz=140						
CSS	**Mathiatis**	**6.59**	**81**	P	**Pn**	**17 52 54.3**	**+1.5**
MVOU	**Mavrovouni**	**6.84**	**81**	P	**Pn**	**17 52 57.2**	**+0.9**
KKBE	**Karaman, Kazim**	**6.84**	**62**	P	**Pn**	**17 52 59.6**	**+3.2**
KKBE				*i* AML	AML	17 54 15.0	
	comp=N,17nm,1.2s						
KKBE				*i* AML	AML	17 54 16.0	
	comp=N,16nm,0.4s						
KKBE				*i* AML	AML	17 54 23.0	
	comp=N,18nm,0.6s						
GULN	**MERSIN_Gulnar**	**6.96**	**71**	P	**Pn**	**17 52 58.3**	**+0.4**
GULN				*i* AML	AML	17 54 14.0	
	comp=N,15nm,0.4s						
GULN				*i* AML	AML	17 54 17.0	
	comp=N,24nm,0.8s						
GULN				*i* AML	AML	17 54 18.0	
	comp=N,24nm,0.6s						
GLL	**Jalalah**	**7.05**	**129**	P	**Pn**	**17 53 01.2**	**+1.8**
	baz=129						
HFRF	**Wahat Farafira**	**7.44**	**160**	P	**Pn**	**17 53 06.5**	**+1.9**
	baz=159						
HFRF				S	**Sn**	**17 54 25.6**	**-2.5**
	baz=159						
KERG	**Konya-Eregli**	**7.79**	**63**	P	**Pn**	**17 53 11.7**	**+2.3**
KERG				*i* AML	AML	17 54 39.0	
	comp=N,14nm,0.4s						
KERG				*i* AML	AML	17 54 40.0	
	comp=N,11nm,0.7s						
KERG				*i* AML	AML	17 54 51.0	
	comp=N,11nm,0.6s						
SLTI	**Sal'it**	**8.30**	**101**	Pn	**Pn**	**17 53 19.7**	**+3.3**
SLTI				Sn	**Sn**	**17 54 45.5**	**-3.8**
MMAI	**Mount Meron Ar**	**8.42**	**95**	P	**Pn**	**17 53 18.8**	**+0.7**
	comp=N,1.1nm,0.3s,baz=275,slow=11,SNR=5.0						
MMAI				S	**Sn**	**17 54 50.2**	**-2.1**
	comp=N,2.8nm,0.3s,baz=309,slow=28,SNR=9.6						
	comp=N,1.2nm,0.4s						
AMAZ	**Amatzia**	**8.43**	**106**	Pn	**Pn**	**17 53 20.2**	**+2.1**
GEM	**Giv'at Ha'Em**	**8.60**	**94**	Pn	**Pn**	**17 53 23.7**	**+3.2**
BRTR	**Keskin Array B**	**8.61**	**48**	P	**Pn**	**17 53 21.4**	**+0.8**
	comp=N,0.1nm,0.3s,baz=216,slow=13,SNR=5.7						
	comp=N,1.1nm,0.7s						
GRB	**Gharib**	**8.64**	**131**	P	**Pn**	**17 53 22.9**	**+1.9**
	baz=131						
YTIR	**Yattir**	**8.65**	**106**	Pn	**Pn**	**17 53 23.3**	**+2.1**
YTIR				Sn	**Sn**	**17 54 54.5**	**-3.3**
NATI	**Neve Ativ**	**8.66**	**93**	Pn	**Pn**	**17 53 24.3**	**+3.1**
HMDT	**Nahal Hemdat**	**8.70**	**100**	Pn	**Pn**	**17 53 24.4**	**+2.6**
HMDT				Sn	**Sn**	**17 54 56.2**	**-2.7**
DSI	**Dead Sea**	**8.79**	**104**	Pn	**Pn**	**17 53 26.2**	**+3.2**
DSI				Sn	**Sn**	**17 54 57.5**	**-3.6**
KRMI	**Paran Flat**	**8.88**	**115**	Pn	**Pn**	**17 53 26.5**	**+2.2**
PRNI	**Paran**	**8.98**	**113**	Pn	**Pn**	**17 53 27.8**	**+2.1**
PRNI				Sn	**Sn**	**17 55 02.1**	**-3.8**
GHAJ	**Ghor Haditha**	**9.03**	**106**	Pn	**Pn**	**17 53 28.8**	**+2.5**
HRFI	**Mount Harif**	**9.15**	**114**	Pn	**Pn**	**17 53 30.3**	**+2.2**
HRFI				Sn	**Sn**	**17 55 06.2**	**-4.0**
TR2	**Tor 2**	**9.16**	**127**	P	**Pn**	**17 53 29.2**	**+0.9**
	baz=127						
MBRI	**Mt Berech**	**9.18**	**116**	Pn	**Pn**	**17 53 30.7**	**+2.1**
EIL	**Elat**	**9.27**	**116**	P	**Pn**	**17 53 31.7**	**+2.0**
	comp=N,1.3nm,0.3s,baz=335,slow=4.2,SNR=17						
EIL				S	**Sn**	**17 55 11.0**	**-2.1**
	comp=N,16nm,0.6s,baz=5.5,slow=14,SNR=9.3						
	comp=N,3.6nm,0.4s						
EIL	**Elat**	**9.27**	**116**	Pn	**Pn**	**17 53 31.7**	**+2.0**
EIL				Sn	**Sn**	**17 55 09.7**	**-3.4**
HDK1	**Dakhla**	**9.28**	**157**	P	**Pn**	**17 53 32.7**	**+2.9**
	baz=157						
ASF	**Jabal al Asfar**	**9.84**	**99**	S	**Sn**	**17 55 24.7**	**-2.4**
	comp=N,1.4nm,0.3s,baz=358,slow=17,SNR=2.3						
KVAR	**Kislovodsk Arr**	**16.57**	**49**	LR	LR	18 03 32.3	
	comp=N,46nm,19.1s,baz=57,slow=44						
KBZ	**Khabaz**	**16.59**	**50**	P	**P**	**17 55 10.1**	**-0.5**
	comp=N,0.1nm,0.3s,baz=249,slow=8.2,SNR=5.3						
	comp=N,4.1nm,1.0s						
AKASG	**Malin Array Be**	**16.75**	**8**	P	**Pn**	**17 55 09.9**	**-0.3**
	comp=N,2.7nm,0.3s,baz=199,slow=10,SNR=18						
	comp=N,0.4nm,0.4s						
GERES	**GERESS Array B**	**17.04**	**333**	P	**Pn**	**17 55 15.6**	**+1.4**
	comp=N,0.2nm,0.3s,baz=141,slow=13,SNR=4.9						
	comp=N,0.4nm,0.5s						
HFS	**Hagfors**	**27.07**	**347**	P	**P**	**17 56 57.7**	**-0.1**
	comp=N,7.3nm,1.1s,baz=143,slow=14,SNR=1.8						
	comp=N,7.3nm,1.1s						
FINES	**FINESS Array B**	**27.28**	**1**	P	**P**	**17 56 58.1**	**-1.5**
	comp=N,1.9nm,1.0s,baz=161,slow=13,SNR=1.0						
	comp=N,1.9nm,1.0s						
NOA	**NORSAR Array B**	**28.40**	**345**	LR	LR	18 09 16.3	
	comp=N,18nm,19.0s,baz=260,slow=38						
TORD	**Torodi Ar. Bea**	**30.02**	**232**	P	**P**	**17 57 26.2**	**+1.7**
	comp=N,0.8nm,0.5s,baz=32,slow=8.8,SNR=13						
	comp=N,0.8nm,0.5s						
WSAR	**Wadi Sarin**	**30.99**	**102**	LR	LR	18 12 50.9	
	comp=N,13nm,19.6s,baz=322,slow=42						
ARCES	**ARCESS Array B**	**35.41**	**0**	P	**P**	**17 58 10.0**	**-1.0**
	comp=N,0.8nm,0.8s,baz=184,slow=12,SNR=1.2						
	comp=N,0.8nm,0.8s						
MKAR	**Makanchi Array**	**44.15**	**56**	P	**P**	**17 59 24.2**	**+0.2**
	comp=N,0.9nm,0.7s,baz=282,slow=6.3,SNR=8.2						
	comp=N,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**45.54**	**45**	P	**P**	**17 59 34.8**	**-0.1**
	comp=N,0.5nm,0.4s,baz=323,slow=42,SNR=2.8						
	comp=N,0.5nm,0.4s						
SONM	**Songino Array**	**59.95**	**50**	P	**P**	**18 01 22.0**	**+0.3**
	comp=N,0.3nm,0.6s,baz=311,slow=11,SNR=2.9						
	comp=N,0.3nm,0.6s						

IDC 20 18:05:57.9±4.3, 2°.15S×103°.16E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=199.1km s-min=23.6km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.90**	**349**	P	Pn	18 10 43.3	-1.2
	0.4nm,0.7s,baz=180,slow=11,SNR=2.1						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**35.22**	**122**	P	P	18 12 54.8	+0.5
	0.3nm,0.3s,baz=304,slow=9.1,SNR=23						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**36.64**	**128**	P	P	18 13 05.8	-0.7
	1.1nm,0.5s,baz=304,slow=7.8,SNR=27						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**52.09**	**342**	P	P	18 15 08.8	-0.9
	0.1nm,0.5s,baz=162,slow=6.4,SNR=1.6						
	0.1nm,0.5s						

IDC 20 18:09:45.8±584.0, 53°.56N×2°.18E, h0km, Error ellipse: s-maj=318.6km s-min=162.6km az=112.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.64**	**118**	I		19 00 25.8	
	baz=307,slow=323,SNR=2.6						
I48TN	**KESRA INFRASON**	**18.45**	**161**	I		20 03 10.0	
	baz=348,slow=319,SNR=0.4						
I43RU	**DUBNA INFRASON**	**20.14**	**67**	I		20 17 40.0	
	baz=281,slow=330,SNR=1.0						

IDC 20 18:33:54.0±2.4, 2°.76N×127°.80E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=167.5km s-min=27.7km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.46**	**164**	P	P	18 39 04.5	-0.8
	0.8nm,0.5s,baz=344,slow=11,SNR=21						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.93**	**168**	P	P	18 39 38.0	+0.6
	0.4nm,0.7s,baz=347,slow=11,SNR=10						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**58.96**	**325**	P	P	18 43 55.4	0.0
	0.3nm,0.5s,baz=114,slow=6.4,SNR=2.5						
	0.3nm,0.5s						

IDC 20 18:40:06.5±2.8, 18°.38N×143°.85E, h0km, mb3.7/3, mbtmp3.8/4, ML4.1/1, MS3.1/1, Error ellipse: s-maj=137.8km s-min=33.1km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.86**	**168**	Pn	Pn	18 41 21.0	+0.1
	7.8nm,0.3s,baz=15,slow=20,SNR=7.4						
	18nm,0.3s						
KLR	**Kul'dur**	**32.29**	**345**	LR	LR	18 56 55.5	
	comp=Z,38nm,21.8s,baz=188,slow=31						
WRA	**Warramunga Arr**	**39.21**	**194**	P	P	18 47 36.7	+0.1
	0.5nm,0.7s,baz=16,slow=8.5,SNR=11						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**42.90**	**193**	P	P	18 48 06.4	-0.6
	0.2nm,0.5s,baz=14,slow=7.7,SNR=1.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**86.43**	**335**	P	P	18 52 50.8	+0.1
	2.7nm,1.0s,baz=43,slow=6.3,SNR=1.1						
	2.7nm,1.0s						

IDC 20 18:43:02.3±2.8, 49°.47S×125°.69E, h0km, mb3.8/4, mbtmp3.9/4, MS3.0/3, Error ellipse: s-maj=115.1km s-min=25.6km az=95.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.86**	**325**	T	T	19 04 46.7	
	baz=154,slow=77,SNR=5.6						
H01W2	**Cape Leeuwin H**	**16.86**	**325**	T	T	19 04 37.5	
	baz=154,slow=77,SNR=5.9						
H01W3	**Cape Leeuwin H**	**16.88**	**325**	T	T	19 04 51.6	
	baz=154,slow=77,SNR=7.3						
NWAO	**Narrogin (SRO)**	**17.69**	**336**	LR	LR	18 52 29.6	
	comp=Z,86nm,19.7s,baz=352,slow=32						
STKA	**Stephens Creek**	**21.24**	**40**	P	P	18 47 49.3	-0.5
	4.8nm,0.8s,baz=217,slow=13,SNR=5.3						
STKA				LR	LR	18 53 54.4	
	comp=Z,23nm,20.4s,baz=205,slow=31						
	4.8nm,0.8s						
ASAR	**Alice Springs**	**26.55**	**17**	P	P	18 48 42.1	+0.3
	1.3nm,0.6s,baz=191,slow=8.9,SNR=16						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**30.27**	**16**	P	P	18 49 15.0	0.0
	1.5nm,1.3s,baz=191,slow=12,SNR=2.3						
WRA				LR	LR	19 01 49.7	
	comp=Z,30nm,18.1s,baz=90,slow=37						
	1.5nm,1.3s						
VNDA	**Vanda**	**31.31**	**166**	P	P	18 49 23.6	0.0
	1.1nm,1.0s,baz=303,slow=8.1,SNR=6.1						
	1.1nm,1.0s						

MAN 20 18:43:45.9, 10°.11N×125°.14E, h29km, mb3.9, ML2.6, MS2.2, 5C-4D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.28**	**274**	↓*eP*	Pb	18 43 53.0	+0.1
MSLP				*eS*	Sn	18 43 59.5	+0.2
SCPH	**Surigao**	**0.48**	**134**	↑*iP*	Pn	18 43 58.3	+1.5
SCPH				*eS*	Sb	18 44 01.6	-1.2
TABP	**Talibon, Bohol**	**0.80**	**268**	↑*eP*	Pn	18 44 00.8	-0.4
TABP				*i* S	Sn	18 44 13.4	+1.3
LLP	**Lapu-Lapu**	**1.17**	**280**	↓*eP*	Pb	18 44 07.9	+0.3
LLP				*i* S	Sb	18 44 24.5	+2.1
TBP	**Tagbilaran**	**1.33**	**252**	*eP*	Pb	18 44 12.2	+2.0
BESP	**Borongan**	**1.51**	**11**	↑*eP*	Pn	18 44 10.0	-1.0
BESP				*eS*	Sn	18 44 30.7	+1.0
CGP	**Cagayan de Oro**	**1.71**	**195**	↑*eP*	Pn	18 44 14.4	+0.7
CGP				*eS*	Sb	18 44 40.3	+2.6
BIPH	**Bislig**	**2.27**	**148**	↑*iP*	Pb	18 44 29.7	+3.6
BIPH				*i* S	Sb	18 45 00.8	+7.0
CNP	**Catarman**	**2.43**	**349**	↓*eP*	Pn	18 44 24.8	+1.1
CNP				*eS*	Sn	18 44 54.4	+2.0
RCP	**Roxas**	**2.76**	**302**	↓*eP*	Pn	18 44 31.3	+3.2
RCP				*eS*	Sn	18 45 03.1	+2.5

IDC 20 18:54:51.2±9.3, 28°.05S×177°.28W, h0km, mb3.9/3, mbtmp3.9/3, MS3.1/3, Error ellipse: s-maj=168.1km s-min=29.0km az=88.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.33**	**205**	Pn	Pb	18 55 17.0	0.0
	86nm,0.3s,baz=71,slow=12,SNR=16						
RAO				Sn	Sn	18 55 37.0	+1.6
	201nm,0.3s,baz=267,slow=23,SNR=5.4						
CTA	**Charters Tower**	**34.13**	**275**	LR	LR	19 14 37.7	
	comp=Z,27nm,18.1s,baz=80,slow=35						
STKA	**Stephens Creek**	**35.68**	**254**	P	P	19 01 50.9	-0.5
	4.0nm,0.9s,baz=85,slow=12,SNR=4.6						
STKA				LR	LR	19 14 32.5	
	comp=Z,25nm,18.2s,baz=27,slow=33						
	4.0nm,0.9s						
ASAR	**Alice Springs**	**43.92**	**264**	P	P	19 03 00.1	0.0
	0.2nm,0.4s,baz=104,slow=7.9,SNR=2.7						
ASAR				LR	LR	19 19 11.2	
	comp=Z,25nm,18.9s,baz=132,slow=33						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.70**	**269**	P	P	19 03 06.3	0.0
	1.1nm,0.6s,baz=110,slow=7.7,SNR=28						
	1.1nm,0.6s						

MAN 20 18:55:12.8, 10°.25N×123°.36E, h9km, mb3.8, ML2.5, MS2.1, 2C-6D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.60**	**83**	↓*iP*	Pg	18 55 24.1	-0.2
LLP				*i* S	Sg	18 55 32.7	+0.6
TBP	**Tagbilaran**	**0.74**	**138**	*eP*	Pb	18 55 27.5	-0.3
TBP				*i* S	Sb	18 55 38.2	+0.2
CNOP	**Candoni, Negro**	**0.83**	**240**	↓*eP*	Pg	18 55 28.6	-0.1
CNOP				*eS*	Sb	18 55 40.9	+0.3
GUIM	**Jordan**	**0.85**	**296**	↓*eP*	Pg	18 55 26.7	-2.4
GUIM				*eS*	Sb	18 55 40.8	-0.4
TABP	**Talibon, Bohol**	**0.97**	**99**	↓*iP*	Pg	18 55 30.4	-1.0
TABP				*i* S	Sg	18 55 43.5	-0.4
GHBP	**Garcia Hernand**	**1.12**	**123**	↓*eP*	Pg	18 55 34.0	-0.3
GHBP				*i* S	Sn	18 55 51.3	+1.0
LSIP	**Lazi, Siquijor**	**1.14**	**167**	↑*iP*	Pb	18 55 33.9	-0.7
LSIP				*i* S	Sn	18 55 50.6	-0.1
RCP	**Roxas**	**1.44**	**335**	↑*eP*	Pn	18 55 38.4	-0.7
RCP				*eS*	Sn	18 55 55.4	-2.7
MSLP	**Maasin**	**1.48**	**94**	↓*eP*	Pn	18 55 39.2	-0.3
MSLP				*eS*	Sg	18 56 00.6	+0.4

SKHL ***20*** *19:07:23.8±0.2, 42°.00N×140°.90E, h135km±4km, mb4.7/5, msh5.5/2*

IDC ***20*** *19:07:24.0±1.9, 41°.95N×140°.94E, h134km±17km, mb3.7/19, mbtmp4.1/23, Error ellipse: s-maj=14.9km s-min=10.8km az=88.0*

BJI ***20*** *19:07:23.5±0.0, 41°.86N×140°.94E, h157km, mb4.4/12, mB4.7/6*

MOS ***20*** *19:07:25.1±0.9, 41°.98N×140°.91E, h122km, mb4.2/18, Error ellipse: s-maj=10.5km s-min=6.4km az=112.4*

JMA ***20*** *19:07:26.1±0.1, 41°.9N±0°.4×140°.9E±0°.7, h145km±1km, MV3.9/39, OSHIMA PEN REG HOKKAIDO*

NIED ***20*** *19:07:26.1, 41°.94N×140°.88E, h145km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.13; $M_{\theta\theta}$0.49; $M_{\phi\phi}$0.64; $M_{r\theta}$0.87; $M_{\phi r}$0.61; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.46000×10^{15} NP1:ϕ_S24.00000°, δ32.00000°, λ-124.00000°. NP2:ϕ_D242.00000°, δ64.00000°, λ-71.00000°.*

NEIC ***20*** *19:07:26.4±1.4, 41°.92N±0°.05×140°.8E±0°.1, h154km±7km, mb4.2/62 Error ellipse: s-maj=13.6km s-min=7.6km az=100.0*

ISC 20 19:07:25.5±0.5, 41°.91N±0°.04×140°.89E±0°.04, h152km±4km, n200, σ1°.15/217, mb4.2/58, 6C-21D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.11**	**99**	↓*eP*	**Pn**	**19 07 45.8**	**0.0**
JKB				↓*eS*	**Sn**	**19 08 00.6**	**-0.6**
JYM2	**Yakumo 2**	**0.44**	**299**	*eP*	**Pn**	**19 07 46.7**	**0.0**
JYM2				*eS*	**Sn**	**19 08 02.3**	**-0.6**
JSR	**Shiriuchi**	**0.52**	**224**	*eP*	**Pn**	**19 07 47.2**	**+0.1**
JSR				*eS*	**Sn**	**19 08 02.7**	**-0.8**
JOT	**Ohata**	**0.54**	**167**	↓*eP*	**Pn**	**19 07 47.5**	**+0.2**
JOT				↓*eS*	**Sn**	**19 08 03.7**	**0.0**
JNB	**Noboribetsu**	**0.57**	**11**	↓*eP*	**Pn**	**19 07 46.9**	**-0.4**
JOMM	**Oshimamatsumae**	**0.76**	**240**	*eP*	**Pn**	**19 07 48.8**	**+0.2**
JOMM				*eS*	**Sn**	**19 08 05.7**	**-0.5**
JHST	**Hiyamasetana**	**0.92**	**305**	↓*eP*	**Pn**	**19 07 49.4**	**-0.2**
JHST				↓*eS*	**Sn**	**19 08 06.7**	**-1.5**
JSH	**Shimam**	**0.97**	**320**	↓*eP*	**Pn**	**19 07 50.1**	**0.0**
JSH				↓*eS*	**Sn**	**19 08 08.0**	**-1.0**
JEW	**Eniwo**	**1.02**	**24**		**Pn**	**19 07 50.6**	**+0.1**
JEW	**Eniwo**	**1.02**	**24**	P	**Pn**	**19 07 50.0**	**-0.6**
JEW	**Eniwo**	**1.02**	**24**	↓*eP*	**Pn**	**19 07 50.7**	**+0.1**
JEW				↓*eS*	**Sn**	**19 08 09.8**	**0.0**
JIAM	**Iburiatsuma**	**1.05**	**46**	↓*eP*	**Pn**	**19 07 51.1**	**+0.4**
JIAM				↓*eS*	**Sn**	**19 08 10.0**	**-0.1**
JOSM	**Okushiri--Mats**	**1.07**	**280**	↓*eP*	**Pn**	**19 07 50.7**	**-0.3**
JOSM				↓*eS*	**Sn**	**19 08 09.0**	**-1.4**
JTM	**Tenmabayashi**	**1.12**	**173**	Pn	**Pn**	**19 07 51.8**	**+0.3**
JTM	**Tenmabayashi**	**1.12**	**173**	P	**Pn**	**19 07 51.9**	**+0.4**
JTM	**Tenmabayashi**	**1.12**	**173**	*eP*	**Pn**	**19 07 51.9**	**+0.4**
JTM				*eS*	**Sn**	**19 08 11.1**	**-0.3**
JBT2	**Biratori 2**	**1.40**	**51**	*eP*	**Pn**	**19 07 54.0**	**0.0**
JBT2				*eS*	**Sn**	**19 08 15.3**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.44**	**74**	*eP*	**Pn**	**19 07 54.8**	**+0.3**
JNBK				*eS*	**Sn**	**19 08 16.6**	**-0.1**
JANG	**Nango**	**1.60**	**163**	*eP*	**Pn**	**19 07 56.1**	**-0.2**
JANG				*eS*	**Sn**	**19 08 18.8**	**-1.0**
ERM	**Erimo**	**1.69**	**86**		**Pn**	**19 07 57.9**	**+0.8**
ERM	**Erimo**	**1.69**	**86**	*eP*	**Pn**	**19 07 58.0**	**+0.8**
ERM	**Erimo**	**1.69**	**86**	P	**Pn**	**19 07 58.1**	**+0.9**
JEM	**Erimo**	**1.69**	**86**	P	**Pn**	**19 07 58.0**	**+0.8**
JHR	**Hokuryu**	**1.94**	**18**	*eP*	**Pn**	**19 08 00.6**	**+0.6**
JHR				*eS*	**Sn**	**19 08 27.1**	**+0.6**
JCH	**Churui**	**1.97**	**68**	*eP*	**Pn**	**19 08 00.6**	**+0.4**
JCH				*eS*	**Sn**	**19 08 25.9**	**-1.1**
JMM	**Marumori**	**4.04**	**181**		**Pn**	**19 08 25.7**	**-0.6**
JMM	**Marumori**	**4.04**	**181**	P	**Pn**	**19 08 25.7**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**4.22**	**58**	*eP*	**Pn**	**19 08 27.6**	**-1.0**
YUK				AMB	AMB	19 08 33.0	
	70nm,0.3s						
YUK				*eS*	**Sn**	**19 09 15.6**	**-2.1**
YUK				A	A	19 09 18.2	
	170nm,0.4s						
YUK				A	A	19 09 18.2	
	150nm,0.4s						
JSD	**Sado**	**4.36**	**208**	Pn	**Pn**	**19 08 31.6**	**+1.1**
JSD	**Sado**	**4.36**	**208**	P	**Pn**	**19 08 32.2**	**+1.7**
TEY	**Ternei**	**4.42**	**317**	↑*iP*	**Pn**	**19 08 31.0**	**-0.2**
TEY				pmax	pmax		
	comp=N,100nm,1.0s						
TEY				pmax	pmax		
	comp=E,200nm,1.0s						
TEY				pmax	pmax		
	comp=Z,200nm,1.0s						
TEY				pmax	pmax		
	comp=N,130nm,0.7s						
TEY				pmax	pmax		
	comp=E,170nm,0.7s						
TEY				pmax	pmax		
	comp=Z,210nm,0.7s						
TEY	**Ternei**	**4.42**	**317**	*iP*	**Pn**	**19 08 31.0**	**-0.2**
TEY				AMB	AMB	19 08 31.4	
	comp=Z,200nm,1.0s						
TEY				AMB	AMB	19 08 31.6	
	comp=Z,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.22**	**14**	Pn	**Pn**	**19 08 41.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.22**	**14**	P	**Pn**	**19 08 42.2**	**+0.5**
YSS	**Yuzh-Sakhalins**	**5.22**	**14**	*eP*	**Pn**	**19 08 41.2**	**-0.5**
YSS				AMB	AMB	19 08 43.2	
	comp=Z,20nm,0.3s						
YSS				*eS*	**Sn**	**19 09 39.1**	**-2.2**
YSS				A	A	19 09 44.7	
	comp=Z,50nm,0.4s						
YSS				A	A	19 09 44.7	
	comp=Z,30nm,0.4s						
JYT	**Yasato**	**5.70**	**186**		**Pn**	**19 08 44.9**	**-3.2**
MJA0	**Matsu Arr-Jizo**	**5.74**	**202**	*eP*	**Pn**	**19 08 51.0**	**+2.3**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**5.74**	**202**		**Pn**	**19 08 47.9**	**-0.9**
MAJO	**Matsushiro**	**5.75**	**202**		**Pn**	**19 08 49.2**	**+0.3**
MAJO	**Matsushiro**	**5.75**	**202**	*de*P	**Pn**	**19 08 50.3**	**+1.4**
MAJO	**Matsushiro**	**5.75**	**202**	P	**Pn**	**19 08 50.5**	**+1.6**
MJAR	**Matsushiro Arr**	**5.75**	**202**	P	**Pn**	**19 08 49.8**	**+0.9**
	comp=Z,5.9nm,0.5s,baz=6.2,slow=14,SNR=18						
MJAR				S	**Sn**	**19 09 55.1**	**+1.1**
	comp=Z,4.0nm,0.6s,baz=24,slow=27,SNR=4.2						
JGF	**Kuroka**	**6.87**	**205**	Pn	**Pn**	**19 09 06.4**	**+2.5**
JGF	**Kuroka**	**6.87**	**205**	P	**Pn**	**19 09 06.0**	**+2.1**
USA0B	**Ussuriysk Arra**	**6.91**	**292**	Pn	**Pn**	**19 09 05.0**	**+0.7**
USA0B	**Ussuriysk Arra**	**6.91**	**292**	P	**Pn**	**19 09 05.0**	**+0.7**
USRK	**Ussuriysk Ar.**	**6.91**	**292**	P	**Pn**	**19 09 04.0**	**-0.3**
	comp=Z,19nm,0.4s,baz=93,slow=14,SNR=46						
USRK	**Ussuriysk Ar.**	**6.91**	**292**	Pn	**Pn**	**19 09 04.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**6.91**	**292**	P	**Pn**	**19 09 04.9**	**+0.6**
INU	**Inuyama**	**7.21**	**206**	Pn	**Pn**	**19 09 09.9**	**+1.5**
INU	**Inuyama**	**7.21**	**206**	P	**Pn**	**19 09 09.4**	**+1.0**
MDJ	**Mudanjiang**	**8.68**	**292**	Pn	**Pn**	**19 09 26.7**	**-1.1**
MDJ	**Mudanjiang**	**8.68**	**292**	P	**Pn**	**19 09 27.9**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,24nm,1

baz=327,slow=75,SNR=10
H11N3 WAKE ISLAND Hy 31.23 127 T T 19 45 46.3
baz=327,slow=75,SNR=7.9
H11S1 WAKE ISLAND Hy 32.04 129 T T 19 46 59.2
baz=328,slow=75,SNR=22
H11S3 WAKE ISLAND Hy 32.05 129 T T 19 46 53.4
baz=328,slow=75,SNR=21
H11S2 WAKE ISLAND Hy 32.06 129 T T 19 46 56.7
baz=328,slow=75,SNR=17
DGZ Jazzator, Alta 37.38 301⇑ *iP* **P 19 14 24.4 +0.9**
DGZ pmax pmax
comp=Z,6.0nm,0.7s
ZAA0 Zalesovo Array 38.46 308 P **P 19 14 32.1 -0.3**
ZAA0 IAmb IAmb 19 14 34.5
comp=Z,5.9nm,0.8s
ZALV Zalesovo Beam 38.46 308 P **P 19 14 32.6 +0.3**
comp=Z,3.7nm,0.3s,baz=88,slow=9.5,SNR=20
ZALV PcP **PcP 19 16 42.7 +0.5**
comp=Z,1.7nm,0.5s,baz=87,slow=2.2,SNR=5.8
comp=Z,3.7nm,0.3s
ZALV Zalesovo Beam 38.46 308 P **P 19 14 32.1 -0.3**
MK31 Makanchi Array 41.35 297 P **P 19 14 56.5 +0.3**
MK31 Makanchi Array 41.35 297 *ceP* **P 19 14 56.2 -0.1**
MKAR Makanchi Array 41.35 297 P **P 19 14 56.5 +0.2**
comp=Z,1.2nm,0.6s,baz=83,slow=12,SNR=20
MKAR PcP **PcP 19 16 51.3 -0.3**
comp=Z,0.2nm,0.4s,baz=71,slow=4.8,SNR=2.2
comp=Z,1.2nm,0.6s
MAKZ Makanchi 41.55 298 P **P 19 14 58.1 +0.2**
MAKZ Makanchi 41.55 298 P **P 19 14 58.1 +0.2**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
J20K Nowinta River 42.56 36 P **P 19 15 07.7 +1.9**
J20K IAmb IAmb 19 15 11.6
comp=Z,7.0nm,1.3s
CMAR Chiang Mai Arr 42.58 250 P **P 19 15 08.1 +1.5**
comp=Z,0.4nm,0.6s,baz=38,slow=7.0,SNR=4.7
comp=Z,0.4nm,0.6s
IMAR Indian Mountai 42.73 33 P **P 19 15 08.0 +0.8**
KURK Kurchatov 42.74 304 P **P 19 15 07.4 0.0**
KURK IAmb IAmb 19 15 11.0
comp=Z,5.9nm,0.8s
KURK Kurchatov 42.74 304 *ceP* **P 19 15 07.2 -0.2**
KURK pmax pmax
comp=Z,5.0nm,0.6s
KURK Kurchatov 42.74 304 *eP* **P 19 15 07.2 -0.2**
KURBB Kurchatov Arra 42.82 304 P **P 19 15 08.1 0.0**
comp=Z,4.6nm,0.6s,baz=77,slow=8.9,SNR=24
comp=Z,4.6nm,0.6s
KURBB Kurchatov Arra 42.82 304 P **P 19 15 07.9 -0.1**
H21K Melozitna Rive 43.12 34 P **P 19 15 10.8 +0.4**
H21K IAmb IAmb 19 15 13.7
comp=Z,7.6nm,1.4s
PPLA Purkeypile 43.48 38 P **P 19 15 15.1 +1.7**
CAST Castle Rocks 43.50 37 P **P 19 15 15.6 +2.2**
CAST IAmb IAmb 19 15 16.2
comp=Z,3.5nm,0.7s
KDAK Kodiak Island 43.85 45 P **P 19 15 16.6 +0.4**
KDAK Kodiak Island 43.85 45 P **P 19 15 16.6 +0.4**
KDAK pmax pmax
comp=Z,50nm,1.5s
MLY Manley 44.00 35 P **P 19 15 19.1 +1.7**
SUA Susitna One 44.29 40 P **P 19 15 20.4 +0.6**
TOLK Toolik Lake Re 44.38 29 P **P 19 15 22.3 +1.9**
TOLK IAmb IAmb 19 15 32.9
comp=Z,5.7nm,1.2s
RND Reindeer 44.95 37 P **P 19 15 24.7 -0.3**
RND IAmb IAmb 19 15 38.3
comp=Z,9.5nm,1.4s
RND Reindeer 44.95 37 P **P 19 15 24.7 -0.3**
RND pmax pmax
comp=Z,9.0nm,1.4s
MDM Murphy Dome 45.07 35 P **P 19 15 27.6 +1.8**
GHO Glory Hole Cre 45.11 39 P **P 19 15 27.1 +0.8**
GHO IAmb IAmb 19 15 34.9
comp=Z,11nm,1.1s
H24K Noodor Dome 45.15 33 P **P 19 15 28.6 +2.2**
FAKI Fak Fak 45.30 192 P **P 19 15 28.6 +0.4**
KNK Knik Glacier 45.38 40 P **P 19 15 29.4 +1.0**
SML Sawmill 45.39 39 P **P 19 15 29.3 +0.9**
DHY Denali Highway 45.66 37 P **P 19 15 31.8 +1.2**
DHY IAmb IAmb 19 15 59.0
comp=Z,10nm,1.4s
IL31 45.66 35 P **P 19 15 31.6 +1.2**
ILAR Eielson Array 45.66 35 P **P 19 15 30.9 +0.4**
comp=Z,1.5nm,0.9s,baz=247,slow=5.1,SNR=10
comp=Z,1.5nm,0.9s
ILAR Eielson Array 45.66 35 P **P 19 15 30.6 +0.1**
PRP Porcupine Dome 46.15 34 P **P 19 15 36.0 +1.5**
PRP IAmb IAmb 19 15 37.0
comp=Z,3.7nm,0.6s
BMAR Burnt Mountain 46.31 31 P **P 19 15 36.1 +0.5**
J25K Salcha River, 46.33 35 P **P 19 15 35.0 -0.8**
RAMN Ramite 46.46 269 *eP* **P 19 15 38.3 +0.8**
GUN Gumba 46.48 271 *eP* **P 19 15 38.5 +0.7**
comp=Z,9.4nm,0.5s
PKI Pulchoki 47.01 271 *eP* **P 19 15 43.3 +1.4**
comp=Z,2.3nm,0.3s
SCRK Sand Creek 47.02 36 P **P 19 15 42.0 +0.8**
SCRK IAmb IAmb 19 15 42.8
comp=Z,4.4nm,0.5s
DOT Dot Lake 47.04 36 P **P 19 15 41.5 +0.2**
DOT IAmb IAmb 19 16 06.8
comp=Z,7.2nm,1.2s
BVAR Borovoye Array 47.09 309 P **P 19 15 42.3 +0.5**
comp=Z,2.9nm,0.3s,baz=76,slow=9.1,SNR=21
comp=Z,2.9nm,0.3s
J26L Joseph Creek 47.12 35 P **P 19 15 42.2 +0.2**
BRVK Borovoye 47.15 309 P **P 19 15 42.5 +0.3**
BRVK IAmb IAmb 19 15 49.9
comp=Z,5.0nm,0.7s
BRVK Borovoye 47.15 309⇓ *eP* **P 19 15 42.8 +0.6**
BRVK pmax pmax
comp=Z,5.0nm,0.7s
BRVK Borovoye 47.15 309 *eP* **P 19 15 42.8 +0.6**
N25K Chitina, Valde 47.17 39 P **P 19 15 42.3 -0.1**
N25K IAmb IAmb 19 16 02.6
comp=Z,12nm,1.4s
GKN Gorkha 47.35 272 *eP* **P 19 15 45.4 +1.0**
comp=Z,4.7nm,0.4s
L26K Log Cabin Wild 47.47 37 P **P 19 15 46.5 +1.9**
DANN Dangsing 47.83 273 *eP* **P 19 15 49.1 +1.0**
K27K Chicken 47.84 35 P **P 19 15 49.1 +1.7**
K27K IAmb IAmb 19 15 51.5
comp=Z,9.1nm,1.4s
AAK Ala-Archa 47.96 294 P **P 19 15 49.1 +0.3**
AAK IAmb IAmb 19 15 51.7
comp=Z,1.9nm,0.5s
AAK Ala-Archa 47.96 294⇓ *eP* **P 19 15 49.3 +0.4**
AAK pmax pmax
comp=Z,4.0nm,1.5s
AAK Ala-Archa 47.96 294 *eP* **P 19 15 49.3 +0.4**
EGAK Eagle 48.09 34 P **P 19 15 49.2 0.0**
EGAK IAmb IAmb 19 16 31.3
comp=Z,6.8nm,1.4s
L27K Beaver Creek, 48.15 37 P **P 19 15 51.9 +2.0**
L27K IAmb IAmb 19 16 00.7
comp=Z,7.8nm,1.5s
BCAR Beaver Creek A 48.16 37 P **P 19 15 51.6 +1.6**
TGL Tana Glacier 48.19 40 P **P 19 15 51.0 +0.7**
WAX Waxell Ridge 48.26 40 P **P 19 15 51.8 +1.0**
M27K Edge Creek, AK 48.27 38 P **P 19 15 53.0 +2.1**
M27K IAmb IAmb 19 16 26.4
comp=Z,4.6nm,1.1s
PYUN Piuthan 48.53 273 *eP* **P 19 15 54.1 +0.6**
CTGM Chitina Glacie 48.85 39 P **P 19 15 56.1 +0.7**
CTGM IAmb IAmb 19 16 35.7
comp=Z,6.4nm,1.0s
J29M Klondike Camp 49.40 34 pP 19 16 36.9 +3.2
INK Inuvik 50.28 29 P **P 19 16 06.9 +1.1**
comp=Z,1.5nm,0.3s,baz=258,slow=6.8,SNR=7.6
comp=Z,1.5nm,0.3s
KK31 Karatay Array 50.46 297 P **P 19 16 08.0 +0.3**
KK31 Karatay Array 50.46 297 P **P 19 16 07.5 -0.1**
KKAR Karatay Array 50.46 297 P **P 19 16 08.0 +0.3**
KKAR Karatay Array 50.46 297 P **P 19 16 07.8 +0.2**
KKAR Karatay Array 50.46 297 P **P 19 16 07.8 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
HYT Haines Junctio 50.69 39 P **P 19 16 10.3 +1.0**
HYT IAmb IAmb 19 16 21.9
comp=Z,6.6nm,1.1s
KULM Kulim 51.07 236 P **P 19 16 11.7 -0.8**
SVE Sverdlovsk 51.30 316 *eP* **P 19 16 18.3 +4.7**
SVE pmax pmax

comp=Z,14nm,0.9s
GAR Garm 52.37 292 P **P 19 16 21.8 -0.3**
GAR IAmb IAmb 19 16 30.6
comp=Z,7.5nm,1.3s
ARU Arti 52.51 316 P **P 19 16 21.8 -0.8**
ARU IAmb IAmb 19 16 30.5
comp=Z,6.3nm,1.0s
ARU Arti 52.51 316⇓ *eP* **P 19 16 22.2 -0.4**
ARU pmax pmax
comp=Z,12nm,1.5s
ARU Arti 52.51 316 *eP* **P 19 16 22.2 -0.4**
CHGR Chuyangaron 53.34 292 P **P 19 16 29.0 -0.1**
CHGR Chuyangaron 53.34 292 P **P 19 16 29.0 -0.1**
CHGR pmax pmax
comp=Z,5.0nm,0.7s
AB31 Akbulak array 54.58 307 *eP* **P 19 16 37.9 +0.1**
ABKAR Akbulak array 54.58 307 P **P 19 16 37.7 -0.1**
ABKAR IAmb IAmb 19 16 45.6
comp=Z,4.2nm,0.7s
ABKAR Akbulak array 54.58 307 P **P 19 16 37.9 +0.2**
MTN Manton Dam 55.21 192 P **P 19 16 42.6 -0.1**
EUNU Eureka 55.44 9 P **P 19 16 43.2 -0.4**
EUNU IAmb IAmb 19 16 45.2
comp=Z,2.5nm,0.9s
PRGR Permogore 56.50 325 *eP* **P 19 16 52.0 +0.7**
PRGR pmax pmax
comp=Z,4.0nm,0.6s
RES Resolute Bay 58.00 15 P **P 19 17 01.7 +0.1**
comp=Z,4.5nm,1.1s,baz=306,slow=8.7,SNR=1.7
comp=Z,4.5nm,1.1s
RES Resolute Bay 58.00 15 P **P 19 17 00.6 -1.0**
KNRA Kununurra 58.38 194 P **P 19 17 05.3 +0.4**
ARCES ARCESS Array B 59.31 338 P **P 19 17 11.3 +0.6**
comp=Z,1.5nm,0.9s,baz=61,slow=5.7,SNR=7.0
comp=Z,1.5nm,0.9s
ARCES ARCESS Array B 59.31 338 P **P 19 17 11.0 +0.2**
ARCES IAmb IAmb 19 17 19.5
comp=Z,5.0nm,1.1s
WB0 Warramunga Arr 61.65 187 P **P 19 17 26.8 -0.4**
WB0 IAmb IAmb 19 17 27.7
comp=Z,4.2nm,0.9s
WRAB Tennant Creek 61.82 187 P **P 19 17 28.0 -0.2**
WRAB IAmb IAmb 19 17 48.2
comp=Z,5.0nm,1.1s
WRAB Tennant Creek 61.82 187⇓ *iP* **P 19 17 28.1 -0.2**
WRAB pmax pmax
comp=Z,7.0nm,1.5s
WB2 Warramunga Arr 61.83 187 P **P 19 17 28.0 -0.4**
WB2 IAmb IAmb 19 18 00.2
comp=Z,6.1nm,1.2s
WR0 Warramunga Arr 61.83 187 P **P 19 17 28.1 -0.3**
WR0 IAmb IAmb 19 17 28.9
comp=Z,4.7nm,1.0s
WRA Warramunga Arr 61.83 187 P **P 19 17 28.2 -0.2**
comp=Z,1.2nm,0.4s,baz=7.8,slow=7.7,SNR=83
comp=Z,1.2nm,0.4s
WRA Warramunga Arr 61.83 187 P **P 19 17 27.8 -0.6**
OBN Obninsk 63.99 322 *eP* **P 19 17 41.9 -0.3**
OBN *e* 19 18 14.5
OBN *e**PP **pP 19 18 20.2 +1.9**
OBN *e**SP **sP 19 18 37.4 +2.6**
OBN *e* 19 20 04.5
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 63.99 322 *eP* **P 19 17 41.9 -0.3**
FIA1 FINESS Array S 64.34 331 P **P 19 17 44.9 +0.4**
FINES FINESS Array B 64.34 331 P **P 19 17 44.8 +0.3**
comp=Z,1.3nm,0.5s,baz=48,slow=7.9,SNR=17
comp=Z,1.3nm,0.5s
FINES FINESS Array B 64.34 331 P **P 19 17 44.5 0.0**
AS31 Alice Springs 65.56 187 P **P 19 17 52.8 0.0**
ASAR Alice Springs 65.56 187 P **P 19 17 53.2 +0.4**
comp=Z,1.2nm,0.7s,baz=6.3,slow=6.6,SNR=16
comp=Z,1.2nm,0.7s
ASAR Alice Springs 65.56 187 P **P 19 17 52.5 -0.3**
ASAR Alice Springs 65.56 187 *eP* **P 19 17 53.1 +0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 69.55 336 P **P 19 18 17.8 +0.3**
comp=Z,0.3nm,0.6s,baz=31,slow=5.2,SNR=1.2
comp=Z,0.3nm,0.6s
AKASG Malin Array Be 70.23 321 P **P 19 18 23.1 +1.4**
comp=Z,0.4nm,0.5s,baz=42,slow=6.2,SNR=2.1
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 72.42 54 P **P 19 18 35.8 +0.4**
comp=Z,0.5nm,0.6s,baz=285,slow=5.6,SNR=6.6
comp=Z,0.5nm,0.6s
MAW Mawson 123.73 207 PKP **PKiKP 19 26 05.0 +0.9**
comp=Z,1.3nm,0.6s,baz=0.0,slow=0.0,SNR=4.2
MAW Mawson 123.73 207 PKIKP **PKiKP 19 26 05.0 +0.9**
TROLL Troll, Antarti 143.69 200 PKPdf PKPbc 19 26 39.9 +0.6
SNAA Sanae 145.25 199 PKPdf **PKPdf 19 26 44.3 +0.4**
VNA2 Neumayer--Watz 146.84 198 PKPdf **PKPbc 19 26 49.2 +0.7**
baz=122,slow=3.0
VNA3 Neumayer Olymp 147.13 197 PKPdf **PKPbc 19 26 49.7 +0.3**
VNA1 Neumayer--Stat 147.24 198 PKPdf **PKPbc 19 26 50.2 +0.6**

NEIC ***20*** *19:08:08±1.1,59.°67N±0.°05×152.°71W±0.°07,h103km±9km,*
Error ellipse: s-maj=7.2km s-min=4.8km az=203.0
AEIC ***20*** *19:08:09±1.1,59.°72N±0.°05×152.°70W±0.°08,h95km±6km,*
ML3.4,ML3.7/126(NEIC),Error ellipse: s-maj=7.3km
s-min=5.7km az=159.0
ISC 20 19:08:08.3±1.1,59.°68N±0.°05×152.°67W±0.°05,
h104km±8km,n204,σ0°55/209,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.29**	**265**		**Pn**	**19 08 23.4**	**0.0**
P19K	**Oil Pt**	**0.29**	**265**	P	**Pn**	**19 08 23.5**	**+0.2**
baz=79							
P19K				S	**Sn**	**19 08 34.4**	**-0.2**
baz=79							
O20K	**Slope Mountain**	**0.41**	**3**	P	**Pn**	**19 08 24.0**	**0.0**
baz=182							
O20K				S	**Sn**	**19 08 35.5**	**-0.2**
baz=182							
HOM	**Homer**	**0.52**	**92**		**Pn**	**19 08 24.8**	**+0.3**
HOM	**Homer**	**0.52**	**92**	P	**Pn**	**19 08 24.9**	**+0.3**
baz=276							
CNPM	**China Poot**	**0.74**	**101**		**Pn**	**19 08 26.6**	**+0.1**
CNPM				IAML		19 08 39.9	
comp=E,2μm,0.4s							
CNPM				IAML		19 08 40.1	
comp=N,2μm,0.7s							
RSO	**Redoubt South**	**0.79**	**357**		**Pn**	**19 08 26.8**	**-0.3**
Q19K	**Cape Douglas,**	**0.90**	**214**		**Pn**	**19 08 28.0**	**0.0**
Q19K				IAML		19 08 44.1	
comp=E,1μm,0.7s							
Q19K				IAML		19 08 46.2	
comp=N,1μm,0.7s							
Q19K	**Cape Douglas,**	**0.90**	**214**	P	**Pn**	**19 08 28.2**	**+0.1**
baz=32							
Q19K				S	**Sn**	**19 08 43.0**	**+0.1**
baz=32							
BRLK	**Bradley Lake**	**0.91**	**84**		**Pn**	**19 08 27.8**	**-0.2**
BRLK				IAML		19 08 44.7	
comp=E,2μm,0.1s							
BRLK				IAML		19 08 45.6	
comp=N,3μm,0.1s							
BRSE	**Bradley Lake S**	**0.98**	**85**	P	**Pn**	**19 08 28.8**	**0.0**
baz=269							
O19K	**Port Alsworth**	**0.98**	**303**		**Pn**	**19 08 28.8**	**+0.1**
O19K	**Port Alsworth**	**0.98**	**303**	P	**Pn**	**19 08 28.9**	**+0.1**
baz=120							
O19K				S	**Sn**	**19 08 43.8**	**-0.4**
baz=120							
O18K	**Koktuh Hills**	**1.30**	**279**		**Pn**	**19 08 32.5**	**+0.2**
O18K	**Koktuh Hills**	**1.30**	**279**	P	**Pn**	**19 08 32.5**	**+0.2**
baz=95							
CAPN	**Captain Cook N**	**1.33**	**34**	Pn	**Pn**	**19 08 34.2**	**+1.6**
CAPN	**Captain Cook N**	**1.33**	**34**	P	**Pn**	**19 08 34.4**	**+1.8**
baz=216							
P18K	**Big Mountain,**	**1.34**	**259**		**Pn**	**19 08 32.8**	**0.0**
P18K	**Big Mountain,**	**1.34**	**259**	P	**Pn**	**19 08 32.8**	**0.0**
baz=75							
P18K				S	**Sn**	**19 08 50.7**	**-0.7**
baz=75							
N19K	**Bonanza Creek**	**1.46**	**322**	Pn	**Pn**	**19 08 34.3**	**0.0**
N19K	**Bonanza Creek**	**1.46**	**322**	P	**Pn**	**19 08 34.3**	**0.0**
baz=140							
SPU	**Mount Spurr**	**1.54**	**11**		**Pn**	**19 08 35.2**	**0.0**
SPCR	**Spurr Chakacha**	**1.54**	**8**	P	**Pn**	**19 08 35.3**	**0.0**
baz=189							
KAHC	**Katmai Hardscr**	**1.59**	**230**	P	**Pn**	**19 08 36.6**	**+0.6**

baz=48
SEW Seward 1.68 74 **Pn 19 08 36.4 -0.5**
SEW Seward 1.68 74 P **Pn 19 08 36.6 -0.2**
baz=258
O22K Cooper Landing 1.68 60 **Pn 19 08 37.0 +0.1**
O22K Cooper Landing 1.68 60 P **Pn 19 08 37.0 +0.1**
baz=243
N18K Kilae Creek 1.90 303 Pn **Pn 19 08 39.5 -0.2**
N18K IAML 19 09 04.0
comp=E,264nm,1.0s
N18K Kilae Creek 1.90 303 P **Pn 19 08 39.8 +0.1**
baz=120
KDAK Kodiak Island 1.90 179 Pn **Pn 19 08 39.1 -0.6**
KDAK IAML 19 09 03.8
comp=E,412nm,0.2s
KDAK IAML 19 09 04.3
comp=E,518nm,0.3s
FIS Fire Island 1.91 38 Pn **Pn 19 08 39.7 -0.1**
FIS IAML 19 09 11.1
comp=E,988nm,0.3s
FIS IAML 19 09 12.4
comp=N,801nm,0.5s
SUA Susitna One 2.03 27 **Pn 19 08 41.7 +0.3**
SUA Susitna One 2.03 27 P **Pn 19 08 41.7 +0.3**
baz=209
SVW2 Sparrevohn 2.03 316 **Pn 19 08 41.1 -0.3**
RC01 Rabbit Creek A 2.03 45 Pn **Pn 19 08 41.3 0.0**
RC01 IAML 19 09 06.9
comp=N,934nm,0.3s
RC01 Rabbit Creek A 2.03 45 P **Pn 19 08 41.4 0.0**
baz=229
M20K Styx River 2.22 354 **Pn 19 08 44.2 +0.3**
M20K Styx River 2.22 354 P **Pn 19 08 44.3 +0.3**
baz=174
SKT Skwentna 2.38 13 **Pn 19 08 45.4 -0.5**
SKT IAML 19 09 19.5
comp=E,204nm,0.3s
SKT IAML 19 09 19.5
comp=N,198nm,0.4s
SKT Skwentna 2.38 13 P **Pn 19 08 45.6 -0.2**
baz=194
M19K Big River Lodg 2.39 340 **Pn 19 08 46.0 +0.1**
M19K Big River Lodg 2.39 340 P **Pn 19 08 46.1 +0.1**
baz=158
M22K Willow 2.43 30 **Pn 19 08 46.7 +0.2**
M22K Willow 2.43 30 P **Pn 19 08 46.6 +0.2**
baz=212
PMR Palmer 2.59 41 **Pn 19 08 48.7 +0.1**
PMR IAML 19 09 21.5
comp=E,215nm,0.3s
PMR IAML 19 09 21.9
comp=N,211nm,0.3s
KNK Knik Glacier 2.71 48 **Pn 19 08 50.0 -0.2**
KNK IAML 19 09 22.0
comp=E,385nm,0.4s
KNK Knik Glacier 2.71 48 P **Pn 19 08 49.6 -0.6**
baz=232
L19K White Mountain 2.73 338 Pn **Pn 19 08 50.4 -0.1**
L19K White Mountain 2.73 338 P **Pn 19 08 50.5 0.0**
baz=156
GHO Glory Hole Cre 2.79 40 **Pn 19 08 50.7 -0.7**
GHO IAML 19 09 24.2
comp=E,344nm,0.3s
GHO IAML 19 09 27.6
comp=N,315nm,0.5s
L20K Farewell, AK 2.87 349 P **Pn 19 08 52.6 +0.2**
baz=167
CUT Chulitna 2.98 22 **Pn 19 08 53.7 0.0**
CUT IAML 19 09 29.5
comp=N,298nm,0.3s
CUT IAML 19 09 32.9
comp=E,321nm,0.6s
CUT Chulitna 2.98 22 P **Pn 19 08 53.7 0.0**
baz=204
SML Sawmill 3.02 43 **Pn 19 08 53.8 -0.6**
SML IAML 19 09 28.9
comp=E,221nm,0.6s
SML IAML 19 09 29.7
comp=N,273nm,0.6s
SML Sawmill 3.02 43 P **Pn 19 08 53.8 -0.6**
baz=227
GLI Glacier Island 3.02 64 **Pn 19 08 53.0 -1.4**
GLI IAML 19 09 27.7
comp=E,258nm,0.3s
GLI IAML 19 09 27.9
comp=N,227nm,0.6s
GLI Glacier Island 3.02 64 P **Pn 19 08 53.0 -1.4**
baz=249
HIN Hinchinbrook I 3.18 74 Pn **Pn 19 08 55.8 -0.6**
HIN IAML 19 09 33.1
comp=N,169nm,0.6s
HIN IAML 19 09 34.0
comp=E,121nm,0.4s
Q23K Middleton Isla 3.23 92 Pn **Pn 19 08 56.8 -0.2**
Q23K IAML 19 09 41.9
comp=N,252nm,3.0s
Q23K Middleton Isla 3.23 92 P **Pn 19 08 56.9 -0.2**
baz=278
SII Sitkinak Islan 3.23 195 Pn **Pn 19 08 56.5 -0.7**
SII IAML 19 09 43.0
comp=E,171nm,3.0s
SII IAML 19 10 06.5
comp=N,155nm,2.7s
SII Sitkinak Islan 3.23 195 P **Pn 19 08 56.5 -0.7**
baz=14
MID Middleton Isla 3.23 92 Pn **Pn 19 08 56.8 -0.3**
MID IAML 19 09 41.9
comp=N,276nm,2.5s
PPLA Purkeypile 3.24 4 **Pn 19 08 57.7 +0.4**
PPLA Purkeypile 3.24 4 P **Pn 19 08 57.8 +0.4**
baz=184
FID Port Fidalgo 3.27 68 **Pn 19 08 56.1 -1.5**
FID IAML 19 09 34.0
comp=E,305nm,0.5s
SCM Sheep Creek Mo 3.40 48 **Pn 19 08 59.1 -0.3**
SCM IAML 19 09 40.9
comp=E,195nm,0.3s
SCM IAML 19 09 43.7
comp=N,186nm,0.6s
EYAK Cordova Ski Ar 3.57 73 Pn **Pn 19 09 00.7 -0.9**
EYAK Cordova Ski Ar 3.57 73 P **Pn 19 09 00.8 -0.9**
baz=259
TTA Tatalina 3.64 335 Pn **Pn 19 09 02.1 -0.5**
TTA Tatalina 3.64 335 P **Pn 19 09 02.2 -0.5**
baz=152
DIV Divide 3.72 64 **Pn 19 09 03.3 -0.4**
WAT1 Susitna Watana 3.73 30 P **Pn 19 09 03.7 -0.3**
baz=214
K20K Telida 3.75 350 **Pn 19 09 04.2 +0.1**
K20K Telida 3.75 350 P **Pn 19 09 04.4 +0.2**
baz=169
CAST Castle Rocks 3.77 4 **Pn 19 09 03.9 -0.4**
CAST Castle Rocks 3.77 4 P **Pn 19 09 03.9 -0.4**
baz=184
WAT6 Susitna Watana 3.77 37 P **Pn 19 09 03.9 -0.6**
baz=222
KLU Klutina 3.79 58 **Pn 19 09 04.3 -0.4**
KLU IAML 19 09 47.9
comp=E,192nm,0.6s
KLU Klutina 3.79 58 P **Pn 19 09 04.1 -0.6**
baz=245
TRF Thorofare Moun 3.95 16 **Pn 19 09 06.8 -0.1**
TRF IAML 19 09 54.3
comp=N,85nm,0.4s
TRF IAML 19 09 55.5
comp=E,74nm,0.3s
TRF Thorofare Moun 3.95 16 P **Pn 19 09 06.9 -0.1**
baz=198
KTH Kantishna Hill 3.98 11 **Pn 19 09 06.9 -0.3**
KTH IAML 19 10 17.6
comp=E,45nm,0.6s
KTH IAML 19 10 25.5
comp=N,41nm,0.8s
M24K Tolsona, Glenn 4.00 50 Pn **Pn 19 09 07.6 +0.1**
M24K IAML 19 09 55.6
comp=N,161nm,0.5s
M24K Tolsona, Glenn 4.00 50 P **Pn 19 09 07.7 +0.1**
baz=236
RAGM Ragged Mountai 4.07 77 Pn **Pn 19 09 08.6 +0.2**
RAGM IAML 19 10 01.3
comp=E,133nm,1.0s
RND Reindeer 4.16 24 **Pn 19 09 09.4 -0.3**
RND IAML 19 09 57.0
comp=N,77nm,0.5s
RND IAML 19 09 59.9
comp=E,66nm,0.3s

KAIM	Kayak Island	4.17	83	Pn	Pn	19 09 10.0	+0.2
KAIM	Kayak Island	4.17	83	P	Pn	19 09 10.0	+0.2
	baz=271						
CHIR	Chirikof Islan	4.18	204	P	Pn	19 09 09.6	-0.2
	baz=21						
BMRM	Bremner River	4.21	69	Pn	Pn	19 09 09.3	-1.0
BMRM	Bremner River	4.21	69	P	Pn	19 09 10.5	+0.1
	baz=256						
CHUM	Lake Minchumin	4.22	2	P	Pn	19 09 10.1	-0.3
	baz=182						
DHY	Denali Highway	4.25	34	Pn	Pn	19 09 10.7	-0.3
DHY				IAML		19 10 00.4	
	comp=E,127nm,0.3s						
DHY				IAML		19 10 01.2	
	comp=N,96nm,0.3s						
DHY	Denali Highway	4.25	34	P	Pn	19 09 10.5	-0.4
	baz=219						
HMT	Hamilton	4.27	77		Pn	19 09 11.1	-0.1
N25K	Chitina, Valde	4.42	61		Pn	19 09 12.9	-0.3
N25K				IAML		19 10 03.4	
	comp=N,78nm,0.7s						
N25K				IAML		19 10 05.2	
	comp=E,73nm,0.6s						
N25K	Chitina, Valde	4.42	61	P	Pn	19 09 12.8	-0.4
	baz=248						
MCK	McKinley	4.44	22	Pn	Pn	19 09 13.5	+0.2
MCK				IAML		19 10 04.9	
	comp=N,63nm,0.5s						
MCK				IAML		19 10 05.9	
	comp=E,79nm,0.3s						
MCK	McKinley	4.44	22	P	Pn	19 09 13.5	+0.2
	baz=205						
SUCK	Suckling Hills	4.50	81	Pn	Pn	19 09 14.3	+0.1
BPAW	Bear Paw Mtn.	4.51	9	Pn	Pn	19 09 13.7	-0.6
BPAW	Bear Paw Mtn.	4.51	9	P	Pn	19 09 14.1	-0.2
	baz=191						
BERG	Berg Lake	4.55	77	Pn	Pn	19 09 14.6	-0.3
HARP	HAARP	4.56	50	P	Pn	19 09 15.2	+0.2
	baz=237						
J20K	Nowinta River	4.57	352	Pn	Pn	19 09 15.3	+0.2
J20K	Nowinta River	4.57	352	P	Pn	19 09 15.2	+0.2
	baz=170						
GLB	Gilahina Butte	4.72	64		Pn	19 09 16.7	-0.5
GLB				IAML		19 10 08.7	
	comp=E,43nm,0.7s						
GLB				IAML		19 10 11.0	
	comp=N,78nm,0.6s						
BWN	Browne	4.76	17		Pn	19 09 17.8	+0.1
BWN				IAML		19 10 59.2	
	comp=E,51nm,1.1s						
BWN				IAML		19 11 06.6	
	comp=N,72nm,1.0s						
PAX	Paxson	4.79	43	Pn	Pn	19 09 17.8	-0.4
PAX	Paxson	4.79	43	P	Pn	19 09 17.9	-0.3
	baz=230						
VRDI	Verde Repeater	4.82	67	Pn	Pn	19 09 18.1	-0.6
VRDI				IAML		19 10 10.9	
	comp=E,28nm,0.5s						
VRDI				IAML		19 10 11.2	
	comp=N,54nm,0.9s						
SNH	Sunshine Point	4.97	80	Pn	Pn	19 09 20.9	+0.3
WAX	Waxell Ridge	4.98	77		Pn	19 09 20.4	-0.3
TGL	Tana Glacier	5.02	73		Pn	19 09 21.3	-0.1
TGL				IAML		19 10 17.3	
	comp=N,50nm,0.6s						
TGL				IAML		19 10 20.9	
	comp=E,43nm,0.5s						
MCARA	McCarthy VSAT	5.06	66		Pn	19 09 22.4	+0.6
MCARA				IAML		19 10 26.3	
	comp=E,77nm,0.8s						
MCARA				IAML		19 10 27.1	
	comp=N,76nm,1.0s						
NEA2	Nenana	5.21	17		Pn	19 09 23.2	-0.6
NEA2				IAML		19 10 23.9	
	comp=N,16nm,0.5s						
NEA2				IAML		19 10 23.9	
	comp=E,17nm,0.7s						
NEA2	Nenana	5.21	17	P	Pn	19 09 23.2	-0.6
	baz=200						
ISLE	Juniper Island	5.25	75		Pn	19 09 23.9	-0.5
ISLE				IAML		19 10 25.5	
	comp=E,62nm,1.1s						
WRH	Wood River Hil	5.27	22		Pn	19 09 23.7	-0.8
WRH				IAML		19 10 21.9	
	comp=E,34nm,0.4s						
WRH				IAML		19 10 25.3	
	comp=N,22nm,0.5s						
MESA	MESA	5.41	80		Pn	19 09 26.8	+0.1
MESA	MESA	5.41	80	P	Pn	19 09 27.1	+0.4
	baz=270						
M26K	Nabesna, AK	5.43	56		Pn	19 09 27.3	+0.4
M26K	Nabesna, AK	5.43	56	P	Pn	19 09 27.3	+0.4
	baz=244						
MLY	Manley	5.45	9	Pn	Pn	19 09 27.0	-0.1
MLY	Manley	5.45	9	P	Pn	19 09 27.2	+0.2
	baz=190						
HDA	Harding Lake	5.46	27		Pn	19 09 26.6	-0.5
HDA	Harding Lake	5.46	27	P	Pn	19 09 26.7	-0.3
	baz=212						
CCB	Clear Creek Bu	5.48	22		Pn	19 09 26.4	-1.0
RIDG	Independent Ri	5.52	39	Pn	Pn	19 09 27.8	-0.1
RIDG	Independent Ri	5.52	39	P	Pn	19 09 28.0	+0.1
	baz=226						
YAH	Yahtse	5.52	78		Pn	19 09 28.5	+0.3
I21K	Tanana	5.53	3		Pn	19 09 27.7	-0.4
I21K	Tanana	5.53	3	P	Pn	19 09 28.2	+0.1
	baz=184						
L26K	Log Cabin Wild	5.60	49		Pn	19 09 26.4	-2.7
BARN	Barnard Glacie	5.63	71	Pn	Pn	19 09 30.1	+0.4
TCOL	CIGO, UAF Yank	5.67	21		Pn	19 09 29.9	-0.2
TCOL	CIGO, UAF Yank	5.67	21	P	Pn	19 09 29.8	-0.2
	baz=206						
COLA	College	5.68	21		Pn	19 09 29.7	-0.4
MDM	Murphy Dome	5.69	19		Pn	19 09 29.7	-0.6
I23K	Minto, Yukon-K	5.70	14		Pn	19 09 30.1	-0.3
I23K	Minto, Yukon-K	5.70	14	P	Pn	19 09 30.1	-0.3
	baz=197						
DOT	Dot Lake	5.71	42	Pn	Pn	19 09 30.3	-0.3
CTGM	Chitina Glacie	5.78	72		Pn	19 09 32.1	+0.5
IL31		5.78	25		Pn	19 09 30.5	-0.9
ILAR	Eielson Array	5.78	25	Pn	Pn	19 09 30.6	-0.9
TABL	Table Mountain	5.82	77		Pn	19 09 32.8	+0.5
M27K	Edge Creek, AK	5.89	58		Pn	19 09 33.7	+0.5
M27K	Edge Creek, AK	5.89	58	P	Pn	19 09 33.3	+0.2
	baz=248						
LOGN	Logan Glacier	5.92	74	Pn	Pn	19 09 34.0	+0.4
SCRK	Sand Creek	5.96	40	Pn	Pn	19 09 33.0	-1.0
SCRK	Sand Creek	5.96	40	P	Pn	19 09 33.0	-1.0
	baz=228						
POKR	Poker Plat Res	5.97	22		Pn	19 09 33.5	-0.6
POKR	Poker Plat Res	5.97	22	P	Pn	19 09 33.8	-0.4
	baz=206						
H21K	Melozitna Rive	6.00	359		Pn	19 09 33.9	-0.6
H21K	Melozitna Rive	6.00	359	P	Pn	19 09 33.8	-0.7
	baz=179						
J25K	Salcha River,	6.02	31		Pn	19 09 34.2	-0.5
J25K	Salcha River,	6.02	31	P	Pn	19 09 34.1	-0.6
	baz=218						
CNBA	Chernabura Isl	6.15	221	Pn	Pn	19 09 36.9	+0.4
L27K	Beaver Creek,	6.22	52		Pn	19 09 38.2	+0.8
L27K	Beaver Creek,	6.22	52	P	Pn	19 09 38.0	+0.5
	baz=242						
BCAR	Beaver Creek A	6.24	52	Pn	Pn	19 09 38.7	+1.0
PCA	Pinnacle	6.26	81	Pn	Pn	19 09 38.7	+0.6
PINM	Pinnacle	6.26	81	P	Pn	19 09 38.7	+0.6
	baz=272						
H23K	Yukon River	6.33	12		Pn	19 09 38.7	-0.3
H23K	Yukon River	6.33	12	P	Pn	19 09 38.7	-0.3
	baz=194						
YUK3	Moose Creek	6.35	65	P	Pn	19 09 40.1	+0.8
	baz=256						
IMAR	Indian Mountai	6.35	356	Pn	Pn	19 09 39.0	-0.2
J26L	Joseph Creek	6.45	38		Pn	19 09 40.3	-0.4
J26L	Joseph Creek	6.45	38	P	Pn	19 09 40.0	-0.6
	baz=226						
H24K	Noodor Dome	6.56	18	Pn	Pn	19 09 41.5	-0.6
H24K	Noodor Dome	6.56	18	P	Pn	19 09 41.2	-0.9
	baz=202						
K27K	Chicken	6.64	44	Pn	Pn	19 09 43.0	-0.1
K27K	Chicken	6.64	44	P	Pn	19 09 43.2	0.0
	baz=234						
PRP	Porcupine Dome	6.72	26	Pn	Pn	19 09 44.0	-0.4
PRP	Porcupine Dome	6.72	26	P	Pn	19 09 43.7	-0.7
	baz=213						
I26K	Coal Creek Min	7.16	34		Pn	19 09 49.3	-0.8
I26K	Coal Creek Min	7.16	34	P	Pn	19 09 49.3	-0.8
	baz=222						
YUK6	Outpost Mounta	7.22	74	P	Pn	19 09 51.9	+0.7
	baz=266						
EGAK	Eagle	7.41	41		Pn	19 09 52.8	-0.8
EGAK	Eagle	7.41	41	P	Pn	19 09 52.9	-0.7
	baz=232						
P29M	Windy Craggy	7.56	84		Pn	19 09 56.1	+0.4
HYT	Haines Junctio	7.63	75	Pn	Pn	19 09 58.0	+1.3
HYT	Haines Junctio	7.63	75	P	Pn	19 09 57.0	+0.3
	baz=266						
DAWY	Dawson	7.66	49		Pn	19 09 57.4	+0.5
COLD	Coldfoot	7.66	7	Pn	Pn	19 09 56.7	-0.2
COLD	Coldfoot	7.66	7	P	Pn	19 09 56.7	-0.2
	baz=189						
FYU	Fort Yukon	7.69	23		Pn	19 09 56.9	-0.4
PLBC	Pleasant Camp	8.28	84	P	Pn	19 10 05.5	+0.1
	baz=279						
N31M	Braeburn, Yuko	8.51	70		Pn	19 10 08.9	+0.4
BMAR	Burnt Mountain	8.57	21	Pn	Pn	19 10 07.9	-1.4
SKAG	Skagway	8.80	84	Pn	Pn	19 10 13.1	+0.6
WHY	Whitehorse	8.92	76	Pn	Pn	19 10 14.7	+0.5
WHY	Whitehorse	8.92	76	P	Pn	19 10 14.3	+0.1
	baz=272						
AKUT	Akutan	9.06	238	Pn	Pn	19 10 17.2	+1.3
TOLK	Toolik Lake Re	9.10	7	Pn	Pn	19 10 16.3	-0.2
TOLK	Toolik Lake Re	9.10	7	P	Pn	19 10 15.9	-0.6
	baz=190						
BESE	Bessie Mountai	9.22	89	Pn	Pn	19 10 19.4	+1.2
M31M	Drury Creek, Y	9.24	66	Pn	Pn	19 10 19.2	+0.7
UNV	Unalaska Valle	9.57	238	Pn	Pn	19 10 23.0	+0.1
UNV	Unalaska Valle	9.57	238	P	Pn	19 10 22.8	-0.2
	baz=47						
FARO	Faro, Yukon	9.73	66	Pn	Pn	19 10 24.7	-0.4
P33M	Teslin, Yukon	9.97	78	Pn	Pn	19 10 29.3	+0.9

*KRNET **20** 19:09:36.6±0.1, 41°.92N×78°.72E, h13km, mb2.2*
*SOME **20** 19:09:38.8, 41°.98N×78°.68E, h20km*
*NNC **20** 19:09:41.2±0.9, 42°.21N×78°.78E, h0km, mb3.0, mpv2.9,*
Error ellipse: s-maj=6.9km s-min=3.0km az=161.0
ISC 20 19:09:38.4±1.4, 41°.97N±0°.06×78°.72E±0°.04, h15km±10km, n33, σ1s50/61, 10C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.72	251	⇓eP	Pg	19 09 50.3	-2.3
	baz=55						
TARG				⇓eS	Sg	19 10 00.3	-2.0
	baz=55						
SATY	Saty	1.11	348	eP	Pb	19 09 58.8	-0.7
	1.4nm,0.1s						
SATY				eS	Sb	19 10 12.4	-1.4
	9.3nm,0.1s						
SATY	Saty	1.11	348	P	Pb	19 09 58.8	-0.7
	1.4nm,0.1s						
SATY				S	Sb	19 10 12.4	-1.4
	9.3nm,0.1s						
ANVS	Anan'yevo	1.13	317	⇑eP	Pb	19 09 58.8	-0.9
	baz=18						
ANVS				⇑eS	Sg	19 10 14.8	-0.2
	baz=18						
UZB	Uzynbulak	1.20	11	eP	Pb	19 09 59.1	-1.7
	0.5nm,0.1s						
UZB				eS	Sb	19 10 13.1	-3.2
	3.9nm,0.1s						
UZB	Uzynbulak	1.20	11	P	Pb	19 09 59.1	-1.7
	0.5nm,0.1s						
UZB				S	Sb	19 10 13.1	-3.2
	3.9nm,0.1s						
SHLS	Shalkode	1.31	24	eP	Pg	19 10 05.1	+1.5
	1.9nm,0.1s						
SHLS				eS	Sg	19 10 23.2	+2.6
	2.8nm,0.2s						
SHLS	Shalkode	1.31	24	P	Pg	19 10 05.1	+1.5
	1.9nm,0.1s						
SHLS				S	Sg	19 10 23.2	+2.6
	2.8nm,0.2s						
PDGK	Podgornoye	1.47	22	⇑P	Pn	19 10 04.5	0.0
	1.7nm,0.8s						
PDGK				⇓S	Sn	19 10 21.4	-2.2
	3.4nm,0.8s						
KPKS	Kokpek	1.50	359	eP	Pn	19 10 04.3	-0.4
	3.5nm,0.1s						
KPKS				eS	Sn	19 10 21.9	-2.2
	6.3nm,0.3s						
KPKS	Kokpek	1.50	359	P	Pn	19 10 04.3	-0.4
	3.5nm,0.1s						
KPKS				S	Sn	19 10 21.9	-2.2
	6.3nm,0.3s						
TNSS	Tian-Shan	1.69	310	eP	Pb	19 10 10.1	+0.7
	1.7nm,0.2s						
TNSS				eS	Sb	19 10 32.0	+1.3
	5.1nm,0.2s						
TNSS	Tian-Shan	1.69	310	P	Pb	19 10 10.1	+0.7
	1.7nm,0.2s						
TNSS				S	Sb	19 10 32.0	+1.3
	5.1nm,0.2s						
MDOK	Medeo	1.72	315	eP	Pb	19 10 10.2	+0.5
	2.7nm,0.2s						
MDOK				eS	Sb	19 10 32.0	+0.8
	6.0nm,0.1s						
MDOK	Medeo	1.72	315	P	Pn	19 10 09.1	+1.3
	2.3nm,0.5s						
MDOK				Pg	Pb	19 10 10.2	+0.5
	2.7nm,0.2s						
MDOK				S	Sb	19 10 31.6	+0.4
	1.5nm,0.2s						
MDOK				Lg	Lg	19 10 32.0	
	6.0nm,0.1s						
ULHL	Ulahol	1.86	279	⇑eP	Pn	19 10 11.4	+1.5
	baz=81						
ULHL				⇑eS	Sb	19 10 36.9	+1.5
	baz=81						
KTMS	Ketmen	1.91	39	eP	Pn	19 10 12.0	+1.6
	1.1nm,0.2s						
KTMS				eS	Sn	19 10 35.1	+0.9
	1.0nm,0.2s						
KTMS	Ketmen	1.91	39	P	Pn	19 10 12.0	+1.6
	1.1nm,0.2s						
KTMS				S	Sn	19 10 35.1	+0.9
	1.0nm,0.2s						
MTBS	Maitube	2.05	305	eP	Pb	19 10 16.6	+1.2
	3.0nm,0.1s						
MTBS				eS	Sg	19 10 42.9	-1.6
	14nm,0.2s						
MTBS	Maitube	2.05	305	Pg	Pb	19 10 16.6	+1.2
	3.0nm,0.1s						
MTBS				Lg	Lg	19 10 42.9	
	14nm,0.2s						
BOOM	Boomskoye usch	2.13	285	⇑eP	Pn	19 10 15.3	+1.8
	baz=86						
BOOM				⇑eS	Sb	19 10 43.7	+0.7
	baz=86						
CHKK	Chushkaly	2.27	327	eP	Pb	19 10 19.4	+0.3
	14nm,0.3s						
CHKK				eS	Sb	19 10 47.7	+0.7
	33nm,0.3s						
CHKK	Chushkaly	2.27	327	Pg	Pb	19 10 19.4	+0.3
	14nm,0.3s						
CHKK				Lg	Lg	19 10 47.7	
	33nm,0.3s						
KST	Kastek	2.31	299	eP	Pb	19 10 21.1	+1.4
	3.2nm,0.3s						
KST				eS	Sg	19 10 50.8	-1.6
	17nm,0.4s						
KST	Kastek	2.31	299	Pg	Pb	19 10 21.1	+1.4
	3.2nm,0.3s						
KST				Lg	Lg	19 10 51.2	
	17nm,0.4s						
ARXS	Arharly	2.34	344	eP	Pb	19 10 19.5	-0.7
	4.0nm,0.2s						
ARXS				eS	Sb	19 10 48.4	-0.5
	6.7nm,0.3s						
ARXS	Arharly	2.34	344	Pg	Pb	19 10 19.5	-0.7
	4.0nm,0.2s						
ARXS				Lg	Lg	19 10 49.0	
	6.7nm,0.3s						
DJR	Jarkent	2.49	18	eP	Pb	19 10 22.3	-0.5
	0.9nm,0.1s						
DJR				eS	Sb	19 10 52.7	-0.6
	13nm,0.4s						
DJR	Jarkent	2.49	18	Pg	Pb	19 10 22.3	-0.5
	0.9nm,0.1s						
DJR				Lg	Lg	19 10 52.7	
	13nm,0.4s						
TKM2	Tokmak 2	2.50	293	⇑eP	Pn	19 10 20.5	+1.8
	baz=94						
TKM2				⇑eS	Sb	19 10 52.6	-1.1
	baz=94						
TKM2	Tokmak 2	2.50	293	⇑Pn	Pb	19 10 23.4	+0.3
	0.4nm,0.3s						
TKM2				⇓Sn	Sg	19 10 57.0	-1.8
	6.1nm,0.5s						
KUU	Kurty	2.60	319	eP	Pb	19 10 26.0	+1.4
	0.8nm,0.2s						
KUU				eS	Sb	19 10 59.1	+2.7
	12nm,0.5s						
KUU	Kurty	2.60	319	Pg	Pb	19 10 26.0	+1.4
	0.8nm,0.2s						
KUU				Lg	Lg	19 10 59.1	
	12nm,0.5s						

ZUR 20 19:41:38.2, 46°.42N×7°.37E, h3km±2km, MLh0.2/3, Error ellipse: s-maj=4.7km s-min=1.2km az=282.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENIN	Lac Senin/Sane	0.08	223	Pg	Pg	19 41 40.0	+0.2
SENIN				Sg	Sg	19 41 41.4	+0.4

ROM 20 19:42:46.3±0.0, 42°.777N±0°.002×13°.154E±0°.003, h10km, ML1.5/5, 1D, Error ellipse: s-maj=0.2km s-min=0.2km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.08	17	P	Pg	19 42 49.2	+0.3
T1245				S	Sg	19 42 50.8	0.0
T1245				AML	AML		
	comp=E,554μm,0.8s						
T1245				AML	AML		
	comp=N,650μm,0.7s						
T1245				AML	AML		
	comp=N,736μm,0.8s						
T1245				AML	AML		
	comp=E,544μm,0.8s						
T1202	Accumoli, Fraz	0.09	145	P	Pg	19 42 49.3	+0.4
T1202				S	Sg	19 42 51.2	+0.4
T1216	Preci, Frazion	0.15	319	P	Pg	19 42 50.3	+0.6
T1216				S	Sg	19 42 53.1	+0.9
MMO1	Montemonaco	0.18	46	P	Pg	19 42 50.9	+0.7
MMO1				S	Sg	19 42 53.9	+1.0
T1217	Poggiodomo (PG	0.18	248	P	Pg	19 42 50.8	+0.7
T1217				S	Sg	19 42 53.9	+1.1
T1217				AML	AML		
	comp=E,140μm,0.6s						
T1217				AML	AML		
	comp=N,150μm,1.4s						
LNSS	Leonessa	0.19	206	P	Pg	19 42 51.1	+0.7
LNSS				S	Sg	19 42 54.5	+1.1
LNSS				AML	AML		
	comp=E,378μm,0.2s						
LNSS				AML	AML		
	comp=N,294μm,0.1s						
SMA1	SAN MARTINO	0.20	138	P	Pg	19 42 51.2	+0.6
T1215	Vallo di Nera,	0.21	277	P	Pg	19 42 51.5	+0.7
T1215				S	Sg	19 42 54.9	+1.1
T1243	Rocca Santa Ma	0.23	110	P	Pg	19 42 51.6	+0.5
RM33	Pellescritta (	0.27	171	P	Pg	19 42 52.4	+0.6
RM33				S	Sb	19 42 57.0	-1.0
RM33				AML	AML		
	comp=E,83μm,0.4s						
RM33				AML	AML		
	comp=N,120μm,0.2s						
T1211	Morro Reatino	0.33	222	P	Pg	19 42 53.5	+0.7
T1211				AML	AML		
	comp=E,120μm,1.0s						
T1211				AML	AML		
	comp=N,142μm,0.7s						
TERO	Teramo	0.37	115	P	Pg	19 42 53.9	+0.3
TERO				AML	AML		
	comp=E,50μm,0.5s						
TERO				AML	AML		
	comp=N,51μm,1.3s						
LRP	Arpino	1.17	164	⇓P	Pb	19 43 06.3	-2.4

*IDC **20** 19:58:37.4±1.1, 24°.08S×66°.95W, h169km±12km, mb3.6/6, mbtmp4.1/11, MS1.9/1, Error ellipse: s-maj=18.1km s-min=14.6km az=176.0*
*NEIC **20** 19:58:37.4±2.4, 24°.17S±0°.06×67°.2W±0°.1, h201km±17km, mb4.3/5, Md4.0(SJA), ML4.3(GUC), Error ellipse: s-maj=17.2km s-min=7.5km az=109.0*
*SJA **20** 19:58:37.1±1.2, 24°.16S×67°.16W, h191km±8km, ML4.4, MW4.0*
*GUC **20** 19:58:38.9±0.7, 24°.14S×67°.42W, h209km±6km, ML4.3*
ISC 20 19:58:37.9±0.7, 24°.16S±0°.03×67°.19W±0°.04, h183km±6km, n92, σ1s43/130, mb3.8/6, 11C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.51	323		Pn	19 59 11.8	+1.1
AF01	San Pedro de A	1.51	323	eP	Pn	19 59 12.0	+1.4
AF01				i S	Sn	19 59 37.7	+1.9
AF01				IAML		19 59 41.5	
	comp=N,914nm,0.4s						
SLA	San Lorenzo	1.64	110	eP	Pn	19 59 12.2	+0.6
SLA				eS	Sn	19 59 37.6	-0.2
AZAP	Zapla	1.94	92	eP	Pn	19 59 14.7	-0.1
AZAP				eS	Sn	19 59 42.9	-0.6
LVC	Limon Verde	2.21	314	P	Pn	19 59 18.9	+0.9
	comp=N,140nm,0.4s,baz=136,slow=5.6,SNR=228						
LVC				S	Sn	19 59 48.9	0.0
	comp=N,428nm,0.4s,baz=165,slow=4.9,SNR=41						
LVC				LR	LR	20 00 21.2	
	comp=N,28nm,20.9s,baz=255,slow=45						
LVC	Limon Verde	2.21	314		Pn	19 59 18.7	+0.8
LVC	Limon Verde	2.21	314	⇑iP	Pn	19 59 18.9	+0.9
LVC				eS	Sn	19 59 48.8	-0.2
LVC	Limon Verde	2.21	314	eP	Pn	19 59 18.8	+0.8
LVC				eS	Sn	19 59 49.5	+0.6
PB15	IPOC Station P	2.30	294		Pn	19 59 19.7	+0.9
PB15	IPOC Station P	2.30	294	⇑iP	Pn	19 59 19.7	+0.9
PB15				eS	Sn	19 59 49.9	-0.4
PB15	IPOC Station P	2.30	294	eP	Pn	19 59 19.7	+0.9
PB15				eS	Sn	19 59 50.3	0.0
PB15				eS	Sn	19 59 50.4	0.0
PB15				IAML		19 59 53.2	
	comp=Z,3μm,0.2s						
GO02	Mina Guanaco	2.40	245		Pn	19 59 20.8	+0.8
GO02	Mina Guanaco	2.40	245	⇑iP	Pn	19 59 20.7	+0.8
GO02				eS	Sn	19 59 52.8	+0.2
GO02				IAML		19 59 54.7	
	comp=N,961nm,0.3s						
GO02	Mina Guanaco	2.40	245	eP	Pn	19 59 20.8	+0.8
GO02				eS	Sn	19 59 53.3	+0.6
YJA	Yavi	2.51	38	eP	Pn	19 59 22.0	+0.6
YJA				eS	Sn	19 59 54.7	-0.4
ASTB	Santa Barbara	2.51	86	eP	Pn	19 59 21.2	+0.1
PB06	IPOC Station P	2.62	303		Pn	19 59 22.8	+0.3
PB06	IPOC Station P	2.62	303	⇑iP	Pn	19 59 23.3	+0.8
PB06				eS	Sn	19 59 55.8	-1.2
PB06				IAML		19 59 57.8	
	comp=E,2μm,0.2s						
PB06	IPOC Station P	2.62	303	eP	Pn	19 59 23.2	+0.8
PB06				eS	Sn	19 59 56.2	-0.8
PB06				IAML		19 59 59.8	
	comp=Z,901nm,0.3s						
PB14	IPOC Station P	2.97	260		Pn	19 59 26.9	+0.2
PB14	IPOC Station P	2.97	260	eP	Pn	19 59 27.4	+0.7
PB14				eS	Sn	20 00 04.4	-0.2
PB09	IPOC Station P	3.02	321		Pn	19 59 28.2	+1.0
PB09	IPOC Station P	3.02	321	⇑iP	Pn	19 59 28.2	+1.0
PB09				i S	Sn	20 00 05.2	-0.4
PB09				IAML		20 00 06.7	
	comp=E,676nm,0.4s						
PB09	IPOC Station P	3.02	321	eP	Pn	19 59 28.2	+1.0
PB09				eS	Sn	20 00 05.3	-0.3
PB09				IAML		20 00 06.1	
	comp=Z,672nm,0.5s						
PB10	IPOC Station P	3.15	281		Pn	19 59 29.1	+0.6
PB10	IPOC Station P	3.15	281	⇑iP	Pn	19 59

comp=E,317nm,0.2s
PB10 IPOC Station P 3.15 281 *e*P **Pn 19 59 29.2 +0.6**
PB10 *e*S **Sn 20 00 07.6 -0.4**
PB03 IPOC Station P 3.16 311 **Pn 19 59 29.2 +0.3**
PB03 IPOC Station P 3.16 311⇑ *i*P **Pn 19 59 29.1 +0.3**
PB03 *e*S **Sn 20 00 06.6 -2.0**
PB03 IAML 20 00 09.4
comp=E,709nm,0.3s
PB03 IPOC Station P 3.16 311 *e*P **Pn 19 59 29.2 +0.3**
PB03 *e*S **Sn 20 00 06.8 -1.8**
PB03 IAML 20 00 09.2
comp=Z,732nm,0.3s
AC02 Maricunga 3.19 213 **Pn 19 59 30.3 +0.8**
AC02 Maricunga 3.19 213 *e*P **Pn 19 59 30.3 +0.8**
PB04 IPOC Station P 3.27 303 Pn **Pn 19 59 30.4 +0.1**
PB04 IPOC Station P 3.27 303⇑ *i*P **Pn 19 59 30.4 +0.1**
PB04 *e*S **Sn 20 00 08.6 -2.5**
PB04 IPOC Station P 3.27 303 *e*P **Pn 19 59 30.6 +0.3**
PB04 *e*S **Sn 20 00 09.1 -2.0**
PB04 IAML 20 00 11.8
comp=Z,604nm,0.5s
PB07 IPOC Station P 3.47 314 **Pn 19 59 32.6 -0.1**
PB07 IPOC Station P 3.47 314⇑ *i*P **Pn 19 59 32.9 +0.2**
PB07 *e*S **Sn 20 00 13.0 -2.5**
PB07 IPOC Station P 3.47 314 *e*P **Pn 19 59 33.0 +0.2**
PB07 *e*S **Sn 20 00 13.8 -1.7**
PB07 IAML 20 00 18.3
comp=Z,528nm,0.7s
AC01 Pan de Azucar 3.67 237 Pn **Pn 19 59 34.2 -0.8**
AC01 Pan de Azucar 3.67 237 *e*P **Pn 19 59 34.3 -0.6**
AC01 *e*S **Sn 20 00 17.0 -2.6**
PB01 IPOC Station P 3.76 325 **Pn 19 59 36.0 -0.3**
PB01 IPOC Station P 3.76 325⇑ *i*P **Pn 19 59 35.9 -0.3**
PB01 *e*S **Sn 20 00 19.3 -2.6**
PB01 IPOC Station P 3.76 325 *e*P **Pn 19 59 36.4 +0.1**
PB01 *e*S **Sn 20 00 20.2 -1.7**
PB01 IAML 20 00 22.5
comp=Z,274nm,0.2s
PB02 IPOC Station P 3.77 318 **Pn 19 59 36.0 -0.4**
PB02 IPOC Station P 3.77 318⇑ *i*P **Pn 19 59 36.2 -0.3**
PB02 *e*S **Sn 20 00 19.2 -3.0**
PB02 IPOC Station P 3.77 318 *e*P **Pn 19 59 36.3 -0.1**
PB02 *e*S **Sn 20 00 21.4 -0.8**
PB02 IAML 20 00 24.6
comp=Z,919nm,0.5s
AC06 Mina Casimiro 4.27 221 Pn **Pn 19 59 41.4 -1.2**
PATCX Punta Patache 4.31 320 **Pn 19 59 42.7 -0.5**
PATCX Punta Patache 4.31 320 *e*P **Pn 19 59 42.3 -0.9**
PATCX *e*S **Sn 20 00 28.8 -5.5**
PATCX Punta Patache 4.31 320 *e*P **Pn 19 59 43.1 -0.1**
PATCX *e*P **Pn 19 59 43.1 -0.1**
PATCX *e*P **Pn 19 59 43.1 -0.1**
PATCX *e*P **Pn 19 59 43.2 -0.1**
PATCX IAML 20 00 42.9
comp=Z,173nm,0.4s
GO03 Copiap 4.38 218 **Pn 19 59 42.9 -1.2**
GO03 Copiap 4.38 218 *e*P **Pn 19 59 42.9 -1.2**
GO03 *e*S **Sn 20 00 33.4 -2.5**
GO03 Copiap 4.38 218 *e*P **Pn 19 59 43.2 -0.9**
GO03 *e*S **Sn 20 00 33.7 -2.2**
PB08 IPOC Station P 4.40 335 **Pn 19 59 44.9 +0.3**
PB08 IPOC Station P 4.40 335 *e*P **Pn 19 59 45.0 +0.3**
PB08 *i* S **Sn 20 00 35.3 -1.5**
PB08 IPOC Station P 4.40 335 *e*P **Pn 19 59 45.1 +0.5**
PB08 *e*P **Pn 19 59 45.4 +0.8**
PB08 *e*S **Sn 20 00 35.4 -1.5**
TA01 Diego Aracena 4.52 322 Pn **Pn 19 59 45.4 -0.5**
TA01 Diego Aracena 4.52 322 *e*P **Pn 19 59 45.4 -0.5**
TA02 Huaiquique 4.74 324 Pn **Pn 19 59 47.1 -1.5**
GO01 Chusmiza 4.84 337 **Pn 19 59 50.4 0.0**
GO01 Chusmiza 4.84 337 *e*S **Sn 20 00 45.4 -1.9**
AC04 Llanos de Chal 5.33 220 Pn **Pn 19 59 54.3 -1.9**
AC04 Llanos de Chal 5.33 220 *e*P **Pn 19 59 55.0 -1.2**
AC04 IAML 20 01 02.3
comp=Z,87nm,0.5s
AC05 El Transito 5.41 210 Pn **Pn 19 59 56.2 -1.2**
LCO Las Campanas 5.76 212 Pn **Pn 19 59 59.6 -2.5**
PB16 IPOC Station P 6.19 339 Pn **Pn 20 00 07.4 -0.6**
PB12 IPOC Station P 6.25 332 Pn **Pn 20 00 06.3 -2.1**
CO01 Juntas del Tor 6.34 203 Pn **Pn 20 00 05.1 -4.6**
GO04 Tololo Observa 6.79 207 Pn Pn 20 00 08.9 -6.7
CO03 El Pedregal 7.34 204 Pn **Pn 20 00 19.2 -3.4**
CO02 Combarbal 7.78 205 Pn **Pn 20 00 26.3 -2.2**
CPUP Villa Florida 9.19 106 P **Pn 20 00 43.0 -3.8**
comp=Z,2.6nm,0.8s,baz=296,slow=11,SNR=5.1
CPUP Villa Florida 9.19 106 Pn **Pn 20 00 42.6 -4.2**
MT02 Curacav 9.70 200 Pn Pn 20 00 48.2 -5.3
SIV San Ignacio 9.95 36 P **Pn 20 00 53.7 -3.3**
comp=Z,2.7nm,0.4s,baz=208,slow=12,SNR=14
SIV S Sn 20 02 34.9 -13
comp=Z,2.7nm,0.8s,baz=205,slow=15,SNR=3.2
TRQA Tornquist 14.55 163 P **P 20 01 57.2 +0.4**
GO06 Curarrehue 15.80 192 P **P 20 02 10.7 0.0**
GO06 IAmb IAmb 20 02 12.7
comp=Z,9.8nm,1.0s
PLCA Paso Flores 16.76 189 P **Pn 20 02 21.8 -0.4**
comp=Z,1.7nm,0.7s,baz=0.1,slow=8.9,SNR=7.0
PLCA Paso Flores 16.76 189 P **P 20 02 21.6 +0.3**
LL04 Puerto Octay 17.26 193 P **Pn 20 02 27.4 -0.7**
LL04 IAmb IAmb 20 02 29.3
comp=Z,9.6nm,1.1s
LL02 Futaleuf 19.36 190 P **Pn 20 02 52.9 +0.1**
LL02 IAmb IAmb 20 02 54.3
comp=Z,17nm,0.8s
BDFB Brasilia 19.91 68 P **P 20 02 54.5 -1.3**
comp=Z,28nm,0.6s,baz=246,slow=10,SNR=38
BDFB Brasilia 19.91 68 P **P 20 02 55.0 -0.8**
SNAA Sanae 59.26 161 P **P 20 08 19.9 +0.1**
comp=Z,1.0nm,0.8s,baz=277,slow=7.9,SNR=6.2
comp=Z,1.0nm,0.8s
QSPA South Pole Qui 66.04 180 P **P 20 09 06.7 +1.8**
comp=Z,2.0nm,0.6s,baz=238,slow=1.0,SNR=16
comp=Z,2.0nm,0.6s
VNDA Vanda 74.51 190 P **P 20 09 58.5 +2.6**
comp=Z,0.7nm,0.9s,baz=115,slow=1.4,SNR=4.1
comp=Z,0.7nm,0.9s
TORD Torodi Ar. Bea 76.79 69 P **P 20 10 09.1 -0.7**
comp=Z,2.1nm,0.8s,baz=263,slow=6.5,SNR=20
comp=Z,2.1nm,0.8s
BOSA Boshof 80.81 117 P **P 20 10 32.1 +0.4**
comp=Z,0.9nm,0.4s,baz=273,slow=3.7,SNR=1.2
comp=Z,0.9nm,0.4s
MAW Mawson 81.33 163 P **P 20 10 34.9 +1.4**
comp=Z,0.4nm,0.3s,baz=275,slow=11,SNR=1.8
comp=Z,0.4nm,0.3s
ASAR Alice Springs 128.24 205 PKP **PKiKP 20 17 24.1 +0.2**
comp=Z,0.7nm,0.7s,baz=146,slow=1.5,SNR=8.9
WRA Warramunga Arr 131.40 207 PKP **PKiKP 20 17 30.5 +0.2**
comp=Z,0.5nm,0.5s,baz=156,slow=1.8,SNR=18
WRA SKPbc **SKPab 20 20 38.9 +0.9**
comp=Z,0.2nm,0.5s,baz=146,slow=3.5,SNR=7.7
MKAR Makanchi Array 146.76 40 PKPbc **PKPbc 20 17 58.9 +0.6**
comp=Z,0.5nm,0.7s,baz=316,slow=2.3,SNR=4.0

*NEIC **20** 20:03:00.5±2.7, 35°.1S±0°.1×178°.7E±0°.1, h155km±12km, mb4.5/9, Error ellipse: s-maj=20.1km s-min=13.9km az=175.0*
*IDC **20** 20:03:01.7±5.4, 35°.41S×178°.49E, h153km±38km, mb3.9/3, mbtmp4.3/4, Error ellipse: s-maj=57.6km s-min=25.0km az=48.0*
*WEL **20** 20:03:07.1±1.0, 36°.S±12°.×17°.8E±1°.2, h191km±17km, M4.1/21, ML4.3/19, MLv4.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=137.4*
*NOU **20** 20:03:16.9, 36°.52S×178°.24E, h156km, MLv3.9/6, Off E. Coast of N. Island, N.Z.*
ISC 20 20:03:08.7±1.4, 36°.1S±0°.1×178°.39E±0°.10, h212km±8km, n122, σ1§44/123, mb4.2/8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.49 182**		Pn	**Pn**	**20 03 41.7**	**-1.7**
MXZ	**Matakaoa Point**	**1.49 182**		P	**Pn**	**20 03 41.9**	**-1.5**
MXZ				S	**Sn**	**20 04 09.5**	**-1.1**
MXZ	**Matakaoa Point**	**1.49 182**		P	**Pn**	**20 03 42.5**	**-0.9**
WIZ	**White Island**	**1.75 213**		P	**Pn**	**20 03 45.1**	**-0.5**
WMGZ	**Waiomatatini S**	**1.75 179**		P	**Pn**	**20 03 45.3**	**-0.3**
WMGZ				S	**Sn**	**20 04 15.2**	**+0.6**
HAZ	**Te Kaha**	**1.75 196**		P	**Pn**	**20 03 44.6**	**-1.1**
HAZ				S	**Sn**	**20 04 14.0**	**-0.7**
PKGZ	**Pakihiroa**	**1.83 188**		P	**Pn**	**20 03 45.7**	**-0.9**
RUGZ	**Raukumara Rang**	**1.98 196**		P	**Pn**	**20 03 46.5**	**-1.5**
RUGZ				S	**Sn**	**20 04 17.9**	**-0.9**
PUZ	**Puketiti**	**2.00 183**		P	**Pn**	**20 03 47.4**	**-0.8**
PUZ				S	**Sn**	**20 04 18.7**	**-0.4**
MYRZ	**Mayor Island**	**2.11 234**		P	**Pn**	**20 03 47.5**	**-1.7**
WHRZ	**Whale Island**	**2.11 212**		P	**Pn**	**20 03 49.4**	**+0.1**
TWGZ	**Tauwhareparae**	**2.13 189**		P	**Pn**	**20 03 49.4**	**-0.1**
TWGZ				S	**Sn**	**20 04 22.3**	**+0.8**
OPRZ	**Ohinepanea**	**2.30 219**		P	**Pn**	**20 03 50.7**	**-0.4**
MARZ	**Manawahe**	**2.35 215**		P	**Pn**	**20 03 51.9**	**+0.1**
MWZ	**Matawai**	**2.36 197**		P	**Pn**	**20 03 51.1**	**-0.8**
MWZ				S	**Sn**	**20 04 27.3**	**+1.5**
TKGZ	**Te Karaka**	**2.41 190**		P	**Pn**	**20 03 52.1**	**-0.2**
TKGZ				S	**Sn**	**20 04 27.0**	**+0.5**
URZ	**Urewera**	**2.41 205**		P	**Pn**	**20 03 51.3**	**-1.1**
	92nm,0.4s,baz=60,slow=1.8,SNR=151						
URZ				S	**Sn**	**20 04 26.9**	**+0.2**
	80nm,0.3s,baz=225,slow=17,SNR=12						
URZ	**Urewera**	**2.41 205**			**Pn**	**20 03 51.5**	**-0.8**
URZ	**Urewera**	**2.41 205**		P	**Pn**	**20 03 51.3**	**-1.1**
URZ				S	**Sn**	**20 04 26.7**	**+0.1**
URZ	**Urewera**	**2.41 205**		P	**Pn**	**20 03 51.8**	**-0.6**
EDRZ	**Edgecumbe**	**2.42 212**		P	**Pn**	**20 03 52.1**	**-0.4**
RAGZ	**Rawiri**	**2.54 197**		P	**Pn**	**20 03 53.7**	**-0.2**
RAGZ				S	**Sn**	**20 04 32.1**	**+2.7**
OMRZ	**Omania**	**2.59 218**		P	**Pn**	**20 03 54.8**	**+0.4**
TARZ	**Mount Tarawera**	**2.63 214**		P	**Pn**	**20 03 55.3**	**+0.4**
KMRZ	**Kaimai**	**2.64 227**		P	**Pn**	**20 03 56.0**	**+1.1**
RIGZ	**Rimuhau**	**2.68 190**		P	**Pn**	**20 03 54.7**	**-0.6**
RIGZ				S	**Sn**	**20 04 32.4**	**+0.3**
RRRZ	**Republican Roa**	**2.72 213**		P	**Pn**	**20 03 55.8**	**+0.1**
MUGZ	**Murupara**	**2.73 208**		P	**Pn**	**20 03 55.2**	**-0.7**
MUGZ				S	**Sn**	**20 04 33.5**	**+0.6**
RTZ	**Ruatahuna**	**2.78 203**		P	**Pn**	**20 03 55.3**	**-1.2**
SNGZ	**Shannon Statio**	**2.83 197**		P	**Pn**	**20 03 56.9**	**-0.1**
SNGZ				S	**Sn**	**20 04 37.6**	**+2.5**
TOZ	**Tahuroa Road**	**2.85 233**		P	**Pn**	**20 03 56.2**	**-0.9**
PRRZ	**Plateau Road**	**2.90 213**		P	**Pn**	**20 03 57.5**	**-0.3**
ALRZ	**Allen Road**	**2.98 213**		P	**Pn**	**20 03 58.4**	**-0.3**
KNZ	**Kokohu**	**3.00 191**		P	**Pn**	**20 03 57.9**	**-1.0**
KNZ				S	**Sn**	**20 04 37.5**	**-1.0**
WPRZ	**Whakapapatarin**	**3.02 215**		P	**Pn**	**20 03 59.4**	**+0.2**
RAHZ	**Arahi**	**3.03 200**		P	**Pn**	**20 03 58.7**	**-0.6**
RAHZ				S	**Sn**	**20 04 40.3**	**+1.3**
MTHZ	**Maungataniwha**	**3.04 203**		P	**Pn**	**20 03 58.3**	**-1.2**
MTHZ				S	**Sn**	**20 04 40.3**	**+1.0**
MHGZ	**Mahia Peninsul**	**3.10 187**		P	**Pn**	**20 03 59.7**	**-0.5**
WHHZ	**Waihua**	**3.14 197**		P	**Pn**	**20 04 00.2**	**-0.4**
WHHZ				S	**Sn**	**20 04 43.0**	**+1.6**
MRHZ	**Matea Rd**	**3.17 209**		P	**Pn**	**20 03 59.9**	**-1.1**
TLZ	**Tolley Road**	**3.20 224**		P	**Pn**	**20 04 02.1**	**+0.8**
NMHZ	**Naumai**	**3.27 202**		P	**Pn**	**20 04 01.9**	**-0.3**
ARHZ	**Arapoaanui**	**3.38 199**		P	**Pn**	**20 04 02.6**	**-0.8**
WATZ	**Wairara**	**3.38 218**		P	**Pn**	**20 04 03.6**	**+0.2**
BKZ	**Black Stump Fm**	**3.44 205**		Pn	**Pn**	**20 04 03.0**	**-1.1**
BKZ	**Black Stump Fm**	**3.44 205**		P	**Pn**	**20 04 03.4**	**-0.7**
BKZ	**Black Stump Fm**	**3.44 205**		P	**Pn**	**20 04 04.4**	**+0.3**
RITZ	**Rihia Road**	**3.53 214**		P	**Pn**	**20 04 05.0**	**-0.2**
KATZ	**Kakaramea**	**3.61 216**		P	**Pn**	**20 04 06.0**	**-0.2**
KWHZ	**Kaweka Forest**	**3.69 204**		P	**Pn**	**20 04 06.2**	**-1.0**
TMVZ	**Te Maari**	**3.71 214**		P	**Pn**	**20 04 06.9**	**-0.6**
HIZ	**Hauiti**	**3.73 228**		Pn	**Pn**	**20 04 08.6**	**+1.1**
HIZ	**Hauiti**	**3.73 228**		P	**Pn**	**20 04 08.6**	**+1.1**
HIZ	**Hauiti**	**3.73 228**		P	**Pn**	**20 04 09.0**	**+1.5**
KRVZ	**Karewarewa**	**3.73 215**		P	**Pn**	**20 04 07.2**	**-0.5**
ETVZ	**East Tongariro**	**3.73 214**		P	**Pn**	**20 04 06.9**	**-0.8**
CKHZ	**Cape Kidnapper**	**3.73 196**		P	**Pn**	**20 04 06.6**	**-1.0**
WTVZ	**West Tongariro**	**3.77 215**		P	**Pn**	**20 04 07.5**	**-0.7**
NNVZ	**North Ngauruho**	**3.77 215**		P	**Pn**	**20 04 07.6**	**-0.6**
OTVZ	**Oturere**	**3.77 214**		P	**Pn**	**20 04 07.5**	**-0.7**
SNVZ	**South Ngauruho**	**3.80 214**		P	**Pn**	**20 04 08.0**	**-0.6**
TWVZ	**Taurewa**	**3.81 217**		P	**Pn**	**20 04 08.0**	**-0.6**
NGZ	**Ngauruhoe**	**3.81 215**		P	**Pn**	**20 04 08.1**	**-0.7**
TUVZ	**Tukino**	**3.86 213**		P	**Pn**	**20 04 08.3**	**-1.0**
BHHZ	**Black Hill Sta**	**3.88 208**		P	**Pn**	**20 04 07.8**	**-1.7**
FWVZ	**Far West T-bar**	**3.90 214**		P	**Pn**	**20 04 08.9**	**-0.9**
KAHZ	**Kahuranaki**	**3.91 197**		P	**Pn**	**20 04 08.7**	**-1.1**
MOVZ	**Moawhango**	**3.93 211**		P	**Pn**	**20 04 08.3**	**-1.8**
WNVZ	**Wahianoa**	**3.93 213**		P	**Pn**	**20 04 09.0**	**-1.2**
OUZ	**Omahuta**	**3.99 281**		Pn	Pn	20 04 03.3	-7.5
OUZ	**Omahuta**	**3.99 281**		P	Pn	20 04 17.2	+6.4
PKVZ	**Pokaka**	**4.02 216**		P	**Pn**	**20 04 10.3**	**-0.9**
MTVZ	**Mangateitei**	**4.04 214**		P	**Pn**	**20 04 10.9**	**-0.5**
PXZ	**Pawanui**	**4.14 196**		P	**Pn**	**20 04 10.8**	**-1.7**
PNHZ	**Puketi**	**4.21 204**		P	**Pn**	**20 04 11.4**	**-2.1**
WPHZ	**Waipukurau**	**4.28 200**		P	**Pn**	**20 04 12.7**	**-1.5**
PRHZ	**Porangahau**	**4.41 198**		P	**Pn**	**20 04 14.2**	**-1.8**
WAZ	**Wanganui**	**4.56 215**		P	**Pn**	**20 04 17.1**	**-0.7**
DVHZ	**Dannevirke**	**4.57 202**		P	**Pn**	**20 04 15.9**	**-2.1**
ANWZ	**Angora Road**	**4.64 198**		P	**Pn**	**20 04 17.0**	**-1.7**
NEZ	**North Egmont**	**4.67 226**		P	**Pn**	**20 04 20.9**	**+1.6**
PKE	**Pukeiti**	**4.68 227**		P	**Pn**	**20 04 20.7**	**+1.3**
KHEZ	**Kahui Hut**	**4.73 226**		P	**Pn**	**20 04 20.6**	**+0.5**
KHEZ	**Kahui Hut**	**4.73 226**		P	**Pn**	**20 04 21.4**	**+1.3**
POWZ	**Post Office Ro**	**4.78 205**		P	**Pn**	**20 04 18.7**	**-1.9**
PRWZ	**Pori Road**	**4.87 202**		P	**Pn**	**20 04 19.9**	**-1.7**
BFZ	**Birch Farm**	**4.90 199**		Pn	**Pn**	**20 04 19.4**	**-2.7**
BFZ	**Birch Farm**	**4.90 199**		P	**Pn**	**20 04 19.8**	**-2.3**
TIWZ	**Tintock**	**5.09 202**		P	**Pn**	**20 04 22.5**	**-2.1**
CPWZ	**Castlepoint**	**5.13 199**		P	**Pn**	**20 04 23.5**	**-1.5**
MSWZ	**Moikau Station**	**5.88 204**		Pn	Pn	20 04 30.0	-3.8
SNZO	**South Karori**	**5.97 208**		Pn	Pn	20 04 31.4	-4.3
PLWZ	**Palliser**	**6.01 203**		Pn	Pn	20 04 32.5	-3.8
TUWZ	**Tuamarina**	**6.38 212**		Pn	Pn	20 04 36.2	-4.7
NNZ	**Nelson**	**6.46 216**		Pn	Pn	20 04 37.7	-4.3
QRZ	**Quartz Range**	**6.61 222**		Pn	**Pn**	**20 04 41.4**	**-2.5**
BSWZ	**Blackbirch Sta**	**6.64 211**		Pn	Pn	20 04 40.3	-4.1
THZ	**Tophouse**	**7.11 215**		Pn	**Pn**	**20 04 47.1**	**-3.3**
KHZ	**Kahutara**	**7.37 209**		Pn	Pn	20 04 49.4	-4.3
LTZ	**Lake Taylor**	**8.20 213**		Pn	Pn	20 05 00.9	-3.6
CTZ	**Chatham Island**	**8.57 155**		P	**Pn**	**20 05 11.9**	**+2.8**
OXZ	**Oxford**	**8.74 212**		Pn	Pn	20 05 07.4	-4.0
MQZ	**McQueen's Vall**	**8.81 208**		Pn	Pn	20 05 07.3	-4.9
RPZ	**Rata Peaks**	**9.49 214**		P	Pn	20 05 17.4	-3.6
	3.8nm,0.3s,baz=24,slow=10.0,SNR=2.1						
RPZ				S		20 07 00.9	-6.6
	3.9nm,0.3s,baz=132,slow=22,SNR=7.4						
FOZ	**Fox Glacier**	**9.95 219**		Pn	**Pn**	**20 05 23.9**	**-3.0**
LBZ	**Lake Benmore**	**10.40 214**		Pn	Pn	20 05 28.9	-3.9
ODZ	**Otahua Downs**	**10.72 211**		Pn	**Pn**	**20 05 33.9**	**-3.0**
WKZ	**Wanaka**	**11.28 216**		Pn	Pn	20 05 40.7	-3.4
AS31	**Alice Springs**	**40.18 275**		P	**P**	**20 10 21.4**	**-3.2**
ASAR	**Alice Springs**	**40.18 275**		P	**P**	**20 10 23.4**	**-1.2**
	3.1nm,0.6s,baz=115,slow=7.7,SNR=61						
	3.1nm,0.6s						
ASAR	**Alice Springs**	**40.18 275**		P	**P**	**20 10 22.5**	**-2.0**
WR0	**Warramunga Arr**	**41.53 281**		P	**P**	**20 10 33.8**	**-1.8**
WR0				IAmb	IAmb	20 10 34.8	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**41.69 281**		P	**P**	**20 10 35.2**	**-1.7**
WB2				IAmb	IAmb	20 10 35.8	
	comp=Z,9.4nm,0.5s						
WRAB	**Tennant Creek**	**41.70 281**		P	**P**	**20 10 35.2**	**-1.7**
WRAB				IAmb	IAmb	20 10 35.8	
	comp=Z,6.8nm,0.6s						
WRA	**Warramunga Arr**	**41.70 281**		P	**P**	**20 10 35.2**	**-1.7**
	comp=Z,4.3nm,0.4s,baz=119,slow=7.7,SNR=148						
	comp=Z,4.3nm,0.4s						
WRA	**Warramunga Arr**	**41.70 281**		P	**P**	**20 10 34.3**	**-2.7**
WB0	**Warramunga Arr**	**41.75 281**		P	**P**	**20 10 35.7**	**-1.7**
WB0				IAmb	IAmb	20 10 36.2	
	comp=Z,6.9nm,0.8s						
KNRA	**Kununurra**	**48.47 281**		P	**P**	**20 11 26.1**	**-4.1**
KNRA				IAmb	IAmb	20 11 31.9	
	comp=Z,29nm,1.5s						
NWAO	**Narrogin (SRO)**	**49.77 255**		P	P	20 11 35.5	-4.3
QSPA	**South Pole Qui**	**51.34 158**		P	**P**	**20 12 14.9**	**+3.9**
	comp=Z,0.7nm,0.5s,baz=339,slow=1.7,SNR=7.2						
	comp=Z,0.7nm,0.5s						
MLOA	**Mauna Loa Obse**	**60.55 28**		P	P	20 12 47.8	-9.4
FINES	**FINESS Array B**	**149.18 334**		PKPbc	**PKPdf**	**20 22 28.5**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=29,slow=3.2,SNR=4.2						

MAN 20 20:04:23.9, 9°.22N×125°.66E, h17km, mb3.8, ML2.6, MS2.1, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.25 190**		*e*P	Pg	20 04 28.7	-0.8
BUTP				*e*S	Sg	20 04 33.6	+0.2
SCPH	**Surigao**	**0.59 343**		*e*P	Pb	20 04 36.0	+0.3
SCPH				*i* S	Sn	20 04 45.9	-0.7
GLSP	**General Luna,**	**0.72 39**		*e*P	Pg	20 04 38.1	0.0
GLSP				*e*S	Sn	20 04 49.3	-0.8
CGP	**Cagayan de Oro**	**1.22 232**		*e*P	Pn	20 04 44.8	-1.4
CGP				*e*S	Sb	20 05 00.9	-1.1
BIPH	**Bislig**	**1.24 146**		*e*P	Pn	20 04 44.7	-1.7
BIPH				*e*S	Sb	20 05 00.4	-2.0
BUKP	**Musuan**	**1.46 204**		*i*P	Pn	20 04 49.8	+0.3
BUKP				*e*S	Sg	20 05 10.6	-0.4

*IDC **20** 20:07:10.9±1.0, 54°.76S×30°.30W, h0km, mb4.1/5, mbtmp4.2/6, ML4.0/1, MS2.7/1, Error ellipse: s-maj=39.8km s-min=21.9km az=97.0*
*NEIC **20** 20:07:14.8±0.7, 55°.0S±0°.2×31°.0W±0°.1, h10km±2km, mb4.5/10, Error ellipse: s-maj=27.9km s-min=10.4km az=9.0*
ISC 20 20:07:12.4±0.8, 54°.8S±0°.1×30°.5W±0°.1, h10km, n22, σ1§12/22, mb4.5/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.51 276**		Pn	**Pn**	**20 08 05.5**	**-1.4**
VNA3	**Neumayer Olymp**	**18.83 159**		P	**Pn**	**20 11 33.1**	**+0.6**
PMSA	**Palmer Station**	**19.35 226**		P	**P**	**20 11 37.8**	**+0.2**
	0.5nm,0.3s,baz=158,slow=11,SNR=8.3						
	12nm,0.8s						
PMSA	**Palmer Station**	**19.35 226**		P	**P**	**20 11 37.1**	**-0.5**
PMSA				IAmb	IAmb	20 11 41.7	
	comp=Z,27nm,0.9s						
SNAA	**Sanae**	**20.67 155**		P	**P**	**20 11 49.1**	**-2.9**
SNAA	**Sanae**	**20.67 155**		P	**P**	**20 11 50.2**	**-1.9**
	comp=Z,2.3nm,0.9s,baz=200,slow=20,SNR=18						
SNAA				LR	LR	20 18 11.3	
	comp=Z,21nm,19.7s,baz=2.5,slow=32						
	comp=Z,2.3nm,0.9s						
SNAA	**Sanae**	**20.67 155**		P	**P**	**20 11 51.1**	**-0.9**
TROLL	**Troll, Antarti**	**22.22 153**		P	**P**	**20 12 07.8**	**-1.0**
BELA	**Belgrano 2**	**23.23 182**		P	**P**	**20 12 19.4**	**+0.3**
BELA				IAmb	IAmb	20 12 22.1	
	comp=Z,9.6nm,1.1s						
TRQA	**Tornquist**	**27.07 295**		P	**P**	**20 12 55.4**	**+0.5**
MT09	**Talagante**	**35.10 290**		P	**P**	**20 14 05.3**	**-0.4**
MT09				IAmb	IAmb	20 14 37.7	
	comp=Z,17nm,1.1s						
MT01	**Popeta**	**35.18 290**		P	**P**	**20 14 06.6**	**+0.4**
QSPA	**South Pole Qui**	**35.46 180**		P	**P**	**20 14 09.9**	**+1.4**
	comp=Z,15nm,0.9s,baz=200,slow=4.2,SNR=40						
	comp=Z,15nm,0.9s						
QSPA	**South Pole Qui**	**35.46 180**		P	**P**	**20 14 09.5**	**+1.0**
MT02	**Curacav**	**35.57 290**		P	**P**	**20 14 10.1**	**+0.4**
MT02				IAmb	IAmb	20 14 37.6	
	comp=Z,17nm,1.2s						
MAW	**Mawson**	**42.28 145**		P	**P**	**20 15 05.3**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=272,slow=14,SNR=4.1						
	comp=Z,1.8nm,0.9s						
PB01	**IPOC Station P**	**44.63 303**		P	**P**	**20 15 26.2**	**+1.3**
PB01				IAmb	IAmb	20 15 28.2	
	comp=Z,9.8nm,1.1s						
VNDA	**Vanda**	**47.73 184**		P	**P**	**20 15 49.4**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=193,slow=6.3,SNR=18						
	comp=Z,2.1nm,0.8s						
VNDA	**Vanda**	**47.73 184**		P	**P**	**20 15 49.3**	**+0.7**
VNDA				IAmb	IAmb	20 15 50.5	
	comp=Z,3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.97 33**		P	**P**	**20 18 41.8**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=204,slow=5.2,SNR=9.0						
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**147.86 314**		PKPbc	**PKPbc**	**20 26 55.9**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=123,slow=1.5,SNR=18						
SONM	**Songino Array**	**152.55 87**		PKPbc	**PKPbc**	**20 27 07.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=213,slow=3.3,SNR=6.5						

*IDC **20** 20:27:48.2±0.8, 54°.81S×30°.00W, h0km, mb4.4/6, mbtmp4.5/7, ML4.0/1, MS3.3/9, Error ellipse: s-maj=30.9km s-min=19.3km az=83.0*
*NEIC **20** 20:27:49.2±1.6, 54°.8S±0°.1×30°.7W±0°.2, h10km±1km, mb4.5/10, Error ellipse: s-maj=24.6km s-min=19.1km az=24.0*
ISC 20 20:27:49.2±0.8, 54°.8S±0°.1×30°.5W±0°.1, h10km, n31, σ1§28/25, mb4.5/10, MS3.2/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.52 276**		Pn	**Pn**	**20 28 42.0**	**-1.8**
VNA1	**Neumayer–Stat**	**18.67 157**		P	**Pn**	**20 32 08.1**	**+0.8**
VNA3	**Neumayer Olymp**	**18.81 159**		P	**Pn**	**20 32 09.5**	**+0.5**
PMSA	**

s-min=7.9km az=165.0

AEIC 20 20:38:31.0±0.8, 51°2N±0°3×177°9W±0°1, h26km±8km, Error ellipse: s-maj=39.9km s-min=7.4km az=163.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.02**	**47**		Pn	20 38 49.4	-0.3
AMKA	**Amchitka**	**1.77**	**277**		Pn	20 38 58.9	-0.9
UNV	**Unalaska Valle**	**7.44**	**65**	Pn	Pn	20 40 17.8	0.0
KDAK	**Kodiak Island**	**16.05**	**56**	Pn	Pn	20 42 14.6	-0.1
L19K	**White Mountain**	**16.66**	**40**	Pn	Pn	20 42 21.2	-1.2
L19K				IAmb	IAmb	20 42 46.9	
	comp=Z,15nm,1.4s						
CNPM	**China Poot**	**17.19**	**51**	Pn	Pn	20 42 29.0	-0.2
SKT	**Skwentna**	**17.95**	**43**		P	20 42 39.2	+0.4
SKT				IAmb	IAmb	20 43 06.7	
	comp=Z,13nm,1.3s						
CAST	**Castle Rocks**	**18.38**	**38**	P	Pn	20 42 44.3	+0.5
KTH	**Kantishna Hill**	**18.90**	**39**	P	P	20 42 49.0	-0.4
KTH				IAmb	IAmb	20 43 17.4	
	comp=Z,11nm,1.3s						
BPAW	**Bear Paw Mtn.**	**19.14**	**37**		Pn	20 42 52.6	-0.4
IMAR	**Indian Mountai**	**19.24**	**31**	P	P	20 42 52.8	-0.2
MLY	**Manley**	**19.71**	**35**	P	P	20 42 58.2	0.0
MLY				IAmb	IAmb	20 43 01.4	
	comp=Z,4.3nm,1.0s						
DHY	**Denali Highway**	**20.15**	**42**	P	P	20 43 02.2	-0.9
DHY				IAmb	IAmb	20 43 03.9	
	comp=Z,10nm,1.5s						
COLD	**Coldfoot**	**21.12**	**30**	P	P	20 43 13.5	+0.1
COLD				IAmb	IAmb	20 43 22.4	
	comp=Z,3.0nm,1.0s						

*BJI **20** 20:50:04.5±0.0, 9°79S×124°50E, h107km, mb5.0/65, mB5.4/34*

*IDC **20** 20:50:12.3±0.6, 8°88S×123°92E, h91km±5km, mb4.8/37, mbtmp5.1/41, MS3.7/48, Error ellipse: s-maj=11.9km s-min=7.0km az=85.0*

*DJA **20** 20:50:12.3±0.2, 9°S±2°×12°4E±°, h118km±2km, M4.9/73, mB5.4/49, mb5.2/73, MLv5.3/18, Mw(mB)4.9/49, MwMwp4.7/6, Mwp5.1/6*

*NEIC **20** 20:50:13.0±2.1, 8°96S±0°04×123°95E±0°07, h96km±3km, mb5.2/103, Error ellipse: s-maj=10.2km s-min=6.1km az=95.0*

*GCMT **20** 20:50:14.0±0.2, 9°02S±0°01×124°01E±0°01, h115km±2km, MW5.1/101, Moment Tensor Solution. s63,c75; s101,c170; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=1.28±.14; Mθθ0.48±.15; Mφφ0.80±.15; Mrθ4.18±.09; Mθφ2.85±.12; Mφr-0.26±.10; Best double couple: M0=5.17700×10^16^ NP1:φs=264.00000°, δ81.00000°, λ=-56.00000°. NP2:φs=6.00000°, δ35.00000°, λ=-165.00000°. Principal axes: T 4.9820, Plg28.0000°, Azm327.0000°; N 0.3880, Plg34.0000°, Azm78.0000°; P -5.3730, Plg43.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **20** 20:50:15.0±1.0, 8°74S×123°90E, h127km, mb5.1/65 Error ellipse: s-maj=10.0km s-min=4.8km az=120.8*

ISC 20 20:50:13.4±0.3, 8°97S±0°03×123°90E±0°04, h103km±2km, h104km:pP-P,n722,σ1°43/738, mb5.1/147, 31C-21D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.86**	**155**	Pn	**Pn**	**20 50 31.8**	**-1.0**
SOEI	**Soe**	**0.86**	**155**	P	**Pn**	**20 50 31.9**	**-0.9**
SOEI	**Soe**	**0.86**	**155**	P	**Pn**	**20 50 32.4**	**-0.4**
BATI	**Baumata**	**1.25**	**191**	P	**Pn**	**20 50 36.7**	**-0.2**
	11μm,0.4s,baz=27,slow=2.0,SNR=4152						
BATI				S	**Sn**	**20 50 54.0**	**-0.7**
	12μm,0.3s,baz=39,slow=2.8,SNR=12						
BATI				LR	LR	20 51 02.2	
	comp=Z,3μm,21.9s,baz=344,slow=37						
BATI	**Baumata**	**1.25**	**191**	P	**Pn**	**20 50 36.7**	**-0.2**
MMRI	**Maumere**	**1.68**	**281**	Pn	**Pn**	**20 50 42.5**	**+0.5**
MMRI	**Maumere**	**1.68**	**281**	P	**Pn**	**20 50 42.4**	**+0.4**
MMRI	**Maumere**	**1.68**	**281**	P	**Pn**	**20 50 43.4**	**+1.4**
BBSI	**Bau Bau**	**3.70**	**339**	P	**Pn**	**20 51 10.7**	**+2.1**
BSSI	**Bau Bau, Buton**	**4.39**	**309**	P	**Pn**	**20 51 18.5**	**+0.5**
BKSI	**Bulukumba**	**5.21**	**314**	P	**Pn**	**20 51 30.5**	**+1.4**
	1.1nm4μm241nm,0.9s						
KKSI	**Kolaka, Sulawe**	**5.26**	**335**	P	**Pn**	**20 51 32.0**	**+2.3**
	1.8nm6μm490nm,0.9s						
KAPI	**Kappang**	**5.69**	**313**	P	**Pn**	**20 51 36.3**	**+0.8**
	70nm,0.5s,baz=141,slow=9.4,SNR=39						
KAPI				LR	LR	20 54 05.6	
	comp=Z,1μm,20.0s,baz=147,slow=41						
KAPI	**Kappang**	**5.69**	**313**	Pn	**Pn**	**20 51 37.6**	**+2.1**
KAPI	**Kappang**	**5.69**	**313**	*cP*	**Pn**	**20 51 37.9**	**+2.3**
KAPI	**Kappang**	**5.69**	**313**	P	**Pn**	**20 51 38.4**	**+2.8**
KAPI	**Kappang**	**5.69**	**313**	P	**Pn**	**20 51 37.5**	**+1.9**
	0.8nm3μm3μm234nm,1.5s						
KAPI	**Kappang**	**5.69**	**313**	P	**Pn**	**20 51 38.4**	**+2.8**
BNSI	**Bone**	**5.90**	**320**	P	**Pn**	**20 51 40.4**	**+2.0**
	1.4nm2μm6μm428nm,1.4s						
PLAI	**Plampang**	**6.05**	**271**	P	**Pn**	**20 51 40.8**	**+0.3**
	3.7nm11μm407nm,0.8s						
PLAI	**Plampang**	**6.05**	**271**	P	**Pn**	**20 51 41.8**	**+1.3**
SPSI	**Sidrap Palu**	**6.45**	**320**	P	**Pn**	**20 51 47.9**	**+2.1**
	1.0nm3μm190nm,1.1s						
NLAI	**Namlea**	**6.52**	**29**	P	**Pn**	**20 51 48.6**	**+1.8**
	1.4nm7μm444nm,0.7s						
AAI	**Ambon**	**6.76**	**39**	P	**Pn**	**20 51 53.7**	**+3.6**
AAI				pmax	pmax		
	comp=Z,156nm,1.0s						
AAI	**Ambon**	**6.76**	**39**	P	**Pn**	**20 51 51.9**	**+1.8**
	comp=Z,0.8nmcomp=Z,45μmcomp=Z,3μmcomp=Z,156nm,1.0s						
TWSI	**Taliwang, Sumb**	**6.94**	**271**	P	**Pn**	**20 51 51.7**	**-0.8**
TTSI	**Tana Toraja**	**7.15**	**325**	P	**Pn**	**20 51 57.6**	**+2.3**
	comp=Z,1.0nmcomp=Z,4μmcomp=Z,279nm,1.2s						
KRAI	**Karang Ratu**	**7.17**	**39**	P	**Pn**	**20 51 57.1**	**+1.4**
	comp=Z,0.6nmcomp=Z,9μmcomp=Z,82nm,0.9s						
SANI	**Sanana**	**7.18**	**17**	P	**Pn**	**20 51 57.3**	**+1.5**
	comp=Z,1.8nmcomp=Z,5μmcomp=Z,492nm,0.8s						
SANI	**Sanana**	**7.18**	**17**	P	**Pn**	**20 52 00.0**	**+4.2**
PMSI	**Majene**	**7.35**	**317**	P	**Pn**	**20 51 59.4**	**+1.2**
	comp=Z,0.8nmcomp=Z,3μmcomp=Z,220nm,1.2s						
SAUI	**Saumlaki**	**7.38**	**83**	**Pn**	**Pn**	**20 51 58.3**	**-0.2**
SAUI	**Saumlaki**	**7.38**	**83**	P	**Pn**	**20 51 57.5**	**-1.0**
	comp=Z,5.3nmcomp=Z,752nm,0.8s						
SAUI	**Saumlaki**	**7.38**	**83**	P	**Pn**	**20 51 59.2**	**+0.7**
MSAI	**Masohi**	**7.49**	**42**	P	**Pn**	**20 52 00.6**	**+0.6**
	comp=Z,0.2nmcomp=Z,769nmcomp=Z,65nm,0.9s						
KLNI	**Mataram**	**7.74**	**273**	P	**Pn**	**20 52 01.5**	**-1.9**
	comp=Z,1.5nmcomp=Z,4μmcomp=Z,221nm,0.4s						
LUWI	**Luwuk**	**7.95**	**352**	Pn	**Pn**	**20 52 07.6**	**+1.3**
LUWI	**Luwuk**	**7.95**	**352**	P	**Pn**	**20 52 07.4**	**+1.1**
	comp=Z,4μmcomp=Z,385nm,1.2s						
MTN	**Manton Dam**	**8.08**	**119**	P	**Pn**	**20 52 05.3**	**-2.7**
	baz=8.1,SNR=1000						
MTN	**Manton Dam**	**8.08**	**119**	Pn	**Pn**	**20 52 05.1**	**-2.9**
MTN	**Manton Dam**	**8.08**	**119**	P	**Pn**	**20 52 06.3**	**-1.7**
KNRA	**Kununurra**	**8.19**	**145**	P	**Pn**	**20 52 05.6**	**-3.9**
	baz=8.2,SNR=1000						
KNRA	**Kununurra**	**8.19**	**145**	Pn	**Pn**	**20 52 05.7**	**-3.8**
KNRA	**Kununurra**	**8.19**	**145**	P	**Pn**	**20 52 06.2**	**-3.3**
APSI	**Ampana**	**8.31**	**344**	P	**Pn**	**20 52 12.7**	**+1.5**
	comp=Z,4μmcomp=Z,337nm,0.8s						
DNP	**Denpasar**	**8.60**	**271**	P	**Pn**	**20 52 14.4**	**-0.6**
SRBI	**Singaraja**	**8.64**	**275**	P	**Pn**	**20 52 14.3**	**-1.3**
	comp=Z,2μmcomp=Z,112nm,0.9s						
IGBI	**Denpasar**	**8.65**	**270**	P	**Pn**	**20 52 14.4**	**-1.4**
	comp=Z,5μmcomp=Z,219nm,2.7s						
RTBI	**Rangdo, Negare**	**8.87**	**273**	P	**Pn**	**20 52 17.7**	**-1.1**
	comp=Z,106nm,0.6s						
LBMI	**Labuha**	**9.02**	**24**	P	**Pn**	**20 52 22.2**	**+1.4**
	comp=Z,3μmcomp=Z,245nm,1.0s						
KDU	**Kakadu**	**9.19**	**114**	P	**Pn**	**20 52 19.4**	**-3.8**
	baz=9.2,SNR=384						
KDU	**Kakadu**	**9.19**	**114**	P	**Pn**	**20 52 20.9**	**-2.3**
GTOI	**Gorontalo**	**9.58**	**355**	P	**Pn**	**20 52 32.0**	**+3.6**
	comp=Z,437nmcomp=Z,50nm,0.8s						
MRSI	**Marisa**	**9.58**	**348**	P	**Pn**	**20 52 29.3**	**+0.8**
	comp=Z,938nmcomp=Z,76nm,1.1s						
ABJI	**Asem Bagus**	**9.64**	**276**	P	**Pn**	**20 52 28.0**	**-1.2**
	comp=Z,117nm,1.1s						
JAGI	**Jajag, Banyuwa**	**9.65**	**272**	Pn	**Pn**	**20 52 25.2**	**-4.2**
JAGI	**Jajag, Banyuwa**	**9.65**	**272**	P	**Pn**	**20 52 25.2**	**-4.2**
	comp=Z,3μmcomp=Z,92nm,0.6s						
JAGI	**Jajag, Banyuwa**	**9.65**	**272**	P	**Pn**	**20 52 26.2**	**-3.2**
KMMI	**Kalianget**	**10.02**	**280**	P	**Pn**	**20 52 34.0**	**-0.4**
	comp=Z,92nm,1.5s						
MPSI	**Mapaga**	**10.07**	**336**	P	**Pn**	**20 52 36.2**	**+1.2**
	comp=Z,1μmcomp=Z,91nm,1.2s						
FAKI	**Fak Fak**	**10.24**	**55**	Pn	**Pn**	**20 52 36.9**	**-0.6**
FAKI	**Fak Fak**	**10.24**	**55**	P	**Pn**	**20 52 37.1**	**-0.4**
	comp=Z,997nmcomp=Z,48nm,0.8s						
FAKI	**Fak Fak**	**10.24**	**55**	P	**Pn**	**20 52 36.5**	**-1.0**
TNTI	**Ternate**	**10.27**	**20**	Pn	**Pn**	**20 52 40.7**	**+2.9**
TNTI	**Ternate**	**10.27**	**20**	P	**Pn**	**20 52 38.9**	**+1.1**
	comp=Z,1μmcomp=Z,108nm,1.1s						
BKB	**Balikpapan**	**10.36**	**317**	Pn	**Pn**	**20 52 43.1**	**+4.1**
BKB	**Balikpapan**	**10.36**	**317**	P	**Pn**	**20 52 41.2**	**+2.2**
	comp=Z,3μmcomp=Z,4μmcomp=Z,317nm,1.4s						
TOLI2	**Tolitoli**	**10.48**	**343**	Pn	**Pn**	**20 52 43.0**	**+2.3**
TOLI2	**Tolitoli**	**10.48**	**343**	P	**Pn**	**20 52 43.6**	**+2.9**
BBKI	**Banjar Baru**	**10.54**	**301**	P	**Pn**	**20 52 40.9**	**-0.5**
	comp=Z,15μmcomp=Z,328nm,1.1s						
SMKI	**Samarinda**	**10.77**	**321**	P	**Pn**	**20 52 45.4**	**+0.7**
	comp=Z,481nm,1.2s						
SIJI	**Sorong**	**10.88**	**43**	P	**Pn**	**20 52 44.6**	**-1.6**
	comp=Z,26nm,0.6s,baz=297,slow=5.6,SNR=23						
SIJI				LR	LR	20 58 09.6	
	comp=Z,307nm,19.4s,baz=202,slow=44						
SIJI	**Sorong**	**10.88**	**43**	P	**Pn**	**20 52 46.9**	**+0.7**
	comp=Z,55nm,1.2s						
KRKI	**Karangkates**	**11.35**	**273**	P	**Pn**	**20 52 50.9**	**-1.6**
	comp=Z,51nm,0.5s						
GAMI	**Galela, Maluku**	**11.41**	**20**	P	**Pn**	**20 52 54.2**	**+0.9**
	comp=Z,2μmcomp=Z,202nm,1.5s						
MTKI	**Muara Teweh, K**	**12.00**	**311**	P	**Pn**	**20 53 01.1**	**0.0**
	comp=Z,119nm,0.9s						
PCJI	**Pacitan**	**12.61**	**273**	P	**Pn**	**20 53 06.2**	**-2.9**
	comp=Z,171nm,0.5s						
RKPI	**Ransiki, Papua**	**12.63**	**55**	P	**Pn**	**20 53 09.4**	**0.0**
	comp=Z,3μmcomp=Z,136nm,0.8s						
SGSI	**Sangihe**	**12.67**	**7**	P	**Pn**	**20 53 10.8**	**+0.8**
	comp=Z,3μmcomp=Z,133nm,0.7s						
MBWA	**Marble Bar**	**12.77**	**198**		**Pn**	**20 53 07.2**	**-4.1**
MBWA	**Marble Bar**	**12.77**	**198**	P	**Pn**	**20 53 09.4**	**-1.8**
MBWA	**Marble Bar**	**12.77**	**198**	P	**Pn**	**20 53 09.5**	**-1.8**
PSA00	**Pilbara Seismi**	**13.13**	**197**	Pn	**Pn**	**20 53 12.5**	**-3.5**
PSA00	**Pilbara Seismi**	**13.13**	**197**	Pn	**Pn**	**20 53 13.3**	**-2.7**
PSA00	**Pilbara Seismi**	**13.13**	**197**	P	**Pn**	**20 53 14.0**	**-1.9**
UGM	**Wanagama**	**13.28**	**274**	Pn	**Pn**	**20 53 16.6**	**-1.4**
UGM	**Wanagama**	**13.28**	**274**	P	**Pn**	**20 53 16.3**	**-1.7**
UGM	**Wanagama**	**13.28**	**274**	P	**Pn**	**20 53 19.7**	**+1.7**
SMRI	**Semarang**	**13.47**	**277**		**Pn**	**20 53 17.0**	**-3.4**
SMRI	**Semarang**	**13.47**	**277**	P	**Pn**	**20 53 18.5**	**-1.9**
	comp=Z,194nm,0.9s						
CTJI	**Waduk Cacaban**	**14.71**	**277**	P	**Pn**	**20 53 34.9**	**-1.5**
WB0	**Warramunga Arr**	**14.77**	**138**	Pn	Pn	20 53 31.4	-5.9
WRA	**Warramunga Arr**	**14.86**	**138**	P	**Pn**	**20 53 33.9**	**-4.5**
	comp=Z,106nm,0.5s,baz=318,slow=13,SNR=286						
WRA				S	Sn	20 56 07.7	-15
	comp=Z,71nm,0.5s,baz=310,slow=24,SNR=12						
WRA				LR	LR	21 00 01.5	
	comp=Z,822nm,19.1s,baz=310,slow=40						
WRA	**Warramunga Arr**	**14.86**	**138**	Pn	Pn	20 53 31.9	-6.4
WRAB	**Tennant Creek**	**14.86**	**138**	P	Pn	20 53 32.4	-6.0
WRAB	**Tennant Creek**	**14.86**	**138**	*d iP*	Pn	20 53 33.0	-5.4
WRAB				pmax	pmax		
	comp=Z,55nm,0.5s						
WRAB	**Tennant Creek**	**14.86**	**138**	P	**Pn**	**20 53 34.3**	**-4.1**
WB2	**Warramunga Arr**	**14.87**	**138**	P	Pn	20 53 33.5	-5.0
	baz=15						
WB2	**Warramunga Arr**	**14.87**	**138**	Pn	Pn	20 53 32.0	-6.4
WR0	**Warramunga Arr**	**15.01**	**138**	Pn	**Pn**	**20 53 34.1**	**-6.1**
MYLDM	**Lahad Datu**	**15.05**	**339**	P	**P**	**20 53 45.3**	**+1.7**
MYLDM	**Lahad Datu**	**15.05**	**339**	P	**Pn**	**20 53 41.4**	**+0.7**
	comp=Z,3μmcomp=Z,199nm,1.1s						
KCP	**Kidapawan**	**15.91**	**4⇑**	*eP*	**P**	**20 53 53.2**	**0.0**
DAV	**Davao City (W)**	**16.02**	**6**	P	**Pn**	**20 53 51.3**	**-1.6**
	comp=Z,99nm,0.3s,baz=115,slow=5.1,SNR=8.2						
DAV				LR	LR	21 01 33.3	
	comp=Z,244nm,18.1s,baz=186,slow=43						
DAV	**Davao City (W)**	**16.02**	**6**	P	**Pn**	**20 53 53.5**	**+0.7**
CTBH	**Cotabato--PC H**	**16.08**	**1⇓**	*eP*	**P**	**20 53 57.1**	**+2.1**
SBUM	**Sibu**	**16.25**	**314**	P	**P**	**20 53 57.5**	**+0.5**
SBUM	**Sibu**	**16.25**	**314**	P	**Pn**	**20 53 55.7**	**-0.1**
	comp=Z,618nmcomp=Z,34nm,0.9s						
LEM	**Lembang**	**16.27**	**276**	P	**Pn**	**20 53 56.0**	**-0.2**
	comp=Z,44nm,0.5s,baz=52,slow=6.7,SNR=14						
LEM				LR	LR	21 00 22.9	
	comp=Z,200nm,22.0s,baz=82,slow=38						
LEM	**Lembang**	**16.27**	**276**	P	**Pn**	**20 53 56.0**	**-0.2**
GIRL	**Giralia**	**16.46**	**213**	P	**Pn**	**20 53 58.3**	**0.0**
	baz=16,SNR=14						
GIRL	**Giralia**	**16.46**	**213**		**P**	**20 54 00.6**	**+1.4**
GIRL	**Giralia**	**16.46**	**213**	P	**P**	**20 53 59.1**	**-0.1**
WRKA	**Warakurna**	**16.52**	**166**	P	**Pn**	**20 53 55.5**	**-3.5**
	baz=17,SNR=157						
WRKA	**Warakurna**	**16.52**	**166**	P	**Pn**	**20 53 55.9**	**-3.2**
CNJI	**Cibinong**	**16.69**	**274**	P	**Pn**	**20 53 59.1**	**-2.0**
	comp=Z,1μmcomp=Z,74nm,0.8s						
PAGZ	**Pagadian**	**16.71**	**358⇑**	*eP*	**P**	**20 54 04.4**	**+2.4**
KKM	**Kota Kinabalu**	**16.77**	**333**	P	**P**	**20 54 04.4**	**+1.7**
KKM	**Kota Kinabalu**	**16.77**	**333**	P	**Pn**	**20 54 02.2**	**0.0**
	comp=Z,2μmcomp=Z,119nm,0.7s						
KKM	**Kota Kinabalu**	**16.77**	**333**	P	**P**	**20 54 05.7**	**+3.0**
BUKP	**Musuan**	**16.77**	**4⇓**	*eP*	**P**	**20 54 04.0**	**+1.3**
KSM	**Kuching**	**17.06**	**307**	P	**P**	**20 54 07.0**	**+1.2**
KSM	**Kuching**	**17.06**	**307**	P	**Pn**	**20 54 04.5**	**-1.2**
	comp=Z,1μmcomp=Z,86nm,1.6s						
KSM	**Kuching**	**17.06**	**307**	P	**P**	**20 54 08.4**	**+2.5**
CBJI	**Citeko**	**17.09**	**277**	P	**Pn**	**20 54 02.7**	**-3.3**
	comp=Z,9μmcomp=Z,243nm,0.7s						
SKJI	**Sukabumi**	**17.29**	**275**	P	**P**	**20 54 05.4**	**-3.0**
	comp=Z,2μmcomp=Z,97nm,0.9s						
CGP	**Cagayan de Oro**	**17.32**	**3⇓**	*eP*	**Pn**	**20 54 12.7**	**+3.8**
GENI	**Genyem**	**17.37**	**70**	P	**P**	**20 54 08.1**	**-1.2**
	comp=Z,2μmcomp=Z,76nm,1.0s						
AS31	**Alice Springs**	**17.47**	**148**	P	**P**	**20 54 07.7**	**-2.7**
ASAR	**Alice Springs**	**17.47**	**148**	P	**P**	**20 54 09.6**	**-0.8**
	comp=Z,129nm,0.5s,baz=320,slow=11,SNR=300						
ASAR				S	Sn	20 57 11.3	-14
	comp=Z,58nm,0.7s,baz=324,slow=24,SNR=12						
ASAR				LR	LR	21 01 44.5	
	comp=Z,643nm,20.4s,baz=326,slow=40						
ASAR	**Alice Springs**	**17.47**	**148**	P	**P**	**20 54 08.1**	**-2.3**
AS01	**Alice Springs**	**17.50**	**148**	P	**P**	**20 54 09.3**	**-1.3**
LSIP	**Lazi, Siquijor**	**17.98**	**359**	*i iP*	**Pn**	**20 54 19.7**	**+2.9**
XMI	**Christmas Isla**	**18.01**	**264**	P	**Pn**	**20 54 17.6**	**+0.3**
GHBP	**Garcia Hernand**	**18.48**	**1⇑**	*iP*	**Pn**	**20 54 25.6**	**+2.8**
TBP	**Tagbilaran**	**18.54**	**360**	*eP*	**Pn**	**20 54 24.0**	**+0.5**
CNOP	**Candoni, Negro**	**18.71**	**356⇑**	*iP*	**Pn**	**20 54 26.2**	**+0.6**
PPBI	**Pangkal Pinang**	**18.92**	**290**	P	**P**	**20 54 24.0**	**-2.3**
	comp=Z,666nmcomp=Z,49nm,1.6s						
TABP	**Talibon, Bohol**	**18.94**	**1⇑**	*iP*	**Pn**	**20 54 27.8**	**-0.4**
QIS	**Mount Isa**	**19.04**	**129**	P	**Pn**	**20 54 28.6**	**-0.9**
	baz=19,SNR=275						
QIS	**Mount Isa**	**19.04**	**129**	P	**Pn**	**20 54 28.7**	**-0.8**
COEN	**Coen**	**19.52**	**106**	P	**P**	**20 54 33.9**	**+1.1**
	baz=20,SNR=42						
COEN	**Coen**	**19.52**	**106**		**P**	**20 54 33.5**	**+0.6**
COEN	**Coen**	**19.52**	**106**	P	**Pn**	**20 54 34.4**	**-0.7**
KASI	**Kota Agung**	**19.55**	**279**	P	**P**	**20 54 30.5**	**-2.7**
	comp=Z,2μmcomp=Z,122nm,0.5s						
LWLI	**Liwa**	**20.08**	**280**	P	**P**	**20 54 38.3**	**-0.7**
	comp=Z,2μmcomp=Z,134nm,0.5s						
MNAI	**Manna**	**21.30**	**281**	P	**P**	**20 54 51.6**	**-0.4**
MNAI	**Manna**	**21.30**	**281**	P	**P**	**20 54 49.9**	**-2.1**
	comp=Z,134nm,1.4s						
MNAI	**Manna**	**21.30**	**281**	P	**P**	**20 54 52.5**	**+0.5**
MORW	**Morawa**	**21.32**	**199**	P	**P**	**20 54 51.4**	**-0.7**
	baz=21,SNR=52						
MORW	**Morawa**	**21.32**	**199**	P	**P**	**20 54 51.0**	**-1.0**
MORW	**Morawa**	**21.32**	**199**	P	**P**	**20 54 51.4**	**-0.7**
OOD	**Oodnadatta**	**21.78**	**151**	P	**P**	**20 54 56.9**	**-0.1**
MTSU	**Mount Surprise**	**21.82**	**117**	P	**P**	**20 54 58.4**	**+0.9**
	baz=22,SNR=71						
MTSU	**Mount Surprise**	**21.82**	**117**	P	**P**	**20 54 59.1**	**+1.6**
FORT	**Forrest**	**22.05**	**170**	P	**P**	**20 54 59.0**	**-0.7**
	baz=22,SNR=157						
FORT	**Forrest**	**22.05**	**170**	P	**P**	**20 54 59.1**	**-0.7**
FORT	**Forrest**	**22.05**	**170**	P	**P**	**20 54 59.5**	**-0.3**
BLDU	**Ballidu**	**22.56**	**196**	P	**P**	**20 55 04.3**	**-0.8**
	baz=23,SNR=62						
BLDU	**Ballidu**	**22.56**	**196**	P	**P**	**20 55 04.6**	**-0.5**
MYKOM	**Kota Tinggi**	**22.66**	**297**	P	**P**	**20 55 07.0**	**+0.7**
MYKOM	**Kota Tinggi**	**22.66**	**297**	P	**P**	**20 55 06.1**	**-0.2**
	comp=Z,739nmcomp=Z,60nm,1.6s						
PMG	**Port Moresby**	**22.96**	**93**	P	**P**	**20 55 13.0**	**+3.7**
	comp=Z,7.1nm,0.5s,baz=72,slow=3.2,SNR=1.7						
PMG				LR	LR	21 05 34.6	
	comp=Z,223nm,18.8s,baz=288,slow=40						
PMG	**Port Moresby**	**22.96**	**93**	P	**P**	**20 55 08.0**	**-1.3**
PMG	**Port Moresby**	**22.96**	**93**	P	**P**	**20 55 08.0**	**-1.3**
LQP	**Lukban**	**23.05**	**354⇑**	*eP*	**P**	**20 55 13.9**	**+3.7**
KLBR	**Kellerberrin**	**23.23**	**193**	P	**P**	**20 55 10.9**	**-0.7**
	baz=23,SNR=48						
KLBR	**Kellerberrin**	**23.23**	**193**	P	**P**	**20 55 11.2**	**-0.4**
MULG	**Mulgathing**	**23.24**	**157**	P	**P**	**20 55 12.0**	**+0.3**
MUN	**Mundaring**	**23.99**	**196**	P	**P**	**20 55 18.2**	**-0.3**
	baz=24,SNR=23						
MUN	**Mundaring**	**23.99**	**196**	P	**P**	**20 55 18.4**	**-0.1**
CTA	**Charters Tower**	**24.26**	**120**	P	**P**	**20 55 22.0**	**+0.9**
	comp=Z,25nm,0.8s,baz=302,slow=12,SNR=20						
CTA				LR	LR	21 05 23.4	
	comp=Z,362nm,19.3s,baz=286,slow=38						
	comp=Z,25nm,0.8s						
CTA	**Charters Tower**	**24.26**	**120**	P	**P**	**20 55 22.0**	**+0.9**
CTAO	**Charters Tower**	**24.26**	**120**	P	**P**	**20 55 22.6**	**+1.5**
CTAO	**Charters Tower**	**24.26**	**120**	P	**P**	**20 55 22.6**	**+1.5**
MANU	**Manus Island**	**24.33**	**75**	P	**P**	**20 55 21.4**	**-0.5**
TV1H	**Townsville Har**	**24.41**	**117**	P	**P**	**20 55 25.6**	**+3.1**
BKNI	**Bangkinang**	**24.57**	**291**	P	**P**	**20 55 23.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 23.9**	**-0.4**
	comp=Z,58nm,0.8s,baz=244,slow=7.5,SNR=65						
NWAO				LR	LR	21 05 35.3	
	comp=Z,232nm,20.8s,baz=182,slow=37						
	comp=Z,58nm,0.8s						
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 23.9**	**-0.4**
	baz=25,SNR=44						
NWAO				P	**P**	**20 55 23.9**	**-0.4**
	baz=25,SNR=44						
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 23.8**	**-0.5**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 24.0**	**-0.4**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 24.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P	**P**	**20 55 24.1**	**-0.2**
LCRK	**Leigh Creek**	**25.21**	**150**	P	**P**	**20 55 31.2**	**+1.6**
QLP	**Quilpie**	**26.04**	**135**	P	**P**	**20 55 37.9**	**+0.7**
	baz=26,SNR=3.8						
BBOO	**Buckleboo**	**26.26**	**156**	P	**P**	**20 55 39.2**	**+0.2**
	baz=26,SNR=56						
BBOO	**Buckleboo**	**26.26**	**156**	P	**P**	**20 55 38.4**	**-0.7**
BBOO				IAmb	IAmb	20 55 40.4	
	comp=Z,57nm,0.7s						
BBOO	**Buckleboo**	**26.26**	**156**	P	**P**	**20 55 39.4**	**+0.3**
RKGY	**Rocky Gully**	**26.30**	**193**	P	**P**	**20 55 40.5**	**+1.1**
	baz=26,SNR=9.9						
RKGY	**Rocky Gully**	**26.30**	**193**	P	**P**	**20 55 40.7**	**+1.3**
IPM	**Ipoh**	**26.43**	**299**	P	**P**	**20 55 40.2**	**-0.6**
IPM	**Ipoh**	**26.43**	**299**	P	**P**	**20 55 46.3**	**+5.5**
	comp=Z,20nm,1.3s						
KULM	**Kulim**	**27.16**	**301**	P	**P**	**20 55 47.1**	**-0.3**
RPSI	**Rantau Prap

ENH Enshi 41.40 341 P P 20 57 50.0 +0.3
ENH Enshi 41.40 341 P P 20 57 49.5 -0.2
JNU Nakatsue 42.38 9 P P 20 57 56.8 -0.8
DZM Mont Dzumac 42.86 113 P P 20 58 02.5 +0.7
comp=Z,7.5nm,0.8s,baz=252,slow=13,SNR=3.5
DZM LR LR 21 16 18.6
comp=Z,178nm,19.4s,baz=226,slow=36
comp=Z,7.5nm,0.8s
DZM Mont Dzumac 42.86 113 P P 20 58 00.6 -1.2
DZM IAmb IAmb 20 58 06.5
comp=Z,48nm,1.6s
JMN Monobe 43.50 12 P P 20 58 07.2 +0.5
JMN Monobe 43.50 12 P P 20 58 07.5 +0.8
CD2 Chengdu 44.11 335 *eP* **P 20 58 14.0 +2.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
BRDH Bariadhala 44.58 315 P P 20 58 16.1 +0.6
comp=Z,135nm,0.3s,baz=105,slow=6.7,SNR=11
JHS Saijyo 44.59 11 P P 20 58 15.7 +0.3
JHS Saijyo 44.59 11 P P 20 58 15.9 +0.5
LYN LuoYang 44.62 347 ⇓*iP* **P 20 58 15.3 -0.2**
LYN pmax pmax
comp=Z,20nm,0.8s
XAN Xi'an 45.07 342 ⇑P **P 20 58 18.1 -1.2**
XAN PcP **PcP 20 59 59.0 +0.6**
XAN pmax pmax
comp=Z,17nm,0.8s
XAN Xi'an 45.07 342 P **P 20 58 17.9 -1.3**
TJN Taejon 45.22 4⇑*eP* **P 20 58 20.5 +0.2**
INU Inuyama 45.78 15 P **P 20 58 24.1 -0.7**
INU IAmb IAmb 20 58 25.5
comp=Z,33nm,0.9s
INU Inuyama 45.78 15 P **P 20 58 24.2 -0.5**
PALK Pallekele 45.97 289 LR LR 21 20 23.9
comp=Z,114nm,18.6s,baz=217,slow=39
PALK Pallekele 45.97 289 P **P 20 58 24.1 -2.6**
JGF Kuroka 46.11 15 P **P 20 58 26.7 -0.7**
JGF IAmb IAmb 20 58 34.2
comp=Z,132nm,2.0s
JGF Kuroka 46.11 15 P **P 20 58 27.2 -0.2**
KSRS Korea Array 46.33 4 P **P 20 58 28.5 -0.5**
comp=Z,6.4nm,0.8s,baz=185,slow=10,SNR=20
KSRS PcP **PcP 21 00 02.8 +0.2**
comp=Z,3.8nm,0.8s,baz=179,slow=3.2,SNR=5.5
KSRS LR LR 21 17 07.5
comp=Z,39nm,21.1s,baz=205,slow=35
comp=Z,6.4nm,0.8s
SHL Shillong 46.36 319 P **P 20 58 28.9 -0.7**
SHL Shillong 46.36 319 P **P 20 58 29.0 -0.7**
SHL pmax pmax
comp=Z,58nm,0.7s
SHL Shillong 46.36 319 P **P 20 58 28.8 -0.9**
SNR=14
KS19 Wonju Array Si 46.37 4 P **P 20 58 29.1 -0.2**
KS19 IAmb IAmb 20 59 07.8
comp=Z,89nm,1.8s
HNS HongShan 46.92 350 ⇓P **P 20 58 33.0 -0.6**
HNS pmax pmax
comp=Z,20nm,1.0s
MJAR Matsushiro Arr 47.22 16 P **P 20 58 34.9 -1.1**
comp=Z,33nm,0.8s,baz=191,slow=8.5,SNR=68
comp=Z,33nm,0.8s
MAJO Matsushiro 47.22 16 P **P 20 58 34.9 -1.2**
MAJO IAmb IAmb 20 58 36.0
comp=Z,53nm,0.9s
MAJO Matsushiro 47.22 16*c iP* **P 20 58 34.8 -1.2**
MAJO pmax pmax
comp=Z,58nm,1.0s
MAJO Matsushiro 47.22 16 P **P 20 58 35.3 -0.7**
MAJO Matsushiro 47.22 16 P **P 20 58 34.7 -1.3**
MJB9 Matsu-Tunnel 47.23 16 P **P 20 58 35.6 -0.4**
MJB9 IAmb IAmb 20 58 37.0
comp=Z,50nm,0.9s
JYT Yasato 47.50 18 P **P 20 58 36.8 -1.4**
JYT IAmb IAmb 20 58 38.5
comp=Z,65nm,1.0s
LZH Lanzhou 48.63 338 *eP* **P 20 58 47.4 +0.3**
LZH pmax pmax
comp=Z,33nm,1.0s
JSD Sado 48.65 15 P **P 20 58 46.8 -0.1**
JMM Marumori 49.19 18 P **P 20 58 51.2 +0.1**
JMM Marumori 49.19 18 P **P 20 58 52.0 +0.9**
BJT Baijiatuau 49.26 352 P **P 20 58 50.6 -1.0**
BJT IAmb IAmb 20 58 53.1
comp=Z,13nm,0.7s
BJT Baijiatuau 49.26 352 P **P 20 58 50.6 -1.0**
BJT pmax pmax
comp=Z,13nm,0.7s
BJT Baijiatuau 49.26 352 P **P 20 58 51.0 -0.6**
BJT Baijiatuau 49.26 352 P **P 20 58 50.5 -1.1**
BJT sP **sP 20 59 25.4 -2.1**
BJI Beijing 49.28 352 P **P 20 58 50.3 -1.4**
BJI sP **sP 20 59 25.3 -2.4**
BJI PcP **PcP 21 00 13.8 +0.7**
BJI pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 49.72 322 P **P 20 58 56.3 +0.4**
LSA Lhasa 49.72 322 P **P 20 58 57.0 +1.2**
LSA pmax pmax
comp=Z,140nm,0.8s
LSA Lhasa 49.72 322 P **P 20 58 56.3 +0.4**
LSA pmax pmax
comp=Z,79nm,0.7s
LSA Lhasa 49.72 322 P **P 20 58 56.9 +1.0**
LSA Lhasa 49.72 322 *i* P **P 20 58 55.7 -0.2**
SNR=44
LSA Lhasa 49.72 322 P **P 20 58 57.1 +1.3**
LSA pP **pP 20 59 20.6 +0.6**
ODAN Odare 50.23 316 *eP* **P 20 58 59.7 +0.2**
TAPN Taplejung 50.33 317 *eP* **P 20 59 00.6 +0.3**
comp=Z,420nm,0.9s
TAPN Taplejung 50.33 317 *eP* **ScP 21 04 04.2 -0.2**
RAMN Ramite 50.83 316 *eP* **P 20 59 04.5 +0.5**
comp=Z,418nm,0.7s
RAMN Ramite 50.83 316 *eP* **ScP 21 04 05.5 -0.9**
H08S2 Diego Garcia H 50.85 267 T T 21 55 13.8
baz=96
HHC Hu-ho-hao-te 50.86 348 *eP* **P 20 59 07.0 +3.2**
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,270nm,6.1s
H08S3 Diego Garcia H 50.87 267 T T 21 55 14.7
baz=96,slow=74,SNR=3.7
H08S1 Diego Carcia H 50.87 267 T T 21 55 14.2
baz=96,slow=74,SNR=1.8
JIRN Jiri 51.56 316 *eP* **P 20 59 09.8 +0.2**
comp=Z,209nm,0.6s
JIRN Jiri 51.56 316 *eP* **ScP 21 04 09.5 -0.2**
MSHR Mys Shultsa 51.72 7*c iP* **P 20 59 10.0 -0.1**
MSHR pmax pmax
comp=Z,46nm,1.3s
HYBB Hyderabad (bro 51.92 300 *eP* **P 20 59 13.0 +1.0**
HYBB epP **pP 20 59 35.1 -0.6**
HYBB esP **sP 20 59 46.7 -0.1**
GUN Gumba 51.93 316 *eP* **P 20 59 12.7 +0.4**
comp=Z,460nm,0.8s
GUN Gumba 51.93 316 *eP* **ScP 21 04 11.4 +0.1**
JTM Tenmabayashi 51.98 17 P **P 20 59 12.5 +0.5**
PKI Pulchoki 52.04 316 *eP* **P 20 59 13.0 -0.2**
comp=Z,233nm,0.7s
PKI Pulchoki 52.04 316 *eP* **ScP 21 04 11.2 -0.6**
PKIN Phulchoki 52.05 316 *eP* **P 20 59 12.9 -0.3**
PKIN Phulchoki 52.05 316 *eP* **ScP 21 04 11.2 -0.6**
comp=Z,16nm,0.9s
KKN Kakani 52.27 316 *eP* **P 20 59 14.6 -0.1**
DMN Daman 52.27 315 *eP* **P 20 59 14.8 0.0**
comp=Z,260nm,0.9s
DMN Daman 52.27 315 *eP* **ScP 21 04 12.4 -0.3**
CN2 Changchun 52.53 1 *eP* **P 20 59 16.8 +0.7**
CN2 *e*PP **PP 21 01 19.4 +3.2**
CN2 *e*S **S 21 06 33.8 -1.2**
CN2 *es*S sS 21 07 25.3 +7.5
WHZ Wether Hill Ro 52.64 142 P **P 20 59 17.4 +0.4**
WHZ IAmb IAmb 20 59 19.0
comp=Z,28nm,0.9s
GKN Gorkha 52.84 315 *eP* **P 20 59 20.0 +1.1**
GKN Gorkha 52.84 315 *eP* **ScP 21 04 14.3 -0.8**
comp=Z,16nm,0.9s
GTA Gaotai 53.07 337 ⇑P **P 20 59 19.3 -1.0**
GTA pP pP 20 59 48.3 +3.5
GTA PcP **PcP 21 00 28.4 +0.9**
GTA pmax pmax
comp=Z,24nm,1.2s

XLT XiLinHaoTe 53.09 353 ⇓*iP* **P 20 59 19.9 -0.4**
XLT pmax pmax
comp=Z,19nm,1.1s
XLT pmax pmax
comp=Z,200nm,5.7s
QRZ Quartz Range 53.39 135 P **P 20 59 24.9 +2.4**
QRZ Quartz Range 53.39 135 P **P 20 59 25.5 +3.0**
USA0B Ussuriysk Arra 53.42 7 P **P 20 59 22.3 -0.3**
USA0B Ussuriysk Arra 53.42 7 P **P 20 59 22.3 -0.3**
USA0B pmax pmax
comp=Z,50nm,0.9s
USRK Ussuriysk Ar. 53.42 7 P **P 20 59 22.3 -0.3**
comp=Z,40nm,0.8s,baz=192,slow=7.0,SNR=43
USRK LR LR 21 25 32.2
comp=Z,35nm,18.2s,baz=158,slow=40
comp=Z,40nm,0.8s
USRK Ussuriysk Ar. 53.42 7 P **P 20 59 21.7 -0.9**
KOLN Koldanda 53.42 314 *eP* **P 20 59 22.8 -0.4**
RPZ Rata Peaks 53.57 139 P **P 20 59 24.0 +0.1**
comp=Z,33nm,0.8s,baz=260,slow=4.5,SNR=14
RPZ LR LR 21 22 24.3
comp=Z,201nm,19.4s,baz=286,slow=36
comp=Z,33nm,0.8s
RPZ Rata Peaks 53.57 139 P **P 20 59 25.4 +1.6**
RPZ IAmb IAmb 20 59 26.6
comp=Z,44nm,1.0s
RPZ Rata Peaks 53.57 139 P **P 20 59 25.8 +1.9**
MDJ Mudanjiang 53.58 5 P **P 20 59 23.4 -0.3**
MDJ Mudanjiang 53.58 5 P **P 20 59 23.8 +0.1**
MDJ pmax pmax
comp=Z,170nm,1.3s
MDJ pmax pmax
comp=Z,350nm,11.8s
MDJ Mudanjiang 53.58 5 P **P 20 59 23.9 +0.2**
MDJ Mudanjiang 53.58 5 P **P 20 59 23.6 -0.1**
DANN Dangsing 53.66 315 *eP* **P 20 59 25.1 0.0**
comp=Z,457nm,0.7s
DANN Dangsing 53.66 315 *eP* **ScP 21 04 17.8 -1.0**
comp=Z,29nm,0.9s
SYZ Scrubby Hill 53.68 143 P **P 20 59 24.9 +0.4**
MRNZ Matariki Terra 53.77 135 P **P 20 59 27.1 +1.8**
ODZ Otahua Downs 53.90 140 P **P 20 59 28.0 +1.8**
THZ Tophouse 54.01 136 P **P 20 59 29.0 +1.9**
THZ Tophouse 54.01 136 P **P 20 59 28.7 +1.6**
MHEZ Mangahewa 54.04 132 P P 20 59 38.2 +11
PYUN Piuthan 54.05 314 *eP* **P 20 59 27.5 -0.3**
PYUN Piuthan 54.05 314 *eP* **ScP 21 04 19.4 -1.0**
comp=Z,22nm,0.8s
OXZ Oxford 54.05 138 P **P 20 59 28.0 +0.6**
NNZ Nelson 54.13 135 P **P 20 59 29.1 +1.2**
BNX BinXian 54.55 3 ⇓P **P 20 59 29.6 -1.1**
BNX pmax pmax
comp=Z,22nm,1.2s
BNX pmax pmax
comp=Z,250nm,6.9s
TUWZ Tuamarina 54.61 135 P **P 20 59 31.8 +0.4**
KHZ Kahutara 54.70 136 P **P 20 59 33.4 +1.3**
KHZ Kahutara 54.70 136 P **P 20 59 33.6 +1.6**
TCW Tory Channel 54.76 135 P **P 20 59 33.6 +1.1**
OGWZ Otaki Gorge 55.25 134 P **P 20 59 36.8 +0.8**
HOWZ Holdsworth Sta 55.53 134 P **P 20 59 38.7 +0.6**
PLWZ Palliser 55.58 135 P **P 20 59 39.0 +0.6**
BKZ Black Stump Fm 55.67 132 P **P 20 59 40.9 +1.8**
DVHZ Dannevirke 55.79 133 P **P 20 59 40.5 +0.6**
URZ Urewera 55.86 130 LR LR 21 24 21.0
comp=Z,265nm,20.1s,baz=20,slow=37
BFZ Birch Farm 55.98 133 P **P 20 59 43.6 +2.4**
CASY Casey 57.97 186 P **P 20 59 54.7 -0.1**
CASY IAmb IAmb 20 59 56.7
comp=Z,16nm,1.0s
CASY Casey 57.97 186 P **P 20 59 55.0 +0.2**
CASY pP **pP 21 00 22.7 +2.7**
HIA Hailar 58.10 357 P **P 20 59 54.8 -1.2**
HIA Hailar 58.10 357 P **P 20 59 54.8 -1.2**
HIA pmax pmax
comp=Z,11nm,1.0s
KLR Kul'dur 58.36 6 P **P 20 59 57.6 -0.1**
comp=Z,5.0nm,0.4s,baz=188,slow=8.3,SNR=18
KLR LR LR 21 29 33.4
comp=Z,37nm,18.1s,baz=189,slow=40
comp=Z,5.0nm,0.4s
KLR Kul'dur 58.36 6⇓*iP* **P 20 59 57.4 -0.3**
KLR pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 58.52 347 P **P 20 59 58.1 -1.0**
ULN IAmb IAmb 21 00 00.8
comp=Z,23nm,1.2s
ULN Ulaanbaatar 58.52 347*ceP* **P 20 59 58.4 -0.7**
ULN pmax pmax
comp=Z,29nm,1.7s
ULN Ulaanbaatar 58.52 347 P **P 20 59 58.6 -0.5**
ULN Ulaanbaatar 58.52 347 P **P 20 59 58.8 -0.3**
SONM Songino Array 58.64 346 P **P 20 59 59.3 -0.6**
comp=Z,6.3nm,0.6s,baz=163,slow=8.8,SNR=50
SONM ScP **ScP 21 04 39.6 -0.4**
comp=Z,2.3nm,0.9s,baz=163,slow=5.2,SNR=5.4
SONM LR LR 21 26 54.1
comp=Z,47nm,19.1s,baz=156,slow=38
comp=Z,6.3nm,0.6s
SONM Songino Array 58.64 346 P **P 20 59 59.2 -0.7**
SONM IAmb IAmb 21 00 01.6
comp=Z,39nm,1.6s
DRV Dumont d'Urvil 58.66 173 P **P 21 00 00.2 +0.6**
DRV pP **pP 21 00 25.2 +0.4**
WMQ Urumqi 61.95 331 ⇑P **P 21 00 23.6 +1.1**
WMQ pP pP 21 00 46.4 -0.8
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ LR LR
comp=Z,160nm,20.1s
WMQ Urumqi 61.95 331 P **P 21 00 23.4 +0.9**
ZEA Zeya 62.53 2 *eP* **P 21 00 26.7 +0.7**
ZEA pmax pmax
comp=Z,40nm,0.7s
MOY Mondy 63.54 344 *eP* **P 21 00 33.0 +0.1**
MOY pmax pmax
comp=Z,30nm,1.5s
NIL Nilore 64.08 314 P **P 21 00 36.0 -0.8**
NIL Nilore 64.08 314 P **P 21 00 36.0 -0.8**
NIL pmax pmax
comp=Z,58nm,0.6s
NIL Nilore 64.08 314 P **P 21 00 36.1 -0.6**
NIL Nilore 64.08 314 P **P 21 00 36.4 -0.3**
NIL pP **pP 21 01 02.3 +0.6**
KSH Kashi 65.55 321 P **P 21 00 46.5 +0.2**
KSH pP pP 21 01 12.8 +1.8
KSH S **S 21 09 23.3 -0.3**
KSH pmax pmax
comp=Z,64nm,1.0s
SHLS Shalkode 65.75 326 *eP* **P 21 00 45.3 -2.2**
SHLS pmax pmax
comp=Z,10.0nm,0.8s
SHLS Shalkode 65.75 326 *eP* **P 21 00 45.3 -2.2**
comp=Z,10nm,0.8s,baz=326
PDGK Podgornoye 65.85 326 *iP* **P 21 00 47.7 -0.4**
PDGK pmax pmax
comp=Z,28nm,0.8s
ZSN Zaisan 65.98 332 *eP* **P 21 00 47.1 -1.6**
ZSN Zaisan 65.98 332 *eP* **P 21 00 47.1 -1.6**
baz=332
UZB Uzynbulak 65.99 326 *eP* **P 21 00 48.3 -0.8**
UZB Uzynbulak 65.99 326 *eP* **P 21 00 48.3 -0.8**
baz=326
CCD Concordia, Ant 66.10 180 P **P 21 00 51.4 +1.8**
CCD pP **pP 21 01 15.4 +0.1**
SATY Saty 66.28 325 *eP* **P 21 00 49.8 -1.1**
SATY pmax pmax
comp=Z,13nm,0.7s
SATY Saty 66.28 325 *eP* **P 21 00 49.9 -1.1**
comp=Z,13nm,0.7s,baz=325
KPKS Kokpek 66.39 326 *eP* **P 21 00 51.0 -0.5**
KPKS pmax pmax
comp=Z,23nm,1.0s
KPKS Kokpek 66.39 326 *eP* **P 21 00 51.1 -0.5**
comp=Z,23nm,1.0s,baz=326
RER Riviere de l'E 66.50 251 P **P 21 00 54.6 +1.8**
DGZ Jazzator, Alta 66.54 335*c iP* **P 21 00 52.2 -0.2**
DGZ pmax pmax
comp=Z,34nm,0.9s
NRN Naryn 66.68 323 P **P 21 00 53.2 -0.5**
NRN IAmb IAmb 21 00 54.6
comp=Z,24nm,1.0s
NRN Naryn 66.68 323 P **P 21 00 53.2 -0.5**
NRN pmax pmax
comp=Z,24nm,1.0s

MK31 Makanchi Array 66.73 330 P **P 21 00 52.9 -0.6**
MK31 IAmb IAmb 21 00 54.5
comp=Z,36nm,0.9s
MK31 Makanchi Array 66.73 330*c iP* **P 21 00 53.3 -0.3**
MKAR Makanchi Array 66.73 330 P **P 21 00 53.4 -0.2**
comp=Z,36nm,0.8s,baz=134,slow=7.8,SNR=283
MKAR S **S 21 09 37.0 -0.5**
comp=Z,0.6nm,0.9s,baz=129,slow=15,SNR=3.5
comp=Z,36nm,0.8s
MKAR Makanchi Array 66.73 330 P **P 21 00 53.1 -0.5**
MAKZ Makanchi 66.90 330 P **P 21 00 54.0 -0.6**
MAKZ IAmb IAmb 21 00 55.4
comp=Z,26nm,0.9s
MAKZ Makanchi 66.90 330 P **P 21 00 54.0 -0.6**
MAKZ pmax pmax
comp=Z,27nm,0.9s
MAKZ Makanchi 66.90 330 P **P 21 00 54.1 -0.6**
BOD Bodaibo 67.04 354 *eP* **P 21 00 55.0 -0.2**
BOD pmax pmax
comp=Z,47nm,1.8s
MDOK Medeo 67.12 325 *eP* **P 21 00 55.7 -0.5**
MDOK Medeo 67.12 325 *eP* **P 21 00 55.8 -0.5**
baz=324
ARXS Arharly 67.34 326 *eP* **P 21 00 57.1 -0.5**
BOOM Boomskoye usch 67.35 323 P **P 21 00 57.9 +0.1**
BOOM IAmb IAmb 21 00 59.1
comp=Z,44nm,1.0s
BOOM Boomskoye usch 67.35 323 P **P 21 00 57.9 +0.1**
BOOM pmax pmax
comp=Z,44nm,1.0s
TDK Taldyqorghan 67.53 327 *eP* **P 21 00 57.6 -1.0**
TDK pmax pmax
comp=Z,43nm,1.1s
TDK Taldyqorghan 67.53 327 *eP* **P 21 00 57.6 -1.0**
comp=Z,43nm,1.1s,baz=327
KBL Kabul 67.54 313 P **P 21 00 58.5 -0.6**
KBL Kabul 67.54 313 P **P 21 00 58.6 -0.6**
KBL pmax pmax
comp=Z,41nm,0.7s
KBL Kabul 67.54 313 P **P 21 00 58.8 -0.3**
SNR=28
TKM2 Tokmak 2 67.81 324 P **P 21 01 00.8 +0.1**
SNR=21
TKM2 Tokmak 2 67.81 324 *i* P **P 21 01 00.1 -0.6**
TKM2 pmax pmax
comp=Z,28nm,1.0s
KUU Kurty 67.98 325 *eP* **P 21 01 00.6 -0.9**
KUU pmax pmax
comp=Z,70nm,1.0s
KUU Kurty 67.98 325 *eP* **P 21 01 00.6 -0.9**
comp=Z,70nm,1.0s,baz=325
KBK Karagaybulak 68.03 323 P **P 21 01 02.6 +0.5**
SNR=19
UCH Uchtor 68.04 323 P **P 21 01 02.8 +0.3**
SNR=29
DRK Karamyk 68.19 319 P **P 21 01 03.1 -0.1**
DRK IAmb IAmb 21 01 04.3
comp=Z,39nm,0.9s
PETK Petropavlovsk- 68.20 21 P **P 21 01 02.2 -0.4**
comp=Z,9.5nm,0.7s,baz=209,slow=2.4,SNR=15
comp=Z,9.5nm,0.7s
PETK Petropavlovsk- 68.20 21 P **P 21 01 02.9 +0.3**
PETK Petropavlovsk- 68.20 21 P **P 21 01 02.9 +0.3**
AAK Ala-Archa 68.29 323 P **P 21 01 04.2 +0.5**
SNR=30
AAK Ala-Archa 68.29 323 LR LR 21 37 55.1
comp=Z,34nm,18.5s,baz=120,slow=42
AAK Ala-Archa 68.29 323 P **P 21 01 03.8 +0.1**
AAK IAmb IAmb 21 01 05.2
comp=Z,41nm,0.9s
AAK Ala-Archa 68.29 323 P **P 21 01 03.8 +0.1**
AAK pmax pmax
comp=Z,41nm,1.0s
AAK Ala-Archa 68.29 323 P **P 21 01 03.9 +0.3**
AAK Ala-Archa 68.29 323 *i* P **P 21 01 03.5 -0.2**
SNR=45
AAK Ala-Archa 68.29 323 P **P 21 01 03.9 +0.3**
AAK pP **pwP 21 01 30.7 -1.6**
CHMS Chumysh 68.36 323 P **P 21 01 03.8 -0.1**
SNR=9.4
CHMS Chumysh 68.36 323 *i* P **P 21 01 03.2 -0.7**
CHMS pmax pmax
comp=Z,17nm,0.9s
PET Petropavlovsk 68.47 22⇓*eP* **P 21 01 04.5 +0.2**
PET pmax pmax
comp=Z,56nm,1.4s
AML Almayashu 68.48 322 P **P 21 01 05.4 +0.3**
SNR=49
USP Ospenovka 68.66 323 P **P 21 01 05.7 -0.1**
SNR=31
SGDS Sogindy 68.70 324 *eP* **P 21 01 04.9 -1.1**
SGDS pmax pmax
comp=Z,17nm,1.1s
SGDS Sogindy 68.70 324 *eP* **P 21 01 04.9 -1.1**
comp=Z,17nm,1.1s,baz=324
EKS2 Erkin-Say 68.74 323 P **P 21 01 06.8 +0.5**
SNR=31
GAR Garm 68.90 318 P **P 21 01 06.8 -0.7**
GAR IAmb IAmb 21 01 11.8
comp=Z,30nm,0.8s
BTK Batken 69.13 319 P **P 21 01 08.4 -0.4**
BTK IAmb IAmb 21 01 10.9
comp=Z,28nm,1.1s
BTK Batken 69.13 319 P **P 21 01 08.5 -0.4**
BTK pmax pmax
comp=Z,28nm,1.1s
CHGR Chuyangaron 69.50 317 P **P 21 01 10.5 -0.7**
CHGR Chuyangaron 69.50 317 P **P 21 01 10.5 -0.7**
CHGR pmax pmax
comp=Z,139nm,1.3s
SIMJ Simiganj 69.61 317 P **P 21 01 11.4 -0.5**
NGCH Negor - Chabah 69.93 301 P **P 21 01 14.9 +1.0**
BTLS Baital 69.98 325 *eP* **P 21 01 12.5 -1.3**
BTLS Baital 69.98 325 *eP* **P 21 01 12.6 -1.3**
baz=325
IUG Iuzhnay 70.75 320 *eP* **P 21 01 17.6 -1.1**
IUG Iuzhnay 70.75 320 *eP* **P 21 01 17.7 -1.1**
baz=320
TAS Tashkent 70.79 319 P **P 21 01 18.4 -0.4**
TAS Tashkent 70.79 319 P **P 21 01 18.4 -0.4**
TAS pmax pmax
comp=Z,78nm,1.0s
ZAA0 Zalesovo Array 70.83 337 P **P 21 01 17.3 -1.4**
ZAA0 IAmb IAmb 21 01 18.5
comp=Z,41nm,0.8s
ZALV Zalesovo Beam 70.83 337 P **P 21 01 17.4 -1.3**
comp=Z,44nm,0.8s,baz=131,slow=4.1,SNR=156
ZALV LR LR 21 38 06.7
comp=Z,26nm,18.2s,baz=82,slow=41
comp=Z,44nm,0.8s
ZALV Zalesovo Beam 70.83 337 P **P 21 01 16.9 -1.9**
WBK Wadi Bani Khal 70.88 298 P **P 21 01 20.2 +0.4**
YAK Yakutsk 70.92 3 P **P 21 01 19.2 0.0**
comp=Z,65nm,0.7s,baz=352,slow=1.6,SNR=64
comp=Z,65nm,0.7s
YAK Yakutsk 70.92 3 P **P 21 01 18.4 -0.7**
YAK Yakutsk 70.92 3*c iP* **P 21 01 18.7 -0.4**
YAK *e**PP **pP 21 01 45.0 +0.3**
YAK *e*PPP PPP 21 05 45.1
YAK *e*S **S 21 10 27.4 +1.2**
YAK *e**SS **sS 21 11 08.0 -1.0**
YAK pmax pmax
comp=Z,112nm,0.9s
YAK pmax pmax
comp=N,27nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,167nm,3.1s
YAK pmax pmax
comp=N,95nm,2.7s
YAK pmax pmax
comp=E,188nm,3.1s
YAK smax smax
comp=N,381nm,3.8s
YAK smax smax
comp=E,262nm,3.6s
YAK Yakutsk 70.92 3 P **P 21 01 18.9 -0.2**
MAW Mawson 70.95 201 P **P 21 01 20.6 +1.3**
comp=E,10nm,0.5s,baz=87,slow=6.0,SNR=39
MAW LR LR 21 30 19.0
comp=E,62nm,18.5s,baz=56,slow=34
comp=E,10nm,0.5s
MAW Mawson 70.95 201 P **P 21 01 20.9 +1.6**
baz=71,SNR=25
MAW Mawson 70.95 201 P **P 21 01 20.2 +0.9**

KK31 Karatay Array 70.97 322 P **P** **21 01 18.8 -1.1**
KK31 Karatay Array 70.97 322 P **P** **21 01 18.8 -1.1**
KK31 pmax pmax
comp=Z,13nm,0.9s
KKAR Karatay Array 70.97 322 P **P** **21 01 18.9 -0.9**
KKAR Karatay Array 70.97 322 P **P** **21 01 19.0 -0.9**
KKAR pmax pmax
comp=Z,13nm,0.9s
KURBB Kurchatov Arra 71.17 331 P **P** **21 01 20.4 -0.5**
comp=Z,29nm,0.9s,baz=140,slow=5.1,SNR=196
KURBB LR LR 21 34 32.2
comp=Z,36nm,21.6s,baz=91,slow=37
comp=Z,29nm,0.9s
KURK Kurchatov 71.19 331 P **P** **21 01 20.4 -0.6**
KURK Kurchatov 71.19 331 P **P** **21 01 20.5 -0.5**
KURK Kurchatov 71.19 331 P **P** **21 01 20.9 -0.1**
KURK Kurchatov 71.19 331 P **P** **21 01 20.6 -0.5**
MHTO MHTO 71.26 296 P **P** **21 01 21.1 -0.9**
VNDA Vanda 71.30 172 P **P** **21 01 21.6 +0.2**
comp=Z,4.4nm,0.5s,baz=318,slow=18,SNR=5.7
VNDA LR LR 21 30 57.5
comp=Z,218nm,22.0s,baz=324,slow=34
comp=Z,4.4nm,0.5s
VNDA Vanda 71.30 172 P **P** **21 01 21.9 +0.5**
VNDA Vanda 71.30 172 P **P** **21 01 21.9 +0.5**
VNDA pmax pmax
comp=Z,32nm,1.6s
VNDA Vanda 71.30 172 P **P** **21 01 22.2 +0.9**
WSAR Wadi Sarin 71.37 298 LR LR 21 33 36.4
comp=Z,41nm,19.6s,baz=138,slow=36
JMDO Jabal Madar 71.56 297 P **P** **21 01 24.2 +0.3**
MA2 Magadan 71.62 14 P **P** **21 01 22.8 -0.6**
comp=Z,26nm,0.8s,baz=282,slow=1.8,SNR=6.3
MA2 LR LR 21 30 42.7
comp=Z,22nm,21.9s,baz=54,slow=34
comp=Z,26nm,0.8s
MA2 Magadan 71.62 14⇓ *e*P **P** **21 01 23.9 +0.5**
MA2 pmax pmax
comp=Z,160nm,2.9s
MA2 Magadan 71.62 14 P **P** **21 01 23.8 +0.3**
SMDO Samad 71.82 298 P **P** **21 01 25.7 +0.1**
BIDO Bidbid 71.90 298 P **P** **21 01 26.4 +0.5**
SNR=9.6
SBA Scott Base 72.26 171 P **P** **21 01 28.1 +1.1**
SBA Scott Base 72.26 171 P **P** **21 01 28.1 +1.1**
SBA pmax pmax
comp=Z,24nm,1.5s
SBV Sambava 72.48 259 P **P** **21 01 31.5 +2.0**
HRA Herat 72.49 310 P **P** **21 01 28.6 -0.9**
HOQ Hoqain 72.63 298 P **P** **21 01 30.6 +0.4**
SNR=6.2
OTUK Ortayu 72.82 327 *i* P **P** **21 01 30.9 0.0**
OTUK pmax pmax
comp=Z,28nm,0.8s
JASK Jask - Hormozg 72.88 301 P **P** **21 01 32.8 +1.1**
DMTO DMTO 73.06 292 P **P** **21 01 32.6 -0.3**
ARQ Araqi 73.25 298 P **P** **21 01 34.3 +0.4**
BRZS Berezniki 73.67 328 *e*P **P** **21 01 34.7 -1.1**
BRZS pmax pmax
comp=Z,9.0nm,0.7s
BRZS Berezniki 73.67 328 *e*P **P** **21 01 34.7 -1.1**
comp=Z,9.3nm,0.7s,baz=328
UOSS Minazif 74.01 299 P **P** **21 01 38.1 -0.3**
UOSS IAmb IAmb 21 01 43.9
comp=Z,34nm,1.1s
UOSS Minazif 74.01 299 P **P** **21 01 39.8 +1.5**
UOSS Minazif 74.01 299 P **P** **21 01 38.7 +0.3**
HATD Hatta, Dubai 74.04 299 P **P** **21 01 39.4 +0.9**
HATD Hatta, Dubai 74.04 299 P **P** **21 01 39.5 +0.9**
DOK Doka 74.05 292 P **P** **21 01 37.9 -0.7**
SNR=9.3
ASHO Ashiyiah 74.06 299 P **P** **21 01 39.0 +0.3**
SNR=6.5
ASHO Ashiyiah 74.06 299 P **P** **21 01 38.5 -0.1**
ALNE Al Ain 74.14 298 P **P** **21 01 39.2 +0.1**
SNR=8.7
ALNE Al Ain 74.14 298 P **P** **21 01 40.2 +1.1**
MSFE Esma-Masafi 74.18 300 P **P** **21 01 40.6 +1.2**
MASF Masafi 74.19 300 P **P** **21 01 41.0 +1.7**
WHFO Wadi Hawf 74.20 291 P **P** **21 01 38.6 -1.0**
SNR=8.6
BANOM Banah 74.24 300 P **P** **21 01 40.3 +0.6**
BANOM Banah 74.24 300 P **P** **21 01 39.7 0.0**
UMZA Um Al Zommool 74.26 297 P **P** **21 01 39.4 -0.3**
SHME Shamm 74.41 300 P **P** **21 01 39.1 -1.6**
FAQ Al Faqa, Dubai 74.48 299 P **P** **21 01 41.0 0.0**
SNR=10
FAQ Al Faqa, Dubai 74.48 299 *i* P **P** **21 01 40.7 -0.3**
SNR=24
ABTO Aybut 74.49 291 P **P** **21 01 40.8 -0.5**
SNR=9.1
NAZ Nazwa, Dubai 74.50 299 P **P** **21 01 41.2 0.0**
SNR=6.0
NAZ Nazwa, Dubai 74.50 299 *i* P **P** **21 01 40.3 -0.8**
SNR=8.7
ABPO Ambohimpanom 74.60 253 P **P** **21 01 43.4 +1.3**
ABPO Ambohimpanom 74.60 253 P **P** **21 01 43.4 +1.3**
ABPO pmax pmax
comp=Z,21nm,1.1s
ASUD Al Ashush, Dub 74.67 299 P **P** **21 01 42.5 +0.3**
ASUD Al Ashush, Dub 74.67 299 *i* P **P** **21 01 41.2 -0.9**
SNR=9.4
VOI Vohitsoka 74.80 250 P **P** **21 01 43.8 +0.6**
VOI IAmb IAmb 21 01 46.1
comp=Z,64nm,1.4s
VOI Vohitsoka 74.80 250 P **P** **21 01 45.3 +2.1**
VOI Vohitsoka 74.80 250 P P 21 01 54.4 +11
SHEM Shemya Is, Ala 74.83 29 LR LR 21 31 50.4
comp=Z,28nm,19.4s,baz=64,slow=33
SEY Seymchan 74.95 13 P **P** **21 01 42.5 -0.4**
comp=Z,27nm,0.9s,baz=219,slow=3.7,SNR=44
comp=Z,27nm,0.9s
SEY Seymchan 74.95 13⇑ *e*P **P** **21 01 43.0 +0.1**
SEY pmax pmax
comp=Z,40nm,1.0s
MZWR Madinat Zayed 75.69 297 P **P** **21 01 48.2 +0.2**
BVAR Borovoye Array 76.62 330 P **P** **21 01 52.2 -0.4**
comp=Z,5.8nm,0.9s,baz=141,slow=7.5,SNR=42
BVAR LR LR 21 39 31.0
comp=Z,39nm,18.2s,baz=135,slow=39
comp=Z,5.8nm,0.9s
BRVK Borovoye 76.69 330 P **P** **21 01 52.6 -0.4**
BRVK IAmb IAmb 21 01 53.9
comp=Z,41nm,1.4s
BRVK Borovoye 76.69 330*c* *i* P **P** **21 01 52.4 -0.6**
BRVK pmax pmax
comp=Z,40nm,1.7s
BRVK Borovoye 76.69 330 P **P** **21 01 52.8 -0.2**
JRN Qarnain Island 76.92 298 P **P** **21 01 56.5 +1.6**
GEYT Alibeck 76.96 312 P **P** **21 01 55.5 +0.6**
comp=Z,12nm,0.9s,baz=146,slow=2.9,SNR=25
GEYT LR LR 21 44 37.3
comp=Z,30nm,19.0s,baz=100,slow=42
comp=Z,12nm,0.9s
GEYT Alibeck 76.96 312 P **P** **21 01 54.9 -0.1**
GYA0B ALIBECK ARRAY 76.96 312 P **P** **21 01 55.1 +0.2**
SLWR Sila 77.70 297 P **P** **21 01 59.7 +0.4**
SMRA Abu-Samra 78.64 297 P **P** **21 02 04.9 +0.5**
SHMA Al-Shehemyia 78.81 299 P **P** **21 02 05.7 +0.3**
ABKAR Abkulak array 80.38 323 P **P** **21 02 12.7 -0.7**
ABKAR IAmb IAmb 21 02 14.0
comp=Z,20nm,0.8s
TIXI Tiksi 80.51 2 P **P** **21 02 12.4 -1.2**
comp=Z,13nm,0.5s,baz=90,slow=24,SNR=123
comp=Z,13nm,0.5s
TIXI Tiksi 80.51 2 P **P** **21 02 12.3 -1.2**
TIXI IAmb IAmb 21 02 14.4
comp=Z,74nm,1.4s
TIXI Tiksi 80.51 2 *i* P **P** **21 02 12.4 -1.2**
TIXI pmax pmax
comp=Z,51nm,1.3s
QSPA South Pole Qui 81.03 180 LR LR 21 38 27.1
comp=Z,150nm,18.2s,baz=343,slow=36
QSPA South Pole Qui 81.03 180 P **P** **21 02 16.7 0.0**
AKTO Aktyubinsk 82.00 324 P **P** **21 02 22.1 +0.2**
comp=Z,32nm,0.7s,baz=110,slow=6.3,SNR=134
AKTO LR LR 21 42 37.5
comp=Z,33nm,20.8s,baz=126,slow=38
comp=Z,32nm,0.7s
NRIK Noril'sk 82.09 348 P **P** **21 02 22.4 +0.5**
comp=Z,3.4nm,0.4s,baz=155,slow=4.3,SNR=11
comp=Z,3.4nm,0.4s
NRIK Noril'sk 82.09 348 P **P** **21 02 22.0 0.0**
NRIK IAmb IAmb 21 02 23.5
comp=Z,82nm,1.9s

BILL Bilibino 82.47 15 *e*P **P** **21 02 24.3 +0.3**
BILL *e* 21 05 33.8
BILL *e*PPP PPP 21 07 29.8
BILL pmax pmax
comp=Z,22nm,1.9s
RAYN Ar Rayn 83.06 295 P **P** **21 02 28.1 0.0**
RAYN Ar Rayn 83.06 295 P **P** **21 02 28.1 0.0**
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 83.06 295 P **P** **21 02 28.6 +0.4**
RAYN Ar Rayn 83.06 295 *i* P **P** **21 02 28.1 0.0**
SNR=24
SVE Sverdlovsk 83.40 330*de*P **P** **21 02 28.5 -0.5**
SVE pmax pmax
comp=Z,52nm,1.0s
PPT Papeete 84.05 107 LR LR 21 39 03.4
comp=Z,27nm,18.1s,baz=216,slow=35
ARU Arti 84.25 330 P **P** **21 02 33.0 -0.4**
comp=Z,14nm,0.8s,baz=201,slow=1.2,SNR=29
ARU LR LR 21 44 21.9
comp=Z,39nm,18.1s,baz=112,slow=39
comp=Z,14nm,0.8s
ARU Arti 84.25 330 P **P** **21 02 32.1 -1.3**
ARU IAmb IAmb 21 02 33.8
comp=Z,20nm,0.9s
ARU Arti 84.25 330*c* *i* P **P** **21 02 32.5 -0.9**
ARU pmax pmax
comp=Z,27nm,1.0s
KIBK Kibwezi 85.55 268 P **P** **21 02 41.9 +0.9**
KIBK Kibwezi 85.55 268 P **P** **21 02 42.2 +1.2**
KMBO Kilima Mbogo 86.52 269 P **P** **21 02 46.2 +0.3**
comp=Z,0.3nm,1.0s,baz=337,slow=24,SNR=3.2
KMBO Kilima Mbogo 86.52 269 P **P** **21 02 46.6 +0.6**
KMBO Kilima Mbogo 86.52 269 P **P** **21 02 46.6 +0.6**
KMBO pmax pmax
comp=Z,11nm,1.1s
KMBO Kilima Mbogo 86.52 269 P **P** **21 02 47.5 +1.5**
KMBO Kilima Mbogo 86.52 269 P **P** **21 02 47.0 +1.1**
GROC Groznyy 87.52 314 *e*P **P** **21 02 50.1 +0.3**
GROC *e**PP **pwP** **21 03 20.4 +0.4**
GROC *e**SP **sP** **21 03 32.1 +5.8**
GROC pmax pmax
comp=Z,15nm,0.6s
GNI Garni 87.54 311 P **P** **21 02 50.2 0.0**
comp=Z,8.6nm,0.9s,baz=281,slow=9.2,SNR=6.2
comp=Z,8.6nm,0.9s
GNI Garni 87.54 311 P **P** **21 02 51.3 +1.1**
GNI IAmb IAmb 21 02 55.5
comp=Z,20nm,1.1s
GNI Garni 87.54 311⇑ *e*P **P** **21 02 50.9 +0.7**
GNI pmax pmax
comp=Z,25nm,1.4s
GNI Garni 87.54 311 P **P** **21 02 52.2 +2.0**
GNI Garni 87.54 311 P **P** **21 02 46.7 -3.5**
GEVA Gevas 88.39 309 P **P** **21 02 54.7 +0.4**
GEVA IAmb IAmb 21 02 59.5
comp=Z,24nm,0.9s
NVL N'lazarevskaya 88.68 198 *e*P **P** **21 02 54.4 -0.4**
NVL pmax pmax
comp=Z,9.0nm,1.0s
ZEI Tsey 88.77 314 *e*P **P** **21 02 55.4 -0.6**
ZEI pmax pmax
comp=Z,11nm,0.9s
BELG Belogornoye 88.78 323 P **P** **21 02 55.0 -0.5**
comp=Z,31nm,0.8s,baz=200,slow=1.0,SNR=22
BELG LR LR 21 49 32.0
comp=Z,26nm,18.5s,baz=141,slow=40
comp=Z,31nm,0.8s
BELG Belogornoye 88.78 323*c* *i* P **P** **21 02 54.8 -0.7**
BELG pmax pmax
comp=Z,6.0nm,0.8s
ONI Oni 89.05 313 P **P** **21 02 59.0 +1.8**
ONI Oni 89.05 313 P **P** **21 02 59.0 +1.8**
LODK Lodwar 89.09 274 P **P** **21 02 58.0 0.0**
LODK Lodwar 89.09 274 P **P** **21 02 59.7 +1.7**
NCK Nalchik 89.15 314⇓ *e*P **P** **21 02 58.3 +0.7**
NCK pmax pmax
comp=Z,20nm,1.2s
GURO Guroymak-BITLI 89.23 309 P **P** **21 02 58.6 +0.4**
GURO IAmb IAmb 21 03 01.9
comp=Z,15nm,1.0s
KIRV Kirov 89.63 330 P **P** **21 02 59.5 +0.2**
comp=Z,9.9nm,0.6s,baz=105,slow=6.8,SNR=7.2
KIRV LR LR 21 47 32.3
comp=Z,56nm,19.8s,baz=92,slow=38
comp=Z,9.9nm,0.6s
KIRV Kirov 89.63 330*de*P **P** **21 03 00.5 +1.2**
KBZ Khabaz 89.69 314 P **P** **21 03 00.1 +0.1**
comp=Z,5.7nm,0.8s,baz=139,slow=3.1,SNR=13
KBZ LR LR 21 53 16.8
comp=Z,34nm,18.6s,baz=56,slow=42
comp=Z,5.7nm,0.8s
KBZ Khabaz 89.69 314*c* *i* P **P** **21 02 59.1 -0.9**
KBZ pmax pmax
comp=Z,10.0nm,1.1s
KIV Kislovodsk 89.89 314 *e*P **P** **21 02 59.0 -2.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 89.89 314 P **P** **21 03 03.2 +2.1**
MARD Mardin 89.95 308 P **P** **21 03 01.3 -0.3**
MARD IAmb IAmb 21 03 03.9
comp=Z,11nm,0.7s
TROLL Troll, Antarti 90.73 195 P **P** **21 03 06.4 +1.9**
SOC Sochi 91.93 314 *e*P **P** **21 03 06.4 -4.0**
SOC *e*PPP PPP 21 08 50.6
SOC *e*S **SKSac** **21 13 29.1 -5.0**
SOC *e*SS **SS** **21 20 11.8 -2.7**
SOC *e*SSS SSS 21 23 50.9
SOC MLR MLR
comp=Z,63nm,18.0s
VRH Novokhopyorsk 92.05 321 *e*P **P** **21 03 09.8 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.6s
ASF Jabal al Asfar 92.19 302 P **P** **21 03 12.5 +0.4**
comp=Z,3.8nm,0.8s,baz=106,slow=2.7,SNR=7.7
comp=Z,3.8nm,0.8s
SNAA Sanae 92.30 195 P **P** **21 03 13.4 +1.6**
SNAA Sanae 92.30 195 LR LR 21 42 58.9
comp=Z,113nm,19.4s,baz=180,slow=34
SNAA Sanae 92.30 195 P **P** **21 03 12.5 +0.8**
SNAA IAmb IAmb 21 03 15.2
comp=Z,21nm,1.0s
SNAA Sanae 92.30 195*d* *i* P **P** **21 03 13.1 +1.3**
SNAA pmax pmax
comp=Z,24nm,1.0s
PRGR Permogore 92.30 332 *e*P **P** **21 03 08.8 -2.9**
PRGR pmax pmax
comp=Z,7.0nm,0.7s
BELA Belgrano 2 92.47 184 P **P** **21 03 13.1 +0.8**
MBAR Mbarara 93.03 269 P **P** **21 03 16.9 +0.4**
MBAR IAmb IAmb 21 03 22.9
comp=Z,6.0nm,0.7s
MBAR Mbarara 93.03 269⇓ *e*P **P** **21 03 17.9 +1.4**
MBAR pmax pmax
comp=Z,6.0nm,0.8s
MBAR Mbarara 93.03 269 P **P** **21 03 17.4 +0.9**
LSZ Lusaka 93.12 254 LR LR 21 39 57.8
comp=Z,28nm,18.7s,baz=156,slow=32
BOSA Boshof 93.26 241 P **P** **21 03 18.1 +0.9**
comp=Z,2.5nm,0.5s,baz=109,slow=3.7,SNR=16
BOSA LR LR 21 37 47.3
comp=Z,19nm,20.3s,baz=184,slow=31
comp=Z,2.5nm,0.5s
EIL Elat 93.47 299 LR LR 21 50 58.4
comp=Z,43nm,18.3s,baz=65,slow=39
MMAI Mount Meron Ar 93.57 303 LR LR 21 49 46.3
comp=Z,32nm,20.5s,baz=158,slow=38
VSR Storozhevoye 93.63 321 *e*P **P** **21 03 15.9 -2.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 93.68 322 *e*P **P** **21 03 17.1 -1.2**
VORR pmax pmax
comp=Z,20nm,0.4s
LBTB Lobatse 93.69 244 LR LR 21 39 07.9
comp=Z,43nm,19.2s,baz=100,slow=31
LBTB Lobatse 93.69 244 P **P** **21 03 19.9 +0.7**
LBTB IAmb IAmb 21 03 22.4
comp=Z,12nm,1.1s
LBTB Lobatse 93.69 244 P **P** **21 03 19.9 +0.7**
LBTB pmax pmax
comp=Z,12nm,1.2s
ANN Anapa 93.75 315 *e*P **P** **21 03 15.5 -3.3**
ANN *e*S **SKSac** **21 13 40.3 -3.8**
ANN pmax pmax
comp=Z,50nm,1.4s

VNA2 Neumayer--Watz 93.91 194 P **P** **21 03 20.7 +1.6**
baz=132,slow=5.0
LPSR Galich'ya Gora 94.01 322 *e*P **P** **21 03 17.0 -2.8**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
BNN Bunyan 94.05 309 P **P** **21 03 21.1 +0.5**
BNN IAmb IAmb 21 03 21.6
comp=Z,11nm,0.9s
KDAK Kodiak Island 94.07 32 LR LR 21 41 19.3
comp=Z,29nm,21.0s,baz=263,slow=33
VNA3 Neumayer Olymp 94.23 194 P **P** **21 03 21.9 +1.3**
VNA1 Neumayer--Stat 94.31 194 P **P** **21 03 22.4 +1.5**
KLMR Klimovskoe 95.03 331 *e*P P 21 03 15.9 -8.4
KLMR *e* 21 07 10.0
KLMR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 95.03 331 *e*P P 21 03 15.9 -8.4
KLMR AMP 21 03 25.6
comp=Z,10.0nm,1.0s
KLMR *e*PP **PP** **21 07 10.0 -5.0**
OBN Obninsk 95.76 325 *e*P **P** **21 03 27.3 -0.4**
OBN *e**SP **sP** **21 04 04.4 +0.1**
OBN *e* 21 07 20.3
OBN pmax pmax
comp=Z,22nm,1.0s
BR131 Keskin Array S 95.86 309 P **P** **21 03 27.9 -0.9**
BR131 IAmb IAmb 21 03 29.4
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 95.86 309⇑ *e*P **P** **21 03 28.6 -0.2**
BRTR Keskin Array B 95.86 309 P **P** **21 03 27.3 -1.5**
comp=Z,2.0nm,0.8s,baz=112,slow=4.3,SNR=10
BRTR LR LR 21 51 30.3
comp=Z,27nm,21.5s,baz=118,slow=38
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 95.86 309 P **P** **21 03 27.8 -1.0**
BRTR Keskin Array B 95.86 309 P **P** **21 03 27.8 -1.0**
MLY Manley 96.10 25 P **P** **21 03 28.1 -1.1**
SUR Sutherland 96.13 236 LR LR 21 41 04.7
comp=Z,24nm,19.6s,baz=126,slow=32
I23K Minto, Yukon-K 96.69 25 P **P** **21 03 30.7 -1.1**
H23K Yukon River 96.70 24 P **P** **21 03 30.6 -1.3**
H23K IAmb IAmb 21 06 38.9
comp=Z,22nm,1.8s
H24K Noodor Dome 97.38 25 P **P** **21 03 34.6 -0.3**
ILAR Eielson Array 97.70 26 P **P** **21 03 35.6 -0.8**
comp=Z,2.1nm,0.2s,baz=290,slow=5.1,SNR=6.3
ILAR PP **PP** **21 07 31.9 -3.6**
comp=Z,0.9nm,0.8s,baz=259,slow=7.1,SNR=8.1
comp=Z,2.1nm,0.2s
J26L Joseph Creek 99.12 26 P **Pdif** **21 03 41.4 -1.4**
J26L IAmb IAmb 21 07 44.2
comp=Z,19nm,1.8s
AKASG Malin Array Be 99.83 320 P **Pdif** **21 03 44.7 -1.4**
comp=Z,1.2nm,0.6s,baz=71,slow=4.5,SNR=11
AKASG PP **PP** **21 07 51.8 -0.3**
comp=Z,1.3nm,0.8s,baz=80,slow=6.0,SNR=8.5
comp=Z,1.2nm,0.6s
AKBB Malin Array Si 99.83 320⇓ *e*P **Pdif** **21 03 44.9 -1.3**
AKBB pmax pmax
comp=Z,4.0nm,0.6s
MNK Minsk 100.73 324 *i* P **Pdif** **21 03 48.8 -1.2**
MNK *i* 21 07 57.8
MNK *i* PPP PPP 21 10 08.3
MNK *i* SS SS 21 22 19.5 +1.4
MNK pmax pmax
comp=E,3.0nm,1.3s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=N,27nm,0.9s
MNK MLR MLR
comp=Z,111nm,17.0s
MNK MLR MLR
comp=N,179nm,17.0s
MNK MLR MLR
comp=E,16nm,18.0s
MNK Minsk 100.73 324 *i* P **Pdif** **21 03 48.9 -1.2**
comp=E,3.0nm,1.3s
MNK *i* P **Pdif** **21 03 48.9 -1.2**
comp=N,27nm,0.9s
MNK *i* P **Pdif** **21 03 48.9 -1.2**
comp=Z,10.0nm,0.9s,baz=90
MNK *i* pP **pPdif** **21 04 15.3 -0.8**
MNK *i* PP **PP** **21 07 57.8 -1.0**
MNK *i* PPP PPP 21 10 08.3
MNK *i* SS SS 21 22 19.6 +1.5
MNK *i* SSS SSS 21 26 14.0
MNK *i* LQ LQ 21 43 35.3
MNK *i* LR LR 21 48 47.8
MNK *i* LRM MLR 21 49 29.0
comp=Z,111nm,16.8s
MNK *i* LRM MLR 21 49 44.9
comp=N,179nm,17.2s
MNK *i* LRM MLR 21 50 04.7
comp=E,16nm,17.6s
ARCES ARCESS Array B 101.28 339 P **Pdif** **21 03 50.7 -1.5**
comp=E,1.4nm,0.8s,baz=69,slow=6.9,SNR=5.3
ARCES PKiKP **PKiKP** **21 08 16.4 +0.3**
comp=E,0.4nm,0.5s,baz=104,slow=1.5,SNR=3.7
ARCES PKKPbc **PKKPbc** **21 20 03.2 -1.4**
comp=E,1.0nm,0.7s,baz=242,slow=2.2,SNR=6.6
TESR Tescani 101.43 316 ⇑P **Pdif** **21 03 53.3 -0.2**
FINES FINESS Array B 101.56 331 P **Pdif** **21 03 51.8 -1.8**
comp=E,2.0nm,0.9s,baz=85,slow=3.1,SNR=3.3
COVR Voineasa-Covas 101.73 315 ⇑P **Pdif** **21 03 57.0 +2.2**
BURAR Bucovina Array 102.41 317 ⇑P **Pdif** **21 03 57.8 -0.1**
KOLS Kolonicke sedl 104.34 318 *i* P **Pdif** **21 04 07.5 +1.2**
UZH Uzhgorod 104.34 318 *e*P **Pdif** **21 04 07.4 +1.1**
GERES GERESS Array B 109.97 319 PP **PP** **21 09 09.1 +1.8**
comp=E,0.2nm,0.4s,baz=56,slow=7.2,SNR=4.1
GERES SKiKP **SKiKP** **21 11 58.9 -0.3**
comp=E,0.9nm,0.8s,baz=272,slow=3.9,SNR=6.0
WTTA Wattenberg 111.61 317 *i* P **PKiKP** **21 08 36.8 +0.6**
comp=E,2.3nm,0.5s
WATA Walderalm 111.64 317 *i* P **PKiKP** **21 08 36.9 +0.7**
comp=E,0.7nm,0.2s
MOTA Moosalm 111.95 317 *i* P **PKiKP** **21 08 37.6 +0.7**
comp=E,1.2nm,0.5s
YKA Yellowknife Ar 112.13 25 PKiKP **PKiKP** **21 08 37.0 +0.5**
comp=E,1.1nm,0.7s,baz=305,slow=1.3,SNR=4.0
YKA SKiKP **SKiKP** **21 12 02.0 -0.8**
comp=E,1.7nm,0.8s,baz=298,slow=1.3,SNR=3.5
YKA Yellowknife Ar 112.13 25 *i* PKiKP **PKiKP** **21 08 37.0 +0.5**
DAVA Damuels 112.78 318 *e*P **PKiKP** **21 08 38.5 +0.1**
comp=E,3.4nm,0.8s
NVAR Mina Array Bea 117.24 51 PKP **PKiKP** **21 08 47.4 0.0**
comp=E,1.0nm,0.9s,baz=258,slow=0.8,SNR=5.1
HLID Hailey 118.92 45 PKPdf **PKiKP** **21 08 50.7 +0.3**
ELK Elko 119.06 48 PKP **PKiKP** **21 08 51.5 +0.6**
comp=E,1.2nm,0.8s,baz=270,slow=13,SNR=3.6
PDAR Pinedale Array 122.54 45 PKP **PKiKP** **21 08 58.0 +0.3**
comp=E,0.7nm,0.5s,baz=39,slow=1.1,SNR=5.8
TOA0 Torodi Ar. Sit 123.22 280 PKPdf **PKPdf** **21 08 59.0 -0.1**
TORD Torodi Ar. Bea 123.22 280 PKP **PKiKP** **21 08 59.6 +0.2**
comp=E,5.9nm,0.6s,baz=81,slow=1.4,SNR=68
TORD SKP 21 12 26.0
comp=E,1.0nm,0.6s,baz=84,slow=1.4,SNR=3.8
TORD PKKPbc **PKKPab** **21 18 50.4 +0.8**
comp=E,0.4nm,0.7s,baz=309,slow=5.5,SNR=2.2
O20A White River Ci 124.35 47 PKPdf **PKPdf** **21 08 58.6 -2.3**
ESDC Sonseca Array 124.50 312 PKP **PKiKP** **21 09 02.0 +0.7**
comp=E,1.4nm,0.7s,baz=22,slow=3.0,SNR=13
ESDC PP **PP** **21 10 50.5 +2.0**
comp=E,0.7nm,1.0s,baz=69,slow=7.0,SNR=4.6
ESDC SKP 21 12 27.8
comp=E,1.1nm,1.3s,baz=4.0,slow=2.8,SNR=4.7
ESDC Sonseca Array 124.50 312 PKPdf **PKiKP** **21 09 01.5 +0.1**
PLCA Paso Flores 128.78 166 PKP **PKiKP** **21 09 10.1 +0.1**
comp=E,1.0nm,0.7s,baz=295,slow=3.3,SNR=6.0
PLCA Paso Flores 128.78 166 *e*P **PKiKP** **21 09 10.6 +0.6**
KIC Kosan Boka 129.07 271⇑ *e*PKP1 **PKiKP** **21 09 11.3 +0.2**
comp=E,3.3nm,0.6s
DBIC Dimbokro 129.22 271 PKP **PKiKP** **21 09 11.7 +0.3**
comp=E,3.4nm,0.4s,baz=72,slow=1.6,SNR=8.7
DBIC SKPbc SKPbc 21 12 23.5 +0.4
comp=E,7.4nm,0.9s,baz=100,slow=6.3,SNR=6.9
LIC Lamto 129.34 271⇑ *e*PKP1 **PKiKP** **21 09 11.9 +0.2**
comp=E,32nm,0.6s
TIC Toumodi 129.37 271⇑ *e*PKP1 **PKiKP** **21 09 11.9 +0.1**
comp=E,8.8nm,0.6s
TXAR Lajitas Array 131.11 59 PKP **PKiKP** **21 09 15.8 +0.9**
comp=E,0.7nm,0.5s,baz=197,slow=2.1,SNR=3.0
TXAR SKPbc **SKPab** **21 12 30.3 +0.4**
comp=E,4.4nm,0.8s,baz=258,slow=3.5,SNR=18
SCHQ Schefferville 133.46 9 PKP **PKPdf** **21 09 18.1 +0.5**
comp=E,4.6nm,0.8s,baz=345,slow=3.1,SNR=6.9

SCHQ SKPbc **SKPbc** **21 12 35.9 -0.9**
comp=E,10nm,0.9s,baz=16,slow=3.3,SNR=6.2
SADO Sadowa 139.13 25 SKPbc **SKPbc** **21 12 53.5 -0.8**
comp=E,7.9nm,1.0s,baz=114,slow=1.5,SNR=3.6
V48A Smith Brothers 141.35 42 PKPpre 21 09 25.3
AC02 Maricunga 142.23 161 PKPdf **PKPdf** **21 09 31.8 -3.4**
TKL Tuckaleechee C 143.35 39 PKP **PKPdf** **21 09 36.4 +0.2**
comp=E,4.4nm,0.6s,baz=308,slow=2.4,SNR=4.2
TKL SKPbc **SKiKP** **21 13 06.8 +0.2**
comp=E,6.2nm,0.9s,baz=99,slow=1.7,SNR=4.4
Q56A Snyder Ridge, 143.60 31 PKPab 21 09 33.5 +0.2
GO02 Mina Guanaco 143.62 159 PKPdf PKPbc 21 09 35.9 +0.9
ITAB Concordia 143.81 186 *eP* **PKPdf** **21 09 37.3 -0.1**
152A Waverly Hall 144.55 44 **PKPab** **21 09 37.0 -0.1**
CPUP Villa Florida 144.90 178 PKP **PKPdf** **21 09 40.1 +0.9**
comp=E,25nm,0.5s,baz=191,slow=2.0,SNR=70
CPUP SKPbc **SKiKP** **21 13 11.1 +1.0**
comp=E,4.2nm,0.8s,baz=101,slow=0.2,SNR=4.2
CPUP Villa Florida 144.90 178 *eP* **PKPdf** **21 09 39.9 +0.7**
GOGA Godfrey 144.96 42 PKPbc 21 09 38.0 -0.5
GOGA Godfrey 144.96 42 PKIKP PKPbc 21 09 38.0 -0.5
T57A Hurt 145.08 33 **PKPbc** **21 09 37.9 -0.9**
PAULI Pauline 145.12 39 **PKPbc** **21 09 38.7 -0.3**
FRBT Francisco Belt 145.14 185 *eP* **PKPdf** **21 09 40.2 +0.4**
KMSC Kings Mountain 145.20 38 **PKPbc** **21 09 38.8 -0.4**
JSRW J. Sargeant Re 145.29 31 **PKPbc** **21 09 38.0 -1.4**
PET01 Itanhaem-SP 145.84 194 *eP* **PKPab** **21 09 42.2 +0.1**
W57A Gilead 145.99 36 **PKPdf** **21 09 39.6 -1.2**
T59A Double "B" Far 146.01 32 **PKPdf** **21 09 40.7 0.0**
V58A Windy Hill, Pi 146.04 35 **PKPdf** **21 09 40.5 -0.4**
BIRD Birdtown, Kers 146.06 38 **PKPbc** **21 09 42.2 +0.3**
LVC Limon Verde 146.20 158 *eP* **PKPdf** **21 09 42.0 0.0**
MAN01 Angra dos Reis 146.21 200 *eP* **PKPab** **21 09 43.5 -0.1**
CAM01 Campos-RJ 146.28 205 *eP* **PKPab** **21 09 43.8 0.0**
PTGB Pitanga 146.29 187 *eP* **PKPbc** **21 09 43.2 +0.2**
PARB Paraibuna 146.30 198 *eP* **PKPbc** **21 09 43.2 +0.2**
DUB01 Friburgo-RJ 146.34 203 *eP* **PKPab** **21 09 43.9 -0.2**
VAS01 Vassouras-RJ 146.56 202 *eP* **PKPbc** **21 09 44.3 +0.5**
ALF01 Guarapari-ES 146.94 207 *eP* **PKPbc** **21 09 44.6 -0.3**
VAO Valinhos 147.00 196 *eP* **PKPbc** **21 09 44.8 -0.3**
FRTB Fartura 147.26 191 *eP* **PKPbc** **21 09 44.9 -0.8**
TA02 Huaiquique 147.83 155 **PKiKP** **21 09 49.0 -0.2**
TRCB Terra Rica 148.25 186 **PKiKP** **21 09 49.6 -0.5**
TRCB Terra Rica 148.25 186 *eP* **PKPdf** **21 09 46.6 +1.6**
PB08 IPOC Station P 148.35 156 **PKiKP** **21 09 50.4 -0.4**
GO01 Chusmiza 148.76 156 **PKiKP** **21 09 51.7 0.0**
SJMB Sao Joao De Ma 148.82 208 *eP* **PKPbc** **21 09 48.0 -1.9**
NAN01 Guarapari, ES 149.04 211 *eP* **PKPdf** **21 09 48.0 +1.7**
PB12 IPOC Station P 149.21 153 PKPab **PKiKP** **21 09 52.5 +0.2**
ANTJ Antonio Joao (149.23 180 *eP* **PKPdf** **21 09 47.7 +1.1**
BB19B Bebedouro 149.24 194 *eP* **PKPdf** **21 09 48.4 +1.8**
PCMB Pacaembu 149.25 189 *eP* **PKPdf** **21 09 48.4 +1.8**
CRIN San Cristobal 149.39 80 **PKiKP** **21 09 52.7 +0.1**
PB16 IPOC Station P 149.81 154 PKPab **PKiKP** **21 09 55.0 +0.9**
AQDB Aquidauana 150.74 181 *eP* **PKPdf** **21 09 51.5 +2.5**
CMC01 Camacan, BA 150.78 214 *eP* **PKPdf** **21 09 49.9 +0.8**
ITRB Iturama 150.96 191 *eP* **PKPdf** **21 09 51.5 +2.1**
LPAZ La Paz 152.22 155 PKPbc **PKiKP** **21 10 00.4 +1.2**
comp=E,5.9nm,0.4s,baz=36,slow=3.7,SNR=26
BBSD Serra de San D 153.63 170 *eP* **PKPdf** **21 09 55.4 +2.0**
BDFB Brasilia 154.27 198 PKPbc **PKiKP** **21 10 04.5 +1.8**
comp=E,1.5nm,0.4s,baz=140,slow=8.2,SNR=3.8

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*IDC **20** 20:51:11.5±13.0, 56°.07S×26°.80W, h196km±124km, mb3.5/3, mbtmp4.1/3, Error ellipse: s-maj=56.3km s-min=25.0km az=113.0*
ISC 20 20:51:01.3±1.0, 56°.05S±0°.2×27°.3W±0°.3, h112km, n18, σ1§38/13, mb3.9/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.89**	**158**	P	**P**	**20 54 51.4**	**+0.8**
VNA3	**Neumayer Olymp**	**17.09**	**161**	P	**P**	**20 54 50.1**	**-2.7**
VNA2	**Neumayer--Watz**	**17.29**	**158**	P	**Pn**	**20 54 56.4**	**+1.2**
baz=317,slow=13							
SNAA	**Sanae**	**18.84**	**156**	P	**P**	**20 55 09.6**	**-2.4**
TROLL	**Troll, Antarti**	**20.34**	**154**	P	**P**	**20 55 28.8**	**+0.5**
MAW	**Mawson**	**40.25**	**144**	P	**P**	**20 58 26.1**	**-0.3**
0.6nm,0.4s,baz=234,slow=8.7,SNR=1.5							
0.6nm,0.4s							
VNDA	**Vanda**	**46.65**	**183**	P	**P**	**20 59 18.8**	**+1.2**
1.6nm,0.7s,baz=190,slow=7.3,SNR=24							
1.6nm,0.7s							
H10S2	**ASCENSION HYDR**	**47.94**	**17**	T	T	21 51 43.8	
baz=187							
H10S3	**ASCENSION HYDR**	**47.94**	**17**	T	T	21 51 41.1	
baz=33,SNR=6.7							
H10N1	**ASCENSION HYDR**	**49.05**	**17**	T	T	21 52 59.0	
baz=188,slow=76,SNR=5.4							
H10N3	**ASCENSION HYDR**	**49.05**	**17**	T	T	21 53 07.3	
baz=188,slow=76,SNR=9.8							
H10N2	**ASCENSION HYDR**	**49.07**	**17**	T	T	21 53 07.2	
baz=188,slow=76,SNR=7.8							
TORD	**Torodi Ar. Bea**	**73.01**	**30**	P	**P**	**21 02 19.4**	**+0.9**
1.4nm,0.4s,baz=200,slow=6.3,SNR=31							
1.4nm,0.4s							
FINES	**FINESS Array B**	**124.33**	**28**	PKP	**PKiKP**	**21 09 45.0**	**-0.6**
3.1nm,1.0s,baz=180,slow=2.1,SNR=4.6							
INK	**Inuvik**	**145.71**	**321**	PKPbc	**PKPab**	**21 10 25.7**	**-0.2**
1.4nm,0.7s,baz=101,slow=2.5,SNR=1.8							
ILAR	**Eielson Array**	**150.02**	**312**	PKPbc	**PKiKP**	**21 10 37.0**	**-0.8**
0.4nm,0.3s,baz=124,slow=1.8,SNR=7.7							
KDAK	**Kodiak Island**	**150.73**	**297**	PKPbc	**PKiKP**	**21 10 39.5**	**0.0**
2.4nm,0.4s,baz=90,slow=3.0,SNR=6.5							
SONM	**Songino Array**	**150.78**	**86**	PKPbc	**PKPbc**	**21 10 39.0**	**-0.6**
0.5nm,0.5s,baz=233,slow=4.2,SNR=4.0							

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*IDC **20** 21:01:17.2±1.3, 44°.16N×105°.88W, h0km, mb3.8/1, mbtmp3.5/6, ML3.0/4, Error ellipse: s-maj=23.8km s-min=9.3km az=144.0*
*NEIC **20** 21:01:18.1±2.2, 43°.75N±0°.04×105°.37W±0°.07, h0km±2km, ML3.3/84, Error ellipse: s-maj=9.2km s-min=7.2km az=65.0*
ISC 20 21:01:15.7±0.8, 43°.80N±0°.04×105°.20W±0°.03, h0km, n63, σ1§45/71, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**69**		**Pb**	**21 01 35.8**	**+1.5**
K22A	**Casper**	**1.51**	**220**		**Pn**	**21 01 42.1**	**-2.0**
K22A				IAML		21 02 04.8	
comp=N,414nm,0.7s							
K22A				IAML		21 02 05.3	
comp=E,345nm,0.7s							
PHWY	**Pilot Hill**	**2.51**	**184**		**Pn**	**21 01 58.5**	**+0.5**
PHWY				IAML		21 02 35.8	
comp=E,140nm,0.6s							
RWWY	**Rawlins**	**2.58**	**216**		**Pn**	**21 01 59.5**	**+0.5**
N23A	**Red Feather La**	**2.96**	**191**	Pn	**Pn**	**21 02 04.6**	**+0.4**
N23A				IAML		21 02 50.8	
comp=N,147nm,0.6s							
N23A				IAML		21 02 54.9	
comp=E,110nm,0.8s							
LAO	**LASA Array**	**2.97**	**346**	Pn	**Pb**	**21 02 08.9**	**-0.7**
RLMT	**Red Lodge**	**3.20**	**296**	Pn	**Pn**	**21 02 08.2**	**+0.8**
RLMT				IAML		21 03 01.3	
comp=E,55nm,0.8s							
RLMT				IAML		21 03 06.3	
comp=E,57nm,0.7s							
BRIGG	**Briggsdale**	**3.29**	**168**	Pn	**Pn**	**21 02 10.0**	**+1.4**
BRIGG				IAML		21 03 04.0	
comp=N,106nm,0.8s							
BW06	**Boulder Array**	**3.35**	**253**		**Pn**	**21 02 09.6**	**+0.1**
BW06				IAML		21 02 59.5	
comp=N,64nm,0.7s							
PD31	**Pinedale Array**	**3.35**	**253**		**Pn**	**21 02 09.4**	**-0.1**
PDAR	**Pinedale Array**	**3.35**	**253**	Pn	**Pn**	**21 02 09.2**	**-0.3**
comp=N,7.5nm,0.4s,baz=71,slow=16,SNR=71							
PDAR				Lg	Lg	21 02 51.8	
comp=N,11nm,0.3s,baz=67,slow=32,SNR=10.0							
PDAR	**Pinedale Array**	**3.35**	**253**		**Pn**	**21 02 08.9**	**-0.6**
YMP	**Mirror Lake PI**	**3.68**	**286**		**Pn**	**21 02 14.6**	**+0.5**
OGNE	**Ogallala**	**3.70**	**140**	Pg	**Pg**	**21 02 25.7**	**-0.9**
GCMT	**Greycliff**	**3.75**	**304**		**Pn**	**21 02 15.8**	**+0.9**
LKWY	**Lake**	**3.82**	**283**		**Pg**	**21 02 28.6**	**-0.3**
LKWY				IAML		21 03 22.6	
comp=N,61nm,0.5s							
LKWY				IAML		21 03 53.5	
comp=N,37nm,1.0s							
H17A	**Grant Village**	**3.92**	**281**		**Pn**	**21 02 18.8**	**+1.4**
LOHW	**Long Hollow**	**3.92**	**269**	Pn	**Pn**	**21 02 18.3**	**+0.8**
YNR	**Norris Junctio**	**4.04**	**285**	Pn	**Pn**	**21 02 19.4**	**+0.3**
YNR					**Pb**	**21 02 29.3**	**+1.4**
SNOW	**Snow King Moun**	**4.05**	**267**	Pn	**Pn**	**21 02 18.4**	**-0.7**
SNOW					**Pb**	**21 02 28.6**	**+0.6**
SNOW				IAML		21 03 38.1	
comp=N,42nm,0.9s							
SNOW				IAML		21 03 46.2	
comp=N,42nm,1.2s							
YFT	**Old Faithful**	**4.11**	**281**	Pn	**Pn**	**21 02 21.4**	**+1.4**
YFT					**Pb**	**21 02 30.8**	**+1.7**
REDW	**Red Top Meadow**	**4.13**	**266**	IAML		21 03 38.2	
comp=N,47nm,1.0s							
REDW				IAML		21 03 47.8	
comp=N,40nm,1.2s							
IMW	**Indian Meadow**	**4.15**	**273**		**Pn**	**21 02 21.8**	**+1.1**
IMW				IAML		21 03 28.7	
comp=N,31nm,0.8s							
IMW				IAML		21 03 38.4	
comp=N,42nm,0.7s							
TPAW	**Teton Pass**	**4.19**	**268**		**Pb**	**21 02 32.0**	**+1.6**
TPAW				IAML		21 03 37.5	
comp=N,23nm,0.9s							
TPAW				IAML		21 03 56.2	
comp=N,29nm,1.8s							
E28A	**Huff**	**4.22**	**47**	Pn	**Pn**	**21 02 23.4**	**+2.1**
E28A					**Pg**	**21 02 36.3**	**-0.3**
FXWY	**Fox Creek**	**4.23**	**270**		**Pn**	**21 02 22.1**	**+0.5**
YMR	**Madison River**	**4.23**	**284**	Pn	**Pn**	**21 02 18.4**	**-3.2**
YMR				IAML		21 03 45.5	
comp=N,57nm,1.0s							
O20A	**White River Ci**	**4.31**	**213**	Pn	**Pn**	**21 02 22.9**	**+0.1**
O20A				Pg	**Pb**	**21 02 34.8**	**+2.3**
O20A				IAML		21 03 39.4	
comp=E,53nm,0.8s							
YHB	**Horse Butte**	**4.41**	**284**	Pn	**Pn**	**21 02 24.3**	**+0.2**
YHB					**Pb**	**21 02 37.0**	**+2.8**
YHB				IAML		21 03 41.7	
comp=N,22nm,1.4s							
YHL	**Hebgen Lake**	**4.42**	**286**		**Pn**	**21 02 24.8**	**+0.5**
YHL				IAML		21 03 53.7	
comp=E,34nm,0.8s							
YHL				IAML		21 04 05.8	
comp=N,28nm,0.9s							
AHID	**Auburn Hatcher**	**4.43**	**258**	Pn	**Pn**	**21 02 24.9**	**+0.6**
AHID				IAML		21 03 39.7	
comp=N,37nm,1.0s							
AHID				IAML		21 03 43.6	
comp=N,29nm,1.1s							
ECR	**Eagle Creek**	**4.56**	**263**	Pn	**Pn**	**21 02 26.8**	**+0.7**
RDMU	**Red Mountain**	**4.58**	**227**		**Pn**	**21 02 26.8**	**+0.3**
RDMU				IAML		21 03 44.7	
comp=E,37nm,0.9s							
RDMU				IAML		21 03 47.9	
comp=N,29nm,0.9s							
DGMT	**Dagmar**	**4.72**	**8**	Pn	**Pn**	**21 02 31.2**	**+3.1**
SMCO	**Snowmass**	**4.81**	**197**		**Pb**	**21 02 42.8**	**+1.7**
SMCO				IAML		21 03 52.5	
comp=N,25nm,1.1s							
SMCO				IAML		21 03 52.7	
comp=N,32nm,0.9s							
Q24A	**Divide**	**4.84**	**180**		**Pb**	**21 02 44.0**	**+2.5**
Q24A				IAML		21 03 56.6	
comp=N,19nm,0.8s							
BOZ	**Bozeman (W)**	**4.92**	**294**	Pn	**Pn**	**21 02 31.3**	**+0.2**
BOZ					**Pb**	**21 02 44.7**	**+1.8**
BOZ				IAML		21 03 56.9	
comp=N,18nm,2.3s							
BOZ				IAML		21 04 07.6	
comp=N,17nm,1.0s							
KSCO	**Kaye Shedlock'**	**5.16**	**157**	Pn	**Pn**	**21 02 34.6**	**+0.2**
HWUT	**Hardware Ranch**	**5.18**	**247**		**Pn**	**21 02 33.9**	**-0.8**
HWUT				IAML		21 04 07.4	
comp=N,22nm,1.0s							
HWUT				IAML		21 04 32.0	
comp=N,25nm,1.2s							
EGMT	**Eagleton**	**5.28**	**325**	Pn	**Pn**	**21 02 36.7**	**+0.7**
EGMT					**Pg**	**21 02 56.6**	**-0.3**
TCUT	**Toone Canyon**	**5.32**	**242**		**Pn**	**21 02 35.9**	**-0.7**
DLMT	**Dillon**	**5.51**	**289**		**Pb**	**21 02 56.3**	**+3.5**
HRY	**Holter Researc**	**5.51**	**304**	Pg	**Pg**	**21 02 58.5**	**-2.8**
LRM	**Limekiln Ridge**	**5.54**	**294**	Pn	**Pn**	**21 02 40.4**	**+0.7**
BGNE	**Belgrade**	**5.73**	**112**	Pn	**Pn**	**21 02 43.9**	**+1.9**
CTU	**Camp Tracy**	**5.77**	**240**	Pn	**Pn**	**21 02 42.2**	**-0.5**
SPUT	**South Promonto**	**5.91**	**248**	Pn	**Pn**	**21 02 45.3**	**+0.7**
HVU	**Hansel Valley**	**5.93**	**253**		**Pn**	**21 02 44.9**	**-0.1**
BCYI	**Bear Canyon**	**5.94**	**278**	Pn	**Pn**	**21 02 47.3**	**+2.2**
PV15	**Paradox Valley**	**5.99**	**206**		**Pn**	**21 02 45.8**	**-0.1**
P17A	**Butcher Ranch,**	**6.00**	**226**		**Pn**	**21 02 45.9**	**0.0**
SDCO	**Great Sand Dun**	**6.06**	**182**	Pn	**Pn**	**21 02 47.7**	**+0.9**
SDCO					**Pg**	**21 03 09.1**	**-2.7**
PV23	**Carpenter Ridg**	**6.07**	**210**	Pn	**Pn**	**21 02 47.6**	**+0.6**
PV23				Pg	**Pg**	**21 03 11.0**	**-1.1**
MPU	**Maple Canyon**	**6.11**	**234**	Pg	**Pg**	**21 03 09.1**	**-3.7**
PV10	**Paradox Valley**	**6.15**	**209**	Pn	**Pn**	**21 02 49.1**	**+1.1**
S22A	**4UR Ranch, Cre**	**6.18**	**192**	Pn	**Pn**	**21 02 48.6**	**+0.2**
ECSD	**EROS Data Cent**	**6.22**	**88**	Pn	**Pn**	**21 02 51.4**	**+2.7**
NLU	**North Lily Min**	**6.41**	**235**	Pn	**Pn**	**21 02 50.7**	**-0.9**
ELK	**Elko**	**8.05**	**251**	Pn	**Pn**	**21 03 14.2**	**+0.2**
comp=N,0.2nm,0.3s,baz=63,slow=9.0,SNR=2.8							
comp=N,0.6nm,0.4s							
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn	**Pn**	**21 03 28.9**	**+1.2**
comp=N,0.7nm,0.3s,baz=228,slow=14,SNR=2.7							
ULM				Lg	Lg	21 05 58.5	
comp=N,0.3nm,0.3s,baz=177,slow=18,SNR=1.6							
comp=N,2.0nm,0.4s							
NEW	**Newport**	**9.41**	**302**	Pn	Pn	21 03 23.8	-8.8
comp=N,0.5nm,0.3s,baz=120,slow=16,SNR=3.0							
NEW				Lg	Lg	21 05 52.3	
comp=N,0.1nm,0.3s,baz=47,slow=19,SNR=1.2							
comp=N,2.3nm,0.6s							
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**21 03 58.1**	**+0.2**
comp=N,0.1nm,0.3s,baz=60,slow=11,SNR=3.1							
comp=N,0.4nm,0.7s							
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**21 14 14.3**	**-0.6**
comp=N,0.5nm,0.8s,baz=16,slow=3.8,SNR=2.6							
comp=N,0.5nm,0.8s							

IDC 20 21:11:02.9±3.9, 17°.42S×178°.81W, h613km±21km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=246.0km s-min=27.2km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.02**	**264**	P	P	21 12 23.3	0.0
15nm,0.6s,baz=135,slow=7.1,SNR=17							
WRA	**Warramunga Arr**	**44.35**	**259**	P	P	21 18 20.5	-0.2
0.9nm,0.5s,baz=95,slow=7.1,SNR=50							
0.9nm,0.5s							
ASAR	**Alice Springs**	**44.56**	**254**	P	P	21 18 22.4	+0.1
4.9nm,0.6s,baz=87,slow=8.7,SNR=83							
4.9nm,0.6s							
NVAR	**Mina Array Bea**	**79.34**	**44**	P	P	21 22 06.8	0.0
0.4nm,0.8s,baz=231,slow=6.9,SNR=2.2							
0.4nm,0.8s							

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*IDC **20** 21:16:22.1±1.4, 39°.77N×20°.66E, h0km, mb3.4/7, mbtmp3.4/9, ML3.2/2, MS2.9/1, Error ellipse: s-maj=31.0km s-min=20.8km az=104.0*
*ATH **20** 21:16:25.9, 39°.78N×20°.68E, h13km±1km, ML2.9/16, Error ellipse: s-maj=2.1km s-min=0.8km az=315.0*
*THE **20** 21:16:26.4, 39°.78N×20°.72E, h0km±2km, ML2.8/24, Error ellipse: s-maj=2.0km s-min=0.6km az=317.0*
*BEO **20** 21:16:26.3±0.8, 39°.67N×20°.67E, h19km±5km, ML2.7/6*
ISC 20 21:16:25.8±0.8, 39°.78N±0°.01×20°.70E±0°.02, h15km±5km, n96, σ1§52/141, mb3.5/6, 10C-2D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**135**	P	**Pg**	**21 16 29.5**	**-0.5**
JAN				S	**Sg**	**21 16 32.9**	**+0.1**
9μm,0.1s							
JAN	**Janina**	**0.17**	**135**	P	**Pg**	**21 16 29.4**	**-0.6**
JAN				S	**Sg**	**21 16 33.1**	**+0.3**
JAN				AML	AML	21 16 34.3	
comp=E,18973μm,0.2s							
JAN				AML	AML	21 16 34.3	
comp=N,17722μm,0.2s							
IGT	**Igoumenitsa**	**0.37**	**229**	P	**Pg**	**21 16 33.8**	**+0.4**
IGT				S	**Sb**	**21 16 40.5**	**+0.8**
comp=N,3μm,0.4s							
IGT	**Igoumenitsa**	**0.37**	**229**	P	**Pg**	**21 16 33.4**	**0.0**
IGT					S	**Sg**	**21 16 38.3**	**-0.2**
IGT					AML	AML	21 16 42.0	
comp=N,4280μm,0.4s							
IGT					AML	AML	21 16 42.8	
comp=E,6511μm,0.4s							
LSK	**Leskovik**	**0.38**	**349**	P	**Pg**	**21 16 34.0**	**+0.4**
LSK					S	**Sb**	**21 16 40.7**	**+0.6**
comp=E,2μm,0.4s							
PENT	**Pentalofos**	**0.54**	**39**	P	**Pg**	**21 16 36.5**	**0.0**
PENT					S	**Sb**	**21 16 45.3**	**+0.6**
comp=E,522nm,0.5s							
PENT	**Pentalofos**	**0.54**	**39**	P	**Pg**	**21 16 36.5**	**0.0**
PENT					S	**Sg**	**21 16 44.4**	**+0.6**
KPRO	**Kipourio**	**0.54**	**71**	P	**Pg**	**21 16 36.5**	**-0.1**
KPRO					S	**Sg**	**21 16 44.1**	**+0.2**
comp=E,2μm,0.3s							
SRN	**Sarande**	**0.55**	**281**	P	**Pg**	**21 16 37.0**	**+0.4**
SRN					S	**Sg**	**21 16 44.2**	**+0.3**
comp=E,622nm,0.4s							
KASA	**Kassiopi**	**0.59**	**267**	P	**Pg**	**21 16 37.3**	**-0.1**
KASA					S	**Sg**	**21 16 44.5**	**-0.7**
NEST	**Nestorio**	**0.69**	**23**	P	**Pg**	**21 16 40.1**	**+0.7**
NEST					S	**Sg**	**21 16 48.6**	**0.0**
comp=E,432nm,0.5s							
NEST	**Nestorio**	**0.69**	**23**	P	**Pg**	**21 16 39.6**	**+0.2**
NEST					S	**Sg**	**21 16 48.4**	**-0.2**
NEST					AML	AML	21 16 53.5	
comp=N,964μm,0.4s							
NEST					AML	AML	21 16 56.8	
comp=E,1166μm,0.3s							
KEK	**Kerkira**	**0.69**	**265**	P	**Pg**	**21 16 38.9**	**-0.5**
KEK					S	**Sb**	**21 16 49.8**	**+0.8**
comp=E,600nm,0.3s							
KEK	**Kerkira**	**0.69**	**265**	P	**Pg**	**21 16 38.8**	**-0.6**
KEK					S	**Sg**	**21 16 48.3**	**-0.3**
KEK					AML	AML	21 16 53.9	
comp=N,1018μm,0.3s							
KEK					AML	AML	21 17 00.9	
comp=E,1375μm,0.4s							
KBN	**Korca**	**0.85**	**5**	P	**Pg**	**21 16 42.4**	**+0.1**
KBN					S	**Sn**	**21 16 56.0**	**+0.4**
comp=E,335nm,0.5s							
TSLK	**Tsoukalades, L**	**0.95**	**182**	P	**Pb**	**21 16 44.7**	**+0.7**
TSLK					S	**Sn**	**21 16 59.3**	**+1.4**
comp=E,780nm,0.6s							
TSLK	**Tsoukalades, L**	**0.95**	**182**	P	**Pb**	**21 16 43.6**	**-0.3**
TSLK					AML	AML	21 17 03.7	
comp=E,1746μm,0.5s							
TSLK					AML	AML	21 17 03.7	
comp=N,1330μm,0.4s							
KZN	**Kozani**	**0.98**	**57**	P	**Pb**	**21 16 44.3**	**-0.2**
KZN					S	**Sg**	**21 16 58.2**	**+0.5**
comp=N,605nm,0.4s							
KZN	**Kozani**	**0.98**	**57**	P	**Pb**	**21 16 44.3**	**-0.2**
KZN					S	**Sg**	**21 16 57.7**	**0.0**
KZN					AML	AML	21 17 00.6	
comp=E,1467μm,0.4s							
KZN					AML	AML	21 17 01.3	
comp=N,987μm,0.5s							
LKD2	**Lefkada island**	**0.99**	**182**	P	**Pb**	**21 16 44.8**	**+0.2**
LKD2					S	**Sn**	**21 17 00.0**	**+1.2**
comp=N,612nm,0.4s							
LKD2	**Lefkada island**	**0.99**	**182**	P	**Pb**	**21 16 44.5**	**-0.1**
LKD2					AML	AML	21 17 05.4	
comp=E,1237μm,0.4s							
LKD2					AML	AML	21 17 10.7	
comp=N,1221μm,0.8s							
THL	**Klokotos Trika**	**1.04**	**101**	P	**Pb**	**21 16 44.6**	**-0.9**
THL					S	**Sb**	**21 16 59.8**	**+0.9**
comp=N,318nm,0.2s							
THL	**Klokotos Trika**	**1.04**	**101**	P	**Pb**	**21 16 44.4**	**-1.1**
THL					AML	AML	21 17 05.7	
comp=E,644μm,0.2s							
THL					AML	AML	21 17 06.7	
comp=N,615μm,0.3s							
NYDR	**Nydri-Lefkada**	**1.06**	**180**	P	**Pb**	**21 16 45.9**	**+0.1**
NYDR					S	**Sn**	**21 17 02.0**	**+1.4**
comp=N,368nm,0.3s							
DRAG	**Dragano-Lefkad**	**1.09**	**185**	P	**Pb**	**21 16 47.0**	**+0.6**
DRAG					S	**Sn**	**21 17 02.6**	**+1.1**
comp=N,4μm,0.3s							
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pb**	**21 16 47.7**	**+0.3**
EVGI					S	**Sn**	**21 17 05.3**	**+2.4**
comp=N,595nm,0.2s							
EVGI	**Lefkada island**	**1.15**	**182**	P	**Pb**	**21 16 47.4**	**0.0**
TYRN	**Tyrnavos**	**1.19**	**93**	P	**Pn**	**21 16 47.4**	**-0.4**
TYRN					S	**Sb**	**21 17 04.6**	**+1.5**
comp=N,902nm,0.5s							
EVR	**Evrytania**	**1.22**	**134**	P	**Pn**	**21 16 48.2**	**-0.2**
EVR					S	**Sg**	**21 17 07.3**	**+2.2**
comp=N,462nm,0.5s							
EVR	**Evrytania**	**1.22**	**134**	P	**Pn**	**21 16 48.1**	**-0.3**
EVR					S	**Sb**	**21 17 04.6**	**+0.5**
EVR					AML	AML	21 17 09.0	
comp=N,954μm,0.6s							
EVR					AML	AML	21 17 12.1	
comp=E,891μm,0.4s							
KTI	**Kastanea**	**1.25**	**60**	P	**Pn**	**21 16 49.4**	**+0.5**
FSK	**Fiskardo**	**1.32**	**185**	P	**Pn**	**21 16 49.9**	**+0.3**
FSK					S	**Sb**	**21 17 07.8**	**+0.8**
FSK					AML	AML	21 17 12.4	
comp=N,539μm,0.3s							
FSK					AML	AML	21 17 14.8	
comp=E,966μm,0.2s							
PVO	**Paravola**	**1.32**	**151**	P	**Pg**	**21 16 51.9**	**+0.6**
PVO					S	**Sg**	**21 17 11.6**	**+3.0**
comp=E,348nm,0.5s							
PVO	**Paravola**	**1.32**	**151**	P	**Pn**	**21 16 50.3**	**+0.6**
OHR	**Ohrid**	**1.34**	**3**	*e*Pg	**Pg**	**21 16 52.3**	**+0.7**
OHR				*e*Sg	**Sg**	**21 17 11.9**	**+2.9**
OHR	**Ohrid**	**1.34**	**3**	*i* Pn	**Pg**	**21 16 52.0**	**+0.5**
OHR				*i*

NEO				AML	AML	21 17 33.2	
	comp=E,292μm,0.6s						
NEO				AML	AML	21 17 34.8	
	comp=N,327μm,0.3s						
VAY	**Valandovo**	**2.10**	**42**	*e*Pn	**Pn**	**21 17 01.8**	**+1.3**
VAY				*e*Sn	**Sn**	**21 17 28.8**	**+2.5**
VAY	**Valandovo**	**2.10**	**42**	*i* Pn	**Pn**	**21 17 01.7**	**+1.2**
KNT	**Kendrikon**	**2.18**	**50**	P	**Pn**	**21 17 02.0**	**+0.5**
STIP	**Stip**	**2.23**	**30**	*i* Pn	**Pb**	**21 17 05.3**	**-0.4**
SKO	**Skopje**	**2.27**	**14**	*e*Pn	**Pn**	**21 17 03.6**	**+0.9**
SKO				*e*Sn	**Sb**	**21 17 34.4**	**+0.2**
SKO	**Skopje**	**2.27**	**14**	*i* Pn	**Pn**	**21 17 05.1**	**+2.4**
SOH	**Sokhos**	**2.29**	**62**	P	**Pn**	**21 17 04.4**	**+1.4**
SRS	**Serrai**	**2.58**	**58**	*e*Pn	**Pn**	**21 17 07.2**	**+0.1**
SRS				*e*Sn	**Sn**	**21 17 40.2**	**+1.9**
PDG	**Podgorica**	**2.87**	**338**	⇑P	**Pn**	**21 17 13.4**	**+2.4**
BARS	**Barje**	**3.15**	**15**	*e*Pn	**Pn**	**21 17 16.7**	**+1.8**
BARS				*e*Sn	**Sn**	**21 17 54.9**	**+2.6**
VTS	**Vitosha**	**3.42**	**33**	⇑P	**Pn**	**21 17 21.9**	**+3.1**
VTS				⇓S	**Sn**	**21 17 56.2**	**-3.0**
SELS	**Selova**	**3.46**	**5**	*e*Pn	**Pn**	**21 17 21.1**	**+2.0**
SJES	**Sjenica**	**3.52**	**351**	*e*Pn	**Pn**	**21 17 22.6**	**+2.5**
ZAPS	**Zavoj**	**3.79**	**22**	*e*Pn	**Pn**	**21 17 25.9**	**+2.3**
IVAS	**Ivanjica**	**3.82**	**354**	*e*Pn	**Pn**	**21 17 25.3**	**+1.2**
BOVS	**Bovan**	**3.93**	**11**	⇑P	**Pn**	**21 17 27.5**	**+1.9**
BOVS	**Bovan**	**3.93**	**11**	*e*Pn	**Pn**	**21 17 26.0**	**+0.4**
BOVS				*e*Sn	**Sn**	**21 18 12.8**	**+1.4**
GRUS	**Gruza**	**4.11**	**0**	*e*Pn	**Pn**	**21 17 29.9**	**+1.9**
BLKB	**Belogradchik**	**4.12**	**20**	⇑P	**Pn**	**21 17 30.3**	**+2.1**
ZAGS	**Zajecar**	**4.19**	**15**	*e*Pn	**Pn**	**21 17 30.8**	**+1.6**
BBLS	**Lazići**	**4.20**	**347**	*e*Pn	**Pn**	**21 17 31.2**	**+1.9**
DIVS	**Divibare**	**4.35**	**353**	*e*Pn	**Pn**	**21 17 32.0**	**+0.6**
DIVS				*e*Sn	**Sn**	**21 18 21.0**	**-0.9**
TRUS	**Trudelj**	**4.45**	**357**	*e*Pn	**Pn**	**21 17 33.8**	**+1.1**
IDI	**Anoyia**	**5.58**	**142**	Pn	**Pn**	**21 17 46.9**	**-1.5**
	comp=N,0.2nm,0.3s,baz=256,slow=19,SNR=1.1						
IDI				Sn	**Sn**	**21 18 46.9**	**-5.3**
	comp=N,1.8nm,0.3s,baz=114,slow=20,SNR=10						
	comp=N,3.8nm,0.9s						
GZR	**Gura Zlata**	**5.82**	**15**	⇓P	**Pn**	**21 17 54.1**	**+2.5**
BZS	**Buzias**	**5.88**	**6**	⇑P	**Pn**	**21 17 54.2**	**+1.9**
ARR	**Arges**	**6.30**	**26**	⇑P	**Pn**	**21 18 01.3**	**+3.1**
VOIR		**6.50**	**28**	⇑P	**Pn**	**21 18 04.4**	**+3.3**
MLR	**Muntele Rosu**	**6.90**	**32**	⇑P	**Pn**	**21 18 10.3**	**+3.9**
MLR	**Muntele Rosu**	**6.90**	**32**	Pn	**Pn**	**21 18 07.4**	**+1.0**
	comp=N,0.3nm,0.3s,baz=238,slow=19,SNR=4.6						
	comp=N,1.1nm,0.5s						
PLOR	**Plostina**	**7.48**	**34**	⇑P	**Pn**	**21 18 17.8**	**+3.4**
VRI	**Vrincioaia**	**7.53**	**34**	⇑P	**Pn**	**21 18 18.8**	**+3.8**
VRAC	**Vranov**	**9.97**	**344**	LR	LR	21 23 13.9	
	comp=N,66nm,20.1s,baz=331,slow=41						
HFS	**Hagfors**	**20.85**	**350**	P	**P**	**21 21 05.0**	**-1.7**
	comp=N,1.9nm,0.7s,baz=177,slow=12,SNR=2.0						
	comp=N,1.9nm,0.7s						
FINES	**FINESS Array B**	**21.95**	**7**	P	**P**	**21 21 16.9**	**-1.7**
	comp=N,0.7nm,0.5s,baz=173,slow=12,SNR=7.6						
	comp=N,0.7nm,0.5s						
NOA	**NORSAR Array B**	**22.08**	**348**	P	**P**	**21 21 19.0**	**-1.1**
	comp=N,0.2nm,0.5s,baz=164,slow=10,SNR=3.8						
	comp=N,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**29.93**	**3**	P	**P**	**21 22 30.8**	**-2.1**
	comp=N,0.6nm,0.7s,baz=187,slow=8.6,SNR=4.8						
	comp=N,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**31.37**	**218**	P	**P**	**21 22 44.9**	**-1.1**
	comp=N,0.3nm,0.6s,baz=30,slow=9.9,SNR=3.0						
	comp=N,0.3nm,0.6s						
MKAR	**Makanchi Array**	**44.37**	**60**	P	**P**	**21 24 33.9**	**-1.5**
	comp=N,0.4nm,0.5s,baz=280,slow=8.3,SNR=7.9						
	comp=N,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**44.54**	**49**	P	**P**	**21 24 34.1**	**-2.5**
	comp=N,0.4nm,0.4s,baz=272,slow=8.6,SNR=2.1						
	comp=N,0.4nm,0.4s						

*NOU **20** 21:34:27.7, 39.°90S×176.°86E, h20km, MLv3.3/5, North Island, New Zealand*
*WEL **20** 21:34:28.7±0.7, 40.°S±4.°×17.°7E±.°, h26km±7km, M3.4/11, ML3.8/11, MLv3.4/11, Error ellipse: s-maj=0.0km s-min=0.0km az=134.5*

ISC 20 21:34:29.5±1.2, 39.°91S±0.°03×176.°71E±0.°03, h35km, n97, σ0§94/99, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.17**	**135**	P	**Pn**	**21 34 36.0**	**-0.1**
PXZ				S	**Sn**	**21 34 42.3**	**+1.7**
KAHZ	**Kahuranaki**	**0.17**	**49**	P	**Pn**	**21 34 35.7**	**-0.5**
KAHZ				S	**Sn**	**21 34 41.5**	**+0.8**
WPHZ	**Waipukurau**	**0.26**	**233**	P	**Pn**	**21 34 36.3**	**-0.7**
WPHZ				S	**Sn**	**21 34 42.2**	**+0.2**
PRHZ	**Porangahau**	**0.36**	**189**	P	**Pn**	**21 34 38.4**	**+0.1**
PRHZ				S	**Sn**	**21 34 46.2**	**+2.0**
CKHZ	**Cape Kidnapper**	**0.38**	**49**	P	**Pn**	**21 34 38.5**	**-0.1**
CKHZ				S	**Sn**	**21 34 46.7**	**+2.0**
PNHZ	**Pukenui**	**0.39**	**269**	P	**Pn**	**21 34 37.3**	**-1.3**
PNHZ				S	**Sn**	**21 34 44.2**	**-0.8**
KWHZ	**Kaweka Forest**	**0.53**	**336**	P	**Pn**	**21 34 39.4**	**-1.4**
DVHZ	**Dannevirke**	**0.57**	**227**	P	**Pn**	**21 34 40.7**	**-0.5**
DVHZ				S	**Sn**	**21 34 50.0**	**+0.6**
ANWZ	**Angora Road**	**0.58**	**198**	P	**Pn**	**21 34 41.0**	**-0.2**
ANWZ				S	**Sn**	**21 34 51.9**	**+2.4**
TSZ	**Takapari Road**	**0.59**	**255**	P	**Pn**	**21 34 40.5**	**-1.0**
BHHZ	**Black Hill Sta**	**0.65**	**310**	P	**Pn**	**21 34 41.0**	**-1.3**
ARHZ	**Aropaoanui**	**0.68**	**19**	P	**Pn**	**21 34 42.6**	**-0.2**
BKZ	**Black Stump Fm**	**0.76**	**347**	P	**Pn**	**21 34 43.0**	**-0.9**
BKZ	**Black Stump Fm**	**0.76**	**347**	P	**Pn**	**21 34 43.0**	**-0.9**
NMHZ	**Naumai**	**0.82**	**6**	P	**Pn**	**21 34 44.4**	**-0.2**
BFZ	**Birch Farm**	**0.85**	**204**	P	**Pn**	**21 34 44.4**	**-0.6**
BFZ	**Birch Farm**	**0.85**	**204**	P	**Pn**	**21 34 45.0**	**0.0**
PRWZ	**Pori Road**	**0.85**	**221**	P	**Pn**	**21 34 45.1**	**0.0**
POWZ	**Post Office Ro**	**0.86**	**236**	P	**Pn**	**21 34 44.8**	**-0.4**
MOVZ	**Moawhango**	**0.89**	**304**	P	**Pn**	**21 34 45.0**	**-0.6**
WHHZ	**Waihua**	**0.93**	**26**	P	**Pn**	**21 34 45.7**	**-0.4**
WNVZ	**Wahianoa**	**1.03**	**304**	P	**Pn**	**21 34 47.8**	**0.0**
RAHZ	**Arahi**	**1.04**	**17**	P	**Pn**	**21 34 47.1**	**-0.5**
TUVZ	**Tukino**	**1.04**	**308**	P	**Pn**	**21 34 47.8**	**+0.1**
MTHZ	**Maungataniwha**	**1.06**	**6**	P	**Pn**	**21 34 47.3**	**-0.7**
WHVZ	**Whangaehu Hut**	**1.07**	**306**	P	**Pn**	**21 34 48.3**	**+0.1**
TIWZ	**Tintock**	**1.07**	**216**	P	**Pn**	**21 34 48.2**	**+0.2**
TRVZ	**Turoa**	**1.08**	**304**	P	**Pn**	**21 34 48.6**	**+0.2**
MTVZ	**Mangateitei**	**1.09**	**298**	P	**Pn**	**21 34 48.5**	**+0.1**
ETVZ	**East Tongariro**	**1.09**	**315**	P	**Pn**	**21 34 48.5**	**+0.1**
SNVZ	**South Ngauruho**	**1.10**	**311**	P	**Pn**	**21 34 48.7**	**+0.1**
MRHZ	**Matea Rd**	**1.10**	**348**	P	**Pn**	**21 34 48.3**	**-0.2**
OTVZ	**Oturere**	**1.10**	**313**	P	**Pn**	**21 34 48.4**	**-0.2**
FWVZ	**Far West T-bar**	**1.11**	**306**	P	**Pn**	**21 34 48.8**	**0.0**
TMVZ	**Te Maari**	**1.11**	**315**	P	**Pn**	**21 34 48.5**	**-0.2**
HATZ	**Hinemaiaia**	**1.12**	**335**	P	**Pn**	**21 34 48.5**	**-0.3**
NGZ	**Ngauruhoe**	**1.13**	**310**	P	**Pn**	**21 34 48.9**	**-0.1**
RITZ	**Rihia Road**	**1.14**	**325**	P	**Pn**	**21 34 49.1**	**+0.1**
MRZ	**Mangatainoka R**	**1.14**	**229**	P	**Pn**	**21 34 48.1**	**-0.9**
NNVZ	**North Ngauruho**	**1.15**	**312**	P	**Pn**	**21 34 49.1**	**-0.1**
KRVZ	**Karewarewa**	**1.16**	**314**	P	**Pn**	**21 34 49.6**	**+0.2**
KNZ	**Kokohua**	**1.16**	**40**	P	**Pn**	**21 34 48.4**	**-0.9**
WTVZ	**West Tongariro**	**1.17**	**312**	P	**Pn**	**21 34 49.8**	**+0.3**
MHGZ	**Mahia Peninsul**	**1.20**	**51**	P	**Pn**	**21 34 49.3**	**-0.5**
KATZ	**Kakaramea**	**1.22**	**320**	P	**Pn**	**21 34 50.5**	**+0.3**
PKVZ	**Pokaka**	**1.22**	**300**	P	**Pn**	**21 34 50.2**	**0.0**
SNGZ	**Shannon Statio**	**1.23**	**24**	P	**Pn**	**21 34 49.6**	**-0.7**
RATZ	**Rangitukua**	**1.27**	**325**	P	**Pn**	**21 34 51.6**	**+0.7**
TWVZ	**Taurewa**	**1.29**	**310**	P	**Pn**	**21 34 51.8**	**+0.6**
RTZ	**Ruatahuna**	**1.31**	**9**	P	**Pn**	**21 34 50.8**	**-0.7**
WAZ	**Wanganui**	**1.33**	**276**	P	**Pn**	**21 34 52.5**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.34**	**222**	P	**Pn**	**21 34 50.7**	**-1.1**
TMWZ	**Te Maipa**	**1.35**	**207**	P	**Pn**	**21 34 50.6**	**-1.2**
WHTZ	**Whakaora**	**1.37**	**335**	P	**Pn**	**21 34 53.7**	**+1.5**
ALRZ	**Allen Road**	**1.38**	**348**	P	**Pn**	**21 34 51.6**	**-0.6**
PRRZ	**Plateau Road**	**1.43**	**350**	P	**Pn**	**21 34 52.5**	**-0.5**
MUGZ	**Murupara**	**1.43**	**2**	P	**Pn**	**21 34 52.3**	**-0.8**
WPRZ	**Whakapapatarin**	**1.45**	**343**	P	**Pn**	**21 34 52.8**	**-0.5**
RIGZ	**Rimuhau**	**1.46**	**35**	P	**Pn**	**21 34 52.4**	**-1.0**
OGWZ	**Otaki Gorge**	**1.48**	**232**	P	**Pn**	**21 34 53.0**	**-0.7**
RAGZ	**Rawiri**	**1.52**	**22**	P	**Pn**	**21 34 53.3**	**-1.0**
MTW	**Mount Morrison**	**1.55**	**216**	P	**Pn**	**21 34 53.2**	**-1.4**
HRRZ	**Handcock Road**	**1.55**	**348**	P	**Pn**	**21 34 54.7**	**0.0**
RRRZ	**Republican Roa**	**1.58**	**355**	P	**Pn**	**21 34 54.2**	**-0.9**
HSRZ	**Hossack Road**	**1.64**	**347**	P	**Pn**	**21 34 55.4**	**-0.5**
KIW	**Kapiti Island**	**1.67**	**235**	P	**Pn**	**21 34 55.9**	**-0.4**
URZ	**Urewera**	**1.68**	**11**	P	**Pn**	**21 34 55.1**	**-1.2**
URZ	**Urewera**	**1.68**	**11**	P	**Pn**	**21 34 55.2**	**-1.2**
TARZ	**Mount Tarawera**	**1.68**	**355**	P	**Pn**	**21 34 55.9**	**-0.6**
MWZ	**Matawai**	**1.70**	**22**	P	**Pn**	**21 34 55.3**	**-1.4**
VRZ	**Vera Road**	**1.70**	**297**	P	Pn	21 34 59.6	+3.0
PAWZ	**Paruwai Farm**	**1.76**	**213**	P	**Pn**	**21 34 56.1**	**-1.5**
TLZ	**Tolley Road**	**1.82**	**330**	P	**Pn**	**21 34 58.1**	**-0.3**
LREZ	**Lake Rotokare**	**1.83**	**283**	P	Pn	21 35 02.3	+3.8
MSWZ	**Moikau Station**	**1.87**	**216**	P	**Pn**	**21 34 57.7**	**-1.3**
PLWZ	**Palliser**	**1.99**	**213**	P	**Pn**	**21 34 59.1**	**-1.7**
TWGZ	**Tauwhareparae**	**2.00**	**30**	P	**Pn**	**21 35 00.2**	**-0.6**
HIZ	**Hauiti**	**2.00**	**314**	P	**Pn**	**21 35 02.4**	**+1.5**
HIZ	**Hauiti**	**2.00**	**314**	P	**Pn**	**21 35 01.5**	**+0.6**
WHRZ	**Whale Island**	**2.06**	**6**	P	**Pn**	**21 35 00.8**	**-0.9**
RUGZ	**Raukumara Rang**	**2.08**	**22**	P	**Pn**	**21 35 00.8**	**-1.3**
NEZ	**North Egmont**	**2.12**	**287**	P	Pn	21 35 06.4	+3.9
KHEZ	**Kahui Hut**	**2.17**	**286**	P	Pn	21 35 08.3	+5.1
PKE	**Pukeiti**	**2.22**	**288**	P	Pn	21 35 09.4	+5.5
TCW	**Tory Channel**	**2.26**	**234**	P	**Pn**	**21 35 05.9**	**+1.5**
NBEZ	**Newall Road No**	**2.29**	**285**	P	Pn	21 35 09.3	+4.6
PKGZ	**Pakihiroa**	**2.29**	**28**	P	**Pn**	**21 35 03.9**	**-0.9**
DUWZ	**D'Urville Isla**	**2.31**	**246**	P	**Pn**	**21 35 05.2**	**+0.1**
TOZ	**Tahuroa Road**	**2.37**	**336**	P	**Pn**	**21 35 05.2**	**-0.7**
WMGZ	**Waiomatatini S**	**2.48**	**33**	P	**Pn**	**21 35 05.6**	**-1.7**
MXZ	**Matakaoa Point**	**2.66**	**29**	P	**Pn**	**21 35 08.8**	**-1.0**
MXZ	**Matakaoa Point**	**2.66**	**29**	P	**Pn**	**21 35 08.6**	**-1.3**
TKNZ	**Takaka Hill**	**3.07**	**247**	P	**Pn**	**21 35 14.4**	**-1.1**
QRZ	**Quartz Range**	**3.32**	**253**	P	**Pn**	**21 35 16.9**	**-2.1**
MRNZ	**Matariki Terra**	**3.35**	**242**	P	**Pn**	**21 35 18.9**	**-0.5**
OKCZ	**Okains Bay**	**4.68**	**214**	P	**Pn**	**21 35 35.5**	**-2.3**
CTZ	**Chatham Island**	**6.28**	**130**	P	**Pn**	**21 35 59.0**	**-0.7**

*NNC **20** 21:38:03.4±0.3, 46.°61N×82.°35E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=1.6km s-min=1.1km az=121.0*
*SOME **20** 21:38:03.7, 46.°52N×82.°10E, h5km*
*ASRS **20** 21:38:08.1±0.3, 47.°N±2.°×8.°2E±.°, h5km, MLh3.7/6, Error ellipse: s-maj=4.4km s-min=3.2km az=135.1, confirmed*

ISC 20 21:38:04.0±0.8, 46.°63N±0.°03×82.°46E±0.°03, h10km, n56, σ2§45/84, 12C-8D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.20**	**325**	⇑P	**Pg**	**21 38 07.2**	**-1.1**
	67nm,0.2s,baz=162,slow=17						
MK31				⇑S	**Sg**	**21 38 09.6**	**-1.5**
	211nm,0.2s						
MKAR	**Makanchi Array**	**0.20**	**325**	⇓Pg	**Pg**	**21 38 07.2**	**-1.0**
MKAR				Sg	**Sg**	**21 38 09.7**	**-1.4**
MAKZ	**Makanchi**	**0.38**	**298**	⇑P	**Pg**	**21 38 09.9**	**-1.5**
	52nm,0.3s						
MAKZ				⇓S	**Sg**	**21 38 14.3**	**-2.1**
	110nm,0.4s						
MAKZ	**Makanchi**	**0.38**	**298**	⇓Pg	**Pg**	**21 38 10.0**	**-1.5**
MAKZ				Sg	**Sg**	**21 38 14.4**	**-2.1**
ZSN	**Zaisan**	**1.84**	**63**	*e*P	**Pg**	**21 38 38.6**	**-0.6**
	7.2nm,0.3s						
ZSN				*e*S	**Sg**	**21 39 04.3**	**+1.3**
	35nm,0.5s						
DJR	**Jarkent**	**2.97**	**220**	*e*P	**Pb**	**21 38 55.0**	**-2.0**
	2.8nm,0.2s						
DJR				*e*S	**Sb**	**21 39 32.3**	**-1.0**
	12nm,0.3s						
DJR	**Jarkent**	**2.97**	**220**	Pg	**Pb**	**21 38 56.3**	**-0.7**
	2.8nm,0.2s						
DJR				Lg	Lg	21 39 33.4	
	12nm,0.3s						
TDK	**Taldyqorghan**	**3.27**	**242**	Pg	**Pb**	**21 39 02.2**	**+0.2**
	17nm,0.2s						
TDK				Lg	Lg	21 39 44.2	
	29nm,0.3s						
KTMS	**Ketmen**	**3.52**	**206**	Pg	**Pb**	**21 39 06.9**	**+0.5**
	1.7nm,0.1s						
BLB	**Baldybastay**	**3.78**	**229**	*e*P	**Pb**	**21 39 10.9**	**+0.1**
	12nm,0.3s						
BLB				*e*S	**Sb**	**21 39 59.5**	**+2.8**
	12nm,0.3s						
BLB	**Baldybastay**	**3.78**	**229**	Pg	**Pb**	**21 39 12.1**	**+1.2**
	12nm,0.3s						
BLB				Lg	Lg	21 39 59.7	
	12nm,0.3s						
PDGK	**Podgornoye**	**3.92**	**214**	⇑Pn	**Pn**	**21 39 04.9**	**+0.7**
	1.6nm,0.6s						
PDGK				⇓Pg	**Pb**	**21 39 15.4**	**+2.3**
	4.3nm,0.6s						
PDGK				⇑Lg	Lg	21 40 06.4	
	8.5nm,0.5s						
SEM	**Semipalatinsk**	**4.06**	**340**	Pg	**Pg**	**21 39 20.4**	**-1.3**
	11nm,0.2s						
ARXS	**Arharly**	**4.06**	**235**	*e*P	**Pb**	**21 39 16.6**	**+1.0**
	5.2nm,0.3s						
ARXS				*e*S	**Sb**	**21 40 09.0**	**+4.3**
	16nm,0.5s						
ARXS	**Arharly**	**4.06**	**235**	Pg	**Pb**	**21 39 16.9**	**+1.3**
	5.2nm,0.3s						
ARXS				Lg	Lg	21 40 08.8	
	16nm,0.5s						
SHLS	**Shalkode**	**4.07**	**213**	*e*P	**Pb**	**21 39 13.6**	**-2.3**
	4.7nm,0.3s						
SHLS				*e*S	**Sb**	**21 40 03.6**	**-1.5**
	18nm,0.4s						
SHLS	**Shalkode**	**4.07**	**213**	Pg	**Pb**	**21 39 13.8**	**-2.0**
	4.7nm,0.3s						
KPKS	**Kokpek**	**4.14**	**222**	*e*P	**Pb**	**21 39 14.9**	**-2.1**
	5.3nm,0.1s						
KPKS				*e*S	**Sb**	**21 40 06.8**	**-0.4**
	13nm,0.4s						
KPKS	**Kokpek**	**4.14**	**222**	Pg	**Pb**	**21 39 17.9**	**+0.8**
	4.1nm,0.1s						
KPKS				Lg	Lg	21 40 10.8	
	13nm,0.4s						
UZB	**Uzynbulak**	**4.25**	**216**	*e*P	**Pb**	**21 39 18.4**	**-0.6**
	0.9nm,0.2s						
UZB				*e*S	**Sb**	**21 40 11.7**	**+1.3**
	7.4nm,0.3s						
UZB	**Uzynbulak**	**4.25**	**216**	Pg	**Pb**	**21 39 19.5**	**+0.6**
	0.9nm,0.2s						
UZB				Lg	Lg	21 40 13.9	
	7.4nm,0.3s						
KURS	**Kuram**	**4.37**	**226**	*e*P	**Pb**	**21 39 20.3**	**-0.6**
	1.1nm,0.1s						
KURS				*e*S	**Sb**	**21 40 15.1**	**+1.5**
	2.6nm,0.3s						
KURS	**Kuram**	**4.37**	**226**	Pg	**Pb**	**21 39 22.3**	**+1.5**
	1.1nm,0.1s						
KURS				Lg	Lg	21 40 18.2	
	2.6nm,0.3s						
ZHN	**Zhinishke**	**4.49**	**221**	Pg	**Pb**	**21 39 23.8**	**+0.9**
	4.7nm,0.2s						
ZHN				Lg	Lg	21 40 21.0	
	19nm,0.2s						
DGZ	**Jazzator, Alta**	**4.53**	**45**	Pn	Pb	21 39 17.8	-5.8
DGZ				Pg	**Pg**	**21 39 29.2**	**-1.5**
DGZ				Sg	**Sg**	**21 40 30.7**	**+1.4**
UKR	**Ust'-Kan**	**4.57**	**19**	Pn	Pb	21 39 17.8	-6.5
UKR				Pg	**Pg**	**21 39 28.4**	**-3.1**
UKR				Sg	**Sg**	**21 40 30.5**	**-0.2**
SATY	**Saty**	**4.59**	**220**	*e*P	**Pb**	**21 39 24.9**	**+0.3**
	1.7nm,0.1s						
SATY				*e*S	**Sb**	**21 40 23.6**	**+3.6**
	13nm,0.3s						
SATY	**Saty**	**4.59**	**220**	Pg	**Pb**	**21 39 26.1**	**+1.4**
	1.7nm,0.1s						
SATY				Lg	Lg	21 40 23.1	
	13nm,0.3s						
CHKK	**Chushkaly**	**4.76**	**236**	*e*P	**Pb**	**21 39 28.4**	**+1.0**
	1.2nm,0.3s						
CHKK				*e*S	**Sb**	**21 40 29.6**	**+4.9**
	6.8nm,0.2s						
CHKK	**Chushkaly**	**4.76**	**236**	Pg	**Pb**	**21 39 29.2**	**+1.8**
	1.2nm,0.3s						
CHKK				Lg	Lg	21 40 28.7	
	6.8nm,0.2s						
KURBB	**Kurchatov Arra**	**4.77**	**328**	⇓Pn	**Pn**	**21 39 17.2**	**+1.4**
	2.2nm,0.3s						
KURBB				⇑Lg	Lg	21 40 31.7	
	49nm,0.7s						
KURK	**Kurchatov**	**4.81**	**330**	⇑Pn	**Pn**	**21 39 17.8**	**+1.4**
	3.0nm,0.7s						
KURK				⇑Lg	Lg	21 40 35.2	
	25nm,0.5s						
KURK	**Kurchatov**	**4.81**	**330**	Pn	**Pn**	**21 39 17.7**	**+1.3**
KURK				Pg	**Pb**	**21 39 29.9**	**+1.6**
KURK				Sg	**Sg**	**21 40 33.7**	**-4.8**
CHBI	**Chibit, Altay**	**4.98**	**40**	Pn	Pb	21 39 25.0	-6.3
CHBI				Pg	**Pg**	**21 39 38.5**	**-0.9**
CHBI				Sg	**Sg**	**21 40 43.9**	**0.0**
KTBS	**Karatobe**	**5.02**	**237**	*e*P	**Pb**	**21 39 32.8**	**+0.9**
	1.2nm,0.3s						
KTBS				*e*S	**Sb**	**21 40 37.0**	**+4.7**
	12nm,0.3s						
KTBS	**Karatobe**	**5.02**	**237**	Pg	**Pb**	**21 39 33.5**	**+1.6**
	1.2nm,0.3s						
KTBS				Lg	Lg	21 40 37.1	
	12nm,0.3s						
KOTS	**Kotyrbulak**	**5.09**	**230**	*e*P	**Pb**	**21 39 35.2**	**+1.9**
	1.4nm,0.2s						
KOTS				*e*S	**Sg**	**21 40 41.5**	**-6.0**
	11nm,0.4s						
KOTS	**Kotyrbulak**	**5.09**	**230**	Pg	**Pb**	**21 39 35.6**	**+2.3**
	1.4nm,0.2s						
KOTS				Lg	Lg	21 40 40.6	
	11nm,0.4s						
KUU	**Kurty**	**5.12**	**240**	*e*P	**Pb**	**21 39 34.0**	**+0.4**
	1.1nm,0.4s						
KUU				*e*S	**Sb**	**21 40 38.9**	**+3.9**
	7.1nm,0.3s						
KUU	**Kurty**	**5.12**	**240**	Pg	**Pb**	**21 39 36.0**	**+2.5**
	1.1nm,0.4s						
KUU				Lg	Lg	21 40 41.0	
	7.1nm,0.3s						
MDOK	**Medeo**	**5.18**	**230**	*e*P	**Pb**	**21 39 35.1**	**+0.4**
	1.4nm,0.2s						
MDOK				*e*S	**Sb**	**21 40 40.7**	**+3.8**
	5.4nm,0.3s						
MDOK	**Medeo**	**5.18**	**230**	Pg	**Pb**	**21 39 35.5**	**+0.9**
	1.4nm,0.2s						
MDOK				Lg	Lg	21 40 40.6	
	5.4nm,0.3s						
CUR	**Chagan-Uzun**	**5.24**	**46**	Pn	Pn	21 39 26.7	+4.3
CUR				Pg	**Pg**	**21 39 42.0**	**-2.3**
CUR				Sg	**Sg**	**21 40 49.7**	**-2.4**
TNSS	**Tian-Shan**	**5.32**	**229**	*e*P	**Pb**	**21 39 38.4**	**+1.2**
	1.8nm,0.3s						
TNSS				*e*S	**Sb**	**21 40 46.1**	**+4.9**
	3.2nm,0.4s						
TNSS	**Tian-Shan**	**5.32**	**229**	Pg	**Pb**	**21 39 38.5**	**+1.3**
	1.8nm,0.3s						
TNSS				Lg	Lg	21 40 46.5	
	3.2nm,0.4s						
ULGR	**Ulagan, Altay**	**5.41**	**40**	Pn	Pb	21 39 31.0	-7.6
ULGR				Pg	**Pg**	**21 39 46.6**	**-0.9**
ULGR				Sg	**Sg**	**21 40 53.8**	**-3.7**
KRBS	**Karabastau**	**5.62**	**241**	*e*P	**Pb**	**21 39 46.6**	**+4.4**
	0.4nm,0.1s						
KRBS				*e*S	**Sg**	**21 41 00.2**	**-4.2**
	2.5nm,0.3s						
KRBS	**Karabastau**	**5.62**	**241**	Pg	**Pb**	**21 39 45.0**	**+2.8**
	0.4nm,0.1s						
KRBS				Lg	Lg	21 40 56.6	
	2.5nm,0.3s						
KST	**Kastek**	**5.85**	**235**	*e*P	**Pb**	**21 39 48.9**	**+2.9**
	1.9nm,0.5s						
KST				*e*S	**Sg**	**21 41 04.3**	**-7.3**
	3.0nm,0.6s						
KST	**Kastek**	**5.85**	**235**	Pg	**Pb**	**21 39 49.6**	**+3.5**
	1.9nm,0.5s						
KST				Lg	Lg	21 41 04.5	
	3.0nm,0.6s						
ARTR	**Artybash**	**6.06**	**30**	Pn	Pn	21 39 37.3	+3.8
ARTR				Sg	**Sg**	**21 41 14.4**	**-3.9**
TKM2	**Tokmak 2**	**6.13**	**235**	⇓Lg	Lg	21 41 16.4	
	5.1nm,1.3s						
OTUK	**Ortayu**	**7.05**	**287**	⇑Pn	**Pn**	**21 39 48.0**	**+0.8**
	1.2nm,0.8s						
OTUK

comp=Z,17nm,1.4s
KNRA Kununurra 50.64 267 P **P 21 53 10.9 -0.2**
KNRA IAmb IAmb 21 53 32.0
comp=Z,14nm,1.1s
SBA Scott Base 57.25 184 P **P 21 53 59.8 +2.8**
VNDA Vanda 57.29 185 P **P 21 53 58.8 +1.5**
comp=Z,0.5nm,0.5s,baz=354,slow=8.6,SNR=8.0
comp=Z,0.5nm,0.5s
VNDA Vanda 57.29 185 P **P 21 53 59.1 +1.8**
PSA00 Pilbara Seismi 57.54 257 P **P 21 53 59.2 -0.8**
PSA00 IAmb IAmb 21 54 11.3
comp=Z,24nm,1.3s
MBWA Marble Bar 57.73 258 P **P 21 54 01.1 -0.2**
MBWA IAmb IAmb 21 54 38.1
comp=Z,27nm,1.4s
MORW Morawa 59.61 248 P **P 21 54 13.4 -0.5**
MORW IAmb IAmb 21 54 22.3
comp=Z,22nm,1.3s
CASY Casey 63.41 205 P **P 21 54 38.3 +0.3**
CASY IAmb IAmb 21 54 38.9
comp=Z,6.4nm,1.2s
QSPA South Pole Qui 68.94 180 P **P 21 55 14.0 +1.3**
QSPA IAmb IAmb 21 55 14.4
comp=Z,4.2nm,0.7s
BELA Belgrano 2 78.94 173 P **P 21 56 09.6 +0.5**
BAR Barrett 79.32 49 P **P 21 56 11.6 -0.4**
BAR IAmb IAmb 21 56 20.2
comp=Z,20nm,1.5s
MAW Mawson 80.98 200 P **P 21 56 20.6 +0.6**
comp=Z,1.1nm,0.6s,baz=140,slow=7.9,SNR=3.7
comp=Z,1.1nm,0.6s
NVAR Mina Array Bea 81.47 43 P **P 21 56 26.0 +2.7**
comp=Z,0.4nm,0.6s,baz=212,slow=8.3,SNR=4.8
comp=Z,0.4nm,0.6s
TRF Thorofare Moun 87.06 12 P **P 21 56 51.3 +1.2**
TRF IAmb IAmb 21 57 05.5
comp=Z,7.3nm,1.4s
SNAA Sanae 87.39 178 P **P 21 56 51.4 -0.2**
SNAA IAmb IAmb 21 57 18.7
comp=Z,5.6nm,1.5s
ILAR Eielson Array 88.92 13 P **P 21 56 59.3 +0.7**
comp=Z,1.6nm,0.2s,baz=220,slow=5.6,SNR=1.6
comp=Z,1.6nm,0.2s
PDAR Pinedale Array 89.41 43 P **P 21 57 03.6 +1.9**
comp=Z,0.4nm,0.6s,baz=199,slow=1.9,SNR=4.9
comp=Z,0.4nm,0.6s
CMAR Chiang Mai Arr 90.34 290 P **P 21 57 08.6 +2.3**
comp=Z,0.3nm,0.3s,baz=152,slow=4.1,SNR=4.3
comp=Z,0.3nm,0.3s
ARCES ARCESS Array B 129.54 350 PKP **PKiKP 22 03 10.2 -0.1**
comp=Z,0.4nm,0.4s,baz=73,slow=2.0,SNR=14
FINES FINESS Array B 136.38 344 PKhKP PKPpre 22 03 17.7
comp=Z,0.4nm,0.6s,baz=70,slow=4.6,SNR=0.6
FINES PKP **PKiKP 22 03 24.7 +0.4**
comp=Z,2.0nm,0.9s,baz=66,slow=3.4,SNR=3.5
AKASG Malin Array Be 143.57 331 PKP PKPbc 22 03 34.5 +0.1
comp=Z,1.2nm,0.4s,baz=40,slow=3.9,SNR=11
EKA Eskdalemuir Ar 145.62 5 PKPbc **PKPab 22 03 41.5 -0.3**
comp=Z,0.6nm,0.5s,baz=344,slow=2.9,SNR=5.3
BRTR Keskin Array B 147.27 312 PKPbc **PKPbc 22 03 46.2 +0.4**
comp=Z,0.7nm,0.6s,baz=144,slow=2.7,SNR=5.3
CLL Collm 148.68 347 *i* PKPbc **PKiKP 22 03 49.9 +0.1**
GERES GERESS Array B 150.81 344 PKPbc **PKiKP 22 03 54.8 +0.4**
comp=Z,0.6nm,0.5s,baz=40,slow=2.3,SNR=7.0
TORD Torodi Ar. Bea 172.06 178 PKP **PKPdf 22 04 09.9 -0.4**
comp=Z,0.3nm,0.6s,baz=259,slow=1.0,SNR=2.5
TORD PKPab **PKPab 22 05 37.3 +0.6**
comp=Z,0.6nm,0.6s,baz=183,slow=4.7,SNR=4.9

*NOU **20** 21:53:06.5, 40.˚40S×173.˚35E, h185km, MLv4.2/12, Cook Strait, New Zealand*
*IDC **20** 21:53:07.2±1.7, 40.˚60S×173.˚65E, h165km±20km, mb3.0/2, mbtmp3.7/4, Error ellipse: s-maj=36.8km s-min=24.3km az=139.0*
*WEL **20** 21:53:10.9±0.9, 40˚S±4˚×17˚3E±˚, h138km±7km, M4.0/19, MLv4.0/19, Error ellipse: s-maj=0.0km s-min=0.0km az=93.9*
ISC 20 21:53:07.4±0.9, **40.˚49S**±0.˚04×**173.˚38E**±0.˚05, **h173**km±6km, **n153**, σ1§15/164, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.52**	**128**	P	**Pn**	**21 53 31.9**	**+0.5**
DUWZ				S	**Sn**	**21 53 48.2**	**-1.8**
TKNZ	**Takaka Hill**	**0.64**	**210**	P	**Pn**	**21 53 32.3**	**+0.3**
TKNZ				S	**Sn**	**21 53 49.1**	**-2.0**
NNZ	**Nelson**	**0.73**	**180**	P	**Pn**	**21 53 32.9**	**+0.4**
NNZ				S	**Sn**	**21 53 50.1**	**-1.9**
QRZ	**Quartz Range**	**0.73**	**242**	P	**Pn**	**21 53 32.8**	**+0.2**
QRZ				S	**Sn**	**21 53 49.8**	**-2.2**
QRZ	**Quartz Range**	**0.73**	**242**	P	**Pn**	**21 53 32.7**	**+0.2**
TCW	**Tory Channel**	**0.99**	**137**	P	**Pn**	**21 53 35.4**	**+1.1**
TCW				S	**Sn**	**21 53 53.3**	**-1.8**
MRNZ	**Matariki Terra**	**1.03**	**207**	P	**Pn**	**21 53 35.0**	**+0.4**
TUWZ	**Tuamarina**	**1.03**	**156**	P	**Pn**	**21 53 35.5**	**+0.9**
TUWZ				S	**Sn**	**21 53 53.8**	**-1.9**
NMEZ	**Namu Road**	**1.14**	**20**	P	**Pn**	**21 53 35.9**	**+0.4**
NMEZ				S	**Sn**	**21 53 56.2**	**-0.9**
KIW	**Kapiti Island**	**1.22**	**108**	P	**Pn**	**21 53 37.0**	**+0.8**
KIW				S	**Sn**	**21 53 56.0**	**-2.5**
NBEZ	**Newall Road No**	**1.27**	**17**	P	**Pn**	**21 53 37.1**	**+0.4**
NBEZ				S	**Sn**	**21 53 58.6**	**-0.7**
BSWZ	**Blackbirch Sta**	**1.28**	**163**	P	**Pn**	**21 53 37.8**	**+1.1**
KHEZ	**Kahui Hut**	**1.28**	**22**	P	**Pn**	**21 53 37.3**	**+0.4**
KHEZ	**Kahui Hut**	**1.28**	**22**	P	**Pn**	**21 53 37.1**	**+0.2**
PREZ	**Palmer Road**	**1.29**	**28**	P	**Pn**	**21 53 37.3**	**+0.4**
LREZ	**Lake Rotokare**	**1.29**	**38**	P	**Pn**	**21 53 37.3**	**+0.5**
WEL	**Wellington**	**1.32**	**128**	P	**Pn**	**21 53 38.1**	**+1.1**
THZ	**Tophouse**	**1.33**	**196**	P	**Pn**	**21 53 37.8**	**+0.6**
NEZ	**North Egmont**	**1.33**	**24**	P	**Pn**	**21 53 37.3**	**0.0**
PKE	**Pukeiti**	**1.37**	**20**	P	**Pn**	**21 53 38.0**	**+0.3**
OGWZ	**Otaki Gorge**	**1.40**	**104**	P	**Pn**	**21 53 38.7**	**+1.0**
CAW	**Cannon Point**	**1.42**	**116**	P	**Pn**	**21 53 38.9**	**+0.9**
WAZ	**Wanganui**	**1.43**	**60**	P	**Pn**	**21 53 39.0**	**+0.9**
DREZ	**Durham Road**	**1.44**	**26**	P	**Pn**	**21 53 38.6**	**+0.4**
OHWZ	**Ohakea**	**1.50**	**80**	P	**Pn**	**21 53 39.9**	**+1.1**
MHEZ	**Mangahewa**	**1.58**	**27**	P	**Pn**	**21 53 40.3**	**+0.7**
HOWZ	**Holdsworth Sta**	**1.67**	**105**	P	**Pn**	**21 53 41.3**	**+0.8**
MRZ	**Mangatainoka R**	**1.68**	**97**	P	**Pn**	**21 53 41.3**	**+0.7**
MSWZ	**Moikau Station**	**1.69**	**124**	P	**Pn**	**21 53 41.6**	**+1.0**
VRZ	**Vera Road**	**1.72**	**38**	P	**Pn**	**21 53 40.9**	**-0.1**
DSZ	**Denniston Nort**	**1.73**	**223**	P	**Pn**	**21 53 41.7**	**+0.6**
MTW	**Mount Morrison**	**1.74**	**113**	P	**Pn**	**21 53 42.1**	**+0.9**
PLWZ	**Palliser**	**1.78**	**128**	P	**Pn**	**21 53 42.5**	**+0.9**
PAWZ	**Paruwai Farm**	**1.79**	**121**	P	**Pn**	**21 53 42.6**	**+0.9**
POWZ	**Post Office Ro**	**1.82**	**88**	P	**Pn**	**21 53 42.7**	**+0.6**
PKVZ	**Pokaka**	**1.93**	**52**	P	**Pn**	**21 53 43.3**	**+0.1**
TIWZ	**Tintock**	**1.93**	**99**	P	**Pn**	**21 53 44.0**	**+0.8**
KHZ	**Kahutara**	**1.93**	**177**	P	**Pn**	**21 53 44.2**	**+1.1**
KHZ	**Kahutara**	**1.93**	**177**	P	**Pn**	**21 53 44.1**	**+0.9**
MTVZ	**Mangateitei**	**1.94**	**56**	P	**Pn**	**21 53 43.7**	**+0.2**
TRWZ	**Traveller**	**1.97**	**118**	P	**Pn**	**21 53 44.6**	**+1.0**
PRWZ	**Pori Road**	**1.97**	**93**	P	**Pn**	**21 53 44.8**	**+1.1**
TMWZ	**Te Maipa**	**2.00**	**109**	P	**Pn**	**21 53 45.0**	**+1.0**
TSZ	**Takapari Road**	**2.02**	**79**	P	**Pn**	**21 53 44.6**	**+0.4**
TRVZ	**Turoa**	**2.04**	**55**	P	**Pn**	**21 53 45.0**	**+0.3**
WNVZ	**Wahianoa**	**2.06**	**57**	P	**Pn**	**21 53 44.8**	**0.0**
DRZ	**Dome Shelter**	**2.07**	**55**	P	**Pn**	**21 53 46.3**	**+1.2**
FWVZ	**Far West T-bar**	**2.07**	**54**	P	**Pn**	**21 53 44.9**	**-0.1**
WHVZ	**Whangaehu Hut**	**2.08**	**55**	P	**Pn**	**21 53 45.4**	**+0.3**
MOVZ	**Moawhango**	**2.12**	**60**	P	**Pn**	**21 53 45.0**	**-0.4**
TWVZ	**Taurewa**	**2.12**	**49**	P	**Pn**	**21 53 45.3**	**-0.2**
TUVZ	**Tukino**	**2.13**	**56**	P	**Pn**	**21 53 45.7**	**+0.1**
DVHZ	**Dannevirke**	**2.13**	**86**	P	**Pn**	**21 53 45.8**	**+0.4**
NGZ	**Ngauruhoe**	**2.15**	**53**	P	**Pn**	**21 53 45.6**	**-0.3**
SNVZ	**South Ngauruho**	**2.17**	**54**	P	**Pn**	**21 53 45.9**	**-0.1**
WTVZ	**West Tongariro**	**2.18**	**52**	P	**Pn**	**21 53 46.0**	**-0.2**
CPWZ	**Castlepoint**	**2.18**	**102**	P	**Pn**	**21 53 47.4**	**+1.4**
NNVZ	**North Ngauruho**	**2.19**	**53**	P	**Pn**	**21 53 46.0**	**-0.3**
BFZ	**Birch Farm**	**2.19**	**96**	P	**Pn**	**21 53 46.8**	**+0.7**
BFZ	**Birch Farm**	**2.19**	**96**	P	**Pn**	**21 53 46.7**	**+0.7**
OTVZ	**Oturere**	**2.20**	**54**	P	**Pn**	**21 53 46.3**	**-0.1**
KRVZ	**Karewarewa**	**2.23**	**52**	P	**Pn**	**21 53 46.5**	**-0.1**
PNHZ	**Pukenui**	**2.23**	**76**	P	**Pn**	**21 53 46.7**	**+0.1**
ETVZ	**East Tongariro**	**2.24**	**54**	P	**Pn**	**21 53 46.8**	**0.0**
TMVZ	**Te Maari**	**2.25**	**53**	P	**Pn**	**21 53 47.0**	**0.0**
HIZ	**Hauiti**	**2.28**	**30**	P	**Pn**	**21 53 46.9**	**-0.1**
HIZ	**Hauiti**	**2.28**	**30**	P	**Pn**	**21 53 47.0**	**-0.1**
BHHZ	**Black Hill Sta**	**2.29**	**65**	P	**Pn**	**21 53 46.9**	**-0.4**
KATZ	**Kakaramea**	**2.33**	**50**	P	**Pn**	**21 53 48.0**	**0.0**
ANWZ	**Angora Road**	**2.36**	**90**	P	**Pn**	**21 53 48.7**	**+0.8**
WPHZ	**Waipukurau**	**2.38**	**81**	P	**Pn**	**21 53 48.8**	**+0.6**
RITZ	**Rihia Road**	**2.43**	**52**	P	**Pn**	**21 53 49.2**	**+0.3**
LTZ	**Lake Taylor**	**2.44**	**200**	P	**Pn**	**21 53 49.5**	**+0.5**
RATZ	**Rangitukua**	**2.45**	**49**	P	**Pn**	**21 53 49.5**	**+0.3**
GVZ	**Greta Valley S**	**2.49**	**186**	P	**Pn**	**21 53 50.2**	**+0.6**
PRHZ	**Porangahau**	**2.49**	**86**	P	**Pn**	**21 53 50.2**	**+0.6**
WATZ	**Wairara**	**2.54**	**46**	P	**Pn**	**21 53 50.3**	**+0.1**
KWHZ	**Kaweka Forest**	**2.56**	**67**	P	**Pn**	**21 53 50.5**	**-0.1**
HATZ	**Hinemaiaia**	**2.63**	**54**	P	**Pn**	**21 53 50.7**	**-0.6**
INZ	**Inchbonnie**	**2.67**	**212**	P	**Pn**	**21 53 51.9**	**+0.3**
PXZ	**Pawanui**	**2.70**	**81**	P	**Pn**	**21 53 52.4**	**+0.4**
TLZ	**Tolley Road**	**2.72**	**38**	P	**Pn**	**21 53 52.0**	**-0.5**
BKZ	**Black Stump Fm**	**2.73**	**62**	P	**Pn**	**21 53 51.9**	**-0.6**
BKZ	**Black Stump Fm**	**2.73**	**62**	P	**Pn**	**21 53 51.9**	**-0.6**
AMCZ	**Amberley**	**2.74**	**191**	P	**Pn**	**21 53 53.1**	**+0.5**
KAHZ	**Kahuranaki**	**2.77**	**77**	P	**Pn**	**21 53 53.3**	**+0.4**
MRHZ	**Matea Rd**	**2.86**	**56**	P	**Pn**	**21 53 53.2**	**-0.9**
WPRZ	**Whakapapatarin**	**2.91**	**48**	P	**Pn**	**21 53 54.2**	**-0.5**
CKHZ	**Cape Kidnapper**	**2.95**	**75**	P	**Pn**	**21 53 55.3**	**+0.2**
NMHZ	**Naumai**	**2.98**	**63**	P	**Pn**	**21 53 55.7**	**+0.1**
ALRZ	**Allen Road**	**2.99**	**51**	P	**Pn**	**21 53 55.0**	**-0.6**
GRRZ	**Galatos Road**	**3.00**	**46**	P	**Pn**	**21 53 55.9**	**+0.1**
OXZ	**Oxford**	**3.01**	**199**	P	**Pn**	**21 53 55.4**	**-0.4**
ARHZ	**Aropaoanui**	**3.04**	**67**	P	**Pn**	**21 53 56.1**	**-0.1**
PRRZ	**Plateau Road**	**3.06**	**51**	P	**Pn**	**21 53 55.8**	**-0.7**
HRRZ	**Handcock Road**	**3.07**	**48**	P	**Pn**	**21 53 56.4**	**-0.2**
HSRZ	**Hossack Road**	**3.10**	**46**	P	**Pn**	**21 53 57.0**	**0.0**
MTHZ	**Maungataniwha**	**3.13**	**60**	P	**Pn**	**21 53 56.6**	**-0.8**
HLRZ	**Highlands Stat**	**3.20**	**47**	P	**Pn**	**21 53 59.3**	**+1.0**
TOZ	**Tahuroa Road**	**3.21**	**32**	P	**Pn**	**21 53 57.8**	**-0.4**
NGRZ	**Ngongotaha**	**3.23**	**43**	P	**Pn**	**21 53 58.8**	**+0.2**
OKCZ	**Okains Bay**	**3.24**	**184**	P	**Pn**	**21 53 58.5**	**-0.2**
RAHZ	**Arahi**	**3.26**	**62**	P	**Pn**	**21 53 58.5**	**-0.4**
WVZ	**Waitaha Valley**	**3.26**	**217**	P	**Pn**	**21 53 58.8**	**0.0**
MQZ	**McQueen's Vall**	**3.26**	**189**	P	**Pn**	**21 53 58.2**	**-0.7**
WHHZ	**Waihua**	**3.28**	**66**	P	**Pn**	**21 53 59.0**	**-0.2**
MUGZ	**Murupara**	**3.30**	**54**	P	**Pn**	**21 53 58.2**	**-1.3**
TARZ	**Mount Tarawera**	**3.30**	**48**	P	**Pn**	**21 53 59.1**	**-0.4**
OMRZ	**Omania**	**3.32**	**45**	P	**Pn**	**21 53 59.3**	**-0.4**
RTZ	**Ruatahuna**	**3.35**	**57**	P	**Pn**	**21 53 59.0**	**-1.1**
RACZ	**Rakaia**	**3.37**	**196**	P	**Pn**	**21 54 00.0**	**-0.2**
AKCZ	**Akaroa Harbour**	**3.40**	**186**	P	**Pn**	**21 54 00.2**	**-0.5**
SNGZ	**Shannon Statio**	**3.50**	**62**	P	**Pn**	**21 54 01.4**	**-0.5**
AWAZ	**Awhitu Peninsu**	**3.56**	**16**	P	**Pn**	**21 54 04.5**	**+1.8**
MARZ	**Manawahe**	**3.57**	**47**	P	**Pn**	**21 54 02.4**	**-0.5**
KNZ	**Kokohu**	**3.62**	**68**	P	**Pn**	**21 54 02.7**	**-0.7**
GCSZ	**Gaunt Creek Bo**	**3.63**	**218**	P	**Pn**	**21 54 03.4**	**-0.1**
WACZ	**Wakanui South**	**3.64**	**198**	P	**Pn**	**21 54 00.9**	**-2.7**
URZ	**Urewera**	**3.65**	**54**	P	**Pn**	**21 54 02.1**	**-1.7**
41nm,0.3s,baz=230,slow=17,SNR=89							
URZ				S	**Sn**	**21 54 42.9**	**-4.8**
93nm,0.3s,baz=176,slow=18,SNR=25							
URZ	**Urewera**	**3.65**	**54**	P	**Pn**	**21 54 02.1**	**-1.7**
URZ	**Urewera**	**3.65**	**54**	P	**Pn**	**21 54 02.1**	**-1.7**
MKAZ	**Moumakai**	**3.65**	**23**	P	**Pn**	**21 54 04.5**	**+0.7**
RPZ	**Rata Peaks**	**3.66**	**207**	P	**Pn**	**21 54 03.4**	**-0.5**
21nm,0.3s,baz=28,slow=4.5,SNR=46							
RPZ				S	**Sn**	**21 54 43.1**	**-5.1**
40nm,0.3s,baz=305,slow=24,SNR=39							
RPZ	**Rata Peaks**	**3.66**	**207**	P	**Pn**	**21 54 03.6**	**-0.3**
RPZ	**Rata Peaks**	**3.66**	**207**	P	**Pn**	**21 54 04.3**	**+0.4**
WTAZ	**Waiatarua**	**3.67**	**15**	P	**Pn**	**21 54 01.8**	**-2.3**
RAGZ	**Rawiri**	**3.70**	**59**	P	**Pn**	**21 54 03.7**	**-0.8**
MHGZ	**Mahia Peninsul**	**3.73**	**71**	P	**Pn**	**21 54 04.5**	**-0.3**
RIGZ	**Rimuhau**	**3.82**	**64**	P	**Pn**	**21 54 05.0**	**-1.1**
MWZ	**Matawai**	**3.86**	**58**	P	**Pn**	**21 54 05.1**	**-1.5**
TKGZ	**Te Karaka**	**4.01**	**61**	P	**Pn**	**21 54 07.6**	**-0.9**
FOZ	**Fox Glacier**	**4.04**	**220**	P	**Pn**	**21 54 08.1**	**-0.6**
RUGZ	**Raukumara Rang**	**4.18**	**54**	P	**Pn**	**21 54 08.6**	**-2.1**
TWGZ	**Tauwhareparae**	**4.25**	**59**	P	**Pn**	**21 54 10.5**	**-1.0**
TMZ	**Timaru**	**4.27**	**204**	P	**Pn**	**21 54 11.2**	**-0.5**
HAZ	**Te Kaha**	**4.37**	**53**	P	**Pn**	**21 54 10.8**	**-2.3**
PUZ	**Puketiti**	**4.48**	**59**	P	**Pn**	**21 54 13.0**	**-1.6**
LBZ	**Lake Benmore**	**4.56**	**210**	P	**Pn**	**21 54 14.6**	**-0.9**
WMGZ	**Waiomatatini S**	**4.73**	**57**	P	**Pn**	**21 54 15.9**	**-1.8**
MXZ	**Matakaoa Point**	**4.82**	**54**	P	**Pn**	**21 54 17.3**	**-1.5**
MXZ	**Matakaoa Point**	**4.82**	**54**	P	**Pn**	**21 54 17.6**	**-1.2**
JCZ	**Jackson Bay**	**4.95**	**222**	P	**Pn**	**21 54 20.0**	**-0.6**
JCZ	**Jackson Bay**	**4.95**	**222**	P	**Pn**	**21 54 20.2**	**-0.4**
ODZ	**Otahua Downs**	**4.98**	**203**	P	**Pn**	**21 54 20.5**	**-0.4**
ODZ	**Otahua Downs**	**4.98**	**203**	P	**Pn**	**21 54 20.9**	**0.0**
WKZ	**Wanaka**	**5.40**	**215**	P	**Pn**	**21 54 31.2**	**+4.8**
MLZ	**Mavora Lakes**	**6.22**	**217**	P	Pn	21 54 42.7	+5.5
SYZ	**Scrubby Hill**	**6.79**	**206**	P	**Pn**	**21 54 44.1**	**-0.5**
SYZ	**Scrubby Hill**	**6.79**	**206**	P	**Pn**	**21 54 44.8**	**+0.2**
CTZ	**Chatham Island**	**8.11**	**117**	P	**Pn**	**21 55 04.2**	**+2.2**
ASAR	**Alice Springs**	**37.07**	**285**	P	**P**	**22 00 03.2**	**+2.3**
0.2nm,0.4s,baz=132,slow=7.4,SNR=5.7							
ASAR				PcP	**PcP**	**22 02 19.2**	**+1.4**
0.3nm,0.5s,baz=124,slow=3.9,SNR=2.2							
0.2nm,0.4s							
WRA	**Warramunga Arr**	**39.05**	**290**	P	**P**	**22 00 19.9**	**+2.3**
0.3nm,0.3s,baz=129,slow=7.7,SNR=12							
0.3nm,0.3s							
TORD	**Torodi Ar. Bea**	**151.81**	**197**	PKPbc	**PKPbc**	**22 12 42.3**	**+0.4**
0.1nm,0.4s,baz=172,slow=2.8,SNR=1.2							

*AEIC **20** 22:02:24±3.1, 54.˚6N±0.˚2×164.˚4W±0.˚1, h7km±7km, Error ellipse: s-maj=28.1km s-min=3.6km az=155.0*
NEIC 20 22:02:26.2±2.5, **54.˚6N**±0.˚2×**164.˚5W**±0.˚2, **h10**km±2km, **ML3.5**/8, **ML3.1**(AEIC), **Error ellipse: s-maj=39.3km s-min=3.2km az=333.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.66**	**68**		Pg	22 02 37.6	-1.4
AKUT	**Akutan**	**0.90**	**238**		Pg	22 02 42.2	-1.2
UNV	**Unalaska Valle**	**1.42**	**238**		Pn	22 02 51.0	-0.9
SDPT	**Sand Point**	**2.42**	**71**		Pn	22 03 06.3	+0.5
CNBA	**Chernabura Isl**	**2.85**	**84**	Pn	Pn	22 03 11.1	-0.5
CNBA				IAML		22 04 27.4	
comp=E,80nm,3.6s							
NIKH	**Nikolski High**	**3.07**	**239**	Pn	Pn	22 03 15.1	+0.4
CHGN	**Chignik**	**3.85**	**61**		Pn	22 03 26.0	+0.6
CHGN					Sn	22 04 12.4	+1.9
CHGN				IAML		22 04 16.8	
comp=E,123nm,0.5s							

*AEIC **20** 22:03:10±1.2, 54.˚57N±0.˚06×164.˚38W±0.˚04, h7km±3km, Error ellipse: s-maj=8.7km s-min=2.4km az=160.0*
NEIC 20 22:03:10.5±1.4, **54.˚59N**±0.˚08×**164.˚38W**±0.˚07, **h6**km±1km, **ML3.7**/12, **ML3.3**(AEIC), **Error ellipse: s-maj=12.8km s-min=2.6km az=155.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.62**	**64**	Pg	Pg	22 03 23.0	+0.5
FALS				Sg	Sg	22 03 30.6	+0.1
AKUT	**Akutan**	**0.93**	**241**	Pg	Pg	22 03 27.9	-0.4
AKUT				Sg	Sg	22 03 40.6	+0.3
UNV	**Unalaska Valle**	**1.45**	**240**	Pn	Pn	22 03 36.5	-0.7
UNV				Sn	Sn	22 03 56.0	-0.5
SDPT	**Sand Point**	**2.38**	**70**	Pg	Pb	22 03 53.8	+0.1
SDPT					Sb	22 04 23.2	0.0
SDPT				IAML		22 04 26.5	
comp=E,507nm,0.9s							
SDPT				IAML		22 04 29.7	
comp=N,572nm,0.6s							
CNBA	**Chernabura Isl**	**2.79**	**83**	Pn	Pn	22 03 53.0	-2.7
CNBA				IAML		22 04 45.4	
comp=N,145nm,1.0s							
NIKH	**Nikolski High**	**3.11**	**240**	Pn	Pn	22 03 58.1	-1.9
CHGN	**Chignik**	**3.81**	**61**		Pn	22 04 11.7	+2.1
CHGN				IAML		22 05 07.1	
comp=N,78nm,0.6s							
CHGN				IAML		22 05 17.0	
comp=E,117nm,0.7s							
SPIA	**Saint Paul Isl**	**4.20**	**311**	Pn	Pn	22 04 13.6	-1.3
CHIR	**Chirikof Islan**	**5.17**	**73**	Pn	Pn	22 04 28.9	+0.6
SII	**Sitkinak Islan**	**6.11**	**67**	Pn	Pn	22 04 41.1	-0.2
O18K	**Koktuh Hills**	**7.25**	**40**	Pn	Pn	22 04 57.9	+1.0
KDAK	**Kodiak Island**	**7.32**	**59**	Pn	Pn	22 04 57.6	-0.2
Q19K	**Cape Douglas,**	**7.33**	**49**	Pn	Pn	22 04 59.0	+1.0
N18K	**Kilae Creek**	**7.62**	**33**	Pn	Pn	22 05 01.8	-0.1

*ISK **20** 22:03:11.1, 35.˚96N×31.˚29E, h10km, ML2.3/16*
*DDA **20** 22:03:14.3±0.0, 36.˚17N×31.˚44E, h28km±1km, ML2.2*
*NIC **20** 22:03:15.1±0.0, 36.˚15N×31.˚58E, h31km±20km, Ml2.6/5*

ISC 20 22:03:15.4±1.2, **36.˚02N**±0.˚04×**31.˚36E**±0.˚03, **h35**km, **n36**, σ1§74/57, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.81**	**74**	PG	**Pn**	**22 03 29.1**	**-1.1**
GAZI				SG	**Sn**	**22 03 40.0**	**-1.0**
GAZI	**Gazipasa**	**0.81**	**74**	P	**Pn**	**22 03 29.2**	**-1.1**
GAZI				S	**Sn**	**22 03 38.4**	**-2.6**
GAZI				*i* AML	AML	22 03 40.0	
comp=Z,95nm,0.4s							
GAZI				*i* AML	AML	22 03 40.0	
comp=N,95nm,0.5s							
GAZI				*i* AML	AML	22 03 40.0	
comp=E,111nm,0.3s							
AKUM	**Antalya-Kumluc**	**0.88**	**290**	P	**Pn**	**22 03 31.4**	**+0.2**
AKUM				S	**Sn**	**22 03 45.3**	**+2.6**
KEPZ	**Antalya-Kepez**	**0.90**	**13**	P	**Pn**	**22 03 29.3**	**-2.4**
KEPZ				S	**Sn**	**22 03 40.0**	**-3.5**
KORT	**Korkueli**	**1.27**	**321**	PN	**Pn**	**22 03 35.9**	**-0.9**
KORT	**Korkueli**	**1.27**	**321**	P	**Pn**	**22 03 35.6**	**-1.2**
KORT				S	**Sn**	**22 03 56.5**	**+3.8**
AKMS	**Akamas**	**1.28**	**141**	P	**Pn**	**22 03 38.2**	**+1.4**
AKMS				S	**Sn**	**22 03 53.5**	**+0.8**
AKMS				AML	AML	22 04 04.0	
0.4nm,0.4s							
AKMS				AML	AML	22 04 04.0	
0.4nm,0.4s							
AKMS				AML	AML	22 04 04.7	
0.4nm,0.5s							
AKMS				AML	AML	22 04 04.7	
0.4nm,0.5s							
HDMB	**Hadim**	**1.31**	**44**	PN	**Pn**	**22 03 37.6**	**+0.2**
HDMB				SN	**Sn**	**22 03 56.3**	**+2.6**
ALFC	**Alefka**	**1.33**	**130**	P	**Pn**	**22 03 37.0**	**-0.5**
ALFC				S	**Sn**	**22 03 53.7**	**-0.3**
ALFC				AML	AML	22 04 03.1	
0.3nm,0.3s							
ALFC				AML	AML	22 04 03.1	
0.3nm,0.3s							
ALFC				AML	AML	22 04 04.9	
0.4nm,0.2s							
ALFC				AML	AML	22 04 04.9	
0.4nm,0.2s							
ELL	**Elmali**	**1.38**	**302**	P	**Pn**	**22 03 38.9**	**+0.7**
ELL				S	**Sn**	**22 03 58.5**	**+3.2**
ERMK	**Ermenek**	**1.40**	**63**	P	**Pn**	**22 03 38.4**	**-0.2**
ERMK				S	**Sn**	**22 04 00.4**	**+4.5**
ERMK				*i* AML	AML	22 04 02.0	
comp=E,36nm,0.4s							
ERMK				*i* AML	AML	22 04 05.0	
comp=N,43nm,0.3s							
TEKE	**Tekeli-Mersin**	**1.43**	**85**	PN	**Pn**	**22 03 38.4**	**-0.4**
AKAS	**Kas**	**1.44**	**279**	PN	**Pn**	**22 03 37.6**	**-1.4**
AKAS				SN	**Sn**	**22 03 55.9**	**-0.8**
AKAS	**Kas**	**1.44**	**279**	P	**Pn**	**22 03 37.3**	**-1.7**
AKAS				S	**Sn**	**22 03 55.2**	**-1.6**
LEF	**Lefka**	**1.54**	**125**	PN	**Pn**	**22 03 39.2**	**-1.1**
BERE	**Bereket-Mersin**	**1.54**	**77**	PN	**Pn**	**22 03 40.1**	**-0.4**
TEVE	**Tevekalti-Mers**	**1.74**	**76**	PN	**Pn**	**22 03 42.9**	**-0.2**
KKBE	**Karaman, Kazim**	**1.75**	**46**	P	**Pn**	**22 03 43.9**	**+0.6**
KKBE				S	**Sn**	**22 04 05.5**	**+1.1**
KKBE				*i* AML	AML	22 04 09.0	
comp=N,21nm,0.3s							
KKBE				*i* AML	AML	22 04

PB06	IPOC Station P	2.86	184	P	Pn	22 10 58.8	-3.2
SOEJ	Jacaque	3.06	21	P	Pn	22 11 05.8	+0.8
BBOE	La Paz, Chanca	3.28	24	P	Pn	22 11 08.5	+0.5
PB15	IPOC Station P	3.35	182	*e*P	Pn	22 11 08.8	+0.1
PB15				IAML		22 12 07.7	
	comp=E,347nm,0.5s						
LPAZ	La Paz	3.72	18	P	Pn	22 11 14.6	+0.6
PB10	IPOC Station P	3.82	197	*e*P	Pn	22 11 13.5	-1.3

*NEIC **20** 22:11:07.9±1.8, 2°.1S±0°.1×101°.6E±0°.2, h144km±7km, mb4.1/7, Error ellipse: s-maj=26.3km s-min=6.8km az=53.0*
*IDC **20** 22:11:09.9±9.0, 2°.29S×101°.52E, h175km±84km, mb3.3/9, mbtmp3.8/9, Error ellipse: s-maj=48.7km s-min=16.0km az=57.0*
ISC 20 22:11:07.9±0.6, **2°.15S**±0°.09×**101°.5E**±0°.1, **h150**km, **n20,** σ1§**21**/22, **mb3.8**/13, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNI	Bangkinang	2.50	349	Pn	Pn	22 11 48.7	-0.4
MNAI	Manna	2.62	147	Pn	Pn	22 11 50.0	-0.6
MNAI				Sn	Sn	22 12 22.5	-0.9
GSI	Gunungsitoli	5.24	311	Pn	Pn	22 12 24.8	+0.3
GSI				Sn	Sn	22 13 21.4	-2.9
KULM	Kulim	7.44	353	Pn	Pn	22 12 53.4	-0.4
CMAR	Chiang Mai Arr	20.63	353	P	P	22 15 38.3	+2.6
	0.6nm,0.3s,baz=174,slow=9.0,SNR=1.9 0.6nm,0.3s						
WB0	Warramunga Arr	36.58	121	P	P	22 17 58.4	-1.3
WB0				IAmb	IAmb	22 18 28.1	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	36.60	121	P	P	22 17 58.5	-1.4
	comp=Z,0.2nm,0.7s,baz=310,slow=8.8,SNR=6.7 comp=Z,0.2nm,0.7s						
WRA	Warramunga Arr	36.60	121	P	P	22 17 59.9	0.0
WB2	Warramunga Arr	36.61	121	P	P	22 17 59.1	-0.9
WB2				IAmb	IAmb	22 18 41.0	
	comp=Z,9.0nm,1.5s						
ASAR	Alice Springs	37.93	127	P	P	22 18 10.3	-0.8
	comp=Z,0.3nm,0.4s,baz=304,slow=8.1,SNR=5.3 comp=Z,0.3nm,0.4s						
SONM	Songino Array	49.95	4	P	P	22 19 47.2	+0.5
	comp=Z,1.1nm,0.5s,baz=190,slow=9.1,SNR=8.5 comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	51.59	343	P	P	22 19 58.5	-0.4
	comp=Z,0.8nm,0.4s,baz=159,slow=8.9,SNR=18 comp=Z,0.8nm,0.4s						
USRK	Ussuriysk Ar.	53.58	27	P	P	22 20 13.8	+0.4
	comp=Z,1.4nm,0.5s,baz=215,slow=5.4,SNR=8.0 comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	57.61	348	P	P	22 20 41.6	-0.3
	comp=Z,0.8nm,0.3s,baz=167,slow=6.9,SNR=5.9 comp=Z,0.8nm,0.3s						
ABKAR	Akbulak array	62.51	331	P	P	22 21 15.4	-0.1
ABKAR				IAmb	IAmb	22 21 15.7	
	comp=Z,1.8nm,0.6s						
BRTR	Keskin Array B	74.55	312	P	P	22 22 30.7	0.0
	comp=Z,0.5nm,0.6s,baz=96,slow=7.2,SNR=3.9 comp=Z,0.5nm,0.6s						
VNDA	Vanda	81.72	169	P	P	22 23 10.6	+1.4
VNDA				IAmb	IAmb	22 23 45.6	
	comp=Z,2.9nm,1.5s						
BURAR	Bucovina Array	82.38	318	P	P	22 23 12.1	-1.3
BURAR				IAmb	IAmb	22 23 53.9	
	comp=Z,1.6nm,1.4s						
ARCES	ARCESS Array B	87.13	340	P	P	22 23 36.9	+0.4
	comp=Z,0.3nm,0.3s,baz=100,slow=5.8,SNR=7.2 comp=Z,0.3nm,0.3s						
SNAA	Sanae	92.48	198	P	P	22 24 02.9	+1.3

*NEIC **20** 22:17:11.6±0.2, 17°.7S±0°.2×179°.43W±0°.08, h580km±10km, mb4.3/10, Error ellipse: s-maj=34.0km s-min=9.9km az=171.0*
*IDC **20** 22:17:11.0±44.0, 17°.58S×179°.45W, h581km±130km, mb3.1/3, mbtmp4.0/4, Error ellipse: s-maj=898.6km s-min=125.5km az=80.0*
ISC 20 22:17:12.1±0.8, **17°.8S**±0°.2×**179°.5W**±0°.1, **h600**km, **n16,** σ1§**31**/16, **mb4.1**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.38	271	P	P	22 18 25.4	-2.8
	13nm,0.6s,baz=107,slow=13,SNR=13						
MSVF	Nonsavu	2.38	271	P	P	22 18 25.6	-2.6
PPTF	Pamatai, Papee	28.47	94	P	P	22 22 20.6	-0.3
PPTF				IAmb	IAmb	22 22 24.2	
	comp=Z,42nm,0.8s						
STKA	Stephens Creek	37.80	241	P	P	22 23 39.9	+0.8
	comp=Z,2.2nm,0.8s,baz=58,slow=9.5,SNR=2.0 comp=Z,2.2nm,0.8s						
WB0	Warramunga Arr	43.63	260	P	P	22 24 25.8	+0.4
WB0				IAmb	IAmb	22 24 26.4	
	comp=Z,6.5nm,1.1s						
WB2	Warramunga Arr	43.66	260	P	P	22 24 25.8	+0.2
WRA	Warramunga Arr	43.67	260	P	P	22 24 25.6	0.0
	comp=Z,0.6nm,0.4s,baz=95,slow=7.1,SNR=26 comp=Z,0.6nm,0.4s						
WRA	Warramunga Arr	43.67	260	P	P	22 24 25.8	+0.2
AS31	Alice Springs	43.85	254	P	P	22 24 27.9	+0.9
AS31				IAmb	IAmb	22 24 28.4	
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	43.86	254	P	P	22 24 27.8	+0.8
	comp=Z,5.4nm,0.6s,baz=88,slow=8.4,SNR=74 comp=Z,5.4nm,0.6s						
ASAR	Alice Springs	43.86	254	P	P	22 24 27.4	+0.4
RPN	Rapa Nui	64.75	112	P	P	22 26 53.5	+0.5
JGF	Kuroka	67.05	323	P	P	22 27 07.4	+0.3
JGF				IAmb	IAmb	22 27 15.8	
	comp=Z,5.8nm,0.9s						
ERM	Erimo	68.81	331	P	P	22 27 19.5	+2.0
JHS	Saijyo	69.17	320	P	P	22 27 19.0	-0.9
MYKOM	Kota Tinggi	77.89	276	P	P	22 28 10.2	+0.4
MYKOM				IAmb	IAmb	22 28 12.9	
	comp=Z,7.0nm,1.0s						

*TIF **20** 22:22:37.8, 42°.57N×43°.47E, h15km*
*NORS **20** 22:22:37.5±0.0, 42°.53N×43°.45E, h8km, MPVA3.7*
*DDA **20** 22:22:38.1±0.0, 42°.46N×43°.39E, h4km±2km, ML2.7*
*MOS **20** 22:22:38.4±0.0, 42°.55N×43°.41E, h14km, MPVA3.6*
ISC 20 22:22:38.2±0.8, **42°.55N**±0°.01×**43°.46E**±0°.02, **h13**km±4km, **n57,** σ0§**75**/103, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.04	357	P	Pg	22 22 40.7	0.0
ONI				S	Sg	22 22 42.4	0.0
ONI	Oni	0.04	357	*e*Pg	Pg	22 22 40.6	0.0
ONI				*e*Sg	Sg	22 22 42.4	0.0
DIGR	Digorskoe uzhe	0.36	15	*i* Pg	Pg	22 22 45.3	-0.3
DIGR				*e*Sg	Sg	22 22 50.5	0.0
TKB	Tkibuli	0.40	240	P	Pb	22 22 46.8	-0.3
TKB				S	Sb	22 22 53.2	+0.2
TKB	Tkibuli	0.40	240	*e*Pg	Pb	22 22 46.8	-0.3
TKB				*e*Sg	Sb	22 22 53.2	+0.2
ZEI	Tsey	0.41	54	*i* Pg	Pg	22 22 46.4	0.0
ZEI				*e*Sg	Sg	22 22 52.1	+0.2
ALIG	Mtskhetisjvari	0.47	162	P	Pb	22 22 47.9	-0.4
ALIG				S	Sb	22 22 55.1	0.0
ALIG	Mtskhetisjvari	0.47	162	*e*Pg	Pb	22 22 47.9	-0.4
ALIG				*e*Sg	Sb	22 22 55.1	0.0
LACR	Lac	0.68	66	*i* Pg	Pg	22 22 51.2	-0.2
LACR				*e*Sg	Sg	22 23 00.3	-0.1
KORR	Kora	0.70	40	*e*Pg	Pb	22 22 52.1	-0.2
KORR				*e*Sg	Sb	22 23 02.9	+1.0
GUDG	Gudauri	0.76	96	P	Pb	22 22 53.8	+0.4
GUDG	Gudauri	0.76	96	*e*Pg	Pb	22 22 53.8	+0.4
LSNR	Lesken	0.78	20	*i* Pg	Pb	22 22 53.4	-0.2
LSNR				*e*Sg	Sb	22 23 04.6	+0.4
BKRG	Bakuriani	0.79	176	P	Pb	22 22 54.1	+0.2
BKRG				S	Sn	22 23 05.9	-1.1
BKRG	Bakuriani	0.79	176	*e*Pg	Pb	22 22 54.1	+0.2
BKRG				*e*Sg	Sn	22 23 05.9	-1.1
PNSH	Pansheti	0.86	84	P	Pg	22 22 54.6	-0.3
PNSH				S	Sg	22 23 05.5	-0.6
PNSH	Pansheti	0.86	84	*e*Pg	Pg	22 22 54.6	-0.3
PNSH				*e*Sg	Sg	22 23 05.5	-0.6
ARNR	Ardon	0.88	44	*e*Pg	Pn	22 22 56.1	-0.2
ARNR				*e*Sg	Sn	22 23 09.2	+0.2
NEY	Neytrino	0.88	323	*e*Pg	Pg	22 22 54.7	-0.5
NEY				*e*Sg	Sg	22 23 05.8	-1.1
ABS	Abastumani	0.93	211	P	Pg	22 22 56.3	+0.3
ABS	Abastumani	0.93	211	*e*Pg	Pg	22 22 56.3	+0.3
STDR	Stavd-Durt	0.93	28	*i* Pg	Pn	22 22 57.5	+0.4
STDR				*e*Sg	Sn	22 23 10.2	-0.2
NCK	Nalchik	0.95	6	*e*Pg	Pn	22 22 57.1	-0.2
NCK				*e*Sg	Sn	22 23 11.1	+0.3
AKH	Akhalkalaki	1.14	179	P	Pg	22 23 00.1	0.0
AKH				S	Sn	22 23 16.4	+0.7
AKH	Akhalkalaki	1.14	179	*e*Pg	Pg	22 23 00.1	0.0
AKH				*e*Sg	Sn	22 23 16.4	+0.7
KMGR	Komgaron	1.16	63	*e*Pg	Pn	22 22 59.9	-0.2
KMGR				*e*Sg	Sn	22 23 18.0	+2.1
GHRG	Ghorjomi	1.16	226	*e*Pg	Pg	22 23 00.4	-0.1
GHRG				*e*Sg	Sn	22 23 17.4	+1.2
KBZ	Khabaz	1.25	341	*e*Pg	Pn	22 23 01.2	-0.2
KBZ				*i* Sg	Sb	22 23 17.4	-0.2
SHTL	Shatili	1.26	85	P	Pb	22 23 01.9	0.0
KBTC	Kuba-Taba	1.27	358	*i* Pg	Pg	22 23 03.2	+0.6
KBTC				*e*Sg	Sg	22 23 20.9	+1.9
BTNK	Botanikuri	1.32	130	P	Pn	22 22 56.8	-5.6
SHA1	Shidzhatmaz	1.32	334	*e*Pg	Pg	22 23 03.3	-0.4
SHA1				*e*Sg	Sg	22 23 20.6	-0.3
DMNI	Dmanisi	1.34	156	P	Pb	22 23 03.3	+0.1
DMNI				S	Sg	22 23 21.4	+0.1
DMNI	Dmanisi	1.34	156	*e*Pg	Pb	22 23 03.3	+0.1
DMNI				*e*Sg	Sg	22 23 21.4	+0.1
PRTR	Priterechnaya	1.35	26	*e*Pg	Pg	22 23 03.7	-0.3
PRTR				*e*Sg	Sg	22 23 22.8	+1.3
KIV0	Kislovodsk Arr	1.51	339	*e*Pg	Pb	22 23 06.4	+0.2
KIV0				*e*Sg	Sg	22 23 26.0	-0.9
KIV	Kislovodsk	1.51	338	*e*Pg	Pb	22 23 06.4	+0.2
KIV				*i* Sg	Sg	22 23 26.1	-0.8
DOMR	Dombai	1.54	300	*e*Pg	Pb	22 23 05.8	-0.8
DOMR				*e*Sg	Sb	22 23 25.9	-0.2
BATM	Batumi	1.62	235	P	Pb	22 23 07.6	-0.3
BATM				S	Sg	22 23 30.0	-0.2
BATM	Batumi	1.62	235	*e*Pg	Pb	22 23 07.6	-0.3
BATM				*e*Sg	Sg	22 23 30.0	-0.2
DBOC	Borcka	1.80	229	P	Pb	22 23 10.5	-0.5
DBOC				S	Sb	22 23 34.0	+0.6
DBOC				*i* AML	AML	22 23 35.0	
	comp=Z,62nm,0.5s						
DBOC				*i* AML	AML	22 23 36.0	
	comp=E,107nm,0.5s						
GROC	Groznyy	1.84	68	*e*Pg	Pb	22 23 11.0	-0.7
GROC				*e*Sg	Sb	22 23 34.7	+0.1
EAK	Akyaka	1.86	176	P	Pn	22 23 10.2	+0.2
EAK				S	Sb	22 23 35.8	+0.2
DAGI	Agillar	1.87	219	P	Pb	22 23 12.4	+0.1
DAGI				S	Sg	22 23 37.7	-0.6
ARXR	Arkhyz	1.89	303	*e*Pg	Pb	22 23 12.0	-0.7
ARXR				*e*Sg	Sb	22 23 35.4	-0.9
DVE	Vedeno	2.01	77	*e*Pg	Pg	22 23 15.9	-0.8
DVE				*e*Sg	Sb	22 23 40.0	+0.4
DBAD	Bademkaya	2.02	221	P	Pb	22 23 14.8	0.0
DBAD				S	Sg	22 23 41.7	-1.4
DBAD				*i* AML	AML	22 23 43.0	
	comp=N,58nm,0.5s						
DBAD				*i* AML	AML	22 23 44.0	
	comp=E,88nm,0.6s						
BTLR	Botlikh	2.05	86	*e*Pg	Pg	22 23 16.8	-0.6
BTLR				*e*Sg	Sg	22 23 43.8	-0.2
DDEM	Demirkent	2.09	218	P	Pb	22 23 16.3	+0.3
DDEM				S	Sb	22 23 43.3	+1.4
DDEM				*i* AML	AML	22 23 46.0	
	comp=E,87nm,0.5s						
DDEM				*i* AML	AML	22 23 47.0	
	comp=N,148nm,0.4s						
DIGO	Kars	2.13	182	P	Pb	22 23 16.0	-0.8
DIGO				S	Sg	22 23 45.4	-1.4
LGD	Lagodekhi	2.19	108	P	Pg	22 23 18.9	-1.2
LGD				S	Sg	22 23 48.2	-0.4
LGD	Lagodekhi	2.19	108	*e*Pg	Pg	22 23 18.9	-1.2
LGD				*e*Sg	Sg	22 23 48.2	-0.4
DDFL	Dedoflistskaro	2.27	118	P	Pg	22 23 22.9	+1.2
DLMR	Dylym	2.39	76	*e*Pn	Pb	22 23 19.7	-1.4
VSLR	Vesyoloye	2.67	291	*e*Sn	Sn	22 23 54.1	+0.9
KRIK	Erzurum-spir	2.91	222	P	Pn	22 23 22.5	-2.0
BAYB	BAYBURT	3.32	227	P	Pn	22 23 32.3	+2.2
BAYB				S	Sb	22 24 19.8	+2.4

*IDC **20** 22:55:12.3±7.5, 23°.77S×179°.63W, h529km±49km, mb3.5/3, mbtmp4.3/4, Error ellipse: s-maj=136.0km s-min=28.4km az=135.0*
*NEIC **20** 22:55:14.6±1.1, 23°.5S±0°.1×179°.7W±0°.1, h560km±5km, mb4.3/24, Error ellipse: s-maj=19.9km s-min=18.3km az=147.0*
ISC 20 22:55:13.5±0.7, **23°.59S**±0°.10×**179°.8W**±0°.1, **h532**km, **n36,** σ1§**32**/36, **mb4.3**/14, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.90	164	P	P	22 56 53.4	+3.2
MSVF	Nonsavu	6.15	341	P	P	22 56 54.3	+1.4
	1.5nm,0.3s,baz=215,slow=14,SNR=4.2						
MSVF	Nonsavu	6.15	341	P	P	22 56 54.5	+1.5
MARNC	Mare, Loyalty	11.42	278	P	P	22 57 47.8	+1.7
AFI	Afiamalu	12.27	40	P	P	22 57 54.0	-1.1
NNZ	Nelson	18.48	196	P	P	22 58 55.6	-0.8
NNZ				IAmb	IAmb	22 59 28.2	
	comp=Z,5.9nm,1.1s						
RPZ	Rata Peaks	21.44	198	P	P	22 59 24.5	+1.2
FOZ	Fox Glacier	21.65	201	P	P	22 59 24.8	-0.4
WHZ	Wether Hill Ro	24.36	201	P	P	22 59 51.5	+2.1
WHZ				IAmb	IAmb	22 59 56.7	
	comp=Z,19nm,1.2s						
EIDS	Eidsvold	26.52	260	P	P	23 00 09.6	+0.9
EIDS				IAmb	IAmb	23 00 51.9	
	comp=Z,9.5nm,1.2s						
CTAO	Charters Tower	31.64	270	P	P	23 00 54.1	+0.8
TOO	Toolangi	32.76	237	P	P	23 01 01.7	-0.8
STKA	Stephens Creek	34.99	248	P	P	23 01 21.9	+0.5
	comp=Z,2.0nm,0.4s,baz=76,slow=11,SNR=5.7 comp=Z,2.0nm,0.4s						
STKA	Stephens Creek	34.99	248	P	P	23 01 22.2	+0.8
BBOO	Buckleboo	39.72	247	P	P	23 01 59.7	-0.4
AS31	Alice Springs	42.25	260	P	P	23 02 20.5	+0.1
ASAR	Alice Springs	42.25	260	P	P	23 02 20.1	-0.3
	comp=Z,3.4nm,0.5s,baz=97,slow=7.2,SNR=33 comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	42.25	260	P	P	23 02 20.3	0.0
WR0	Warramunga Arr	42.40	266	P	P	23 02 20.9	-0.7
WR0				IAmb	IAmb	23 02 22.0	
	comp=Z,2.9nm,0.6s						
WB2	Warramunga Arr	42.58	266	P	P	23 02 22.5	-0.5
WB2				IAmb	IAmb	23 02 22.7	
	comp=Z,7.2nm,0.5s						
WB0	Warramunga Arr	42.58	266	P	P	23 02 22.4	-0.6
WB0				IAmb	IAmb	23 02 23.0	
	comp=Z,7.4nm,0.7s						
WRAB	Tennant Creek	42.58	266	P	P	23 02 22.2	-0.8
WRAB				IAmb	IAmb	23 02 22.7	
	comp=Z,5.7nm,0.5s						
WRA	Warramunga Arr	42.59	266	P	P	23 02 22.4	-0.7
	comp=Z,5.3nm,0.5s,baz=102,slow=8.2,SNR=230 comp=Z,5.3nm,0.5s						
WRA	Warramunga Arr	42.59	266	P	P	23 02 22.6	-0.5
FORT	Forrest	46.58	249	P	P	23 02 53.1	-0.5
SOEI	Soe	54.98	275	P	P	23 03 54.3	-0.9
SOEI				IAmb	IAmb	23 04 05.4	
	comp=Z,10nm,0.7s						
PSA00	Pilbara Seismi	55.38	259	P	P	23 03 57.1	-0.7
PSA00				IAmb	IAmb	23 04 14.4	
	comp=Z,34nm,1.5s						
MBWA	Marble Bar	55.59	260	P	P	23 03 58.7	-0.5
MBWA				IAmb	IAmb	23 04 30.1	
	comp=Z,35nm,1.4s						
MORW	Morawa	57.14	250	P	P	23 04 09.5	-0.3
MORW				IAmb	IAmb	23 04 40.4	
	comp=Z,43nm,1.4s						
CASY	Casey	60.47	206	P	P	23 04 27.0	-4.4
TOLI2	Tolitoli	62.66	284	P	P	23 04 47.2	+0.6
TOLI2				IAmb	IAmb	23 05 08.6	
	comp=Z,8.3nm,0.9s						
QSPA	South Pole Qui	66.50	180	P	P	23 05 12.0	+1.8
SNAA	Sanae	84.98	179	P	P	23 06 51.5	-0.8
AKASG	Malin Array Be	144.79	328	PKPbc	PKPdf	23 13 48.9	-0.7
	comp=Z,0.5nm,0.3s,baz=42,slow=4.2,SNR=5.7						
BRTR	Keskin Array B	147.52	308	PKPbc	PKPbc	23 13 57.5	-0.7
	comp=Z,0.7nm,0.6s,baz=98,slow=4.3,SNR=3.1						
CLL	Collm	150.60	344	*i* PKPbc	PKiKP	23 14 05.4	-0.2

*IDC **21** 00:06:40.1±1.7, 13°.03N×44°.82W, h0km, mb3.8/5, mbtmp3.8/5, MS3.1/7, Error ellipse: s-maj=59.5km s-min=28.2km az=177.0*
*NEIC **21** 00:06:42.2±1.7, 13°.2N±0°.1×45°.1W±0°.1, h10km±1km, mb4.7/82, Error ellipse: s-maj=19.1km s-min=15.9km az=125.0*
ISC 21 00:06:41.2±0.6, **13°.2N**±0°.1×**45°.07W**±0°.08, **h10**km, **n99,** σ1§**12**/88, **mb4.6**/40, **MS3.1**/6, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	10.97	224	LR	LR	00 12 58.7	
	comp=Z,74nm,19.4s,baz=33,slow=34						
BBGH	Gun Hill	14.11	271	Pn	Pn	00 09 57.0	-4.3
ILAM	Ilet Lapin Mar	15.42	278	Pn	Pn	00 10 19.6	+0.6
FDF	Fort de France	15.68	278	Pn	Pn	00 10 21.3	-1.2
FDF				IAmb	IAmb	00 10 32.8	
	comp=Z,58nm,1.1s						
SVB	Belmont	15.76	272	Pn	Pn	00 10 23.3	-0.1
SVB				IAmb	IAmb	00 10 28.8	
	comp=Z,44nm,0.9s						
DLPL	La Plaine	15.82	280	Pn	Pn	00 10 24.6	+0.3
GRGR	Grenville	16.22	268	Pn	Pn	00 10 27.5	-1.9
GRGR				IAmb	IAmb	00 10 48.2	
	comp=Z,142nm,1.1s						
TDBA	Terre de Bas,	16.26	281	Pn	Pn	00 10 28.7	-1.2
TDBA				IAmb	IAmb	00 10 45.8	
	comp=Z,68nm,0.7s						
CBE	Ff, Capester	16.26	282	Pn	Pn	00 10 28.7	-1.2
CBE				IAmb	IAmb	00 10 33.4	
	comp=Z,117nm,1.1s						
GCPR	Guaynabo City	20.85	287	P	P	00 11 20.4	-3.0
GCPR				IAmb	IAmb	00 11 21.1	
	comp=Z,35nm,1.4s						
SJG	San Juan	20.88	286	LR	LR	00 18 17.6	
	comp=Z,29nm,21.6s,baz=86,slow=33						
BBTS	Babate	27.73	84	LR	LR	00 21 00.8	
	comp=Z,62nm,19.9s,baz=321,slow=31						
ROSC	El Rosal	30.03	257	P	P	00 12 53.1	+2.0
	comp=Z,8.0nm,0.4s,baz=86,slow=19,SNR=1.7						
ROSC				LR	LR	00 25 04.7	
	comp=Z,47nm,19.8s,baz=54,slow=36						
MTDJ	Mount Denham	31.62	283	P	P	00 13 06.4	+1.6
BCIP	Isla Barro Col	34.32	267	P	P	00 13 26.6	-1.8
BCIP				IAmb	IAmb	00 13 38.6	
	comp=Z,18nm,1.4s						
SLOR	San Lorenzo -	35.91	250	P	P	00 13 41.5	-1.1
H10N3	ASCENSION HYDR	36.86	123	T	T	00 52 40.0	
	baz=304,slow=75,SNR=5.5						
H10N2	ASCENSION HYDR	36.86	123	T	T	00 52 41.3	
	baz=304,slow=75,SNR=5.9						
H10N1	ASCENSION HYDR	36.88	123	T	T	00 52 41.2	
	baz=304,slow=75,SNR=6.6						
UCCT	U. Connecticut	37.01	325	P	P	00 13 51.2	+0.2
UCCT				IAmb	IAmb	00 13 57.2	
	comp=Z,38nm,1.3s						
456A	Hilliard	38.23	303	P	P	00 14 01.4	-0.2
SDMD	Soldier's Deli	38.30	319	P	P	00 14 02.0	0.0
H62A	Milan	38.40	330	P	P	00 14 02.7	-0.1
H62A				IAmb	IAmb	00 14 22.5	
	comp=Z,30nm,1.4s						
COVE	Coope Vega, Sa	38.53	271	P	P	00 14 03.5	-0.9
COVE				IAmb	IAmb	00 14 30.5	
	comp=Z,8.0nm,0.7s						
S57A	Dark Hollow, R	38.82	315	P	P	00 14 04.3	-2.2
JSC	Jenkinsville	38.92	309	P	P	00 14 07.1	-0.3
N58A	Sunbury	39.03	321	P	P	00 14 07.8	-0.4
DBIC	Dimbokro	40.10	95	LR	LR	00 29 01.3	
	comp=Z,25nm,18.1s,baz=62,slow=34						
GO01	Chusmiza	40.38	216	P	P	00 14 20.9	+0.7
MDT	Midelt	41.73	55	LR	LR	00 30 04.4	
	comp=Z,30nm,18.3s,baz=1.0,slow=34						
P52A	Corning	41.91	316	P	P	00 14 30.6	-1.4
P52A				IAmb	IAmb	00 14 42.2	
	comp=Z,13nm,1.1s						
PB07	IPOC Station P	42.39	215	P	P	00 14 35.9	-0.5
PB07				IAmb	IAmb	00 14 38.7	
	comp=Z,45nm,1.5s						
BRAL	Brewton	42.49	302	P	P	00 14 38.5	+1.6
BRAL				IAmb	IAmb	00 14 53.6	
	comp=Z,41nm,1.2s						
PB03	IPOC Station P	42.58	215	P	P	00 14 39.2	+1.4
PB03				IAmb	IAmb	00 14 46.1	
	comp=Z,22nm,1.4s						
T50A	Nancy	42.69	311	P	P	00 14 38.6	+0.2
R50A	Paris	42.83	313	P	P	00 14 40.1	+0.6
R50A				IAmb	IAmb	00 14 54.2	
	comp=Z,14nm,1.4s						
CLTN	Cedars of Leba	43.45	309	P	P	00 14 45.4	+0.8
CLTN				IAmb	IAmb	00 14 49.3	
	comp=Z,11nm,1.5s						
P49A	Miami Univ. Ec	43.64	314	P	P	00 14 46.4	+0.4
V48A	Smith Brothers	43.70	308	P	P	00 14 47.4	+0.8
P48A	Milroy	44.10	314	P	P	00 14 47.7	-2.1
P48A				IAmb	IAmb	00 14 48.3	
	comp=Z,28nm,1.5s						
T47A	Sharon Grove	44.35	310	P	P	00 14 51.7	-0.2
T47A				IAmb	IAmb	00 15 11.6	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	45.48	84	P	P	00 14 59.9	-1.3
	comp=Z,0.9nm,0.8s,baz=285,slow=8.0,SNR=5.1 comp=Z,0.9nm,0.8s						
LOIL	Loyola Univers	46.72	316	P	P	00 15 12.3	+1.8
M44A	Midewin, Midew	46.72	315	P	P	00 15 09.4	-1.1
H43A	Windswept, Lux	47.88	319	P	P	00 15 17.7	-1.8
NRS	Narsarsuaq	47.89	360	P	P	00 15 18.7	-0.6
L40A	Anamosa	49.18	315	P	P	00 15 29.9	+0.3
L40A				IAmb	IAmb	00 15 40.3	
	comp=Z,17nm,1.1s						
S39A	Bolivar	49.27	309	P	P

HWUT	Hardware Ranch	63.81	310	P	P	00 17 14.2	0.0
HWUT				IAmb	IAmb	00 17 23.7	
comp=Z,4.6nm,1.2s							
BGU	Big Grassy Mou	64.86	309	P	P	00 17 21.7	+0.8
BGU				IAmb	IAmb	00 17 31.1	
comp=Z,4.1nm,1.2s							
LRM	Limekiln Ridge	64.91	315	P	P	00 17 19.9	-1.4
ELK	Elko	66.52	309	P	P	00 17 34.4	+2.6
comp=Z,0.9nm,0.7s,baz=121,slow=6.1,SNR=3.6							
comp=Z,0.9nm,0.7s							
109C	Camp Elliot, M	67.96	300	P	P	00 17 41.8	+1.1
WVOR	Wild Horse Val	69.12	311	P	P	00 17 49.3	+1.3
WVOR				IAmb	IAmb	00 17 56.6	
comp=Z,9.2nm,1.4s							
MDPB	Devils Postpil	69.46	305	P	P	00 17 50.0	-0.4
FINES	FINESS Array B	69.51	29	P	P	00 17 50.5	+0.7
FIA1	FINESS Array S	69.51	29	P	P	00 17 50.1	+0.3
MG01	Puerto William	70.49	194	P	P	00 17 55.5	-0.3
ARCES	ARCESS Array B	70.96	21	P	P	00 17 59.2	+0.6
comp=Z,1.9nm,0.9s,baz=249,slow=5.5,SNR=3.6							
comp=Z,1.9nm,0.9s							
JCC	Jacoby Creek,	73.19	309	P	P	00 18 11.9	-0.6
K27K	Chicken	81.30	334	P	P	00 18 57.5	0.0
K27K				IAmb	IAmb	00 19 11.4	
comp=Z,8.8nm,1.4s							
M26K	Nabesna, AK	82.06	332	P	P	00 19 02.3	+0.6
ISLE	Juniper Island	82.16	330	P	P	00 19 02.7	+0.3
MCARA	McCarthy VSAT	82.31	331	P	P	00 19 02.1	-0.8
MCARA				IAmb	IAmb	00 19 22.4	
comp=Z,23nm,1.5s							
TGL	Tana Glacier	82.36	331	P	P	00 19 03.6	+0.2
IL31		83.14	335	P	P	00 19 07.4	+0.2
IL31				IAmb	IAmb	00 19 10.7	
comp=Z,4.1nm,1.2s							
ILAR	Eielson Array	83.14	335	P	P	00 19 09.2	+2.0
comp=Z,1.1nm,1.0s,baz=80,slow=4.4,SNR=8.1							
comp=Z,1.1nm,1.0s							
ILAR	Eielson Array	83.14	335	P	P	00 19 08.2	+0.9
CCB	Clear Creek Bu	83.56	335	P	P	00 19 10.9	+1.5
CCB				IAmb	IAmb	00 19 26.8	
comp=Z,3.6nm,1.3s							
WRH	Wood River Hil	83.73	335	P	P	00 19 09.4	-0.9
KIBK	Kibwezi	83.83	94	P	P	00 19 11.3	-0.6
KIBK				IAmb	IAmb	00 19 19.9	
comp=Z,9.4nm,1.4s							
NEA2	Nenana	84.09	335	P	P	00 19 12.4	+0.2
NEA2				IAmb	IAmb	00 19 26.3	
comp=Z,4.1nm,1.4s							
BPAW	Bear Paw Mtn.	85.05	335	P	P	00 19 17.6	+0.6
P19K	Oil Pt	87.64	331	P	P	00 19 29.8	0.0
O18K	Koktuh Hills	88.48	332	P	P	00 19 34.2	+0.4
KKAR	Karatay Array	98.84	42	P	Pdif	00 20 22.4	+0.6

*NOU **21** 00:22:13.8, 16.°52S×178.°94W, h608km, mb4.6/13, Fiji Islands Region*
*NEIC **21** 00:22:15.7±1.7, 17.°1S±0.°1×179.°0W±0.°1, h530km±6km, mb4.3/224, Error ellipse: s-maj=18.0km s-min=14.8km az=107.0*
*IDC **21** 00:22:18.8±0.7, 17.°14S×179.°17W, h567km±6km, mb3.8/22, mbtmp4.7/23, Error ellipse: s-maj=11.7km s-min=9.0km az=112.0*

ISC 21 00:22:17.3±0.3, 17.°11S±0.°06×179.°07W±0.°07, h550km, n476, σ1901/452, mb4.3/127, 42C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.82	257	P	P	00 23 33.2	+1.8
340nm,0.7s,baz=86,slow=5.3,SNR=205							
MSVF				S	S	00 24 35.4	+3.8
43nm,1.0s,baz=73,slow=19,SNR=16							
MSVF	Nonsavu	2.82	257	P	P	00 23 33.0	+1.6
MSVF	Nonsavu	2.82	257	P	P	00 23 33.2	+1.8
FUTU	Fugatoga	2.93	18	P	P	00 23 32.1	0.0
AFI	Afiamalu	7.72	67	P	P	00 24 05.7	-6.7
FUNA	Funafuti	8.70	349	P	P	00 24 19.8	-2.4
NIUE	Niue	8.91	104	P	P	00 24 23.9	-0.3
NIUE	Niue	8.91	104	P	P	00 24 23.7	-0.5
OUZ	Omahuta	19.19	199	P	P	00 26 08.3	+2.4
KUZ	Kuaotunu	20.09	192	P	P	00 26 14.0	-0.1
MXZ	Matakaoa Point	20.50	186	P	P	00 26 16.3	-1.5
MXZ	Matakaoa Point	20.50	186	P	P	00 26 16.9	-0.9
URZ	Urewera	21.34	188	P	P	00 26 23.6	-1.7
11nm,0.4s,baz=342,slow=6.4,SNR=17							
URZ				S	S	00 29 45.4	-0.2
5.6nm,1.0s,baz=232,slow=20,SNR=1.7							
11nm,0.4s							
URZ	Urewera	21.34	188	P	P	00 26 22.9	-2.4
URZ	Urewera	21.34	188	P	P	00 26 22.9	-2.4
HIZ	Hauiti	21.98	193	P	P	00 26 30.7	-0.4
BKZ	Black Stump Fm	22.31	189	P	P	00 26 31.9	-2.3
BKZ				IAmb	IAmb	00 26 58.6	
comp=Z,12nm,1.2s							
BFZ	Birch Farm	23.84	189	P	P	00 26 46.6	-1.0
BFZ	Birch Farm	23.84	189	P	P	00 26 46.9	-0.7
QRZ	Quartz Range	24.72	195	P	P	00 26 55.7	+0.2
QRZ	Quartz Range	24.72	195	P	P	00 26 55.3	-0.2
NNZ	Nelson	24.89	194	P	P	00 26 55.2	-1.7
CMWZ	Cape Campbell	25.23	192	P	P	00 27 00.0	+0.1
BSWZ	Blackbirch Sta	25.26	192	P	P	00 27 00.4	+0.1
THZ	Tophouse	25.52	194	P	P	00 27 01.5	-1.1
KHZ	Kahutara	26.00	193	P	P	00 27 05.3	-1.4
KHZ	Kahutara	26.00	193	P	P	00 27 04.8	-1.9
LTZ	Lake Taylor	26.63	194	P	P	00 27 10.3	-2.1
OXZ	Oxford	27.20	194	P	P	00 27 15.2	-2.1
MOZ	McQueen's Vall	27.43	193	P	P	00 27 17.6	-1.6
FOZ	Fox Glacier	27.98	197	P	P	00 27 22.7	-1.3
LBZ	Lake Benmore	28.66	196	P	P	00 27 27.7	-2.4
LBZ				IAmb	IAmb	00 27 44.1	
comp=Z,19nm,1.2s							
JCZ	Jackson Bay	28.77	198	P	P	00 27 30.2	-0.9
ODZ	Otahua Downs	29.16	195	P	P	00 27 32.2	-2.1
ODZ				IAmb	IAmb	00 27 50.3	
comp=Z,19nm,1.3s							
ODZ	Otahua Downs	29.16	195	P	P	00 27 32.5	-1.8
WKZ	Wanaka	29.39	197	P	P	00 27 34.6	-1.8
MLZ	Mavora Lakes	30.15	198	P	P	00 27 42.8	-0.1
DCZ	Deep Cove	30.53	199	P	P	00 27 45.0	-1.1
WHZ	Wether Hill Ro	30.67	198	P	P	00 27 47.1	-0.3
SYZ	Scrubby Hill	30.93	196	P	P	00 27 48.7	-0.8
COEN	Coen	36.48	270	P	P	00 28 37.1	+0.5
TOO	Toolangi	37.19	230	P	P	00 28 41.4	-0.8
BBOO	Buckleboo	43.25	240	P	P	00 29 30.1	-0.6
WR0	Warramunga Arr	43.97	259	P	P	00 29 35.9	-0.6
WB0	Warramunga Arr	44.12	259	P	P	00 29 36.6	-1.1
WB0				IAmb	IAmb	00 30 19.4	
comp=Z,8.9nm,1.3s							
WB2	Warramunga Arr	44.15	259	P	P	00 29 37.0	-0.9
WRA	Warramunga Arr	44.16	259	P	P	00 29 37.0	-1.0
comp=Z,0.9nm,0.3s,baz=89,slow=7.6,SNR=51							
WRA				PcP	PcP	00 31 10.8	0.0
comp=Z,1.0nm,0.7s,baz=92,slow=3.6,SNR=6.0							
WRA				S	S	00 35 27.3	-4.2
comp=Z,0.4nm,0.6s,baz=99,slow=13,SNR=2.0							
comp=Z,0.9nm,0.3s							
WRA	Warramunga Arr	44.16	259	P	P	00 29 36.9	-1.0
AS31	Alice Springs	44.41	253	P	P	00 29 39.6	-0.1
ASAR	Alice Springs	44.41	253	P	P	00 29 39.5	-0.3
comp=Z,7.5nm,0.5s,baz=86,slow=8.1,SNR=123							
ASAR				PcP	PcP	00 31 11.7	+0.1
comp=Z,1.4nm,0.6s,baz=91,slow=4.2,SNR=6.5							
ASAR				S	S	00 35 32.3	-2.7
comp=Z,1.2nm,0.8s,baz=87,slow=17,SNR=6.7							
comp=Z,7.5nm,0.5s							
ASAR	Alice Springs	44.41	253	P	P	00 29 39.1	-0.7
GUMO	Guam	46.89	308	P	P	00 29 58.6	-0.1
comp=Z,29nm,0.3s,baz=357,slow=18,SNR=2.2							
comp=Z,29nm,0.3s							
FORT	Forrest	49.78	244	P	P	00 30 20.2	+0.1
KNRA	Kununurra	49.95	264	P	P	00 30 21.2	-0.2
KNRA				IAmb	IAmb	00 30 21.8	
comp=Z,9.7nm,0.8s							
SIJI	Sorong	51.44	283	P	P	00 30 32.8	+0.4
comp=Z,24nm,0.6s,baz=101,slow=7.5,SNR=8.9							
comp=Z,24nm,0.6s							
PSA00	Pilbara Seismi	57.50	255	P	P	00 31 14.4	-0.3
PSA00				IAmb	IAmb	00 31 56.1	
comp=Z,33nm,1.4s							
MBWA	Marble Bar	57.66	255	P	P	00 31 15.5	-0.4
MBWA				IAmb	IAmb	00 31 54.3	
comp=Z,29nm,1.5s							
SBA	Scott Base	61.17	183	P	P	00 31 39.8	+1.5
VNDA	Vanda	61.18	185	P	P	00 31 38.9	+0.5
comp=Z,1.1nm,0.6s,baz=353,slow=8.3,SNR=15							
comp=Z,1.1nm,0.6s							
VNDA	Vanda	61.18	185	P	P	00 31 39.0	+0.5
CASY	Casey	66.60	205	P	P	00 32 13.0	0.0
CASY				IAmb	IAmb	00 32 35.9	
comp=Z,6.5nm,1.0s							
JGF	Kuroka	66.72	322	P	P	00 32 14.3	0.0
MJAR	Matsushiro Arr	66.89	324	P	P	00 32 14.7	-0.6
comp=Z,6.1nm,0.5s,baz=154,slow=6.2,SNR=14							
comp=Z,6.1nm,0.5s							
JMN	Monobe	67.58	319	P	P	00 32 20.2	+0.6
JSD	Sado	67.93	325	P	P	00 32 21.8	+0.3
ADK	Adak	68.73	2	P	P	00 32 25.5	-0.6
JHS	Saijyo	68.88	319	P	P	00 32 28.3	+0.9
SHEM	Shemya Is, Ala	69.80	356	P	P	00 32 30.8	-1.6
comp=Z,50nm,0.9s,baz=221,slow=11,SNR=1.9							
comp=Z,50nm,0.9s							
NIKH	Nikolski High	70.35	7	P	P	00 32 34.9	-0.8
SSLB	Suanglung	71.27	303	P	P	00 32 41.4	-0.5
TPUB	Ta-pu	71.30	303	P	P	00 32 41.3	-0.7
UNV	Unalaska Valle	71.48	8	P	P	00 32 41.1	-1.2
UNV	Unalaska Valle	71.48	8	P	P	00 32 40.8	-1.6
baz=193							
PETK	Petropavlovsk-	72.75	346	P	P	00 32 49.7	-0.1
comp=Z,9.2nm,0.8s,baz=148,slow=8.7,SNR=6.6							
comp=Z,9.2nm,0.8s							
PETK	Petropavlovsk-	72.75	346	P	P	00 32 50.2	+0.4
QSPA	South Pole Qui	72.94	180	P	P	00 32 51.0	+0.1
comp=Z,9.5nm,0.8s,baz=37,slow=3.6,SNR=24							
comp=Z,9.5nm,0.8s							
QSPA	South Pole Qui	72.94	180	P	P	00 32 51.3	+0.4
QSPA				IAmb	IAmb	00 32 52.0	
comp=Z,12nm,1.0s							
KSRS	Korea Array	73.69	319	P	P	00 32 56.3	+0.8
comp=Z,1.6nm,0.5s,baz=138,slow=7.4,SNR=2.9							
comp=Z,1.6nm,0.5s							
CHIR	Chirikof Islan	75.30	13	P	P	00 33 05.1	+1.1
USRK	Ussuriysk Ar.	75.60	326	P	P	00 33 07.7	+1.7
comp=Z,1.8nm,0.6s,baz=153,slow=2.6,SNR=5.1							
comp=Z,1.8nm,0.6s							
SII	Sitkinak Islan	76.30	14	P	P	00 33 09.6	-0.1
HOPS	Hopland Field	76.50	42	P	P	00 33 11.6	+0.5
HOPS				IAmb	IAmb	00 33 12.8	
comp=Z,20nm,1.1s							
KCPM	Cahto Peak	76.58	41	P	P	00 33 12.2	+0.5
KCPM				IAmb	IAmb	00 33 49.6	
comp=Z,20nm,1.1s							
KMPM	Mount Pierce	76.67	40	P	P	00 33 13.4	+1.2
KMPM				IAmb	IAmb	00 33 14.0	
comp=Z,14nm,0.9s							
KMRM	Mail Ridge	76.81	40	P	P	00 33 13.9	+1.0
KMRM				IAmb	IAmb	00 33 14.8	
comp=Z,19nm,0.8s							
KHMM	Horse Mountain	77.19	40	P	P	00 33 15.8	+0.8
KHMM				IAmb	IAmb	00 33 17.0	
comp=Z,18nm,1.4s							
CBX	Cerro Bola	77.32	50	P	P	00 33 16.3	+0.3
KRMB	Red Mountain	77.46	39	P	P	00 33 17.2	+0.8
KRMB				IAmb	IAmb	00 33 22.2	
comp=Z,15nm,1.4s							
Q17K	Contact Creek	77.50	12	P	P	00 33 15.5	-0.7
baz=203							
EDW2	Edwards Air Fo	77.66	47	P	P	00 33 18.1	+0.5
baz=239,SNR=7.5							
ESJX	Sierra Juarez	77.70	51	P	P	00 33 18.5	+0.5
CMB	Columbia Colle	77.70	44	P	P	00 33 17.2	-0.5
ISA	Isabella, Lake	77.72	47	P	P	00 33 17.7	-0.3
ISA				IAmb	IAmb	00 33 19.4	
comp=Z,8.3nm,0.9s							
ISA	Isabella, Lake	77.72	47	P	P	00 33 18.5	+0.5
baz=238,SNR=5.4							
MONP2	Monument Peak	77.78	50	P	P	00 33 19.3	+0.8
baz=240,SNR=9.2							
KDAK	Kodiak Island	77.78	14	P	P	00 33 17.3	-0.3
comp=Z,14nm,1.1s,baz=198,slow=3.2,SNR=6.1							
comp=Z,14nm,1.1s							
KDAK	Kodiak Island	77.78	14	P	P	00 33 17.3	-0.3
AFDM	Forest Hills D	77.82	43	P	P	00 33 18.5	+0.2
ORV	Oroville	77.82	42	P	P	00 33 17.6	-0.7
RMX	La Rumorosa	77.89	50	P	P	00 33 18.5	-0.5
RMX				IAmb	IAmb	00 33 20.6	
comp=Z,7.8nm,0.7s							
IKP	In-Ko-Pah, Jac	77.89	50	P	P	00 33 19.9	+0.9
baz=240,SNR=6.2							
YUH	Yuha Desert	78.03	50	P	P	00 33 19.3	-0.2
Q18K	Katmai Hardscr	78.04	13	P	P	00 33 18.3	-0.9
baz=203							
LRMC	Laurel Mtn Rad	78.18	47	P	P	00 33 21.1	+0.6
baz=239							
YBH	Yreka Blue Hor	78.31	40	P	P	00 33 21.3	+0.3
MDPB	Devils Postpil	78.35	45	P	P	00 33 21.5	0.0
OMMB	Old Mammoth Mi	78.39	45	P	P	00 33 21.7	-0.1
CWC	Cottonwood Cre	78.40	46	P	P	00 33 22.0	+0.3
baz=238							
WAKR	Walker	78.58	44	P	P	00 33 22.5	-0.2
WAKR				IAmb	IAmb	00 33 24.2	
comp=Z,8.3nm,0.8s							
Q19K	Cape Douglas,	78.58	13	P	P	00 33 21.6	-0.3
MPMC	Manual Prospec	78.61	47	P	P	00 33 23.2	+0.3
baz=239,SNR=7.9							
MPK	Martis Peak	78.62	43	P	P	00 33 22.8	-0.2
MPK				IAmb	IAmb	00 33 24.3	
comp=Z,12nm,0.7s							
BELC	Belle Mtn. Jos	78.64	49	P	P	00 33 23.4	+0.4
baz=240							
HUMO	Hull Mountain	78.67	39	P	P	00 33 23.1	+0.2
HUMO				IAmb	IAmb	00 33 24.6	
comp=Z,11nm,1.2s							
P18K	Big Mountain,	78.68	12	P	P	00 33 21.8	-0.7
P18K	Big Mountain,	78.68	12	P	P	00 33 21.3	-1.1
baz=203							
BEKR	Beckworth	78.72	42	P	P	00 33 23.0	-0.3
PNTR	Pine Nut	78.79	43	P	P	00 33 23.8	0.0
PNTR				IAmb	IAmb	00 33 25.2	
comp=Z,16nm,0.8s							
HEC	Hector,Ludlow	78.81	48	P	P	00 33 24.4	+0.7
baz=240							
DSP	Deep Springs	78.96	45	P	P	00 33 24.9	+0.6
DSP				IAmb	IAmb	00 33 26.1	
comp=Z,7.8nm,0.8s							
YERR	Yerington	78.97	43	P	P	00 33 24.8	+0.1
YERR				IAmb	IAmb	00 33 25.9	
comp=Z,12nm,0.6s							
QSM	Queen of Sheba	79.00	47	P	P	00 33 24.5	-0.2
N16K	Nishlik Lake	79.03	10	P	P	00 33 24.5	+0.2
baz=200							
LHV	Little Huntoon	79.06	44	P	P	00 33 25.1	+0.2
LHV				IAmb	IAmb	00 33 26.8	
comp=Z,12nm,0.9s							
BNX	BinXian	79.08	325	⇑P	P	00 33 25.3	+0.4
O18K	Koktuh Hills	79.11	12	P	P	00 33 24.0	-0.7
baz=203							
LCH	Last Change Ra	79.11	46	P	P	00 33 25.1	-0.3
GRAC	Grapevine Rang	79.18	46	P	P	00 33 26.4	+0.7
baz=239							
GWY	Greenwater Val	79.25	47	P	P	00 33 25.7	-0.5
RYN	Ryan	79.25	44	P	P	00 33 25.9	-0.3
PAHR	Pah Rah Range	79.26	43	P	P	00 33 26.4	+0.2
NVAR	Mina Array Bea	79.29	44	P	P	00 33 26.9	+0.4
comp=Z,4.9nm,0.7s,baz=226,slow=9.0,SNR=45							
comp=Z,4.9nm,0.7s							
NV11	Mina Array Sit	79.39	44	P	P	00 33 26.6	-0.3
GMN	Gold Mountain	79.41	46	P	P	00 33 26.7	-0.4
MZP	Montezuma Peak	79.53	45	P	P	00 33 27.4	-0.4
WCT	Wildcat Mounta	79.59	46	P	P	00 33 27.8	-0.1
BLYC	Blythe	79.59	50	P	P	00 33 27.2	-0.6
CNPM	China Poot	79.66	14	P	P	00 33 27.3	-0.4
N18K	Kilae Creek	79.74	11	P	P	00 33 27.2	-0.8
N18K				IAmb	IAmb	00 33 27.7	
comp=Z,6.4nm,0.8s							
KVN	Kaiserville	79.75	44	P	P	00 33 29.1	+0.2
KVN				IAmb	IAmb	00 33 29.9	
comp=Z,15nm,1.4s							
TPH	Tonopah	79.83	45	P	P	00 33 29.2	-0.1
MOD	Modoc Plateau	79.89	40	P	P	00 33 29.6	+0.2
MOD				IAmb	IAmb	00 33 30.6	
comp=Z,6.4nm,0.7s							
TPNV	Topopah Spring	79.92	46	P	P	00 33 29.5	-0.2
TPNV	Topopah Spring	79.92	46	P	P	00 33 30.5	+0.7
baz=240,SNR=6.3							
BRSE	Bradley Lake S	79.97	14	P	P	00 33 29.2	-0.1
baz=207							
K05A	Summer Lake	79.98	39	P	P	00 33 30.4	+0.5
K05A				IAmb	IAmb	00 33 31.1	
comp=Z,9.1nm,0.6s							
214A	Organ Pipe Nat	80.02	52	P	P	00 33 30.1	-0.2
N19K	Bonanza Creek	80.13	12	P	P	00 33 29.0	-1.1
N19K				IAmb	IAmb	00 33 29.9	
comp=Z,9.5nm,0.9s							
N19K	Bonanza Creek	80.13	12	P	P	00 33 29.3	-0.9
baz=204							
RSO	Redoubt South	80.17	13	P	P	00 33 29.6	-0.9
H04A	Detroit Lake	80.34	37	P	P	00 33 31.3	-0.2
H04A				IAmb	IAmb	00 33 31.9	
comp=Z,6.9nm,0.6s							
SHPR	Sheep Range	80.46	47	P	P	00 33 32.2	-0.3
PINE	Pine Mountain	80.56	39	P	P	00 33 33.0	+0.1
PINE				IAmb	IAmb	00 33 34.1	
comp=Z,7.5nm,0.8s							
Y14A	Wickenburg	80.79	50		pP	00 35 21.6	-9.5
N20K	Mount Spurr	80.95	13	P	P	00 33 33.7	-0.7
baz=206							
PRN	Pahroc Range	80.98	46	P	P	00 33 35.4	+0.2
PRN				IAmb	IAmb	00 33 37.0	
comp=Z,9.9nm,0.9s							
NLWA	Neilton Lookou	81.01	34	P	P	00 33 35.2	+0.3
BMN	Battle Mountai	81.05	43	P	P	00 33 35.8	+0.3
BMN				IAmb	IAmb	00 33 36.9	
comp=Z,9.9nm,1.0s							
R11A	Troy Canyon, C	81.08	45	P	P	00 33 36.2	+0.4
baz=240,SNR=5.0							
M19K	Big River Lodg	81.15	12	P	P	00 33 34.7	-0.6
M19K				IAmb	IAmb	00 33 35.3	
comp=Z,6.9nm,0.7s							
M19K	Big River Lodg	81.15	12	P	P	00 33 34.8	-0.6
baz=204							
WVOR	Wild Horse Val	81.21	41	P	P	00 33 35.8	-0.5
WVOR				IAmb	IAmb	00 33 37.7	
comp=Z,9.1nm,0.9s							
L19K	White Mountain	81.32	11	P	P	00 33 36.5	+0.3
L19K				IAmb	IAmb	00 33 37.3	
comp=Z,13nm,1.2s							
L19K	White Mountain	81.32	11	P	P	00 33 36.6	+0.4
baz=203							
RC01	Rabbit Creek A	81.40	14	P	P	00 33 36.1	-0.5
RC01				IAmb	IAmb	00 33 43.2	
comp=Z,10nm,1.2s							
SUA	Susitna One	81.50	13	IAmb	IAmb	00 33 37.1	
comp=Z,11nm,0.6s							
SUA	Susitna One	81.50	13	P	P	00 33 36.5	-0.8
baz=207							
PWL	Port Wells	81.53	15	P	P	00 33 36.5	-0.8
PWL				IAmb	IAmb	00 33 37.1	
comp=Z,10nm,0.8s							
PWL	Port Wells	81.53	15	P	P	00 33 36.3	-1.0
baz=210							
I07A	Izee	81.58	39	P	P	00 33 37.7	-0.4
I07A				IAmb	IAmb	00 33 39.5	
comp=Z,7.4nm,0.8s							
TUC	Tucson	81.72	53	P	P	00 33 39.4	+0.4
TUC				IAmb	IAmb	00 33 41.3	
comp=Z,8.3nm,1.0s							
TUC	Tucson	81.72	53	P	P	00 33 40.6	+1.6
baz=244							
L20K	Farewell, AK	81.78	12	P	P	00 33 38.2	-0.3
baz=204							
SKT	Skwentna	81.80	13	P	P	00 33 38.8	+0.2
TTA	Tatalina	81.80	10	P	P	00 33 37.7	-1.0
TTA				IAmb	IAmb	00 33 39.5	
comp=Z,11nm,1.0s							
J08A	Circle Bar Ran	81.81	40	P	P	00 33 39.3	0.0
J08A				IAmb	IAmb	00 33 40.6	
comp=Z,11nm,1.1s							
GLI	Glacier Island	81.85	15	P	P	00 33 38.0	-0.9
GLI	Glacier Island	81.85	15	P	P	00 33 37.8	-1.1
baz=211							
EYAK	Cordova Ski Ar	81.91	16	P	P	00 33 38.5	-0.6
baz=212							
KNK	Knik Glacier	81.98	14	P	P	00 33 39.1	-0.5
baz=209							
LCMT	Little Creek M	82.06	48	P	P	00 33 41.1	+0.4
GHO	Glory Hole Cre	82.19	14	P	P	00 33 40.2	-0.5
CCUT	Cedar City	82.23	47	P	P	00 33 42.7	+1.0
BERG	Berg Lake	82.33	17	P	P	00 33 41.2	-0.2
SML	Sawmill	82.36	14	P	P	00 33 41.2	-0.4
SML				IAmb	IAmb	00 33 51.6	
comp=Z,23nm,1.4s							
KNB	Kanab	82.36	48	P	P	00 33 43.1	+0.9
KNB				IAmb	IAmb	00 33 44.0	
comp=Z,6.8nm,0.8s							
PSUT	Pine Spring	82.36	46	P	P	00 33 42.9	+0.6
PSUT				IAmb	IAmb	00 33 43.5	
comp=Z,9.0nm,0.6s							
DIV	Divide	82.40	16	IAmb	IAmb	00 33 41.8	
comp=Z,13nm,0.7s							
U15A	North Rim	82.46	48	P	P	00 33 43.8	+0.9
U15A				IAmb	IAmb	00 33 44.9	
comp=Z,11nm,0.8s							
319A	Douglas	82.47	54	P	P	00 33 42.7	-0.2
319A				IAmb	IAmb	00 33 45.2	
comp=Z,8.9nm,0.9s							
PPLA	Purkeypile	82.49	12	P	P	00 33 40.7	-1.6
PPLA				IAmb	IAmb	00 34 05.4	
comp=Z,16nm,1.4s							
K20K	Telida	82.55	11	P	P	00 33 42.1	-0.3
K20K				IAmb	IAmb	00 33 42.9	
comp=Z,13nm,0.8s							
K20K	Telida	82.55	11	P	P	00 33 41.9	-0.5
baz=204,SNR=7.7							
BMRM	Bremner River	82.57	16	P	P	00 33 42.0	-0.7
BMRM				IAmb	IAmb	00 33 42.4	
comp=Z,8.6nm,0.6s							
BMRM	Bremner River	82.57	16	P	P	00 33 41.9	-0.7
baz=213							
G08A	Pilot Rock	82.57	38	P	P	00 33 43.4	+0.3
G08A				IAmb	IAmb	00 33 43.8	
comp=Z,5.8nm,0.8s							
SCM	Sheep Creek Mo	82.62	15	P	P	00 33 42.6	-0.3
SCM	Sheep Creek Mo	82.62

J20K IAmb IAmb 00 33 46.6
comp=Z,8.7nm,0.8s
J20K Nowinta River 83.28 11 P P 00 33 45.9 -0.1
baz=204,SNR=6.7
KTH Kantishna Hill 83.33 12 P P 00 33 44.8 -1.6
KTH IAmb IAmb 00 33 46.0
comp=Z,8.5nm,0.8s
CHUM Lake Minchumin 83.35 12 P P 00 33 45.0 -1.4
baz=206,SNR=7.0
TRF Thorofare Moun 83.37 13 P P 00 33 45.5 -1.2
TRF Thorofare Moun 83.37 13 P P 00 33 45.2 -1.5
baz=208,SNR=13
LOGN Logan Glacier 83.45 18 P P 00 33 46.8 -0.4
LOGN IAmb IAmb 00 33 47.6
comp=Z,13nm,0.9s
BARN Barnard Glacie 83.45 17 P P 00 33 47.1 -0.1
BARN IAmb IAmb 00 33 47.8
comp=Z,14nm,0.8s
CTG Chitna Glacier 83.47 17 P P 00 33 46.7 -0.5
baz=216
CTGM Chitina Glacie 83.47 17 P P 00 33 47.1 -0.1
CTGM IAmb IAmb 00 33 48.1
comp=Z,18nm,1.1s
MFID Camas Ranch 83.48 41 P P 00 33 47.7 0.0
MFID IAmb IAmb 00 33 48.9
comp=Z,5.7nm,0.9s
P29M Windy Craggy 83.51 20 P P 00 33 47.7 +0.4
P29M IAmb IAmb 00 33 48.8
comp=Z,13nm,1.1s
P29M Windy Craggy 83.51 20 P P 00 33 47.5 +0.2
baz=219
RND Reindeer 83.64 13 P P 00 33 47.3 -0.7
RND IAmb IAmb 00 33 48.5
comp=Z,17nm,1.0s
O28M Mount Upton 83.65 18 P P 00 33 48.1 -0.2
baz=217,SNR=5.1
DHY Denali Highway 83.68 14 P P 00 33 47.7 -0.6
DHY Denali Highway 83.68 14 P P 00 33 47.3 -0.9
baz=210
BPAW Bear Paw Mtn. 83.81 12 P P 00 33 47.0 -1.6
BPAW IAmb IAmb 00 33 50.0
comp=Z,4.7nm,0.8s
BPAW Bear Paw Mtn. 83.81 12 P P 00 33 47.1 -1.6
baz=207
PLBC Pleasant Camp 83.83 20 P P 00 33 49.1 +0.2
baz=221
MCK McKinley 83.91 13 IAmb IAmb 00 33 49.0
comp=Z,12nm,1.0s
MCK McKinley 83.91 13 P P 00 33 47.5 -1.7
baz=209
PAX Paxson 84.04 15 P P 00 33 48.9 -1.0
PAX IAmb IAmb 00 33 52.2
comp=Z,5.6nm,0.9s
PAX Paxson 84.04 15 P P 00 33 49.0 -1.0
baz=212
B08A Colville Reser 84.06 35 IAmb IAmb 00 33 50.3
comp=Z,4.7nm,0.8s
P30M Million Dollar 84.14 20 P P 00 33 50.7 +0.2
baz=220
YUK8 Steele Glacier 84.19 18 P P 00 33 50.6 -0.3
baz=217,SNR=6.2
M26K Nabesna, AK 84.19 16 P P 00 33 50.4 -0.2
M26K IAmb IAmb 00 33 51.7
comp=Z,16nm,1.0s
M26K Nabesna, AK 84.19 16 P P 00 33 50.5 -0.2
baz=214,SNR=7.9
PLID Pearl Lake 84.23 39 P P 00 33 49.1 -2.4
YUK3 Moose Creek 84.38 17 P P 00 33 51.4 -0.4
baz=217,SNR=7.6
MAW Mawson 84.39 200 P P 00 33 52.5 +0.9
comp=Z,3.0nm,0.6s,baz=127,slow=6.7,SNR=7.1
comp=Z,3.0nm,0.6s
MAW Mawson 84.39 200 P P 00 33 52.3 +0.7
HLID Hailey 84.45 41 IAmb IAmb 00 33 54.1
comp=Z,5.7nm,0.7s
HLID Hailey 84.45 41 P P 00 33 53.2 +0.7
baz=240,SNR=15
M27K Edge Creek, AK 84.45 16 IAmb IAmb 00 33 52.9
comp=Z,10nm,0.9s
M27K Edge Creek, AK 84.45 16 P P 00 33 51.8 -0.2
baz=215
HYT Haines Junctio 84.51 19 P P 00 33 51.7 -0.7
HYT IAmb IAmb 00 33 53.1
comp=Z,5.5nm,1.0s
TMUT Trail Mountain 84.54 46 P P 00 33 53.7 +0.5
TMUT IAmb IAmb 00 33 55.1
comp=Z,5.7nm,1.0s
S34M Telegraph Cree 84.57 23 P P 00 33 53.1 +0.6
baz=225,SNR=6.6
I21K Tanana 84.59 11 P P 00 33 51.8 -0.7
I21K IAmb IAmb 00 33 52.7
comp=Z,8.4nm,1.0s
I21K Tanana 84.59 11 P P 00 33 51.8 -0.7
baz=206,SNR=5.3
L26K Log Cabin Wild 84.62 16 IAmb IAmb 00 33 52.8
comp=Z,5.0nm,0.7s
L26K Log Cabin Wild 84.62 16 P P 00 33 52.1 -0.6
baz=214,SNR=5.7
NEA2 Nenana 84.64 13 P P 00 33 52.5 -0.2
HVU Hansel Valley 84.64 43 P P 00 33 54.3 +0.8
K24K Donnelly Dome 84.68 14 P P 00 33 52.6 -0.4
baz=212,SNR=7.2
MLY Manley 84.69 12 P P 00 33 51.9 -1.2
MLY Manley 84.69 12 P P 00 33 51.6 -1.4
baz=207
XLT XiLinHaoTe 84.74 319 *e*P P 00 33 54.3 +0.5
RIDG Independent Ri 84.84 15 IAmb IAmb 00 33 54.0
comp=Z,8.6nm,0.9s
RIDG Independent Ri 84.84 15 P P 00 33 52.9 -0.9
baz=213
H21K Melozitna Rive 84.87 11 P P 00 33 54.5 +0.6
H21K Melozitna Rive 84.87 11 P P 00 33 54.1 +0.2
baz=205
Q32M Nakina River 84.89 22 P P 00 33 54.9 +0.6
baz=224
O30N Mendenhall 84.92 20 P P 00 33 54.2 0.0
baz=221
SRU San Rafael Swe 84.93 47 P P 00 33 55.1 +0.2
HDA Harding Lake 84.93 13 P P 00 33 53.9 -0.3
baz=211
CCB Clear Creek Bu 84.95 13 P P 00 33 53.4 -0.8
CCB IAmb IAmb 00 33 53.8
comp=Z,6.3nm,0.8s
DOT Dot Lake 84.96 15 P P 00 33 54.0 -0.3
DOT IAmb IAmb 00 33 54.5
comp=Z,9.8nm,0.7s
I23K Minto, Yukon-K 85.07 12 P P 00 33 53.7 -1.0
baz=208
MDM Murphy Dome 85.13 13 P P 00 33 53.8 -1.4
MDM IAmb IAmb 00 33 54.7
comp=Z,11nm,1.2s
TCUT Toone Canyon 85.23 45 P P 00 33 55.8 -0.7
TCUT IAmb IAmb 00 33 57.8
comp=Z,6.0nm,0.7s
NEW Newport 85.24 36 P P 00 33 55.8 -0.3
SCRK Sand Creek 85.25 15 IAmb IAmb 00 33 56.2
comp=Z,5.1nm,0.8s
SCRK Sand Creek 85.25 15 P P 00 33 55.1 -0.7
baz=213,SNR=5.8
IL31 85.26 13 IAmb IAmb 00 33 56.2
comp=Z,8.5nm,1.2s
ILAR Eielson Array 85.26 13 P P 00 33 54.2 -1.5
comp=Z,1.8nm,0.4s,baz=218,slow=5.1,SNR=42
comp=Z,1.8nm,0.4s
XAN Xi'an 85.28 308⇑ *i*P P 00 33 57.8 +1.2
XAN pP PcP 00 34 01.1 +2.5
H22K Ishtalitna Cre 85.34 11 P P 00 33 55.3 -0.9
baz=206
POKR Poker Plat Res 85.44 13 P P 00 33 55.3 -1.3
baz=210
J25K Salcha River, 85.46 14 IAmb IAmb 00 33 57.0
comp=Z,6.1nm,1.1s
J25K Salcha River, 85.46 14 P P 00 33 56.2 -0.6
baz=212
M29M Somme Creek 85.48 18 P P 00 33 57.0 0.0
baz=218
G21K Allakaket 85.54 10 P P 00 33 56.8 -0.3
baz=204
R33M Jennings River 85.67 22 P P 00 33 58.4 +0.5
baz=225
K27K Chicken 85.77 15 P P 00 33 58.4 +0.2
baz=215
J26L Joseph Creek 85.79 15 IAmb IAmb 00 33 59.1
comp=Z,7.0nm,0.7s
J26L Joseph Creek 85.79 15 P P 00 33 58.2 -0.2
baz=214,SNR=8.2
MCMT McKenzie Canyo 86.05 41 P P 00 34 00.2 -0.1

L29M L29M 86.10 17 P P 00 34 00.2 +0.3
baz=219
ANMO Albuquerque 86.10 52 P P 00 34 00.7 0.0
ANMO Albuquerque 86.10 52 P P 00 34 01.3 +0.6
baz=246
TX31 Lajitas Ar. Si 86.10 58 P P 00 34 00.5 -0.3
TX32 Lajitas Array 86.10 58 P P 00 34 00.3 -0.4
TX32 IAmb IAmb 00 34 03.1
comp=Z,6.3nm,1.1s
TXAR Lajitas Array 86.11 58 P P 00 34 02.1 +1.4
comp=Z,2.7nm,0.8s,baz=213,slow=6.2,SNR=16
comp=Z,2.7nm,0.8s
TXAR Lajitas Array 86.11 58 P P 00 34 01.9 +1.1
RDMU Red Mountain 86.23 46 P P 00 34 01.4 +0.1
HHC Hu-ho-hao-te 86.27 315 *e*P P 00 34 02.6 +1.4
MSO Missoula 86.36 39 P P 00 34 01.2 -0.3
DLMT Dillon 86.46 40 P P 00 34 02.4 +0.3
DLMT IAmb IAmb 00 34 03.5
comp=Z,6.1nm,0.9s
DAWY Dawson 86.50 16 P P 00 34 01.7 0.0
DAWY IAmb IAmb 00 34 02.3
comp=Z,3.9nm,0.7s
DAWY Dawson 86.50 16 P P 00 34 01.8 +0.1
baz=218
M31M Drury Creek, Y 86.53 19 P P 00 34 00.9 -0.9
M31M Drury Creek, Y 86.53 19 P P 00 34 01.2 -0.7
baz=222
I26K Coal Creek Min 86.56 14 IAmb IAmb 00 34 02.3
comp=Z,4.1nm,0.6s
I26K Coal Creek Min 86.56 14 P P 00 34 01.4 -0.5
baz=214
EGAK Eagle 86.61 15 IAmb IAmb 00 34 01.9
comp=Z,4.9nm,0.8s
EGAK Eagle 86.61 15 P P 00 34 01.8 -0.4
baz=216
TPAW Teton Pass 86.63 43 P P 00 34 02.5 -0.6
TPAW IAmb IAmb 00 34 04.5
comp=Z,5.7nm,1.0s
GDL2 Guadalupe Moun 86.63 55 P P 00 34 02.3 -0.9
REDW Red Top Meadow 86.63 43 P P 00 34 02.6 -0.4
REDW IAmb IAmb 00 34 04.5
comp=Z,9.1nm,0.9s
FXWY Fox Creek 86.64 42 P P 00 34 03.1 0.0
FXWY IAmb IAmb 00 34 05.5
comp=Z,4.3nm,0.8s
F22K John River 86.66 10 P P 00 34 01.8 -0.6
baz=206
SNOW Snow King Moun 86.74 43 P P 00 34 02.9 -0.8
SNOW IAmb IAmb 00 34 05.2
comp=Z,14nm,1.1s
COLD Coldfoot 86.75 11 P P 00 34 02.5 -0.2
COLD IAmb IAmb 00 34 03.4
comp=Z,6.1nm,0.8s
COLD Coldfoot 86.75 11 P P 00 34 02.6 -0.2
baz=207,SNR=6.9
LRM Limekiln Ridge 86.77 40 P P 00 34 02.8 -0.8
G24K Hadweenzic Riv 86.80 12 P P 00 34 02.4 -0.7
baz=210
IMW Indian Meadow 86.82 42 P P 00 34 03.8 -0.2
IMW IAmb IAmb 00 34 05.6
comp=Z,8.3nm,0.8s
K29M Barlow Dome 86.84 17 P P 00 34 03.9 +0.4
baz=219
MOOW Moose Ponds 86.88 42 P P 00 34 03.8 -0.4
LOHW Long Hollow 86.91 43 P P 00 34 04.8 +0.4
LOHW IAmb IAmb 00 34 05.6
comp=Z,3.4nm,0.7s
S22A 4UR Ranch, Cre 86.96 49 P P 00 34 04.2 -0.6
YHB Horse Butte 87.05 41 P P 00 34 05.0 0.0
YHB IAmb IAmb 00 34 06.9
comp=Z,6.9nm,1.0s
YHL Hebgen Lake 87.10 41 P P 00 34 04.9 -0.5
YHL IAmb IAmb 00 34 07.4
comp=Z,6.5nm,0.8s
I27K Kandik River 87.17 15 P P 00 34 04.2 -0.6
baz=216
BW06 Boulder Array 87.21 44 P P 00 34 05.2 -0.6
BW06 IAmb IAmb 00 34 06.5
comp=Z,5.1nm,0.6s
BW06 Boulder Array 87.21 44 P P 00 34 05.7 -0.1
baz=244
PD31 Pinedale Array 87.21 44 IAmb IAmb 00 34 06.5
comp=Z,4.4nm,0.6s
PDAR Pinedale Array 87.21 44 P P 00 34 05.9 +0.1
comp=Z,4.1nm,0.6s,baz=213,slow=3.0,SNR=43
comp=Z,4.1nm,0.6s
H17A Grant Village 87.28 42 P P 00 34 08.0 +1.8
baz=243
E22K Anaktuvuk Pass 87.29 10 P P 00 34 04.7 -0.7
baz=206
F24K Squaw Lake 87.44 11 P P 00 34 05.7 -0.3
baz=210
E23K Chandalar 87.59 11 P P 00 34 06.7 -0.2
baz=208
H27K Steamboat Moun 87.71 14 P P 00 34 07.2 -0.1
baz=216
G26K Porcupine Rive 87.79 13 P P 00 34 07.3 -0.3
baz=214,SNR=5.7
E24K Your Creek 87.81 11 P P 00 34 07.3 -0.5
baz=209
MMPY Sheldon Lake, 87.84 20 P P 00 34 08.2 +0.1
baz=225,SNR=5.1
F25K Christian Rive 87.94 12 P P 00 34 08.6 +0.2
baz=212
CMAR Chiang Mai Arr 88.02 290 P P 00 34 10.3 +0.4
comp=Z,1.0nm,0.3s,baz=92,slow=3.0,SNR=8.5
comp=Z,1.0nm,0.3s
TGTN Hyland Airport 88.11 22 P P 00 34 10.1 +0.7
baz=228
TOLK Toolik Lake Re 88.12 10 P P 00 34 09.0 -0.3
baz=208
BRLDA Berland Lookou 88.22 31 P P 00 34 10.4 +0.3
D23K Nanushuk River 88.22 10 P P 00 34 09.6 -0.1
baz=207
PZH PanZhiHua 88.22 298 P P 00 34 11.0 +0.2
E25K Arctic Village 88.41 12 P P 00 34 10.6 0.0
baz=212
D24K Happy Valley 88.70 10 P P 00 34 11.7 -0.1
baz=209
C23K Itkillik River 89.01 10 P P 00 34 13.4 +0.1
baz=207
C24K Franklin Bluff 89.22 10 P P 00 34 14.4 +0.1
baz=209
D25K Kavik River 89.28 11 P P 00 34 13.6 -1.1
baz=211
ABTX Abilene, Hawle 90.50 56 P P 00 34 21.0 -0.1
baz=250
LAO LASA Array 91.03 41 P P 00 34 24.5 +1.2
baz=246
TROLL Troll, Antarti 91.10 180 P P 00 34 22.9 -0.4
SNAA Sanae 91.41 179 P P 00 34 23.9 -0.7
SNAA Sanae 91.41 179 P P 00 34 24.1 -0.6
SNAA IAmb IAmb 00 34 24.6
comp=Z,2.9nm,1.0s
RSSD Black Hills 91.43 44 P P 00 34 25.3 -0.1
baz=247
VNA3 Neumayer Olymp 91.57 177 P P 00 34 25.1 -0.2
VNA2 Neumayer--Watz 92.00 177 P P 00 34 27.0 -0.3
baz=184,slow=4.0
VNA1 Neumayer--Stat 92.23 177 P P 00 34 28.9 +0.6
SONM Songino Array 92.54 319 P P 00 34 29.9 -0.3
comp=Z,0.5nm,0.4s,baz=113,slow=5.2,SNR=4.3
comp=Z,0.5nm,0.4s
YKA Yellowknife Ar 93.88 25 P P 00 34 35.1 -0.7
comp=Z,3.1nm,0.7s,baz=231,slow=5.1,SNR=10
comp=Z,3.1nm,0.7s
ARU Arti 121.84 326 PKPdf 00 40 07.9 -1.0
ARCES ARCESS Array B 125.42 350 PKP **PKPdf 00 40 14.8 -0.6**
comp=Z,1.1nm,0.4s,baz=86,slow=1.1,SNR=17
GEYT Alibeck 126.07 305 PKP **PKPdf 00 40 17.0 -0.7**
comp=Z,1.2nm,0.6s,baz=97,slow=6.0,SNR=5.0
FINES FINESS Array B 132.25 344 PKP **PKPdf 00 40 28.6 +0.1**
comp=Z,1.4nm,0.4s,baz=33,slow=3.3,SNR=14
NB2 NORSAR Subarra 135.51 353 PKP **PKPdf 00 40 35.7 +0.9**
comp=Z,1.6nm,0.8s,baz=17,slow=2.6
NOA NORSAR Array B 135.51 353 PKP **PKPdf 00 40 35.5 +0.7**
comp=Z,0.8nm,0.5s,baz=15,slow=3.8,SNR=4.4
AKASG Malin Array Be 139.56 332 PKP **PKPdf 00 40 43.6 +1.1**
comp=Z,1.1nm,0.4s,baz=45,slow=3.0,SNR=6.1
VLDR Vladesti 143.50 328⇑P PKPab 00 40 49.3 +1.1
TLCR 143.56 326⇑P PKPab 00 40 49.0 +0.6
LODK Lodwar 143.58 252 PKPdf PKPab 00 40 50.4 +0.8
BURAR Bucovina Array 143.62 332⇑P PKPab 00 40 48.9 +0.2
SCTR Scanteiesti 143.66 327⇑P PKPab 00 40 49.6 +0.8
GHRR 143.70 328⇑P PKPab 00 40 50.3 +1.3
BIZ Bicaz 143.71 330⇑P PKPab 00 40 49.8 +0.8

TESR Tescani 143.75 330⇑P PKPab 00 40 49.5 +0.3
BRTR Keskin Array B 143.78 315 PKP PKPbc 00 40 49.2 -0.4
comp=Z,4.4nm,0.7s,baz=77,slow=3,1,SNR=33
IZVR Izvoarele 143.87 327⇑P PKPbc 00 40 49.9 +0.4
CFR Carcaliu 143.93 327⇑P PKPbc 00 40 49.6 -0.1
PANC Panciu 143.96 328⇑P PKPbc 00 40 50.3 +0.5
TPGR Topolog 143.99 326⇑P PKPbc 00 40 50.9 +0.9
ODBI Odobesti 144.08 328⇑P **PKPab 00 40 51.7 +1.3**
VRI Vrincioaia 144.17 329⇑P PKPbc 00 40 51.0 +0.5
PLOR Plostina 144.22 329⇑P PKPbc 00 40 50.9 +0.2
BMR Baia Mare 144.32 334⇓P PKPbc 00 40 51.2 +0.3
TRPA Tarpa 144.36 335⇑P PKPbc 00 40 51.4 +0.4
ARCR ARCALIA 144.40 332⇑P PKPbc 00 40 52.1 +1.0
COVR Noineasa-Covas 144.45 329⇑P PKPbc 00 40 50.8 -0.5
OSTC Ostas 144.45 343 *e*PKP **PKPdf 00 40 51.6 +0.4**
CLL Collm 144.55 347⇓ *i*PKPbc **PKPdf 00 40 51.3 0.0**
comp=Z,41nm,1.0s
CLL *i* PKiKP **PKPab 00 40 53.9 +1.9**
UPC Upice 144.55 343 *e*PKP **PKPdf 00 40 51.9 +0.6**
DPC Dobruska-Polom 144.60 343 *e*PKP **PKPdf 00 40 52.2 +0.7**
NEHR Nehoiu 144.70 329⇑P **PKPdf 00 40 53.1 +1.3**
KRLC Kraliky 144.72 342 *e*PKP **PKPdf 00 40 51.9 +0.2**
DOPR Dopca 144.75 330⇑P **PKPdf 00 40 53.4 +1.5**
MORC Moravsky Berou 144.76 341⇑P **PKPdf 00 40 51.9 0.0**
MORC Moravsky Berou 144.76 341 *e*PKP **PKPdf 00 40 51.8 0.0**
ISR Istrita 144.79 328⇑P **PKPdf 00 40 53.0 +1.1**
MLR Muntele Rosu 144.83 329⇑P **PKPdf 00 40 52.7 +0.5**
PVCC Panska Ves 144.91 345 *e*PKP **PKPdf 00 40 53.1 +1.2**
CJR Cluj-Napoca 145.02 332⇑P **PKPdf 00 40 53.3 +0.9**
MAUC Maruska 145.03 341 *e*PKP **PKPdf 00 40 53.7 +1.5**
SECR 145.09 328⇑P **PKPdf 00 40 53.8 +1.4**
LTVH Ltavrtes, Hu 145.22 335⇑P **PKPdf 00 40 53.2 +0.7**
VOIR 145.30 330⇑P **PKPdf 00 40 54.3 +1.4**
DRGR 145.35 333⇑P **PKPdf 00 40 54.0 +1.1**
PRU Pruhonice 145.41 344 *e*PKP **PKPdf 00 40 54.3 +1.5**
GOPC GO Pecny, Ondr 145.42 344 *e*PKP **PKPdf 00 40 54.2 +1.3**
VRAC Vranov 145.46 342 *e*PKP **PKPdf 00 40 54.4 +1.4**
JAVC Velka Javorina 145.52 340 *e*PKP **PKPbc 00 40 55.5 +1.0**
ARR Arges 145.55 330⇑P **PKPdf 00 40 53.9 +0.6**
PSZ Piszkesteto 145.56 337⇑P **PKPdf 00 40 48.7 -4.5**
NKC Novy Kostel 145.68 347 *e*PKP **PKPdf 00 40 54.9 +1.6**
KRUC Moravsky 145.74 342 *e*PKP **PKPdf 00 40 54.8 +1.4**
RAZG Razgrad 145.87 326⇑P **PKPdf 00 40 54.7 +0.9**
CSS Mathiatis 146.09 308 PKPdf 00 40 56.1 +1.6
SIRR Siria 146.21 334⇑P **PKPbc 00 40 57.0 +0.6**
MEM Membach 146.33 354 *d*PKPdf **PKPdf 00 40 54.4 +0.1**
MEM *d*PKP **PKPbc 00 40 56.0 -0.6**
BTNL Ternell 146.34 354 *d*PKP **PKPdf 00 40 56.6 +2.2**
BSTI Sart Tilman 146.40 355 *d*PKP **PKPdf 00 40 57.0 +2.6**
GZR Gura Zlata 146.40 332⇑P **PKPdf 00 40 56.7 +2.0**
KHC Kasperske Hory 146.45 345 *e*PKP **PKPdf 00 40 57.0 +2.3**
CKRC Cesky Krumlov 146.54 344 *e*PKP **PKPdf 00 40 57.5 +2.7**
SNF Seneffe 146.57 356 *d*PKP **PKPdf 00 40 57.1 +2.4**
SNF *d*PKiKP **PKPbc 00 40 59.2 +1.9**
BCLA Clavier 146.59 355 *d*PKP **PKPbc 00 40 58.2 +0.9**
BHOU Houvegnez 146.59 354 *d*PKP **PKPbc 00 40 57.7 +0.3**
BGES Gesves 146.64 355 *d*PKPdf **PKPdf 00 40 54.7 -0.1**
BGES *d*PKP **PKPbc 00 40 57.2 -0.3**
GERES GERESS Array B 146.68 345 PKPbc **PKPdf 00 40 57.6 +2.5**
comp=Z,5.3nm,0.8s,baz=45,slow=4.0,SNR=36
BZS Buzias 146.74 333⇑P **PKPdf 00 40 57.2 +2.0**
BMRD Maredsous 146.75 356 *d*PKPdf **PKPdf 00 40 55.0 0.0**
BMRD *d*PKP **PKPbc 00 40 59.0 +1.2**
CONA Conrad Observa 146.91 341 *i* P **PKPbc 00 40 58.8 +0.4**
comp=Z,8.4nm,0.5s,SNR=7.3
HERR Herculane 146.96 331⇑P **PKPbc 00 40 58.6 +0.1**
DOU Dourbes 146.96 356 *d*PKP **PKPbc 00 40 58.5 +0.2**
RONA Rosalia, Austr 146.98 341 *i* P **PKPbc 00 40 58.9 +0.3**
comp=Z,5.2nm,0.5s,SNR=6.2
DJES Djerdap 147.07 331⇑P **PKPdf 00 40 58.3 +2.5**
WLF Walferdange 147.25 354 *d*PKP **PKPbc 00 40 59.7 +0.5**
MOA Molln 147.44 343 *e*P **PKPbc 00 40 59.7 0.0**
comp=Z,2.6nm,0.5s
MORH Mrgy, Hungar 147.45 337⇑P **PKPdf 00 40 59.3 +3.0**
ARSA Arzberg 147.62 341 *i* P **PKPbc 00 41 00.1 -0.1**
comp=Z,1.9nm,0.5s
BIOA Bad Ischl, Aus 147.76 344 *e*P **PKPbc 00 41 00.3 -0.3**
comp=Z,1.3nm,0.3s
BLKB Belogradchik 147.79 330⇑P **PKPdf 00 40 59.8 +2.7**
FRGS Fruska Gora 147.87 335⇑P **PKPbc 00 41 01.3 +0.4**
BOVS Bovan 148.24 331⇑P **PKPbc 00 41 01.3 -0.5**
VTS Vitosha 148.25 328⇑P **PKPbc 00 41 02.4 +0.3**
BFO Black Forest 148.28 351 PKPbc 00 41 01.8 0.0
SOKA Soboth 148.28 341 *e*P **PKPbc 00 41 01.5 -0.5**
comp=Z,5.3nm,0.6s
PERS Pernice 148.29 341 *i* PKPbc **PKPdf 00 41 01.4 +3.6**
KBA Koelnbreinsper 148.40 344 *e*P **PKPdf 00 41 01.4 +3.3**
comp=Z,5.8nm,0.4s
OBKA Obir 148.58 342 *e*P **PKPdf 00 41 01.9 +3.6**
comp=Z,1.2nm,0.4s
WATA Walderalm 148.60 346 *e*P **PKPbc 00 41 02.6 -0.2**
comp=Z,8.4nm,0.6s
RETA Reutte 148.64 347 *e*P **PKPbc 00 41 02.6 -0.3**
comp=Z,5.9nm,0.5s
WTTA Wattenberg 148.66 346 *i* P **PKPbc 00 41 03.0 0.0**
comp=Z,22nm,0.6s,SNR=8.2
MOTA Moosalm 148.70 347 *e*P **PKPbc 00 41 02.8 -0.3**
comp=Z,12nm,0.9s
MYKA Terra Mystica 148.73 343 *e*P **PKPbc 00 41 02.3 -0.8**
comp=Z,9.6nm,0.5s
SQTA Sankt Quirin 148.80 346 *i* P **PKPbc 00 41 03.0 -0.2**
comp=Z,15nm,0.6s,SNR=5.5
ABTA Abfaltersbach 148.93 344 *i* P **PKPbc 00 41 02.9 -0.7**
comp=Z,13nm,0.6s,SNR=6.0
LJU Ljubljana 149.01 341 *i* PKPbc **PKPbc 00 41 03.5 -0.2**
DAVA Damuels 149.01 348 *e*P **PKPbc 00 41 03.7 -0.1**
comp=Z,5.5nm,0.6s
CRNS Crni Vrh 149.05 342 *i* PKPbc **PKPbc 00 41 03.2 -0.6**
FETA Feichten 149.09 347 *e*P **PKPbc 00 41 04.1 0.0**
comp=Z,5.6nm,0.6s
CTI Castel Tesino 149.79 345 PKPab **PKPab 00 41 13.1 -0.3**
BNI Bardonecchia 151.73 351 PKPbc 00 41 10.6 +0.4
ESDC Sonseca Array 157.12 10 PKPab **PKPab 00 41 43.7 -1.0**
comp=Z,0.7nm,0.5s,baz=348,slow=5.0,SNR=8.6
TORD Torodi Ar. Bea 175.99 191 PKP **PKPdf 00 41 24.3 -1.1**
comp=Z,0.4nm,0.6s,baz=150,slow=1.3,SNR=3.7
TORD PKPab **PKPab 00 43 08.6 +0.2**
comp=Z,0.6nm,1.0s,baz=171,slow=4.3,SNR=2.5

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*NEIC **21** 00:27:58.9±0.9, 12°.5S±0°.2×169°.3E±0°.1, h605km±11km, mb4.3/36, Error ellipse: s-maj=23.7km s-min=12.8km az=152.0*
*IDC **21** 00:27:59.0±4.0, 12°.48S×169°.22E, h615km±61km, mb3.4/5, mbtmp4.4/6, Error ellipse: s-maj=71.4km s-min=18.3km az=160.0*
ISC 21 00:27:58.5±0.7, 12°.5S±0°.1×169°.2E±0°.1, h600km, n50, σ0°66/50, mb4.3/23, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**8.45**	**193**	P	**P**	**00 30 01.8**	**-0.2**
MARNC	**Mare, Loyalty**	**9.01**	**187**	P	**P**	**00 30 07.4**	**0.0**
DZM	**Mont Dzumac**	**9.88**	**195**	P	**P**	**00 30 16.8**	**+0.7**
MSVF	**Nonsavu**	**9.99**	**122**	P	**P**	**00 30 17.8**	**+0.6**
	7.4nm,0.6s,baz=276,slow=17,SNR=6.4						
MSVF	**Nonsavu**	**9.99**	**122**	P	**P**	**00 30 17.3**	**0.0**
ONTNC	**Ouen Toro**	**10.11**	**195**	P	**P**	**00 30 19.2**	**+1.0**
EIDS	**Eidsvold**	**21.37**	**231**	P	**P**	**00 32 04.4**	**-0.1**
EIDS				IAmb	IAmb	00 32 22.7	
	comp=Z,10nm,1.2s						
ARMA	**Armidale**	**24.14**	**220**	P	**P**	**00 32 28.8**	**-0.4**
ARMA				IAmb	IAmb	00 32 33.9	
	comp=Z,16nm,1.4s						
COEN	**Coen**	**25.39**	**264**	P	**P**	**00 32 42.2**	**+1.9**
QRZ	**Quartz Range**	**28.37**	**175**	P	**P**	**00 33 05.9**	**-0.1**
STKA	**Stephens Creek**	**31.88**	**228**	P	**P**	**00 33 36.2**	**0.0**
	comp=Z,3.1nm,0.5s,baz=45,slow=9.1,SNR=9.1						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**31.88**	**228**	P	**P**	**00 33 36.0**	**-0.2**
TOO	**Toolangi**	**32.76**	**216**	P	**P**	**00 33 42.8**	**-0.9**
WR0	**Warramunga Arr**	**34.06**	**253**	P	**P**	**00 33 54.5**	**-0.2**
WR0				IAmb	IAmb	00 33 54.9	
	comp=Z,3.9nm,0.5s						
WB0	**Warramunga Arr**	**34.17**	**253**	P	**P**	**00 33 55.7**	**0.0**
WB2	**Warramunga Arr**	**34.23**	**253**	P	**P**	**00 33 56.2**	**0.0**
WB2				IAmb	IAmb	00 33 56.8	
	comp=Z,6.8nm,0.8s						
WRAB	**Tennant Creek**	**34.23**	**253**	P	**P**	**00 33 55.9**	**-0.3**
WRAB				IAmb	IAmb	00 33 56.3	
	comp=Z,7.4nm,0.5s						
WRA	**Warramunga Arr**	**34.24**	**253**	P	**P**	**00 33 56.1**	**-0.2**
	comp=Z,7.1nm,0.5s,baz=84,slow=8.5,SNR=90						

comp=Z,7.1nm,0.5s
WRA Warramunga Arr 34.24 253 P P 00 33 55.0 -1.3
AS31 Alice Springs 35.26 247 P P 00 34 04.5 -0.2
ASAR Alice Springs 35.26 247 P P 00 34 04.4 -0.3
comp=Z,8.9nm,0.4s,baz=77,slow=9.9,SNR=82
comp=Z,8.9nm,0.4s
ASAR Alice Springs 35.26 247 P P 00 34 04.1 -0.7
BBOO Buckleboo 36.44 231 P P 00 34 13.7 -0.5
KNRA Kununurra 39.32 260 P P 00 34 38.2 +0.5
KNRA IAmb IAmb 00 34 38.7
comp=Z,13nm,0.8s
FORT Forrest 42.07 238 P P 00 34 58.8 -0.6
PSA00 Pilbara Seismi 47.89 252 P P 00 35 43.8 -0.1
MBWA Marble Bar 47.98 253 P P 00 35 44.6 0.0
MORW Morawa 51.95 243 P P 00 36 12.9 -0.5
MORW IAmb IAmb 00 36 34.3
comp=Z,31nm,1.4s
QSPA South Pole Qui 77.52 180 P P 00 38 53.5 +0.3
O18K Koktuh Hills 77.57 18 P P 00 38 52.6 -0.7
O18K IAmb IAmb 00 38 54.0
comp=Z,34nm,1.4s
CAST Castle Rocks 81.32 17 P P 00 39 12.8 -0.2
CAST IAmb IAmb 00 39 13.5
comp=Z,6.7nm,0.8s
J20K Nowinta River 81.38 15 P P 00 39 14.4 +1.2
HMT Hamilton 81.50 21 P P 00 39 14.3 +0.3
KTH Kantishna Hill 81.75 17 P P 00 39 15.6 +0.4
KTH IAmb IAmb 00 39 23.4
comp=Z,8.1nm,1.3s
TRF Thorofare Moun 81.86 17 P P 00 39 15.9 0.0
TRF IAmb IAmb 00 39 30.4
comp=Z,8.8nm,1.4s
WAX Waxell Ridge 82.09 22 P P 00 39 17.6 +0.6
VRDI Verde Repeater 82.41 21 P P 00 39 18.7 -0.1
VRDI IAmb IAmb 00 40 02.6
comp=Z,17nm,1.5s
TABL Table Mountain 82.71 22 P P 00 39 20.0 -0.3
TABL IAmb IAmb 00 39 37.0
comp=Z,21nm,1.2s
I21K Tanana 82.74 15 P P 00 39 21.2 +1.1
I21K IAmb IAmb 00 39 22.2
comp=Z,8.9nm,1.3s
H21K Melozitna Rive 82.91 15 P P 00 39 22.1 +1.2
BARN Barnard Glacie 82.93 22 P P 00 39 21.7 +0.3
BARN IAmb IAmb 00 39 34.0
comp=Z,16nm,1.5s
IMAR Indian Mountai 82.94 14 P P 00 39 22.1 +1.0
MLY Manley 82.95 16 P P 00 39 21.7 +0.4
CTGM Chitina Glacie 82.99 22 P P 00 39 22.1 +0.4
CTGM IAmb IAmb 00 39 55.1
comp=Z,6.8nm,1.0s
WRH Wood River Hil 83.27 17 P P 00 39 22.6 -0.2
WRH IAmb IAmb 00 39 36.5
comp=Z,6.8nm,1.5s
CCB Clear Creek Bu 83.48 17 P P 00 39 23.3 -0.5
ILAR Eielson Array 83.84 17 P P 00 39 24.6 -1.0
comp=Z,1.4nm,0.7s,baz=234,slow=5.2,SNR=13
comp=Z,1.4nm,0.7s
J25K Salcha River, 84.17 18 P P 00 39 27.7 +0.4
J25K IAmb IAmb 00 39 28.9
comp=Z,5.8nm,1.4s
NVAR Mina Array Bea 84.39 49 P P 00 39 29.2 0.0
comp=Z,0.5nm,0.7s,baz=226,slow=7.4,SNR=4.0
comp=Z,0.5nm,0.7s
ARCES ARCESS Array B 118.56 346 PKP PKPdf 00 45 36.9 -1.6
comp=Z,0.6nm,0.5s,baz=43,slow=1.8,SNR=13

*NEIC **21** 00:33:19.8±1.2,5°.95S±0°.10×147°.0E±0°.1,h77km±9km, mb4.2/16,Error ellipse: s-maj=20.1km s-min=11.3km az=121.0*
*IDC **21** 00:33:20.2±3.9,6°.11S×147°.15E,h85km±36km,mb3.5/4, mbtmp4.0/7,MS3.1/2,Error ellipse: s-maj=31.6km s-min=28.2km az=94.0*
ISC 21 00:33:20.4±0.9,6°.11S±0°.08×146°.9E±0°.1,h78km,n31, σ1°.79/30,mb4.1/9,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.29**	**175**	P	**Pn**	**00 34 10.4**	**+0.8**
	36nm,0.4s,baz=48,slow=9.2,SNR=12						
PMG				S	**Sn**	**00 34 48.2**	**+0.6**
	113nm,0.5s,baz=329,slow=14,SNR=4.0						
PMG	**Port Moresby**	**3.29**	**175**		**Pn**	**00 34 10.7**	**+1.1**
COEN	**Coen**	**8.61**	**205**	Pn	**Pn**	**00 35 23.8**	**+1.5**
SIJI	**Sorong**	**16.44**	**288**	P	**Pn**	**00 37 06.9**	**+0.6**
	8.5nm,0.4s,baz=103,slow=18,SNR=2.6						
WB0	**Warramunga Arr**	**18.22**	**221**		**P**	**00 37 28.6**	**+1.2**
WR0	**Warramunga Arr**	**18.26**	**220**	P	**P**	**00 37 28.9**	**+1.0**
WR0				IAmb	IAmb	00 37 31.7	
	comp=Z,13nm,1.3s						
WB2	**Warramunga Arr**	**18.37**	**220**	P	**P**	**00 37 29.5**	**+0.4**
WB2				IAmb	IAmb	00 37 32.1	
	comp=Z,4.5nm,0.6s						
WRA	**Warramunga Arr**	**18.38**	**220**	P	**P**	**00 37 29.0**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=41,slow=12,SNR=21						
WRA				S	**S**	**00 40 47.7**	**-6.8**
	comp=Z,1.0nm,0.7s,baz=42,slow=20,SNR=3.9						
WRA				LR	LR	00 45 21.3	
	comp=Z,54nm,19.6s,baz=308,slow=39						
WRA	**Warramunga Arr**	**18.38**	**220**	P	**P**	**00 37 29.5**	**+0.3**
EIDS	**Eidsvold**	**19.57**	**169**	P	**Pn**	**00 37 43.9**	**-0.2**
EIDS				IAmb	IAmb	00 37 44.2	
	comp=Z,6.6nm,0.9s						
KNRA	**Kununurra**	**20.16**	**240**	P	**P**	**00 37 48.6**	**0.0**
KNRA				IAmb	IAmb	00 37 53.6	
	comp=Z,20nm,1.2s						
AS31	**Alice Springs**	**21.46**	**214**	P	**P**	**00 38 03.3**	**+0.7**
ASAR	**Alice Springs**	**21.47**	**214**	P	**P**	**00 38 02.6**	**0.0**
	comp=Z,2.0nm,0.6s,baz=46,slow=9.2,SNR=22						
ASAR				LR	LR	00 47 37.7	
	comp=Z,53nm,19.3s,baz=340,slow=40						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**21.47**	**214**	P	**P**	**00 38 03.1**	**+0.4**
BATI	**Baumata**	**23.34**	**258**	P	**P**	**00 38 24.4**	**+2.1**
	comp=Z,31nm,0.5s,baz=119,slow=10,SNR=6.7						
STKA	**Stephens Creek**	**26.11**	**190**	P	**P**	**00 38 46.5**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=352,slow=14,SNR=1.7						
	comp=Z,1.3nm,0.5s						
MBWA	**Marble Bar**	**30.26**	**238**	P	**P**	**00 39 24.6**	**+0.5**
PSA00	**Pilbara Seismi**	**30.34**	**237**	P	**P**	**00 39 25.8**	**+0.9**
PSA00				IAmb	IAmb	00 39 28.9	
	comp=Z,23nm,1.2s						
H11S3	**WAKE ISLAND Hy**	**31.29**	**38**	T	T	01 12 37.1	
	baz=220						
H11S2	**WAKE ISLAND Hy**	**31.30**	**38**	T	T	01 12 37.6	
	baz=220						
H11S1	**WAKE ISLAND Hy**	**31.31**	**38**	T	T	01 12 38.3	
	baz=220						
MORW	**Morawa**	**37.02**	**228**	P	**P**	**00 40 23.2**	**+0.4**
KULM	**Kulim**	**47.53**	**283**	P	**P**	**00 41 48.0**	**-0.4**
VNDA	**Vanda**	**71.81**	**177**	P	**P**	**00 44 34.6**	**+0.5**
MKAR	**Makanchi Array**	**77.51**	**321**	P	**P**	**00 45 09.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=2.0						
	comp=Z,0.3nm,0.5s						
SCM	**Sheep Creek Mo**	**84.23**	**26**	P	**P**	**00 45 42.0**	**-1.2**
MLY	**Manley**	**84.26**	**22**	P	**P**	**00 45 41.3**	**-2.0**
MLY				IAmb	IAmb	00 45 55.9	
	comp=Z,4.2nm,1.3s						
ILAR	**Eielson Array**	**85.63**	**23**	P	**P**	**00 45 47.5**	**-2.5**
	comp=Z,1.2nm,0.7s,baz=256,slow=5.1,SNR=10						
	comp=Z,1.2nm,0.7s						
DOT	**Dot Lake**	**86.33**	**25**	P	**P**	**00 45 50.3**	**-3.3**
DOT				IAmb	IAmb	00 46 16.5	
	comp=Z,2.0nm,1.1s						
M27K	**Edge Creek, AK**	**86.81**	**26**	P	**P**	**00 45 55.2**	**-0.9**
M27K				IAmb	IAmb	00 45 56.4	
	comp=Z,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**145.01**	**284**	PKPbc	**PKPbc**	**00 52 49.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=80,slow=4.1,SNR=9.0						

*IDC **21** 00:53:21.3±1.9,6°.65S×128°.58E,h0km,mb3.6/1, mbtmp3.5/4,ML3.4/3,Error ellipse: s-maj=68.6km s-min=30.2km az=78.0*
ISC 21 00:53:32.0±2.9,6°.63S±0°.10×13°.1E±°,h35km,n4,σ2°.47/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.74**	**4**	Pn	**Pn**	**00 54 56.1**	**+1.4**
	1.4nm,0.3s,baz=162,slow=20,SNR=1.6						
SIJI				Sn	**Sn**	**00 55 57.3**	**-2.2**
	2.8nm,0.3s,baz=143,slow=20,SNR=1.8						
	6.5nm,0.3s						
WRA	**Warramunga Arr**	**13.66**	**166**	Pn	**Pn**	**00 56 44.7**	**+1.3**
	0.1nm,0.3s,baz=337,slow=10.0,SNR=1.8						
WRA				Sn	**Sn**	**00 59 14.3**	**+0.3**
	0.4nm,0.3s,baz=354,slow=24,SNR=9.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.19**	**170**	P	**P**	**00 57 30.0**	**-0.9**
	0.2nm,0.3s,baz=344,slow=10,SNR=5.5						
ASAR				S	**Sn**	**01 00 36.9**	**-3.0**
	0.2nm,0.4s,baz=358,slow=29,SNR=1.7						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**68.38**	**326**	P	P	01 04 17.1	-13
	0.3nm,0.5s,baz=110,slow=7.9,SNR=4.2						
	0.3nm,0.5s						

*NEIC **21** 01:45:01.9±1.6,1°.95S±0°.06×100°.12E±0°.09,h61km±7km, mb4.5/12,Error ellipse: s-maj=12.7km s-min=8.7km az=71.0*
*IDC **21** 01:45:01.9±4.2,1°.78S×100°.34E,h52km±38km,mb3.9/15, mbtmp4.2/16,ML3.5/1,MS3.2/5,Error ellipse: s-maj=28.5km s-min=14.2km az=54.0*
*DJA **21** 01:45:02.7±0.3,2°.5S±3°.×10°.0E±°,h48km±20km,M4.5/19, mb4.6/6,mB4.9/3,MLv4.6/19,Mw(mB)4.2/3*
ISC 21 01:45:00.4±0.4,1°.75S±0°.04×100°.24E±0°.04,h34km,n84, σ2°.21/83,mb4.3/19,MS3.9/3,2C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.03**	**193**	P	**Pb**	**01 45 19.9**	**+0.1**
PPSI				S	**Sb**	**01 45 32.9**	**-0.1**
SISI	**Saibi**	**1.23**	**290**	P	**Pb**	**01 45 23.1**	**0.0**
SISI				S	**Sb**	**01 45 38.8**	**+0.1**
SDSI	**Sungai Dareh**	**1.44**	**55**	P	**Pb**	**01 45 27.7**	**+1.1**
BKNI	**Bangkinang**	**2.21**	**21**		**Pb**	**01 45 38.6**	**-1.2**
BKNI	**Bangkinang**	**2.21**	**21**	P	**Pb**	**01 45 39.0**	**-0.8**
MASI	**Maura Aman, Be**	**2.42**	**125**	P	**Pn**	**01 45 40.0**	**+2.4**
RGRI	**Rengat**	**2.51**	**56**	P	**Pb**	**01 45 42.4**	**-2.5**
PBSI	**Pulau Batu**	**2.59**	**311**	P	**Pn**	**01 45 42.3**	**+2.4**
MNSI	**Mandailing Nat**	**2.62**	**345**	P	**Pb**	**01 45 43.9**	**-2.7**
UBSI	**University, Be**	**2.84**	**135**	P	**Pn**	**01 45 45.7**	**+2.3**
KSI	**Kapahiang**	**3.01**	**129**	P	**Pn**	**01 45 47.9**	**+2.2**
MNAI	**Manna**	**3.75**	**134**	Pn	**Pn**	**01 45 55.0**	**-0.8**
MNAI	**Manna**	**3.75**	**134**	P	**Pn**	**01 45 57.9**	**+2.1**
GSI	**Gunungsitoli**	**4.04**	**319**	Pn	**Pn**	**01 46 00.9**	**+1.0**
GSI	**Gunungsitoli**	**4.04**	**319**	P	**Pn**	**01 46 01.7**	**+1.8**
DSRI	**Dabo**	**4.51**	**74**	P	**Pn**	**01 46 09.3**	**+2.9**
RPSI	**Rantau Prapat**	**4.61**	**343**		**Pn**	**01 46 11.0**	**+3.3**
RPSI	**Rantau Prapat**	**4.61**	**343**		**Pn**	**01 46 10.6**	**+2.9**
BTDF	**Bukit Timah Da**	**4.69**	**49**	P	**Pn**	**01 46 12.1**	**+3.3**
PSI	**Prapat**	**4.71**	**344**	P	**Pn**	**01 46 10.6**	**+1.4**
	2.2nm,0.3s,baz=167,slow=14,SNR=3.1						
PSI				LR	LR	01 48 09.0	
	comp=Z,208nm,21.1s,baz=164,slow=40						
	7.0nm,0.3s						
PSI	**Prapat**	**4.71**	**344**	P	**Pn**	**01 46 10.3**	**+1.1**
PSI				P	**Pn**	**01 46 10.4**	**+1.2**
LWLI	**Liwa**	**5.00**	**131**	P	**Pn**	**01 46 15.7**	**+2.5**
TPRI	**Tanjung Pinang**	**5.04**	**58**	P	**Pn**	**01 46 17.2**	**+3.6**
MYKOM	**Kota Tinggi**	**5.04**	**46**	Pn	**Pn**	**01 46 17.1**	**+3.5**
KASI	**Kota Agung**	**5.66**	**132**	P	**Pn**	**01 46 23.6**	**+1.5**
	0.4nm1μm60nm,1.1s						
KCSI	**Kotacane, Aceh**	**5.79**	**335**	P	**Pn**	**01 46 27.6**	**+3.6**
	0.5nm42nm,1.0s						
IPM	**Ipoh**	**6.24**	**7**		**Pn**	**01 46 34.5**	**+4.4**
IPM	**Ipoh**	**6.24**	**7**	P	**Pn**	**01 46 33.4**	**+3.3**
	0.2nm43nm,0.7s						
KULM	**Kulim**	**7.01**	**3**	Pn	**Pn**	**01 46 44.5**	**+3.8**
KULM	**Kulim**	**7.01**	**3**	P	**Pn**	**01 46 44.2**	**+3.5**
	0.1nm519nm40nm,0.8s						
MLSI	**Meulaboh, Aceh**	**7.11**	**327**	P	**Pn**	**01 46 45.1**	**+3.1**
	0.2nm2μm44nm,0.8s						
CNJI	**Cibinong**	**8.81**	**129**	P	**Pn**	**01 47 07.4**	**+2.1**
SKLT	**Songkhla**	**8.87**	**2**	P	**Pn**	**01 47 08.9**	**+2.6**
LEM	**Lembang**	**8.91**	**125**	LR	LR	01 50 35.5	
	comp=Z,50nm,22.0s,baz=126,slow=38						
SBUM	**Sibu**	**12.68**	**71**		**Pn**	**01 47 59.4**	**+1.0**
KAPI	**Kappang**	**19.74**	**100**	P	**Pn**	**01 49 30.2**	**+1.1**
	13nm,0.6s,baz=204,slow=20,SNR=2.7						
KAPI				LR	LR	01 57 53.9	
	comp=Z,73nm,18.2s,baz=290,slow=39						
CMAR	**Chiang Mai Arr**	**20.12**	**356**	P	**P**	**01 49 31.4**	**-0.1**
	3.9nm,0.6s,baz=188,slow=9.7,SNR=16						
CMAR				LR	LR	01 56 42.0	
	comp=Z,57nm,18.8s,baz=165,slow=35						
	3.9nm,0.6s						
TOLI2	**Tolitoli**	**20.73**	**82**		**P**	**01 49 38.6**	**+0.4**
TOLI2				IAmb	IAmb	01 49 42.9	
	comp=Z,14nm,0.7s						
PZH	**PanZhiHua**	**28.13**	**3**	P	P	01 50 55.0	+5.5
H08S2	**Diego Garcia H**	**28.26**	**257**	T	T	02 19 45.1	
	baz=79,slow=75,SNR=188						
H08S3	**Diego Garcia H**	**28.26**	**257**	T	T	02 19 39.1	
	baz=79,slow=75,SNR=239						
H08S1	**Diego Carcia H**	**28.27**	**257**	T	T	02 19 46.5	
	baz=79,slow=75,SNR=136						
SHL	**Shillong**	**28.34**	**344**	P	**P**	**01 50 51.1**	**-0.3**
H01W3	**Cape Leeuwin H**	**35.41**	**160**	T	T	02 30 08.8	
	baz=335,slow=76,SNR=5.0						
H01W2	**Cape Leeuwin H**	**35.42**	**160**	T	T	02 30 09.5	
	baz=335,slow=76,SNR=5.2						
H01W1	**Cape Leeuwin H**	**35.43**	**160**	T	T	02 30 01.6	
	baz=335,slow=76,SNR=7.8						
XAN	**Xi'an**	**36.53**	**12**	↑*iP*	**P**	**01 52 01.4**	**-1.4**
XAN				pP	pP	01 52 03.4	-9.2
LYN	**LuoYang**	**37.89**	**17**	↑↑P	**P**	**01 52 14.3**	**-0.1**
WRA	**Warramunga Arr**	**37.91**	**121**	P	**P**	**01 52 12.8**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=302,slow=9.2,SNR=8.2						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**37.91**	**121**	P	**P**	**01 52 12.6**	**-2.2**
WB2	**Warramunga Arr**	**37.92**	**121**	P	**P**	**01 52 12.9**	**-1.9**
WB2				IAmb	IAmb	01 52 17.0	
	comp=Z,12nm,1.4s						
NJ2	**Nanjing**	**37.97**	**26**	*e*P	**P**	**01 52 13.0**	**-2.0**
ASAR	**Alice Springs**	**39.20**	**126**	P	**P**	**01 52 25.1**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=305,slow=8.0,SNR=14						
	comp=Z,1.9nm,0.7s						
HHC	**Hu-ho-hao-te**	**43.64**	**12**	*e*P	**P**	**01 53 05.8**	**+4.0**
KSRS	**Korea Array**	**46.69**	**31**	P	**P**	**01 53 25.9**	**0.0**
	comp=Z,1.8nm,0.6s,baz=232,slow=8.0,SNR=5.0						
	comp=Z,1.8nm,0.6s						
WMQ	**Urumqi**	**46.75**	**348**	*e*P	**P**	**01 53 27.3**	**+0.9**
WMQ				sP	sP	01 53 45.8	+5.9
STKA	**Stephens Creek**	**49.13**	**132**	P	**P**	**01 53 42.9**	**-2.1**
	comp=Z,1.5nm,0.7s,baz=342,slow=9.6,SNR=1.5						
	comp=Z,1.5nm,0.7s						
JWT	**Wachi**	**49.38**	**38**	P	**P**	**01 53 45.6**	**-1.2**
SONM	**Songino Array**	**49.68**	**5**	P	**P**	**01 53 49.4**	**+0.4**
	comp=Z,4.0nm,0.4s,baz=187,slow=10.0,SNR=31						
	comp=Z,4.0nm,0.4s						
SONM	**Songino Array**	**49.68**	**5**	P	**P**	**01 53 49.0**	**-0.1**
SONM				IAmb	IAmb	01 53 50.5	
	comp=Z,5.8nm,0.9s						
ULN	**Ulaanbaatar**	**49.77**	**6**	P	**P**	**01 53 50.2**	**+0.4**
ULN				IAmb	IAmb	01 53 51.2	
	comp=Z,5.1nm,0.9s						
MK31	**Makanchi Array**	**50.86**	**344**	P	**P**	**01 53 57.5**	**-0.4**
MKAR	**Makanchi Array**	**50.86**	**344**	P	**P**	**01 53 58.2**	**+0.3**
	comp=Z,5.3nm,0.3s,baz=160,slow=8.6,SNR=85						
	comp=Z,5.3nm,0.3s						
MKAR	**Makanchi Array**	**50.86**	**344**	P	**P**	**01 53 57.8**	**-0.1**
GEYT	**Alibeck**	**55.42**	**320**	P	**P**	**01 54 31.2**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=119,slow=12,SNR=2.6						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**55.44**	**343**	P	**P**	**01 54 30.6**	**-0.9**
KURK				IAmb	IAmb	01 54 32.4	
	comp=Z,4.7nm,0.7s						
ZAA0	**Zalesovo Array**	**56.97**	**349**	P	**P**	**01 54 41.3**	**-1.1**
ZALV	**Zalesovo Beam**	**56.97**	**349**	P	**P**	**01 54 42.0**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=173,slow=5.4,SNR=26						
	comp=Z,4.8nm,0.5s						
ABKAR	**Akbulak array**	**61.54**	**331**	P	**P**	**01 55 13.5**	**-0.5**
AKTO	**Aktyubinsk**	**63.26**	**331**	P	**P**	**01 55 24.2**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=116,slow=5.4						
	comp=Z,0.6nm,0.4s						
KBZ	**Khabaz**	**68.28**	**319**	P	**P**	**01 55 58.6**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=80,slow=5.2,SNR=3.9						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**73.34**	**312**	P	**P**	**01 56 28.9**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=141,slow=8.1,SNR=2.1						
	comp=Z,0.8nm,1.0s						
TIXI	**Tiksi**	**75.58**	**9**	P	**P**	**01 56 40.2**	**-1.0**
TIXI				IAmb	IAmb	01 56 41.3	
	comp=Z,3.9nm,0.7s						
BOSA	**Boshof**	**75.99**	**241**	P	**P**	**01 56 45.3**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=162,slow=3.2,SNR=7.5						
MNK	**Minsk**	**81.26**	**326**	*i* P	**P**	**01 57 15.8**	**+2.9**
	comp=E,1.0nm,1.1s						
MNK				*i* P	**P**	**01 57 15.8**	**+2.9**
	comp=N,18nm,0.8s						
MNK				*i* P	**P**	**01 57 15.8**	**+2.9**
	comp=Z,6.0nm,1.1s,baz=106						
MNK				*i* pP	**sP**	**01 57 32.6**	**+5.7**
MNK				*i* PP	**PP**	**02 00 21.9**	**+3.2**
MNK				*i* PPP	PPP	02 02 12.2	
MNK				*i* S	**S**	**02 07 22.4**	**+1.4**
MNK				*i* sS	ScS	02 07 51.3	+13
MNK				*i* SS	**SS**	**02 12 40.2**	**+3.2**
MNK				*i* SSS	SSS	02 16 07.8	
MNK				*i* LQ	LQ	02 27 03.7	
MNK				*i* LR	LR	02 33 08.2	
MNK				*i* LRM	MLR	02 35 35.2	
	comp=N,314nm,18.7s						
MNK				*i* LRM	MLR	02 35 44.8	
	comp=E,48nm,20.0s						
MNK				*i* LRM	MLR	02 35 48.1	
	comp=Z,81nm,15.5s						
FINES	**FINESS Array B**	**84.01**	**332**	P	**P**	**01 57 27.0**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=125,slow=5.3,SNR=9.2						
	comp=Z,1.9nm,0.8s						
ARCES	**ARCESS Array B**	**86.33**	**340**	P	**P**	**01 57 38.2**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=107,slow=6.5,SNR=10						
	comp=Z,1.2nm,0.7s						
RAFF	**Raffo Rosso**	**87.77**	**307**	P	**P**	**01 57 42.6**	**-3.7**
JMIC	**Jan Mayen**	**97.70**	**342**	LR	LR	02 48 24.0	
	comp=Z,32nm,18.1s,baz=214,slow=39						
TXAR	**Lajitas Array**	**144.36**	**37**	PKP	PKPbc	02 04 32.7	+0.5
	comp=Z,0.7nm,0.5s,baz=306,slow=1.3,SNR=8.1						
CPUP	**Villa Florida**	**144.66**	**216**	PKP	**PKPdf**	**02 04 33.7**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=193,slow=3.9,SNR=4.5						
MIAR	**Mount Ida**	**144.92**	**20**	PKPbc	**PKPab**	**02 04 31.2**	**-2.5**
U49A	**Red Boiling Sp**	**144.97**	**8**	PKPbc	**PKPab**	**02 04 30.4**	**-3.4**
V51A	**Loudon**	**145.85**	**7**	PKPbc	**PKPdf**	**02 04 32.5**	**-3.6**

*LDG **21** 01:54:54.5±0.4,39°.76N×20°.49E,h4km,Ml3.8/6,Error ellipse: s-maj=12.6km s-min=6.6km az=12.0*
*IDC **21** 01:54:55.3±0.9,39°.79N×20°.69E,h0km,mb3.8/8, mbtmp3.7/16,ML3.6/7,MS3.1/2,Error ellipse: s-maj=15.0km s-min=13.9km az=55.0*
*PDG **21** 01:54:57.7±0.6,39°.77N×20°.55E,h14km±1km,ML3.7/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*TIR **21** 01:54:57.9,39°.76N×20°.63E,h0km±2km,Md3.9,Ml3.8*
*BEO **21** 01:54:57.7±0.7,39°.63N×20°.57E,h16km±4km,ML3.7/11*
*ATH **21** 01:54:58.1,39°.75N×20°.66E,h5km±1km,ML3.7/11,Error ellipse: s-maj=1.6km s-min=0.7km az=338.0*
*THE **21** 01:54:58.4,39°.76N×20°.64E,h7km,ML3.8/19,Error ellipse: s-maj=0.9km s-min=0.3km az=305.0*
*NEIC **21** 01:54:59.1±2.1,39°.86N±0°.04×20°.56E±0°.05,h10km±1km, Error ellipse: s-maj=8.4km s-min=5.2km az=222.0*
ISC 21 01:54:57.7±0.8,39°.75N±0°.01×20°.63E±0°.02,h12km±6km, n246,σ1°.21/310,mb4.0/9,17C-16D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.19**	**118**	P	**Pg**	**01 55 01.7**	**-0.3**
JAN				S	**Sg**	**01 55 05.3**	**+0.3**
	120μm,0.3s						
JAN	**Janina**	**0.19**	**118**	P	**Pg**	**01 55 01.6**	**-0.3**
JAN				S	**Sg**	**01 55 04.0**	**-0.9**
JAN				AML	AML	01 55 06.0	
JAN				AML	AML	01 55 07.0	
IGT	**Igoumenitsa**	**0.31**	**227**	P	**Pg**	**01 55 04.8**	**+0.7**
IGT				S	**Sb**	**01 55 09.8**	**-0.5**
	25μm,0.4s						
IGT	**Igoumenitsa**	**0.31**	**227**	P	**Pg**	**01 55 04.4**	**+0.4**
	baz=226						
IGT				S	**Sb**	**01 55 11.5**	**+1.2**
	baz=226						
IGT	**Igoumenitsa**	**0.31**	**227**	P	**Pg**	**01 55 04.5**	**+0.4**
IGT				AML	AML	01 55 12.6	
	comp=E,66065μm,0.4s						
IGT				AML	AML	01 55 15.4	
	comp=N,33035μm,0.3s						
LSK	**Leskovik**	**0.40**	**357**	P	**Pg**	**01 55 06.3**	**+0.5**
LSK				S	**Sg**	**01 55 11.8**	**+0.6**
	comp=N,27μm,0.6s						
LSK	**Leskovik**	**0.40**	**357**	P	**Pg**	**01 55 06.3**	**+0.5**
	baz=357						
LSK				S	**Sb**	**01 55 12.4**	**-0.6**
	baz=357						
LSK				AMP			
	comp=N,109nm,0.7s,baz=357						
SRN	**Sarande**	**0.50**	**286**	P	**Pb**	**01 55 08.2**	**-0.2**
SRN				S	**Sb**	**01 55 15.5**	**-0.2**
	comp=N,8μm,0.4s						
SRN	**Sarande**	**0.50**	**286**	P	**Pb**	**01 55 08.3**	**-0.2**
	baz=285						
SRN				S	**Sb**	**01 55 16.0**	**+0.3**
	baz=285						
SRN				AMP			
	comp=N,28nm,0.4s,baz=285						
KASA	**Kassiopi**	**0.54**	**270**	P	**Pg**	**01 55 08.6**	**+0.4**
KASA				S	**Sb**	**01 55 16.3**	**-0.3**
KASA				AML	AML	01 55 19.2	
	comp=E,20436μm,0.5s						
KASA				AML	AML	01 55 19.9	
	comp=N,39606μm,0.4s						
PENT	**Pentalofos**	**0.59**	**41**	P	**Pg**	**01 55 09.1**	**-0.3**
PENT				S	**Sb**	**01 55 18.1**	**-0.4**
PENT	**Pentalofos**	**0.59**	**41**	P	**Pg**	**01 55 09.0**	**-0.3**
PENT				S	**Sg**	**01 55 17.5**	**+0.2**
PENT				AML	AML	01 55 22.9	
	comp=E,9191μm,0.3s						
PENT				AML	AML	01 55 25.6	
	comp=N,2834μm,0.4s						
KPRO	**Kipourio**	**0.60**	**70**	P	**Pg**	**01 55 09.2**	**-0.3**
K

KZN S **Sg** **01 55 31.4 +0.1**
KZN AML AML 01 55 35.5
comp=E,9889μm,0.5s
KZN AML AML 01 55 37.0
comp=N,6907μm,0.6s
DRAG Dragano-Lefkad 1.06 182 P **Pg** **01 55 18.4 +0.2**
DRAG S **Sn** **01 55 33.8 +0.7**
THL Klokotos Trika 1.08 99 P **Pb** **01 55 18.2 -0.2**
THL S **Sn** **01 55 34.7 +1.1**
comp=N,3μm,0.4s
THL Klokotos Trika 1.08 99 P **Pb** **01 55 17.1 -1.2**
THL S **Sb** **01 55 32.4 -0.1**
THL AML AML 01 55 38.8
comp=N,6330μm,0.6s
THL AML AML 01 55 39.3
comp=E,4189μm,0.3s
EVGI Lefkada island 1.12 179 P **Pn** **01 55 19.3 +0.1**
EVGI S **Sn** **01 55 36.5 +1.9**
comp=E,4μm,0.2s
EVGI Lefkada island 1.12 179 P **Pb** **01 55 18.6 -0.4**
VLO Vlora 1.13 310 Pg **Pg** **01 55 19.5 +0.1**
VLO Vlora 1.13 310 P **Pg** **01 55 20.2 +0.7**
VLO S **Sn** **01 55 35.6 +0.9**
comp=E,9μm,0.4s
EVR Evrytania 1.23 132 P **Pn** **01 55 20.8 0.0**
EVR S **Sg** **01 55 38.4 +0.9**
comp=E,2μm,0.5s
EVR Evrytania 1.23 132 P **Pn** **01 55 20.4 -0.4**
EVR S **Sb** **01 55 37.1 +0.2**
EVR AML AML 01 55 42.4
comp=E,3972μm,0.5s
EVR AML AML 01 55 48.3
comp=N,5341μm,0.6s
FSK Fiskardo 1.29 182 P **Pb** **01 55 22.1 +0.3**
FSK S **Sg** **01 55 40.2 +1.0**
comp=N,3μm,0.3s
FSK Fiskardo 1.29 182 P **Pn** **01 55 21.3 -0.2**
FSK S **Sg** **01 55 39.1 0.0**
FSK AML AML 01 55 41.9
comp=N,5308μm,0.4s
FSK AML AML 01 55 43.3
comp=E,7913μm,0.3s
PVO Paravola 1.33 148 P **Pb** **01 55 22.9 +0.4**
LRSO Larissa Observ 1.36 93 P **Pn** **01 55 22.5 0.0**
LRSO S **Sg** **01 55 42.4 +0.9**
comp=E,6μm,0.6s
LRSO Larissa Observ 1.36 93 P **Pn** **01 55 22.1 -0.4**
OHR Ohrid 1.37 5 *e*Pg **Pg** **01 55 24.1 +0.1**
OHR *e*Sg **Sg** **01 55 45.2 +3.4**
OHR Ohrid 1.37 5 *i* Pn **Pg** **01 55 23.9 -0.1**
OHR *i* Sn **Sg** **01 55 46.1 +4.3**
MAKR Makrakomi, Fth 1.38 122 P **Pb** **01 55 23.7 +0.3**
MAKR S **Sg** **01 55 43.0 +1.0**
comp=E,7μm,0.5s
MAKR Makrakomi, Fth 1.38 122 P **Pb** **01 55 23.4 0.0**
LIT Litokhoron 1.47 76 Pn **Pb** **01 55 25.3 +0.3**
LIT Litokhoron 1.47 76 P **Pn** **01 55 23.8 -0.3**
KEF4 Livadi, Kephal 1.50 186 P **Pn** **01 55 24.6 +0.3**
ANX Ano Chora 1.53 139 P **Pb** **01 55 25.9 -0.1**
KEF3 Kipouria, Keph 1.56 188 P **Pn** **01 55 25.1 -0.1**
VLS Valsamata 1.57 181 P **Pn** **01 55 25.5 +0.2**
VLS S **Sb** **01 55 46.7 +0.3**
VLS AML AML 01 55 50.0
comp=E,4694μm,0.7s
VLS AML AML 01 55 51.2
comp=N,4797μm,0.4s
EFP Efpalio 1.65 143 P **Pb** **01 55 28.1 +0.1**
SCTE Santa Cesarea 1.69 282 Pn **Pn** **01 55 27.2 +0.2**
SCTE Santa Cesarea 1.69 282 P **Pn** **01 55 27.3 +0.2**
TIR Tirane 1.70 340 ⇓P **Pb** **01 55 28.1 -0.8**
TIR Tirane 1.70 340 **Pn** **01 55 27.9 +0.7**
TIR Tirane 1.70 340 *e*Pn **Pb** **01 55 29.1 +0.2**
TIR *e*Sn **Sb** **01 55 49.8 -0.5**
TIR Tirane 1.70 340 P **Pb** **01 55 29.2 +0.3**
baz=341
TIR S **Sg** **01 55 54.5 +2.0**
baz=341
SERG Sergoula 1.73 140 P **Pn** **01 55 27.1 -0.5**
RLS Riolos of Patr 1.81 159 P **Pb** **01 55 30.3 -0.4**
LAKA Lakka 1.83 145 P **Pb** **01 55 30.7 -0.5**
AXAR Agios Charalam 1.85 121 P **Pn** **01 55 30.1 +0.8**
DLFA Delphi 1.93 131 P **Pn** **01 55 31.0 +0.7**
PHP Peshkopia 1.94 356 P **Pb** **01 55 33.6 +0.6**
baz=356
PHP S **Sg** **01 55 59.4 -0.8**
baz=356
DRO Drossia 1.98 154 P **Pb** **01 55 32.6 -1.0**
THE Thessaloniki 2.00 63 P **Pn** **01 55 31.2 0.0**
XOR Xorichti 2.02 100 P **Pn** **01 55 32.1 +0.6**
LTHK Lithakia 2.04 175 P **Pb** **01 55 33.4 -1.3**
NEO Neokhori 2.05 102 P **Pn** **01 55 32.9 +0.9**
KLV Kalavryta, Ach 2.07 145 P **Pb** **01 55 34.0 -1.3**
LKR Lokris 2.14 120 P **Pn** **01 55 34.0 +0.8**
VAY Valandovo 2.16 43 *e*Pn **Pn** **01 55 33.7 +0.3**
VAY *e*Sn **Sb** **01 56 03.2 -0.2**
VAY Valandovo 2.16 43 *i* Pn **Pn** **01 55 34.1 +0.6**
VAY *i* Sn **Sb** **01 56 04.2 +0.8**
KNT Kendrikon 2.23 50 P **Pn** **01 55 34.4 -0.1**
STIP Stip 2.28 31 *i* Pn **Pb** **01 55 38.0 -0.7**
SKO Skopje 2.31 15 *e*Pn **Pb** **01 55 37.8 -1.4**
SKO *e*Sn **Sb** **01 56 06.7 -1.0**
SKO Skopje 2.31 15 *i* Pn **Pb** **01 55 38.3 -0.9**
THAL Thalero 2.33 136 P **Pn** **01 55 36.9 +1.1**
ULC Ulcinj 2.45 335 *e*Pn **Pn** **01 55 37.8 +0.3**
ULC *i* Sn **Sn** **01 56 09.0 +1.6**
SRS Serrai 2.64 58 *e*Pn **Pn** **01 55 40.6 +0.5**
SRS *e*Sn **Sn** **01 56 13.8 +1.7**
SRS Serrai 2.64 58 P **Pn** **01 55 39.8 -0.3**
BCI Bajram Curri 2.65 351 P **Pb** **01 55 42.9 -2.2**
baz=351
BCI S **Sb** **01 56 15.7 -2.0**
baz=351
DRME Dracevica, Mon 2.67 336 *e*Pn **Pn** **01 55 41.5 +1.0**
DRME Dracevica, Mon 2.67 336 *e*Pn **Pn** **01 55 40.8 +0.3**
DRME *i* Sn **Sn** **01 56 14.3 +1.5**
ITM Ithomi 2.76 158 Pn **Pb** **01 55 46.3 -0.6**
KOKK Kokkinochori, 2.79 66 P **Pn** **01 55 42.6 +0.5**
BUM Brajici-Budva 2.87 333 *e*Pn **Pn** **01 55 43.5 +0.2**
BUM *i* Sn **Sn** **01 56 19.1 +1.3**
PDG Podgorica 2.88 339 ⇑P **Pn** **01 55 44.1 +0.8**
PDG ⇓S **Sn** **01 56 18.3 +0.5**
PDG Podgorica 2.88 339 Pn **Pn** **01 55 43.7 +0.4**
TTG Podgorica 2.88 339 ⇓*i*Pn **Pn** **01 55 43.6 +0.4**
TTG *i* Sn **Sn** **01 56 19.3 +1.5**
PVY Plav 2.89 350 *e*Pn **Pn** **01 55 44.0 +0.4**
PVY *i* Sn **Sn** **01 56 19.8 +1.4**
PTL Penteli 3.04 123 P **Pn** **01 55 45.7 +0.1**
TIP Timpagrande 3.05 261 ⇑P **Pn** **01 55 44.9 -0.9**
TIP ⇓S **Sn** **01 56 18.8 -3.4**
TIP Timpagrande 3.05 261 Pn **Pn** **01 55 46.1 +0.3**
CEME Cevo 3.08 336 *e*Pn **Pn** **01 55 46.5 +0.3**
CEME *i* Sn **Sn** **01 56 24.2 +1.2**
MATE Matera 3.14 288 ⇓P **Pn** **01 55 46.1 -0.8**
MATE ⇑S **Sn** **01 56 21.3 -2.9**
HCY Herceg Novi 3.14 330 *e*Pn **Pn** **01 55 46.4 -0.6**
HCY Herceg Novi 3.14 330 *e*Pn **Pn** **01 55 47.3 +0.3**
HCY *i* Sn **Sn** **01 56 25.6 +1.2**
IVA Berane 3.17 350 *e*Pn **Pn** **01 55 47.9 +0.4**
IVA *i* Sn **Sn** **01 56 26.7 +1.5**
BARS Barje 3.19 16 *e*Pn **Pn** **01 55 49.6 +1.9**
KOME Kolasin 3.21 345 *e*Pn **Pn** **01 55 48.4 +0.4**
KOME *i* Sn **Sn** **01 56 27.5 +1.2**
NKME Niksic 3.27 338 *e*Pn **Pn** **01 55 49.2 +0.4**
NKME *i* Sn **Sn** **01 56 28.8 +1.1**
VTS Vitosha 3.48 34 ⇑P **Pn** **01 55 53.3 +1.6**
VTS Vitosha 3.48 34 Pn **Pn** **01 55 52.8 +1.1**
SELS Selova 3.49 6 *e*Pn **Pn** **01 55 53.3 +1.5**
BRY Bratogost 3.52 334 *e*Pn **Pn** **01 55 52.5 +0.2**
BRY Bratogost 3.52 334 *e*Pn **Pn** **01 55 52.6 +0.2**
BRY *i* Sn **Sn** **01 56 34.8 +0.8**
SJES Sjenica 3.55 352 *e*Pn **Pn** **01 55 54.7 +2.1**
UPM Unac-Piva 3.69 340 *e*Pn **Pn** **01 55 54.8 +0.1**
UPM Unac-Piva 3.69 340 *e*Pn **Pn** **01 55 54.9 +0.2**
UPM *i* Sn **Sn** **01 56 38.9 +0.8**
PLE Pljevlja 3.70 346 *e*Pn **Pn** **01 55 55.2 +0.5**
PLE *i* Sn **Sn** **01 56 39.3 +1.0**
CUC Castrocucco 3.71 275 Pn **Pn** **01 55 55.7 +0.8**
STON Ston 3.82 326 *e*Pn **Pn** **01 55 54.2 -2.1**
ZAPS Zavoj 3.83 22 *e*Pn **Pn** **01 55 58.6 +2.1**
IVAS Ivanjica 3.84 355 *e*Pn **Pn** **01 55 57.2 +0.5**
BOVS Bovan 3.97 11 *e*Pn **Pn** **01 55 58.9 +0.6**
BOVS *e*Sn **Sn** **01 56 45.4 +0.7**

CEL Celeste 3.98 250 **Pn** **01 55 59.0 +0.5**
RUDO Rudo 3.98 347 *e*Pn **Pn** **01 55 58.8 +0.3**
RDO Rodhopi 4.00 68 Pn **Pn** **01 55 60.0 +1.3**
GRUS Gruza 4.14 1 *e*Pn **Pn** **01 56 02.0 +1.3**
BBLS Lazići 4.22 348 *e*Pn **Pn** **01 56 02.3 +0.5**
BBLS Lazići 4.22 348 *e*Pn **Pn** **01 56 02.9 +1.1**
SGRT San Giovanni R 4.22 300 Pn **Pn** **01 56 00.8 -1.0**
ZAGS Zajecar 4.24 16 *e*Pn **Pn** **01 56 03.3 +1.3**
ZAGS *e*Sn **Sn** **01 56 52.6 +1.3**
DIVS Divibare 4.37 354 Pn **Pn** **01 56 03.8 -0.2**
DIVS Divibare 4.37 354 *e*Pn **Pn** **01 56 04.3 +0.3**
DIVS Divibare 4.37 354 *e*Pn **Pn** **01 56 04.8 +0.8**
DIVS *e*Sn **Sn** **01 56 55.0 +0.1**
TRUS Trudelj 4.48 358 *e*Pn **Pn** **01 56 06.5 +1.2**
HAPS Han Pijesak,BI 4.51 344 *e*Pn **Pn** **01 56 05.8 -0.1**
APE Apeiranthos 4.69 123 ⇓P **Pn** **01 56 11.4 +3.2**
KUBS Kucevo 4.73 9 *e*Pn **Pn** **01 56 09.2 +0.4**
KUBS *e*Sn **Sn** **01 57 03.5 0.0**
PAOL Paolisi 4.80 287 **Pn** **01 56 10.4 +0.5**
TEKS Tekeris 4.87 351 *e*Pn **Pn** **01 56 09.3 -1.4**
TEKS Tekeris 4.87 351 *e*Pn **Pn** **01 56 10.4 -0.3**
HERR Herculane 5.30 14 ⇑P **Pn** **01 56 18.4 +1.8**
MGRS Mrkonjic Grad 5.36 332 *e*Pn **Pn** **01 56 18.0 +0.5**
VAE Valguarnera 5.37 247 Pn **Pn** **01 56 18.6 +0.9**
comp=N,3.7nm,0.7s,baz=180,slow=20,SNR=0.9
VAE Sn **Sn** **01 57 18.8 -0.7**
comp=N,3.4nm,0.3s,baz=41,slow=8.1,SNR=6.7
FRGS Fruska Gora 5.44 354 ⇑P **Pn** **01 56 18.7 +0.1**
FRGS Fruska Gora 5.44 354 *e*Pn **Pn** **01 56 18.8 +0.2**
FRGS Fruska Gora 5.44 354 *e*Pn **Pn** **01 56 19.0 +0.4**
FRGS *e*Sn **Sn** **01 57 21.5 +0.4**
COPA Copaceanca 5.56 36 ⇓P **Pn** **01 56 22.3 +2.2**
INTR Introdacqua 5.58 296 Pn **Pn** **01 56 20.9 +0.4**
IDI Anoyia 5.59 141 ⇓P **Pn** **01 56 22.6 +1.9**
IDI Anoyia 5.59 141 Pn **Pn** **01 56 19.9 -0.8**
comp=N,0.6nm,0.3s,baz=260,slow=21,SNR=16
IDI Sn **Sn** **01 57 20.4 -4.5**
comp=N,4.8nm,0.3s,baz=163,slow=10,SNR=7.1
comp=N,2.3nm,0.3s
IDI Anoyia 5.59 141 Pn **Pn** **01 56 24.3 +3.6**
BLY Banja Luka 5.61 334 *e*Pn **Pn** **01 56 21.0 +0.1**
A052A Srbac 5.83 338 *e*Pn **Pn** **01 56 21.6 -2.2**
GZR Gura Zlata 5.86 15 ⇓P **Pn** **01 56 25.9 +1.5**
BZS Buzias 5.91 7 ⇓P **Pn** **01 56 26.3 +1.3**
A051A Mrakovica 5.94 334 *e*Pn **Pn** **01 56 25.3 -0.2**
PRIJ Prijedor 5.98 332 *e*Pn **Pn** **01 56 25.4 -0.5**
AQU L'Aquila 6.05 298 Pn **Pn** **01 56 27.4 +0.4**
CAMP Campotosto 6.12 299 **Pn** **01 56 28.3 +0.3**
LOT Lotru 6.15 21 ⇓P **Pn** **01 56 29.1 +0.7**
ARR Arges 6.35 26 ⇑P **Pn** **01 56 32.2 +1.1**
VOIR 6.55 28 ⇓P **Pn** **01 56 35.5 +1.6**
SIRR Siria 6.56 6 ⇑P **Pn** **01 56 34.6 +0.7**
KOVH Kovagotottos 6.60 345 P **Pn** **01 56 34.8 +0.3**
KOVH S **Sn** **01 57 45.0 -4.7**
MORH Mrgy, Hungar 6.63 348 ⇑P **Pn** **01 56 34.5 -0.3**
MORH Mrgy, Hungar 6.63 348 P **Pn** **01 56 33.2 -1.6**
MORH S **Sn** **01 57 45.8 -4.4**
ISR Istrita 6.92 37 ⇓P **Pn** **01 56 41.0 +2.1**
MLR Muntele Rosu 6.95 33 ⇑P **Pn** **01 56 41.7 +2.3**
MLR Muntele Rosu 6.95 33 Pn **Pn** **01 56 39.9 +0.5**
comp=N,0.4nm,0.3s,baz=141,slow=6.5,SNR=2.2
comp=N,1.8nm,0.5s
MLR Muntele Rosu 6.95 33 Pn **Pn** **01 56 41.0 +1.6**
DRGR 7.20 11 ⇑P **Pn** **01 56 44.5 +1.7**
COVR Voineasa-Covas 7.34 32 ⇑P **Pn** **01 56 47.4 +2.7**
OZUR 7.39 29 ⇓P **Pn** **01 56 47.5 +2.2**
CEY Cerknica 7.53 325 *e*Pn **Pn** **01 56 47.0 -0.2**
PLOR Plostina 7.54 34 ⇑P **Pn** **01 56 49.8 +2.5**
VRI Vrincioaia 7.58 34 ⇑P **Pn** **01 56 50.7 +2.8**
MPLH Magyarpolny 7.75 344 P **Pn** **01 56 50.8 +0.5**
MPLH S **Sn** **01 58 17.3 -0.6**
CFR Carcaliu 7.76 43 ⇓P **Pn** **01 56 52.2 +1.9**
SOKA Soboth 8.04 331 *i* Pn **Pn** **01 56 53.8 -0.6**
comp=N,5.6nm,0.4s,SNR=14
OBKA Obir 8.09 329 *e*Pn **Pn** **01 56 54.7 -0.3**
OBKA Obir 8.09 329 *i* Pn **Pn** **01 56 55.2 +0.2**
comp=N,0.4nm,0.1s,SNR=6.4
PSZ Piszkesteto 8.19 357 ⇓P **Pn** **01 56 56.7 +0.4**
PSZ Piszkesteto 8.19 357 Pn **Pn** **01 56 56.2 -0.1**
PSZ Piszkesteto 8.19 357 P **Pn** **01 56 57.4 +1.1**
VLDR Vladesti 8.19 40 ⇑P **Pn** **01 56 59.1 +2.9**
ARSA Arzberg 8.37 335 *i* Pn **Pn** **01 56 58.2 -0.5**
comp=N,2.5nm,0.4s
TRPA Tarpa 8.49 9 ⇑P **Pn** **01 57 01.5 +1.0**
TRPA Tarpa 8.49 9 P **Pn** **01 57 03.4 +3.0**
BUR01 Bucovina Ar. S 8.54 21 ⇑P **Pn** **01 57 03.1 +2.0**
ABAH Abaujker 8.56 3 P **Pn** **01 57 03.0 +1.7**
BUR08 Bucovina Ar. S 8.56 21 **Pn** **01 57 02.2 +0.7**
MYKA Terra Mystica 8.56 326 *i* Pn **Pn** **01 57 01.8 +0.3**
comp=N,1.6nm,0.3s
CONA Conrad Observa 8.87 339 *e*Pn **Pn** **01 57 07.0 +1.3**
comp=N,0.3nm,0.2s
KBA Koelnbreinsper 9.04 327 *i* Pn **Pn** **01 57 08.0 -0.1**
comp=N,2.0nm,0.4s,SNR=4.3
ABTA Abfaltersbach 9.16 322 *i* Pn **Pn** **01 57 09.3 -0.4**
comp=N,0.7nm,0.2s
MOA Molln 9.31 333 *e*Pn **Pn** **01 57 12.1 +0.4**
comp=N,3.3nm,0.4s
BIOA Bad Ischl, Aus 9.41 330 *e*Pn **Pn** **01 57 13.1 +0.1**
comp=N,3.0nm,0.3s
KEST Kesra 9.79 249 Pn **Pn** **01 57 18.6 +0.3**
comp=N,0.1nm,0.3s,baz=315,slow=13,SNR=1.9
comp=N,3.5nm,0.8s
WTTA Wattenberg 9.95 322 *i* Pn **Pn** **01 57 20.6 +0.1**
comp=N,2.3nm,0.2s,SNR=7.6
BRTR Keskin Array B 10.02 86 Pn **Pn** **01 57 22.6 +1.0**
comp=N,0.2nm,0.3s,baz=266,slow=12,SNR=6.5
BRTR LR LR 02 01 11.5
comp=N,79nm,18.5s,baz=316,slow=38
comp=N,0.4nm,0.4s
WATA Walderalm 10.03 322 *i* Pn **Pn** **01 57 21.5 -0.2**
comp=N,5.7nm,0.4s,SNR=7.4
SQTA Sankt Quirin 10.13 321 *i* Pn **Pn** **01 57 23.5 +0.5**
comp=N,0.8nm,0.2s,SNR=7.3
FUORN Ofenpass-Fuorn 10.22 316 **Pn** **01 57 23.2 -1.1**
FETA Feichten 10.23 319 *e*Pn **Pn** **01 57 25.5 +1.1**
comp=N,0.6nm,0.3s
MOTA Moosalm 10.26 321 *i* Pn **Pn** **01 57 22.9 -2.0**
comp=N,3.1nm,0.4s,SNR=5.1
MORC Moravsky Berou 10.27 349 Pn **Pn** **01 57 25.0 +0.2**
GERES GERESS Array B 10.36 334 Pn **Pn** **01 57 26.2 +0.2**
comp=N,0.4nm,0.3s,baz=180,slow=14,SNR=8.0
GERES Sn **Sn** **01 59 20.0 -2.1**
comp=N,0.3nm,0.3s,baz=148,slow=23,SNR=2.7
comp=N,0.5nm,0.3s
GERES GERESS Array B 10.36 334 Pn **Pn** **01 57 24.9 -1.2**
DAVOX Davos/Dischmat 10.52 315 Pn **Pn** **01 57 28.8 +0.4**
comp=N,1.0nm,0.3s,baz=335,slow=22,SNR=13
comp=N,2.7nm,0.4s
KHC Kasperske Hory 10.64 334 *e*PN **Pn** **01 57 29.2 -0.7**
SBF Sospel 10.67 297 *e*Pn Pn 01 57 22.7 -7.7
SBF Sospel 10.67 297 *e*P **Pn** **01 57 29.3 -1.1**
DAVA Damuels 10.84 318 *i* Pn **Pn** **01 57 34.3 +1.6**
comp=N,1.0nm,0.3s
MBDF Montbardon 11.41 300 *e*Pn Pn 01 57 33.7 -6.9
MBDF Montbardon 11.41 300 *e*P **Pn** **01 57 39.3 -1.3**
MBDF *e*Sn Sn 01 59 33.6 -14
comp=N,23nm,1.1s
LPG La Plagne 11.72 304 *e*Pn Pn 01 57 37.9 -7.0
LPG La Plagne 11.72 304 *e*P **Pn** **01 57 43.6 -1.3**
LPG *e*Sn Sn 01 59 41.7 -14
comp=N,0.8nm,0.3s
LPL La Plagne 11.74 304 *e*Pn Pn 01 57 37.8 -7.3
LPL La Plagne 11.74 304 *e*P **Pn** **01 57 44.2 -0.9**
LPL *e*Sn Sn 01 59 42.4 -14
comp=N,2.7nm,0.3s
ORIF Oris-en-Rattie 12.07 300 *e*P **Pn** **01 57 50.4 +0.9**
AKASG Malin Array Be 12.51 26 LR LR 02 03 43.5
comp=N,112nm,20.5s,baz=224,slow=42
CABF La Chapelle 12.63 308 *e*Pn Pn 01 57 50.4 -6.7
CABF La Chapelle 12.63 308 *e*P **Pn** **01 57 56.6 -0.5**
HINF Hinteralfeld 12.80 314 *e*Pn Pn 01 57 52.5 -6.9
HINF Hinteralfeld 12.80 314 *e*P **Pn** **01 57 57.3 -2.1**
CDF Champ du Feu 12.91 316 *e*P **Pn** **01 57 59.5 -1.5**
HAU Haudompre 13.19 313 *e*Pn Pn 01 57 57.5 -7.2
HAU Haudompre 13.19 313 *e*P **Pn** **01 58 02.8 -1.9**
HAU *e*Sn Sn 02 00 16.1 -15
comp=N,4.8nm,0.4s
SMF Signal de Mont 14.04 305 *e*P **Pn** **01 58 14.3 -2.0**
LOR Lormes 14.29 307 *e*P **Pn** **01 58 20.7 +1.0**
LOR *e*Sn Sn 02 00 47.2 -11
comp=N,1.7nm,0.3s
AVF Avril sur Loir 14.41 305 *e*P **Pn** **01 58 20.9 -0.4**

BGF Bois d'Agland 14.64 304 *e*Pn Pn 01 58 17.9 -6.6
BGF Bois d'Agland 14.64 304 *e*P **Pn** **01 58 22.1 -2.4**
KBZ Khabaz 17.08 69 P **P** **01 59 00.3 +2.5**
comp=N,2.7nm,0.9s,baz=230,slow=7.9,SNR=4.3
ESDC Sonseca Array 18.91 278 P **Pn** **01 59 18.9 0.0**
comp=N,0.1nm,0.3s,baz=74,slow=11,SNR=7.2
comp=N,0.8nm,0.7s
ESDC Sonseca Array 18.91 278 P **P** **01 59 16.8 -1.4**
HFS Hagfors 20.87 350 P **P** **01 59 37.8 -1.5**
comp=N,2.3nm,0.5s,baz=165,slow=10,SNR=11
comp=N,2.3nm,0.5s
FINES FINESS Array B 21.98 7 P **P** **01 59 49.9 -1.3**
comp=N,1.2nm,0.3s,baz=184,slow=11,SNR=19
comp=N,1.2nm,0.3s
NB2 NORSAR Subarra 22.10 348 P **P** **01 59 51.4 -1.2**
comp=Z,1.5nm,0.6s,baz=164,slow=12
NOA NORSAR Array B 22.10 348 P **P** **01 59 51.2 -1.4**
comp=Z,1.3nm,0.7s,baz=165,slow=11,SNR=6.7
comp=Z,1.3nm,0.7s
EKA Eskdalemuir Ar 22.22 322 P **P** **01 59 52.9 -0.9**
comp=Z,1.6nm,0.5s,baz=121,slow=10,SNR=17
comp=Z,1.6nm,0.5s
ARCES ARCESS Array B 29.96 3 P **P** **02 01 03.4 -2.0**
comp=Z,0.4nm,0.3s,baz=187,slow=11,SNR=12
comp=Z,0.4nm,0.3s
TOA0 Torodi Ar. Sit 31.31 217 P **P** **02 01 18.6 +0.7**
TORD Torodi Ar. Bea 31.31 217 P **P** **02 01 17.6 -0.3**
comp=Z,1.8nm,0.7s,baz=32,slow=9.3,SNR=15
comp=Z,1.8nm,0.7s
KKAR Karatay Array 37.11 68 P **P** **02 02 09.6 +1.7**
MK31 Makanchi Array 44.42 60 P **P** **02 03 07.1 -1.1**
MK31 IAmb IAmb 02 03 07.9
comp=Z,1.3nm,0.6s
MKAR Makanchi Array 44.42 60 P **P** **02 03 07.2 -1.0**
comp=Z,1.9nm,0.5s,baz=276,slow=7.6,SNR=33
comp=Z,1.9nm,0.5s
MKAR Makanchi Array 44.42 60 P **P** **02 03 07.4 -0.8**
ZAA0 Zalesovo Array 44.59 49 P **P** **02 03 11.4 +2.0**
ZAA0 IAmb IAmb 02 03 21.0
comp=Z,1.6nm,0.8s
ZALV Zalesovo Beam 44.59 49 P **P** **02 03 08.7 -0.8**
comp=Z,0.8nm,0.4s,baz=289,slow=9.2,SNR=2.7
comp=Z,0.8nm,0.4s

MAN 21 01:57:28.1, 15.°98N×121.°81E, h27km, mb3.7, ML2.4, MS1.9, 5C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.33**	**223**	⇑*e*P	Pb	01 57 36.0	+0.3
BALP				*e*S	Sn	01 57 41.9	-1.0
PCPH	**Palayan**	**0.80**	**239**	⇑*e*P	Pn	01 57 44.2	+0.6
PCPH				*e*S	Sn	01 57 58.0	+3.4
SMPP	**San Manuel, Pa**	**1.10**	**279**	⇑*e*P	Pn	01 57 47.2	-0.5
SMPP				*e*S	Sb	01 58 02.6	+0.2
SAMP	**Sagada Mountai**	**1.40**	**322**	⇑*e*P	Pn	01 57 51.4	-0.4
SAMP				*e*S	Sn	01 58 09.8	+0.4
JCNP	**Jose Panganiba**	**1.89**	**153**	⇑*e*P	Pn	01 57 59.1	+0.6
JCNP				*e*S	Sn	01 58 22.0	+0.5
APYP	**Conner**	**1.95**	**344**	⇓*e*P	Pn	01 57 56.7	-2.7
APYP				*e*S	Sn	01 58 22.7	-0.2

MAN 21 01:57:29.2, 11.°44N×126.°13E, h4km, mb4.2, ML3.0, MS2.7, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.70**	**283**	⇓*e*P	Pg	01 57 43.0	+0.3
BESP				*e*S	Sb	01 57 54.0	0.0
GLSP	**General Luna,**	**1.65**	**180**	⇑*e*P	Pn	01 57 59.5	+0.5
GLSP				*e*S	Sg	01 58 29.4	+7.3
CNP	**Catarman**	**1.79**	**307**	⇓*e*P	Pg	01 58 03.2	-0.3
CNP				*e*S	Sn	01 58 23.9	-0.2
MSLP	**Maasin**	**1.80**	**224**	⇑*e*P	Pn	01 58 01.5	+0.4
MSLP				*e*S	Sn	01 58 25.1	+0.7
GHBP	**Garcia Hernand**	**2.53**	**225**	⇑*e*P	Pn	01 58 10.3	-0.8
BIPH	**Bislig**	**3.24**	**176**	⇓*i*P	Pb	01 58 24.7	-2.7
BIPH				*i* S	Sb	01 59 05.9	-1.4

SOME ***21*** *02:07:16.4, 39.°55N×73.°08E, h5km*
KRNET ***21*** *02:07:16.1±0.1, 39.°44N×73.°07E, h19km, mb3.2*
NNC ***21*** *02:07:17.4±5.2, 39.°70N×73.°73E, h0km, mb3.4, mpv3.0,*
Error ellipse: s-maj=41.4km s-min=27.4km az=154.0
ISU ***21*** *02:07:18, 39.°51N×72.°82E, h5km*
ISC 21 02:07:16.8±1.1, 39.°46N±0.°05×73.°08E±0.°03, h10km, n33, σ2°35/58, 16C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.99**	**272**	⇑*e*P	**Pg**	**02 07 34.7**	**-1.2**
DRK				⇑*e*S	**Sb**	**02 07 48.4**	**-1.1**
OHH	**Osh**	**1.09**	**348**	⇓*e*P	**Pg**	**02 07 36.8**	**-1.0**
OHH				⇓*e*S	**Sb**	**02 07 52.0**	**-0.2**
OHH	**Osh**	**1.09**	**348**	P	**Pg**	**02 07 36.5**	**-1.3**
OHH				S	**Sn**	**02 07 52.9**	**-0.6**
FRG	**Fergana**	**1.35**	**313**	P	**Pg**	**02 07 43.1**	**+0.3**
FRG				S	**Sg**	**02 07 59.7**	**-0.7**
BTK	**Batken**	**1.84**	**290**	⇓*e*P	**Pb**	**02 07 50.0**	**-0.7**
BTK				⇓*e*S	**Sg**	**02 08 14.5**	**-1.6**
MINT	**Mingtut**	**1.91**	**303**	P	**Sg**	**02 08 19.5**	**+1.4**
GAR	**Garm**	**2.19**	**259**	⇑*e*P	**Pb**	**02 07 54.7**	**-2.0**
GAR				⇑*e*S	**Sb**	**02 08 22.7**	**-1.3**
ARLS	**Aral**	**2.58**	**21**	⇑*e*P	**Pn**	**02 08 00.4**	**+1.5**
ARLS				⇑*e*S	**Sb**	**02 08 32.7**	**-2.5**
AML	**Almayashu**	**2.71**	**10**	P	**Pb**	**02 08 04.3**	**-1.4**
UCH	**Uchtor**	**2.98**	**21**	P	**Pb**	**02 08 07.2**	**-3.0**
UCH	**Uchtor**	**2.98**	**21**	⇓*e*P	**Pn**	**02 08 06.2**	**+1.7**
UCH				⇓*e*S	**Sn**	**02 08 42.6**	**+2.1**
NRN	**Naryn**	**2.98**	**47**	⇓*e*P	**Pn**	**02 08 05.7**	**+1.3**
NRN				⇓*e*S	**Sn**	**02 08 41.8**	**+1.4**
CHGR	**Chuyangaron**	**3.15**	**257**	⇑*e*P	**Pn**	**02 08 07.8**	**+1.1**
CHGR				⇑*e*S	**Sn**	**02 08 45.7**	**+1.3**
EKS2	**Erkin-Say**	**3.25**	**9**	P	**Pb**	**02 08 11.6**	**-3.0**
EKS2	**Erkin-Say**	**3.25**	**9**	⇑*e*P	**Pn**	**02 08 09.8**	**+1.9**
EKS2				⇑*e*S	**Sn**	**02 08 48.9**	**+2.2**
MRKS	**Merke**	**3.29**	**2**	*e*P	**Pb**	**02 08 14.4**	**-0.9**
MRKS				*e*S	**Sb**	**02 08 56.4**	**+1.0**
AAK	**Ala-Archa**	**3.35**	**18**	P	**Pb**	**02 08 13.0**	**-3.5**
AAK	**Ala-Archa**	**3.35**	**18**	⇓*e*P	**Pn**	**02 08 11.2**	**+1.7**
AAK				⇓*i*S	**Sn**	**02 08 51.3**	**+1.9**
KBK	**Karagaybulak**	**3.50**	**23**	⇑*e*P	**Pn**	**02 08 13.2**	**+1.8**
KBK				⇑*e*S	**Sn**	**02 08 55.0**	**+2.1**
IUG	**Iuzhnay**	**3.55**	**320**	*e*P	**Pb**	**02 08 18.9**	**-0.8**
IUG				*e*S	**Sb**	**02 09 04.0**	**+1.1**
ULHL	**Ulahol**	**3.68**	**40**	⇑*e*P	**Pn**	**02 08 15.7**	**+1.8**
ULHL				⇑*i*S	**Sn**	**02 08 59.4**	**+1.9**
CHMS	**Chumysh**	**3.76**	**19**	P	**Pn**	**02 08 18.2**	**+3.3**
CHMS	**Chumysh**	**3.76**	**19**	⇓Pg	**Pn**	**02 08 18.2**	**+3.3**
CHMS				⇑Lg	Lg	02 09 06.5	
3.0nm,0.5s

TKM2	**Tokmak 2**	**3.95**	**28**	⇑Pn		**Pn**	**02 08 20.0**	**+2.3**
	0.9nm,0.3s							
TKM2				⇓Lg		Lg	02 09 21.6	
	5.9nm,0.8s							
KK31	**Karatay Array**	**4.13**	**333**	Pn		**Pn**	**02 08 23.0**	**+3.1**
	0.5nm,0.2s,baz=138,slow=13,SNR=34							
KK31				⇓Pg		**Pg**	**02 08 34.6**	**-1.3**
	0.5nm,0.2s,baz=160,slow=16,SNR=4.6							
KK31				⇓Sn		**Sn**	**02 09 12.0**	**+3.7**
	1.5nm,0.3s,baz=162,slow=23,SNR=4.3							
KK31				⇓Lg		Lg	02 09 29.3	
	6.6nm,0.7s							
KKAR	**Karatay Array**	**4.13**	**333**	⇓*e*P		**Pn**	**02 08 21.7**	**+1.8**
	baz=33							
KKAR				⇓*i*S		**Sn**	**02 09 09.8**	**+1.5**
	baz=33							
KST	**Kastek**	**4.19**	**30**	*e*P		**Pb**	**02 08 33.1**	**+2.3**
	6.9nm,1.0s							
KST				*e*S		**Sg**	**02 09 28.4**	**-3.0**
	7.7nm,0.1s							
DGS	**Degeres**	**4.29**	**27**	*e*P		**Pb**	**02 08 34.3**	**+1.9**
	3.9nm,0.3s							
DGS				*e*S		**Sg**	**02 09 30.7**	**-3.9**
	7.5nm,0.2s							
TNSS	**Tian-Shan**	**4.62**	**38**	*e*P		**Pb**	**02 08 41.0**	**+2.9**
	2.6nm,0.0s							
TNSS				*e*S		**Sg**	**02 09 42.3**	**-2.7**
	3.5nm,0.3s							
KRBS	**Karabastau**	**4.66**	**24**	*e*P		**Pb**	**02 08 41.1**	**+2.4**
	1.7nm,0.1s							
KRBS				*e*S		**Sg**	**02 09 42.4**	**-4.1**
	4.4nm,0.2s							
KTBS	**Karatobe**	**5.04**	**31**	*e*P		**Pb**	**02 08 48.5**	**+3.5**
	2.4nm,1.1s							
KTBS				*e*S		**Sg**	**02 09 55.3**	**-3.2**
	8.1nm,0.0s							
KUU	**Kurty**	**5.06**	**28**	*e*P		**Pb**	**02 08 48.2**	**+2.7**
	1.6nm,0.0s							
KUU				*e*S		**Sg**	**02 09 54.6**	**-4.7**
	7.5nm,0.3s							
ARXS	**Arharly**	**5.93**	**35**	*e*P		Pg	02 09 05.1	-5.3
	2.0nm,0.2s							
ARXS				*e*S		**Sg**	**02 10 23.0**	**-4.2**
	3.1nm,0.3s							

*OSPL **21** 02:14:05.4±7.2, 19°.05N×67°.46W, h3km±79km, ML2.8*
RSPR 21 02:14:08.2, 18°.83N×67°.59W, h14km±4km, MD3.2/16, 17C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.46**	**166**	⇓*e*P	Pg	02 14 16.8	-0.5
IDE	**Isla Desecheo**	**0.46**	**166**	*e*S	Sg	02 14 23.4	0.0
AGPR	**Aguadilla, PR**	**0.58**	**128**	⇑*e*P	Pg	02 14 17.9	-1.8
AGPR	**Aguadilla, PR**	**0.58**	**128**	*e*S	Sg	02 14 25.6	-1.7
AGPR	**Aguadilla, PR**	**0.58**	**128**		Pg	02 14 17.9	-1.8
AGPR					Sg	02 14 25.6	-1.7
AGPR	**Aguadilla, PR**	**0.58**	**128**	IAML		02 14 26.7	
	comp=E,617nm,0.2s						
AGPR				IAML		02 14 30.2	
	comp=N,568nm,0.2s						
AGPR	**Aguadilla, PR**	**0.58**	**128**	*i* P	Pg	02 14 17.9	-1.7
AGPR				*e*S	Sg	02 14 26.1	-1.3
AGPR				IAML		02 14 29.3	
	comp=Z,413nm,0.3s						
PRSN	**Puerto Rico Se**	**0.74**	**145**	⇑*e*P	Pg	02 14 21.1	-1.6
PRSN	**Puerto Rico Se**	**0.74**	**145**	*e*S	Sg	02 14 31.4	-1.1
PRSN	**Puerto Rico Se**	**0.74**	**145**		Pg	02 14 21.1	-1.6
PRSN					Sg	02 14 31.4	-1.1
LSP	**Las Mesas**	**0.81**	**144**	⇑*e*P	Pg	02 14 21.9	-2.0
LSP	**Las Mesas**	**0.81**	**144**	*e*S	Sg	02 14 32.9	-1.7
PCDR	**Punta Cana, DR**	**0.81**	**247**	⇑*e*P	Pg	02 14 23.7	-0.3
PCDR	**Punta Cana, DR**	**0.81**	**247**		Pg	02 14 23.7	-0.3
PCDR	**Punta Cana, DR**	**0.81**	**247**	*i* P	Pb	02 14 24.3	+0.1
PCDR				*e*S	Sn	02 14 36.5	-0.7
PCDR				IAML		02 14 39.2	
	comp=Z,161nm,0.9s						
AOPR	**Arecibo Observ**	**0.93**	**121**	⇑*e*P	Pb	02 14 23.1	-3.1
AOPR	**Arecibo Observ**	**0.93**	**121**	*e*S	Sb	02 14 35.4	-2.9
AOPR	**Arecibo Observ**	**0.93**	**121**		Pb	02 14 23.1	-3.1
AOPR					Sb	02 14 35.4	-2.9
AOPR	**Arecibo Observ**	**0.93**	**121**	IAML		02 14 46.7	
	comp=N,433nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.94**	**151**	⇑*e*P	Pb	02 14 24.1	-2.2
CRPR	**Cabo Rojo, PR**	**0.94**	**151**	*e*S	Sb	02 14 36.9	-1.7
CRPR	**Cabo Rojo, PR**	**0.94**	**151**		Pb	02 14 24.1	-2.2
CRPR					Sb	02 14 36.9	-1.7
CRPR	**Cabo Rojo, PR**	**0.94**	**151**	IAML		02 14 42.1	
	comp=N,340nm,0.3s						
CRPR				IAML		02 14 42.8	
	comp=E,240nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.94**	**151**	*i* P	Pb	02 14 24.3	-2.0
CRPR				*e*S	Sn	02 14 40.4	+0.1
CRPR				IAML		02 14 41.7	
	comp=Z,490nm,0.2s						
MLPR	**Magueyes Islan**	**1.00**	**149**	⇑*e*P	Pb	02 14 24.8	-2.6
MLPR	**Magueyes Islan**	**1.00**	**149**	*e*S	Sb	02 14 37.3	-3.1
MLPR	**Magueyes Islan**	**1.00**	**149**		Pb	02 14 24.8	-2.6
MLPR					Sb	02 14 37.3	-3.1
MLPR	**Magueyes Islan**	**1.00**	**149**	IAML		02 14 42.3	
	comp=N,225nm,0.3s						
MLPR				IAML		02 14 42.5	
	comp=E,252nm,0.2s						
UUPR	**Utuado, UPR, P**	**1.01**	**125**	⇑*e*P	Pb	02 14 24.6	-2.9
UUPR	**Utuado, UPR, P**	**1.01**	**125**	*e*S	Sb	02 14 37.6	-3.0
UUPR	**Utuado, UPR, P**	**1.01**	**125**		Pb	02 14 24.6	-2.9
UUPR					Sb	02 14 37.6	-3.0
EMPR	**Esperanza - Ma**	**1.07**	**109**	⇑*e*P	Pb	02 14 25.8	-2.6
EMPR	**Esperanza - Ma**	**1.07**	**109**	*e*S	Sb	02 14 39.7	-2.6
EMPR	**Esperanza - Ma**	**1.07**	**109**	IAML		02 14 41.3	
	comp=N,343nm,0.3s						
EMPR	**Esperanza - Ma**	**1.07**	**109**		Pb	02 14 25.8	-2.6
EMPR					Sb	02 14 39.7	-2.6
CELP	**Cerrillos**	**1.22**	**128**	⇑*e*P	Pn	02 14 28.1	-2.8
CELP	**Cerrillos**	**1.22**	**128**	*e*S	Sb	02 14 43.1	-3.7
CELP	**Cerrillos**	**1.22**	**128**		Pn	02 14 28.1	-2.8
CELP					Sb	02 14 43.1	-3.7
GCPR	**Guaynabo City**	**1.52**	**110**	Pn	Pn	02 14 32.5	-2.6
GCPR				IAML		02 15 00.0	
	comp=E,69nm,0.3s						
SJG	**San Juan**	**1.54**	**117**	Pn	Pn	02 14 33.3	-2.0
SJG				IAML		02 14 56.9	
	comp=E,131nm,0.2s						
SJG				IAML		02 14 59.2	
	comp=E,138nm,0.2s						
IGPR	**InterUniversit**	**1.65**	**121**	*e*S	Sn	02 14 54.1	-3.7
DR12	**Loma Pena Alta**	**1.70**	**269**	⇑*e*P	Pn	02 14 26.5	-11
CBYP	**Canovanas**	**1.74**	**108**	⇑*e*P	Pn	02 14 35.5	-2.6
CBYP	**Canovanas**	**1.74**	**108**		Pn	02 14 35.5	-2.6
HUMP	**Col San Antoni**	**1.79**	**112**	⇑*e*P	Pn	02 14 36.5	-2.2
HUMP	**Col San Antoni**	**1.79**	**112**	*e*S	Sn	02 14 57.8	-3.4
HUMP	**Col San Antoni**	**1.79**	**112**		Pn	02 14 36.5	-2.2
HUMP					Sn	02 14 57.8	-3.4
MTP	**Monte Pirata**	**2.07**	**110**	⇑*e*P	Pn	02 14 39.9	-2.7
MTP	**Monte Pirata**	**2.07**	**110**	*e*S	Sn	02 15 04.7	-3.4
MTP	**Monte Pirata**	**2.07**	**110**		Pn	02 14 39.9	-2.7
MTP					Sn	02 15 04.7	-3.4
MTP	**Monte Pirata**	**2.07**	**110**	IAML		02 15 14.9	
	comp=E,60nm,0.2s						
CUPR	**Culebra, Puert**	**2.25**	**103**	⇑*e*P	Pn	02 14 41.8	-3.3
CUPR	**Culebra, Puert**	**2.25**	**103**		Pn	02 14 41.8	-3.3
STVI	**Saint Thomas**	**2.55**	**100**	⇑*e*P	Pn	02 14 47.4	-1.8
STVI	**Saint Thomas**	**2.55**	**100**	*e*S	Sn	02 15 15.9	-4.0
STVI	**Saint Thomas**	**2.55**	**100**		Pn	02 14 47.4	-1.8
STVI					Sn	02 15 15.9	-4.0
STVI	**Saint Thomas**	**2.55**	**100**	IAML		02 15 27.3	
	comp=N,36nm,0.3s						
BANI	**BANI**	**2.66**	**261**	*i* P	Pn	02 14 43.4	-7.5
BANI				*e*S	Sn	02 15 23.5	+0.6
BANI				IAML		02 15 24.4	
	comp=Z,36nm,2.6s						
SJVI	**Gifft Hill Sch**	**2.72**	**100**	⇑*e*P	Pn	02 14 49.4	-2.2
SJVI	**Gifft Hill Sch**	**2.72**	**100**	*e*S	Sn	02 15 21.3	-3.0
SJVI	**Gifft Hill Sch**	**2.72**	**100**		Pn	02 14 49.4	-2.2
SJVI					Sn	02 15 21.3	-3.0

IDC 21 02:24:53.3±3.0, 4°.95N×127°.84E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=241.0km s-min=28.4km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.55**	**166**	P	P	02 30 23.6	-0.4
	1.1nm,0.7s,baz=345,slow=10,SNR=6.9						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**29.05**	**168**	P	P	02 30 56.1	+0.5
	0.1nm,0.5s,baz=1.0,slow=10,SNR=1.6						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**57.20**	**324**	P	P	02 34 42.3	-0.1
	0.3nm,0.5s,baz=131,slow=7.0,SNR=4.3						
	0.3nm,0.5s						

*IDC **21** 02:31:28.7±1.2, 6°.96S×128°.20E, h0km, mb4.1/3, mbtmp4.1/6, ML4.1/3, Error ellipse: s-maj=59.4km s-min=21.4km az=72.0*
*NEIC **21** 02:31:41±1.3, 6°.72S±0°.08×129°.25E±0°.10, h122km±6km, mb4.0/4, Error ellipse: s-maj=14.0km s-min=11.1km az=78.0*
*DJA **21** 02:31:43.7±0.4, 7°.S±3°.×13°.0E±°, h198km±11km, M4.3/9, mb4.2/7, mB5.0/5, MLv4.5/9, Mw(mB)4.3/5*
ISC 21 02:31:42.7±0.8, 6°.67S±0°.05×129°.6E±0°.1, h150km, n39, σ2°.18/37, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.10**	**128**		**Pn**	**02 32 20.6**	**+1.6**
SAUI				Sn	**Sn**	**02 32 45.9**	**-1.0**
SAUI	**Saumlaki**	**2.10**	**128**	P	**Pn**	**02 32 21.4**	**+2.4**
SAUI	**Saumlaki**	**2.10**	**128**	P	**Pn**	**02 32 21.9**	**+2.9**
BNDI	**Bandanaira**	**2.15**	**7**	P	Pn	02 32 24.6	+4.9
MSAI	**Masohi**	**3.38**	**348**	P	Pn	02 32 40.4	+5.4
KRAI	**Karang Ratu**	**3.56**	**340**	P	Pn	02 32 43.5	+6.3
FAKI	**Fak Fak**	**4.55**	**35**		**Pn**	**02 32 49.5**	**-0.7**
FAKI	**Fak Fak**	**4.55**	**35**	P	**Pn**	**02 32 50.7**	**+0.5**
FAKI				S	**Sn**	**02 33 40.3**	**-2.5**
SIJI	**Sorong**	**5.99**	**16**	Pn	**Pn**	**02 33 10.8**	**+1.5**
	5.1nm,0.3s,baz=186,slow=22,SNR=18						
SIJI				Sn	**Sn**	**02 34 14.7**	**-2.4**
	4.1nm,0.3s,baz=284,slow=23,SNR=8.1						
	18nm,0.2s						
SIJI	**Sorong**	**5.99**	**16**	P	**Pn**	**02 33 10.2**	**+0.9**
	0.4nm4μm17nm,0.4s						
SOEI	**Soe**	**6.13**	**240**	Pn	Pn	02 33 04.4	-6.9
SOEI	**Soe**	**6.13**	**240**	P	Pn	02 33 14.9	+3.6
	0.5nm16nm,0.5s						
MTN	**Manton Dam**	**6.31**	**167**		**Pn**	**02 33 12.6**	**-0.9**
MTN	**Manton Dam**	**6.31**	**167**	P	**Pn**	**02 33 13.8**	**+0.3**
KDU	**Kakadu**	**6.60**	**155**	P	**Pn**	**02 33 17.5**	**+0.1**
RKPI	**Ransiki, Papua**	**6.84**	**42**	P	**Pn**	**02 33 21.1**	**+0.4**
	1.1nm3μm119nm,1.1s						
KNRA	**Kununurra**	**8.99**	**185**		**Pn**	**02 33 47.5**	**-1.8**
KNRA	**Kununurra**	**8.99**	**185**	P	**Pn**	**02 33 48.6**	**-0.7**
WB0	**Warramunga Arr**	**13.81**	**161**		**Pn**	**02 34 52.2**	**-0.1**
WRAB	**Tennant Creek**	**13.95**	**161**	P	**Pn**	**02 34 50.9**	**-3.2**
WRA	**Warramunga Arr**	**13.96**	**161**	Pn	**Pn**	**02 34 50.7**	**-3.5**
	0.6nm,0.3s,baz=333,slow=13,SNR=21						
WRA				Sn	Sn	02 37 16.4	-13
	2.7nm,0.3s,baz=328,slow=25,SNR=12						
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**13.96**	**161**	Pn	**Pn**	**02 34 53.4**	**-0.8**
WB2	**Warramunga Arr**	**13.96**	**161**		**Pn**	**02 34 55.0**	**+0.8**
COEN	**Coen**	**15.15**	**120**	Pn	**Pn**	**02 35 11.8**	**+2.7**
ASAR	**Alice Springs**	**17.39**	**167**	P	**Pn**	**02 35 36.1**	**-0.2**
	0.9nm,0.3s,baz=342,slow=9.2,SNR=58						
ASAR				S	**S**	**02 38 40.7**	**-8.2**
	1.2nm,0.6s,baz=355,slow=26,SNR=5.9						
	3.3nm,0.6s						
ASAR	**Alice Springs**	**17.39**	**167**	P	**Pn**	**02 35 35.5**	**-0.8**
AS01	**Alice Springs**	**17.40**	**167**	P	**Pn**	**02 35 36.5**	**+0.1**
PSA00	**Pilbara Seismi**	**17.58**	**212**	P	Pn	02 35 47.8	+9.2
	10nm,2.3s						
WRKA	**Warakurna**	**18.31**	**184**	P	**Pn**	**02 35 46.4**	**-0.8**
OOD	**Oodnadatta**	**21.78**	**165**	P	**P**	**02 36 23.0**	**+0.3**
MULG	**Mulgathing**	**23.85**	**171**	P	**P**	**02 36 43.8**	**+1.6**
STKA	**Stephens Creek**	**27.45**	**158**	P	**P**	**02 37 18.7**	**+4.0**
	1.7nm,0.7s,baz=338,slow=11,SNR=3.2						
	1.7nm,0.7s						
STKA	**Stephens Creek**	**27.45**	**158**	P	**P**	**02 37 15.4**	**+0.7**
SONM	**Songino Array**	**58.02**	**342**	P	**P**	**02 41 20.7**	**+0.8**
	0.4nm,0.5s,baz=160,slow=8.0,SNR=3.4						
	0.4nm,0.5s						
MK31	**Makanchi Array**	**67.76**	**327**	P	**P**	**02 42 24.4**	**+0.3**
MK31				IAmb	IAmb	02 42 26.1	
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**67.76**	**327**	P	**P**	**02 42 25.9**	**+1.7**
	comp=Z,1.9nm,0.4s,baz=115,slow=8.2,SNR=25						
	comp=Z,1.9nm,0.4s						
MKAR	**Makanchi Array**	**67.76**	**327**	P	**P**	**02 42 24.1**	**-0.1**
KK31	**Karatay Array**	**72.86**	**319**	P	**P**	**02 42 54.5**	**-0.8**
KK31				IAmb	IAmb	02 43 02.3	
	comp=Z,2.9nm,1.4s						
KKAR	**Karatay Array**	**72.86**	**319**	P	**P**	**02 42 55.3**	**0.0**

*IDC **21** 02:51:02.0±1.7, 39°.85N×20°.69E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=70.5km s-min=30.0km az=123.0*
*BEO **21** 02:51:04.7±0.7, 39°.66N×20°.65E, h14km±4km, ML2.7/8*
*ATH **21** 02:51:05.3, 39°.81N×20°.66E, h5km±31km, ML2.7/6, Error ellipse: s-maj=31.6km s-min=0.8km az=0.0*
*THE **21** 02:51:05.5, 39°.79N×20°.69E, h0km±1km, ML2.7/14, Error ellipse: s-maj=1.3km s-min=0.4km az=276.0*
ISC 21 02:51:05.4±0.9, 39°.80N±0°.02×20°.67E±0°.02, h11km±6km, n73, σ1°.16/105, mb3.4/3, 8C-3D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.19**	**135**	P	**Pg**	**02 51 09.1**	**-0.5**
JAN				S	**Sg**	**02 51 12.1**	**-0.4**
	8μm,0.3s						
JAN	**Janina**	**0.19**	**135**	P	**Pg**	**02 51 09.1**	**-0.5**
JAN				S	**Sg**	**02 51 12.5**	**0.0**
JAN				AML	AML	02 51 13.3	
	comp=N,14160μm,0.2s						
JAN				AML	AML	02 51 13.4	
	comp=E,12401μm,0.2s						
LSK	**Leskovik**	**0.36**	**351**	P	**Pg**	**02 51 12.6**	**0.0**
LSK				S	**Sg**	**02 51 18.0**	**+0.6**
	comp=E,2μm,0.6s						
IGT	**Igoumenitsa**	**0.37**	**225**	P	**Pg**	**02 51 12.6**	**-0.2**
IGT				S	**Sg**	**02 51 19.2**	**+1.5**
	comp=E,2μm,0.4s						
IGT	**Igoumenitsa**	**0.37**	**225**	P	**Pg**	**02 51 12.5**	**-0.2**
IGT				S	**Sg**	**02 51 17.8**	**+0.1**
IGT				AML	AML	02 51 21.2	
	comp=E,3402μm,0.3s						
IGT				AML	AML	02 51 21.5	
	comp=N,3305μm,0.5s						
SRN	**Sarande**	**0.53**	**280**	P	**Pg**	**02 51 15.4**	**-0.2**
SRN				S	**Sb**	**02 51 24.0**	**-0.2**
	comp=N,955nm,0.6s						
PENT	**Pentalofos**	**0.54**	**42**	P	**Pg**	**02 51 15.7**	**-0.2**
PENT	**Pentalofos**	**0.54**	**42**	P	**Pg**	**02 51 15.5**	**-0.4**
PENT				S	**Sg**	**02 51 22.6**	**-0.4**
KPRO	**Kipourio**	**0.55**	**73**	P	**Pg**	**02 51 15.7**	**-0.5**
KPRO				S	**Sg**	**02 51 23.6**	**+0.1**
	comp=N,2μm,0.6s						
KASA	**Kassiopi**	**0.57**	**265**	P	**Pg**	**02 51 15.9**	**-0.6**
KASA				S	**Sg**	**02 51 24.1**	**0.0**
KASA				AML	AML	02 51 27.2	
	comp=N,2065μm,0.4s						
KASA				AML	AML	02 51 29.0	
	comp=E,1540μm,0.4s						
KEK	**Kerkira**	**0.68**	**263**	P	**Pg**	**02 51 17.9**	**-0.7**
KEK				S	**Sb**	**02 51 29.4**	**+0.8**
	comp=E,518nm,0.4s						
KEK	**Kerkira**	**0.68**	**263**	P	**Pg**	**02 51 17.7**	**-0.9**
KEK				S	**Sg**	**02 51 27.2**	**-0.3**
KEK				AML	AML	02 51 33.3	
	comp=N,929μm,0.5s						
KEK				AML	AML	02 51 36.0	
	comp=E,1136μm,0.3s						
NEST	**Nestorio**	**0.68**	**25**	P	**Pg**	**02 51 18.5**	**-0.1**
NEST				S	**Sb**	**02 51 28.1**	**-0.7**
	comp=E,430nm,0.5s						
NEST	**Nestorio**	**0.68**	**25**	P	**Pg**	**02 51 18.4**	**-0.3**
KBN	**Korca**	**0.83**	**6**	P	**Pg**	**02 51 21.0**	**-0.5**
KBN				S	**Sb**	**02 51 33.9**	**+0.8**
	comp=E,320nm,0.6s						
TSLK	**Tsoukalades, L**	**0.97**	**181**	P	**Pg**	**02 51 23.3**	**-0.7**
TSLK	**Tsoukalades, L**	**0.97**	**181**	P	**Pg**	**02 51 23.2**	**-0.9**
KZN	**Kozani**	**0.98**	**58**	P	**Pg**	**02 51 23.7**	**-0.7**
KZN				S	**Sb**	**02 51 38.8**	**+1.3**
	comp=E,428nm,0.6s						
KZN	**Kozani**	**0.98**	**58**	P	**Pg**	**02 51 23.6**	**-0.7**
KZN				AML	AML	02 51 41.0	
	comp=N,638μm,0.9s						
KZN				AML	AML	02 51 45.5	
	comp=E,1071μm,0.4s						
LKD2	**Lefkada island**	**1.00**	**181**	P	**Pg**	**02 51 24.0**	**-0.7**
LKD2				AML	AML	02 51 49.2	
	comp=E,682μm,0.6s						
LKD2				AML	AML	02 51 50.8	
	comp=N,725μm,0.6s						
THL	**Klokotos Trika**	**1.06**	**102**	P	**Pg**	**02 51 25.4**	**-0.4**
THL				S	**Sb**	**02 51 40.4**	**+0.9**
	comp=N,320nm,0.5s						
THL	**Klokotos Trika**	**1.06**	**102**	P	**Pg**	**02 51 24.8**	**-0.9**
NYDR	**Nydri-Lefkada**	**1.08**	**179**	P	**Pg**	**02 51 25.5**	**-0.7**
NYDR				S	**Sb**	**02 51 42.0**	**+1.9**
	comp=N,318nm,0.5s						
EVGI	**Lefkada island**	**1.17**	**181**	P	**Pg**	**02 51 27.0**	**-0.9**
EVGI				S	**Sg**	**02 51 43.5**	**+0.4**
EVR	**Evrytania**	**1.24**	**135**	P	**Pg**	**02 51 28.4**	**-0.9**
EVR				S	**Sn**	**02 51 47.0**	**+1.5**
	comp=N,312nm,0.8s						
EVR	**Evrytania**	**1.24**	**135**	P	**Pg**	**02 51 28.3**	**-0.9**
OHR	**Ohrid**	**1.32**	**4**	*e*Pg	**Pb**	**02 51 30.7**	**+0.5**
OHR				*e*Sg	**Sn**	**02 51 51.1**	**+3.7**
OHR	**Ohrid**	**1.32**	**4**	*i* Pn	**Pb**	**02 51 31.8**	**+1.6**
OHR				*i* Sn	**Sb**	**02 51 52.6**	**+5.3**
FSK	**Fiskardo**	**1.34**	**184**	P	**Pn**	**02 51 30.0**	**+0.1**
PVO	**Paravola**	**1.35**	**150**	P	**Pg**	**02 51 31.3**	**0.0**
MAKR	**Makrakomi, Fth**	**1.37**	**124**	P	**Pn**	**02 51 30.6**	**+0.1**
MAKR				S	**Sn**	**02 51 50.9**	**+2.3**
	comp=N,632nm,0.6s						
LIT	**Litokhoron**	**1.43**	**77**	P	**Pn**	**02 51 31.2**	**0.0**
LIT				S	**Sg**	**02 51 52.2**	**+0.8**
	comp=N,470nm,0.6s						
LIT	**Litokhoron**	**1.43**	**77**	P	**Pn**	**02 51 31.2**	**0.0**
ANX	**Ano Chora**	**1.54**	**141**	P	**Pn**	**02 51 34.0**	**+1.1**
KEF4	**Livadi, Kephal**	**1.55**	**187**	P	**Pn**	**02 51 33.9**	**+1.0**
KEF3	**Kipouria, Keph**	**1.61**	**189**	P	**Pn**	**02 51 34.3**	**+0.6**
VLS	**Valsamata**	**1.62**	**182**	P	**Pn**	**02 51 33.8**	**-0.1**
EFP	**Efpalio**	**1.67**	**145**	P	**Pn**	**02 51 35.2**	**+0.7**
TIR	**Tirane**	**1.67**	**339**	⇑P	**Pn**	**02 51 34.4**	**-0.1**
TIR	**Tirane**	**1.67**	**339**	*e*Pn	**Pn**	**02 51 34.5**	**0.0**
TIR				*e*Sn	**Sg**	**02 51 59.0**	**-0.1**
SERG	**Sergoula**	**1.75**	**142**	P	**Pn**	**02 51 36.1**	**+0.5**
GRG	**Griva**	**1.76**	**48**	P	**Pn**	**02 51 35.5**	**-0.3**
LAKA	**Lakka**	**1.86**	**146**	P	**Pn**	**02 51 38.6**	**+1.5**
DRO	**Drossia**	**2.01**	**156**	P	**Pn**	**02 51 39.4**	**+0.2**
KLV	**Kalavryta, Ach**	**2.09**	**146**	P	**Pn**	**02 51 42.2**	**+1.7**
VAY	**Valandovo**	**2.10**	**43**	*e*Pn	**Pn**	**02 51 40.5**	**+0.1**
VAY				*e*Sn	**Sb**	**02 52 08.8**	**-0.7**
VAY	**Valandovo**	**2.10**	**43**	*e*Pn	**Pb**	**02 51 44.3**	**+0.8**
VAY				*i* Sn	**Sb**	**02 52 09.1**	**-0.4**
KNT	**Kendrikon**	**2.18**	**50**	P	**Pn**	**02 51 41.0**	**-0.6**
SKO	**Skopje**	**2.25**	**15**	*e*Pn	**Pn**	**02 51 43.9**	**+1.4**
SKO				*e*Sn	**Sb**	**02 52 13.3**	**-0.6**
SRS	**Serrai**	**2.59**	**58**	*e*Pn	**Pn**	**02 51 46.9**	**-0.3**
SRS				*e*Sn	**Sn**	**02 52 20.0**	**+1.4**
KOKK	**Kokkinochori,**	**2.74**	**67**	P	**Pn**	**02 51 49.2**	**-0.1**
PDG	**Podgorica**	**2.84**	**338**	⇑P	**Pn**	**02 51 52.3**	**+1.6**
BARS	**Barje**	**3.14**	**16**	*e*Pn	**Pn**	**02 51 56.0**	**+1.3**
BARS				*e*Sn	**Sn**	**02 52 34.3**	**+2.1**
MATE	**Matera**	**3.16**	**287**	⇑P	**Pg**	**02 52 04.5**	**-1.4**
VTS	**Vitosha**	**3.42**	**34**	⇓P	**Pn**	**02 51 59.7**	**+0.9**
SELS	**Selova**	**3.44**	**5**	*e*Pn	**Pn**	**02 52 00.3**	**+1.4**
SJES	**Sjenica**	**3.50**	**352**	*e*Pn	**Pn**	**02 52 01.5**	**+1.7**
ZAPS	**Zavoj**	**3.77**	**22**	*e*Pn	**Pn**	**02 52 04.6**	**+1.1**
ZAPS				*e*Sn	**Sn**	**02 52 47.6**	**-0.3**
IVAS	**Ivanjica**	**3.80**	**354**	*e*Pn	**Pn**	**02 52 04.7**	**+0.8**
BOVS	**Bovan**	**3.91**	**11**	⇓P	**Pn**	**02 52 06.0**	**+0.6**
BOVS	**Bovan**	**3.91**	**11**	*e*Pn	**Pn**	**02 52 05.5**	**+0.1**
BOVS				*e*Sn	**Sn**	**02 52 51.5**	**+0.2**
GRUS	**Gruza**	**4.09**	**0**	*e*Pn	**Pn**	**02 52 08.9**	**+1.1**
BLKB	**Belogradchik**	**4.11**	**21**	⇑P	**Pn**	**02 52 09.7**	**+1.6**
ZAGS	**Zajecar**	**4.18**	**16**	*e*Pn	**Pn**	**02 52 09.3**	**+0.3**
ZAGS				*e*Sn	**Sn**	**02 52 58.2**	**+0.4**
DIVS	**Divibare**	**4.33**	**353**	*e*Pn	**Pn**	**02 52 11.1**	**-0.1**
DIVS				*e*Sn	**Sn**	**02 53 00.6

JFM	Mihama	1.76	83	A		A		03 12 53.7
	comp=E,4.0nm,1.4s,comp=E,9.0nm,2.3s							
JHIK	Hikimi	1.77	244	A		A		03 12 54.5
	comp=E,4.0nm,4.1s,comp=E,10.0nm,4.2s							
JKI	Kunimi	2.53	229	A		A		03 13 05.7
	comp=E,6.0nm,2.6s,comp=E,8.0nm,1.4s							
INU	Inuyama	2.59	89	P		Pn		03 13 05.9	+0.8
MAJO	Matsushiro	3.74	70	P		Pn		03 13 22.1	+1.2
MJAR	Matsushiro Arr	3.74	70	Pn		Pn		03 13 22.2	+1.2
	0.3nm,0.3s,baz=248,slow=12,SNR=7.2							
MJAR				Lg		Lg		03 14 22.4
	0.9nm,0.3s,baz=248,slow=23,SNR=9.2							
MJAR				LR		LR		03 15 02.0
	comp=Z,323nm,19.1s,baz=245,slow=42							
	2.2nm,0.3s							
JTU	Tsushima	3.74	259	P		Pn		03 13 22.8	+1.9
JSD	Sado	4.46	51	P		Pn		03 13 31.1	+0.3
KSRS	Korea Array	5.23	296	Pn		Pn		03 13 40.5	-0.9
	0.8nm,0.3s,baz=110,slow=15,SNR=4.6							
KSRS				Sn		Sn		03 14 40.3	-1.4
	2.3nm,0.3s,baz=17,slow=15,SNR=9.4							
KSRS				LR		LR		03 15 46.0
	comp=Z,188nm,19.7s,baz=100,slow=39							
	1.7nm,0.3s							
USRK	Ussuriysk Ar.	8.97	351	LR		LR		03 17 32.7
	comp=Z,113nm,21.7s,baz=170,slow=34							
KLR	Kul'dur	13.98	354	LR		LR		03 19 54.3
	comp=Z,95nm,18.1s,baz=226,slow=32							
SONM	Songino Array	23.90	310	P		P		03 17 37.7	+0.7
	1.2nm,0.8s,baz=119,slow=8.6,SNR=5.1							
	1.2nm,0.8s							
MA2	Magadan	26.66	19	LR		LR		03 29 24.7
	comp=Z,38nm,18.8s,baz=138,slow=38							
BRDH	Bariadhala	38.73	263	LR		LR		03 38 32.9
	comp=Z,119nm,18.7s,baz=88,slow=41							
MKAR	Makanchi Array	39.86	303	LR		LR		03 36 47.5
	comp=Z,63nm,19.1s,baz=126,slow=37							
AAK	Ala-Archa	45.88	298	LR		LR		03 42 58.5
	comp=Z,37nm,18.8s,baz=114,slow=40							
ILAR	Eielson Array	54.17	31	LR		LR		03 48 19.4
	comp=Z,18nm,18.8s,baz=117,slow=40							
WRA	Warramunga Arr	54.97	179	P		P		03 21 54.5	-0.1
	0.2nm,0.4s,baz=354,slow=7.7,SNR=1.8							
	0.2nm,0.4s							
KBZ	Khabaz	67.25	308	LR		LR		03 56 15.4
	comp=Z,47nm,18.2s,baz=23,slow=39							

*FUNV **21** 03:15:35.8, 8°.69N×71°.63W, h5km, MW4.2*
*IDC **21** 03:15:36.3±1.0, 9°.33N×71°.48W, h0km, mb3.3/2,*
mbtmp3.8/6, ML3.5/4, MS3.0/1, Error ellipse: s-maj=28.4km
s-min=10.3km az=27.0
ISC 21 03:15:35.0±1.3, 8.71N±0°.04×71°.61W±0°.03, h7km±10km,
n46, σ1§64/63, 2C-3D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.86	119	⇓iP	Pg	03 15 52.3	+0.8
SOCV				eS	Sg	03 15 03.5	+0.9
SDV	Santo Domingo	0.98	79	Pg	Pg	03 15 54.3	+0.4
	158nm,0.3s,baz=270,slow=10,SNR=173						
SDV				Lg	Lg	03 16 07.4	
	513nm,0.3s,baz=90,slow=20,SNR=18						
CAPV	Capacho	1.09	220	⇑iP	Pg	03 15 55.7	-0.1
CAPV				eS	Sg	03 16 09.9	-0.1
MCQV	Machiques	1.62	326	⇓iP	Pn	03 16 03.6	-0.3
MCQV				eS	Sn	03 16 26.3	+1.4
PAMC	Pamplona, Colo	1.73	218	eP	Pn	03 16 05.8	-0.1
PAMC				eS	Sn	03 16 28.4	-0.1
PAMC				i		03 16 32.7	
	comp=Z,990nm,0.3s						
OCAC	Ocana	1.75	255	eP	Pn	03 16 05.3	-0.6
OCAC				eS	Sn	03 16 28.5	0.0
OCAC				i		03 16 31.3	
	comp=Z,5μm,0.7s						
CURV	Curarigua	2.08	51	eP	Pn	03 16 13.1	+2.7
CURV				eS	Sn	03 16 37.3	+0.7
LL1C	La Loma 1 Cana	2.09	294	eP	Pn	03 16 11.0	+0.6
LL1C				eS	Sb	03 16 39.9	+0.5
LL1C				i		03 16 46.3	
	comp=Z,2μm,0.5s						
TAMC	Tame, Arauca	2.26	184	eP	Pn	03 16 12.8	-0.1
DABV	Dabajuro	2.40	24	eP	Pn	03 16 14.7	0.0
DABV				eS	Sn	03 16 44.2	-0.2
BARC	Barichara	2.61	217	eP	Pb	03 16 23.5	+1.2
BRRC	Barranca, Sant	2.62	233	eP	Pn	03 16 18.2	+0.6
BRRC				eS	Sn	03 16 49.5	-0.2
BRRC				i		03 17 03.3	
	comp=Z,109nm,0.3s						
CRJC	Cerrejon, Guaj	2.62	332	eP	Pn	03 16 16.8	-0.9
SIQV	Siquisique	2.63	43	eP	Pn	03 16 18.1	+0.3
SIQV				eS	Sn	03 16 50.4	+0.4
URIC	Uribia, Colomb	3.00	353	eP	Pn	03 16 20.8	-2.2
RUSC	La Rusia	3.15	208	eP	Pn	03 16 25.9	+0.4
MAPV	Macapo	3.31	70	eP	Pn	03 16 28.0	+0.8
MAPV				eS	Sn	03 17 07.0	+0.1
BAUV	El Baul	3.54	86	⇓iP	Pn	03 16 30.0	-0.3
BAUV				eS	Sn	03 17 11.9	-0.6
PTBC	PUERTO BERRIO,	3.55	233	eP	Pn	03 16 29.1	-1.4
JACV	Jacura	3.62	49	eP	Pn	03 16 31.8	+0.3
JACV				eS	Sn	03 17 13.1	-1.4
SJCC	San Jacinto, C	3.71	289	eP	Pn	03 16 33.4	+0.6
SPBC	San Pablo de B	3.89	219	eP	Pn	03 16 35.6	+0.3
TURV	Turiamo	4.11	65	eP	Pn	03 16 38.5	+0.3
TURV				eS	Sn	03 17 24.8	-1.6
BENV	Beln	4.15	72	⇑eP	Pn	03 16 38.8	-0.1
BENV				eS	Sn	03 17 26.5	-1.3
NORC	Norcasia	4.49	226	eP	Pn	03 16 44.8	+1.3
PTGC	Puerto Gaitan,	4.51	187	eP	Pn	03 16 42.5	-1.2
CHIC	Chingaza	4.56	208	eP	Pn	03 16 45.2	+0.4
HELC	Santa Helena	4.62	237	eP	Pn	03 16 46.2	+0.7
ROSC	El Rosal	4.69	215	Pn	Pb	03 16 54.7	-3.0
	comp=Z,3.6nm,0.3s,baz=17,slow=19,SNR=3.4						
ROSC				Sn	Sg	03 18 04.3	-1.4
	comp=Z,9.9nm,0.3s,baz=269,slow=20,SNR=5.1						
	comp=Z,8.9nm,0.4s						
LCBC	Los crdobas,	4.70	272	eP	Pn	03 16 46.1	-0.3
CARV	Caracas	4.95	68	eP	Pn	03 16 49.8	-0.1
CARV				eS	Sn	03 17 45.2	-2.3
GUY2C	Guyana, Caldas	5.08	227	eP	Pn	03 16 53.0	+0.9
CACV	CAICARA DEL OR	5.15	102	eP	Pn	03 16 58.9	+6.4
CBOC	Ciudad Bolivar	5.20	237	eP	Pn	03 16 55.1	+1.8
MERV	Las Mercedes	5.28	84	eP	Pn	03 16 53.7	-0.6
MERV				eS	Sn	03 17 51.8	-3.7
PRAC	Prado	5.93	213	eP	Pn	03 17 03.7	+0.4
PCRV	Puerto La Cruz	7.04	77	Pn	Pn	03 17 18.1	-0.4
	comp=Z,1.9nm,0.3s,baz=289,slow=2.2,SNR=15						
PCRV				Sn	Sn	03 18 36.7	-2.1
	comp=Z,1.7nm,0.3s,baz=258,slow=14,SNR=1.3						
	comp=Z,5.1nm,0.4s						
PCRV	Puerto La Cruz	7.04	77	eP	Pn	03 17 18.2	-0.3
PCRV				eS	Sn	03 18 33.2	-5.6
GARC	Garzon, Huila	7.54	211	eP	Pn	03 17 27.5	+1.9
SJG	San Juan	10.75	29	Pn	Pn	03 18 04.3	-5.1
	comp=Z,1.9nm,0.3s,baz=200,slow=15,SNR=6.5						
SJG				Sn	Sn	03 19 50.7	-19
	comp=Z,0.5nm,0.3s,baz=353,slow=19,SNR=1.7						
	comp=Z,4.4nm,0.3s						
MDP	Montagnes des	19.17	100	P	Pn	03 20 01.3	+1.2
	comp=Z,0.4nm,0.3s,baz=289,slow=12,SNR=4.9						
	comp=Z,1.8nm,0.6s						
NNA	Nana	21.20	194	LR	LR	03 29 47.9	
	comp=Z,38nm,21.0s,baz=22,slow=39						
TXAR	Lajitas Array	36.40	309	P	P	03 22 38.4	-1.9
	comp=Z,0.2nm,0.7s,baz=122,slow=8.6,SNR=2.8						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	47.48	322	P	P	03 24 09.3	-1.6
	comp=Z,0.3nm,0.5s,baz=123,slow=10,SNR=4.7						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	151.41	236	PKPbc	PKiKP	03 35 35.4	+4.4
	comp=Z,0.3nm,0.6s,baz=134,slow=2.7,SNR=2.4						
WRA	Warramunga Arr	152.53	243	PKPbc	PKiKP	03 35 38.3	+5.0
	comp=Z,0.4nm,0.6s,baz=106,slow=2.6,SNR=6.5						

*UPA **21** 03:44:18.5±1.5, 9°.29N×84°.97W, h22km±214km, MW4.0*
*UCR **21** 03:44:23.0±1.3, 9°.28N×84°.48W, h5km, MW4.1*
*INET **21** 03:44:23.8±1.0, 9°.35N×84°.41W, h16km±6km, ML3.7*
ISC 21 03:44:22.7±1.4, 9°.27N±0°.05×84°.50W±0°.04, h13km±12km,
n56, σ0§66/72, 3C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACO	JACO, Garabito	0.42	338	eP	Pb	03 44 32.2	+0.1
JACO				eS	Sb	03 44 38.6	+0.2
JACO	JACO, Garabito	0.42	338	eP	Pb	03 44 32.0	0.0
JACO				eS	Sb	03 44 38.4	+0.1
EDDO	Dominical	0.63	91	eP	Pb	03 44 35.5	0.0
CDM	Cerro de Muert	0.78	69	eP	Pg	03 44 37.6	-0.4
CDM	Cerro de Muert	0.78	69	eP	Pg	03 44 37.5	-0.4
CDM				eS	Sb	03 44 48.6	-0.4
CDM				IAML		03 44 50.7	
	comp=E,4μm,0.2s						
RIMA	Rio Macho	0.80	52	eP	Pb	03 44 37.6	-1.0
RIMA	Rio Macho	0.80	52	eP	Pb	03 44 37.5	-1.0
OCM	Ochomogo	0.82	40	eP	Pb	03 44 37.8	-1.1
PEZE	Perez Zeledon,	0.82	82	eP	Pb	03 44 38.1	-0.7
PEZE	Perez Zeledon,	0.82	82	eP	Pb	03 44 38.1	-0.7
HDC	Heredia	0.82	27	eP	Pb	03 44 38.4	-0.6
HDC3	Heredia 3	0.82	28	eP	Pb	03 44 38.3	-0.7
HDC3	Heredia 3	0.82	28	eP	Pb	03 44 38.3	-0.7
HAYA	Volcan Irazu	0.96	42	eP	Pb	03 44 40.7	-0.7
CRPO	Crater poas	0.96	16	eP	Pb	03 44 40.7	-0.7
VTRT	Volcan Turrial	1.01	44	eP	Pb	03 44 41.5	-0.8
VTCV	VTCV, Calle Va	1.04	47	eP	Pb	03 44 42.1	-0.6
EDPN	Palmar Norte	1.07	106	eP	Pn	03 44 43.3	-0.1
POPE	POPE, Guanacas	1.09	316	eP	Pb	03 44 43.1	-0.4
JTS	Las Juntas de	1.11	336	eP	Pb	03 44 43.4	-0.5
SRBA	San Rafael, Bu	1.12	92	eP	Pb	03 44 43.6	-0.4
MRVA	Moravia de Chi	1.18	62	eP	Pn	03 44 44.6	-0.4
CASO	Castillo	1.18	349	eP	Pb	03 44 44.9	-0.2
CASO				eS	Sg	03 45 01.6	+0.7
RIFO	Rio Frio, Sara	1.19	29	eP	Pn	03 44 44.5	-0.5
FORC	Fortuna	1.20	352	eP	Pb	03 44 45.3	-0.1
FORC				eS	Sg	03 45 02.3	+0.7
EDBA	Buenos Aires	1.21	95	eP	Pn	03 44 45.0	-0.5
CEDE	Laguna Cedeo	1.23	351	⇑eP	Pb	03 44 46.1	+0.3
CEDE				eS	Sg	03 45 03.8	+1.4
DUNO	Dulce Nombre,	1.27	310	eP	Pn	03 44 45.4	-0.7
DUNO	Dulce Nombre,	1.27	310	eP	Pn	03 44 45.6	-0.6
DUNO				IAML		03 45 09.8	
	comp=E,1μm,0.3s						
POTG	Potrero Grande	1.38	99	eP	Pb	03 44 48.0	-0.4
BATAN	Batan	1.38	53	eP	Pb	03 44 47.9	-0.5
BATAN				eS	Sg	03 45 08.2	+0.9
ORTG	Ortega, Santa	1.44	319	eP	Pn	03 44 48.0	-0.6
COVE	Coope Vega, Sa	1.45	4	eP	Pb	03 44 48.9	-0.6
ACAL	Aguas Claras	1.46	339	⇓iP	Pb	03 44 49.4	-0.3
ACAL				eS	Sg	03 45 09.0	-0.7
PTEN	Parque Tenorio	1.52	342	⇑eP	Pb	03 44 50.8	0.0
CUI	Cuipilapa	1.53	335	eP	Pb	03 44 50.5	-0.5
CUI				eS	Sb	03 45 11.1	+0.8
COLC	Colonia	1.55	334	eP	Pb	03 44 50.9	-0.4
COLC				eS	Sg	03 45 12.8	0.0
HORNC	Hornillas	1.58	335	⇓eP	Pb	03 44 51.4	-0.5
GUAB	Guayabo de Bag	1.60	333	eP	Pb	03 44 51.7	-0.5
LIM1	Limonal	1.60	333	⇓eP	Pb	03 44 51.6	-0.7
LIM1				eS	Sb	03 45 13.2	+0.8
MESS	Mesas	1.62	335	⇑eP	Pb	03 44 51.9	-0.6
MESS				eS	Sb	03 45 13.1	+0.3
VERA	Finca Concepci	1.62	347	eP	Pb	03 44 51.9	-0.5
VMAR	Armenia, Volca	1.65	338	eP	Pb	03 44 52.7	-0.3
GPS3	Bodega del ICE	1.71	330	⇓eP	Pb	03 44 53.2	-0.8
GPS1	Guardaparques	1.72	331	eP	Pn	03 44 53.0	+0.6
VRLE	La Escondida,	1.73	331	eP	Pb	03 44 53.8	-0.7
CDITO	Canoas	1.75	113	eP	Pn	03 44 52.9	+0.1
CDITO				eS	Sg	03 45 20.3	+1.3
LAPC	Finca la Perla	1.75	328	eP	Pb	03 44 53.7	-1.1
BUEV	Buena Vista	1.76	330	eP	Pb	03 44 53.9	-1.1
GBS3	Finca Las Img	1.77	328	eP	Pb	03 44 53.8	+0.6
GB1A	Boringuen Arri	1.78	330	eP	Pb	03 44 54.3	-0.9
BRU2	Volcan	1.85	105	eP	Pn	03 44 54.4	+0.1
BRU2	Volcan	1.85	105	eP	Pn	03 44 54.4	+0.1
BRU2				eS	Sg	03 45 23.1	+0.8
CNI2	El Empalme, Bo	2.01	85	eP	Pn	03 44 57.1	+0.8
CNI2				eS	Sb	03 45 25.0	+1.0
BCO2	Palmira	2.02	106	⇓eP	Pn	03 44 57.1	+0.5
BCO2				eS	Sg	03 45 27.4	-0.4
ESPN	Las Esperanzas	2.92	4	eP	Pn	03 45 09.6	+0.8

*NEIC **21** 03:51:11.4±0.8, 19°.13N±0°.10×64°.88W±0°.05, h22km±19km,*
Error ellipse: s-maj=15.5km s-min=3.1km az=200.0
*RSPR **21** 03:51:12.4, 19°.20N×64°.87W, h12km±6km, MD3.6/18*
ISC 21 03:51:10.8±1.5, 19°.22N±0°.08×64°.87W±0°.03, h25km, n86,
σ1§08/96, 13C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.83	163	⇑eP	Pb	03 51 26.2	-0.3
TBVI	Tortola	0.83	163	eS	Sn	03 51 37.7	-0.6
TBVI	Tortola	0.83	163		Pb	03 51 26.2	-0.3
TBVI					Sn	03 51 37.7	-0.6
STVI	Saint Thomas	0.86	185	⇓eP	Pb	03 51 26.8	-0.3
STVI	Saint Thomas	0.86	185	eS	Sn	03 51 38.2	-0.9
STVI	Saint Thomas	0.86	185		Pb	03 51 26.8	-0.3
STVI					Sn	03 51 38.2	-0.9
SJVI	Gifft Hill Sch	0.88	174	⇑eP	Pb	03 51 27.2	-0.3
SJVI	Gifft Hill Sch	0.88	174	eS	Sn	03 51 38.5	-1.1
SJVI	Gifft Hill Sch	0.88	174		Pb	03 51 27.2	-0.3
SJVI					Sn	03 51 38.5	-1.1
CUPR	Culebra, Puert	0.98	204	⇓eP	Pb	03 51 28.6	-0.5
CUPR	Culebra, Puert	0.98	204	eS	Sn	03 51 42.2	+0.1
CUPR	Culebra, Puert	0.98	204		Pb	03 51 28.6	-0.5
CUPR					Sn	03 51 42.2	+0.1
CUPR	Culebra, Puert	0.98	204	IAML		03 51 43.4	
	comp=E,1μm,0.2s						
MTP	Monte Pirata	1.29	210	⇓eP	Pn	03 51 33.1	-0.1
MTP	Monte Pirata	1.29	210	eS	Sn	03 51 48.3	-1.4
MTP	Monte Pirata	1.29	210		Pn	03 51 33.1	-0.1
MTP					Sn	03 51 48.3	-1.4
MTP	Monte Pirata	1.29	210	IAML		03 51 53.1	
	comp=N,772nm,0.2s						
CBYP	Canovanas	1.33	225	⇓eP	Pn	03 51 33.2	-0.5
CBYP	Canovanas	1.33	225		Pn	03 51 33.2	-0.5
HUMP	Col San Antoni	1.42	221	⇓eP	Pn	03 51 34.7	-0.3
HUMP	Col San Antoni	1.42	221	eS	Sn	03 51 52.5	-0.3
HUMP	Col San Antoni	1.42	221		Pn	03 51 34.7	-0.3
HUMP					Sn	03 51 52.5	-0.3
HUMP	Col San Antoni	1.42	221	IAML		03 51 53.5	
	comp=N,1μm,0.2s						
CDVI	St. Croix	1.46	176	⇑eP	Pb	03 51 36.8	-0.4
CDVI	St. Croix	1.46	176		Pb	03 51 36.8	-0.4
CDVI	St. Croix	1.46	176	eP	Pb	03 51 36.9	-0.3
CDVI				eS	Sb	03 51 56.2	+0.9
GCPR	Guaynabo City	1.46	232	⇓eP	Pn	03 51 34.9	-0.7
GCPR	Guaynabo City	1.46	232	eS	Sn	03 51 52.6	-1.4
GCPR	Guaynabo City	1.46	232		Pn	03 51 34.9	-0.7
GCPR					Sn	03 51 52.6	-1.4
SJG	San Juan	1.64	228		Pn	03 51 37.7	-0.3
SJG				IAML		03 52 07.6	
	comp=N,375nm,0.2s						
SJG				IAML		03 52 08.0	
	comp=N,357nm,0.4s						
SJG	San Juan	1.64	228	eP	Pn	03 51 37.2	-0.8
SJG				eS	Sn	03 51 58.0	-0.2
IGPR	InterUniversit	1.71	224	⇓eP	Pn	03 51 38.9	-0.1
IGPR	InterUniversit	1.71	224	eS	Sn	03 51 59.8	-0.2
EMPR	Esperanza - Ma	1.74	245	⇑eP	Pn	03 51 39.4	0.0
EMPR	Esperanza - Ma	1.74	245	eS	Sn	03 52 00.7	-0.1
EMPR	Esperanza - Ma	1.74	245		Pn	03 51 39.4	0.0
EMPR					Sn	03 52 00.7	-0.1
EMPR	Esperanza - Ma	1.74	245	IAML		03 52 05.3	
	comp=N,350nm,0.5s						
CELP	Cerrillos	1.98	235	⇓eP	Pn	03 51 42.8	+0.1
CELP	Cerrillos	1.98	235	eS	Sn	03 52 06.9	+0.1
CELP	Cerrillos	1.98	235		Pn	03 51 42.8	+0.1
CELP					Sn	03 52 06.9	+0.1
AOPR	Arecibo Observ	1.98	245	⇑eP	Pn	03 51 42.9	0.0
AOPR	Arecibo Observ	1.98	245		Pn	03 51 42.9	0.0
AOPR	Arecibo Observ	1.98	245	IAML		03 52 17.5	
	comp=N,438nm,0.3s						
AOPR				IAML		03 52 20.6	
	comp=E,885nm,0.4s						
AOPR	Arecibo Observ	1.98	245	eP	Pn	03 51 42.7	-0.1
AOPR				eS	Sn	03 52 07.1	+0.2
UUPR	Utuado, UPR, P	2.00	242	⇑eP	Pn	03 51 43.0	0.0
UUPR	Utuado, UPR, P	2.00	242		Pn	03 51 43.0	0.0
SMRT	St. Maarten	2.06	124		Pn	03 51 44.1	+0.4
SMRT				IAML		03 52 13.0	
	comp=N,484nm,0.2s						
SMRT				IAML		03 52 16.3	
	comp=E,491nm,0.2s						
SMRT	St. Maarten	2.06	124	eP	Pn	03 51 43.5	-0.3
SMRT				eS	Sn	03 52 08.3	-0.4
AGPR	Aguadilla, PR	2.25	251	⇑eP	Pn	03 51 46.0	-0.4
AGPR	Aguadilla, PR	2.25	251		Pn	03 51 46.0	-0.4
AGPR	Aguadilla, PR	2.25	251	IAML		03 52 29.7	
	comp=E,155nm,0.3s						
AGPR				IAML		03 52 31.3	
	comp=N,148nm,0.5s						
GBPR	Guanica, Bosqu	2.27	237	⇑eP	Pn	03 51 47.5	+0.7
GBPR	Guanica, Bosqu	2.27	237	eS	Sn	03 52 15.0	+1.1
LSP	Las Mesas	2.34	244	⇑eP	Pn	03 51 48.0	+0.3
PRSN	Puerto Rico Se	2.38	246	⇑eP	Pn	03 51 49.1	+0.9
PRSN	Puerto Rico Se	2.38	246		Pn	03 51 49.1	+0.9
MLPR	Magueyes Islan	2.41	239	⇑eP	Pn	03 51 49.2	+0.6
MLPR	Magueyes Islan	2.41	239	eS	Sn	03 52 16.8	-0.4
MLPR	Magueyes Islan	2.41	239		Pn	03 51 49.2	+0.6
MLPR					Sn	03 52 16.8	-0.4
CRPR	Cabo Rojo, PR	2.44	241	⇑eP	Pn	03 51 49.6	+0.5
CRPR	Cabo Rojo, PR	2.44	241		Pn	03 51 49.6	+0.5
IDE	Isla Desecheo	2.60	252	⇑eP	Pn	03 51 51.6	+0.3
ANWB	Willy Bob	3.31	117	Pn	Pn	03 52 01.3	+0.4
ANWB				IAML		03 52 52.0	
	comp=N,68nm,1.1s						
ANWB				IAML		03 52 53.0	
	comp=N,61nm,1.4s						
ANWB	Willy Bob	3.31	117	eP	Pn	03 51 58.4	-2.5
ANWB				eS	Sn	03 52 36.2	-3.2
MBFL	Flemmings, Mon	3.52	134	eP	Pn	03 52 04.3	+0.3
MBFL				eS	Sn	03 52 45.2	+0.3
ANBD	Bethesda, Anti	3.65	126	eP	Pn	03 52 04.8	-0.9
ANBD				eS	Sn	03 52 45.4	-2.6
GDHS	Morne Mazeau,	4.16	134	Pn	Pn	03 52 13.0	+0.2
GDHS				IAML		03 53 11.9	
	comp=N,117nm,0.5s						
GDHS				IAML		03 53 26.7	
	comp=E,110nm,0.8s						
CBE	Ff, Capester	4.41	135	Pn	Pn	03 52 16.7	+0.5
CBE	Ff, Capester	4.41	135	eP	Pn	03 52 17.6	+1.4
CBE	Ff, Capester	4.41	135	eS	Sn	03 53 09.2	+2.4
TBG	Guadaloupe-3	4.54	137	eP	Pn	03 52 16.9	-1.1
TBG	Guadaloupe-3	4.54	137	eS	Sn	03 53 14.1	+4.1
TDBA	Terre de Bas,	4.55	137	eP	Pn	03 52 14.8	-3.3
TDBA	Terre de Bas,	4.55	137	eS	Sn	03 53 11.5	+1.3
MAGL	Barre de l'ile	4.71	133	eP	Pn	03 52 21.0	+0.6
MAGL	Barre de l'ile	4.71	133	eS	Sn	03 53 12.3	-2.0
DSLB	Salisbury	4.99	138	eP	Pn	03 52 25.6	+1.4
DSLB	Salisbury	4.99	138	eS	Sn	03 53 23.2	+2.0
MDN	Morne-Daniel	5.10	139	eS	Sn	03 53 24.5	+0.7
BIM	Bigot	5.92	142	eP	Pn	03 52 37.3	+0.4
SDDR	Presa de Saban	6.08	269		Pn	03 52 41.1	+2.0
SDDR	Presa de Saban	6.08	269	eP	Pn	03 52 39.1	0.0
SDDR	Presa de Saban	6.08	269	eS	Sn	03 53 47.6	-0.3
MPOM	Morne Pois Mar	6.10	140	eP	Pn	03 52 40.9	+1.4
MPOM	Morne Pois Mar	6.10	140	eS	Sn	03 53 46.4	-2.1
SLBI	Saint Lucia, B	6.37	144	e	Pn	03 52 38.4	-4.7

IDC 21 03:51:29.4±6.2, 19°.30N×93°.99E, h0km, mb3.8/2,
mbtmp3.7/3, ML3.8/1, MS3.2/1, Error ellipse:
s-maj=130.5km s-min=69.6km az=154.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	4.76	99	Pn	Pn	03 52 43.2	+0.7
	1.0nm,0.3s,baz=282,slow=14,SNR=6.8						
	2.2nm,0.3s						
ZALV	Zalesovo Beam	35.30	351	LR	LR	04 12 59.6	
	comp=Z,37nm,18.8s,baz=38,slow=37						
WRA	Warramunga Arr	55.54	132	P	P	04 01 05.4	-1.4
	0.4nm,0.6s,baz=317,slow=7.6,SNR=7.5						
	0.4nm,0.6s						
STKA	Stephens Creek	68.34	137	P	P	04 02 33.8	+1.0
	1.0nm,0.5s,baz=307,slow=5.1,SNR=2.8						
	1.0nm,0.5s						

*TRN **21** 03:58:14.7, 10°.82N×62°.23W, h75km, MD4.0*
*FUNV **21** 03:58:15.4, 10°.84N×62°.27W, h25km, MW3.8*
ISC 21 03:58:13.8±1.4, 10°.81N±0°.05×62°.25W±0°.05, h81km±16km,
n41, σ1§55/57, Near coast of Venezuela

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

STKA Stephens Creek 30.11 222 LR LR 04 23 40.8
comp=Z,51nm,19.6s,baz=26,slow=35
WRA Warramunga Arr 30.88 249 P P 04 12 12.3 0.0
0.3nm,0.6s,baz=79,slow=9.1,SNR=2.7
0.3nm,0.6s
ASAR Alice Springs 32.25 243 P P 04 12 24.2 -0.1
0.6nm,0.6s,baz=81,slow=9.6,SNR=5.0
0.6nm,0.6s
RPZ Rata Peaks 33.18 172 LR LR 04 24 32.0
comp=Z,64nm,18.5s,baz=182,slow=34
ILAR Eielson Array 83.54 19 P P 04 18 23.4 0.0
0.5nm,0.7s,baz=232,slow=5.8,SNR=7.1
0.5nm,0.7s

*MAN **21** 04:22:58.4, 5°.41N×128°.41E, h32km, mb4.5, ML3.3, MS3.1*
IDC 21 04:23:24.9±11.0, 4°.79N×126°.82E, h228km±109km, mb3.3/4, mbtmp3.9/4, MS2.7/2, Error ellipse: s-maj=161.2km s-min=25.7km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.58**	**331**	LR	LR	04 25 11.2	
	comp=Z,115nm,18.6s,baz=342,slow=41						
KAPI	**Kappang**	**12.03**	**216**	LR	LR	04 31 10.7	
	comp=Z,44nm,19.4s,baz=66,slow=39						
WRA	**Warramunga Arr**	**25.67**	**163**	P	P	04 28 33.7	-0.4
	1.2nm,0.5s,baz=343,slow=10,SNR=8.0						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**29.12**	**167**	P	P	04 29 05.3	+0.5
	0.8nm,0.4s,baz=352,slow=7.8,SNR=18						
ASAR				PcP	PcP	04 32 06.4	-0.3
	0.3nm,0.4s,baz=342,slow=2.9,SNR=4.3						
	0.8nm,0.4s						
STKA	**Stephens Creek**	**39.09**	**160**	P	P	04 30 29.6	-0.6
	1.4nm,0.6s,baz=314,slow=10.0,SNR=3.2						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**56.74**	**325**	P	P	04 32 45.0	-0.1
	0.4nm,0.5s,baz=120,slow=7.3,SNR=3.5						
	0.4nm,0.5s						

IDC 21 04:26:28.2±5.0, 15°.28S×173°.65W, h0km, mb3.9/3, mbtmp3.9/4, ML3.2/1, MS2.7/3, Error ellipse: s-maj=395.4km s-min=22.8km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.26**	**53**	Pn	Pn	04 27 05.0	-1.9
	6.4nm,0.3s,baz=64,slow=12,SNR=4.8						
AFI				Sn	Sn	04 27 26.2	-9.4
	19nm,0.3s,baz=30,slow=20,SNR=4.2						
AFI				LR	LR	04 27 28.2	
	comp=Z,58nm,18.6s,baz=76,slow=26						
	24nm,0.3s						
RAR	**Rarotonga**	**14.44**	**116**	LR	LR	04 33 12.4	
	comp=Z,41nm,21.6s,baz=186,slow=28						
PPT	**Papeete**	**23.20**	**99**	LR	LR	04 39 58.8	
	comp=Z,29nm,18.6s,baz=349,slow=35						
H11S2	**WAKE ISLAND Hy 38.74**	**329**		T	T	05 14 37.5	
	baz=149,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy 38.75**	**329**		T	T	05 14 37.3	
	baz=149,slow=76,SNR=36						
H11S1	**WAKE ISLAND Hy 38.75**	**329**		T	T	05 14 38.3	
	baz=149,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy 39.69**	**331**		T	T	05 15 45.7	
	baz=150,slow=76,SNR=127						
H11N1	**WAKE ISLAND Hy 39.69**	**331**		T	T	05 15 47.4	
	baz=150,slow=76,SNR=97						
H11N2	**WAKE ISLAND Hy 39.70**	**331**		T	T	05 15 47.0	
	baz=150,slow=76,SNR=135						
WRA	**Warramunga Arr**	**49.64**	**257**	P	P	04 35 21.7	-0.3
	0.8nm,0.8s,baz=91,slow=8.4,SNR=4.8						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**49.92**	**252**	P	P	04 35 23.9	-0.3
	3.9nm,0.7s,baz=85,slow=8.5,SNR=39						
	3.9nm,0.7s						
NVAR	**Mina Array Bea**	**74.40**	**42**	P	P	04 38 09.3	+0.9
	0.7nm,0.7s,baz=218,slow=8.8,SNR=7.3						
	0.7nm,0.7s						

*SNET **21** 04:39:35.8±0.3, 12°.86N×86°.93W, h15km±999km, ML2.9*
*INET **21** 04:39:36.1±0.7, 12°.44N×87°.17W, h102km±6km, ML3.0*
ISC 21 04:39:35.6±1.5, 12°.6N±0°.2×87°.1W±0°.1, h110km, n8, σ0§44/10, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.38**	**97**	*eP*	**Pn**	**04 39 51.1**	**-0.7**
CNGN				*eS*	**Sn**	**04 40 04.0**	**0.0**
CNGN				IAML		04 40 14.4	
	comp=N,383nm,0.3s						
COPN	**Copaltepe**	**0.61**	**127**	*eP*	**Pn**	**04 39 53.5**	**+0.3**
MGAN	**Managua**	**0.91**	**116**	*eP*	**Pn**	**04 39 56.0**	**+0.1**
BOAB	**BOACO BROADBAN**	**.39**	**94**	*eP*	**Pn**	**04 40 01.5**	**+0.4**
COEB	**Comit de Eme**	**1.69**	**304**	*eP*	**Pn**	**04 40 04.8**	**-0.1**
COEB				*eS*	**Sn**	**04 40 27.4**	**+0.2**
COEB				IAML		04 40 31.8	
	comp=Z,129nm,0.3s						
CONN	**Concepcion**	**1.73**	**124**	*eP*	**Pn**	**04 40 04.9**	**-0.4**
COEG	**Centro de Oper**	**2.05**	**302**	*eP*	**Pn**	**04 40 09.7**	**+0.4**
COEG				IAML		04 40 42.6	
	comp=Z,110nm,0.2s						
P5NO	**Presa 5 de nov**	**2.17**	**311**	*eP*	**Pn**	**04 40 10.3**	**-0.5**

*NIED **21** 04:41:10.3, 38°.39N×142°.18E, h30km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=0.73; Mθθ=0.72; Mφφ=0.01; Mrθ=2.94; Mrφ=-1.43; Mθφ=1.20; Fault plane solution: M0=3.49000×10¹⁴ NP1: φs=158.00000°, δ=26.00000°, λ=-11.00000°. NP2: φs=259.00000°, δ=85.00000°, λ=-115.00000°.*
*JMA **21** 04:41:10.3±0.1, 38°.4N±0°.4×142°.2E±0°.8, h30km±1km, MV3.8/40, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*IDC **21** 04:41:21.9±5.6, 37°.47N×141°.95E, h70km±50km, mb3.3/4, mbtmp3.5/5, ML2.0/1, Error ellipse: s-maj=48.8km s-min=29.0km az=86.0*
ISC 21 04:41:07.4±2.0, 38°.35N±0°.04×142°.16E±0°.09, h14km±10km, n19, σ1§17/23, mb3.8/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.55**	**266**	⇓*iP*	**Pn**	**04 41 21.4**	**+0.6**
JIKH				⇓S	**Sn**	**04 41 28.8**	**-0.9**
JIO	**Ouri**	**0.65**	**279**	*i P*	**Pn**	**04 41 23.0**	**+0.9**
JIO				S	**Sn**	**04 41 31.6**	**-0.5**
JKMT	**Kesennumamotoy**	**0.71**	**310**	⇓*iP*	**Pn**	**04 41 23.8**	**+0.8**
JKMT				⇓S	**Sn**	**04 41 33.2**	**-0.4**
OFUJ	**Ofunato**	**0.82**	**332**	⇓*iP*	**Pn**	**04 41 25.0**	**+0.5**
OFUJ				⇓S	**Sn**	**04 41 35.3**	**-1.2**
JMK	**Ichinoseki**	**0.95**	**309**	*i P*	**Pn**	**04 41 27.3**	**+1.1**
JMK				S	**Sg**	**04 41 39.4**	**+1.1**
JOU	**Okura**	**1.18**	**271**	P	**Pg**	**04 41 31.4**	**+1.3**
JOU				*e*S	**Sg**	**04 41 46.5**	**+1.1**
JMM	**Marumori**	**1.19**	**246**	*i P*	**Pg**	**04 41 31.0**	**+0.8**
JMM				*e*S	**Sg**	**04 41 46.3**	**+0.6**
JOM	**Ohasama**	**1.31**	**329**	*i P*	**Pg**	**04 41 32.8**	**+0.2**
JOM				S	**Sg**	**04 41 49.1**	**-0.5**
JFK	**Kawauchi**	**1.42**	**226**	P	**Pg**	**04 41 33.8**	**-0.9**
JFK				S	**Sn**	**04 41 50.2**	**-1.0**
JYK	**Kaneyama**	**1.52**	**292**	P	**Pg**	**04 41 36.2**	**-0.4**
JRG	**Rokugo**	**1.58**	**312**	P	**Pg**	**04 41 37.0**	**-0.8**
MJAR	**Matsushiro Arr**	**3.63**	**241**	P	**Pb**	**04 42 08.6**	**-2.7**
	0.2nm,0.3s,baz=55,slow=11,SNR=3.1						
	1.0nm,0.3s						
H11N2	**WAKE ISLAND Hy 28.35**	**124**		T	T	05 17 12.3	
	baz=316						
H11N1	**WAKE ISLAND Hy 28.36**	**124**		T	T	05 17 11.5	
	baz=316,slow=74,SNR=6.7						
H11N3	**WAKE ISLAND Hy 28.37**	**124**		T	T	05 17 13.2	
	baz=316,slow=74,SNR=8.2						
MKAR	**Makanchi Array**	**43.94**	**301**	P	P	04 49 24.2	+11
	1.1nm,0.8s,baz=89,slow=9.7,SNR=5.1						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**58.45**	**189**	P	**P**	**04 51 03.7**	**+1.0**
	0.5nm,0.4s,baz=5.6,slow=7.1,SNR=6.3						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**62.18**	**189**	P	**P**	**04 51 30.1**	**+1.9**
	0.6nm,0.8s,baz=19,slow=5.9,SNR=3.6						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**76.32**	**46**	P	P	04 53 07.8	+12
	0.1nm,0.4s,baz=276,slow=0.4,SNR=3.8						
	0.1nm,0.4s						

MAN 21 04:43:02.8, 10°.33N×126°.03E, h22km, mb4.5, ML3.3, MS3.1, 11C-7D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.55**	**170**	⇓*eP*	Pb	04 43 14.6	+0.7
GLSP				*e*S	Sn	04 43 23.5	-0.4
SCPH	**Surigao**	**0.76**	**224**	⇓*iP*	Pb	04 43 17.3	-0.1
SCPH				*i* S	Sn	04 43 28.4	-0.7
MSLP	**Maasin**	**1.17**	**261**	⇓*eP*	Pn	04 43 23.4	-0.4
MSLP				*e*S	Sn	04 43 40.2	+1.0
BESP	**Borongan**	**1.39**	**335**	⇑*eP*	Pn	04 43 27.3	+0.4
BESP				*e*S	Sb	04 43 45.5	+0.1
BUTP	**Butuan**	**1.41**	**197**	⇓*eP*	Pb	04 43 29.8	+1.3
BUTP				*e*S	Sb	04 43 50.6	+4.5
OCLP	**Ormoc**	**1.57**	**297**	⇑*eP*	Pn	04 43 30.1	+0.7
OCLP				*e*S	Sb	04 43 58.0	+7.4
TABP	**Talibon, Bohol**	**1.69**	**262**	⇓*iP*	Pn	04 43 30.2	-0.8
GHBP	**Garcia Hernand**	**1.82**	**248**	⇓*iP*	Pn	04 43 32.9	+0.1
GHBP				*i* S	Sn	04 43 56.1	+0.8
LLP	**Lapu-Lapu**	**2.03**	**270**	⇑*eP*	Pn	04 43 34.9	-0.9
LLP				*e*S	Sn	04 43 58.2	-2.3
BIPH	**Bislig**	**2.16**	**171**	⇑*eP*	Pn	04 43 37.9	+0.5
BIPH				*e*S	Sn	04 44 03.2	-0.4
TBP	**Tagbilaran**	**2.23**	**254**	⇓*iP*	Pn	04 43 38.5	0.0
TBP				*i* S	Sn	04 44 05.8	+0.5
CGP	**Cagayan de Oro**	**2.28**	**215**	⇓*eP*	Pn	04 43 40.7	+1.5
CGP				*e*S	Sn	04 44 07.3	+0.6
CNP	**Catarman**	**2.55**	**328**	⇑*eP*	Pn	04 43 42.9	+0.1
CNP				*e*S	Sn	04 44 14.2	+1.0
BUKP	**Musuan**	**2.62**	**202**	⇑*eP*	Pb	04 43 47.0	-2.0
BUKP				*e*S	Sb	04 44 20.3	-0.5
LSIP	**Lazi, Siquijor**	**2.65**	**243**	⇑*eP*	Pn	04 43 46.1	+1.9
LSIP				*i* S	Sn	04 44 16.3	+0.6
KCP	**Kidapawan**	**3.43**	**196**	⇑*eP*	Pn	04 43 58.6	+3.6
RCP	**Roxas**	**3.45**	**291**	⇑*eP*	Pn	04 43 55.8	+0.5
PVCP	**Virac**	**3.73**	**331**	⇑*eP*	Pn	04 43 58.2	-1.0
PVCP				*e*S	Sb	04 44 53.7	+0.9

*NEIC **21** 04:50:33.9±0.9, 1°.31N±0°.08×126°.52E±0°.07, h48km±7km, mb4.4/23, Error ellipse: s-maj=13.7km s-min=7.4km az=217.0*
*DJA **21** 04:50:34.2±0.2, 1°N±2°×126°6E±°, h44km±6km, M4.4/12, mb4.6/8, mB5.4/3, MLv4.3/12, Mw(mB)4.8/3*
*IDC **21** 04:50:35.1±3.4, 1°.26N×126°.36E, h61km±31km, mb4.1/13, mbtmp4.3/14, ML4.0/1, MS3.1/3, Error ellipse: s-maj=36.1km s-min=10.6km az=77.0*
ISC 21 04:50:33.7±0.4, 1°.28N±0°.05×126°.48E±0°.06, h47km, n75, σ1§08/76, mb4.4/23, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02**	**120**		**Pn**	**04 50 51.5**	**-0.2**
TNTI	**Ternate**	**1.02**	**120**	P	**Pn**	**04 50 51.6**	**0.0**
TNTI				S	**Sn**	**04 51 05.8**	**+0.9**
GAMI	**Galela, Maluku**	**1.42**	**67**	P	**Pn**	**04 50 57.0**	**-0.1**
LBMI	**Labuha**	**2.16**	**152**	P	**Pn**	**04 51 08.0**	**+0.8**
LBMI				S	**Sn**	**04 51 34.0**	**+1.1**
SGSI	**Sangihe**	**2.57**	**338**	P	**Pn**	**04 51 11.9**	**-1.0**
SGSI				S	**Sn**	**04 51 43.7**	**+0.8**
SANI	**Sanana**	**3.34**	**188**	P	**Pn**	**04 51 23.5**	**0.0**
GTOI	**Gorontalo**	**3.53**	**260**	P	**Pn**	**04 51 26.2**	**+0.2**
LUWI	**Luwuk**	**4.37**	**238**	Pn	**Pn**	**04 51 39.0**	**+1.5**
LUWI	**Luwuk**	**4.37**	**238**	P	**Pn**	**04 51 37.6**	**+0.1**
NLAI	**Namlea**	**4.53**	**172**	P	**Pn**	**04 51 40.8**	**+1.0**
MRSI	**Marisa**	**4.61**	**260**	P	**Pn**	**04 51 43.3**	**+2.5**
KRAI	**Karang Ratu**	**4.95**	**157**	P	**Pn**	**04 51 48.8**	**+3.2**
SIJI	**Sorong**	**5.24**	**114**	LR	LR	04 54 02.9	
	comp=Z,204nm,21.8s,baz=81,slow=39						
APSI	**Ampana**	**5.30**	**246**	P	**Pn**	**04 51 51.2**	**+0.9**
	1.3nm3μm266nm,0.6s						
TOLI2	**Tolitoli**	**5.70**	**268**	Pn	**Pn**	**04 51 56.2**	**+0.4**
MPSI	**Mapaga**	**6.65**	**262**	P	**Pn**	**04 52 10.4**	**+1.6**
	0.1nm40nm,0.9s						
FAKI	**Fak Fak**	**7.12**	**126**	Pn	**Pn**	**04 52 14.1**	**-1.2**
TTSI	**Tana Toraja**	**7.92**	**237**	P	**Pn**	**04 52 26.6**	**+0.2**
	0.3nm45nm,0.5s						
BNSI	**Bone**	**8.51**	**228**	P	**Pn**	**04 52 35.5**	**+1.1**
	30nm,0.7s						
MYLDM	**Lahad Datu**	**8.86**	**296**	Pn	**Pn**	**04 52 39.5**	**+0.3**
MYLDM	**Lahad Datu**	**8.86**	**296**	P	**Pn**	**04 52 42.4**	**+3.3**
BKSI	**Bulukumba**	**9.13**	**224**	P	**Pn**	**04 52 43.6**	**+0.7**
	1μm25nm,0.6s						
KAPI	**Kappang**	**9.18**	**227**	P	**Pn**	**04 52 43.7**	**+0.1**
	1.7nm,0.3s,baz=97,slow=10,SNR=1.9						
KAPI				LR	LR	04 57 04.6	
	comp=Z,85nm,20.7s,baz=55,slow=43						
	7.0nm,0.4s						
KAPI	**Kappang**	**9.18**	**227**	Pn	**Pn**	**04 52 44.0**	**+0.5**
BATI	**Baumata**	**11.75**	**194**	LR	LR	04 58 21.9	
	comp=Z,166nm,19.0s,baz=166,slow=40						
SBUM	**Sibu**	**14.30**	**275**		**Pn**	**04 53 53.0**	**-0.6**
SBUM	**Sibu**	**14.30**	**275**	P	**Pn**	**04 53 55.6**	**+2.1**
	6.7nm,0.8s						
MTN	**Manton Dam**	**14.77**	**162**		**Pn**	**04 54 00.2**	**+0.5**
KSM	**Kuching**	**16.17**	**271**	Pn	**Pn**	**04 54 16.6**	**-1.2**
KSM				IAmb	IAmb	04 54 23.4	
	comp=Z,12nm,0.7s						
KSM	**Kuching**	**16.17**	**271**	P	**P**	**04 54 19.9**	**-0.5**
	comp=Z,13nm,0.7s						
KNRA	**Kununurra**	**17.00**	**172**	Pn	**Pn**	**04 54 27.3**	**-0.9**
KNRA				IAmb	IAmb	04 54 35.2	
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**22.45**	**160**	P	**P**	**04 55 28.6**	**-0.3**
WRAB				IAmb	IAmb	04 55 32.3	
	comp=Z,26nm,0.8s						
WRA	**Warramunga Arr**	**22.46**	**160**	P	**P**	**04 55 28.9**	**-0.1**
	comp=Z,19nm,0.5s,baz=337,slow=11,SNR=58						
WRA				S	**S**	**04 59 32.9**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=324,slow=22,SNR=4.8						
	comp=Z,19nm,0.5s						
WRA	**Warramunga Arr**	**22.46**	**160**	P	**P**	**04 55 28.1**	**-0.9**
WB2	**Warramunga Arr**	**22.46**	**160**	P	**P**	**04 55 28.4**	**-0.6**
MBWA	**Marble Bar**	**23.26**	**196**	P	**P**	**04 55 35.6**	**-1.6**
MBWA				IAmb	IAmb	04 55 38.0	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**25.83**	**164**	P	**P**	**04 56 00.1**	**-0.7**
ASAR	**Alice Springs**	**25.83**	**164**	P	**P**	**04 56 00.9**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=345,slow=7.2,SNR=70						
	comp=Z,5.5nm,0.6s						
ASAR	**Alice Springs**	**25.83**	**164**	P	**P**	**04 56 01.1**	**+0.3**
MORW	**Morawa**	**31.79**	**198**	P	**P**	**04 56 53.5**	**-0.3**
PZH	**PanZhiHua**	**34.56**	**319**	P	**P**	**04 57 20.8**	**+2.6**
BBOO	**Buckleboo**	**35.09**	**166**	P	**P**	**04 57 22.5**	**0.0**
STKA	**Stephens Creek**	**35.96**	**158**	P	**P**	**04 57 30.6**	**+0.7**
	comp=Z,8.3nm,0.7s,baz=333,slow=9.6,SNR=14						
	comp=Z,8.3nm,0.7s						
STKA	**Stephens Creek**	**35.96**	**158**	P	**P**	**04 57 29.5**	**-0.5**
STKA				IAmb	IAmb	04 57 31.3	
	comp=Z,1.9nm,0.7s						
MJAR	**Matsushiro Arr**	**36.73**	**16**	P	**P**	**04 57 36.7**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=185,slow=9.1,SNR=5.3						
	comp=Z,1.4nm,0.3s						
ARMA	**Armidale**	**39.60**	**145**	P	**P**	**04 58 00.9**	**+0.1**
ARMA				IAmb	IAmb	04 58 04.5	
	comp=Z,11nm,1.1s						
SHL	**Shillong**	**41.16**	**309**	P	**P**	**04 58 12.2**	**-1.7**
HHC	**Hu-ho-hao-te**	**41.64**	**343**	*eP*	**P**	**04 58 17.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**43.02**	**6**	P	**P**	**04 58 29.8**	**+1.2**
	comp=Z,2.4nm,0.5s,baz=187,slow=7.6,SNR=5.6						
	comp=Z,2.4nm,0.5s						
KLR	**Kul'dur**	**47.98**	**5**	P	**P**	**04 59 08.2**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=147,slow=6.0,SNR=4.0						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	**49.53**	**342**	P	**P**	**04 59 20.3**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=164,slow=9.4,SNR=3.1						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**49.53**	**342**	P	**P**	**04 59 19.5**	**-0.4**
WMQ	**Urumqi**	**54.59**	**326**	*eP*	**P**	**04 59 58.3**	**+0.8**
WMQ				pP	pP	05 00 12.6	+2.4
MK31	**Makanchi Array**	**59.42**	**326**	P	**P**	**05 00 30.7**	**-0.9**
MK31				IAmb	IAmb	05 00 33.7	
	comp=Z,1.7nm,0.5s						
MKAR	**Makanchi Array**	**59.42**	**326**	P	**P**	**05 00 30.4**	**-1.2**
	comp=Z,2.1nm,0.3s,baz=121,slow=7.5,SNR=40						
	comp=Z,2.1nm,0.3s						
MKAR	**Makanchi Array**	**59.42**	**326**	P	**P**	**05 00 31.1**	**-0.5**
KSH	**Kashi**	**59.61**	**316**	P	P	05 00 39.3	+6.2
ZALV	**Zalesovo Beam**	**62.65**	**334**	P	**P**	**05 00 52.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=125,slow=9.0,SNR=2.3						
	comp=Z,0.8nm,0.3s						
GAR	**Garm**	**63.40**	**314**	P	**P**	**05 00 58.0**	**-0.7**
KURK	**Kurchatov**	**63.67**	**328**	P	**P**	**05 00 59.1**	**-0.9**
KURK				IAmb	IAmb	05 01 01.3	
	comp=Z,5.0nm,0.6s						
KKAR	**Karatay Array**	**64.86**	**318**	P	**P**	**05 01 07.3**	**-0.8**
CASY	**Casey**	**68.37**	**187**	P	**P**	**05 01 30.0**	**+0.1**
CASY				IAmb	IAmb	05 01 37.8	
	comp=Z,7.8nm,1.4s						
BRVK	**Borovoye**	**69.30**	**328**	P	**P**	**05 01 36.5**	**+0.5**
BRVK				IAmb	IAmb	05 01 39.9	
	comp=Z,3.5nm,1.1s						
TIXI	**Tiksi**	**70.28**	**1**	P	**P**	**05 01 41.6**	**0.0**
TIXI				IAmb	IAmb	05 01 42.1	
	comp=Z,2.7nm,0.5s						
NRIK	**Noril'sk**	**72.73**	**346**	P	**P**	**05 01 56.7**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=130,slow=7.0,SNR=4.4						
	comp=Z,3.9nm,0.6s						
ABKAR	**Akbulak array**	**73.88**	**321**	P	**P**	**05 02 02.9**	**-0.8**
VNDA	**Vanda**	**81.05**	**173**	P	**P**	**05 02 43.5**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=317,slow=6.4,SNR=17						
	comp=Z,1.9nm,0.7s						
VNDA	**Vanda**	**81.05**	**173**	P	**P**	**05 02 43.5**	**+0.3**
VNDA				IAmb	IAmb	05 02 45.8	
	comp=Z,2.6nm,0.8s						
RAYN	**Ar Rayn**	**81.21**	**293**	P	**P**	**05 02 43.5**	**-1.7**
SBA	**Scott Base**	**81.96**	**172**	P	**P**	**05 02 48.4**	**+0.4**
SBA				IAmb	IAmb	05 02 56.7	
	comp=Z,4.1nm,1.2s						
ILAR	**Eielson Array**	**87.41**	**25**	P	**P**	**05 03 14.1**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=240,slow=4.8,SNR=4.2						
	comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	**92.64**	**340**	P	**P**	**05 03 39.0**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=70,slow=4.0,SNR=6.4						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	**93.86**	**332**	P	**P**	**05 03 47.9**	**+2.1**
	comp=Z,3.7nm,1.1s,baz=96,slow=4.2,SNR=2.5						
TXAR	**Lajitas Array**	**123.27**	**53**	PKP	**PKiKP**	**05 09 27.3**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=243,slow=2.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**123.41**	**287**	PKP	**PKPdf**	**05 09 26.6**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=92,slow=1.6,SNR=3.1						

MAN 21 04:55:10.2, 10°.24N×126°.00E, h31km, mb3.9, ML2.7, MS2.2, 2C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.47**	**164**	⇓*eP*	Pn	04 55 20.9	0.0
GLSP				*e*S	Sn	04 55 29.9	+1.8
SCPH	**Surigao**	**0.68**	**228**	*eP*	Pn	04 55 23.8	0.0
SCPH				*e*S	Sn	04 55 33.9	+0.7
MSLP	**Maasin**	**1.13**	**265**	⇑*eP*	Pb	04 55 30.7	-0.5
MSLP				*e*S	Sb	04 55 47.1	+1.6
BESP	**Borongan**	**1.46**	**338**	⇓*eP*	Pn	04 55 35.1	+0.6
BESP				*e*S	Sn	04 55 52.4	-0.2
TABP	**Talibon, Bohol**	**1.65**	**265**	⇓*iP*	Pn	04 55 36.6	-0.4
TABP				*i* S	Sn	04 55 57.6	+0.4
GHBP	**Garcia Hernand**	**1.76**	**250**	⇑*iP*	Pn	04 55 39.5	+0.9
GHBP				*i* S	Sb	04 56 02.6	-1.1

*TRN **21** 05:05:48.6, 10°.79N×62°.29W, h67km, MD3.4*
*FUNV **21** 05:05:49.4, 10°.76N×62°.29W, h30km, MW3.5*
ISC 21 05:05:46.9±1.5, 10°.74N±0°.07×62°.30W±0°.05, h88km±15km, n16, σ1§45/29, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.88**	**96**	*eP*	**Pn**	**05 06 05.8**	**+0.6**
TRN				*e*S	**Sn**	**05 06 18.0**	**-0.8**
CRUV	**Carupano**	**0.93**	**266**	*eP*	**Pn**	**05 06 06.5**	**+0.8**
CRUV				*e*S	**Sn**	**05 06 18.6**	**-1.1**
GRFF	**Grenada Fort F**	**1.41**	**23**	*eP*	**Pn**	**05 06 11.3**	**-0.2**
GRFF				*e*S	**Sn**	**05 06 28.7**	**-1.3**
GRGR	**Grenville**	**1.52**	**24**	*eP*	**Pn**	**05 06 13.4**	**+0.5**
GRGR				*e*S	**Sn**	**05 06 32.2**	**-0.3**
TOSP	**Speyside**	**1.81**	**72**	*eP*	**Pn**	**05 06 17.2**	**+0.5**
TOSP				*e*S	**Sn**	**05 06 39.4**	**+0.1**
CUMV	**Cumana_UDO**	**1.89**	**261**	*eP*	**Pn**	**05 06 19.6**	**+2.0**
CUMV				*e*S	**Sn**	**05 06 41.4**	**+0.4**
GCMP	**Grenada, Carri**	**1.93**	**26**	*eP*	**Pn**	**05 06 18.8**	**+0.7**
GCMP				*e*S	**Sn**	**05 06 41.4**	**-0.6**
PCRV	**Puerto La Cruz**	**2.37**	**256**	*eP*	**Pn**	**05 06 25.9**	**+1.9**
PCRV				*e*S	**Sn**	**05 06 51.7**	**-0.8**
SVB	**Belmont**	**2.71**	**22**	*eP*	**Pn**	**05 06 31.0**	**+2.4**
SVB				*e*S	**Sn**	**05 06 59.1**	**-1.5**
MCLT	**Moule a Chique**	**3.23**	**24**	*eP*	**Pn**	**05 06 35.8**	**+0.2**
MCLT				*e*S	**Sn**	**05 07 11.8**	**-1.4**
SLBI	**Saint Lucia, B**	**3.51**	**21**	*eP*	**Pn**	**05 06 40.0**	**+0.7**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JKR	Kurayoshi	0.01	195	⇓P		Pg	05 07 24.4	-1.1
JKR				⇓S		Sg	05 07 25.8	-1.0
JAD	Aida	0.53	148	*i* P		Pg	05 07 32.3	-1.6
JAD				S		Sg	05 07 39.4	-1.6
JAD	Aida	0.53	148	A		A	05 07 32.3	
	comp=E,6μm,4.6s,comp=E,3μm,4.6s							
JNM	Ikuma	0.66	280	*i* P		Pg	05 07 35.8	-0.6
JNM	Ikuma	0.66	280	A		A	05 07 35.8	
	comp=E,4μm,8.4s,comp=E,6μm,8.8s							
JHS	Saijyo	0.70	236	Pg		Pg	05 07 35.9	-1.2
JHS				Sg		Sg	05 07 45.2	-1.1
JHS	Saijyo	0.70	236	P		Pg	05 07 36.9	-0.2
JHS	Saijyo	0.70	236	*i* P		Pg	05 07 35.9	-1.2
JHS	Saijyo	0.70	236	A		A	05 07 35.9	
	comp=E,2μm,5.8s,comp=E,5μm,5.0s							
JHS	Saijyo	0.70	236	⇑P		Pg	05 07 34.2	-2.9
JKSM	Kasumi	0.71	74	*i* P		Pg	05 07 35.7	-1.7
JKSM	Kasumi	0.71	74	A		A	05 07 35.7	
	comp=E,2μm,8.2s,comp=E,6μm,8.4s							
JISK	Izumosakaura	0.80	278	⇓*i* P		Pg	05 07 38.0	-1.1
JISK	Izumosakaura	0.80	278	A		A	05 07 38.0	
	comp=E,2μm,4.0s,comp=E,6μm,9.7s							
JJG	Jouge	0.93	217	A		A	05 07 40.2	
	comp=E,2μm,3.8s,comp=E,3μm,5.0s							
JKS	Kasai	0.93	116	⇓*i* P		Pg	05 07 39.3	-2.2
JKS	Kasai	0.93	116	A		A	05 07 39.3	
	comp=E,2μm,4.1s,comp=E,2μm,3.3s							
JOI	OKI	1.01	333	*i* P		Pg	05 07 41.4	-1.7
JOI	OKI	1.01	333	A		A	05 07 41.4	
	comp=E,7μm,1.9s,comp=E,7μm,2.0s							
JJS	Sakaide	1.02	175	*i* P		Pg	05 07 41.0	-2.2
JJS				S		Sg	05 07 54.5	-1.9
JKY	Yasaka	1.07	77	*i* P		Pb	05 07 42.2	-2.0
JKY	Yasaka	1.07	77	A		A	05 07 42.2	
	comp=E,3μm,4.4s,comp=E,6μm,2.5s							
JGT2	ShimaneMisato	1.13	254	A		A	05 07 44.0	
	comp=E,2μm,3.7s,comp=E,4μm,8.1s							
JGT2	ShimaneMisato	1.13	254	⇓P		Pb	05 07 43.5	-1.6
JMIK	Miki	1.16	120	A		A	05 07 43.7	
	comp=E,3μm,3.4s,comp=E,2μm,3.2s							
JAWN	Awajishima-nag	1.27	135	A		A	05 07 45.5	
	comp=E,2μm,4.1s,comp=E,3μm,6.0s							
JAWN	Awajishima-nag	1.27	135	⇓P		Pn	05 07 45.2	-2.1
JAWN				⇓S		Sb	05 08 01.8	-2.0
JWT	Wachi	1.29	94	Pn		Pn	05 07 47.2	-0.5
JWT				Sn		Sb	05 08 03.6	-1.0
JWT	Wachi	1.29	94	P		Pg	05 07 49.0	+0.5
JWT	Wachi	1.29	94	A		A	05 07 45.9	
	comp=E,1μm,4.6s,comp=E,2μm,3.1s							
JWT	Wachi	1.29	94	⇓P		Pn	05 07 45.7	-1.9
JWT	Wachi	1.29	94	⇑P		Pn	05 07 47.5	-0.2
JHT	Toyohira	1.36	238	A		A	05 07 47.7	
	comp=E,2μm,3.8s,comp=E,3μm,3.9s							
JHT	Toyohira	1.36	238	P		Pn	05 07 47.5	-1.1
JMAF	Mimaanabuki	1.37	169	A		A	05 07 47.3	
	comp=E,4μm,5.3s,comp=E,1μm,4.3s							
JHM	Kurahashi	1.64	221	A		A	05 07 51.9	
	comp=E,1μm,3.7s,comp=E,1μm,6.1s							
JMN	Monobe	1.66	178	Pn		Pn	05 07 52.0	-0.8
JMN	Monobe	1.66	178	P		Pn	05 07 53.5	+0.8
JMN	Monobe	1.66	178	A		A	05 07 51.8	
	comp=E,3μm,6.2s,comp=E,2μm,2.7s							
JMN	Monobe	1.66	178	⇑P		Pn	05 07 52.2	-0.5
JAI	Aioi	1.68	162	A		A	05 07 52.0	
	comp=E,3μm,5.3s,comp=E,1μm,5.3s							
JAI	Aioi	1.68	162	P		Pn	05 07 52.1	-0.8
JHE	Heguri	1.69	115	A		A	05 07 52.1	
	comp=E,981nm,4.0s,comp=E,852nm,4.1s							
JHE	Heguri	1.69	115	⇓P		Pn	05 07 52.0	-1.2
JET	Tanbara	1.73	202	A		A	05 07 53.1	
	comp=E,962nm,3.7s,comp=E,987nm,4.0s							
JET	Tanbara	1.73	202	P		Pn	05 07 53.2	-0.5
JFM	Mihama	1.77	85	A		A	05 07 53.3	
	comp=E,1μm,3.7s,comp=E,3μm,3.0s							
JHIK	Hikimi	1.78	242	A		A	05 07 54.1	
	comp=E,1μm,4.5s,comp=E,3μm,8.2s							
JWY	Kouya	1.87	128	A		A	05 07 54.7	
	comp=E,553nm,8.8s,comp=E,775nm,9.4s							
JKHR	Kochiharuno	1.89	188	A		A	05 07 55.4	
	comp=E,2μm,5.8s,comp=E,707nm,1.7s							
JWM	Minabe	1.99	140	A		A	05 07 56.5	
	comp=E,1μm,10.2s,comp=E,1μm,9.4s							
JWM	Minabe	1.99	140	⇓P		Pn	05 07 55.6	-1.6
MRT2	Murotomisaki 2	2.02	172	A		A	05 07 57.1	
	comp=E,2μm,6.5s,comp=E,1μm,5.1s							
JNTK	Naratenkawa	2.03	123	A		A	05 07 57.1	
	comp=E,385nm,3.8s,comp=E,593nm,4.5s							
JKD	Kudamatsu	2.09	231	A		A	05 07 58.5	
	comp=E,2μm,6.4s,comp=E,1μm,3.1s							
JEG	Eigenji	2.12	96	A		A	05 07 58.3	
	comp=E,1μm,5.7s,comp=E,1μm,4.3s							
JNA	Nagahama	2.14	212	A		A	05 07 59.1	
	comp=E,517nm,9.1s,comp=E,777nm,3.8s							
JTNC	Tanabenakahech	2.15	136	A		A	05 07 58.9	
	comp=E,962nm,8.5s,comp=E,766nm,5.0s							
JKU	Kubokawa	2.17	197	A		A	05 07 59.5	
	comp=E,1μm,4.2s,comp=E,819nm,4.4s							
JKU	Kubokawa	2.17	197	P		Pn	05 07 59.1	-0.6
JKG	Kaga	2.22	66	A		A	05 07 60.0	
	comp=E,1μm,9.2s,comp=E,1μm,11.9s							
TSUJ	Tsu 2	2.23	107	A		A	05 07 60.0	
	comp=E,661nm,4.2s,comp=E,571nm,2.0s							
TSUJ	Tsu 2	2.23	107	⇓P		Pn	05 07 59.5	-1.1
JHGM	Hagimishima	2.28	255	A		A	05 08 01.5	
	comp=E,750nm,3.5s,comp=E,3μm,8.7s							
JKN2	Miekihoku	2.32	119	A		A	05 08 01.3	
	comp=E,447nm,4.2s,comp=E,384nm,2.8s							
JKN2	Miekihoku	2.32	119	P		Pn	05 08 00.3	-1.4
JYTA	Yamagatataniai	2.38	84	A		A	05 08 02.3	
	comp=E,450nm,7.0s,comp=E,2μm,4.6s							
JYTA	Yamagatataniai	2.38	84	P		Pn	05 08 02.4	-0.3
UWA2	Uwa jima 2	2.39	205	A		A	05 08 02.7	
	comp=E,698nm,5.6s,comp=E,705nm,3.6s							
JICN	Ichinomiyachia	2.47	91	A		A	05 08 03.5	
	comp=E,1μm,1.9s,comp=E,2μm,5.6s							
JWKM	Wakayamakushim	2.51	140	A		A	05 08 04.1	
	comp=E,1μm,3.4s,comp=E,1μm,4.4s							
JTY	Toyota	2.53	244	A		A	05 08 05.0	
	comp=E,1μm,9.8s,comp=E,2μm,10.4s							
JKI	Kunimi	2.56	227	A		A	05 08 05.3	
	comp=E,2μm,3.6s,comp=E,1μm,3.2s							
JIE	Ise	2.57	112	A		A	05 08 04.8	
	comp=E,466nm,3.6s,comp=E,388nm,7.8s							
JIE	Ise	2.57	112	P		Pn	05 08 03.9	-1.3
INU	Inuyama	2.61	90	Pn		Pn	05 08 05.1	-0.7
INU	Inuyama	2.61	90	P		Pn	05 08 08.0	+2.2
INU	Inuyama	2.61	90	⇓P		Pn	05 08 05.1	-0.7
JTO	Tosashimizu	2.66	199	A		A	05 08 06.6	
	comp=E,903nm,4.7s,comp=E,583nm,5.5s							
JAO	Obara	2.81	92	A		A	05 08 08.3	
	comp=E,400nm,4.4s,comp=E,1μm,6.0s							
JJH	Hakui	2.84	57	A		A	05 08 08.9	
	comp=E,887nm,3.5s,comp=E,884nm,2.9s							
JBEP	Beppuamama	2.86	225	A		A	05 08 09.6	
	comp=E,2μm,3.5s,comp=E,1μm,2.3s							
JUS	Usuki	2.88	217	A		A	05 08 09.9	
	comp=E,743nm,5.2s,comp=E,479nm,3.1s							
JGF	Kuroka	2.89	85	Pn		Pn	05 08 08.9	-0.7
JGF	Kuroka	2.89	85	P		Pn	05 08 11.3	+1.6
JGF	Kuroka	2.89	85	A		A	05 08 09.5	
	comp=E,379nm,3.1s,comp=E,2μm,6.7s							
JGF	Kuroka	2.89	85	⇓P		Pn	05 08 08.8	-0.8
JGN	Niukaw	2.96	73	A		A	05 08 10.5	
	comp=E,447nm,4.6s,comp=E,1μm,7.6s							
JFA	Akaike	3.01	237	A		A	05 08 11.8	
	comp=E,888nm,11.5s,comp=E,2μm,5.7s							
TTO1	TONANKAI O.B.S	3.01	125	P		Pn	05 08 10.9	-0.2
JSKE	Saikikamae	3.04	212	A		A	05 08 12.1	
	comp=E,352nm,4.2s,comp=E,556nm,4.8s							
JTT	Ttatey	3.09	66	A		A	05 08 12.5	
	comp=E,804nm,3.5s,comp=E,1μm,6.8s							
TTO2	TONANKAI O.B.S	3.12	121	⇓P		Pn	05 08 12.4	0.0
HMMJ	Hamamatsu 2	3.24	98	A		A	05 08 14.4	
	comp=E,326nm,5.9s,comp=E,780nm,9.0s							
JNY	Yasuok	3.30	89	A		A	05 08 15.3	
	comp=E,570nm,5.3s,comp=E,1μm,9.7s							
JNU	Nakatsue	3.33	228	A		A	05 08 16.3	
	comp=E,828nm,9.0s,comp=E,746nm,8.7s							
JKIT	Kitakata	3.39	216	A		A	05 08 17.1	
	comp=E,674nm,8.5s,comp=E,437nm,4.0s							
JFI	Itaya	3.45	236	A		A	05 08 18.1	
	comp=E,836nm,8.7s,comp=E,1μm,7.7s							
JHHC	Hyugahichiya	3.46	212	A		A	05 08 18.0	
	comp=E,307nm,3.6s,comp=E,413nm,4.1s							
JKKS	Kakegawashinom	3.47	99	A		A	05 08 17.8	
	comp=E,889nm,5.1s,comp=E,1μm,4.4s							
JNT	Takato	3.55	81	A		A	05 08 18.8	
	comp=E,508nm,5.0s,comp=E,1μm,9.1s							
SHZ3	Shizuoka 3	3.61	94	A		A	05 08 19.6	
	comp=E,470nm,5.9s,comp=E,1μm,8.2s							
JNG	Nsakai	3.62	72	A		A	05 08 19.9	
	comp=E,451nm,9.8s,comp=E,778nm,8.7s							
JSG	Sagara	3.65	100	A		A	05 08 20.2	
	comp=E,2μm,4.2s,comp=E,1μm,9.4s							
JTSN	Tsuno	3.68	212	A		A	05 08 21.2	
	comp=E,245nm,4.7s,comp=E,321nm,4.7s							
JII	Iki	3.73	246	A		A	05 08 22.1	
	comp=E,625nm,3.3s,comp=E,2μm,6.6s							
JTU	Tsushima	3.73	258	Pn		Pn	05 08 20.8	-0.4
JTU	Tsushima	3.73	258	P		Pn	05 08 23.5	+2.3
JTU	Tsushima	3.73	258	⇓P		Pn	05 08 20.6	-0.6
MJB9	Matsu-Tunnel	3.74	71	Pn		Pn	05 08 22.4	+1.1
MAJO	Matsushiro	3.74	71			Pn	05 08 20.9	-0.5
MAJO	Matsushiro	3.74	71	*c i* P		Pn	05 08 21.2	-0.1
MAJO	Matsushiro	3.74	71	P		Pn	05 08 23.7	+2.4
MAJO	Matsushiro	3.74	71	⇑P		Pn	05 08 21.3	-0.1
MJAR	Matsushiro Arr	3.74	71	Pn		Pn	05 08 22.3	+1.0
	15nm,0.3s,baz=253,slow=13,SNR=183							
MJAR				Sn		Sb	05 09 11.4	-3.6
	26nm,0.3s,baz=239,slow=14,SNR=5.8							
MJAR				Lg		Lg	05 09 24.3	
	83nm,0.3s,baz=227,slow=29,SNR=9.0							
MJAR				LR		LR	05 10 04.4	
	comp=Z,382μm,19.6s,baz=240,slow=42							
	392nm,0.7s							
JOD2	Odawara 2	4.31	90	P		Pn	05 08 28.7	-0.4
JSD	Sado	4.44	52			Pn	05 08 30.1	-0.8
JSD	Sado	4.44	52	P		Pn	05 08 31.3	+0.4
JSD	Sado	4.44	52	⇑P		Pn	05 08 30.2	-0.6
JSU	Suzuyama	4.79	217	Pn		Pn	05 08 35.7	-0.1
JSU	Suzuyama	4.79	217	P		Pn	05 08 38.0	+2.2
JSU	Suzuyama	4.79	217	⇑P		Pn	05 08 36.5	+0.7
KSRS	Korea Array	5.18	295	Pn		Pn	05 08 40.4	-0.8
	49nm,0.3s,baz=111,slow=14,SNR=245							
KSRS				Sn		Sn	05 09 40.0	-1.0
	146nm,0.3s,baz=113,slow=23,SNR=6.8							
KSRS				LR		LR	05 10 48.0	
	comp=Z,263μm,19.8s,baz=110,slow=41							
	116nm,0.3s							
KSAR	Wonju Array Be	5.21	295			Pn	05 08 40.5	-0.9
KSAR	Wonju Array Be	5.21	295	P		Pn	05 08 40.6	-0.9
JYT	Yasato	5.24	79			Pn	05 08 41.9	0.0
JYT	Yasato	5.24	79	P		Pn	05 08 43.5	+1.5
JYT	Yasato	5.24	79	⇑P		Pn	05 08 42.0	+0.1
KS19	Wonju Array Si	5.24	295			Pn	05 08 40.7	-1.3
I30JP	ISUMI INFRASON	5.31	89	Pn		Pb	05 08 52.6	-3.8
	baz=261,slow=18							
I30JP				I		I	05 27 45.0	
	baz=273,slow=324,SNR=6.5							
TJN	Taejon	5.34	283			Pn	05 08 42.2	-1.1
TJN	Taejon	5.34	283	*d i* P		Pn	05 08 42.3	-0.9
TJN	Taejon	5.34	283	P		Pn	05 08 45.7	+2.5
JHJ	Hachijo jima 2	5.43	113	Pn		Pn	05 08 44.8	+0.3
	286nm,0.3s,baz=228,slow=9.9,SNR=26							
JHJ				Sn		Sn	05 09 47.2	+0.2
	98nm,0.3s,baz=128,slow=19,SNR=1.8							
JHJ				LR		LR	05 10 58.3	
	comp=Z,203μm,21.0s,baz=10,slow=38							
	932nm,0.4s							
JHJ2	Mitsune	5.46	113			Pn	05 08 43.3	-1.6
JHJ2	Mitsune	5.46	113	P		Pn	05 08 44.7	-0.2
JHJ2	Mitsune	5.46	113	⇑P		Pn	05 08 44.5	-0.4
JMM	Marumori	6.12	64			Pn	05 08 53.9	-0.2
JMM	Marumori	6.12	64	P		Pn	05 08 56.7	+2.6
JMM	Marumori	6.12	64	⇑P		Pn	05 08 55.3	+1.2
INCN	Inchon	6.16	292	Pn		Pn	05 08 55.0	+0.4
INCN	Inchon	6.16	292	P		Pn	05 08 55.0	+0.4
INCN	Inchon	6.16	292	P		Pn	05 08 54.5	-0.1
INCN	Inchon	6.16	292	P		Pn	05 08 54.7	+0.1
INCN	Inchon	6.16	292	⇑P		Pn	05 08 54.2	-0.4
HHU	Hamhung	6.74	314	P		Pn	05 09 00.3	-2.2
HHU				pP		Pn	05 09 05.1	+2.6
HHU				S		Sn	05 10 20.0	+0.8
HHU				AMS		AMS		
	comp=N,159μm,13.0s							
HHU				AMS		AMS		
	comp=E,166μm,13.6s							
HHU				AMS		AMS		
	comp=Z,125μm,10.2s							
HJU	Haeju	7.02	295	P		Pn	05 09 05.5	-0.9
HJU				pP		Pn	05 09 09.9	+3.5
HJU				S		Sn	05 10 27.5	+1.3
HJU				AMS		AMS		
	comp=N,150μm,7.8s							
HJU				AMS		AMS		
	comp=E,156μm,8.1s							
HJU				AMS		AMS		
	comp=Z,186μm,9.6s							
MSHR	Mys Shultsa	7.47	345	*de* P		Pn	05 09 11.2	-1.4
JTM	Tenmabayashi	7.85	45			Pn	05 09 18.8	+1.0
JTM	Tenmabayashi	7.85	45	P		Pn	05 09 21.0	+3.2
JTM	Tenmabayashi	7.85	45	⇑P		Pn	05 09 19.4	+1.7
JOSM	Okushiri--Mats	8.01	32	P		Pn	05 09 21.1	+1.2
SUJ	Sinuiju	8.76	305	P		Pn	05 09 28.9	-1.3
SUJ				pP		Pn	05 09 32.7	+2.5
SUJ				S		Sn	05 11 08.5	-0.4
SUJ				AMS		AMS		
	comp=N,287μm,9.6s							
SUJ				AMS		AMS		
	comp=E,259μm,8.7s							
SUJ				AMS		AMS		
	comp=Z,372μm,12.5s							
USRK	Ussuriysk Ar.	8.91	351	Pn		Pn	05 09 32.9	+0.6
	comp=Z,152nm,0.9s,baz=177,slow=13,SNR=33							
USRK				Sn		Sn	05 11 21.0	+8.3
	comp=Z,9.6nm,0.3s,baz=163,slow=23,SNR=6.0							
USRK				LR		LR	05 12 24.8	
	comp=Z,81μm,21.2s,baz=162,slow=34							
I45RU	USSURIYSK INFR	8.91	351	I		I	06 00 10.0	
	baz=167,slow=330,SNR=2.1							
JEW	Eniwo	9.51	36			Pn	05 09 43.1	+2.6
JEW	Eniwo	9.51	36	P		Pn	05 09 45.4	+4.9
JEW	Eniwo	9.51	36	⇑P		Pn	05 09 44.0	+3.5
JOW	Kunigami	9.76	211	Pn		Pn	05 09 43.9	-0.1
	comp=Z,18nm,0.3s,baz=80,slow=15,SNR=24							
	comp=Z,109nm,0.5s							
JOW	Kunigami	9.76	211			Pn	05 09 43.6	-0.5
JOW	Kunigami	9.76	211	P		Pn	05 09 44.5	+0.5
JOW	Kunigami	9.76	211	⇑P		Pn	05 09 44.0	-0.1
MDJ	Mudanjiang	9.77	342			Pn	05 09 44.4	+0.3
ERM	Erimo	9.84	45			Pn	05 09 46.1	+1.0
ERM	Erimo	9.84	45	*c i* P		Pn	05 09 46.9	+1.8
ERM				pmax		pmax		
	comp=Z,1μm,0.8s							
ERM	Erimo	9.84	45	P		Pn	05 09 48.3	+3.2
ERM	Erimo	9.84	45	⇑P		Pn	05 09 46.8	+1.8
JEM	Erimo	9.84	45	P		Pn	05 09 48.6	+3.5
TEY	Ternei	9.87	12	*eP*		Pn	05 09 43.8	-1.6
TEY				pmax		pmax		
	comp=N,200nm,0.7s							
TEY				pmax		pmax		
	comp=E,30nm,0.7s							
TEY				pmax		pmax		
	comp=Z,230nm,0.7s							
TEY				pmax		pmax		
	comp=E,700nm,2.9s							
TEY				pmax		pmax		
	comp=N,3μm,3.1s							
TEY				pmax		pmax		
	comp=Z,2μm,3.1s							
SNY	Shenyang	10.27	312	⇑P		Pn	05 09 55.5	+4.6
SNY				pmax		pmax		
	comp=Z,650nm,1.3s							
SNY				pmax		pmax		
	comp=Z,10μm,7.9s							
SNY				LR		LR		
	comp=Z,410μm,15.1s							
SNY				LR		LR		
	comp=Z,221μm,18.5s							
SNY				LR		LR		
	comp=Z,153μm,13.6s							
DL2	Dalian	10.35	293	⇓*i* P		Pn	05 09 53.4	+1.4
DL2				S		Sn	05 11 53.3	+5.4
DL2				pmax		pmax		
	comp=Z,100nm,0.9s							
DL2				pmax		pmax		
	comp=Z,7μm,11.6s							
DL2				LR		LR		
	comp=Z,404μm,10.2s							
DL2				LR		LR		
	comp=Z,157μm,13.2s							
DL2				LR		LR		
	comp=Z,269μm,12.2s							
CN2	Changchun	10.59	325	P		Pn	05 09 58.0	+2.7
CN2				*es*P			05 10 04.0	
CN2				*eS*		Sn	05 11 57.3	+3.4
CN2				pmax		pmax		
	comp=Z,50nm,1.2s							
CN2				pmax		pmax		
	comp=Z,1μm,6.0s							
CN2				LR		LR		
	comp=Z,624μm,15.0s							
CN2				LR		LR		
	comp=Z,524μm,15.0s							
CN2				LR		LR		
	comp=Z,172μm,12.0s							
JCJ	Chichijima	10.93	137	Pn		Pn	05 10 01.6	+1.5
	comp=Z,6.0nm,0.3s,baz=328,slow=7.5,SNR=12							
JCJ				Sn		Sn	05 12 02.9	+0.6
	comp=Z,5.6nm,0.3s,baz=287,slow=19,SNR=0.8							
	comp=Z,171nm,0.8s							
JCJ	Chichijima	10.93	137			Pn	05 09 59.5	-0.5
JCJ	Chichijima	10.93	137	P		Pn	05 10 03.7	+3.7
JCJ	Chichijima	10.93	137	⇓P		Pn	05 10 00.5	+0.5
SSE	Sheshan	11.41	252	P		Pn	05 10 12.3	+5.7
SSE				S		Sn	05 12 17.8	+3.7
SSE				pmax		pmax		
	comp=Z,60nm,0.9s							
SSE				pmax		pmax		
	comp=Z,2μm,3.0s							
BNX	BinXian	11.43	337	⇑P		Pn	05 10 10.9	+4.2
BNX				sP			05 10 17.5	
BNX				S		Sn	05 12 23.3	+8.9
BNX				pmax		pmax		
	comp=Z,680nm,1.4s							
BNX				pmax		pmax		
	comp=Z,4μm,3.0s							
BNX				LR		LR		
	comp=Z,224μm,14.7s							
BNX				LR		LR		
	comp=Z,328μm,14.9s							
BNX				LR		LR		
	comp=Z,93μm,12.6s							
NMR	Nemuro--Hokkai	12.17	46	*c i* P		Pn	05 10 15.8	-1.1
RUSJ	Misakicho	12.36	42	*c i* P		Pn	05 10 20.8	+1.3
YUK	Yuzh-Kuril'sk	12.65	43	*c i* P		Pn	05 10 23.5	0.0
YUK				*eS*		Sn	05 12 40.3	-4.1
YUK				pmax		pmax		
	comp=Z,8μm,1.7s							
YUK				pmax		pmax		
	comp=Z,744nm,1.0s							
YUK				pmax		pmax		
	comp=N,357nm,0.6s							
YUK				pmax		pmax		
	comp=E,516nm,0.8s							
YUK				MLR		MLR		
	comp=Z,5μm,19.0s							
YUK				MLR		MLR		
	comp=N,7μm,11.0s							
YUK				MLR		MLR		
	comp=E,7μm,13.0s							
NJ2	Nanjing	12.90	259	⇑*i* P		Pn	05 10 29.9	+3.0
NJ2				S		Sn	05 12 55.0	+4.5
NJ2				pmax		pmax		
	comp=E,470nm,1.5s							
NJ2				pmax		pmax		
	comp=E,5μm,3.5s							
NJ2				LR		LR		
	comp=E,258μm,11.4s							
NJ2				LR		LR		
	comp=E,191μm,16.1s							
NJ2				LR		LR		
	comp=E,177μm,16.6s							
YSS	Yuzh-Sakhalins	13.36	27			Pn	05 10 33.6	+0.5
YSS	Yuzh-Sakhalins	13.36	27	α *i* P		Pn	05 10 34.8	+1.7
YSS				*eS*		Sn	05 13 02.5	+1.0
YSS				pmax		pmax		
	comp=Z,21μm,3.6s							
YSS				pmax		pmax		
	comp=N,20μm,3.4s							
YSS				pmax		pmax		
	comp=E,9μm,3.7s							
YSS				pmax		pmax		
	comp=Z,1μm,1.2s							
YSS				MLR		MLR		
	comp=N,97μm,12.0s							
YSS				MLR		MLR		
	comp=Z,153μm,12.0s							
YSS				MLR		MLR		
	comp=E,57μm,13.0s							
YSS	Yuzh-Sakhalins	13.36	27	P		Pn	05 10 37.1	+4.0
YSS	Yuzh-Sakhalins	13.36	27	⇑P		Pn	05 10 35.0	+1.9
TIA	Tai'an	13.58	278	⇓P		Pn	05 10 38.0	+1.7
TIA				pmax		pmax		
	comp=E,220nm,2.3s							
TIA				pmax		pmax		
	comp=E,4μm,3.7s							
TIA				LR		LR		
	comp=E,154μm,12.8s							
TIA				LR		LR		
	comp=E,351μm,12.6s							
TIA				LR		LR		
	comp=E,445μm,13.5s							
KLR	Kul'dur	13.92	354	Pn		Pn	05 10 42.8	+2.1
	comp=E,3.4nm,0.3s,baz=157,slow=13,SNR=46							
KLR				Sn		S	05 13 29.6	-7.6
	comp=E,0.4nm,0.3s,baz=185,slow=18,SNR=0.8							
KLR				LR		LR	05 15 43.1	
	comp=E,68μm,18.0s,baz=170,slow=36							
KLR	Kul'dur	13.92	354	*c i* P		Pn	05 10 43.3	+2.6
KLR				pmax		pmax		
	comp=Z,1μm,2.5s							
KUR	Kuril'sk	14.52	43	*d i* P		Pn	05 10 49.0	0.0
KUR				*eS*		Sn	05

XLT			sP	sP		05 11 18.4 +1.0
XLT			S	**Sn**		**05 14 13.8 +6.0**
XLT			sS	S		05 14 20.5 -1.0
XLT			pmax	pmax		
	comp=Z,470nm,2.5s					
XLT			pmax	pmax		
	comp=Z,14μm,8.7s					
XLT			LR	LR		
	comp=Z,17μm,15.6s					
XLT			LR	LR		
	comp=Z,87μm,14.7s					
XLT			LR	LR		
	comp=Z,98μm,11.8s					
SSLB	**Suanglung**	**16.07 227**		**Pn**		**05 11 08.5 -1.2**
SSLB	**Suanglung**	**16.07 227**	P	**Pn**		**05 11 09.6 -0.1**
YULB	**Yu-li**	**16.17 226**	P	**Pn**		**05 11 11.7 +0.8**
TPUB	**Ta-pu**	**16.64 227**	P	**Pn**		**05 11 17.9 +1.0**
TWGBT	**Beinan**	**16.74 225**	P	**P**		**05 11 19.6 -0.8**
QZH	**Quanzhou**	**16.77 236**	⇑*i*P	**Pn**		**05 11 18.5 0.0**
QZH			S	**Sn**		**05 14 25.3 +0.5**
QZH			pmax	pmax		
	comp=Z,5μm,8.4s					
QZH			LR	LR		
	comp=Z,112μm,13.2s					
QZH			LR	LR		
	comp=Z,126μm,12.5s					
QZH			LR	LR		
	comp=Z,98μm,12.2s					
WHN	**Wuhan**	**17.04 259**	⇑P	**P**		**05 11 24.6 +0.9**
WHN			S	**S**		**05 14 36.8 -4.3**
WHN			pmax	pmax		
	comp=Z,15μm,3.8s					
WHN			LR	LR		
	comp=Z,561μm,11.7s					
WHN			LR	LR		
	comp=Z,216μm,11.2s					
WHN			LR	LR		
	comp=Z,347μm,11.6s					
KNMB	**Chin-men Tao**	**17.23 235**	P	**Pn**		**05 11 23.3 -1.0**
HIA	**Hailar**	**17.30 328**	P	**Pn**		**05 11 25.4 +0.3**
HIA			IAmb	IAmb		05 11 33.0
	comp=Z,1μm,1.7s					
HIA	**Hailar**	**17.30 328**	P	**Pn**		**05 11 25.4 +0.3**
HIA			pmax	pmax		
	comp=Z,1μm,1.7s					
TIY	**Taiyuan**	**17.34 284**	*e*P	**P**		**05 11 27.0 -0.1**
TIY			S	**Sn**		**05 14 41.0 +2.3**
TIY			pmax	pmax		
	comp=Z,16μm,9.6s					
TIY			LR	LR		
	comp=Z,121μm,14.1s					
TIY			LR	LR		
	comp=Z,183μm,16.1s					
TIY			LR	LR		
	comp=Z,194μm,14.4s					
LYN	**LuoYang**	**17.52 273**	⇓*i*P	**Pn**		**05 11 28.4 +0.5**
LYN			sP	sP		05 11 33.3 -0.3
LYN			S	**Sn**		**05 14 45.8 +2.7**
LYN			SS	**SnSn**		**05 15 05.4 +9.1**
LYN			pmax	pmax		
	comp=Z,750nm,1.6s					
LYN			pmax	pmax		
	comp=Z,17μm,4.0s					
LYN			LR	LR		
	comp=Z,341μm,16.9s					
LYN			LR	LR		
	comp=Z,139μm,20.8s					
LYN			LR	LR		
	comp=Z,303μm,14.3s					
HHC	**Hu-ho-hao-te**	**18.32 294**	⇓*i*P	**P**		**05 11 39.8 +1.8**
HHC			PP	**PnPn**		**05 11 57.8 +8.6**
HHC			S	**S**		**05 15 07.6 +0.1**
HHC			SS	**SnSn**		**05 15 23.8 +7.7**
HHC			pmax	pmax		
	comp=Z,3μm,1.4s					
HHC			pmax	pmax		
	comp=Z,39μm,6.9s					
HHC			LR	LR		
	comp=Z,83μm,11.6s					
HHC			LR	LR		
	comp=Z,307μm,10.8s					
HHC			LR	LR		
	comp=Z,306μm,10.1s					
ZEA	**Zeya**	**18.92 348**	*e*P	**Pn**		**05 11 45.4 +0.5**
ZEA			*e*			05 15 20.2
ZEA			pmax	pmax		
	comp=E,1μm,2.8s					
ZEA			pmax	pmax		
	comp=N,2μm,6.1s					
ZEA			pmax	pmax		
	comp=Z,3μm,3.9s					
ZEA			pmax	pmax		
	comp=E,80nm,0.7s					
ZEA			pmax	pmax		
	comp=N,420nm,1.4s					
ZEA			pmax	pmax		
	comp=Z,790nm,1.6s					
ZEA			MLR	MLR		
	comp=E,92μm,11.0s					
ZEA			MLR	MLR		
	comp=N,105μm,12.0s					
ZEA			MLR	MLR		
	comp=Z,70μm,13.0s					
CNSH	**ChangSha**	**19.14 254**	⇓P	**Pn**		**05 11 48.0 +0.3**
CNSH			S	**S**		**05 15 23.9 +0.1**
CNSH			LR	LR		
	comp=Z,318μm,14.8s					
CNSH			LR	LR		
	comp=Z,168μm,15.5s					
CNSH			LR	LR		
	comp=Z,172μm,13.0s					
CICP	**Calayan Island**	**19.42 217**	⇓*e*P	**P**		**05 11 45.4 -4.5**
BTO	**Baotou**	**19.45 293**	*e*P	**Pn**		**05 11 52.5 +1.0**
BTO			S	**S**		**05 15 34.9 +4.8**
BTO			LR	LR		
	comp=Z,571μm,13.7s					
BTO			LR	LR		
	comp=Z,545μm,17.7s					
PACPP	**Pamplona Cagay**	**20.17 216**	⇓*e*P	Pn		05 11 59.5 -0.5
XAN	**Xi'an**	**20.50 273**	P	Pn		05 12 03.3 -0.7
XAN			pP	sP		05 12 13.3 +6.9
XAN			S	Sn		05 15 53.4 -1.7
XAN			pmax	pmax		
	comp=Z,700nm,1.2s					
XAN			pmax	pmax		
	comp=Z,11μm,4.9s					
XAN			LR	LR		
	comp=Z,325μm,19.2s					
XAN			LR	LR		
	comp=Z,139μm,20.3s					
XAN			LR	LR		
	comp=Z,253μm,13.7s					
APYP	**Conner**	**20.73 216**	⇓*e*P	Pn		05 12 05.5 -1.1
ENH	**Enshi**	**21.06 263**	P	**P**		**05 12 07.6 -0.2**
GZH	**Guangzhou**	**21.62 241**	P	**P**		**05 12 08.1 -5.7**
GZH			S	**S**		**05 16 04.8 -8.5**
GZH			LR	LR		
	comp=Z,263μm,15.1s					
GZH			LR	LR		
	comp=Z,195μm,14.7s					
CIT	**Chita**	**22.04 325**	*e*P	**P**		**05 12 17.5 -0.7**
CIT			*e*			05 12 39.1
CIT			pmax	pmax		
	comp=Z,2μm,2.0s					
SKR	**Severo-Kuril's**	**22.22 40**	*e*P	**P**		**05 12 19.7 -0.3**
SKR			*i* S	**S**		**05 16 27.9 +3.6**
SKR			pmax	pmax		
	comp=Z,361nm,1.0s					
SKR			pmax	pmax		
	comp=Z,5μm,10.6s					
SKR			smax	smax		
	comp=N,16μm,15.2s					
SKR			smax	smax		
	comp=E,28μm,16.5s					
GULI	**GuiLin**	**22.56 250**	⇑P	**P**		**05 12 23.3 -0.6**
GULI			S	**S**		**05 16 27.1 -4.1**
GULI			pmax	pmax		
	comp=E,100nm,1.2s					
GULI			LR	LR		
	comp=E,241μm,14.6s					
GULI			LR	LR		
	comp=E,162μm,15.2s					
GULI			LR	LR		
	comp=E,97μm,10.8s					
PCPH	**Palayan**	**22.80 213**	⇓*e*P	**P**		**05 12 27.1 +0.7**
JCNP	**Jose Panganiba**	**23.27 208**	⇑*e*P	**P**		**05 12 30.9 -0.5**
ULN	**Ulaanbaatar**	**23.44 310**	P	**P**		**05 12 32.8 -0.3**
ULN	**Ulaanbaatar**	**23.44 310**	*d i*P	**P**		**05 12 32.3 -0.8**
ULN			pmax	pmax		
	comp=Z,880nm,1.7s					
ULN			MLR	MLR		
	comp=Z,60μm,13.0s					
ULN	**Ulaanbaatar**	**23.44 310**	P	**P**		**05 12 33.8 +0.7**
ULN	**Ulaanbaatar**	**23.44 310**	P	**P**		**05 12 31.4 -1.7**
	comp=Z,116μmcomp=Z,44μmcomp=Z,2μm,1.6s					
ULN	**Ulaanbaatar**	**23.44 310**	⇓P	**P**		**05 12 31.8 -1.2**
SONM	**Songino Array**	**23.84 310**	P	**P**		**05 12 36.0 -0.9**
	comp=Z,159nm,1.0s,baz=128,slow=9.0,SNR=149					
SONM			LR	LR		05 21 18.2
	comp=Z,47μm,20.9s,baz=112,slow=35					
	comp=Z,159nm,1.0s					
SONM	**Songino Array**	**23.84 310**	P	**P**		**05 12 36.4 -0.5**
SONM	**Songino Array**	**23.84 310**	P	**P**		**05 12 36.4 -0.5**
SONM			pmax	pmax		
	comp=Z,1μm,1.5s					
GUMO	**Guam**	**23.88 153**	P	**P**		**05 12 36.8 -0.5**
	comp=Z,185nm,0.9s,baz=243,slow=2.8,SNR=11					
GUMO			S	**S**		**05 16 53.1 -0.4**
	comp=Z,20nm,0.3s,baz=56,slow=7.3,SNR=1.6					
GUMO			LR	LR		05 20 04.5
	comp=Z,21μm,21.3s,baz=330,slow=32					
	comp=Z,185nm,0.9s					
GUMO	**Guam**	**23.88 153**	P	**P**		**05 12 36.3 -1.0**
GUMO	**Guam**	**23.88 153**	P	**P**		**05 12 36.3 -1.0**
GUMO			pmax	pmax		
	comp=Z,1μm,1.2s					
GUMO	**Guam**	**23.88 153**	P	**P**		**05 12 37.7 +0.4**
GUMO	**Guam**	**23.88 153**	⇑P	**P**		**05 12 38.0 +0.6**
LQP	**Lukban**	**23.90 211**	⇓*e*P	**P**		**05 12 38.6 +0.8**
LZH	**Lanzhou**	**24.30 280**	⇓P	**P**		**05 12 40.4 -1.0**
LZH			pP	pP		05 12 44.8 +0.1
LZH			sP	sP		05 12 49.1 +3.0
LZH			PP	**PnPn**		**05 13 16.8 +5.6**
LZH			S	**S**		**05 16 51.6 -8.8**
LZH			SS			05 17 47.8
LZH			pmax	pmax		
	comp=Z,120nm,1.3s					
LZH			pmax	pmax		
	comp=Z,7μm,6.4s					
LZH			LR	LR		
	comp=Z,117μm,12.5s					
LZH			LR	LR		
	comp=Z,231μm,14.6s					
LZH			LR	LR		
	comp=Z,276μm,15.3s					
PEA0B	**Petropavlovsk-**	**24.44 36**	P	**P**		**05 12 41.8 -0.4**
PEA0B			IAmb	IAmb		05 13 00.1
	comp=Z,702nm,1.5s					
PEA0B	**Petropavlovsk-**	**24.44 36**	P	**P**		**05 12 41.8 -0.4**
PEA0B			pmax	pmax		
	comp=Z,701nm,1.5s					
PETK	**Petropavlovsk-**	**24.44 36**	P	**P**		**05 12 42.9 +0.7**
	comp=Z,43nm,0.8s,baz=219,slow=11,SNR=28					
PETK			LR	LR		05 21 41.8
	comp=Z,41μm,21.9s,baz=211,slow=35					
	comp=Z,43nm,0.8s					
LUBP	**Lubang**	**24.79 213**	⇑*e*P	**P**		**05 12 43.4 -2.3**
PET	**Petropavlovsk**	**24.85 37**	P	**P**		**05 12 46.2 +0.3**
PET			IAMs_20	IAMs_20		05 23 42.7
	comp=Z,49μm,18.0s					
PET	**Petropavlovsk**	**24.85 37**	*j i*P	**P**		**05 12 46.3 +0.3**
PET			*e*S	**S**		**05 17 04.4 -4.1**
PET			pmax	pmax		
	comp=Z,903nm,1.9s					
PET			pmax	pmax		
	comp=Z,8μm,8.9s					
PET			MLR	MLR		
	comp=Z,67μm,18.0s					
PET			MLR	MLR		
	comp=Z,60μm,16.0s					
PET	**Petropavlovsk**	**24.85 37**	P	**P**		**05 12 47.8 +1.9**
PET	**Petropavlovsk**	**24.85 37**	⇑P	**P**		**05 12 45.2 -0.7**
GYA	**Guiyang**	**24.88 257**	⇓P	**P**		**05 12 46.9 +0.3**
GYA			S	**S**		**05 17 04.5 -5.2**
GYA			pmax	pmax		
	comp=Z,190nm,1.9s					
GYA			pmax	pmax		
	comp=Z,3μm,3.7s					
GYA			LR	LR		
	comp=Z,88μm,11.6s					
GYA			LR	LR		
	comp=Z,86μm,17.2s					
GYA			LR	LR		
	comp=Z,161μm,15.0s					
CD2	**Chengdu**	**25.51 269**	P	**P**		**05 12 52.5 +0.2**
CD2			sP	sP		05 12 57.3 +0.3
CD2			S	**S**		**05 17 18.9 -0.8**
CD2			pmax	pmax		
	comp=Z,70nm,0.8s					
CD2			pmax	pmax		
	comp=Z,4μm,7.5s					
CD2			LR	LR		
	comp=Z,333μm,14.9s					
CD2			LR	LR		
	comp=Z,225μm,15.7s					
CD2			LR	LR		
	comp=Z,201μm,17.2s					
RCP	**Roxas**	**25.77 206**	⇓*e*P	**P**		**05 12 54.9 +0.3**
BOD	**Bodaibo**	**26.05 336**	*e*P	**P**		**05 12 56.2 -0.6**
BOD			pmax	pmax		
	comp=Z,1μm,1.6s					
LLP	**Lapu-Lapu**	**26.52 202**	*e*P	**P**		**05 13 01.1 -0.3**
LLP			*e*S	**S**		**05 17 45.6 +10**
MA2	**Magadan**	**26.61 19**	P	**P**		**05 13 01.6 -0.2**
	comp=Z,136nm,1.1s,baz=214,slow=10.0,SNR=15					
MA2			S	**S**		**05 17 32.1 -4.2**
	comp=Z,9.3nm,0.8s,baz=322,slow=9.2,SNR=1.4					
MA2			LR	LR		05 24 09.7
	comp=Z,30μm,19.8s,baz=210,slow=38					
	comp=Z,136nm,1.1s					
MA2	**Magadan**	**26.61 19**	P	**P**		**05 13 00.9 -0.9**
MA2			IAmb	IAmb		05 13 05.3
	comp=Z,283nm,1.2s					
MA2	**Magadan**	**26.61 19**	*c i*P	**P**		**05 13 00.9 -0.9**
MA2			pmax	pmax		
	comp=Z,327nm,1.3s					
MA2			MLR	MLR		
	comp=Z,51μm,13.0s					
MA2	**Magadan**	**26.61 19**	P	**P**		**05 13 03.4 +1.6**
MA2	**Magadan**	**26.61 19**	⇑P	**P**		**05 13 01.7 -0.2**
TABP	**Talibon, Bohol**	**26.63 201**	⇑*i*P	**P**		**05 13 00.4 -1.9**
ZAK	**Zakamensk**	**26.69 314**	*e*P	**P**		**05 13 02.3 -0.5**
ZAK			pmax	pmax		
	comp=Z,352nm,1.6s					
QIZ	**Qiongzhong**	**26.73 239**	IAMs_20	IAMs_20		05 24 27.8
	comp=Z,46μm,21.0s					
QIZ	**Qiongzhong**	**26.73 239**	P	**P**		**05 13 04.3 +1.0**
QIZ			S	**S**		**05 17 40.6 +1.6**
QIZ			pmax	pmax		
	comp=Z,63nm,1.5s					
QIZ			LR	LR		
	comp=Z,147μm,14.3s					
QIZ			LR	LR		
	comp=Z,122μm,16.7s					
QIZ			LR	LR		
	comp=Z,62μm,11.2s					
YAK	**Yakutsk**	**26.79 356**	P	**P**		**05 13 02.7 -0.7**
	comp=Z,72nm,0.9s,baz=168,slow=0.8,SNR=1.6					
YAK			S	**S**		**05 17 40.3 +1.2**
	comp=Z,4.8nm,0.3s,baz=210,slow=1.4,SNR=1.2					
YAK			LR	LR		05 22 56.1
	comp=Z,51μm,19.5s,baz=169,slow=35					
	comp=Z,72nm,0.9s					
YAK	**Yakutsk**	**26.79 356**	P	**P**		**05 13 03.4 0.0**
YAK			IAmb	IAmb		05 13 12.9
	comp=Z,283nm,0.9s					
YAK			IAMs_20	IAMs_20		05 22 44.4
	comp=Z,54μm,20.0s					
YAK	**Yakutsk**	**26.79 356**	*e*P	**P**		**05 13 02.7 -0.7**
YAK			*e*S	**S**		**05 17 39.1 0.0**
YAK			*e*SS			05 18 46.5
YAK			*e*			05 23 51.8
YAK			pmax	pmax		
	comp=Z,320nm,1.1s					
YAK			pmax	pmax		
	comp=N,189nm,1.0s					
YAK			pmax	pmax		
	comp=E,39nm,1.0s					
YAK			smax	smax		
	comp=N,11μm,5.5s					
YAK			smax	smax		
	comp=E,4μm,6.0s					
YAK			MLR	MLR		
	comp=Z,81μm,14.0s					
YAK			MLR	MLR		
	comp=N,53μm,14.0s					
YAK	**Yakutsk**	**26.79 356**	⇑P	**P**		**05 13 01.3 -2.1**
IRK	**Irkutsk**	**26.91 318**	*e*P	**P**		**05 13 04.9 +0.3**
IRK			pmax	pmax		
	comp=Z,820nm,2.3s					
GHBP	**Garcia Hernand**	**27.07 201**	⇑*i*P	**P**		**05 13 04.3 -2.0**
TBP	**Tagbilaran**	**27.15 202**	*e*P	**P**		**05 13 02.9 -4.1**
GTA	**Gaotai**	**27.22 289**	⇓P	**P**		**05 13 06.4 -1.3**
GTA			pP	pP		05 13 11.3 +0.2
GTA			sP	sP		05 13 13.9 +1.5
GTA			S	**S**		**05 17 43.6 -3.0**
GTA			sS	sS		05 17 53.1 +1.1
GTA			pmax	pmax		
	comp=Z,42nm,1.8s					
GTA			pmax	pmax		
	comp=Z,2μm,8.6s					
GTA			LR	LR		
	comp=Z,79μm,14.9s					
GTA			LR	LR		
	comp=Z,154μm,14.9s					
GTA			LR	LR		
	comp=Z,156μm,14.2s					
CNOP	**Candoni, Negro**	**27.41 205**	⇑*e*P	**P**		**05 13 07.4 -1.9**
LSIP	**Lazi, Siquijor**	**27.75 202**	⇑*i*P	**P**		**05 13 06.5 -5.9**
KMI	**Kunming**	**28.63 258**	⇓P	**P**		**05 13 24.3 +3.8**
KMI			pP	sP		05 13 28.3 +3.1
KMI			sP	pP		05 13 29.9 +6.0
KMI			PP	**PnPn**		**05 14 12.0 +1.6**
KMI			S	**S**		**05 18 06.9 -2.3**
KMI			pmax	pmax		
	comp=Z,170nm,1.3s					
KMI			pmax	pmax		
	comp=Z,2μm,5.7s					
KMI			LR	LR		
	comp=Z,111μm,13.6s					
KMI			LR	LR		
	comp=Z,148μm,14.4s					
KMI			LR	LR		
	comp=Z,134μm,15.2s					
PZH	**PanZhiHua**	**28.80 261**	P	**P**		**05 13 22.9 +0.9**
PZH			sP	**sP**		**05 13 28.8 +2.1**
PZH			PP	**PnPn**		**05 14 19.6 +6.9**
PZH			S	**S**		**05 18 08.6 -3.2**
PZH			sS	**sS**		**05 18 17.4 +0.1**
PZH			SS	**SnSn**		**05 19 39.3 +6.3**
PZH			ScP	**SS**		**05 20 16.3 +2.7**
PZH			pmax	pmax		
	comp=Z,30nm,0.8s					
PZH			pmax	pmax		
	comp=Z,2μm,8.9s					
PZH			LR	LR		
	comp=Z,63μm,12.7s					
PZH			LR	LR		
	comp=Z,52μm,14.1s					
PZH			LR	LR		
	comp=Z,92μm,14.1s					
DAV	**Davao City (W)**	**29.18 197**	P	**P**		**05 13 25.3 +0.1**
	comp=Z,147nm,0.3s,baz=315,slow=5.7,SNR=1.3					
DAV			S	**S**		**05 18 18.0 +0.4**
	comp=Z,267nm,0.4s,baz=294,slow=19,SNR=2.3					
DAV			LR	LR		05 27 01.4
	comp=Z,17μm,18.0s,baz=31,slow=40					
DAV	**Davao City (W)**	**29.18 197**	IAMs_20	IAMs_20		05 23 32.3
	comp=Z,41μm,22.0s					
SEY	**Seymchan**	**29.89 17**	P	**P**		**05 13 31.6 +0.6**
	comp=Z,44nm,0.9s,baz=213,slow=6.4,SNR=29					
SEY			S	**S**		**05 18 25.8 -2.0**
	comp=Z,4.9nm,0.9s,baz=6.0,slow=19,SNR=1.8					
SEY			LR	LR		05 25 57.2
	comp=Z,37μm,18.4s,baz=198,slow=37					
	comp=Z,44nm,0.9s					
SEY	**Seymchan**	**29.89 17**	*ce*P	**P**		**05 13 30.9 -0.1**
SEY			pmax	pmax		
	comp=Z,280nm,2.5s					
SEY			MLR	MLR		
	comp=Z,41μm,12.0s					
UBPT	**Khong Chiam**	**32.33 239**	P	**P**		**05 13 53.5 +0.5**
UBPT			IAmb	IAmb		05 14 06.4
	comp=Z,206nm,1.3s					
UBPT	**Khong Chiam**	**32.33 239**	P	**P**		**05 13 53.0 0.0**
	comp=Z,9μmcomp=Z,2μmcomp=Z,123nm,1.4s					
UBPT	**Khong Chiam**	**32.33 239**	⇑P	**P**		**05 13 54.1 +1.1**
SGSI	**Sangihe**	**32.47 196**	P	**P**		**05 13 53.7 -0.5**
	comp=Z,378nm,1.0s					
WAKE	**Wake Island**	**33.09 110**	P	**P**		**05 13 59.5 -0.1**
WAKE			IAmb	IAmb		05 14 18.3
	comp=Z,174nm,1.1s					
WAKE	**Wake Island**	**33.09 110**	P	**P**		**05 14 01.2 +1.6**
SHEM	**Shemya Is, Ala**	**33.20 46**	LR	LR		05 26 45.3
	comp=Z,17μm,21.8s,baz=249,slow=35					
MYLDM	**Lahad Datu**	**33.22 209**	P	**P**		**05 14 01.2 +0.4**
MYLDM	**Lahad Datu**	**33.22 209**	P	**P**		**05 14 00.7 -0.1**
	comp=Z,12μmcomp=Z,7μmcomp=Z,278nm,1.3s					
KKM	**Kota Kinabalu**	**33.40 213**	P	**P**		**05 14 02.0 -0.5**
KKM			IAmb	IAmb		05 14 14.0
	comp=Z,131nm,1.2s					
KKM	**Kota Kinabalu**	**33.40 213**	P	**P**		**05 14 02.2 -0.3**
	comp=Z,9μmcomp=Z,2μmcomp=Z,97nm,1.6s					
KKM	**Kota Kinabalu**	**33.40 213**	P	**P**		**05 14 04.0 +1.5**
GAMI	**Galela, Maluku**	**33.85 191**	P	**P**		**05 14 05.4 -0.8**
	comp=Z,7μmcomp=Z,4μmcomp=Z,102nm,0.7s					
SPMM	**Sapulut**	**34.49 212**	P	**P**		**05 14 13.0 +1.2**
MOKO	**MOKOCHONG**	**34.75 266**	*e*P	**P**		**05 14 14.4 +0.2**
MOKO			IAmb	IAmb		05 14 17.2
	comp=Z,609nm,1.4s					
JORH	**JORHAT**	**34.79 267**	*e*P	**P**		**05 14 15.9 +1.5**
JORH			IAmb	IAmb		05 14 19.5
	comp=Z,197nm,0.6s					
CHTO	**Chiang Mai**	**34.94 251**	P	**P**		**05 14 15.3 -0.4**
CHTO	**Chiang Mai**	**34.94 251**	P	**P**		**05 14 15.3 -0.4**
CHTO			pmax	pmax		
	comp=Z,70nm,1.1s					
CHTO			MLR	MLR		
	comp=Z,2μm,19.0s					
TNTI	**Ternate**	**34.96 191**	P	**P**		**05 14 15.2 -0.7**
TNTI			IAmb	IAmb		05 14 26.0
	comp=Z,377nm,1.4s					
TNTI	**Ternate**	**34.96 191**	P	**P**		**05 14 14.9 -1.0**
	comp=Z,3μmcomp=Z,4μmcomp=Z,192nm,1.0s					
TNTI	**Ternate**	**34.96 191**	P	**P**		**05 14 16.2 +0.3**
ITAN	**ITANAGAR**	**35.06 268**	*e*P	**P**		**05 14 17.1 +0.4**
ITAN			IAmb	IAmb		05 14 20.2
	comp=Z,646nm,1.5s					
ITAN			*i* x	x		05 26 16.2
CMAR	**Chiang Mai Arr**	**35.15 251**	P	**P**		**05 14 17.4 -0.1**
	comp=Z,6.4nm,0.7s,baz=47,slow=5.6,SNR=34					
CMAR			PcP	**PcP**		**05 16 49.5 +0.6**
	comp=Z,5.9nm,0.8s,baz=13,slow=2.7,SNR=2.4					
CMAR			ScP	**ScP**		**05 20 34.2 -0.2**
	comp=Z,2.1nm,0.7s,baz=28,slow=2.9,SNR=6.3					
CMAR			LR	LR		05 29 01.7
	comp=Z,38μm,19.2s,baz=35,slow=37					
	comp=Z,6.4nm,0.7s					
CMAR	**Chiang Mai Arr**	**35.15 251**	P	**P**		**05 14 17.0 -0.6**
CMAR	**Chiang Mai Arr**	**35.15 251**	*i* P	**P**		**05 14 18.1 +0.6**
MND	**Mandalay**	**35.44 258**	P	**P**		**05 14 20.8 +0.8**
GTOI	**Gorontalo**	**36.02 199**	P	**P**		**05 14 23.4 -1.5**
	comp=Z,3μmcomp=Z,1μmcomp=Z,63nm,0.9s					
TEZP	**TEZPUR**	**36.03 268**	*e*P	**P**		**05 14 23.9 -1.1**
TEZP			IAmb	IAmb		05 14 27.5
	comp=Z,357nm,1.8s					
TEZP			*i* x	x		05 26 17.3
AMKA	**Amchitka**	**36.07 49**	P	**P**		**05 14 25.9 +0.8**
WMQ	**Urumqi**	**36.13 298**	P	**P**		**05 14 26.3 +0.5**
WMQ			pP	sP		05 14 31.9 +1.3
WMQ			PP	**PP**		**05 15 52.0 +4.2**
WMQ			S	**S**		**05 20 06.4 +1.1**
WMQ			ScP	**ScP**		**05 20 37.8 0.0**
WMQ			pmax	pmax		
	comp=Z,130nm,1.3s					
WMQ			pmax	pmax		
	comp=Z,1μm,9.3s					
WMQ			LR	LR		
	comp=Z,95μm,14.3s					
WMQ			LR	LR		
	comp=Z,60μm,15.1s					
WMQ			LR	LR		
	comp=Z,25μm,24.9s					
MWPI	**Manokwari, Pap**	**36.13 180**	P	**P**		**05 14 26.4 +0.5**
	comp=Z,201nm,1.8s					
SIJI	**Sorong**	**36.15 184**	P	**P**		**05 14 25.9 -0.2**
	comp=Z,96nm,0.7s,baz=5.2,slow=7.5,SNR=19					
SIJI			LR	LR		05 26 21.2

comp=Z,15μm,20.9s,baz=8.5,slow=32
comp=Z,96nm,0.7s
SIJI Sorong 36.15 184 P **P** **05 14 25.3 -0.8**
comp=Z,2μmcomp=Z,142nm,0.9s
TOLI2 Tolitoli 36.20 202 P **P** **05 14 25.1 -1.4**
TOLI2 IAmb IAmb 05 14 30.1
comp=Z,542nm,1.8s
TOLI2 Tolitoli 36.20 202 P **P** **05 14 26.1 -0.4**
LSA Lhasa 36.21 273 P **P** **05 14 25.9 -1.2**
LSA Lhasa 36.21 273 P **P** **05 14 29.0 +1.9**
LSA pP **sP** **05 14 37.3 +5.4**
LSA S **S** **05 20 11.4 +3.8**
LSA pmax pmax
comp=Z,37nm,2.0s
LSA pmax pmax
comp=Z,350nm,3.7s
LSA LR LR
comp=Z,42μm,13.5s
LSA LR LR
comp=Z,29μm,12.8s
LSA LR LR
comp=Z,72μm,14.2s
LSA Lhasa 36.21 273 P **P** **05 14 25.9 -1.2**
LSA pmax pmax
comp=Z,64nm,1.3s
LSA MLR MLR
comp=Z,88μm,19.0s
LSA Lhasa 36.21 273 *i* P **P** **05 14 25.6 -1.5**
SNR=12
PATS Pohnpei 36.24 136 P **P** **05 14 24.9 -2.0**
PATS Pohnpei 36.24 136 P **P** **05 14 28.6 +1.7**
LBMI Labuha 36.33 191 P **P** **05 14 27.2 -0.4**
comp=Z,4μmcomp=Z,238nm,1.1s
TIXI Tiksi 36.42 357 P **P** **05 14 27.4 -0.4**
comp=Z,24nm,0.7s,baz=270,slow=23,SNR=33
TIXI S **S** **05 20 05.9 -3.0**
comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=1.1
TIXI LR LR 05 29 02.1
comp=Z,47μm,18.1s,baz=270,slow=36
comp=Z,24nm,0.7s
TIXI Tiksi 36.42 357 P **P** **05 14 28.0 +0.2**
TIXI Tiksi 36.42 357 *c i* P **P** **05 14 26.6 -1.2**
TIXI pmax pmax
comp=Z,102nm,1.1s
TIXI MLR MLR
comp=Z,78μm,14.0s
TIXI Tiksi 36.42 357 ⇑P **P** **05 14 26.8 -1.0**
DGZ Jazzator, Alta 36.45 308 *d i* P **P** **05 14 27.7 -0.9**
DGZ pmax pmax
comp=Z,262nm,1.6s
DGZ MLR MLR
comp=Z,63μm,12.0s
MRSI Marisa 36.46 200 P **P** **05 14 28.6 -0.1**
comp=Z,6μmcomp=Z,3μmcomp=Z,143nm,1.2s
MPSI Mapaga 37.21 203 P **P** **05 14 35.3 +0.2**
comp=Z,7μmcomp=Z,4μmcomp=Z,183nm,1.9s
SHL Shillong 37.21 267 P **P** **05 14 33.6 -1.8**
SHL Shillong 37.21 267 P **P** **05 14 33.6 -1.8**
SHL pmax pmax
comp=Z,109nm,0.9s
SHL Shillong 37.21 267 P **P** **05 14 34.6 -0.8**
SNR=40
SHL Shillong 37.21 267 *e* P **P** **05 14 34.5 -0.8**
SHL IAmb IAmb 05 14 41.4
comp=Z,114nm,1.1s
SMPI Sarmi 37.47 172 P **P** **05 14 36.2 -1.1**
BILL Bilibino 37.48 19 P **P** **05 14 36.9 0.0**
BILL IAmb IAmb 05 14 41.9
comp=Z,464nm,1.3s
BILL IAMs_20 IAMs_20 05 29 55.1
comp=Z,34μm,19.0s
BILL Bilibino 37.48 19 *d i* P **P** **05 14 36.3 -0.6**
BILL *i* 05 16 02.9
BILL *i* S **S** **05 20 28.9 +3.7**
BILL pmax pmax
comp=Z,478nm,1.4s
BILL MLR MLR
comp=Z,28μm,14.0s
SRDT SRDT 37.53 245 P **P** **05 14 37.7 -0.2**
comp=Z,2μmcomp=Z,112nm,2.0s
LUWI Luwuk 37.69 198 P **P** **05 14 36.9 -2.2**
LUWI IAmb IAmb 05 15 13.0
comp=Z,159nm,0.9s
LUWI Luwuk 37.69 198 P **P** **05 14 37.3 -1.8**
comp=Z,6μmcomp=Z,134nm,1.3s
LUWI Luwuk 37.69 198 P **P** **05 14 37.9 -1.2**
comp=Z,212nm,0.9s
APSI Ampana 37.86 200 P **P** **05 14 39.9 -0.7**
comp=Z,7μmcomp=Z,3μmcomp=Z,187nm,1.3s
SANI Sanana 37.96 193 P **P** **05 14 40.2 -1.3**
comp=Z,6μmcomp=Z,3μmcomp=Z,141nm,1.2s
SANI Sanana 37.96 193 P **P** **05 14 40.8 -0.7**
ZSN Zaisan 38.04 304 *e* P **P** **05 14 39.2 -2.7**
ZSN *e* 05 16 08.6
ZSN *e* S **S** **05 20 34.1 -0.1**
ZSN pmax pmax
comp=Z,187nm,2.4s
ZSN Zaisan 38.04 304 *e* P **P** **05 14 39.2 -2.7**
comp=Z,187nm,2.4s,baz=304
ZSN *e* PP **PP** **05 16 08.6 -0.2**
baz=304
ZSN *e* S **S** **05 20 34.2 -0.1**
baz=304
FAKI Fak Fak 38.14 183 P **P** **05 14 41.5 -1.5**
FAKI IAmb IAmb 05 14 47.4
comp=Z,371nm,1.0s
FAKI Fak Fak 38.14 183 P **P** **05 14 42.1 -0.9**
comp=Z,5μmcomp=Z,6μmcomp=Z,420nm,0.9s
FAKI Fak Fak 38.14 183 P **P** **05 14 42.2 -0.8**
SBUM Sibu 38.42 216 P **P** **05 14 45.0 -0.4**
SBUM Sibu 38.42 216 P **P** **05 14 45.3 -0.1**
SBUM Sibu 38.42 216 P **P** **05 14 46.0 +0.6**
ZAA0 Zalesovo Array 38.57 314 P **P** **05 14 44.8 -1.5**
ZALV Zalesovo Beam 38.57 314 P **P** **05 14 45.0 -1.3**
comp=Z,7.8nm,0.7s,baz=101,slow=8.0,SNR=20
ZALV PcP **PcP** **05 16 57.6 -1.0**
comp=Z,23nm,0.7s,baz=87,slow=3.2,SNR=12
ZALV ScP **ScP** **05 20 45.5 -1.1**
comp=Z,4.0nm,0.8s,baz=117,slow=5.2,SNR=3.9
comp=Z,7.8nm,0.7s
ZALV Zalesovo Beam 38.57 314 P **P** **05 14 44.9 -1.3**
ADK Adak 38.61 49 P **P** **05 14 46.9 +0.3**
ADK IAmb IAmb 05 14 50.9
comp=Z,471nm,1.4s
ADK Adak 38.61 49 IAMs_20 IAMs_20 05 29 10.2
comp=Z,25μm,19.0s
ADK Adak 38.61 49 P **P** **05 14 46.9 +0.3**
ADK pmax pmax
comp=Z,471nm,1.4s
BRDH Bariadhala 38.72 263 P **P** **05 14 47.9 0.0**
comp=Z,51nm,0.3s,baz=33,slow=16,SNR=9.6
BRDH LR LR 05 33 33.5
comp=Z,90μm,18.2s,baz=74,slow=41
comp=Z,51nm,0.3s
MSAI Masohi 38.80 188 P **P** **05 14 48.8 +0.2**
comp=Z,2μmcomp=Z,54nm,1.4s
KRAI Karang Ratu 38.84 189 P **P** **05 14 48.6 -0.3**
comp=Z,7μmcomp=Z,335nm,1.6s
NLAI Namlea 38.94 191 P **P** **05 14 49.9 +0.2**
comp=Z,109nm,1.8s
AAI Ambon 39.23 189 P **P** **05 14 51.5 -0.6**
comp=Z,8μmcomp=Z,7μmcomp=Z,512nm,1.2s
MANU Manus Island 39.34 158 P **P** **05 14 52.3 -0.7**
MANU Manus Island 39.34 158 P **P** **05 14 53.7 +0.7**
BKB Balikpapan 39.75 207 IAMs_20 IAMs_20 05 34 04.4
comp=Z,26μm,20.0s
MK31 Makanchi Array 39.81 303 P **P** **05 14 55.8 -1.0**
MK31 Makanchi Array 39.81 303 P **P** **05 14 55.8 -1.0**
MK31 pmax pmax
comp=Z,108nm,1.4s
MKAR Makanchi Array 39.81 303 P **P** **05 14 55.6 -1.3**
comp=Z,14nm,0.9s,baz=91,slow=8.7,SNR=36
MKAR ScP **ScP** **05 20 49.6 -2.0**
comp=Z,3.4nm,1.0s,baz=32,slow=3.2,SNR=3.7
MKAR LR LR 05 32 04.4
comp=Z,44μm,20.1s,baz=100,slow=37
comp=Z,14nm,0.9s
MKAR Makanchi Array 39.81 303 P **P** **05 14 55.7 -1.1**
BNDI Bandanaira 39.87 186 P **P** **05 14 57.7 +0.2**
comp=Z,6μmcomp=Z,429nm,1.8s
TAPN Taplejung 39.89 272 *e* P **P** **05 14 58.4 +0.4**
comp=Z,271nm,1.1s
MAKZ Makanchi 40.03 303 P **P** **05 14 57.3 -1.3**
MAKZ IAMs_20 IAMs_20 05 32 00.4
comp=Z,45μm,20.0s
MAKZ Makanchi 40.03 303 P **P** **05 14 57.3 -1.3**
MAKZ pmax pmax
comp=Z,207nm,1.6s
MAKZ MLR MLR
comp=Z,45μm,20.0s
MAKZ Makanchi 40.03 303 ⇓P **P** **05 14 57.1 -1.5**
KSM Kuching 40.21 218 P **P** **05 14 59.6 -0.8**
KSM Kuching 40.21 218 P **P** **05 15 00.3 0.0**
comp=Z,1μmcomp=Z,68nm,1.6s
KSM Kuching 40.21 218 P **P** **05 15 01.0 +0.7**
KSM Kuching 40.21 218 P **P** **05 15 01.8 +1.5**
MTKI Muara Teweh, K 40.24 210 P **P** **05 15 00.5 -0.1**
comp=Z,100nm,1.0s
ODAN Odare 40.35 271 *e* P **P** **05 15 02.3 +0.6**
TTSI Tana Toraja 40.42 202 P **P** **05 15 02.2 +0.1**
comp=Z,2μmcomp=Z,69nm,1.8s
STKI Sintang 40.85 216 P **P** **05 15 04.8 -0.9**
comp=Z,16μmcomp=Z,75nm,1.5s
RAMN Ramite 40.95 272 *e* P **P** **05 15 06.4 -0.4**
comp=Z,619nm,1.6s
KKSI Kolaka, Sulawe 40.98 199 P **P** **05 15 06.8 +0.1**
comp=Z,6μmcomp=Z,386nm,1.6s
SRIT Nakonsritamara 41.09 238 P **P** **05 15 06.7 -0.9**
SRIT IAmb IAmb 05 15 24.1
comp=Z,160nm,1.0s
SEM Semipalatinsk 41.10 308 *e* P **P** **05 15 04.3 -3.4**
SEM *e* 05 16 39.5
SEM *e* S **S** **05 21 17.0 -3.5**
SEM pmax pmax
comp=Z,255nm,1.9s
SEM MLR MLR
comp=Z,20μm,12.0s
SEM Semipalatinsk 41.10 308 *e* P **P** **05 15 04.3 -3.4**
comp=Z,256nm,1.9s,baz=308
SEM *e* PP **PP** **05 16 39.6 -2.8**
baz=308
SEM *e* S **S** **05 21 17.0 -3.5**
baz=308
SEM *e* LR LR 05 32 13.8
comp=Z,20μm,12.3s,baz=308
PMSI Majene 41.14 203 P **P** **05 15 07.7 -0.3**
comp=Z,4μmcomp=Z,239nm,1.8s
GUN Gumba 41.16 273 *e* P **P** **05 15 07.6 -1.0**
comp=Z,527nm,1.1s
SPSI Sidrap Palu 41.31 202 P **P** **05 15 08.5 -0.9**
comp=Z,1μmcomp=Z,36nm,1.0s
SKLT Songkhla 41.42 235 P **P** **05 15 10.3 0.0**
comp=Z,2μmcomp=Z,92nm,1.7s
BNSI Bone 41.62 201 P **P** **05 15 12.0 +0.1**
comp=Z,3μmcomp=Z,1μmcomp=Z,80nm,1.1s
PKI Pulchoki 41.68 273 *e* P **P** **05 15 12.0 -0.8**
comp=Z,708nm,1.8s
PKIN Phulchoki 41.69 273 *e* P **P** **05 15 12.0 -0.8**
KKN Kakani 41.70 274 *e* P **P** **05 15 11.9 -0.9**
comp=Z,90nm,2.0s
DMN Daman 41.91 273 *e* P **P** **05 15 13.9 -0.7**
BBSI Bau Bau 42.02 197 P **P** **05 15 15.3 +0.1**
comp=Z,180nm,1.3s
PDGK Podgornoye 42.11 298 *i* P **P** **05 15 14.2 -1.7**
PDGK pmax pmax
comp=Z,212nm,1.4s
GKN Gorkha 42.14 274 *e* P **P** **05 15 14.8 -1.6**
comp=Z,858nm,1.5s
KURK Kurchatov 42.14 309 P **P** **05 15 14.5 -1.4**
KURK IAmb IAmb 05 15 19.4
comp=Z,335nm,1.4s
KURK Kurchatov 42.14 309 IAMs_20 IAMs_20 05 31 18.9
comp=Z,38μm,19.0s
KURK Kurchatov 42.14 309 P **P** **05 15 14.5 -1.4**
KURK pmax pmax
comp=Z,335nm,1.4s
KURK Kurchatov 42.14 309 P **P** **05 15 14.8 -1.0**
KURK Kurchatov 42.14 309 ⇓P **P** **05 15 14.2 -1.7**
SHLS Shalkode 42.16 298 *e* P P 05 15 11.0 -5.3
SHLS *e* 05 16 49.4
SHLS *e* S **S** **05 21 32.8 -3.3**
SHLS Shalkode 42.16 298 *e* P P 05 15 11.0 -5.3
baz=297
SHLS *e* PP **PP** **05 16 49.4 -4.3**
baz=297
SHLS *e* S **S** **05 21 32.9 -3.3**
baz=297
KURBB Kurchatov Arra 42.20 309 P **P** **05 15 14.8 -1.6**
comp=Z,124nm,1.3s,baz=91,slow=8.2,SNR=102
KURBB PcP **PcP** **05 17 10.3 0.0**
comp=Z,14nm,1.1s,baz=94,slow=3.6,SNR=5.0
KURBB LR LR 05 31 55.7
comp=Z,31μm,19.8s,baz=65,slow=35
comp=Z,124nm,1.3s
KURBB Kurchatov Arra 42.20 309 P **P** **05 15 14.9 -1.5**
KAPI Kappang 42.31 201 P **P** **05 15 16.7 -0.9**
comp=Z,36nm,0.6s,baz=9.2,slow=3.6,SNR=13
KAPI LR LR 05 36 19.7
comp=Z,4μm,18.2s,baz=22,slow=41
comp=Z,36nm,0.6s
KAPI Kappang 42.31 201 P **P** **05 15 16.6 -0.9**
KAPI IAmb IAmb 05 15 22.6
comp=Z,291nm,1.4s
KAPI Kappang 42.31 201 P **P** **05 15 16.6 -0.9**
KAPI pmax pmax
comp=Z,291nm,1.4s
KAPI MLR MLR
comp=Z,12μm,22.0s
KAPI Kappang 42.31 201 P **P** **05 15 17.2 -0.4**
KAPI P **P** **05 15 17.2 -0.4**
KAPI Kappang 42.31 201 P **P** **05 15 16.9 -0.7**
comp=Z,2μmcomp=Z,140nm,2.1s
KAPI Kappang 42.31 201 P **P** **05 15 17.6 0.0**
KAPI Kappang 42.31 201 ⇑P **P** **05 15 16.4 -1.2**
NRIK Noril'sk 42.31 338 P **P** **05 15 16.2 -0.9**
comp=Z,30nm,1.1s,baz=124,slow=8.1,SNR=15
NRIK PcP **PcP** **05 17 11.1 +0.6**
comp=Z,45nm,1.1s,baz=216,slow=0.9,SNR=3.9
NRIK LR LR 05 31 44.8
comp=Z,28μm,18.5s,baz=124,slow=35
comp=Z,30nm,1.1s
NRIK Noril'sk 42.31 338 P **P** **05 15 15.8 -1.2**
NRIK Noril'sk 42.31 338 *d i* P **P** **05 15 14.9 -2.1**
NRIK pmax pmax
comp=Z,84nm,1.2s
NRIK MLR MLR
comp=Z,40μm,12.0s
UZB Uzynbulak 42.48 298 *e* P **P** **05 15 15.8 -3.1**
UZB *e* 05 16 57.5
UZB Uzynbulak 42.48 298 *e* P **P** **05 15 15.8 -3.1**
baz=297
UZB *e* PP **PP** **05 16 57.5 +0.3**
baz=297
BKSI Bulukumba 42.50 200 P **P** **05 15 18.4 -0.7**
comp=Z,5μmcomp=Z,2μmcomp=Z,104nm,1.1s
BBKI Banjar Baru 42.55 209 P **P** **05 15 19.7 +0.1**
comp=Z,9μmcomp=Z,370nm,1.4s
TDK Taldyqorghan 42.66 300 *e* P **P** **05 15 17.7 -2.6**
TDK *e* 05 16 58.5
TDK *e* S **S** **05 21 41.7 -1.6**
TDK pmax pmax
comp=Z,365nm,1.8s
TDK MLR MLR
comp=Z,46μm,14.0s
TDK Taldyqorghan 42.66 300 *e* P **P** **05 15 17.7 -2.6**
comp=Z,365nm,1.8s,baz=300
TDK *e* PP **PP** **05 16 58.6 -0.5**
baz=300
TDK *e* S **S** **05 21 41.7 -1.6**
baz=300
TDK *e* LR LR 05 33 16.9
comp=Z,46μm,13.8s,baz=300
KPKS Kokpek 42.67 298 *e* P **P** **05 15 17.6 -2.8**
KPKS *e* 05 16 59.2
KPKS *e* S **S** **05 21 44.4 +0.8**
KPKS pmax pmax
comp=Z,118nm,2.3s
KPKS Kokpek 42.67 298 *e* P **P** **05 15 17.7 -2.8**
comp=Z,118nm,2.3s,baz=298
KPKS *e* PP **PP** **05 16 59.2 0.0**
baz=298
KPKS *e* S **S** **05 21 44.5 +0.8**
baz=298
JRMM Jerantut 42.69 230 P **P** **05 15 21.0 +0.3**
DANN Dangsing 42.72 275 *e* P **P** **05 15 19.8 -1.5**
comp=Z,1μm,1.5s
KULM Kulim 42.79 233 P **P** **05 15 20.1 -1.5**
KULM Kulim 42.79 233 P **P** **05 15 21.8 +0.3**
comp=Z,3μmcomp=Z,2μmcomp=Z,86nm,1.4s
KULM Kulim 42.79 233 P **P** **05 15 22.0 +0.5**
SPIA Saint Paul Isl 42.88 42 P **P** **05 15 22.1 +0.4**
baz=264
BOK Bokaro 42.89 268 *e* P **P** **05 15 22.3 0.0**
ZHN Zhinishke 42.90 298 *e* P **P** **05 15 19.8 -2.5**
ZHN *e* 05 17 01.0
ZHN Zhinishke 42.90 298 *e* P **P** **05 15 19.8 -2.5**
baz=298
ZHN *e* PP **PP** **05 17 01.0 -0.7**
baz=298
SATY Saty 42.94 298 *e* P **P** **05 15 19.8 -2.8**
SATY *e* 05 17 01.1
SATY *e* S **S** **05 21 46.5 -1.1**
SATY pmax pmax
comp=Z,117nm,2.2s
SATY Saty 42.94 298 *e* P **P** **05 15 19.8 -2.8**
comp=Z,117nm,2.2s,baz=297
SATY *e* PP **PP** **05 17 01.2 -1.0**
baz=297
SATY *e* S **S** **05 21 46.5 -1.1**
baz=297
VLK Valmikinagar 43.04 274 *e* P **P** **05 15 23.4 0.0**
VLK *i x* x 05 17 04.2
KOLN Koldanda 43.08 274 *e* P **P** **05 15 22.0 -2.0**
comp=Z,151nm,2.0s
IPM Ipoh 43.16 232 P **P** **05 15 23.3 -1.2**
IPM IAMs_20 IAMs_20 05 35 03.8
comp=Z,27μm,18.0s
IPM Ipoh 43.16 232 P **P** **05 15 24.2 -0.3**
comp=Z,2μmcomp=Z,95nm,1.4s
IPM Ipoh 43.16 232 P **P** **05 15 24.0 -0.5**
IPM Ipoh 43.16 232 P **P** **05 15 24.6 +0.1**
BSSI Bau Bau, Buton 43.18 200 P **P** **05 15 23.5 -1.1**
comp=Z,5μmcomp=Z,2μmcomp=Z,214nm,1.0s
SAUI Saumlaki 43.20 184 P **P** **05 15 24.0 -0.8**
SAUI IAmb IAmb 05 15 59.2
comp=Z,308nm,1.0s
SAUI Saumlaki 43.20 184 P **P** **05 15 25.1 +0.3**
comp=Z,342nm,1.1s
GAMB Gambell 43.33 32 P **P** **05 15 25.5 +0.3**
baz=256
PYUN Piuthan 43.45 275 *e* P **P** **05 15 25.2 -1.8**
comp=Z,979nm,1.2s
NIKH Nikolski High 43.45 48 P **P** **05 15 26.2 -0.3**
NIKH IAmb IAmb 05 15 28.6
comp=Z,275nm,1.6s
MYKOM Kota Tinggi 43.50 227 IAMs_20 IAMs_20 05 33 17.0
comp=Z,24μm,20.0s
CHKK Chushkaly 43.83 299 *e* P **P** **05 15 26.5 -3.2**
CHKK Chushkaly 43.83 299 *e* P **P** **05 15 26.5 -3.2**
baz=299
MDOK Medeo 43.90 298 *e* P **P** **05 15 27.4 -3.0**
MDOK *e* S **S** **05 22 00.4 -1.3**
MDOK MLR MLR
comp=Z,24μm,14.0s
MDOK Medeo 43.90 298 *e* P **P** **05 15 27.5 -3.0**
baz=298
MDOK *e* S **S** **05 22 00.5 -1.3**
baz=298
MDOK *e* LR LR 05 32 34.5
comp=Z,24μm,14.1s,baz=298
AAA Alma-Ata 43.99 298 *e* P **P** **05 15 30.1 -0.9**
AAA MLR MLR
comp=Z,35μm,14.0s
AAA Alma-Ata 43.99 298 *e* P **P** **05 15 30.1 -0.9**
baz=298
AAA *e* LR LR 05 32 56.7
comp=Z,35μm,14.5s,baz=298
KUU Kurty 44.29 299 *e* P **P** **05 15 29.8 -3.6**
KUU *e* 05 17 15.2
KUU *e* S **S** **05 22 05.7 -1.4**
KUU pmax pmax
comp=Z,387nm,1.8s
KUU Kurty 44.29 299 *e* P **P** **05 15 29.8 -3.6**
comp=Z,387nm,1.8s,baz=299
KUU *e* PP **PP** **05 17 15.3 -1.2**
baz=299
KUU *e* S **S** **05 22 05.7 -1.4**
baz=299
BWNR Bhubaneshwar 44.62 263 *e* P **P** **05 15 36.2 0.0**
NRN Naryn 44.99 296 P **P** **05 15 38.6 -0.8**
NRN Naryn 44.99 296 P **P** **05 15 38.6 -0.8**
NRN pmax pmax
comp=Z,63nm,1.2s
TKM2 Tokmak 2 44.99 298 P **P** **05 15 40.4 +1.2**
SNR=42
TKM2 Tokmak 2 44.99 298 P **P** **05 15 39.2 0.0**
MMRI Maumere 45.13 196 P **P** **05 15 38.9 -1.4**
MMRI IAmb IAmb 05 15 43.1
comp=Z,329nm,1.4s
MMRI Maumere 45.13 196 P **P** **05 15 39.7 -0.6**
PTH Pithoragarh 45.15 278 *e* P **P** **05 15 39.8 -0.8**
LGTI Lohaghat 45.16 278 *e* P **P** **05 15 41.3 +0.9**
TNA Tin City 45.32 30 P **P** **05 15 41.8 +0.6**
TNA IAmb IAmb 05 15 46.1
comp=Z,296nm,1.3s
TNA Tin City 45.32 30 P **P** **05 15 41.9 +0.7**
baz=256
LHMI Lhok Sumawe 45.32 237 IAMs_20 IAMs_20 05 33 48.2
comp=Z,20μm,18.0s
KSH Kashi 45.44 293 P **P** **05 15 45.9 +3.2**
KSH PP PP 05 17 37.0 +8.1
KSH S S 05 22 34.6 +10
KSH pmax pmax
comp=Z,24nm,1.0s
KSH pmax pmax
comp=Z,1μm,8.9s
KSH LR LR
comp=Z,103μm,15.1s
KSH LR LR
comp=Z,47μm,15.8s
KSH LR LR
comp=Z,84μm,14.4s
KBK Karagaybulak 45.51 298 P **P** **05 15 42.6 -0.7**
SNR=30
ALBI Allahabad 45.55 272 *e* P **P** **05 15 42.4 -1.2**
CHMS Chumysh 45.58 298 P **P** **05 15 44.4 +0.7**
SNR=23
CHMS Chumysh 45.58 298 *i* P **P** **05 15 42.6 -1.1**
CHMS pmax pmax
comp=Z,51nm,1.2s
SGDS Sogindy 45.59 299 *e* P **P** **05 15 41.1 -2.6**
SGDS *e* S **S** **05 22 29.7 +3.7**
SGDS pmax pmax
comp=Z,75nm,1.8s
SGDS Sogindy 45.59 299 *e* P **P** **05 15 41.2 -2.6**
comp=Z,75nm,1.8s,baz=299
SGDS *e* S **S** **05 22 29.7 +3.7**
baz=299
USP Ospenovka 45.71 299 P **P** **05 15 43.7 -1.1**
SNR=38
BTLS Baital 45.72 301 *e* P **P** **05 15 42.4 -2.3**
BTLS *e* S **S** **05 22 26.9 -0.9**
BTLS pmax pmax
comp=Z,145nm,1.7s
BTLS Baital 45.72 301 *e* P **P** **05 15 42.5 -2.3**
comp=Z,145nm,1.7s,baz=301
BTLS *e* S **S** **05 22 26.9 -0.9**
baz=301
PSI Prapat 45.79 233 LR LR 05 35 44.4
comp=Z,13μm,20.0s,baz=33,slow=37
PSI Prapat 45.79 233 P **P** **05 15 44.3 -1.4**
PSI pmax pmax
comp=Z,45nm,0.8s
PSI MLR MLR
comp=Z,32μm,18.0s
PSI Prapat 45.79 233 P **P** **05 15 45.2 -0.5**
comp=Z,2μmcomp=Z,595nmcomp=Z,47nm,1.2s,comp=Z,4μm,1.2s,
comp=Z,986nm,1.2s,comp=Z,77nm,1.2s
PSI P **P** **05 15 45.2 -0.5**
comp=Z,2μmcomp=Z,595nmcomp=Z,47nm,1.2s,comp=Z,4μm,1.2s,
comp=Z,986nm,1.2s,comp=Z,77nm,1.2s
PSI Prapat 45.79 233 P **P** **05 15 45.3 -0.5**
SOEI Soe 45.80 193 P **P** **05 15 44.3 -1.3**
SOEI Soe 45.80 193 P **P** **05 15 44.6 -1.1**
comp=Z,5μmcomp=Z,7μmcomp=Z,428nm,1.1s
SOEI Soe 45.80 193 P **P** **05 15 44.9 -0.8**
AAK Ala-Archa 45.84 298 P **P** **05 15 46.6 +0.6**
SNR=24
AAK Ala-Archa 45.84 298 P **P** **05 15 44.0 -2.0**
comp=Z,13nm,0.8s,baz=146,slow=5.4,SNR=27
AAK LR LR 05 34 22.6
comp=Z,43μm,20.1s,baz=74,slow=36
comp=Z,13nm,0.8s
AAK Ala-Archa 45.84 298 P **P** **05 15 44.5 -1.5**
AAK Ala-Archa 45.84 298 *d i* P **P** **05 15 44.4 -1.5**
AAK pmax pmax
comp=Z,104nm,1.7s
AAK MLR MLR

comp=Z,56μm,16.0s
AAK Ala-Archa 45.84 298 P **P 05 15 44.7 -1.2**
AAK P **P 05 15 44.7 -1.2**
AAK Ala-Archa 45.84 298 *i* P **P 05 15 44.1 -1.8**
SNR=31
AAK Ala-Archa 45.84 298 ⇓P **P 05 15 44.7 -1.2**
RPSI Rantau Prapat 45.87 233 P **P 05 15 44.3 -1.8**
RPSI IAMs_20 IAMs_20 05 38 07.7
comp=Z,32μm,18.0s
UCH Uchtor 45.91 297 P **P 05 15 48.0 +1.2**
SNR=44
BRZS Berezniki 45.98 308 *e*P **P 05 15 44.1 -2.6**
BRZS *e*S **S 05 22 28.9 -2.6**
BRZS pmax pmax
comp=Z,125nm,1.6s
BRZS Berezniki 45.98 308 *e*P **P 05 15 44.1 -2.6**
comp=Z,125nm,1.6s,baz=308
BRZS *e*S **S 05 22 29.0 -2.6**
baz=308
ANM Nome 46.20 31 IAMs_20 IAMs_20 05 37 15.7
comp=Z,17μm,18.0s
ANM Nome 46.20 31 P **P 05 15 49.6 +1.4**
baz=261,SNR=6.1
EKS2 Erkin-Say 46.35 298 P **P 05 15 49.1 -0.8**
SNR=15
BATI Baumata 46.35 194 LR LR 05 34 59.1
comp=Z,7μm,21.8s,baz=26,slow=36
BATI Baumata 46.35 194 P **P 05 15 49.2 -0.8**
comp=Z,5μmcomp=Z,6μmcomp=Z,729nm,0.9s
BKNI Bangkinang 46.36 228 IAMs_20 IAMs_20 05 33 27.6
comp=Z,26μm,22.0s
BKNI Bangkinang 46.36 228 P **P 05 15 53.4 +3.4**
MLSI Meulaboh, Aceh 46.39 237 P **P 05 15 48.5 -1.8**
comp=Z,91nm,1.1s
OTUK Ortayu 46.41 306 P **P 05 15 48.5 -1.6**
PLAI Plampang 46.52 202 P **P 05 15 49.4 -1.8**
comp=Z,5μmcomp=Z,3μmcomp=Z,153nm,1.7s
PLAI Plampang 46.52 202 P **P 05 15 50.2 -1.0**
AML Almayashu 46.53 297 P **P 05 15 51.0 -0.6**
SNR=46
KLNI Mataram 46.68 204 P **P 05 15 52.3 -0.2**
comp=Z,5μmcomp=Z,5μmcomp=Z,221nm,1.8s
TWSI Taliwang, Sumb 46.71 203 P **P 05 15 51.9 -0.8**
comp=Z,5μmcomp=Z,4μmcomp=Z,250nm,1.2s
BLSP Bilaspur 46.72 268 *e*P **P 05 15 51.4 -1.5**
PMBI Palembang 46.84 222 IAMs_20 IAMs_20 05 38 56.8
comp=Z,18μm,18.0s
RAGD RAYAGADA 47.05 264 *e*P **P 05 15 55.8 +0.3**
RTBI Rangdo, Negare 47.11 206 P **P 05 15 54.4 -1.5**
comp=Z,5μmcomp=Z,336nm,1.7s
BVAR Borovoye Array 47.14 313 P **P 05 15 54.2 -1.6**
comp=Z,12nm,0.7s,baz=92,slow=7.9,SNR=59
BVAR LR LR 05 35 51.0
comp=Z,44μm,18.4s,baz=79,slow=36
comp=Z,12nm,0.7s
BRVK Borovoye 47.20 313 P **P 05 15 54.9 -1.3**
BRVK IAmb IAmb 05 15 59.0
comp=Z,92nm,1.2s
BRVK Borovoye 47.20 313 *d i* P **P 05 15 54.6 -1.6**
BRVK pmax pmax
comp=Z,121nm,1.7s
BRVK MLR MLR
comp=Z,35μm,12.0s
BRVK Borovoye 47.20 313 P **P 05 15 55.4 -0.9**
BRVK Borovoye 47.20 313 ⇓P **P 05 15 54.7 -1.6**
NGJI Ngawi 47.47 211 P **P 05 15 57.5 -1.1**
comp=Z,43nm,1.0s
BHK Bhakra 47.52 282 *e*P **P 05 16 00.4 +1.4**
THN Thein Dam 47.72 284 *e*P **P 05 15 59.8 -0.7**
GSI Gunungsitoli 47.79 233 P **P 05 16 00.5 -0.8**
GSI Gunungsitoli 47.79 233 P **P 05 16 00.6 -0.7**
comp=Z,15μmcomp=Z,297nm,1.3s
GSI Gunungsitoli 47.79 233 P **P 05 16 00.7 -0.6**
KDU Kakadu 47.83 182 P **P 05 16 01.0 -0.4**
KDU Kakadu 47.83 182 ⇑P **P 05 16 00.7 -0.7**
JBP Jabalpur 47.99 271 *e*P **P 05 16 00.6 -2.2**
JBP *e*S **S 05 22 59.0 -1.7**
MTN Manton Dam 48.04 184 P **P 05 16 01.9 -1.1**
MTN Manton Dam 48.04 184 P **P 05 16 01.5 -1.5**
MTN Manton Dam 48.04 184 ⇑P **P 05 16 01.1 -1.9**
DZA Taraz 48.06 299 *e*P **P 05 16 02.4 -0.7**
DZA Taraz 48.06 299 *e*P **P 05 16 02.5 -0.7**
baz=299
CTJI Waduk Cacaban 48.14 214 P **P 05 16 02.9 -1.0**
comp=Z,5μmcomp=Z,201nm,1.2s
JHNI Jhansi 48.15 274 *e*P **P 05 16 01.3 -2.7**
UGM Wanagama 48.35 212 P **P 05 16 04.9 -0.7**
KLI Kotabumi 48.41 220 P **P 05 16 04.3 -1.7**
comp=Z,5μmcomp=Z,5μmcomp=Z,320nm,0.5s
MASI Maura Aman, Be 48.42 224 P **P 05 16 05.2 -0.9**
comp=Z,2μmcomp=Z,131nm,1.2s
DRK Karamyk 48.57 294 P **P 05 16 05.8 -1.5**
DRK IAmb IAmb 05 16 24.9
comp=Z,101nm,1.1s
KK31 Karatay Array 48.60 299 P **P 05 16 06.2 -1.1**
KK31 Karatay Array 48.60 299 P **P 05 16 06.2 -1.1**
KK31 pmax pmax
comp=Z,455nm,1.6s
KKAR Karatay Array 48.60 299 P **P 05 16 06.4 -0.8**
KKAR Karatay Array 48.60 299 P **P 05 16 06.4 -0.8**
KKAR Karatay Array 48.60 299 ⇓P **P 05 16 06.1 -1.1**
LEM Lembang 48.71 216 LR LR 05 38 04.1
comp=Z,6μm,20.9s,baz=338,slow=38
LEM Lembang 48.71 216 P **P 05 16 07.9 -0.6**
comp=Z,4μmcomp=Z,4μmcomp=Z,243nm,1.1s
CHNA Chernabura Isl 48.85 45 P **P 05 16 08.5 -0.4**
baz=275,SNR=13
CNBA Chernabura Isl 48.85 45 P **P 05 16 09.0 +0.1**
CNBA IAMs_20 IAMs_20 05 35 26.8
comp=Z,26μm,22.0s
SISI Saibi 48.85 229 P **P 05 16 07.6 -1.8**
comp=Z,174nm,0.9s
N16K Nishlik Lake 48.98 37 P **P 05 16 10.7 +0.8**
baz=271,SNR=23
BTK Batken 49.14 295 P **P 05 16 11.1 -0.4**
BTK IAmb IAmb 05 16 36.4
comp=Z,92nm,1.1s
BTK Batken 49.14 295 P **P 05 16 11.1 -0.4**
BTK pmax pmax
comp=Z,92nm,1.2s
KASI Kota Agung 49.16 220 P **P 05 16 12.8 +1.1**
comp=Z,1μmcomp=Z,56nm,0.8s
IUG Iuzhnay 49.17 298 *e*P **P 05 16 09.5 -2.3**
IUG *e*S **S 05 23 17.7 +0.5**
IUG Iuzhnay 49.17 298 *e*P **P 05 16 09.5 -2.3**
baz=298
IUG *e*S **S 05 23 17.7 +0.5**
baz=298
NIL Nilore 49.24 286 P **P 05 16 11.6 -0.7**
NIL Nilore 49.24 286 IAMs_20 IAMs_20 05 39 37.7
comp=Z,23μm,19.0s
NIL Nilore 49.24 286 P **P 05 16 11.6 -0.7**
NIL pmax pmax
comp=Z,349nm,1.5s
NIL MLR MLR
comp=Z,23μm,19.0s
KHET Khetri 49.28 279 *e*P **P 05 16 11.3 -1.4**
O16K Kokwok River B 49.34 38 P **P 05 16 13.2 +0.6**
baz=272,SNR=15
P16K Nushagak River 49.42 39 P **P 05 16 14.4 +1.1**
baz=273
PPSI Pulau Pagai 49.42 227 P **P 05 16 13.1 -0.7**
comp=Z,156nm,1.2s
NGP Nagpur 49.70 269 *e*P **P 05 16 15.0 -0.9**
GAR Garm 49.81 294 P **P 05 16 15.7 -1.0**
O17K Koliganek Bris 49.84 38 P **P 05 16 17.2 +0.8**
baz=273
GCSA Galena City Sc 49.86 32 P **P 05 16 16.5 +0.1**
baz=269,SNR=7.9
COEN Coen 49.87 168 P **P 05 16 16.5 -0.6**
COEN Coen 49.87 168 P **P 05 16 17.9 +0.8**
COEN Coen 49.87 168 ⇓P **P 05 16 17.7 +0.6**
Q16K King Salmon 50.14 40 P **P 05 16 19.4 +0.7**
baz=274,SNR=7.8
P17K Kvichak River 50.21 39 P **P 05 16 19.4 +0.1**
baz=274
TTA Tatalina 50.24 34 P **P 05 16 20.4 +0.8**
TTA Tatalina 50.24 34 P **P 05 16 20.4 +0.8**
TTA pmax pmax
comp=Z,129nm,1.4s
TTA Tatalina 50.24 34 P **P 05 16 19.4 -0.2**
baz=271,SNR=11
TTA Tatalina 50.24 34 ⇑P **P 05 16 20.4 +0.8**
A21K Barrow 50.38 23 IAMs_20 IAMs_20 05 38 51.9
comp=Z,19μm,18.0s
N18K Kilae Creek 50.39 37 IAMs_20 IAMs_20 05 36 19.6
comp=Z,19μm,21.0s
N18K Kilae Creek 50.39 37 P **P 05 16 21.6 +1.0**
baz=273,SNR=24
SVW2 Sparrevohn 50.52 36 P **P 05 16 23.1 +1.5**
SVW2 IAmb IAmb 05 16 26.9
comp=Z,149nm,1.2s
Q17K Contact Creek 50.57 40 P **P 05 16 24.0 +1.8**
baz=275,SNR=6.9
VJD Vijayawada 50.75 263 *e*P **P 05 16 25.2 +1.3**
CHGR Chuyangaron 50.77 294 P **P 05 16 22.7 -1.3**
CHGR Chuyangaron 50.77 294 P **P 05 16 22.7 -1.3**
CHGR pmax pmax
comp=Z,497nm,1.4s
O18K Koktuh Hills 50.79 38 P **P 05 16 24.0 +0.3**
baz=274,SNR=6.5
L19K White Mountain 50.81 35 P **P 05 16 24.6 +0.8**
L19K IAmb IAmb 05 16 29.6
comp=Z,154nm,1.3s
L19K White Mountain 50.81 35 P **P 05 16 23.8 0.0**
baz=273,SNR=24
P18K Big Mountain, 50.81 39 P **P 05 16 23.9 0.0**
P18K IAmb IAmb 05 16 28.6
comp=Z,156nm,1.2s
P18K Big Mountain, 50.81 39 P **P 05 16 24.1 +0.2**
baz=275,SNR=7.6
AJM Ajmer 50.88 277 *e*P **P 05 16 24.0 -0.9**
HNR Honiara 50.95 146 LR LR 05 35 25.7
comp=Z,133μm,21.7s,baz=332,slow=33
CHIR Chirikof Islan 50.99 43 IAMs_20 IAMs_20 05 36 42.4
comp=Z,23μm,21.0s
Q18K Katmai Hardscr 51.00 40 P **P 05 16 24.7 -0.7**
baz=276,SNR=6.0
KNRA Kununurra 51.01 186 P **P 05 16 24.9 -0.8**
KNRA Kununurra 51.01 186 P **P 05 16 25.5 -0.2**
M19K Big River Lodg 51.04 35 P **P 05 16 27.3 +1.7**
M19K IAmb IAmb 05 16 30.8
comp=Z,155nm,1.4s
M19K Big River Lodg 51.04 35 P **P 05 16 26.4 +0.9**
baz=274
J20K Nowinta River 51.05 32 P **P 05 16 25.8 +0.3**
J20K IAmb IAmb 05 16 30.7
comp=Z,267nm,1.3s
J20K IAMs_20 IAMs_20 05 39 31.8
comp=Z,18μm,19.0s
J20K Nowinta River 51.05 32 P **P 05 16 26.2 +0.7**
baz=272,SNR=44
N19K Bonanza Creek 51.07 37 IAMs_20 IAMs_20 05 36 39.5
comp=Z,17μm,21.0s
N19K Bonanza Creek 51.07 37 P **P 05 16 26.7 +0.9**
baz=274,SNR=15
K20K Telida 51.11 33 P **P 05 16 26.8 +0.8**
K20K IAmb IAmb 05 16 31.2
comp=Z,264nm,1.4s
K20K IAMs_20 IAMs_20 05 36 50.6
comp=Z,21μm,22.0s
K20K Telida 51.11 33 P **P 05 16 26.8 +0.8**
baz=273,SNR=24
IMAR Indian Mountai 51.17 30 P **P 05 16 26.3 -0.1**
L20K Farewell, AK 51.25 35 P **P 05 16 27.5 +0.4**
baz=274,SNR=29
G21K Allakaket 51.26 29 P **P 05 16 27.6 +0.5**
baz=271
F21K Alatna River 51.27 28 P **P 05 16 27.3 +0.1**
baz=270,SNR=46
H21K Melozitna Rive 51.57 30 P **P 05 16 29.8 +0.5**
H21K IAmb IAmb 05 16 34.4
comp=Z,159nm,1.2s
H21K IAMs_20 IAMs_20 05 40 31.5
comp=Z,16μm,19.0s
H21K Melozitna Rive 51.57 30 P **P 05 16 29.9 +0.5**
baz=272,SNR=69
AKL Akola 51.58 269 *e*P **P 05 16 29.8 -0.3**
M20K Styx River 51.64 35 IAMs_20 IAMs_20 05 35 54.4
comp=Z,18μm,22.0s
M20K Styx River 51.64 35 P **P 05 16 31.2 +1.1**
baz=275
Q19K Cape Douglas, 51.67 39 P **P 05 16 29.9 -0.4**
baz=276
SII Sitkinak Islan 51.69 42 IAMs_20 IAMs_20 05 38 36.9
comp=Z,21μm,21.0s
F22K John River 51.77 28 P **P 05 16 31.7 +0.8**
baz=271
P19K Oil Pt 51.80 38 P **P 05 16 31.6 +0.3**
P19K IAmb IAmb 05 16 36.5
comp=Z,139nm,1.1s
P19K Oil Pt 51.80 38 P **P 05 16 34.7 +3.4**
baz=276,SNR=6.7
CHUM Lake Minchumin 51.87 33 P **P 05 16 32.6 +0.9**
baz=274,SNR=31
E22K Anaktuvuk Pass 51.90 27 P **P 05 16 32.3 +0.4**
baz=271
I21K Tanana 51.93 31 P **P 05 16 32.6 +0.5**
I21K IAmb IAmb 05 16 37.5
comp=Z,203nm,1.2s
I21K Tanana 51.93 31 P **P 05 16 32.9 +0.8**
baz=273,SNR=65
RSO Redoubt South 51.95 37 P **P 05 16 33.0 +0.4**
HYB Hyderabad 51.98 265 *e*P **P 05 16 32.7 -0.4**
HYB IAmb IAmb 05 16 36.9
comp=Z,58nm,1.0s
HYB *i* x x 05 35 08.4
HYB IAMs_20 IAMs_20 05 41 57.5
comp=Z,21μm,16.8s
HYBB Hyderabad (bro 51.98 265 *e*P **P 05 16 32.5 -0.7**
HYBB IVmBBB 05 16 32.7
comp=Z,70nm,0.8s
HYBB *e*sP **pP 05 16 35.3 -1.4**
HYBB *e*PcP **PcP 05 17 45.3 -0.3**
HYBB *e*PP **PP 05 18 30.8 -0.4**
HYBB *e*PcS **PcS 05 21 43.4 -0.6**
HYBB *e*S **S 05 23 57.2 +0.6**
HYBB IVMs_BB IVMs_BB 05 41 37.3
comp=Z,5μm,13.6s
PPLA Purkeypile 51.99 34 P **P 05 16 32.6 -0.2**
PPLA Purkeypile 51.99 34 P **P 05 16 33.7 +0.9**
baz=275,SNR=33
CAST Castle Rocks 52.00 33 P **P 05 16 32.8 +0.1**
CAST IAmb IAmb 05 16 37.9
comp=Z,298nm,1.6s
CAST IAMs_20 IAMs_20 05 37 17.0
comp=Z,19μm,22.0s
CAST Castle Rocks 52.00 33 P **P 05 16 33.3 +0.6**
baz=274,SNR=22
G22K Bettles 52.05 29 P **P 05 16 33.0 0.0**
baz=272
N20K Mount Spurr 52.14 36 P **P 05 16 34.5 +0.7**
baz=276,SNR=62
SPCR Spurr Chakacha 52.14 36 P **P 05 16 34.5 +0.7**
baz=276,SNR=45
H22K Ishtalitna Cre 52.15 30 P **P 05 16 34.7 +1.0**
baz=273
KBL Kabul 52.21 289 P **P 05 16 33.0 -1.9**
KBL Kabul 52.21 289 P **P 05 16 33.0 -1.9**
KBL pmax pmax
comp=Z,137nm,1.5s
KBL Kabul 52.21 289 P **P 05 16 33.7 -1.2**
SNR=44
KBL P **P 05 16 33.7 -1.2**
SNR=44
SPU Mount Spurr 52.22 36 P **P 05 16 35.0 +0.6**
D23K Nanushuk River 52.30 26 P **P 05 16 35.5 +0.7**
baz=271
SVE Sverdlovsk 52.30 318 *c e*P **P 05 16 34.0 -1.0**
SVE *e*S **S 05 23 59.4 -0.5**
SVE pmax pmax
comp=Z,220nm,1.3s
SVE MLR MLR
comp=E,40μm,16.0s
SVE MLR MLR
comp=Z,40μm,16.0s
SVE MLR MLR
comp=N,41μm,14.0s
C23K Itkillik River 52.31 25 P **P 05 16 35.4 +0.6**
baz=271,SNR=24
KDAK Kodiak Island 52.38 40 P **P 05 16 36.1 +0.6**
comp=N,45nm,0.9s,baz=310,slow=6.4,SNR=10
KDAK LR LR 05 39 44.0
comp=N,26μm,21.8s,baz=272,slow=37
comp=N,45nm,0.9s
KDAK Kodiak Island 52.38 40 P **P 05 16 35.6 +0.1**
KDAK Kodiak Island 52.38 40 P **P 05 16 35.6 +0.1**
KDAK pmax pmax
comp=Z,542nm,1.9s
KDAK MLR MLR
comp=Z,32μm,21.0s
KDAK Kodiak Island 52.38 40 P **P 05 16 35.0 -0.5**
baz=278
KDAK Kodiak Island 52.38 40 ⇑p **P 05 16 38.5 +3.0**
SKT Skwentna 52.38 35 P **P 05 16 36.2 +0.6**
SKT Skwentna 52.38 35 P **P 05 16 35.2 -0.4**
baz=276,SNR=27
BPAW Bear Paw Mtn. 52.43 32 P **P 05 16 35.9 0.0**
BPAW IAmb IAmb 05 16 40.9
comp=Z,257nm,1.4s
BPAW IAMs_20 IAMs_20 05 40 23.4
comp=Z,23μm,18.0s
BPAW Bear Paw Mtn. 52.43 32 P **P 05 16 36.3 +0.4**
baz=275,SNR=38
MLY Manley 52.47 31 P **P 05 16 36.8 +0.6**
MLY IAmb IAmb 05 16 41.4
comp=Z,250nm,1.4s
MLY IAMs_20 IAMs_20 05 40 18.2
comp=Z,16μm,18.0s
MLY Manley 52.47 31 P **P 05 16 36.9 +0.7**
baz=274,SNR=72
KTH Kantishna Hill 52.51 33 P **P 05 16 37.0 +0.5**
KTH IAMs_20 IAMs_20 05 37 44.4
comp=Z,18μm,22.0s
COLD Coldfoot 52.55 28 P **P 05 16 36.5 -0.1**
COLD IAmb IAmb 05 16 41.5
comp=Z,143nm,1.2s
COLD Coldfoot 52.55 28 P **P 05 16 36.9 +0.2**
baz=273,SNR=49
HOM Homer 52.60 38 P **P 05 16 37.0 -0.2**
baz=278
G23K Bananza Creek 52.64 29 P **P 05 16 37.7 +0.3**
baz=274,SNR=67
CAPN Captain Cook N 52.70 37 IAMs_20 IAMs_20 05 38 15.6
comp=Z,18μm,19.0s
TOLK Toolik Lake Re 52.71 27 P **P 05 16 38.4 +0.4**
TOLK IAmb IAmb 05 16 43.7
comp=Z,286nm,1.5s
TOLK IAMs_20 IAMs_20 05 39 40.7
comp=Z,24μm,18.0s
TOLK Toolik Lake Re 52.71 27 P **P 05 16 38.2 +0.3**
baz=272,SNR=38
E23K Chandalar 52.73 27 P **P 05 16 38.6 +0.5**
baz=273,SNR=83
TRF Thorofare Moun 52.80 33 P **P 05 16 39.2 +0.3**
TRF IAMs_20 IAMs_20 05 37 19.1
comp=Z,18μm,22.0s
TRF Thorofare Moun 52.80 33 P **P 05 16 39.1 +0.3**
baz=276,SNR=15
SUA Susitna One 52.81 36 P **P 05 16 38.8 -0.1**
SUA IAmb IAmb 05 16 44.2
comp=Z,190nm,1.0s
SUA Susitna One 52.81 36 P **P 05 16 41.3 +2.4**
baz=277,SNR=21
CNPM China Poot 52.83 38 P **P 05 16 38.3 -0.5**
H23K Yukon River 52.90 30 P **P 05 16 39.6 +0.3**
H23K IAMs_20 IAMs_20 05 41 12.8
comp=Z,15μm,18.0s
H23K Yukon River 52.90 30 P **P 05 16 40.4 +1.1**
baz=275,SNR=136
CUT Chulitna 52.92 34 P **P 05 16 39.7 +0.2**
CUT IAMs_20 IAMs_20 05 36 58.5
comp=Z,19μm,22.0s
CUT Chulitna 52.92 34 P **P 05 16 39.1 -0.4**
baz=277,SNR=22
D24K Happy Valley 52.96 26 P **P 05 16 40.0 +0.4**
baz=273
BRLK Bradley Lake 52.97 38 P **P 05 16 40.5 +0.5**
BRLK IAmb IAmb 05 16 44.6
comp=Z,211nm,1.2s
C24K Franklin Bluff 52.98 25 P **P 05 16 40.3 +0.5**
baz=272
I23K Minto, Yukon-K 53.04 31 P **P 05 16 40.8 +0.5**
I23K IAmb IAmb 05 16 56.8
comp=Z,306nm,1.8s
I23K IAMs_20 IAMs_20 05 41 37.4
comp=Z,18μm,18.0s
I23K Minto, Yukon-K 53.04 31 P **P 05 16 40.8 +0.5**
baz=275,SNR=34
BRSE Bradley Lake S 53.04 38 P **P 05 16 41.9 +1.4**
baz=278,SNR=22
M22K Willow 53.07 35 P **P 05 16 40.9 +0.3**
M22K IAmb IAmb 05 16 52.0
comp=Z,175nm,1.0s
M22K IAMs_20 IAMs_20 05 37 28.5
comp=Z,16μm,22.0s
M22K Willow 53.07 35 P **P 05 16 40.1 -0.5**
baz=277,SNR=20
BWN Browne 53.09 32 P **P 05 16 41.5 +0.8**
BWN IAMs_20 IAMs_20 05 40 53.7
comp=Z,21μm,19.0s
LATR Latur 53.09 267 *e*P **P 05 16 40.7 -0.6**
E24K Your Creek 53.15 27 P **P 05 16 41.9 +0.7**
baz=274,SNR=77
NEA2 Nenana 53.22 32 P **P 05 16 41.7 0.0**
NEA2 IAMs_20 IAMs_20 05 40 24.1
comp=Z,16μm,19.0s
NEA2 Nenana 53.22 32 P **P 05 16 41.9 +0.3**
baz=276,SNR=131
RC01 Rabbit Creek A 53.35 36 P **P 05 16 42.3 -0.4**
RC01 IAmb IAmb 05 16 47.2
comp=Z,260nm,1.2s
RC01 Rabbit Creek A 53.35 36 P **P 05 16 42.2 -0.5**
baz=278,SNR=24
MCK McKinley 53.37 33 P **P 05 16 43.5 +0.7**
MCK IAmb IAmb 05 16 47.2
comp=Z,316nm,1.5s
MCK IAMs_20 IAMs_20 05 41 30.2
comp=Z,18μm,18.0s
MCK McKinley 53.37 33 P **P 05 16 43.5 +0.7**
MCK pmax pmax
comp=Z,317nm,1.5s
MCK MLR MLR
comp=Z,18μm,18.0s
MCK McKinley 53.37 33 P **P 05 16 42.9 0.0**
baz=277,SNR=46
F24K Squaw Lake 53.42 28 P **P 05 16 43.8 +0.7**
baz=275,SNR=48
O22K Cooper Landing 53.44 37 P **P 05 16 43.9 +0.5**
O22K IAMs_20 IAMs_20 05 38 28.1
comp=Z,18μm,21.0s
O22K Cooper Landing 53.44 37 P **P 05 16 42.9 -0.4**
baz=278,SNR=10
RND Reindeer 53.45 33 P **P 05 16 44.0 +0.5**
RND IAmb IAmb 05 16 48.2
comp=Z,297nm,1.4s
RND IAMs_20 IAMs_20 05 40 41.1
comp=Z,14μm,20.0s
RND Reindeer 53.45 33 P **P 05 16 44.0 +0.5**
RND pmax pmax
comp=Z,297nm,1.4s
RND MLR MLR
comp=Z,14μm,20.0s
ARU Arti 53.50 318 P **P 05 16 41.8 -2.0**
comp=Z,32nm,0.5s,baz=85,slow=2.9,SNR=65
ARU LR LR 05 39 02.1
comp=Z,20μm,20.2s,baz=74,slow=36
comp=Z,32nm,0.5s
ARU Arti 53.50 318 P **P 05 16 42.2 -1.6**
ARU Arti 53.50 318 *d i* P **P 05 16 42.2 -1.6**
ARU 05 17 48.8
ARU 05 18 38.1
ARU PPP PPP 05 19 53.6
ARU S **S 05 24 16.6 +0.3**
ARU 05 26 34.0
ARU SS **SS 05 27 53.1 -2.9**
ARU pmax pmax
comp=Z,221nm,1.6s
ARU MLR MLR
comp=Z,22μm,13.0s
MDM Murphy Dome 53.53 31 P **P 05 16 44.0 0.0**
PMR Palmer 53.56 35 P **P 05 16 44.3 +0.1**
PMR IAmb IAmb 05 16 48.8
comp=Z,242nm,1.2s
PMR Palmer 53.56 35 P **P 05 16 44.3 +0.1**
PMR pmax pmax
comp=Z,242nm,1.2s
PMR Palmer 53.56 35 P **P 05 16 43.8 -0.4**
baz=278,SNR=63
H24K Noodor Dome 53.58 30 P **P 05 16 44.5 +0.1**
H24K IAmb IAmb 05 16 50.0
comp=Z,234nm,1.2s
H24K IAMs_20 IAMs_20 05 38 54.8
comp=Z,16μm,22.0s
H24K Noodor Dome 53.58 30 P **P 05 16 45.4 +1.0**
baz=276,SNR=103
SEW Seward 53.63 37 P **P 05 16 44.8 +0.1**
SEW IAmb IAmb 05 16 54.0
comp=Z,159nm,0.9s

SEW Seward 53.63 37 P **P 05 16 45.5 +0.8**
baz=279,SNR=25
WRH Wood River Hil 53.65 32 P **P 05 16 45.3 +0.4**
WRH IAmb IAmb 05 16 53.9
comp=Z,126nm,1.2s
WRH IAMs_20 IAMs_20 05 40 36.6
comp=Z,14µm,19.0s
G24K Hadweenzic Riv 53.66 29 P **P 05 16 45.5 +0.6**
baz=276,SNR=79
WAT1 Susitna Watana 53.66 34 P **P 05 16 44.4 -0.6**
baz=278
TCOL CIGO, UAF Yank 53.70 31 P **P 05 16 45.4 +0.2**
TCOL IAmb IAmb 05 16 54.6
comp=Z,171nm,1.0s
TCOL CIGO, UAF Yank 53.70 31 P **P 05 16 45.7 +0.6**
baz=277,SNR=34
COLA College 53.70 31 P **P 05 16 45.2 0.0**
COLA IAmb IAmb 05 16 54.6
comp=Z,170nm,1.0s
COLA College 53.70 31 *c iP* **P 05 16 45.4 +0.2**
COLA pmax pmax
comp=Z,202nm,1.1s
COLA MLR MLR
comp=Z,14µm,16.0s
COLA College 53.70 31 P **P 05 16 45.6 +0.4**
baz=277
COLA College 53.70 31 P **P 05 16 47.0 +1.8**
COLA College 53.70 31 ⇑P **P 05 16 45.5 +0.4**
JASL Jaisalmer 53.72 280 *eP* **P 05 16 46.6 +0.7**
CCB Clear Creek Bu 53.75 32 P **P 05 16 45.5 -0.1**
CCB IAMs_20 IAMs_20 05 40 59.2
comp=Z,16µm,18.0s
D25K Kavik River 53.82 26 P **P 05 16 46.2 +0.1**
baz=275,SNR=34
POKR Poker Plat Res 53.85 31 IAMs_20 IAMs_20 05 42 22.8
comp=Z,19µm,18.0s
POKR Poker Plat Res 53.85 31 P **P 05 16 47.2 +0.9**
baz=277,SNR=48
SML Sawmill 53.91 35 P **P 05 16 47.1 +0.3**
SML IAmb IAmb 05 17 09.6
comp=Z,150nm,0.9s
SML IAMs_20 IAMs_20 05 37 43.4
comp=Z,15µm,22.0s
SML Sawmill 53.91 35 P **P 05 16 46.9 +0.1**
baz=279,SNR=36
KNK Knik Glacier 53.91 36 P **P 05 16 47.6 +0.8**
KNK IAmb IAmb 05 16 51.6
comp=Z,217nm,1.1s
KNK IAMs_20 IAMs_20 05 37 17.5
comp=Z,18µm,22.0s
KNK Knik Glacier 53.91 36 P **P 05 16 46.5 -0.3**
baz=279,SNR=46
PWL Port Wells 54.06 36 P **P 05 16 48.1 +0.2**
PWL IAMs_20 IAMs_20 05 42 04.4
comp=Z,18µm,20.0s
PWL Port Wells 54.06 36 P **P 05 16 47.4 -0.5**
baz=279,SNR=46
WAT6 Susitna Watana 54.06 34 P **P 05 16 47.8 -0.3**
baz=279,SNR=34
IL31 54.13 31 P **P 05 16 48.0 -0.2**
IL31 IAmb IAmb 05 16 52.2
comp=Z,232nm,1.5s
ILAR Eielson Array 54.13 31 P **P 05 16 48.4 0.0**
comp=Z,36nm,1.0s,baz=285,slow=6.8,SNR=100
ILAR LR LR 05 41 11.5
comp=Z,13µm,18.2s,baz=272,slow=38
ILAR PKPPKP P'P'df 05 47 00.8 -11
comp=Z,1.1nm,1.1s,baz=354,slow=3.0,SNR=4.1
comp=Z,36nm,1.0s
ILAR Eielson Array 54.13 31 P **P 05 16 47.6 -0.7**
HDA Harding Lake 54.15 32 P **P 05 16 48.1 -0.4**
HDA Harding Lake 54.15 32 P **P 05 16 47.9 -0.6**
baz=278,SNR=69
MTSU Mount Surprise 54.15 168 P **P 05 16 49.7 +0.7**
DHY Denali Highway 54.16 33 P **P 05 16 48.1 -0.6**
DHY IAmb IAmb 05 16 53.7
comp=Z,241nm,1.3s
DHY IAMs_20 IAMs_20 05 38 11.9
comp=Z,20µm,22.0s
DHY Denali Highway 54.16 33 P **P 05 16 48.4 -0.4**
baz=279,SNR=60
G25K Bearman Lake 54.19 29 P **P 05 16 49.6 +0.8**
baz=277,SNR=60
M23K Glacier View 54.20 35 P **P 05 16 48.0 -0.9**
baz=279,SNR=18
E25K Arctic Village 54.23 27 P **P 05 16 50.0 +0.9**
baz=277,SNR=44
AB31 Akbulak array 54.25 309 *i* P **P 05 16 47.7 -1.8**
ABKAR Akbulak array 54.25 309 P **P 05 16 47.2 -2.3**
ABKAR Akbulak array 54.25 309 ⇓P **P 05 16 47.7 -1.7**
ABKAR ⇓P **pP 05 16 47.9 -5.1**
ABKAR ⇑p **sP 05 16 50.6 -3.8**
F25K Christian Rive 54.27 28 P **P 05 16 50.5 +1.1**
baz=277,SNR=62
H25K Birch Creek 54.37 29 P **P 05 16 51.3 +1.3**
baz=278,SNR=61
SCM Sheep Creek Mo 54.37 35 P **P 05 16 50.0 -0.2**
SCM Sheep Creek Mo 54.37 35 P **P 05 16 50.0 -0.2**
SCM pmax pmax
comp=Z,427nm,1.5s
SCM MLR MLR
comp=Z,11µm,21.0s
SCM Sheep Creek Mo 54.37 35 P **P 05 16 50.0 -0.2**
baz=280,SNR=37
PRP Porcupine Dome 54.59 30 P **P 05 16 51.2 -0.7**
PRP IAmb IAmb 05 16 57.5
comp=Z,121nm,1.0s
PRP IAMs_20 IAMs_20 05 42 27.4
comp=Z,17µm,19.0s
PRP Porcupine Dome 54.59 30 P **P 05 16 52.3 +0.4**
baz=278,SNR=95
GLI Glacier Island 54.65 36 P **P 05 16 51.6 -0.6**
GLI Glacier Island 54.65 36 P **P 05 16 51.4 -0.8**
baz=280,SNR=8.6
BMAR Burnt Mountain 54.69 28 P **P 05 16 52.9 +0.5**
C27K Jago River 54.72 25 P **P 05 16 53.1 +0.6**
baz=277,SNR=28
K24K Donnelly Dome 54.75 32 P **P 05 16 52.4 -0.5**
baz=279,SNR=47
J25K Salcha River, 54.80 31 IAMs_20 IAMs_20 05 42 41.9
comp=Z,19µm,20.0s
J25K Salcha River, 54.80 31 P **P 05 16 52.2 -1.1**
baz=279,SNR=31
F26K Sheenjek River 54.82 28 P **P 05 16 54.5 +1.1**
baz=278,SNR=138
WB0 Warramunga Arr 54.85 179 P **P 05 16 52.8 -1.3**
WB0 IAmb IAmb 05 16 58.1
comp=Z,89nm,0.9s
M24K Tolsona, Glenn 54.86 34 P **P 05 16 56.2 +2.4**
baz=280,SNR=8.9
FID Port Fidalgo 54.97 36 P **P 05 16 54.0 -0.5**
WRAB Tennant Creek 55.02 179 P **P 05 16 53.8 -1.4**
WRAB IAmb IAmb 05 16 59.2
comp=Z,77nm,0.9s
WRAB Tennant Creek 55.02 179 P **P 05 16 53.8 -1.4**
WRAB pmax pmax
comp=Z,77nm,0.9s
WRAB MLR MLR
comp=Z,9µm,20.0s
WRAB Tennant Creek 55.02 179 P **P 05 16 54.2 -1.0**
WRAB Tennant Creek 55.02 179 ⇑P **P 05 16 53.6 -1.7**
WRAB ⇓P **P 05 16 53.9 -1.4**
WRAB ⇓P **sP 05 16 58.6 -1.5**
HIN Hinchinbrook I 55.03 37 P **P 05 16 55.3 +0.4**
HIN IAmb IAmb 05 17 15.6
comp=Z,158nm,1.0s
HIN IAMs_20 IAMs_20 05 42 05.1
comp=Z,18µm,19.0s
WRA Warramunga Arr 55.03 179 P **P 05 16 53.7 -1.6**
comp=Z,72nm,1.0s,baz=355,slow=7.5,SNR=113
WRA S **S 05 24 34.5 -3.0**
comp=Z,2.6nm,1.3s,baz=352,slow=12,SNR=9.9
WRA LR LR 05 40 37.5
comp=Z,6µm,20.4s,baz=2.5,slow=36
comp=Z,72nm,1.0s
WRA Warramunga Arr 55.03 179 P **P 05 16 53.6 -1.7**
WRA Warramunga Arr 55.03 179 *i* P **P 05 16 53.7 -1.6**
WRA pmax pmax
comp=Z,77nm,1.0s
WB2 Warramunga Arr 55.03 179 P **P 05 16 53.9 -1.4**
WB2 IAmb IAmb 05 16 59.3
comp=Z,91nm,0.9s
PAX Paxson 55.03 33 P **P 05 16 54.5 -0.5**
PAX IAmb IAmb 05 16 59.4
comp=Z,145nm,1.4s
PAX Paxson 55.03 33 P **P 05 16 54.5 -0.5**
PAX pmax pmax
comp=Z,145nm,1.4s
PAX Paxson 55.03 33 P **P 05 16 55.0 0.0**
baz=280,SNR=36
WR0 Warramunga Arr 55.05 179 P **P 05 16 54.0 -1.4**
WR0 IAmb IAmb 05 16 59.5
comp=Z,140nm,0.9s
BHV Bhavnagar 55.06 273 *eP* **P 05 16 55.8 +0.1**
G26K Porcupine Rive 55.07 28 P **P 05 16 56.5 +1.4**
baz=279,SNR=120
KLU Klutina 55.09 35 P **P 05 16 55.4 -0.1**
KLU IAmb IAmb 05 17 14.3
comp=Z,148nm,1.2s
KLU IAMs_20 IAMs_20 05 38 53.8
comp=Z,13µm,19.0s
KLU Klutina 55.09 35 P **P 05 16 55.9 +0.4**
baz=281,SNR=34
AKTO Aktyubinsk 55.16 311 P **P 05 16 53.5 -2.5**
comp=Z,30nm,1.0s,baz=72,slow=6.4,SNR=41
AKTO LR LR 05 41 21.8
comp=Z,20µm,18.4s,baz=68,slow=37
comp=Z,30nm,1.0s
RIDG Independent Ri 55.17 32 IAMs_20 IAMs_20 05 42 14.7
comp=Z,20µm,20.0s
RIDG Independent Ri 55.17 32 P **P 05 16 55.2 -0.7**
baz=280,SNR=20
HARP HAARP 55.28 34 P **P 05 16 57.6 +0.9**
baz=281,SNR=24
Q23K Middleton Isla 55.30 38 IAMs_20 IAMs_20 05 41 23.5
comp=Z,18µm,19.0s
EYAK Cordova Ski Ar 55.36 36 P **P 05 16 58.3 +1.0**
EYAK IAmb IAmb 05 17 02.1
comp=Z,175nm,1.4s
EYAK Cordova Ski Ar 55.36 36 P **P 05 16 57.9 +0.6**
baz=282,SNR=9.7
SALM Salem 55.41 259 *eP* **P 05 16 58.9 +0.6**
SCRK Sand Creek 55.50 32 P **P 05 16 58.5 0.0**
SCRK IAMs_20 IAMs_20 05 43 16.4
comp=Z,16µm,19.0s
SCRK Sand Creek 55.50 32 P **P 05 16 58.1 -0.3**
baz=281,SNR=151
J26L Joseph Creek 55.58 31 IAMs_20 IAMs_20 05 43 34.6
comp=Z,17µm,18.0s
J26L Joseph Creek 55.58 31 P **P 05 16 57.7 -1.3**
baz=281,SNR=35
KAD Karad 55.60 267 *eP* **P 05 16 58.7 -1.0**
I26K Coal Creek Min 55.60 30 P **P 05 16 59.6 +0.6**
I26K IAMs_20 IAMs_20 05 39 58.2
comp=Z,17µm,22.0s
I26K Coal Creek Min 55.60 30 P **P 05 16 58.5 -0.5**
baz=281
N25K Chitina, Valde 55.69 35 P **P 05 16 59.3 -0.5**
N25K IAmb IAmb 05 17 05.7
comp=Z,208nm,1.4s
N25K Chitina, Valde 55.69 35 P **P 05 17 00.5 +0.7**
baz=282,SNR=32
E27K Coleen River 55.70 27 P **P 05 17 00.3 +0.7**
baz=280,SNR=61
TV1H Townsville Har 55.73 165 P **P 05 17 00.8 +0.5**
MENT Mentasta 55.82 33 P **P 05 17 01.1 +0.4**
BMRM Bremner River 55.83 36 P **P 05 17 00.9 +0.2**
BMRM Bremner River 55.83 36 P **P 05 17 01.0 +0.2**
baz=282,SNR=55
QIS Mount Isa 55.91 173 P **P 05 17 00.8 -0.9**
RAGM Ragged Mountai 55.92 36 P **P 05 17 02.2 +0.8**
RAGM IAMs_20 IAMs_20 05 40 07.6
comp=Z,22µm,21.0s
G27K Doyon Strip 55.92 28 P **P 05 17 02.2 +0.9**
baz=281,SNR=76
L26K Log Cabin Wild 55.97 33 P **P 05 17 01.9 +0.2**
L26K IAMs_20 IAMs_20 05 42 53.9
comp=Z,23µm,19.0s
L26K Log Cabin Wild 55.97 33 P **P 05 17 02.3 +0.6**
baz=282,SNR=87
PALK Pallekele 56.02 253 LR LR 05 42 24.5
comp=Z,25µm,20.6s,baz=149,slow=38
PALK Pallekele 56.02 253 P **P 05 17 03.1 +0.4**
PALK IAmb IAmb 05 17 11.0
comp=Z,92nm,1.1s
PALK Pallekele 56.02 253 P **P 05 17 03.1 +0.4**
PALK pmax pmax
comp=Z,92nm,1.1s
PALK MLR MLR
comp=Z,30µm,20.0s
PALK Pallekele 56.02 253 P **P 05 17 03.4 +0.7**
PALK P **P 05 17 03.4 +0.7**
PALK Pallekele 56.02 253 P **P 05 17 01.3 -1.4**
comp=Z,2µmcomp=Z,2µmcomp=Z,83nm,1.9s
H27K Steamboat Moun 56.09 29 P **P 05 17 03.6 +1.1**
baz=281,SNR=104
GLB Gilahina Butte 56.10 35 P **P 05 17 03.3 +0.6**
GLB IAmb IAmb 05 17 08.3
comp=Z,228nm,1.3s
GLB IAMs_20 IAMs_20 05 41 24.3
comp=Z,16µm,22.0s
HMT Hamilton 56.13 36 P **P 05 17 03.5 +0.7**
HMT IAMs_20 IAMs_20 05 43 09.2
comp=Z,13µm,18.0s
KAIM Kayak Island 56.15 37 IAMs_20 IAMs_20 05 43 11.6
comp=Z,16µm,18.0s
I27K Kandik River 56.18 30 P **P 05 17 04.0 +0.9**
baz=282,SNR=162
M26K Nabesna, AK 56.26 34 P **P 05 17 04.1 +0.2**
M26K IAMs_20 IAMs_20 05 43 07.6
comp=Z,14µm,20.0s
M26K Nabesna, AK 56.26 34 P **P 05 17 04.3 +0.5**
baz=283,SNR=159
VRDI Verde Repeater 56.31 35 P **P 05 17 04.6 +0.2**
VRDI IAmb IAmb 05 17 09.8
comp=Z,217nm,1.2s
VRDI IAMs_20 IAMs_20 05 39 33.0
comp=Z,18µm,22.0s
K27K Chicken 56.31 32 P **P 05 17 05.2 +1.1**
K27K IAMs_20 IAMs_20 05 44 08.0
comp=Z,15µm,18.0s
K27K Chicken 56.31 32 P **P 05 17 04.5 +0.4**
baz=282
CTA Charters Tower 56.42 166 LR LR 05 39 04.6
comp=Z,8µm,21.3s,baz=346,slow=34
CTA Charters Tower 56.42 166 P **P 05 17 05.1 -0.2**
CTAO Charters Tower 56.42 166 P **P 05 17 05.1 -0.2**
CTAO Charters Tower 56.42 166 ⇑P **P 05 17 06.0 +0.7**
SUCK Suckling Hills 56.43 37 IAMs_20 IAMs_20 05 41 04.0
comp=Z,16µm,19.0s
MCARA McCarthy VSAT 56.48 35 P **P 05 17 06.3 +1.0**
MCARA IAMs_20 IAMs_20 05 41 45.4
comp=Z,15µm,22.0s
MCARA McCarthy VSAT 56.48 35 P **P 05 17 05.9 +0.6**
baz=283,SNR=47
EGAK Eagle 56.54 31 P **P 05 17 05.9 +0.2**
EGAK Eagle 56.54 31 P **P 05 17 05.8 +0.1**
baz=283,SNR=44
L27K Beaver Creek, 56.64 33 P **P 05 17 06.6 +0.1**
L27K IAMs_20 IAMs_20 05 43 21.6
comp=Z,16µm,19.0s
L27K Beaver Creek, 56.64 33 P **P 05 17 07.2 +0.7**
baz=283,SNR=127
BCAR Beaver Creek A 56.66 33 P **P 05 17 07.6 +0.9**
TGL Tana Glacier 56.72 36 P **P 05 17 07.2 0.0**
M27K Edge Creek, AK 56.78 34 P **P 05 17 07.8 +0.1**
M27K IAmb IAmb 05 17 13.2
comp=Z,210nm,1.1s
M27K IAMs_20 IAMs_20 05 43 41.3
comp=Z,19µm,20.0s
M27K Edge Creek, AK 56.78 34 P **P 05 17 08.5 +0.9**
baz=284,SNR=76
WAX Waxell Ridge 56.78 36 IAMs_20 IAMs_20 05 42 41.5
comp=Z,14µm,18.0s
KOD Kodaikanal 56.82 258 *eP* **P 05 17 07.5 -1.2**
SNH Sunshine Point 56.86 36 P **P 05 17 08.3 +0.2**
SNH IAMs_20 IAMs_20 05 38 56.4
comp=Z,13µm,21.0s
ISLE Juniper Island 56.99 36 P **P 05 17 09.7 +0.5**
ISLE IAmb IAmb 05 17 29.1
comp=Z,107nm,0.9s
ISLE IAMs_20 IAMs_20 05 41 24.9
comp=Z,15µm,21.0s
BARN Barnard Glacie 57.20 35 P **P 05 17 10.7 0.0**
BARN IAMs_20 IAMs_20 05 41 40.4
comp=Z,13µm,21.0s
BVCY Beaver Creek 57.23 33 P **P 05 17 10.4 -0.2**
baz=284,SNR=38
MESA MESA 57.29 36 IAMs_20 IAMs_20 05 41 06.8
comp=Z,15µm,19.0s
MESA MESA 57.29 36 P **P 05 17 13.6 +2.3**
baz=285,SNR=5.3
YAH Yahtse 57.34 36 P **P 05 17 12.0 +0.3**
YAH IAmb IAmb 05 17 16.5
comp=Z,229nm,1.4s
YAH IAMs_20 IAMs_20 05 40 26.1
comp=Z,13µm,21.0s
CTG Chitna Glacier 57.37 35 P **P 05 17 12.0 +0.2**
baz=285,SNR=36
CTGM Chitina Glacie 57.38 35 P **P 05 17 12.9 +1.1**
DAWY Dawson 57.45 31 P **P 05 17 12.9 +0.7**
DAWY Dawson 57.45 31 P **P 05 17 12.5 +0.2**
baz=285,SNR=31
DAWY Dawson 57.45 31 ⇑P **P 05 17 12.7 +0.4**
DAWY ⇓p **pP 05 17 13.8 -1.9**
HRA Herat 57.48 291 P **P 05 17 12.1 -1.0**
HRA IAmb IAmb 05 17 16.5
comp=Z,232nm,1.8s
PCHI Peechi 57.54 259 ⇓*eP* **P 05 17 16.1 +2.6**
PCHI *eS* **S 05 25 10.1 -1.2**
LOGN Logan Glacier 57.57 35 P **P 05 17 12.8 -0.5**
YUK3 Moose Creek 57.57 34 P **P 05 17 13.6 +0.2**
baz=285,SNR=60
I29M Ogilvie Camp, 57.58 30 P **P 05 17 13.2 +0.2**
I29M IAmb IAmb 05 17 18.8
comp=Z,163nm,1.2s
I29M IAMs_20 IAMs_20 05 44 40.3
comp=Z,18µm,18.0s
I29M Ogilvie Camp, 57.58 30 P **P 05 17 13.6 +0.5**
baz=285,SNR=75
KIRV Kirov 57.80 322 P **P 05 17 13.3 -1.4**
comp=Z,35nm,0.5s,baz=75,slow=4.5,SNR=30
KIRV LR LR 05 44 25.6
comp=Z,28µm,18.6s,baz=71,slow=38
comp=Z,35nm,0.5s
MBWA Marble Bar 57.80 196 P **P 05 17 14.1 -1.0**
MBWA IAmb IAmb 05 17 30.9
comp=Z,212nm,1.7s
MBWA Marble Bar 57.80 196 P **P 05 17 14.5 -0.6**
MBWA Marble Bar 57.80 196 P **P 05 17 14.4 -0.6**
MBWA Marble Bar 57.80 196 ⇑P **P 05 17 14.3 -0.8**
J29M Klondike Camp 57.85 31 P **P 05 17 14.9 -0.2**
J29M IAmb IAmb 05 17 24.1
comp=Z,188nm,1.2s
J29M IAMs_20 IAMs_20 05 43 16.5
comp=Z,18µm,19.0s
J29M Klondike Camp 57.85 31 P **P 05 17 16.0 +0.9**
baz=285,SNR=7.6
EPYK Eagle Plains 57.94 28 P **P 05 17 16.0 +0.3**
EPYK Eagle Plains 57.94 28 P **P 05 17 16.2 +0.5**
baz=285,SNR=92
O28M Mount Upton 57.97 35 P **P 05 17 16.5 +0.3**
baz=286,SNR=31
G30M tAoh Zrail Nji 57.97 28 P **P 05 17 15.6 -0.2**
baz=286,SNR=106
YUK8 Steele Glacier 58.02 35 P **P 05 17 16.7 +0.1**
baz=286,SNR=25
PCA Pinnacle 58.12 36 P **P 05 17 17.8 +0.8**
PCA IAmb IAmb 05 17 32.9
comp=Z,165nm,1.2s
PINM Pinnacle 58.13 36 P **P 05 17 17.9 +0.8**
baz=286,SNR=10
PSA00 Pilbara Seismi 58.18 195 P **P 05 17 17.1 -0.6**
PSA00 IAmb IAmb 05 17 33.5
comp=Z,144nm,1.8s
PSA00 Pilbara Seismi 58.18 195 P **P 05 17 17.0 -0.7**
L29M L29M 58.25 32 P **P 05 17 19.0 +1.2**
baz=286,SNR=108
M29M Somme Creek 58.29 33 P **P 05 17 19.6 +1.3**
baz=286,SNR=71
K29M Barlow Dome 58.31 31 P **P 05 17 19.1 +0.7**
baz=286,SNR=86
BCPM Bancas Point 58.47 36 P **P 05 17 19.7 +0.4**
BCPM IAMs_20 IAMs_20 05 43 53.9
comp=Z,12µm,18.0s
YUK4 Talbot Arm 58.53 34 P **P 05 17 20.7 +0.7**
baz=287,SNR=42
INK Inuvik 58.59 26 P **P 05 17 20.2 +0.2**
comp=Z,50nm,1.1s,baz=280,slow=8.2,SNR=22
INK LR LR 05 44 45.6
comp=Z,18µm,18.8s,baz=274,slow=38
comp=Z,50nm,1.1s
INK Inuvik 58.59 26 P **P 05 17 20.2 +0.2**
INK IAmb IAmb 05 17 31.7
comp=Z,118nm,1.2s
INK Inuvik 58.59 26 P **P 05 17 19.7 -0.4**
baz=287,SNR=34
PNL Peninsula 58.66 36 P **P 05 17 23.3 +2.5**
baz=287,SNR=17
AS01 Alice Springs 58.73 180 P **P 05 17 21.0 -0.6**
AS31 Alice Springs 58.73 180 P **P 05 17 20.6 -1.0**
ASAR Alice Springs 58.73 180 P **P 05 17 20.9 -0.6**
comp=Z,32nm,0.9s,baz=2.1,slow=5.4,SNR=92
ASAR S **S 05 25 29.6 +3.2**
comp=Z,1.3nm,1.0s,baz=16,slow=20,SNR=4.2
ASAR LR LR 05 41 49.9
comp=Z,9µm,21.6s,baz=8.0,slow=35
ASAR PKPPKP **P'P'df 05 46 55.2 +5.4**
comp=Z,0.9nm,0.9s,baz=166,slow=3.3,SNR=4.9
comp=Z,32nm,0.9s
ASAR Alice Springs 58.73 180 P **P 05 17 20.3 -1.3**
PRGR Permogore 58.75 326 *eP* **P 05 17 20.8 -0.4**
PRGR pmax pmax
comp=Z,184nm,1.0s
F31M Tsiigehtchic 58.77 27 P **P 05 17 21.1 -0.2**
baz=287,SNR=23
YUK6 Outpost Mounta 58.78 35 P **P 05 17 22.7 +0.9**
baz=287,SNR=52
O29M Mount Kennedy 58.87 36 P **P 05 17 23.3 +1.0**
baz=288,SNR=73
M30M Minto, Yukon 59.00 33 P **P 05 17 24.1 +1.0**
M30M IAMs_20 IAMs_20 05 45 03.8
comp=Z,13µm,18.0s
MAYO Mayo, Yukon 59.08 31 P **P 05 17 24.7 +1.1**
MAYO Mayo, Yukon 59.08 31 P **P 05 17 25.5 +1.9**
baz=288,SNR=16
GEYT Alibeck 59.17 297 P **P 05 17 23.8 -1.0**
comp=Z,26nm,0.9s,baz=50,slow=2.3,SNR=37
GEYT LR LR 05 44 36.1
comp=Z,24µm,18.2s,baz=88,slow=38
comp=Z,26nm,0.9s
GEYT Alibeck 59.17 297 P **P 05 17 23.7 -1.0**
GYA0 ALIBECK ARRAY 59.17 297 P **P 05 17 25.6 +0.9**
GYA0B ALIBECK ARRAY 59.17 297 P **P 05 17 24.0 -0.7**
N30M Aishikik Lake 59.21 34 P **P 05 17 25.6 +1.0**
baz=288,SNR=28
HYT Haines Junctio 59.21 35 P **P 05 17 25.5 +0.8**
HYT Haines Junctio 59.21 35 P **P 05 17 26.1 +1.5**
baz=288,SNR=86
P29M Windy Craggy 59.48 36 P **P 05 17 27.3 +0.9**
P29M IAMs_20 IAMs_20 05 42 24.7
comp=Z,16µm,22.0s
P29M Windy Craggy 59.48 36 P **P 05 17 27.6 +1.2**
baz=289,SNR=43
N31M Braeburn, Yuko 59.79 34 P **P 05 17 29.5 +0.9**
N31M IAMs_20 IAMs_20 05 41 27.0
comp=Z,15µm,22.0s
N31M Braeburn, Yuko 59.79 34 P **P 05 17 29.4 +0.8**
baz=289,SNR=43
O30N Mendenhall 59.89 35 P **P 05 17 29.8 +0.6**
baz=289,SNR=26
A36M Sachs Harbour 60.02 21 IAMs_20 IAMs_20 05 46 35.5
comp=Z,15µm,20.0s
M31M Drury Creek, Y 60.18 33 P **P 05 17 32.1 +1.0**
M31M IAmb IAmb 05 17 37.0
comp=Z,178nm,1.4s
M31M IAMs_20 IAMs_20 05 46 15.1
comp=Z,12µm,20.0s
M31M Drury Creek, Y 60.18 33 P **P 05 17 31.5 +0.3**
baz=290,SNR=55
PLBC Pleasant Camp 60.20 36 P **P 05 17 32.6 +1.3**
baz=290,SNR=26
WRKA Warakurna 60.33 186 P **P 05 17 32.0 -0.5**
WHY Whitehorse 60.48 34 P **P 05 17 33.8 +0.4**
WHY Whitehorse 60.48 34 P **P 05 17 34.0 +0.6**
baz=290,SNR=68
RK1H Rockhampton Ha 60.55 162 P **P 05 17 34.5 +0.4**
FARO Faro, Yukon 60.63 32 P **P 05 17 34.2 0.0**
FARO Faro, Yukon 60.63 32 P **P 05 17 34.8 +0.5**
baz=291,SNR=91
GIRL Giralia 60.63 201 P **P 05 17 35.7 +1.1**
SKAG Skagway 60.69 36 P **P 05 17 36.0 +1.3**
SKAG Skagway 60.69 36 P **P 05 17 35.6 +0.9**
baz=290,SNR=41
BELG Belogornoye 60.74 316 P **P 05 17 33.9 -1.1**
comp=Z,28nm,0.6s,baz=260,slow=4.2,SNR=13
BELG LR LR 05 43 34.1
comp=Z,35µm,18.5s,baz=61,slow=36

comp=Z,28nm,0.6s
BELG Belogornoye 60.74 316 *c i*P **P 05 17 34.0 -1.1**
BELG pmax pmax
comp=Z,30nm,1.0s
BELG MLR MLR
comp=Z,6μm,15.0s
S31K Pelican 60.78 38 P **P 05 17 38.3 +3.1**
baz=291,SNR=6.3
SPA0 Spitsbergen Ar 60.89 348 *e*P **P 05 17 35.9 +0.1**
SPA0 *e*S **S 05 25 51.3 -1.8**
LVZ Lovozero 61.03 335 IAMs_20 IAMs_20 05 46 14.0
comp=Z,17μm,18.0s
LVZ Lovozero 61.03 335 *c e*P **P 05 17 36.2 -0.7**
LVZ pmax pmax
comp=Z,91nm,1.7s
LVZ MLR MLR
comp=Z,22μm,13.0s
N32M Quiet Lake 61.13 34 P **P 05 17 38.3 +0.6**
baz=291
KBS Kingsbay 61.17 349 IAMs_20 IAMs_20 05 41 47.8
MMPY Sheldon Lake, 61.39 32 P **P 05 17 40.0 +0.6**
baz=292,SNR=49
P32M Atlin 61.41 35 P **P 05 17 40.3 +0.6**
baz=292,SNR=25
C36M Paulatuk 61.43 23 P **P 05 17 40.3 +0.8**
baz=295
SIT Sitka 61.56 38 P **P 05 17 40.3 -0.3**
SIT Sitka 61.56 38 P **P 05 17 40.3 -0.3**
SIT pmax pmax
comp=Z,263nm,1.3s
SIT Sitka 61.56 38 P **P 05 17 41.9 +1.3**
baz=292,SNR=9.2
JIS Juneau Island 61.58 37 P **P 05 17 41.0 +0.3**
APA Apatity 61.59 335 ⇓ *i*P **P 05 17 38.3 -2.4**
APA *i*S **S 05 25 59.0 -3.3**
APA *i*PS 05 26 08.0
P33M Teslin, Yukon 61.60 35 P **P 05 17 41.4 +0.5**
P33M IAmb IAmb 05 17 57.3
comp=Z,149nm,1.1s
P33M IAMs_20 IAMs_20 05 42 51.8
comp=Z,16μm,21.0s
P33M Teslin, Yukon 61.60 35 P **P 05 17 41.4 +0.5**
baz=292,SNR=77
HSPB Hornsund (broa 61.71 347 *e*P **P 05 17 41.7 +0.4**
HSPB *e*L L 05 44 23.1
comp=Z,32μm,18.6s
S32K Killisnoo 61.78 38 P **P 05 17 46.2 +4.1**
baz=292,SNR=7.4
KLMR Klimovskoe 61.79 326 *d i*P **P 05 17 40.0 -2.1**
KLMR *e* 05 18 22.4
KLMR *e* 05 19 56.6
KLMR S **S 05 26 00.7 -4.1**
KLMR SS **SS 05 30 01.1 -4.9**
KLMR SSS SSS 05 32 44.7
KLMR pmax pmax
comp=Z,247nm,1.2s
KLMR MLR MLR
comp=Z,23μm,14.0s
KLMR Klimovskoe 61.79 326 ⇓ *i*P **P 05 17 40.0 -2.1**
KLMR *e*P **P 05 17 40.0 -2.1**
KLMR *e*P **P 05 17 40.0 -2.1**
KLMR AMP 05 17 51.5
comp=Z,247nm,1.2s
KLMR *e*PcP **PcP 05 18 22.4 -0.7**
KLMR *e*PP **PP 05 19 56.6 -1.1**
KLMR S **S 05 26 00.8 -4.1**
KLMR S **S 05 26 00.8 -4.1**
KLMR SS **SS 05 30 01.1 -4.9**
KLMR SS **SS 05 30 01.1 -4.9**
KLMR SSS SSS 05 32 44.8
KLMR SSS SSS 05 32 44.8
KLMR LQ LQ 05 37 10.3
KLMR LQ LQ 05 37 10.3
KLMR LR LR 05 37 56.8
KLMR AMP 05 45 17.6
comp=Z,23μm,14.3s
NOR Nord 62.24 355 *e*P **P 05 17 43.5 -1.4**
NOR IAmb IAmb 05 17 59.7
comp=Z,165nm,1.7s
HMDM Hanimaadhoo 62.27 258 IAMs_20 IAMs_20 05 46 39.4
comp=Z,13μm,20.0s
Q32M Nakina River 62.34 36 P **P 05 17 46.6 +0.5**
baz=293,SNR=13
BJO1 Bjornoya 62.41 344 *e*S **S 05 26 14.0 +1.6**
QLP Quilpie 62.42 169 P **P 05 17 46.9 +0.3**
EIDS Eidsvold 62.60 162 P **P 05 17 46.8 -1.0**
EUNU Eureka 62.66 7 P **P 05 17 48.0 +0.3**
EUNU IAmb IAmb 05 17 53.7
comp=Z,51nm,0.8s
KOUNC Koumac, New Ca 62.69 148 IAMs_20 IAMs_20 05 42 58.1
comp=Z,14μm,21.0s
KEV Kevo 62.73 338 P **P 05 17 48.0 -0.2**
KEV IAmb IAmb 05 17 52.0
comp=Z,181nm,1.6s
KEV Kevo 62.73 338 P **P 05 17 48.0 -0.2**
KEV pmax pmax
comp=Z,181nm,1.6s
KEV MLR MLR
comp=Z,21μm,18.0s
KEV Kevo 62.73 338 ⇑P **P 05 17 47.2 -1.0**
KEV ⇑P **P 05 17 47.3 -1.0**
R33M Jennings River 62.78 35 P **P 05 17 49.7 +0.8**
baz=294,SNR=21
OOD Oodnadatta 62.87 178 P **P 05 17 49.5 -0.1**
U33K Whale Pass 63.05 39 P **P 05 17 52.4 +1.9**
baz=294,SNR=7.4
TGTN Hyland Airport 63.12 32 P **P 05 17 51.9 +0.8**
baz=295,SNR=61
INKA Innaminka 63.13 173 P **P 05 17 52.3 +1.0**
RMQ Roma 63.14 165 P **P 05 17 51.7 +0.2**
HAMF Hammerfest 63.27 339 *e*P **P 05 17 52.1 +0.3**
HAMF *e*S **S 05 26 24.9 +1.6**
ARA0 ARCESS Array S 63.30 338 *e*P **P 05 17 51.2 -0.8**
ARA0 IVmB_BB 05 17 54.9
comp=Z,1μm,2.6s
ARA0 *e*S **S 05 26 21.8 -1.9**
ARCES ARCESS Array B 63.30 338 P **P 05 17 50.7 -1.3**
comp=Z,10.0nm,0.6s,baz=64,slow=5.7,SNR=46
ARCES LR LR 05 49 29.7
comp=Z,13μm,18.4s,baz=67,slow=40
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 63.30 338 P **P 05 17 51.5 -0.5**
ARCES IAmb IAmb 05 17 55.8
comp=Z,126nm,1.6s
ARCES ARCESS Array B 63.30 338 P **P 05 17 51.5 -0.5**
ARCES pmax pmax
comp=Z,126nm,1.6s
S34M Telegraph Cree 63.31 37 P **P 05 17 54.1 +1.8**
baz=294,SNR=14
CRAG Craig 63.31 40 P **P 05 17 55.8 +3.4**
baz=294
WTLY Watson Lake, Y 63.48 34 P **P 05 17 54.1 +0.6**
WTLY IAmb IAmb 05 17 58.5
comp=Z,170nm,1.4s
WTLY Watson Lake, Y 63.48 34 P **P 05 17 54.3 +0.8**
baz=295,SNR=55
DLBC Dease Lake 63.62 36 LR LR 05 48 11.7
comp=Z,10μm,18.3s,baz=304,slow=38
DLBC Dease Lake 63.62 36 P **P 05 17 55.7 +1.2**
baz=295,SNR=20
T35M Bob Quinn 64.13 37 P **P 05 17 58.0 +0.2**
baz=296,SNR=16
KTK1 Kautokeino 64.26 338 *e*P **P 05 17 57.6 -0.8**
KTK1 IVmB_BB 05 18 01.2
comp=Z,1μm,1.8s
KTK1 *e*S **S 05 26 33.7 -1.9**
AUBSH Beerwah State 64.50 161 P **P 05 18 00.5 +0.1**
comp=Z,80nm,1.2s
MAK Makhachkala 64.53 306 *c i*P **P 05 17 57.7 -2.9**
MAK *e*S **S 05 26 37.4 -2.3**
MAK *e*SS **SS 05 30 43.6 -6.0**
MAK pmax pmax
comp=Z,251nm,1.1s
MAK pmax pmax
comp=Z,1μm,2.8s
MAK smax smax
comp=N,4μm,7.4s
MAK smax smax
comp=E,4μm,6.2s
MAK MLR MLR
comp=N,53μm,12.0s
MAK MLR MLR
comp=Z,34μm,12.0s
MAK MLR MLR
comp=E,60μm,14.0s
VRH Novokhopyorsk 64.58 316 *e*P **P 05 17 59.0 -1.7**
VRH *e*S **S 05 26 34.2 -5.8**
VRH pmax pmax
comp=Z,70nm,0.6s
VRH smax smax
comp=N,2μm,6.6s
VRH MLR MLR
comp=Z,38μm,15.0s
JETT Jettan, Norway 64.81 339 *e*P **P 05 18 02.2 +0.2**
JETT IVmB_BB 05 18 05.0
comp=Z,2μm,2.0s
JETT *e*S **S 05 26 42.1 -0.4**
MOS Moscow 64.81 322 *e*P **P 05 17 59.3 -2.9**
MOS *e* 05 18 33.3
MOS *e* 05 20 22.2
MOS *e*S **S 05 26 38.6 -4.2**
MOS *e* 05 26 54.4
MOS *e* 05 27 13.2
MOS *e*SS **SS 05 30 53.5 +0.2**
MOS pmax pmax
comp=Z,200nm,1.6s
MOS pmax pmax
comp=Z,700nm,2.8s
MOS smax smax
comp=N,3μm,5.0s
MOS smax smax
comp=E,2μm,5.0s
MOS MLR MLR
comp=Z,39μm,13.0s
MOS MLR MLR
comp=N,34μm,12.0s
MOS MLR MLR
comp=E,24μm,12.0s
NOUC Port Laguerre 64.94 147 P **P 05 18 04.7 +1.3**
DZM Mont Dzumac 64.98 147 *e*P **P 05 18 04.6 +0.9**
comp=E,151nm,1.1s
DZM *e*S **S 05 26 45.9 +0.2**
comp=E,4μm,32.3s
DZM Mont Dzumac 64.98 147 *e*LR LR 05 37 29.0
comp=E,18μm,25.1s
DZM Mont Dzumac 64.98 147 LR LR 05 42 47.5
comp=E,6μm,21.9s,baz=334,slow=33
DZM Mont Dzumac 64.98 147 P **P 05 18 03.9 +0.1**
DZM IAmb IAmb 05 18 39.6
comp=Z,64nm,1.0s
DZM Mont Dzumac 64.98 147 P **P 05 18 04.6 +0.9**
LIRD Liard River Hi 65.02 34 P **P 05 18 04.2 +0.7**
baz=298,SNR=48
AKT Akhty 65.02 304 *e*P **P 05 18 02.4 -1.6**
AKT *e* 05 18 35.3
AKT *e* 05 20 24.8
AKT *e* 05 26 58.2
AKT pmax pmax
comp=Z,90nm,0.7s
YATNC Mamie plateau, 65.17 146 P **P 05 18 06.9 +2.0**
ONTNC Ouen Toro 65.19 147 P **P 05 18 05.9 +0.9**
TRO Tromso 65.19 340 *e*P **P 05 18 04.4 0.0**
TRO IVmB_BB 05 18 07.1
comp=Z,1μm,1.9s
TRO *e*S **S 05 26 46.2 -0.8**
WSAR Wadi Sarin 65.27 282 LR LR 05 50 47.0
comp=Z,13μm,19.4s,baz=86,slow=40
WBK Wadi Bani Khal 65.31 281 P **P 05 18 07.3 +1.3**
SNR=6.5
WBK P **P 05 18 07.3 +1.3**
SNR=6.5
MULG Mulgathing 65.32 180 P **P 05 18 05.4 -0.3**
OUENC Ouen Island, N 65.46 146 P **P 05 18 09.0 +2.3**
SEKA Sheki 65.50 304 P **P 05 18 04.5 -2.5**
LPSR Galich'ya Gora 65.52 318 *e*P **P 05 18 05.7 -1.1**
LPSR *e*S **S 05 26 46.6 -5.0**
LPSR pmax pmax
comp=Z,80nm,0.9s
LPSR smax smax
comp=N,1μm,5.4s
LPSR MLR MLR
comp=Z,31μm,16.0s
LKRN Lenkeran, Azer 65.53 301 P **P 05 18 05.4 -1.7**
BIDO Bidbid 65.54 282 P **P 05 18 10.0 +2.5**
SNR=9.4
BIDO P **P 05 18 10.0 +2.5**
SNR=9.4
GROC Groznyy 65.55 307 *e*P **P 05 18 06.1 -1.1**
GROC *e* 05 18 38.2
GROC S **S 05 26 49.5 -2.8**
GROC pmax pmax
comp=Z,93nm,0.6s
GROC MLR MLR
comp=Z,6μm,13.0s
LCRK Leigh Creek 65.62 176 P **P 05 18 08.2 +0.6**
OBN Obninsk 65.63 321 LR LR 05 47 59.1
comp=Z,5μm,18.7s,baz=62,slow=37
OBN Obninsk 65.63 321 ⇓ *e*P **P 05 18 07.1 -0.4**
OBN *e* 05 18 36.4
OBN *e* 05 20 32.6
OBN *i*S **S 05 26 54.8 +2.0**
OBN *i*SSS SSS 05 33 58.0
OBN pmax pmax
comp=Z,169nm,1.5s
OBN MLR MLR
comp=Z,39μm,13.0s
RES Resolute Bay 65.63 13 P **P 05 18 07.8 +0.6**
comp=Z,69nm,1.0s,baz=309,slow=6.5,SNR=58
RES LR LR 05 49 27.0
comp=Z,15μm,18.2s,baz=314,slow=38
comp=Z,69nm,1.0s
ZKTA Zakatala 65.70 305 P **P 05 18 06.1 -2.2**
MNGR Mingechevir, A 65.77 304 P **P 05 18 06.9 -1.8**
VORR Voronezh 65.78 317 ⇑ *e*P **P 05 18 08.7 +0.1**
VORR *e*S **S 05 26 53.1 -1.7**
VORR pmax pmax
comp=Z,71nm,1.5s
VORR MLR MLR
comp=Z,20μm,14.0s
BANOM Banah 65.82 285 P **P 05 18 09.8 +0.5**
SNR=14
BANOM P **P 05 18 09.8 +0.5**
SNR=14
BANOM Banah 65.82 285 *i*P **P 05 18 07.9 -1.3**
SNR=12
SMDO Samad 65.83 282 P **P 05 18 11.2 +1.7**
SNR=9.9
SMDO P **P 05 18 11.2 +1.7**
SNR=9.9
SHME Shamm 65.88 286 P **P 05 18 07.9 -1.7**
SNR=23
SHME P **P 05 18 07.9 -1.7**
SNR=23
SHME Shamm 65.88 286 *i*P **P 05 18 08.7 -0.9**
SNR=24
VSR Storozhevoye 66.01 317 *e*P **P 05 18 08.7 -1.4**
VSR *e*S **S 05 26 52.3 -5.4**
VSR pmax pmax
comp=Z,100nm,1.5s
VSR smax smax
comp=N,1μm,6.2s
VSR MLR MLR
comp=Z,37μm,15.0s
FORT Forrest 66.04 185 P **P 05 18 09.1 -1.2**
FORT Forrest 66.04 185 P **P 05 18 10.2 -0.1**
HOQ Hoqain 66.16 283 P **P 05 18 13.9 +2.4**
SNR=15
HOQ P **P 05 18 13.9 +2.4**
SNR=15
MASF Masafi 66.20 285 P **P 05 18 14.4 +2.7**
SNR=13
MASF P **P 05 18 14.4 +2.7**
SNR=13
MSFE Esma-Masafi 66.20 285 *i*P **P 05 18 10.5 -1.3**
SNR=12
KAAM Kaadhehdhoo 66.22 253 IAMs_20 IAMs_20 05 45 56.3
comp=Z,18μm,22.0s
MORW Morawa 66.27 197 P **P 05 18 10.8 -1.0**
MORW IAmb IAmb 05 18 27.7
comp=Z,200nm,1.8s
MORW Morawa 66.27 197 P **P 05 18 10.9 -1.0**
GANJ Ganja 66.35 304 P **P 05 18 10.4 -2.1**
UOSS Minazif 66.37 285 P **P 05 18 12.1 -0.7**
UOSS IAmb IAmb 05 18 45.0
comp=Z,152nm,1.9s
UOSS Minazif 66.37 285 IAMs_20 IAMs_20 05 48 00.6
comp=Z,14μm,22.0s
UOSS Minazif 66.37 285 *i*P **P 05 18 11.1 -1.7**
SNR=8.3
HATD Hatta, Dubai 66.48 284 P **P 05 18 13.6 +0.1**
SNR=18
HATD Hatta, Dubai 66.48 284 *i*P **P 05 18 12.2 -1.4**
SNR=9.1
GOF Gofitskoye 66.50 309 ⇑ *e*P **P 05 18 13.7 +0.4**
SOHO SOHO 66.51 284 *i*P **P 05 18 12.1 -1.6**
SNR=15
ASHO Ashiyiah 66.61 284 P **P 05 18 14.4 0.0**
SNR=25
ASHO Ashiyiah 66.61 284 *i*P **P 05 18 11.8 -2.6**
SNR=17
BSY Bisya 66.66 282 P **P 05 18 14.6 -0.2**
SNR=17
BSY P **P 05 18 14.6 -0.2**
SNR=17
NAZ Nazwa, Dubai 66.78 285 P **P 05 18 17.7 +2.3**
SNR=14
NAZ P **P 05 18 17.7 +2.3**
SNR=14
NAZ Nazwa, Dubai 66.78 285 *i*P **P 05 18 13.7 -1.7**
SNR=10
DAG Danmarks Havn 66.79 353 *i*P **P 05 18 13.0 -1.6**
DAG IAmb IAmb 05 18 19.2
comp=Z,249nm,1.4s
NCK Nalchik 66.86 308 ⇓ *e*P **P 05 18 15.6 0.0**
NCK pmax pmax
comp=Z,35nm,0.4s
NCK MLR MLR
comp=Z,50μm,13.0s
ARQ Araqi 66.91 283 P **P 05 18 15.4 -0.9**
SNR=17
ARQ P **P 05 18 15.4 -0.9**
SNR=17
MHTO MHTO 66.93 280 P **P 05 18 15.4 -1.0**
SNR=22
MHTO P **P 05 18 15.4 -1.0**
SNR=22
FAQ Al Faqa, Dubai 66.95 285 P **P 05 18 17.8 +1.3**
SNR=12
FAQ Al Faqa, Dubai 66.95 285 *i*P **P 05 18 14.6 -1.9**
SNR=13
ZEI Tsey 66.98 307 *e*P **P 05 18 13.7 -3.0**
ZEI pmax pmax
comp=Z,81nm,1.4s
ALNE Al Ain 67.17 284 P **P 05 18 21.1 +3.2**
SNR=27
ALNE P **P 05 18 21.1 +3.2**
SNR=27
ALNE Al Ain 67.17 284 *i*P **P 05 18 16.6 -1.3**
SNR=19
FUTU Fugatoga 67.18 129 P **P 05 18 19.7 +1.8**
KBZ Khabaz 67.20 308 P **P 05 18 16.6 -1.1**
comp=Z,29nm,0.9s,baz=67,slow=2.5,SNR=38
KBZ LR LR 05 49 16.1
comp=Z,24μm,18.8s,baz=54,slow=38
comp=Z,29nm,0.9s
KBZ Khabaz 67.20 308 *d i*P **P 05 18 16.0 -1.7**
KBZ pmax pmax
comp=Z,85nm,1.2s
KBZ MLR MLR
comp=Z,23μm,15.0s
ASUD Al Ashush, Dub 67.22 285 P **P 05 18 18.7 +0.5**
SNR=6.0
ASUD Al Ashush, Dub 67.22 285 P **P 05 18 17.4 -0.8**
KIV Kislovodsk 67.23 308 ⇓ P **P 05 18 17.3 -0.8**
KIV Kislovodsk 67.23 308 P **P 05 18 16.8 -1.3**
KIV IAmb IAmb 05 18 29.9
comp=Z,90nm,0.9s
KIV Kislovodsk 67.23 308 *e*P **P 05 18 16.6 -1.5**
KIV *e*S **S 05 27 12.1 -0.7**
KIV *e*SS **SS 05 31 32.0 +0.4**
KIV pmax pmax
comp=Z,85nm,1.0s
KIV pmax pmax
comp=Z,85nm,4.1s
KIV MLR MLR
comp=Z,23μm,17.0s
KIV Kislovodsk 67.23 308 *i*P **P 05 18 15.6 -2.5**
SNR=8.7
STEI Steigen 67.29 339 *e*P **P 05 18 17.2 -0.7**
STEI IVmB_BB 05 18 20.7
comp=Z,1μm,1.8s
STEI *e*S **S 05 27 12.8 +0.2**
FIA1 FINESS Array S 67.30 330 P **P 05 18 17.8 -0.2**
FIA1 IAmb IAmb 05 18 27.5
comp=Z,121nm,1.1s
FINES FINESS Array B 67.30 330 P **P 05 18 16.3 -1.8**
comp=Z,7.9nm,0.6s,baz=70,slow=5.2,SNR=43
FINES LR LR 05 49 04.0
comp=Z,13μm,18.3s,baz=60,slow=37
comp=Z,7.9nm,0.6s
FINES FINESS Array B 67.30 330 P **P 05 18 17.9 -0.2**
STKA Stephens Creek 67.31 173 P **P 05 18 18.2 -0.2**
comp=Z,20nm,0.6s,baz=334,slow=7.5,SNR=26
STKA LR LR 05 46 03.6
comp=Z,9μm,21.5s,baz=346,slow=34
comp=Z,20nm,0.6s
STKA Stephens Creek 67.31 173 ⇑ *e*P **P 05 18 17.7 -0.7**
STKA Stephens Creek 67.31 173 P **P 05 18 18.4 0.0**
ONI Oni 67.37 307 P **P 05 18 18.2 -0.8**
ONI IAmb IAmb 05 18 28.9
comp=Z,69nm,1.1s
ONI Oni 67.37 307 P **P 05 18 18.2 -0.8**
ONI pmax pmax
comp=Z,69nm,1.1s
NEEM North Greenlan 67.39 1 *i*P **P 05 18 19.4 +0.6**
NEEM IAmb IAmb 05 18 24.1
comp=Z,2μm,2.5s
TULEG Thule 67.43 6 *i*P **P 05 18 17.0 -1.7**
TULEG IAmb IAmb 05 18 25.9
comp=Z,109nm,1.0s
BBB Bella Bella 67.43 41 LR LR 05 48 31.2
comp=Z,5μm,19.9s,baz=300,slow=37
MSVF Nonsavu 67.45 134 P **P 05 18 22.0 +2.3**
comp=Z,57nm,1.0s,baz=264,slow=4.0,SNR=12
MSVF LR LR 05 42 32.4
comp=Z,6μm,22.0s,baz=323,slow=31
comp=Z,57nm,1.0s
MSVF Nonsavu 67.45 134 P **P 05 18 22.0 +2.3**
MSVF Nonsavu 67.45 134 P **P 05 18 23.4 +3.7**
CMSA Cobar Meteorol 67.50 169 P **P 05 18 20.1 +0.5**
AJN Ajban 67.52 285 *i*P **P 05 18 18.6 -1.5**
SNR=6.3
ARMA Armidale 67.57 163 P **P 05 18 19.6 -0.6**
ARMA Armidale 67.57 163 P **P 05 18 21.1 +0.9**
NAX Nakhchivan 67.59 303 P **P 05 18 18.4 -2.0**
BLDU Ballidu 67.60 196 P **P 05 18 19.8 -0.5**
FAUS Fauske 67.62 338 *e*P **P 05 18 19.9 -0.1**
FAUS IVmB_BB 05 18 22.7
comp=Z,1μm,2.0s
FAUS *e*S **S 05 27 15.8 -0.8**
GNI Garni 67.65 304 LR LR 05 48 39.9
comp=Z,15μm,19.6s,baz=63,slow=37
GNI Garni 67.65 304 IAMs_20 IAMs_20 05 48 36.8
comp=Z,17μm,18.0s
GNI Garni 67.65 304 *d i*P **P 05 18 19.7 -1.2**
GNI pmax pmax
comp=Z,142nm,1.3s
GNI MLR MLR
comp=Z,16μm,17.0s
LOF Lofoten 67.65 340 *e*S **S 05 27 16.6 -0.3**
DQM DQM 67.81 279 P **P 05 18 22.8 +0.8**
SNR=9.0
DQM P **P 05 18 22.8 +0.8**
SNR=9.0
BBOO Buckleboo 67.88 178 P **P 05 18 21.6 -0.3**
BBOO IAmb IAmb 05 18 51.1
comp=Z,58nm,1.1s
YKA Yellowknife Ar 68.21 28 P **P 05 18 24.8 +1.0**
comp=Z,34nm,1.0s,baz=302,slow=6.2,SNR=26
YKA PKP2ab 05 46 46.7
comp=Z,2.0nm,0.9s,baz=103,slow=3.2,SNR=3.8
YKA LR LR 05 49 04.1
comp=Z,6μm,20.7s,baz=296,slow=37
comp=Z,34nm,1.0s
YKA Yellowknife Ar 68.21 28 P **P 05 18 23.7 -0.1**
YKA Yellowknife Ar 68.21 28 *i*P **P 05 18 24.8 +1.0**
YKA pmax pmax
comp=Z,35nm,1.0s
KLBR Kellerberrin 68.32 195 P **P 05 18 23.5 -1.3**
KARS Kars 68.54 305 P **P 05 18 28.8 +2.3**
HTT Hallett 68.63 175 P **P 05 18 27.3 +0.6**
VSU Vasula 68.64 327 *e*P **P 05 18 27.1 +0.6**
VSU Vasula 68.64 327 *c i*P **P 05 18 25.5 -1.0**
VSU pmax pmax
comp=Z,395nm,1.1s
VSU MLR MLR

comp=Z,57µm,15.0s
MOR8 Moi Rana 68.66 338 *e*P **P 05 18 25.6 -1.0**
MOR8 IVmB_BB 05 18 27.9
comp=Z,1µm,2.0s
MOR8 *e*S **S 05 27 24.4 -4.7**
MEF Metsahovi 68.66 330 *e*P **P 05 18 27.3 +0.7**
MUN Mundaring 69.03 196 P **P 05 18 30.4 +1.2**
DBG Daneborg 69.22 353 *e*P **P 05 18 32.4 +2.4**
DBG IAmb IAmb 05 18 49.9
comp=Z,199nm,2.0s
RAF Rauma 69.26 331 *e*P **P 05 18 31.0 +0.6**
SOC Sochi 69.30 309 *d i*P **P 05 18 28.6 -2.3**
SOC *e**SP **pP 05 18 31.9 -2.6**
SOC *e* 05 21 01.4
SOC *e*PPP PPP 05 22 41.6
SOC *e*S **S 05 27 36.1 -1.2**
SOC *e*SSS SSS 05 35 07.6
SOC pmax pmax
comp=Z,21nm,0.9s
SOC MLR MLR
comp=Z,18µm,17.0s
HILA High Level 69.49 32 P **P 05 18 32.1 +0.2**
MZR Muzera 69.49 284 *i* P **P 05 18 30.4 -2.1**
SNR=9.8
GEVA Gevas 69.67 303 P **P 05 18 33.7 +0.1**
GEVA IAmb IAmb 05 18 38.9
comp=Z,93nm,1.2s
NWAO Narrogin (SRO) 69.72 195 P **P 05 18 33.0 -0.4**
MTSE Matsula 69.76 328 *e*P **P 05 18 34.0 +0.6**
ANN Anapa 70.11 311 *e*P **P 05 18 33.5 -2.4**
ANN *e* 05 21 07.7
ANN *e*S **S 05 27 45.6 -1.2**
ANN *e*SS **SS 05 32 16.7 +0.8**
ANN pmax pmax
comp=Z,231nm,1.4s
ANN pmax pmax
comp=N,93nm,1.6s
ANN pmax pmax
comp=E,26nm,1.4s
ANN pmax pmax
comp=Z,183nm,1.3s
ANN pmax pmax
comp=N,52nm,1.5s
ANN smax smax
comp=Z,207nm,2.5s
ANN smax smax
comp=N,747nm,4.5s
ANN smax smax
comp=E,516nm,4.6s
ANN MLR MLR
comp=Z,30µm,15.0s
ANN MLR MLR
comp=E,16µm,15.0s
ANN MLR MLR
comp=N,6µm,8.0s
MGCD Mangrove Creek 70.14 165 P **P 05 18 37.2 +1.2**
MANA Manning 70.18 34 P **P 05 18 36.1 -0.1**
GURO Guroymak-BITLI 70.26 304 P **P 05 18 36.3 -0.8**
GURO IAmb IAmb 05 18 41.9
comp=Z,86nm,1.2s
MNK Minsk 70.28 323 *i* P **P 05 18 37.5 +0.8**
MNK *i* 05 18 59.0
MNK *i* 05 21 12.8
MNK *i* PPP PPP 05 22 54.8
MNK *i* S **S 05 27 50.1 +1.6**
MNK *i* 05 28 40.1
MNK *i* SS **SS 05 32 21.3 +3.4**
MNK pmax pmax
comp=Z,98nm,1.0s
MNK pmax pmax
comp=E,15nm,1.2s
MNK pmax pmax
comp=N,99nm,1.2s
MNK MLR MLR
comp=Z,37µm,17.0s
MNK MLR MLR
comp=E,5µm,17.0s
MNK MLR MLR
comp=N,28µm,15.0s
MNK Minsk 70.28 323 *i* P **P 05 18 37.5 +0.8**
comp=E,15nm,1.2s
MNK *i* P **P 05 18 37.5 +0.8**
comp=N,99nm,1.2s
MNK *i* P **P 05 18 37.5 +0.8**
comp=Z,98nm,1.1s,baz=237
MNK *i* PcP **PcP 05 18 59.0 +0.5**
MNK *i* PP **PP 05 21 12.8 +1.0**
MNK *i* PPP PPP 05 22 54.8
MNK *i* S **S 05 27 50.1 +1.6**
MNK *i* SS **SS 05 32 21.4 +3.4**
MNK *i* SSS SSS 05 35 39.5
MNK *i* LQ LQ 05 44 36.3
MNK *i* LR LR 05 49 57.2
MNK *i* LRM MLR 05 52 23.3
comp=Z,37µm,16.6s
MNK *i* LRM MLR 05 52 26.9
comp=E,5µm,16.6s
MNK *i* LRM MLR 05 52 27.7
comp=N,28µm,15.2s
WAPA Wapiti River 70.37 36 P **P 05 18 37.8 +0.4**
AAL Aland 70.47 331 *e*P **P 05 18 38.1 +0.3**
ISAL Salakas 70.52 325 *e*P **P 05 18 38.5 +0.3**
NSS Namsos 70.53 337 *e*P **P 05 18 38.9 +0.8**
NSS IVmBBB 05 18 42.1
comp=Z,999nm,2.8s
NSS *e*S **S 05 27 52.5 +1.5**
KOPT Kop Dagi 70.56 306 P **P 05 18 38.3 -0.8**
KOPT IAmb IAmb 05 19 09.5
comp=Z,74nm,1.2s
JMIC Jan Mayen 70.56 348 *e*S **S 05 27 53.3 +2.0**
NACGM Naroch 70.59 324 ⇑ *i*P **P 05 18 38.0 -0.7**
SLIT Silitere, Latvi 71.05 328 *e*P **P 05 18 42.1 +0.7**
DMTO DMTO 71.06 279 P **P 05 18 40.1 -2.0**
SNR=6.8
DMTO P **P 05 18 40.1 -2.0**
SNR=6.8
AFI Afiamalu 71.09 123 LR LR 05 44 17.5
comp=Z,6µm,21.7s,baz=320,slow=31
DOK Doka 71.24 280 P **P 05 18 41.6 -1.7**
SNR=16
DOK P **P 05 18 41.6 -1.7**
SNR=16
PABE Paberze 71.56 326 P **P 05 18 44.5 0.0**
PABE IAmb IAmb 05 18 54.5
comp=Z,140nm,1.1s
PABE Paberze 71.56 326 *e*P **P 05 18 45.2 +0.7**
LLLB Lilloоet 71.59 41 P **P 05 18 45.6 +0.7**
LLLB IAmb IAmb 05 18 49.5
comp=Z,92nm,1.2s
UPP Uppsala 71.60 331 *e*P **P 05 18 45.2 +0.6**
DGAR Diego Garcia 71.68 246 IAMs_20 IAMs_20 05 48 47.9
comp=Z,11µm,21.0s
AKASG Malin Array Be 71.70 320 P **P 05 18 43.2 -2.3**
comp=Z,4.8nm,0.5s,baz=48,slow=6.1,SNR=48
AKASG LR LR 05 50 22.6
comp=Z,36µm,18.2s,baz=49,slow=36
comp=Z,4.8nm,0.5s
AKASG Malin Array Be 71.70 320 P **P 05 18 44.3 -1.2**
AKASG Malin Array Be 71.70 320 P **P 05 18 44.3 -1.2**
AKASG pmax pmax
comp=Z,45nm,1.0s
AKBB Malin Array Si 71.70 320 P **P 05 18 44.5 -1.0**
AKBB Malin Array Si 71.70 320 *d i*P **P 05 18 42.7 -2.8**
AKBB pmax pmax
comp=Z,58nm,0.9s
AKBB MLR MLR
comp=Z,38µm,17.0s
MARD Mardin 71.73 303 P **P 05 18 44.8 -1.4**
MARD IAmb IAmb 05 18 50.5
comp=Z,108nm,1.1s
CAN Canberra 71.76 167 P **P 05 18 45.0 -0.9**
CAN IAmb IAmb 05 19 00.2
comp=Z,84nm,1.3s
CAN Canberra 71.76 167 P **P 05 18 45.0 -0.9**
CAN pmax pmax
comp=Z,84nm,1.3s
CAN Canberra 71.76 167 P **P 05 18 46.9 +1.0**
RBK Rabkut 71.77 279 P **P 05 18 45.2 -1.3**
SNR=12
RBK P **P 05 18 45.2 -1.3**
SNR=12
CNB Canberra Magne 71.82 167 P **P 05 18 47.4 +1.1**
BRLDA Berland Lookou 71.88 36 P **P 05 18 47.5 +0.9**
WHFO Wadi Hawf 71.90 279 P **P 05 18 45.2 -2.1**
SNR=12
WHFO P **P 05 18 45.2 -2.1**
SNR=12
TBLU Trondheim 71.96 337 *e*S **S 05 28 05.5 -2.2**
SIM Simferopol' 72.06 313 *e*P **P 05 18 46.4 -1.3**
SIM S **S 05 28 05.9 -3.5**
SIM SS **SS 05 32 46.6 +1.0**
SIM pmax pmax
comp=Z,56nm,0.8s
SIM MLR MLR
comp=Z,16µm,18.0s
ARPS Mount Arapiles 72.18 173 P **P 05 18 48.7 +0.4**
SUMG Summit 72.19 358 *i* P **P 05 18 48.0 -0.6**
SUMG IAmb IAmb 05 18 57.3
comp=Z,176nm,1.0s
NLWA Neilton Lookou 72.26 44 P **P 05 18 49.5 +0.6**
ABTO Aybut 72.58 279 P **P 05 18 49.9 -1.5**
SNR=24
ABTO P **P 05 18 49.9 -1.5**
SNR=24
VIKU Vikbolandet 72.84 331 *e*P **P 05 18 52.4 +0.3**
HFS Hagfors 72.91 333 LR LR 05 51 25.6
comp=Z,15µm,20.3s,baz=12,slow=36
NC405 NORSAR Array S 72.95 335 P **P 05 18 52.1 -0.7**
B06A Marblemount 72.97 42 P **P 05 18 53.6 +0.5**
B06A IAmb IAmb 05 18 57.7
comp=Z,176nm,1.4s
SCO Scoresbysund 72.99 352 P **P 05 18 53.1 +0.3**
SCO IAMs_20 IAMs_20 05 49 06.8
comp=Z,12µm,20.0s
SCO Scoresbysund 72.99 352 P **P 05 18 53.1 +0.3**
SCO pmax pmax
comp=Z,349nm,1.7s
NB201 NORSAR Array S 73.15 335 P **P 05 18 53.5 -0.4**
NB201 IAmb IAmb 05 19 09.3
comp=Z,95nm,1.1s
NC204 NORSAR Array S 73.17 335 P **P 05 18 53.4 -0.7**
NC204 IAmb IAmb 05 19 10.7
comp=Z,267nm,1.8s
BRAT Ballarat 73.18 172 P **P 05 18 55.4 +1.2**
NB2 NORSAR Subarra 73.18 335 P **P 05 18 52.2 -2.0**
comp=Z,301nm,2.0s,baz=46,slow=5.9
NB2 NORSAR Subarra 73.18 335 P **P 05 18 52.2 -2.0**
baz=46,slow=5.9
NOA NORSAR Array B 73.18 335 P **P 05 18 52.2 -2.0**
comp=Z,7.4nm,0.8s,baz=44,slow=6.1,SNR=18
NOA LR LR 05 54 57.5
comp=Z,13µm,18.7s,baz=50,slow=39
comp=Z,7.4nm,0.8s
DOMB Dombas 73.20 336 *e*P **P 05 18 55.8 +1.5**
DOMB IVmB_BB 05 18 58.4
comp=Z,1µm,2.9s
DOMB *e*S **S 05 28 19.9 -2.2**
MOL Molde 73.31 337 *e*P **P 05 18 55.2 +0.4**
MOL IVmB_BB 05 18 58.3
comp=Z,2µm,2.6s
TOO Toolangi 73.40 170 P **P 05 18 57.0 +1.4**
NAO01 NORSAR Array S 73.43 335 P **P 05 18 55.7 0.0**
NAO01 IAmb IAmb 05 19 12.0
comp=Z,107nm,1.5s
D05A Enumclaw 73.44 44 P **P 05 18 58.0 +2.1**
AKN Aaknes 73.78 337 *e*S **S 05 28 31.0 +2.5**
KIS Kishinev 74.01 317 *e*P **P 05 18 58.0 -1.2**
KIS Kishinev 74.01 317 *e*PcP PcP 05 19 23.0 +8.5
KIS *e*S **SKiKP 05 28 29.0 +1.5**
KIS *e*L L 05 46 30.0
KIS LQM 05 48 42.0
comp=Z,26µm,17.0s
KIS LRM MLR 05 53 46.0
comp=Z,12µm,14.0s
KIS Kishinev 74.01 317 *e*P **P 05 18 58.0 -1.2**
KIS *e*S **SKiKP 05 28 29.0 +1.5**
KIS MLR MLR
comp=Z,12µm,14.0s
MILM Milestii Mici 74.06 316 *e*P **P 05 18 58.0 -1.5**
comp=Z,170nm,2.0s
MILM Milestii Mici 74.06 316 *e*PcP PcP 05 19 26.0 +11
MILM *i* S **SKiKP 05 28 26.0 -1.6**
MILM *e*L L 05 45 12.0
MILM LQM 05 48 44.0
comp=Z,60µm,17.0s
MILM LRM MLR 05 53 49.0
comp=Z,27µm,14.5s
MILM Milestii Mici 74.06 316 *e*P **P 05 18 58.0 -1.5**
MILM *e*S **SKiKP 05 28 26.0 -1.6**
MILM pmax pmax
comp=Z,170nm,2.0s
MILM MLR MLR
comp=Z,27µm,14.5s
OSL Oslo 74.13 334 *e*S **S 05 28 32.1 -0.2**
GAZ Gaziantep 74.23 304 P **P 05 19 00.4 -0.5**
GAZ IAmb IAmb 05 19 18.4
comp=Z,83nm,1.1s
B08A Colville Reser 74.24 42 P **P 05 19 00.5 -0.2**
B08A IAmb IAmb 05 19 05.2
comp=Z,126nm,1.4s
BNN Bunyan 74.24 307 P **P 05 18 60.0 -0.9**
ILGA Ilgaz 74.41 309 P **P 05 19 01.0 -1.0**
SKAR Skarslia 74.44 335 *e*P **P 05 19 04.1 +2.5**
SKAR IVmB_BB 05 19 05.2
comp=Z,1µm,2.2s
SKAR *e*S **S 05 28 35.1 -0.9**
KONO Kongsberg 74.73 334 IAMs_20 IAMs_20 05 51 44.3
comp=Z,16µm,19.0s
KONO Kongsberg 74.73 334 *e*S **S 05 28 37.0 -2.3**
HYA Hoyanger 74.79 337 *e*P **P 05 19 04.0 +0.5**
FOO Floro 74.83 337 *e*S **S 05 28 41.5 +1.3**
LVV L'vov 74.93 321 *e*P **P 05 19 03.9 -0.6**
LVV *e* 05 21 49.5
LVV *e*S **S 05 28 38.5 -3.2**
LVV *e*SS **SS 05 33 23.1 -6.0**
DBO Dodson Butte 75.00 48 P **P 05 19 06.6 +1.3**
C09A Chrisman Ranch 75.14 42 P **P 05 19 05.6 -0.2**
C09A IAmb IAmb 05 19 10.5
comp=Z,176nm,1.4s
BR131 Keskin Array S 75.19 308 P **P 05 19 04.8 -1.6**
BR131 Keskin Array S 75.19 308 *d i*P **P 05 19 04.8 -1.6**
BRTR Keskin Array B 75.19 308 P **P 05 19 04.8 -1.6**
comp=Z,11nm,0.8s,baz=96,slow=4.8,SNR=41
BRTR LR LR 05 55 44.9
comp=Z,22µm,19.2s,baz=50,slow=39
comp=Z,11nm,0.8s
BRTR Keskin Array B 75.19 308 P **P 05 19 04.7 -1.8**
BRTR Keskin Array B 75.19 308 *i* P **P 05 19 05.0 -1.5**
BRTR pmax pmax
comp=Z,11nm,0.8s
D08A Wollman Farm, 75.22 42 P **P 05 19 06.6 +0.3**
D08A IAmb IAmb 05 19 11.0
comp=Z,135nm,1.6s
BEL Belsk 75.30 324 *e*P **P 05 19 08.4 +1.7**
BEL *e*S **S 05 28 49.6 +3.8**
BEL *e*L L 05 50 00.1
comp=Z,37µm,20.0s
SUE Sulen 75.33 337 *e*S **S 05 28 46.8 +1.1**
F07A Phinny Hill Vi 75.35 44 P **P 05 19 07.7 +0.7**
CFR Carcaliu 75.44 315 ⇓ P **P 05 19 07.6 +0.1**
TPGR Topolog 75.47 315 ⇑ P **P 05 19 08.5 +0.7**
RAYN Ar Rayn 75.48 289 P **P 05 19 06.4 -1.8**
RAYN IAmb IAmb 05 19 11.9
comp=Z,222nm,1.8s
RAYN Ar Rayn 75.48 289 P **P 05 19 06.4 -1.8**
RAYN pmax pmax
comp=Z,222nm,1.8s
RAYN MLR MLR
comp=Z,24µm,19.0s
RAYN Ar Rayn 75.48 289 *i* P **P 05 19 05.4 -2.8**
SNR=24
NEW Newport 75.48 41 LR LR 05 52 40.5
comp=Z,6µm,21.1s,baz=318,slow=36
NEW Newport 75.48 41 P **P 05 19 08.5 +0.7**
NEW IAmb IAmb 05 19 12.4
comp=Z,112nm,1.4s
NEW Newport 75.48 41 P **P 05 19 08.5 +0.7**
NEW pmax pmax
comp=Z,112nm,1.4s
NEW Newport 75.48 41 P **P 05 19 08.0 +0.2**
baz=307
E08A Dider Farm, El 75.48 43 P **P 05 19 08.7 +0.8**
TESR Tescani 75.50 317 ⇑ P **P 05 19 08.0 +0.1**
BIZ Bicaz 75.55 318 ⇑ P **P 05 19 08.2 0.0**
ODD1 Odda 75.57 336 *e*S **S 05 28 49.6 +0.9**
BUR08 Bucovina Ar. S 75.62 319 P **P 05 19 08.3 -0.4**
BURAR Bucovina Array 75.63 319 ⇑ P **P 05 19 09.3 +0.5**
BURAR Bucovina Array 75.63 319 P **P 05 19 08.1 -0.7**
ILULI Ilulissat 75.64 2 P **P 05 19 08.6 +0.3**
ILULI IAmb IAmb 05 19 15.3
comp=Z,178nm,1.4s
ILULI IAMs_20 IAMs_20 05 52 54.1
comp=Z,13µm,20.0s
ILULI Ilulissat 75.64 2 P **P 05 19 08.6 +0.3**
ILULI pmax pmax
comp=Z,178nm,1.4s
ILULI MLR MLR
comp=Z,13µm,20.0s
ILULI Ilulissat 75.64 2 *e*P **P 05 19 09.7 +1.4**
ILULI IAmb IAmb 05 19 14.0
comp=Z,195nm,1.4s
ANTO Ankara 75.65 309 ⇑ P **P 05 19 08.8 -0.2**
ANTO Ankara 75.65 309 P **P 05 19 07.8 -1.2**
ANTO Ankara 75.65 309 P **P 05 19 07.8 -1.2**
ANTO pmax pmax
comp=Z,36nm,0.8s
ANTO MLR MLR
comp=Z,20µm,21.0s
BER Bergen 75.65 336 *e*S **S 05 28 50.6 +1.3**
TIRR Tirgusor 75.70 315 ⇑ P **P 05 19 09.2 +0.1**
ICESG Greenland Ices 75.72 358 *e*P **P 05 19 10.2 +1.0**
ICESG IAmb IAmb 05 19 17.8
comp=Z,2µm,2.6s
VRI Vrincioaia 75.84 316 ⇓ P **P 05 19 10.0 +0.1**
E09A Wood Farm, Sta 75.98 43 P **P 05 19 11.1 +0.4**
E09A IAmb IAmb 05 19 15.6
comp=Z,188nm,1.6s
PINE Pine Mountain 75.99 46 P **P 05 19 11.6 +0.5**
PINE IAmb IAmb 05 19 23.7
comp=Z,74nm,0.9s
BLS5 Blasjo 76.00 335 *e*S **S 05 28 51.9 -1.4**
GKP Gorka Klasztor 76.03 326 *e*S **S 05 28 58.0 +4.1**
GKP *e*L L 05 51 24.0
comp=Z,46µm,18.1s
YBH Yreka Blue Hor 76.12 49 LR LR 05 48 33.7
comp=Z,5µm,21.4s,baz=302,slow=32
YBH Yreka Blue Hor 76.12 49 P **P 05 19 12.6 +0.9**
YBH Yreka Blue Hor 76.12 49 P **P 05 19 12.6 +0.9**
YBH pmax pmax
comp=Z,75nm,1.2s
HOMB Homborsund 76.12 334 *e*S **S 05 28 55.9 +1.3**
OZUR 76.23 317 ⇓ P **P 05 19 12.1 -0.1**
G08A Pilot Rock 76.25 44 P **P 05 19 13.2 +0.8**
PSN Preselentsi 76.29 314 P **P 05 19 10.8 -1.7**
MDUB Mudurnu 76.32 310 P **P 05 19 11.8 -1.0**
NEHR Nehoiu 76.35 316 ⇑ P **P 05 19 12.5 -0.3**
KOLS Kolonicke sedl 76.38 321 *e*P **P 05 19 13.3 +0.4**
KOLS pmax pmax
comp=Z,26nm,1.0s
MLR Muntele Rosu 76.50 316 ⇓ P **P 05 19 12.7 -1.2**
MLR Muntele Rosu 76.50 316 LR LR 05 55 56.8
comp=Z,30µm,18.7s,baz=60,slow=38
MLR Muntele Rosu 76.50 316 P **P 05 19 12.2 -1.6**
MLR Muntele Rosu 76.50 316 P **P 05 19 12.2 -1.6**
MLR pmax pmax
comp=Z,69nm,1.3s
MLR MLR MLR
comp=Z,34µm,19.0s
DOPR Dopca 76.53 317 ⇑ P **P 05 19 13.0 -0.8**
UZH Uzhgorod 76.56 321 *e*P **P 05 19 13.0 -0.9**
UZH *e* 05 19 21.8
UZH *i* S **S 05 28 56.0 -3.8**
UZH MLR MLR
comp=N,4µm,14.0s
UZH MLR MLR
comp=E,6µm,14.0s
UZH MLR MLR
comp=Z,4µm,14.0s
STHS Stebnicka Huta 76.60 322 *e*P **P 05 19 14.2 0.0**
WALA Waterton Lakes 76.67 39 P **P 05 19 15.4 +0.7**
WALA IAmb IAmb 05 19 19.4
comp=Z,140nm,1.6s
TRPA Tarpa 76.74 320 ⇑ P **P 05 19 15.2 +0.3**
TRPA Tarpa 76.74 320 P **P 05 19 15.0 0.0**
OJC Ojcow 76.81 323 *e*P **P 05 19 12.7 -2.6**
OJC *e*S **S 05 28 57.2 -5.4**
OJC *e*L L 05 50 52.6
comp=Z,24µm,22.3s
OJC Ojcow 76.81 323 P **P 05 19 13.3 -2.0**
OJC IAmb IAmb 05 19 17.4
comp=Z,188nm,1.5s
OJC Ojcow 76.81 323 P **P 05 19 13.3 -2.0**
OJC pmax pmax
comp=Z,188nm,1.5s
CRVS Cervenica-Dubn 76.81 321 *e*P **P 05 19 15.1 -0.3**
CRVS pmax pmax
comp=Z,216nm,2.1s
RGN Rugen 76.88 329 IAMs_20 IAMs_20 05 51 10.2
comp=Z,15µm,21.0s
VOIR 77.04 317 ⇓ P **P 05 19 16.4 -0.4**
ABAH Abaujker 77.31 321 P **P 05 19 17.5 -0.6**
ARR Arges 77.31 317 ⇓ P **P 05 19 18.6 +0.3**
BMO Blue Mountains 77.45 44 P **P 05 19 18.9 -0.2**
BMO Blue Mountains 77.45 44 P **P 05 19 19.0 -0.2**
BMO pmax pmax
comp=Z,64nm,1.2s
HOPS Hopland Field 77.47 51 IAMs_20 IAMs_20 05 46 36.3
comp=Z,9µm,22.0s
MOD Modoc Plateau 77.48 47 P **P 05 19 19.4 0.0**
MOD IAMs_20 IAMs_20 05 46 02.4
comp=Z,9µm,22.0s
DRGR 77.49 319 ⇑ P **P 05 19 19.8 +0.5**
J08A Circle Bar Ran 77.69 45 P **P 05 19 20.7 +0.2**
MMAI Mount Meron Ar 77.75 302 LR LR 05 58 06.7
comp=Z,8µm,18.7s,baz=278,slow=39
OKC Ostrava-Krasne 77.87 323 *e*P **P 05 19 23.2 +2.0**
OKC MLR MLR
comp=Z,34µm,16.0s
OKC Ostrava-Krasne 77.87 323 *e*P **P 05 19 23.2 +2.0**
OKC AMS AMS 05 56 50.0
comp=Z,34µm,16.0s
LRW Lerwick 77.88 339 *e*P **P 05 19 20.8 -0.3**
LRW IAMs_20 IAMs_20 05 56 31.8
comp=Z,19µm,17.3s
SFJD Kangerlussuaq 77.88 2 LR LR 05 55 50.0
comp=Z,16µm,18.2s,baz=350,slow=37
SFJD Kangerlussuaq 77.88 2 P **P 05 19 21.3 +0.4**
SFJD Kangerlussuaq 77.88 2 P **P 05 19 21.3 +0.4**
SFJD pmax pmax
comp=Z,246nm,1.4s
SFJD MLR MLR
comp=Z,18µm,19.0s
SFJD Kangerlussuaq 77.88 2 *i* P **P 05 19 22.2 +1.2**
SFJD IAmb IAmb 05 19 26.7
comp=Z,462nm,1.8s
MSO Missoula 78.06 41 P **P 05 19 23.2 +0.7**
MSO Missoula 78.06 41 P **P 05 19 22.7 +0.2**
baz=309
CSS Mathiatis 78.07 304 P **P 05 19 20.7 -2.0**
CSS IAmb IAmb 05 19 56.3
comp=Z,147nm,1.6s
KSP Ksiaz 78.09 325 *e*P **P 05 19 21.4 -1.1**
KSP *e*S **S 05 29 13.1 -3.3**
KSP *e*L L 05 51 52.7
comp=Z,20µm,22.0s
WVOR Wild Horse Val 78.15 46 IAMs_20 IAMs_20 05 46 43.1
comp=Z,9µm,21.0s
MORC Moravsky Berou 78.20 324 ⇓ P **P 05 19 23.7 +0.5**
MORC Moravsky Berou 78.20 324 *e*P **P 05 19 22.8 -0.4**
MORC *e*S **S 05 29 15.0 -2.7**
PSZ Piszkesteto 78.25 321 ⇓ P **P 05 19 23.9 +0.4**
PSZ Piszkesteto 78.25 321 P **P 05 19 23.1 -0.4**
PSZ IAmb IAmb 05 19 27.7
comp=Z,296nm,1.9s
PSZ Piszkesteto 78.25 321 P **P 05 19 23.1 -0.4**
PSZ pmax pmax
comp=Z,296nm,1.9s
PSZ Piszkesteto 78.25 321 P **P 05 19 23.0 -0.5**
FFC Flin Flon 78.27 29 IAMs_20 IAMs_20 05 59 46.4
comp=Z,10µm,18.0s
ISP Isparta 78.28 308 IAMs_20 IAMs_20 05 57 35.9
comp=Z,16µm,22.0s
BORG Borgarnes 78.30 349 LR LR 05 52 24.1
comp=Z,7µm,20.8s,baz=28,slow=34
OSTC Ostas 78.32 325 *e*P **P 05 19 24.7 +1.0**
OSTC AMS AMS 05 58 40.0
comp=Z,24µm,14.6s
GZR Gura Zlata 78.33 318 ⇓ P **P 05 19 23.2 -0.7**
MAUC Maruska 78.34 323 *e*P **P 05 19 24.8 +0.9**
MAUC AMS AMS 05 56 20.0
comp=Z,64µm,14.7s
CHVC Chvalec 78.37 325 *e*P **P 05 19 24.9 +0.8**
CHVC AMS AMS 05 56 20.0
comp=Z,28µm,14.8s

KRLC	Kraliky	78.37	324	eP	P	05 19 24.1	0.0
KRLC				e		05 19 34.2	
KRLC				MLR	MLR		
comp=Z,30µm,13.2s							
KRLC	Kraliky	78.37	324	eP	P	05 19 24.1	0.0
KRLC				ePCP	PcP	05 19 34.2	+0.8
KRLC				AMS	AMS	05 57 30.0	
comp=Z,30µm,13.2s							
DPC	Dobruska-Polom	78.41	325	eP	P	05 19 24.5	+0.2
DPC				e		05 19 35.3	
DPC				eS	S	05 29 17.8	-2.1
DPC				MLR	MLR		
comp=Z,28µm,13.5s							
DPC	Dobruska-Polom	78.41	325	eP	P	05 19 24.5	+0.2
DPC				ePCP	PcP	05 19 35.3	+1.8
DPC				eS	S	05 29 17.8	-2.1
DPC				AMS	AMS	05 58 30.0	
comp=Z,28µm,13.5s							
VYHS	Vyhne	78.41	322	eP	P	05 19 24.7	+0.4
VYHS				pmax	pmax		
comp=Z,155nm,1.9s							
UPC	Upice	78.45	325	eP	P	05 19 26.2	+1.8
UPC				eS	S	05 29 17.9	-2.3
UPC				MLR	MLR		
comp=Z,25µm,14.0s							
UPC	Upice	78.45	325	eP	P	05 19 26.2	+1.8
UPC				eS	S	05 29 17.9	-2.3
UPC				AMS	AMS	05 57 50.0	
comp=Z,25µm,14.0s							
DY2G	Dye2	78.46	0	eP	P	05 19 26.2	+1.7
DY2G				IAmb	IAmb	05 19 31.4	
comp=Z,655nm,1.4s							
GHAJ	Ghor Haditha	78.60	300	IAMs_20	IAMs_20	05 58 54.0	
comp=Z,14µm,19.0s							
BEKR	Beckworth	78.66	49	P	P	05 19 26.3	+0.3
BEKR				IAmb	IAmb	05 19 44.1	
comp=Z,76nm,1.0s							
JAVC	Velka Javorina	78.75	323	eP	P	05 19 26.7	+0.5
JAVC				eS	S	05 29 23.2	-0.5
RAO	Raoul Island	78.75	138	LR	LR	05 48 08.9	
comp=Z,5µm,21.9s,baz=320,slow=31							
BZS	Buzias	78.82	319	⇑P	P	05 19 26.4	-0.1
AFDM	Forest Hills D	78.82	50	P	P	05 19 26.6	-0.2
HERR	Herculane	78.85	318	⇑P	P	05 19 26.9	+0.1
TAU	Tasmania Unive	78.89	170	IAMs_20	IAMs_20	05 51 08.8	
comp=Z,9µm,22.0s							
BUD	Budapest	78.98	321	P	P	05 19 28.1	+0.7
VRAC	Vranov	78.98	324	LR	LR	05 57 47.7	
comp=Z,34µm,19.1s,baz=45,slow=38							
VRAC	Vranov	78.98	324	eP	P	05 19 27.1	-0.3
VRAC				eS	S	05 29 23.2	-2.8
MPEP	Malo Peshtene	79.06	316	P	P	05 19 27.2	-0.8
SMOL	Smolenice	79.10	323	eP	P	05 19 28.7	+0.6
SMOL				pmax	pmax		
comp=Z,73nm,1.7s							
ANGG	Ammassalik, Gr	79.10	356	IAMs_20	IAMs_20	05 53 49.4	
comp=Z,14µm,20.0s							
PVCC	Panska Ves	79.11	325	eP	P	05 19 30.5	+2.5
PVCC				eS	S	05 29 26.9	-0.3
PVCC				MLR	MLR		
comp=Z,28µm,13.1s							
PVCC	Panska Ves	79.11	325	eP	P	05 19 30.5	+2.5
PVCC				eS	S	05 29 26.9	-0.3
PVCC				AMS	AMS	05 57 50.0	
comp=Z,28µm,13.1s							
SRO	Srobarova	79.12	322	eP	P	05 19 29.4	+1.2
SRO				pmax	pmax		
comp=Z,179nm,2.0s							
KDZ	Kurdzhali	79.14	314	i P	P	05 19 27.6	-0.8
MFID	Camas Ranch	79.18	44	P	P	05 19 29.8	+1.0
KRUC	Moravsky	79.24	324	eP	P	05 19 28.5	-0.3
KRUC				eS	S	05 29 27.6	-1.1
MODS	Modra-Piesok	79.27	323	eP	P	05 19 29.1	+0.1
MODS				pmax	pmax		
comp=Z,407nm,1.8s							
CLL	Collm	79.28	327	eP	P	05 19 28.0	-1.0
CLL				i		05 19 36.6	
CLL				eS	S	05 29 26.0	-3.0
CLL				pmax	pmax		
comp=Z,93nm,1.0s							
CLL	Collm	79.28	327	eP	P	05 19 28.0	-1.0
comp=Z,87nm,1.4s							
CLL				i PcP	PcP	05 19 36.6	-0.6
comp=Z,93nm,1.0s							
CLL				i x	x	05 19 44.0	
CLL				ePP	PP	05 22 28.0	0.0
CLL				ePPP	PPP	05 24 15.0	
CLL				ex	x	05 26 12.0	
CLL				eS	S	05 29 26.0	-3.0
CLL				e(PPS)		05 30 38.0	
CLL				eSS	SS	05 34 22.0	-13
CLL				eSSS	SSS	05 37 54.0	
CLL				ex	x	05 38 42.0	
CLL				eSSSS		05 40 00.0	
CLL				Lmax		05 58 00.0	
MDVR	Moldovita	79.30	318	⇓P	P	05 19 29.7	+0.4
PGB	Panagyurishte	79.32	315	i P	P	05 19 29.8	+0.4
EMB	Emerald Bay	79.35	50	P	P	05 19 29.6	-0.3
PAHR	Pah Rah Range	79.35	49	P	P	05 19 30.1	+0.3
GOPC	GO Pecny, Ondr	79.43	325	eP	P	05 19 32.0	+2.1
GOPC				e		05 19 35.9	
GOPC				eS	S	05 29 27.8	-2.9
GOPC	GO Pecny, Ondr	79.43	325	eP	P	05 19 32.0	+2.1
GOPC				ePCP	sP	05 19 35.9	+1.1
GOPC				eS	S	05 29 27.8	-2.9
VCNR	Virginia City	79.44	49	P	P	05 19 30.9	+0.5
EGMT	Eagleton	79.44	38	P	P	05 19 30.9	+0.9
EGMT				IAmb	IAmb	05 19 34.6	
comp=Z,195nm,1.3s							
EGMT				IAMs_20	IAMs_20	05 58 03.7	
comp=Z,8µm,19.0s							
EGMT	Eagleton	79.44	38	P	P	05 19 30.1	0.0
baz=312							
CSKK	Cskako	79.45	321	P	P	05 19 30.4	+0.5
ZST	Bratislava	79.47	323	eP	P	05 19 31.1	+1.0
ZST				pmax	pmax		
comp=Z,412nm,1.6s							
PRU	Pruhonice	79.49	325	eP	P	05 19 30.0	-0.2
PRU				eS	S	05 29 29.6	-1.7
PRU				MLR	MLR		
comp=Z,33µm,14.2s							
PRU	Pruhonice	79.49	325	eP	P	05 19 30.0	-0.2
PRU				eS	S	05 29 29.6	-1.7
PRU				AMS	AMS	05 58 30.0	
comp=Z,33µm,14.2s							
TREC	Trest	79.52	324	AMS	AMS	05 59 50.0	
comp=Z,24µm,13.6s							
RZN	Rozhen	79.53	314	i P	P	05 19 31.0	+0.2
FRB	Frobisher Bay	79.61	10	LR	LR	05 57 56.5	
comp=Z,9µm,18.3s,baz=353,slow=38							
CMB	Columbia Colle	79.74	51	IAMs_20	IAMs_20	05 47 10.3	
comp=Z,8µm,22.0s							
VTS	Vitosha	79.81	315	⇑P	P	05 19 33.1	+0.9
VTS	Vitosha	79.81	315	i P	P	05 19 32.3	0.0
EGYH	Egyhazaskeszo	79.88	322	P	P	05 19 33.9	+1.6
HLID	Hailey	79.88	43	P	P	05 19 34.0	+1.3
baz=310							
MPLH	Magyarpolny	79.94	322	P	P	05 19 33.4	+0.7
TIH	Tihany	79.94	321	P	P	05 19 33.7	+1.1
MORH	Mrgy, Hungar	80.01	320	⇓P	P	05 19 33.2	+0.2
MORH	Mrgy, Hungar	80.01	320	P	P	05 19 32.7	-0.3
BIGH	Upper Bighouse	80.03	339	eP	P	05 19 32.8	0.0
BIGH				IAmb	IAmb	05 19 37.0	
comp=Z,244nm,1.6s							
BIGH				IAMs_20	IAMs_20	05 57 19.5	
comp=Z,12µm,17.2s							
BOVS	Bovan	80.03	317	⇑P	P	05 19 32.6	-0.6
BOZ	Bozeman (W)	80.08	40	IAMs_20	IAMs_20	05 54 42.8	
comp=Z,9µm,21.0s							
BOZ	Bozeman (W)	80.08	40	P	P	05 19 33.8	+0.1
baz=311							
FRGS	Fruska Gora	80.09	319	⇓P	P	05 19 34.2	+0.7
SOP	Sopron	80.09	322	P	P	05 19 33.8	+0.4
MMB	Musomiste	80.17	314	i P	P	05 19 33.2	-0.9
RONA	Rosalia, Austr	80.21	323	i P	P	05 19 35.1	+0.9
comp=Z,96nm,1.6s,SNR=30							
CONA	Conrad Observa	80.27	323	i P	P	05 19 35.2	+0.7
comp=Z,133nm,1.6s,SNR=73							
NKC	Novy Kostel	80.28	326	AMS	AMS	05 58 30.0	
comp=Z,32µm,13.6s							
KKB	Krupnik	80.37	315	i P	P	05 19 34.6	-0.5
KOVH	Kovagotottos	80.38	321	P	P	05 19 35.0	0.0
CKRC	Cesky Krumlov	80.41	324	eP	P	05 19 35.4	+0.2
CKRC				eS	S	05 29 38.3	-2.8
CKRC				AMS	AMS	05 58 10.0	
comp=Z,23µm,14.7s							
KHC	Kasperske Hory	80.54	325	eP	P	05 19 36.1	+0.2
KHC				ePCP	PcP	05 19 46.0	+3.2
KHC				eS	S	05 29 36.8	-5.7
KHC				AMS	AMS	05 55 30.0	
comp=Z,29µm,16.2s							
MCD	Coleburn Disti	80.59	338	eP	P	05 19 35.6	-0.3
NUUK	Nuuk	80.67	2	eP	P	05 19 36.1	-0.1
NUUK				IAmb	IAmb	05 19 44.1	
comp=Z,137nm,1.0s							
GERES	GERESS Array B	80.68	325	P	P	05 19 35.9	-0.8
comp=Z,2.2nm,0.8s,baz=70,slow=1.6,SNR=16							
GERES				LR	LR	05 57 51.6	
comp=Z,16µm,18.6s,baz=46,slow=38							
comp=Z,2.2nm,0.8s							
GERES	GERESS Array B	80.68	325	P	P	05 19 36.3	-0.4
GERES	GERESS Array B	80.68	325	P	P	05 19 36.3	-0.4
NVAR	Mina Array Bea	80.80	49	P	P	05 19 38.8	+1.1
comp=Z,9.3nm,0.8s,baz=301,slow=5.1,SNR=40							
NVAR				LR	LR	05 53 54.5	
comp=Z,2µm,19.1s,baz=302,slow=34							
comp=Z,9.3nm,0.8s							
NVAR	Mina Array Bea	80.80	49		P	05 19 38.3	+0.5
BEHE	Becsehely	80.80	321	P	P	05 19 38.3	+1.0
MDPB	Devils Postpil	80.80	50	P	P	05 19 38.4	+0.6
YHL	Hebgen Lake	80.81	41	P	P	05 19 38.8	+1.0
YHL				IAmb	IAmb	05 19 46.2	
comp=Z,171nm,1.5s							
ARSA	Arzberg	80.90	323	i P	P	05 19 38.1	+0.3
comp=Z,55nm,2.0s,SNR=15							
DRUM	Mains of Drumt	80.91	337	eP	P	05 19 37.6	-0.1
DRUM				IAmb	IAmb	05 19 41.3	
comp=Z,305nm,1.7s							
DRUM				IAMs_20	IAMs_20	05 58 22.0	
comp=Z,17µm,16.2s							
MLAC	Mammoth, Mammo	80.96	50	P	P	05 19 40.2	+1.6
baz=308,SNR=6.4							
VAY	Valandovo	81.02	315	i P	P	05 19 38.9	+0.3
MOA	Molln	81.10	324	i P	P	05 19 39.5	+0.6
comp=Z,45nm,1.5s,SNR=15							
ELK	Elko	81.20	46	LR	LR	05 55 25.0	
comp=Z,4µm,19.7s,baz=322,slow=36							
ELK	Elko	81.20	46	IAMs_20	IAMs_20	05 48 40.7	
comp=Z,7µm,22.0s							
GRFO	Grafenberg	81.23	326	P	P	05 19 39.5	0.0
GRFO				IAmb	IAmb	05 19 43.7	
comp=Z,216nm,1.5s							
GRFO	Grafenberg	81.23	326	P	P	05 19 39.5	0.0
GRFO				pmax	pmax		
comp=Z,216nm,1.5s							
GRFO				MLR	MLR		
comp=Z,24µm,19.0s							
SKO	Skopje	81.25	316	i P	P	05 19 40.7	+0.9
KAC	Achnashellach	81.27	339	eP	P	05 19 39.6	0.0
EDU	Dundee	81.37	337	eP	P	05 19 40.2	+0.1
KPL	Plockton	81.51	339	eP	P	05 19 41.0	+0.2
KPL				IAmb	IAmb	05 19 44.8	
comp=Z,356nm,1.7s							
KPL				IAMs_20	IAMs_20	05 57 02.8	
comp=Z,11µm,17.8s							
BIOA	Bad Ischl, Aus	81.52	324	i P	P	05 19 41.8	+0.7
comp=Z,78nm,1.6s,SNR=16							
SOKA	Soboth	81.54	322	i P	P	05 19 41.6	+0.3
comp=Z,86nm,1.7s,SNR=25							
SMMC	Simmler	81.63	53	P	P	05 19 43.7	+1.7
baz=308							
RLMT	Red Lodge	81.64	40	IAMs_20	IAMs_20	05 55 11.0	
comp=Z,8µm,22.0s							
RLMT	Red Lodge	81.64	40	P	P	05 19 43.1	+1.1
baz=313							
ESY	Stoneypath	81.77	337	eP	P	05 19 41.9	-0.4
KARP	Karpathos	81.80	308	IAMs_20	IAMs_20	05 57 58.3	
comp=Z,12µm,20.0s							
DGMT	Dagmar	81.82	35	IAMs_20	IAMs_20	05 55 56.4	
comp=Z,12µm,21.0s							
DGMT	Dagmar	81.82	35	P	P	05 19 43.9	+1.2
baz=316							
DGMT	Dagmar	81.82	35	P	P	05 19 43.7	+1.0
baz=316							
OBKA	Obir	81.89	323	eP	P	05 19 43.8	+0.6
comp=Z,32nm,1.7s							
HVU	Hansel Valley	81.95	44	P	P	05 19 44.8	+1.1
HVU				IAmb	IAmb	05 20 05.2	
comp=Z,142nm,1.9s							
HVU	Hansel Valley	81.95	44	P	P	05 19 44.8	+1.1
HVU				pmax	pmax		
comp=Z,142nm,1.9s							
SNOW	Snow King Moun	81.96	42	P	P	05 19 44.3	+0.4
PKM	Mcpherson Peak	82.01	53	P	P	05 19 46.0	+1.9
baz=308							
EBL	Broad Law	82.02	337	eP	P	05 19 43.0	-0.6
KBA	Koelnbreinsper	82.09	324	i P	P	05 19 44.9	+0.6
comp=Z,51nm,1.8s,SNR=16							
LAO	LASA Array	82.11	37	IAMs_20	IAMs_20	05 55 52.2	
comp=Z,8µm,19.0s							
LAO	LASA Array	82.11	37	P	P	05 19 44.9	+0.6
baz=314							
LAO	LASA Array	82.11	37	P	P	05 19 44.6	+0.3
baz=314							
CWC	Cottonwood Cre	82.17	51	P	P	05 19 45.1	+0.1
baz=308							
OHR	Ohrid	82.17	315	i P	P	05 19 48.5	+3.7
PDG	Podgorica	82.18	317	⇑P	P	05 19 41.5	-3.2
LJU	Ljubljana	82.23	322	eP	P	05 19 45.6	+0.7
LJU				ePP	PP	05 22 52.0	-0.6
LJU				eS	S	05 29 59.6	-0.5
LJU				e		05 40 44.2	
AHID	Auburn Hatcher	82.24	42	P	P	05 19 45.9	+0.6
AHID				IAMs_20	IAMs_20	06 01 17.0	
comp=Z,9µm,19.0s							
MYKA	Terra Mystica	82.26	323	i P	P	05 19 45.1	0.0
comp=Z,45nm,1.7s,SNR=9.4							
GRAC	Grapevine Rang	82.27	50	P	P	05 19 45.9	+0.6
GRAC				IAmb	IAmb	05 20 04.2	
comp=Z,107nm,1.1s							
GRAC	Grapevine Rang	82.27	50	P	P	05 19 46.6	+1.2
baz=309,SNR=23							
LAWE	Loch Awe, Argy	82.35	338	eP	P	05 19 45.2	-0.1
LAWE				IAmb	IAmb	05 19 48.9	
comp=Z,325nm,1.9s							
LAWE				IAMs_20	IAMs_20	05 58 09.1	
comp=Z,17µm,16.0s							
SANT	Santorini	82.38	309	IAMs_20	IAMs_20	05 57 21.5	
comp=Z,12µm,19.0s							
ISA	Isabella, Lake	82.40	52	P	P	05 19 46.1	+0.1
ISA	Isabella, Lake	82.40	52	P	P	05 19 46.1	+0.1
ISA				pmax	pmax		
comp=Z,28nm,1.2s							
ISA	Isabella, Lake	82.40	52	P	P	05 19 46.1	+0.1
baz=308,SNR=12							
EKA	Eskdalemuir Ar	82.43	337	LR	LR	05 59 45.0	
comp=Z,8µm,18.3s,baz=40,slow=38							
PGBU	Glenifferbraes	82.44	338	eP	P	05 19 45.9	+0.1
PGBU				IAmb	IAmb	05 19 49.7	
comp=Z,449nm,1.8s							
PGBU				IAMs_20	IAMs_20	05 58 33.7	
comp=Z,17µm,14.8s							
ESK	Eskdalemuir	82.45	337	eP	P	05 19 45.8	-0.1
ESK				IAmb	IAmb	05 19 49.4	
comp=Z,296nm,2.0s							
ESK				IAMs_20	IAMs_20	06 05 16.8	
comp=Z,17µm,12.6s							
ESK	Eskdalemuir	82.45	337	P	P	05 19 45.5	-0.3
ESK				IAmb	IAmb	05 19 49.9	
comp=Z,266nm,2.0s							
ESK	Eskdalemuir	82.45	337	IAMs_20	IAMs_20	05 58 14.3	
comp=Z,12µm,19.0s							
ESK	Eskdalemuir	82.45	337	P	P	05 19 45.5	-0.3
ESK				pmax	pmax		
comp=Z,266nm,2.0s							
ESK				MLR	MLR		
comp=Z,12µm,19.0s							
CADS	Cadrg	82.49	323	eP	P	05 19 46.5	+0.2
CADS				e		05 35 27.6	
ARVC	Arvin	82.50	52	P	P	05 19 48.0	+1.5
baz=308							
KBN	Korca	82.50	315	P	P	05 19 46.0	-0.5
KBN				IAmb	IAmb	05 20 02.6	
comp=Z,121nm,1.3s							
KBN	Korca	82.50	315	P	P	05 19 46.0	-0.5
KBN				pmax	pmax		
comp=Z,121nm,1.3s							
R11A	Troy Canyon, C	82.51	48	P	P	05 19 47.0	+0.3
R11A				IAmb	IAmb	05 19 55.2	
comp=Z,133nm,1.6s							
R11A	Troy Canyon, C	82.51	48	P	P	05 19 47.0	+0.3
baz=310							
HWUT	Hardware Ranch	82.75	43	IAMs_20	IAMs_20	06 01 36.6	
comp=Z,9µm,18.0s							
WATA	Walderalm	82.75	325	eP	P	05 19 48.5	+0.7
comp=Z,28nm,1.4s							
BTNL	Ternell	82.78	329	dP	P	05 19 49.0	+1.4
MPMC	Manual Prospec	82.78	51	P	P	05 19 49.6	+1.4
baz=309,SNR=25							
WTTA	Wattenberg	82.78	324	i P	P	05 19 48.1	+0.1
comp=Z,38nm,1.1s,SNR=9.3							
BEBN	Eben Emael	82.80	330	dP	P	05 19 49.6	+1.9
MEM	Membach	82.81	330	dP	P	05 19 48.9	+1.1
FURC	Furnace Creek,	82.92	50	P	P	05 19 49.7	+1.2
baz=309,SNR=46							
DUG	Dugway, Tooele	82.97	45	P	P	05 19 49.4	+0.4
DUG				IAmb	IAmb	05 19 57.6	
comp=Z,81nm,1.3s							
DUG				IAMs_20	IAMs_20	05 55 44.4	
comp=Z,8µm,21.0s							
DUG	Dugway, Tooele	82.97	45	P	P	05 19 49.4	+0.4
DUG				pmax	pmax		
comp=Z,81nm,1.3s							
DUG				MLR	MLR		
comp=Z,8µm,21.0s							
DUG	Dugway, Tooele	82.97	45	P	P	05 19 50.6	+1.6
baz=311							
MOTA	Moosalm	82.97	325	eP	P	05 19 49.2	+0.3
comp=Z,50nm,1.6s							
TPNV	Topopah Spring	82.99	49	P	P	05 19 48.7	-0.6
TPNV				IAmb	IAmb	05 20 07.7	
comp=Z,117nm,1.1s							
TPNV				IAMs_20	IAMs_20	05 49 12.4	
comp=Z,8µm,21.0s							
TPNV	Topopah Spring	82.99	49	P	P	05 19 48.7	-0.6
TPNV				pmax	pmax		
comp=Z,117nm,1.2s							
TPNV	Topopah Spring	82.99	49	P	P	05 19 49.3	+0.1
baz=309							
BHOU	Houvegnez	83.00	329	dP	P	05 19 49.6	+0.8
BSTI	Sart Tilman	83.01	330	dP	P	05 19 50.6	+1.8
SQTA	Sankt Quirin	83.01	325	eP	P	05 19 49.2	+0.1
comp=Z,14nm,0.8s							
LRMC	Laurel Mtn Rad	83.02	51	P	P	05 19 49.6	+0.2
baz=309,SNR=23							
RETA	Reutte	83.03	325	i P	P	05 19 49.3	+0.2
comp=Z,59nm,1.2s,SNR=14							
BW06	Boulder Array	83.08	42	IAMs_20	IAMs_20	05 57 37.2	
comp=Z,9µm,21.0s							
BW06	Boulder Array	83.08	42	P	P	05 19 49.3	-0.4
baz=313							
PD31	Pinedale Array	83.08	42	P	P	05 19 49.1	-0.6
PDAR	Pinedale Array	83.08	42	P	P	05 19 49.5	-0.2
comp=Z,5.8nm,0.8s,baz=290,slow=1.3,SNR=31							
PDAR				PKKPbc	PKKPbc	05 38 09.4	-1.0
comp=Z,0.8nm,0.9s,baz=131,slow=2.1,SNR=4.1							
PDAR				LR	LR	05 57 36.3	
comp=Z,6µm,21.4s,baz=344,slow=36							
comp=Z,5.8nm,0.8s							
PDAR	Pinedale Array	83.08	42	P	P	05 19 49.7	0.0
EDW2	Edwards Air Fo	83.19	52	P	P	05 19 50.3	+0.2
baz=309,SNR=27							
GWY	Greenwater Val	83.21	50	P	P	05 19 50.1	-0.3
GWY				IAmb	IAmb	05 20 08.6	
comp=Z,110nm,1.2s							
QSM	Queen of Sheba	83.23	50	P	P	05 19 50.4	+0.1
QSM				IAmb	IAmb	05 20 23.1	
comp=Z,80nm,1.0s							
MSEY	Mahe Island	83.23	259	IAMs_20	IAMs_20	05 54 22.0	
comp=Z,12µm,22.0s							
CTU	Camp Tracy	83.25	44	P	P	05 19 51.1	+0.6
GAL1	Galloway	83.31	337	eP	P	05 19 49.7	-0.6
GAL1				IAMs_20	IAMs_20	06 02 27.6	
comp=Z,14µm,15.9s							
BGES	Gesves	83.36	330	dP	P	05 19 50.0	-0.7
comp=Z,14nm,1.2s							
FETA	Feichten	83.38	325	eP	P	05 19 51.0	0.0
comp=Z,23nm,1.0s							
IDI	Anoyia	83.41	309	IAMs_20	IAMs_20	05 58 08.0	
comp=Z,9µm,20.0s							
PSUT	Pine Spring	83.44	47	P	P	05 19 51.9	+0.4
PSUT				IAmb	IAmb	05 20 00.0	
comp=Z,77nm,1.3s							
PRN	Pahroc Range	83.44	48	P	P	05 19 52.4	+0.9
PRN				IAmb	IAmb	05 20 00.2	
comp=Z,118nm,1.5s							
WLF	Walferdange	83.47	329	dP	P	05 19 53.3	+2.1
PASC	Pasadena Art C	83.51	53	IAMs_20	IAMs_20	05 49 59.2	
comp=Z,13µm,22.0s							
URZ	Urewera	83.53	147	P	P	05 19 53.6	+2.1
comp=Z,16nm,0.9s,baz=0.0,slow=2.0,SNR=3.3							
URZ				LR	LR	05 53 17.5	
comp=Z,4µm,20.9s,baz=50,slow=33							
comp=Z,16nm,0.9s							
BMRD	Maredsous	83.56	330	dP	P	05 19 51.5	-0.2
CLGH	Cloghs, Cushen	83.56	338	eP	P	05 19 51.1	-0.5
CLGH				IAmb	IAmb	05 19 55.2	
comp=Z,405nm,1.9s							
CLGH				IAMs_20	IAMs_20	06 02 50.4	
comp=Z,14µm,12.5s							
DAVA	Damuels	83.59	325	i P	P	05 19 52.4	+0.3
comp=Z,89nm,1.1s,SNR=18							
SNF	Seneffe	83.59	330	dP	P	05 19 52.0	+0.1
SHOC	Shoshone, Teco	83.64	50	P	P	05 19 53.7	+1.3
baz=310,SNR=16							
GSC	Goldstone, Bar	83.68	51	P	P	05 19 53.6	+0.9
baz=309,SNR=29							
IVI	Ivigtut	83.73	1	eP	P	05 19 54.1	+1.8
IVI				IAmb	IAmb	05 20 02.8	
comp=Z,100nm,1.2s							
DOU	Dourbes	83.78	330	dP	P	05 19 52.8	-0.1
comp=Z,13nm,1.3s							
BFSC	Mount Baldy Ra	83.81	52	P	P	05 19 54.3	+0.9
baz=309,SNR=12							
CIS	Catalina Islan	83.83	53	P	P	05 19 56.1	+2.7
baz=309							
DAVOX	Davos/Dischmat	83.96	325	LR	LR	05 59 24.6	
comp=Z,21µm,19.2s,baz=48,slow=37							
IDGL	Inch Island, C	83.99	339	eP	P	05 19 53.9	+0.1
BKZ	Black Stump Fm	84.01	148	P	P	05 19 54.0	0.0
BKZ				IAmb	IAmb	05 20 04.2	
comp=Z,96nm,1.2s							
BKZ	Black Stump Fm	84.01	148	P	P	05 19 55.4	+1.4
ULM	Lac du Bonnet	84.10	29	P	P	05 19 54.1	-0.4
comp=Z,52nm,1.0s,baz=322,slow=5.5,SNR=26							
ULM				LR	LR	05 59 49.3	
comp=Z,6µm,18.6s,baz=330,slow=37							
comp=Z,52nm,1.0s							
TUQ	Turquoise Moun	84.16	50	P	P	05 19 56.8	+1.6
baz=310,SNR=39							
ATD	Arta Tunnel	84.21	280	LR	LR	05 59 03.9	
comp=Z,5µm,21.1s,baz=57,slow=37							
ATD	Arta Tunnel	84.21	280	IAMs_20	IAMs_20	06 02 14.5	
comp=Z,7µm,18.0s							
GMM	Mts of Mourne	84.23	338	eP	P

comp=Z,19µm,15.5s
GMRC Granite Mounta 84.74 51 P P 05 19 59.4 +1.3
baz=310
K22A Casper 84.78 40 P P 05 19 59.1 +0.8
K22A Casper 84.78 40 P P 05 19 58.6 +0.3
baz=315
K22A Casper 84.78 40 P P 05 19 57.6 -0.7
baz=315
E28A Huff 84.82 34 P P 05 20 00.0 +1.8
baz=318
PFO Pinyon Flats O 84.97 52 LR LR 05 51 19.8
comp=Z,12µm,21.9s,baz=297,slow=31
PFO Pinyon Flats O 84.97 52 P P 05 20 00.3 +1.0
PFO IAmb IAmb 05 20 11.2
comp=Z,120nm,1.6s
PFO Pinyon Flats O 84.97 52 IAMs_20 IAMs_20 05 50 55.1
comp=Z,15µm,22.0s
PFO Pinyon Flats O 84.97 52 P P 05 20 00.4 +1.0
PFO pmax pmax
comp=Z,120nm,1.6s
PFO Pinyon Flats O 84.97 52 P P 05 20 00.4 +1.0
baz=310,SNR=26
TPFO Pinon Flats 84.98 52 P P 05 20 00.5 +1.1
baz=310,SNR=33
109C Camp Elliot, M 85.01 53 IAMs_20 IAMs_20 05 50 49.1
comp=Z,7µm,21.0s
RSSD Black Hills 85.01 38 IAMs_20 IAMs_20 05 56 48.1
comp=Z,10µm,22.0s
RSSD Black Hills 85.01 38 P P 05 20 00.8 +1.3
baz=316
RSSD Black Hills 85.01 38 P P 05 20 00.3 +0.8
baz=316
BELC Belle Mtn. Jos 85.02 52 P P 05 20 00.5 +0.9
baz=310,SNR=18
STRD Stroud 85.03 334 *e*P **P 05 19 58.5 -0.6**
STRD IAMs_20 IAMs_20 06 02 17.6
comp=Z,19µm,14.2s
RWWY Rawlins 85.09 41 P P 05 19 59.5 -0.5
RWWY IAMs_20 IAMs_20 05 57 44.3
comp=Z,8µm,22.0s
SWN1 Swindon 85.11 334 *e*P **P 05 19 59.1 -0.5**
SWN1 IAMs_20 IAMs_20 06 04 31.3
comp=Z,20µm,15.4s
MCH1 Michaelchurch 85.14 335 *e*P **P 05 19 58.7 -1.0**
MCH1 IAmb IAmb 05 20 03.0
comp=Z,423nm,1.8s
MCH1 IAMs_20 IAMs_20 05 59 35.0
comp=Z,17µm,16.3s
JCZ Jackson Bay 85.24 156 P P 05 20 01.5 +1.4
LPW Lampeter 85.41 335 *e*P **P 05 20 01.2 +0.2**
MONP2 Monument Peak 85.45 53 P P 05 20 02.7 +0.8
baz=310,SNR=10
IRM Iron Mountain 85.47 51 P P 05 20 02.7 +1.0
baz=310,SNR=18
BC3 Big Chuckawall 85.59 51 P P 05 20 03.7 +1.3
baz=310,SNR=12
O20A White River Ci 85.60 43 P P 05 20 02.2 -0.3
O20A White River Ci 85.60 43 P P 05 20 03.1 +0.6
baz=314
AGMN Agassiz Nation 85.63 31 IAMs_20 IAMs_20 06 01 44.1
comp=Z,7µm,19.0s
AGMN Agassiz Nation 85.63 31 P P 05 20 02.0 -0.3
baz=321
AGMN Agassiz Nation 85.63 31 P P 05 20 02.5 +0.3
baz=321
CBX Cerro Bola 85.66 53 P P 05 20 02.8 0.0
RPZ Rata Peaks 85.72 154 P **P 05 20 03.8 +1.5**
comp=Z,7.4nm,0.5s,baz=107,slow=9.6,SNR=3.8
comp=Z,7.4nm,0.5s
TIP Timpagrande 85.77 316 ||P **P 05 20 04.9 +1.8**
RSBS Rosebush, Pemb 85.77 336 *e*P **P 05 20 02.2 -0.6**
RSBS IAmb IAmb 05 20 06.1
comp=Z,239nm,1.8s
IKP In-Ko-Pah, Jac 85.81 53 P P 05 20 04.9 +1.4
baz=310,SNR=9.5
SWSC Sam W. Stewart 85.82 52 P P 05 20 05.7 +2.3
baz=310
PDMCI Parker Dam,Lak 86.00 50 P P 05 20 05.9 +1.5
baz=311,SNR=8.8
IWEX Carrickbyrne, 86.08 337 *e*P **P 05 20 04.4 +0.1**
PHWY Pilot Hill 86.30 40 P P 05 20 06.2 +0.2
PHWY IAmb IAmb 05 20 17.8
comp=Z,116nm,1.9s
PHWY IAMs_20 IAMs_20 05 58 50.2
comp=Z,6µm,20.0s
N23A Red Feather La 86.32 41 P P 05 20 08.3 +2.2
baz=315
ROCAM Rodrigues Isla 86.34 243 IAMs_20 IAMs_20 05 55 22.6
comp=Z,10µm,20.0s
GLA Glamis 86.38 52 P P 05 20 09.3 +3.1
baz=310
B35A Bob, Littlefor 86.46 30 P P 05 20 07.4 +1.1
baz=323
SSF Saint Saulge 86.60 329 *e*P **P 05 20 07.2 +0.2**
SSF pmax pmax
comp=Z,32nm,1.6s
DYA Yadsworthy 86.76 334 *e*P **P 05 20 07.2 -0.5**
DYA IAmb IAmb 05 20 10.8
comp=Z,320nm,1.7s
DYA IAMs_20 IAMs_20 05 56 39.8
comp=Z,26µm,21.1s
WUAZ Wupatki 86.91 48 IAMs_20 IAMs_20 05 48 30.1
comp=Z,6µm,19.0s
WUAZ Wupatki 86.91 48 P P 05 20 10.3 +1.3
baz=312
SMCO Snowmass 86.97 43 IAMs_20 IAMs_20 05 59 50.2
comp=Z,8µm,22.0s
ISCO Idaho Springs 87.28 42 S S 05 30 46.6 -4.6
baz=315
F33A 5 Mile Ranch, 87.36 32 P P 05 20 12.1 +1.4
baz=321
CCA1 Carnmenellis 87.42 335 *e*P **P 05 20 10.1 -0.8**
CCA1 IAmb IAmb 05 20 14.3
comp=Z,320nm,1.8s
CCA1 IAMs_20 IAMs_20 06 02 21.2
comp=Z,18µm,14.5s
MVCO Mesa Verde 87.47 45 P P 05 20 12.6 +0.8
MVCO IAmb IAmb 05 20 30.0
comp=Z,71nm,1.2s
MVCO IAMs_20 IAMs_20 05 58 45.9
comp=Z,7µm,21.0s
MVCO Mesa Verde 87.47 45 P P 05 20 13.2 +1.5
baz=314
SSB Saint Sauveur 87.53 327 IAMs_20 IAMs_20 05 57 07.1
comp=Z,12µm,20.0s
EYMN Ely 87.68 29 IAMs_20 IAMs_20 06 04 34.1
comp=Z,11µm,18.0s
EYMN Ely 87.68 29 P P 05 20 11.3 -0.9
baz=324,SNR=8.4
EYMN S **S 05 30 47.3 -6.8**
baz=324
EYMN Ely 87.68 29 P P 05 20 13.1 +0.9
baz=324
ANKE Ethiopia-Afar 87.82 280 *e*P **P 05 20 11.2 -2.8**
ANKE *e*S S 05 31 07.0 +10
S22A 4UR Ranch, Cre 88.05 44 P P 05 20 15.8 +1.2
baz=315
Q24A Divide 88.12 42 P P 05 20 16.8 +1.8
baz=316
OGNE Ogallala 88.34 39 IAMs_20 IAMs_20 06 03 18.2
comp=Z,7µm,20.0s
OGNE Ogallala 88.34 39 P P 05 20 16.2 +0.5
baz=318
OGNE Ogallala 88.34 39 P P 05 20 16.6 +1.0
baz=318
214A Organ Pipe Nat 88.38 51 P P 05 20 18.8 +2.9
baz=312
SCHQ Schefferville 88.40 12 P P 05 20 16.7 +1.1
comp=Z,34nm,1.0s,baz=2.3,slow=5.4,SNR=12
SCHQ LR LR 06 02 35.5
comp=Z,14µm,19.3s,baz=352,slow=38
comp=Z,34nm,1.0s
F36A Milaca 88.54 31 S S 05 31 03.8 +1.5
baz=323
E38A The Farm, Brul 88.74 29 S S 05 31 10.2 +5.9
baz=324
SDCO Great Sand Dun 88.80 43 P P 05 20 17.8 -0.3
baz=315
SDCO S **S 05 31 02.9 -2.8**
baz=315
SDCO Great Sand Dun 88.80 43 P P 05 20 19.5 +1.4
baz=315
ECSD EROS Data Cent 88.86 34 IAMs_20 IAMs_20 06 06 07.6
comp=Z,11µm,19.0s
ECSD EROS Data Cent 88.86 34 P P 05 20 18.0 0.0
baz=321
ECSD EROS Data Cent 88.86 34 P P 05 20 19.0 +1.1
baz=321
AAE Adis Abeba 88.93 280 *e*P **P 05 20 18.4 -0.7**
AAE *e*S **S 05 31 00.0 -7.6**
AAE IAMs_20 IAMs_20 05 37 45.0
comp=E,4µm,19.0s
AAE IAMs_20 IAMs_20 05 40 24.5
comp=N,20µm,55.5s
AAE Adis Abeba 88.93 280 *e*P **P 05 20 18.4 -0.7**
AAE *e*S **S 05 31 00.0 -7.6**
AAE IAMs_20 IAMs_20 05 37 45.0
comp=E,4µm,19.0s
AAE IAMs_20 IAMs_20 05 40 24.5
comp=N,20µm,55.5s
AAE Adis Abeba 88.93 280 *e*P **P 05 20 18.4 -0.7**
AAE Adis Abeba 88.93 280 *e*P **P 05 20 20.5 +1.4**
AAE *e*S **S 05 31 16.3 +8.7**
FURI Furi 89.07 280 IAMs_20 IAMs_20 06 04 13.3
comp=Z,11µm,20.0s
FURI Furi 89.07 280 *e*P **P 05 20 20.3 +0.6**
FURI *e*S **S 05 31 02.2 -6.8**
FURI IAMs_20 IAMs_20 05 37 46.8
comp=Z,4µm,18.3s
FURI IAMs_20 IAMs_20 05 37 47.3
comp=Z,2µm,17.2s
FURI Furi 89.07 280 *e*P **P 05 20 20.3 +0.6**
FURI *e*S **S 05 31 02.2 -6.8**
FURI IAMs_20 IAMs_20 05 37 46.8
comp=Z,4µm,18.3s
FURI IAMs_20 IAMs_20 05 37 47.3
comp=Z,2µm,17.2s
FURI Furi 89.07 280 *e*P **P 05 20 20.5 +0.7**
FURI *e*S **S 05 31 04.7 -4.3**
SPMN Marine on St. 89.35 31 P **P 05 20 21.7 +1.4**
baz=324
SPMN S **S 05 31 11.3 +1.3**
baz=324
SPMN Marine on St. 89.35 31 P **P 05 20 21.6 +1.4**
baz=324
TUC Tucson 89.43 50 P **P 05 20 24.1 +3.2**
baz=313
LFF La Frestale 89.46 329 *e*P **P 05 20 21.3 +0.6**
LFF pmax pmax
comp=Z,114nm,2.0s
D41A Chassel 89.53 27 P **P 05 20 22.4 +1.4**
baz=327
D41A S **S 05 31 08.8 -2.8**
baz=327
PPT Papeete 89.56 112 LR LR 05 55 05.0
comp=Z,5µm,20.2s,baz=303,slow=32
PPT2 Papeete2 89.57 112 *e*LR LR 05 48 53.4
comp=Z,16µm,27.5s
PPT2 *e*LR LR 05 48 53.6
comp=Z,24µm,27.0s
T25A Trinidad 89.84 43 P **P 05 20 24.3 +1.4**
baz=316
I37B Waseca 90.06 32 P **P 05 20 24.1 +0.5**
baz=323
COWI Conover 90.11 28 S **S 05 31 16.6 -0.6**
baz=326
ANMO Albuquerque 90.23 46 P **P 05 20 27.0 +2.2**
comp=Z,8.5nm,1.0s,baz=275,slow=3.4,SNR=25
comp=Z,8.5nm,1.0s
ANMO Albuquerque 90.23 46 IAMs_20 IAMs_20 06 00 15.7
comp=Z,7µm,20.0s
ANMO Albuquerque 90.23 46||*e*P **P 05 20 24.9 +0.1**
ANMO Albuquerque 90.23 46 P **P 05 20 25.3 +0.5**
baz=315
ANMO S **S 05 31 17.1 -1.9**
baz=315
ANMO Albuquerque 90.23 46 P **P 05 20 27.2 +2.4**
baz=315
G40A Rib Lake 90.38 29 P **P 05 20 26.3 +1.3**
baz=326,SNR=16
G40A S **S 05 31 18.8 -0.8**
baz=326
Y22D IRIS PASSCAL I 90.57 46 IAMs_20 IAMs_20 05 54 25.8
comp=Z,6µm,21.0s
Y22A Socorro 90.64 47 P **P 05 20 27.5 +0.8**
baz=315,SNR=12
BNM Barren Site 90.69 46 P **P 05 20 27.2 +0.3**
CBKS Cedar Bluff 91.10 39 IAMs_20 IAMs_20 06 08 35.4
comp=Z,10µm,18.0s
CBKS Cedar Bluff 91.10 39 P **P 05 20 28.8 +0.2**
baz=319
121A Cookes Peak, D 91.12 48 P **P 05 20 28.9 0.0**
baz=314,SNR=16
121A Cookes Peak, D 91.12 48 P **P 05 20 30.9 +2.0**
baz=314
I40A Norwalk 91.34 30 P **P 05 20 31.3 +1.7**
baz=325
N35A Tabor 91.55 35 P **P 05 20 32.1 +1.6**
baz=322
SCIA State Center 91.83 33 IAMs_20 IAMs_20 06 02 24.4
comp=Z,9µm,21.0s
SCIA State Center 91.83 33 S **S 05 31 31.0 -2.0**
baz=323
TAOE Nuku Hiva Isla 91.85 99 *e*LR LR 05 49 56.4
comp=Z,18µm,30.3s
R32A Long Quarter, 91.92 39 P **P 05 20 34.7 +2.4**
baz=320
R32A S **S 05 31 33.5 -0.5**
baz=320
H43A Windswept, Lux 92.01 28 S **S 05 31 31.7 -2.7**
baz=327
I42A Draeger Farm, 92.04 29 S **S 05 31 33.9 -0.8**
baz=326
JFWS Jewell Farm 92.30 31 IAMs_20 IAMs_20 06 05 39.5
comp=Z,10µm,19.0s
JFWS Jewell Farm 92.30 31 S **S 05 31 33.1 -4.0**
baz=325
G45A Suttons Bay 92.32 27 S **S 05 31 37.8 +0.6**
baz=329
G45A S **S 05 31 37.8 +0.6**
baz=329
KEST Kesra 92.36 318 P **P 05 20 36.8 +2.3**
comp=Z,5.0nm,1.1s,baz=336,slow=13,SNR=2.8
KSU1 Kansas State U 92.45 37 P **P 05 20 35.8 +1.1**
baz=321
KSU1 Kansas State U 92.45 37 P **P 05 20 36.0 +1.3**
baz=321
L40A Anamosa 92.58 32 P **P 05 20 35.6 +0.4**
baz=325,SNR=7.1
L40A S **S 05 31 38.8 -0.9**
baz=325
N38A Joes South For 92.72 34 P **P 05 20 36.7 +0.8**
baz=323
N38A S **S 05 31 41.1 +0.2**
baz=323
RER Riviere de l'E 92.83 246 IAMs_20 IAMs_20 06 00 24.7
comp=Z,9µm,20.0s
GLMI Grayling 92.89 26 IAMs_20 IAMs_20 06 06 42.8
comp=Z,8µm,20.0s
AMTX Amarillo 92.99 43 P **P 05 20 37.3 -0.2**
baz=318,SNR=7.1
AMTX S **S 05 31 45.5 +1.8**
baz=318
AMTX Amarillo 92.99 43 P **P 05 20 39.4 +2.0**
baz=318
MSTX Muleshoe 93.05 44 P **P 05 20 36.4 -1.3**
baz=317,SNR=8.4
MSTX S **S 05 31 43.8 -0.5**
baz=317
MSTX Muleshoe 93.05 44 P **P 05 20 40.1 +2.4**
baz=317
TBI Tubuai 93.13 116 *e*LR LR 05 50 31.4
comp=Z,12µm,32.5s
TBI *e*LR LR 05 50 31.7
comp=Z,198µm,22.5s
OK035 E0210 Rd and N 93.23 40 IAMs_20 IAMs_20 06 07 26.7
comp=Z,8µm,18.0s
K43A Burlington 93.26 30 S **S 05 31 44.9 -0.8**
baz=327
OK038 West end E0370 93.38 40 IAMs_20 IAMs_20 06 11 17.8
comp=Z,8µm,18.0s
OK032 Salt Plains WL 93.41 39 IAMs_20 IAMs_20 06 06 46.6
comp=Z,5µm,18.0s
HTMS Hat Mesa 93.64 46 P **P 05 20 41.1 +0.7**
J47A Sunmer 94.18 27 S **S 05 31 55.1 +1.4**
baz=329
J47A S **S 05 31 55.1 +1.4**
baz=329
T35B Sooner Cattle 94.20 38 P **P 05 20 43.9 +1.1**
baz=321,SNR=9.1
T35B S **S 05 31 53.0 -1.1**
baz=321
P40A Paris 94.27 34 P **P 05 20 44.0 +0.9**
baz=324,SNR=11
P40A S **S 05 31 54.6 0.0**
baz=324
OK048 Pawnee Station 94.36 39 IAMs_20 IAMs_20 06 11 39.7
comp=Z,9µm,19.0s
OK029 Liberty Lake 94.58 40 IAMs_20 IAMs_20 06 11 48.4
comp=Z,10µm,18.0s
WMOK Wichita Mounta 94.68 41 IAMs_20 IAMs_20 06 11 40.3
comp=Z,6µm,18.0s
WMOK Wichita Mounta 94.68 41 P **P 05 20 45.1 0.0**
baz=320,SNR=11
WMOK Wichita Mounta 94.68 41 P **P 05 20 47.4 +2.3**
baz=320
SADO Sadowa 94.80 23 LR LR 06 06 10.3
comp=Z,11µm,20.0s,baz=0.5,slow=37
OK025 Westminster Rd 94.80 40 IAMs_20 IAMs_20 06 11 54.4
comp=Z,10µm,18.0s
LODK Lodwar 94.92 278 IAMs_20 IAMs_20 06 04 30.5
comp=Z,7µm,21.0s
LODK Lodwar 94.92 278 *e*P P 05 20 36.3 -10
LODK *e*S **SKSac 05 31 22.1 -0.6**
LODK IAMs_20 IAMs_20 05 38 42.5
comp=N,1µm,14.5s
LODK IAMs_20 IAMs_20 05 39 04.6
comp=E,3µm,36.6s
LODK Lodwar 94.92 278 *e*P P 05 20 36.3 -10
LODK *e*S **SKSac 05 31 22.1 -0.6**
LODK IAMs_20 IAMs_20 05 38 42.5
comp=N,1µm,14.5s
LODK IAMs_20 IAMs_20 05 39 04.6
comp=E,3µm,36.6s
LODK Lodwar 94.92 278 *e*P **P 05 20 48.4 +1.8**
PBRG Braganca 95.10 332 *e*P **P 05 20 47.2 +0.3**
comp=E,53nm,1.8s
PBRG Braganca 95.10 332 *e*S **S 05 32 00.0 -1.9**
R40A Maddies Statio 95.17 35 P **P 05 20 47.1 -0.1**
baz=324
LPIG La Paz 95.26 56 LR LR 05 55 47.9
comp=E,3µm,21.4s,baz=309,slow=30
TUL1 Leonard 95.34 38 IAMs_20 IAMs_20 06 11 48.6
comp=Z,9µm,18.0s
TUL1 Leonard 95.34 38 S **S 05 32 02.2 -1.8**
baz=321
AAM Ann Arbor 95.42 27 IAMs_20 IAMs_20 06 05 37.8
comp=Z,7µm,20.0s
AAM Ann Arbor 95.42 27 S **S 05 32 07.4 +3.0**
baz=330
L48A N Adams 95.44 28 P **P 05 20 49.7 +1.3**
baz=330
L48A P **P 05 20 49.7 +1.3**
baz=330
L48A S **S 05 32 06.2 +1.5**
baz=330
L48A S **S 05 32 06.2 +1.5**
baz=330
PGAV Gavieira, Arco 95.55 333 *e*S **S 05 32 10.1 +4.2**
PGAV Gavieira, Arco 95.55 333 *e*LQ LQ 05 46 18.5
PGAV *e*LR LR 05 53 02.6
comp=Z,21µm,18.0s
U38A Gravette 95.63 37 P **P 05 20 50.3 +0.9**
baz=322
MVO Moncorvo 95.76 331 *e*P **P 05 20 51.1 +1.1**
comp=Z,47nm,1.8s
MVO Moncorvo 95.76 331 *e*S **S 05 32 10.8 +3.1**
MVO Moncorvo 95.76 331 *e*LQ LQ 05 46 36.6
MVO *e*LR LR 05 56 08.6
comp=Z,19µm,18.0s
ESDC Sonseca Array 95.77 329 P **P 05 20 50.2 +0.3**
comp=Z,0.7nm,0.6s,baz=329,slow=1.7,SNR=7.9
ESDC PP **PP 05 24 39.5 -1.2**
comp=Z,3.5nm,1.1s,baz=23,slow=6.3,SNR=4.1
ESDC LR LR 06 06 49.2
comp=Z,14µm,18.5s,baz=24,slow=37
comp=Z,0.7nm,0.6s
CCM Cathedral Cave 95.83 34 IAMs_20 IAMs_20 06 08 34.3
comp=Z,8µm,19.0s
CCM Cathedral Cave 95.83 34 P **P 05 20 51.4 +1.1**
baz=325
CCM Cathedral Cave 95.83 34 P **P 05 20 51.5 +1.2**
baz=325
POLO Lamas de Olo 95.88 332 *e*P **P 05 20 50.9 +0.4**
comp=Z,28nm,1.8s
POLO Lamas de Olo 95.88 332 *e*S **S 05 32 14.4 +5.7**
TX31 Lajitas Ar. Si 95.88 48 P **P 05 20 51.3 +0.5**
baz=316
TX32 Lajitas Array 95.88 48 P **P 05 20 50.7 -0.1**
TX32 IAmb IAmb 05 21 02.9
comp=Z,79nm,1.6s
TXAR Lajitas Array 95.88 48 P **P 05 20 51.2 +0.5**
comp=Z,12nm,0.9s,baz=299,slow=2.1,SNR=38
TXAR PP **PP 05 24 42.9 +0.7**
comp=Z,1.2nm,0.8s,baz=299,slow=5.6,SNR=2.7
TXAR PKKP **PKKPbc 05 37 39.8 +1.2**
comp=Z,0.8nm,0.8s,baz=125,slow=6.3,SNR=4.9
comp=Z,12nm,0.9s
TXAR Lajitas Array 95.88 48 P **P 05 20 50.7 -0.1**
HHAR Hobbs 95.97 37 P **P 05 20 51.5 +0.5**
baz=323
KMBO Kilima Mbogo 96.01 273 LR LR 06 04 36.1
comp=Z,176nm,20.8s,baz=44,slow=36
KMBO Kilima Mbogo 96.01 273 IAMs_20 IAMs_20 06 06 59.5
comp=Z,8µm,20.0s
KMBO Kilima Mbogo 96.01 273 *e*P **P 05 20 54.2 +2.5**
KMBO *e*S **SKSac 05 31 28.8 -0.1**
KMBO IAMs_20 IAMs_20 05 33 49.5
comp=Z,973nm,12.0s
KMBO IAMs_20 IAMs_20 05 33 53.5
comp=Z,1µm,35.9s
KMBO Kilima Mbogo 96.01 273 *e*P **P 05 20 54.2 +2.5**
KMBO *e*S **SKSac 05 31 28.8 -0.1**
KMBO IAMs_20 IAMs_20 05 33 49.5
comp=Z,973nm,12.0s
KMBO IAMs_20 IAMs_20 05 33 53.5
comp=Z,1µm,35.9s
KMBO Kilima Mbogo 96.01 273 *e*P **P 05 20 53.0 +1.3**
KMBO *e*S **SKSac 05 31 37.2 +8.4**
KIBK Kibwezi 96.06 271 IAMs_20 IAMs_20 06 04 56.2
comp=Z,7µm,20.0s
MGMO Mountain Grove 96.08 35 P **P 05 20 50.6 -0.8**
O48B Farmland 96.60 29 S **S 05 32 18.8 +4.0**
baz=329
MTE Manteigas 96.62 331 *e*P **P 05 20 54.5 +0.6**
comp=Z,39nm,1.6s
MTE Manteigas 96.62 331 *e*S **S 05 32 14.6 -0.5**
MTE Manteigas 96.62 331 *e*LQ LQ 05 46 54.6
MTE *e*LR LR 05 55 57.3
comp=Z,16µm,16.0s
M52A Chesterland 96.92 26 S **S 05 32 19.6 +2.0**
baz=332
M52A S **S 05 32 19.6 +2.0**
baz=332
PCBR Castelo Branco 97.07 331 *e*P Pdif 05 20 57.1 +1.2
comp=Z,36nm,1.6s
N51A Ashland 97.09 27 S **S 05 32 21.4 +2.3**
baz=331
N51A S **S 05 32 21.4 +2.3**
baz=331
PCAS Casmilo, Conde 97.29 332 *e*S **S 05 32 23.2 +2.5**
JCT Junction City 97.32 44 IAMs_20 IAMs_20 05 58 52.3
comp=Z,5µm,21.0s
JCT Junction City 97.32 44 P Pdif 05 20 59.4 +2.1
baz=319
PMRV Marv??o 97.39 331 *e*P Pdif 05 20 57.6 +0.2
comp=Z,43nm,1.7s
PMRV Marv??o 97.39 331 *e*S **S 05 32 22.4 +0.8**
PMRV Marv??o 97.39 331 *e*LQ LQ 05 47 07.3
PMRV *e*LR LR 05 56 56.5
comp=Z,18µm,18.0s
ACSO Alum Creek Sta 97.47 28 IAMs_20 IAMs_20 06 06 51.0
comp=Z,9µm,20.0s
MIAR Mount Ida 97.53 38 IAMs_20 IAMs_20 06 12 55.5
comp=Z,9µm,18.0s
MIAR Mount Ida 97.53 38 P Pdif 05 20 59.6 +1.5
baz=323
N53A Lisbon 97.75 26 S **S 05 32 27.6 +3.0**
baz=332
N53A S **S 05 32 27.6 +3.0**
baz=332
PSBE So Bento 97.87 332 *e*S **S 05 32 29.3 +3.6**
OPO Ambohidratompo 97.88 253 LR LR 06 02 23.2
comp=Z,4µm,20.6s,baz=200,slow=34
PESTR Estremoz 97.95 331 *e*S **S 05 32 28.6 +2.2**
PMTG Montargil 98.03 331 *e*P Pdif 05 21 01.4 +1.2
comp=Z,39nm,1.8s
PMTG Montargil 98.03 331 *e*S **S 05 32 31.2 +4.2**
O53A New Philadelph 98.11 26 IAMs_20 IAMs_20 06 04 50.9
comp=Z,11µm,22.0s
P52A Corning 98.31 27 IAMs_20 IAMs_20 06 07 50.3
comp=Z,8µm,21.0s

PBAR	Barrancos	98.31	330	eS	S		05 32 32.3	+2.8
435B	Jarrell	98.34	43	IAMs_20	IAMs_20		06 10 08.2	
	comp=Z,6μm,18.0s							
PMAFR	Mafra	98.54	332	eS	S		05 32 34.6	+3.2
PNCL	Nicolau / Gran	98.97	331	eS	S		05 32 33.1	-2.0
NATX	Nacogdoches	99.17	40	IAMs_20	IAMs_20		06 14 15.0	
	comp=Z,8μm,18.0s							
PVAQ	Vaqueiros	99.25	330	eS	S		05 32 44.0	+6.5
PVAQ	Vaqueiros	99.25	330	eLQ	LQ		05 48 26.7	
PVAQ				eLR	LR		05 55 27.2	
	comp=Z,16μm,18.0s							
PLAL	Pickwick Lake	99.81	34	IAMs_20	IAMs_20		06 08 41.5	
	comp=Z,8μm,20.0s							
HKT	Hockley	99.94	42	IAMs_20	IAMs_20		06 14 44.4	
	comp=Z,8μm,18.0s							
VOI	Vohitsoka	100.05	250	IAMs_20	IAMs_20		06 04 43.3	
	comp=Z,8μm,21.0s							
TZTN	Tazewell	100.43	30	IAMs_20	IAMs_20		06 06 19.8	
	comp=Z,9μm,22.0s							
VBMS	Vicksburg	100.92	37	IAMs_20	IAMs_20		06 07 58.1	
	comp=Z,7μm,21.0s							
MBAR	Mbarara	101.01	277	IAMs_20	IAMs_20		06 08 12.8	
	comp=Z,8μm,21.0s							
MBAR	Mbarara	101.01	277	eP	Pdif		05 21 18.6	+4.5
TKL	Tuckaleechee C	101.10	30	P	Pdif		05 21 14.5	+0.5
	comp=Z,2.7nm,0.8s,baz=215,slow=12,SNR=1.9							
GOGA	Godfrey	103.16	31	IAMs_20	IAMs_20		06 12 00.2	
	comp=Z,7μm,20.0s							
BRAL	Brewton	103.45	35	IAMs_20	IAMs_20		06 14 36.1	
	comp=Z,7μm,18.0s							
UNM	Universidad Na	105.94	52	IAMs_20	IAMs_20		06 01 44.3	
	comp=Z,9μm,22.0s							
PMOZ	Porto Moniz, M	106.91	335	eSS	SS		05 41 13.0	+2.9
PMOZ				eLQ	LQ		05 50 42.4	
PMOZ				eLR	LR		05 57 49.8	
	comp=Z,8μm,22.0s							
BBSR	BB Station	110.39	17	IAMs_20	IAMs_20		06 15 00.6	
	comp=Z,7μm,20.0s							
TEIG	Tepich	111.79	43	IAMs_20	IAMs_20		06 23 19.5	
	comp=Z,5μm,19.0s							
TORD	Torodi Ar. Bea	113.80	308	PKiKP	PKiKP		05 26 01.9	-1.2
	comp=Z,1.1nm,0.6s,baz=9.2,slow=3.1,SNR=3.3							
TORD				PKKPbc	PKKPbc		05 36 46.1	+1.9
	comp=Z,0.8nm,0.7s,baz=211,slow=4.0,SNR=3.6							
VNDA	Vanda	113.94	174	PKiKP	PKiKP		05 26 01.1	-0.3
	comp=Z,1.0nm,0.8s,baz=311,slow=5.5,SNR=6.9							
VNDA				PP	PP		05 26 54.0	-2.0
	comp=Z,2.8nm,1.1s,baz=337,slow=12,SNR=5.9							
VNDA				PKKPbc	PKKPbc		05 36 44.2	-0.9
	comp=Z,0.4nm,0.6s,baz=177,slow=1.8,SNR=2.3							
MAW	Mawson	115.49	204	PKP	PKPdf		05 26 03.9	-0.6
	comp=Z,2.4nm,0.7s,baz=332,slow=3.7,SNR=8.1							
MAW				PKKPab	PKKPab		05 36 41.1	+0.2
	comp=Z,1.7nm,0.8s,baz=292,slow=5.4,SNR=2.6							
SNET	Serv Nac Est T	116.41	48	IAMs_20	IAMs_20		06 25 32.3	
	comp=Z,5μm,20.0s							
TGUH	Tegucigalpa,Un	117.28	46	IAMs_20	IAMs_20		06 25 15.3	
	comp=Z,5μm,20.0s							
LBTB	Lobatse	118.31	258	PKP	PKPdf		05 26 10.6	-1.0
	comp=Z,5.6nm,0.9s,baz=88,slow=0.7,SNR=5.1							
GTBY	Guantanamo Bay	118.52	31	IAMs_20	IAMs_20		06 22 52.8	
	comp=Z,7μm,19.0s							
MTDJ	Mount Denham	118.94	34	IAMs_20	IAMs_20		06 20 36.3	
	comp=Z,5μm,20.0s							
BOSA	Boshof	120.23	255	PKP	PKPdf		05 26 13.9	-1.2
	comp=Z,2.9nm,0.8s,baz=92,slow=0.1,SNR=6.7							
TSUM	Tsumeb	122.00	268	PKP	PKiKP		05 26 19.3	+0.4
	comp=Z,1.4nm,0.6s,baz=44,slow=3.7,SNR=2.2							
TSUM	Tsumeb	122.00	268	IAMs_E	IAMs_20		06 19 30.2	
	comp=Z,7μm,21.0s							
HDC	Heredia	122.36	46	IAMs_20	IAMs_20		06 27 01.0	
	comp=Z,7μm,20.0s							
HDC	Heredia	122.36	46	eP	PKiKP		05 26 21.2	+1.3
DBIC	Dimbokro	122.89	309	PKP	PKPdf		05 26 19.9	-0.6
	comp=Z,4.0nm,0.7s,baz=34,slow=0.8,SNR=5.7							
DBIC	Dimbokro	122.89	309	PKiKP	PKPdf		05 26 20.0	-0.6
SJG	San Juan	123.52	23	IAMs_20	IAMs_20		06 23 57.7	
	comp=Z,6μm,19.0s							
SMRT	St. Maarten	124.49	20	IAMs_20	IAMs_20		06 23 19.1	
	comp=Z,7μm,21.0s							
SEUS	St. Eustatius	125.04	20	IAMs_20	IAMs_20		06 23 34.8	
	comp=Z,5μm,20.0s							
QSPA	South Pole Qui	125.14	180	IAMs_20	IAMs_20		06 17 48.0	
	comp=Z,3μm,21.0s							
ANWB	Willy Bob	125.19	18	IAMs_20	IAMs_20		06 18 58.7	
	comp=Z,8μm,22.0s							
BCIP	Isla Barro Col	125.47	42	IAMs_20	IAMs_20		06 24 51.9	
	comp=Z,5μm,21.0s							
SACV	Santiago Islan	125.54	333	IAMs_20	IAMs_20		06 23 44.1	
	comp=Z,6μm,18.0s							
RPN	Rapa Nui	126.18	100	IAMs_20	IAMs_20		06 11 45.8	
	comp=Z,4μm,19.0s							
PAYG	Puerto Ayora	126.40	60	IAMs_20	IAMs_20		06 12 23.1	
	comp=Z,7μm,22.0s							
ABD	La Joyeuse, An	126.42	18	IAMs_20	IAMs_20		06 26 06.1	
	comp=Z,4μm,21.0s							
GDHS	Morne Mazeau,	126.54	19	IAMs_20	IAMs_20		06 20 36.3	
	comp=Z,5μm,22.0s							
GDSD	La Dsirade Is	126.68	18	IAMs_20	IAMs_20		06 24 05.0	
	comp=Z,5μm,20.0s							
CBE	Ff, Capester	126.77	19	IAMs_20	IAMs_20		06 26 09.6	
	comp=Z,5μm,21.0s							
MAGL	Barre de l'ile	126.97	18	IAMs_20	IAMs_20		06 27 52.8	
	comp=Z,5μm,20.0s							
SJCC	San Jacinto, C	127.28	37	eP	PKiKP		05 26 31.7	+2.1
HATO	Hato, Curacao	128.00	29	IAMs_20	IAMs_20		06 27 09.9	
	comp=Z,5μm,20.0s							
SVN	Savane Anatole	128.06	19	IAMs_20	IAMs_20		06 22 12.7	
	comp=Z,5μm,22.0s							
FDF	Fort de France	128.17	19	IAMs_20	IAMs_20		06 19 21.6	
	comp=Z,6μm,22.0s							
ILAM	Ilet Lapin Mar	128.20	18	IAMs_20	IAMs_20		06 24 12.4	
	comp=Z,5μm,20.0s							
BIM	Bigot	128.40	19	IAMs_20	IAMs_20		06 22 34.6	
	comp=Z,4μm,21.0s							
MPOM	Morne Pois Mar	128.52	18	IAMs_20	IAMs_20		06 26 12.8	
	comp=Z,4μm,21.0s							
OCAC	Ocana	129.61	36	eP	PKiKP		05 26 35.5	+1.1
HELC	Santa Helena	130.26	40	eP	PKiKP		05 26 40.8	+4.8
SDV	Santo Domingo	130.28	32	PKP	PKiKP		05 26 36.0	+0.3
	comp=Z,4.7nm,0.3s,baz=15,slow=0.5,SNR=11							
SDV	Santo Domingo	130.28	32	IAMs_20	IAMs_20		06 27 15.5	
	comp=Z,6μm,20.0s							
SDV	Santo Domingo	130.28	32	eP	PKiKP		05 26 36.3	+0.6
CBOC	Ciudad Bolivar	130.29	40	eP	PKiKP		05 26 35.6	-0.2
BRRC	Barranca, Sant	130.40	37	eP	PKiKP		05 26 36.2	+0.4
PLMC	San Jos del P	130.94	41	eP	PKiKP		05 26 39.7	+2.8
BARC	Barichara	131.11	37	eP	PKiKP		05 26 46.5	+9.0
NORC	Norcasia	131.14	39	eP	PKiKP		05 26 41.0	+3.7
GUY2C	Guyana, Caldas	131.17	40	eP	PKiKP		05 26 42.1	+4.2
SPBC	San Pablo de B	131.47	38	eP	PKPdf		05 26 36.8	-0.3
RUSC	La Rusia	131.76	37	eP	PKiKP		05 26 43.3	+4.2
ANIL	Santa Ana	131.76	41	eP	PKiKP		05 26 43.1	+4.2
ROSC	El Rosal	132.04	39	PKP	PKiKP		05 26 40.5	+1.0
	comp=Z,4.9nm,0.5s,baz=145,slow=16,SNR=5.8							
ROSC	El Rosal	132.04	39	eP	PKiKP		05 26 40.9	+1.4
CHIC	Chingaza	132.52	39	eP	PKiKP		05 26 40.0	-0.5
BBAC	Balboa, Cauca	132.78	45	eP	PKiKP		05 26 43.4	+2.6
PAC1	Pacto, Paraso	133.28	48	eP	PKiKP		05 26 42.3	+0.5
GCUF	Volcan Galeras	133.37	45	eP	PKiKP		05 26 46.0	+3.7
NVL	N'lazarevskaya	133.43	203	ePKIKP	PKPdf		05 26 39.2	+0.4
NVL				e			05 29 05.1	
NVL				pmax	pmax			
	comp=Z,8.0nm,0.8s							
GARC	Garzon, Huila	133.63	43	eP	PKiKP		05 26 45.7	+3.0
FLOC	Florencia	134.04	43	eP	PKPdf		05 26 40.9	-1.0
PIAT	Ana Tenorio	134.60	48	eP	PKiKP		05 26 44.6	-0.1
PTLC	Puerto Leguiza	135.69	43	eP	PKiKP		05 26 50.6	+4.1
TROLL	Troll, Antarti	135.69	200	PKPdf	PKPpre		05 26 29.5	
TROLL	Troll, Antarti	135.69	200	SKPdf	SKPbc		05 30 15.2	+0.7
SNAA	Sanae	137.30	199	PKPdf	PKPpre		05 26 34.1	
SNAA	Sanae	137.30	199	SKPdf	SKPbc		05 30 18.5	-0.9
SNAA	Sanae	137.30	199	IAMs_20	IAMs_20		06 33 53.7	
	comp=Z,3μm,20.0s							
VNA2	Neumayer--Watz	138.93	198	PKPdf	PKPpre		05 26 37.5	
	baz=114,slow=4.0							
VNA2	Neumayer--Watz	138.93	198	SKPdf	SKPdf		05 30 23.7	-0.1
	baz=110,slow=2.0							
SHEL	Horse Pasture	139.10	288	IAMs_20	IAMs_20		06 30 42.8	
	comp=Z,4μm,20.0s							
ATAH	Atahualpa	139.21	54	PKP	PKiKP		05 26 55.6	+1.5
	comp=Z,8.9nm,0.8s,baz=89,slow=1.5,SNR=5.2							
MDP	Montagnes des	139.27	10	PKP	PKPdf		05 26 52.3	+0.8
	comp=Z,7.5nm,0.8s,baz=344,slow=3.8,SNR=5.2							
VNA3	Neumayer Olymp	139.29	197	PKPdf	PKPpre		05 26 36.3	
VNA3	Neumayer Olymp	139.29	197	SKPdf	SKPbc		05 30 25.4	+0.4
VNA1	Neumayer--Stat	139.33	198	PKPdf	PKPpre		05 26 40.1	
VNA1	Neumayer--Stat	139.33	198	SKPdf	SKPbc		05 30 25.3	+0.3
TBTG	Tabatinga, AM	141.98	41	eP	PKiKP		05 26 58.8	-0.5
NNA	Nana	143.77	58	PKhKP	PKPpre		05 26 55.6	
	comp=Z,24nm,0.9s,baz=228,slow=5.4,SNR=5.4							
NNA				PKP	PKPdf		05 26 59.8	+0.3
	comp=Z,36nm,0.9s,baz=316,slow=3.2,SNR=9.8							
NNA	Nana	143.77	58	IAMs_20	IAMs_20		06 20 03.4	
	comp=Z,5μm,22.0s							
MCPB	Macapa, AP	144.72	10	eP	PKPbc		05 27 00.1	+0.1
MALB	Monte Alegre	145.80	14	eP	PKPab		05 27 04.1	+0.3
TMAB	Tom-Au,PA,Br	147.10	4	eP	PKPbc		05 27 07.4	+0.1
ROSB	Rosrio	147.61	356	eP	PKPbc		05 27 07.9	-0.8
ITTB	Itaituba	147.89	18	eP	PKPdf		05 27 06.5	-0.1
PMSA	Palmer Station	148.67	165	IAMs_20	IAMs_20		06 39 45.1	
	comp=Z,4μm,21.0s							
PMSA	Palmer Station	148.67	165	eP	PKPbc		05 27 09.2	-0.7
ETMB	Extrema	148.67	40	eP	PKPdf		05 27 07.0	-0.8
RCBR	Riachuelo	149.09	340	PKPbc	PKPbc		05 27 12.7	+0.1
	comp=Z,32nm,0.9s,baz=146,slow=6.3,SNR=6.2							
RCBR	Riachuelo	149.09	340	IAMs_20	IAMs_20		06 31 21.1	
	comp=Z,5μm,20.0s							
RCBR	Riachuelo	149.09	340	eP	PKPbc		05 27 10.6	-2.0
NPGB	Novo Progresso	150.56	19	eP	PKPdf		05 27 12.7	+1.9
PRPB	Parauapebas	150.73	7	eP	PKPdf		05 27 13.3	+2.2
LPAZ	La Paz	152.68	51	PKP	PKPdf		05 27 16.4	+1.7
	comp=Z,7.9nm,1.2s,baz=344,slow=2.9,SNR=8.3							
LPAZ				PKPbc	PKPbc		05 27 21.7	0.0
	comp=Z,14nm,1.0s,baz=360,slow=5.6,SNR=18							
LPAZ	La Paz	152.68	51	eP	PKPbc		05 27 21.5	-0.3
LPAZ	La Paz	152.68	51	eP	PKPdf		05 27 16.1	+1.4
NBAN	Anadia - AL	152.85	338	eP	PKPdf		05 27 16.4	+2.1
SMTB	Santa Maria do	153.56	3	eP	PKPdf		05 27 15.8	+0.5
CLDB	Colider	154.07	22	eP	PKPdf		05 27 18.3	+2.3
VILB	Vilhena	154.32	33	eP	PKPdf		05 27 17.5	+1.2
PDRB	Porto dos Gac	154.47	25	eP	PKPdf		05 27 18.2	+1.7
SNDB	Serra Nova Dou	156.23	13	eP	PKPdf		05 27 20.9	+1.9
LVC	Limon Verde	156.46	63	IAMs_20	IAMs_20		06 44 05.9	
	comp=Z,4μm,21.0s							
LVC	Limon Verde	156.46	63	eP	PKPdf		05 27 20.9	+1.4
SIV	San Ignacio	156.53	38	PKP	PKPdf		05 27 20.9	+1.6
	comp=Z,4.4nm,1.0s,baz=36,slow=0.8,SNR=11							
SIV				PKPab	PKPab		05 27 47.8	-0.1
	comp=Z,18nm,0.9s,baz=16,slow=1.7,SNR=6.8							
SIV				PP	PP		05 31 26.4	+1.3
	comp=Z,5.6nm,1.0s,baz=304,slow=7.3,SNR=3.9							
PTLB	Pontes e Lacer	157.00	34	eP	PKPdf		05 27 20.8	+1.0
SDBA	SAO DESIDERIO	157.09	357	eP	PKPdf		05 27 21.5	+1.4
GDU01	Guandu, BA	157.62	343	eP	PKPdf		05 27 22.4	+1.7
BBSD	Serra de San D	157.78	39	eP	PKPdf		05 27 22.8	+1.9
COYC	Coyhaique	157.91	125	IAMs_20	IAMs_20		06 29 38.2	
	comp=Z,3μm,20.0s							
LCO	Las Campanas	158.32	80	IAMs_20	IAMs_20		06 55 06.2	
	comp=Z,4μm,21.0s							
SALV	Santo Antonio	158.81	26	eP	PKPdf		05 27 24.0	+1.9
BBRB	Robore, Bolivi	159.10	39	eP	PKPdf		05 27 24.7	+2.3
JANB	Januaria	159.69	355	eP	PKPdf		05 27 25.4	+2.2
PLCA	Paso Flores	160.11	113	PKP	PKPdf		05 27 24.8	+1.8
	comp=Z,1.2nm,0.9s,baz=0.0,slow=4.0,SNR=2.4							
PLCA				PKPab	PKPab		05 28 02.0	-1.0
	comp=Z,2.9nm,0.9s,baz=222,slow=1.0,SNR=4.7							
BDFB	Brasilia	160.26	5	PKP	PKPdf		05 27 25.6	+1.7
	comp=Z,3.2nm,0.8s,baz=229,slow=9.3,SNR=3.1							
BDFB				PKPab	PKPab		05 28 03.1	-1.0
	comp=Z,14nm,0.7s,baz=330,slow=2.5,SNR=15							
BDFB				PP	PP		05 31 45.5	+0.5
	comp=Z,10nm,1.0s,baz=75,slow=6.0,SNR=5.8							
C2SB	Chapadao do Su	162.42	21	eP	PKPdf		05 27 27.9	+2.0
IPMB	Ipamerri, GO	162.57	6	eP	PKPdf		05 27 26.9	+0.7
SJMB	Sao Joao De Ma	162.80	344	eP	PKPdf		05 27 28.6	+2.2
AQDB	Aquidauana	162.94	32	eP	PKPdf		05 27 28.9	+2.4
PMNB	Patos De Minas	163.21	1	eP	PKPdf		05 27 29.0	+2.1
RPRD	Ribas do Rio P	163.74	26	eP	PKPdf		05 27 29.2	+2.0
ITRB	Iturama	163.94	14	eP	PKPdf		05 27 29.7	+2.3
ANTJ	Antonio Joao (	164.13	35	eP	PKPdf		05 27 28.9	+1.3
ALF01	Guarapari-ES	164.52	341	eP	PKPdf		05 27 29.3	+1.4
PCMB	Pacaembu	165.56	19	eP	PKPdf		05 27 31.0	+2.2
BB19B	Bebedouro	165.58	9	eP	PKPdf		05 27 30.8	+2.0
CAM01	Campos-RJ	165.92	342	eP	PKPdf		05 27 31.1	+2.1
TRCB	Terra Rica	166.25	26	eP	PKPdf		05 27 31.5	+2.1
DUB01	Friburgo-RJ	166.33	345	eP	PKPdf		05 27 31.6	+2.2
VAS01	Vassouras-RJ	166.72	349	eP	PKPdf		05 27 32.6	+2.9
CPUP	Villa Florida	166.84	50	PKPab	PKPab		05 28 33.0	+0.2
	comp=Z,3.9nm,0.8s,baz=325,slow=1.9,SNR=4.3							
CPUP				PP	PP		05 32 24.6	+4.1
	comp=Z,3.7nm,0.9s,baz=300,slow=8.1,SNR=3.6							
CPUP	Villa Florida	166.84	50	PKP2	PKPab		05 28 33.0	+0.2
CPUP	Villa Florida	166.84	50	eP	PKPdf		05 27 32.6	+3.0
RCLB	Rio Claro- Sao	167.02	6	eP	PKPdf		05 27 32.7	+2.7
MCR1	Marechal Candi	167.16	34	eP	PKPdf		05 27 31.8	+1.9
MAN01	Angra dos Reis	167.37	351	eP	PKPdf		05 27 32.1	+1.9
VAO	Valinhos	167.64	3	eP	PKPdf		05 27 33.0	+2.6
FRTB	Fartura	167.64	15	eP	PKPdf		05 27 32.1	+1.8
PARB	Paraibuna	167.98	358	eP	PKPdf		05 27 32.9	+2.3
PTGB	Pitanga	168.21	27	eP	PKPdf		05 27 33.1	+2.3
FRBT	Francisco Belt	168.91	34	eP	PKPdf		05 27 33.8	+2.6
ITQB	Itaqui	169.50	60	eP	PKPdf		05 27 34.2	+2.9
CRSM	Crissiumal (Br	169.66	43	eP	PKPdf		05 27 34.2	+2.7
TIJ01	Guaruva-PR	169.68	14	eP	PKPdf		05 27 34.1	+2.4
LPA	La Plata	170.36	91	cePKIKP	PKPdf		05 27 33.1	+1.5
ITAB	Concordia	170.41	34	eP	PKPdf		05 27 34.2	+2.3
RODS	Rosario do Sul	170.90	59	eP	PKPdf		05 27 35.1	+2.9
ALGR	Alto Alegre (B	171.23	43	eP	PKPdf		05 27 34.8	+2.3
CPSB	Cacapava Do Su	172.13	53	eP	PKPdf		05 27 35.3	+2.6

IDC 21 05:08:45.8±3.2, 54°.42N×86°.98E, h0km, mbtmp3.2/2, ML2.6/2, Error ellipse: s-maj=28.5km s-min=16.3km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.35	251	I		05 17 53.0	
	baz=69,slow=338,SNR=3.9						
ZALV	Zalesovo Beam	1.35	251	Pn	Pg	05 09 10.6	-1.1
	1.8nm,0.3s,baz=67,slow=16,SNR=18						
ZALV				Sn	Sb	05 09 29.9	0.0
	2.5nm,0.3s,baz=68,slow=28,SNR=15						
KURBB	Kurchatov Arra	6.40	237	Pn	Pn	05 10 22.9	+1.6
	0.1nm,0.3s,baz=54,slow=14,SNR=8.5						
KURBB				Sn	Sn	05 11 34.8	-0.2
	0.1nm,0.3s,baz=75,slow=32,SNR=4.7						
KURBB				Lg	Lg	05 12 07.6	
	baz=46,slow=27,SNR=5.9						
	2.7nm,0.6s						
MKAR	Makanchi Array	8.19	203	Pn	Pn	05 10 46.4	+0.5
	0.1nm,0.3s,baz=20,slow=12,SNR=3.8						
MKAR				Sn	Sn	05 12 18.4	-0.8
	0.2nm,0.3s,baz=22,slow=26,SNR=5.8						
MKAR				Lg	Lg	05 13 06.3	
	0.1nm,0.3s,baz=21,slow=33,SNR=8.8						
	0.6nm,0.8s						

AEIC 21 05:12:27±1.9, 57°.09N±0°.06×156°.5W±0°.1, h12km±7km, ML3.0, ML3.3/42(NEIC), Error ellipse: s-maj=10.2km s-min=6.7km az=136.0
NEIC 21 05:12:28.8±2.9, 57°.10N±0°.06×156°.61W±0°.05, h32km±15km, Error ellipse: s-maj=8.1km s-min=3.7km az=172.0

ISC 21 05:12:29.6±1.6, 57°.04N±0°.06×156°.47W±0°.10, h75km, n39, σ0§61/30, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	Chignik	1.31	236		Pn	05 12 51.0	-1.2
CHGN	Chignik	1.31	236	P	Pn	05 12 50.9	-1.2
	baz=52						
CHIR	Chirikof Islan	1.31	159		Pn	05 12 50.9	-1.4
CHIR				IAML		05 13 13.6	
	comp=E,527nm,0.7s						
CHIR				IAML		05 13 13.9	
	comp=N,517nm,0.9s						
CHIR	Chirikof Islan	1.31	159	P	Pn	05 12 52.2	0.0
	baz=339						
CHIR				S	Sn	05 13 09.7	+0.5
	baz=339						
SII	Sitkinak Islan	1.35	110		Pn	05 12 51.7	-1.0
SII	Sitkinak Islan	1.35	110	P	Pn	05 12 52.1	-0.6
	baz=294						
SII				S	Sn	05 13 10.1	0.0
	baz=294						
KAHC	Katmai Hardscr	1.79	25	P	Pn	05 12 58.1	-0.5
	baz=208						

KDAK	Kodiak Island	2.23	69			Pn	05 13 04.0	-0.4
KDAK				IAML			05 13 43.7	
	comp=N,168nm,0.9s							
Q19K	Cape Douglas,	2.42	37			Pn	05 13 05.9	-1.0
Q19K				IAML			05 13 40.1	
	comp=N,200nm,0.7s							
Q19K				IAML			05 13 43.9	
	comp=E,208nm,0.7s							
P18K	Big Mountain,	2.45	15			Pn	05 13 05.8	-1.5
SDPT	Sand Point	2.81	235	Pn		Pn	05 13 11.2	-1.0
SDPT				IAML			05 13 57.1	
	comp=N,119nm,2.0s							
SDPT				IAML			05 14 07.8	
	comp=E,117nm,2.4s							
CNBA	Chernabura Isl	2.84	220			Pn	05 13 12.4	-0.2
CNBA				IAML			05 14 04.3	
	comp=N,97nm,1.1s							
O18K	Koktuh Hills	2.90	13			Pn	05 13 10.0	-3.4
O18K				IAML			05 13 55.7	
	comp=N,90nm,0.6s							
O18K				IAML			05 13 58.8	
	comp=E,72nm,0.6s							
P19K	Oil Pt	3.12	32	Pn		Pn	05 13 13.9	-2.6
P19K				IAML			05 14 11.3	
	comp=N,91nm,1.1s							
P19K				IAML			05 14 14.2	
	comp=E,86nm,0.8s							
N18K	Kilae Creek	3.66	4			Pn	05 13 23.6	-0.2
N18K				IAML			05 14 24.1	
	comp=E,64nm,1.2s							
CNPM	China Poot	3.72	46	Pn		Pn	05 13 22.7	-1.8
CNPM				IAML			05 15 34.1	
	comp=N,38nm,3.8s							
N19K	Bonanza Creek	3.92	14			Pn	05 13 24.6	-2.7
N19K				IAML			05 14 27.6	
	comp=E,45nm,0.6s							
BRLK	Bradley Lake	4.01	45	Pn		Pn	05 13 27.8	-0.7
BRLK				IAML			05 14 14.9	
	comp=N,32nm,0.2s							
BRLK				IAML			05 14 15.2	
	comp=E,34nm,0.1s							
SVW2	Sparrevohn	4.09	6			Pn	05 13 29.6	-0.1
SVW2				IAML			05 14 40.8	
	comp=E,30nm,2.1s							
SEW	Seward	4.79	47	Pn		Pn	05 13 36.6	-2.4
M19K	Big River Lodg	4.99	11	Pn		Pn	05 13 41.3	-0.5
M19K				IAML			05 16 52.6	
	comp=N,21nm,2.2s							
M20K	Styx River	5.14	18			Pn	05 13 44.2	+0.2
M20K				IAML			05 17 07.8	
	comp=N,35nm,3.0s							
L19K	White Mountain	5.22	8			Pn	05 13 44.9	-0.2
L19K				IAML			05 17 13.0	
	comp=N,25nm,2.1s							
SUA	Susitna One	5.32	31	Pn		Pn	05 13 47.3	+0.9
RC01	Rabbit Creek A	5.34	38	Pn		Pn	05 13 47.1	+0.4
PWL	Port Wells	5.69	44	Pn		Pn	05 13 49.6	-1.7
HIN	Hinchinbrook I	6.18	53	Pn		Pn	05 13 57.8	-0.4
PPLA	Purkeypile	6.25	18	Pn		Pn	05 13 60.0	+0.8
K20K	Telida	6.45	10	Pn		Pn	05 14 01.8	0.0
CAST	Castle Rocks	6.76	17	Pn		Pn	05 14 06.8	+0.8
RAGM	Ragged Mountai	7.00	56	Pn		Pn	05 14 08.8	-0.4
TRF

comp=E,7.0nm,1.2s,comp=E,7.0nm,0.3s
JAI Aioi 1.73 159 A A 05 30 35.9
comp=E,11nm,1.9s,comp=E,9.0nm,1.9s
JKHR Kochiharuno 1.90 185 A A 05 30 39.3
comp=E,5.0nm,2.5s,comp=E,6.0nm,1.6s
JKD Kudamatsu 2.02 228 A A 05 30 42.0
comp=E.5.0nm,1.6s,comp=E,6.0nm,3.8s
JTNC Tanabenakahech 2.24 135 A A 05 30 42.8
comp=E,7.0nm,2.4s,comp=E,6.0nm,3.0s
JKI Kunimi 2.49 225 A A 05 30 48.8
comp=E,10.0nm,1.9s,comp=E,16nm,1.0s
INU Inuyama 2.72 90 Pn Pn 05 30 52.9 +2.5
JBEP Beppuamama 2.80 223 A A 05 30 53.2
comp=E,12nm,3.6s,comp=E,13nm,0.8s
JGF Kuroka 3.00 85 Pn 05 30 56.2 +1.8
JTU Tsushima 3.64 257 Pn 05 31 01.6 -1.5
MJB9 Matsu-Tunnel 3.83 71 Pn 05 31 06.9 +1.1
MAJO Matsushiro 3.83 72 Pn 05 31 06.2 +0.4
MJAR Matsushiro Arr 3.83 72 Pn **Pn 05 31 06.2 +0.4**
0.6nm,0.3s,baz=186,slow=16,SNR=6.1
MJAR Pg **Pb 05 31 15.5 +1.3**
0.5nm,0.3s,baz=287,slow=8.8,SNR=6.3
MJAR Lg Lg 05 32 06.8
1.0nm,0.3s,baz=225,slow=32,SNR=7.2
4.0nm,0.3s
JSD Sado 4.51 53 Pn **Pn 05 31 13.3 -1.8**
JSU Suzuyama 4.74 216 Pn Pn 05 31 19.6 +1.2
KSRS Korea Array 5.08 295 Pn **Pn 05 31 23.3 +0.3**
2.4nm,0.3s,baz=109,slow=14,SNR=12
KSRS Sn **Sn 05 32 21.9 -0.3**
4.1nm,0.3s,baz=110,slow=24,SNR=5.2
6.6nm,0.3s
KSAR Wonju Array Be 5.10 295 Pn **Pn 05 31 21.9 -1.4**
KS19 Wonju Array Si 5.14 296 Pn Pn 05 31 22.9 -1.0
JTM Tenmabayashi 7.91 45 Pn Pn 05 32 02.7 +0.9
USRK Ussuriysk Ar. 8.88 352 Pn Pn 05 32 14.5 -0.6
0.2nm,0.3s,baz=167,slow=13,SNR=2.7
3.1nm,0.9s
KLR Kul'dur 13.88 355 Pn Pn 05 33 24.2 +0.6
0.1nm,0.3s,baz=163,slow=19,SNR=3.4
1.9nm,0.7s
NACB Ninganchiao 15.34 226 Pn **Pn 05 33 44.2 +0.8**
NACB IAmb IAmb 05 34 11.5
comp=Z,28nm,0.9s
SONM Songino Array 23.75 310 P **P 05 35 19.9 +0.4**
comp=Z,1.7nm,0.8s,baz=127,slow=9.8,SNR=6.0
comp=Z,1.7nm,0.8s
MK31 Makanchi Array 39.71 303 P **P 05 37 38.0 -1.5**
MKAR Makanchi Array 39.71 303 P **P 05 37 38.9 -0.6**
comp=Z,0.2nm,0.5s,baz=93,slow=12,SNR=1.8
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 39.71 303 P **P 05 37 38.6 -1.0**
MMRI Maumere 45.12 196 P **P 05 38 23.5 -0.3**
KK31 Karatay Array 48.50 299 P **P 05 38 49.2 -0.8**
KK31 IAmb IAmb 05 39 01.4
comp=Z,0.2nm,0.3s
KKAR Karatay Array 48.50 299 P **P 05 38 48.8 -1.2**
WRA Warramunga Arr 55.05 179 P **P 05 39 38.1 -1.0**
comp=Z,0.5nm,0.4s,baz=354,slow=7.7,SNR=12
comp=Z,0.5nm,0.4s
ASAR Alice Springs 58.75 180 P **P 05 40 07.0 +1.7**
comp=Z,0.4nm,0.7s,baz=11,slow=13,SNR=7.9
comp=Z,0.4nm,0.7s

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*IDC **21** 05:33:58.1±1.1, 35°.36N×133°.72E, h0km, mb3.6/4, mbtmp3.7/7, ML3.4/3, Error ellipse: s-maj=25.6km s-min=16.9km az=1.0*
*JMA **21** 05:33:58.4±0.0, 35°.4N±0°.2×133°.8E±0°.1, h5km, MD4.4/20, MV4.0/20, EASTERN TOTTORI PREF*
JMA Felt IV J1 at EASTERN TOTTORI PREF .
*NEIC **21** 05:33:58.8±1.5, 35°.36N±0°.06×133°.85E±0°.04, h10km±2km, mb4.0/3, Error ellipse: s-maj=11.3km s-min=3.2km az=333.0*
ISC 21 05:33:58.1±0.8, 35°.38N±0°.06×133°.81E±0°.04, h8km±5km, n42, σ1§33/32, mb3.6/4, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.01**	**97**	P	**Pg**	**05 33 59.6**	**0.0**
JKR				S	**Sg**	**05 34 00.4**	**-0.2**
JKR	**Kurayoshi**	**0.01**	**97**	A	A	05 33 59.6	
comp=E,264nm,3.4s,comp=E,287nm,1.5s							
JAD	**Aida**	**0.53**	**146**	P	**Pb**	**05 34 09.1**	**-0.5**
JAD				S	**Sb**	**05 34 16.3**	**-1.0**
JAD	**Aida**	**0.53**	**146**	A	A	05 34 09.1	
comp=E,23nm,4.0s,comp=E,13nm,3.3s							
JHS	**Saijyo**	**0.69**	**237**		**Pg**	**05 34 12.2**	**+0.9**
JHS				Sg	**Sb**	**05 34 21.7**	**-0.2**
JHS	**Saijyo**	**0.69**	**237**	A	A	05 34 12.4	
comp=E,8.0nm,2.0s,comp=E,13nm,4.1s							
JKSM	**Kasumi**	**0.72**	**73**	A	A	05 34 11.9	
comp=E,8.0nm,4.4s,comp=E,23nm,4.0s							
JJG	**Jouge**	**0.91**	**216**	A	A	05 34 16.6	
comp=E,17nm,2.0s,comp=E,6.0nm,1.2s							
JOI	**OKI**	**1.02**	**333**	A	A	05 34 17.5	
comp=E,20nm,0.6s,comp=E,20nm,0.4s							
JKY	**Yasaka**	**1.08**	**76**	A	A	05 34 18.5	
comp=E,9.0nm,1.6s,comp=E,22nm,0.9s							
JMIK	**Miki**	**1.17**	**119**	A	A	05 34 20.4	
comp=E,11nm,2.1s,comp=E,14nm,1.9s							
JHT	**Toyohira**	**1.35**	**238**	A	A	05 34 24.1	
comp=E,7.0nm,4.7s,comp=E,12nm,1.8s							
JMAF	**Mimaanabuki**	**1.36**	**168**	A	A	05 34 24.2	
comp=E,22nm,1.3s,comp=E,9.0nm,1.6s							
JHM	**Kurahashi**	**1.63**	**221**	A	A	05 34 28.5	
comp=E,6.0nm,4.5s,comp=E,9.0nm,1.3s							
JMN	**Monobe**	**1.65**	**178**	Pn	**Pn**	**05 34 27.1**	**-0.3**
JMN	**Monobe**	**1.65**	**178**	A	A	05 34 28.7	
comp=E,15nm,1.2s,comp=E,11nm,1.1s							
JAI	**Aioi**	**1.67**	**161**	A	A	05 34 28.9	
comp=E,14nm,1.4s,comp=E,9.0nm,1.5s							
JFM	**Mihama**	**1.78**	**85**	A	A	05 34 29.8	
comp=E,6.0nm,1.0s,comp=E,10.0nm,2.6s							
JICN	**Ichinomiyachia**	**2.48**	**91**	A	A	05 34 40.1	
comp=E,12nm,1.7s,comp=E,14nm,2.3s							
INU	**Inuyama**	**2.62**	**90**		**Pn**	**05 34 39.4**	**-1.3**
JGF	**Kuroka**	**2.90**	**85**		**Pn**	**05 34 44.0**	**-0.6**
MJB9	**Matsu-Tunnel**	**3.75**	**71**	Pn	**Pn**	**05 34 58.0**	**+1.7**
MAJO	**Matsushiro**	**3.75**	**71**	Pn	**Pn**	**05 34 56.9**	**+0.6**
MJAR	**Matsushiro Arr**	**3.75**	**71**	Pn	**Pn**	**05 34 58.9**	**+2.6**
0.5nm,0.3s,baz=258,slow=14,SNR=4.1							
MJAR				Pg	**Pg**	**05 35 09.5**	**-0.5**
1.2nm,0.3s,baz=233,slow=17,SNR=9.5							
MJAR				Lg	Lg	05 35 59.8	
1.4nm,0.3s,baz=232,slow=22,SNR=3.2							
3.9nm,0.3s							
JSD	**Sado**	**4.45**	**52**	Pn	**Pn**	**05 35 06.0**	**+0.1**
JSU	**Suzuyama**	**4.77**	**217**	Pn	**Pn**	**05 35 10.4**	**0.0**
KSRS	**Korea Array**	**5.18**	**295**	Pn	**Pn**	**05 35 15.9**	**0.0**
1.0nm,0.3s,baz=106,slow=14,SNR=3.8							
KSRS				Sn	**Sn**	**05 36 11.0**	**-4.8**
1.1nm,0.3s,baz=123,slow=17,SNR=2.1							
2.8nm,0.3s							
KSAR	**Wonju Array Be**	**5.21**	**295**	Pn	**Pn**	**05 35 16.1**	**-0.2**
KS19	**Wonju Array Si**	**5.24**	**296**	Pn	**Pn**	**05 35 17.4**	**+0.7**
JYT	**Yasato**	**5.25**	**79**	Pn	**Pn**	**05 35 16.7**	**-0.2**
JHJ	**Hachijo jima 2**	**5.43**	**113**	Pn	**Pn**	**05 35 20.9**	**+1.5**
18nm,0.3s,baz=242,slow=17,SNR=1.2							
51nm,0.3s							
JHJ2	**Mitsune**	**5.46**	**113**	Pn	**Pn**	**05 35 20.0**	**+0.2**
JTM	**Tenmabayashi**	**7.86**	**44**	Pn	**Pn**	**05 35 53.8**	**+1.1**
USA0B	**Ussuriysk Arra**	**8.92**	**352**	Pn	**Pn**	**05 36 08.0**	**+0.7**
JMZ	**Minamidaito 2**	**9.79**	**194**	Pn	**Pn**	**05 36 19.0**	**-0.1**
SSLB	**Suanglung**	**16.06**	**227**	Pn	**Pn**	**05 37 43.4**	**-0.9**
SSLB				IAmb	IAmb	05 37 57.6	
comp=Z,27nm,1.2s							
YULB	**Yu-li**	**16.16**	**226**	Pn	**Pn**	**05 37 46.2**	**+0.6**
YULB				IAmb	IAmb	05 37 56.9	
comp=Z,14nm,0.9s							
SONM	**Songino Array**	**23.84**	**310**	P	**P**	**05 39 13.1**	**+1.3**
comp=Z,2.0nm,0.9s,baz=124,slow=10,SNR=6.1							
comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**23.84**	**310**	P	**P**	**05 39 12.6**	**+0.8**
SONM				IAmb	IAmb	05 39 14.5	
comp=Z,1.1nm,0.9s							
MKAR	**Makanchi Array**	**39.81**	**303**	P	**P**	**05 41 31.8**	**+0.1**
comp=Z,0.5nm,0.9s,baz=80,slow=10,SNR=2.2							
comp=Z,0.5nm,0.9s							
WRA	**Warramunga Arr**	**55.02**	**179**	P	**P**	**05 43 30.8**	**+0.7**
comp=Z,1.4nm,1.1s,baz=354,slow=8.1,SNR=5.1							
comp=Z,1.4nm,1.1s							
ASAR	**Alice Springs**	**58.72**	**180**	P	**P**	**05 43 58.1**	**+1.7**
comp=Z,0.3nm,0.6s,baz=7.5,slow=12,SNR=2.3							
comp=Z,0.3nm,0.6s							

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*IDC **21** 05:38:54.5±2.3, 19°.59N×92°.45W, h0km, mb3.6/5, mbtmp3.7/8, ML3.9/3, Error ellipse: s-maj=48.7km s-min=30.3km az=124.0*
*NEIC **21** 05:38:56.0±1.6, 19°.56N±0°.06×92°.26W±0°.06, h10km±2km, mb4.1/17, Error ellipse: s-maj=12.0km s-min=7.4km az=140.0*
ISC 21 05:38:55.2±0.6, 19°.59N±0°.06×92°.26W±0°.06, h10km, n56, σ1§73/57, mb4.0/8, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**3.29**	**178**		**Pn**	**05 39 47.1**	**0.0**
PETF	**Flores**	**3.50**	**139**		**Pn**	**05 39 49.4**	**-0.3**
CMIG	**Matias Romero**	**3.52**	**225**	Pn	**Pn**	**05 39 48.5**	**-1.5**
2.3nm,0.3s,baz=53,slow=13,SNR=32							
CMIG				Sn	**Sn**	**05 40 26.3**	**-5.4**
3.6nm,0.3s,baz=219,slow=21,SNR=9.9							
4.7nm,0.3s							
TEIG	**Tepich**	**3.81**	**80**	Pn	**Pn**	**05 39 54.3**	**+0.4**
HUEH	**Huehuetenango**	**4.31**	**170**		**Pn**	**05 40 01.3**	**+0.2**
RTAL	**Retalhuleu**	**5.07**	**174**	Pn	**Pn**	**05 40 10.9**	**-0.4**
ESQI	**Esquipulas**	**5.73**	**150**		**Pn**	**05 40 21.1**	**+0.6**
MTO3	**Montecristo**	**5.86**	**151**		**Pn**	**05 40 23.0**	**+0.6**
TLIG	**Tlapa**	**6.31**	**252**	Pn	**Pn**	**05 40 29.5**	**+1.1**
SOR	**Soroa**	**9.20**	**68**	Pn	**Pn**	**05 41 08.0**	**-0.1**
SOR	**Soroa**	**9.20**	**68**	*eP*	**Pn**	**05 41 07.6**	**-0.5**
SOR				IAmb	IAmb	05 41 12.7	
comp=Z,5.5nm,0.5s							
SOR				*eS*	**Sn**	**05 42 46.9**	**-4.9**
833A	**Chaparral WMA,**	**10.86**	**324**	Pn	**Pn**	**05 41 30.3**	**-0.5**
LCCY	**Blossom Villag**	**11.48**	**88**	Pn	**Pn**	**05 41 38.5**	**-0.7**
MGV	**Manicaragua**	**11.76**	**76**	*eP*	**Pn**	**05 41 43.5**	**+0.4**
435B	**Jarrell**	**12.14**	**338**	Pn	**Pn**	**05 41 49.8**	**+1.6**
061Z	**Ochoppi**	**12.20**	**57**	Pn	**Pn**	**05 41 49.4**	**+0.3**
451A	**Vernon**	**12.46**	**27**	Pn	**Pn**	**05 41 52.6**	**0.0**
BATAN	**Batan**	**12.76**	**136**	Pn	**Pn**	**05 41 54.7**	**-2.1**
237A	**Washetta, Mont**	**12.76**	**346**	Pn	**Pn**	**05 41 57.5**	**+0.8**
JCT	**Junction City**	**12.81**	**329**	Pn	**Pn**	**05 41 58.5**	**+1.1**
143A	**Socs Landing,**	**13.08**	**3**	Pn	**Pn**	**05 42 02.9**	**+1.8**
WHTX	**Lake Whitney,**	**13.20**	**340**		**Pn**	**05 42 03.0**	**+0.3**
352A	**Blakely**	**13.56**	**28**		**Pn**	**05 42 09.3**	**+1.7**
WLAR	**White Oak Lake**	**14.06**	**357**		**Pn**	**05 42 14.9**	**+0.4**
TXAR	**Lajitas Array**	**14.20**	**315**	Pn	**Pn**	**05 42 17.1**	**+0.6**
comp=Z,0.3nm,0.3s,baz=131,slow=13,SNR=16							
TXAR				Sn	Sn	05 44 43.2	-11
comp=Z,0.2nm,0.3s,baz=22,slow=7.1,SNR=5.2							
comp=Z,0.6nm,0.4s							
TX31	**Lajitas Ar. Si**	**14.20**	**315**		**Pn**	**05 42 17.4**	**+0.9**
TX32	**Lajitas Array**	**14.20**	**315**		**Pn**	**05 42 18.2**	**+1.7**
LMGC	**Las Mercedes**	**14.37**	**86**	*eP*	**Pn**	**05 42 20.1**	**+1.3**
ABTX	**Abilene, Hawle**	**14.56**	**334**	Pn	**Pn**	**05 42 22.2**	**+0.7**
MIAR	**Mount Ida**	**14.94**	**356**	Pn	**Pn**	**05 42 27.3**	**+0.8**
X37A	**Clayton**	**15.19**	**350**		**Pn**	**05 42 30.8**	**+1.0**
X37A				IAmb	IAmb	05 42 48.4	
comp=Z,17nm,1.1s							
X34A	**Smith Ranch, M**	**15.74**	**343**	P	**P**	**05 42 40.2**	**-0.9**
X34A				IAmb	IAmb	05 43 11.9	
comp=Z,12nm,0.7s							
FCAR	**Ozark Folk Cen**	**16.24**	**0**	P	**P**	**05 42 45.6**	**-1.0**
GDL2	**Guadalupe Moun**	**16.60**	**322**		**P**	**05 42 51.1**	**+0.4**
HHAR	**Hobbs**	**16.69**	**355**	P	**P**	**05 42 51.8**	**+0.2**
U38A	**Gravette**	**16.89**	**354**	P	**P**	**05 42 53.8**	**+0.1**
HODGE	**Hodges**	**17.08**	**29**	P	**P**	**05 42 55.5**	**-0.4**
HODGE				IAmb	IAmb	05 43 06.0	
comp=Z,15nm,1.3s							
CPCT	**Cooper Cave**	**17.21**	**22**	P	**P**	**05 42 57.3**	**0.0**
BG3	**Lake Jocassee**	**17.42**	**26**	P	**P**	**05 43 00.4**	**+0.7**
BG3				IAmb	IAmb	05 43 31.7	
comp=Z,7.3nm,0.7s							
TKL	**Tuckaleechee C**	**17.67**	**23**	P	**P**	**05 43 04.4**	**+2.0**
comp=Z,0.6nm,0.3s,baz=194,slow=13,SNR=7.4							
TKL				S	**Sn**	**05 46 12.7**	**-5.7**
comp=Z,1.9nm,0.5s,baz=357,slow=5.9,SNR=4.7							
comp=Z,3.4nm,0.5s							
V53A	**Saluda**	**18.05**	**26**	P	**P**	**05 43 09.3**	**+2.5**
V53A				IAmb	IAmb	05 43 17.1	
comp=Z,17nm,1.4s							
ANMO	**Albuquerque**	**19.79**	**323**	P	**Pn**	**05 43 29.3**	**+1.9**
comp=Z,0.4nm,0.5s,baz=169,slow=15,SNR=2.2							
T25A	**Trinidad**	**20.46**	**331**	P	Pn	05 43 35.2	-0.1
T25A				IAmb	IAmb	05 43 58.1	
comp=Z,14nm,1.1s							
P48A	**Milroy**	**20.66**	**15**	P	**P**	**05 43 36.1**	**+0.9**
Q51A	**Peebles**	**20.85**	**20**	P	Pn	05 43 38.7	-0.9
L40A	**Anamosa**	**22.42**	**2**	P	**P**	**05 43 54.1**	**+0.1**
L40A				IAmb	IAmb	05 43 56.0	
comp=Z,11nm,1.1s							
SMCO	**Snowmass**	**23.29**	**330**	P	**P**	**05 44 06.1**	**+2.5**
SMCO				IAmb	IAmb	05 44 13.7	
comp=Z,6.0nm,1.1s							
ECSD	**EROS Data Cent**	**24.35**	**352**	P	**P**	**05 44 13.4**	**+0.1**
ECSD				IAmb	IAmb	05 44 18.0	
comp=Z,5.4nm,0.8s							
SPMN	**Marine on St.**	**25.57**	**359**	P	**P**	**05 44 24.7**	**+0.4**
BOSC	**San Juan Bosco**	**26.34**	**148**	P	**P**	**05 44 35.2**	**+3.5**
PDAR	**Pinedale Array**	**27.33**	**332**	P	**P**	**05 44 40.6**	**+0.1**
comp=Z,0.4nm,0.7s,baz=128,slow=9.6,SNR=3.8							
comp=Z,0.4nm,0.7s							
H17A	**Grant Village**	**29.07**	**332**		**S**	**05 49 44.9**	**-2.9**
NVAR	**Mina Array Bea**	**29.35**	**315**	P	**P**	**05 44 58.9**	**+0.3**
comp=Z,0.2nm,0.4s,baz=146,slow=7.3,SNR=4.1							
comp=Z,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**45.56**	**346**	P	**P**	**05 47 15.7**	**+0.7**
comp=Z,1.2nm,0.7s,baz=146,slow=7.6,SNR=3.4							
comp=Z,1.2nm,0.7s							
ILAR	**Eielson Array**	**57.65**	**336**	P	**P**	**05 48 46.1**	**+0.7**
comp=Z,0.4nm,0.8s,baz=111,slow=4.0,SNR=2.1							
comp=Z,0.4nm,0.8s							
ARCES	**ARCESS Array B**	**80.94**	**18**	P	**P**	**05 51 10.6**	**+1.0**
comp=Z,1.1nm,0.7s,baz=304,slow=5.2,SNR=4.2							
comp=Z,1.1nm,0.7s							

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*IDC **21** 05:43:36.7±1.4, 27°.83N×111°.86W, h0km, mb3.9/2, mbtmp3.8/9, ML3.6/7, Error ellipse: s-maj=20.5km s-min=11.6km az=41.0*
*NEIC **21** 05:43:36.4±1.8, 27°.94N±0°.04×111°.91W±0°.07, h10km±2km, mb4.2/12, Md4.5/18(MEX), Error ellipse: s-maj=10.6km s-min=6.6km az=282.0*
*MEX **21** 05:43:37.9±0.6, 27°.95N×112°.03W, h10km, MD4.5*
ISC 21 05:43:36.7±0.7, 27°.90N±0°.05×111°.96W±0°.04, h21km±4km, n86, σ1§36/91, mb4.1/3, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.63**	**204**		**Pb**	**05 43 48.9**	**-0.3**
SRIG				Sg	**Sb**	**05 43 58.4**	**+0.8**
SRIG	**Santa Rosalia**	**0.63**	**204**	*eP*	**Pb**	**05 43 49.0**	**-0.2**
SRIG				*eS*	**Sb**	**05 43 58.4**	**+0.8**
GUYB	**Guaymas**	**0.96**	**90**	*eP*	**Pb**	**05 43 54.0**	**-0.7**
GUYB				*eS*	**Sb**	**05 44 07.1**	**+0.3**
HSIG		**1.43**	**38**	Pn	**Pn**	**05 44 00.3**	**-1.1**
HSIG		**1.43**	**38**	*eP*	**Pn**	**05 44 00.3**	**-1.1**
HSIG				*eS*	**Sn**	**05 44 18.8**	**-0.8**
BAHB	**Baha de los**	**1.76**	**307**	*eP*	**Pn**	**05 44 03.4**	**-2.5**
BAHB				*eS*	**Sn**	**05 44 25.0**	**-2.6**
LAPR	**La Primavera**	**2.61**	**353**	*eP*	**Pn**	**05 44 17.4**	**-0.3**
LAPR				*eS*	**Sn**	**05 44 50.0**	**+1.2**
NE80	**Navojoa**	**2.61**	**111**		**Pn**	**05 44 17.4**	**-0.4**
NE80					**Sn**	**05 44 50.0**	**+1.1**
NZIG	**Nacozari, Sono**	**3.24**	**40**		**Pn**	**05 44 27.1**	**+0.6**
NZIG					**Sn**	**05 45 04.3**	**-0.2**
NZIG	**Nacozari, Sono**	**3.24**	**40**	*eP*	**Pn**	**05 44 27.1**	**+0.6**
NZIG				*eS*	**Sn**	**05 45 04.3**	**-0.2**
CSIG	**Choix**	**3.36**	**108**	*e*	**Pn**	**05 44 25.8**	**-2.3**
CSIG				*e*		05 45 06.9	
TSIG	**Topolobambo**	**3.47**	**131**	*eP*	**Pn**	**05 44 32.6**	**+3.1**
PIX	**Pinacate**	**3.88**	**341**	Pn	**Pn**	**05 44 34.0**	**-1.0**
SFX	**San Felipe**	**4.02**	**322**	Pn	**Pn**	**05 44 37.6**	**+0.6**
LPIG	**La Paz**	**4.06**	**158**	Pn	**Pn**	**05 44 37.7**	**0.0**
2.4nm,0.3s,baz=139,slow=19,SNR=2.1							
LPIG				Lg	Lg	05 45 44.4	
4.9nm,0.3s,baz=280,slow=7.0,SNR=3.9							
10.0nm,0.4s							
LPIG	**La Paz**	**4.06**	**158**		**Pn**	**05 44 36.6**	**-1.1**
LPIG	**La Paz**	**4.06**	**158**	*eP*	**Pn**	**05 44 36.6**	**-1.1**
214A	**Organ Pipe Nat**	**4.11**	**350**	Pn	**Pn**	**05 44 38.2**	**-0.1**
319A	**Douglas**	**4.17**	**33**		**Pn**	**05 44 39.3**	**0.0**
TUC	**Tucson**	**4.51**	**13**	Pn	**Pn**	**05 44 44.2**	**+0.3**
SLBS	**Sierra La Lagu**	**4.57**	**156**	Pn	**Pn**	**05 44 45.6**	**+0.8**
113A	**Mohawk Valley,**	**5.10**	**343**		**Pn**	**05 44 51.9**	**+0.1**
ESJX	**Sierra Juarez**	**5.36**	**321**		**Pn**	**05 44 57.8**	**+2.1**
HPIG		**5.67**	**98**	Pn	**Pn**	**05 44 58.9**	**-1.1**
GLA	**Glamis**	**5.70**	**335**		**Pn**	**05 45 00.6**	**+0.4**
YUH	**Yuha Desert**	**5.84**	**325**		**Pn**	**05 45 02.6**	**+0.5**
121A	**Cookes Peak, D**	**5.86**	**37**		**Pn**	**05 45 02.6**	**+0.1**
CBX	**Cerro Bola**	**6.00**	**318**	*e*	Pb	05 45 36.3	+16
CBX				*e*		05 46 42.8	
Y14A	**Wickenburg**	**6.09**	**352**		**Pn**	**05 45 06.5**	**+0.9**
BLYC	**Blythe**	**6.24**	**340**	Pn	**Pn**	**05 45 08.6**	**+1.1**
BAR	**Barrett**	**6.27**	**321**	Pn	**Pn**	**05 45 08.8**	**+0.8**
X18A	**Snowflake**	**6.83**	**14**		**Pn**	**05 45 17.0**	**+1.1**
PFO	**Pinyon Flats O**	**6.89**	**327**	Pn	Pn	05 45 21.9	+5.3
0.1nm,0.3s,baz=130,slow=7.7,SNR=8.0							
PFO				Lg	Lg	05 47 21.3	
0.5nm,0.3s,baz=244,slow=10,SNR=6.3							
4.3nm,0.9s							
W13A	**Hualapai Mount**	**7.36**	**348**		**Pn**	**05 45 24.5**	**+1.3**
ELS	**Elsinore Mount**	**7.41**	**322**	Pn	**Pn**	**05 45 23.8**	**0.0**
TX31	**Lajitas Ar. Si**	**7.42**	**77**	Pn	**Pn**	**05 45 25.6**	**+1.6**
TX32	**Lajitas Array**	**7.42**	**77**	Pn	**Pn**	**05 45 25.3**	**+1.3**
TXAR	**Lajitas Array**	**7.42**	**77**	Pn	**Pn**	**05 45 25.9**	**+1.9**
1.8nm,0.3s,baz=248,slow=13,SNR=62							
TXAR				Lg	Lg	05 47 30.3	
4.9nm,0.3s,baz=261,slow=24,SNR=3.2							
2.5nm,0.3s							
TXAR	**Lajitas Array**	**7.42**	**77**		**Pn**	**05 45 25.6**	**+1.6**
CRNM	**Carthage**	**7.52**	**35**	Pn	**Pn**	**05 45 25.4**	**+0.2**
WUAZ	**Wupatki**	**7.61**	**4**	Pn	**Pn**	**05 45 27.1**	**+0.6**
GDL2	**Guadalupe Moun**	**7.85**	**55**	Pn	**Pn**	**05 45 31.1**	**+1.3**
V12A	**Nelson**	**8.18**	**343**		**Pn**	**05 45 35.0**	**+0.7**
CLNB	**Carlsbad**	**8.24**	**56**	Pn	**Pn**	**05 45 34.0**	**-1.1**
ANMO	**Albuquerque**	**8.45**	**32**	Pn	**Pn**	**05 45 40.9**	**+2.8**
0.3nm,0.3s,baz=218,slow=15,SNR=8.5							
ANMO				Lg	Lg	05 48 02.4	
1.0nm,0.3s,baz=137,slow=24,SNR=8.5							
2.3nm,0.7s							
U15A	**North Rim**	**8.51**	**358**		**Pn**	**05 45 39.9**	**+0.9**
KNB	**Kanab**	**9.12**	**356**		**Pn**	**05 45 48.5**	**+1.2**
LCMT	**Little Creek M**	**9.15**	**354**		**Pn**	**05 45 49.3**	**+1.7**
GWY	**Greenwater Val**	**9.18**	**335**		**Pn**	**05 45 48.0**	**-0.1**
ISA	**Isabella, Lake**	**9.52**	**326**		**Pn**	**05 45 53.3**	**+0.7**
PKCU	**Pink Cliffs**	**9.52**	**358**		**Pn**	**05 45 53.1**	**+0.2**
CCUT	**Cedar City**	**9.70**	**353**		**Pn**	**05 45 57.0**	**+1.8**
TPNV	**Topopah Spring**	**9.72**	**339**		**Pn**	**05 45 55.8**	**+0.3**
PRN	**Pahroc Range**	**9.83**	**345**		**Pn**	**05 45 58.2**	**+1.2**
PV13	**Radium Mtn., P**	**10.56**	**14**		**Pn**	**05 46 06.9**	**-0.2**
MVU	**Marysvale**	**10.58**	**359**		**Pn**	**05 46 07.2**	**-0.1**
TCRU	**Three Creeks R**	**10.69**	**358**	Pn	**Pn**	**05 46 09.9**	**+1.0**
PSUT	**Pine Spring**	**10.72**	**352**		**Pn**	**05 46 09.3**	**+0.1**
R11A	**Troy Canyon, C**	**10.85**	**345**		**Pn**	**05 46 09.9**	**-1.1**
TMUT	**Trail Mountain**	**11.38**	**3**		**Pn**	**05 46 20.1**	**+1.7**
P17A	**Butcher Ranch,**	**11.59**	**5**		**Pn**	**05 46 21.5**	**+0.4**
NV11	**Mina Array Sit**	**11.71**	**335**		**Pn**	**05 46 23.5**	**+0.8**
Q09A	**Carvers**	**11.74**	**340**		**Pn**	**05 46 24.4**	**+1.2**
NVAR	**Mina Array Bea**	**11.77**	**335**	Pn	**Pn**	**05 46 28.1**	**+4.6**
baz=147,slow=3.0,SNR=3.8							
0.7nm,0.8s							
P18A	**Preston Nutter**	**11.78**	**6**		**Pn**	**05 46 23.4**	**-0.4**
KVN	**Kaiserville**	**12.24**	**337**		**Pn**	**05 46 30.3**	**+0.3**
ELK	**Elko**	**13.10**	**349**	Pn	Pn	05 46 46.6	+4.9
0.2nm,0.3s,baz=188,slow=11,SNR=19							
ELK				Lg	Lg	05 50 30.1	
0.1nm,0.3s,baz=271,slow=4.8,SNR=4.3							
9.7nm,1.1s							
TCUT	**Toone Canyon**	**13.19**	**2**	Pn	**Pn**	**05 46 41.6**	**-1.5**
BMN	**Battle Mountai**	**13.23**	**342**	Pn	**Pn**	**05 46 43.7**	**+0.2**
PDAR	**Pinedale Array**	**14.96**	**7**	Pn	**P**	**05 47 16.4**	**+3.9**
0.1nm,0.3s,baz=182,slow=11,SNR=20							
PDAR				Lg	Lg	05 51 28.3	
0.1nm,0.3s,baz=164,slow=21,SNR=1.8							
3.7nm,0.8s							
IMW	**Indian Meadow**	**15.98**	**3**	Pn	**Pn**	**05

comp=Z,0.3nm,0.7s,baz=291,slow=8.7,SNR=4.6
comp=Z,0.3nm,0.7s
WRA Warramunga Arr 55.10 179 P P 05 55 56.4 +1.3
comp=Z,1.0nm,0.9s,baz=355,slow=7.7,SNR=6.2
comp=Z,1.0nm,0.9s
ASAR Alice Springs 58.80 180 P P 05 56 23.6 +2.3
comp=Z,0.5nm,0.7s,baz=6.8,slow=9.3,SNR=3.0
comp=Z,0.5nm,0.7s

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*JMA **21** 05:48:56.7±0.1,38°.2N±0°.3×141°.7E±0°.5,h50km,MV3.9/40,*
E OFF MIYAGI PREF
JMA Felt I J1 at E OFF MIYAGI PREF .
*IDC **21** 05:48:58.5±1.3,38°.16N×141°.81E,h72km±9km,mb3.5/12,*
mbtmp3.8/13,Error ellipse: s-maj=26.5km s-min=19.0km
az=74.0
ISC 21 05:48:55.5±0.9,38°.12N±0°.05×141°.80E±0°.08,h45km±5km,
n34,σ0§94/42,mb3.8/12,20D,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**306**	⇓P	**Pn**	**05 49 05.2**	**+0.8**
JIKH				⇓S	**Sn**	**05 49 11.1**	**+0.3**
JIO	**Ouri**	**0.49**	**314**	⇓P	**Pn**	**05 49 06.7**	**+0.4**
JIO				⇓S	**Sn**	**05 49 13.6**	**-0.5**
JKMT	**Kesennumamotoy**	**0.74**	**340**	⇓P	**Pn**	**05 49 09.8**	**+0.2**
JKMT				⇓S	**Sn**	**05 49 18.8**	**-0.9**
JMM	**Marumori**	**0.83**	**253**	⇓*i*P	**Pn**	**05 49 10.9**	**0.0**
JMM				⇓S	**Sn**	**05 49 21.0**	**-1.1**
JOFO	**Osakifurukawao**	**0.85**	**305**	⇓*i*P	**Pn**	**05 49 11.3**	**+0.2**
JOFO				⇓S	**Sn**	**05 49 22.3**	**-0.1**
JOU	**Okura**	**0.93**	**286**	⇓*i*P	**Pn**	**05 49 12.2**	**0.0**
JOU				⇓S	**Sn**	**05 49 23.6**	**-0.8**
JMK	**Ichinoseki**	**0.95**	**332**	⇓*i*P	**Pn**	**05 49 12.7**	**+0.3**
JMK				⇓S	**Sn**	**05 49 23.9**	**-0.9**
JFK	**Kawauchi**	**1.05**	**225**	P	**Pn**	**05 49 14.5**	**+0.7**
JFK				S	**Sn**	**05 49 27.2**	**-0.2**
JOTO	**OTAMA OYAMA**	**1.29**	**245**	P	**Pn**	**05 49 17.7**	**+0.7**
JOTO				S	**Sn**	**05 49 33.5**	**+0.3**
JYS	**Shiratake**	**1.37**	**275**	⇓*i*P	**Pn**	**05 49 18.4**	**+0.2**
JYS				⇓S	**Sn**	**05 49 34.7**	**-0.5**
JYK	**Kaneyama**	**1.38**	**306**	⇓P	**Pn**	**05 49 18.4**	**0.0**
JOM	**Ohasama**	**1.41**	**344**	⇓*i*P	**Pn**	**05 49 19.1**	**+0.4**
JOM				⇓*e*S	**Sn**	**05 49 35.7**	**-0.4**
JRG	**Rokugo**	**1.57**	**325**	*i*P	**Pn**	**05 49 21.6**	**+0.6**
JYA	**Atsumi**	**1.71**	**287**	⇓P	**Pn**	**05 49 23.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.57**	**313**	P	**Pn**	**05 51 14.5**	**+3.9**
	5.4nm,0.7s,baz=125,slow=12,SNR=7.0						
SONM	**Songino Array**	**27.45**	**302**	P	**P**	**05 54 39.3**	**+2.1**
	0.3nm,0.4s,baz=96,slow=9.3,SNR=1.7						
SONM				pP	**sP**	**05 54 54.7**	**+0.1**
	0.5nm,0.6s,baz=112,slow=10.0,SNR=1.8						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.46**	**123**	T	T	06 25 04.3	
	baz=316,slow=75,SNR=81						
H11N1	**WAKE ISLAND Hy**	**28.47**	**123**	T	T	06 25 05.1	
	baz=316,slow=75,SNR=86						
H11N3	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	06 25 05.8	
	baz=316,slow=75,SNR=132						
H11S1	**WAKE ISLAND Hy**	**29.21**	**125**	T	T	06 25 58.0	
	baz=318,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**29.21**	**125**	T	T	06 25 58.3	
	baz=318,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	06 25 58.5	
	baz=318,slow=76,SNR=36						
ZALV	**Zalesovo Beam**	**41.42**	**311**	P	**P**	**05 56 36.5**	**-0.8**
	1.6nm,0.5s,baz=79,slow=7.7,SNR=6.0						
ZALV				pP	**sP**	**05 56 54.5**	**-0.5**
	1.7nm,0.5s,baz=84,slow=7.4,SNR=4.8						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	**43.81**	**301**	P	**P**	**05 56 57.2**	**+0.4**
	1.0nm,0.6s,baz=84,slow=9.4,SNR=6.6						
MKAR				pP	**sP**	**05 57 14.5**	**0.0**
	1.9nm,0.7s,baz=88,slow=10.0,SNR=9.6						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**48.42**	**33**	P	**P**	**05 57 32.5**	**-0.3**
	0.3nm,0.7s,baz=263,slow=6.3,SNR=2.2						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**58.17**	**188**	P	**P**	**05 58 44.9**	**0.0**
	0.6nm,0.5s,baz=4.4,slow=7.1,SNR=6.4						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**61.90**	**188**	P	**P**	**05 59 10.9**	**+0.5**
	0.5nm,0.6s,baz=2.0,slow=5.1,SNR=5.1						
	0.5nm,0.6s						
ARCES	**ARCESS Array B**	**63.09**	**339**	P	**P**	**05 59 16.2**	**-1.6**
	0.9nm,0.6s,baz=42,slow=8.2,SNR=5.8						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**68.00**	**332**	P	**P**	**05 59 49.3**	**-0.3**
	1.3nm,0.7s,baz=2.3,slow=7.0,SNR=2.0						
	1.3nm,0.7s						
NB2	**NORSAR Subarra**	**73.31**	**337**	P	**P**	**06 00 22.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**73.31**	**337**	P	**P**	**06 00 21.7**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=38,slow=6.1,SNR=3.9						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**73.63**	**322**	P	**P**	**06 00 23.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=46,slow=6.6,SNR=4.4						
	comp=Z,0.6nm,0.5s						
PDAR	**Pinedale Array**	**76.69**	**46**	P	**P**	**06 00 43.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=278,slow=1.4,SNR=3.5						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**89.22**	**53**	P	**P**	**06 01 45.8**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=287,slow=3.7,SNR=2.6						
	comp=Z,0.2nm,0.7s						

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*IDC **21** 05:50:20.3±1.2,35°.17N×133°.66E,h0km,mb3.5/4,*
mbtmp3.6/7,ML3.1/3,Error ellipse: s-maj=24.8km
s-min=24.0km az=151.0
*JMA **21** 05:50:21.1±0.0,35°.4N±0°.1×133°.8E±0°.1,h10km,MD4.2/20,*
MV4.4/20,EASTERN TOTTORI PREF
JMA Felt III J1 at EASTERN TOTTORI PREF .
ISC 21 05:50:21.1±0.9,35°.41N±0°.03×133°.83E±0°.02,h11km±5km,
n44,σ1§16/29,mb3.6/4,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.03**	**194**	P	**Pg**	**05 50 23.0**	**0.0**
JKR				S	**Sg**	**05 50 24.3**	**-0.1**
JKR	**Kurayoshi**	**0.03**	**194**	A	A	05 50 23.0	
	comp=E,224nm,0.8s,comp=E,232nm,1.1s						
JAD	**Aida**	**0.54**	**149**	*i*P	**Pg**	**05 50 31.5**	**-0.1**
JAD				S	**Sg**	**05 50 38.7**	**-0.1**
JAD	**Aida**	**0.54**	**149**	A	A	05 50 31.5	
	comp=E,18nm,0.7s,comp=E,17nm,0.4s						
JNM	**Ikuma**	**0.66**	**278**	*i*P	**Pg**	**05 50 34.2**	**+0.3**
JNM				S	**Sg**	**05 50 43.2**	**+0.8**
JNM	**Ikuma**	**0.66**	**278**	A	A	05 50 34.2	
	comp=E,17nm,0.6s,comp=E,9.0nm,1.6s						
JKSM	**Kasumi**	**0.70**	**75**	*i*P	**Pg**	**05 50 34.2**	**-0.5**
JKSM				S	**Sg**	**05 50 43.4**	**-0.6**
JKSM	**Kasumi**	**0.70**	**75**	A	A	05 50 34.2	
	comp=E,4.0nm,2.1s,comp=E,11nm,1.3s						
JHS	**Saijyo**	**0.71**	**235**	P	**Pg**	**05 50 34.9**	**0.0**
JHS				S	**Sg**	**05 50 44.5**	**+0.4**
JISK	**Izumosakaura**	**0.81**	**277**	*i*P	**Pg**	**05 50 36.4**	**-0.2**
JISK				S	**Sg**	**05 50 47.3**	**+0.2**
JISK	**Izumosakaura**	**0.81**	**277**	A	A	05 50 36.4	
	comp=E,8.0nm,0.5s,comp=E,10.0nm,0.7s						
JKS	**Kasai**	**0.93**	**117**	*i*P	**Pg**	**05 50 38.5**	**-0.6**
JKS				S	**Sg**	**05 50 50.6**	**-0.6**
JKS	**Kasai**	**0.93**	**117**	A	A	05 50 38.5	
	comp=E,9.0nm,0.6s,comp=E,13nm,0.4s						
JJG	**Jouge**	**0.94**	**216**	A	A	05 50 39.1	
	comp=E,16nm,0.3s,comp=E,22nm,0.2s						
JOI	**OKI**	**1.00**	**332**	P	**Pg**	**05 50 39.5**	**-0.8**
JOI				S	**Sg**	**05 50 53.1**	**-0.2**
JOI	**OKI**	**1.00**	**332**	A	A	05 50 39.5	
	comp=E,40nm,0.6s,comp=E,50nm,0.7s						
JJS	**Sakaide**	**1.03**	**175**	*i*P	**Pg**	**05 50 40.3**	**-0.7**
JJS				S	**Sg**	**05 50 54.0**	**-0.4**
JKY	**Yasaka**	**1.06**	**78**	*i*P	**Pg**	**05 50 40.7**	**-0.8**
JKY				S	**Sg**	**05 50 54.7**	**-0.7**
JKY	**Yasaka**	**1.06**	**78**	A	A	05 50 40.7	
	comp=E,7.0nm,0.5s,comp=E,13nm,1.7s						
JGT2	**ShimaneMisato**	**1.14**	**253**	A	A	05 50 42.5	
	comp=E,6.0nm,0.6s,comp=E,10.0nm,0.9s						
JMIK	**Miki**	**1.17**	**120**	A	A	05 50 42.6	
	comp=E,14nm,0.3s,comp=E,22nm,1.6s						
JAWN	**Awajishima-nag**	**1.27**	**136**	A	A	05 50 44.4	
	comp=E,18nm,0.6s,comp=E,21nm,0.5s						
JWT	**Wachi**	**1.29**	**95**	A	A	05 50 44.6	
	comp=E,5.0nm,6.0s,comp=E,4.0nm,5.2s						
JHT	**Toyohira**	**1.37**	**238**	A	A	05 50 46.3	
	comp=E,9.0nm,0.2s,comp=E,11nm,1.0s						
JHM	**Kurahashi**	**1.66**	**221**	A	A	05 50 50.6	
	comp=E,9.0nm,0.7s,comp=E,10.0nm,0.7s						
JAI	**Aioi**	**1.69**	**162**	A	A	05 50 50.9	
	comp=E,10.0nm,1.7s,comp=E,7.0nm,1.7s						
JET	**Tanbara**	**1.75**	**202**	A	A	05 50 51.9	
	comp=E,5.0nm,0.3s,comp=E,6.0nm,2.7s						
JFM	**Mihama**	**1.76**	**85**	A	A	05 50 51.9	
	comp=E,4.0nm,1.7s,comp=E,8.0nm,6.7s						
JHIK	**Hikimi**	**1.79**	**241**	A	A	05 50 52.7	
	comp=E,4.0nm,0.8s,comp=E,6.0nm,2.0s						
JKHR	**Kochiharuno**	**1.91**	**188**	A	A	05 50 54.4	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,1.9s						
JWM	**Minabe**	**2.00**	**141**	A	A	05 50 55.4	
	comp=E,5.0nm,2.1s,comp=E,4.0nm,1.0s						
JNA	**Nagahama**	**2.16**	**212**	A	A	05 50 58.0	
	comp=E,3.0nm,2.6s,comp=E,4.0nm,6.9s						
JTNC	**Tanabenakahech**	**2.16**	**137**	A	A	05 50 57.8	
	comp=E,5.0nm,2.0s,comp=E,4.0nm,1.9s						
JKI	**Kunimi**	**2.57**	**227**	A	A	05 51 04.0	
	comp=E,6.0nm,0.8s,comp=E,13nm,0.9s						
JAO	**Obara**	**2.81**	**92**	A	A	05 51 07.0	
	comp=E,2.0nm,2.0s,comp=E,4.0nm,1.8s						
JBEP	**Beppuamama**	**2.88**	**225**	A	A	05 51 08.4	
	comp=E,7.0nm,1.3s,comp=E,8.0nm,0.9s						
JUS	**Usuki**	**2.90**	**217**	A	A	05 51 08.7	
	comp=E,3.0nm,1.2s,comp=E,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**3.73**	**71**	Pn	**Pn**	**05 51 20.5**	**+1.9**
	0.4nm,0.3s,baz=249,slow=13,SNR=4.4						
MJAR				Pg	**Pg**	**05 51 34.0**	**+1.5**
	1.3nm,0.3s,baz=244,slow=15,SNR=11						
MJAR				Lg	Lg	05 52 20.5	
	1.5nm,0.3s,baz=230,slow=30,SNR=4.9						
	5.7nm,0.4s						
KSRS	**Korea Array**	**5.18**	**295**	Pn	**Pn**	**05 51 38.2**	**-0.3**
	1.4nm,0.3s,baz=107,slow=14,SNR=4.1						
KSRS				Sn	**Sn**	**05 52 37.0**	**-1.3**
	2.2nm,0.3s,baz=117,slow=24,SNR=7.1						
	3.1nm,0.3s						
KLR	**Kul'dur**	**13.90**	**354**	Pn	**P**	**05 53 43.4**	**-2.8**
	0.1nm,0.3s,baz=157,slow=19,SNR=2.5						
	3.0nm,1.0s						
SONM	**Songino Array**	**23.84**	**310**	P	**P**	**05 55 35.8**	**+1.5**
	1.3nm,0.6s,baz=110,slow=9.4,SNR=5.5						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**54.11**	**31**	P	**P**	**05 59 48.3**	**+2.6**
	0.4nm,0.9s,baz=302,slow=11,SNR=4.6						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**55.05**	**179**	P	**P**	**05 59 50.9**	**-2.0**
	0.5nm,0.8s,baz=354,slow=7.6,SNR=2.2						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**58.75**	**180**	P	**P**	**06 00 19.7**	**+0.6**
	0.3nm,0.6s,baz=12,slow=4.7,SNR=2.0						
	0.3nm,0.6s						

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*BJI **21** 05:53:12.1±0.0,35°.09N×134°.44E,h10km,mb4.4/28,*
mB5.8/9,Ms5.2/2,Ms7 4.7/2
*IDC **21** 05:53:16.7±0.6,35°.29N×133°.65E,h0km,mb4.1/15,*
mbtmp4.1/19,ML3.5/4,Error ellipse: s-maj=17.4km
s-min=14.6km az=44.0
*JMA **21** 05:53:17.6±0.0,35°.4N±0°.1×133°.87E±0°.09,h9km,*
MD5.0/20,MW4.7/20,EASTERN TOTTORI PREF
JMA Felt IV J1 at EASTERN TOTTORI PREF .
*MOS **21** 05:53:17.2±1.5,35°.30N×133°.77E,h16km,mb4.6/16,Error*
ellipse: s-maj=10.1km s-min=6.1km az=110.9
*NIED **21** 05:53:17.6,35°.36N×133°.87E,h9km,MW4.7,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm;
M_{rr}-0.29; $M_{\theta\theta}$1.43; $M_{\phi\phi}$-1.14; $M_{r\theta}$-0.33; $M_{\theta\phi}$-0.30;
$M_{\phi r}$-0.41; Fault plane solution: $M_0$1.43000×10^{16} NP1:
ϕ_s320.00000°,δ67.00000°,λ-10.00000°. NP2:ϕ_s54.00000°,
δ81.00000°,λ-157.00000°.
*NEIC **21** 05:53:18.1±1.4,35°.37N±0°.04×133°.80E±0°.01,h10km±1km,*
mb4.6/29 Error ellipse: s-maj=6.7km s-min=2.9km
az=191.0
ISC 21 05:53:17.5±1.0,35°.29N±0°.03×133°.80E±0°.03,h5km±6km,
n175,σ1§53/143,mb4.5/49,10C-12D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.09**	**10**	P	**Pg**	**05 53 19.3**	**-0.1**
JKR				S	**Sg**	**05 53 20.4**	**-0.3**
JKR	**Kurayoshi**	**0.09**	**10**	A	A	05 53 19.3	
	comp=E,1μm,2.0s,comp=E,581nm,1.6s						
JAD	**Aida**	**0.46**	**139**	*i*P	**Pb**	**05 53 27.0**	**-1.2**
JAD				S	**Sg**	**05 53 33.5**	**+1.0**
JAD	**Aida**	**0.46**	**139**	A	A	05 53 27.0	
	comp=E,132nm,2.6s,comp=E,92nm,3.3s						
JHS	**Saijyo**	**0.63**	**243**	Pg	**Pn**	**05 53 30.9**	**-2.3**
JHS				Sg	**Sb**	**05 53 40.2**	**-0.1**
JHS	**Saijyo**	**0.63**	**243**	⇓*i*P	**Pn**	**05 53 31.0**	**-2.3**
JHS				⇓S	**Sb**	**05 53 40.7**	**+0.4**
JHS	**Saijyo**	**0.63**	**243**	A	A	05 53 31.0	
	comp=E,69nm,4.5s,comp=E,110nm,4.7s						
JNM	**Ikuma**	**0.66**	**288**	⇓*i*P	**Pb**	**05 53 31.1**	**-0.5**
JNM	**Ikuma**	**0.66**	**288**	A	A	05 53 31.1	
	comp=E,71nm,4.6s,comp=E,65nm,3.3s						
JKSM	**Kasumi**	**0.76**	**67**	⇓*i*P	**Pg**	**05 53 30.6**	**-1.5**
JKSM				⇓S	**Sg**	**05 53 39.8**	**-2.3**
JKSM	**Kasumi**	**0.76**	**67**	A	A	05 53 30.6	
	comp=E,67nm,4.8s,comp=E,89nm,5.0s						
JISK	**Izumosakaura**	**0.81**	**285**	⇓*i*P	**Pb**	**05 53 33.4**	**-0.7**
JISK	**Izumosakaura**	**0.81**	**285**	A	A	05 53 33.4	
	comp=E,47nm,2.7s,comp=E,35nm,4.6s						
JJG	**Jouge**	**0.84**	**219**	A	A	05 53 35.2	
	comp=E,60nm,2.3s,comp=E,103nm,3.8s						
JKS	**Kasai**	**0.91**	**110**	*i*P	**Pg**	**05 53 34.0**	**-0.9**
JKS				S	**Sg**	**05 53 45.8**	**-1.0**
JKS	**Kasai**	**0.91**	**110**	A	A	05 53 34.0	
	comp=E,45nm,4.6s,comp=E,66nm,2.9s						
JJS	**Sakaide**	**0.92**	**173**	*i*P	**Pb**	**05 53 35.8**	**-0.3**
JJS				S	**Sb**	**05 53 48.9**	**+0.3**
JGT2	**ShimaneMisato**	**1.08**	**258**	A	A	05 53 39.1	
	comp=E,23nm,4.5s,comp=E,56nm,5.3s						
JOI	**OKI**	**1.09**	**336**	*i*P	**Pg**	**05 53 36.8**	**-1.6**
JOI				S	**Sg**	**05 53 51.1**	**-1.6**
JOI	**OKI**	**1.09**	**336**	A	A	05 53 36.8	
	comp=E,144nm,0.5s,comp=E,142nm,0.4s						
JKY	**Yasaka**	**1.11**	**72**	⇓*i*P	**Pg**	**05 53 37.0**	**-1.8**
JKY				⇓S	**Sg**	**05 53 51.7**	**-1.6**
JKY	**Yasaka**	**1.11**	**72**	A	A	05 53 37.0	
	comp=E,69nm,4.8s,comp=E,104nm,1.4s						
JMIK	**Miki**	**1.14**	**115**	A	A	05 53 38.5	
	comp=E,98nm,1.1s,comp=E,181nm,1.6s						
JAWN	**Awajishima-nag**	**1.21**	**131**	A	A	05 53 40.2	
	comp=E,61nm,3.4s,comp=E,86nm,1.3s						
JMAF	**Mimaanabuki**	**1.28**	**167**	A	A	05 53 42.2	
	comp=E,65nm,1.3s,comp=E,28nm,2.0s						
JHT	**Toyohira**	**1.30**	**241**	A	A	05 53 42.8	
	comp=E,37nm,4.3s,comp=E,85nm,3.5s						
JWT	**Wachi**	**1.31**	**90**	A	A	05 53 40.8	
	comp=E,21nm,3.7s,comp=E,23nm,4.7s						
JHM	**Kurahashi**	**1.56**	**223**	A	A	05 53 46.9	
	comp=E,67nm,4.3s,comp=E,56nm,1.1s						
JMN	**Monobe**	**1.56**	**178**	Pn	**Pg**	**05 53 47.1**	**-0.4**
JAI	**Aioi**	**1.59**	**160**	A	A	05 53 46.8	
	comp=E,79nm,1.4s,comp=E,40nm,1.3s						
JET	**Tanbara**	**1.63**	**203**	A	A	05 53 48.0	
	comp=E,36nm,0.8s,comp=E,25nm,1.9s						
JHE	**Heguri**	**1.67**	**112**	A	A	05 53 47.0	
	comp=E,24nm,5.7s,comp=E,40nm,2.1s						
JHIK	**Hikimi**	**1.72**	**244**	A	A	05 53 49.2	
	comp=E,31nm,1.1s,comp=E,80nm,3.9s						
JKHR	**Kochiharuno**	**1.80**	**188**	A	A	05 53 50.3	
	comp=E,21nm,2.0s,comp=E,21nm,2.0s						
JFM	**Mihama**	**1.80**	**82**	A	A	05 53 48.3	
	comp=E,20nm,1.3s,comp=E,36nm,2.8s						
JWY	**Kouya**	**1.82**	**126**	A	A	05 53 49.5	
	comp=E,31nm,1.9s,comp=E,41nm,1.9s						
MRT2	**Murotomisaki 2**	**1.92**	**171**	A	A	05 53 51.9	
	comp=E,28nm,5.3s,comp=E,19nm,3.4s						
JWM	**Minabe**	**1.93**	**138**	A	A	05 53 51.4	
	comp=E,33nm,2.3s,comp=E,30nm,2.9s						
JNTK	**Naratenkawa**	**2.00**	**120**	A	A	05 53 52.0	
	comp=E,18nm,1.8s,comp=E,20nm,2.1s						
JKD	**Kudamatsu**	**2.01**	**233**	A	A	05 53 53.6	
	comp=E,41nm,5.7s,comp=E,51nm,5.2s						
JNA	**Nagahama**	**2.05**	**213**	A	A	05 53 54.2	
	comp=E,22nm,6.3s,comp=E,21nm,6.8s						
JKU	**Kubokawa**	**2.07**	**197**	A	A	05 53 54.4	
	comp=E,22nm,3.2s,comp=E,15nm,4.3s						
JTNC	**Tanabenakahech**	**2.10**	**134**	A	A	05 53 53.8	
	comp=E,35nm,2.2s,comp=E,36nm,2.9s						
JEG	**Eigenji**	**2.13**	**94**	A	A	05 53 53.3	
	comp=E,14nm,5.0s,comp=E,18nm,1.3s						
TSUJ	**Tsu 2**	**2.23**	**104**	A	A	05 53 55.0	
	comp=E,15nm,0.7s,comp=E,31nm,2.7s						
JHGM	**Hagimishima**	**2.24**	**258**	A	A	05 53 56.7	
	comp=E,12nm,2.3s,comp=E,36nm,2.0s						
JKG	**Kaga**	**2.28**	**64**	A	A	05 53 55.1	
	comp=E,11nm,3.6s,comp=E,24nm,1.7s						
JKN2	**Miekihoku**	**2.29**	**117**	A	A	05 53 56.2	
	comp=E,15nm,4.2s,comp=E,18nm,3.9s						
UWA2	**Uwa jima 2**	**2.29**	**206**	A	A	05 53 57.7	
	comp=E,16nm,6.8s,comp=E,15nm,7.3s						
JMMH	**Miemihama**	**2.35**	**128**	A	A	05 53 57.3	
	comp=E,18nm,1.4s,comp=E,22nm,2.6s						
JYTA	**Yamagatataniai**	**2.41**	**82**	A	A	05 53 57.3	
	comp=E,11nm,5.4s,comp=E,18nm,2.0s						
JWKM	**Wakayamakushim**	**2.45**	**138**	A	A	05 53 59.0	
	comp=E,32nm,1.8s,comp=E,21nm,9.0s						
JTY	**Toyota**	**2.48**	**246**	A	A	05 54 00.2	
	comp=E,19nm,5.6s,comp=E,30nm,1.7s						
JKI	**Kunimi**	**2.48**	**229**	A	A	05 54 00.4	
	comp=E,46nm,1.8s,comp=E,63nm,2.1s						
JICN	**Ichinomiyachia**	**2.49**	**89**	A	A	05 53 58.5	
	comp=E,33nm,1.7s,comp=E,25nm,2.3s						
JIE	**Ise**	**2.55**	**110**	A	A	05 53 59.8	
	comp=E,12nm,2.4s,comp=E,21nm,5.7s						
INU	**Inuyama**	**2.63**	**88**	Pn	**Pn**	**05 54 00.0**	**-0.6**
JGF	**Kuroka**	**2.92**	**83**	Pn	**Pn**	**05 54 03.8**	**-0.9**
JTU	**Tsushima**	**3.70**	**259**	Pn	**Pn**	**05 54 16.1**	**+0.8**
MJB9	**Matsu-Tunnel**	**3.79**	**69**	Pn	**Pn**	**05 54 17.6**	**+1.0**
MAJO	**Matsushiro**	**3.79**	**70**	Pn	**Pn**	**05 54 16.4**	**-0.2**
MAJO	**Matsushiro**	**3.79**	**70**	*c*P	**Pn**	**05 54 16.4**	**-0.2**
MJAR	**Matsushiro Arr**	**3.79**	**70**	Pn	**Pn**	**05 54 17.1**	**+0.5**
	2.2nm,0.3s,baz=241,slow=13,SNR=12						
MJAR				Pg	**Pg**	**05 54 29.1**	**-0.9**
	5.5nm,0.3s,baz=261,slow=17,SNR=17						
MJAR				Lg	Lg	05 55 15.5	
	8.5nm,0.3s,baz=91,slow=7.0,SNR=13						
	19nm,0.3s						
JSD	**Sado**	**4.51**	**51**		**Pn**	**05 54 25.3**	**-1.2**
KSRS	**Korea Array**	**5.21**	**296**	Pn	**Pn**	**05 54 35.6**	**-0.4**
	3.8nm,0.3s,baz=113,slow=14,SNR=12						
KSRS				Sn	**Sn**	**05 55 35.0**	**-1.6**
	7.5nm,0.3s,baz=112,slow=25,SNR=8.3						
	18nm,0.6s						
KSAR	**Wonju Array Be**	**5.23**	**296**	Pn	**Pn**	**05 54 35.1**	**-1.3**
KSAR	**Wonju Array Be**	**5.23**	**296**	P	**Pn**	**05 54 35.1**	**-1.3**
KS19	**Wonju Array Si**	**5.27**	**296**	Pn	**Pn**	**05 54 35.9**	**-1.0**
TJN	**Taejon**	**5.34**	**284**	Pn	**Pn**	**05 54 36.7**	**-1.2**
TJN	**Taejon**	**5.34**	**284**	*i*P	**Pn**	**05 54 38.7**	**+0.8**
JHJ	**Hachijo jima 2**	**5.41**	**112**	Pn	**Pn**	**05 54 39.0**	**+0.2**
	14nm,0.3s,baz=61,slow=19,SNR=1.8						
JHJ				Sn	**Sn**	**05 55 36.3**	**-5.2**
	8.0nm,0.3s,baz=294,slow=20,SNR=1.1						
	138nm,0.7s						
JHJ2	**Mitsune**	**5.44**	**112**	Pn	**Pn**	**05 54 39.9**	**+0.6**
JMM	**Marumori**	**6.18**	**63**	Pn	**Pn**	**05 54 50.6**	**+1.1**
MSHR	**Mys Shultsa**	**7.56**	**345**	*ce*P	**Pn**	**05 55 07.5**	**-0.9**
MSHR				pmax	pmax		
	comp=Z,23nm,1.0s						
JTM	**Tenmabayashi**	**7.93**	**44**	Pn	**Pn**	**05 55 14.9**	**+1.4**
USA0B	**Ussuriysk Arra**	**9.00**	**352**	*i*P	**Pn**	**05 55 27.7**	**-0.5**
USRK	**Ussuriysk Ar.**	**9.00**	**352**	Pn	**Pn**	**05 55 29.1**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=174,slow=10,SNR=16						
	comp=Z,22nm,0.9s						
USRK	**Ussuriysk Ar.**	**9.00**	**352**	Pn	**Pn**	**05 55 28.1**	**0.0**
CN2	**Changchun**	**10.66**	**325**	*e*P	**Pn**	**05 55 52.1**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**11.51**	**337**	⇓P	**Pn**	**05 56 05.8**	**+3.3**
BNX				pmax	pmax		
	comp=Z,15nm,1.3s						
NJ2	**Nanjing**	**12.86**	**260**	*e*P	**Pn**	**05 56 21.3**	**+0.3**
NJ2				pmax	pmax		
	comp=

KK31	Karatay Array	48.63	299	P	P	06 02 00.9	-1.4
KK31				IAmb	IAmb	06 02 26.0	
comp=Z,5.6nm,1.1s							
KK31	Karatay Array	48.63	299	P	P	06 02 00.9	-1.4
KK31				pmax	pmax		
comp=Z,6.0nm,1.1s							
KKAR	Karatay Array	48.63	299	P	P	06 02 00.9	-1.4
KKAR	Karatay Array	48.63	299	P	P	06 02 00.9	-1.4
K20K	Telida	51.20	33	P	P	06 02 20.7	-0.8
K20K				IAmb	IAmb	06 02 42.8	
comp=Z,8.0nm,1.2s							
IMAR	Indian Mountai	51.26	30	P	P	06 02 21.2	-0.8
KDAK	Kodiak Island	52.46	40	P	P	06 02 30.3	-0.7
comp=Z,4.5nm,0.7s,baz=286,slow=7.4,SNR=2.4							
comp=Z,4.5nm,0.7s							
H23K	Yukon River	52.99	30	P	P	06 02 35.0	+0.2
H23K				IAmb	IAmb	06 02 47.0	
comp=Z,11nm,1.2s							
I23K	Minto, Yukon-K	53.13	31	P	P	06 02 35.7	-0.1
I23K				IAmb	IAmb	06 02 41.8	
comp=Z,10nm,1.4s							
NEA2	Nenana	53.31	32	P	P	06 02 36.3	-0.8
NEA2				IAmb	IAmb	06 02 40.5	
comp=Z,16nm,1.3s							
ARU	Arti	53.56	318	P	P	06 02 37.0	-2.1
ARU				IAmb	IAmb	06 02 43.5	
comp=Z,8.0nm,1.1s							
ARU	Arti	53.56	318c	iP	P	06 02 37.2	-1.9
ARU				S	S	06 10 09.2	-3.3
ARU				pmax	pmax		
comp=Z,41nm,5.0s							
MDM	Murphy Dome	53.63	31	P	P	06 02 39.2	-0.3
MDM				IAmb	IAmb	06 02 48.3	
comp=Z,8.1nm,1.0s							
POKR	Poker Plat Res	53.94	31	P	P	06 02 41.4	-0.4
IL31		54.22	31	P	P	06 02 44.0	+0.2
ILAR	Eielson Array	54.22	31	P	P	06 02 43.2	-0.6
comp=Z,1.0nm,0.6s,baz=273,slow=4.9,SNR=11							
comp=Z,1.0nm,0.6s							
ILAR	Eielson Array	54.22	31	P	P	06 02 42.4	-1.4
HDA	Harding Lake	54.24	32	P	P	06 02 42.9	-1.1
HDA				IAmb	IAmb	06 02 46.2	
comp=Z,8.5nm,1.1s							
ABKAR	Abkulak array	54.30	309	P	P	06 02 42.3	-2.4
ABKAR	Abkulak array	54.30	309	P	P	06 02 42.6	-2.1
ABKAR				IAmb	IAmb	06 02 53.3	
comp=Z,3.2nm,1.1s							
SCM	Sheep Creek Mo	54.46	35	P	P	06 02 45.0	-0.8
SCM	Sheep Creek Mo	54.46	35	P	P	06 02 45.0	-0.8
SCM				pmax	pmax		
comp=Z,18nm,1.3s							
PRP	Porcupine Dome	54.68	30	P	P	06 02 47.8	+0.4
PRP				IAmb	IAmb	06 02 55.6	
comp=Z,6.2nm,1.0s							
WB0	Warramunga Arr	54.76	179	P	P	06 02 47.0	-1.2
WRAB	Tennant Creek	54.92	179ce	P	P	06 02 51.3	+1.9
WRAB				pmax	pmax		
comp=Z,6.0nm,1.3s							
WB2	Warramunga Arr	54.93	179	P	P	06 02 48.4	-1.1
WB2				IAmb	IAmb	06 02 52.9	
comp=Z,6.2nm,0.9s							
WRA	Warramunga Arr	54.93	179	P	P	06 02 48.8	-0.6
comp=Z,3.0nm,0.6s,baz=354,slow=7.7,SNR=24							
comp=Z,3.0nm,0.6s							
WRA	Warramunga Arr	54.93	179	P	P	06 02 48.3	-1.2
WRA	Warramunga Arr	54.93	179	P	P	06 02 48.3	-1.2
WRA				pmax	pmax		
comp=Z,1.0nm,1.0s							
WR0	Warramunga Arr	54.95	179	P	P	06 02 49.1	-0.5
WR0				IAmb	IAmb	06 02 53.1	
comp=Z,9.5nm,0.9s							
SCRK	Sand Creek	55.59	32	P	P	06 02 52.8	-1.1
SCRK				IAmb	IAmb	06 02 57.8	
comp=Z,5.8nm,0.8s							
M26K	Nabesna, AK	56.35	34	P	P	06 02 58.7	-0.6
M26K				IAmb	IAmb	06 03 07.4	
comp=Z,8.2nm,1.0s							
K27K	Chicken	56.41	32	P	P	06 02 58.2	-1.4
K27K				IAmb	IAmb	06 03 08.4	
comp=Z,6.4nm,1.0s							
L27K	Beaver Creek,	56.73	33	P	P	06 03 01.2	-0.8
L27K				IAmb	IAmb	06 03 05.1	
comp=Z,6.0nm,1.1s							
BCAR	Beaver Creek A	56.75	33	P	P	06 03 01.9	-0.2
EPYK	Eagle Plains	58.04	28	P	P	06 03 10.7	-0.4
ASAR	Alice Springs	58.64	180	P	P	06 03 15.9	+0.2
comp=Z,2.1nm,0.8s,baz=8.3,slow=11,SNR=12							
comp=Z,2.1nm,0.8s							
ASAR	Alice Springs	58.64	180	P	P	06 03 16.0	+0.2
PRGR	Permogore	58.81	326	eP	P	06 03 18.9	+2.3
KLMR	Klimovskoe	61.86	326	eP	P	06 03 36.1	-1.3
KLMR				pmax	pmax		
comp=Z,13nm,1.5s							
KLMR	Klimovskoe	61.86	326	eP	P	06 03 36.2	-1.2
KLMR				AMP		06 03 44.2	
comp=Z,13nm,1.5s							
ARCES	ARCESS Array B	63.38	338	P	P	06 03 47.9	+0.5
comp=Z,1.1nm,0.6s,baz=64,slow=9.5,SNR=7.0							
comp=Z,1.1nm,0.6s							
STKA	Stephens Creek	67.22	173	P	P	06 04 13.4	+0.7
comp=Z,1.5nm,0.5s,baz=349,slow=7.9,SNR=3.1							
comp=Z,1.5nm,0.5s							
KBZ	Khabaz	67.24	308	P	P	06 04 12.2	-0.6
comp=Z,2.1nm,0.8s,baz=148,slow=5.2,SNR=3.7							
comp=Z,2.1nm,0.8s							
KIV	Kislovodsk	67.27	308	eP	P	06 04 13.6	+0.4
KIV				pmax	pmax		
comp=Z,10.0nm,1.1s							
FINES	FINESS Array B	67.37	330	P	P	06 04 11.4	-2.0
comp=Z,1.0nm,0.6s,baz=88,slow=4.6,SNR=5.1							
comp=Z,1.0nm,0.6s							
FINES	FINESS Array B	67.37	330	iP	P	06 04 12.0	-1.4
FINES				pmax	pmax		
comp=Z,1.0nm,0.7s							
AKASG	Malin Array Be	71.76	320	P	P	06 04 38.3	-2.4
comp=Z,0.9nm,0.6s,baz=50,slow=5.7,SNR=1.6							
comp=Z,0.9nm,0.6s							
AKBB	Malin Array Si	71.76	320	eP	P	06 04 43.5	+2.8
AKBB				pmax	pmax		
comp=Z,3.0nm,0.9s							
SUMG	Summit	72.29	358	iP	P	06 04 47.0	+3.0
NOA	NORSAR Array B	73.26	335	P	P	06 04 50.4	+0.9
comp=Z,0.8nm,0.7s,baz=47,slow=5.9,SNR=2.5							
comp=Z,0.8nm,0.7s							
BRTR	Keskin Array B	75.24	308	iP	P	06 05 03.2	+1.6
BRTR				pmax	pmax		
comp=Z,1.0nm,0.8s							
CLL	Collm	79.35	327	eP	P	06 05 25.0	+0.8
NVAR	Mina Array Bea	80.87	49	P	P	06 05 35.4	+2.4
comp=Z,0.6nm,0.6s,baz=290,slow=5.8,SNR=6.1							
comp=Z,0.6nm,0.6s							
PDAR	Pinedale Array	83.16	42	P	P	06 05 47.3	+2.3
comp=Z,0.5nm,0.7s,baz=302,slow=3.3,SNR=5.2							
comp=Z,0.5nm,0.7s							
TXAR	Lajitas Array	95.96	48	P	P	06 06 45.4	-0.6
comp=Z,0.4nm,0.7s,baz=266,slow=3.0,SNR=5.6							
comp=Z,0.4nm,0.7s							

JMA 21 06:02:38.9±0.0, 35°.4N±0°.2×133°.9E±0°.1, h6km, MV1.9/7, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.04	285	P	Pg	06 02 40.1	0.0
JKR				S	Sg	06 02 41.1	+0.1

IDC 21 06:02:40.0±1.1, 35°.37N×133°.74E, h0km, mb3.4/4, mbtmp3.4/6, ML2.9/2, Error ellipse: s-maj=23.5km s-min=18.9km az=167.0
JMA 21 06:02:41.1±0.0, 35°.4N±0°.1×133°.9E±0°.1, h10km, MD4.3/20, MV4.1/20, EASTERN TOTTORI PREF
JMA Felt III J1 at EASTERN TOTTORI PREF .

ISC 21 06:02:40.9±1.5, 35°.31N±0°.06×133°.74E±0°.08, h5km±11km, n26, σ0°62/11, mb3.4/4, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.10	43	P	Pg	06 02 43.0	+0.1
JKR				S	Sg	06 02 44.3	-0.1
JKR	Kurayoshi	0.10	43	A	A	06 02 43.0	
comp=E,139nm,1.8s,comp=E,101nm,0.6s							
JAD	Aida	0.51	136	P	Pg	06 02 50.5	-0.1
JAD				S	Sg	06 02 57.2	-0.1
JAD	Aida	0.51	136	A	A	06 02 50.5	
comp=Z,20nm,0.4s,comp=E,17nm,1.3s							
JHS	Saijyo	0.59	239	A	A	06 02 54.9	
comp=E,7.0nm,3.7s,comp=E,10.0nm,1.1s							
JISK	Izumosakaura	0.75	285	A	A	06 02 57.2	
comp=E,5.0nm,2.3s,comp=E,7.0nm,1.0s							
JJG	Jouge	0.82	216	A	A	06 02 58.7	
comp=E,7.0nm,0.7s,comp=E,13nm,0.8s							
JOI	OKI	1.06	338	A	A	06 03 00.9	
comp=E,32nm,0.3s,comp=E,45nm,0.3s							
JKY	Yasaka	1.16	74	A	A	06 03 00.6	
comp=E,10.0nm,0.7s,comp=E,19nm,1.5s							
JMIK	Miki	1.19	114	A	A	06 03 01.9	
comp=E,21nm,0.3s,comp=E,26nm,0.9s							
JHT	Toyohira	1.26	240	A	A	06 03 06.3	
comp=E,7.0nm,0.2s,comp=E,10.0nm,1.1s							
JAWN	Awajishima-nag	1.26	130	A	A	06 03 03.7	
comp=E,19nm,0.4s,comp=E,17nm,1.4s							
JHM	Kurahashi	1.53	221	A	A	06 03 10.4	
comp=E,10.0nm,0.8s,comp=E,9.0nm,0.8s							
JAI	Aioi	1.62	158	A	A	06 03 10.2	
comp=E,8.0nm,0.8s,comp=E,3.0nm,1.6s							
JHIK	Hikimi	1.68	243	A	A	06 03 12.7	
comp=E,6.0nm,0.6s,comp=E,10.0nm,2.5s							
JFM	Mihama	1.85	82	A	A	06 03 11.7	
comp=E,2.0nm,0.6s,comp=E,7.0nm,0.5s							
JWM	Minabe	1.97	137	A	A	06 03 14.7	
comp=E,4.0nm,2.3s,comp=E,4.0nm,3.6s							
JKD	Kudamatsu	1.98	231	A	A	06 03 17.1	
comp=E,6.0nm,2.2s,comp=E,6.0nm,0.8s							
JEG	Eigenji	2.18	94	A	A	06 03 16.7	
comp=E,3.0nm,0.5s,comp=E,3.0nm,1.2s							
JKI	Kunimi	2.45	228	A	A	06 03 23.8	
comp=E,6.0nm,1.4s,comp=E,9.0nm,1.7s							
MJAR	Matsushiro Arr	3.83	70	Pn	Pn	06 03 40.8	+0.2
0.4nm,0.3s,baz=252,slow=12,SNR=23							
MJAR				Lg	Lg	06 04 40.6	
2.1nm,0.3s,baz=304,slow=14,SNR=11							
12nm,0.6s							
KSRS	Korea Array	5.16	296	Pn	Pn	06 03 59.0	+0.4
0.8nm,0.3s,baz=110,slow=15,SNR=4.1							
KSRS				Sn	Sn	06 04 58.6	0.0
1.5nm,0.3s,baz=111,slow=24,SNR=6.6							
1.8nm,0.3s							
SONM	Songino Array	23.84	310	P	P	06 07 54.0	-1.0
0.2nm,0.3s,baz=116,slow=9.8,SNR=1.1							
0.2nm,0.3s							
ILAR	Eielson Array	54.23	31	P	P	06 12 07.2	0.0
0.3nm,0.8s,baz=277,slow=7.2,SNR=2.5							
0.3nm,0.8s							
WRA	Warramunga Arr	54.95	179	P	P	06 12 12.4	-0.5
0.4nm,0.4s,baz=354,slow=7.7,SNR=16							
0.4nm,0.4s							
ASAR	Alice Springs	58.65	180	P	P	06 12 40.2	+1.1
0.2nm,0.7s,baz=8.9,slow=12,SNR=7.1							
0.2nm,0.7s							

MAN 21 06:16:59.5, 9°.76N×124°.16E, h31km, mb3.8, ML2.5, MS2.0, 5C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHBP	Garcia Hernand	0.20	129	↓iP	Pn	06 17 07.4	+1.0
GHBP				i S	Sn	06 17 12.4	+1.7
TBP	Tagbilaran	0.30	257	↑iP	Pb	06 17 07.0	-0.1
TBP				i S	Sb	06 17 11.9	-0.4
TABP	Talibon, Bohol	0.37	27	↑eP	Pb	06 17 06.9	-1.1
TABP				i S	Sb	06 17 11.6	-2.1
LLP	Lapu-Lapu	0.59	341	↓iP	Pb	06 17 09.7	-1.7
LLP				i S	Sb	06 17 16.5	-3.0
MSLP	Maasin	0.78	62	↓eP	Pb	06 17 16.4	+1.8
MSLP				eS	Sn	06 17 28.1	+3.0
LSIP	Lazi, Siquijor	0.82	220	↑iP	Pb	06 17 16.7	+1.5
LSIP				i S	Sb	06 17 29.3	+3.4
OCLP	Ormoc	1.36	19	↓eP	Pb	06 17 25.2	+0.9
CNOP	Candoni, Negro	1.50	273	↓eP	Pb	06 17 27.1	+0.3
CNOP				eS	Sb	06 17 48.3	+2.9
GUIM	Jordan	1.77	299	↑eP	Pb	06 17 30.4	-0.9
GUIM				eS	Sb	06 17 52.5	-0.6
RCP	Roxas	2.27	322	↑eP	Pn	06 17 36.9	+2.1

IDC 21 06:25:41.4±1.5, 17°.98S×177°.85W, h518km±16km, mb3.4/5, mbtmp4.4/8, Error ellipse: s-maj=29.3km s-min=19.7km az=140.0
NEIC 21 06:25:42.4±0.7, 17°.6S±0°.2×177°.9W±0°.1, h536km±11km, mb4.5/22, Error ellipse: s-maj=25.0km s-min=18.3km az=186.0

ISC 21 06:25:42.8±0.6, 17°.6S±0°.1×177°.94W±0°.09, h550km, n42, σ1°61/43, mb4.5/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.83	268	P	P	06 27 01.9	-1.6
97nm,0.7s,baz=108,slow=6.2,SNR=67							
MSVF	Nonsavu	3.83	268	P	P	06 27 01.8	-1.7
AFI	Afiamalu	6.99	59	P	P	06 27 28.5	-2.3
34nm,0.7s,baz=207,slow=14,SNR=3.5							
AFI	Afiamalu	6.99	59	P	P	06 27 28.4	-2.4
NIUE	Niue	7.75	102	P	P	06 27 37.0	-1.0
FUNA	Funafuti	9.46	343	P	P	06 27 54.6	-0.7
DZM	Mont Dzumac	15.34	251	P	P	06 28 53.6	-2.3
6.9nm,0.7s,baz=155,slow=20,SNR=8.9							
DZM	Mont Dzumac	15.34	251	P	P	06 28 53.6	-2.3
DZM				IAmb	IAmb	06 28 57.6	
comp=Z,14nm,1.2s							
KOUNC	Koumac, New Ca	17.05	257	P	P	06 29 11.8	-0.2
RAR	Rarotonga	17.50	105	P	P	06 29 13.8	-2.3
URZ	Urewera	21.01	191	P	P	06 29 44.9	-2.9
comp=Z,16nm,1.0s,baz=347,slow=2.4,SNR=6.4							
comp=Z,16nm,1.0s							
HIZ	Hauiti	21.75	195	P	P	06 29 54.2	-0.3
EIDS	Eidsvold	29.78	250	P	P	06 31 04.4	-1.1
EIDS				IAmb	IAmb	06 31 05.5	
comp=Z,9.7nm,0.7s							
MLZ	Mavora Lakes	30.02	200	P	P	06 31 06.4	-0.8
MLZ				IAmb	IAmb	06 31 19.9	
comp=Z,16nm,1.3s							
ARMA	Armidale	30.47	240	P	P	06 31 10.9	-0.5
ARMA				IAmb	IAmb	06 31 12.1	
comp=Z,10.0nm,0.7s							
WHZ	Wether Hill Ro	30.54	200	P	P	06 31 12.9	+1.2
WHZ				IAmb	IAmb	06 31 37.9	
comp=Z,14nm,1.2s							
CTAO	Charters Tower	33.94	260	P	P	06 31 40.1	-0.9
CTAO				IAmb	IAmb	06 31 41.4	
comp=Z,16nm,1.1s							
CAN	Canberra	34.23	232	P	P	06 31 43.0	-0.2
CAN				IAmb	IAmb	06 32 01.7	
comp=Z,15nm,1.2s							
COEN	Coen	37.55	270	P	P	06 32 10.7	-0.3
COEN				IAmb	IAmb	06 32 13.4	
comp=Z,13nm,1.1s							
TOO	Toolangi	37.70	231	P	P	06 32 11.8	0.0
TOO				IAmb	IAmb	06 32 13.9	
comp=Z,17nm,1.1s							
STKA	Stephens Creek	39.16	241	P	P	06 32 24.2	+0.5
comp=Z,6.7nm,0.7s,baz=90,slow=10,SNR=10							
comp=Z,6.7nm,0.7s							
STKA	Stephens Creek	39.16	241	P	P	06 32 23.6	-0.1
BBOO	Buckleboo	43.93	241	P	P	06 33 01.0	-0.4
WB0	Warramunga Arr	45.09	259	P	P	06 33 10.3	-0.2
WB0				IAmb	IAmb	06 33 10.9	
comp=Z,11nm,1.1s							
WRA	Warramunga Arr	45.12	259	P	P	06 33 10.2	-0.6
comp=Z,2.9nm,0.6s,baz=96,slow=7.1,SNR=42							
WRA				PcP	PcP	06 34 41.9	+2.2
comp=Z,0.4nm,0.9s,baz=89,slow=3.6,SNR=5.4							
comp=Z,2.9nm,0.6s							
WRA	Warramunga Arr	45.12	259	P	P	06 33 10.1	-0.7
AS31	Alice Springs	45.30	254	P	P	06 33 11.7	-0.4
AS31				IAmb	IAmb	06 33 12.8	
comp=Z,13nm,0.7s							
ASAR	Alice Springs	45.30	254	P	P	06 33 12.3	+0.2
comp=Z,46nm,0.5s,baz=90,slow=7.7,SNR=21							
ASAR				PcP	PcP	06 34 42.5	+2.3
comp=Z,1.7nm,0.5s,baz=101,slow=3.9,SNR=5.1							
ASAR	Alice Springs	45.30	254	P	P	06 33 12.0	-0.1
FORT	Forrest	50.53	244	P	P	06 33 50.8	-0.2
FORT				IAmb	IAmb	06 33 51.4	
comp=Z,20nm,0.7s							
PSA00	Pilbara Seismi	58.41	255	P	P	06 34 46.7	+0.2
MBWA	Marble Bar	58.58	256	P	P	06 34 47.4	-0.1
GIRL	Giralia	63.40	253	P	P	06 35 18.5	-0.6
QSPA	South Pole Qui	72.43	180	P	P	06 36 15.5	+2.1
TXAR	Lajitas Array	85.47	57	P	P	06 37 28.6	+5.4
comp=Z,0.3nm,0.7s,baz=219,slow=8.1,SNR=3.7							
ILAR	Eielson Array	85.51	13	P	P	06 37 24.6	+2.2
comp=Z,0.2nm,0.6s,baz=222,slow=5.7,SNR=5.4							
comp=Z,0.2nm,0.6s							
CMAR	Chiang Mai Arr	89.21	290	P	P	06 37 45.0	+4.1
comp=Z,1.1nm,0.4s,baz=131,slow=2.5,SNR=5.3							
comp=Z,1.1nm,0.4s							
TROLL	Troll, Antarti	90.59	180	P	P	06 37 48.1	+1.7
SNAA	Sanae	90.87	178	P	P	06 37 49.0	+1.4
VNA3	Neumayer Olymp	90.99	176	P	P	06 37 49.9	+1.8
VNA2	Neumayer--Watz	91.44	177	P	P	06 37 52.2	+2.1
baz=184,slow=5.0							
VNA1	Neumayer--Stat	91.66	177	P	P	06 37 53.4	+2.3

JMA 21 06:27:19.9±0.0, 35°.4N±0°.1×133°.8E±0°.1, h7km, MV3.5/20, EASTERN TOTTORI PREF
JMA Felt III J1 at EASTERN TOTTORI PREF .
IDC 21 06:27:23.1±1.4, 35°.55N×133°.88E, h0km, mb3.6/4, mbtmp3.5/5, ML2.1/1, Error ellipse: s-maj=34.1km s-min=19.5km az=2.0

ISC 21 06:27:18.6±1.2, 35°.46N±0°.07×133°.96E±0°.07, h10km, n8, σ1°78/7, mb3.5/4, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.14	235	P	Pg	06 27 21.3	-0.5
JKR				S	Sg	06 27 22.5	-1.4
JAD	Aida	0.54	161	↓↓P	Pb	06 27 30.5	+0.3
JAD				↓↓S	Sb	06 27 38.1	0.0
MJAR	Matsushiro Arr	3.61	71	Pn	Pb	06 28 21.7	-0.9
0.1nm,0.3s,baz=265,slow=14,SNR=1.8							
MJAR				Lg	Lg	06 29 19.5	
0.4nm,0.3s,baz=214,slow=16,SNR=5.3							
1.2nm,0.3s							
KSRS	Korea Array	5.26	294	Sn	Sn	06 29 37.1	-0.8
1.1nm,0.3s,baz=114,slow=25,SNR=4.7							
SONM	Songino Array	23.88	310	P	P	06 32 35.4	+3.0
1.3nm,0.9s,baz=116,slow=13,SNR=6.0							
1.3nm,0.9s							
MKAR	Makanchi Array	39.87	303	P	P	06 34 59.3	+6.9
0.7nm,0.4s,baz=86,slow=8.9,SNR=9.1							
0.7nm,0.4s							
KURBB	Kurchatov Arra	42.24	309	P	P	06 35 16.4	+4.5
0.4nm,0.5s,baz=91,slow=9.2,SNR=2.7							
0.4nm,0.5s							
WRA	Warramunga Arr	55.09	180	P	P	06 36 57.2	+6.3
0.5nm,0.8s,baz=357,slow=10,SNR=2.6							
0.5nm,0.8s							

IDC 21 06:29:26.0±8.1, 32°.02S×179°.70E, h429km±99km, mb2.8/2, mbtmp3.9/3, Error ellipse: s-maj=108.9km s-min=44.2km az=7.0
WEL 21 06:29:28.8±0.9, 32°.S±8°.×18°.0E±1°.9, h331km±16km, M4.3/10, mB4.6/6, ML4.7/11, MLv4.7/10, Mw(mB)3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.7

ISC 21 06:29:23.9±0.9, 31°.70S±0°.08×179°.9E±0°.1, h400km, n34, σ1°78/47, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.05	38	P	Pn	06 30 27.5	-0.1
GLKZ				S	S	06 31 17.5	-1.6
RIZ	Raoul Island	3.06	38	P	Pn	06 30 29.4	+1.7
MXZ	Matakaoa Point	6.00	192	S	S	06 32 10.3	-1.6
WMGZ	Waiomatatini S	6.24	191	P	Pn	06 31 03.3	+4.4
WMGZ				S	S	06 32 16.7	+0.2
HAZ	Te Kaha	6.30	196	P	Pn	06 31 01.1	+1.5
HAZ				S	S	06 32 16.5	-1.3
OUZ	Omahuta	6.35	235	P	P	06 31 02.7	+2.4
PKGZ	Pakihiroa	6.36	193	P	Pn	06 31 02.9	+2.5
PKGZ				S	S	06 32 18.5	-0.7
PUZ	Puketiti	6.51	192	P	P	06 31 04.3	+1.8
PUZ				S	S	06 32 21.2	-0.9
RUGZ	Raukumara Rang	6.52	196	P	P	06 31 03.6	+0.7
RUGZ				S	S	06 32 18.9	-3.6
TWGZ	Tauwhareparae	6.66	193	P	P	06 31 04.7	+0.4
TWGZ				S	S	06 32 24.9	-0.3
MWZ	Matawai	6.91	196	P	P	06 31 07.1	+0.1
MWZ				S	S	06 32 27.3	-3.0
URZ	Urewera	6.94	199	P	P	06 31 06.2	-1.1
35nm,0.4s,baz=341,slow=3.9,SNR=55							
URZ				S	S	06 32 26.6	-4.3
11nm,0.3s,baz=303,slow=19,SNR=12							
URZ	Urewera	6.94	199	P	P	06 31 06.2	-1.1
URZ				S	S	06 32 29.3	-1.6
RAGZ	Rawiri	7.09	196	P	P	06 31 10.6	+1.5
RIGZ	Rimuhau	7.21	194	P	P	06 31 11.7	+1.2
RIGZ				S	S	06 32 36.1	-0.5
MUGZ	Murupara	7.24	200	P	P	06 31 11.4	+0.6
MUGZ				S	S	06 32 35.1	-2.0
RTZ	Ruatahuna	7.31	198	P	P	06 31 12.7	+1.2
RTZ				S	S	06 32 38.3	-0.4
HRRZ	Handcock Road	7.32	203	P	P	06 31 13.9	+2.3
PRRZ	Plateau Road	7.38	202	P	P	06 31 13.0	+0.7
SNGZ	Shannon Statio	7.38	196	P	P	06 31 14.5	+2.2
SNGZ				S	S	06 32 38.0	-1.9
WPRZ	Whakapapatarin	7.47	203	P	P	06 31 15.9	+2.6
TLZ	Tolley Road	7.53	207	P	P	06 31 17.7	+3.7
KNZ	Kokohu	7.54	194	P	P	06 31 15.2	+1.2
RAHZ	Arahi	7.57	197	P	P	06 31 15.3	+0.9
MTHZ	Maungataniwha	7.57	199	P	P	06 31 14.8	+0.3
MHGZ	Mahia Peninsul	7.62	192	P	P	06 31 17.1	+2.2
NMHZ	Naumai	7.81	198	P	P	06 31 18.3	+1.2
BKZ	Black Stump Fm	7.96	200	P	P	06 31 18.8	0.0
HIZ	Hauiti	7.97	210	P	P	06 31 21.1	+2.3
OTVZ	Oturere	8.22	204	P	P	06 31 22.7	+0.9
MOVZ	Moawhango	8.41	203	P	P	06 31 23.2	-0.6
ASAR	Alice Springs	41.29	269	P	P	06 36 31.3	-1.2
0.2nm,0.4s,baz=114,slow=7.4,SNR=2.4							
0.2nm,0.4s							
WRA	Warramunga Arr	42.40	275	P	P	06 36 39.5	-1.9
0.5nm,0.4s,baz=111,slow=8.0,SNR=8.0							
0.5nm,0.4s							
FINES	FINESS Array B	145.71	338	PKPbc	PKPbc	06 48 14.8	-1.2
1.7nm,0.8s,baz=46,slow=4.3,SNR=7.0							

*ISK 21

IDI	**Anoyia**	1.11	343	P	Pg	06 58 44.8	-0.5
IDI				S	Sg	06 58 58.8	-0.8
IDI				AML	AML	06 59 06.9	
	comp=N,857μm,0.6s						
IDI				AML	AML	06 59 09.2	
	comp=E,787μm,0.4s						
ZKR	**Zakros**	1.17	40	PN	Pg	06 58 44.7	-1.6
ZKR	**Zakros**	1.17	40	P	Pg	06 58 46.6	+0.3
ZKR				S	Sg	06 59 02.9	+1.4
	comp=E,570nm,0.5s						
ZKR	**Zakros**	1.17	40	P	Pg	06 58 46.2	-0.2
ZKR				S	Sg	06 59 02.9	+1.4
ZKR				AML	AML	06 59 09.1	
	comp=E,1599μm,0.6s						
ZKR				AML	AML	06 59 11.4	
	comp=N,674μm,0.4s						
GVD	**Gavdhos**	1.17	302	PN	Pg	06 58 46.3	-0.1
GVD	**Gavdhos**	1.17	302	P	Pg	06 58 46.5	+0.1
GVD				S	Sb	06 59 02.5	+0.8
	comp=N,668nm,0.5s						
GVD	**Gavdhos**	1.17	302	P	Pg	06 58 46.7	+0.4
GVDS	**Gavdos**	1.17	302	PN	Pg	06 58 46.3	-0.1
GVDS				SN	Sn	06 59 04.3	+1.6
GVDS	**Gavdos**	1.17	302	P	Pg	06 58 46.6	+0.2
GVDS				S	Sb	06 59 02.1	+0.4
	comp=N,425nm,0.5s						
IMMV	**Iera Moni Meta**	1.64	319	PN	Pn	06 58 52.7	-0.3
IMMV	**Iera Moni Meta**	1.64	319	P	Pn	06 58 52.5	-0.5
IMMV				S	Sn	06 59 13.7	-0.6
	comp=N,418nm,0.7s						
IMMV	**Iera Moni Meta**	1.64	319	P	Pn	06 58 52.9	-0.1
KNDR	**Palaiochora Ch**	1.66	308	PN	Pn	06 58 53.8	+0.4
RODP	**Rodopos**	1.83	317	PN	Pn	06 58 56.1	+0.4
KARP	**Karpathos**	2.02	49	PN	Pn	06 58 57.2	-1.1
KARP	**Karpathos**	2.02	49	P	Pn	06 58 59.0	+0.7
KARP				S	Sn	06 59 24.5	+0.7
	comp=N,185nm,0.6s						
KARP	**Karpathos**	2.02	49	P	Pn	06 58 58.7	+0.4
SANT	**Santorini**	2.14	4	PN	Pn	06 58 59.6	-0.4
ANKY	**Antikythira Is**	2.31	316	P	Pn	06 59 02.4	+0.1
KTHA	**Kythira Island**	2.73	319	PN	Pn	06 59 07.3	-0.7
KTHA	**Kythira Island**	2.73	319	P	Pn	06 59 07.4	-0.6
KTHR	**Kythira**	2.76	318	P	Pn	06 59 08.3	-0.2
APE	**Apeiranthos**	2.84	4	PN	Pn	06 59 08.8	-0.8
ARG	**Arkhangelos**	3.05	49	PN	Pn	06 59 11.4	-1.1
ARG	**Arkhangelos**	3.05	49	P	Pn	06 59 12.6	+0.1
TURN	**Turunc**	3.50	43	PN	Pn	06 59 17.5	-1.1
DALY	**Dalyan (Mula)**	3.77	46	PN	Pn	06 59 21.5	-0.8
YER	**Yerkesik**	3.79	39	PN	Pn	06 59 22.0	-0.6
FETY	**Fethiye**	3.92	51	PN	Pn	06 59 22.4	-2.0
AKAS	**Kas**	4.06	59	PN	Pn	06 59 24.1	-2.3
CAME	**Cameli-Denizli**	4.24	49	PN	Pn	06 59 28.1	-0.9
ELL	**Elmali**	4.53	55	PN	Pn	06 59 31.8	-1.1
KORT	**Korkueli**	4.96	55	PN	Pn	06 59 38.2	-0.6
YTIR	**Yattir**	8.75	106	Pn	Pn	07 00 29.3	-1.5
YTIR				Sn	Sn	07 01 59.1	-11
HMDT	**Nahal Hemdat**	8.79	100	Pn	Pn	07 00 30.6	-0.7
DSI	**Dead Sea**	8.88	105	Pn	Pn	07 00 31.1	-1.5
DSI				Sn	Sn	07 02 01.9	-11
KRMI	**Paran Flat**	8.98	115	Pn	Pn	07 00 32.3	-1.6
KRMI				Sn	Sn	07 02 03.6	-12
PRNI	**Paran**	9.08	113	Pn	Pn	07 00 33.8	-1.5
PRNI				Sn	Sn	07 02 06.4	-11
MBRI	**Mt Berech**	9.28	116	Pn	Pn	07 00 36.6	-1.6
MBRI				Sn	Sn	07 02 11.4	-11
EIL	**Elat**	9.38	116	Pn	Pn	07 00 37.1	-2.2
AKASG	**Malin Array Be**	16.71	9	Pn	Pn	07 02 16.4	-1.8
	comp=N,0.8nm,0.3s,baz=201,slow=11,SNR=4.5						
	comp=N,0.2nm,0.3s						
OBN	**Obninsk**	22.32	17	LR	LR	07 11 33.2	
	comp=N,126nm,20.1s,baz=44,slow=36						
TORD	**Torodi Ar. Bea**	29.98	231	P	P	07 04 33.8	+0.7
	comp=N,0.3nm,0.5s,baz=36,slow=9.3,SNR=2.8						
	comp=N,0.3nm,0.5s						
MKAR	**Makanchi Array**	44.20	56	P	P	07 06 41.4	+8.0
	comp=N,0.6nm,0.7s,baz=279,slow=6.1,SNR=4.6						
	comp=N,0.6nm,0.7s						

*MOS **21** 07:01:19.2±0.0, 42.°10N×46.°10E, h29km, MPVA2.9*
*DRS **21** 07:01:21.0±0.0, 42.°04N×45.°94E, h19km*
ISC 21 07:01:19.1±1.1, 42.°07N±0.°03×46.°02E±0.°03, h11km±10km, n21, σ0°64/38, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	0.29	144	P	Pb	07 01 25.6	-0.8
LGD				S	Sg	07 01 30.2	+1.3
BTLR	**Botlikh**	0.61	14	*e*Pg	Pb	07 01 31.9	0.0
BTLR				*e*Sg	Sb	07 01 40.7	+0.1
DDFL	**Dedoflistskaro**	0.63	173	P	Pn	07 01 34.7	+0.6
XNZR	**Khunzakh**	0.69	47	*e*Pg	Pb	07 01 33.6	+0.2
XNZR				*e*Sg	Sb	07 01 43.2	+0.2
GNBR	**Gunib**	0.77	65	*e*Pg	Pb	07 01 34.6	0.0
GNBR				*e*Sg	Sb	07 01 45.3	+0.1
SHTL	**Shatili**	0.87	313	P	Pg	07 01 35.0	-1.0
DVE	**Vedeno**	0.89	5	*e*Pg	Pn	07 01 37.4	-0.3
DVE				*i* Sg	Sn	07 01 50.4	-0.3
BTNK	**Botanikuri**	0.99	247	P	Pg	07 01 30.8	-7.4
KRNR	**Karanay**	1.00	41	*e*Pg	Pb	07 01 38.6	0.0
KRNR				*e*Sg	Sb	07 01 52.0	+0.1
DLMR	**Dylym**	1.10	24	*e*Pg	Pn	07 01 40.7	+0.2
DLMR				*e*Sg	Sn	07 01 56.0	+0.3
BUJR	**Buynaksk**	1.10	47	*e*Pg	Pb	07 01 40.1	-0.2
BUJR				*e*Sg	Sb	07 01 54.8	0.0
DBC	**Dubki**	1.12	32	*e*Pg	Pn	07 01 40.6	-0.4
DBC				*e*Sg	Sn	07 01 55.8	-0.6
GROC	**Groznyy**	1.14	352	*e*Pg	Pn	07 01 42.0	+0.9
GROC				*e*Sg	Sn	07 01 58.5	+1.7
URKR	**Urkarakh**	1.21	85	*e*Pg	Pn	07 01 42.3	+0.2
URKR				*e*Sg	Sn	07 01 58.5	0.0
SGKR	**Sergokala**	1.28	72	*e*Pg	Pb	07 01 43.0	-0.3
SGKR				*e*Sg	Sn	07 02 00.1	-0.1
AKT	**Akhty**	1.41	114	*e*Pg	Pn	07 01 44.8	-0.1
AKT				*e*Sg	Sn	07 02 04.4	+0.8
LACR	**Lac**	1.48	301	*e*Pg	Pg	07 01 48.2	+0.6
LACR				*e*Sg	Sg	07 02 07.8	+1.0
DMNI	**Dmanisi**	1.56	242	P	Pn	07 01 46.4	-0.6
DMNI				S	Sn	07 02 06.6	-0.6
KANR	**Karaman**	1.56	43	*e*Pg	Pn	07 01 47.2	+0.4
KANR				*e*Sg	Sg	07 02 08.0	-1.5
ZEI	**Tsey**	1.72	295	*e*Pg	Pb	07 01 50.8	-0.2
ZEI				*e*Sg	Sg	07 02 13.9	-0.7
DIGR	**Digorskoe uzhe**	1.98	296	*e*Pg	Pb	07 01 55.2	-0.2
DIGR				*e*Sg	Sb	07 02 20.5	+0.2

*IDC **21** 07:21:01.3±1.3, 35.°27N×133.°64E, h0km, mb3.5/3, mbtmp3.4/5, ML2.7/2, Error ellipse: s-maj=26.7km s-min=19.9km az=3.0*
*NIED **21** 07:21:02.1, 35.°44N×133.°83E, h8km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.19; Mθθ1.27; Mφφ-1.46; Mrθ-0.01; Mrφ-0.46; Mθφ0.25; Fault plane solution: M0 1.46000×10^15 NP1: φs235.00000°, δ82.00000°, λ-176.00000°. NP2: φs144.00000°, δ86.00000°, λ-8.00000°.*
*JMA **21** 07:21:02.1±0.0, 35.°4N±0.°1×133.°83E±0.°09, h8km, MD4.3/20, MV3.9/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
ISC 21 07:21:01.9±0.9, 35.°42N±0.°05×133.°80E±0.°03, h10km±6km, n44, σ1°04/24, mb3.6/3, 10D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	0.04	157	*i* P	Pg	07 21 03.9	+0.1
JKR				S	Sg	07 21 05.3	+0.1
JKR	**Kurayoshi**	0.04	157	A	A	07 21 03.9	
	comp=E,72nm,1.0s,comp=E,164nm,1.2s						
JAD	**Aida**	0.56	148	*i* P	Pb	07 21 13.0	-0.8
JAD				S	Sb	07 21 20.7	-1.2
JAD	**Aida**	0.56	148	A	A	07 21 13.0	
	comp=E,18nm,5.8s,comp=E,11nm,5.4s						
JNM	**Ikuma**	0.63	277	⇓*i*P	Pb	07 21 14.8	-0.2
JNM				⇓S	Sb	07 21 23.8	-0.1
JNM	**Ikuma**	0.63	277	A	A	07 21 14.8	
	comp=E,9.0nm,4.3s,comp=E,11nm,1.0s						
JHS	**Saijyo**	0.70	233	*i* P	Pb	07 21 15.7	-0.4
JHS				S	Sb	07 21 25.7	-0.1
JHS	**Saijyo**	0.70	233	A	A	07 21 15.7	
	comp=E,12nm,6.2s,comp=E,13nm,6.6s						
JKSM	**Kasumi**	0.72	76	⇓*i*P	Pg	07 21 15.2	-0.7
JKSM				⇓S	Sg	07 21 24.4	-0.9
JKSM	**Kasumi**	0.72	76	A	A	07 21 15.2	
	comp=E,3.0nm,4.6s,comp=E,14nm,4.1s						
JISK	**Izumosakaura**	0.78	276	⇓*i*P	Pb	07 21 17.2	-0.4
JISK				⇓S	Sb	07 21 27.7	-0.5
JISK	**Izumosakaura**	0.78	276	A	A	07 21 17.2	
	comp=E,7.0nm,0.9s,comp=E,9.0nm,3.6s						
JJG	**Jouge**	0.94	215	A	A	07 21 20.5	
	comp=E,8.0nm,2.9s,comp=E,14nm,3.8s						
JKS	**Kasai**	0.96	117	⇓*i*P	Pg	07 21 19.8	-0.5
JKS				⇓S	Sg	07 21 32.4	-0.5
JOI	**OKI**	0.98	333	*i* P	Pg	07 21 19.9	-0.9
JOI				S	Sg	07 21 33.0	-0.5
JOI	**OKI**	0.98	333	A	A	07 21 19.9	
	comp=E,22nm,0.7s,comp=E,21nm,0.4s						
JKY	**Yasaka**	1.08	78	⇓*i*P	Pg	07 21 21.6	-1.2
JKY				⇓S	Sg	07 21 35.8	-1.0
JKY	**Yasaka**	1.08	78	A	A	07 21 21.6	
	comp=E,8.0nm,4.0s,comp=E,15nm,0.8s						
JGT2	**ShimaneMisato**	1.12	252	A	A	07 21 23.6	
	comp=E,6.0nm,4.3s,comp=E,11nm,4.5s						
JMIK	**Miki**	1.20	120	A	A	07 21 24.1	
	comp=E,17nm,6.1s,comp=E,19nm,1.8s						
JAWN	**Awajishima-nag**	1.30	135	A	A	07 21 26.1	
	comp=E,11nm,0.5s,comp=E,15nm,1.3s						
JHT	**Toyohira**	1.36	237	A	A	07 21 27.6	
	comp=E,7.0nm,1.6s,comp=E,13nm,2.0s						
JMAF	**Mimaanabuki**	1.40	168	A	A	07 21 28.0	
	comp=E,10.0nm,1.7s,comp=E,5.0nm,1.9s						
JHM	**Kurahashi**	1.65	220	A	A	07 21 32.1	
	comp=E,10.0nm,0.9s,comp=E,9.0nm,1.0s						
JMN	**Monobe**	1.69	178	A	A	07 21 32.4	
	comp=E,9.0nm,5.4s,comp=E,7.0nm,1.1s						
JAI	**Aioi**	1.71	161	A	A	07 21 32.6	
	comp=E,9.0nm,1.7s,comp=E,7.0nm,1.8s						
JHE	**Heguri**	1.73	116	A	A	07 21 32.5	
	comp=E,4.0nm,3.6s,comp=E,4.0nm,10.0s						
JHIK	**Hikimi**	1.77	241	A	A	07 21 33.9	
	comp=E,3.0nm,3.7s,comp=E,8.0nm,4.6s						
JFM	**Mihama**	1.79	86	A	A	07 21 33.2	
	comp=E,4.0nm,0.9s,comp=E,9.0nm,1.1s						
JWM	**Minabe**	2.02	140	A	A	07 21 37.1	
	comp=E,4.0nm,2.3s,comp=E,4.0nm,6.0s						
MRT2	**Murotomisaki 2**	2.05	172	A	A	07 21 37.7	
	comp=E,7.0nm,4.7s,comp=E,3.0nm,4.4s						
JKD	**Kudamatsu**	2.09	230	A	A	07 21 38.6	
	comp=E,6.0nm,4.8s,comp=E,6.0nm,1.8s						
JICN	**Ichinomiyachia**	2.49	92	A	A	07 21 43.5	
	comp=E,7.0nm,2.0s,comp=E,7.0nm,2.3s						
JTY	**Toyota**	2.53	244	A	A	07 21 44.9	
	comp=E,3.0nm,5.1s,comp=E,4.0nm,1.9s						
JKI	**Kunimi**	2.56	227	A	A	07 21 45.4	
	comp=E,6.0nm,2.5s,comp=E,8.0nm,1.6s						
JAO	**Obara**	2.83	92	A	A	07 21 48.3	
	comp=E,2.0nm,0.9s,comp=E,3.0nm,3.8s						
JBEP	**Beppuamama**	2.87	224	A	A	07 21 49.8	
	comp=E,9.0nm,5.3s,comp=E,9.0nm,1.9s						
JUS	**Usuki**	2.90	216	A	A	07 21 50.1	
	comp=E,3.0nm,1.6s,comp=E,2.0nm,3.3s						
JNY	**Yasuok**	3.32	90	A	A	07 21 55.3	
	comp=E,2.0nm,0.9s,comp=E,5.0nm,2.0s						
MJAR	**Matsushiro Arr**	3.75	71	Pn	Pn	07 22 03.2	+3.4
	0.2nm,0.3s,baz=256,slow=14,SNR=2.5						
MJAR				Lg	Lg	07 23 06.2	
	0.7nm,0.3s,baz=242,slow=28,SNR=3.2						
	1.6nm,0.3s						
KSRS	**Korea Array**	5.16	295	Pn	Pn	07 22 19.2	+0.2
	0.8nm,0.3s,baz=108,slow=14,SNR=6.8						
KSRS				Sn	Sn	07 23 18.4	-0.2
	1.5nm,0.3s,baz=116,slow=24,SNR=6.4						
	2.0nm,0.4s						
SONM	**Songino Array**	23.81	310	P	P	07 26 16.2	+1.2
	1.4nm,0.9s,baz=120,slow=8.8,SNR=5.1						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	55.06	179	P	P	07 30 33.6	-0.3
	0.4nm,0.5s,baz=354,slow=7.6,SNR=3.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	58.76	180	P	P	07 31 00.1	-0.1
	0.4nm,0.7s,baz=16,slow=11,SNR=3.4						
	0.4nm,0.7s						

IDC 21 07:28:05.9±1.6, 41.°12S×90.°83W, h0km, mb3.7/5, mbtmp3.7/5, MS4.2/1, Error ellipse: s-maj=167.4km s-min=28.7km az=85.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	11.92	56	T	T	07 44 01.2	
	baz=230,slow=73,SNR=131						
H03S1	**Juan Fernandez**	11.93	56	T	T	07 44 01.8	
	baz=230,slow=73,SNR=119						
H03S3	**Juan Fernandez**	11.94	56	T	T	07 44 00.8	
	baz=230,slow=73,SNR=112						
H03N3	**Juan Fernandez**	12.17	55	T	T	07 44 14.7	
	baz=231,slow=71,SNR=111						
H03N2	**Juan Fernandez**	12.18	55	T	T	07 44 17.0	
	baz=231,slow=71,SNR=147						
H03N1	**Juan Fernandez**	12.19	55	T	T	07 44 13.8	
	baz=231,slow=71,SNR=167						
VNDA	**Vanda**	53.80	195	P	P	07 37 29.7	0.0
	0.6nm,0.9s,baz=100,slow=5.6,SNR=2.8						
	0.6nm,0.9s						
MDP	**Montagnes des**	57.75	47	LR	LR	08 01 12.4	
	comp=Z,186nm,18.1s,baz=216,slow=34						
MAW	**Mawson**	69.78	170	P	P	07 39 17.4	0.0
	1.8nm,0.9s,baz=214,slow=11,SNR=2.7						
	1.8nm,0.9s						
TXAR	**Lajitas Array**	71.10	348	P	P	07 39 26.7	+0.7
	0.4nm,0.9s,baz=146,slow=8.3,SNR=2.5						
	0.4nm,0.9s						
NVAR	**Mina Array Bea**	83.06	339	P	P	07 40 32.9	-0.3
	0.4nm,0.8s,baz=165,slow=7.2,SNR=2.6						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	85.20	346	P	P	07 40 43.7	-0.3
	0.5nm,0.7s,baz=153,slow=8.1,SNR=5.3						
	0.5nm,0.7s						

*IDC **21** 07:39:56.5±10.0, 41.°92S×91.°72W, h0km, mb3.9/5, mbtmp3.9/5, MS4.0/4, Error ellipse: s-maj=277.1km s-min=41.3km az=178.0*
ISC 21 07:40:02.8±1.2, 41.°1S±0.°2×91.°7W±0.°3, h10km, n17, σ0°96/8, mb3.9/5, MS3.8/3, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	12.44	59	T	T	07 55 54.0	
	baz=230,slow=73,SNR=119						
H03S1	**Juan Fernandez**	12.45	59	T	T	07 55 52.6	
	baz=230,slow=73,SNR=107						
H03S3	**Juan Fernandez**	12.46	59	T	T	07 55 55.1	
	baz=230,slow=73,SNR=95						
H03N3	**Juan Fernandez**	12.69	57	T	T	07 56 11.0	
	baz=231,slow=71,SNR=177						
H03N2	**Juan Fernandez**	12.69	57	T	T	07 56 16.2	
	baz=231,slow=71,SNR=182						
H03N1	**Juan Fernandez**	12.71	57	T	T	07 56 10.5	
	baz=231,slow=71,SNR=161						
PLCA	**Paso Flores**	15.99	96	LR	LR	07 48 20.8	
	comp=Z,453nm,20.2s,baz=289,slow=32						
RPN	**Rapa Nui**	20.12	308	LR	LR	07 50 38.5	
	comp=Z,328nm,18.2s,baz=144,slow=31						
LVC	**Limon Verde**	26.58	53	LR	LR	07 55 02.1	
	comp=Z,223nm,18.2s,baz=246,slow=33						
LPAZ	**La Paz**	32.01	46	P	P	07 46 30.9	+0.9
	0.5nm,0.5s,baz=252,slow=6.4,SNR=2.1						
	0.5nm,0.5s						
SIV	**San Ignacio**	36.39	56	P	P	07 47 06.8	-0.6
	1.5nm,0.8s,baz=220,slow=8.2,SNR=4.8						
SIV				LR	LR	08 00 20.5	
	comp=Z,332nm,20.1s,baz=260,slow=33						
	1.5nm,0.8s						
VNA3	**Neumayer Olymp**	49.21	155	P	P	07 48 50.0	-0.8
VNA1	**Neumayer--Stat**	49.77	154	P	P	07 48 55.4	+0.5
VNA2	**Neumayer--Watz**	50.00	155	P	P	07 48 57.4	+0.7
	baz=293,slow=10.0						
TXAR	**Lajitas Array**	70.92	349	P	P	07 51 20.4	+0.2
	1.4nm,1.1s,baz=180,slow=8.7,SNR=5.9						
	1.4nm,1.1s						
NVAR	**Mina Array Bea**	82.77	339	P	P	07 52 27.5	+0.5
	0.8nm,1.0s,baz=179,slow=6.3,SNR=6.4						
	0.8nm,1.0s						
PDAR	**Pinedale Array**	85.00	347	P	P	07 52 36.9	-1.3
	1.7nm,0.9s,baz=139,slow=5.8,SNR=11						
	1.7nm,0.9s						

*IDC **21** 07:52:47.0±1.3, 35.°45N×133.°74E, h0km, mb3.4/3, mbtmp3.4/5, ML2.8/2, MS3.3/1, Error ellipse: s-maj=28.6km s-min=18.3km az=7.0*
*JMA **21** 07:52:46.4±0.0, 35.°4N±0.°1×133.°8E±0.°1, h6km, MD4.1/20, MV3.9/20, EASTERN TOTTORI PREF*
JMA Felt IV J1 at EASTERN TOTTORI PREF .
*NIED **21** 07:52:46.4, 35.°41N×133.°84E, h6km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr0.17; Mθθ5.63; Mφφ-5.80; Mrθ2.19; Mθφ-2.19; Mφr1.79; Fault plane solution: M0 6.73000×10^14 NP1: φs145.00000°, δ65.00000°, λ-1.00000°. NP2: φs235.00000°, δ89.00000°, λ-155.00000°.*
ISC 21 07:52:46.2±1.3, 35.°44N±0.°04×133.°83E±0.°03, h0km±11km, n34, σ0°74/22, mb3.6/3, 4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	0.06	188	P	Pg	07 52 47.6	+0.2
JKR				S	Sg	07 52 48.5	+0.4
JKR	**Kurayoshi**	0.06	188	A	A	07 52 47.6	
	comp=E,269nm,0.5s,comp=E,331nm,1.0s						
JAD	**Aida**	0.57	151	*i* P	Pg	07 52 56.8	-0.3
JAD				S	Sg	07 53 04.1	-0.4
JAD	**Aida**	0.57	151	A	A	07 52 56.8	
	comp=E,15nm,3.4s,comp=E,13nm,2.8s						
JNM	**Ikuma**	0.66	275	*i* P	Pg	07 52 59.5	+0.7
JNM				S	Sb	07 53 08.7	-1.5
JKSM	**Kasumi**	0.70	77	*i* P	Pg	07 52 59.5	-0.1
JKSM				S	Sg	07 53 08.9	+0.3
JKSM	**Kasumi**	0.70	77	A	A	07 52 59.5	
	comp=E,6.0nm,2.4s,comp=E,10.0nm,3.7s						
JHS	**Saijyo**	0.73	233	⇓*i*P	Pg	07 53 00.0	-0.2
JHS				⇓S	Sg	07 53 09.9	+0.2
JHS	**Saijyo**	0.73	233	A	A	07 53 00.0	
	comp=E,9.0nm,4.3s,comp=E,14nm,3.7s						
JISK	**Izumosakaura**	0.80	275	⇓*i*P	Pg	07 53 01.8	+0.2
JISK				⇓S	Sg	07 53 12.2	+0.2
JISK	**Izumosakaura**	0.80	275	A	A	07 53 01.8	
	comp=E,6.0nm,0.4s,comp=E,6.0nm,5.4s						
JKS	**Kasai**	0.95	118	*i* P	Pg	07 53 03.7	-0.7
JKS				S	Sg	07 53 16.0	-0.6
JJG	**Jouge**	0.97	215	A	A	07 53 04.6	
	comp=E,12nm,3.1s,comp=E,18nm,3.4s						
JOI	**OKI**	0.97	331	*i* P	Pg	07 53 04.8	-0.1
JOI				S	Sb	07 53 18.6	-0.8
JOI	**OKI**	0.97	331	A	A	07 53 04.8	
	comp=E,17nm,0.3s,comp=E,19nm,0.4s						
JKY	**Yasaka**	1.06	79	A	A	07 53 06.3	
	comp=E,5.0nm,3.1s,comp=E,10.0nm,1.1s						
JGT2	**ShimaneMisato**	1.15	251	A	A	07 53 08.1	
	comp=E,3.0nm,3.9s,comp=E,5.0nm,4.5s						
JMIK	**Miki**	1.18	122	A	A	07 53 08.2	
	comp=E,12nm,4.1s,comp=E,16nm,1.4s						
JWT	**Wachi**	1.29	96	A	A	07 53 10.2	
	comp=E,3.0nm,4.2s,comp=E,5.0nm,3.7s						
JAWN	**Awajishima-nag**	1.30	137	A	A	07 53 10.1	
	comp=E,10.0nm,0.5s,comp=E,11nm,0.6s						
JHT	**Toyohira**	1.39	237	A	A	07 53 12.0	
	comp=E,12nm,0.2s,comp=E,14nm,0.3s						
JMAF	**Mimaanabuki**	1.42	169	A	A	07 53 12.1	
	comp=E,7.0nm,1.0s,comp=E,5.0nm,3.7s						
JHM	**Kurahashi**	1.68	220	A	A	07 53 16.4	
	comp=E,7.0nm,5.1s,comp=E,7.0nm,1.9s						
JMN	**Monobe**	1.71	179	A	A	07 53 16.5	
	comp=E,4.0nm,1.3s,comp=E,4.0nm,1.2s						
JAI	**Aioi**	1.72	162	A	A	07 53 16.7	
	comp=E,5.0nm,1.0s,comp=E,5.0nm,1.1s						
JFM	**Mihama**	1.76	86	A	A	07 53 17.6	
	comp=E,2.0nm,2.0s,comp=E,3.0nm,3.4s						
JHIK	**Hikimi**	1.80	240	A	A	07 53 18.4	
	comp=E,3.0nm,4.7s,comp=E,5.0nm,3.8s						
JKD	**Kudamatsu**	2.12	230	A	A	07 53 23.0	
	comp=E,5.0nm,4.6s,comp=E,6.0nm,4.2s						
JKI	**Kunimi**	2.59	227	A	A	07 53 29.8	
	comp=E,4.0nm,2.6s,comp=E,5.0nm,4.6s						
MJAR	**Matsushiro Arr**	3.72	71	Pn	Pn	07 53 45.8	+0.9
	0.3nm,0.3s,baz=258,slow=14,SNR=6.8						
MJAR				Lg	Lg	07 54 48.0	
	0.3nm,0.3s,baz=276,slow=25,SNR=3.6						
MJAR				LR	LR	07 55 32.4	
	comp=Z,364nm,19.7s,baz=233,slow=44						
	3.5nm,0.4s						
KSRS	**Korea Array**	5.17	295	Pn	Pn	07 54 04.2	-0.6
	0.8nm,0.3s,baz=111,slow=15,SNR=5.6						
KSRS				Sn	Sn	07 55 03.5	-1.7
	3.1nm,0.3s,baz=118,slow=24,SNR=7.3						
	1.5nm,0.4s						
SONM	**Songino Array**	23.

MDOK				*e*S		**Sg**	**08 23 11.2 -1.7**
	5.9nm,0.1s						
KOTS	**Kotyrbulak**	**4.57**	**35**	*e*P		**Pb**	**08 22 11.7 +2.5**
	2.9nm,0.3s						
KOTS				*e*S		**Sg**	**08 23 14.9 -0.7**
	17nm,0.4s						
KTBS	**Karatobe**	**4.79**	**29**	*e*P		**Pb**	**08 22 14.4 +1.6**
	1.2nm,0.1s						
KTBS				*e*S		**Sg**	**08 23 20.3 -2.3**
	6.2nm,0.1s						
KUU	**Kurty**	**4.83**	**25**	*e*P		**Pb**	**08 22 14.5 +1.0**
	1.1nm,1.0s						
KUU				*e*S		**Sg**	**08 23 20.2 -3.6**
	3.5nm,0.7s						

*BUL **21** 08:35:55.5±0.5,24°.08S×29°.71E,h10km,MD3.5*
PRE 21 08:35:53.6±1.9,21°.80S×32°.45E,h10km,ML1.8,
Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**1.97**	**209**	*e*P	Pn	08 36 26.6	-0.4
MOPA				*e*S	Sb	08 36 53.4	-0.8
MOPA				IAML		08 36 57.0	
	comp=Z,3.0nm,0.2s						
MOPA	**Mopani**	**1.97**	**209**	*i* P	Pn	08 36 26.2	-0.8
MOPA				*i* S	Sn	08 36 48.8	-3.1
MOPA	**Mopani**	**1.97**	**209**	*i* P	Pn	08 36 26.2	-0.8
MOPA				*i* S	Sn	08 36 48.8	-3.1
MUSN	**Musina, Limpop**	**2.45**	**258**	*e*P	Pn	08 36 35.8	+2.0
MUSN				*e*S	Sn	08 37 03.4	-0.5
MUSN				IAML		08 37 09.2	
	comp=Z,13nm,0.3s						
MUSN	**Musina, Limpop**	**2.45**	**258**	*i* P	Pn	08 36 26.6	-7.2
MUSN				*i* S	Sn	08 36 48.5	-15
MUSN	**Musina, Limpop**	**2.45**	**258**	*i* P	Pn	08 36 26.6	-7.2
MUSN				*i* S	Sn	08 36 48.5	-15
MATP	**Matopo**	**3.94**	**290**	*i* P	Pn	08 36 53.7	-0.6
MATP				*i* S	Sn	08 37 36.3	-4.2
MATP	**Matopo**	**3.94**	**290**	*i* P	Pn	08 36 53.7	-0.6
MATP				*i* S	Sn	08 37 36.3	-4.2
LEPH	**Lephalale, Lim**	**4.76**	**244**	*e*S	Sn	08 37 60.0	-0.9

*IDC **21** 08:40:10.9±1.9,7°.08S×128°.48E,h0km,mb3.9/1,*
mbtmp3.8/3,ML4.0/2,MS4.3/1,Error ellipse:
s-maj=113.5km s-min=30.7km az=66.0
ISC 21 08:40:15.2±1.5,6°.6S±0°.2×129°.4E±0°.2,h35km,n14,
σ2s66/13,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.41**	**164**	P	**Pn**	**08 41 51.3**	**+4.1**
KDU	**Kakadu**	**6.75**	**153**	P	**Pn**	**08 41 55.6**	**+3.8**
KNRA	**Kununurra**	**9.00**	**184**	P	**Pn**	**08 42 25.7**	**+2.9**
WRA	**Warramunga Arr**	**14.08**	**160**	Pn	**Pn**	**08 43 29.0**	**-3.4**
	0.6nm,0.3s,baz=335,slow=13,SNR=15						
WRA				Sn	Sn	08 45 51.6	-16
	1.2nm,0.3s,baz=334,slow=22,SNR=9.8						
	0.8nm,0.4s						
QIS	**Mount Isa**	**17.03**	**145**	P	**Pn**	**08 44 10.1**	**-0.7**
PSA00	**Pilbara Seismi**	**17.47**	**211**	P	**P**	**08 44 18.2**	**+1.0**
ASAR	**Alice Springs**	**17.48**	**166**	P	**Pn**	**08 44 15.2**	**-1.2**
	0.7nm,0.3s,baz=339,slow=8.6,SNR=49						
ASAR				S	Sn	08 47 14.6	-16
	0.6nm,0.4s,baz=53,slow=33,SNR=7.6						
	0.9nm,0.4s						
AS01	**Alice Springs**	**17.49**	**166**	P	**Pn**	**08 44 15.7**	**-0.9**
OOD	**Oodnadatta**	**21.88**	**165**	P	**P**	**08 45 02.7**	**-2.5**
	11nm,1.0s						
MULG	**Mulgathing**	**23.93**	**170**	P	**P**	**08 45 23.5**	**-2.6**
FORT	**Forrest**	**24.05**	**183**	P	**P**	**08 45 25.6**	**-1.6**
LCRK	**Leigh Creek**	**25.10**	**162**	P	**P**	**08 45 36.1**	**-0.7**
JOW	**Kunigami**	**33.29**	**358**	LR	LR	09 02 48.4	
	comp=Z,481nm,18.2s,baz=48,slow=40						
MKAR	**Makanchi Array**	**67.58**	**327**	P	**P**	**08 51 08.8**	**+0.5**
	0.4nm,0.3s,baz=133,slow=6.2,SNR=10						
	0.4nm,0.3s						

*IDC **21** 08:44:44.9±0.5,43°.80N×148°.36E,h0km,mb4.5/29,*
mbtmp4.5/36,ML3.1/5,MS4.3/55,Error ellipse:
s-maj=14.6km s-min=10.6km az=159.0
*MOS **21** 08:44:47.3±1.1,43°.66N×148°.43E,h31km,mb5.3/45,*
MS4.7/24,Error ellipse: s-maj=6.4km s-min=4.4km
az=127.0
*SKHL **21** 08:44:47.5±0.1,43°.60N×148°.70E,h42km±2km,mb5.6/4,*
Ms4.7/4,msh4.7/4
*JMA **21** 08:44:48.7±0.4,44°.N±1°.×14°.8E±°.,h0km,MD4.9/34,*
MV5.1/34,E OFF HOKKAIDO
*NIED **21** 08:44:48.7,43°.57N×148°.13E,h0km,MW4.9,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^16Nm;
Mrr1.11; Mθθ-0.24; Mφφ-0.87; Mrθ1.37; Mφθ-0.80; Mφr1.09;
Fault plane solution: M0 2.17000×10^16 NP1:
φs195.00000°,δ21.00000°,λ57.00000°. NP2:φs49.00000°,
δ73.00000°,λ101.00000°.
*BJI **21** 08:44:48.8±0.0,43°.93N×148°.40E,h36km,mb4.8/56,*
mB5.2/39,Ms4.9/49,Ms7 4.7/47
*GCMT **21** 08:44:49.6±0.4,43°.73N±0°.03×148°.72E±0°.04,h29km±1km,*
MW5.0/69,Moment Tensor Solution. s22,c27; s69,c82;
Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.44±.30;
Mθθ-0.33±.22; Mφφ-2.12±.20; Mrθ0.44±.26; Mφθ-2.31±.11;
Mφr1.39±.20; Best double couple: M0 3.42700×10^16
NP1:φs22.00000°,δ59.00000°,λ73.00000°. NP2:
φs231.00000°,δ35.00000°,λ115.00000°. Principal axes:
T 2.8500, Plg71.0000°, Azm253.0000°; N 1.1480,
Plg14.0000°, Azm30.0000°; P -4.0040, Plg12.0000°,
Azm123.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*NEIC **21** 08:44:50.6±1.2,43°.63N±0°.08×148°.4E±0°.1,h39km±8km,*
mb4.8/67 Error ellipse: s-maj=14.7km s-min=10.5km
az=127.0
ISC 21 08:44:50.2±0.4,43°.69N±0°.04×148°.36E±0°.04,h34km±1km,
h34km:pP-P,n592,σ1s37/627,mb4.9/135,MS4.5/88,
41C-27D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.59**	**347**	*e*PN	**Pn**	**08 45 14.8**	**-1.1**
KUR				*e*S	**Sn**	**08 45 35.2**	**0.0**
KUR				pmax	pmax		
	comp=N,609nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1μm,0.4s						
KUR				smax	smax		
	comp=N,4μm,0.3s						
KUR				smax	smax		
	comp=E,2μm,0.4s						
KUR				smax	smax		
	comp=N,31μm,2.1s						
KUR	**Kuril'sk**	**1.59**	**347**	*e*P	**Pn**	**08 45 15.2**	**-0.7**
KUR				AMB	AMB	08 45 17.7	
	comp=N,1μm,0.4s						
KUR				*e*S	**Sn**	**08 45 35.9**	**+0.7**
KUR				A	A	08 45 41.8	
	comp=N,4μm,0.5s						
KUR				A	A	08 45 41.8	
	comp=N,4μm,0.5s						
KUR				A	A	08 45 44.7	
	comp=N,31μm,2.1s						
KUR				AMS	AMS	08 46 00.0	
	comp=N,35μm,9.0s						
YUK	**Yuzh-Kuril'sk**	**1.84**	**282**	*e*PN	**Pn**	**08 45 19.5**	**+0.2**
YUK				*e*S	**Sn**	**08 45 43.3**	**+1.8**
YUK				pmax	pmax		
	comp=N,249nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,518nm,0.1s						
YUK				smax	smax		
	comp=N,12μm,0.5s						
YUK				smax	smax		
	comp=E,10μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.84**	**282**	*e*P	**Pn**	**08 45 19.6**	**+0.2**
YUK				AMB	AMB	08 45 21.9	
	comp=E,2μm,0.3s						
YUK				*e*S	**Sn**	**08 45 43.7**	**+2.2**
YUK				A	A	08 45 52.8	
	comp=E,9μm,0.5s						
YUK				A	A	08 45 52.8	
	comp=E,9μm,0.5s						
YUK				AMS	AMS	08 46 24.0	
	comp=E,16μm,13.0s						
YUK				AMS	AMS	08 46 24.0	
	comp=E,15μm,13.0s						
NEM2	**Nemuro 2**	**1.93**	**261**	*e*P	**Pn**	**08 45 20.6**	**0.0**
NEM2				*e*S	**Sn**	**08 45 43.2**	**-0.4**
NEM2	**Nemuro 2**	**1.93**	**261**	A	A	08 45 20.6	
	comp=E,12nm,2.0s,comp=E,14nm,4.5s						
NMR	**Nemuro--Hokkai**	**1.94**	**262**	*e*PN	**Pn**	**08 45 20.1**	**-0.6**
NMR				*e*S	**Sb**	**08 45 48.1**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.94**	**262**	*e*P	**Pn**	**08 45 20.8**	**+0.1**
NMR				*e*S	**Sn**	**08 45 45.9**	**+2.0**
RUSJ	**Misakicho**	**2.29**	**282**	PN	**Pn**	**08 45 27.2**	**+1.7**
RUSJ				*e*S	**Sb**	**08 45 56.1**	**-2.7**
JRA	**Rausu**	**2.36**	**277**	*e*P	**Pn**	**08 45 27.2**	**+0.7**
JRA	**Rausu**	**2.36**	**277**	A	A	08 45 27.2	
	comp=E,24nm,2.5s,comp=E,11nm,4.5s						
JKHN	**Kushirohamanak**	**2.41**	**257**	*e*P	**Pn**	**08 45 28.3**	**+1.1**
JKHN	**Kushirohamanak**	**2.41**	**257**	A	A	08 45 28.3	
	comp=E,14nm,2.3s,comp=E,17nm,3.6s						
JNSB	**Nemuroshibetsu**	**2.44**	**273**	*e*P	**Pn**	**08 45 28.5**	**+1.0**
JNK	**Nakash**	**2.65**	**269**	*e*P	**Pn**	**08 45 30.8**	**+0.4**
AKK	**Akkeshi**	**2.65**	**257**	*e*P	**Pn**	**08 45 31.3**	**+0.8**
JAK	**Akkeshi**	**2.76**	**257**	*e*P	**Pn**	**08 45 32.3**	**+0.3**
JAK				*e*S	**Sn**	**08 46 04.8**	**+0.7**
JTKR	**Abashiri--Toko**	**3.24**	**277**	*e*P	**Pn**	**08 45 40.1**	**+1.6**
JAR	**Ashorobuto**	**3.37**	**265**	*e*P	**Pn**	**08 45 41.1**	**+0.8**
JOB	**Onbets**	**3.40**	**258**	*e*P	**Pn**	**08 45 41.6**	**+0.9**
JOB	**Onbets**	**3.40**	**258**	A	A	08 45 41.6	
	comp=E,11nm,6.5s,comp=E,11nm,3.1s						
JCH	**Churui**	**3.81**	**255**	*e*P	**Pn**	**08 45 47.4**	**+0.9**
JCH				*e*S	**Sn**	**08 46 30.3**	**+0.2**
JKK2	**Kamakawa 2**	**4.07**	**275**	*e*P	**Pn**	**08 45 52.4**	**+2.3**
ERM	**Erimo**	**4.18**	**248**	Pn	**Pn**	**08 45 53.5**	**+2.0**
ERM	**Erimo**	**4.18**	**248**	PN	**Pn**	**08 45 53.5**	**+2.0**
JEM	**Erimo**	**4.18**	**248**		**Pn**	**08 45 53.1**	**+1.7**
JEM	**Erimo**	**4.18**	**248**	A	A	08 45 52.7	
	comp=E,5.0nm,3.3s,comp=E,6.0nm,5.4s						
JSE	**Soyaes**	**4.34**	**289**	*e*P	**Pn**	**08 45 55.3**	**+1.6**
JNBK	**Urakawa-nobuka**	**4.35**	**253**	P	**Pn**	**08 45 54.9**	**+1.0**
JNBK				*e*S	**Sn**	**08 46 44.3**	**+1.0**
JNBK	**Urakawa-nobuka**	**4.35**	**253**	A	A	08 45 54.9	
	comp=E,9.0nm,1.2s,comp=E,5.0nm,1.3s						
JSHD	**Hidakashinhida**	**4.51**	**256**	A	A	08 45 57.5	
	comp=E,7.0nm,6.4s,comp=E,8.0nm,2.9s						
JIAM	**Iburiatsuma**	**4.83**	**259**	A	A	08 46 02.1	
	comp=E,10.0nm,1.2s,comp=E,9.0nm,1.2s						
JWK2	**Keihoku**	**4.90**	**292**	*e*P	**Pn**	**08 46 04.9**	**+3.4**
JEW	**Eniwo**	**5.12**	**263**	Pn	**Pn**	**08 46 06.9**	**+2.5**
JEW	**Eniwo**	**5.12**	**263**	*e*P	**Pn**	**08 46 06.6**	**+2.2**
YSS	**Yuzh-Sakhalins**	**5.13**	**312**	Pn	**Pn**	**08 46 05.7**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.13**	**312**	*e*PN	**Pn**	**08 46 06.0**	**+1.5**
YSS				*e*S	**Sn**	**08 47 05.4**	**+2.9**
YSS				pmax	pmax		
	comp=Z,80nm,0.7s						
YSS				smax	smax		
	comp=N,190nm,1.0s						
YSS				smax	smax		
	comp=E,160nm,0.9s						
YSS				MLR	MLR		
	comp=N,4μm,16.0s						
YSS				MLR	MLR		
	comp=E,4μm,16.0s						
YSS				MLR	MLR		
	comp=Z,6μm,16.0s						
YSS	**Yuzh-Sakhalins**	**5.13**	**312**	*e*P	**Pn**	**08 46 06.3**	**+1.8**
YSS				AMB	AMB	08 46 08.5	
	comp=Z,80nm,0.7s						
YSS				*e*S	**Sn**	**08 47 05.4**	**+2.9**
YSS				A	A	08 47 13.3	
	comp=Z,190nm,0.9s						
YSS				A	A	08 47 13.3	
	comp=Z,160nm,0.9s						
YSS				AMS	AMS	08 48 04.0	
	comp=Z,4μm,16.0s						
YSS				AMS	AMS	08 48 04.0	
	comp=Z,4μm,16.0s						
YSS				AMS	AMS	08 48 04.0	
	comp=Z,6μm,16.0s						
JRBN	**Rebuntou**	**5.50**	**291**	*e*P	**Pn**	**08 46 12.0**	**+2.4**
JOT	**Ohata**	**5.87**	**249**	*e*P	**Pn**	**08 46 15.1**	**+0.3**
JOT				*e*S	**Sn**	**08 47 19.3**	**-1.6**
JTM	**Tenmabayashi**	**6.14**	**244**	Pn	**Pn**	**08 46 18.0**	**-0.4**
TYV	**Tymovskoe**	**8.16**	**334**	*e*P	**Pn**	**08 46 48.7**	**+2.6**
JMM	**Marumori**	**8.17**	**227**	Pn	**Pn**	**08 46 44.1**	**-2.2**
TEY	**Ternei**	**8.54**	**283**	*e*PN	**Pn**	**08 46 52.9**	**+1.6**
TEY	**Ternei**	**8.54**	**283**	*e*P	**Pn**	**08 46 52.9**	**+1.6**
SKR	**Severo-Kuril's**	**8.76**	**34**	*e*PN	Pn	08 47 01.1	+6.7
SKR				*e*S	**Sn**	**08 48 39.9**	**+8.1**
SKR				pmax	pmax		
	comp=Z,127nm,0.7s						
SKR				pmax	pmax		
	comp=Z,2μm,6.0s						
SKR	**Severo-Kuril's**	**8.76**	**34**	*e*P	**Pn**	**08 46 52.9**	**-1.5**
SKR				AMB	AMB	08 47 05.0	
	comp=Z,130nm,0.7s						
SKR				AMB	AMB	08 47 09.6	
	comp=Z,2μm,6.0s						
SKR				*e*S	**Sn**	**08 48 26.4**	**-5.4**
SKR				A	A	08 48 33.8	
	comp=Z,130nm,0.5s						
SKR				A	A	08 48 33.8	
	comp=Z,130nm,0.5s						
SKR				AMS	AMS	08 50 33.0	
	comp=Z,6μm,16.0s						
SKR				AMS	AMS	08 50 33.0	
	comp=Z,3μm,16.0s						
SKR				AMS	AMS	08 50 33.0	
	comp=Z,3μm,16.0s						
JSD	**Sado**	**9.51**	**237**		**Pn**	**08 47 04.1**	**-0.5**
JYT	**Yasato**	**9.73**	**223**	Pn	**Pn**	**08 47 05.3**	**-2.4**
MAJO	**Matsushiro**	**10.55**	**231**	Pn	**Pn**	**08 47 17.7**	**-1.2**
MAJO	**Matsushiro**	**10.55**	**231**	*i* PN	**Pn**	**08 47 18.2**	**-0.7**
MJAR	**Matsushiro Arr**	**10.55**	**231**	Pn	**Pn**	**08 47 18.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=16						
MJAR				Sn	**Sn**	**08 49 13.1**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=28,slow=41,SNR=1.6						
	comp=Z,7.9nm,0.9s						
MJAR	**Matsushiro Arr**	**10.55**	**231**	PN	**Pn**	**08 47 18.0**	**-0.9**
MJB9	**Matsu-Tunnel**	**10.55**	**231**	Pn	**Pn**	**08 47 19.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**11.28**	**30**	Pn	**Pn**	**08 47 29.7**	**+0.9**
PEA0B	**Petropavlovsk-**	**11.28**	**30**	PN	**Pn**	**08 47 29.7**	**+0.9**
PETK	**Petropavlovsk-**	**11.28**	**30**	Pn	**Pn**	**08 47 26.5**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=208,slow=18,SNR=2.0						
PETK				LR	LR	08 52 23.5	
	comp=Z,2μm,18.6s,baz=223,slow=41						
	comp=Z,2.9nm,0.6s						
PETK	**Petropavlovsk-**	**11.28**	**30**	Pn	**Pn**	**08 47 29.4**	**+0.6**
PETK	**Petropavlovsk-**	**11.28**	**30**	PN	**Pn**	**08 47 29.4**	**+0.6**
JGF	**Kuroka**	**11.70**	**230**	Pn	**Pn**	**08 47 34.6**	**-0.1**
USA0B	**Ussuriysk Arra**	**11.82**	**278**	Pn	**Pn**	**08 47 37.4**	**+1.2**
USA0B	**Ussuriysk Arra**	**11.82**	**278**	PN	**Pn**	**08 47 37.4**	**+1.2**
USRK	**Ussuriysk Ar.**	**11.82**	**278**	Pn	**Pn**	**08 47 33.7**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=99,slow=12,SNR=2.1						
USRK				LR	LR	08 52 24.7	
	comp=Z,2μm,18.2s,baz=83,slow=39						
	comp=Z,6.7nm,1.0s						
USRK	**Ussuriysk Ar.**	**11.82**	**278**		**Pn**	**08 47 37.4**	**+1.2**
USRK	**Ussuriysk Ar.**	**11.82**	**278**	PN	**Pn**	**08 47 37.4**	**+1.2**
MSHR	**Mys Shultsa**	**12.62**	**271**	*ce*PN	**Pn**	**08 47 48.7**	**+1.5**
MSHR				pmax	pmax		
	comp=Z,14nm,1.3s						
MSHR				MLR	MLR		
	comp=Z,816nm,15.0s						
KLR	**Kul'dur**	**12.72**	**302**	Pn	**Pn**	**08 47 46.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=109,slow=15,SNR=3.1						
KLR				LR	LR	08 52 58.5	
	comp=Z,2μm,19.4s,baz=118,slow=39						
	comp=Z,4.0nm,1.1s						
KLR	**Kul'dur**	**12.72**	**302**	*i* PN	**Pn**	**08 47 49.0**	**+0.5**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLR				MLR	MLR		
	comp=Z,3μm,13.0s						
KLR	**Kul'dur**	**12.72**	**302**	*e*P	**Pn**	**08 47 49.0**	**+0.5**
BNX	**BinXian**	**15.04**	**285**	⇑P	**Pn**	**08 48 20.9**	**+0.8**
BNX				pmax	pmax		
	comp=Z,16nm,0.9s						
BNX				pmax	pmax		
	comp=Z,480nm,4.8s						
MA2	**Magadan**	**15.98**	**4**	Pn	**Pn**	**08 48 29.9**	**-2.2**
	comp=Z,12nm,0.8s,baz=173,slow=16,SNR=2.4						
MA2				LR	LR	08 54 46.8	
	comp=Z,767nm,18.4s,baz=194,slow=38						
MA2	**Magadan**	**15.98**	**4**	*i* P	**Pn**	**08 48 32.6**	**+0.4**
MA2				pmax	pmax		
	comp=Z,21nm,0.9s						
MA2				MLR	MLR		
	comp=Z,1μm,17.0s						
CN2	**Changchun**	**16.55**	**278**	*e*P	**Pn**	**08 48 40.1**	**+0.5**
CN2				*es*P	pP	08 48 49.0	-0.8
CN2				*e*S	**Sn**	**08 51 41.0**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
KSRS	**Korea Array**	**16.71**	**255**	Pn	**Pn**	**08 48 40.3**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=62,slow=12,SNR=7.6						
KSRS				LR	LR	08 55 05.6	
	comp=Z,826nm,21.0s,baz=65,slow=37						
	comp=Z,4.8nm,1.0s						
ZEA	**Zeya**	**17.12**	**313**	*e*P	**Pn**	**08 48 47.3**	**+0.7**
ZEA				pmax	pmax		
	comp=N,20nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=N,800nm,12.0s						
ZEA				MLR	MLR		
	comp=E,700nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,13.0s						
ZEA	**Zeya**	**17.12**	**313**	*e*P	**Pn**	**08 48 46.3**	**-0.3**
ZEA				AMB	AMB	08 48 49.3	
	comp=Z,50nm,0.7s						
ZEA				AMS	AMS	08 56 00.0	
	comp=Z,800nm,12.0s						
ZEA				AMS	AMS	08 56 00.0	
	comp=Z,700nm,12.0s						
ZEA				AMS	AMS	08 56 00.0	
	comp=Z,1μm,12.0s						
JCJ	**Chichijima**	**17.29**	**199**		**Pn**	**08 48 48.8**	**-0.2**
JCJ				IAmb	IAmb	08 48 50.9	
	comp=Z,67nm,1.1s						
INCN	**Inchon**	**17.61**	**257**	P	**P**	**08 48 53.9**	**+0.3**
INCN	**Inchon**	**17.61**	**257**	P	**P**	**08 48 53.9**	**+0.3**
INCN				pmax	pmax		
	comp=Z,44nm,1.0s						
TJN	**Taejon**	**17.63**	**253**	*ce*P	**Pn**	**08 48 51.7**	**-1.4**
SEY	**Seymchan**	**19.42**	**6**	P	**P**	**08 49 10.4**	**-2.9**
	comp=Z,21nm,0.8s,baz=182,slow=9.3,SNR=19						
SEY	**Seymchan**	**19.42**	**6**	*ce*P	**P**	**08 49 11.3**	**-2.0**
SEY				pmax	pmax		
	comp=Z,23nm,0.8s						
SEY				MLR	MLR		
	comp=Z,1μm,15.0s						
YAK	**Yakutsk**	**21.41**	**336**	P	**P**	**08 49 30.9**	**-3.8**
	comp=Z,25nm,0.4s,baz=311,slow=2.7,SNR=10						
	comp=Z,25nm,0.4s						
YAK	**Yakutsk**	**21.41**	**336**	*e*P	**P**	**08 49 30.4**	**-4.4**
YAK				*e*PPP	PPP	08 49 57.0	
YAK				*e*S	**S**	**08 53 25.5**	**-4.8**
YAK				*e*		08 53 34.1	
YAK				*e**SS	Sn	08 53 36.2	-2.8
YAK				pmax	pmax		
	comp=Z,51nm,0.8s						
YAK				pmax	pmax		
	comp=N,19nm,1.0s						
YAK				pmax	pmax		
	comp=E,20nm,1.1s						
YAK				smax	smax		
	comp=N,127nm,2.6s						
YAK				smax	smax		
	comp=E,210nm,2.7s						
YAK				MLR	MLR		
	comp=Z,1μm,18.0s						
YAK				MLR	MLR		
	comp=N,1μm,18.0s						
YAK				MLR	MLR		
	comp=E,349nm,17.0s						
XLT	**XiLinHaoTe**	**23.23**	**282**	*e*P	**P**	**08 49 52.6**	**-1.7**
XLT				pP	pP	08 50 04.0	+1.4
XLT				sP	pwP	08 50 07.8	+0.7
XLT				S	**S**	**08 53 59.5**	**-4.4**
XLT				sS	sS	08 54 17.6	-2.4
XLT				pmax	pmax		
	comp=E,39nm,0.9s						
XLT				LR	LR		
	comp=E,1μm,15.6s						
XLT				LR	LR		
	comp=E,2μm,14.7s						
BJI	**Beijing**	**24.16**	**272**	P	**P**	**08 50 02.3**	**-0.8**
BJI				pP	**pP**	**08 50 11.8**	**0.0**
BJI				sP	**sP**	**08 50 14.8**	**-0.6**
BJI				PP	**PnPn**	**08 50 36.8**	**+3.7**
BJI				S	**S**	**08 54 18.5**	**-0.3**
BJI				sS	**sS**	**08 54 35.3**	**+0.5**
BJI				pmax	pmax		
	comp=E,42nm,1.3s						
BJI				LR	LR		
	comp=E,140nm,17.8s						
BJI				LR	LR		
	comp=E,750nm,18.5s						
BJI				LR	LR		
	comp=E,850nm,17.0s						
BJT	**Baijiatuau**	**24.18**	**272**	P	**P**	**08 50 01.9**	**-1.3**
BJT				IAmb	IAmb	08 50 05.7	
	comp=Z,52nm,1.1s						
BJT	**Baijiatuau**	**24.18**	**272**	P	**P**	**08 50 01.9**	**-1.3**
BJT				pmax	pmax		
	comp=Z,53nm,1.1s						
TIA	**Tai'an**	**24.98**	**263**	⇓P	**P**	**08 50 11.8**	**+1.2**
TIA				pmax	pmax		
	comp=Z,24nm,1.2s						
TIA				LR	LR		
	comp=Z,640nm,12.8s						
TIA				LR	LR		
	comp=Z,500nm,4.8s						
TIA				LR	LR		
	comp=Z,670nm,13.7s						
BOD	**Bodaibo**	**25.59**	**316**	*e*P	**P**	**08 50 11.4**	**-4.5**
BOD				pmax	pmax		
	comp=Z,15nm,2.0s						
NJ2	**Nanjing**	**25.89**	**253**	*e*P	**P**	**08 50 21.4**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,36nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1μm,4.5s						
NJ2				LR	LR		
	comp=Z,2μm,14.2s						
NJ2				LR	LR		
	comp=Z,1μm,12.8s						
NJ2				LR	LR		
	comp=Z,2μm,16.6s						
BILL	**Bilibino**	**26.18**	**15**	⇑*e*P	**P**	**08 50 20.0**	**-1.1**
BILL				*e*		08 51 01.4	
BILL				*e*S	**S**	**08 54 55.9**	**+5.4**
BILL				pmax	pmax		
	comp=Z,11nm,1.1s						
BILL				MLR	MLR		
	comp=Z,1μm,16.0s						
BILL	**Bilibino**	**26.18**	**15**	*e*P	**P**	**08 50 20.7**	**-0.4**
HNS	**HongShan**	**26.21**	**268**	⇑P	**P**	**08 50 22.5**	**+0.8**
HNS				pmax	pmax		
	comp=Z,28nm,1.4s						
HNS				LR	LR		
	comp=Z,540nm,12.

comp=Z,1μm,15.9s
HHC LR LR
comp=Z,2μm,14.6s
TIY Taiyuan 27.73 270 *e*P **P 08 50 40.5 +5.0**
BTO Baotou 28.43 277 *e*P **P 08 50 41.3 -0.4**
BTO S **S 08 55 28.3 +1.7**
BTO LR LR
comp=Z,3μm,15.3s
BTO LR LR
comp=Z,4μm,15.9s
H11N2 WAKE ISLAND Hy 28.49 141 T T 09 20 33.3
baz=332,slow=75
H11N1 WAKE ISLAND Hy 28.50 141 T T 09 21 06.4
baz=332,slow=75
H11N3 WAKE ISLAND Hy 28.51 141 T T 09 20 34.9
baz=332,slow=75
ULN Ulaanbaatar 28.86 293 P **P 08 50 45.1 -0.5**
ULN IAmb IAmb 08 50 47.6
comp=Z,22nm,0.8s
ULN Ulaanbaatar 28.86 293 *ce*P **P 08 50 45.8 +0.3**
ULN pmax pmax
comp=Z,31nm,1.0s
ULN Ulaanbaatar 28.86 293 P **P 08 50 45.8 +0.3**
comp=Z,118nm,1.1s
ULN Ulaanbaatar 28.86 293 *e*P **P 08 50 45.8 +0.3**
LYN LuoYang 29.12 264 *e*P **P 08 50 49.4 +1.7**
LYN S **S 08 55 34.3 -3.0**
LYN pmax pmax
comp=Z,380nm,8.0s
LYN LR LR
comp=Z,750nm,12.9s
LYN LR LR
comp=Z,600nm,14.9s
SONM Songino Array 29.31 293 P **P 08 50 49.4 0.0**
comp=Z,17nm,1.0s,baz=83,slow=8.8,SNR=46
SONM LR LR 09 03 47.3
comp=Z,1μm,19.1s,baz=68,slow=39
comp=Z,17nm,1.0s
SONM Songino Array 29.31 293 P **P 08 50 49.9 +0.4**
SONM IAmb IAmb 08 50 51.4
comp=Z,14nm,1.0s
SONM Songino Array 29.31 293 P **P 08 50 49.9 +0.4**
SONM pmax pmax
comp=Z,14nm,1.0s
H11S1 WAKE ISLAND Hy 29.47 143 T T 09 21 46.7
baz=333,slow=76
H11S3 WAKE ISLAND Hy 29.48 143 T T 09 22 32.3
baz=333,slow=76
H11S2 WAKE ISLAND Hy 29.49 143 T T 09 22 10.6
baz=333,slow=76
TIXI Tiksi 29.61 348 LR LR 09 02 15.8
comp=Z,256nm,19.2s,baz=1.0,slow=36
TIXI Tiksi 29.61 348 *i* P **P 08 50 52.8 +1.2**
TIXI MLR MLR
comp=Z,605nm,17.0s
TIXI Tiksi 29.61 348 *e*P **P 08 50 52.8 +1.2**
LZH Lanzhou 34.65 273 *e*P **P 08 51 37.9 +1.4**
LZH pP pP 08 51 45.3 -0.1
LZH sP sP 08 51 49.3 +0.5
LZH pmax pmax
comp=Z,66nm,1.2s
LZH LR LR
comp=Z,1μm,12.9s
LZH LR LR
comp=Z,960nm,14.4s
LZH LR LR
comp=Z,1μm,15.1s
GTA Gaotai 36.17 280 ⇑P **P 08 51 50.6 +1.1**
GTA pP pwP 08 52 02.8 -0.2
GTA sP sP 08 52 08.1 +6.9
GTA pmax pmax
comp=Z,23nm,1.3s
GTA pmax pmax
comp=Z,140nm,8.2s
GTA LR LR
comp=Z,640nm,14.5s
GTA LR LR
comp=Z,1μm,15.3s
GTA LR LR
comp=Z,1μm,14.5s
N18K Kilae Creek 36.86 43 P **P 08 51 55.2 +0.3**
N18K IAmb IAmb 08 52 10.8
comp=Z,26nm,1.1s
N18K Kilae Creek 36.86 43 P **P 08 51 55.9 +1.0**
baz=268
SVW2 Sparrevohn 37.02 42 P **P 08 51 56.3 0.0**
SVW2 IAmb IAmb 08 52 09.4
comp=Z,16nm,1.2s
L19K White Mountain 37.41 40 P **P 08 51 59.1 -0.6**
L19K IAmb IAmb 08 52 28.0
comp=Z,20nm,1.5s
M19K Big River Lodg 37.62 41 P **P 08 52 01.0 -0.4**
M19K IAmb IAmb 08 52 17.4
comp=Z,22nm,1.5s
K20K Telida 37.84 38 P **P 08 52 03.2 +0.1**
K20K Telida 37.84 38 P **P 08 52 04.2 +1.1**
baz=266
J20K Nowinta River 37.86 37 P **P 08 52 03.2 -0.2**
J20K IAmb IAmb 08 52 28.0
comp=Z,9.2nm,0.8s
J20K Nowinta River 37.86 37 P **P 08 52 03.4 +0.1**
baz=265
L20K Farewell, AK 37.88 40 P **P 08 52 04.8 +1.3**
baz=268
IMAR Indian Mountai 38.20 34 P **P 08 52 06.8 +0.6**
M20K Styx River 38.22 41 P **P 08 52 07.0 +0.5**
M20K IAmb IAmb 08 52 22.2
comp=Z,10.0nm,0.8s
G21K Allakaket 38.36 33 P **P 08 52 07.6 +0.1**
baz=263
F21K Alatna River 38.46 32 P **P 08 52 08.0 -0.4**
baz=262,SNR=6.0
H21K Melozitna Rive 38.56 35 P **P 08 52 09.5 +0.3**
H21K IAmb IAmb 08 52 10.5
comp=Z,13nm,0.9s
H21K Melozitna Rive 38.56 35 P **P 08 52 09.2 0.0**
baz=265,SNR=10
KDAK Kodiak Island 38.64 47 P **P 08 52 08.6 -1.4**
comp=Z,13nm,0.8s,baz=289,slow=7.2,SNR=7.9
comp=Z,13nm,0.8s
KDAK Kodiak Island 38.64 47 P **P 08 52 09.8 -0.2**
KDAK Kodiak Island 38.64 47 P **P 08 52 09.8 -0.2**
KDAK pmax pmax
comp=Z,216nm,1.9s
KDAK Kodiak Island 38.64 47 P **P 08 52 10.2 +0.2**
baz=275
KDAK Kodiak Island 38.64 47 P **P 08 52 09.5 -0.4**
KDAK pP **pP 08 52 18.8 -0.2**
PPLA Purkeypile 38.67 39 P **P 08 52 10.8 +0.5**
PPLA IAmb IAmb 08 52 22.7
comp=Z,35nm,1.4s
CAST Castle Rocks 38.73 38 P **P 08 52 10.3 -0.4**
CAST Castle Rocks 38.73 38 P **P 08 52 11.0 +0.3**
baz=268,SNR=7.6
I21K Tanana 38.86 35 P **P 08 52 11.5 -0.3**
I21K Tanana 38.86 35 P **P 08 52 12.1 +0.3**
baz=266
SKT Skwentna 38.97 41 P **P 08 52 13.5 +0.7**
F22K John River 39.00 32 P **P 08 52 13.6 +0.6**
baz=263,SNR=12
H22K Ishtalitna Cre 39.16 34 P **P 08 52 15.0 +0.7**
baz=266
G22K Bettles 39.20 33 P **P 08 52 14.4 -0.1**
baz=264,SNR=18
E22K Anaktuvuk Pass 39.22 31 P **P 08 52 15.1 +0.4**
baz=263
BPAW Bear Paw Mtn. 39.24 37 P **P 08 52 15.3 +0.4**
KTH Kantishna Hill 39.26 38 P **P 08 52 15.4 +0.3**
KTH IAmb IAmb 08 52 31.1
comp=Z,26nm,1.1s
MLY Manley 39.38 36 P **P 08 52 16.1 -0.1**
MLY IAmb IAmb 08 52 39.9
comp=Z,33nm,1.8s
MLY Manley 39.38 36 P **P 08 52 16.8 +0.6**
baz=268,SNR=8.3
TRF Thorofare Moun 39.54 38 P **P 08 52 18.4 +0.7**
NRIK Noril'sk 39.73 331 LR LR 09 09 54.3
comp=Z,572nm,19.7s,baz=93,slow=38
COLD Coldfoot 39.73 32 P **P 08 52 19.0 0.0**
COLD IAmb IAmb 08 52 39.3
comp=Z,12nm,0.9s
COLD Coldfoot 39.73 32 P **P 08 52 18.9 -0.1**
baz=265,SNR=9.1
D23K Nanushuk River 39.73 30 P **P 08 52 19.1 +0.1**
baz=263,SNR=5.2
G23K Bananza Creek 39.77 33 P **P 08 52 19.1 -0.2**
baz=266,SNR=7.3
C23K Itkillik River 39.88 28 P **P 08 52 20.3 +0.2**
baz=262,SNR=5.3
H23K Yukon River 39.91 35 P **P 08 52 21.1 +0.5**
baz=268,SNR=8.1
I23K Minto, Yukon-K 39.97 36 P **P 08 52 20.7 -0.3**
I23K Minto, Yukon-K 39.97 36 P **P 08 52 21.1 +0.2**
baz=269,SNR=5.9
E23K Chandalar 40.03 31 P **P 08 52 21.8 +0.3**
baz=265,SNR=18
NEA2 Nenana 40.08 36 P **P 08 52 21.8 -0.1**
baz=270,SNR=14
TOLK Toolik Lake Re 40.10 30 P **P 08 52 22.1 0.0**
baz=264,SNR=9.8
GHO Glory Hole Cre 40.21 41 P **P 08 52 22.4 -0.8**
GHO IAmb IAmb 08 52 47.6
comp=Z,10nm,0.7s
WAT1 Susitna Watana 40.34 39 P **P 08 52 23.3 -0.9**
baz=272
D24K Happy Valley 40.42 29 P **P 08 52 24.6 0.0**
baz=264
E24K Your Creek 40.45 31 P **P 08 52 25.4 +0.3**
baz=266,SNR=22
SML Sawmill 40.49 41 P **P 08 52 25.2 -0.3**
baz=274
C24K Franklin Bluff 40.52 29 P **P 08 52 25.6 +0.2**
baz=264
QIZ Qiongzhong 40.53 245 P **P 08 52 26.9 +0.7**
QIZ pP **pP 08 52 34.3 -0.8**
QIZ S **S 08 58 36.3 +3.2**
QIZ pmax pmax
comp=Z,17nm,1.4s
QIZ LR LR
comp=Z,630nm,19.1s
QIZ LR LR
comp=Z,540nm,11.2s
QIZ LR LR
comp=Z,870nm,16.7s
PWL Port Wells 40.56 42 P **P 08 52 25.8 -0.2**
baz=275
H24K Noodor Dome 40.60 35 P **P 08 52 26.6 +0.3**
baz=269,SNR=7.4
TCOL CIGO, UAF Yank 40.60 36 P **P 08 52 26.3 +0.2**
baz=270
COLA College 40.60 36 P **P 08 52 26.5 +0.3**
baz=270
COLA College 40.60 36 P **P**
COLA pP **sP 08 52 39.3 +0.6**
COLA sP **pwP 08 52 43.1 +3.3**
F24K Squaw Lake 40.65 32 P **P 08 52 26.7 +0.1**
baz=267,SNR=8.1
G24K Hadweenzic Riv 40.78 33 P **P 08 52 28.2 +0.5**
baz=268,SNR=18
POKR Poker Plat Res 40.78 36 P **P 08 52 28.0 +0.3**
baz=270
DHY Denali Highway 40.87 39 P **P 08 52 28.5 -0.1**
baz=273
HDA Harding Lake 41.00 37 P **P 08 52 28.7 -0.9**
baz=272,SNR=11
IL31 41.02 36 P **P 08 52 29.1 -0.5**
IL31 IAmb IAmb 08 52 44.5
comp=Z,11nm,0.7s
ILAR Eielson Array 41.02 36 P **P 08 52 28.4 -1.2**
comp=Z,2.9nm,0.6s,baz=270,slow=9.1,SNR=47
ILAR LR LR 09 10 39.4
comp=Z,176nm,19.7s,baz=274,slow=38
comp=Z,2.9nm,0.6s
ILAR Eielson Array 41.02 36 P **P 08 52 29.1 -0.6**
ILAR Eielson Array 41.02 36 P **P 08 52 29.1 -0.6**
GOMU GeErMu 41.12 278 P **P 08 52 32.0 +0.7**
GOMU pmax pmax
comp=Z,10.0nm,1.3s
GOMU pmax pmax
comp=Z,71nm,4.9s
GOMU LR LR
comp=Z,650nm,18.8s
GOMU LR LR
comp=Z,900nm,17.0s
GOMU LR LR
comp=Z,1μm,17.4s
DGZ Jazzator, Alta 41.21 301 *i* P **P 08 52 31.0 -0.6**
DGZ pmax pmax
comp=Z,12nm,1.0s
DGZ MLR MLR
comp=Z,1μm,13.0s
PZH PanZhiHua 41.24 261 P **P 08 52 32.9 +0.8**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,410nm,5.3s
D25K Kavik River 41.30 29 P **P 08 52 31.8 -0.2**
baz=266,SNR=16
G25K Bearman Lake 41.32 33 P **P 08 52 32.9 +0.7**
baz=270,SNR=7.1
M24K Tolsona, Glenn 41.49 40 P **P 08 52 33.5 -0.2**
M24K IAmb IAmb 08 52 45.4
comp=Z,20nm,0.7s
M24K Tolsona, Glenn 41.49 40 P **P 08 52 34.1 +0.4**
baz=275
F25K Christian Rive 41.51 32 P **P 08 52 34.4 +0.7**
baz=269,SNR=6.6
K24K Donnelly Dome 41.54 38 P **P 08 52 33.8 -0.2**
baz=273,SNR=6.7
E25K Arctic Village 41.55 31 P **P 08 52 35.0 +1.0**
baz=269,SNR=7.4
PRP Porcupine Dome 41.58 35 P **P 08 52 34.3 0.0**
baz=272
KLU Klutina 41.66 41 P **P 08 52 35.7 +0.6**
baz=276,SNR=5.4
J25K Salcha River, 41.68 36 P **P 08 52 34.3 -0.9**
baz=273,SNR=7.2
ZALV Zalesovo Beam 41.74 307 P **P 08 52 34.6 -1.1**
comp=Z,1.8nm,0.4s,baz=74,slow=6.8,SNR=12
ZALV PcP **PcP 08 54 31.2 -0.3**
comp=Z,1.5nm,0.4s,baz=55,slow=2.8,SNR=3.9
ZALV LR LR 09 10 51.9
comp=Z,302nm,18.9s,baz=76,slow=38
comp=Z,1.8nm,0.4s
ZALV Zalesovo Beam 41.74 307 *i* P **P 08 52 35.0 -0.7**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
BMAR Burnt Mountain 41.92 32 P **P 08 52 37.5 +0.4**
RIDG Independent Ri 41.96 38 P **P 08 52 36.6 -0.8**
RIDG Independent Ri 41.96 38 P **P 08 52 37.1 -0.3**
baz=274
F26K Sheenjek River 42.08 32 P **P 08 52 39.2 +0.9**
baz=270,SNR=13
G26K Porcupine Rive 42.24 33 P **P 08 52 40.4 +0.8**
baz=272,SNR=15
C27K Jago River 42.25 29 P **P 08 52 39.9 +0.2**
baz=269,SNR=11
SCRK Sand Creek 42.32 37 P **P 08 52 39.8 -0.7**
baz=275,SNR=12
BMRM Bremner River 42.36 42 P **P 08 52 40.3 -0.5**
BMRM IAmb IAmb 08 52 52.2
comp=Z,17nm,0.9s
J26L Joseph Creek 42.46 36 P **P 08 52 40.7 -0.8**
J26L Joseph Creek 42.46 36 P **P 08 52 38.5 -3.1**
baz=274,SNR=6.9
I26K Coal Creek Min 42.58 35 P **P 08 52 40.8 -1.5**
L26K Log Cabin Wild 42.70 39 P **P 08 52 44.1 +0.7**
baz=276,SNR=8.8
VRDI Verde Repeater 42.88 41 P **P 08 52 44.8 -0.3**
VRDI IAmb IAmb 08 52 60.0
comp=Z,48nm,1.9s
M26K Nabesna, AK 42.93 40 P **P 08 52 45.5 +0.1**
M26K IAmb IAmb 08 52 57.5
comp=Z,12nm,0.8s
M26K Nabesna, AK 42.93 40 P **P 08 52 46.0 +0.6**
baz=277,SNR=8.0
WMQ Urumqi 42.94 292 *e*P **P 08 52 46.8 +1.1**
WMQ sP pwP 08 53 03.3 +4.0
WMQ pmax pmax
comp=Z,62nm,1.1s
WMQ pmax pmax
comp=Z,150nm,5.3s
WMQ LR LR
comp=Z,1μm,16.3s
WMQ LR LR
comp=Z,3μm,16.3s
WMQ LR LR
comp=Z,1μm,17.5s
E27K Coleen River 43.03 31 P **P 08 52 46.5 +0.4**
baz=272,SNR=10
K27K Chicken 43.15 37 P **P 08 52 47.2 +0.1**
K27K IAmb IAmb 08 53 02.2
comp=Z,18nm,0.9s
K27K Chicken 43.15 37 P **P 08 52 47.2 +0.1**
baz=276
H27K Steamboat Moun 43.18 34 P **P 08 52 48.1 +0.9**
baz=274,SNR=14
L27K Beaver Creek, 43.38 38 P **P 08 52 49.4 +0.4**
baz=278,SNR=18
M27K Edge Creek, AK 43.46 40 P **P 08 52 50.0 +0.3**
baz=278,SNR=5.4
EGAK Eagle 43.47 36 P **P 08 52 48.9 -0.7**
baz=276,SNR=7.2
ZSN Zaisan 43.52 298 *e*P **P 08 52 48.0 -2.2**
ZSN Zaisan 43.52 298 *e*P **P 08 52 48.0 -2.2**
baz=298
BVCY Beaver Creek 43.92 39 P **P 08 52 54.3 +1.0**
baz=279
CTG Chitna Glacier 43.93 41 P **P 08 52 53.6 0.0**
baz=280
YUK3 Moose Creek 44.21 40 P **P 08 52 55.8 0.0**
baz=280
I29M Ogilvie Camp, 44.59 35 P **P 08 52 59.0 +0.3**
baz=278,SNR=13
L29M L29M 45.04 38 P **P 08 53 03.0 +0.8**
baz=280
EPYK Eagle Plains 45.09 33 P **P 08 53 03.0 +0.4**
baz=278,SNR=8.0
K29M Barlow Dome 45.17 37 P **P 08 53 03.8 +0.4**
baz=280,SNR=5.8
G30M tAoh Zraii Nji 45.20 32 P **P 08 53 03.6 +0.2**
baz=278,SNR=5.9
MK31 Makanchi Array 45.39 298 **P 08 53 05.2 0.0**
MK31 Makanchi Array 45.39 298 *i* P **P 08 53 05.2 0.0**
MKAR Makanchi Array 45.39 298 P **P 08 53 05.1 -0.2**
comp=Z,23nm,0.9s,baz=74,slow=8.9,SNR=89
MKAR PcP **PcP 08 54 43.9 -0.2**
comp=Z,0.8nm,0.5s,baz=69,slow=4.7,SNR=1.0
MKAR LR LR 09 13 26.2
comp=Z,934nm,19.1s,baz=97,slow=38
comp=Z,23nm,0.9s
MKAR Makanchi Array 45.39 298 *i* P **P 08 53 05.4 +0.2**
MKAR pmax pmax
comp=Z,16nm,0.7s
MKAR Makanchi Array 45.39 298 *e*P **P 08 53 05.4 +0.2**
SEM Semipalatinsk 45.41 304 *e*P **P 08 53 03.4 -2.2**
SEM Semipalatinsk 45.41 304 *e*P **P 08 53 03.5 -2.2**
baz=304
MAKZ Makanchi 45.59 298 P **P 08 53 06.9 +0.1**
MAKZ Makanchi 45.59 298 P **P 08 53 06.8 +0.1**
MAKZ pP **sP 08 53 18.4 -0.8**
M30M Minto, Yukon 45.74 39 P **P 08 53 07.4 -0.4**
HYT Haines Junctio 45.80 41 P **P 08 53 09.0 +0.6**
HYT IAmb IAmb 08 53 16.9
comp=Z,18nm,0.8s
HYT Haines Junctio 45.80 41 P **P 08 53 09.4 +1.0**
baz=283,SNR=11
INK Inuvik 46.01 30 P **P 08 53 09.1 -0.7**
comp=Z,7.3nm,0.4s,baz=269,slow=6.5,SNR=52
comp=Z,7.3nm,0.4s
INK Inuvik 46.01 30 P **P 08 53 09.9 +0.1**
baz=279,SNR=8.0
KURK Kurchatov 46.29 304 **P 08 53 12.1 -0.1**
KURK Kurchatov 46.29 304 *ce*P **P 08 53 11.9 -0.3**
KURK pmax pmax
comp=Z,33nm,1.0s
KURK MLR MLR
comp=Z,800nm,15.0s
KURK Kurchatov 46.29 304 *e*P **P 08 53 11.9 -0.3**
KURK Kurchatov 46.29 304 P **P 08 53 11.8 -0.4**
KURK pP **pP 08 53 22.6 +1.2**
KURBB Kurchatov Arra 46.38 304 P **P 08 53 12.2 -0.7**
comp=Z,8.0nm,0.3s,baz=70,slow=8.8,SNR=41
KURBB PcP **PcP 08 54 47.2 -0.2**
comp=Z,2.9nm,0.9s,baz=77,slow=3.4,SNR=3.5
KURBB LR LR 09 13 48.2
comp=Z,580nm,18.9s,baz=56,slow=38
comp=Z,8.0nm,0.3s
M31M Drury Creek, Y 46.92 39 P **P 08 53 16.8 -0.2**
M31M Drury Creek, Y 46.92 39 P **P 08 53 17.7 +0.7**
baz=284
P33M Teslin, Yukon 48.20 41 P **P 08 53 27.6 +0.6**
P33M IAmb IAmb 08 53 28.7
comp=Z,9.8nm,1.1s
CMAR Chiang Mai Arr 48.35 255 P **P 08 53 29.6 +0.9**
comp=Z,3.0nm,0.8s,baz=41,slow=6.9,SNR=14
CMAR LR LR 09 15 43.6
comp=Z,282nm,19.3s,baz=50,slow=38
comp=Z,3.0nm,0.8s
TDK Taldyqorghan 48.59 297 *e*P **P 08 53 30.0 -0.2**
TDK Taldyqorghan 48.59 297 *e*P **P 08 53 30.0 -0.2**
baz=297
PDGK Podgornoye 48.59 295 *i* P **P 08 53 30.2 -0.2**
PDGK pmax pmax
comp=Z,20nm,0.9s
SHLS Shalkode 48.69 295 *e*P **P 08 53 27.3 -3.8**
SHLS Shalkode 48.69 295 *e*P **P 08 53 27.4 -3.8**
baz=294
UZB Uzynbulak 48.98 295 *e*P **P 08 53 31.0 -2.4**
UZB Uzynbulak 48.98 295 *e*P **P 08 53 31.0 -2.4**
baz=295
KPKS Kokpek 49.06 295 *e*P **P 08 53 32.6 -1.3**
KPKS Kokpek 49.06 295 *e*P **P 08 53 32.7 -1.3**
baz=295
C36M Paulatuk 49.12 28 P **P 08 53 33.9 0.0**
baz=286
ARXS Arharly 49.30 297 *e*P **P 08 53 35.2 -0.5**
SATY Saty 49.42 295 *e*P **P 08 53 35.5 -1.2**
SATY Saty 49.42 295 *e*P **P 08 53 35.6 -1.2**
baz=295
CHKK Chushkaly 50.00 297 *e*P **P 08 53 39.7 -1.3**
CHKK Chushkaly 50.00 297 *e*P **P 08 53 39.7 -1.3**
baz=296
BRZS Berezniki 50.10 305 *e*P **P 08 53 40.0 -1.6**
BRZS Berezniki 50.10 305 *e*P **P 08 53 40.1 -1.6**
baz=305
DLBC Dease Lake 50.13 43 P **P 08 53 41.4 -0.4**
comp=Z,3.1nm,1.0s,baz=284,slow=12,SNR=3.1
comp=Z,3.1nm,1.0s
BVAR Borovoye Array 50.22 310 P **P 08 53 41.9 -0.6**
comp=Z,5.4nm,0.8s,baz=74,slow=7.9,SNR=27
BVAR LR LR 09 15 51.4
comp=Z,258nm,18.5s,baz=68,slow=37
comp=Z,5.4nm,0.8s
BRVK Borovoye 50.27 310 *ce*P **P 08 53 42.9 +0.1**
BRVK pmax pmax
comp=Z,14nm,0.8s
BRVK MLR MLR
comp=Z,1μm,16.0s
BRVK Borovoye 50.27 310 ⇑P **P 08 53 42.6 -0.3**
comp=Z,20nm,1.2s
BRVK Borovoye 50.27 310 *e*P **P 08 53 42.9 +0.1**
BRVK Borovoye 50.27 310 P **P 08 53 42.5 -0.3**
BRVK pP **sP 08 53 53.9 -1.4**
MDOK Medeo 50.27 296 *e*P **P 08 53 42.2 -1.0**
MDOK Medeo 50.27 296 *e*P **P 08 53 42.3 -1.0**
baz=296
KUU Kurty 50.40 297 *e*P **P 08 53 41.5 -2.5**
KUU Kurty 50.40 297 *e*P **P 08 53 41.6 -2.5**
baz=297
OTUK Ortayu 51.02 303 P **P 08 53 48.9 +0.2**
ULHL Ulahol 51.22 295 P **P 08 53 51.2 +0.8**
SNR=5.6
BOOM Boomskoye usch 51.30 295 **P 08 53 50.8 -0.2**
BOOM Boomskoye usch 51.30 295 P **P 08 53 50.8 -0.2**
BOOM pmax pmax
comp=Z,44nm,1.1s
TKM2 Tokmak 2 51.33 296 P **P 08 53 52.1 +0.9**
SNR=29
TKM2 Tokmak 2 51.33 296 P **P 08 53 51.5 +0.3**
BTLS Baital 51.36 299 *e*P **P 08 53 49.8 -1.4**
BTLS Baital 51.36 299 *e*P **P 08 53 49.9 -1.4**
baz=299
SGDS Sogindy 51.71 297 *e*P **P 08 53 52.3 -1.6**
SGDS Sogindy 51.71 297 *e*P **P 08 53 52.3 -1.6**
baz=297
KBK Karagaybulak 51.87 296 P **P 08 53 56.2 +0.9**
SNR=6.5
USP Ospenovka 51.88 297 P **P 08 53 55.8 +0.6**
SNR=13
GUN Gumba 51.90 274 *e*P **P 08 53 56.1 +0.3**
RAMN Ramite 51.93 273 *e*P **P 08 53 56.2 +0.2**
comp=Z,25nm,0.4s
AAK Ala-Archa 52.17 296 P **P 08 53 58.4 +0.9**
SNR=5.4
AAK Ala-Archa 52.17 296 LR LR 09 17 49.6
comp=Z,352nm,18.6s,baz=68,slow=38
AAK Ala-Archa 52.17 296 P **P 08 53 57.3 -0.2**
AAK IAmb IAmb 08 53 59.3

comp=Z,14nm,0.9s
AAK Ala-Archa 52.17 296 *ce*P **P 08 53 58.3 +0.8**
AAK pmax pmax
comp=Z,22nm,1.3s
AAK MLR MLR
comp=Z,892nm,16.0s
AAK Ala-Archa 52.17 296 *e*P **P 08 53 58.3 +0.8**
AAK Ala-Archa 52.17 296 P **P 08 53 58.0 +0.4**
AAK pP **pP 08 54 08.3 +1.5**
KKN Kakani 52.40 274 *e*P **P 08 54 00.0 +0.6**
PKI Pulchoki 52.43 274 *e*P **P 08 54 00.0 +0.2**
comp=Z,56nm,1.2s
PKIN Phulchoki 52.44 274 *e*P **P 08 54 00.1 +0.3**
DMN Daman 52.63 274 *e*P **P 08 54 01.8 +0.6**
EKS2 Erkin-Say 52.63 297 P **P 08 54 01.5 +0.7**
SNR=13
KSH Kashi 52.70 292 P **P 08 54 05.9 +4.5**
KSH sP pwP 08 54 17.9 +2.6
KSH PP **PP 08 56 07.3 +6.7**
KSH pmax pmax
comp=Z,13nm,1.7s
KSH LR LR
comp=Z,810nm,14.6s
KSH LR LR
comp=Z,570nm,15.1s
KSH LR LR
comp=Z,1μm,17.1s
GKN Gorkha 52.74 275 *e*P **P 08 54 02.2 +0.3**
EUNU Eureka 52.77 10 P **P 08 54 01.0 -0.3**
AML Almayashu 52.94 296 P **P 08 54 04.5 +1.1**
SNR=10
DANN Dangsing 53.17 276 *e*P **P 08 54 06.0 +0.7**
KOLN Koldanda 53.62 275 *e*P **P 08 54 08.9 +0.4**
BBB Bella Bella 53.65 49 LR LR 09 17 38.7
comp=Z,68nm,19.7s,baz=316,slow=37
SVE Sverdlovsk 53.79 317 *e*P **P 08 54 08.6 -0.4**
SVE pmax pmax
comp=Z,37nm,1.3s
SVE MLR MLR
comp=Z,856nm,16.0s
SVE Sverdlovsk 53.79 317 *e*P **P 08 54 08.6 -0.4**
HNR Honiara 53.91 166 LR LR 09 14 49.8
comp=Z,1μm,21.0s,baz=340,slow=33
KK31 Karatay Array 54.52 298 P **P 08 54 14.4 -0.2**
KK31 Karatay Array 54.52 298 *i* P **P 08 54 14.4 -0.2**
KKAR Karatay Array 54.52 298 P **P 08 54 13.9 -0.6**
KKAR Karatay Array 54.52 298 P **P 08 54 13.9 -0.6**
KKAR pmax pmax
comp=Z,20nm,0.9s
RES Resolute Bay 54.77 17 P **P 08 54 14.6 -1.3**
comp=Z,13nm,0.7s,baz=349,slow=1.4,SNR=26
RES LR LR 09 21 16.1
comp=Z,165nm,18.0s,baz=298,slow=40
comp=Z,13nm,0.7s
ARU Arti 54.99 317 LR LR 09 22 05.9
comp=Z,181nm,19.3s,baz=38,slow=41
ARU Arti 54.99 317 P **P 08 54 17.3 -0.4**
ARU Arti 54.99 317 *c i* P **P 08 54 15.8 -1.9**
ARU 08 56 17.1
ARU S **S 09 01 55.9 -1.2**
ARU SS **SS 09 05 34.8 -5.5**
ARU pmax pmax
comp=Z,45nm,1.2s
ARU MLR MLR
comp=Z,695nm,15.0s
ARU Arti 54.99 317 P **P 08 54 17.1 -0.6**
ARU pP **sP 08 54 29.4 -0.1**
SPITS Spitsbergen Ar 55.01 349 LR LR 09 20 15.8
comp=Z,162nm,18.3s,baz=5.5,slow=39
IUG Iuzhnay 55.30 298 *e*P **P 08 54 19.4 -0.9**
IUG Iuzhnay 55.30 298 *e*P **P 08 54 19.4 -0.9**
baz=298
YKA Yellowknife Ar 55.36 34 P **P 08 54 19.6 -0.7**
comp=Z,2.1nm,0.8s,baz=312,slow=15,SNR=8.4
YKA LR LR 09 20 37.0
comp=Z,218nm,18.6s,baz=282,slow=39
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 55.36 34 *i* P **P 08 54 21.0 +0.7**
NIL Nilore 57.65 287 P **P 08 54 37.7 +0.6**
NIL Nilore 57.65 287 P **P 08 54 37.7 +0.6**
NIL pmax pmax
comp=Z,62nm,1.1s
NIL Nilore 57.65 287 P **P 08 54 37.8 +0.7**
NIL pP **sP 08 54 49.4 0.0**
CHGR Chuyangaron 57.69 294 P **P 08 54 37.1 -0.3**
CHGR Chuyangaron 57.69 294 P **P 08 54 37.1 -0.3**
CHGR pmax pmax
comp=Z,28nm,0.6s
SIMJ Simiganj 57.78 295 P **P 08 54 37.8 -0.2**
SIMJ pP **sP 08 54 49.6 -0.9**
SIMJ sP **pwP 08 54 54.5 +2.5**
AB31 Akbulak array 57.79 309 *i* P **P 08 54 37.7 0.0**
ABKAR Akbulak array 57.79 309 P **P 08 54 37.3 -0.4**
PRGR Permogore 58.10 327 *e*P **P 08 54 37.8 -1.9**
PRGR *e**PP **pP 08 54 45.5 -3.5**
PRGR *e*S **S 09 02 36.4 -1.7**
KIRV Kirov 58.18 322 LR LR 09 21 48.8
comp=Z,460nm,18.9s,baz=44,slow=38
KIRV Kirov 58.18 322 *ce*P **P 08 54 40.6 +0.3**
LVZ Lovozero 58.22 336 *ce*P **P 08 54 40.5 0.0**
LVZ pmax pmax
comp=Z,13nm,1.3s
LVZ MLR MLR
comp=Z,482nm,18.0s
AKTO Aktyubinsk 58.24 311 LR LR 09 21 32.8
comp=Z,364nm,19.0s,baz=41,slow=38
AKTO Aktyubinsk 58.24 311 ⇑S **P 08 54 39.8 -1.1**
comp=Z,13nm,0.9s
NEEM North Greenlan 58.54 5 *e*P **P 08 54 40.5 -2.4**
NEEM IAmb IAmb 08 54 42.5
comp=Z,34nm,1.1s
APA Apatity 58.79 336 ⇓*i* P **P 08 54 44.7 +0.2**
APA pmax pmax
comp=Z,9.0nm,0.7s
DAG Danmarks Havn 59.54 357 *i* P **P 08 54 48.0 -1.5**
DAG IAmb IAmb 08 54 49.0
comp=Z,28nm,1.4s
ARA0 ARCESS Array S 59.61 340 *e*P **P 08 54 50.2 +0.1**
ARCES ARCESS Array B 59.61 340 P **P 08 54 48.9 -1.2**
comp=Z,1.3nm,0.5s,baz=40,slow=7.4,SNR=14
ARCES PcP **PcP 08 55 36.5 -0.5**
comp=Z,3.3nm,0.8s,baz=62,slow=5.4,SNR=4.1
ARCES LR LR 09 24 21.4
comp=Z,338nm,19.2s,baz=36,slow=40
comp=Z,1.3nm,0.5s
PSI Prapat 59.70 242 LR LR 09 21 51.0
comp=Z,143nm,19.7s,baz=36,slow=37
KTK1 Kautokeino 60.55 340 *e*P **P 08 54 54.8 -1.8**
KTK1 IAmb IAmb 08 55 01.7
comp=Z,6.1nm,0.8s
JETT Jettan, Norway 60.81 341 *e*P **P 08 54 57.9 -0.5**
KLMR Klimovskoe 60.96 328 *e*P **P 08 54 55.6 -3.8**
KLMR pmax pmax
comp=Z,32nm,1.3s
KLMR Klimovskoe 60.96 328 *e*P **P 08 54 55.7 -3.7**
KLMR AMP 08 54 59.9
comp=Z,32nm,1.3s
NEW Newport 61.71 49 P **P 08 55 04.3 -0.5**
comp=Z,2.5nm,0.8s,baz=324,slow=6.9,SNR=5.5
comp=Z,2.5nm,0.8s
PINE Pine Mountain 62.08 55 P **P 08 55 09.2 +1.7**
PINE IAmb IAmb 08 55 09.7
comp=Z,7.8nm,0.8s
YBH Yreka Blue Hor 62.19 58 P **P 08 55 08.0 -0.2**
comp=Z,2.4nm,0.9s,baz=280,slow=4.3,SNR=9.5
YBH LR LR 09 17 46.7
comp=Z,60nm,21.8s,baz=314,slow=32
comp=Z,2.4nm,0.9s
BELG Belogornoye 62.54 317 LR LR 09 25 26.1
comp=Z,439nm,18.4s,baz=117,slow=39
BELG Belogornoye 62.54 317 *i* P **P 08 55 10.0 -0.2**
BELG pmax pmax
comp=Z,9.0nm,0.9s
BELG MLR MLR
comp=Z,60nm,10.0s
STEI Steigen 63.27 342 *e*P **P 08 55 14.1 -0.6**
CTA Charters Tower 63.49 182 LR LR 09 23 34.9
comp=Z,53nm,18.9s,baz=49,slow=37
MOD Modoc Plateau 63.55 56 P **P 08 55 17.8 +0.4**
MOD IAmb IAmb 08 55 32.1
comp=Z,6.5nm,1.1s
FAUS Fauske 63.70 342 IAmb IAmb 08 55 17.1
comp=Z,26nm,1.0s
FAUS *e*P **P 08 55 17.1 -0.5**
SUMG Summit 63.94 2 *i* P **P 08 55 18.0 -1.7**
SUMG IAmb IAmb 08 55 20.5
comp=Z,54nm,1.3s
MSO Missoula 64.30 49 P **P 08 55 21.7 -0.4**
baz=307
WRAB Tennant Creek 64.60 195 P **P 08 55 21.6 -2.4**
WRAB sP **sP 08 55 37.7 +0.6**
WB2 Warramunga Arr 64.61 195 P **P 08 55 24.1 0.0**
WB2 IAmb IAmb 08 55 39.4
comp=Z,6.1nm,0.8s
WRA Warramunga Arr 64.61 195 P **P 08 55 24.2 0.0**
comp=Z,1.7nm,0.7s,baz=12,slow=6.8,SNR=10
WRA LR LR 09 19 29.8
comp=Z,80nm,21.9s,baz=66,slow=32
comp=Z,1.7nm,0.7s
WRA Warramunga Arr 64.61 195 P **P 08 55 23.0 -1.1**
WRA Warramunga Arr 64.61 195 *i* P **P 08 55 24.1 -0.1**
WRA pmax pmax
comp=Z,2.0nm,0.8s
MOR8 Moi Rana 64.88 341 *e*P **P 08 55 23.2 -2.2**
MOR8 IAmb IAmb 08 55 24.7
comp=Z,32nm,0.8s
MOS Moscow 65.02 324 *e*P **P 08 55 24.7 -1.7**
MOS pmax pmax
comp=Z,33nm,1.0s
GEYT Alibeck 65.24 299 P **P 08 55 27.6 -0.7**
comp=Z,6.6nm,0.6s,baz=9.5,slow=4.5,SNR=13
GEYT LR LR 09 25 48.5
comp=Z,363nm,19.4s,baz=67,slow=38
comp=Z,6.6nm,0.6s
GEYT Alibeck 65.24 299 P **P 08 55 28.2 -0.1**
GEYT IAmb IAmb 08 55 30.6
comp=Z,12nm,1.0s
FIA1 FINESS Array S 65.33 333 P **P 08 55 27.5 -0.9**
FINES FINESS Array B 65.33 333 P **P 08 55 27.0 -1.4**
comp=Z,12nm,0.6s,baz=40,slow=7.4,SNR=52
FINES LR LR 09 28 00.6
comp=Z,345nm,18.4s,baz=35,slow=40
comp=Z,12nm,0.6s
FINES FINESS Array B 65.33 333 **P 08 55 27.0 -1.4**
LRM Limekiln Ridge 65.73 49 P **P 08 55 31.2 -0.4**
OBN Obninsk 65.88 324 *ce*P **P 08 55 31.5 -0.5**
OBN *e* 08 56 04.4
OBN *e* 08 57 56.6
OBN *e*PPP PPP 08 59 39.6
OBN pmax pmax
comp=Z,40nm,1.1s
OBN MLR MLR
comp=Z,436nm,10.0s
OBN Obninsk 65.88 324 *e*P **P 08 55 31.5 -0.5**
YERR Yerington 65.94 59 P **P 08 55 33.0 0.0**
YERR IAmb IAmb 08 55 48.5
comp=Z,13nm,1.0s
HLID Hailey 66.02 52 P **P 08 55 33.5 +0.1**
baz=308
VRH Novokhopyorsk 66.15 319 *e*P **P 08 55 33.6 -0.3**
VRH pmax pmax
comp=Z,20nm,0.8s
BOZ Bozeman (W) 66.32 49 P **P 08 55 34.7 -0.6**
BOZ IAmb IAmb 08 55 46.9
comp=Z,5.6nm,0.8s
BOZ Bozeman (W) 66.32 49 P **P 08 55 34.7 -0.6**
BOZ pmax pmax
comp=Z,6.0nm,0.8s
BOZ Bozeman (W) 66.32 49 P **P 08 55 35.5 +0.2**
baz=309
LPSR Galich'ya Gora 66.53 321 *e*P **P 08 55 35.4 -0.9**
LPSR pmax pmax
comp=Z,40nm,0.9s
NVAR Mina Array Bea 66.86 58 P **P 08 55 38.9 -0.1**
comp=Z,4.8nm,0.9s,baz=288,slow=6.9,SNR=30
comp=Z,4.8nm,0.9s
NVAR Mina Array Bea 66.86 58 P **P 08 55 38.8 -0.2**
MSVF Nonsavu 66.90 149 LR LR 09 24 38.5
comp=Z,154nm,18.0s,baz=351,slow=36
VORR Voronezh 67.03 320 *e*P **P 08 55 39.6 +0.2**
VORR pmax pmax
comp=Z,38nm,1.1s
YHH Holmes Hill 67.26 49 P **P 08 55 41.8 +0.3**
VSU Vasula 67.32 331 *i* P **P 08 55 41.1 -0.1**
VSU pmax pmax
comp=Z,37nm,0.7s
VSU MLR MLR
comp=Z,2μm,21.0s
VSR Storozhevoye 67.35 320 *e*P **P 08 55 40.8 -0.7**
VSR pmax pmax
comp=Z,90nm,1.3s
ICESG Greenland Ices 67.39 3 *e*P **P 08 55 42.3 +0.4**
ICESG IAmb IAmb 08 55 43.5
comp=Z,35nm,0.9s
DZM Mont Dzumac 67.51 162 *e*LR LR 09 16 04.1
comp=Z,128nm,21.8s
AFI Afiamalu 67.89 138 LR LR 09 27 24.9
comp=Z,82nm,18.0s,baz=338,slow=38
ASAR Alice Springs 68.33 194 P **P 08 55 48.2 +0.4**
comp=Z,1.3nm,0.7s,baz=8.9,slow=5.6,SNR=18
ASAR LR LR 09 27 21.9
comp=Z,24nm,18.1s,baz=344,slow=37
comp=Z,1.3nm,0.7s
GRAC Grapevine Rang 68.34 59 P **P 08 55 48.3 +0.2**
baz=309
MAK Makhachkala 68.47 309 *e*P **P 08 55 46.5 -2.1**
MAK *e*S **S 09 04 46.2 -1.7**
MAK pmax pmax
comp=Z,219nm,1.3s
MAK MLR MLR
comp=Z,324nm,13.0s
R11A Troy Canyon, C 68.58 57 P **P 08 55 49.7 0.0**
baz=309
PALK Pallekele 68.89 260 LR LR 09 28 34.8
comp=Z,236nm,19.7s,baz=152,slow=38
FURC Furnace Creek, 68.98 59 P **P 08 55 52.4 +0.5**
baz=309
FRB Frobisher Bay 68.99 17 LR LR 09 29 18.9
comp=Z,140nm,18.8s,baz=1.0,slow=39
TPNV Topopah Spring 69.06 59 P **P 08 55 52.6 -0.1**
baz=309
DUG Dugway, Tooele 69.07 54 P **P 08 55 53.0 +0.3**
baz=310
BW06 Boulder Array 69.28 50 P **P 08 55 53.4 -0.6**
baz=311
PDAR Pinedale Array 69.28 50 P **P 08 55 53.2 -0.8**
comp=Z,1.4nm,0.5s,baz=243,slow=0.8,SNR=22
comp=Z,1.4nm,0.5s
PDAR Pinedale Array 69.28 50 P **P 08 55 53.9 -0.2**
AKT Akhty 69.29 308 *e*P **P 08 55 54.6 +0.6**
AKT *e* 08 56 15.5
AKT pmax pmax
comp=Z,15nm,0.7s
ISAL Salakas 69.71 329 *e*P **P 08 55 57.5 +1.4**
SEKA Sheki 69.77 308 P **P 08 55 55.2 -1.7**
NC303 NORSAR Array S 69.78 339 P **P 08 55 56.0 -0.5**
ZKTA Zakatala 69.82 309 P **P 08 55 55.6 -1.5**
IIGN Ignalina 69.84 329 *e*P **P 08 55 57.5 +0.5**
MNK Minsk 69.85 328 *i* P **P 08 55 56.4 -0.6**
MNK *i* 08 56 18.5
MNK *i* 08 58 31.0
MNK *i* PPP PPP 09 00 13.0
MNK *i* S **S 09 05 04.5 +0.6**
MNK *i* 09 05 55.7
MNK *i* SS **SS 09 09 39.4 +7.5**
MNK pmax pmax
comp=Z,52nm,0.9s
MNK pmax pmax
comp=N,40nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK MLR MLR
comp=N,386nm,15.0s
MNK MLR MLR
comp=Z,378nm,15.0s
MNK MLR MLR
comp=E,111nm,16.0s
MNK Minsk 69.85 328 *i* P **P 08 55 56.4 -0.6**
comp=E,3.0nm,0.8s
MNK *i* P **P 08 55 56.4 -0.6**
comp=N,40nm,0.8s
MNK *i* P **P 08 55 56.4 -0.6**
comp=Z,52nm,0.9s,baz=222
MNK *i* PcP **PcP 08 56 18.5 -0.9**
MNK *i* PP **PP 08 58 31.0 -0.1**
MNK *i* PPP PPP 09 00 13.0
MNK *i* S **S 09 05 04.5 +0.6**
MNK *i* SS **SS 09 09 39.5 +7.5**
MNK *i* SSS SSS 09 12 53.0
MNK *i* LQ LQ 09 21 49.1
MNK *i* LR LR 09 26 57.7
MNK *i* LRM MLR 09 29 15.0
comp=N,386nm,15.1s
MNK *i* LRM MLR 09 29 15.0
comp=Z,378nm,15.1s
MNK *i* LRM MLR 09 29 36.4
comp=E,111nm,16.4s
LGD Lagodekhi 69.91 309 P **P 08 55 58.2 +0.5**
NACGM Naroch 69.97 328 ⇑*i* P **P 08 55 57.5 -0.3**
baz=41
NB2 NORSAR Subarra 69.97 339 P **P 08 55 57.0 -0.8**
comp=Z,12nm,0.6s,baz=31,slow=6.5
NB2 NORSAR Subarra 69.97 339 P **P 08 55 57.0 -0.8**
baz=31,slow=6.5
NOA NORSAR Array B 69.97 339 P **P 08 55 57.1 -0.6**
comp=Z,7.5nm,0.6s,baz=31,slow=6.3,SNR=43
NOA LR LR 09 30 49.2
comp=Z,206nm,19.6s,baz=30,slow=40
comp=Z,7.5nm,0.6s
SHTL Shatili 69.98 310 P **P 08 55 57.8 -0.4**
VSVD Vaisvydziai 70.20 330 *e*P **P 08 55 59.1 0.0**
TUQ Turquoise Moun 70.23 60 P **P 08 56 00.1 +0.2**
baz=310
KIV Kislovodsk 70.46 312 *e*P **P 08 56 01.6 +0.5**
KIV *e*S **S 09 05 13.4 +1.8**
KIV pmax pmax
comp=Z,36nm,1.1s
KIV MLR MLR
comp=Z,558nm,18.0s
KIV Kislovodsk 70.46 312 *e*P **P 08 56 01.6 +0.5**
KIV Kislovodsk 70.46 312 P **P 08 56 02.2 +1.1**
KIV pP **sP 08 56 13.7 -0.2**
KBZ Khabaz 70.50 312 P **P 08 56 01.8 +0.6**
comp=Z,27nm,0.9s,baz=82,slow=1.0,SNR=35
KBZ LR LR 09 31 48.1
comp=Z,523nm,18.4s,baz=29,slow=40
KBZ Khabaz 70.50 312 *ce*P **P 08 56 01.8 +0.6**
KBZ pmax pmax
comp=Z,26nm,0.9s
KBZ MLR MLR
comp=Z,733nm,15.0s
PABE Paberze 70.56 330 *e*P **P 08 56 01.1 -0.3**
ZEI Tsey 70.58 311 *e*P **P 08 56 01.1 -0.9**
ZEI pmax pmax
comp=Z,19nm,1.0s
SHA1 Shidzhatmaz 70.62 312 *c i* P **P 08 56 03.1 +0.8**
GANJ Ganja 70.64 308 P **P 08 56 00.3 -1.9**
NEY Neytrino 70.91 312 *i* P **P 08 56 05.0 +1.0**
NEY pmax pmax
comp=Z,3.0nm,1.0s
RSSD Black Hills 71.37 46 P **P 08 56 05.8 -1.0**
RSSD pP **pP 08 56 17.0 +0.7**
RSSD sP **pwP 08 56 22.3 +1.4**
DMNI Dmanisi 71.39 310 P **P 08 56 07.8 +0.9**
MONP2 Monument Peak 71.55 62 P **P 08 56 08.1 +0.1**
baz=310
ABS Abastumani 71.87 311 P **P 08 56 11.1 +1.3**
GNI Garni 71.88 308 LR LR 09 30 56.6
comp=Z,216nm,18.9s,baz=47,slow=39
GNI Garni 71.88 308 *ce*P **P 08 56 11.4 +1.6**
GNI pmax pmax
comp=Z,29nm,1.7s
GNI MLR MLR
comp=Z,370nm,16.0s
NAX Nakhchivan 72.09 307 P **P 08 56 09.4 -1.7**
AKASG Malin Array Be 72.15 324 P **P 08 56 10.1 -0.9**
comp=Z,13nm,0.7s,baz=39,slow=6.6,SNR=86
AKASG LR LR 09 32 34.6
comp=Z,232nm,18.9s,baz=39,slow=40
comp=Z,13nm,0.7s
AKASG Malin Array Be 72.15 324 P **P 08 56 10.4 -0.6**
AKASG IAmb IAmb 08 56 12.0
comp=Z,24nm,1.2s
AKASG Malin Array Be 72.15 324 P **P 08 56 10.4 -0.6**
AKASG pmax pmax
comp=Z,24nm,1.2s
AKBB Malin Array Si 72.15 324 P **P 08 56 10.8 -0.2**
AKBB Malin Array Si 72.15 324 P **P 08 56 10.8 -0.2**
AKBB pmax pmax
comp=Z,60nm,1.2s
SOC Sochi 72.28 314 *e*P **P 08 56 11.0 -1.0**
SOC *e* 08 58 50.9
SOC *e*PPP PPP 09 00 34.4
SOC *e*S **S 09 05 33.5 +1.0**
SOC *e*SS **SS 09 10 07.0 -2.8**
SOC pmax pmax
comp=Z,11nm,0.4s
SOC MLR MLR
comp=Z,523nm,20.0s
BORU Boraas 72.45 337 *e*P **P 08 56 12.2 -0.5**
N23A Red Feather La 72.53 50 P **P 08 56 14.0 +0.1**
baz=313
BLEU Blekinge 72.66 335 *e*P **P 08 56 12.9 -1.0**
PV13 Radium Mtn., P 72.75 54 P **P 08 56 14.3 -0.9**
PV13 IAmb IAmb 08 56 26.8
comp=Z,8.0nm,0.7s
ONAU Onsala 72.90 337 *e*P **P 08 56 14.5 -0.8**
DEL Delary 73.12 336 *e*P **P 08 56 15.6 -1.1**
BJUU Bjuv 73.70 336 *e*P **P 08 56 19.5 -0.6**
BSD Bornholm Skovb 73.94 334 *e*P **P 08 56 21.6 +0.1**
WSAR Wadi Sarin 74.15 287 LR LR 09 33 59.0
comp=Z,129nm,18.2s,baz=27,slow=40
SIM Simferopol' 74.15 318 *e*P **P 08 56 23.1 +0.1**
SIM pmax pmax
comp=Z,35nm,0.8s
GKP Gorka Klasztor 74.71 332 *e*P P 08 56 38.0 +12
SDCO Great Sand Dun 74.94 52 P **P 08 56 28.1 0.0**
baz=314
LVV L'vov 74.97 326 *e*P **P 08 56 26.6 -1.0**
LVV *e* 08 56 39.5
LVV *e*S **SKiKP 09 05 52.1 +3.3**
LVV MLR MLR
comp=Z,500nm,17.0s
ECSD EROS Data Cent 75.42 43 P **P 08 56 29.7 -0.7**
baz=317
STKA Stephens Creek 75.45 186 LR LR 09 28 21.6
comp=Z,50nm,21.1s,baz=22,slow=35
TUC Tucson 75.50 59 P **P 08 56 32.0 +0.9**
baz=313
BUR08 Bucovina Ar. S 76.19 324 P **P 08 56 35.2 +0.4**
BUR08 IAmb IAmb 08 56 48.4
comp=Z,16nm,0.8s
BURAR Bucovina Array 76.20 324 ⇑P **P 08 56 34.9 0.0**
OJC Ojcow 76.29 329 *e*P **P 08 56 33.8 -1.4**
ANMO Albuquerque 76.32 55 *ce*P **P 08 56 34.6 -1.3**
BIZ Bicaz 76.35 323 ⇑P **P 08 56 36.0 +0.4**
KOLS Kolonicke sedl 76.37 327 *e*P **P 08 56 36.5 +0.8**
KOLS pmax pmax
comp=Z,10.0nm,0.8s
STHS Stebnicka Huta 76.39 328 *e*P **P 08 56 36.0 +0.2**
TESR Tescani 76.44 323 ⇑P **P 08 56 36.4 +0.3**
CRVS Cervenica-Dubn 76.72 327 *e*P **P 08 56 38.0 +0.3**
CRVS pmax pmax
comp=Z,105nm,2.3s
CFR Carcaliu 76.81 321 ⇑P **P 08 56 37.1 -1.1**
TRPA Tarpa 76.91 326 ⇑P **P 08 56 39.3 +0.7**
TRPA Tarpa 76.91 326 P **P 08 56 39.0 +0.3**
VRI Vrincioaia 76.91 322 ⇑P **P 08 56 38.8 0.0**
KSP Ksiaz 77.05 331 *e*P **P 08 56 39.6 +0.1**
COVR Voineasa-Covas 77.16 323 ⇑P **P 08 56 40.0 -0.2**
HARR Harsova 77.27 321 ⇑P **P 08 56 41.3 +0.5**
OSTC Ostas 77.32 331 AMS AMS 09 33 30.0
comp=Z,500nm,22.1s
CHVC Chvalec 77.35 331 *e*P **P 08 56 41.9 +0.7**
SCHQ Schefferville 77.38 20 P **P 08 56 40.7 -0.6**
comp=Z,2.3nm,0.5s,baz=355,slow=3.5,SNR=5.3
SCHQ LR LR 09 33 10.8
comp=Z,201nm,20.3s,baz=14,slow=38
comp=Z,2.3nm,0.5s
DPC Dobruska-Polom 77.45 331 *e*P **P 08 56 42.2 +0.4**
DPC *e**PP **sP 08 56 54.1 -0.6**
DPC Dobruska-Polom 77.45 331 *e*P **P 08 56 42.2 +0.4**
DPC *e*pP **sP 08 56 54.1 -0.6**
MORC Moravsky Berou 77.49 330 ⇑P **P 08 56 42.5 +0.5**
MORC Moravsky Berou 77.49 330 *e*P **P 08 56 42.3 +0.3**
MORC *e* 08 56 54.8
KRLC Kraliky 77.52 330 *e*P **P 08 56 42.4 +0.2**
KRLC *e**PP **PcP 08 56 52.7 +0.3**
KRLC Kraliky 77.52 330 *e*P **P 08 56 42.4 +0.2**
KRLC *e*pP **PcP 08 56 52.7 +0.3**
MLR Muntele Rosu 77.55 323 ⇑P **P 08 56 43.0 +0.4**
MAUC Maruska 77.72 329 *e*P **P 08 56 43.4 +0.1**
MAUC *e*pP **sP 08 56 55.8 -0.4**
CLL Collm 77.77 333 P **P 08 56 43.2 -0.3**
CLL Collm 77.77 333 ⇑*i* P **P 08 56 43.2 -0.3**

CLL *i* *PP **sP** **08 56 55.3 -1.1**
CLL pmax pmax
comp=Z,17nm,0.8s
CLL MLR MLR
comp=Z,300nm,18.9s
CLL Collm 77.77 333 ⇑*i*P **P** **08 56 43.2 -0.3**
comp=Z,17nm,0.8s
CLL *i* pP **sP** **08 56 55.3 -1.1**
comp=Z,39nm,1.0s
CLL *e*PP **PP** **08 59 41.0 +2.6**
CLL LmH 09 28 00.0
comp=N,300nm,20.7s
CLL LmH 09 28 00.0
comp=E,600nm,20.1s
CLL LmV 09 35 00.0
comp=Z,300nm,18.9s
CLL LmV 17 43 00.0
comp=Z,200nm,19.2s
DRGR 77.90 325 ⇑P **P** **08 56 44.6 +0.2**
PVCC Panska Ves 77.91 332 AMS AMS 09 34 30.0
comp=Z,600nm,17.2s
VOIR 77.98 323 ⇑P **P** **08 56 45.0 +0.1**
VYHS Vyhne 78.06 328 *e*P **P** **08 56 45.5 +0.3**
VYHS pmax pmax
comp=Z,10.0nm,1.2s
PSZ Piszkesteto 78.13 327 P **P** **08 56 44.5 -1.2**
JAVC Velka Javorina 78.20 329 *e*P **P** **08 56 47.3 +1.3**
JAVC *e* 08 56 59.8
BRTR Keskin Array B 78.22 314 P **P** **08 56 46.0 -0.4**
comp=Z,2.5nm,0.9s,baz=90,slow=3.7,SNR=11
BRTR LR LR 09 36 19.2
comp=Z,215nm,18.6s,baz=57,slow=40
comp=Z,2.5nm,0.9s
BRTR Keskin Array B 78.22 314 *i* P **P** **08 56 47.0 +0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
VRAC Vranov 78.22 330 LR LR 09 34 56.1
comp=Z,370nm,18.3s,baz=27,slow=38
VRAC Vranov 78.22 330 *e*P **P** **08 56 46.6 +0.5**
VRAC *e* 08 56 59.0
GOPC GO Pecny, Ondr 78.36 331 *e*P **P** **08 56 47.0 +0.2**
GOPC *e*PP **pP** **08 56 57.7 +1.3**
GOPC MLR MLR
comp=Z,600nm,19.2s
GOPC GO Pecny, Ondr 78.36 331 *e*P **P** **08 56 47.0 +0.2**
GOPC *e*pP **pP** **08 56 57.7 +1.3**
GOPC AMS AMS 09 34 30.0
comp=Z,600nm,19.2s
PRU Pruhonice 78.38 332 *e*P **P** **08 56 46.9 0.0**
PRU *e*PP **pP** **08 56 58.2 +1.7**
PRU MLR MLR
comp=Z,700nm,18.8s
PRU Pruhonice 78.38 332 *e*P **P** **08 56 46.9 0.0**
PRU *e*pP **pP** **08 56 58.2 +1.7**
PRU AMS AMS 09 34 50.0
comp=Z,700nm,18.8s
KRUC Moravsky 78.50 330 *e*P **P** **08 56 47.9 +0.3**
KRUC *e* 08 57 00.3
SMOL Smolenice 78.58 329 *e*P **P** **08 56 48.5 +0.5**
SMOL pmax pmax
comp=Z,9.0nm,1.3s
MODS Modra-Piesok 78.75 329 *e*P **P** **08 56 49.5 +0.5**
MODS pmax pmax
comp=Z,25nm,1.0s
SIRR Siria 78.76 325 ⇑P **P** **08 56 49.2 +0.1**
MOX Moxa 78.79 334 P **P** **08 56 49.2 0.0**
MOX pmax pmax
comp=Z,14nm,1.1s
RAO Raoul Island 78.89 150 LR LR 09 27 54.5
comp=Z,128nm,18.3s,baz=98,slow=33
ZST Bratislava 78.96 329 *e*P **P** **08 56 51.3 +1.2**
GZR Gura Zlata 78.99 324 ⇓P **P** **08 56 50.6 +0.2**
BZS Buzias 79.30 325 ⇑P **P** **08 56 51.7 -0.4**
KHC Kasperske Hory 79.44 332 P **P** **08 56 53.2 +0.4**
KHC Kasperske Hory 79.44 332 P **P** **08 56 53.2 +0.4**
KHC pmax pmax
comp=Z,26nm,1.1s
KHC Kasperske Hory 79.44 332 *e*P **P** **08 56 53.0 +0.2**
KHC *e*pP **sP** **08 57 04.6 -1.0**
KHC AMS AMS 09 35 20.0
comp=Z,900nm,17.6s
CKRC Cesky Krumlov 79.45 331 *e*P **P** **08 56 52.9 +0.1**
HERR Herculane 79.56 324 ⇑P **P** **08 56 52.8 -0.6**
SOP Sopron 79.59 329 P **P** **08 56 54.0 +0.5**
GERES GERESS Array B 79.64 331 P **P** **08 56 53.4 -0.6**
comp=Z,2.5nm,0.6s,baz=39,slow=5.1,SNR=21
comp=Z,2.5nm,0.6s
CONA Conrad Observa 79.64 330 *i* P **P** **08 56 54.7 +0.7**
comp=Z,9.6nm,0.8s,SNR=5.8
MPLH Magyarpolny 79.65 328 P **P** **08 56 54.5 +0.5**
RONA Rosalia, Austr 79.68 329 *i* P **P** **08 56 54.9 +0.8**
comp=Z,13nm,0.9s,SNR=5.0
MORH Mrgy, Hungar 80.01 327 ⇑P **P** **08 56 55.7 -0.1**
MORH Mrgy, Hungar 80.01 327 P **P** **08 56 55.4 -0.5**
RAR Rarotonga 80.19 132 LR LR 09 25 44.9
comp=Z,24nm,19.9s,baz=330,slow=31
MOA Molln 80.29 331 *e*P **P** **08 56 57.7 +0.3**
comp=Z,4.7nm,0.9s
KOVH Kovagotottos 80.33 327 P **P** **08 56 57.3 -0.3**
ARSA Arzberg 80.34 330 *e*P **P** **08 56 58.7 +1.0**
comp=Z,8.7nm,1.3s
BTNL Ternell 80.52 337 *d*P **P** **08 56 58.2 -0.4**
BTNL *d*PcP **PcP** **08 57 04.7 -0.7**
BTNL *d*pP **pP** **08 57 09.3 +1.1**
MEM Membach 80.53 337 *d*P **P** **08 56 58.6 0.0**
MEM *d*PcP **PcP** **08 57 05.2 -0.3**
MEM *d*x x 08 57 17.9
BIOA Bad Ischl, Aus 80.64 331 *e*P **P** **08 57 00.1 +0.8**
comp=Z,13nm,1.0s
BSTI Sart Tilman 80.68 337 *d*P **P** **08 56 58.8 -0.6**
BSTI *d*PcP **PcP** **08 57 06.1 0.0**
BHOU Houvegnez 80.76 337 *d*P **P** **08 56 59.7 -0.2**
BHOU *d*pP **sP** **08 57 11.5 -1.5**
BHOU *d*sP **pwP** **08 57 15.1 +0.9**
BOVS Bovan 80.86 324 ⇑P **P** **08 56 59.4 -1.0**
BCLA Clavier 80.90 337 *d*P **P** **08 57 00.1 -0.4**
BCLA *d*x x 08 57 13.0
BCLA *d*x x 08 57 40.5
BGES Gesves 81.00 337 *d*P **P** **08 57 01.2 +0.1**
BGES *d*PcP **PcP** **08 57 07.8 +0.3**
BGES *d*pP **sP** **08 57 12.9 -1.3**
BGES *d*x x 08 57 34.5
SOKA Soboth 81.00 330 *e*P **P** **08 57 01.5 +0.1**
comp=Z,13nm,0.9s
VTS Vitosha 81.01 322 ⇓P **P** **08 57 01.6 0.0**
BMRD Maredsous 81.16 337 *d*P **P** **08 57 01.7 -0.2**
RCHB Rochefort 81.16 337 *d*P **P** **08 57 01.5 -0.5**
KBA Koelnbreinsper 81.27 331 *e*P **P** **08 57 03.6 +0.8**
comp=Z,11nm,0.8s
DOU Dourbes 81.39 337 *d*P **P** **08 57 03.1 -0.1**
DOU *d*x x 08 57 15.8
WATA Walderalm 81.67 332 *e*P **P** **08 57 05.4 +0.5**
comp=Z,7.8nm,0.6s
WTTA Wattenberg 81.71 332 *e*P **P** **08 57 05.8 +0.7**
comp=Z,5.4nm,0.4s
RETA Reutte 81.81 332 *e*P **P** **08 57 05.8 +0.2**
comp=Z,9.8nm,1.0s
MOTA Moosalm 81.82 332 *i* P **P** **08 57 06.2 +0.5**
comp=Z,23nm,1.0s,SNR=6.0
ABTA Abfaltersbach 81.85 331 *e*P **P** **08 57 06.4 +0.6**
comp=Z,7.1nm,1.2s
SQTA Sankt Quirin 81.89 332 *e*P **P** **08 57 06.7 +0.6**
comp=Z,9.6nm,0.7s
TXAR Lajitas Array 81.95 57 P **P** **08 57 06.5 -0.1**
comp=Z,1.3nm,0.5s,baz=298,slow=3.8,SNR=25
comp=Z,1.3nm,0.5s
MMAI Mount Meron Ar 82.21 309 LR LR 09 37 56.3
comp=Z,166nm,18.5s,baz=242,slow=39
DAVA Damuels 82.28 333 *e*P **P** **08 57 08.9 +0.7**
comp=Z,15nm,0.9s
DAVOX Davos/Dischmat 82.72 333 LR LR 09 36 31.3
comp=Z,37nm,18.9s,baz=69,slow=38
TAOE Nuku Hiva Isla 82.97 109 *e*LR LR 09 23 15.1
comp=Z,144nm,24.6s
PPT Papeete 83.24 122 LR LR 09 30 09.8
comp=Z,195nm,18.7s,baz=316,slow=33
PPT2 Papeete2 83.25 122 *e*LR LR 09 23 22.9
comp=Z,101nm,20.8s
EIL Elat 84.94 307 LR LR 09 42 23.4
comp=Z,131nm,18.2s,baz=61,slow=41
IDI Anoyia 86.07 317 ⇓P **P** **08 57 27.4 -0.1**
TBI Tubuai 87.71 126 *e*LR LR 09 25 26.5
comp=Z,149nm,24.8s
TKL Tuckaleechee C 87.89 40 LR LR 09 38 05.9
comp=Z,156nm,21.1s,baz=341,slow=36

KEST Kesra 92.60 328 LR LR 09 43 52.0
comp=Z,323nm,19.0s,baz=284,slow=38
ESDC Sonseca Array 93.33 339 P **P** **08 58 01.2 -0.4**
comp=Z,0.7nm,0.6s,baz=42,slow=2.6,SNR=5.5
ESDC LR LR 09 44 59.8
comp=Z,157nm,20.6s,baz=34,slow=39
comp=Z,0.7nm,0.6s
MDT Midelt 99.96 337 LR LR 09 50 47.3
comp=Z,91nm,18.8s,baz=32,slow=40
TORD Torodi Ar. Bea 115.78 324 PKP **PKiKP** **09 03 28.4 -1.0**
comp=Z,0.5nm,0.5s,baz=12,slow=1.5,SNR=6.9
SGCB São Gabriel d 126.36 46 *e*P **PKiKP** **09 03 51.5 +1.3**
ETMB Extrema 134.85 52 *e*P **PKiKP** **09 04 07.6 +0.4**
ITTB Itaituba 135.43 35 *e*P **PKiKP** **09 04 08.2 -0.3**
H03N2 Juan Fernandez 142.08 91 T T 11 42 58.2
baz=305,slow=77
H03N3 Juan Fernandez 142.10 91 T T 11 43 05.6
baz=305,slow=77
H03N1 Juan Fernandez 142.10 91 T T 11 43 08.2
baz=305,slow=77
SIV San Ignacio 142.76 51 PKP **PKPdf** **09 04 19.7 -0.5**
comp=Z,0.5nm,0.5s,baz=354,slow=9.2,SNR=2.3
PTLB Pontes e Lacer 143.39 48 *e*P **PKiKP** **09 04 23.4 -1.2**
SDBA SAO DESIDERIO 146.80 24 *e*P **PKPbc** **09 04 29.0 -0.1**
TROLL Troll, Antarti 147.22 199 PKPbc **PKPbc** **09 04 29.3 +0.6**
SNAA Sanae 148.66 197 PKPbc **PKPbc** **09 04 32.3 -0.2**
BDFB Brasilia 148.76 32 PKPbc **PKPbc** **09 04 34.0 -0.4**
comp=Z,1.3nm,0.3s,baz=268,slow=15,SNR=2.1
BDFB Brasilia 148.76 32 PKP2 **PKPbc** **09 04 34.0 -0.4**
MURT Porto Murtinho 149.23 53 *e*P **PKPbc** **09 04 33.1 -2.1**
JANB Januaria 149.48 25 *e*P **PKPdf** **09 04 33.7 +2.1**
VNA2 Neumayer--Watz 150.17 196 PKPbc **PKiKP** **09 04 36.6 -0.4**
baz=136,slow=3.0
VNA3 Neumayer Olymp 150.33 194 PKPbc **PKPbc** **09 04 36.8 +0.3**
VNA1 Neumayer--Stat 150.56 196 PKPbc **PKiKP** **09 04 37.9 +0.2**
CMC01 Camacan, BA 150.98 16 *e*P **PKPdf** **09 04 36.0 +2.1**
PLCA Paso Flores 151.20 98 PKPbc **PKiKP** **09 04 40.0 -0.1**
comp=Z,2.1nm,0.7s,baz=270,slow=4.0,SNR=4.3
PLCA Paso Flores 151.20 98 *e*P **PKPdf** **09 04 36.0 +2.4**
PMNB Patos De Minas 152.00 31 *e*P **PKPdf** **09 04 37.6 +2.1**

IDC 21 08:55:25.8±2.4, 54°.23N×86°.09E, h_0^{km}, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=18.9km s-min=11.8km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.80	250	I		09 01 50.0	
	baz=71,slow=330,SNR=3.3						
ZALV	Zalesovo Beam	0.80	250	Pg	Pg	08 55 39.8	-1.2
	1.6nm,0.3s,baz=64,slow=20,SNR=3.7						
ZALV				Lg	Lg	08 55 52.4	
	8.0nm,0.3s,baz=68,slow=29,SNR=15						
KURBB	Kurchatov Arra	5.86	235	Pn	Pn	08 56 54.8	+1.0
	0.2nm,0.3s,baz=51,slow=13,SNR=8.0						
	0.9nm,0.3s						
MKAR	Makanchi Array	7.83	200	Pn	Pn	08 57 21.7	+0.9
	0.6nm,0.3s,baz=17,slow=10,SNR=12						
	0.8nm,0.3s						

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*JMA **21** 08:55:57.7±0.0, 35°.4N±0°.1×133°.8E±0°.1, $h7^{km}$, MV3.4/20, EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .
ISC 21 08:55:58.1±1.4, 35°.40N±0°.06×133°.83E±0°.03, $h6^{km}\pm8^{km}$, n8, σ_0°61/11, 4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.02	199	*i* P	Pg	08 55 59.1	-0.1
JKR				*e*S	Sg	08 56 00.1	+0.1
JAD	Aida	0.54	149	*i* P	Pg	08 56 08.2	-0.1
JAD				S	Sg	08 56 15.6	+0.3
JNM	Ikuma	0.66	279	⇓*i*P	Pg	08 56 10.6	-0.2
JNM				⇓*e*S	Sg	08 56 19.6	+0.3
JHS	Saijyo	0.71	236	P	Pg	08 56 11.2	-0.5
JHS				S	Sg	08 56 21.1	+0.2
JKSM	Kasumi	0.71	74	⇓*i*P	Pg	08 56 10.9	-0.7
JKSM				⇓*e*S	Sg	08 56 20.2	-0.7
MJAR	Matsushiro Arr	3.73	71	Lg	Lg	08 57 56.3	
	0.2nm,0.3s,baz=257,slow=18,SNR=5.1						
MJAR	Matsushiro Arr	3.73	71				
	2.1nm,0.5s						
MJAR	Matsushiro Arr	3.73	71	Pn	Pg	08 57 10.6	+1.0
	0.1nm,0.3s,baz=242,slow=13,SNR=6.8						

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*JMA **21** 08:56:23.2±0.0, 35°.4N±0°.1×133°.85E±0°.09, $h11^{km}$, MV2.7/20, EASTERN TOTTORI PREF*
*IDC **21** 08:56:23.9±4.5, 35°.22N×135°.07E, $h0^{km}$, mb3.4/2, mbtmp3.3/3, ML1.8/1, Error ellipse: s-maj=117.4km s-min=19.2km az=140.0*
ISC 21 08:56:23.5±1.2, 35°.40N±0°.07×133°.86E±0°.04, $h10^{km}$, n9, σ_0°61/12, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.03	238	P	Pg	08 56 25.2	-0.2
JKR				*e*S	Sg	08 56 26.4	-0.3
JAD	Aida	0.52	151	P	Pg	08 56 33.4	-0.3
JAD				S	Sg	08 56 40.4	-0.1
JNM	Ikuma	0.68	279	S	Sg	08 56 45.5	-0.1
JKSM	Kasumi	0.69	74	S	Sg	08 56 45.4	-0.4
JHS	Saijyo	0.72	237	*e*S	Sg	08 56 46.4	-0.6
JISK	Izumosakaura	0.83	277	*e*S	Sg	08 56 49.8	-0.4
JKS	Kasai	0.91	117	P	Pg	08 56 40.7	-0.3
JKS				S	Sg	08 56 52.6	-0.3
WRA	Warramunga Arr	55.04	179	P	P	09 05 56.8	+1.5
	0.3nm,0.4s,baz=0.1,slow=7.3,SNR=7.0						
	0.3nm,0.4s						
ASAR	Alice Springs	58.74	180	P	P	09 06 21.3	-0.3
	0.1nm,0.4s,baz=6.6,slow=10,SNR=2.0						
	0.1nm,0.4s						

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*IDC **21** 08:59:46.8±1.0, 35°.25N×133°.68E, $h0^{km}$, mb3.5/5, mbtmp3.5/8, ML3.1/3, MS3.2/1, Error ellipse: s-maj=21.1km s-min=15.7km az=172.0*
*JMA **21** 08:59:47.8±0.0, 35°.4N±0°.1×133°.8E±0°.1, $h9^{km}$, MD4.3/20, MV4.1/20, EASTERN TOTTORI PREF*
JMA Felt IV J1 at EASTERN TOTTORI PREF .
*NIED **21** 08:59:47.8, 35°.43N×133°.83E, $h9^{km}$, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.33; $M_{\theta\theta}$=0.64; $M_{\phi\phi}$=-0.31; $M_{r\theta}$=0.38; $M_{\theta\phi}$=-1.48; $M_{\phi r}$=0.22; Fault plane solution: M_0=1.60000×10^{15} NP1: ϕ_s=352.00000°, δ=80.00000°, λ=6.00000°. NP2: ϕ_s=261.00000°, δ=84.00000°, λ=170.00000°.*
ISC 21 08:59:48.2±0.9, 35°.39N±0°.06×133°.81E±0°.05, $h9^{km}\pm5^{km}$, n48, σ_1°59/16, mb3.6/5, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.02	143	P	Pg	08 59 49.6	-0.2
JKR				S	Sg	08 59 50.9	0.0
JKR	Kurayoshi	0.02	143	A	A	08 59 49.6	
	comp=E,445nm,0.6s,comp=E,138nm,2.6s						
JAD	Aida	0.54	147	⇓P	Pg	08 59 58.6	-0.1
JAD				⇓S	Sg	09 00 06.2	+0.5
JAD	Aida	0.54	147	A	A	08 59 58.6	
	comp=E,17nm,6.1s,comp=E,12nm,1.2s						
JNM	Ikuma	0.64	279	A	A	09 00 00.6	
	comp=E,15nm,0.9s,comp=E,25nm,1.6s						
JHS	Saijyo	0.69	235	A	A	09 00 01.8	
	comp=E,7.0nm,3.4s,comp=E,11nm,3.9s						
JKSM	Kasumi	0.73	74	A	A	09 00 01.2	
	comp=E,5.0nm,3.4s,comp=E,19nm,2.9s						
JISK	Izumosakaura	0.79	278	A	A	09 00 03.2	
	comp=E,10.0nm,1.1s,comp=E,15nm,1.3s						
JJG	Jouge	0.92	216	A	A	09 00 06.0	
	comp=E,9.0nm,2.4s,comp=E,16nm,0.2s						
JOI	OKI	1.00	333	A	A	09 00 06.3	
	comp=E,20nm,0.7s,comp=E,27nm,0.4s						
JKY	Yasaka	1.08	77	A	A	09 00 07.6	
	comp=E,10.0nm,3.4s,comp=E,17nm,3.4s						
JGT2	ShimaneMisato	1.11	253	A	A	09 00 09.2	
	comp=E,6.0nm,0.9s,comp=E,13nm,1.4s						
JMIK	Miki	1.18	119	A	A	09 00 09.7	
	comp=E,11nm,0.9s,comp=E,15nm,0.7s						
JAWN	Awajishima-nag	1.28	135	A	A	09 00 11.6	
	comp=E,6.0nm,7.3s,comp=E,12nm,1.5s						
JWT	Wachi	1.31	94	A	A	09 00 11.6	
	comp=E,4.0nm,3.5s,comp=E,9.0nm,5.4s						
JHT	Toyohira	1.35	238	A	A	09 00 13.2	
	comp=E,8.0nm,0.9s,comp=E,12nm,0.2s						
JMAF	Mimaanabuki	1.38	168	A	A	09 00 13.5	
	comp=E,18nm,5.5s,comp=E,7.0nm,2.0s						
JHM	Kurahashi	1.63	220	A	A	09 00 17.6	
	comp=E,4.0nm,0.7s,comp=E,5.0nm,1.5s						
JMN	Monobe	1.66	178	A	A	09 00 17.9	
	comp=E,16nm,1.1s,comp=E,12nm,0.8s						
JAI	Aioi	1.68	161	A	A	09 00 18.1	
	comp=E,14nm,2.2s,comp=E,10.0nm,2.1s						
JHE	Heguri	1.71	115	A	A	09 00 18.0	
	comp=E,4.0nm,8.8s,comp=E,4.0nm,9.0s						
JET	Tanbara	1.73	201	A	A	09 00 19.0	
	comp=E,6.0nm,0.3s,comp=E,5.0nm,0.8s						
JHIK	Hikimi	1.77	241	A	A	09 00 19.5	
	comp=E,4.0nm,6.5s,comp=E,6.0nm,5.5s						
JFM	Mihama	1.78	85	A	A	09 00 18.8	
	comp=E,6.0nm,1.7s,comp=E,14nm,2.3s						
JKHR	Kochiharuno	1.90	188	A	A	09 00 21.5	
	comp=E,15nm,2.9s,comp=E,9.0nm,1.1s						
MRT2	Murotomisaki 2	2.02	172	A	A	09 00 23.2	
	comp=E,8.0nm,5.9s,comp=E,5.0nm,4.8s						
JEG	Eigenji	2.13	96	A	A	09 00 24.0	
	comp=E,4.0nm,0.9s,comp=E,6.0nm,4.4s						
JTNC	Tanabenakahech	2.16	136	A	A	09 00 25.0	
	comp=E,5.0nm,1.0s,comp=E,4.0nm,3.4s						
JKU	Kubokawa	2.17	197	A	A	09 00 25.4	
	comp=E,5.0nm,4.1s,comp=E,4.0nm,4.1s						
JHGM	Hagimishima	2.27	255	A	A	09 00 26.8	
	comp=E,4.0nm,5.1s,comp=E,7.0nm,2.1s						
JICN	Ichinomiyachia	2.48	91	A	A	09 00 29.1	
	comp=E,14nm,2.0s,comp=E,16nm,2.3s						
JTY	Toyota	2.52	244	A	A	09 00 30.5	
	comp=E,3.0nm,2.5s,comp=E,4.0nm,2.1s						
JKI	Kunimi	2.55	227	A	A	09 00 30.9	
	comp=E,5.0nm,2.1s,comp=E,5.0nm,5.6s						
JAO	Obara	2.83	92	A	A	09 00 34.0	
	comp=E,3.0nm,0.6s,comp=E,5.0nm,3.4s						
JBEP	Beppuamama	2.85	225	A	A	09 00 35.3	
	comp=E,6.0nm,4.4s,comp=E,7.0nm,1.2s						
JUS	Usuki	2.88	217	A	A	09 00 35.7	
	comp=E,3.0nm,3.7s,comp=E,2.0nm,4.2s						
JNY	Yasuok	3.31	89	A	A	09 00 40.9	
	comp=E,4.0nm,0.6s,comp=E,6.0nm,1.7s						
SHZ3	Shizuoka 3	3.62	94	A	A	09 00 45.3	
	comp=E,4.0nm,1.1s,comp=E,4.0nm,1.7s						
MJAR	Matsushiro Arr	3.75	71	Pn	Pn	09 00 46.5	+0.1
	0.6nm,0.3s,baz=259,slow=14,SNR=14						
MJAR				Pg	Pg	09 00 59.8	-0.3
	1.1nm,0.3s,baz=276,slow=15,SNR=24						
MJAR				Sn	Sb	09 01 36.7	-3.6
	0.4nm,0.3s,baz=222,slow=20,SNR=5.0						
MJAR				Lg	Lg	09 01 49.5	
	1.0nm,0.3s,baz=254,slow=18,SNR=7.1						
MJAR				LR	LR	09 02 30.6	
	comp=Z,293nm,19.7s,baz=50,slow=42						
	4.1nm,0.3s						
KSRS	Korea Array	5.17	295	Pn	Pn	09 01 04.3	-1.5
	1.4nm,0.3s,baz=109,slow=14,SNR=8.7						
KSRS				Sn	Sn	09 02 04.2	-1.5
	2.3nm,0.3s,baz=112,slow=23,SNR=7.4						
	3.0nm,0.3s						
JHJ	Hachijo jima 2	5.44	113	Pn	Pn	09 01 04.2	-5.4
	22nm,0.3s,baz=239,slow=19,SNR=1.5						
JOW	Kunigami	9.76	211	Pn	Pn	09 02 09.8	+0.9
	0.6nm,0.3s,baz=108,slow=19,SNR=1.7						
KLR	Kul'dur	13.91	354	Pn	Pn	09 03 07.8	+2.3
	0.1nm,0.3s,baz=158,slow=18,SNR=3.6						
	0.7nm,0.5s						
SONM	Songino Array	23.83	310	P	P	09 05 01.4	-0.3
	1.6nm,0.9s,baz=116,slow=9.8,SNR=7.1						
	1.6nm,0.9s						
MKAR	Makanchi Array	39.80	303	P	P	09 07 21.8	+0.1
	0.4nm,0.7s,baz=95,slow=11,SNR=2.8						
	0.4nm,0.7s						
ILAR	Eielson Array	54.13	31	P	P	09 09 15.4	+2.1
	0.4nm,0.7s,baz=283,slow=6.7,SNR=4.4						
	0.4nm,0.7s						
WRA	Warramunga Arr	55.03	179	P	P	09 09 18.9	-1.3
	0.7nm,0.6s,baz=354,slow=7.8,SNR=14						
	0.7nm,0.6s						
ASAR	Alice Springs	58.74	180	P	P	09 09 45.7	-0.9
	0.4nm,0.8s,baz=8.8,slow=12,SNR=2.3						
	0.4nm,0.8s						

GEN 21 09:15:57.8, 44°.09N×8°.07E, $h3^{km}$, Ml0.3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RORO	Rocca Rossa	0.02	357	P	Pg	09 15 58.7	+0.2
RORO				S	Sg	09 15 59.5	+0.5
CANO	Canova, Maglio	0.17	47	P	Pg	09 16 00.8	-0.3
CANO				S	Sg	09 16 02.9	-0.3
MGRO	Montegrosso	0.19	255	S	Sg	09 16 06.9	+1.9
IMI	Imperia	0.22	214	P	Pg	09 16 02.9	+0.8
IMI				S	Sg	09 16 06.8	+1.8
ENR	Entracque	0.48	286	S	Sg	09 16 14.6	+1.2
PCP	Piancastagn	0.56	37	P	Pg	09 16 08.8	+0.2

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*LDG **21** 09:16:33.1±0.1, 45°.42N×6°.31E, $h2^{km}$, Md2.0/2, Ml2.1/11, Error ellipse: s-maj=1.1km s-min=0.9km az=86.0*
STR 21 09:16:33.1±0.3, 45°N±2°×°±°, $h5^{km}$, MLv1.7/19, 2C-2D, Error ellipse: s-maj=0.0km s-min=0.0km az=101.7, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDM	Grand'Maison	0.26	215	Pg	Pg	09 16 38.0	-0.2
GDM				Sg	Sg	09 16 41.5	-0.1
LPL	La Plagne	0.30	70	*e*Pg	Pg	09 16 39.2	+0.1
LPL				*e*Sg	Sg	09 16 43.4	+0.3
	47nm,0.3s						
LPG	La Plagne	0.31	74	*e*Pg	Pg	09 16 39.4	+0.2
LPG				*e*Sg	Sg	09 16 43.9	+0.5
	50nm,0.3s						
OGMO	Fort Saint-Gob	0.33	129	Pg	Pg	09 16 40.0	+0.5
RSL	Roselend	0.34	37	⇑Pg	Pg	09 16 39.4	-0.5
RSL				Sg	Sg	09 16 43.7	-0.7
GRN	Grenoble	0.44	247	⇓Pg	Pg	09 16 41.9	+0.2
GRN				Sg	Sg	09 16 48.3	+0.8
OGSM	Saint Maurice	0.48	294	Pg	Pg	09 16 41.8	-0.6
ORIF	Oris-en-Rattie	0.59	213	*e*Pg	Pg	09 16 44.1	-0.3
ORIF				*e*Sg	Sg	09 16 51.7	-0.4
	11nm,0.2s						
ORIF	Oris-en-Rattie	0.59	213	Pg	Pg	09 16 43.9	-0.5
ORIF				Sg	Sg	09 16 51.9	-0.2
MBDF	Montbardon	0.76	155	*e*Pg	Pg	09 16 47.6	0.0
MBDF				*e*Sg	Sg	09 16 57.5	0.0
	4.3nm,0.3s						
CREF	Crivoux	0.89	166	⇓Pg	Pg	09 16 50.0	-0.2
OGAG	Argentiere	0.97	171	⇑Pg	Pg	09 16 45.3	-6.4
SURF	Saint Ours	1.00	160	Pg	Pb	09 16 53.1	+0.1
JAUF	Jausiers	1.03	163	Pg	Pg	09 16 52.7	-0.1
GIMEL	St. Georges /	1.12	358	Pg	Pg	09 16 54.8	+0.2
CABF	La Chapelle	1.21	352	*e*Pg	Pg	09 16 55.7	-0.6
CABF	La Chapelle	1.21	352	*e*Pn	Pn	09 16 57.2	+0.4
CABF				*e*Sg	Sg	09 17 11.2	-0.7
	5.0nm,0.2s						
SSB	Saint Sauveur	1.27	264	Pg	Pg	09 16 57.0	-0.3
SSB				Sg	Sg	09 17 12.6	-1.2
VIVF	Saint-Julien-l	1.30	245	*e*P	Pb	09 16 58.0	0.0
VIVF				*e*Sg	Sg	09 17 13.8	-1.0
	3.7nm,0.2s						
RIVEL	MONT RIVEL	1.37	348	Pg	Pg	09 16 59.6	+0.2
RIVEL				Sg	Sn	09 17 18.3	+0.6
TRIGF	Trigance	1.67	178	Pg	Pg	09 17 04.8	-0.3
CHMF	Charmoille	1.85	7	Pn	Pn	09 17 05.6	+0.1
CHMF				Pg	Pb	09 17 07.9	+0.5
LMR	La Mourre	2.08	176	*e*Pg	Pb	09 17 12.0	+0.6
LMR				*e*Sg	Sb	09 17 37.6	0.0
	0.8nm,0.2s						
LASF	Ste Croix	2.21	234	*e*Pn	Pn	09 17 08.8	-1.7
LASF	Ste Croix	2.21	234

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSF	**Saint Saulge**	2.56	311	*e*Pg	Pb	09 17 20.4	+0.9
SSF				*e*Sg	Sb	09 17 52.1	+0.9
	0.6nm,0.2s						
HAU	**Haudompre**	2.59	0	*e*Pg	Pb	09 17 21.1	+1.0
HAU				*e*Sn	Sn	09 17 45.1	-2.5
HAU				*e*Sg	Sg	09 17 54.4	-1.9
	2.2nm,0.2s						
CDF	**Champ du Feu**	3.07	12	*e*Sg	Sg	09 18 09.0	-2.6
	0.8nm,0.2s						

IDC 21 09:16:33.1±3.2, 54°.35N×87°.06E, h0km, mbtmp3.1/2, ML2.4/2, Error ellipse: s-maj=27.8km s-min=19.1km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.38	254	I		09 25 30.0	
	baz=72,slow=338,SNR=8.1						
ZALV	**Zalesovo Beam**	1.38	254	Pg	Pg	09 16 57.0	-2.6
	1.5nm,0.3s,baz=71,slow=16,SNR=7.8						
ZALV				Lg	Lg	09 17 17.4	
	1.7nm,0.3s,baz=75,slow=28,SNR=5.5						
KURBB	**Kurchatov Arra**	6.41	238	Pn	Pn	09 18 09.9	+1.2
	0.1nm,0.3s,baz=55,slow=14,SNR=4.4						
KURBB				Lg	Lg	09 19 56.1	
	0.1nm,0.3s,baz=33,slow=28,SNR=1.9						
	1.4nm,0.2s						
MKAR	**Makanchi Array**	8.15	204	Pn	Pn	09 18 34.1	+1.4
	0.1nm,0.3s,baz=24,slow=14,SNR=2.2						
	0.1nm,0.3s						

MIRAS 21 09:17:41.0±0.0, 54°.91N×61°.42E, h0km, ML2.5/9, 1C-2D, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAUR	**Kamensk Uralsk**	1.52	2	*i* P	Pb	09 18 10.1	0.0
	47nm,0.3s,baz=1.7						
KAUR				*i* P	Pb	09 18 10.1	0.0
	99nm,0.7s,baz=1.7						
KAUR				*i* P	Pb	09 18 10.1	0.0
	46nm,0.2s,baz=1.7						
KAUR				*e*S	Sn	09 18 31.9	+1.9
	32nm,0.5s,baz=1.7						
KAUR				*e*S	Sn	09 18 31.9	+1.9
	28nm,0.5s,baz=1.7						
KAUR				*e*S	Sn	09 18 31.9	+1.9
	62nm,0.7s,baz=1.7						
KAUR				*i* AML	AML	09 18 33.6	
	99nm,0.7s						
SVE	**Sverdlovsk**	1.97	347	*e*S	Sb	09 18 43.3	+0.5
	26nm,0.3s,baz=347						
SVE				*e*S	Sb	09 18 43.3	+0.5
	baz=347						
SVE				*e*S	Sb	09 18 43.3	+0.5
	baz=347						
ARU	**Arti**	2.22	314	*i* P	Pn	09 18 18.9	-0.2
	7.5nm,0.3s,baz=314						
ARU				*i* P	Pn	09 18 18.9	-0.2
	6.2nm,0.2s,baz=314						
ARU				*i* P	Pn	09 18 18.9	-0.2
	5.1nm,0.1s,baz=314						
ARU				*e*S	Sn	09 18 47.7	+0.6
	16nm,0.5s,baz=314						
ARU				*e*S	Sn	09 18 47.7	+0.6
	18nm,0.6s,baz=314						
ARU				*e*S	Sn	09 18 47.7	+0.6
	5.4nm,0.3s,baz=314						
ARU				*i* AML	AML	09 18 49.5	
	21nm,0.7s						
PR3R	**Kungur**	3.54	318	*e*P	Pn	09 18 36.7	-0.5
	16nm,1.8s,baz=318						
PR3R				*e*P	Pn	09 18 36.7	-0.5
	51nm,baz=318						
PR3R				*e*P	Pn	09 18 36.7	-0.5
	11nm,1.1s,baz=318						
PR3R				*e*S	Sn	09 19 20.5	+0.9
	18nm,1.2s,baz=318						
PR3R				*e*S	Sn	09 19 20.5	+0.9
	19nm,0.5s,baz=318						
PR3R				*e*S	Sn	09 19 20.5	+0.9
	baz=318						
PR3R				*i* AML	AML	09 19 22.8	
	29nm,0.4s						
PR7R	**Sarany**	3.93	339	*e*S	Sb	09 19 42.8	+3.6
	26nm,0.1s,baz=339						
PR7R				*e*S	Sb	09 19 42.8	+3.6
	baz=339						
PR7R				*e*S	Sb	09 19 42.8	+3.6
	85nm,5.0s,baz=339						
AKTO	**Aktyubinsk**	4.94	206	⇓Pg	Pg	09 19 24.6	+9.0
	4.2nm,1.4s						
AKTO				⇓Lg	Lg	09 20 11.9	
	4.1nm,0.7s						
PR1R	**Pomanovo**	4.99	331	*e*S	Sg	09 20 16.0	-5.0
	baz=331						
PR1R				*e*S	Sg	09 20 16.0	-5.0
	8.8nm,1.0s,baz=331						
PR1R				*e*S	Sg	09 20 16.0	-5.0
	8.7nm,0.3s,baz=331						
AB31	**Akbulak array**	5.74	190	⇑Lg	Lg	09 20 33.9	
	3.4nm,0.8s,baz=9.0,slow=26,SNR=5.6						

IDC 21 09:17:55.8±2.6, 53°.65N×87°.04E, h0km, mbtmp3.4/2, ML2.7/2, Error ellipse: s-maj=25.0km s-min=15.5km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.35	284	I		09 27 14.1	
	baz=102,slow=334,SNR=17						
ZALV	**Zalesovo Beam**	1.35	284	Pg	Pg	09 18 20.5	-1.2
	1.4nm,0.3s,baz=104,slow=18,SNR=8.9						
ZALV				Lg	Lg	09 18 39.2	
	1.9nm,0.3s,baz=110,slow=29,SNR=7.6						
KURBB	**Kurchatov Arra**	6.06	243	Pn	Pn	09 19 27.1	+0.6
	0.1nm,0.3s,baz=55,slow=4.9,SNR=1.5						
KURBB				Lg	Lg	09 21 08.1	
	baz=58,slow=32						
	2.3nm,0.2s						
MKAR	**Makanchi Array**	7.51	206	Pn	Pn	09 19 48.0	+1.5
	0.2nm,0.3s,baz=27,slow=14,SNR=12						
MKAR				Lg	Lg	09 21 52.6	
	baz=23,slow=27,SNR=3.6						
	0.4nm,0.3s						

*DJA **21** 09:19:09.0±0.6, 1°.N±2°×12°.7E±°, h115km±6km, M4.0/7, mb3.9/3, mB5.9/1, MLv4.1/7, Mw(mB)5.5/1*
*IDC **21** 09:19:14.8±13.0, 1°.07N×127°.21E, h163km±138km, mb3.4/3, mbtmp4.0/4, ML4.1/1, Error ellipse: s-maj=121.9km s-min=67.0km az=62.0*
ISC 21 09:19:09.0±1.1, 1°.41N±0°.06×127°.10E±0°.07, h103km, n13, σ2°.70/16, mb3.8/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	0.69	157	S	Sn	09 19 45.3	+5.5
GAMI	**Galela, Maluku**	0.81	58	P	Pn	09 19 29.3	+1.6
GAMI				S	Sn	09 19 44.2	+2.5
LBMI	**Labuha**	2.08	169	P	Pn	09 19 44.6	+1.9
SGSI	**Sangihe**	2.75	325	P	Pn	09 19 52.1	+0.6
SGSI				S	Sn	09 20 24.5	+0.3
SANI	**Sanana**	3.62	198	P	Pn	09 20 03.8	+0.7
SANI				S	Sn	09 20 44.2	-0.7
GTOI	**Gorontalo**	4.16	259	P	Pn	09 20 13.2	+2.8
NLAI	**Namlea**	4.62	180	P	Pn	09 20 18.0	+1.4
LUWI	**Luwuk**	4.97	241	P	Pn	09 20 23.2	+1.9
	1.1nm14μm24nm,0.6s						
APSI	**Ampana**	5.92	247	P	Pn	09 20 35.9	+1.7
KAPI	**Kappang**	9.73	229	P	Pn	09 21 29.4	+3.4
	1.9nm,0.3s,baz=9.2,slow=4.3,SNR=7.0						
	5.9nm,0.3s						
WRA	**Warramunga Arr**	22.38	162	P	P	09 23 56.1	-2.9
	1.4nm,0.3s,baz=341,slow=10,SNR=28						
	1.4nm,0.3s						
ASAR	**Alice Springs**	25.79	166	P	P	09 24 27.6	-3.0
	0.5nm,0.6s,baz=343,slow=7.9,SNR=11						
	0.5nm,0.6s						
STKA	**Stephens Creek**	35.85	159	P	P	09 25 56.4	-2.5
	2.4nm,0.8s,baz=334,slow=14,SNR=1.7						
	2.4nm,0.8s						

*JMA **21** 09:22:38.4±0.3, 30°.N±2°×13°.9E±°, h447km, MV4.0/29, NEAR TORISHIMA IS*
*NEIC **21** 09:22:39.1±1.5, 30°.0N±0°.1×138°.5E±0°.1, h422km±8km, mb4.0/4, Error ellipse: s-maj=18.2km s-min=14.5km az=107.0*
*IDC **21** 09:22:39.3±0.8, 30°.08N×138°.64E, h426km±8km, mb3.4/22, mbtmp4.2/26, Error ellipse: s-maj=13.0km s-min=9.7km az=80.0*
ISC 21 09:22:40.3±0.5, 30°.09N±0°.06×138°.71E±0°.08, h443km, n144, σ1°.82/153, mb3.7/22, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	3.16	17	P	P	09 23 47.3	-0.6
	159nm,0.6s,baz=287,slow=19,SNR=2.0						
JHJ				S	S	09 24 40.4	-2.6
	102nm,0.3s,baz=100,slow=22,SNR=5.0						
JHJ2	**Mitsune**	3.16	17	P	P	09 23 47.0	-0.9
JMKN	**Mikurajimanish**	3.86	11	*e*P	P	09 23 53.1	-0.6
CBIJ	**Chichi jima**	4.27	133	P	P	09 23 55.0	-2.6
CBIJ				S	S	09 24 54.7	-5.6
JCJ	**Chichijima**	4.27	133	P	P	09 23 54.8	-2.8
	110nm,0.3s,baz=89,slow=22,SNR=13						
JCJ				S	S	09 24 54.2	-6.1
	190nm,0.4s,baz=111,slow=23,SNR=12						
JCJ	**Chichijima**	4.27	133	P	P	09 23 55.0	-2.5
BSO1	**Boso 1**	4.94	22	P	P	09 24 02.5	-0.4
BSO1				S	S	09 25 08.2	-2.5
BSO3	**Boso 3**	4.94	17	P	P	09 24 02.1	-1.2
BSO3				*e*S	S	09 25 09.1	-2.1
BSO4	**Boso 4**	5.08	15	P	P	09 24 04.7	-0.1
JOD2	**Odawara 2**	5.17	3	P	P	09 24 05.0	-0.9
JOD2				*e*S	S	09 25 13.3	-2.4
INU	**Inuyama**	5.43	345	P	P	09 24 07.1	-1.4
JGF	**Kuroka**	5.61	349		P	09 24 09.3	-1.0
JHU	**Hanno**	5.77	5	P	P	09 24 10.4	-1.4
JYT	**Yasato**	6.25	11	P	P	09 24 14.8	-2.0
JYT	**Yasato**	6.25	11	S	S	09 25 30.2	-5.5
JAG	**Ashikaga**	6.35	5	P	P	09 24 16.0	-1.9
JAG				S	S	09 25 31.0	-6.7
MJAR	**Matsushiro Arr**	6.45	356	P	P	09 24 16.6	-2.3
	4.8nm,0.6s,baz=170,slow=12,SNR=9.7						
MJAR				S	S	09 25 36.4	-3.3
	1.7nm,0.5s,baz=2.0,slow=32,SNR=2.4						
MAJO	**Matsushiro**	6.45	356	P	P	09 24 18.8	-0.1
MJB9	**Matsu-Tunnel**	6.45	356		P	09 24 19.7	+0.8
JHO	**Hitachi**	6.69	13	P	P	09 24 20.0	-1.5
JHO				S	S	09 25 38.2	-6.0
JFK	**Kawauchi**	7.48	13	P	P	09 24 29.1	-0.9
JSD	**Sado**	7.94	357	P	P	09 24 33.4	-1.4
JMM	**Marumori**	7.95	12	P	P	09 24 34.6	-0.4
JMK	**Ichinoseki**	9.08	13	P	P	09 24 47.9	+0.6
JOW	**Kunigami**	9.74	253	P	P	09 24 56.4	+1.8
	7.4nm,0.6s,baz=75,slow=10,SNR=5.1						
JTM	**Tenmabayashi**	10.84	10	P	P	09 25 07.7	+1.2
KSRS	**Korea Array**	11.59	312	P	P	09 25 14.5	-0.2
	6.4nm,0.7s,baz=127,slow=10,SNR=19						
ERM	**Erimo**	12.43	16	P	P	09 25 25.6	+1.9
JEW	**Eniwo**	12.91	9	P	P	09 25 31.0	+2.0
SSLB	**Suanglung**	17.02	253	P	P	09 26 09.7	-3.5
SONM	**Songino Array**	30.44	315	P	P	09 28 15.3	+0.3
	1.5nm,0.6s,baz=123,slow=8.5,SNR=6.4						
	1.5nm,0.6s						
CMAR	**Chiang Mai Arr**	37.88	261	P	P	09 29 18.1	0.0
	1.6nm,0.4s,baz=51,slow=7.2,SNR=6.8						
	1.6nm,0.4s						
NIKH	**Nikolski High**	44.21	43	P	P	09 30 09.3	+1.0
ZAA0	**Zalesovo Array**	45.23	318	P	P	09 30 15.8	-0.4
ZALV	**Zalesovo Beam**	45.23	318	P	P	09 30 15.9	-0.2
	1.8nm,0.4s,baz=100,slow=8.1,SNR=6.2						
	1.8nm,0.4s						
ZALV	**Zalesovo Beam**	45.23	318	P	P	09 30 16.3	+0.2
MK31	**Makanchi Array**	46.22	308	P	P	09 30 24.4	+0.4
MKAR	**Makanchi Array**	46.22	308	P	P	09 30 23.8	-0.2
	1.5nm,0.6s,baz=88,slow=9.7,SNR=12						
MKAR				ScP	ScP	09 35 02.0	+0.7
	0.3nm,0.5s,baz=90,slow=1.4,SNR=2.8						
	1.5nm,0.6s						
MKAR	**Makanchi Array**	46.22	308	P	P	09 30 24.0	0.0
KURK	**Kurchatov**	48.71	313	P	P	09 30 42.6	0.0
KURBB	**Kurchatov Arra**	48.77	313	P	P	09 30 42.9	-0.2
	2.6nm,0.4s,baz=92,slow=7.8,SNR=42						
	2.6nm,0.4s						
WB0	**Warramunga Arr**	49.74	185	P	P	09 30 50.6	-0.1
WB2	**Warramunga Arr**	49.92	185	P	P	09 30 52.0	0.0
WRA	**Warramunga Arr**	49.92	185	P	P	09 30 52.0	+0.1
	0.9nm,0.5s,baz=1.1,slow=7.7,SNR=26						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	49.92	185	P	P	09 30 52.1	+0.1
WR0	**Warramunga Arr**	49.92	185	P	P	09 30 51.7	-0.3
SVW2	**Sparrevohn**	52.47	34	P	P	09 31 12.6	+2.5
L19K	**White Mountain**	52.91	33	P	P	09 31 15.5	+2.2
N19K	**Bonanza Creek**	52.98	34	P	P	09 31 16.0	+2.1
M19K	**Big River Lodg**	53.10	33	P	P	09 31 16.9	+2.2
K20K	**Telida**	53.38	31	P	P	09 31 18.4	+1.8
J20K	**Nowinta River**	53.42	30	P	P	09 31 19.2	+2.3
AS31	**Alice Springs**	53.65	185	P	P	09 31 19.4	+0.3
ASAR	**Alice Springs**	53.65	185	P	P	09 31 19.1	+0.1
	0.6nm,0.4s,baz=358,slow=5.6,SNR=29						
	0.6nm,0.4s						
ASAR	**Alice Springs**	53.65	185	P	P	09 31 18.4	-0.7
M20K	**Styx River**	53.70	33	P	P	09 31 20.4	+1.4
BVAR	**Borovoye Array**	53.77	316	P	P	09 31 19.9	+0.3
	4.1nm,0.4s,baz=94,slow=7.3,SNR=38						
	4.1nm,0.4s						
IMAR	**Indian Mountai**	53.80	28	P	P	09 31 20.8	+1.2
RSO	**Redoubt South**	53.81	35	P	P	09 31 21.8	+1.8
BRVK	**Borovoye**	53.84	316	P	P	09 31 20.4	+0.3
KDAK	**Kodiak Island**	53.86	38	P	P	09 31 21.3	+1.2
H21K	**Melozitna Rive**	54.15	28	P	P	09 31 24.4	+2.3
PPLA	**Purkeypile**	54.19	32	P	P	09 31 24.8	+2.2
CAST	**Castle Rocks**	54.27	31	P	P	09 31 25.0	+2.0
SKT	**Skwentna**	54.46	33	P	P	09 31 26.0	+1.6
PSA00	**Pilbara Seismi**	54.48	202	P	P	09 31 20.3	-4.6
CNPM	**China Poot**	54.56	36	P	P	09 31 26.2	+1.1
KTH	**Kantishna Hill**	54.80	31	P	P	09 31 28.1	+1.3
KK31	**Karatay Array**	54.87	304	P	P	09 31 27.9	+0.3
KKAR	**Karatay Array**	54.87	304	P	P	09 31 28.0	+0.4
MLY	**Manley**	54.96	29	P	P	09 31 29.7	+1.9
TRF	**Thorofare Moun**	55.08	31	P	P	09 31 30.6	+1.8
RC01	**Rabbit Creek A**	55.30	34	P	P	09 31 31.6	+1.3
O22K	**Cooper Landing**	55.31	35	P	P	09 31 31.5	+1.2
SEW	**Seward**	55.45	35	P	P	09 31 32.2	+0.9
BWN	**Browne**	55.47	30	P	P	09 31 34.0	+2.7
H23K	**Yukon River**	55.50	28	P	P	09 31 33.8	+2.2
I23K	**Minto, Yukon-K**	55.55	29	P	P	09 31 33.8	+1.9
PMR	**Palmer**	55.59	33	P	P	09 31 32.7	+0.5
MCK	**McKinley**	55.69	31	P	P	09 31 34.3	+1.3
KNK	**Knik Glacier**	55.92	34	P	P	09 31 35.8	+1.2
MDM	**Murphy Dome**	56.02	29	P	P	09 31 37.2	+2.0
WRH	**Wood River Hil**	56.08	30	P	P	09 31 37.2	+1.6
H24K	**Noodor Dome**	56.19	28	P	P	09 31 38.0	+1.5
CCB	**Clear Creek Bu**	56.20	30	P	P	09 31 37.7	+1.3
DHY	**Denali Highway**	56.40	32	P	P	09 31 38.7	+0.7
SCM	**Sheep Creek Mo**	56.45	33	P	P	09 31 40.1	+1.8
HDA	**Harding Lake**	56.57	30	P	P	09 31 39.6	+0.6
IL31		56.59	30	P	P	09 31 40.0	+0.8
ILAR	**Eielson Array**	56.59	30	P	P	09 31 39.5	+0.3
	1.0nm,0.6s,baz=259,slow=4.8,SNR=14						
	1.0nm,0.6s						
ILAR	**Eielson Array**	56.59	30	P	P	09 31 39.8	+0.6
CHGR	**Chuyangaron**	56.81	299	P	P	09 31 41.7	+0.4
FID	**Port Fidalgo**	56.90	34	P	P	09 31 42.7	+1.3
KLU	**Klutina**	57.13	34	P	P	09 31 44.0	+0.9
PAX	**Paxson**	57.27	32	P	P	09 31 45.7	+1.7
EYAK	**Cordova Ski Ar**	57.27	35	P	P	09 31 45.2	+1.2
RIDG	**Independent Ri**	57.51	31	P	P	09 31 46.6	+1.0
BMAR	**Burnt Mountain**	57.52	26	P	P	09 31 48.4	+2.8
BMRM	**Bremner River**	57.80	34	P	P	09 31 49.8	+2.2
DOT	**Dot Lake**	57.87	31	P	P	09 31 48.7	+0.6
SCRK	**Sand Creek**	57.88	31	P	P	09 31 49.4	+1.2
J26L	**Joseph Creek**	58.03	30	P	P	09 31 50.1	+0.9
GLB	**Gilahina Butte**	58.15	34	P	P	09 31 51.7	+1.7
L26K	**Log Cabin Wild**	58.23	32	P	P	09 31 52.9	+2.4
COCO	**West Island**	58.24	230	P	P	09 31 48.1	-3.1
VRDI	**Verde Repeater**	58.34	34	P	P	09 31 53.0	+1.5
M26K	**Nabesna, AK**	58.45	32	P	P	09 31 54.1	+2.1
MCARA	**McCarthy VSAT**	58.53	34	P	P	09 31 54.9	+2.3
TGL	**Tana Glacier**	58.69	34	P	P	09 31 55.4	+1.7
WAX	**Waxell Ridge**	58.71	35	P	P	09 31 55.8	+2.0
BCAR	**Beaver Creek A**	58.94	32	P	P	09 31 57.1	+1.8
ISLE	**Juniper Island**	58.95	34	P	P	09 31 57.2	+1.7
EGAK	**Eagle**	59.05	29	P	P	09 31 56.4	+0.5
ARU	**Arti**	60.19	321	P	P	09 32 03.6	-0.1
	5.8nm,0.5s,baz=131,slow=4.6,SNR=7.2						
	5.8nm,0.5s						
EPYK	**Eagle Plains**	60.69	27	P	P	09 32 09.4	+2.4
ABKAR	**Akbulak array**	60.82	313	P	P	09 32 07.9	-0.2
M30M	**Minto, Yukon**	61.27	32	P	P	09 32 12.9	+2.0
INK	**Inuvik**	61.60	25	P	P	09 32 13.8	+0.9
	2.3nm,0.7s,baz=286,slow=5.9,SNR=8.7						
	2.3nm,0.7s						
INK	**Inuvik**	61.60	25	P	P	09 32 14.1	+1.2
AKTO	**Aktyubinsk**	61.76	314	P	P	09 32 14.1	-0.2
	2.3nm,0.7s,baz=72,slow=14,SNR=5.5						
	2.3nm,0.7s						
M31M	**Drury Creek, Y**	62.45	32	P	P	09 32 20.3	+1.7
SKAG	**Skagway**	62.61	35	P	P	09 32 21.6	+2.0
KEV	**Kevo**	69.14	340	P	P	09 33 00.9	+0.5
ARCES	**ARCESS Array B**	69.70	340	P	P	09 33 04.7	+0.8
	1.0nm,0.4s,baz=68,slow=8.8,SNR=18						
	1.0nm,0.4s						
ARCES	**ARCESS Array B**	69.70	340	P	P	09 33 04.9	+1.0
YKA	**Yellowknife Ar**	70.96	28	P	P	09 33 11.7	+0.3
	0.9nm,0.7s,baz=292,slow=6.6,SNR=2.5						
	0.9nm,0.7s						
KBZ	**Khabaz**	73.74	311	P	P	09 33 28.1	+0.1
	2.3nm,0.7s,baz=62,slow=6.2,SNR=5.7						
	2.3nm,0.7s						
FIA1	**FINESS Array S**	73.90	333	P	P	09 33 29.0	+0.4
FINES	**FINESS Array B**	73.90	333	P	P	09 33 28.9	+0.3
	1.4nm,0.3s,baz=60,slow=4.9,SNR=21						
	1.4nm,0.3s						
FINES	**FINESS Array B**	73.90	333	P	P	09 33 29.1	+0.5
J08A	**Circle Bar Ran**	78.40	47	P	P	09 33 56.1	+2.0
HFS	**Hagfors**	79.46	335	P	P	09 33 59.0	-0.3
	1.4nm,0.4s,baz=69,slow=7.9,SNR=10						
	1.4nm,0.4s						
NB2	**NORSAR Subarra**	79.69	337	P	P	09 34 00.2	-0.3
	comp=Z,0.7nm,0.6s,baz=46,slow=5.6						
NOA	**NORSAR Array B**	79.69	337	P	P	09 34 00.0	-0.5
	comp=Z,0.7nm,0.5s,baz=44,slow=5.4,SNR=4.3						
	comp=Z,0.7nm,0.5s						
HRY	**Holter Researc**	80.60	41	P	P	09 34 07.6	+1.9
LRM	**Limekiln Ridge**	80.74	42	P	P	09 34 08.7	+2.1
NVAR	**Mina Array Bea**	81.04	51	P	P	09 34 09.7	+1.4
	comp=Z,0.7nm,0.6s,baz=292,slow=5.6,SNR=9.5						
	comp=Z,0.7nm,0.6s						
BR131	**Keskin Array S**	81.73	311	P	P	09 34 11.7	-0.1
BRTR	**Keskin Array B**	81.73	311	P	P	09 34 12.3	+0.6
	comp=Z,1.9nm,0.9s,baz=108,slow=4.8,SNR=6.7						
	comp=Z,1.9nm,0.9s						
BRTR	**Keskin Array B**	81.73	311	P	P	09 34 11.9	+0.2
BUR08	**Bucovina Ar. S**	82.31	321	P	P	09 34 15.4	+0.9
BURAR	**Bucovina Array**	82.32	321	P	P	09 34 14.9	+0.3
PDAR	**Pinedale Array**	84.19	43	P	P	09 34 25.5	+1.2
	comp=Z,0.4nm,0.7s,baz=313,slow=6.0,SNR=2.2						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	96.19	51	P	P	09 35 21.6	+1.4
	comp=Z,0.2nm,0.6s,baz=324,slow=4.5,SNR=2.6						
	comp=Z,0.2nm,0.6s						

IDC 21 09:22:53.5±3.4, 52°.33N×35°.52E, h0km, mbtmp3.8/2, ML2.7/4, Error ellipse: s-maj=49.8km s-min=12.6km az=131.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBN	**Obninsk**	2.86	12	Pn	Pn	09 23 40.2	-0.1
	1.0nm,0.3s,baz=0.0,slow=0.0,SNR=1.2						
OBN				Lg	Lg	09 24 20.3	
	0.7nm,0.3s,baz=27,slow=23,SNR=6.8						
AKASG	**Malin Array Be**	4.25	250	Pn	Pn	09 23 58.7	-0.8
	0.7nm,0.3s,baz=54,slow=12,SNR=2.0						
AKASG				Pg	Pb	09 24 07.8	-1.3
	1.4nm,0.3s,baz=61,slow=16,SNR=4.2						
AKASG				Sn	Sn	09 24 46.1	-3.7
	2.4nm,0.3s,baz=60,slow=21,SNR=6.0						
AKASG				Lg	Lg	09 25 03.6	
	2.5nm,0.3s,baz=64,slow=30,SNR=4.9						
I43RU	**DUBNA INFRASON**	4.51	12	I		09 49 50.0	
	0.4nm,1.1s,baz=190,slow=316,SNR=13						
FINES	**FINESS Array B**	10.48	334	Pn	Pn	09 25 20.8	-4.1
	0.2nm,0.3s,baz=150,slow=14,SNR=4.5						
FINES				Sn	Sn	09 27 11.2	-12
	0.1nm,0.3s,baz=153,slow=23,SNR=1.3						
	3.7nm,1.0s						
I31KZ	**AKTYUBINSK INF**	14.19	89	I		10 51 30.0	
	baz=285,slow=319,SNR=0.8						
ARCES	**ARCESS Array B**	17.89	349	P	Pn	09 27 02.7	-0.7
	0.1nm,0.3s,baz=155,slow=11,SNR=11						
	1.4nm,0.7s						

*IDC **21** 09:35:49.7±1.1, 35°.38N×133°.80E, h0km, mb3.3/5, mbtmp3.3/7, ML2.6/2, MS2.9/3, Error ellipse: s-maj=24.1km s-min=17.9km az=179.0*
*NIED **21** 09:35:50.8, 35°.35N×133°.88E, h11km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; M_{rr}-2.07; $M_{\theta\theta}$3.43; $M_{\phi\phi}$-1.37; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.15; $M_{\phi r}$3.26; Fault plane solution: $M_0$4.22000×10^14^ NP1: ϕ_s125.00000°, δ56.00000°, λ-37.00000°. NP2: ϕ_s237.00000°, δ60.00000°, λ-140.00000°.*
*JMA **21** 09:35:50.8±0.0, 35°.4N±0°.1×133°.88E±0°.08, h11km, MV3.8/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
**ISC 21 09:35

KAF	**Kangasniemi**	**0.37 138**	PG	Pg	09 52 32.3	-0.6
KAF			SG	Sg	09 52 37.9	+0.2
KEF	**Keuruu**	**0.48 243**	PG	Pg	09 52 34.6	-0.5
KEF			SG	Sg	09 52 40.6	-0.7
FIA0	**FINESS Array S**	**0.96 172**	SB	Sb	09 52 58.8	+0.3
VAF	**Ylistaro**	**1.58 296**	PG	Pn	09 52 54.5	-0.6
VAF			MSG		09 53 13.3	
	comp=Z,1.6nm,0.2s					
VAF			SG	Sn	09 53 15.5	-0.6
OUF	**Merijarvi**	**2.04 347**	PG	Pn	09 53 02.4	+1.0
OUF			MSG		09 53 26.5	
	comp=Z,1.1nm,0.2s					
OUF			SG	Sb	09 53 29.6	-0.1
OBF0	**Syolatti, Pyha**	**2.23 343**	SG	Sb	09 53 35.1	0.0
MEF	**Metsahovi**	**2.28 198**	MSG		09 53 33.3	
	comp=Z,0.8nm,0.2s					
MEF			SG	Sb	09 53 35.8	-0.7
RAF	**Rauma**	**2.35 236**	MSG		09 53 35.6	
	comp=Z,1.2nm,0.2s					
RAF			SG	Sb	09 53 38.5	-0.1
JOF	**Joensuu**	**2.61 76**	SB	Sb	09 53 45.0	-1.0
RMF	**Romuvaara**	**2.62 44**	SB	Sb	09 53 46.1	-0.3
TOF	**Tornio**	**3.76 351**	PN	Pn	09 53 24.2	-0.8
RNF	**Rovaniemi**	**4.24 1**	SB	Sb	09 54 30.4	-2.5

HEL 21 09:52:46.7±0.1, 67°.64N×21°.01E, h0km, ML1.7, ML1.4(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.41**	**322**	*i* P	Pg	09 52 54.0	-0.5
KUA				*i* S	Sg	09 53 00.1	+0.2
MASU	**Masugnsbyn**	**0.42**	**115**	*i* P	Pg	09 52 53.9	-0.9
MASU				*i* S	Sg	09 53 00.2	0.0
DUNU	**Dundret**	**0.54**	**198**	*i* P	Pg	09 52 56.3	-0.8
DUNU				*i* S	Sg	09 53 04.4	+0.3
LANU	**Lannavaara**	**0.56**	**41**	*e*P	Pg	09 52 56.4	-1.0
LANU				*e*S	Sg	09 53 04.5	-0.1
RATU	**Laukkuluspa**	**0.57**	**290**	*i* P	Pg	09 52 56.9	-0.7
KOVU	**Salmi**	**0.67**	**332**	*i* P	Pg	09 52 58.9	-0.7
NIKU	**Nikkaluokta**	**0.79**	**288**	*i* P	Pg	09 53 00.8	-0.9
SALU	**Saltoluokta**	**0.99**	**256**	*e*P	Pg	09 53 04.5	-1.2
PAJU	**Pajala**	**1.02**	**126**	*e*P	Pg	09 53 04.7	-1.5
	baz=306						
PAJU				*e*SB	Sg	09 53 18.7	-0.8
ERTU	**Ertsjaerv**	**1.18**	**156**	*e*P	Pg	09 53 07.6	-1.7
	baz=336						
ERTU				*e*SB	Sg	09 53 24.2	-0.4
KLF	**Kolari**	**1.21**	**108**	*e*P	Pg	09 53 08.5	-1.4
KLF				*e*SB	Sg	09 53 24.8	-0.7
HEF	**Hetta**	**1.27**	**51**	*e*P	Pg	09 53 09.0	-1.9
	baz=235						
HEF				MSG		09 53 25.0	
	comp=Z,3.4nm,0.2s						
HEF				*e*SB	Sg	09 53 26.3	-1.0
KIF	**Kilpisjarvi**	**1.38**	**357**	*e*P	Pg	09 53 11.8	-1.3
KIF	**Kilpisjarvi**	**1.38**	**357**	*e*P	Pg	09 53 11.8	-1.2
KIF				MSG		09 53 27.6	
	comp=Z,13nm,0.2s						
KIF				*e*SN	Sn	09 53 32.0	0.0
HARU	**Harads**	**1.48**	**180**	*e*P	Pn	09 53 12.8	-1.6
KTK1	**Kautokeino**	**1.61**	**30**	*e*PN	Pn	09 53 16.3	-0.1
KTK1				*e*SN	Sg	09 53 39.2	+0.8
KALU	**Kalix**	**2.01**	**151**	*e*PB	Pn	09 53 22.2	+0.3
	baz=329						
KALU				*e*SG	Sb	09 53 49.4	-0.2
TOF	**Tornio**	**2.04**	**138**	*e*PB	Pn	09 53 22.7	+0.5
TOF				MSG		09 53 47.5	
	comp=Z,8.4nm,0.2s						
TOF				*e*SG	Sb	09 53 50.1	-0.3
SGF	**Sodankyl**	**2.13**	**93**	*e*PB	Pn	09 53 24.1	+0.7
SGF				*e*SG	Sb	09 53 52.7	-0.3
RNF	**Rovaniemi**	**2.21**	**115**	*e*PB	Pn	09 53 25.2	+0.6
RNF				*e*SG	Sb	09 53 54.6	-0.8
KEV	**Kevo**	**3.06**	**43**	*e*P	Pn	09 53 36.9	+0.8
KEV	**Kevo**	**3.06**	**43**	*e*P	Pn	09 53 37.1	+1.0
KEV				*e*SB	Sn	09 54 15.6	+2.3
KEV				MSG		09 54 16.2	
	comp=Z,1.4nm,0.2s						
BURU	**Burvik**	**3.07**	**177**	*e*S	Sn	09 54 15.1	+1.5
OBF4	**Vikkela, Lumij**	**3.28**	**148**	*e*PB	Pn	09 53 41.7	+2.4
VRF	**Varrio**	**3.28**	**84**	*e*SG	Sb	09 54 28.9	+2.7
MSF	**Maaselka**	**3.62**	**115**	*e*PG	Pb	09 53 51.2	-0.3
UMAU	**Umeaa**	**3.77**	**182**	*e*PB	Pn	09 53 49.6	+3.6

UPP 21 09:53:21.4±0.0, 67°.63N×21°.01E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.42**	**323**	P	Pg	09 53 29.3	0.0
KUA				S	Sg	09 53 34.8	+0.1
MASU	**Masugnsbyn**	**0.42**	**114**	P	Pg	09 53 29.3	-0.1
MASU				S	Sg	09 53 34.8	0.0
DUNU	**Dundret**	**0.54**	**199**	P	Pg	09 53 31.7	+0.1
LANU	**Lannavaara**	**0.56**	**41**	P	Pg	09 53 32.3	+0.1
RATU	**Laukkuluspa**	**0.57**	**291**	P	Pg	09 53 32.2	-0.2
KOVU	**Salmi**	**0.68**	**332**	P	Pg	09 53 34.1	-0.3
NIKU	**Nikkaluokta**	**0.79**	**289**	P	Pg	09 53 36.4	-0.1
SALU	**Saltoluokta**	**0.99**	**257**	P	Pg	09 53 39.7	-0.7
PAJU	**Pajala**	**1.02**	**126**	P	Pg	09 53 40.1	-0.8
ERTU	**Ertsjaerv**	**1.17**	**156**	P	Pg	09 53 42.8	-1.0
HARU	**Harads**	**1.47**	**180**	P	Pn	09 53 48.3	-0.8

*NOU **21** 10:13:08.2, 39°.39S×176°.31E, h97km, MLv3.7/12, North Island, New Zealand*
*WEL **21** 10:13:11.1±0.3, 39°S±2°.×17°.6E±°, h57km±3km, M3.1/61, ML3.4/63, MLv3.1/61, Error ellipse: s-maj=0.0km s-min=0.0km az=141.3*

ISC 21 10:13:07.9±1.4, 39°.32S±0°.03×176°.22E±0°.03, h92km±7km, n140, σ1§37/152, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KWHZ	**Kaweka Forest**	**0.19**	**123**	P	**Pn**	**10 13 22.2**	**+1.0**
KWHZ				S	**Sn**	**10 13 31.5**	**+0.3**
BHHZ	**Black Hill Sta**	**0.21**	**216**	P	**Pn**	**10 13 22.3**	**+0.9**
BHHZ				S	**Sn**	**10 13 30.3**	**-1.0**
BKZ	**Black Stump Fm**	**0.26**	**54**	P	**Pn**	**10 13 22.1**	**+0.6**
BKZ				S	**Sn**	**10 13 30.5**	**-1.1**
BKZ	**Black Stump Fm**	**0.26**	**54**	P	**Pn**	**10 13 21.9**	**+0.4**
MOVZ	**Moawhango**	**0.37**	**257**	P	**Pn**	**10 13 22.9**	**+0.8**
MOVZ				S	**Sn**	**10 13 31.5**	**-1.2**
ETVZ	**East Tongariro**	**0.44**	**295**	P	**Pn**	**10 13 24.1**	**+1.5**
HATZ	**Hinemaiaia**	**0.44**	**347**	P	**Pn**	**10 13 22.8**	**+0.3**
HATZ				S	**Sn**	**10 13 31.0**	**-2.4**
TUVZ	**Tukino**	**0.44**	**277**	P	**Pn**	**10 13 23.7**	**+1.0**
TUVZ				S	**Sn**	**10 13 32.9**	**-0.8**
TMVZ	**Te Maari**	**0.45**	**297**	P	**Pn**	**10 13 23.6**	**+0.9**
TMVZ				S	**Sn**	**10 13 32.6**	**-1.1**
OTVZ	**Oturere**	**0.46**	**290**	P	**Pn**	**10 13 23.8**	**+1.0**
OTVZ				S	**Sn**	**10 13 33.1**	**-0.7**
SNVZ	**South Ngauruho**	**0.47**	**286**	P	**Pn**	**10 13 23.9**	**+1.0**
SNVZ				S	**Sn**	**10 13 33.3**	**-0.7**
WNVZ	**Wahianoa**	**0.48**	**269**	P	**Pn**	**10 13 24.0**	**+1.0**
WNVZ				S	**Sn**	**10 13 33.7**	**-0.5**
WHVZ	**Whangaehu Hut**	**0.49**	**274**	P	**Pn**	**10 13 24.1**	**+1.0**
NGZ	**Ngauruhoe**	**0.50**	**287**	P	**Pn**	**10 13 24.2**	**+1.1**
KRVZ	**Karewarewa**	**0.50**	**297**	P	**Pn**	**10 13 24.1**	**+1.1**
NMHZ	**Naumai**	**0.51**	**64**	P	**Pn**	**10 13 24.6**	**+1.5**
NMHZ				S	**Sn**	**10 13 35.0**	**+0.7**
NNVZ	**North Ngauruho**	**0.51**	**292**	P	**Pn**	**10 13 24.4**	**+1.2**
MRHZ	**Matea Rd**	**0.51**	**18**	P	**Pn**	**10 13 23.3**	**+0.2**
MRHZ				S	**Sn**	**10 13 32.5**	**-1.8**
DRZ	**Dome Shelter**	**0.51**	**275**	P	**Pn**	**10 13 24.9**	**+1.6**
FWVZ	**Far West T-bar**	**0.52**	**277**	P	**Pn**	**10 13 24.3**	**+1.0**
TRVZ	**Turoa**	**0.52**	**272**	P	**Pn**	**10 13 24.4**	**+1.0**
WTVZ	**West Tongariro**	**0.53**	**293**	P	**Pn**	**10 13 24.2**	**+0.9**
KATZ	**Kakaramea**	**0.54**	**310**	P	**Pn**	**10 13 24.9**	**+1.5**
RATZ	**Rangitukua**	**0.57**	**322**	P	**Pn**	**10 13 24.1**	**+0.6**
MTVZ	**Mangateitei**	**0.58**	**264**	P	**Pn**	**10 13 25.0**	**+1.3**
PNHZ	**Pukenui**	**0.59**	**182**	P	**Pn**	**10 13 25.1**	**+1.4**
ARHZ	**Aropaoanui**	**0.60**	**85**	P	**Pn**	**10 13 25.4**	**+1.6**
TWVZ	**Taurewa**	**0.66**	**292**	P	**Pn**	**10 13 25.0**	**+0.6**
MTHZ	**Maungataniwha**	**0.67**	**46**	P	**Pn**	**10 13 25.4**	**+1.0**
PKVZ	**Pokaka**	**0.68**	**272**	P	**Pn**	**10 13 25.8**	**+1.4**
WHTZ	**Whakaora**	**0.69**	**342**	P	**Pn**	**10 13 25.6**	**+1.0**
KAHZ	**Kahuranaki**	**0.69**	**133**	P	**Pn**	**10 13 26.6**	**+2.0**
WATZ	**Wairara**	**0.72**	**328**	P	**Pn**	**10 13 25.7**	**+0.8**
CKHZ	**Cape Kidnapper**	**0.74**	**117**	P	**Pn**	**10 13 26.9**	**+1.9**
WPHZ	**Waipukurau**	**0.76**	**167**	P	**Pn**	**10 13 27.1**	**+1.8**
TSZ	**Takapari Road**	**0.76**	**195**	P	**Pn**	**10 13 26.9**	**+1.6**
ALRZ	**Allen Road**	**0.76**	**7**	P	**Pn**	**10 13 25.8**	**+0.5**
RAHZ	**Arahi**	**0.79**	**59**	P	**Pn**	**10 13 26.9**	**+1.4**
WPRZ	**Whakapapatarin**	**0.80**	**357**	P	**Pn**	**10 13 26.3**	**+0.6**
WHHZ	**Waihua**	**0.82**	**73**	P	**Pn**	**10 13 27.6**	**+1.7**
PRRZ	**Plateau Road**	**0.83**	**9**	P	**Pn**	**10 13 26.5**	**+0.6**
PXZ	**Pawanui**	**0.86**	**145**	P	**Pn**	**10 13 28.2**	**+1.9**
RTZ	**Ruatahuna**	**0.92**	**40**	P	**Pn**	**10 13 27.7**	**+0.7**
HRRZ	**Handcock Road**	**0.93**	**3**	P	**Pn**	**10 13 27.7**	**+0.7**
MUGZ	**Murupara**	**0.95**	**27**	P	**Pn**	**10 13 27.6**	**+0.4**
GRRZ	**Galatos Road**	**0.97**	**355**	P	**Pn**	**10 13 28.4**	**+0.9**
DVHZ	**Dannevirke**	**0.98**	**182**	P	**Pn**	**10 13 29.1**	**+1.6**
PRHZ	**Porangahau**	**1.00**	**161**	P	**Pn**	**10 13 29.7**	**+2.0**
RRRZ	**Republican Roa**	**1.01**	**13**	P	**Pn**	**10 13 28.4**	**+0.5**
HSRZ	**Hossack Road**	**1.01**	**1**	P	**Pn**	**10 13 28.7**	**+0.8**
SNGZ	**Shannon Statio**	**1.02**	**59**	P	**Pn**	**10 13 29.5**	**+1.5**
WAZ	**Wanganui**	**1.05**	**245**	P	**Pn**	**10 13 30.8**	**+2.5**
HLRZ	**Highlands Stat**	**1.07**	**6**	P	**Pn**	**10 13 30.2**	**+1.6**
TARZ	**Mount Tarawera**	**1.11**	**12**	P	**Pn**	**10 13 30.1**	**+1.0**
POWZ	**Post Office Ro**	**1.12**	**198**	P	**Pn**	**10 13 30.9**	**+1.7**
TLZ	**Tolley Road**	**1.12**	**331**	P	**Pn**	**10 13 30.2**	**+0.9**
OHWZ	**Ohakea**	**1.13**	**218**	P	**Pn**	**10 13 31.7**	**+2.5**
VRZ	**Vera Road**	**1.15**	**279**	P	**Pn**	**10 13 31.3**	**+1.8**
ANWZ	**Angora Road**	**1.15**	**170**	P	**Pn**	**10 13 31.6**	**+2.1**
KNZ	**Kokohu**	**1.17**	**76**	P	**Pn**	**10 13 30.9**	**+1.3**
OMRZ	**Omania**	**1.22**	**6**	P	**Pn**	**10 13 31.1**	**+0.7**
PRWZ	**Pori Road**	**1.25**	**189**	P	**Pn**	**10 13 32.6**	**+1.9**
URZ	**Urewera**	**1.27**	**34**	P	**Pn**	**10 13 31.3**	**+0.4**
URZ	**Urewera**	**1.27**	**34**	P	**Pn**	**10 13 31.5**	**+0.6**
EDRZ	**Edgecumbe**	**1.28**	**19**	P	**Pn**	**10 13 31.8**	**+0.6**
KARZ	**Kaharoa**	**1.30**	**1**	P	**Pn**	**10 13 32.4**	**+1.1**
MHGZ	**Mahia Peninsul**	**1.32**	**83**	P	**Pn**	**10 13 33.2**	**+1.7**
HIZ	**Hauiti**	**1.34**	**307**	P	**Pn**	**10 13 33.3**	**+1.6**
HIZ	**Hauiti**	**1.34**	**307**	P	**Pn**	**10 13 33.4**	**+1.6**
RIGZ	**Rimuhau**	**1.35**	**63**	P	**Pn**	**10 13 33.2**	**+1.3**
BFZ	**Birch Farm**	**1.36**	**179**	P	**Pn**	**10 13 33.6**	**+1.6**
BFZ	**Birch Farm**	**1.36**	**179**	P	**Pn**	**10 13 33.4**	**+1.4**
MARZ	**Manawahe**	**1.38**	**15**	P	**Pn**	**10 13 33.1**	**+0.8**
LREZ	**Lake Rotokare**	**1.42**	**264**	P	**Pn**	**10 13 35.1**	**+2.4**
MWZ	**Matawai**	**1.42**	**46**	P	**Pn**	**10 13 33.6**	**+0.8**
MRZ	**Mangatainoka R**	**1.43**	**200**	P	**Pn**	**10 13 34.3**	**+1.4**
KMRZ	**Kaimai**	**1.49**	**351**	P	**Pn**	**10 13 35.0**	**+1.3**
MHEZ	**Mangahewa**	**1.50**	**279**	P	**Pn**	**10 13 36.4**	**+2.7**
OPRZ	**Ohinepanea**	**1.50**	**10**	P	**Pn**	**10 13 34.4**	**+0.7**
TKGZ	**Te Karaka**	**1.55**	**56**	P	**Pn**	**10 13 35.6**	**+1.3**
DREZ	**Durham Road**	**1.57**	**274**	P	**Pn**	**10 13 37.6**	**+3.0**
WHRZ	**Whale Island**	**1.58**	**22**	P	**Pn**	**10 13 35.6**	**+0.8**
TGRZ	**Tauranga**	**1.59**	**1**	P	**Pn**	**10 13 36.1**	**+1.2**
NEZ	**North Egmont**	**1.65**	**271**	P	**Pn**	**10 13 39.0**	**+3.2**
HOWZ	**Holdsworth Sta**	**1.67**	**199**	P	**Pn**	**10 13 37.0**	**+1.1**
TOZ	**Tahuroa Road**	**1.69**	**340**	P	**Pn**	**10 13 37.7**	**+1.6**
OGWZ	**Otaki Gorge**	**1.70**	**208**	P	**Pn**	**10 13 37.6**	**+1.4**
KHEZ	**Kahui Hut**	**1.71**	**270**	P	**Pn**	**10 13 39.7**	**+3.1**
KHEZ	**Kahui Hut**	**1.71**	**270**	P	**Pn**	**10 13 39.3**	**+2.8**
PKE	**Pukeiti**	**1.74**	**273**	P	**Pn**	**10 13 39.5**	**+2.7**
RUGZ	**Raukumara Rang**	**1.77**	**41**	P	**Pn**	**10 13 37.8**	**+0.4**
TWGZ	**Tauwhareparae**	**1.79**	**51**	P	**Pn**	**10 13 39.0**	**+1.6**
TMWZ	**Te Maipa**	**1.80**	**188**	P	**Pn**	**10 13 38.9**	**+1.3**
NMEZ	**Namu Road**	**1.82**	**266**	P	**Pn**	**10 13 40.6**	**+2.9**
NBEZ	**Newall Road No**	**1.83**	**271**	P	**Pn**	**10 13 40.5**	**+2.6**
KIW	**Kapiti Island**	**1.84**	**213**	P	**Pn**	**10 13 39.3**	**+1.3**
MTW	**Mount Morrison**	**1.92**	**196**	P	**Pn**	**10 13 39.8**	**+0.8**
HAZ	**Te Kaha**	**1.98**	**39**	P	**Pn**	**10 13 40.0**	**+0.1**
CAW	**Cannon Point**	**1.99**	**206**	P	**Pn**	**10 13 40.9**	**+0.9**
PUZ	**Puketiti**	**2.02**	**53**	P	**Pn**	**10 13 41.3**	**+0.7**
MYRZ	**Mayor Island**	**2.04**	**0**	P	**Pn**	**10 13 42.5**	**+1.8**
PKGZ	**Pakihiroa**	**2.04**	**46**	P	**Pn**	**10 13 41.8**	**+1.1**
TRWZ	**Traveller**	**2.11**	**191**	P	**Pn**	**10 13 42.6**	**+0.9**
PAWZ	**Paruwai Farm**	**2.15**	**196**	P	**Pn**	**10 13 42.6**	**+0.5**
MSWZ	**Moikau Station**	**2.22**	**199**	P	**Pn**	**10 13 43.5**	**+0.4**
WEL	**Wellington**	**2.25**	**209**	P	**Pn**	**10 13 44.1**	**+0.6**
WMGZ	**Waiomatatini S**	**2.28**	**50**	P	**Pn**	**10 13 44.7**	**+0.8**
SNZO	**South Karori**	**2.30**	**210**	P	**Pn**	**10 13 44.6**	**+0.5**
DUWZ	**D'Urville Isla**	**2.30**	**229**	P	**Pn**	**10 13 44.8**	**+0.7**
PLWZ	**Palliser**	**2.36**	**198**	P	**Pn**	**10 13 45.2**	**+0.2**
MKAZ	**Moumakai**	**2.37**	**339**	P	**Pn**	**10 13 46.8**	**+1.8**
MXZ	**Matakaoa Point**	**2.40**	**44**	P	**Pn**	**10 13 46.5**	**+1.0**
MXZ	**Matakaoa Point**	**2.40**	**44**	P	**Pn**	**10 13 46.7**	**+1.2**
TCW	**Tory Channel**	**2.40**	**218**	P	**Pn**	**10 13 46.0**	**+0.6**
ETAZ	**East Tamaki Re**	**2.57**	**336**	P	**Pn**	**10 13 49.6**	**+1.8**
KUZ	**Kuaotunu**	**2.60**	**351**	P	**Pn**	**10 13 49.7**	**+1.6**
KUZ	**Kuaotunu**	**2.60**	**351**	P	**Pn**	**10 13 49.7**	**+1.6**
TUWZ	**Tuamarina**	**2.73**	**219**	P	**Pn**	**10 13 50.2**	**+0.4**
MBAZ	**Motutapu North**	**2.75**	**337**	P	**Pn**	**10 13 52.2**	**+2.0**
RVAZ	**Riverhead Bore**	**2.86**	**333**	P	**Pn**	**10 13 53.6**	**+2.0**
NNZ	**Nelson**	**2.88**	**228**	P	**Pn**	**10 13 52.0**	**+0.2**
BSWZ	**Blackbirch Sta**	**2.98**	**216**	P	**Pn**	**10 13 53.4**	**+0.2**
TKNZ	**Takaka Hill**	**3.03**	**235**	P	**Pn**	**10 13 54.1**	**+0.2**
QRZ	**Quartz Range**	**3.21**	**241**	P	**Pn**	**10 13 56.2**	**0.0**
QRZ	**Quartz Range**	**3.21**	**241**	P	**Pn**	**10 13 56.3**	**+0.1**
MRNZ	**Matariki Terra**	**3.36**	**231**	P	**Pn**	**10 13 58.7**	**+0.4**
THZ	**Tophouse**	**3.51**	**225**	P	**Pn**	**10 14 00.4**	**0.0**
KHZ	**Kahutara**	**3.70**	**212**	P	**Pn**	**10 14 02.4**	**-0.5**
KHZ	**Kahutara**	**3.70**	**212**	P	**Pn**	**10 14 02.4**	**-0.5**
DSZ	**Denniston Nort**	**4.14**	**233**	P	**Pn**	**10 14 08.2**	**-0.7**
GVZ	**Greta Valley S**	**4.37**	**212**	P	**Pn**	**10 14 11.0**	**-0.9**
LTZ	**Lake Taylor**	**4.57**	**220**	P	**Pn**	**10 14 13.6**	**-1.1**
AMCZ	**Amberley**	**4.70**	**214**	P	**Pn**	**10 14 16.2**	**-0.1**
INZ	**Inchbonnie**	**4.96**	**225**	P	**Pn**	**10 14 18.9**	**-1.0**
AKCZ	**Akaroa Harbour**	**5.18**	**208**	P	**Pn**	**10 14 22.1**	**-0.8**
WACZ	**Wakanui South**	**5.67**	**214**	P	**Pn**	**10 14 28.2**	**-1.3**
RPZ	**Rata Peaks**	**5.86**	**220**	P	**Pn**	**10 14 32.2**	**+0.1**
LBZ	**Lake Benmore**	**6.78**	**220**	P	**Pn**	**10 14 43.9**	**-0.7**
CTZ	**Chatham Island**	**6.95**	**132**	P	**Pn**	**10 14 49.7**	**+2.7**
ODZ	**Otahua Downs**	**7.06**	**214**	P	**Pn**	**10 14 47.0**	**-1.5**

IDC 21 10:16:24.7±473.0, 53°.98N×0°.04W, h0km, Error ellipse: s-maj=241.8km s-min=34.6km az=23.0, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.00**	**115**	I		11 11 50.0	
	baz=311,slow=315,SNR=1.2						
I37NO	**I37NO**	**17.43**	**23**	I		12 05 30.0	
	baz=219,slow=330,SNR=1.2						
I43RU	**DUBNA INFRASON**	**21.19**	**67**	I		12 27 10.0	
	baz=279,slow=329,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**34.92**	**72**	I		13 51 50.0	
	baz=299,slow=338,SNR=1.1						

*TRN **21** 10:18:41.8, 10°.64N×62°.47W, h92km, MD3.6*
*FUNV **21** 10:18:43.0, 10°.63N×62°.43W, h95km, MW3.8*

ISC 21 10:18:40.7±1.4, 10°.64N±0°.06×62°.47W±0°.05, h109km±12km, n23, σ1§38/36, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.75**	**272**	⇑*i*P	**Pn**	**10 18 59.9**	**+0.5**
CRUV				*e*S	**Sn**	**10 19 12.2**	**-1.4**
TRN	**Trinidad (W)**	**1.05**	**90**	*e*P	**Pn**	**10 19 03.3**	**+1.0**
TRN				*e*S	**Sn**	**10 19 17.3**	**-1.4**
GRFF	**Grenada Fort F**	**1.57**	**27**	*e*P	**Pn**	**10 19 08.5**	**+0.2**
GRFF				*e*S	**Sn**	**10 19 28.1**	**-1.3**
GRGR	**Grenville**	**1.68**	**28**	*e*P	**Pn**	**10 19 10.2**	**+0.5**
GRGR				*e*S	**Sn**	**10 19 31.0**	**-0.8**
CUMV	**Cumana_UDO**	**1.71**	**263**	⇓*i*P	**Pn**	**10 19 12.3**	**+2.3**
CUMV				*e*S	**Sn**	**10 19 33.3**	**+1.0**
TOSP	**Speyside**	**2.01**	**71**	*e*P	**Pn**	**10 19 14.4**	**+0.7**
TOSP				*e*S	**Sn**	**10 19 38.0**	**-1.0**
GCMP	**Grenada, Carri**	**2.10**	**29**	*e*P	**Pn**	**10 19 15.9**	**+1.0**
GCMP				*e*S	**Sn**	**10 19 40.9**	**-0.2**
PCRV	**Puerto La Cruz**	**2.18**	**258**	*e*P	**Pn**	**10 19 17.4**	**+1.4**
PCRV				*e*S	**Sn**	**10 19 42.4**	**-0.6**
PRGV	**PARIAGUAN**	**2.85**	**229**	*e*P	**Pn**	**10 19 26.1**	**+1.4**
PRGV				*e*S	**Sn**	**10 19 58.1**	**-0.4**
SVB	**Belmont**	**2.87**	**24**	*e*P	**Pn**	**10 19 25.0**	**0.0**
MCLT	**Moule a Chique**	**3.39**	**26**	*e*P	**Pn**	**10 19 32.4**	**+0.5**
MCLT				*e*S	**Sn**	**10 20 11.0**	**-0.6**
SLB	**Belfond**	**3.46**	**24**	*e*P	**Pn**	**10 19 34.7**	**+1.8**
SLBI	**Saint Lucia, B**	**3.66**	**23**	*e*P	**Pn**	**10 19 36.3**	**+0.8**
SLBI				*e*S	**Sn**	**10 20 16.7**	**-1.2**
BIM	**Bigot**	**4.08**	**19**	*e*P	**Pn**	**10 19 42.4**	**+1.2**
MPOM	**Morne Pois Mar**	**4.09**	**22**	*e*P	**Pn**	**10 19 42.8**	**+1.5**
MPOM				*e*S	**Sn**	**10 20 27.5**	**-0.8**
DSLB	**Salisbury**	**4.87**	**12**	*e*P	**Pn**	**10 19 53.2**	**+1.4**
CACV	**CAICARA DEL OR**	**5.05**	**233**	*e*P	Pn	10 19 49.5	-4.7
CACV				*e*S	Sn	10 20 40.6	-11
BENV	**Beln**	**5.09**	**263**	*e*P	**Pn**	**10 19 55.4**	**+0.6**
BENV				*e*S	**Sn**	**10 20 50.5**	**-2.0**
MAGL	**Barre de l'ile**	**5.40**	**12**	*e*P	**Pn**	**10 20 00.3**	**+1.4**
CBE	**Ff, Capester**	**5.46**	**9**	*e*P	**Pn**	**10 20 01.1**	**+1.3**
BAUV	**El Baul**	**5.74**	**253**	*e*P	**Pn**	**10 20 04.3**	**+0.7**
BAUV	**El Baul**	**5.74**	**253**	*e*S	**Sn**	**10 21 06.0**	**-2.3**
BAUV	**El Baul**	**5.74**	**253**	*e*P	**Pn**	**10 20 04.1**	**+0.5**
BAUV				*e*S	**Sn**	**10 21 04.6**	**-3.7**

*IDC **21** 10:20:31.5±1.4, 35°.50N×133°.71E, h0km, mb3.1/2, mbtmp3.0/5, ML2.2/3, MS2.6/1, Error ellipse: s-maj=26.9km s-min=18.4km az=165.0*
*JMA **21** 10:20:32.1±0.0, 35°.5N±0°.1×133°.8E±0°.1, h8km, MV3.6/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
*NIED **21** 10:20:32.1, 35°.45N×133°.82E, h8km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.69; $M_{\theta\theta}$2.04; $M_{\phi\phi}$-1.35; $M_{r\theta}$-1.18; $M_{\theta\phi}$-1.88; $M_{\phi r}$0.70; Fault plane solution: $M_0$2.77000×10^{14} NP1: ϕ_s247.00000°, δ71.00000°, λ172.00000°. NP2: ϕ_s339.00000°, δ83.00000°, λ19.00000°.*

ISC 21 10:20:31.6±1.2, 35°.49N±0°.05×133°.81E±0°.03, h2km±11km, n11, σ0§77/19, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.11**	**174**	P	**Pg**	**10 20 34.0**	**+0.2**
JKR				S	**Sg**	**10 20 35.5**	**+0.2**
JAD	**Aida**	**0.63**	**152**	P	**Pg**	**10 20 43.2**	**-0.3**
JAD				*e*S	**Sg**	**10 20 51.0**	**-0.6**
JNM	**Ikuma**	**0.63**	**271**	P	**Pb**	**10 20 44.8**	**-0.6**
JNM				*e*S	**Sb**	**10 20 53.7**	**-1.0**
JKSM	**Kasumi**	**0.71**	**82**	P	**Pg**	**10 20 45.3**	**+0.2**
JKSM				S	**Sg**	**10 20 54.5**	**+0.2**
JHS	**Saijyo**	**0.75**	**229**	P	**Pg**	**10 20 45.8**	**-0.1**
JHS				S	**Sg**	**10 20 55.8**	**+0.2**
JISK	**Izumosakaura**	**0.78**	**271**	P	**Pg**	**10 20 47.1**	**+0.6**
JISK				*e*S	**Sg**	**10 20 57.4**	**+0.8**
MJAR	**Matsushiro Arr**	**3.72**	**72**	Pn	**Pn**	**10 21 31.4**	**+1.4**
	0.1nm,0.3s,baz=164,slow=14,SNR=5.7						
MJAR				Pg	**Pg**	**10 21 41

TOLI2 Tolitoli 6.27 242 Pn Pn 10 35 46.0 -1.0
APSI Ampana 6.82 223 P **Pn 10 35 56.6 +2.0**
0.7nm2µm194nm,0.7s
SIJI Sorong 7.00 135 P **Pn 10 35 55.1 -2.0**
33nm,0.3s,baz=180,slow=19,SNR=28
SIJI S **Sn 10 37 12.4 -2.9**
11nm,0.5s,baz=176,slow=22,SNR=4.4
NLAI Namlea 7.34 174 P **Pn 10 36 00.1 -1.6**
0.3nm35nm,0.4s
MPSI Mapaga 7.41 240 P **Pn 10 36 00.5 -2.2**
0.2nm1µm23nm,0.6s
KRAI Karang Ratu 7.67 164 P **Pn 10 36 06.6 +0.4**
MYLDM Lahad Datu 7.85 278 Pn 10 36 09.2 +0.7
MYLDM Lahad Datu 7.85 278 P Pn 10 36 16.1 +7.5
RCP Roxas 8.20 335¶ *e*P **Pn 10 36 16.1 +2.7**
FAKI Fak Fak 9.17 139 Pn **Pn 10 36 24.4 -2.2**
FAKI Fak Fak 9.17 139 P **Pn 10 36 25.0 -1.6**
TTSI Tana Toraja 9.62 222 P **Pn 10 36 34.6 +2.0**
46nm,1.1s
KKM Kota Kinabalu 10.23 281 Pn **Pn 10 36 42.6 +1.5**
KAPI Kappang 11.18 216 P **Pn 10 36 56.7 +2.8**
9.4nm,0.5s,baz=153,slow=4.7,SNR=3.7
PLAI Plampang 15.41 213 P **P 10 37 56.2 +4.7**
MTN Manton Dam 17.51 164 P **P 10 38 12.4 -2.3**
KNRA Kununurra 19.81 173 P **P 10 38 39.2 -0.7**
KNRA IAmb IAmb 10 38 43.4
comp=Z,14nm,0.8s
KNRA Kununurra 19.81 173 P **Pn 10 38 40.9 -1.4**
SSLB Suanglung 20.23 346 P **P 10 38 42.3 -2.1**
SSLB IAmb IAmb 10 39 02.9
comp=Z,33nm,1.4s
CTJI Waduk Cacaban 20.34 237 P Pn 10 38 49.9 +1.3
GUMO Guam 20.60 62 LR LR 10 47 05.9
comp=Z,26nm,18.4s,baz=220,slow=38
MANU Manus Island 21.92 106 P P 10 39 14.8 +12
JOW Kunigami 22.68 5 P **P 10 39 10.1 -0.2**
comp=Z,21nm,1.0s,baz=168,slow=13,SNR=6.4
comp=Z,21nm,1.0s
JOW Kunigami 22.68 5 P **P 10 39 09.8 -0.5**
WB0 Warramunga Arr 25.02 162 P **P 10 39 32.6 +0.6**
WB0 IAmb IAmb 10 39 34.1
comp=Z,14nm,0.5s
MASI Maura Aman, Be 25.10 254 P P 10 39 41.3 +8.5
WRAB Tennant Creek 25.17 162 P **P 10 39 31.5 -1.8**
WRAB IAmb IAmb 10 39 35.6
comp=Z,20nm,0.9s
WRA Warramunga Arr 25.17 162 P **P 10 39 34.0 +0.6**
comp=Z,5.5nm,0.6s,baz=342,slow=10,SNR=35
comp=Z,5.5nm,0.6s
WRA Warramunga Arr 25.17 162 P **P 10 39 34.0 +0.6**
WB2 Warramunga Arr 25.18 162 P **P 10 39 33.3 -0.1**
WB2 IAmb IAmb 10 39 35.7
comp=Z,9.1nm,0.8s
WR0 Warramunga Arr 25.25 162 P **P 10 39 34.7 +0.6**
WR0 IAmb IAmb 10 39 41.4
comp=Z,5.3nm,0.6s
PSA00 Pilbara Seismi 26.30 194 P **P 10 39 44.3 +0.9**
PSA00 IAmb IAmb 10 39 56.1
comp=Z,25nm,1.4s
QIS Mount Isa 27.77 152 P **P 10 39 59.1 +2.3**
AS31 Alice Springs 28.58 165 P **P 10 40 04.1 +0.2**
ASAR Alice Springs 28.59 165 P **P 10 40 04.3 +0.3**
comp=Z,0.6nm,0.4s,baz=348,slow=7.0,SNR=10
comp=Z,0.6nm,0.4s
ASAR Alice Springs 28.59 165 P **P 10 40 05.0 +1.0**
AS01 Alice Springs 28.59 165 P **P 10 40 06.0 +1.9**
WRKA Warakurna 29.04 176 P **P 10 40 11.8 +3.8**
KSRS Korea Array 33.22 2 P **P 10 40 43.9 -0.6**
comp=Z,1.2nm,0.5s,baz=185,slow=9.7,SNR=7.3
comp=Z,1.2nm,0.5s
BBOO Buckleboo 37.87 167 P **P 10 41 25.6 +1.2**
STKA Stephens Creek 38.63 159 P **P 10 41 31.4 +0.5**
comp=Z,2.4nm,0.3s,baz=318,slow=15,SNR=3.6
comp=Z,2.4nm,0.3s
USRK Ussuriysk Ar. 40.24 6 P **P 10 41 43.6 -0.4**
comp=Z,2.0nm,0.7s,baz=187,slow=6.4,SNR=8.2
comp=Z,2.0nm,0.7s
USRK Ussuriysk Ar. 40.24 6 P **P 10 41 45.0 +0.9**
ARMA Armidale 42.02 146 P **P 10 41 57.6 -1.4**
KLR Kul'dur 45.20 5 P **P 10 42 23.1 -0.9**
comp=Z,2.1nm,0.6s,baz=170,slow=11,SNR=3.5
comp=Z,2.1nm,0.6s
SONM Songino Array 46.80 342 P **P 10 42 37.8 +1.0**
comp=Z,0.5nm,0.5s,baz=208,slow=10,SNR=1.8
comp=Z,0.5nm,0.5s
PETK Petropavlovsk- 55.24 22 P **P 10 43 39.9 +0.1**
comp=Z,2.4nm,0.6s,baz=200,slow=6.9,SNR=2.0
comp=Z,2.4nm,0.6s
PETK Petropavlovsk- 55.24 22 P **P 10 43 39.5 -0.2**
MKAR Makanchi Array 57.00 325 P **P 10 43 52.5 +0.1**
comp=Z,0.6nm,0.4s,baz=125,slow=7.6,SNR=7.4
comp=Z,0.6nm,0.4s
MKAR Makanchi Array 57.00 325 P **P 10 43 53.5 +1.1**
ZALV Zalesovo Beam 60.06 333 P **P 10 44 12.8 -0.6**
comp=Z,0.5nm,0.3s,baz=135,slow=7.6,SNR=2.7
comp=Z,0.5nm,0.3s
KURK Kurchatov 61.19 328 P **P 10 44 20.9 -0.3**
KURK IAmb IAmb 10 44 40.4
comp=Z,2.3nm,0.8s
ABKAR Akbulak array 71.59 321 P **P 10 45 28.2 +0.6**
VNDA Vanda 83.85 173 P **P 10 46 36.1 +1.0**
comp=Z,0.5nm,0.8s,baz=302,slow=4.8,SNR=2.5
comp=Z,0.5nm,0.8s
ARCES ARCESS Array B 89.95 340 P **P 10 47 05.1 +0.3**
comp=Z,0.7nm,0.6s,baz=82,slow=6.5,SNR=4.1
comp=Z,0.7nm,0.6s

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*IDC **21** 10:37:12.7±1.9, 16°.57N×148°.53E, h0km, mb3.9/8, mbtmp3.9/9, ML4.0/1, Error ellipse: s-maj=57.5km s-min=20.1km az=89.0*
*NEIC **21** 10:37:13.9±1.3, 16°.3N±0°.1×148°.45E±0°.04, h10km±1km, mb4.2/10, Error ellipse: s-maj=20.6km s-min=5.9km az=176.0*
ISC 21 10:37:16.8±0.7,**16°.36N**±0°.09×**148°.53E**±0°.10,**h35**km,**n25**, σ1§**14**/26,**mb4.2**/13,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.48**	**233**	Pn		**Pn**	**10 38 23.0**	**+0.7**
	7.7nm,0.3s,baz=131,slow=7.6,SNR=5.0							
GUMO				Sn		**Sn**	**10 39 13.8**	**+0.5**
	17nm,0.3s,baz=339,slow=21,SNR=4.5							
	18nm,0.3s							
GUMO	**Guam**	**4.48**	**233**	Pn		**Pn**	**10 38 20.1**	**-2.2**
PATS	**Pohnpei**	**13.46**	**134**	Pn		**Pn**	**10 40 24.7**	**-0.7**
MJAR	**Matsushiro Arr**	**22.09**	**337**	P		**P**	**10 42 08.6**	**-0.4**
	1.2nm,0.6s,baz=156,slow=8.8,SNR=3.4							
	1.2nm,0.6s							
YHNB	**Yeheng**	**26.70**	**292**	P		**P**	**10 42 52.2**	**-0.8**
SSLB	**Suanglung**	**26.90**	**290**	P		**P**	**10 42 53.5**	**-1.3**
WB0	**Warramunga Arr**	**38.50**	**202**	P		**P**	**10 44 35.9**	**+0.1**
WB0				IAmb		IAmb	10 44 44.3	
	comp=Z,5.6nm,1.1s							
WR0	**Warramunga Arr**	**38.62**	**201**	P		**P**	**10 44 37.0**	**+0.1**
WR0				IAmb		IAmb	10 44 59.0	
	comp=Z,7.5nm,1.2s							
WB2	**Warramunga Arr**	**38.67**	**202**	P		**P**	**10 44 37.1**	**-0.2**
WB2				IAmb		IAmb	10 44 49.8	
	comp=Z,4.5nm,0.8s							
WRA	**Warramunga Arr**	**38.68**	**202**	P		**P**	**10 44 40.3**	**+2.9**
	comp=Z,1.8nm,0.6s,baz=28,slow=9.0,SNR=17							
	comp=Z,1.8nm,0.6s							
WRA	**Warramunga Arr**	**38.68**	**202**	P		**P**	**10 44 37.3**	**-0.1**
MARNC	**Mare, Loyalty**	**42.19**	**152**	P		**P**	**10 45 05.9**	**-0.5**
ASAR	**Alice Springs**	**42.27**	**200**	P		**P**	**10 45 09.6**	**+2.5**
	comp=Z,0.2nm,0.5s,baz=25,slow=5.3,SNR=4.7							
	comp=Z,0.2nm,0.5s							
SONM	**Songino Array**	**46.64**	**322**	P		**P**	**10 45 41.7**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=136,slow=6.9,SNR=4.4							
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**46.64**	**322**	P		**P**	**10 45 42.6**	**+0.7**
SONM				IAmb		IAmb	10 45 50.7	
	comp=Z,1.5nm,1.3s							
CMAR	**Chiang Mai Arr**	**47.24**	**280**	P		**P**	**10 45 47.6**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=74,slow=6.6,SNR=5.4							
	comp=Z,0.8nm,0.3s							
ZALV	**Zalesovo Beam**	**61.50**	**323**	P		**P**	**10 47 29.8**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=96,slow=7.7,SNR=5.8							
	comp=Z,1.2nm,0.5s							
MK31	**Makanchi Array**	**62.02**	**315**	P		**P**	**10 47 32.9**	**-0.9**
MK31				IAmb		IAmb	10 47 43.0	
	comp=Z,2.1nm,1.4s							
MKAR	**Makanchi Array**	**62.02**	**315**	P		**P**	**10 47 34.1**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=85,slow=7.0,SNR=4.0							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**62.02**	**315**	P		**P**	**10 47 32.2**	**-1.5**
KURK	**Kurchatov**	**64.80**	**319**	P		**P**	**10 47 52.1**	**+0.1**
KURK				IAmb		IAmb	10 47 53.2	
	comp=Z,6.2nm,1.1s							
BCAR	**Beaver Creek A**	**66.36**	**28**	P		**P**	**10 48 02.8**	**+0.9**
ABKAR	**Akbulak array**	**76.88**	**318**	P		**P**	**10 49 05.3**	**-0.1**
FINES	**FINESS Array B**	**90.12**	**336**	P		**P**	**10 50 12.9**	**-0.1**
	comp=Z,3.5nm,1.1s,baz=48,slow=5.7,SNR=4.9							
	comp=Z,3.5nm,1.1s							
DBIC	**Dimbokro**	**145.11**	**309**	PKP		**PKPdf**	**10 56 52.3**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=36,slow=2.4,SNR=5.0							

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*IDC **21** 10:49:45.7±1.1, 16°.51N×93°.24W, h157km±11km, mb3.7/13, mbtmp4.1/13, Error ellipse: s-maj=27.0km s-min=10.8km az=54.0*
*NEIC **21** 10:49:48.0±2.4, 16°.53N±0°.07×93°.38W±0°.06, h168km±5km, mb4.2/83, Md4.5/43(MEX), Error ellipse: s-maj=11.6km s-min=6.8km az=214.0*
*MEX **21** 10:49:48.3±1.0, 16°.49N×93°.41W, h172km±6km, MD4.5*
ISC 21 10:49:47.1±0.6,**16°.50N**±0°.04×**93°.48W**±0°.03,**h172**km±5km, **n169**, σ2§**01**/199,**mb4.2**/39,**Chiapas**

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
TGIG		**0.44**	**51**			**Pn**	**10 50 10.5**	**-0.3**
TGIG						**Sn**	**10 50 27.5**	**-1.4**
TGIG		**0.44**	**51**	*i* P		**Pn**	**10 50 10.5**	**-0.3**
TGIG				*i* S		**Sn**	**10 50 27.5**	**-1.4**
PCIG		**0.83**	**163**			**Pn**	**10 50 12.7**	**-0.1**
PCIG						**Sn**	**10 50 31.6**	**-1.0**
PCIG		**0.83**	**163**	*i* P		**Pn**	**10 50 12.7**	**-0.1**
PCIG				*i* S		**Sn**	**10 50 31.6**	**-1.0**
UXUV	**UXUV**	**1.03**	**322**	*i* P		**Pn**	**10 50 14.7**	**+0.4**
UXUV				*i* S		**Sn**	**10 50 34.3**	**-1.0**
CCIG	**Comitan**	**1.30**	**99**			**Pn**	**10 50 16.1**	**-0.6**
CCIG	**Comitan**	**1.30**	**99**	*e*S		**Sn**	**10 50 37.5**	**-2.0**
CMIG	**Matias Romero**	**1.47**	**294**	P		**Pn**	**10 50 18.5**	**+0.5**
	536nm,0.3s,baz=144,slow=5.9,SNR=3381							
CMIG				S		**Sn**	**10 50 42.0**	**-0.1**
	509nm,0.3s,baz=230,slow=23,SNR=29							
CMIG				LR		LR	10 50 43.5	
	comp=Z,67nm,21.7s,baz=275,slow=34							
CMIG	**Matias Romero**	**1.47**	**294**	*i* P		**Pn**	**10 50 18.6**	**+0.5**
CMIG				*i* S		**Sn**	**10 50 42.2**	**+0.2**
TUIG	**Tuzandepetl**	**1.77**	**329**	*e*		**Pn**	**10 50 21.7**	**+0.6**
TUIG				*e*			10 50 47.3	
PAVE	**Pavencul**	**1.81**	**136**	*i* P		**Pn**	**10 50 21.3**	**-0.5**
PAVE				*e*S		**Sn**	**10 50 46.9**	**-1.7**
PATR	**El Naranjo**	**1.82**	**139**	*i* P		**Pn**	**10 50 20.8**	**-1.2**
PATR				*e*S		**Sn**	**10 50 47.0**	**-1.9**
CHUJ	**Union Juarez**	**1.92**	**137**	*i* P		**Pn**	**10 50 21.9**	**-1.2**
CHUJ				*e*S		**Sn**	**10 50 49.2**	**-1.6**
THIG		**1.97**	**143**			**Pn**	**10 50 23.0**	**-0.2**
THIG						**Sn**	**10 50 50.4**	**-0.9**
THIG		**1.97**	**143**	*i* P		**Pn**	**10 50 23.0**	**-0.2**
THIG				*e*S		**Sn**	**10 50 50.4**	**-0.9**
HUEH	**Huehuetenango**	**2.23**	**121**			**Pn**	**10 50 25.4**	**-1.2**
RTAL	**Retalhuleu**	**2.61**	**139**			**Pn**	**10 50 30.3**	**-0.4**
RTAL				Sn		**Sn**	**10 51 02.9**	**-1.7**
HUIG	**Huatulco**	**2.63**	**254**			**Pn**	**10 50 29.7**	**-1.3**
HUIG						**Sn**	**10 51 03.0**	**-1.9**
HUIG	**Huatulco**	**2.63**	**254**	*i* P		**Pn**	**10 50 29.7**	**-1.3**
HUIG				*e*S		**Sn**	**10 51 03.0**	**-1.9**
OXIG	**Oaxaca**	**3.17**	**281**			**Pn**	**10 50 39.3**	**+1.6**
OXIG						**Sn**	**10 51 15.1**	**-1.9**
VHO	**Vista Hermosa**	**3.17**	**281**	*i* P		**Pn**	**10 50 39.3**	**+1.6**
VHO				*e*S		**Sn**	**10 51 15.1**	**-1.9**
SCIG	**Sabancuy**	**3.28**	**41**	*i* P		**Pn**	**10 50 37.0**	**-1.8**
SCIG				*e*S		**Sn**	**10 51 14.0**	**-5.2**
PETF	**Flores**	**3.48**	**83**			**Pn**	**10 50 39.9**	**-1.5**
PEIG	**Puerto Escondi**	**3.56**	**262**			**Pn**	**10 50 41.6**	**-0.9**
PEIG						**Sn**	**10 51 22.5**	**-3.0**
PEIG	**Puerto Escondi**	**3.56**	**262**	*e*P		**Pn**	**10 50 41.6**	**-0.9**
PEIG				*e*S		**Sn**	**10 51 22.5**	**-3.0**
TOIG	**Toxpalan**	**3.78**	**295**			**Pn**	**10 50 46.4**	**+1.1**
TOIG						**Sn**	**10 51 26.3**	**-4.3**
TOIG	**Toxpalan**	**3.78**	**295**	*i* P		**Pn**	**10 50 46.4**	**+1.1**
TOIG				*e*S		**Sn**	**10 51 26.3**	**-4.3**
YOIG	**Yosondua**	**3.92**	**276**			**Pn**	**10 50 48.3**	**+1.1**
YOIG						**Sn**	**10 51 32.5**	**-1.5**
YOIG	**Yosondua**	**3.92**	**276**	*e*P		**Pn**	**10 50 48.3**	**+1.1**
YOIG				*e*S		**Sn**	**10 51 32.5**	**-1.5**
TPIG	**Tehuac#an**	**4.17**	**298**			**Pn**	**10 50 51.8**	**+1.5**
TPIG						**Sn**	**10 51 34.7**	**-5.1**
TPIG	**Tehuac#an**	**4.17**	**298**	*i* P		**Pn**	**10 50 51.8**	**+1.5**
TPIG				*e*S		**Sn**	**10 51 34.7**	**-5.1**
TXIG	**Tlaxiaco**	**4.18**	**281**			**Pn**	**10 50 52.1**	**+1.6**
TXIG						**Sn**	**10 51 34.7**	**-5.3**
TXIG	**Tlaxiaco**	**4.18**	**281**	*i* P		**Pn**	**10 50 52.1**	**+1.6**
TXIG				*e*S		**Sn**	**10 51 34.7**	**-5.3**
LVIG	**Laguna Verde**	**4.25**	**319**	*i* P		**Pn**	**10 50 51.8**	**+0.6**
LVIG				*e*S		**Sn**	**10 51 38.0**	**-3.4**
ESQI	**Esquipulas**	**4.43**	**115**			**Pn**	**10 50 52.2**	**-1.4**
PNIG	**Pinotepa**	**4.46**	**269**			**Pn**	**10 50 54.3**	**+0.3**
PNIG						**Sn**	**10 51 39.9**	**-6.3**
PNIG	**Pinotepa**	**4.46**	**269**	*e*P		**Pn**	**10 50 54.3**	**+0.3**
PNIG				*e*S		**Sn**	**10 51 39.9**	**-6.3**
MTO3	**Montecristo**	**4.49**	**117**			**Pn**	**10 50 52.9**	**-1.6**
FTIG	**Fresnillo de T**	**4.67**	**288**			**Pn**	**10 50 58.7**	**+2.0**
FTIG						**Sn**	**10 51 46.0**	**-5.2**
FTIG	**Fresnillo de T**	**4.67**	**288**	*e*P		**Pn**	**10 50 58.7**	**+2.0**
FTIG				*e*S		**Sn**	**10 51 46.0**	**-5.2**
TLIG	**Tlapa**	**4.98**	**283**			**Pn**	**10 51 02.8**	**+1.9**
UNM	**Universidad Na**	**6.11**	**298**	Pn		**Pn**	**10 51 16.4**	**+0.6**
TEIG	**Tepich**	**6.17**	**52**	Pn		**Pn**	**10 51 13.3**	**-3.0**
TGUH	**Tegucigalpa,Un**	**6.46**	**111**	Pn		**Pn**	**10 51 20.1**	**-0.2**
CNGN	**Cerro Negro**	**7.67**	**120**	Pn		**Pn**	**10 51 35.7**	**-0.5**
MOIG	**Morelia**	**7.99**	**294**	Pn		**Pn**	**10 51 41.1**	**+0.6**
ORTG	**Ortega, Santa**	**9.90**	**127**	Pn		**Pn**	**10 52 04.8**	**-0.9**
DUNO	**Dulce Nombre,**	**10.05**	**128**	Pn		**Pn**	**10 52 06.3**	**-1.2**
JTS	**Las Juntas de**	**10.34**	**126**	Pn		**Pn**	**10 52 09.2**	**-2.1**
RIMA	**Rio Macho**	**11.51**	**124**			**Pn**	**10 52 25.6**	**-1.1**
SOR	**Soroa**	**11.68**	**56**	Pn		**Pn**	**10 52 26.5**	**-2.1**
PEZE	**Perez Zeledon,**	**11.88**	**125**	Pn		**Pn**	**10 52 30.4**	**-1.1**
SRBA	**San Rafael, Bu**	**12.22**	**125**			**Pn**	**10 52 35.5**	**-0.4**
735A	**Kenedy**	**12.93**	**343**	Pn		**Pn**	**10 52 44.2**	**-0.4**
CDITO	**Canoas**	**13.00**	**126**			**Pn**	**10 52 45.0**	**-0.8**
BRU2	**Volcan**	**13.01**	**125**	Pn		**Pn**	**10 52 44.8**	**-1.2**
LCCY	**Blossom Villag**	**13.12**	**74**	Pn		**Pn**	**10 52 45.8**	**-1.3**
JCT	**Junction City**	**15.07**	**339**			**Pn**	**10 53 11.8**	**+0.4**
JCT				IAmb		IAmb	10 53 15.6	
	comp=Z,8.1nm,0.8s							
MTDJ	**Mount Denham**	**15.32**	**81**	P		**Pn**	**10 53 13.7**	**-1.0**
HPIG		**15.35**	**315**			**Pn**	**10 53 14.8**	**-0.4**
HPIG				IAmb		IAmb	10 53 20.8	
	comp=Z,10.0nm,1.0s							
TXAR	**Lajitas Array**	**15.84**	**326**	P		**P**	**10 53 24.4**	**+3.2**
	comp=Z,5.2nm,0.7s,baz=149,slow=13,SNR=58							
TXAR	**Lajitas Array**	**15.84**	**326**	P		**P**	**10 53 22.6**	**+1.3**
TX31	**Lajitas Ar. Si**	**15.84**	**326**	P		**P**	**10 53 23.4**	**+2.1**
TX32	**Lajitas Array**	**15.84**	**326**	P		**P**	**10 53 23.1**	**+1.8**
656A	**Willston**	**16.28**	**36**	P		**Pn**	**10 53 26.2**	**0.0**
ABTX	**Abilene, Hawle**	**17.00**	**342**	P		**Pn**	**10 53 36.1**	**+1.2**
ABTX				IAmb		IAmb	10 53 38.1	
	comp=Z,7.8nm,0.9s							
GTBY	**Guantanamo Bay**	**17.78**	**76**	P		**P**	**10 53 40.1**	**-2.4**
MIAR	**Mount Ida**	**17.97**	**360**	P		**P**	**10 53 44.4**	**-0.1**
OXF	**Oxford**	**18.30**	**11**	P		**P**	**10 53 48.3**	**+0.2**
OXF				IAmb		IAmb	10 53 49.9	
	comp=Z,12nm,1.0s							
CLNB	**Carlsbad**	**18.31**	**331**	P		**Pn**	**10 53 50.7**	**+0.3**
255A	**Hazlehurst**	**18.32**	**31**	P		**P**	**10 53 48.2**	**-0.1**
HTMS	**Hat Mesa**	**18.37**	**332**	P		**P**	**10 53 51.0**	**+1.9**
CLN7	**Carlsbad 7**	**18.40**	**331**	P		**P**	**10 53 51.4**	**+2.0**
X34A	**Smith Ranch, M**	**18.44**	**349**	P		**P**	**10 53 49.7**	**0.0**
X34A				IAmb		IAmb	10 54 13.1	
	comp=Z,10nm,1.2s							
GDL2	**Guadalupe Moun**	**18.49**	**330**	P		**Pn**	**10 53 52.8**	**+0.2**
154A	**Montrose**	**18.59**	**28**	P		**P**	**10 53 51.1**	**-0.1**
WMOK	**Wichita Mounta**	**18.77**	**346**	P		**P**	**10 53 53.9**	**+0.6**
SJCC	**San Jacinto, C**	**18.98**	**108**	*e*P		**P**	**10 53 56.0**	**+0.3**
GOGA	**Godfrey**	**19.11**	**26**	P		**P**	**10 53 56.4**	**-0.5**
FPAL	**Fort Paine**	**19.30**	**20**	P		**P**	**10 53 58.3**	**-0.6**
FPAL				IAmb		IAmb	10 54 03.0	
	comp=Z,6.9nm,0.7s							
MSTX	**Muleshoe**	**19.30**	**336**	P		**P**	**10 53 59.0**	**-0.1**
MSTX				IAmb		IAmb	10 54 05.1	
	comp=Z,10nm,0.8s							
OK025	**Westminster Rd**	**19.31**	**350**	P		**P**	**10 53 58.0**	**-1.1**
FCAR	**Ozark Folk Cen**	**19.35**	**3**	P		**P**	**10 53 59.2**	**-0.2**
AMTX	**Amarillo**	**19.73**	**340**	P		**P**	**10 54 05.1**	**+1.5**
SWET	**Sewanee**	**19.82**	**18**	P		**P**	**10 54 04.2**	**-0.4**
W50A	**Signal Mountai**	**20.00**	**20**	P		**P**	**10 54 05.6**	**-0.9**
W50A				IAmb		IAmb	10 54 12.4	
	comp=Z,6.1nm,0.8s							
OK044	**Pawnee Station**	**20.01**	**352**	P		**P**	**10 54 05.5**	**-1.1**
OK044				IAmb		IAmb	10 54 08.9	
	comp=Z,9.4nm,0.7s							
CBOC	**Ciudad Bolivar**	**20.11**	**120**	*e*P		**P**	**10 54 05.6**	**-2.5**
OK051	**E0350 and S346**	**20.15**	**352**	P		**P**	**10 54 09.2**	**+1.1**
OK051				IAmb		IAmb	10 54 10.3	
	comp=Z,11nm,0.8s							
GR1C	**Gorgona, Isla**	**20.16**	**130**	*e*P		**P**	**10 54 08.3**	**-0.1**
WVT	**Waverly**	**20.18**	**13**	P		**P**	**10 54 08.3**	**-0.1**
PLMC	**San Jos del P**	**20.43**	**122**	*e*P		**P**	**10 54 08.1**	**-3.2**
TUMC	**Tumaco**	**20.58**	**134**	*e*P		Pn	10 54 16.0	-1.6
319A	**Douglas**	**20.65**	**319**	P		**P**	**10 54 16.9**	**+3.4**
319A				IAmb		IAmb	10 54 17.8	
	comp=Z,11nm,0.9s							
YOTC	**Yotoco, Valle**	**20.92**	**125**	*e*P		**P**	**10 54 13.2**	**-3.4**
TKL	**Tuckaleechee C**	**20.95**	**23**	P		**P**	**10 54 15.9**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=192,slow=14,SNR=1.6							
	comp=Z,1.9nm,0.7s							
GUY2C	**Guyana, Caldas**	**21.00**	**120**	*e*P		**P**	**10 54 15.2**	**-2.7**
BNM	**Barren Site**	**21.18**	**329**	P		**P**	**10 54 22.2**	**+2.9**
SBM	**South Baldy**	**21.32**	**327**	P		**P**	**10 54 20.9**	**-0.1**
LENM	**Lemitar**	**21.37**	**328**	P		**P**	**10 54 23.5**	**+2.3**
URIC	**Uribia, Colomb**	**21.37**	**100**	*e*P		**P**	**10 54 18.1**	**-3.2**
BBAC	**Balboa, Cauca**	**21.50**	**130**	*e*P		**P**	**10 54 23.0**	**+0.1**
ANMO	**Albuquerque**	**21.73**	**330**	P		**P**	**10 54 26.5**	**+1.3**
	comp=Z,3.6nm,0.7s,baz=145,slow=12,SNR=18							
	comp=Z,3.6nm,0.7s							
ANMO	**Albuquerque**	**21.73**	**330**	P		**P**	**10 54 26.8**	**+1.6**
ORTC	**Ortega, Tolima**	**21.84**	**123**	*e*P		**P**	**10 54 24.1**	**-2.2**
PRAC	**Prado**	**22.25**	**123**	*e*P		**P**	**10 54 27.7**	**-2.6**
CHIC	**Chingaza**	**22.68**	**119**	*e*P		**P**	**10 54 31.5**	**-3.2**
GARC	**Garzon, Huila**	**22.70**	**127**	*e*P		**P**	**10 54 30.6**	**-4.2**
PIAT	**Ana Tenorio**	**22.97**	**138**	*e*P		**P**	**10 54 36.3**	**-1.0**
SDV	**Santo Domingo**	**23.52**	**106**	P		**P**	**10 54 40.0**	**-2.1**
	comp=Z,7.6nm,0.4s,baz=346,slow=8.7,SNR=4.4							
	comp=Z,7.6nm,0.4s							
BOSC	**San Juan Bosco**	**24.50**	**142**	P		**P**	**10 54 51.6**	**+0.6**
BOSC				IAmb		IAmb	10 54 53.4	
	comp=Z,8.4nm,0.9s							
MVCO	**Mesa Verde**	**24.53**	**330**	P		**P**	**10 54 52.9**	**+1.7**
MVCO				IAmb		IAmb	10 54 54.2	
	comp=Z,9.5nm,0.8s							
PV13	**Radium Mtn., P**	**25.45**	**331**	IAmb		IAmb	10 55 02.6	
	comp=Z,7.7nm,0.9s							
PV12	**Saucer Basin,**	**25.57**	**331**	P		**P**	**10 55 02.4**	**+2.0**
PV12				IAmb		IAmb	10 55 03.7	
	comp=Z,8.6nm,0.8s							
PV11	**David Mesa, Pa**	**25.59**	**331**	IAmb		IAmb	10 55 06.8	
	comp=Z,6.1nm,0.7s							
PFO	**Pinyon Flats O**	**26.80**	**314**	P		**P**	**10 55 12.7**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=112,slow=8.5,SNR=4.5							
	comp=Z,2.6nm,0.8s							
V12A	**Nelson**	**27.00**	**319**	P		**P**	**10 55 15.1**	**+1.9**
V12A				IAmb		IAmb	10 55 16.8	
	comp=Z,4.9nm,0.8s							
P17A	**Butcher Ranch,**	**27.40**	**330**	P		**P**	**10 55 14.5**	**-2.3**
P17A				IAmb		IAmb	10 55 19.7	
	comp=Z,4.2nm,0.9s							
ATAH	**Atahualpa**	**27.82**	**146**	P		**P**	**10 55 21.4**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=27,slow=5.1,SNR=3.7							
	comp=Z,3.7nm,0.6s							
MPU	**Maple Canyon**	**28.25**	**330**	P		**P**	**10 55 26.0**	**+1.6**
MPU				IAmb		IAmb	10 55 27.3	
	comp=Z,3.4nm,0.7s							
TCUT	**Toone Canyon**	**29.01**	**331**	IAmb		IAmb	10 55 34.2	
	comp=Z,5.1nm,0.9s							
PDAR	**Pinedale Array**	**29.57**	**336**	P		**P**	**10 55 36.7**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=139,slow=12,SNR=5.0							
	comp=Z,0.4nm,0.6s							
BGU	**Big Grassy Mou**	**29.63**	**329**	P		**P**	**10 55 38.9**	**+2.3**
BGU				IAmb		IAmb	10 55 39.

SKT	Skwentna	60.76	333	P	P	10 59 41.8	+1.3
PLCA	Paso Flores	60.80	160	P	P	10 59 40.6	-0.4
	comp=Z,1.7nm,0.9s,baz=322,slow=12,SNR=3.9						
	comp=Z,1.7nm,0.9s						
SEY	Seymchan	85.90	335	P	P	11 02 07.6	+0.2
	comp=Z,1.5nm,0.7s,baz=144,slow=3.5,SNR=4.8						
	comp=Z,1.5nm,0.7s						
KSH	Kashi	123.41	10	PKP	PKiKP	11 08 27.8	+3.2
WRA	Warramunga Arr	134.57	258	PKP	PKPdf	11 08 46.2	+0.3
	comp=Z,0.3nm,0.8s,baz=85,slow=2.6,SNR=7.2						
PZH	PanZhiHua	134.77	341	PKP	PKPdf	11 08 46.4	+0.1
ASAR	Alice Springs	135.09	253	PKP	PKPdf	11 08 46.7	-0.1
	comp=Z,0.3nm,0.8s,baz=72,slow=2.6,SNR=2.1						

IDC 21 11:04:04.5±8.2, 34°.41S×179°.42E, h180km±72km, mb2.8/2, mbtmp3.4/3, Error ellipse: s-maj=83.9km s-min=59.6km az=18.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	4.28	205	P	Pn	11 05 10.1	+1.1
	8.3nm,0.3s,baz=46,slow=18,SNR=36						
URZ				S	Sn	11 05 59.4	-0.2
	42nm,0.3s,baz=119,slow=19,SNR=34						
ASAR	Alice Springs	40.92	273	P	P	11 11 29.8	+0.4
	0.4nm,0.9s,baz=112,slow=7.3,SNR=6.9						
	0.4nm,0.9s						
WRA	Warramunga Arr	42.28	278	P	P	11 11 39.7	-0.7
	0.2nm,0.4s,baz=116,slow=7.7,SNR=5.1						
	0.2nm,0.4s						
BRTR	Keskin Array B	152.29	291	PKPbc	PKPbc	11 23 38.7	-0.3
	0.3nm,0.3s,baz=76,slow=1.0,SNR=1.7						

BER 21 11:27:46.4±1.5, 66°.85N×21°.20E, h0km, ML1.4, Suspected explosion

HEL 21 11:27:47.0±0.1, 67°.15N×20°.62E, h0km, ML1.5, ML2.0(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.04	212	*i* P	Pg	11 27 47.2	-0.5
MASU	Masugnsbyn	0.62	60	*i* P	Pg	11 27 57.7	-1.1
RATU	Laukkuluspa	0.78	330	*i* P	Pg	11 28 00.8	-1.1
RATU				*i* S	Sg	11 28 11.0	-1.0
SALU	Saltoluokta	0.85	287	*i* P	Pg	11 28 02.5	-0.8
ERTU	Ertsjaerv	0.86	133	*e*P	Pg	11 28 02.1	-1.4
ERTU				*e*SB	Sg	11 28 14.5	-0.2
NIKU	Nikkaluokta	0.94	320	*e*P	Pg	11 28 03.7	-1.4
PAJU	Pajala	0.98	96	*e*P	Pg	11 28 04.6	-1.2
PAJU				*e*SB	Sg	11 28 18.3	-0.2
HARU	Harads	1.00	172	*e*P	Pg	11 28 05.9	-0.3
LANU	Lannavaara	1.04	30	*e*PB	Pg	11 28 06.5	-0.4
LANU				*e*SB	Sg	11 28 20.5	0.0
KLF	Kolari	1.31	85	*e*P	Pg	11 28 10.4	-1.6
KLF				*e*S	Sg	11 28 27.3	-1.6
SJUU	Sjulsmark	1.70	166	*e*P	Pn	11 28 17.8	0.0
KALU	Kalix	1.70	139	*e*PN	Pn	11 28 18.1	+0.3
	baz=324						
KALU				*e*SN	Sg	11 28 41.9	+0.4
HEF	Hetta	1.71	41	*e*P	Pn	11 28 17.9	-0.2
HEF				*e*S	Sn	11 28 39.7	-0.9
HEF	Hetta	1.71	41	*e*P	Pn	11 28 17.2	-0.9
	baz=223						
HEF				MSG		11 28 37.5	
	comp=Z,2.0nm,0.2s						
HEF				*e*S	Sn	11 28 39.3	-1.3
TOF	Tornio	1.83	124	*e*PG	Pn	11 28 20.2	+0.6
TOF				MSG		11 28 41.9	
	comp=Z,2.7nm,0.2s						
TOF				*e*SN	Sb	11 28 44.5	-0.2
KIF	Kilpisjarvi	1.86	2	*e*P	Pn	11 28 20.9	+0.8
KIF	Kilpisjarvi	1.86	2	*e*PN	Pn	11 28 20.6	+0.5
KIF				MSG		11 28 42.7	
	comp=Z,3.3nm,0.2s						
KIF				*e*SG	Sb	11 28 46.1	+0.5
FAUS	Fauske	2.08	279	*e*P	Pn	11 28 24.0	+0.9
FAUS				*e*S	Sg	11 28 53.0	-0.9
FAUS				IAML		11 28 55.0	
	comp=Z,4.0nm,0.5s						
KTK1	Kautokeino	2.11	27	*e*P	Pn	11 28 23.8	+0.3
KTK1				*e*S	Sb	11 28 51.7	-1.1
KTK1				IAML		11 28 53.4	
	comp=Z,4.9nm,0.4s						
KTK1	Kautokeino	2.11	27	*e*PB	Pn	11 28 23.9	+0.4
KTK1				*e*SG	Sb	11 28 51.7	-1.1
RNF	Rovaniemi	2.20	102	*e*PB	Pn	11 28 25.5	+0.8
RNF				*e*SG	Sb	11 28 54.9	-0.4
STEI	Steigen	2.21	293	*e*P	Pb	11 28 27.8	+0.1
STEI				*e*S	Sg	11 28 57.2	-0.6
STEI				IAML		11 29 01.9	
	comp=Z,3.0nm,0.5s						
SGF	Sodankyl	2.31	80	*e*SG	Sb	11 28 58.0	-0.6
BURU	Burvik	2.60	173	*e*PB	Pn	11 28 32.0	+1.8
ARA0	ARCESS Array S	3.00	35	*e*P	Pn	11 28 36.6	+0.8
ARA0				*e*SG	Sb	11 29 18.5	+0.1
OUF	Merijarvi	3.27	147	*e*SB	Sb	11 29 24.0	-2.1
KEV	Kevo	3.52	39	*e*S	Sn	11 29 24.6	-0.5
OLKF	Oulanka, Finla	3.58	99	*e*SB	Sn	11 29 30.3	+3.6
MSF	Maaselka	3.59	106	*e*P	Pn	11 28 43.2	-0.7
VAF	Ylistaro	4.22	167	*e*S	Sn	11 29 42.6	+0.3

MAN 21 11:28:34.9, 10°.97N×122°.20E, h6km, mb4.6, ML3.4, MS3.3, 11C-5D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	0.52	131⇓	*e*P	Pg	11 28 43.3	-1.5
GUIM				*e*S	Sg	11 28 50.7	-0.9
RCP	Roxas	0.80	42⇑	*e*P	Pg	11 28 49.6	-0.7
RCP				*i* S	Sn	11 29 05.6	+0.7
CUYO	Cuyo Island	1.16	264⇓	*e*P	Pg	11 28 56.1	-1.1
CUYO				*e*S	Sg	11 29 12.3	-0.1
CNOP	Candoni, Negro	1.22	159⇑	*i* P	Pg	11 28 55.5	-2.8
OTRP	Odiongan	1.40	353⇑	*e*P	Pn	11 29 00.5	-0.4
OTRP				*e*S	Sg	11 29 21.3	+1.5
SJMP	San Jose	1.82	325⇑	*e*P	Pn	11 29 06.2	-0.6
LLP	Lapu-Lapu	1.86	110⇓	*e*P	Pn	11 29 06.7	-0.6
LLP				*e*S	Sn	11 29 31.7	+0.6
TBP	Tagbilaran	2.07	128	*e*P	Pn	11 29 09.4	-0.9
TBP				*i* S	Sn	11 29 35.0	-1.4
BUSP	Coron	2.21	298⇑	*e*P	Pn	11 29 11.9	-0.3
TABP	Talibon, Bohol	2.27	112⇑	*e*P	Pn	11 29 13.5	+0.4
TABP				*i* S	Sn	11 29 40.6	-0.8
LSIP	Lazi, Siquijor	2.31	142⇑	*e*P	Pn	11 29 13.4	-0.1
GHBP	Garcia Hernand	2.48	122⇑	*e*P	Pn	11 29 17.2	+1.3
GHBP				*i* S	Sb	11 29 50.5	-0.2
MSLP	Maasin	2.75	107⇓	*e*P	Pn	11 29 20.7	+1.2
CNP	Cataman	2.86	57⇓	*e*P	Pn	11 29 23.0	+1.9
CNP				*e*S	Sb	11 30 00.9	-0.8
LQP	Lukban	3.19	348⇑	*e*P	Pn	11 29 27.1	+1.2
PAGZ	Pagadian	3.31	159⇑	*e*P	Pn	11 29 29.4	+2.1
PAGZ				*e*S	Sn	11 30 08.9	+1.8
LUBP	Lubang	3.34	325⇑	*e*P	Pn	11 29 28.3	+0.5
LUBP				*e*S	Sn	11 30 09.4	+1.6
CGP	Cagayan de Oro	3.51	135	*e*P	Pg	11 29 47.0	+4.8

HEL 21 11:28:47.3±0.1, 64°.01N×28°.12E, h0km, ML1.6, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	Romuvaara	0.82	74	PG	Pg	11 29 02.6	-0.4
RMF				SG	Sg	11 29 12.7	-1.0
OUL	Oulu	1.45	319	*e*SB	Pn	11 29 13.9	-0.8
OUL	Oulu	1.45	319	PN	Pn	11 29 13.9	-0.8
OUF	Merijarvi	1.53	285	PG	Pn	11 29 14.8	-1.0
OUF				MSG		11 29 33.2	
	comp=Z,6.0nm,0.2s						
OUF				SN	Sn	11 29 37.8	+1.4
OBF4	Vikkela, Lumij	1.54	303	*e*SB	Pn	11 29 15.3	-0.7
OBF4	Vikkela, Lumij	1.54	303	PG	Pn	11 29 15.3	-0.7
	baz=116						
OBF0	Syolatti, Pyha	1.77	288	*e*SB	Pn	11 29 18.9	-0.2
OBF0	Syolatti, Pyha	1.77	288	PG	Pn	11 29 18.9	-0.2
JOF	Joensuu	1.80	126	PG	Pn	11 29 18.9	-0.7
	baz=304						
MSF	Maaselka	1.95	11	PG	Pn	11 29 22.4	+0.8
	baz=195						
MSF	Maaselka	1.95	11	*e*S	Pn	11 29 22.4	+0.8
KAF	Kangasniemi	2.07	204	PN	Pn	11 29 23.5	+0.2
KAF				MSG		11 29 49.0	
	comp=Z,2.6nm,0.2s						
KAF				SG	Sb	11 29 51.9	-0.2
OBF8	Ulkokalla	2.07	281	PG	Pn	11 29 24.1	+0.8
KU6	Riekki	2.16	20	PG	Pb	11 29 26.2	-1.1
KU6				MSG		11 29 51.3	
	comp=Z,1.1nm,0.2s						
KEF	Keuruu	2.37	220	PB	Pn	11 29 28.6	+1.3
KEF				MSG		11 29 57.3	
	comp=Z,2.3nm,0.2s						
KEF				SB	Sb	11 29 59.2	-1.2
OLKF	Oulanka, Finla	2.38	13	PG	Pb	11 29 29.6	-1.5
VAF	Ylistaro	2.63	251	PB	Pn	11 29 32.7	+1.8
VAF				MSG		11 30 04.8	
	comp=Z,2.7nm,0.2s						
VAF				SG	Sb	11 30 07.0	-1.0
TOF	Tornio	2.63	324	PB	Pn	11 29 31.8	+0.8
	baz=142						
TOF				MSG		11 30 04.8	
	comp=Z,1.3nm,0.2s						
RNF	Rovaniemi	2.76	342	PG	Pb	11 29 35.1	-2.3
BURU	Burvik	3.00	284	PG	Pb	11 29 41.8	+0.3
UMAU	Umeaa	3.29	271	PN	Pn	11 29 39.7	-0.3
KLF	Kolari	3.67	334	SG	Sb	11 30 39.8	+1.9
PAJU	Pajala	3.68	328	SG	Sb	11 30 40.2	+2.1
HEMU	Hemsoen	4.74	258	PN	Pn	11 29 59.7	-0.1

IDC 21 11:42:57.7±0.8, 14°.73S×173°.35W, h0km, mb3.9/8, mbtmp3.9/8, MS3.4/5, Error ellipse: s-maj=43.3km s-min=17.4km az=144.0
NEIC 21 11:43:01.6±1.4, 14°.64S±0°.08×173°.22W±0°.07, h33km±6km, mb4.2/7, Error ellipse: s-maj=13.1km s-min=7.7km az=145.0

ISC 21 11:43:01.7±0.6, 14°.69S±0°.09×173°.24W±0°.08, h35km, n36, σ1§66/25, mb4.2/13, MS3.5/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.62	61	Pn	Pn	11 43 27.5	-0.3
	99nm,0.3s,baz=240,slow=8.1,SNR=92						
AFI				Sn	Sn	11 43 43.9	-3.6
	216nm,0.3s,baz=279,slow=19,SNR=13						
NIUE	Niue	5.39	144		Pn	11 44 17.4	-2.2
MSVF	Nonsavu	8.89	249	Pn	Pn	11 45 07.4	-0.5
FUNA	Funafuti	9.61	309	Pn	Pn	11 45 15.4	-2.2
RAR	Rarotonga	14.36	119	LR	LR	11 51 04.2	
	comp=Z,34nm,20.4s,baz=259,slow=34						
PPT	Papeete	22.91	100	LR	LR	11 54 11.7	
	comp=Z,35nm,21.0s,baz=358,slow=29						
URZ	Urewera	24.98	198	P	P	11 48 22.1	+0.1
	12nm,0.9s,baz=349,slow=5.2,SNR=2.3						
URZ				LR	LR	11 56 41.4	
	comp=Z,101nm,18.7s,baz=94,slow=33						
	12nm,0.9s						
BKZ	Black Stump Fm	26.00	198	P	P	11 48 31.3	-0.1
HNR	Honiara	26.72	278	LR	LR	11 57 07.2	
	comp=Z,705nm,19.9s,baz=60,slow=32						
H11S2	WAKE ISLAND Hy	38.44	328	T	T	12 31 01.1	
	baz=147,slow=76,SNR=4.9						
H11S3	WAKE ISLAND Hy	38.45	328	T	T	12 31 02.2	
	baz=147,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	38.46	328	T	T	12 30 58.5	
	baz=147,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	39.38	330	T	T	12 33 01.0	
	baz=149						
H11N1	WAKE ISLAND Hy	39.38	330	T	T	12 33 21.0	
	baz=149						
H11N2	WAKE ISLAND Hy	39.40	330	T	T	12 32 59.0	
	baz=149						
WB0	Warramunga Arr	50.12	256	P	P	11 51 53.5	-0.4
WB0				IAmb	IAmb	11 51 54.4	
	comp=Z,3.5nm,0.9s						
WB2	Warramunga Arr	50.15	256	P	P	11 51 53.8	-0.3
WB2				IAmb	IAmb	11 52 00.1	
	comp=Z,6.6nm,1.2s						
WRA	Warramunga Arr	50.16	256	P	P	11 51 53.7	-0.5
	comp=Z,0.8nm,0.5s,baz=91,slow=6.9,SNR=20						
WRA				PcP	PcP	11 53 15.3	+1.9
	comp=Z,0.3nm,0.6s,baz=93,slow=3.6,SNR=2.3						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	50.16	256	P	P	11 51 52.9	-1.3
AS31	Alice Springs	50.48	251	P	P	11 51 55.1	-1.5
AS31				IAmb	IAmb	11 51 56.9	
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	50.48	251	P	P	11 51 56.0	-0.6
	comp=Z,5.6nm,0.6s,baz=86,slow=8.1,SNR=114						
	comp=Z,5.6nm,0.6s						
LPIG	La Paz	72.54	59	LR	LR	12 20 56.4	
	comp=Z,34nm,19.6s,baz=279,slow=31						
NVAR	Mina Array Bea	73.70	42	P	P	11 54 34.9	+2.5
	comp=Z,0.5nm,0.7s,baz=229,slow=9.1,SNR=6.2						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	73.70	42	P	P	11 54 31.8	-0.6
QSPA	South Pole Qui	75.35	180	P	P	11 54 42.4	+1.0
QSPA				IAmb	IAmb	11 54 43.8	
	comp=Z,3.1nm,0.9s						
R11A	Troy Canyon, C	75.44	43	P	P	11 54 42.2	-0.2
R11A				IAmb	IAmb	11 54 55.4	
	comp=Z,1.3nm,1.4s						
TXAR	Lajitas Array	80.09	56	P	P	11 55 11.2	+2.8
	comp=Z,0.3nm,0.8s,baz=208,slow=7.1,SNR=2.4						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	81.64	42	P	P	11 55 18.0	+1.5
	comp=Z,0.2nm,0.4s,baz=217,slow=2.8,SNR=1.8						
	comp=Z,0.2nm,0.4s						
ILAR	Eielson Array	81.73	11	P	P	11 55 16.8	+0.6
	comp=Z,0.5nm,0.8s,baz=223,slow=4.7,SNR=4.9						
	comp=Z,0.5nm,0.8s						
H03S2	Juan Fernandez	85.46	124	T	T	13 30 19.0	
	baz=251						
H03S1	Juan Fernandez	85.48	124	T	T	13 30 24.6	
	baz=251						
H03S3	Juan Fernandez	85.48	124	T	T	13 30 15.8	
	baz=251						
MAW	Mawson	88.51	199	P	P	11 55 52.1	+1.8
	comp=Z,0.9nm,0.6s,baz=112,slow=5.4,SNR=1.7						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	123.93	352	PKP	PKiKP	12 01 57.6	+1.7
	comp=Z,2.1nm,1.0s,baz=31,slow=2.8,SNR=6.1						
GERES	GERESS Array B	145.47	352	PKPbc	PKiKP	12 02 38.5	-1.7
	comp=Z,0.9nm,0.6s,baz=19,slow=4.5,SNR=7.5						
BRTR	Keskin Array B	145.70	322	PKPbc	PKiKP	12 02 39.3	-1.8
	comp=Z,0.8nm,0.5s,baz=111,slow=2.8,SNR=4.5						

NEIC 21 11:55:28.9±1.2, 18°.70N±0°.09×145°.4E±0°.1, h222km±8km, mb4.3/107, Error ellipse: s-maj=17.9km s-min=12.4km az=99.0
IDC 21 11:55:29.7±2.5, 18°.68N×145°.55E, h238km±24km, mb3.6/16, mbtmp4.2/19, Error ellipse: s-maj=18.0km s-min=10.9km az=89.0

ISC 21 11:55:26.2±0.4, 18°.72N±0°.05×145°.48E±0°.08, h200km, n156, σ1§06/152, mb4.3/69, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.13	187	P	Pn	11 56 45.8	+3.4
	51nm,0.9s,baz=9.0,slow=19,SNR=2.2						
GUMO				S	Sn	11 57 43.8	+1.3
	25nm,0.3s,baz=343,slow=19,SNR=1.8						
GUMO	Guam	5.13	187		Pn	11 56 45.1	+2.7
JOW	Kunigami	17.79	300	P	Pn	11 59 23.0	+1.1
	13nm,0.8s,baz=148,slow=18,SNR=2.9						
JOW	Kunigami	17.79	300	P	P	11 59 19.6	-0.3
MJAR	Matsushiro Arr	18.88	342	P	P	11 59 33.1	+1.5
	0.5nm,0.4s,baz=164,slow=10,SNR=2.2						
MAJO	Matsushiro	18.88	342	P	P	11 59 32.6	+1.1
MJB9	Matsu-Tunnel	18.88	342	P	P	11 59 32.6	+1.0
MJB9				IAmb	IAmb	11 59 54.8	
	comp=Z,8.2nm,1.3s						
JNU	Nakatsue	19.42	320	P	P	11 59 39.1	+1.7
H11S3	WAKE ISLAND Hy	20.10	87	T	T	12 21 05.6	
	baz=269						
H11S1	WAKE ISLAND Hy	20.11	87	T	T	12 21 03.3	
	baz=269						
H11S2	WAKE ISLAND Hy	20.12	87	T	T	12 21 15.9	
	baz=269						
H11N1	WAKE ISLAND Hy	20.24	84	T	T	12 21 30.8	
	baz=267						
H11N2	WAKE ISLAND Hy	20.25	84	T	T	12 21 37.8	
	baz=267						
H11N3	WAKE ISLAND Hy	20.26	84	T	T	12 21 27.3	
	baz=267						
KSRS	Korea Array	24.18	324	pP	pP	12 01 12.2	+11
	comp=Z,1.8nm,0.8s,baz=140,slow=8.6,SNR=4.1						
FAKI	Fak Fak	25.14	213	P	P	12 00 33.1	0.0
FAKI	Fak Fak	25.14	213	P	P	12 00 33.7	+0.5
TOLI2	Tolitoli	29.89	237	P	P	12 01 13.3	-2.1
TOLI2				IAmb	IAmb	12 01 17.1	
	comp=Z,7.2nm,1.2s						
SAUI	Saumlaki	29.99	209	P	P	12 01 15.9	-0.4
KLR	Kul'dur	32.39	343	P	P	12 01 37.4	+0.4
	comp=Z,0.8nm,0.4s,baz=164,slow=7.4,SNR=4.7						
	comp=Z,0.8nm,0.4s						
MTN	Manton Dam	34.41	205	P	P	12 01 54.1	-0.6
MTN	Manton Dam	34.41	205	P	P	12 01 54.4	-0.3
MIDW	Midway	35.24	67	P	P	12 02 01.9	0.0
SBUM	Sibu	36.36	248	P	P	12 02 09.7	-1.8
SBUM				IAmb	IAmb	12 02 13.3	
	comp=Z,2.7nm,0.5s						
KNRA	Kununurra	37.94	207	P	P	12 02 23.6	-1.0
KNRA				IAmb	IAmb	12 02 26.3	
	comp=Z,9.8nm,0.8s						
KNRA	Kununurra	37.94	207	P	P	12 02 24.6	0.0
CTAO	Charters Tower	38.57	179	P	P	12 02 29.8	-0.1
CTAO				IAmb	IAmb	12 03 05.5	
	comp=Z,12nm,1.2s						
PLAI	Plampang	38.68	227	P	P	12 02 30.8	-0.1
QIS	Mount Isa	39.46	189	P	P	12 02 38.0	+0.8
WB0	Warramunga Arr	39.76	196	P	P	12 02 39.6	-0.2
WB0				IAmb	IAmb	12 02 40.4	
	comp=Z,16nm,1.1s						
WR0	Warramunga Arr	39.91	196	P	P	12 02 41.0	0.0
WR0				IAmb	IAmb	12 02 42.1	
	comp=Z,10.0nm,1.1s						
WRAB	Tennant Creek	39.93	196	P	P	12 02 41.0	-0.1
WRAB				IAmb	IAmb	12 02 41.8	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	39.93	196	P	P	12 02 41.3	+0.1
WB2	Warramunga Arr	39.94	196	P	P	12 02 41.1	-0.2
WRA	Warramunga Arr	39.95	196	P	P	12 02 41.0	-0.2
	comp=Z,4.4nm,0.4s,baz=19,slow=8.1,SNR=141						
WRA				PcP	PcP	12 04 41.3	-1.3
	comp=Z,0.3nm,0.4s,baz=23,slow=3.7,SNR=2.3						
	comp=Z,4.4nm,0.4s						
WRA	Warramunga Arr	39.95	196	P	P	12 02 40.4	-0.9
SONM	Songino Array	43.00	321	P	P	12 03 06.5	+0.5
	comp=Z,0.3nm,0.4s,baz=138,slow=9.1,SNR=2.1						
SONM				PcP	PP	12 04 51.3	+1.3
	comp=Z,0.5nm,0.8s,baz=114,slow=4.6,SNR=2.1						
	comp=Z,0.3nm,0.4s						
AS01	Alice Springs	43.60	195	P	P	12 03 10.7	-0.2
AS31	Alice Springs	43.61	195	P	P	12 03 10.6	-0.4
ASAR	Alice Springs	43.62	195	P	P	12 03 10.6	-0.4
	comp=Z,1.4nm,0.4s,baz=10,slow=7.3,SNR=71						
	comp=Z,1.4nm,0.4s						
CMAR	Chiang Mai Arr	44.02	277	P	P	12 03 15.4	+1.1
	comp=Z,0.9nm,0.3s,baz=74,slow=6.7,SNR=1.5						
	comp=Z,0.9nm,0.3s						
DZM	Mont Dzumac	45.43	152	P	P	12 03 25.1	-0.3
WRKA	Warakurna	46.60	202	P	P	12 03 34.3	-0.2
MBWA	Marble Bar	46.98	214	P	P	12 03 37.5	+0.1
MBWA				IAmb	IAmb	12 04 01.0	
	comp=Z,17nm,1.4s						
OOD	Oodnadatta	47.20	192	P	P	12 03 40.0	+1.0
PSA00	Pilbara Seismi	47.26	213	P	P	12 03 38.7	-0.8
PSA00				IAmb	IAmb	12 03 40.1	
	comp=Z,12nm,1.2s						
LCRK	Leigh Creek	49.38	188	P	P	12 03 54.9	-0.7
MULG	Mulgathing	49.94	193	P	P	12 03 59.9	0.0
STKA	Stephens Creek	50.44	184	P	P	12 04 02.4	-1.2
	comp=Z,1.0nm,0.3s,baz=1.3,slow=10.0,SNR=3.6						
	comp=Z,1.0nm,0.3s						
UNV	Unalaska Valle	50.75	35	P	P	12 04 06.7	+1.0
AKUT	Akutan	51.27	35	P	P	12 04 10.1	+0.6
FORT	Forrest	51.99	199	P	P	12 04 14.9	-0.2
MORW	Morawa	55.37	212	P	P	12 04 39.5	-0.1
TOO	Toolangi	55.99	180	P	P	12 04 43.8	-0.1
ZALV	Zalesovo Beam	57.88	323	PcP	PcP	12 05 45.0	-2.1
	comp=Z,0.3nm,0.4s,baz=114,slow=3.5,SNR=2.2						
MK31	Makanchi Array	58.30	314	P	P	12 04 59.4	-0.7
MKAR	Makanchi Array	58.30	314	P	P	12 05 00.0	-0.1
	comp=Z,0.7nm,0.5s,baz=89,slow=8.1,SNR=11						
MKAR				PcP	pP	12 05 47.6	+3.1
	comp=Z,0.2nm,0.6s,baz=79,slow=4.1,SNR=1.6						
MKAR				pP	pwP	12 05 54.4	+4.9
	comp=Z,0.4nm,0.6s,baz=99,slow=8.9,SNR=2.6						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	58.30	314	P	P	12 04 59.5	-0.6
N19K	Bonanza Creek	59.33	30	P	P	12 05 08.8	+1.7
N19K				IAmb	IAmb	12 05 47.7	
	comp=Z,9.5nm,1.1s						
L19K	White Mountain	59.58	28	P	P	12 05 10.0	+1.3
L19K				IAmb	IAmb	12 05 22.2	
	comp=Z,9.5nm,1.4s						
K20K	Telida	60.30	27	P	P	12 05 15.0	+1.5
K20K				IAmb	IAmb	12 05 22.3	
	comp=Z,8.7nm,1.4s						
J20K	Nowinta River	60.53	26	P	P	12 05 16.2	+1.2
CNPM	China Poot	60.55	32	P	P	12 05 15.5	+0.2
PPLA	Purkeypile	60.98	28	P	P	12 05 19.3	+1.1
SKT	Skwentna	61.02	29	P	P	12 05 18.6	+0.1
SKT				IAmb	IAmb	12 05 55.1	
	comp=Z,8.5nm,1.2s						
CAST	Castle Rocks	61.17	27	P	P	12 05 20.3	+0.9
CAST				IAmb	IAmb	12 05 20.9	
	comp=Z,3.6nm,0.6s						
SUA	Susitna One	61.25	29	P	P	12 05 20.9	+0.8
IMAR	Indian Mountai	61.28	24	P	P	12 05 21.5	+1.4
NRIK	Noril'sk	61.52	340	P	P	12 05 21.0	-0.6
	comp=Z,2.8nm,0.4s,baz=106,slow=8.7,SNR=5.2						
	comp=Z,2.8nm,0.4s						
H21K	Melozitna Rive	61.55	25	P	P	12 05

SCRK	**Sand Creek**	**64.81**	**27**	P	**P**	**12 05 44.0**	**+0.5**
J26L	**Joseph Creek**	**65.08**	**27**	P	**P**	**12 05 45.4**	**+0.3**
BMAR	**Burnt Mountain**	**65.18**	**24**	P	**P**	**12 05 47.1**	**+1.4**
I26K	**Coal Creek Min**	**65.37**	**26**	P	**P**	**12 05 46.6**	**-0.3**
I26K				IAmb	IAmb	12 06 25.8	
	comp=Z,6.7nm,1.4s						
L27K	**Beaver Creek,**	**65.64**	**29**	P	**P**	**12 05 49.5**	**+0.8**
K27K	**Chicken**	**65.65**	**27**	P	**P**	**12 05 49.8**	**+1.1**
K27K				IAmb	IAmb	12 05 56.9	
	comp=Z,5.4nm,1.4s						
BCAR	**Beaver Creek A**	**65.66**	**29**	P	**P**	**12 05 49.6**	**+0.8**
EGAK	**Eagle**	**66.14**	**27**	P	**P**	**12 05 52.9**	**+1.1**
EGAK				IAmb	IAmb	12 06 09.2	
	comp=Z,8.2nm,1.4s						
BRVK	**Borovoye**	**66.39**	**320**	P	**P**	**12 05 51.7**	**-2.0**
KK31	**Karatay Array**	**66.60**	**310**	P	**P**	12 05 52.4	-2.8
KKAR	**Karatay Array**	**66.60**	**310**	P	**P**	**12 05 52.9**	**-2.3**
DAWY	**Dawson**	**66.83**	**28**	P	**P**	**12 05 57.2**	**+0.9**
DAWY				IAmb	IAmb	12 06 34.3	
	comp=Z,9.9nm,1.5s						
I29M	**Ogilvie Camp,**	**67.40**	**26**	P	**P**	**12 06 00.5**	**+0.7**
M30M	**Minto, Yukon**	**67.91**	**29**	P	**P**	**12 06 04.0**	**+1.0**
N31M	**Braeburn, Yuko**	**68.36**	**30**	P	**P**	**12 06 07.2**	**+1.3**
SKAG	**Skagway**	**68.59**	**33**	P	**P**	**12 06 08.6**	**+1.4**
SKAG				IAmb	IAmb	12 06 18.7	
	comp=Z,12nm,1.4s						
M31M	**Drury Creek, Y**	**69.03**	**30**	P	**P**	**12 06 10.6**	**+0.6**
M31M				IAmb	IAmb	12 06 22.1	
	comp=Z,7.0nm,1.4s						
JIS	**Juneau Island**	**69.11**	**34**	P	**P**	**12 06 11.9**	**+1.5**
INK	**Inuvik**	**69.43**	**23**	P	**P**	**12 06 12.2**	**0.0**
	comp=Z,3.0nm,0.8s,baz=288,slow=2.9,SNR=9.1						
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**69.43**	**23**	P	**P**	**12 06 12.5**	**+0.3**
INK				IAmb	IAmb	12 06 39.9	
	comp=Z,8.8nm,1.3s						
FARO	**Faro, Yukon**	**69.51**	**30**	P	**P**	**12 06 13.4**	**+0.5**
FARO				IAmb	IAmb	12 06 44.4	
	comp=Z,5.5nm,1.3s						
P33M	**Teslin, Yukon**	**69.84**	**32**	P	**P**	**12 06 15.7**	**+0.6**
P33M				IAmb	IAmb	12 06 26.9	
	comp=Z,12nm,1.4s						
DLBC	**Dease Lake**	**71.39**	**34**	P	**P**	**12 06 25.3**	**+0.9**
DLBC				IAmb	IAmb	12 06 25.8	
	comp=Z,11nm,1.5s						
C36M	**Paulatuk**	**72.81**	**22**	P	**P**	**12 06 32.3**	**-0.1**
ABKAR	**Akbulak array**	**73.19**	**317**	P	**P**	**12 06 33.4**	**-1.7**
GEYT	**Alibeck**	**76.72**	**306**	P	**P**	**12 06 55.6**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=65,slow=6.8,SNR=2.0						
	comp=Z,1.0nm,0.4s						
EUNU	**Eureka**	**77.73**	**8**	P	**P**	**12 06 58.8**	**-1.7**
EUNU				IAmb	IAmb	12 07 04.4	
	comp=Z,9.6nm,1.4s						
YKA	**Yellowknife Ar**	**78.07**	**28**	P	**P**	**12 07 02.1**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=288,slow=5.8,SNR=7.1						
	comp=Z,1.1nm,0.6s						
LTY	**Liberty**	**79.03**	**44**	P	**P**	**12 07 08.4**	**+0.2**
LTY				IAmb	IAmb	12 07 08.9	
	comp=Z,2.4nm,0.6s						
B08A	**Colville Reser**	**79.60**	**42**	P	**P**	**12 07 11.8**	**+0.6**
B08A				IAmb	IAmb	12 07 11.9	
	comp=Z,3.0nm,0.7s						
PINE	**Pine Mountain**	**79.80**	**47**	P	**P**	**12 07 13.4**	**+0.8**
PINE				IAmb	IAmb	12 07 14.6	
	comp=Z,4.7nm,0.7s						
K05A	**Summer Lake**	**80.12**	**48**	P	**P**	**12 07 15.4**	**+1.0**
K05A				IAmb	IAmb	12 07 15.6	
	comp=Z,4.6nm,0.7s						
BEKR	**Beckworth**	**81.33**	**51**	P	**P**	**12 07 20.9**	**+0.1**
BEKR				IAmb	IAmb	12 07 21.7	
	comp=Z,3.5nm,0.7s						
J08A	**Circle Bar Ran**	**81.64**	**47**	P	**P**	**12 07 22.8**	**+0.5**
CMB	**Columbia Colle**	**81.85**	**53**	P	**P**	**12 07 24.0**	**+0.6**
CMB				IAmb	IAmb	12 07 24.5	
	comp=Z,2.5nm,0.6s						
PNTR	**Pine Nut**	**82.12**	**52**	P	**P**	**12 07 25.0**	**-0.1**
PNTR				IAmb	IAmb	12 07 26.7	
	comp=Z,6.0nm,0.7s						
ARCES	**ARCESS Array B**	**82.41**	**342**	P	**P**	**12 07 25.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=83,slow=7.6,SNR=1.8						
	comp=Z,1.4nm,0.8s						
LHV	**Little Huntoon**	**83.19**	**52**	P	**P**	**12 07 29.2**	**-1.0**
LHV				IAmb	IAmb	12 08 03.9	
	comp=Z,5.4nm,1.5s						
KVN	**Kaiserville**	**83.24**	**51**	P	**P**	**12 07 30.8**	**0.0**
KVN				IAmb	IAmb	12 07 31.4	
	comp=Z,2.7nm,0.7s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**12 07 30.9**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=265,slow=6.0,SNR=36						
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**12 07 30.2**	**-0.8**
DSP	**Deep Springs**	**83.88**	**53**	P	**P**	**12 07 34.8**	**+1.1**
LCH	**Last Change Ra**	**84.16**	**53**	P	**P**	**12 07 35.7**	**+0.2**
TPH	**Tonopah**	**84.21**	**52**	P	**P**	**12 07 36.1**	**+0.4**
HLID	**Hailey**	**84.36**	**46**	P	**P**	**12 07 36.6**	**+0.3**
GMN	**Gold Mountain**	**84.43**	**53**	P	**P**	**12 07 36.9**	**0.0**
WCT	**Wildcat Mounta**	**85.08**	**53**	P	**P**	**12 07 39.3**	**-0.6**
WCT				IAmb	IAmb	12 07 40.8	
	comp=Z,2.9nm,0.8s						
TPNV	**Topopah Spring**	**85.31**	**53**	P	**P**	**12 07 41.1**	**-0.1**
TPNV				IAmb	IAmb	12 07 42.0	
	comp=Z,3.1nm,0.6s						
SPUT	**South Promonto**	**86.53**	**48**	P	**P**	**12 07 46.9**	**-0.2**
SPUT				IAmb	IAmb	12 08 27.4	
	comp=Z,5.2nm,1.1s						
FINES	**FINESS Array B**	**86.78**	**335**	P	**P**	**12 07 45.8**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=58,slow=4.8,SNR=12						
	comp=Z,1.2nm,0.4s						
V12A	**Nelson**	**86.79**	**53**	P	**P**	**12 07 47.9**	**-0.5**
HWUT	**Hardware Ranch**	**87.03**	**47**	P	**P**	**12 07 49.4**	**-0.1**
MTPU	**Mount Pierson**	**87.94**	**51**	P	**P**	**12 07 53.0**	**-1.1**
PDAR	**Pinedale Array**	**87.96**	**45**	P	**P**	**12 07 53.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=253,slow=2.0,SNR=4.6						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.96**	**45**	P	**P**	12 07 52.1	-1.8
PV21	**Cone Mtn., Par**	**90.06**	**49**	P	**P**	**12 08 03.7**	**-0.2**
PV21				IAmb	IAmb	12 08 26.6	
	comp=Z,3.2nm,1.1s						
PV14	**Lion Creek, Pa**	**90.10**	**49**	P	**P**	**12 08 04.0**	**-0.1**
PV14				IAmb	IAmb	12 08 04.9	
	comp=Z,5.8nm,1.0s						
PV11	**David Mesa, Pa**	**90.24**	**49**	P	**P**	**12 08 04.8**	**+0.1**
PV03	**Paradox Valley**	**90.28**	**49**	P	**P**	**12 08 04.6**	**-0.3**
LPAZ	**La Paz**	**147.88**	**91**	PKPbc	**PKPdf**	**12 14 48.0**	**+2.0**
	comp=Z,2.0nm,0.5s,baz=311,slow=3.8,SNR=8.8						

IDC 21 12:31:55.5±999.0, 46°.35N×7°.58E, h0km, Error ellipse: s-maj=629.3km s-min=105.2km az=56.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**4.85**	**57**	I		13 01 00.0	
	0.1nm,0.6s,baz=241,slow=318,SNR=1.5						
I43RU	**DUBNA INFRASON**	**20.99**	**50**	I		14 40 20.0	
	baz=253,slow=330,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	**33.23**	**64**	I		15 56 40.0	
	baz=282,slow=337,SNR=1.1						

JMA 21 12:48:53.7±0.1, 37°.4N±0°.4×140°.5E±0°.5, h86km, MV0.9/26, MID FUKUSHIMA PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOTO	**OTAMA OYAMA**	**0.24**	**318**	*eP*	Pn	12 49 06.3	-0.1
JOTO				*eS*	Sn	12 49 15.8	0.0
JFK	**Kawauchi**	**0.27**	**93**	P	Pn	12 49 06.5	0.0
JFK				*eS*	Sn	12 49 15.8	-0.3
JFFD	**Fukushimafurud**	**0.29**	**176**	P	Pn	12 49 06.6	-0.1
JFFD				*eS*	Sn	12 49 16.1	-0.1
JMM	**Marumori**	**0.52**	**23**	*eP*	Pn	12 49 08.5	+0.3
JMM				*eS*	Sn	12 49 19.3	+0.3
JAG	**Ashikaga**	**1.29**	**223**	*eP*	Pn	12 49 17.1	+0.5
JAG				*eS*	Sn	12 49 35.6	+1.7

JMA 21 12:49:05.9±0.1, 38°.3N±0°.3×141°.9E±0°.5, h43km, MV1.5/31, E OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.32**	**269**	P	Pn	12 49 14.5	-0.1
JIKH				S	Sn	12 49 20.6	-0.2
JIO	**Ouri**	**0.44**	**289**	P	Pn	12 49 15.9	0.0
JIO	**Ouri**	**0.44**	**289**	P	Pn	12 49 15.9	0.0
JIO				*eS*	Sn	12 49 23.0	0.0
JKMT	**Kesennumamotoy**	**0.59**	**328**	P	Pn	12 49 17.9	0.0
JKMT				*eS*	Sn	12 49 26.3	-0.1
OFUJ	**Ofunato**	**0.78**	**348**	P	Pn	12 49 20.4	-0.1
OFUJ				*eS*	Sn	12 49 31.1	+0.1
JMK	**Ichinoseki**	**0.82**	**321**	P	Pn	12 49 21.2	+0.2
JMK				S	Sn	12 49 32.4	+0.5
JOU	**Okura**	**0.95**	**273**	P	Pn	12 49 23.1	+0.3
JOU				*eS*	Sn	12 49 35.9	+0.5
JMM	**Marumori**	**0.97**	**243**	*eS*	Sn	12 49 34.6	-0.9
JOM	**Ohasama**	**1.24**	**339**	*eP*	Pn	12 49 27.4	+0.7
JYK	**Kaneyama**	**1.33**	**297**	*eP*	Pn	12 49 28.4	+0.4

*SOME **21** 12:50:41.1, 39°.87N×77°.18E, h10km*
*KRNET **21** 12:50:41.3±0.1, 39°.88N×77°.31E, mb3.2*
*NNC **21** 12:50:43.1±1.4, 39°.91N×77°.13E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=9.0km s-min=7.4km az=175.0

ISC 21 12:50:46.1±2.0, 40°.06N±0°.09×77°.07E±0°.04, h10km, n49, σ1§75/77, 9C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.59**	**330**	⇓*iP*	**Pb**	**12 51 15.7**	**-0.2**
	baz=27						
NRN				⇓*iS*	**Sg**	**12 51 40.8**	**+3.4**
	baz=27						
TARG	**Taragay, Kyrgy**	**1.76**	**18**	⇓*iP*	**Pn**	**12 51 16.4**	**-0.7**
	baz=11						
TARG				⇓*iS*	**Sb**	**12 51 41.9**	**+0.8**
	baz=11						
BOOM	**Boomskoye usch**	**2.57**	**341**	⇓*iP*	**Pn**	**12 51 29.4**	**+1.4**
	baz=39						
BOOM				⇓*iS*	**Sb**	**12 52 04.8**	**+0.6**
	baz=39						
ARLS	**Aral**	**2.75**	**312**	⇑*iP*	**Pb**	**12 51 32.2**	**-3.2**
	baz=12						
ARLS				⇑*iS*	**Sb**	**12 52 09.2**	**-0.1**
	baz=12						
UCH	**Uchtor**	**2.90**	**319**	⇑*iP*	**Pn**	**12 51 34.6**	**+1.8**
	baz=19						
UCH				⇑*iS*	**Sb**	**12 52 13.3**	**-0.6**
	baz=19						
TNSS	**Tian-Shan**	**2.98**	**358**	*eP*	**Pb**	**12 51 40.5**	**+1.0**
	9.8nm,0.1s						
TNSS				*eS*	**Sg**	**12 52 23.0**	**+1.2**
	6.5nm,0.6s						
TNSS	**Tian-Shan**	**2.98**	**358**	Pg	**Pb**	**12 51 40.5**	**+1.0**
	13nm,0.5s						
TNSS				Lg	Lg	12 52 23.8	
	6.5nm,0.6s						
KBK	**Karagaybulak**	**3.04**	**329**	⇓*iP*	**Pn**	**12 51 36.3**	**+1.8**
	baz=28						
KBK				⇓*iS*	**Sb**	**12 52 16.6**	**-1.2**
	baz=28						
TKM2	**Tokmak 2**	**3.06**	**339**	⇑*iP*	**Pn**	**12 51 36.3**	**+1.5**
	baz=38						
TKM2				⇑*iS*	**Sb**	**12 52 16.6**	**-1.8**
	baz=38						
TKM2	**Tokmak 2**	**3.06**	**339**	⇓Pg	**Pb**	**12 51 37.6**	**-3.3**
	2.6nm,0.3s						
TKM2				⇑Lg	Lg	12 52 27.5	
	0.5nm,0.2s						
KST	**Kastek**	**3.09**	**345**	*eP*	**Pg**	**12 51 43.3**	**-2.1**
	3.8nm,0.3s						
KST				*eS*	**Sg**	**12 52 27.6**	**+2.1**
	5.9nm,0.4s						
KST	**Kastek**	**3.09**	**345**	Pg	**Pg**	**12 51 43.3**	**-2.1**
	3.8nm,0.3s						
KST				Lg	Lg	12 52 27.6	
	5.9nm,0.4s						
MDOK	**Medeo**	**3.10**	**360**	*eP*	**Pb**	**12 51 42.7**	**+1.3**
	4.4nm,0.3s						
MDOK				*eS*	**Sg**	**12 52 26.5**	**+0.7**
	12nm,0.8s						
MDOK	**Medeo**	**3.10**	**360**	Pg	**Pb**	**12 51 42.0**	**+0.5**
	4.7nm,0.7s						
MDOK				Pg	**Pb**	**12 51 42.7**	**+1.3**
	4.4nm,0.3s						
MDOK				Lg	Lg	12 52 24.1	
	6.6nm,0.5s						
MDOK				Lg	Lg	12 52 26.5	
	12nm,0.8s						
MTBS	**Maitube**	**3.11**	**351**	*eP*	**Pb**	**12 51 43.2**	**+1.7**
	3.9nm,0.2s						
MTBS				*eS*	**Sg**	**12 52 27.2**	**+1.4**
	8.1nm,0.5s						
MTBS	**Maitube**	**3.11**	**351**	Pg	**Pb**	**12 51 43.2**	**+1.7**
	3.9nm,0.2s						
MTBS				Lg	Lg	12 52 27.2	
	8.1nm,0.5s						
SATY	**Saty**	**3.16**	**18**	*eP*	**Pg**	**12 51 43.9**	**-2.8**
	3.2nm,0.3s						
SATY				*eS*	**Sg**	**12 52 28.4**	**+0.7**
	41nm,0.5s						
SATY	**Saty**	**3.16**	**18**	Pg	**Pg**	**12 51 43.9**	**-2.8**
	3.2nm,0.3s						
SATY				Lg	Lg	12 52 28.4	
	41nm,0.5s						
KOTS	**Kotyrbulak**	**3.17**	**1**	*eP*	**Pb**	**12 51 44.3**	**+1.6**
	6.1nm,0.3s						
KOTS				*eS*	**Sg**	**12 52 29.5**	**+1.4**
	35nm,0.6s						
KOTS	**Kotyrbulak**	**3.17**	**1**	Pg	**Pb**	**12 51 44.3**	**+1.6**
	6.1nm,0.3s						
KOTS				Lg	Lg	12 52 29.5	
	35nm,0.6s						
ZHN	**Zhinishke**	**3.27**	**18**	*eP*	**Pb**	**12 51 45.6**	**+1.3**
	4.5nm,0.2s						
ZHN				*eS*	**Sg**	**12 52 31.3**	**+0.1**
	37nm,0.3s						
ZHN	**Zhinishke**	**3.27**	**18**	Pg	**Pb**	**12 51 45.6**	**+1.3**
	4.5nm,0.2s						
ZHN				Lg	Lg	12 52 31.3	
	37nm,0.3s						
DGS	**Degeres**	**3.33**	**343**	*eP*	**Pb**	**12 51 47.1**	**+1.8**
	7.0nm,0.5s						
DGS				*eS*	**Sg**	**12 52 34.3**	**+1.4**
	6.6nm,0.5s						
DGS	**Degeres**	**3.33**	**343**	Pg	**Pb**	**12 51 47.1**	**+1.8**
	7.0nm,0.5s						
DGS				Lg	Lg	12 52 34.3	
	6.6nm,0.5s						
UZB	**Uzynbulak**	**3.42**	**25**	*eP*	**Pb**	**12 51 47.8**	**+0.9**
	0.8nm,0.3s						
UZB				*eS*	**Sg**	**12 52 35.0**	**-0.8**
	5.6nm,0.6s						
UZB	**Uzynbulak**	**3.42**	**25**	Pg	**Pb**	**12 51 47.8**	**+0.9**
	0.8nm,0.3s						
UZB				Lg	Lg	12 52 35.0	
	5.6nm,0.6s						
KURS	**Kuram**	**3.52**	**13**	*eP*	**Pb**	**12 51 49.9**	**+1.2**
	3.0nm,0.6s						
KURS				*eS*	**Sg**	**12 52 38.8**	**-0.6**
	6.1nm,0.4s						
KURS	**Kuram**	**3.52**	**13**	Pg	**Pb**	**12 51 49.8**	**+1.2**
	3.0nm,0.6s						
KURS				Lg	Lg	12 52 38.7	
	6.1nm,0.4s						
SHLS	**Shalkode**	**3.58**	**29**	*eP*	**Pg**	**12 51 53.8**	**-0.9**
	1.6nm,0.4s						
SHLS				*eS*	**Sg**	**12 52 45.6**	**+4.5**
	12nm,0.7s						
SHLS	**Shalkode**	**3.58**	**29**	Pg	**Pg**	**12 51 53.8**	**-0.9**
	1.6nm,0.4s						
SHLS				Lg	Lg	12 52 45.6	
	12nm,0.7s						
KPKS	**Kokpek**	**3.61**	**19**	*eP*	**Pb**	**12 51 51.6**	**+1.5**
	1.8nm,0.2s						
KPKS				*eS*	**Sg**	**12 52 42.1**	**0.0**
	26nm,0.4s						
KPKS	**Kokpek**	**3.61**	**19**	Pg	**Pb**	**12 51 51.6**	**+1.5**
	1.8nm,0.2s						
KPKS				Lg	Lg	12 52 42.1	
	26nm,0.4s						
KTBS	**Karatobe**	**3.66**	**356**	*eP*	**Pb**	**12 51 52.3**	**+1.4**
	3.0nm,0.5s						
KTBS				*eS*	**Sg**	**12 52 43.2**	**-0.5**
	0.4nm,0.5s						
KTBS	**Karatobe**	**3.66**	**356**	Pg	**Pb**	**12 51 52.3**	**+1.4**
	3.0nm,0.5s						
KTBS				Lg	Lg	12 52 43.2	
	0.4nm,0.5s						
PDGK	**Podgornoye**	**3.74**	**28**	⇑Pg	**Pb**	**12 51 53.3**	**+1.0**
	1.8nm,0.6s						
PDGK				⇑Lg	Lg	12 52 45.4	
	8.3nm,0.5s						
KRBS	**Karabastau**	**3.78**	**345**	*eP*	**Pg**	**12 51 55.6**	**-2.9**
	3.9nm,0.5s						
KRBS				*eS*	**Sg**	**12 52 48.8**	**+1.3**
	4.5nm,0.7s						
KRBS	**Karabastau**	**3.78**	**345**	Pg	**Pg**	**12 51 55.6**	**-2.9**
	3.9nm,0.5s						
KRBS				Lg	Lg	12 52 48.8	
	4.5nm,0.7s						
KUU	**Kurty**	**3.87**	**352**	*eP*	**Pb**	**12 51 56.4**	**+1.9**
	2.0nm,0.1s						
KUU				*eS*	**Sg**	**12 52 49.9**	**-0.5**
	6.7nm,0.7s						
KUU	**Kurty**	**3.87**	**352**	Pg	**Pb**	**12 51 56.4**	**+1.9**
	2.0nm,0.1s						
KUU				Lg	Lg	12 52 49.9	
	6.7nm,0.7s						
MRKS	**Merke**	**3.94**	**314**	*eP*	**Pb**	**12 51 58.1**	**+2.4**
	4.8nm,0.4s						
MRKS				*eS*	**Sg**	**12 52 52.9**	**+0.2**
	6.9nm,0.6s						
MRKS	**Merke**	**3.94**	**314**	Pg	**Pb**	**12 51 58.1**	**+2.4**
	4.8nm,0.4s						
MRKS				Lg	Lg	12 52 52.9	
	6.9nm,0.6s						
BLB	**Baldybastay**	**4.17**	**14**	*eP*	**Pb**	**12 52 00.2**	**+0.6**
	5.6nm,0.4s						
BLB				*eS*	**Sg**	**12 52 56.9**	**-3.1**
	16nm,0.5s						
BLB	**Baldybastay**	**4.17**	**14**	Pg	**Pb**	**12 52 00.2**	**+0.6**
	5.6nm,0.4s						
BLB				Lg	Lg	12 52 56.9	
	16nm,0.5s						
KTMS	**Ketmen**	**4.18**	**35**	*eP*	**Pb**	**12 52 01.3**	**+1.4**
	1.1nm,0.3s						
KTMS				*eS*	**Sg**	**12 52 58.4**	**-2.0**
	4.4nm,0.3s						
KTMS	**Ketmen**	**4.18**	**35**	Pg	**Pb**	**12 52 01.3**	**+1.4**
	1.1nm,0.3s						
KTMS				Lg	Lg	12 52 58.4	
	4.4nm,0.3s						
ARXS	**Arharly**	**4.19**	**8**	*eP*	**Pb**	**12 52 01.8**	**+1.9**
	5.4nm,0.6s						
ARXS				*eS*	**Sg**	**12 52 59.9**	**-0.7**
	7.7nm,0.6s						
ARXS	**Arharly**	**4.19**	**8**	Pg	**Pb**	**12 52 01.8**	**+1.9**
	5.4nm,0.6s						
ARXS				Lg	Lg	12 52 59.9	
	7.7nm,0.6s						
DJR	**Jarkent**	**4.72**	**24**	*eP*	**Pb**	**12 52 10.6**	**+1.5**
	0.7nm,0.1s						
DJR				*eS*	**Sg**	**12 53 15.4**	**-2.4**
	4.0nm,0.5s						
DJR	**Jarkent**	**4.72**	**24**	Pg	**Pb**	**12 52 10.6**	**+1.5**
	0.7nm,0.1s						
DJR				Lg	Lg	12 53 15.4	
	4.0nm,0.5s						

MAN 21 12:55:48.7, 9°.84N×124°.14E, h32km, mb3.6, ML2.3, MS1.8, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHBP	**Garcia Hernand**	**0.28**	**140**	⇓*iP*	Pn	12 55 58.0	+1.4
GHBP				*i* S	Sn	12 56 03.4	+1.7
TABP	**Talibon, Bohol**	**0.31**	**37**	⇑*iP*	Pn	12 55 57.5	+0.4
TABP				*i* S	Sb	12 56 02.1	+0.3
TBP	**Tagbilaran**	**0.31**	**241**	⇑*iP*	Pn	12 55 57.6	+0.5
TBP				*i* S	Sn	12 56 02.4	-0.2
LLP	**Lapu-Lapu**	**0.50**	**340**	⇑*iP*	Pn	12 56 00.4	+0.7
LLP				*i* S	Sn	12 56 07.3	0.0
MSLP	**Maasin**	**0.76**	**68**	⇑*eP*	Pb	12 56 06.7	+3.0
MSLP				*eS*	Sb	12 56 18.6	+4.8
LSIP	**Lazi, Siquijor**	**0.87**	**215**	⇑*iP*	Pb	12 56 07.5	+2.1

*IDC **21** 13:03:10.5±1.3, 35°.31N×133°.72E, h0km, mb3.2/3,*
mbtmp3.2/6, ML2.6/3, MS2.9/1, Error ellipse: s-maj=24.5km
s-min=17.9km az=175.0
*JMA **21** 13:03:12.3±0.0, 35°.4N±0°.1×133°.8E±0°.1, h10km, MV3.9/20,*
EASTERN TOTTORI PREF
JMA Felt III J1 at EASTERN TOTTORI PREF .
*NIED **21** 13:03:12.3, 35°.42N×133°.83E, h10km, MW3.7, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-0.36; $M_{\theta\theta}$3.96; $M_{\phi\phi}$-3.61; $M_{r\theta}$0.14; $M_{\theta\phi}$-2.26; $M_{\phi r}$0.14;
Fault plane solution: $M_0$4.41000×10^{14} NP1:
ϕ_s150.00000°, δ87.00000°, λ-1.00000°. NP2:ϕ_s240.00000°,
δ89.00000°, λ-177.00000°.

ISC 21 13:03:12.1±1.2, 35°.35N±0°.07×133°.72E±0°.07, h8km±9km, n9, σ0§66/12, mb3.4/3, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.09**	**72**	P	**Pg**	**13 03 14.2**	**-0.1**
JKR				S	**Sg**	**13 03 15.6**	**-0.3**
JAD	**Aida**	**0.55**	**138**	P	**Pg**	**13 03 23.0**	**+0.2**
JAD				S	**Sg**	**13 03 30.4**	**+0.4**
MJAR	**Matsushiro Arr**	**3.83**	**71**	Pn	**Pn**	**13 04 11.5**	**+0.1**
	0.2nm,0.3s,baz=254,slow=14,SNR=11						
MJAR				Pg	**Pb**	**13 04 20.3**	**+0.3**
	0.2nm,0.3s,baz=253,slow=16,SNR=6.5						
MJAR				Lg	Lg	13 05 13.9	
	0.4nm,0.3s,baz=257,slow=34,SNR=1.6						
	1.0nm,0.3s						
KSRS	**Korea Array**	**5.12**	**296**	Pn	**Pn**	**13 04 29.5**	**+0.4**
	1.2nm,0.3s,baz=111,slow=15,SNR=9.7						
KSRS				Sn	**Sn**	**13 05 28.3**	**-0.1**
	1.7nm,0.3s,baz=112,slow=25,SNR=7.4						
	2.8nm,0.3s						
USRK	**Ussurisyk Ar.**	**8.94**	**352**	Pn	**Pn**	**13 05 21.8**	**+0.3**
	0.2nm,0.3s,baz=168,slow=13,SNR=2.2						
	0.8nm,0.5s						
SONM	**Songino Array**	**23.80**	**310**	P	**P**	**13 08 25.4**	**0.0**
	0.4nm,0.3s,baz=106,slow=7.7,SNR=2.2						
	0.4nm,0.3s						
DAV	**Davao City (W)**	**29.12**	**197**	LR	LR	13 22 57.9	
	comp=Z,19nm,18.0s,baz=162,slow=41						
WRA	**Warramunga Arr**	**54.99**	**179**	P	**P**	**13 12 42.3**	**-1.7**
	0.3nm,0.8s,baz=356,slow=7.6,SNR=2.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**58.70**	**180**	P	**P**	**13 13 10.4**	**+0.

comp=N,2μm,0.3s
MOKO MOKOCHONG 3.44 63 *e*P **Pn 13 05 53.4 +3.1**
MOKO *e*S **Sn 13 06 30.1 -1.0**
MOKO IAML 13 06 47.9
comp=E,727nm,0.7s
MOKO IAML 13 06 48.1
comp=N,787nm,0.1s
ZIRO ZIRO 3.66 42 *e*P **Pn 13 05 53.9 +0.4**
ZIRO *e*S **Sn 13 06 36.0 -0.8**
ODAN Odare 3.91 302 *e*Pn **Pn 13 05 58.2 +1.2**
ODAN *e*Sn **Sn 13 06 43.5 +0.6**
comp=N,28nm,0.3s
TAPN Taplejung 3.95 310 *e*Pn **Pn 13 06 00.5 +2.9**
TAPN *e*Sn **Sn 13 06 48.3 +4.2**
RAMN Ramite 4.57 299 *e*Pn **Pn 13 06 06.2 +0.1**
BOK Bokaro 4.86 259 *e*P **Pn 13 06 09.8 0.0**
BOK *i* x x 13 06 19.2
BOK IAML 13 07 28.0
comp=N,65nm,0.2s
BOK IAML 13 07 28.2
comp=E,28nm,0.2s
JIRN Jiri 5.24 304 *e*Pn **Pn 13 06 16.4 +1.1**
JIRN *e*Sn **Sn 13 07 15.5 -0.3**
comp=E,73nm,0.2s
GUN Gumba 5.60 305 *e*Pn **Pn 13 06 21.5 +1.2**
PKI Pulchoki 5.80 299 *e*Pn **Pn 13 06 23.8 +0.8**
PKIN Phulchoki 5.81 299 *e*Pn **Pn 13 06 23.6 +0.5**
PKIN *e*Sn **Sn 13 07 28.9 -0.9**
comp=E,22nm,0.2s
KKN Kakani 6.00 301 *e*Pn **Pn 13 06 26.5 +0.8**
DMN Daman 6.05 299 *e*Pn **Pn 13 06 26.6 +0.1**
GKN Gorkha 6.60 300 *e*Pn **Pn 13 06 34.2 +0.3**
GKN *e*Sn **Sn 13 07 46.5 -2.7**
comp=E,31nm,0.2s
KOLN Koldanda 7.34 295 *e*Pn **Pn 13 06 42.7 -1.4**
KOLN *e*Sn **Sn 13 08 03.1 -4.4**
comp=E,3.2nm,0.3s
DANN Dangsing 7.45 300 *e*Pn **Pn 13 06 45.7 +0.1**
PYUN Piuthan 7.96 296 *e*Pn **Pn 13 06 52.1 -0.6**
CMAR Chiang Mai Arr 9.66 129 Pn **Pn 13 07 15.0 -0.7**
comp=E,0.4nm,0.3s,baz=297,slow=14,SNR=4.7
comp=E,0.5nm,0.3s
MKAR Makanchi Array 23.03 344 P **P 13 10 03.4 +1.5**
comp=E,0.4nm,0.5s,baz=167,slow=9.6,SNR=4.1
comp=E,0.4nm,0.5s
SONM Songino Array 25.98 24 P P 13 10 38.3 +8.8
comp=E,1.1nm,0.6s,baz=206,slow=10.0,SNR=5.3
comp=E,1.1nm,0.6s

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*IDC **21** 13:10:11.7±2.4, 4°.66S×130°.41E, h81km±22km, mb3.7/9, mbtmp4.2/12, MS3.1/2, Error ellipse: s-maj=27.3km s-min=13.8km az=75.0*
*DJA **21** 13:10:13.0±0.4, 4°.S±4°×13°.0E±°, h72km±7km, M4.6/5, mb5.0/1, mB4.9/1, MLv4.4/5, Mw(mB)4.1/1*
*NEIC **21** 13:10:13.2±1.6, 4°.68S±0°.07×130°.40E±0°.09, h90km±7km, mb4.4/27, Error ellipse: s-maj=13.1km s-min=9.8km az=69.0*
ISC 21 13:10:12.6±0.5, 4°.60S±0°.05×130°.50E±0°.05, h100km, n63, σ2°34/70, mb4.1/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.60**	**278**	P	**Pn**	**13 10 27.7**	**-1.5**
BNDI				S	**Sn**	**13 10 40.0**	**-1.6**
MSAI	**Masohi**	**2.00**	**308**	P	**Pn**	**13 10 44.4**	**-0.9**
MSAI				S	**Sn**	**13 11 06.4**	**-3.8**
FAKI	**Fak Fak**	**2.42**	**46**		**Pn**	**13 10 50.1**	**-0.6**
FAKI	**Fak Fak**	**2.42**	**46**	P	**Pn**	**13 10 49.7**	**-1.0**
FAKI				S	**Sn**	**13 11 18.0**	**-1.8**
KRAI	**Karang Ratu**	**2.46**	**301**	P	**Pn**	**13 10 51.7**	**+0.5**
KRAI				S	**Sn**	**13 11 18.1**	**-2.7**
AAI	**Ambon**	**2.47**	**291**	P	**Pn**	**13 10 51.0**	**-0.4**
SAUI	**Saumlaki**	**3.45**	**167**	Pn	**Pn**	**13 11 04.9**	**+0.5**
SAUI	**Saumlaki**	**3.45**	**167**	P	**Pn**	**13 11 05.3**	**+0.8**
NLAI	**Namlea**	**3.65**	**292**	P	**Pn**	**13 11 07.1**	**0.0**
SIJI	**Sorong**	**3.79**	**12**	P	**Pn**	**13 11 08.2**	**-0.8**
	77nm,0.2s,baz=52,slow=2.3,SNR=139						
SIJI				S	**Sn**	**13 11 47.2**	**-5.4**
	142nm,0.3s,baz=198,slow=20,SNR=29						
SIJI	**Sorong**	**3.79**	**12**	P	**Pn**	**13 11 07.5**	**-1.5**
RKPI	**Ransiki, Papua**	**4.79**	**50**	P	**Pn**	**13 11 21.5**	**-1.0**
LBMI	**Labuha**	**4.95**	**323**	P	**Pn**	**13 11 23.3**	**-1.4**
SANI	**Sanana**	**5.17**	**299**	P	**Pn**	**13 11 26.3**	**-1.4**
TNTI	**Ternate**	**6.19**	**330**	Pn	**Pn**	**13 11 41.2**	**-0.3**
MTN	**Manton Dam**	**8.21**	**176**	Pn	**Pn**	**13 12 07.9**	**-1.2**
BATI	**Baumata**	**8.77**	**230**	P	**Pn**	**13 12 14.9**	**-1.8**
	40nm,0.6s,baz=222,slow=11,SNR=4.4						
BATI				S	**Sn**	**13 13 58.0**	**+4.1**
	15nm,0.4s,baz=80,slow=18,SNR=2.1						
KNRA	**Kununurra**	**11.14**	**189**		**Pn**	**13 12 45.0**	**-3.8**
TOLI2	**Tolitoli**	**11.25**	**300**	Pn	**Pn**	**13 12 50.4**	**+0.1**
MYLDM	**Lahad Datu**	**15.43**	**309**		**Pn**	**13 13 45.5**	**+0.6**
MYLDM				IAmb	IAmb	13 13 48.2	
	comp=Z,30nm,1.2s						
WB0	**Warramunga Arr**	**15.54**	**166**		**Pn**	**13 13 41.8**	**-4.5**
WB0				IAmb	IAmb	13 13 49.8	
	comp=Z,13nm,0.5s						
COEN	**Coen**	**15.57**	**127**		**Pn**	**13 13 45.0**	**-1.7**
COEN				IAmb	IAmb	13 13 57.0	
	comp=Z,13nm,0.5s						
WRAB	**Tennant Creek**	**15.69**	**166**		**Pn**	**13 13 45.2**	**-2.9**
WRAB				IAmb	IAmb	13 13 59.5	
	comp=Z,11nm,0.6s						
WRA	**Warramunga Arr**	**15.70**	**167**	P	**Pn**	**13 13 43.2**	**-5.1**
	comp=Z,4.8nm,0.4s,baz=343,slow=13,SNR=79						
WRA				S	Sn	13 16 24.9	-17
	comp=Z,3.7nm,0.5s,baz=340,slow=22,SNR=7.3						
WRA	**Warramunga Arr**	**15.70**	**167**		**Pn**	**13 13 42.9**	**-5.3**
WB2	**Warramunga Arr**	**15.70**	**166**		**Pn**	**13 13 43.8**	**-4.5**
WB2				IAmb	IAmb	13 13 56.8	
	comp=Z,10.0nm,0.7s						
WR0	**Warramunga Arr**	**15.76**	**166**		**Pn**	**13 13 45.4**	**-3.7**
KKM	**Kota Kinabalu**	**17.76**	**306**	P	**Pn**	**13 14 14.4**	**+0.7**
KKM				IAmb	IAmb	13 14 57.6	
	comp=Z,17nm,1.2s						
AS31	**Alice Springs**	**19.23**	**170**	P	**Pn**	**13 14 30.0**	**-1.1**
AS31				IAmb	IAmb	13 14 52.4	
	comp=Z,9.6nm,0.3s						
ASAR	**Alice Springs**	**19.24**	**170**	P	**P**	**13 14 29.9**	**+0.8**
	comp=Z,5.6nm,0.3s,baz=350,slow=11,SNR=270						
ASAR				S	**S**	**13 17 52.0**	**-10**
	comp=Z,6.9nm,0.8s,baz=351,slow=23,SNR=7.4						
ASAR				LR	LR	13 21 47.0	
	comp=Z,43nm,18.3s,baz=343,slow=36						
MBWA	**Marble Bar**	**19.50**	**211**	P	**P**	**13 14 31.4**	**-0.6**
MBWA				IAmb	IAmb	13 15 10.7	
	comp=Z,9.3nm,1.0s						
PSA00	**Pilbara Seismi**	**19.78**	**211**	P	**P**	**13 14 34.5**	**-0.6**
PSA00				IAmb	IAmb	13 14 36.6	
	comp=Z,13nm,0.8s						
CTA	**Charters Tower**	**21.73**	**136**	P	**P**	**13 14 57.0**	**+1.0**
	comp=Z,5.1nm,0.8s,baz=337,slow=9.3,SNR=3.3						
	comp=Z,5.1nm,0.8s						
CTAO	**Charters Tower**	**21.73**	**136**	P	**P**	**13 14 56.9**	**+0.8**
CTAO				IAmb	IAmb	13 15 11.2	
	comp=Z,14nm,0.9s						
FORT	**Forrest**	**26.14**	**185**	P	**P**	**13 15 36.4**	**-1.1**
FORT				IAmb	IAmb	13 15 38.5	
	comp=Z,20nm,0.7s						
MORW	**Morawa**	**27.93**	**208**	P	**P**	**13 15 52.5**	**-1.1**
MORW				IAmb	IAmb	13 16 29.3	
	comp=Z,24nm,1.4s						
BBOO	**Buckleboo**	**28.54**	**170**	P	**P**	**13 15 59.3**	**+0.3**
STKA	**Stephens Creek**	**29.06**	**160**	P	**P**	**13 16 04.2**	**+0.7**
	comp=Z,2.7nm,0.3s,baz=341,slow=8.4,SNR=20						
STKA				LR	LR	13 30 17.4	
	comp=Z,52nm,18.4s,baz=29,slow=42						
	comp=Z,2.7nm,0.3s						
STKA	**Stephens Creek**	**29.06**	**160**	P	**P**	**13 16 03.8**	**+0.2**
NWAO	**Narrogin (SRO)**	**30.79**	**202**	P	**P**	**13 16 18.1**	**-0.6**
	comp=Z,3.2nm,0.6s,baz=326,slow=12,SNR=1.4						
	comp=Z,3.2nm,0.6s						
NWAO	**Narrogin (SRO)**	**30.79**	**202**	P	**P**	**13 16 18.2**	**-0.6**
NWAO				IAmb	IAmb	13 16 24.1	
	comp=Z,34nm,1.4s						
CAN	**Canberra**	**35.02**	**153**	P	**P**	**13 16 57.5**	**+1.7**
TOO	**Toolangi**	**35.56**	**159**	P	**P**	**13 17 02.7**	**+2.3**
NJ2	**Nanjing**	**38.10**	**344**	*e*P	**P**	**13 17 23.8**	**+2.0**
CMAR	**Chiang Mai Arr**	**38.63**	**307**	P	**P**	**13 17 26.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=139,slow=7.2,SNR=4.3						
	comp=Z,0.4nm,0.3s						
LBZ	**Lake Benmore**	**52.73**	**145**	P	**P**	**13 19 18.9**	**+1.7**
TUWZ	**Tuamarina**	**53.36**	**140**	P	**P**	**13 19 22.9**	**+1.1**
BKZ	**Black Stump Fm**	**53.95**	**136**	P	**P**	**13 19 27.8**	**+1.6**
MK31	**Makanchi Array**	**66.52**	**326**	P	**P**	**13 20 53.6**	**+1.8**
MKAR	**Makanchi Array**	**66.52**	**326**	P	**P**	**13 20 53.3**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=111,slow=7.6,SNR=15						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**66.52**	**326**	P	**P**	**13 20 52.8**	**+1.0**
ZALV	**Zalesovo Beam**	**69.67**	**333**	P	**P**	**13 21 12.3**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=121,slow=5.6,SNR=7.9						
	comp=Z,1.6nm,0.6s						
KURK	**Kurchatov**	**70.75**	**328**	P	**P**	**13 21 19.6**	**+1.7**
KURK				IAmb	IAmb	13 21 20.3	
	comp=Z,3.8nm,0.9s						
VNDA	**Vanda**	**74.75**	**173**	P	**P**	**13 21 41.6**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=312,slow=7.0,SNR=1.4						
	comp=Z,0.4nm,0.6s						
MAW	**Mawson**	**77.35**	**201**	P	**P**	**13 21 56.9**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=66,slow=4.8,SNR=7.0						
	comp=Z,0.7nm,0.4s						
MAW	**Mawson**	**77.35**	**201**	P	**P**	**13 21 57.1**	**+1.0**
ABKAR	**Akbulak array**	**80.96**	**321**	P	**P**	**13 22 17.0**	**+0.9**
VOI	**Vohitsoka**	**82.47**	**249**	P	**P**	**13 22 24.7**	**-0.1**
QSPA	**South Pole Qui**	**85.36**	**180**	P	**P**	**13 22 38.2**	**-0.4**
QSPA				IAmb	IAmb	13 23 06.0	
	comp=Z,4.3nm,1.4s						
ILAR	**Eielson Array**	**90.98**	**25**	P	**P**	**13 23 07.4**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=235,slow=4.6,SNR=4.3						
	comp=Z,0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**128.79**	**283**	PKP	**PKiKP**	**13 29 10.4**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=87,slow=1.9,SNR=5.8						
CPUP	**Villa Florida**	**148.33**	**167**	PKPbc	**PKPbc**	**13 29 48.8**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=223,slow=0.8,SNR=5.7						
LPAZ	**La Paz**	**152.24**	**139**	PKPbc	**PKiKP**	**13 29 59.5**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=223,slow=5.9,SNR=13						

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*IDC **21** 13:34:00.3±2.5, 6°.05S×128°.21E, h421km±29km, mb3.4/3, mbtmp3.9/6, Error ellipse: s-maj=47.1km s-min=12.8km az=77.0*
ISC 21 13:33:58.8±1.2, 6°.09S±0°.08×128°.0E±0°.2, h400km, n7, σ1°18/10, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.12**	**32**	P	**Pn**	**13 35 34.6**	**+1.8**
	7.2nm,0.4s,baz=225,slow=7.1,SNR=8.3						
SIJI				S	**S**	**13 36 48.7**	**-0.8**
	4.7nm,0.3s,baz=220,slow=23,SNR=7.6						
WRA	**Warramunga Arr**	**15.08**	**157**	P	**P**	**13 37 12.8**	**+0.6**
	0.6nm,0.4s,baz=332,slow=11,SNR=25						
WRA				S	**S**	**13 39 51.6**	**-0.7**
	0.2nm,0.4s,baz=326,slow=20,SNR=1.2						
ASAR	**Alice Springs**	**18.37**	**163**	P	**P**	**13 37 48.1**	**+0.7**
	0.3nm,0.5s,baz=345,slow=12,SNR=10						
ASAR				S	**S**	**13 40 55.5**	**-0.5**
	0.4nm,0.9s,baz=343,slow=18,SNR=2.7						
PETK	**Petropavlovsk-**	**64.11**	**19**	P	**P**	**13 43 49.7**	**-2.0**
	11nm,1.1s,baz=223,slow=5.9,SNR=3.1						
	11nm,1.1s						
MK31	**Makanchi Array**	**66.39**	**328**	Pn	**P**	**13 44 06.7**	**+0.3**
	0.2nm,0.5s,baz=227,slow=14,SNR=5.0						
MK31				Lg	Lg	13 44 34.1	
	0.1nm,0.2s,baz=230,slow=25,SNR=4.1						
MKAR	**Makanchi Array**	**66.39**	**328**	P	**P**	**13 44 06.9**	**+0.5**
	0.4nm,0.4s,baz=120,slow=7.9,SNR=6.9						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**69.91**	**334**	P	**P**	**13 44 27.7**	**0.0**
	0.5nm,0.4s,baz=142,slow=7.3,SNR=2.4						
	0.5nm,0.4s						

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*GUC **21** 13:39:58.7±0.7, 19°.12S×69°.17W, h116km±3km, ML3.7*
*VAO **21** 13:40:00.5±0.7, 19°.22S×68°.42W, h10km, mb4.5*
*IDC **21** 13:40:03.1±7.5, 19°.02S×68°.35W, h132km±31km, mb3.4/1, mbtmp3.7/3, Error ellipse: s-maj=152.4km s-min=32.0km az=74.0*
ISC 21 13:39:58.0±0.9, 19°.13S±0°.04×69°.22W±0°.07, h120km±8km, n28, σ1°27/39, 8C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.54**	**177**	↑*i* P	**Pn**	**13 40 16.9**	**0.0**
GO01				*i* S	**Sn**	**13 40 31.3**	**+0.3**
GO01				IAML		13 40 32.2	
	comp=E,2μm,0.1s						
PB16	**IPOC Station P**	**0.84**	**341**	↑*i* P	**Pn**	**13 40 19.6**	**+0.4**
PB16				*i* S	**Sn**	**13 40 35.8**	**+0.7**
PB16				IAML		13 40 36.9	
	comp=E,3μm,0.6s						
PB08	**IPOC Station P**	**1.01**	**176**	↑*i* P	**Pn**	**13 40 20.9**	**+0.3**
PB08				*i* S	**Sn**	**13 40 38.1**	**+0.4**
PB08				IAML		13 40 39.8	
	comp=E,1μm,0.5s						
PB12	**IPOC Station P**	**1.17**	**296**	↑*i* P	**Pn**	**13 40 21.8**	**-0.1**
PB12				*i* S	**Sn**	**13 40 39.9**	**0.0**
PB12				IAML		13 40 41.8	
	comp=N,2μm,0.1s						
AP01	**Chacalluta**	**1.30**	**305**	↑*i* P	**Pn**	**13 40 23.6**	**+0.3**
AP01				*i* S	**Sn**	**13 40 43.0**	**+0.7**
AP01				IAML		13 40 49.7	
	comp=E,2μm,0.6s						
TA02	**Huaiquique**	**1.42**	**217**	*e*P	**Pn**	**13 40 24.0**	**-0.5**
TA02				*i* S	**Sn**	**13 40 45.2**	**+0.5**
TA02				IAML		13 40 46.6	
	comp=N,2μm,0.2s						
TA01	**Diego Aracena**	**1.69**	**212**	↓*i* P	**Pn**	**13 40 27.6**	**-0.1**
TA01				*i* S	**Sn**	**13 40 49.6**	**-0.7**
TA01				IAML		13 40 50.9	
	comp=E,773nm,0.3s						
PATCX	**Punta Patache**	**1.90**	**207**	↑*i* P	**Pn**	**13 40 30.3**	**0.0**
PATCX				*i* S	**Sn**	**13 40 54.3**	**-0.6**
PATCX				IAML		13 40 58.9	
	comp=E,452nm,0.6s						
PB01	**IPOC Station P**	**1.92**	**187**	↑*i* P	**Pn**	**13 40 30.9**	**+0.3**
PB01				*i* S	**Sn**	**13 40 55.5**	**0.0**
PB01				IAML		13 40 56.4	
	comp=E,997nm,0.2s						
PB02	**IPOC Station P**	**2.27**	**196**	↑*i* P	**Pn**	**13 40 35.3**	**+0.4**
PB02				IAML		13 41 13.2	
	comp=E,677nm,0.2s						
PB09	**IPOC Station P**	**2.65**	**180**	*e*P	**Pn**	**13 40 40.6**	**+0.6**
PB09				*i* S	**Sn**	**13 41 12.4**	**+0.2**
PB09				IAML		13 41 20.3	
	comp=N,301nm,0.8s						
PB07	**IPOC Station P**	**2.66**	**193**	*e*P	**Pn**	**13 40 40.4**	**+0.3**
PB07				IAML		13 41 21.4	
	comp=E,382nm,0.5s						
PB03	**IPOC Station P**	**2.94**	**190**	*e*P	**Pn**	**13 40 44.0**	**+0.2**
LPAZ	**La Paz**	**3.01**	**20**	P	**Pn**	**13 40 46.9**	**+1.7**
	comp=E,12nm,0.4s,baz=135,slow=19,SNR=40						
LPAZ				S	**Sn**	**13 41 20.9**	**-0.4**
	comp=E,12nm,0.6s,baz=137,slow=19,SNR=4.3						
LPAZ	**La Paz**	**3.01**	**20**	*e*P	**Pn**	**13 40 47.0**	**+1.8**
PB04	**IPOC Station P**	**3.30**	**195**	*e*P	**Pn**	**13 40 48.8**	**+0.3**
LVC	**Limon Verde**	**3.47**	**175**	*e*P	**Pn**	**13 40 53.7**	**+2.7**
PB06	**IPOC Station P**	**3.57**	**185**	*e*P	**Pn**	**13 40 52.2**	**+0.2**
PTLB	**Pontes e Lacer**	**10.31**	**71**	*e*P	**Pn**	**13 42 18.9**	**-3.8**
VILB	**Vilhena**	**10.63**	**56**	*e*P	**Pn**	**13 42 25.5**	**-1.6**
CPUP	**Villa Florida**	**13.10**	**125**	P	**Pn**	**13 42 56.5**	**-3.1**
	comp=E,1.2nm,0.6s,baz=304,slow=16,SNR=1.8						
TRCB	**Terra Rica**	**15.92**	**106**	*e*P	**Pn**	**13 43 35.1**	**-0.3**
CRSM	**Crissiumal (Br**	**16.23**	**124**	*e*P	**Pn**	**13 43 39.9**	**+0.8**
FRBT	**Francisco Belt**	**16.40**	**117**	*e*P	**Pn**	**13 43 41.9**	**+0.6**
PTGB	**Pitanga**	**16.86**	**112**	*e*P	**Pn**	**13 43 47.4**	**+0.4**
RODS	**Rosario do Sul**	**16.92**	**134**	*e*P	**P**	**13 43 50.4**	**+2.8**
ITAB	**Concordia**	**17.65**	**120**	*e*P	**Pn**	**13 43 57.9**	**+1.4**
TORD	**Torodi Ar. Bea**	**76.85**	**71**	P	**P**	**13 51 36.4**	**-0.9**
	comp=E,0.4nm,0.5s,baz=246,slow=4.4,SNR=3.6						
	comp=E,0.4nm,0.5s						

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*IDC **21** 13:41:17.7±1.3, 35°.29N×133°.74E, h0km, mb3.4/3, mbtmp3.3/5, ML2.3/2, Error ellipse: s-maj=26.1km s-min=17.7km az=172.0*
*JMA **21** 13:41:19.6±0.0, 35°.4N±0°.1×133°.8E±0°.1, h11km, MV3.5/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
*NIED **21** 13:41:19.6, 35°.40N×133°.84E, h11km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-1.13; $M_{\theta\theta}$0.63; $M_{\phi\phi}$0.50; $M_{r\theta}$0.68; $M_{\theta\phi}$-0.81; $M_{\phi r}$0.00; Fault plane solution: $M_0$1.44000×10¹⁴ NP1: ϕ_s154.00000°, δ38.00000°, λ-56.00000°. NP2: ϕ_s293.00000°, δ59.00000°, λ-114.00000°.*
ISC 21 13:41:18.5±2.2, 35°.25N±0°.09×133°.73E±0°.08, h4km±16km, n7, σ0°36/11, mb3.4/3, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.15**	**32**	⇓P	**Pg**	**13 41 21.5**	**+0.1**
JKR				⇓S	**Sg**	**13 41 22.9**	**-0.5**
JAD	**Aida**	**0.48**	**131**	P	**Pb**	**13 41 29.6**	**+0.2**
JAD				S	**Sb**	**13 41 36.8**	**-0.1**
MJAR	**Matsushiro Arr**	**3.86**	**69**	Pn	**Pn**	**13 42 18.3**	**-0.4**
	0.1nm,0.3s,baz=253,slow=15,SNR=2.2						
MJAR				Pg	**Pb**	**13 42 27.7**	**+0.6**
	0.2nm,0.3s,baz=257,slow=15,SNR=6.5						
MJAR				Lg	Lg	13 43 20.0	
	0.4nm,0.3s,baz=256,slow=20,SNR=10.0						
	1.6nm,0.4s						
KSRS	**Korea Array**	**5.17**	**297**	Pn	**Pn**	**13 42 36.5**	**-0.1**
	0.3nm,0.3s,baz=109,slow=15,SNR=1.5						
KSRS				Sn	**Sn**	**13 43 36.5**	**-0.3**
	0.7nm,0.3s,baz=118,slow=23,SNR=1.9						
	0.6nm,0.3s						
SONM	**Songino Array**	**23.87**	**310**	P	**P**	**13 46 33.3**	**+0.3**
	0.8nm,0.7s,baz=118,slow=9.1,SNR=4.0						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**54.90**	**179**	P	**P**	**13 50 50.3**	**0.0**
	0.7nm,1.0s,baz=354,slow=7.6,SNR=2.6						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**58.60**	**180**	P	**P**	**13 51 16.5**	**0.0**
	0.3nm,0.8s,baz=9.5,slow=12,SNR=1.6						
	0.3nm,0.8s						

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*IDC **21** 13:53:51.5±1.3, 35°.18N×133°.90E, h0km, mb3.3/4, mbtmp3.3/6, ML2.7/2, MS2.6/2, Error ellipse: s-maj=29.9km s-min=18.9km az=172.0*
*JMA **21** 13:53:52.6±0.0, 35°.4N±0°.1×133°.86E±0°.09, h8km, MV3.8/20, EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .
*NIED **21** 13:53:52.6, 35°.36N×133°.86E, h8km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-1.72; $M_{\theta\theta}$1.72; $M_{\phi\phi}$-0.01; $M_{r\theta}$-1.46; $M_{\theta\phi}$-2.54; $M_{\phi r}$2.31; Fault plane solution: $M_0$3.97000×10¹⁴ NP1: ϕ_s269.00000°, δ34.00000°, λ-149.00000°. NP2: ϕ_s152.00000°, δ73.00000°, λ-60.00000°.*
ISC 21 13:53:52.0±1.4, 35°.26N±0°.07×133°.86E±0°.03, h2km±11km, n12, σ0°75/17, mb3.3/4, 3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.12**	**344**	⇓*i* P	**Pg**	**13 53 54.2**	**-0.2**
JAD	**Aida**	**0.40**	**142**	⇓*i* P	**Pb**	**13 54 02.1**	**+0.3**
JAD				⇓S	**Sb**	**13 54 08.7**	**+0.2**
JHS	**Saijyo**	**0.66**	**247**	*i* P	**Pb**	**13 54 05.9**	**-0.4**
JHS				S	**Sb**	**13 54 15.6**	**-0.4**
JNM	**Ikuma**	**0.72**	**289**	*i* P	**Pg**	**13 54 06.2**	**+0.4**
JNM				*e*S	**Sg**	**13 54 15.6**	**+0.4**
JKSM	**Kasumi**	**0.73**	**63**	*i* P	**Pg**	**13 54 05.8**	**-0.2**
JKSM				S	**Sg**	**13 54 15.0**	**-0.5**
JISK	**Izumosakaura**	**0.86**	**287**	*i* P	**Pg**	**13 54 08.3**	**-0.2**
JISK				*e*S	**Sg**	**13 54 19.4**	**-0.3**
MJAR	**Matsushiro Arr**	**3.75**	**69**	Pn	**Pn**	**13 54 52.0**	**+1.1**
	0.3nm,0.3s,baz=249,slow=12,SNR=17						
MJAR				Lg	Lg	13 55 51.9	
	0.8nm,0.3s,baz=237,slow=29,SNR=13						
MJAR				LR	LR	13 56 33.5	
	comp=Z,128nm,19.0s,baz=248,slow=43						
	3.4nm,0.3s						
KSRS	**Korea Array**	**5.27**	**296**	Pn	**Pn**	**13 55 12.3**	**+0.6**
	0.5nm,0.3s,baz=110,slow=14,SNR=7.7						
KSRS				LR	LR	13 57 03.0	
	comp=Z,40nm,18.7s,baz=100,slow=36						
	1.7nm,0.4s						
SONM	**Songino Array**	**23.95**	**310**	P	**P**	**13 59 09.3**	**+1.7**
	1.2nm,0.7s,baz=118,slow=9.8,SNR=5.5						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**39.91**	**303**	P	**P**	**14 01 27.3**	**-0.1**
	0.2nm,0.5s,baz=82,slow=10,SNR=2.3						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**54.22**	**31**	P	**P**	**14 03 17.8**	**-1.0**
	0.2nm,0.7s,baz=285,slow=5.7,SNR=2.1						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**54.90**	**179**	P	**P**	**14 03 23.3**	**-0.9**
	0.2nm,0.7s,baz=355,slow=7.7,SNR=4.9						
	0.2nm,0.7s						

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*BER **21** 14:02:43.7±2.6, 71°.20N×11°.99E, h14km±20km, ML2.0, ML2.7(HEL), Confirmed Earthquake*
*HEL **21** 14:02:44.9±0.2, 71°.06N×12°.70E, h10km, ML2.7, ML2.1(UPP), Confirmed Earthquake*
*KOLA **21** 14:02:45.3, 70°.95N×12°.68E, h0km, ML2.2*
*UPP **21** 14:02:46.0±2.9, 70°.78N×12°.88E, h0km, ML2.1, Suspected explosion*
NAO 21 14:02:41.7±278.0, 71°.16N×11°.86E, h19km±310km, ML2.8, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRO	**Tromso**	**2.84**	**119**	Pn	Pn	14 03 25.8	-0.1
TRO				Sn	Sn	14 03 56.8	-2.7
TRO	**Tromso**	**2.84**	**119**	*e*P	Pn	14 03 25.8	-0.1
TRO				*e*S	Sn	14 03 57.1	-2.3
TRO				IAML		14 03 58.0	
	comp=Z,24nm,0.3s						
TRO	**Tromso**	**2.84**	**119**	*e*P	Pn	14 03 25.7	-0.2
T

ARA0	**ARCESS Array S**	**4.89 103**	Pn	Pn	14 03 54.4	+0.3
	baz=285,slow=11					
ARA0			Sn	Sn	14 04 46.1	-3.9
	baz=280,slow=22					
ARA0	**ARCESS Array S**	**4.89 103**	*e*P	Pn	14 03 54.2	+0.2
ARA0			*e*S	Sn	14 04 46.4	-3.6
ARA0			IAML		14 04 48.9	
	comp=Z,2.2nm,0.2s					
ARA0	**ARCESS Array S**	**4.89 103**	*e*P	Pn	14 03 54.3	+0.2
ARA0			*e*S	Sn	14 04 45.8	-4.2
HEF	**Hetta**	**4.94 118**	*e*P	Pn	14 03 55.5	+0.8
HEF			*e*S	Sn	14 04 49.1	-2.2
HEF	**Hetta**	**4.94 118**	*e*P	Pn	14 03 55.8	+1.0
HEF			*e*S	Sn	14 04 47.4	-3.9
HEF			MSN		14 04 51.9	
	comp=Z,3.8nm,0.1s					
MOR8	**Moi Rana**	**5.10 168**	*e*P	Pn	14 03 56.8	-0.3
MOR8			*e*S	Sn	14 04 51.6	-3.8
MOR8			IAML		14 04 56.9	
	comp=Z,7.6nm,0.2s					
DUNU	**Dundret**	**5.11 138**	P	Pn	14 03 57.9	+0.7
DUNU	**Dundret**	**5.11 138**	*e*P	Pn	14 03 57.9	+0.7
MASU	**Masugnsbyn**	**5.17 131**	S	Sn	14 04 54.6	-2.4
MASU	**Masugnsbyn**	**5.17 131**	*e*S	Sn	14 04 54.6	-2.4
KEV	**Kevo**	**5.27 98**	Pn	Pn	14 03 59.8	+0.4
KEV			Sn	Sn	14 04 55.0	-4.5
KEV	**Kevo**	**5.27 98**	*e*P	Pn	14 03 59.8	+0.5
KEV			*e*S	Sn	14 04 55.0	-4.5
KEV	**Kevo**	**5.27 98**	*e*P	Pn	14 03 59.8	+0.5
KEV			*e*S	Sn	14 04 55.0	-4.5
PAJU	**Pajala**	**5.78 130**	P	Pn	14 04 06.8	+0.5
PAJU			S	Sn	14 05 09.5	-2.6
PAJU	**Pajala**	**5.78 130**	*e*P	Pn	14 04 06.8	+0.5
PAJU			*e*S	Sn	14 05 09.5	-2.6
KLF	**Kolari**	**5.84 127**	*e*P	Pn	14 04 07.8	+0.7
KLF			*e*S	Sn	14 05 09.2	-4.1
KLF	**Kolari**	**5.84 127**	*e*P	Pn	14 04 07.8	+0.7
KLF			*e*S	Sn	14 05 09.2	-4.1
ERTU	**Ertsjaerv**	**5.94 136**	P	Pn	14 04 09.3	+0.7
ERTU	**Ertsjaerv**	**5.94 136**	*e*P	Pn	14 04 09.3	+0.7
HARU	**Harads**	**6.02 142**	P	Pn	14 04 10.5	+0.9
HARU	**Harads**	**6.02 142**	*e*P	Pn	14 04 10.5	+0.9
SGF	**Sodankyl**	**6.39 119**	*e*P	Pn	14 04 14.5	-0.2
SGF			*e*S	Sn	14 05 21.2	-5.8
SGF	**Sodankyl**	**6.39 119**	*e*P	Pn	14 04 14.5	-0.2
SGF			*e*S	Sn	14 05 21.2	-5.8
NSS	**Namsos**	**6.67 180**	*e*P	Pn	14 04 20.5	+2.1
TOF	**Tornio**	**6.83 132**	*e*P	Pn	14 04 21.4	+0.7
TOF			*e*S	Sn	14 05 32.7	-5.0
TOF	**Tornio**	**6.83 132**	*e*P	Pn	14 04 21.4	+0.7
TOF			*e*S	Sn	14 05 32.7	-5.0
RNF	**Rovaniemi**	**6.84 125**	*e*P	Pn	14 04 20.8	-0.1
RNF			*e*S	Sn	14 05 32.9	-5.3
RNF	**Rovaniemi**	**6.84 125**	*e*P	Pn	14 04 20.8	-0.1
RNF			*e*S	Sn	14 05 32.9	-5.3
PRVG	**Vayda Guba**	**6.95 92**	P	Pn	14 04 22.7	+0.3
PRVG			S	Sn	14 05 35.6	-5.2
VRF	**Varrio**	**7.11 110**	*e*P	Pn	14 04 24.7	+0.2
VRF			*e*S	Sn	14 05 38.7	-5.9
VRF	**Varrio**	**7.11 110**	*e*P	Pn	14 04 24.7	+0.2
VRF			*e*S	Sn	14 05 38.7	-5.9
SPA0	**Spitsbergen Ar**	**7.15 7**	Pn	Pn	14 04 23.8	-1.3
	baz=177,slow=16					
SPA0			Sn	Sn	14 05 38.5	-7.2
	baz=174,slow=37					
SPA0	**Spitsbergen Ar**	**7.15 7**	*e*P	Pn	14 04 23.9	-1.1
NOD	**Norderasen**	**7.84 170**	*e*P	Pn	14 04 36.0	+1.4
OLKF	**Oulanka, Finla**	**7.99 119**	*e*P	Pn	14 04 36.1	-0.5
OLKF			*e*S	Sn	14 06 00.2	-6.1
OLKF	**Oulanka, Finla**	**7.99 119**	*e*P	Pn	14 04 36.1	-0.5
OLKF			*e*S	Sn	14 06 00.2	-6.1
OUL	**Oulu**	**8.02 133**	*e*P	Pn	14 04 36.6	-0.5
OUL			*e*S	Sn	14 06 01.0	-6.0
OUL	**Oulu**	**8.02 133**	*e*P	Pn	14 04 36.6	-0.5
OUL			*e*S	Sn	14 06 01.0	-6.0
OBF4	**Vikkela, Lumij**	**8.06 136**	*e*P	Pn	14 04 37.0	-0.6
OBF4			*e*S	Sn	14 06 02.2	-5.9
OBF4	**Vikkela, Lumij**	**8.06 136**	*e*P	Pn	14 04 37.0	-0.6
OBF4			*e*S	Sn	14 06 02.2	-5.9
APA0	**Apatity Array**	**8.24 105**	Pn	Pn	14 04 39.2	-0.8
APA0			Sn	Sn	14 06 04.5	-7.9
	baz=315,slow=28					
APA0	**Apatity Array**	**8.24 105**	S	Sn	14 06 04.6	-7.8
AKN	**Aaknes**	**9.22 194**	*e*P	Pn	14 04 54.6	+1.0
NRA0	**NORESS Array S**	**10.47 181**	Pn	Pn	14 05 11.2	+0.6
	baz=356,slow=14					
HFS	**Hagfors**	**11.10 175**	Pn	Pn	14 05 19.4	+0.1
FIA0	**FINESS Array S**	**11.27 143**	Pn	Pn	14 05 22.3	+0.9
	baz=346,slow=12					

*IDC **21** 14:03:07.0±1.8, 35°.26N×133°.72E, h0km, mb3.3/1, mbtmp3.2/3, ML2.5/2, MS2.8/2, Error ellipse: s-maj=34.1km s-min=19.2km az=164.0*
*NIED **21** 14:03:08.1, 35°.36N×133°.87E, h6km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.17; $M_{\theta\theta}$=2.62; $M_{\phi\phi}$=-2.44; $M_{r\theta}$=0.02; $M_{\theta\phi}$=-0.36; $M_{\phi r}$=0.96; Fault plane solution: M_0=2.73000×10^{14} NP1: ϕ_s=231.00000°, δ=75.00000°, λ=-167.00000°. NP2: ϕ_s=137.00000°, δ=77.00000°, λ=-16.00000°.*
*JMA **21** 14:03:08.1±0.0, 35°.4N±0°.1×133°.87E±0°.09, h6km, MV3.5/20, EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .
ISC 21 14:03:08.0±1.0, 35°.37N±0°.07×133°.83E±0°.06, h8km±6km, n6, σ1§15/9, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.01**	**315**	⇓P	**Pg**	**14 03 09.4**	**-0.1**
JKR				⇓S	**Sg**	**14 03 10.4**	**-0.2**
JAD	**Aida**	**0.51**	**147**	P	**Pg**	**14 03 17.5**	**-0.3**
JAD				S	**Sg**	**14 03 24.2**	**-0.3**
MJAR	**Matsushiro Arr**	**3.74**	**70**	Pn	**Pn**	**14 04 08.0**	**+2.0**
	0.2nm,0.3s,baz=254,slow=13,SNR=8.9						
MJAR				Pg	**Pg**	**14 04 18.2**	**-1.4**
	0.4nm,0.3s,baz=250,slow=17,SNR=9.9						
MJAR				Lg	Lg	14 05 10.0	
	0.3nm,0.3s,baz=234,slow=28,SNR=5.6 2.3nm,0.3s						
KSRS	**Korea Array**	**5.20**	**295**	Pn	**Pn**	**14 04 26.6**	**+0.6**
	0.3nm,0.3s,baz=111,slow=14,SNR=3.0						
KSRS				Sn	**Sn**	**14 05 25.9**	**-0.2**
	0.6nm,0.3s,baz=114,slow=18,SNR=2.1						
KSRS				LR	LR	14 06 31.8	
	comp=Z,29nm,20.0s,baz=40,slow=39 0.8nm,0.3s						
TIXI	**Tiksi**	**36.44**	**357**	LR	LR	14 26 02.0	
	comp=Z,42nm,18.7s,baz=192,slow=38						
WRA	**Warramunga Arr**	**55.01**	**179**	P	**P**	**14 12 39.4**	**-0.5**
	0.2nm,0.5s,baz=354,slow=7.7,SNR=4.8 0.2nm,0.5s						

*IDC **21** 14:07:38.1±1.0, 8°.98S×158°.35E, h0km, mb3.8/7, mbtmp3.8/7, MS3.1/4, Error ellipse: s-maj=26.3km s-min=19.2km az=177.0*
ISC 21 14:07:42.5±0.8, 9°.0S±0°.2×158°.36E±0°.09, h29km, n9, σ0§74/10, mb3.7/7, MS3.1/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.62**	**105**	Pn	**Pn**	**14 08 09.2**	**0.0**
	2μm,0.3s,baz=278,slow=4.0,SNR=41						
HNR				Sn	**Sn**	**14 08 29.4**	**+0.2**
	2μm,0.3s,baz=224,slow=11,SNR=8.0						
CTA	**Charters Tower**	**16.07**	**225**	Pn	**P**	**14 11 29.8**	**+0.1**
	0.2nm,0.3s,baz=43,slow=13,SNR=3.7						
CTA				LR	LR	14 16 33.2	
	comp=Z,38nm,20.3s,baz=70,slow=33						
WRA	**Warramunga Arr**	**25.64**	**242**	P	**P**	**14 13 09.7**	**-0.2**
	1.5nm,0.8s,baz=68,slow=9.1,SNR=11						
WRA				LR	LR	14 22 43.7	
	comp=Z,66nm,18.9s,baz=142,slow=35 1.5nm,0.8s						
ASAR	**Alice Springs**	**27.56**	**235**	P	**P**	**14 13 26.0**	**-1.3**
	1.2nm,0.8s,baz=62,slow=8.6,SNR=9.2						
ASAR				LR	LR	14 23 44.8	
	comp=Z,44nm,18.1s,baz=166,slow=35 1.2nm,0.8s						
STKA	**Stephens Creek**	**27.57**	**212**	P	**P**	**14 13 28.3**	**+1.1**
	3.8nm,0.6s,baz=51,slow=14,SNR=8.8						
STKA				LR	LR	14 23 20.3	
	comp=Z,42nm,19.2s,baz=24,slow=34 3.8nm,0.6s						
VNDA	**Vanda**	**68.52**	**179**	P	**P**	**14 18 41.5**	**-0.3**
	0.6nm,0.8s,baz=347,slow=5.2,SNR=4.8 0.6nm,0.8s						
SONM	**Songino Array**	**72.83**	**326**	P	**P**	**14 19 09.3**	**+0.5**
	0.5nm,0.7s,baz=138,slow=5.0,SNR=2.5 0.5nm,0.7s						
ILAR	**Eielson Array**	**84.04**	**21**	P	**P**	**14 20 09.4**	**-0.7**
	0.2nm,0.5s,baz=231,slow=4.1,SNR=2.7 0.2nm,0.5s						
MKAR	**Makanchi Array**	**87.11**	**318**	P	**P**	**14 20 26.1**	**+0.3**
	0.3nm,0.6s,baz=103,slow=6.0,SNR=2.8 0.3nm,0.6s						

*IDC **21** 14:09:40.8±1.3, 35°.54N×141°.86E, h0km, mb3.4/4, mbtmp3.3/5, ML2.2/1, MS2.4/3, Error ellipse: s-maj=33.1km s-min=24.4km az=63.0*
*JMA **21** 14:09:47.4±0.2, 35°.2N±0°.4×141°.1E±°, h39km±2km, MV2.9/27, E OFF BOSO PENINSULA*
ISC 21 14:09:44.3±1.2, 35°.39N±0°.07×141°.47E±0°.08, h25km, n20, σ1§64/15, mb3.4/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.59**	**303**	P	**Pn**	**14 09 59.3**	**+2.2**
CHOJ				*e*S	**Sn**	**14 10 08.3**	**+2.4**
BSO1	**Boso 1**	**0.83**	**209**	P	**Pb**	**14 10 00.2**	**+0.3**
KTR	**Katsuura**	**0.97**	**256**	P	**Pb**	**14 10 02.8**	**+0.3**
KTR				*e*S	**Sn**	**14 10 13.8**	**-1.6**
BSO3	**Boso 3**	**0.98**	**234**	P	**Pb**	**14 10 02.2**	**-0.3**
BSO4	**Boso 4**	**1.01**	**247**	P	**Pb**	**14 10 03.2**	**+0.2**
JKUC	**kamogawauchiur**	**1.06**	**258**	P	**Pb**	**14 10 04.0**	**0.0**
JKUC				*e*S	**Sn**	**14 10 15.8**	**-1.8**
JIM2	**Oshima 3**	**1.80**	**249**	P	**Pn**	**14 10 13.0**	**-0.7**
MJAR	**Matsushiro Arr**	**2.88**	**295**	Pn	**Pb**	**14 10 32.0**	**-3.0**
	0.3nm,0.3s,baz=103,slow=14,SNR=12						
MJAR				Sn	**Sb**	**14 11 11.2**	**+1.3**
	0.4nm,0.3s,baz=109,slow=14,SNR=3.1						
MJAR				LR	LR	14 11 23.6	
	comp=Z,48nm,19.3s,baz=124,slow=33 1.7nm,0.3s						
KSRS	**Korea Array**	**11.11**	**285**	LR	LR	14 15 41.1	
	comp=Z,11nm,21.3s,baz=120,slow=32						
JOW	**Kunigami**	**14.15**	**237**	LR	LR	14 17 56.2	
	comp=Z,33nm,19.2s,baz=138,slow=34						
H11N2	**WAKE ISLAND Hy**	**27.30**	**118**	T	T	14 43 52.9	
	baz=310,slow=76						
H11N1	**WAKE ISLAND Hy**	**27.31**	**118**	T	T	14 43 52.9	
	baz=310,slow=76						
H11N3	**WAKE ISLAND Hy**	**27.32**	**118**	T	T	14 43 56.8	
	baz=310						
H11S1	**WAKE ISLAND Hy**	**27.96**	**120**	T	T	14 45 16.8	
	baz=312,slow=75,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**27.96**	**120**	T	T	14 45 20.2	
	baz=312,slow=75,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**27.98**	**120**	T	T	14 45 19.0	
	baz=312,slow=75,SNR=7.8						
MKAR	**Makanchi Array**	**45.05**	**304**	P	**P**	**14 17 58.5**	**+0.6**
	0.1nm,0.6s,baz=96,slow=7.3,SNR=1.5 0.1nm,0.6s						
ILAR	**Eielson Array**	**50.87**	**32**	P	**P**	**14 18 40.9**	**-1.8**
	0.3nm,0.8s,baz=263,slow=6.3,SNR=1.5 0.3nm,0.8s						
WRA	**Warramunga Arr**	**55.44**	**188**	P	**P**	**14 19 17.7**	**+0.9**
	0.9nm,0.6s,baz=1.2,slow=7.5,SNR=13 0.9nm,0.6s						
ASAR	**Alice Springs**	**59.17**	**188**	P	P	14 19 45.5	+2.5
	0.3nm,0.8s,baz=16,slow=14,SNR=8.2 0.3nm,0.8s						

*IDC **21** 14:33:38.0±1.7, 37°.76N×26°.74E, h0km, mb3.6/3, mbtmp3.6/4, ML3.0/1, MS3.2/1, Error ellipse: s-maj=143.3km s-min=25.9km az=145.0*
*ISK **21** 14:33:39.8, 37°.55N×26°.81E, h12km, ML3.6/26*
*ATH **21** 14:33:41.1, 37°.57N×26°.89E, h12km±1km, ML3.6/7, Error ellipse: s-maj=2.8km s-min=0.9km az=69.0*
*DDA **21** 14:33:41.6±0.0, 37°.55N×26°.83E, h6km±1km, MW3.5*
*THE **21** 14:33:41.1, 37°.57N×26°.88E, h5km±1km, ML3.5/7, Error ellipse: s-maj=1.0km s-min=0.4km az=57.0*
ISC 21 14:33:40.7±0.8, 37°.55N±0°.02×26°.83E±0°.02, h13km±6km, n100, σ0§75/123, mb3.5/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.16**	**3**	P	**Pg**	**14 33 44.5**	**-0.1**
SMG				S	**Sg**	**14 33 46.9**	**-0.4**
	106μm,0.2s						
SMG	**Samos**	**0.16**	**3**	P	**Pg**	**14 33 44.6**	**-0.1**
SMG				S	**Sg**	**14 33 47.0**	**-0.3**
SMG				AML	AML	14 33 48.0	
SMG				AML	AML	14 33 48.1	
DDIM	**Aydin, Didim**	**0.34**	**105**	P	**Pg**	**14 33 47.8**	**+0.2**
DDIM				*i* AML	AML	14 33 53.0	
	comp=E,4μm,0.9s						
DDIM				S	**Sg**	**14 33 53.1**	**+0.8**
DDIM				*i* AML	AML	14 33 54.0	
	comp=N,3μm,0.6s						
GCAM	**G?zelcaml?**	**0.36**	**64**	PG	**Pg**	**14 33 48.1**	**+0.2**
GCAM				SG	**Sg**	**14 33 53.6**	**+0.8**
DGB	**zmir**	**0.51**	**5**	P	**Pg**	**14 33 50.4**	**-0.3**
DGB				S	**Sg**	**14 33 58.0**	**+0.5**
DGB				*i* AML	AML	14 34 01.0	
	comp=E,3μm,0.6s						
DGB				*i* AML	AML	14 34 02.0	
	comp=N,1μm,0.2s						
BODT	**Bodrum**	**0.62**	**141**	PG	**Pg**	**14 33 51.6**	**-1.1**
ZEYE	**Izmir, Urla-Ze**	**0.74**	**340**	P	**Pb**	**14 33 55.1**	**-0.2**
ZEYE				S	**Sb**	**14 34 06.9**	**+1.5**
ZEYE				*i* AML	AML	14 34 08.0	
	comp=N,6μm,0.7s						
ZEYE				*i* AML	AML	14 34 08.0	
	comp=E,4μm,0.6s						
KOSK	**Kos Island**	**0.80**	**171**	PG	**Pg**	**14 33 56.1**	**-0.1**
KOSK	**Kos Island**	**0.80**	**171**	P	**Pb**	**14 33 56.4**	**0.0**
KOSK				S	**Sn**	**14 34 09.7**	**+0.3**
	4μm,0.5s						
KOSK	**Kos Island**	**0.80**	**171**	P	**Pb**	**14 33 56.7**	**+0.3**
KOSK				S	**Sb**	**14 34 07.9**	**+0.8**
KOSK				AML	AML	14 34 10.2	
	comp=N,23854μm,0.5s						
KOSK				AML	AML	14 34 14.6	
	comp=E,29015μm,0.6s						
URLA	**Izmir**	**0.83**	**347**	PG	**Pg**	**14 33 55.4**	**-1.4**
BLCB	**Balcova**	**0.86**	**11**	PG	**Pg**	**14 33 56.7**	**-0.5**
BLCB				SG	**Sg**	**14 34 09.1**	**+0.6**
BLCB	**Balcova**	**0.86**	**11**	P	**Pg**	**14 33 56.6**	**-0.6**
BLCB				S	**Sg**	**14 34 08.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**64**	PG	**Pg**	**14 33 58.3**	**-0.4**
NISR	**Nisiros**	**0.96**	**165**	P	**Pb**	**14 33 59.3**	**+0.1**
NISR	**Nisiros**	**0.96**	**165**	P	**Pg**	**14 33 58.7**	**-0.5**
NIS1	**Nisyros Isl.**	**0.98**	**163**	PG	**Pg**	**14 33 59.5**	**-0.1**
NIS1	**Nisyros Isl.**	**0.98**	**163**	P	**Pg**	**14 33 59.3**	**-0.3**
NIS1	**Nisyros Isl.**	**0.98**	**163**	P	**Pg**	**14 33 59.6**	**-0.1**
NIS1				AML	AML	14 34 23.2	
	comp=N,5753μm,0.6s						
NIS1				AML	AML	14 34 26.2	
	comp=E,6440μm,0.6s						
CHOS	**Chios island**	**1.04**	**324**	PG	**Pg**	**14 34 00.2**	**-0.5**
CHOS	**Chios island**	**1.04**	**324**	P	**Pb**	**14 34 00.4**	**-0.2**
CHOS	**Chios island**	**1.04**	**324**	P	**Pb**	**14 34 00.4**	**-0.2**
APE	**Apeiranthos**	**1.14**	**246**	PN	**Pb**	**14 34 02.1**	**-0.1**
APE	**Apeiranthos**	**1.14**	**246**	P	**Pn**	**14 34 02.4**	**+0.1**
APE	**Apeiranthos**	**1.14**	**246**	P	**Pb**	**14 34 02.1**	**-0.1**
APE				S	**Sn**	**14 34 19.0**	**+1.2**
APE				AML	AML	14 34 22.6	
	comp=N,2236μm,0.3s						
APE				AML	AML	14 34 22.9	
	comp=E,1767μm,0.3s						
FOCM	**Foa**	**1.17**	**356**	PN	**Pg**	**14 34 02.3**	**-0.9**
MULA	**Mugla, Merkez-**	**1.22**	**103**	P	**Pg**	**14 34 03.1**	**-1.2**
MULA				S	**Sg**	**14 34 19.6**	**-0.5**
MULA				*i* AML	AML	14 34 23.0	
	comp=E,536nm,0.6s						
YER	**Yerkesik**	**1.23**	**109**	PN	**Pg**	**14 34 03.8**	**-0.6**
YER	**Yerkesik**	**1.23**	**109**	P	**Pg**	**14 34 03.7**	**-0.6**
YER				S	**Sg**	**14 34 20.2**	**-0.2**
TNSA	**Tinos**	**1.32**	**270**	P	**Pg**	**14 34 05.5**	**-0.6**
TURN	**Turunc**	**1.37**	**124**	PN	**Pn**	**14 34 05.1**	**-0.3**
ZEDA	**zmir-Bergama**	**1.43**	**8**	P	**Pn**	**14 34 05.6**	**-0.7**
ZEDA				S	**Sg**	**14 34 28.0**	**+1.1**
ZEDA				*i* AML	AML	14 34 32.0	
	comp=E,563nm,0.9s						
ZEDA				*i* AML	AML	14 34 32.0	
	comp=E,346nm,0.6s						
GOMA	**Golmarmara-Man**	**1.44**	**36**	PN	**Pn**	**14 34 06.7**	**+0.2**
DKL	**Dikili**	**1.52**	**2**	PN	**Pn**	**14 34 07.6**	**0.0**
AKS	**Akhisar**	**1.54**	**30**	PN	**Pn**	**14 34 08.2**	**+0.3**
THR8	**Santorini-Mono**	**1.57**	**224**	P	**Pn**	**14 34 08.5**	**+0.3**
THR8	**Santorini-Mono**	**1.57**	**224**	P	**Pn**	**14 34 07.1**	**-1.1**
THR3	**Thira Island,**	**1.61**	**226**	P	**Pn**	**14 34 09.4**	**+0.7**
DALY	**Dalyan (Mula)**	**1.63**	**116**	PN	**Pn**	**14 34 09.7**	**+0.7**
THR5	**Thira Island,**	**1.63**	**227**	P	**Pb**	**14 34 10.1**	**-0.5**
THR5	**Thira Island,**	**1.63**	**227**	P	**Pg**	**14 34 12.0**	**0.0**
THR6	**Thira Island,**	**1.65**	**224**	P	**Pb**	**14 34 10.2**	**-0.7**
MANT	**Manisa**	**1.66**	**55**	P	**Pn**	**14 34 08.6**	**-1.1**
MANT				S	**Sn**	**14 34 31.5**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.66**	**92**	P	**Pn**	**14 34 09.6**	**+0.1**
TAVA				S	**Sg**	**14 34 35.3**	**+1.2**
THR9	**Santorini-Faro**	**1.67**	**225**	P	**Pb**	**14 34 11.0**	**-0.3**
ARG	**Arkhangelos**	**1.69**	**141**	PN	**Pn**	**14 34 09.8**	**0.0**
ARG	**Arkhangelos**	**1.69**	**141**	P	**Pn**	**14 34 09.8**	**0.0**
ARG				S	**Sn**	**14 34 32.2**	**+0.9**
	comp=E,745nm,0.8s						
ARG	**Arkhangelos**	**1.69**	**141**	P	**Pn**	**14 34 09.9**	**0.0**
ARG				AML	AML	14 34 40.7	
	comp=N,1595μm,0.8s						
ARG				AML	AML	14 34 42.1	
	comp=E,1205μm,0.6s						
PRK	**Paraskevi**	**1.75**	**346**	P	**Pn**	**14 34 11.0**	**+0.3**
PRK				S	**Sn**	**14 34 34.0**	**+1.1**
	comp=E,2μm,0.8s						
PRK	**Paraskevi**	**1.75**	**346**	P	**Pn**	**14 34 11.3**	**+0.6**
PRK				AML	AML	14 34 43.1	
	comp=N,3638μm,0.5s						
PRK				AML	AML	14 34 47.4	
	comp=E,4009μm,1.1s						
SIGR	**SIGRI**	**1.83**	**336**	PN	**Pn**	**14 34 11.7**	**-0.1**
SIGR	**SIGRI**	**1.83**	**336**	P	**Pn**	**14 34 11.6**	**-0.2**
SIGR				S	**Sn**	**14 34 35.8**	**+1.0**
	comp=E,468nm,0.5s						
SIGR	**SIGRI**	**1.83**	**336**	P	**Pn**	**14 34 11.6**	**-0.2**
SIGR				AML	AML	14 34 44.1	
	comp=E,879μm,0.4s						
SIGR				AML	AML	14 34 47.4	
	comp=N,986μm,0.6s						
STEP	**BALIKESIR_Sava**	**1.96**	**21**	P	**Pb**	**14 34 16.7**	**+0.5**
STEP				S	**Sg**	**14 34 43.2**	**-0.4**
STEP				*i* AML	AML	14 34 49.0	
	comp=N,680nm,0.5s						
STEP				*i* AML	AML	14 34 49.0	
	comp=N,426nm,0.7s						
BUHA	**Balikesir, Bur**	**1.96**	**6**	P	**Pn**	**14 34 13.2**	**-0.4**
BUHA				S	**Sg**	**14 34 46.0**	**+2.3**
APMY	**Acipayam-Deniz**	**1.97**	**91**	PN	**Pn**	**14 34 14.3**	**+0.5**
GPNR	**Gulpinar-Canak**	**1.98**	**344**	PN	**Pn**	**14 34 13.9**	**0.0**
KARP	**Karpathos**	**2.01**	**172**	PN	**Pn**	**14 34 14.1**	**-0.2**
KARP	**Karpathos**	**2.01**	**172**	P	**Pn**	**14 34 14.2**	**-0.1**
KARP	**Karpathos**	**2.01**	**172**	P	**Pn**	**14 34 14.0**	**-0.3**
FETY	**Fethiye**	**2.02**	**116**	PN	**Pn**	**14 34 14.8**	**+0.4**
KOCA	**Canakkale, Ayv**	**2.03**	**345**	S	**Sg**	**14 34 46.7**	**+0.8**
CAME	**Cameli-Denizli**	**2.06**	**106**	PN	**Pn**	**14 34 15.7**	**+0.5**
MHLO	**Agia Marina, M**	**2.12**	**247**	P	**Pb**	**14 34 17.4**	**-1.5**
MHLO	**Agia Marina, M**	**2.12**	**247**	P	**Pn**	**14 34 16.7**	**+1.0**
BAYC	**CANAKKALE_Bayr**	**2.20**	**354**	P	**Pn**	**14 34 16.5**	**-0.5**
BAYC				S	**Sg**	**14 34 51.2**	**-0.3**
EZN	**Ezine**	**2.31**	**350**	PN	**Pn**	**14 34 18.4**	**0.0**
EZN	**Ezine**	**2.31**	**350**	P	**Pn**	**14 34 18.0**	**-0.4**
EZN				S	**Sn**	**14 34 47.8**	**+1.1**
	comp=N,348nm,0.5s						
DION	**Dionisos Attik**	**2.35**	**284**	P	**Pn**	**14 34 19.4**	**+0.4**
DION	**Dionisos Attik**	**2.35**	**284**	P	**Pn**	**14 34 20.1**	**+1.1**
BOZC	**Bozcaada**	**2.37**	**345**	PN	**Pn**	**14 34 19.1**	**-0.1**
PTL	**Penteli**	**2.40**	**283**	P	**Pn**	**14 34 20.3**	**+0.6**
KYMI	**Kymi, Euboea I**	**2.41**	**298**	P	**Pn**	**14 34 20.8**	**+1.0**
KYMI				S	**Sb**	**14 34 52.0**	**-1.5**
	comp=N,72nm,0.8s						
KYMI	**Kymi, Euboea I**	**2.41**	**298**	P	**Pn**	**14 34 19.5**	**-0.3**
VLY	**Voula,Athens**	**2.42**	**278**	P	**Pn**	**14 34 21.2**	**+1.2**
VLY	**Voula,Athens**	**2.42**	**278**	P	**Pn**	**14 34 21.1**	**+1.2**
ATHU	**Athens Univers**	**2.45**	**281**	P	**Pn**	**14 34 21.6**	**+1.3**
ZKR	**Zakros**	**2.48**	**192**	P	**Pn**	**14 34 21.1**	**+0.4**
BASM	**Basmaki-Afyon**	**2.58**	**81**	PN	**Pn**	**14 34 22.8**	**+0.6**
AKAS	**Kas**	**2.58**	**120**	PN	**Pn**	**14 34 23.0**	**+0.7**
GADA	**Gvkgeada**	**2.74**	**345**	PN	**Pn**	**14 34 24.4**	**+0.1**
IDI	**Anoyia**	**2.74**	**215**	P	**Pn**	**14 34 24.6**	**+0.2**
TVSB	**Tavsanli**	**2.81**	**47**	PN	**Pn**	**14 34 26.0**	**+0.6**
KORT	**Korkueli**	**2.86**	**100**	PN	**Pn**	**14 34 26.8**	**+0.7**
SMTH	**Samothraki Isl**	**3.09**	**341**	P	**Pn**	**14 34 29.1**	**-0.1**
ANKY	**Antikythira Is**	**3.29**	**240**	P	**Pn**	**14 34 33.6**	**+1.7**
NEO	**Neokhori**	**3.33**	**303**	P	**Pn**	**14 34 32.9**	**+0.4**
AXAR	**Agios Charalam**	**3.50**	**292**	P	**Pn**

baz=78
KBK Karagaybulak 1.89 33⇑iP Pn 14 40 37.0 -0.3
baz=31
KBK ⇑iS Sn 14 41 00.9 -0.4
baz=31
CHMS Chumysh 2.11 25 ⇑Pn Pb 14 40 43.2 +0.1
2.5nm,0.6s
CHMS ⇓Lg Lg 14 41 12.2
8.7nm,0.4s
TKM2 Tokmak 2 2.38 39 ⇑Pn Pb 14 40 47.8 -0.1
9.0nm,1.1s
TKM2 ⇓Lg Lg 14 41 17.9
SGDS Sogindy 2.50 18 eP Pb 14 40 49.8 +0.1
1.3nm,0.2s
SGDS eS Sb 14 41 21.6 +0.9
12nm,0.2s
KST Kastek 2.66 42 eP Pb 14 40 52.8 +0.4
1.9nm,0.3s
KST eS Sb 14 41 26.7 +1.4
12nm,0.6s
IUG Iuzhnay 2.84 293 eP Pg 14 40 58.9 -0.1
37nm,0.1s
IUG eS Sg 14 41 37.6 +1.8
62nm,0.5s
MTBS Maitube 2.96 45 eP Pb 14 40 58.5 +0.9
1.9nm,0.2s
MTBS eS Sb 14 41 36.5 +2.5
12nm,0.5s
KK31 Karatay Array 3.03 313 P Pb 14 41 00.1 +1.4
0.9nm,0.5s,baz=128,slow=16,SNR=15
KK31 ⇓S Sg 14 41 40.4 -1.3
8.0nm,0.4s,baz=132,slow=28,SNR=13
TNSS Tian-Shan 3.19 51 eP Pb 14 41 03.3 +1.5
1.2nm,0.6s
TNSS eS Sg 14 41 44.8 -2.4
2.9nm,0.3s
MDOK Medeo 3.33 50 eP Pb 14 41 05.2 +1.3
1.3nm,0.3s
MDOK eS Sb 14 41 48.1 +3.4
10nm,0.8s
KUU Kurty 3.48 35 eP Pb 14 41 07.4 +0.9
1.1nm,0.3s
KUU eS Sb 14 41 52.0 +3.1
6.7nm,0.4s
UZB Uzynbulak 4.56 61 eP Pb 14 41 27.0 +2.1
0.5nm,0.1s
UZB eS Sb 14 42 25.3 +5.1
4.2nm,0.4s

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*IDC **21** 15:01:10.7±1.9, 17°.02S×179°.35W, h549km±16km, mb2.9/6, mbtmp3.8/8, Error ellipse: s-maj=82.1km s-min=18.3km az=148.0*

ISC 21 15:01:10.7±1.4, 17°.0S±0°.6×179°.4W±0°.4, h550km, n9, σ0§39/10, mb3.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.58**	**254**	**P**		**15 02 23.5**	**0.0**
	11nm,0.8s,baz=118,slow=19,SNR=7.4						
AFI	**Afiamalu**	**7.93**	**68**	P		15 03 00.8	-7.2
	21nm,0.5s,baz=256,slow=12,SNR=9.5						
DZM	**Mont Dzumac**	**14.30**	**247**	**P**		**15 04 13.6**	**+0.4**
	3.8nm,0.7s,baz=124,slow=13,SNR=6.4						
STKA	**Stephens Creek**	**38.28**	**240**	P		**15 07 44.3**	**-0.2**
	2.3nm,0.4s,baz=93,slow=13,SNR=20						
	2.3nm,0.4s						
WRA	**Warramunga Arr**	**43.92**	**259**	P		**15 08 29.1**	**-0.3**
	0.3nm,0.3s,baz=93,slow=7.7,SNR=23						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.17**	**253**	P		**15 08 31.5**	**+0.1**
	6.1nm,0.5s,baz=89,slow=8.0,SNR=205						
ASAR				PcP		**15 10 03.5**	**-0.7**
	0.2nm,0.5s,baz=99,slow=4.4,SNR=1.9						
ASAR				ScP		**15 13 04.4**	**+0.5**
	0.4nm,0.9s,baz=121,slow=4.4,SNR=2.3						
	6.1nm,0.5s						
NVAR	**Mina Array Bea**	**79.42**	**44**	P		**15 12 20.6**	**0.0**
	0.2nm,0.7s,baz=243,slow=6.0,SNR=2.2						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**85.23**	**13**	P		**15 12 49.0**	**0.0**
	0.3nm,0.8s,baz=212,slow=6.4,SNR=4.9						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**86.29**	**58**	P		**15 12 55.1**	**+0.1**
	0.2nm,0.7s,baz=217,slow=5.7,SNR=2.3						
	0.2nm,0.7s						

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*GUC **21** 15:09:45.4±0.8, 21°.62S×67°.17W, h248km±9km, ML3.7*
*IDC **21** 15:09:49.8±9.0, 21°.04S×66°.69W, h249km±75km, mb3.5/1, mbtmp3.9/2, Error ellipse: s-maj=108.8km s-min=86.2km az=24.0*
*SCB **21** 15:09:49.3±0.8, 21°.55S×66°.97W, h175km±7km, ML3.6/3, MW3.6, Error ellipse: s-maj=3.9km s-min=3.0km az=0.0*

ISC 21 15:09:43.8±1.2, 21°.61S±0°.05×66°.90W±0°.05, h212km±9km, n32, σ1§69/51, 9C-1D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.23**	**73**	P		**15 10 17.7**	**+0.7**
MOCB				S		**15 10 39.0**	**-3.5**
MOCB				IAML		15 10 43.8	
	271nm,0.4s						
YJA	**Yavi**	**1.40**	**114**	P		**15 10 19.5**	**+1.2**
LVC	**Limon Verde**	**2.11**	**242**	eP		**15 10 26.1**	**+1.4**
LVC	**Limon Verde**	**2.11**	**242**	P		**15 10 26.0**	**+1.2**
PB09	**IPOC Station P**	**2.19**	**265**	eP		**15 10 27.1**	**+1.7**
PB09				iS		**15 10 58.8**	**+1.5**
PB09				IAML		15 11 04.1	
	comp=N,63nm,0.3s						
PB01	**IPOC Station P**	**2.48**	**283**	⇑iP		**15 10 29.1**	**+0.7**
PB01				iS		**15 11 03.6**	**+0.9**
PB01				IAML		15 11 04.5	
	comp=N,122nm,0.4s						
PB08	**IPOC Station P**	**2.57**	**304**	⇑iP		**15 10 31.2**	**+1.6**
PB08				iS		**15 11 06.8**	**+1.8**
PB08				IAML		15 11 09.2	
	comp=E,44nm,0.1s						
PB03	**IPOC Station P**	**2.69**	**260**	eP		**15 10 31.5**	**+0.8**
PB03				iS		**15 11 06.4**	**-0.5**
PB03				IAML		15 11 07.8	
	comp=E,128nm,0.2s						
PB06	**IPOC Station P**	**2.71**	**246**	eP		**15 10 32.0**	**+1.1**
PB06				iS		**15 11 08.1**	**+0.7**
PB06				IAML		15 11 09.2	
	comp=E,141nm,0.1s						
PB06	**IPOC Station P**	**2.71**	**246**	P		**15 10 32.4**	**+1.5**
PB07	**IPOC Station P**	**2.78**	**267**	⇑eP		**15 10 32.5**	**+0.8**
PB07				iS		**15 11 08.3**	**-0.6**
PB07				IAML		15 11 09.2	
	comp=N,308nm,0.5s						
PB02	**IPOC Station P**	**2.81**	**275**	⇑iP		**15 10 33.0**	**+1.0**
PB02				iS		**15 11 08.5**	**-0.7**
PB02				IAML		15 11 09.4	
	comp=N,349nm,0.4s						
PB02	**IPOC Station P**	**2.81**	**275**	P		**15 10 32.8**	**+0.8**
PB02				S		**15 11 04.4**	**-4.9**
PB02				IAML		15 11 09.2	
	comp=N,337nm,0.4s						
PB15	**IPOC Station P**	**2.86**	**236**	P		**15 10 34.5**	**+1.8**
GO01	**Chusmiza**	**2.89**	**312**	eP		**15 10 34.5**	**+1.2**
GO01				IAML		15 11 18.8	
	comp=N,194nm,0.1s						
HMBC	**Humberstone**	**3.09**	**295**	⇑iP		**15 10 35.5**	**+0.2**
HMBC				iS		**15 11 14.3**	**-0.9**
PB04	**IPOC Station P**	**3.10**	**256**	eP		**15 10 36.3**	**+0.8**
PB04				iS		**15 11 14.4**	**-1.0**
PB04	**IPOC Station P**	**3.10**	**256**	P		**15 10 36.8**	**+1.4**
PB04				S		**15 11 11.7**	**-3.8**
PB04				IAML		15 11 15.8	
	comp=N,93nm,0.3s						
PATCX	**Punta Patache**	**3.14**	**284**	⇑iP		**15 10 36.3**	**+0.6**
PATCX				iS		**15 11 14.8**	**-1.2**
PB11	**IPOC Station P**	**3.17**	**305**	⇑iP		**15 10 36.8**	**+0.5**
PB11				iS		**15 11 16.4**	**-0.6**
TA01	**Diego Aracena**	**3.24**	**288**	⇑iP		**15 10 37.0**	**+0.2**
TA01				iS		**15 11 16.0**	**-2.0**
TA01	**Diego Aracena**	**3.24**	**288**	P		**15 10 37.2**	**+0.4**
PB10	**IPOC Station P**	**3.87**	**240**	eP		**15 10 45.0**	**+0.5**
PB10				iS		**15 11 29.6**	**-2.2**
PB16	**IPOC Station P**	**4.08**	**323**	⇑iP		**15 10 49.3**	**+1.6**
PB16				iS		**15 11 38.6**	**+1.2**
GO02	**Mina Guanaco**	**4.31**	**214**	⇓iP		**15 10 51.3**	**+1.1**
GO02				iS		**15 11 41.3**	**-0.8**
PB12	**IPOC Station P**	**4.39**	**312**	eP		**15 10 49.8**	**-1.2**
PB12				iS		**15 11 40.0**	**-3.7**
SOEJ	**Jacaque**	**4.77**	**345**	P		**15 10 58.0**	**+1.8**
BBOE	**La Paz, Chanca**	**4.88**	**348**	P		**15 10 59.8**	**+2.1**
LPAZ	**La Paz**	**5.42**	**347**	P		**15 11 05.3**	**+0.8**
	comp=N,2.8nm,0.3s,baz=148,slow=7.0,SNR=16						
LPAZ				S		**15 12 05.9**	**-2.2**
	comp=N,1.7nm,0.7s,baz=183,slow=9.2,SNR=1.3						
LPAZ	**La Paz**	**5.42**	**347**	P		**15 11 06.7**	**+2.1**
TORD	**Torodi Ar. Bea**	**75.64**	**69**	P		**15 21 06.0**	**0.0**
	comp=N,0.6nm,0.4s,baz=255,slow=5.6,SNR=8.7						
	comp=N,0.6nm,0.4s						
MKAR	**Makanchi Array**	**144.61**	**37**	PKP	PKPbc	15 28 55.1	+0.8
	comp=N,0.3nm,0.6s,baz=318,slow=1.9,SNR=4.2						

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*DDA **21** 15:32:23.4±0.0, 35°.02N×27°.82E, h5km±1km, ML2.7*
*ISK **21** 15:32:25.8, 35°.15N×27°.71E, h10km, ML3.0/19*
*ATH **21** 15:32:27.3, 35°.17N×27°.63E, h18km±7km, ML2.8/3, Error ellipse: s-maj=8.2km s-min=1.6km az=329.0*
*THE **21** 15:32:29.8, 35°.33N×27°.55E, h6km±4km, ML2.7/3, Error ellipse: s-maj=5.3km s-min=1.4km az=321.0*
*GII **21** 15:32:33.1±0.0, 34°.81N×28°.16E, h10km*

ISC 21 15:32:26.2±1.6, 35°.13N±0°.05×27°.71E±0°.04, h9km±12km, n44, σ1§06/57, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.61**	**313**	PG		**15 32 37.9**	**-0.1**
KARP				SG		**15 32 46.5**	**+0.4**
KARP	**Karpathos**	**0.61**	**313**	P		**15 32 37.1**	**-1.0**
KARP				S		**15 32 44.0**	**-2.1**
	2μm,0.2s						
KARP	**Karpathos**	**0.61**	**313**	P		**15 32 37.9**	**-0.1**
KARP				S		**15 32 45.7**	**-0.4**
KARP				AML	AML	15 32 47.6	
	comp=E,3448μm,0.2s						
KARP				AML	AML	15 32 47.7	
	comp=N,3623μm,0.2s						
ARG	**Arkhangelos**	**1.14**	**17**	PN	**Pb**	**15 32 47.5**	**-0.5**
ARG	**Arkhangelos**	**1.14**	**17**	P	**Pb**	**15 32 48.0**	**0.0**
ARG				S	**Sg**	**15 33 02.4**	**-0.5**
	comp=N,408nm,0.7s						
ARG	**Arkhangelos**	**1.14**	**17**	P	**Pb**	**15 32 48.3**	**+0.3**
ARG				S	**Sn**	**15 33 04.3**	**+0.3**
ARG				AML	AML	15 33 09.1	
	comp=E,921μm,0.7s						
ARG				AML	AML	15 33 13.9	
	comp=N,547μm,1.0s						
ZKR	**Zakros**	**1.22**	**270**	PN	**Pn**	**15 32 49.4**	**0.0**
ZKR	**Zakros**	**1.22**	**270**	P	**Pn**	**15 32 49.6**	**+0.2**
ZKR				S	**Sb**	**15 33 05.2**	**-0.1**
	comp=N,298nm,0.6s						
ZKR	**Zakros**	**1.22**	**270**	P	**Pn**	**15 32 49.4**	**0.0**
ZKR				AML	AML	15 33 17.4	
	comp=N,358μm,0.6s						
ZKR				AML	AML	15 33 22.5	
	comp=E,833μm,0.6s						
NIS1	**Nisyros Isl.**	**1.53**	**344**	PN	**Pn**	**15 32 53.5**	**-0.2**
NIS1	**Nisyros Isl.**	**1.53**	**344**	P	**Pn**	**15 32 53.5**	**-0.2**
FRMA	**Ierapetra Chan**	**1.62**	**267**	P	**Pn**	**15 32 55.4**	**+0.5**
TURN	**Turunc**	**1.70**	**15**	PN	**Pn**	**15 32 56.3**	**+0.3**
TURN	**Turunc**	**1.70**	**15**	P	**Pn**	**15 32 56.9**	**+0.9**
TURN				S	**Sg**	**15 33 21.7**	**+0.8**
TURN				*i* AML	AML	15 33 26.0	
	comp=E,76nm,0.4s						
TURN				*i* AML	AML	15 33 31.0	
	comp=E,77nm,0.6s						
KOSK	**Kos Island**	**1.72**	**340**	PN	**Pn**	**15 32 56.6**	**+0.3**
DALY	**Dalyan (Mula)**	**1.85**	**24**	PN	**Pn**	**15 32 58.4**	**+0.3**
FETY	**Fethiye**	**1.87**	**36**	PN	**Pn**	**15 32 58.0**	**-0.4**
AKAS	**Kas**	**1.90**	**54**	PN	**Pn**	**15 32 58.8**	**-0.1**
AKAS	**Kas**	**1.90**	**54**	P	**Pn**	**15 32 58.8**	**-0.1**
AKAS				S	**Sb**	**15 33 25.1**	**+0.2**
AKAS				*i* AML	AML	15 33 28.0	
	comp=E,68nm,0.4s						
AKAS				*i* AML	AML	15 33 29.0	
	comp=E,79nm,0.5s						
BDRM	**Kayabasi**	**1.94**	**354**	P	**Pn**	**15 32 58.4**	**-1.0**
BDRM				S	**Sg**	**15 33 29.9**	**+1.2**
BDRM				*i* AML	AML	15 33 32.0	
	comp=E,46nm,0.6s						
YER	**Yerkesik**	**2.06**	**13**	PN	**Pn**	**15 33 01.2**	**+0.2**
YER	**Yerkesik**	**2.06**	**13**	P	**Pn**	**15 33 01.7**	**+0.7**
CAME	**Cameli-Denizli**	**2.23**	**35**	PN	**Pn**	**15 33 03.1**	**-0.3**
THR3	**Thira Island,**	**2.27**	**305**	P	**Pn**	**15 33 04.4**	**+0.6**
IDI	**Anoyia**	**2.31**	**275**	PN	**Pn**	**15 33 05.5**	**+1.0**
IDI	**Anoyia**	**2.31**	**275**	P	**Pn**	**15 33 05.9**	**+1.4**
IDI	**Anoyia**	**2.31**	**275**	P	**Pn**	**15 33 06.0**	**+1.4**
ELL	**Elmali**	**2.41**	**47**	PN	**Pn**	**15 33 06.1**	**+0.2**
TAVA	**DENIZLI_Tavas**	**2.53**	**22**	P	**Pn**	**15 33 07.7**	**+0.2**
TAVA				S	**Sg**	**15 33 50.0**	**+2.6**
TAVA				*i* AML	AML	15 33 53.0	
	comp=E,34nm,0.5s						
AYDN	**Tasoluk**	**2.53**	**3**	P	**Pn**	**15 33 07.7**	**+0.2**
GOLH	**Golhisar**	**2.58**	**35**	P	**Pn**	**15 33 09.8**	**+1.6**
GOLH				S	**Sb**	**15 33 43.3**	**-1.3**
GOLH				*i* AML	AML	15 34 02.0	
	comp=E,35nm,1.4s						
GOLH				*i* AML	AML	15 34 15.0	
	comp=E,29nm,0.6s						
APE	**Apeiranthos**	**2.62**	**318**	PN	**Pn**	**15 33 09.1**	**+0.4**
APMY	**Acipayam-Deniz**	**2.67**	**28**	PN	**Pn**	**15 33 09.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**2.82**	**3**	PN	**Pn**	**15 33 11.5**	**0.0**
KORT	**Korkueli**	**2.84**	**48**	PN	**Pn**	**15 33 12.7**	**+0.8**
IMMV	**Iera Moni Meta**	**3.06**	**277**	PN	**Pn**	**15 33 15.8**	**+1.0**
KNDR	**Palaiochora Ch**	**3.29**	**273**	PN	**Pn**	**15 33 19.5**	**+1.6**
URLA	**Izmir**	**3.35**	**345**	PN	**Pn**	**15 33 18.6**	**-0.1**
KTHA	**Kythira Island**	**3.94**	**288**	PN	**Pn**	**15 33 28.3**	**+1.4**
KTHR	**Kythira**	**3.99**	**288**	P	**Pn**	**15 33 28.9**	**+1.4**
NATI	**Neve Ativ**	**6.91**	**103**	Pn	**Pn**	**15 34 09.8**	**+2.2**
KRMI	**Paran Flat**	**7.75**	**128**	Pn	**Pn**	**15 34 20.8**	**+1.6**
KRMI				Sn	**Sn**	**15 35 45.4**	**-1.6**
PRNI	**Paran**	**7.78**	**126**	Pn	**Pn**	**15 34 20.8**	**+1.2**
EIL	**Elat**	**8.19**	**130**	Pn	**Pn**	**15 34 27.4**	**+2.1**
EIL				Sn	**Sn**	**15 35 55.3**	**-2.7**

IDC 21 15:32:44.6±2.0, 0°.36N×125°.13E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=190.8km s-min=28.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.10**	**156**	P	P	15 37 41.4	-0.3
	0.3nm,0.4s,baz=334,slow=11,SNR=8.1						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**25.35**	**161**	P	P	15 38 13.8	+0.2
	0.2nm,0.5s,baz=347,slow=9.4,SNR=8.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.45**	**327**	P	P	15 42 49.3	-0.1
	0.1nm,0.4s,baz=123,slow=7.1,SNR=1.5						
	0.1nm,0.4s						

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*IDC **21** 15:38:52.8±1.6, 3°.59S×145°.75E, h0km, mb3.7/5, mbtmp3.8/6, ML4.0/1, MS3.3/2, Error ellipse: s-maj=52.2km s-min=24.9km az=107.0*

ISC 21 15:38:55.8±1.7, 3°.8S±0°.2×145°.9E±0°.4, h25km, n8, σ1§54/6, mb3.7/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**14.92**	**281**	LR	LR	15 48 01.8	
	comp=Z,224nm,20.3s,baz=94,slow=37						
WRA	**Warramunga Arr**	**19.67**	**214**	P	**Pn**	**15 43 23.5**	**-1.1**
	0.5nm,0.3s,baz=33,slow=11,SNR=39						
	6.9nm,1.0s						
ASAR	**Alice Springs**	**22.96**	**209**	P	**P**	**15 43 59.8**	**+1.2**
	2.3nm,0.9s,baz=31,slow=11,SNR=44						
	2.3nm,0.9s						
JCJ	**Chichijima**	**30.87**	**353**	LR	LR	15 55 28.3	
	comp=Z,32nm,18.6s,baz=154,slow=32						
CMAR	**Chiang Mai Arr**	**51.26**	**297**	P	**P**	**15 47 57.5**	**-0.5**
	0.6nm,0.7s,baz=120,slow=5.3,SNR=1.9						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**75.09**	**320**	P	**P**	**15 50 37.4**	**+1.7**
	0.7nm,1.0s,baz=104,slow=6.1,SNR=3.7						
	0.7nm,1.0s						
ILAR	**Eielson Array**	**83.85**	**23**	P	**P**	**15 51 22.6**	**-0.4**
	1.0nm,0.8s,baz=250,slow=4.7,SNR=8.9						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**84.33**	**324**	P	**P**	**15 51 24.7**	**-0.9**
	0.4nm,0.5s,baz=104,slow=6.1,SNR=4.6						
	0.4nm,0.5s						

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*IDC **21** 15:40:04.5±1.2, 3°.56S×145°.83E, h0km, mb3.8/6, mbtmp3.9/8, ML1.3/1, MS3.8/8, Error ellipse: s-maj=36.5km s-min=20.5km az=96.0*

ISC 21 15:40:06.3±1.1, 3°.5S±0°.1×145°.7E±0°.2, h10km, n14, σ1§36/10, mb3.7/7, MS3.6/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.03**	**166**	Pn	**Pn**	**15 41 35.1**	**-0.5**
	0.5nm,0.3s,baz=292,slow=2.7,SNR=3.1						
PMG				Sn	**Sn**	**15 42 46.4**	**+1.6**
	0.3nm,0.3s,baz=209,slow=20,SNR=1.2						
	16nm,0.8s						
HNR	**Honiara**	**15.29**	**113**	LR	LR	15 48 48.1	
	comp=Z,3μm,21.6s,baz=274,slow=34						
WRA	**Warramunga Arr**	**19.76**	**213**	P	**P**	**15 44 34.8**	**-1.9**
	8.5nm,0.9s,baz=34,slow=10.0,SNR=15						
WRA				LR	LR	15 52 59.3	
	comp=Z,594nm,18.4s,baz=46,slow=39						
BATI	**Baumata**	**22.89**	**252**	P	**P**	**15 45 10.9**	**+0.4**
	40nm,0.6s,baz=130,slow=7.9,SNR=4.1						
BATI				LR	LR	15 56 16.9	
	comp=Z,166nm,18.3s,baz=88,slow=42						
ASAR	**Alice Springs**	**23.07**	**209**	P	**P**	**15 45 11.8**	**-0.5**
	2.2nm,0.8s,baz=38,slow=10,SNR=6.7						
ASAR				LR	LR	15 53 54.1	
	comp=Z,255nm,21.9s,baz=24,slow=36						
	2.2nm,0.8s						
KAPI	**Kappang**	**25.95**	**266**	LR	LR	15 57 01.9	
	comp=Z,70nm,19.2s,baz=84,slow=39						
DZM	**Mont Dzumac**	**27.28**	**134**	LR	LR	15 55 44.5	
	comp=Z,195nm,19.4s,baz=217,slow=35						
AFI	**Afiamalu**	**43.18**	**107**	LR	LR	16 04 49.7	
	comp=Z,46nm,19.0s,baz=276,slow=34						
URZ	**Urewera**	**44.90**	**145**	LR	LR	16 05 49.5	
	comp=Z,72nm,19.9s,baz=52,slow=34						
CMAR	**Chiang Mai Arr**	**50.98**	**297**	P	**P**	**15 49 08.9**	**+0.2**
	0.6nm,0.7s,baz=111,slow=6.9,SNR=2.1						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**74.78**	**320**	P	**P**	**15 51 49.2**	**+2.4**
	0.8nm,0.9s,baz=114,slow=5.2,SNR=3.6						
	0.8nm,0.9s						
KURBB	**Kurchatov Arra**	**78.49**	**323**	P	**P**	**15 52 07.8**	**+0.1**
	0.5nm,0.8s,baz=108,slow=4.7,SNR=2.9						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**83.70**	**23**	P	**P**	**15 52 34.4**	**-0.8**
	1.3nm,0.8s,baz=249,slow=5.5,SNR=8.0						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**84.02**	**324**	P	**P**	**15 52 37.0**	**0.0**
	0.7nm,0.7s,baz=106,slow=4.7,SNR=4.6						
	0.7nm,0.7s						

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*DJA **21** 16:10:52.9±0.2, 2°.N±2°.×12°.7E±°, h96km±2km, M5.0/53, mB5.4/33, mb5.2/53, MLv5.3/20, Mw(mB)4.9/33, MwMwp4.5/2, Mwp4.9/2*
*MOS **21** 16:10:52.2±0.9, 1°.92N×127°.31E, h103km, mb4.8/44, Error ellipse: s-maj=12.1km s-min=5.6km az=113.0*
*NEIC **21** 16:10:53.2±2.5, 1°.87N±0°.06×127°.30E±0°.08, h98km±6km, mb4.9/65, Error ellipse: s-maj=12.1km s-min=9.1km az=68.0*
*GCMT **21** 16:10:53.2±0.3, 1°.97N±0°.02×127°.30E±0°.02, h87km±3km, MW4.9/85, Moment Tensor Solution. s29,c31; s85,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.67±.10; $M_{\theta\theta}$0.88±.10; $M_{\phi\phi}$-2.54±.10; $M_{r\theta}$-1.00±.05; $M_{\theta\phi}$-1.10±.11; $M_{\phi r}$0.26±.08; Best double couple: $M_0$2.67900×10^{16} NP1:ϕ_s228.00000°, δ57.00000°, λ138.00000°. NP2: ϕ_s344.00000°, δ56.00000°, λ41.00000°. Principal axes: T 2.4950, Plg51.0000°, Azm196.0000°; N 0.3760, Plg39.0000°, Azm17.0000°; P -2.8640, Plg0.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **21** 16:10:53.7±1.2, 1°.84N×127°.34E, h99km±10km, mb4.3/26, mbtmp4.7/30, MS3.4/21 Error ellipse: s-maj=14.4km s-min=7.3km az=68.0*

ISC 21 16:10:53.0±0.3, 1°.88N±0°.03×127°.30E±0°.04, h94km±3km, h94km:pP-P, n531, σ1§36/566, mb4.8/108, 20C-8D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.49**	**94**	P	**Pn**	**16 11 07.1**	**-1.0**
TNTI	**Ternate**	**1.10**	**176**	Pn	**Pn**	**16 11 14.8**	**+0.7**
TNTI	**Ternate**	**1.10**	**176**	P	**Pn**	**16 11 14.7**	**+0.6**
TNTI	**Ternate**	**1.10**	**176**	P	**Pn**	**16 11 16.2**	**+2.1**
LBMI	**Labuha**	**2.50**	**175**	P	**Pn**	**16 11 33.6**	**+1.6**
SGSI	**Sangihe**	**2.52**	**316**	P	**Pn**	**16 11 31.0**	**-1.3**
SANI	**Sanana**	**4.11**	**199**	P	**Pn**	**16 11 53.1**	**-0.6**
SANI	**Sanana**	**4.11**	**199**	P	**Pn**	**16 11 53.8**	**+0.1**
GTOI	**Gorontalo**	**4.46**	**254**	P	**Pn**	**16 11 59.9**	**+1.6**
GSPH	**General Santos**	**4.79**	**331**	⇑eP	**Pn**	**16 12 01.5**	**-1.6**
GSPH				*i* S	**Sn**	**16 12 53.9**	**-3.6**
SIJI	**Sorong**	**4.81**	**124**	P	**Pn**	**16 12 04.1**	**+0.9**
	111nm,0.4s,baz=333,slow=21,SNR=114						
SIJI				S	**Sn**	**16 12 57.9**	**+0.1**
	37nm,0.5s,baz=331,slow=23,SNR=1.0						
SIJI				LR	LR	16 14 11.6	
	comp=Z,1μm,21.1s,baz=232,slow=42						
SIJI	**Sorong**	**4.81**	**124**	P	**Pn**	**16 12 03.9**	**+0.7**
NLAI	**Namlea**	**5.08**	**182**	P	**Pn**	**16 12 07.6**	**+0.7**
	1.4nm5μm158nm,0.5s						
KRAI	**Karang Ratu**	**5.27**	**168**	P	**Pn**	**16 12 12.3**	**+2.8**
	1.7nm4μm498nm,1.1s						
LUWI	**Luwuk**	**5.37**	**237**	Pn	**Pn**	**16 12 10.3**	**-0.5**
LUWI	**Luwuk**	**5.37**	**237**	P	**Pn**	**16 12 10.5**	**-0.3**
	7.4nm6μm546nm,0.8s						
LUWI	**Luwuk**	**5.37**	**237**	P	**Pn**	**16 12 13.1**	**+2.3**
MSAI	**Masohi**	**5.44**	**163**	P	**Pn**	**16 12 12.7**	**+1.0**
	0.5nm2μm160nm,1.0s						
DAV	**Davao City (W)**	**5.44**	**342**	P	**Pn**	**16 12 12.4**	**+0.7**
	218nm,0.4s,baz=52,slow=1.5,SNR=13						
DAV				S	**Sn**	**16 13 11.3**	**-1.6**
	687nm,0.5s,baz=168,slow=9.3,SNR=2.2						
DAV	**Davao City (W)**	**5.44**	**342**	Pn	**Pn**	**16 12 12.1**	**+0.4**
DAV	**Davao City (W)**	**5.44**	**342**	P	**Pn**	**16 12 13.4**	**+1.7**
DAV				S	**Sn**	**16 13 11.4**	**-1.6**
DAV	**Davao City (W)**	**5.44**	**342**	P	**Pn**	**16 12 10.9**	**-0.8**
	9.5nm11μm755nm,0.8s						
MRSI	**Marisa**	**5.53**	**256**	P	**Pn**	**16 12 14.0**	**+1.1**
	4.2nm2μm14μm1μm,0.6s						
AAI	**Ambon**	**5.60**	**171**	P	**Pn**	**16 12 15.5**	**+1.7**
	1.9nm5μm622nm,0.8s						
CTBH	**Cotabato--PC H**	**6.12**	**330**	eP	**Pn**	**16 12 20.1**	**-0.9**
CTBH				*i* S	**Sn**	**16 13 25.4**	**-4.2**
APSI	**Ampana**	**6.29**	**244**	P	**Pn**	**16 12

2µm193nm,0.7s
I39PW **PALAU INFRASON** 9.15 52 I 17 06 00.0
baz=228,slow=306,SNR=0.7
CNOP **Candoni, Negro** 9.16 330⇑ *e*P Pn 16 13 02.2 -0.2
MYLDM **Lahad Datu** 9.37 291 Pn 16 13 07.4 +2.1
MYLDM **Lahad Datu** 9.37 291 P Pn 16 13 05.7 +0.4
6µm485nm,1.1s
SPSI **Sidrap Palu** 9.50 232 P Pn 16 13 06.3 -0.7
2µm204nm,1.0s
BNSI **Bone** 9.51 229 P Pn 16 13 06.7 -0.5
877nm61nm,0.7s
BKSI **Bulukumba** 10.12 225 P Pn 16 13 16.3 +0.8
1µm108nm,0.6s
KAPI **Kappang** 10.18 228 P Pn 16 13 17.1 +0.8
23nm,0.4s,baz=22,slow=3.9,SNR=16
KAPI S Sn 16 15 04.6 -4.0
30nm,0.4s,baz=334,slow=23,SNR=9.0
KAPI **Kappang** 10.18 228 Pn Pn 16 13 13.0 -3.3
KAPI **Kappang** 10.18 228 P Pn 16 13 17.5 +1.2
SAUI **Saumlaki** 10.57 158 P Pn 16 13 22.8 +1.1
744nm,0.9s
RCP **Roxas** 10.63 335⇓ *e*P Pn 16 13 22.4 0.0
MMRI **Maumere** 11.60 206 Pn Pn 16 13 36.9 +1.5
MMRI **Maumere** 11.60 206 P Pn 16 13 36.4 +0.9
71nm,0.8s
KKM **Kota Kinabalu** 11.80 291 Pn 16 13 39.4 +1.0
KKM **Kota Kinabalu** 11.80 291 P Pn 16 13 37.8 -0.6
2µm202nm,0.9s
KKM **Kota Kinabalu** 11.80 291 P Pn 16 13 41.5 +3.1
SOEI **Soe** 11.94 195 Pn Pn 16 13 42.8 +2.5
SOEI **Soe** 11.94 195 P Pn 16 13 41.3 +1.1
2µm213nm,0.8s
SOEI **Soe** 11.94 195 P Pn 16 13 44.2 +4.0
BATI **Baumata** 12.54 197 P Pn 16 13 50.3 +2.2
44nm,0.6s,baz=298,slow=1.8,SNR=13
BATI LR LR 16 19 29.6
comp=Z,75nm,20.4s,baz=54,slow=41
BATI **Baumata** 12.54 197 P Pn 16 13 49.5 +1.4
1µm94nm,0.7s
MTKI **Muara Teweh, K** 12.71 257 P Pn 16 13 50.6 +0.2
2µm67nm,1.1s
LQP **Lukban** 13.43 335⇑ *i*P Pn 16 14 00.5 +0.5
BBKI **Banjar Baru** 13.53 247 P Pn 16 14 01.1 -0.1
GENI **Genyem** 13.61 109 P Pn 16 14 03.5 +1.3
2µm257nm,1.1s
PLAI **Plampang** 14.25 222 P Pn 16 14 11.5 +1.0
4µm371nm,1.0s
PLAI **Plampang** 14.25 222 P P 16 14 15.4 +0.4
TWSI **Taliwang, Sumb** 14.80 224 P Pn 16 14 18.5 +1.0
3µm370nm,1.1s
SBUM **Sibu** 15.08 272 P P 16 14 22.9 -1.2
SBUM **Sibu** 15.08 272 P Pn 16 14 21.1 0.0
476nm38nm,1.1s
MTN **Manton Dam** 15.11 166 P Pn 16 14 19.9 -1.6
baz=15,SNR=13
MTN **Manton Dam** 15.11 166 P Pn 16 14 19.4 -2.1
MTN IAmb IAmb 16 14 31.9
comp=Z,53nm,0.7s
MTN **Manton Dam** 15.11 166 P Pn 16 14 20.2 -1.3
MTNI **Mataram** 15.23 227 P Pn 16 14 19.5 -3.6
comp=Z,1µmcomp=Z,76nm,0.9s
KDU **Kakadu** 15.35 161 P Pn 16 14 22.6 -2.0
baz=15,SNR=13
KDU **Kakadu** 15.35 161 P Pn 16 14 22.6 -2.0
SRBI **Singaraja** 15.59 230 P Pn 16 14 28.7 +1.1
comp=Z,1µmcomp=Z,104nm,0.9s
STKI **Sintang** 15.92 264 P Pn 16 14 31.5 -0.2
comp=Z,25nm,0.7s
KMMI **Kalianget** 15.99 236 P Pn 16 14 33.3 +0.8
comp=Z,206nm,1.0s
RTBI **Rangdo, Negare** 16.04 230 P Pn 16 14 33.9 +0.7
comp=Z,166nm,1.0s
JAGI **Jajag, Banyuwa** 16.65 232 P P 16 14 41.4 -0.3
comp=Z,1µmcomp=Z,135nm,1.1s
JAGI **Jajag, Banyuwa** 16.65 232 P P 16 14 46.3 +4.6
KSM **Kuching** 16.99 269 P Pn 16 14 43.7 -1.2
KSM **Kuching** 16.99 269 P Pn 16 14 44.5 -0.4
comp=Z,551nmcomp=Z,35nm,1.0s
KNRA **Kununurra** 17.50 175 P P 16 14 50.6 -0.4
baz=18,SNR=133
KNRA **Kununurra** 17.50 175 P P 16 14 49.9 -1.0
KNRA **Kununurra** 17.50 175 P P 16 14 50.7 -0.2
PCJI **Pacitan** 18.93 238 P P 16 15 07.3 +0.6
comp=Z,170nm,0.8s
UGM **Wanagama** 19.35 240 P Pn 16 15 16.2 +2.9
CTJI **Waduk Cacaban** 20.12 244 P P 16 15 19.4 -0.2
comp=Z,99nm,1.0s
GUMO **Guam** 20.92 55 P Pn 16 15 31.1 -0.5
comp=Z,28nm,0.6s,baz=174,slow=18,SNR=4.1
GUMO LR LR 16 23 27.8
comp=Z,75nm,18.9s,baz=232,slow=36
LEM **Lembang** 21.46 246 P P 16 15 37.8 +3.5
comp=Z,52nm,0.9s,baz=134,slow=22,SNR=4.8
LEM LR LR 16 26 00.1
comp=Z,124nm,18.6s,baz=328,slow=42
PPBI **Pangkal Pinang** 21.53 259 P P 16 15 34.8 0.0
comp=Z,5µmcomp=Z,34nm,0.7s
TWG **Pinlang** 21.68 344 P P 16 15 33.6 -2.7
TWG IAmb IAmb 16 15 35.0
comp=Z,36nm,0.6s
YULB **Yu-li** 22.17 345 P P 16 15 38.5 -2.9
YULB **Yu-li** 22.17 345 P P 16 15 41.3 -0.1
COEN **Coen** 22.25 135 P P 16 15 40.8 -1.6
baz=22,SNR=8.2
COEN **Coen** 22.25 135 P P 16 15 42.6 +0.2
COEN **Coen** 22.25 135 P P 16 15 42.5 +0.1
TPUB **Ta-pu** 22.26 344 P P 16 15 40.9 -1.5
TPUB IAmb IAmb 16 15 44.5
comp=Z,65nm,0.8s
TPUB **Ta-pu** 22.26 344 P P 16 15 41.6 -0.8
WB0 **Warramunga Arr** 22.61 162 P P 16 15 44.6 -1.5
SSLB **Suanglung** 22.63 345 P P 16 15 44.7 -1.6
SSLB IAmb IAmb 16 15 52.5
comp=Z,43nm,0.9s
SSLB **Suanglung** 22.63 345 P P 16 15 46.8 +0.5
PMG **Port Moresby** 22.74 120 P P 16 15 46.7 -0.8
comp=Z,19nm,0.8s,baz=144,slow=23,SNR=3.6
PMG LR LR 16 26 07.0
comp=Z,141nm,20.3s,baz=305,slow=40
comp=Z,19nm,0.8s
PMG **Port Moresby** 22.74 120 *i* P P 16 15 47.2 -0.3
PMG pmax pmax
comp=Z,20nm,1.0s
WRAB **Tennant Creek** 22.75 163 P P 16 15 45.4 -2.2
WRAB **Tennant Creek** 22.75 163 *ce*P P 16 15 46.5 -1.1
WRAB pmax pmax
comp=Z,99nm,0.7s
WRAB **Tennant Creek** 22.75 163 P P 16 15 46.7 -0.9
WRA **Warramunga Arr** 22.76 163 P P 16 15 46.4 -1.2
comp=Z,89nm,0.6s,baz=339,slow=10,SNR=221
WRA S S 16 19 45.9 -3.6
comp=Z,1.3nm,0.6s,baz=270,slow=14,SNR=2.3
WRA LR LR 16 25 24.1
comp=Z,141nm,20.4s,baz=330,slow=38
WRA **Warramunga Arr** 22.76 163 P P 16 15 46.4 -1.2
WRA **Warramunga Arr** 22.76 163 P P 16 15 46.4 -1.2
WRA pmax pmax
comp=Z,13nm,0.7s
WB2 **Warramunga Arr** 22.76 163 P P 16 15 46.3 -1.3
WR0 **Warramunga Arr** 22.83 162 P P 16 15 45.7 -2.7
YOJ **Yonaguni jima** 22.83 350 P P 16 15 43.2 -5.1
YOJ IAmb IAmb 16 15 48.6
comp=Z,102nm,1.1s
YOJ **Yonaguni jima** 22.83 350 P P 16 15 43.2 -5.1
YOJ pmax pmax
comp=Z,102nm,1.1s
YHNB **Yeheng** 23.37 346 P P 16 15 53.6 +0.1
YHNB IAmb IAmb 16 16 00.5
comp=Z,35nm,0.8s
YHNB **Yeheng** 23.37 346 P P 16 15 54.3 +0.7
MYKOM **Kota Tinggi** 23.43 270 P P 16 15 53.8 -0.4
MYKOM **Kota Tinggi** 23.43 270 P P 16 15 53.6 -0.6
comp=Z,22nm,1.1s
KASI **Kota Agung** 23.93 252 P P 16 15 58.9 +0.3
comp=Z,95nm,0.8s
MBWA **Marble Bar** 24.06 198 P P 16 15 59.0 -0.7
MBWA IAmb IAmb 16 16 00.5
comp=Z,49nm,0.8s
MBWA **Marble Bar** 24.06 198 P P 16 15 59.3 -0.4
MBWA S S 16 20 12.8 +2.3
MBWA **Marble Bar** 24.06 198 P P 16 15 59.2 -0.4
QIZ **Qiongzhong** 24.14 316 P P 16 15 59.2 -1.2
QIZ IAmb IAmb 16 16 01.6
comp=Z,24nm,0.7s
QIZ **Qiongzhong** 24.14 316 P P 16 16 01.1 +0.6
QIZ pP pP 16 16 21.9 +1.4
QIZ S S 16 20 16.6 +4.7
QIZ pmax pmax
comp=Z,35nm,0.7s
QIZ **Qiongzhong** 24.14 316 P P 16 16 01.2 +0.7
LWLI **Liwa** 24.20 253 P P 16 16 01.6 +0.4
comp=Z,95nm,0.7s
PSA00 **Pilbara Seismi** 24.42 197 P P 16 16 02.0 -0.8
PSA00 **Pilbara Seismi** 24.42 197 P P 16 16 01.7 -1.2
PSA00 IAmb IAmb 16 16 03.9
comp=Z,54nm,1.1s
PSA00 **Pilbara Seismi** 24.42 197 P P 16 16 02.9 0.0
JOW **Kunigami** 24.83 2 P P 16 16 08.0 +1.3
comp=Z,14nm,0.8s,baz=185,slow=7.0,SNR=5.1
comp=Z,14nm,0.8s
UBPT **Khong Chiam** 25.32 303 P P 16 16 11.9 +0.7
UBPT IAmb IAmb 16 16 13.1
comp=Z,26nm,0.7s
UBPT **Khong Chiam** 25.32 303 P P 16 16 10.6 -0.6
comp=Z,37nm,0.7s
UBPT **Khong Chiam** 25.32 303 P P 16 16 12.7 +1.5
QIS **Mount Isa** 25.35 152 P P 16 16 11.6 +0.2
baz=25,SNR=46
QIS **Mount Isa** 25.35 152 P P 16 16 11.5 +0.1
KRVT **Keravat (AS076** 25.46 104 P P 16 16 12.6 0.0
comp=Z,18nm,0.7s,baz=11,slow=14,SNR=3.0
comp=Z,18nm,0.7s
MASI **Maura Aman, Be** 25.54 259 P P 16 16 13.4 +0.1
comp=Z,47nm,0.9s
MTSU **Mount Surprise** 26.00 141 P P 16 16 16.0 -1.4
baz=26,SNR=11
MTSU **Mount Surprise** 26.00 141 P P 16 16 20.2 +2.8
AS31 **Alice Springs** 26.19 166 P P 16 16 18.2 -0.8
ASAR **Alice Springs** 26.19 166 P P 16 16 18.2 -0.8
comp=Z,21nm,0.5s,baz=351,slow=7.8,SNR=857
ASAR PcP PcP 16 19 44.0 +0.1
comp=Z,3.3nm,0.6s,baz=2.7,slow=2.3,SNR=4.3
ASAR S S 16 20 42.2 -2.2
comp=Z,0.9nm,0.5s,baz=344,slow=3.8,SNR=2.3
ASAR ScP ScP 16 23 14.7 -0.7
comp=Z,3.9nm,1.0s,baz=341,slow=2.8,SNR=7.6
comp=Z,21nm,0.5s
ASAR **Alice Springs** 26.19 166 P P 16 16 17.4 -1.6
ASAR PcP PcP 16 19 42.9 -1.0
AS01 **Alice Springs** 26.20 166 P P 16 16 18.6 -0.5
IPM **Ipoh** 26.36 276 P P 16 16 18.0 -2.6
WRKA **Warakurna** 26.77 178 P P 16 16 23.5 -0.7
baz=27,SNR=36
WRKA **Warakurna** 26.77 178 P P 16 16 23.9 -0.3
KULM **Kulim** 26.81 278 P P 16 16 21.1 -3.5
GIRL **Giralia** 27.50 207 P P 16 16 32.1 +1.4
baz=28,SNR=9.2
GIRL **Giralia** 27.50 207 P P 16 16 29.3 -1.4
GIRL **Giralia** 27.50 207 P P 16 16 32.1 +1.4
PSI **Prapat** 28.36 272 LR LR 16 30 37.4
comp=Z,73nm,18.0s,baz=69,slow=42
CTA **Charters Tower** 28.67 140 P P 16 16 42.8 +1.5
comp=Z,16nm,1.0s,baz=322,slow=14,SNR=4.5
CTA LR LR 16 29 55.2
comp=Z,100nm,19.2s,baz=299,slow=40
comp=Z,16nm,1.0s
CTA **Charters Tower** 28.67 140 P P 16 16 43.4 +2.1
CTAO **Charters Tower** 28.67 140 P P 16 16 37.4 -3.9
CTAO IAmb IAmb 16 16 49.8
comp=Z,18nm,0.9s
CTAO **Charters Tower** 28.67 140 P P 16 16 37.4 -3.9
CTAO pmax pmax
comp=Z,17nm,0.9s
CTAO **Charters Tower** 28.67 140 P P 16 16 43.4 +2.1
JCJ **Chichijima** 28.86 28 LR LR 16 25 37.9
comp=Z,52nm,21.2s,baz=224,slow=31
GSI **Gunungsitoli** 29.71 269 P P 16 16 47.6 -3.0
GSI IAmb IAmb 16 16 50.4
comp=Z,26nm,0.9s
GSI PcP PcP 16 19 54.1 +1.4
GSI **Gunungsitoli** 29.71 269 P P 16 16 50.2 -0.4
OOD **Oodnadatta** 30.58 165 P P 16 16 57.3 -0.7
NJ2 **Nanjing** 31.05 346 ⇑P P 16 17 08.0 +5.9
NJ2 pmax pmax
comp=Z,17nm,0.9s
PATS **Pohnpei** 31.31 80 P P 16 17 02.3 -2.3
PATS IAmb IAmb 16 17 19.3
comp=Z,29nm,1.1s
INKA **Innaminka** 32.16 157 P P 16 17 12.5 +0.6
CMAR **Chiang Mai Arr** 32.32 303 P P 16 17 14.0 +0.6
comp=Z,5.0nm,1.0s,baz=115,slow=7.4,SNR=24
CMAR PcP PcP 16 20 00.7 +1.2
comp=Z,2.0nm,1.1s,baz=148,slow=1.1,SNR=4.8
CMAR ScP ScP 16 23 35.5 +0.5
comp=Z,1.9nm,1.1s,baz=146,slow=1.7,SNR=7.9
CMAR LR LR 16 30 26.4
comp=Z,21nm,20.8s,baz=100,slow=36
comp=Z,5.0nm,1.0s
CMAR **Chiang Mai Arr** 32.32 303 P P 16 17 11.7 -1.7
CMAR **Chiang Mai Arr** 32.32 303 *i* P P 16 17 14.3 +0.9
CMAR pmax pmax
comp=Z,5.0nm,1.0s
CHTO **Chiang Mai** 32.48 303 P P 16 17 12.5 -2.3
CHTO IAmb IAmb 16 17 16.4
comp=Z,16nm,1.1s
CHTO **Chiang Mai** 32.48 303 P P 16 17 12.5 -2.3
CHTO pmax pmax
comp=Z,17nm,1.2s
FORT **Forrest** 32.48 179 P P 16 17 13.8 -0.8
baz=33,SNR=32
FORT **Forrest** 32.48 179 P P 16 17 12.2 -2.4
FORT **Forrest** 32.48 179 P P 16 17 14.2 -0.5
MORW **Morawa** 32.60 198 P P 16 17 15.6 -0.2
baz=33,SNR=15
MORW **Morawa** 32.60 198 P P 16 17 13.5 -2.3
MORW IAmb IAmb 16 17 16.5
comp=Z,29nm,0.9s
MORW **Morawa** 32.60 198 P P 16 17 15.5 -0.3
MULG **Mulgathing** 32.62 169 P P 16 17 15.4 -0.5
QLP **Quilpie** 32.68 151 P P 16 17 17.0 +0.5
baz=33,SNR=4.7
QLP **Quilpie** 32.68 151 P P 16 17 17.1 +0.7
ENH **Enshi** 32.91 331 P P 16 17 19.5 +1.0
KMI **Kunming** 33.09 316 ⇑P P 16 17 23.5 +3.1
KMI pmax pmax
comp=Z,14nm,1.3s
RK1H **Rockhampton Ha** 33.77 139 P P 16 17 26.5 +0.5
LCRK **Leigh Creek** 33.79 163 P P 16 17 25.7 -0.3
BLDU **Ballidu** 33.85 197 P P 16 17 26.3 -0.3
baz=34,SNR=41
BLDU **Ballidu** 33.85 197 P P 16 17 26.2 -0.3
KLBR **Kellerberrin** 34.49 194 P P 16 17 31.8 -0.3
baz=35,SNR=5.8
KLBR **Kellerberrin** 34.49 194 P P 16 17 31.9 -0.3
INU **Inuyama** 34.51 14 P P 16 17 32.4 +0.2
INU IAmb IAmb 16 17 36.3
comp=Z,19nm,0.6s
INU **Inuyama** 34.51 14 P P 16 17 32.8 +0.6
INU **Inuyama** 34.51 14 P P 16 17 32.3 +0.1
PZH **PanZhiHua** 34.67 317 P P 16 17 34.4 +0.5
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,250nm,5.1s
MUN **Mundaring** 35.27 196 P P 16 17 38.7 -0.2
baz=36,SNR=27
MUN **Mundaring** 35.27 196 P P 16 17 38.7 -0.2
LYN **LuoYang** 35.33 339 *e*P P 16 17 42.1 +2.8
LYN pmax pmax
comp=Z,10.0nm,0.5s
KSRS **Korea Array** 35.41 1 P P 16 17 40.6 +0.7
comp=Z,3.9nm,0.9s,baz=178,slow=10,SNR=10
KSRS PcP PcP 16 20 08.7 +0.8
comp=Z,2.4nm,0.7s,baz=186,slow=2.8,SNR=6.8
KSRS ScP ScP 16 23 45.2 -0.3
comp=Z,1.3nm,0.8s,baz=186,slow=5.6,SNR=3.8
KSRS LR LR 16 33 55.1
comp=Z,32nm,20.1s,baz=185,slow=39
comp=Z,3.9nm,0.9s
BBOO **Buckleboo** 35.48 167 P P 16 17 40.0 -0.6
baz=36,SNR=55
BBOO **Buckleboo** 35.48 167 P P 16 17 39.8 -0.8
BBOO **Buckleboo** 35.48 167 P P 16 17 40.0 -0.6
EIDS **Eidsvold** 35.55 141 P P 16 17 41.1 -0.3
baz=36,SNR=7.1
EIDS **Eidsvold** 35.55 141 P P 16 17 39.6 -1.8
EIDS IAmb IAmb 16 17 45.2
comp=Z,18nm,0.9s
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 44.0 -0.2
baz=36,SNR=8.8
NWAO P P 16 17 44.0 -0.2
baz=36,SNR=8.8
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 43.7 -0.5
NWAO IAmb IAmb 16 17 46.5
comp=Z,16nm,0.8s
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 43.7 -0.5
NWAO pmax pmax
comp=Z,16nm,0.8s
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 44.1 -0.1
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 44.0 -0.2
NWAO **Narrogin (SRO)** 35.90 195 P P 16 17 44.0 -0.2
MJAR **Matsushiro Arr** 35.94 15 P P 16 17 43.6 -1.0
comp=Z,8.7nm,0.7s,baz=188,slow=8.4,SNR=13
MJAR PcP PcP 16 20 10.1 +0.5
comp=Z,1.0nm,0.6s,baz=172,slow=3.0,SNR=4.5
MJAR LR LR 16 31 24.5
comp=Z,36nm,19.9s,baz=195,slow=34
comp=Z,8.7nm,0.7s
MAJO **Matsushiro** 35.94 15 P P 16 17 43.8 -0.8
MAJO IAmb IAmb 16 17 48.0
comp=Z,17nm,0.7s
MAJO **Matsushiro** 35.94 15 P P 16 17 43.8 -0.8
MAJO pmax pmax
comp=Z,17nm,0.7s
MAJO **Matsushiro** 35.94 15 P P 16 17 44.0 -0.5
MAJO **Matsushiro** 35.94 15 P P 16 17 43.5 -1.1
MAJO pP pP 16 18 07.0 +1.7
MJB9 **Matsu-Tunnel** 35.94 15 P P 16 17 44.6 0.0
MJB9 IAmb IAmb 16 17 50.0
comp=Z,17nm,0.8s
WHYH **Whyalla** 36.05 165 P P 16 17 45.2 -0.3
STKA **Stephens Creek** 36.21 159 P P 16 17 46.4 -0.5
comp=Z,90nm,0.7s,baz=334,slow=8.6,SNR=181
STKA S S 16 23 18.6 -1.6
comp=Z,4.6nm,0.9s,baz=114,slow=17,SNR=2.8
STKA LR LR 16 33 13.2
comp=Z,61nm,19.5s,baz=16,slow=37
STKA **Stephens Creek** 36.21 159 P P 16 17 46.6 -0.2
baz=36,SNR=90
STKA **Stephens Creek** 36.21 159 P P 16 17 46.6 -0.2
STKA IAmb IAmb 16 17 47.5
comp=Z,19nm,0.8s
STKA **Stephens Creek** 36.21 159 P P 16 17 46.7 -0.2
CD2 **Chengdu** 36.47 325 *e*P P 16 17 50.0 +0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HTT **Hallett** 36.79 164 P P 16 17 51.7 -0.1
baz=37,SNR=19
HTT **Hallett** 36.79 164 P P 16 17 51.8 0.0
HNS **HongShan** 37.20 343 ⇓P P 16 17 57.8 +2.6
HNS pmax pmax
comp=Z,13nm,1.0s
JSD **Sado** 37.37 14 P P 16 17 56.1 -0.5
JSD IAmb IAmb 16 18 08.6
comp=Z,22nm,0.9s
JSD **Sado** 37.37 14 P P 16 17 56.1 -0.5
CMSA **Cobar Meteorol** 37.54 154 P P 16 17 58.6 +0.4
baz=38,SNR=28
CMSA **Cobar Meteorol** 37.54 154 P P 16 17 58.7 +0.5
RKGY **Rocky Gully** 37.56 194 P P 16 17 59.2 +1.0
baz=38,SNR=13
RKGY **Rocky Gully** 37.56 194 P P 16 17 59.3 +1.0
BJT **Baijiatuau** 39.29 346 P P 16 18 13.4 +0.7
BJT pP pwP 16 18 37.7 +0.6
BJI **Beijing** 39.31 346 P P 16 18 13.8 +1.0
BJI pP pP 16 18 35.0 +1.0
BJI pmax pmax
comp=Z,15nm,0.6s
BJI pmax pmax
comp=Z,260nm,5.0s
ARMA **Armidale** 39.62 146 P P 16 18 16.5 +0.8
baz=40,SNR=11
ARMA **Armidale** 39.62 146 P P 16 18 15.6 -0.1
ARMA IAmb IAmb 16 18 18.5
comp=Z,10nm,0.7s
ARMA **Armidale** 39.62 146 P P 16 18 17.1 +1.4
LZH **Lanzhou** 40.38 330 *e*P P 16 18 23.8 +1.8
LZH pP pwP 16 18 46.8 +0.4
LZH sP sP 16 18 57.5 +3.8
LZH pmax pmax
comp=Z,25nm,1.1s
JTM **Tenmabayashi** 40.69 16 P P 16 18 22.7 -1.6
ARPS **Mount Arapiles** 40.76 162 P P 16 18 25.1 +0.3
baz=41,SNR=22
ARPS **Mount Arapiles** 40.76 162 P P 16 18 25.2 +0.3
HHC **Hu-ho-hao-te** 41.33 342 *e*P P 16 18 32.3 +2.7
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,230nm,5.6s
SHL **Shillong** 41.44 308 P P 16 18 30.5 -0.4
CN2 **Changchun** 41.78 358 *e*P P 16 18 36.8 +3.7
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CAN **Canberra** 42.21 153 P P 16 18 37.1 +0.3
CAN **Canberra** 42.21 153 P P 16 18 37.2 +0.3
CAN pmax pmax
comp=Z,33nm,0.8s
CAN **Canberra** 42.21 153 P P 16 18 38.1 +1.2
CAN **Canberra** 42.21 153 P P 16 18 37.9 +1.0
USRK **Ussuriysk Ar.** 42.35 5 P P 16 18 38.4 +0.6
comp=Z,9.2nm,0.9s,baz=188,slow=7.1,SNR=22
USRK PcP PcP 16 20 29.2 -0.5
comp=Z,0.9nm,0.5s,baz=147,slow=1.4,SNR=1.1
comp=Z,9.2nm,0.9s
USRK **Ussuriysk Ar.** 42.35 5 P P 16 18 38.0 +0.2
CNB **Canberra Magne** 42.37 153 P P 16 18 39.3 +1.1
baz=42,SNR=8.6
CNB **Canberra Magne** 42.37 153 P P 16 18 39.4 +1.2
TOO **Toolangi** 42.72 159 P P 16 18 42.0 +1.1
baz=43,SNR=16
TOO **Toolangi** 42.72 159 P P 16 18 40.5 -0.4
TOO IAmb IAmb 16 18 42.4
comp=Z,25nm,0.9s
TOO **Toolangi** 42.72 159 P P 16 18 40.5 -0.4
TOO pmax pmax
comp=Z,25nm,1.0s
TOO **Toolangi** 42.72 159 P P 16 18 42.2 +1.3
GEXS **Deakin Univers** 42.86 160 P P 16 18 41.0 -1.0
comp=Z,43nm,0.5s
XLT **XiLinHaoTe** 43.02 348 *e*P P 16 18 44.3 +1.0
XLT pP pwP 16 19 09.6 +1.6
XLT sP sP 16 19 20.3 +5.2
XLT PcP PcP 16 20 37.6 +5.6
XLT pmax pmax
comp=Z,10.0nm,1.3s
XLT pmax pmax
comp=Z,240nm,5.9s
BNX **BinXian** 43.69 0 ⇓P P 16 19 00.3 +12
LSA **Lhasa** 44.09 312 P P 16 18 52.8 +0.2
LSA **Lhasa** 44.09 312 P P 16 18 54.7 +2.1
LSA pP pwP 16 19 18.4 +1.2
GTA **Gaotai** 44.97 330 ⇑P P 16 19 00.8 +1.7
GTA PcP PcP 16 20 40.3 +1.5
GTA pmax pmax
comp=Z,8.0nm,0.7s
DZM **Mont Dzumac** 45.02 124 *e*LR LR 16 31 43.7
comp=Z,279nm,31.4s
GOMU **GeErMu** 45.49 322 P P 16 19 09.3 +5.8
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU pmax pmax
comp=Z,48nm,4.2s
TAPN **Taplejung** 45.58 307 *e*P P 16 19 04.6 +0.3
ODAN **Odare** 45.61 307 *e*P P 16 19 05.4 +0.9
RAMN **Ramite** 46.29 306 *e*P P 16 19 10.5 +0.7
comp=Z,34nm,0.8s
PALK **Pallekele** 46.73 278 LR LR 16 39 25.4
comp=Z,58nm,21.9s,baz=199,slow=37
YSS **Yuzh-Sakhalins** 46.88 14 *i* P P 16 19 11.6 -2.1
YSS pmax pmax
comp=Z,137nm,2.3s
JIRN **Jiri** 46.92 307 *e*P P 16 19 15.4 +0.5
GUN **Gumba** 47.28 307 *e*P P 16 19 18.3 +0.7
KLR **Kul'dur** 47.33 4 P P 16 19 17.1 -0.2
comp=Z,3.4nm,0.7s,baz=218,slow=4.0,SNR=7.9
KLR LR LR 16 38 37.0
comp=Z,20nm,21.9s,baz=165,slow=35
comp=Z,3.4nm,0.7s
KLR **Kul'dur** 47.33 4 *ce*P P 16 19 17.3 +0.1
KLR pmax pmax
comp=Z,29nm,2.5s
PKI **Pulchoki** 47.51 307 *e*P P 16 19 19.3 -0.1
PKIN **Phulchoki** 47.52 307 *e*P P 16 19 19.5 +0.1
MOO **Moorlands** 47.64 160 P P 16 19 19.8 +0.1
KKN **Kakani** 47.71 307 *e*P P 16 19 21.1 +0.3
DMN **Daman** 47.77 306 *e*P P 16 19 21.9 +0.6

TAU Tasmania Unive 48.10 160 P **P** **16 19 25.7 +2.5**
GKN Gorkha 48.31 307 *e*P **P** **16 19 25.6 +0.2**
ULN Ulaanbaatar 49.05 342 *ce*P **P** **16 19 30.2 -0.5**
ULN pmax pmax
comp=Z,20nm,1.3s
ULN Ulaanbaatar 49.05 342 P **P** **16 19 32.6 +1.9**
ULN Ulaanbaatar 49.05 342 P **P** **16 19 29.8 -0.9**
comp=Z,70nm,0.9s
ULN Ulaanbaatar 49.05 342 P **P** **16 19 32.0 +1.3**
ULN pP **pwP** **16 19 57.1 +1.4**
KOLN Koldanda 49.05 306 *e*P **P** **16 19 31.9 +0.8**
DANN Dangsing 49.16 307 *e*P **P** **16 19 32.3 +0.3**
comp=Z,39nm,0.7s
SONM Songino Array 49.23 341 P **P** **16 19 33.2 +1.2**
comp=Z,5.9nm,0.9s,baz=156,slow=8.0,SNR=23
SONM PcP **PcP** **16 20 54.2 +0.4**
comp=Z,3.1nm,0.8s,baz=163,slow=5.6,SNR=2.0
SONM LR LR 16 41 15.2
comp=Z,57nm,20.4s,baz=138,slow=37
comp=Z,5.9nm,0.9s
SONM Songino Array 49.23 341 P **P** **16 19 32.3 +0.3**
SONM Songino Array 49.23 341 P **P** **16 19 32.3 +0.3**
SONM pmax pmax
comp=Z,6.0nm,1.0s
PYUN Piuthan 49.68 306 *e*P **P** **16 19 36.6 +0.7**
comp=Z,27nm,0.6s
ZEA Zeya 51.69 360 *e*P **P** **16 19 50.8 +0.5**
WMQ Urumqi 54.56 326 *e*P **P** **16 20 14.3 +2.6**
WMQ pP pP 16 20 35.3 +1.3
WMQ pmax pmax
comp=Z,20nm,1.1s
DGAR Diego Garcia 55.49 260 P **P** **16 20 19.2 +0.5**
BOD Bodaibo 56.77 352 *e*P **P** **16 20 27.0 -0.1**
BOD pmax pmax
comp=Z,11nm,1.1s
PETK Petropavlovsk- 56.93 21 P **P** **16 20 29.2 +0.9**
comp=Z,2.4nm,0.6s,baz=175,slow=3.9,SNR=5.3
comp=Z,2.4nm,0.6s
PETK Petropavlovsk- 56.93 21 P **P** **16 20 27.6 -0.7**
ZSN Zaisan 58.36 327 *e*P **P** **16 20 38.3 -0.2**
ZSN Zaisan 58.36 327 *e*P **P** **16 20 38.3 -0.2**
baz=327
DGZ Jazzator, Alta 58.48 331 *i*P **P** **16 20 38.9 -0.5**
DGZ pmax pmax
comp=Z,6.0nm,0.7s
SHLS Shalkode 59.13 321 *e*P **P** **16 20 42.9 -1.1**
SHLS pmax pmax
comp=Z,5.0nm,0.8s
SHLS Shalkode 59.13 321 *e*P **P** **16 20 41.6 -2.5**
baz=321
MK31 Makanchi Array 59.39 326 P **P** **16 20 46.7 +1.0**
MK31 IAmb IAmb 16 20 47.8
comp=Z,12nm,0.8s
MK31 Makanchi Array 59.39 326 P **P** **16 20 46.7 +1.0**
MK31 pmax pmax
comp=Z,12nm,0.8s
MKAR Makanchi Array 59.39 326 P **P** **16 20 46.9 +1.2**
comp=Z,12nm,0.5s,baz=119,slow=8.4,SNR=142
MKAR S **S** **16 28 48.4 +1.0**
comp=Z,0.1nm,0.5s,baz=220,slow=32,SNR=2.7
MKAR LR LR 16 46 28.7
comp=Z,44nm,21.5s,baz=102,slow=36
comp=Z,12nm,0.5s
MKAR Makanchi Array 59.39 326 P **P** **16 20 46.5 +0.8**
UZB Uzynbulak 59.40 321 *e*P **P** **16 20 46.8 +0.8**
UZB pmax pmax
comp=Z,5.0nm,1.4s
UZB Uzynbulak 59.40 321 *e*P **P** **16 20 46.3 +0.4**
baz=320
NIL Nilore 59.51 308 P **P** **16 20 46.4 -0.3**
NIL IAmb IAmb 16 20 51.2
comp=Z,12nm,0.8s
NIL Nilore 59.51 308 P **P** **16 20 46.4 -0.3**
NIL pmax pmax
comp=Z,12nm,0.9s
NIL Nilore 59.51 308 P **P** **16 20 48.1 +1.4**
NIL Nilore 59.51 308 P **P** **16 20 47.9 +1.2**
MAKZ Makanchi 59.58 326 P **P** **16 20 47.3 +0.3**
MAKZ Makanchi 59.58 326 P **P** **16 20 47.3 +0.3**
MAKZ pmax pmax
comp=Z,19nm,0.9s
MAKZ Makanchi 59.58 326 P **P** **16 20 48.0 +1.1**
MAKZ pP **pwP** **16 21 12.1 -0.3**
SATY Saty 59.75 320 *e*P **P** **16 20 49.4 +1.1**
SATY Saty 59.75 320 *e*P **P** **16 20 49.4 +1.1**
baz=320
KSH Kashi 59.75 316 P **P** **16 20 51.4 +3.0**
KSH sP sP 16 21 26.4 +5.2
KSH PcP **PcP** **16 21 39.0 +4.7**
KSH PP **PP** **16 23 02.6 +1.3**
KSH pmax pmax
comp=Z,11nm,1.3s
KPKS Kokpek 59.77 321 *e*P **P** **16 20 48.7 +0.2**
KPKS pmax pmax
comp=Z,10.0nm,1.0s
KPKS Kokpek 59.77 321 *e*P **P** **16 20 48.5 +0.1**
baz=321
LBZ Lake Benmore 59.84 146 P **P** **16 20 48.1 -0.7**
YAK Yakutsk 60.04 1 P **P** **16 20 49.6 -0.1**
YAK Yakutsk 60.04 1 *e*P **P** **16 20 49.3 -0.4**
YAK *e**PP **pP** **16 21 11.2 -1.2**
YAK *e*S **S** **16 28 55.2 +0.2**
YAK *e*SS **SS** **16 32 51.5 -1.8**
YAK pmax pmax
comp=Z,25nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK smax smax
comp=N,265nm,3.3s
YAK smax smax
comp=E,177nm,3.0s
YAK Yakutsk 60.04 1 P **P** **16 20 49.9 +0.2**
YAK pP **pP** **16 21 12.8 +0.5**
MA2 Magadan 60.36 13 *i*P **P** **16 20 51.4 -0.6**
MA2 pmax pmax
comp=Z,82nm,1.7s
MDOK Medeo 60.67 320 *e*P **P** **16 20 55.5 +0.9**
MDOK Medeo 60.67 320 *e*P **P** **16 20 55.6 +0.9**
baz=320
TDK Taldyqorghan 60.72 322 *e*P **P** **16 20 55.4 +0.7**
TDK Taldyqorghan 60.72 322 *e*P **P** **16 20 55.5 +0.7**
baz=322
CHKK Chushkaly 61.04 320 *e*P **P** **16 20 57.5 +0.6**
CHKK Chushkaly 61.04 320 *e*P **P** **16 20 57.5 +0.6**
baz=320
KUU Kurty 61.47 320 *e*P **P** **16 20 59.2 -0.7**
KUU Kurty 61.47 320 *e*P **P** **16 20 59.2 -0.7**
baz=320
TKM2 Tokmak 2 61.51 319 P **P** **16 21 01.3 +0.9**
AAK Ala-Archa 62.11 318 LR LR 16 50 24.6
comp=Z,56nm,20.3s,baz=110,slow=38
AAK Ala-Archa 62.11 318 *ce*P **P** **16 21 03.2 -1.1**
AAK pmax pmax
comp=Z,16nm,1.7s
AAK Ala-Archa 62.11 318 P **P** **16 21 06.1 +1.8**
AAK Ala-Archa 62.11 318 P **P** **16 21 05.6 +1.3**
SGDS Sogindy 62.38 319 *e*P **P** **16 21 05.3 -0.7**
SGDS Sogindy 62.38 319 *e*P **P** **16 21 05.3 -0.7**
baz=319
ZALV Zalesovo Beam 62.49 333 P **P** **16 21 06.1 -0.3**
comp=Z,4.4nm,0.7s,baz=123,slow=7.3,SNR=14
ZALV LR LR 16 48 59.3
comp=Z,71nm,18.0s,baz=90,slow=37
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 62.49 333 *i*P **P** **16 21 08.8 +2.4**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
KBL Kabul 63.10 308 P **P** **16 21 11.6 +0.4**
KBL IAmb IAmb 16 21 12.9
comp=Z,13nm,0.8s
KBL Kabul 63.10 308 P **P** **16 21 11.6 +0.4**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 63.10 308 P **P** **16 21 12.1 +0.9**
SNR=6.0
BTLS Baital 63.46 321 *e*P **P** **16 21 12.8 -0.3**
BTLS pmax pmax
comp=Z,4.0nm,0.9s
BTLS Baital 63.46 321 *e*P **P** **16 21 12.8 -0.3**
baz=320
GAR Garm 63.59 313 P **P** **16 21 14.7 +0.5**
KURBB Kurchatov Arra 63.60 328 P **P** **16 21 14.2 +0.4**
KURK Kurchatov 63.60 328 P **P** **16 21 14.4 +0.5**
KURK Kurchatov 63.60 328 *ce*P **P** **16 21 14.7 +0.9**
KURK pmax pmax
comp=Z,27nm,0.7s
KURK Kurchatov 63.60 328 P **P** **16 21 14.8 +0.9**
KURK Kurchatov 63.60 328 P **P** **16 21 14.6 +0.9**
KURK pP **pwP** **16 21 39.4 -0.2**
SEY Seymchan 63.70 12 P **P** **16 21 15.4 +1.2**
comp=Z,8.5nm,0.8s,baz=250,slow=4.8,SNR=12
comp=Z,8.5nm,0.8s
SEY Seymchan 63.70 12 *i*P **P** **16 21 14.7 +0.4**
SEY pmax pmax
comp=Z,7.0nm,0.9s
SIMJ Simiganj 64.44 312 P **P** **16 21 20.5 +0.7**
IUG Iuzhnay 64.94 316 *e*P **P** **16 21 23.7 +0.8**
IUG Iuzhnay 64.94 316 *e*P **P** **16 21 23.8 +0.8**
baz=316
KK31 Karatay Array 64.97 317 *i*P **P** **16 21 23.6 +0.6**
KKAR Karatay Array 64.97 317 P **P** **16 21 23.5 +0.5**
KKAR Karatay Array 64.97 317 P **P** **16 21 23.5 +0.5**
OTUK Ortayu 65.94 323 P **P** **16 21 30.0 +0.9**
BRZS Berezniki 66.52 325 *e*P **P** **16 21 31.8 -1.0**
BRZS Berezniki 66.52 325 *e*P **P** **16 21 31.9 -1.0**
baz=325
DRV Dumont d'Urvil 68.99 175 P **P** **16 21 47.0 -0.9**
BRVK Borovoye 69.25 327 P **P** **16 21 49.0 -0.8**
BRVK IAmb IAmb 16 21 53.5
comp=Z,16nm,0.9s
BRVK Borovoye 69.25 327 *ce*P **P** **16 21 50.0 +0.2**
BRVK pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 69.25 327 P **P** **16 21 50.3 +0.5**
BRVK Borovoye 69.25 327 P **P** **16 21 50.3 +0.5**
BRVK pP **pwP** **16 22 14.7 -1.3**
WBK Wadi Bani Khal 69.30 293 P **P** **16 21 51.1 +0.3**
TIXI Tiksi 69.68 1 P **P** **16 21 51.8 -0.3**
comp=Z,2.6nm,0.5s,baz=271,slow=24,SNR=10
comp=Z,2.6nm,0.5s
TIXI Tiksi 69.68 1 P **P** **16 21 52.0 -0.1**
TIXI Tiksi 69.68 1 P **P** **16 21 52.0 -0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.1s
WSAR Wadi Sarin 69.68 294 LR LR 16 57 29.3
comp=Z,11nm,18.3s,baz=84,slow=40
MHTO MHTO 70.05 292 P **P** **16 21 55.9 +0.5**
SNR=14
JMDO Jabal Madar 70.07 293 P **P** **16 21 56.4 +0.9**
BIDO Bidbid 70.18 294 P **P** **16 21 57.0 +0.8**
SMDO Samad 70.19 294 P **P** **16 21 56.6 +0.2**
DQM DQM 70.34 290 P **P** **16 21 57.9 +0.7**
HOQ Hoqain 70.93 294 P **P** **16 22 01.8 +1.1**
BSY Bisya 70.94 293 P **P** **16 22 01.6 +0.8**
SNR=7.1
BILL Bilibino 71.19 14 *e*P **P** **16 21 59.0 -2.4**
BILL *e**PP **sP** **16 22 33.2 -1.5**
BILL *e* 16 24 42.2
BILL *e*PPP PPP 16 26 23.9
BILL pmax pmax
comp=Z,22nm,1.8s
ARQ Araqi 71.62 294 P **P** **16 22 05.7 +0.8**
UOSS Minazif 72.08 296 P **P** **16 22 06.1 -1.6**
UOSS Minazif 72.08 296 P **P** **16 22 07.5 -0.1**
BANOM Banah 72.11 297 P **P** **16 22 08.9 +1.0**
HATD Hatta, Dubai 72.14 295 P **P** **16 22 09.2 +1.3**
MASF Masafi 72.17 296 P **P** **16 22 09.8 +1.6**
ASHO Ashiyiah 72.19 295 P **P** **16 22 08.9 +0.6**
NRIK Noril'sk 72.35 346 P **P** **16 22 08.4 0.0**
comp=Z,7.7nm,0.7s,baz=129,slow=5.5,SNR=9.8
comp=Z,7.7nm,0.7s
ALNE Al Ain 72.40 295 P **P** **16 22 10.7 +1.1**
SNR=9.7
GEYT Ailbeck 72.49 309 P **P** **16 22 11.1 +1.2**
comp=Z,5.3nm,0.7s,baz=153,slow=4.8,SNR=11
comp=Z,5.3nm,0.7s
NAZ Nazwa, Dubai 72.58 295 P **P** **16 22 10.9 +0.3**
FAQ Al Faqa, Dubai 72.61 295 P **P** **16 22 11.0 +0.2**
SNR=5.1
DMTO DMTO 72.62 288 P **P** **16 22 11.7 +0.8**
UMQ Umm Al-Quwin 72.64 296 P **P** **16 22 10.8 -0.1**
UMZA Um Al Zommool 72.81 293 P **P** **16 22 12.4 +0.5**
ASUD Al Ashush, Dub 72.84 295 P **P** **16 22 13.5 +1.4**
AJN Ajban 73.14 295 P **P** **16 22 15.0 +1.0**
RBK Rabkut 73.32 288 P **P** **16 22 15.1 0.0**
DOK Doka 73.45 289 P **P** **16 22 15.8 0.0**
SNR=19
WHFO Wadi Hawf 73.75 288 P **P** **16 22 17.4 -0.3**
SNR=9.1
AB31 Akbulak array 73.94 321 P **P** **16 22 17.6 -0.5**
ABKAR Akbulak array 73.94 321 P **P** **16 22 16.6 -1.5**
ABTO Aybut 74.17 287 P **P** **16 22 20.1 0.0**
SNR=6.2
MZR Muzera 74.38 293 P **P** **16 22 22.1 +1.0**
AKTO Aktyubinsk 75.46 322 LR LR 16 57 53.6
comp=Z,50nm,20.2s,baz=76,slow=37
SVE Sverdlovsk 75.83 329 *e*P **P** **16 22 29.0 +0.2**
SVE pmax pmax
comp=Z,18nm,0.8s
ARU Arti 76.80 328 P **P** **16 22 33.0 -1.3**
ARU IAmb IAmb 16 22 34.7
comp=Z,10nm,0.8s
ARU Arti 76.80 328 *d*P **P** **16 22 33.2 -1.1**
ARU *PP **pP** **16 22 57.7 -0.2**
ARU S **S** **16 32 11.9 -2.1**
ARU pmax pmax
comp=Z,11nm,0.8s
N16K Nishlik Lake 80.49 29 P **P** **16 22 56.2 +1.7**
baz=257
AKT Akhty 80.94 312 *e*P **P** **16 22 55.7 -1.8**
AKT *e**PP **pP** **16 23 22.7 +1.4**
AKT pmax pmax
comp=Z,10.0nm,1.0s
O17K Koliganek Bris 81.16 30 P **P** **16 22 59.0 +1.0**
baz=258
Q17K Contact Creek 81.48 31 P **P** **16 22 60.0 0.0**
baz=260
VNDA Vanda 81.53 173 P **P** **16 22 59.3 -0.4**
comp=Z,7.1nm,0.6s,baz=318,slow=6.5,SNR=17
comp=Z,7.1nm,0.6s
VNDA Vanda 81.53 173 P **P** **16 22 59.3 -0.4**
VNDA IAmb IAmb 16 22 59.8
comp=Z,8.1nm,0.7s
VNDA Vanda 81.53 173 P **P** **16 22 59.3 -0.4**
VNDA pmax pmax
comp=Z,8.0nm,0.7s
RAYN Ar Rayn 81.73 293 P **P** **16 23 01.1 -0.8**
RAYN IAmb IAmb 16 23 03.2
comp=Z,13nm,0.9s
RAYN Ar Rayn 81.73 293 P **P** **16 23 01.1 -0.8**
RAYN pmax pmax
comp=Z,13nm,1.0s
Q18K Katmai Hardscr 82.01 31 P **P** **16 23 02.8 +0.1**
baz=260
KIRV Kirov 82.09 329 *ce*P **P** **16 23 03.2 +0.3**
BELG Belogornoye 82.21 323 *i*P **P** **16 23 03.2 -0.5**
BELG pmax pmax
comp=Z,4.0nm,1.0s
MAW Mawson 82.22 200 P **P** **16 23 04.0 +0.6**
comp=Z,12nm,0.6s,baz=84,slow=5.2,SNR=60
comp=Z,12nm,0.6s
MAW Mawson 82.22 200 P **P** **16 23 04.4 +1.0**
baz=82,SNR=29
MAW Mawson 82.22 200 P **P** **16 23 04.0 +0.6**
GCSA Galena City Sc 82.28 25 P **P** **16 23 05.2 +1.4**
baz=258
TTA Tatalina 82.29 27 P **P** **16 23 04.8 +0.8**
baz=259
SBA Scott Base 82.43 172 P **P** **16 23 03.8 -0.6**
SBA Scott Base 82.43 172 P **P** **16 23 03.8 -0.6**
SBA pmax pmax
comp=Z,6.0nm,0.8s
N19K Bonanza Creek 82.63 29 P **P** **16 23 06.9 +1.1**
baz=261
L19K White Mountain 82.68 28 P **P** **16 23 06.5 +0.5**
L19K White Mountain 82.68 28 P **P** **16 23 07.5 +1.4**
baz=260
M19K Big River Lodg 82.85 28 P **P** **16 23 07.8 +0.9**
baz=260
GNI Garni 83.10 310 *i*P **P** **16 23 08.9 0.0**
GNI pmax pmax
comp=Z,7.0nm,0.9s
L20K Farewell, AK 83.18 27 P **P** **16 23 10.1 +1.5**
baz=261
K20K Telida 83.23 26 P **P** **16 23 09.9 +1.1**
baz=261
J20K Nowinta River 83.33 26 P **P** **16 23 08.8 -0.6**
J20K Nowinta River 83.33 26 P **P** **16 23 10.6 +1.3**
baz=260
M20K Styx River 83.44 28 P **P** **16 23 11.3 +1.3**
baz=262
ZEI Tsey 83.88 313 *e*P **P** **16 23 12.3 -0.6**
ZEI *e* 16 23 37.1
ZEI pmax pmax
comp=Z,9.0nm,1.3s
G21K Allakaket 83.98 23 P **P** **16 23 13.5 +0.9**
baz=261
PPLA Purkeypile 84.01 27 P **P** **16 23 13.6 +0.6**
baz=262
CHUM Lake Minchumin 84.09 26 P **P** **16 23 14.4 +1.2**
baz=262
CAST Castle Rocks 84.13 26 P **P** **16 23 14.5 +1.0**
baz=262
H21K Melozitna Rive 84.13 24 P **P** **16 23 15.1 +1.7**
baz=262
SKT Skwentna 84.20 28 P **P** **16 23 13.5 -0.3**
SKT IAmb IAmb 16 23 14.5
comp=Z,11nm,0.6s
SKT Skwentna 84.20 28 P **P** **16 23 14.1 +0.2**
baz=263
BRSE Bradley Lake S 84.33 30 P **P** **16 23 15.2 +0.7**
baz=264
PRGR Permogore 84.39 332 *e*P **P** **16 23 14.9 +0.2**
PRGR pmax pmax
comp=Z,7.0nm,0.7s
I21K Tanana 84.41 25 P **P** **16 23 15.4 +0.6**
baz=262
SUA Susitna One 84.51 29 P **P** **16 23 15.6 +0.1**
baz=264
TBI Tubuai 84.53 114 *e*LR LR 16 50 02.0
comp=Z,66nm,40.2s
F22K John River 84.65 22 P **P** **16 23 17.4 +1.5**
baz=262
KBZ Khabaz 84.66 314 P **P** **16 23 16.7 +0.2**
comp=Z,5.2nm,1.0s,baz=139,slow=2.7,SNR=7.0
comp=Z,5.2nm,1.0s
KBZ Khabaz 84.66 314 *i*P **P** **16 23 16.0 -0.5**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
BPAW Bear Paw Mtn. 84.70 26 P **P** **16 23 16.6 +0.3**
baz=263
NEY Neytrino 84.77 313 *i*P **P** **16 23 18.2 +0.9**
NEY pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 84.82 314 *e*P **P** **16 23 16.9 -0.5**
KIV pmax pmax
comp=Z,7.0nm,1.0s
G22K Bettles 84.83 23 P **P** **16 23 17.7 +0.9**
baz=263
SHA1 Shidzhatmaz 84.83 314 *i*P **P** **16 23 17.6 -0.1**
M22K Willow 84.84 28 P **P** **16 23 17.1 +0.2**
baz=264
E22K Anaktuvuk Pass 84.87 22 P **P** **16 23 17.9 +0.8**
baz=262
MLY Manley 84.91 25 P **P** **16 23 17.7 +0.4**
baz=264
O22K Cooper Landing 84.91 30 P **P** **16 23 17.9 +0.5**
baz=265
TRF Thorofare Moun 84.93 27 P **P** **16 23 17.7 +0.1**
baz=264
RC01 Rabbit Creek A 84.96 29 P **P** **16 23 17.7 +0.1**
baz=265
SEW Seward 85.01 30 P **P** **16 23 18.4 +0.5**
baz=265
PMR Palmer 85.29 28 P **P** **16 23 19.5 +0.3**
baz=265
COLD Coldfoot 85.37 23 P **P** **16 23 18.7 -0.9**
COLD Coldfoot 85.37 23 P **P** **16 23 20.4 +0.8**
baz=264
G23K Bananza Creek 85.39 23 P **P** **16 23 20.1 +0.4**
baz=264
H23K Yukon River 85.49 24 P **P** **16 23 21.0 +0.8**
baz=264
I23K Minto, Yukon-K 85.50 25 P **P** **16 23 20.8 +0.6**
baz=265
C23K Itkillik River 85.52 20 P **P** **16 23 21.8 +1.5**
baz=263
MCK McKinley 85.56 26 P **P** **16 23 21.1 +0.5**
baz=265
NEA2 Nenana 85.58 25 P **P** **16 23 20.7 0.0**
baz=265
KNK Knik Glacier 85.60 29 P **P** **16 23 20.9 +0.1**
baz=266
PWL Port Wells 85.62 29 P **P** **16 23 21.5 +0.5**
baz=266
E23K Chandalar 85.68 22 P **P** **16 23 22.4 +1.2**
baz=264
SML Sawmill 85.69 28 P **P** **16 23 21.8 +0.5**
baz=266
TOLK Toolik Lake Re 85.75 21 P **P** **16 23 22.7 +1.2**
baz=264
VRH Novokhopyorsk 85.77 321 *e*P **P** **16 23 20.5 -1.3**
VRH pmax pmax
comp=Z,20nm,0.6s
M23K Glacier View 85.98 28 P **P** **16 23 23.4 +0.7**
baz=266
WAT6 Susitna Watana 86.02 28 P **P** **16 23 23.5 +0.4**
baz=266
D24K Happy Valley 86.07 21 P **P** **16 23 24.2 +1.2**
baz=265
E24K Your Creek 86.10 22 P **P** **16 23 25.5 +2.2**
baz=265
SCM Sheep Creek Mo 86.17 28 P **P** **16 23 25.0 +1.3**
baz=267
H24K Noodor Dome 86.17 24 P **P** **16 23 24.7 +1.1**
baz=266
F24K Squaw Lake 86.29 23 P **P** **16 23 25.2 +1.0**
baz=266
G24K Hadweenzic Riv 86.39 23 P **P** **16 23 25.7 +1.0**
baz=266
ILAR Eielson Array 86.53 25 P **P** **16 23 23.6 -1.7**
comp=Z,1.8nm,1.1s,baz=252,slow=3.5,SNR=6.9
comp=Z,1.8nm,1.1s
KLU Klutina 86.82 29 P **P** **16 23 28.1 +1.2**
baz=268
H25K Birch Creek 87.04 24 P **P** **16 23 28.4 +0.7**
baz=268
F25K Christian Rive 87.15 23 P **P** **16 23 29.2 +0.8**
baz=268
KLMR Klimovskoe 87.29 331 *e*P **P** **16 23 25.8 -3.2**
KLMR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 87.29 331 *e*P **P** **16 23 25.9 -3.1**
KLMR AMP 16 23 40.9
comp=Z,10.0nm,1.0s
VORR Voronezh 87.35 321 *e*P **P** **16 23 29.0 -0.6**
VSR Storozhevoye 87.38 321 *e*P **P** **16 23 28.0 -1.7**
VSR pmax pmax
comp=Z,8.0nm,0.8s
RIDG Independent Ri 87.38 26 P **P** **16 23 29.3 -0.3**
baz=269
LPSR Galich'ya Gora 87.53 322 *e*P **P** **16 23 29.4 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
J26L Joseph Creek 87.95 26 P **P** **16 23 32.0 -0.3**
baz=270
L26K Log Cabin Wild 88.05 27 P **P** **16 23 32.7 0.0**
baz=270
I26K Coal Creek Min 88.12 25 P **P** **16 23 32.8 -0.2**
baz=270
L27K Beaver Creek, 88.74 27 P **P** **16 23 36.7 +0.7**
baz=272
I27K Kandik River 88.76 25 P **P** **16 23 36.6 +0.6**
baz=272
OBN Obninsk 88.89 325 *de*P **P** **16 23 36.1 -0.7**
OBN *e**PP **sP** **16 24 11.0 +0.2**
OBN *e* 16 27 06.7
OBN *e*PPP PPP 16 29 01.5
OBN *e*S **SKSac** **16 33 56.4 -1.3**
OBN pmax pmax
comp=Z,28nm,1.7s
DAWY Dawson 89.78 26 P **P** **16 23 40.9 0.0**
baz=274
I29M Ogilvie Camp, 90.15 25 P **P** **16 23 42.8 +0.3**
baz=275
M29M Somme Creek 90.32 28 P **P** **16 23 43.9 +0.4**
baz=275
L29M L29M 90.42 27 P **P** **16 23 44.8 +1.0**
baz=275
K29M Barlow Dome 90.62 26 P **P** **16 23 45.2 +0.3**
baz=276
M30M Minto, Yukon 91.08 27 P **P** **16 23 47.9 +1.0**
baz=276
BRTR Keskin Array B 91.63 310 P **P** **16 23 49.0 -1.2**
comp=Z,1.3nm,0.8s,baz=121,slow=4.7,SNR=5.6
comp=Z,1.3nm,0.8s

BRTR Keskin Array B 91.63 310 P **P 16 23 49.0 -1.2**
ARCES ARCESS Array B 92.37 340 P **P 16 23 51.6 -1.1**
comp=Z,4.4nm,0.7s,baz=75,slow=5.1,SNR=8.3
comp=Z,4.4nm,0.7s
TAOE Nuku Hiva Isla 92.81 99 *e*LR LR 16 53 54.0
comp=Z,403nm,28.9s
AKASG Malin Array Be 93.68 321 P **P 16 23 57.6 -1.5**
comp=Z,0.1nm,0.3s,baz=65,slow=3.8,SNR=1.9
comp=Z,0.1nm,0.3s
FINES FINESS Array B 93.72 332 P **P 16 23 57.5 -1.5**
comp=Z,1.7nm,0.8s,baz=64,slow=4.4,SNR=6.2
comp=Z,1.7nm,0.8s
VSU Vasula 93.94 329 *i* P **P 16 24 01.8 +1.7**
VSU pmax pmax
comp=Z,33nm,1.1s
NACGM Naroch 94.52 325⇑ *e*P P 16 24 08.2 +5.4
baz=81
CRVS Cervenica-Dubn 98.95 320 *e*P **P 16 24 21.1 -2.0**
NVAR Mina Array Bea 107.71 49 PKiKP **PKiKP 16 29 10.9 +0.9**
comp=Z,0.4nm,0.7s,baz=282,slow=1.7,SNR=2.4
PDAR Pinedale Array 112.36 42 PKiKP **PKiKP 16 29 20.0 +1.3**
comp=Z,0.4nm,0.7s,baz=254,slow=2.3,SNR=3.9
TXAR Lajitas Array 122.26 53 PKP **PKPdf 16 29 37.8 -0.1**
comp=Z,1.6nm,0.7s,baz=224,slow=1.3,SNR=20
TORD Torodi Ar. Bea 124.02 287 PKP **PKPdf 16 29 41.5 0.0**
comp=Z,5.3nm,0.8s,baz=62,slow=1.8,SNR=31
DBIC Dimbokro 131.49 281 PKP **PKPdf 16 29 55.3 -0.5**
comp=Z,4.6nm,0.9s,baz=59,slow=4.2,SNR=3.5
PLCA Paso Flores 138.08 160 PKP **PKPdf 16 30 08.0 +0.5**
comp=Z,1.4nm,0.7s,baz=202,slow=3.4,SNR=4.5
CPUP Villa Florida 155.28 170 PKPbc PKPdf 16 30 45.5 +9.4
comp=Z,1.9nm,0.9s,baz=88,slow=2.5,SNR=4.9
LPAZ La Paz 159.12 134 PKPab **PKPab 16 31 20.1 +1.0**
comp=Z,2.5nm,0.9s,baz=135,slow=5.6,SNR=5.0

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*SKHL **21** 16:12:34.8±0.3, 44°.70N×147°.00E, h149km±9km, mb4.6/2, msh5.3/2*
*MOS **21** 16:12:34.9±1.2, 44°.96N×146°.66E, h159km, mb4.0/1, Error ellipse: s-maj=19.0km s-min=10.3km az=64.2*
*JMA **21** 16:12:37.0±0.5, 45°.N±1°×14°.7E±°, h155km±3km, MV4.0/34, NEAR ETOROFU ISLAND*
*IDC **21** 16:12:37.0±2.5, 44°.98N×146°.59E, h158km±24km, mb3.5/14, mbtmp3.9/19, Error ellipse: s-maj=19.8km s-min=12.1km az=143.0*

ISC 21 16:12:35.8±0.6, **44°.73N**±0°.07×**146°.81E**±0°.06, **h155**km±6km, **n51**, σ1§**30**/61, **mb3.8**/14, **2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.90**	**56**	*d i* PN	**Pn**	**16 13 00.4**	**+0.2**
KUR				pmax	pmax		
	comp=Z,1μm,0.4s						
KUR				pmax	pmax		
	comp=N,263nm,0.6s						
KUR	**Kuril'sk**	**0.90**	**56**	*e*P	**Pn**	**16 13 00.4**	**+0.2**
KUR				AMB	AMB	16 13 01.1	
	comp=N,200nm,0.3s						
KUR				*e*S	**Sn**	**16 13 19.8**	**+0.8**
KUR				A	A	16 13 25.5	
	comp=N,340nm,0.4s						
KUR				A	A	16 13 25.5	
	comp=N,380nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.97**	**225**⇑	*i* PN	**Pn**	**16 13 01.3**	**+0.5**
YUK				*e*S	**Sn**	**16 13 21.1**	**+1.2**
YUK				pmax	pmax		
	comp=N,461nm,0.4s						
YUK				pmax	pmax		
	comp=Z,4μm,0.4s						
YUK				pmax	pmax		
	comp=E,538nm,0.2s						
YUK				smax	smax		
	comp=N,850nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.97**	**225**	*i* P	**Pn**	**16 13 01.4**	**+0.6**
YUK				AMB	AMB	16 13 02.1	
	comp=E,170nm,0.3s						
YUK				*e*S	**Sn**	**16 13 21.1**	**+1.2**
YUK				A	A	16 13 25.3	
	comp=E,560nm,0.4s						
YUK				A	A	16 13 25.3	
	comp=E,880nm,0.4s						
RUSJ	**Misakicho**	**1.28**	**241**	*e*PN	**Pn**	**16 13 03.9**	**+0.3**
RUSJ				S	**Sn**	**16 13 23.4**	**-1.4**
JRA	**Rausu**	**1.45**	**237**	P	**Pn**	**16 13 05.8**	**+0.6**
NEM2	**Nemuro 2**	**1.57**	**210**	P	**Pn**	**16 13 06.5**	**0.0**
NEM2				*e*S	**Sn**	**16 13 28.9**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.57**	**210**⇑	*i* PN	**Pn**	**16 13 06.3**	**-0.2**
NMR				*e*S	**Sn**	**16 13 28.7**	**-1.3**
NMR	**Nemuro--Hokkai**	**1.57**	**210**	*i* P	**Pn**	**16 13 06.4**	**-0.1**
NMR				*e*S	**Sn**	**16 13 28.9**	**-1.1**
JNSB	**Nemuroshibetsu**	**1.61**	**234**	P	**Pn**	**16 13 07.8**	**+0.9**
JNK	**Nakash**	**1.89**	**233**	P	**Pn**	**16 13 10.8**	**+0.8**
JKHN	**Kushirohamanak**	**2.03**	**216**	P	**Pn**	**16 13 11.9**	**+0.3**
JKHN				*e*S	**Sn**	**16 13 38.7**	**-0.4**
JTKR	**Abashiri--Toko**	**2.22**	**251**	P	**Pn**	**16 13 14.4**	**+0.7**
JTKR				*e*S	**Sn**	**16 13 43.3**	**+0.4**
AKK	**Akkeshi**	**2.23**	**220**	*e*P	**Pn**	**16 13 14.1**	**+0.2**
AKK				*e*S	**Sn**	**16 13 42.6**	**-0.6**
JAK	**Akkeshi**	**2.31**	**222**	P	**Pn**	**16 13 15.2**	**+0.3**
JAK				*e*S	**Sn**	**16 13 44.1**	**-0.8**
JMP	**Maruseppu**	**2.58**	**255**	*e*P	**Pn**	**16 13 18.7**	**+0.6**
JAR	**Ashorobuto**	**2.62**	**238**	*e*P	**Pn**	**16 13 19.9**	**+1.3**
JOB	**Onbets**	**2.82**	**231**	*e*P	**Pn**	**16 13 22.1**	**+1.0**
JOB				*e*S	**Sn**	**16 13 56.3**	**+0.1**
JSE	**Soyaes**	**3.01**	**276**	*e*P	**Pn**	**16 13 24.3**	**+0.9**
JKK2	**Kamakawa 2**	**3.04**	**255**	P	**Pn**	**16 13 25.3**	**+1.5**
JKK2				*e*S	**Sn**	**16 14 02.9**	**+1.8**
ASAJ	**Asahikawa**	**3.08**	**260**	*e*P	**Pn**	**16 13 25.9**	**+1.6**
JCH	**Churui**	**3.28**	**231**	*e*P	**Pn**	**16 13 27.5**	**+0.6**
JCH				*e*S	**Sn**	**16 14 04.8**	**-1.5**
JWK2	**Keihoku**	**3.53**	**281**	*e*P	**Pn**	**16 13 32.0**	**+2.0**
JNBK	**Urakawa-nobuka**	**3.84**	**232**	*e*P	**Pn**	**16 13 33.9**	**-0.1**
JNBK				*e*S	**Sn**	**16 14 14.9**	**-4.3**
JRBN	**Rebuntou**	**4.13**	**282**	*e*P	**Pn**	**16 13 39.1**	**+1.3**
MJAR	**Matsushiro Arr**	**10.46**	**222**	P	**Pn**	**16 15 03.7**	**+1.9**
comp=E,1.1nm,0.5s,baz=30,slow=12,SNR=4.9							
USRK	**Ussuriysk Ar.**	**10.61**	**272**	P	**Pn**	**16 15 03.9**	**+0.3**
comp=E,1.3nm,0.4s,baz=92,slow=12,SNR=6.6							
PETK	**Petropavlovsk-**	**11.02**	**37**	P	**Pn**	**16 15 07.8**	**-1.1**
comp=E,5.9nm,0.7s,baz=190,slow=0.1,SNR=14							
KSRS	**Korea Array**	**15.97**	**249**	P	**Pn**	**16 16 11.3**	**-0.4**
comp=E,1.7nm,0.7s,baz=57,slow=9.6,SNR=4.1							
SEY	**Seymchan**	**18.52**	**8**	P	**Pn**	**16 16 38.7**	**-3.3**
comp=E,4.8nm,0.7s,baz=173,slow=11,SNR=9.1							
SONM	**Songino Array**	**27.88**	**291**	P	**P**	**16 18 10.4**	**-0.6**
comp=E,0.5nm,0.6s,baz=79,slow=9.0,SNR=3.3							
comp=E,0.5nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**30.00**	**140**	T	T	16 49 47.5	
baz=331,slow=75,SNR=39							
H11N1	**WAKE ISLAND Hy**	**30.02**	**140**	T	T	16 49 47.3	
baz=331,slow=75,SNR=33							
H11N3	**WAKE ISLAND Hy**	**30.02**	**140**	T	T	16 49 48.9	
baz=331,slow=75,SNR=34							
H11S1	**WAKE ISLAND Hy**	**30.98**	**141**	T	T	16 50 56.7	
baz=323,slow=79,SNR=57							
H11S3	**WAKE ISLAND Hy**	**30.99**	**141**	T	T	16 50 57.0	
baz=323,slow=79,SNR=46							
H11S2	**WAKE ISLAND Hy**	**31.00**	**141**	T	T	16 50 58.2	
baz=323,slow=79,SNR=50							
ILAR	**Eielson Array**	**40.84**	**37**	P	**P**	**16 20 01.9**	**+0.2**
comp=E,1.5nm,0.6s,baz=260,slow=5.8,SNR=28							
comp=E,1.5nm,0.6s							
ILAR	**Eielson Array**	**40.84**	**37**	P	**P**	**16 20 02.0**	**+0.2**
MKAR	**Makanchi Array**	**43.92**	**297**	P	**P**	**16 20 26.4**	**-0.5**
comp=E,0.7nm,0.5s,baz=77,slow=7.5,SNR=11							
comp=E,0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**47.58**	**252**	P	**P**	**16 20 57.1**	**+1.3**
comp=E,1.4nm,0.7s,baz=37,slow=7.3,SNR=7.4							
comp=E,1.4nm,0.7s							
YKA	**Yellowknife Ar**	**55.12**	**34**	P	**P**	**16 21 51.9**	**+0.6**
comp=E,1.2nm,0.7s,baz=289,slow=5.8,SNR=5.4							
comp=E,1.2nm,0.7s							
ARCES	**ARCESS Array B**	**58.24**	**339**	P	**P**	**16 22 11.1**	**-2.2**
comp=E,1.8nm,0.9s,baz=41,slow=8.4,SNR=1.9							
comp=E,1.8nm,0.9s							
FINES	**FINESS Array B**	**63.89**	**333**	P	**P**	**16 22 49.1**	**-2.3**
comp=E,0.8nm,0.5s,baz=31,slow=12,SNR=1.3							
comp=E,0.8nm,0.5s							
WRA	**Warramunga Arr**	**65.36**	**193**	P	**P**	**16 23 02.6**	**+1.2**
comp=E,1.0nm,0.5s,baz=7.5,slow=7.0,SNR=3.7							
comp=E,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**67.27**	**58**	P	**P**	**16 23 15.3**	**+1.6**
comp=E,1.0nm,0.6s,baz=294,slow=6.7,SNR=9.1							
comp=E,1.0nm,0.6s							
NOA NORSAR Array B	**68.60**	**339**	P	**P**	**16 23 19.6**	**-1.8**
comp=E,0.3nm,0.6s,baz=30,slow=6.5,SNR=1.6							
comp=E,0.3nm,0.6s							
ASAR Alice Springs	**69.08**	**193**	P	**P**	**16 23 26.8**	**+2.0**
comp=E,0.6nm,0.8s,baz=8.7,slow=6.3,SNR=2.0							
comp=E,0.6nm,0.8s							
PDAR Pinedale Array	**69.46**	**50**	P	**P**	**16 23 28.6**	**+1.2**
comp=E,1.5nm,0.6s,baz=286,slow=0.9,SNR=21							
comp=E,1.5nm,0.6s							
SCHQ Schefferville	**76.78**	**19**	P	**P**	**16 24 09.6**	**-0.1**
comp=E,2.9nm,0.8s,baz=315,slow=10.0,SNR=1.6							
comp=E,2.9nm,0.8s							
TXAR Lajitas Array	**82.31**	**56**	P	**P**	**16 24 41.3**	**+1.1**
comp=E,0.3nm,0.5s,baz=271,slow=2.5,SNR=6.6							
TXAR			pP	**pwP**	**16 25 19.1**	**+0.5**
comp=E,0.3nm,0.5s,baz=290,slow=3.5,SNR=3.0							
comp=E,0.3nm,0.5s							

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*IDC **21** 16:32:31.9±0.7, 3°.54S×145°.52E, h0km, mb4.4/18, mbtmp4.4/22, ML1.5/1, MS4.1/51, Error ellipse: s-maj=20.2km s-min=13.2km az=90.0*
*NEIC **21** 16:32:33.0±2.5, 3°.42S±0°.09×145°.5E±0°.1, h10km±1km, mb5.0/39, Error ellipse: s-maj=20.3km s-min=12.6km az=125.0*
*BJI **21** 16:32:33.7±0.0, 3°.34S×145°.28E, h7km, mb4.6/50, mB5.2/29, Ms4.8/16, Ms7 4.5/17*
*DJA **21** 16:32:34.1±1.3, 3°S±3°×14°.5E±°, h20km±9km, M4.8/47, mb4.9/47, mB5.3/21, MLv4.8/3, Mw(mB)4.8/21, MwMwp4.6/1, Mwp4.9/1*
*GCMT **21** 16:32:36.0±0.2, 3°.37S±0°.01×145°.46E±0°.01, h12km, MW5.0/124, Moment Tensor Solution. s34,c42; s124,c182; Duration: 0 Moment tensor: Scale 1016Nm; Mrr0.56±.07; Mθθ-0.43±.08; Mφφ-0.13±.08; Mrθ-1.81±.24; Mθφ3.25±.05; Mφr0.33±.18; Best double couple: M0 3.72300×1016 NP1:φs270.00000°, δ88.00000°, λ30.00000°. NP2:φs179.00000°, δ60.00000°, λ178.00000°. Principal axes: T 3.3860, Plg22.0000°, Azm139.0000°; N 0.6740, Plg60.0000°, Azm274.0000°; P -4.0600, Plg19.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 16:32:35.3±0.4, **3°.53S**±0°.05×**145°.41E**±0°.06, **h23**km, **n195**, σ1§**65**/164, **mb4.9**/66, **MS4.3**/56, **2C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**2.45**	**53**		**Pn**	**16 33 10.3**	**-3.7**
MANU	**Manus Island**	**2.45**	**53**	P	**Pn**	**16 33 11.8**	**-2.2**
GENI	**Genyem**	**5.32**	**280**	P	**Pn**	**16 33 52.2**	**-1.2**
1.3nm4μm197nm,1.3s							
PMG	**Port Moresby**	**6.09**	**163**	Pn	**Pn**	**16 34 04.5**	**+0.4**
0.8nm,0.3s,baz=359,slow=6.5,SNR=2.8							
PMG				Sn	**Sn**	**16 35 11.9**	**-1.2**
1.4nm,0.3s,baz=213,slow=3.2,SNR=3.7							
17nm,0.8s							
PMG	**Port Moresby**	**6.09**	**163**	P	**Pn**	**16 34 04.1**	**+0.1**
0.5nm2μm917nm64nm,1.1s							
PMG	**Port Moresby**	**6.09**	**163**	P	**Pn**	**16 34 08.2**	**+4.2**
KRVT	**Keravat (AS076**	**6.65**	**97**	Pn	**Pn**	**16 34 09.2**	**-2.5**
30nm,1.0s,baz=159,slow=15,SNR=2.1							
COEN	**Coen**	**10.59**	**192**	P	**Pn**	**16 35 10.0**	**+4.1**
baz=11,SNR=7.2							
COEN	**Coen**	**10.59**	**192**	Pn	**Pn**	**16 35 07.5**	**+1.7**
COEN	**Coen**	**10.59**	**192**	P	**Pn**	**16 35 09.9**	**+4.1**
SIJI	**Sorong**	**14.38**	**280**	Pn	**Pn**	**16 35 58.6**	**+1.0**
10nm,0.8s,baz=326,slow=23,SNR=16							
SIJI				LR	LR	16 42 02.7	
comp=Z,193nm,18.3s,baz=92,slow=39							
SIJI	**Sorong**	**14.38**	**280**	P	**Pn**	**16 35 56.8**	**-0.8**
1μm48nm,1.0s							
BNDI	**Bandanaira**	**15.50**	**266**	P	**Pn**	**16 36 12.4**	**-0.2**
3μm159nm,1.6s							
HNR	**Honiara**	**15.59**	**113**	LR	LR	16 41 14.7	
comp=Z,11μm,21.5s,baz=276,slow=34							
KDU	**Kakadu**	**15.70**	**234**	P	**Pn**	**16 36 14.1**	**-1.1**
baz=16,SNR=7.1							
KDU	**Kakadu**	**15.70**	**234**	P	**Pn**	**16 36 16.6**	**+1.4**
MSAI	**Masohi**	**16.45**	**270**	P	**Pn**	**16 36 25.1**	**+0.2**
5.7nm,0.9s							
CTA	**Charters Tower**	**16.48**	**177**	Pn	**P**	**16 36 30.9**	**+3.2**
0.1nm,0.3s,baz=357,slow=11,SNR=3.1							
CTA				LR	LR	16 42 36.9	
comp=Z,482nm,21.0s,baz=0.5,slow=37							
PATS	**Pohnpei**	**16.49**	**51**	P	**Pn**	**16 36 25.9**	**+0.5**
baz=17,SNR=7.4							
PATS	**Pohnpei**	**16.49**	**51**	Pn	**Pn**	**16 36 20.6**	**-4.8**
PATS				IAmb	IAmb	16 36 29.2	
comp=Z,206nm,1.4s							
MTN	**Manton Dam**	**16.88**	**236**	P	**Pn**	**16 36 30.4**	**+0.1**
baz=17,SNR=12							
MTN	**Manton Dam**	**16.88**	**236**	P	**Pn**	**16 36 29.8**	**-0.5**
MTN	**Manton Dam**	**16.88**	**236**	P	**P**	**16 36 31.3**	**-0.9**
KRAI	**Karang Ratu**	**16.98**	**270**	P	**Pn**	**16 36 31.1**	**-0.5**
comp=Z,22nm,0.9s							
AAI	**Ambon**	**17.18**	**269**	P	**Pn**	**16 36 34.0**	**-0.1**
comp=Z,52nm,1.5s							
QIS	**Mount Isa**	**17.84**	**198**	P	**P**	**16 36 43.1**	**+0.2**
baz=18,SNR=5.2							
LBMI	**Labuha**	**18.12**	**279**	P	**Pn**	**16 36 45.1**	**-0.7**
comp=Z,1μmcomp=Z,81nm,1.5s							
NLAI	**Namlea**	**18.28**	**270**	P	**Pn**	**16 36 47.1**	**-0.6**
comp=Z,39nm,1.1s							
GAMI	**Galela, Maluku**	**18.40**	**287**	P	**Pn**	**16 36 48.7**	**-0.5**
comp=Z,74nm,1.2s							
TNTI	**Ternate**	**18.53**	**283**	P	**P**	**16 36 49.7**	**-0.8**
comp=Z,668nmcomp=Z,22nm,1.1s							
WB0	**Warramunga Arr**	**19.39**	**213**	P	**P**	**16 37 00.2**	**+0.3**
WB0				IAmb	IAmb	16 37 07.8	
comp=Z,66nm,0.9s							
SANI	**Sanana**	**19.45**	**274**	P	**P**	**16 36 59.1**	**-1.5**
comp=Z,709nmcomp=Z,30nm,1.2s							
WR0	**Warramunga Arr**	**19.47**	**212**	P	**Pn**	**16 37 01.3**	**-0.7**
WR0				IAmb	IAmb	16 37 11.4	
comp=Z,69nm,1.0s							
WRAB	**Tennant Creek**	**19.55**	**213**	P	**P**	**16 37 01.8**	**+0.2**
WRAB				IAmb	IAmb	16 37 06.2	
comp=Z,115nm,1.2s							
WRAB	**Tennant Creek**	**19.55**	**213**	P	**Pn**	**16 37 02.2**	**-0.8**
WB2	**Warramunga Arr**	**19.56**	**213**	P	**Pn**	**16 37 02.2**	**-0.9**
WB2				IAmb	IAmb	16 37 06.4	
comp=Z,114nm,1.2s							
WRA	**Warramunga Arr**	**19.56**	**213**	P	**P**	**16 37 02.2**	**+0.4**
comp=Z,61nm,1.1s,baz=37,slow=12,SNR=68							
WRA				S	**S**	**16 40 35.6**	**-5.9**
comp=Z,1.3nm,1.0s,baz=42,slow=25,SNR=1.7							
WRA				LR	LR	16 45 26.2	
comp=Z,3μm,18.2s,baz=30,slow=40							
WRA	**Warramunga Arr**	**19.56**	**213**	P	**P**	**16 37 01.4**	**-0.3**
KNRA	**Kununurra**	**20.35**	**233**	P	**P**	**16 37 10.0**	**-0.3**
baz=20,SNR=28							
KNRA	**Kununurra**	**20.35**	**233**		**P**	**16 37 10.0**	**-0.3**
KNRA				IAmb	IAmb	16 37 14.0	
comp=Z,70nm,0.9s							
KNRA	**Kununurra**	**20.35**	**233**	P	**P**	**16 37 10.1**	**-0.2**
SOEI	**Soe**	**21.88**	**253**	P	**P**	**16 37 26.7**	**-0.3**
SOEI	**Soe**	**21.88**	**253**	P	**P**	**16 37 26.9**	**-0.1**
comp=Z,3μmcomp=Z,273nm,1.1s							
SOEI	**Soe**	**21.88**	**253**	P	**P**	**16 37 27.3**	**+0.3**
DAV	**Davao City (W)**	**22.42**	**298**	LR	LR	16 46 01.6	
comp=Z,215nm,18.4s,baz=108,slow=36							
BATI	**Baumata**	**22.57**	**252**	P	**P**	**16 37 34.4**	**0.0**
comp=Z,134nm,1.0s,baz=156,slow=4.0,SNR=14							
BATI				LR	LR	16 48 44.7	
comp=Z,509nm,20.0s,baz=98,slow=43							
comp=Z,134nm,1.0s							
BATI	**Baumata**	**22.57**	**252**	P	**P**	**16 37 33.7**	**-0.7**
comp=Z,2μmcomp=Z,226nm,1.1s							
LUWI	**Luwuk**	**22.75**	**276**	P	**P**	**16 37 37.4**	**+1.2**
LUWI	**Luwuk**	**22.75**	**276**	P	**P**	**16 37 35.4**	**-0.8**
comp=Z,2μmcomp=Z,85nm,1.0s							
GTOI	**Gorontalo**	**22.76**	**280**	P	**P**	**16 37 37.7**	**+1.3**
comp=Z,322nmcomp=Z,42nm,1.1s							
BBSI	**Bau Bau**	**22.85**	**264**	P	**P**	**16 37 37.1**	**-0.2**
comp=Z,72nm,1.3s							
AS01	**Alice Springs**	**22.88**	**208**	P	**P**	**16 37 39.4**	**+1.9**
AS31	**Alice Springs**	**22.90**	**208**	P	**P**	**16 37 38.6**	**+0.9**
ASAR	**Alice Springs**	**22.90**	**208**	P	**P**	**16 37 38.1**	**+0.4**
comp=Z,16nm,0.9s,baz=33,slow=10,SNR=101							
ASAR				S	**S**	**16 41 44.5**	**-1.9**
comp=Z,2.9nm,1.1s,baz=33,slow=19,SNR=3.4							
ASAR				LR	LR	16 47 08.8	
comp=Z,1μm,20.1s,baz=40,slow=38							
comp=Z,16nm,0.9s							
ASAR Alice Springs	**22.90**	**208**	P	**P**	**16 37 37.1**	**-0.6**
QLP Quilpie	**22.95**	**183**	P	**P**	**16 37 41.6**	**+3.4**
baz=23,SNR=6.0							
RMQ Roma	**23.05**	**172**	P	**P**	**16 37 41.8**	**+2.6**
baz=23,SNR=6.1							
RMQ Roma	**23.05**	**172**	P	**P**	**16 37 42.5**	**+3.3**
MMRI Maumere	**23.58**	**257**	P	**P**	**16 37 43.5**	**-1.2**
comp=Z,79nm,1.2s							
KKSI Kolaka, Sulawe	**23.71**	**268**	P	**P**	**16 37 46.1**	**+0.2**
comp=Z,818nmcomp=Z,41nm,1.1s							
MRSI Marisa	**23.79**	**279**	P	**P**	**16 37 45.7**	**-0.9**
comp=Z,652nmcomp=Z,40nm,1.1s							
APSI Ampana	**23.88**	**276**	P	**P**	**16 37 44.5**	**-3.0**
comp=Z,2μmcomp=Z,162nm,1.2s							
TOLI2 Tolitoli	**25.04**	**280**	P	**P**	**16 37 57.3**	**-0.8**
TOLI2			IAmb	IAmb	16 38 03.0	
comp=Z,43nm,0.8s							
BKSI Bulukumba	**25.27**	**265**	P	**P**	**16 38 00.1**	**-0.1**
comp=Z,787nmcomp=Z,60nm,1.2s							
TTSI Tana Toraja	**25.55**	**270**	P	**P**	**16 38 02.9**	**+0.2**
comp=Z,1μmcomp=Z,76nm,1.3s							
KAPI Kappang	**25.63**	**266**	P	**P**	**16 38 04.0**	**+0.6**
comp=Z,31nm,1.0s,baz=42,slow=2.7,SNR=8.5							
KAPI			LR	LR	16 51 11.7	
comp=Z,220nm,18.9s,baz=90,slow=44							
comp=Z,31nm,1.0s							
KAPI Kappang	**25.63**	**266**	P	**P**	**16 38 03.0**	**-0.5**
MPSI Mapaga	**25.78**	**278**	P	**P**	**16 38 03.6**	**-1.2**
comp=Z,22nm,1.1s							
OOD Oodnadatta	**25.85**	**200**	P	**P**	**16 38 07.1**	**+1.8**
WRKA Warakurna	**26.99**	**216**	P	**P**	**16 38 16.2**	**+0.5**
baz=27,SNR=54							
WRKA Warakurna	**26.99**	**216**	P	**P**	**16 38 17.0**	**+1.3**
DZM Mont Dzumac	**27.50**	**134**	*e*S	**S**	**16 43 01.7**	**+1.4**
comp=Z,270nm,26.3s							
DZM			*e*LR	LR	16 45 19.2	
comp=Z,1μm,25.7s							
DZM Mont Dzumac	**27.50**	**134**	LR	LR	16 48 09.5	
comp=Z,660nm,19.4s,baz=236,slow=34							
MYLDM Lahad Datu	**28.24**	**288**	P	**P**	**16 38 26.2**	**-0.7**
comp=Z,36nm,1.6s							
STKA Stephens Creek	**28.43**	**187**	P	**P**	**16 38 29.3**	**+0.9**
comp=Z,3.5nm,0.9s,baz=354,slow=7.1,SNR=5.5							
STKA			LR	LR	16 50 52.6	
comp=Z,725nm,20.1s,baz=6.2,slow=39							
comp=Z,3.5nm,0.9s							
MULG Mulgathing	**28.69**	**201**	P	**P**	**16 38 31.7**	**+0.9**
PSA00 Pilbara Seismi	**30.63**	**232**	P	**P**	**16 38 45.5**	**-2.6**
FORT Forrest	**31.67**	**209**	P	**P**	**16 38 58.0**	**+0.9**
baz=32,SNR=13							
FORT Forrest	**31.67**	**209**	P	**P**	**16 38 56.1**	**-1.0**
FORT Forrest	**31.67**	**209**	P	**P**	**16 38 57.8**	**+0.7**
SBUM Sibu	**33.70**	**280**	P	**P**	**16 39 13.7**	**-1.5**
SBUM Sibu	**33.70**	**280**	P	**P**	**16 39 14.7**	**-0.4**
comp=Z,6.3nm,1.5s							
STKI Sintang	**34.10**	**275**	P	**P**	**16 39 18.2**	**-0.4**
comp=Z,3μmcomp=Z,19nm,1.3s							
JOW Kunigami	**34.43**	**332**	LR	LR	16 50 14.6	
comp=Z,745nm,21.0s,baz=134,slow=31							
KSM Kuching	**35.43**	**277**	P	**P**	**16 39 28.9**	**-1.3**
KSM			IAmb	IAmb	16 39 34.7	
comp=Z,27nm,1.2s							
KSM Kuching	**35.43**	**277**	P	**P**	**16 39 29.1**	**-1.1**
comp=Z,20nm,1.3s							
PPBI Pangkal Pinang	**39.24**	**271**	P	**P**	**16 40 02.3**	**-0.2**
comp=Z,24nm,1.3s							
NWAO Narrogin (SRO)	**39.37**	**219**	LR	LR	16 57 47.0	
comp=Z,2μm,19.9s,baz=278,slow=38							
MJAR Matsushiro Arr	**40.43**	**351**	P	**P**	**16 40 13.7**	**+1.7**
comp=Z,2.6nm,1.1s,baz=180,slow=7.2,SNR=4.2							
comp=Z,2.6nm,1.1s							
KASI Kota Agung	**40.83**	**266**	P	**P**	**16 40 12.0**	**-3.6**
comp=Z,46nm,1.0s							
LWLI Liwa	**41.26**	**266**	P	**P**	**16 40 18.4**	**-0.9**
comp=Z,67nm,1.1s							
QIZ Qiongzhong	**41.56**	**304**	P	**P**	**16 40 19.6**	**-2.0**
QIZ			S	**S**	**16 46 38.6**	**+2.1**
QIZ			pmax	pmax		
comp=Z,18nm,1.2s							
QIZ			LR	LR		
comp=Z,630nm,21.5s							
QIZ			LR	LR		
comp=Z,360nm,15.9s							
QIZ			LR	LR		
comp=Z,430nm,30.3s							
MASI Maura Aman, Be	**43.09**	**269**	P	**P**	**16 40 33.7**	**-0.5**
comp=Z,42nm,1.1s							
NJ2 Nanjing	**43.46**	**327**	*e*P	**P**	**16 40 37.9**	**+1.1**
NJ2			pmax	pmax		
comp=Z,9.0nm,0.7s							
AFI Afiamalu	**43.48**	**106**	LR	LR	16 56 56.6	
comp=Z,183nm,20.9s,baz=276,slow=34							
KSRS Korea Array	**43.90**	**340**	P	**P**	**16 40 39.8**	**-0.5**
comp=Z,3.0nm,0.9s,baz=158,slow=10,SNR=7.9							
KSRS

comp=Z,125nm,19.2s,baz=160,slow=34
comp=Z,0.8nm,0.5s
HHC Hu-ho-hao-te 53.91 328 *eP* **P 16 41 57.3 +0.1**
HHC pmax pmax
comp=Z,33nm,0.8s
HHC pmax pmax
comp=Z,200nm,6.0s
HHC LR LR
comp=Z,570nm,18.6s
HHC LR LR
comp=Z,510nm,16.7s
HHC LR LR
comp=Z,760nm,16.8s
XLT XiLinHaoTe 54.07 334 *eP* **P 16 41 59.0 +0.7**
XLT pP pP 16 42 03.8 -1.0
XLT sP sP 16 42 06.3 -1.1
XLT PcS **PcS 16 47 06.3 +3.9**
XLT S **S 16 49 36.5 +3.0**
XLT sS pS 16 49 42.4 +1.1
XLT ScS **ScS 16 51 41.3 -5.2**
XLT pmax pmax
comp=Z,3.0nm,1.2s
XLT LR LR
comp=Z,51nm,19.0s
XLT LR LR
comp=Z,400nm,16.0s
LZH Lanzhou 55.31 319 *eP* **P 16 42 10.3 +2.7**
LZH pP pP 16 42 14.3 +0.2
LZH sP pwP 16 42 17.1 +0.1
LZH pmax pmax
comp=Z,16nm,1.1s
RAR Rarotonga 56.04 113 LR LR 17 06 14.3
comp=Z,20nm,18.1s,baz=272,slow=36
PETK Petropavlovsk- 57.37 9 LR LR 17 03 32.8
comp=Z,146nm,20.6s,baz=207,slow=32
BRDH Bariadhala 58.57 299 LR LR 17 05 57.1
comp=Z,72nm,21.6s,baz=116,slow=34
SHL Shillong 59.36 302 P **P 16 42 36.6 +0.2**
GTA Gaotai 59.84 320 *eP* **P 16 42 41.8 +2.4**
GTA pP pP 16 42 46.0 0.0
GTA sP pwP 16 42 49.0 +0.2
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,130nm,5.2s
GTA LR LR
comp=Z,130nm,16.4s
GTA LR LR
comp=Z,160nm,17.8s
GTA LR LR
comp=Z,190nm,17.4s
SHEM Shemya Is, Ala 61.06 19 LR LR 17 06 01.0
comp=Z,206nm,18.6s,baz=180,slow=33
ULN Ulaanbaatar 61.20 332 P **P 16 42 46.4 -2.1**
ULN IAmb IAmb 16 42 57.0
comp=Z,26nm,1.6s
ULN Ulaanbaatar 61.20 332 P **P 16 42 47.5 -1.0**
comp=Z,37nm,1.3s
SONM Songino Array 61.49 331 P **P 16 42 51.2 +0.7**
comp=Z,1.9nm,1.0s,baz=144,slow=5.6,SNR=8.9
SONM LR LR 17 09 02.1
comp=Z,253nm,19.3s,baz=143,slow=36
comp=Z,1.9nm,1.0s
GOMU GeErMu 61.54 315 P **P 16 42 54.0 +2.7**
GOMU pmax pmax
comp=Z,3.0nm,1.3s
GOMU pmax pmax
comp=Z,64nm,4.8s
MA2 Magadan 63.06 3 LR LR 17 12 26.4
comp=Z,34nm,18.3s,baz=148,slow=38
JIRN Jiri 64.86 303 *eP* **P 16 43 14.8 +1.3**
PPT2 Papeete2 65.14 108 *eLR* LR 17 02 44.3
comp=Z,107nm,24.5s
GUN Gumba 65.20 303 *eP* **P 16 43 16.6 +0.9**
PALK Pallekele 65.46 280 LR LR 17 17 04.3
comp=Z,43nm,18.1s,baz=203,slow=41
PKI Pulchoki 65.49 302 *eP* **P 16 43 18.6 +1.1**
comp=Z,50nm,1.3s
DMN Daman 65.75 302 *eP* **P 16 43 21.0 +1.8**
TBI Tubuai 65.80 114 *eLR* LR 17 03 03.0
comp=Z,270nm,39.2s
GKN Gorkha 66.27 303 *eP* **P 16 43 22.9 +0.5**
KOLN Koldanda 67.08 302 *eP* **P 16 43 27.5 -0.1**
DANN Dangsing 67.11 303 *eP* **P 16 43 28.2 +0.3**
comp=Z,11nm,0.5s
PYUN Piuthan 67.69 302 *eP* **P 16 43 31.8 +0.3**
comp=Z,40nm,1.0s
HYBB Hyderabad (bro 69.12 290 *eP* **P 16 43 39.9 -0.5**
WMQ Urumqi 69.90 319 *eP* **P 16 43 45.6 +0.9**
VNDA Vanda 74.46 176 P **P 16 44 11.2 -0.1**
comp=Z,0.8nm,0.8s,baz=331,slow=7.2,SNR=6.4
VNDA LR LR 17 15 28.7
comp=Z,128nm,18.4s,baz=342,slow=35
comp=Z,0.8nm,0.8s
MK31 Makanchi Array 74.59 321 P **P 16 44 13.3 +0.6**
MKAR Makanchi Array 74.59 321 P **P 16 44 14.1 +1.4**
comp=Z,2.6nm,1.1s,baz=106,slow=7.7,SNR=9.7
MKAR LR LR 17 15 30.2
comp=Z,84nm,20.6s,baz=76,slow=34
comp=Z,2.6nm,1.1s
MKAR Makanchi Array 74.59 321 P **P 16 44 12.7 0.0**
ZALV Zalesovo Beam 76.09 328 P **P 16 44 21.5 +0.4**
comp=Z,1.8nm,0.9s,baz=98,slow=4.5,SNR=5.4
ZALV LR LR 17 17 07.9
comp=Z,344nm,20.1s,baz=114,slow=35
comp=Z,1.8nm,0.9s
ZALV Zalesovo Beam 76.09 328 P **P 16 44 18.8 -2.3**
KSH Kashi 76.56 312 P P 16 44 29.5 +5.3
KSH pP pwP 16 44 34.3 +0.5
KSH pmax pmax
comp=Z,6.0nm,1.5s
NIL Nilore 77.21 305 P **P 16 44 27.0 -0.9**
KURK Kurchatov 78.29 323 P **P 16 44 32.9 -0.6**
KURK IAmb IAmb 16 44 42.3
comp=Z,12nm,1.2s
KURBB Kurchatov Arra 78.31 323 LR LR 17 20 47.6
comp=Z,75nm,18.1s,baz=93,slow=37
AAK Ala-Archa 78.49 315 LR LR 17 19 12.5
comp=Z,105nm,20.9s,baz=106,slow=36
KDAK Kodiak Island 78.50 29 LR LR 17 14 22.7
comp=Z,126nm,21.5s,baz=268,slow=32
L19K White Mountain 79.52 24 P **P 16 44 40.9 +0.9**
L19K IAmb IAmb 16 44 59.9
comp=Z,21nm,1.2s
CAST Castle Rocks 81.22 24 P **P 16 44 47.5 -1.6**
CAST IAmb IAmb 16 45 04.2
comp=Z,12nm,1.3s
KK31 Karatay Array 81.44 314 P **P 16 44 50.5 -0.3**
KKAR Karatay Array 81.44 314 P **P 16 44 50.9 +0.1**
IMAR Indian Mountai 81.77 21 P **P 16 44 51.7 -0.3**
BPAW Bear Paw Mtn. 81.96 23 P **P 16 44 53.3 +0.2**
MLY Manley 82.45 23 P **P 16 44 55.4 -0.3**
MLY IAmb IAmb 16 45 03.8
comp=Z,26nm,1.6s
NRIK Noril'sk 82.45 342 P **P 16 44 56.4 +0.8**
comp=Z,6.1nm,0.9s,baz=138,slow=7.2,SNR=3.3
NRIK LR LR 17 23 08.2
comp=Z,130nm,18.2s,baz=136,slow=37
comp=Z,6.1nm,0.9s
CCB Clear Creek Bu 83.44 23 P **P 16 44 60.0 -0.8**
CCB IAmb IAmb 16 45 07.5
comp=Z,17nm,1.3s
BVAR Borovoye Array 83.85 324 LR LR 17 23 45.9
comp=Z,111nm,18.3s,baz=95,slow=37
IL31 83.86 24 P **P 16 44 59.6 -3.2**
IL31 IAmb IAmb 16 45 24.5
comp=Z,9.8nm,1.1s
ILAR Eielson Array 83.86 24 P **P 16 45 01.8 -1.1**
comp=Z,4.6nm,0.8s,baz=257,slow=4.7,SNR=30
ILAR LR LR 17 16 25.5
comp=Z,153nm,20.6s,baz=258,slow=31
comp=Z,4.6nm,0.8s
ILAR Eielson Array 83.86 24 P **P 16 45 01.6 -1.2**
MAW Mawson 83.91 202 P **P 16 45 03.7 +0.6**
comp=Z,2.0nm,1.0s,baz=95,slow=9.3,SNR=1.9
MAW LR LR 17 20 22.6
comp=Z,54nm,21.4s,baz=71,slow=34
comp=Z,2.0nm,1.0s
BRVK Borovoye 83.92 324 P **P 16 45 03.5 +0.1**
BRVK IAmb IAmb 16 45 12.3
comp=Z,13nm,1.1s
J25K Salcha River, 84.41 24 P **P 16 45 04.7 -1.0**
BCAR Beaver Creek A 85.42 26 P **P 16 45 10.4 -0.4**
QSPA South Pole Qui 86.42 180 LR LR 17 23 57.7
comp=Z,233nm,20.2s,baz=9.0,slow=36
QSPA South Pole Qui 86.42 180 P **P 16 45 15.8 -0.1**
QSPA IAmb IAmb 16 45 27.7
comp=Z,7.6nm,1.0s
DAWY Dawson 86.72 25 P **P 16 45 17.3 0.0**
DAWY IAmb IAmb 16 45 51.5
comp=Z,10nm,1.1s
WSAR Wadi Sarin 88.42 293 LR LR 17 24 35.2
comp=Z,13nm,21.9s,baz=118,slow=35
INK Inuvik 89.95 22 LR LR 17 24 17.5
comp=Z,201nm,19.4s,baz=242,slow=34
GEYT Alibeck 90.01 308 P **P 16 45 33.5 0.0**
comp=Z,0.6nm,0.4s,baz=63,slow=0.3,SNR=1.5
GEYT LR LR 17 27 31.0
comp=Z,113nm,21.7s,baz=143,slow=37
comp=Z,0.6nm,0.4s
DLBC Dease Lake 90.13 32 LR LR 17 20 37.9
comp=Z,137nm,19.3s,baz=274,slow=32
BBB Bella Bella 90.60 38 LR LR 17 17 12.6
comp=Z,237nm,21.3s,baz=256,slow=30
AKTO Aktyubinsk 91.03 320 LR LR 17 25 23.7
comp=Z,89nm,21.9s,baz=83,slow=35
ARU Arti 91.17 326 LR LR 17 26 22.2
comp=Z,154nm,21.8s,baz=90,slow=35
YBH Yreka Blue Hor 93.73 49 LR LR 17 19 20.9
comp=Z,316nm,22.0s,baz=318,slow=30
KIRV Kirov 96.12 328 LR LR 17 29 08.9
comp=Z,312nm,21.7s,baz=87,slow=35
NVAR Mina Array Bea 97.11 52 LR LR 17 21 01.4
comp=Z,290nm,22.0s,baz=270,slow=30
BELG Belogornoye 97.54 322 LR LR 17 31 44.6
comp=Z,91nm,19.4s,baz=83,slow=36
NEW Newport 97.60 42 LR LR 17 23 26.1
comp=Z,113nm,19.5s,baz=288,slow=31
YKA Yellowknife Ar 97.73 27 LR LR 17 26 25.5
comp=Z,92nm,21.0s,baz=315,slow=33
PFO Pinyon Flats O 98.72 57 LR LR 17 24 42.5
comp=Z,96nm,18.4s,baz=258,slow=32
ELK Elko 99.38 49 LR LR 17 22 40.5
comp=Z,120nm,21.5s,baz=258,slow=30
LPAZ La Paz 141.44 122 PKhKP PKPpre 16 52 01.0
comp=Z,0.4nm,0.5s,baz=236,slow=3.6,SNR=1.4
TORD Torodi Ar. Bea 142.90 287 PKhKP PKPpre 16 52 04.5
comp=Z,0.5nm,0.8s,baz=96,slow=2.9,SNR=3.0

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*BJI **21** 16:41:10.9±0.0, 6°.27S×146°.04E, h145km, mb4.9/53, mB5.0/25*
*NEIC **21** 16:41:11.1±2.4, 6°.37S±0°.06×145°.70E±0°.09, h120km±3km, mb4.9/58, Error ellipse: s-maj=12.3km s-min=9.4km az=91.0*
*DJA **21** 16:41:11.9±0.3, 6°S±2°×14°6E±°, h130km±4km, M5.0/50, mb5.1/50, mB5.5/23, MLv5.5/5, Mw(mB)4.9/23, MwMwp6.0/1, Mwp6.0/1*
*IDC **21** 16:41:11.9±0.5, 6°.33S×145°.86E, h132km±4km, mb4.3/17, mbtmp4.7/21, Error ellipse: s-maj=14.7km s-min=8.4km az=74.0*
*GCMT **21** 16:41:14.1±0.3, 6°.29S±0°.02×145°.68E±0°.03, h154km±4km, MW4.9/80, Moment Tensor Solution. s7,c7; s80,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.75±.13; $M_{\theta\theta}$0.83±.12; $M_{\phi\phi}$-1.58±.13; $M_{r\theta}$0.43±.09; $M_{\theta\phi}$-2.13±.11; $M_{\phi r}$-1.64±.10; Best double couple: $M_0$3.03100×10^{16} NP1:ϕs170.00000°, δ81.00000°, λ37.00000°. NP2: ϕs73.00000°, δ53.00000°, λ168.00000°. Principal axes: T 2.8490, Plg33.0000°, Azm38.0000°; N 0.3650, Plg52.0000°, Azm182.0000°; P -3.2130, Plg18.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 16:41:11.3±0.4, 6°.35S±0°.04×145°.65E±0°.05, h124km±3km, h125km:pP-P, n299, σ1ϑ10/314, mb5.0/67, 1C-3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.38**	**154**	P	**Pn**	**16 42 03.0**	**+0.2**
	2μm,0.7s,baz=335,slow=7.4,SNR=1020						
PMG				S	**Sn**	**16 42 41.1**	**-1.4**
	385nm,0.5s,baz=204,slow=6.8,SNR=3.1						
PMG	**Port Moresby**	**3.38**	**154**	Pn	**Pn**	**16 42 02.9**	**+0.1**
PMG	**Port Moresby**	**3.38**	**154**	P	**Pn**	**16 42 02.8**	**+0.1**
PMG	**Port Moresby**	**3.38**	**154**	P	**Pn**	**16 42 03.0**	**+0.2**
MANU	**Manus Island**	**4.61**	**22**		**Pn**	**16 42 19.7**	**+0.6**
MANU	**Manus Island**	**4.61**	**22**	P	**Pn**	**16 42 20.7**	**+1.6**
GENI	**Genyem**	**6.62**	**304**	P	**Pn**	**16 42 45.8**	**-0.4**
	2.2nm670nm,0.8s						
KRVT	**Keravat (AS076**	**6.66**	**73**	P	**Pn**	**16 42 47.1**	**+0.4**
	338nm,0.7s,baz=217,slow=3.1,SNR=48						
RABL	**Rabaul**	**6.83**	**72**		**Pn**	**16 42 49.5**	**+0.5**
COEN	**Coen**	**7.94**	**198**	P	**Pn**	**16 43 05.9**	**+1.9**
	baz=8.1,SNR=78						
COEN	**Coen**	**7.94**	**198**	Pn	**Pn**	**16 43 06.3**	**+2.3**
COEN	**Coen**	**7.94**	**198**	P	**Pn**	**16 43 06.8**	**+2.7**
SMPI	**Sarmi**	**8.17**	**302**	P	**Pn**	**16 43 06.7**	**-0.4**
SRPI	**Serui, Papua**	**10.39**	**295**	P	**Pn**	**16 43 35.8**	**-1.2**
	5μm256nm,1.0s						
MTSU	**Mount Surprise**	**11.79**	**186**	P	**Pn**	**16 43 57.0**	**+1.3**
	baz=12,SNR=13						
MTSU	**Mount Surprise**	**11.79**	**186**	P	**P**	**16 44 00.0**	**-3.6**
RKPI	**Ransiki, Papua**	**12.41**	**292**	P	**Pn**	**16 44 04.4**	**+0.5**
	2μm122nm,0.8s						
MWPI	**Manokwari, Pap**	**12.78**	**294**	P	**Pn**	**16 44 08.8**	**+0.2**
	176nm,1.0s						
TV1H	**Townsville Har**	**12.88**	**175**	P	**P**	**16 44 16.0**	**+0.2**
CTA	**Charters Tower**	**13.67**	**178**	P	**P**	**16 44 25.9**	**+1.3**
	12nm,0.7s,baz=356,slow=14,SNR=14						
CTA				S	**Sn**	**16 46 48.5**	**-2.5**
	6.9nm,0.8s,baz=77,slow=21,SNR=2.9						
CTA	**Charters Tower**	**13.67**	**178**	P	**P**	**16 44 26.6**	**+2.0**
CTAO	**Charters Tower**	**13.67**	**178**	Pn	**Pn**	**16 44 20.4**	**+0.2**
CTAO	**Charters Tower**	**13.67**	**178**	P	**P**	**16 44 26.3**	**+1.7**
FAKI	**Fak Fak**	**13.79**	**284**	Pn	**Pn**	**16 44 23.1**	**+1.5**
FAKI	**Fak Fak**	**13.79**	**284**	P	**Pn**	**16 44 22.5**	**+0.8**
	2μm233nm,1.0s						
FAKI	**Fak Fak**	**13.79**	**284**	P	**P**	**16 44 24.3**	**-1.7**
SAUI	**Saumlaki**	**14.34**	**263**	P	**Pn**	**16 44 29.0**	**+0.4**
	378nm,0.8s						
KDU	**Kakadu**	**14.44**	**243**	P	**Pn**	**16 44 30.2**	**+0.2**
	baz=15,SNR=18						
KDU	**Kakadu**	**14.44**	**243**	P	**Pn**	**16 44 30.9**	**+0.9**
HNR	**Honiara**	**14.48**	**103**	P	**Pn**	**16 44 31.5**	**+0.9**
	3μm,0.9s,baz=236,slow=8.8,SNR=5.5						
QIS	**Mount Isa**	**15.29**	**202**	P	**Pn**	**16 44 41.3**	**+0.6**
	baz=16,SNR=4.7						
QIS	**Mount Isa**	**15.29**	**202**	P	**P**	**16 44 42.5**	**-0.2**
SIJI	**Sorong**	**15.35**	**290**	P	**Pn**	**16 44 42.1**	**+0.7**
	218nm,1.0s,baz=92,slow=8.9,SNR=37						
SIJI	**Sorong**	**15.35**	**290**	P	**Pn**	**16 44 41.6**	**+0.1**
	5μm198nm,1.0s						
MTN	**Manton Dam**	**15.70**	**245**	P	**Pn**	**16 44 45.4**	**-0.4**
	baz=16,SNR=9.2						
MTN	**Manton Dam**	**15.70**	**245**	Pn	**Pn**	**16 44 45.7**	**-0.1**
MTN				IAmb	IAmb	16 44 51.4	
	comp=Z,30nm,0.6s						
MTN	**Manton Dam**	**15.70**	**245**	P	**P**	**16 44 47.3**	**+0.1**
BNDI	**Bandanaira**	**15.78**	**276**	P	**Pn**	**16 44 47.6**	**+0.8**
	comp=Z,9μmcomp=Z,874nm,1.4s						
BNDI	**Bandanaira**	**15.78**	**276**	P	**P**	**16 44 47.8**	**-0.3**
MSAI	**Masohi**	**16.93**	**279**	P	**Pn**	**16 45 01.5**	**+0.6**
	comp=Z,206nmcomp=Z,20nm,0.7s						
WB0	**Warramunga Arr**	**17.25**	**218**	P	**P**	**16 45 03.2**	**-1.1**
WR0	**Warramunga Arr**	**17.31**	**218**	P	**P**	**16 45 04.8**	**-0.1**
WR0				IAmb	IAmb	16 45 13.8	
	comp=Z,29nm,0.9s						
WRAB	**Tennant Creek**	**17.40**	**218**	P	**P**	**16 45 05.8**	**-0.2**
WRAB	**Tennant Creek**	**17.40**	**218**	P	**Pn**	**16 45 06.6**	**0.0**
WB2	**Warramunga Arr**	**17.41**	**218**	P	**P**	**16 45 06.0**	**0.0**
WRA	**Warramunga Arr**	**17.42**	**218**	P	**P**	**16 45 05.8**	**-0.4**
	comp=Z,7.4nm,0.7s,baz=45,slow=12,SNR=26						
WRA	**Warramunga Arr**	**17.42**	**218**	P	**P**	**16 45 05.8**	**-0.4**
KRAI	**Karang Ratu**	**17.46**	**279**	P	**Pn**	**16 45 07.1**	**-0.2**
	comp=Z,2μmcomp=Z,262nm,1.1s						
AAI	**Ambon**	**17.59**	**278**	P	**Pn**	**16 45 09.1**	**+0.2**
	comp=Z,4μmcomp=Z,384nm,0.7s						
PATS	**Pohnpei**	**18.20**	**44**	P	**P**	**16 45 13.0**	**-1.7**
	baz=18,SNR=22						
PATS	**Pohnpei**	**18.20**	**44**	P	**P**	**16 45 14.4**	**-0.2**
PATS	**Pohnpei**	**18.20**	**44**	P	**Pn**	**16 45 15.4**	**-0.7**
NLAI	**Namlea**	**18.74**	**279**	P	**Pn**	**16 45 21.9**	**-0.7**
	comp=Z,6μmcomp=Z,120nm,0.9s						
KNRA	**Kununurra**	**18.98**	**239**	P	**P**	**16 45 23.1**	**-0.2**
	baz=19,SNR=20						
KNRA	**Kununurra**	**18.98**	**239**	P	**P**	**16 45 22.0**	**-1.2**
KNRA				IAmb	IAmb	16 45 28.5	
	comp=Z,30nm,0.8s						
KNRA	**Kununurra**	**18.98**	**239**	P	**P**	**16 45 22.5**	**-0.7**
LBMI	**Labuha**	**18.98**	**287**	P	**Pn**	**16 45 24.5**	**-0.9**
	comp=Z,3μmcomp=Z,321nm,0.9s						
TNTI	**Ternate**	**19.58**	**291**		**Pn**	**16 45 32.1**	**-0.2**
TNTI	**Ternate**	**19.58**	**291**	P	**P**	**16 45 31.1**	**+1.3**
	comp=Z,3μmcomp=Z,378nm,1.0s						
TNTI	**Ternate**	**19.58**	**291**	P	**Pn**	**16 45 33.3**	**+1.0**
GAMI	**Galela, Maluku**	**19.60**	**294**	P	**P**	**16 45 30.1**	**0.0**
EIDS	**Eidsvold**	**19.61**	**165**	P	**Pn**	**16 45 32.0**	**-0.7**
	baz=20,SNR=5.0						
EIDS	**Eidsvold**	**19.61**	**165**	P	**P**	**16 45 29.8**	**-0.2**
EIDS	**Eidsvold**	**19.61**	**165**	P	**Pn**	**16 45 35.2**	**+2.6**
GUMO	**Guam**	**19.82**	**358**	P	**P**	**16 45 32.4**	**0.0**
	comp=Z,150nm,0.9s,baz=181,slow=8.8,SNR=12						
GUMO	**Guam**	**19.82**	**358**		**P**	**16 45 32.1**	**-0.3**
SANI	**Sanana**	**20.07**	**281**	P	**P**	**16 45 34.2**	**-0.9**
	comp=Z,1μmcomp=Z,165nm,0.8s						
SANI	**Sanana**	**20.07**	**281**	P	**P**	**16 45 35.4**	**+0.3**
QLP	**Quilpie**	**20.17**	**184**	P	**P**	**16 45 37.4**	**+1.4**
	baz=20,SNR=3.9						
QLP	**Quilpie**	**20.17**	**184**	P	Pn	16 45 40.6	+1.5
	comp=Z,72nm,1.2s						
RMQ	**Roma**	**20.24**	**172**	P	**P**	**16 45 38.0**	**+1.2**
	baz=20,SNR=7.0						
RMQ	**Roma**	**20.24**	**172**	P	Pn	16 45 39.6	-0.4
AS01	**Alice Springs**	**20.57**	**212**	P	**P**	**16 45 41.6**	**+1.2**
AS31	**Alice Springs**	**20.59**	**212**	P	**P**	**16 45 39.7**	**-1.0**
ASAR	**Alice Springs**	**20.59**	**212**	P	**P**	**16 45 40.6**	**0.0**
	comp=Z,8.2nm,0.9s,baz=50,slow=8.5,SNR=37						
ASAR				S	**S**	**16 49 20.4**	**-3.9**
	comp=Z,1.8nm,1.0s,baz=24,slow=20,SNR=1.9						
	comp=Z,8.2nm,0.9s						
ASAR	**Alice Springs**	**20.59**	**212**	P	**P**	**16 45 40.5**	**-0.2**
SOEI	**Soe**	**21.44**	**260**	P	**P**	**16 45 49.9**	**-0.1**
SOEI				IAmb	IAmb	16 46 02.7	
	comp=Z,35nm,0.8s						
SOEI	**Soe**	**21.44**	**260**	P	**P**	**16 45 49.4**	**-0.6**
	comp=Z,106nm,1.2s						
SOEI	**Soe**	**21.44**	**260**	P	**P**	**16 45 50.4**	**+0.4**
INKA	**Innaminka**	**21.78**	**192**	P	**P**	**16 45 54.2**	**+0.9**
BATI	**Baumata**	**22.09**	**259**	P	**P**	**16 45 59.1**	**+2.4**
	comp=Z,29nm,0.5s,baz=164,slow=21,SNR=5.7						
	comp=Z,29nm,0.5s						
BATI	**Baumata**	**22.09**	**259**	P	**P**	**16 45 56.4**	**-0.3**
	comp=Z,58nm,0.9s						
MMRI	**Maumere**	**23.33**	**263**	P	**P**	**16 46 07.8**	**-0.8**
MMRI				IAmb	IAmb	16 46 10.2	
	comp=Z,80nm,1.0s						
MMRI	**Maumere**	**23.33**	**263**	P	**P**	**16 46 07.4**	**-1.2**
	comp=Z,80nm,0.8s						
MMRI	**Maumere**	**23.33**	**263**	P	**P**	**16 46 08.0**	**-0.6**
OOD	**Oodnadatta**	**23.33**	**203**	P	**P**	**16 46 08.9**	**+0.4**
LUWI	**Luwuk**	**23.43**	**282**	P	**P**	**16 46 10.0**	**+0.4**
	comp=Z,4μmcomp=Z,332nm,1.1s						
GTOI	**Gorontalo**	**23.64**	**286**	P	**P**	**16 46 13.0**	**+1.5**
	comp=Z,2μmcomp=Z,232nm,0.7s						
APSI	**Ampana**	**24.55**	**282**	P	**P**	**16 46 19.2**	**-0.5**
	comp=Z,2μmcomp=Z,170nm,1.4s						
ARMA	**Armidale**	**24.59**	**168**	P	**P**	**16 46 21.0**	**+0.9**
	baz=25,SNR=5.9						
ARMA	**Armidale**	**24.59**	**168**	P	**P**	**16 46 20.1**	**0.0**
ARMA	**Armidale**	**24.59**	**168**	P	**P**	**16 46 21.8**	**+1.7**
MRSI	**Marisa**	**24.62**	**285**	P	**P**	**16 46 18.8**	**-1.6**
	comp=Z,622nmcomp=Z,83nm,1.0s						
WRKA	**Warakurna**	**24.93**	**220**	P	**P**	**16 46 23.0**	**-0.1**
	baz=25,SNR=12						
WRKA	**Warakurna**	**24.93**	**220**	P	**P**	**16 46 23.5**	**+0.3**
LCRK	**Leigh Creek**	**24.97**	**195**	P	**P**	**16 46 24.0**	**+0.6**
CMSA	**Cobar Meteorol**	**25.06**	**180**	P	**P**	**16 46 25.6**	**+1.4**
	baz=25,SNR=6.4						
CMSA	**Cobar Meteorol**	**25.06**	**180**	P	**P**	**16 46 25.8**	**+1.6**
LIFNC	**LIFOU**	**25.36**	**127**	P	**P**	**16 46 26.4**	**-0.6**
LIFNC	**LIFOU**	**25.36**	**127**	P	**P**	**16 46 28.4**	**+1.4**
DZM	**Mont Dzumac**	**25.45**	**130**	P	**P**	**16 46 27.3**	**-0.6**
	comp=Z,7.2nm,0.9s,baz=274,slow=15,SNR=5.5						
	comp=Z,7.2nm,0.9s						
DZM	**Mont Dzumac**	**25.45**	**130**	P	**P**	**16 46 31.7**	**+3.8**
	comp=Z,20nm,0.9s						
STKA	**Stephens Creek**	**25.68**	**188**	P	**P**	**16 46 30.1**	**+0.4**
	comp=Z,10.0nm,0.8s,baz=6.0,slow=7.6,SNR=17						
	comp=Z,10.0nm,0.8s						
STKA	**Stephens Creek**	**25.68**	**188**	P	**P**	**16 46 30.4**	**+0.7**
	baz=26,SNR=15						
STKA	**Stephens Creek**	**25.68**	**188**	P	**P**	**16 46 30.0**	**+0.2**
STKA	**Stephens Creek**	**25.68**	**188**	P	**P**	**16 46 31.3**	**+1.5**
KAPI	**Kappang**	**25.81**	**272**	P	**P**	**16 46 33.6**	**+2.4**
	comp=Z,40nm,0.8s,baz=114,slow=6.7,SNR=17						
KAPI				pP	**pP**	**16 47 00.7**	**+2.5**
	comp=Z,29nm,0.9s,baz=82,slow=8.6,SNR=3.1						
	comp=Z,40nm,0.8s						
TOLI2	**Tolitoli**	**25.91**	**286**	P	**P**	**16 46 32.0**	**-0.1**
TOLI2				IAmb	IAmb	16 46 36.1	
	comp=Z,52nm,0.8s						
TOLI2	**Tolitoli**	**25.91**	**286**	P	**P**	**16 46 32.4**	**+0.3**
MULG	**Mulgathing**	**26.19**	**203**	P	**P**	**16 46 35.4**	**+1.0**
HTT	**Hallett**	**27.66**	**192**	P	**P**	**16 46 49.2**	**+1.6**
PLAI	**Plampang**	**27.74**	**263**	P	**P**	**16 46 48.4**	**-0.1**
MYLDM	**Lahad Datu**	**29.43**	**292**	P	**P**	**16 47 00.7**	**-2.8**
MYLDM				IAmb	IAmb	16 47 07.2	
	comp=Z,46nm,1.1s						
MYLDM	**Lahad Datu**	**29.43**	**292**	P	**P**	**16 47 02.5**	**-0.9**
	comp=Z,49nm,1.2s						
KKM	**Kota Kinabalu**	**31.86**	**292**	P	**P**	**16 47 23.0**	**-2.0**
KKM				IAmb	IAmb	16 47 25.6	
	comp=Z,19nm,0.8s						
KKM	**Kota Kinabalu**	**31.86**	**292**	P	**P**	**16 47 24.8**	**-0.2**
SBUM	**Sibu**	**34.51**	**284**	P	**P**	**16 47 48.2**	**+0.3**
	comp=Z,12nm,1.0s						
KSM	**Kuching**	**36.13**	**281**	P	**P**	**16 48 02.1**	**+0.3**
KSM				IAmb	IAmb	16 48 03.3	
	comp=Z,22nm,1.1s						
KSM	**Kuching**	**36.13**	**281**	P	**P**	**16 48 01.8**	**0.0**
	comp=Z,16nm,0.7s						
KLBR	**Kellerberrin**	**36.21**	**223**	P	**P**	**16 48 01.6**	**-0.7**
	baz=36,SNR=4.9						
KLBR	**Kellerberrin**	**36.21**	**223**	P	**P**	**16 48 01.8**	**-0.5**
TWG	**Pinlang**	**37.67**	**321**	P	**P**	**16 48 13.0**	**-1.7**
YULB	**Yu-li**	**37.95**	**322**	P	**P**	**16 48 18.0**	**+1.0**
TPUB	**Ta-pu**	**38.29**	**321**	P	**P**	**16 48 19.5**	**-0.5**
TPUB	**Ta-pu**	**38.29**	**321**	P	**P**	**16 48 19.8**	**-0.2**
NACB	**Ninganchiao**	**38.35**	**323**	P	**P**	**16 48 20.6**	**+0.2**
NACB	**Ninganchiao**	**38.35**	**323**	P	**P**	**16 48 21.5**	**+1.1**
SSLB	**Suanglung**	**38.45**	**322**	P	**P**	**16 48 20.9**	**-0.4**
SSLB				IAmb	IAmb	16 48 24.6	
	comp=Z,28nm,0.7s						
SSLB	**Suanglung**	**38.45**	**322**	P	**P**	**16 48 21.4**	**+0.1**
YHNB	**Yeheng**	**38.86**	**323**	P	**P**	**16 48 25.7**	**+1.0**
YHNB	**Yeheng**	**38.86**	**323**	P	**P**	**16 48 26.2**	**+1.5**
TATO	**Taipei**	**39.02**	**324**	P	**P**	**16 48 27.4**	**+1.4**
TATO	**Taipei**	**39.02**	**324**	P	**P**	**16 48 27.0**	**+1.0**
MYKOM	**Kota Tinggi**	**42.51**	**280**	P	**P**	**16 48 54.6**	**-0.2**
	comp=Z,32nm,1.0s						
BKZ	**Black Stump Fm**	**42.90**	**144**	P	**P**	**16 48 56.9**	**-0.8**
BKZ	**Black Stump Fm**	**42.90**	**144**	P	**P**	**16 49 00.0**	**+2.3**
MJAR	**Matsushiro Arr**	**43.23**	**351**	P	**P**	**16 48 59.0**	**-1.3**
	comp=Z,7.4nm,0.9s,baz=171,slow=8.2,SNR=11						
	comp=Z,7.4nm,0.9s						
MAJO	**Matsushiro**	**43.23**	**351**	P	**P**	**16 48 58.1**	**-2.2**
MAJO				IAmb	IAmb	16 49 01.3	
	comp=Z,20nm,1.1s						
MAJO	**Matsushiro**	**43.23**	**351**	P	**P**	**16 48 58.4**

comp=Z,5.8nm,0.7s,baz=160,slow=8.8,SNR=14
comp=Z,5.8nm,0.7s
PSI Prapat 47.53 280 P P 16 49 33.9 -0.8
comp=Z,18nm,1.1s,comp=Z,29nm,1.2s
PSI P **P 16 49 34.1 -0.6**
comp=Z,18nm,1.1s,comp=Z,29nm,1.2s
NONG Nongkai 48.46 301 P **P 16 49 42.7 +1.1**
GSI Gunungsitoli 48.59 277 P **P 16 49 41.8 -1.0**
GSI IAmb IAmb 16 49 42.7
comp=Z,28nm,0.8s
GSI Gunungsitoli 48.59 277 P **P 16 49 41.2 -1.6**
comp=Z,37nm,1.3s
KCSI Kotacane, Aceh 48.80 280 P **P 16 49 42.6 -1.8**
comp=Z,59nm,0.8s
GYA Guiyang 49.92 313⇑ *iP* **P 16 49 54.8 +2.0**
GYA pP pP 16 50 23.5 +0.9
GYA pmax pmax
comp=Z,17nm,0.8s
MLSI Meulaboh, Aceh 50.29 281 P **P 16 49 53.9 -1.7**
comp=Z,2μmcomp=Z,178nm,0.6s
SRDT SRDT 50.53 294 P **P 16 49 56.4 -1.0**
comp=Z,26nm,1.3s
KMI Kunming 52.16 309 ⇓P **P 16 50 11.5 +1.8**
KMI pmax pmax
comp=Z,19nm,0.9s
HNS HongShan 52.23 329 ⇓P **P 16 50 10.3 +0.6**
HNS pmax pmax
comp=Z,29nm,0.7s
CM31 Chiang Mai Arr 52.24 299 P **P 16 50 11.7 +1.6**
CMAR Chiang Mai Arr 52.24 299 P **P 16 50 11.7 +1.5**
comp=Z,20nm,0.6s,baz=122,slow=5.9,SNR=172
comp=Z,20nm,0.6s
CHTO Chiang Mai 52.38 299 P **P 16 50 12.4 +1.3**
XAN Xi'an 53.11 322⇓ *iP* **P 16 50 16.8 +0.5**
XAN pmax pmax
comp=Z,27nm,0.8s
BJI Beijing 53.57 332 P **P 16 50 19.8 +0.4**
BJI pmax pmax
comp=Z,8.0nm,1.5s
PZH PanZhiHua 53.64 309 P **P 16 50 21.1 +0.7**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,170nm,5.1s
CD2 Chengdu 54.57 315 *eP* **P 16 50 27.1 +0.1**
HHC Hu-ho-hao-te 56.44 329 *eP* **P 16 50 41.6 +1.4**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,280nm,4.5s
LZH Lanzhou 57.61 320 *eP* **P 16 50 50.1 +1.4**
LZH pmax pmax
comp=Z,25nm,1.1s
PEA0B Petropavlovsk- 60.11 8 P **P 16 51 05.1 -0.2**
PETK Petropavlovsk- 60.11 8 P **P 16 51 05.3 -0.1**
comp=Z,19nm,0.8s,baz=191,slow=12,SNR=11
comp=Z,19nm,0.8s
PETK Petropavlovsk- 60.11 8 P **P 16 51 04.6 -0.8**
DRV Dumont d'Urvil 60.34 183 P **P 16 51 06.7 -0.1**
GTA Gaotai 62.16 321 *eP* **P 16 51 20.9 +1.2**
GTA pP PcP 16 51 56.9 -1.8
GTA sP sP 16 52 09.3 +5.1
GTA pmax pmax
comp=Z,13nm,0.7s
LSA Lhasa 63.39 308 P **P 16 51 29.9 +1.5**
GOMU GeErMu 63.70 316 P **P 16 51 31.3 +1.1**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,100nm,7.5s
ULN Ulaanbaatar 63.78 332 P **P 16 51 30.8 +0.5**
ULN IAmb IAmb 16 51 33.5
comp=Z,8.4nm,0.7s
ULN Ulaanbaatar 63.78 332 P **P 16 51 30.7 +0.5**
comp=Z,53nm,0.9s
ULN Ulaanbaatar 63.78 332 P **P 16 51 31.2 +0.9**
ULN pP **PcP 16 52 04.0 -1.2**
SONM Songino Array 64.07 332 P **P 16 51 33.1 +1.0**
comp=Z,1.8nm,0.4s,baz=164,slow=6.5,SNR=16
SONM pP **PcP 16 52 05.2 -1.1**
comp=Z,2.8nm,1.0s,baz=151,slow=5.6,SNR=3.2
comp=Z,1.8nm,0.4s
SONM Songino Array 64.07 332 P **P 16 51 32.7 +0.6**
ODAN Odare 65.31 303 *eP* **P 16 51 43.0 +2.3**
JIRN Jiri 66.60 304 *eP* **P 16 51 50.0 +0.9**
GUN Gumba 66.94 304 *eP* **P 16 51 52.2 +0.9**
PKI Pulchoki 67.21 303 *eP* **P 16 51 53.4 +0.4**
comp=Z,29nm,0.9s
PKIN Phulchoki 67.22 303 *eP* **P 16 51 53.4 +0.4**
comp=Z,23nm,0.8s
KKN Kakani 67.40 303 *eP* **P 16 51 54.2 +0.2**
comp=Z,6.7nm,1.0s
DMN Daman 67.48 303 *eP* **P 16 51 55.4 +0.8**
comp=Z,79nm,1.1s
GKN Gorkha 68.00 303 *eP* **P 16 51 58.2 +0.5**
comp=Z,50nm,0.9s
KOLN Koldanda 68.79 303 *eP* **P 16 52 03.1 +0.4**
comp=Z,7.6nm,1.0s
DANN Dangsing 68.85 304 *eP* **P 16 52 03.3 +0.1**
comp=Z,38nm,0.8s
PYUN Piuthan 69.41 303 *eP* **P 16 52 06.7 +0.2**
VNDA Vanda 71.65 176 P **P 16 52 19.1 +0.1**
comp=Z,1.0nm,0.9s,baz=322,slow=7.4,SNR=6.5
VNDA pP **pP 16 52 51.0 +0.6**
comp=Z,1.4nm,0.7s,baz=328,slow=7.6,SNR=5.6
comp=Z,1.0nm,0.9s
VNDA Vanda 71.65 176 P **P 16 52 18.1 -0.8**
VNDA pP **pP 16 52 47.2 -3.2**
VNDA sP **sP 16 53 02.4 -1.7**
UNV Unalaska Valle 72.13 27 P **P 16 52 22.1 0.0**
baz=231
WMQ Urumqi 72.19 320 *eP* **P 16 52 24.3 +1.5**
WMQ pmax pmax
comp=Z,21nm,0.7s
AKUT Akutan 72.65 28 P **P 16 52 24.4 -0.9**
MK31 Makanchi Array 76.92 321 P **P 16 52 49.0 -1.0**
MKAR Makanchi Array 76.92 321 P **P 16 52 50.8 +0.7**
comp=Z,1.9nm,0.4s,baz=100,slow=7.9,SNR=54
MKAR pP **pP 16 53 22.1 +0.2**
comp=Z,3.1nm,0.7s,baz=111,slow=6.6,SNR=4.4
comp=Z,1.9nm,0.4s
MAKZ Makanchi 77.12 321 P **P 16 52 50.5 -0.6**
ZALV Zalesovo Beam 78.60 328 P **P 16 52 58.5 -0.6**
comp=Z,4.1nm,0.4s,baz=107,slow=5.2,SNR=19
ZALV pP **pP 16 53 32.3 +1.2**
comp=Z,1.9nm,0.7s,baz=107,slow=6.3,SNR=1.9
comp=Z,4.1nm,0.4s
ZALV Zalesovo Beam 78.60 328 P **P 16 52 58.4 -0.7**
KSH Kashi 78.62 312 P **P 16 53 02.0 +2.2**
KSH pmax pmax
comp=Z,5.0nm,0.9s
NIL Nilore 79.04 306 P **P 16 53 00.4 -1.7**
O16K Kokwok River B 79.26 25 P **P 16 53 03.0 +0.3**
baz=237
BOOM Boomskoye usch 79.58 315 P **P 16 53 05.3 +0.4**
BOOM IAmb IAmb 16 53 09.9
comp=Z,19nm,1.1s
O17K Koliganek Bris 79.79 26 P **P 16 53 06.0 +0.6**
baz=238
KURK Kurchatov 80.69 324 P **P 16 53 10.5 0.0**
MAW Mawson 81.41 203 P **P 16 53 16.1 +2.0**
comp=Z,3.0nm,0.9s,baz=76,slow=2.7,SNR=3.4
comp=Z,3.0nm,0.9s
L19K White Mountain 81.97 24 P **P 16 53 16.2 -0.9**
L19K IAmb IAmb 16 53 18.0
comp=Z,12nm,1.1s
L19K White Mountain 81.97 24 P **P 16 53 17.7 +0.6**
baz=240
L20K Farewell, AK 82.51 24 P **P 16 53 19.7 -0.2**
baz=241
K20K Telida 82.87 23 P **P 16 53 21.4 -0.3**
K20K IAmb IAmb 16 53 22.8
comp=Z,11nm,1.0s
K20K Telida 82.87 23 P **P 16 53 22.1 +0.4**
baz=240
J20K Nowinta River 83.25 23 P **P 16 53 23.7 +0.1**
baz=240,SNR=7.7
CHGR Chuyangaron 83.49 310 P **P 16 53 25.9 +0.4**
CHGR IAmb IAmb 16 53 26.7
comp=Z,16nm,0.7s
KKAR Karatay Array 83.58 315 P **P 16 53 26.3 +0.5**
QSPA South Pole Qui 83.62 180 P **P 16 53 25.0 -0.7**
CAST Castle Rocks 83.69 24 P **P 16 53 24.9 -1.0**
CAST IAmb IAmb 16 53 25.7
comp=Z,15nm,1.1s
CAST Castle Rocks 83.69 24 P **P 16 53 25.6 -0.3**
baz=242,SNR=6.1
CHUM Lake Minchumin 83.81 23 P **P 16 53 25.9 -0.6**
baz=242,SNR=9.2
PMR Palmer 84.10 26 P **P 16 53 27.5 -0.5**
baz=245
PWL Port Wells 84.15 27 P **P 16 53 28.1 -0.2**
baz=245
IMAR Indian Mountai 84.29 21 P **P 16 53 27.5 -1.4**
BPAW Bear Paw Mtn. 84.43 23 P **P 16 53 28.8 -0.9**
BPAW IAmb IAmb 16 53 29.4
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 84.43 23 P **P 16 53 29.3 -0.4**
baz=243,SNR=5.5
H21K Melozitna Rive 84.47 21 P **P 16 53 29.8 -0.1**
baz=241
SML Sawmill 84.54 26 P **P 16 53 29.2 -1.1**
SML IAmb IAmb 16 53 30.4
comp=Z,27nm,1.1s
SML Sawmill 84.54 26 P **P 16 53 29.6 -0.7**
baz=246
I21K Tanana 84.55 22 P **P 16 53 29.8 -0.4**
baz=242,SNR=9.2
G21K Allakaket 84.64 21 P **P 16 53 30.6 0.0**
baz=241
WAT1 Susitna Watana 84.87 25 P **P 16 53 30.9 -1.0**
baz=245
MLY Manley 84.95 22 P **P 16 53 31.5 -0.8**
baz=243,SNR=12
MCK McKinley 85.09 24 P **P 16 53 31.4 -1.6**
baz=245,SNR=10
WAT6 Susitna Watana 85.11 25 P **P 16 53 32.0 -1.3**
baz=246
NRIK Noril'sk 85.20 342 P **P 16 53 31.9 -1.5**
comp=Z,4.7nm,0.6s,baz=136,slow=4.8,SNR=9.2
comp=Z,4.7nm,0.6s
NEA2 Nenana 85.40 23 P **P 16 53 32.8 -1.7**
baz=245,SNR=6.3
DHY Denali Highway 85.46 25 P **P 16 53 34.1 -0.8**
baz=246,SNR=7.9
KLU Klutina 85.47 27 P **P 16 53 33.4 -1.6**
KLU IAmb IAmb 16 53 36.0
comp=Z,12nm,1.0s
I23K Minto, Yukon-K 85.52 23 P **P 16 53 34.2 -0.8**
baz=244
CCB Clear Creek Bu 85.92 23 P **P 16 53 34.9 -2.1**
CCB IAmb IAmb 16 53 36.1
comp=Z,14nm,1.0s
G23K Bananza Creek 85.96 21 P **P 16 53 37.3 0.0**
baz=244
E22K Anaktuvuk Pass 85.99 19 P **P 16 53 38.0 +0.6**
baz=242
HDA Harding Lake 86.16 24 P **P 16 53 36.5 -1.8**
baz=247
IL31 86.33 23 P **P 16 53 37.3 -1.7**
IL31 IAmb IAmb 16 53 37.9
comp=Z,12nm,0.9s
ILAR Eielson Array 86.33 23 P **P 16 53 36.8 -2.3**
comp=Z,7.8nm,0.9s,baz=254,slow=4.9,SNR=8.9
ILAR pP **pP 16 54 12.8 +1.8**
comp=Z,3.0nm,0.7s,baz=252,slow=4.7,SNR=4.1
comp=Z,7.8nm,0.9s
ILAR Eielson Array 86.33 23 P **P 16 53 36.9 -2.1**
E23K Chandalar 86.69 20 P **P 16 53 41.3 +0.4**
baz=244
D23K Nanushuk River 86.75 19 P **P 16 53 42.0 +0.9**
baz=243
RIDG Independent Ri 86.76 25 P **P 16 53 41.1 -0.2**
baz=249,SNR=5.1
J25K Salcha River, 86.87 24 P **P 16 53 40.8 -1.0**
J25K IAmb IAmb 16 53 41.6
comp=Z,22nm,1.1s
J25K Salcha River, 86.87 24 P **P 16 53 40.9 -1.0**
baz=248,SNR=15
F24K Squaw Lake 87.06 21 P **P 16 53 43.5 +0.9**
baz=246
E24K Your Creek 87.08 20 P **P 16 53 42.7 -0.1**
baz=245
C23K Itkillik River 87.16 18 P **P 16 53 43.4 +0.5**
baz=243
SCRK Sand Creek 87.20 25 P **P 16 53 42.7 -0.8**
baz=250
BARN Barnard Glacie 87.25 28 P **P 16 53 43.0 -0.9**
BARN IAmb IAmb 16 53 44.8
comp=Z,14nm,1.0s
CTG Chitna Glacier 87.37 28 P **P 16 53 44.1 -0.3**
baz=252
CTGM Chitina Glacie 87.38 28 P **P 16 53 43.7 -0.7**
CTGM IAmb IAmb 16 53 45.3
comp=Z,16nm,1.1s
J26L Joseph Creek 87.56 24 P **P 16 53 44.5 -0.6**
baz=250,SNR=7.3
M27K Edge Creek, AK 87.57 26 P **P 16 53 44.8 -0.4**
M27K IAmb IAmb 16 53 46.3
comp=Z,17nm,1.1s
M27K Edge Creek, AK 87.57 26 P **P 16 53 45.3 0.0**
baz=252,SNR=8.3
C24K Franklin Bluff 87.71 19 P **P 16 53 46.1 +0.6**
baz=245
L27K Beaver Creek, 87.81 26 P **P 16 53 46.3 0.0**
baz=252,SNR=8.5
O28M Mount Upton 87.85 28 P **P 16 53 47.4 +0.5**
baz=253
F25K Christian Rive 87.88 21 P **P 16 53 47.4 +0.9**
baz=248
YUK3 Moose Creek 88.02 27 P **P 16 53 48.0 +0.4**
baz=253,SNR=5.8
BVCY Beaver Creek 88.03 27 P **P 16 53 47.6 +0.2**
baz=252
E25K Arctic Village 88.11 20 P **P 16 53 48.6 +1.0**
baz=248
BMAR Burnt Mountain 88.20 21 P **P 16 53 48.0 -0.1**
G26K Porcupine Rive 88.32 22 P **P 16 53 48.7 +0.2**
baz=250
F26K Sheenjek River 88.45 21 P **P 16 53 50.0 +0.7**
baz=249
O29M Mount Kennedy 88.49 29 P **P 16 53 50.3 +0.7**
baz=254
EGAK Eagle 88.63 24 P **P 16 53 49.5 -0.5**
EGAK IAmb IAmb 16 53 50.5
comp=Z,10nm,1.1s
EGAK Eagle 88.63 24 P **P 16 53 49.9 -0.1**
baz=252,SNR=5.2
I27K Kandik River 88.70 23 P **P 16 53 50.4 -0.1**
baz=252
H27K Steamboat Moun 88.94 23 P **P 16 53 51.7 +0.2**
baz=252
M29M Somme Creek 89.11 27 P **P 16 53 53.0 +0.5**
baz=254,SNR=5.1
DAWY Dawson 89.15 25 P **P 16 53 52.7 +0.1**
baz=254,SNR=6.5
L29M L29M 89.44 26 P **P 16 53 54.2 +0.2**
baz=255
N30M Aishikik Lake 89.49 28 P **P 16 53 54.5 +0.2**
baz=256
E27K Coleen River 89.53 21 P **P 16 53 55.3 +1.0**
baz=252
K29M Barlow Dome 89.89 26 P **P 16 53 56.2 +0.1**
baz=255,SNR=5.3
EPYK Eagle Plains 90.84 23 P **P 16 54 00.0 -0.4**
baz=256
ABKAR Akbulak array 91.97 319 P **P 16 54 04.8 -1.2**
NVAR Mina Array Bea 98.64 52 P **P 16 54 36.6 -0.3**
comp=Z,0.5nm,0.8s,baz=276,slow=8.1,SNR=2.3
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 111.10 61 PKiKP **PKiKP 16 59 31.1 +0.1**
comp=Z,0.3nm,0.8s,baz=304,slow=1.6,SNR=3.4
GERES GERESS Array B 121.43 325 PKP **PKPdf 16 59 49.9 -0.4**
comp=Z,0.5nm,0.7s,baz=123,slow=3.6,SNR=5.3
PLCA Paso Flores 122.55 148 PKP **PKPdf 16 59 52.8 +0.1**
comp=Z,1.5nm,0.7s,baz=303,slow=0.2,SNR=5.2
LPAZ La Paz 139.71 124 PKP **PKPdf 17 00 25.3 -1.0**
comp=Z,0.7nm,0.6s,baz=118,slow=4.5,SNR=2.4
LPAZ pPKP **pPKPdf 17 01 01.3 +0.8**
comp=Z,0.9nm,0.5s,baz=300,slow=6.2,SNR=2.2
CPUP Villa Florida 140.60 146 PKP **PKPdf 17 00 26.9 -0.1**
comp=Z,2.3nm,0.8s,baz=197,slow=5.3,SNR=3.9
TOA0 Torodi Ar. Sit 143.88 284 PKPdf PKPbc 17 00 31.2 +0.2
TORD Torodi Ar. Bea 143.88 284 PKP PKPbc 17 00 31.1 0.0
comp=Z,2.4nm,0.5s,baz=64,slow=4.9,SNR=16
TORD pPKP pPKPdf 17 01 08.0 +0.9
comp=Z,5.4nm,0.8s,baz=72,slow=3.0,SNR=7.6
CELP Cerrillos 146.48 67 PKPbc **PKPbc 17 00 38.8 -0.1**
HUMP Col San Antoni 147.12 66 PKPbc **PKPbc 17 00 40.4 -0.4**
DBIC Dimbokro 150.70 272 PKPbc **PKPbc 17 00 50.1 +0.2**
comp=Z,5.3nm,0.7s,baz=90,slow=5.3,SNR=6.1
DBIC pPKPbc **pPKPbc 17 01 25.6 +1.5**
comp=Z,9.0nm,0.8s,baz=92,slow=4.2,SNR=3.6
BDFB Brasilia 154.30 148 PKPbc **PKPbc 17 00 57.8 -0.3**
comp=Z,1.0nm,0.3s,baz=229,slow=3.4,SNR=3.9
BDFB pPKPbc **pPKPbc 17 01 32.5 +0.3**
comp=Z,3.4nm,0.5s,baz=115,slow=4.1,SNR=2.6

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*IDC **21** 17:52:53.6±1.0, 6°.63N×72°.75W, h159km±25km, mbtmp3.6/2, Error ellipse: s-maj=747.1km s-min=7.7km az=132.0*
*RSNC **21** 17:52:54.6±1.3, 6°.82N×73°.15W, h147km±6km, ML3.0*
ISC 21 17:52:52.8±1.0, **6°.85N**±0°.04×**73°.10W**±0°.04, **h157**km±6km, **n24**, σ1**9**49/45, **5C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**198**	⇑ *iP*	**Pn**	**17 53 14.6**	**+0.2**
BARC				*eS*	**Sn**	**17 53 30.1**	**-0.8**
BARC				*i*		17 53 31.1	
comp=Z,102nm,0.6s							
PAMC	**Pamplona, Colo**	**0.62**	**39**	⇑ *iP*	**Pn**	**17 53 17.5**	**+1.3**
PAMC				*eS*	**Sn**	**17 53 34.1**	**+0.1**
PAMC				*i*		17 53 36.5	
comp=Z,277nm,0.5s							
BRRC	**Barranca, Sant**	**0.66**	**292**	⇑ *iP*	**Pn**	**17 53 16.5**	**+0.7**
BRRC				*eS*	**Sn**	**17 53 33.3**	**0.0**
BRRC				*i*		17 53 37.2	
comp=Z,168nm,0.2s							
RUSC	**La Rusia**	**0.95**	**179**	⇑ *iP*	**Pn**	**17 53 18.6**	**+0.1**
RUSC				*eS*	**Sn**	**17 53 36.9**	**-1.2**
RUSC				*i*		17 53 38.1	
comp=Z,154nm,0.3s							
TAMC	**Tame, Arauca**	**1.36**	**108**	⇑ *iP*	**Pn**	**17 53 22.9**	**+1.4**
TAMC				*eS*	**Sn**	**17 53 44.3**	**+0.7**
TAMC				*i*		17 53 44.9	
comp=Z,39nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	*eP*	**Pn**	**17 53 21.2**	**-0.6**
PTBC				*eS*	**Sn**	**17 53 42.5**	**-1.4**
PTBC				*i*		17 53 46.2	
comp=Z,83nm,0.2s							
OCAC	**Ocana**	**1.40**	**351**	*eP*	**Pn**	**17 53 22.0**	**-0.1**
OCAC				*eS*	**Sn**	**17 53 44.4**	**-0.1**
OCAC				*i*		17 53 46.6	
comp=Z,227nm,0.6s							
SPBC	**San Pablo de B**	**1.54**	**219**	*eP*	**Pn**	**17 53 23.3**	**-0.1**
SPBC				*eS*	**Sn**	**17 53 44.9**	**-2.0**
SPBC				*i*		17 53 48.9	
comp=Z,203nm,0.3s							
NORC	**Norcasia**	**2.18**	**234**	*eP*	**Pn**	**17 53 30.7**	**+0.2**
NORC				*eS*	**Sn**	**17 53 58.3**	**-1.3**
NORC				*i*		17 54 04.1	
comp=Z,62nm,0.2s							
CHIC	**Chingaza**	**2.30**	**196**	*eP*	**Pn**	**17 53 32.8**	**+0.5**
CHIC				*eS*	**Sn**	**17 54 01.6**	**-1.1**
CHIC				*i*		17 54 08.7	
comp=Z,38nm,0.3s							
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**17 53 34.7**	**+1.9**
comp=Z,17nm,0.2s,baz=161,slow=5.4,SNR=4.5							
ROSC				S	**Sn**	**17 54 05.3**	**+1.8**
comp=Z,133nm,0.4s,baz=354,slow=23,SNR=15							
ROSC	**El Rosal**	**2.34**	**211**	*eP*	**Pn**	**17 53 35.3**	**+2.5**
ROSC				*eS*	**Sn**	**17 54 03.9**	**+0.3**
ROSC				*i*		17 54 10.8	
comp=Z,128nm,0.5s							
HELC	**Santa Helena**	**2.50**	**255**	*eP*	**Pn**	**17 53 37.0**	**+2.3**
HELC				*eS*	**Sn**	**17 54 06.4**	**-0.6**
HELC				*i*		17 54 13.3	
comp=Z,54nm,0.4s							
GUY2C	**Guyana, Caldas**	**2.78**	**234**	*eP*	**Pn**	**17 53 39.4**	**+1.3**
GUY2C				*eS*	**Sn**	**17 54 15.7**	**+2.5**
GUY2C				*i*		17 54 19.7	
comp=Z,54nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.81**	**160**	*eP*	**Pn**	**17 53 37.9**	**-0.2**
PTGC				*eS*	**Sn**	**17 54 10.9**	**-2.2**
PTGC				*i*		17 54 13.3	
comp=Z,75nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.06**	**251**	*eP*	**Pn**	**17 53 43.4**	**+2.0**
CBOC				*eS*	**Sn**	**17 54 15.9**	**-3.1**
CBOC				*i*		17 54 22.1	
comp=Z,23nm,0.5s							
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**17 53 44.1**	**+1.3**
comp=Z,14nm,0.3s,baz=202,slow=5.4,SNR=5.2							
SDV				S	**Sn**	**17 54 20.4**	**-1.1**
comp=Z,22nm,0.4s,baz=90,slow=23,SNR=11							
PRAC	**Prado**	**3.59**	**210**	*eP*	**Pn**	**17 53 46.0**	**-2.1**
PRAC				*eS*	**Sn**	**17 54 27.8**	**-3.2**
PRAC				*i*		17 54 35.5	
comp=Z,39nm,0.3s							
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*	**Pn**	**17 53 49.5**	**+0.5**
SJCC				*eS*	**Sn**	**17 54 30.4**	**-2.1**
SJCC				*i*		17 54 34.3	
comp=Z,25nm,0.5s							
PLMC	**San Jos del P**	**3.71**	**239**	*eP*	**Pn**	**17 53 51.5**	**+1.8**
PLMC				*eS*	**Sn**	**17 54 33.2**	**-0.6**
PLMC				*i*		17 54 35.4	
comp=Z,16nm,0.3s							
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*eP*	**Pn**	**17 53 54.9**	**-0.4**
YOTC	**Yotoco, Valle**	**4.31**	**229**	*eP*	**Pn**	**17 53 59.2**	**+1.8**
YOTC				*eS*	**Sn**	**17 54 48.0**	**+0.2**
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**18 12 24.1**	**+0.4**
comp=Z,0.2nm,0.6s,baz=117,slow=3.3,SNR=7.3							
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKiKP**	**18 12 27.1**	**-0.3**
comp=Z,0.2nm,0.4s,baz=107,slow=2.9,SNR=9.8							

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*JMA **21** 17:57:54.4±0.2, 30°.1N±0°.7×131°.4E±0°.8, h23km±1km, MV3.6/26, E OFF TANEGASHIMA ISLAND*
*NIED **21** 17:57:54.4, 30°.08N×131°.35E, h23km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.97; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.63; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.74; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.25000×10^{15} NP1: ϕ_s217.00000°, δ31.00000°, λ86.00000°. NP2:ϕ_s41.00000°, δ59.00000°, λ92.00000°.*
*IDC **21** 17:57:58.1±2.5, 30°.18N×131°.10E, h42km±24km, mb3.6/9, mbtmp3.7/13, ML3.0/4, MS3.4/2 Error ellipse: s-maj=33.0km s-min=19.5km az=98.0*
ISC 21 17:57:55.8±1.8, **30°.11N**±0°.07×**131°.24E**±0°.08, **h29**km±10km, **n24**, σ0**°96**/29, **mb3.8**/9, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.41**	**314**	*iP*	**Pb**	**17 58 04.3**	**-0.5**
JMTN				S	**Sb**	**17 58 11.2**	**+0.3**
JTN	**Tanegashima 3**	**0.58**	**337**	*iP*	**Pb**	**17 58 07.2**	**-0.3**
JTN				S	**Sb**	**17 58 15.7**	**0.0**
JYAK	**Yakushimahirau**	**0.65**	**281**	*iP*	**Pn**	**17 58 08.4**	**-0.5**
JYAK				*eS*	**Sn**	**17 58 19.8**	**+1.6**
JKC	**Kuchinoerabu**	**0.97**	**291**	*iP*	**Pb**	**17 58 13.8**	**-0.1**
JKC				*eS*	**Sb**	**17 58 28.1**	**+1.7**
JTSR	**Tashiro 2**	**1.08**	**345**	*iP*	**Pn**	**17 58 14.9**	**-0.2**
JTSR				S	**Sb**	**17 58 30.0**	**+0.2**
JNN	**Nakanoshima**	**1.22**	**257**	*iP*	**Pn**	**17 58 17.6**	**+0.8**
JNAR	**Kushima--Naru**	**1.41**	**1**	P	**Pn**	**17 58 19.8**	**+0.3**
JSU	**Suzuyama**	**1.54**	**334**	P	**Pn**	**17 58 21.4**	**0.0**
JSU				*eS*	**Sb**	**17 58 41.5**	**-1.4**
JNKG	**Nichinankitago**	**1.55**	**4**	P	**Pn**	**17 58 21.7**	**+0.3**
JOW	**Kunigami**	**4.18**	**219**	P	**Pn**	**17 58 58.8**	**+1.2**
1.9nm,0.3s,baz=123,slow=21,SNR=12							
JOW				S	**Sn**	**17 59 43.8**	**-1.8**
17nm,0.3s,baz=29,slow=29,SNR=12							
7.0nm,0.3s							
KSRS	**Korea Array**	**7.82**	**340**	P	**Pn**	**17 59 48.9**	**+1.3**
0.1nm,0.3s,baz=158,slow=14,SNR=2.2							
KSRS				S	Sn	18 01 03.1	-12
0.8nm,0.5s,baz=142,slow=41,SNR=1.9							
1.1nm,0.7s							
MJAR	**Matsushiro Arr**	**8.66**	**40**	P	**Pn**	**18 00 00.9**	**+1.8**
baz=26,slow=8.8,SNR=1.5							
0.7nm,0.5s							
USRK	**Ussuriysk Ar.**	**14.07**	**2**	LR	LR	18 06 28.7	
comp=Z,59nm,18.6s,baz=189,slow=36							
KLR	**Kul'dur**	**19.10**	**1**	P	**Pn**	**18 02 16.4**	**-0.6**
0.3nm,0.3s,baz=195,slow=4.7,SNR=5.5							
1.2nm,0.5s							
SONM	**Songino Array**	**26.02**	**320**	P	**P**	**18 03 25.4**	**-1.0**
1.2nm,0.8s,baz=140,slow=7.8,SNR=7.7							
1.2nm,0.8s							
CMAR	**Chiang Mai Arr**	**31.54**	**256**	P	**P**	**18 04 14.8**	**-0.8**
0.3nm,0.4s,baz=62,slow=8.7,SNR=2.7							
0.3nm,0.4s							
MKAR	**Makanchi Array**	**41.09**	**308**	P	**P**	**18 05 36.7**	**-0.2**
0.5nm,0.6s,baz=104,slow=11,SNR=6.4							
0.5nm,0.6s							
ASAR	**Alice Springs**	**53.53**	**177**	P	**P**	**18 07 15.1**	**+1.2**
0.2nm,0.6s,baz=1.7,slow=7.8,SNR=4.5							
0.2nm,0.6s							

AKTO Aktyubinsk 57.06 313 LR LR 18 33 16.7
comp=Z,88nm,21.3s,baz=27,slow=37
ARCES ARCESS Array B 67.38 338 P **P** **18 08 47.8 -0.1**
2.7nm,1.0s,baz=59,slow=8.7,SNR=2.4
2.7nm,1.0s
KBZ Khabaz 68.78 309 P **P** **18 08 57.2 +0.1**
2.7nm,1.0s,baz=45,slow=3.9,SNR=4.4
2.7nm,1.0s
FINES FINESS Array B 70.80 331 P **P** **18 09 09.0 -0.2**
1.4nm,0.6s,baz=69,slow=7.6,SNR=11
1.4nm,0.6s
BRTR Keskin Array B 76.74 308 P **P** **18 09 45.5 +0.8**
0.7nm,0.7s,baz=120,slow=4.9,SNR=4.4
0.7nm,0.7s
NOA NORSAR Array B 76.99 334 P **P** **18 09 44.9 -0.7**
0.7nm,0.6s,baz=50,slow=5.5,SNR=3.6
0.7nm,0.6s

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*ISK **21** 18:02:26.8, 40.°91N×43.°95E, h5km, ML2.8/10*
*TIF **21** 18:02:26.8, 40.°93N×43.°97E, h11km±1km*
*NSSP **21** 18:02:26.1, 40.°90N×43.°92E, h11km, Ms2.7*
*DDA **21** 18:02:27.2±0.0, 40.°86N×43.°94E, h7km±3km, ML2.3*
ISC 21 18:02:27.0±1.0, 40.°93N±0.°01×43.°96E±0.°02, h8km±9km, n49, σ1§51/87, 11C-9D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIZ	**Spitak**	**0.26**	**113**	⇑*iP*	**Pb**	**18 02 32.9**	**-1.1**
SPIZ				⇑*iS*	**Sb**	**18 02 38.1**	**-0.7**
STE	**Stepanavan**	**0.32**	**77**	⇑*iP*	**Pb**	**18 02 34.6**	**-0.5**
STE				⇑*iS*	**Sb**	**18 02 40.9**	**+0.4**
STEZ	**Stepenevan**	**0.34**	**78**	⇓*iP*	**Pg**	**18 02 33.5**	**-0.3**
STEZ				⇑*iS*	**Sg**	**18 02 39.4**	**+1.0**
EAK	**Akyaka**	**0.36**	**228**	P	**Pg**	**18 02 33.0**	**-1.0**
EAK				S	**Sg**	**18 02 38.1**	**-0.6**
EAK				*i* AML	AML	18 02 48.0	
	comp=E,943nm,0.6s						
EAK				*i* AML	AML	18 02 49.0	
	comp=N,1μm,0.5s						
DMNI	**Dmanisi**	**0.44**	**24**	P	**Pg**	**18 02 35.9**	**+0.3**
DMNI				S	**Sg**	**18 02 42.7**	**+1.3**
CKLZ	**Chkalov**	**0.53**	**89**	⇑*iP*	**Pg**	**18 02 37.0**	**-0.3**
CKLZ				⇓*iS*	**Sg**	**18 02 45.1**	**+0.9**
KZRT	**Kazreti**	**0.57**	**36**	P	**Pg**	**18 02 38.2**	**+0.2**
KZRT				S	**Sg**	**18 02 45.9**	**+0.4**
AKH	**Akhalkalaki**	**0.59**	**324**	PG	**Pg**	**18 02 38.9**	**+0.4**
AKH				SG	**Sb**	**18 02 47.5**	**-1.0**
AKH	**Akhalkalaki**	**0.59**	**324**	P	**Pg**	**18 02 38.9**	**+0.4**
AKH				S	**Sb**	**18 02 47.7**	**-0.8**
AZMN	**Azmana**	**0.64**	**308**	P	Pn	18 02 57.2	+15
AZMN				S	Sn	18 03 06.4	+13
ARUZ	**Aruch**	**0.65**	**171**	⇓*iP*	**Pn**	**18 02 41.2**	**-1.4**
ARUZ				⇑*iS*	**Sb**	**18 02 50.5**	**+0.5**
DIGO	**Kars**	**0.68**	**221**	P	**Pg**	**18 02 39.3**	**-0.7**
DIGO				S	**Sg**	**18 02 48.3**	**-0.6**
BRNG	**Burnasheti**	**0.70**	**352**	P	**Pg**	**18 02 41.0**	**+0.5**
BRNG				S	**Sb**	**18 02 51.9**	**+0.3**
KARS	**Kars**	**0.73**	**246**	PG	**Pg**	**18 02 41.1**	**0.0**
KARS				SG	**Sb**	**18 02 51.6**	**-0.7**
METS	**Metsamor**	**0.78**	**173**	⇑*iP*	**Pb**	**18 02 42.3**	**-0.6**
METS				⇓*iS*	**Sb**	**18 02 53.5**	**-0.2**
METS	**Metsamor**	**0.78**	**173**	P	**Pb**	**18 02 42.4**	**-0.5**
METS				S	**Sb**	**18 02 53.6**	**-0.1**
KAPZ	**Kaputan**	**0.83**	**137**	⇑*iP*	**Pb**	**18 02 43.5**	**-0.3**
KAPZ				⇓*iS*	**Sb**	**18 02 54.8**	**-0.3**
VNNZ	**Vanand**	**0.83**	**187**	⇓*iP*	**Pb**	**18 02 43.2**	**-0.5**
VNNZ				⇓*iS*	**Sn**	**18 02 55.4**	**-2.2**
BKRG	**Bakuriani**	**0.89**	**339**	P	**Pb**	**18 02 44.5**	**-0.4**
BKRG				S	**Sn**	**18 02 58.0**	**-1.3**
TASB	**TASBURUN-IGDIR**	**0.97**	**167**	PG	**Pb**	**18 02 45.5**	**-0.6**
TASB				SG	**Sb**	**18 02 58.5**	**-0.6**
GNI	**Garni**	**0.98**	**142**	⇑*iP*	**Pb**	**18 02 46.1**	**-0.3**
GNI				⇑*iS*	**Sn**	**18 03 00.3**	**-1.1**
GNI	**Garni**	**0.98**	**142**	PG	**Pn**	**18 02 46.3**	**-1.0**
BTNK	**Botanikuri**	**0.99**	**40**	P	Pg	18 02 38.9	-7.0
BTNK				S	**Sg**	**18 02 52.8**	**-6.0**
SEAG	**Tbilisi Sea**	**1.05**	**37**	P	**Pg**	**18 02 46.9**	**-0.3**
IGDI	**IGDIR**	**1.06**	**175**	P	**Pg**	**18 02 46.5**	**-0.9**
IGDI				S	**Sb**	**18 03 01.0**	**-0.8**
IGDI				*i* AML	AML	18 03 01.0	
	comp=N,183nm,0.4s						
IGDI				*i* AML	AML	18 03 03.0	
	comp=E,178nm,0.4s						
NRKZ	**NAREK**	**1.07**	**150**	⇓*iP*	**Pg**	**18 02 46.2**	**-1.4**
NRKZ				⇓*iS*	**Sb**	**18 03 01.2**	**-0.9**
ABS	**Abastumani**	**1.19**	**314**	P	**Pg**	**18 02 49.9**	**0.0**
ABS				S	**Sn**	**18 03 07.2**	**+0.5**
ALIG	**Mtskhetisjvari**	**1.20**	**349**	P	**Pn**	**18 02 49.6**	**-0.6**
ALIG				S	**Sn**	**18 03 06.7**	**0.0**
KOTA	**Agri, Merkez-K**	**1.26**	**207**	P	**Pg**	**18 02 52.1**	**+0.8**
KOTA				S	**Sn**	**18 03 14.8**	**+6.4**
KOTA				*i* AML	AML	18 03 16.0	
	comp=N,44nm,0.7s						
KOTA				*i* AML	AML	18 03 19.0	
	comp=E,36nm,0.8s						
SENK	**Senkaya-Erzuru**	**1.27**	**254**	PN	**Pg**	**18 02 51.3**	**-0.1**
DYDN	**Diyadin**	**1.40**	**188**	P	**Pg**	**18 02 55.4**	**+1.6**
DYDN				S	**Sg**	**18 03 16.1**	**+4.1**
DYDN				*i* AML	AML	18 03 18.0	
	comp=E,58nm,0.8s						
DYDN				*i* AML	AML	18 03 20.0	
	comp=N,76nm,0.8s						
AGRB	**Hanur-Agry**	**1.54**	**209**	PN	**Pb**	**18 02 55.6**	**-0.3**
EATA	**Eleskirt**	**1.54**	**227**	P	**Pg**	**18 02 56.6**	**0.0**
EATA				S	**Sg**	**18 03 19.6**	**+3.0**
EATA				*i* AML	AML	18 03 24.0	
	comp=E,26nm,1.2s						
EATA				*i* AML	AML	18 03 26.0	
	comp=N,32nm,0.4s						
DAGI	**Agillar**	**1.55**	**276**	P	**Pg**	**18 02 56.4**	**-0.4**
DAGI				S	**Sg**	**18 03 17.7**	**+0.8**
DAGI				*i* AML	AML	18 03 20.0	
	comp=N,43nm,0.6s						
DAGI				*i* AML	AML	18 03 25.0	
	comp=E,45nm,0.6s						
GUDG	**Gudauri**	**1.58**	**14**	P	**Pb**	**18 02 56.5**	**-0.2**
GUDG				S	**Sg**	**18 03 19.4**	**+1.4**
TKB	**Tkibuli**	**1.59**	**333**	P	**Pb**	**18 02 56.9**	**+0.1**
TKB				S	**Sg**	**18 03 19.0**	**+0.8**
DDEM	**Demirkent**	**1.67**	**269**	P	**Pb**	**18 02 58.1**	**+0.1**
DDEM				S	**Sg**	**18 03 21.7**	**+1.0**
DDEM				*i* AML	AML	18 03 24.0	
	comp=E,59nm,0.5s						
DDEM				*i* AML	AML	18 03 26.0	
	comp=N,106nm,0.5s						
ONI	**Oni**	**1.70**	**347**	PN	**Pb**	**18 02 58.3**	**-0.3**
ONI	**Oni**	**1.70**	**347**	P	**Pb**	**18 02 58.5**	**-0.1**
ONI				S	**Sg**	**18 03 22.4**	**+0.7**
DDFL	**Dedoflistskaro**	**1.71**	**72**	P	**Pg**	**18 03 01.3**	**+1.5**
DDFL				S	**Sg**	**18 03 28.2**	**+6.2**
DBAD	**Bademkaya**	**1.71**	**274**	P	**Pg**	**18 02 59.4**	**-0.5**
DBAD				S	**Sg**	**18 03 22.4**	**+0.3**
DBAD				*i* AML	AML	18 03 24.0	
	comp=N,36nm,0.4s						
DBAD				*i* AML	AML	18 03 26.0	
	comp=E,31nm,0.6s						
PNSH	**Pansheti**	**1.78**	**16**	P	**Pb**	**18 02 59.8**	**-0.1**
PNSH				S	**Sg**	**18 03 25.1**	**+1.0**
DBOC	**Borcka**	**1.78**	**284**	P	**Pg**	**18 03 00.3**	**-0.8**
DBOC				S	**Sg**	**18 03 23.5**	**-0.6**
DBOC				*i* AML	AML	18 03 26.0	
	comp=E,23nm,0.4s						
CLDR	**Caldiran**	**1.78**	**181**	PN	**Pb**	**18 02 59.0**	**-1.1**
BATM	**Batumi**	**1.83**	**292**	P	**Pb**	**18 03 00.5**	**-0.3**
BATM				S	**Sg**	**18 03 25.3**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**1.86**	**240**	PN	**Pb**	**18 03 00.1**	**-1.2**
LGD	**Lagodekhi**	**1.94**	**61**	P	**Pb**	**18 03 02.5**	**-0.2**
LGD				S	**Sg**	**18 03 29.5**	**0.0**
SHTL	**Shatili**	**1.95**	**27**	P	**Pb**	**18 03 02.9**	**0.0**
SHTL				S	**Sg**	**18 03 29.2**	**-0.3**
CHOM	**Cayeli-Rize**	**2.42**	**275**	PN	**Pn**	**18 03 08.3**	**+1.4**

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*JMA **21** 18:08:33.9±0.1, 28.°8N±0.°9×13.°9E±.°, h529km, MD5.2/23, MW4.9/23, W OFF OGASAWARA*
*NIED **21** 18:08:33.9, 28.°78N×139.°11E, h529km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61; $M_{\theta\theta}$1.13; $M_{\phi\phi}$-0.52; $M_{r\theta}$1.13; $M_{\theta\phi}$-0.00; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.66000×10^{16} NP1:ϕ_s55.00000°,*
δ28.00000°, λ-152.00000°. NP2:ϕ_s300.00000°, δ77.00000°, λ-65.00000°.
*BJI **21** 18:08:34.8±0.0, 28.°84N×138.°74E, h484km, mb5.2/72, mB4.9/34*
*MOS **21** 18:08:36.0±0.8, 28.°84N×138.°64E, h500km, mb4.7/17, Error ellipse: s-maj=8.0km s-min=4.5km az=108.4*
*NEIC **21** 18:08:37.0±1.5, 28.°83N±0.°08×138.°76E±0.°10, h495km±6km, mb4.7/326, Error ellipse: s-maj=12.4km s-min=10.9km az=91.0*
*IDC **21** 18:08:37.5±0.6, 28.°86N×138.°68E, h502km±6km, mb4.2/45, mbtmp5.1/51, Error ellipse: s-maj=7.1km s-min=4.7km az=89.0*
ISC 21 18:08:36.8±0.3, 28.°85N±0.°03×138.°72E±0.°04, h499km±3km, h499km:pP-P, n824, σ1§22/838, mb4.7/270, 26C-19D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.53**	**119**	P	**P**	**18 09 49.1**	**-2.4**
CBIJ				S	**S**	**18 10 47.8**	**-4.4**
CBIJ	**Chichi jima**	**3.53**	**119**	A	A	18 09 49.1	
	comp=E,8.0nm,0.5s,comp=E,5.0nm,2.1s						
JCJ	**Chichijima**	**3.53**	**119**	P	**P**	**18 09 48.9**	**-2.6**
	1μm,0.4s,baz=288,slow=23,SNR=89						
JCJ				S	**S**	**18 10 46.7**	**-5.5**
	2μm,0.4s,baz=257,slow=22,SNR=24						
JCJ	**Chichijima**	**3.53**	**119**	P	**P**	**18 09 48.9**	**-2.6**
JCJ				S	**S**	**18 10 46.1**	**-6.2**
JHH2	**Haha-jima-NKT2**	**3.78**	**125**	P	**P**	**18 09 50.9**	**-2.6**
JHH2				*eS*	**S**	**18 10 51.3**	**-4.4**
JHH2	**Haha-jima-NKT2**	**3.78**	**125**	A	A	18 09 50.9	
	comp=E,13nm,0.4s,comp=E,15nm,0.3s						
JHCJ	**Hachijojimakas**	**4.31**	**12**	*eP*	**P**	**18 09 57.5**	**-0.1**
JHCJ				*eS*	**S**	**18 11 02.6**	**-0.9**
JHJ2	**Mitsune**	**4.35**	**12**	P	**P**	**18 09 58.2**	**+0.3**
JHJ2	**Mitsune**	**4.35**	**12**	P	**P**	**18 09 58.1**	**+0.3**
JHJ	**Hachijo jima 2**	**4.35**	**12**	P	**P**	**18 09 57.8**	**-0.1**
	274nm,0.4s,baz=42,slow=22,SNR=30						
JHJ				S	**S**	**18 11 00.6**	**-3.6**
	305nm,0.4s,baz=270,slow=22,SNR=7.8						
JTNC	**Tanabenakahech**	**5.62**	**333**	P	**P**	**18 10 11.1**	**+1.8**
JTNC				*eS*	**S**	**18 11 26.8**	**+1.7**
JIE	**Ise**	**5.78**	**343**	P	**P**	**18 10 13.2**	**+2.3**
JIE				*eS*	**S**	**18 11 30.0**	**+2.2**
JIM2	**Oshima 3**	**5.88**	**6**	A	A	18 10 11.6	
	comp=E,4.0nm,2.9s,comp=E,6.0nm,1.2s						
JHTM	**Izuhatsuma**	**6.09**	**2**	A	A	18 10 13.8	
	comp=E,5.0nm,5.8s,comp=E,8.0nm,1.6s						
BSO1	**Boso 1**	**6.10**	**18**	*i P*	**P**	**18 10 12.8**	**-0.4**
BSO1				*i S*	**S**	**18 11 30.0**	**-2.3**
TATJ	**Tateyama 2**	**6.24**	**9**	A	A	18 10 14.9	
	comp=E,8.0nm,1.0s,comp=E,5.0nm,3.3s						
JMN	**Monobe**	**6.39**	**321**	P	**P**	**18 10 16.2**	**-0.6**
JOD2	**Odawara 2**	**6.40**	**3**	P	**P**	**18 10 15.8**	**-1.1**
JOD2				S	**S**	**18 11 37.0**	**-1.9**
JTO	**Tosashimizu**	**6.47**	**310**	P	**P**	**18 10 19.8**	**+2.2**
INU	**Inuyama**	**6.64**	**348**	P	**P**	**18 10 19.6**	**+0.4**
INU	**Inuyama**	**6.64**	**348**	P	**P**	**18 10 20.3**	**+1.1**
JGF	**Kuroka**	**6.83**	**351**	P	**P**	**18 10 21.0**	**-0.2**
TOK	**Tokyo**	**6.87**	**7**	A	A	18 10 21.1	
	comp=E,11nm,0.6s,comp=E,16nm,0.8s						
JRY	**Ryogami san**	**7.15**	**1**	P	**P**	**18 10 23.7**	**-0.6**
JRY				*eS*	**S**	**18 11 46.5**	**-6.0**
JMZ	**Minamidaito 2**	**7.32**	**247**	*eP*	**P**	**18 10 27.4**	**+1.2**
JYT	**Yasato**	**7.46**	**9**	P	**P**	**18 10 24.8**	**-2.7**
JYT	**Yasato**	**7.46**	**9**	P	**P**	**18 10 25.3**	**-2.2**
JSU	**Suzuyama**	**7.63**	**292**	P	**P**	**18 10 30.8**	**+1.5**
JSU	**Suzuyama**	**7.63**	**292**	P	**P**	**18 10 31.6**	**+2.3**
MJAR	**Matsushiro Arr**	**7.68**	**357**	P	**P**	**18 10 28.6**	**-1.1**
	59nm,0.6s,baz=171,slow=11,SNR=105						
MJAR				S	**S**	**18 11 58.7**	**-3.7**
	12nm,0.6s,baz=104,slow=9.2,SNR=6.2						
MAJO	**Matsushiro**	**7.68**	**357**	P	**P**	**18 10 29.0**	**-0.8**
MAJO	**Matsushiro**	**7.68**	**357**	P	**P**	**18 10 29.0**	**-0.8**
MAJO	**Matsushiro**	**7.68**	**357**	P	**P**	**18 10 29.1**	**-0.7**
MJB9	**Matsu-Tunnel**	**7.69**	**357**	P	**P**	**18 10 29.9**	**+0.1**
JHS	**Saijyo**	**7.76**	**324**	P	**P**	**18 10 31.9**	**+1.2**
JHS	**Saijyo**	**7.76**	**324**	P	**P**	**18 10 32.6**	**+2.0**
JSJ	**Shimokoshiki**	**8.28**	**292**	P	**P**	**18 10 37.6**	**+1.5**
JAMN	**Amaminishikomi**	**8.41**	**268**	P	**P**	**18 10 39.7**	**+2.2**
JMM	**Marumori**	**9.16**	**10**	P	**P**	**18 10 45.0**	**0.0**
JMM	**Marumori**	**9.16**	**10**	P	**P**	**18 10 45.1**	**0.0**
JSD	**Sado**	**9.17**	**358**	P	**P**	**18 10 44.0**	**-1.3**
JSD	**Sado**	**9.17**	**358**	P	**P**	**18 10 44.1**	**-1.1**
JOW	**Kunigami**	**9.46**	**260**	P	**P**	**18 10 50.4**	**+1.9**
	113nm,0.5s,baz=106,slow=8.5,SNR=43						
JOW				S	**S**	**18 12 39.0**	**+2.2**
	3.7nm,0.3s,baz=172,slow=30,SNR=5.8						
JOW	**Kunigami**	**9.46**	**260**	P	**P**	**18 10 50.2**	**+1.7**
JOW	**Kunigami**	**9.46**	**260**	P	**P**	**18 10 50.6**	**+2.1**
JTU	**Tsushima**	**9.74**	**308**	P	**P**	**18 10 53.4**	**+2.1**
JTU	**Tsushima**	**9.74**	**308**	P	**P**	**18 10 53.6**	**+2.2**
JTM	**Tenmabayashi**	**12.06**	**9**	P	**P**	**18 11 16.4**	**+0.6**
JTM	**Tenmabayashi**	**12.06**	**9**	P	**P**	**18 11 16.4**	**+0.6**
TJN	**Taejon**	**12.16**	**311**	P	**P**	**18 11 16.8**	**-0.1**
TJN	**Taejon**	**12.16**	**311**	*ceP*	**P**	**18 11 17.4**	**+0.5**
KSRS	**Korea Array**	**12.46**	**316**	P	**P**	**18 11 20.4**	**+0.3**
	3.8nm,0.4s,baz=123,slow=11,SNR=31						
KSRS				S	**S**	**18 13 34.0**	**-0.7**
	14nm,1.2s,baz=125,slow=19,SNR=8.7						
KSRS				ScP	**ScP**	**18 19 02.9**	**+0.7**
	5.1nm,0.8s,baz=216,slow=0.8,SNR=16						
KSAR	**Wonju Array Be**	**12.47**	**316**	P	**P**	**18 11 20.8**	**+0.5**
KSAR	**Wonju Array Be**	**12.47**	**316**	P	**P**	**18 11 20.8**	**+0.5**
KS19	**Wonju Array Si**	**12.52**	**316**	P	**P**	**18 11 20.4**	**-0.4**
ERM	**Erimo**	**13.62**	**14**	P	**P**	**18 11 33.0**	**+0.7**
ERM	**Erimo**	**13.62**	**14**	*ceP*	**P**	**18 11 33.0**	**+0.7**
ERM				pmax	pmax		
	comp=Z,60nm,0.7s						
ERM	**Erimo**	**13.62**	**14**	P	**P**	**18 11 33.0**	**+0.7**
JEM	**Erimo**	**13.62**	**14**	P	**P**	**18 11 33.1**	**+0.8**
JEW	**Eniwo**	**14.13**	**8**	P	**P**	**18 11 37.8**	**+0.2**
JEW				S	**S**	**18 14 08.2**	**+1.3**
JEW	**Eniwo**	**14.13**	**8**	P	**P**	**18 11 37.9**	**+0.2**
YOJ	**Yonaguni jima**	**14.71**	**256**	P	**P**	**18 11 42.9**	**-1.1**
YOJ	**Yonaguni jima**	**14.71**	**256**	P	**P**	**18 11 42.9**	**-1.1**
YOJ	**Yonaguni jima**	**14.71**	**256**	P	**P**	**18 11 42.9**	**-1.1**
TATO	**Taipei**	**15.85**	**260**	P	**P**	**18 11 54.0**	**-1.9**
TATO	**Taipei**	**15.85**	**260**	P	**P**	**18 11 55.3**	**-0.6**
NACB	**Ninganchiao**	**16.02**	**257**	P	**P**	**18 11 55.6**	**-2.2**
NACB	**Ninganchiao**	**16.02**	**257**	P	**P**	**18 11 56.9**	**-0.8**
YHNB	**Yeheng**	**16.04**	**259**	P	**P**	**18 11 56.3**	**-1.7**
YHNB	**Yeheng**	**16.04**	**259**	P	**P**	**18 11 56.6**	**-1.4**
GUMO	**Guam**	**16.23**	**158**	P	**P**	**18 12 00.1**	**0.0**
	comp=Z,119nm,0.5s,baz=225,slow=3.6,SNR=11						
GUMO				S	**S**	**18 14 49.6**	**+2.2**
	comp=Z,16nm,0.5s,baz=47,slow=17,SNR=1.5						
GUMO	**Guam**	**16.23**	**158**	P	**P**	**18 11 60.0**	**0.0**
USA0B	**Ussuriysk Arra**	**16.23**	**342**	P	**P**	**18 11 59.8**	**+0.1**
USA0B	**Ussuriysk Arra**	**16.23**	**342**	P	**P**	**18 11 59.8**	**+0.1**
USA0B				pmax	pmax		
	comp=Z,99nm,0.8s						
USRK	**Ussuriysk Ar.**	**16.23**	**342**	P	**P**	**18 11 59.9**	**+0.1**
	comp=Z,88nm,0.6s,baz=148,slow=8.6,SNR=72						
USRK				S	**S**	**18 14 46.6**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=41,slow=25,SNR=3.0						
USRK	**Ussuriysk Ar.**	**16.23**	**342**	P	**P**	**18 11 59.7**	**0.0**
YULB	**Yu-li**	**16.56**	**255**	P	**P**	**18 12 02.4**	**-1.0**
YULB	**Yu-li**	**16.56**	**255**	P	**P**	**18 12 02.4**	**-1.0**
SSLB	**Suanglung**	**16.70**	**257**	P	**P**	**18 12 04.3**	**-0.6**
SSLB	**Suanglung**	**16.70**	**257**	P	**P**	**18 12 04.3**	**-0.6**
TWGBT	**Beinan**	**16.97**	**253**	P	**P**	**18 12 06.5**	**-1.2**
TWG	**Pinlang**	**16.98**	**253**	P	**P**	**18 12 05.8**	**-1.9**
TPUB	**Ta-pu**	**17.16**	**255**	P	**P**	**18 12 08.8**	**-0.8**
TPUB	**Ta-pu**	**17.16**	**255**	P	**P**	**18 12 08.7**	**-0.8**
MDJ	**Mudanjiang**	**17.33**	**338**	P	**P**	**18 12 09.6**	**-1.2**
MDJ				IAmb	IAmb	18 12 13.7	
	comp=Z,21nm,0.8s						
NJ2	**Nanjing**	**17.42**	**285**	⇓P	**P**	**18 12 10.8**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,68nm,0.8s						
YSS	**Yuzh-Sakhalins**	**18.35**	**9**	P	**P**	**18 12 20.5**	**+0.4**
YSS	**Yuzh-Sakhalins**	**18.35**	**9**	⇑*eP*	**P**	**18 12 20.7**	**+0.5**
YSS				pmax	pmax		
	comp=Z,200nm,0.8s						
YSS				pmax	pmax		
	comp=N,90μm,0.7s						
YSS				pmax	pmax		
	comp=Z,2μm,4.1s						
YSS				pmax	pmax		
	comp=E,900nm,4.4s						
YSS	**Yuzh-Sakhalins**	**18.35**	**9**	P	**P**	**18 12 20.6**	**+0.4**
QZH	**Quanzhou**	**18.37**	**262**	⇓*iP*	**P**	**18 12 19.8**	**-0.9**
QZH				pmax	pmax		
	comp=E,97nm,0.6s						
KNMB	**Chin-men Tao**	**18.68**	**261**	P	**P**	**18 12 23.2**	**-0.3**
TIA	**Tai'an**	**19.61**	**298**	⇓P	**P**	**18 12 32.1**	**+0.2**
TIA				pmax	pmax		
	comp=E,21nm,0.7s						
KLR	**Kul'dur**	**21.04**	**347**	P	**P**	**18 12 45.6**	**+0.9**
	comp=E,43nm,0.6s,baz=159,slow=7.7,SNR=127						
KLR				S	**S**	**18 16 06.5**	**+0.8**
	comp=E,2.1nm,0.8s,baz=265,slow=23,SNR=1.6						
KLR				ScP	**ScP**	**18 19 19.4**	**0.0**
	comp=E,4.8nm,0.6s,baz=202,slow=2.7,SNR=11						
	comp=E,43nm,0.6s						
WHN	**Wuhan**	**21.23**	**281**	⇓*iP*	**P**	**18 12 47.8**	**+1.1**
WHN				pmax	pmax		
	comp=E,270nm,0.6s						
BJT	**Baijiatuau**	**21.62**	**307**	P	**P**	**18 12 49.3**	**-0.8**
BJT				IAmb	IAmb	18 12 52.4	
	comp=Z,17nm,0.7s						
BJT	**Baijiatuau**	**21.62**	**307**	P	**P**	**18 12 49.3**	**-0.8**
BJT				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI	**Beijing**	**21.62**	**307**	P	**P**	**18 12 50.0**	**-0.1**
BJI				pmax	pmax		
	comp=Z,23nm,0.7s						
HNS	**HongShan**	**21.80**	**299**	⇓P	**P**	**18 12 51.8**	**+0.1**
HNS				sP	**sP**	**18 15 07.3**	**+2.6**
HNS				S	**S**	**18 16 17.8**	**-0.2**
HNS				ScP	**ScP**	**18 19 22.5**	**+1.0**
HNS				pmax	pmax		
	comp=Z,53nm,0.7s						
GRNR	**Gornyy**	**21.96**	**356**	⇑*iP*	**P**	**18 12 54.1**	**+1.1**
GRNR				*eS*	**S**	**18 16 26.7**	**+6.5**
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,4.0nm,0.9s						
LYN	**LuoYang**	**23.01**	**291**	⇓*iP*	**P**	**18 13 02.9**	**+0.2**
LYN				pmax	pmax		
	comp=N,40nm,0.9s						
LYN				pmax	pmax		
	comp=N,310nm,4.0s						
HKPS	**Hong Kong Po S**	**23.09**	**259**	P	**P**	**18 13 04.7**	**+1.1**
HHC	**Hu-ho-hao-te**	**25.19**	**306**	*eP*	**P**	**18 13 22.8**	**+0.7**
HHC				pmax	pmax		
	comp=N,23nm,0.8s						
HHC				pmax	pmax		
	comp=N,340nm,5.0s						
ENH	**Enshi**	**25.44**	**280**	P	**P**	**18 13 24.3**	**0.0**
ENH				S	**S**	**18 17 13.4**	**-2.2**
XAN	**Xi'an**	**25.89**	**289**	⇓*iP*	**P**	**18 13 28.8**	**+0.5**
XAN				pmax	pmax		
	comp=N,110nm,0.6s						
ZEA	**Zeya**	**26.25**	**345**	*eP*	**P**	**18 13 32.0**	**+0.9**
ZEA				pmax	pmax		
	comp=N,50nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.6s						
PEA0B	**Petropavlovsk-**	**27.98**	**25**	P	**P**	**18 13 47.7**	**+1.4**
PEA0B	**Petropavlovsk-**	**27.98**	**25**	P	**P**	**18 13 47.7**	**+1.4**
PEA0B				pmax	pmax		
	comp=Z,90nm,1.4s						
PETK	**Petropavlovsk-**	**27.98**	**25**	P	**P**	**18 13 47.6**	**+1.2**
	comp=Z,24nm,0.8s,baz=184,slow=4.5,SNR=22						
	comp=Z,24nm,0.8s						
PETK	**Petropavlovsk-**	**27.98**	**25**	P	**P**	**18 13 47.4**	**+1.1**
QIZ	**Qiongzhong**	**28.08**	**256**	P	**P**	**18 13 48.5**	**+0.8**
QIZ				IAmb	IAmb	18 13 50.3	
	comp=Z,31nm,1.0s						
PET	**Petropavlovsk**	**28.27**	**26**	P	**P**	**18 13 49.6**	**+0.8**
GYA	**Guiyang**	**28.45**	**273**	⇓*iP*	**P**	**18 13 51.6**	**+0.6**
GYA				S	**S**	**18 18 03.4**	**+0.4**
GYA				pmax	pmax		
	comp=Z,150nm,1.0s						
PATS	**Pohnpei**	**28.67**	**136**	P	**P**	**18 13 53.4**	**+0.6**
PATS				IAmb	IAmb	18 14 32.2	
	comp=Z,52nm,1.4s						
TNTI	**Ternate**	**29.95**	**203**	P	**P**	**18 14 03.6**	**-0.4**
TNTI				IAmb	IAmb	18 14 05.7	
	comp=Z,28nm,0.8s						
TNTI	**Ternate**	**29.95**	**203**	P	**P**	**18 14 03.8**	**-0.2**
	comp=Z,550nmcomp=Z,51nm,1.2s						
LZH	**Lanzhou**	**30.18**	**293**	⇓P	**P**	**18 14 06.5**	**+0.5**
LZH				PcP	**PcP**	**18 16 53.0**	**+1.2**
LZH				ScP	**ScP**	**18 19 47.8**	**+1.2**
LZH				pmax	pmax		
	comp=Z,200nm,1.2s		

comp=Z,449nmcomp=Z,11nm,0.7s
GTA Gaotai 33.65 299 ||P **P** **18 14 35.8 +0.2**
GTA pP pP 18 16 03.0 +2.2
GTA sP PcP 18 16 59.8 -1.6
GTA S **S** **18 19 20.5 -2.2**
GTA ScP **ScP** **18 19 58.8 +0.4**
GTA ScS **ScS** **18 24 00.3 -1.1**
GTA pmax pmax
comp=Z,41nm,1.2s
BOD Bodaibo 33.70 336 *e*P **P** **18 14 35.9 +0.4**
BOD pmax pmax
comp=Z,12nm,0.8s
YAK Yakutsk 33.72 352 P **P** **18 14 35.3 -0.3**
comp=Z,21nm,0.4s,baz=351,slow=0.8,SNR=37
YAK S **S** **18 19 20.1 -2.5**
comp=Z,1.7nm,0.3s,baz=126,slow=24,SNR=8.9
YAK ScS **ScS** **18 23 56.6 -3.9**
comp=Z,1.9nm,0.3s,baz=196,slow=20,SNR=7.2
comp=Z,21nm,0.4s
YAK Yakutsk 33.72 352 P **P** **18 14 35.5 0.0**
YAK Yakutsk 33.72 352 *e*P **P** **18 14 35.0 -0.5**
YAK *e* 18 16 10.8
YAK *e*S **S** **18 19 22.6 0.0**
YAK pmax pmax
comp=Z,71nm,0.8s
YAK pmax pmax
comp=N,22nm,1.0s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK pmax pmax
comp=Z,142nm,2.1s
YAK pmax pmax
comp=N,127nm,2.0s
YAK pmax pmax
comp=E,119nm,2.4s
YAK smax smax
comp=N,194nm,2.0s
YAK smax smax
comp=E,122nm,2.2s
APSI Ampana 33.81 212 P **P** **18 14 36.7 -0.3**
comp=E,3μmcomp=E,239nm,0.7s
AAI Ambon 33.90 199 P **P** **18 14 38.0 +0.3**
comp=E,976nmcomp=E,130nm,0.9s
SEY Seymchan 35.23 11 P **P** **18 14 49.2 +0.9**
comp=E,20nm,0.8s,baz=203,slow=8.7,SNR=27
SEY ScP **ScP** **18 20 02.6 -0.9**
comp=E,3.9nm,1.0s,baz=12,slow=22,SNR=2.6
comp=E,20nm,0.8s
SEY Seymchan 35.23 11*ce*P **P** **18 14 49.2 +0.9**
SEY pmax pmax
comp=Z,84nm,2.5s
SHEM Shemya Is, Ala 35.31 38 P **P** **18 14 50.6 +1.5**
comp=Z,132nm,1.0s,baz=41,slow=5.8,SNR=4.9
comp=Z,132nm,1.0s
SBUM Sibu 36.41 229 P **P** **18 14 59.6 +0.8**
SBUM IAmb IAmb 18 15 00.6
comp=Z,15nm,0.8s
SBUM Sibu 36.41 229 P **P** **18 14 59.0 +0.2**
comp=Z,24nm,1.0s
KKSI Kolaka, Sulawe 36.70 209 P **P** **18 15 01.2 0.0**
comp=Z,38nm,0.8s
SPSI Sidrap Palu 37.37 212 P **P** **18 15 05.6 -1.0**
comp=Z,37nm,0.8s
MTKI Muara Teweh, K 37.39 222 P **P** **18 15 06.7 -0.1**
GOMU GeErMu 37.48 293 P **P** **18 15 09.0 +1.2**
GOMU pmax pmax
comp=Z,73nm,0.8s
GOMU pmax pmax
comp=Z,87nm,3.9s
CHTO Chiang Mai 37.58 264 P **P** **18 15 08.6 +0.2**
CHTO PcP **PcP** **18 17 14.3 +1.0**
CHTO Chiang Mai 37.58 264 P **P** **18 15 08.6 +0.2**
CHTO 18 17 14.3
CHTO pmax pmax
comp=Z,2.0nm,0.8s
BNSI Bone 37.59 211 P **P** **18 15 08.6 +0.1**
comp=Z,362nmcomp=Z,27nm,1.1s
AMKA Amchitka 37.66 42 P **P** **18 15 09.5 +0.9**
CM31 Chiang Mai Arr 37.72 263 P **P** **18 15 10.1 +0.6**
CM31 IAmb IAmb 18 15 11.2
comp=Z,33nm,0.8s
CMAR Chiang Mai Arr 37.72 263 P **P** **18 15 10.2 +0.7**
comp=Z,17nm,0.7s,baz=82,slow=4.7,SNR=151
CMAR PcP **PcP** **18 17 14.9 +1.1**
comp=Z,2.9nm,0.7s,baz=50,slow=2.1,SNR=5.9
CMAR ScP **ScP** **18 20 14.8 +1.1**
comp=Z,3.7nm,1.0s,baz=42,slow=2.3,SNR=12
comp=Z,17nm,0.7s
KAPI Kappang 38.30 211 P **P** **18 15 14.2 0.0**
comp=Z,10nm,0.4s,baz=19,slow=3.2,SNR=12
KAPI PcP **PcP** **18 17 16.4 +0.9**
comp=Z,8.6nm,0.4s,baz=26,slow=7.0,SNR=6.0
comp=Z,10nm,0.4s
KAPI Kappang 38.30 211 P **P** **18 15 13.7 -0.5**
KAPI IAmb IAmb 18 15 16.2
comp=Z,29nm,1.0s
KAPI PcP **PcP** **18 17 15.6 0.0**
KAPI Kappang 38.30 211 P **P** **18 15 13.7 -0.5**
KAPI 18 17 15.6
KAPI pmax pmax
comp=Z,29nm,1.0s
BKSI Bulukumba 38.40 211 P **P** **18 15 14.5 -0.5**
comp=Z,29nm,1.0s
KSM Kuching 38.41 230 P **P** **18 15 15.5 +0.3**
KSM PcP **PcP** **18 17 16.6 +0.6**
STKI Sintang 38.69 227 P **P** **18 15 17.8 +0.3**
comp=Z,2μmcomp=Z,68nm,0.8s
PMG Port Moresby 38.90 167 P **P** **18 15 19.2 +0.1**
comp=Z,11nm,0.4s,baz=54,slow=5.4,SNR=8.5
comp=Z,11nm,0.4s
PMG Port Moresby 38.90 167 P **P** **18 15 19.1 0.0**
PMG IAmb IAmb 18 15 39.9
comp=Z,38nm,1.2s
PMG Port Moresby 38.90 167 P **P** **18 15 19.1 0.0**
PMG pmax pmax
comp=Z,38nm,1.3s
SRDT SRDT 39.34 257 P **P** **18 15 22.2 -0.5**
comp=Z,4μmcomp=Z,40nm,1.7s
BBKI Banjar Baru 39.47 219 P **P** **18 15 23.2 -0.6**
comp=Z,3μmcomp=Z,51nm,1.0s
KIWB Kanaga Island 39.91 42 P **P** **18 15 26.8 +0.1**
MMRI Maumere 40.52 206 P **P** **18 15 30.7 -1.5**
MMRI Maumere 40.52 206 P **P** **18 15 31.3 -0.8**
comp=Z,60nm,1.0s
GSTR Great Sitkin T 40.62 42 P **P** **18 15 33.0 +0.5**
SOEI Soe 40.84 202 P **P** **18 15 33.9 -1.0**
SOEI PcP **PP** **18 17 23.6 +0.2**
SOEI Soe 40.84 202 P **P** **18 15 33.8 -1.0**
comp=Z,79nm,1.0s
LSA Lhasa 41.27 283 P **P** **18 15 39.4 +0.8**
LSA IAmb IAmb 18 15 41.0
comp=Z,17nm,0.6s
LSA Lhasa 41.27 283 P **P** **18 15 39.4 +0.8**
LSA pmax pmax
comp=Z,17nm,0.6s
LSA Lhasa 41.27 283 P **P** **18 15 40.4 +1.8**
LSA Lhasa 41.27 283 P **P** **18 15 40.1 +1.5**
BATI Baumata 41.46 203 P **P** **18 15 39.1 -0.6**
comp=Z,30nm,0.3s,baz=55,slow=2.0,SNR=20
BATI PcP **PcP** **18 17 26.4 +0.6**
comp=Z,16nm,0.4s,baz=153,slow=2.3,SNR=2.7
BATI S **S** **18 21 15.7 -3.0**
comp=Z,22nm,0.8s,baz=74,slow=20,SNR=2.1
comp=Z,30nm,0.3s
BATI Baumata 41.46 203 P **P** **18 15 38.3 -1.4**
comp=Z,65nm,1.1s
SHL Shillong 41.58 277 P **P** **18 15 40.4 -0.3**
SHL **PcP** **18 17 25.4 -1.1**
SHL Shillong 41.58 277 P **P** **18 15 40.4 -0.3**
SHL 18 17 25.4
SHL pmax pmax
comp=Z,66nm,0.9s
SHL Shillong 41.58 277 P **P** **18 15 41.0 +0.3**
SNR=18
SKLT Songkhla 41.88 247 P **P** **18 15 43.1 +0.1**
comp=Z,78nm,0.7s
SRIT Nakonsritamara 41.90 249 P **P** **18 15 43.5 +0.3**
MTN Manton Dam 42.09 191 P **P** **18 15 43.7 -0.9**
MTN IAmb IAmb 18 15 44.9
comp=Z,30nm,0.8s
BILL Bilibino 42.49 15 P **P** **18 15 47.2 +0.1**
BILL Bilibino 42.49 15*d*/P **P** **18 15 47.7 +0.6**
BILL *e**PP **pP** **18 17 17.8 -0.5**
BILL *e* 18 17 42.4
BILL pmax pmax
comp=Z,149nm,1.7s

PLAI Plampang 42.56 211 P **P** **18 15 47.1 -1.3**
comp=Z,1μmcomp=Z,132nm,0.8s
BRDH Bariadhala 42.62 273 P **P** **18 15 49.7 +0.9**
comp=Z,349nm,0.6s,baz=77,slow=2.9,SNR=17
MYKOM Kota Tinggi 42.75 237 P **P** **18 15 50.5 +0.6**
MYKOM IAmb IAmb 18 15 51.7
comp=Z,22nm,0.7s
COEN Coen 42.77 174 P **P** **18 15 50.3 +0.3**
COEN IAmb IAmb 18 15 51.4
comp=Z,11nm,0.7s
TWSI Taliwang, Sumb 42.90 213 P **P** **18 15 50.1 -0.9**
comp=Z,707nmcomp=Z,78nm,0.9s
KULM Kulim 42.97 244 P **P** **18 15 52.2 +0.6**
WMQ Urumqi 43.06 304 *e*P **P** **18 15 53.4 +1.3**
WMQ pmax pmax
comp=Z,43nm,1.3s
SRBI Singaraja 43.16 215 P **P** **18 15 53.0 0.0**
comp=Z,138nm,0.9s
IPM Ipoh 43.17 243 P **P** **18 15 53.2 0.0**
IPM PcP **PcP** **18 17 32.1 +0.3**
IPM Ipoh 43.17 243 P **P** **18 15 53.3 +0.1**
comp=Z,1μmcomp=Z,116nm,0.7s
TIXI Tiksi 43.19 355 P **P** **18 15 52.4 -0.1**
comp=Z,37nm,0.7s,baz=90,slow=23,SNR=114
TIXI ScP **ScP** **18 20 32.1 -2.2**
comp=Z,1.4nm,0.5s,baz=270,slow=24,SNR=2.0
TIXI S **S** **18 21 40.6 -1.4**
comp=Z,2.5nm,0.8s,baz=90,slow=23,SNR=8.2
comp=Z,37nm,0.7s
TIXI Tiksi 43.19 355 P **P** **18 15 52.0 -0.5**
TIXI Tiksi 43.19 355*ce*P **P** **18 15 52.3 -0.1**
TIXI pmax pmax
comp=Z,34nm,0.6s
RTBI Rangdo, Negare 43.61 215 P **P** **18 15 56.3 -0.3**
comp=Z,2μmcomp=Z,265nm,0.7s
DSRI Dabo 43.78 234 P **P** **18 15 58.3 +0.4**
comp=Z,493nmcomp=Z,45nm,0.7s
DGZ Jazzator, Alta 43.84 313*d*/P **P** **18 15 58.9 +0.8**
DGZ pmax pmax
comp=Z,16nm,1.0s
PPBI Pangkal Pinang 43.89 231 P **P** **18 15 59.0 +0.2**
comp=Z,626nmcomp=Z,40nm,1.0s
JAGI Jajag, Banyuwa 44.03 216 P **P** **18 15 58.0 -1.8**
JAGI IAmb IAmb 18 16 00.1
comp=Z,30nm,0.7s
SMRI Semarang 44.91 222 P **P** **18 16 06.2 -0.4**
NIKH Nikolski High 45.10 43 P **P** **18 16 07.2 -0.4**
NIKH Nikolski High 45.10 43 P **P** **18 16 07.2 -0.4**
baz=259,SNR=6.4
ODAN Odare 45.14 280 *e*P **P** **18 16 09.7 +1.1**
comp=Z,17nm,0.5s
KNRA Kununurra 45.30 194 P **P** **18 16 09.3 -0.2**
CTJI Waduk Cacaban 45.62 223 P **P** **18 16 12.0 -0.1**
comp=Z,70nm,2.9s
RAMN Ramite 45.80 281 *e*P **P** **18 16 14.4 +0.7**
comp=Z,84nm,0.4s
BKNI Bangkinang 45.81 238 P **P** **18 16 14.2 +0.6**
PSI Prapat 45.85 243 P **P** **18 16 14.2 +0.1**
PSI 18 17 41.2
PSI pmax pmax
comp=Z,49nm,0.8s
PSI Prapat 45.85 243 P **P** **18 16 14.2 +0.1**
comp=Z,501nmcomp=Z,45nm,0.9s
RPSI Rantau Prapat 45.92 243 P **P** **18 16 14.2 -0.2**
RPSI PcP **PcP** **18 17 41.2 -0.1**
JIRN Jiri 45.97 282 *e*P **P** **18 16 16.5 +1.4**
LHMI Lhok Sumawe 45.97 247 P **P** **18 16 16.6 +1.7**
PBA Port Blair 46.08 258 P **P** **18 16 15.8 +0.2**
PBA Port Blair 46.08 258 P **P** **18 16 15.2 -0.5**
ZAA0 Zalesovo Array 46.15 319 P **P** **18 16 15.2 -0.5**
ZAA0 PcP **PcP** **18 17 40.9 -0.6**
ZALV Zalesovo Beam 46.15 319 P **P** **18 16 15.1 -0.5**
comp=Z,2.6nm,0.6s,baz=101,slow=7.7,SNR=9.7
ZALV PcP **PcP** **18 17 41.1 -0.3**
comp=Z,4.7nm,0.6s,baz=108,slow=3.6,SNR=7.9
ZALV ScP **ScP** **18 20 45.4 -1.5**
comp=Z,2.0nm,0.5s,baz=112,slow=4.6,SNR=5.3
ZALV S **S** **18 22 20.9 -3.5**
comp=Z,0.5nm,0.5s,baz=234,slow=45,SNR=2.8
comp=Z,2.6nm,0.6s
ZALV Zalesovo Beam 46.15 319 P **P** **18 16 14.9 -0.7**
ZALV PcP **PcP** **18 17 40.9 -0.6**
GUN Gumba 46.17 282 *e*P **P** **18 16 17.9 +1.2**
KCSI Kotacane, Aceh 46.32 245 P **P** **18 16 15.6 -1.9**
comp=Z,39nm,1.0s
LEM Lembang 46.43 225 P **P** **18 16 18.9 +0.5**
comp=Z,199nm,0.7s,baz=22,slow=5.9,SNR=62
LEM Lembang 46.43 225 P **P** **18 16 19.0 +0.5**
MNSI Mandailing Nat 46.61 240 P **P** **18 16 19.7 0.0**
comp=Z,1μmcomp=Z,96nm,0.7s
UNV Unalaska Valle 46.65 42 P **P** **18 16 19.1 -0.2**
UNV IAmb IAmb 18 16 24.8
comp=Z,17nm,0.6s
PKI Pulchoki 46.66 282 *e*P **P** **18 16 20.8 +0.4**
comp=Z,39nm,0.4s
PKIN Phulchoki 46.67 282 *e*P **P** **18 16 20.8 +0.4**
comp=Z,56nm,0.5s
KKN Kakani 46.72 282 *e*P **P** **18 16 21.5 +0.9**
DMN Daman 46.91 282 *e*P **P** **18 16 22.9 +0.7**
comp=Z,83nm,0.4s
GAMB Gambell 46.94 28 P **P** **18 16 22.4 +1.0**
GAMB IAmb IAmb 18 16 52.1
comp=Z,40nm,1.2s
MLSI Meulaboh, Aceh 46.97 247 P **P** **18 16 21.3 -1.1**
comp=Z,3μmcomp=Z,134nm,0.7s
MK31 Makanchi Array 46.99 308 P **P** **18 16 21.9 -0.3**
MK31 PcP **PcP** **18 17 43.7 -1.0**
MK31 Makanchi Array 46.99 308 P **P** **18 16 22.5 +0.3**
MKAR Makanchi Array 46.99 308 P **P** **18 16 22.6 +0.3**
comp=Z,4.6nm,0.3s,baz=89,slow=10,SNR=164
MKAR PcP **PcP** **18 17 44.7 0.0**
comp=Z,2.4nm,0.3s,baz=70,slow=4.5,SNR=13
MKAR ScP **ScP** **18 20 49.9 -0.8**
comp=Z,7.9nm,0.8s,baz=87,slow=5.0,SNR=19
MKAR S **S** **18 22 35.2 -1.2**
comp=Z,0.3nm,0.7s,baz=113,slow=8.5,SNR=2.1
MKAR ScS **ScS** **18 25 18.4 -3.4**
comp=Z,0.8nm,0.9s,baz=83,slow=12,SNR=4.6
comp=Z,4.6nm,0.3s
MKAR Makanchi Array 46.99 308 P **P** **18 16 22.1 -0.2**
MKAR PcP **PcP** **18 17 44.8 +0.1**
AKUT Akutan 47.12 41 P **P** **18 16 22.9 0.0**
MAKZ Makanchi 47.21 308 P **P** **18 16 24.3 +0.5**
MAKZ IAmb IAmb 18 16 25.4
comp=Z,23nm,1.4s
MAKZ PcP **PcP** **18 17 44.9 -0.6**
MAKZ Makanchi 47.21 308 P **P** **18 16 24.1 +0.3**
GKN Gorkha 47.22 283 *e*P **P** **18 16 25.1 +0.8**
comp=Z,49nm,0.3s
LWLI Liwa 47.38 230 P **P** **18 16 24.7 -0.9**
comp=Z,2μmcomp=Z,183nm,0.8s
MNAI Manna 47.66 232 P **P** **18 16 26.5 -1.1**
GSI Gunungsitoli 47.83 243 P **P** **18 16 29.1 +0.2**
GSI Gunungsitoli 47.83 243 P **P** **18 16 28.8 -0.1**
DANN Dangsing 47.88 283 *e*P **P** **18 16 30.6 +1.1**
KOLN Koldanda 48.16 283 *e*P **P** **18 16 32.4 +0.9**
WB0 Warramunga Arr 48.51 185 P **P** **18 16 33.4 -0.4**
WB0 pP **pP** **18 18 07.2 0.0**
PYUN Piuthan 48.60 283 *e*P **P** **18 16 35.9 +1.1**
comp=Z,245nm,0.3s
WRAB Tennant Creek 48.68 185 P **P** **18 16 34.9 -0.2**
WRAB IAmb IAmb 18 16 35.8
comp=Z,56nm,1.4s
WRAB PcP **PcP** **18 17 50.8 -0.3**
WRAB **pP** **18 18 07.8 -0.7**
WRAB Tennant Creek 48.68 185 P **P** **18 16 34.9 -0.2**
WRAB 18 17 50.8
WRAB *PP **pP** **18 18 07.8 -0.7**
WRAB pmax pmax
comp=Z,56nm,1.5s
WB2 Warramunga Arr 48.69 185 P **P** **18 16 34.9 -0.3**
WB2 IAmb IAmb 18 16 35.3
comp=Z,21nm,0.4s
WB2 PcP **PcP** **18 17 50.9 -0.2**
WB2 **pP** **18 18 07.7 -0.9**
WR0 Warramunga Arr 48.69 185 P **P** **18 16 34.6 -0.5**
WR0 PcP **PcP** **18 17 51.8 +0.6**
WRA Warramunga Arr 48.69 185 P **P** **18 16 34.9 -0.3**
comp=Z,17nm,0.3s,baz=0.6,slow=7.6,SNR=779
WRA PcP **PcP** **18 17 51.9 +0.8**
comp=Z,6.1nm,0.5s,baz=357,slow=4.0,SNR=9.1
WRA pP **pP** **18 18 09.1 +0.5**
comp=Z,9.0nm,1.0s,baz=4.0,slow=8.4,SNR=5.8
WRA ScP **ScP** **18 20 57.5 -0.6**
comp=Z,2.5nm,0.8s,baz=2.5,slow=5.0,SNR=5.7

WRA S **S** **18 22 54.0 -6.3**
comp=Z,1.4nm,0.7s,baz=5.3,slow=13,SNR=6.7
WRA ScS **ScS** **18 25 33.4 -0.3**
comp=Z,0.3nm,0.9s,baz=219,slow=14,SNR=2.2
comp=Z,17nm,0.3s
WRA Warramunga Arr 48.69 185 P **P** **18 16 33.7 -1.5**
WRA PcP **PcP** **18 17 51.4 +0.3**
WRA pP **pP** **18 18 08.4 -0.2**
PDGK Podgornoye 49.02 304 *i* P **P** **18 16 37.7 +0.1**
PDGK pmax pmax
comp=Z,44nm,0.9s
SHLS Shalkode 49.05 304 *e*P **P** **18 16 34.5 -3.3**
TNA Tin City 49.13 26 P **P** **18 16 37.3 -0.5**
TNA IAmb IAmb 18 16 39.9
comp=Z,33nm,1.0s
CTA Charters Tower 49.19 171 P **P** **18 16 39.0 +0.1**
comp=Z,3.9nm,0.6s,baz=350,slow=9.5,SNR=5.8
comp=Z,3.9nm,0.6s
CTA Charters Tower 49.19 171 P **P** **18 16 39.0 +0.1**
CTAO Charters Tower 49.19 171 P **P** **18 16 38.1 -0.8**
CTAO Charters Tower 49.19 171 P **P** **18 16 38.1 -0.8**
CTAO pmax pmax
comp=Z,20nm,1.3s
UZB Uzynbulak 49.38 304 *e*P **P** **18 16 39.4 -0.9**
KURK Kurchatov 49.57 314 P **P** **18 16 41.4 +0.1**
KURK IAmb IAmb 18 16 43.2
comp=Z,20nm,0.9s
KURK Kurchatov 49.57 314 P **P** **18 16 41.4 +0.1**
KURK pmax pmax
comp=Z,20nm,0.9s
KURK Kurchatov 49.57 314 P **P** **18 16 41.5 +0.2**
KURK S **S** **18 23 07.8 -3.8**
KPKS Kokpek 49.60 304 *e*P **P** **18 16 40.0 -1.8**
KURBB Kurchatov Arra 49.62 313 P **P** **18 16 41.6 -0.1**
comp=Z,17nm,0.5s,baz=92,slow=7.9,SNR=167
KURBB ScP **ScP** **18 21 00.1 -1.6**
comp=Z,1.8nm,0.9s,baz=96,slow=3.8,SNR=4.7
comp=Z,17nm,0.5s
ANM Nome 49.81 28 P **P** **18 16 44.2 +1.3**
ANM IAmb IAmb 18 16 45.3
comp=Z,39nm,1.0s
ANM Nome 49.81 28 P **P** **18 16 44.2 +1.3**
ANM pmax pmax
comp=Z,39nm,1.0s
NRIK Noril'sk 49.91 339 P **P** **18 16 43.8 +0.2**
comp=Z,26nm,0.7s,baz=111,slow=9.0,SNR=25
NRIK S **S** **18 23 14.8 -0.9**
comp=Z,7.6nm,1.0s,baz=213,slow=21,SNR=16
comp=Z,26nm,0.7s
NRIK Noril'sk 49.91 339 P **P** **18 16 43.5 0.0**
NRIK IAmb IAmb 18 16 44.6
comp=Z,21nm,0.7s
NRIK Noril'sk 49.91 339*ce*P **P** **18 16 43.7 +0.2**
NRIK pmax pmax
comp=Z,22nm,0.8s
SDPT Sand Point 50.33 40 P **P** **18 16 46.4 -0.4**
SDPT Sand Point 50.33 40 P **P** **18 16 46.2 -0.6**
baz=264
CNBA Chernabura Isl 50.78 41 P **P** **18 16 50.3 +0.2**
CHNA Chernabura Isl 50.79 41 P **P** **18 16 50.1 0.0**
baz=265
CHGN Chignik 51.57 39 P **P** **18 16 55.4 -0.4**
CHGN IAmb IAmb 18 17 21.4
comp=Z,73nm,1.4s
NRN Naryn 51.77 302 P **P** **18 16 58.6 +0.6**
NRN PcP **PcP** **18 18 02.5 -0.3**
N16K Nishlik Lake 51.86 34 P **P** **18 16 59.1 +1.2**
baz=262,SNR=9.1
TKM2 Tokmak 2 51.90 304 P **P** **18 16 59.8 +1.1**
SNR=11
TKM2 Tokmak 2 51.90 304 P **P** **18 16 59.6 +0.8**
KSH Kashi 52.05 299 P **P** **18 17 04.0 +4.2**
KSH pmax pmax
comp=Z,34nm,0.8s
O16K Kokwok River B 52.08 35 P **P** **18 17 00.1 +0.6**
baz=263
KBK Karagaybulak 52.40 303 P **P** **18 17 03.3 +1.0**
SNR=12
AS31 Alice Springs 52.42 186 P **P** **18 17 01.8 -0.6**
AS31 PcP **PcP** **18 18 05.7 +0.7**
ASAR Alice Springs 52.42 186 P **P** **18 17 02.2 -0.2**
comp=Z,6.7nm,0.5s,baz=3.5,slow=6.7,SNR=495
ASAR PcP **PcP** **18 18 06.2 +1.2**
comp=Z,5.8nm,0.7s,baz=7.6,slow=4.4,SNR=15
ASAR pP **pP** **18 18 39.2 +1.4**
comp=Z,1.6nm,0.9s,baz=6.9,slow=8.5,SNR=1.7
ASAR ScP **ScP** **18 21 14.4 +0.3**
comp=Z,1.0nm,0.8s,baz=5.3,slow=4.3,SNR=4.1
ASAR S **S** **18 23 48.7 -2.1**
comp=Z,1.3nm,1.0s,baz=16,slow=18,SNR=4.3
comp=Z,6.7nm,0.5s
O17K Koliganek Bris 52.60 35 P **P** **18 17 03.7 +0.5**
baz=264
Q16K King Salmon 52.72 36 P **P** **18 17 04.7 +0.6**
baz=265
AAK Ala-Archa 52.74 303 P **P** **18 17 05.4 +0.6**
SNR=6.1
AAK Ala-Archa 52.74 303 P **P** **18 17 05.1 +0.3**
AAK PcP **PcP** **18 18 06.4 +0.1**
AAK Ala-Archa 52.74 303*de*P **P** **18 17 05.3 +0.6**
AAK pmax pmax
comp=Z,5.0nm,0.6s
AAK Ala-Archa 52.74 303 P **P** **18 17 05.6 +0.8**
AAK Ala-Archa 52.74 303 *i* P **P** **18 17 05.4 +0.6**
SNR=7.7
UCH Uchtor 52.77 303 P **P** **18 17 06.8 +1.4**
SNR=20
BTLS Baital 52.80 306 *e*P **P** **18 17 02.9 -2.0**
P17K Kvichak River 52.88 36 P **P** **18 17 05.8 +0.6**
baz=265
MBWA Marble Bar 52.99 202 P **P** **18 17 06.7 +0.2**
MBWA PcP **PcP** **18 18 06.6 -0.6**
Q17K Contact Creek 53.09 37 P **P** **18 17 06.5 -0.4**
baz=266
EKS2 Erkin-Say 53.26 304 P **P** **18 17 08.9 +0.5**
SNR=5.2
N18K Kilae Creek 53.30 34 P **P** **18 17 09.1 +0.9**
N18K IAmb IAmb 18 17 10.6
comp=Z,29nm,1.1s
N18K Kilae Creek 53.30 34 P **P** **18 17 09.0 +0.7**
baz=264
PSA00 Pilbara Seismi 53.33 202 P **P** **18 17 08.4 -0.5**
PSA00 IAmb IAmb 18 17 10.0
comp=Z,24nm,0.9s
PSA00 PcP **PcP** **18 18 08.2 -0.3**
PSA00 pP **pP** **18 18 44.7 0.0**
PSA00 Pilbara Seismi 53.33 202 IAmb IAmb 18 17 09.6
comp=Z,33nm,0.7s
AML Almayashu 53.39 303 P **P** **18 17 11.0 +1.3**
SNR=13
TTA Tatalina 53.51 31 P **P** **18 17 10.0 +0.3**
TTA Tatalina 53.51 31 P **P** **18 17 10.0 +0.3**
TTA pmax pmax
comp=Z,21nm,1.2s
TTA Tatalina 53.51 31 P **P** **18 17 10.1 +0.3**
baz=262
P18K Big Mountain, 53.51 36 P **P** **18 17 10.0 +0.2**
baz=266
Q18K Katmai Hardscr 53.58 37 P **P** **18 17 10.2 -0.2**
baz=266
OTUK Ortayu 53.70 311 P **P** **18 17 11.5 +0.2**
L19K White Mountain 53.95 32 IAmb IAmb 18 17 15.1
comp=Z,49nm,1.4s
L19K White Mountain 53.95 32 P **P** **18 17 13.9 +1.0**
baz=264,SNR=8.9
N19K Bonanza Creek 54.00 34 P **P** **18 17 14.3 +1.0**
N19K IAmb IAmb 18 17 15.0
comp=Z,19nm,0.6s
N19K Bonanza Creek 54.00 34 P **P** **18 17 14.5 +1.2**
baz=265,SNR=6.0
O19K Port Alsworth 54.03 35 P **P** **18 17 13.7 +0.3**
baz=266,SNR=8.8
M19K Big River Lodg 54.14 32 P **P** **18 17 15.1 +1.0**
baz=265
Q19K Cape Douglas, 54.30 36 P **P** **18 17 15.3 -0.1**
baz=267
L20K Farewell, AK 54.43 32 P **P** **18 17 16.7 +0.4**
baz=265,SNR=6.7
K20K Telida 54.43 31 IAmb IAmb 18 17 18.9
comp=Z,49nm,1.1s
K20K Telida 54.43 31 P **P** **18 17 17.5 +1.3**
baz=264,SNR=20
J20K Nowinta River 54.49 30 P **P** **18 17 18.0 +1.5**
J20K IAmb IAmb 18 17 19.2
comp=Z,81nm,1.3s
J20K Nowinta River 54.49 30 P **P** **18 17 17.8 +1.2**

baz=263,SNR=30
P19K Oil Pt 54.55 35 P P 18 17 17.3 +0.2
baz=267
M20K Styx River 54.73 33 P P 18 17 19.4 +1.0
baz=266
BRVK Borovoye 54.73 317 P P 18 17 18.9 +0.4
BRVK Borovoye 54.73 317 P P 18 17 18.9 +0.4
BRVK pmax pmax
comp=Z,22nm,1.1s
BRVK Borovoye 54.73 317 P P 18 17 19.1 +0.6
KDAK Kodiak Island 54.83 38 P P 18 17 19.2 +0.1
comp=Z,42nm,0.6s,baz=276,slow=3.6,SNR=48
comp=Z,42nm,0.6s
KDAK Kodiak Island 54.83 38 P P 18 17 19.1 +0.1
KDAK IAmb IAmb 18 17 20.0
comp=Z,44nm,0.8s
KDAK Kodiak Island 54.83 38 P P 18 17 19.1 +0.1
KDAK pmax pmax
comp=Z,44nm,0.8s
KDAK Kodiak Island 54.83 38 P P 18 17 19.1 +0.1
baz=269
O20K Slope Mountain 54.87 35 P P 18 17 19.7 +0.3
baz=267
Q20K Shuyak Island 54.94 37 P P 18 17 19.4 -0.4
baz=269
G21K Allakaket 55.06 27 P P 18 17 21.6 +1.1
baz=262,SNR=17
F21K Alatna River 55.16 26 P P 18 17 21.8 +0.5
baz=262,SNR=15
H21K Melozitna Rive 55.23 28 P P 18 17 23.2 +1.4
H21K IAmb IAmb 18 17 23.7
comp=Z,26nm,0.9s
H21K Melozitna Rive 55.23 28 P P 18 17 23.1 +1.4
baz=263,SNR=23
PPLA Purkeypile 55.24 31 IAmb IAmb 18 17 24.6
comp=Z,16nm,0.7s
PPLA Purkeypile 55.24 31 P P 18 17 22.9 +0.9
baz=266
CHUM Lake Minchumin 55.26 30 P P 18 17 23.2 +1.3
baz=265,SNR=13
CAST Castle Rocks 55.33 31 IAmb IAmb 18 17 24.3
comp=Z,25nm,0.7s
CAST Castle Rocks 55.33 31 P P 18 17 23.4 +0.9
baz=266,SNR=28
NIL Nilore 55.35 293 P P 18 17 23.8 +0.6
NIL Nilore 55.35 293 P P 18 17 23.8 +0.6
NIL pmax pmax
comp=Z,63nm,0.7s
NIL Nilore 55.35 293 P P 18 17 24.6 +1.4
SKT Skwentna 55.49 33 P P 18 17 24.2 +0.6
SKT IAmb IAmb 18 17 24.9
comp=Z,25nm,1.1s
SKT Skwentna 55.49 33 P P 18 17 24.1 +0.4
baz=267,SNR=9.7
I21K Tanana 55.52 29 IAmb IAmb 18 17 26.4
comp=Z,31nm,1.0s
I21K Tanana 55.52 29 P P 18 17 25.2 +1.4
baz=264,SNR=15
CNPM China Poot 55.56 36 P P 18 17 24.0 -0.1
CNPM IAmb IAmb 18 17 24.7
comp=Z,31nm,0.6s
KK31 Karatay Array 55.57 304 IAmb IAmb 18 17 25.6
comp=Z,22nm,0.7s
KK31 Karatay Array 55.57 304 *i* P P 18 17 25.0 +0.4
KKAR Karatay Array 55.57 304 P P 18 17 25.2 +0.6
KKAR IAmb IAmb 18 17 25.6
comp=Z,22nm,0.7s
KKAR Karatay Array 55.57 304 P P 18 17 25.2 +0.6
KKAR Karatay Array 55.57 304 P P 18 17 25.2 +0.6
KKAR pmax pmax
comp=Z,22nm,0.7s
F22K John River 55.70 26 P P 18 17 26.4 +1.3
baz=263
BRSE Bradley Lake S 55.81 35 P P 18 17 25.6 -0.3
baz=269
H22K Ishtalitna Cre 55.84 28 P P 18 17 27.7 +1.7
baz=265,SNR=15
SUA Susitna One 55.84 33 P P 18 17 26.2 0.0
SUA IAmb IAmb 18 17 28.1
comp=Z,27nm,0.9s
SUA Susitna One 55.84 33 P P 18 17 26.2 0.0
baz=268
BPAW Bear Paw Mtn. 55.86 30 P P 18 17 26.9 +0.7
BPAW IAmb IAmb 18 17 28.3
comp=Z,53nm,1.4s
BPAW Bear Paw Mtn. 55.86 30 P P 18 17 27.3 +1.0
baz=266,SNR=13
G22K Bettles 55.89 27 P P 18 17 27.1 +0.8
baz=264
E22K Anaktuvuk Pass 55.92 25 P P 18 17 27.8 +1.2
baz=263,SNR=30
MLY Manley 56.03 29 P P 18 17 28.6 +1.1
MLY IAmb IAmb 18 17 29.7
comp=Z,23nm,0.9s
MLY Manley 56.03 29 P P 18 17 28.5 +1.1
baz=266,SNR=19
IUG Iuzhnay 56.08 303 *e* P P 18 17 27.6 -0.6
TRF Thorofare Moun 56.13 31 P P 18 17 28.9 +0.6
baz=267,SNR=6.8
M22K Willow 56.15 33 P P 18 17 28.3 +0.1
baz=268,SNR=6.7
RC01 Rabbit Creek A 56.32 34 P P 18 17 29.8 +0.4
baz=269
COLD Coldfoot 56.43 26 IAmb IAmb 18 17 32.3
comp=Z,18nm,0.8s
COLD Coldfoot 56.43 26 P P 18 17 31.1 +1.0
baz=265,SNR=12
D23K Nanushuk River 56.44 24 P P 18 17 31.7 +1.6
baz=263,SNR=21
G23K Bananza Creek 56.46 27 P P 18 17 31.8 +1.4
baz=265,SNR=40
SEW Seward 56.46 35 P P 18 17 30.2 -0.1
SEW IAmb IAmb 18 17 31.2
comp=Z,36nm,0.9s
SEW Seward 56.46 35 P P 18 17 30.2 -0.1
baz=270,SNR=5.6
BWN Browne 56.53 30 P P 18 17 32.0 +1.2
BWN IAmb IAmb 18 17 34.2
comp=Z,48nm,1.0s
C23K Itkillik River 56.57 23 P P 18 17 32.2 +1.3
baz=263,SNR=16
H23K Yukon River 56.59 28 IAmb IAmb 18 17 33.8
comp=Z,40nm,1.1s
H23K Yukon River 56.59 28 P P 18 17 32.7 +1.5
baz=266,SNR=18
PMR Palmer 56.62 33 IAmb IAmb 18 17 32.3
comp=Z,41nm,1.1s
PMR Palmer 56.62 33 P P 18 17 31.4 0.0
baz=270,SNR=7.0
I23K Minto, Yukon-K 56.62 29 P P 18 17 32.4 +1.0
baz=267,SNR=13
GHO Glory Hole Cre 56.72 33 IAmb IAmb 18 17 34.5
comp=Z,22nm,0.7s
NEA2 Nenana 56.72 29 P P 18 17 32.7 +0.6
NEA2 IAmb IAmb 18 17 34.0
comp=Z,74nm,1.2s
NEA2 Nenana 56.72 29 P P 18 17 33.0 +0.9
baz=268,SNR=27
E23K Chandalar 56.73 25 P P 18 17 33.7 +1.5
baz=265,SNR=15
MCK McKinley 56.75 30 P P 18 17 32.9 +0.5
MCK IAmb IAmb 18 17 34.4
comp=Z,75nm,1.2s
MCK McKinley 56.75 30 P P 18 17 32.9 +0.5
MCK pmax pmax
comp=Z,75nm,1.2s
MCK McKinley 56.75 30 P P 18 17 32.5 +0.1
baz=268,SNR=27
TOLK Toolik Lake Re 56.80 25 IAmb IAmb 18 17 34.9
comp=Z,30nm,1.1s
TOLK Toolik Lake Re 56.80 25 P P 18 17 33.8 +1.1
baz=264,SNR=8.2
KNK Knik Glacier 56.94 33 P P 18 17 33.9 +0.1
baz=270,SNR=14
SML Sawmill 57.00 33 IAmb IAmb 18 17 35.4
comp=Z,50nm,0.8s
SML Sawmill 57.00 33 P P 18 17 34.3 +0.2
baz=270,SNR=16
PWL Port Wells 57.01 34 P P 18 17 34.4 +0.2
baz=271,SNR=8.9
MDM Murphy Dome 57.10 29 P P 18 17 35.2 +0.5
MDM IAmb IAmb 18 17 37.3
comp=Z,31nm,0.8s
D24K Happy Valley 57.12 24 P P 18 17 36.1 +1.3
baz=265
E24K Your Creek 57.16 25 P P 18 17 36.6 +1.4
baz=266,SNR=28

C24K Franklin Bluff 57.22 23 P P 18 17 36.5 +1.1
baz=265
DZM Mont Dzumac 57.25 149 P P 18 17 37.8 +1.3
comp=Z,14nm,0.7s,baz=334,slow=3.6,SNR=9.6
comp=Z,14nm,0.7s
TCOL CIGO, UAF Yank 57.25 29 IAmb IAmb 18 17 38.2
comp=Z,25nm,0.8s
TCOL CIGO, UAF Yank 57.25 29 P P 18 17 36.7 +1.0
baz=268
COLA College 57.26 29 P P 18 17 36.5 +0.8
COLA IAmb IAmb 18 17 38.2
comp=Z,24nm,0.8s
COLA College 57.26 29 P P 18 17 36.5 +0.8
COLA pmax pmax
comp=Z,24nm,0.8s
H24K Noodor Dome 57.27 28 P P 18 17 37.3 +1.3
H24K IAmb IAmb 18 17 38.2
comp=Z,30nm,0.8s
H24K Noodor Dome 57.27 28 P P 18 17 37.3 +1.3
baz=268,SNR=33
WAT6 Susitna Watana 57.28 32 P P 18 17 36.1 -0.1
baz=270,SNR=21
F24K Squaw Lake 57.35 26 P P 18 17 37.9 +1.5
baz=267,SNR=51
POKR Poker Plat Res 57.44 29 P P 18 17 37.4 +0.3
POKR IAmb IAmb 18 17 39.2
comp=Z,42nm,0.8s
POKR Poker Plat Res 57.44 29 P P 18 17 37.5 +0.4
baz=269,SNR=11
DHY Denali Highway 57.44 31 P P 18 17 37.2 -0.1
baz=270,SNR=9.9
G24K Hadweenzic Riv 57.47 27 P P 18 17 38.8 +1.6
baz=268,SNR=27
SCM Sheep Creek Mo 57.48 33 P P 18 17 37.9 +0.4
baz=271,SNR=11
P23K Montague Islan 57.49 35 P P 18 17 38.2 +0.7
baz=272,SNR=5.0
GLI Glacier Island 57.61 34 P P 18 17 38.4 +0.1
GLI IAmb IAmb 18 17 39.4
comp=Z,49nm,0.7s
GLI Glacier Island 57.61 34 P P 18 17 38.4 +0.1
baz=272,SNR=6.1
HDA Harding Lake 57.64 30 IAmb IAmb 18 17 39.0
comp=Z,66nm,1.3s
IL31 57.67 29 P P 18 17 38.0 -0.5
ILAR Eielson Array 57.67 29 P P 18 17 38.0 -0.6
comp=Z,6.8nm,0.6s,baz=252,slow=5.6,SNR=130
comp=Z,6.8nm,0.6s
FID Port Fidalgo 57.92 34 IAmb IAmb 18 17 41.6
comp=Z,34nm,1.1s
D25K Kavik River 58.00 24 P P 18 17 42.0 +1.1
baz=267,SNR=18
M24K Tolsona, Glenn 58.02 32 IAmb IAmb 18 17 43.1
comp=Z,32nm,0.9s
M24K Tolsona, Glenn 58.02 32 P P 18 17 42.2 +1.1
baz=272,SNR=6.0
G25K Bearman Lake 58.02 27 P P 18 17 42.6 +1.7
baz=269,SNR=14
H25K Birch Creek 58.12 27 P P 18 17 43.0 +1.3
baz=270,SNR=12
K24K Donnelly Dome 58.15 30 P P 18 17 41.7 -0.3
baz=271,SNR=9.9
KLU Klutina 58.16 33 IAmb IAmb 18 17 43.7
comp=Z,24nm,0.8s
KLU Klutina 58.16 33 P P 18 17 42.6 +0.5
baz=272,SNR=13
F25K Christian Rive 58.21 26 P P 18 17 44.2 +1.9
baz=269,SNR=36
PRP Porcupine Dome 58.24 28 P P 18 17 42.1 -0.5
PRP Porcupine Dome 58.24 28 P P 18 17 42.2 -0.5
baz=270,SNR=20
DIV Divide 58.25 34 IAmb IAmb 18 17 44.5
comp=Z,34nm,1.1s
E25K Arctic Village 58.25 25 P P 18 17 44.2 +1.7
baz=269,SNR=29
EYAK Cordova Ski Ar 58.29 34 P P 18 17 43.2 +0.4
baz=273
PAX Paxson 58.31 31 P P 18 17 43.2 +0.1
PAX Paxson 58.31 31 P P 18 17 43.2 +0.1
PAX pmax pmax
comp=Z,16nm,1.0s
PAX Paxson 58.31 31 P P 18 17 43.6 +0.4
baz=272,SNR=12
J25K Salcha River, 58.32 29 P P 18 17 42.0 -1.1
J25K Salcha River, 58.32 29 P P 18 17 42.1 -1.1
baz=271,SNR=7.0
FYU Fort Yukon 58.36 27 IAmb IAmb 18 17 47.4
comp=Z,32nm,0.9s
HARP HAARP 58.48 32 P P 18 17 45.2 +1.0
baz=272,SNR=21
KBL Kabul 58.50 295 P P 18 17 44.0 -1.1
KBL IAmb IAmb 18 17 46.3
comp=Z,16nm,0.7s
KBL Kabul 58.50 295 P P 18 17 44.0 -1.1
KBL pmax pmax
comp=Z,16nm,0.7s
KBL Kabul 58.50 295 P P 18 17 45.7 +0.6
SNR=14
RIDG Independent Ri 58.57 30 P P 18 17 44.6 -0.3
RIDG IAmb IAmb 18 17 47.6
comp=Z,39nm,1.1s
RIDG Independent Ri 58.57 30 P P 18 17 44.5 -0.3
baz=272,SNR=12
PALK Pallekele 58.58 260 P P 18 17 46.5 +0.9
F26K Sheenjek River 58.78 26 P P 18 17 48.1 +1.9
baz=273,SNR=34
N25K Chitina, Valde 58.79 33 P P 18 17 47.2 +0.9
baz=273,SNR=5.3
BMRM Bremner River 58.82 34 P P 18 17 47.3 +0.7
baz=274,SNR=14
DOT Dot Lake 58.92 31 P P 18 17 47.1 -0.1
G26K Porcupine Rive 58.93 27 P P 18 17 48.7 +1.6
baz=271,SNR=14
SCRK Sand Creek 58.94 30 IAmb IAmb 18 17 48.0
comp=Z,25nm,0.6s
SCRK Sand Creek 58.94 30 P P 18 17 47.4 0.0
baz=272,SNR=30
C27K Jago River 58.95 24 P P 18 17 48.6 +1.4
baz=269,SNR=14
J26L Joseph Creek 59.10 30 P P 18 17 48.2 -0.2
J26L Joseph Creek 59.10 30 P P 18 17 48.3 -0.1
baz=273,SNR=40
GLB Gilahina Butte 59.17 33 IAmb IAmb 18 17 50.7
comp=Z,65nm,1.5s
I26K Coal Creek Min 59.24 29 P P 18 17 48.5 -0.7
I26K Coal Creek Min 59.24 29 P P 18 17 48.8 -0.4
baz=272,SNR=7.1
L26K Log Cabin Wild 59.28 31 IAmb IAmb 18 17 51.0
comp=Z,22nm,0.6s
L26K Log Cabin Wild 59.28 31 P P 18 17 50.6 +1.0
baz=274,SNR=25
VRDI Verde Repeater 59.36 33 P P 18 17 50.8 +0.5
VRDI IAmb IAmb 18 17 51.4
comp=Z,13nm,0.7s
M26K Nabesna, AK 59.49 32 P P 18 17 51.9 +0.9
baz=274,SNR=8.2
MCARA McCarthy VSAT 59.56 33 IAmb IAmb 18 17 53.2
comp=Z,28nm,0.8s
MCARA McCarthy VSAT 59.56 33 P P 18 17 52.1 +0.7
baz=275,SNR=8.2
POO Poona 59.66 276 *ex* x 18 17 47.0
TGL Tana Glacier 59.71 34 P P 18 17 52.9 +0.4
TGL IAmb IAmb 18 17 54.0
comp=Z,20nm,0.7s
E27K Coleen River 59.74 25 P P 18 17 54.0 +1.4
baz=272,SNR=24
G27K Doyon Strip 59.78 27 P P 18 17 53.9 +1.1
baz=273,SNR=8.2
H27K Steamboat Moun 59.86 27 P P 18 17 54.9 +1.5
baz=273,SNR=27
I27K Kandik River 59.87 28 P P 18 17 54.4 +1.0
baz=274,SNR=17
SVE Sverdlovsk 59.96 322 *eP* P 18 17 54.7 +0.5
SVE pmax pmax
comp=Z,12nm,1.0s
ISLE Juniper Island 59.96 34 IAmb IAmb 18 17 55.1
comp=Z,19nm,0.5s
L27K Beaver Creek, 59.97 31 P P 18 17 54.9 +0.8
baz=275
M27K Edge Creek, AK 60.01 32 IAmb IAmb 18 17 56.3
comp=Z,33nm,1.1s
M27K Edge Creek, AK 60.01 32 P P 18 17 55.0 +0.4
baz=275
EGAK Eagle 60.12 29 P P 18 17 55.2 +0.1
EGAK IAmb IAmb 18 17 57.5
comp=Z,11nm,0.6s
EGAK Eagle 60.12 29 P P 18 17 55.1 0.0

baz=275,SNR=12
FORT Forrest 60.16 191 P P 18 17 56.1 +0.4
MESA MESA 60.20 34 P P 18 17 56.6 +0.6
baz=276
BARN Barnard Glacie 60.24 33 P P 18 17 56.5 +0.2
CTG Chitna Glacier 60.41 34 P P 18 17 57.7 +0.4
baz=277
CTGM Chitina Glacie 60.41 34 IAmb IAmb 18 17 58.9
comp=Z,35nm,1.4s
STKA Stephens Creek 60.45 177 P P 18 17 57.9 +0.2
comp=Z,17nm,0.6s,baz=358,slow=6.8,SNR=52
comp=Z,17nm,0.6s
TABL Table Mountain 60.57 34 IAmb IAmb 18 18 14.5
comp=Z,25nm,0.9s
PCHI Peechi 60.84 266 ‖ *eP* P 18 18 01.4 +0.7
DAWY Dawson 60.95 30 IAmb IAmb 18 18 02.4
comp=Z,29nm,1.5s
DAWY Dawson 60.95 30 P P 18 18 01.2 +0.5
baz=276,SNR=6.8
O28M Mount Upton 60.99 34 P P 18 18 02.0 +0.7
baz=278,SNR=10.0
PCA Pinnacle 61.05 34 P P 18 18 02.1 +0.7
PCA IAmb IAmb 18 18 03.2
comp=Z,51nm,1.2s
PINM Pinnacle 61.05 34 P P 18 18 02.1 +0.6
baz=278
ARU Arti 61.15 321 P P 18 18 01.9 -0.1
ARU Arti 61.15 321 *d i* P P 18 18 02.0 -0.1
ARU 18 18 36.1
ARU *PP pP 18 19 39.6 -1.9
ARU 18 20 20.6
ARU S S 18 25 43.8 +1.5
ARU pmax pmax
comp=Z,16nm,1.2s
I29M Ogilvie Camp, 61.26 28 IAmb IAmb 18 18 04.6
comp=Z,22nm,0.9s
I29M Ogilvie Camp, 61.26 28 P P 18 18 03.3 +0.6
baz=277,SNR=20
MORW Morawa 61.54 203 P P 18 18 04.8 -0.2
MORW IAmb IAmb 18 18 06.3
comp=Z,33nm,1.2s
PNL Peninsula 61.55 35 P P 18 18 05.4 +0.8
baz=279
M29M Somme Creek 61.58 32 P P 18 18 06.4 +1.5
baz=278,SNR=19
L29M L29M 61.63 31 P P 18 18 06.8 +1.6
baz=278,SNR=14
AB31 Akbulak array 61.67 313 P P 18 18 05.4 -0.2
ABKAR Akbulak array 61.67 313 P P 18 18 05.7 +0.1
ABKAR IAmb IAmb 18 18 06.4
comp=Z,21nm,0.7s
EPYK Eagle Plains 61.78 27 P P 18 18 07.4 +1.3
baz=278,SNR=40
K29M Barlow Dome 61.80 30 P P 18 18 07.5 +1.2
baz=278,SNR=20
O29M Mount Kennedy 61.85 34 P P 18 18 08.2 +1.4
baz=279,SNR=7.8
G30M tAoh Zraii Nji 61.90 26 P P 18 18 07.3 +0.5
baz=278,SNR=19
HYT Haines Junctio 62.29 33 IAmb IAmb 18 18 11.9
comp=Z,25nm,1.1s
M30M Minto, Yukon 62.32 31 IAmb IAmb 18 18 12.0
comp=Z,22nm,1.3s
M30M Minto, Yukon 62.32 31 P P 18 18 10.5 +0.8
baz=280
N30M Aishikik Lake 62.38 33 P P 18 18 11.2 +1.1
baz=280,SNR=6.6
P29M Windy Craggy 62.38 35 IAmb IAmb 18 18 12.5
comp=Z,27nm,0.9s
P29M Windy Craggy 62.38 35 P P 18 18 11.5 +1.4
baz=280,SNR=7.0
P30M Million Dollar 62.68 34 P P 18 18 13.3 +1.2
baz=281
INK Inuvik 62.72 25 P P 18 18 12.2 +0.2
comp=Z,7.2nm,0.4s,baz=271,slow=4.9,SNR=29
comp=Z,7.2nm,0.4s
INK Inuvik 62.72 25 P P 18 18 12.2 +0.2
INK IAmb IAmb 18 18 12.7
comp=Z,12nm,0.6s
INK Inuvik 62.72 25 P P 18 18 12.2 +0.2
INK pmax pmax
comp=Z,12nm,0.6s
INK Inuvik 62.72 25 P P 18 18 12.2 +0.2
baz=279,SNR=7.5
F31M Tsiigehtchic 62.78 26 P P 18 18 12.5 +0.1
baz=280
O30N Mendenhall 62.98 33 P P 18 18 14.8 +0.9
baz=281
N31M Braeburn, Yuko 62.99 32 IAmb IAmb 18 18 16.2
comp=Z,50nm,1.2s
N31M Braeburn, Yuko 62.99 32 P P 18 18 15.4 +1.4
baz=281,SNR=11
M31M Drury Creek, Y 63.49 32 IAmb IAmb 18 18 18.5
comp=Z,18nm,0.5s
M31M Drury Creek, Y 63.49 32 P P 18 18 18.1 +0.9
baz=282,SNR=13
WHY Whitehorse 63.58 33 P P 18 18 18.9 +1.0
baz=282,SNR=7.2
SKAG Skagway 63.62 35 IAmb IAmb 18 18 19.7
comp=Z,21nm,1.2s
SKAG Skagway 63.62 35 P P 18 18 19.2 +1.2
baz=282
HRA Herat 63.92 296 P P 18 18 21.4 +0.6
HRA IAmb IAmb 18 18 22.5
comp=Z,22nm,0.8s
FARO Faro, Yukon 63.96 31 IAmb IAmb 18 18 22.0
comp=Z,24nm,1.2s
P33M Teslin, Yukon 64.68 34 IAmb IAmb 18 18 27.0
comp=Z,23nm,1.4s
NWAO Narrogin (SRO) 64.73 200 P P 18 18 25.6 +0.2
comp=Z,35nm,0.5s,baz=245,slow=5.1,SNR=47
comp=Z,35nm,0.5s
NWAO Narrogin (SRO) 64.73 200 P P 18 18 25.4 0.0
NWAO Narrogin (SRO) 64.73 200 P P 18 18 25.4 0.0
NWAO pmax pmax
comp=Z,42nm,0.6s
R33M Jennings River 65.80 34 P P 18 18 33.4 +1.4
baz=286
C36M Paulatuk 65.81 23 P P 18 18 31.9 +0.2
baz=287
GEYT Alibeck 65.97 301 P P 18 18 34.0 +0.6
comp=Z,10.0nm,0.7s,baz=64,slow=3.4,SNR=23
comp=Z,10.0nm,0.7s
GEYT Alibeck 65.97 301 IAmb IAmb 18 18 35.0
comp=Z,11nm,0.7s
GYA0B ALIBECK ARRAY 65.97 301 IAmb IAmb 18 18 35.0
comp=Z,9.9nm,0.7s
S34M Telegraph Cree 66.13 36 P P 18 18 34.9 +1.0
baz=286
DLBC Dease Lake 66.54 35 P P 18 18 37.8 +1.3
comp=Z,4.8nm,0.7s,baz=284,slow=6.3,SNR=5.6
comp=Z,4.8nm,0.7s
DLBC Dease Lake 66.54 35 IAmb IAmb 18 18 39.0
comp=Z,33nm,1.4s
DLBC Dease Lake 66.54 35 P P 18 18 37.5 +0.9
baz=287
T35M Bob Quinn 66.86 37 P P 18 18 39.6 +1.1
baz=288
NGCH Negor - Chabah 67.97 288 P P 18 18 47.6 +1.8
BELG Belogornoye 68.34 319 *i* P P 18 18 46.9 -0.7
BELG pmax pmax
comp=Z,4.0nm,0.9s
EUNU Eureka 68.58 8 P P 18 18 49.3 +0.5
EUNU IAmb IAmb 18 18 50.1
comp=Z,20nm,0.7s
HAMF Hammerfest 70.81 341 *eP* P 18 19 02.3 +0.2
WBK Wadi Bani Khal 70.87 286 P P 18 19 04.3 +1.0
ARA0 ARCESS Array S 70.87 340 *eP* P 18 19 03.2 +0.7
ARCES ARCESS Array B 70.87 340 P P 18 19 02.9 +0.5
comp=Z,4.8nm,0.5s,baz=66,slow=8.4,SNR=51
comp=Z,4.8nm,0.5s
RES Resolute Bay 71.06 13 P P 18 19 04.0 +0.5
comp=Z,15nm,0.7s,baz=318,slow=6.6,SNR=27
comp=Z,15nm,0.7s
RES Resolute Bay 71.06 13 P P 18 19 03.7 +0.2
RES IAmb IAmb 18 19 04.9
comp=Z,20nm,0.9s
RES Resolute Bay 71.06 13 P P 18 19 03.7 +0.2
RES pmax pmax
comp=Z,20nm,0.9s
BIDO Bidbid 71.21 287 P P 18 19 06.3 +1.0
SMDO Samad 71.46 287 P P 18 19 07.4 +0.5
JMDO Jabal Madar 71.69 286 P P 18 19 08.6 +0.4
BANOM Banah 71.76 290 P P 18 19 09.6 +1.0
BANOM Banah 71.76 290 *i* P P 18 19 09.2 +0.7
SNR=11
KTK1 Kautokeino 71.83 340 *eP* P 18 19 09.0 +0.9

KTK1 IAmb IAmb 18 19 11.8
comp=Z,16nm,1.4s
SHME Shamm 71.84 290 P **P 18 19 10.0 +1.0**
SNR=8.1
SHME Shamm 71.84 290 *i* P **P 18 19 09.8 +0.8**
SNR=30
HOQ Hoqain 71.87 287 P **P 18 19 09.8 +0.6**
SNR=7.0
YKA Yellowknife Ar 72.04 28 P **P 18 19 09.5 0.0**
comp=Z,7.2nm,0.6s,baz=299,slow=6.2,SNR=54
comp=Z,7.2nm,0.6s
MASF Masafi 72.10 289 P **P 18 19 11.5 +0.9**
MSFE Esma-Masafi 72.11 289 P **P 18 19 11.2 +0.6**
VRH Novokhopyorsk 72.19 319 *e*P **P 18 19 09.4 -1.1**
VRH pmax pmax
comp=Z,10.0nm,0.5s
AKT Akhty 72.22 308 *e*P **P 18 19 11.4 +0.4**
AKT *e* 18 19 24.9
AKT *e**PP **pwP 18 20 58.1 -1.6**
AKT pmax pmax
comp=Z,55nm,0.8s
UOSS Minazif 72.24 289 P **P 18 19 11.0 -0.3**
UOSS IAmb IAmb 18 19 12.5
comp=Z,34nm,1.2s
UOSS Minazif 72.24 289 P **P 18 19 11.8 +0.5**
UOSS Minazif 72.24 289 P **P 18 19 11.7 +0.4**
BSY Bisya 72.30 287 P **P 18 19 12.5 +0.7**
SNR=6.3
HATD Hatta, Dubai 72.34 289 P **P 18 19 12.9 +1.0**
HATD Hatta, Dubai 72.34 289 *i* P **P 18 19 12.8 +0.8**
SNR=9.4
JETT Jettan, Norway 72.35 341 *e*P **P 18 19 11.4 +0.3**
MHTO MHTO 72.38 285 P **P 18 19 12.5 +0.3**
SNR=7.5
UMQ Umm Al-Quwin 72.45 290 P **P 18 19 13.3 +0.9**
ASHO Ashiyiah 72.46 289 P **P 18 19 13.4 +0.8**
ASHO Ashiyiah 72.46 289 *i* P **P 18 19 13.1 +0.5**
SNR=13
ARQ Araqi 72.63 287 P **P 18 19 14.6 +1.0**
SNR=8.2
NAZ Nazwa, Dubai 72.67 289 P **P 18 19 14.7 +1.0**
NAZ Nazwa, Dubai 72.67 289 P **P 18 19 14.2 +0.4**
TRO Tromso 72.72 341 *e*P **P 18 19 13.5 +0.3**
FAQ Al Faqa, Dubai 72.83 289 P **P 18 19 15.2 +0.5**
FAQ Al Faqa, Dubai 72.83 289 *i* P **P 18 19 15.0 +0.3**
SNR=8.8
ALNE Al Ain 72.98 288 P **P 18 19 16.4 +0.8**
SNR=9.5
ALNE Al Ain 72.98 288 *i* P **P 18 19 16.1 +0.5**
SNR=6.4
ASUD Al Ashush, Dub 73.09 289 P **P 18 19 17.2 +1.0**
ASUD Al Ashush, Dub 73.09 289 *i* P **P 18 19 17.0 +0.8**
SNR=7.5
LPSR Galich'ya Gora 73.18 321 *e*P **P 18 19 16.0 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
DQM DQM 73.19 284 P **P 18 19 17.2 +0.3**
WAPA Wapiti River 73.24 36 P **P 18 19 16.7 +0.1**
WAPA IAmb IAmb 18 19 17.8
comp=Z,40nm,1.1s
OBN Obninsk 73.33 324 *c*e*P **P 18 19 17.2 +0.2**
OBN *e**PP **pP 18 21 02.4 +1.1**
OBN *e* 18 22 08.1
OBN pmax pmax
comp=Z,13nm,0.9s
AJN Ajban 73.40 289 P **P 18 19 18.8 +0.8**
VORR Voronezh 73.42 320 *e*P **P 18 19 18.6 +1.0**
VORR pmax pmax
comp=Z,60nm,0.4s
VSR Storozhevoye 73.64 320 *e*P **P 18 19 18.2 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.4s
LLLB Lillooet 73.82 41 IAmb IAmb 18 19 21.9
comp=Z,17nm,1.1s
UMZA Um Al Zommool 74.03 287 P **P 18 19 21.8 +0.2**
ZEI Tsey 74.30 310 *e*P **P 18 19 21.9 -1.1**
ZEI pmax pmax
comp=Z,14nm,0.6s
KBZ Khabaz 74.56 312 P **P 18 19 24.9 +0.7**
comp=Z,30nm,0.8s,baz=97,slow=3.5,SNR=80
comp=Z,30nm,0.8s
KBZ Khabaz 74.56 312 *d i* P **P 18 19 24.5 +0.3**
KBZ pmax pmax
comp=Z,37nm,0.9s
KIV Kislovodsk 74.61 312 ⇑P **P 18 19 25.6 +1.0**
KIV Kislovodsk 74.61 312 P **P 18 19 25.6 +1.0**
KIV IAmb IAmb 18 19 27.2
comp=Z,22nm,0.8s
KIV Kislovodsk 74.61 312 *e*P **P 18 19 24.7 +0.1**
KIV pmax pmax
comp=Z,29nm,1.0s
KIV Kislovodsk 74.61 312 P **P 18 19 26.2 +1.6**
KIV Kislovodsk 74.61 312 *i* P **P 18 19 25.8 +1.2**
SNR=6.3
MZWR Madinat Zayed 74.65 289 P **P 18 19 25.1 0.0**
ONI Oni 74.68 310 IAmb IAmb 18 19 27.2
comp=Z,16nm,0.9s
BRLDA Berland Lookou 74.69 36 IAmb IAmb 18 19 27.1
comp=Z,18nm,0.8s
SHA1 Shidzhatmaz 74.72 312 *i* P **P 18 19 25.3 -0.1**
STEI Steigen 74.84 341 *e*P **P 18 19 25.7 +0.4**
STEI IAmb IAmb 18 19 26.4
comp=Z,12nm,0.6s
FINES FINESS Array B 75.00 333 P **P 18 19 26.3 0.0**
comp=Z,3.2nm,0.3s,baz=68,slow=4.9,SNR=62
FINES S **S 18 28 21.2 -2.0**
comp=Z,3.0nm,0.8s,baz=66,slow=15,SNR=5.8
comp=Z,3.2nm,0.3s
FAUS Fauske 75.18 340 *e*P **P 18 19 27.8 +0.5**
MZR Muzera 75.31 288 P **P 18 19 29.2 +0.4**
MZR Muzera 75.31 288 *i* P **P 18 19 28.8 0.0**
SNR=9.9
GHWR Ruwais 75.40 289 P **P 18 19 29.3 0.0**
LON Longmire 75.56 44 P **P 18 19 30.2 +0.3**
LON Longmire 75.56 44 P **P 18 19 30.2 +0.3**
LON pmax pmax
comp=Z,5.0nm,0.9s
URZ Urewera 75.80 150 P **P 18 19 30.3 -0.8**
comp=Z,4.4nm,0.5s,baz=26,slow=3.7,SNR=6.9
comp=Z,4.4nm,0.5s
BUCK Buck Mountain 75.97 47 IAmb IAmb 18 19 35.1
comp=Z,31nm,0.9s
SHMA Al-Shehemyia 76.16 292 P **P 18 19 33.8 +0.3**
MOR8 Moi Rana 76.24 340 *e*P **P 18 19 32.3 -0.9**
HOOD Mount Hood Mea 76.31 46 IAmb IAmb 18 19 36.3
comp=Z,32nm,1.1s
B08A Colville Reser 76.32 42 P **P 18 19 34.5 +0.5**
B08A IAmb IAmb 18 19 35.7
comp=Z,16nm,0.9s
SLWR Sila 76.33 290 P **P 18 19 34.5 0.0**
DMTO DMTO 76.35 283 P **P 18 19 34.8 +0.1**
SAKB Bahrain 76.46 292 P **P 18 19 35.0 -0.1**
DOK Doka 76.66 284 P **P 18 19 36.3 -0.1**
SMRA Abu-Samra 76.75 291 P **P 18 19 36.7 -0.1**
GEVA Gevas 76.80 306 IAmb IAmb 18 19 38.6
comp=Z,19nm,1.2s
RBK Rabkut 77.08 283 P **P 18 19 38.6 -0.1**
D08A Wollman Farm, 77.18 43 P **P 18 19 39.2 +0.5**
D08A IAmb IAmb 18 19 40.0
comp=Z,12nm,0.6s
C09A Chrisman Ranch 77.21 42 IAmb IAmb 18 19 40.1
comp=Z,13nm,0.6s
YBH Yreka Blue Hor 77.26 49 P **P 18 19 40.7 +1.3**
comp=Z,6.4nm,0.8s,baz=306,slow=4.8,SNR=13
comp=Z,6.4nm,0.8s
WHFO Wadi Hawf 77.27 284 P **P 18 19 39.3 -0.5**
PINE Pine Mountain 77.47 47 IAmb IAmb 18 19 43.1
comp=Z,32nm,0.8s
NEW Newport 77.66 42 P **P 18 19 41.3 -0.1**
comp=Z,11nm,0.8s,baz=300,slow=3.7,SNR=9.2
comp=Z,11nm,0.8s
NEW Newport 77.66 42 P **P 18 19 41.4 +0.1**
NEW Newport 77.66 42 P **P 18 19 41.4 +0.1**
NEW pmax pmax
comp=Z,11nm,0.9s
NEW Newport 77.66 42 P **P 18 19 41.6 +0.2**
baz=300
ABTO Aybut 77.92 283 P **P 18 19 43.2 -0.1**
SNR=5.6
K05A Summer Lake 78.00 48 P **P 18 19 44.6 +1.1**
K05A IAmb IAmb 18 19 45.8
comp=Z,19nm,1.0s
MNK Minsk 78.00 326 *i* P P 18 19 37.9 -5.1
MNK *i* *PP pP 18 21 25.6 -3.3
MNK *i* 18 22 42.6
MNK *i* S **S 18 28 48.2 -7.1**
MNK *i* SS **SS 18 34 06.9 -2.3**
MNK *i* SSS SSS 18 37 37.0
MNK pmax pmax
comp=E,1.0nm,0.4s
MNK pmax pmax
comp=Z,12nm,0.5s
MNK pmax pmax
comp=N,25nm,0.6s
MNK MLR MLR
comp=N,1μm,24.0s
MNK MLR MLR
comp=E,116nm,21.0s
MNK MLR MLR
comp=Z,111nm,15.0s
MNK Minsk 78.00 326 *i* P P 18 19 38.0 -5.0
comp=E,1.0nm,0.4s
MNK *i* P P 18 19 38.0 -5.0
comp=N,25nm,0.6s
MNK *i* P P 18 19 38.0 -5.0
comp=Z,12nm,0.5s,baz=57
MNK *i* pP pP 18 21 25.6 -3.3
MNK *i* PP **PP 18 22 42.6 -4.6**
MNK *i* PPP PPP 18 24 34.7
MNK *i* S **S 18 28 48.2 -7.1**
MNK *i* sS sS 18 32 03.6 -1.1
MNK *i* SS **SS 18 34 06.9 -2.3**
MNK *i* SSS SSS 18 37 37.0
MNK *i* LRM MLR 18 57 02.1
comp=N,1μm,23.6s
MNK *i* LRM MLR 18 57 13.3
comp=E,116nm,21.1s
MNK *i* LRM MLR 18 57 28.0
comp=Z,111nm,15.3s
RPZ Rata Peaks 78.06 157 P **P 18 19 43.0 -0.3**
comp=Z,13nm,0.5s,baz=152,slow=1.0,SNR=11
comp=Z,13nm,0.5s
RPZ Rata Peaks 78.06 157 P **P 18 19 42.6 -0.7**
RPZ IAmb IAmb 18 19 46.1
comp=Z,14nm,0.6s
NACGM Naroch 78.31 327⇑ *e*P **P 18 19 44.7 +0.1**
baz=56
SUMG Summit 78.83 359 *i* P **P 18 19 47.0 -0.6**
MARD Mardin 78.86 306 IAmb IAmb 18 19 49.5
comp=Z,20nm,1.0s
WALA Waterton Lakes 79.09 40 P **P 18 19 49.0 -0.1**
ORV Oroville 79.09 51 P **P 18 19 49.3 +0.1**
ORV Oroville 79.09 51 P **P 18 19 49.3 +0.1**
ORV pmax pmax
comp=Z,20nm,1.3s
J08A Circle Bar Ran 79.25 46 IAmb IAmb 18 19 52.2
comp=Z,31nm,1.2s
AKASG Malin Array Be 79.38 322 P **P 18 19 50.0 -0.4**
comp=Z,1.3nm,0.3s,baz=52,slow=5.3,SNR=16
comp=Z,1.3nm,0.3s
AKASG Malin Array Be 79.38 322 P **P 18 19 50.0 -0.4**
AKBB Malin Array Si 79.38 322 P **P 18 19 50.0 -0.4**
AKBB Malin Array Si 79.38 322 P **P 18 19 50.0 -0.4**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
SIM Simferopol' 79.58 316 *e*P **P 18 19 51.4 -0.2**
SIM pmax pmax
comp=Z,24nm,0.8s
BEKR Beckworth 79.71 50 IAmb IAmb 18 19 54.2
comp=Z,18nm,1.0s
AFDM Forest Hills D 79.74 51 P **P 18 19 53.0 +0.4**
MSO Missoula 80.24 42 P **P 18 19 55.3 +0.1**
baz=302
EMB Emerald Bay 80.32 51 IAmb IAmb 18 19 57.7
comp=Z,22nm,1.1s
PNTR Pine Nut 80.61 51 P **P 18 19 57.8 +0.4**
NB2 NORSAR Subarra 80.83 337 P **P 18 19 57.3 -0.6**
comp=Z,1.0nm,0.5s,baz=45,slow=5.3
NB2 NORSAR Subarra 80.83 337 P **P 18 19 57.3 -0.6**
baz=45,slow=5.3
NOA NORSAR Array B 80.83 337 P **P 18 19 57.5 -0.4**
comp=Z,0.5nm,0.4s,baz=47,slow=4.9,SNR=3.8
MFID Camas Ranch 80.89 45 IAmb IAmb 18 20 00.1
comp=Z,9.6nm,0.6s
GAZ Gaziantep 81.43 308 IAmb IAmb 18 20 03.4
comp=Z,24nm,0.8s
RAYN Ar Rayn 81.64 292 P **P 18 20 03.1 +0.3**
RAYN Ar Rayn 81.64 292 P **P 18 20 03.2 +0.3**
RAYN pmax pmax
comp=Z,71nm,1.3s
RAYN Ar Rayn 81.64 292 P **P 18 20 03.6 +0.8**
RAYN Ar Rayn 81.64 292 *i* P **P 18 20 03.6 +0.8**
SNR=26
LRM Limekiln Ridge 81.65 42 P **P 18 20 03.4 +0.6**
HLID Hailey 81.69 45 P **P 18 20 03.8 +0.9**
baz=302,SNR=11
LHV Little Huntoon 81.77 51 IAmb IAmb 18 20 05.7
comp=Z,24nm,1.3s
NVAR Mina Array Bea 81.81 51 P **P 18 20 04.5 +0.9**
comp=Z,6.0nm,0.7s,baz=298,slow=5.9,SNR=42
comp=Z,6.0nm,0.7s
DLMT Dillon 81.82 42 IAmb IAmb 18 20 05.2
comp=Z,26nm,1.2s
NV11 Mina Array Sit 81.91 51 P **P 18 20 04.2 +0.1**
EGMT Eagleton 81.97 39 IAmb IAmb 18 20 05.6
comp=Z,15nm,0.8s
EGMT Eagleton 81.97 39 P **P 18 20 04.7 +0.6**
baz=304,SNR=6.7
BOZ Bozeman (W) 82.26 42 P **P 18 20 06.3 +0.6**
baz=304,SNR=12
BR131 Keskin Array S 82.56 311 IAmb IAmb 18 20 08.4
comp=Z,18nm,0.8s
BRTR Keskin Array B 82.56 311 P **P 18 20 07.5 +0.1**
comp=Z,9.1nm,0.7s,baz=99,slow=4.4,SNR=51
comp=Z,9.1nm,0.7s
BRTR Keskin Array B 82.56 311 P **P 18 20 07.1 -0.2**
VES Vestal, Richgr 82.57 53 P **P 18 20 07.4 +0.1**
baz=300
TLCR 82.63 318 ⇑P **P 18 20 06.5 -0.9**
TLCR 82.63 318 ⇑P **P 18 20 06.5 -0.9**
ELK Elko 82.65 47 P **P 18 20 09.0 +1.1**
comp=Z,6.9nm,0.5s,baz=313,slow=5.3,SNR=44
comp=Z,6.9nm,0.5s
ELK Elko 82.65 47 IAmb IAmb 18 20 09.8
comp=Z,16nm,1.1s
ELK Elko 82.65 47 P **P 18 20 09.0 +1.1**
VLDR Vladesti 82.69 319 ⇓P **P 18 20 08.5 +0.9**
YHL Hebgen Lake 82.94 42 IAmb IAmb 18 20 11.6
comp=Z,14nm,0.9s
CWC Cottonwood Cre 82.97 52 P **P 18 20 09.4 -0.1**
baz=301
SCHL Schela 83.03 319 ⇑P **P 18 20 07.7 -1.7**
ANTO Ankara 83.03 312 P **P 18 20 09.4 -0.3**
TPGR Topolog 83.05 318 ⇑P **P 18 20 10.1 +0.6**
ISA Isabella, Lake 83.09 53 P **P 18 20 09.6 -0.4**
baz=301
GMN Gold Mountain 83.10 51 P **P 18 20 10.5 +0.3**
TESR Tescani 83.14 320 ⇑P **P 18 20 10.0 +0.1**
GRAC Grapevine Rang 83.18 52 P **P 18 20 11.3 +0.9**
baz=301,SNR=5.6
BIZ Bicaz 83.19 320 ⇑P **P 18 20 05.5 -4.7**
BURAR Bucovina Array 83.29 321 ⇑P **P 18 20 11.2 +0.4**
BURAR Bucovina Array 83.29 321 P **P 18 20 11.0 +0.2**
BURAR Bucovina Array 83.29 321 ⇑P **P 18 20 11.2 +0.4**
YNR Norris Junctio 83.31 42 IAmb IAmb 18 20 14.2
comp=Z,18nm,1.2s
YFT Old Faithful 83.36 43 IAmb IAmb 18 20 15.2
comp=Z,14nm,0.9s
TLBR Topalu 83.45 318 ⇑P **P 18 20 10.6 -0.9**
VRI Vrincioaia 83.46 319 ⇑P **P 18 20 13.3 +1.7**
VRI Vrincioaia 83.46 319 ⇑P **P 18 20 13.3 +1.7**
PLOR Plostina 83.51 319 ⇑P P 18 20 20.4 +8.6
PLOR Plostina 83.51 319 ⇑P P 18 20 20.4 +8.5
H17A Grant Village 83.55 42 IAmb IAmb 18 20 16.2
comp=Z,23nm,1.1s
H17A Grant Village 83.55 42 P **P 18 20 14.8 +2.4**
baz=304,SNR=13
MPMC Manual Prospec 83.58 52 P **P 18 20 13.0 +0.4**
baz=301,SNR=7.6
IMW Indian Meadow 83.61 43 IAmb IAmb 18 20 41.6
comp=Z,19nm,0.6s
HVU Hansel Valley 83.66 46 IAmb IAmb 18 20 15.0
comp=Z,19nm,0.6s
R11A Troy Canyon, C 83.68 50 P **P 18 20 13.8 +0.7**
baz=302,SNR=10
FXWY Fox Creek 83.71 43 IAmb IAmb 18 20 37.3
comp=Z,9.5nm,0.3s
LRMC Laurel Mtn Rad 83.74 53 P **P 18 20 13.9 +0.6**
baz=301,SNR=6.8
FURC Furnace Creek, 83.80 52 P **P 18 20 14.3 +0.9**
baz=301,SNR=5.7
MOOW Moose Ponds 83.81 43 P **P 18 20 13.4 -0.3**
MOOW IAmb IAmb 18 20 39.8
comp=Z,6.9nm,0.6s
EDW2 Edwards Air Fo 83.83 54 P **P 18 20 14.4 +0.8**
baz=301,SNR=7.3
TPAW Teton Pass 83.83 43 IAmb IAmb 18 20 59.2
comp=Z,9.1nm,0.7s
RLMT Red Lodge 83.90 41 IAmb IAmb 18 20 16.1
comp=Z,16nm,1.1s
RLMT Red Lodge 83.90 41 P **P 18 20 15.1 +1.0**
baz=305,SNR=12
TPNV Topopah Spring 83.97 51 IAmb IAmb 18 20 16.1
comp=Z,13nm,0.8s
TPNV Topopah Spring 83.97 51 P **P 18 20 15.2 +0.7**
baz=302,SNR=13
QSM Queen of Sheba 84.06 52 IAmb IAmb 18 20 16.4
comp=Z,13nm,0.9s
GWY Greenwater Val 84.08 52 P **P 18 20 15.4 +0.3**
GWY IAmb IAmb 18 20 16.6
comp=Z,12nm,1.0s
CIS Catalina Islan 84.28 55 P **P 18 20 16.2 +0.3**
baz=301
BFSC Mount Baldy Ra 84.39 54 P **P 18 20 17.1 +0.5**
baz=301
GSC Goldstone, Bar 84.44 53 IAmb IAmb 18 20 18.4
comp=Z,10nm,0.9s
GSC Goldstone, Bar 84.44 53 P **P 18 20 17.3 +0.6**
baz=302
DUG Dugway, Tooele 84.51 47 P **P 18 20 18.0 +0.9**
DUG IAmb IAmb 18 20 19.0
comp=Z,9.2nm,0.8s
DUG Dugway, Tooele 84.51 47 P **P 18 20 18.0 +0.9**
DUG pmax pmax
comp=Z,9.0nm,0.9s
DUG Dugway, Tooele 84.51 47 P **P 18 20 18.1 +1.1**
baz=303,SNR=10
HWUT Hardware Ranch 84.51 45 IAmb IAmb 18 21 00.8
comp=Z,20nm,0.7s
ARR Arges 84.94 320 ⇑P **P 18 20 19.2 +0.2**
TUQ Turquoise Moun 84.99 52 P **P 18 20 20.2 +0.7**
baz=302,SNR=7.1
HEC Hector,Ludlow 85.02 53 P **P 18 20 20.5 +0.9**
baz=302
CSS Mathiatis 85.26 307 P **P 18 20 20.4 -0.3**
CSS IAmb IAmb 18 20 20.8
comp=Z,13nm,0.6s
GMRC Granite Mounta 85.52 53 P **P 18 20 23.1 +1.0**
baz=302
GHAJ Ghor Haditha 85.56 303 IAmb IAmb 18 20 22.8
comp=Z,24nm,1.2s
PFO Pinyon Flats O 85.57 54 P **P 18 20 22.4 +0.1**
comp=Z,6.5nm,0.8s,baz=300,slow=3.5,SNR=6.9
comp=Z,6.5nm,0.8s
PFO Pinyon Flats O 85.57 54 P **P 18 20 22.1 -0.2**
PFO IAmb IAmb 18 20 23.9
comp=Z,12nm,1.0s
PFO Pinyon Flats O 85.57 54 P **P 18 20 22.1 -0.2**
PFO pmax pmax
comp=Z,12nm,1.0s
PFO Pinyon Flats O 85.57 54 P **P 18 20 23.1 +0.7**
baz=302,SNR=7.2
V12A Nelson 85.57 52 P **P 18 20 22.8 +0.6**
BELC Belle Mtn. Jos 85.69 53 P **P 18 20 23.4 +0.5**
baz=302,SNR=5.8
MVU Marysvale 85.83 48 IAmb IAmb 18 20 25.9
comp=Z,18nm,0.9s
MTPU Mount Pierson 86.10 48 P **P 18 20 25.1 0.0**
VYHS Vyhne 86.12 325 *e*P **P 18 20 24.6 +0.1**
IRM Iron Mountain 86.21 53 P **P 18 20 26.3 +1.1**
baz=302
P17A Butcher Ranch, 86.23 47 IAmb IAmb 18 20 39.5
comp=Z,10nm,0.7s
BC3 Big Chuckawall 86.26 54 P **P 18 20 26.5 +0.9**
baz=302
IKP In-Ko-Pah, Jac 86.33 55 P **P 18 20 26.8 +0.9**
baz=302
YUH Yuha Desert 86.46 55 P **P 18 20 26.4 0.0**
SRU San Rafael Swe 86.58 47 IAmb IAmb 18 21 04.6
comp=Z,9.4nm,0.7s
MODS Modra-Piesok 86.98 325 *e*P **P 18 20 29.8 +1.2**
ULM Lac du Bonnet 87.61 32 P **P 18 20 31.1 -0.3**
comp=Z,3.0nm,0.4s,baz=297,slow=5.8,SNR=3.6
comp=Z,3.0nm,0.4s
MORH Mrgy, Hungar 87.70 323 ⇑P **P 18 20 30.7 -1.2**
PV13 Radium Mtn., P 88.22 47 IAmb IAmb 18 21 04.7
comp=Z,7.4nm,0.7s
GERES GERESS Array B 88.40 327 P **P 18 20 34.5 -0.9**
comp=Z,0.2nm,0.4s,baz=172,slow=32,SNR=6.2
S22A 4UR Ranch, Cre 89.73 46 P **P 18 20 41.8 -0.2**
S22A IAmb IAmb 18 21 17.2
comp=Z,6.2nm,0.7s
TUC Tucson 90.27 52 P **P 18 20 43.6 -0.8**
TUC Tucson 90.27 52 P **P 18 20 43.6 -0.8**
TUC pmax pmax
comp=Z,6.0nm,1.2s
SDCO Great Sand Dun 90.56 46 P **P 18 20 46.7 +0.9**
baz=308
ANMO Albuquerque 91.65 48 P **P 18 20 51.6 +0.8**
comp=Z,6.2nm,0.9s,baz=280,slow=4.0,SNR=8.0
comp=Z,6.2nm,0.9s
ANMO Albuquerque 91.65 48 P **P 18 20 51.0 +0.2**
ANMO IAmb IAmb 18 20 52.8
comp=Z,6.0nm,0.8s
ANMO Albuquerque 91.65 48 P **P 18 20 51.0 +0.2**
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 91.65 48 P **P 18 20 52.0 +1.2**
baz=307
319A Douglas 91.86 53 IAmb IAmb 18 20 53.7
comp=Z,8.1nm,0.8s
121A Cookes Peak, D 92.21 51 IAmb IAmb 18 20 56.2
comp=Z,8.0nm,1.0s
TX32 Lajitas Array 96.95 51 P **P 18 21 12.9 -1.9**
TX32 IAmb IAmb 18 21 17.3
comp=Z,7.3nm,1.5s
TXAR Lajitas Array 96.95 51 P **P 18 21 15.7 +0.8**
comp=Z,0.7nm,0.5s,baz=300,slow=2.5,SNR=13
comp=Z,0.7nm,0.5s
VNDA Vanda 107.04 175 PKiKP **PKiKP 18 26 04.2 -0.3**
comp=Z,0.4nm,0.7s,baz=282,slow=3.5,SNR=2.1
QSPA South Pole Qui 118.62 180 PKP **PKPdf 18 26 26.5 -0.4**
comp=Z,4.6nm,0.6s,baz=274,slow=0.8,SNR=68
QSPA SKP 18 29 13.9
comp=Z,2.1nm,0.9s,baz=280,slow=1.5,SNR=6.9
QSPA South Pole Qui 118.62 180 **PKPdf 18 26 26.1 -0.9**
LBTB Lobatse 120.96 257 PKPdf **PKiKP 18 26 32.8 -0.1**
LBTB Lobatse 120.96 257 PKiKP **PKiKP 18 26 32.8 -0.1**
TORD Torodi Ar. Bea 121.11 309 PKP **PKPdf 18 26 32.5 -0.7**
comp=Z,3.2nm,0.6s,baz=52,slow=1.2,SNR=36
TORD SKP 18 29 21.0
comp=Z,1.0nm,0.7s,baz=27,slow=2.6,SNR=3.6
TORD PKKPbc **PKKPbc 18 36 37.8 +0.8**
comp=Z,1.2nm,0.9s,baz=216,slow=3.5,SNR=5.4
BOSA Boshof 122.40 253 PKP **PKPdf 18 26 35.3 -0.2**
comp=Z,2.1nm,0.7s,baz=69,slow=2.9,SNR=4.3
DBIC Dimbokro 130.22 309 PKP **PKPdf 18 26 50.8 +0.1**
comp=Z,2.2nm,0.6s,baz=320,slow=2.1,SNR=2.1
DBIC SKPbc **SKPbc 18 29 26.4 -0.7**
comp=Z,25nm,0.8s,baz=24,slow=4.0,SNR=19
TROLL Troll, Antarti 130.77 197 PKPdf **PKPdf 18 26 50.5 +0.3**
TROLL Troll, Antarti 130.77 197 SKPbc **SKPbc 18 29 26.8 -0.6**
BELA Belgrano 2 130.80 182 **PKPdf 18 26 49.0 -0.9**
SNAA Sanae 132.28 195 PKPdf **PKPdf 18 26 52.6 -0.3**
SNAA Sanae 132.28 195 SKPbc **SKPbc 18 29 31.6 -1.1**
VNA2 Neumayer--Watz 133.85 195 PKPdf **PKPdf 18 26 55.9 +0.1**
baz=128,slow=2.0
VNA3 Neumayer Olymp 134.10 194 PKPdf **PKPdf 18 26 56.1 -0.2**
VNA3 Neumayer Olymp 134.10 194 SKPbc **SKPbc 18 29 37.7 -0.9**
BOAV Boa Vista 143.86 34 *e*P PKPab 18 27 14.3 -0.4
MCPB Macapa, AP 149.85 22 *e*P **PKPdf 18 27 28.1 +2.5**
ETMB Extrema 149.92 56 *e*P **PKPdf 18 27 28.2 +2.5**
MALB Monte Alegre 150.44 27 *e*P **PKPdf 18 27 29.0 +2.4**
LPAZ La Paz 152.31 69 PKPbc **PKiKP 18 27 38.3 +0.8**
comp=Z,0.8nm,0.4s,baz=270,slow=16,SNR=3.5
LPAZ La Paz 152.31 69 *e*P **PKPdf 18 27 31.9 +1.9**
PLCA Paso Flores 153.32 124 PKPbc **PKiKP 18 27 38.9 +0.7**
comp=Z,2.0nm,0.5s,baz=240,slow=4.0,SNR=14
PLCA PKPab **PKPab 18 27 54.0 +1.3**
comp=Z,1.5nm,0.7s,baz=221,slow=6.4,SNR=5.9
PLCA Paso Flores 153.32 124 *e*P **PKPdf 18 27 32.8 +2.7**
LVC Limon Verde 154.38 82 *e*P **PKPdf 18 27 34.8 +2.3**
NPGB Novo Progresso 154.56 34 *e*P **PKPdf 18 27 35.1 +2.6**
PTLB Pontes e Lacer 158.79 55 *e*P **PKPdf 18 27 41.2 +3.4**
SALV Santo Antonio 161.49 49 *e*P **PKPdf 18 27 43.8 +3.1**
MURT Porto Murtinho 163.59 68 *e*P **PKPdf 18 27 45.6 +3.0**
CPUP Villa Florida 165.55 84 PKPab **PKPab 18 28 48.2 +1.8**

comp=Z,0.6nm,0.3s,baz=310,slow=2.3,SNR=2.9

ITQB	**Itaqui**	**166.58**	**97**	*e*P	**PKPdf**	**18 27 48.6**	**+3.7**
MC01	**Montes Claros**	**167.67**	**12**	*e*P	**PKPdf**	**18 27 49.1**	**+3.0**
PCMB	**Pacaembu**	**168.45**	**54**	*e*P	**PKPdf**	**18 27 49.9**	**+3.4**
CNLB	**Canela**	**171.61**	**95**	*e*P	**PKPdf**	**18 27 51.7**	**+3.6**

JMA 21 18:09:22.8±0.0, 35.4°N±0.1°×133.9°E±0.1°, h6km, MV1.7/20, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.05**	**203**	*i* P	Pg	18 09 24.1	-0.2
JKR				*e*S	Sg	18 09 25.5	+0.1
JAD	**Aida**	**0.55**	**151**	*i* P	Pg	18 09 33.5	0.0
JAD				S	Sg	18 09 41.0	+0.3

TAP 21 18:13:17.3, 23.9°N×121.4°E, h18km, ML3.9, 5C-23D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.04**	**33**	⇑*i*P	Pg	18 13 20.6	+0.1
ETM	baz=34			*i* S	Sg	18 13 22.9	+0.2
ESL	**Shilin**	**0.13**	**196**	⇑*i*P	Pg	18 13 21.2	-0.1
ESL	baz=192			*i* S	Sg	18 13 23.6	-0.4
HWA	**Hwalien**	**0.13**	**71**	⇓*i*P	Pg	18 13 21.8	+0.6
HWA	baz=74			S	Sg	18 13 25.2	+1.2
TWD	**Chiawan**	**0.18**	**38**	⇓*i*P	Pg	18 13 22.1	+0.1
TWD	baz=34			*i* S	Sg	18 13 25.3	+0.2
ETL	**Fush Village**	**0.26**	**32**	P	Pg	18 13 23.1	-0.1
ETL	baz=32			S	Sg	18 13 27.2	-0.1
NACB	**Ninganchiao**	**0.26**	**25**	⇑*i*P	Pg	18 13 23.1	-0.1
NACB	baz=25			S	Sg	18 13 26.9	-0.4
EGFH	**Guangfu**	**0.27**	**189**	P	Pg	18 13 23.0	-0.3
EGFH	baz=188			S	Sg	18 13 27.2	-0.2
ETLH	**Xiulin Townshi**	**0.27**	**2**	⇓*i*P	Pg	18 13 23.4	0.0
ETLH	baz=2.0			S	Sg	18 13 27.2	-0.4
OWD	**Renai**	**0.27**	**274**	*e*P	Pb	18 13 23.6	0.0
OWD	baz=279			S	Sg	18 13 27.7	0.0
WHF	**Hehuan Shan**	**0.28**	**318**	⇓*i*P	Pb	18 13 23.8	0.0
WHF	baz=314			*i* S	Sb	18 13 28.3	0.0
CHGB	**Renai**	**0.30**	**294**	⇓*i*P	Pb	18 13 24.3	+0.1
CHGB	baz=299			S	Sg	18 13 28.6	+0.1
WUSB	**Renai**	**0.33**	**280**	⇓*i*P	Pb	18 13 24.8	+0.1
WUSB	baz=284			*i* S	Sb	18 13 29.5	-0.1
VWDT	**VWDT**	**0.35**	**239**	⇑*i*P	Pb	18 13 25.2	+0.1
VWDT	baz=235			*i* S	Sb	18 13 30.2	-0.1
FUSS	**Fushou**	**0.37**	**326**	⇓*i*P	Pb	18 13 25.6	+0.1
FUSS	baz=327			S	Sb	18 13 31.0	-0.2
TWT	**Tachien**	**0.42**	**319**	⇓*i*P	Pb	18 13 26.5	+0.2
TWT	baz=312			*e*S	Sb	18 13 32.2	-0.2
TDCB	**Techi**	**0.43**	**318**	⇓*i*P	Pb	18 13 26.5	+0.1
TDCB	baz=312			S	Sg	18 13 32.2	+0.1
HGSD	**Ruisui**	**0.44**	**186**	P	Pg	18 13 26.0	-0.3
HGSD	baz=191			*e*S	Sb	18 13 32.9	-0.1
EHP	**Heping Village**	**0.45**	**33**	*e*P	Pg	18 13 26.2	-0.2
EHP	baz=35			*e*S	Sg	18 13 32.4	-0.1
EHY	**Hungye**	**0.45**	**198**	⇓*i*P	Pg	18 13 25.3	-1.1
EHY	baz=190			*e*S	Sg	18 13 32.7	+0.1
NNSB	**Datong**	**0.50**	**351**	⇓*i*P	Pb	18 13 27.6	0.0
NNSB	baz=351			*e*S	Sg	18 13 34.1	-0.1
SSLB	**Suanglung**	**0.50**	**253**	⇓*i*P	Pg	18 13 27.3	0.0
SSLB	baz=258			S	Sg	18 13 33.4	-0.7
NNS	**Nan Shan**	**0.51**	**350**	⇓*i*P	Pg	18 13 26.9	-0.8
NNS	baz=359			*e*S	Sg	18 13 33.6	-0.9
SMLT	**Sun Moon Lake**	**0.53**	**264**	⇓*i*P	Pb	18 13 28.0	0.0
SMLT	baz=264			*e*S	Sg	18 13 34.8	-0.2
WCS	**Beigang Elemen**	**0.53**	**283**	⇓*i*P	Pg	18 13 27.1	-0.8
WCS	baz=283			*e*S	Sg	18 13 33.2	-1.7
TYC	**Yuchr**	**0.56**	**267**	⇓*i*P	Pg	18 13 28.5	0.0
TYC	baz=267			*e*S	Sg	18 13 35.7	-0.4
YULB	**Yu-li**	**0.56**	**197**	*e*P	Pg	18 13 27.2	-1.3
YULB	baz=191			*e*S	Sg	18 13 35.1	-1.0
WHP	**Taichung City**	**0.59**	**305**	⇓*i*P	Pb	18 13 29.3	+0.3
WHP	baz=300			*e*S	Sg	18 13 36.2	-0.7
LATG	**Datong**	**0.60**	**5**	⇑*i*P	Pb	18 13 29.0	-0.2
LATG	baz=5.0			*e*S	Sg	18 13 36.7	-0.6
EYUL	**Yuli**	**0.60**	**193**	*e*P	Pb	18 13 28.6	-0.6
EYUL	baz=198			*e*S	Sg	18 13 37.1	-0.2
WHYT	**Xinyi Township**	**0.61**	**247**	*e*P	Pg	18 13 29.9	+0.4
WHYT	baz=250			*e*S	Sb	18 13 38.1	+0.3
YUS	**Yu-Shan**	**0.65**	**227**	*e*P	Pb	18 13 30.4	0.0
YUS	baz=217			*e*S	Sg	18 13 38.3	-0.8
WJS	**Zhushan**	**0.69**	**261**	*e*P	Pn	18 13 31.9	-0.2
WJS	baz=263			*e*S	Sn	18 13 41.8	-0.6
ENTT	**Nioudou**	**0.71**	**7**	*e*P	Pb	18 13 29.6	-1.4
ENTT	baz=8.0			*e*S	Sb	18 13 39.1	-1.3
WNT	**Mingjian**	**0.72**	**266**	⇓*i*P	Pn	18 13 32.4	-0.1
WNT	baz=265			S	Sn	18 13 43.4	+0.2
YHNB	**Yeheng**	**0.74**	**353**	⇓*i*P	Pb	18 13 31.6	0.0
YHNB	baz=345			*e*S	Sb	18 13 40.9	-0.5
ALS	**Alishan**	**0.74**	**235**	⇓*i*P	Pg	18 13 32.0	+0.1
ALS	baz=226			*e*S	Sb	18 13 41.0	-0.7
NSK	**Sanguang**	**0.74**	**352**	⇓P	Pb	18 13 30.8	-1.0
NSK	baz=345			*e*S	Sb	18 13 40.2	-1.3
FULB	**Fuli**	**0.75**	**193**	*e*P	Pb	18 13 31.3	-0.6
FULB	baz=202			*e*S	Sn	18 13 43.8	-0.1
TWC	**Suao**	**0.75**	**27**	*e*P	Pb	18 13 31.1	-0.8
TWC	baz=28			*e*S	Sb	18 13 41.5	-0.3
TCU	**Taichung**	**0.76**	**286**	⇓P	Pn	18 13 33.4	+0.4
TCU	baz=286			*e*S	Sn	18 13 45.4	+1.4
TWQ1	**Liyutan**	**0.76**	**303**	*e*P	Pn	18 13 32.8	-0.3
TWQ1	baz=313			*e*S	Sn	18 13 44.3	+0.2
NFF	**Wufeng Townshi**	**0.77**	**335**	*e*P	Pb	18 13 31.4	-0.7
NFF	baz=335			*e*S	Sb	18 13 41.4	-0.8
CHN5	**Tsauling**	**0.80**	**245**	*e*P	Pb	18 13 32.6	-0.1
CHN5	baz=245			*e*S	Sg	18 13 44.3	+0.6
TWE	**Neicheng**	**0.80**	**13**	*e*P	Pb	18 13 32.2	-0.5
TWE	baz=14			*e*S	Sb	18 13 42.9	-0.3
NSTT	**Nanjuang**	**0.81**	**328**	⇓*i*P	Pg	18 13 33.5	+0.3
NSTT	baz=329			*e*S	Sg	18 13 44.5	+0.5
LIOB	**Emei**	**0.82**	**330**	*e*P	Pn	18 13 33.9	-0.1
LIOB	baz=321			*e*S	Sn	18 13 45.0	-0.7
EHD	**Haiduan**	**0.82**	**197**	*e*P	Pb	18 13 31.6	-1.4
EHD	baz=197			*e*S	Sb	18 13 42.3	-1.4
FUSB	**Fushanzhiwuyua**	**0.83**	**7**	*e*P	Pb	18 13 32.8	-0.3
FUSB	baz=8.0			*e*S	Sb	18 13 43.0	-1.0
WCHH	**Zhanghua**	**0.85**	**280**	*e*P	Pn	18 13 34.6	+0.3
WCHH	baz=280			*e*S	Sn	18 13 46.2	0.0
ELDTW	**Lidau**	**0.85**	**209**	*e*P	Pb	18 13 31.9	-1.7
ELDTW	baz=215			*e*S	Sb	18 13 44.1	-0.6
ILA	**Ilan**	**0.86**	**17**	*e*P	Pg	18 13 34.3	+0.1
NMLH	**Miaoli**	**0.86**	**314**	P	Pn	18 13 35.2	+0.7
NMLH	baz=323			*e*S	Sn	18 13 47.3	+0.7
WDJ	**Dajia District**	**0.86**	**299**	*e*P	Pn	18 13 35.0	+0.5
WDJ	baz=299			*e*S	Sn	18 13 47.5	+0.9
WDLH	**Douliu**	**0.89**	**254**	*e*P	Pn	18 13 35.4	+0.5
WDLH	baz=254			*e*S	Sn	18 13 48.1	+0.8
WCKO	**Fanlu**	**0.94**	**238**	*e*P	Pb	18 13 34.8	-0.2
WCKO	baz=238			*e*S	Sn	18 13 49.4	+1.0
SBCB	**Hsinchu**	**0.96**	**333**	*e*P	Pg	18 13 36.0	+0.1
EDH	**Donghe**	**0.97**	**189**	*e*P	Pb	18 13 34.5	-1.1
EDH	baz=188			*e*S	Sb	18 13 47.5	-0.5
HSN	**Hsinchu**	**0.98**	**332**	*e*P	Pg	18 13 37.4	+1.1
HSN	baz=342			*e*S	Sn	18 13 52.0	+2.6
STYH	**Taoyuan**	**0.99**	**220**	*e*P	Pb	18 13 35.3	-0.7
STYH	baz=216			*e*S	Sg	18 13 49.4	-0.3
EGS		**1.00**	**25**	*e*P	Pb	18 13 36.1	+0.1
EGS	baz=32			*e*S	Sg	18 13 49.5	-0.3
CHN2	**Minshiung**	**1.00**	**246**	*e*P	Pn	18 13 36.3	-0.1
CHN2	baz=258			*e*S	Sn	18 13 51.8	+1.8
TPUB	**Ta-pu**	**1.00**	**231**	*i* P	Pg	18 13 36.7	0.0
TPUB	baz=220			*e*S	Sn	18 13 50.6	+0.6
WRL	**Guolierlin Hig**	**1.00**	**268**	P	Pb	18 13 36.2	+0.1
WRL	baz=268			*e*S	Sn	18 13 50.9	+0.8
NHDH	**Xindian Distri**	**1.02**	**3**	*e*P	Pn	18 13 36.8	0.0
NHDH	baz=3.0			*e*S	Sg	18 13 51.0	+0.4
TWA	**Mucha**	**1.04**	**6**	*e*P	Pn	18 13 37.0	-0.1
TWA				*e*S	Sb	18 13 50.6	+0.4
WTP	**Ta-pu**	**1.04**	**229**	P	Pg	18 13 37.5	0.0
WTP	baz=218			*e*S	Sg	18 13 52.5	+1.2
CHY	**Chiayi**	**1.05**	**246**	*e*P	Pg	18 13 38.4	+0.6
CHY	baz=257			*e*S	Sg	18 13 52.5	+0.9
NCUH	**Zhongli**	**1.06**	**346**	*e*P	Pg	18 13 38.4	+0.5
NCUH	baz=346			*e*S	Sg	18 13 53.4	+1.6
NCU	**National Centr**	**1.06**	**346**	*e*P	Pg	18 13 38.2	+0.3
NCU	baz=347			*e*S	Sg	18 13 54.0	+2.2
LONT	**Longtian**	**1.07**	**197**	*e*P	Pb	18 13 36.0	-1.2
LONT	baz=181			*e*S	Sn	18 13 51.6	-0.2
TIPB	**Shuangxi**	**1.08**	**17**	*e*P	Pb	18 13 36.8	-0.6
WTCT	**Ta-ch'eng**	**1.09**	**266**	*e*P	Pg	18 13 38.3	-0.1
WTCT	baz=266			*e*S	Sg	18 13 54.1	+1.3
TAP	**Taipei**	**1.10**	**2**	*e*P	Pb	18 13 37.7	-0.1
TAP	baz=2.0			*e*S	Sg	18 13 53.9	+0.8
TWK	**Hsinying**	**1.12**	**234**	*e*P	Pg	18 13 38.7	-0.3
TWK	baz=233			*e*S	Sg	18 13 53.9	+0.1
CHN1	**Nanshi**	**1.14**	**229**	*e*P	Pg	18 13 39.5	0.0
CHN1	baz=229			*e*S	Sg	18 13 54.9	+0.5
TWS1	**Kuangyinshan**	**1.16**	**358**	*e*P	Pb	18 13 38.9	+0.1
TWS1	baz=10.0			*e*S	Sg	18 13 56.5	+1.5
TWG	**Pinlang**	**1.17**	**198**	*e*P	Pn	18 13 36.0	-2.7
TWGBT	**Beinan**	**1.17**	**198**	*e*P	Pn	18 13 35.5	-3.3
SGST	**Jiashian**	**1.18**	**224**	*e*P	Pn	18 13 38.7	-0.1
SGST	baz=208			*e*S	Sg	18 13 55.8	+0.3
WSF	**Szhu**	**1.18**	**256**	*e*P	Pg	18 13 39.7	-0.5
WSF	baz=255			*e*S	Sg	18 13 55.1	-0.5
YM01	**YM01**	**1.21**	**4**	*e*P	Pn	18 13 39.4	+0.1
YM01	baz=5.0			*e*S	Sg	18 13 56.5	0.0
SXI1	**Grass Mountain**	**1.21**	**18**	*e*P	Pn	18 13 39.0	-0.4
WSL	**Shuilin Townsh**	**1.21**	**250**	*e*P	Pb	18 13 39.6	-0.1
WSL	baz=262			*e*S	Sg	18 13 56.4	-0.2
NTST	**Danshui**	**1.22**	**359**	*e*P	Pb	18 13 39.9	0.0
NTST	baz=11			*e*S	Sg	18 13 58.0	+1.1
ICHU	**Yijhu**	**1.23**	**243**	*e*P	Pg	18 13 41.0	-0.2
ICHU	baz=242			*e*S	Sg	18 13 58.2	+0.9
ANP	**Anpu**	**1.25**	**2**	*e*P	Pb	18 13 40.2	-0.1
LDUT	**Ludao**	**1.26**	**180**	*e*P	Pn	18 13 39.6	-0.3
LDUT	baz=179			*e*S	Sb	18 13 55.9	-0.3
CHN3	**Shinhua**	**1.33**	**230**	*e*P	Pg	18 13 44.7	+1.8
CHN3	baz=229			*e*S	Sg	18 14 02.5	+2.2
TWY	**Chenhua**	**1.34**	**5**	*e*P	Pb	18 13 41.9	0.0
SHHT	**Tainan City**	**1.38**	**229**	*e*P	Pb	18 13 42.9	+0.5
SCST	**Cishan**	**1.38**	**221**	*e*P	Pg	18 13 43.4	-0.5
SCST	baz=220			*e*S	Sg	18 14 02.1	+0.3
SCLT	**Jiali**	**1.40**	**237**	*e*P	Pg	18 13 43.8	-0.4
SCLT	baz=236			*e*S	Sg	18 14 03.3	+0.9
SSD	**Sandimen**	**1.41**	**213**	*e*P	Pb	18 13 43.1	0.0
SSD	baz=212			*e*S	Sb	18 14 01.9	+1.1
ECL	**Taimali**	**1.42**	**200**	*e*P	Pb	18 13 42.8	-0.3
TSMG	**Majia**	**1.44**	**212**	*e*P	Pb	18 13 43.7	+0.1
TWM1	**Shoushan**	**1.47**	**221**	*e*P	Pg	18 13 45.6	+0.1
TSCK	**Chigu Township**	**1.50**	**239**	*e*P	Pn	18 13 43.0	-0.2
YOJ	**Yonaguni jima**	**1.50**	**69**	*e*P	Pn	18 13 42.4	-0.8
YOJ	baz=82			*e*S	Sb	18 14 03.0	-0.3
EAST	**Anshuo**	**1.65**	**201**	*e*P	Pb	18 13 47.1	-0.1
TAWH	**Dawu Township**	**1.68**	**199**	*e*P	Pn	18 13 44.4	-1.3
SCZT	**Fangliau**	**1.74**	**207**	*e*P	Pn	18 13 46.5	-0.1
PHUB	**P'eng-hu**	**1.79**	**257**	*e*P	Pn	18 13 47.1	-0.2
WDGT	**Dungji**	**1.79**	**248**	*e*P	Pn	18 13 47.5	+0.2
PNG	**Penghu**	**1.79**	**259**	*e*P	Pn	18 13 47.3	0.0
SLIU	**Shizi**	**1.82**	**200**	*e*P	Pb	18 13 50.6	+0.5
LAY	**Lan-yu**	**1.89**	**178**	*e*P	Pn	18 13 46.2	-2.5
SMST	**Manzhou Townsh**	**1.99**	**197**	*e*P	Pn	18 13 50.6	+0.5
VCHM	**Qimei**	**2.01**	**249**	*e*P	Pn	18 13 51.2	+0.9
HEN	**Hengchun**	**2.04**	**200**	*e*P	Pb	18 13 54.1	+0.4
TWK1	**Hengchun**	**2.08**	**197**	*e*P	Pb	18 13 53.1	-1.3

*IDC **21** 18:13:42.8±0.8, 28.84°N×138.91°E, h487km±10km, mb3.0/10, mbtmp3.9/15, Error ellipse: s-maj=22.8km s-min=11.3km az=78.0*

ISC 21 18:13:42.5±0.7, 28.84°N±0.09°×138.8°E±0.1°, h473km, n15, σ1§25/17, mb3.3/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.46**	**119**	P	**P**	**18 14 56.4**	**+1.5**
JCJ	23nm,0.3s,baz=285,slow=22,SNR=1.9			S	**S**	**18 15 54.5**	**+0.9**
JHJ	**Hachijo jima 2**	**4.35**	**11**	P	**P**	**18 15 04.1**	**+2.1**
JHJ	43nm,0.2s,baz=7.7,slow=13,SNR=9.4			S	**S**	**18 16 08.6**	**+1.7**
MJAR	**Matsushiro Arr**	**7.70**	**356**	P	**P**	**18 15 35.6**	**+0.7**
JOW	**Kunigami**	**9.53**	**260**	P	**P**	**18 15 56.3**	**+1.7**
USRK	**Ussuriysk Ar.**	**16.27**	**342**	P	**P**	**18 17 06.9**	**+0.6**
KLR	**Kul'dur**	**21.07**	**347**	P	**P**	**18 17 52.7**	**+0.7**
SONM	**Songino Array**	**31.39**	**316**	P	**P**	**18 19 23.2**	**-0.2**
TIXI	**Tiksi**	**43.20**	**355**	P	**P**	**18 20 59.6**	**-0.4**
WRA	**Warramunga Arr**	**48.69**	**186**	P	**P**	**18 21 42.1**	**-0.6**
KURBB	**Kurchatov Arra**	**49.68**	**313**	P	**P**	**18 21 48.6**	**-1.1**
ASAR	**Alice Springs**	**52.42**	**186**	P	**P**	**18 22 09.4**	**-0.6**
ILAR	**Eielson Array**	**57.64**	**29**	P	**P**	**18 22 45.0**	**-1.1**
ARCES	**ARCESS Array B**	**70.90**	**340**	P	**P**	**18 24 09.8**	**-0.8**
YKA	**Yellowknife Ar**	**72.02**	**28**	P	**P**	**18 24 15.9**	**-1.3**
FINES	**FINESS Array B**	**75.05**	**333**	P	**P**	**18 24 33.4**	**-1.2**

23nm,1.0s,baz=63,slow=8.2,SNR=2.2
3.3nm,1.0s
0.4nm,0.7s,baz=295,slow=6.0,SNR=1.5
0.4nm,0.7s
0.7nm,0.3s,baz=69,slow=4.9,SNR=6.5
0.7nm,0.3s

*IDC **21** 18:20:45.6±1.2, 36.78S×179.06E, h0km, mb4.2/5, mbtmp4.2/6, ML4.6/1, MS3.7/10, Error ellipse: s-maj=33.4km s-min=30.5km az=42.0*

*NEIC **21** 18:20:48.7±2.5, 37.18S±0.07°×179.04E±0.08, h13km±4km, mb4.5/14, Mwr4.5/10, Error ellipse: s-maj=13.1km s-min=4.4km az=141.0*

*WEL **21** 18:20:49.2±1.2, 37°S±6°×17°9E±°, h5km, M4.5/12, ML4.9/12, MLv4.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=105.7*

*NEIC **21** 18:20:50.9, 37.09S×178.87E, h27km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.49; $M_{\theta\theta}$4.66; $M_{\phi\phi}$0.83; $M_{r\theta}$-1.36; $M_{\theta\phi}$2.96; $M_{\phi r}$-0.34; Fault plane solution: $M_0$6.09000×10^{15} NP1:ϕ_s237.09000°, δ38.66000°, λ-96.54000°. NP2:ϕ_s65.45000°, δ51.64000°, λ-84.79000°. Principal axes: T 6.4272, Plg7.0000°, Azm152.0000°; N -0.7532, Plg4.0000°, Azm242.0000°; P -5.6739, Plg82.0000°, Azm4.0000°;*

ISC 21 18:20:48.5±2.0, 37.03S±0.06°×179.06E±0.08, h15km±10km, n149, σ1§54/137, mb4.4/10, MS3.5/9, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.80**	**228**		**Pg**	**18 21 03.6**	**-0.5**
MXZ				Sg	**Sg**	**18 21 11.9**	**-2.6**
MXZ	**Matakaoa Point**	**0.80**	**228**	P	**Pg**	**18 21 03.7**	**-0.3**
MXZ				S	**Sg**	**18 21 12.5**	**-2.1**
WMGZ	**Waiomatatini S**	**0.94**	**213**	P	**Pb**	**18 21 08.3**	**+1.9**
WMGZ				S	**Sg**	**18 21 21.2**	**+2.2**
PKGZ	**Pakihiroa**	**1.16**	**222**	P	**Pg**	**18 21 10.0**	**-0.9**
PKGZ				S	**Sg**	**18 21 26.3**	**+0.3**
PUZ	**Puketiti**	**1.22**	**211**	P	**Pn**	**18 21 11.9**	**+0.9**
PUZ				S	**Sg**	**18 21 28.0**	**+0.1**
HAZ	**Te Kaha**	**1.25**	**234**	P	**Pn**	**18 21 10.3**	**-1.0**

HAZ S **Sg** **18 21 28.8 0.0**
TWGZ Tauwhareparae 1.43 216 P **Pn** **18 21 15.1 +1.2**
RUGZ Raukumara Rang 1.44 229 P **Pn** **18 21 14.4 +0.3**
WIZ White Island 1.57 251 P **Pn** **18 21 14.7 -1.0**
WSRZ White Island S 1.57 251 P **Pn** **18 21 15.4 -0.5**
TKGZ Te Karaka 1.70 214 P **Pn** **18 21 18.8 +1.3**
MWZ Matawai 1.78 223 P **Pn** **18 21 19.8 +1.1**
WHRZ Whale Island 1.85 243 P **Pn** **18 21 20.9 +1.3**
WHRZ S **Sn** **18 21 43.8 +1.0**
RAGZ Rawiri 1.96 221 P **Pn** **18 21 22.6 +1.4**
URZ Urewera 1.97 231 Pn **Pn** **18 21 22.4 +1.1**
178nm,0.3s,baz=124,slow=5.7,SNR=569
URZ Sn **Sn** **18 21 45.0 -0.7**
426nm,0.3s,baz=19,slow=23,SNR=51
URZ LR LR 18 22 32.3
comp=Z,2μm,18.7s,baz=71,slow=50
490nm,0.3s
URZ Urewera 1.97 231 **Pn** **18 21 22.2 +0.9**
URZ **Sn** **18 21 46.0 +0.3**
URZ Urewera 1.97 231 P **Pn** **18 21 22.4 +1.1**
MARZ Manawahe 2.12 243 P **Pn** **18 21 25.1 +1.7**
EDRZ Edgecumbe 2.13 239 P **Pn** **18 21 24.9 +1.3**
OPRZ Ohinepanea 2.15 247 P **Pn** **18 21 23.9 +0.2**
SNGZ Shannon Statio 2.21 217 P **Pn** **18 21 25.5 +0.8**
MYRZ Mayor Island 2.26 263 P **Pn** **18 21 25.7 +0.4**
KNZ Kokohu 2.27 208 P **Pn** **18 21 25.4 0.0**
RTZ Ruatahuna 2.28 225 P **Pn** **18 21 26.9 +1.3**
MHGZ Mahia Peninsul 2.30 203 P **Pn** **18 21 26.6 +0.7**
MUGZ Murupara 2.32 231 P **Pn** **18 21 27.3 +1.3**
TGRZ Tauranga 2.33 252 P **Pn** **18 21 27.5 +1.2**
LIRZ Lichensteins R 2.33 245 P **Pn** **18 21 28.2 +1.9**
TARZ Mount Tarawera 2.35 239 P **Pn** **18 21 28.4 +1.7**
OMRZ Omania 2.39 242 P **Pn** **18 21 27.7 +0.6**
RRRZ Republican Roa 2.40 236 P **Pn** **18 21 28.5 +1.2**
RAHZ Arahi 2.44 219 P **Pn** **18 21 28.6 +0.8**
KARZ Kaharoa 2.44 245 P **Pn** **18 21 29.1 +1.3**
HLRZ Highlands Stat 2.47 240 P **Pn** **18 21 29.7 +1.5**
WHHZ Waihua 2.50 215 P **Pn** **18 21 29.3 +0.7**
NGRZ Ngongotaha 2.52 244 P **Pn** **18 21 30.5 +1.6**
MTHZ Maungataniwha 2.52 223 P **Pn** **18 21 30.5 +1.6**
PRRZ Plateau Road 2.57 234 P **Pn** **18 21 30.5 +1.0**
HSRZ Hossack Road 2.57 239 P **Pn** **18 21 31.4 +1.8**
HRRZ Handcock Road 2.58 237 P **Pn** **18 21 31.9 +2.2**
KMRZ Kaimai 2.61 251 P **Pn** **18 21 30.2 +0.1**
ALRZ Allen Road 2.64 234 P **Pn** **18 21 31.7 +1.2**
GRRZ Galatos Road 2.68 240 P **Pn** **18 21 33.6 +2.5**
KUZ Kuaotunu 2.69 275 P **Pn** **18 21 30.7 -0.4**
NMHZ Naumai 2.72 220 P **Pn** **18 21 32.8 +1.1**
WPRZ Whakapapatarin 2.73 236 P **Pn** **18 21 34.5 +2.7**
MRHZ Matea Rd 2.75 228 P **Pn** **18 21 33.2 +1.1**
ARHZ Aropaoanui 2.76 215 P **Pn** **18 21 32.6 +0.5**
TOZ Tahuroa Road 2.92 255 P **Pn** **18 21 34.0 -0.3**
BKZ Black Stump Fm 2.94 223 Pn **Pn** **18 21 35.2 +0.6**
BKZ Sn **Sn** **18 22 07.2 -2.4**
BKZ Black Stump Fm 2.94 223 P **Pn** **18 21 35.3 +0.7**
GRZ Great Barrier 3.00 284 P **Pn** **18 21 35.9 +0.5**
TLZ Tolley Road 3.08 244 P **Pn** **18 21 38.6 +2.1**
MKAZ Moumakai 3.12 267 P **Pn** **18 21 37.0 0.0**
WATZ Wairara 3.12 237 P **Pn** **18 21 38.8 +1.7**
WIAZ Waiheke Island 3.15 273 P **Pn** **18 21 37.7 +0.2**
KWHZ Kaweka Forest 3.16 220 P **Pn** **18 21 38.0 +0.2**
RATZ Rangitukua 3.18 234 P **Pn** **18 21 39.4 +1.5**
ETAZ East Tamaki Re 3.31 270 P **Pn** **18 21 40.4 +0.8**
MBAZ Motutapu North 3.34 273 P **Pn** **18 21 41.0 +0.8**
TMVZ Te Maari 3.37 231 P **Pn** **18 21 41.4 +0.8**
ETVZ East Tongariro 3.37 230 P **Pn** **18 21 41.8 +1.1**
BHHZ Black Hill Sta 3.40 223 P **Pn** **18 21 41.3 +0.2**
ABAZ Army Bay 3.42 276 P **Pn** **18 21 42.3 +1.2**
OTVZ Oturere 3.42 230 P **Pn** **18 21 43.0 +1.7**
NNVZ North Ngauruho 3.43 231 P **Pn** **18 21 43.7 +2.1**
SNVZ South Ngauruho 3.45 230 P **Pn** **18 21 42.5 +0.7**
EPAZ Eden Park BICE 3.46 271 P **Pn** **18 21 43.3 +1.6**
NGZ Ngauruhoe 3.46 231 P **Pn** **18 21 42.9 +0.9**
HBAZ Herne Bay Bore 3.47 272 P **Pn** **18 21 43.3 +1.4**
TUVZ Tukino 3.49 229 P **Pn** **18 21 43.4 +1.1**
TWVZ Taurewa 3.51 233 P **Pn** **18 21 43.9 +1.4**
MOVZ Moawhango 3.52 227 P **Pn** **18 21 42.6 -0.1**
AWAZ Awhitu Peninsu 3.53 268 P **Pn** **18 21 43.7 +1.0**
WHVZ Whangaehu Hut 3.54 230 P **Pn** **18 21 44.1 +1.0**
FWVZ Far West T-bar 3.54 230 P **Pn** **18 21 44.2 +1.1**
WNVZ Wahianoa 3.56 229 P **Pn** **18 21 43.6 +0.3**
WTAZ Waiatarua 3.59 270 P **Pn** **18 21 44.8 +1.2**
RVAZ Riverhead Bore 3.60 273 P **Pn** **18 21 44.8 +1.2**
HIZ Hauiti 3.64 245 **Pn** **18 21 46.0 +1.7**
HIZ Hauiti 3.64 245 P **Pn** **18 21 46.0 +1.7**
WCZ Waipu Caves 3.95 285 P **Pn** **18 21 49.7 +1.3**
VRZ Vera Road 3.98 237 P **Pn** **18 21 50.9 +1.9**
WAZ Wanganui 4.20 228 P **Pn** **18 21 52.6 +0.7**
BFZ Birch Farm 4.25 210 Pn **Pn** **18 21 50.5 -2.2**
MHEZ Mangahewa 4.26 240 P **Pn** **18 21 57.0 +4.3**
DREZ Durham Road 4.39 239 P **Pn** **18 21 56.6 +2.0**
LREZ Lake Rotokare 4.39 235 P **Pn** **18 21 57.5 +2.9**
NEZ North Egmont 4.50 239 P **Pn** **18 21 59.9 +3.7**
PKE Pukeiti 4.54 240 P **Pn** **18 21 59.5 +2.8**
KHEZ Kahui Hut 4.57 239 P **Pn** **18 22 00.6 +3.5**
NBEZ Newall Road No 4.66 240 P Pn 18 22 03.3 +5.1
OUZ Omahuta 4.77 291 Pn **Pn** **18 22 01.6 +1.8**
OUZ Omahuta 4.77 291 P **Pn** **18 22 01.8 +2.0**
MSWZ Moikau Station 5.28 213 Pn 18 22 03.7 -3.1
PLWZ Palliser 5.41 212 Pn 18 22 04.4 -4.2
SNZO South Karori 5.45 217 Pn Pn 18 22 05.9 -3.2
TUWZ Tuamarina 5.92 221 Pn 18 22 12.0 -3.5
NNZ Nelson 6.08 225 Pn Pn 18 22 15.0 -2.7
QRZ Quartz Range 6.34 231 **Pn** **18 22 19.0 -2.3**
THZ Tophouse 6.71 223 Pn 18 22 23.2 -3.3
LTZ Lake Taylor 7.75 220 Pn 18 22 36.7 -4.1
MQZ McQueen's Vall 8.26 214 Pn 18 22 43.2 -4.5
OXZ Oxford 8.27 218 Pn 18 22 44.9 -2.9
RPZ Rata Peaks 9.04 220 Pn Pn 18 22 55.2 -3.2
3.2nm,0.3s,baz=150,slow=8.0,SNR=10
RPZ Sn Sn 18 24 26.6 -13
5.5nm,0.3s,baz=153,slow=20,SNR=15
RPZ LR LR 18 27 27.8
comp=Z,818nm,20.4s,baz=42,slow=44
ODZ Otahua Downs 10.21 216 Pn Pn 18 23 10.2 -4.3
DZM Mont Dzumac 18.48 320 *e*LR LR 18 29 22.4
comp=Z,298nm,24.1s
DZM Mont Dzumac 18.48 320 LR LR 18 31 08.1
comp=Z,200nm,19.3s,baz=208,slow=34
RAR Rarotonga 24.22 55 LR LR 18 33 41.8
comp=Z,81nm,20.6s,baz=220,slow=32
TBI Tubuai 30.28 72 *e*LR LR 18 34 55.8
TBI comp=Z,176nm,26.5s *e*LR LR 18 34 56.0
comp=Z,3μm,24.2s
TBI Tubuai 30.28 72 *e*T T 18 58 55.0
14nm,0.3s
STKA Stephens Creek 31.18 268 P **P** **18 27 05.5 -1.4**
2.5nm,1.0s,baz=32,slow=8.5,SNR=1.9
STKA LR LR 18 38 13.0
comp=Z,123nm,22.0s,baz=45,slow=34
2.5nm,1.0s
HNR Honiara 32.47 323 LR LR 18 38 04.9
comp=Z,586nm,21.5s,baz=164,slow=32
CTA Charters Tower 33.18 291 LR LR 18 39 20.8
comp=Z,100nm,21.2s,baz=111,slow=34
PPT2 Papeete2 33.71 63 *e*LR LR 18 36 31.3
comp=Z,227nm,25.5s
PPT2 *e*LR LR 18 36 31.4
comp=Z,219nm,27.2s
BBOO Buckleboo 35.28 264 P **P** **18 27 41.5 -1.2**
COEN Coen 39.36 296 P **P** **18 28 17.8 +0.4**
COEN IAmb IAmb 18 28 33.0
comp=Z,21nm,1.2s
AS31 Alice Springs 40.81 276 P **P** **18 28 28.7 -0.8**
ASAR Alice Springs 40.82 276 P **P** **18 28 29.1 -0.5**
comp=Z,4.9nm,0.9s,baz=119,slow=7.7,SNR=49
ASAR PcP **PcP** **18 30 28.6 -1.8**
comp=Z,0.2nm,0.8s,baz=122,slow=3.5,SNR=1.1
ASAR LR LR 18 45 14.5
comp=Z,64nm,18.4s,baz=150,slow=36
comp=Z,4.9nm,0.9s
ASAR Alice Springs 40.82 276 P **P** **18 28 28.5 -1.1**
VNDA Vanda 41.27 186 LR LR 18 41 59.6
comp=Z,28nm,20.0s,baz=22,slow=31
WR0 Warramunga Arr 42.25 281 P **P** **18 28 40.9 -0.4**
FORT Forrest 42.37 263 P **P** **18 28 41.1 -1.0**
WB2 Warramunga Arr 42.40 281 P **P** **18 28 41.8 -0.7**
WB2 IAmb IAmb 18 28 42.8
comp=Z,7.6nm,0.8s
WRAB Tennant Creek 42.41 281 P **P** **18 28 41.5 -1.1**
WRAB IAmb IAmb 18 28 42.8
comp=Z,7.2nm,0.8s
WRA Warramunga Arr 42.41 281 P **P** **18 28 42.1 -0.5**
comp=Z,5.1nm,0.7s,baz=122,slow=7.5,SNR=84
WRA PcP **PcP** **18 30 34.7 -1.0**
comp=Z,0.7nm,0.8s,baz=130,slow=3.8,SNR=3.9
WRA LR LR 18 46 09.8
comp=Z,95nm,19.9s,baz=148,slow=36
comp=Z,5.1nm,0.7s
WB0 Warramunga Arr 42.47 281 P **P** **18 28 42.4 -0.7**
WB0 IAmb IAmb 18 28 43.3
comp=Z,5.7nm,0.7s
MTN Manton Dam 49.04 287 P **P** **18 29 35.8 +0.8**
KNRA Kununurra 49.19 282 P **P** **18 29 35.9 -0.2**
MORW Morawa 52.57 259 P **P** **18 30 00.2 -1.3**
QSPA South Pole Qui 53.09 180 P **P** **18 30 07.2 +2.2**
comp=Z,2.2nm,0.8s,baz=31,slow=1.7,SNR=2.4
comp=Z,2.2nm,0.8s
QSPA South Pole Qui 53.09 180 P **P** **18 30 07.3 +2.3**
QSPA IAmb IAmb 18 30 25.0
comp=Z,7.4nm,1.1s
BELA Belgrano 2 63.55 172 P **P** **18 31 19.3 +1.5**
BELA IAmb IAmb 18 31 37.4
comp=Z,5.6nm,1.2s
MAW Mawson 65.25 202 P **P** **18 31 30.2 +1.3**
SNAA Sanae 71.59 179 PcP **PcP** **18 32 23.5 -4.4**
VNA3 Neumayer Olymp 71.85 177 PcP **PcP** **18 32 26.6 -2.4**
VNA1 Neumayer--Stat 72.49 177 PcP **PcP** **18 32 30.6 -1.0**
H03N3 Juan Fernandez 79.06 124 T T 19 59 40.5
baz=234,slow=72,SNR=45
H03N2 Juan Fernandez 79.07 124 T T 19 59 38.6
baz=234,slow=72,SNR=30
H03N1 Juan Fernandez 79.08 124 T T 19 59 37.3
baz=234,slow=72,SNR=36
CMAR Chiang Mai Arr 93.34 290 P **P** **18 34 03.3 +0.2**
comp=Z,0.4nm,0.6s,baz=140,slow=4.2,SNR=3.6
comp=Z,0.4nm,0.6s
KMI Kunming 94.68 298 ⇑P **P** **18 34 10.8 +1.4**
KMI pP pwP 18 34 20.3 +3.9
PZH PanZhiHua 96.24 298 P **P** **18 34 17.8 +1.5**
HHC Hu-ho-hao-te 99.11 315 *e*P **Pdif** **18 34 33.3 +4.4**
KURBB Kurchatov Arra 123.74 311 PKP **PKPdf** **18 39 42.8 -2.1**
comp=Z,0.4nm,0.8s,baz=120,slow=2.3,SNR=4.1
ARCES ARCESS Array B 144.42 344 PKP **PKPab** **18 40 21.4 +0.2**
comp=Z,0.5nm,0.5s,baz=45,slow=1.5,SNR=4.6
FINES FINESS Array B 150.28 334 PKPbc **PKPbc** **18 40 37.6 -0.4**
comp=Z,2.3nm,0.8s,baz=37,slow=3.0,SNR=7.0
BRTR Keskin Array B 152.85 286 PKPbc **PKPbc** **18 40 44.8 -0.2**
comp=Z,0.2nm,0.4s,baz=129,slow=2.0,SNR=2.4
TORD Torodi Ar. Bea 156.10 186 PKPab **PKPab** **18 41 10.1 0.0**
comp=Z,0.8nm,0.8s,baz=175,slow=4.3,SNR=4.2

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*IDC **21** 18:25:44.6±2.6, 36°.74S×179°.09E, h0km, mb3.9/3, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=52.8km s-min=36.1km az=59.0*
*NEIC **21** 18:25:47.6±3.1, 37°.11S±0°.07×178°.92E±0°.09, h10km±1km, mb4.3/9, Error ellipse: s-maj=16.1km s-min=7.7km az=134.0*
*WEL **21** 18:25:49.0±1.8, 37°S±7°×17°9E±1°2, h5km±7km, M3.9/13, ML4.1/13, MLv3.9/13, Error ellipse: s-maj=0.0km s-min=0.0km az=78.6*
ISC 21 18:25:45.8±2.1, 37°.09S±0°.05×179°.06E±0°.07, h6km±11km, n118, σ1§93/124, mb4.2/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.76**	**232**		**Pn**	**18 26 02.3**	**-0.8**
MXZ					**Sg**	**18 26 09.4**	**-0.9**
MXZ	**Matakaoa Point**	**0.76**	**232**	P	**Pn**	**18 26 02.4**	**-0.6**
MXZ				S	**Sb**	**18 26 11.9**	**-0.1**
WMGZ	**Waiomatatini S**	**0.89**	**215**	P	**Pn**	**18 26 07.2**	**+2.4**
WMGZ				S	**Sn**	**18 26 20.7**	**+2.7**
PKGZ	**Pakihiroa**	**1.11**	**224**	P	**Pn**	**18 26 08.9**	**+0.9**
PKGZ				S	**Sn**	**18 26 26.3**	**+2.6**
PUZ	**Puketiti**	**1.17**	**213**	P	**Pn**	**18 26 10.8**	**+2.1**
PUZ				S	**Sn**	**18 26 29.2**	**+4.2**
HAZ	**Te Kaha**	**1.21**	**237**	P	**Pn**	**18 26 09.3**	**0.0**
HAZ				S	**Sn**	**18 26 28.7**	**+2.7**
TWGZ	**Tauwhareparae**	**1.38**	**218**	P	**Pg**	**18 26 14.2**	**+2.0**
TWGZ				S	**Sg**	**18 26 34.3**	**+4.2**
RUGZ	**Raukumara Rang**	**1.40**	**231**	P	**Pg**	**18 26 13.4**	**+0.8**
WIZ	**White Island**	**1.55**	**253**	P	**Pn**	**18 26 13.7**	**-0.2**
MWZ	**Matawai**	**1.73**	**224**	P	**Pg**	**18 26 19.2**	**+0.1**
WHRZ	**Whale Island**	**1.82**	**245**	P	**Pg**	**18 26 20.5**	**-0.2**
RIGZ	**Rimuhau**	**1.91**	**212**	P	**Pb**	**18 26 21.3**	**+0.3**
RAGZ	**Rawiri**	**1.91**	**222**	P	**Pb**	**18 26 21.9**	**+0.8**
URZ	**Urewera**	**1.93**	**232**	Pn	**Pb**	**18 26 21.3**	**-0.1**
	59nm,0.3s,baz=341,slow=2.6,SNR=45						
URZ				Sn	**Sb**	**18 26 45.3**	**-0.5**
	81nm,0.3s,baz=217,slow=23,SNR=25						
	158nm,0.4s						
URZ	**Urewera**	**1.93**	**232**		**Pb**	**18 26 21.1**	**-0.3**
URZ				Sn	**Sb**	**18 26 44.8**	**-1.0**
URZ	**Urewera**	**1.93**	**232**	P	**Pb**	**18 26 21.3**	**-0.1**
URZ				S	**Sg**	**18 26 46.0**	**-1.9**
EDRZ	**Edgecumbe**	**2.10**	**241**	P	**Pb**	**18 26 23.5**	**-0.8**
OPRZ	**Ohinepanea**	**2.13**	**249**	P	**Pb**	**18 26 23.3**	**-1.5**
SNGZ	**Shannon Statio**	**2.16**	**218**	P	**Pb**	**18 26 25.3**	**-0.1**
RTZ	**Ruatahuna**	**2.24**	**227**	P	**Pb**	**18 26 26.6**	**-0.1**
MHGZ	**Mahia Peninsul**	**2.25**	**203**	P	**Pb**	**18 26 25.8**	**-1.0**
MYRZ	**Mayor Island**	**2.26**	**264**	P	**Pb**	**18 26 25.5**	**-1.5**
MUGZ	**Murupara**	**2.28**	**232**	P	**Pb**	**18 26 26.5**	**-0.8**
TGRZ	**Tauranga**	**2.31**	**253**	P	**Pb**	**18 26 26.4**	**-1.6**
TARZ	**Mount Tarawera**	**2.32**	**240**	P	**Pb**	**18 26 28.1**	**0.0**
OMRZ	**Omania**	**2.36**	**244**	P	**Pb**	**18 26 29.6**	**+0.8**
RRRZ	**Republican Roa**	**2.37**	**238**	P	**Pb**	**18 26 27.6**	**-1.3**
RAHZ	**Arahi**	**2.40**	**220**	P	**Pb**	**18 26 28.3**	**-1.0**
KARZ	**Kaharoa**	**2.42**	**247**	P	**Pb**	**18 26 28.7**	**-1.0**
HLRZ	**Highlands Stat**	**2.44**	**241**	P	**Pb**	**18 26 29.5**	**-0.6**
WHHZ	**Waihua**	**2.45**	**215**	P	**Pb**	**18 26 29.1**	**-1.1**
MTHZ	**Maungataniwha**	**2.48**	**224**	P	**Pb**	**18 26 29.2**	**-1.6**
HSRZ	**Hossack Road**	**2.54**	**241**	P	**Pb**	**18 26 32.4**	**+0.6**
KMRZ	**Kaimai**	**2.59**	**252**	P	**Pb**	**18 26 29.4**	**+1.1**
ALRZ	**Allen Road**	**2.60**	**235**	P	**Pb**	**18 26 30.9**	**-1.9**
NMHZ	**Naumai**	**2.67**	**221**	P	**Pb**	**18 26 32.1**	**-2.0**
KUZ	**Kuaotunu**	**2.70**	**276**	P	**Pn**	**18 26 29.7**	**0.0**
ARHZ	**Aropaoanui**	**2.71**	**216**	P	**Pn**	**18 26 32.4**	**+2.6**
BKZ	**Black Stump Fm**	**2.89**	**224**		**Pn**	**18 26 34.1**	**+1.6**
BKZ				Sn	**Sn**	**18 27 08.0**	**+0.4**
BKZ	**Black Stump Fm**	**2.89**	**224**	P	**Pn**	**18 26 34.2**	**+1.8**
TOZ	**Tahuroa Road**	**2.90**	**256**	P	**Pn**	**18 26 33.0**	**+0.5**
CKHZ	**Cape Kidnapper**	**3.00**	**211**	P	**Pn**	**18 26 35.2**	**+1.4**
GRZ	**Great Barrier**	**3.01**	**285**	P	**Pn**	**18 26 34.6**	**+0.6**
TLZ	**Tolley Road**	**3.05**	**245**	P	**Pb**	**18 26 37.6**	**-2.9**
MKAZ	**Moumakai**	**3.12**	**269**	P	**Pn**	**18 26 35.9**	**+0.4**
KWHZ	**Kaweka Forest**	**3.12**	**221**	P	**Pn**	**18 26 37.5**	**+1.9**
WIAZ	**Waiheke Island**	**3.16**	**274**	P	**Pn**	**18 26 36.7**	**+0.7**
ETAZ	**East Tamaki Re**	**3.31**	**271**	P	**Pn**	**18 26 40.0**	**+1.9**
TMVZ	**Te Maari**	**3.33**	**232**	P	**Pn**	**18 26 40.4**	**+1.9**
MBAZ	**Motutapu North**	**3.35**	**274**	P	**Pn**	**18 26 40.2**	**+1.5**
BHHZ	**Black Hill Sta**	**3.36**	**224**	P	**Pn**	**18 26 40.3**	**+1.5**
OTVZ	**Oturere**	**3.38**	**231**	P	**Pb**	**18 26 42.8**	**-3.4**
SNVZ	**South Ngauruho**	**3.41**	**231**	P	**Pn**	**18 26 41.4**	**+1.7**
ABAZ	**Army Bay**	**3.42**	**277**	P	**Pn**	**18 26 41.2**	**+1.6**
TWVZ	**Taurewa**	**3.47**	**234**	P	**Pn**	**18 26 43.1**	**+2.7**
HBAZ	**Herne Bay Bore**	**3.47**	**273**	P	**Pn**	**18 26 43.5**	**+3.1**
MOVZ	**Moawhango**	**3.48**	**227**	P	**Pn**	**18 26 41.9**	**+1.4**
WNVZ	**Wahianoa**	**3.52**	**230**	P	**Pn**	**18 26 43.1**	**+1.9**
AWAZ	**Awhitu Peninsu**	**3.53**	**269**	P	**Pn**	**18 26 42.8**	**+1.7**
WTAZ	**Waiatarua**	**3.59**	**271**	P	**Pn**	**18 26 43.7**	**+1.7**
PNHZ	**Pukenui**	**3.60**	**218**	P	**Pn**	**18 26 42.9**	**+0.8**
RVAZ	**Riverhead Bore**	**3.60**	**274**	P	**Pn**	**18 26 43.7**	**+1.5**
WPHZ	**Waipukurau**	**3.61**	**214**	P	**Pn**	**18 26 43.5**	**+1.3**
HIZ	**Hauiti**	**3.62**	**246**		**Pn**	**18 26 44.5**	**+2.1**
HIZ	**Hauiti**	**3.62**	**246**	P	**Pn**	**18 26 45.3**	**+3.0**
TSZ	**Takapari Road**	**3.83**	**218**	P	**Pn**	**18 26 45.9**	**+0.6**
DVHZ	**Dannevirke**	**3.92**	**214**	P	**Pn**	**18 26 47.4**	**+0.8**
VRZ	**Vera Road**	**3.95**	**238**	P	**Pn**	**18 26 49.8**	**+2.9**
WCZ	**Waipu Caves**	**3.97**	**285**	P	**Pn**	**18 26 48.6**	**+1.5**
WAZ	**Wanganui**	**4.16**	**229**	P	**Pn**	**18 26 51.8**	**+2.0**
POWZ	**Post Office Ro**	**4.18**	**217**	P	**Pn**	**18 26 50.9**	**+0.8**
BFZ	**Birch Farm**	**4.20**	**211**	Pn	**Pn**	**18 26 49.5**	**-0.8**
BFZ				Sn	**Sn**	**18 27 35.1**	**-4.7**
PRWZ	**Pori Road**	**4.21**	**214**	P	**Pn**	**18 26 51.4**	**+0.9**
NEZ	**North Egmont**	**4.47**	**239**	P	**Pn**	**18 26 58.7**	**+4.5**
PKE	**Pukeiti**	**4.51**	**241**	P	Pb	18 26 60.0	-5.5
KHEZ	**Kahui Hut**	**4.54**	**240**	P	Pn	18 26 59.9	+4.8
NBEZ	**Newall Road No**	**4.63**	**240**	P	Pb	18 27 02.1	-5.3
OUZ	**Omahuta**	**4.80**	**291**		**Pn**	**18 26 60.0**	**+1.4**
OUZ	**Omahuta**	**4.80**	**291**	P	**Pn**	**18 27 00.5**	**+1.9**
MSWZ	**Moikau Station**	**5.23**	**213**	Pn	**Pn**	**18 27 02.2**	**-2.3**
PLWZ	**Palliser**	**5.35**	**212**	Pn	**Pn**	**18 27 03.6**	**-2.6**
SNZO	**South Karori**	**5.40**	**217**	Pn	**Pn**	**18 27 04.7**	**-2.1**
DUWZ	**D'Urville Isla**	**5.45**	**226**	P	**Pn**	**18 27 08.1**	**+0.5**
TUWZ	**Tuamarina**	**5.87**	**221**	Pn	**Pn**	**18 27 11.7**	**-1.6**
CMWZ	**Cape Campbell**	**5.97**	**217**	Pn	**Pn**	**18 27 13.6**	**-1.1**
NNZ	**Nelson**	**6.04**	**225**	Pn	**Pn**	**18 27 12.8**	**-2.7**
BSWZ	**Blackbirch Sta**	**6.12**	**219**	Pn	**Pn**	**18 27 15.4**	**-1.2**
TKNZ	**Takaka Hill**	**6.16**	**228**	P	**Pn**	**18 27 18.2**	**+0.9**
QRZ	**Quartz Range**	**6.30**	**232**	Pn	**Pn**	**18 27 17.6**	**-1.7**
THZ	**Tophouse**	**6.66**	**224**	Pn	**Pn**	**18 27 21.2**	**-3.1**
KHZ	**Kahutara**	**6.80**	**217**	Pn	**Pn**	**18 27 22.6**	**-3.5**
LTZ	**Lake Taylor**	**7.71**	**220**	Pn	**Pn**	**18 27 34.9**	**-3.7**
MQZ	**McQueen's Vall**	**8.21**	**214**	Pn	**Pn**	**18 27 42.0**	**-3.5**
OXZ	**Oxford**	**8.22**	**219**	Pn	**Pn**	**18 27 43.9**	**-1.7**
RPZ	**Rata Peaks**	**9.00**	**220**	Pn	**Pn**	**18 27 53.1**	**-3.2**
	1.1nm,0.3s,baz=101,slow=13,SNR=2.4						
RPZ				Sn	Sn	18 29 27.7	-10
	1.5nm,0.3s,baz=61,slow=23,SNR=1.9						
RPZ	**Rata Peaks**	**9.00**	**220**	Pn	**Pn**	**18 27 53.3**	**-2.9**
FOZ	**Fox Glacier**	**9.54**	**225**	Pn	**Pn**	**18 28 02.3**	**-1.4**
LBZ	**Lake Benmore**	**9.91**	**220**	Pn	**Pn**	**18 28 05.0**	**-3.7**
ODZ	**Otahua Downs**	**10.16**	**216**	Pn	**Pn**	**18 28 08.9**	**-3.3**
WKZ	**Wanaka**	**10.82**	**221**	Pn	**Pn**	**18 28 18.7**	**-2.5**
WHZ	**Wether Hill Ro**	**12.10**	**220**	Pn	**Pn**	**18 28 37.8**	**-0.9**
COEN	**Coen**	**39.38**	**296**	P	**P**	**18 33 15.8**	**-0.6**
COEN				IAmb	IAmb	18 33 23.4	
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**40.82**	**276**	P	**P**	**18 33 27.9**	**-0.5**
ASAR	**Alice Springs**	**40.82**	**276**	P	**P**	**18 33 27.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=121,slow=7.8,SNR=19						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**40.82**	**276**	P	**P**	**18 33 26.8**	**-1.5**
WR0	**Warramunga Arr**	**42.26**	**281**	P	**P**	**18 33 39.6**	**-0.6**
WR0				IAmb	IAmb	18 34 22.7	
	comp=Z,7.0nm,1.2s						
FORT	**Forrest**	**42.36**	**263**	P	**P**	**18 33 40.3**	**-0.5**
WRA	**Warramunga Arr**	**42.43**	**281**	P	**P**	**18 33 40.7**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=123,slow=7.0,SNR=35						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**42.43**	**281**	P	**P**	**18 33 40.5**	**-0.9**
WB0	**Warramunga Arr**	**42.48**	**281**	P	**P**	**18 33 41.1**	**-0.8**
WB0				IAmb	IAmb	18 33 55.0	
	comp=Z,3.2nm,0.7s						
MTN	**Manton Dam**	**49.06**	**287**	P	**P**	**18 34 30.9**	**-3.0**
KNRA	**Kununurra**	**49.21**	**282**	P	**P**	**18 34 34.8**	**-0.3**
QSPA	**South Pole Qui**	**53.03**	**180**	P	**P**	**18 35 06.3**	**+3.0**
	comp=Z,1.4nm,1.0s,baz=127,slow=3.2,SNR=2.5						
	comp=Z,1.4nm,1.0s						
QSPA	**South Pole Qui**	**53.03**	**180**	P	**P**	**18 35 06.4**	**+3.0**
QSPA				IAmb	IAmb	18 35 10.7	
	comp=Z,7.6nm,1.4s						
H03N3	**Juan Fernandez**	**79.03**	**124**	T	T	20 04 49.9	
	baz=235,slow=72,SNR=10						
H03N2	**Juan Fernandez**	**79.03**	**124**	T	T	20 04 48.1	
	baz=235,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**79.05**	**124**	T	T	20 04 49.5	
	baz=235,slow=72,SNR=9.7						
ARCES	**ARCESS Array B 144.48**	**344**		PKP	**PKPab**	**18 45 20.2**	**-0.1**
	comp=Z,3.4nm,1.0s,baz=46,slow=3.9,SNR=2.0						

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*BJI **21** 18:33:38.5±0.0, 32°.35N×132°.57E, h60km, mb4.6/59, mB4.9/28, Ms4.2/15, Ms7 3.9/14*
*MOS **21** 18:33:44.8±0.9, 32°.74N×131°.82E, h66km, mb4.8/24, Error ellipse: s-maj=8.7km s-min=5.4km az=115.8*
*NIED **21** 18:33:46.5, 32°.79N×131°.94E, h55km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr4.76; Mθθ-5.23; Mφφ0.47; Mrθ4.53; Mθφ-0.36; Mφr4.17; Fault plane solution: M0 7.91000×10^15^ NP1: φs287.00000°, δ26.00000°, λ135.00000°. NP2: φs59.00000°, δ72.00000°, λ71.00000°.*
*NEIC **21** 18:33:46.1±2.8, 32°.78N±0°.04×131°.89E±0°.05, h48km±6km, mb4.9/121 Error ellipse: s-maj=7.8km s-min=4.1km az=135.0*
*IDC **21** 18:33:46.9±1.7, 32°.78N×131°.68E, h64km±14km, mb4.0/28, mbtmp4.3/31, MS3.5/19, Error ellipse: s-maj=13.0km s-min=10.7km az=82.0*
*JMA **21** 18:33:46.5±0.1, 32°.8N±0°.2×131°.9E±0°.3, h55km, MD4.4/32, MW4.6/32, HYUGANADA REGION*
JMA Felt IV J1 at HYUGANADA REGION .
ISC 21 18:33:45.9±0.4, 32°.76N±0°.03×131°.92E±0°.03, h57km±2km, h57km:pP-P, n409, σ1§80/390, mb4.7/109, MS3.7/21, 16C-13D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSKE	**Saikikamae**	**0.04**	**342**	P	**Pn**	**18 33 54.6**	**+0.2**
JSKE				*e*S	**Sn**	**18 34 00.6**	**0.0**
JSKE	**Saikikamae**	**0.04**	**342**	A

JSU Sn **Sn** **18 34 36.8 +1.4**
JSU Suzuyama 1.76 225 P **Pn** **18 34 15.5 +1.4**
JSU Suzuyama 1.76 225 A A 18 34 15.7
comp=E,6.0nm,3.6s,comp=E,5.0nm,0.9s
JHIK Hikimi 1.77 0 A A 18 34 15.0
comp=E,7.0nm,1.7s,comp=E,11nm,1.1s
NGSJ Nagasakinomoza 1.79 267 A A 18 34 15.9
comp=E,4.0nm,4.5s,comp=E,4.0nm,5.7s
JTSR Tashiro 2 1.80 208 A A 18 34 16.2
comp=E,8.0nm,2.8s,comp=E,6.0nm,1.5s
JMN Monobe 1.91 59 Pn **Pn** **18 34 16.4 +0.3**
JMN Monobe 1.91 59 P Pn 18 34 21.1 +5.0
JMN Monobe 1.91 59 A A 18 34 17.0
comp=E,6.0nm,2.6s,comp=E,6.0nm,0.9s
JHT Toyohira 1.95 12 A A 18 34 17.5
comp=E,8.0nm,0.6s,comp=E,5.0nm,2.9s
MRT2 Murotomisaki 2 1.97 71 A A 18 34 17.9
comp=E,4.0nm,3.1s,comp=E,3.0nm,3.7s
JHGM Hagimishima 2.12 342 A A 18 34 20.1
comp=E,23nm,1.1s,comp=E,15nm,1.3s
JTN Tanegashima 3 2.24 201 A A 18 34 22.5
comp=E,3.0nm,3.9s,comp=E,3.0nm,1.6s
JHS Saijyo 2.45 24 Pn **Pn** **18 34 24.0 +0.6**
JHS Sn **Sn** **18 34 52.0 -0.3**
JHS Saijyo 2.45 24 P **Pn** **18 34 26.9 +3.4**
JHS Saijyo 2.45 24 A A 18 34 24.6
comp=E,8.0nm,4.2s,comp=E,4.0nm,0.9s
JTSM Tsushimamitsus 2.64 307 A A 18 34 27.6
comp=E,3.0nm,1.5s,comp=E,3.0nm,1.1s
JTU Tsushima 2.74 311 Pn **Pn** **18 34 27.5 +0.1**
JTU Sn **Sn** **18 34 58.0 -1.4**
JTU Tsushima 2.74 311 P **Pn** **18 34 28.3 +0.9**
JTU Tsushima 2.74 311 A A 18 34 29.1
comp=E,4.0nm,1.9s,comp=E,5.0nm,4.5s
JISK Izumosakaura 2.84 16 A A 18 34 30.1
comp=E,5.0nm,5.7s,comp=E,7.0nm,0.7s
JNM Ikuma 2.88 18 A A 18 34 30.7
comp=E,11nm,1.2s,comp=E,8.0nm,1.0s
JOI OKI 3.69 17 A A 18 34 42.1
comp=E,4.0nm,4.5s,comp=E,4.0nm,4.3s
INU Inuyama 4.96 57 Pn **Pn** **18 34 59.4 +1.6**
INU Sn **Sn** **18 35 51.6 -2.2**
INU Inuyama 4.96 57 P **Pn** **18 35 00.3 +2.5**
TJN Taejon 5.21 315 Pn **Pn** **18 35 02.1 +0.9**
TJN Sn **Sn** **18 35 59.8 -0.1**
TJN Taejon 5.21 315 P **Pn** **18 35 02.1 +0.9**
TJN 18 35 59.8
TJN Taejon 5.21 315 P **Pn** **18 35 02.4 +1.2**
JGF Kuroka 5.33 56 Pn **Pn** **18 35 04.0 +1.1**
JGF Kuroka 5.33 56 P **Pn** **18 35 05.5 +2.6**
KSRS Korea Array 5.72 326 P **Pn** **18 35 09.1 +1.0**
17nm,0.4s,baz=145,slow=14,SNR=73
KSRS S **Sn** **18 36 10.7 -1.7**
65nm,0.7s,baz=139,slow=24,SNR=11
KSRS LR LR 18 37 42.5
comp=Z,649nm,19.1s,baz=145,slow=42
KSAR Wonju Array Be 5.72 326 **Pn** **18 35 09.2 +0.9**
KSAR Wonju Array Be 5.72 326 P **Pn** **18 35 09.2 +0.9**
KS19 Wonju Array Si 5.78 326 **Pn** **18 35 09.1 +0.1**
INCN Inchon 6.40 319 Pn **Pn** **18 35 18.4 +0.8**
INCN **Sn** **18 36 28.2 -1.1**
INCN Inchon 6.40 319 P **Pn** **18 35 18.4 +0.8**
INCN 18 36 28.2
INCN Inchon 6.40 319 P **Pn** **18 35 19.5 +1.9**
MJB9 Matsu-Tunnel 6.41 52 **Pn** **18 35 20.1 +2.4**
MAJO Matsushiro 6.41 52 Pn **Pn** **18 35 19.4 +1.7**
MAJO Matsushiro 6.41 52 *c i* P **Pn** **18 35 19.6 +1.9**
MAJO Matsushiro 6.41 52 P **Pn** **18 35 19.7 +2.0**
MJAR Matsushiro Arr 6.41 52 P **Pn** **18 35 19.9 +2.2**
13nm,0.4s,baz=116,slow=14,SNR=60
MJAR S **Sn** **18 36 27.9 -1.6**
5.4nm,0.6s,baz=223,slow=29,SNR=1.1
MJAR LR LR 18 38 05.5
comp=Z,252nm,19.3s,baz=220,slow=39
JHJ Hachijo jima 2 6.62 85 P **Pn** **18 35 21.8 +1.2**
143nm,0.3s,baz=86,slow=21,SNR=13
JHJ S **Sn** **18 36 32.9 -1.8**
234nm,0.9s,baz=123,slow=7.3,SNR=1.9
JHJ LR LR 18 37 59.5
comp=Z,262nm,20.9s,baz=280,slow=37
JHJ2 Mitsune 6.65 85 Pn **Pn** **18 35 21.7 +0.7**
JOW Kunigami 6.70 209 P **Pn** **18 35 20.9 -0.8**
25nm,0.3s,baz=100,slow=15,SNR=30
JOW S **Sn** **18 36 30.4 -6.2**
50nm,0.2s,baz=141,slow=27,SNR=13
JSD Sado 7.39 43 Pn **Pn** **18 35 32.1 +1.1**
JYT Yasato 7.66 61 Pn **Pn** **18 35 36.3 +1.5**
JMM Marumori 8.86 52 Pn **Pn** **18 35 51.2 0.0**
JCJ Chichijima 10.54 120 Pn **Pn** **18 36 14.3 +0.1**
JTM Tenmabayashi 10.86 40 Pn **Pn** **18 36 22.3 +3.8**
NJ2 Nanjing 11.07 270 *eP* **Pn** **18 36 21.5 +0.1**
NJ2 pmax pmax
comp=Z,17nm,0.6s
USRK Ussuriysk Ar. 11.43 0 P **Pn** **18 36 30.1 +3.9**
2.6nm,0.6s,baz=175,slow=13,SNR=3.5
USRK LR LR 18 40 38.6
comp=Z,316nm,18.8s,baz=171,slow=36
CN2 Changchun 12.14 337 *eP* **Pn** **18 36 39.5 +3.6**
CN2 *ep*P P 18 36 48.8 +2.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s
YHNB Yeheng 12.26 232 Pn **Pn** **18 36 37.4 -0.4**
JEW Eniwo 12.57 34 Pn **Pn** **18 36 43.0 +1.2**
TIA Tai'an 12.68 290 ⇓P **Pn** **18 36 46.9 +3.5**
TIA pmax pmax
comp=Z,10.0nm,1.3s
ERM Erimo 12.85 41 Pn **Pn** **18 36 44.7 -0.9**
ERM Erimo 12.85 41 P **Pn** **18 36 44.7 -0.9**
BJT Baijiatuau 14.60 304 Pn **Pn** **18 37 09.4 +0.3**
BJT Baijiatuau 14.60 304 P **Pn** **18 37 09.4 +0.3**
BJI Beijing 14.60 304 P **P** **18 37 13.9 -0.3**
BJI pmax pmax
comp=Z,33nm,0.7s
HNS HongShan 14.83 293 ⇑P **P** **18 37 19.1 +2.4**
HNS pmax pmax
comp=Z,140nm,0.8s
HNS LR LR
comp=N,280nm,16.8s
HNS LR LR
comp=E,410nm,16.5s
HNS LR LR
comp=Z,430nm,15.5s
WHN Wuhan 15.13 266 ⇑P **P** **18 37 21.8 +1.7**
LYN LuoYang 16.30 282 ⇓*iP* **P** **18 37 35.8 +2.8**
LYN sP sP 18 37 55.8 +2.8
LYN pmax pmax
comp=Z,20nm,0.7s
KLR Kul'dur 16.46 360 P **P** **18 37 36.4 +1.7**
25nm,0.6s,baz=170,slow=8.4,SNR=65
KLR LR LR 18 43 37.1
comp=Z,158nm,19.4s,baz=204,slow=36
KLR Kul'dur 16.46 360 *eP* **P** **18 37 36.5 +1.7**
KLR pmax pmax
comp=Z,65nm,1.3s
XLT XiLinHaoTe 16.65 316 *eP* **P** **18 37 38.6 +1.6**
XLT pP pP 18 37 47.4 -2.1
XLT sP sP 18 37 55.9 -1.0
XLT PcP **PcP** **18 42 22.8 +0.6**
XLT pmax pmax
comp=Z,13nm,1.0s
XLT pmax pmax
comp=Z,170nm,5.6s
HHC Hu-ho-hao-te 18.16 302 *eP* **Pn** **18 37 56.0 +1.9**
HHC pmax pmax
comp=Z,34nm,0.9s
HHC pmax pmax
comp=Z,470nm,4.9s
HHC LR LR
comp=Z,350nm,13.9s
HHC LR LR
comp=Z,430nm,13.7s
HHC LR LR
comp=Z,480nm,16.5s
HIA Hailar 18.84 335 **P** **18 38 00.7 -0.3**
HIA Hailar 18.84 335 P **P** **18 38 00.7 -0.3**
HIA pmax pmax
comp=Z,41nm,1.6s
HKPS Hong Kong Po S 18.88 241 P **Pn** **18 38 03.1 +0.4**
HKPS IAmb IAmb 18 38 04.5
comp=Z,185nm,1.7s
BTO Baotou 19.20 300 *eP* **Pn** **18 38 07.8 +1.3**
BTO S **Sn** **18 41 48.9 +7.9**
BTO LR LR
comp=Z,750nm,4.4s
BTO LR LR
comp=Z,550nm,4.5s
XAN Xi'an 19.24 280 ⇑*iP* **P** **18 38 06.0 +0.5**
XAN pmax pmax
comp=Z,17nm,1.2s
ENH Enshi 19.28 269 P **P** **18 38 05.9 -0.1**
ENH IAmb IAmb 18 38 16.7
comp=Z,111nm,2.0s
ZEA Zeya 21.24 352 *eP* **P** **18 38 27.6 +0.7**
ZEA pmax pmax
comp=Z,20nm,0.6s
GUMO Guam 22.45 145 LR LR 18 46 28.9
comp=Z,52nm,20.3s,baz=4.5,slow=34
LZH Lanzhou 23.36 286 *eP* **P** **18 38 48.8 -0.8**
LZH sP sP 18 39 07.1 -3.0
LZH pmax pmax
comp=Z,45nm,1.1s
CD2 Chengdu 23.97 273 *eP* **P** **18 38 54.0 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ULN Ulaanbaatar 24.09 316 P **P** **18 38 55.3 -0.8**
ULN IAmb IAmb 18 39 12.8
comp=Z,32nm,0.9s
ULN Ulaanbaatar 24.09 316 *ceP* **P** **18 38 55.9 -0.2**
ULN pmax pmax
comp=Z,32nm,1.7s
SONM Songino Array 24.46 315 P **P** **18 38 59.1 -0.4**
comp=Z,11nm,0.8s,baz=126,slow=8.7,SNR=62
SONM PcP **PcP** **18 42 36.9 +0.1**
comp=Z,0.6nm,0.7s,baz=102,slow=3.0,SNR=2.7
SONM LR LR 18 49 51.8
comp=Z,231nm,18.2s,baz=120,slow=40
comp=Z,11nm,0.8s
SONM Songino Array 24.46 315 P **P** **18 38 58.5 -1.0**
SONM IAmb IAmb 18 39 22.9
comp=Z,51nm,1.3s
SONM Songino Array 24.46 315 P **P** **18 38 58.5 -1.0**
SONM pmax pmax
comp=Z,51nm,1.3s
DAV Davao City (W) 26.23 194 LR LR 18 48 47.5
comp=Z,27nm,21.1s,baz=34,slow=34
GTA Gaotai 26.69 294 *eP* **P** **18 39 18.8 -0.9**
GTA pP pP 18 39 34.1 +0.1
GTA sP sP 18 39 41.3 +0.4
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,150nm,4.8s
GTA LR LR
comp=Z,200nm,14.2s
GTA LR LR
comp=Z,150nm,18.5s
GTA LR LR
comp=Z,220nm,18.2s
PZH PanZhiHua 26.90 265 P **P** **18 39 22.8 +1.0**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,140nm,4.4s
PETK Petropavlovsk- 27.49 35 LR LR 18 49 54.8
comp=Z,102nm,19.7s,baz=234,slow=35
YAK Yakutsk 29.32 358 LR LR 18 51 22.3
comp=Z,92nm,21.9s,baz=271,slow=36
YAK Yakutsk 29.32 358 *ceP* **P** **18 39 42.1 -0.7**
YAK pmax pmax
comp=Z,30nm,2.5s
MA2 Magadan 29.61 19 LR LR 18 51 53.4
comp=Z,47nm,18.3s,baz=238,slow=37
MYLDM Lahad Datu 30.16 207 P **P** **18 39 53.0 +2.3**
MYLDM IAmb IAmb 18 40 58.9
comp=Z,24nm,1.5s
GOMU GeErMu 30.66 287 P **P** **18 39 55.5 +0.1**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,64nm,4.6s
TNTI Ternate 32.10 189 P **P** **18 40 07.4 -0.3**
CHTO Chiang Mai 32.63 253 P **P** **18 40 12.0 -0.4**
CHTO Chiang Mai 32.63 253 P **P** **18 40 12.0 -0.4**
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CM31 Chiang Mai Arr 32.81 252 P **P** **18 40 13.8 -0.2**
CMAR Chiang Mai Arr 32.81 252 P **P** **18 40 13.8 -0.2**
comp=Z,1.5nm,0.6s,baz=50,slow=7.4,SNR=12
CMAR ScP **ScP** **18 46 35.5 -1.6**
comp=Z,0.6nm,1.0s,baz=48,slow=1.3,SNR=2.6
comp=Z,1.5nm,0.6s
CMAR Chiang Mai Arr 32.81 252 P **P** **18 40 13.3 -0.7**
SEY Seymchan 32.86 17 P **P** **18 40 14.4 +0.5**
comp=Z,3.8nm,0.9s,baz=232,slow=9.9,SNR=6.0
comp=Z,3.8nm,0.9s
SEY Seymchan 32.86 17 *i* P **P** **18 40 13.7 -0.2**
SEY pmax pmax
comp=Z,7.0nm,1.0s
SIJI Sorong 33.45 181 LR LR 18 54 16.5
comp=Z,42nm,19.6s,baz=285,slow=37
H11N2 WAKE ISLAND Hy 33.79 104 T T 19 16 26.8
baz=298,slow=74,SNR=14
H11N1 WAKE ISLAND Hy 33.79 104 T T 19 16 31.5
baz=298,slow=74,SNR=14
H11N3 WAKE ISLAND Hy 33.81 104 T T 19 16 32.5
baz=298,slow=74,SNR=13
FAKI Fak Fak 35.48 179 P **P** **18 40 37.6 +0.5**
WMQ Urumqi 36.04 301 *eP* **P** **18 40 40.9 -0.8**
WMQ pmax pmax
comp=Z,7.0nm,1.1s
WMQ LR LR
comp=Z,160nm,22.7s
DGZ Jazzator, Alta 36.88 311 *i* P **P** **18 40 48.1 -0.8**
DGZ pmax pmax
comp=Z,12nm,2.1s
TIXI Tiksi 38.99 358 P **P** **18 41 04.7 -1.5**
comp=Z,1.2nm,0.5s,baz=90,slow=23,SNR=1.6
TIXI LR LR 18 57 37.8
comp=Z,121nm,21.6s,baz=202,slow=37
comp=Z,1.2nm,0.5s
KAPI Kappang 39.30 199 P **P** **18 41 08.3 -1.0**
KAPI IAmb IAmb 18 41 25.7
comp=Z,20nm,1.3s
KAPI Kappang 39.30 199 P **P** **18 41 08.3 -1.0**
KAPI pmax pmax
comp=Z,20nm,1.3s
ZAA0 Zalesovo Array 39.34 317 P **P** **18 41 07.8 -1.6**
ZALV Zalesovo Beam 39.34 317 P **P** **18 41 07.7 -1.6**
comp=Z,0.8nm,0.5s,baz=99,slow=9.2,SNR=4.1
ZALV PcP **PcP** **18 43 16.1 -0.7**
comp=Z,1.0nm,0.6s,baz=102,slow=3.9,SNR=3.0
ZALV LR LR 18 58 12.7
comp=Z,142nm,19.8s,baz=104,slow=37
comp=Z,0.8nm,0.5s
ZALV Zalesovo Beam 39.34 317 **P** **18 41 07.1 -2.2**
ZALV Zalesovo Beam 39.34 317 *i* P **P** **18 41 10.3 +1.0**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
RAMN Ramite 39.50 274 *eP* **P** **18 41 10.9 -0.4**
comp=Z,7.3nm,0.6s
JIRN Jiri 39.61 275 *eP* **P** **18 41 12.2 -0.2**
comp=Z,3.6nm,0.3s
GUN Gumba 39.79 276 *eP* **P** **18 41 13.4 -0.5**
comp=Z,19nm,0.5s
KULM Kulim 39.96 234 P **P** **18 41 14.0 -0.9**
KULM IAmb IAmb 18 42 28.6
comp=Z,48nm,1.7s
MK31 Makanchi Array 39.98 305 P **P** **18 41 13.5 -1.3**
MK31 Makanchi Array 39.98 305 P **P** **18 41 13.5 -1.3**
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 39.98 305 P **P** **18 41 13.9 -0.9**
comp=Z,4.2nm,0.7s,baz=92,slow=10,SNR=38
MKAR PcP **PcP** **18 43 18.1 -0.9**
comp=Z,0.4nm,0.4s,baz=88,slow=3.9,SNR=4.3
MKAR ScP **ScP** **18 47 01.6 -1.6**
comp=Z,0.4nm,0.6s,baz=79,slow=6.3,SNR=4.1
MKAR LR LR 18 59 12.0
comp=Z,103nm,20.4s,baz=90,slow=38
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 39.98 305 P **P** **18 41 13.4 -1.5**
MAKZ Makanchi 40.19 305 P **P** **18 41 15.3 -1.3**
MAKZ Makanchi 40.19 305 P **P** **18 41 15.3 -1.3**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 40.19 305 P **P** **18 41 15.6 -1.0**
PKI Pulchoki 40.29 275 *eP* **P** **18 41 17.6 -0.4**
IPM Ipoh 40.30 232 P **P** **18 41 16.8 -1.0**
PKIN Phulchoki 40.30 275 *eP* **P** **18 41 17.7 -0.3**
comp=Z,4.1nm,0.4s
BILL Bilibino 40.48 19 P **P** **18 41 19.8 +1.1**
BILL IAmb IAmb 18 41 21.3
comp=Z,17nm,0.7s
BILL Bilibino 40.48 19 *ceP* **P** **18 41 20.3 +1.7**
BILL *e* 18 42 54.2
BILL pmax pmax
comp=Z,18nm,1.3s
BILL MLR MLR
comp=Z,45nm,13.0s
GKN Gorkha 40.80 276 *eP* **P** **18 41 21.1 -0.9**
DANN Dangsing 41.43 277 *eP* **P** **18 41 26.7 -0.6**
comp=Z,37nm,0.9s
PDGK Podgornoye 42.00 300 *i P* **P** **18 41 30.5 -1.1**
PDGK pmax pmax
comp=Z,15nm,1.1s
PYUN Piuthan 42.15 277 *eP* **P** **18 41 32.3 -0.8**
MMRI Maumere 42.18 194 P **P** **18 41 32.6 -0.5**
MMRI IAmb IAmb 18 41 35.0
comp=Z,17nm,0.5s
KURK Kurchatov 42.62 311 P **P** **18 41 34.7 -1.6**
KURK Kurchatov 42.62 311 *ceP* **P** **18 41 35.7 -0.7**
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 42.62 311 P **P** **18 41 35.4 -1.0**
KURK pP **pP** **18 41 50.3 -0.9**
KURBB Kurchatov Arra 42.67 311 P **P** **18 41 35.7 -1.1**
comp=Z,4.9nm,0.7s,baz=98,slow=9.0,SNR=44
comp=Z,4.9nm,0.7s
PSI Prapat 42.94 233 P **P** **18 41 38.8 -0.7**
comp=Z,3.6nm,0.5s,baz=117,slow=11,SNR=3.7
comp=Z,3.6nm,0.5s
PSI Prapat 42.94 233 P **P** **18 41 39.4 -0.1**
PSI pmax pmax
comp=Z,8.0nm,1.1s
RPSI Rantau Prapat 43.02 233 P **P** **18 41 39.4 -0.6**
NRIK Noril'sk 44.17 339 P **P** **18 41 48.1 -0.5**
comp=Z,9.3nm,0.6s,baz=123,slow=8.4,SNR=9.2
NRIK LR LR 19 01 35.3
comp=Z,159nm,18.2s,baz=120,slow=38
comp=Z,9.3nm,0.6s
NRIK Noril'sk 44.17 339 P **P** **18 41 48.1 -0.5**
NRIK IAmb IAmb 18 41 49.3
comp=Z,11nm,0.8s
NRIK Noril'sk 44.17 339 *ceP* **P** **18 41 48.7 +0.1**
NRIK pmax pmax
comp=Z,12nm,0.8s
NRN Naryn 44.76 298 P **P** **18 41 53.8 -0.3**
NRN Naryn 44.76 298 P **P** **18 41 53.8 -0.3**
NRN pmax pmax
comp=Z,5.0nm,0.5s
TKM2 Tokmak 2 44.88 300 P **P** **18 41 54.5 -0.4**
GSI Gunungsitoli 44.95 233 P **P** **18 41 54.3 -1.1**
GSI IAmb IAmb 18 43 00.2
comp=Z,28nm,1.1s
KSH Kashi 45.07 295 P **P** **18 42 00.0 +3.7**
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH LR LR
comp=Z,270nm,20.3s
KSH LR LR
comp=Z,290nm,16.5s
MTN Manton Dam 45.35 181 P **P** **18 41 58.6 +0.2**
MTN IAmb IAmb 18 42 19.4
comp=Z,27nm,1.1s
AAK Ala-Archa 45.72 300 P **P** **18 42 00.7 -0.7**
comp=Z,4.0nm,0.5s,baz=130,slow=5.3,SNR=17
comp=Z,4.0nm,0.5s
AAK Ala-Archa 45.72 300 P **P** **18 42 00.2 -1.2**
AAK Ala-Archa 45.72 300 *ceP* **P** **18 42 01.0 -0.4**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 45.72 300 P **P** **18 42 01.1 -0.4**
AAK sP **sP** **18 42 21.5 -1.6**
OTUK Ortayu 46.71 308 P **P** **18 42 08.3 -0.7**
BRVK Borovoye 47.86 314 P **P** **18 42 16.9 -0.9**
BRVK IAmb IAmb 18 42 17.9
comp=Z,6.5nm,0.7s
BRVK Borovoye 47.86 314 *ceP* **P** **18 42 17.2 -0.6**
BRVK pmax pmax
comp=Z,5.0nm,0.6s
BRVK Borovoye 47.86 314 P **P** **18 42 17.2 -0.6**
BRVK pP **pP** **18 42 33.7 +0.8**
BRVK sP **sP** **18 42 39.2 -0.3**
KNRA Kununurra 48.25 184 P **P** **18 42 21.4 +0.2**
KK31 Karatay Array 48.55 301 P **P** **18 42 23.2 -0.1**
KK31 IAmb IAmb 18 42 46.1
comp=Z,10nm,0.9s
KK31 Karatay Array 48.55 301 P **P** **18 42 23.2 -0.1**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 48.55 301 P **P** **18 42 23.1 -0.2**
KKAR IAmb IAmb 18 42 46.1
comp=Z,10nm,0.9s
KKAR Karatay Array 48.55 301 P **P** **18 42 23.0 -0.3**
KKAR Karatay Array 48.55 301 P **P** **18 42 23.1 -0.2**
KKAR pmax pmax
comp=Z,10.0nm,0.9s
GAR Garm 49.47 296 P **P** **18 42 30.0 -0.6**
CHGR Chuyangaron 50.43 295 P **P** **18 42 37.0 -0.8**
CHGR Chuyangaron 50.43 295 P **P** **18 42 37.0 -0.8**
CHGR pmax pmax
comp=Z,48nm,0.8s
SIMJ Simiganj 50.55 295 P **P** **18 42 38.3 -0.4**
SIMJ pP **pP** **18 42 52.2 -1.8**
CNBA Chernabura Isl 51.84 43 P **P** **18 42 50.2 +2.3**
WB0 Warramunga Arr 52.28 177 P **P** **18 42 52.3 +0.7**
WB0 IAmb IAmb 18 43 14.3
comp=Z,12nm,1.1s
WRAB Tennant Creek 52.44 177 *ceP* **P** **18 42 53.0 +0.2**
WRAB pmax pmax
comp=Z,11nm,1.7s
WRAB Tennant Creek 52.44 177 P **P** **18 42 53.0 +0.2**
WRAB pP **pP** **18 43 07.2 -0.6**
WRAB sP **sP** **18 43 15.4 +1.2**
WRA Warramunga Arr 52.45 177 P **P** **18 42 53.5 +0.6**
comp=Z,2.8nm,0.9s,baz=356,slow=8.2,SNR=25
comp=Z,2.8nm,0.9s
WRA Warramunga Arr 52.45 177 P **P** **18 42 52.4 -0.5**
WRA Warramunga Arr 52.45 177 *i* P **P** **18 42 53.2 +0.3**
WRA pmax pmax
comp=Z,3.0nm,0.9s
WB2 Warramunga Arr 52.45 177 P **P** **18 42 53.5 +0.6**
WB2 IAmb IAmb 18 43 30.1
comp=Z,12nm,1.2s
WR0 Warramunga Arr 52.48 177 P **P** **18 42 53.4 +0.3**
WR0 IAmb IAmb 18 43 16.3
comp=Z,13nm,1.1s
P18K Big Mountain, 53.86 37 P **P** **18 43 03.9 +1.0**
L19K White Mountain 53.87 34 P **P** **18 43 05.3 +2.4**
L19K IAmb IAmb 18 43 33.0
comp=Z,27nm,1.6s
J20K Nowinta River 54.11 31 P **P** **18 43 07.3 +2.7**
J20K IAmb IAmb 18 43 08.3
comp=Z,13nm,0.8s
J20K Nowinta River 54.11 31 P **P** **18 43 07.2 +2.7**
baz=272,SNR=8.2
N19K Bonanza Creek 54.13 35 P **P** **18 43 06.8 +1.9**
K20K Telida 54.18 32 P **P** **18 43 06.8 +1.7**
K20K IAmb IAmb 18 43 29.4
comp=Z,11nm,0.8s
K20K PcP **PcP** **18 44 09.5 +0.6**
K20K Telida 54.18 32 P **P** **18 43 08.0 +2.9**
baz=273,SNR=8.0
IMAR Indian Mountai 54.23 29 P **P** **18 43 07.4 +1.9**
IMAR PcP **PcP** **18 44 10.5 +1.4**
L20K Farewell, AK 54.31 33 P **P** **18 43 09.0 +2.9**
baz=273
G21K Allakaket 54.33 28 P **P** **18 43 08.6 +2.5**
baz=271,SNR=5.9
F21K Alatna River 54.33 28 P **P** **18 43 08.2 +2.0**
baz=270
ARU Arti 54.42 319 P **P** **18 43 05.8 -1.1**
ARU Arti 54.42 319 *d iP* **P** **18 43 05.8 -1.1**
ARU *PP **sP** **18 43 24.5 -4.4**
ARU 18 44 07.2
ARU S **S** **18 50 40.7 -0.3**
ARU SS **SKiKP** **18 54 18.5 +7.1**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU Arti 54.42 319 P **P** **18 43 05.3 -1.7**
ARU sP **sP** **18 43 24.4 -4.4**
H21K Melozitna Rive 54.63 29 P **P** **18 43 10.8 +2.4**
H21K Melozitna Rive 54.63 29 P **P** **18 43 11.1 +2.8**
baz=272
AB31 Akbulak array 54.72 310 P **P** **18 43 07.8 -1.4**
ABKAR Akbulak array 54.72 310 P **P** **18 43 08.7 -0.5**

ABKAR IAmb IAmb 18 43 30.8
comp=Z,8.3nm,0.9s
ABKAR Akbulak array 54.72 310 P **P 18 43 08.4 -0.8**
CHUM Lake Minchumin 54.93 32 P **P 18 43 13.4 +2.9**
baz=274,SNR=5.8
E22K Anaktuvuk Pass 54.96 26 P **P 18 43 12.8 +2.0**
baz=271
I21K Tanana 55.00 30 P **P 18 43 13.5 +2.5**
I21K IAmb IAmb 18 43 14.7
comp=Z,10nm,0.9s
I21K Tanana 55.00 30 P **P 18 43 13.8 +2.8**
baz=273,SNR=7.3
PPLA Purkeypile 55.06 33 P **P 18 43 13.2 +1.5**
PPLA IAmb IAmb 18 43 40.6
comp=Z,13nm,0.8s
PPLA PcP **PcP 18 44 11.8 -0.7**
PPLA Purkeypile 55.06 33 P **P 18 43 14.4 +2.8**
baz=274
CAST Castle Rocks 55.06 32 P **P 18 43 13.0 +1.5**
CAST IAmb IAmb 18 43 35.7
comp=Z,8.4nm,0.8s
CAST Castle Rocks 55.06 32 P **P 18 43 14.2 +2.6**
baz=274
H22K Ishtalitna Cre 55.21 29 P **P 18 43 15.7 +3.2**
baz=273,SNR=7.2
D23K Nanushuk River 55.35 25 P **P 18 43 16.4 +2.9**
baz=272
KDAK Kodiak Island 55.41 39 P **P 18 43 15.5 +1.5**
KDAK Kodiak Island 55.41 39 P **P 18 43 15.5 +1.5**
BPAW Bear Paw Mtn. 55.50 31 P **P 18 43 16.8 +2.2**
BPAW IAmb IAmb 18 43 33.1
comp=Z,8.8nm,1.1s
BPAW Bear Paw Mtn. 55.50 31 P **P 18 43 17.4 +2.8**
baz=275
MLY Manley 55.53 30 P **P 18 43 16.9 +2.0**
MLY IAmb IAmb 18 43 18.4
comp=Z,7.1nm,0.8s
MLY Manley 55.53 30 P **P 18 43 17.6 +2.6**
baz=274,SNR=5.3
KTH Kantishna Hill 55.57 32 P **P 18 43 17.9 +2.7**
COLD Coldfoot 55.61 27 P **P 18 43 17.8 +2.4**
E23K Chandalar 55.78 26 P **P 18 43 19.2 +2.5**
baz=273
TRF Thorofare Moun 55.87 32 P **P 18 43 21.1 +3.7**
SUA Susitna One 55.87 34 P **P 18 43 18.9 +1.5**
H23K Yukon River 55.97 29 P **P 18 43 20.6 +2.6**
H23K Yukon River 55.97 29 P **P 18 43 21.0 +3.1**
baz=275,SNR=17
D24K Happy Valley 56.01 25 P **P 18 43 20.3 +2.1**
baz=273
I23K Minto, Yukon-K 56.10 30 P **P 18 43 21.2 +2.4**
I23K IAmb IAmb 18 43 22.6
comp=Z,28nm,1.7s
AS31 Alice Springs 56.14 178 P **P 18 43 20.3 +0.7**
ASAR Alice Springs 56.14 178 P **P 18 43 20.5 +0.9**
comp=Z,1.5nm,0.7s,baz=11,slow=13,SNR=30
comp=Z,1.5nm,0.7s
ASAR Alice Springs 56.14 178 P **P 18 43 20.0 +0.4**
BWN Browne 56.16 31 P **P 18 43 22.3 +2.9**
E24K Your Creek 56.20 26 P **P 18 43 22.2 +2.5**
baz=274
NEA2 Nenana 56.28 31 P **P 18 43 22.8 +2.6**
NEA2 Nenana 56.28 31 P **P 18 43 22.8 +2.6**
baz=276,SNR=7.9
RC01 Rabbit Creek A 56.40 35 P **P 18 43 22.5 +1.4**
MCK McKinley 56.44 32 P **P 18 43 21.9 +0.5**
MCK IAmb IAmb 18 43 44.6
comp=Z,5.9nm,0.7s
MCK McKinley 56.44 32 P **P 18 43 21.9 +0.5**
MCK pmax pmax
comp=Z,6.0nm,0.7s
MCK McKinley 56.44 32 P **P 18 43 23.5 +2.1**
baz=277
F24K Squaw Lake 56.48 27 P **P 18 43 24.1 +2.5**
baz=275
MDM Murphy Dome 56.60 30 P **P 18 43 24.4 +1.9**
H24K Noodor Dome 56.65 29 P **P 18 43 25.6 +2.8**
H24K IAmb IAmb 18 43 26.2
comp=Z,6.5nm,0.8s
H24K Noodor Dome 56.65 29 P **P 18 43 25.7 +2.8**
baz=276,SNR=6.7
WRH Wood River Hil 56.72 31 P **P 18 43 24.2 +0.9**
WRH IAmb IAmb 18 43 48.0
comp=Z,6.3nm,0.8s
G24K Hadweenzic Riv 56.72 28 P **P 18 43 25.9 +2.6**
baz=276
CCB Clear Creek Bu 56.82 30 P **P 18 43 25.7 +1.8**
D25K Kavik River 56.87 25 P **P 18 43 26.2 +1.8**
baz=275
POKR Poker Plat Res 56.92 30 P **P 18 43 27.1 +2.4**
POKR IAmb IAmb 18 43 28.3
comp=Z,14nm,0.8s
POKR Poker Plat Res 56.92 30 P **P 18 43 27.3 +2.6**
baz=277,SNR=5.9
KNK Knik Glacier 56.97 34 P **P 18 43 26.1 +1.0**
KNK IAmb IAmb 18 43 51.0
comp=Z,14nm,0.9s
KNK Knik Glacier 56.97 34 P **P 18 43 27.4 +2.2**
baz=279
SML Sawmill 56.97 34 P **P 18 43 26.4 +1.2**
SML IAmb IAmb 18 43 50.7
comp=Z,14nm,0.8s
IL31 57.19 30 P **P 18 43 26.9 +0.2**
ILAR Eielson Array 57.19 30 P **P 18 43 27.6 +1.0**
comp=Z,2.7nm,0.7s,baz=268,slow=6.7,SNR=30
ILAR LR LR 19 08 45.6
comp=Z,34nm,18.2s,baz=85,slow=37
comp=Z,2.7nm,0.7s
ILAR Eielson Array 57.19 30 P **P 18 43 27.8 +1.1**
ILAR Eielson Array 57.19 30 P **P 18 43 27.8 +1.1**
HDA Harding Lake 57.22 31 IAmb IAmb 18 43 51.6
comp=Z,13nm,0.8s
HDA Harding Lake 57.22 31 P **P 18 43 28.0 +1.2**
baz=278,SNR=6.0
DHY Denali Highway 57.22 32 P **P 18 43 29.1 +2.0**
DHY IAmb IAmb 18 43 52.5
comp=Z,9.4nm,0.8s
G25K Bearman Lake 57.25 28 P **P 18 43 30.1 +3.0**
baz=277
F25K Christian Rive 57.33 27 P **P 18 43 30.6 +3.0**
baz=277
H25K Birch Creek 57.43 28 P **P 18 43 31.3 +3.0**
baz=278
PRP Porcupine Dome 57.66 29 P **P 18 43 31.5 +1.4**
PRP IAmb IAmb 18 43 33.3
comp=Z,5.8nm,0.8s
PRP Porcupine Dome 57.66 29 P **P 18 43 32.4 +2.3**
baz=279,SNR=6.9
BMAR Burnt Mountain 57.75 27 P **P 18 43 31.2 +0.6**
C27K Jago River 57.77 24 P **P 18 43 32.9 +2.3**
baz=278
F26K Sheenjek River 57.88 27 P **P 18 43 34.4 +2.9**
baz=278,SNR=5.6
G26K Porcupine Rive 58.13 27 P **P 18 43 36.1 +2.9**
baz=279,SNR=5.4
SCRK Sand Creek 58.57 31 IAmb IAmb 18 43 39.0
comp=Z,10nm,1.0s
SCRK Sand Creek 58.57 31 P **P 18 43 38.0 +1.5**
baz=281,SNR=8.6
J26L Joseph Creek 58.65 30 P **P 18 43 38.0 +1.0**
J26L Joseph Creek 58.65 30 P **P 18 43 38.6 +1.7**
baz=281
I26K Coal Creek Min 58.67 29 IAmb IAmb 18 44 05.8
comp=Z,6.3nm,0.9s
I26K Coal Creek Min 58.67 29 P **P 18 43 38.4 +1.4**
baz=281
MENT Mentasta 58.89 32 IAmb IAmb 18 44 05.1
comp=Z,12nm,1.0s
GEYT Alibeck 58.97 298 P **P 18 43 39.1 -0.4**
comp=Z,2.3nm,0.7s,baz=72,slow=4.8,SNR=5.9
comp=Z,2.3nm,0.7s
L26K Log Cabin Wild 59.03 32 P **P 18 43 42.0 +2.4**
baz=282
H27K Steamboat Mou 59.15 28 P **P 18 43 43.2 +2.8**
baz=282,SNR=6.1
I27K Kandik River 59.24 29 P **P 18 43 44.1 +3.1**
baz=282,SNR=8.0
M26K Nabesna, AK 59.33 33 IAmb IAmb 18 43 45.2
comp=Z,11nm,0.9s
M26K Nabesna, AK 59.33 33 P **P 18 43 44.1 +2.4**
baz=283,SNR=10
L27K Beaver Creek, 59.70 32 IAmb IAmb 18 44 11.0
comp=Z,8.1nm,0.9s
L27K Beaver Creek, 59.70 32 P **P 18 43 46.8 +2.5**
baz=283,SNR=7.4
M27K Edge Creek, AK 59.84 33 P **P 18 43 47.3 +2.0**
M27K IAmb IAmb 18 44 11.4
comp=Z,9.6nm,0.9s
M27K Edge Creek, AK 59.84 33 P **P 18 43 47.6 +2.3**
baz=284
DAWY Dawson 60.52 30 P **P 18 43 51.7 +1.9**
baz=285
I29M Ogilvie Camp, 60.64 29 IAmb IAmb 18 43 53.9
comp=Z,8.6nm,1.0s
I29M Ogilvie Camp, 60.64 29 P **P 18 43 53.1 +2.5**
baz=285
EPYK Eagle Plains 61.01 27 P **P 18 43 55.2 +2.1**
baz=286,SNR=8.1
G30M tAoh Zraii Nji 61.03 27 P **P 18 43 55.2 +2.0**
baz=286,SNR=11
L29M L29M 61.32 31 P **P 18 43 58.4 +3.1**
baz=286,SNR=11
M29M Somme Creek 61.36 32 P **P 18 43 58.5 +2.9**
baz=286,SNR=6.6
K29M Barlow Dome 61.38 30 P **P 18 43 58.6 +2.9**
baz=286,SNR=5.9
INK Inuvik 61.64 25 P **P 18 43 58.9 +1.7**
comp=Z,8.2nm,0.9s,baz=304,slow=7.2,SNR=13
comp=Z,8.2nm,0.9s
INK Inuvik 61.64 25 P **P 18 43 58.7 +1.5**
INK IAmb IAmb 18 43 59.9
comp=Z,15nm,1.1s
INK Inuvik 61.64 25 P **P 18 43 58.7 +1.5**
INK pmax pmax
comp=Z,15nm,1.1s
INK Inuvik 61.64 25 P **P 18 43 59.0 +1.7**
baz=287
M30M Minto, Yukon 62.06 32 IAmb IAmb 18 44 03.6
comp=Z,6.2nm,0.8s
M30M Minto, Yukon 62.06 32 P **P 18 44 03.1 +2.8**
baz=288
HYT Haines Junctio 62.27 34 P **P 18 44 04.6 +2.8**
baz=288,SNR=6.1
P30M Million Dollar 62.75 34 P **P 18 44 08.1 +3.2**
baz=289
N31M Braeburn, Yuko 62.86 33 P **P 18 44 08.5 +3.0**
baz=289,SNR=5.5
KLMR Klimovskoe 63.11 327 *e*P **P 18 44 08.9 +1.8**
KLMR pmax pmax
comp=Z,13nm,1.5s
KLMR Klimovskoe 63.11 327 *e*P **P 18 44 08.9 +1.8**
KLMR AMP 18 44 15.8
comp=Z,13nm,1.5s
M31M Drury Creek, Y 63.24 32 IAmb IAmb 18 44 11.1
comp=Z,7.1nm,0.8s
M31M Drury Creek, Y 63.24 32 P **P 18 44 10.7 +2.7**
baz=290,SNR=5.1
PLBC Pleasant Camp 63.25 35 P **P 18 44 11.3 +3.2**
baz=290
WHY Whitehorse 63.55 33 P **P 18 44 11.9 +1.7**
WHY IAmb IAmb 18 44 13.9
comp=Z,13nm,0.9s
WHY Whitehorse 63.55 33 P **P 18 44 13.1 +2.9**
baz=290
FARO Faro, Yukon 63.69 31 P **P 18 44 13.7 +2.7**
baz=290,SNR=16
MMPY Sheldon Lake, 64.45 31 P **P 18 44 19.0 +2.9**
baz=292,SNR=6.1
C36M Paulatuk 64.46 22 P **P 18 44 17.5 +1.6**
baz=295
P33M Teslin, Yukon 64.66 33 P **P 18 44 20.4 +2.9**
baz=292,SNR=7.8
ALE Alert 64.75 2 P **P 18 44 18.6 +0.9**
STKA Stephens Creek 64.93 171 P **P 18 44 18.8 -0.6**
comp=Z,2.0nm,0.7s,baz=352,slow=5.4,SNR=4.5
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 65.14 338 P **P 18 44 19.6 -0.7**
comp=Z,3.8nm,0.8s,baz=61,slow=8.2,SNR=11
ARCES LR LR 19 17 06.3
comp=Z,140nm,18.2s,baz=102,slow=40
comp=Z,3.8nm,0.8s
AKT Akhty 65.20 305 *e*P **P 18 44 20.6 -0.8**
AKT *e**PP **pP 18 44 37.1 0.0**
AKT *e* 18 44 52.9
AKT *e* 18 46 43.2
AKT pmax pmax
comp=Z,15nm,0.7s
TGTN Hyland Airport 66.18 31 P **P 18 44 29.9 +2.7**
baz=295,SNR=13
OBN Obninsk 66.69 321⇑ *e*P **P 18 44 29.9 -0.6**
OBN *e* 18 44 58.8
OBN *e* 18 47 05.8
OBN pmax pmax
comp=Z,5.0nm,1.1s
OBN MLR MLR
comp=Z,155nm,16.0s
WRGLY Wrigley 67.43 28 P **P 18 44 37.4 +2.3**
baz=298
KBZ Khabaz 67.58 308 P **P 18 44 36.1 -0.2**
comp=Z,5.8nm,0.7s,baz=141,slow=1.7,SNR=17
comp=Z,5.8nm,0.7s
KBZ Khabaz 67.58 308 *ce*P **P 18 44 36.0 -0.3**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 67.63 309 *e*P **P 18 44 35.7 -1.1**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,105nm,17.0s
SHA1 Shidzhatmaz 67.74 308 *i* P **P 18 44 36.7 -1.0**
RES Resolute Bay 68.54 12 LR LR 19 16 26.3
comp=Z,39nm,19.4s,baz=8.5,slow=37
RES Resolute Bay 68.54 12 P **P 18 44 42.2 +0.4**
RES IAmb IAmb 18 44 43.7
comp=Z,10nm,0.8s
RES Resolute Bay 68.54 12 P **P 18 44 42.2 +0.4**
RES pmax pmax
comp=Z,10.0nm,0.9s
FINES FINESS Array B 68.79 330 P **P 18 44 42.1 -1.5**
comp=Z,1.6nm,0.4s,baz=74,slow=6.0,SNR=22
comp=Z,1.6nm,0.4s
VSU Vasula 69.99 327 *i* P **P 18 44 50.7 -0.4**
VSU pmax pmax
comp=Z,46nm,1.1s
YKA Yellowknife Ar 71.27 27 P **P 18 45 00.4 +1.6**
comp=Z,6.3nm,0.8s,baz=301,slow=6.0,SNR=15
comp=Z,6.3nm,0.8s
MNK Minsk 71.44 323 *i* P **P 18 44 57.4 -2.6**
MNK *i* *PP **pP 18 45 16.1 +0.2**
MNK *i* 18 47 36.3
MNK *i* PPP PPP 18 49 20.0
MNK *i* S **S 18 54 10.7 -3.1**
MNK *i* *SS **sS 18 54 43.0 +2.4**
MNK *i* 18 54 55.7
MNK *i* SS **SS 18 58 47.4 -1.2**
MNK pmax pmax
comp=N,17nm,0.7s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,3.0nm,0.8s
MNK MLR MLR
comp=N,132nm,14.0s
MNK MLR MLR
comp=Z,50nm,11.0s
MNK MLR MLR
comp=E,22nm,16.0s
MNK Minsk 71.44 323 *i* P **P 18 44 57.4 -2.6**
comp=E,2.0nm,0.9s
MNK *i* P **P 18 44 57.4 -2.6**
comp=N,17nm,0.7s
MNK *i* P **P 18 44 57.4 -2.6**
comp=Z,3.0nm,0.8s,baz=240
MNK *i* pP **pP 18 45 16.1 +0.2**
MNK *i* PP **PP 18 47 36.4 -2.2**
MNK *i* PPP PPP 18 49 20.1
MNK *i* S **S 18 54 10.8 -3.1**
MNK *i* sS **sS 18 54 43.1 +2.4**
MNK *i* SS **SS 18 58 47.5 -1.2**
MNK *i* SSS SSS 19 02 09.1
MNK *i* LR LR 19 16 60.0
MNK *i* LRM MLR 19 18 59.6
comp=N,132nm,14.2s
MNK *i* LRM MLR 19 19 06.1
comp=Z,50nm,10.9s
MNK *i* LRM MLR 19 19 24.8
comp=E,22nm,16.1s
NACGM Naroch 71.79 324 *e*P **P 18 45 00.7 -1.3**
baz=59
MARD Mardin 71.84 303 P **P 18 45 03.1 +0.3**
MARD IAmb IAmb 18 45 25.7
comp=Z,15nm,1.0s
AKASG Malin Array Be 72.67 319 P **P 18 45 05.8 -1.6**
comp=Z,1.0nm,0.4s,baz=55,slow=6.6,SNR=10
comp=Z,1.0nm,0.4s
WAPA Wapiti River 73.43 34 P **P 18 45 12.8 +0.9**
SUMG Summit 74.74 357 *i* P **P 18 45 19.0 -0.7**
RAYN Ar Rayn 74.81 288 P **P 18 45 19.5 -1.0**
RAYN Ar Rayn 74.81 288 P **P 18 45 19.5 -1.0**
RAYN pmax pmax
comp=Z,9.0nm,1.3s
NB2 NORSAR Subarra 74.87 334 P **P 18 45 18.4 -1.8**
comp=Z,0.9nm,0.7s,baz=50,slow=5.9
NOA NORSAR Array B 74.87 334 P **P 18 45 18.5 -1.6**
comp=Z,0.4nm,0.5s,baz=47,slow=5.5,SNR=2.1
comp=Z,0.4nm,0.5s
BR131 Keskin Array S 75.57 308 P **P 18 45 23.3 -1.4**
BR131 IAmb IAmb 18 45 24.8
comp=Z,10nm,0.8s
BR131 Keskin Array S 75.57 308 P **P 18 45 23.3 -1.4**
BR131 pmax pmax
comp=Z,10.0nm,0.9s
BRTR Keskin Array B 75.57 308 P **P 18 45 24.0 -0.7**
comp=Z,4.7nm,0.8s,baz=88,slow=5.5,SNR=20
comp=Z,4.7nm,0.8s
BRTR Keskin Array B 75.57 308 P **P 18 45 23.3 -1.4**
B08A Colville Reser 77.26 40 IAmb IAmb 18 45 36.8
comp=Z,10nm,1.1s
NEW Newport 78.51 40 P **P 18 45 43.0 +2.1**
baz=307
PINE Pine Mountain 78.96 45 **P 18 45 45.2 +1.5**
PINE IAmb IAmb 18 46 06.5
comp=Z,13nm,1.1s
E09A Wood Farm, Sta 78.99 41 IAmb IAmb 18 46 04.5
comp=Z,17nm,1.6s
ELL Elmali 79.63 307 P **P 18 45 44.3 -3.1**
ELL Elmali 79.63 307 P **P 18 45 44.3 -3.1**
ELL pmax pmax
comp=Z,30nm,0.6s
CLL Collm 80.59 326⇑ *i*P **P 18 45 51.1 -1.0**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 80.59 326 LmV 19 22 00.0
comp=Z,100nm,21.7s
CLL Collm 80.59 326⇑ *i*P **P 18 45 51.1 -1.0**
comp=Z,5.0nm,0.9s
CLL Collm 80.59 326 *e*PcP **PcP 18 45 58.0 -0.8**
CLL Collm 80.59 326 *i* pPcP 18 46 12.8
GERES GERESS Array B 81.89 324 P **P 18 45 58.4 -0.8**
comp=Z,0.6nm,0.7s,baz=70,slow=4.4,SNR=4.7
comp=Z,0.6nm,0.7s
HLID Hailey 82.88 42 P **P 18 46 07.0 +2.4**
baz=309
KVN Kaiserville 83.47 47 P **P 18 46 09.3 +1.6**
KVN IAmb IAmb 18 46 10.8
comp=Z,13nm,1.5s
KVN Kaiserville 83.47 47 P **P 18 46 09.3 +1.6**
KVN pmax pmax
comp=Z,13nm,1.5s
NVAR Mina Array Bea 83.72 48 P **P 18 46 10.6 +1.6**
comp=Z,1.3nm,0.6s,baz=302,slow=5.3,SNR=12
comp=Z,1.3nm,0.6s
RLMT Red Lodge 84.68 39 P **P 18 46 16.0 +2.2**
baz=312
LCH Last Change Ra 84.86 49 P **P 18 46 16.5 +1.8**
R11A Troy Canyon, C 85.46 47 P **P 18 46 19.7 +1.9**
baz=309
TPNV Topopah Spring 85.91 48 IAmb IAmb 18 46 39.2
comp=Z,8.9nm,1.3s
TPNV Topopah Spring 85.91 48 P **P 18 46 22.1 +2.0**
baz=308
PDAR Pinedale Array 86.10 40 P **P 18 46 21.6 +0.6**
comp=Z,0.7nm,0.8s,baz=270,slow=0.4,SNR=6.2
comp=Z,0.7nm,0.8s
GWY Greenwater Val 86.12 49 P **P 18 46 21.8 +0.7**
GWY IAmb IAmb 18 46 39.9
comp=Z,11nm,1.5s
ULM Lac du Bonnet 87.17 28 P **P 18 46 26.4 +0.7**
comp=Z,7.0nm,0.8s,baz=281,slow=2.5,SNR=4.4
comp=Z,7.0nm,0.8s
P17A Butcher Ranch, 87.63 43 P **P 18 46 28.7 +0.4**
P17A IAmb IAmb 18 46 31.5
comp=Z,5.8nm,1.0s
P18A Preston Nutter 87.81 43 IAmb IAmb 18 46 32.7
comp=Z,9.0nm,1.2s
PV13 Radium Mtn., P 89.62 43 P **P 18 46 39.4 +1.6**
TXAR Lajitas Array 98.82 47 P **P 18 47 20.9 +1.0**
comp=Z,0.2nm,0.6s,baz=274,slow=3.5,SNR=2.7
comp=Z,0.2nm,0.6s
H03N2 Juan Fernandez 154.19 100 T T 21 47 05.0
baz=281,slow=75,SNR=5.5
H03N3 Juan Fernandez 154.20 100 T T 21 47 06.4
baz=281,slow=75,SNR=5.7
H03N1 Juan Fernandez 154.21 100 T T 21 47 02.9
baz=281,slow=75,SNR=6.3
LPAZ La Paz 155.55 53 PKPbc PKPdf 18 53 44.7 +10
comp=Z,0.4nm,0.4s,baz=50,slow=4.9,SNR=4.0

MAN 21 18:36:50.3, 9°.31N×123°.18E, h4km, mb3.9, ML2.7, MS2.2, 3C-8D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSIP	**Lazi, Siquijor**	**0.48**	**112**	⇓	*i*P	Pg	18 36 59.7	+0.2
CNOP	**Candoni, Negro**	**0.74**	**314**	⇓	*e*P	Pg	18 37 04.0	-0.5
CNOP					*i* S	Sb	18 37 15.5	-0.7
TBP	**Tagbilaran**	**0.77**	**61**	⇓	*i*P	Pg	18 37 05.4	+0.2
TBP					*i* S	Sb	18 37 17.4	+0.2
GHBP	**Garcia Hernand**	**1.17**	**74**	⇑	*i*P	Pg	18 37 12.2	-0.6
GHBP					*i* S	Sg	18 37 25.2	-2.7
LLP	**Lapu-Lapu**	**1.27**	**38**	⇓	*i*P	Pg	18 37 14.0	-0.6
LLP					*i* S	Sb	18 37 31.8	+0.4
TABP	**Talibon, Bohol**	**1.38**	**56**	⇓	*i*P	Pn	18 37 15.2	-1.1
TABP					*i* S	Sn	18 37 35.0	0.0
GUIM	**Jordan**	**1.43**	**336**	⇑	*e*P	Pn	18 37 16.5	-0.5
GUIM					*e*S	Sb	18 37 36.0	-0.2
PAGZ	**Pagadian**	**1.47**	**172**	⇓	*i*P	Pn	18 37 16.4	-1.1
PAGZ					*i* S	Sg	18 37 37.6	+0.2
CGP	**Cagayan de Oro**	**1.72**	**119**	⇓	*e*P	Pn	18 37 09.6	-11
CGP					*e*S	Sb	18 37 44.2	-0.3
RCP	**Roxas**	**2.28**	**349**	⇓	*e*P	Pn	18 37 30.0	+1.3
RCP					*e*S	Sb	18 38 00.3	-0.2
CTBH	**Cotabato--PC H**	**2.33**	**153**	⇑	*i*P	Pn	18 37 29.8	+0.4

MAN 21 18:38:27.6, 9°.29N×123°.16E, h3km, mb4.1, ML2.9, MS2.5, 4C-7D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSIP	**Lazi, Siquijor**	**0.49**	**108**	⇑	*i*P	Pg	18 38 37.4	+0.5
LSIP					*i* S	Sb	18 38 45.9	-0.4
CNOP	**Candoni, Negro**	**0.75**	**316**	⇓	*e*P	Pg	18 38 41.7	-0.2
CNOP					*e*S	Sb	18 38 53.1	-0.8
TBP	**Tagbilaran**	**0.80**	**60**	⇑	*e*P	Pg	18 38 43.2	+0.4
TBP					*i* S	Sb	18 38 55.1	-0.2
GHBP	**Garcia Hernand**	**1.19**	**73**	⇑	*e*P	Pg	18 38 50.3	-0.1
GHBP					*i* S	Sg	18 39 06.0	+0.1
LLP	**Lapu-Lapu**	**1.29**	**38**	⇓	*i*P	Pg	18 38 51.5	-0.9
LLP					*i* S	Sb	18 39 09.6	0.0
TABP	**Talibon, Bohol**	**1.40**	**55**	⇓	*i*P	Pn	18 38 53.1	-1.0
TABP					*i* S	Sb	18 39 12.8	+0.1
PAGZ	**Pagadian**	**1.45**	**171**	⇑	*e*P	Pn	18 38 54.4	-0.3
PAGZ					*i* S	Sb	18 39 13.7	-0.3
GUIM	**Jordan**	**1.45**	**337**	⇓	*e*P	Pn	18 38 54.0	-0.7
GUIM					*e*S	Sn	18 39 16.0	+1.8
CGP	**Cagayan de Oro**	**1.72**	**119**	⇓	*e*P	Pg	18 39 01.5	+0.8
CGP					*e*S	Sg	18 39 24.5	+1.5
MSLP	**Maasin**	**1.87**	**63**	⇓	*e*P	Pg	18 39 03.3	-0.2
MSLP					*e*S	Sg	18 39 31.1	+3.3
RCP	**Roxas**	**2.30**	**350**	⇓	*e*P	Pn	18 39 05.9	-0.5
RCP					*e*S	Sb	18 39 39.2	+0.7

*IDC **21** 18:38:32.3±0.6, 17°.23S×66°.42E, h0km, mb4.1/13, mbtmp4.1/14, ML4.4/1, MS4.1/53, Error ellipse: s-maj=19.5km s-min=17.8km az=124.0*
*NEIC **21** 18:38:34.1±2.3, 17°.4S±0°.1×66°.25E±0°.09, h13km±4km, mb4.5/26, Error ellipse: s-maj=16.1km s-min=11.3km az=152.0*
*GCMT **21** 18:38:40.1±0.1, 17°.19S±0°.01×66°.30E±0°.01, h23km, MW5.2/138, Moment Tensor Solution. s84, c117; s138, c234; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.10±.02; $M_{\theta\theta}$-0.71±.01; $M_{\phi\phi}$0.80±.02; $M_{r\theta}$-0.12±.02; $M_{\theta\phi}$0.35±.01; $M_{\phi r}$-0.07±.02; Best double*

couple: $M_0$0.84300×10^{17} NP1:ϕ_s57.00000°, δ88.00000°, λ-10.00000°. NP2:ϕ_s147.00000°, δ80.00000°, λ-178.00000°. Principal axes: T 0.8890, Plg5.0000°, Azm103.0000°; N -0.0930, Plg80.0000°, Azm226.0000°; P -0.7960, Plg8.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 21 18:38:33.4±0.4, 17°.35S±0°.08×66°.24E±0°.07, h10km, n97, σ1§63/51, mb4.4/21, MS4.2/55, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**3.62**	**228**	Pn	**Pn**	**18 39 29.3**	**-0.3**
ROCAM				Sn	**Sn**	**18 40 10.5**	**-1.9**
RER	**Riviere de l'E**	**10.61**	**247**	Pn	**Pn**	**18 41 04.8**	**-0.8**
RER					**Sn**	**18 43 00.5**	**-4.1**
H08S1	**Diego Garcia H**	**11.40**	**33**	T	T	18 52 52.2	
	baz=211,slow=76,SNR=1532						
H08S2	**Diego Garcia H**	**11.41**	**33**	T	T	18 52 53.0	
	baz=211,slow=76,SNR=1201						
H08S3	**Diego Garcia H**	**11.43**	**33**	T	T	18 52 56.9	
	baz=211,slow=76,SNR=2770						
MSEY	**Mahe Island**	**16.43**	**319**		**P**	**18 42 30.1**	**+3.0**
ABPO	**Ambohimpanom**	**18.14**	**262**	P	**P**	**18 42 47.6**	**+1.5**
ABPO				IAmb	IAmb	18 43 05.1	
	comp=Z,36nm,1.4s						
OPO	**Ambohidratompo**	**18.16**	**263**	P	**P**	**18 42 48.4**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=89,slow=9.5,SNR=15						
OPO				S	**Sn**	**18 46 03.6**	**-5.5**
	comp=Z,2.0nm,0.6s,baz=109,slow=22,SNR=2.1						
	comp=Z,10nm,0.6s						
PALK	**Pallekele**	**28.34**	**31**	LR	LR	18 51 53.6	
	comp=Z,144nm,19.8s,baz=313,slow=28						
KMBO	**Kilima Mbogo**	**32.75**	**296**	LR	LR	18 55 50.1	
	comp=Z,23nm,21.2s,baz=32,slow=32						
KMBO	**Kilima Mbogo**	**32.75**	**296**	P	**P**	**18 45 07.0**	**-0.1**
KMBO				IAmb	IAmb	18 45 14.4	
	comp=Z,7.0nm,1.1s						
LSZ	**Lusaka**	**36.54**	**268**	LR	LR	18 58 17.2	
	comp=Z,351nm,20.9s,baz=116,slow=32						
LODK	**Lodwar**	**36.80**	**301**	P	**P**	**18 45 43.5**	**+1.6**
ATD	**Arta Tunnel**	**36.85**	**320**	LR	LR	18 58 14.9	
	comp=Z,422nm,21.8s,baz=142,slow=32						
LBTB	**Lobatse**	**38.54**	**252**	P	**P**	**18 45 59.1**	**+2.5**
	comp=Z,8.7nm,0.9s,baz=91,slow=8.6,SNR=8.5						
LBTB				LR	LR	18 58 58.2	
	comp=Z,504nm,19.7s,baz=90,slow=32						
	comp=Z,8.7nm,0.9s						
LBTB	**Lobatse**	**38.54**	**252**	P	**P**	**18 45 57.5**	**+0.9**
LBTB				IAmb	IAmb	18 46 00.6	
	comp=Z,21nm,1.3s						
MBAR	**Mbarara**	**38.69**	**292**	LR	LR	18 59 51.9	
	comp=Z,707nm,19.1s,baz=101,slow=33						
BOSA	**Boshof**	**39.18**	**246**	LR	LR	18 59 11.7	
	comp=Z,362nm,19.1s,baz=93,slow=32						
WSAR	**Wadi Sarin**	**41.02**	**349**	LR	LR	19 00 44.4	
	comp=Z,146nm,18.7s,baz=186,slow=32						
H01W3	**Cape Leeuwin H**	**45.96**	**122**	T	T	19 35 50.5	
	baz=280,slow=75,SNR=340						
H01W2	**Cape Leeuwin H**	**45.96**	**122**	T	T	19 35 50.6	
	baz=280,slow=75,SNR=369						
H01W1	**Cape Leeuwin H**	**45.98**	**122**	T	T	19 35 51.7	
	baz=280,slow=75,SNR=358						
TSUM	**Tsumeb**	**46.12**	**260**	LR	LR	19 04 36.8	
	comp=Z,245nm,18.2s,baz=90,slow=34						
BRDH	**Bariadhala**	**46.91**	**33**	LR	LR	19 06 48.2	
	comp=Z,165nm,18.8s,baz=208,slow=36						
CMAR	**Chiang Mai Arr**	**47.97**	**44**	P	**P**	**18 47 12.1**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=238,slow=9.1,SNR=6.6						
CMAR				LR	LR	19 05 10.8	
	comp=Z,136nm,19.0s,baz=230,slow=34						
	comp=Z,1.3nm,1.0s						
NWAO	**Narrogin (SRO)**	**48.25**	**119**	LR	LR	19 02 52.3	
	comp=Z,254nm,20.7s,baz=144,slow=30						
SBUM	**Sibu**	**49.42**	**71**	P	**P**	**18 47 23.9**	**0.0**
SBUM				IAmb	IAmb	18 47 26.9	
	comp=Z,4.7nm,1.2s						
MAW	**Mawson**	**50.27**	**182**	P	**P**	**18 47 32.2**	**+2.6**
	comp=Z,4.8nm,0.8s,baz=343,slow=10,SNR=7.1						
MAW				LR	LR	19 03 28.3	
	comp=Z,250nm,21.8s,baz=4.5,slow=30						
	comp=Z,4.8nm,0.8s						
MAW	**Mawson**	**50.27**	**182**	P	**P**	**18 47 28.9**	**-0.7**
PSA00	**Pilbara Seismi**	**50.52**	**104**	P	**P**	**18 47 30.8**	**-1.5**
PSA00				IAmb	IAmb	18 47 33.4	
	comp=Z,13nm,1.4s						
PSA00	**Pilbara Seismi**	**50.52**	**104**	P	**P**	**18 47 31.1**	**-1.1**
PSA00				IAmb	IAmb	18 47 33.5	
	comp=Z,23nm,1.2s						
KAPI	**Kappang**	**53.74**	**83**	LR	LR	19 07 26.6	
	comp=Z,232nm,22.0s,baz=246,slow=32						
EIL	**Elat**	**55.64**	**327**	LR	LR	19 08 37.8	
	comp=Z,336nm,19.8s,baz=88,slow=32						
BATI	**Baumata**	**56.06**	**91**	LR	LR	19 07 27.3	
	comp=Z,134nm,20.0s,baz=267,slow=31						
TOLI2	**Tolitoli**	**56.76**	**77**	P	**P**	**18 48 15.8**	**-2.3**
TOLI2				IAmb	IAmb	18 48 19.0	
	comp=Z,12nm,1.1s						
MMAI	**Mount Meron Ar**	**58.11**	**330**	LR	LR	19 11 00.9	
	comp=Z,138nm,20.8s,baz=154,slow=34						
KNRA	**Kununurra**	**59.73**	**98**	P	**P**	**18 48 37.9**	**-1.0**
AAK	**Ala-Archa**	**60.17**	**7**	LR	LR	19 11 29.3	
	comp=Z,174nm,19.2s,baz=183,slow=33						
KKAR	**Karatay Array**	**60.28**	**4**	P	**P**	**18 48 42.4**	**+0.3**
KKAR	**Karatay Array**	**60.28**	**4**	P	**P**	**18 48 42.8**	**+0.6**
KKAR				IAmb	IAmb	18 49 21.3	
	comp=Z,5.6nm,1.5s						
HKPS	**Hong Kong Po S**	**61.23**	**52**	P	**P**	**18 48 50.8**	**+1.8**
MTN	**Manton Dam**	**62.57**	**96**	P	**P**	**18 48 57.5**	**-0.6**
ASAR	**Alice Springs**	**63.19**	**108**	P	**P**	**18 49 01.3**	**-0.9**
	comp=Z,3.5nm,0.9s,baz=268,slow=5.8,SNR=24						
ASAR				LR	LR	19 12 13.6	
	comp=Z,708nm,21.9s,baz=273,slow=32						
	comp=Z,3.5nm,0.9s						
ASAR	**Alice Springs**	**63.19**	**108**	P	**P**	**18 49 01.2**	**-1.1**
AS31	**Alice Springs**	**63.19**	**108**	P	**P**	**18 49 01.5**	**-0.7**
DAV	**Davao City (W)**	**63.44**	**73**	LR	LR	19 14 27.2	
	comp=Z,190nm,21.2s,baz=242,slow=34						
WRA	**Warramunga Arr**	**64.18**	**104**	P	**P**	**18 49 08.3**	**-0.6**
	comp=Z,6.9nm,1.0s,baz=264,slow=6.6,SNR=26						
WRA				LR	LR	19 13 14.8	
	comp=Z,182nm,22.0s,baz=254,slow=32						
	comp=Z,6.9nm,1.0s						
WRA	**Warramunga Arr**	**64.18**	**104**	P	**P**	**18 49 08.2**	**-0.6**
WB2	**Warramunga Arr**	**64.19**	**104**	P	**P**	**18 49 08.7**	**-0.2**
WB0	**Warramunga Arr**	**64.26**	**104**	P	**P**	**18 49 08.9**	**-0.5**
MK31	**Makanchi Array**	**65.47**	**12**	P	**P**	**18 49 15.9**	**-0.7**
MK31				IAmb	IAmb	18 49 52.7	
	comp=Z,4.3nm,1.4s						
MKAR	**Makanchi Array**	**65.47**	**12**	P	**P**	**18 49 16.8**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=179,slow=4.9,SNR=5.8						
MKAR				LR	LR	19 14 31.9	
	comp=Z,99nm,19.2s,baz=193,slow=33						
	comp=Z,1.1nm,0.9s						
MKAR	**Makanchi Array**	**65.47**	**12**	P	**P**	**18 49 15.6**	**-0.9**
KNMB	**Chin-men Tao**	**65.67**	**52**	P	**P**	**18 49 15.8**	**-2.5**
SIJI	**Sorong**	**65.94**	**83**	LR	LR	19 14 15.3	
	comp=Z,40nm,20.3s,baz=224,slow=33						
ABKAR	**Akbulak array**	**66.54**	**356**	P	**P**	**18 49 23.0**	**-0.4**
ABKAR				IAmb	IAmb	18 49 35.7	
	comp=Z,3.4nm,1.1s						
ABKAR	**Akbulak array**	**66.54**	**356**	P	**P**	**18 49 22.5**	**-0.9**
SNAA	**Sanae**	**67.10**	**199**	P	**P**	**18 49 28.2**	**+1.4**
SNAA	**Sanae**	**67.10**	**199**	LR	LR	19 11 36.3	
	comp=Z,155nm,21.0s,baz=14,slow=30						
VNA2	**Neumayer--Watz**	**68.38**	**200**	P	**P**	**18 49 37.2**	**+2.3**
	baz=89,slow=6.0						
KURBB	**Kurchatov Arra**	**68.54**	**8**	LR	LR	19 18 41.0	
	comp=Z,133nm,18.4s,baz=170,slow=35						
STKA	**Stephens Creek**	**68.83**	**118**	LR	LR	19 16 10.3	
	comp=Z,127nm,19.7s,baz=237,slow=33						
VNA3	**Neumayer Olymp**	**69.16**	**200**	P	**P**	**18 49 41.8**	**+2.1**
BVAR	**Borovoye Array**	**70.17**	**3**	LR	LR	19 19 39.9	
	comp=Z,126nm,19.2s,baz=187,slow=35						
TORD	**Torodi Ar. Bea**	**70.56**	**291**	P	**P**	**18 49 49.8**	**+0.6**
	comp=Z,1.8nm,1.2s,baz=104,slow=6.3,SNR=5.7						
TORD				LR	LR	19 19 00.1	
	comp=Z,174nm,19.9s,baz=208,slow=34						
	comp=Z,1.8nm,1.2s						
QSPA	**South Pole Qui**	**72.74**	**180**	P	**P**	**18 50 03.1**	**+1.4**
	comp=Z,3.5nm,0.9s,baz=257,slow=1.6,SNR=8.5						
QSPA				LR	LR	19 17 04.7	
	comp=Z,144nm,21.5s,baz=286,slow=32						
	comp=Z,3.5nm,0.9s						
QSPA	**South Pole Qui**	**72.74**	**180**	P	**P**	**18 50 02.7**	**+1.0**
QSPA				IAmb	IAmb	18 50 22.3	
	comp=Z,7.6nm,1.1s						
ZAA0	**Zalesovo Array**	**72.78**	**11**	P	**P**	**18 50 01.2**	**-0.5**
ZAA0				IAmb	IAmb	18 50 16.5	
	comp=Z,3.2nm,0.9s						
ZALV	**Zalesovo Beam**	**72.78**	**11**	P	**P**	**18 50 01.3**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=242,slow=3.2,SNR=5.6						
ZALV				LR	LR	19 19 30.3	
	comp=Z,129nm,20.4s,baz=206,slow=34						
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**72.78**	**11**	P	**P**	**18 50 00.7**	**-1.0**
ARU	**Arti**	**73.78**	**356**	LR	LR	19 20 29.9	
	comp=Z,126nm,19.0s,baz=164,slow=34						
DBIC	**Dimbokro**	**74.15**	**282**	LR	LR	19 21 25.7	
	comp=Z,243nm,20.1s,baz=86,slow=35						
SONM	**Songino Array**	**74.17**	**27**	P	**P**	**18 50 10.6**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=206,slow=7.0,SNR=6.6						
SONM				LR	LR	19 21 17.1	
	comp=Z,120nm,21.3s,baz=220,slow=35						
	comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**74.17**	**27**	P	**P**	**18 50 10.2**	**-0.1**
VNDA	**Vanda**	**74.40**	**167**	P	**P**	**18 50 11.7**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=306,slow=5.2,SNR=4.3						
VNDA				LR	LR	19 19 10.2	
	comp=Z,213nm,19.5s,baz=260,slow=33						
	comp=Z,1.1nm,1.1s						
JOW	**Kunigami**	**74.51**	**55**	LR	LR	19 20 25.8	
	comp=Z,60nm,19.1s,baz=180,slow=34						
CTA	**Charters Tower**	**75.12**	**107**	LR	LR	19 20 49.5	
	comp=Z,358nm,20.3s,baz=254,slow=34						
AKASG	**Malin Array Be**	**75.16**	**337**	P	**P**	**18 50 15.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=137,slow=4.8,SNR=2.6						
AKASG				LR	LR	19 23 18.3	
	comp=Z,95nm,19.0s,baz=170,slow=36						
	comp=Z,0.2nm,0.3s						
KEST	**Kesra**	**75.40**	**315**	LR	LR	19 21 31.3	
	comp=Z,219nm,22.0s,baz=17,slow=34						
PMG	**Port Moresby**	**78.65**	**96**	LR	LR	19 25 16.4	
	comp=Z,86nm,19.1s,baz=292,slow=36						
KSRS	**Korea Array**	**79.57**	**45**	LR	LR	19 23 55.6	
	comp=Z,81nm,19.8s,baz=230,slow=34						
KLMR	**Klimovskoe**	**80.84**	**347**	*e*	P	18 50 57.0	+10
KLMR					AMP	18 51 02.4	
	comp=Z,16nm,1.3s						
GUMO	**Guam**	**83.46**	**74**	LR	LR	19 22 16.2	
	comp=Z,21nm,20.6s,baz=228,slow=32						
MDT	**Midelt**	**84.03**	**307**	LR	LR	19 28 27.6	
	comp=Z,215nm,20.4s,baz=128,slow=36						
KRVT	**Keravat (AS076**	**84.72**	**93**	LR	LR	19 26 18.6	
	comp=Z,62nm,19.2s,baz=3.6,slow=34						
JCJ	**Chichijima**	**85.84**	**60**	LR	LR	19 25 29.3	
	comp=Z,87nm,21.4s,baz=246,slow=33						
MJAR	**Matsushiro Arr**	**86.43**	**50**	P	**P**	**18 51 15.2**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=238,slow=6.1,SNR=2.7						
MJAR				LR	LR	19 29 30.0	
	comp=Z,48nm,21.0s,baz=232,slow=36						
	comp=Z,1.3nm,0.8s						
ESDC	**Sonseca Array**	**86.49**	**313**	LR	LR	19 28 59.0	
	comp=Z,122nm,21.0s,baz=110,slow=35						
BBTS	**Babate**	**87.61**	**286**	LR	LR	19 29 09.0	
	comp=Z,242nm,19.6s,baz=88,slow=35						
NRIK	**Noril'sk**	**87.78**	**7**	LR	LR	19 31 21.8	
	comp=Z,84nm,18.8s,baz=188,slow=36						
KLR	**Kul'dur**	**87.96**	**37**	LR	LR	19 33 03.2	
	comp=Z,46nm,18.2s,baz=228,slow=37						
RPZ	**Rata Peaks**	**88.45**	**135**	LR	LR	19 23 10.5	
	comp=Z,109nm,19.5s,baz=261,slow=30						
HNR	**Honiara**	**90.73**	**100**	LR	LR	19 31 09.6	
	comp=Z,2μm,19.6s,baz=199,slow=35						
DZM	**Mont Dzumac**	**92.65**	**114**	LR	LR	19 30 52.0	
	comp=Z,252nm,20.4s,baz=218,slow=34						
YAK	**Yakutsk**	**93.44**	**25**	LR	LR	19 32 04.7	
	comp=Z,71nm,21.9s,baz=267,slow=34						
TIXI	**Tiksi**	**98.17**	**17**	LR	LR	19 36 11.5	
	comp=Z,85nm,21.8s,baz=259,slow=35						
RCBR	**Riachuelo**	**99.78**	**261**	LR	LR	19 30 52.8	
	comp=Z,215nm,21.2s,baz=278,slow=31						

AUST 21 18:41:45.2±2.8, 36°.28S×148°.83E, h3km±31km, Error ellipse: s-maj=54.0km s-min=11.4km az=91.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILA	**Mila**	**0.82**	**162**	P	Pg	18 42 00.3	-0.5
	baz=0.8						
AUMTS	**Mt Stromlo**	**0.97**	**8**	P	Pb	18 42 05.1	+0.4
	baz=1.0						
AUMTS				S	Sg	18 42 16.9	+0.6
	baz=1.0						
CNB	**Canberra Magne**	**1.05**	**24**	P	Pn	18 42 07.7	+0.8
	baz=1.1						
CNB				S	Sb	18 42 19.9	-0.5
	baz=1.1						
AUDAR	**Daramalan Coll**	**1.06**	**14**	P	Pg	18 42 04.7	-0.7
	baz=1.1						
AUDAR				S	Sb	18 42 20.3	-0.2
	baz=1.1						

ROM 21 18:43:10.2±0.1, 42°.848N±0°.004×13°.245E±0°.004, h7km, ML0.9/1, 2C-1D, Error ellipse: s-maj=0.4km s-min=0.1km az=157.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**281**	P	Pg	18 43 11.9	+0.1
T1245				S	Sg	18 43 13.0	0.0
T1245				AML	AML		
	comp=N,202μm,0.7s						
T1245				AML	AML		
	comp=E,164μm,0.6s						
MC2	**Monte Cornacci**	**0.08**	**328**	P	Pg	18 43 12.6	+0.3
MMO1	**Montemonaco**	**0.08**	**50**	⇑P	Pg	18 43 12.4	+0.2
MMO1				S	Sg	18 43 14.0	+0.4
T1202	**Accumoli, Fraz**	**0.14**	**186**	P	Pg	18 43 13.8	+0.5
T1216	**Preci, Frazion**	**0.17**	**284**	P	Pg	18 43 14.2	+0.4
T1216				AML	AML		
	comp=E,55μm,1.5s						
T1216				AML	AML		
	comp=N,72μm,1.6s						
FDMO	**Fiordimonte**	**0.22**	**328**	P	Pg	18 43 15.2	+0.5
FDMO				S	Sg	18 43 19.2	+1.6
ARVD	**Arcevia**	**0.69**	**341**	⇑P	Pg	18 43 22.5	-0.9
MCIV	**Monte Civitell**	**1.16**	**267**	S	Sn	18 43 49.0	0.0
GSCL	**Gusciola**	**2.45**	**309**	S	Sb	18 44 26.0	+1.1
NDIM	**Novi di Modena**	**2.65**	**321**	⇓P	Pn	18 43 53.3	0.0
NDIM				AML	AML		
	comp=E,1505μm,0.1s						
NDIM				AML	AML		
	comp=N,643μm,0.1s						

*SJA **21** 19:02:30.5±0.8, 30°.67S×71°.49W, h25km±2km, ML4.3, MW4.1*

*GUC **21** 19:02:31.3±0.8, 30°.75S×71°.38W, h47km±2km, ML4.3*

*NEIC **21** 19:02:32.9, 30°.71S×71°.46W, h66km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.20; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-2.62; $M_{r\theta}$-0.05; $M_{\phi\theta}$0.17; $M_{\phi r}$-1.84; Fault plane solution: $M_0$3.06000×10^{15} NP1:ϕ_s352.45000°, δ26.53000°, λ83.07000°. NP2:ϕ_s180.18000°, δ63.68000°, λ93.44000°. Principal axes: T 2.8218, Plg71.0000°, Azm98.0000°; N 0.4252, Plg3.0000°, Azm359.0000°; P -3.2470, Plg19.0000°, Azm268.0000°;*

*NEIC **21** 19:02:32.7±2.0, 30°.71S±0°.01×71°.48W±0°.09, h42km±7km, mb4.4/6, Mwr4.3/16, ML4.3(GUC) Error ellipse: s-maj=11.1km s-min=1.5km az=95.0*

*IDC **21** 19:02:34.0±2.9, 30°.74S×71°.36W, h58km±24km, mb4.1/6, mbtmp4.2/11, ML4.0/5, MS3.1/6, Error ellipse: s-maj=25.8km s-min=18.0km az=96.0*

ISC 21 19:02:31.9±0.7, 30°.70S±0°.03×71°.52W±0°.04, h44km±6km, n134, σ2§12/179, mb4.3/9, 2C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.10**	**285**		**Pn**	**19 02 40.4**	**+1.4**
CO06				Sn	**Sn**	**19 02 45.7**	**+1.8**
CO06	**Fray Jorge**	**0.10**	**285**	⇑*i*P	Pn	**19 02 40.4**	**+1.4**
CO06				*e*S	**Sn**	**19 02 46.3**	**+2.3**
CO02	**Combarbal**	**0.68**	**138**		**Pn**	**19 02 44.7**	**-0.5**
CO02				Sn	**Sn**	**19 02 53.9**	**-0.8**
CO02	**Combarbal**	**0.68**	**138**	*e*P	**Pn**	**19 02 44.9**	**-0.3**
CO02				*e*S	**Sn**	**19 02 53.9**	**-0.8**
CO02	**Combarbal**	**0.68**	**138**	*e*P	**Pn**	**19 02 44.6**	**-0.5**
CO02				*e*P	**Pn**	**19 02 45.0**	**-0.2**
CO02				*e*S	**Sn**	**19 02 54.0**	**-0.7**
CO02				IAML		19 02 54.9	
	comp=Z,46μm,0.1s						
CO03	**El Pedregal**	**0.73**	**101**		**Pn**	**19 02 45.2**	**-0.7**
CO03				Sn	**Sn**	**19 02 54.6**	**-1.5**
CO03	**El Pedregal**	**0.73**	**101**	⇓*i*P	Pn	**19 02 45.4**	**-0.6**
CO03				*i* S	**Sn**	**19 02 54.8**	**-1.3**
CO03				IAML		19 02 55.1	
	comp=E,26μm,0.2s						
CO03	**El Pedregal**	**0.73**	**101**	*e*P	Pn	**19 02 45.0**	**-0.9**
CO03				*e*S	**Sn**	**19 02 54.8**	**-1.3**
CO03				IAML		19 02 55.6	
	comp=Z,10μm,0.3s						
CO05	**La Serena**	**0.82**	**18**		**Pn**	**19 02 47.7**	**+0.7**
CO05				Sn	**Sn**	**19 02 57.4**	**-0.5**
CO05	**La Serena**	**0.82**	**18**	⇓*i*P	Pn	**19 02 47.9**	**+0.9**
CO05				*e*S	**Sn**	**19 02 56.7**	**-1.3**
GO04	**Tololo Observa**	**0.82**	**50**		**Pn**	**19 02 47.1**	**-0.1**
GO04				Sn	**Sn**	**19 02 57.4**	**-0.9**
GO04	**Tololo Observa**	**0.82**	**50**	*e*P	Pn	**19 02 46.9**	**-0.3**
GO04				*e*S	**Sn**	**19 02 56.6**	**-1.7**
GO04				IAML		19 03 00.7	
	comp=N,39μm,0.3s						
CO01	**Juntas del Tor**	**1.43**	**60**		**Pn**	**19 02 56.3**	**+0.7**
CO01				Sn	**Sn**	**19 03 12.2**	**-1.2**
CO01	**Juntas del Tor**	**1.43**	**60**	⇓*i*P	Pn	**19 02 56.4**	**+0.7**
CO01				*e*S	**Sn**	**19 03 14.3**	**+1.0**
CO01				IAML		19 03 15.7	
	comp=N,4μm,0.2s						
CO01	**Juntas del Tor**	**1.43**	**60**	*e*P	Pn	**19 02 56.4**	**+0.8**
CO01				*e*S	**Sn**	**19 03 14.7**	**+1.3**
LCO	**Las Campanas**	**1.83**	**23**		**Pn**	**19 03 01.6**	**+0.5**
LCO	**Las Campanas**	**1.83**	**23**	⇓*i*P	Pn	**19 03 02.0**	**+0.9**
LCO				*e*S	**Sn**	**19 03 24.4**	**+1.3**
LCO	**Las Campanas**	**1.83**	**23**	*e*P	Pn	**19 03 02.0**	**+0.9**
LCO				*e*S	**Sn**	**19 03 25.8**	**+2.6**
LCO				IAML		19 03 28.2	
	comp=Z,3μm,0.7s						
AROD	**Rodeo**	**1.85**	**74**	*e*P	Pn	**19 02 58.1**	**-3.3**
AROD				*e*P	Pn	**19 03 03.7**	**+2.3**
AROD				*e*S	**Sn**	**19 03 27.2**	**+3.5**
VA06	**Catapilco**	**1.87**	**174**	Pn	Pn	**19 03 01.7**	**+0.4**
VA06	**Catapilco**	**1.87**	**174**	*e*P	Pn	**19 03 01.8**	**+0.4**
VA06				*e*S	**Sn**	**19 03 25.0**	**+1.4**
VA06				IAML		19 03 33.8	
	comp=E,3μm,0.4s						
ACCO	**Cerro Coronel**	**2.12**	**88**	*e*P	Pn	**19 03 07.0**	**+1.8**
ACCO				*e*P	Pn	**19 03 07.8**	**+2.6**
ACDV	**Cuesta del Vie**	**2.14**	**76**	*e*P	Pn	**19 03 08.0**	**+2.7**
ACDV				*e*S	**Sn**	**19 03 29.1**	**-1.6**
AC05	**El Transito**	**2.15**	**31**		Pn	**19 03 07.0**	**+1.6**
AC05	**El Transito**	**2.15**	**31**	⇓*i*P	Pn	**19 03 07.1**	**+1.7**
AC05				*e*S	**Sn**	**19 03 33.2**	**+2.3**
AC05				IAML		19 03 42.2	
	comp=N,2μm,0.3s						
AC05	**El Transito**	**2.15**	**31**	*e*P	Pn	**19 03 07.0**	**+1.6**
AC05				*e*S	**Sn**	**19 03 36.1**	**+5.2**
AC05				IAML		19 03 48.0	
	comp=Z,1μm,0.6s						
RTLS	**Leoncito**	**2.20**	**120**	*e*P	Pn	**19 03 08.7**	**+2.5**
RTLS				*e*P	Pn	**19 03 09.0**	**+2.8**
RTLS				*e*S	**Sn**	**19 03 39.0**	**+6.6**
RTLS				IAML		19 03 44.8	
	comp=Z,1μm,0.4s						
VA03	**San Esteban**	**2.22**	**158**		Pn	**19 03 07.4**	**+1.2**
VA03	**San Esteban**	**2.22**	**158**	⇑*e*P	Pn	**19 03 07.6**	**+1.3**
VA03				*e*S	**Sn**	**19 03 34.3**	**+1.8**
VA03				IAML		19 03 40.0	
	comp=E,5μm,0.1s						
VA03	**San Esteban**	**2.22**	**158**	*e*P	Pn	**19 03 07.0**	**+0.7**
VA03				*e*P	Pn	**19 03 07.8**	**+1.5**
VA03				*e*S	**Sn**	**19 03 36.5**	**+4.0**
VA03				IAML		19 03 44.8	
	comp=Z,2μm,0.3s						
ROCH	**El Roble**	**2.31**	**169**	*e*P	Pn	**19 03 08.8**	**+1.2**
ROCH				*e*S	**Sn**	**19 03 35.4**	**+0.6**
ROCH				IAML		19 03 42.5	
	comp=N,3μm,0.4s						
ROC1	**El Roble**	**2.31**	**169**		Pn	**19 03 08.6**	**+0.9**
ROC1	**El Roble**	**2.31**	**169**	*e*P	Pn	**19 03 09.0**	**+1.3**
AC04	**Llanos de Chal**	**2.52**	**9**		Pn	**19 03 11.3**	**+1.0**
AC04	**Llanos de Chal**	**2.52**	**9**	*e*P	Pn	**19 03 10.9**	**+0.6**
AC04				*e*S	**Sn**	**19 03 42.6**	**+2.8**
AC04				IAML		19 03 52.7	
	comp=E,788nm,0.2s						
AC04	**Llanos de Chal**	**2.52**	**9**	*e*P	Pn	**19 03 12.0**	**+1.7**
AC04				*e*S	**Sn**	**19 03 40.1**	**+0.4**
AC04				IAML		19 03 52.0	
	comp=Z,790nm,0.6s						
PEL	**Peldehue**	**2.54**	**164**	*e*P	Pn	**19 03 12.2**	**+1.6**
PEL				*e*S	**Sn**	**19 03 42.1**	**+1.8**
PEL				IAML		19 03 54.5	
	comp=E,1μm,0.4s						
PEL	**Peldehue**	**2.54**	**164**	*e*P	Pn	**19 03 12.0**	**+1.4**
PEL				*e*P	Pn	**19 03 12.3**	**+1.7**
PEL				*e*S	**Sn**	**19 03 46.1**	**+5.8**
PEL				*e*S	**Sn**	**19 03 48.6**	**+8.3**
MT02	**Curacav**	**2.57**	**173**		Pn	**19 03 11.7**	**+0.6**
MT02	**Curacav**	**2.57**	**173**	*e*P	Pn	**19 03 11.9**	**+0.9**
MT02				*e*S	**Sn**	**19 03 42.5**	**+1.4**
MT02				IAML		19 03 55.7	
	comp=E,711nm,0.4s						
MT02	**Curacav**	**2.57**	**173**	*e*P	Pn	**19 03 12.0**	**+0.9**
MT02

LMEL	Las Melosas	3.33	161			Pn	19 03 23.4 +1.7
BO04	La Punta	3.37	167			Pn	19 03 23.1 +1.0
BO04	La Punta	3.37	167	eP		Pn	19 03 23.3 +1.2
AC06	Mina Casimiro	3.48	17	Pn		Pn	19 03 24.5 +0.9
BO01	Tunca	3.70	174	Pn		Pn	19 03 27.9 +1.4
BO01	Tunca	3.70	174	eP		Pn	19 03 24.1 -2.4
BO01				eP		Pn	19 03 28.1 +1.6
BO01				eS		Sn	19 04 15.2 +6.3
BO01				IAML			19 04 30.1
	comp=Z,218nm,0.5s						
BO02	Sierra Bellavi	4.13	171			Pn	19 03 33.5 +1.0
BO02	Sierra Bellavi	4.13	171	eP		Pn	19 03 35.0 +2.5
BO02				eS		Sn	19 04 24.1 +4.6
BO02				IAML			19 04 44.2
	comp=Z,267nm,0.2s						
ACLC	CERRO LA CRUZ	4.16	73	eP		Pn	19 03 35.0 +1.9
ACLC				eS		Sn	19 04 22.6 +2.1
ACLC				IAML			19 04 32.3
	comp=Z,989nm,0.5s						
GO05	Huala	4.31	184	Pn		Pn	19 03 34.1 -0.8
AC02	Maricunga	4.39	29	Pn		Pn	19 03 38.1 +1.7
AC02	Maricunga	4.39	29	eP		Pn	19 03 38.8 +2.3
AC02				IAML			19 05 02.0
	comp=Z,267nm,0.9s						
AC01	Pan de Azucar	4.61	10	Pn		Pn	19 03 38.3 -0.7
ML02	Panimavida	5.05	179	Pn		Pn	19 03 44.1 -1.0
GO02	Mina Guanaco	5.78	18	Pn		Pn	19 03 55.1 -0.3
BI05	Punta Hualpn	6.19	193	Pn		Pn	19 03 59.2 -1.5
H03N1	Juan Fernandez	6.84	245	T		T	19 11 00.8
	baz=73,slow=72,SNR=1615						
VA04	Juan Fernndez	6.85	243	Pn		Pn	19 04 10.0 +0.2
H03N3	Juan Fernandez	6.85	244	T		T	19 11 00.9
	baz=73,slow=72,SNR=1161						
H03N2	Juan Fernandez	6.86	245	T		T	19 11 00.5
	baz=73,slow=72,SNR=1543						
PB10	IPOC Station P	7.21	7	Pn		Pn	19 04 14.3 -0.4
PB15	IPOC Station P	7.68	14	Pn		Pn	19 04 20.7 -0.8
PB06	IPOC Station P	8.15	13	Pn		Pn	19 04 26.4 -1.4
LVC	Limon Verde	8.39	17	P		Pn	19 04 31.7 +0.5
	comp=Z,0.7nm,0.3s,baz=197,slow=10,SNR=2.5						
LVC				S		Sn	19 06 07.7 +2.9
	comp=Z,15nm,0.6s,baz=184,slow=11,SNR=3.8						
LVC				LR		LR	19 07 53.9
	comp=Z,63nm,21.2s,baz=234,slow=38						
	comp=Z,1.9nm,0.3s						
LVC	Limon Verde	8.39	17	Pn		Pn	19 04 29.4 -1.9
PB04	IPOC Station P	8.42	9	Pn		Pn	19 04 31.1 -0.5
PB03	IPOC Station P	8.76	11	Pn		Pn	19 04 34.5 -1.7
GO06	Curarrehue	8.86	180	Pn		Pn	19 04 34.9 -2.6
LR03	Panguipulli	8.94	184	Pn		Pn	19 04 35.7 -2.7
PB07	IPOC Station P	9.06	10	Pn		Pn	19 04 38.3 -2.0
PB09	IPOC Station P	9.10	14	Pn		Pn	19 04 38.7 -2.1
PB02	IPOC Station P	9.46	9	Pn		Pn	19 04 44.0 -1.7
PB01	IPOC Station P	9.79	11	Pn		Pn	19 04 47.7 -2.5
PATCX	Punta Patache	9.91	7	Pn		Pn	19 04 49.5 -2.4
PLCA	Paso Flores	10.04	176	P		Pn	19 04 55.0 +1.5
	comp=Z,0.2nm,0.3s,baz=341,slow=11,SNR=4.8						
PLCA				LR		LR	19 08 58.5
	comp=Z,54nm,18.5s,baz=347,slow=38						
	comp=Z,0.6nm,0.4s						
PLCA	Paso Flores	10.04	176	Pn		Pn	19 04 49.4 -4.2
PB08	IPOC Station P	10.73	12	Pn		Pn	19 05 01.9 -1.4
PB11	IPOC Station P	11.02	9	Pn		Pn	19 05 07.2 0.0
GO01	Chusmiza	11.18	11	Pn		Pn	19 05 08.3 -1.4
PB12	IPOC Station P	12.08	5	Pn		Pn	19 05 20.5 -1.1
ITQB	Itaqui	12.93	89	Pn		Pn	19 05 28.5 -4.5
CPUP	Villa Florida	13.22	74	P		Pn	19 05 37.1 +0.2
	comp=Z,0.3nm,0.3s,baz=243,slow=12,SNR=3.4						
CPUP				S		Sn	19 08 03.1 +0.6
	comp=Z,6.6nm,1.0s,baz=272,slow=14,SNR=2.7						
CPUP				LR		LR	19 11 08.7
	comp=Z,115nm,19.1s,baz=222,slow=39						
	comp=Z,1.9nm,0.6s						
CPUP	Villa Florida	13.22	74	Pn		Pn	19 05 33.9 -3.1
LPAZ	La Paz	14.68	13	P		Pn	19 05 59.3 +2.0
	comp=Z,0.4nm,0.3s,baz=171,slow=5.7,SNR=8.3						
	comp=Z,3.0nm,0.8s						
LPAZ	La Paz	14.68	13	Pn		Pn	19 05 58.7 +1.3
SIV	San Ignacio	17.49	35	P		P	19 06 33.5 +0.2
	comp=Z,0.1nm,0.3s,baz=208,slow=9.2,SNR=17						
SIV				LR		LR	19 13 25.5
	comp=Z,20nm,19.7s,baz=276,slow=37						
	comp=Z,4.1nm,0.7s						
BDFB	Brasilia	26.22	60	P		P	19 08 02.1 -0.8
	comp=Z,6.9nm,0.7s,baz=237,slow=6.0,SNR=7.8						
	comp=Z,6.9nm,0.7s						
BDFB	Brasilia	26.22	60	P		P	19 08 02.1 -0.8
BDFB				IAmb		IAmb	19 08 03.2
	comp=Z,6.5nm,0.9s						
CELP	Cerrillos	48.73	6	P		P	19 11 13.0 +0.8
CELP				IAmb		IAmb	19 11 15.2
	comp=Z,15nm,0.9s						
AOPR	Arecibo Observ	48.98	6	P		P	19 11 14.1 -0.1
CMIG	Matias Romero	52.56	331	LR		LR	19 29 12.5
	comp=Z,142nm,22.0s,baz=124,slow=30						
VNA2	Neumayer--Watz	52.89	158	P		P	19 11 43.0 0.0
	baz=281,slow=8.0						
TEIG	Tepich	53.13	340	P		P	19 11 45.6 +0.3
SNAA	Sanae	54.48	159	P		P	19 11 54.6 -0.1
SNAA	Sanae	54.48	159	P		P	19 11 54.6 -0.1
SNAA				IAmb		IAmb	19 12 08.8
	comp=Z,2.1nm,0.8s						
TROLL	Troll, Antarti	56.19	159	P		P	19 12 06.5 -0.6
QSPA	South Pole Qui	59.53	180	P		P	19 12 31.4 +0.8
QSPA				IAmb		IAmb	19 13 12.9
	comp=Z,5.2nm,1.4s						
TXAR	Lajitas Array	67.09	330	P		P	19 13 22.9 +1.9
	comp=Z,0.6nm,0.6s,baz=148,slow=8.0,SNR=6.7						
	comp=Z,0.6nm,0.6s						
DBIC	Dimbokro	73.72	72	P		P	19 14 01.7 0.0
	comp=Z,5.0nm,0.5s,baz=209,slow=6.4,SNR=14						
	comp=Z,5.0nm,0.5s						
MAW	Mawson	76.21	164	P		P	19 14 15.8 +0.6
	comp=Z,1.1nm,0.5s,baz=217,slow=7.8,SNR=11						
	comp=Z,1.1nm,0.5s						
BOSA	Boshof	81.22	118	P		P	19 14 43.5 -0.1
	comp=Z,2.7nm,0.6s,baz=262,slow=4.3,SNR=5.4						
	comp=Z,2.7nm,0.6s						
TORD	Torodi Ar. Bea	82.68	70	P		P	19 14 51.0 -0.2
	comp=Z,1.6nm,0.5s,baz=279,slow=6.9,SNR=28						
	comp=Z,1.6nm,0.5s						
LBTB	Lobatse	83.30	115	LR		LR	19 45 59.0
	comp=Z,17nm,21.6s,baz=170,slow=31						
ASAR	Alice Springs	120.70	207	PKP		PKPdf	19 21 18.4 -1.2
	comp=Z,0.3nm,1.1s,baz=115,slow=1.8,SNR=1.0						
WRA	Warramunga Arr	123.84	210	PKP		PKPdf	19 21 24.9 -0.8
	comp=Z,0.2nm,0.7s,baz=146,slow=1.5,SNR=1.3						
H11S2	WAKE ISLAND Hyl	26.19	271	T		T	21 40 16.9
	baz=116,slow=75,SNR=27						
H11S1	WAKE ISLAND Hyl	26.21	271	T		T	21 40 18.9
	baz=116,slow=75,SNR=39						
H11S3	WAKE ISLAND Hyl	26.21	271	T		T	21 40 17.2
	baz=116,slow=75,SNR=32						
H11N3	WAKE ISLAND Hyl	26.52	273	T		T	21 40 46.4
	baz=117,slow=74						
H11N1	WAKE ISLAND Hyl	26.54	273	T		T	21 40 44.8
	baz=117						
H11N2	WAKE ISLAND Hyl	26.54	273	T		T	21 40 46.3
	baz=117,slow=74						
ZALV	Zalesovo Beam	151.18	29	PKPbc		PKPbc	19 22 20.0 +0.2
	comp=Z,5.2nm,0.5s,baz=297,slow=3.5,SNR=25						
MKAR	Makanchi Array	154.18	44	PKPbc		PKPbc	19 22 26.4 -0.5
	comp=Z,0.1nm,0.4s,baz=323,slow=4.5,SNR=1.7						

*NEIC **21** 19:26:55.9±2.5, 13°.94N±0°.07×93°.75W±0°.04, h10km±1km, mb4.5/20, Md4.0/20(MEX), Error ellipse: s-maj=12.1km s-min=6.5km az=195.0*

*IDC **21** 19:26:56.3±3.9, 13°.83N×93°.36W, h0km, mb3.7/3, mbtmp3.7/3, MS3.3/2, Error ellipse: s-maj=126.6km s-min=62.3km az=29.0*

*MEX **21** 19:27:01.0±0.7, 14°.14N×93°.67W, h10km, MD4.0*

ISC 21 19:26:55.7±0.9, 13°.96N±0°.07×93.79W±0°.04, h10km, n54, σ2§37/64, mb4.5/12, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		1.75	57				Pn	19 27 25.1	-1.0
THIG							Sn	19 27 43.2	-5.3
THIG		1.75	57	eP			Pn	19 27 25.1	-1.0
THIG				eS			Sn	19 27 43.2	-5.3
PCIG		1.82	17				Pn	19 27 26.5	-0.6
PCIG							Sn	19 27 45.8	-4.5
PCIG		1.82	17	eP			Pn	19 27 26.5	-0.6
PCIG				eS			Sn	19 27 45.8	-4.5
PATR	El Naranjo	1.90	52	eP			Pn	19 27 27.1	-1.2
CHUJ	Union Juarez	1.98	55	eP			Pn	19 27 28.3	-1.2
PAVE	Pavencul	1.98	52	eP			Pn	19 27 28.7	-0.9
RTAL	Retalhuleu	2.10	74				Pn	19 27 30.0	-1.0
HUEH	Huehuetenango	2.59	58				Pn	19 27 37.8	-0.1
NILT	Santiago Nilte	2.71	343	eP			Pn	19 27 40.2	+0.8
NILT				i S			Sn	19 28 08.8	-3.5
CCIG	Comitan	2.81	34	Pn			Pn	19 27 42.4	+1.6
CCIG	Comitan	2.81	34	eP			Pn	19 27 42.8	+1.9
CCIG				i S			Sn	19 28 15.8	+1.0
HUIG	Huatulco	2.88	309				Pn	19 27 43.0	+1.4
HUIG							Sn	19 28 11.1	-5.3
HUIG	Huatulco	2.88	309	eP			Pn	19 27 43.0	+1.4
HUIG				eS			Sn	19 28 11.1	-5.3
TGIG		2.88	13				Pn	19 27 43.3	+1.6
TGIG		2.88	13	eP			Pn	19 27 43.3	+1.6
CMIG	Matias Romero	3.29	341				Pn	19 27 48.7	+1.4
CMIG							Sn	19 28 23.7	-2.8
CMIG	Matias Romero	3.29	341	eP			Pn	19 27 48.7	+1.4
CMIG				eS			Sn	19 28 23.7	-2.8
UXUV	UXUV	3.36	354	eP			Pn	19 27 51.0	+2.7
UXUV				eS			Sn	19 28 28.1	-0.1
PEIG	Puerto Escondi	3.83	302				Pn	19 27 53.9	-0.8
PEIG							Sn	19 28 34.9	-5.0
PEIG	Puerto Escondi	3.83	302	eP			Pn	19 27 53.9	-0.8
PEIG				eS			Sn	19 28 34.9	-5.0
MTO3	Montecristo	4.32	84				Pn	19 28 01.0	-0.7
ESQI	Esquipulas	4.35	82				Pn	19 28 01.2	-0.8
PETF	Flores	4.79	52				Pn	19 28 08.0	+0.1
CNGN	Cerro Negro	7.05	101	Pn			Pn	19 28 37.0	-2.1
BOAB	BOACO BROADBAN	8.05	100	Pn			Pn	19 28 52.1	-0.6
TEIG	Tepich	8.16	39				Pn	19 28 52.5	-1.8
ORTG	Ortega, Santa	8.89	113	Pn			Pn	19 29 06.9	+2.6
RIOS	Rincon, Osa	11.35	116				Pn	19 29 38.8	+0.8
SOR	Soroa	13.48	48	Pn			Pn	19 30 04.8	-2.3
MIAR	Mount Ida	20.50	0	P			P	19 31 34.3	+0.4
X37A	Clayton	20.59	356	P			Pn	19 31 37.0	-0.2
X37A				IAmb			IAmb	19 31 42.4	
	comp=Z,11nm,0.9s								
WMOK	Wichita Mounta	21.18	349	P			P	19 31 41.0	-0.2
FCAR	Ozark Folk Cen	21.89	4	P			P	19 31 48.1	-0.8
AMTX	Amarillo	22.02	342	P			P	19 31 51.4	+1.0
AMTX				IAmb			IAmb	19 31 55.2	
	comp=Z,12nm,0.5s								
HHAR	Hobbs	22.23	360	P			P	19 31 54.5	+1.9
U38A	Gravette	22.39	359	P			P	19 31 55.0	+0.6
U38A				IAmb			IAmb	19 31 58.2	
	comp=Z,22nm,1.1s								
OK044	Pawnee Station	22.48	354	P			P	19 31 55.0	-0.3
OK046	Pawnee Station	22.52	353	P			P	19 31 55.1	-0.5
OK046				IAmb			IAmb	19 31 59.7	
	comp=Z,20nm,0.8s								
OK048	Pawnee Station	22.54	353	P			P	19 31 55.4	-0.5
OK048				IAmb			IAmb	19 32 00.0	
	comp=Z,15nm,0.8s								
OK051	E0350 and S346	22.62	354	P			P	19 31 56.8	+0.1
MGMO	Mountain Grove	23.14	3	P			P	19 32 02.6	+0.4
TKL	Tuckaleechee C	23.41	21	LR			LR	19 41 10.3	
	comp=Z,41nm,21.0s,baz=210,slow=36								
S39A	Bolivar	23.64	1	P			P	19 32 06.2	-0.9
S39A				IAmb			IAmb	19 32 09.3	
	comp=Z,12nm,0.8s								
CCM	Cathedral Cave	24.11	5	P			P	19 32 11.6	0.0
CCM				IAmb			IAmb	19 32 13.1	
	comp=Z,6.8nm,0.7s								
P40A	Paris	25.52	3	P			P	19 32 23.1	-1.3
P40A				IAmb			IAmb	19 32 25.7	
	comp=Z,9.2nm,0.6s								
BAUV	El Baul	25.71	98	P			P	19 32 26.2	-0.2
BAUV				IAmb			IAmb	19 33 06.0	
	comp=Z,10nm,1.0s								
N38A	Joes South For	26.74	1	P			P	19 32 35.3	-0.2
LCH	Last Change Ra	31.45	322	P			P	19 33 14.7	-3.0
LCH				IAmb			IAmb	19 33 45.6	
	comp=Z,2.3nm,0.6s								
SCHQ	Schefferville	45.88	21	LR			LR	19 56 46.9	
	comp=Z,73nm,18.1s,baz=204,slow=39								
YKA	Yellowknife Ar	50.68	348	P			P	19 35 59.3	+4.2
	comp=Z,0.7nm,0.5s,baz=153,slow=7.9,SNR=3.7								
	comp=Z,0.7nm,0.5s								
ILAR	Eielson Array	62.20	337	P			P	19 37 20.8	+3.6
	comp=Z,0.5nm,0.8s,baz=144,slow=4.7,SNR=4.5								
	comp=Z,0.5nm,0.8s								
ESDC	Sonseca Array	81.10	51	P			P	19 39 12.6	+1.1
	comp=Z,0.4nm,0.8s,baz=282,slow=6.3,SNR=2.5								
	comp=Z,0.4nm,0.8s								
CMAR	Chiang Mai Arr	145.43	338	PKPbc			PKPab	19 46 37.2	+2.2
	comp=Z,2.7nm,0.8s,baz=335,slow=3.5,SNR=15								

IDC 21 19:28:24.5±1.4, 31°.79N×104°.06E, h0km, mb3.4/4, mbtmp3.4/5, ML3.4/1, MS3.0/1, Error ellipse: s-maj=94.1km s-min=23.4km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.12	6	Pn			Pn	19 32 13.6	+1.0
	0.1nm,0.3s,baz=186,slow=12,SNR=3.9								
	0.7nm,0.9s								
MKAR	Makanchi Array	22.44	318	P			P	19 33 25.1	+0.2
	0.4nm,0.7s,baz=115,slow=10,SNR=4.1								
	0.4nm,0.7s								
ZALV	Zalesovo Beam	26.09	334	P			P	19 33 59.2	-0.5
	0.7nm,0.5s,baz=130,slow=8.5,SNR=3.6								
	0.7nm,0.5s								
GUMO	Guam	41.49	106	LR			LR	19 54 00.7	
	comp=Z,16nm,18.1s,baz=172,slow=37								
WRA	Warramunga Arr	59.07	146	P			P	19 38 26.5	-0.2
	0.6nm,0.6s,baz=339,slow=7.3,SNR=2.7								
	0.6nm,0.6s								
ASAR	Alice Springs	62.10	149	P			P	19 38 47.5	+0.1
	0.2nm,0.5s,baz=335,slow=6.5,SNR=1.9								
	0.2nm,0.5s								

*IDC **21** 19:46:14.9±2.3, 18°.64N×145°.81E, h199km±21km, mb3.3/7, mbtmp3.9/8, MS2.9/1, Error ellipse: s-maj=36.4km s-min=14.8km az=89.0*

*NEIC **21** 19:46:16.9±1.6, 18°.56N±0°.08×145°.7E±0°.1, h202km±8km, mb4.3/38, Error ellipse: s-maj=16.8km s-min=12.2km az=89.0*

ISC 21 19:46:15.9±0.6, 18°.62N±0°.07×145°.6E±0°.1, h200km, n56, σ1§10/57, mb4.2/26, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.05	189	P			Pn	19 47 32.0	+0.9
	34nm,0.3s,baz=280,slow=4.9,SNR=11								
GUMO				S			Sn	19 48 31.2	+0.9
	55nm,0.3s,baz=168,slow=22,SNR=5.9								
GUMO	Guam	5.05	189	Pn			Pn	19 47 31.6	+0.5
GUMO				Sn			Sn	19 48 27.8	-2.5
GUMO	Guam	5.05	189	P			Pn	19 47 34.9	+3.9
PATS	Pohnpei	17.01	132	Pn			Pn	19 50 11.5	+9.1
PATS				IAmb			IAmb	19 50 38.4	
	comp=Z,31nm,1.3s								
TOLI2	Tolitoli	29.95	237	P			P	19 52 06.3	+0.7
TOLI2				IAmb			IAmb	19 52 11.1	
	comp=Z,4.5nm,1.1s								
KKM	Kota Kinabalu	31.28	250	P			P	19 52 17.6	+0.2
KKM				IAmb			IAmb	19 52 45.5	
	comp=Z,13nm,1.1s								
COEN	Coen	32.46	184	P			P	19 52 27.0	-0.5
COEN				IAmb			IAmb	19 53 03.4	
	comp=Z,11nm,1.0s								
MTN	Manton Dam	34.38	206	P			P	19 52 44.0	-0.2
SBUM	Sibu	36.46	248	P			P	19 53 03.6	+1.6
KNRA	Kununurra	37.91	207	P			P	19 53 14.3	+0.2
CTAO	Charters Tower	38.47	179	P			P	19 53 18.9	+0.2
CTAO				IAmb			IAmb	19 53 32.5	
	comp=Z,14nm,1.4s								
KSM	Kuching	38.60	248	P			P	19 53 19.9	0.0
KSM				IAmb			IAmb	19 53 57.6	
	comp=Z,14nm,1.3s								
WB0	Warramunga Arr	39.71	197	P			P	19 53 28.6	-0.4
WB0				IAmb			IAmb	19 54 00.1	
	comp=Z,12nm,1.4s								
WR0	Warramunga Arr	39.85	196	P			P	19 53 29.8	-0.4
WB2	Warramunga Arr	39.89	197	P			P	19 53 30.4	0.0
WB2				IAmb			IAmb	19 53 31.2	
	comp=Z,9.7nm,1.1s								
WRA	Warramunga Arr	39.89	197	P			P	19 53 30.7	+0.2
	comp=Z,2.2nm,0.4s,baz=23,slow=8.9,SNR=77								
WRA				PcP			PcP	19 55 31.2	-0.9
	comp=Z,2.6nm,1.4s,baz=17,slow=3.6,SNR=4.8								
	comp=Z,2.2nm,0.4s								
WRA	Warramunga Arr	39.89	197	P			P	19 53 29.0	-1.5
SONM	Songino Array	43.17	321	P			P	19 53 56.1	-0.9
	comp=Z,0.3nm,0.6s,baz=134,slow=8.3,SNR=3.0								
	comp=Z,0.3nm,0.6s								
AS31	Alice Springs	43.56	196	P			P	19 54 00.4	+0.2
ASAR	Alice Springs	43.56	196	P			P	19 54 00.0	-0.2
	comp=Z,0.4nm,0.3s,baz=14,slow=6.5,SNR=17								
ASAR				PcP			PcP	19 55 43.6	-0.6
	comp=Z,0.3nm,0.7s,baz=24,slow=5.3,SNR=4.3								
	comp=Z,0.4nm,0.3s								
ASAR	Alice Springs	43.56	196	P			P	19 54 00.5	+0.3
YAK	Yakutsk	44.79	349	LR			LR	20 19 11.6	
	comp=Z,13nm,18.5s,baz=93,slow=44								
DZM	Mont Dzumac	45.27	152	P			P	19 54 13.6	-0.3
DZM				IAmb			IAmb	19 54 51.1	
	comp=Z,17nm,1.1s								
MARNC	Mare, Loyalty	45.48	150	P			P	19 54 09.8	-5.6
MBWA	Marble Bar	46.97	214	P			P	19 54 27.3	+0.3
MBWA				IAmb			IAmb	19 55 03.8	
	comp=Z,18nm,1.3s								
FORT	Forrest	51.94	199	P			P	19 55 03.2	-1.1
BBOO	Buckleboo	51.95	190	P			P	19 55 05.8	+1.4
FALS	False Pass	52.82	34	P			P	19 55 11.5	+1.0
MORW	Morawa	55.35	212	P			P	19 55 29.4	+0.1
ZALV	Zalesovo Beam	58.05	323	P			P	19 55 47.3	-0.5
	comp=Z,0.6nm,0.6s,baz=96,slow=13,SNR=2.5								
	comp=Z,0.6nm,0.6s								
MK31	Makanchi Array	58.48	314	P			P	19 55 51.3	+0.3
MKAR	Makanchi Array	58.48	314	P			P	19 55 51.2	+0.1
	comp=Z,0.3nm,0.5s,baz=96,slow=7.8,SNR=7.0								
	comp=Z,0.3nm,0.5s								
MKAR	Makanchi Array	58.48	314	P			P	19 55 51.4	+0.3
K20K	Telida	60.32	27	P			P	19 56 04.9	+1.5
K20K				IAmb			IAmb	19 56 43.4	
	comp=Z,5.6nm,1.3s								
J20K	Nowinta River	60.56	26	P			P	19 56 04.5	-0.4
J20K				IAmb			IAmb	19 56 09.2	
	comp=Z,9.7nm,1.4s								
CAST	Castle Rocks	61.20	27	P			P	19 56 09.9	+0.7
IMAR	Indian Mountai	61.32	24	P			P	19 56 11.2	+1.3
H21K	Melozitna Rive	61.58	24	P			P	19 56 12.6	+0.8
H21K				IAmb			IAmb	19 56 25.7	
	comp=Z,4.1nm,1.3s								
KTH	Kantishna Hill	61.73	27	P			P	19 56 13.4	+0.5
KTH				IAmb			IAmb	19 56 41.0	
	comp=Z,12nm,1.5s								
I21K	Tanana	61.76	25	P			P	19 56 13.8	+0.9
BPAW	Bear Paw Mtn.	61.85	26	P			P	19 56 14.1	+0.5
BPAW				IAmb			IAmb	19 56 57.5	
	comp=Z,4.9nm,1.4s								
TRF	Thorofare Moun	61.98	27	P			P	19 56 14.9	+0.2
TRF				IAmb			IAmb	19 56 53.7	
	comp=Z,9.6nm,1.4s								
MLY	Manley	62.22	25	P			P	19 56 16.9	+0.8
MLY				IAmb			IAmb	19 56 17.6	
	comp=Z,3.9nm,1.3s								
SML	Sawmill	62.47	29	P			P	19 56 18.9	+1.1
FID	Port Fidalgo	63.14	31	P			P	19 56 22.7	+0.5
DHY	Denali Highway	63.17	28	P			P	19 56 23.2	+0.6
DHY				IAmb			IAmb	19 56 23.5	
	comp=Z,9.2nm,1.5s								
H24K	Noodor Dome	63.58	25	P			P	19 56 25.7	+0.7
H24K				IAmb			IAmb	19 56 52.5	
	comp=Z,6.8nm,1.4s								
IL31		63.74	26	P			P	19 56 24.8	-1.2
IL31				IAmb			IAmb	19 56 54.8	
	comp=Z,5.9nm,1.4s								
ILAR	Eielson Array	63.74	26	P			P	19 56 24.5	-1.6
	comp=Z,0.5nm,0.5s,baz=250,slow=5.8,SNR=7.0								
	comp=Z,0.5nm,0.5s								
J25K	Salcha River,	64.35	27	P			P	19 56 29.3	-0.8
BMAR	Burnt Mountain	65.22	24	P			P	19 56 36.8	+1.2
BCAR	Beaver Creek A	65.68	28	P			P	19 56 39.6	+0.9
LTZ	Lake Taylor	65.84	159	P			P	19 56 38.0	-1.9
BRVK	Borovoye	66.56	320	P			P	19 56 46.5	+2.1
ABKAR	Akbulak array	73.36	317	P			P	19 57 25.3	-0.6
FINES	FINESS Array B	86.93	335	P			P	19 58 36.1	-1.9
	comp=Z,1.2nm,0.8s,baz=75,slow=7.4,SNR=6.5								
	comp=Z,1.2nm,0.8s								

*GCG **21** 19:51:00.7±0.4, 14°.05N×92°.66W, h101km±49km, MD4.5*

*UCR **21** 19:51:13.4±0.8, 14°.34N×91°.65W, h98km, ML4.7, mb4.6(NEIC)*

*IDC **21** 19:51:15.9±0.9, 14°.61N×91°.24W, h89km±6km, mb4.1/18, mbtmp4.4/20, MS3.6/36, Error ellipse: s-maj=21.5km s-min=10.1km az

TGUH Tegucigalpa,Un 4.10 94 Pn Pn 19 52 16.0 +0.3
TGUH Tegucigalpa,Un 4.10 94 eP Pn 19 52 15.0 -0.6
TGUH Tegucigalpa,Un 4.10 94 eP Pn 19 52 16.2 +0.6
CMIG Matias Romero 4.24 310 P Pn 19 52 17.3 -0.1
comp=Z,61nm,0.5s,baz=116,slow=9.0,SNR=66
CMIG S Sn 19 53 07.5 +1.6
comp=Z,271nm,0.6s,baz=102,slow=20,SNR=6.7
CMIG LR LR 19 53 33.9
comp=Z,150nm,21.3s,baz=110,slow=32
CNGN Cerro Negro 5.02 111 Pn 19 52 28.3 +0.3
CNGN Cerro Negro 5.02 111 eP Pn 19 52 28.4 +0.4
MOMN Momotombo 5.20 112 eP Pn 19 52 31.8 +1.3
COPN Copaltepe 5.24 114 eP Pn 19 52 31.6 +0.6
HUEN 5.55 111 eP Pn 19 52 37.3 +2.1
HUEN eS Sn 19 53 41.5 +3.7
MATN Matagalpa 5.59 104 Pn 19 52 37.1 +1.2
MATN Matagalpa 5.59 104 eP Pn 19 52 36.6 +0.7
WILN Americas 2 5.61 112 eP Pn 19 52 36.2 +0.1
BOAB BOACO BROADBAN 5.98 108 Pn Pn 19 52 41.7 +0.6
BOAB BOACO BROADBAN 5.98 108 eP Pn 19 52 42.8 +1.7
TEIG Tepich 6.58 27 Pn Pn 19 52 49.5 +0.3
TEIG Tepich 6.58 27 eP Pn 19 52 50.6 +1.4
ACON Acoyapa 6.60 111 Pn 19 52 49.8 +0.3
ACON Acoyapa 6.60 111 eP Pn 19 52 50.6 +1.1
ORTG Ortega, Santa 7.11 123 Pn Pn 19 52 58.1 +1.5
DUNO Dulce Nombre, 7.25 125 Pn 19 53 00.2 +1.8
ESPN Las Esperanzas 7.32 106 Pn 19 53 00.3 +0.9
ESPN Las Esperanzas 7.32 106 eP Pn 19 53 00.5 +1.1
TLIG Tlapa 7.51 296 Pn 19 53 02.5 +0.4
JTS Las Juntas de 7.56 122 Pn Pn 19 53 04.0 +1.3
JTS Las Juntas de 7.56 122 eP Pn 19 53 05.3 +2.5
JTS Las Juntas de 7.56 122 eP Pn 19 53 05.2 +2.5
COVE Coope Vega, Sa 7.81 117 Pn 19 53 06.9 +0.8
JACO JACO, Garabito 8.15 124 Pn 19 53 12.3 +1.5
RIMA Rio Macho 8.75 121 Pn 19 53 20.4 +1.3
RIMA Rio Macho 8.75 121 eP Pn 19 53 21.9 +2.8
CDM Cerro de Muert 8.95 122 eP Pn 19 53 24.1 +2.2
MRVA Moravia de Chi 9.07 119 eP Pn 19 53 26.2 +2.8
PEZE Perez Zeledon, 9.11 122 Pn 19 53 24.8 +0.9
SRBA San Rafael, Bu 9.45 122 Pn 19 53 29.7 +1.1
SRBA San Rafael, Bu 9.45 122 eP Pn 19 53 30.4 +1.9
POTG Potrero Grande 9.75 122 eP Pn 19 53 34.7 +2.1
CTCR Cotoan 10.13 122 eP Pn 19 53 39.8 +1.9
CDITO Canoas 10.22 123 Pn 19 53 39.6 +0.7
CCOL Caracol de Cor 10.24 124 eP Pn 19 53 43.0 +3.8
BRU2 Volcan 10.24 122 Pn Pn 19 53 40.3 +0.9
BRU2 Volcan 10.24 122 eP Pn 19 53 41.4 +2.0
BRU2 Volcan 10.24 122 eP Pn 19 53 41.1 +1.7
MOIG Morelia 10.67 301 Pn Pn 19 53 47.0 +1.8
SOR Soroa 11.60 43 Pn Pn 19 53 57.7 +0.1
LCCY Blossom Villag 12.11 63 Pn Pn 19 54 04.8 +0.4
BCIP Isla Barro Col 12.52 113 Pn 19 54 10.0 0.0
ZAIG Zacatecas 13.41 310 Pn 19 54 24.4 +2.4
MTDJ Mount Denham 13.93 72 P P 19 54 33.2 -0.5
MTDJ Mount Denham 13.93 72 eP P 19 54 32.5 -1.2
833A Chaparral WMA, 15.71 333 Pn Pn 19 54 51.6 +0.5
HKT Hockley 16.01 346 Pn Pn 19 54 55.6 +0.8
060A Indiantown 16.33 38 Pn Pn 19 54 58.1 -0.8
SJCC San Jacinto, C 16.55 104 eP Pn 19 54 58.9 -2.9
DWPF Disney Wildern 16.56 33 P 19 55 02.6 -0.1
GTBY Guantanamo Bay 16.59 68 P 19 55 03.5 +0.4
GTBY IAmb IAmb 19 55 23.8
comp=Z,43nm,1.1s
346A Big Creek Wild 17.04 6 P P 19 55 08.8 +0.9
656A Willston 17.07 28 P Pn 19 55 07.5 -0.4
435B Jarrell 17.27 342 P Pn 19 55 10.0 -0.4
NATX Nacogdoches 17.55 351 P Pn 19 55 13.8 0.0
NATX IAmb IAmb 19 55 17.6
comp=Z,64nm,1.2s
PLMC San Jos del P 17.68 121 eP P 19 55 14.9 -0.4
JCT Junction City 17.76 336 Pn 19 55 17.7 +1.2
JCT Junction City 17.76 336 P Pn 19 55 18.9 +2.4
baz=152
237A Washetta, Mont 17.99 348 P Pn 19 55 19.6 +0.5
237A IAmb IAmb 19 55 32.6
comp=Z,31nm,0.9s
352A Blakely 18.06 18 P Pn 19 55 20.1 +0.2
352A IAmb IAmb 19 55 48.5
comp=Z,58nm,0.9s
YOTC Yotoco, Valle 18.15 123 eP Pn 19 55 21.4 0.0
250A Grady 18.16 14 P Pn 19 55 21.7 +0.5
250A IAmb IAmb 19 55 25.7
comp=Z,73nm,1.2s
HPIG 18.20 316 P Pn 19 55 22.2 +0.2
GUY2C Guyana, Caldas 18.29 118 eP Pn 19 55 23.5 +0.1
146A Union 18.32 7 P Pn 19 55 23.4 +0.4
WHTX Lake Whitney, 18.37 344 P P 19 55 22.7 +0.1
WHTX IAmb IAmb 19 55 45.0
comp=Z,24nm,0.7s
WHTX Lake Whitney, 18.37 344 P Pn 19 55 23.5 -0.2
baz=161
PTBC PUERTO BERRIO, 18.46 113 eP Pn 19 55 24.5 -0.4
TIGA Tifton 18.46 22 P P 19 55 23.2 -0.4
NORC Norcasia 18.55 117 eP Pn 19 55 26.4 +0.4
ANIL Santa Ana 18.64 120 eP Pn 19 55 28.3 +0.9
TX31 Lajitas Ar. Si 18.67 325 P Pn 19 55 27.2 -0.3
TX31 IAmb IAmb 19 55 29.9
comp=Z,32nm,1.1s
TX32 Lajitas Array 18.67 325 P Pn 19 55 27.2 -0.3
TXAR Lajitas Array 18.67 325 P Pn 19 55 28.4 +1.0
comp=Z,9.2nm,1.0s,baz=152,slow=10,SNR=45
TXAR PcP PcP 19 59 52.6 +1.6
comp=Z,2.0nm,0.9s,baz=174,slow=2.5,SNR=6.8
TXAR Lajitas Array 18.67 325 P Pn 19 55 27.5 +0.1
Z47A Carrollton 19.00 9 P P 19 55 30.0 +0.6
LRAL Lakeview Retre 19.02 12 P 19 55 30.3 +0.5
LRAL Lakeview Retre 19.02 12 P Pn 19 55 31.9 +0.4
baz=193,SNR=17
Z38A Mt. Pleasant 19.07 351 P P 19 55 30.5 +0.3
Z38A IAmb IAmb 19 55 36.2
comp=Z,23nm,0.8s
URIC Uribia, Colomb 19.18 96 eP Pn 19 55 35.1 +1.6
IMBA Imbabura, San 19.21 136 P P 19 55 33.1 +0.7
152A Waverly Hall 19.23 18 P Pn 19 55 33.3 -0.6
152A IAmb IAmb 19 55 38.8
comp=Z,40nm,0.9s
WLAR White Oak Lake 19.29 356 P P 19 55 33.1 +0.5
WLAR IAmb IAmb 19 56 03.5
comp=Z,35nm,0.7s
255A Hazlehurst 19.32 24 P P 19 55 33.6 +0.6
ROSC El Rosal 19.38 118 P Pn 19 55 36.8 +0.6
comp=Z,9.2nm,0.4s,baz=55,slow=0.7,SNR=6.8
ROSC El Rosal 19.38 118 P 19 55 35.1 +0.9
ROSC IAmb IAmb 19 55 38.6
comp=Z,35nm,1.1s
ROSC El Rosal 19.38 118 eP Pn 19 55 41.8 +5.6
Y45A Yeager Farm, C 19.49 5 P P 19 55 35.1 +0.3
PRAC Prado 19.50 121 eP P 19 55 36.2 +1.1
Z35A Perchaven, San 19.59 345 P P 19 55 36.7 +0.7
Z35A IAmb IAmb 19 56 08.4
comp=Z,49nm,1.1s
ABTX Abilene, Hawle 19.63 339 P P 19 55 37.1 +0.6
ABTX IAmb IAmb 19 55 38.7
comp=Z,38nm,0.9s
ABTX Abilene, Hawle 19.63 339 P P 19 55 37.3 +0.9
baz=156,SNR=11
BETC Betania 19.64 125 eP Pn 19 55 38.0 -1.0
154A Montrose 19.70 21 P Pn 19 55 38.5 -0.9
Z51A Franklin 19.71 16 P Pn 19 55 38.9 -0.7
PAMC Pamplona, Colo 19.72 109 eP P 19 55 36.0 -2.0
SDDR Presa de Saban 19.88 74 P P 19 55 40.1 +0.9
GARC Garzon, Huila 19.90 126 eP Pn 19 55 44.7 +2.5
Y49A Blount Mountai 19.94 12 P P 19 55 41.0 +1.3
Y49A IAmb IAmb 19 55 47.7
comp=Z,32nm,1.1s
RUSC La Rusia 19.97 113 eP P 19 55 39.9 -0.8
CHIC Chingaza 19.99 117 eP P 19 55 41.9 +1.0
FLOC Florencia 20.16 128 eP Pn 19 55 43.8 -1.2
MIAR Mount Ida 20.17 355 P P 19 55 41.8 -0.4
MIAR IAmb IAmb 19 56 11.8
comp=Z,33nm,1.1s
MIAR Mount Ida 20.17 355 P P 19 55 42.7 +0.4
baz=174,SNR=7.0
GOGA Godfrey 20.30 20 P P 19 55 44.0 +0.3
GOGA IAmb IAmb 19 55 46.5
comp=Z,42nm,0.9s
GOGA Godfrey 20.30 20 P Pn 19 55 45.2 -1.2
baz=203,SNR=11
UALR University of 20.33 358 P P 19 55 43.8 -0.1
UALR IAmb IAmb 19 55 48.8
comp=Z,36nm,0.9s
X48A Hartselle 20.39 11 P P 19 55 44.5 -0.1
X48A IAmb IAmb 19 56 11.4
comp=Z,21nm,0.8s
X37A Clayton 20.43 351 P 19 55 44.7 -0.3
X37A IAmb IAmb 19 56 17.0
comp=Z,41nm,1.1s
SC01 Santiago de lo 20.48 73 P P 19 55 44.5 -1.2
Y52A Lilburn 20.54 18 P P 19 55 46.5 +0.3
PLAL Pickwick Lake 20.75 8 P P 19 55 48.3 -0.1
PLAL IAmb IAmb 19 56 14.4
comp=Z,50nm,1.3s
FPAL Fort Paine 20.77 14 P P 19 55 50.1 +1.3
FPAL IAmb IAmb 19 55 51.3
comp=Z,38nm,1.1s
X34A Smith Ranch, M 20.94 345 P P 19 55 50.3 -0.2
X34A IAmb IAmb 19 56 12.2
comp=Z,43nm,1.3s
X51A Calhoun 20.98 15 P P 19 55 51.5 +0.6
CLNB Carlsbad 21.10 330 P P 19 55 53.2 +0.9
HBAR Harrisburg 21.11 2 P P 19 55 51.7 -0.6
SDV Santo Domingo 21.13 103 P P 19 55 52.0 -1.0
comp=Z,9.7nm,0.4s,baz=290,slow=7.8,SNR=4.4
SDV LR LR 20 03 28.9
comp=Z,132nm,21.6s,baz=202,slow=35
comp=Z,9.7nm,0.4s
SDV Santo Domingo 21.13 103 P P 19 55 51.2 -1.8
SDV Santo Domingo 21.13 103 eP P 19 55 51.4 -1.6
CLN7 Carlsbad 7 21.19 330 P P 19 55 53.9 +0.6
GDL2 Guadalupe Moun 21.29 329 P P 19 55 54.9 +0.5
WMOK Wichita Mounta 21.32 343 P P 19 55 53.8 -0.8
WMOK IAmb IAmb 19 56 16.0
comp=Z,36nm,1.1s
WMOK Wichita Mounta 21.32 343 P P 19 55 55.4 +0.8
baz=160,SNR=5.3
SWET Sewanee 21.35 13 P P 19 55 54.6 -0.3
SWET IAmb IAmb 19 56 17.1
comp=Z,31nm,0.9s
FCAR Ozark Folk Cen 21.43 359 P P 19 55 55.9 +0.1
HODGE Hodges 21.46 21 P P 19 55 54.8 -1.2
HODGE IAmb IAmb 19 56 26.4
comp=Z,38nm,1.0s
FNO Franklin 21.46 347 P 19 55 56.1 0.0
W50A Signal Mountai 21.47 14 P P 19 55 55.8 -0.4
W50A IAmb IAmb 19 56 16.0
comp=Z,38nm,0.9s
LCAR Lake Charles 21.61 1 P P 19 55 57.1 -0.5
BOSC San Juan Bosco 21.66 143 P P 19 55 58.0 -0.6
BOSC IAmb IAmb 19 56 24.6
comp=Z,31nm,1.3s
V48A Smith Brothers 21.68 10 P P 19 55 57.4 -1.0
V48A IAmb IAmb 19 56 20.6
comp=Z,52nm,1.1s
PTLC Puerto Leguiza 21.72 129 eP P 19 56 02.0 +3.0
W52A Murphy 21.73 17 P P 19 55 59.8 +0.8
W52A IAmb IAmb 19 56 41.1
comp=Z,20nm,0.8s
OK025 Westminster Rd 21.76 347 P 19 55 58.1 -1.2
GLAT Glass 21.89 5 P P 19 56 00.6 0.0
CPCT Cooper Cave 21.90 15 P P 19 56 01.2 +0.4
CPCT IAmb IAmb 19 56 11.2
comp=Z,32nm,1.1s
WVT Waverly 21.91 8 P P 19 56 00.2 -0.6
WVT Waverly 21.91 8 P P 19 56 00.9 0.0
baz=189
HHAR Hobbs 21.93 355 P P 19 56 00.1 -0.9
BG3 Lake Jocassee 21.93 19 P P 19 56 01.1 0.0
BG3 IAmb IAmb 19 56 30.7
comp=Z,26nm,0.9s
OK029 Liberty Lake 22.00 347 P 19 56 00.1 -1.7
MSTX Muleshoe 22.03 334 P P 19 56 01.1 -1.1
MSTX Muleshoe 22.03 334 P P 19 56 03.2 +0.9
baz=150,SNR=7.7
OK034 N. Norfolk Rd. 22.05 349 P P 19 56 01.3 -1.0
CLTN Cedars of Leba 22.11 11 P P 19 56 00.8 -2.2
CLTN IAmb IAmb 19 56 24.5
comp=Z,51nm,1.2s
U38A Gravette 22.13 354 P P 19 56 02.4 -0.8
PAULI Pauline 22.15 22 IAmb IAmb 19 56 22.8
comp=Z,31nm,0.9s
V51A Loudon 22.28 15 IAmb IAmb 19 56 15.7
comp=Z,54nm,1.2s
TKL Tuckaleechee C 22.30 17 P P 19 56 05.6 +0.6
comp=Z,22nm,0.8s,baz=191,slow=11,SNR=21
TKL LR LR 20 05 50.9
comp=Z,254nm,20.7s,baz=198,slow=40
TKL Tuckaleechee C 22.30 17 IAmb IAmb 19 56 07.4
comp=Z,40nm,1.0s
AMTX Amarillo 22.40 338 IAmb IAmb 19 56 10.7
comp=Z,20nm,0.8s
AMTX Amarillo 22.40 338 P P 19 56 05.9 -0.2
baz=153
OK044 Pawnee Station 22.42 349 IAmb IAmb 19 56 28.5
comp=Z,29nm,1.0s
OK046 Pawnee Station 22.46 348 P 19 56 05.7 -1.0
OK046 IAmb IAmb 19 56 30.8
comp=Z,31nm,0.9s
OK048 Pawnee Station 22.49 348 IAmb IAmb 19 56 31.1
comp=Z,27nm,0.9s
BIRD Birdtown, Kers 22.50 24 P P 19 56 06.3 -0.9
BIRD IAmb IAmb 19 56 27.0
comp=Z,42nm,1.2s
V52A Sevierville 22.52 17 IAmb IAmb 19 56 09.5
comp=Z,34nm,0.9s
OK051 E0350 and S346 22.55 349 P 19 56 06.7 -1.0
OK051 IAmb IAmb 19 56 38.2
comp=Z,24nm,0.9s
V53A Saluda 22.59 19 IAmb IAmb 19 56 41.3
comp=Z,45nm,1.1s
KMSC Kings Mountain 22.61 22 P P 19 56 08.1 -0.1
KMSC pP pP 19 56 27.7 +0.6
U49A Red Boiling Sp 22.63 12 P P 19 56 07.8 -0.6
U49A pP pP 19 56 28.6 +1.4
MGMO Mountain Grove 22.70 358 IAmb IAmb 19 56 10.1
comp=Z,73nm,1.5s
T47A Sharon Grove 22.86 9 P P 19 56 09.5 -1.2
T47A pP pP 19 56 30.4 +0.8
T47A IAmb IAmb 19 56 34.4
comp=Z,39nm,0.8s
TZTN Tazewell 23.19 16 IAmb IAmb 19 56 21.7
comp=Z,31nm,1.0s
TZTN Tazewell 23.19 16 P P 19 56 14.4 +0.4
baz=200,SNR=7.3
S39A Bolivar 23.28 356 P P 19 56 13.7 -1.1
S39A IAmb IAmb 19 56 16.3
comp=Z,28nm,0.9s
V55A Taylorsville 23.29 21 IAmb IAmb 19 56 39.0
comp=Z,29nm,1.0s
T50A Nancy 23.32 14 P P 19 56 14.5 -0.7
T50A pP pP 19 56 34.8 +0.2
T50A IAmb IAmb 19 56 37.8
comp=Z,27nm,1.1s
121A Cookes Peak, D 23.40 323 IAmb IAmb 19 56 20.1
comp=Z,40nm,1.1s
121A Cookes Peak, D 23.40 323 P P 19 56 18.7 +2.5
baz=137,SNR=15
319A Douglas 23.50 319 IAmb IAmb 19 56 20.8
comp=Z,38nm,1.2s
BAUV El Baul 23.58 101 P P 19 56 14.5 -3.3
CCM Cathedral Cave 23.59 0 P P 19 56 16.5 -1.0
CCM Cathedral Cave 23.59 0 P P 19 56 16.8 -0.8
baz=180
USIN University of 23.74 8 IAmb IAmb 19 56 43.9
comp=Z,38nm,0.8s
R40A Maddies Statio 23.83 358 IAmb IAmb 19 56 21.2
comp=Z,30nm,0.8s
V58A Windy Hill, Pi 24.05 25 P P 19 56 21.5 -0.2
V58A IAmb IAmb 19 56 47.7
comp=Z,23nm,0.9s
WCI Wyandotte Cave 24.20 10 P P 19 56 22.8 -0.3
WCI Wyandotte Cave 24.20 10 P P 19 56 23.3 +0.2
baz=192
S51A Beattyville 24.21 15 IAmb IAmb 19 56 53.2
comp=Z,40nm,1.2s
ANMO Albuquerque 24.53 329 P P 19 56 27.8 +1.5
comp=Z,2.4nm,0.7s,baz=156,slow=13,SNR=8.0
ANMO PcP PcP 20 00 03.6 +1.1
comp=Z,2.4nm,0.9s,baz=208,slow=4.7,SNR=4.0
comp=Z,2.4nm,0.7s
ANMO Albuquerque 24.53 329 P P 19 56 27.6 +1.3
ANMO PcP 20 00 04.5 +2.0
ANMO Albuquerque 24.53 329 P P 19 56 28.6 +2.3
baz=143
SJG San Juan 24.60 78 LR LR 20 05 37.9
comp=Z,87nm,19.6s,baz=246,slow=36
ATAH Atahualpa 25.01 148 P P 19 56 34.6 +3.6
comp=Z,17nm,0.8s,baz=301,slow=8.8,SNR=7.4
comp=Z,17nm,0.8s
S54A Dingess, Beckl 25.02 19 IAmb IAmb 19 56 31.3
comp=Z,14nm,0.6s
TUC Tucson 25.08 319 P P 19 56 33.7 +2.5
baz=131
T25A Trinidad 25.43 335 IAmb IAmb 19 56 59.8
comp=Z,18nm,1.0s
Q51A Peebles 25.59 15 P P 19 56 35.5 -0.2
Q51A IAmb IAmb 19 56 36.9
comp=Z,26nm,0.9s
T59A Double "B" Far 25.71 26 P P 19 56 36.8 +0.1
T59A IAmb IAmb 19 56 38.1
comp=Z,18nm,0.8s
T59A pP pP 19 56 57.8 -0.3
Q52A Bidwell 25.81 17 IAmb IAmb 19 56 39.0
comp=Z,23nm,0.9s
X18A Snowflake 26.09 324 P P 19 56 42.2 +1.7
214A Organ Pipe Nat 26.19 316 P P 19 56 43.6 +2.3
baz=127
Q54A Coxs Mills 26.25 19 IAmb IAmb 19 56 42.7
comp=Z,21nm,0.9s
W18A Petrified Fore 26.39 325 P P 19 56 46.1 +2.9
baz=137
P53A Whipple 26.55 18 P P 19 56 44.2 -0.1
P53A IAmb IAmb 19 56 45.8
comp=Z,22nm,1.1s
O52A Adamsville 27.00 16 IAmb IAmb 19 57 31.3
comp=Z,29nm,1.1s
MVCO Mesa Verde 27.33 329 P P 19 56 52.2 +0.5
MVCO Mesa Verde 27.33 329 P P 19 56 53.9 +2.3
baz=142
WUAZ Wupatki 27.61 323 P P 19 56 56.4 +2.3
baz=135,SNR=7.2
GLA Glamis 28.21 315 P P 19 57 01.1 +1.8
GLA IAmb IAmb 19 57 02.9
comp=Z,14nm,1.1s
GLA Glamis 28.21 315 P P 19 57 02.2 +2.8
baz=126
PV13 Radium Mtn., P 28.23 330 P P 19 57 00.4 +0.7
SSPA Standing Stone 28.73 22 P P 19 57 04.1 +0.2
baz=208
YUH Yuha Desert 28.74 313 P P 19 57 05.7 +1.6
U15A North Rim 28.78 323 IAmb IAmb 19 57 08.3
comp=Z,16nm,1.3s
BC3 Big Chuckawall 28.99 316 P P 19 57 08.9 +2.6
baz=126,SNR=9.5
IRM Iron Mountain 29.08 317 P P 19 57 09.8 +2.8
baz=127
GMRC Granite Mounta 29.80 317 P P 19 57 16.5 +3.0
baz=127,SNR=8.8
V12A Nelson 29.86 320 P P 19 57 15.9 +1.9
V12A pP pP 19 57 36.8 +1.3
NNA Nana 29.94 150 LR LR 20 06 55.6
comp=Z,70nm,20.4s,baz=323,slow=31
SHPR Sheep Range 30.55 320 P P 19 57 21.7 +1.5
SHPR PcP 20 00 19.9 +2.9
PSUT Pine Spring 31.14 325 P P 19 57 26.6 +1.2
GWY Greenwater Val 31.30 318 PcP PcP 20 00 21.3 +2.3
TPNV Topopah Spring 31.50 320 P P 19 57 31.7 +3.2
baz=129
LRMC Laurel Mtn Rad 31.54 316 P P 19 57 31.8 +2.9
baz=125
MPMC Manual Prospec 31.75 318 P P 19 57 33.0 +2.3
baz=126,SNR=12
R11A Troy Canyon, C 32.01 323 P P 19 57 35.8 +2.8
baz=132,SNR=13
SADO Sadowa 32.06 17 P P 19 57 32.3 -0.8
comp=Z,7.6nm,0.8s,baz=253,slow=5.7,SNR=4.7
SADO LR LR 20 11 22.4
comp=Z,151nm,21.0s,baz=170,slow=38
comp=Z,7.6nm,0.8s
GRAC Grapevine Rang 32.23 319 IAmb IAmb 19 57 39.0
comp=Z,18nm,1.1s
HWUT Hardware Ranch 32.25 331 P P 19 57 36.9 +1.9
HWUT PcP 20 00 21.9 +0.5
PDAR Pinedale Array 32.29 335 P P 19 57 35.6 +0.1
comp=Z,0.6nm,0.7s,baz=116,slow=10,SNR=6.0
PDAR LR LR 20 15 03.6
comp=Z,114nm,18.5s,baz=100,slow=44
comp=Z,0.6nm,0.7s
GMN Gold Mountain 32.35 320 P P 19 57 37.1 +1.0
CWC Cottonwood Cre 32.36 318 P P 19 57 38.4 +2.3
baz=126
BGU Big Grassy Mou 32.44 329 PcP 20 00 23.7 +1.7
BOAV Boa Vista 32.80 108 eP P 19 57 38.2 -1.8
HVU Hansel Valley 32.95 330 IAmb IAmb 19 57 45.1
comp=Z,12nm,1.2s
LONY Lake Ozonia 33.40 22 P P 19 57 44.8 -0.1
baz=211
ELK Elko 33.45 326 P P 19 57 48.5 +2.8
comp=Z,4.0nm,0.8s,baz=136,slow=7.0,SNR=19
ELK Elko 33.45 326 P P 19 57 46.8 +1.2
ELK PcP PcP 20 00 26.2 +1.3
TPAW Teton Pass 33.47 334 IAmb IAmb 19 58 11.1
comp=Z,22nm,1.4s
MOOW Moose Ponds 33.59 334 PcP PcP 20 00 26.5 +1.2
NV11 Mina Array Sit 33.61 320 IAmb IAmb 19 57 51.0
comp=Z,16nm,0.9s
OMMB Old Mammoth Mi 33.65 319 P P 19 57 48.9 +1.4
NVAR Mina Array Bea 33.70 320 P P 19 57 51.0 +3.2
comp=Z,13nm,0.8s,baz=134,slow=9.1,SNR=94
NVAR pP pP 19 58 11.0 +1.6
comp=Z,4.6nm,0.6s,baz=125,slow=9.9,SNR=5.9
NVAR PcP PcP 20 00 27.3 +1.6
comp=Z,4.2nm,0.8s,baz=134,slow=4.0,SNR=9.1
MDPB Devils Postpil 33.71 318 P P 19 57 48.3 +0.4
MDPB IAmb IAmb 19 57 51.7
comp=Z,9.3nm,0.9s
LHV Little Huntoon 33.71 320 IAmb IAmb 19 57 52.2
comp=Z,14nm,0.9s
RYN Ryan 33.96 320 P P 19 57 51.6 +1.7
KVN Kaiserville 33.96 321 IAmb IAmb 19 57 53.7
comp=Z,11nm,1.0s
KVN PcP PcP 20 00 28.8 +2.4
BMN Battle Mountai 34.34 324 P P 19 57 54.5 +1.3
BMN IAmb IAmb 19 57 56.2
comp=Z,8.9nm,0.9s
YERR Yerington 34.62 320 IAmb IAmb 19 57 58.9
comp=Z,7.4nm,0.9s
ETMB Extrema 34.73 132 eP P 19 57 56.2 -0.4
PNTR Pine Nut 34.90 320 P P 19 57 58.5 +0.3
PNTR IAmb IAmb 19 58 02.1
comp=Z,8.7nm,0.8s
HLID Hailey 35.09 330 IAmb IAmb 19 58 03.2
comp=Z,6.5nm,0.9s
HLID Hailey 35.09 330 P P 19 58 02.0 +2.3
baz=139,SNR=10
MACA Manacapuru-AM 35.15 117 eP P 19 57 59.2 -1.1
MCMT McKenzie Canyo 35.36 333 P P 19 58 03.2 +1.2
MFID Camas Ranch 35.67 329 IAmb IAmb 19 58 08.7
comp=Z,7.6nm,1.0s
DLMT Dillon 35.68 334 IAmb IAmb 19 58 08.5
comp=Z,8.4nm,1.1s
DLMT PcP PcP 20 00 33.8 +2.7
BEKR Beckworth 35.84 321 P P 19 58 07.5 +1.3
BEKR IAmb IAmb 19 58 09.9
comp=Z,11nm,1.3s
ULM Lac du Bonnet 35.96 355 P P 19 58 05.8 -1.0
comp=Z,1.8nm,0.4s,baz=166,slow=12,SNR=2.5
ULM pP pP 19 58 27.4 -1.4
comp=Z,9.3nm,0.9s,baz=178,slow=9.4,SNR=5.0
ULM LR LR 20 14 41.4
comp=Z,98nm,21.8s,baz=118,slow=39
comp=Z,1.8nm,0.4s
WVOR Wild Horse Val 36.47 325 IAmb IAmb 19 58 14.3
comp=Z,14nm,1.1s
PLID Pearl Lake 36.99 331 P P 19 58 16.1 +0.2
PLID IAmb IAmb 19 58 18.1
comp=Z,11nm,1.0s
MSO Missoula 37.41 334 PcP PcP 20 00 38.5 +2.2
K05A Summer Lake 37.92 324 PcP 20 00 40.8 +2.7
I07A Izee 38.04 327 P P 19 58 25.1 +0.4
I07A IAmb IAmb 19 58 26.8
comp=Z,8.5nm,1.0s
LPAZ La Paz 38.22 142 P P 19 58 28.4 +1.5
comp=Z,1.5nm,0.7s,baz=320,slow=12,SNR=5.2
comp=Z,1.5nm,0.7s
G08A Pilot Rock 38.59 329 PcP PcP 20 00 41.8 +1.8
PINE Pine Mountain 38.63 325 IAmb IAmb 19 58 32.0
comp=Z,9.8nm,0.9s
PINE PcP PcP 20 00 42.6 +2.3
PB16 IPOC Station P 39.06 146 P P 19 58 34.8 +0.8
HOOD Mount Hood Mea 40.01 327 P P 19 58 42.6 +1.5
ITTB Itaituba 40.04 115 eP P 19 58 39.4 -2.2
C09A Chrisman Ranch 40.05 332 P P 19 58 41.6 +0.3
C09A IAmb IAmb 19 58 43.8
comp=Z,8.7nm,0.7s

MALB	Monte Alegre	40.24 111	eP		P	19 58 42.3	-0.9
VILB	Vilhena	41.20 130	eP		P	19 58 50.4	-0.7
MCPB	Macapa, AP	41.67 107	eP		P	19 58 55.1	+0.1
NPGB	Novo Progresso	41.68 118	eP		P	19 58 52.9	-2.2
PDRB	Porto dos Gac	43.05 125	eP		P	19 59 05.0	-1.1
CLDB	Colider	43.37 123	eP		P	19 59 07.0	-1.8
PTLB	Pontes e Lacer	43.60 132	eP		P	19 59 09.7	-0.8
SCHQ	Schefferville	44.70 20	P		P	19 59 18.0	-0.8
	comp=Z,18nm,0.8s,baz=223,slow=6.8,SNR=13						
SCHQ			pP		pP	19 59 38.9	-2.7
	comp=Z,7.9nm,0.9s,baz=265,slow=19,SNR=2.6						
SCHQ			LR		LR	20 19 07.5	
	comp=Z,226nm,20.4s,baz=214,slow=38						
	comp=Z,18nm,0.8s						
SCHQ	Schefferville	44.70 20	P		P	19 59 17.6	-1.2
BBRB	Robore, Bolivi	45.03 135	eP		P	19 59 21.4	-0.6
SALV	Santo Antonio	46.43 129	eP		P	19 59 32.1	-0.8
SNDB	Serra Nova Dou	47.66 121	eP		P	19 59 41.8	-0.8
MURT	Porto Murtinho	48.86 136	eP		P	19 59 50.3	-1.3
SMTB	Santa Maria do	49.28 115	eP		P	19 59 53.7	-1.4
AQDB	Aquidauana	49.36 134	P		P	19 59 54.6	-0.9
AQDB			IAmb		IAmb	19 59 56.6	
	comp=Z,12nm,1.2s						
AQDB	Aquidauana	49.36 134	eP		P	19 59 54.9	-0.7
ROSB	Rosario	49.97 106	eP		P	20 00 01.4	+1.1
ANTJ	Antonio Joao (	50.17 135	eP		P	20 00 00.9	-0.8
YKA	Yellowknife Ar	50.78 346	P		P	20 00 05.6	-0.1
	comp=Z,4.0nm,0.8s,baz=149,slow=7.8,SNR=9.4						
YKA			pP		pP	20 00 27.5	-1.3
	comp=Z,5.3nm,0.9s,baz=150,slow=7.8,SNR=7.3						
YKA			PcP		PcP	20 01 21.5	+0.2
	comp=Z,0.9nm,0.4s,baz=150,slow=4.2,SNR=9.1						
YKA			LR		LR	20 24 23.4	
	comp=Z,56nm,18.6s,baz=2.0,slow=39						
	comp=Z,4.0nm,0.8s						
FRB	Frobisher Bay	51.84 13	LR		LR	20 23 20.8	
	comp=Z,136nm,18.1s,baz=200,slow=37						
BDFB	Brasilia	52.30 123	P		P	20 00 17.9	+0.1
	comp=Z,1.9nm,0.3s,baz=304,slow=5.2,SNR=6.3						
	comp=Z,1.9nm,0.3s						
BDFB	Brasilia	52.30 123	eP		P	20 00 16.9	-1.0
CPUP	Villa Florida	52.35 140	LR		LR	20 21 52.5	
	comp=Z,54nm,20.0s,baz=32,slow=35						
CPUP	Villa Florida	52.35 140	eP		P	20 00 16.5	-1.3
TRCB	Terra Rica	53.03 134	eP		P	20 00 22.2	-0.8
SDBA	SAO DESIDERIO	53.27 118	eP		P	20 00 25.0	+0.1
IPMB	Ipameri, GO	53.43 126	eP		P	20 00 24.9	-1.2
FRBT	Francisco Belt	54.83 137	eP		P	20 00 35.3	-0.8
PMNB	Patos De Minas	55.14 125	eP		P	20 00 38.3	-0.1
MMPY	Sheldon Lake,	55.73 339	P		P	20 00 43.2	+1.1
	baz=131						
PLCA	Paso Flores	58.16 161	LR		LR	20 21 37.0	
	comp=Z,75nm,18.4s,baz=304,slow=31						
M29M	Somme Creek	58.27 336	P		P	20 01 01.0	+1.0
	baz=124,SNR=6.2						
GDU01	Guandu, BA	58.48 116	eP		P	20 01 01.8	-0.2
RCBR	Riachuelo	58.66 106	LR		LR	20 26 52.2	
	comp=Z,42nm,21.5s,baz=132,slow=36						
SFJD	Kangerlussuaq	59.01 17	LR		LR	20 27 37.3	
	comp=Z,140nm,20.8s,baz=185,slow=37						
CMC01	Camacan, BA	59.26 118	eP		P	20 01 06.9	-0.6
SJMB	Sao Joao De Ma	59.46 122	eP		P	20 01 08.6	-0.3
GUA01	Guaratinga, BA	59.59 119	eP		P	20 01 09.9	+0.3
L27K	Beaver Creek,	59.91 336	P		P	20 01 11.9	+0.6
L27K			IAmb		IAmb	20 01 13.6	
	comp=Z,5.3nm,0.9s						
L27K	Beaver Creek,	59.91 336	P		P	20 01 12.4	+1.2
	baz=120						
INK	Inuvik	60.23 343	P		P	20 01 12.8	-0.4
	comp=Z,1.7nm,0.4s,baz=146,slow=5.3,SNR=4.3						
INK			LR		LR	20 30 20.6	
	comp=Z,23nm,19.4s,baz=242,slow=39						
	comp=Z,1.7nm,0.4s						
RES	Resolute Bay	60.34 359	LR		LR	20 30 23.0	
	comp=Z,101nm,18.1s,baz=194,slow=39						
ALF01	Guarapari-ES	60.80 124	eP		P	20 01 18.3	+0.4
KLU	Klutina	60.87 333	P		P	20 01 19.2	+1.4
	baz=115						
J26L	Joseph Creek	61.30 337	IAmb		IAmb	20 01 24.1	
	comp=Z,8.8nm,1.4s						
J26L	Joseph Creek	61.30 337	P		P	20 01 22.1	+1.3
	baz=119						
PAX	Paxson	61.33 335	P		P	20 01 22.4	+1.4
	baz=117						
I26K	Coal Creek Min	61.55 338	P		P	20 01 22.5	+0.2
	baz=120						
J25K	Salcha River,	62.04 337	IAmb		IAmb	20 01 27.9	
	comp=Z,5.4nm,0.9s						
J25K	Salcha River,	62.04 337	P		P	20 01 26.2	+0.5
	baz=118						
PRP	Porcupine Dome	62.52 338	P		P	20 01 28.8	-0.2
PRP			IAmb		IAmb	20 01 31.1	
	comp=Z,5.0nm,0.9s						
KDAK	Kodiak Island	62.66 328	P		P	20 01 30.8	+1.0
	comp=Z,9.7nm,0.7s,baz=56,slow=0.8,SNR=11						
	comp=Z,9.7nm,0.7s						
IL31		62.70 337	IAmb		IAmb	20 01 32.4	
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	62.70 337	P		P	20 01 30.1	+0.2
	comp=Z,3.6nm,0.8s,baz=113,slow=4.9,SNR=27						
ILAR			LR		LR	20 32 42.5	
	comp=Z,28nm,20.6s,baz=102,slow=40						
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	62.70 337	P		P	20 01 29.4	-0.6
G25K	Bearman Lake	63.31 339	P		P	20 01 35.0	+1.0
	baz=118						
SKT	Skwentna	63.52 333	P		P	20 01 35.7	+0.2
SKT			IAmb		IAmb	20 01 37.3	
	comp=Z,8.9nm,0.9s						
TRF	Thorofare Moun	63.52 335	P		P	20 01 36.5	+0.9
	baz=112,SNR=6.3						
H24K	Noodor Dome	63.54 337	IAmb		IAmb	20 01 38.2	
	comp=Z,8.7nm,1.1s						
H24K	Noodor Dome	63.54 337	P		P	20 01 36.4	+0.8
	baz=116						
E25K	Arctic Village	63.78 340	P		P	20 01 37.7	+0.5
	baz=119						
I23K	Minto, Yukon-K	63.81 336	P		P	20 01 37.8	+0.5
	baz=114,SNR=7.7						
BPAW	Bear Paw Mtn.	64.05 335	IAmb		IAmb	20 01 40.4	
	comp=Z,10nm,1.0s						
BPAW	Bear Paw Mtn.	64.05 335	P		P	20 01 39.1	+0.2
	baz=112						
PPLA	Purkeypile	64.12 334	P		P	20 01 39.7	+0.1
	baz=110						
Q18K	Katmai Hardscr	64.14 329	P		P	20 01 40.9	+1.2
	baz=105						
M20K	Styx River	64.20 332	IAmb		IAmb	20 01 41.6	
	comp=Z,11nm,1.1s						
CAST	Castle Rocks	64.26 334	IAmb		IAmb	20 01 41.5	
	comp=Z,10nm,1.1s						
CAST	Castle Rocks	64.26 334	P		P	20 01 41.0	+0.7
	baz=110						
MLY	Manley	64.30 336	P		P	20 01 40.6	0.0
	baz=112,SNR=12						
N19K	Bonanza Creek	64.49 331	P		P	20 01 41.6	-0.3
N19K	Bonanza Creek	64.49 331	P		P	20 01 42.6	+0.6
	baz=107						
L20K	Farewell, AK	64.72 333	P		P	20 01 43.3	-0.1
	baz=108,SNR=7.7						
I21K	Tanana	64.84 336	IAmb		IAmb	20 01 49.8	
	comp=Z,19nm,1.5s						
I21K	Tanana	64.84 336	P		P	20 01 44.9	+0.8
	baz=111						
K20K	Telida	65.08 334	P		P	20 01 45.1	-0.5
K20K			IAmb		IAmb	20 01 47.5	
	comp=Z,14nm,1.1s						
K20K	Telida	65.08 334	P		P	20 01 45.7	0.0
	baz=108,SNR=6.4						
H21K	Melozitna Rive	65.34 336	P		P	20 01 46.9	-0.3
	baz=111						
J20K	Nowinta River	65.37 335	P		P	20 01 47.4	-0.1
J20K			IAmb		IAmb	20 01 48.9	
	comp=Z,13nm,1.3s						
J20K	Nowinta River	65.37 335	P		P	20 01 47.3	-0.2
	baz=109						
PPT	Papeete	65.50 243	LR		LR	20 25 00.7	
	comp=Z,30nm,20.4s,baz=196,slow=31						
E22K	Anaktuvuk Pass	65.89 339	P		P	20 01 51.5	+0.7
	baz=113						
G21K	Allakaket	65.91 337	P		P	20 01 51.5	+0.6
	baz=110						
F21K	Alatna River	66.15 338	P		P	20 01 53.4	+0.9
	baz=111,SNR=9.5						
N16K	Nishlik Lake	66.44 330	P		P	20 01 55.0	+0.5
	baz=103						
BORG	Borgarnes	68.66 26	LR		LR	20 31 14.5	
	comp=Z,28nm,19.6s,baz=267,slow=35						
BBTS	Babate	72.21 79	LR		LR	20 32 55.2	
	comp=Z,50nm,18.0s,baz=278,slow=35						
JMIC	Jan Mayen	74.22 20	LR		LR	20 35 42.8	
	comp=Z,94nm,18.7s,baz=264,slow=36						
CLGH	Cloghs, Cushen	75.71 36	eP		P	20 02 48.6	-1.9
KPL	Plockton	75.79 34	eP		P	20 02 49.3	-1.5
KAC	Achnashellach	75.97 34	eP		P	20 02 49.9	-2.1
MDO	Dochfour	76.48 34	eP		P	20 02 52.9	-1.9
GAL1	Galloway	76.54 36	eP		P	20 02 53.6	-1.5
IOMK	Kirk Michael	76.68 37	eP		P	20 02 53.9	-2.2
INVG	Invergeldie, C	76.75 35	eP		P	20 02 54.5	-1.9
MCD	Coleburn Disti	77.06 34	eP		P	20 02 56.5	-1.6
ESK	Eskdalemuir	77.35 36	eP		P	20 02 57.6	-2.2
DRUM	Mains of Drumt	77.55 34	eP		P	20 02 58.8	-2.0
ESY	Stoneypath	77.61 35	eP		P	20 02 59.4	-1.8
ESDC	Sonseca Array	79.09 52	P		P	20 03 08.0	-1.8
	comp=Z,1.5nm,0.8s,baz=283,slow=5.1,SNR=9.5						
ESDC			pP		pP	20 03 31.3	-2.7
	comp=Z,0.8nm,0.7s,baz=283,slow=5.1,SNR=3.4						
ESDC			LR		LR	20 31 35.0	
	comp=Z,45nm,21.3s,baz=313,slow=31						
	comp=Z,1.5nm,0.8s						
SPITS	Spitsbergen Ar	79.62 12	LR		LR	20 40 20.5	
	comp=Z,83nm,18.6s,baz=226,slow=37						
MDT	Midelt	79.78 59	LR		LR	20 33 28.1	
	comp=Z,28nm,18.2s,baz=325,slow=32						
NOA	NORSAR Array B	83.58 29	P		P	20 03 32.7	-0.3
	comp=Z,1.1nm,0.9s,baz=291,slow=5.0,SNR=3.6						
NOA			LR		LR	20 39 31.8	
	comp=Z,28nm,18.4s,baz=355,slow=35						
	comp=Z,1.1nm,0.9s						
HFS	Hagfors	85.03 29	LR		LR	20 43 14.1	
	comp=Z,81nm,18.7s,baz=312,slow=37						
DBIC	Dimbokro	85.12 84	LR		LR	20 40 08.2	
	comp=Z,16nm,19.3s,baz=280,slow=35						
ARCES	ARCESS Array B	85.63 18	P		P	20 03 42.4	-0.8
	comp=Z,0.9nm,0.7s,baz=305,slow=4.3,SNR=6.8						
ARCES			LR		LR	20 41 16.7	
	comp=Z,94nm,20.4s,baz=306,slow=35						
	comp=Z,0.9nm,0.7s						
DAVOX	Davos/Dischmat	87.25 42	LR		LR	20 38 04.9	
	comp=Z,28nm,19.9s,baz=278,slow=32						
CLL	Collm	87.72 37	i P		P	20 03 52.9	-0.7
	comp=Z,20nm,1.8s						
CLL			ePP		pP	20 04 18.0	-0.6
CLL			eSP		sP	20 04 29.0	+0.4
CLL			ePP		PP	20 07 21.0	+1.1
TORD	Torodi Ar. Bea	89.81 77	P		P	20 04 00.9	-3.3
	comp=Z,0.2nm,0.4s,baz=298,slow=4.5,SNR=7.3						
FINES	FINESS Array B	89.95 25	P		P	20 04 03.3	-0.6
	comp=Z,4.2nm,1.1s,baz=248,slow=2.1,SNR=5.6						
FINES			LR		LR	20 44 46.6	
	comp=Z,28nm,18.1s,baz=302,slow=36						
	comp=Z,4.2nm,1.1s						
TIXI	Tiksi	90.00 348	LR		LR	20 49 30.6	
	comp=Z,24nm,18.8s,baz=181,slow=39						
VRAC	Vranov	90.59 38	LR		LR	20 46 49.8	
	comp=Z,17nm,18.4s,baz=332,slow=37						
PETK	Petropavlovsk-	90.62 326	P		P	20 04 07.9	+0.6
	comp=Z,12nm,1.0s,baz=98,slow=7.9,SNR=3.8						
	comp=Z,12nm,1.0s						
MA2	Magadan	90.99 333	LR		LR	20 52 08.5	
	comp=Z,26nm,18.2s,baz=110,slow=40						
NRIK	Noril'sk	96.50 0	LR		LR	20 52 35.7	
	comp=Z,75nm,18.2s,baz=360,slow=38						
AKASG	Malin Array Be	97.14 33	LR		LR	20 48 49.2	
	comp=Z,22nm,18.9s,baz=240,slow=36						
ZALV	Zalesovo Beam	111.88 2	PKiKP		PKiKP	20 09 39.2	-0.2
	comp=Z,0.7nm,0.3s,baz=211,slow=2.0,SNR=4.8						
KURBB	Kurchatov Arra	114.69 7	PKP		PKiKP	20 09 44.6	-0.3
	comp=Z,1.2nm,0.5s,baz=350,slow=1.6,SNR=14						
SONM	Songino Array	116.05 347	PKP		PKPdf	20 09 48.2	+0.4
	comp=Z,0.5nm,1.0s,baz=210,slow=1.0,SNR=3.9						
KSRS	Korea Array	116.52 326	PKP		PKiKP	20 09 49.5	+0.8
	comp=Z,1.5nm,0.7s,baz=43,slow=2.4,SNR=5.9						
MKAR	Makanchi Array	118.86 5	PKP		PKPdf	20 09 52.5	-0.6
	comp=Z,0.6nm,0.3s,baz=344,slow=3.1,SNR=24						
BOSA	Boshof	120.06 115	PKP		PKiKP	20 09 56.1	+0.1
	comp=Z,2.5nm,0.5s,baz=276,slow=2.5,SNR=17						
GEYT	Alibeck	120.66 28	PKP		PKPdf	20 09 56.6	-0.2
	comp=Z,1.1nm,0.5s,baz=288,slow=5.8,SNR=4.0						
HHC	Hu-ho-hao-te	121.05 340	eP		PKPdf	20 09 56.0	-1.5
AAK	Ala-Archa	121.83 12	PKP		PKiKP	20 09 59.3	+0.1
	comp=Z,0.6nm,0.3s,baz=168,slow=7.7,SNR=4.4						
WMQ	Urumqi	122.08	eP		PKiKP	20 10 00.3	+0.7
GTA	Gaotai	125.47 349	eP		PKiKP	20 10 06.6	+0.1
GTA			pP		PKPdf	20 10 10.8	+4.7
GTA			sP		pPKPdf	20 10 13.6	-18
LZH	Lanzhou	127.76 344	eP		PKPdf	20 10 05.3	-5.3
LZH			pP		PKiKP	20 10 11.4	+0.2
WRA	Warramunga Arr	135.97 256	PKhKP		PKPpre	20 10 19.6	
	comp=Z,0.3nm,0.9s,baz=90,slow=3.7,SNR=6.8						
WRA			PKP		PKPdf	20 10 27.1	+0.8
	comp=Z,0.9nm,0.5s,baz=90,slow=2.9,SNR=16						
ASAR	Alice Springs	136.26 251	PKhKP		PKPpre	20 10 21.3	
	comp=Z,0.2nm,0.4s,baz=109,slow=3.2,SNR=2.3						
ASAR			PKP		PKPdf	20 10 27.2	+0.5
	comp=Z,0.4nm,0.3s,baz=91,slow=2.2,SNR=6.7						
PZH	PanZhiHua	137.38 342	PKP		PKPdf	20 10 28.3	-0.6
CMAR	Chiang Mai Arr	145.79 342	PKPbc		PKPbc	20 10 44.8	+0.3
	comp=Z,22nm,0.8s,baz=334,slow=3.5,SNR=82						
HYBB	Hyderabad (bro	146.91 18	ePKiKP		PKPab	20 10 50.0	+0.6

*IDC **21** 19:56:17.6±2.5, 17°.59S×173°.19W, h0km, mb3.8/4, mbtmp3.9/5, ML4.5/1, Error ellipse: s-maj=110.3km s-min=26.1km az=140.0*
*NEIC **21** 19:56:28±2.9, 16°.62S±0°.10×173°.7W±0°.2, h54km±13km, mb4.5/9, Error ellipse: s-maj=21.3km s-min=13.5km az=78.0.*

ISC 21 19:56:27.9±0.7, 16°.64S±0°.06×173°.73W±0°.09, h50km, n19, σ2s24/21, mb4.3/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.31	35	Pn	Pn	19 57 19.3	+2.0
	36nm,0.3s,baz=216,slow=3.3,SNR=48						
AFI				Sn	Sn	19 57 53.5	-1.9
	27nm,0.3s,baz=203,slow=11,SNR=4.1						
	85nm,0.3s						
AFI	Afiamalu	3.31	35		Pn	19 57 19.2	+1.9
AFI				Sn	Sn	19 57 54.0	-1.4
NIUE	Niue	4.36	124		Pn	19 57 33.5	+1.9
NIUE				Sn	Sn	19 58 17.4	-3.7
MSVF	Nonsavu	7.93	261			19 58 45.6	
QRZ	Quartz Range	26.87	204	P	P	20 02 07.3	+3.3
LTZ	Lake Taylor	28.67	202	P	P	20 02 24.5	+4.4
LTZ				IAmb	IAmb	20 02 43.1	
	comp=Z,27nm,1.4s						
STKA	Stephens Creek	43.15	241	P	P	20 04 21.6	-2.2
WB0	Warramunga Arr	49.23	258		P	20 05 09.8	-2.0
WB0				IAmb	IAmb	20 05 12.9	
	comp=Z,9.2nm,1.4s						
WB2	Warramunga Arr	49.25	258	P	P	20 05 09.8	-2.2
WB2				IAmb	IAmb	20 05 27.2	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	49.26	258	P	P	20 05 10.2	-1.8
	comp=Z,0.2nm,0.4s,baz=96,slow=6.2,SNR=1.3						
	comp=Z,0.2nm,0.4s						
AS31	Alice Springs	49.43	253	P	P	20 05 11.7	-1.6
AS31				IAmb	IAmb	20 05 12.5	
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	49.44	253	P	P	20 05 11.8	-1.6
	comp=Z,3.4nm,0.5s,baz=88,slow=8.3,SNR=96						
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	49.44	253	P	P	20 05 11.4	-2.0
KNRA	Kununurra	55.08	262	P	P	20 05 54.2	-1.0
SOEI	Soe	60.56	268	P	P	20 06 33.9	-0.1
QSPA	South Pole Qui	73.41	180	P	P	20 07 54.5	-0.2
QSPA				IAmb	IAmb	20 08 26.9	
	comp=Z,6.1nm,1.4s						
PDAR	Pinedale Array	83.40	42	P	P	20 08 49.4	-0.9
	comp=Z,0.7nm,0.7s,baz=182,slow=2.6,SNR=3.6						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	83.72	11	P	P	20 08 51.7	+0.6
	comp=Z,0.3nm,0.6s,baz=224,slow=3.8,SNR=4.1						
	comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	146.91	320	PKPbc	PKPdf	20 16 04.4	+1.0
	comp=Z,0.3nm,0.4s,baz=11,slow=2.9,SNR=3.8						

*IDC **21** 19:57:38.2±1.5, 38°.93N×142°.79E, h0km, mb3.5/3, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=75.7km s-min=27.0km az=122.0*

*JMA **21** 19:57:42.0±0.1, 39°.2N±0°.3×142°.4E±0°.6, h35km±1km, MV3.4/30, E OFF IWATE PREF*

ISC 21 19:57:42.0±1.9, 39°.20N±0°.05×142°.38E±0°.10, h30km±12km, n18, σ0s52/19, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.56	258	i P	Pb	19 57 53.6	+0.2
OFUJ				S	Sb	19 58 01.6	+0.4
MIYJ	Miyakonagasawa	0.57	311	i P	Pb	19 57 53.5	-0.1
MIYJ				S	Sb	19 58 01.4	-0.1
JKMT	Kesennumamotoy	0.80	241	i P	Pn	19 57 56.9	-0.4
JKMT				S	Sb	19 58 07.6	-0.3
JTH	Tanohata	0.84	332	P	Pn	19 57 57.3	-0.5
JTH				S	Sb	19 58 08.6	-0.4
JOM	Ohasama	0.89	288	i P	Pn	19 57 58.4	0.0
JOM				S	Sn	19 58 10.2	-0.1
JMK	Ichinoseki	0.94	255	i P	Pn	19 57 59.0	0.0
JMK				S	Sn	19 58 11.5	0.0
JIO	Ouri	1.09	228	P	Pn	19 58 00.9	-0.4
JIO				S	Sn	19 58 14.9	-0.5
JKZ	Kuzumaki	1.13	314	S	Sn	19 58 16.7	+0.4
MJAR	Matsushiro Arr	4.23	232	Pn	Pn	19 58 45.2	+0.8
	0.1nm,0.3s,baz=45,slow=12,SNR=8.8						
	1.3nm,0.7s						
H11N2	WAKE ISLAND Hy	28.69	125	T	T	20 34 07.5	
	baz=318,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.70	126	T	T	20 34 01.7	
	baz=318,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.71	125	T	T	20 34 02.4	
	baz=318,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	29.48	127	T	T	20 35 05.7	
	baz=319						
H11S3	WAKE ISLAND Hy	29.48	127	T	T	20 35 13.0	
	baz=319						
H11S2	WAKE ISLAND Hy	29.50	127	T	T	20 35 10.4	
	baz=319						
ILAR	Eielson Array	47.27	33	P	P	20 06 13.1	+1.0
	0.3nm,0.6s,baz=266,slow=6.1,SNR=6.6						
	0.3nm,0.6s						
WRA	Warramunga Arr	59.31	189	P	P	20 07 40.0	-1.0
	0.5nm,0.6s,baz=6.9,slow=7.0,SNR=5.8						
	0.5nm,0.6s						
ASAR	Alice Springs	63.04	189	P	P	20 08 06.0	-0.2
	0.3nm,0.7s,baz=20,slow=5.9,SNR=2.8						
	0.3nm,0.7s						

*NEIC **21** 20:04:36.0±2.8, 24°.21S±0°.06×67°.4W±0°.1, h191km±8km, mb4.3/12, Md3.6(SJA), ML4.1(GUC), Error ellipse: s-maj=14.0km s-min=8.1km az=95.0*
*VAO **21** 20:04:35.7±0.9, 24°.21S×67°.65W, h242km±8km, mb4.2*
*IDC **21** 20:04:35.2±2.1, 24°.16S×67°.04W, h170km±21km, mb3.6/1, mbtmp4.0/6, Error ellipse: s-maj=29.8km s-min=19.4km az=145.0*
*GUC **21** 20:04:36.4±0.7, 24°.17S×67°.46W, h209km±6km, ML4.1*

ISC 21 20:04:36.1±0.6, 24°.17S±0°.04×67°.39W±0°.06, h202km±7km, n93, σ1s32/127, mb4.1/3, 11C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.41	329		Pn	20 05 09.4	-0.1
AF01				Sn	S	20 05 35.0	0.0
AF01	San Pedro de A	1.41	329	eP	Pn	20 05 09.8	+0.2
AF01				eS	S	20 05 35.4	+0.3
LVC	Limon Verde	2.09	318	P	Pn	20 05 16.4	+0.4
	98nm,0.4s,baz=136,slow=6.2,SNR=156						
LVC				S	S	20 05 46.7	+0.3
	128nm,0.4s,baz=17,slow=23,SNR=38						
LVC	Limon Verde	2.09	318	Pn	Pn	20 05 16.4	+0.4
LVC				Sn	S	20 05 46.2	-0.2
LVC	Limon Verde	2.09	318	⇑ i P	Pn	20 05 16.4	+0.4
LVC				eS	S	20 05 46.6	+0.1
LVC	Limon Verde	2.09	318	eP	Pn	20 05 16.4	+0.4
PB15	IPOC Station P	2.13	296		Pn	20 05 17.0	+0.7
PB15				Sn	S	20 05 47.1	+0.1
PB15	IPOC Station P	2.13	296	⇑ i P	Pn	20 05 17.1	+0.7
PB15				eS	S	20 05 47.5	+0.5
GO02	Mina Guanaco	2.23	243	Pn	Pn	20 05 17.5	+0.1
GO02				Sn	S	20 05 48.8	-0.2
GO02	Mina Guanaco	2.23	243	⇑ i P	Pn	20 05 17.7	+0.2
GO02				eS	S	20 05 49.6	+0.6
GO02				IAML		20 05 50.5	
	comp=N,644nm,0.2s						
PB06	IPOC Station P	2.48	306		Pn	20 05 20.7	+0.7
PB06				Sn	S	20 05 53.4	-0.1
PB06	IPOC Station P	2.48	306	⇑ i P	Pn	20 05 20.7	+0.7
PB06				eS	S	20 05 53.2	-0.3
PB06				IAML		20 05 55.5	
	comp=E,433nm,0.3s						
PB14	IPOC Station P	2.78	260		Pn	20 05 22.4	-1.2
PB09	IPOC Station P	2.91	324		Pn	20 05 25.9	+0.9
PB09				Sn	S	20 06 02.3	-0.2
PB09	IPOC Station P	2.91	324	eP	Pn	20 05 25.9	+0.9
PB09				i S	S	20 06 03.0	+0.5
PB09				IAML		20 06 05.3	
	comp=N,232nm,0.4s						
PB10	IPOC Station P	2.97	282	Pn	Pn	20 05 26.1	+0.7
PB10				Sn	S	20 06 04.5	+1.2
PB10	IPOC Station P	2.97	282	⇑ i P	Pn	20 05 26.3	+0.8
PB10				eS	S	20 06 03.5	+0.2
PB03	IPOC Station P	3.03	314		Pn	20 05 26.5	+0.2
PB03				Sn	S	20 06 03.6	-1.3
PB03	IPOC Station P	3.03	314	⇑ i P	Pn	20 05 26.8	+0.4
PB03				eS	S	20 06 03.6	-1.3
PB03				I

SIV	**San Ignacio**	**10.07**	**37**	P	**Pn**	**20 06 52.8**	**-3.5**
	comp=N,2.0nm,0.6s,baz=220,slow=13,SNR=8.8						
SIV				S	S	20 08 31.7	-18
	comp=N,1.5nm,0.8s,baz=250,slow=15,SNR=2.0						
ITQB	**Itaqui**	**11.06**	**122**	Pn	**Pn**	**20 07 11.5**	**+2.6**
FRBT	**Francisco Belt**	**13.11**	**101**	*e*P	**P**	**20 07 36.9**	**-1.1**
TRCB	**Terra Rica**	**13.61**	**87**	P	**P**	**20 07 42.5**	**-1.0**
TRCB	**Terra Rica**	**13.61**	**87**	*e*P	**Pn**	**20 07 42.3**	**+1.1**
ALGR	**Alto Alegre (B**	**13.66**	**113**	*e*P	**Pn**	**20 07 42.8**	**+1.0**
CPSB	**Cacapava Do Su**	**13.87**	**120**	*e*P	**Pn**	**20 07 44.4**	**+0.1**
PTGB	**Pitanga**	**13.97**	**95**	*e*P	**P**	**20 07 46.8**	**-0.8**
GO06	**Curarrehue**	**15.75**	**192**		**Pn**	**20 08 08.0**	**+0.7**
GO06				IAmb	IAmb	20 08 10.4	
	comp=Z,6.3nm,0.8s						
PDRB	**Porto dos Gac**	**16.08**	**41**	*e*P	**P**	**20 08 09.3**	**-1.6**
FRTB	**Fartura**	**16.34**	**91**	*e*P	**P**	**20 08 12.1**	**-1.7**
ITRB	**Iturama**	**16.41**	**78**	*e*P	**P**	**20 08 14.4**	**-0.1**
PLCA	**Paso Flores**	**16.73**	**188**	P	**Pn**	**20 08 19.4**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=3.6,slow=12,SNR=6.9						
PLCA	**Paso Flores**	**16.73**	**188**	P	**Pn**	**20 08 19.0**	**-0.1**
PLCA				IAmb	IAmb	20 08 27.3	
	comp=Z,5.1nm,0.7s						
CLDB	**Colider**	**17.22**	**42**	*e*P	**P**	**20 08 22.3**	**-1.1**
LL03	**Petrohue**	**17.43**	**193**	P	**P**	**20 08 25.1**	**-0.4**
BB19B	**Bebedouro**	**17.69**	**84**	*e*P	**P**	**20 08 28.8**	**+0.3**
VAO	**Valinhos**	**18.76**	**91**	*e*P	**P**	**20 08 38.1**	**-2.1**
IPMB	**Ipameri, GO**	**18.92**	**75**	*e*P	**P**	**20 08 40.4**	**-1.5**
LL02	**Futaleuf**	**19.33**	**190**	P	**P**	**20 08 46.9**	**+0.9**
LL02				IAmb	IAmb	20 08 50.9	
	comp=Z,18nm,0.8s						
SNDB	**Serra Nova Dou**	**19.50**	**54**	*e*P	**P**	**20 08 46.7**	**-1.5**
GO07	**Milladeo Hill,**	**19.59**	**194**	P	**P**	**20 08 48.9**	**+0.1**
BDFB	**Brasilia**	**20.08**	**69**	P	**P**	**20 08 52.7**	**-1.7**
	comp=Z,18nm,0.7s,baz=241,slow=12,SNR=21						
BDFB	**Brasilia**	**20.08**	**69**	P	**P**	**20 08 52.5**	**-2.0**
BDFB				IAmb	IAmb	20 08 54.0	
	comp=Z,19nm,0.9s						
AY01	**Puyuhuapi**	**20.66**	**191**	P	**P**	**20 09 00.1**	**-0.1**
ITTB	**Itaituba**	**22.67**	**32**	*e*P	**P**	**20 09 19.4**	**-1.0**
MC01	**Montes Claros**	**23.17**	**76**	*e*P	**P**	**20 09 23.1**	**-1.9**
JANB	**Januaria**	**23.52**	**72**	*e*P	**P**	**20 09 26.7**	**-1.6**
SMTB	**Santa Maria do**	**24.28**	**55**	*e*P	**P**	**20 09 34.5**	**-0.5**
SDBA	**SAO DESIDERIO**	**24.30**	**65**	*e*P	**P**	**20 09 33.9**	**-1.4**
GDU01	**Guandu, BA**	**28.23**	**73**	*e*P	**P**	**20 10 08.7**	**-1.8**
EFI	**East Falkland**	**28.38**	**168**	P	**P**	**20 10 12.8**	**+1.4**
SNAA	**Sanae**	**59.31**	**161**	P	**P**	**20 14 17.7**	**+1.3**
SNAA				IAmb	IAmb	20 14 20.9	
	comp=Z,8.5nm,1.5s						
TX31	**Lajitas Ar. Si**	**63.61**	**325**	P	**P**	**20 14 47.0**	**+1.3**
TX31				IAmb	IAmb	20 14 53.0	
	comp=Z,3.8nm,1.2s						
TX32	**Lajitas Array**	**63.61**	**325**	P	**P**	**20 14 47.1**	**+1.5**
TXAR	**Lajitas Array**	**63.61**	**325**	P	**P**	**20 14 46.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**76.96**	**69**	P	**P**	**20 16 07.5**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=260,slow=6.0,SNR=11						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**128.15**	**205**	PKP	**PKiKP**	**20 23 21.6**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=131,slow=1.9,SNR=6.9						
WRA	**Warramunga Arr**	**131.31**	**208**	PKP	**PKiKP**	**20 23 27.6**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=162,slow=1.7,SNR=14						
MKAR	**Makanchi Array**	**146.88**	**39**	PKPbc	**PKiKP**	**20 23 57.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=320,slow=3.6,SNR=4.4						

*IDC **21** 20:11:07.2±5.1,5°.60S×147°.35E,h186km±35km,mb3.3/2, mbtmp4.0/4,MS2.4/1,Error ellipse: s-maj=51.8km s-min=47.4km az=139.0*

*NEIC **21** 20:11:08.7±2.2,5°.56S±0°.06×147°.0E±0°.2,h184km±10km, mb4.4/15,Error ellipse: s-maj=23.0km s-min=7.9km az=100.0*

ISC 21 20:11:09.0±0.8,**5°.62S**±0°.08×**147°.1E**±0°.1,**h195**km,**n36**, σ1§**09**/39,**mb4.3**/4,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.56**	**4**		**Pn**	**20 12 03.9**	**-1.3**
PMG	**Port Moresby**	**3.77**	**179**	P	**Pn**	**20 12 06.7**	**-1.0**
	12nm,0.3s,baz=11,slow=13,SNR=21						
PMG				S	**Sn**	**20 12 51.9**	**-2.0**
	37nm,0.4s,baz=99,slow=23,SNR=11						
PMG				LR	LR	20 13 17.2	
	comp=Z,49nm,21.5s,baz=84,slow=34						
PMG	**Port Moresby**	**3.77**	**179**		**Pn**	**20 12 06.5**	**-1.2**
PMG				Sn	**Sn**	**20 12 51.2**	**-2.7**
PMG	**Port Moresby**	**3.77**	**179**	P	**Pn**	**20 12 07.1**	**-0.6**
COEN	**Coen**	**9.15**	**205**	Pn	**Pn**	**20 13 15.7**	**-1.6**
COEN				Sn	**Sn**	**20 15 01.6**	**+1.9**
CTAO	**Charters Tower**	**14.41**	**183**	P	**P**	**20 14 26.8**	**+1.0**
QIS	**Mount Isa**	**16.54**	**205**	P	**Pn**	**20 14 50.8**	**+0.6**
MTN	**Manton Dam**	**17.31**	**244**		**P**	**20 14 58.0**	**+0.2**
MTN				IAmb	IAmb	20 15 12.6	
	comp=Z,39nm,1.4s						
MTN	**Manton Dam**	**17.31**	**244**	P	**P**	**20 14 58.2**	**+0.4**
WB0	**Warramunga Arr**	**18.73**	**220**	P	**P**	**20 15 13.6**	**+0.4**
WB0				IAmb	IAmb	20 15 15.0	
	comp=Z,5.6nm,0.5s						
WR0	**Warramunga Arr**	**18.78**	**219**	P	**P**	**20 15 14.2**	**+0.5**
WR0				IAmb	IAmb	20 15 14.8	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**18.88**	**220**	P	**P**	**20 15 15.2**	**+0.4**
WRAB				IAmb	IAmb	20 15 19.6	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**18.88**	**220**	P	**P**	**20 15 15.4**	**+0.6**
WRA	**Warramunga Arr**	**18.89**	**220**	P	**P**	**20 15 15.6**	**+0.6**
	comp=Z,3.7nm,0.3s,baz=48,slow=12,SNR=115						
WRA	**Warramunga Arr**	**18.89**	**220**	P	**P**	**20 15 13.9**	**-1.1**
WB1	**Warramunga Ar.**	**18.90**	**220**	P	**P**	**20 15 15.6**	**+0.6**
EIDS	**Eidsvold**	**20.01**	**169**	P	**P**	**20 15 27.6**	**+0.7**
EIDS				IAmb	IAmb	20 16 02.2	
	comp=Z,14nm,1.4s						
KNRA	**Kununurra**	**20.59**	**240**	P	**P**	**20 15 32.5**	**-0.7**
KNRA	**Kununurra**	**20.59**	**240**	P	**P**	**20 15 32.9**	**-0.3**
AS01	**Alice Springs**	**21.96**	**214**	P	**P**	**20 15 48.2**	**+0.8**
AS31	**Alice Springs**	**21.99**	**214**	P	**P**	**20 15 47.5**	**-0.2**
ASAR	**Alice Springs**	**21.99**	**214**	P	**P**	**20 15 48.1**	**+0.5**
	comp=Z,4.4nm,0.6s,baz=49,slow=8.3,SNR=80						
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**21.99**	**214**	P	**P**	**20 15 47.1**	**-0.6**
INKA	**Innaminka**	**22.82**	**195**	P	**P**	**20 15 55.7**	**+0.5**
SOEI	**Soe**	**23.00**	**258**	P	**P**	**20 15 56.9**	**-0.1**
SOEI				IAmb	IAmb	20 16 36.3	
	comp=Z,11nm,1.1s						
OOD	**Oodnadatta**	**24.58**	**205**	P	**P**	**20 16 12.0**	**+0.8**
LCRK	**Leigh Creek**	**26.08**	**198**	P	**P**	**20 16 24.7**	**0.0**
WRKA	**Warakurna**	**26.42**	**221**	P	**P**	**20 16 27.8**	**-0.1**
MULG	**Mulgathing**	**27.44**	**205**	P	**P**	**20 16 37.0**	**+0.2**
LHI	**Lord Howe Isla**	**28.11**	**158**	P	**P**	**20 16 45.6**	**+2.9**
BBOO	**Buckleboo**	**28.95**	**199**	P	**P**	**20 16 49.8**	**-0.4**
MORW	**Morawa**	**37.50**	**228**	P	**P**	**20 18 03.6**	**-0.7**
MORW				IAmb	IAmb	20 18 47.9	
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**72.29**	**177**	P	**P**	**20 22 12.6**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=346,slow=4.7,SNR=1.7						
	comp=Z,0.3nm,0.8s						
VNDA	**Vanda**	**72.29**	**177**	P	**P**	**20 22 12.7**	**+0.1**
FALS	**False Pass**	**72.87**	**27**	P	**P**	**20 22 16.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**145.09**	**285**	PKPbc	**PKPbc**	**20 30 21.9**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=101,slow=5.8,SNR=2.0						

*NEIC **21** 20:25:35.8±1.3,36°.46N±0°.01×98°.30W±0°.01,h5km±1km, mb_Lg3.8/101,Error ellipse: s-maj=2.5km s-min=1.9km az=137.0*

*ANF **21** 20:25:37.0±0.7,36°.47N×98°.23W,h5km,ML5.0/14, ML4.1/5,Error ellipse: s-maj=10.1km s-min=6.6km az=163.0*

ISC 21 20:25:35.9±0.8,**36°.45N**±0°.03×**98°.26W**±0°.03,**h10**km,**n88**, σ1§**05**/45,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.39**	**274**	Pg	**Pb**	**20 25 44.5**	**-0.4**
OK038				Sg	**Sg**	**20 25 46.0**	**-2.8**
KAN14	**Manchester OK**	**0.56**	**25**	Pg	**Pb**	**20 25 49.0**	**+1.2**
U32A	**Winter Ranch,**	**0.60**	**263**	Pg	**Pg**	**20 25 47.8**	**+0.2**
U32A	**Winter Ranch,**	**0.60**	**263**	P	**Pg**	**20 25 47.8**	**+0.2**
	baz=83						
KAN17	**Caldwell West**	**0.71**	**34**	Pg	**Pb**	**20 25 51.3**	**+0.9**
OK049	**E0420 Rd and N**	**0.77**	**93**	Pg	**Pg**	**20 25 51.1**	**+0.3**
KAN01	**Argonia South**	**0.81**	**30**	Pg	**Pn**	**20 25 53.3**	**-0.1**
KAN13	**South Haven SW**	**0.84**	**48**		**Pb**	**20 25 53.4**	**+0.7**
KAN09	**Caldwell North**	**0.86**	**37**		**Pg**	**20 25 51.9**	**-0.5**
KAN06	**Argonia West S**	**0.86**	**22**	Pg	**Pn**	**20 25 54.5**	**+0.4**
KAN12	**Harper NE Stat**	**0.87**	**14**		**Pn**	**20 25 54.7**	**+0.5**
OK029	**Liberty Lake**	**0.93**	**135**	Pg	**Pg**	**20 25 53.9**	**+0.2**
KS21	**Milan North St**	**0.96**	**30**		**Pn**	**20 25 56.2**	**+0.7**
OK050	**Pawnee Station**	**1.03**	**93**		**Pg**	**20 25 55.6**	**-0.2**
OK048	**Pawnee Station**	**1.06**	**92**		**Pb**	**20 25 56.3**	**-0.2**
OK045	**Pawnee Station**	**1.08**	**90**		**Pb**	**20 25 56.3**	**-0.3**
OK046	**Pawnee Station**	**1.09**	**93**		**Pb**	**20 25 56.7**	**-0.2**
OK033	**Mehan**	**1.15**	**110**		**Pb**	**20 25 57.8**	**0.0**
OK025	**Westminster Rd**	**1.15**	**139**	Pg	**Pb**	**20 25 58.0**	**+0.1**
OK051	**E0350 and S346**	**1.15**	**87**		**Pb**	**20 25 58.0**	**+0.1**
OK044	**Pawnee Station**	**1.19**	**93**		**Pn**	**20 25 58.4**	**-0.2**
OK031	**S. Brethren Rd**	**1.25**	**113**		**Pn**	**20 25 59.5**	**0.0**
OK034	**N. Norfolk Rd.**	**1.33**	**109**	Pg	**Pn**	**20 26 00.6**	**0.0**
FNO	**Franklin**	**1.38**	**149**		**Pn**	**20 26 01.8**	**+0.5**
T35A	**Sooner Cattle**	**1.48**	**71**		**Pn**	**20 26 03.8**	**+1.2**
T35B	**Sooner Cattle**	**1.48**	**71**	P	**Pb**	**20 26 04.1**	**+0.5**
	baz=252						
T35B	**Sooner Cattle**	**1.48**	**71**	S	**Sn**	**20 26 23.2**	**+1.1**
	baz=252						
WMOK	**Wichita Mounta**	**1.76**	**194**		**Pb**	**20 26 08.8**	**+0.5**
WMOK	**Wichita Mounta**	**1.76**	**194**	P	**Pb**	**20 26 09.2**	**+0.8**
	baz=13						
X34A	**Smith Ranch, M**	**1.88**	**169**	Pn	**Pb**	**20 26 10.9**	**+0.5**
R32A	**Long Quarter,**	**2.00**	**350**	Pn	**Pg**	**20 26 13.5**	**-0.7**
R32A	**Long Quarter,**	**2.00**	**350**	S	**Sb**	**20 26 36.4**	**-1.0**
	baz=170						
R32A	**Long Quarter,**	**2.00**	**350**	P	**Pg**	**20 26 13.8**	**-0.5**
	baz=170						
TUL1	**Leonard**	**2.07**	**104**		**Pn**	**20 26 12.6**	**+1.8**
TUL1	**Leonard**	**2.07**	**104**	P	**Pn**	**20 26 12.7**	**+1.9**
	baz=286						
CBKS	**Cedar Bluff**	**2.63**	**334**		**Pn**	**20 26 20.4**	**+1.9**
CBKS				IAmb_Lg		20 27 05.6	
	comp=Z,348nm,0.8s						
KSU1	**Kansas State U**	**2.95**	**26**		**Pn**	**20 26 24.2**	**+1.4**
X37A	**Clayton**	**3.00**	**127**		**Pn**	**20 26 24.6**	**+1.1**
X37A				IAmb_Lg		20 27 13.2	
	comp=Z,275nm,1.0s						
U38A	**Gravette**	**3.13**	**89**		**Pn**	**20 26 25.2**	**0.0**
AMTX	**Amarillo**	**3.19**	**242**	IAmb_Lg		20 27 25.5	
	comp=Z,334nm,0.8s						
Z35A	**Perchaven, San**	**3.22**	**165**		**Pn**	**20 26 26.1**	**-0.5**
Z35A				IAmb_Lg		20 27 22.2	
	comp=Z,190nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.30**	**308**	IAmb_Lg		20 27 54.6	
	comp=Z,219nm,0.8s						
N33A	**J Bar K, Exete**	**4.33**	**8**	IAmb_Lg		20 27 58.2	
	comp=Z,165nm,0.9s						
MSTX	**Muleshoe**	**4.45**	**237**	IAmb_Lg		20 28 08.0	
	comp=Z,197nm,0.8s						
WHTX	**Lake Whitney,**	**4.50**	**171**	IAmb_Lg		20 28 05.6	
	comp=Z,134nm,1.1s						
237A	**Washetta, Mont**	**4.88**	**155**	IAmb_Lg		20 28 24.6	
	comp=Z,136nm,0.8s						
T25A	**Trinidad**	**4.98**	**280**		**Pn**	**20 26 53.9**	**+2.9**
R40A	**Maddies Statio**	**5.11**	**67**	Pn	**Pn**	**20 26 50.4**	**-2.2**
OGNE	**Ogallala**	**5.37**	**328**	Pn	**Pn**	**20 26 55.2**	**-1.0**
435B	**Jarrell**	**5.68**	**174**	Pn	**Pn**	**20 26 60.0**	**-0.5**
435B				IAmb_Lg		20 28 46.6	
	comp=Z,124nm,0.8s						
N38A	**Joes South For**	**5.85**	**41**	IAmb_Lg		20 28 55.5	
	comp=Z,138nm,0.8s						
GNAR	**Gosnell**	**6.68**	**92**	IAmb_Lg		20 29 27.8	
	comp=Z,89nm,0.8s						
SCIA	**State Center**	**6.71**	**34**	IAmb_Lg		20 29 21.0	
	comp=Z,152nm,0.7s						
143A	**Socs Landing,**	**6.78**	**121**	IAmb_Lg		20 29 25.2	
	comp=Z,96nm,0.8s						
PEBM	**Pemiscott Bayo**	**6.79**	**90**	IAmb_Lg		20 29 27.1	
	comp=Z,135nm,0.9s						
ANMO	**Albuquerque**	**6.83**	**260**	IAmb_Lg		20 29 29.6	
	comp=Z,95nm,0.9s						
PARMO	**Parma**	**6.85**	**86**	IAmb_Lg		20 29 27.3	
	comp=Z,147nm,0.8s						
342A	**Flagon Creek P**	**7.07**	**134**	IAmb_Lg		20 29 25.4	
	comp=Z,71nm,0.8s						
441A	**DeRidder**	**7.09**	**142**	IAmb_Lg		20 29 39.1	
	comp=Z,98nm,0.9s						
LNXT	**Lenox**	**7.09**	**90**	IAmb_Lg		20 29 40.6	
	comp=Z,112nm,0.7s						
N41A	**Harden Midland**	**7.19**	**52**	IAmb_Lg		20 29 40.5	
	comp=Z,76nm,0.7s						
HALT	**Halls**	**7.24**	**92**	IAmb_Lg		20 29 25.4	
	comp=Z,88nm,0.7s						
S44A	**Carbondale**	**7.31**	**78**	IAmb_Lg		20 29 41.1	
	comp=Z,104nm,1.1s						
SIUC	**Southern Illin**	**7.34**	**77**	IAmb_Lg		20 29 42.8	
	comp=Z,140nm,1.2s						
ECSD	**EROS Data Cent**	**7.38**	**9**	IAmb_Lg		20 29 41.2	
	comp=Z,80nm,0.7s						
SMCO	**Snowmass**	**7.41**	**294**	IAmb_Lg		20 29 50.9	
	comp=Z,145nm,1.2s						
W45A	**Hickory Valley**	**7.49**	**97**	IAmb_Lg		20 29 49.9	
	comp=Z,94nm,0.7s						
K38A	**Parkersburg**	**7.50**	**33**	IAmb_Lg		20 29 55.3	
	comp=Z,104nm,0.9s						
735A	**Kenedy**	**7.59**	**177**	IAmb_Lg		20 29 51.7	
	comp=Z,80nm,0.8s						
Y45A	**Yeager Farm, C**	**7.59**	**107**	IAmb_Lg		20 29 43.6	
	comp=Z,91nm,1.1s						
P43A	**Skaggs, Pawnee**	**7.59**	**63**	IAmb_Lg		20 29 49.0	
	comp=Z,75nm,0.8s						
VBMS	**Vicksburg**	**7.67**	**121**	IAmb_Lg		20 30 01.9	
	comp=Z,100nm,0.8s						
T45A	**Paducah**	**7.74**	**83**	IAmb_Lg		20 29 42.7	
	comp=Z,124nm,0.7s						
L40A	**Anamosa**	**7.82**	**42**	IAmb_Lg		20 30 01.3	
	comp=Z,74nm,0.8s						
344A	**Westbrook Farm**	**8.00**	**126**	IAmb_Lg		20 30 10.1	
	comp=Z,84nm,1.1s						
SUSD	**Miller**	**8.00**	**356**	IAmb_Lg		20 30 02.2	
	comp=Z,101nm,0.8s						
HDIL	**Hopedale**	**8.14**	**57**	IAmb_Lg		20 29 57.0	
	comp=Z,129nm,0.8s						
833A	**Chaparral WMA,**	**8.16**	**187**	IAmb_Lg		20 30 16.2	
	comp=Z,92nm,0.9s						
I37A	**Lemond, Waseca**	**8.42**	**25**	IAmb_Lg		20 30 25.1	
	comp=Z,82nm,0.9s						
146A	**Union**	**8.49**	**114**	IAmb_Lg		20 30 21.0	
	comp=Z,77nm,0.9s						
O44A	**Mansfield**	**8.54**	**61**	IAmb_Lg		20 30 22.0	
	comp=Z,75nm,0.7s						
O20A	**White River Ci**	**8.66**	**298**	IAmb_Lg		20 30 34.3	
	comp=Z,57nm,1.0s						
L42A	**Oliver, Polo**	**8.67**	**48**	IAmb_Lg		20 30 14.0	
	comp=Z,74nm,0.8s						
JFWS	**Jewell Farm**	**8.93**	**41**	IAmb_Lg		20 30 17.9	
	comp=Z,104nm,0.8s						
I40A	**Norwalk**	**9.45**	**36**	IAmb_Lg		20 30 46.7	
	comp=Z,55nm,0.8s						
F33A	**5 Mile Ranch,**	**9.49**	**8**	IAmb_Lg		20 30 35.5	
	comp=Z,63nm,0.7s						
SPMN	**Marine on St.**	**9.69**	**24**	IAmb_Lg		20 31 08.7	
	comp=Z,99nm,0.9s						
K43A	**Burlington**	**9.88**	**48**	IAmb_Lg		20 30 56.0	
	comp=Z,87nm,0.9s						

*IDC **21** 20:26:00.5±0.7,36°.46N×98°.80W,h0km,mb4.0/5, mbtmp4.0/13,ML3.6/7,MS3.2/11,Error ellipse: s-maj=11.5km s-min=8.9km az=124.0*

*NEIC **21** 20:26:00,36°.44N×98°.76W,h6km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.15; $M_{\theta\theta}$=1.15; $M_{\phi\phi}$=-1.00; $M_{r\theta}$=-0.21; $M_{\phi\theta}$=0.13; $M_{r\phi}$=0.02; Fault plane solution: M_0=1.11000×10^{15} NP1:ϕ_s=221.09000°, δ82.06000°, λ175.29000°. NP2:ϕ_s=311.74000°, δ85.34000°, λ7.96000°. Principal axes: T 1.1878, Plg9.0000°, Azm177.0000°; N -0.1769, Plg81.0000°, Azm342.0000°; P -1.0109, Plg2.0000°, Azm86.0000°;*

*NEIC **21** 20:26:00.1±0.5,36°.44N±0°.01×98°.77W±0°.02,h5km±1km Error ellipse: s-maj=3.0km s-min=2.1km az=292.0*

*TUL **21** 20:26:00.5±0.5,36°.45N±0°.01×98°.78W±0°.02,h7km±4km, ML4.2,mb4.3/11(NEIC),mb_Lg4.3/116(NEIC), Mwr4.0/37(NEIC),Error ellipse: s-maj=2.0km s-min=1.5km az=89.0*

ISC 21 20:26:00.1±0.8,**36°.46N**±0°.02×**98°.70W**±0°.02,**h7**km±5km, **n254**,σ1§**49**/241,**mb4.2**/8,**MS3.5**/3,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.04**	**294**	Pg	**Pg**	**20 26 01.5**	**-0.1**
OK038				Sg	**Sg**	**20 26 02.8**	**+0.1**
OK035	**E0210 Rd and N**	**0.25**	**357**	Sg	**Sg**	**20 26 10.4**	**+2.1**
OK035	**E0210 Rd and N**	**0.25**	**357**	Pg	**Pg**	**20 26 06.2**	**+1.3**
U32A	**Winter Ranch,**	**0.26**	**252**	Pg	**Pg**	**20 26 04.7**	**-0.4**
U32A				Sg	**Sg**	**20 26 07.9**	**-0.8**
U32A	**Winter Ranch,**	**0.26**	**252**	P	**Pg**	**20 26 04.8**	**-0.4**
	baz=69						
U32A				S	**Sg**	**20 26 08.0**	**-0.8**
	baz=69						
OK032	**Salt Plains WL**	**0.52**	**49**	Pg	**Pb**	**20 26 11.7**	**+0.2**
OK032				Sg	**Sb**	**20 26 19.6**	**+0.4**
KAN14	**Manchester OK**	**0.77**	**50**		**Pb**	**20 26 16.1**	**+0.4**
KAN14				Sg	**Sb**	**20 26 27.5**	**+1.1**
KAN16	**Harper SW Stat**	**0.92**	**33**	Pg	**Pb**	**20 26 18.9**	**+0.6**
KAN17	**Caldwell West**	**0.95**	**52**	Pg	**Pb**	**20 26 19.4**	**+0.6**
KAN17				Sg	**Sb**	**20 26 32.6**	**+1.1**
KAN08	**Anthony NE Sta**	**0.96**	**37**		**Pb**	**20 26 19.4**	**+0.4**
KAN08				Sg	**Sb**	**20 26 32.9**	**+0.9**
KAN01	**Argonia South**	**1.02**	**47**	Pg	**Pb**	**20 26 20.6**	**+0.6**
KAN06	**Argonia West S**	**1.03**	**40**		**Pb**	**20 26 20.7**	**+0.5**
KAN09	**Caldwell North**	**1.09**	**52**	Pg	**Pb**	**20 26 21.8**	**+0.4**
KAN13	**South Haven SW**	**1.12**	**60**	Pg	**Pn**	**20 26 22.5**	**+0.3**
OK049	**E0420 Rd and N**	**1.12**	**92**	Pg	**Pb**	**20 26 22.4**	**+0.7**
KS21	**Milan North St**	**1.17**	**45**	Pg	**Pn**	**20 26 23.5**	**+0.6**
KS20	**Mayfield South**	**1.19**	**50**		**Pn**	**20 26 23.7**	**+0.6**
OK029	**Liberty Lake**	**1.20**	**123**	Pg	**Pb**	**20 26 23.7**	**+0.5**
OK050	**Pawnee Station**	**1.38**	**92**		**Pb**	**20 26 26.9**	**+0.7**
OK025	**Westminster Rd**	**1.41**	**128**	Pg	**Pb**	**20 26 27.2**	**+0.5**
OK048	**Pawnee Station**	**1.41**	**91**		**Pb**	**20 26 27.4**	**+0.7**
OK045	**Pawnee Station**	**1.43**	**90**		**Pb**	**20 26 27.8**	**+0.9**
OK046	**Pawnee Station**	**1.44**	**92**		**Pb**	**20 26 28.0**	**+0.7**
OK005	**Luther M Schoo**	**1.46**	**123**		**Pb**	**20 26 28.0**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**1.47**	**136**	Pg	**Pb**	**20 26 27.9**	**+0.2**
OK033	**Mehan**	**1.48**	**106**		**Pb**	**20 26 28.3**	**+0.4**
OK051	**E0350 and S346**	**1.50**	**88**		**Pb**	**20 26 29.0**	**+0.8**
OK044	**Pawnee Station**	**1.53**	**93**		**Pb**	**20 26 29.5**	**+0.7**
OK031	**S. Brethren Rd**	**1.58**	**108**		**Pb**	**20 26 29.8**	**+0.2**
FNO	**Franklin**	**1.60**	**138**		**Pb**	**20 26 30.0**	**+0.1**
OK034	**N. Norfolk Rd.**	**1.66**	**105**	Pn	**Pb**	**20 26 31.0**	**0.0**
WMOK	**Wichita Mounta**	**1.72**	**182**	Pn	**Pn**	**20 26 30.3**	**-0.1**
WMOK	**Wichita Mounta**	**1.72**	**182**	P	**Pn**	**20 26 30.6**	**+0.1**
	baz=0.1						
WMOK				S	**Sb**	**20 26 53.8**	**0.0**
	baz=0.1						
WMOK	**Wichita Mounta**	**1.72**	**182**	P	**Pn**	**20 26 30.3**	**-0.1**
	baz=0.1						
WMOK				S	**Sb**	**20 26 53.7**	**0.0**
	baz=0.1						
T35A	**Sooner Cattle**	**1.81**	**75**	Pn	**Pb**	**20 26 34.5**	**+0.9**
T35B	**Sooner Cattle**	**1.81**	**75**	P	**Pb**	**20 26 34.1**	**+0.5**
	baz=256						
T35B				S	**Sg**	**20 26 59.3**	**+1.0**
	baz=256						
OK011	**Prague**	**1.90**	**120**	Pn	**Pb**	**20 26 34.8**	**-0.2**
R32A	**Long Quarter,**	**1.96**	**360**		**Pb**	**20 26 35.8**	**-0.3**
R32A				IAmb_Lg		20 27 05.7	
	comp=Z,1μm,0.7s						
R32A	**Long Quarter,**	**1.96**	**360**	S	**Sg**	**20 27 02.7**	**-0.2**
	baz=182						
X34A	**Smith Ranch, M**	**1.98**	**159**	Pn	**Pb**	**20 26 36.1**	**-0.4**
TUL1	**Leonard**	**2.41**	**102**	Pn	**Pn**	**20 26 39.1**	**-0.8**
TUL1				IAmb_Lg		20 27 18.7	
	comp=Z,797nm,0.7s						
TUL1	**Leonard**	**2.41**	**102**	P	**Pn**	**20 26 41.6**	**+1.7**
	baz=284						
TUL1				Sn	**Sb**	**20 27 12.9**	**-0.8**
	baz=284						
TUL1	**Leonard**	**2.41**	**102**	P	**Pb**	**20 26 43.

comp=Z,332nm,0.7s
WHAR Wooly Hollow 5.33 101 Pn 20 27 21.6 +1.5
FCAR Ozark Folk Cen 5.35 94 IAmb_Lg 20 28 56.6
comp=Z,475nm,0.8s
WLAR White Oak Lake 5.35 120 Pn **Pn 20 27 20.9 +0.6**
WLAR IAmb_Lg 20 28 57.1
comp=Z,559nm,0.9s
R40A Maddies Statio 5.43 68 Pn **Pn 20 27 22.0 +0.5**
R40A IAmb_Lg 20 29 02.7
comp=Z,494nm,0.8s
R40A Maddies Statio 5.43 68 P **Pn 20 27 22.6 +1.2**
baz=252,SNR=8.0
UALR University of 5.44 106 IAmb_Lg 20 29 05.0
comp=Z,357nm,0.7s
CPRX Cap Rock 5.46 233 Pn 20 27 22.2 +0.2
SDCO Great Sand Dun 5.59 285 Pn 20 27 24.1 +0.3
SDCO Great Sand Dun 5.59 285 P **Pn 20 27 24.8 +0.9**
baz=102
SDCO Great Sand Dun 5.59 285 P **Pn 20 27 24.6 +0.8**
baz=102,SNR=36
Q24A Divide 5.69 298 IAmb_Lg 20 28 58.3
comp=Z,485nm,0.8s
Q24A Divide 5.69 298 P **Pn 20 27 25.4 +0.1**
baz=114
HTMS Hat Mesa 5.70 227 Pn 20 27 26.0 +0.8
435B Jarrell 5.74 170 Pn 20 27 25.6 0.0
435B IAmb_Lg 20 29 16.3
comp=Z,588nm,0.9s
435B Jarrell 5.74 170 P **Pn 20 27 25.8 +0.1**
baz=350,SNR=5.6
435B Jarrell 5.74 170 P **Pn 20 27 25.8 +0.1**
baz=350
NATX Nacogdoches 5.76 143 IAmb_Lg 20 29 17.5
comp=Z,510nm,0.9s
NATX Nacogdoches 5.76 143 S **Sn 20 28 30.5 -1.8**
baz=325
L34A Svendsen Farm, 5.79 17 Pn **Pn 20 27 28.1 +1.8**
CLNB Carlsbad 5.99 227 Pn **Pn 20 27 30.3 +1.1**
BRIGG Briggsdale 6.03 315 Pn **Pn 20 27 30.4 +0.6**
BRIGG IAmb_Lg 20 29 18.4
comp=Z,565nm,0.8s
JCT Junction City 6.04 189 IAmb_Lg 20 29 24.1
comp=Z,689nm,1.0s
JCT Junction City 6.04 189 P **Pn 20 27 29.9 +0.1**
baz=7.9
P40A Paris 6.08 58 Pn **Pn 20 27 31.9 +1.6**
P40A Paris 6.08 58 S **Sn 20 28 39.6 -0.4**
baz=242
N38A Joes South For 6.08 43 P **Pn 20 27 31.3 +1.0**
baz=227
LCAR Lake Charles 6.11 91 Pn **Pn 20 27 32.1 +1.4**
LCAR IAmb_Lg 20 29 13.6
comp=Z,273nm,0.9s
LCAR Lake Charles 6.11 91 P **Pn 20 27 32.1 +1.4**
baz=276,SNR=7.5
CCM Cathedral Cave 6.15 73 IAmb_Lg 20 29 24.2
comp=Z,504nm,0.9s
CCM Cathedral Cave 6.15 73 P **Pn 20 27 32.2 +0.9**
baz=257
CCM Cathedral Cave 6.15 73 S **Sg 20 29 14.7 -2.9**
baz=257
K31A O'Neill 6.15 360 Pn **Pn 20 27 33.4 +2.0**
K31A IAmb_Lg 20 29 27.4
comp=Z,531nm,0.8s
CCAR Cane Creek 6.21 112 Pn **Pn 20 27 33.7 +1.6**
CCAR IAmb_Lg 20 29 32.4
comp=Z,547nm,0.7s
GDL2 Guadalupe Moun 6.33 229 Pn **Pn 20 27 33.9 0.0**
ISCO Idaho Springs 6.39 304 S **Sg 20 29 18.8 -6.5**
baz=120
ANMO Albuquerque 6.49 259 Pn **Pn 20 27 37.5 +1.3**
comp=Z,1.2nm,0.3s,baz=88,slow=14,SNR=14
ANMO Pg **Pb 20 27 56.9 +3.5**
comp=Z,4.9nm,0.3s,baz=79,slow=14,SNR=21
ANMO Lg Lg 20 29 25.0
comp=Z,29nm,0.3s,baz=338,slow=6.0,SNR=9.4
ANMO LR LR 20 30 19.5
comp=Z,190nm,18.5s,baz=66,slow=40
comp=Z,6.7nm,0.7s
ANMO Albuquerque 6.49 259 IAmb_Lg 20 29 38.8
comp=Z,123nm,0.8s
ANMO IAmb_Lg 20 29 38.8
comp=Z,122nm,0.8s
ANMO Albuquerque 6.49 259 P **Pn 20 27 37.1 +0.9**
baz=74
ANMO Albuquerque 6.49 259 P **Pn 20 27 37.1 +0.9**
baz=74
S22A 4UR Ranch, Cre 6.63 284 Pn **Pn 20 27 39.3 +1.2**
PBMO Poplar Bluff 6.66 85 IAmb_Lg 20 29 46.1
comp=Z,503nm,0.8s
FVM French Village 6.77 75 IAmb_Lg 20 29 37.1
comp=Z,233nm,0.9s
BNM Barren Site 6.88 253 Pn **Pn 20 27 41.4 -0.2**
SCIA State Center 6.90 36 IAmb_Lg 20 29 49.9
comp=Z,530nm,0.7s
SLM Saint Louis 7.06 70 Pn **Pn 20 27 45.2 +1.4**
SLM IAmb_Lg 20 29 48.1
comp=Z,506nm,0.9s
143A Socs Landing, 7.08 120 IAmb_Lg 20 29 54.9
comp=Z,325nm,0.9s
SMCO Snowmass 7.09 295 IAmb_Lg 20 29 54.2
comp=Z,118nm,0.9s
PEBM Pemiscott Bayo 7.14 90 IAmb_Lg 20 29 53.8
comp=Z,570nm,0.7s
LENM Lemitar 7.14 254 Pn **Pn 20 27 46.1 +1.0**
PHWY Pilot Hill 7.15 315 Pn **Pn 20 27 46.1 +0.7**
PHWY IAmb_Lg 20 30 01.0
comp=Z,346nm,0.8s
N23A Red Feather La 7.19 310 IAmb_Lg 20 29 57.0
comp=Z,616nm,1.0s
MET Memphis--Engin 7.24 98 IAmb_Lg 20 30 12.5
comp=Z,397nm,0.7s
342A Flagon Creek P 7.33 132 Pn **Pn 20 27 48.2 +0.7**
SBM South Baldy 7.38 253 Pn **Pn 20 27 47.8 -0.7**
ECSD EROS Data Cent 7.44 12 Pn **Pn 20 27 48.7 -0.3**
ECSD EROS Data Cent 7.44 12 P **Pn 20 27 48.6 -0.4**
baz=194
ECSD EROS Data Cent 7.44 12 P **Pn 20 27 48.6 -0.3**
baz=194,SNR=19
N41A Harden Midland 7.46 53 Pn **Pn 20 27 49.9 +0.6**
GLAT Glass 7.59 89 Pn **Pn 20 27 50.3 -0.8**
GLAT IAmb_Lg 20 30 03.9
comp=Z,529nm,0.9s
735A Kenedy 7.62 174 IAmb_Lg 20 30 16.9
comp=Z,311nm,1.1s
HICK Hickman 7.62 87 IAmb_Lg 20 30 12.7
comp=Z,510nm,0.8s
S44A Carbondale 7.65 78 IAmb_Lg 20 30 24.8
comp=Z,303nm,0.8s
S44A Carbondale 7.65 78 P **Pn 20 27 52.9 +1.0**
baz=264,SNR=6.4
SIUC Southern Illin 7.68 78 Pn **Pn 20 27 52.4 +0.1**
SIUC IAmb_Lg 20 30 25.6
comp=Z,321nm,0.7s
K38A Parkersburg 7.69 35 P **Pn 20 27 53.0 +0.6**
baz=219
OXF Oxford 7.82 102 Pn **Pn 20 27 54.2 0.0**
OXF IAmb_Lg 20 30 18.6
comp=Z,283nm,1.0s
OXF Oxford 7.82 102 P **Pn 20 27 54.1 -0.1**
baz=287
W45A Hickory Valley 7.83 97 IAmb_Lg 20 30 12.3
comp=Z,387nm,0.8s
MVCO Mesa Verde 7.90 278 IAmb_Lg 20 30 15.8
comp=Z,191nm,0.9s
P43A Skaggs, Pawnee 7.90 64 Pn **Pn 20 27 55.5 +0.1**
P43A Skaggs, Pawnee 7.90 64 P **Pn 20 27 55.4 +0.1**
baz=249,SNR=8.8
Y45A Yeager Farm, C 7.93 106 IAmb_Lg 20 30 28.2
comp=Z,313nm,0.8s
SUSD Miller 7.97 359 IAmb_Lg 20 30 18.4
comp=Z,198nm,0.7s
VBMS Vicksburg 7.98 120 IAmb_Lg 20 30 31.0
comp=Z,280nm,1.2s
Q44A Meyer Farm, Va 8.05 69 Pn **Pn 20 27 57.9 +0.5**
T45B Paducah 8.09 83 P **Pn 20 27 58.7 +0.9**
baz=269
833A Chaparral WMA, 8.14 184 IAmb_Lg 20 30 31.5
comp=Z,209nm,0.8s
PV02 Paradox Valley 8.19 285 IAmb_Lg 20 30 35.1
comp=Z,276nm,1.2s
TX31 Lajitas Ar. Si 8.24 212 Pn **Pn 20 27 59.8 -0.4**
TX31 Lajitas Ar. Si 8.24 212 P **Pn 20 27 59.5 -0.7**
baz=29,SNR=20
TXAR Lajitas Array 8.24 212 Pn **Pn 20 27 59.5 -0.6**
comp=Z,6.4nm,0.3s,baz=31,slow=12,SNR=86
TXAR Pg **Pb 20 28 23.7 +0.5**
comp=Z,4.1nm,0.3s,baz=40,slow=12,SNR=7.4
TXAR Sn **Sn 20 29 29.4 -4.2**
comp=Z,6.9nm,0.3s,baz=38,slow=19,SNR=4.3
TXAR Lg Lg 20 30 13.1
comp=Z,7.8nm,0.3s,baz=44,slow=33,SNR=4.6
O20A White River Ci 8.35 299 Pn **Pn 20 28 02.9 +1.2**
O20A IAmb_Lg 20 30 45.8
comp=Z,198nm,1.3s
HDIL Hopedale 8.43 58 Pn **Pn 20 28 03.2 +0.7**
HDIL Hopedale 8.43 58 P **Pn 20 28 03.3 +0.7**
baz=244,SNR=9.1
HDIL S **Sn 20 29 35.5 -2.4**
baz=244
HDIL Hopedale 8.43 58 P **Pn 20 28 03.2 +0.7**
baz=244,SNR=5.6
RWWY Rawlins 8.43 311 IAmb_Lg 20 30 28.1
comp=Z,466nm,1.3s
121A Cookes Peak, D 8.46 245 IAmb_Lg 20 30 47.8
comp=Z,222nm,1.1s
121A Cookes Peak, D 8.46 245 P **Pn 20 28 03.3 +0.1**
baz=60
I37A Lemond, Waseca 8.56 27 IAmb_Lg 20 30 55.3
comp=Z,333nm,1.0s
K22A Casper 8.64 318 IAmb_Lg 20 30 54.8
comp=Z,436nm,1.0s
RSSD Black Hills 8.67 334 IAmb_Lg 20 30 43.9
comp=Z,227nm,0.8s
WVT Waverly 8.78 89 Pn **Pn 20 28 07.6 +0.2**
WVT Waverly 8.78 89 P **Pn 20 28 07.5 +0.2**
baz=275
L42A Oliver, Polo 8.92 49 Pn **Pn 20 28 09.3 0.0**
L42A Oliver, Polo 8.92 49 P **Pn 20 28 10.1 +0.7**
baz=235
JFWS Jewell Farm 9.16 43 Pn **Pn 20 28 12.4 -0.2**
JFWS IAmb_Lg 20 31 17.1
comp=Z,314nm,0.8s
JFWS Jewell Farm 9.16 43 P **Pn 20 28 13.8 +1.2**
baz=228
JFWS S **Sn 20 29 51.7 -4.1**
baz=228
T47A Sharon Grove 9.32 83 Pn **Pn 20 28 15.6 +0.8**
P46A Rosedale 9.59 67 Pn **Pn 20 28 18.7 +0.1**
M44A Midewin, Midew 9.64 56 Pn **Pn 20 28 20.1 +0.8**
I40A Norwalk 9.65 37 IAmb_Lg 20 31 11.1
comp=Z,310nm,1.1s
SPMN Marine on St. 9.82 25 Pn **Pn 20 28 23.1 +1.4**
SPMN IAmb_Lg 20 31 11.0
comp=Z,196nm,1.0s
BLO Bloomington 10.00 71 Pn **Pn 20 28 23.6 -0.6**
K43A Burlington 10.14 49 Pn **Pn 20 28 24.9 -1.1**
F36A Milaca 10.16 21 Pn **Pn 20 28 26.3 0.0**
U49A Red Boiling Sp 10.40 86 Pn **Pn 20 28 30.5 +0.9**
PDAR Pinedale Array 10.48 310 Pn **Pn 20 28 31.4 +0.5**
comp=Z,0.3nm,0.3s,baz=110,slow=15,SNR=12
PDAR Lg Lg 20 31 25.3
comp=Z,4.6nm,0.3s,baz=125,slow=31,SNR=11
PDAR LR LR 20 32 29.2
comp=Z,49nm,18.2s,baz=32,slow=37
comp=Z,2.0nm,0.7s
I42A Draeger Farm, 10.53 42 Pn **Pn 20 28 30.4 -0.9**
I42A Draeger Farm, 10.53 42 P **Pn 20 28 31.7 +0.3**
baz=229
MTPU Mount Pierson 10.87 282 Pn **Pn 20 28 36.4 +0.1**
G40A Rib Lake 10.89 34 Pn **Pn 20 28 35.2 -1.1**
P48A Milroy 10.89 70 Pn **Pn 20 28 34.9 -1.4**
R49A Shelbyville 10.92 76 Pn **Pn 20 28 35.5 -1.2**
U15A North Rim 10.96 274 Pn 20 28 37.0 -0.5
T50A Nancy 11.13 83 Pn **Pn 20 28 38.9 -0.8**
P49A Miami Univ. Ec 11.45 70 Pn **Pn 20 28 42.7 -1.2**
P49A Miami Univ. Ec 11.45 70 P **Pn 20 28 42.8 -1.1**
baz=259
E38A The Farm, Brul 11.46 26 Pn **Pn 20 28 43.5 -0.5**
CPCT Cooper Cave 11.53 91 Pn **Pn 20 28 44.9 -0.2**
H43A Windswept, Lux 11.53 43 Pn **Pn 20 28 43.0 -2.0**
V51A Loudon 11.62 89 Pn **Pn 20 28 46.7 +0.4**
V51A Loudon 11.62 89 P **Pn 20 28 46.9 +0.6**
baz=277,SNR=5.1
O49A Covington 11.88 67 Pn **Pn 20 28 48.8 -0.9**
TKL Tuckaleechee C 12.10 89 Pn **Pn 20 28 53.4 +0.5**
comp=Z,1.6nm,0.3s,baz=226,slow=5.5,SNR=9.4
TKL Lg Lg 20 32 17.4
comp=Z,2.0nm,0.3s,baz=128,slow=12,SNR=6.8
TKL LR LR 20 33 30.0
comp=Z,115nm,19.1s,baz=298,slow=37
comp=Z,6.9nm,0.5s
TKL Tuckaleechee C 12.10 89 Pn **Pn 20 28 52.5 -0.4**
TKL Tuckaleechee C 12.10 89 P **Pn 20 28 53.2 +0.2**
baz=278
S51A Beattyville 12.13 80 Pn **Pn 20 28 53.4 +0.2**
S51A Beattyville 12.13 80 P **Pn 20 28 53.4 +0.2**
baz=269,SNR=6.7
S51A P **Pn 20 28 53.4 +0.2**
baz=269,SNR=6.7
N49A Columbus Grove 12.18 64 Pn **Pn 20 28 52.8 -1.1**
TZTN Tazewell 12.19 85 Pn **Pn 20 28 54.9 +0.7**
V52A Sevierville 12.22 88 Pn **Pn 20 28 54.5 0.0**
L48A N Adams 12.34 59 Pn **Pn 20 28 55.2 -0.9**
Q51A Peebles 12.42 73 Pn **Pn 20 28 56.1 -1.1**
EYMN Ely 12.65 23 Pn 20 28 56.8 -3.5
D41A Chassel 13.00 32 Pn **Pn 20 29 02.4 -2.6**
E43A Lone Tree Farm 13.22 38 Pn **Pn 20 29 06.1 -2.0**
Q52A Bidwell 13.25 74 Pn **Pn 20 29 06.8 -1.7**
N51A Ashland 13.50 66 Pn **Pn 20 29 09.6 -2.3**
ELK Elko 13.62 293 Lg Lg 20 33 04.4
comp=Z,0.1nm,0.3s,baz=244,slow=18,SNR=1.8
O52A Adamsville 13.73 70 Pn **Pn 20 29 14.3 -0.9**
ULM Lac du Bonnet 13.93 8 Pn **Pn 20 29 13.6 -4.2**
comp=Z,0.6nm,0.3s,baz=189,slow=14,SNR=2.6
ULM Sn Sn 20 31 41.9 -11
comp=Z,0.8nm,0.3s,baz=98,slow=22,SNR=1.7
ULM Lg Lg 20 33 10.5
baz=270,slow=20
comp=Z,3.1nm,0.5s
V55A Taylorsville 14.14 87 Pn **Pn 20 29 19.9 -0.9**
N53A Lisbon 14.61 67 Pn **Pn 20 29 24.4 -2.8**
E46A Sault Ste Mari 14.62 43 Pn **Pn 20 29 23.5 -3.7**
PFO Pinyon Flats O 14.83 264 LR LR 20 34 59.9
comp=Z,98nm,20.1s,baz=38,slow=37
M53A Wi Miller and 14.87 65 Pn **Pn 20 29 29.5 -1.2**
R55A Marlinton 14.88 77 Pn **Pn 20 29 29.4 -1.5**
T57A Hurt 15.60 82 P **Pn 20 29 39.5 -0.8**
T57A IAmb IAmb 20 29 42.1
comp=Z,18nm,0.8s
NVAR Mina Array Bea 15.70 283 Pn **Pn 20 29 43.5 +1.6**
comp=Z,0.1nm,0.3s,baz=89,slow=14,SNR=2.2
NVAR LR LR 20 36 10.0
comp=Z,96nm,19.4s,baz=92,slow=39
comp=Z,0.2nm,0.4s
M55A Ridgway 16.28 66 Pn **20 29 47.2 -1.9**
T59A Double "B" Far 16.96 82 Pn **Pn 20 29 56.6 -1.2**
SADO Sadowa 16.98 55 P **P 20 30 01.1 +1.2**
comp=Z,0.4nm,0.3s,baz=269,slow=14,SNR=1.1
SADO Lg Lg 20 34 50.6
comp=Z,0.9nm,0.3s,baz=100,slow=20,SNR=3.1
comp=Z,4.0nm,0.7s
NEW Newport 17.96 317 LR LR 20 36 50.4
comp=Z,126nm,19.3s,baz=124,slow=36
FFC Flin Flon 18.41 354 P **Pn 20 30 14.3 -1.2**
J58A Remsen 19.20 62 P **P 20 30 24.3 -0.1**
J58A IAmb IAmb 20 30 28.3
comp=Z,10nm,0.9s
YBH Yreka Blue Hor 19.34 293 P **Pn 20 30 28.7 +1.6**
comp=Z,0.1nm,0.3s,baz=63,slow=6.8,SNR=4.2
YBH LR LR 20 38 24.8
comp=Z,81nm,19.6s,baz=86,slow=39
comp=Z,4.8nm,0.8s
CMIG Matias Romero 19.59 169 LR LR 20 41 28.1
comp=Z,18nm,18.4s,baz=21,slow=47
NCB Newcomb 20.09 61 P **P 20 30 35.2 +1.1**
NCB IAmb IAmb 20 31 12.8
comp=Z,24nm,1.4s
C03A Quillayute Air 22.23 309 P **P 20 30 53.4 -3.7**
YKA Yellowknife Ar 27.87 344 P **P 20 31 51.0 +0.9**
comp=Z,1.0nm,0.8s,baz=146,slow=8.9,SNR=2.8
YKA LR LR 20 44 01.7
comp=Z,89nm,18.4s,baz=219,slow=39
comp=Z,1.0nm,0.8s
CTGM Chitina Glacie 36.31 326 P **P 20 33 03.8 -0.4**
CTGM IAmb IAmb 20 33 05.3
comp=Z,3.2nm,0.8s
BCAR Beaver Creek A 37.36 329 P **P 20 33 14.4 +1.4**
RES Resolute Bay 38.35 2 LR LR 20 49 16.2
comp=Z,78nm,18.5s,baz=336,slow=36
ILAR Eielson Array 40.10 330 P **P 20 33 38.1 +2.2**
comp=Z,1.7nm,0.9s,baz=109,slow=7.4,SNR=12
comp=Z,1.7nm,0.9s
CAST Castle Rocks 41.86 327 P **P 20 33 54.1 +3.6**
CAST IAmb IAmb 20 34 36.8
comp=Z,7.1nm,1.5s
M20K Styx River 41.99 325 P **P 20 33 54.4 +2.7**
J20K Nowinta River 42.93 328 P **P 20 34 00.4 +1.3**
J20K IAmb IAmb 20 34 32.5
comp=Z,10nm,1.4s
ARCES ARCESS Array B 66.76 18 P **P 20 36 53.2 +1.6**
comp=Z,2.2nm,0.9s,baz=327,slow=5.8,SNR=6.8
comp=Z,2.2nm,0.9s
FINES FINESS Array B 72.66 24 P **P 20 37 31.1 +3.1**
comp=Z,2.3nm,0.8s,baz=312,slow=6.5,SNR=3.5
comp=Z,2.3nm,0.8s
YAK Yakutsk 74.37 339 LR LR 21 17 04.5
comp=Z,23nm,18.6s,baz=90,slow=41
ZALV Zalesovo Beam 89.91 358 P **P 20 39 03.0 +3.4**
comp=Z,0.6nm,0.7s,baz=2.9,slow=8.7,SNR=3.6
comp=Z,0.6nm,0.7s

JMA 21 20:32:30.4±0.0, 35°.4N±0°.1×133°.9E±0°.1, h8km, MV1.0/25, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.04**	**292**	*i* P	Pg	20 32 31.9	-0.1
JKR				S	Sg	20 32 33.4	+0.2
JKS	**Kasai**	**0.89**	**115**	*eP*	Pg	20 32 47.3	-0.2

JMA 21 20:32:36.2±0.1, 35°.4N±0°.3×133°.8E±0°.2, h12km, MV0.9/25, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.06**	**194**	P	Pg	20 32 38.6	0.0
JKR				*e*S	Sg	20 32 40.2	-0.1
JAD	**Aida**	**0.56**	**151**	*e*S	Pg	20 32 46.3	-0.9
JAD	**Aida**	**0.56**	**151**	*e*P	Pg	20 32 46.4	-0.8
JAD				*e*S	Sg	20 32 54.7	+0.1
JNM	**Ikuma**	**0.66**	**276**	*e*P	Pg	20 32 49.1	0.0
JISK	**Izumosakaura**	**0.81**	**275**	*e*P	Pg	20 32 51.4	-0.5
JKS	**Kasai**	**0.94**	**118**	*e*S	Sg	20 33 06.3	-0.3

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*IDC **21** 20:42:33.3±2.1, 19°.02N×145°.58E, h239km±23km, mb3.0/6, mbtmp3.6/8, Error ellipse: s-maj=36.6km s-min=15.1km az=95.0*
*NEIC **21** 20:42:33.6±0.9, 18°.96N±0°.08×145°.8E±0°.4, h230km±9km, mb4.1/13, Error ellipse: s-maj=50.8km s-min=8.3km az=100.0*

ISC 21 20:42:31.5±0.7, 19°.15N±0°.07×145°.5E±0°.2, h214km, n25, σ1$00/26, mb3.8/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.57**	**186**	P	**Pn**	**20 43 55.8**	**+2.3**
	11nm,0.3s,baz=63,slow=18,SNR=1.4						
GUMO				S	**S**	**20 44 57.9**	**-0.4**
	40nm,0.3s,baz=331,slow=22,SNR=5.6						
GUMO	**Guam**	**5.57**	**186**	Pn	**Pn**	**20 43 54.8**	**+1.2**
JGF	**Kuroka**	**17.90**	**338**	P	**Pn**	**20 46 27.6**	**0.0**
MJAR	**Matsushiro Arr**	**18.47**	**341**	P	**Pn**	**20 46 33.9**	**-0.5**
	1.2nm,0.5s,baz=158,slow=10,SNR=5.3						
MJB9	**Matsu-Tunnel**	**18.48**	**341**	P	**Pn**	**20 46 36.3**	**+1.9**
JMM	**Marumori**	**19.09**	**349**	P	**Pn**	**20 46 42.3**	**+0.7**
WB0	**Warramunga Arr**	**40.19**	**196**	P	**P**	**20 49 46.3**	**-1.0**
WB2	**Warramunga Arr**	**40.36**	**196**	P	**P**	**20 49 47.4**	**-1.4**
WB2				IAmb	IAmb	20 49 48.0	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**40.37**	**196**	P	**P**	**20 49 47.4**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=18,slow=8.9,SNR=15						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**40.37**	**196**	P	**P**	**20 49 48.1**	**-0.7**
SONM	**Songino Array**	**42.68**	**321**	P	**P**	**20 50 07.0**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=122,slow=10,SNR=1.8						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**44.04**	**195**	P	**P**	**20 50 16.7**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=21,slow=6.5,SNR=4.2						
	comp=Z,0.1nm,0.4s						
CAST	**Castle Rocks**	**60.77**	**27**	P	**P**	**20 52 20.8**	**+0.2**
CAST				IAmb	IAmb	20 52 22.5	
	comp=Z,4.0nm,1.0s						
IMAR	**Indian Mountai**	**60.88**	**24**	P	**P**	**20 52 22.0**	**+0.8**
RC01	**Rabbit Creek A**	**61.25**	**30**	P	**P**	**20 52 24.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**61.43**	**27**	P	**P**	**20 52 25.5**	**+0.5**
BPAW				IAmb	IAmb	20 53 03.5	
	comp=Z,6.6nm,1.4s						
MLY	**Manley**	**61.79**	**26**	P	**P**	**20 52 27.6**	**+0.1**
MLY				IAmb	IAmb	20 53 02.8	
	comp=Z,5.8nm,1.4s						
I23K	**Minto, Yukon-K**	**62.38**	**26**	P	**P**	**20 52 31.8**	**+0.5**
I23K				IAmb	IAmb	20 52 42.1	
	comp=Z,6.1nm,1.5s						
H24K	**Noodor Dome**	**63.15**	**25**	P	**P**	**20 52 36.6**	**+0.2**
H24K				IAmb	IAmb	20 52 36.6	
	comp=Z,5.7nm,1.5s						
ILAR	**Eielson Array**	**63.32**	**26**	P	**P**	**20 52 36.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=254,slow=5.6,SNR=5.4						
	comp=Z,0.6nm,0.7s						
PAX	**Paxson**	**63.59**	**28**	P	**P**	**20 52 39.8**	**+0.4**
BMAR	**Burnt Mountain**	**64.77**	**24**	P	**P**	**20 52 48.0**	**+1.0**
BCAR	**Beaver Creek A**	**65.27**	**29**	P	**P**	**20 52 50.3**	**+0.1**
YKA	**Yellowknife Ar**	**77.67**	**28**	P	**P**	**20 54 03.7**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=281,slow=5.6,SNR=3.6						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**83.00**	**52**	P	**P**	**20 54 32.9**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=270,slow=6.6,SNR=5.3						
	comp=Z,0.6nm,0.6s						

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*TUL **21** 20:47:39.4±0.8, 36°.445N±0°.010×98°.78W±0°.02, h7km±4km, ML3.7, mb_Lg3.5/90(NEIC), Mwr3.4/4(SLM), Error ellipse: s-maj=2.0km s-min=1.3km az=111.0*
*NEIC **21** 20:47:39.2±0.7, 36°.45N±0°.01×98°.79W±0°.02, h14km±3km, Error ellipse: s-maj=2.7km s-min=1.8km az=129.0*
*ANF **21** 20:47:39.8±0.3, 36°.39N×98°.75W, h7km, ML4.2/9, Error ellipse: s-maj=4.3km s-min=2.8km az=166.0*
*NEIC **21** 20:47:39.4, 36°.44N×98°.77W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.04; $M_{\theta\theta}$=1.31; $M_{\phi\phi}$=-1.26; $M_{r\theta}$=-0.06; $M_{r\phi}$=-0.25; $M_{\theta\phi}$=0.25; Fault plane solution: M_0=1.33000×10^{14} NP1:ϕ_s=231.00000°, δ=80.00000°, λ=-175.00000°. NP2:ϕ_s=140.00000°, δ=85.00000°, λ=-10.00000°. Principal axes: T 1.3352, Plg=3.0000°, Azm=186.0000°; N -0.0031, Plg=79.0000°, Azm=294.0000°; P -1.3321, Plg=11.0000°, Azm=95.0000°;*

ISC 21 20:47:38.9±0.8, 36°.45N±0°.03×98°.76W±0°.03, h9km±5km, n146, σ1$03/158, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.03**	**25**	Pg	**Pg**	**20 47 40.4**	**-0.2**
OK038				Sg	**Sg**	**20 47 41.8**	**0.0**
U32A	**Winter Ranch,**	**0.21**	**251**	Pg	**Pg**	**20 47 43.6**	**+0.5**
U32A				Sg	**Sg**	**20 47 46.7**	**+0.7**
U32A	**Winter Ranch,**	**0.21**	**251**	P	**Pg**	**20 47 43.6**	**+0.5**
	baz=70,SNR=694						
U32A				S	**Sg**	**20 47 46.8**	**+0.8**
	baz=70						
OK035	**E0210 Rd and N**	**0.26**	**9**	Pg	**Pg**	**20 47 45.1**	**+0.9**
OK035				Sg	**Sg**	**20 47 49.2**	**+1.5**
OK032	**Salt Plains WL**	**0.57**	**51**	Pg	**Pg**	**20 47 50.6**	**+0.8**
OK032				Sg	**Sg**	**20 47 57.9**	**+0.6**
KAN14	**Manchester OK**	**0.82**	**51**		**Pg**	**20 47 55.1**	**+0.5**
KAN14				Sg	**Sg**	**20 48 06.2**	**+1.0**
KAN16	**Harper SW Stat**	**0.95**	**35**	Pg	**Pg**	**20 47 57.5**	**+0.3**
KAN16				Sg	**Sg**	**20 48 10.1**	**+0.4**
KAN17	**Caldwell West**	**1.00**	**53**	Pg	**Pg**	**20 47 58.3**	**+0.3**
KAN17				Sg	**Sg**	**20 48 10.5**	**-0.5**
KAN08	**Anthony NE Sta**	**1.00**	**39**		**Pg**	**20 47 58.3**	**+0.2**
KAN08				Sg	**Sg**	**20 48 11.9**	**+0.7**
KAN12	**Harper NE Stat**	**1.04**	**36**	Pg	**Pg**	**20 47 59.1**	**+0.2**
KAN12				Sg	**Sg**	**20 48 13.4**	**+0.9**
KAN01	**Argonia South**	**1.07**	**48**	Pg	**Pg**	**20 47 59.6**	**+0.2**
KAN01				Sg	**Sg**	**20 48 13.7**	**+0.4**
KAN06	**Argonia West S**	**1.08**	**42**		**Pg**	**20 47 59.7**	**+0.1**
KAN06				Sg	**Sg**	**20 48 13.5**	**-0.1**
KAN09	**Caldwell North**	**1.15**	**53**		**Pg**	**20 48 00.9**	**+0.1**
KAN09				Sg	**Sg**	**20 48 16.1**	**+0.3**
KAN13	**South Haven SW**	**1.17**	**61**	Pg	**Pg**	**20 48 01.4**	**0.0**
KAN13				Sg	**Sg**	**20 48 17.1**	**+0.4**
OK049	**E0420 Rd and N**	**1.17**	**92**	Pg	**Pg**	**20 48 01.3**	**-0.1**
OK049				Sg	**Sg**	**20 48 17.3**	**+0.6**

KS21	Milan North St	1.21	46	Pg	Pb	20 48 02.3	+0.3
OK029	Liberty Lake	1.24	121	Pg	Pn	20 48 02.2	-0.2
OK029					Sb	20 48 19.4	+0.8
KS20	Mayfield South	1.24	51	Pg	Pn	20 48 02.6	+0.1
KS20					Sb	20 48 19.4	+0.7
OK050	Pawnee Station	1.44	92		Pn	20 48 05.7	+0.6
OK025	Westminster Rd	1.44	126		Pn	20 48 05.7	+0.5
OK048	Pawnee Station	1.47	91		Pn	20 48 06.3	+0.8
OK045	Pawnee Station	1.48	89		Pn	20 48 06.7	+1.0
OKCSW	OKLAHOMA CITY	1.49	134		Pn	20 48 06.7	+0.8
OK046	Pawnee Station	1.50	91		Pn	20 48 06.9	+0.9
OK005	Luther M Schoo	1.50	121		Pn	20 48 06.8	+0.9
OK033	Mehan	1.53	105		Pn	20 48 07.3	+0.9
OK051	E0350 and S346	1.55	87		Pn	20 48 07.9	+1.2
OK044	Pawnee Station	1.58	92		Pn	20 48 08.3	+1.1
FNO	Franklin	1.62	137		Pn	20 48 08.8	+1.1
OK031	S. Brethren Rd	1.63	107		Pn	20 48 09.0	+1.2
WMOK	Wichita Mounta	1.71	181	Pn	Pn	20 48 09.1	+0.2
WMOK	Wichita Mounta	1.71	181	P	Pn	20 48 09.0	+0.2
	baz=0.1,SNR=418						
OK034	N. Norfolk Rd.	1.71	104	Pn	Pn	20 48 09.9	+1.0
T35A	Sooner Cattle	1.87	75	Pn	Pn	20 48 12.2	+1.1
T35B	Sooner Cattle	1.87	75	P	Pn	20 48 12.2	+1.2
	baz=256,SNR=185						
T35B				S	Sb	20 48 38.1	+1.5
	baz=256						
R32A	Long Quarter,	1.97	1		Pn	20 48 12.4	-0.1
R32A	Long Quarter,	1.97	1	P	Pb	20 48 14.8	-0.1
	baz=182,SNR=52						
R32A				S	Sb	20 48 41.2	+1.6
	baz=182						
X34A	Smith Ranch, M	1.99	157		Pn	20 48 13.9	+1.2
TUL1	Leonard	2.46	102	Pn	Pn	20 48 19.3	+0.1
TUL1	Leonard	2.46	102	P	Pn	20 48 20.3	+1.1
	baz=283,SNR=18						
TUL1				S	Sn	20 48 51.5	+2.1
	baz=283						
CBKS	Cedar Bluff	2.49	342	Pn	Pn	20 48 20.4	+0.8
CBKS	Cedar Bluff	2.49	342	P	Pn	20 48 21.0	+1.3
	baz=162						
CBKS				S	Sb	20 48 55.4	+0.9
	baz=162						
AMTX	Amarillo	2.84	238	Pn	Pn	20 48 25.5	+0.9
AMTX	Amarillo	2.84	238	P	Pn	20 48 26.9	+2.3
	baz=56						
AMTX				Sb	Sb	20 49 07.5	+2.6
	baz=56						
KSU1	Kansas State U	3.15	32	Pn	Pn	20 48 29.6	+0.9
KSU1				IAmb_Lg		20 49 21.2	
	comp=Z,130nm,1.0s						
X37A	Clayton	3.33	123	Pn	Pn	20 48 31.9	+0.7
X37A	Clayton	3.33	123	P	Pn	20 48 32.0	+0.9
	baz=305,SNR=20						
Z35A	Perchaven, San	3.35	158		Pn	20 48 31.9	+0.4
U38A	Gravette	3.53	89	Pn	Pn	20 48 34.8	+0.9
U38A				IAmb_Lg		20 49 38.7	
	comp=Z,153nm,1.0s						
ABTX	Abilene, Hawle	3.88	191	Pn	Pn	20 48 39.4	+0.6
ABTX	Abilene, Hawle	3.88	191	P	Pn	20 48 39.5	+0.6
	baz=10,SNR=7.9						
HHAR	Hobbs	3.89	91	Pn	Pn	20 48 39.8	+0.8
HHAR				IAmb_Lg		20 49 47.0	
	comp=Z,80nm,0.8s						
KSCO	Kaye Shedlock'	3.99	311		Pn	20 48 42.3	+1.9
KSCO				IAmb_Lg		20 49 55.9	
	comp=Z,178nm,0.8s						
MSTX	Muleshoe	4.11	234		Pn	20 48 43.9	+1.9
MSTX				IAmb_Lg		20 49 54.6	
	comp=Z,131nm,0.9s						
Z38A	Mt. Pleasant	4.44	135		Pn	20 48 47.1	+0.7
Z38A				IAmb_Lg		20 50 06.7	
	comp=Z,95nm,1.0s						
S39A	Bolivar	4.52	72		Pn	20 48 48.4	+0.8
S39A				IAmb_Lg		20 50 05.9	
	comp=Z,160nm,0.8s						
WHTX	Lake Whitney,	4.58	166	Pn	Pn	20 48 49.2	+0.9
WHTX				IAmb_Lg		20 50 16.6	
	comp=Z,90nm,1.2s						
T25A	Trinidad	4.59	280	Pn	Pn	20 48 49.6	+1.0
T25A				IAmb_Lg		20 50 11.1	
	comp=Z,155nm,0.9s						
MIAR	Mount Ida	4.63	113	Pn	Pn	20 48 50.3	+1.2
MIAR				IAmb_Lg		20 50 17.4	
	comp=Z,87nm,0.9s						
BGNE	Belgrade	4.98	5		Pn	20 48 54.4	+0.6
BGNE				IAmb_Lg		20 50 29.9	
	comp=Z,95nm,0.8s						
N35A	Tabor	5.04	28		Pn	20 48 55.0	+0.4
237A	Washetta, Mont	5.06	150	Pn	Pn	20 48 55.1	+0.1
237A				IAmb_Lg		20 50 31.8	
	comp=Z,65nm,0.8s						
OGNE	Ogallala	5.17	331		Pn	20 48 56.8	+0.3
P38A	Dawn	5.20	51	Pn	Pn	20 48 56.6	-0.3
MGMO	Mountain Grove	5.26	80		Pn	20 48 58.5	+0.8
MGMO				IAmb_Lg		20 50 30.2	
	comp=Z,62nm,0.8s						
WHAR	Wooly Hollow	5.38	100	Pn	Pn	20 48 59.5	+0.2
WHAR				IAmb_Lg		20 50 32.0	
	comp=Z,58nm,0.7s						
WLAR	White Oak Lake	5.39	119	Pn	Pn	20 48 58.0	-1.4
WLAR				IAmb_Lg		20 50 36.2	
	comp=Z,79nm,0.9s						
FCAR	Ozark Folk Cen	5.40	94		Pn	20 48 58.4	-1.2
FCAR				IAmb_Lg		20 50 35.5	
	comp=Z,64nm,0.8s						
CPRX	Cap Rock	5.41	232	Pn	Pn	20 48 58.9	-1.0
R40A	Maddies Statio	5.49	68		Pn	20 48 59.9	-0.9
R40A				IAmb_Lg		20 50 35.3	
	comp=Z,105nm,0.9s						
UALR	University of	5.49	106		Pn	20 49 00.2	-0.6
UALR				IAmb_Lg		20 50 49.1	
	comp=Z,56nm,0.8s						
SDCO	Great Sand Dun	5.54	286		Pn	20 49 01.8	-0.1
HTMS	Hat Mesa	5.65	227	Pn	Pn	20 49 04.1	+0.9
Q24A	Divide	5.65	298		Pn	20 49 03.2	-0.2
Q24A				IAmb_Lg		20 50 48.7	
	comp=Z,59nm,0.7s						
435B	Jarrell	5.74	170		Pn	20 49 04.8	+0.5
435B				IAmb_Lg		20 50 55.0	
	comp=Z,102nm,0.9s						
NATX	Nacogdoches	5.78	143	Pn	Pn	20 49 04.4	-0.4
NATX				IAmb_Lg		20 50 56.2	
	comp=Z,72nm,0.9s						
CLN7	Carlsbad 7	5.80	227	Pn	Pn	20 49 04.0	-1.2
L34A	Svendsen Farm,	5.81	18	Pn	Pn	20 49 07.2	+2.0
CLNB	Carlsbad	5.95	227		Pn	20 49 08.1	+0.8
BRIGG	Briggsdale	6.00	315	Pn	Pn	20 49 06.3	-1.7
BRIGG				IAmb_Lg		20 50 57.6	
	comp=Z,82nm,0.7s						
JCT	Junction City	6.02	189	Pn	Pn	20 49 07.6	-0.5
JCT				IAmb_Lg		20 50 59.2	
	comp=Z,98nm,0.9s						
N38A	Joes South For	6.12	43		Pn	20 49 09.4	-0.2
P40A	Paris	6.13	58		Pn	20 49 10.2	+0.7
LCAR	Lake Charles	6.16	91	Pn	Pn	20 49 12.1	+2.1
K31A	O'Neill	6.17	0	Pn	Pn	20 49 11.0	+0.8
K31A				IAmb_Lg		20 51 05.8	
	comp=Z,109nm,0.8s						
CCM	Cathedral Cave	6.21	73		Pn	20 49 10.8	+0.2
CCM				IAmb_Lg		20 51 00.5	
	comp=Z,113nm,0.9s						
CCAR	Cane Creek	6.25	112	IAmb_Lg		20 51 05.1	
	comp=Z,107nm,1.1s						
GDL2	Guadalupe Moun	6.28	229		Pn	20 49 09.8	-2.0
S22A	4UR Ranch, Cre	6.58	284	Pn	Pn	20 49 15.6	-0.5
BNM	Barren Site	6.83	253	Pn	Pn	20 49 18.9	-0.6
SCIA	State Center	6.95	37	IAmb_Lg		20 51 28.8	
	comp=Z,99nm,0.7s						
CRNM	Carthage	6.99	251	Pn	Pn	20 49 20.0	-1.6
SMCO	Snowmass	7.05	295	Pn	Pn	20 49 21.3	-1.3
LENM	Lemitar	7.09	254	Pn	Pn	20 49 24.1	+1.1
SLM	Saint Louis	7.12	70	IAmb_Lg		20 51 29.3	
	comp=Z,74nm,0.8s						
143A	Socs Landing,	7.12	119	Pn	Pn	20 49 21.5	-1.7
143A				IAmb_Lg		20 51 41.1	
	comp=Z,46nm,0.9s						
PHWY	Pilot Hill	7.12	315	Pn	Pn	20 49 24.0	+0.4
PHWY				IAmb_Lg		20 51 40.2	
	comp=Z,98nm,1.1s						
N23A	Red Feather La	7.16	310	Pn	Pn	20 49 23.2	-0.9
SBM	South Baldy	7.32	253	Pn	Pn	20 49 23.8	-2.5
ECSD	EROS Data Cent	7.46	12	Pn	Pn	20 49 26.9	-1.0
N41A	Harden Midland	7.51	53	Pn	Pn	20 49 28.8	+0.2
735A	Kenedy	7.61	174	IAmb_Lg		20 51 54.2	
	comp=Z,95nm,1.3s						
S44A	Carbondale	7.70	78	Pn	Pn	20 49 31.2	+0.1
S44A				IAmb_Lg		20 51 51.6	
	comp=Z,56nm,0.8s						
S44A	Carbondale	7.70	78	P	Pn	20 49 31.4	+0.3
	baz=264						
SIUC	Southern Illin	7.73	78	Pn	Pn	20 49 31.3	-0.3
OXF	Oxford	7.87	101	Pn	Pn	20 49 33.0	-0.5
OXF				IAmb_Lg		20 52 06.8	
	comp=Z,51nm,1.1s						
W45A	Hickory Valley	7.88	97	IAmb_Lg		20 51 50.8	
	comp=Z,63nm,0.8s						
P43A	Skaggs, Pawnee	7.96	64	P	Pn	20 49 35.5	+0.8
	baz=249						
Y45A	Yeager Farm, C	7.97	106	IAmb_Lg		20 52 09.5	
	comp=Z,37nm,0.7s						
L40A	Anamosa	8.10	44	Pn	Pn	20 49 37.0	+0.4
833A	Chaparral WMA,	8.12	184		Pn	20 49 37.7	+0.8
PV13	Radium Mtn., P	8.20	285	Pn	Pn	20 49 37.7	-0.6
TX31	Lajitas Ar. Si	8.21	212	Pn	Pn	20 49 38.2	-0.1
TX31	Lajitas Ar. Si	8.21	212	P	Pn	20 49 38.6	+0.3
	baz=29,SNR=9.0						
TX32	Lajitas Array	8.21	212		Pn	20 49 38.4	+0.2
TXAR	Lajitas Array	8.21	212	Pn	Pn	20 49 38.4	+0.2
PV23	Carpenter Ridg	8.39	287	Pn	Pn	20 49 40.6	-0.4
RWWY	Rawlins	8.40	311	IAmb_Lg		20 52 15.5	
	comp=Z,31nm,0.8s						
HDIL	Hopedale	8.48	58	Pn	Pn	20 49 41.7	-0.2
I37A	Lemond, Waseca	8.60	27	IAmb_Lg		20 52 29.4	
	comp=Z,45nm,0.8s						
K22A	Casper	8.62	318	IAmb_Lg		20 52 22.0	
	comp=Z,54nm,0.9s						
RSSD	Black Hills	8.66	334	Pn	Pn	20 49 45.1	+0.6
RSSD				IAmb_Lg		20 52 22.7	
	comp=Z,40nm,0.8s						
PLAL	Pickwick Lake	8.81	96	Pn	Pn	20 49 47.8	+1.3
WVT	Waverly	8.83	89	Pn	Pn	20 49 46.3	-0.4
O44A	Mansfield	8.89	62	Pn	Pn	20 49 47.8	+0.2
L42A	Oliver, Polo	8.97	49	IAmb_Lg		20 52 31.3	
	comp=Z,70nm,0.8s						
JFWS	Jewell Farm	9.20	43	IAmb_Lg		20 52 55.9	
	comp=Z,60nm,0.8s						
T47A	Sharon Grove	9.37	83	Pn	Pn	20 49 55.7	+1.5
545A	Edgard	9.42	130	Pn	Pn	20 49 55.5	+0.7
P46A	Rosedale	9.65	67	Pn	Pn	20 49 59.4	+1.5
SRU	San Rafael Swe	9.69	289	Pn	Pn	20 49 59.0	+0.4
I40A	Norwalk	9.70	37	Pn	Pn	20 49 58.1	-0.4
I40A				IAmb_Lg		20 52 56.4	
	comp=Z,34nm,0.8s						
BLO	Bloomington	10.06	71		Pn	20 50 02.6	-0.9
WCI	Wyandotte Cave	10.09	76	Pn	Pn	20 50 03.8	-0.1
319A	Douglas	10.10	243	Pn	Pn	20 50 02.5	-1.7
F36A	Milaca	10.20	21	Pn	Pn	20 50 04.2	-1.2
TMUT	Trail Mountain	10.24	290	Pn	Pn	20 50 05.0	-1.4
BW06	Boulder Array	10.45	310	Pn	Pn	20 50 07.6	-1.4
I42A	Draeger Farm,	10.58	42	Pn	Pn	20 50 10.0	-0.6
MSU	Marysvale	10.86	285	Pn	Pn	20 50 12.7	-2.0
G40A	Rib Lake	10.93	34	Pn	Pn	20 50 14.5	-0.9
P48A	Milroy	10.95	70	Pn	Pn	20 50 13.6	-2.1
V51A	Loudon	11.67	89	Pn	Pn	20 50 26.1	+0.5
COWI	Conover	12.05	34	Pn	Pn	20 50 28.4	-2.3
EYMN	Ely	12.68	23	Pn	Pn	20 50 36.5	-2.9
P51A	Williamsport	12.75	72	P	Pn	20 50 38.8	-1.6
	baz=261						
P51A				P	Pn	20 50 38.8	-1.6
	baz=261						

IDC 21 21:01:51.0±2.4, 6°51S×130°26E, h0km, mb3.5/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=145.4km s-min=31.8km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.93	164	Pn	Pn	21 05 09.5	-0.4
	0.3nm,0.3s,baz=347,slow=13,SNR=18						
WRA				Sn	Sn	21 07 31.9	-14
	0.8nm,0.3s,baz=340,slow=23,SNR=10						
	0.7nm,0.5s						
ASAR	Alice Springs	17.42	169	P	Pn	21 05 56.0	+0.3
	0.2nm,0.3s,baz=338,slow=9.3,SNR=13						
ASAR				S	Sn	21 08 55.9	-14
	0.6nm,0.6s,baz=358,slow=27,SNR=5.9						
	0.4nm,0.5s						
MKAR	Makanchi Array	67.96	327	P	P	21 12 51.8	0.0
	0.2nm,0.3s,baz=120,slow=7.7,SNR=5.3						
	0.2nm,0.3s						

*CFUSG **21** 21:17:20.0, 45°.03N×41°.37E, h12km, mb2.8/5, Krasnodar region Magtype MSH 3.4 from 5 stations*
*IDC **21** 21:17:21.5±0.6, 44°.89N×41°.23E, h0km, mb3.4/8, mbtmp3.6/16, ML3.5/7, MS2.8/2, Error ellipse: s-maj=9.5km s-min=5.9km az=35.0*
*AZER **21** 21:17:23.6±3.2, 45°.03N×41°.23E, h21km±71km, Error ellipse: s-maj=65.3km s-min=49.7km az=135.0*
*MOS **21** 21:17:24.6±0.0, 44°.94N×41°.21E, h18km, MPVA4.5, Felt III-IV MSK at Armavir*
*MCSM **21** 21:17:26.6±0.8, 45°.N±7°.×4°.1E±1°.0, h19km±3km, mb4.0*
ISC 21 21:17:23.2±1.0, 45°.05N±0°.03×41°.22E±0°.02, h18km±6km, n176, σ1§94/255, mb3.5/7, 29C-6D,
Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABN	Labinsk	0.54	221	*i* Pg	Pg	21 17 34.0	-0.1
LABN				*e*Sg	Sg	21 17 40.8	-0.6
LABN	Labinsk	0.54	221	*i* PG	Pg	21 17 34.0	-0.1
LABN				*i* S	Sg	21 17 40.2	-1.2
NVNR	Nevinnomyssk	0.69	130	*i* Pg	Pb	21 17 34.7	-2.0
NVNR				*e*Sg	Sg	21 17 43.3	-2.6
NVNR	Nevinnomyssk	0.69	130	*i* PG	Pb	21 17 34.7	-2.0
NVNR				*i* S	Sg	21 17 43.5	-2.3
ERBR	Yeremizino-Bor	0.84	322	*i* Pg	Pg	21 17 40.1	+0.4
ERBR				*e*Sg	Sn	21 17 52.7	+0.6
ERBR	Yeremizino-Bor	0.84	322	*i* PG	Pg	21 17 40.2	+0.5
ERBR				*i* S	Sn	21 17 52.8	+0.6
AHMR	Akhmetovskaya	0.91	188	*e*Pg	Pb	21 17 39.3	-1.2
AHMR				*e*Sg	Sb	21 17 50.8	-1.4
AHMR	Akhmetovskaya	0.91	188	*e*PG	Pb	21 17 39.4	-1.0
AHMR				*i* S	Sb	21 17 50.9	-1.3
ALER	Alexandrovskoy	1.23	103	*e*Pg	Pn	21 17 45.7	0.0
ALER				*e*Sg	Sn	21 18 02.5	+0.6
ALER	Alexandrovskoy	1.23	103	*e*PG	Pn	21 17 45.6	0.0
ALER				*e*S	Sn	21 18 02.6	+0.6
GOF	Gofitskoye	1.29	89	*e*Pg	Pn	21 17 47.0	+0.7
GOF				*e*Sg	Sg	21 18 04.9	-0.1
GUZR	Guzeripl'	1.32	217	*e*Pg	Pn	21 17 45.9	-1.0
GUZR				*e*Sg	Sn	21 18 03.1	-0.9
GUZR	Guzeripl'	1.32	217	*e*PG	Pn	21 17 46.0	-0.9
GUZR				*i* S	Sn	21 18 02.9	-1.2
ARXR	Arkhyz	1.49	179	*e*Pg	Pn	21 17 49.3	0.0
ARXR				*i* Sg	Sn	21 18 08.8	+0.4
ARXR	Arkhyz	1.49	179	*e*PG	Pn	21 17 49.3	0.0
KIV	Kislovodsk	1.52	136	‖P	Pn	21 17 49.3	-0.3
KIV	Kislovodsk	1.52	136	*i* Pg	Pn	21 17 49.4	-0.3
KIV				*e*Sg	Sn	21 18 09.1	+0.2
KIV	Kislovodsk	1.52	136	*i* PG	Pn	21 17 49.7	+0.1
KVAR	Kislovodsk Arr	1.52	136	Pg	Pn	21 17 49.8	+0.1
	baz=270,slow=20						
KVAR				Lg	Lg	21 18 08.6	
	baz=311,slow=20						
BEYR	Belyy Ugol+	1.54	132	*i* Pg	Pn	21 17 50.0	+0.1
BEYR				*e*Sg	Sn	21 18 09.9	+0.4
BEYR	Belyy Ugol+	1.54	132	*i* PG	Pn	21 17 50.0	+0.1
GOYR	Goytkh	1.54	239	*e*Pg	Pn	21 17 51.5	-1.1
SHA1	Shidzhatmaz	1.67	141	*e*Pg	Pn	21 17 52.8	+1.0
SHA1				*i* Sg	Sn	21 18 13.4	+0.5
SHA1	Shidzhatmaz	1.67	141	*i* PN	Pn	21 17 52.1	+0.3
LZRR	Lazarevskoye	1.73	230	*i* Pg	Pb	21 17 54.0	-0.4
LZRR				*e*Sg	Sb	21 18 15.6	-0.3
LZRR	Lazarevskoye	1.73	230	*i* PN	Pb	21 17 54.1	-0.4
LZRR				*e*S	Sb	21 18 15.6	-0.3
DOMR	Dombai	1.78	171	*i* Pg	Pn	21 17 54.2	+0.8
DOMR				*e*Sg	Sn	21 18 15.3	-0.4
DOMR	Dombai	1.78	171	*i* PN	Pn	21 17 53.2	-0.2
KBZ	Khabaz	1.79	137	Pg	Pn	21 17 53.5	+0.3
	100nm,0.3s,baz=306,slow=11,SNR=1106						
KBZ				Lg	Lg	21 18 17.1	
	baz=118,slow=17						
KBZ	Khabaz	1.79	137	*e*Pg	Pn	21 17 54.4	+1.2
KBZ				*e*Sg	Sn	21 18 17.1	+1.6
KBZ	Khabaz	1.79	137	*e*PN	Pn	21 17 53.3	+0.1
VSLR	Vesyoloye	1.81	209	*e*Pg	Pn	21 17 54.2	+0.6
VSLR				*e*Sg	Sn	21 18 17.4	+1.4
VSLR	Vesyoloye	1.81	209	*i* PN	Pn	21 17 54.1	+0.6
SOC	Sochi	1.82	217	*i* Pg	Pn	21 17 55.2	+1.4
SOC				*e*Sg	Sn	21 18 17.4	+1.0
SOC	Sochi	1.82	217	*i* PN	Pn	21 17 55.2	+1.4
SOC				*e*S	Sn	21 18 17.4	+1.0
KBTC	Kuba-Taba	2.00	128	*e*Pg	Pn	21 17 57.8	+1.7
KBTC				*e*Sg	Sn	21 18 22.6	+1.9
KBTC	Kuba-Taba	2.00	128	*e*PN	Pn	21 17 57.8	+1.7
NEY	Neytrino	2.10	149	*e*Pg	Pn	21 17 59.5	+1.8
NEY				*e*Sg	Sn	21 18 24.4	+0.9
NEY	Neytrino	2.10	149	*e*PN	Pn	21 17 59.3	+1.6
SPGR	Shapsug	2.26	263	*i* Pg	Pb	21 18 02.8	-0.7
SPGR	Shapsug	2.26	263	*e*PN	Pn	21 18 01.8	+2.1
SPGR				*e*S	Sb	21 18 30.4	-0.7
GL1R	Gelendzhik	2.30	258	*e*Pn	Pn	21 18 02.3	+2.0
GL1R	Gelendzhik	2.30	258c	*i* PN	Pn	21 18 01.7	+1.4
NCK	Nalchik	2.31	132	*e*Pg	Pn	21 18 02.2	+1.8
NCK				*e*Sg	Sn	21 18 29.3	+0.9
NCK	Nalchik	2.31	132	*i* PN	Pn	21 18 02.3	+1.8
NCK				*i* S	Sn	21 18 30.1	+1.7
PRTR	Priterechnaya	2.55	120	*e*Pn	Pn	21 18 05.6	+1.9
PRTR				*e*Sn	Sn	21 18 36.0	+1.8
LSNR	Lesken	2.58	133	*e*Pn	Pn	21 18 05.7	+1.6
LSNR				*e*Sn	Sn	21 18 36.4	+1.2
LSNR	Lesken	2.58	133	*e*PN	Pn	21 18 05.8	+1.6
LSNR				pmax	pmax		
	comp=Z,83nm,0.5s						
STDR	Stavd-Durt	2.65	129	*i* Pn	Pn	21 18 07.0	+2.0
ANN	Anapa	2.70	266	*e*Pn	Pb	21 18 09.7	-1.4
ANN				*e*Sn	Sb	21 18 42.6	-1.3
ANN	Anapa	2.70	266	*i* PN	Pb	21 18 09.4	-1.7
ANN				*e*S	Sb	21 18 42.2	-1.7
DIGR	Digorskoe uzhe	2.74	141	*e*Pn	Pn	21 18 08.4	+1.9
DIGR				*e*Sn	Sn	21 18 39.8	+0.4
KORR	Kora	2.84	133	*i* Pn	Pn	21 18 09.8	+2.1
TRKR	Terskaya	2.84	117	*i* Pn	Pn	21 18 09.0	+1.2
TRKR				*e*Sn	Sn	21 18 43.1	+1.5
ARNR	Ardon	2.89	129	*e*Pn	Pn	21 18 10.5	+2.1
ARNR				*e*Sn	Sn	21 18 43.2	+0.4
BTKR	Batakoyurt	2.92	124	*e*Pn	Pg	21 18 18.6	-0.6
BTKR				*e*Sn	Sb	21 18 52.6	+2.4
ONI	Oni	2.94	146	PN	Pn	21 18 11.9	+2.7
ONI				S	Sb	21 18 53.9	+3.0
ZEI	Tsey	2.98	139	*e*Pn	Pn	21 18 11.5	+1.7
ZEI	Tsey	2.98	139	*e*PN	Pn	21 18 11.3	+1.5
ZEI				*e*S	Sb	21 18 53.0	+1.0
ZEI				pmax	pmax		
	comp=Z,36nm,0.5s						
ZEI				smax	smax		
	comp=E,209nm,0.4s						
ZEI				smax	smax		
	comp=N,200nm,0.5s						
TKB	Tkibuli	2.99	154	PN	Pn	21 18 11.7	+1.9
LACR	Lac	3.14	134	*e*Pn	Pn	21 18 13.1	+1.1
ALIG	Mtskhetisjvari	3.43	148	PN	Pn	21 18 18.1	+2.2
PNSH	Pansheti	3.44	133	PN	Pn	21 18 17.3	+1.1
ABS	Abastumani	3.49	160	PN	Pn	21 18 17.8	+0.9
GUDG	Gudauri	3.50	137	PN	Pn	21 18 19.0	+2.0
BKRG	Bakuriani	3.69	152	PN	Pn	21 18 21.2	+1.6
SHTL	Shatili	3.72	129	PN	Pn	21 18 21.4	+1.5
GROC	Groznyy	3.78	118	*e*PN	Pn	21 18 20.2	-0.4
GROC						21 19 05.2	
GROC				pmax	pmax		
	comp=Z,57nm,0.6s						
GROC				smax	smax		
	comp=E,52nm,0.6s						
GROC				smax	smax		
	comp=N,29nm,0.2s						
GROC				smax	smax		
	comp=N,44nm,0.4s						
GROC				MLR	MLR		
	comp=Z,7.0nm,1.0s						
DVE	Vedeno	4.11	119	*e*Pn	Pn	21 18 26.4	+1.2
DVE				*e*Sn	Sn	21 19 12.6	-0.3
DVE	Vedeno	4.11	119	*i* PN	Pn	21 18 26.0	+0.8
DVE				MLR	MLR		
	comp=Z,55nm,2.0s						
FEO	Feodosiya	4.14	272	*e*S	Sn	21 19 15.4	+2.0
FEO				Sm		21 19 16.0	
	comp=N,47nm,0.3s						
FEO				Sm		21 19 16.0	
	comp=E,21nm,0.4s						
KTUT	Trabzon	4.20	195	P	Pn	21 18 29.6	+3.2
DMNI	Dmanisi	4.31	149	PN	Pn	21 18 30.6	+2.6
BTLR	Botlikh	4.33	122	*e*Pn	Pn	21 18 29.2	+0.9
BTLR				*e*Sn	Sn	21 19 17.4	-1.0
BTLR	Botlikh	4.33	122	*i* PN	Pn	21 18 29.0	+0.7
SUDU	Sudak	4.42	270	*e*P	Pn	21 18 30.7	+1.3
SUDU				Pm		21 18 34.3	
	comp=Z,18nm,0.2s						
SUDU				*e*S	Sn	21 19 22.2	+1.8
SUDU				Sm		21 19 24.3	
	comp=N,18nm,0.3s						
SUDU				Sm		21 19 24.3	
	comp=E,9

GANJ S Sn 21 19 54.3 +0.2
SEKA Sheki 5.82 129 P Pn 21 18 49.5 +0.7
SEKA S Sn 21 19 57.1 +2.0
AKT Akhty 5.94 125 eP Pn 21 18 53.3 +2.9
AKT eS Sn 21 20 01.5 +3.4
AKT pmax pmax
comp=Z,4.0nm,0.4s
AKT smax smax
comp=E,29nm,0.4s
AKT smax smax
comp=E,22nm,0.4s
AKT smax smax
comp=N,27nm,0.4s
MNGR Mingechevir, A 6.07 133 S Sn 21 20 01.2 +0.2
BZK Bozkurt 6.09 242 P Pn 21 18 52.2 -0.2
BZK ⇑S Sn 21 19 58.6 -3.0
VRH Novokhopyorsk 6.16 3 eP Pn 21 18 53.9 +0.6
VRH pmax pmax
comp=Z,10.0nm,0.6s
QSAR Qusar 6.24 122 P Pn 21 18 54.0 -0.5
QSAR S Sn 21 20 06.1 +0.8
VSR Storozhevoye 6.32 348 eP Pn 21 18 58.2 +2.7
VSR pmax pmax
comp=Z,6.0nm,0.4s
QBL Gabala 6.35 128 S Sn 21 20 08.1 0.0
XNQ Khinaliq 6.38 125 P Pn 21 18 55.8 -0.7
XNQ S Sn 21 20 08.6 -0.3
QUBA Quba, Azerbaij 6.47 122 P Pn 21 18 57.6 0.0
QUBA S Sn 21 20 11.5 +0.5
BRDA Brd 6.49 135 P Pn 21 18 57.7 -0.2
VORR Voronezh 6.76 349 eP Pn 21 18 58.0 -3.5
VORR pmax pmax
comp=Z,30nm,0.4s
LPSR Galich'ya Gora 7.70 350 eP Pn 21 19 12.6 -1.9
LPSR pmax pmax
comp=Z,5.0nm,0.5s
BR131 Keskin Array S 7.74 229 i P Pn 21 19 15.9 +0.8
BRTR Keskin Array B 7.74 229 Pn Pn 21 19 16.3 +1.2
comp=Z,0.3nm,0.3s,baz=47,slow=12,SNR=7.5
comp=Z,0.6nm,0.3s
BRTR Keskin Array B 7.74 229 i P Pn 21 19 16.6 +1.5
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BELG Belogornoye 8.47 28 Pn Pn 21 19 25.6 +0.6
comp=Z,2.1nm,0.3s,baz=204,slow=20,SNR=1.7
BELG Sn Sn 21 20 59.6 -0.5
comp=Z,1.3nm,0.3s,baz=163,slow=20,SNR=1.7
BELG Lg Lg 21 21 57.4
baz=285,slow=22
comp=Z,4.7nm,0.3s
BELG Belogornoye 8.47 28 i P Pn 21 19 28.0 +3.0
BELG pmax pmax
comp=Z,1.0nm,0.3s
BELG MLR MLR
comp=Z,12nm,8.0s
TLCR 8.78 275 ⇑P Pn 21 19 29.2 0.0
TLCR ⇓S Sn 21 21 04.0 -3.6
TLCR 8.78 275 ⇑P Pn 21 19 29.2 0.0
MILM Milestii Mici 8.84 287 P Pn 21 19 29.8 -0.3
MILM ⇑S Sn 21 21 06.2 -3.0
MILM Milestii Mici 8.84 287 P Pn 21 19 29.8 -0.3
TPGR Topolog 9.08 273 ⇑P Pn 21 19 33.4 -0.1
TPGR ⇑S Sn 21 21 11.2 -4.0
TIRR Tirgusor 9.14 271 ⇑P Pn 21 19 33.4 -0.7
TIRR ⇓S Sn 21 21 12.2 -4.3
TIRR Tirgusor 9.14 271 ⇑P Pn 21 19 33.4 -0.7
HARR Harsova 9.45 272 ⇑P Pn 21 19 38.7 +0.3
HARR Harsova 9.45 272 ⇑P Pn 21 19 38.7 +0.3
AKASG Malin Array Be 9.84 309 Pn Pn 21 19 43.8 +0.1
comp=Z,1.6nm,0.3s,baz=115,slow=12,SNR=4.6
AKASG Sn Sn 21 21 30.6 -3.1
comp=Z,1.4nm,0.3s,baz=127,slow=24,SNR=5.1
AKASG Lg Lg 21 22 37.5
comp=Z,0.9nm,0.3s,baz=119,slow=30,SNR=4.8
comp=Z,0.6nm,0.4s
AKBB Malin Array Si 9.84 309 i P Pn 21 19 45.3 +1.6
AKBB Malin Array Si 9.84 309 Sn Sn 21 21 29.6 -4.1
AK11 Malin Array Si 9.86 309 Sn Sn 21 21 29.4 -4.7
AK14 Malin Array Si 9.87 309 Sn Sn 21 21 30.2 -4.2
AK13 Malin Array Si 9.88 309 Sn Sn 21 21 30.5 -4.3
VRI Vrincioaia 10.22 280 ⇑P Pn 21 19 49.4 +0.4
VRI ⇑S Sn 21 21 39.7 -3.5
VRI Vrincioaia 10.22 280 ⇑P Pn 21 19 49.4 +0.4
PLOR Plostina 10.28 280 ⇑P Pn 21 19 50.4 +0.6
PLOR ⇑S Sn 21 21 40.8 -3.7
PLOR Plostina 10.28 280 ⇑P Pn 21 19 50.4 +0.6
TESR Tescani 10.29 283 ⇑P Pn 21 19 49.6 -0.3
TESR ⇑S Sn 21 21 41.8 -2.9
LUBAR Lubar, Ukraine 10.33 303 Pn Pn 21 19 51.3 +0.9
comp=Z,5.2nm,0.9s
LUBAR sP 21 19 59.9
comp=Z,5.2nm,0.9s
OBN Obninsk 10.50 345⇑ eP Pn 21 19 54.2 +1.4
OBN eS Sn 21 21 47.6 -2.3
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,143nm,8.0s
KMPD K-Podol'skiy 10.71 294 Sn Sn 21 21 51.5 -3.5
MLR Muntele Rosu 10.78 278 ⇑P Pn 21 19 56.3 -0.5
MLR ⇓S Sn 21 21 53.6 -3.4
MLR Muntele Rosu 10.78 278 Pn Pn 21 19 58.4 +1.6
comp=Z,0.3nm,0.3s,baz=226,slow=12,SNR=3.9
MLR Sn Sn 21 21 56.7 -0.4
comp=Z,0.3nm,0.3s,baz=9.4,slow=23,SNR=2.4
comp=Z,2.0nm,0.7s
MI28 Mi28,Pidlybu 10.81 308 Pn Pn 21 19 59.0 +1.9
MI28 Sn Sn 21 21 53.5 -4.0
BURAR Bucovina Array 11.36 289 ⇑S Sn 21 22 09.0 -2.1
BURAR Bucovina Array 11.36 289 ⇑P Pn 21 20 04.0 -0.7
BURAR Bucovina Array 11.36 289 ⇑P Pn 21 20 04.0 -0.7
VOIR 11.41 278 ⇓P Pn 21 20 04.9 -0.5
VOIR 11.41 278 ⇓P Pn 21 20 04.9 -0.5
AKTO Aktyubinsk 12.51 59 Pn Pn 21 20 18.1 -2.1
comp=Z,0.8nm,0.3s,baz=251,slow=12,SNR=9.5
AKTO Sn Sn 21 22 31.1 -8.0
comp=Z,0.4nm,0.3s,baz=90,slow=18,SNR=2.6
comp=Z,2.4nm,0.4s
AKTO Aktyubinsk 12.51 59 ⇑P Pn 21 20 18.2 -2.1
comp=Z,2.0nm,0.5s
AKTO ⇑S Sn 21 22 31.1 -8.0
comp=Z,1.8nm,0.5s
MNK Minsk 12.78 323 i P Pn 21 20 24.8 +1.0
MNK i S Sn 21 22 48.6 +3.2
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK pmax pmax
comp=N,17nm,0.7s
MNK MLR MLR
comp=E,82nm,20.0s
MNK MLR MLR
comp=N,572nm,17.0s
MNK MLR MLR
comp=Z,109nm,15.0s
MNK Minsk 12.78 323 i LRM MLR 21 26 00.1
comp=Z,109nm,15.2s
MNK Minsk 12.78 323 i P Pn 21 20 24.8 +1.0
comp=E,2.0nm,0.9s
MNK Minsk 12.78 323 i P Pn 21 20 24.8 +1.0
comp=N,17nm,0.7s
MNK Minsk 12.78 323 i P Pn 21 20 24.8 +1.0
comp=Z,9.0nm,0.7s,baz=132
MNK Minsk 12.78 323 i PP P 21 20 32.7 -2.1
MNK Minsk 12.78 323 i S Sn 21 22 48.6 +3.2
MNK Minsk 12.78 323 i SS Sn 21 23 02.0 +16
MNK Minsk 12.78 323 i LR LR 21 25 10.8
MNK Minsk 12.78 323 i LRM MLR 21 25 50.5
comp=E,82nm,20.4s
MNK Minsk 12.78 323 i LRM MLR 21 25 50.5
comp=N,572nm,16.6s
AB31 Akbulak array 13.41 65 P Pn 21 20 30.7 -1.8
AB31 S Sn 21 23 00.2 -0.8
AB31 Akbulak array 13.41 65 P Pn 21 20 30.7 -1.8
comp=N,0.7nm,0.4s,baz=254,slow=10,SNR=38
AB31 S Sn 21 23 00.2 -0.8
comp=N,0.6nm,0.4s,baz=252,slow=20,SNR=4.7
NACGM Naroch 13.52 322⇑ eP Pn 21 20 34.0 0.0
baz=131
KIRV Kirov 14.45 17 i P Pn 21 20 48.6 +1.9
ARU Arti 15.76 38 Pn Pn 21 21 00.4 -3.7
baz=225,slow=14,SNR=2.2
ARU Sn Sn 21 23 48.3 -10
baz=282,slow=20,SNR=2.3

comp=N,1.1nm,0.3s
FINES FINESS Array B 18.67 337 Pn P 21 21 38.1 -1.9
comp=N,0.1nm,0.3s,baz=143,slow=13,SNR=7.0
comp=N,2.9nm,0.9s
FINES FINESS Array B 18.67 337 i P P 21 21 39.0 -1.0
FINES pmax pmax
comp=Z,1.0nm,0.3s
CLL Collm 19.75 299 eP Pn 21 21 58.0 +4.5
CLL eS Sn 21 25 37.0 +2.1
CLL Collm 19.75 299 epP Pn 21 21 58.0 +4.5
CLL eS Sn 21 25 37.0 +2.1
BVAR Borovoye Array 20.60 57 P Pn 21 22 03.2 -0.4
comp=Z,0.4nm,0.4s,baz=257,slow=12,SNR=6.2
comp=Z,0.4nm,0.4s
DAVOX Davos/Dischmat 21.80 286 P P 21 22 15.8 +1.4
comp=Z,1.1nm,0.5s,baz=67,slow=7.7,SNR=1.8
comp=Z,1.1nm,0.5s
HFS Hagfors 22.29 322 P P 21 22 20.1 +0.8
comp=Z,2.2nm,0.7s,baz=126,slow=10.0,SNR=7.2
comp=Z,2.2nm,0.7s
NOA NORSAR Array B 23.80 323 P P 21 22 36.5 +1.7
comp=Z,0.2nm,0.5s,baz=129,slow=9.3,SNR=2.5
NOA LR LR 21 31 16.8
comp=Z,29nm,18.1s,baz=0.0,slow=35
comp=Z,0.2nm,0.5s
ARCES ARCESS Array B 25.80 347 P P 21 22 55.8 +2.9
comp=Z,1.1nm,0.7s,baz=160,slow=11,SNR=1.7
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 28.39 72 P P 21 23 18.1 +1.7
comp=Z,0.1nm,0.5s,baz=284,slow=7.0,SNR=1.8
comp=Z,0.1nm,0.5s
EKA Eskdalemuir Ar 29.73 306 P P 21 23 29.4 +1.2
comp=Z,0.4nm,0.5s,baz=98,slow=9.5,SNR=1.6
comp=Z,0.4nm,0.5s
TORD Torodi Ar. Bea 46.21 239 P P 21 25 47.5 +0.2
comp=Z,0.5nm,0.6s,baz=42,slow=7.4,SNR=5.3
comp=Z,0.5nm,0.6s

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*IDC **21** 21:17:25.9±1.3, 35°.23N×133°.79E, h0km, mb3.3/3, mbtmp3.3/5, ML2.8/2, MS2.4/2, Error ellipse: s-maj=28.1km s-min=18.4km az=163.0*
*JMA **21** 21:17:26.7±0.0, 35°.4N±0°.1×133°.8E±0°.1, h11km, MD4.0/20, MV4.0/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
*NIED **21** 21:17:26.7, 35°.42N×133°.82E, h11km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; M_{rr}0.35; $M_{\theta\theta}$2.80; $M_{\phi\phi}$-3.14; $M_{r\theta}$-0.46; $M_{\phi\theta}$-2.26; $M_{\phi r}$0.57; Fault plane solution: $M_0$3.81000×10^14^ NP1: ϕ_s243.00000°, δ79.00000°, λ176.00000°. NP2: ϕ_s334.00000°, δ86.00000°, λ11.00000°.*
ISC 21 21:17:26.5±0.8, 35°.43N±0°.04×133°.82E±0°.02, h11km±6km, n38, σ1°.13/35, mb3.3/3, 8D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.05**	**182**	P	**Pg**	**21 17 28.8**	**+0.2**
JKR				S	**Sg**	**21 17 30.1**	**0.0**
JKR	**Kurayoshi**	**0.05**	**182**	A	A	21 17 28.8	
comp=E,29nm,1.0s,comp=E,51nm,1.4s							
JAD	**Aida**	**0.56**	**150**	P	**Pb**	**21 17 37.5**	**-0.9**
JAD				S	**Sb**	**21 17 44.9**	**-1.4**
JNM	**Ikuma**	**0.65**	**276**	⇓iP	**Pb**	**21 17 39.4**	**-0.5**
JNM				⇓S	**Sb**	**21 17 48.4**	**-0.5**
JNM	**Ikuma**	**0.65**	**276**	A	A	21 17 39.4	
comp=E,6.0nm,0.7s,comp=E,6.0nm,0.8s							
JKSM	**Kasumi**	**0.71**	**77**	i P	**Pg**	**21 17 39.9**	**-0.2**
JKSM				S	**Sg**	**21 17 49.1**	**-0.3**
JHS	**Saijyo**	**0.72**	**234**	P	**Pb**	**21 17 40.2**	**-0.8**
JHS	**Saijyo**	**0.72**	**234**	i P	**Pb**	**21 17 40.0**	**-1.0**
JHS				S	**Sb**	**21 17 49.8**	**-1.1**
JISK	**Izumosakaura**	**0.80**	**276**	⇓iP	**Pg**	**21 17 41.7**	**-0.2**
JISK				⇓S	**Sb**	**21 17 52.2**	**-1.0**
JISK	**Izumosakaura**	**0.80**	**276**	A	A	21 17 41.7	
comp=E,3.0nm,1.1s,comp=E,5.0nm,0.9s							
JKS	**Kasai**	**0.95**	**118**	⇓iP	**Pg**	**21 17 44.4**	**-0.4**
JKS				⇓S	**Sg**	**21 17 56.9**	**-0.1**
JJG	**Jouge**	**0.95**	**215**	A	A	21 17 44.6	
comp=E,7.0nm,0.2s,comp=E,11nm,0.3s							
JOI	**OKI**	**0.98**	**332**	i P	**Pg**	**21 17 44.6**	**-0.8**
JOI				S	**Sg**	**21 17 57.9**	**-0.3**
JOI	**OKI**	**0.98**	**332**	A	A	21 17 44.6	
comp=E,17nm,1.1s,comp=E,21nm,0.3s							
JJS	**Sakaide**	**1.05**	**175**	i P	**Pb**	**21 17 46.0**	**-0.7**
JJS				S	**Sb**	**21 17 60.0**	**-0.6**
JKY	**Yasaka**	**1.07**	**79**	⇓iP	**Pg**	**21 17 46.4**	**-0.6**
JKY				⇓S	**Sg**	**21 18 00.4**	**-0.5**
JKY	**Yasaka**	**1.07**	**79**	A	A	21 17 46.4	
comp=E,3.0nm,0.6s,comp=E,4.0nm,1.0s							
JGT2	**ShimaneMisato**	**1.14**	**252**	A	A	21 17 47.8	
comp=E,2.0nm,0.2s,comp=E,5.0nm,1.2s							
JMIK	**Miki**	**1.18**	**121**	A	A	21 17 48.5	
comp=E,6.0nm,0.7s,comp=E,8.0nm,0.7s							
JAWN	**Awajishima-nag**	**1.29**	**136**	A	A	21 17 50.4	
comp=E,6.0nm,2.0s,comp=E,9.0nm,0.5s							
JHT	**Toyohira**	**1.38**	**237**	A	A	21 17 51.8	
comp=E,4.0nm,0.3s,comp=E,7.0nm,0.3s							
JHM	**Kurahashi**	**1.67**	**220**	A	A	21 17 56.2	
comp=E,4.0nm,1.6s,comp=E,3.0nm,1.0s							
JMN	**Monobe**	**1.69**	**178**	P	**Pb**	**21 17 57.1**	**-0.6**
JMN	**Monobe**	**1.69**	**178**	A	A	21 17 56.5	
comp=E,4.0nm,1.1s,comp=E,3.0nm,0.7s							
JFM	**Mihama**	**1.77**	**86**	A	A	21 17 57.7	
comp=E,2.0nm,1.9s,comp=E,5.0nm,1.2s							
JHIK	**Hikimi**	**1.79**	**241**	A	A	21 17 58.1	
comp=E,1.0nm,2.3s,comp=E,2.0nm,2.0s							
JKI	**Kunimi**	**2.58**	**227**	A	A	21 18 09.5	
comp=E,3.0nm,1.9s,comp=E,3.0nm,0.8s							
INU	**Inuyama**	**2.61**	**91**	P	**Pn**	**21 18 09.6**	**+1.0**
JGF	**Kuroka**	**2.89**	**86**	P	**Pn**	**21 18 13.9**	**+1.4**
MAJO	**Matsushiro**	**3.73**	**71**	P	**Pn**	**21 18 25.5**	**+1.5**
MJAR	**Matsushiro Arr**	**3.73**	**71**	Pn	**Pn**	**21 18 26.2**	**+2.2**
0.2nm,0.3s,baz=254,slow=13,SNR=10							
MJAR				Pg	**Pg**	**21 18 36.2**	**-1.8**
0.5nm,0.3s,baz=267,slow=14,SNR=12							
MJAR				Lg	Lg	21 19 28.0	
0.6nm,0.3s,baz=259,slow=19,SNR=7.0							
MJAR				LR	LR	21 19 41.8	
comp=Z,46nm,21.4s,baz=226,slow=36							
2.0nm,0.3s							
JTU	**Tsushima**	**3.74**	**257**	P	**Pn**	**21 18 25.0**	**+0.8**
JSD	**Sado**	**4.42**	**53**	P	**Pn**	**21 18 34.6**	**+1.2**
JSU	**Suzuyama**	**4.82**	**217**	P	**Pn**	**21 18 40.8**	**+1.8**
KSRS	**Korea Array**	**5.17**	**295**	Pn	**Pn**	**21 18 43.8**	**+0.1**
0.9nm,0.3s,baz=111,slow=15,SNR=5.1							
KSRS				Sn	**Sn**	**21 19 42.7**	**-0.7**
1.2nm,0.3s,baz=111,slow=25,SNR=6.5							
KSRS				LR	LR	21 20 47.7	
comp=Z,42nm,18.9s,baz=10.0,slow=38							
2.1nm,0.3s							
SONM	**Songino Array**	**23.82**	**310**	P	**P**	**21 22 42.8**	**+3.2**
0.5nm,0.8s,baz=108,slow=9.3,SNR=3.0							
0.5nm,0.8s							
WRA	**Warramunga Arr**	**55.07**	**179**	P	**P**	**21 26 57.9**	**-0.5**
0.2nm,0.6s,baz=354,slow=7.6,SNR=5.2							
0.2nm,0.6s							
ASAR	**Alice Springs**	**58.77**	**180**	P	**P**	**21 27 24.6**	**-0.1**
0.3nm,0.8s,baz=12,slow=13,SNR=1.7							
0.3nm,0.8s							

PRU 21 21:18:33.9±0.0, 50°.09N×18°.44E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.32**	**217**	ePG	Pg	21 18 40.5	+0.6
OKC				eSG	Sg	21 18 43.6	-0.4
MORC	**Moravsky Berou**	**0.66**	**242**	ePG	Pg	21 18 45.4	-1.1
MORC				eSG	Sg	21 18 55.0	0.0
MAUC	**Maruska**	**0.83**	**209**	ePG	Pg	21 18 50.0	+0.3
MAUC				eSG	Sg	21 19 01.4	+1.0
KRLC	**Kraliky**	**1.07**	**270**	ePG	Pg	21 18 53.5	-0.9
KRLC				eSG	Sg	21 19 06.8	-1.4
DPC	**Dobruska-Polom**	**1.39**	**282**	ePG	Pg	21 18 58.8	-1.6
DPC				eSG	Sg	21 19 18.2	-0.2

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*JMA **21** 21:22:13.0±0.2, 24°.3N±0°.7×121°.9E±0°.6, h51km±2km, MV2.4/9, TAIWAN REGION*
*TAP **21** 21:22:13.4, 24°.39N×121°.92E, h24km, ML3.0, C*
ISC 21 21:22:12.8±1.1, 24°.34N±0°.02×121°.92E±0°.02, h16km±9km, n83, σ0°.76/126, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta** baz=293	**0.16**	**309**	i P	**Pb**	**21 22 17.6**	**+0.2**
EWUT				eS	**Sb**	**21 22 20.8**	**+0.3**
TWC	**Suao** baz=346	**0.27**	**347**	i P	**Pb**	**21 22 19.5**	**+0.2**
TWC				S	**Sb**	**21 22 23.4**	**-0.3**
ETL	**Fush Village** baz=229	**0.33**	**236**	eP	**Pn**	**21 22 21.9**	**-1.0**
NACB	**Ninganchiao** baz=238	**0.34**	**240**	P	**Pn**	**21 22 21.9**	**-1.2**
NACB				S	**Sn**	**21 22 28.8**	**-0.8**
TWD	**Chiawan** baz=227	**0.39**	**228**	P	**Pn**	**21 22 22.8**	**-1.0**
TWD				eS	**Sn**	**21 22 30.7**	**-0.2**
LATG	**Datong** baz=296	**0.40**	**298**	P	**Pb**	**21 22 22.2**	**+0.6**
LATG				eS	**Sb**	**21 22 28.2**	**+0.6**
ETLH	**Xiulin Townshi** baz=249	**0.42**	**251**	P	**Pn**	**21 22 23.2**	**-1.0**
ETLH				eS	**Sn**	**21 22 30.4**	**-1.3**
ENTT	**Nioudou** baz=309	**0.43**	**313**	P	**Pb**	**21 22 21.5**	**-0.6**
ENTT				eS	**Sb**	**21 22 27.3**	**-1.1**
TWE	**Neicheng** baz=327	**0.44**	**329**	P	**Pb**	**21 22 22.5**	**+0.3**
TWE				eS	**Sb**	**21 22 28.8**	**+0.2**
ILA	**Ilan** baz=335	**0.45**	**340**	eP	**Pb**	**21 22 22.6**	**+0.3**
ILA				eS	**Sb**	**21 22 29.3**	**+0.5**
NDT	**Datong Townshi** baz=300	**0.45**	**305**	P	**Pg**	**21 22 21.3**	**-0.5**
NDT				eS	**Sb**	**21 22 27.7**	**-1.1**
HWA	**Hwalien** baz=214	**0.46**	**218**	eP	**Pn**	**21 22 24.7**	**-0.1**
NNSB	**Datong** baz=281	**0.49**	**280**	P	**Pn**	**21 22 24.2**	**-1.1**
NNSB				eS	**Sn**	**21 22 31.0**	**-2.6**
EGS	baz=3.0	**0.50**	**2**	P	**Pg**	**21 22 23.2**	**+0.4**
EGS				eS	**Sb**	**21 22 30.2**	**0.0**
NNS	**Nan Shan** baz=282	**0.51**	**281**	P	**Pb**	**21 22 23.2**	**-0.2**
NNS				eS	**Sb**	**21 22 30.6**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=321	**0.51**	**324**	P	**Pb**	**21 22 23.6**	**+0.2**
FUSB				eS	**Sb**	**21 22 30.3**	**-0.3**
YHNB	**Yeheng** baz=300	**0.59**	**304**	P	**Pb**	**21 22 25.4**	**+0.6**
YHNB				eS	**Sb**	**21 22 33.3**	**+0.3**
NSK	**Sanguang** baz=300	**0.61**	**303**	eP	**Pb**	**21 22 24.6**	**-0.4**
NSK				eS	**Sb**	**21 22 32.9**	**-0.6**
FUSS	**Fushou** baz=262	**0.62**	**261**	eP	**Pn**	**21 22 26.8**	**-0.4**
FUSS				eS	**Sn**	**21 22 36.8**	**-0.1**
WHF	**Hehuan Shan** baz=255	**0.63**	**252**	P	**Pn**	**21 22 26.8**	**-0.6**
WHF				eS	**Sn**	**21 22 36.8**	**-0.6**
TIPB	**Shuangxi** baz=352	**0.63**	**352**	P	**Pg**	**21 22 25.4**	**+0.1**
TIPB				eS	**Sg**	**21 22 33.6**	**-0.1**
TWT	**Tachien** baz=259	**0.68**	**263**	eP	**Pn**	**21 22 28.2**	**+0.2**
TWT				eS	**Sn**	**21 22 38.2**	**-0.2**
ESL	**Shilin** baz=233	**0.69**	**220**	P	**Pb**	**21 22 27.2**	**+0.8**
ESL				eS	**Sn**	**21 22 38.1**	**-0.1**
TDCB	**Techi** baz=259	**0.70**	**263**	P	**Pn**	**21 22 27.9**	**-0.3**
TDCB				eS	**Sn**	**21 22 38.0**	**-0.7**
TWA	**Mucha** baz=325	**0.70**	**335**	eP	**Pn**	**21 22 27.8**	**-0.3**
TWA				eS	**Sb**	**21 22 36.6**	**+0.4**
NHDH	**Xindian Distri** baz=322	**0.71**	**330**	eP	**Pn**	**21 22 27.6**	**-0.6**
NHDH				eS	**Sb**	**21 22 36.5**	**+0.1**
CHGB	**Renai** baz=245	**0.73**	**248**	P	**Pn**	**21 22 28.7**	**0.0**
CHGB				eS	**Sn**	**21 22 40.3**	**+0.6**
NWF	**Wu-fen Shan** baz=343	**0.73**	**350**	eP	**Pb**	**21 22 27.4**	**+0.2**
NWF				eS	**Sb**	**21 22 37.1**	**0.0**
SXI1	**Grass Mountain** baz=359	**0.75**	**357**	eP	**Pg**	**21 22 27.4**	**0.0**
OWD	**Renai** baz=238	**0.78**	**240**	P	**Pn**	**21 22 29.1**	**-0.1**
OWD				eS	**Sn**	**21 22 41.0**	**+0.3**
NFF	**Wufeng Townshi** baz=293	**0.78**	**292**	eP	**Pn**	**21 22 29.4**	**+0.1**
NFF				eS	**Sn**	**21 22 39.3**	**-1.3**
TAP	**Taipei** baz=331	**0.79**	**332**	eP	**Pn**	**21 22 29.1**	**-0.1**
TAP				eS	**Sn**	**21 22 39.9**	**-0.7**
EGFH	**Guangfu** baz=199	**0.81**	**214**	eP	**Pn**	**21 22 29.7**	**+0.2**
WUSB	**Renai** baz=235	**0.81**	**245**	P	**Pn**	**21 22 29.7**	**0.0**
WUSB				eS	**Sn**	**21 22 41.7**	**+0.3**
YM01	**YM01** baz=338	**0.86**	**339**	P	**Pn**	**21 22 30.0**	**-0.3**
YM01				eS	**Sb**	**21 22 41.3**	**+0.6**
LIOB	**Emei** baz=287	**0.87**	**290**	P	**Pn**	**21 22 30.9**	**+0.5**
TWS1	**Kuangyinshan** baz=340	**0.88**	**329**	eP	**Pn**	**21 22 30.3**	**-0.2**
TWS1				eS	**Sn**	**21 22 42.8**	**-0.2**
NSTT	**Nanjuang** baz=287	**0.88**	**289**	eP	**Pn**	**21 22 31.0**	**+0.5**
NSTT				eS	**Sn**	**21 22 41.8**	**-1.2**
WHP	**Taichung City** baz=269	**0.89**	**266**	P	**Pn**	**21 22 31.4**	**+0.7**
WHP				eS	**Sn**	**21 22 43.4**	**+0.1**
ANP	**Anpu** baz=322	**0.91**	**337**	eP	**Pb**	**21 22 30.6**	**+0.2**
VWDT	**VWDT** baz=228	**0.92**	**231**	eP	**Pn**	**21 22 31.4**	**+0.4**
VWDT				eS	**Sn**	**21 22 44.9**	**+0.9**
NTST	**Danshui** baz=342	**0.92**	**333**	eP	**Pn**	**21 22 31.6**	**+0.5**
NTST				eS	**Sn**	**21 22 44.3**	**+0.3**
JYNG	**Yonagunijimaku** baz=211	**0.94**	**83**	P	**Pb**	**21 22 30.7**	**-0.1**
JYNG				eS	**Sb**	**21 22 44.0**	**+0.9**
HGSD	**Ruisui** baz=206	**0.96**	**208**	eP	**Pg**	**21 22 31.6**	**+0.2**
WCS	**Beigang Elemen** baz=241	**0.96**	**253**	eP	**Pn**	**21 22 31.5**	**-0.1**
TWY	**Chenhua** baz=343	**0.97**	**343**	eP	**Pb**	**21 22 31.6**	**+0.4**
EHY	**Hungye** baz=211	**0.99**	**213**	eP	**Pb**	**21 22 30.5**	**-1.2**
YOJ	**Yonaguni jima** baz=78	**1.00**	**83**	eP	**Pb**	**21 22 31.1**	**-0.7**

YOJ			*e*S		**Sb**	**21 22 44.2 -0.5**
	baz=78					
YOJ	**Yonaguni jima**	**1.00 83**	P		**Pb**	**21 22 31.9 +0.1**
YOJ			*e*S		**Sb**	**21 22 45.1 +0.3**
SMLT	**Sun Moon Lake**	**1.04 244**	*e*P		**Pn**	**21 22 33.4 +0.7**
	baz=231					
SSLB	**Suanglung**	**1.04 238**	*e*P		**Pn**	**21 22 32.9 +0.2**
	baz=228					
SSLB			*e*S		**Sn**	**21 22 47.3 +0.4**
	baz=228					
TWQ1	**Liyutan**	**1.04 270**	*e*P		**Pn**	**21 22 34.7 +1.9**
	baz=268					
TWQ1			*e*S		**Sn**	**21 22 49.7 +2.7**
	baz=268					
NMLH	**Miaoli**	**1.04 281**	*e*P		**Pn**	**21 22 34.5 +1.8**
	baz=278					
TYC	**Yuchr**	**1.06 246**	*e*P		**Pn**	**21 22 34.1 +1.1**
	baz=233					
YULB	**Yu-li**	**1.10 211**	*e*P		**Pb**	**21 22 33.0 -0.5**
	baz=209					
WHYT	**Xinyi Township**	**1.17 237**	*e*P		**Pg**	**21 22 35.5 +0.1**
	baz=226					
WJS	**Zhushan**	**1.20 245**	*e*P		**Pg**	**21 22 36.7 +0.6**
	baz=228					
YUS	**Yu-Shan**	**1.23 226**	*e*P		**Pg**	**21 22 36.3 -0.2**
	baz=210					
YUS			*e*S		**Sn**	**21 22 54.1 +1.9**
	baz=210					
FULB	**Fuli**	**1.27 207**	*e*P		**Pg**	**21 22 37.4 0.0**
	baz=219					
ALS	**Alishan**	**1.31 231**	*e*P		**Pg**	**21 22 38.0 -0.1**
	baz=218					
EHD	**Haiduan**	**1.36 209**	*e*P		**Pn**	**21 22 37.8 +0.7**
	baz=208					
WDLH	**Douliu**	**1.42 243**	*e*P		**Pg**	**21 22 40.5 +0.4**
	baz=240					
WRL	**Guolierlin Hig**	**1.47 253**	*e*P		**Pb**	**21 22 39.1 -0.8**
	baz=250					
WCKO	**Fanlu**	**1.50 233**	*e*P		**Pb**	**21 22 40.3 0.0**
	baz=231					
CHN4	**Tsaushan**	**1.56 231**	*e*P		**Pb**	**21 22 41.6 +0.3**
	baz=229					
STYH	**Taoyuan**	**1.57 222**	*e*P		**Pn**	**21 22 40.3 +0.4**
	baz=220					
TPUB	**Ta-pu**	**1.57 229**	*e*P		**Pg**	**21 22 42.0 -1.0**
	baz=227					
WTP	**Ta-pu**	**1.62 228**	*e*P		**Pg**	**21 22 43.1 -0.8**
	baz=226					
IRIF	**Iriomote-Funau**	**1.65 90**	*e*P		**Pn**	**21 22 41.3 +0.2**
IRIF			S		**Sn**	**21 23 01.9 -0.1**
TWK	**Hsinying**	**1.69 231**	*e*P		**Pb**	**21 22 44.1 +0.5**
	baz=229					
TWG	**Pinlang**	**1.70 207**	*e*P		**Pn**	**21 22 42.6 +0.8**
	baz=194					
TWGBT	**Beinan**	**1.70 207**	*e*P		**Pn**	**21 22 41.3 -0.6**
	baz=194					
CHN1	**Nanshi**	**1.72 228**	*e*P		**Pg**	**21 22 44.9 -1.0**
	baz=227					
WSL	**Shuilin Townsh**	**1.75 242**	*e*P		**Pb**	**21 22 43.7 -0.7**
	baz=255					
SGST	**Jiashian**	**1.75 224**	*e*P		**Pb**	**21 22 43.8 -0.8**
	baz=210					
JKRS	**Kuro-shima**	**1.91 93**	*e*S		**Sn**	**21 23 08.3 -0.2**
SSD	**Sandimen**	**1.98 217**	*e*P		**Pb**	**21 22 48.0 -0.4**
	baz=216					
TSMG	**Majia**	**2.00 216**	*e*P		**Pb**	**21 22 48.9 0.0**
	baz=216					
JIJ	**Ishigaki jima**	**2.03 89**	*e*S		**Sn**	**21 23 10.2 -1.2**
MASBT	**Mashibuluo**	**2.09 215**	*e*P		**Pn**	**21 22 48.9 +1.8**
	baz=215					
EAST	**Anshuo**	**2.18 207**	*e*P		**Pn**	**21 22 50.0 +1.4**
	baz=197					
JISG	**Ishigakijimahi**	**2.19 83**	*e*S		**Sn**	**21 23 14.8 -0.7**
PHUB	**P'eng-hu**	**2.30 249**	*e*P		**Pn**	**21 22 51.3 +1.3**
	baz=245					

*DSN **21** 21:27:12.1±0.7, 26°.03N×54°.44E, h10km, ML3.2/9, Error ellipse: s-maj=6.6km s-min=4.1km az=137.0*
*OMAN **21** 21:27:13.5±0.7, 25°.94N×54°.42E, h15km±9km, mb5.1/1, ml3.1/21, Error ellipse: s-maj=9.3km s-min=3.6km az=162.0*
ISC 21 21:27:10.8±1.8, **26°.00N**±0°.06×**54°.44E**±0°.05, **h3**km±11km, **n32**, σ0§**61**/48, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMQ	**Umm Al-Quwin**	**1.20 113**		P	**Pn**	**21 27 35.4**	**+0.9**
UMQ				S	**Sn**	**21 27 52.6**	**+1.3**
NAZ	**Nazwa, Dubai**	**1.50 132**		P	**Pg**	**21 27 39.9**	**+0.3**
	SNR=16						
NAZ				S	**Sg**	**21 27 59.5**	**+0.5**
NAZ	**Nazwa, Dubai**	**1.50 132**		*e*P	**Pg**	**21 27 39.6**	**0.0**
	SNR=13						
NAZ				S	**Sg**	**21 27 59.8**	**+0.8**
AJN	**Ajban**	**1.52 161**		P	**Pb**	**21 27 39.2**	**-0.4**
AJN				S	**Sg**	**21 28 00.2**	**+0.6**
	SNR=9.3						
SHME	**Shamm**	**1.54 88**		P	**Pg**	**21 27 40.3**	**0.0**
	SNR=8.5						
SHME				S	**Sg**	**21 28 00.8**	**+0.6**
	SNR=8.7						
SHME	**Shamm**	**1.54 88**		*e*P	**Pn**	**21 27 39.2**	**+0.2**
	SNR=8.3						
SHME				S	**Sg**	**21 28 00.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**1.59 149**		P	**Pb**	**21 27 40.4**	**-0.4**
	SNR=43						
ASUD				S	**Sg**	**21 28 01.7**	**-0.2**
ASUD	**Al Ashush, Dub**	**1.59 149**		*e*P	**Pg**	**21 27 41.3**	**0.0**
	SNR=44						
FAQ	**Al Faqa, Dubai**	**1.63 140**		P	**Pb**	**21 27 41.1**	**-0.5**
FAQ				S	**Sb**	**21 28 02.3**	**-0.2**
FAQ	**Al Faqa, Dubai**	**1.63 140**		*e*P	**Pb**	**21 27 41.2**	**-0.4**
	SNR=22						
MASF	**Masafi**	**1.68 112**		P	**Pb**	**21 27 41.9**	**-0.4**
	SNR=11						
MASF				S	**Sg**	**21 28 04.2**	**-0.5**
BANOM	**Banah**	**1.68 92**		P	**Pb**	**21 27 42.3**	**-0.1**
	SNR=18						
BANOM				S	**Sg**	**21 28 04.6**	**-0.2**
	SNR=7.4						
BANOM	**Banah**	**1.68 92**		*e*P	**Pn**	**21 27 41.5**	**+0.4**
	SNR=18						
MSFE	**Esma-Masafi**	**1.68 112**		*e*P	**Pn**	**21 27 41.1**	**0.0**
	SNR=11						
JRN	**Qarnain Island**	**1.78 234**		P	**Pn**	**21 27 42.6**	**+0.2**
UOSS	**Minazif**	**1.91 123**		P	**Pb**	**21 27 45.2**	**-1.1**
UOSS				S	**Sn**	**21 28 09.5**	**+0.6**
UOSS	**Minazif**	**1.91 123**		*e*P	**Pn**	**21 27 44.3**	**0.0**
	SNR=16						
HATD	**Hatta, Dubai**	**1.93 127**		P	**Pb**	**21 27 45.8**	**-0.9**
HATD				S	**Sb**	**21 28 10.4**	**-0.8**
HATD	**Hatta, Dubai**	**1.93 127**		P	**Pb**	**21 27 45.7**	**-0.9**
ASHO	**Ashiyiah**	**1.97 131**		P	**Pn**	**21 27 46.0**	**+0.9**
	SNR=23						
ASHO				S	**Sb**	**21 28 11.7**	**-0.6**
ASHO	**Ashiyiah**	**1.97 131**		*e*P	**Pn**	**21 27 46.0**	**+0.9**
	SNR=23						
ALNE	**Al Ain**	**2.28 148**		P	**Pn**	**21 27 50.0**	**+0.7**
MZWR	**Madinat Zayed**	**2.29 193**		P	**Pn**	**21 27 50.8**	**+1.4**
GHWR	**Ruwais**	**2.48 215**		P	**Pn**	**21 27 52.1**	**+0.1**
MZR	**Muzera**	**3.11 196**		P	**Pn**	**21 28 00.9**	**+0.1**
ARQ	**Araqi**	**3.26 144**		P	**Pn**	**21 28 03.4**	**+0.6**
	SNR=11						
UMZA	**Um Al Zommool**	**3.34 168**		P	**Pn**	**21 28 04.2**	**+0.3**
HOQ	**Hoqain**	**3.55 132**		P	**Pn**	**21 28 07.1**	**+0.2**
	SNR=22						
BSY	**Bisya**	**4.11 142**		P	**Pn**	**21 28 15.1**	**+0.6**
BSY				S	**Sn**	**21 29 02.0**	**-1.1**
SMDO	**Samad**	**4.41 131**		P	**Pn**	**21 28 19.1**	**+0.5**
SMDO				S	**Sn**	**21 29 11.0**	**+0.5**
WBK	**Wadi Bani Khal**	**5.34 128**		P	**Pn**	**21 28 31.6**	**+0.1**
	SNR=23						
WBK				S	**Sn**	**21 29 33.3**	**-0.2**
MHTO	**MHTO**	**5.95 146**		P	**Pn**	**21 28 39.9**	**0.0**
	SNR=16						

*STR **21** 21:39:36.3±0.3, 48°.N±2°.×°.±°., h6km±5km, MLv1.8/25, Error ellipse: s-maj=0.0km s-min=0.0km az=35.6, preliminary*
*VIE **21** 21:39:36.2±0.5, 48°.29N×9°.26E, h6km, mb2.1/1, ml1.9/7, Error ellipse: s-maj=4.8km s-min=2.3km az=15.0 17 km E of Ebingen*
*LDG **21** 21:39:36.4±0.1, 48°.32N×9°.21E, h10km, Md2.0/1, Ml2.1/10, Error ellipse: s-maj=1.3km s-min=1.1km az=76.0*
*PRU **21** 21:40:27.0±0.0, 49°.17N×11°.50E, h1km, Albstadt*
ISC 21 21:39:35.9±1.0, **48°.30N**±0°.03×**9°.18E**±0°.02, **h18**km±4km, **n43**, σ0§**94**/64, **5C-2D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUT	**Gutenstein**	**0.24 191**		⇓Pg	**Pb**	**21 39 41.3**	**-0.2**
GUT				Sg	**Sg**	**21 39 44.9**	**-0.3**
OPP	**Oppenau**	**0.69 287**		⇑Pg	**Pb**	**21 39 49.6**	**+0.3**
OPP	**Oppenau**	**0.69 287**		Sg	**Sg**	**21 40 00.2**	**+1.5**
SLE	**Schleitheim**	**0.71 221**		Sg	**Sg**	**21 39 59.8**	**+0.4**
SLE	**Schleitheim**	**0.71 221**		Pg	**Pg**	**21 39 50.2**	**+0.3**
FELD	**Feldberg im Sc**	**0.90 242**		Pg	**Pn**	**21 39 54.0**	**+0.3**
FELD	**Feldberg im Sc**	**0.90 242**		Sg	**Sn**	**21 40 05.9**	**-0.4**
KIZ	**Kirchzarten**	**0.92 248**		Sg	**Sg**	**21 40 06.2**	**+0.4**
KIZ	**Kirchzarten**	**0.92 248**		Pg	**Pg**	**21 39 53.8**	**+0.1**
VOGT	**Vogtsburg - To**	**1.04 258**		Pg	**Pg**	**21 39 56.4**	**+0.4**
VOGT	**Vogtsburg - To**	**1.04 258**		Sg	**Sg**	**21 40 10.4**	**+0.8**
SULZ	**Cheisacher**	**1.06 223**		Pn	**Pg**	**21 39 56.8**	**+0.4**
SULZ	**Cheisacher**	**1.06 223**		Pg	**Pb**	**21 39 55.4**	**-0.3**
SULZ	**Cheisacher**	**1.06 223**		Sg	**Sg**	**21 40 11.1**	**+0.7**
SUBF	**Surbourg**	**1.08 305**		⇑Pg	**Pg**	**21 39 57.4**	**+0.7**
SZBH	**soultz borehol**	**1.08 306**		⇑Pg	**Pg**	**21 39 57.2**	**+0.4**
SZBH				Sg	**Sg**	**21 40 11.8**	**+0.9**
DAVA	**Damuels**	**1.12 155**		*e*Pg	**Pg**	**21 39 58.3**	**+0.6**
	0.8nm,0.2s						
DAVA				*e*Sg	**Sg**	**21 40 13.4**	**+1.1**
	3.6nm,0.2s						
OBER	**Oberstdorf**	**1.17 140**		⇓Pg	**Pn**	**21 39 56.5**	**-0.9**
WLS	**Welschbruch**	**1.23 276**		⇑Pg	**Pg**	**21 39 59.7**	**+0.1**
WLS				Sg	**Sg**	**21 40 15.8**	**+0.3**
CDF	**Champ du Feu**	**1.28 276**		*e*Pn	**Pn**	**21 39 59.2**	**+0.3**
CDF	**Champ du Feu**	**1.28 276**		*e*Pg	**Pg**	**21 40 00.5**	**0.0**
CDF				*e*Sg	**Sn**	**21 40 16.8**	**+1.2**
	5.3nm,0.3s						
CIEL	**Dossenheim-sur**	**1.32 294**		Pg	**Pg**	**21 40 01.4**	**+0.1**
CIEL				Sg	**Sg**	**21 40 19.0**	**+0.5**
RETA	**Reutte**	**1.34 127**		*e*Pg	**Pb**	**21 40 01.5**	**+1.0**
	1.1nm,0.1s						
RETA				*e*Sg	**Sg**	**21 40 18.9**	**-0.4**
	2.5nm,0.2s						
ECH	**Echery**	**1.35 267**		⇑Pg	**Pb**	**21 40 01.6**	**+0.9**
MOF	**Molkenrain**	**1.45 253**		Pn	**Pg**	**21 40 03.9**	**+0.1**
MOTA	**Moosalm**	**1.61 126**		*i* Pg	**Pb**	**21 40 06.1**	**+0.9**
	0.8nm,0.2s						
MOTA				*e*Sg	**Sg**	**21 40 26.9**	**-1.0**
	3.5nm,0.2s						
HINF	**Hinteralfeld**	**1.64 254**		*e*Pg	**Pg**	**21 40 07.3**	**-0.1**
HINF				*e*Sg	**Sg**	**21 40 28.7**	**0.0**
	2.4nm,0.3s						
FETA	**Feichten**	**1.66 140**		*e*Pg	**Pg**	**21 40 07.5**	**-0.2**
	0.2nm,0.1s						
FETA				*e*Sg	**Sg**	**21 40 28.8**	**-0.5**
	0.6nm,0.2s						
SQTA	**Sankt Quirin**	**1.75 128**		*i* Pg	**Pb**	**21 40 08.5**	**+1.1**
	1.1nm,0.2s						
SQTA				*e*Sg	**Sb**	**21 40 30.5**	**+1.5**
	4.1nm,0.2s						
RONF	**Ronchamp**	**1.80 252**		Pn	**Pb**	**21 40 08.7**	**+0.4**
WATA	**Walderalm**	**1.88 120**		*e*Pg	**Pg**	**21 40 11.8**	**-0.2**
	0.5nm,0.1s						
WATA				*e*Sg	**Sg**	**21 40 35.2**	**-1.3**
	0.9nm,0.1s						
ABH	**Alteburg**	**1.91 326**		Pn	**Pg**	**21 40 12.2**	**-0.4**
HAU	**Haudompre**	**1.92 262**		*e*Pg	**Pg**	**21 40 12.4**	**-0.4**
HAU				*e*Sg	**Sg**	**21 40 37.4**	**-0.3**
	1.8nm,0.2s						
WTTA	**Wattenberg**	**1.96 121**		*e*Pg	**Pg**	**21 40 13.5**	**0.0**
	0.3nm,0.1s						
WTTA				*e*Sg	**Sb**	**21 40 37.1**	**+1.9**
	0.7nm,0.2s						
PAGF	**Fort de Pagny**	**2.32 278**		*e*Pg	**Pg**	**21 40 19.8**	**-0.5**
	baz=91						
PAGF				*e*Sn	**Sn**	**21 40 40.1**	**-1.0**
PAGF				*e*Sg	**Sg**	**21 40 49.6**	**-0.7**
	0.9nm,0.2s						
CABF	**La Chapelle**	**2.70 232**		*e*Sg	**Sg**	**21 41 01.8**	**-0.8**
	1.5nm,0.3s						
SAVF	**Savonnieres en**	**2.72 278**		*e*Pg	**Pg**	**21 40 26.8**	**-1.2**
SAVF				*e*Sg	**Sg**	**21 41 01.6**	**-1.6**
	1.5nm,0.3s						
MEZF	**Maizieres J'vi**	**2.76 276**		*e*Pn	**Pn**	**21 40 19.3**	**+0.1**
MEZF				*e*Sn	**Sn**	**21 40 50.6**	**-1.4**
SFTF	**Sexfontaines**	**2.77 269**		*e*Pg	**Pg**	**21 40 28.2**	**-0.8**
	baz=90						
SFTF				*e*Sg	**Sg**	**21 41 04.2**	**-0.7**
	2.1nm,0.4s						
KHC	**Kasperske Hory**	**3.03 72**		*e*PG	Pg	21 40 51.7	+18
KHC				*e*SG	**Sg**	**21 41 10.5**	**-2.6**
LOR	**Lormes**	**3.74 256**		*e*Pg	**Pg**	**21 40 46.1**	**-1.3**
	baz=78						
LOR				*e*Sg	**Sg**	**21 41 34.1**	**-1.7**
	0.6nm,0.2s,baz=89						
SSF	**Saint Saulge**	**4.03 254**		*e*Pn	**Pn**	**21 40 36.8**	**+0.1**
SSF	**Saint Saulge**	**4.03 254**		*e*Pg	**Pg**	**21 40 51.5**	**-1.6**
SSF				*e*Sg	**Sg**	**21 41 42.7**	**-2.5**
	0.1nm,0.1s						

*IDC **21** 21:42:05.8±6.8, 6°.41N×72°.60W, h170km±46km, mbtmp4.3/1, Error ellipse: s-maj=87.2km s-min=82.4km az=147.0*
*RSNC **21** 21:42:06.6±0.7, 6°.79N×73°.15W, h148km±3km, ML3.3, Mw3.7*
ISC 21 21:42:04.8±1.1, **6°.82N**±0°.03×**73°.13W**±0°.04, **h156**km±7km, **n31**, σ1§**64**/59, **3C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23 192**		*e*P	**Pn**	**21 42 26.5**	**+0.3**
BARC				*e*S	**Sn**	**21 42 41.6**	**-0.9**
BARC				*i*		21 42 44.3	
	comp=Z,850nm,0.3s						
BRRC	**Barranca, Sant**	**0.64 296**		⇑*i*P	**Pn**	**21 42 28.2**	**+0.7**
BRRC				*e*S	**Sn**	**21 42 45.3**	**+0.3**
BRRC				*i*		21 42 49.4	
	comp=Z,395nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67 40**		⇑*i*P	**Pn**	**21 42 29.3**	**+0.9**
PAMC				*e*S	**Sn**	**21 42 46.5**	**+0.2**
PAMC				*i*		21 42 49.6	
	comp=Z,283nm,0.4s						
RUSC	**La Rusia**	**0.93 177**		⇓*i*P	**Pn**	**21 42 30.3**	**+0.2**
RUSC				*e*S	**Sn**	**21 42 49.0**	**-0.5**
RUSC				*i*		21 42 50.4	
	comp=Z,363nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34 258**		*e*P	**Pn**	**21 42 32.8**	**-0.5**
PTBC				*e*S	**Sn**	**21 42 54.5**	**-0.5**
PTBC				*i*		21 42 57.4	
	comp=Z,184nm,0.3s						
TAMC	**Tame, Arauca**	**1.39 106**		⇑*i*P	**Pn**	**21 42 34.8**	**+1.1**
TAMC				*e*S	**Sn**	**21 42 56.4**	**+0.5**
TAMC				*i*		21 42 58.0	
	comp=Z,133nm,0.5s						
OCAC	**Ocana**	**1.42 353**		*e*S	**Sn**	**21 42 57.2**	**+0.4**
OCAC				*i*		21 43 01.9	
	comp=Z,434nm,0.2s						
SPBC	**San Pablo de B**	**1.49 219**		*e*P	**Pn**	**21 42 35.4**	**+0.5**
SPBC				*e*S	**Sn**	**21 42 57.1**	**-0.7**
SPBC				*i*		21 43 00.1	
	comp=Z,378nm,0.3s						
NORC	**Norcasia**	**2.13 234**		*e*P	**Pn**	**21 42 42.5**	**+0.6**
NORC				*e*S	**Sn**	**21 43 10.2**	**-0.2**
NORC				*i*		21 43 16.0	
	comp=Z,175nm,0.2s						
CHIC	**Chingaza**	**2.26 195**		⇓*e*P	**Pn**	**21 42 44.2**	**+0.5**
CHIC				*e*S	**Sn**	**21 43 13.8**	**+0.1**
CHIC				*i*		21 43 24.1	
	comp=Z,122nm,0.4s						
ROSC	**El Rosal**	**2.30 211**		P	**Pn**	**21 42 46.2**	**+2.0**
	comp=Z,143nm,0.4s,baz=90,slow=20,SNR=59						
ROSC				S	**Sn**	**21 43 17.9**	**+3.4**
	comp=Z,404nm,0.4s,baz=48,slow=20,SNR=20						
ROSC	**El Rosal**	**2.30 211**		*e*P	**Pn**	**21 42 46.1**	**+1.9**
ROSC				*e*S	**Sn**	**21 43 16.8**	**+2.3**
ROSC				*i*		21 43 21.2	
	comp=Z,364nm,0.4s						
HELC	**Santa Helena**	**2.46 255**		*e*P	**Pn**	**21 42 48.1**	**+1.9**
HELC				*e*S	**Sn**	**21 43 18.6**	**+0.7**
HELC				*i*		21 43 26.8	
	comp=Z,108nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.73 235**		*e*P	**Pn**	**21 42 50.6**	**+1.1**
GUY2C				*e*S	**Sn**	**21 43 23.8**	**-0.2**
GUY2C				*i*		21 43 32.7	
	comp=Z,144nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73 351**		*e*P	**Pn**	**21 42 51.6**	**+2.5**
LL1C				*e*S	**Sn**	**21 43 27.0**	**+3.6**
VILC	**Villavicencio,**	**2.75 192**		*e*P	**Pn**	**21 42 49.7**	**+0.3**
VILC				*e*S	**Sn**	**21 43 24.1**	**+0.1**
PTGC	**Puerto Gaitan,**	**2.79 159**		*e*P	**Pn**	**21 42 49.2**	**-0.6**
PTGC				*e*S	**Sn**	**21 43 22.8**	**-1.8**
PTGC				*i*		21 43 27.9	
	comp=Z,118nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.02 252**		*e*P	**Pn**	**21 42 54.1**	**+1.3**
CBOC				*e*S	**Sn**	**21 43 30.2**	**+0.3**
CBOC				*i*		21 43 41.2	
	comp=Z,35nm,0.5s						
DBBC	**Dabeiba**	**3.06 274**		*e*P	**Pn**	**21 42 53.8**	**+0.5**
DBBC				*e*S	**Sn**	**21 43 27.1**	**-3.7**
ARGC	**Ariguani, Magd**	**3.21 340**		*e*P	**Pn**	**21 42 56.1**	**+1.0**
ARGC				*e*S	**Sn**	**21 43 36.0**	**+1.8**
ARGC				*i*		21 43 44.5	
	comp=Z,40nm,0.4s						
ANIL	**Santa Ana**	**3.23 224**		*e*P	**Pn**	**21 42 57.5**	**+1.8**
ANIL				*e*S	**Sn**	**21 43 37.1**	**+2.0**
PRAC	**Prado**	**3.55 210**		*e*P	**Pn**	**21 42 59.8**	**+0.3**
PRAC				*e*S	**Sn**	**21 43 42.0**	**+0.1**
PRAC				*i*		21 43 48.7	
	comp=Z,188nm,0.4s						
ORTC	**Ortega, Tolima**	**3.58 216**		*e*P	**Pn**	**21 43 00.7**	**+0.8**
ORTC				*e*S	**Sn**	**21 43 44.0**	**+1.4**
ORTC				*i*		21 43 50.3	
	comp=Z,86nm,0.4s						
SJCC	**San Jacinto, C**	**3.67 327**		*e*P	**Pn**	**21 43 00.6**	**-0.4**
SJCC				*e*S	**Sn**	**21 43 41.2**	**-3.4**
SJCC				*i*		21 43 45.8	
	comp=Z,36nm,0.3s						
PLMC	**San Jos del P**	**3.67 239**		*e*P	**Pn**	**21 43 01.8**	**+0.8**
PLMC				*e*S	**Sn**	**21 43 44.3**	**-0.3**
PLMC				*i*		21 43 48.4	
	comp=Z,31nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.18 3**		*e*P	**Pn**	**21 43 06.9**	**-0.7**
CRJC				*e*S	**Sn**	**21 43 54.7**	**-2.0**
CRJC				*i*		21 43 56.2	
	comp=Z,55nm,0.4s						
GUVC	**San Jose del G**	**4.28 173**		*e*P	**Pn**	**21 43 08.2**	**-0.7**
GUVC				*e*S	**Sn**	**21 43 58.8**	**-0.1**
GUVC				*i*		21 44 04.0	
	comp=Z,59nm,0.3s						
URIC	**Uribia, Colomb**	**4.98 13**		*e*P	**Pn**	**21 43 17.0**	**-1.0**
URIC				*e*S	**Sn**	**21 44 11.5**	**-3.8**
URIC				*i*		21 44 19.5	
	comp=Z,11nm,0.4s						
GARC	**Garzon, Huila**	**5.17 207**		*e*P	**Pn**	**21 43 20.2**	**-0.7**
GARC				*e*S	**Sn**	**21 44 15.3**	**-5.0**
GARC				*i*		21 44 21.1	
	comp=Z,29nm,0.3s						
ASAR	**Alice Springs**	**149.10 234**		PKPbc	**PKPbc**	**22 01 35.0**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=116,slow=3.7,SNR=3.1						
WRA	**Warramunga Arr**	**150.33 241**		PKPbc	**PKPbc**	**22 01 38.1**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=108,slow=2.8,SNR=5.0						

*NEIC **21** 21:46:54.8±1.5, 3°.88S±0°.06×128°.94E±0°.03, h114km±8km, mb4.4/36, Error ellipse: s-maj=9.2km s-min=2.9km az=157.0*
*IDC **21** 21:46:55.0±1.8, 3°.82S×129°.02E, h122km±18km, mb4.0/12, mbtmp4.4/16, Error ellipse: s-maj=19.1km s-min=10.3km az=85.0*
*DJA **21** 21:46:55.0±0.2, 4°S±2°×12°9E±°, h128km±4km, M4.5/18, mb4.5/18, mB4.7/5, MLv4.7/18, Mw(mB)4.0/5*
ISC 21 21:46:53.9±0.4, **3°.91S**±0°.05×**128°.96E**±0°.05, **h114**km, **n115**, σ1§**52**/119, **mb4.3**/21, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.56 357**		P	**Pn**	**21 47 14.1**	**+2.4**
AAI	**Ambon**	**0.80 286**		P	**Pn**	**21 47 16.5**	**+3.0**
KRAI	**Karang Ratu**	**0.81 316**		P	**Pn**	**21 47 16.6**	**+2.9**
BNDI	**Bandanaira**	**1.12 123**		P	**Pn**	**21 47 19.3**	**+2.6**
BNDI	**Bandanaira**	**1.12 123**		P	Pn	21 47 21.8	+5.1
NLAI	**Namlea**	**1.97 290**		P	**Pn**	**21 47 28.6**	**+1.8**
FAKI	**Fak Fak**	**3.43 73**		Pn	**Pn**	**21 47 47.8**	**+2.0**
FAKI				Sn	**Sn**	**21 48 24.0**	**-1.8**
FAKI	**Fak Fak**	**3.43 73**		P	**Pn**	**21 47 48.0**	**+2.3**
FAKI	**Fak Fak**	**3.43 73**		P	**Pn**	**21 47 48.5**	**+2.8**
SANI	**Sanana**	**3.50 302**		P	**Pn**	**21 47 46.3**	**-0.4**
SANI	**Sanana**	**3.50 302**		P	**Pn**	**21 47 46.9**	**+0.2**
LBMI	**Labuha**	**3.56 336**		P	**Pn**	**21 47 48.6**	**+1.1**
SIJI	**Sorong**	**3.80 37**		P	**Pn**	**21 47 51.5**	**+0.7**
	68nm,0.4s,baz=56,slow=16,SNR=132						
SIJI				S	**Sn**	**21 48 33.1**	**-1.5**
	121nm,0.3s,baz=154,slow=21,SNR=22						
SIJI	**Sorong**	**3.80 37**		P	**Pn**	**21 47 51.2**	**+0.5**
SWI	**Sorong**	**3.80 37**		P	**Pn**	**21 47 51.3**	**+0.6**
SAUI	**Saumlaki**	**4.67 150**		Pn	**Pn**	**21 48 03.5**	**+1.1**
SAUI	**Saumlaki**	**4.67 150**		P	**Pn**	**21 48 04.2**	**+1.8**
TNTI	**Ternate**	**4.91 341**		Pn	**Pn**	**21 48 06.0**	**+0.3**
TNTI	**Ternate**	**4.91 341**		P	**Pn**	**21 48 06.1**	**+0.3**
TNTI	**Ternate**	**4.91 341**		P	**Pn**	**21 48 07.0**	**+1.3**
RKPI	**Ransiki, Papua**	**5.73 66**		P	**Pn**	**21 48 18.3**	**+1.6**
	1.8nm194nm,0.6s						
GAMI	**Galela, Maluku**	**5.83 348**		P	**Pn**	**21 48 18.2**	**+0.1**
	0.3nm38nm,0.9s						
MWPI	**Manokwari, Pap**	**5.87 60**		P	**Pn**	**21 48 20.0**	**+1.3**
	0.7nm110nm,0.

PSA00	Pilbara Seismi	19.66 206	P	P	21 51 13.2	-0.8
PSA00			IAmb	IAmb	21 51 14.6	
	comp=Z,5.0nm,0.7s					
PSA00	Pilbara Seismi	19.66 206	P	P	21 51 13.8	-0.2
AS31	Alice Springs	20.21 167	P	P	21 51 21.0	+0.9
ASAR	Alice Springs	20.21 167	P	P	21 51 21.6	+1.5
	comp=Z,56nm,0.6s,baz=350,slow=12,SNR=468					
ASAR			S	S	21 54 58.2	-2.6
	comp=Z,9.7nm,0.8s,baz=343,slow=21,SNR=23					
	comp=Z,56nm,0.6s					
ASAR	Alice Springs	20.21 167	P	P	21 51 21.2	+1.2
AS01	Alice Springs	20.22 167	P	P	21 51 22.1	+2.0
WRKA	Warakurna	21.02 182	P	P	21 51 29.6	+1.0
CTA	Charters Tower	23.30 135	P	P	21 51 53.6	+1.7
	comp=Z,6.4nm,0.8s,baz=320,slow=12,SNR=6.2					
	comp=Z,6.4nm,0.8s					
CTAO	Charters Tower	23.30 135	P	P	21 51 53.6	+1.7
GIRL	Giralia	23.46 216	P	P	21 51 49.7	-3.6
GIRL			IAmb	IAmb	21 51 58.9	
	comp=Z,30nm,1.0s					
OOD	Oodnadatta	24.61 166	P	P	21 52 04.0	+0.4
MULG	Mulgathing	26.67 170	P	P	21 52 22.6	+0.3
FORT	Forrest	26.74 182	P	P	21 52 22.8	-0.1
FORT			IAmb	IAmb	21 52 23.6	
	comp=Z,16nm,0.8s					
FORT	Forrest	26.74 182	P	P	21 52 22.9	0.0
IPM	Ipoh	29.13 286	P	P	21 52 44.7	+0.2
IPM			IAmb	IAmb	21 52 45.5	
	comp=Z,9.9nm,0.7s					
BBOO	Buckleboo	29.51 168	P	P	21 52 47.7	+0.2
BBOO			IAmb	IAmb	21 52 47.7	
	comp=Z,6.5nm,0.8s					
BBOO	Buckleboo	29.51 168	P	P	21 52 47.6	0.0
KULM	Kulim	29.72 288	P	P	21 52 49.7	+0.1
KULM			IAmb	IAmb	21 52 50.8	
	comp=Z,4.7nm,0.8s					
STKA	Stephens Creek	30.25 158	P	P	21 52 54.7	+0.6
	comp=Z,4.9nm,0.8s,baz=8.7,slow=6.5,SNR=6.8					
	comp=Z,4.9nm,0.8s					
STKA	Stephens Creek	30.25 158	P	P	21 52 54.9	+0.7
HTT	Hallett	30.81 164	P	P	21 52 59.8	+0.7
ARPS	Mount Arapiles	34.78 162	P	P	21 53 35.1	+1.5
CAN	Canberra	36.35 152	P	P	21 53 47.9	+0.9
CNB	Canberra Magne	36.51 151	P	P	21 53 49.6	+1.1
TOO	Toolangi	36.77 158	P	P	21 53 51.3	+0.8
TOO			IAmb	IAmb	21 54 04.9	
	comp=Z,7.8nm,1.1s					
CMAR	Chiang Mai Arr	36.99 308	P	P	21 53 53.2	+0.5
	comp=Z,3.0nm,0.7s,baz=138,slow=7.5,SNR=20					
	comp=Z,3.0nm,0.7s					
CHTO	Chiang Mai	37.19 308	P	P	21 53 54.8	+0.4
JMN	Monobe	37.72 7	P	P	21 53 59.0	+0.4
PZH	PanZhiHua	40.09 320	P	P	21 54 20.8	+2.1
MJAR	Matsushiro Arr	41.16 11	P	P	21 54 26.0	-1.1
	comp=Z,2.5nm,0.7s,baz=188,slow=10,SNR=10.0					
	comp=Z,2.5nm,0.7s					
KSRS	Korea Array	41.16 359	P	P	21 54 27.3	+0.2
	comp=Z,2.5nm,0.6s,baz=178,slow=8.9,SNR=4.5					
	comp=Z,2.5nm,0.6s					
JSD	Sado	42.62 11	P	P	21 54 38.7	-0.2
JMM	Marumori	42.99 14	P	P	21 54 42.3	+0.3
JTM	Tenmabayashi	45.84 13	P	P	21 55 05.0	+0.4
HHC	Hu-ho-hao-te	47.30 342	eP	P	21 55 14.4	-1.8
USA0B	Ussuriysk Arra	47.97 3	P	P	21 55 20.9	-0.1
USA0B			IAmb	IAmb	21 55 21.5	
	comp=Z,4.8nm,0.6s					
USRK	Ussuriysk Ar.	47.97 3	P	P	21 55 21.0	-0.1
	comp=Z,6.0nm,0.7s,baz=176,slow=6.3,SNR=12					
	comp=Z,6.0nm,0.7s					
USRK	Ussuriysk Ar.	47.97 3	P	P	21 55 21.2	+0.1
XLT	XiLinHaoTe	48.98 348	eP	P	21 55 28.4	-0.6
XLT			pP	pP	21 55 54.1	-1.6
XLT			sP	sP	21 56 05.0	-3.4
XLT			PcP	PcP	21 56 49.1	-2.3
LSA	Lhasa	49.27 315	P	P	21 55 32.3	+0.3
LSA			IAmb	IAmb	21 55 32.8	
	comp=Z,4.4nm,0.6s					
GTA	Gaotai	50.78 331	eP	P	21 55 42.4	-0.4
WHZ	Wether Hill Ro	53.84 147	P	P	21 56 05.6	+0.5
LBZ	Lake Benmore	54.18 144	P	P	21 56 08.4	+0.8
ULN	Ulaanbaatar	55.02 342	P	P	21 56 13.8	0.0
ULN			IAmb	IAmb	21 56 14.5	
	comp=Z,4.4nm,0.9s					
SONM	Songino Array	55.20 342	P	P	21 56 14.8	-0.2
	comp=Z,2.3nm,0.9s,baz=165,slow=7.9,SNR=10					
	comp=Z,2.3nm,0.9s					
SONM	Songino Array	55.20 342	P	P	21 56 15.5	+0.4
SONM			IAmb	IAmb	21 56 15.8	
	comp=Z,2.8nm,1.0s					
WMQ	Urumqi	60.26 327	eP	P	21 56 52.8	+2.4
PETK	Petropavlovsk-	61.74 19	P	P	21 57 00.5	+0.3
	comp=Z,6.9nm,0.9s,baz=186,slow=4.5,SNR=4.2					
	comp=Z,6.9nm,0.9s					
PETK	Petropavlovsk-	61.74 19	P	P	21 57 00.2	0.0
MK31	Makanchi Array	65.09 327	P	P	21 57 21.9	-0.6
MKAR	Makanchi Array	65.09 327	P	P	21 57 21.8	-0.6
	comp=Z,1.4nm,0.5s,baz=114,slow=7.8,SNR=27					
	comp=Z,1.4nm,0.5s					
MKAR	Makanchi Array	65.09 327	P	P	21 57 21.7	-0.8
MAKZ	Makanchi	65.27 326	P	P	21 57 22.7	-0.9
MAKZ			IAmb	IAmb	21 57 23.0	
	comp=Z,1.7nm,0.6s					
YAK	Yakutsk	65.76 0	P	P	21 57 26.4	+0.1
ZALV	Zalesovo Beam	68.37 334	P	P	21 57 41.8	-1.2
	comp=Z,1.8nm,0.8s,baz=129,slow=4.7,SNR=7.3					
	comp=Z,1.8nm,0.8s					
KURK	Kurchatov	69.36 328	P	P	21 57 47.5	-1.7
VNDA	Vanda	75.62 173	P	P	21 58 25.4	-0.5
	comp=Z,0.8nm,0.6s,baz=310,slow=2.4,SNR=6.5					
	comp=Z,0.8nm,0.6s					
ABKAR	Akbulak array	79.46 322	P	P	21 58 47.0	-0.8
RAYN	Ar Rayn	85.56 294	P	P	21 59 19.5	-0.6

WEL 21 21:51:33.9±0.7, 33°S±6°×17°9E±1°3, h33km, M4.3/11, mB4.9/7, ML4.6/19, MLv4.4/11, Mw(mB)4.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.29	41	S	Sn	21 53 23.1	-2.5
MXZ	Matakaoa Point	5.01	185	P	Pn	21 52 49.2	+2.5
MXZ				S	Sn	21 53 44.3	+0.9
WMGZ	Waiomatatini S	5.26	184	P	Pn	21 52 52.1	+2.0
WMGZ				S	Sn	21 53 52.4	+2.8
HAZ	Te Kaha	5.26	190	P	Pn	21 52 51.7	+1.6
HAZ				S	Sn	21 53 51.6	+2.1
PKGZ	Pakihiroa	5.35	187	P	Pn	21 52 53.7	+2.2
PKGZ				S	Sn	21 53 53.7	+1.7
RUGZ	Raukumara Rang	5.48	190	P	Pn	21 52 55.1	+1.8
RUGZ				S	Sn	21 53 56.7	+1.5
PUZ	Puketiti	5.52	185	P	Pn	21 52 54.9	+1.2
PUZ				S	Sn	21 53 56.9	+0.8
TWGZ	Tauwhareparae	5.65	187	P	Pn	21 52 58.0	+2.5
TWGZ				S	Sn	21 54 01.4	+2.1
MWZ	Matawai	5.86	191	P	Pn	21 53 00.4	+1.9
MWZ				S	Sn	21 54 05.9	+1.3
URZ	Urewera	5.86	194	P	Pn	21 52 59.2	+0.8
URZ				S	Sn	21 54 07.1	+2.7
TKGZ	Te Karaka	5.92	188	P	Pn	21 52 59.8	+0.6
TKGZ				S	Sn	21 54 06.4	+0.4
MUGZ	Murupara	6.15	196	P	Pn	21 53 04.1	+1.8
RIGZ	Rimuhau	6.20	188	P	Pn	21 53 03.3	+0.2
RIGZ				S	Sn	21 54 12.4	-0.4
RTZ	Ruatahuna	6.23	194	P	Pn	21 53 04.3	+0.7
RAHZ	Arahi	6.50	192	P	Pn	21 53 07.6	+0.3
RAHZ				S	Sn	21 54 19.7	-0.7
NMHZ	Naumai	6.73	194	P	Pn	21 53 10.8	+0.4
HIZ	Hauiti	6.78	208	P	Pn	21 53 16.5	+5.4
ARHZ	Aropaoanui	6.86	192	P	Pn	21 53 11.5	-0.6
BKZ	Black Stump Fm	6.87	196	P	Pn	21 53 11.6	-0.7
BKZ				S	Sn	21 54 30.3	+1.0
SNVZ	South Ngauruho	7.11	201	P	Pn	21 53 16.5	+0.7
KWHZ	Kaweka Forest	7.13	196	P	Pn	21 53 14.6	-1.3
KWHZ				S	Sn	21 54 34.3	-1.5
BHHZ	Black Hill Sta	7.28	198	P	Pn	21 53 16.5	-1.4
MOVZ	Moawhango	7.28	200	P	Pn	21 53 16.9	-1.1
MOVZ				S	Sn	21 54 37.6	-2.0
KAHZ	Kahuranaki	7.39	192	P	Pn	21 53 18.1	-1.4
PXZ	Pawanui	7.63	192	P	Pn	21 53 19.7	-2.9
PXZ				S	Sn	21 54 43.1	-4.8
TSZ	Takapari Road	7.84	197	P	Pn	21 53 22.4	-3.2
TSZ				S	Sn	21 54 47.6	-5.6

IDC 21 22:28:20.9±30.0, 11°97S×166°62E, h262km±253km, mb2.9/3, mbtmp3.5/3, Error ellipse: s-maj=347.8km s-min=60.7km az=133.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.99	252	P	P	22 34 23.3	+0.1
	0.2nm,0.5s,baz=83,slow=9.8,SNR=1.8						
	0.2nm,0.5s						
ASAR	Alice Springs	33.16	245	P	P	22 34 33.1	-0.2
	0.3nm,0.5s,baz=70,slow=9.9,SNR=4.5						
	0.3nm,0.5s						
ILAR	Eielson Array	84.11	18	P	P	22 40 22.2	0.0
	0.8nm,0.6s,baz=233,slow=5.5,SNR=11						
	0.8nm,0.6s						
ARCES	ARCESS Array B	117.44	346	PKP	PKPdf	22 46 34.6	-0.2
	4.0nm,1.1s,baz=27,slow=2.2,SNR=5.1						

TUL 21 22:48:18.3±1.2, 36°44N±0°02×98°78W±0°02, h7km±4km, ML3.0, mb_Lg2.5/18(NEIC), Error ellipse: s-maj=2.6km s-min=1.7km az=130.0

NEIC 21 22:48:18.4±1.2, 36°44N±0°01×98°77W±0°02, h5km±1km, Error ellipse: s-maj=3.1km s-min=2.2km az=310.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	West end E0370	0.04	31		Pg	22 48 19.3	-0.3
OK038				Sg	Sg	22 48 20.9	+0.4
U32A	Winter Ranch,	0.20	251	Pg	Pg	22 48 22.4	+0.1
U32A				Sg	Sg	22 48 25.5	+0.6
OK035	E0210 Rd and N	0.27	10	Pg	Pg	22 48 24.1	+0.4
OK032	Salt Plains WL	0.57	51	Pg	Pg	22 48 29.1	-0.3
OK032				Sg	Sg	22 48 37.6	+0.7
KAN14	Manchester OK	0.82	51	Pg	Pg	22 48 33.9	-0.3
KAN14				Sg	Sg	22 48 45.5	+0.6
KAN13	South Haven SW	1.18	61	Pg	Pg	22 48 40.4	-0.7
OK049	E0420 Rd and N	1.18	91		Pg	22 48 40.5	-0.6
OK029	Liberty Lake	1.24	121		Pg	22 48 41.9	-0.4
OK048	Pawnee Station	1.47	91		Pn	22 48 45.6	0.0
OK033	Mehan	1.53	105		Pn	22 48 46.6	+0.2
FNO	Franklin	1.62	136	Pn	Pn	22 48 47.5	-0.2
OK031	S. Brethren Rd	1.64	107		Pn	22 48 47.2	-0.6
OK031				Sg	Sg	22 49 10.9	0.0
WMOK	Wichita Mounta	1.70	180	Pn	Pn	22 48 47.9	-0.8
OK034	N. Norfolk Rd.	1.72	104		Pn	22 48 49.0	+0.1
OK034					Sn	22 49 10.0	-1.3
T35A	Sooner Cattle	1.87	75	Pn	Pn	22 48 51.6	+0.5
R32A	Long Quarter,	1.98	1		Pn	22 48 52.1	-0.4
X34A	Smith Ranch, M	1.99	157		Pn	22 48 52.4	-0.4
TUL1	Leonard	2.47	102	Pn	Pn	22 48 59.6	+0.4
CBKS	Cedar Bluff	2.49	342	IAmb_Lg		22 49 39.7	
	comp=Z,11nm,0.8s						
AMTX	Amarillo	2.84	238	IAmb_Lg		22 49 55.7	
	comp=Z,24nm,0.8s						
KSU1	Kansas State U	3.16	32	IAmb_Lg		22 50 03.2	
	comp=Z,11nm,0.8s						
X37A	Clayton	3.33	123	IAmb_Lg		22 50 12.8	
	comp=Z,16nm,0.8s						
U38A	Gravette	3.53	89	IAmb_Lg		22 50 16.7	
	comp=Z,12nm,1.1s						
MSTX	Muleshoe	4.10	234	IAmb_Lg		22 50 33.0	
	comp=Z,11nm,0.9s						
S39A	Bolivar	4.53	72	IAmb_Lg		22 50 44.9	
	comp=Z,8.8nm,0.8s						
T25A	Trinidad	4.58	280	IAmb_Lg		22 50 49.9	
	comp=Z,9.5nm,0.9s						
R40A	Maddies Statio	5.50	68	IAmb_Lg		22 51 19.2	
	comp=Z,13nm,1.3s						
P40A	Paris	6.14	58	IAmb_Lg		22 51 37.7	
	comp=Z,9.6nm,0.8s						

KRNET 21 22:50:24.1±0.1, 41°28N×78°68E, mb2.6
SOME 21 22:50:25.0, 41°13N×78°62E, h5km

ISC 21 22:50:25.3±1.9, 41°11N±0°08×78°58E±0°04, h10km, n25, σ1§61/50, 6C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.85	317	⇓iP	Pg	22 50 39.4	-2.3
	baz=4.0						
TARG				⇓iS	Sg	22 50 51.0	-1.9
	baz=4.0						
SATY	Saty	1.95	356	eP	Pg	22 51 02.2	-0.5
	4.5nm,0.2s						
SATY				eS	Sg	22 51 28.8	+0.8
	14nm,0.1s						
NRN	Naryn	1.97	280	⇑iP	Pb	22 51 02.2	+0.8
	baz=75						
NRN				⇑iS	Sg	22 51 29.7	+1.0
	baz=75						
UZB	Uzynbulak	2.06	9	eP	Pg	22 51 03.8	-1.0
	1.1nm,0.3s						
UZB				eS	Sg	22 51 31.9	+0.4
	5.6nm,0.4s						
ULHL	Ulahol	2.09	304	⇑iP	Pb	22 51 02.4	-1.0
	baz=99						
ULHL				⇑iS	Sb	22 51 30.1	+0.7
	baz=99						
SHLS	Shalkode	2.15	18	eP	Pg	22 51 07.5	+1.0
	3.4nm,0.3s						
SHLS				eS	Sg	22 51 37.9	+3.5
	9.2nm,0.8s						
TNSS	Tian-Shan	2.28	328	eP	Pg	22 51 08.3	-0.7
	11nm,0.2s						
TNSS				eS	Sg	22 51 39.7	+1.2
	4.9nm,0.2s						
MDOK	Medeo	2.35	331	eP	Pg	22 51 09.8	-0.5
	7.4nm,0.1s						
MDOK				eS	Sg	22 51 42.0	+1.4
	12nm,0.1s						
KPKS	Kokpek	2.36	2	eP	Pg	22 51 09.5	-0.9
	3.3nm,0.0s						
KPKS				eS	Sg	22 51 41.7	+0.7
	11nm,0.3s						
KOTS	Kotyrbulak	2.39	333	eP	Pg	22 51 10.2	-0.8
	6.4nm,0.4s						
KOTS				eS	Sg	22 51 43.0	+1.0
	19nm,0.5s						
KURS	Kuram	2.40	353	eP	Pg	22 51 10.7	-0.5
	4.0nm,0.6s						
KURS				eS	Sg	22 51 43.6	+1.3
	4.5nm,0.1s						
BOOM	Boomskoye usch	2.41	306	⇓iP	Pb	22 51 06.8	-2.0
	baz=1.0						
BOOM				⇓iS	Sb	22 51 37.7	-0.9
	baz=1.0						
AAA	Alma-Ata	2.44	330	eP	Pg	22 51 11.8	-0.1
	28nm,0.1s						
AAA				eS	Sg	22 51 45.5	+2.0
	44nm,0.1s						
MTBS	Maitube	2.58	322	eP	Pg	22 51 13.7	-0.9
	2.6nm,0.1s						
MTBS				eS	Sg	22 51 48.7	+0.7
	8.8nm,0.1s						
KTMS	Ketmen	2.68	29	eP	Pg	22 51 14.3	-2.4
	0.8nm,0.1s						
KTMS				eS	Sg	22 51 49.5	-1.8
	6.2nm,0.0s						
KST	Kastek	2.74	316	eP	Pg	22 51 16.6	-1.3
	2.8nm,0.5s						
KST				eS	Sg	22 51 53.5	+0.1
	8.2nm,0.1s						
TKM2	Tokmak 2	2.87	310	⇑iP	Pn	22 51 12.7	+1.5
	baz=6.0						
TKM2				⇑iS	Sn	22 51 48.1	+2.2
	baz=6.0						
KTBS	Karatobe	2.96	332	eP	Pg	22 51 19.7	-2.2
	2.4nm,2.2s						
KTBS				eS	Sg	22 51 59.1	-1.0
	16nm,0.0s						
DGS	Degeres	2.98	317	eP	Pb	22 51 20.1	+1.5
	4.7nm,0.3s						
DGS				eS	Sg	22 51 59.9	-1.2
	4.0nm,0.4s						
CHKK	Chushkaly	2.98	337	eP	Pg	22 51 20.6	-1.8
	0.9nm,0.2s						
CHKK				eS	Sg	22 52 00.5	-0.6
	17nm,0.4s						
BLB	Baldybastay	2.99	359	eP	Pg	22 51 20.4	-2.1
	5.9nm,0.1s						
BLB				eS	Sg	22 52 00.4	-0.8
	9.3nm,0.0s						
ARXS	Arharly	3.15	350	eP	Pg	22 51 23.1	-2.5
	3.0nm,0.2s						
ARXS				eS	Sg	22 52 05.1	-1.3
	10nm,0.1s						
KUU	Kurty	3.24	330	eP	Pb	22 51 24.3	+1.5
	0.8nm,0.5s						
KUU				eS	Sg	22 52 06.8	-2.4
	3.8nm,0.4s						
DJR	Jarkent	3.34	15	eP	Pg	22 51 26.2	-3.1
	1.0nm,0.4s						
DJR				eS	Sg	22 52 10.2	-2.4
	5.9nm,0.1s						
KRBS	Karabastau	3.36	321	eP	Pg	22 51 27.1	-2.6
	2.2nm,0.1s						
KRBS				eS	Sg	22 52 11.9	-1.3
	3.5nm,0.3s						

IDC 21 22:51:58.5±0.7, 29°28S×60°96E, h0km, mb4.0/11, mbtmp4.0/12, ML3.9/1, MS3.4/20, Error ellipse: s-maj=24.3km s-min=18.8km az=72.0
NEIC 21 22:52:00.4±0.9, 29°2S±0°1×60°6E±0°2, h10km±1km, mb4.4/6, Error ellipse: s-maj=37.4km s-min=12.0km az=64.0

ISC 21 22:52:00.2±0.6, 29°2S±0°1×61°0E±0°1, h10km, n46, σ0§96/24, mb4.1/13, MS3.5/20, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.29	328	Pn	Pn	22 54 11.7	-2.7
VOI	Vohitsoka	14.72	296	P	Pn	22 55 29.9	+1.2
ABPO	Ambohimpanom	16.12	306	P	Pn	22 55 46.8	-0.5
OPO	Ambohidratompo	16.45	307	Pn	Pn	22 55 51.3	-0.1
	baz=186,slow=23,SNR=2.4						
OPO				Sn	Sn	22 58 40.5	-14
	baz=290,slow=19,SNR=1.7						
	1.6nm,0.4s						
H08S1	Diego Carcia H	23.98	29	T	T	23 21 57.8	
	baz=204,slow=76,SNR=4.3						
H08S2	Diego Garcia H	23.99	29	T	T	23 22 04.9	
	baz=204,slow=76,SNR=4.0						
H08S3	Diego Garcia H	24.00	29	T	T	23 21 59.5	
	baz=204,slow=76,SNR=7.4						
BOSA	Boshof	31.24	262	LR	LR	23 08 37.1	
	comp=Z,26nm,19.4s,baz=180,slow=32						
LBTB	Lobatse	31.72	269	LR	LR	23 08 24.3	
	comp=Z,25nm,20.1s,baz=130,slow=31						
LSZ	Lusaka	33.25	287	LR	LR	23 09 44.8	
	comp=Z,32nm,20.9s,baz=204,slow=32						
SUR	Sutherland	34.55	254	LR	LR	23 09 47.5	
	comp=Z,42nm,21.9s,baz=130,slow=31						
MAW	Mawson	38.48	179	LR	LR	23 14 09.7	
	comp=Z,61nm,18.3s,baz=4.5,slow=35						
MBAR	Mbarara	40.51	309	LR	LR	23 16 10.9	
	comp=Z,25nm,18.1s,baz=3.5,slow=36						
TSUM	Tsumeb	40.64	274	LR	LR	23 14 26.3	
	comp=Z,31nm,21.5s,baz=193,slow=33						
PALK	Pallekele	40.90	31	LR	LR	23 12 33.9	
	comp=Z,84nm,20.4s,baz=311,slow=30						
ATD	Arta Tunnel	44.10	334	LR	LR	23 16 12.0	
	comp=Z,58nm,18.9s,baz=155,slow=33						
H01W2	Cape Leeuwin H	44.96	111	T	T	23 47 55.5	
	baz=262,slow=75,SNR=6.7						
H01W3	Cape Leeuwin H	44.97	111	T	T	23 47 54.0	
	baz=262,slow=75,SNR=8.5						
H01W1	Cape Leeuwin H	44.98	111	T	T	23 48 06.0	
	baz=262,slow=75,SNR=6.5						
SNAA	Sanae	54.41	200	P	P	23 01 25.6	-1.6
	1.3nm,0.7s,baz=120,slow=5.3,SNR=4.3						
SNAA				LR	LR	23 19 36.3	
	comp=Z,51nm,20.1s,baz=9.0,slow=30						
	1.3nm,0.7s						
SNAA	Sanae	54.41	200	P	P	23 01 26.6	-0.5
SNAA				IAmb	IAmb	23 02 07.7	
	comp=Z,4.6nm,1.3s						
RAYN	Ar Rayn	54.47	342	P	P	23 01 28.0	-0.1
RAYN				IAmb	IAmb	23 01 31.9	
	comp=Z,3.3nm,1.1s						
BRDH	Bariadhala	59.39	33	LR	LR	23 27 08.3	
	comp=Z,45nm,18.5s,baz=252,slow=36						
CMAR	Chiang Mai Arr	59.86	42	P	P	23 02 07.8	+1.5
	comp=Z,1.3nm,0.5s,baz=218,slow=5.9,SNR=7.6						
CMAR				LR	LR	23 25 45.0	
	comp=Z,30nm,18.0s,baz=245,slow=34						
	comp=Z,1.3nm,0.5s						
QSPA	South Pole Qui	60.98	180	P	P	23 02 12.8	-0.8
	comp=Z,2.0nm,0.8s,baz=251,slow=0.9,SNR=8.9						
QSPA				LR	LR	23 26 16.0	
	comp=Z,40nm,19.7s,baz=244,slow=34						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	60.98	180	P	P	23 02 13.5	-0.1
QSPA				IAmb	IAmb	23 02 53.5	
	comp=Z,6.2nm,1.3s						
EIL	Elat	63.58	335	LR	LR	23 26 48.4	
	comp=Z,41nm,19.2s,baz=128,slow=33						
VNDA	Vanda	64.05	166	P	P	23 02 33.5	-0.2
	comp=Z,0.9nm,0.8s,baz=262,slow=7.7,SNR=6.3						
VNDA				LR	LR	23 28 27.8	
	comp=Z,67nm,18.0s,baz=259,slow=34						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	64.57	104	P	P	23 02 37.8	-0.3
	comp=Z,0.9nm,0.7s,baz=244,slow=5.6,SNR=8.6						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	66.39	100	P	P	23 02 49.7	-0.2
	comp=Z,1.6nm,1.1s,baz=248,slow=5.3,SNR=6.1						
	comp=Z,1.6nm,1.1s						
GNI	Garni	70.61	347	LR	LR	23 32 46.1	
	comp=Z,48nm,19.0s,baz=140,slow=35						
TORD	Torodi Ar. Bea	71.03	298	P	P	23 03 19.1	+0.4
	comp=Z,2.3nm,0.9s,baz=108,slow=3.7,SNR=10						
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	72.45	7	P	P	23 03 27.0	+0.4
KKAR	Karatay Array	72.45	7	P	P	23 03 27.7	+1.0
KKAR				IAmb	IAmb	23 03 30.6	
	comp=Z,2.8nm,1.0s						
DBIC	Dimbokro	72.59	288	LR	LR	23 35 16.6	
	comp=Z,34nm,18.1s,baz=352,slow=36						
BRTR	Keskin Array B	73.12	338	P	P	23 03 31.4	+0.4
	comp=Z,0.9nm,0.8s,baz=158,slow=8.8,SNR=5.0						
	comp=Z,0.9nm,0.8s						
KBZ	Khabaz	74.42	346	LR	LR	23 34 46.1	
	comp=Z,38nm,19.7s,baz=133,slow=34						
MKAR	Makanchi Array	78.02	15	P	P	23 03 58.8	+0.1
	comp=Z,0.8nm,0.8s,baz=184,slow=4.9,SNR=7.5						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	78.02	15	P	P	23 03 58.3	-0.4
ABKAR	Akbulak array	78.08	359	P	P	23 03 58.9	0.0
ZALV	Zalesovo Beam	85.31	14	P	P	23 04 36.7	-0.2
	comp=Z,0.6nm,0.5s,baz=224,slow=4.1,SNR=5.8						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo

	comp=Z,8.3nm,0.7s						
WRAB	**Tennant Creek**	**19.61**	**214**	P	**P**	**23 17 55.2**	**-0.6**
WB2	**Warramunga Arr**	**19.62**	**214**	P	**P**	**23 17 55.7**	**-0.2**
WB2				IAmb	IAmb	23 17 57.4	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**19.63**	**214**	P	**P**	**23 17 55.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=33,slow=11,SNR=28						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**19.63**	**214**	P	**P**	**23 17 55.9**	**-0.1**
KNRA	**Kununurra**	**20.52**	**233**	P	**P**	**23 18 03.8**	**-2.0**
KNRA				IAmb	IAmb	23 18 09.3	
	comp=Z,26nm,1.1s						
DAV	**Davao City (W)**	**22.75**	**298**	LR	LR	23 27 29.8	
	comp=Z,18nm,18.1s,baz=98,slow=37						
BATI	**Baumata**	**22.83**	**252**	LR	LR	23 28 36.9	
	comp=Z,88nm,18.7s,baz=112,slow=40						
AS31	**Alice Springs**	**22.93**	**209**	P	**P**	**23 18 31.8**	**+0.1**
ASAR	**Alice Springs**	**22.93**	**209**	P	**P**	**23 18 31.6**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=36,slow=9.8,SNR=20						
ASAR				LR	LR	23 27 13.6	
	comp=Z,98nm,21.0s,baz=330,slow=36						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**22.93**	**209**	P	**P**	**23 18 31.2**	**-0.5**
DZM	**Mont Dzumac**	**27.19**	**134**	LR	LR	23 27 52.1	
	comp=Z,76nm,20.0s,baz=48,slow=32						
OUENC	**Ouen Island, N**	**27.69**	**134**	P	**P**	**23 19 14.4**	**-1.3**
STKA	**Stephens Creek**	**28.34**	**187**	LR	LR	23 30 02.9	
	comp=Z,52nm,20.9s,baz=20,slow=35						
BBOO	**Buckleboo**	**30.38**	**196**	P	**P**	**23 19 40.0**	**+0.6**
JOW	**Kunigami**	**34.69**	**332**	LR	LR	23 31 11.0	
	comp=Z,132nm,20.8s,baz=327,slow=31						
NWAO	**Narrogin (SRO)**	**39.47**	**219**	LR	LR	23 38 23.1	
	comp=Z,130nm,18.8s,baz=158,slow=38						
CMAR	**Chiang Mai Arr**	**51.04**	**297**	P	**P**	**23 22 31.0**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=110,slow=7.8,SNR=4.3						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	**74.31**	**176**	P	**P**	**23 25 05.8**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=337,slow=7.7,SNR=2.5						
	comp=Z,0.6nm,0.9s						
VNDA	**Vanda**	**74.31**	**176**	P	**P**	**23 25 04.8**	**+0.4**
VNDA				IAmb	IAmb	23 25 16.5	
	comp=Z,3.2nm,1.5s						
MKAR	**Makanchi Array**	**74.89**	**320**	P	**P**	**23 25 09.3**	**+1.0**
	comp=Z,0.7nm,1.0s,baz=107,slow=8.0,SNR=3.0						
	comp=Z,0.7nm,1.0s						
TIXI	**Tiksi**	**75.97**	**355**	LR	LR	00 03 56.1	
	comp=Z,16nm,18.4s,baz=179,slow=40						
ILAR	**Eielson Array**	**83.85**	**23**	P	**P**	**23 25 55.1**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=253,slow=5.0,SNR=13						
	comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**86.29**	**180**	P	**P**	**23 26 09.3**	**+0.1**
QSPA				IAmb	IAmb	23 26 30.1	
	comp=Z,3.3nm,1.2s						
DAWY	**Dawson**	**86.70**	**25**	P	**P**	**23 26 10.7**	**-0.4**
INK	**Inuvik**	**89.96**	**22**	LR	LR	00 00 35.1	
	comp=Z,24nm,21.5s,baz=68,slow=32						
PFO	**Pinyon Flats O**	**98.53**	**57**	LR	LR	00 06 55.3	
	comp=Z,30nm,18.0s,baz=321,slow=33						
ELK	**Elko**	**99.23**	**49**	LR	LR	00 05 36.6	
	comp=Z,22nm,20.4s,baz=337,slow=32						

*UPP **21** 23:15:17.0±0.0, 67°.81N×20°.18E, h0km, ML2.1, Explosion*
HEL 21 23:15:17.7±0.0, 67°.81N×20°.18E, h0km, ML1.3, ML2.1 (UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.22**	**273**	P	Pg	23 15 21.5	-0.4
RATU				S	Sg	23 15 24.9	+0.1
RATU	**Laukkuluspa**	**0.22**	**273**	*i* P	Pg	23 15 21.5	-0.4
RATU				*i* S	Sg	23 15 24.9	+0.1
KOVU	**Salmi**	**0.41**	**359**	P	Pg	23 15 24.9	-0.7
KOVU	**Salmi**	**0.41**	**359**	*i* P	Pg	23 15 24.9	-0.7
NIKU	**Nikkaluokta**	**0.44**	**278**	P	Pg	23 15 25.5	-0.5
NIKU	**Nikkaluokta**	**0.44**	**278**	*i* P	Pg	23 15 25.5	-0.5
DUNU	**Dundret**	**0.71**	**168**	P	Pg	23 15 30.2	-1.1
DUNU	**Dundret**	**0.71**	**168**	*i* P	Pg	23 15 30.2	-1.1
LANU	**Lannavaara**	**0.72**	**70**	P	Pg	23 15 30.7	-0.8
LANU	**Lannavaara**	**0.72**	**70**	*e*P	Pg	23 15 30.7	-0.9
LANU				*e*S	Sg	23 15 41.5	+0.6
SALU	**Saltoluokta**	**0.77**	**237**	P	Pg	23 15 31.6	-0.8
SALU	**Saltoluokta**	**0.77**	**237**	*i* P	Pg	23 15 31.6	-0.8
MASU	**Masugnsbyn**	**0.78**	**116**	P	Pg	23 15 31.9	-0.7
MASU	**Masugnsbyn**	**0.78**	**116**	*i* P	Pg	23 15 31.9	-0.7
KIF	**Kilpisjarvi**	**1.22**	**11**	*e*PB	Pg	23 15 40.7	-0.4
KIF				MSG		23 15 54.9	
	comp=Z,2.3nm,0.2s						
KIF				*e*S	Sg	23 15 56.4	-0.4
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 15 42.3	-1.9
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 15 42.2	-1.9
PAJU				*e*SB	Sg	23 16 00.7	-1.3
HEF	**Hetta**	**1.44**	**64**	*e*PG	Pn	23 15 43.6	-1.4
HEF				MSG		23 16 01.8	
	comp=Z,1.5nm,0.2s						
HEF				*e*SB	Sg	23 16 03.2	-0.6
ERTU	**Ertsjaerv**	**1.49**	**147**	P	Pn	23 15 44.2	-1.4
ERTU	**Ertsjaerv**	**1.49**	**147**	*e*PG	Pn	23 15 44.5	-1.2
ERTU				*e*SB	Sg	23 16 04.1	-1.3
KLF	**Kolari**	**1.57**	**110**	*e*PG	Pn	23 15 45.7	-1.0
KLF				*e*SB	Sn	23 16 06.7	-1.0
KTK1	**Kautokeino**	**1.65**	**42**	*e*PN	Pb	23 15 48.5	-0.5
KTK1				*e*SN	Sg	23 16 11.3	+0.5
HARU	**Harads**	**1.69**	**169**	P	Pn	23 15 47.8	-0.6
HARU	**Harads**	**1.69**	**169**	*e*P	Pn	23 15 47.8	-0.6
KALU	**Kalix**	**2.33**	**146**	*e*SG	Sb	23 16 28.8	-1.0
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 15 59.2	+1.2
TOF				MSG		23 16 28.3	
	comp=Z,1.8nm,0.2s						
TOF				*e*SB	Sb	23 16 29.8	-1.5
SGF	**Sodankyl**	**2.46**	**96**	*e*SG	Sb	23 16 33.2	-0.3
RNF	**Rovaniemi**	**2.57**	**115**	*e*PB	Pn	23 16 01.8	+1.3
RNF				*e*SB	Sb	23 16 35.4	-1.3

*PGC **21** 23:19:29.9±0.7, 49°.74N×114°.85W, h1km, ML3.2/9, 71km Ene of Cranbrook, Bc British Columbia, Canada*
*IDC **21** 23:19:30.6±1.7, 49°.89N×114.64W, h0km, mb2.7/1, mbtmp3.0/3, ML3.5/2, Error ellipse: s-maj=54.9km s-min=12.3km az=75.0*
ISC 21 23:19:29.2±0.7, 49°.73N±0°.03×114°.87W±0°.03, h10km, n25, σ2.973/42, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPGA	**Hill Springs,**	**0.88**	**115**	P	**Pg**	**23 19 45.2**	**-0.9**
HSPGA				S	**Sg**	**23 19 57.4**	**-0.1**
WALA	**Waterton Lakes**	**0.92**	**137**	P	**Pg**	**23 19 46.0**	**-0.9**
BSMT	**Bassoo Peak**	**1.89**	**178**	Pn	**Pn**	**23 20 02.6**	**+1.0**
YBMT	**Yellow Bay**	**1.96**	**163**	Pn	**Pn**	**23 20 04.0**	**+1.4**
YBMT				Sg	**Sb**	**23 20 30.8**	**+1.3**
JTMT	**Jette**	**2.03**	**169**	Pn	**Pn**	**23 20 04.6**	**+1.0**
JTMT				Sg	**Sb**	**23 20 33.3**	**+1.8**
MKRVA	**Milk River, Al**	**2.10**	**105**	Pn	**Pn**	**23 20 05.7**	**+1.2**
MKRVA				Sg	**Sb**	**23 20 33.9**	**+0.2**
SLEB	**Sale Mountain**	**2.53**	**306**	Pn	**Pn**	**23 20 12.6**	**+2.0**
SLEB				Sg	**Sb**	**23 20 48.0**	**+1.8**
OVMT	**Ovando**	**2.95**	**154**	Pn	**Pn**	**23 20 17.6**	**+1.4**
OVMT				Sg	**Sb**	**23 20 59.8**	**+1.8**
C09A	**Chrisman Ranch**	**2.97**	**231**	Sg	**Sb**	**23 21 02.0**	**+3.4**
PNT	**Penticton**	**3.12**	**264**	Pn	**Pn**	**23 20 19.4**	**+0.9**
PNT				Sn	**Sn**	**23 20 56.9**	**+1.0**
B08A	**Colville Reser**	**3.25**	**247**	Pn	**Pn**	**23 20 20.7**	**+0.5**
B08A				Sn	**Sn**	**23 20 59.8**	**+0.8**
B08A				Sg	**Sb**	**23 21 10.9**	**+4.4**
LYMT	**Lyon Mountain**	**3.26**	**147**	Pn	**Pn**	**23 20 22.3**	**+1.8**
MNB	**Mounoet Dainar**	**3.32**	**319**	Pn	**Pn**	**23 20 23.9**	**+2.4**
MNB				Sg	**Sg**	**23 21 13.7**	**-2.1**
BLBC	**Blue River**	**3.61**	**312**	Pn	**Pn**	**23 20 27.5**	**+2.1**
EDM	**Edmonton**	**3.62**	**15**	Pn	**Pn**	**23 20 25.6**	**+0.2**
EDM				Sn	**Sn**	**23 21 06.9**	**-1.2**
LTY	**Liberty**	**4.59**	**240**	Pn	**Pn**	**23 20 39.2**	**+0.5**
LTY				Sg	**Sg**	**23 21 51.8**	**-4.6**
LLLB	**Lillooet**	**4.59**	**284**	Pn	**Pn**	**23 20 40.6**	**+1.9**
LLLB				Sn	**Sn**	**23 21 33.2**	**+1.1**
LLLB				Sg	**Sg**	**23 21 52.7**	**-4.0**
HNBB	**Haney**	**5.04**	**268**	Sg	**Sg**	**23 22 06.0**	**-5.0**
WSLR	**Whistler**	**5.22**	**277**	Sn	**Sn**	**23 21 47.8**	**+0.3**
WSLR				Sg	**Sg**	**23 22 12.5**	**-4.2**
SWHSA	**Sweathouse Loo**	**5.30**	**348**	Sn	**Sn**	**23 21 47.6**	**-2.0**
SWHSA				Sg	**Sb**	**23 22 11.9**	**+6.2**
BDMTA	**Bald Mountain**	**5.66**	**336**	Sn	**Sn**	**23 21 56.2**	**-2.3**
BDMTA				Sg	**Sb**	**23 22 22.0**	**+6.0**
STPRA	**Salt Prairie L**	**5.97**	**355**	Sn	**Sn**	**23 22 02.6**	**-3.4**
PDAR	**Pinedale Array**	**7.88**	**150**	Pn	**Pn**	**23 21 28.6**	**+4.6**
	0.1nm,0.3s,baz=339,slow=12,SNR=3.0						
PDAR				Lg	Lg	23 23 37.1	
	0.1nm,0.3s,baz=339,slow=28,SNR=2.2						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**12.79**	**1**	Pn	**Pn**	**23 22 27.9**	**-3.0**
	0.3nm,0.3s,baz=182,slow=13,SNR=12						
YKA				Sn	Sn	23 24 41.3	-12
	0.4nm,0.3s,baz=178,slow=23,SNR=8.2						
YKA				Lg	Lg	23 26 00.3	
	baz=182,slow=28						
	0.5nm,0.4s						
ILAR	**Eielson Array**	**22.59**	**324**	P	**P**	**23 24 31.9**	**+2.3**
	0.3nm,0.7s,baz=125,slow=8.9,SNR=2.7						
	0.3nm,0.7s						

*UPP **21** 23:31:18.8±0.0, 67°.83N×20°.20E, h0km, ML2.1, Explosion*
*HEL **21** 23:31:18.9, 67°.77N×20°.19E, h0km, ML1.5, Explosion*
HEL 21 23:31:19.3±0.0, 67°.83N×20°.20E, h0km, ML1.5, ML2.1 (UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**23**	P	Pg	23 31 21.6	-0.3
KUA				S	Sg	23 31 23.6	-0.1
KUA	**Kurravaara**	**0.14**	**23**	*i* P	Pg	23 31 21.6	-0.3
KUA				*i* S	Sg	23 31 23.6	-0.1
RATU	**Laukkuluspa**	**0.23**	**269**	P	Pg	23 31 23.4	-0.3
RATU	**Laukkuluspa**	**0.23**	**269**	*i* P	Pg	23 31 23.4	-0.3
KOVU	**Salmi**	**0.40**	**358**	P	Pg	23 31 26.4	-0.5
KOVU	**Salmi**	**0.40**	**358**	*i* P	Pg	23 31 26.4	-0.5
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	23 31 27.3	-0.5
NIKU	**Nikkaluokta**	**0.44**	**275**	*i* P	Pg	23 31 27.3	-0.5
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 31 32.4	-0.6
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 31 32.2	-0.7
LANU				*e*S	Sg	23 31 42.0	-0.1
DUNU	**Dundret**	**0.73**	**168**	P	Pg	23 31 32.4	-0.8
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg	23 31 32.4	-0.8
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	23 31 33.6	-0.7
MASU	**Masugnsbyn**	**0.78**	**118**	*i* P	Pg	23 31 33.6	-0.7
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 31 33.7	-0.7
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	23 31 33.7	-0.7
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pg	23 31 42.4	+0.1
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PB	Pg	23 31 42.4	+0.1
KIF				MSG		23 31 58.0	
	comp=Z,7.5nm,0.2s						
KIF				*e*SB	Sb	23 31 58.4	-0.5
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 31 44.1	-1.7
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 31 44.1	-1.7
	baz=304						
PAJU				*e*SB	Sg	23 32 03.3	-0.5
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 31 45.3	-1.1
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 31 45.2	-1.2
HEF				MSG		23 32 02.5	
	comp=Z,2.3nm,0.2s						
HEF				*e*SN	Sn	23 32 05.9	+0.1
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 31 46.5	-0.9
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	23 31 46.7	-0.7
ERTU				*e*SN	Sg	23 32 07.2	-0.1
KLF	**Kolari**	**1.57**	**111**	*e*PG	Pn	23 31 47.3	-1.0
KLF				*e*SN	Sg	23 32 09.7	+0.2
KTK1	**Kautokeino**	**1.64**	**42**	*e*PN	Pn	23 31 48.9	-0.4
KTK1				*e*SN	Sn	23 32 10.9	-0.1
HARU	**Harads**	**1.70**	**169**	P	Pn	23 31 49.7	-0.5
HARU	**Harads**	**1.70**	**169**	*e*P	Pn	23 31 49.7	-0.5
TRO	**Tromso**	**1.87**	**346**	*e*SG	Sb	23 32 18.5	+0.4
KALU	**Kalix**	**2.34**	**146**	*e*PB	Pn	23 31 59.9	+1.0
	baz=326						
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 32 00.9	+1.2
SGF	**Sodankyl**	**2.45**	**96**	*e*PG	Pb	23 32 02.8	-1.3
SGF				*e*S	Sn	23 32 31.2	+0.1
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	23 32 04.2	+2.0
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pn	23 32 03.8	+1.4
	baz=228						

*BJI **21** 23:31:26.8±0.0, 37°.43N×71°.84E, h205km, mb4.6/36, mB4.9/23*
*MOS **21** 23:31:27.8±0.8, 37°.30N×72°.02E, h210km, mb4.5/22, Error ellipse: s-maj=6.0km s-min=3.5km az=89.0*
*IDC **21** 23:31:28.7±0.8, 37°.16N×72°.00E, h211km±7km, mb3.8/33, mbtmp4.3/38, Error ellipse: s-maj=10.9km s-min=7.2km az=5.0*
*NEIC **21** 23:31:28.8±1.5, 37°.29N±0°.05×71°.92E±0°.08, h202km±7km, mb4.5/39, Error ellipse: s-maj=9.1km s-min=7.9km az=83.0*
*NNC **21** 23:31:30.5±2.6, 37°.69N×71°.95E, h0km, mb5.3, mpv4.3, Error ellipse: s-maj=22.4km s-min=17.9km az=41.0*
ISC 21 23:31:28.1±0.4, 37°.28N±0°.04×72°.01E±0°.03, h203km±3km, h203km:pP-P, n273, σ1.958/327, mb4.3/62, 25C-18D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.18**	**323**	Pn	**Pn**	**23 32 09.0**	**+0.2**
GAR				Sn	**S**	**23 32 38.0**	**-1.9**
DRK	**Karamyk**	**2.21**	**356**	Pn	**Pn**	**23 32 10.3**	**+1.0**
DRK				Sn	**S**	**23 32 40.3**	**-0.6**
CHGR	**Chuyangaron**	**2.64**	**302**	Pn	**Pn**	**23 32 13.6**	**-0.2**
CHGR				Sn	**S**	**23 32 46.4**	**-2.5**
CHGR	**Chuyangaron**	**2.64**	**302**	PN	**Pn**	**23 32 13.6**	**-0.2**
BTK	**Batken**	**2.93**	**342**	Pn	**Pn**	**23 32 18.4**	**+1.3**
BTK				Sn	**S**	**23 32 54.9**	**-0.1**
BTK	**Batken**	**2.93**	**342**	PN	**Pn**	**23 32 18.4**	**+1.3**
BTK						23 32 54.9	
OHH	**Osh**	**3.30**	**10**	PN	**Pn**	**23 32 22.2**	**+0.7**
CEP	**Cherat**	**3.45**	**181**	P	**Pn**	**23 32 24.5**	**+1.1**
CEP				S	**S**	**23 33 07.0**	**+0.9**
KBL	**Kabul**	**3.64**	**222**	Pn	**Pn**	**23 32 25.9**	**0.0**
KBL				Sn	**S**	**23 33 09.7**	**-0.7**
KBL	**Kabul**	**3.64**	**222**	PN	**Pn**	**23 32 25.9**	**0.0**
KBL						23 33 09.7	
CHCP	**Chirah Chowk**	**3.75**	**164**	P	**Pn**	**23 32 28.3**	**+1.2**
NIL	**Nilore**	**3.76**	**164**	Pn	**Pn**	**23 32 28.4**	**+1.3**
NIL	**Nilore**	**3.76**	**164**	PN	**Pn**	**23 32 28.4**	**+1.3**
KSH	**Kashi**	**3.83**	**53**	P	**Pn**	**23 32 24.6**	**-3.4**
KSH				S	**S**	**23 33 06.0**	**-8.5**
TRKS	**Terek-Say**	**4.30**	**351**	PN	**Pn**	**23 32 33.5**	**-0.3**
ARK	**Arkit**	**4.51**	**360**	PN	**Pn**	**23 32 37.2**	**+0.7**
TAS	**Tashkent**	**4.56**	**333**	Pn	**Pn**	**23 32 37.1**	**+0.2**
TAS	**Tashkent**	**4.56**	**333**	PN	**Pn**	**23 32 37.1**	**+0.2**
ARLS	**Aral**	**4.91**	**21**	PN	**Pn**	**23 32 41.8**	**+0.2**
AML	**Almayashu**	**5.02**	**14**	P	**Pn**	**23 32 43.7**	**+0.6**
	SNR=1182						
IUG	**Iuzhnay**	**5.10**	**343**	*d* PN	**Pn**	**23 32 44.4**	**+0.6**
IUG				*i* S	**S**	**23 33 40.8**	**-2.5**
IUG	**Iuzhnay**	**5.10**	**343**	⇓*i* P	**Pn**	**23 32 44.5**	**+0.6**
	baz=341						
IUG				*i* S	**S**	**23 33 40.8**	**-2.5**
	baz=341						
JMU	**Jammu**	**5.13**	**152**	*e*P	**Pn**	**23 32 43.9**	**-0.4**
JMU				*e*S	**S**	**23 33 41.7**	**-2.2**
NRN	**Naryn**	**5.18**	**35**	Pn	**Pn**	**23 32 44.6**	**-0.5**
NRN	**Naryn**	**5.18**	**35**	PN	**Pn**	**23 32 44.6**	**-0.5**
UCH	**Uchtor**	**5.31**	**21**	P	**Pn**	**23 32 47.6**	**+0.8**
	SNR=266						
CHM	**Chimkent**	**5.37**	**341**	*e*PN	**Pn**	**23 32 47.6**	**+0.5**
CHM	**Chimkent**	**5.37**	**341**	*e*P	**Pn**	**23 32 47.7**	**+0.5**
	baz=338						
CHM				*i* S	**S**	**23 33 46.4**	**-2.9**
	baz=338						
EKS2	**Erkin-Say**	**5.55**	**14**	P	**Pn**	**23 32 50.1**	**+0.5**
	SNR=119						
DZA	**Taraz**	**5.63**	**355**	*d* PN	**Pn**	**23 32 50.9**	**+0.3**
DZA	**Taraz**	**5.63**	**355**	⇓*i* P	**Pn**	**23 32 50.9**	**+0.3**
	baz=354						
DZA				*e*S	**S**	**23 33 52.6**	**-3.0**
	baz=354						
AAK	**Ala-Archa**	**5.68**	**19**	P	**Pn**	**23 32 52.5**	**+1.1**
	SNR=134						
AAK	**Ala-Archa**	**5.68**	**19**	P	**Pn**	**23 32 52.4**	**+1.1**
	79nm,0.3s,baz=186,slow=6.4,SNR=365						
AAK				S	**S**	**23 33 56.6**	**-0.3**
	119nm,0.6s,baz=332,slow=21,SNR=36						
THN	**Thein Dam**	**5.71**	**147**	*e*P	**Pn**	**23 32 52.4**	**+0.6**
THN				*e*S	**S**	**23 33 56.5**	**-1.0**
KBK	**Karagaybulak**	**5.83**	**22**	P	**Pn**	**23 32 54.4**	**+1.1**
	SNR=46						
KK31	**Karatay Array**	**5.93**	**349**		**Pn**	**23 32 54.5**	**0.0**
KK31	**Karatay Array**	**5.93**	**349**	PN	**Pn**	**23 32 54.5**	**0.0**
KK31	**Karatay Array**	**5.93**	**349**	⇓P	**Pn**	**23 32 54.5**	**0.0**
	49nm,0.3s,baz=165,slow=11,SNR=1246						
KK31				S	**S**	**23 33 58.8**	**-3.8**
	206nm,0.5s,baz=166,slow=18,SNR=16						
KKAR	**Karatay Array**	**5.93**	**349**	Pn	**Pn**	**23 32 54.3**	**-0.1**
KKAR	**Karatay Array**	**5.93**	**349**	Pn	**Pn**	**23 32 54.7**	**+0.2**
KKAR	**Karatay Array**	**5.93**	**349**	PN	**Pn**	**23 32 54.7**	**+0.2**
ULHL	**Ulahol**	**5.94**	**32**	P	**Pn**	**23 32 55.2**	**+0.5**
	SNR=49						
BOOM	**Boomskoye usch**	**6.02**	**29**	Pn	**Pn**	**23 32 56.9**	**+1.1**
BOOM	**Boomskoye usch**	**6.02**	**29**	PN	**Pn**	**23 32 56.9**	**+1.1**
CHMS	**Chumysh**	**6.09**	**19**	P	**Pn**	**23 32 57.1**	**+0.6**
	SNR=48						
CHMS	**Chumysh**	**6.09**	**19**	PN	**Pn**	**23 32 56.8**	**+0.3**
CHMS				S	**S**	**23 34 04.5**	**-1.7**
CHMS	**Chumysh**	**6.09**	**19**	⇑P	**Pn**	**23 32 56.8**	**+0.3**
	0.2nm,0.1s						
CHMS				⇓S	**S**	**23 34 04.5**	**-1.7**
	72nm,0.6s						
TKM2	**Tokmak 2**	**6.27**	**25**	P	**Pn**	**23 32 59.9**	**+0.8**
	SNR=56						
USP	**Ospenovka**	**6.28**	**17**	P	**Pn**	**23 32 58.9**	**-0.1**
	SNR=25						
SGDS	**Sogindy**	**6.48**	**17**	*d* PN	**Pn**	**23 33 01.4**	**-0.2**
SGDS	**Sogindy**	**6.48**	**17**	⇓*i* P	**Pn**	**23 33 01.4**	**-0.2**
	baz=18						
TNSS	**Tian-Shan**	**6.88**	**32**	*i* PN	**Pn**	**23 33 07.7**	**+0.6**
TNSS	**Tian-Shan**	**6.88**	**32**	*i* P	**Pn**	**23 33 07.7**	**+0.6**
	baz=34						
BHK	**Bhakra**	**6.89**	**147**	*e*P	**Pn**	**23 33 07.1**	**+0.1**
BHK				*e*S	**S**	**23 34 22.2**	**-3.1**
AAA	**Alma-Ata**	**7.01**	**31**	*e*PN	**Pn**	**23 33 09.2**	**+0.7**
AAA	**Alma-Ata**	**7.01**	**31**	*e*P	**Pn**	**23 33 09.3**	**+0.7**
	baz=33						
MDOK	**Medeo**	**7.03**	**32**	*e*PN	**Pn**	**23 33 09.5**	**+0.7**
MDOK	**Medeo**	**7.03**	**32**	*e*P	**Pn**	**23 33 09.6**	**+0.7**
	baz=34						
KNDC	**Almaty**	**7.04**	**31**	PN	**Pn**	**23 33 09.5**	**+0.6**
KNDC	**Almaty**	**7.04**	**31**	⇑P	**Pn**	**23 33 09.5**	**+0.6**
	102nm,0.9s						
KNDC				⇓S	**S**	**23 34 20.8**	**-8.0**
	119nm,1.0s						
KUU	**Kurty**	**7.38**	**25**	*e*PN	**Pn**	**23 33 12.7**	**-0.5**
KUU	**Kurty**	**7.38**	**25**	*e*P	**Pn**	**23 33 12.8**	**-0.5**
	baz=27						
SMLA	**Simla**	**7.47**	**144**	*e*P	**Pn**	**23 33 14.2**	**-0.3**
SMLA				*e*S	**S**	**23 34 34.5**	**-4.5**
SMLA				IAML		23 34 36.0	
	comp=N,592nm,0.3s						
SMLA				IAML		23 34 41.2	
	comp=E,570nm,0.4s						
SATY	**Saty**	**7.57**	**38**	*d*PN	**Pn**	**23 33 15.1**	**-0.7**
SATY	**Saty**	**7.57**	**38**	⇓*e*P	**Pn**	**23 33 15.2**	**-0.7**
	baz=41						
CHKK	**Chushkaly**	**7.58**	**28**	*e*PN	**Pn**	**23 33 15.3**	**-0.5**
CHKK	**Chushkaly**	**7.58**	**28**	*e*P	**Pn**	**23 33 15.4**	**-0.5**
	baz=30						
BTLS	**Baital**	**7.91**	**11**	*d* PN	**Pn**	**23 33 19.7**	**-0.3**
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.2s						
BTLS	**Baital**	**7.91**	**11**	⇓*i* P	**Pn**	**23 33 19.7**	**-0.3**
	comp=Z,2.6nm,0.2s,baz=11						
UZB	**Uzynbulak**	**7.95**	**40**	*e*PN	**Pn**	**23 33 20.8**	**+0.1**
UZB	**Uzynbulak**	**7.95**	**40**	*e*P	**Pn**	**23 33 20.9**	**+0.1**
	baz=42						
KPKS	**Kokpek**	**8.01**	**37**	*e*PN	**Pn**	**23 33 21.2**	**-0.3**
KPKS	**Kokpek**	**8.01**	**37**	*e*P	**Pn**	**23 33 21.2**	**-0.3**
	baz=40						
SHLS	**Shalkode**	**8.18**	**42**	*e*PN	**Pn**	**23 33 26.7**	**+2.9**
SHLS	**Shalkode**	**8.18**	**42**	*e*P	**Pn**	**23 33 26.7**	**+2.9**
	baz=46						
HRA	**Herat**	**8.44**	**253**	Pn	**Pn**	**23 33 26.5**	**-0.8**
DDI	**Dehra Dun**	**8.57**	**142**	*e*P	**Pn**	**23 33 28.5**	**-0.3**
NDI	**New Delhi**	**9.62**	**151**

comp=Z,32nm,0.5s
AKL Akola 17.08 164 *e*P **Pn 23 35 14.3 -1.0**
BLSP Bilaspur 17.45 147 *e*P **Pn 23 35 18.9 -0.7**
LSA Lhasa 17.65 110 Pn **Pn 23 35 23.0 +0.6**
LSA IAmb IAmb 23 35 30.2
comp=Z,14nm,0.8s
LSA Lhasa 17.65 110 P **Pn 23 35 23.9 +1.5**
LSA pmax pmax
comp=Z,16nm,0.6s
LSA Lhasa 17.65 110 P **Pn 23 35 23.0 +0.6**
LSA pmax pmax
comp=Z,14nm,0.8s
WSAR Wadi Sarin 18.12 223 P **P 23 35 24.5 -0.7**
comp=Z,2.1nm,0.6s,baz=276,slow=19,SNR=9.0
UOSS Minazif 18.25 232 P **P 23 35 26.0 -0.6**
GOMU GeErMu 18.31 86 P **Pn 23 35 29.5 -0.4**
GOMU pmax pmax
comp=Z,4.0nm,0.7s
GOMU pmax pmax
comp=Z,56nm,5.0s
ZAA0 Zalesovo Array 18.88 24 P **P 23 35 34.0 +1.0**
ZALV Zalesovo Beam 18.88 24 P **P 23 35 33.6 +0.6**
comp=Z,40nm,0.4s,baz=208,slow=10,SNR=261
ZALV S **S 23 38 54.9 -1.6**
comp=Z,4.0nm,0.8s,baz=218,slow=16,SNR=3.2
ZALV Zalesovo Beam 18.88 24 P **P 23 35 33.9 +0.9**
ZALV Zalesovo Beam 18.88 24 P **P 23 35 33.9 +0.9**
AKT Akhty 19.21 290 *e*P **P 23 35 37.6 +0.7**
AKT *e*S **S 23 39 07.3 +3.7**
AKT pmax pmax
comp=Z,13nm,0.6s
AKT smax smax
comp=N,13nm,0.6s
AKT smax smax
comp=E,11nm,0.6s
MAK Makhachkala 19.55 295 *e*P **P 23 35 40.8 +0.5**
MAK *e*S **S 23 39 11.6 +1.7**
MAK pmax pmax
comp=Z,252nm,1.1s
GNBR Gunib 19.87 293 *i* P **P 23 35 44.8 +0.9**
SVE Sverdlovsk 20.98 342 *e*P **P 23 35 55.8 +0.3**
ARU Arti 21.18 339 P **P 23 35 57.9 +0.4**
comp=Z,5.3nm,0.5s,baz=160,slow=5.7,SNR=13
comp=Z,5.3nm,0.5s
ARU Arti 21.18 339 P **P 23 35 58.3 +0.8**
ARU IAmb IAmb 23 36 04.1
comp=Z,13nm,0.5s
ARU Arti 21.18 339*c i*P **P 23 35 57.6 +0.1**
ARU *PP **pP 23 36 28.9 -3.6**
ARU S **S 23 39 41.4 +1.1**
ARU pmax pmax
comp=Z,19nm,1.2s
GNI Garni 21.44 286 P **P 23 36 01.3 +0.7**
comp=Z,9.0nm,0.9s,baz=358,slow=1.9,SNR=5.7
comp=Z,9.0nm,0.9s
GNI Garni 21.44 286 P **P 23 36 01.8 +1.2**
GNI IAmb IAmb 23 36 20.9
comp=Z,22nm,0.8s
GNI Garni 21.44 286 *i* P **P 23 36 01.8 +1.2**
GNI pmax pmax
comp=Z,16nm,0.8s
GTA Gaotai 21.88 76 *e*P **P 23 36 07.4 +2.4**
GTA pP pP 23 36 45.9 +4.9
GTA sP sP 23 37 09.5 +2.4
GTA pmax pmax
comp=Z,12nm,0.7s
ZEI Tsey 22.16 293 *e*P **P 23 36 08.4 +0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
ONI Oni 22.47 293 P **P 23 36 11.6 +1.1**
ONI IAmb IAmb 23 36 21.5
comp=Z,8.1nm,0.7s
ONI Oni 22.47 293 P **P 23 36 11.6 +1.1**
ONI pmax pmax
comp=Z,8.0nm,0.7s
BELG Belogornoye 22.81 319 P **P 23 36 13.5 +0.3**
comp=Z,8.9nm,0.5s,baz=30,slow=1.3,SNR=18
comp=Z,8.9nm,0.5s
KBZ Khabaz 22.98 295 P **P 23 36 15.7 +0.8**
comp=Z,3.1nm,0.8s,baz=146,slow=7.0,SNR=6.5
comp=Z,3.1nm,0.8s
KBZ Khabaz 22.98 295*ce*P **P 23 36 15.4 +0.5**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KVAR Kislovodsk Arr 23.15 296 P **P 23 36 17.9 +1.3**
comp=Z,2.5nm,0.8s,baz=233,slow=9.0,SNR=2.0
comp=Z,2.5nm,0.8s
SHA1 Shidzhatmaz 23.16 295 *i* P **P 23 36 17.5 +0.7**
KIV Kislovodsk 23.16 296 *e*P **P 23 36 19.3 +2.7**
KIV *e*S **S 23 40 15.9 +3.1**
KIV pmax pmax
comp=Z,7.0nm,1.0s
GURO Guroymak-BITLI 23.64 282 P **P 23 36 21.9 +0.8**
SOC Sochi 25.27 295 *e*P **P 23 36 35.8 +0.1**
SOC *e* 23 37 26.8
SOC *e*S **S 23 40 47.2 +1.1**
VRH Novokhopyorsk 25.56 313 *e*P **P 23 36 38.5 +0.3**
VRH *e**PP **pP 23 37 17.9 -1.3**
VRH pmax pmax
comp=Z,10.0nm,0.6s
KIRV Kirov 25.91 333 P **P 23 36 43.2 +2.0**
comp=Z,7.7nm,0.7s,baz=129,slow=17,SNR=2.6
comp=Z,7.7nm,0.7s
VSR Storozhevoye 27.08 311 *e*P **P 23 36 51.0 -0.8**
VSR *e**PP **pP 23 37 29.9 -3.6**
VSR pmax pmax
comp=Z,2.0nm,0.8s
VORR Voronezh 27.20 312 *e*P **P 23 36 52.8 0.0**
VORR pmax pmax
comp=Z,10.0nm,0.4s
SONM Songino Array 27.23 56 P **P 23 36 55.2 +1.9**
comp=Z,9.7nm,0.6s,baz=266,slow=9.2,SNR=55
comp=Z,9.7nm,0.6s
SONM Songino Array 27.23 56 P **P 23 36 54.5 +1.2**
SONM IAmb IAmb 23 36 56.0
comp=Z,9.8nm,0.9s
SONM Songino Array 27.23 56 P **P 23 36 54.5 +1.2**
SONM pmax pmax
comp=Z,10.0nm,0.9s
PZH PanZhiHua 27.33 105 P **P 23 36 56.0 +1.6**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,4.9s
ULN Ulaanbaatar 27.67 56 P **P 23 36 58.7 +1.4**
ULN IAmb IAmb 23 36 59.8
comp=Z,11nm,0.6s
ULN Ulaanbaatar 27.67 56*ce*P **P 23 36 59.0 +1.7**
ULN pmax pmax
comp=Z,8.0nm,0.6s
LPSR Galich'ya Gora 27.68 314 *e*P **P 23 36 56.7 -0.3**
LPSR *e**PP **pP 23 37 36.9 -1.9**
LPSR pmax pmax
comp=Z,5.0nm,0.9s
OBN Obninsk 29.89 318⇓*e*P **P 23 37 17.4 +0.9**
OBN *e**PP **pP 23 38 01.0 +2.4**
OBN *e* 23 38 29.1
OBN *e*S **S 23 41 49.6 -8.7**
OBN pmax pmax
comp=Z,15nm,1.4s
BR131 Keskin Array S 29.98 287 P **P 23 37 18.5 +0.8**
BR131 IAmb IAmb 23 37 19.5
comp=Z,14nm,1.5s
BR131 Keskin Array S 29.98 287 P **P 23 37 18.5 +0.8**
BR131 pmax pmax
comp=Z,14nm,1.5s
BRTR Keskin Array B 29.98 287 P **P 23 37 18.8 +1.0**
comp=Z,1.8nm,0.5s,baz=100,slow=8.5,SNR=14
BRTR PP **sP 23 38 22.0 -1.0**
comp=Z,1.7nm,1.0s,baz=74,slow=11,SNR=3.3
BRTR PcP **PcP 23 40 15.2 +0.4**
comp=Z,0.5nm,0.6s,baz=94,slow=4.1,SNR=1.7
comp=Z,1.8nm,0.5s
BRTR Keskin Array B 29.98 287 P **P 23 37 18.5 +0.8**
CMAR Chiang Mai Arr 30.14 121 P **P 23 37 19.1 -0.1**
comp=Z,2.3nm,0.3s,baz=312,slow=8.4,SNR=3.6
comp=Z,2.3nm,0.3s
HHC Hu-ho-hao-te 30.74 71 *e*P **P 23 37 25.8 +1.4**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,340nm,6.1s
AKASG Malin Array Be 33.10 308 P **P 23 37 44.6 -0.1**
comp=Z,1.3nm,0.5s,baz=79,slow=6.8,SNR=8.4
AKASG PP **sP 23 38 55.8 +5.3**
comp=Z,0.8nm,0.5s,baz=91,slow=12,SNR=4.6
comp=Z,1.3nm,0.5s
AKASG Malin Array Be 33.10 308 *i* P **P 23 37 44.5 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 33.10 308 P **P 23 37 45.1 +0.4**
AKBB Malin Array Si 33.10 308 P **P 23 37 45.1 +0.4**
AKBB pmax pmax
comp=Z,4.0nm,0.9s
NRIK Noril'sk 33.22 10 P **P 23 37 46.8 +1.3**
comp=Z,5.8nm,0.5s,baz=200,slow=5.5,SNR=9.1
comp=Z,5.8nm,0.5s
NRIK Noril'sk 33.22 10 P **P 23 37 47.0 +1.6**
NRIK IAmb IAmb 23 37 47.6
comp=Z,6.6nm,0.7s
NRIK Noril'sk 33.22 10*ce*P **P 23 37 47.1 +1.6**
NRIK pmax pmax
comp=Z,10.0nm,1.0s
HNS HongShan 33.73 77 ⇓P **P 23 37 52.4 +2.1**
HNS pmax pmax
comp=Z,11nm,1.4s
XLT XiLinHaoTe 33.80 65 *e*P **P 23 37 52.8 +1.9**
XLT pmax pmax
comp=Z,7.0nm,0.9s
XLT pmax pmax
comp=Z,220nm,4.6s
MNK Minsk 34.53 314 *i* P **P 23 37 56.6 -0.3**
MNK *i* *PP **pP 23 38 39.8 +0.4**
MNK *i* 23 39 19.6
MNK *i* 23 40 26.1
MNK *i* S **S 23 43 10.4 +0.2**
MNK *i* *SS **sS 23 44 27.9 +1.5**
MNK *i* 23 47 54.6
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=N,11nm,0.6s
MNK pmax pmax
comp=Z,5.0nm,0.9s
MNK MLR MLR
comp=Z,80nm,15.0s
MNK MLR MLR
comp=N,523nm,15.0s
MNK MLR MLR
comp=E,58nm,20.0s
MNK Minsk 34.53 314 *i* P **P 23 37 56.7 -0.3**
comp=E,2.0nm,0.9s
MNK *i* P **P 23 37 56.7 -0.3**
comp=N,11nm,0.6s
MNK *i* P **P 23 37 56.7 -0.3**
comp=Z,5.0nm,0.8s,baz=282
MNK *i* pP **pP 23 38 39.9 +0.4**
MNK *i* PP **PP 23 39 19.7 +0.2**
MNK *i* S **S 23 43 10.5 +0.2**
MNK *i* sS **sS 23 44 27.9 +1.5**
MNK *i* SS **SS 23 45 49.0 +1.9**
MNK *i* LRM MLR 23 53 22.2
comp=Z,80nm,15.4s
MNK *i* LRM MLR 23 53 53.2
comp=N,523nm,15.5s
MNK *i* LRM MLR 23 53 55.8
comp=E,58nm,20.0s
VRI Vrincioaia 34.55 299 ⇑P P 23 37 52.2 -5.1
VRI Vrincioaia 34.55 299 ⇑P P 23 37 52.2 -5.1
PLOR Plostina 34.61 299 ⇑P **P 23 37 58.7 +0.9**
PLOR Plostina 34.61 299 ⇑P **P 23 37 58.7 +0.9**
RAZG Razgrad 34.86 295 ⇑P **P 23 38 00.6 +0.6**
COVR Voineasa-Covas 34.92 299 ⇑P **P 23 38 01.8 +1.3**
MLR Muntele Rosu 35.12 298 ⇑P **P 23 38 04.0 +1.7**
MLR Muntele Rosu 35.12 298 P **P 23 38 03.5 +1.2**
comp=E,4.0nm,0.7s,baz=92,slow=20,SNR=6.6
comp=E,4.0nm,0.7s
MLR Muntele Rosu 35.12 298 P **P 23 38 04.5 +2.2**
MLR IAmb IAmb 23 38 05.3
comp=Z,5.2nm,0.7s
MLR Muntele Rosu 35.12 298 P **P 23 38 04.5 +2.2**
MLR pmax pmax
comp=Z,5.0nm,0.7s
NACGM Naroch 35.23 315⇓*e*P **P 23 38 03.5 +0.5**
baz=101
BURAR Bucovina Array 35.55 302 ⇑P **P 23 38 06.8 +0.9**
BURAR Bucovina Array 35.55 302 P **P 23 38 06.8 +0.9**
BURAR Bucovina Array 35.55 302 ⇑P **P 23 38 06.8 +0.9**
BUR08 Bucovina Ar. S 35.56 302 P **P 23 38 06.8 +0.8**
VOIR 35.75 298 ⇑P **P 23 38 08.5 +0.9**
VOIR 35.75 298 ⇑P **P 23 38 08.5 +0.9**
ARR Arges 36.05 298 ⇑P **P 23 38 10.8 +0.7**
DRGR 37.29 301 ⇑P **P 23 38 21.8 +1.2**
DRGR 37.29 301 ⇑P **P 23 38 21.8 +1.2**
FINES FINESS Array B 37.30 325 P **P 23 38 20.6 +0.3**
comp=Z,0.9nm,0.4s,baz=133,slow=7.3,SNR=7.9
FINES pP **pP 23 39 03.0 -0.3**
comp=Z,0.9nm,0.6s,baz=116,slow=13,SNR=1.5
comp=Z,0.9nm,0.4s
FINES FINESS Array B 37.30 325 P **P 23 38 20.4 +0.1**
TRPA Tarpa 37.34 303 ⇑P **P 23 38 22.5 +1.6**
VTS Vitosha 37.35 294 P **P 23 38 22.1 +0.8**
VTS Vitosha 37.35 294 P **P 23 38 22.1 +0.8**
VTS pmax pmax
comp=Z,8.0nm,1.5s
BLKB Belogradchik 37.62 296 ⇑P **P 23 38 24.7 +1.3**
IDI Anoyia 37.73 282 P **P 23 38 24.6 +0.1**
comp=Z,2.0nm,0.7s,baz=160,slow=17,SNR=2.4
comp=Z,2.0nm,0.7s
IDI Anoyia 37.73 282 P **P 23 38 24.0 -0.4**
IDI IAmb IAmb 23 38 36.0
comp=Z,8.6nm,1.3s
BOVS Bovan 38.31 296 ⇑P **P 23 38 30.1 +1.0**
NJ2 Nanjing 38.57 83 *e*P **P 23 38 31.0 -0.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
ARCES ARCESS Array B 40.74 337 P **P 23 38 49.6 +0.8**
comp=Z,1.0nm,0.3s,baz=112,slow=8.1,SNR=24
ARCES pP **pP 23 39 33.4 +0.5**
comp=Z,1.1nm,0.5s,baz=104,slow=7.5,SNR=2.7
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 40.74 337 P **P 23 38 49.5 +0.8**
ARCES ARCESS Array B 40.74 337 P **P 23 38 49.5 +0.8**
ARCES pmax pmax
comp=Z,8.0nm,1.3s
ZEA Zeya 40.95 48 *e*P **P 23 38 53.1 +2.4**
ZEA pmax pmax
comp=Z,10.0nm,0.5s
VRAC Vranov 41.21 305 P **P 23 38 53.3 +0.4**
comp=Z,2.4nm,0.7s,baz=89,slow=5.5,SNR=4.3
comp=Z,2.4nm,0.7s
IPM Ipoh 42.08 134 P **P 23 39 00.1 -0.2**
IPM IAmb IAmb 23 39 01.3
comp=Z,15nm,0.7s
PSI Prapat 42.29 138 P **P 23 39 01.8 -0.3**
comp=Z,4.0nm,0.3s,baz=338,slow=4.6,SNR=6.1
comp=Z,4.0nm,0.3s
RPSI Rantau Prapat 42.38 138 P **P 23 39 01.8 -0.9**
GSI Gunungsitoli 42.86 141 P **P 23 39 08.2 +1.6**
YAK Yakutsk 42.86 36 P **P 23 39 06.3 +0.3**
comp=Z,7.6nm,0.3s,baz=253,slow=0.4,SNR=4.5
comp=Z,7.6nm,0.3s
YAK Yakutsk 42.86 36*ce*P **P 23 39 06.1 +0.1**
YAK pmax pmax
comp=Z,18nm,0.6s
HFS Hagfors 42.96 321 P **P 23 39 07.2 +0.4**
comp=Z,4.7nm,0.5s,baz=93,slow=12,SNR=23
HFS pP **pP 23 39 52.0 +0.9**
comp=Z,2.5nm,0.6s,baz=112,slow=11,SNR=2.2
comp=Z,4.7nm,0.5s
GERES GERESS Array B 43.15 305 P **P 23 39 09.2 +0.6**
comp=Z,0.1nm,0.3s,baz=266,slow=40,SNR=1.6
GERES PP **PP 23 40 51.9 -1.1**
comp=Z,0.3nm,0.5s,baz=74,slow=7.2,SNR=2.2
CLL Collm 43.34 308 *e*P **P 23 39 11.0 +1.0**
CLL Collm 43.34 308 *e*P **P 23 39 11.0 +1.0**
CUC Castrocucco 43.36 292 P **P 23 39 12.1 +1.7**
KSRS Korea Array 43.87 72 P **P 23 39 14.9 +0.6**
comp=Z,3.7nm,0.6s,baz=280,slow=6.6,SNR=13
comp=Z,3.7nm,0.6s
NC405 NORSAR Array S 44.01 323 P **P 23 39 15.3 0.0**
NC405 IAmb IAmb 23 39 22.5
comp=Z,42nm,1.4s
KLR Kul'dur 44.03 55 P **P 23 39 16.7 +1.1**
comp=Z,4.5nm,0.4s,baz=288,slow=7.7,SNR=17
comp=Z,4.5nm,0.4s
KLR Kul'dur 44.03 55 *i* P **P 23 39 16.7 +1.1**
KLR pmax pmax
comp=Z,36nm,3.5s
NC602 NORSAR Array S 44.07 322 P **P 23 39 15.4 -0.2**
NC303 NORSAR Array S 44.19 323 P **P 23 39 16.9 +0.3**
NC303 IAmb IAmb 23 39 20.3
comp=Z,27nm,1.5s
NB201 NORSAR Array S 44.21 323 P **P 23 39 16.8 -0.1**
NB2 NORSAR Subarra 44.25 322 P **P 23 39 16.7 -0.5**
comp=Z,0.8nm,0.5s,baz=94,slow=7.9
NOA NORSAR Array B 44.25 322 P **P 23 39 17.1 -0.1**
comp=Z,1.2nm,0.6s,baz=96,slow=7.6,SNR=5.9
NOA pP **pP 23 40 03.4 +1.8**
comp=Z,1.0nm,0.6s,baz=96,slow=7.9,SNR=3.4
comp=Z,1.2nm,0.6s
NAO01 NORSAR Array S 44.40 322 P **P 23 39 18.0 -0.3**
NBO00 NORSAR Array S 44.46 322 P **P 23 39 19.0 +0.2**
NBO00 IAmb IAmb 23 39 38.5
comp=Z,29nm,1.1s
NC204 NORSAR Array S 44.49 323 P **P 23 39 18.9 -0.1**
NC204 IAmb IAmb 23 40 00.5
comp=Z,24nm,1.3s
TIXI Tiksi 44.75 22 P **P 23 39 21.4 +0.6**
TIXI IAmb IAmb 23 39 22.1
comp=Z,15nm,0.8s
TIXI Tiksi 44.75 22*ce*P **P 23 39 20.9 0.0**
TIXI pmax pmax
comp=Z,16nm,1.0s
KONO Kongsberg 45.00 320 P **P 23 39 23.2 +0.2**
KONO IAmb IAmb 23 39 29.4
comp=Z,37nm,1.5s
KONO Kongsberg 45.00 320 P **P 23 39 23.2 +0.2**
KONO pmax pmax
comp=Z,37nm,1.5s
USRK Ussuriysk Ar. 45.09 62 P **P 23 39 24.1 +0.2**
comp=Z,2.5nm,0.6s,baz=269,slow=7.1,SNR=5.8
comp=Z,2.5nm,0.6s
USRK Ussuriysk Ar. 45.09 62 P **P 23 39 24.4 +0.5**
USRK Ussuriysk Ar. 45.09 62 P **P 23 39 24.4 +0.5**
SPITS Spitsbergen Ar 46.92 347 P **P 23 39 38.4 +0.6**
SPITS pmax pmax
comp=Z,60nm,1.3s
KEST Kesra 49.56 288 P **P 23 39 59.5 +0.9**
comp=Z,1.7nm,0.7s,baz=299,slow=18,SNR=1.9
comp=Z,1.7nm,0.7s
MJAR Matsushiro Arr 51.92 69 P **P 23 40 16.0 -0.1**
comp=Z,5.4nm,0.9s,baz=295,slow=9.0,SNR=9.4
comp=Z,5.4nm,0.9s
JMM Marumori 53.34 67 P **P 23 40 26.9 +0.4**
CART Cartagena 56.53 294 P **P 23 40 48.6 -0.7**
CART IAmb IAmb 23 41 31.7
comp=Z,15nm,0.9s
BILL Bilibino 57.55 26⇓*e*P **P 23 40 57.6 +1.6**
BILL *e**PP **pP 23 41 44.3 +1.0**
BILL *e* 23 43 14.9
BILL *i* S S 23 48 27.8 -9.5
BILL pmax pmax
comp=Z,9.0nm,1.2s
ESDC Sonseca Array 57.81 298 P **P 23 40 58.4 0.0**
comp=Z,0.6nm,0.8s,baz=56,slow=7.1,SNR=6.1
ESDC pP **pP 23 41 46.8 +1.4**
comp=Z,0.6nm,0.6s,baz=59,slow=7.3,SNR=3.4
comp=Z,0.6nm,0.8s
PETK Petropavlovsk- 58.85 45 P **P 23 41 04.2 -1.1**
comp=Z,5.0nm,1.0s,baz=317,slow=5.9,SNR=2.2
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 66.54 269 P **P 23 41 54.7 -1.9**
comp=Z,1.0nm,0.5s,baz=49,slow=5.9,SNR=24
comp=Z,1.0nm,0.5s
INK Inuvik 73.01 10 P **P 23 42 36.0 +0.9**
comp=Z,3.1nm,0.4s,baz=336,slow=6.1,SNR=9.2
comp=Z,3.1nm,0.4s
INK Inuvik 73.01 10 P **P 23 42 36.0 +0.9**
ILAR Eielson Array 73.81 16 P **P 23 42 39.5 -0.4**
comp=Z,2.4nm,0.8s,baz=336,slow=4.2,SNR=0.9
comp=Z,2.4nm,0.8s
YKA Yellowknife Ar 80.43 3 P **P 23 43 16.8 +0.1**
comp=Z,3.5nm,0.7s,baz=349,slow=5.4,SNR=17
comp=Z,3.5nm,0.7s
WRA Warramunga Arr 81.72 123 P **P 23 43 22.7 -1.5**
comp=Z,0.4nm,0.5s,baz=327,slow=5.0,SNR=9.5
comp=Z,0.4nm,0.5s
ASAR Alice Springs 84.04 126 P **P 23 43 34.8 -1.2**
comp=Z,0.2nm,0.4s,baz=314,slow=5.9,SNR=2.0
comp=Z,0.2nm,0.4s
PLCA Paso Flores 150.85 251 PKPbc **PKPbc 23 50 55.2 -1.2**
comp=Z,0.8nm,0.6s,baz=21,slow=6.0,SNR=3.9

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*HEL **21** 23:31:52.4, 67°.85N×20°.14E, h0km, ML2.1, Explosion*
UPP 21 23:31:52.0±0.0, 67°.85N×20°.21E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**26**	P	Pg	23 31 54.4	+0.3
KUA				S	Sg	23 31 56.1	+0.5
KUA	**Kurravaara**	**0.11**	**26**	*i* P	Pg	23 31 54.4	+0.3
KUA				*i* S	Sg	23 31 56.1	+0.5
KOVU	**Salmi**	**0.37**	**357**	P	Pg	23 31 59.3	+0.2
KOVU	**Salmi**	**0.37**	**357**	*i* P	Pg	23 31 59.3	+0.2
NIKU	**Nikkaluokta**	**0.45**	**272**	P	Pg	23 32 00.5	0.0
NIKU	**Nikkaluokta**	**0.45**	**272**	*i* P	Pg	23 32 00.5	0.0
LANU	**Lannavaara**	**0.70**	**73**	P	Pg	23 32 05.4	0.0
LANU	**Lannavaara**	**0.70**	**73**	*e*P	Pg	23 32 05.2	-0.2
LANU				*e*S	Sg	23 32 14.7	+0.3
DUNU	**Dundret**	**0.75**	**169**	P	Pg	23 32 06.2	-0.1
DUNU	**Dundret**	**0.75**	**169**	*i* P	Pg	23 32 06.2	-0.1
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	23 32 06.9	-0.2
MASU	**Masugnsbyn**	**0.79**	**119**	*i* P	Pg	23 32 06.9	-0.2
SALU	**Saltoluokta**	**0.81**	**235**	P	Pg	23 32 07.3	-0.1
SALU	**Saltoluokta**	**0.81**	**235**	*i* P	Pg	23 32 07.3	-0.1
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*PN	Pn	23 32 16.1	+0.4
KIF				MSG		23 32 29.5	
KIF	comp=Z,33nm,0.2s			*e*SB	Sb	23 32 30.6	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pn	23 32 17.5	-1.2
PAJU	**Pajala**	**1.40**	**125**	*e*P	Pn	23 32 17.4	-1.3
PAJU	baz=309			*e*SB	Sg	23 32 36.2	-0.6
HEF	**Hetta**	**1.41**	**65**	*e*PG	Pn	23 32 18.2	-0.7
HEF				MSG		23 32 35.4	
HEF	comp=Z,12nm,0.2s			*e*SB	Sg	23 32 36.6	-0.6
ERTU	**Ertsjaerv**	**1.52**	**148**	P	Pn	23 32 19.6	-0.7
ERTU	**Ertsjaerv**	**1.52**	**148**	*e*PG	Pn	23 32 20.3	-0.1
ERTU				*e*SN	Sb	23 32 40.7	0.0
KLF	**Kolari**	**1.57**	**112**	*e*PG	Pn	23 32 21.2	+0.1
KLF				*e*SN	Sg	23 32 42.8	+0.4
KTK1	**Kautokeino**	**1.61**	**43**	*e*PN	Pg	23 32 22.8	-0.1
KTK1				*e*SG	Sn	23 32 43.0	-0.2
HARU	**Harads**	**1.73**	**170**	P	Pn	23 32 23.5	+0.4
HARU	**Harads**	**1.73**	**170**	*e*P	Pn	23 32 23.5	+0.4
TRO	**Tromso**	**1.85**	**346**	*e*SN	Sb	23 32 50.2	+0.1
KALU	**Kalix**	**2.36**	**147**	*e*P	Pn	23 32 31.8	-0.1
KALU	baz=330			*e*SB	Sb	23 33 03.6	-1.3
TOF	**Tornio**	**2.41**	**136**	*e*P	Pn	23 32 33.1	+0.5
TOF				MSG		23 33 03.9	
TOF	comp=Z,13nm,0.2s			*e*SG	Sb	23 33 06.3	0.0
TOF	**Tornio**	**2.41**	**136**	MSG		23 32 28.6	
TOF	comp=Z,1.9nm,0.2s **Tornio**	**2.41**	**136**	*e*SG	Pn	23 32 33.1	+0.5
SGF	**Sodankyl**	**2.45**	**97**	*e*PB	Pb	23 32 35.0	-1.8
SGF				*e*SG	Sb	23 33 08.6	+1.1
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*P	Pn	23 32 35.8	+1.0
ARA0	baz=228			*e*SB	Sb	23 33 10.5	-0.4
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*SB	Pn	23 32 35.8	+1.0
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	23 32 36.9	+2.0
RNF				*e*SB	Sb	23 33 11.1	-0.2
RNF	**Rovaniemi**	**2.58**	**116**	*e*SB	Pn	23 32 36.9	+2.0
KEV	**Kevo**	**3.12**	**49**	MSG		23 32 52.2	
KEV	comp=Z,1.2nm,0.2s			*e*S	Pb	23 32 46.3	-2.0
KEV	**Kevo**	**3.12**	**49**	*e*PB	Pb	23 32 46.3	-2.0
KEV				*e*S	Sn	23 33 21.4	+1.2
KEV				MSG		23 33 24.6	
KEV	comp=Z,4.4nm,0.2s			*e*S	Pn	23 32 47.0	+2.0
BURU	**Burvik**	**3.32**	**171**	*e*P	Pn	23 32 47.0	+2.0
BURU	**Burvik**	**3.32**	**171**	*e*S	Sn	23 33 27.3	+2.2
BURU				*e*P	Pn	23 32 50.3	+1.7
VRF	**Varrio**	**3.57**	**87**	*e*SB	Sb	23 33 40.0	+0.3
VRF				*e*S	Pb	23 32 56.8	+0.4
OUL	**Oulu**	**3.60**	**138**	*e*PG	Pb	23 32 56.8	+0.4
OUL	**Oulu**	**3.60**	**138**	*e*SG	Sb	23 33 41.7	+1.2
OUL				*e*S	Pb	23 33 02.6	+0.9
OLKF	**Oulanka, Finla**	**3.91**	**109**	*e*P	Pn	23 32 54.8	+1.5
OLKF	**Oulanka, Finla**	**3.91**	**109**	*e*S	Pb	23 33 04.5	+1.4
MSF	**Maaselka**	**3.99**	**115**				

MSF	Maaselka	3.99	115	eP	Pn	23 32 55.8	+1.5
UMAU	Umeaa	3.99	177	eP	Pn	23 32 56.6	+2.3
UMAU				eS	Sn	23 33 43.1	+1.3
KU6	Riekki	4.23	111	ePG	Pb	23 33 07.8	+0.6
KU6				eSG	Sg	23 34 04.3	-3.3

*IDC **22** 00:00:49.1±1.1,3˙.29S×139˙.75E, h0km, mb4.1/4, mbtmp4.2/6, ML4.3/2, MS3.2/11, Error ellipse: s-maj=56.5km s-min=24.6km az=89.0*
*DJA **22** 00:00:52.8±0.4,3˚S±2˚×14˚0E±˚, h10km, M4.4/7, mb4.6/7, MLv4.3/2*
*NEIC **22** 00:01:03.5±2.7, 4˚.0S±0˚.1×139˚.8E±0˚.1, h79km±11km, mb4.2/12, Error ellipse: s-maj=18.3km s-min=13.6km az=139.0*

ISC 22 00:00:56.5±0.7, 3˚.42S±0˚.06×140˚.11E±0˚.08, h56km, n37, σ1°67/31, mb4.1/7, MS3.2/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.82	4	P	Pn	00 01 09.6	-2.5
GENI				S	Sn	00 01 22.3	-1.2
WAMI	Wamena	1.47	252	P	Pn	00 01 18.7	-1.9
WAMI				S	Sn	00 01 40.1	+1.3
SMPI	Sarmi	1.99	315	P	Pn	00 01 30.0	+2.2
FAKI	Fak Fak	7.86	273	Pn	Pn	00 02 49.4	+1.1
PMG	Port Moresby	9.19	131	Pn	Pn	00 03 12.2	+5.7
SIJI	Sorong	9.19	286	LR	LR	00 06 45.8	
	comp=Z,74nm,20.5s,baz=96,slow=40						
COEN	Coen	10.90	164	Pn	Pn	00 03 30.3	+0.4
MTN	Manton Dam	12.90	223	Pn	Pn	00 03 55.9	-1.3
KNRA	Kununurra	16.52	222		Pn	00 04 43.3	-1.3
SOEI	Soe	16.94	247		P	00 04 52.4	+1.2
SOEI	Soe	16.94	247	P	P	00 04 50.8	-0.4
	60nm,0.7s						
WB0	Warramunga Arr	17.18	199		Pn	00 04 50.6	-2.1
WB0				IAmb	IAmb	00 05 16.8	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	17.31	198	P	Pn	00 04 52.5	-1.9
WR0				IAmb	IAmb	00 04 58.7	
	comp=Z,12nm,0.6s						
WRAB	Tennant Creek	17.35	198	P	Pn	00 04 52.4	-2.5
WRAB				IAmb	IAmb	00 05 03.2	
	comp=Z,21nm,0.9s						
WB2	Warramunga Arr	17.36	198	P	Pn	00 04 53.7	-1.3
WB2				IAmb	IAmb	00 05 04.0	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	17.36	198	P	Pn	00 04 52.9	-2.1
	comp=Z,1.8nm,0.3s,baz=18,slow=13,SNR=24						
WRA				S	Sn	00 07 54.6	-13
	comp=Z,1.6nm,0.8s,baz=19,slow=26,SNR=3.0						
WRA				LR	LR	00 11 57.1	
	comp=Z,134nm,18.1s,baz=10.0,slow=38						
	comp=Z,6.0nm,0.3s						
WRA	Warramunga Arr	17.36	198	Pn	Pn	00 04 51.6	-3.4
GUMO	Guam	17.55	16	LR	LR	00 10 48.7	
	comp=Z,60nm,19.6s,baz=168,slow=34						
CTA	Charters Tower	17.62	161	P	P	00 05 01.0	+2.5
	comp=Z,0.3nm,0.3s,baz=26,slow=11,SNR=3.3						
CTA				LR	LR	00 11 52.6	
	comp=Z,73nm,18.8s,baz=316,slow=37						
	comp=Z,2.3nm,0.6s						
KAPI	Kappang	20.36	265	LR	LR	00 14 35.5	
	comp=Z,18nm,19.4s,baz=108,slow=41						
AS31	Alice Springs	21.00	196	P	P	00 05 35.0	-0.4
AS31				IAmb	IAmb	00 05 38.6	
	comp=Z,6.4nm,0.6s						
ASAR	Alice Springs	21.00	196	P	P	00 05 34.7	-0.8
	comp=Z,10nm,0.5s,baz=25,slow=8.3,SNR=82						
ASAR				S	S	00 09 23.6	-2.8
	comp=Z,2.5nm,0.8s,baz=15,slow=25,SNR=4.3						
ASAR				LR	LR	00 14 10.6	
	comp=Z,120nm,18.6s,baz=342,slow=38						
	comp=Z,10nm,0.5s						
ASAR	Alice Springs	21.00	196	P	P	00 05 35.4	0.0
EIDS	Eidsvold	24.24	155	P	P	00 06 09.4	+1.1
EIDS				IAmb	IAmb	00 06 27.3	
	comp=Z,7.2nm,1.0s						
PSA00	Pilbara Seismi	26.71	226	P	P	00 06 31.7	+1.0
STKA	Stephens Creek	28.34	177	LR	LR	00 19 07.6	
	comp=Z,117nm,19.9s,baz=25,slow=39						
JNU	Nakatsue	37.38	347	P	P	00 08 12.0	+8.0
KSRS	Korea Array	42.21	346	LR	LR	00 23 40.0	
	comp=Z,14nm,21.5s,baz=165,slow=33						
KLR	Kul'dur	52.94	353	LR	LR	00 30 50.9	
	comp=Z,19nm,18.2s,baz=10.0,slow=34						
MA2	Magadan	63.37	6	LR	LR	00 39 06.3	
	comp=Z,12nm,19.4s,baz=220,slow=36						
MKAR	Makanchi Array	71.20	322	P	P	00 12 08.7	-0.9
	comp=Z,0.5nm,0.8s,baz=98,slow=8.0,SNR=4.0						
VNDA	Vanda	74.96	175	P	P	00 12 31.6	+0.4
	comp=Z,1.1nm,0.6s,baz=323,slow=6.9,SNR=19						
VNDA				LR	LR	00 44 22.9	
	comp=Z,28nm,20.6s,baz=318,slow=35						
	comp=Z,1.1nm,0.6s						
VNDA	Vanda	74.96	175	P	P	00 12 32.2	+1.0
MAW	Mawson	82.00	202	P	P	00 13 11.0	+0.9
	comp=Z,1.6nm,0.8s,baz=82,slow=8.2,SNR=3.6						
	comp=Z,1.6nm,0.8s						
ILAR	Eielson Array	85.90	24	P	P	00 13 29.6	-0.5
	comp=Z,0.3nm,0.5s,baz=264,slow=4.2,SNR=2.3						
	comp=Z,0.3nm,0.5s						
QSPA	South Pole Qui	86.53	180	P	P	00 13 34.5	+1.2
LPAZ	La Paz	145.90	126	PKPbc	PKiKP	00 20 34.7	-0.3
	comp=Z,0.8nm,0.8s,baz=225,slow=5.7,SNR=2.2						

*IDC **22** 00:35:44.3±1.3, 9˚.39S×148˚.86E, h0km, mb3.6/3, mbtmp3.5/4, ML3.1/1, MS2.9/6, Error ellipse: s-maj=41.7km s-min=23.8km az=159.0*

ISC 22 00:35:47.5±1.2, 9˚.5S±0˚.2×148˚.8E±0˚.1, h22km, n12, σ0°79/8, MS2.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	1.66	272	Pn	Pn	00 36 15.5	+0.3
	52nm,0.3s,baz=58,slow=12,SNR=52						
PMG				Sn	Sb	00 36 37.6	-0.2
	179nm,0.3s,baz=25,slow=23,SNR=11						
CTA	Charters Tower	10.84	193	LR	LR	00 41 56.1	
	comp=Z,39nm,18.6s,baz=84,slow=34						
WRA	Warramunga Arr	17.45	232	P	Pn	00 39 48.6	-1.0
	0.1nm,0.3s,baz=54,slow=12,SNR=2.2						
WRA				S	Sn	00 42 48.4	-15
	0.2nm,0.8s,baz=52,slow=24,SNR=1.0						
	0.4nm,0.7s						
SIJI	Sorong	19.46	295	LR	LR	00 50 01.9	
	comp=Z,42nm,18.5s,baz=146,slow=44						
ASAR	Alice Springs	20.07	224	P	P	00 40 20.0	+0.4
	1.3nm,0.7s,baz=58,slow=10,SNR=15						
ASAR				LR	LR	00 47 55.3	
	comp=Z,51nm,18.5s,baz=165,slow=36						
	1.3nm,0.7s						
BATI	Baumata	24.81	266	LR	LR	00 50 37.4	
	comp=Z,16nm,21.8s,baz=179,slow=36						
KAPI	Kappang	29.18	277	LR	LR	00 54 57.6	
	comp=Z,9.5nm,18.3s,baz=119,slow=40						
USRK	Ussuriysk Ar.	55.56	345	LR	LR	01 08 05.7	
	comp=Z,16nm,18.1s,baz=322,slow=35						
MKAR	Makanchi Array	81.31	320	P	P	00 48 02.7	+0.4
	0.2nm,0.6s,baz=104,slow=5.3,SNR=2.6						
	0.2nm,0.6s						
ILAR	Eielson Array	87.95	23	P	P	00 48 34.4	-0.9
	0.5nm,0.7s,baz=246,slow=5.3,SNR=6.7						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	147.59	280	PKPbc	PKPbc	00 55 31.6	+0.4
	1.2nm,0.5s,baz=58,slow=2.6,SNR=11						
BDFB	Brasilia	149.98	146	PKPbc	PKPbc	00 55 38.2	+0.8
	1.6nm,0.4s,baz=224,slow=7.1,SNR=3.9						

IDC 22 00:40:05.5±12.0, 30˚.19N×79˚.36E, h0km, mb3.9/3, mbtmp3.6/4, ML2.7/1, MS3.5/1, Error ellipse: s-maj=306.3km s-min=53.4km az=117.0, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.74	7	Pn	Pn	00 43 59.4	-1.9
	baz=185,slow=12,SNR=1.2						
	0.1nm,0.6s						
FINES	FINESS Array B	46.56	328	P	P	00 48 34.9	+0.2
	1.9nm,0.9s,baz=121,slow=9.9,SNR=4.4						
	1.9nm,0.9s						
ARCES	ARCESS Array B	49.61	338	P	P	00 48 57.4	-0.8
	3.6nm,1.2s,baz=110,slow=9.8,SNR=1.4						
	3.6nm,1.2s						
MA2	Magadan	55.17	36	LR	LR	01 14 26.6	
	comp=Z,42nm,19.1s,baz=121,slow=37						
TORD	Torodi Ar. Bea	72.94	275	P	P	00 51 37.4	+0.2
	0.3nm,0.5s,baz=49,slow=4.4,SNR=2.4						
	0.3nm,0.5s						

*MOS **22** 01:06:28.7±1.5, 62˚.55N×151˚.97W, h63km, mb4.7/16, Error ellipse: s-maj=15.1km s-min=6.6km az=91.1*
*IDC **22** 01:06:32.9±1.7, 62˚.62N×151˚.28W, h91km±14km, mb3.7/21, mbtmp4.1/26, MS3.0/2, Error ellipse: s-maj=14.3km s-min=12.9km az=42.0*
*NEIC **22** 01:06:33.4±1.1, 62˚.52N±0˚.03×151˚.35W±0˚.07, h97km±5km, Error ellipse: s-maj=5.0km s-min=4.7km az=92.0*
*AEIC **22** 01:06:33±1.0, 62˚.52N±0˚.03×151˚.27W±0˚.07, h100km±5km, ML3.9, ML4.0/128(NEIC), Mwr4.1/56(NEIC), Error ellipse: s-maj=5.0km s-min=4.5km az=109.0*
*NEIC **22** 01:06:33, 62˚.52N×151˚.24W, h97km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.01; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.59; $M_{r\theta}$0.97; $M_{\theta\phi}$1.18; $M_{r\phi}$0.64; Fault plane solution: $M_0$1.87000×10^{15} NP1:ϕ_s349.49000°, δ53.26000°, λ143.81000°. NP2:ϕ_s103.13000°, δ61.76000°, λ42.76000°. Principal axes: T 2.0016, Plg49.0000°, Azm320.0000°; N -0.2986, Plg40.0000°, Azm130.0000°; P -1.7030, Plg5.0000°, Azm225.0000°;*

ISC 22 01:06:33.5±0.6, 62˚.52N±0˚.02×151˚.30W±0˚.03, h102km±4km, n229, σ1°19/265, mb4.2/39, 10C, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUT	Chulitna	0.49	103		Pn	01 06 49.2	-0.1
CUT				Sn	Sn	01 07 00.7	-0.6
CUT	Chulitna	0.49	103	P	Pn	01 06 49.2	-0.1
	baz=284						
CUT				S	Sn	01 07 00.9	-0.4
	baz=284						
SKT	Skwentna	0.55	191		Pn	01 06 49.6	-0.3
SKT				Sn	Sn	01 07 01.3	-0.8
SKT				IAML		01 07 02.1	
	comp=N,8μm,0.6s						
SKT				IAML		01 07 02.2	
	comp=E,13μm,0.7s						
SKT	Skwentna	0.55	191	P	Pn	01 06 49.6	-0.3
	baz=13						
SKT				S	Sn	01 07 01.4	-0.8
	baz=13						
PPLA	Purkeypile	0.56	313		Pn	01 06 50.2	+0.1
PPLA	Purkeypile	0.56	313	P	Pn	01 06 50.2	+0.1
	baz=132						
PPLA				S	Sn	01 07 02.3	-0.2
	baz=132						
M22K	Willow	0.95	144		Pn	01 06 53.2	-0.2
M22K				Sn	Sn	01 07 08.5	0.0
M22K	Willow	0.95	144	P	Pn	01 06 53.1	-0.2
	baz=326						
M22K				S	Sn	01 07 08.6	+0.1
	baz=326						
CAST	Castle Rocks	0.97	339		Pn	01 06 53.5	-0.2
CAST				Sn	Sn	01 07 07.7	-1.3
CAST	Castle Rocks	0.97	339	P	Pn	01 06 53.5	-0.2
	baz=157						
CAST				S	Sn	01 07 07.9	-1.1
	baz=157						
TRF	Thorofare Moun	1.04	26		Pn	01 06 54.8	+0.1
TRF				IAML		01 07 11.7	
	comp=E,6μm,0.8s						
TRF				IAML		01 07 12.1	
	comp=N,5μm,0.5s						
TRF	Thorofare Moun	1.04	26	P	Pn	01 06 54.7	+0.1
	baz=206						
TRF				S	Sn	01 07 11.0	+0.4
	baz=206						
KTH	Kantishna Hill	1.05	9	Pn	Pn	01 06 54.8	+0.2
KTH				Sn	Sn	01 07 09.8	-0.8
KTH				IAML		01 07 11.2	
	comp=E,2μm,0.6s						
KTH				IAML		01 07 11.2	
	comp=N,3μm,0.9s						
M20K	Styx River	1.07	234		Pn	01 06 54.6	-0.3
M20K				IAML		01 07 10.7	
	comp=N,3μm,0.6s						
M20K				IAML		01 07 10.8	
	comp=E,3μm,0.2s						
M20K				Sn	Sn	01 07 10.0	-1.0
M20K	Styx River	1.07	234	P	Pn	01 06 54.6	-0.3
	baz=53						
SUA	Susitna One	1.09	166		Pn	01 06 55.2	0.0
SUA				Sn	Sn	01 07 11.2	-0.2
SUA				IAML		01 07 16.5	
	comp=N,5μm,0.6s						
SUA	Susitna One	1.09	166	P	Pn	01 06 55.1	0.0
	baz=347						
SUA				S	Sn	01 07 11.6	+0.1
	baz=347						
L20K	Farewell, AK	1.20	269	P	Pn	01 06 55.8	-0.5
	baz=87						
WAT1	Susitna Watana	1.31	75	P	Pn	01 06 57.4	-0.1
	baz=257						
GHO	Glory Hole Cre	1.34	123		Pn	01 06 58.1	+0.1
GHO				Sn	Sn	01 07 16.7	+0.1
PMR	Palmer	1.38	131		Pn	01 06 57.9	-0.5
PMR				IAML		01 07 18.0	
	comp=E,2μm,0.5s						
PMR				IAML		01 07 20.5	
	comp=N,1μm,0.4s						
PMR	Palmer	1.38	131	P	Pn	01 06 57.9	-0.5
PMR	Palmer	1.38	131	P	Pn	01 06 57.9	-0.5
	baz=314						
SPU	Mount Spurr	1.39	195		Pn	01 06 58.2	-0.3
SPCR	Spurr Chakacha	1.39	198	P	Pn	01 06 58.4	-0.2
	baz=18						
SPCR				S	Sn	01 07 18.0	+0.4
	baz=18						
RND	Reindeer	1.43	50		Pn	01 06 59.2	+0.2
RND				Sn	Sn	01 07 17.9	-0.5
RND				IAML		01 07 18.4	
	comp=N,2μm,0.8s						
RND				IAML		01 07 18.6	
	comp=E,2μm,0.6s						
RND	Reindeer	1.43	50	P	Pn	01 06 59.2	+0.2
RND						01 07 17.9	
CHUM	Lake Minchumin	1.44	342	P	Pn	01 06 59.2	+0.1
	baz=160						
CHUM				S	Sn	01 07 18.4	-0.1
	baz=160						
FIS	Fire Island	1.47	159		Pn	01 07 00.5	+1.0
K20K	Telida	1.52	305		Pn	01 07 00.1	0.0
K20K				IAML		01 07 20.6	
	comp=E,991nm,1.1s						
K20K	Telida	1.52	305	P	Pn	01 07 00.1	0.0
	baz=122						
K20K				S	Sn	01 07 19.1	-1.1
	baz=122						
SML	Sawmill	1.57	116		Pn	01 07 00.4	-0.2
SML	Sawmill	1.57	116	P	Pn	01 07 00.5	-0.1
	baz=299						
M19K	Big River Lodg	1.57	248		Pn	01 07 00.5	-0.3
M19K	Big River Lodg	1.57	248	P	Pn	01 07 00.5	-0.3
	baz=66						
BPAW	Bear Paw Mtn.	1.59	5	Pn	Pn	01 07 00.8	-0.2
BPAW				Sn	Sn	01 07 20.8	-1.1
BPAW				IAML		01 07 22.2	
	comp=E,2μm,0.5s						
BPAW				IAML		01 07 22.5	
	comp=N,1μm,0.9s						
BPAW	Bear Paw Mtn.	1.59	5	P	Pn	01 07 00.7	-0.3
	baz=185						
RC01	Rabbit Creek A	1.62	152		Pn	01 07 00.6	-0.6
RC01				IAML		01 07 23.6	
	comp=N,2μm,0.2s						
RC01				IAML		01 07 24.5	
	comp=E,2μm,0.5s						
RC01	Rabbit Creek A	1.62	152	P	Pn	01 07 00.6	-0.6
	baz=334						
RC01				S	Sn	01 07 21.3	-1.0
	baz=334						
MCK	McKinley	1.62	40	Pn	Pn	01 07 01.6	+0.2
MCK	McKinley	1.62	40	P	Pn	01 07 01.6	+0.2
MCK	McKinley	1.62	40	P	Pn	01 07 01.6	+0.2
	baz=222						
WAT6	Susitna Watana	1.65	86	P	Pn	01 07 01.4	-0.5
	baz=269						
L19K	White Mountain	1.69	260		Pn	01 07 02.1	0.0
L19K				Sn	Sn	01 07 23.5	-0.5
L19K				IAML		01 07 25.1	
	comp=E,2μm,0.8s						
L19K	White Mountain	1.69	260	P	Pn	01 07 02.2	0.0
	baz=77						
L19K				S	Sn	01 07 24.0	0.0
	baz=77						
KNK	Knik Glacier	1.74	128		Pn	01 07 02.6	-0.3
KNK				IAML		01 07 27.7	
	comp=N,2μm,0.4s						
KNK				IAML		01 07 30.6	
	comp=E,2μm,0.5s						
KNK	Knik Glacier	1.74	128	P	Pn	01 07 02.5	-0.3
	baz=311						
CAPN	Captain Cook N	1.76	178	Sn	Sn	01 07 29.3	+3.9
BWN	Browne	1.85	26		Pn	01 07 04.6	+0.4
BWN				IAML		01 07 52.8	
	comp=N,1μm,0.8s						
BWN				IAML		01 08 00.3	
	comp=E,1μm,0.9s						
DHY	Denali Highway	1.89	71		Pn	01 07 04.7	-0.2
DHY				IAML		01 07 28.9	
	comp=E,1μm,0.9s						
DHY				IAML		01 07 33.0	
	comp=N,1μm,0.5s						
DHY	Denali Highway	1.89	71	P	Pn	01 07 04.6	-0.2
	baz=254						
SCM	Sheep Creek Mo	1.99	108		Pn	01 07 05.4	-0.6
SCM				IAML		01 07 39.0	
	comp=N,2μm,0.6s						
SCM				IAML		01 07 44.0	
	comp=E,2μm,0.9s						
SCM	Sheep Creek Mo	1.99	108	P	Pn	01 07 05.4	-0.6
J20K	Nowinta River	2.10	324	Pn	Pn	01 07 07.5	+0.1
J20K				IAML		01 07 34.6	
	comp=N,1μm,1.0s						
J20K				IAML		01 07 35.0	
	comp=E,892nm,0.7s						
J20K	Nowinta River	2.10	324	P	Pn	01 07 07.4	0.0
	baz=141						
O22K	Cooper Landing	2.18	159	P	Pn	01 07 08.3	-0.1
	baz=341						
PWL	Port Wells	2.19	138		Pn	01 07 07.7	-0.8
TTA	Tatalina	2.21	283		Pn	01 07 08.7	-0.1
TTA				IAML		01 07 36.5	
	comp=N,484nm,1.1s						
TTA				IAML		01 07 37.1	
	comp=E,640nm,0.7s						
TTA	Tatalina	2.21	283	P	Pn	01 07 08.7	-0.1
TTA	Tatalina	2.21	283	P	Pn	01 07 08.8	-0.1
	baz=99						
N19K	Bonanza Creek	2.29	223	Pn	Pn	01 07 10.3	+0.4
N19K	Bonanza Creek	2.29	223	P	Pn	01 07 10.3	+0.4
	baz=40						
NEA2	Nenana	2.31	25		Pn	01 07 09.6	-0.4
NEA2	Nenana	2.31	25	P	Pn	01 07 09.6	-0.4
	baz=206						
M24K	Tolsona, Glenn	2.43	98		Pn	01 07 11.9	+0.2
M24K	Tolsona, Glenn	2.43	98	P	Pn	01 07 11.9	+0.2
	baz=282						
WRH	Wood River Hil	2.43	35		Pn	01 07 11.5	-0.1
SVW2	Sparrevohn	2.48	237		Pn	01 07 12.4	0.0
O20K	Slope Mountain	2.53	195	P	Pn	01 07 14.0	+0.9
	baz=14						
MLY	Manley	2.53	5		Pn	01 07 13.1	0.0
MLY				IAML		01 07 43.1	
	comp=E,402nm,0.8s						
MLY				IAML		01 07 43.5	
	comp=N,449nm,0.8s						
MLY	Manley	2.53	5	P	Pn	01 07 13.0	0.0
	baz=185						
SEW	Seward	2.58	159		Pn	01 07 13.3	-0.3
SEW	Seward	2.58	159	P	Pn	01 07 13.5	-0.1
	baz=341						
GLI	Glacier Island	2.59	128		Pn	01 07 12.9	-0.9
GLI	Glacier Island	2.59	128	P	Pn	01 07 12.9	-0.9
	baz=311						
CCB	Clear Creek Bu	2.65	35		Pn	01 07 14.2	-0.2
CCB				IAML		01 08 03.8	
	comp=E,364nm,0.6s						
I21K	Tanana	2.69	354		Pn	01 07 15.5	+0.4
I21K				IAML		01 07 46.8	
	comp=E,634nm,1.0s						
I21K				IAML		01 07 47.6	
	comp=N,598nm,0.8s						
I21K	Tanana	2.69	354	P	Pn	01 07 15.4	+0.4
	baz=173						
PAX	Paxson	2.72	78	Pn	Pn	01 07 15.5	-0.1
PAX	Paxson	2.72	78	P	Pn	01 07 15.5	-0.1
PAX	Paxson	2.72	78	P	Pn	01 07 15.4	-0.1
	baz=263						
HDA	Harding Lake	2.72	44		Pn	01 07 15.3	-0.2
HDA				IAML		01 07 55.1	
	comp=N,492nm,0.8s						
HDA				IAML		01 07 56.3	
	comp=E,378nm,0.5s						
HDA	Harding Lake	2.72	44	P	Pn	01 07 15.4	-0.2
	baz=227						
KLU	Klutina	2.74	110		Pn	01 07 14.6	-1.2
KLU				IAML		01 07 48.7	
	comp=N,943nm,0.4s						
KLU				IAML		01 07 57.1	
	comp=E,740nm,0.4s						
KLU	Klutina	2.74	110	P	Pn	01 07 14.7	-1.1
	baz=294						
I23K	Minto, Yukon-K	2.78	17		Pn	01 07 16.1	-0.1
I23K	Minto, Yukon-K	2.78	17	P	Pn	01 07 16.1	-0.1
	baz=198						
BRSE	Bradley Lake S	2.80	174	P	Pn	01 07 15.8	-0.8
	baz=355						
MDM	Murphy Dome	2.80	28		Pn	01 07 16.7	+0.1
MDM				IAML		01 07 48.8	
	comp=E,388nm,1.2s						
MDM				IAML		01 07 50.7	
	comp=N,295nm,0.9s						
TCOL	CIGO, UAF Yank	2.82	31		Pn	01 07 16.9	+0.1
TCOL	CIGO, UAF Yank	2.82	31	P	Pn	01 07 16.8	+0.1
	baz=214						
COLA	College	2.82	31		Pn	01 07 16.8	+0.1
COLA	College	2.82	31	P	Pn	01 07 16.8	+0.1
HARP	HAARP	2.86	90	P	Pn	01 07 17.5	+0.2
	baz=275						
N18K	Kilae Creek	2.87	232	Pn	Pn	01 07 17.6	+0.1
N18K	Kilae Creek	2.87	232	P	Pn	01 07 17.6	+0.1
	baz=48						
HOM	Homer	2.88	183	P	Pn	01 07 17.3	-0.3
	baz=3.6						
FID	Port Fidalgo	2.91	125		Pn	01 07 16.9	-1.1
DIV	Divide	2.97	116		Pn	01 07 17.4	-1.5
IL31		3.00	39		Pn	01 07 18.8	-0.3
ILAR	Eielson Array	3.00	39	P	Pn	01 07 19.1	-0.1
	comp=N,157nm,0.5s,baz=221,slow=14,SNR=1879						
ILAR				S	Sn	01 07 51.2	-3.2
	comp=N,63nm,0.7s,baz=214,slow=18,SNR=1.9						
ILAR	Eielson Array	3.00	39	Pn	Pn	01 07 18.9	-0.2
OPT	Oil Point	3.02	199	P	Pn	01 07 20.4	+0.8
	baz=18						
P19K	Oil Pt	3.03	199	P	Pn	01 07 20.3	+0.7
	baz=18						
POKR	Poker Plat Res	3.12	32		Pn	01 07 21.0	+0.2
POKR	Poker Plat Res	3.12	32	P	Pn	01 07 21.0	+0.2
	baz=215						
HIN	Hinchinbrook I	3.14	131	Pn	Pn	01 07 20.1	-0.9
RIDG	Independent Ri	3.18	64		Pn	01 07 22.4	+0.7
RIDG				IAML		01 08 04.7	
	comp=N,451nm,1.0s						
RIDG				IAML		01 08 06.4	
	comp=E,603nm,0.5s						
RIDG	Independent Ri	3.18	64	P	Pn	01 07 22.3	+0.7
	baz=250						
H21K	Melozitna Rive	3.22	349		Pn	01 07 22.5	+0.4
H21K				IAML		01 07 59.2	
	comp=E,381nm,1.1s						
H21K				IAML		01 08 01.6	
	comp=N,390nm,1.0s						
H21K	Melozitna Rive	3.22	349	P	Pn	01 07 22.6	+0.4
	baz=167						
N25K	Chitina, Valde	3.29	103	Pn	Pn	01 07 22.3	-0.8
N25K				IAML

EYAK Cordova Ski Ar 3.31 124 Pn **Pn 01 07 22.4 -1.0**
EYAK Cordova Ski Ar 3.31 124 P **Pn 01 07 22.5 -0.9**
baz=309
J25K Salcha River, 3.38 49 Pn **Pn 01 07 24.2 -0.2**
J25K IAML 01 08 09.8
comp=E,232nm,0.7s
J25K IAML 01 08 18.8
comp=N,222nm,0.7s
J25K Salcha River, 3.38 49 P **Pn 01 07 24.1 -0.3**
baz=234
H23K Yukon River 3.41 12 Pn **Pn 01 07 25.0 +0.3**
H23K IAML 01 08 16.4
comp=E,209nm,1.0s
H23K Yukon River 3.41 12 P **Pn 01 07 24.9 +0.3**
baz=194
BMRM Bremner River 3.54 113 Pn **Pn 01 07 25.2 -1.3**
BMRM Bremner River 3.54 113 P **Pn 01 07 25.2 -1.3**
baz=299
SCRK Sand Creek 3.62 63 P **Pn 01 07 27.2 -0.3**
baz=249
IMAR Indian Mountai 3.64 344 Pn **Pn 01 07 28.4 +0.7**
H24K Noodor Dome 3.65 23 Pn **Pn 01 07 27.9 0.0**
H24K Noodor Dome 3.65 23 P **Pn 01 07 27.9 0.0**
baz=206
P18K Big Mountain, 3.67 213 Pn **Pn 01 07 28.5 +0.2**
L26K Log Cabin Wild 3.69 79 Pn **Pn 01 07 28.5 0.0**
L26K IAML 01 08 34.4
comp=N,475nm,0.5s
L26K Log Cabin Wild 3.69 79 P **Pn 01 07 28.6 +0.2**
baz=266
GLB Gilahina Butte 3.70 104 Pn **Pn 01 07 27.9 -0.7**
GLB IAML 01 08 28.2
comp=E,322nm,0.8s
Q19K Cape Douglas, 3.78 199 P **Pn 01 07 30.7 +1.0**
baz=17
M26K Nabesna, AK 3.86 88 P **Pn 01 07 30.3 -0.4**
baz=275
VRDI Verde Repeater 3.94 106 Pn **Pn 01 07 30.9 -1.0**
VRDI IAML 01 08 31.2
comp=E,234nm,0.9s
VRDI IAML 01 08 31.9
comp=N,402nm,0.8s
PRP Porcupine Dome 3.94 38 Pn **Pn 01 07 31.6 -0.3**
PRP IAML 01 08 35.4
comp=N,124nm,0.6s
PRP IAML 01 08 48.4
comp=E,115nm,0.7s
PRP Porcupine Dome 3.94 38 P **Pn 01 07 31.6 -0.3**
baz=222
J26L Joseph Creek 4.00 57 P **Pn 01 07 32.6 0.0**
baz=243
HMT Hamilton 4.03 120 Pn **Pn 01 07 31.3 -1.7**
MCARA McCarthy VSAT 4.07 103 P **Pn 01 07 33.1 -0.4**
baz=290
M27K Edge Creek, AK 4.38 88 P **Pn 01 07 38.0 +0.1**
baz=276
L27K Beaver Creek, 4.38 79 P **Pn 01 07 37.1 -0.7**
baz=267
BCAR Beaver Creek A 4.40 79 Pn **Pn 01 07 37.5 -0.6**
WAX Waxell Ridge 4.55 113 Pn **Pn 01 07 39.2 -0.9**
COLD Coldfoot 4.75 5 P **Pn 01 07 43.0 +0.3**
baz=186
KDAK Kodiak Island 4.79 188 P **Pn 01 07 42.1 -1.2**
comp=E,24nm,0.3s,baz=58,slow=6.9,SNR=121
KDAK S **Sn 01 08 33.6 -4.0**
comp=E,31nm,0.4s,baz=323,slow=20,SNR=9.4
KDAK Kodiak Island 4.79 188 Pn **Pn 01 07 41.8 -1.5**
KDAK IAML 01 08 56.7
comp=E,93nm,2.7s
KDAK IAML 01 09 15.0
comp=E,85nm,2.7s
CTG Chitina Glacier 4.99 104 P **Pn 01 07 45.5 -0.5**
baz=293
CTGM Chitina Glacie 4.99 104 Pn **Pn 01 07 45.5 -0.6**
CTGM IAML 01 09 05.9
comp=E,145nm,1.1s
CTGM IAML 01 09 06.8
comp=N,185nm,1.1s
EGAK Eagle 5.05 59 Pn **Pn 01 07 46.6 -0.2**
EGAK IAML 01 09 19.9
comp=N,174nm,1.1s
EGAK IAML 01 09 25.5
comp=N,159nm,0.8s
EGAK Eagle 5.05 59 P **Pn 01 07 46.6 -0.2**
baz=248
YAH Yahtse 5.07 111 Pn **Pn 01 07 46.2 -1.1**
YAH IAML 01 09 04.3
comp=E,165nm,0.8s
MESA MESA 5.08 113 P **Pn 01 07 46.6 -0.8**
baz=302
YUK3 Moose Creek 5.14 94 P **Pn 01 07 47.8 -0.3**
baz=283
LOGN Logan Glacier 5.19 105 Pn **Pn 01 07 47.9 -0.9**
OHAK Old Harbor 5.41 192 P **Pn 01 07 49.8 -1.8**
baz=10.0
DAWY Dawson 5.59 69 P **Pn 01 07 54.0 -0.1**
baz=259
BMAR Burnt Mountain 5.69 27 Pn **Pn 01 07 55.1 -0.3**
PINM Pinnacle 5.85 110 P **Pn 01 07 57.1 -0.6**
baz=299
TOLK Toolik Lake Re 6.19 6 Pn **Pn 01 08 02.8 +0.5**
BCPM Bancas Point 6.19 109 Pn **Pn 01 08 00.7 -1.6**
YUK6 Outpost Mounta 6.35 99 P **Pn 01 08 04.7 +0.1**
baz=290
M30M Minto, Yukon 6.71 83 Pn **Pn 01 08 08.6 -0.7**
HYT Haines Junctio 6.78 98 P **Pn 01 08 09.9 -0.5**
baz=290
EPYK Eagle Plains 7.39 52 Pn **Pn 01 08 17.6 -0.9**
EPYK Eagle Plains 7.39 52 P **Pn 01 08 18.4 0.0**
baz=245
INK Inuvik 9.38 44 P **Pn 01 08 45.7 +0.3**
comp=E,17nm,0.6s,baz=228,slow=15,SNR=62
INK Inuvik 9.38 44 Pn **Pn 01 08 45.3 -0.2**
DLBC Dease Lake 11.24 102 P **Pn 01 09 09.0 -1.8**
comp=E,5.8nm,1.3s,baz=274,slow=15,SNR=2.0
YKA Yellowknife Ar 16.80 74 P **Pn 01 10 21.8 -0.3**
comp=E,2.7nm,0.7s,baz=283,slow=11,SNR=10
YKA PcP **PcP 01 15 04.4 +0.9**
comp=E,0.4nm,0.4s,baz=281,slow=1.1,SNR=5.9
YKA Yellowknife Ar 16.80 74 *ceP* **P 01 10 22.1 -0.5**
YKA pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 18.26 306 *i* P **P 01 10 33.0 -5.6**
BILL pmax pmax
comp=Z,25nm,2.8s
RES Resolute Bay 22.74 35 P **P 01 11 26.1 -0.3**
comp=Z,0.7nm,0.3s,baz=252,slow=15,SNR=6.3
RES LR LR 01 21 10.1
comp=Z,13nm,18.2s,baz=220,slow=39
comp=Z,0.7nm,0.3s
SEY Seymchan 25.11 296 P **P 01 11 48.2 -0.1**
comp=Z,3.8nm,0.7s,baz=64,slow=8.3,SNR=8.0
comp=Z,3.8nm,0.7s
TIXI Tiksi 29.98 321 *ceP* **P 01 12 29.8 -1.8**
TIXI pmax pmax
comp=Z,12nm,2.5s
PDAR Pinedale Array 31.32 109 P **P 01 12 44.3 +0.3**
comp=Z,0.2nm,0.4s,baz=306,slow=7.7,SNR=2.7
comp=Z,0.2nm,0.4s
NVAR Mina Array Bea 31.36 125 P **P 01 12 45.7 +1.4**
comp=Z,0.2nm,0.5s,baz=324,slow=9.0,SNR=2.7
comp=Z,0.2nm,0.5s
YAK Yakutsk 34.62 305 *i* P **P 01 13 11.2 -1.0**
YAK pmax pmax
comp=Z,7.0nm,0.8s
NRIK Noril'sk 42.01 333 P **P 01 14 14.3 +0.4**
comp=Z,3.6nm,0.6s,baz=43,slow=7.8,SNR=5.6
comp=Z,3.6nm,0.6s
NRIK Noril'sk 42.01 333 *i* P **P 01 14 14.3 +0.4**
NRIK pmax pmax
comp=Z,5.0nm,1.3s
KLR Kul'dur 42.47 289 *i* P **P 01 14 14.9 -3.0**
KLR pmax pmax
comp=Z,3.0nm,1.0s
TXAR Lajitas Array 45.19 115 P **P 01 14 41.7 +1.7**
comp=Z,0.4nm,0.6s,baz=332,slow=6.6,SNR=6.2
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 48.21 2 P **P 01 15 02.5 -0.5**
comp=Z,1.3nm,0.6s,baz=10,slow=7.4,SNR=12
ARCES PcP **PcP 01 16 28.1 -0.4**
comp=Z,2.0nm,0.8s,baz=347,slow=3.7,SNR=4.0
comp=Z,1.3nm,0.6s
TKL Tuckaleechee C 48.81 90 P **P 01 15 08.6 +0.6**
comp=Z,2.2nm,1.0s,baz=324,slow=11,SNR=1.5
comp=Z,2.2nm,1.0s
KSRS Korea Array 53.44 282 P **P 01 15 43.0 +0.5**
comp=Z,1.6nm,0.6s,baz=29,slow=7.7,SNR=4.9
comp=Z,1.6nm,0.6s
ULN Ulaanbaatar 53.71 305 *ceP* **P 01 15 44.4 -0.2**
ULN pmax pmax
comp=Z,12nm,2.5s
SONM Songino Array 53.98 306 P **P 01 15 48.2 +1.7**
comp=Z,4.3nm,0.7s,baz=30,slow=7.1,SNR=27
comp=Z,4.3nm,0.7s
PRGR Permogore 55.50 350 *eP* **P 01 15 57.7 +0.6**
ZALV Zalesovo Beam 55.83 324 P **P 01 15 59.4 -0.1**
comp=Z,5.9nm,0.5s,baz=30,slow=6.5,SNR=30
comp=Z,5.9nm,0.5s
NOA NORSAR Array B 56.05 10 P **P 01 15 60.0 -1.1**
comp=Z,0.5nm,0.6s,baz=351,slow=7.3,SNR=2.3
NOA LR LR 01 43 11.7
comp=Z,29nm,18.1s,baz=340,slow=39
comp=Z,0.5nm,0.6s
NOA NORSAR Array B 56.05 10 P **P 01 16 00.0 -1.1**
FINES FINESS Array B 56.34 2 P **P 01 16 02.5 -0.6**
comp=Z,2.6nm,0.7s,baz=23,slow=6.8,SNR=12
comp=Z,2.6nm,0.7s
FINES FINESS Array B 56.34 2 *i* P **P 01 16 03.0 -0.1**
FINES pmax pmax
comp=Z,3.0nm,0.7s
KLMR Klimovskoe 56.67 354 *eP* **P 01 16 05.0 -0.4**
KLMR pmax pmax
comp=Z,16nm,1.6s
KLMR Klimovskoe 56.67 354 *eP* **P 01 16 05.1 -0.4**
KLMR AMP 01 16 07.5
comp=Z,16nm,1.6s
SVE Sverdlovsk 58.43 340 *eP* **P 01 16 18.7 +0.9**
SVE pmax pmax
comp=Z,14nm,0.9s
ARU Arti 59.13 341 *c i* P **P 01 16 22.7 +0.1**
ARU 01 17 08.2
ARU S **S 01 24 26.0 +4.5**
ARU pmax pmax
comp=Z,8.0nm,0.6s
BRVK Borovoye 60.21 333 *ceP* **P 01 16 29.2 -0.9**
BRVK pmax pmax
comp=Z,8.0nm,1.7s
KURK Kurchatov 60.40 326 *ceP* **P 01 16 31.3 -0.1**
KURK pmax pmax
comp=Z,3.0nm,1.3s
OBN Obninsk 62.54 355 *eP* **P 01 16 47.1 +1.4**
OBN *e* 01 17 24.2
OBN *e* 01 19 02.2
OBN pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 62.97 322 P **P 01 16 48.3 -0.5**
comp=Z,2.6nm,0.4s,baz=36,slow=6.7,SNR=50
comp=Z,2.6nm,0.4s
MKAR Makanchi Array 62.97 322 *i* P **P 01 16 48.2 -0.6**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MNK Minsk 63.32 1 *i* P **P 01 16 50.4 -0.5**
MNK *i* *PP pP 01 17 06.6 -10
MNK *i* *SP sP 01 17 13.6 -15
MNK *i* 01 17 26.9
MNK *i* 01 19 10.1
MNK *i* PPP PPP 01 20 39.5
MNK *i* S **S 01 25 18.4 +3.9**
MNK *i* *SS **pS 01 25 46.3 +2.6**
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK Minsk 63.32 1 *i* P **P 01 16 50.4 -0.5**
comp=E,3.0nm,0.9s
MNK *i* P **P 01 16 50.4 -0.5**
comp=N,7.0nm,0.9s
MNK *i* P **P 01 16 50.4 -0.5**
comp=Z,10.0nm,0.9s,baz=359
MNK *i* pP pP 01 17 06.6 -10
MNK *i* sP sP 01 17 13.6 -15
MNK *i* PP **PP 01 19 10.1 -0.5**
MNK *i* PPP PPP 01 20 39.5
MNK *i* S **S 01 25 18.5 +3.9**
MNK *i* sS **pS 01 25 46.4 +2.6**
MNK *i* SS **SS 01 29 11.5 -10**
MNK *i* SSS SSS 01 31 40.3
VORR Voronezh 65.85 353 *eP* **P 01 17 09.3 +1.9**
DPC Dobruska-Polom 67.05 9 *eP* **P 01 17 16.0 +0.8**
DPC Dobruska-Polom 67.05 9 *eP* **P 01 17 16.0 +0.8**
AKASG Malin Array Be 67.13 360 P **P 01 17 15.2 -0.3**
comp=Z,2.0nm,0.4s,baz=3.5,slow=6.5,SNR=21
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 67.13 360 *i* P **P 01 17 15.1 -0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 67.13 360 *ceP* **P 01 17 16.2 +0.7**
KRLC Kraliky 67.35 8 *eP* **P 01 17 17.6 +0.5**
KRLC Kraliky 67.35 8 *eP* **P 01 17 17.6 +0.5**
KHC Kasperske Hory 68.05 11 *eP* **P 01 17 22.3 +0.8**
KHC Kasperske Hory 68.05 11 *eP* **P 01 17 22.3 +0.8**
MAUC Maruska 68.13 8 *eP* **P 01 17 22.6 +0.7**
GERES GERESS Array B 68.34 11 P **P 01 17 23.2 -0.1**
comp=Z,0.5nm,0.5s,baz=2.9,slow=8.0,SNR=6.4
comp=Z,0.5nm,0.5s
CKRC Cesky Krumlov 68.42 10 *eP* **P 01 17 20.1 -3.6**
AAK Ala-Archa 68.95 325 *ceP* **P 01 17 27.9 +0.6**
AAK pmax pmax
comp=Z,3.0nm,1.3s
CONA Conrad Observa 69.43 9 *eP* **P 01 17 30.4 +0.4**
comp=Z,1.6nm,0.7s
MOTA Moosalm 69.59 13 *eP* **P 01 17 33.0 +1.8**
comp=Z,6.0nm,1.3s
SQTA Sankt Quirin 69.72 13 *i* P **P 01 17 33.0 +1.0**
comp=Z,3.2nm,1.0s
WTTA Wattenberg 69.72 12 *i* P **P 01 17 31.9 -0.1**
comp=Z,9.1nm,1.4s
KBA Koelnbreinsper 70.06 11 *eP* **P 01 17 34.9 +0.7**
comp=Z,2.5nm,0.6s
OBKA Obir 70.73 10 *eP* **P 01 17 38.3 +0.2**
comp=Z,3.1nm,0.5s
KBZ Khabaz 73.49 349 P **P 01 17 55.5 +1.1**
comp=Z,2.9nm,0.8s,baz=6.5,slow=4.6,SNR=5.5
comp=Z,2.9nm,0.8s
KBZ Khabaz 73.49 349 *ceP* **P 01 17 56.1 +1.7**
ESDC Sonseca Array 74.82 26 P **P 01 18 02.4 +0.1**
comp=Z,0.9nm,1.0s,baz=346,slow=7.3,SNR=3.2
comp=Z,0.9nm,1.0s
GEYT Alibeck 77.13 337 P **P 01 18 15.3 -0.1**
comp=Z,0.8nm,0.5s,baz=352,slow=6.4,SNR=3.1
comp=Z,0.8nm,0.5s
BRTR Keskin Array B 78.03 356 P **P 01 18 20.8 +0.3**
comp=Z,1.1nm,0.8s,baz=20,slow=4.0,SNR=4.8
comp=Z,1.1nm,0.8s
KEST Kesra 80.85 16 P **P 01 18 35.1 -0.7**
comp=Z,1.6nm,0.8s,baz=276,slow=9.2,SNR=1.6
comp=Z,1.6nm,0.8s
BOSA Boshof 146.02 5 PKPbc **PKPdf 01 26 00.2 +0.3**
comp=Z,1.7nm,0.5s,baz=30,slow=1.7,SNR=7.0
SUR Sutherland 149.42 13 PKPbc **PKPbc 01 26 10.6 +0.5**
comp=Z,6.8nm,1.0s,baz=68,slow=5.4,SNR=2.5

*IDC **22** 01:18:56.5±1.4, 28°.97S×61°.13E, h0km, mb3.7/6, mbtmp3.8/7, ML4.2/1, MS3.2/11, Error ellipse: s-maj=71.0km s-min=24.1km az=31.0*

ISC 22 01:18:58.0±1.4, 29°.00S±0°.4×61°.1E±0°.3, h10km, n22, σ0 48/8, mb3.8/6, MS3.2/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.40**	**306**	Pn		**Pn**	**01 22 48.5**	**-0.1**
	0.1nm,0.3s,baz=118,slow=12,SNR=7.1							
OPO				Sn		Sn	01 25 38.0	-13
	baz=80,slow=11,SNR=1.6							
	3.2nm,0.6s							
BOSA	**Boshof**	**31.35**	**262**	LR		LR	01 35 12.6	
	comp=Z,22nm,21.6s,baz=96,slow=31							
LBTB	**Lobatse**	**31.81**	**269**	LR		LR	01 37 50.2	
	comp=Z,20nm,18.6s,baz=145,slow=36							
LSZ	**Lusaka**	**33.27**	**287**	LR		LR	01 38 17.2	
	comp=Z,28nm,18.2s,baz=163,slow=35							
MAW	**Mawson**	**38.67**	**179**	LR		LR	01 40 29.8	
	comp=Z,45nm,18.4s,baz=228,slow=33							
MBAR	**Mbarara**	**40.45**	**309**	LR		LR	01 41 50.5	
	comp=Z,35nm,20.2s,baz=90,slow=34							
TSUM	**Tsumeb**	**40.71**	**274**	LR		LR	01 41 07.4	
	comp=Z,36nm,21.6s,baz=146,slow=33							
ATD	**Arta Tunnel**	**43.96**	**334**	LR		LR	01 42 48.9	
	comp=Z,34nm,18.5s,baz=33,slow=33							
H01W2	**Cape Leeuwin H**	**44.96**	**112**	T		T	02 15 02.5	
	baz=262,slow=74,SNR=4.7							
H01W3	**Cape Leeuwin H**	**44.96**	**112**	T		T	02 15 07.8	
	baz=262,slow=74,SNR=5.2							
H01W1	**Cape Leeuwin H**	**44.97**	**112**	T		T	02 15 02.5	
	baz=262,slow=74,SNR=6.2							
EIL	**Elat**	**63.44**	**335**	LR		LR	01 53 52.9	
	comp=Z,13nm,19.1s,baz=290,slow=33							
ASAR	**Alice Springs**	**64.53**	**104**	P		**P**	**01 29 35.0**	**-0.6**
	0.4nm,0.6s,baz=246,slow=6.0,SNR=3.1							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**66.34**	**100**	P		**P**	**01 29 48.0**	**+0.6**
	0.2nm,0.6s,baz=247,slow=5.4,SNR=1.6							
	0.2nm,0.6s							
STKA	**Stephens Creek**	**67.89**	**115**	P		**P**	**01 29 56.9**	**0.0**
	0.9nm,0.5s,baz=270,slow=5.1,SNR=3.2							
	0.9nm,0.5s							
GNI	**Garni**	**70.44**	**347**	LR		LR	02 00 46.0	
	comp=Z,14nm,18.1s,baz=117,slow=36							
TORD	**Torodi Ar. Bea**	**71.01**	**298**	P		**P**	**01 30 16.7**	**+0.3**
	1.2nm,1.1s,baz=89,slow=5.7,SNR=5.7							
	1.2nm,1.1s							
BRTR	**Keskin Array B**	**72.98**	**338**	P		**P**	**01 30 27.5**	**-0.3**
	0.6nm,0.8s,baz=130,slow=5.8,SNR=2.7							
	0.6nm,0.8s							
KBZ	**Khabaz**	**74.25**	**346**	LR		LR	02 01 32.9	
	comp=Z,27nm,20.7s,baz=140,slow=34							
MKAR	**Makanchi Array**	**77.81**	**15**	P		**P**	**01 30 55.5**	**+0.3**
	0.7nm,0.8s,baz=193,slow=4.9,SNR=5.2							
	0.7nm,0.8s							
MDT	**Midelt**	**87.50**	**310**	LR		LR	02 10 07.8	
	comp=Z,38nm,18.1s,baz=298,slow=35							
YKA	**Yellowknife Ar**	**146.36**	**356**	PKPbc		**PKPbc**	**01 38 38.1**	**-0.3**
	0.6nm,0.7s,baz=356,slow=3.2,SNR=3.4							

IDC 22 01:27:28.9±2.2, 7°.61S×129°.40E, h0km, mb3.5/1, mbtmp3.2/3, ML3.2/1, MS3.8/1, Error ellipse: s-maj=145.3km s-min=33.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.16**	**159**	Pn		Pn	01 30 35.9	-1.3
	0.1nm,0.3s,baz=341,slow=13,SNR=2.5							
WRA				Sn		Sn	01 32 54.0	-10
	0.6nm,0.3s,baz=331,slow=23,SNR=8.9							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**16.54**	**165**	Pn		P	01 31 23.8	-1.4
	0.1nm,0.3s,baz=338,slow=9.6,SNR=1.9							
ASAR				Sn		Sn	01 34 13.6	-13
	0.1nm,0.3s,baz=355,slow=27,SNR=3.1							
JHJ	**Hachijo jima 2**	**41.69**	**13**	LR		LR	01 49 26.2	
	comp=Z,120nm,20.1s,baz=310,slow=32							
MKAR	**Makanchi Array**	**68.41**	**327**	P		P	01 38 32.6	0.0
	0.2nm,0.4s,baz=115,slow=8.1,SNR=5.5							
	0.2nm,0.4s							

*JMA **22** 01:44:04.4±0.2, 25°.3N±0°.8×124°.9E±0°.4, h5km, MD4.4/10, MV4.3/10, NEAR MIYAKOJIMA ISLAND*
*NIED **22** 01:44:04.4, 25°.33N×124°.94E, h5km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.12; $M_{\theta\theta}$0.96; $M_{\phi\phi}$0.16; $M_{r\theta}$-0.18; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.20000×10^{15} NP1: ϕ_s249.00000°, δ39.00000°, λ-81.00000°. NP2: ϕ_s58.00000°, δ51.00000°, λ-97.00000°.*
*NEIC **22** 01:44:07.9±1.7, 25°.2N±0°.1×125°.18E±0°.07, h40km±14km, mb4.1/6 Error ellipse: s-maj=18.9km s-min=8.9km az=168.0*
*IDC **22** 01:44:10.6±2.8, 25°.39N×125°.17E, h65km±26km, mb3.6/13, mbtmp3.9/16, ML3.3/3, MS3.2/10, Error ellipse: s-maj=21.0km s-min=15.1km az=63.0*

ISC 22 01:44:06.3±1.1, 25°.28N±0°.06×125°.07E±0°.04, h28km±9km, n57, σ 1 25/55, mb4.0/17, MS3.4/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.39**	**156**	P		**Pb**	**01 44 14.2**	**-0.7**
JIKM				*eS*		**Sb**	**01 44 21.2**	**+0.6**
JIKM	**Ikemajima**	**0.39**	**156**	A		A	01 44 14.2	
	comp=E,51nm,1.0s,comp=E,53nm,1.2s							
JIRB	**Irabujima**	**0.46**	**169**	P		**Pb**	**01 44 15.1**	**-0.8**
JIRB				S		**Sb**	**01 44 22.4**	**0.0**
JIRB	**Irabujima**	**0.46**	**169**	A		A	01 44 15.1	
	comp=E,30nm,0.7s,comp=E,34nm,3.3s							
JMJ2	**Miyako jima3**	**0.58**	**157**	P		**Pb**	**01 44 17.9**	**-0.1**
JMJ2				S		**Sb**	**01 44 26.8**	**+0.8**
JMJ2	**Miyako jima3**	**0.58**	**157**	A		A	01 44 17.9	
	comp=E,34nm,2.3s,comp=E,83nm,0.7s							
JOGS	**Gusukube**	**0.60**	**150**	P		**Pb**	**01 44 18.5**	**+0.2**
JOGS				S		**Sn**	**01 44 28.1**	**+0.4**
JOGS	**Gusukube**	**0.60**	**150**	A		A	01 44 18.5	
	comp=E,80nm,0.6s,comp=E,76nm,0.9s							
JTJ	**Tarama**	**0.72**	**208**	P		**Pb**	**01 44 18.7**	**-1.6**
JTJ	**Tarama**	**0.72**	**208**	A		A	01 44 18.7	
	comp=E,26nm,1.7s,comp=E,32nm,1.1s							
JISG	**Ishigakijimahi**	**0.98**	**225**	P		**Pb**	**01 44 22.5**	**-2.1**
JISG				*eS*		**Sb**	**01 44 35.5**	**-1.6**
JISG	**Ishigakijimahi**	**0.98**	**225**	A		A	01 44 22.5	
	comp=E,12nm,0.7s,comp=E,10.0nm,0.7s							
JIJ	**Ishigaki jima**	**1.24**	**223**	P		**Pn**	**01 44 26.5**	**-1.3**
JIJ				S		**Sn**	**01 44 42.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.24**	**223**	A		A	01 44 26.5	
	comp=E,6.0nm,1.7s,comp=E,6.0nm,1.0s							
JKRS	**Kuro-shima**	**1.42**	**223**	P		**Pn**	**01 44 29.6**	**-0.6**
JKRS				S		**Sn**	**01 44 48.2**	**+0.3**
JKRS	**Kuro-shima**	**1.42**	**223**	A		A	01 44 29.6	
	comp=E,18nm,1.8s,comp=E,21nm,3.8s							
IRIF	**Iriomote-Funau**	**1.54**	**233**	*eS*		**Sn**	**01 44 51.4**	**+0.4**
IRIF	**Iriomote-Funau**	**1.54**	**233**	A		A	01 44 51.4	
	comp=E,6.0nm,5.5s,comp=E,5.0nm,1.0s							
YOJ	**Yonaguni jima**	**2.04**	**247**			**Pn**	**01 44 38.9**	**+0.1**
TATO	**Taipei**	**3.26**	**265**			**Pn**	**01 44 58.3**	**+2.7**
JOW	**Kunigami**	**3.27**	**61**	P		**Pn**	**01 44 56.8**	**+1.1**
	6.2nm,0.3s,baz=335,slow=11,SNR=9.7							
JOW				S		**Sn**	**01 45 30.4**	**-3.3**
	58nm,0.5s,baz=240,slow=19,SNR=4.9							
	19nm,0.3s							
JOW	**Kunigami**	**3.27**	**61**			**Pn**	**01 44 56.0**	**+0.4**
NACB	**Ninganchiao**	**3.35**	**252**			**Pn**	**01 44 59.2**	**+2.4**
YHNB	**Yeheng**	**3.41**	**261**			**Pn**	**01 44 58.9**	**+1.2**
YULB	**Yu-li**	**3.92**	**242**			**Pn**	**01 45 05.8**	**+1.1**
SSLB	**Suanglung**	**4.04**	**249**			**Pn**	**01 45 08.1**	**+1.9**
TPUB	**Ta-pu**	**4.51**	**245**			**Pn**	**01 45 14.2**	**+1.4**
KSAR	**Wonju Array Be**	**12.36**	**11**	Pn		**Pn**	**01 47 01.8**	**+1.4**
KSRS	**Korea Array**	**12.38**	**11**	P		**Pn**	**01 47 03.1**	**+2.5**
	0.3nm,0.3s,baz=187,slow=14,SNR=12							
KSRS				LR		LR	01 52 03.6	
	comp=Z,99nm,18.7s,baz=195,slow=39							
	4.4nm,0.9s							
KS19	**Wonju Array Si**	**12.41**	**10**	Pn		**Pn**	**01 47 01.0**	**-0.1**
MJAR	**Matsushiro Arr**	**15.89**	**42**	P		**P**	**01 47 49.3**	**-2.1**
	0.1nm,0.3s,baz=239,slow=9.5,SNR=2.2							
MJAR				LR		LR	01 54 05.1	
	comp=Z,36nm,18.8s,baz=208,slow=38							
	0.9nm,0.4s							
DAV	**Davao City (W)**	**18.11**	**178**	LR		LR	01 57 03.4	
	comp=Z,33nm,18.3s,baz=354,slow=42							
KLR	**Kul'dur**	**24.47**	**11**	LR		LR	01 58 01.9	
	comp=Z,51nm,21.6s,baz=274,slow=34							
CMAR	**Chiang Mai Arr**	**25.16**	**260**	P		**P**	**01 49 31.3**	**+1.9**
	1.2nm,0.3s,baz=66,slow=7.8,SNR=5.7							
CMAR				LR		LR	01 59 04.0	
	comp=Z,12nm,18.3s,baz=160,slow=35							
	1.2nm,0.3s							
ULN	**Ulaanbaatar**	**26.66**	**332**	P		**P**	**01 49 44.1**	**+1.2**
ULN				IAmb		IAmb	01 49 47.4	
	comp=Z,10.0nm,1.3s							
SONM	**Songino Array**	**26.92**	**332**	P		**P**	**01 49 45.2**	**0.0**
	comp=Z,2.5nm,1.0s,baz=150,slow=8.5,SNR=8.8							
SONM				LR		LR	02 01 41.4	
	comp=Z,112nm,19.3s,baz=137,slow=39							
	comp=Z,2.5nm,1.0s							
SONM	**Songino Array**	**26.92**	**332**	P		**P**	**01 49 46.9**	**+1.8**
MK31	**Makanchi Array**	**40.08**	**314**	P		**P**	**01 51 39.7**	**+0.4**
MK31				IAmb		IAmb	01 51 46.2	
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**40.08**	**314**	P		**P**	**01 51 39.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=100,slow=10,SNR=11							
MKAR				PcP		**PcP**	**01 53 43.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=90,slow=5.8,SNR=5.4							
MKAR				LR		LR	02 09 25.5	
	comp=Z,42nm,20.3s,baz=86,slow=38							
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**40.08**	**314**	P		**P**	**01 51 39.1**	**-0.2**

MAKZ Makanchi 40.29 313 P P 01 51 41.9 +0.9
MAKZ IAmb IAmb 01 51 48.5
comp=Z,2.5nm,0.8s
ZAA0 Zalesovo Array 41.33 325 P P 01 51 50.0 +0.6
ZAA0 IAmb IAmb 01 51 55.7
comp=Z,2.5nm,0.6s
ZALV Zalesovo Beam 41.33 325 P P 01 51 49.5 +0.1
comp=Z,2.1nm,0.6s,baz=112,slow=9.3,SNR=7.4
ZALV LR LR 02 09 59.7
comp=Z,50nm,20.2s,baz=72,slow=38
comp=Z,2.1nm,0.6s
ZALV Zalesovo Beam 41.33 325 P P 01 51 49.2 -0.2
KURBB Kurchatov Arra 43.61 318 P P 01 52 08.5 +0.5
comp=Z,1.3nm,1.0s,baz=107,slow=8.9,SNR=6.5
KURBB PcP **PcP 01 53 54.9 -0.3**
comp=Z,0.5nm,0.8s,baz=103,slow=4.0,SNR=5.5
comp=Z,1.3nm,1.0s
AAK Ala-Archa 44.70 306 LR LR 02 13 48.9
comp=Z,68nm,19.0s,baz=58,slow=40
WRA Warramunga Arr 45.84 168 P P 01 52 26.9 +0.8
comp=Z,1.3nm,0.7s,baz=348,slow=8.5,SNR=8.8
comp=Z,1.3nm,0.7s
BVAR Borovoye Array 49.11 319 P P 01 52 51.1 -0.1
comp=Z,0.3nm,0.5s,baz=116,slow=9.8,SNR=3.8
comp=Z,0.3nm,0.5s
ASAR Alice Springs 49.40 169 P P 01 52 54.5 +0.7
comp=Z,0.5nm,0.5s,baz=355,slow=9.6,SNR=9.1
ASAR PcP **PcP 01 54 16.3 +0.4**
comp=Z,0.5nm,0.8s,baz=338,slow=2.5,SNR=4.4
comp=Z,0.5nm,0.5s
ABKAR Akbulak array 55.23 314 P P 01 53 36.8 +0.1
ARU Arti 56.39 322 LR LR 02 19 46.0
comp=Z,94nm,19.3s,baz=61,slow=38
GEYT Alibeck 57.30 300 P P 01 53 52.4 +0.6
comp=Z,2.2nm,0.9s,baz=12,slow=7.8,SNR=4.7
comp=Z,2.2nm,0.9s
GEYT Alibeck 57.30 300 P P 01 53 52.7 +0.9
ILAR Eielson Array 66.61 28 P P 01 54 52.7 -1.1
comp=Z,0.5nm,0.5s,baz=249,slow=4.1,SNR=11
comp=Z,0.5nm,0.5s
FINES FINESS Array B 72.28 330 P P 01 55 27.9 -1.0
comp=Z,3.0nm,0.9s,baz=96,slow=3.8,SNR=5.8
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 75.35 307 P P 01 55 45.7 -1.8
comp=Z,0.7nm,0.7s,baz=57,slow=4.6,SNR=5.6
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 80.56 24 P P 01 56 15.5 -0.3
comp=Z,2.2nm,0.8s,baz=303,slow=5.2,SNR=8.8
comp=Z,2.2nm,0.8s

IDC ***22*** *02:00:34.5±0.5, 12°.33N×144°.05E, h0km, mb4.3/18, mbtmp4.4/20, ML4.6/2, MS4.0/64, Error ellipse: s-maj=19.6km s-min=12.6km az=100.0*
BJI ***22*** *02:00:36.3±0.0, 12°.42N×143°.97E, h12km, mb4.7/37, mB5.2/19, Ms4.5/10, Ms7 4.3/15*
NEIC ***22*** *02:00:37.5±1.4, 12°.42N±0°.06×144°.08E±0°.07, h10km±1km, mb4.8/114, Error ellipse: s-maj=14.0km s-min=6.9km az=236.0*
GCMT ***22*** *02:00:39.5±0.2, 12°.15N±0°.02×144°.09E±0°.02, h13km, MW5.0/114, Moment Tensor Solution. s40,c42; s114,c155; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=3.34±.14; Mθθ2.29±.10; Mφφ1.05±.09; Mrθ-0.18±.23; Mθφ-1.50±.06; Mφr-0.08±.24; Best double couple: M0=3.32300×10^16^ NP1:φs=121.00000°, δ46.00000°, λ-94.00000°. NP2:φs=307.00000°, δ44.00000°, λ-86.00000°. Principal axes: T 3.2950, Plg1.0000°, Azm214.0000°; N 0.0560, Plg3.0000°, Azm124.0000°; P -3.3500, Plg87.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***22*** *02:00:41.5±0.6, 12°N±5°×14°4E±1°1, h63km±9km, M4.9/19, mB5.7/10, mb5.0/19, MLv4.2/1, Mw(mB)5.3/10*
ISC 22 02:00:39.0±0.4, 12°.38N±0°.06×144°.10E±0°.07, h27km, n223, σ1§45/130, mb4.8/92, MS4.2/71, 6C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.42**	**32**	Pn	**Pn**	**02 01 03.0**	**0.0**
	187nm,0.3s,baz=328,slow=17,SNR=103						
GUMO				Sn	**Sb**	**02 01 23.6**	**+1.2**
	272nm,0.3s,baz=202,slow=23,SNR=5.4						
GUMO	**Guam**	**1.42**	**32**	Pn	**Pn**	**02 01 02.6**	**-0.4**
MANU	**Manus Island**	**14.69**	**167**	Pn	**Pn**	**02 04 05.1**	**0.0**
GENI	**Genyem**	**15.38**	**195**	P	**Pn**	**02 04 16.2**	**+1.9**
	2μm101nm,1.7s						
SRPI	**Serui, Papua**	**16.17**	**209**	P	**P**	**02 04 25.9**	**-1.6**
MWPI	**Manokwari, Pap**	**16.57**	**218**	P	**P**	**02 04 31.1**	**-0.8**
	42nm,0.5s						
WAMI	**Wamena**	**17.02**	**199**	P	P	02 05 03.8	+27
SIJI	**Sorong**	**18.32**	**225**	P	**P**	**02 04 50.8**	**-0.5**
	0.7nm,0.3s,baz=20,slow=15,SNR=5.6						
SIJI				LR	LR	02 10 16.4	
	comp=Z,647nm,21.5s,baz=13,slow=32						
	3.5nm,0.3s						
KRVT	**Keravat (AS076**	**18.35**	**154**	P	**Pn**	**02 04 51.9**	**+0.1**
	5.4nm,0.3s,baz=60,slow=16,SNR=3.3						
KRVT				LR	LR	02 10 16.1	
	comp=Z,267nm,18.6s,baz=130,slow=32						
	79nm,0.8s						
DAV	**Davao City (W)**	**19.00**	**256**	LR	LR	02 12 29.3	
	comp=Z,335nm,20.8s,baz=88,slow=38						
FAKI	**Fak Fak**	**19.23**	**219**	P	**P**	**02 05 00.8**	**-0.5**
FAKI				IAmb	IAmb	02 05 03.9	
	comp=Z,103nm,1.6s						
TNTI	**Ternate**	**20.21**	**236**	P	**P**	**02 05 12.6**	**+0.6**
TNTI				IAmb	IAmb	02 05 14.6	
	comp=Z,131nm,1.9s						
JOW	**Kunigami**	**20.68**	**316**	LR	LR	02 12 50.2	
	comp=Z,262nm,20.5s,baz=71,slow=36						
JHJ	**Hachijo jima 2**	**21.02**	**350**	LR	LR	02 13 16.5	
	comp=Z,459nm,19.2s,baz=143,slow=36						
MSAI	**Masohi**	**21.71**	**225**	P	**P**	**02 05 29.0**	**+0.8**
PMG	**Port Moresby**	**21.86**	**172**	LR	LR	02 14 23.5	
	comp=Z,293nm,18.7s,baz=348,slow=38						
KRAI	**Karang Ratu**	**22.06**	**226**	P	**P**	**02 05 34.0**	**+2.0**
	comp=Z,4μmcomp=Z,36nm,1.9s						
H11N1	**WAKE ISLAND Hy**	**23.07**	**69**	T	T	02 29 43.2	
	baz=255,slow=75,SNR=60						
H11N2	**WAKE ISLAND Hy**	**23.08**	**69**	T	T	02 29 44.3	
	baz=255,slow=75,SNR=90						
H11N3	**WAKE ISLAND Hy**	**23.09**	**69**	T	T	02 29 43.8	
	baz=255,slow=75,SNR=44						
GTOI	**Gorontalo**	**23.95**	**242**	P	**P**	**02 05 54.4**	**+3.2**
	comp=Z,291nmcomp=Z,17nm,1.0s						
MJAR	**Matsushiro Arr**	**24.64**	**349**	P	**P**	**02 05 57.3**	**-0.1**
MJAR				LR	LR	02 14 55.3	
	comp=Z,730nm,18.5s,baz=154,slow=35						
	comp=Z,1.6nm,0.7s						
MAJO	**Matsushiro**	**24.64**	**349**	P	**P**	**02 05 56.6**	**-0.8**
MJB9	**Matsu-Tunnel**	**24.64**	**349**	P	**P**	**02 05 57.6**	**+0.2**
MRSI	**Marisa**	**24.96**	**243**	P	**P**	**02 06 02.2**	**+1.7**
	comp=Z,1μmcomp=Z,91nm,1.3s						
LUWI	**Luwuk**	**25.02**	**239**	P	**P**	**02 06 01.0**	**0.0**
LUWI	**Luwuk**	**25.02**	**239**	P	**P**	**02 06 01.7**	**+0.7**
	comp=Z,7μmcomp=Z,97nm,1.1s						
TOLI2	**Tolitoli**	**25.69**	**246**	P	**P**	**02 06 06.2**	**-0.8**
TOLI2				IAmb	IAmb	02 06 16.2	
	comp=Z,56nm,1.7s						
APSI	**Ampana**	**25.91**	**241**	P	**P**	**02 06 12.6**	**+3.6**
	comp=Z,66nm,1.1s						
MYLDM	**Lahad Datu**	**26.27**	**256**	P	**P**	**02 06 13.7**	**+1.3**
MYLDM	**Lahad Datu**	**26.27**	**256**	P	**P**	**02 06 14.2**	**+1.8**
	comp=Z,57nm,1.4s						
MPSI	**Mapaga**	**26.82**	**245**	P	**P**	**02 06 23.1**	**+5.8**
KSRS	**Korea Array**	**28.87**	**333**	P	**P**	**02 06 35.8**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=143,slow=11,SNR=2.4						
	comp=Z,1.0nm,0.6s						
NJ2	**Nanjing**	**30.36**	**314**	*eP*	**P**	**02 06 46.3**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
CTA	**Charters Tower**	**32.33**	**176**	LR	LR	02 20 18.0	
	comp=Z,262nm,18.9s,baz=356,slow=37						
SBUM	**Sibu**	**33.08**	**255**	P	**P**	**02 07 12.9**	**+0.1**
SBUM	**Sibu**	**33.08**	**255**	P	**P**	**02 07 13.5**	**+0.7**
	comp=Z,9.0nm,1.2s						
WRAB	**Tennant Creek**	**33.51**	**197**	P	**P**	**02 07 18.0**	**+1.5**
WB2	**Warramunga Arr**	**33.52**	**197**	P	**P**	**02 07 15.8**	**-0.8**
WRA	**Warramunga Arr**	**33.52**	**197**	P	**P**	**02 07 15.5**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=19,slow=9.8,SNR=40						
WRA				LR	LR	02 21 24.5	
	comp=Z,634nm,18.9s,baz=10.0,slow=37						
	comp=Z,2.8nm,0.6s						
WRA	**Warramunga Arr**	**33.52**	**197**	P	**P**	**02 07 15.6**	**-1.1**
QIZ	**Qiongzhong**	**33.59**	**286**	P	**P**	**02 07 17.3**	**0.0**
QIZ				S	**S**	**02 12 41.9**	**+3.5**
QIZ				LR	LR		
	comp=Z,500nm,20.7s						
KSM	**Kuching**	**35.20**	**255**	P	**P**	**02 07 30.5**	**-0.7**
KSM	**Kuching**	**35.20**	**255**	P	**P**	**02 07 30.9**	**-0.3**
	comp=Z,31nm,1.1s						
LYN	**LuoYang**	**36.21**	**313**	⇑P	**P**	**02 07 41.3**	**+1.7**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	**HongShan**	**36.22**	**319**	⇓P	**P**	**02 07 40.5**	**+0.8**
HNS				S	**S**	**02 13 11.9**	**-6.4**
HNS				pmax	pmax		
	comp=Z,15nm,1.3s						
HNS				LR	LR		
	comp=Z,370nm,12.9s						
HNS				LR	LR		
	comp=Z,290nm,15.5s						
AS31	**Alice Springs**	**37.19**	**196**	P	**P**	**02 07 47.8**	**-0.3**
ASAR	**Alice Springs**	**37.19**	**196**	P	**P**	**02 07 46.4**	**-1.7**
	comp=Z,2.7nm,0.9s,baz=20,slow=11,SNR=32						
ASAR				PcP	**PcP**	**02 10 08.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=38,slow=3.0,SNR=5.7						
ASAR				LR	LR	02 23 30.2	
	comp=Z,537nm,20.4s,baz=358,slow=37						
	comp=Z,2.7nm,0.9s						
ASAR	**Alice Springs**	**37.19**	**196**	P	**P**	**02 07 46.5**	**-1.5**
KLR	**Kul'dur**	**38.14**	**347**	LR	LR	02 22 48.8	
	comp=Z,210nm,21.6s,baz=187,slow=35						
XLT	**XiLinHaoTe**	**39.59**	**328**	*eP*	P	02 08 15.3	+7.2
XLT				pP	sP	02 08 19.3	+1.4
HHC	**Hu-ho-hao-te**	**40.21**	**321**	*eP*	**P**	**02 08 14.6**	**+1.2**
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,350nm,6.2s						
HHC				LR	LR		
	comp=Z,390nm,14.6s						
HHC				LR	LR		
	comp=Z,520nm,15.9s						
HHC				LR	LR		
	comp=Z,650nm,15.2s						
DZM	**Mont Dzumac**	**40.65**	**147**	*e*LR	LR	02 19 27.2	
	comp=Z,300nm,28.9s						
LEM	**Lembang**	**40.98**	**244**	LR	LR	02 28 35.0	
	comp=Z,117nm,18.7s,baz=150,slow=41						
KMI	**Kunming**	**41.00**	**294**	⇑P	**P**	**02 08 22.6**	**+2.3**
KMI				pP	pP	02 08 25.9	-1.3
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
CD2	**Chengdu**	**41.50**	**303**	*eP*	**P**	**02 08 24.0**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	**Petropavlovsk-**	**42.06**	**12**	LR	LR	02 22 29.0	
	comp=Z,409nm,20.2s,baz=198,slow=31						
PZH	**PanZhiHua**	**42.14**	**296**	P	**P**	**02 08 31.9**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,150nm,4.0s						
LZH	**Lanzhou**	**43.21**	**310**	*eP*	**P**	**02 08 40.3**	**+2.2**
LZH				pP	pP	02 08 43.8	-1.1
LZH				sP	sP	02 08 46.4	-1.4
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=Z,370nm,16.1s						
LZH				LR	LR		
	comp=Z,360nm,17.5s						
LZH				LR	LR		
	comp=Z,390nm,18.2s						
CMAR	**Chiang Mai Arr**	**43.86**	**284**	P	**P**	**02 08 42.8**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=86,slow=5.8,SNR=11						
CMAR				LR	LR	02 26 45.8	
	comp=Z,292nm,20.2s,baz=95,slow=36						
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**43.86**	**284**	P	**P**	**02 08 43.1**	**-0.3**
CHTO	**Chiang Mai**	**43.87**	**284**	P	**P**	**02 08 42.9**	**-0.6**
STKA	**Stephens Creek**	**44.07**	**183**	P	**P**	**02 08 43.0**	**-1.8**
	comp=Z,2.4nm,0.5s,baz=351,slow=7.2,SNR=9.9						
STKA				LR	LR	02 29 22.9	
	comp=Z,401nm,18.3s,baz=4.7,slow=39						
	comp=Z,2.4nm,0.5s						
MASI	**Maura Aman, Be**	**44.36**	**252**	P	**P**	**02 08 48.8**	**+1.3**
	comp=Z,58nm,1.1s						
MSVF	**Nonsavu**	**44.93**	**131**	LR	LR	02 24 19.8	
	comp=Z,118nm,21.7s,baz=146,slow=32						
MNSI	**Mandailing Nat**	**45.61**	**259**	P	P	02 09 04.9	+7.5
PSI	**Prapat**	**45.71**	**262**	LR	LR	02 31 10.9	
	comp=Z,47nm,20.4s,baz=90,slow=40						
PSI	**Prapat**	**45.71**	**262**	P	**pP**	**02 09 03.7**	**-1.5**
	comp=Z,9.1nm,0.9s						
PSI				P	**P**	**02 08 58.0**	**-0.3**
	comp=Z,9.1nm,0.9s						
RPSI	**Rantau Prapat**	**45.74**	**262**	P	**P**	**02 08 58.6**	**+0.2**
RPSI				IAmb	IAmb	02 09 03.8	
	comp=Z,11nm,1.0s						
KCSI	**Kotacane, Aceh**	**46.65**	**263**	P	**P**	**02 09 07.1**	**+1.5**
	comp=Z,34nm,1.3s						
SHEM	**Shemya Is, Ala**	**46.87**	**25**	LR	LR	02 28 43.8	
	comp=Z,98nm,19.3s,baz=240,slow=36						
ULN	**Ulaanbaatar**	**46.96**	**326**	P	**P**	**02 09 08.9**	**+1.3**
SONM	**Songino Array**	**47.30**	**326**	P	**P**	**02 09 10.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=146,slow=8.6,SNR=4.6						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**47.30**	**326**	P	**P**	**02 09 11.6**	**+1.3**
GSI	**Gunungsitoli**	**47.40**	**260**	P	**P**	**02 09 11.2**	**-0.2**
GTA	**Gaotai**	**47.43**	**313**	*eP*	**P**	**02 09 13.5**	**+2.0**
GTA				pP	pP	02 09 16.5	-1.9
GTA				sP	sP	02 09 19.5	-1.8
GTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,84nm,4.9s						
GTA				LR	LR		
	comp=Z,120nm,16.0s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
GTA				LR	LR		
	comp=Z,210nm,18.2s						
MORW	**Morawa**	**49.32**	**213**	P	**P**	**02 09 26.3**	**+0.4**
GOMU	**GeErMu**	**50.15**	**307**	P	**P**	**02 09 31.3**	**-1.5**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,56nm,4.2s						
YAK	**Yakutsk**	**50.66**	**351**	LR	LR	02 30 51.9	
	comp=Z,219nm,18.8s,baz=88,slow=36						
SHL	**Shillong**	**50.80**	**293**	P	**P**	**02 09 36.7**	**-0.9**
SHL				IAmb	IAmb	02 09 38.8	
	comp=Z,13nm,0.8s						
BRDH	**Bariadhala**	**50.84**	**289**	LR	LR	02 31 56.2	
	comp=Z,230nm,20.3s,baz=96,slow=37						
AFI	**Afiamalu**	**50.94**	**119**	LR	LR	02 27 59.4	
	comp=Z,113nm,19.2s,baz=250,slow=32						
NWAO	**Narrogin (SRO)**	**51.84**	**209**	LR	LR	02 32 55.5	
	comp=Z,159nm,19.0s,baz=246,slow=38						
TAPN	**Taplejung**	**54.66**	**295**	*eP*	**P**	**02 10 06.0**	**-0.3**
RAMN	**Ramite**	**55.62**	**294**	*eP*	**P**	**02 10 11.7**	**-1.5**
	comp=Z,32nm,0.8s						
JIRN	**Jiri**	**56.03**	**295**	*eP*	**P**	**02 10 15.4**	**-0.8**
	comp=Z,36nm,0.6s						
GUN	**Gumba**	**56.32**	**295**	*eP*	**P**	**02 10 17.4**	**-0.9**
	comp=Z,51nm,0.7s						
PKI	**Pulchoki**	**56.72**	**295**	*eP*	**P**	**02 10 19.8**	**-1.3**
	comp=Z,19nm,0.8s						
PKIN	**Phulchoki**	**56.73**	**295**	*eP*	**P**	**02 10 19.6**	**-1.5**
	comp=Z,7.3nm,0.4s						
DMN	**Daman**	**56.99**	**295**	*eP*	**P**	**02 10 21.7**	**-1.2**
	comp=Z,22nm,0.5s						
WMQ	**Urumqi**	**57.43**	**314**	⇑*i*P	**P**	**02 10 29.1**	**+3.5**
WMQ				pP	pP	02 10 31.3	-1.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.8s						
WMQ				LR	LR		
	comp=Z,110nm,18.5s						
DANN	**Dangsing**	**58.21**	**296**	*eP*	**P**	**02 10 30.6**	**-1.0**
	comp=Z,43nm,0.5s						
URZ	**Urewera**	**59.09**	**150**	LR	LR	02 33 23.7	
	comp=Z,76nm,19.5s,baz=56,slow=33						
TIXI	**Tiksi**	**59.96**	**354**	LR	LR	02 37 55.6	
	comp=Z,60nm,20.2s,baz=0.0,slow=37						
RPZ	**Rata Peaks**	**61.00**	**158**	LR	LR	02 32 42.0	
	comp=Z,144nm,21.5s,baz=298,slow=32						
MK31	**Makanchi Array**	**61.84**	**317**	P	**P**	**02 10 56.1**	**+0.2**
MKAR	**Makanchi Array**	**61.84**	**317**	P	**P**	**02 10 55.8**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=90,slow=8.6,SNR=27						
	comp=Z,3.6nm,0.6s						
MKAR	**Makanchi Array**	**61.84**	**317**	P	**P**	**02 10 55.5**	**-0.3**
MAKZ	**Makanchi**	**62.06**	**317**	P	**P**	**02 10 57.2**	**-0.1**
MAKZ				IAmb	IAmb	02 10 60.0	
	comp=Z,7.6nm,0.8s						
ZAA0	**Zalesovo Array**	**62.17**	**325**	P	**P**	**02 10 58.0**	**+0.2**
ZALV	**Zalesovo Beam**	**62.17**	**325**	P	**P**	**02 10 57.4**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=95,slow=6.2,SNR=3.0						
ZALV				PcP	**PcP**	**02 11 36.7**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=126,slow=5.0,SNR=4.8						
ZALV				LR	LR	02 40 53.2	
	comp=Z,73nm,18.1s,baz=96,slow=39						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**62.17**	**325**	P	**P**	**02 10 59.1**	**+1.2**
PALK	**Pallekele**	**62.56**	**272**	LR	LR	02 35 23.2	
	comp=Z,105nm,21.9s,baz=198,slow=33						
RAR	**Rarotonga**	**64.44**	**121**	LR	LR	02 33 16.3	
	comp=Z,86nm,21.9s,baz=322,slow=30						
KURK	**Kurchatov**	**65.03**	**320**	P	**P**	**02 11 16.1**	**-0.7**
KSH	**Kashi**	**65.38**	**308**	P	**P**	**02 11 23.3**	**+3.8**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KDAK	**Kodiak Island**	**65.49**	**32**	LR	LR	02 38 56.1	
	comp=Z,91nm,19.6s,baz=246,slow=35						
NRIK	**Noril'sk**	**67.03**	**341**	LR	LR	02 41 42.1	
	comp=Z,188nm,18.3s,baz=127,slow=37						
NIL	**Nilore**	**67.37**	**301**	P	**P**	**02 11 31.8**	**-0.4**
CAST	**Castle Rocks**	**67.41**	**26**	IAmb	IAmb	02 11 42.9	
	comp=Z,10nm,1.3s						
BPAW	**Bear Paw Mtn.**	**68.08**	**25**	P	**P**	**02 11 36.9**	**+0.9**
MLY	**Manley**	**68.46**	**24**	IAmb	IAmb	02 11 40.7	
	comp=Z,7.2nm,1.1s						
COLD	**Coldfoot**	**69.34**	**22**	P	**P**	**02 11 45.1**	**+1.2**
COLD				IAmb	IAmb	02 11 46.0	
	comp=Z,6.2nm,1.0s						
BTK	**Batken**	**69.38**	**308**	P	**P**	**02 11 46.1**	**+1.4**
WRH	**Wood River Hil**	**69.40**	**25**	IAmb	IAmb	02 11 46.2	
	comp=Z,8.1nm,1.0s						
MDM	**Murphy Dome**	**69.47**	**25**	IAmb	IAmb	02 11 50.9	
	comp=Z,5.8nm,1.0s						
KK31	**Karatay Array**	**69.69**	**311**	P	**P**	**02 11 46.3**	**-0.2**
KKAR	**Karatay Array**	**69.69**	**311**	P	**P**	**02 11 46.4**	**-0.1**
GAR	**Garm**	**69.75**	**307**	P	**P**	**02 11 47.6**	**+0.5**
GAR				IAmb	IAmb	02 11 52.8	
	comp=Z,12nm,1.1s						
HDA	**Harding Lake**	**69.86**	**26**	IAmb	IAmb	02 11 52.0	
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**69.97**	**25**	P	**P**	**02 11 46.6**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=252,slow=4.7,SNR=20						
ILAR				LR	LR	02 43 35.4	
	comp=Z,49nm,18.6s,baz=257,slow=37						
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**70.41**	**322**	LR	LR	02 44 19.2	
	comp=Z,221nm,20.3s,baz=95,slow=37						
BRVK	**Borovoye**	**70.48**	**322**	P	**P**	**02 11 51.2**	**+0.1**
BRVK				IAmb	IAmb	02 11 53.5	
	comp=Z,5.7nm,0.7s						
KBL	**Kabul**	**70.84**	**302**	P	**P**	**02 11 54.3**	**+0.3**
KBL				IAmb	IAmb	02 11 55.1	
	comp=Z,5.8nm,0.8s						
SCRK	**Sand Creek**	**71.04**	**26**	IAmb	IAmb	02 12 05.3	
	comp=Z,22nm,1.9s						
L26K	**Log Cabin Wild**	**71.14**	**27**	IAmb	IAmb	02 11 59.3	
	comp=Z,7.5nm,1.1s						
J26L	**Joseph Creek**	**71.32**	**26**	IAmb	IAmb	02 11 59.7	
	comp=Z,6.5nm,0.7s						
L27K	**Beaver Creek,**	**71.83**	**27**	IAmb	IAmb	02 12 08.8	
	comp=Z,20nm,2.0s						
LOGN	**Logan Glacier**	**71.92**	**30**	IAmb	IAmb	02 12 04.1	
	comp=Z,9.6nm,0.8s						
PPT	**Papeete**	**71.92**	**113**	LR	LR	02 39 27.3	
	comp=Z,107nm,18.6s,baz=340,slow=32						
PPT2	**Papeete2**	**71.92**	**113**	*e*LR	LR	02 33 56.8	
	comp=Z,139nm,22.0s						
DAWY	**Dawson**	**73.05**	**27**	P	**P**	**02 12 07.0**	**+0.6**
DAWY				IAmb	IAmb	02 12 08.2	
	comp=Z,8.7nm,1.2s						
HYT	**Haines Junctio**	**73.62**	**30**	IAmb	IAmb	02 12 13.1	
	comp=Z,7.3nm,0.8s						
TBI	**Tubuai**	**74.04**	**119**	*e*LR	LR	02 34 54.7	
	comp=Z,84nm,34.2s						
WHY	**Whitehorse**	**74.90**	**30**	IAmb	IAmb	02 12 20.8	
	comp=Z,8.8nm,1.0s						
INK	**Inuvik**	**75.76**	**22**	LR	LR	02 44 40.6	
	comp=Z,49nm,21.1s,baz=254,slow=35						
HRA	**Herat**	**76.46**	**303**	IAmb	IAmb	02 12 28.9	
	comp=Z,8.2nm,0.8s						
ABKAR	**Akbulak array**	**76.93**	**318**	P	**P**	**02 12 28.0**	**-1.1**
ARU	**Arti**	**77.33**	**325**	LR	LR	02 49 49.0	
	comp=Z,112nm,19.2s,baz=78,slow=38						
ARU	**Arti**	**77.33**	**325**	P	**P**	**02 12 31.1**	**0.0**
DLBC	**Dease Lake**	**77.40**	**33**	LR	LR	02 41 40.6	
	comp=Z,118nm,20.4s,baz=271,slow=32						
WTLY	**Watson Lake, Y**	**77.93**	**31**	IAmb	IAmb	02 12 38.9	
	comp=Z,8.2nm,0.8s						
AKTO	**Aktyubinsk**	**78.09**	**319**	LR	LR	02 50 02.6	
	comp=Z,73nm,18.6s,baz=80,slow=38						
TAOE	**Nuku Hiva Isla**	**78.17**	**102**	*e*LR	LR	02 36 49.8	
	comp=Z,188nm,21.3s						
BBB	**Bella Bella**	**78.98**	**39**	LR	LR	02 39 31.8	
	comp=Z,439nm,20.7s,baz=248,slow=30						
GEYT	**Alibeck**	**79.37**	**307**	P	**P**	**02 12 43.5**	**+0.6**
	comp=Z,4.8nm,0.9s,baz=70,slow=1.7,SNR=6.2						
GEYT				LR	LR	02 52 30.4	
	comp=Z,90nm,19.5s,baz=87,slow=39						
	comp=Z,4.8nm,0.9s						
GEYT	**Alibeck**	**79.37**	**307**	P	**P**	**02 12 43.5**	**+0.6**
GEYT				IAmb	IAmb	02 12 45.7	
	comp=Z,8.6nm,1.1s						
WSAR	**Wadi Sarin**	**81.11**	**292**	LR	LR	02 49 33.4	
	comp=Z,54nm,21.6s,baz=132,slow=36						
KIRV	**Kirov**	**81.97**	**328**	LR	LR	02 51 11.4	
	comp=Z,110nm,19.5s,baz=73,slow=37						
EUNU	**Eureka**	**84.16**	**8**	P	**P**	**02 13 08.3**	**+0.9**
BELG	**Belogornoye**	**84.22**

comp=Z,62nm,18.0s,baz=300,slow=33
comp=Z,5.4nm,0.8s
NV11 Mina Array Sit 88.37 51 P P 02 13 30.3 +1.3
NV11 IAmb IAmb 02 13 33.0
comp=Z,7.3nm,1.1s
ISA Isabella, Lake 88.81 54 IAmb IAmb 02 13 34.3
comp=Z,14nm,1.6s
GNI Garni 89.14 311 LR LR 02 56 47.4
comp=Z,20nm,20.0s,baz=82,slow=38
KBZ Khabaz 89.48 315 P P 02 13 33.6 -0.2
comp=Z,2.0nm,0.8s,baz=23,slow=15,SNR=4.1
comp=Z,2.0nm,0.8s
HLID Hailey 89.72 45 P **P 02 13 36.1 +0.8**
HLID IAmb IAmb 02 13 40.0
comp=Z,13nm,1.8s
ELK Elko 89.93 48 LR LR 02 47 09.4
comp=Z,177nm,21.9s,baz=288,slow=31
ELK Elko 89.93 48 IAmb IAmb 02 13 40.3
comp=Z,5.1nm,0.9s
WCT Wildcat Mounta 89.96 52 IAmb IAmb 02 13 39.7
comp=Z,5.1nm,1.0s
QSM Queen of Sheba 89.99 53 IAmb IAmb 02 13 39.1
comp=Z,6.7nm,1.1s
GWY Greenwater Val 90.09 53 IAmb IAmb 02 13 39.6
comp=Z,5.9nm,1.2s
TPNV Topopah Spring 90.21 52 IAmb IAmb 02 13 41.6
comp=Z,8.1nm,1.0s
GSC Goldstone, Bar 90.22 54 IAmb IAmb 02 13 40.8
comp=Z,7.4nm,1.1s
VNDA Vanda 90.31 176 LR LR 02 51 48.5
comp=Z,28nm,19.7s,baz=340,slow=34
PFO Pinyon Flats O 90.94 55 LR LR 02 50 11.7
comp=Z,141nm,18.9s,baz=276,slow=33
PFO Pinyon Flats O 90.94 55 P **P 02 13 41.5 +0.5**
HVU Hansel Valley 91.41 47 P **P 02 13 43.9 +0.8**
HVU IAmb IAmb 02 13 45.7
comp=Z,6.4nm,1.4s
V12A Nelson 91.63 53 IAmb IAmb 02 13 47.8
comp=Z,6.1nm,0.9s
YHH Holmes Hill 91.78 43 IAmb IAmb 02 13 50.3
comp=Z,8.0nm,1.4s
ESJX Sierra Juarez 91.78 57 P **P 02 13 46.2 +1.2**
ESJX IAmb IAmb 02 13 51.8
comp=Z,6.2nm,1.3s
FINES FINESS Array B 91.94 335 P **P 02 13 43.4 -1.5**
comp=Z,3.8nm,0.7s,baz=62,slow=4.1,SNR=26
FINES LR LR 02 56 55.0
comp=Z,75nm,21.9s,baz=39,slow=37
comp=Z,3.8nm,0.7s
MOOW Moose Ponds 92.20 44 IAmb IAmb 02 14 03.0
comp=Z,5.8nm,1.6s
YMP Mirror Lake Pl 92.26 43 P **P 02 13 48.1 +0.9**
BLYC Blythe 92.45 55 IAmb IAmb 02 13 51.1
comp=Z,5.1nm,0.9s
RLMT Red Lodge 92.73 43 IAmb IAmb 02 13 55.3
comp=Z,4.0nm,0.9s
KNB Kanab 92.82 51 IAmb IAmb 02 13 55.1
comp=Z,7.3nm,1.3s
PDAR Pinedale Array 93.34 45 P **P 02 13 52.1 0.0**
comp=Z,0.4nm,0.7s,baz=274,slow=3.5,SNR=3.0
PDAR LR LR 02 48 42.5
comp=Z,144nm,22.0s,baz=300,slow=31
comp=Z,0.4nm,0.7s
LAO LASA Array 94.13 41 P **P 02 13 55.2 -0.2**
NACGM Naroch 94.88 329⇓*eP* **P 02 13 57.0 -1.6**
baz=61
AKASG Malin Array Be 95.57 325 LR LR 03 00 44.0
comp=Z,174nm,18.7s,baz=56,slow=38
BRTR Keskin Array B 97.34 313 P **P 02 14 08.9 -1.5**
comp=Z,0.6nm,0.7s,baz=22,slow=6.8,SNR=3.8
comp=Z,0.6nm,0.7s
HFS Hagfors 97.62 337 LR LR 03 00 43.1
comp=Z,66nm,18.5s,baz=36,slow=37
NOA NORSAR Array B 97.91 339 LR LR 03 01 54.9
comp=Z,64nm,19.7s,baz=30,slow=38
MAW Mawson 98.03 202 LR LR 02 57 43.2
comp=Z,141nm,18.1s,baz=60,slow=35
ATD Arta Tunnel 98.31 284 LR LR 03 00 34.5
comp=Z,18nm,18.4s,baz=10.0,slow=37
ANMO Albuquerque 98.38 52 LR LR 02 58 52.6
comp=Z,117nm,18.3s,baz=290,slow=36
MMAI Mount Meron Ar 98.49 306 LR LR 03 05 46.8
comp=Z,26nm,19.4s,baz=224,slow=40
ULM Lac du Bonnet 98.66 34 LR LR 02 52 33.6
comp=Z,88nm,21.5s,baz=314,slow=32
LPIG La Paz 98.83 63 LR LR 02 52 50.0
comp=Z,116nm,19.3s,baz=280,slow=32
ESDC Sonseca Array 120.30 332 PKP **PKPdf 02 19 27.7 -0.5**
comp=Z,0.5nm,1.0s,baz=11,slow=3.2,SNR=4.9
TORD Torodi Ar. Bea 134.91 303 PKP **PKPdf 02 19 56.6 0.0**
comp=Z,0.3nm,0.5s,baz=40,slow=2.5,SNR=8.9
PLCA Paso Flores 138.52 139 PKP **PKiKP 02 20 04.2 -0.6**
comp=Z,1.0nm,0.7s,baz=245,slow=1.4,SNR=6.8
DBIC Dimbokro 143.80 300 PKhKP PKPpre 02 20 09.2
comp=Z,2.4nm,0.5s,baz=69,slow=6.7,SNR=5.8
KIC Kosan Boka 143.86 299⇑*i*PKIKP **PKPdf 02 20 12.0 -0.9**
comp=Z,2.2nm,0.5s
TIC Toumodi 143.95 300⇑*i*PKIKP PKPbc 02 20 11.6 +0.7
comp=Z,2.4nm,0.2s
LIC Lamto 144.18 299⇑*i*PKIKP **PKPab 02 20 11.5 +0.4**
comp=Z,24nm,0.6s
GO02 Mina Guanaco 145.77 117 PKPdf 02 20 16.8 +0.5
PB11 IPOC Station P 146.79 107 PKPbc **PKPdf 02 20 18.2 +0.3**
PB16 IPOC Station P 147.09 105 PKPbc **PKPbc 02 20 20.8 -0.3**
LPAZ La Paz 148.55 101 PKPbc **PKPbc 02 20 24.8 -0.4**
LPAZ La Paz 148.55 101 PKPbc **PKPbc 02 20 24.6 -0.6**

*IDC **22** 02:13:34.6±1.2, 43°.47S×91°.94E, h0km, mb3.8/7, mbtmp3.8/7, MS3.6/7, Error ellipse: s-maj=41.3km s-min=22.7km az=117.0*
ISC 22 02:13:36.3±1.0, 43°.5S±0°.2×92°.0E±0°.3, h10km, n16, σ0°.97/8, mb3.8/7, MS3.6/7, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**19.14**	**71**	T	T	02 37 45.6	
baz=237,slow=74,SNR=129							
H01W3	**Cape Leeuwin H**	**19.15**	**71**	T	T	02 37 42.4	
baz=237,slow=74,SNR=135							
H01W1	**Cape Leeuwin H**	**19.16**	**71**	T	T	02 37 43.9	
baz=237,slow=74,SNR=120							
MAW	**Mawson**	**28.71**	**203**	P	**P**	**02 19 33.8**	**+0.6**
1.7nm,0.9s,baz=51,slow=8.0,SNR=2.5							
1.7nm,0.9s							
ASAR	**Alice Springs**	**39.62**	**74**	P	**P**	**02 21 08.6**	**+0.5**
1.9nm,0.9s,baz=230,slow=7.4,SNR=12							
ASAR				LR	LR	02 35 37.7	
comp=Z,113nm,19.5s,baz=341,slow=33							
1.9nm,0.9s							
WRA	**Warramunga Arr**	**42.39**	**70**	P	**P**	**02 21 30.7**	**-0.2**
2.2nm,0.9s,baz=229,slow=8.2,SNR=9.3							
WRA				LR	LR	02 37 36.9	
comp=Z,197nm,19.3s,baz=206,slow=34							
2.2nm,0.9s							
BATI	**Baumata**	**43.07**	**49**	LR	LR	02 38 54.1	
comp=Z,60nm,18.7s,baz=212,slow=35							
VNDA	**Vanda**	**43.63**	**163**	P	**P**	**02 21 40.7**	**+0.4**
0.6nm,1.0s,baz=287,slow=8.2,SNR=2.5							
0.6nm,1.0s							
KAPI	**Kappang**	**45.48**	**41**	LR	LR	02 36 47.8	
comp=Z,36nm,20.1s,baz=256,slow=31							
QSPA	**South Pole Qui**	**46.66**	**180**	P	**P**	**02 22 04.0**	**-0.8**
1.0nm,0.9s,baz=6.3,slow=6.5,SNR=6.5							
1.0nm,0.9s							
CTA	**Charters Tower**	**50.68**	**80**	LR	LR	02 43 04.5	
comp=Z,35nm,18.5s,baz=264,slow=35							
PMG	**Port Moresby**	**58.56**	**72**	LR	LR	02 46 53.3	
comp=Z,139nm,21.3s,baz=249,slow=34							
TSUM	**Tsumeb**	**65.85**	**266**	LR	LR	02 49 50.6	
comp=Z,33nm,18.0s,baz=147,slow=33							
MKAR	**Makanchi Array**	**90.30**	**353**	P	**P**	**02 26 37.0**	**+0.1**
0.4nm,0.8s,baz=168,slow=2.7,SNR=3.0							
0.4nm,0.8s							
SONM	**Songino Array**	**91.82**	**10**	P	**P**	**02 26 44.6**	**+0.6**
0.4nm,0.7s,baz=198,slow=4.2,SNR=2.4							
0.4nm,0.7s							
INK	**Inuvik**	**145.71**	**28**	PKPbc	**PKPdf**	**02 33 11.9**	**-1.7**
2.5nm,1.0s,baz=260,slow=7.6,SNR=3.3							

*RSNC **22** 02:21:55.8±1.2, 9°.48N×72°.98W, h2km±5km, ML2.1*
*FUNV **22** 02:21:56.4, 9°.39N×72°.92W, h9km, MW3.1*
ISC 22 02:21:54.1±1.4, 9°.44N±0°.03×72°.97W±0°.03, h12km±11km, n19, σ1°.39/36, 3C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL1C	**La Loma 1 Cana**	**0.59**	**280**	*eP*	**Pg**	**02 22 06.1**	**+0.4**
LL1C				*eS*	**Sb**	**02 22 15.3**	**+0.6**
MCQV	**Machiques**	**0.74**	**35**	*eP*	**Pb**	**02 22 09.7**	**+0.6**
MCQV				*eS*	**Sn**	**02 22 21.0**	**-0.8**
LL5C	**La Loma 5 El P**	**0.81**	**293**⇑	*iP*	**Pg**	**02 22 10.2**	**+0.5**
LL5C				*eS*	**Sn**	**02 22 22.2**	**-1.0**
OCAC	**Ocana**	**1.24**	**196**⇑	*iP*	**Pn**	**02 22 16.9**	**-0.6**
OCAC				*eS*	**Sb**	**02 22 33.2**	**-0.4**
ARGC	**Ariguani, Magd**	**1.33**	**288**	*eP*	**Pn**	**02 22 18.4**	**-0.2**
ARGC				*eS*	**Sn**	**02 22 35.7**	**-0.5**
ARGC				*i*		02 22 38.0	
comp=Z,21nm,0.3s							
CRJC	**Cerrejon, Guaj**	**1.57**	**3**	*eP*	**Pn**	**02 22 22.5**	**+0.4**
CRJC				*eS*	**Sb**	**02 22 43.8**	**+0.5**
CRJC				*i*		02 22 45.9	
comp=Z,31nm,0.3s							
CAPV	**Capacho**	**1.69**	**157**	*eP*	**Pn**	**02 22 24.5**	**+0.8**
CAPV				*eS*	**Sb**	**02 22 46.2**	**-0.5**
PAMC	**Pamplona, Colo**	**2.10**	**173**	*eP*	**Pb**	**02 22 32.7**	**+0.2**
PAMC				*eS*	**Sb**	**02 22 59.6**	**+0.8**
PAMC				*i*		02 23 02.1	
comp=Z,28nm,0.2s							
SJCC	**San Jacinto, C**	**2.23**	**282**⇑	*iP*	**Pn**	**02 22 32.3**	**+1.3**
SJCC				*eS*	**Sb**	**02 23 02.1**	**+0.1**
SOCV	**Socops**	**2.38**	**119**	*eP*	**Pn**	**02 22 34.2**	**+1.1**
SOCV				*eS*	**Sn**	**02 23 02.7**	**+0.5**
BRRC	**Barranca, Sant**	**2.43**	**198**	*eP*	**Pb**	**02 22 38.0**	**+0.2**
BRRC				*eS*	**Sb**	**02 23 09.5**	**+1.8**
BRRC				*i*		02 23 15.0	
comp=Z,5.7nm,0.2s							
URIC	**Uribia, Colomb**	**2.45**	**23**	*eP*	**Pb**	**02 22 36.5**	**-1.6**
URIC				*eS*	**Sb**	**02 23 08.4**	**+0.1**
URIC				*i*		02 23 15.1	
comp=Z,5.9nm,0.1s							
DABV	**Dabajuro**	**2.73**	**57**	*eP*	**Pn**	**02 22 39.5**	**+1.7**
DABV				*eS*	**Sn**	**02 23 11.6**	**+0.8**
CURV	**Curarigua**	**3.02**	**79**	*eP*	**Pn**	**02 22 44.2**	**+2.3**
CURV				*eS*	**Sn**	**02 23 17.4**	**-0.7**
SIQV	**Siquisique**	**3.34**	**69**	*eP*	**Pn**	**02 22 47.8**	**+1.5**
SIQV				*eS*	**Sn**	**02 23 24.4**	**-1.4**
RUSC	**La Rusia**	**3.52**	**182**	*eP*	**Pb**	**02 22 59.0**	**+2.2**
RUSC				*eS*	**Sg**	**02 23 44.4**	**-3.0**
RUSC				*i*		02 23 46.7	
comp=Z,3.2nm,0.3s							
MAPV	**Macapo**	**4.46**	**85**	*eP*	**Pn**	**02 23 02.6**	**+0.8**
BAUV	**El Baul**	**4.89**	**95**	*eP*	**Pn**	**02 23 07.1**	**-0.5**
BAUV				*eS*	**Sn**	**02 23 59.9**	**-4.2**
BENV	**Beln**	**5.32**	**84**	*eP*	**Pn**	**02 23 14.4**	**+0.9**

TAP 22 02:26:22.8, 22°.65N×121°.34E, h34km, ML2.3, 1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.12**	**78**	*i P*	Pb	02 26 28.5	-0.3
baz=68							
LDUT				*i S*	Sb	02 26 33.4	+0.5
baz=68							
TWGBT	**Beinan**	**0.30**	**305**	P	Pb	02 26 30.5	-0.1
baz=304							
TWGBT				S	Sb	02 26 35.8	0.0
baz=304							
TWG	**Pinlang**	**0.30**	**304**	*i P*	Pb	02 26 30.4	-0.2
baz=304							
TWG				*i S*	Sb	02 26 35.9	-0.1
baz=304							
LONT	**Longtian**	**0.32**	**323**	P	Pb	02 26 30.8	-0.1
baz=310							
LONT				*i S*	Sb	02 26 36.8	+0.4
baz=310							
EDH	**Donghe**	**0.33**	**353**	*eP*	Pb	02 26 30.6	-0.3
baz=352							
EDH				S	Sb	02 26 37.2	+0.7
baz=352							
ECL	**Taimali**	**0.36**	**262**	*i P*	Pb	02 26 30.9	-0.5
baz=268							
ECL				*i S*	Sn	02 26 36.7	-0.6
baz=268							
ECS	**Chishang**	**0.46**	**346**	P	Pb	02 26 32.7	-0.1
baz=335							
EHD	**Haiduan**	**0.51**	**346**	*eP*	Pb	02 26 32.0	-1.7
baz=335							
EHD				S	Sb	02 26 39.4	-1.8
baz=335							
TAWH	**Dawu Township**	**0.52**	**234**	P	Pb	02 26 32.0	-1.7
baz=235							
TAWH				S	Sb	02 26 39.4	-1.8
baz=235							
EAST	**Anshuo**	**0.53**	**240**⇓	*iP*	Pb	02 26 33.2	-0.7
baz=240							
EAST				*i S*	Sb	02 26 40.8	-0.8
baz=240							
FULB	**Fuli**	**0.55**	**355**	*eP*	Pb	02 26 34.2	0.0
baz=343							
FULB				*eS*	Sn	02 26 42.9	+0.7
baz=343							
ELDTW	**Lidau**	**0.62**	**331**	P	Pn	02 26 35.1	0.0
baz=331							
ELDTW				S	Sn	02 26 43.5	-0.5
baz=331							
LAY	**Lan-yu**	**0.64**	**162**	*i P*	Pn	02 26 35.1	-0.3
baz=163							
LAY				S	Sb	02 26 45.1	+0.7
baz=163							
TSMG	**Majia**	**0.65**	**275**	*eP*	Pn	02 26 35.3	-0.2
baz=275							
TSMG				S	Sn	02 26 44.0	-0.6
baz=275							
MASBT	**Mashibuluo**	**0.66**	**267**	P	Pn	02 26 35.5	-0.1
baz=267							
MASBT				S	Sn	02 26 44.1	-0.7
baz=267							
SLIU	**Shizi**	**0.66**	**230**	*eP*	Pn	02 26 34.8	-0.9
baz=230							
SLIU				*eS*	Sn	02 26 43.1	-1.8
baz=230							
SSD	**Sandimen**	**0.67**	**279**	*i P*	Pn	02 26 35.4	-0.3
baz=278							
SSD				*i S*	Sn	02 26 44.3	-0.7
baz=278							
LYUB	**Lan-yu**	**0.68**	**161**	P	Pn	02 26 34.2	-1.7
baz=162							
LYUB				S	Sn	02 26 42.9	-2.5
baz=162							
EYUL	**Yuli**	**0.70**	**358**	*eS*	Sb	02 26 48.1	+2.1
baz=348							
SCZT	**Fangliau**	**0.72**	**248**	P	Pb	02 26 37.1	+0.1
baz=247							
SCZT				*eS*	Sn	02 26 45.9	-0.6
baz=247							
STYH	**Taoyuan**	**0.74**	**315**	*eP*	Pn	02 26 35.4	-1.4
baz=314							
STYH				S	Sn	02 26 46.6	-0.2
baz=314							
YULB	**Yu-li**	**0.74**	**357**	*eP*	Pn	02 26 36.8	-0.1
baz=347							
YULB				*eS*	Sn	02 26 47.1	+0.1
baz=347							
HGSD	**Ruisui**	**0.84**	**5**	*eP*	Pb	02 26 39.2	+0.2
baz=12							
HGSD				*eS*	Sb	02 26 51.1	+1.0
baz=12							
TWKBT	**Hengchun**	**0.86**	**215**	*eP*	Pn	02 26 38.1	-0.4
baz=217							
TWKBT				*eS*	Sn	02 26 47.8	-2.0
baz=217							
TWK1	**Hengchun**	**0.86**	**216**	P	Pn	02 26 38.6	+0.1
baz=217							
TWK1				S	Sn	02 26 49.5	-0.4
baz=217							
WTP	**Ta-pu**	**0.90**	**312**	P	Pb	02 26 40.7	+0.7
baz=316							
WTP				*i S*	Sb	02 26 53.4	+1.7
baz=316							
YUS	**Yu-Shan**	**0.91**	**337**	S	Sn	02 26 51.5	-0.3
baz=340							
CHN1	**Nanshi**	**0.92**	**306**	*eP*	Pb	02 26 40.8	+0.4
baz=305							
TPUB	**Ta-pu**	**0.93**	**315**	P	Pb	02 26 40.9	+0.5
baz=314							
TPUB				S	Sb	02 26 53.8	+1.4
baz=314							
ALS	**Alishan**	**0.99**	**330**	P	Pb	02 26 41.7	0.0
baz=337							
ALS				S	Sb	02 26 56.0	+1.4
baz=337							
TWK	**Hsinying**	**1.00**	**308**	*eP*	Pb	02 26 41.3	-0.4
baz=316							
WCKO	**Fanlu**	**1.04**	**319**	*eP*	Pn	02 26 41.4	+0.4
baz=325							
WCKO				*eS*	Sb	02 26 56.0	+0.3
baz=325							
VWDT	**VWDT**	**1.12**	**350**	P	Pn	02 26 42.1	+0.1
baz=1.0							
VWDT				*eS*	Sn	02 26 56.8	+0.6
baz=1.0							
WHYT	**Xinyi Township**	**1.14**	**337**	*eP*	Pb	02 26 44.3	+0.3
baz=342							
WHYT				*eS*	Sb	02 26 58.2	-0.3
baz=342							
ESL	**Shilin**	**1.16**	**4**	*eP*	Pb	02 26 44.1	-0.3
baz=4.0							
SCLT	**Jiali**	**1.18**	**297**	*eS*	Sn	02 26 58.6	+0.8
baz=295							
SSLB	**Suanglung**	**1.19**	**343**	*eP*	Pb	02 26 45.0	+0.1
baz=348							
SSLB				*eS*	Sb	02 26 59.4	-0.6
baz=348							
TYC	**Yuchr**	**1.33**	**340**	P	Pb	02 26 47.2	+0.1
baz=342							
TYC				S	Sb	02 27 03.8	0.0
baz=342							
WUSB	**Renai**	**1.35**	**351**	*eP*	Pn	02 26 46.5	+1.1
baz=2.0							
CHGB	**Renai**	**1.41**	**354**	*eP*	Pn	02 26 46.9	+0.6
baz=4.0							
WCS	**Beigang Elemen**	**1.46**	**344**	*eP*	Pn	02 26 47.8	+1.1
baz=343							
WHF	**Hehuan Shan**	**1.49**	**357**	*eP*	Pn	02 26 47.6	0.0
baz=6.0							

*IDC **22** 02:40:41.8±0.5, 10°.57N×125°.91E, h0km, mb4.1/23, mbtmp4.1/23, MS3.3/6, Error ellipse: s-maj=28.5km s-min=12.3km az=71.0*
*MAN **22** 02:40:45.7, 10°.62N×126°.10E, h3km, mb4.6, ML3.4, MS3.3*
MAN INTENSITY II - LORETO DINAGAT.
ISC 22 02:40:44.1±2.0, 10°.62N±0°.05×125°.99E±0°.07, h14km±12km, n53, σ1°.18/49, mb4.3/23, MS3.3/5, 8C-7D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABP	**Talibon, Bohol**	**1.71**	**252**⇓	*eP*	**Pg**	**02 41 17.5**	**+0.5**
TABP				*eS*	**Sg**	**02 41 38.9**	**-0.2**
GHBP	**Garcia Hernand**	**1.91**	**239**⇓	*eP*	**Pg**	**02 41 20.6**	**-0.2**
GHBP				*eS*	**Sg**	**02 41 46.7**	**+1.0**
LLP	**Lapu-Lapu**	**2.01**	**262**⇑	*iP*	**Pg**	**02 41 22.7**	**0.0**
LLP				*i S*	**Sg**	**02 41 49.4**	**+0.7**
TBP	**Tagbilaran**	**2.29**	**246**⇓	*iP*	**Pb**	**02 41 26.3**	**+1.2**
TBP				*i S*	**Sg**	**02 41 56.6**	**-1.0**
BIPH	**Bislig**	**2.45**	**171**⇑	*eP*	**Pn**	**02 41 25.0**	**+1.3**
BIPH				*i S*	**Sg**	**02 42 02.4**	**-0.5**
CGP	**Cagayan de Oro**	**2.50**	**211**⇓	*eP*	**Pb**	**02 41 29.6**	**+0.8**
CGP				*eS*	**Sb**	**02 42 01.1**	**+1.6**
LSIP	**Lazi, Siquijor**	**2.75**	**238**⇓	*eP*	**Pb**	**02 41 32.1**	**-0.9**
LSIP				*eS*	**Sb**	**02 42 07.9**	**+1.3**
BUKP	**Musuan**	**2.87**	**199**⇓	*eP*	**Pb**	**02 41 34.5**	**-0.7**
BUKP				*eS*	**Sb**	**02 42 12.1**	**+1.9**
RCP	**Roxas**	**3.31**	**287**⇓	*eP*	**Pb**	**02 41 40.8**	**-1.8**
CNOP	**Candoni, Negro**	**3.39**	**257**⇑	*eP*	**Pb**	**02 41 41.8**	**-2.1**
DAV	**Davao City (W)**	**3.55**	**187**	Lg	Lg	02 42 33.5	
64nm,0.3s,baz=320,slow=19,SNR=2.0							
KCP	**Kidapawan**	**3.70**	**194**⇑	*iP*	**Pb**	**02 41 47.8**	**-1.5**
KCP				*i S*	**Sb**	**02 42 31.4**	**-2.6**
PAGZ	**Pagadian**	**3.77**	**223**⇑	*eP*	**Pb**	**02 41 46.9**	**-3.5**
CTBH	**Cotabato--PC H**	**3.79**	**207**⇑	*iP*	**Pb**	**02 41 49.6**	**-1.2**
LQP	**Lukban**	**5.56**	**309**⇑	*eP*	Pn	02 42 11.9	+5.3
PACPP	**Pamplona Cagay**	**8.99**	**331**⇑	*eP*	Pn	02 42 58.8	+5.3
GUMO	**Guam**	**18.70**	**79**	LR	LR	02 50 41.2	
comp=Z,67nm,20.4s,baz=143,slow=32							
LEM	**Lembang**	**25.20**	**227**	LR	LR	02 56 31.2	
comp=Z,76nm,19.2s,baz=156,slow=38							
KSRS	**Korea Array**	**26.77**	**3**	P	**P**	**02 46 24.4**	**+1.0**
1.2nm,0.7s,baz=183,slow=11,SNR=4.6							
KSRS				LR	LR	02 56 58.2	
comp=Z,19nm,19.9s,baz=175,slow=36							
1.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**27.28**	**290**	P	**P**	**02 46 28.7**	**+0.4**
1.1nm,0.3s,baz=104,slow=6.2,SNR=4.8							
1.1nm,0.3s							
WRA	**Warramunga Arr**	**31.47**	**165**	P	**P**	**02 47 04.5**	**-1.0**
0.6nm,0.6s,baz=347,slow=9.1,SNR=3.6							
0.6nm,0.6s							
USRK	**Ussuriysk Ar.**	**33.86**	**8**	P	**P**	**02 47 26.9**	**+0.8**
3.0nm,0.7s,baz=189,slow=11,SNR=6.4							
3.0nm,0.7s							
ASAR	**Alice Springs**	**34.95**	**167**	P	**P**	**02 47 35.6**	**-0.2**
1.3nm,0.3s,baz=350,slow=7.1,SNR=24							
1.3nm,0.3s							
CTA	**Charters Tower**	**36.46**	**147**	P	**P**	**02 47 49.1**	**+0.3**
5.5nm,1.1s,baz=346,slow=12,SNR=2.2							
5.5nm,1.1s							
H11S3	**WAKE ISLAND Hy 40.09**	**74**		T	T	03 31 04.7	
baz=266,slow=77,SNR=33							
H11S1	**WAKE ISLAND Hy 40.11**	**74**		T	T	03 31 05.1	
baz=266,slow=77,SNR=43							
H11S2	**WAKE ISLAND Hy 40.11**	**74**		T	T	03 31 06.2	
baz=266,slow=77,SNR=44							
H11N1	**WAKE ISLAND Hy 40.41**	**72**		T	T	03 31 27.9	
baz=264,slow=74,SNR=45							
H11N2	**WAKE ISLAND Hy 40.42**	**72**		T	T	03 31 26.7	
baz=264,slow=74,SNR=31							
H11N3	**WAKE ISLAND Hy 40.43**	**72**		T	T	03 31 29.2	
baz=264,slow=74,SNR=46							
SONM	**Songino Array**	**40.59**	**340**	P	**P**	**02 48 24.7**	**+1.3**
0.9nm,0.5s,baz=145,slow=8.9,SNR=4.8							
0.9nm,0.5s							
NWAO	**Narrogin (SRO)**	**44.10**	**191**	LR	LR	03 11 03.2	
comp=Z,34nm,18.3s,baz=180,slow=41							
STKA	**Stephens Creek**	**44.82**	**161**	P	**P**	**02 48 58.3**	**+0.6**
1.2nm,0.4s,baz=9.7,slow=4.2,SNR=5.0							
1.2nm,0.4s							
PETK	**Petropavlovsk-**	**49.44**	**25**	P	**P**	**02 49 34.8**	**+1.3**
2.5nm,0.8s,baz=204,slow=3.2,SNR=2.2							
2.5nm,0.8s							
MKAR	**Makanchi Array**	**51.58**	**323**	P	**P**	**02 49 50.8**	**+0.9**
4.3nm,0.6s,baz=120,slow=8.1,SNR=38							
MKAR				PcP	**PcP**	**02 51 03.2**	**-0.5**
0.6nm,0.6s,baz=103,slow=4.6,SNR=1.4							
4.3nm,0.6s							
ZALV	**Zalesovo Beam**	**54.19**	**331**	P	**P**	**02 50 09.1**	**+0.1**
0.9nm,0.3s,baz=110,slow=8.1,SNR=7.7							
0.9nm,0.3s							
KURBB	**Kurchatov Arra**	**55.63**	**325**	P	**P**	**02 50 19.8**	**+0.4**
3.0nm,0.5s,baz=124,slow=6.9,SNR=46							
3.0nm,0.5s							
BVAR	**Borovoye Array**	**61.22**	**325**	P	**P**	**02 50 58.9**	**+0.4**
0.8nm,0.7s,baz=130,slow=8.0,SNR=6.3							
0.8nm,0.7s							
NRIK	**Noril'sk**	**63.61**	**346**	P	**P**	**02 51 14.7**	**+0.5**
4.6nm,0.7s,baz=102,slow=9.9,SNR=3.6							
4.6nm,0.7s							
AKTO	**Aktyubinsk**	**67.88**	**320**	P	**P**	**02 51 41.8**	**-0.3**
0.5nm,0.5s,baz=90,slow=11,SNR=2.0							
0.5nm,0.5s							
URZ	**Urewera**	**68.11**	**139**	LR	LR	03 20 49.9	
comp=Z,21nm,21.3s,baz=356,slow=35							
ARU	**Arti**	**68.78**	**327**	P	**P**	**02 51 46.8**	**-0.8**
3.4nm,0.5s,baz=8.0,slow=2.9,SNR=5.0							
3.4nm,0.5s							
ILAR	**Eielson Array**	**79.25**	**26**	P	**P**

BBB	**Bella Bella**	91.23	36	LR	LR	03 42 18.4	
	comp=Z,44nm,18.5s,baz=289,slow=40						
TXAR	**Lajitas Array**	117.81	49	PKP	**PKPdf**	02 59 30.5	-0.4
	0.2nm,0.6s,baz=349,slow=1.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	119.88	292	PKP	**PKPdf**	02 59 33.4	-1.6
	0.4nm,0.9s,baz=89,slow=1.4,SNR=1.8						
PLCA	**Paso Flores**	146.64	157	PKPbc	**PKPbc**	03 00 25.4	-0.4
	0.9nm,0.8s,baz=135,slow=2.9,SNR=2.0						

IDC 22 03:07:00.3±18.0, 23°83S×69°02E, h0km, mb3.7/3, mbtmp3.7/3, MS3.5/2, Error ellipse: s-maj=595.6km s-min=44.8km az=53.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	16.43	12	T	T	03 27 32.4	
	baz=191,slow=76,SNR=6.4						
H08S2	**Diego Garcia H**	16.44	12	T	T	03 27 31.5	
	baz=191,slow=76,SNR=7.5						
H08S3	**Diego Garcia H**	16.45	12	T	T	03 27 31.4	
	baz=191,slow=76,SNR=13						
BOSA	**Boshof**	39.39	253	LR	LR	03 27 34.7	
	comp=Z,25nm,18.9s,baz=14,slow=31						
ASAR	**Alice Springs**	58.88	104	P	P	03 17 01.6	+0.1
	0.7nm,0.6s,baz=256,slow=6.4,SNR=15						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	60.26	100	P	P	03 17 10.8	-0.2
	0.9nm,0.7s,baz=254,slow=7.0,SNR=6.9						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	71.31	10	P	P	03 18 21.6	0.0
	0.2nm,0.6s,baz=182,slow=7.2,SNR=2.1						
	0.2nm,0.6s						
MDT	**Midelt**	89.97	306	LR	LR	04 00 31.1	
	comp=Z,42nm,18.3s,baz=265,slow=36						

*IDC **22** 03:17:11.8±1.6, 5°67S×110°85E, h522km±20km, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=25.1km s-min=14.3km az=62.0*

ISC 22 03:17:10.6±0.8, 5°6S±0°1×111°0E±0°2, h500km, n10, σ1§05/10, mb3.5/8, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	3.58	250	P	P	03 18 27.6	+1.6
	30nm,0.4s,baz=118,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	26.79	124	P	P	03 22 10.6	+0.5
	0.5nm,0.3s,baz=313,slow=9.7,SNR=13						
	0.5nm,0.3s						
ASAR	**Alice Springs**	28.43	131	P	P	03 22 24.9	+0.4
	1.4nm,0.6s,baz=309,slow=8.2,SNR=15						
	1.4nm,0.6s						
STKA	**Stephens Creek**	38.75	136	P	P	03 23 51.8	+0.3
	5.9nm,0.4s,baz=316,slow=9.4,SNR=12						
	5.9nm,0.4s						
USRK	**Ussuriysk Ar.**	53.06	19	P	P	03 25 41.2	+0.8
	1.4nm,0.6s,baz=217,slow=5.4,SNR=2.5						
	1.4nm,0.6s						
SONM	**Songino Array**	53.36	356	P	P	03 25 42.7	0.0
	0.4nm,0.5s,baz=177,slow=8.3,SNR=3.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	58.05	337	P	P	03 26 13.9	-1.3
	0.3nm,0.6s,baz=161,slow=6.7,SNR=3.6						
	0.3nm,0.6s						
MAW	**Mawson**	69.87	198	P	P	03 27 29.3	-1.0
	1.5nm,0.7s,baz=56,slow=8.9,SNR=3.7						
	1.5nm,0.7s						
VNDA	**Vanda**	76.62	170	P	P	03 28 07.7	-1.1
	0.8nm,0.5s,baz=312,slow=7.7,SNR=15						
	0.8nm,0.5s						
CPUP	**Villa Florida**	146.30	199	PKPbc	**PKPdf**	03 35 53.8	+0.2
	0.8nm,0.4s,baz=182,slow=1.5,SNR=3.5						

*NEIC **22** 03:30:18.4±1.5, 23°8S±0°2×69°1E±0°1, h10km±2km, mb4.3/6, Error ellipse: s-maj=33.8km s-min=8.2km az=215.0*
*IDC **22** 03:30:18.1±1.1, 23°55S×69°52E, h0km, mb3.9/7, mbtmp3.9/7, MS3.5/8, Error ellipse: s-maj=41.5km s-min=24.6km az=45.0*

ISC 22 03:30:19.6±0.9, 23°7S±0°2×69°4E±0°2, h12km, n32, σ0§81/18, mb4.2/11, MS3.4/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	16.22	11	T	T	03 50 42.2	
	baz=191,slow=76,SNR=28						
H08S2	**Diego Garcia H**	16.22	11	T	T	03 50 38.8	
	baz=191,slow=76,SNR=56						
H08S3	**Diego Garcia H**	16.24	11	T	T	03 50 39.3	
	baz=191,slow=76,SNR=76						
PALK	**Pallekele**	32.69	21	LR	LR	03 47 18.2	
	comp=Z,70nm,18.6s,baz=322,slow=31						
PSI	**Prapat**	38.96	51	LR	LR	03 50 30.9	
	comp=Z,35nm,18.7s,baz=248,slow=31						
LSZ	**Lusaka**	39.66	274	LR	LR	03 52 43.4	
	comp=Z,50nm,18.5s,baz=206,slow=34						
BOSA	**Boshof**	39.79	253	LR	LR	03 51 01.4	
	comp=Z,67nm,19.3s,baz=106,slow=31						
LBTB	**Lobatse**	39.83	259	LR	LR	03 50 19.7	
	comp=Z,54nm,20.7s,baz=352,slow=30						
H01W2	**Cape Leeuwin H**	40.26	117	T	T	04 20 40.3	
	baz=273,slow=75,SNR=7.0						
H01W3	**Cape Leeuwin H**	40.26	117	T	T	04 20 40.1	
	baz=273,slow=75,SNR=8.7						
H01W1	**Cape Leeuwin H**	40.28	117	T	T	04 20 41.6	
	baz=273,slow=75,SNR=7.6						
SUR	**Sutherland**	43.47	247	LR	LR	03 52 33.1	
	comp=Z,58nm,22.0s,baz=353,slow=31						
TSUM	**Tsumeb**	48.25	265	LR	LR	03 57 56.8	
	comp=Z,34nm,19.4s,baz=300,slow=34						
CMAR	**Chiang Mai Arr**	50.84	37	P	P	03 39 21.4	+1.0
CHTO	**Chiang Mai**	51.13	37	P	P	03 39 22.5	-0.1
CHTO				IAmb	IAmb	03 39 36.7	
	comp=Z,3.4nm,1.1s						
ASAR	**Alice Springs**	58.56	104	P	P	03 40 16.6	+0.1
	comp=Z,3.3nm,0.6s,baz=253,slow=6.3,SNR=46						
	comp=Z,3.3nm,0.6s						
ASAR	**Alice Springs**	58.56	104	P	P	03 40 16.1	-0.5
AS31	**Alice Springs**	58.56	104	P	P	03 40 16.9	+0.3
WRA	**Warramunga Arr**	59.92	100	P	P	03 40 26.3	+0.2
	comp=Z,5.1nm,0.9s,baz=254,slow=7.1,SNR=20						
	comp=Z,5.1nm,0.9s						
KK31	**Karatay Array**	66.47	1	P	P	03 41 07.8	-1.0
KK31				IAmb	IAmb	03 41 16.8	
	comp=Z,3.2nm,1.2s						
KKAR	**Karatay Array**	66.47	1	P	P	03 41 08.6	-0.2
KKAR				IAmb	IAmb	03 41 16.8	
	comp=Z,3.2nm,1.2s						
VNDA	**Vanda**	67.57	166	P	P	03 41 16.4	+0.9
	comp=Z,0.4nm,0.7s,baz=285,slow=6.6,SNR=3.5						
	comp=Z,0.4nm,0.7s						
SBA	**Scott Base**	68.55	167	P	P	03 41 20.2	-1.4
MK31	**Makanchi Array**	71.11	9	P	P	03 41 39.0	+1.3
MK31				IAmb	IAmb	03 41 51.3	
	comp=Z,2.5nm,1.4s						
MKAR	**Makanchi Array**	71.11	9	P	P	03 41 37.2	-0.5
	comp=Z,1.0nm,0.7s,baz=200,slow=5.8,SNR=6.1						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	71.11	9	P	P	03 41 37.4	-0.3
BRTR	**Keskin Array B**	71.39	332	P	P	03 41 38.7	-1.0
ABKAR	**Akbulak array**	73.11	354	P	P	03 41 50.0	+0.4
TORD	**Torodi Ar. Bea**	75.64	291	P	P	03 42 06.1	+1.0
	comp=Z,0.3nm,0.8s,baz=94,slow=4.3,SNR=1.8						
	comp=Z,0.3nm,0.8s						
ZALV	**Zalesovo Beam**	78.45	9	P	P	03 42 19.6	-0.5
	comp=Z,1.5nm,0.9s,baz=209,slow=7.6,SNR=4.1						
	comp=Z,1.5nm,0.9s						
AKASG	**Malin Array Be**	82.13	336	P	P	03 42 39.9	0.0
	comp=Z,0.1nm,0.2s,baz=140,slow=3.9,SNR=1.8						
	comp=Z,0.1nm,0.2s						
BBTS	**Babate**	92.18	285	LR	LR	04 26 31.4	
	comp=Z,39nm,18.0s,baz=32,slow=37						

*KRNET **22** 03:42:20.8±0.1, 42°49N×78°96E, mb2.4*
*NNC **22** 03:42:27.5±0.6, 42°78N×78°35E, h0km, mb2.6, mpv2.6, Error ellipse: s-maj=5.0km s-min=1.7km az=168.0*
*SOME **22** 03:42:28.4, 42°82N×78°35E, h10km*

ISC 22 03:42:25.9±1.3, 42°69N±0°04×78°39E±0°03, h4km±12km, n29, σ0§91/54, 11C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	0.37	2	*e*P	**Pg**	03 42 33.8	+0.6
	2.0nm,0.1s						
SATY				*e*S	**Sg**	03 42 37.1	-0.9
	46nm,0.1s						
SATY	**Saty**	0.37	2	P	**Pg**	03 42 33.8	+0.6
	2.4nm,0.1s						
SATY				S	**Sg**	03 42 37.1	-0.9
	46nm,0.1s						
ZHN	**Zhinishke**	0.48	4	*e*P	**Pg**	03 42 35.5	+0.4
	4.6nm,0.1s						
ZHN				*e*S	**Sg**	03 42 40.7	-0.8
	52nm,0.2s						
ZHN	**Zhinishke**	0.48	4	P	**Pg**	03 42 35.5	+0.4
	4.6nm,0.1s						
ZHN				S	**Sg**	03 42 40.8	-0.7
	52nm,0.2s						
UZB	**Uzynbulak**	0.66	45	*e*P	**Pg**	03 42 39.3	+0.8
	0.8nm,0.0s						
UZB				*e*S	**Sg**	03 42 46.9	-0.1
	4.1nm,0.1s						
UZB	**Uzynbulak**	0.66	45	P	**Pg**	03 42 39.3	+0.8
	3.6nm,0.3s						
UZB				S	**Sg**	03 42 46.9	-0.1
	1.9nm,0.1s						
KPKS	**Kokpek**	0.81	16	*e*P	**Pg**	03 42 42.0	+0.6
	1.3nm,0.1s						
KPKS				*e*S	**Sg**	03 42 51.6	-0.3
	4.2nm,0.2s						
KPKS	**Kokpek**	0.81	16	P	**Pg**	03 42 42.0	+0.6
	1.3nm,0.1s						
KPKS				S	**Sg**	03 42 51.6	-0.3
	4.2nm,0.2s						
PDGK	**Podgornoye**	1.03	51	⇑P	**Pg**	03 42 46.8	+1.1
	2.2nm,1.1s						
PDGK				⇑S	**Sb**	03 43 00.4	0.0
	3.2nm,1.1s						
TARG	**Taragay, Kyrgy**	1.05	204	⇓*e*P	Pg	03 42 42.0	-4.0
	baz=29						
TARG				⇓*e*S	**Sg**	03 42 57.4	-2.2
	baz=29						
MDOK	**Medeo**	1.09	296	⇓P	**Pg**	03 42 47.3	+0.5
	2.4nm,0.5s						
MDOK				⇑S	**Sb**	03 43 01.3	-0.8
	2.9nm,0.7s						
TNSS	**Tian-Shan**	1.11	289	*e*P	**Pb**	03 42 48.4	+0.4
	4.4nm,0.3s						
TNSS				*e*S	**Sb**	03 43 02.4	-0.6
	1.9nm,0.1s						
TNSS	**Tian-Shan**	1.11	289	P	**Pb**	03 42 48.4	+0.4
	2.6nm,0.2s						
TNSS				S	**Sb**	03 43 02.4	-0.6
	2.0nm,0.3s						
IZV	**Izvestkoviy**	1.35	286	*e*P	**Pb**	03 42 52.6	+0.8
	0.1nm,0.1s						
IZV				*e*S	**Sb**	03 43 09.9	+0.4
	5.6nm,0.2s						
IZV	**Izvestkoviy**	1.35	286	P	**Pg**	03 42 52.4	+0.7
	3.6nm,0.2s						
IZV				S	**Sb**	03 43 09.9	+0.4
	5.5nm,0.2s						
BLB	**Baldybastay**	1.41	3	*e*P	**Pn**	03 42 52.5	0.0
	2.3nm,0.1s						
BLB				*e*S	**Sg**	03 43 09.5	-1.8
	4.7nm,0.2s						
BLB	**Baldybastay**	1.41	3	P	**Pn**	03 42 52.5	0.0
	2.3nm,0.1s						
BLB				S	**Sg**	03 43 09.5	-1.8
	3.9nm,0.2s						
ARXS	**Arharly**	1.58	345	*e*P	**Pg**	03 42 55.9	-0.2
	2.3nm,0.2s						
ARXS				*e*S	**Sg**	03 43 15.4	-1.2
	7.9nm,0.3s						
ARXS	**Arharly**	1.58	345	P	**Pg**	03 42 55.9	-0.2
	2.3nm,0.3s						
ARXS				S	**Sg**	03 43 15.4	-1.2
	7.9nm,0.3s						
KTBS	**Karatobe**	1.61	310	*e*P	**Pg**	03 42 56.7	-0.1
	1.3nm,0.1s						
KTBS				*e*S	**Sg**	03 43 16.6	-1.1
	6.3nm,0.2s						
KTBS	**Karatobe**	1.61	310	P	**Pg**	03 42 56.7	-0.1
	1.3nm,0.1s						
KTBS				S	**Sg**	03 43 16.6	-1.1
	6.3nm,0.2s						
BOOM	**Boomskoye usch**	1.82	265	⇑*e*P	**Pn**	03 42 57.7	-0.4
	baz=71						
BOOM				⇑*e*S	**Sg**	03 43 24.9	+0.7
	baz=71						
DGS	**Degeres**	2.00	287	*e*P	**Pg**	03 43 05.3	+1.1
	2.1nm,0.3s						
DGS				*e*S	**Sg**	03 43 31.6	+1.5
	3.0nm,0.2s						
DGS	**Degeres**	2.00	287	Pg	**Pg**	03 43 05.3	+1.1
	2.0nm,0.4s						
DGS				Lg	Lg	03 43 31.6	
	2.2nm,0.3s						
TKM2	**Tokmak 2**	2.06	277	⇑*e*P	**Pn**	03 43 01.5	-0.1
	baz=81						
TKM2				⇑*e*S	**Sg**	03 43 31.8	-0.4
	baz=81						
TKM2	**Tokmak 2**	2.06	277	⇑Pg	**Pn**	03 43 03.1	+1.5
	3.3nm,1.0s						
TKM2				⇑Lg	Lg	03 43 30.0	
	3.1nm,0.5s						
NRN	**Naryn**	2.17	236	⇑*e*P	**Pn**	03 43 00.9	-2.2
	baz=45						
NRN				⇑*e*S	**Sn**	03 43 30.8	+0.1
	baz=45						
KRBS	**Karabastau**	2.22	298	*e*P	**Pb**	03 43 07.2	+0.5
	2.0nm,0.1s						
KRBS				*e*S	**Sb**	03 43 34.7	+0.1
	2.6nm,0.2s						
KRBS	**Karabastau**	2.22	298	Pg	**Pb**	03 43 07.2	+0.5
	2.0nm,0.4s						
KRBS				Lg	Lg	03 43 34.7	
	2.6nm,0.4s						

*NEIC **22** 03:43:11.7±1.8, 25°49N±0°05×125°04E±0°05, h10km±1km, mb4.2/12, Error ellipse: s-maj=9.7km s-min=7.8km az=205.0*
*IDC **22** 03:43:17.2±0.7, 25°31N×125°05E, h0km, mb4.1/15, mbtmp4.0/18, ML3.1/3, MS3.5/19, Error ellipse: s-maj=19.2km s-min=16.9km az=67.0*
*NIED **22** 03:43:19.2, 25°35N×124°95E, h13km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.77; $M_{\theta\theta}$1.35; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.01; $M_{r\phi}$0.79; $M_{\theta\phi}$0.01; Fault plane solution: $M_0$1.79000×1015 NP1: ϕ_s240.00000°, δ45.00000°, λ-91.00000°. NP2:ϕ_s61.00000°, δ45.00000°, λ-89.00000°.*
*JMA **22** 03:43:19.2±0.2, 25°4N±0°8×125°0E±0°7, h13km±3km, MD4.5/10, MV4.4/10, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

ISC 22 03:43:11.1±1.4, 25°59N±0°04×125°00E±0°04, h3km±9km, n90, σ2§49/57, mb4.1/20, MS3.5/18, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	0.70	161	P	**Pn**	03 43 29.1	+1.2
JIKM				S	**Sn**	03 43 35.9	-3.3
JIKM	**Ikemajima**	0.70	161	A	A	03 43 29.1	
	comp=E,66nm,1.8s,comp=E,80nm,1.2s						
JIRB	**Irabujima**	0.77	168	*i* P	**Pn**	03 43 29.9	+1.0
JIRB				S	**Sn**	03 43 37.2	-3.8
JIRB	**Irabujima**	0.77	168	A	A	03 43 29.9	
	comp=E,46nm,2.2s,comp=E,41nm,0.6s						
JMJ	**Miyako jima 2**	0.82	161	P	Pn	03 43 32.9	+3.4
JMJ2	**Miyako jima3**	0.90	160	*i* P	**Pn**	03 43 32.5	+1.9
JMJ2				S	**Sn**	03 43 42.0	-2.0
JMJ2	**Miyako jima3**	0.90	160	A	A	03 43 32.5	
	comp=E,47nm,2.6s,comp=E,114nm,0.6s						
JOGS	**Gusukube**	0.91	156	*i* P	**Pn**	03 43 33.1	+2.4
JOGS				S	**Sn**	03 43 42.9	-1.4
JOGS	**Gusukube**	0.91	156	A	A	03 43 33.1	
	comp=E,101nm,0.6s,comp=E,93nm,0.8s						
JTJ	**Tarama**	0.98	196	P	**Pn**	03 43 33.6	+1.8
JTJ				S	**Sn**	03 43 43.9	-2.3
JTJ	**Tarama**	0.98	196	A	A	03 43 33.6	
	comp=E,36nm,1.6s,comp=E,34nm,1.1s						
JISG	**Ishigakijimahi**	1.18	212	P	**Pn**	03 43 37.1	+2.6
JISG				S	**Sn**	03 43 50.7	-0.3
JISG	**Ishigakijimahi**	1.18	212	A	A	03 43 37.1	
	comp=E,12nm,0.5s,comp=E,15nm,0.8s						
JIJ	**Ishigaki jima**	1.45	213	*i* P	**Pg**	03 43 41.3	+2.5
JIJ				S	**Sg**	03 43 57.6	+0.1
JIJ	**Ishigaki jima**	1.45	213	A	A	03 43 41.3	
	comp=E,8.0nm,1.2s,comp=E,8.0nm,1.4s						
JKRS	**Kuro-shima**	1.62	214	P	**Pg**	03 43 44.5	+2.4
JKRS				S	**Sg**	03 44 02.4	-0.7
JKRS	**Kuro-shima**	1.62	214	A	A	03 43 44.5	
	comp=E,24nm,1.8s,comp=E,23nm,1.5s						
IRIF	**Iriomote-Funau**	1.70	223	P	**Pg**	03 43 45.5	+1.9
IRIF	**Iriomote-Funau**	1.70	223	A	A	03 43 45.5	
	comp=E,8.0nm,2.9s,comp=E,9.0nm,0.9s						
HATJ	**Hateruma jima**	1.87	216	A	A	03 43 48.4	
	comp=E,10.0nm,1.7s,comp=E,14nm,3.2s						
YOJ	**Yonaguni jima**	2.12	239		**Pn**	03 43 47.6	+0.1
YOJ	**Yonaguni jima**	2.12	239	P	**Pg**	03 43 54.8	+3.0
JOW	**Kunigami**	3.19	66	Pn	**Pg**	03 44 11.6	-0.7
	12nm,0.3s,baz=133,slow=20,SNR=31						
	34nm,0.3s						
JOW	**Kunigami**	3.19	66	Pn	**Pn**	03 44 03.5	+1.2
TATO	**Taipei**	3.23	260		**Pn**	03 44 01.3	-1.5
TATO	**Taipei**	3.23	260	P	**Pg**	03 44 15.7	+2.6
NACB	**Ninganchiao**	3.40	246	Pn	**Pn**	03 44 05.1	+0.1
YHNB	**Yeheng**	3.41	255		**Pn**	03 44 05.8	+0.5
YHNB	**Yeheng**	3.41	255	P	**Pg**	03 44 16.0	-0.4
YULB	**Yu-li**	4.02	238		**Pn**	03 44 12.3	-1.3
YULB	**Yu-li**	4.02	238	P	**Pb**	03 44 18.9	-3.7
SSLB	**Suanglung**	4.09	245		**Pn**	03 44 15.4	+0.8
SSLB	**Suanglung**	4.09	245	P	**Pb**	03 44 22.0	-1.8
TWGBT	**Beinan**	4.52	233	P	Pn	03 44 24.6	+4.2
TWG	**Pinlang**	4.52	233		**Pn**	03 44 17.7	-2.8
TPUB	**Ta-pu**	4.59	241	Pn	**Pn**	03 44 21.8	+0.4
JNU	**Nakatsue**	9.09	33	Pn	**Pn**	03 45 23.0	-0.3
KSAR	**Wonju Array Be**	12.07	11	Pn	**Pn**	03 46 03.6	-0.4
KSRS	**Korea Array**	12.09	11	Pn	Pn	03 46 17.8	+14
	baz=186,slow=13						
INU	**Inuyama**	14.20	44	Pn	**Pn**	03 46 31.0	-2.2
MJAR	**Matsushiro Arr**	15.71	43	Pn	**P**	03 47 02.7	+5.2
	0.1nm,0.3s,baz=234,slow=10,SNR=2.0						
	0.6nm,0.4s						
USRK	**Ussuriysk Ar.**	19.42	15	P	Pn	03 47 48.7	+9.2
	0.1nm,0.3s,baz=201,slow=7.7,SNR=2.7						
USRK				LR	LR	03 54 25.7	
	comp=Z,68nm,21.7s,baz=210,slow=34						
	3.1nm,0.9s						
USRK	**Ussuriysk Ar.**	19.42	15	P	**P**	03 47 36.3	-2.1
MYLDM	**Lahad Datu**	21.23	198	P	**P**	03 47 55.7	-2.6
MYLDM				IAmb	IAmb	03 48 13.7	
	comp=Z,12nm,1.0s						
GUMO	**Guam**	22.17	119	LR	LR	03 55 00.1	
	comp=Z,64nm,21.9s,baz=348,slow=32						
CHTO	**Chiang Mai**	25.02	260	P	**P**	03 48 34.8	-1.7
CHTO				IAmb	IAmb	03 48 52.1	
	comp=Z,5.2nm,0.9s						
CMAR	**Chiang Mai Arr**	25.15	259	P	P	03 48 45.5	+7.8
	comp=Z,2.9nm,0.3s,baz=66,slow=7.6,SNR=7.3						
	comp=Z,2.9nm,0.3s						
CMAR	**Chiang Mai Arr**	25.15	259	P	**P**	03 48 36.5	-1.2
ULN	**Ulaanbaatar**	26.35	332	P	**P**	03 48 48.4	-0.1
ULN				IAmb	IAmb	03 49 02.2	
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	26.61	331	P	P	03 49 00.4	+10
	comp=Z,3.6nm,1.0s,baz=153,slow=8.5,SNR=13						
SONM				LR	LR	04 00 45.8	
	comp=Z,120nm,18.9s,baz=136,slow=39						
	comp=Z,3.6nm,1.0s						
SONM	**Songino Array**	26.61	331	P	**P**	03 48 51.0	+0.1
SONM				IAmb	IAmb	03 49 04.0	
	comp=Z,5.2nm,1.1s						
SIJI	**Sorong**	26.99	166	LR	LR	03 58 22.5	
	comp=Z,71nm,21.6s,baz=234,slow=34						
KAPI	**Kappang**	30.84	190	LR	LR	04 00 51.0	
	comp=Z,33nm,22.0s,baz=7.5,slow=34						
PETK	**Petropavlovsk-**	36.79	33	LR	LR	04 06 36.2	
	comp=Z,36nm,18.8s,baz=100,slow=38						
MA2	**Magadan**	38.40	21	LR	LR	04 07 03.3	
	comp=Z,18nm,19.2s,baz=90,slow=37						
MK31	**Makanchi Array**	39.82	313	P	**P**	03 50 45.5	-0.1
MKAR	**Makanchi Array**	39.82	313	P	P	03 50 54.4	+8.8
	comp=Z,1.2nm,0.6s,baz=98,slow=10,SNR=13						
MKAR				PcP	**PcP**	03 52 58.9	+7.2
	comp=Z,1.0nm,0.7s,baz=106,slow=1.1,SNR=5.2						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	39.82	313	P	**P**	03 50 45.8	+0.1
MAKZ	**Makanchi**	40.03	313	P	**P**	03 50 48.3	+0.9
MAKZ				IAmb	IAmb	03 51 03.1	
	comp=Z,3.7nm,0.8s						
ZAA0	**Zalesovo Array**	41.03	324	P	**P**	03 50 56.2	+0.7
ZALV	**Zalesovo Beam**	41.03	324	P	P	03 51 04.2	+8.7
	comp=Z,2.6nm,0.6s,baz=114,slow=8.5,SNR=10						
ZALV				PcP	**PcP**	03 53 02.2	+6.8
	comp=Z,1.0nm,0.8s,baz=125,slow=4.2,SNR=2.3						
ZALV				LR	LR	04 07 28.1	
	comp=Z,55nm,19.1s,baz=84,slow=35						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	41.03	324	P	**P**	03 50 55.5	-0.1
KURK	**Kurchatov**	43.31	318	P	**P**	03 51 13.3	-0.8
KURK				IAmb	IAmb	03 51 30.2	
	comp=Z,8.5nm,1.5s						
KURBB	**Kurchatov Arra**	43.34	318	P	P	03 51 23.5	+9.2
	comp=Z,2.5nm,0.2s,baz=104,slow=7.7,SNR=2.1						
KURBB				PcP	**PcP**	03 53 09.3	+6.1
	comp=Z,0.6nm,0.3s,baz=85,slow=3.2,SNR=1.8						
	comp=Z,2.5nm,0.2s						
AAK	**Ala-Archa**	44.46	306	LR	LR	04 13 38.2	
	comp=Z,53nm,19.3s,baz=62,slow=41						
TIXI	**Tiksi**	46.15	2	LR	LR	04 12 49.9	
	comp=Z,88nm,18.2s,baz=183,slow=38						
WRA	**Warramunga Arr**	46.16	168	P	P	03 51 41.7	+4.5
	comp=Z,1.2nm,0.8s,baz=348,slow=8.9,SNR=8.0						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	46.16	168	P	**P**	03 51 34.6	-2.6
GAR	**Garm**	47.47	300	P	**P**	03 51 46.3	-1.2
NRIK	**Noril'sk**	49.00	343	LR	LR	04 15 01.8	
	comp=Z,90nm,18.1s,baz=138,slow=39						
ASAR	**Alice Springs**	49.72	169	P	P	03 52 09.7	+5.0
	comp=Z,0.7nm,0.8s,baz=354,slow=12,SNR=7.7						
ASAR				PcP	**PcP

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.36**	**12⇑**	*eP*	Pn	03 49 47.6	+6.3
GLSP				*eS*	Sb	03 49 57.7	+14
BUTP	**Butuan**	**0.63**	**223⇓**	*eP*	**Pb**	**03 49 42.1**	**-1.1**
BUTP				*eS*	**Sg**	**03 49 48.7**	**-2.2**
BIPH	**Bislig**	**1.28**	**166⇓**	*eP*	**Pg**	**03 49 56.0**	**+1.0**
BIPH				*i* S	**Sn**	**03 50 11.0**	**0.0**
MSLP	**Maasin**	**1.36**	**301⇑**	*eP*	**Pg**	**03 49 59.5**	**+2.9**
MSLP				*eS*	**Sg**	**03 50 21.4**	**+7.0**
CGP	**Cagayan de Oro**	**1.66**	**234⇑**	*iP*	**Pb**	**03 49 59.6**	**-1.2**
CGP				*i* S	**Sn**	**03 50 18.9**	**-1.4**
GHBP	**Garcia Hernand**	**1.72**	**277⇑**	*eP*	**Pg**	**03 50 01.9**	**-1.5**
GHBP				*eS*	**Sb**	**03 50 23.3**	**0.0**
TABP	**Talibon, Bohol**	**1.81**	**291⇓**	*eP*	**Pg**	**03 50 03.9**	**-1.3**
TABP				*eS*	**Sn**	**03 50 24.9**	**+0.6**
BUKP	**Musuan**	**1.83**	**212⇓**	*eP*	**Pg**	**03 50 04.0**	**-1.4**
BUKP				*eS*	**Sn**	**03 50 25.7**	**+1.0**
TBP	**Tagbilaran**	**2.17**	**277**	*eP*	**Pb**	**03 50 07.9**	**-1.7**
TBP				*i* S	**Sn**	**03 50 34.0**	**+0.8**
LLP	**Lapu-Lapu**	**2.23**	**293**	*eP*	**Pb**	**03 50 08.4**	**-2.3**
LLP				*eS*	**Sb**	**03 50 37.2**	**-1.0**
BESP	**Borongan**	**2.24**	**344⇓**	*eP*	Pg	03 50 16.2	+2.9
BESP				*eS*	Sg	03 50 48.4	+6.1
DAV	**Davao City (W)**	**2.39**	**191**	Pn	**Pg**	**03 50 17.0**	**+0.7**
	67nm,0.3s,baz=225,slow=1.4,SNR=3.8						
DAV				Sn	**Sg**	**03 50 48.2**	**+0.8**
	61nm,0.3s,baz=345,slow=11,SNR=1.9						
	256nm,0.4s						
LSIP	**Lazi, Siquijor**	**2.41**	**263⇓**	*eP*	**Pb**	**03 50 11.1**	**-2.5**
LSIP				*i* S	**Sg**	**03 50 49.9**	**+2.1**
MATI	**Mati**	**2.48**	**175⇓**	*eP*	**Pg**	**03 50 15.8**	**-2.1**
MATI				*eS*	**Sb**	**03 50 46.9**	**+1.5**
KCP	**Kidapawan**	**2.59**	**202⇑**	*eP*	**Pb**	**03 50 16.2**	**-0.6**
KCP				*i* S	**Sn**	**03 50 44.1**	**+0.6**
CTBH	**Cotabato--PC H**	**2.83**	**219⇓**	*iP*	**Pb**	**03 50 21.3**	**+0.5**
DDMP	**Don Marcelino,**	**3.32**	**186⇑**	*eP*	**Pb**	**03 50 28.1**	**-1.2**
DDMP				*eS*	**Sb**	**03 51 06.2**	**-3.5**
CNP	**Catarman**	**3.35**	**336⇓**	*eP*	**Pg**	**03 50 31.4**	**-3.2**
CNP				*eS*	**Sg**	**03 51 19.0**	**+1.0**
RCP	**Roxas**	**3.88**	**303⇓**	*eP*	**Pb**	**03 50 36.0**	**-2.7**
WRA	**Warramunga Arr**	**30.31**	**164**	P	**P**	**03 55 43.8**	**+2.0**
	0.2nm,0.7s,baz=345,slow=9.6,SNR=1.3						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**33.78**	**167**	P	**P**	**03 56 13.5**	**+1.2**
	0.1nm,0.4s,baz=348,slow=7.4,SNR=1.8						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**52.56**	**323**	P	P	03 58 48.4	+4.6
	0.2nm,0.7s,baz=124,slow=7.7,SNR=1.6						
	0.2nm,0.7s						

MAN 22 03:55:39.9, 9°.19N×125°.79E, h32km, mb3.8, ML2.5, MS2.0, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.28**	**218⇑**	*eP*	Pn	03 55 48.5	+0.7
BUTP				*eS*	Sn	03 55 55.2	+2.3
SCPH	**Surigao**	**0.66**	**333⇑**	*iP*	Pb	03 55 53.8	+0.7
SCPH				*i* S	Sn	03 56 03.2	+0.8
GLSP	**General Luna,**	**0.68**	**29⇓**	*eP*	Pb	03 55 53.5	+0.1
GLSP				*eS*	Sn	03 56 03.8	+1.0
CGP	**Cagayan de Oro**	**1.31**	**236⇑**	*eP*	Pb	03 56 06.2	+2.4
CGP				*eS*	Sb	03 56 24.7	+4.3
TABP	**Talibon, Bohol**	**1.70**	**302⇑**	*eP*	Pb	03 56 10.5	0.0
TABP				*eS*	Sb	03 56 31.3	-0.2

*IDC **22** 04:12:10.1±0.8, 6°.77S×146°.77E, h0km, mb3.8/6, mbtmp3.7/8, ML3.3/1, MS2.6/1, Error ellipse: s-maj=39.1km s-min=21.6km az=96.0*

ISC 22 04:12:14.8±0.9, 6°.84S±0°.10×146°.8E±0°.2, h33km, n11, σ0°.48/11, mb3.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.57**	**172**	Pn	**Pn**	**04 12 54.9**	**+0.7**
	13nm,0.3s,baz=318,slow=5.8,SNR=13						
PMG				Sn	**Sn**	**04 13 23.5**	**-0.9**
	38nm,0.3s,baz=6.9,slow=14,SNR=4.6						
PMG				LR	LR	04 13 44.3	
	comp=Z,106nm,19.8s,baz=38,slow=36						
WRA	**Warramunga Arr**	**17.77**	**222**	P	**Pn**	**04 16 19.5**	**-0.4**
	0.1nm,0.3s,baz=52,slow=11,SNR=2.2						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**20.82**	**215**	P	**P**	**04 16 54.3**	**+0.5**
	1.0nm,0.6s,baz=32,slow=13,SNR=11						
	1.0nm,0.6s						
VNDA	**Vanda**	**71.09**	**177**	P	**P**	**04 23 29.3**	**-0.1**
	0.7nm,0.9s,baz=341,slow=4.7,SNR=6.1						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**78.02**	**321**	P	**P**	**04 24 10.1**	**-0.1**
	0.3nm,0.4s,baz=102,slow=11,SNR=3.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**79.62**	**328**	P	**P**	**04 24 18.6**	**-0.1**
	0.5nm,0.5s,baz=112,slow=6.9,SNR=1.5						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**86.33**	**23**	P	**P**	**04 24 53.0**	**-0.2**
	0.6nm,0.5s,baz=256,slow=4.7,SNR=10						
	0.6nm,0.5s						
NVAR	**Mina Array Bea**	**98.03**	**52**	P	Pdif	04 25 50.3	+1.7
	0.1nm,0.3s,baz=270,slow=11,SNR=5.5						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**145.10**	**283**	PKPbc	**PKPdf**	**04 31 49.8**	**-0.2**
	2.8nm,0.7s,baz=64,slow=3.6,SNR=30						
DBIC	**Dimbokro**	**151.86**	**271**	PKPbc	**PKiKP**	**04 32 07.8**	**0.0**
	2.9nm,0.5s,baz=33,slow=0.9,SNR=7.6						
BDFB	**Brasilia**	**153.27**	**147**	PKPbc	**PKiKP**	**04 32 11.2**	**+0.4**
	2.4nm,0.5s,baz=72,slow=3.2,SNR=4.1						

*IDC **22** 04:12:22.5±1.4, 7°.03S×147°.02E, h0km, mb3.7/3, mbtmp3.8/5, ML3.0/2, Error ellipse: s-maj=50.4km s-min=22.3km az=97.0*

ISC 22 04:12:27.4±1.2, 7°.14S±0°.09×147°.0E±0°.3, h33km, n6, σ0°.79/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.26**	**175**	Pn	**Pn**	**04 13 02.7**	**+0.2**
	67nm,0.3s,baz=32,slow=4.8,SNR=75						
PMG				Sn	**Sb**	**04 13 35.3**	**0.0**
	27nm,0.3s,baz=359,slow=16,SNR=2.1						
	346nm,0.6s						
WRA	**Warramunga Arr**	**17.67**	**223**	P	**Pn**	**04 16 30.2**	**-1.0**
	0.2nm,0.3s,baz=51,slow=12,SNR=6.0						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**20.68**	**216**	P	**P**	**04 17 05.4**	**+0.6**
	2.3nm,0.7s,baz=35,slow=13,SNR=7.1						
	2.3nm,0.7s						
MKAR	**Makanchi Array**	**78.35**	**321**	P	**P**	**04 24 25.4**	**+0.8**
	0.4nm,0.6s,baz=115,slow=5.5,SNR=2.7						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**86.53**	**23**	P	**P**	**04 25 06.2**	**-0.6**
	0.6nm,0.7s,baz=252,slow=5.1,SNR=6.9						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.33**	**283**	PKPbc	**PKPbc**	**04 32 02.6**	**-0.2**
	1.3nm,0.7s,baz=76,slow=3.4,SNR=4.6						

*NEIC **22** 04:25:36.6±1.5, 53°.35N±0°.04×158°.7W±0°.1, h10km±2km, ML3.2/6, Error ellipse: s-maj=13.9km s-min=5.5km az=73.0.*
*IDC **22** 04:25:47.0±6.5, 53°.92N×157°.86W, h0km, mb3.2/2, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=117.0km s-min=28.3km az=89.0*

ISC 22 04:25:36.7±2.7, 53°.4N±0°.2×158°.7W±0°.1, h10km, n43, σ1°.09/36, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.56**	**340**		**Pb**	**04 26 05.4**	**-0.3**
CNBA				IAML		04 26 25.8	
	comp=E,268nm,0.4s						
SDPT	**Sand Point**	**2.26**	**333**	Pn	**Pn**	**04 26 13.8**	**-0.3**
SDPT					**Sn**	**04 26 42.4**	**+0.5**
SDPT				IAML		04 26 43.6	
	comp=E,130nm,0.7s						
SDPT				IAML		04 26 56.1	
	comp=N,120nm,0.7s						
CHGN	**Chignik**	**2.95**	**3**	Pn	**Pn**	**04 26 23.8**	**+0.3**
CHGN				IAML		04 27 01.9	
	comp=E,129nm,0.5s						
FALS	**False Pass**	**3.18**	**300**	Pn	**Pn**	**04 26 26.2**	**-0.5**
UNV	**Unalaska Valle**	**4.70**	**279**	Pn	**Pn**	**04 26 47.1**	**-0.5**
KDAK	**Kodiak Island**	**5.61**	**35**	Pn	**Pn**	**04 26 59.4**	**-0.6**
	comp=E,0.5nm,0.3s,baz=228,slow=11,SNR=15						
KDAK				Sn	Sn	04 27 52.9	-12
	comp=E,1.2nm,0.3s,baz=201,slow=20,SNR=1.1						
	comp=E,3.5nm,0.6s						
KDAK	**Kodiak Island**	**5.61**	**35**	Pn	**Pn**	**04 26 58.6**	**-1.4**
Q19K	**Cape Douglas,**	**6.24**	**25**	Pn	**Pn**	**04 27 09.0**	**+0.3**
CNPM	**China Poot**	**7.42**	**31**	Pn	**Pn**	**04 27 23.9**	**-1.0**
N18K	**Kilae Creek**	**7.49**	**10**	Pn	**Pn**	**04 27 25.3**	**-0.6**
BRLK	**Bradley Lake**	**7.71**	**31**	Pn	**Pn**	**04 27 27.5**	**-1.5**
SEW	**Seward**	**8.43**	**33**	Pn	**Pn**	**04 27 38.7**	**-0.1**
M19K	**Big River Lodg**	**8.86**	**13**	Pn	**Pn**	**04 27 45.7**	**+1.1**
RC01	**Rabbit Creek A**	**9.12**	**28**	Pn	**Pn**	**04 27 48.1**	**-0.1**
PWL	**Port Wells**	**9.37**	**33**	Pn	**Pn**	**04 27 51.8**	**+0.2**
HIN	**Hinchinbrook I**	**9.68**	**38**	Pn	**Pn**	**04 27 55.4**	**-0.4**
KNK	**Knik Glacier**	**9.76**	**30**	Pn	**Pn**	**04 27 57.5**	**+0.6**
EYAK	**Cordova Ski Ar**	**10.06**	**39**	Pn	**Pn**	**04 28 00.8**	**-0.3**
KAIM	**Kayak Island**	**10.22**	**44**	Pn	**Pn**	**04 28 03.7**	**+0.5**
RAGM	**Ragged Mountai**	**10.38**	**42**	Pn	**Pn**	**04 28 06.3**	**+0.9**
SCM	**Sheep Creek Mo**	**10.43**	**31**	Pn	**Pn**	**04 28 06.2**	**+0.1**
HMT	**Hamilton**	**10.52**	**43**	Pn	**Pn**	**04 28 07.8**	**+0.5**
KLU	**Klutina**	**10.63**	**35**	Pn	**Pn**	**04 28 08.1**	**-0.9**
CAST	**Castle Rocks**	**10.65**	**16**	Pn	**Pn**	**04 28 09.1**	**-0.1**
BERG	**Berg Lake**	**10.78**	**43**	Pn	**Pn**	**04 28 08.7**	**-2.1**
TRF	**Thorofare Moun**	**11.01**	**20**	Pn	**Pn**	**04 28 14.1**	**-0.1**
N25K	**Chitina, Valde**	**11.18**	**37**	Pn	**Pn**	**04 28 15.2**	**-1.2**
VRDI	**Verde Repeater**	**11.36**	**40**	Pn	**Pn**	**04 28 19.7**	**+0.6**
BCPM	**Bancas Point**	**12.34**	**50**	Pn	**Pn**	**04 28 32.5**	**+0.3**
ILAR	**Eielson Array**	**12.91**	**23**	Pn	**Pn**	**04 28 36.8**	**-3.2**
	comp=E,0.1nm,0.3s,baz=212,slow=13,SNR=1.7						
ILAR				Sn	Sn	04 30 48.4	-15
	baz=189,slow=17,SNR=1.5						
	comp=E,0.1nm,0.3s						
J25K	**Salcha River,**	**13.16**	**26**	Pn	**Pn**	**04 28 42.2**	**-1.2**
J26L	**Joseph Creek**	**13.57**	**29**	Pn	**Pn**	**04 28 47.3**	**-1.7**
I26K	**Coal Creek Min**	**14.29**	**27**	Pn	**Pn**	**04 28 58.2**	**-0.6**
EGAK	**Eagle**	**14.48**	**31**	Pn	**Pn**	**04 29 01.2**	**-0.2**
INK	**Inuvik**	**19.12**	**29**	P	**Pn**	**04 30 02.7**	**+2.5**
	comp=E,0.1nm,0.3s,baz=230,slow=12,SNR=1.8						
	comp=E,1.2nm,0.7s						
PDAR	**Pinedale Array**	**33.84**	**88**	P	P	04 32 27.5	+8.3
	comp=E,0.2nm,0.5s,baz=309,slow=5.7,SNR=2.7						
	comp=E,0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**42.76**	**232**	T	T	05 21 15.6	
	baz=28,slow=76,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**42.77**	**232**	T	T	05 21 16.8	
	baz=28,slow=76,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**42.78**	**232**	T	T	05 21 20.4	
	baz=28,slow=76,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**43.91**	**231**	T	T	05 22 54.3	
	baz=28						
H11S2	**WAKE ISLAND Hy**	**43.92**	**231**	T	T	05 22 47.9	
	baz=28						
H11S3	**WAKE ISLAND Hy**	**43.93**	**231**	T	T	05 22 56.5	
	baz=28						
TXAR	**Lajitas Array**	**46.33**	**99**	P	P	04 34 11.0	+8.2
	comp=E,0.3nm,0.8s,baz=321,slow=7.0,SNR=3.5						
	comp=E,0.3nm,0.8s						

*IDC **22** 04:32:27.3±2.2, 17°.94S×173°.64W, h0km, mb3.6/5, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=109.2km s-min=23.9km az=144.0*

ISC 22 04:32:35.0±2.0, 17°.2S±0°.5×174°.1W±0°.5, h35km, n9, σ1°.51/7, mb3.5/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.97**	**35**	Pn	**Pn**	**04 33 35.0**	**+1.6**
	4.3nm,0.3s,baz=267,slow=17,SNR=1.9						
AFI				Sn	**Sn**	**04 34 16.9**	**-1.8**
	21nm,0.3s,baz=298,slow=22,SNR=8.4						
	15nm,0.3s						
WRA	**Warramunga Arr**	**48.78**	**258**	P	**P**	**04 41 16.5**	**-0.4**
	0.4nm,0.6s,baz=98,slow=7.4,SNR=7.3						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**48.91**	**253**	P	**P**	**04 41 17.4**	**-0.5**
	2.5nm,0.7s,baz=91,slow=8.3,SNR=25						
	2.5nm,0.7s						
NVAR	**Mina Array Bea**	**76.11**	**42**	P	**P**	**04 44 18.4**	**-1.2**
	0.1nm,0.3s,baz=224,slow=5.0,SNR=1.6						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**84.05**	**42**	P	**P**	**04 45 01.9**	**-0.4**
	0.3nm,0.8s,baz=224,slow=6.2,SNR=2.7						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**84.32**	**11**	P	**P**	**04 45 04.1**	**+1.2**
	0.2nm,0.7s,baz=224,slow=6.2,SNR=1.6						
	0.2nm,0.7s						
H03S2	**Juan Fernandez**	**84.80**	**124**	T	T	06 17 39.0	
	baz=250,slow=75						
H03S1	**Juan Fernandez**	**84.81**	**124**	T	T	06 17 41.2	
	baz=250,slow=75						
H03S3	**Juan Fernandez**	**84.82**	**124**	T	T	06 17 37.3	
	baz=250,slow=75						

*JMA **22** 04:40:60.0±0.3, 23°.N±1°.×122°.1E±0°.6, h30km, MV3.5/12, TAIWAN REGION*
*TAP **22** 04:41:01.4, 23°.38N×122°.05E, h40km±1km, ML3.5, C*

ISC 22 04:40:58.2±1.2, 23°.35N±0°.02×122°.13E±0°.02, h18km±5km, n129, σ0°.70/176, 3C-17D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.62**	**267⇓**	*iP*	**Pb**	**04 41 11.4**	**+0.9**
	baz=256						
ECBN				*i* S	**Sb**	**04 41 19.7**	**+0.8**
	baz=256						
TEGC	**Jichi Village**	**0.65**	**304**	*i* P	**Pn**	**04 41 12.6**	**+0.1**
	baz=305						
TEGC				*eS*	**Sb**	**04 41 20.7**	**+1.1**
	baz=305						
HGSD	**Ruisui**	**0.66**	**282⇓**	*iP*	**Pn**	**04 41 12.4**	**-0.2**
	baz=281						
HGSD				*i* S	**Sb**	**04 41 20.9**	**+0.9**
	baz=281						
TEYL	**Yanliau Villag**	**0.71**	**317**	*eP*	**Pn**	**04 41 14.2**	**+0.9**
	baz=330						
EGFH	**Guangfu**	**0.72**	**296**	*eP*	**Pn**	**04 41 13.5**	**+0.1**
	baz=305						
EYUL	**Yuli**	**0.74**	**270⇓**	*iP*	**Pn**	**04 41 14.1**	**+0.3**
	baz=263						
CHKT	**Chengkung**	**0.74**	**250⇓**	*eP*	**Pg**	**04 41 13.0**	**+0.2**
	baz=299						
CHKT				*eS*	**Sg**	**04 41 22.3**	**-0.4**
	baz=239						
EHY	**Hungye**	**0.76**	**282**	*eP*	**Pn**	**04 41 14.0**	**0.0**
	baz=280						
EHY				S	**Sb**	**04 41 23.8**	**+1.0**
	baz=280						
TWF1	**Yuli**	**0.76**	**270⇓**	*iP*	**Pn**	**04 41 14.2**	**+0.1**
	baz=263						
TWF1				*eS*	**Sb**	**04 41 24.3**	**+1.3**
	baz=263						
YULB	**Yu-li**	**0.76**	**273**	P	**Pn**	**04 41 14.3**	**+0.2**
YULB	**Yu-li**	**0.76**	**273⇓**	*iP*	**Pn**	**04 41 14.2**	**+0.1**
	baz=266						
YULB				S	**Sb**	**04 41 24.2**	**+1.2**
	baz=266						
FULB	**Fuli**	**0.78**	**259**	⇓P	**Pn**	**04 41 14.1**	**-0.2**
	baz=248						
FULB				*eS*	**Sg**	**04 41 24.6**	**+0.7**
	baz=248						
ESL	**Shilin**	**0.79**	**306**	*eP*	**Pg**	**04 41 13.8**	**+0.2**
	baz=308						
HWA	**Hwalien**	**0.79**	**323**	*eP*	**Pn**	**04 41 15.0**	**+0.6**
	baz=326						
ETM	**Tongmen**	**0.84**	**317**	*eP*	**Pn**	**04 41 15.4**	**+0.2**
	baz=323						
EDH	**Donghe**	**0.85**	**244**	⇓P	**Pn**	**04 41 15.1**	**-0.1**
	baz=235						
EDH				S	**Sb**	**04 41 25.7**	**+0.3**
	baz=235						
EHD	**Haiduan**	**0.87**	**257**	*eP*	**Pb**	**04 41 14.5**	**-0.3**
	baz=248						
ECS	**Chishang**	**0.87**	**253**	*eP*	**Pn**	**04 41 16.0**	**+0.4**
	baz=244						
TWD	**Chiawan**	**0.87**	**326**	*eP*	**Pn**	**04 41 15.7**	**0.0**
	baz=329						
TWD				S	**Sb**	**04 41 26.0**	**-0.2**
	baz=329						
LDUT	**Ludao**	**0.91**	**222**	*eP*	**Pn**	**04 41 16.1**	**+0.1**
	baz=217						
ETL	**Fush Village**	**0.93**	**330**	*eP*	**Pn**	**04 41 16.3**	**-0.1**
	baz=333						
NACB	**Ninganchiao**	**0.95**	**329**	P	**Pn**	**04 41 16.8**	**0.0**
NACB	**Ninganchiao**	**0.95**	**329**	P	**Pn**	**04 41 16.7**	**0.0**
	baz=332						
NACB				*i* S	**Sb**	**04 41 28.3**	**-0.2**
	baz=332						
VWDT	**VWDT**	**0.99**	**294⇓**	*iP*	**Pg**	**04 41 17.9**	**+0.5**
	baz=294						
VWDT				S	**Sb**	**04 41 29.9**	**+0.3**
	baz=294						
LONT	**Longtian**	**1.02**	**244**	*eP*	**Pg**	**04 41 18.3**	**+0.3**
	baz=236						
ELDTW	**Lidau**	**1.03**	**261⇓**	*iP*	**Pn**	**04 41 17.9**	**0.0**
	baz=250						
ELDTW				*eS*	**Sb**	**04 41 30.7**	**-0.2**
	baz=250						
ETLH	**Xiulin Townshi**	**1.04**	**325**	*eP*	**Pg**	**04 41 18.5**	**+0.1**
	baz=327						
ETLH				*eS*	**Sb**	**04 41 30.8**	**-0.2**
	baz=327						
OWD	**Renai**	**1.06**	**305**	*eP*	**Pg**	**04 41 18.8**	**-0.1**
	baz=306						
TTN	**Taitung**	**1.08**	**237**	*eP*	**Pg**	**04 41 18.9**	**-0.2**
	baz=233						
YUS	**Yu-Shan**	**1.09**	**278**	*eP*	**Pg**	**04 41 19.6**	**+0.2**
	baz=276						
TWGBT	**Beinan**	**1.10**	**241**	P	**Pn**	**04 41 19.2**	**+0.5**
TWGBT	**Beinan**	**1.10**	**241**	P	**Pb**	**04 41 18.8**	**+0.1**
	baz=232						
TWGBT				S	**Sb**	**04 41 32.3**	**-0.4**
	baz=232						
TWG	**Pinlang**	**1.10**	**242**	*eP*	**Pb**	**04 41 18.8**	**0.0**
	baz=232						
TWG				*eS*	**Sb**	**04 41 32.2**	**-0.7**
	baz=232						
WHF	**Hehuan Shan**	**1.12**	**315**	*eP*	**Pg**	**04 41 19.6**	**-0.4**
	baz=316						
WHF				*eS*	**Sb**	**04 41 32.4**	**-1.3**
	baz=316						
CHGB	**Renai**	**1.12**	**309**	*eP*	**Pg**	**04 41 19.9**	**-0.1**
	baz=310						
CHGB				*eS*	**Sb**	**04 41 32.7**	**-0.9**
	baz=310						
WUSB	**Renai**	**1.12**	**305**	P	**Pg**	**04 41 19.9**	**-0.2**
	baz=306						
EWUT	**Wuta**	**1.14**	**344**	*eP*	**Pn**	**04 41 18.7**	**-0.5**
	baz=347						
SSLB	**Suanglung**	**1.16**	**292**	P	**Pg**	**04 41 20.3**	**-0.4**
SSLB	**Suanglung**	**1.16**	**292**	*eP*	**Pb**	**04 41 20.1**	**+0.3**
	baz=292						
FUSS	**Fushou**	**1.21**	**318⇑**	*eP*	**Pg**	**04 41 21.0**	**-0.6**
	baz=319						
FUSS				*eS*	**Sb**	**04 41 35.9**	**-0.1**
	baz=319						
WHYT	**Xinyi Township**	**1.22**	**287**	*eP*	**Pg**	**04 41 21.6**	**-0.2**
	baz=286						
ALS	**Alishan**	**1.23**	**278⇓**	*iP*	**Pg**	**04 41 22.1**	**+0.1**
	baz=276						
ALS				*eS*	**Sb**	**04 41 36.7**	**+0.1**
	baz=276						
SMLT	**Sun Moon Lake**	**1.24**	**295**	*eP*	**Pb**	**04 41 21.6**	**+0.4**
	baz=295						
SMLT				*eS*	**Sb**	**04 41 36.8**	**-0.2**
	baz=295						
TWT	**Tachien**	**1.25**	**316**	*eP*	**Pg**	**04 41 21.9**	**-0.5**
	baz=316						
TWT				*eS*	**Sb**	**04 41 35.8**	**-1.5**
	baz=316						
STYH	**Taoyuan**	**1.26**	**262**	*eP*	**Pn**	**04 41 20.7**	**-0.1**
	baz=254						
TDCB	**Techi**	**1.26**	**316**	*eP*	**Pg**	**04 41 22.3**	**-0.4**
	baz=316						
TDCB				*eS*	**Sb**	**04 41 36.5**	**-1.1**
	baz=316						
NNSB	**Datong**	**1.27**	**328**	⇑P	**Pb**	**04 41 22.0**	**+0.3**
	baz=320						
NNSB				*eS*	**Sb**	**04 41 36.8**	**-1.0**
	baz=320						
STYT	**Tauyuan**	**1.27**	**262⇓**	*iP*	**Pb**	**04 41 22.1**	**+0.4**
	baz=254						
STYT				*eS*	**Sb**	**04 41 37.6**	**-0.2**
	baz=254						
TWC	**Suao**	**1.28**	**349**	⇓P	**Pg**	**04 41 22.6**	**-0.3**
	baz=2.0						
NNS	**Nan Shan**	**1.28**	**328**	*eP*	**Pn**	**04 41 21.3**	**-0.1**
	baz=330						
TYC	**Yuchr**	**1.29**	**296**	*eP*	**Pb**	**04 41 22.4**	**+0.5**
	baz=296						
DPDB	**Guoxing**	**1.29**	**302**	*eP*	**Pb**	**04 41 22.6**	**+0.5**
	baz=302						
LATG	**Datong**	**1.30**	**335**	⇑P	**Pb**	**04 41 22.3**	**+0.1**
	baz=337						
LATG				S	**Sb**	**04 41 38.2**	**-0.4**
	baz=337						
ECL	**Taimali**	**1.32**	**235**	P	**Pn**	**04 41 21.7**	**0.0**
	baz=242						
ECL				*eS*	**Sn**	**04 41 36.0**	**-2.7**
	baz=242						
WCS	**Beigang Elemen**	**1.32**	**303**	*eP*	**Pb**	**04 41 22.7**	**+0.3**
	baz=312						
JYNG	**Yonagunijimaku**	**1.33**	**34**	*eP*	**Pg**	**04 41 23.4**	**-0.4**
JYNG				S	**Sb**	**04 41 39.7**	**+0.4**
CHN5	**Tsauling**	**1.35**	**281**	*eP*	**Pb**	**04 41 23.0**	**-0.1**
	baz=280						
NDT	**Datong Townshi**	**1.37**	**336**	*eP*	**Pn**	**04 41 21.8**	**-0.6**
	baz=338						
WJS	**Zhushan**	**1.37**	**290**	*eP*	**Pb**	**04 41 23.3**	**0.0**
	baz=290						
YOJ	**Yonaguni jima**	**1.37**	**36**	⇓P	**Pg**	**04 41 23.8**	**-0.9**
	baz=48						
YOJ				*eS*	**Sn**	**04 41 39.9**	**-0.3**
	baz=48						
YOJ	**Yonaguni jima**	**1.37**	**36**	P	**Pg**	**04 41 24.0**	**-0.7**
YOJ				S	**Sb**	**04 41 40.9**	**+0.4**
TPUB	**Ta-pu**	**1

TAWH	Dawu Township	1.52 229	eP	Pn	04 41 24.0	-0.5
	baz=234					
TCU	Taichung	1.55 301	eP	Pb	04 41 26.8	+0.4
	baz=302					
MASBT	Mashibuluo	1.56 242	eP	Pb	04 41 26.0	-0.5
	baz=235					
SCST	Cishan	1.57 253	eP	Pb	04 41 27.1	+0.3
	baz=244					
NFF	Wufeng Townshi	1.57 324	eP	Pb	04 41 26.3	-0.6
	baz=326					
TWQ1	Liyutan	1.59 309	eP	Pb	04 41 27.5	+0.4
	baz=310					
WCHH	Zhanghua	1.61 297	eP	Pb	04 41 27.7	+0.3
	baz=297					
TIPB	Shuangxi	1.64 350	eP	Pb	04 41 27.8	-0.1
	baz=1.0					
NSTT	Nanjuang	1.64 321	eP	Pb	04 41 28.4	+0.4
	baz=322					
NSTT			eS	Sn	04 41 47.4	+0.6
	baz=322					
NSY	Sanyi	1.64 311	eP	Pg	04 41 28.9	-0.9
	baz=312					
LIOB	Emei	1.64 322	eP	Pb	04 41 28.2	+0.2
	baz=308					
TWM1	Shoushan	1.66 252	eP	Pg	04 41 29.6	-0.5
	baz=249					
SLIU	Shizi	1.67 228	eP	Pn	04 41 27.2	+0.7
	baz=225					
SHHT	Tainan City	1.67 259	eP	Pb	04 41 29.2	+0.8
	baz=257					
HATJ	Hateruma jima	1.69 65	P	Pb	04 41 28.5	-0.3
HATJ			eS	Sn	04 41 48.5	+0.5
WRL	Guolierlin Hig	1.70 289	eP	Pb	04 41 28.1	-0.8
	baz=289					
SCZT	Fangliau	1.70 235	eP	Pn	04 41 28.0	+1.1
	baz=227					
TWA	Mucha	1.70 343	eP	Pb	04 41 29.2	+0.3
	baz=337					
ICHU	Yijhu	1.70 271	eP	Pb	04 41 28.9	0.0
	baz=269					
TATO	Taipei	1.72 340	P	Pb	04 41 28.8	-0.5
	baz=332					
TATO			S	Sn	04 41 49.5	+0.8
	baz=332					
NWF	Wu-fen Shan	1.74 350	eP	Pb	04 41 29.9	+0.1
	baz=352					
WFSB	Wu-fen Shan	1.74 350	eP	Pb	04 41 29.8	+0.2
	baz=352					
SXI1	Grass Mountain	1.75 353	eP	Pb	04 41 29.6	-0.3
	baz=8.0					
WSL	Shuilin Townsh	1.75 276	eP	Pn	04 41 28.1	+0.4
	baz=275					
CHN8	Yiju	1.76 270	eP	Pn	04 41 28.5	+0.7
	baz=269					
IRIF	Iriomote-Funau	1.77 56	P	Pb	04 41 29.6	-0.4
IRIF			eS	Sb	04 41 51.6	-0.3
SMST	Manzhou Townsh	1.78 222	eP	Pb	04 41 29.4	-1.0
	baz=226					
TWKBT	Hengchun	1.86 221	eP	Pn	04 41 29.8	+0.7
	baz=225					
TWK1	Hengchun	1.86 221	eP	Pb	04 41 30.6	-1.0
	baz=218					
YM01	YM01	1.86 344	eP	Pb	04 41 31.2	-0.5
	baz=332					
JKRS	Kuro-shima	1.94 63	P	Pb	04 41 32.1	-0.8
JKRS			S	Sn	04 41 55.3	+1.2
JIJ	Ishigaki jima	2.10 61	eP	Pb	04 41 34.4	-1.4
JIJ			eS	Sn	04 41 58.6	+0.4
WDGT	Dungji	2.27 268	eP	Pn	04 41 36.1	+1.3
	baz=267					
JISG	Ishigakijimahi	2.35 58	P	Pn	04 41 36.5	+0.6
JISG			S	Sn	04 42 04.2	0.0
PHUB	P'eng-hu	2.35 274	eP	Pn	04 41 36.5	+0.6
	baz=274					
PNG	Penghu	2.37 276	eP	Pn	04 41 37.7	+1.4
	baz=275					
PNG			eS	Sn	04 42 04.6	-0.2
	baz=275					
VCHM	Qimei	2.48 267	eP	Pn	04 41 38.9	+1.1
	baz=266					
JTJ	Tarama	2.68 61	P	Pn	04 41 42.1	+1.6
JTJ			eS	Sn	04 42 13.3	+0.8
VWUC	VWUC	2.94 304	eP	Pn	04 41 45.0	+1.0
	baz=304					
VWUC			eS	Sn	04 42 17.2	-1.7
	baz=304					
PTMZ	Houxiangcun	3.22 302	eP	Pn	04 41 48.5	+0.6
	baz=302					
JMJ2	Miyako jima3	3.24 64	P	Pn	04 41 50.4	+2.3
JMJ	Miyako jima 2	3.24 63	eP	Pn	04 41 50.0	+1.8
	baz=63					
MATB	Ma-tsu	3.42 325	eP	Pn	04 41 51.5	+0.8
	baz=315					
KNMB	Chin-men Tao	3.60 289	eP	Pn	04 41 54.0	+0.9
	baz=289					
XPSS	Dashiqiu	3.97 334	eP	Pn	04 41 58.4	+0.2
	baz=335					
AXDP	Jialang	4.10 293	eP	Pn	04 42 00.3	+0.4
	baz=293					

IDC 22 04:41:25.4±2.0, 1°.90N×126°.30E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=183.4km s-min=24.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.09	160	P	P	04 46 33.0	-0.1
	1.0nm,0.4s,baz=339,slow=11,SNR=12 1.0nm,0.4s						
ASAR	Alice Springs	26.47	164	P	P	04 47 04.7	+0.1
	0.2nm,0.4s,baz=344,slow=9.7,SNR=1.8 0.2nm,0.4s						
MKAR	Makanchi Array	58.81	326	P	P	04 51 25.7	-0.1
	0.5nm,0.5s,baz=119,slow=8.1,SNR=9.2 0.5nm,0.5s						

IDC 22 04:54:14.2±7.8, 19°.21S×177°.26W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=377.3km s-min=116.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.48	261	P	P	05 02 35.6	0.0
	0.2nm,0.3s,baz=97,slow=7.5,SNR=10.0 0.2nm,0.3s						
ASAR	Alice Springs	45.51	255	P	P	05 02 35.5	-0.2
	0.4nm,0.4s,baz=92,slow=8.5,SNR=5.1 0.4nm,0.4s						
AKASG	Malin Array Be	142.21	332	PKP	PKPdf	05 13 47.8	-0.6
	0.9nm,0.4s,baz=43,slow=3.7,SNR=8.0						

IDC 22 05:04:04.9±7.6, 19°.90S×178°.19W, h521km±50km, mb3.5/3, mbtmp4.3/4, Error ellipse: s-maj=186.2km s-min=34.2km az=147.0

ISC 22 05:04:05.4±2.3, 18°.8S±0°.6×178°.2W±0°.3, h550km, n7, σ0°88/8, mb4.2/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.75	286	P	P	05 05 26.2	+0.6
	5.7nm,0.5s,baz=127,slow=16,SNR=8.5						
AFI	Afiamalu	7.84	52	S	S	05 07 37.1	+0.1
	12nm,0.3s,baz=153,slow=19,SNR=2.3						
CTA	Charters Tower	33.53	262	P	P	05 10 00.1	0.0
	2.9nm,0.4s,baz=118,slow=8.0,SNR=3.2 2.9nm,0.4s						
WRA	Warramunga Arr	44.70	260	P	P	05 11 29.9	-0.2
	1.7nm,0.3s,baz=96,slow=6.9,SNR=98 1.7nm,0.3s						
ASAR	Alice Springs	44.77	255	P	P	05 11 29.7	-0.9
	5.4nm,0.6s,baz=97,slow=7.9,SNR=65						
ASAR				PcP	PcP	05 13 02.3	+1.3
	0.6nm,0.6s,baz=94,slow=3.7,SNR=4.8 5.4nm,0.6s						
AKASG	Malin Array Be	141.47	332	PKP	PKiKP	05 22 36.8	-0.1
	0.3nm,0.3s,baz=38,slow=3.5,SNR=7.1						
GERES	GERESS Array B	148.55	345	PKPbc	PKPab	05 22 55.3	-0.9
	0.2nm,0.4s,baz=19,slow=3.3,SNR=2.2						

ROM 22 05:10:09.9±0.1, 42°.831N±0°.004×13°.252E±0°.006, h9km, ML1.5/6, 3C-1D, Error ellipse: s-maj=0.5km s-min=0.4km az=222.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.05	298	⇓P	Pg	05 10 11.9	0.0
T1245				S	Sg	05 10 13.1	-0.3
T1245				AML	AML		
	comp=N,1745μm,1.1s						
T1245				AML	AML		
	comp=E,1094μm,0.7s						
T1245				AML	AML		
	comp=E,1250μm,0.8s						
T1245				AML	AML		
	comp=N,1915μm,1.0s						
MMO1	Montemonaco	0.09	39	⇑P	Pg	05 10 12.8	+0.5
MMO1				S	Sg	05 10 14.7	+0.7
MC2	Monte Cornacci	0.09	331	P	Pg	05 10 12.8	+0.3
NRCA	Norcia	0.10	271	P	Pg	05 10 12.7	+0.2
NRCA				S	Sg	05 10 14.6	+0.4
NRCA				AML	AML		
	comp=E,698μm,0.2s						
NRCA				AML	AML		
	comp=N,674μm,0.9s						
NRCA				AML	AML		
	comp=E,730μm,0.1s						
NRCA				AML	AML		
	comp=N,651μm,1.0s						
NRCA				AML	AML		
	comp=E,698μm,0.1s						
NRCA				AML	AML		
	comp=N,674μm,1.0s						
T1202	Accumoli, Fraz	0.13	189	P	Pg	05 10 13.4	+0.5
T1216	Preci, Frazion	0.18	289	⇑P	Pg	05 10 14.3	+0.6
T1243	Rocca Santa Ma	0.20	133	P	Pg	05 10 14.1	+0.1
T1243				S	Sg	05 10 18.3	+1.5
SMA1	SAN MARTINO	0.21	163	⇑P	Pg	05 10 14.8	+0.6
FDMO	Fiordimonte	0.24	330	P	Pg	05 10 15.4	+0.7
FDMO				S	Sg	05 10 19.9	+1.9
FDMO				AML	AML		
	comp=E,38μm,0.8s						
FDMO				AML	AML		
	comp=N,53μm,1.4s						
FDMO				AML	AML		
	comp=E,38μm,0.8s						
LNSS	Leonessa	0.28	214	P	Pb	05 10 16.6	-0.5
LNSS				S	Sb	05 10 21.6	-0.4
LNSS				AML	AML		
	comp=E,76μm,0.7s						
LNSS				AML	AML		
	comp=N,63μm,0.6s						
LNSS				AML	AML		
	comp=E,76μm,0.7s						
LNSS				AML	AML		
	comp=N,63μm,0.6s						
T1215	Vallo di Nera,	0.28	264	P	Pg	05 10 16.2	+0.6
T1215				S	Sb	05 10 21.2	-0.9
TERO	Teramo	0.33	129	P	Pg	05 10 17.1	+0.6
TERO				S	Sb	05 10 22.8	-0.7
TERO				AML	AML		
	comp=E,64μm,0.3s						
TERO				AML	AML		
	comp=N,88μm,0.3s						
PP3	Marolino	0.61	25	AML	AML		
	comp=E,370μm,1.6s						

SKO 22 05:11:24.9, 41°.34N×19°.36E, h0km
BEO 22 05:11:24.7±0.6, 41°.36N×19°.42E, h7km±3km, ML2.3/7
PDG 22 05:11:25.9±0.4, 41°.49N×19°.36E, h15km, ML2.3/11, Error ellipse: s-maj=1.4km s-min=1.6km az=0.0
TIR 22 05:11:25.2, 41°.43N×19°.59E, h14km, Md2.7, Ml2.4

ISC 22 05:11:23.6±1.1, 41°.40N±0°.03×19°.41E±0°.03, h7km±9km, n36, σ0°75/67, 6C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.35	98	ePg	Pg	05 11 30.1	-0.3
TIR				eSg	Sg	05 11 35.6	+0.6
TIR	Tirane	0.35	98	i Pg	Pg	05 11 30.0	-0.4
TIR				i Sg	Sg	05 11 36.0	+1.0
TIR	Tirane	0.35	98	P	Pg	05 11 29.9	-0.4
	baz=112						
TIR				S	Sg	05 11 34.2	-0.7
	baz=112						
TIR				AMP			
	comp=N,1.0nm,0.2s,baz=112						
TIR	Tirane	0.35	98	⇓P	Pg	05 11 30.0	-0.4
ULC	Ulcinj	0.58	348	i Pg	Pg	05 11 35.1	+0.3
ULC	Ulcinj	0.58	348	⇑iPg	Pg	05 11 34.8	0.0
ULC				i Sg	Sg	05 11 43.5	+1.2
DRME	Dracevica, Mon	0.81	348	⇑iPg	Pg	05 11 39.2	+0.1
DRME				i Sg	Sb	05 11 50.7	-0.4
PHP	Peshkopia	0.83	69	P	Pg	05 11 38.4	-1.2
	baz=68						
PHP				S	Sg	05 11 48.9	-1.4
	baz=68						
PHP				AMP			
	comp=N,0.7nm,0.5s,baz=68						
BUM	Brajici-Budva	0.98	337	⇑iPg	Pg	05 11 42.4	0.0
BUM				i Sg	Sb	05 11 56.0	-0.2
PDG	Podgorica	1.04	354	ePg	Pn	05 11 44.6	0.0
PDG				eSg	Sn	05 11 59.3	-0.1
PDG	Podgorica	1.04	354	i Pg	Pn	05 11 45.0	+0.4
PDG				i Sg	Sn	05 12 00.3	+0.9
TTG	Podgorica	1.04	354	⇓iPg	Pg	05 11 43.7	+0.2
TTG				i Sg	Sb	05 11 58.3	+0.5
BCI	Bajram Curri	1.09	27	P	Pg	05 11 44.3	-0.2
	baz=20						
BCI				S	Sg	05 11 58.4	-0.1
	baz=20						
BCI				AMP			
	comp=N,0.4nm,0.4s,baz=20						
OHR	Ohrid	1.09	105	ePg	Pn	05 11 45.3	-0.1
OHR				eSg	Sg	05 11 59.1	+0.5
OHR	Ohrid	1.09	105	i Pg	Pn	05 11 45.9	+0.6
OHR				i Sg	Sn	05 12 01.5	+0.8
OHR				eLg	Lg	05 12 02.7	
	comp=E,72nm,0.6s						
OHR				eLg	Lg	05 12 05.2	
	comp=N,48nm,0.6s						
CEME	Cevo	1.21	343	⇑iPg	Pg	05 11 46.8	+0.1
CEME				i Sg	Sn	05 12 03.4	-0.2
HCY	Herceg Novi	1.25	327	⇑iPg	Pn	05 11 47.3	-0.3
HCY				i Sg	Sn	05 12 04.5	-0.2
PVY	Plav	1.27	19	⇓iPg	Pg	05 11 48.1	+0.2
PVY				i Sg	Sn	05 12 05.7	+0.5
KBN	Korca	1.30	126	P	Pb	05 11 48.6	+0.2
	baz=131						
NKME	Niksic	1.41	346	ePg	Pg	05 11 50.7	+0.1
NKME				i Sg	Sg	05 12 10.1	+1.2
KOME	Kolasin	1.46	3	⇓iPg	Pg	05 11 51.5	0.0
KOME				i Sg	Sg	05 12 11.8	+1.4
IVA	Berane	1.52	14	⇑iPg	Pb	05 11 52.3	+0.1
IVA				i Sg	Sg	05 12 13.9	+1.5
LSK	Leskovik	1.54	144	P	Pn	05 11 52.0	+0.4
	baz=148						
DBRK	Dubrovnik	1.58	324	ePn	Pn	05 11 52.2	+0.1
DBRK				Sn	Sn	05 12 12.5	-0.3
SRN	Sarande	1.58	163	P	Pb	05 11 53.1	0.0
	baz=168						
SRN				S	Sb	05 12 13.9	+0.5
	baz=168						
BRY	Bratogost	1.64	337	⇓iPg	Pb	05 11 53.8	-0.4
BRY				i Sg	Sg	05 12 16.6	+0.4
UPM	Unac-Piva	1.84	349	⇓iPn	Pn	05 11 56.8	+0.9
UPM				i Sn	Sb	05 12 21.8	+0.7
SJES	Sjenica	1.91	13	ePn	Pn	05 11 56.5	-0.2
SJES				eSn	Sb	05 12 22.4	-0.6
STON	Ston	1.94	320	ePn	Pn	05 11 56.0	-1.1
STON				Sn	Sn	05 12 20.5	-1.3
STON	Ston	1.94	320	ePn	Pb	05 11 58.5	-0.8
STON				eSn	Sn	05 12 22.7	+1.0
SELS	Selova	2.22	34	ePn	Pb	05 12 02.7	-1.4
SELS				eSn	Sb	05 12 30.7	-1.1
BARS	Barje	2.29	51	ePn	Pn	05 12 03.6	+1.8
BARS				eSn	Sn	05 12 31.0	+0.8
LSTV	Lastovo	2.32	307	ePn	Pn	05 12 02.0	-0.2
LSTV				Sn	Sn	05 12 29.6	-1.4
BBLS	Lazići	2.47	360	ePn	Pb	05 12 06.7	-1.6
RICI	Ricice	2.69	322	ePn	Pn	05 12 07.2	-0.2
RICI				Sn	Sn	05 12 40.3	+0.2
DUGI	Dugi Otok	4.12	310	ePn	Pn	05 12 27.4	+0.4
DUGI				Sn	Sn	05 13 15.0	-0.5

IDC 22 05:16:57.1±2.3, 4°.77S×154°.03E, h0km, mb3.4/3, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=51.9km s-min=37.9km az=104.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.05	283	Pn	Pn	05 17 33.4	+0.5
	49nm,0.3s,baz=283,slow=2.6,SNR=56						
KRVT				Sn	Sn	05 17 51.4	-7.8
	63nm,0.3s,baz=154,slow=23,SNR=12 130nm,0.3s						
WRA	Warramunga Arr	24.39	230	P	P	05 22 17.4	+0.1
	0.5nm,0.4s,baz=54,slow=9.9,SNR=13 0.5nm,0.4s						
ASAR	Alice Springs	27.01	224	P	P	05 22 41.1	0.0
	0.3nm,0.9s,baz=53,slow=9.5,SNR=1.4 0.3nm,0.9s						
MKAR	Makanchi Array	81.11	319	P	P	05 29 14.5	+0.1
	0.3nm,0.4s,baz=92,slow=6.3,SNR=4.5 0.3nm,0.4s						
TORD	Torodi Ar. Bea	151.46	289	PKPbc	PKPbc	05 36 53.5	-0.6
	0.7nm,0.7s,baz=93,slow=2.4,SNR=3.5						

IDC 22 05:20:36.7±2.1, 20°.36S×178°.30W, h551km±23km, mb2.9/6, mbtmp4.0/8, Error ellipse: s-maj=29.9km s-min=24.6km az=15.0

ISC 22 05:20:36.4±1.2, 20°.4S±0°.2×178°.3W±0°.2, h550km, n8, σ0°81/9, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.35	307	P	P	05 22 01.5	+0.4
	14nm,0.4s,baz=138,slow=15,SNR=38						
URZ	Urewera	18.23	192	P	P	05 24 15.1	-1.1
	3.2nm,0.3s,baz=22,slow=3.9,SNR=1.5						
CTA	Charters Tower	33.22	264	P	P	05 26 28.0	-0.5
	1.1nm,0.3s,baz=90,slow=10,SNR=2.1 1.1nm,0.3s						
STKA	Stephens Creek	37.57	244	P	P	05 27 04.1	-0.3
	1.7nm,0.7s,baz=29,slow=10,SNR=2.3 1.7nm,0.7s						
ASAR	Alice Springs	44.26	257	P	P	05 27 58.3	+0.6
	2.2nm,0.8s,baz=95,slow=7.7,SNR=18						
ASAR				PcP	PcP	05 29 29.8	-0.4
	0.2nm,0.6s,baz=102,slow=3.9,SNR=1.7 2.2nm,0.8s						
WRA	Warramunga Arr	44.33	262	P	P	05 27 58.5	+0.2
	0.5nm,0.3s,baz=97,slow=7.6,SNR=19 0.5nm,0.3s						
VNDA	Vanda	57.98	185	P	P	05 29 37.4	+1.3
	0.4nm,0.6s,baz=354,slow=7.1,SNR=6.1 0.4nm,0.6s						
TXAR	Lajitas Array	87.25	57	P	P	05 32 24.8	-0.4
	0.4nm,0.9s,baz=205,slow=5.5,SNR=3.5 0.4nm,0.9s						

LDG 22 05:24:56.1±0.2, 42°.77N×13°.19E, h6km, Ml2.7/13, Error ellipse: s-maj=5.5km s-min=3.4km az=44.0
PRU 22 05:24:57.6±0.0, 42°.76N×14°.02E, h0km

ROM 22 05:24:56.3±0.1, 42°.771N±0°.003×13°.132E±0°.005, h6km, ML2.9/45, 24C-22D, Error ellipse: s-maj=0.4km s-min=0.2km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.06	348	⇓P	Pg	05 24 58.0	0.0
NRCA				S	Sg	05 24 59.1	-0.1
NRCA				AML	AML		
	comp=E,99350μm,0.2s						
NRCA				AML	AML		
	comp=N,69100μm,0.4s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,99350μm,0.2s						
NRCA				AML	AML		
	comp=N,74850μm,0.2s						
T1245	Castelsantange	0.10	26	⇑P	Pg	05 24 58.7	+0.2
T1245				S	Sg	05 25 00.5	+0.5
T1245				AML	AML		
	comp=E,56650μm,0.4s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,56600μm,0.4s						
T1245				AML	AML		
	comp=E,66450μm,0.4s						
T1202	Accumoli, Fraz	0.10	134	P	Pg	05 24 59.3	+0.8
T1202				S	Sg	05 25 01.6	+1.6
T1216	Preci, Frazion	0.15	325	⇓P	Pg	05 24 59.7	+0.4
T1216				S	Sg	05 25 03.0	+1.7
T1216				AML	AML		
	comp=E,30500μm,0.5s						
T1216				AML	AML		
	comp=N,32400μm,0.5s						
T1216				AML	AML		
	comp=E,30450μm,0.5s						
T1216				AML	AML		
	comp=N,32400μm,0.6s						
T1216				AML	AML		
	comp=N,32350μm,0.5s						
MC2	Monte Cornacci	0.15	17	⇑P	Pg	05 24 59.8	+0.4
MC2				S	Sg	05 25 03.0	+1.5
T1217	Poggiodomo (PG	0.16	248	⇓P	Pg	05 25 00.4	+0.9
T1217				S	Sg	05 25 03.5	+1.8
T1217				AML	AML		
	comp=E,7490μm,0.5s						
T1217				AML	AML		
	comp=N,19500μm,0.4s						
T1217				AML	AML		
	comp=E,7385μm,0.5s						
T1217				AML	AML		
	comp=N,19150μm,0.4s						
T1217				AML	AML		
	comp=E,7490μm,0.5s						
T1217				AML	AML		
	comp=N,19550μm,0.4s						
T1217				AML	AML		
	comp=N,19150μm,0.4s						
T1217				AML	AML		
	comp=E,7495μm,0.5s						
T1217				AML	AML		
	comp=N,19550μm,0.4s						
T1217				AML	AML		
	comp=E,7390μm,0.5s						
LNSS	Leonessa	0.18	202	P	Pg	05 25 00.8	+0.9
LNSS				S	Sg	05 25 04.3	+1.9
LNSS				AML	AML		
	comp=E,13200μm,1.4s						
LNSS				AML	AML		
	comp=N,14000μm,0.5s						
MMO1	Montemonaco	0.19	48	⇑P	Pg	05 25 00.5	+0.4
MMO1				S	Sg	05 25 03.9	+1.2
T1215	Vallo di Nera,	0.20	279	⇓P	Pg	05 25 00.9	+0.7
T1215				S	Sg	05 25 04.8	+1.9
T1215				AML	AML		
	comp=N,4025μm,1.2s						
T1215				AML	AML		
	comp=E,4730μm,0.5s						
T1215				AML	AML		
	comp=N,4075μm,0.8s						
T1215				AML	AML		
	comp=E,4775μm,0.6s						
T1215				AML	AML		
	comp=N,4020μm,1.2s						
T1215				AML	AML		
	comp=N,4017μm,1.2s						
T1215				AML	AML		
	comp=E,4730μm,0.5s						
T1243	Rocca Santa Ma	0.24	108	P	Pg	05 25 01.7	+0.6
T1243				S	Sg	05 25 06.2	+1.8
AM05	Amandola Campo	0.26	38	P	Pg	05 25 01.9	+0.5
AM05				S	Sb	05 25 06.8	-1.4
AM05				AML	AML		
	comp=N,1149μm,1.6s						
AM05				AML	AML		
	comp=E,5005μm,1.4s						
AM05				AML	AML		
	comp=N,198μm,0.4s						
AM05				AML	AML		
	comp=E,1330μm,1.4s						
AM05				AML	AML		
	comp=N,1152μm,1.6s						
FDMO	Fiordimonte	0.27	353	P	Pg	05 25 02.1	+0.6

FDMO			S	Sg	05 25 06.6	+1.5
FDMO			AML	AML		
	comp=N,5305μm,0.3s					
FDMO			AML	AML		
	comp=E,4150μm,0.3s					
RM33	**Pellescritta (**	**0.27 167**	P	Pg	05 25 02.3	+0.8
RM33			S	Sb	05 25 07.1	-1.3
RM33			AML	AML		
	comp=E,7555μm,0.5s					
RM33			AML	AML		
	comp=N,7645μm,0.4s					
RM33			AML	AML		
	comp=E,7660μm,0.5s					
RM33			AML	AML		
	comp=N,7640μm,0.4s					
RM33			AML	AML		
	comp=E,7555μm,0.5s					
RM33			AML	AML		
	comp=N,7650μm,0.4s					
RM33			AML	AML		
	comp=E,7655μm,0.5s					
CESI	**CESI - Serrava**	**0.29 325**	⇓P	Pg	05 25 02.3	+0.4
CESI			S	Sg	05 25 07.0	+1.3
CESI			AML	AML		
	comp=N,14100μm,0.4s					
CESI			AML	AML		
	comp=E,5410μm,0.4s					
CAMP	**Campotosto**	**0.31 139**	P	Pg	05 25 02.9	+0.6
CAMP			S	Sb	05 25 08.3	-1.4
CAMP			AML	AML		
	comp=E,2785μm,0.7s					
CAMP			AML	AML		
	comp=N,2470μm,0.5s					
T1211	**Morro Reatino**	**0.31 221**	⇓P	Pg	05 25 03.1	+0.7
T1211			S	Sb	05 25 09.2	-0.5
T1211			AML	AML		
	comp=N,6310μm,0.3s					
T1211			AML	AML		
	comp=E,2480μm,0.7s					
T1211			AML	AML		
	comp=E,2405μm,0.4s					
T1211			AML	AML		
	comp=E,2485μm,0.7s					
T1211			AML	AML		
	comp=N,6225μm,0.3s					
T1211			AML	AML		
	comp=N,6310μm,0.3s					
GUMA	**Gualdo di Mace**	**0.33 27**	P	Pg	05 25 03.3	+0.6
GUMA			S	Sb	05 25 09.0	-1.2
GUMA			AML	AML		
	comp=N,12750μm,0.5s					
GUMA			AML	AML		
	comp=E,16050μm,0.5s					
GUMA			AML	AML		
	comp=E,12350μm,0.7s					
GUMA			AML	AML		
	comp=N,13850μm,0.6s					
ARRO	**Arrone**	**0.33 235**	⇓P	Pg	05 25 03.5	+0.7
ARRO			S	Sb	05 25 09.1	-1.0
ARRO			AML	AML		
	comp=N,2515μm,0.7s					
ARRO			AML	AML		
	comp=E,2085μm,0.7s					
ARRO			AML	AML		
	comp=N,2520μm,0.7s					
T1247	**Pizzolo (AQ)**	**0.35 159**	P	Pg	05 25 03.9	+0.8
T1247			S	Sb	05 25 09.9	-0.9
T1247			AML	AML		
	comp=E,5960μm,0.5s					
T1247			AML	AML		
	comp=E,5955μm,0.5s					
T1247			AML	AML		
	comp=N,5815μm,0.3s					
TERO	**Teramo**	**0.38 113**	⇑P	Pg	05 25 04.0	+0.4
TERO			S	Sb	05 25 10.2	-1.4
TERO			AML	AML		
	comp=E,1935μm,1.3s					
TERO			AML	AML		
	comp=N,2795μm,0.4s					
TERO			AML	AML		
	comp=E,1940μm,1.3s					
TERO			AML	AML		
	comp=N,2790μm,0.4s					
TERO			AML	AML		
	comp=E,2090μm,1.4s					
TERO			AML	AML		
	comp=N,2905μm,0.4s					
SEF1	**Sefro**	**0.40 340**	S	Sg	05 25 09.0	-0.3
CESX	**Cesi**	**0.44 249**	⇓P	Pg	05 25 05.1	+0.4
CESX			S	Sb	05 25 12.8	-0.4
CESX			AML	AML		
	comp=E,2215μm,1.1s					
CESX			AML	AML		
	comp=N,1975μm,0.4s					
OFFI	**Offida**	**0.44 68**	⇑P	Pb	05 25 06.0	-0.4
OFFI			S	Sb	05 25 14.7	+1.4
OFFI			AML	AML		
	comp=E,4470μm,0.7s					
OFFI			AML	AML		
	comp=N,5020μm,0.9s					
ASSB	**Assisi San Ben**	**0.44 308**	⇓P	Pg	05 25 05.0	+0.2
ASSB			S	Sb	05 25 12.4	-1.0
ASSB			AML	AML		
	comp=E,2560μm,0.3s					
ASSB			AML	AML		
	comp=N,2180μm,1.3s					
GIGS	**Gran Sasso**	**0.46 135**	⇓P	Pg	05 25 05.5	+0.4
GIGS			S	Sb	05 25 12.6	-1.2
GIGS			AML	AML		
	comp=E,633μm,0.2s					
GIGS			AML	AML		
	comp=N,512μm,0.4s					
AQU	**L'Aquila**	**0.46 154**	⇑P	Pg	05 25 05.9	+0.8
AQU			S	Sb	05 25 13.4	-0.5
AQU			AML	AML		
	comp=E,2580μm,1.5s					
AQU			AML	AML		
	comp=N,1800μm,1.0s					
AQU			AML	AML		
	comp=N,1895μm,1.0s					
AQU			AML	AML		
	comp=E,2625μm,1.5s					
AQU			AML	AML		
	comp=E,2575μm,1.5s					
FIAM	**Fiamignano**	**0.50 181**	⇓P	Pg	05 25 06.4	+0.4
FIAM			S	Sb	05 25 14.5	-0.7
FIAM			AML	AML		
	comp=E,1160μm,0.9s					
FIAM			AML	AML		
	comp=N,1280μm,0.7s					
FIAM			AML	AML		
	comp=E,1161μm,0.9s					
SNTG	**Esanatoglia**	**0.50 344**	⇑P	Pg	05 25 06.2	+0.2
SNTG			S	Sb	05 25 14.3	-0.9
SNTG			AML	AML		
	comp=E,1355μm,0.5s					
SNTG			AML	AML		
	comp=N,1340μm,0.7s					
SNTG			AML	AML		
	comp=N,1410μm,0.7s					
SNTG			AML	AML		
	comp=E,1385μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.55 319**	⇓P	Pg	05 25 07.0	+0.2
ATCC			S	Sb	05 25 16.0	-0.5
ATCC			AML	AML		
	comp=N,2120μm,0.3s					
ATCC			AML	AML		
	comp=E,2680μm,0.5s					
EL6	**Elcito**	**0.56 358**	⇓P	Pg	05 25 07.0	0.0
EL6			S	Sb	05 25 16.4	-0.5
EL6			AML	AML		
	comp=N,2655μm,1.0s					
EL6			AML	AML		
	comp=E,2495μm,0.4s					
TRTR	**Tortoreto Alta**	**0.58 86**	⇑P	Pb	05 25 09.2	+0.5
TRTR			S	Sn	05 25 23.9	+3.1
FOSV	**Fossato di Vic**	**0.59 333**	⇑P	Pg	05 25 07.8	+0.1
FOSV			S	Sb	05 25 16.8	-0.9
FAGN	**Fagnano**	**0.60 146**	⇑P	Pg	05 25 08.1	+0.2
FAGN			S	Sb	05 25 18.6	+0.5
FAGN			AML	AML		
	comp=N,2720μm,0.4s					
FAGN			AML	AML		
	comp=E,2440μm,0.3s					
CING	**Cingoli**	**0.61 4**	⇓P	Pg	05 25 08.1	+0.1
CING			S	Sb	05 25 17.9	-0.3
CING			AML	AML		
	comp=N,818μm,0.3s					
CING			AML	AML		
	comp=E,950μm,0.3s					
VCEL	**Villa Celiera**	**0.64 125**	⇑P	Pg	05 25 09.2	+0.6
VCEL			S	Sb	05 25 19.9	+0.7
VCEL			AML	AML		
	comp=E,2595μm,0.6s					
VCEL			AML	AML		
	comp=N,2245μm,0.9s					
VCEL			AML	AML		
	comp=E,2600μm,0.6s					
MURB	**Monte Urbino**	**0.66 318**	⇑P	Pg	05 25 09.2	+0.2
MURB			S	Sb	05 25 19.9	0.0
MURB			AML	AML		
	comp=E,2455μm,1.1s					
MURB			AML	AML		
	comp=N,2395μm,1.0s					
MURB			AML	AML		
	comp=N,2300μm,0.3s					
MURB			AML	AML		
	comp=E,2675μm,1.1s					
ATTE	**AVT- Monte Tez**	**0.71 307**	⇑P	Pg	05 25 10.5	+0.5
ATTE			AML	AML		
	comp=E,559μm,1.6s					
ATTE			AML	AML		
	comp=N,521μm,0.9s					
ATFO	**Monte Foce - G**	**0.72 326**	⇓P	Pg	05 25 10.1	-0.1
ATFO			S	Sb	05 25 22.8	+1.2
ATFO			AML	AML		
	comp=E,1198μm,1.2s					
ATFO			AML	AML		
	comp=N,750μm,0.6s					
T0110	**Collepietro**	**0.72 138**	⇑P	Pg	05 25 10.3	+0.1
T0110			S	Sb	05 25 21.9	+0.4
T0110			AML	AML		
	comp=E,2165μm,1.2s					
T0110			AML	AML		
	comp=E,2160μm,1.2s					
T0110			AML	AML		
	comp=N,2140μm,0.4s					
ARVD	**Arcevia**	**0.74 349**	⇑P	Pg	05 25 10.6	+0.1
ARVD			S	Sb	05 25 23.0	+1.0
ARVD			AML	AML		
	comp=N,496μm,0.8s					
ARVD			AML	AML		
	comp=E,665μm,0.6s					
MGAB	**Montegabbione**	**0.76 281**	⇑P	Pg	05 25 11.3	+0.4
MGAB			AML	AML		
	comp=N,1785μm,0.5s					
MGAB			AML	AML		
	comp=E,1280μm,1.4s					
MGAB			AML	AML		
	comp=E,1575μm,0.4s					
MGAB			AML	AML		
	comp=N,1695μm,0.4s					
PTQR	**Pietraquaria**	**0.77 165**	⇑P	Pg	05 25 11.3	+0.2
PTQR			AML	AML		
	comp=N,422μm,0.5s					
PTQR			AML	AML		
	comp=E,340μm,1.4s					
FRON	**Frontone**	**0.80 338**	P	Pg	05 25 11.3	-0.4
FRON			S	Sb	05 25 23.6	-0.2
FRON			AML	AML		
	comp=N,924μm,0.5s					
FRON			AML	AML		
	comp=E,568μm,1.1s					
ATVO	**AVT- Monte Val**	**0.81 319**	⇓P	Pg	05 25 11.5	-0.3
ATVO			AML	AML		
	comp=E,617μm,0.7s					
ATVO			AML	AML		
	comp=N,568μm,1.2s					
CERT	**Cerreto**	**0.83 188**	P	Pb	05 25 12.7	-0.4
CERT			S	Sb	05 25 23.9	-0.6
CERT			AML	AML		
	comp=E,1240μm,0.5s					
CERT			AML	AML		
	comp=N,599μm,1.0s					
AOI	**Ancona**	**0.85 24**	⇑P	Pb	05 25 13.4	-0.1
AOI			S	Sn	05 25 26.7	-1.0
AOI			AML	AML		
	comp=E,894μm,0.4s					
AOI			AML	AML		
	comp=N,670μm,0.3s					
ATPI	**Pietralunga -**	**0.86 322**	⇓P	Pg	05 25 12.6	-0.3
ATPI			AML	AML		
	comp=E,638μm,0.5s					
ATPI			AML	AML		
	comp=N,511μm,0.9s					
PIEI	**Pieia**	**0.88 330**	⇓P	Pg	05 25 12.8	-0.4
PIEI			S	Sb	05 25 26.6	+0.6
PIEI			AML	AML		
	comp=N,330μm,1.6s					
PIEI			AML	AML		
	comp=E,359μm,1.1s					
MPAG	**Monte Paganucc**	**0.90 343**	⇑P	Pg	05 25 13.1	-0.5
MPAG			S	Sb	05 25 27.3	+0.6
MPAG			AML	AML		
	comp=E,670μm,0.7s					
MPAG			AML	AML		
	comp=N,594μm,0.6s					
SACS	**San Casciano d**	**0.90 275**	P	Pg	05 25 12.3	-1.3
NARO	**Abbazia di Nar**	**0.93 335**	⇑P	Pg	05 25 13.6	-0.6
NARO			S	Sb	05 25 28.1	+0.6
NARO			AML	AML		
	comp=N,450μm,0.6s					
NARO			AML	AML		
	comp=E,368μm,0.8s					
INTR	**Introdacqua**	**0.95 143**	⇑P	Pg	05 25 13.9	-0.6
INTR			AML	AML		
	comp=E,642μm,0.6s					
INTR			AML	AML		
	comp=N,900μm,1.6s					
FSSB	**Fossombrone**	**0.96 344**	⇓P	Pg	05 25 14.6	0.0
FSSB			S	Sn	05 25 29.5	-0.7
FSSB			AML	AML		
	comp=E,2185μm,0.4s					
FSSB			AML	AML		
	comp=N,2090μm,0.4s					
LATE	**Laterza**	**0.99 261**	⇓P	Pb	05 25 16.3	+0.4
CAFI	**Castiglion Fio**	**1.02 304**	⇑P	Pg	05 25 15.7	-0.1
CAFI			S	Sn	05 25 31.4	-0.4
CAFI			AML	AML		
	comp=E,418μm,0.7s					
CAFI			AML	AML		
	comp=N,432μm,1.1s					
PE3	**Peglio**	**1.03 334**	S	Sb	05 25 31.0	+0.5
LPEL	**Lama dei Pelig**	**1.06 133**	⇓P	Pg	05 25 16.1	-0.5
LPEL			S	Sb	05 25 31.9	+0.7
LPEL			AML	AML		
	comp=N,394μm,1.1s					
LPEL			AML	AML		
	comp=E,544μm,0.7s					
MCIV	**Monte Civitell**	**1.07 271**	⇓P	Pn	05 25 17.9	0.0
MCIV			AML	AML		
	comp=N,207μm,0.8s					
MCIV			AML	AML		
	comp=E,220μm,1.4s					
GIUL	**Giuliano Di Ro**	**1.22 176**	P	Pn	05 25 20.5	+0.7
TRIV	**Trivento**	**1.45 133**	⇑P	Pg	05 25 24.0	-0.1
VAGA	**Valle Agricola**	**1.58 148**	⇑P	Pg	05 25 27.9	+1.3
PGF	**Pioggiola**	**3.06 267**	*e*Pn	Pn	05 25 45.6	+0.4
PGF			*e*Sn	Sn	05 26 18.4	-3.7
	comp=E,1.9nm,0.4s					
GBAS	**Gorenja Brezov**	**3.30 16**	*i* Pn	Pn	05 25 49.3	+0.8
ROBS	**Robic**	**3.48 4**	*i* Pn	Pn	05 25 51.5	+0.5
OBKA	**Obir**	**3.87 15**	*e*Pn	Pn	05 25 58.0	+1.6
	comp=E,1.4nm,0.3s					
OBKA			*i* Sn	Sn	05 26 42.7	+0.5
	comp=E,3.9nm,0.5s					
OBKA			Sg	Sg	05 27 02.1	+1.5
	comp=E,22nm,0.8s					
MYKA	**Terra Mystica**	**3.88 5**	*e*Pn	Pn	05 25 58.0	+1.6
	comp=E,2.2nm,0.4s					
MYKA			*i* Sn	Sn	05 26 44.2	+1.9
	comp=E,3.6nm,0.5s					
ABTA	**Abfaltersbach**	**4.00 354**	*i* Pn	Pn	05 26 00.1	+2.0
	comp=E,5.5nm,0.5s					
ABTA			*e*Sn	Sn	05 26 46.3	+0.9
	comp=E,8.6nm,0.7s					
SBF	**Sospel**	**4.30 287**	*e*Pn	Pn	05 26 01.0	-1.2
SBF			*e*Sn	Sn	05 26 48.4	-4.3
	comp=E,4.7nm,0.4s					
KBA	**Koelnbreinsper**	**4.31 2**	*i* Pn	Pn	05 26 04.3	+1.8
	comp=E,2.6nm,0.4s					
KBA			*i* Sn	Sn	05 26 53.3	+0.2
	comp=E,3.4nm,0.3s					
FETA	**Feichten**	**4.58 339**	*e*Pn	Pn	05 26 07.9	+1.7
	comp=E,1.7nm,0.4s					
FETA			*i* Sn	Sn	05 26 59.8	0.0
	comp=E,1.0nm,0.4s					
WTTA	**Wattenberg**	**4.62 347**	*i* Sn	Sn	05 27 02.3	+1.6
	comp=E,4.3nm,0.4s					
SQTA	**Sankt Quirin**	**4.65 344**	*i* Pn	Pn	05 26 09.7	+2.5
	comp=E,1.7nm,0.2s					
SQTA			*i* Sn	Sn	05 27 03.7	+2.2
	comp=E,2.8nm,0.2s					
WATA	**Walderalm**	**4.70 347**	Pn	Pn	05 26 07.9	+0.1
	comp=E,2.5nm,0.3s					
WATA			*e*Sn	Sn	05 27 04.4	+1.8
	comp=E,5.6nm,0.5s					
ARSA	**Arzberg**	**4.79 20**	*i* Sn	Sn	05 27 03.4	-1.3
	comp=E,1.3nm,0.3s					
MOTA	**Moosalm**	**4.79 343**	*i* Pn	Pn	05 26 11.1	+2.0
	comp=E,2.0nm,0.4s					
MOTA			*e*Sn	Sn	05 27 07.7	+2.6
	comp=E,4.5nm,0.5s					
LMR	**La Mourre**	**4.89 279**	*e*Pn	Pn	05 26 09.8	-0.4
LMR			*e*Sn	Sn	05 27 02.7	-4.4
	comp=E,1.3nm,0.5s					
BIOA	**Bad Ischl, Aus**	**4.93 4**	*e*Pn	Pn	05 26 13.6	+2.7
	comp=E,3.6nm,0.4s					
BIOA			*i* Sn	Sn	05 27 11.7	+3.4
	comp=E,8.1nm,0.5s					
RETA	**Reutte**	**5.00 341**	*i* Pn	Pn	05 26 15.0	+3.1
	comp=E,1.4nm,0.4s					
MBDF	**Montbardon**	**5.01 295**	*e*Pn	Pn	05 26 15.2	+3.2
MBDF			*e*Sn	Sn	05 27 06.5	-3.8
	comp=E,1.2nm,0.5s					
MOA	**Molln**	**5.14 9**	*i* Pn	Pn	05 26 15.5	+1.7
	comp=E,0.9nm,0.3s					
MOA			*e*Sn	Sn	05 27 15.1	+1.6
	comp=E,4.9nm,0.7s					
LPG	**La Plagne**	**5.34 303**	*e*Pn	Pn	05 26 17.1	+0.3
LPG			*e*Sn	Sn	05 27 12.7	-6.0
	comp=E,2.8nm,0.6s					
LPL	**La Plagne**	**5.36 303**	*e*Pn	Pn	05 26 16.7	-0.3
LPL			*e*Sn	Sn	05 27 13.6	-5.5
	comp=E,2.6nm,0.6s					
RONA	**Rosalia, Austr**	**5.41 23**	*i* Pn	Pn	05 26 19.7	+2.2
	comp=E,1.0nm,0.5s					
CONA	**Conrad Observa**	**5.50 20**	*i* Pn	Pn	05 26 20.1	+1.3
	comp=E,0.7nm,0.2s					
CONA			*e*Sn	Sn	05 27 22.8	+0.4
	comp=E,1.6nm,0.5s					
ORIF	**Oris-en-Rattie**	**5.67 295**	*e*Pn	Pn	05 26 19.6	-1.5
CKRC	**Cesky Krumlov**	**6.11 7**	*e*SN	Sn	05 27 36.1	-1.1
KHC	**Kasperske Hory**	**6.37 3**	*e*PN	Pn	05 26 31.2	+0.6
KHC			*e*SN	Sn	05 27 42.7	-1.0
VIVF	**Saint-Julien-l**	**6.46 292**	*e*Pn	Pn	05 26 30.9	-1.1
HINF	**Hinteralfeld**	**6.71 321**	*e*Pn	Pn	05 26 33.7	-1.7
HINF			*e*Sn	Sn	05 27 46.8	-5.3
	comp=E,4.7nm,0.5s					
LASF	**Ste Croix**	**6.88 284**	*e*Pn	Pn	05 26 36.7	-0.9
CDF	**Champ du Feu**	**6.98 326**	*e*Pn	Pn	05 26 37.3	-1.7
CDF			*e*Sn	Sn	05 27 52.8	-5.9
	comp=E,3.3nm,0.6s					
HAU	**Haudompre**	**7.08 320**	*e*Pn	Pn	05 26 38.9	-1.5
HAU			*e*Sn	Sn	05 27 55.1	-6.2
	comp=E,6.3nm,0.5s					
LOR	**Lormes**	**7.96 308**	*e*Pn	Pn	05 26 50.8	-1.6
LOR			*e*Sn	Sn	05 28 16.9	-5.9
	comp=E,0.6nm,0.3s					
MTLF	**Montolieu**	**8.02 278**	*e*Pn	Pn	05 26 51.8	-1.4
MEZF	**Maizieres J'vi**	**8.05 318**	*e*Sn	Sn	05 28 17.7	-7.3
	comp=E,2.7nm,0.5s					

*TEH **22** 05:49:32.3, 28°.49N±56°.95E, h15km, ML4.0*
*OMAN **22** 05:49:34.0±0.1, 28°.38N±56°.86E, h10km, mb4.8/5, ml3.9/11, Error ellipse: s-maj=4.9km s-min=1.9km az=299.0*
*IDC **22** 05:49:34.8±2.0, 28°.42N±56°.78E, h44km±23km, mb3.5/12, mbtmp3.7/16, ML3.8/4, MS3.2/9, Error ellipse: s-maj=18.0km s-min=13.6km az=68.0*
*DSN **22** 05:49:35.9±1.5, 28°.34N±56°.39E, h10km, ML3.8/9, Error ellipse: s-maj=21.0km s-min=8.8km az=62.0*
ISC 22 05:49:34.0±0.6, 28°.49N±0°.04×56°.90E±0°.05, h31km, n117, σ1ŝ76/122, mb3.7/12, MS3.2/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.89**	**127**	*e*Pg	**Pn**	**05 49 49.0**	**-1.4**
IBND	**Bandar-abas**	**1.08**	**197**	*e*Pg	**Pn**	**05 49 53.9**	**+0.9**
IBND				*e*		05 50 20.2	
	comp=Z,74μm,0.6s						
NGRK	**Negar Kerman**	**1.16**	**353**	*e*Pg	**Pn**	**05 49 53.5**	**-1.0**
NGRK				*e*		05 50 16.7	
	comp=Z,29μm,0.2s						
GENO	**Geno**	**1.26**	**211**	*e*Pg	**Pn**	**05 49 57.2**	**+1.5**
GENO				*e*		05 50 16.5	
	comp=Z,53μm,0.6s						
CHMN	**Cheshme madani**	**1.48**	**22**	*e*Pg	**Pn**	**05 49 59.5**	**+0.7**
KRBR	**Kerman**	**1.49**	**355**	*e*Pg	**Pn**	**05 49 59.3**	**+0.3**
TVBK	**TV Kerman**	**1.50**	**355**	*e*Pn	**Pn**	**05 49 59.5**	**+0.4**
TVBK				*e*		05 50 28.4	
	comp=Z,30μm,0.2s						
KHGB	**Koh Gabri**	**1.92**	**349**	*e*		05 50 10.2	
	comp=Z,15μm,0.6s						
KHGB				*e*Pn	**Pn**	**05 50 06.2**	**+1.5**
LAR1	**LAR**	**2.38**	**251**	*e*Pn	**Pn**	**05 50 12.5**	**+1.6**
LAR1				*e*		05 51 07.2	
	comp=Z,16μm,0.5s						
SHME	**Shamm**	**2.52**	**196**	*e*Pn	**Pn**	**05 50 13.4**	**+0.6**
SHME	**Shamm**	**2.52**	**196**	P	**Pn**	**05 50 13.4**	**+0.6**
	SNR=12						
SHME				S	**Sn**	**05 50 44.0**	**+1.5**
SHME	**Shamm**	**2.52**	**196**	*e*P	**Pn**	**05 50 13.2**	**+0.4**
	SNR=22						
BANOM	**Banah**	**2.61**	**192**	*e*Pn	**Pn**	**05 50 15.0**	**+0.9**
BANOM	**Banah**	**2.61**	**192**	P	**Pn**	**05 50 14.6**	**+0.4**
	SNR=66						
BANOM				S	**Sn**	**05 50 46.4**	**+1.6**
BANOM	**Banah**	**2.61**	**192**	*e*P	**Pn**	**05 50 14.5**	**+0.4**
	SNR=24						
BANOM				S	**Sn**	**05 50 45.9**	**+1.2**
JASK	**Jask - Hormozg**	**2.75**	**162**	*e*Pn	**Pn**	**05 50 16.8**	**+0.9**
JASK				*e*		05 51 28.2	
	comp=Z,6μm,0.8s						
JASK	**Jask - Hormozg**	**2.75**	**162**	P	**Pn**	**05 50 16.9**	**+0.9**
	SNR=17						
JHRM	**Jahrom**	**2.93**	**271**	*e*Pn	**Pn**	**05 50 20.9**	**+2.4**
UMQ	**Umm Al-Quwin**	**3.15**	**201**	*e*Pn	**Pn**	**05 50 22.9**	**+1.4**
MASF	**Masafi**	**3.17**	**192**	P	**Pn**	**05 50 22.6**	**+0.7**
	SNR=12						
MASF				S	**Sn**	**05 51 00.1**	**+1.4**
MSFE	**Esma-Masafi**	**3.19**	**192**	*e*Pn	**Pn**	**05 50 23.3**	**+1.3**
MSFE	**Esma-Masafi**	**3.19**	**192**	*e*P	**Pn**	**05 50 23.0**	**+1.0**
	SNR=9.2						
IBAF	**Bafgh**	**3.30**	**340**	*e*Pn	**Pn**	**05 50 26.0**	**+2.3**
IBAF				*e*		05 50 36.6	
	comp=Z,2μm,0.5s						
QIR1	**Qir**	**3.40**	**271**	*e*Pn	**Pn**	**05 50 26.9**	**+2.0**
IMEH	**Mehriz**	**3.51**	**326**	*e*Pn	**Pn**	**05 50 28.9**	**+2.3**
IMEH				*e*		05 51 30.7	
	comp=Z,2μm,0.9s						
ZHDN	**Zahedan**	**3.54**	**74**	*e*Pn	**Pn**	**05 50 28.7**	**+1.7**
ZHSF	**Zahedan**	**3.57**	**71**	*e*Pn	**Pn**	**05 50 30.7**	**+3.3**
UOSS	**Minazif**	**3.58**	**190**	*e*Pn	**Pn**	**05 50 28.8**	**+1.4**
UOSS	**Minazif**	**3.58**	**190**	P	**Pn**	**05 50 28.6**	**+1.1**
UOSS				S	**Sn**	**05 51 10.5**	**+1.8**
NAZ	**Nazwa, Dubai**	**3.66**	**198**	*e*Pn	**Pn**	**05 50 30.1**	**+1.6**
NAZ	**Nazwa, Dubai**	**3.66**	**198**	P	**Pn**	**05 50 30.2**	**+1.8**
	SNR=12						
NAZ				S	**Sn**	**05 51 11.6**	**+1.1**
NAZ	**Nazwa, Dubai**	**3.66**	**198**	*i* P	**Pn**	**05 50 29.9**	**+1.5**
	SNR=12						
HATD	**Hatta, Dubai**	**3.71**	**191**	*e*Pn	**Pn**	**05 50 30.7**	**+1.5**
HATD	**Hatta, Dubai**	**3.71**	**191**	P	**Pn**	**05 50 30.5**	**+1.3**
ASHO	**Ashiyiah**	**3.86**	**191**	*e*Pn	**Pn**	**05 50 32.4**	**+1.1**
ASHO	**Ashiyiah**	**3.86**	**191**	P	**Pn**	**05 50 32.8**	**+1.5**
	SNR=11						
ASHO				S	**Sn**	**05 51 17.2**	**+1.5**
ASHO	**Ashiyiah**	**3.86**	**191**	*i* P	**Pn**	**05 50 33.0**	**+1.6**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**3.91**	**198**	*e*Pn	**Pn**	**05 50 33.4**	**+1.5**
FAQ	**Al Faqa, Dubai**	**3.91**	**198**	P	**Pn**	**05 50 33.6**	**+1.7**
	SNR=16						
FAQ				S	**Sn**	**05 51 18.3**	**+1.5**
FAQ	**Al Faqa, Dubai**	**3.91**	**198**	*i* P	**Pn**	**05 50 33.3**	**+1.4**

SNR=61
BSRN Basiran 3.96 28 *e*Pn **Pn 05 50 35.4 +2.6**
NHDN Nehbandan 3.98 43 *e*Pn **Pn 05 50 35.5 +2.5**
ESRB Sir Abu 4.03 217 *e*Pn **Pn 05 50 34.2 +0.6**
ASUD Al Ashush, Dub 4.10 200 *e*Pn **Pn 05 50 36.3 +1.8**
ASUD Al Ashush, Dub 4.10 200 P **Pn 05 50 36.6 +2.2**
SNR=56
ASUD S **Sn 05 51 24.4 +3.1**
ASUD Al Ashush, Dub 4.10 200 *i* P **Pn 05 50 36.0 +1.5**
SNR=22
AJN Ajban 4.27 204 *e*Pn **Pn 05 50 38.0 +1.2**
AJN Ajban 4.27 204 P **Pn 05 50 38.5 +1.6**
SNR=10
AJN S **Sn 05 51 26.2 +0.5**
AJN Ajban 4.27 204 *i* P **Pn 05 50 38.0 +1.2**
SNR=10
CHBR Chabahar 4.30 131 *e*Pn **Pn 05 50 38.2 +0.9**
ICHK Chekchek 4.32 331 *e*Pn **Pn 05 50 40.0 +2.2**
ICHK *e* 05 52 10.7
comp=Z,1μm,0.8s
IKOO Kooshah 4.32 24 *e*Pn **Pn 05 50 40.3 +2.5**
YZKH Yazd 4.37 333 *e*Pn **Pn 05 50 40.9 +2.6**
ISAD Sadrabad 4.41 322 *e*Pn **Pn 05 50 41.7 +2.7**
ISAD *e* 05 51 58.0
comp=Z,1μm,1.0s
TPRV Parvadeh(Tabas 4.53 358 *e*Pn **Pn 05 50 42.9 +2.4**
ALNE Al Ain 4.53 193 *e*Pn **Pn 05 50 41.8 +1.3**
ALNE Al Ain 4.53 193 P **Pn 05 50 41.8 +1.3**
ITEG Tejag 4.67 19 *e*Pn **Pn 05 50 45.3 +2.7**
NGCH Negor - Chabah 4.90 129 *e*Pn **Pn 05 50 46.5 +1.0**
NGCH Negor - Chabah 4.90 129 P **Pn 05 50 46.6 +1.0**
SNR=12
AHBU AHRAM 4.94 276 *e*Pn **Pn 05 50 49.1 +3.0**
IDAH Dahanechah 4.95 30 *e*Pn **Pn 05 50 48.8 +2.4**
BIDO Bidbid 5.07 167 P **Pn 05 50 46.5 -1.3**
TKDS Koohdasht(Taba 5.11 2 *e*Pn **Pn 05 50 51.5 +2.9**
IRAM Ramesheh 5.13 311 *e*Pn **Pn 05 50 50.6 +1.8**
ARQ Araqi 5.14 184 P **Pn 05 50 50.1 +1.2**
SNR=12
TABS Tabas 5.15 2 *e*Pn **Pn 05 50 53.1 +4.1**
AFRZ Afriz 5.25 20 *e*Pn **Pn 05 50 52.2 +1.8**
IMON Monand 5.26 26 *e*Pn **Pn 05 50 53.3 +2.7**
ANAR Anarak 5.42 331 *e*Pn **Pn 05 50 54.8 +2.0**
MZWR Madinat Zayed 5.43 211 *e*Pn **Pn 05 50 53.3 +0.4**
WSAR Wadi Sarin 5.45 163 P **Pn 05 50 54.0 +0.8**
comp=Z,3.2nm,0.3s,baz=342,slow=4.0,SNR=14
WSAR S **Sn 05 51 53.8 -1.1**
comp=Z,18nm,0.3s,baz=199,slow=23,SNR=12
comp=Z,8.4nm,0.3s
TNSJ Nastanj 5.46 357 *e*Pn **Pn 05 50 55.9 +2.5**
SMDO Samad 5.50 169 P **Pn 05 50 55.4 +1.5**
NASN Na'in 5.56 322 *e*Pn **Pn 05 50 56.8 +1.9**
BSY Bisya 5.73 177 P **Pn 05 50 57.9 +1.0**
IGAR Gharneh 5.73 314 *e*Pn **Pn 05 50 59.0 +1.9**
IZEF Zefreh 5.90 319 *e*Pn **Pn 05 51 00.9 +1.4**
SHRT Shahrakht 5.91 29 *e*Pn **Pn 05 51 02.5 +3.1**
IBRJ Brojen 5.96 306 *e*Pn **Pn 05 51 02.3 +2.0**
WBK Wadi Bani Khal 6.14 162 P **Pn 05 51 03.0 +0.4**
SNR=9.8
MZR Muzera 6.27 210 *e*Pn **Pn 05 51 04.6 +0.2**
IKLH Kolahrood 6.64 318 *e*Pn **Pn 05 51 12.3 +2.6**
IPIR Pirpir 6.66 318 *e*Pn **Pn 05 51 11.8 +1.9**
QAMS Qamsar 7.04 319 *e*Pn **Pn 05 51 16.5 +1.3**
ISFB Sefidab 7.07 327 *e*Pn **Pn 05 51 17.8 +2.4**
AMIS Naft Sefid 7.32 297 *e*Pn **Pn 05 51 21.9 +3.1**
TBJM Torbat-e-JAM 7.36 22 *e*Pn **Pn 05 51 21.7 +2.2**
SHRO Shahrood 7.52 354 *e*Pn **Pn 05 51 24.8 +3.2**
MHTO MHTO 7.53 172 P **Pn 05 51 21.2 -0.5**
KHMZ Khomeyn 7.92 313 *e*Pn **Pn 05 51 28.9 +1.6**
ASAO Ashtian 8.42 318 *e*Pn **Pn 05 51 36.0 +1.9**
IKRD Kardeh 8.55 14 *e*Pn **Pn 05 51 38.2 +2.3**
HSAM Samen 9.10 311 *e*Pn **Pn 05 51 43.8 +0.3**
MRVT Maraveh tapeh 9.17 356 *e*Pn **Pn 05 51 47.2 +3.0**
GEYT Alibeck 9.47 6 P **Pn 05 51 50.5 +2.2**
comp=Z,0.7nm,0.3s,baz=181,slow=13,SNR=5.0
GEYT LR LR 05 55 59.0
comp=Z,157nm,20.8s,baz=209,slow=40
comp=Z,2.8nm,0.5s
WHFO Wadi Hawf 10.91 196 P **Pn 05 52 05.8 -2.2**
SNR=5.2
RAYN Ar Rayn 11.38 247 *i* P Pn 05 52 11.2 -3.3
SNR=15
GNI Garni 15.35 322 LR LR 05 59 37.4
comp=Z,68nm,19.6s,baz=138,slow=39
ASF Jabal al Asfar 17.65 287 P **Pn 05 53 38.0 +0.4**
comp=Z,0.1nm,0.3s,baz=73,slow=18,SNR=1.7
ASF S Sn 05 56 39.6 -14
comp=Z,1.6nm,0.7s,baz=328,slow=20,SNR=1.2
comp=Z,0.9nm,0.4s
MMAI Mount Meron Ar 19.01 289 P **P 05 53 52.2 -1.1**
comp=Z,0.7nm,0.3s,baz=121,slow=13,SNR=2.0
comp=Z,0.3nm,0.3s
AAK Ala-Archa 20.05 41 LR LR 06 01 39.4
comp=Z,30nm,20.7s,baz=256,slow=36
AKTO Aktyubinsk 21.93 2 P **P 05 54 25.1 +0.3**
comp=Z,1.9nm,0.7s,baz=183,slow=12,SNR=6.6
AKTO LR LR 06 04 40.2
comp=Z,60nm,20.0s,baz=183,slow=41
comp=Z,1.9nm,0.7s
BRTR Keskin Array B 22.22 306 P **P 05 54 27.9 -0.3**
comp=Z,2.1nm,0.8s,baz=124,slow=10,SNR=10
comp=Z,2.1nm,0.8s
BELG Belogornoye 24.86 346 LR LR 06 07 31.3
comp=Z,61nm,19.8s,baz=152,slow=43
BVAR Borovoye Array 26.46 18 P **P 05 55 08.4 +0.3**
comp=Z,1.4nm,0.8s,baz=201,slow=6.3,SNR=9.4
BVAR LR LR 06 07 07.5
comp=Z,81nm,18.6s,baz=193,slow=40
comp=Z,1.4nm,0.8s
MKAR Makanchi Array 26.98 40 P **P 05 55 13.3 +0.5**
comp=Z,0.1nm,0.4s,baz=222,slow=5.8,SNR=2.3
comp=Z,0.1nm,0.4s
KURBB Kurchatov Arra 27.50 31 P **P 05 55 17.7 +0.3**
comp=Z,0.2nm,0.7s,baz=224,slow=8.9,SNR=2.1
comp=Z,0.2nm,0.7s
ZALV Zalesovo Beam 32.59 31 P **P 05 56 02.0 -0.4**
comp=Z,0.9nm,0.5s,baz=254,slow=9.7,SNR=5.3
comp=Z,0.9nm,0.5s
MBAR Mbarara 38.27 225 LR LR 06 12 33.0
comp=Z,44nm,18.1s,baz=26,slow=36
GERES GERESS Array B 38.73 314 P **P 05 56 53.4 -1.9**
comp=Z,0.4nm,0.6s,baz=145,slow=7.0,SNR=2.9
comp=Z,0.4nm,0.6s
FINES FINESS Array B 38.80 337 P **P 05 56 54.5 -1.0**
comp=Z,1.2nm,0.6s,baz=121,slow=9.4,SNR=7.7
comp=Z,1.2nm,0.6s
NOA NORSAR Array B 44.46 330 P **P 05 57 39.8 -2.1**
comp=Z,0.4nm,0.6s,baz=142,slow=11,SNR=2.1
NOA LR LR 06 20 20.0
comp=Z,26nm,18.8s,baz=20,slow=42
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 53.38 265 P **P 05 58 49.2 -1.8**
comp=Z,2.3nm,0.6s,baz=64,slow=7.3,SNR=16
comp=Z,2.3nm,0.6s
LBTB Lobatse 61.13 213 LR LR 06 27 33.5
comp=Z,24nm,18.3s,baz=103,slow=37
WRA Warramunga Arr 88.90 113 P **P 06 02 26.3 +0.6**
comp=Z,0.6nm,0.9s,baz=338,slow=6.3,SNR=2.6
comp=Z,0.6nm,0.9s
ASAR Alice Springs 90.45 117 P **P 06 02 32.8 -0.1**
comp=Z,0.5nm,0.7s,baz=320,slow=4.5,SNR=5.7
comp=Z,0.5nm,0.7s

*IDC **22** 06:00:14.1±2.5, 24°.42N×94°.38E, h92km±28km, mb3.5/10, mbtmp3.8/12, MS3.0/1, Error ellipse: s-maj=22.9km s-min=14.2km az=57.0*
*NDI **22** 06:00:19.2±3.9, 24°.79N×94°.09E, h37km±15km, ML3.9*
ISC 22 06:00:14.7±0.8,**24°.58N**±0°.05×**94°.20E**±0°.06,**h100**km,**n23,**
σ2°58/29, mb3.7/10,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.14**	**356**	*e*Pg	**Pn**	**06 00 37.0**	**+0.1**
KOHI				*i* Sg	**Sn**	**06 00 50.3**	**-3.3**
KOHI				IAML		06 00 56.2	
comp=E,2μm,0.4s							
KOHI				IAML		06 00 56.3	
comp=N,2μm,0.4s							
SILR	**SILCHAR**	**1.28**	**279**	*e*P	**Pn**	**06 00 38.3**	**-0.1**
SILR				*e*S	**Sn**	**06 00 56.4**	**+0.1**
SILR				IAML		06 01 03.1	
comp=N,1μm,0.2s							
SILR				IAML		06 01 05.4	
comp=E,1μm,0.3s							
MOKO	**MOKOCHONG**	**1.76**	**9**	*e*P	**Pn**	**06 00 47.5**	**+3.0**
MOKO				*e*S	**Sn**	**06 01 03.8**	**-3.2**
MOKO				IAML		06 01 11.5	
comp=E,2μm,0.4s							
MOKO				IAML		06 01 12.1	
comp=N,1μm,0.6s							
JORH	**JORHAT**	**2.16**	**1**	*e*S	**Sn**	**06 01 13.0**	**-2.8**
SHL	**Shillong**	**2.32**	**296**	*e*P	**Pn**	**06 00 50.5**	**-1.1**
SHL				*e*S	**Sn**	**06 01 18.1**	**-1.7**
SHL				IAML		06 01 19.8	
comp=N,952nm,0.1s							
SHL				IAML		06 01 19.9	
comp=E,701nm,0.1s							
TEZP	**TEZPUR**	**2.39**	**328**	*e*P	**Pn**	**06 00 50.7**	**-1.7**
TEZP				*e*S	**Sn**	**06 01 17.6**	**-3.7**
TEZP				IAML		06 01 20.9	
comp=E,1μm,0.2s							
TEZP				IAML		06 01 20.9	
comp=N,2μm,0.2s							
ITAN	**ITANAGAR**	**2.59**	**351**	*e*P	**Pn**	**06 00 58.0**	**+2.9**
ITAN				*e*S	**Sn**	**06 01 23.3**	**-2.8**
ITAN				IAML		06 01 35.5	
comp=N,1μm,0.1s							
ITAN				IAML		06 01 35.6	
comp=E,2μm,0.1s							
DIBR	**DIBRUGARH**	**2.95**	**12**	*e*S	**Sn**	**06 01 30.2**	**-4.3**
ZIRO	**ZIRO**	**2.96**	**354**	*ex*	x	06 00 56.4	
ZIRO				*e*S	**Sn**	**06 01 30.0**	**-4.9**
ZIRO				IAML		06 01 31.6	
comp=E,1μm,0.4s							
ZIRO				IAML		06 01 32.8	
comp=N,1μm,0.2s							
BRDH	**Bariadhala**	**3.01**	**232**	P	**Pn**	**06 00 59.3**	**-1.3**
comp=N,62nm,0.3s,baz=274,slow=22,SNR=1.8							
BRDH				S	**Sn**	**06 01 36.9**	**+0.9**
comp=N,184nm,0.3s,baz=270,slow=21,SNR=16							
DHUB	**DHUBRI**	**4.06**	**292**	*ex*	x	06 01 14.1	
DHUB				*e*S	**Sn**	**06 01 58.1**	**-3.2**
CMAR	**Chiang Mai Arr**	**7.52**	**143**	P	**Pn**	**06 01 57.9**	**-3.9**
comp=N,2.6nm,0.5s,baz=320,slow=13,SNR=18							
MKAR	**Makanchi Array**	**24.13**	**340**	P	**P**	**06 05 23.6**	**+2.3**
comp=N,0.8nm,0.3s,baz=153,slow=9.0,SNR=17							
comp=N,0.8nm,0.3s							
SONM	**Songino Array**	**25.15**	**20**	P	**P**	**06 05 32.1**	**+1.5**
comp=N,3.0nm,0.7s,baz=192,slow=10,SNR=14							
comp=N,3.0nm,0.7s							
KURBB	**Kurchatov Arra**	**28.69**	**339**	P	**P**	**06 06 04.1**	**+1.9**
comp=N,0.2nm,0.5s,baz=151,slow=9.1,SNR=4.4							
comp=N,0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**30.16**	**349**	P	**P**	**06 06 16.6**	**+1.4**
comp=N,1.2nm,0.4s,baz=181,slow=7.0,SNR=5.4							
comp=N,1.2nm,0.4s							
DAV	**Davao City (W)**	**34.72**	**115**	LR	LR	06 20 47.3	
comp=N,28nm,21.5s,baz=284,slow=36							
FINES	**FINESS Array B**	**58.28**	**328**	P	**P**	**06 10 00.0**	**+1.4**
comp=N,1.9nm,0.8s,baz=76,slow=5.9,SNR=4.0							
comp=N,1.9nm,0.8s							
WRA	**Warramunga Arr**	**59.03**	**135**	P	**P**	**06 10 03.2**	**-1.3**
comp=N,0.5nm,0.5s,baz=322,slow=7.4,SNR=20							
comp=N,0.5nm,0.5s							
ARCES	**ARCESS Array B**	**59.77**	**338**	P	**P**	**06 10 10.9**	**+2.1**
comp=N,1.9nm,0.9s,baz=100,slow=5.0,SNR=4.3							
comp=N,1.9nm,0.9s							
ASAR	**Alice Springs**	**61.50**	**138**	P	**P**	**06 10 19.9**	**-1.4**
comp=N,0.2nm,0.3s,baz=320,slow=6.3,SNR=5.6							
comp=N,0.2nm,0.3s							
NOA	**NORSAR Array B**	**65.45**	**328**	P	**P**	**06 10 48.3**	**+1.5**
comp=N,0.5nm,0.6s,baz=83,slow=6.6,SNR=2.5							
comp=N,0.5nm,0.6s							
ILAR	**Eielson Array**	**79.34**	**22**	P	**P**	**06 12 09.1**	**-0.1**
comp=N,0.2nm,0.6s,baz=293,slow=5.4,SNR=1.9							
comp=N,0.2nm,0.6s							

*IDC **22** 06:02:15.1±1.2, 42°.18N×142°.83E, h0km, mb3.8/12, mbtmp3.8/15, ML2.4/3, MS2.8/4, Error ellipse: s-maj=27.5km s-min=25.8km az=88.0*
*JMA **22** 06:02:24.0±0.2, 42°N±1°×14°2E±°, h70km±2km, MV3.4/39, S OFF URAKAWA*
*MOS **22** 06:02:23.9±1.8, 42°.11N×142°.38E, h77km, mb4.3/8, Error ellipse: s-maj=12.7km s-min=10.5km az=69.6*
ISC 22 06:02:24.6±0.7,**41°.97N**±0°.04×**142°.35E**±0°.03,**h69**km±6km,
n57,σ1°27/57, mb3.9/15,**6C-7D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.43**	**44**	*e*P	**Pn**	**06 02 35.7**	**-1.0**
JNBK				*e*S	**Sn**	**06 02 44.9**	**-0.6**
JSHD	**Hidakashinhida**	**0.45**	**11**	*e*P	**Pn**	**06 02 36.4**	**-0.4**
JSHD				*e*S	**Sn**	**06 02 46.0**	**+0.2**
ERM	**Erimo**	**0.60**	**85**	*c i*PN	**Pn**	**06 02 38.2**	**-0.1**
JEM	**Erimo**	**0.60**	**85**	*e*P	**Pn**	**06 02 38.3**	**0.0**
JEM				*e*S	**Sn**	**06 02 48.6**	**+0.2**
JIAM	**Iburiatsuma**	**0.73**	**334⇓**	*e*P	**Pn**	**06 02 40.0**	**+0.3**
JIAM			⇓	*e*S	**Sn**	**06 02 51.9**	**+1.0**
JBT2	**Biratori 2**	**0.81**	**1⇓**	*e*P	**Pn**	**06 02 40.0**	**-0.6**
JKB	**Kayabe**	**0.99**	**266**	*e*S	**Sn**	**06 02 55.3**	**-1.1**
JCH	**Churui**	**0.99**	**49**	*e*P	**Pn**	**06 02 43.0**	**+0.1**
JNB	**Noboribetsu**	**1.09**	**298⇓**	*e*P	**Pn**	**06 02 43.0**	**-1.2**
JEW	**Eniwo**	**1.10**	**323⇓**	*e*P	**Pn**	**06 02 44.1**	**-0.2**
JEW			⇓	*e*S	**Sn**	**06 02 58.8**	**-0.1**
JOT	**Ohata**	**1.14**	**239**	*e*P	**Pn**	**06 02 44.1**	**-0.6**
JFR	**Furan**	**1.21**	**8**	*e*P	**Pn**	**06 02 45.3**	**-0.4**
JFR				*e*S	**Sn**	**06 03 01.6**	**+0.1**
JOB	**Onbets**	**1.44**	**49**	*e*P	**Pn**	**06 02 49.7**	**+1.0**
JISS	**Ishikarishitsu**	**1.48**	**333**	*e*P	**Pn**	**06 02 48.9**	**-0.3**
JISS				*e*S	**Sn**	**06 03 07.5**	**-0.2**
JYM2	**Yakumo 2**	**1.48**	**276**	*e*P	**Pn**	**06 02 48.6**	**-0.7**
JSR	**Shiriuchi**	**1.51**	**254**	*e*P	**Pn**	**06 02 49.3**	**-0.4**
JSR				*e*S	**Sn**	**06 03 08.0**	**-0.5**
JANG	**Nango**	**1.71**	**202**	*e*P	**Pn**	**06 02 52.6**	**+0.2**
JOMM	**Oshimamatsumae**	**1.81**	**257**	*e*P	**Pn**	**06 02 53.3**	**-0.3**
JOMM				*e*S	**Sn**	**06 03 14.9**	**-0.7**
JHR	**Hokuryu**	**1.83**	**346**	*e*P	**Pn**	**06 02 55.0**	**+1.0**
JHR				*e*S	**Sn**	**06 03 17.9**	**+1.7**
NMR	**Nemuro--Hokkai**	**2.86**	**60⇑**	*i*PN	**Pn**	**06 03 07.2**	**-0.6**
NMR				*i* S	**Sn**	**06 03 38.4**	**-2.6**
YUK	**Yuzh-Kuril'sk**	**3.30**	**50**	*d i*PN	**Pn**	**06 03 17.7**	**+3.9**
YUK				*e*S	**Sn**	**06 03 52.2**	**+0.3**
YUK				pmax	pmax		
comp=Z,166nm,0.3s							
YUK				pmax	pmax		
comp=E,86nm,0.1s							
YUK				smax	smax		
comp=N,429nm,0.4s							
YUK				smax	smax		
comp=E,227nm,0.5s							
MAJO	**Matsushiro**	**6.30**	**212⇑**	*e*PN	Pn	06 03 59.9	+5.0
MJAR	**Matsushiro Arr**	**6.30**	**212**	Pn	**Pn**	**06 03 56.2**	**+1.3**
baz=26,slow=11,SNR=2.1							
MJAR				LR	LR	06 06 46.6	
comp=E,59nm,21.7s,baz=54,slow=41							
comp=E,1.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**7.91**	**290**	Pn	**Pn**	**06 04 15.8**	**-1.0**
comp=E,0.2nm,0.3s,baz=96,slow=11,SNR=5.2							
comp=E,4.6nm,0.8s							
KLR	**Kul'dur**	**10.38**	**318**	LR	LR	06 08 40.9	
comp=E,63nm,18.2s,baz=224,slow=37							
KSRS	**Korea Array**	**11.99**	**253**	Pn	**Pn**	**06 05 14.9**	**+2.4**
comp=E,0.1nm,0.3s,baz=65,slow=13,SNR=5.9							
KSRS				LR	LR	06 09 11.5	
comp=E,43nm,19.5s,baz=350,slow=34							
comp=E,1.9nm,0.8s							
SEY	**Seymchan**	**21.82**	**12⇑**	*e*P	**P**	**06 07 05.7**	**-5.1**
SEY				pmax	pmax		
comp=Z,7.0nm,1.3s							
SONM	**Songino Array**	**25.97**	**295**	P	**P**	**06 07 51.3**	**+0.6**
comp=Z,0.5nm,0.4s,baz=89,slow=8.5,SNR=3.5							
comp=Z,0.5nm,0.4s							
BILL	**Bilibino**	**29.11**	**18**	*i* P	**P**	**06 08 16.1**	**-2.3**
BILL				pmax	pmax		
comp=Z,6.0nm,1.4s							
H11N2	**WAKE ISLAND Hy 30.39**	**129**		T	T	06 40 12.7	
baz=323,slow=75,SNR=44							
H11N1	**WAKE ISLAND Hy 30.40**	**129**		T	T	06 40 13.5	
baz=323,slow=75,SNR=43							
H11N3	**WAKE ISLAND Hy 30.41**	**129**		T	T	06 40 14.0	
baz=323,slow=75,SNR=40							
H11S1	**WAKE ISLAND Hy 31.25**	**131**		T	T	06 41 17.9	
baz=325,slow=76,SNR=36							
H11S3	**WAKE ISLAND Hy 31.25**	**131**		T	T	06 41 19.5	
baz=325,slow=76,SNR=38							
H11S2	**WAKE ISLAND Hy 31.27**	**131**		T	T	06 41 17.3	
baz=325,slow=76,SNR=34							
ZALV	**Zalesovo Beam**	**39.28**	**308**	P	**P**	**06 09 45.8**	**-0.6**
comp=Z,0.6nm,0.3s,baz=90,slow=8.9,SNR=5.3							
comp=Z,0.6nm,0.3s							
ZALV Zalesovo Beam 39.28 308 *i* P **P 06 09 46.5 +0.1**							
ZALV				pmax	pmax		
comp=Z,1.0nm,0.3s							
MK31 Makanchi Array 42.28 298⇑ *e*P **P 06 10 11.8 +0.6**							
MKAR Makanchi Array 42.28 298 P **P 06 10 11.6 +0.3**							
comp=Z,1.3nm,0.7s,baz=81,slow=9.3,SNR=9.9							
comp=Z,1.3nm,0.7s							
KURK Kurchatov 43.60 304⇑ *e*P **P 06 10 21.2 -0.6**							
KURK				pmax	pmax		
comp=Z,2.0nm,0.9s							
CMAR Chiang Mai Arr 43.62 251 LR LR 06 28 37.4							
comp=Z,14nm,18.0s,baz=75,slow=36							
CMAR Chiang Mai Arr 43.62 251 *i* P **P 06 10 24.1 +1.8**							
CMAR				pmax	pmax		
comp=Z,2.0nm,0.3s							
KURBB Kurchatov Arra 43.68 304 P **P 06 10 22.4 0.0**							
comp=Z,2.7nm,0.8s,baz=78,slow=8.6,SNR=18							
comp=Z,2.7nm,0.8s							
BVAR Borovoye Array 47.90 309 P **P 06 10 55.5 -0.1**							
comp=Z,0.5nm,0.3s,baz=72,slow=9.5,SNR=7.1							
comp=Z,0.5nm,0.3s							
AKTO Aktyubinsk 55.99 310 P **P 06 11 57.2 +1.4**							
comp=Z,1.0nm,0.6s,baz=87,slow=8.2,SNR=2.3							
comp=Z,1.0nm,0.6s							
WRA Warramunga Arr 62.04 189 P **P 06 12 38.0 +0.2**							
comp=Z,0.6nm,1.0s,baz=4.0,slow=6.9,SNR=2.7							
comp=Z,0.6nm,1.0s							
WRA Warramunga Arr 62.04 189 P **P 06 12 38.0 +0.2**							
FINES FINESS Array B 64.81 332 P **P 06 12 55.5 -0.1**							
comp=Z,3.7nm,0.9s,baz=35,slow=7.0,SNR=8.6							
comp=Z,3.7nm,0.9s							
FINES FINESS Array B 64.81 332 *i* P **P 06 12 55.2 -0.4**							
FINES				pmax	pmax		
comp=Z,4.0nm,1.1s							
NOA NORSAR Array B 69.92 337 P **P 06 13 27.9 -0.2**							
comp=Z,0.6nm,0.6s,baz=28,slow=5.5,SNR=1.9							
comp=Z,0.6nm,0.6s							
AKASG Malin Array Be 70.86 322 P **P 06 13 33.8 0.0**							
comp=Z,0.3nm,0.3s,baz=43,slow=5.4,SNR=5.2							
comp=Z,0.3nm,0.3s							
AKASG Malin Array Be 70.86 322 *i* P **P 06 13 34.0 +0.2**							
PDAR Pinedale Array 73.73 47 P **P 06 13 49.4 -2.0**							
comp=Z,0.2nm,0.6s,baz=270,slow=3.4,SNR=2.3							
comp=Z,0.2nm,0.6s							
GERES GERESS Array B 78.90 328 P **P 06 14 19.9 -0.5**							
comp=Z,0.4nm,0.8s,baz=7.8,slow=7.9,SNR=1.9							
comp=Z,0.4nm,0.8s							
H03N2 Juan Fernandez 146.51 89 T T 09 05 18.8							
baz=301,slow=77,SNR=14							
H03N3 Juan Fernandez 146.53 89 T T 09 05 19.7							
baz=301,slow=77,SNR=25							
H03N1 Juan Fernandez 146.53 89 T T 09 05 20.0							
baz=301,slow=77,SNR=16							

*JMA **22** 06:21:27.4±0.2, 24°.7N±1°.0×122°.4E±0°.4, h84km±1km, MV2.6/10, TAIWAN REGION*
*TAP **22** 06:21:27.4, 24°.73N×122°.37E, h84km, ML3.8, C*
ISC 22 06:21:27.9±1.3,**24°.71N**±0°.03×**122°.38E**±0°.02,**h80**km±7km,
n136,σ0°83/209,9D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.43**	**289**	*e*P	**Pn**	**06 21 41.3**	**+0.3**
baz=280							
TWB1	**Santiao Chiao**	**0.46**	**310**	*i* P	**Pn**	**06 21 41.4**	**+0.1**
baz=303							
TWB1				S	**Sn**	**06 21 51.3**	**0.0**
baz=303							
TWC	**Suao**	**0.49**	**258⇓**	*i*P	**Pn**	**06 21 41.6**	**0.0**
baz=255							
TWC				*e*S	**Sn**	**06 21 51.6**	**0.0**
baz=255							
TIPB	**Shuangxi**	**0.56**	**298⇓**	*i*P	**Pn**	**06 21 42.4**	**+0.2**
baz=290							
TIPB				S	**Sn**	**06 21 52.8**	**-0.2**
baz=290							
ILA	**Ilan**	**0.57**	**276**	*e*P	**Pn**	**06 21 42.4**	**+0.1**
baz=270							
JYNG	**Yonagunijimaku**	**0.58**	**116**	*e*P	**Pn**	**06 21 42.4**	**+0.1**
JYNG				S	**Sn**	**06 21 53.4**	**+0.4**
SXI1	**Grass Mountain**	**0.59**	**310⇓**	*i*P	**Pn**	**06 21 42.6**	**0.0**
baz=308							
SXI1				S	**Sn**	**06 21 53.7**	**+0.2**
baz=308							
EWUT	**Wuta**	**0.60**	**244**	*e*P	**Pn**	**06 21 42.1**	**-0.5**
baz=242							
YOJ	**Yonaguni jima**	**0.63**	**113**	⇓P	**Pn**	**06 21 42.6**	**-0.2**
baz=121							
YOJ				*e*S	**Sn**	**06 21 54.3**	**+0.4**
baz=121							
YOJ	**Yonaguni jima**	**0.63**	**113**	P	**Pn**	**06 21 42.9**	**+0.1**
YOJ				S	**Sn**	**06 21 54.1**	**+0.2**
TWE	**Neicheng**	**0.65**	**271**	⇓P	**Pn**	**06 21 43.3**	**+0.3**
baz=268							
TWE				*e*S	**Sn**	**06 21 53.7**	**-0.5**
baz=268							
NWF	**Wu-fen Shan**	**0.65**	**304**	*i* P	**Pn**	**06 21 43.3**	**+0.1**
baz=302							
NWF				*e*S	**Sn**	**06 21 54.1**	**-0.4**
baz=302							
WFSB	**Wu-fen Shan**	**0.65**	**304⇓**	*i*P	**Pn**	**06 21 43.3**	**+0.2**
baz=302							
WFSB				*i* S	**Sn**	**06 21 54.7**	**+0.4**
baz=302							
TNOU	**National Taiwa**	**0.70**	**309**	P	**Pn**	**06 21 43.4**	**-0.2**
baz=307							
TNOU				*e*S	**Sn**	**06 21 55.3**	**+0.1**
baz=307							
FUSB	**Fushanzhiwuyua**	**0.72**	**274⇓**	*i*P	**Pn**	**06 21 44.1**	**+0.2**
baz=277							
FUSB				S	**Sn**	**06 21 55.7**	**0.0**
baz=277							
ENTT	**Nioudou**	**0.74**	**265⇓**	*e*P	**Pn**	**06 21 43.5**	**-0.5**
baz=266							
ENTT				*e*S	**Sn**	**06 21 56.0**	**0.0**
baz=266							
TWA	**Mucha**	**0.77**	**291**	P	**Pn**	**06 21 44.3**	**0.0**
baz=282							
TWA				*i* S	**Sn**	**06 21 56.5**	**0.0**
baz=282							
LATG	**Datong**	**0.79**	**258**	P	**Pn**	**06 21 45.2**	**+0.5**
baz=252							
LATG				S	**Sn**	**06 21 58.1**	**+0.9**
baz=252							
NDT	**Datong Townshi**	**0.79**	**262**	*e*P	**Pn**	**06 21 43.7**	**-0.9**
baz=262							
NDT				*e*S	**Sn**	**06 21 56.5

baz=272
NNSB Datong 0.95 253 P **Pn 06 21 46.8 +0.3**
baz=244
NNSB S **Sn 06 22 00.4 +0.1**
baz=244
TWD Chiawan 0.95 229 *e*P **Pn 06 21 46.5 +0.1**
baz=221
TWD *e*S **Sn 06 21 60.0 -0.1**
baz=221
NNS Nan Shan 0.95 254 *e*P **Pn 06 21 45.8 -0.7**
baz=245
NNS *e*S **Sn 06 21 59.8 -0.6**
baz=245
TWS1 Kuangyinshan 0.95 294 *e*P **Pn 06 21 46.6 +0.2**
baz=293
TWS1 *e*S **Sn 06 22 00.5 +0.3**
baz=293
ETLH Xiulin Townshi 0.96 239 *e*P **Pn 06 21 46.5 -0.1**
baz=228
ETLH *e*S **Sn 06 22 00.3 -0.1**
baz=228
NTST Danshui 0.96 298 *e*P **Pn 06 21 46.8 +0.4**
baz=297
NTST *e*S **Sn 06 22 01.0 +0.7**
baz=297
HWA Hwalien 1.01 224 *e*P **Pn 06 21 47.1 0.0**
baz=222
ETM Tongmen 1.09 228 *e*P **Pn 06 21 48.0 -0.1**
baz=225
ETM *e*S **Sn 06 22 02.7 -0.6**
baz=225
TEYL Yanliau Villag 1.10 220 *e*P **Pn 06 21 47.9 -0.3**
baz=214
TEYL *e*S **Sn 06 22 03.4 +0.1**
baz=214
NCU National Centr 1.11 284 *e*P **Pn 06 21 49.2 +0.9**
baz=291
NCU *e*S **Sn 06 22 04.9 +1.3**
baz=291
FUSS Fushou 1.13 246 *e*P **Pn 06 21 49.2 +0.5**
baz=238
FUSS *e*S **Sn 06 22 05.1 +0.7**
baz=238
NFF Wufeng Townshi 1.15 266⇓*e*P **Pn 06 21 48.1 -0.7**
baz=270
NFF *e*S **Sn 06 22 03.8 -0.7**
baz=270
WHF Hehuan Shan 1.16 241 *i* P **Pn 06 21 49.5 +0.2**
baz=232
WHF S **Sn 06 22 05.1 -0.2**
baz=232
TWT Tachien 1.19 248 *e*P **Pn 06 21 49.9 +0.5**
baz=245
TWT S **Sn 06 22 06.0 +0.5**
baz=245
TDCB Techi 1.20 248 P **Pn 06 21 50.2 +0.7**
baz=238
TDCB S **Sn 06 22 06.3 +0.5**
baz=238
ESL Shilin 1.24 224 *e*P **Pn 06 21 49.2 -0.7**
baz=222
LIOB Emei 1.24 267 *e*P **Pn 06 21 50.2 +0.3**
baz=265
LIOB *e*S **Sn 06 22 07.0 +0.6**
baz=265
NHW Xinwu Township 1.24 284 *e*P **Pn 06 21 50.1 +0.2**
baz=288
NSTT Nanjuang 1.25 267 *e*P **Pn 06 21 50.2 +0.1**
baz=264
NSTT S **Sn 06 22 07.3 +0.5**
baz=264
TEGC Jichi Village 1.25 218 *e*P **Pn 06 21 50.3 +0.3**
baz=209
SBCB Hsinchu 1.27 274 *e*P **Pn 06 21 50.5 +0.3**
baz=272
SBCB S **Sn 06 22 07.7 +0.7**
baz=272
CHGB Renai 1.27 240 *e*P **Pn 06 21 50.9 +0.3**
baz=230
CHGB S **Sn 06 22 07.3 -0.2**
baz=230
IRIF Iriomote-Funau 1.29 107 *e*P **Pn 06 21 50.1 -0.4**
IRIF *e*S **Sn 06 22 07.7 +0.2**
WUSB Renai 1.35 238 P **Pn 06 21 51.9 +0.5**
baz=230
WUSB S **Sn 06 22 09.1 -0.1**
baz=230
WHP Taichung City 1.37 252 *e*P **Pn 06 21 52.6 +0.9**
baz=250
WHP S **Sn 06 22 10.7 +1.1**
baz=250
NMLH Miaoli 1.45 264 *e*P **Pn 06 21 52.8 +0.2**
baz=261
WPL Puli Township 1.47 242 *e*P **Pn 06 21 53.7 +0.9**
baz=236
VWDT VWDT 1.48 230 P **Pn 06 21 53.1 +0.2**
baz=223
VWDT S **Sn 06 22 11.4 -0.4**
baz=223
DPDB Guoxing 1.48 243 *e*P **Pn 06 21 54.4 +1.3**
baz=241
WCS Beigang Elemen 1.48 244 *e*P **Pn 06 21 53.4 +0.4**
baz=242
HGSD Ruisui 1.49 216 *e*P **Pn 06 21 52.9 -0.2**
baz=207
HGSD *e*S **Sn 06 22 11.8 -0.3**
baz=207
NSY Sanyi 1.50 259 P **Pn 06 21 53.8 +0.5**
baz=257
NSY S **Sn 06 22 12.9 +0.5**
baz=257
TWQ1 Liyutan 1.50 257 *e*P **Pn 06 21 53.4 +0.1**
baz=254
TWQ1 *e*S **Sn 06 22 12.9 +0.4**
baz=254
EHY Hungye 1.54 219 *e*P **Pn 06 21 52.7 -1.0**
baz=226
JKRS Kuro-shima 1.56 107 *e*P **Pn 06 21 54.3 +0.3**
JKRS *e*S **Sn 06 22 14.3 +0.6**
SMLT Sun Moon Lake 1.58 239 *e*P **Pn 06 21 55.8 +1.5**
baz=230
SMLT *e*S **Sn 06 22 16.1 +1.7**
baz=230
SSLB Suanglung 1.59 235 P **Pn 06 21 56.4 +2.0**
SSLB Suanglung 1.59 235 *e*P **Pn 06 21 55.5 +1.1**
baz=229
SSLB *e*S **Sn 06 22 16.3 +1.8**
baz=229
TYC Yuchr 1.60 240 *e*P **Pn 06 21 55.5 +1.0**
baz=232
WDJ Dajia District 1.62 258 *e*P **Pn 06 21 54.8 0.0**
baz=255
ECBN Changbin 1.62 212 *e*P **Pn 06 21 53.4 -1.4**
baz=203
YULB Yu-li 1.64 217 P **Pn 06 21 55.1 0.0**
YULB Yu-li 1.64 217 *e*P **Pn 06 21 54.0 -1.1**
baz=225
YULB S **Sn 06 22 13.3 -2.4**
baz=225
JIJ Ishigaki jima 1.65 102 *e*P **Pn 06 21 55.1 +0.1**
EYUL Yuli 1.67 216 *e*P **Pn 06 21 54.9 -0.5**
baz=223
TWF1 Yuli 1.67 216 *e*P **Pn 06 21 54.5 -1.0**
baz=223
WHYT Xinyi Township 1.72 234 *e*P **Pn 06 21 57.3 +1.2**
baz=232
WHYT *e*S **Sn 06 22 19.1 +1.6**
baz=232
WNT1 Nantou City 1.74 243 *e*P **Pn 06 21 55.7 -0.6**
baz=251
WJS Zhushan 1.75 240 *e*P **Pn 06 21 58.1 +1.7**
baz=248
WJS *e*S **Sn 06 22 20.1 +2.0**
baz=248
WNT Mingjian 1.75 242 *e*P **Pn 06 21 58.6 +2.0**
baz=250
JISG Ishigakijimahi 1.76 94 P **Pn 06 21 56.4 -0.2**
JISG *e*S **Sn 06 22 19.2 +0.7**
YUS Yu-Shan 1.78 227 P **Pn 06 21 57.8 +0.4**
baz=220
YUS *e*S **Sn 06 22 19.3 -0.3**
baz=220
WYL Yuanlin Townsh 1.80 246 *e*P **Pn 06 21 57.7 +0.6**
baz=252
FULB Fuli 1.80 214 *e*P **Pn 06 21 56.9 -0.3**
baz=204
FULB *e*S **Sn 06 22 19.1 -0.3**
baz=204

CHKT Chengkung 1.85 210 *e*P **Pn 06 21 56.1 -1.7**
baz=202
ALS Alishan 1.87 231 P **Pn 06 21 59.4 +1.0**
baz=222
ALS S **Sn 06 22 22.2 +0.8**
baz=222
CHN5 Tsauling 1.91 235 *e*P **Pn 06 21 58.8 +0.2**
baz=243
CHN5 *e*S **Sn 06 22 23.2 +1.2**
baz=243
ECS Chishang 1.92 214 *e*P **Pn 06 21 59.3 +0.5**
baz=212
ECS *e*S **Sn 06 22 22.2 -0.2**
baz=212
ELDTW Lidau 1.96 220 *e*P **Pn 06 21 59.0 -0.4**
baz=213
WDLH Douliu 1.96 239 *e*P **Pn 06 21 59.5 +0.2**
baz=247
EDH Donghe 1.99 210 *e*P **Pn 06 21 58.7 -0.9**
baz=202
EDH *e*S **Sn 06 22 22.2 -1.6**
baz=202
WRL Guolierlin Hig 1.99 247 *e*P **Pn 06 21 58.6 -1.1**
baz=252
WCKO Fanlu 2.06 232 *e*P **Pn 06 22 01.6 +1.0**
baz=222
WCKO *e*S **Sn 06 22 27.1 +1.6**
baz=222
WTK Tuku 2.08 241 *e*P **Pn 06 22 01.7 +0.8**
baz=239
JTJ Tarama 2.12 91 *e*P **Pn 06 22 01.4 +0.1**
CHN4 Tsaushan 2.12 231 *e*P **Pn 06 22 01.5 +0.1**
baz=228
CHN4 *e*S **Sn 06 22 28.4 +1.4**
baz=228
STYH Taoyuan 2.12 224 *e*P **Pn 06 22 01.7 +0.3**
baz=222
STYH *e*S **Sn 06 22 26.9 0.0**
baz=222
TPUB Ta-pu 2.13 229 P **Pn 06 22 03.0 +1.5**
TPUB Ta-pu 2.13 229 P **Pn 06 22 03.0 +1.5**
baz=227
TPUB S **Sn 06 22 28.8 +1.6**
baz=227
LONT Longtian 2.13 213 *e*P **Pn 06 22 00.5 -1.1**
baz=211
STYT Tauyuan 2.14 224 *e*P **Pn 06 22 02.8 +1.1**
baz=222
STYT *e*S **Sn 06 22 28.5 +1.1**
baz=222
CHY Chiayi 2.15 236 *e*P **Pn 06 22 02.5 +0.7**
baz=245
WTP Ta-pu 2.17 228 *e*P **Pn 06 22 03.3 +1.1**
baz=227
WTP *e*S **Sn 06 22 29.9 +1.6**
baz=227
LDUT Ludao 2.19 203 *e*P **Pn 06 22 01.3 -1.1**
baz=206
TWGBT Beinan 2.23 213 P **Pn 06 22 03.2 +0.4**
TWGBT Beinan 2.23 213 *e*P **Pn 06 22 02.0 -0.9**
baz=210
TWGBT S **Sn 06 22 27.9 -1.6**
baz=210
TWG Pinlang 2.23 213 *e*P **Pn 06 22 02.3 -0.6**
baz=210
TWG *e*S **Sn 06 22 27.9 -1.7**
baz=210
TWK Hsinying 2.25 231 *e*P **Pn 06 22 04.4 +1.2**
baz=228
TWK *e*S **Sn 06 22 32.2 +2.1**
baz=228
CHN1 Nanshi 2.27 228 *e*P **Pn 06 22 04.5 +1.0**
baz=226
CHN1 *e*S **Sn 06 22 31.3 +0.6**
baz=226
SGST Jiashian 2.31 226 *e*P **Pn 06 22 04.8 +0.9**
baz=224
SLGT Liugui 2.33 223 *e*P **Pn 06 22 05.6 +1.4**
baz=213
SCST Cishan 2.50 224 *e*P **Pn 06 22 07.6 +1.0**
baz=230
SSD Sandimen 2.52 220 *e*P **Pn 06 22 07.9 +1.1**
baz=218
TSMG Majia 2.55 219 *e*P **Pn 06 22 08.5 +1.3**
baz=217
MATB Ma-tsu 2.63 304 *e*P **Pn 06 22 06.6 -1.6**
baz=302
MASBT Mashibuluo 2.63 218 P **Pn 06 22 09.2 +1.0**
baz=215
MASBT S **Sn 06 22 40.0 +0.8**
baz=215
JMJ Miyako jima 2 2.65 87 *e*P **Pn 06 22 09.8 +1.2**
baz=89
VWUC VWUC 2.67 277 *e*P **Pn 06 22 08.1 -0.8**
baz=274
EAST Anshuo 2.71 212 *e*P **Pn 06 22 08.8 -0.6**
baz=205
LAY Lan-yu 2.76 196 *e*P **Pn 06 22 09.3 -0.8**
baz=189
LYUB Lan-yu 2.79 195 *e*P **Pn 06 22 08.9 -1.6**
baz=194
PNG Penghu 2.82 247 *e*P **Pn 06 22 09.7 -1.1**
baz=244
PHUB P'eng-hu 2.83 246 *e*P **Pn 06 22 09.4 -1.5**
baz=243
PHUB *e*S **Sn 06 22 42.3 -1.6**
baz=243
SCZT Fangliau 2.83 215 *e*P **Pn 06 22 12.2 +1.2**
baz=213
SLIU Shizi 2.87 211 *e*P **Pn 06 22 11.3 -0.2**
baz=205
WDGT Dungji 2.87 240 *e*P **Pn 06 22 11.8 +0.3**
baz=238
XPSS Dashiqiu 2.96 319 *e*P **Pn 06 22 11.2 -1.5**
baz=318
LYJJ Jianjiangzhen 2.99 308 *e*P **Pn 06 22 12.0 -1.1**
baz=307
SMST Manzhou Townsh 3.03 208 *e*P **Pn 06 22 13.5 -0.1**
baz=201
TWKBT Hengchun 3.11 208 *e*P **Pn 06 22 14.8 0.0**
baz=201
MHZQ Yeshan 3.33 295 *e*P **Pn 06 22 17.0 -0.7**
baz=293
KNM Kinmen 3.60 266 *e*P **Pn 06 22 21.9 +0.6**
baz=263
AXDP Jialang 4.01 274 *e*P **Pn 06 22 26.2 -0.7**
baz=270

IDC ***22*** *06:34:39.3±0.9, 23°.07S×173°.18E, h0km, mb4.1/8, mbtmp4.0/10, ML4.7/2, MS3.3/18, Error ellipse: s-maj=26.6km s-min=20.1km az=152.0*
NEIC ***22*** *06:34:41.4±2.2, 23°.3S±0°.1×173°.2E±0°.1, h10km±1km, mb4.4/15, Error ellipse: s-maj=23.4km s-min=15.0km az=343.0*
NOU ***22*** *06:35:44.8, 22°.44S×168°.27E, h0km, MLv2.7/5, New Caledonia*
ISC 22 06:34:45.7±0.6, 23°.02S±0°.10×173°.09E±0°.08, h49km, n52, σ1§15/42, mb4.1/11, MS3.3/14, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.93	287		Pn	06 35 56.3	-1.0
OUENC	Ouen Island, N	5.80	275		Pn	06 36 08.2	-1.0
OUENC	Ouen Island, N	5.80	275	P	Pn	06 36 09.1	-0.1
YATNC	Mamie plateau,	5.81	278	P	Pn	06 36 09.7	+0.4
LIFNC	LIFOU	5.88	291	Pn	Pn	06 36 09.8	-0.4
ONTNC	Ouen Toro	6.17	275	Pn	Pn	06 36 11.9	-2.4
ONTNC	Ouen Toro	6.17	275	P	Pn	06 36 15.3	+1.0
DZM	Mont Dzumac	6.22	277	Pn	Pn	06 36 14.3	-0.7
	2.8nm,0.3s,baz=120,slow=13,SNR=54						
DZM				Sn	Sn	06 37 22.5	-2.3
	2.3nm,0.3s,baz=124,slow=22,SNR=10.0						
DZM				LR	LR	06 38 09.6	
	comp=Z,113nm,21.3s,baz=32,slow=33						
	6.3nm,0.3s						
DZM	Mont Dzumac	6.22	277	P	Pn	06 36 14.8	-0.2
NOUC	Port Laguerre	6.34	277	P	Pn	06 36 17.9	+1.3
MSVF	Nonsavu	7.02	42	Pn	Pn	06 36 25.2	-0.8
	1.3nm,0.3s,baz=220,slow=18,SNR=6.4						
MSVF				LR	LR	06 38 42.0	
	comp=Z,149nm,20.6s,baz=201,slow=35						
	2.6nm,0.4s						
MSVF	Nonsavu	7.02	42	Pn	Pn	06 36 25.6	-0.4
RAO	Raoul Island	10.18	129	LR	LR	06 40 10.0	
	comp=Z,141nm,18.3s,baz=334,slow=33						
URZ	Urewera	15.57	168	LR	LR	06 42 38.8	
	comp=Z,222nm,19.9s,baz=72,slow=31						
LTZ	Lake Taylor	19.72	182	P	P	06 39 10.6	-0.5
LTZ				IAmb	IAmb	06 39 22.2	
	comp=Z,38nm,1.4s						
EIDS	Eidsvold	20.21	259	P	Pn	06 39 22.6	+3.8
EIDS				IAmb	IAmb	06 39 23.0	
	comp=Z,14nm,0.8s						
OXZ	Oxford	20.27	182	P	P	06 39 13.9	-3.1
OXZ				IAmb	IAmb	06 39 27.5	
	comp=Z,23nm,0.9s						
RPZ	Rata Peaks	20.71	184	P	P	06 39 21.2	-0.5
	comp=Z,7.1nm,0.7s,baz=13,slow=17,SNR=2.3						
RPZ				LR	LR	06 46 15.0	
	comp=Z,88nm,20.2s,baz=6.5,slow=34						
	comp=Z,7.1nm,0.7s						
CAN	Canberra	24.28	234	P	P	06 40 00.5	+2.1
CTA	Charters Tower	25.12	272	P	P	06 40 08.1	+1.9
	comp=Z,8.9nm,0.8s,baz=100,slow=11,SNR=12						
CTA				LR	LR	06 50 04.4	
	comp=Z,31nm,18.1s,baz=80,slow=37						
	comp=Z,8.9nm,0.8s						
CTAO	Charters Tower	25.12	272	P	P	06 40 08.3	+2.1
CTAO				IAmb	IAmb	06 40 09.6	
	comp=Z,11nm,0.8s						
RAR	Rarotonga	25.19	91	LR	LR	06 47 32.8	
	comp=Z,39nm,22.0s,baz=215,slow=31						
PMG	Port Moresby	28.28	294	LR	LR	06 50 27.2	
	comp=Z,56nm,18.1s,baz=14,slow=33						
STKA	Stephens Creek	29.23	246	P	P	06 40 43.5	+0.6
	comp=Z,2.5nm,0.8s,baz=90,slow=10,SNR=5.1						
STKA				LR	LR	06 51 30.3	
	comp=Z,64nm,19.3s,baz=31,slow=34						
	comp=Z,2.5nm,0.8s						
STKA	Stephens Creek	29.23	246	P	P	06 40 43.5	+0.6
BBOO	Buckleboo	34.00	245	P	P	06 41 25.2	+0.3
AS31	Alice Springs	35.91	261	P	P	06 41 41.9	+0.4
ASAR	Alice Springs	35.91	261	P	P	06 41 41.8	+0.3
	comp=Z,2.3nm,0.7s,baz=86,slow=8.5,SNR=21						
ASAR				PcP	PcP	06 44 08.9	+1.0
	comp=Z,1.4nm,0.8s,baz=102,slow=3.0,SNR=7.5						
ASAR				LR	LR	06 56 21.4	
	comp=Z,30nm,18.9s,baz=158,slow=36						
	comp=Z,2.3nm,0.7s						
ASAR	Alice Springs	35.91	261	P	P	06 41 41.4	-0.1
WB0	Warramunga Arr	36.11	268	P	P	06 41 42.6	-0.6
WB0				IAmb	IAmb	06 41 43.9	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	36.12	267	P	P	06 41 43.3	0.0
	comp=Z,2.4nm,1.0s,baz=97,slow=8.4,SNR=12						
WRA				PcP	PcP	06 44 09.7	+1.2
	comp=Z,0.8nm,0.7s,baz=98,slow=3.1,SNR=4.3						
WRA				LR	LR	06 55 44.6	
	comp=Z,47nm,18.7s,baz=117,slow=35						
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	36.12	267	P	P	06 41 43.0	-0.3
H11S2	WAKE ISLAND Hy	41.73	351	T	T	07 27 11.2	
	baz=171,slow=76,SNR=4.5						
H11S3	WAKE ISLAND Hy	41.74	351	T	T	07 27 14.7	
	baz=171,slow=76,SNR=3.5						
H11S1	WAKE ISLAND Hy	41.75	351	T	T	07 27 10.6	
	baz=171,slow=76,SNR=4.7						
GUMO	Guam	45.69	320	LR	LR	06 59 45.1	
	comp=Z,65nm,19.3s,baz=106,slow=33						
SIJI	Sorong	46.19	292	LR	LR	07 01 41.7	
	comp=Z,48nm,18.8s,baz=248,slow=35						
KAPI	Kappang	54.43	281	LR	LR	07 07 14.9	
	comp=Z,18nm,19.9s,baz=108,slow=36						
VNDA	Vanda	54.82	183	P	P	06 44 10.4	+0.2
	comp=Z,0.9nm,0.7s,baz=356,slow=6.9,SNR=12						
VNDA				LR	LR	07 03 00.0	
	comp=Z,41nm,21.6s,baz=70,slow=31						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	54.82	183	P	P	06 44 09.6	-0.7
VNDA				IAmb	IAmb	06 44 48.1	
	comp=Z,2.2nm,1.1s						
SBA	Scott Base	54.97	182	P	P	06 44 12.3	+1.0
SBA				IAmb	IAmb	06 44 13.7	
	comp=Z,7.0nm,0.8s						
LEM	Lembang	64.81	273	LR	LR	07 16 11.9	
	comp=Z,31nm,18.2s,baz=274,slow=38						
QSPA	South Pole Qui	67.05	180	P	P	06 45 33.3	-0.3
MAW	Mawson	76.28	202	P	P	06 46 29.6	+0.8
MAW				IAmb	IAmb	06 46 51.5	
	comp=Z,1.2nm,1.3s						
BELA	Belgrano 2	78.01	174	P	P	06 46 36.8	-1.7
BELA				IAmb	IAmb	06 46 37.8	
	comp=Z,2.5nm,0.9s						
KLR	Kul'dur	80.81	334	LR	LR	07 19 14.1	
	comp=Z,30nm,19.3s,baz=330,slow=33						
MA2	Magadan	84.32	349	LR	LR	07 25 17.8	
	comp=Z,18nm,18.2s,baz=145,slow=36						
NVAR	Mina Array Bea	88.67	47	P	P	06 47 35.2	+1.2
	comp=Z,0.4nm,0.7s,baz=216,slow=9.0,SNR=3.6						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	92.81	16	P	P	06 47 51.6	-0.8
	comp=Z,0.4nm,0.7s,baz=234,slow=5.3,SNR=9.1						
	comp=Z,0.4nm,0.7s						
CLL	Collm	147.83	336	*e*PKPbc	PKiKP	06 54 27.0	+0.1
CLL				*ex*	x	06 54 34.0	
GERES	GERESS Array B	149.50	333	PKPbc	PKiKP	06 54 30.8	+0.2
	comp=Z,0.6nm,0.8s,baz=350,slow=1.1,SNR=4.9						
TORD	Torodi Ar. Bea	167.23	221	PKP	PKPdf	06 54 47.2	+0.2
	comp=Z,1.0nm,1.0s,baz=192,slow=1.3,SNR=3.8						
TORD				PKPab	PKPab	06 55 51.1	-0.4
	comp=Z,0.8nm,1.0s,baz=134,slow=4.2,SNR=2.6						

ISK ***22*** *07:12:20.4, 39°.18N×29°.05E, h4km, ML2.5/16*
DDA ***22*** *07:12:20.1±0.0, 39°.12N×29°.03E, h7km±2km, ML1.7*
ISC 22 07:12:20.5±0.9, 39°.15N±0°.02×29°.03E±0°.02, h8km±7km, n29, σ0§60/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.06	221	PG	Pg	07 12 22.7	+0.2
SMAA				SG	Sg	07 12 24.7	+0.7
DEMI	Demirci	0.27	247	P	Pg	07 12 25.8	-0.2
DEMI				S	Sg	07 12 29.2	-0.4
GEDZ	Gediz	0.31	110	PG	Pb	07 12 27.4	-1.0
GEDZ				SG	Sb	07 12 32.4	-1.2
GDZ	Gediz	0.35	100	P	Pg	07 12 26.8	-0.7
GDZ				*i* AML	AML	07 12 32.0	
	comp=N,113nm,0.3s						
GDZ				*i* AML	AML	07 12 32.0	
	comp=E,64nm,0.2s						
GDZ				S	Sg	07 12 32.5	+0.2
USAK	Uak-Merkez	0.43	182	P	Pg	07 12 29.0	0.0
USAK				*i* AML	AML	07 12 35.0	
	comp=E,55nm,0.2s						
USAK				S	Sg	07 12 35.1	+0.3
TVSB	Tavsanli	0.45	48	PG	Pg	07 12 28.6	-0.7
TVSB				SG	Sg	07 12 34.5	-0.7
DURS	Dursunbey	0.63	316	P	Pg	07 12 32.6	-0.1
DURS				S	Sg	07 12 40.5	-0.4
DURS				*i* AML	AML	07 12 47.0	
	comp=N,99nm,0.5s						
DURS				*i* AML	AML	07 12 48.0	
	comp=E,113nm,0.1s						
ANDZ	Kutahya, Merke	0.76	62	P	Pg	07 12 35.2	0.0
ANDZ				S	Sb	07 12 46.0	-0.7
ANDZ				*i* AML	AML	07 12 50.0	
	comp=E,122nm,0.4s						
ANDZ				*i* AML	AML	07 12 50.0	
	comp=N,128nm,0.3s						
PASA	Karahalli, USA	0.88	156	P	Pn	07 12 38.8	-0.4
PASA				S	Sg	07 12 49.1	+0.3
ORLT	Orhaneli	0.90	353	PG	Pb	07 12 38.1	-0.4
ORLT				SG	Sb	07 12 50.8	+0.2
AKHS	Akhisar	0.99	255	P	Pg	07 12 39.2	-0.3
AKHS				*i* AML	AML	07 12 52.0	
	comp=E,62nm,0.3s						
AKHS				S	Sg	07 12 52.5	+0.1
AUBOZ	BOZOYUK	1.08	45	PG	Pb	07 12 41.2	-0.4
AUBOZ				SG	Sb	07 12 55.7	-0.2
CAVI	Cavuskoy	1.22	30	PN	Pn	07 12 44.1	+0.2
CAVI				SN	Sn	07 13 01.1	+0.4
MDNY	Mudanya-Bursa	1.22	355	PN	Pb	07 12 43.8	-0.1
IZI	Iznik	1.23	16	PN	Pn	07 12 44.3	+0.2
BALY	Balya	1.24	299	P	Pg	07 12 42.8	-1.7
BORA	Eskisehir	1.32	56	PN	Pg	07 12 45.9	0.0
BORA				SN	Sn	07 13 04.2	+1.1
SHUT	Suhut-Afyon	1.33	116	PN	Pg	07 12 46.2	+0.2
GONE	Gonen-Balikesi	1.37	311	PN	Pb	07 12 46.4	-0.1
ADVT	Abdulvahap	1.39	23	PN	Pg	07 12 46.9	-0.4

ADVT			SN	Sn	07 13 05.9	+1.1
ARMT	**Armutlu**	**1.42 355**	PN	Pb	07 12 47.2	-0.1
ARMT			SN	Sg	07 13 06.6	+0.3
YLV	**Yalova**	**1.44 10**	PN	Pb	07 12 47.6	0.0
YLV			SN	Sg	07 13 06.9	0.0
EDC	**Edincik**	**1.50 323**	PN	Pb	07 12 48.5	-0.1
EDC			SN	Sg	07 13 08.5	-0.2
SRCK	**Saricakaya, Es**	**1.52 54**	PN	Pb	07 12 48.9	0.0
GULT	**Gulveren**	**1.72 41**	PN	Pb	07 12 51.5	-0.9
HRT	**Hereke**	**1.74 16**	PN	Pn	07 12 51.5	+0.4
ISK	**Istanbul-Kandi**	**1.91 1**	PN	Pn	07 12 54.2	+0.8
SVRH	**Sivrihisar-ESK**	**1.95 80**	PN	Pn	07 12 55.0	+1.0
AUMIH	**MIHALICIK**	**2.03 68**	PN	Pn	07 12 56.0	+0.9

ROM 22 07:12:31.8±0.1, 42°.551N±0°.009×13°.130E±0°.010, h12km, ML1.0/1, Error ellipse: s-maj=0.9km s-min=0.4km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.07**	**124**	P	Pg	07 12 34.6	+0.2
RM33				S	Sg	07 12 36.7	+0.4
LNSS	**Leonessa**	**0.08**	**308**	P	Pg	07 12 34.4	-0.2
T1201	**Domo (RI)**	**0.14**	**40**	P	Pb	07 12 35.9	-0.6
T1201				S	Sg	07 12 40.4	+2.7
T1202	**Accumoli, Fraz**	**0.17**	**25**	P	Pg	07 12 36.2	+0.5
T1243	**Rocca Santa Ma**	**0.28**	**58**	P	Pg	07 12 37.8	+0.2
T1243				S	Sg	07 12 42.1	+0.7
NRCA	**Norcia**	**0.28**	**358**	P	Pb	07 12 38.5	-0.4
NRCA				AML	AML		
	comp=E,310μm,0.1s						
NRCA				AML	AML		
	comp=N,343μm,0.1s						
NRCA				AML	AML		
	comp=E,310μm,0.1s						
T1245	**Castelsantange**	**0.31**	**8**	P	Pg	07 12 38.8	+0.6
T1245				AML	AML		
	comp=E,42μm,1.3s						
T1245				AML	AML		
	comp=N,48μm,0.3s						
T1215	**Vallo di Nera,**	**0.32**	**322**	P	Pg	07 12 38.9	+0.6
T1215				S	Sg	07 12 43.2	+0.7
T1216	**Preci, Frazion**	**0.35**	**346**	P	Pg	07 12 39.0	+0.1
T1216				S	Sb	07 12 44.6	-1.0

ROM 22 08:50:41.3±0.1, 42°.878N±0°.002×13°.139E±0°.003, h7km, ML0.9/2, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=358.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**120**	P	Pg	08 50 43.1	+0.1
T1245				S	Sg	08 50 44.3	+0.1
T1245				END			
T1245	**Castelsantange**	**0.04**	**120**	⇓P	Pg	08 50 43.1	+0.1
T1245				S	Sg	08 50 44.2	+0.1
NRCA	**Norcia**	**0.05**	**202**	P	Pg	08 50 43.1	+0.2
NRCA				S	Sg	08 50 44.3	+0.2
NRCA				END			
NRCA	**Norcia**	**0.05**	**202**	P	Pg	08 50 43.2	+0.2
NRCA				S	Sg	08 50 44.3	+0.1
MC2	**Monte Cornacci**	**0.05**	**47**	P	Pg	08 50 43.2	0.0
MC2				S	Sg	08 50 44.4	-0.1
MC2	**Monte Cornacci**	**0.05**	**47**	P	Pg	08 50 43.2	0.0
T1216	**Preci, Frazion**	**0.09**	**278**	P	Pg	08 50 43.8	+0.4
T1216				S	Sg	08 50 45.7	+0.7
T1216				END			
T1216	**Preci, Frazion**	**0.09**	**278**	⇑P	Pg	08 50 43.9	+0.4
T1216				S	Sg	08 50 45.7	+0.7
T1216				AML	AML		
	comp=N,184μm,0.1s						
T1216				AML	AML		
	comp=E,102μm,0.3s						
FEMA	**Monte Fema**	**0.11**	**322**	P	Pg	08 50 44.0	+0.2
FEMA				S	Sg	08 50 46.1	+0.6
MMO1	**Montemonaco**	**0.14**	**81**	P	Pg	08 50 44.6	+0.3
MMO1				S	Sg	08 50 47.1	+0.8
MMO1				END			
MMO1	**Montemonaco**	**0.14**	**81**	P	Pg	08 50 44.7	+0.4
MMO1				S	Sg	08 50 47.1	+0.7
FDMO	**Fiordimonte**	**0.16**	**347**	P	Pg	08 50 45.3	+0.6
T1202	**Accumoli, Fraz**	**0.18**	**160**	S	Sg	08 50 44.0	-3.7
T1202	**Accumoli, Fraz**	**0.18**	**160**	P	Pg	08 50 45.8	+0.7
T1202				S	Sg	08 50 49.1	+1.4
AM05	**Amandola Campo**	**0.19**	**58**	S	Sg	08 50 48.0	+0.3
AM05	**Amandola Campo**	**0.19**	**58**	S	Sg	08 50 48.0	+0.3
T1215	**Vallo di Nera,**	**0.21**	**249**	P	Pg	08 50 46.1	+0.5
T1215				S	Sg	08 50 49.8	+1.3
T1215				END			
T1215	**Vallo di Nera,**	**0.21**	**249**	P	Pg	08 50 46.1	+0.5
T1215				S	Sg	08 50 49.7	+1.2
T1215				AML	AML		
	comp=E,42μm,0.5s						
T1215				AML	AML		
	comp=N,64μm,3.5s						
T1243	**Rocca Santa Ma**	**0.29**	**128**	S	Sg	08 50 49.0	-2.0
PTQR	**Pietraquaria**	**0.88**	**167**	P	Pn	08 50 59.6	-0.5
PTQR	**Pietraquaria**	**0.88**	**167**	P	Pn	08 50 59.6	-0.5

*IDC **22** 09:13:55.9±2.7, 19°.08S×177°.52W, h309km±32km, mb3.0/4, mbtmp3.9/6, Error ellipse: s-maj=30.3km s-min=16.9km az=138.0*

ISC 22 09:13:54.6±0.9, 19°.3S±0°.2×177°.3W±0°.2, h300km, n6, σ2§38/8, mb3.3/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.53**	**46**	P	**Pn**	**09 15 44.1**	**+1.6**
	5.5nm,0.3s,baz=225,slow=1.4,SNR=2.4						
AFI				S	**S**	**09 17 06.9**	**-3.0**
	10.0nm,0.8s,baz=229,slow=23,SNR=1.3						
URZ	**Urewera**	**19.55**	**193**	P	**P**	**09 18 02.7**	**+2.0**
	2.3nm,0.3s,baz=23,slow=7.7,SNR=12						
URZ				S	**S**	**09 21 21.3**	**-3.3**
	6.0nm,0.7s,baz=62,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**45.40**	**261**	P	**P**	**09 21 43.2**	**-1.1**
	0.2nm,0.3s,baz=97,slow=7.4,SNR=12						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**45.42**	**255**	P	**P**	**09 21 44.4**	**-0.1**
	2.1nm,0.9s,baz=90,slow=8.0,SNR=14						
	2.1nm,0.9s						
NVAR	**Mina Array Bea**	**79.69**	**43**	P	**P**	**09 25 29.7**	**0.0**
	0.4nm,0.7s,baz=221,slow=8.1,SNR=3.8						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**85.86**	**57**	P	**P**	**09 26 02.1**	**+0.8**
	0.4nm,0.8s,baz=215,slow=7.0,SNR=5.1						
	0.4nm,0.8s						

IDC 22 09:22:07.0±4.1, 53°.52N×90°.95E, h0km, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=41.9km s-min=32.7km az=24.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.67**	**279**	I		09 50 00.0	
	baz=94,slow=342						
ZALV	**Zalesovo Beam**	**3.67**	**279**	Pn	Pn	09 23 06.3	+1.4
	0.8nm,0.3s,baz=90,slow=16,SNR=5.6						
ZALV				Sn	Sn	09 23 53.2	+4.4
	0.2nm,0.3s,baz=109,slow=27,SNR=1.6						
ZALV				Lg	Lg	09 23 58.6	
	1.3nm,0.3s,baz=102,slow=26,SNR=6.1						
	1.5nm,0.3s						
KURBB	**Kurchatov Arra**	**8.18**	**254**	Pn	Pn	09 24 06.2	-0.7
	0.1nm,0.3s,baz=67,slow=15,SNR=4.6						
KURBB				Sn	Sn	09 25 38.6	-1.3
	baz=67,slow=24,SNR=1.5						
KURBB				Lg	Lg	09 26 24.6	
	baz=61,slow=33						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**8.72**	**223**	Pn	Pn	09 24 15.2	+0.8
	0.1nm,0.3s,baz=34,slow=14,SNR=7.6						
	0.2nm,0.3s						

*IDC **22** 09:31:48.0±22.0, 51°.74N×172°.63W, h0km, mb3.6/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=427.6km s-min=71.8km az=85.0*
*NEIC **22** 09:31:49.0±0.9, 52°.1N±0°.2×174°.55W±0°.08, h69km±23km, mb3.6/19, Error ellipse: s-maj=26.5km s-min=2.3km az=166.0*

ISC 22 09:31:47.5±1.0, 52°.0N±0°.2×174°.46W±0°.07, h50km, n36, σ0§94/29, mb3.6/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.38**	**267**		**Pn**	**09 32 11.5**	**+1.1**
ADK				Sn	**Sn**	**09 32 28.4**	**+0.8**
NIKH	**Nikolski High**	**3.57**	**71**	Pn	**Pn**	**09 32 42.4**	**+2.1**
AMKA	**Amchitka**	**3.93**	**264**	Pn	**Pn**	**09 32 46.2**	**+0.9**
UNV	**Unalaska Valle**	**5.17**	**66**	Pn	**Pn**	**09 33 03.9**	**+1.7**
SPIA	**Saint Paul Isl**	**5.76**	**23**	Pn	**Pn**	**09 33 11.2**	**+0.8**
CAST	**Castle Rocks**	**16.45**	**37**	Pn	**Pn**	**09 35 34.7**	**0.0**
I21K	**Tanana**	**17.53**	**32**		**Pn**	**09 35 47.0**	**-1.0**
I21K				IAmb	IAmb	09 36 08.4	
	comp=Z,6.7nm,1.4s						
MCK	**McKinley**	**17.82**	**39**		**Pn**	**09 35 51.7**	**+0.2**
MLY	**Manley**	**17.86**	**34**		**Pn**	**09 35 52.4**	**+0.3**
WRH	**Wood River Hil**	**18.51**	**37**	P	**P**	**09 35 59.3**	**-0.1**
CCB	**Clear Creek Bu**	**18.70**	**37**		**P**	**09 36 01.1**	**-0.3**
CCB				IAmb	IAmb	09 36 19.1	
	comp=Z,4.1nm,1.2s						
MDM	**Murphy Dome**	**18.71**	**36**	P	**P**	**09 36 01.4**	**-0.1**
MDM				IAmb	IAmb	09 36 19.3	
	comp=Z,3.7nm,1.4s						
HDA	**Harding Lake**	**18.91**	**38**	P	**P**	**09 36 03.9**	**+0.2**
HDA				IAmb	IAmb	09 36 08.7	
	comp=Z,4.6nm,1.2s						
IL31		**19.11**	**37**	P	**P**	**09 36 06.6**	**+0.7**
IL31				IAmb	IAmb	09 36 30.4	
	comp=Z,8.2nm,1.5s						
ILAR	**Eielson Array**	**19.11**	**37**	P	**P**	**09 36 06.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=220,slow=10,SNR=17						
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**19.11**	**37**	P	**P**	**09 36 05.3**	**-0.6**
H24K	**Noodor Dome**	**19.31**	**34**	P	**P**	**09 36 09.0**	**+0.9**
J25K	**Salcha River,**	**19.61**	**39**	P	**P**	**09 36 11.0**	**-0.5**
J25K				IAmb	IAmb	09 36 12.4	
	comp=Z,1.8nm,0.6s						
SCRK	**Sand Creek**	**19.90**	**41**	P	**P**	**09 36 13.6**	**-1.0**
SCRK				IAmb	IAmb	09 36 15.0	
	comp=Z,2.9nm,0.6s						
J26L	**Joseph Creek**	**20.27**	**40**	P	**P**	**09 36 18.0**	**-0.6**
J26L				IAmb	IAmb	09 36 19.0	
	comp=Z,2.8nm,0.5s						
K27K	**Chicken**	**20.70**	**42**	P	**P**	**09 36 22.3**	**-0.8**
I26K	**Coal Creek Min**	**20.77**	**38**	P	**P**	**09 36 24.1**	**+0.2**
I26K				IAmb	IAmb	09 36 40.2	
	comp=Z,5.6nm,1.3s						
EGAK	**Eagle**	**21.34**	**40**	P	**P**	**09 36 29.2**	**-0.8**
EGAK				IAmb	IAmb	09 36 31.1	
	comp=Z,1.9nm,0.8s						
P29M	**Windy Craggy**	**21.77**	**55**	P	**P**	**09 36 33.0**	**-1.7**
DAWY	**Dawson**	**21.83**	**43**	P	**P**	**09 36 34.5**	**-0.9**
DAWY				IAmb	IAmb	09 36 48.2	
	comp=Z,5.3nm,1.4s						
WRAK	**Wrangell Islan**	**24.74**	**63**	P	**P**	**09 37 04.7**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**35.33**	**211**	T	T	10 16 23.5	
	baz=20,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**35.34**	**211**	T	T	10 16 27.7	
	baz=20,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**35.35**	**211**	T	T	10 16 23.4	
	baz=20,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**36.54**	**211**	T	T	10 17 43.6	
	baz=20,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**36.55**	**211**	T	T	10 17 49.6	
	baz=20,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**36.55**	**211**	T	T	10 17 52.8	
	baz=20,slow=76,SNR=13						
PDAR	**Pinedale Array**	**43.55**	**75**	P	**P**	**09 39 45.3**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=306,slow=3.0,SNR=5.2						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**55.90**	**85**	P	**P**	**09 41 19.4**	**-0.9**
	comp=Z,1.0nm,1.1s,baz=290,slow=3.7,SNR=4.0						
	comp=Z,1.0nm,1.1s						
H03N2	**Juan Fernandez**	**118.73**	**108**	T	T	12 00 34.4	
	baz=309,slow=76,SNR=2.6						
H03N1	**Juan Fernandez**	**118.75**	**108**	T	T	12 00 34.2	
	baz=313,slow=76,SNR=3.2						

GUC 22 09:32:49.9±0.7, 25°.11S×69°.19W, h115km±4km, ML2.8, 2C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.36**	**261**	⇑*i*P	Pn	09 33 06.7	-0.2
GO02				*i* S	Sn	09 33 19.6	-0.2
AC01	**Pan de Azucar**	**1.64**	**230**	⇑*i*P	Pn	09 33 18.9	+0.2
AC01				*i* S	Sn	09 33 40.6	0.0
AC01				IAML		09 33 42.1	
	comp=N,112nm,0.2s						
AC02	**Maricunga**	**1.72**	**178**	⇓*i*P	Pn	09 33 20.4	+0.1
AC02				*i* S	Sn	09 33 42.9	-0.4
AC02				IAML		09 33 45.9	
	comp=E,63nm,0.3s						
PB15	**IPOC Station P**	**1.91**	**352**	⇓*i*P	Pn	09 33 22.8	+0.6
PB15				*i* S	Sn	09 33 47.2	+0.4
PB10	**IPOC Station P**	**2.01**	**322**	*i* P	Pn	09 33 24.3	+1.0
PB10				*i* S	Sn	09 33 48.7	-0.1
AF01	**San Pedro de A**	**2.34**	**24**	*i* P	Pn	09 33 28.3	+0.6
AF01				IAML		09 33 59.9	
	comp=E,112nm,0.5s						
PB06	**IPOC Station P**	**2.41**	**352**	*e*P	Pn	09 33 29.1	+0.5
PB06				*e*S	Sn	09 33 59.0	+0.8
PB06				IAML		09 33 60.0	
	comp=N,43nm,0.3s						
PB06	**IPOC Station P**	**2.41**	**352**	⇓*i*P	Pn	09 33 29.1	+0.5
PB06				*i* S	Sn	09 33 58.0	-0.2
PB06				IAML		09 33 59.6	
	comp=N,47nm,0.3s						
LVC	**Limon Verde**	**2.50**	**6**	*i* P	Pn	09 33 29.9	0.0
PB04	**IPOC Station P**	**2.89**	**342**	*e*P	Pn	09 33 34.6	-0.3
PB04				*e*S	Sn	09 34 09.6	+0.1
PB04				IAML		09 34 13.2	
	comp=N,30nm,0.4s						
PB04	**IPOC Station P**	**2.89**	**342**	*i* P	Pn	09 33 34.5	-0.4
PB03	**IPOC Station P**	**3.08**	**350**	*e*P	Pn	09 33 37.1	-0.3
PB03				*e*S	Sn	09 34 12.1	-1.8
PB03				IAML		09 34 14.4	
PB03	**IPOC Station P**	**3.08**	**350**	⇓*i*P	Pn	09 33 37.1	-0.3
PB03				*i* S	Sn	09 34 13.0	-0.9
PB03				IAML		09 34 15.0	
	comp=E,24nm,0.2s						
PB09	**IPOC Station P**	**3.29**	**359**	*i* P	Pn	09 33 40.7	+0.6
PB07	**IPOC Station P**	**3.42**	**349**	*i* P	Pn	09 33 41.3	-0.6
PB02	**IPOC Station P**	**3.82**	**350**	*e*P	Pn	09 33 46.3	-0.8
PB02				*e*S	Sn	09 34 27.9	-3.5
PB02				IAML		09 34 40.0	
PB02	**IPOC Station P**	**3.82**	**350**	*i* P	Pn	09 33 46.3	-0.8
PB01	**IPOC Station P**	**4.05**	**356**	*i* P	Pn	09 33 49.4	-0.8

*FUNV **22** 10:08:40.0, 9°.71N×62°.61W, h12km, MW3.4*
*TRN **22** 10:08:43.7, 10°.12N×62°.50W, h7km, MD3.8*

ISC 22 10:08:41.2±1.4, 9°.83N±0°.08×62°.70W±0°.05, h89km±16km, n18, σ1§30/28, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.99**	**328**	*e*P	**Pn**	**10 09 00.3**	**-0.5**
CRUV				*e*S	**Sn**	**10 09 13.7**	**-1.8**
COAV	**Cumanacoa**	**1.16**	**286**	*e*P	**Pn**	**10 09 03.9**	**+1.0**
COAV				*e*S	**Sn**	**10 09 20.3**	**+1.1**
TRN	**Trinidad (W)**	**1.51**	**57**	*e*P	**Pn**	**10 09 07.0**	**-0.1**
TBH	**Brigand Hill**	**1.73**	**68**	*e*P	**Pn**	**10 09 10.6**	**+0.6**
PCRV	**Puerto La Cruz**	**1.94**	**280**	*e*P	**Pn**	**10 09 13.1**	**+0.5**
PCRV				*e*S	**Sn**	**10 09 38.6**	**+2.1**
PRGV	**PARIAGUAN**	**2.20**	**241**	*e*P	**Pn**	**10 09 17.1**	**+1.0**
PRGV				*e*S	**Sn**	**10 09 42.1**	**-0.5**
TPR	**Prospect**	**2.32**	**54**	*e*P	**Pn**	**10 09 19.2**	**+1.5**
GRFF	**Grenada Fort F**	**2.40**	**23**	*e*P	**Pn**	**10 09 18.8**	**+0.1**
GRGR	**Grenville**	**2.51**	**24**	*e*P	**Pn**	**10 09 20.3**	**+0.1**
GRGR				*e*S	**Sn**	**10 09 47.6**	**-2.4**
TOSP	**Speyside**	**2.58**	**55**	*e*P	**Pn**	**10 09 21.1**	**0.0**
TOSP				*e*S	**Sn**	**10 09 49.9**	**-1.8**
GCMP	**Grenada, Carri**	**2.92**	**25**	*e*P	**Pn**	**10 09 26.5**	**+0.8**
GCMP				*e*S	**Sn**	**10 10 01.5**	**+1.6**
MERV	**Las Mercedes**	**3.59**	**261**	*e*P	**Pn**	**10 09 35.1**	**+0.3**
MERV				*e*S	**Sn**	**10 10 16.5**	**+0.3**
SVB	**Belmont**	**3.70**	**22**	*e*P	**Pn**	**10 09 37.8**	**+1.5**
CACV	**CAICARA DEL OR**	**4.41**	**240**	*e*P	Pn	10 09 39.5	-6.4
CACV				*e*S	Sn	10 10 24.4	-12
SLBI	**Saint Lucia, B**	**4.49**	**22**	*e*P	**Pn**	**10 09 48.5**	**+1.5**
BENV	**Beln**	**4.83**	**272**	*e*P	**Pn**	**10 09 52.3**	**+0.7**
BENV				*e*S	**Sn**	**10 10 45.6**	**-0.8**
BAUV	**El Baul**	**5.34**	**261**	*e*P	**Pn**	**10 09 58.1**	**-0.5**
BAUV				*e*S	**Sn**	**10 10 56.9**	**-1.9**
MAPV	**Macapo**	**5.67**	**270**	*e*P	**Pn**	**10 10 02.9**	**-0.2**
MAPV				*e*S	**Sn**	**10 11 04.9**	**-2.1**

*MOS **22** 10:30:03.9±0.0, 41°.32N×50°.25E, h17km, MPVA4.3*
*IDC **22** 10:30:05.2±1.5, 41°.47N×50°.30E, h47km±21km, mb3.2/5, mbtmp3.7/11, ML3.4/5, MS2.1/1, Error ellipse: s-maj=22.8km s-min=12.8km az=16.0*
*DRS **22** 10:30:06.4±0.0, 41°.80N×50°.64E, h22km*

ISC 22 10:30:05.0±0.9, 41°.41N±0°.07×50°.48E±0°.05, h35km, n41, σ2§17/65, mb3.3/5, 2C-1D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**1.73**	**292**	*e*Pg	**Pn**	**10 30 35.0**	**+2.5**
DRN				*e*Sg	**Sn**	**10 30 56.3**	**+3.0**
DRN	**Derbent**	**1.73**	**292**	*e*PN	**Pn**	**10 30 32.4**	**-0.1**
DRN				*i* S	**Sn**	**10 30 53.7**	**+0.4**
DRN				pmax	pmax		
	comp=Z,104nm,0.2s						
DRN				smax	smax		
	comp=E,1μm,0.2s						
KSMR	**Kasumkent**	**1.78**	**277**	*e*Pg	**Pn**	**10 30 35.5**	**+2.1**
KSMR				*e*Sg	**Sn**	**10 30 57.6**	**+2.8**
KSMR	**Kasumkent**	**1.78**	**277**	*e*PN	**Pn**	**10 30 35.4**	**+2.1**
KSMR				*i* S	**Sn**	**10 30 59.1**	**+4.3**
KSMR				pmax	pmax		
	comp=Z,4.0nm,0.1s						
KSMR				smax	smax		
	comp=E,32nm,0.1s						
AKT	**Akhty**	**2.07**	**273**	*e*Pg	**Pn**	**10 30 38.7**	**+1.3**
AKT				*e*Sg	**Sn**	**10 31 05.1**	**+3.1**
AKT	**Akhty**	**2.07**	**273**	*e*PN	**Pn**	**10 30 38.9**	**+1.5**
AKT				pmax	pmax		
	comp=Z,166nm,0.5s						
URKR	**Urkarakh**	**2.26**	**290**	*e*Pg	**Pn**	**10 30 40.6**	**+0.5**
URKR				*e*Sg	**Sn**	**10 31 08.4**	**+1.7**
URKR	**Urkarakh**	**2.26**	**290**	*e*PN	**Pn**	**10 30 40.5**	**+0.5**
URKR				*i* S	**Sn**	**10 31 08.8**	**+2.1**
URKR				pmax	pmax		
	comp=Z,76nm,0.2s						
URKR				smax	smax		
	comp=E,283nm,0.5s						
SGKR	**Sergokala**	**2.35**	**297**	*e*PN	**Pn**	**10 30 40.9**	**-0.3**
SGKR				*i* S	**Sn**	**10 31 09.2**	**+0.3**
SGKR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SGKR				smax	smax		
	comp=N,128nm,0.2s						
SEKA	**Sheki**	**2.48**	**266**	PN	**Pn**	**10 30 44.0**	**+1.0**
KMKR	**Kumukh**	**2.63**	**287**	*e*Pn	**Pn**	**10 30 46.2**	**+1.0**
KMKR				*e*Sn	**Sn**	**10 31 18.2**	**+2.2**
KMKR	**Kumukh**	**2.63**	**287**	*e*PN	**Pn**	**10 30 46.2**	**+1.0**
KMKR				*i* S	**Sn**	**10 31 18.5**	**+2.5**
KMKR				pmax	pmax		
	comp=Z,89nm,0.1s						
KMKR				smax	smax		
	comp=N,297nm,0.2s						
MNGR	**Mingechevir, A**	**2.65**	**257**	PN	**Pn**	**10 30 46.0**	**+0.8**
MAK	**Makhachkala**	**2.70**	**306**	*e*Pn	**Pn**	**10 30 48.8**	**+2.8**
MAK				*e*Sn	**Sn**	**10 31 21.3**	**+4.0**
GNBR	**Gunib**	**2.80**	**292**	*e*Pn	**Pn**	**10 30 50.2**	**+2.8**
GNBR				*e*Sn	**Sn**	**10 31 23.2**	**+3.2**
ZKTA	**Zakatala**	**2.91**	**276**	PN	**Pn**	**10 30 50.1**	**+1.3**
XNZR	**Khunzakh**	**3.03**	**293**	*e*Pn	**Pn**	**10 30 53.5**	**+2.8**
XNZR				*e*Sn	**Sn**	**10 31 29.2**	**+3.3**
GANJ	**Ganja**	**3.24**	**258**	PN	**Pn**	**10 30 52.7**	**-0.7**
BTLR	**Botlikh**	**3.41**	**293**	*e*Pn	**Pn**	**10 30 57.2**	**+1.5**
BTLR				*i* Sn	**Sn**	**10 31 36.9**	**+1.9**
DVE	**Vedeno**	**3.59**	**297**	*e*Pn	**Pn**	**10 30 59.4**	**+1.2**
DVE				*e*Pn	**Sn**	**10 31 40.2**	**+0.9**
GROC	**Groznyy**	**3.91**	**299**	*e*Pn	**Pn**	**10 31 04.8**	**+2.2**
GROC				*e*Sn	**Sn**	**10 31 49.8**	**+2.6**
GROC	**Groznyy**	**3.91**	**299**	PN	**Pn**	**10 31 02.6**	**+0.1**
GROC				*e*S	**Sn**	**10 31 50.1**	**+2.9**
GROC				smax	smax		
	comp=N,66nm,0.6s						
GROC				smax	smax		
	comp=E,46nm,0.3s						
GNI	**Garni**	**4.54**	**256**	P	**Pn**	**10 31 11.0**	**-0.3**
	comp=E,3.9nm,0.5s,baz=66,slow=20,SNR=1.5						
GNI				LR	LR	10 33 04.5	
	comp=E,24nm,19.6s,baz=98,slow=41						
LACR	**Lac**	**4.81**	**289**	*e*Pn	**Pn**	**10 31 15.5**	**+0.5**
LACR				*e*Sn	**Sn**	**10 32 08.6**	**-1.0**
KBZ	**Khabaz**	**6.06**	**295**	P	**Pn**	**10 31 30.4**	**-1.7**
	comp=E,0.3nm,0.3s,baz=119,slow=19,SNR=9.2						
KBZ				S	**Sn**	**10 32 36.0**	**-4.2**
	comp=E,1.6nm,0.3s,baz=322,slow=19,SNR=6.3						
	comp=E,0.7nm,0.3s						
KBZ	**Khabaz**	**6.06**	**295**	*e*Pn	Pn	10 31 38.1	+6.1
KBZ				*e*Sn	**Sn**	**10 32 42.5**	**+2.4**
SHA1	**Shidzhatmaz**	**6.23**	**295**	*i* Pn	**Pn**	**10 31 35.5**	**+0.9**
SHA1				*e*Sn	**Sn**	**10 32 41.9**	**-2.7**
GEYT	**Alibeck**	**6.84**	**118**	P	**Pn**	**10 31 45.9**	**+3.1**
	comp=E,1.2nm,0.3s,baz=311,slow=16,SNR=4.7						
GEYT				S	**Sn**	**10 33 01.2**	**+1.8**
	comp=E,2.1nm,0.5s,baz=305,slow=23,SNR=2.4						
	comp=E,2.3nm,0.3s						
AB31	**Akbulak array**	**10.28**	**37**	P	**Pn**	**10 32 30.2**	**+0.2**
AB31				S	Sn	10 34 16.6	-7.3
AB31	**Akbulak array**	**10.28**	**37**	P	**Pn**	**10 32 30.0**	**+0.1**
	comp=E,0.6nm,0.5s,baz=211,slow=13,SNR=20						
AB31				⇑S	Sn	10 34 16.6	-7.3
	comp=E,0.6nm,0.3s,baz=214,slow=23,SNR=8.4						
AKTO	**Aktyubinsk**	**10.43**	**28**	P	**

*IDC **22** 11:02:06.2±2.7, 4.°02S×99.°69E, h0km, mb3.8/6, mbtmp3.9/7, ML4.4/1, MS3.1/2, Error ellipse: s-maj=97.6km s-min=19.5km az=54.0*

ISC 22 11:02:12.0±2.3, 3.°9S±0.°3×99.°8E±0.°4, h35km, n15, σ0.°86/8, mb3.9/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**8.29**	**111**	Pn	**Pn**	**11 04 10.3**	**+0.5**
	4.9nm,0.3s,baz=311,slow=19,SNR=2.0						
LEM				LR	LR	11 07 45.1	
	comp=Z,67nm,20.9s,baz=232,slow=40 12nm,0.3s						
CMAR	**Chiang Mai Arr**	**22.25**	**358**	P	**P**	**11 07 04.8**	**-1.2**
	3.1nm,0.9s,baz=188,slow=8.8,SNR=13 3.1nm,0.9s						
H08S2	**Diego Garcia H**	**27.43**	**261**	T	T	11 37 16.4	
	baz=85						
H08S3	**Diego Garcia H**	**27.44**	**261**	T	T	11 37 16.4	
	baz=85						
H08S1	**Diego Carcia H**	**27.45**	**261**	T	T	11 37 16.4	
	baz=85						
H01W3	**Cape Leeuwin H**	**33.55**	**158**	T	T	11 44 55.1	
	baz=336,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**33.56**	**158**	T	T	11 44 54.1	
	baz=336,slow=76,SNR=10						
H01W1	**Cape Leeuwin H**	**33.57**	**158**	T	T	11 44 47.9	
	baz=336,slow=76,SNR=10						
WRA	**Warramunga Arr**	**37.22**	**118**	P	**P**	**11 09 19.4**	**-1.0**
	0.4nm,0.8s,baz=291,slow=9.8,SNR=2.2 0.4nm,0.8s						
ASAR	**Alice Springs**	**38.31**	**124**	P	**P**	**11 09 29.4**	**-0.2**
	0.3nm,0.4s,baz=300,slow=7.6,SNR=7.6 0.3nm,0.4s						
SONM	**Songino Array**	**51.86**	**6**	P	**P**	**11 11 17.8**	**+0.9**
	1.4nm,0.8s,baz=183,slow=8.3,SNR=6.1 1.4nm,0.8s						
MKAR	**Makanchi Array**	**52.82**	**345**	P	**P**	**11 11 24.2**	**+0.3**
	0.8nm,0.4s,baz=148,slow=9.3,SNR=13 0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**59.01**	**350**	P	**P**	**11 12 08.0**	**0.0**
	1.0nm,0.4s,baz=160,slow=4.6,SNR=7.5 1.0nm,0.4s						
KLR	**Kul'dur**	**59.75**	**24**	LR	LR	11 40 53.5	
	comp=Z,27nm,19.0s,baz=241,slow=39						
TXAR	**Lajitas Array**	**146.31**	**39**	PKPbc	**PKPdf**	**11 21 48.9**	**+0.2**
	0.3nm,0.5s,baz=360,slow=2.1,SNR=7.6						

*SKHL **22** 11:15:58.3±0.2, 43.°10N×146.°00E, h54km±4km, mb4.6/2*
*JMA **22** 11:15:58.6±0.1, 43.°2N±0.°5×146.°0E±0.°7, h48km, MV3.9/40, OFF NEMURO PENINSULA*
JMA Felt II J1 at OFF NEMORO PENINSULA .
*MOS **22** 11:15:58.2±2.0, 43.°14N×146.°00E, h51km, mb4.2/4, Error ellipse: s-maj=16.6km s-min=9.8km az=101.1*
*NIED **22** 11:15:58.6, 43.°15N×145.°97E, h48km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.98; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$-2.06; $M_{r\theta}$2.85; $M_{\theta\phi}$-2.16; $M_{\phi r}$-1.05; Fault plane solution: $M_0$4.46000×10^{14} NP1: ϕ_s191.00000°, δ45.00000°, λ41.00000°. NP2:ϕ_s70.00000°, δ63.00000°, λ127.00000°.*
*IDC **22** 11:16:05.1±9.1, 43.°23N×145.°95E, h108km±59km, mb3.2/6, mbtmp3.6/8 Error ellipse: s-maj=103.6km s-min=22.3km az=173.0*

ISC 22 11:15:58.9±1.1, 43.°15N±0.°06×146.°00E±0.°05, h43km±7km, n41, σ1.°08/50, mb3.6/10, 3C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.29**	**319**	P	**Pn**	**11 16 07.2**	**0.0**
NEM2				eS	**Sn**	**11 16 13.2**	**+0.2**
NMR	**Nemuro--Hokkai**	**0.30**	**318**	↓iPN	**Pn**	**11 16 07.2**	**-0.1**
NMR				iS	**Sn**	**11 16 13.2**	**0.0**
NMR	**Nemuro--Hokkai**	**0.30**	**318**	iP	**Pn**	**11 16 07.2**	**-0.1**
NMR				iS	**Sn**	**11 16 13.3**	**0.0**
JKHN	**Kushirohamanak**	**0.62**	**264**	iP	**Pn**	**11 16 11.3**	**0.0**
JKHN				eS	**Sn**	**11 16 20.4**	**+0.3**
AKK	**Akkeshi**	**0.86**	**262**	eP	**Pn**	**11 16 13.5**	**-1.0**
AKK				eS	**Sn**	**11 16 25.1**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**0.89**	**354**	diPN	**Pn**	**11 16 14.3**	**-0.7**
YUK				iS	**Sn**	**11 16 25.8**	**-0.9**
YUK				pmax	pmax		
	comp=Z,737nm,0.2s						
YUK				pmax	pmax		
	comp=N,120nm,0.1s						
YUK				pmax	pmax		
	comp=E,86nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
YUK				smax	smax		
	comp=E,5μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.89**	**354**	iP	**Pn**	**11 16 14.3**	**-0.7**
YUK				AMB	AMB	11 16 15.1	
	comp=E,350nm,0.2s						
YUK				iS	**Sn**	**11 16 25.9**	**-0.8**
YUK				A	A	11 16 29.0	
	comp=E,3μm,0.5s						
YUK				A	A	11 16 29.0	
	comp=E,3μm,0.5s						
JNSB	**Nemuroshibetsu**	**0.96**	**311**	iP	**Pn**	**11 16 15.5**	**-0.4**
JNSB				eS	**Sn**	**11 16 28.6**	**+0.3**
JAK	**Akkeshi**	**0.97**	**261**	P	**Pn**	**11 16 15.4**	**-0.6**
JAK				eS	**Sn**	**11 16 28.1**	**-0.5**
JRA	**Rausu**	**1.01**	**321**	eP	**Pn**	**11 16 16.4**	**-0.2**
JRA				eS	**Sn**	**11 16 29.7**	**0.0**
JNK	**Nakash**	**1.03**	**296**	eP	**Pn**	**11 16 16.2**	**-0.7**
JNK				eS	**Sn**	**11 16 29.2**	**-1.0**
RUSJ	**Misakicho**	**1.10**	**331**	↓iPN	**Pn**	**11 16 18.0**	**+0.2**
RUSJ				iS	**Sn**	**11 16 32.7**	**+0.9**
JOB	**Onbets**	**1.61**	**262**	eP	**Pn**	**11 16 24.4**	**-0.4**
JOB				eS	**Sn**	**11 16 43.5**	**-0.7**
JAR	**Ashorobuto**	**1.64**	**276**	P	**Pn**	**11 16 25.1**	**-0.1**
JAR				eS	**Sn**	**11 16 45.2**	**+0.2**
JTKR	**Abashiri--Toko**	**1.73**	**299**	P	**Pn**	**11 16 27.1**	**+0.6**
JTKR				eS	**Sn**	**11 16 48.1**	**+0.9**
ERM	**Erimo**	**2.38**	**243**	diPN	**Pn**	**11 16 37.9**	**+2.5**
KUR	**Kuril'sk**	**2.48**	**32**	ePN	**Pn**	**11 16 37.8**	**+1.1**
KUR				iS	**Sn**	**11 17 06.9**	**+1.2**
KUR				pmax	pmax		
	comp=Z,102nm,0.4s						
KUR				pmax	pmax		
	comp=N,42nm,0.5s						
KUR				smax	smax		
	comp=N,227nm,0.5s						
KUR				smax	smax		
	comp=E,104nm,0.3s						
KUR	**Kuril'sk**	**2.48**	**32**	ePN	**Pn**	**11 16 37.0**	**+0.3**
KUR				AMB	AMB	11 16 39.7	
	comp=E,70nm,0.4s						
KUR				iS	**Sn**	**11 17 05.3**	**-0.4**
KUR				A	A	11 17 13.5	
	comp=E,190nm,0.4s						
KUR				A	A	11 17 13.5	
	comp=E,200nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.45**	**330**	↓ePN	**Pn**	**11 17 04.3**	**+0.6**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.45**	**330**	eP	**Pn**	**11 17 04.3**	**+0.6**
YSS				AMB	AMB	11 17 07.0	
	comp=Z,10.0nm,0.3s						
KLR	**Kul'dur**	**11.59**	**307**	P	Pn	11 18 46.6	+5.0
	comp=Z,0.9nm,0.7s,baz=154,slow=16,SNR=2.1						
PETK	**Petropavlovsk-**	**12.65**	**34**	P	Pn	11 19 00.3	+4.3
	comp=Z,2.6nm,0.7s,baz=179,slow=12,SNR=7.8						
SONM	**Songino Array**	**27.93**	**294**	P	**P**	**11 21 44.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=52,slow=7.7,SNR=2.0 comp=Z,0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.22**	**136**	T	T	11 52 51.4	
	baz=328,slow=75,SNR=268						
H11N1	**WAKE ISLAND Hy**	**29.23**	**137**	T	T	11 52 52.7	
	baz=328,slow=75,SNR=202						
H11N3	**WAKE ISLAND Hy**	**29.24**	**136**	T	T	11 52 49.1	
	baz=328,slow=75,SNR=153						
TIXI	**Tiksi**	**29.79**	**349**	↓eP	**P**	**11 22 03.0**	**+1.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIXI	**Tiksi**	**29.79**	**349**	eP	**P**	**11 22 03.0**	**+1.9**
H11S1	**WAKE ISLAND Hy**	**30.16**	**138**	T	T	11 53 57.1	
	baz=329,slow=76,SNR=369						
H11S3	**WAKE ISLAND Hy**	**30.16**	**138**	T	T	11 54 01.8	
	baz=329,slow=76,SNR=273						
H11S2	**WAKE ISLAND Hy**	**30.17**	**138**	T	T	11 53 56.2	
	baz=329,slow=76,SNR=227						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRIK	**Noril'sk**	**39.37**	**332**	↑eP	**P**	**11 23 24.8**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ILAR	**Eielson Array**	**42.47**	**36**	P	**P**	**11 23 48.1**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=265,slow=4.8,SNR=8.8 comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**44.12**	**298**	P	**P**	**11 24 01.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=235,slow=23,SNR=2.6 comp=Z,0.3nm,0.6s						
BRVK	**Borovoye**	**49.28**	**309**	↑eP	**P**	**11 24 46.8**	**+3.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**50.86**	**296**	↑eP	**P**	**11 24 54.1**	**-1.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	**50.86**	**296**	eP	**P**	**11 24 54.1**	**-1.4**
FINES	**FINESS Array B**	**65.03**	**333**	P	**P**	**11 26 32.9**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=28,slow=8.6,SNR=6.7 comp=Z,2.4nm,0.7s						
PDAR	**Pinedale Array**	**70.94**	**49**	P	**P**	**11 27 11.0**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=266,slow=2.6,SNR=1.8 comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**83.68**	**55**	P	**P**	**11 28 22.0**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=286,slow=2.5,SNR=4.0 comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**83.68**	**55**	P	**P**	**11 28 22.0**	**-1.3**

MAN 22 11:44:55.1, 6.°28N×125.°28E, h25km, mb4.3, ML3.2, MS2.9, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.47**	**111**	↓eP	Pn	11 45 06.4	+0.2
DDMP				eS	Sn	11 45 14.5	+0.9
KCP	**Kidapawan**	**0.75**	**346**	↑iP	Pb	11 45 09.0	-0.6
SKMP	**Bagumbayan, Su**	**0.77**	**288**	↓eP	Pb	11 45 09.2	-0.7
SKMP				eS	Sb	11 45 17.3	-2.5
MATI	**Mati**	**1.18**	**56**	↑eP	Pn	11 45 07.6	-8.4
MATI				eS	Sn	11 45 30.2	-1.1
CTBH	**Cotabato--PC H**	**1.39**	**313**	↓eP	Pn	11 45 19.5	+0.6
CGP	**Cagayan de Oro**	**2.24**	**345**	↓eP	Pb	11 45 37.2	+2.3
CGP				eS	Sb	11 46 01.1	-1.2
PAGZ	**Pagadian**	**2.44**	**310**	↑eP	Pb	11 45 36.2	-2.1
PAGZ				eS	Sn	11 46 03.4	+0.9

*IDC **22** 11:51:18.2±1.1, 4.°03N×117.°35E, h0km, mb4.1/6, mbtmp4.1/6, MS3.0/4, Error ellipse: s-maj=159.0km s-min=16.9km az=63.0*
*DJA **22** 11:51:22.0±0.9, 4.°N±2.°×11.°7E±.°, h17km±9km, M4.5/11, mb4.6/8, mB4.6/3, MLv4.5/11, Mw(mB)3.8/3*

ISC 22 11:51:23.6±0.8, 4.°05N±0.°07×117.°39E±0.°08, h35km, n23, σ0.°86/21, mb4.1/6, 1D, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**1.58**	**44**	P	**Pn**	**11 51 49.1**	**0.0**
MYLDM				S	**Sn**	**11 52 09.7**	**+1.4**
KKM	**Kota Kinabalu**	**2.31**	**329**	P	**Pn**	**11 51 58.2**	**-1.0**
KKM				Pn	Pn	11 51 58.7	-0.5
KKM				Pg		11 52 05.8	
MPSI	**Mapaga**	**4.45**	**146**	P	**Pn**	**11 52 28.2**	**-0.4**
SBUM	**Sibu**	**5.40**	**253**	P	**Pn**	**11 52 41.7**	**0.0**
	0.1nm15nm,0.8s						
MTKI	**Muara Teweh, K**	**5.55**	**207**	P	**Pn**	**11 52 45.2**	**+1.5**
MRSI	**Marisa**	**5.76**	**128**	P	**Pn**	**11 52 46.9**	**+0.2**
	0.3nm993nm90nm,0.6s						
MRSI				Pn	Pn	11 52 49.4	+2.7
	0.3nm993nm90nm,0.6s						
APSI	**Ampana**	**6.51**	**139**	P	**Pn**	**11 52 58.9**	**+2.0**
	0.6nm35nm,0.5s						
LUWI	**Luwuk**	**7.38**	**133**	P	**Pn**	**11 53 09.2**	**+0.3**
	0.5nm48nm,0.6s						
PMSI	**Majene**	**7.65**	**169**	P	**Pn**	**11 53 13.4**	**+0.8**
	0.2nm46nm,1.1s						
LSIP	**Lazi, Siquijor**	**7.99**	**50**	↓eP	**Pn**	**11 53 17.5**	**+0.2**
SPSI	**Sidrap Palu**	**8.30**	**163**	P	**Pn**	**11 53 21.9**	**+0.3**
	32nm,0.5s						
BNSI	**Bone**	**8.82**	**162**	P	**Pn**	**11 53 29.2**	**+0.6**
	23nm,0.8s						
KAPI	**Kappang**	**9.30**	**165**	LR	LR	11 58 25.9	
	comp=Z,126nm,18.2s,baz=340,slow=46						
BKSI	**Bulukumba**	**9.70**	**164**	P	**Pn**	**11 53 41.4**	**+0.7**
SIJI	**Sorong**	**14.70**	**109**	LR	LR	12 02 14.0	
	comp=Z,34nm,18.6s,baz=122,slow=44						
CMAR	**Chiang Mai Arr**	**23.04**	**310**	LR	LR	12 06 47.6	
	comp=Z,45nm,18.1s,baz=125,slow=40						
GUMO	**Guam**	**28.73**	**69**	LR	LR	12 08 51.4	
	comp=Z,18nm,20.3s,baz=203,slow=37						
WRA	**Warramunga Arr**	**29.08**	**146**	P	**P**	**11 57 20.3**	**-0.7**
	1.6nm,0.7s,baz=332,slow=9.5,SNR=14 1.6nm,0.7s						
ASAR	**Alice Springs**	**31.90**	**150**	P	**P**	**11 57 46.0**	**0.0**
	1.5nm,0.7s,baz=323,slow=8.1,SNR=20						
ASAR				PcP	**PcP**	**12 00 36.7**	**+0.6**
	0.4nm,0.6s,baz=344,slow=2.3,SNR=7.0 1.5nm,0.7s						
STKA	**Stephens Creek**	**42.50**	**149**	P	**P**	**11 59 14.9**	**-0.8**
	3.6nm,0.7s,baz=322,slow=12,SNR=3.1 3.6nm,0.7s						
SONM	**Songino Array**	**44.64**	**349**	P	**P**	**11 59 32.9**	**+0.1**
	1.3nm,0.7s,baz=173,slow=9.2,SNR=8.4 1.3nm,0.7s						
MKAR	**Makanchi Array**	**52.29**	**330**	P	**P**	**12 00 31.5**	**-0.2**
	0.9nm,0.4s,baz=126,slow=8.1,SNR=14 0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**56.40**	**338**	P	**P**	**12 01 00.7**	**-0.7**
	2.3nm,0.6s,baz=123,slow=7.9,SNR=10 2.3nm,0.6s						

JMA 22 12:05:08.9±0.0, 35.°4N±0.°2×133.°9E±0.°1, h7km, MV1.3/10, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.03**	**234**	P	Pg	12 05 10.1	-0.1
JKR				S	Sg	12 05 11.1	+0.1

*IDC **22** 12:06:17.9±2.2, 36.°26N×140.°37E, h0km, mb3.4/3, mbtmp3.5/4, ML3.1/1, MS3.4/1, Error ellipse: s-maj=49.2km s-min=23.4km az=51.0*
*JMA **22** 12:06:25.8±0.1, 36.°2N±0.°3×140.°1E±0.°5, h53km, MV3.3/33, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF .

ISC 22 12:06:25.5±1.1, 36.°13N±0.°06×140.°15E±0.°08, h56km±8km, n14, σ1.°05/18, mb3.5/3, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.11**	**22**	P	**Pn**	**12 06 34.3**	**+0.3**
JYT	**Yasato**	**0.11**	**22**	P	**Pn**	**12 06 34.3**	**+0.3**
JYT				eS	**Sn**	**12 06 40.1**	**0.0**
JAG	**Ashikaga**	**0.63**	**298**	↓iP	**Pn**	**12 06 38.3**	**-0.4**
JKT	**Katashina**	**0.96**	**312**	↓iP	**Pn**	**12 06 42.5**	**-0.5**
JKT				↓eS	**Sn**	**12 06 54.9**	**-0.9**
JRY	**Ryogami san**	**1.01**	**264**	↓iP	**Pn**	**12 06 43.3**	**-0.3**
JRY				↓eS	**Sn**	**12 06 56.2**	**-0.7**
MJAR	**Matsushiro Arr**	**1.62**	**285**	Pn	**Pn**	**12 06 49.6**	**-2.1**
	2.7nm,0.3s,baz=85,slow=22,SNR=32						
MJAR				Sn	**Sn**	**12 07 12.6**	**+1.2**
	1.4nm,0.3s,baz=135,slow=16,SNR=7.1						
MJAR				LR	LR	12 07 20.3	
	comp=Z,25nm,19.7s,baz=162,slow=35						
MAJO	**Matsushiro**	**1.62**	**285**	P	**Pn**	**12 06 52.1**	**+0.4**
JGF	**Kuroka**	**2.33**	**258**	P	**Pn**	**12 07 03.4**	**+2.0**
JSD	**Sado**	**2.43**	**322**	P	**Pn**	**12 07 02.8**	**+0.1**
JHJ	**Hachijo jima 2**	**3.02**	**186**	Pn	**Pn**	**12 07 10.8**	**0.0**
	5.6nm,0.3s,baz=72,slow=20,SNR=1.4						
JHJ				Sn	**Sn**	**12 07 44.0**	**-1.8**
	6.2nm,0.3s,baz=74,slow=19,SNR=0.9 27nm,0.4s						
MKAR	**Makanchi Array**	**43.74**	**303**	P	**P**	**12 14 25.2**	**0.0**
	0.3nm,0.7s,baz=85,slow=9.0,SNR=1.9 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**45.76**	**309**	P	**P**	**12 14 41.6**	**+0.4**
	0.4nm,0.6s,baz=85,slow=7.9,SNR=4.4 0.4nm,0.6s						
WRA	**Warramunga Arr**	**56.04**	**187**	P	**P**	**12 15 58.9**	**+0.2**
	0.4nm,0.6s,baz=1.1,slow=7.7,SNR=8.1 0.4nm,0.6s						
ASAR	**Alice Springs**	**59.76**	**187**	LR	LR	12 41 28.9	
	comp=Z,27nm,18.6s,baz=132,slow=35						

*ARE **22** 12:08:49±4.3, 14.°45S×0.°08×75.°7W±0.°1, h54km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=151.0*
*VAO **22** 12:08:50.3±1.0, 14.°23S×75.°70W, h50km±7km, mb4.4*
*NEIC **22** 12:08:50.8±1.3, 14.°27S±0.°07×75.°6W±0.°1, h50km±7km, mb4.3/16, ML4.6(ARE), Error ellipse: s-maj=16.8km s-min=8.6km az=62.0*
*IDC **22** 12:08:50.5±1.7, 14.°22S×75.°45W, h50km±17km, mb3.7/6, mbtmp4.1/9, ML4.2/4, MS3.4/20, Error ellipse: s-maj=30.2km s-min=11.0km az=57.0*

ISC 22 12:08:50.8±0.5, 14.°32S±0.°06×75.°58W±0.°08, h50km, n99, σ1.°58/80, mb4.1/9, MS3.6/15, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.62**	**332**	P	**Pn**	**12 09 29.6**	**-1.1**
	242nm,0.3s,baz=145,slow=11,SNR=176						
NNA				S	**Sn**	**12 10 01.5**	**+0.2**
	2μm,0.4s,baz=227,slow=19,SNR=14						
NNA				LR	LR	12 10 36.7	
	comp=Z,251nm,20.7s,baz=156,slow=41						
NNA	**Nana**	**2.62**	**332**		**Pn**	**12 09 29.9**	**-0.8**
PB12	**IPOC Station P**	**6.61**	**131**	Pn	**Pn**	**12 10 24.5**	**-1.0**
PB16	**IPOC Station P**	**7.07**	**125**	Pn	**Pn**	**12 10 34.0**	**+1.8**
CZSB	**Cruzeiro do Su**	**7.13**	**24**	eP	**Pn**	**12 10 32.3**	**-0.3**
LPAZ	**La Paz**	**7.45**	**106**	P	**Pn**	**12 10 41.6**	**+4.0**
	3.4nm,0.3s,baz=319,slow=8.2,SNR=23						
LPAZ	**La Paz**	**7.45**	**106**	eP	**Pn**	**12 10 38.7**	**+1.1**
ATAH	**Atahualpa**	**7.65**	**339**	P	**Pn**	**12 10 39.1**	**-1.0**
	1.2nm,0.3s,baz=198,slow=3.2,SNR=3.0						
ATAH				S	**Sn**	**12 12 09.9**	**+4.2**
	43nm,0.7s,baz=343,slow=20,SNR=1.7						
ATAH				LR	LR	12 13 55.9	
	comp=Z,109nm,20.8s,baz=180,slow=40 3.8nm,0.3s						
PB11	**IPOC Station P**	**7.84**	**135**	Pn	**Pn**	**12 10 41.3**	**-1.1**
TA02	**Huaiquique**	**7.88**	**139**		**Pn**	**12 10 43.4**	**+0.5**
GO01	**Chusmiza**	**8.10**	**132**	Pn	**Pn**	**12 10 45.9**	**-0.5**
PATCX	**Punta Patache**	**8.29**	**142**		**Pn**	**12 10 48.6**	**+0.2**
PB02	**IPOC Station P**	**8.82**	**143**	Pn	**Pn**	**12 10 56.3**	**+0.5**
PB01	**IPOC Station P**	**8.86**	**140**	Pn	**Pn**	**12 10 56.3**	**0.0**
PB03	**IPOC Station P**	**9.48**	**145**	Pn	**Pn**	**12 11 05.3**	**+0.4**
ETMB	**Extrema**	**10.20**	**65**	eP	**Pn**	**12 11 14.5**	**-0.1**
LVC	**Limon Verde**	**10.40**	**143**	P	**Pn**	**12 11 18.2**	**+0.6**
	3.3nm,0.3s,baz=351,slow=6.5,SNR=19						
LVC				S	**Sn**	**12 13 10.9**	**-2.0**
	14nm,0.4s,baz=124,slow=20,SNR=6.6						
LVC				LR	LR	12 15 04.2	
	comp=Z,98nm,19.7s,baz=306,slow=36 11nm,0.5s						
LVC	**Limon Verde**	**10.40**	**143**	Pn	**Pn**	**12 11 17.7**	**+0.1**
LVC	**Limon Verde**	**10.40**	**143**	eP	**Pn**	**12 11 18.0**	**+0.4**
BOSC	**San Juan Bosco**	**11.46**	**345**	Pn	**Pn**	**12 11 31.3**	**-0.7**
TBTG	**Tabatinga, AM**	**11.52**	**30**	eP	**Pn**	**12 11 30.9**	**-1.7**
COHC	**Cochancay**	**12.32**	**343**		**Pn**	**12 11 41.2**	**-2.4**
COHC	**Cochancay**	**12.32**	**343**	eP	**Pn**	**12 11 44.5**	**+1.0**
PIAT	**Ana Tenorio**	**13.50**	**348**	eP	**Pn**	**12 11 59.0**	**-1.1**
SLOR	**San Lorenzo -**	**13.80**	**348**		**Pn**	**12 12 04.2**	**-0.1**
SIV	**San Ignacio**	**14.11**	**99**	P	**Pn**	**12 12 06.7**	**-1.3**
	0.1nm,0.3s,baz=276,slow=15,SNR=5.6						
SIV				LR	LR	12 18 25.6	
	comp=Z,91nm,18.3s,baz=284,slow=41 1.3nm,0.4s						
PTLC	**Puerto Leguiza**	**14.41**	**3**	eP	Pn	12 12 04.7	-7.4
VILB	**Vilhena**	**15.01**	**87**	eP	**Pn**	**12 12 21.0**	**+1.1**
GCUF	**Volcan Galeras**	**15.54**	**353**	eP	**P**	**12 12 36.4**	**+5.6**
FLOC	**Florencia**	**15.80**	**360**	eP	**P**	**12 12 31.2**	**-2.0**
PTLB	**Pontes e Lacer**	**15.94**	**96**	eP	**Pn**	**12 12 33.6**	**+1.8**
BBAC	**Balboa, Cauca**	**16.32**	**354**	eP	**P**	**12 12 38.3**	**-0.7**
PRAC	**Prado**	**17.93**	**2**	eP	P	12 13 06.3	+10
ORTC	**Ortega, Tolima**	**18.11**	**1**	eP	**Pn**	**12 13 03.3**	**+4.4**
VILC	**Villavicencio,**	**18.40**	**6**	eP	**Pn**	**12 13 07.6**	**+5.1**
MACA	**Manacapuru-AM**	**18.41**	**54**	eP	**Pn**	**12 13 02.7**	**+0.2**
PDRB	**Porto dos Gac**	**18.57**	**84**	eP	**Pn**	**12 13 05.0**	**+0.6**
MURT	**Porto Murtinho**	**18.58**	**116**	eP	**Pn**	**12 13 06.7**	**+2.2**
ANIL	**Santa Ana**	**18.69**	**1**	eP	Pn	12 13 13.9	+7.8
ROSC	**El Rosal**	**19.07**	**4**	LR	LR	12 20 19.0	
	comp=Z,104nm,21.6s,baz=246,slow=36						
H03N1	**Juan Fernandez**	**19.28**	**188**	T	T	12 32 23.8	
	baz=10,slow=74,SNR=498						
H03N2	**Juan Fernandez**	**19.28**	**189**	T	T	12 32 23.4	
	baz=10,slow=74,SNR=362						
MT02	**Curacav**	**19.29**	**169**	P	**P**	**12 13 11.2**	**-0.2**
H03N3	**Juan Fernandez**	**19.30**	**188**	T	T	12 32 22.4	
	baz=10,slow=74,SNR=1147						
GUY2C	**Guyana, Caldas**	**19.41**	**1**	eP	**Pn**	**12 13 14.8**	**-0.2**
CLDB	**Colider**	**19.61**	**82**	eP	**P**	**12 13 14.6**	**-0.6**
NORC	**Norcasia**	**19.76**	**2**	eP	**P**	**12 13 16.8**	**-0.1**
MT09	**Talagante**	**19.82**	**169**	P	**P**	**12 13 17.5**	**0.0**
MT09				IAmb	IAmb	12 13 24.1	
	comp=Z,9.4nm,0.8s						
LMEL	**Las Melosas**	**20.05**	**167**	P	**P**	**12 13 21.1**	**+1.1**
LMEL				IAmb	IAmb	12 13 26.4	
	comp=Z,22nm,1.1s						
RUSC	**La Rusia**	**20.23**	**7**	eP	Pn	12 13 23.9	-0.7
PTBC	**PUERTO BERRIO,**	**20.75**	**3**	eP	**P**	**12 13 25.4**	**-2.1**
BO02	**Sierra Bellavi**	**20.84**	**169**	P	**P**	**12 13 29.9**	**+1.5**
BO02				IAmb	IAmb	12 13 31.9	
	comp=Z,13nm,0.8s						
CPUP	**Villa Florida**	**20.85**	**128**	P	**P**	**12 13 28.6**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=314,slow=12,SNR=3.7 comp=Z,1.9nm,0.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA				LR	LR	12 48 55.4	
	comp=Z,28nm,21.8s,baz=175,slow=29 comp=Z,1.7nm,0.9s						
SFJD	**Kangerlussuaq**	**83.14**	**10**	LR	LR	12 59 53.6	
	comp=Z,19nm,19.4s,baz=149,slow=37						
AFI	**Afiamalu**	**92.46**	**255**	LR	LR	12 55 17.6	
	comp=Z,47nm,19.2s,baz=188,slow=30						
URZ	**Urewera**	**94.33**	**229**	LR	LR	12 56 56.9	
	comp=Z,34nm,18.0s,baz=96,slow=30						
ILAR	**Eielson Array**	**95.10**	**336**	LR	LR	13 09 11.1	
	comp=Z,16nm,18.1s,baz=102,slow=38						
RPZ	**Rata Peaks**	**96.29**	**222**	LR	LR	12 57 47.2	
	comp=Z,22nm,19.4s,baz=142,slow=30						
DAVOX	**Davos/Dischmat**	**97.23**	**44**	LR	LR	13 02 55.2	
	comp=Z,22nm,18.4s,baz=266,slow=33						
ASAR	**Alice Springs**	**132.50**	**218**	PKP	**PKPdf**	**12 27 59.4**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=114,slow=2.0,SNR=9.7						
WRA	**Warramunga Arr**	**135.00**	**222**	PKP	**PKPdf**	**12 28 04.9**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=127,slow=1.9,SNR=16						
KSH	**Kashi**	**144.59**	**39**	PKP	**PKiKP**	**12 28 24.9**	**-1.1**
KSH				sPKP		12 28 38.1	
SONM	**Songino Array**	**146.54**	**358**	PKPbc	**PKPbc**	**12 28 26.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=331,slow=1.7,SNR=2.3						
LZH	**Lanzhou**	**158.31**	**1**	*e*PKP	**PKPdf**	**12 28 43.6**	**+0.5**
LZH				pPKP	pPKPdf	12 28 52.3	-6.3
LZH				sPKP		12 28 57.1	
PZH	**PanZhiHua**	**167.62**	**11**	PKP	**PKPdf**	**12 28 50.6**	**-1.7**

*IDC **22** 12:47:02.4±1.1,21°.59S×66°.50W,h204km±14km,mb3.7/1, mbtmp4.0/5,Error ellipse: s-maj=27.6km s-min=11.3km az=120.0*

ISC 22 12:47:02.7±0.8,21°.53S±0°.07×66°.67W±0°.08,h219km,n17, σ1§73/20,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.34**	**242**	P	**Pn**	**12 47 48.3**	**+1.7**
	38nm,0.4s,baz=58,slow=8.1,SNR=12						
LVC				S	**S**	**12 48 20.5**	**0.0**
	29nm,0.4s,baz=237,slow=21,SNR=21						
PB01	**IPOC Station P**	**2.67**	**280**	*i* S	**S**	**12 48 25.4**	**-1.1**
PB03	**IPOC Station P**	**2.92**	**259**	*i* S	**S**	**12 48 29.7**	**-1.7**
PB06	**IPOC Station P**	**2.94**	**246**	*i* S	**S**	**12 48 31.1**	**-0.7**
PB06				IAML		12 48 36.6	
	comp=E,194nm,0.7s						
PB07	**IPOC Station P**	**3.00**	**266**	*i* S	**S**	**12 48 31.4**	**-1.8**
PB02	**IPOC Station P**	**3.02**	**273**	*i* S	**S**	**12 48 31.4**	**-1.9**
PB15	**IPOC Station P**	**3.09**	**237**	*i* S	**S**	**12 48 35.0**	**0.0**
PATCX	**Punta Patache**	**3.33**	**282**	*i* S	**S**	**12 48 37.5**	**-2.4**
PB04	**IPOC Station P**	**3.33**	**255**	*i* S	**S**	**12 48 37.6**	**-2.4**
LPAZ	**La Paz**	**5.39**	**345**	P	**Pn**	**12 48 24.3**	**+1.1**
	comp=E,12nm,0.5s,baz=131,slow=7.3,SNR=16						
LPAZ				S	**S**	**12 49 28.8**	**+2.1**
	comp=E,6.0nm,0.8s,baz=90,slow=20,SNR=2.0						
SIV	**San Ignacio**	**7.64**	**45**	P	**Pn**	**12 48 51.4**	**-0.1**
	comp=E,8.8nm,0.4s,baz=230,slow=11,SNR=34						
SIV				S	**S**	**12 50 14.2**	**-4.1**
	comp=E,1.1nm,0.5s,baz=150,slow=20,SNR=1.2						
PLCA	**Paso Flores**	**19.43**	**189**	P	**P**	**12 51 13.5**	**+0.8**
	comp=E,0.9nm,0.5s,baz=19,slow=11,SNR=2.9						
TORD	**Torodi Ar. Bea**	**75.40**	**69**	P	**P**	**12 58 23.3**	**+0.4**
	comp=E,1.2nm,0.5s,baz=252,slow=5.8,SNR=9.1 comp=E,1.2nm,0.5s						
ASAR	**Alice Springs**	**130.82**	**205**	PKP	**PKiKP**	**13 05 49.5**	**0.0**
	comp=E,0.2nm,0.4s,baz=136,slow=1.8,SNR=5.3						
WRA	**Warramunga Arr**	**133.95**	**208**	PKP	**PKPdf**	**13 05 55.1**	**+0.5**
	comp=E,0.1nm,0.4s,baz=159,slow=1.9,SNR=5.3						
ZALV	**Zalesovo Beam**	**141.06**	**27**	PKP	**PKPdf**	**13 06 07.6**	**+1.0**
	comp=E,0.6nm,0.3s,baz=291,slow=4.5,SNR=2.2						
MKAR	**Makanchi Array**	**144.41**	**37**	PKP	**PKPdf**	**13 06 13.6**	**+0.8**
	comp=E,1.6nm,0.6s,baz=313,slow=3.8,SNR=15						

*SNET **22** 12:55:57.7±0.5,13°.51N×90°.60W,h19km±4km,ML3.4*
*GCG **22** 12:55:59.7±0.5,13°.71N×90°.72W,h32km±6km,MD3.7*

ISC 22 12:55:55.1±3.2,13°.5N±0°.1×90.67W±0°.09,h10km±15km, n10,σ0§62/18,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.93**	**4**	*e*P	**Pg**	**12 56 13.7**	**+0.6**
PCG				*e*S	**Sg**	**12 56 25.1**	**-0.2**
NUBE	**Las Nubes**	**0.97**	**63**	*e*P	**Pg**	**12 56 13.9**	**+0.1**
NUBE				*e*S	**Sg**	**12 56 26.1**	**-0.4**
FUG	**Fuego 3**	**1.00**	**350**	*e*P	**Pg**	**12 56 14.7**	**+0.3**
FUG				*e*S	**Sg**	**12 56 25.9**	**-1.5**
LOAL	**Lomas de Alarc**	**1.02**	**58**	*e*P	**Pg**	**12 56 14.8**	**+0.1**
LOAL				*e*S	**Sg**	**12 56 27.6**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.03**	**57**	*e*P	**Pg**	**12 56 14.9**	**0.0**
SLOZ				*e*S	**Sg**	**12 56 28.4**	**0.0**
CEVE	**Cerro Verde**	**1.08**	**70**	*e*P	**Pg**	**12 56 16.0**	**+0.1**
CEVE				*e*S	**Sg**	**12 56 30.9**	**+0.9**
CEVE				IAML		12 56 31.6	
	comp=Z,1μm,0.3s						
NBG	**Las Nubes**	**1.17**	**16**	*e*P	**Pg**	**12 56 17.7**	**+0.1**
NBG				*e*S	**Sg**	**12 56 33.6**	**+0.9**
JAYA	**Jayaque - finc**	**1.20**	**81**	*e*P	**Pb**	**12 56 17.8**	**-0.4**
JAYA				*e*S	**Sb**	**12 56 33.2**	**-0.6**
JAYA				IAML		12 56 33.5	
	comp=Z,876nm,0.1s						
LFRS	**El Faro**	**1.57**	**84**	*e*P	**Pn**	**12 56 23.6**	**+0.4**
COEG	**Centro de Oper**	**1.75**	**85**	*e*S	**Sn**	**12 56 48.2**	**+0.2**

*IDC **22** 12:58:43.3±5.2,36°.21N×71°.16E,h78km±32km,mb3.5/5, mbtmp3.8/11,Error ellipse: s-maj=59.6km s-min=22.1km az=155.0*
*SOME **22** 12:58:44.6,37°.90N×72°.10E,h5km*
*NNC **22** 12:58:48.5±3.6,37°.03N×70°.86E,h0km,mb4.4,mpv4.2, Error ellipse: s-maj=29.0km s-min=20.9km az=169.0*

ISC 22 12:58:47.7±1.4,36°.7N±0°.1×71°.03E±0°.08,h100km,n30, σ1§65/41,mb3.8/4,4C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.53**	**352**	*e*P	**Pn**	**13 00 09.6**	**+1.9**
	230nm,0.2s						
IUG				*e*S	**Sn**	**13 01 11.1**	**+1.1**
	166nm,0.5s						
AML	**Almayashu**	**5.84**	**20**	P	**Pn**	**13 00 13.8**	**+1.7**
	SNR=54						
UCH	**Uchtor**	**6.18**	**25**	P	**Pn**	**13 00 18.0**	**+1.2**
	SNR=17						
MRKS	**Merke**	**6.31**	**15**	*e*P	**Pn**	**13 00 17.9**	**-0.3**
	10nm,0.3s						
MRKS				*e*S	**Sn**	**13 01 25.4**	**-3.4**
	28nm,0.2s						
EKS2	**Erkin-Say**	**6.36**	**19**	P	**Pn**	**13 00 20.7**	**+1.8**
	SNR=13						
KK31	**Karatay Array**	**6.45**	**357**	⇓P	**Pn**	**13 00 21.9**	**+1.9**
	8.3nm,0.2s,baz=175,slow=12,SNR=100						
KK31				⇑S	**Sn**	**13 01 32.2**	**+0.1**
	5.8nm,0.5s,baz=181,slow=23,SNR=5.8						
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**13 00 23.2**	**+1.8**
	SNR=19						
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**13 00 23.4**	**+2.0**
	22nm,0.3s,baz=187,slow=6.4,SNR=83						
AAK				S	**Sn**	**13 01 34.9**	**+0.3**
	9.4nm,0.6s,baz=0.7,slow=15,SNR=8.0						
KBK	**Karagaybulak**	**6.71**	**26**	P	**Pn**	**13 00 25.5**	**+1.8**
	SNR=7.1						
CHMS	**Chumysh**	**6.95**	**23**	P	**Pn**	**13 00 28.4**	**+1.6**
	SNR=12						
CHMS	**Chumysh**	**6.95**	**23**	⇓P	**Pn**	**13 00 28.1**	**+1.3**
	6.5nm,0.2s						
CHMS				⇑S	**Sn**	**13 01 45.4**	**+1.1**
	10nm,0.6s						
USP	**Ospenovka**	**7.12**	**21**	P	**Pn**	**13 00 30.1**	**+1.0**
	SNR=28						
TKM2	**Tokmak 2**	**7.17**	**28**	P	**Pn**	**13 00 31.2**	**+1.2**
	SNR=5.2						
TKM2	**Tokmak 2**	**7.17**	**28**	⇓P	**Pn**	**13 00 31.0**	**+1.0**
	5.3nm,0.5s						
TKM2				⇓S	**Sn**	**13 01 50.9**	**+0.9**
	6.1nm,1.1s						
SGDS	**Sogindy**	**7.32**	**21**	*e*P	**Pn**	**13 00 32.8**	**+0.8**
	7.0nm,0.2s						
SGDS				*e*S	**Sn**	**13 01 50.6**	**-2.9**
	6.2nm,0.6s						
DGS	**Degeres**	**7.51**	**28**	*e*P	**Pn**	**13 00 34.5**	**0.0**
	4.7nm,0.5s						
DGS				*e*S	**Sn**	**13 01 53.8**	**-4.4**
	2.6nm,0.4s						
KRBS	**Karabastau**	**7.87**	**25**	*e*P	**Pn**	**13 00 42.1**	**+2.7**
	3.0nm,0.4s						
KRBS				*e*S	**Sn**	**13 02 06.7**	**-0.2**
	1.4nm,0.8s						
BTLS	**Baital**	**8.68**	**14**	*e*P	Pn	13 01 01.6	+11
	2.1nm,0.2s						
BTLS				*e*S	Sn	13 02 40.5	+14
	3.1nm,0.3s						
GEYT	**Alibeck**	**10.37**	**281**	P	**Pn**	**13 01 12.4**	**-0.9**
	1.0nm,0.4s,baz=110,slow=18,SNR=2.2						
GEYT				S	**Sn**	**13 03 07.4**	**-0.2**
	1.5nm,0.3s,baz=27,slow=13,SNR=2.4						
MKAR	**Makanchi Array**	**13.15**	**36**	P	**Pn**	**13 01 50.0**	**-0.4**
	0.3nm,0.5s,baz=222,slow=15,SNR=2.9						
AB31	**Akbulak array**	**14.96**	**331**	⇓P	**Pn**	**13 02 13.8**	**+0.1**
	3.0nm,0.6s,baz=139,slow=12,SNR=41						
AB31				⇓S	**Sn**	**13 04 56.3**	**-2.3**
	0.7nm,0.5s,baz=152,slow=24,SNR=4.2						
KURBB	**Kurchatov Arra**	**14.96**	**19**	P	**P**	**13 02 16.2**	**-0.6**
	0.7nm,0.5s,baz=207,slow=10,SNR=8.5						
BVAR	**Borovoye Array**	**16.37**	**359**	P	**P**	**13 02 33.0**	**+0.7**
	0.4nm,0.4s,baz=171,slow=12,SNR=4.5						
AKTO	**Aktyubinsk**	**16.65**	**330**	P	**P**	**13 02 35.2**	**-0.3**
	1.4nm,0.4s,baz=125,slow=14,SNR=6.1						
AKTO	**Aktyubinsk**	**16.65**	**330**	⇑P	**P**	**13 02 36.5**	**+0.9**
	1.2nm,0.5s						
AKTO				⇑S	**Sn**	**13 05 39.4**	**-0.1**
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**13 03 09.2**	**-0.3**
	1.1nm,0.3s,baz=221,slow=10,SNR=8.5						
	1.1nm,0.3s						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**13 05 52.3**	**+2.1**
	5.0nm,1.0s,baz=116,slow=8.7,SNR=4.0						
	5.0nm,1.0s						
ARCES	**ARCESS Array B**	**41.01**	**338**	P	**P**	**13 06 22.5**	**+2.0**
	1.5nm,0.6s,baz=137,slow=11,SNR=9.0						
	1.5nm,0.6s						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**13 06 47.6**	**+0.6**
	0.7nm,0.6s,baz=97,slow=7.9,SNR=3.4						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**13 09 20.5**	**-1.7**
	0.3nm,0.4s,baz=63,slow=6.0,SNR=2.4						
	0.3nm,0.4s						

*TUL **22** 13:03:13.8±0.5,36°.65N±0°.02×99°.08W±0°.04,h5km±5km, ML3.1,mb_Lg2.8/49(NEIC),Error ellipse: s-maj=5.0km s-min=2.0km az=114.0*
*ANF **22** 13:03:14.8±0.5,36°.64N×99°.03W,h3km±3km,ML3.5/7, Error ellipse: s-maj=4.6km s-min=2.2km az=75.0*
*NEIC **22** 13:03:15.2±0.6,36°.64N±0°.01×99°.04W±0°.02,h5km±1km, Error ellipse: s-maj=4.1km s-min=2.2km az=293.0*

ISC 22 13:03:14.9±1.3,36°.65N±0°.03×99°.02W±0°.04,h4km±10km, n54,σ0§69/44,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK035	**E0210 Rd and N**	**0.26**	**76**	Pg	**Pg**	**13 03 20.1**	**+0.3**
OK035				Sg	**Sg**	**13 03 24.5**	**+1.3**
U32A	**Winter Ranch,**	**0.27**	**177**	Pg	**Pg**	**13 03 19.7**	**-0.4**
U32A				Sg	**Sg**	**13 03 24.3**	**+0.7**
U32A	**Winter Ranch,**	**0.27**	**177**	P	**Pg**	**13 03 19.6**	**-0.4**
	baz=353						
U32A				S	**Sg**	**13 03 24.1**	**+0.5**
	baz=353						
OK038	**West end E0370**	**0.28**	**127**	Pg	**Pg**	**13 03 19.4**	**-0.9**
OK032	**Salt Plains WL**	**0.67**	**76**		**Pg**	**13 03 27.5**	**-0.2**
KAN14	**Manchester OK**	**0.90**	**70**	Pg	**Pg**	**13 03 31.7**	**-0.4**
KAN16	**Harper SW Stat**	**0.96**	**53**	Pg	**Pg**	**13 03 32.6**	**-0.6**
KAN08	**Anthony NE Sta**	**1.02**	**55**		**Pg**	**13 03 33.8**	**-0.6**
KAN12	**Harper NE Stat**	**1.04**	**51**	Pg	**Pg**	**13 03 34.2**	**-0.7**
KAN17	**Caldwell West**	**1.08**	**68**	Pg	**Pg**	**13 03 35.0**	**-0.6**
KAN01	**Argonia South**	**1.13**	**63**	Pg	**Pg**	**13 03 35.7**	**-0.8**
KAN09	**Caldwell North**	**1.22**	**66**		**Pg**	**13 03 37.5**	**-0.8**
KS21	**Milan North St**	**1.26**	**59**	Pg	**Pg**	**13 03 38.2**	**-0.8**
KAN13	**South Haven SW**	**1.29**	**73**	Pg	**Pn**	**13 03 38.8**	**-0.8**
KS20	**Mayfield South**	**1.31**	**63**		**Pn**	**13 03 39.1**	**-0.8**
OK049	**E0420 Rd and N**	**1.40**	**99**	Pg	**Pn**	**13 03 40.7**	**-0.5**
OK029	**Liberty Lake**	**1.52**	**123**		**Pn**	**13 03 41.9**	**-0.9**
OK050	**Pawnee Station**	**1.66**	**98**	Pn	**Pn**	**13 03 44.0**	**-0.7**
OK050				IAmb_Lg		13 04 10.0	
	comp=Z,33nm,0.8s						
OK048	**Pawnee Station**	**1.69**	**97**	Pn	**Pn**	**13 03 45.3**	**+0.2**
OK045	**Pawnee Station**	**1.70**	**96**	Pn	**Pn**	**13 03 45.9**	**+0.7**
OK051	**E0350 and S346**	**1.76**	**94**	Pn	**Pn**	**13 03 46.3**	**+0.2**
R32A	**Long Quarter,**	**1.79**	**8**	Pn	**Pn**	**13 03 46.6**	**+0.1**
R32A				IAmb_Lg		13 04 13.4	
	comp=Z,65nm,0.8s						
R32A	**Long Quarter,**	**1.79**	**8**	P	**Pn**	**13 03 46.3**	**-0.2**
	baz=188						
R32A				S	**Sn**	**13 04 10.5**	**+0.8**
	baz=188						
OK031	**S. Brethren Rd**	**1.89**	**111**	Pn	**Pn**	**13 03 48.5**	**+0.6**
FNO	**Franklin**	**1.91**	**136**	Pn	**Pn**	**13 03 48.6**	**+0.4**
WMOK	**Wichita Mounta**	**1.92**	**174**	Pn	**Pn**	**13 03 47.8**	**-0.5**
WMOK	**Wichita Mounta**	**1.92**	**174**	P	**Pn**	**13 03 47.6**	**-0.6**
	baz=354						
WMOK				S	**Sb**	**13 04 14.1**	**-0.6**
	baz=354						
T35A	**Sooner Cattle**	**2.03**	**82**	Pn	**Pn**	**13 03 50.0**	**+0.2**
T35B	**Sooner Cattle**	**2.03**	**82**	P	**Pn**	**13 03 49.9**	**+0.1**
	baz=263						
T35B				S	**Sb**	**13 04 17.6**	**-0.3**
	baz=263						
CBKS	**Cedar Bluff**	**2.24**	**345**	Pn	**Pn**	**13 03 53.1**	**+0.4**
CBKS	**Cedar Bluff**	**2.24**	**345**	P	**Pn**	**13 03 53.2**	**+0.4**
	baz=166						
CBKS				S	**Sb**	**13 04 23.0**	**-0.9**
	baz=166						
X34A	**Smith Ranch, M**	**2.26**	**154**		**Pn**	**13 03 54.4**	**+1.4**
X34A				IAmb_Lg		13 04 27.3	
	comp=Z,36nm,0.8s						
TUL1	**Leonard**	**2.71**	**105**	Pn	**Pn**	**13 03 57.8**	**-1.4**
TUL1				IAmb_Lg		13 04 47.4	
	comp=Z,27nm,0.9s						
TUL1	**Leonard**	**2.71**	**105**	P	**Pn**	**13 03 59.7**	**+0.6**
	baz=287						
AMTX	**Amarillo**	**2.79**	**232**	IAmb_Lg		13 04 42.7	
	comp=Z,43nm,0.8s						
KSU1	**Kansas State U**	**3.10**	**37**	IAmb_Lg		13 04 59.8	
	comp=Z,28nm,0.7s						
X37A	**Clayton**	**3.61**	**124**	Pn	**Pn**	**13 04 11.5**	**-0.1**
X37A				IAmb_Lg		13 05 10.6	
	comp=Z,17nm,0.8s						
X37A	**Clayton**	**3.61**	**124**	P	**Pn**	**13 04 11.4**	**-0.1**
	baz=306						
X37A				S	**Sn**	**13 04 55.4**	**+0.8**
	baz=306						
U38A	**Gravette**	**3.74**	**92**	IAmb_Lg		13 05 16.9	
	comp=Z,21nm,0.7s						
HHAR	**Hobbs**	**4.11**	**94**	IAmb_Lg		13 05 27.4	
	comp=Z,26nm,1.1s						
T25A	**Trinidad**	**4.35**	**278**	IAmb_Lg		13 05 37.2	
	comp=Z,30nm,0.8s						
237A	**Washetta, Mont**	**5.34**	**149**	IAmb_Lg		13 06 18.8	
	comp=Z,21nm,0.8s						
Q24A	**Divide**	**5.38**	**297**	IAmb_Lg		13 06 06.2	
	comp=Z,13nm,0.8s						
R40A	**Maddies Statio**	**5.61**	**71**	IAmb_Lg		13 06 22.9	
	comp=Z,12nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.62**	**96**	IAmb_Lg		13 06 23.2	
	comp=Z,15nm,1.1s						
WHAR	**Wooly Hollow**	**5.62**	**102**	IAmb_Lg		13 06 14.5	
	comp=Z,12nm,0.8s						
BRIGG	**Briggsdale**	**5.71**	**315**	IAmb_Lg		13 06 21.9	
	comp=Z,22nm,0.8s						
435B	**Jarrell**	**5.97**	**168**	IAmb_Lg		13 06 31.5	
	comp=Z,17nm,0.8s						
N38A	**Joes South For**	**6.13**	**46**	IAmb_Lg		13 06 35.2	
	comp=Z,19nm,0.8s						
ANMO	**Albuquerque**	**6.28**	**257**	IAmb_Lg		13 06 42.0	
	comp=Z,9.0nm,1.3s						
CCM	**Cathedral Cave**	**6.35**	**75**	IAmb_Lg		13 06 52.6	
	comp=Z,9.6nm,0.7s						
PHWY	**Pilot Hill**	**6.84**	**315**	IAmb_Lg		13 07 04.4	
	comp=Z,17nm,1.1s						
N23A	**Red Feather La**	**6.87**	**310**	IAmb_Lg		13 07 01.8	
	comp=Z,16nm,0.8s						
RSSD	**Black Hills**	**8.39**	**334**	IAmb_Lg		13 07 49.5	
	comp=Z,7.2nm,0.9s						

ROM 22 13:23:36.4±0.0,42°.749N±0°.002×13°.156E±0°.004, h12km,ML1.5/7,7C-2D,Error ellipse: s-maj=0.3km s-min=0.1km az=255.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**132**	P	Pg	13 23 39.3	+0.2
T1202				S	Sg	13 23 41.4	+0.4
T1202	**Accumoli, Fraz**	**0.07**	**132**	P	Pg	13 23 39.3	+0.2
T1202				S	Sg	13 23 41.3	+0.3
NRCA	**Norcia**	**0.09**	**340**	⇓P	Pg	13 23 39.4	+0.2
NRCA	**Norcia**	**0.09**	**340**	⇓P	Pg	13 23 39.4	+0.2
NRCA				S	Sg	13 23 41.4	0.0
NRCA				AML	AML		
	comp=E,1470μm,0.1s						
NRCA				AML	AML		
	comp=N,775μm,0.1s						
NRCA				AML	AML		
	comp=N,775μm,0.1s						
NRCA				AML	AML		
	comp=E,1470μm,0.1s						
T1245	**Castelsantange**	**0.11**	**12**	⇑P	Pg	13 23 39.8	+0.2
T1245	**Castelsantange**	**0.11**	**12**	⇑P	Pg	13 23 39.8	+0.2
T1245				S	Sg	13 23 42.1	+0.2
T1245				AML	AML		
	comp=E,648μm,0.1s						
T1245				AML	AML		
	comp=N,594μm,1.5s						
T1245				AML	AML		
	comp=E,648μm,0.1s						
T1245				AML	AML		
	comp=N,594μm,1.5s						
T1201	**Domo (RI)**	**0.12**	**143**	P	Pg	13 23 39.9	+0.4
T1201				S	Sg	13 23 42.5	+0.6
MC2	**Monte Cornacci**	**0.17**	**9**	P	Pg	13 23 40.6	+0.2
MC2				S	Sg	13 23 44.1	+0.9
LNSS	**Leonessa**	**0.17**	**210**	P	Pg	13 23 40.7	+0.4
LNSS				S	Sg	13 23 43.9	+0.7
LNSS				AML	AML		
	comp=E,738μm,0.2s						
LNSS				AML	AML		
	comp=N,568μm,0.1s						
LNSS				AML	AML		
	comp=N,568μm,0.1s						
LNSS				AML	AML		
	comp=E,738μm,0.2s						
T1217	**Poggiodomo (PG**	**0.17**	**257**	⇑P	Pg	13 23 40.7	+0.4
T1217				S	Sg	13 23 43.9	+0.8
T1217				AML	AML		
	comp=E,138μm,1.1s						
T1217				AML	AML		
	comp=N,165μm,1.4s						
T1217				AML	AML		
	comp=E,138μm,1.1s						
T1217				AML	AML		
	comp=N,165μm,1.4s						
T1217	**Poggiodomo (PG**	**0.17**	**257**	⇑P	Pg	13 23 40.7	+0.4
T1216	**Preci, Frazion**	**0.17**	**325**	P	Pg	13 23 40.7	+0.3
T1216				S	Sg	13 23 44.0	+0.8
SMA1	**SAN MARTINO**	**0.18**	**132**	P	Pg	13 23 40.6	+0.2
SMA1				S	Sg	13 23 44.5	+1.2
SMA1	**SAN MARTINO**	**0.18**	**132**	P	Pg	13 23 40.7	+0.2
SMA1				S	Sg	13 23 44.4	+1.1
MMO1	**Montemonaco**	**0.20**	**40**	⇑P	Pg	13 23 41.0	+0.2
MMO1	**Montemonaco**	**0.20**	**40**	⇑P	Pg	13 23 41.0	+0.2
MMO1				S	Sg	13 23 44.4	+0.6
T1215	**Vallo di Nera,**	**0.22**	**284**	P	Pg	13 23 41.4	+0.3
T1215				S	Sg	13 23 45.5	+1.1
T1243	**Rocca Santa Ma**	**0.22**	**104**	P	Pg	13 23 41.2	0.0
T1243				S	Sg	13 23 44.8	+0.3
CAMP	**Campotosto**	**0.28**	**139**	P	Pg	13 23 42.3	0.0
CAMP				S	Sg	13 23 47.0	+0.8
FDMO	**Fiordimonte**	**0.29**	**350**	P	Pg	13 23 42.6	+0.2
FDMO				S	Sg	13 23 47.3	+0.8
FDMO				AML	AML		
	comp=E,55μm,0.1s						
FDMO				AML	AML		
	comp=N,56μm,1.4s						
FDMO				AML	AML		
	comp=N,56μm,1.4s						
FDMO				AML	AML		
	comp=E,55μm,0.1s						
FDMO	**Fiordimonte**	**0.29**	**350**	⇑P	Pg	13 23 42.6	+0.2
T1211	**Morro Reatino**	**0.31**	**226**	P	Pg	13 23 43.0	+0.3
T1211				S	Sb	13 23 48.2	-0.7
CESI	**CESI - Serrava**	**0.32**	**324**	P	Pg	13 23 43.1	+0.3
CESI				S	Sb	13 23 48.2	-0.9
CESI				AML	AML		
	comp=E,47μm,0.2s						
CESI				AML	AML		
	comp=N,78μm,0.3s						
CESI				AML	AML		
	comp=N,78μm,0.3s						
CESI				AML	AML		
	comp=E,47μm,0.2s						
CSP1	**Cessapalombo**	**0.34**	**6**	P	Pg	13 23 43.5	+0.1
CSP1				S	Sb	13 23 49.2	-0.9
TERO	**Teramo**	**0.35**	**111**	P	Pg	13 23 43.5	0.0
TERO				S	Sg	13 23 49.0	+0.7
GIGS	**Gran Sasso**	**0.43**	**134**	P	Pg	13 23 44.8	-0.1
GIGS				S	Sg	13 23 51.2	+0.6
ASSB	**Assisi San Ben**	**0.47**	**309**	P	Pg	13 23 46.0	+0.3
ASSB				S	Sb	13 23 53.1	-0.4
FIAM	**Fiamignano**	**0.48**	**183**	P	Pg	13 23 45.9	0.0
FIAM				S	Sb	13 23 53.1	-0.8
FIAM				AML	AML		
	comp=E,45μm,0.4s						
FIAM				AML	AML		
	comp=N,37μm,1.0s						
FIAM				AML	AML		
	comp=N,37μm,1.0s						
FIAM				AML	AML		
	comp=E,45μm,0.4s						
EL6	**Elcito**	**0.58**	**356**	P	Pg	13 23 48.1	+0.3
EL6				S	Sb	13 23 57.1	+0.2
SAMA	**S.Maria delle**	**1.05**	**204**	S	Sn

NEM2	Nemuro 2	2.42 221	eP	Pn	13 43 48.1	+2.4
NEM2			eS	Sn	13 44 18.3	-0.8
NMR	Nemuro--Hokkai	2.43 221	eP	Pn	13 43 47.2	+1.5
NMR			AMB	AMB	13 43 49.2	
	10.0nm,0.2s					
NMR			eS	Sn	13 44 16.4	-2.8
NMR			A	A	13 44 22.2	
	70nm,0.4s					
NMR			A	A	13 44 22.2	
	70nm,0.4s					
JNK	Nakash	2.81 236	eP	Pn	13 43 53.0	+2.9
AKK	Akkeshi	3.12 226	eP	Pn	13 43 56.8	+3.0
AKK			eS	Sn	13 44 33.6	0.0
JTKR	Abashiri--Toko	3.12 248	eP	Pn	13 43 55.8	+2.0
JAK	Akkeshi	3.21 227	eP	Pn	13 43 57.5	+2.7
JAK			eS	Sn	13 44 35.7	+0.2
JAR	Ashorobuto	3.55 239	eP	Pn	13 44 02.2	+3.3
JKK2	Kamakawa 2	3.93 252	eP	Pn	13 44 05.8	+2.1
JCH	Churui	4.20 233	eP	Pn	13 44 09.4	+2.5
JCH			eS	Sn	13 44 55.8	-1.5
JNBK	Urakawa-nobuka	4.76 234	eP	Pn	13 44 15.7	+1.6
JNBK			eS	Sn	13 45 06.8	-3.2
JOT	Ohata	6.31 235	eP	Pn	13 44 35.0	+1.0
JOT			eS	Sn	13 45 41.1	-5.0
JANG	Nango	6.75 226	eP	Pn	13 44 40.6	+0.8
JANG			eS	Sn	13 45 51.1	-5.5
JOSM	Okushiri--Mats	6.88 246	eP	Pn	13 44 43.1	+1.8
JOM	Ohasama	7.55 223	eP	Pn	13 44 52.5	+2.3
JMK	Ichinoseki	8.00 221	eP	Pn	13 44 58.6	+2.6
JMK			eS	Sn	13 46 22.6	-3.4

MAN 22 13:45:34.0, 15°.11N×122°.97E, h1km, mb4.2, ML3.0, MS2.6, 9C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCNP	Jose Panganiba	0.86	198⇑	eP	Pg	13 45 50.3	-0.1
JCNP				eS	Sg	13 46 00.3	-1.3
GQP	Guinayangan	1.30	203⇑	eP	Pg	13 45 57.9	-1.1
GQP				eS	Sg	13 46 14.3	-1.6
BALP	Baler	1.48	295⇑	eP	Pn	13 46 01.7	-0.1
BALP				eS	Sn	13 46 21.9	+0.1
LQP	Lukban	1.70	234⇑	eP	Pn	13 46 05.5	+0.5
LQP				eS	Sg	13 46 29.9	+1.1
PVCP	Virac	1.90	142⇓	eP	Pn	13 46 07.5	0.0
PVCP				eS	Sb	13 46 33.6	0.0
BOAC	Boac	1.97	214⇑	eP	Pg	13 46 11.4	-0.4
BOAC				eS	Sb	13 46 36.0	+0.2
PALP	Palanan	2.01	345⇑	eP	Pb	13 46 10.2	-1.1
PALP				eS	Sb	13 46 37.0	+0.2
TGY	Tagaytay City	2.21	243⇑	eP	Pn	13 46 11.8	-0.1
MACP	Maragondon, Ca	2.33	249⇑	eP	Pb	13 46 16.6	-0.3
MACP				eS	Sg	13 46 48.7	-0.3
SMPP	San Manuel, Pa	2.43	295⇓	eP	Pn	13 46 16.3	+1.4
SMPP				eS	Sn	13 46 46.2	+0.9
SAMP	Sagada Mountai	2.79	315⇑	eP	Pn	13 46 21.6	+1.9
SAMP				eS	Sb	13 46 57.1	-2.1
CNP	Catarman	3.07	147⇓	eP	Pb	13 46 28.4	-1.0
CNP				eS	Sn	13 47 02.7	+1.8
PACPP	Pamplona Cagay	3.67	335⇓	eP	Pn	13 46 33.7	+1.8
PACPP				eS	Sn	13 47 16.9	+1.1
CTBH	Cotabato--PC H	7.94	171⇓	iP	Pn	13 47 30.9	+0.3

MAN 22 13:46:58.2, 8°.28N×125°.83E, h10km, mb4.2, ML3.0, MS2.7, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.54	101⇓	iP	Pg	13 47 08.7	0.0
BIPH				i S	Sg	13 47 16.4	+0.7
BUTP	Butuan	0.71	343⇓	eP	Pg	13 47 12.1	+0.1
BUTP				eS	Sn	13 47 25.7	+0.3
GLSP	General Luna,	1.52	11⇑	eP	Pn	13 47 24.4	-1.1
GLSP				eS	Sb	13 47 46.5	+0.6
GHBP	Garcia Hernand	2.00	312⇑	eP	Pn	13 47 32.2	+0.1
GHBP				eS	Sn	13 47 55.9	-1.4
TABP	Talibon, Bohol	2.33	321⇑	eP	Pn	13 47 36.3	-0.2
TABP				eS	Sn	13 48 06.4	+1.1
LSIP	Lazi, Siquijor	2.33	291⇑	eP	Pn	13 47 37.1	+0.5
LSIP				eS	Sn	13 48 01.9	-3.4
TBP	Tagbilaran	2.39	306	eP	Pn	13 47 38.0	+0.5
TBP				eS	Sb	13 48 10.7	-0.3
PAGZ	Pagadian	2.46	260⇓	eP	Pb	13 47 42.7	+0.1
PAGZ				eS	Sg	13 48 18.6	+1.2

IDC 22 14:02:05.1±2.6, 0°.61S×67°.06E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/23, Error ellipse: s-maj=93.1km s-min=34.6km az=63.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	15.70	60	LR	LR	14 10 27.7	
	comp=Z,237nm,18.8s,baz=356,slow=32						
WSAR	Wadi Sarin	25.08	341	LR	LR	14 15 45.2	
	comp=Z,81nm,18.4s,baz=180,slow=33						
OPO	Ambohidratompo	26.45	226	LR	LR	14 16 05.6	
	comp=Z,86nm,18.9s,baz=162,slow=32						
PSI	Prapat	32.03	84	LR	LR	14 20 03.7	
	comp=Z,92nm,18.1s,baz=240,slow=34						
BRDH	Bariadhala	33.30	44	LR	LR	14 24 48.1	
	comp=Z,139nm,18.1s,baz=266,slow=41						
MBAR	Mbarara	36.32	270	LR	LR	14 22 30.9	
	comp=Z,35nm,19.5s,baz=51,slow=34						
CMAR	Chiang Mai Arr	36.62	57	LR	LR	14 23 29.5	
	comp=Z,49nm,18.9s,baz=240,slow=35						
GEYT	Alibeck	39.22	349	LR	LR	14 25 23.1	
	comp=Z,60nm,19.1s,baz=176,slow=36						
LSZ	Lusaka	41.05	247	LR	LR	14 24 05.5	
	comp=Z,111nm,21.0s,baz=107,slow=32						
EIL	Elat	42.95	317	LR	LR	14 24 42.2	
	comp=Z,36nm,21.4s,baz=57,slow=32						
ASF	Jabal al Asfar	43.31	322	LR	LR	14 28 25.4	
	comp=Z,44nm,19.1s,baz=107,slow=36						
MMAI	Mount Meron Ar	44.81	321	LR	LR	14 27 24.3	
	comp=Z,33nm,21.4s,baz=142,slow=34						
GNI	Garni	45.39	336	LR	LR	14 29 18.5	
	comp=Z,25nm,18.2s,baz=98,slow=36						
LBTB	Lobatse	46.82	235	LR	LR	14 28 51.8	
	comp=Z,68nm,18.2s,baz=68,slow=34						
BOSA	Boshof	48.67	231	LR	LR	14 30 03.7	
	comp=Z,90nm,18.1s,baz=14,slow=34						
KBZ	Khabaz	49.14	337	LR	LR	14 30 17.9	
	comp=Z,14nm,20.4s,baz=196,slow=34						
TSUM	Tsumeb	51.87	246	LR	LR	14 31 49.6	
	comp=Z,92nm,18.0s,baz=153,slow=34						
KAPI	Kappang	52.79	96	LR	LR	14 32 53.0	
	comp=Z,12nm,18.1s,baz=296,slow=35						
SUR	Sutherland	53.79	229	LR	LR	14 31 11.0	
	comp=Z,101nm,20.1s,baz=15,slow=32						
BELG	Belogornoye	55.28	346	LR	LR	14 36 48.0	
	comp=Z,28nm,18.8s,baz=264,slow=38						
ZALV	Zalesovo Beam	56.33	13	P	P	14 11 46.5	-1.2
	0.4nm,0.3s,baz=216,slow=7.1,SNR=1.4						
	0.4nm,0.3s						
SONM	Songino Array	59.11	30	P	P	14 12 08.6	+1.0
	0.4nm,0.4s,baz=212,slow=8.0,SNR=2.3						
	0.4nm,0.4s						
MAW	Mawson	66.93	182	LR	LR	14 38 30.5	
	comp=Z,36nm,18.2s,baz=206,slow=33						
WRA	Warramunga Arr	68.47	111	P	P	14 13 09.8	0.0
	1.2nm,0.9s,baz=285,slow=5.9,SNR=5.4						
	1.2nm,0.9s						
ASAR	Alice Springs	68.61	115	P	P	14 13 10.4	-0.1
	0.3nm,0.6s,baz=288,slow=5.8,SNR=7.6						
ASAR				LR	LR	14 40 01.8	
	comp=Z,11nm,20.4s,baz=108,slow=33						
	0.3nm,0.6s						
SNAA	Sanae	83.18	197	LR	LR	14 46 17.5	
	comp=Z,33nm,18.1s,baz=11,slow=32						
TXAR	Lajitas Array	150.09	344	PKPbc	PKPbc	14 21 58.6	-0.1
	0.6nm,1.0s,baz=50,slow=2.8,SNR=4.1						

SOME 22 14:32:42.8, 37°.78N×71°.62E, h0km, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.53	345	eP	Pg	14 34 09.0	-0.5
	114nm,0.2s						
IUG				eS	Sg	14 35 10.9	+2.7
	32nm,0.2s						
MRKS	Merke	5.11	13	eP	Pg	14 34 19.6	-1.0
	4.0nm,0.5s						
MRKS				eS	Sg	14 35 29.1	+2.3
	10nm,0.7s						
KK31	Karatay Array	5.38	351	⇑P	Pb	14 34 21.0	+3.3
	1.3nm,0.2s,baz=173,slow=11,SNR=103						
KK31				⇓S	Sg	14 35 32.1	-3.5
	1.9nm,0.4s,baz=193,slow=23,SNR=4.0						
AB31	Akbulak array	14.23	327	P	P	14 36 14.0	+0.8
	0.2nm,0.3s,baz=152,slow=13,SNR=19						
AB31				⇑S	Sn	14 38 52.7	+8.6
	0.5nm,0.7s,baz=161,slow=22,SNR=3.0						

FUNV 22 14:33:45.9, 11°.29N×70°.37W, h26km, MW4.2
IDC 22 14:33:45.9±3.1, 11°.39N×70°.28W, h35km±28km, mb3.1/3, mbtmp3.8/7, ML3.5/4, MS2.8/3, Error ellipse: s-maj=25.4km s-min=20.0km az=145.0
ISC 22 14:33:45.4±0.9, 11°.35N±0°.05×70°.32W±0°.04, h35km±3km, n42, σ1§70/55, mb3.3/4, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	Dabajuro	0.53	216	eP	Pb	14 33 55.1	-1.4
DABV				eS	Sb	14 34 01.3	-2.9
SIQV	Siquisique	0.86	144	eP	Pn	14 34 01.9	+0.8
SIQV				eS	Sn	14 34 13.1	+0.5
CURV	Curarigua	1.38	165	eP	Pb	14 34 10.8	0.0
CURV				eS	Sn	14 34 24.5	-0.9
JACV	Jacura	1.49	100	eP	Pn	14 34 11.8	+2.0
URIC	Uribia, Colomb	1.67	282	eP	Pn	14 34 11.0	-1.3
MAPV	Macapo	2.38	129	eP	Pn	14 34 23.0	+1.0
MAPV				eS	Sn	14 34 49.5	-0.5
SDV	Santo Domingo	2.47	187	Pn	Pn	14 34 24.0	+0.6
	9.4nm,0.3s,baz=37,slow=8.5,SNR=13						
SDV				Pg	Pb	14 34 33.4	+4.1
	39nm,0.3s,baz=346,slow=12,SNR=18						
SDV				Sn	Sn	14 34 51.9	-0.6
	54nm,0.3s,baz=333,slow=22,SNR=11						
SDV				LR	LR	14 35 56.0	
	comp=Z,77nm,19.6s,baz=102,slow=52						
	19nm,0.3s						
MCQV	Machiques	2.53	239	eP	Pn	14 34 23.4	-0.6
MCQV				eS	Sn	14 34 52.4	-1.3
CRJC	Cerrejon, Guaj	2.53	263	eP	Pn	14 34 23.1	-1.0
BENV	Beln	3.01	117	eP	Pn	14 34 32.2	+1.4
BENV				eS	Sn	14 35 04.3	-1.4
SOCV	Socops	3.10	190	eP	Pn	14 34 32.6	+0.8
SOCV				eS	Sn	14 35 04.6	-3.1
BAUV	El Baul	3.28	137	eP	Pn	14 34 35.5	+1.1
BAUV				eS	Sn	14 35 09.9	-2.4
LL1C	La Loma 1 Cana	3.65	241	eP	Pn	14 34 39.5	0.0
CAPV	Capacho	3.98	210	eP	Pn	14 34 42.8	-1.5
ARGC	Ariguani, Magd	4.13	249	eP	Pn	14 34 48.9	+2.8
PAMC	Pamplona, Colo	4.63	211	eP	Pn	14 34 53.1	-0.2
SJCC	San Jacinto, C	4.99	254	eP	Pn	14 34 59.0	+1.0
BRRC	Barranca, Sant	5.38	219	eP	Pn	14 35 04.5	+1.2
BARC	Barichara	5.51	211	eP	Pn	14 35 05.5	+0.3
PCRV	Puerto La Cruz	5.71	101	Pn	Pn	14 35 10.0	+2.2
	5.2nm,0.3s,baz=303,slow=2.2,SNR=53						
PCRV				Sn	Sn	14 36 13.8	+1.5
	7.2nm,0.3s,baz=103,slow=16,SNR=7.9						
	10nm,0.3s						
RUSC	La Rusia	6.07	207	eP	Pn	14 35 13.3	0.0
PTBC	PUERTO BERRIO,	6.29	221	eP	Pn	14 35 13.8	-1.9
SPBC	San Pablo de B	6.77	213	eP	Pn	14 35 22.3	-0.1
CRUV	Carupano	6.99	95	eP	Pn	14 35 25.7	+0.3
HELC	Santa Helena	7.26	226	eP	Pn	14 35 31.3	+1.8
NORC	Norcasia	7.30	218	eP	Pn	14 35 28.3	-1.4
CHIC	Chingaza	7.48	207	eP	Pn	14 35 32.1	-0.5
ROSC	El Rosal	7.58	212	Pn	Pn	14 35 36.3	+2.4
	5.6nm,0.3s,baz=176,slow=19,SNR=3.7						
ROSC				Sn	Sn	14 36 59.2	+0.3
	3.5nm,0.3s,baz=208,slow=23,SNR=4.4						
	11nm,0.3s						
CBOC	Ciudad Bolivar	7.83	226	eP	Pn	14 35 36.8	-0.3
SJG	San Juan	7.84	31	Pn	Pn	14 35 36.3	-0.7
	5.6nm,0.3s,baz=199,slow=8.6,SNR=9.2						
SJG				Sn	Sn	14 36 58.1	-6.4
	3.6nm,0.3s,baz=360,slow=19,SNR=2.5						
	11nm,0.3s						
GUY2C	Guyana, Caldas	7.87	220	eP	Pn	14 35 38.3	+0.4
ANIL	Santa Ana	8.47	217	eP	Pn	14 35 47.6	+1.6
ORTC	Ortega, Tolima	8.86	214	eP	Pn	14 35 51.4	+0.3
GTBY	Guantanamo Bay	9.69	332	eP	Pn	14 36 02.7	+0.3
ATAH	Atahualpa	20.05	204	LR	LR	14 47 58.1	
	comp=Z,38nm,19.4s,baz=52,slow=42						
NNA	Nana	24.08	196	LR	LR	14 50 36.3	
	comp=Z,41nm,19.5s,baz=356,slow=42						
TXAR	Lajitas Array	35.84	305	P	P	14 40 42.3	+0.3
	0.1nm,0.4s,baz=115,slow=10,SNR=4.3						
	0.1nm,0.4s						
NVAR	Mina Array Bea	50.46	311	P	P	14 42 42.0	+1.8
	0.1nm,0.3s,baz=97,slow=4.9,SNR=2.1						
NVAR				pP	pP	14 42 51.4	+0.7
	0.2nm,0.5s,baz=106,slow=6.2,SNR=3.8						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	70.18	80	P	P	14 44 54.9	-0.3
	0.8nm,0.8s,baz=289,slow=4.4,SNR=3.4						
	0.8nm,0.8s						
ILAR	Eielson Array	74.07	334	pP	pP	14 45 29.1	+0.6
	0.2nm,0.6s,baz=110,slow=4.8,SNR=4.4						
ASAR	Alice Springs	153.90	239	PKPab	PKPab	14 53 53.5	-1.8
	0.4nm,0.8s,baz=109,slow=3.0,SNR=5.4						
ASAR				pPKPab	pPKPab	14 54 05.8	-0.5
	1.1nm,0.7s,baz=113,slow=3.4,SNR=14						
WRA	Warramunga Arr	154.79	247	PKPab	PKPab	14 53 59.5	+0.4
	0.4nm,0.8s,baz=108,slow=2.1,SNR=1.7						
WRA				pPKPab	pPKPab	14 54 10.2	-0.1
	0.5nm,0.6s,baz=100,slow=3.8,SNR=5.4						

IDC 22 14:36:20.4±1.4, 35°.89N×87°.30E, h0km, mb3.3/4, mbtmp3.4/9, ML3.1/5, MS3.5/30, Error ellipse: s-maj=47.5km s-min=20.8km az=56.0
ISC 22 14:36:20.4±0.9, 35°.60N±0°.07×87°.02E±0°.09, h10km, n40, σ2§57/18, mb3.5/4, MS3.5/26, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMU	GeErMu	6.35	82	P	Pn	14 37 57.3	+2.9
GOMU				S	Sn	14 39 05.9	-1.3
LSA	Lhasa	6.83	148	Pn	Pn	14 37 58.8	-2.3
LSA				Pg	Pn	14 38 05.0	+3.9
LSA				Sn	Sn	14 38 44.5	-35
WMQ	Urumqi	8.23	3	ePn	Pn	14 38 23.8	+3.9
WMQ				Sn	Sn	14 39 55.3	+2.4
KSH	Kashi	9.60	297	P	Pn	14 38 45.3	+6.5
GTA	Gaotai	10.85	66	eP	Pn	14 38 55.1	-0.8
GTA				pP		14 38 59.3	
GTA				sP		14 39 02.3	
MKAR	Makanchi Array	11.73	344	Pn	Pn	14 39 05.8	-2.1
	0.1nm,0.3s,baz=151,slow=14,SNR=7.1						
MKAR				LR	LR	14 44 08.2	
	comp=Z,141nm,18.7s,baz=190,slow=41						
	0.6nm,0.7s						
AAK	Ala-Archa	12.00	310	Pn	Pn	14 39 12.7	+1.1
	0.1nm,0.3s,baz=90,slow=20,SNR=2.5						
AAK				LR	LR	14 44 45.9	
	comp=Z,275nm,20.8s,baz=116,slow=42						
	1.3nm,0.7s						
KURBB	Kurchatov Arra	16.23	340	Pn	Pn	14 40 05.5	-2.9
	0.1nm,0.3s,baz=152,slow=12,SNR=2.5						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	18.41	356	P	P	14 40 31.7	-3.9
	0.1nm,0.3s,baz=157,slow=13,SNR=4.0						
ZALV				LR	LR	14 48 32.7	
	comp=Z,131nm,21.1s,baz=186,slow=40						
	0.6nm,0.5s						
SONM	Songino Array	18.87	44	P	P	14 40 38.1	-2.8
	0.2nm,0.3s,baz=235,slow=11,SNR=7.8						
SONM				LR	LR	14 48 09.3	
	comp=Z,208nm,22.0s,baz=236,slow=38						
	1.5nm,0.9s						
CMAR	Chiang Mai Arr	20.07	145	LR	LR	14 50 39.0	
	comp=Z,22nm,19.0s,baz=320,slow=42						
BVAR	Borovoye Array	21.01	331	P	P	14 41 04.7	+0.8
	0.3nm,0.7s,baz=123,slow=10,SNR=2.7						
BVAR				LR	LR	14 49 26.9	
	comp=Z,75nm,18.8s,baz=137,slow=38						
	0.3nm,0.7s						
GEYT	Alibeck	23.24	284	LR	LR	14 52 15.2	
	comp=Z,200nm,21.2s,baz=72,slow=41						
AKTO	Aktyubinsk	25.67	314	LR	LR	14 53 09.6	
	comp=Z,246nm,19.1s,baz=117,slow=39						
QIZ	Qiongzhong	26.05	123	P	P	14 41 53.4	-0.6
QIZ				S	S	14 46 26.1	+1.1
ARU	Arti	28.37	326	LR	LR	14 54 29.5	
	comp=Z,176nm,18.3s,baz=122,slow=38						
PALK	Pallekele	28.78	193	LR	LR	14 54 49.3	
	comp=Z,46nm,18.9s,baz=93,slow=38						
BELG	Belogornoye	32.45	314	LR	LR	14 57 18.7	
	comp=Z,151nm,18.8s,baz=70,slow=39						
KSRS	Korea Array	32.74	74	LR	LR	14 57 21.1	
	comp=Z,95nm,20.3s,baz=295,slow=39						
GNI	Garni	33.45	291	LR	LR	14 59 10.9	
	comp=Z,60nm,19.4s,baz=126,slow=41						
NRIK	Noril'sk	33.80	0	LR	LR	14 57 42.6	
	comp=Z,200nm,20.5s,baz=168,slow=38						
PSI	Prapat	34.45	159	LR	LR	14 59 59.8	
	comp=Z,51nm,18.6s,baz=308,slow=41						
KLR	Kul'dur	35.20	53	LR	LR	14 56 56.4	
	comp=Z,53nm,18.6s,baz=252,slow=36						
YAK	Yakutsk	37.47	32	LR	LR	14 59 05.5	
	comp=Z,67nm,18.9s,baz=268,slow=37						
MJAR	Matsushiro Arr	40.98	73	LR	LR	15 00 49.3	
	comp=Z,68nm,21.4s,baz=292,slow=36						
TIXI	Tiksi	42.10	18	LR	LR	15 02 30.9	
	comp=Z,50nm,20.4s,baz=358,slow=38						
JHJ	Hachijo jima 2	43.20	77	LR	LR	15 05 04.2	
	comp=Z,39nm,19.7s,baz=143,slow=40						
AKASG	Malin Array Be	43.66	309	LR	LR	15 04 30.4	
	comp=Z,126nm,22.0s,baz=67,slow=39						
EIL	Elat	43.83	278	LR	LR	15 06 29.9	
	comp=Z,104nm,20.7s,baz=61,slow=41						
FINES	FINESS Array B	45.70	324	LR	LR	15 06 36.1	
	comp=Z,89nm,19.8s,baz=178,slow=40						
MA2	Magadan	46.97	39	LR	LR	15 06 58.5	
	comp=Z,36nm,19.4s,baz=132,slow=39						
KAPI	Kappang	50.75	136	LR	LR	15 10 50.9	
	comp=Z,18nm,19.2s,baz=304,slow=41						
PETK	Petropavlovsk-	51.32	47	LR	LR	15 08 33.8	
	comp=Z,113nm,20.2s,baz=271,slow=38						
HFS	Hagfors	51.78	322	LR	LR	15 08 48.4	
	comp=Z,142nm,18.3s,baz=74,slow=38						
VRAC	Vranov	51.92	308	LR	LR	15 09 21.2	
	comp=Z,93nm,19.9s,baz=66,slow=38						
NOA	NORSAR Array B	52.88	324	P	P	14 45 36.2	0.0
	0.4nm,0.5s,baz=83,slow=7.6,SNR=2.0						
	0.4nm,0.5s						
GUMO	Guam	56.15	98	LR	LR	15 10 48.0	
	comp=Z,18nm,20.1s,baz=321,slow=37						
DAVOX	Davos/Dischmat	56.93	307	LR	LR	15 13 27.2	
	comp=Z,107nm,21.9s,baz=85,slow=39						
WRA	Warramunga Arr	71.14	133	P	P	14 47 41.0	+1.7
	0.4nm,0.8s,baz=327,slow=6.7,SNR=1.8						
	0.4nm,0.8s						
ASAR	Alice Springs	73.77	136	P	P	14 47 57.4	+2.3
	0.3nm,0.7s,baz=324,slow=4.6,SNR=2.3						
	0.3nm,0.7s						

EAF 22 14:42:36.1±11.0, 25°.01S×21°.75E, h10km, MD3.7
PRE 22 14:43:18.6±0.6, 26°.95S×26°.68E, h2km, ML2.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.61	88	eP	Pg	14 43 30.3	0.0
PRYS				eS	Sg	14 43 38.8	+0.6
PRYS				IAML		14 43 44.9	
	comp=Z,38nm,0.1s						
SWZ	Schweizer	1.22	259	eP	Pb	14 43 42.5	0.0
SWZ				eS	Sb	14 43 58.8	-0.1
SWZ				IAML		14 44 02.7	
	comp=Z,69nm,0.3s						
BOSA	Boshof	2.08	217	i Pg	Pn	14 43 55.7	+1.0
BOSA	Boshof	2.08	217	i Pg	Pn	14 43 55.7	+1.0
LBTB	Lobatse	2.16	333	i Pg	Pn	14 43 48.8	-6.9
LBTB				i Sg	Sn	14 44 24.1	+1.0
LBTB	Lobatse	2.16	333	i Pg	Pn	14 43 48.8	-6.9
LBTB				i Sg	Sn	14 44 24.1	+1.0
MOPA	Mopani	5.47	52	eP	Pn	14 44 42.3	+1.1
MOPA				eS	Sn	14 45 43.0	-1.7
MOPA				IAML		14 46 26.9	
	comp=Z,11nm,1.3s						
GRAF	Camdeboo Natio	5.64	199	eP	Pn	14 44 44.8	+1.1
GRAF				eS	Sn	14 45 47.6	-1.5
GRAF				IAML		14 46 28.1	
	comp=Z,56nm,4.5s						
FRAZ	Fraserburg	6.76	222	eP	Pn	14 45 00.0	+1.0
FRAZ				eS	Sn	14 46 14.1	-2.6
FRAZ				IAML		14 46 34.6	
	comp=Z,13nm,2.1s						

ISN 22 15:03:08.2±0.7, 32°.99N×46°.00E, h8km±3km, ML3.1
TEH 22 15:03:08.7, 33°.09N×46°.07E, h19km, ML3.0
ISC 22 15:03:08.9±0.9, 33°.10N±0°.04×45°.99E±0°.04, h14km±7km, n20, σ1§43/25, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	Badra	0.05	277	ePg	Pg	15 03 11.5	-0.1
IBDR				eSg	Sg	15 03 13.5	+0.1
IBDR				AML	AML	15 03 15.6	
	comp=E,5μm,0.5s						
IBDR				AML	AML	15 03 15.6	
	comp=N,3μm,0.4s						
DHL1	Dehloran	1.16	111	ePg	Pn	15 03 30.0	-0.8
IGHG	Ghaleghazi	1.31	21	ePg	Pb	15 03 33.8	+0.2
IGHG				e		15 03 57.2	
	comp=Z,2μm,0.6s						
BHD	Baghdad	1.36	277	ePn	Pg	15 03 35.0	-0.1
BHD				eSn	Sg	15 03 56.0	+3.1
RAFI	Al-Rafai	1.38	176	ePn	Pb	15 03 34.0	-0.5
RAFI				eSn	Sg	15 03 53.0	-0.4
RAFI				AML	AML	15 03 55.7	
	comp=E,376nm,0.2s						
KCHF	Cheshme Sefid,	1.46	36	ePg	Pb	15 03 35.6	-0.4
KCHF				eSg	Sg	15 03 56.6	+0.6
KCHF				e		15 04 00.2	
	comp=Z,3μm,0.3s						
KER	Kermanshah	1.59	36	ePg	Pb	15 03 37.7	-0.5
KER				e		15 03 40.7	
	comp=Z,1μm,0.2s						
IKFM	Kafar-mosalman	1.61	74

NGRK			*e*Sg	Sn	15 08 46.1	+0.6
NGRK			*e*		15 08 49.0	
	comp=Z,14μm,0.2s					
IBAF	**Bafgh**	**1.15 315**	*e*Pg	Pg	15 08 28.4	-0.2
IBAF			*e*		15 08 44.8	
	comp=Z,21μm,0.1s					
CHMN	**Cheshme madani**	**1.27 136**	*e*Pg	Pn	15 08 31.3	+0.3
CHMN			*e*		15 08 53.0	
	comp=Z,12μm,0.3s					
IMEH	**Mehriz**	**1.75 291**	*e*Pn	Pb	15 08 39.3	+0.2
IMEH			*e*		15 09 05.2	
	comp=Z,5μm,0.4s					
TPRV	**Parvadeh(Tabas**	**2.25 3**	*e*Pn	Pb	15 08 46.6	-0.9
TPRV			*e*		15 09 19.8	
	comp=Z,6μm,0.3s					
YZKH	**Yazd**	**2.30 315**	*e*Pn	Pb	15 08 47.5	-0.9
ICHK	**Chekchek**	**2.33 309**	*e*Pn	Pb	15 08 47.5	-1.4
ICHK			*e*		15 09 26.1	
	comp=Z,3μm,0.3s					
KBAM	**BAM**	**2.34 134**	*e*Pn	Pb	15 08 48.6	-0.4
KBAM			*e*		15 09 25.6	
	comp=Z,4μm,0.3s					
BSRN	**Basiran**	**2.52 61**	*e*Pn	Pn	15 08 49.9	+1.9
IKOO	**Kooshah**	**2.67 52**	*e*Pn	Pn	15 08 52.0	+1.7
IKOO			*e*		15 09 41.2	
	comp=Z,2μm,0.4s					
ISAD	**Sadrabad**	**2.68 296**	*e*	Sg	15 09 36.5	+3.9
	comp=Z,2μm,0.3s					
ITEG	**Tejag**	**2.83 41**	*e*Pn	Pn	15 08 54.3	+1.9
ITEG			*e*		15 09 50.8	
	comp=Z,942nm,0.5s					
TKDS	**Koohdasht(Taba**	**2.87 10**	*e*Pn	Pn	15 08 55.1	+2.3
TKDS			*e*		15 09 07.9	
	comp=Z,2μm,0.3s					
TABS	**Tabas**	**2.91 10**	*e*Pn	Pn	15 08 55.9	+2.6
NHDN	**Nehbandan**	**3.08 78**	*e*Pn	Pn	15 08 58.0	+2.2
NHDN			*e*		15 09 59.0	
	comp=Z,3μm,0.6s					
TNSJ	**Nastanj**	**3.18 1**	*e*Pn	Pn	15 08 59.7	+2.7
TNSJ			*e*		15 10 00.1	
	comp=Z,3μm,0.4s					
AFRZ	**Afriz**	**3.38 38**	*e*Pn	Pn	15 09 01.6	+1.8
ANAR	**Anarak**	**3.38 316**	*e*Pn	Pn	15 09 02.3	+2.4
GENO	**Geno**	**3.38 185**	*e*		15 09 09.6	
	comp=Z,800nm,0.3s					
GENO			*e*Pn	Pb	15 09 03.5	-3.4
IDAH	**Dahanechah**	**3.45 55**	*e*Pn	Pn	15 09 03.1	+2.2
IRAM	**Ramesheh**	**3.69 287**	*e*Pn	Pn	15 09 07.2	+2.9
IRAM			*e*		15 10 12.8	
	comp=Z,411nm,0.7s					
NASN	**Na'in**	**3.75 303**	*e*Pn	Pn	15 09 07.8	+2.6
ZHSF	**Zahedan**	**3.86 106**	*e*Pn	Pn	15 09 09.5	+3.1
ZHDN	**Zahedan**	**3.96 109**	*e*Pn	Pn	15 09 10.5	+2.7
ZHDN			*e*		15 10 19.2	
	comp=Z,319nm,0.6s					
IZEF	**Zefreh**	**4.15 302**	*e*Pn	Pn	15 09 13.6	+3.1
IZEF			*e*		15 10 20.3	
	comp=Z,260nm,0.3s					
SHRT	**Shahrakht**	**4.28 47**	*e*Pn	Pn	15 09 15.0	+2.8
KRSH	**Karshahi**	**4.89 312**	*e*Pn	Pn	15 09 23.6	+2.9
KRSH			*e*		15 11 01.6	
	comp=Z,381nm,0.5s					
ISFB	**Sefidab**	**5.08 316**	*e*Pn	Pn	15 09 26.2	+3.1
IANJ	**Anjilo**	**5.16 336**	*e*Pn	Pn	15 09 26.9	+2.4
SHRO	**Shahrood**	**5.21 355**	*e*Pn	Pn	15 09 27.6	+2.5
TBJM	**Torbat-e-JAM**	**5.50 34**	*e*Pn	Pn	15 09 31.6	+2.6
IFIR	**Firoozkooh**	**5.79 328**	*e*Pn	Pn	15 09 35.8	+2.7
IVRN	**Varamin**	**5.83 317**	*e*Pn	Pn	15 09 36.9	+3.5
IPAY	**Payeh**	**6.02 19**	*e*Pn	Pn	15 09 39.0	+2.8
IAKL	**Akhelmad**	**6.10 17**	*e*Pn	Pn	15 09 40.4	+3.1
MRVT	**Maraveh tapeh**	**6.87 357**	*e*Pn	Pn	15 09 50.6	+2.8

*IDC **22** 15:17:57.4±3.7, 6°.81N×127°.08E, h52km±32km, mb3.6/4, mbtmp3.9/5, ML3.9/1, MS2.8/3, Error ellipse: s-maj=44.4km s-min=12.2km az=42.0*
*MAN **22** 15:17:59.3, 6°.91N×126°.79E, h26km, mb4.6, ML3.5, MS3.4*
ISC 22 15:17:55.3±1.7, 6°.80N±0°.05×127°.10E±0°.07, h29km±13km, n17, σ2°.09/25, mb3.7/4, 4C-6D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.84**	**280**	⇑*e*P	**Pb**	**15 18 10.4**	**-1.1**
MATI				*e*S	**Sb**	**15 18 20.4**	**-2.0**
DAV	**Davao City (W)**	**1.53**	**280**	P	**Pb**	**15 18 22.3**	**-0.7**
	195nm,0.4s,baz=232,slow=5.7,SNR=6.9						
DAV				S	**Sn**	**15 18 40.8**	**+1.2**
	653nm,0.5s,baz=303,slow=23,SNR=17						
DAV				LR	LR	15 19 08.9	
	comp=Z,384nm,18.9s,baz=92,slow=47						
DDMP	**Don Marcelino,**	**1.54**	**243**	⇓*e*P	**Pn**	**15 18 21.6**	**+0.7**
DDMP				*e*S	**Sn**	**15 18 40.3**	**+0.4**
BIPH	**Bislig**	**1.55**	**332**	⇑*i*P	**Pn**	**15 18 21.7**	**+0.7**
BIPH				*i* S	**Sn**	**15 18 39.4**	**-0.8**
KCP	**Kidapawan**	**2.00**	**276**	⇑*e*P	**Pn**	**15 18 28.2**	**+1.0**
KCP				*i* S	**Sn**	**15 18 51.6**	**+0.3**
BUTP	**Butuan**	**2.60**	**326**	⇓*e*P	**Pb**	**15 18 39.8**	**-1.5**
BUTP				*e*S	**Sb**	**15 19 16.2**	**+3.4**
CTBH	**Cotabato--PC H**	**2.86**	**278**	⇓*i*P	**Pn**	**15 18 40.4**	**+1.4**
CGP	**Cagayan de Oro**	**2.89**	**305**	⇑*e*P	**Pn**	**15 18 42.5**	**+3.1**
CGP				*e*S	**Sn**	**15 19 13.1**	**-0.2**
GLSP	**General Luna,**	**3.11**	**342**	⇓*e*P	**Pn**	**15 18 44.3**	**+1.9**
LSIP	**Lazi, Siquijor**	**4.14**	**304**	⇓*e*P	**Pn**	**15 18 59.7**	**+3.1**
LSIP				*e*S	**Sn**	**15 19 39.5**	**-4.5**
TABP	**Talibon, Bohol**	**4.26**	**320**	⇓*e*P	**Pn**	**15 19 00.2**	**+2.0**
SIJI	**Sorong**	**8.69**	**151**	P	**Pn**	**15 20 02.2**	**+3.1**
	1.4nm,0.3s,baz=335,slow=19,SNR=7.0						
SIJI				S	**Sn**	**15 21 33.6**	**-2.5**
	2.7nm,0.3s,baz=313,slow=23,SNR=8.9						
SIJI				LR	LR	15 23 32.5	
	comp=Z,38nm,21.6s,baz=330,slow=39						
	3.3nm,0.3s						
WRA	**Warramunga Arr**	**27.52**	**165**	P	**P**	**15 23 39.2**	**-0.4**
	0.6nm,0.5s,baz=346,slow=10.0,SNR=12						
WRA				LR	LR	15 37 14.1	
	comp=Z,27nm,18.5s,baz=210,slow=42						
	0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.76**	**296**	LR	LR	15 36 20.7	
	comp=Z,16nm,18.2s,baz=110,slow=37						
ASAR	**Alice Springs**	**31.01**	**168**	P	**P**	**15 24 10.4**	**-0.1**
	0.4nm,0.3s,baz=342,slow=7.5,SNR=31						
	0.4nm,0.3s						
STKA	**Stephens Creek**	**40.88**	**161**	P	**P**	**15 25 35.4**	**+0.5**
	3.3nm,0.7s,baz=329,slow=8.5,SNR=9.1						
	3.3nm,0.7s						
MKAR	**Makanchi Array**	**55.28**	**324**	P	**P**	**15 27 24.5**	**-1.6**
	0.5nm,0.6s,baz=113,slow=7.1,SNR=7.6						
	0.5nm,0.6s						

ROM 22 15:36:00.6±0.1, 42°.861N±0°.004×13°.252E±0°.006, h9km, ML1.6/1, 1D, Error ellipse: s-maj=0.4km s-min=0.4km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**265**	P	Pg	15 36 02.5	-0.1
T1245				S	Sg	15 36 03.5	-0.6
T1245	**Castelsantange**	**0.05**	**265**	P	Pg	15 36 02.5	-0.2
T1245				AML	AML		
	comp=E,1360μm,0.5s						
T1245				AML	AML		
	comp=N,1415μm,0.8s						
T1245				AML	AML		
	comp=E,1355μm,0.5s						
T1245				AML	AML		
	comp=N,1540μm,0.7s						
MMO1	**Montemonaco**	**0.07**	**55**	P	Pg	15 36 02.8	+0.1
MMO1				S	Sg	15 36 04.0	-0.3
MMO1	**Montemonaco**	**0.07**	**55**	P	Pg	15 36 02.8	0.0
MMO1				S	Sg	15 36 04.0	-0.3
MC2	**Monte Cornacci**	**0.07**	**319**	⇓P	Pg	15 36 02.9	0.0
MC2	**Monte Cornacci**	**0.07**	**319**	P	Pg	15 36 02.9	0.0
MC2	**Monte Cornacci**	**0.07**	**319**	P	Pg	15 36 02.9	0.0
NRCA	**Norcia**	**0.10**	**255**	P	Pg	15 36 03.5	+0.3
NRCA				S	Sg	15 36 05.6	+0.5
NRCA	**Norcia**	**0.10**	**255**	P	Pg	15 36 03.6	+0.4
NRCA				S	Sg	15 36 05.6	+0.5
NRCA				AML	AML		
	comp=N,675μm,0.1s						
NRCA				AML	AML		
	comp=E,368μm,0.5s						
AM05	**Amandola Campo**	**0.14**	**32**	P	Pg	15 36 04.4	+0.7
AM05				S	Sg	15 36 07.0	+1.1
AM05	**Amandola Campo**	**0.14**	**32**	AML	AML		
	comp=E,393μm,0.4s						
AM05				AML	AML		
	comp=N,44μm,0.1s						
T1202	**Accumoli, Fraz**	**0.16**	**187**	P	Pg	15 36 04.8	+0.7
T1202				S	Sg	15 36 08.2	+1.7
T1202	**Accumoli, Fraz**	**0.16**	**187**	P	Pg	15 36 04.8	+0.7
T1202				S	Sg	15 36 08.0	+1.5
T1216	**Preci, Frazion**	**0.17**	**280**	P	Pg	15 36 04.8	+0.5
T1216				S	Sg	15 36 08.1	+1.3
T1216	**Preci, Frazion**	**0.17**	**280**	P	Pg	15 36 04.8	+0.5
T1201	**Domo (RI)**	**0.20**	**180**	P	Pg	15 36 05.9	+1.1
GUMA	**Gualdo di Mace**	**0.21**	**17**	P	Pg	15 36 05.9	+1.0
GUMA				S	Sg	15 36 09.8	+1.9
FDMO	**Fiordimonte**	**0.21**	**326**	P	Pg	15 36 05.7	+0.7
FDMO				S	Sg	15 36 09.3	+1.4
FDMO	**Fiordimonte**	**0.21**	**326**	AML	AML		
	comp=N,71μm,1.1s						
FDMO				AML	AML		
	comp=E,56μm,1.6s						
T1243	**Rocca Santa Ma**	**0.22**	**139**	P	Pg	15 36 05.6	+0.5
T1243				S	Sg	15 36 09.5	+1.3
T1243	**Rocca Santa Ma**	**0.22**	**139**	P	Pg	15 36 05.7	+0.5
SMA1	**SAN MARTINO**	**0.24**	**165**	P	Pg	15 36 06.0	+0.5
SMA1				S	Sg	15 36 10.3	+1.6
SMA1				AML	AML		
	comp=E,80μm,0.9s						
SMA1				AML	AML		
	comp=N,67μm,0.6s						
SMA1				AML	AML		
	comp=N,67μm,0.6s						
SMA1				AML	AML		
	comp=E,80μm,0.9s						
SMA1	**SAN MARTINO**	**0.24**	**165**	P	Pg	15 36 06.1	+0.6
T1215	**Vallo di Nera,**	**0.29**	**258**	P	Pg	15 36 07.0	+0.7
T1215				S	Sb	15 36 12.2	-0.7
T1215	**Vallo di Nera,**	**0.29**	**258**	P	Pg	15 36 07.1	+0.7
T1246	**Crognaleto (TE**	**0.33**	**147**	P	Pg	15 36 07.6	+0.5
CAMP	**Campotosto**	**0.34**	**160**	P	Pg	15 36 07.9	+0.5
CAMP				S	Sb	15 36 13.8	-0.8
TERO	**Teramo**	**0.35**	**132**	P	Pg	15 36 08.0	+0.5
TERO				S	Sb	15 36 14.1	-0.6
TERO	**Teramo**	**0.35**	**132**	AML	AML		
	comp=N,44μm,0.5s						
TERO				AML	AML		
	comp=E,35μm,0.1s						
RM33	**Pellescritta (**	**0.35**	**184**	P	Pg	15 36 08.2	+0.6

*NNC **22** 16:15:32.9±3.7, 36°.13N×51°.50E, h0km, mb3.8, Error ellipse: s-maj=32.9km s-min=20.1km az=26.0*
*TEH **22** 16:15:34.2, 35°.75N×52°.12E, h8km, ML3.9*
*IDC **22** 16:15:36.9±1.7, 35°.92N×52°.20E, h0km, mb3.7/8, mbtmp3.8/12, ML3.5/4, MS3.1/15, Error ellipse: s-maj=33.6km s-min=16.8km az=12.0*
*MOS **22** 16:15:37.8±2.2, 36°.08N×51°.92E, h10km, mb4.0/6, Error ellipse: s-maj=8.5km s-min=4.8km az=111.4*
*AZER **22** 16:15:40.8±0.6, 36°.01N×51°.93E, h10km, Error ellipse: s-maj=8.6km s-min=4.8km az=59.0*
ISC 22 16:15:35.3±0.5, 35°.77N±0°.02×52°.12E±0°.02, h10km, n187, σ2°.22/213, mb3.7/11, MS3.0/9, 15C-5D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAMV	**Damavand**	**0.18**	**222**	*e*Pg	**Pg**	**16 15 37.8**	**-1.6**
IDMV	**Damavand**	**0.20**	**201**	*e*Pg	**Pg**	**16 15 38.1**	**-1.6**
IDMV				*e*Sg	**Sg**	**16 15 41.6**	**-1.1**
IPRN	**Peran**	**0.51**	**20**	*e*Pg	**Pg**	**16 15 44.2**	**-1.1**
IPRN				*e*Sg	**Sb**	**16 15 52.6**	**-1.3**
IPRN				*e*		16 15 53.3	
	comp=Z,66μm,0.4s						
IFIR	**Firoozkooh**	**0.53**	**103**	*e*Pg	**Pg**	**16 15 44.3**	**-1.4**
TEHA	**Amirabad Tehra**	**0.60**	**268**	*e*Pg	**Pg**	**16 15 45.8**	**-1.2**
TEHA				*e*Sg	**Sb**	**16 15 54.8**	**-1.7**
TEHA				*e*		16 15 57.9	
	comp=Z,36μm,0.5s						
TEH	**Tehran**	**0.60**	**267**	*e*Pg	**Pg**	**16 15 45.6**	**-1.5**
TEH				*e*		16 16 04.6	
	comp=Z,39μm,0.7s						
TEH	**Tehran**	**0.60**	**267**	P	**Pg**	**16 15 45.5**	**-1.5**
IHSB	**Hasanabad**	**0.76**	**245**	*e*Pg	**Pg**	**16 15 48.5**	**-1.6**
IHSB				*e*Sg	**Sb**	**16 15 59.3**	**-1.9**
ILAS	**Lasjerd**	**0.78**	**119**	*e*Pg	**Pg**	**16 15 48.9**	**-1.6**
ILAS				*e*		16 16 00.4	
	comp=Z,54μm,0.4s						
ILAS				*e*Sg	**Sb**	**16 16 00.4**	**-1.6**
CHTH	**Charan**	**0.82**	**280**	*e*Pg	**Pg**	**16 15 49.5**	**-1.7**
IVRN	**Varamin**	**0.83**	**203**	*e*Pg	**Pg**	**16 15 50.2**	**-1.2**
IVRN				*e*Sg	**Sb**	**16 16 02.5**	**-0.7**
IVRN				*e*		16 16 04.4	
	comp=Z,54μm,0.3s						
ISHM	**Shahmirzad**	**0.95**	**87**	*e*Pg	**Pg**	**16 15 52.3**	**-1.4**
ISHM				*e*Sg	**Sb**	**16 16 06.8**	**-0.1**
ISHM				*e*		16 16 10.3	
	comp=Z,80μm,0.4s						
KLST	**Kelardasht - M**	**1.14**	**311**	*e*Pn	**Pg**	**16 15 55.5**	**-1.8**
KLST				*e*		16 16 15.2	
	comp=Z,21μm,0.4s						
IMHD	**Mahdasht**	**1.19**	**267**	*e*Pg	**Pb**	**16 15 56.2**	**-1.8**
IMHD				*e*		16 16 16.5	
	comp=Z,24μm,0.1s						
IQOM	**Qom**	**1.26**	**223**	*e*Pg	**Pn**	**16 15 57.3**	**-1.9**
IQOM				*e*Sg	**Sn**	**16 16 15.0**	**-1.4**
IQOM				*e*		16 16 17.4	
	comp=Z,29μm,0.2s						
QALM	**Alamut, Qazvin**	**1.37**	**300**	*e*Pn	**Pn**	**16 15 58.9**	**-1.8**
QALM				*e*		16 16 05.1	
	comp=Z,16μm,0.3s						
ISFB	**Sefidab**	**1.41**	**176**	*e*Pg	**Pb**	**16 16 00.5**	**-1.4**
ISFB				*e*Sg	**Sg**	**16 16 19.8**	**-1.1**
ISFB				*e*		16 16 25.4	
	comp=Z,21μm,0.2s						
GHVR	**GHOM**	**1.45**	**208**	*e*Pg	**Pb**	**16 16 01.2**	**-1.3**
IANJ	**Anjilo**	**1.49**	**101**	*e*Pn	**Pb**	**16 16 02.0**	**-1.3**
IANJ				*e*		16 16 28.5	
	comp=Z,27μm,0.4s						
IGLO	**Ghaloghah**	**1.57**	**62**	*e*Pn	**Pb**	**16 16 03.8**	**-0.8**
IGZV	**Ghazvin**	**1.66**	**292**	*e*		16 16 40.1	
	comp=Z,10μm,1.2s						
IGZV				*e*Pn	**Pb**	**16 16 05.4**	**-0.8**
KRSH	**Karshahi**	**1.79**	**180**	*e*Pn	**Pb**	**16 16 06.2**	**-2.2**
IRAZ	**Razeghan**	**1.82**	**259**	*e*Pg	**Pb**	**16 16 07.0**	**-1.9**
JIR1	**Jirandeh**	**2.10**	**297**	*e*Pn	**Pb**	**16 16 12.6**	**-1.0**
ASAO	**Ashtian**	**2.10**	**235**	*e*Pn	**Pb**	**16 16 11.6**	**-2.1**
QAMS	**Qamsar**	**2.11**	**197**	*e*Pn	**Pb**	**16 16 11.5**	**-2.4**
GIDE	**GILAN DEYLAMAN**	**2.12**	**304**	*e*Pn	**Pb**	**16 16 13.6**	**-0.5**
LHJ2	**Lahijan - Gila**	**2.17**	**311**	*e*Pn	**Pb**	**16 16 13.0**	**-1.7**
IKLH	**Kolahrood**	**2.48**	**191**	*e*Pn	**Pb**	**16 16 17.0**	**-3.2**
IKLH				*e*		16 16 50.3	
	comp=Z,11μm,0.4s						
QSDN	**Sirdan**	**2.50**	**288**	*e*Pn	**Pb**	**16 16 18.3**	**-2.1**
QSDN				*e*		16 17 02.5	
	comp=Z,8μm,0.7s						
HAGD	**Aghdareh**	**2.61**	**250**	*e*Pn	**Pb**	**16 16 19.2**	**-3.2**
HAGD				*e*		16 16 21.5	
	comp=Z,5μm,0.4s						
KHMZ	**Khomeyn**	**2.69**	**222**	*e*Pn	**Pb**	**16 16 20.1**	**-3.7**
IZEF	**Zefreh**	**2.87**	**176**	*e*Pn	**Pn**	**16 16 22.1**	**+0.7**
IZEF				*e*		16 17 06.2	
	comp=Z,3μm,0.3s						
ANAR	**Anarak**	**2.89**	**152**	*e*Pn	**Pn**	**16 16 22.5**	**+0.9**
ZNJK	**Zanjan**	**2.92**	**289**	*e*Pn	**Pn**	**16 16 23.4**	**+1.3**
NASN	**Na'in**	**3.01**	**169**	*e*Pn	**Pn**	**16 16 24.4**	**+1.0**
IMND	**Minoodasht**	**3.04**	**60**	*e*Pn	**Pn**	**16 16 24.8**	**+1.4**
SHRO	**Shahrood**	**3.17**	**85**	*e*Pn	**Pn**	**16 16 27.3**	**+1.9**
IPIR	**Pirpir**	**3.24**	**199**	*e*Pn	**Pb**	**16 16 28.6**	**-4.5**
IPIR				*e*		16 17 28.7	
	comp=Z,4μm,0.8s						
HSAM	**Samen**	**3.28**	**243**	*e*Pn	**Pn**	**16 16 28.8**	**+1.8**
HSAM				*e*		16 16 40.3	
	comp=Z,2μm,0.4s						
IGAR	**Gharneh**	**3.35**	**181**	*e*Pn	**Pn**	**16 16 29.4**	**+1.4**
IGAR				*e*		16 17 24.9	
	comp=Z,2μm,0.5s						
SHK1	**Shahrekord**	**3.58**	**197**	*e*Pn	**Pn**	**16 16 32.3**	**+1.2**
SHK1				*e*		16 17 45.2	
	comp=Z,1μm,0.6s						
GAS1	**Astara - Iran**	**3.70**	**316**	*e*Pn	**Pn**	**16 16 34.4**	**+1.8**
MRVT	**Maraveh tapeh**	**3.71**	**58**	*e*Pn	**Pn**	**16 16 34.4**	**+1.7**
MRVT				*e*		16 16 35.5	
	comp=Z,99nm,0.3s						
IBZA	**Bozab**	**3.72**	**251**	*e*Pn	**Pn**	**16 16 33.8**	**+0.7**
IBZA				*e*		16 17 37.2	
	comp=Z,2μm,0.7s						
IDOB	**Doab**	**3.80**	**240**	*e*Pn	**Pn**	**16 16 36.5**	**+2.4**
IKMR	**Kamar-syah**	**3.81**	**235**	*e*Pn	**Pn**	**16 16 36.3**	**+2.2**
ASTR	**Astara**	**3.85**	**317**	P	**Pn**	**16 16 35.5**	**+0.8**
	SNR=7.6						
ASTR				S	**Sn**	**16 17 18.6**	**-1.4**
IBRJ	**Brojen**	**3.91**	**191**	*e*Pn	**Pn**	**16 16 37.6**	**+1.8**
IBRJ				*e*		16 17 56.4	
	comp=Z,982nm,1.0s						
YZKH	**Yazd**	**3.94**	**148**	*e*Pn	**Pn**	**16 16 37.3**	**+1.3**
IRAM	**Ramesheh**	**3.95**	**177**	*e*Pn	**Pn**	**16 16 37.7**	**+1.4**
IRAM				*e*		16 16 55.3	
	comp=Z,1μm,0.5s						
SNGE	**Sanandaj**	**3.96**	**262**	*e*Pn	**Pn**	**16 16 37.1**	**+0.8**
ICHK	**Chekchek**	**3.99**	**151**	*e*Pn	**Pn**	**16 16 38.0**	**+1.2**
ISAD	**Sadrabad**	**4.06**	**161**	*e*Pn	**Pn**	**16 16 38.8**	**+1.0**
ISAD				*e*		16 17 51.1	
	comp=Z,2μm,0.5s						
IKOM	**Komasi**	**4.11**	**249**	*e*Pn	**Pn**	**16 16 40.2**	**+1.9**
TNSJ	**Nastanj**	**4.11**	**115**	*e*Pn	**Pn**	**16 16 39.2**	**+1.0**
ISRB	**Sarab**	**4.12**	**301**	*e*Pn	**Pn**	**16 16 40.7**	**+2.1**
ISRB				*e*		16 16 57.0	
	comp=Z,2μm,0.9s						
LRK	**Lerik**	**4.17**	**315**	P	**Pn**	**16 16 41.0**	**+1.9**
	SNR=17						
LRK				S	**Sn**	**16 17 27.5**	**-0.4**
IKFM	**Kafar-mosalman**	**4.17**	**239**	*e*Pn	**Pn**	**16 16 41.2**	**+2.2**
IHSH	**Hashtrud**	**4.20**	**293**	*e*Pn	**Pn**	**16 16 42.0**	**+2.2**
ILIN	**Lien**	**4.30**	**260**	*e*Pn	**Pn**	**16 16 43.5**	**+2.5**
KER	**Kermanshah**	**4.32**	**253**	*e*Pn	**Pn**	**16 16 43.4**	**+2.2**
YRD	**Yardimli**	**4.41**	**317**	P	**Pn**	**16 16 43.7**	**+1.2**
	SNR=13						
YRD				S	**Sn**	**16 17 31.7**	**-2.3**
KCHF	**Cheshme Sefid,**	**4.43**	**252**	*e*Pn	**Pn**	**16 16 44.7**	**+2.0**
GRMI	**Germi**	**4.54**	**313**	*e*Pn	**Pn**	**16 16 45.8**	**+1.6**
GLBA	**Clilabad**	**4.56**	**321**	P	**Pn**	**16 16 46.0**	**+1.6**
	SNR=12						
GLBA				S	**Sn**	**16 17 35.2**	**-2.3**
IBST	**Bostanabad**	**4.62**	**296**	*e*Pn	**Pn**	**16 16 47.3**	**+1.9**
TABS	**Tabas**	**4.63**	**116**	*e*Pn	**Pn**	**16 16 46.9**	**+1.5**
TKDS	**Koohdasht(Taba**	**4.65**	**116**	*e*Pn	**Pn**	**16 16 46.7**	**+1.0**
TKDS				*e*		16 18 48.0	
	comp=Z,1μm,0.8s						
TPRV	**Parvadeh(Tabas**	**4.66**	**125**	*e*Pn	**Pn**	**16 16 47.3**	**+1.5**
AMIS	**Naft Sefid**	**4.72**	**211**	*e*Pn	**Pn**	**16 16 48.6**	**+1.9**
IGHG	**Ghaleghazi**	**4.77**	**254**	*e*Pn	**Pn**	**16 16 49.7**	**+2.1**
IHRS	**Heris**	**4.79**	**304**	*e*Pn	**Pn**	**16 16 50.0**	**+2.2**
IHRS				*e*		16 17 08.5	
	comp=Z,778nm,0.7s						
IDHR	**Dehrash**	**4.81**	**259**	*e*Pn	**Pn**	**16 16 49.9**	**+1.9**
IMEH	**Mehriz**	**4.83**	**154**	*e*Pn	**Pn**	**16 16 49.4**	**+1.0**
IMEH				*e*		16 18 13.7	
	comp=Z,829nm,0.7s						
ALIB	**Äli-Bayra**	**4.86**	**330**	P	**Pn**	**16 16 50.9**	**+2.5**
	SNR=10						
ALIB				S	**Sn**	**16 17 45.1**	**+0.4**
IBAF	**Bafgh**	**5.06**	**144**	*e*Pn	**Pn**	**16 16 52.5**	**+1.1**
GEYT	**Alibeck**	**5.27**	**64**	Pn	**Pn**	**16 16 57.1**	**+2.9**
	comp=Z,7.0nm,0.3s,baz=247,slow=17,SNR=40						
GEYT				LR	LR	16 19 22.7	
	comp=Z,343nm,18.4s,baz=286,slow=44						
	comp=Z,18nm,0.4s						
GYA0	**ALIBECK ARRAY**	**5.27**	**64**	P	**Pn**	**16 16 57.1**	**+2.9**
GYA0				S	**Sb**	**16 18 03.9**	**-7.1**
GYA0B	**ALIBECK ARRAY**	**5.27**	**64**	⇑P	**Pn**	**16 16 57.1**	**+2.9**
GYA0B				⇑S	**Sb**	**16 18 03.9**	**-7.0**
IAZR	**Azarshahr**	**5.29**	**293**	*e*Pn	**Pn**	**16 16 57.2**	**+2.6**
QRD	**Qoradiz**	**5.30**	**316**	P	**Pn**	**16 16 56.0**	**+1.4**
QRD				S	**Sn**	**16 17 57.3**	**+1.5**
BLQ	**Beylaqan**	**5.35**	**319**	P	**Pn**	**16 16 56.3**	**+1.0**
	SNR=7.1						
BLQ				S	**Sn**	**16 17 56.2**	**-0.8**
GBS	**Qobustan**	**5.38**	**333**	P	**Pn**	**16 16 57.8**	**+2.1**
GBS				S	**Sn**	**16 17 58.2**	**+0.5**
IAKL	**Akhelmad**	**5.43**	**79**	*e*Pn	**Pn**	**16 16 57.9**	**+1.3**
IEMG	**Emamgholi**	**5.51**	**71**	*e*Pn	**Pn**	**16 16 59.6**	**+1.9**
KDMR	**Kurdemir**	**5.55**	**327**	S	**Sn**	**16 18 02.8**	**+1.0**
IPAY	**Payeh**	**5.61**	**81**	*e*Pn	**Pn**	**16 17 00.2**	**+1.2**
ATGJ	**Altiaghaj**	**5.67**	**335**	P	**Pn**	**16 17 02.0**	**+2.3**
	SNR=16						
ATGJ				S	**Sn**	**16 18 04.0**	**-0.9**
ZRD	**Zardab**	**5.71**	**323**	P	**Pn**	**16 17 01.0**	**+0.9**
ZRD				S	**Sn**	**16 18 05.2**	**-0.4**
PQL	**Pirkuli**	**5.73**	**332**	P	**Pn**	**16 17 02.4**

NHDN Nehbandan 7.92 121 *e*Pn **Pn 16 17 32.4 +1.7**
MAK Makhachkala 8.02 335 *e*P **Pn 16 17 27.7 -4.2**
MAK *e*S **Sn 16 18 55.8 -6.9**
MAK pmax pmax
comp=Z,104nm,17.2s
BTLR Botlikh 8.27 328⇑ *e*P **Pn 16 17 37.6 +2.2**
DVE Vedeno 8.55 329⇑ *e*P **Pn 16 17 41.1 +1.9**
GROC Groznyy 8.89 329 P **Pn 16 17 41.2 -2.6**
GROC *e*S **Sn 16 19 23.4 -0.5**
GROC pmax pmax
comp=Z,89nm,0.5s
GROC smax smax
comp=N,32nm,0.7s
GROC smax smax
comp=E,28nm,0.6s
ZEI Tsey 9.47 320 *e*P **Pn 16 17 53.5 +1.5**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
ZHSF Zahedan 9.53 128 *e*Pn **Pn 16 17 54.9 +2.1**
NEY Neytrino 10.41 319 *i*P **Pn 16 18 04.2 -0.7**
KBZ Khabaz 10.65 321 Pn Pn 16 18 14.1 +6.1
comp=Z,0.1nm,0.3s,baz=206,slow=10,SNR=1.7
comp=Z,1.0nm,0.6s
KIV Kislovodsk 10.92 321 *e*P **Pn 16 18 10.3 -1.4**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,23nm,11.0s
ARXR Arkhyz 11.41 316⇑ *e*P **Pn 16 18 18.7 +0.2**
WSAR Wadi Sarin 13.70 154 LR LR 16 25 13.2
comp=Z,43nm,18.2s,baz=32,slow=42
MMAI Mount Meron Ar 14.08 264 LR LR 16 25 03.4
comp=Z,61nm,21.5s,baz=114,slow=40
AB31 Akbulak array 14.65 21 P **Pn 16 18 59.9 -2.6**
AB31 S **Sn 16 21 40.6 -4.3**
AB31 Akbulak array 14.65 21 P **Pn 16 18 60.0 -2.6**
comp=Z,1.0nm,0.7s,baz=216,slow=13,SNR=15
AB31 ⇓S **Sn 16 21 40.6 -4.3**
comp=Z,5.9nm,1.0s,baz=211,slow=28,SNR=6.6
BR131 Keskin Array S 15.14 291⇑ *e*P **P 16 19 11.7 -2.9**
BRTR Keskin Array B 15.14 291 Pn **P 16 19 17.6 +3.0**
comp=Z,0.1nm,0.3s,baz=119,slow=10,SNR=5.6
comp=Z,0.7nm,0.6s
AKTO Aktyubinsk 15.27 14 Pn **Pn 16 19 08.9 -2.0**
comp=Z,0.3nm,0.3s,baz=169,slow=16,SNR=6.2
comp=Z,1.7nm,0.6s
AKTO Aktyubinsk 15.27 14 P **Pn 16 19 09.1 -1.8**
AKTO S **Sn 16 21 54.9 -5.2**
AKTO Aktyubinsk 15.27 14 ⇑P **Pn 16 19 09.1 -1.8**
comp=Z,2.3nm,0.7s
AKTO ⇑S **Sn 16 21 54.9 -5.2**
comp=Z,4.4nm,0.7s
EIL Elat 15.67 252 LR LR 16 26 36.9
comp=Z,134nm,18.3s,baz=55,slow=42
KK31 Karatay Array 15.97 57 P **Pn 16 19 19.8 -0.2**
KK31 Karatay Array 15.97 57 ⇑P **Pn 16 19 19.8 -0.2**
comp=Z,0.6nm,0.5s,baz=252,slow=14,SNR=10
VRH Novokhopyorsk 17.15 337 *e*P **Pn 16 19 33.8 -1.1**
VRH pmax pmax
comp=Z,7.0nm,0.4s
VSR Storozhevoye 18.03 333 *e*P **Pn 16 19 42.1 -3.8**
VSR pmax pmax
comp=Z,10.0nm,1.5s
VORR Voronezh 18.39 334 *e*P **Pn 16 19 52.7 +2.4**
VORR pmax pmax
comp=Z,40nm,0.4s
AAK Ala-Archa 18.62 62 LR LR 16 28 12.1
comp=Z,80nm,19.2s,baz=267,slow=41
AAK Ala-Archa 18.62 62⇑ *e*P **Pn 16 19 58.4 +5.1**
AAK pmax pmax
comp=Z,3.0nm,1.2s
LPSR Galich'ya Gora 19.25 335 *e*P **P 16 19 57.0 -2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 21.13 10 P **P 16 20 20.6 +0.5**
comp=Z,2.5nm,0.5s,baz=210,slow=14,SNR=6.3
comp=Z,2.5nm,0.5s
ARU Arti 21.13 10 *d i*P **P 16 20 23.5 +3.4**
ARU 16 20 40.3
ARU S Sn 16 24 19.6 -1.8
ARU SS **SnSn 16 24 41.6 +5.2**
ARU pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 21.51 31⇓ *e*P **P 16 20 27.2 +3.0**
BRVK pmax pmax
comp=Z,6.0nm,1.7s
BVAR Borovoye Array 21.53 31 LR LR 16 30 26.8
comp=Z,56nm,19.0s,baz=228,slow=42
MLR Muntele Rosu 22.03 304 P **P 16 20 34.0 +4.0**
comp=Z,4.1nm,0.9s,baz=98,slow=8.3,SNR=4.8
comp=Z,4.1nm,0.9s
AKASG Malin Array Be 22.26 319 P **P 16 20 32.5 +0.3**
comp=Z,0.8nm,0.5s,baz=124,slow=11,SNR=5.1
comp=Z,0.8nm,0.5s
AKASG Malin Array Be 22.26 319 *i*P **P 16 20 33.0 +0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 22.26 319⇑ *e*P **P 16 20 36.5 +4.3**
KIRV Kirov 22.90 356 P **P 16 20 40.4 +1.5**
comp=Z,8.3nm,0.6s,baz=220,slow=6.2,SNR=6.5
comp=Z,8.3nm,0.6s
KIRV Kirov 22.90 356⇓ *e*P **P 16 20 41.7 +2.7**
KURBB Kurchatov Arra 24.14 44 P **P 16 20 53.6 +2.3**
comp=Z,1.1nm,0.8s,baz=245,slow=9.7,SNR=5.1
comp=Z,1.1nm,0.8s
KURK Kurchatov 24.24 44⇑ *e*P **P 16 20 57.8 +5.6**
KURK pmax pmax
comp=Z,14nm,2.5s
MK31 Makanchi Array 25.06 55 *i*P **P 16 21 02.6 +2.8**
MKAR Makanchi Array 25.06 55 P **P 16 20 60.0 +0.2**
comp=Z,0.5nm,0.6s,baz=224,slow=5.1,SNR=5.7
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 25.06 55 *c e*P **P 16 21 04.6 +4.8**
KOLS Kolonicke sedl 25.50 310 *e*P **P 16 21 06.9 +3.2**
KLMR Klimovskoe 26.37 346 *e*P **P 16 21 13.5 +2.1**
KLMR pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 26.37 346 *e*P **P 16 21 13.6 +2.1**
KLMR AMP 16 21 27.6
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 29.09 41 LR LR 16 33 20.4
comp=Z,29nm,18.7s,baz=205,slow=37
FINES FINESS Array B 30.52 335 LR LR 16 36 22.8
comp=Z,104nm,18.4s,baz=197,slow=41
GERES GERESS Array B 30.93 307 P **P 16 21 53.5 +1.2**
comp=Z,1.0nm,0.8s,baz=108,slow=8.8,SNR=9.5
comp=Z,1.0nm,0.8s
GERES GERESS Array B 30.93 307 *e*P **P 16 21 54.0 +1.6**
HFS Hagfors 34.65 327 LR LR 16 40 22.7
comp=Z,93nm,18.8s,baz=26,slow=43
NOA NORSAR Array B 36.15 327 LR LR 16 39 17.3
comp=Z,33nm,18.7s,baz=0.0,slow=39
PALK Pallekele 38.59 130 LR LR 16 40 13.1
comp=Z,20nm,18.0s,baz=86,slow=38
KMBO Kilima Mbogo 39.24 204⇑ *e*P P 16 23 09.5 +5.2
MBAR Mbarara 41.31 214 LR LR 16 41 17.4
comp=Z,20nm,21.7s,baz=50,slow=37
SONM Songino Array 41.41 56 LR LR 16 40 59.7
comp=Z,30nm,18.6s,baz=288,slow=37
ULN Ulaanbaatar 41.85 56 *i*P P 16 23 32.4 +6.8
CMAR Chiang Mai Arr 44.66 100 P **P 16 23 51.8 +3.4**
comp=Z,0.9nm,0.8s,baz=298,slow=8.4,SNR=6.4
CMAR LR LR 16 44 18.9
comp=Z,7.7nm,19.1s,baz=15,slow=39
comp=Z,0.9nm,0.8s
CMAR Chiang Mai Arr 44.66 100 *i*P P 16 23 55.0 +6.6
CMAR pmax pmax
comp=Z,1.0nm,0.6s

NEIC ***22*** *16:29:42.0±2.6, 57°.78N±0°.08×156°.4W±0°.2, h118km±17km, Error ellipse: s-maj=14.2km s-min=11.2km az=87.0*
AEIC ***22*** *16:29:44±1.9, 57°.78N±0°.08×156°.3W±0°.2, h126km±9km, ML3.3, ML3.3/42(NEIC), Error ellipse: s-maj=16.0km s-min=12.1km az=83.0*
IDC ***22*** *16:29:48.7±4.5, 58°.18N×155°.48W, h140km±19km, mb3.2/3, mbtmp3.6/4, Error ellipse: s-maj=55.0km s-min=20.5km az=75.0*
ISC 22 16:29:42.6±1.2, 57°.91N±0°.06×156°.28W±0°.08, h100km, n108, σ1§85/111, mb3.4/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHC	**Katmai Hardscr**	**1.00**	**42**	P	**Pn**	**16 30 07.0**	**+3.8**
	baz=220						
P18K	**Big Mountain,**	**1.59**	**20**	Pn	**Pn**	**16 30 13.1**	**+3.1**
P18K	**Big Mountain,**	**1.59**	**20**	P	**Pn**	**16 30 13.2**	**+3.2**
	baz=200						
Q19K	**Cape Douglas,**	**1.72**	**53**	Pn	**Pn**	**16 30 14.9**	**+3.3**
Q19K				IAML		16 30 43.1	
	comp=E,636nm,1.1s						
Q19K				IAML		16 30 43.1	
	comp=N,432nm,0.9s						
Q19K	**Cape Douglas,**	**1.72**	**53**	P	**Pn**	**16 30 14.9**	**+3.3**
	baz=232						
OHAK	**Old Harbor**	**1.75**	**112**	Pn	**Pn**	**16 30 13.3**	**+1.3**
OHAK				IAML		16 30 37.1	
	comp=N,490nm,0.3s						
OHAK				IAML		16 30 37.2	
	comp=E,357nm,0.2s						
OHAK	**Old Harbor**	**1.75**	**112**	P	**Pn**	**16 30 13.4**	**+1.4**
	baz=291						
SII	**Sitkinak Islan**	**1.77**	**139**	Pn	**Pn**	**16 30 13.1**	**+0.9**
SII	**Sitkinak Islan**	**1.77**	**139**	P	**Pn**	**16 30 13.0**	**+0.7**
	baz=318						
SII				S	**Sn**	**16 30 36.0**	**+1.2**
	baz=318						
KDAK	**Kodiak Island**	**1.98**	**92**	P	**Pn**	**16 30 16.9**	**+2.0**
	comp=E,174nm,0.3s,baz=203,slow=2.4,SNR=2168						
KDAK				S	**Sn**	**16 30 41.5**	**+2.0**
	comp=E,55nm,0.3s,baz=238,slow=23,SNR=12						
KDAK	**Kodiak Island**	**1.98**	**92**	Pn	**Pn**	**16 30 16.8**	**+1.9**
KDAK				IAML		16 30 45.3	
	comp=E,211nm,0.5s						
KDAK				IAML		16 30 45.6	
	comp=E,226nm,0.4s						
O18K	**Koktuh Hills**	**2.03**	**16**	Pn	**Pn**	**16 30 18.4**	**+2.9**
O18K				IAML		16 30 46.4	
	comp=N,123nm,1.3s						
O18K	**Koktuh Hills**	**2.03**	**16**	P	**Pn**	**16 30 18.5**	**+2.9**
	baz=196						
OPT	**Oil Point**	**2.36**	**41**	P	**Pn**	**16 30 23.1**	**+3.3**
	baz=222						
P19K	**Oil Pt**	**2.36**	**41**	P	**Pn**	**16 30 22.9**	**+3.0**
	baz=222						
O19K	**Port Alsworth**	**2.51**	**23**	Pn	**Pn**	**16 30 24.4**	**+2.8**
O19K				IAML		16 31 17.2	
	comp=E,184nm,0.5s						
O19K				IAML		16 31 17.4	
	comp=N,114nm,0.6s						
O19K	**Port Alsworth**	**2.51**	**23**	P	**Pn**	**16 30 24.5**	**+2.8**
	baz=204						
N18K	**Kilae Creek**	**2.79**	**4**	Pn	**Pn**	**16 30 27.9**	**+2.4**
N18K	**Kilae Creek**	**2.79**	**4**	P	**Pn**	**16 30 27.9**	**+2.4**
	baz=185						
HOM	**Homer**	**2.98**	**52**	Pn	**Pn**	**16 30 29.7**	**+1.7**
N19K	**Bonanza Creek**	**3.06**	**17**	Pn	**Pn**	**16 30 32.2**	**+3.1**
N19K	**Bonanza Creek**	**3.06**	**17**	P	**Pn**	**16 30 32.1**	**+3.0**
	baz=198						
CNPM	**China Poot**	**3.09**	**56**	Pn	**Pn**	**16 30 31.9**	**+2.4**
CNPM				IAML		16 31 09.3	
	comp=N,101nm,0.4s						
CNPM				IAML		16 31 09.4	
	comp=E,78nm,1.0s						
RSO	**Redoubt South**	**3.14**	**34**	Pn	**Pn**	**16 30 34.3**	**+3.9**
SVW2	**Sparrevohn**	**3.22**	**6**		**Pn**	**16 30 33.5**	**+2.3**
BRLK	**Bradley Lake**	**3.37**	**54**	Pn	**Pn**	**16 30 34.6**	**+1.4**
BRLK				IAML		16 31 13.3	
	comp=E,63nm,0.4s						
BRLK				IAML		16 31 13.3	
	comp=N,116nm,0.2s						
SPU	**Mount Spurr**	**3.92**	**31**	Pn	**Pn**	**16 30 43.1**	**+2.4**
M19K	**Big River Lodg**	**4.12**	**13**	Pn	**Pn**	**16 30 46.1**	**+2.7**
M19K				IAML		16 31 57.8	
	comp=E,20nm,1.8s						
M19K				IAML		16 32 12.0	
	comp=N,20nm,4.0s						
M19K	**Big River Lodg**	**4.12**	**13**	P	**Pn**	**16 30 46.0**	**+2.7**
	baz=194						
SEW	**Seward**	**4.16**	**55**	Pn	**Pn**	**16 30 44.7**	**+0.8**
M20K	**Styx River**	**4.29**	**20**		**Pn**	**16 30 48.4**	**+2.8**
M20K				IAML		16 31 48.9	
	comp=N,18nm,3.4s						
M20K				IAML		16 32 12.4	
	comp=E,22nm,1.7s						
L19K	**White Mountain**	**4.34**	**9**	Pn	**Pn**	**16 30 49.0**	**+2.6**
L19K				IAML		16 32 13.1	
	comp=E,20nm,2.4s						
L19K				IAML		16 32 14.5	
	comp=N,22nm,2.5s						
L19K	**White Mountain**	**4.34**	**9**	P	**Pn**	**16 30 49.0**	**+2.6**
	baz=190						
RC01	**Rabbit Creek A**	**4.61**	**44**	Pn	**Pn**	**16 30 51.2**	**+1.2**
SKT	**Skwentna**	**4.73**	**28**	Pn	**Pn**	**16 30 54.1**	**+2.6**
SKT				IAML		16 32 12.1	
	comp=E,22nm,3.6s						
SKT				IAML		16 32 38.0	
	comp=N,17nm,3.7s						
L20K	**Farewell, AK**	**4.74**	**14**	P	**Pn**	**16 30 54.6**	**+2.9**
	baz=196						
PWL	**Port Wells**	**5.03**	**51**	Pn	**Pn**	**16 30 56.5**	**+0.9**
KNK	**Knik Glacier**	**5.30**	**45**	Pn	**Pn**	**16 31 00.7**	**+1.4**
PPLA	**Purkeypile**	**5.40**	**20**	Pn	**Pn**	**16 31 04.8**	**+4.0**
GLI	**Glacier Island**	**5.56**	**54**	Pn	**Pn**	**16 31 03.4**	**+0.6**
K20K	**Telida**	**5.57**	**10**		**Pn**	**16 31 05.5**	**+2.5**
K20K	**Telida**	**5.57**	**10**	P	**Pn**	**16 31 05.3**	**+2.4**
	baz=192						
HIN	**Hinchinbrook I**	**5.62**	**60**	Pn	**Pn**	**16 31 04.8**	**+1.2**
FID	**Port Fidalgo**	**5.77**	**56**	Pn	**Pn**	**16 31 05.5**	**-0.1**
CAST	**Castle Rocks**	**5.90**	**19**		**Pn**	**16 31 09.6**	**+2.2**
CAST	**Castle Rocks**	**5.90**	**19**	P	**Pn**	**16 31 10.3**	**+2.8**
	baz=202						
SCM	**Sheep Creek Mo**	**5.98**	**45**	Pn	**Pn**	**16 31 08.0**	**-0.6**
EYAK	**Cordova Ski Ar**	**6.02**	**59**	Pn	**Pn**	**16 31 08.9**	**-0.1**
KTH	**Kantishna Hill**	**6.24**	**23**	Pn	**Pn**	**16 31 13.4**	**+1.3**
DIV	**Divide**	**6.25**	**54**	Pn	**Pn**	**16 31 11.8**	**-0.4**
TRF	**Thorofare Moun**	**6.29**	**25**	Pn	**Pn**	**16 31 14.0**	**+1.2**
TRF	**Thorofare Moun**	**6.29**	**25**	P	**Pn**	**16 31 14.1**	**+1.3**
	baz=210						
WAT6	**Susitna Watana**	**6.32**	**39**	P	**Pn**	**16 31 13.4**	**+0.1**
	baz=226						
KLU	**Klutina**	**6.35**	**51**		**Pn**	**16 31 14.3**	**+0.7**
KLU	**Klutina**	**6.35**	**51**	P	**Pn**	**16 31 14.2**	**+0.5**
	baz=240						
J20K	**Nowinta River**	**6.37**	**8**	Pn	**Pn**	**16 31 16.2**	**+2.4**
M24K	**Tolsona, Glenn**	**6.58**	**46**	Pn	**Pn**	**16 31 17.4**	**+0.6**
M24K	**Tolsona, Glenn**	**6.58**	**46**	P	**Pn**	**16 31 17.4**	**+0.6**
	baz=234						
HMT	**Hamilton**	**6.65**	**63**	Pn	**Pn**	**16 31 18.8**	**+1.2**
BMRM	**Bremner River**	**6.70**	**58**	Pn	**Pn**	**16 31 18.2**	**-0.1**
BMRM	**Bremner River**	**6.70**	**58**	P	**Pn**	**16 31 19.0**	**+0.8**
	baz=247						
BPAW	**Bear Paw Mtn.**	**6.72**	**20**	Pn	**Pn**	**16 31 19.6**	**+1.1**
DHY	**Denali Highway**	**6.79**	**37**	Pn	**Pn**	**16 31 20.0**	**+0.3**
MCK	**McKinley**	**6.85**	**28**	Pn	**Pn**	**16 31 21.6**	**+1.3**
BERG	**Berg Lake**	**6.93**	**64**		**Pn**	**16 31 22.3**	**+0.8**
N25K	**Chitina, Valde**	**6.97**	**53**		**Pn**	**16 31 23.0**	**+1.1**
N25K	**Chitina, Valde**	**6.97**	**53**	P	**Pn**	**16 31 23.2**	**+1.2**
	baz=242						
UNV	**Unalaska Valle**	**7.04**	**239**	Pn	**Pn**	**16 31 21.3**	**-1.7**
GLB	**Gilahina Butte**	**7.24**	**55**	Pn	**Pn**	**16 31 26.3**	**+0.7**
VRDI	**Verde Repeater**	**7.31**	**58**	Pn	**Pn**	**16 31 27.6**	**+0.8**
WAX	**Waxell Ridge**	**7.35**	**64**	Pn	**Pn**	**16 31 27.6**	**+0.4**
PAX	**Paxson**	**7.37**	**42**	Pn	**Pn**	**16 31 27.4**	**0.0**
PAX	**Paxson**	**7.37**	**42**	P	**Pn**	**16 31 28.9**	**+1.5**
	baz=231						
NEA2	**Nenana**	**7.55**	**24**		**Pn**	**16 31 29.9**	**+0.1**
MLY	**Manley**	**7.62**	**18**	Pn	**Pn**	**16 31 31.4**	**+0.6**
ISLE	**Juniper Island**	**7.64**	**63**		**Pn**	**16 31 32.1**	**+0.9**
WRH	**Wood River Hil**	**7.67**	**28**		**Pn**	**16 31 31.2**	**-0.2**
YAH	**Yahtse**	**7.87**	**66**		**Pn**	**16 31 34.2**	**-0.2**
CCB	**Clear Creek Bu**	**7.89**	**28**		**Pn**	**16 31 33.6**	**-0.8**
HDA	**Harding Lake**	**7.92**	**31**		**Pn**	**16 31 34.4**	**-0.5**
H21K	**Melozitna Rive**	**7.95**	**10**		**Pn**	**16 31 37.6**	**+2.4**
M26K	**Nabesna, AK**	**8.01**	**50**		**Pn**	**16 31 37.2**	**+1.1**
M26K	**Nabesna, AK**	**8.01**	**50**	P	**Pn**	**16 31 37.1**	**+1.1**
	baz=241						
MDM	**Murphy Dome**	**8.05**	**25**		**Pn**	**16 31 36.2**	**-0.4**
RIDG	**Independent Ri**	**8.08**	**39**	Pn	**Pn**	**16 31 37.0**	**0.0**
BARN	**Barnard Glacie**	**8.08**	**61**		**Pn**	**16 31 38.1**	**+0.9**
TABL	**Table Mountain**	**8.18**	**66**		**Pn**	**16 31 39.3**	**+0.8**
IMAR	**Indian Mountai**	**8.19**	**7**	Pn	**Pn**	**16 31 39.8**	**+1.3**
CTG	**Chitna Glacier**	**8.21**	**62**	P	**Pn**	**16 31 40.2**	**+1.4**
	baz=254						
IL31		**8.22**	**29**	Pn	**Pn**	**16 31 38.2**	**-0.7**
ILAR	**Eielson Array**	**8.22**	**29**	P	**Pn**	**16 31 38.4**	**-0.6**
	comp=N,1.7nm,0.4s,baz=218,slow=13,SNR=24						
ILAR				S	**Sn**	**16 33 06.2**	**-3.8**
	comp=N,1.8nm,0.5s,baz=196,slow=23,SNR=12						
ILAR	**Eielson Array**	**8.22**	**29**	Pn	**Pn**	**16 31 37.7**	**-1.2**
M27K	**Edge Creek, AK**	**8.45**	**52**	Pn	**Pn**	**16 31 42.6**	**+0.4**
J25K	**Salcha River,**	**8.52**	**33**	Pn	**Pn**	**16 31 42.0**	**-1.1**
H23K	**Yukon River**	**8.55**	**19**	Pn	**Pn**	**16 31 42.3**	**-1.1**
BCAR	**Beaver Creek A**	**8.82**	**48**	Pn	**Pn**	**16 31 47.4**	**+0.4**
YUK3	**Moose Creek**	**8.85**	**57**	P	**Pn**	**16 31 49.1**	**+1.5**
	baz=251						
H24K	**Noodor Dome**	**8.88**	**23**	Pn	**Pn**	**16 31 46.0**	**-1.9**
J26L	**Joseph Creek**	**9.01**	**38**	Pn	**Pn**	**16 31 50.6**	**+1.0**
I26K	**Coal Creek Min**	**9.68**	**35**	Pn	**Pn**	**16 31 59.2**	**+0.5**
P29M	**Windy Craggy**	**9.78**	**72**	Pn	**Pn**	**16 32 01.8**	**+1.6**
DAWY	**Dawson**	**10.24**	**46**	Pn	**Pn**	**16 32 07.3**	**+0.9**
M30M	**Minto, Yukon**	**10.73**	**56**	Pn	**Pn**	**16 32 14.0**	**+0.9**
WHY	**Whitehorse**	**11.27**	**67**	Pn	**Pn**	**16 32 21.6**	**+1.2**
SIT	**Sitka**	**11.31**	**85**	Pn	**Pn**	**16 32 21.4**	**+0.6**
NVAR	**Mina Array Bea**	**31.36**	**112**	P	**P**	**16 35 54.2**	**+0.4**
	comp=N,0.5nm,0.7s,baz=296,slow=9.0,SNR=4.7						
	comp=N,0.5nm,0.7s						
PDAR	**Pinedale Array**	**32.70**	**97**	P	**P**	**16 36 04.2**	**-1.2**
	comp=N,0.6nm,0.6s,baz=325,slow=3.9,SNR=8.1						
	comp=N,0.6nm,0.6s						
TXAR	**Lajitas Array**	**45.96**	**105**	P	**P**	**16 37 54.6**	**-0.9**
	comp=N,0.4nm,0.7s,baz=311,slow=5.9,SNR=5.5						
	comp=N,0.4nm,0.7s						

MOS ***22*** *16:42:18.6±1.0, 52°.33N×177°.06W, h142km, mb4.4/33, Error ellipse: s-maj=9.4km s-min=6.5km az=92.0*
NEIC ***22*** *16:42:18.6±2.5, 52°.21N±0°.10×177°.2W±0°.1, h127km±5km, mb4.7/151, ML4.4/6, ML4.7(AEIC), Error ellipse: s-maj=14.9km s-min=8.4km az=162.0*
AEIC ***22*** *16:42:20±3.3, 51°.83N±0°.05×176°.92W±0°.09, h144km±4km, Error ellipse: s-maj=8.9km s-min=6.6km az=62.0*
IDC ***22*** *16:42:20.1±0.4, 52°.38N×177°.14W, h140km±3km, mb4.0/33, mbtmp4.5/37, MS3.2/15, Error ellipse: s-maj=10.8km s-min=6.7km az=169.0*
GCMT ***22*** *16:42:20.6±0.4, 52°.39N±0°.03×176°.90W±0°.05, h149km±5km, MW4.8/90, Moment Tensor Solution. s14,c14; s90,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.19±.10; $M_{\theta\theta}$-0.06±.19; $M_{\phi\phi}$1.24±.15; $M_{r\theta}$-1.57±.09; $M_{\theta\phi}$-1.23±.12; $M_{\phi r}$-0.43±.08; Best double couple: $M_0$2.33100×10^{16} NP1:ϕ_s113.00000°, δ66.00000°, λ-134.00000°. NP2:ϕ_s0.00000°, δ49.00000°, λ-33.00000°. Principal axes: T 2.0630, Plg10.0000°, Azm233.0000°; N 0.5260, Plg39.0000°, Azm134.0000°; P -2.5980, Plg49.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 16:42:20.0±0.4, 52°.27N±0°.06×177°.08W±0°.04, h144km±2km, h144km:pP-P, n374, σ1§14/412, mb4.6/91, 22C-19D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.46**	**148**	Pn	**Pn**	**16 42 39.0**	**-1.4**
ADK				IAML		16 42 42.1	
	3μm,0.7s						
ADK	**Adak**	**0.46**	**148**	P	**Pn**	**16 42 39.0**	**-1.4**
ADK	**Adak**	**0.46**	**148**	P	**Pn**	**16 42 39.2**	**-1.2**
AMKA	**Amchitka**	**2.42**	**250**		**Pn**	**16 42 57.0**	**-2.7**
NIKH	**Nikolski High**	**5.06**	**79**		**Pn**	**16 43 34.1**	**+0.1**
SHEM	**Shemya Is, Ala**	**5.41**	**278**	P	**Pn**	**16 43 38.6**	**+0.1**
	137nm,0.5s,baz=62,slow=3.0,SNR=20						
SHEM				S	**Sn**	**16 44 39.5**	**-0.4**
	46nm,0.7s,baz=278,slow=19,SNR=1.5						
SHEM				LR	LR	16 45 20.6	
	comp=Z,168nm,21.0s,baz=323,slow=34						
SMY	**Shemya**	**5.41**	**278**	Pn	**Pn**	**16 43 38.7**	**+0.2**
SMY				IAML		16 45 37.6	
	comp=N,208nm,3.3s						
SMY				IAML		16 47 08.0	
	comp=E,308nm,3.2s						
SMY	**Shemya**	**5.41**	**278**	P	**Pn**	**16 43 38.7**	**+0.2**
SPIA	**Saint Paul Isl**	**6.31**	**36**	Pn	**Pn**	**16 43 52.4**	**+1.9**
UNV	**Unalaska Valle**	**6.57**	**72**	Pn	**Pn**	**16 43 54.8**	**+0.8**
UNV	**Unalaska Valle**	**6.57**	**72**	P	**Pn**	**16 43 55.0**	**+1.0**
AKUT	**Akutan**	**7.04**	**70**	Pn	**Pn**	**16 44 01.4**	**+1.0**
FALS	**False Pass**	**8.54**	**67**		**Pn**	**16 44 21.5**	**+1.2**
FALS	**False Pass**	**8.54**	**67**	P	**Pn**	**16 44 21.5**	**+1.2**
SDPT	**Sand Point**	**10.29**	**66**	Pn	**Pn**	**16 44 42.7**	**-0.9**
CNBA	**Chernabura Isl**	**10.71**	**69**	Pn	**Pn**	**16 44 47.2**	**-2.1**
CHGN	**Chignik**	**11.62**	**62**		**Pn**	**16 44 59.8**	**-1.4**
SII	**Sitkinak Islan**	**13.98**	**63**	Pn	**Pn**	**16 45 29.0**	**-2.5**
N18K	**Kilae Creek**	**14.36**	**46**	P	**Pn**	**16 45 35.9**	**-0.5**
OHAK	**Old Harbor**	**14.57**	**61**		**Pn**	**16 45 36.2**	**-2.7**
SVW2	**Sparrevohn**	**14.69**	**45**	Pn	**Pn**	**16 45 41.5**	**+1.1**
Q19K	**Cape Douglas,**	**14.78**	**54**	P	**Pn**	**16 45 41.8**	**+0.2**
KDAK	**Kodiak Island**	**15.04**	**59**	P	**Pn**	**16 45 43.1**	**-1.7**
	comp=E,43nm,0.3s,baz=272,slow=5.2,SNR=91						
KDAK				S	**Sn**	**16 48 24.2**	**-7.4**
	comp=E,9.0nm,0.3s,baz=5.4,slow=21,SNR=9.3						
KDAK	**Kodiak Island**	**15.04**	**59**	Pn	**Pn**	**16 45 42.8**	**-2.1**
KDAK				IAmb	IAmb	16 45 46.2	
	comp=Z,89nm,1.1s						
P19K	**Oil Pt**	**15.20**	**52**	P	**P**	**16 45 48.4**	**-0.1**
P19K				IAmb	IAmb	16 46 05.9	
	comp=Z,55nm,0.9s						
PEA0B	**Petropavlovsk-**	**15.30**	**283⇑**	*e*P	**Pn**	**16 45 43.7**	**-4.3**
PETK	**Petropavlovsk-**	**15.30**	**283**	P	**P**	**16 45 49.6**	**0.0**
	comp=Z,5.2nm,0.7s,baz=98,slow=13,SNR=7.2						
PETK				PcP	**PcP**	**16 50 42.3**	**-0.6**
	comp=Z,8.2nm,1.0s,baz=105,slow=1.9,SNR=8.2						
PETK				LR	LR	16 51 28.2	
	comp=Z,22nm,21.4s,baz=91,slow=36						
PETK				ScP	**ScP**	**16 54 01.8**	**-1.4**
	comp=Z,2.3nm,0.6s,baz=38,slow=1.8,SNR=9.5						
RSO	**Redoubt South**	**15.70**	**49**	P	**P**	**16 45 53.7**	**-0.5**
CNPM	**China Poot**	**16.13**	**53**	P	**P**	**16 45 59.2**	**+0.4**
SPU	**Mount Spurr**	**16.28**	**47**	P	**Pn**	**16 45 59.5**	**-0.6**
BRLK	**Bradley Lake**	**16.36**	**52**	P	**P**	**16 46 01.6**	**+0.2**
BRLK				IAmb	IAmb	16 46 18.3	
	comp=Z,46nm,1.1s						
K20K	**Telida**	**16.42**	**39**		**P**	**16 46 02.9**	**+0.9**
SKT	**Skwentna**	**16.82**	**45**	P	**Pn**	**16 46 09.5**	**+2.9**
SKT				IAmb	IAmb	16 46 11.1	
	comp=Z,58nm,1.2s						
J20K	**Nowinta River**	**16.84**	**36**	P	**Pn**	**16 46 08.8**	**+2.0**
J20K				IAmb	IAmb	16 46 17.1	
	comp=Z,34n

comp=Z,62nm,1.0s
MCK McKinley 18.63 41 P P 16 46 26.3 +0.2
MCK IAmb IAmb 16 46 32.9
comp=Z,21nm,0.7s
MCK McKinley 18.63 41 P P 16 46 26.3 +0.2
MCK pmax pmax
comp=Z,21nm,0.7s
SCM Sheep Creek Mo 18.63 47 P P 16 46 27.0 +0.8
SCM IAmb IAmb 16 46 32.0
comp=Z,52nm,1.1s
SCM Sheep Creek Mo 18.63 47 P P 16 46 27.0 +0.8
SCM pmax pmax
comp=Z,53nm,1.1s
HIN Hinchinbrook I 18.65 52 P P 16 46 25.8 -0.6
HIN IAmb IAmb 16 46 30.0
comp=Z,83nm,1.1s
FID Port Fidalgo 18.74 51 P P 16 46 27.9 +0.6
FID IAmb IAmb 16 46 30.9
comp=Z,70nm,0.8s
NEA2 Nenana 18.95 39 P Pn 16 46 31.3 -0.6
NEA2 IAmb IAmb 16 46 32.3
comp=Z,33nm,0.7s
DHY Denali Highway 19.02 44 P Pn 16 46 31.9 -0.9
DHY IAmb IAmb 16 46 33.2
comp=Z,47nm,0.7s
I23K Minto, Yukon-K 19.11 37 P Pn 16 46 33.4 -0.2
I23K IAmb IAmb 16 46 35.8
comp=Z,39nm,0.9s
KLU Klutina 19.18 49 P Pn 16 46 33.9 -0.8
KLU IAmb IAmb 16 46 39.1
comp=Z,33nm,0.6s
M24K Tolsona, Glenn 19.23 47 P Pn 16 46 34.4 -0.8
WRH Wood River Hil 19.28 40 P P 16 46 33.7 +0.5
WRH IAmb IAmb 16 46 37.5
comp=Z,26nm,0.8s
MA2 Magadan 19.29 305 P Pn 16 46 35.7 -0.1
comp=Z,36nm,0.9s,baz=93,slow=15,SNR=13
MA2 Magadan 19.29 305*de*P P 16 46 33.6 +0.4
MA2 pmax pmax
comp=Z,124nm,2.3s
MA2 Magadan 19.29 305 P Pn 16 46 35.6 -0.1
SEY Seymchan 19.33 315 P Pn 16 46 36.2 0.0
comp=Z,19nm,0.6s,baz=116,slow=9.6,SNR=59
SEY PcP PcP 16 50 49.4 +0.1
comp=Z,6.0nm,1.1s,baz=129,slow=3.9,SNR=4.9
SEY Seymchan 19.33 315*de*P Pn 16 46 36.2 0.0
SEY pmax pmax
comp=Z,76nm,1.3s
H23K Yukon River 19.38 35 P Pn 16 46 36.7 -0.3
H23K IAmb IAmb 16 46 40.8
comp=Z,61nm,0.8s
MDM Murphy Dome 19.44 38 P P 16 46 35.9 +1.0
CCB Clear Creek Bu 19.47 39 P P 16 46 35.1 -0.1
CCB IAmb IAmb 16 46 49.9
comp=Z,26nm,0.6s
TCOL CIGO, UAF Yank 19.54 39 P P 16 46 37.3 +1.4
TCOL IAmb IAmb 16 46 40.6
comp=Z,46nm,0.8s
COLA College 19.55 39 P Pn 16 46 37.6 -1.2
COLA IAmb IAmb 16 46 40.6
comp=Z,46nm,0.8s
COLA College 19.55 39*de*P Pn 16 46 38.2 -0.6
COLA pmax pmax
comp=Z,41nm,0.8s
COLA College 19.55 39 P Pn 16 46 38.1 -0.7
BMRM Bremner River 19.68 51 P Pn 16 46 39.9 -0.6
BMRM IAmb IAmb 16 46 42.8
comp=Z,32nm,0.8s
HDA Harding Lake 19.70 40 P P 16 46 37.6 -0.1
HDA IAmb IAmb 16 46 43.1
comp=Z,26nm,0.9s
PAX Paxson 19.80 45 P P 16 46 40.2 +1.3
PAX IAmb IAmb 16 46 43.4
comp=Z,36nm,0.9s
PAX Paxson 19.80 45 P P 16 46 40.2 +1.3
PAX pmax pmax
comp=Z,36nm,0.9s
POKR Poker Plat Res 19.82 38 P P 16 46 40.0 +1.1
POKR IAmb IAmb 16 46 42.6
comp=Z,44nm,0.8s
N25K Chitina, Valde 19.82 49 P P 16 46 39.4 +0.3
N25K IAmb IAmb 16 46 44.3
comp=Z,43nm,0.6s
IL31 19.88 39 P P 16 46 39.0 -0.6
IL31 IAmb IAmb 16 46 54.4
comp=Z,32nm,0.8s
ILAR Eielson Array 19.88 39 P P 16 46 38.8 -0.8
comp=Z,3.4nm,0.4s,baz=242,slow=9.8,SNR=57
ILAR PcP PcP 16 50 49.5 -0.7
comp=Z,0.9nm,0.6s,baz=294,slow=4.4,SNR=5.7
ILAR ScP ScP 16 54 10.9 -1.8
comp=Z,1.9nm,0.5s,baz=266,slow=3.7,SNR=21
ILAR Eielson Array 19.88 39 P P 16 46 39.1 -0.5
COLD Coldfoot 19.94 31 P Pn 16 46 42.1 -1.2
H24K Noodor Dome 19.98 36 P P 16 46 40.2 -0.6
BERG Berg Lake 20.02 53 P Pn 16 46 43.4 -1.0
BERG IAmb IAmb 16 46 47.8
comp=Z,27nm,0.8s
GLB Gilahina Butte 20.16 50 P P 16 46 43.1 +0.4
VRDI Verde Repeater 20.28 51 P P 16 46 44.6 +0.4
VRDI IAmb IAmb 16 46 48.5
comp=Z,18nm,0.5s
RIDG Independent Ri 20.32 43 P P 16 46 45.2 +0.8
RIDG IAmb IAmb 16 46 49.7
comp=Z,26nm,0.6s
J25K Salcha River, 20.41 41 P P 16 46 45.5 +0.1
DOT Dot Lake 20.62 44 P P 16 46 48.3 +0.7
DOT IAmb IAmb 16 46 51.2
comp=Z,34nm,0.8s
PRP Porcupine Dome 20.71 38 P P 16 46 49.4 +0.7
PRP IAmb IAmb 16 46 52.6
comp=Z,19nm,0.6s
ISLE Juniper Island 20.71 53 P P 16 46 50.1 +1.4
L26K Log Cabin Wild 20.75 46 P P 16 46 50.0 +1.1
L26K IAmb IAmb 16 46 54.2
comp=Z,24nm,0.8s
M26K Nabesna, AK 20.75 47 P P 16 46 50.0 +1.0
M26K IAmb IAmb 16 46 59.1
comp=Z,15nm,0.6s
SCRK Sand Creek 20.75 43 P P 16 46 49.3 +0.2
SCRK IAmb IAmb 16 46 52.4
comp=Z,31nm,0.5s
MESA MESA 20.85 54 P P 16 46 51.8 +1.6
MESA IAmb IAmb 16 46 59.6
comp=Z,46nm,1.1s
TOLK Toolik Lake Re 20.97 28 P P 16 46 52.2 +0.9
YAH Yahtse 20.98 53 P P 16 46 52.4 +0.8
J26L Joseph Creek 21.10 42 P P 16 46 52.9 +0.1
J26L IAmb IAmb 16 46 55.9
comp=Z,48nm,1.1s
BARN Barnard Glacie 21.11 52 P P 16 46 54.7 +1.7
BARN IAmb IAmb 16 46 56.8
comp=Z,18nm,0.6s
M27K Edge Creek, AK 21.24 48 P P 16 46 55.6 +1.2
M27K IAmb IAmb 16 46 58.1
comp=Z,58nm,0.9s
CTGM Chitina Glacie 21.25 52 P P 16 46 56.0 +1.5
CTGM IAmb IAmb 16 47 05.8
comp=Z,18nm,0.7s
TABL Table Mountain 21.28 53 P P 16 46 56.5 +1.6
LOGN Logan Glacier 21.40 52 P P 16 46 57.2 +1.1
LOGN IAmb IAmb 16 46 58.6
comp=Z,14nm,0.5s
L27K Beaver Creek, 21.43 46 P P 16 46 57.0 +0.8
BCAR Beaver Creek A 21.44 46 P P 16 46 57.2 +0.7
I26K Coal Creek Min 21.54 40 P P 16 46 56.4 -1.0
K27K Chicken 21.57 43 P P 16 46 59.0 +1.3
K27K IAmb IAmb 16 47 01.1
comp=Z,25nm,0.8s
PCA Pinnacle 21.69 54 P P 16 46 59.0 -0.1
BMAR Burnt Mountain 21.90 34 P P 16 46 59.6 -1.5
EGAK Eagle 22.17 42 P P 16 47 04.6 +0.7
EGAK IAmb IAmb 16 47 08.0
comp=Z,31nm,0.6s
DAWY Dawson 22.72 44 P P 16 47 09.6 +0.3
DAWY IAmb IAmb 16 47 13.3
comp=Z,18nm,0.7s
HYT Haines Junctio 23.10 53 P P 16 47 11.5 -1.4
I29M Ogilvie Camp, 23.50 41 P P 16 47 16.4 +0.1
I29M IAmb IAmb 16 47 19.6
comp=Z,35nm,0.8s
M30M Minto, Yukon 23.61 48 P P 16 47 17.4 0.0
M31M Drury Creek, Y 24.69 50 P P 16 47 27.7 +0.6
FARO Faro, Yukon 25.18 50 P P 16 47 31.3 -0.3
P33M Teslin, Yukon 25.41 54 P P 16 47 34.5 +0.8

INK Inuvik 26.11 36 P P 16 47 40.9 +1.0
comp=Z,10nm,0.5s,baz=236,slow=7.7,SNR=15
comp=Z,10nm,0.5s
INK Inuvik 26.11 36 P P 16 47 39.5 -0.3
INK IAmb IAmb 16 47 46.2
comp=Z,23nm,0.9s
INK Inuvik 26.11 36 P P 16 47 39.6 -0.3
INK pmax pmax
comp=Z,23nm,1.0s
DLBC Dease Lake 26.98 58 P P 16 47 49.4 +1.5
comp=Z,0.9nm,0.5s,baz=270,slow=11,SNR=4.6
DLBC LR LR 16 58 13.2
comp=Z,42nm,18.3s,baz=248,slow=35
comp=Z,0.9nm,0.5s
YAK Yakutsk 29.64 310 P P 16 48 10.8 -0.5
comp=Z,3.5nm,0.3s,baz=104,slow=1.9,SNR=7.5
YAK PcP PcP 16 51 11.4 -0.5
comp=Z,6.9nm,0.7s,baz=149,slow=1.2,SNR=5.8
YAK LR LR 17 00 03.1
comp=Z,38nm,18.2s,baz=82,slow=36
comp=Z,3.5nm,0.3s
YAK Yakutsk 29.64 310 P P 16 48 10.6 -0.7
YAK IAmb IAmb 16 48 11.8
comp=Z,11nm,0.7s
YAK Yakutsk 29.64 310 *e*P P 16 48 11.0 -0.3
YAK pmax pmax
comp=Z,9.0nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.0s
A36M Sachs Harbour 29.78 30 P P 16 48 14.6 +2.1
TIXI Tiksi 30.39 330 P P 16 48 18.0 +0.1
comp=E,3.9nm,0.4s,baz=90,slow=22,SNR=8.1
TIXI PcP PcP 16 51 13.2 -0.4
comp=E,4.4nm,0.5s,baz=90,slow=23,SNR=4.4
comp=E,3.9nm,0.4s
TIXI Tiksi 30.39 330 P P 16 48 15.8 -2.0
TIXI Tiksi 30.39 330‖ *e*P P 16 48 18.4 +0.6
TIXI pmax pmax
comp=Z,5.0nm,0.6s
KLR Kul'dur 31.97 285 P P 16 48 31.2 -0.7
comp=Z,1.4nm,0.5s,baz=78,slow=8.5,SNR=7.3
KLR PcP PcP 16 51 18.5 +0.2
comp=Z,1.4nm,0.5s,baz=14,slow=5.5,SNR=5.5
KLR LR LR 17 00 34.7
comp=Z,24nm,20.5s,baz=82,slow=34
comp=Z,1.4nm,0.5s
HILA High Level 33.63 55 P P 16 48 45.4 -0.8
YKA Yelloknife Ar 33.84 48 P P 16 48 49.0 +1.0
comp=Z,8.8nm,0.7s,baz=292,slow=10,SNR=29
YKA PcP PcP 16 51 23.4 +0.2
comp=Z,1.7nm,0.4s,baz=283,slow=3.2,SNR=7.9
comp=Z,8.8nm,0.7s
YKA Yellowknife Ar 33.84 48 P P 16 48 46.4 -1.6
YKA Yellowknife Ar 33.84 48 *i* P P 16 48 49.0 +1.0
YKA pmax pmax
comp=Z,6.0nm,0.5s
JSD Sado 33.98 263 P P 16 48 49.1 -0.4
JSD Sado 33.98 263 P P 16 48 51.0 +1.5
NLWA Neilton Lookou 34.02 77 P P 16 48 49.7 0.0
NLWA IAmb IAmb 16 48 53.1
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 34.24 277 P P 16 48 51.3 -0.4
comp=Z,2.1nm,0.7s,baz=56,slow=11,SNR=5.3
USRK PcP PcP 16 51 25.6 +0.8
comp=Z,4.9nm,0.8s,baz=100,slow=2.6,SNR=9.5
comp=Z,2.1nm,0.7s
H11N2 WAKE ISLAND Hy 34.80 207 T T 17 25 51.1
baz=18,slow=76,SNR=312
H11N3 WAKE ISLAND Hy 34.81 207 T T 17 25 51.8
baz=18,slow=76,SNR=338
H11N1 WAKE ISLAND Hy 34.82 207 T T 17 25 52.5
baz=18,slow=76,SNR=124
MJAR Matsushiro Arr 34.98 261 P P 16 48 59.6 +1.5
comp=Z,10nm,0.8s,baz=46,slow=6.8,SNR=41
MJAR PcP PcP 16 51 28.0 +0.9
comp=Z,7.4nm,0.6s,baz=92,slow=1.7,SNR=23
comp=Z,10nm,0.8s
MAJO Matsushiro 34.98 261 P P 16 48 59.3 +1.2
MAJO PcP PcP 16 51 28.0 +0.9
MAJO Matsushiro 34.98 261*de*P P 16 48 59.2 +1.1
MAJO pmax pmax
comp=Z,31nm,1.0s
MAJO Matsushiro 34.98 261 P P 16 48 59.6 +1.5
LON Longmire 35.56 76 P P 16 49 01.4 -1.6
LON Longmire 35.56 76 P P 16 49 01.4 -1.6
LON pmax pmax
comp=Z,6.0nm,0.9s
LTY Liberty 35.98 75 P P 16 49 05.9 -0.8
H11S1 WAKE ISLAND Hy 36.02 207 T T 17 27 19.7
baz=18,slow=76,SNR=289
H11S2 WAKE ISLAND Hy 36.03 207 T T 17 27 23.7
baz=18,slow=76,SNR=111
H11S3 WAKE ISLAND Hy 36.04 207 T T 17 27 22.3
baz=18,slow=76,SNR=54
JGF Kuroka 36.12 261 P P 16 49 08.1 +0.2
JGF Kuroka 36.12 261 P P 16 49 09.7 +1.8
HOOD Mount Hood Mea 36.38 78 P P 16 49 10.6 +0.4
HOOD IAmb IAmb 16 49 16.9
comp=Z,18nm,1.1s
H04A Detroit Lake 36.39 80 P P 16 49 10.6 +0.5
DBO Dodson Butte 36.60 83 P P 16 49 12.2 +0.3
DBO IAmb IAmb 16 49 17.3
comp=Z,9.5nm,0.9s
HUMO Hull Mountain 37.06 83 P P 16 49 16.4 +0.6
HUMO PcP PcP 16 51 34.6 +1.4
EDM Edmonton 37.45 62 P P 16 49 17.2 -1.7
EDM IAmb IAmb 16 49 20.9
comp=Z,10nm,0.6s
EDM Edmonton 37.45 62 P P 16 49 17.2 -1.7
EDM pmax pmax
comp=Z,10.0nm,0.6s
NEW Newport 37.58 72 P P 16 49 19.3 -0.8
NEW Newport 37.58 72 P P 16 49 19.3 -0.8
NEW pmax pmax
comp=Z,5.0nm,1.0s
PINE Pine Mountain 37.63 80 P P 16 49 22.0 +1.2
PINE PcP PcP 16 51 37.2 +2.0
YBH Yreka Blue Hor 37.71 84 P P 16 49 23.7 +2.3
YBH Yreka Blue Hor 37.71 84 P P 16 49 23.7 +2.3
YBH pmax pmax
comp=Z,5.0nm,0.7s
K05A Summer Lake 38.25 81 P P 16 49 28.1 +2.1
K05A IAmb IAmb 16 49 29.5
comp=Z,19nm,1.1s
RES Resolute Bay 38.48 25 P P 16 49 28.1 +0.8
comp=Z,1.5nm,0.4s,baz=0.0,slow=3.0,SNR=1.4
comp=Z,1.5nm,0.4s
HIA Hailar 38.95 292‖ *e*P P 16 49 31.0 -0.5
HIA pmax pmax
comp=Z,4.0nm,1.0s
EUNU Eureka 39.13 16 P P 16 49 33.6 +0.9
MSO Missoula 40.16 72 P P 16 49 41.9 +0.2
MSO PcP PcP 16 51 43.6 +0.6
KSRS Korea Array 40.69 271 P P 16 49 47.5 +1.5
comp=Z,4.2nm,0.6s,baz=55,slow=8.1,SNR=21
KSRS PcP PcP 16 51 45.5 +0.8
comp=Z,1.9nm,0.8s,baz=46,slow=5.2,SNR=4.1
comp=Z,4.2nm,0.6s
PNTR Pine Nut 41.19 85 P P 16 49 51.6 +1.3
PNTR IAmb IAmb 16 49 54.4
comp=Z,19nm,0.6s
HLID Hailey 41.68 76 P P 16 49 54.4 +0.2
HLID PcP PcP 16 51 49.3 +1.2
MCMT McKenzie Canyo 41.89 74 P P 16 49 54.0 -2.0
KVN Kaiserville 42.13 84 P P 16 49 58.0 0.0
KVN Kaiserville 42.13 84 P P 16 49 58.0 0.0
KVN pmax pmax
comp=Z,4.0nm,1.0s
NVAR Mina Array Bea 42.40 85 P P 16 50 02.0 +1.9
comp=Z,3.8nm,0.6s,baz=294,slow=7.4,SNR=24
NVAR pP pP 16 50 32.0 +0.8
comp=Z,4.4nm,0.8s,baz=294,slow=8.0,SNR=8.2
NVAR sP sP 16 50 47.6 +0.6
comp=Z,3.0nm,0.8s,baz=290,slow=8.2,SNR=4.0
NVAR PcP PcP 16 51 52.3 +1.7
comp=Z,4.6nm,0.8s,baz=281,slow=3.7,SNR=11
NVAR ScP ScP 16 55 28.4 +0.9
comp=Z,2.4nm,0.8s,baz=276,slow=4.7,SNR=13
comp=Z,3.8nm,0.6s
YHL Hebgen Lake 42.86 73 P P 16 50 04.1 +0.2
YHH Holmes Hill 43.09 73 P P 16 50 06.0 +0.2
XLT XiLinHaoTe 43.96 287 *e*P P 16 50 11.4 -1.1
NRIK Noril'sk 44.18 330 P P 16 50 15.1 +1.3
comp=Z,6.0nm,0.6s,baz=77,slow=10.0,SNR=9.0

comp=Z,6.0nm,0.6s
NRIK Noril'sk 44.18 330 P P 16 50 13.6 -0.1
NRIK Noril'sk 44.18 330*de*P P 16 50 14.8 +1.1
NRIK *i* *PP pwP 16 50 47.6 -2.1
NRIK pmax pmax
comp=Z,7.0nm,0.9s
GWY Greenwater Val 44.83 86 P P 16 50 20.0 +0.4
PDAR Pinedale Array 45.03 74 P P 16 50 21.5 +0.3
comp=Z,4.6nm,0.5s,baz=314,slow=3.4,SNR=56
PDAR pP pP 16 50 52.5 +0.1
comp=Z,3.0nm,0.6s,baz=316,slow=4.1,SNR=3.1
PDAR sP sP 16 51 09.2 +1.1
comp=Z,3.3nm,0.7s,baz=308,slow=3.0,SNR=2.8
PDAR PcP PcP 16 51 59.5 -0.1
comp=Z,0.9nm,0.5s,baz=132,slow=1.3,SNR=1.9
comp=Z,4.6nm,0.5s
PRN Pahroc Range 45.03 84 P P 16 50 22.2 +1.1
PRN IAmb IAmb 16 50 23.9
comp=Z,18nm,1.1s
NOR Nord 45.95 4 *i* P P 16 50 28.1 +0.5
NOR IAmb IAmb 16 50 29.1
comp=Z,2.5nm,0.9s
V12A Nelson 46.24 85 P P 16 50 31.9 +1.3
NEEM North Greenlan 46.31 14 *i* P P 16 50 32.1 +1.3
NEEM IAmb IAmb 16 50 32.3
comp=Z,21nm,0.7s
PKCU Pink Cliffs 46.68 82 P P 16 50 34.2 -0.1
ULN Ulaanbaatar 46.82 296‖ *e*P P 16 50 33.9 -1.1
ULN pmax pmax
comp=Z,4.0nm,1.4s
SONM Songino Array 47.20 297 P P 16 50 37.3 -0.6
comp=Z,1.0nm,0.6s,baz=51,slow=9.5,SNR=5.3
SONM PcP PcP 16 52 06.7 -0.2
comp=Z,4.3nm,0.7s,baz=65,slow=3.0,SNR=14
SONM ScP ScP 16 55 46.4 -0.6
comp=Z,1.1nm,0.7s,baz=42,slow=2.5,SNR=5.7
SONM LR LR 17 10 56.2
comp=Z,25nm,20.3s,baz=66,slow=36
comp=Z,1.0nm,0.6s
U15A North Rim 47.35 83 P P 16 50 38.7 -0.7
U15A IAmb IAmb 16 50 41.7
comp=Z,14nm,0.6s
O20A White River Ci 47.42 76 P P 16 50 40.3 +0.5
O20A IAmb IAmb 16 50 41.2
comp=Z,17nm,0.6s
ULM Lac du Bonnet 48.30 58 P P 16 50 45.3 -0.9
comp=Z,2.4nm,0.5s,baz=299,slow=4.9,SNR=5.5
comp=Z,2.4nm,0.5s
ULM Lac du Bonnet 48.30 58‖ *e*P P 16 50 46.4 +0.2
HHC Hu-ho-hao-te 48.47 286 *e*P P 16 50 47.3 -0.4
UPNV Upernavik 48.77 20 *e*P P 16 50 50.0 +0.6
HNS HongShan 48.79 281 ⇑P P 16 50 51.3 +1.2
KBS Kingsbay 48.95 358 *e*P P 16 50 52.5 +1.7
MVCO Mesa Verde 49.14 79 P P 16 50 53.8 +0.7
MVCO IAmb IAmb 16 50 59.8
comp=Z,6.3nm,0.7s
NJ2 Nanjing 49.84 272 *e*P P 16 50 58.1 -0.1
X18A Snowflake 50.03 83 P P 16 50 60.0 +0.1
X18A IAmb IAmb 16 51 02.3
comp=Z,7.7nm,0.6s
214A Organ Pipe Nat 50.04 88 P P 16 51 00.1 +0.5
214A IAmb IAmb 16 51 01.3
comp=Z,4.9nm,0.6s
DAG Danmarks Havn 50.50 6 *i* P P 16 51 03.3 +0.9
DAG IAmb IAmb 16 51 04.5
comp=Z,3.0nm,0.4s
SDCO Great Sand Dun 50.59 77 P P 16 51 04.0 -0.1
ANMO Albuquerque 51.88 80‖ *e*P P 16 51 14.8 +1.2
ANMO pmax pmax
comp=Z,5.0nm,1.3s
EYMN Ely 51.99 58 P P 16 51 13.7 -0.4
EYMN IAmb IAmb 16 51 15.1
comp=Z,8.8nm,1.0s
SUMG Summit 52.17 15 *i* P P 16 51 15.0 -0.4
SUMG IAmb IAmb 16 51 17.4
comp=Z,9.7nm,0.8s
BNM Barren Site 52.31 81 P P 16 51 17.2 +0.4
121A Cookes Peak, D 52.72 83 P P 16 51 20.4 +0.7
121A IAmb IAmb 16 51 22.1
comp=Z,6.3nm,0.7s
YOJ Yonaguni jima 52.73 262 P P 16 51 18.9 -0.8
YOJ Yonaguni jima 52.73 262 P P 16 51 18.9 -0.8
DBG Daneborg 52.74 8 *i* P P 16 51 19.3 +0.1
ZALV Zalesovo Beam 54.19 314 P P 16 51 29.3 -0.6
comp=Z,0.6nm,0.4s,baz=35,slow=7.1,SNR=3.3
ZALV PcP PcP 16 52 32.0 -0.5
comp=Z,3.0nm,0.6s,baz=24,slow=4.2,SNR=9.8
comp=Z,0.6nm,0.4s
COWI Conover 54.41 59 P P 16 51 30.9 -0.9
COWI IAmb IAmb 16 51 33.4
comp=Z,5.6nm,0.8s
SSLB Suanglung 54.48 263 P P 16 51 32.4 -0.1
SSLB Suanglung 54.48 263 P P 16 51 33.9 +1.4
MSTX Muleshoe 54.77 78 P P 16 51 34.3 -0.3
MSTX IAmb IAmb 16 51 36.8
comp=Z,12nm,0.8s
ICESG Greenland Ices 54.98 17 *i* P P 16 51 35.9 0.0
TPUB Ta-pu 55.04 263 P P 16 51 36.3 -0.3
E43A Lone Tree Farm 55.34 57 P P 16 51 38.0 -0.4
LZH Lanzhou 56.15 287 *e*P P 16 51 56.8 +12
LZH pP pP 16 52 01.9 -15
WMOK Wichita Mounta 56.62 75 P P 16 51 47.3 -0.4
WMOK Wichita Mounta 56.62 75 P P 16 51 47.3 -0.4
WMOK pmax pmax
comp=Z,4.0nm,0.8s
E46A Sault Ste Mari 56.73 56 P P 16 51 48.0 -0.3
ENH Enshi 56.82 278 P P 16 51 49.4 +0.3
comp=Z,10.0nm,2.5s
ARA0 ARCESS Array S 57.38 351 *e*P P 16 51 52.6 +0.1
ARA0 IAmb IAmb 16 51 54.5
comp=Z,9.6nm,0.9s
ARCES ARCESS Array B 57.38 351 P P 16 51 52.4 -0.2
comp=Z,5.4nm,0.7s,baz=27,slow=6.7,SNR=21
comp=Z,5.4nm,0.7s
ARCES ARCESS Array B 57.38 351 P P 16 51 52.3 -0.2
ARCES IAmb IAmb 16 51 54.3
comp=Z,6.6nm,0.8s
ARCES ARCESS Array B 57.38 351 P P 16 51 52.3 -0.2
ARCES pmax pmax
comp=Z,7.0nm,0.9s
TXAR Lajitas Array 57.47 83 P P 16 51 54.8 +1.0
comp=Z,4.2nm,0.4s,baz=305,slow=5.0,SNR=78
TXAR pP pP 16 52 26.6 0.0
comp=Z,7.1nm,1.0s,baz=298,slow=5.4,SNR=4.3
TXAR sP sP 16 52 43.4 +1.3
comp=Z,3.3nm,0.6s,baz=296,slow=4.9,SNR=3.7
TXAR PcP PcP 16 52 47.1 +1.3
comp=Z,0.6nm,0.4s,baz=270,slow=1.8,SNR=3.8
TXAR ScP ScP 16 56 31.5 -0.3
comp=Z,0.9nm,0.8s,baz=288,slow=3.4,SNR=4.8
comp=Z,4.2nm,0.4s
JETT Jettan, Norway 57.81 353 *e*P P 16 51 56.0 +0.4
JETT IAmb IAmb 16 51 56.2
comp=Z,12nm,0.7s
TRO Tromso 57.84 353 *e*P P 16 51 55.8 +0.1
TRO IAmb IAmb 16 51 56.2
comp=Z,6.0nm,0.5s
R40A Maddies Statio 57.96 68 P P 16 51 55.4 -1.6
KTK1 Kautokeino 58.11 352 *e*P P 16 51 57.8 +0.3
KTK1 IAmb IAmb 16 51 59.4
comp=Z,14nm,1.2s
JCT Junction City 59.00 79 P P 16 52 04.0 -0.4
JCT Junction City 59.00 79 P P 16 52 04.0 -0.4
JCT pmax pmax
comp=Z,24nm,1.1s
KURK Kurchatov 59.17 314*de*P P 16 52 05.7 +0.6
KURK pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 59.74 303 *e*P P 16 52 07.8 -1.5
MIAR Mount Ida 59.82 72 P P 16 52 10.1 +0.2
MIAR IAmb IAmb 16 52 10.8
comp=Z,7.5nm,0.9s
MIAR Mount Ida 59.82 72 P P 16 52 10.1 +0.2
MIAR pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 60.31 309 *d* *i* P P 16 52 11.8 -1.2
MKAR Makanchi Array 60.31 309 P P 16 52 12.2 -0.9
comp=Z,1.5nm,0.5s,baz=46,slow=7.0,SNR=9.5
comp=Z,1.5nm,0.5s
BVAR Borovoye Array 60.89 320 LR LR 17 21 38.3
comp=Z,37nm,18.4s,baz=41,slow=39
BRVK Borovoye 60.91 320*de*P P 16 52 17.7 +0.8
BRVK pmax pmax
comp=Z,5.0nm,1.0s
GOMU GeErMu 61.29 293 P P 16 52 19.1 -1.2

WCI	Wyandotte Cave	61.34	64	P	P	16 52 20.5	+0.4
WCI	Wyandotte Cave	61.34	64	P	P	16 52 20.5	+0.4
WCI				pmax	pmax		
	comp=Z,13nm,0.7s						
ARU	Arti	62.40	329	LR	LR	17 21 58.5	
	comp=Z,26nm,20.1s,baz=17,slow=38						
ARU	Arti	62.40	329	P	P	16 52 27.4	+0.5
ARU				IAmb	IAmb	16 52 30.2	
	comp=Z,5.0nm,0.6s						
ARU	Arti	62.40	329	*d iP*	P	16 52 27.1	+0.2
ARU						16 53 03.5	
ARU				S	S	17 00 44.6	+2.8
ARU				SS	SS	17 04 50.6	+3.7
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
U49A	Red Boiling Sp	62.86	65	P	P	16 52 30.9	+0.6
T50A	Nancy	63.02	64	P	P	16 52 31.4	+0.1
L56A	Greenwood	63.15	55	P	P	16 52 32.1	0.0
KIRV	Kirov	63.23	335	*ceP*	P	16 52 32.9	+0.6
KIRV				*i *PP	PcP	16 53 07.0	-1.3
KLMR	Klimovskoe	63.48	341	*eP*	P	16 52 31.7	-2.2
KLMR				*e*PP	pP	16 53 06.4	-0.7
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLMR	Klimovskoe	63.48	341	*eP*	P	16 52 31.8	-2.2
KLMR				AMP		16 52 35.8	
	comp=Z,10.0nm,1.1s						
KLMR				*e*pP	pP	16 53 06.5	-0.7
X48A	Hartselle	63.64	67	P	P	16 52 34.5	-0.9
M57A	Sunshine Farm,	63.95	56	P	P	16 52 37.4	0.0
PZH	PanZhiHua	64.24	281	P	P	16 52 39.5	-0.1
LRAL	Lakeview Retre	64.70	68	P	P	16 52 41.1	-1.3
LRAL				IAmb	IAmb	16 52 44.6	
	comp=Z,10nm,0.6s						
QIZ	Qiongzhong	64.86	269	P	P	16 52 45.6	+2.1
	comp=Z,16nm,0.9s						
FINES	FINESS Array B	65.14	348	P	P	16 52 44.0	-0.8
	comp=Z,5.2nm,0.9s,baz=19,slow=7.6,SNR=13						
FINES				PcP	PcP	16 53 15.8	-0.3
	comp=Z,4.9nm,0.9s,baz=57,slow=5.1,SNR=4.4						
	comp=Z,5.2nm,0.9s						
FINES	FINESS Array B	65.14	348	*i P*	P	16 52 44.5	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NB2	NORSAR Subarra	66.84	356	P	P	16 52 55.4	-0.3
	comp=Z,2.0nm,0.6s,baz=6.3,slow=6.9						
NB2	NORSAR Subarra	66.84	356	P	P	16 52 55.4	-0.3
	baz=6.3,slow=6.9						
NOA	NORSAR Array B	66.84	356	P	P	16 52 55.4	-0.3
	comp=Z,1.4nm,0.7s,baz=5.6,slow=6.5,SNR=4.5						
NOA				pP	pP	16 53 29.5	+0.3
	comp=Z,1.4nm,0.9s,baz=3.0,slow=6.7,SNR=2.7						
NOA				LR	LR	17 23 27.1	
	comp=Z,11nm,18.0s,baz=275,slow=37						
	comp=Z,1.4nm,0.7s						
AAK	Ala-Archa	67.10	311	*ceP*	P	16 52 58.3	+0.5
AAK				pmax	pmax		
	comp=Z,22nm,2.5s						
SKAR	Skarslia	67.31	357	*eP*	P	16 52 59.1	+0.4
SKAR				IAmb	IAmb	16 53 11.2	
	comp=Z,26nm,1.4s						
AKTO	Aktyubinsk	67.56	325	LR	LR	17 24 42.8	
	comp=Z,25nm,19.2s,baz=28,slow=38						
HFS	Hagfors	67.61	354	LR	LR	17 26 09.1	
	comp=Z,14nm,18.1s,baz=286,slow=39						
ABKAR	Akbulak array	67.86	324	P	P	16 53 02.2	0.0
SIJI	Sorong	68.33	238	P	P	16 53 06.4	+0.9
	comp=Z,15nm,0.6s,baz=29,slow=6.8,SNR=6.7						
	comp=Z,15nm,0.6s						
KSH	Kashi	68.81	307	P	P	16 53 12.3	+3.8
KSH	Kashi	68.81	307	sP	sP	16 54 03.4	+6.1
BELG	Belogornoye	69.16	333	LR	LR	17 25 54.1	
	comp=Z,8.4nm,19.1s,baz=122,slow=38						
CMAR	Chiang Mai Arr	71.97	277	P	P	16 53 28.0	+0.2
	comp=Z,1.5nm,0.6s,baz=23,slow=6.7,SNR=14						
CMAR				pP	pP	16 54 02.0	+0.2
	comp=Z,1.0nm,0.7s,baz=25,slow=6.6,SNR=2.2						
	comp=Z,1.5nm,0.6s						
TOLI2	Tolitoli	72.40	248	P	P	16 53 30.4	+0.1
GUN	Gumba	72.50	293	*eP*	P	16 53 31.1	-0.1
JIRN	Jiri	72.52	293	*eP*	P	16 53 31.4	0.0
PKI	Pulchoki	73.03	293	*eP*	P	16 53 33.8	-0.5
PKIN	Phulchoki	73.03	293	*eP*	P	16 53 33.8	-0.5
LUWI	Luwuk	73.05	245	P	P	16 53 33.3	-0.8
LUWI	Luwuk	73.05	245	P	P	16 53 34.3	+0.2
AKASG	Malin Array Be	75.01	343	P	P	16 53 44.3	-0.8
	comp=Z,0.8nm,0.3s,baz=20,slow=5.6,SNR=6.6						
AKASG				pP	pP	16 54 20.9	+1.6
	comp=Z,5.0nm,0.7s,baz=19,slow=6.1,SNR=4.6						
AKASG				LR	LR	17 31 14.4	
	comp=Z,17nm,18.4s,baz=78,slow=39						
	comp=Z,0.8nm,0.3s						
AKBB	Malin Array Si	75.01	343	⇑*eP*	P	16 53 44.5	-0.5
CLL	Collm	76.44	354	*i P*	P	16 53 52.8	-0.4
CLL	Collm	76.44	354	*i P*	P	16 53 52.8	-0.4
CLL				*i* P(2)		16 54 33.6	
	comp=Z,16nm,1.4s						
CLL				*e*PP	PP	16 56 43.0	-3.0
DPC	Dobruska-Polom	77.12	351	*eP*	P	16 53 57.0	-0.1
DPC	Dobruska-Polom	77.12	351	*eP*	P	16 53 57.0	-0.1
DPC				*e*pP	pwP	16 54 38.1	+1.8
KRLC	Kraliky	77.35	351	*eP*	P	16 53 58.2	-0.2
KRLC				*e*PP	pwP	16 54 38.4	+0.8
KRLC	Kraliky	77.35	351	*eP*	P	16 53 58.2	-0.2
KRLC				*e*pP	pwP	16 54 38.4	+0.8
KAPI	Kappang	78.01	245	P	P	16 54 03.8	+1.5
	comp=Z,14nm,0.6s,baz=179,slow=1.9,SNR=6.4						
	comp=Z,14nm,0.6s						
GEYT	Alibeck	78.14	318	P	P	16 54 03.2	+0.3
	comp=Z,3.8nm,0.7s,baz=336,slow=3.3,SNR=12						
	comp=Z,3.8nm,0.7s						
KIV	Kislovodsk	78.20	332	*eP*	P	16 54 03.3	+0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,31nm,19.0s						
KBZ	Khabaz	78.34	332	P	P	16 54 04.0	+0.2
	comp=Z,2.0nm,0.8s,baz=260,slow=6.1,SNR=2.3						
KBZ				LR	LR	17 32 31.7	
	comp=Z,16nm,19.6s,baz=214,slow=38						
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	78.34	332	P	P	16 54 04.0	+0.2
KHC	Kasperske Hory	78.57	353	*eP*	P	16 54 04.9	-0.2
KHC	Kasperske Hory	78.57	353	*eP*	P	16 54 04.9	-0.2
KHC				*e*pP	pwP	16 54 45.9	+1.5
TRPA	Tarpa	78.58	347	⇓P	P	16 54 06.1	+1.0
BUR08	Bucovina Ar. S	78.65	345	P	P	16 54 05.2	-0.4
BURAR	Bucovina Array	78.68	345	⇑P	P	16 54 06.0	+0.2
BURAR	Bucovina Array	78.68	345	⇑P	P	16 54 06.0	+0.2
CTAO	Charters Tower	78.82	215	P	P	16 54 07.1	+0.5
CTAO				IAmb	IAmb	16 54 11.9	
	comp=Z,6.9nm,0.7s						
CTAO	Charters Tower	78.82	215	P	P	16 54 07.1	+0.5
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GERES	GERESS Array B	78.84	353	P	P	16 54 06.5	-0.1
	comp=Z,1.1nm,0.9s,baz=354,slow=4.0,SNR=6.1						
	comp=Z,1.1nm,0.9s						
AKT	Akhty	78.87	327	*eP*	P	16 54 07.1	+0.1
AKT				*e*		16 54 15.0	
AKT				*e*PP	pP	16 54 39.8	-1.7
AKT				pmax	pmax		
	comp=Z,11nm,0.8s						
ZEI	Tsey	78.90	331	*eP*	P	16 54 06.3	-0.9
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BIZ	Bicaz	79.19	344	⇑P	P	16 54 09.1	+0.7
CDF	Champ du Feu	79.62	357	*eP*	P	16 54 10.6	-0.3
CDF				pmax	pmax		
	comp=Z,8.0nm,1.4s						
DRGR		79.87	346	⇓P	P	16 54 12.6	+0.4
DRGR		79.87	346	⇓P	P	16 54 12.6	+0.4
OZUR		80.06	344	⇑P	P	16 54 16.0	+2.8
VRI	Vrincioaia	80.12	343	⇑P	P	16 54 14.6	+1.1
VRI	Vrincioaia	80.12	343	⇑P	P	16 54 14.6	+1.1
PLOR	Plostina	80.15	343	⇓P	P	16 54 12.7	-1.0
PLOR	Plostina	80.15	343	⇓P	P	16 54 12.7	-1.0
BATI	Baumata	80.19	239	P	P	16 54 15.1	+0.8
	comp=Z,45nm,0.4s,baz=295,slow=0.9,SNR=9.1						
COVR	Voineasa-Covas	80.23	344	⇑P	P	16 54 16.0	+1.9
MLR	Muntele Rosu	80.62	344	⇓P	P	16 54 17.8	+1.5
MLR	Muntele Rosu	80.62	344	⇓P	P	16 54 17.8	+1.5
VOIR		80.82	344	P	P	16 54 16.8	-0.6
VOIR		80.82	344	P	P	16 54 16.8	-0.6
SSF	Saint Saulge	81.04	360	*eP*	P	16 54 19.2	+0.8
SSF				pmax	pmax		
	comp=Z,12nm,1.4s						
BZS	Buzias	81.17	347	⇑P	P	16 54 18.3	-0.8
BZS	Buzias	81.17	347	⇑P	P	16 54 18.3	-0.8
GZR	Gura Zlata	81.22	346	⇑P	P	16 54 19.7	+0.2
GZR	Gura Zlata	81.22	346	⇑P	P	16 54 19.7	+0.2
IPM	Ipoh	81.51	266	P	P	16 54 21.4	+0.1
IPM	Ipoh	81.51	266	P	P	16 54 21.7	+0.4
HERR	Herculane	81.78	346	⇑P	P	16 54 22.2	-0.1
BLKB	Belogradchik	82.97	346	⇑P	P	16 54 28.3	-0.3
BOVS	Bovan	83.10	346	⇓P	P	16 54 28.2	-1.0
WRA	Warramunga Arr	83.40	225	P	P	16 54 31.4	+0.6
	comp=Z,1.6nm,0.6s,baz=35,slow=6.0,SNR=18						
WRA				pP	pP	16 55 05.5	-1.5
	comp=Z,3.5nm,0.8s,baz=36,slow=6.5,SNR=7.4						
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	83.40	225	*i P*	P	16 54 31.8	+0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RMQ	Roma	83.93	210	P	P	16 54 34.9	+1.5
PSI	Prapat	84.12	267	P	P	16 54 35.7	+0.8
	comp=Z,76nm,0.8s,baz=21,slow=4.3,SNR=48						
PSI	Prapat	84.12	267	P	P	16 54 35.6	+0.7
BRTR	Keskin Array B	84.56	337	P	P	16 54 36.9	0.0
	comp=Z,3.9nm,0.7s,baz=48,slow=2.9,SNR=26						
BRTR				LR	LR	17 36 43.5	
	comp=Z,23nm,19.5s,baz=330,slow=39						
	comp=Z,3.9nm,0.7s						
BRTR	Keskin Array B	84.56	337	P	P	16 54 36.3	-0.6
GSI	Gunungsitoli	86.12	267	P	P	16 54 45.6	+0.9
AS01	Alice Springs	86.85	224	P	P	16 54 49.1	+1.1
AS31	Alice Springs	86.87	224	P	P	16 54 47.2	-0.9
ASAR	Alice Springs	86.87	224	P	P	16 54 49.0	+1.0
	comp=Z,5.6nm,0.8s,baz=22,slow=5.6,SNR=71						
ASAR				pP	pP	16 55 23.6	-0.2
	comp=Z,4.7nm,0.8s,baz=31,slow=4.6,SNR=9.5						
	comp=Z,5.6nm,0.8s						
INKA	Innaminka	87.80	217	P	P	16 54 54.4	+2.0
ESDC	Sonseca Array	88.23	5	P	P	16 54 53.5	-1.1
	comp=Z,1.2nm,0.8s,baz=347,slow=3.9,SNR=7.7						
	comp=Z,1.2nm,0.8s						
OOD	Oodnadatta	89.79	221	P	P	16 55 03.1	+1.4
STKA	Stephens Creek	91.26	214	P	P	16 55 09.8	+1.3
	comp=Z,3.3nm,0.6s,baz=350,slow=4.1,SNR=9.7						
STKA				pP	pP	16 55 44.3	-0.8
	comp=Z,4.8nm,0.7s,baz=360,slow=6.7,SNR=6.4						
	comp=Z,3.3nm,0.6s						
TORD	Torodi Ar. Bea	114.84	1	PKP	PKiKP	17 00 42.1	-1.5
	comp=Z,0.8nm,0.6s,baz=11,slow=2.7,SNR=7.6						
TORD				PKKPab	PKKPab	17 11 26.6	-3.0
	comp=Z,1.5nm,0.9s,baz=172,slow=3.8,SNR=5.2						
H03N2	Juan Fernandez	120.37	106	T	T	19 12 32.6	
	baz=317,slow=77,SNR=44						
H03N1	Juan Fernandez	120.38	106	T	T	19 12 38.4	
	baz=317,slow=77,SNR=41						
H03N3	Juan Fernandez	120.38	106	T	T	19 12 42.5	
	baz=317,slow=77,SNR=48						
DBIC	Dimbokro	120.91	9	PKP	PKPdf	17 00 54.0	-1.2
	comp=Z,1.2nm,0.4s,baz=343,slow=4.9,SNR=4.1						
KMBO	Kilima Mbogo	121.52	319	PKP	PKPdf	17 00 56.6	-0.1
	comp=Z,0.8nm,0.5s,baz=12,slow=9.3,SNR=3.9						
KMBO	Kilima Mbogo	121.52	319	*i* PKIKP	PKiKP	17 00 58.2	+1.3
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BDFB	Brasilia	125.77	67	PKP	PKPdf	17 01 04.5	0.0
	comp=Z,1.9nm,0.5s,baz=285,slow=5.4,SNR=3.7						
CPUP	Villa Florida	128.44	84	PKP	PKPdf	17 01 08.7	-0.6
	comp=Z,3.3nm,0.6s,baz=284,slow=2.5,SNR=9.1						
PLCA	Paso Flores	130.22	107	PKP	PKPdf	17 01 12.7	+0.4
	comp=Z,6.3nm,0.9s,baz=275,slow=3.0,SNR=16						
PLCA				SKPbc	SKPab	17 04 21.6	0.0
	comp=Z,4.1nm,0.8s,baz=283,slow=4.6,SNR=14						
PLCA	Paso Flores	130.22	107	PKPdf	PKiKP	17 01 13.0	-0.1
LBTB	Lobatse	147.80	319		PKPbc	17 01 47.7	0.0
LBTB	Lobatse	147.80	319	PKP2	PKPbc	17 01 47.7	0.0
MAW	Mawson	147.85	219	PKPbc	PKiKP	17 01 47.9	-0.2
	comp=Z,9.5nm,0.6s,baz=98,slow=3.4,SNR=84						
BOSA	Boshof	151.12	316	PKP	PKPdf	17 01 50.1	+0.3
	comp=Z,18nm,0.5s,baz=354,slow=0.1,SNR=4.4						
BOSA				PKPbc	PKPbc	17 01 55.5	-0.3
	comp=Z,18nm,0.5s,baz=24,slow=2.3,SNR=63						
VNA3	Neumayer Olymp	160.14	168	PKPdf	PKPdf	17 01 59.9	-0.4
SNAA	Sanae	160.36	175	PKPab	PKPab	17 02 42.7	+0.3
SNAA	Sanae	160.36	175	PKPdf	PKPdf	17 02 00.3	-0.4
VNA2	Neumayer--Watz	160.71	170	PKPab	PKPab	17 02 44.4	+0.6
	baz=184,slow=3.7						
VNA2	Neumayer--Watz	160.71	170	PKPdf	PKPdf	17 01 57.5	-3.5
	baz=275,slow=1.1						
VNA1	Neumayer--Stat	160.86	169	PKPdf	PKPdf	17 01 59.3	-1.8

*NNC **22** 16:45:47.6±0.8, 41°.22N×78°.71E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=5.6km s-min=3.6km az=165.0*
*SOME **22** 16:45:47.0, 41°.22N×78°.63E, h10km*
*IDC **22** 16:45:47.9±2.7, 41°.43N×78°.52E, h0km, mb3.4/2, mbtmp3.4/3, ML3.2/1, MS2.7/3, Error ellipse: s-maj=54.4km s-min=21.5km az=140.0*
*KRNET **22** 16:45:48.7±0.1, 41°.07N×78°.81E, mb4.0*
ISC 22 16:45:47.1±1.8, 41°.22N±0°.06×78°.60E±0°.04, h10km±11km, n79, σ1.9 47/108, 20C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	1.84	356	*eP*	Pg	16 46 23.1	+0.7
	520nm,0.6s						
SATY				*eS*	Sg	16 46 49.4	+3.0
	920nm,1.2s						
ZHN	Zhinishke	1.95	357	*eP*	Pg	16 46 24.4	0.0
	368nm,0.3s						
ZHN				*eS*	Sg	16 46 51.6	+1.8
	478nm,0.5s						
ZHN	Zhinishke	1.95	357	Pg	Pg	16 46 24.4	0.0
	368nm,0.3s						
ZHN				Lg	Lg	16 46 51.6	
	478nm,0.5s						
UZB	Uzynbulak	1.95	9	*eP*	Pb	16 46 23.5	+0.6
	40nm,0.3s						
UZB				*eS*	Sg	16 46 49.7	-0.2
	336nm,0.5s						
UZB	Uzynbulak	1.95	9	Pg	Pb	16 46 23.5	+0.6
	40nm,0.3s						
UZB				Lg	Lg	16 46 49.7	
	336nm,0.5s						
NRN	Naryn	1.97	277	⇑*eP*	Pg	16 46 25.3	+0.5
	baz=80						
NRN				⇑*eS*	Sg	16 46 51.8	+1.5
	baz=80						
ULHL	Ulahol	2.04	301	P	Pg	16 46 27.2	+1.0
	SNR=21						
ULHL	Ulahol	2.04	301	⇑*eP*	Pg	16 46 26.3	+0.1
	baz=2.0						
ULHL				⇑*eS*	Sg	16 46 53.9	+1.3
	baz=2.0						
SHLS	Shalkode	2.04	18	*eP*	Pg	16 46 26.4	+0.2
	230nm,0.4s						
SHLS				*eS*	Sg	16 46 54.7	+2.1
	344nm,0.6s						
SHLS	Shalkode	2.04	18	Pg	Pg	16 46 26.4	+0.2
	230nm,0.4s						
SHLS				Lg	Lg	16 46 54.7	
	344nm,0.6s						
TNSS	Tian-Shan	2.19	327	*eP*	Pg	16 46 29.3	+0.2
	116nm,0.3s						
TNSS				*eS*	Sg	16 46 59.6	+2.1
	452nm,0.8s						
TNSS	Tian-Shan	2.19	327	Pg	Pg	16 46 29.3	+0.2
	116nm,0.3s						
TNSS				Lg	Lg	16 46 59.6	
	452nm,0.8s						
PDGK	Podgornoye	2.21	17	⇑Pg	Pb	16 46 26.7	-0.5
	57nm,0.5s						
PDGK				⇑Lg	Lg	16 46 56.9	
	1μm,0.8s						
KPKS	Kokpek	2.25	2	*eP*	Pb	16 46 28.2	+0.4
	137nm,0.3s						
KPKS				*eS*	Sg	16 46 58.4	-0.8
	1μm,0.5s						
KPKS	Kokpek	2.25	2	Pg	Pb	16 46 28.2	+0.4
	137nm,0.3s						
KPKS				Lg	Lg	16 46 58.4	
	1μm,0.5s						
MDOK	Medeo	2.26	330	*eP*	Pb	16 46 29.2	+1.2
	124nm,0.5s						
MDOK				*eS*	Sg	16 46 59.2	-0.4
	419nm,0.9s						
MDOK	Medeo	2.26	330	Pg	Pb	16 46 29.2	+1.2
	124nm,0.5s						
MDOK				Pg	Pb	16 46 29.3	+1.2
	110nm,0.7s						
MDOK				Lg	Lg	16 46 59.2	
	419nm,0.9s						
MDOK				Lg	Lg	16 46 59.3	
	374nm,0.6s						
KURS	Kuram	2.29	352	*eP*	Pg	16 46 30.0	-1.0
	174nm,0.9s						
KURS				*eS*	Sg	16 47 01.6	+1.0
	396nm,0.7s						
KURS	Kuram	2.29	352	Pg	Pg	16 46 30.0	-1.0
	174nm,0.9s						
KURS				Lg	Lg	16 47 01.6	
	396nm,0.7s						
KOTS	Kotyrbulak	2.29	332	*eP*	Pg	16 46 30.7	-0.3
	193nm,0.2s						
KOTS				*eS*	Sg	16 47 02.2	+1.4
	481nm,0.5s						
KOTS	Kotyrbulak	2.29	332	Pg	Pg	16 46 30.7	-0.3
	193nm,0.2s						
KOTS				Lg	Lg	16 47 02.2	
	481nm,0.5s						
KNDC	Almaty	2.33	329	⇑Pg	Pg	16 46 31.3	-0.6
	162nm,0.7s						
KNDC				⇑Lg	Lg	16 47 04.6	
	745nm,0.5s						
AAA	Alma-Ata	2.35	328	*eP*	Pg	16 46 32.0	-0.1
	284nm,0.2s						
AAA				*eS*	Sg	16 47 04.4	+1.9
	57nm,0.6s						
AAA	Alma-Ata	2.35	328	Pg	Pg	16 46 32.0	-0.1
	284nm,0.2s						
AAA				Lg	Lg	16 47 04.4	
	57nm,0.6s						
MTBS	Maitube	2.50	321	*eP*	Pg	16 46 34.4	-0.5
	42nm,0.4s						
MTBS				*eS*	Sg	16 47 08.2	+0.9
	195nm,0.6s						
MTBS	Maitube	2.50	321	Pg	Pg	16 46 34.4	-0.5
	42nm,0.4s						
MTBS				Lg	Lg	16 47 08.2	
	195nm,0.6s						
KTMS	Ketmen	2.58	30	*eP*	Pb	16 46 33.5	0.0
	36nm,0.4s						
KTMS				*eS*	Sg	16 47 07.4	-2.5
	215nm,0.8s						
KTMS	Ketmen	2.58	30	Pg	Pb	16 46 33.4	0.0
	36nm,0.4s						
KTMS				Lg	Lg	16 47 07.4	
	215nm,0.8s						
KST	Kastek	2.67	314	*eP*	Pg	16 46 37.7	-0.7
	46nm,0.5s						
KST				*eS*	Sg	16 47 14.1	+1.1
	234nm,0.8s						
KST	Kastek	2.67	314	Pg	Pg	16 46 37.7	-0.7
	46nm,0.5s						
KST				Lg	Lg	16 47 14.1	
	234nm,0.8s						
TKM2	Tokmak 2	2.81	308	P	Pb	16 46 37.1	-0.3
	SNR=29						
TKM2	Tokmak 2	2.81	308	⇑*eP*	Pb	16 46 36.9	-0.5
	baz=9.0						
TKM2				⇑*eS*	Sb	16 47 12.6	+0.6
	baz=9.0						
TKM2	Tokmak 2	2.81	308	⇓Pg	Pb	16 46 37.2	-0.3
	19nm,0.5s						
TKM2				⇑Lg	Lg	16 47 19.0	
	262nm,0.6s						
KTBS	Karatobe	2.87	331	*eP*	Pg	16 46 40.4	-1.5
	26nm,0.2s						
KTBS				*eS*	Sg	16 47 18.9	-0.2
	636nm,0.8s						
KTBS	Karatobe	2.87	331	Pg	Pg	16 46 40.4	-1.5
	26nm,0.2s						
KTBS				Lg	Lg	16 47 18.9	
	636nm,0.8s						
BLB	Baldybastay	2.88	358	*eP*	Pg	16 46 41.0	-1.1
	115nm,0.3s						
BLB				*eS*	Sg	16 47 19.3	-0.2
	310nm,0.4s						
BLB	Baldybastay	2.88	358	Pg	Pg	16 46 41.1	-1.1
	115nm,0.3s						
BLB				Lg	Lg	16 47 19.3	
	310nm,0.4s						
CHKK	Chushkaly	2.89	336	*eP*	Pg	16 46 41.3	-1.1
	81nm,0.5s						
CHKK				*eS*	Sg	16 47 20.4	+0.5
	324nm,0.6s						
CHKK	Chushkaly	2.89	336	Pg	Pg	16 46 41.3	-1.1
	81nm,0.5s						
CHKK				Lg	Lg	16 47 20.3	
	324nm,0.6s						
DGS	Degeres	2.91	315	*eP*	Pg	16 46 41.8	-1.1
	44nm,0.6s						
DGS				*eS*	Sg	16 47 21.2	+0.6
	130nm,0.6s						
DGS	Degeres	2.91	315	Pg	Pg	16 46 41.8	-1.1
	44nm,0.6s						
DGS				Lg	Lg	16 47 21.2	
	130nm,0.6s						
ARXS	Arharly	3.04	350	*eP*	Pg	16 46 43.8	-1.6
	117nm,0.6s						
ARXS				*eS*	Sg	16 47 24.3	-0.6
	129nm,0.7s						
ARXS	Arharly	3.04	350	Pg	Pg	16 46 43.8	-1.6
	117nm,0.6s						
ARXS				Lg	Lg	16 47 24.3	
	129nm,0.7s						
KBK	Karagaybulak	3.08	299	P	Pb	16 46 41.1	-0.9
	SNR=10						
KBK	Karagaybulak	3.08	299	⇓*eP*	Pb	16 46 40.7	-1.3
	baz=0.0						
KBK				⇓*eS*	Sb	16 47 18.5	-1.2
	baz=0.0						
KUU	Kurty	3.15	329	*eP*	Pb	16 46 45.3	+2.2
	81nm,0.7s						
KUU				*eS*	Sg	16 47 27.0	-1.2
	126nm,0.7s						
UCH	Uchtor	3.22	290	P	Pb	16 46 42.4	-2.2
	SNR=6.6						
UCH	Uchtor	3.22	290	⇓*eP*	Pb	16 46 42.8	-1.8
	baz=91						
UCH				⇓*eS*	Sb	16 47 22.0	-2.0
	baz=91						
DJR	Jarkent	3.23	15	*eP*	Pb	16 46 45.9	+1.3
	15nm,0.3s						
DJR				*eS*	Sg	16 47 27.

TDK				*e*S		**Sg**	**16 47 47.6 -0.9**
	406nm,1.3s						
TDK	**Taldyqorghan**	**3.78 358**		Pg		**Pg**	**16 46 57.4 -2.1**
	177nm,0.4s						
TDK				Lg		Lg	16 47 47.6
	406nm,1.3s						
EKS2	**Erkin-Say**	**3.87 293**		P		**Pg**	**16 47 01.1 -0.1**
	SNR=7.8						
MRKS	**Merke**	**4.28 293**		*e*P		**Pg**	**16 47 08.8 -0.4**
	7.8nm,0.5s						
MRKS				*e*S		**Sg**	**16 48 06.9 +2.3**
	62nm,0.5s						
MRKS	**Merke**	**4.28 293**		Pg		**Pg**	**16 47 08.7 -0.4**
	7.8nm,0.5s						
MRKS				Lg		Lg	16 48 06.9
	62nm,0.5s						
BTLS	**Baital**	**5.07 320**		*e*P		**Pg**	**16 47 20.6 -3.5**
	7.1nm,0.8s						
BTLS				*e*S		**Sg**	**16 48 28.2 -1.5**
	17nm,0.7s						
BTLS	**Baital**	**5.07 320**		Pg		**Pg**	**16 47 20.6 -3.5**
	7.1nm,0.8s						
BTLS				Lg		Lg	16 48 28.2
	17nm,0.7s						
MAKZ	**Makanchi**	**6.09 22**		⇓Pn		**Pn**	**16 47 18.5 +1.3**
	2.5nm,0.7s						
MAKZ				⇑Lg		Lg	16 49 00.2
	5.8nm,0.6s						
MK31	**Makanchi Array**	**6.17 24**		⇑Pn		**Pn**	**16 47 19.5 +1.2**
	0.6nm,0.3s,baz=206,slow=12,SNR=36						
MK31				⇑Lg		Lg	16 49 02.9
	7.6nm,0.6s						
MKAR	**Makanchi Array**	**6.17 24**		Pn		**Pn**	**16 47 19.6 +1.2**
	0.6nm,0.3s,baz=204,slow=13,SNR=31						
MKAR				Sn		**Sn**	**16 48 28.1 -0.9**
	0.8nm,0.3s,baz=197,slow=20,SNR=2.2						
MKAR				LR		LR	16 49 53.4
	comp=Z,31nm,20.9s,baz=198,slow=41						
	0.7nm,0.3s						
KK31	**Karatay Array**	**6.30 290**		⇓Pg		**Pg**	**16 47 44.0 -3.6**
	4.2nm,0.7s,baz=108,slow=16,SNR=23						
KK31				Lg		Lg	16 49 09.0
	6.2nm,0.6s,baz=101,slow=29,SNR=7.5						
IUG	**Iuzhnay**	**6.48 281**		*e*P		**Pg**	**16 47 49.8 -1.3**
	67nm,0.7s						
IUG				*e*S		**Sg**	**16 49 18.3 +3.2**
	50nm,1.4s						
OTUK	**Ortayu**	**8.31 330**		⇑Pn		**Pn**	**16 47 50.5 +2.8**
	3.5nm,0.9s						
OTUK				⇑Lg		Lg	16 50 14.5
	22nm,0.8s						
CEP	**Cherat**	**9.09 218**		P		Pn	16 48 05.9 +7.4
KURBB	**Kurchatov Arra**	**9.40 360**		⇑Lg		Lg	16 50 45.5
	25nm,0.8s						
KURK	**Kurchatov**	**9.50 0**		⇓Lg		Lg	16 50 50.1
	22nm,1.0s						
SONM	**Songino Array**	**20.82 62**		P		Pn	16 50 30.6 -0.6
	0.7nm,0.8s,baz=258,slow=12,SNR=4.1						
	0.7nm,0.8s						
PALK	**Pallekele**	**33.86 176**		LR		LR	17 05 17.5
	comp=Z,48nm,18.8s,baz=320,slow=34						
BRTR	**Keskin Array B**	**33.95 283**		P		**P**	**16 52 32.0 +1.3**
	0.8nm,0.8s,baz=90,slow=10,SNR=5.2						
	0.8nm,0.8s						

TAP 22 16:51:26.5, 23.°09N×121.°17E, h14km, ML2.4, 3C-11D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECS	**Chishang**	**0.04**	**83**	⇑*i*P	Pg	16 51 29.8	+0.7
	baz=82						
ECS				*i*S	Sg	16 51 32.4	+1.4
	baz=82						
EHD	**Haiduan**	**0.07**	**29**	⇑*i*P	Pg	16 51 28.6	-0.8
	baz=21						
EHD				*i*S	Sg	16 51 30.4	-0.8
	baz=21						
FULB	**Fuli**	**0.16**	**46**	*e*P	Pb	16 51 31.4	+0.2
	baz=36						
FULB				*e*S	Sb	16 51 35.1	+0.7
	baz=36						
EDH	**Donghe**	**0.17**	**134**	⇓*i*P	Pb	16 51 31.4	-0.1
	baz=135						
EDH				S	Sb	16 51 35.1	+0.4
	baz=135						
ELDTW	**Lidau**	**0.17**	**305**	*i*P	Pg	16 51 30.9	+0.1
	baz=305						
ELDTW				*i*S	Sg	16 51 33.5	-0.1
	baz=305						
CHKT	**Chengkung**	**0.18**	**87**	⇓P	Pb	16 51 31.3	-0.3
	baz=103						
CHKT				*i*S	Sb	16 51 35.4	+0.4
	baz=103						
LONT	**Longtian**	**0.19**	**192**	⇓*i*P	Pg	16 51 31.2	+0.4
	baz=201						
LONT				*i*S	Sb	16 51 34.8	-0.4
	baz=201						
TWG	**Pinlang**	**0.28**	**199**	⇓*i*P	Pg	16 51 32.5	0.0
	baz=208						
TWG				S	Sg	16 51 37.0	+0.5
	baz=208						
TWGBT	**Beinan**	**0.28**	**197**	⇓*i*P	Pg	16 51 32.5	0.0
	baz=208						
TWGBT				*i*S	Sg	16 51 37.0	+0.5
	baz=208						
TWF1	**Yuli**	**0.29**	**24**	*e*P	Pg	16 51 32.7	+0.1
	baz=15						
TWF1				*e*S	Sg	16 51 36.9	+0.3
	baz=15						
EYUL	**Yuli**	**0.29**	**28**	*e*P	Pb	16 51 33.5	0.0
	baz=21						
YULB	**Yu-li**	**0.32**	**21**	P	Pb	16 51 33.9	-0.2
YULB	**Yu-li**	**0.32**	**21**	P	Pg	16 51 33.2	0.0
	baz=11						
YULB				S	Sg	16 51 37.9	+0.2
	baz=11						
YULB	**Yu-li**	**0.32**	**21**	P	Pg	16 51 32.9	-0.3
ECBN	**Changbin**	**0.34**	**49**	*e*P	Pg	16 51 31.3	-2.2
	baz=62						
ECBN				*e*S	Sb	16 51 40.2	+0.5
	baz=62						
STYH	**Taoyuan**	**0.37**	**282**	⇓*i*P	Pg	16 51 33.4	-0.6
	baz=289						
STYH				S	Sg	16 51 38.7	-0.4
	baz=289						
STYT	**Tauyuan**	**0.39**	**281**	⇓*i*P	Pg	16 51 34.7	+0.3
	baz=281						
STYT				*i*S	Sg	16 51 40.1	+0.4
	baz=281						
EHY	**Hungye**	**0.44**	**19**	*e*P	Pb	16 51 35.8	-0.3
	baz=10.0						
EHY				*e*S	Sg	16 51 41.3	+0.2
	baz=10.0						
YUS	**Yu-Shan**	**0.45**	**333**	P	Pg	16 51 35.8	+0.3
	baz=331						
YUS				*i*S	Sg	16 51 42.0	+0.3
	baz=331						
HGSD	**Ruisui**	**0.46**	**30**	*e*P	Pn	16 51 37.6	-1.1
	baz=16						
HGSD				*e*S	Sb	16 51 44.9	+1.7
	baz=16						
SLGT	**Liugui**	**0.49**	**259**	*e*P	Pg	16 51 36.5	+0.2
	baz=263						
SLGT				*e*S	Sg	16 51 42.9	+0.1
	baz=263						
LDUT	**Ludao**	**0.50**	**146**	P	Pg	16 51 36.5	+0.2
	baz=135						
LDUT				S	Sb	16 51 44.8	+0.6
	baz=135						
ECL	**Taimali**	**0.53**	**202**	*e*P	Pg	16 51 36.6	-0.3
	baz=204						
ECL				S	Sg	16 51 43.3	-0.7
	baz=204						
WTP	**Ta-pu**	**0.54**	**287**	⇓*i*P	Pb	16 51 37.8	+0.1
	baz=286						
WTP				S	Sb	16 51 45.5	+0.2
	baz=286						
ALS	**Alishan**	**0.54**	**321**	⇓*i*P	Pb	16 51 37.9	0.0
	baz=319						
ALS				*i*S	Sb	16 51 45.4	-0.2
	baz=319						
TPUB	**Ta-pu**	**0.54**	**293**	P	Pb	16 51 37.9	+0.1
TPUB	**Ta-pu**	**0.54**	**293**	⇓P	Pb	16 51 38.0	+0.2
	baz=300						
TPUB				S	Sb	16 51 45.4	0.0
	baz=300						
SGST	**Jiashian**	**0.54**	**269**	*i*P	Pg	16 51 37.1	0.0
	baz=270						
SGST				*i*S	Sg	16 51 44.9	+0.5
	baz=270						
CHN4	**Tsaushan**	**0.59**	**296**	⇓P	Pg	16 51 38.1	0.0
	baz=296						
CHN1	**Nanshi**	**0.60**	**279**	P	Pb	16 51 39.3	+0.5
	baz=279						
CHN1				*e*S	Sb	16 51 47.8	+0.7
	baz=279						
SSD	**Sandimen**	**0.60**	**236**	*e*P	Pg	16 51 37.9	-0.5
	baz=236						
TSMG	**Majia**	**0.62**	**232**	*e*P	Pg	16 51 38.2	-0.4
	baz=231						
TSMG				S	Sg	16 51 45.8	-1.0
	baz=231						
EGFH	**Guangfu**	**0.62**	**22**	*e*P	Pb	16 51 39.1	-0.1
	baz=20						
EGFH				*e*S	Sb	16 51 47.8	0.0
	baz=20						
WCKO	**Fanlu**	**0.63**	**304**	*e*P	Pg	16 51 38.8	+0.1
	baz=308						
WCKO				*e*S	Sb	16 51 48.4	+0.5
	baz=308						
SNST	**Tainan City**	**0.63**	**282**	*e*P	Pn	16 51 41.5	+0.4
	baz=282						
TWK	**Hsinying**	**0.65**	**286**	⇑P	Pb	16 51 39.8	+0.1
	baz=286						
TWK				*e*S	Sb	16 51 48.9	+0.2
	baz=286						
SCST	**Cishan**	**0.66**	**252**	*e*P	Pb	16 51 39.8	+0.1
	baz=253						
VWDT	**VWDT**	**0.66**	**358**	*e*P	Pb	16 51 39.9	0.0
	baz=351						
VWDT				*e*S	Sb	16 51 49.3	+0.4
	baz=351						
WHYT	**Xinyi Township**	**0.67**	**334**	P	Pb	16 51 40.4	+0.3
	baz=332						
WHYT				*e*S	Sb	16 51 49.0	-0.2
	baz=332						
CHN5	**Tsauling**	**0.68**	**318**	*e*P	Pg	16 51 39.7	0.0
	baz=317						
CHN5				*e*S	Sb	16 51 49.3	-0.2
	baz=317						
MASBT	**Mashibuluo**	**0.69**	**226**	P	Pg	16 51 39.5	-0.4
	baz=228						
MASBT				*e*S	Sg	16 51 47.8	-1.2
	baz=228						
SSLB	**Suanglung**	**0.72**	**344**	*e*P	Pb	16 51 40.8	-0.1
	baz=342						
SSLB				*e*S	Sg	16 51 49.3	-0.8
	baz=342						
TWM1	**Shoushan**	**0.74**	**249**	*e*P	Pn	16 51 42.6	+0.1
	baz=250						
ESL	**Shilin**	**0.76**	**18**	*e*P	Pb	16 51 42.0	+0.4
	baz=17						
EAST	**Anshuo**	**0.76**	**203**	*e*P	Pg	16 51 41.1	-0.3
	baz=194						
TAWH	**Dawu Township**	**0.79**	**199**	*e*P	Pg	16 51 41.0	-0.9
	baz=202						
CHY	**Chiayi**	**0.80**	**301**	*e*P	Pn	16 51 42.9	-0.5
	baz=300						
WGK	**Gukeng**	**0.82**	**317**	*e*P	Pb	16 51 42.8	+0.4
	baz=316						
SMLT	**Sun Moon Lake**	**0.83**	**343**	*e*P	Pn	16 51 45.2	+1.3
	baz=341						
WDLH	**Douliu**	**0.83**	**316**	*e*P	Pn	16 51 43.9	+0.1
	baz=314						
WJS	**Zhushan**	**0.83**	**331**	*e*P	Pn	16 51 44.7	+0.8
	baz=329						
TYC	**Yuchr**	**0.86**	**340**	*e*P	Pn	16 51 44.4	+0.2
	baz=344						
TYC				*e*S	Sn	16 51 57.0	+0.5
	baz=344						
OWD	**Renai**	**0.86**	**0**	*e*P	Pg	16 51 43.1	-0.2
	baz=358						
ICHU	**Yijhu**	**0.86**	**288**	*e*P	Pn	16 51 44.6	+0.3
	baz=288						
SCZT	**Fangliau**	**0.88**	**216**	*e*P	Pg	16 51 43.2	-0.3
	baz=222						
WUSB	**Renai**	**0.90**	**357**	*e*P	Pg	16 51 43.8	-0.1
	baz=4.0						
WNT	**Mingjian**	**0.90**	**330**	*e*P	Pn	16 51 45.5	+0.7
	baz=328						
WNT				*e*S	Sn	16 51 59.2	+1.6
	baz=328						
ETM	**Tongmen**	**0.92**	**19**	*e*P	Pg	16 51 44.3	0.0
	baz=23						
WTK	**Tuku**	**0.93**	**310**	*e*P	Pn	16 51 46.4	+1.2
	baz=308						
SLIU	**Shizi**	**0.94**	**202**	*e*P	Pb	16 51 44.3	-0.2
	baz=196						
CHGB	**Renai**	**0.97**	**0**	*e*P	Pn	16 51 45.6	-0.2
	baz=357						
CHGB				S	Sg	16 51 58.2	+0.3
	baz=357						
DPDB	**Guoxing**	**0.97**	**347**	*e*P	Pn	16 51 46.0	+0.3
	baz=344						
WSL	**Shuilin Townsh**	**0.97**	**297**	*e*P	Pb	16 51 45.0	0.0
	baz=296						
WCS	**Beigang Elemen**	**0.99**	**346**	*e*P	Pb	16 51 45.6	+0.1
	baz=343						
TSCK	**Chigu Township**	**1.00**	**273**	*e*P	Pg	16 51 45.9	+0.1
	baz=286						
WWF	**Wufeng**	**1.04**	**336**	*e*P	Pn	16 51 47.4	+0.7
	baz=333						
WHF	**Hehuan Shan**	**1.05**	**5**	*e*P	Pb	16 51 46.8	0.0
	baz=11						
TWD	**Chiawan**	**1.06**	**22**	*e*P	Pg	16 51 47.7	+0.7
	baz=19						
SMST	**Manzhou Townsh**	**1.11**	**196**	*e*P	Pg	16 51 47.8	-0.1
	baz=188						
ETLH	**Xiulin Townshi**	**1.15**	**14**	*e*P	Pb	16 51 48.2	0.0
	baz=25						
FUSS	**Fushou**	**1.15**	**3**	*e*P	Pn	16 51 48.6	+0.1
	baz=8.0						
WHP	**Taichung City**	**1.20**	**350**	*e*P	Pg	16 51 51.5	+1.8
	baz=357						
TWQ1	**Liyutan**	**1.30**	**344**	*e*P	Pg	16 51 52.3	+0.6
	baz=341						
NNSB	**Datong**	**1.35**	**8**	*e*P	Pg	16 51 52.4	0.0
	baz=5.0						
NNS	**Nan Shan**	**1.36**	**8**	*e*P	Pb	16 51 51.5	-0.3
	baz=4.0						
NSY	**Sanyi**	**1.37**	**344**	*e*P	Pg	16 51 54.1	+1.1
	baz=341						
LATG	**Datong**	**1.48**	**13**	*e*P	Pg	16 51 54.5	-0.4
	baz=21						
NFF	**Wufeng Townshi**	**1.54**	**358**	*e*P	Pb	16 51 55.3	+0.5
NDT	**Datong Townshi**	**1.54**	**12**	*e*P	Pb	16 51 54.8	0.0
	baz=20						
NSTT	**Nanjuang**	**1.54**	**354**	*e*P	Pg	16 51 55.8	-0.3
	baz=349						
LIOB	**Emei**	**1.56**	**355**	*e*P	Pg	16 51 56.0	-0.4
	baz=349						
PNG	**Penghu**	**1.56**	**288**	*e*P	Pb	16 51 54.6	-0.6
	baz=288						
YHNB	**Yeheng**	**1.58**	**7**	*e*P	Pg	16 51 56.3	-0.6
	baz=3.0						
ENTT	**Nioudou**	**1.58**	**13**	*e*P	Pb	16 51 55.5	-0.1
	baz=22						
NSK	**Sanguang**	**1.59**	**6**	*e*P	Pb	16 51 55.8	+0.1
	baz=2.0						
FUSB	**Fushanzhiwuyua**	**1.71**	**13**	*e*P	Pg	16 51 59.6	+0.4
	baz=20						

SOME ***22*** *16:51:46.4, 43.°20N×70.°52E, h0km*
NNC ***22*** *16:51:47.2±0.1, 43.°16N×70.°45E, h0km, Error ellipse: s-maj=2.5km s-min=0.4km az=50.0, Suspected Mining explosion.*
KRNET ***22*** *16:51:47.5±0.1, 43.°14N×70.°48E, mb2.8*

ISC 22 16:51:48.4±1.7, 43.°15N±0.°07×70.°47E±0.°07, h0km, n18, σ0991/36, 21C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.04**	**141**	⇑P	**Pg**	**16 51 48.3**	**-0.8**
KK09				⇑S	**Sg**	**16 51 49.1**	**-0.5**
KK08	**Karatay Array**	**0.05**	**162**	⇑P	**Pg**	**16 51 48.5**	**-0.8**
KK08				⇑S	**Sg**	**16 51 49.3**	**-0.7**
KK04	**Karatay Array**	**0.05**	**146**	⇑P	**Pg**	**16 51 48.5**	**-0.9**
KK04				⇑S	**Sg**	**16 51 49.7**	**-0.4**
KK05	**Karatay Array**	**0.06**	**131**	⇑P	**Pg**	**16 51 48.5**	**-0.9**
KK05				⇑S	**Sg**	**16 51 49.7**	**-0.4**
KK01	**Karatay Array**	**0.06**	**148**	⇑P	**Pg**	**16 51 48.6**	**-0.8**
KK01				⇑S	**Sg**	**16 51 49.8**	**-0.3**
KK03	**Karatay Array**	**0.06**	**153**	⇑P	**Pg**	**16 51 48.6**	**-0.8**
KK03				⇑S	**Sg**	**16 51 49.9**	**-0.3**
KK02	**Karatay Array**	**0.06**	**146**	⇑P	**Pg**	**16 51 48.7**	**-0.8**
KK02				⇑S	**Sg**	**16 51 49.9**	**-0.3**
KK31	**Karatay Array**	**0.06**	**146**	⇑P	**Pg**	**16 51 48.7**	**-0.8**
	9.1nm,0.2s,baz=119,slow=50,SNR=5032						
KK31				⇑S	**Sg**	**16 51 49.7**	**-0.6**
	171nm,0.2s						
KKAR	**Karatay Array**	**0.06**	**146**	⇓*e*P	**Pg**	**16 51 48.8**	**-0.7**
	baz=45						
KKAR				⇓*e*S	**Sg**	**16 51 49.7**	**-0.6**
	baz=45						
KK07	**Karatay Array**	**0.07**	**158**	⇑P	**Pg**	**16 51 48.9**	**-0.8**
KK07				⇑S	**Sg**	**16 51 49.9**	**-0.6**
KK06	**Karatay Array**	**0.07**	**143**	⇑P	**Pg**	**16 51 49.0**	**-0.8**
KK06				⇑S	**Sg**	**16 51 50.1**	**-0.6**
IUG	**Iuzhnay**	**1.06**	**198**	*e*P	**Pg**	**16 52 08.0**	**-0.6**
	3.9nm,0.1s						
IUG				*e*S	**Sb**	**16 52 23.5**	**-0.4**
	12nm,0.3s						
TRKS	**Terek-Say**	**1.70**	**163**	⇑*i*P	**Pn**	**16 52 19.9**	**+0.5**
	baz=63						
TRKS				⇑*i*S	**Sg**	**16 52 43.7**	**+0.8**
	baz=63						
MRKS	**Merke**	**2.07**	**100**	*e*P	**Pn**	**16 52 25.6**	**+1.2**
	3.6nm,0.2s						
MRKS				*e*S	**Sb**	**16 52 53.7**	**+0.6**
	11nm,0.3s						
EKS2	**Erkin-Say**	**2.48**	**100**	⇓*i*P	**Pn**	**16 52 30.7**	**+0.5**
	baz=0.0						
EKS2				⇓*i*S	**Sn**	**16 53 02.0**	**+0.8**
	baz=0.0						
USP	**Ospenovka**	**2.95**	**86**	⇓*e*P	**Pn**	**16 52 37.2**	**+0.7**
	baz=86						
USP				⇓*e*S	**Sn**	**16 53 13.3**	**+0.6**
	baz=86						
KRBS	**Karabastau**	**3.83**	**80**	*e*P	**Pb**	**16 52 55.9**	**-1.0**
	1.5nm,0.1s						
KRBS				*e*S	**Sb**	**16 53 45.1**	**+1.2**
	2.0nm,0.4s						
DGS	**Degeres**	**3.88**	**87**	*e*P	**Pb**	**16 52 58.8**	**+1.0**
	2.3nm,0.3s						
DGS				*e*S	**Sg**	**16 53 50.1**	**-2.9**
	1.9nm,0.3s						

PNSN ***22*** *17:17:05.4, 47.°54N×121.°92W, h24km, MD3.0, Fault plane solution: NP1:φ25.00000°, δ80.00000°, λ20.00000°.*
SEA ***22*** *17:17:05.4±2.2, 47.°54N±0.°02×121.°92W±0.°02, h24km±5km, ML3.0/48, ML2.9/68(NEIC), Error ellipse: s-maj=2.7km s-min=2.2km az=186.0*

NEIC 22 17:17:05.2±2.1, 47.°54N±0.°02×121.°92W±0.°02, h25km±6km, Error ellipse: s-maj=2.7km s-min=2.2km az=191.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELW	**Echo Lake**	**0.06**	**142**		Pb	17 17 09.4	-0.3
ELW					Sb	17 17 12.7	+0.1
PNLK	**Pine Lake Midd**	**0.08**	**300**		Pb	17 17 09.8	0.0
PNLK					Sb	17 17 13.5	+0.7
ALCT	**Alcott Element**	**0.13**	**325**		Pb	17 17 10.4	+0.2
ALCT					Sb	17 17 14.8	+1.3
RATT	**Rattlesnake La**	**0.14**	**144**		Pb	17 17 10.0	-0.3
RATT					Sb	17 17 13.6	0.0
CDMR	**Cedar Moraine**	**0.16**	**136**		Pb	17 17 10.4	-0.1
CDMR					Sb	17 17 14.3	+0.2
MARYW	**Marymoor Park**	**0.18**	**313**		Pb	17 17 11.1	+0.4
WISC	**Wilburton Inst**	**0.18**	**293**		Pb	17 17 11.3	+0.6
WISC					Sb	17 17 16.3	+1.8
MPL	**Maple valley S**	**0.19**	**249**		Pb	17 17 10.7	-0.1
RAW	**Raver**	**0.20**	**182**		Pb	17 17 10.7	-0.2
EARN	**East Ridge Ele**	**0.22**	**338**		Pb	17 17 11.2	+0.1
EARN					Sb	17 17 16.4	+1.3
TTW	**Tolt Reservoir**	**0.22**	**45**		Pb	17 17 11.0	-0.2
TTW					Sb	17 17 15.1	-0.2
C05A	**Tolt Reservoir**	**0.22**	**45**		Pb	17 17 10.8	-0.4
C05A					Sb	17 17 15.0	-0.3
SP2	**Seward Park 2**	**0.22**	**275**		Pb	17 17 11.3	+0.1
SP2					Sb	17 17 16.4	+1.2
LEOT	**Leota Junior H**	**0.26**	**330**		Pb	17 17 11.8	+0.1
LEOT					Sb	17 17 17.5	+1.3
NOWS	**NOAA--Sand Poi**	**0.27**	**303**		Pb	17 17 12.4	+0.6
NOWS					Sn	17 17 19.0	+0.1
KNEL	**Kent Elementar**	**0.27**	**235**		Sn	17 17 18.1	-0.9
FINN	**Finn Hill Juni**	**0.28**	**311**		Pb	17 17 12.4	+0.5
FINN					Sn	17 17 18.7	-0.4
SSS1	**John Stanford**	**0.28**	**279**		Sn	17 17 19.6	+0.5
NIHS	**Ingelmoor High**	**0.29**	**315**		Pb	17 17 12.5	+0.4
ALKI	**Alki Wastewate**	**0.34**	**276**		Pb	17 17 13.4	+0.6
LAWT	**Lawton Element**	**0.34**	**291**		Pb	17 17 13.6	+0.8
LAWT					Sn	17 17 21.0	+0.4
GSM	**Grass Mountain**	**0.35**	**165**		Pb	17 17 12.6	-0.5
D05A	**Enumclaw**	**0.35**	**187**		Pb	17 17 13.0	-0.1
D05A					Sb	17 17 19.0	+0.6
D05A	**Enumclaw**	**0.35**	**187**	IAML		17 17 19.5	
	comp=N,1μm,0.2s						
D05A				IAML		17 17 19.7	
	comp=E,444nm,0.3s						
EVGW	**Everett Gatewa**	**0.35**	**334**		Pb	17 17 12.9	-0.2
EVGW					Sb	17 17 19.3	+0.9
MBPA	**Monroe Substat**	**0.36**	**4**		Pb	17 17 12.8	-0.4
MBPA					Sb	17 17 18.5	-0.2
SCCW	**Shoreline CC**	**0.36**	**306**		Pb	17 17 13.6	+0.4
VVHS	**Vashon High Sc**	**0.38**	**253**		Pb	17 17 13.2	-0.3
VVHS					Sb	17 17 20.0	+0.9
LYNC	**Lynnwood City**	**0.38**	**319**		Pb	17 17 13.5	0.0
SMNR	**Sumner High Sc**	**0.40**	**212**		Pb	17 17 13.8	0.0
PAYL	**Puyallup Schoo**	**0.44**	**218**		Pb	17 17 14.2	-0.2
PAYL					Sn	17 17 22.0	-1.0
PSNS	**PSNS Bremerton**	**0.49**	**273**		Pb	17 17 14.9	-0.4
PCEP	**Pierce County**	**0.49**	**211**		Pb	17 17 15.0	-0.3
EVCC	**Everett Colleg**	**0.51**	**338**		Pb	17 17 15.6	0.0
KINR	**Kitsap County**	**0.53**	**294**		Pb	17 17 15.8	-0.2
GHW	**Garrison Hill**	**0.55**	**206**		Pb	17 17 15.6	-0.8
KIMR	**Kitsap County**	**0.57**	**267**		Sb	17 17 24.7	+0.2
SWID	**South Whidbey**	**0.57**	**325**		Pb	17 17 16.4	-0.3
GMW	**Gold Mountain**	**0.58**	**271**		Pb	17 17 15.9	-1.0
B941	**Kapowsin**	**0.59**	**200**		Pb	17 17 15.9	-1.0
GNW	**Green Mountain**	**0.61**	**273**		Pb	17 17 16.2	-1.1
GNW					Sb	17 17 24.8	-0.8
FMW	**Mount Fremont**	**0.63**	**164**		Pb	17 17 16.9	-0.8
OBSR	**Observation Ro**	**0.64**	**173**		Pb	17 17 17.4	-0.7
PCFR	**Pierce County**	**0.65**	**213**		Pb	17 17 17.2	-0.8
RCS	**Mount Rainier-**	**0.68**	**169**		Pb	17 17 18.0	-0.7
SR41	**SR410 Landslid**	**0.70**	**158**		Pb	17 17 18.1	-0.9
PANH	**Panhandle Gap,**	**0.71**	**164**		Pb	17 17 18.3	-0.8
PANH					Sb	17 17 28.0	-0.4
B013	**Quilcene**	**0.72**	**293**		Pb	17 17 17.9	-1.3
B013					Sb	17 17 27.6	-1.1
REMR	**Mount Rainier-**	**0.72**	**176**		Pb	17 17 18.4	-0.9
C04A	**Brinnon**	**0.73**	**285**		Pb	17 17 18.1	-1.2
C04A					Sb	17 17 28.2	-0.8
WRW	**Wenatchee Ridg**	**0.77**	**65**		Pb	17 17 19.5	-0.6
HDW	**Hoodsport**	**0.77**	**279**		Pb	17 17 18.8	-1.3
GPW	**Glacier Peak**	**0.79**	**42**		Pb	17 17 19.8	-0.6
LON	**Longmire**	**0.79**	**174**

B04A	Port Angeles	1.19	297		Pn	17 17 25.2	-1.1
B04A				Sn	Sn	17 17 40.1	-1.4
B04A	Port Angeles	1.19	297		Pn	17 17 25.1	-1.1
NLW	Nelson Butte	1.20	63		Pn	17 17 26.9	+0.4
OSD	Olympics--Snow	1.23	284		Pn	17 17 27.1	-0.1
B017	Montesano	1.24	245		Pn	17 17 27.0	+0.1
MBW	Mount Baker	1.25	1		Pn	17 17 27.2	0.0
B201	Coldwater, Mou	1.26	191		Pn	17 17 27.0	-0.3
ERK	Elk Rock	1.27	193		Pn	17 17 27.2	-0.3
OLQ	Olympics--Lake	1.28	270		Pn	17 17 27.1	-0.4
JRO	Jston Ridge Ob	1.28	189		Pn	17 17 27.6	0.0
VGZ	Gonzales	1.29	313		Pn	17 17 26.3	-1.3
MCW	Mount Constitu	1.29	332		Pn	17 17 27.2	-0.6
CBSW	Chelan Butte S	1.30	77		Pb	17 17 28.6	-0.4
B202	Windy Ridge, M	1.30	187		Pn	17 17 27.6	-0.4
SOSW	Source of Smit	1.30	187		Pn	17 17 28.1	+0.2
STD	Studebaker Rid	1.32	189		Pn	17 17 28.2	+0.1
SHUK	Shuksan-Mt. Ba	1.33	7		Pn	17 17 28.3	0.0
WISH	Wishkah	1.33	252		Pn	17 17 28.5	+0.4
STW	Striped Peak	1.33	298		Pn	17 17 27.5	-0.7
NLWA	Neilton Lookou	1.33	264	Pn	Pn	17 17 27.8	-0.4
NLWA				Sn	Sn	17 17 45.2	+0.1
BOLM	Sugar Bowl	1.33	188		Pn	17 17 28.8	+0.4
VALT	Mount Saint He	1.34	188		Pn	17 17 28.8	+0.3
WTV	Waterville	1.34	82		Pb	17 17 29.1	-0.6
ESD	East Dome	1.35	187		Pn	17 17 29.2	+0.5
SEPW	September Lobe	1.35	188		Pn	17 17 29.1	+0.3
SHW	Mount Saint He	1.36	189		Pn	17 17 29.2	+0.4
FL2	Flat Top 2	1.37	192		Pn	17 17 29.0	0.0
SWF2	Southwest Flan	1.38	189		Pn	17 17 29.6	+0.6
HSR	South Ridge	1.38	188		Pn	17 17 29.5	+0.4
BMW	Boistfort Moun	1.39	221		Pn	17 17 29.0	-0.1
VA2	Yakima	1.39	136		Pb	17 17 30.1	-0.4
B203	Quarry, Mount	1.40	192		Pn	17 17 29.4	+0.2
ASR	Mount Adams--S	1.41	171		Pn	17 17 30.0	+0.7
CDFW	Cedar Flats	1.43	183		Pn	17 17 30.0	+0.4
VT2	Vantage 2	1.43	113		Pb	17 17 31.3	+0.1
MXC	Moxie City	1.47	130		Pb	17 17 31.8	-0.1
B019	Raymond	1.48	234		Pn	17 17 30.8	+0.6
SNB	Saturna Island	1.49	326		Pn	17 17 30.6	+0.1
E03A	Lebam	1.50	229		Pn	17 17 30.6	+0.1
E03A				Sn	Sb	17 17 50.5	-0.4
E03A				IAML		17 17 53.4	
	comp=N,151nm,0.4s						
E03A				IAML		17 17 56.1	
	comp=E,186nm,0.5s						
RVW	Rose Valley	1.50	202		Pn	17 17 30.8	+0.3
B011	North Saanich	1.51	318		Pn	17 17 30.2	-0.5
PGC	Sidney	1.51	318	Pn	Pn	17 17 30.4	-0.3
PGC				Sn	Sn	17 17 48.9	-0.7
PGC				IAML		17 17 51.1	
	comp=E,222nm,0.3s						
DHW2	Dyer Hill 2	1.52	72		Pb	17 17 32.5	-0.3
MTMW	Mount Mitchell	1.53	188		Pn	17 17 31.9	+0.9
OBC	Olympics--Boni	1.54	290		Pb	17 17 32.7	-0.4
TRW	Toppenish Ridg	1.56	142		Pb	17 17 32.6	-0.9
BVW	Beverly	1.57	117		Pb	17 17 33.3	-0.4
EPH	Ephrata	1.59	96		Pn	17 17 32.1	+0.3
GULW	Guler Mountain	1.63	172		Pb	17 17 33.9	-0.8
B023	Clatskanie	1.63	210		Pn	17 17 33.0	+0.6
F04D	Rainier, OR	1.64	208		Pn	17 17 33.4	+1.0
SAW	Saint Andrews	1.71	84		Pn	17 17 33.7	+0.2
MDW	Midway	1.74	121		Pb	17 17 35.7	-0.8
FHE	Frenchman Hill	1.75	109		Pn	17 17 34.8	+0.8
BENWA	Benson Ranch	1.82	123		Pn	17 17 35.8	+0.8
C03A	Quillayute Air	1.83	284	Pn	Pb	17 17 39.5	+1.5
C03A				Sn	Sn	17 17 58.3	+0.9
C03A				IAML		17 18 06.3	
	comp=E,182nm,1.5s						
C03A				IAML		17 18 39.9	
	comp=N,161nm,2.7s						
CRF	Corfu	1.87	111		Pn	17 17 36.3	+0.6
SNIWA	Snively Ranch	1.89	124		Pn	17 17 36.7	+0.9
LOCW	Locke Island	1.89	115		Pn	17 17 37.0	+1.1
B08A	Colville Reser	1.92	64		Pn	17 17 36.4	-0.1
GBL	Gable Mountain	1.93	118		Pn	17 17 37.6	+1.2
RSW	Rattlesnake Hi	1.96	125		Pn	17 17 38.6	+1.5
HAWA	Hanford	2.00	124	Pn	Pn	17 17 37.8	+0.4
HAWA				IAML		17 18 08.7	
	comp=N,100nm,0.3s						
HAWA				IAML		17 18 13.7	
	comp=N,69nm,0.5s						
BLTW	Bickleton	2.02	143		Pn	17 17 38.3	+0.5
H2OWA	Water	2.06	123		Pb	17 17 40.9	-1.0
D08A	Wollman Farm,	2.10	102		Pn	17 17 38.1	-0.6
D08A				IAML		17 18 12.1	
	comp=N,74nm,0.4s						
D08A				IAML		17 18 14.0	
	comp=E,58nm,0.2s						
F07A	Phinny Hill Vi	2.14	139		Pn	17 17 38.4	-0.9
F07A				IAML		17 18 11.3	
	comp=E,113nm,0.4s						
NLLB	Nanaimo Lost L	2.18	322		Pn	17 17 41.1	+1.2
OD2	Odessa Site #2	2.18	93		Pb	17 17 44.9	+0.9
KMOR	Kings Mountain	2.19	210		Pn	17 17 41.3	+1.2
E08A	Dider Farm, El	2.22	117	Pn	Pn	17 17 39.6	-0.8
E08A				IAML		17 18 12.7	
	comp=N,83nm,0.3s						
E08A				IAML		17 18 20.3	
	comp=E,103nm,0.5s						
HOOD	Mount Hood Mea	2.23	175		Pn	17 17 39.2	-1.5
C09A	Chrisman Ranch	2.48	83		Pn	17 17 43.6	-0.5
JBO	Jordan Butte	2.53	145		Pn	17 17 45.3	+0.5
HEBO	Mount Hebo	2.65	209	Pn	Pn	17 17 45.5	-0.9
OZB	Mount Ozzard	2.78	302	Pn	Pn	17 17 47.5	-0.6
OZB				IAML		17 18 36.2	
	comp=N,72nm,2.0s						
E09A	Wood Farm, Sta	2.78	110		Pn	17 17 46.6	-1.5
E09A				IAML		17 18 36.7	
	comp=N,55nm,0.3s						
E09A				IAML		17 18 38.0	
	comp=E,44nm,0.4s						
H04A	Detroit Lake	2.86	184	Pn	Pn	17 17 50.5	+1.2
H04A				IAML		17 18 36.5	
	comp=E,35nm,0.4s						
H04A				IAML		17 18 37.6	
	comp=N,40nm,1.4s						
G08A	Pilot Rock	3.04	137		Pn	17 17 52.3	+0.4
G08A				IAML		17 18 45.6	
	comp=N,28nm,0.4s						
G08A				IAML		17 18 47.3	
	comp=E,26nm,0.5s						
LLLB	Lilloet	3.07	0	Pn	Pn	17 17 52.1	-0.1
LLLB				IAML		17 18 45.7	
	comp=N,27nm,0.5s						
COR	Corvallis	3.11	199	Pn	Pn	17 17 53.8	+1.2
COR				IAML		17 19 44.9	
	comp=N,47nm,3.0s						
COR				IAML		17 19 54.0	
	comp=N,53nm,4.0s						
NEW	Newport	3.31	76	Pn	Pn	17 17 55.1	-0.3
NEW				IAML		17 18 50.6	
	comp=N,25nm,0.9s						
BUCK	Buck Mountain	3.42	193	Pn	Pn	17 17 56.1	-1.0
PINE	Pine Mountain	3.81	169	Pn	Pn	17 18 05.6	+3.1
PINE				IAML		17 19 14.0	
	comp=N,25nm,4.5s						
PINE				IAML		17 20 12.0	
	comp=E,20nm,4.6s						
I07A	Izee	3.85	153	Pn	Pn	17 18 04.4	+1.5
I07A				IAML		17 19 10.4	
	comp=N,12nm,4.4s						
BMO	Blue Mountains	4.18	128		Pn	17 18 07.1	-0.4
DBO	Dodson Butte	4.52	192	Pn	Pn	17 18 11.1	-1.0
PLID	Pearl Lake	4.78	119		Pn	17 18 17.2	+1.4
PLID				IAML		17 19 48.3	
	comp=N,6.8nm,3.2s						
PLID				IAML		17 19 50.2	
	comp=N,6.9nm,2.6s						
J08A	Circle Bar Ran	4.83	149	Pn	Pn	17 18 16.2	-0.3
KEBM	Edson Butte	4.97	201	Pn	Pn	17 18 16.2	-2.1
MSO	Missoula	5.49	94	Pn	Pn	17 18 22.6	-2.8
WALA	Waterton Lakes	5.56	71	Pn	Pn	17 18 25.1	-1.3
JORV	Jorden Valley	5.71	141		Pn	17 18 26.7	-1.8
LHEM	Herd Peak	5.91	182		Pn	17 18 33.5	+2.1
GRNB	Grenville Isla	8.12	324	Pn	Pn	17 19 02.1	+0.7

NEIC ***22*** *17:23:48.4±1.9, 20°.2S±0°.1×170°.00E±0°.06, h99km±12km, mb4.3/8, Error ellipse: s-maj=21.1km s-min=6.9km az=194.0*
IDC ***22*** *17:23:50.6±6.3, 20°.40S×169°.76E, h111km±42km, mb3.4/4, mbtmp3.8/5, Error ellipse: s-maj=98.3km s-min=48.3km az=148.0*
NOU ***22*** *17:23:56.5, 20°.46S×169°.50E, h80km, MLv4.1/12, Vanuatu Islands*

ISC 22 17:23:51.8±0.9, 20°.52S±0°.08×169°.79E±0°.08, h122km, n31, σ1§26/37, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.90	240		Pn	17 24 23.4	-0.8
MARNC				Sn	Sn	17 24 46.8	-2.1
MARNC	Mare, Loyalty	1.90	240	P	Pn	17 24 24.1	0.0
LIFNC	LIFOU	2.40	264		Pn	17 24 29.3	-1.1
LIFNC				Sn	Sn	17 24 56.8	-3.3
LIFNC	LIFOU	2.40	264	P	Pn	17 24 29.5	-0.9
YATNC	Mamie plateau,	3.11	240	P	Pn	17 24 40.3	+0.7
DVP	Devils Point	3.17	331	P	Pn	17 24 41.5	+1.1
OUENC	Ouen Island, N	3.33	235		Pn	17 24 43.8	+1.2
OUENC				Sn	Sn	17 25 22.1	+0.3
OUENC	Ouen Island, N	3.33	235	P	Pn	17 24 43.7	+1.2
DZM	Mont Dzumac	3.48	243	P	Pn	17 24 45.2	+0.6
	25nm,0.3s,baz=100,slow=13,SNR=520						
DZM				S	Sn	17 25 23.9	-1.5
	51nm,0.3s,baz=145,slow=23,SNR=18						
DZM	Mont Dzumac	3.48	243		Pn	17 24 45.2	+0.6
DZM				Sn	Sn	17 25 24.4	-1.0
DZM	Mont Dzumac	3.48	243	P	Pn	17 24 45.3	+0.6
ONTNC	Ouen Toro	3.58	240		Pn	17 24 46.9	+1.1
ONTNC				Sn	Sn	17 25 26.1	-1.5
ONTNC	Ouen Toro	3.58	240	P	Pn	17 24 47.3	+1.5
NOUC	Port Laguerre	3.61	244	P	Pn	17 24 47.9	+1.7
KOUNC	Koumac, New Ca	5.16	269	Pn	Pn	17 25 08.4	+1.4
KOUNC	Koumac, New Ca	5.16	269	P	Pn	17 25 08.6	+1.6
RAO	Raoul Island	14.13	130	Pn	Pn	17 27 04.8	-1.8
ARMA	Armidale	19.11	235	P	Pn	17 28 08.8	+1.3
ARMA				IAmb	IAmb	17 28 17.4	
	comp=Z,30nm,1.4s						
BKZ	Black Stump Fm	19.46	164	P	Pn	17 28 11.9	+0.5
BKZ				IAmb	IAmb	17 28 45.3	
	comp=Z,31nm,1.3s						
CTA	Charters Tower	22.08	267	P	P	17 28 38.2	+1.1
	comp=Z,1.2nm,0.5s,baz=104,slow=12,SNR=1.6						
	comp=Z,1.2nm,0.5s						
CTAO	Charters Tower	22.08	267	P	P	17 28 37.9	+0.8
CTAO				IAmb	IAmb	17 28 54.2	
	comp=Z,6.6nm,1.1s						
STKA	Stephens Creek	27.63	240	P	P	17 29 29.0	+0.9
	comp=Z,0.7nm,0.6s,baz=79,slow=16,SNR=1.4						
	comp=Z,0.7nm,0.6s						
BBOO	Buckleboo	32.39	241	P	P	17 30 10.7	+0.7
WB0	Warramunga Arr	33.20	265	P	P	17 30 17.0	-0.3
WB0				IAmb	IAmb	17 30 29.1	
	comp=Z,8.6nm,1.4s						
WB2	Warramunga Arr	33.22	265	P	P	17 30 17.2	-0.2
WRA	Warramunga Arr	33.23	265	P	P	17 30 16.8	-0.7
	comp=Z,0.4nm,0.5s,baz=92,slow=8.3,SNR=8.2						
	comp=Z,0.4nm,0.5s						
AS31	Alice Springs	33.34	258	P	P	17 30 18.4	-0.1
ASAR	Alice Springs	33.34	258	P	P	17 30 18.4	-0.1
	comp=Z,2.4nm,0.8s,baz=94,slow=9.1,SNR=35						
	comp=Z,2.4nm,0.8s						
ASAR	Alice Springs	33.34	258	P	P	17 30 18.0	-0.5
QSPA	South Pole Qui	69.54	180	P	P	17 34 48.4	+1.1
QSPA				IAmb	IAmb	17 35 07.3	
	comp=Z,7.4nm,1.5s						
GERES	GERESS Array B	145.86	332	PKPbc	PKPdf	17 43 14.3	-1.9
	comp=Z,0.3nm,0.6s,baz=52,slow=6.4,SNR=3.8						

ROM 22 17:29:16.2±0.1, 42°.802N±0°.004×13°.236E±0°.005, h9km, ML1.0/4, Error ellipse: s-maj=0.5km s-min=0.3km az=33.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	327	P	Pg	17 29 18.7	+0.2
T1245				S	Sg	17 29 20.2	+0.1
T1245				AML	AML		
	comp=E,123μm,1.3s						
T1245				AML	AML		
	comp=N,161μm,0.3s						
NRCA	Norcia	0.10	290	P	Pg	17 29 19.3	+0.5
NRCA				S	Sg	17 29 21.0	+0.5
NRCA				AML	AML		
	comp=E,170μm,0.9s						
NRCA				AML	AML		
	comp=N,170μm,0.1s						
T1202	Accumoli, Fraz	0.10	185	P	Pg	17 29 19.2	+0.4
T1202				S	Sg	17 29 21.0	+0.3
MMO1	Montemonaco	0.12	34	P	Pg	17 29 19.6	+0.5
MMO1				S	Sg	17 29 21.6	+0.5
T1216	Preci, Frazion	0.18	299	P	Pg	17 29 19.9	-0.2
T1216				S	Sg	17 29 24.0	+1.3
T1243	Rocca Santa Ma	0.19	124	P	Pg	17 29 21.0	+0.7
T1243				S	Sg	17 29 24.2	+1.2
TERO	Teramo	0.33	123	P	Pg	17 29 23.4	+0.7
TERO				S	Sb	17 29 28.7	-0.9
TERO				AML	AML		
	comp=E,20μm,1.4s						
TERO				AML	AML		
	comp=N,22μm,1.6s						

PRU ***22*** *17:31:01.4±0.0, 50°.10N×18°.47E, h0km*

IPEC 22 17:31:01.1±0.2, 50°.09N×18°.53E, h1km, ML1.6/4, Error ellipse: s-maj=2.0km s-min=1.1km az=163.0, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.35	225	*e*PG	Pg	17 31 08.4	+0.6
OKC				*e*SG	Sg	17 31 12.4	0.0
	comp=Z,12nm,0.4s						
MORC	Moravsky Berou	0.71	244	*e*PG	Pg	17 31 14.7	0.0
MORC				*e*SG	Sg	17 31 23.5	-0.4
MORC	Moravsky Berou	0.71	244	*e*Pg	Pg	17 31 14.6	-0.1
	baz=64						
MORC				*e*Sg	Sg	17 31 23.4	-0.5
	12nm,0.3s,baz=64						
OJC	Ojcow	0.83	80	*e*Pg	Pg	17 31 16.3	-0.6
OJC				*e*Sg	Sb	17 31 29.0	-0.9
MAUC	Maruska	0.86	212	*e*PG	Pb	17 31 18.7	-0.1
MAUC				*e*SG	Sg	17 31 29.5	+0.9
KRLC	Kraliky	1.13	270	*e*PG	Pg	17 31 21.6	-1.1
KRLC				*e*SG	Sg	17 31 35.4	-1.9
	comp=Z,4.7nm,0.3s						
JAVC	Velka Javorina	1.35	205	*e*PG	Pg	17 31 26.8	-0.2
JAVC	Velka Javorina	1.35	205	*e*Pg	Pg	17 31 26.7	-0.3
	baz=24						
DPC	Dobruska-Polom	1.44	281	*e*PG	Pn	17 31 27.8	-0.6
DPC				*e*SG	Sg	17 31 46.7	-0.7
	comp=Z,13nm,0.7s						
VRAC	Vranov	1.48	239	*e*PG	Pn	17 31 28.3	-0.6
VRAC				*e*SG	Sg	17 31 47.3	-1.3
VRAC	Vranov	1.48	239	*e*Pg	Pn	17 31 28.2	-0.7
	baz=57						
VRAC				*e*Sg	Sg	17 31 47.3	-1.3
	3.9nm,0.2s,baz=57						
OSTC	Ostas	1.56	288	*e*PG	Pn	17 31 30.0	+0.1
OSTC				*e*SG	Sn	17 31 50.6	-0.2
CHVC	Chvalec	1.66	288	*e*PG	Pn	17 31 31.3	-0.1
KRUC	Moravsky	1.73	234	*e*PN	Pn	17 31 32.2	-0.1
KRUC				*e*SG	Sn	17 31 55.1	+0.1
KRUC	Moravsky	1.73	234	*e*Pn	Pn	17 31 32.2	-0.1
	baz=53						
KRUC				*e*Sg	Sn	17 31 55.0	0.0
	3.7nm,0.3s,baz=53						
GOPC	GO Pecny, Ondr	2.42	267	*e*SG	Sb	17 32 16.0	+0.2
KHC	Kasperske Hory	3.36	255	*e*PG	Pg	17 32 03.5	-2.0
KHC				*e*SG	Sg	17 32 46.1	-2.9

JMA 22 17:38:13.2±0.0, 35°.4N±0°.2×133°.8E±0°.1, h5km, MV0.6/29, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.05	190	P	Pg	17 38 14.4	-0.1
JAD	Aida	0.56	150	P	Pg	17 38 23.9	0.0
JAD				*e*S	Sg	17 38 31.5	+0.3
JNM	Ikuma	0.66	276	*e*P	Pg	17 38 26.1	+0.2
JNM				*e*S	Sg	17 38 35.1	+0.8
JKSM	Kasumi	0.70	76	*e*S	Sg	17 38 35.8	+0.1
JKS	Kasai	0.94	118	*e*P	Pg	17 38 30.9	-0.4

JMA 22 17:38:27.5±0.2, 35°.1N±0°.6×135°.4E±0°.6, h13km±2km, MV0.6/19, MID KYOTO PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.22	0	*e*P	Pg	17 38 32.4	+0.1
JWT				*e*S	Sb	17 38 36.5	-0.9
JKS	Kasai	0.46	261	*e*S	Sg	17 38 42.6	-0.2
JKS	Kasai	0.46	261	*e*S	Sg	17 38 42.6	-0.2
JHE	Heguri	0.47	150	*e*S	Sg	17 38 42.3	-0.6

BJI ***22*** *17:49:30.9±0.0, 6°.60S×129°.80E, h23km, mb4.7/54, mB5.1/33, Ms4.7/17, Ms7 4.3/16*
IDC ***22*** *17:49:31.9±0.5, 6°.27S×129°.76E, h0km, mb4.5/17, mbtmp4.7/21, ML5.1/3, MS4.0/50, Error ellipse: s-maj=16.9km s-min=12.6km az=83.0*
MOS ***22*** *17:49:32.0±1.4, 6°.46S×129°.69E, h23km, mb5.1/27, Error ellipse: s-maj=11.9km s-min=6.3km az=118.2*
NEIC ***22*** *17:49:34.1±1.6, 6°.30S±0°.06×129°.82E±0°.07, h22km±4km, mb5.0/46, Error ellipse: s-maj=10.2km s-min=8.4km az=84.0*
DJA ***22*** *17:49:36.3±0.3, 6°S±2°×13°0E±°, h39km±4km, M4.8/53, mb5.1/53, mB5.3/36, MLv5.0/17, Mw(mB)4.8/36, MwMwp4.7/10, Mwp5.0/10*
GCMT ***22*** *17:49:37.1±0.2, 6°.28S±0°.01×129°.62E±0°.01, h23km±1km, MW5.1/105, Moment Tensor Solution. s76,c101; s105,c165; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.64±.14; Mθθ=4.24±.11; Mφφ=4.88±.13; Mrθ=0.41±.17; Mrφ=2.60±.10; Mθφ=1.95±.22; Best double couple: M0=5.58400×10^16 NP1:φs=330.00000°, δ=88.00000°, λ=161.00000°. NP2:φs=61.00000°, δ=71.00000°, λ=2.00000°. Principal axes: T 6.0480, Plg=15.0000°, Azm=284.0000°; N -0.9280, Plg=71.0000°, Azm=144.0000°; P -5.1210, Plg=12.0000°, Azm=17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 17:49:35.6±0.3, 6°.38S±0°.04×129°.76E±0°.05, h35km, n332, σ1§88/301, mb5.0/64, MS4.1/53, 7C-9D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.85	5	P	Pn	17 50 02.0	-2.8
BNDI	Bandanaira	1.85	5	P	Pn	17 50 03.2	-1.6
SAUI	Saumlaki	2.21	136	Pg	Pn	17 50 13.6	+3.7
SAUI	Saumlaki	2.21	136	P	Pn	17 50 14.2	+4.4
SAUI	Saumlaki	2.21	136	P	Pn	17 50 14.4	+4.6
AAI	Ambon	3.09	330	P	Pn	17 50 19.0	-2.9
MSAI	Masohi	3.12	345	P	Pn	17 50 20.5	-1.8
KRAI	Karang Ratu	3.33	336	P	Pn	17 50 23.8	-1.4
NLAI	Namlea	4.09	320	P	Pn	17 50 33.9	-1.8
FAKI	Fak Fak	4.24	36	Pn	Pn	17 50 37.2	-0.5
FAKI	Fak Fak	4.24	36	P	Pn	17 50 37.0	-0.7
FAKI	Fak Fak	4.24	36	P	Pn	17 50 37.9	+0.2
SIJI	Sorong	5.67	15	Pn	Pn	17 50 56.9	-0.6
	23nm,0.3s,baz=208,slow=19,SNR=150						
SIJI				Sn	Sn	17 51 57.8	-3.7
	1.5nm,0.3s,baz=197,slow=17,SNR=1.4						
	64nm,0.3s						
SIJI	Sorong	5.67	15	P	Pn	17 50 56.5	-1.0
	0.5nm3μm4μm141nm,0.8s						
SANI	Sanana	5.71	319	P	Pn	17 50 57.7	-0.2
	0.8nm2μm3μm298nm,0.9s						
SANI	Sanana	5.71	319	P	Pn	17 50 58.1	+0.2
LBMI	Labuha	6.13	338	P	Pn	17 51 04.9	+1.2
	1.6nm5μm392nm,0.9s						
SOEI	Soe	6.39	238	Pn	Pn	17 51 09.6	+2.3
SOEI	Soe	6.39	238	P	Pn	17 51 09.7	+2.3
	1.6nm4μm350nm,1.3s						
SOEI	Soe	6.39	238	P	Pn	17 51 10.6	+3.2
RKPI	Ransiki, Papua	6.54	43	P	Pn	17 51 09.2	-0.2
	4.7nm3μm7μm768nm,0.7s						
MTN	Manton Dam	6.57	168	P	Pn	17 51 11.3	+1.5
	baz=6.7,SNR=203						
MTN	Manton Dam	6.57	168	Pn	Pn	17 51 11.3	+1.5
MTN	Manton Dam	6.57	168	P	Pn	17 51 12.2	+2.5
KDU	Kakadu	6.82	157	P	Pn	17 51 14.0	+0.8
	baz=6.9,SNR=315						
KDU	Kakadu	6.82	157	P	Pn	17 51 14.2	+1.0
BATI	Baumata	7.13	237	Pn	Pn	17 51 20.1	+2.6
	69nm,0.3s,baz=121,slow=4.0,SNR=79						
BATI				Sn	Sn	17 52 41.0	+3.6
	1.1nm,0.3s,baz=99,slow=19,SNR=1.5						
BATI				LR	LR	17 54 33.8	
	comp=Z,3μm,18.5s,baz=60,slow=42						
	269nm,0.5s						
BATI	Baumata	7.13	237	P	Pn	17 51 19.6	+2.1
	3μm340nm,0.6s						
BBSI	Bau Bau	7.20	277	P	Pn	17 51 19.4	+0.9
	0.4nm3μm112nm,0.9s						
TNTI	Ternate	7.49	341	Pn	Pn	17 51 20.9	-1.6
TNTI	Ternate	7.49	341	P	Pn	17 51 23.2	+0.8
	0.3nm971nm103nm,1.1s						
TNTI	Ternate	7.49	341	P	Pn	17 51 23.1	+0.7
MMRI	Maumere	7.79	253	Pn	Pn	17 51 27.3	+0.8
MMRI	Maumere	7.79	253	P	Pn	17 51 29.8	+3.3
	1.4nm5μm411nm,1.1s						
MMRI	Maumere	7.79	253	P	Pn	17 51 30.8	+4.3
SRPI	Serui, Papua	7.86	56	P	Pn	17 51 26.9	-0.6
	2μm79nm,0.5s						
KKSI	Kolaka, Sulawe	8.36	285	P	Pn	17 51 34.7	+0.3
	1μm65nm,0.8s						
GAMI	Galela, Maluku	8.39	346	P	Pn	17 51 34.3	-0.5
	804nm67nm,0.7s						
LUWI	Luwuk	8.75	307	Pn	Pn	17 51 39.6	-0.2
LUWI	Luwuk	8.75	307	P	Pn	17 51 39.6	-0.2
	1μm148nm,0.8s						
LUWI	Luwuk	8.75	307	P	Pn	17 51 41.0	+1.2
BSSI	Bau Bau, Buton	9.21	271	P	Pn	17 51 46.7	+0.6
	3μm2μm185nm,0.8s						
KNRA	Kununurra	9.29	186	P	Pn	17 51 46.5	-0.7
	baz=9.5,SNR=203						
KNRA	Kununurra	9.29	186	Pn	Pn	17 51 46.3	-0.9
KNRA	Kununurra	9.29	186	P	Pn	17 51 47.8	+0.6
BKSI	Bulukumba	9.64	276	P	Pn	17 51 52.6	+0.7
	2μm2μm172nm,0.7s						
GTOI	Goront

WRA Sn **Sn** **17 55 23.7 -7.1**
comp=Z,4.9nm,0.3s,baz=336,slow=22,SNR=8.1
WRA Warramunga Arr 14.20 162 Pn **Pn** **17 52 50.8 -3.5**
WRA Warramunga Arr 14.20 162 P **Pn** **17 52 50.8 -3.5**
WB2 Warramunga Arr 14.21 162 P **Pn** **17 52 50.7 -3.7**
baz=14
WB2 Warramunga Arr 14.21 162 **Pn** **17 52 51.0 -3.4**
WB1 Warramunga Ar. 14.22 162 P **Pn** **17 52 52.8 -1.8**
WR0 Warramunga Arr 14.28 161 **Pn** **17 52 52.3 -3.1**
BBKI Banjar Baru 15.14 280 P **P** **17 53 10.2 -1.5**
comp=Z,182nm,1.1s
COEN Coen 15.20 121 P **Pn** **17 53 06.7 -1.0**
baz=15,SNR=35
COEN Coen 15.20 121 **Pn** **17 53 05.3 -2.5**
COEN IAmb IAmb 17 53 14.3
comp=Z,59nm,1.3s
COEN Coen 15.20 121 P **Pn** **17 53 08.2 +0.4**
MYLDM Lahad Datu 16.06 315 P **P** **17 53 19.6 -2.4**
MYLDM Lahad Datu 16.06 315 P **Pn** **17 53 18.3 -0.7**
comp=Z,2μmcomp=Z,68nm,1.6s
QIS Mount Isa 17.03 147 P **Pn** **17 53 29.0 -2.1**
baz=17,SNR=14
QIS Mount Isa 17.03 147 P **Pn** **17 53 29.3 -1.9**
PMG Port Moresby 17.50 101 P **P** **17 53 38.5 +0.6**
comp=Z,57nm,0.7s,baz=283,slow=9.6,SNR=18
PMG LR LR 18 01 20.3
comp=Z,1μm,18.6s,baz=280,slow=40
PMG Port Moresby 17.50 101 P **Pn** **17 53 35.3 -1.7**
PMG IAmb IAmb 17 53 43.0
comp=Z,60nm,0.7s
PMG Port Moresby 17.50 101 P **P** **17 53 36.8 -1.1**
comp=Z,1μmcomp=Z,93nm,0.8s
PMG Port Moresby 17.50 101 P **P** **17 53 40.4 +2.6**
PMG Port Moresby 17.50 101 P **P** **17 53 40.5 +2.6**
MBWA Marble Bar 17.61 212 P **Pn** **17 53 35.4 -3.0**
MBWA Marble Bar 17.61 212 P **P** **17 53 39.4 +0.3**
AS31 Alice Springs 17.65 167 P **Pn** **17 53 37.5 -1.4**
ASAR Alice Springs 17.65 167 P **Pn** **17 53 36.5 -2.4**
comp=Z,6.6nm,0.4s,baz=335,slow=8.7,SNR=130
ASAR S **Sn** **17 56 50.0 -4.5**
comp=Z,25nm,0.8s,baz=351,slow=24,SNR=8.5
ASAR LR LR 18 00 41.0
comp=Z,1μm,18.7s,baz=344,slow=38
ASAR Alice Springs 17.65 167 P **Pn** **17 53 36.6 -2.2**
ASAR Alice Springs 17.65 167 P **Pn** **17 53 36.6 -2.2**
AS01 Alice Springs 17.66 167 P **P** **17 53 38.6 -1.0**
PSA00 Pilbara Seismi 17.89 211 P **Pn** **17 53 37.5 -4.3**
PSA00 Pilbara Seismi 17.89 211 P **Pn** **17 53 38.3 -3.6**
PSA00 IAmb IAmb 17 53 52.5
comp=Z,34nm,1.1s
PSA00 Pilbara Seismi 17.89 211 P **P** **17 53 43.1 +0.9**
MANU Manus Island 18.08 77 P **P** **17 53 48.4 +4.1**
KKM Kota Kinabalu 18.30 312 P **P** **17 53 43.9 -2.9**
KKM Kota Kinabalu 18.30 312 P **Pn** **17 53 45.8 -1.2**
comp=Z,886nmcomp=Z,68nm,1.6s
KKM Kota Kinabalu 18.30 312 P **Pn** **17 53 50.9 +3.9**
MTSU Mount Surprise 18.39 131 P **Pn** **17 53 47.8 -0.2**
baz=18,SNR=56
MTSU Mount Surprise 18.39 131 P **Pn** **17 53 48.7 +0.7**
PCJI Pacitan 18.52 263 P **Pn** **17 53 48.9 -0.6**
comp=Z,68nm,1.6s
WRKA Warakurna 18.61 184 P **P** **17 53 48.1 -2.0**
baz=19,SNR=88
WRKA Warakurna 18.61 184 P **Pn** **17 53 52.3 +1.7**
SBUM Sibu 19.58 296 P **P** **17 53 58.5 -2.4**
SBUM Sibu 19.58 296 P **P** **17 53 59.6 -1.2**
comp=Z,586nmcomp=Z,31nm,1.6s
KSM Kuching 20.92 291 P **P** **17 54 13.0 -2.4**
KSM IAmb IAmb 17 54 29.5
comp=Z,47nm,1.2s
KSM Kuching 20.92 291 P **P** **17 54 15.4 0.0**
comp=Z,523nmcomp=Z,36nm,1.2s
KSM Kuching 20.92 291 P Pn 17 54 18.7 +0.6
TV1H Townsville Har 20.95 129 P Pn 17 54 20.1 +1.8
CTA Charters Tower 21.03 132 P **P** **17 54 19.3 +2.8**
comp=Z,7.4nm,0.7s,baz=313,slow=8.5,SNR=10
CTA LR LR 18 03 06.4
comp=Z,653nm,18.1s,baz=310,slow=39
comp=Z,7.4nm,0.7s
CTA Charters Tower 21.03 132 P **P** **17 54 19.5 +3.0**
CTAO Charters Tower 21.03 132 P **P** **17 54 15.0 -1.6**
CTAO IAmb IAmb 17 54 32.6
comp=Z,150nm,1.6s
CTAO Charters Tower 21.03 132 P **P** **17 54 15.0 -1.6**
CTAO pmax pmax
comp=Z,151nm,1.6s
CTAO Charters Tower 21.03 132 P **P** **17 54 19.6 +3.0**
AUAYR Ayr State High 21.60 129 P **P** **17 54 24.9 +2.3**
LEM Lembang 22.00 268 P **P** **17 54 27.4 +0.3**
comp=Z,14nm,0.5s,baz=345,slow=20,SNR=2.9
LEM LR LR 18 04 23.7
comp=Z,1μm,19.5s,baz=98,slow=40
comp=Z,14nm,0.5s
LEM Lembang 22.00 268 P **P** **17 54 26.6 -0.5**
OOD Oodnadatta 22.03 166 P **P** **17 54 29.7 +2.5**
KRVT Keravat (AS076 22.27 86 LR LR 18 05 03.8
comp=Z,322nm,18.3s,baz=34,slow=42
RABL Rabaul 22.41 86 P **P** **17 54 33.6 +2.1**
CNJI Cibinong 22.48 266 P **P** **17 54 31.4 -0.8**
comp=Z,867nmcomp=Z,75nm,1.3s
MEEK Meekatharra 22.78 207 P **P** **17 54 39.1 +3.9**
INKA Innaminka 23.67 155 P **P** **17 54 46.5 +2.5**
PPBI Pangkal Pinang 23.92 279 P **P** **17 54 46.5 0.0**
comp=Z,2μmcomp=Z,117nm,1.3s
MULG Mulgathing 24.12 171 P **P** **17 54 51.4 +3.2**
FORT Forrest 24.33 184 P **P** **17 54 52.0 +1.9**
baz=25,SNR=11
FORT Forrest 24.33 184 P **P** **17 54 49.3 -0.8**
FORT Forrest 24.33 184 P **P** **17 54 53.2 +3.1**
QLP Quilpie 24.38 147 P **P** **17 54 53.2 +2.6**
baz=24,SNR=4.0
QLP Quilpie 24.38 147 P **P** **17 54 53.8 +3.2**
GUMO Guam 24.87 37 LR LR 18 06 13.7
comp=Z,105nm,19.0s,baz=212,slow=40
PMBI Palembang 25.13 277 P **P** **17 55 02.6 +5.0**
LCRK Leigh Creek 25.23 163 P **P** **17 55 00.3 +2.0**
MORW Morawa 26.03 208 P **P** **17 55 07.2 +1.6**
baz=26,SNR=11
MORW Morawa 26.03 208 P **P** **17 55 05.5 -0.1**
MORW IAmb IAmb 17 55 17.5
comp=Z,50nm,1.1s
MORW Morawa 26.03 208 P **P** **17 55 07.9 +2.3**
RK1H Rockhampton Ha 26.16 132 P **P** **17 55 10.7 +3.9**
BBOO Buckleboo 26.95 168 P **P** **17 55 16.3 +2.4**
baz=27,SNR=19
BBOO Buckleboo 26.95 168 P **P** **17 55 13.6 -0.3**
BBOO IAmb IAmb 17 55 43.3
comp=Z,55nm,1.4s
BBOO Buckleboo 26.95 168 P **P** **17 55 15.8 +2.0**
RMQ Roma 26.98 140 P **P** **17 55 16.6 +2.3**
baz=27,SNR=8.1
RMQ Roma 26.98 140 P **P** **17 55 17.8 +3.6**
MYKOM Kota Tinggi 27.11 287 P **P** **17 55 14.6 -0.9**
MYKOM IAmb IAmb 17 55 25.6
comp=Z,46nm,1.2s
MYKOM Kota Tinggi 27.11 287 P **P** **17 55 14.7 -0.8**
comp=Z,33nm,1.3s
KLBR Kellerberrin 27.48 203 P **P** **17 55 20.1 +1.4**
baz=28,SNR=7.3
KLBR Kellerberrin 27.48 203 P **P** **17 55 21.6 +2.9**
STKA Stephens Creek 27.68 158 P **P** **17 55 22.3 +1.8**
comp=Z,17nm,0.7s,baz=325,slow=11,SNR=30
STKA LR LR 18 07 04.6
comp=Z,611nm,21.0s,baz=327,slow=38
comp=Z,17nm,0.7s
STKA Stephens Creek 27.68 158 P **P** **17 55 22.2 +1.8**
baz=28,SNR=28
STKA Stephens Creek 27.68 158 P **P** **17 55 20.1 -0.3**
STKA Stephens Creek 27.68 158 P **P** **17 55 20.1 -0.3**
STKA pmax pmax
comp=Z,6.0nm,1.0s
STKA Stephens Creek 27.68 158 P **P** **17 55 22.2 +1.8**
HTT Hallett 28.23 164 P **P** **17 55 27.6 +2.2**
baz=28,SNR=9.0
HTT Hallett 28.23 164 P **P** **17 55 28.7 +3.3**
MUN Mundaring 28.44 205 P **P** **17 55 28.7 +1.5**
baz=29,SNR=4.0
AULRC Lightning Ridg 28.66 145 P **P** **17 55 30.8 +1.6**
SDSI Sungai Dareh 28.77 280 P **P** **17 55 29.7 -0.7**
comp=Z,22nm,1.4s
NWAO Narrogin (SRO) 28.87 202 P **P** **17 55 34.6 +3.6**
comp=Z,6.2nm,0.7s,baz=270,slow=12,SNR=3.6
NWAO LR LR 18 08 14.7
comp=Z,561nm,18.1s,baz=231,slow=39
comp=Z,6.2nm,0.7s

CMSA Cobar Meteorol 29.14 151 P **P** **17 55 35.7 +2.3**
baz=29,SNR=21
CMSA Cobar Meteorol 29.14 151 P **P** **17 55 35.5 +2.1**
BKNI Bangkinang 29.42 282 P **P** **17 55 39.8 +3.6**
HNR Honiara 30.05 98 LR LR 18 09 03.9
comp=Z,6μm,18.8s,baz=253,slow=39
AUDCS Dubbo College 31.17 148 P **P** **17 55 52.8 +1.4**
QIZ Qiongzhong 31.98 323 P **P** **17 55 58.6 0.0**
QIZ sP **pP** **17 56 07.8 +0.2**
QIZ S **S** **18 01 07.6 -0.4**
QIZ sS **sS** **18 01 21.1 -2.3**
QIZ LR LR
comp=Z,400nm,15.9s
QIZ LR LR
comp=Z,250nm,15.1s
RPSI Rantau Prapat 32.08 285 P **P** **17 55 57.4 -2.2**
PSI Prapat 32.11 286 P **P** **17 56 00.1 +0.1**
comp=Z,6.7nm,0.8s,baz=333,slow=4.1,SNR=4.1
PSI LR LR 18 09 44.1
comp=Z,866nm,19.7s,baz=110,slow=38
comp=Z,6.7nm,0.8s
PSI Prapat 32.11 286 P **P** **17 55 57.4 -2.6**
PSI pmax pmax
comp=Z,52nm,1.2s
PSI Prapat 32.11 286 P P 17 56 06.2 +6.2
comp=Z,43nm,1.2s
ARPS Mount Arapiles 32.20 162 P **P** **17 56 03.1 +2.7**
baz=32,SNR=34
ARPS Mount Arapiles 32.20 162 P **P** **17 56 03.3 +2.9**
GSI Gunungsitoli 33.02 282 P **P** **17 56 06.3 -1.6**
GSI Gunungsitoli 33.02 282 P **P** **17 56 08.0 +0.1**
comp=Z,80nm,1.1s
GSI Gunungsitoli 33.02 282 P P 17 56 14.6 +6.7
JOW Kunigami 33.04 358 LR LR 18 07 43.1
comp=Z,271nm,20.3s,baz=139,slow=33
CNB Canberra Magne 33.98 151 P **P** **17 56 18.7 +2.6**
baz=34,SNR=6.0
TOO Toolangi 34.20 157 P **P** **17 56 20.1 +2.3**
baz=34,SNR=4.3
JCJ Chichijima 35.38 19 LR LR 18 11 05.1
comp=Z,189nm,19.4s,baz=112,slow=37
DZM Mont Dzumac 38.69 118 *e*LR LR 18 07 29.5
comp=Z,870nm,30.9s
DZM Mont Dzumac 38.69 118 LR LR 18 14 13.5
comp=Z,410nm,18.0s,baz=260,slow=38
CMAR Chiang Mai Arr 39.15 310 P **P** **17 57 00.9 +0.7**
comp=Z,0.5nm,0.5s,baz=134,slow=6.6,SNR=6.8
CMAR LR LR 18 16 27.0
comp=Z,140nm,18.8s,baz=120,slow=41
comp=Z,0.5nm,0.5s
CMAR Chiang Mai Arr 39.15 310 P **P** **17 56 59.3 -1.0**
CHTO Chiang Mai 39.36 310 P **P** **17 57 01.2 -0.8**
CHTO IAmb IAmb 17 57 11.6
comp=Z,38nm,1.9s
CHTO Chiang Mai 39.36 310 P **P** **17 57 01.2 -0.8**
CHTO pmax pmax
comp=Z,38nm,1.9s
WHN Wuhan 39.57 339 ⇑P **P** **17 57 05.3 +1.8**
GYA Guiyang 39.58 327 ⇑P **P** **17 57 04.9 +1.0**
GYA pmax pmax
comp=Z,12nm,0.8s
NJ2 Nanjing 39.60 345 *e*P **P** **17 57 05.8 +2.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
JHJ Hachijo jima 2 40.42 13 LR LR 18 12 47.5
comp=Z,327nm,18.0s,baz=128,slow=35
ENH Enshi 41.30 333 P **P** **17 57 18.8 +0.9**
JGF Kuroka 42.36 9 P **P** **17 57 24.9 -1.6**
JGF IAmb IAmb 17 58 16.3
comp=Z,46nm,1.7s
PZH PanZhiHua 42.50 321 P **P** **17 57 28.6 +0.7**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,70nm,4.1s
MND Mandalay 43.39 312 P P 17 57 38.4 +3.4
MJAR Matsushiro Arr 43.42 10 P **P** **17 57 34.6 -0.4**
comp=Z,15nm,0.8s,baz=185,slow=9.5,SNR=56
MJAR LR LR 18 14 09.6
comp=Z,215nm,20.6s,baz=200,slow=34
comp=Z,15nm,0.8s
MAJO Matsushiro 43.42 10 P **P** **17 57 34.2 -0.8**
MAJO IAmb IAmb 17 57 36.7
comp=Z,25nm,0.8s
MAJO Matsushiro 43.42 10*d i*P **P** **17 57 34.6 -0.5**
MAJO pmax pmax
comp=Z,24nm,0.8s
MJB9 Matsu-Tunnel 43.42 10 P **P** **17 57 34.1 -1.0**
MJB9 IAmb IAmb 17 57 37.7
comp=Z,26nm,0.8s
JYT Yasato 43.50 12 P **P** **17 57 35.4 -0.2**
JYT IAmb IAmb 17 57 38.6
comp=Z,28nm,0.8s
KSRS Korea Array 43.64 358 P **P** **17 57 37.8 +1.0**
comp=Z,2.6nm,0.7s,baz=173,slow=9.5,SNR=8.5
KSRS LR LR 18 17 43.7
comp=Z,97nm,19.1s,baz=170,slow=39
comp=Z,2.6nm,0.7s
CD2 Chengdu 44.65 328 *e*P **P** **17 57 45.6 +0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
XAN Xi'an 44.77 335⇑*i*P **P** **17 57 46.3 +0.3**
XAN pP pP 17 57 53.3 -2.0
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN LR LR
comp=Z,410nm,9.3s
XAN LR LR
comp=Z,330nm,9.8s
XAN LR LR
comp=Z,220nm,12.4s
JMM Marumori 45.20 12 P **P** **17 57 48.8 -0.4**
HNS HongShan 45.76 343 ⇓P **P** **17 57 54.4 +0.7**
HNS pmax pmax
comp=Z,22nm,0.9s
BRDH Bariadhala 47.16 309 LR LR 18 19 54.5
comp=Z,180nm,19.2s,baz=112,slow=39
BJT Baijiatuau 47.84 346 P **P** **17 58 09.3 -0.6**
BJT IAmb IAmb 17 58 20.4
comp=Z,13nm,0.6s
BJT Baijiatuau 47.84 346 P **P** **17 58 09.3 -0.6**
BJT pmax pmax
comp=Z,13nm,0.6s
BJI Beijing 47.86 346 P **P** **17 58 10.5 +0.5**
BJI pmax pmax
comp=Z,13nm,0.8s
MSVF Nonsavu 48.42 108 LR LR 18 17 17.2
comp=Z,225nm,20.5s,baz=263,slow=34
LZH Lanzhou 48.74 332 *e*P **P** **17 58 18.8 +1.6**
LZH sP sP 17 58 27.9 -2.5
LZH S **S** **18 05 17.4 -0.4**
LZH SS **SS** **18 08 49.4 +0.6**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,120nm,5.5s
LZH LR LR
comp=Z,370nm,14.4s
LZH LR LR
comp=Z,260nm,16.5s
LZH LR LR
comp=Z,290nm,18.9s
HHC Hu-ho-hao-te 49.88 342 *e*P **P** **17 58 27.3 +1.6**
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,220nm,5.7s
USRK Ussuriysk Ar. 50.38 2 P **P** **17 58 31.0 +1.7**
comp=Z,2.4nm,0.6s,baz=177,slow=5.8,SNR=3.6
USRK LR LR 18 19 34.2
comp=Z,134nm,20.2s,baz=176,slow=36
comp=Z,2.4nm,0.6s
USRK Ussuriysk Ar. 50.38 2 P **P** **17 58 31.0 +1.7**
PALK Palekele 50.78 285 LR LR 18 19 49.2
comp=Z,264nm,21.3s,baz=215,slow=36
XLT XiLinHaoTe 51.55 347 *e*P **P** **17 58 39.3 +1.1**
XLT pP pP 17 58 46.4 -1.2
XLT sP sP 17 58 48.1 -3.3
XLT pmax pmax
comp=Z,18nm,0.8s
XLT pmax pmax
comp=Z,220nm,4.3s
RPZ Rata Peaks 51.87 143 LR LR 18 19 58.4
comp=Z,394nm,20.0s,baz=303,slow=35
TUWZ Tuamarina 52.51 139 P **P** **17 58 45.4 +0.1**
URZ Urewera 53.27 134 LR LR 18 21 38.6
comp=Z,264nm,19.6s,baz=41,slow=36
GTA Gaotai 53.31 331 *e*P **P** **17 58 52.3 +0.9**
GTA pP pP 17 58 57.4 -3.9
GTA sP sP 17 59 00.4 -4.7
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA pmax pmax
comp=Z,64nm,8.0s
GTA LR LR
comp=Z,88nm,15.6s
GTA LR LR
comp=Z,130nm,16.0s
GTA LR LR
comp=Z,170nm,16.4s
RAMN Ramite 53.31 310 *e*P **P** **17 58 52.1 +0.3**
comp=Z,11nm,0.5s
JIRN Jiri 54.00 311 *e*P **P** **17 58 57.3 +0.3**
GUN Gumba 54.36 311 *e*P **P** **17 59 00.2 +0.6**
PKI Pulchoki 54.54 310 *e*P **P** **17 59 00.6 -0.3**
PKIN Phulchoki 54.55 310 *e*P **P** **17 59 00.6 -0.3**
comp=Z,4.1nm,0.6s
GKN Gorkha 55.35 310 *e*P **P** **17 59 06.3 -0.2**
comp=Z,9.9nm,0.5s
KLR Kul'dur 55.40 2 LR LR 18 20 58.9
comp=Z,125nm,21.2s,baz=184,slow=34
KLR Kul'dur 55.40 2⇓*e*P **P** **17 59 06.7 +0.4**
KLR pmax pmax
comp=Z,4.0nm,0.8s
HYBB Hyderabad (bro 55.83 296 *e*P **P** **17 59 09.8 -0.2**
KOLN Koldanda 56.02 310 *e*P **P** **17 59 11.1 -0.3**
DANN Dangsing 56.19 310 *e*P **P** **17 59 12.9 +0.2**
PYUN Piuthan 56.65 310 *e*P **P** **17 59 15.7 -0.2**
comp=Z,20nm,0.7s
ULN Ulaanbaatar 57.60 342 **P** **17 59 23.7 +1.5**
ULN IAmb IAmb 17 59 34.1
comp=Z,11nm,0.8s
ULN Ulaanbaatar 57.60 342 P **P** **17 59 23.7 +1.5**
ULN pmax pmax
comp=Z,11nm,0.9s
SONM Songino Array 57.78 342 P **P** **17 59 25.0 +1.6**
comp=Z,7.1nm,1.0s,baz=164,slow=8.1,SNR=23
SONM LR LR 18 25 27.8
comp=Z,112nm,20.6s,baz=150,slow=37
comp=Z,7.1nm,1.0s
SONM Songino Array 57.78 342 **P** **17 59 23.7 +0.3**
SONM IAmb IAmb 17 59 35.9
comp=Z,10nm,1.0s
SONM Songino Array 57.78 342 P **P** **17 59 23.7 +0.3**
SONM pmax pmax
comp=Z,10.0nm,1.0s
AFI Afiamalu 57.92 102 LR LR 18 22 56.7
comp=Z,118nm,20.4s,baz=285,slow=35
ZEA Zeya 59.93 358 *e*P **P** **17 59 39.9 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
WMQ Urumqi 62.74 327⇑*i*P **P** **17 59 58.9 +1.5**
WMQ pP pP 18 00 06.3 -1.0
WMQ sP pwP 18 00 11.1 +0.5
WMQ pmax pmax
comp=Z,19nm,1.1s
MOY Mondy 62.85 340 *e*P **P** **18 00 00.0 +2.0**
MOY pmax pmax
comp=Z,32nm,1.6s
PETK Petropavlovsk- 63.81 18 P **P** **18 00 05.7 +1.6**
comp=Z,15nm,1.0s,baz=167,slow=3.2,SNR=19
PETK LR LR 18 28 33.2
comp=Z,40nm,18.9s,baz=215,slow=37
comp=Z,15nm,1.0s
PETK Petropavlovsk- 63.81 18 P **P** **18 00 03.4 -0.8**
BOD Bodaibo 65.25 351 *e*P **P** **18 00 14.0 +0.6**
BOD pmax pmax
comp=Z,13nm,2.2s
DGZ Jazzator, Alta 66.84 332*de*P **P** **18 00 25.2 +1.1**
DGZ pmax pmax
comp=Z,10.0nm,1.0s
PDGK Podgornoye 67.16 322 *i* P **P** **18 00 25.9 -0.3**
PDGK pmax pmax
comp=Z,16nm,1.2s
KSH Kashi 67.40 317 P **P** **18 00 29.8 +2.0**
KSH pP sP 18 00 37.8 -3.7
KSH pmax pmax
comp=Z,5.0nm,0.6s
MK31 Makanchi Array 67.58 327 P **P** **18 00 28.2 -0.4**
MK31 IAmb IAmb 18 00 38.8
comp=Z,10nm,0.8s
MK31 Makanchi Array 67.58 327 P **P** **18 00 28.2 -0.4**
MK31 pmax pmax
comp=Z,10.0nm,0.8s
MKAR Makanchi Array 67.58 327 P **P** **18 00 29.4 +0.8**
comp=Z,7.7nm,0.5s,baz=114,slow=8.7,SNR=122
comp=Z,7.7nm,0.5s
MKAR Makanchi Array 67.58 327 P **P** **18 00 28.8 +0.2**
MAKZ Makanchi 67.75 327 P **P** **18 00 28.9 -0.9**
MAKZ Makanchi 67.75 327 P **P** **18 00 28.9 -0.9**
MAKZ pmax pmax
comp=Z,25nm,1.3s
MA2 Magadan 67.84 11 LR LR 18 29 18.9
comp=Z,60nm,20.4s,baz=132,slow=35
YAK Yakutsk 68.20 360 LR LR 18 28 04.6
comp=Z,70nm,22.0s,baz=272,slow=34
YAK Yakutsk 68.20 360 P **P** **18 00 32.1 -0.1**
YAK Yakutsk 68.20 360 *e*P **P** **18 00 32.2 0.0**
YAK *e**PP **sP** **18 00 41.9 -4.1**
YAK *e* 18 00 58.3
YAK *e* 18 03 08.9
YAK *e*S **S** **18 09 30.9 +1.0**
YAK *e* 18 10 33.4
YAK *e*SS **SS** **18 13 56.5 +3.1**
YAK pmax pmax
comp=Z,25nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=Z,225nm,3.5s
YAK pmax pmax
comp=E,209nm,3.2s
YAK pmax pmax
comp=N,195nm,3.7s
YAK smax smax
comp=N,235nm,3.5s
YAK smax smax
comp=E,107nm,3.3s
TKM2 Tokmak 2 69.35 320 P **P** **18 00 39.3 -0.8**
RAR Rarotonga 69.53 110 LR LR 18 28 07.6
comp=E,52nm,21.5s,baz=260,slow=33
SHEM Shemya Is, Ala 69.84 27 LR LR 18 25 37.9
comp=E,57nm,20.2s,baz=283,slow=31
AAK Ala-Archa 69.91 320 LR LR 18 34 50.0
comp=E,60nm,21.9s,baz=121,slow=39
ZAA0 Zalesovo Array 70.92 334 P **P** **18 00 48.6 -0.5**
ZALV Zalesovo Beam 70.92 334 P **P** **18 00 50.0 +0.9**
comp=E,10nm,0.6s,baz=116,slow=5.0,SNR=50
ZALV LR LR 18 34 00.3
comp=E,48nm,21.0s,baz=153,slow=38
comp=E,10nm,0.6s
ZALV Zalesovo Beam 70.92 334 P **P** **18 00 48.5 -0.6**
ZALV Zalesovo Beam 70.92 334 *i* P **P** **18 00 50.0 +0.9**
ZALV pmax pmax
comp=Z,16nm,0.8s
GAR Garm 71.06 315 P **P** **18 00 50.8 +0.4**
GAR IAmb IAmb 18 01 28.7
comp=Z,23nm,1.3s
SEY Seymchan 71.24 11⇑*e*P **P** **18 00 53.2 +2.3**
SEY pmax pmax
comp=Z,59nm,2.5s
CHGR Chuyangaron 71.74 314 P **P** **18 00 54.2 -0.3**
CHGR IAmb IAmb 18 01 04.0
comp=Z,16nm,1.0s
CHGR Chuyangaron 71.74 314 P **P** **18 00 54.2 -0.3**
CHGR pmax pmax
comp=Z,16nm,1.0s
KURK Kurchatov 71.86 329 P **P** **18 00 55.2 +0.4**
KURK Kurchatov 71.86 329*de*P **P** **18 00 55.8 +0.9**
KURK pmax pmax
comp=Z,27nm,0.9s
KKAR Karatay Array 72.72 319 P **P** **18 00 59.0 -1.3**
KKAR Karatay Array 72.72 319 **P** **18 00 59.7 -0.5**
KKAR IAmb IAmb 18 01 13.0
comp=Z,9.9nm,1.4s
KKAR Karatay Array 72.72 319 P **P** **18 00 59.7 -0.5**
KKAR pmax pmax
comp=Z,10.0nm,1.4s
VNDA Vanda 73.09 173 P **P** **18 01 03.4 +1.6**
comp=Z,2.0nm,0.8s,baz=318,slow=8.3,SNR=7.8

VNDA LR LR 18 31 15.4
comp=Z,152nm,20.9s,baz=342,slow=34
comp=Z,2.0nm,0.8s
VNDA Vanda 73.09 173 P P 18 01 01.4 -0.4
VNDA Vanda 73.09 173 P P 18 01 01.4 -0.4
VNDA pmax pmax
comp=Z,4.0nm,0.9s
OTUK Ortayu 74.00 324 P P 18 01 09.0 +1.3
WSAR Wadi Sarin 75.38 296 LR LR 18 37 34.0
comp=Z,51nm,20.5s,baz=122,slow=38
MAW Mawson 75.44 201 P P 18 01 18.1 +2.5
comp=Z,2.0nm,0.7s,baz=215,slow=3.2,SNR=4.3
MAW LR LR 18 32 15.8
comp=Z,151nm,19.9s,baz=58,slow=34
comp=Z,2.0nm,0.7s
BRVK Borovoye 77.48 328 P P 18 01 28.6 +1.2
BRVK IAmb IAmb 18 01 37.6
comp=Z,10nm,0.9s
BRVK Borovoye 77.48 328 P P 18 01 28.6 +1.2
BRVK pmax pmax
comp=Z,11nm,1.0s
TIXI Tiksi 77.87 360 P P 18 01 29.1 -0.1
TIXI IAmb IAmb 18 01 31.0
comp=Z,7.0nm,0.7s
TIXI Tiksi 77.87 360⇑ *eP* **P 18 01 30.4 +1.2**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
TBI Tubuai 79.06 112 *e*LR LR 18 26 11.3
comp=Z,228nm,31.0s
PPT2 Papeete2 79.23 107 *e*LR LR 18 26 15.8
comp=Z,192nm,29.5s
PPT Papeete 79.23 107 LR LR 18 33 03.9
comp=Z,39nm,21.9s,baz=308,slow=33
GEYT Alibeck 79.63 310 LR LR 18 42 31.5
comp=Z,94nm,20.9s,baz=145,slow=40
NRIK Noril'sk 80.90 346 P P 18 01 47.7 +1.9
comp=Z,2.7nm,0.5s,baz=134,slow=11,SNR=4.7
NRIK LR LR 18 42 19.0
comp=Z,142nm,18.3s,baz=156,slow=39
comp=Z,2.7nm,0.5s
NRIK Noril'sk 80.90 346 P P 18 01 46.2 +0.4
NRIK IAmb IAmb 18 02 01.4
comp=Z,13nm,1.1s
NRIK Noril'sk 80.90 346⇑ *eP* **P 18 01 47.3 +1.5**
NRIK pmax pmax
comp=Z,7.0nm,1.0s
ABKAR Akbulak array 81.87 322 P P 18 01 51.7 +0.3
ABKAR Akbulak array 81.87 322 P P 18 01 50.8 -0.5
ABKAR IAmb IAmb 18 02 05.1
comp=Z,4.7nm,0.8s
QSPA South Pole Qui 83.60 180 LR LR 18 38 26.8
comp=Z,238nm,20.6s,baz=352,slow=35
SVE Sverdlovsk 84.11 329 *eP* **P 18 02 04.2 +1.4**
SVE pmax pmax
comp=Z,29nm,1.2s
ARU Arti 85.05 328 P P 18 02 06.7 -0.8
ARU IAmb IAmb 18 02 17.2
comp=Z,13nm,1.0s
ARU Arti 85.05 328 *d iP* **P 18 02 08.0 +0.5**
ARU S **S 18 12 31.0 -3.3**
ARU SS **SS 18 18 06.6 -1.6**
ARU pmax pmax
comp=Z,11nm,1.1s
RAYN Ar Rayn 87.27 294 P P 18 02 19.0 -0.3
RAYN IAmb IAmb 18 02 33.3
comp=Z,11nm,1.2s
RAYN Ar Rayn 87.27 294 P P 18 02 19.0 -0.3
RAYN pmax pmax
comp=Z,11nm,1.3s
ATD Arta Tunnel 88.25 282 LR LR 18 38 36.9
comp=Z,60nm,21.2s,baz=62,slow=33
MAK Makhachkala 88.66 313 *eP* **P 18 02 21.4 -4.0**
MAK *e* 18 12 47.3
MAK *e*SS SS 18 19 00.3 -1.3
KBZ Khabaz 92.09 314⇓ *eP* **P 18 02 39.2 -2.2**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KMBO Kilima Mbogo 92.36 269 LR LR 18 40 49.6
comp=Z,54nm,20.9s,baz=91,slow=33
ILAR Eielson Array 92.89 25 P **P 18 02 44.0 -0.6**
comp=Z,1.4nm,0.8s,baz=273,slow=4.1,SNR=11
comp=Z,1.4nm,0.8s
J26L Joseph Creek 94.27 26 P P 18 02 50.6 -0.5
SOC Sochi 94.38 313 *eP* **P 18 02 48.9 -3.0**
SOC *e* 18 06 36.8
SOC *i* S **SKSac 18 13 22.2 -2.4**
SOC MLR MLR
comp=Z,49nm,15.0s
BELA Belgrano 2 95.42 183 P P 18 02 57.1 +1.0
ASF Jabal al Asfar 95.77 302 LR LR 18 53 09.9
comp=Z,58nn,19.1s,baz=108,slow=40
DAWY Dawson 96.06 26 P P 18 02 58.7 -0.6
SNAA Sanae 96.21 194 LR LR 18 46 24.5
comp=Z,131nm,18.9s,baz=185,slow=35
MMAI Mount Meron Ar 97.08 302 LR LR 18 54 52.3
comp=Z,38nm,18.6s,baz=230,slow=40
MBAR Mbarara 98.90 268 LR LR 18 46 56.3
comp=Z,66nm,18.2s,baz=89,slow=35
LSZ Lusaka 99.41 253 LR LR 18 42 09.8
comp=Z,47nm,21.0s,baz=124,slow=32
BOSA Boshof 99.57 240 LR LR 18 45 01.7
comp=Z,55nm,18.5s,baz=162,slow=33
BURAR Bucovina Array 104.48 317 ⇓P **Pdif 18 03 38.1 +0.8**
GERES GERESS Array B 111.79 320 PKiKP **PKiKP 18 08 08.2 +1.2**
comp=Z,0.3nm,0.4s,baz=45,slow=1.5,SNR=4.2
PDAR Pinedale Array 116.62 45 PKP **PKiKP 18 08 18.2 +1.6**
comp=Z,0.1nm,0.4s,baz=134,slow=3.9,SNR=1.5
ANMO Albuquerque 121.13 53 PKPdf **PKiKP 18 08 24.8 -0.8**
ANMO Albuquerque 121.13 53 PKIKP **PKiKP 18 08 24.8 -0.8**
TXAR Lajitas Array 124.81 59 PKP **PKiKP 18 08 34.2 +1.2**
comp=Z,0.1nm,0.4s,baz=191,slow=1.8,SNR=2.3
ECSD EROS Data Cent 124.97 40 PKPdf **PKiKP 18 08 30.9 -1.8**
JCT Junction City 127.75 56 PKiKP 18 08 37.4 -1.3
JCT Junction City 127.75 56 PKIKP **PKiKP 18 08 37.4 -1.3**
TORD Torodi Ar. Bea 128.45 282 PKP **PKiKP 18 08 41.5 +1.1**
comp=Z,0.5nm,0.6s,baz=93,slow=2.3,SNR=3.3
BOAB BOACO BROADBAND 144.56 78 PKPdf PKPbc 18 09 06.8 -1.4
ITAB Concordia 146.54 177 PKiKP 18 09 15.7 -1.3
CPUP Villa Florida 146.77 168 PKPbc **PKiKP 18 09 16.3 -1.2**
comp=Z,6.9nm,1.0s,baz=166,slow=2.9,SNR=3.8
CPUP Villa Florida 146.77 168 PKPab 18 09 15.0 -0.9
PB11 IPOC Station P 147.76 144 PKPbc 18 09 15.4 -2.5
LPAZ La Paz 151.36 142 PKPbc **PKiKP 18 09 29.9 +1.9**
comp=Z,6.5nm,1.0s,baz=106,slow=2.9,SNR=11
LPAZ La Paz 151.36 142 PKiKP 18 09 26.8 -1.2
LPAZ La Paz 151.36 142 PKIKP **PKiKP 18 09 26.8 -1.2**

JMA ***22*** *18:00:04.2±0.3, 36°N±1°×12°9E±°, h14km, MV2.9/11, S KOREAN PENINSULA REG*
KMA ***22*** *18:00:04.8±0.0, 35°.79N×129°.19E, h15km, Error ellipse: s-maj=0.5km s-min=0.4km az=290.0*
ISC 22 18:00:04.4±1.4, 35°.78N±0°.03×129°.15E±0°.04, h15km±13km, n39, σ0°44/41, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	Daegu	0.21	268	P	Pb	18 00 10.4	+0.6
	SNR=1089						
YOCB	Yeongcheon	0.26	321	P	Pb	18 00 11.0	+0.2
	SNR=124						
MIYA	Miryang-si	0.44	229	P	Pb	18 00 14.2	+0.4
	SNR=20						
KSDAU	Deagu-acc	0.45	284	P	Pb	18 00 14.5	+0.6
	SNR=214						
KSPHA	Pohang	0.45	23	P	Pg	18 00 13.6	+0.1
	SNR=140						
KSBUS	Busan	0.53	183	P	Pb	18 00 15.2	-0.2
	SNR=320						
KSCHR	CHANGNYEONG	0.58	247	P	Pb	18 00 16.8	+0.4
	SNR=111						
KSADO	Andong	0.65	346	P	Pb	18 00 17.4	-0.1
	SNR=94						
EUSB	Uiseong	0.69	327	P	Pb	18 00 18.2	+0.1
	SNR=173						
YODB	Yeongdeok	0.78	16	P	Pg	18 00 19.3	-0.3
	SNR=170						
KSGUM	GUMI	0.83	303	P	Pn	18 00 21.2	-0.4
	SNR=26						
EURB	Uiryeong-eup	0.84	237	P	Pn	18 00 21.2	-0.4
	SNR=17						
YEYB	Yeongyang	0.85	357	P	Pb	18 00 21.0	+0.1
	SNR=95						
ADOA	Andong Acc Bor	0.87	336	P	Pg	18 00 21.5	+0.1
	SNR=32						
KSGIC	Gimchen	0.90	290	P	Pn	18 00 22.5	-0.1
	SNR=74						
HACA	Hapcheon Acc B	0.93	247	P	Pn	18 00 23.0	+0.1
	SNR=32						
KSULJ	Uljin	0.95	13	P	Pb	18 00 22.2	-0.3
	SNR=256						
KUJA	Jangpyeong	0.99	207	P	Pn	18 00 24.0	+0.2
	SNR=9.7						
KSSAJ	Sangju	1.02	308	P	Pn	18 00 24.3	+0.1
	SNR=5.7						
DUSB	Deogyusan	1.12	276	P	Pg	18 00 26.4	+0.3
	SNR=149						
HAMB	Hamyang	1.17	257	P	Pg	18 00 27.0	0.0
	SNR=28						
CHYB	Chungyang	1.18	351	P	Pn	18 00 26.4	0.0
	SNR=168						
YOJB	Youngju	1.21	335	P	Pb	18 00 27.0	0.0
	SNR=85						
OKCB	Cheongsan-myeo	1.24	298	P	Pg	18 00 28.1	-0.2
	SNR=72						
KSMGY	Mungyeong	1.24	315	P	Pg	18 00 28.0	-0.3
	SNR=67						
JTU	Tsushima	1.27	171	P	Pn	18 00 27.5	-0.1
JTU				S	Sb	18 00 44.5	+0.5
KSBON	Boeun	1.31	304	P	Pg	18 00 29.7	+0.1
	SNR=84						
KSTBA	Taebaek	1.35	353	P	Pb	18 00 29.7	+0.2
	SNR=100						
YKDB	Yokjido	1.36	212	P	Pg	18 00 30.0	-0.6
	SNR=12						
JTSM	Tsushimamitsus	1.45	172	*e*P	Pn	18 00 30.2	+0.2
JTSM				*e*S	Sn	18 00 48.4	-0.4
KSCHJ	Chungju	1.45	319	P	Pb	18 00 31.0	-0.1
	SNR=32						
GWYB	Gwangyang	1.45	236	P	Pg	18 00 32.0	-0.4
	SNR=18						
IMWB	Imwonan-gil	1.47	6	P	Pb	18 00 31.6	+0.2
	SNR=18						
NAWB	Namwon	1.47	257	P	Pg	18 00 32.0	-0.8
	SNR=114						
KSJEO	Jeonju	1.52	277	P	Pg	18 00 33.0	-0.6
	SNR=96						
JECH	Jecheon	1.58	331	P	Pn	18 00 32.3	+0.4
	SNR=16						
KSWJU	Wonju	1.85	332	P	Pn	18 00 36.2	+0.6
	SNR=36						
JII	Iki	2.03	166	*e*P	Pn	18 00 39.7	+1.6
JTY	Toyota	2.18	133	*e*S	Sb	18 01 09.7	-0.6

NEIC ***22*** *18:22:23.9±2.5, 56°.60S±0°.08×27°.2W±0°.2, h101km±9km, mb4.3/12, Error ellipse: s-maj=18.3km s-min=7.4km az=58.0*
IDC ***22*** *18:22:26.2±12.0, 56°.54S×27°.12W, h120km±113km, mb3.7/5, mbtmp4.1/5, Error ellipse: s-maj=43.5km s-min=22.0km az=71.0*
ISC 22 18:22:23.7±0.7, 56°.6S±0°.1×27°.2W±0°.1, h101km, n20, σ1°08/17, mb4.2/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPZ	Base Esperanza	16.28	233	Pn	Pn	18 26 04.7	-1.3
SNAA	Sanae	18.23	155	P	Pn	18 26 29.0	-0.8
PLTB	Pedras Altas	30.88	312	P	P	18 28 31.2	+0.8
PLTB				IAmb	IAmb	18 28 52.1	
	comp=Z,9.4nm,1.3s						
QSPA	South Pole Qui	33.65	180	P	P	18 28 55.4	+0.9
QSPA				IAmb	IAmb	18 29 33.8	
	comp=Z,4.7nm,1.4s						
CPUP	Villa Florida	37.19	312	P	P	18 29 23.9	-1.0
	comp=Z,1.4nm,0.6s,baz=197,slow=11,SNR=3.9						
	comp=Z,1.4nm,0.6s						
CPUP	Villa Florida	37.19	312	P	P	18 29 23.5	-1.4
CPUP				IAmb	IAmb	18 29 43.2	
	comp=Z,5.8nm,1.4s						
SBA	Scott Base	45.53	184	P	P	18 30 34.1	+1.6
VNDA	Vanda	46.03	183	P	P	18 30 37.4	+1.0
	comp=Z,0.8nm,0.6s,baz=190,slow=7.3,SNR=11						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	46.03	183	P	P	18 30 36.1	-0.3
BOSA	Boshof	46.09	75	P	P	18 30 36.6	-0.9
BOSA				IAmb	IAmb	18 31 11.0	
	comp=Z,15nm,1.4s						
H10N1	ASCENSION HYDR	49.64	17	T	T	19 25 25.6	
	baz=189						
H10N3	ASCENSION HYDR	49.64	17	T	T	19 25 27.3	
	baz=189						
H10N2	ASCENSION HYDR	49.65	17	T	T	19 25 25.1	
	baz=189						
LPAZ	La Paz	50.71	306	P	P	18 31 14.7	+1.0
	comp=Z,4.1nm,0.4s,baz=138,slow=5.2,SNR=25						
	comp=Z,4.1nm,0.4s						
LPAZ	La Paz	50.71	306	P	P	18 31 14.7	+1.0
LPAZ				PcP	PcP	18 32 29.8	+0.2
VA02	Isla de Pascua	63.61	260	P	P	18 32 43.2	-0.5
TOA0	Torodi Ar. Sit	73.52	29	P	P	18 33 46.3	+1.0
TOA0				IAmb	IAmb	18 33 46.6	
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	73.52	29	P	P	18 33 45.5	+0.2
	comp=Z,1.0nm,0.5s,baz=209,slow=6.7,SNR=6.7						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	98.46	162	P	Pdif	18 35 49.8	-0.8
	comp=Z,0.2nm,0.6s,baz=182,slow=4.0,SNR=5.0						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	150.49	311	PKPbc	PKiKP	18 42 01.4	-1.2
	comp=Z,1.0nm,0.7s,baz=128,slow=2.5,SNR=8.2						

DJA 22 18:22:44.8±0.6, 3°S±5°×13°0E±°, h81km±22km, M3.4/10, mb3.8/3, MLv3.1/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.35	247	P	Pn	18 23 08.6	+0.3
BNDI	Bandanaira	1.71	189	P	Pn	18 23 12.9	-0.1
KRAI	Karang Ratu	1.85	254	P	Pn	18 23 15.2	+0.4
FAKI	Fak Fak	2.07	93	P	Pn	18 23 17.7	0.0
AAI	Ambon	2.16	246	P	Pn	18 23 18.8	-0.1
SIJI	Sorong	2.22	29	P	Pn	18 23 19.6	-0.1
LBMI	Labuha	3.44	309	P	Pn	18 23 36.7	+0.5
RKPI	Ransiki, Papua	4.20	72	P	Pn	18 23 46.8	+0.3
SANI	Sanana	4.26	280	P	Pn	18 23 46.6	-0.7
GTOI	Gorontalo	7.95	295	P	Pn	18 24 40.2	+2.6
	2.9nm,1.0s						
APSI	Ampana	8.73	282	P	Pn	18 24 48.5	+0.1

MOS ***22*** *18:47:17.9±1.0, 85°.61N×84°.62E, h11km, mb4.9/68, MS3.9/4, Error ellipse: s-maj=70.9km s-min=4.9km az=88.4*
IDC ***22*** *18:47:18.6±0.4, 85°.58N×85°.26E, h0km, mb4.2/33, mbtmp4.2/36, ML4.3/3, MS3.7/66, Error ellipse: s-maj=12.6km s-min=9.0km az=125.0*
GCMT ***22*** *18:47:18.4±0.4, 85°.55N±0°.04×85°.6E±0°.3, h14km±1km, MW4.8/77, Moment Tensor Solution. s15,c16; s77,c101; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.56±.14; Mθθ0.26±.08; Mφφ1.30±.10; Mrθ-0.62±.22; Mφθ-0.60±.05; Mφr-0.22±.19; Best double couple: M0 1.68700×10^16 NP1:φs136.00000°, δ49.00000°, λ-117.00000°. NP2: φs354.00000°, δ47.00000°, λ-62.00000°. Principal axes: T 1.5720, Plg1.0000°, Azm245.0000°; N 0.2280, Plg20.0000°, Azm155.0000°; P -1.8020, Plg70.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *18:47:19.4±1.7, 85°.59N±0°.09×83°.6E±0°.9, h10km±1km, mb4.7/231 Error ellipse: s-maj=15.0km s-min=12.3km az=355.0*
IEPN ***22*** *18:47:20.0, 84°.97N×85°.25E, h2km*
ISC 22 18:47:19.4±0.3, 85°.57N±0°.04×83°.35E±0°.04, h10km, n489, σ1°83/446, mb4.7/181, MS3.7/67, 18C-17D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	6.20	240	P	Pn	18 48 50.6	-0.2
ZFI2				*e*S	Sn	18 49 55.3	-6.2
ZFI	Zemlya Franca-	6.20	240	*e*P	Pn	18 48 50.4	-0.3
ZFI				*e*S	Sn	18 49 55.4	-6.2
	104nm,1.4s						
OMEGA	Omega	6.22	240	*e*P	Pn	18 48 50.6	-0.4
OMEGA				*e*S	Sn	18 49 55.2	-6.8
	87nm,2.5s						
NOR	Nord	10.21	305	*e*P	Pn	18 49 53.1	+7.4
NOR				*e*		18 51 09.8	
NOR	Nord	10.21	305	*i* P	Pn	18 49 53.0	+7.3
NOR				IAML		18 51 13.9	
	comp=Z,1.1nm,0.3s						
KBS	Kingsbay	10.59	275		Pn	18 49 49.7	-1.2
KBS	Kingsbay	10.59	275⇓	*e*P	Pn	18 49 49.7	-1.2
KBS	Kingsbay	10.59	275	*e*P	Pn	18 49 50.1	-0.8
KBS				*e*S	Sn	18 51 42.3	-7.1
KBS				IAML		18 51 51.7	
	comp=Z,4.3nm,0.5s						
KBS	Kingsbay	10.59	275	*e*P	Pn	18 49 50.1	-0.8
KBS				*e*S	Sn	18 51 42.3	-7.1
KBS				IAML		18 51 51.7	
	comp=Z,4.3nm,0.5s						
KBS	Kingsbay	10.59	275	*e*P	Pn	18 49 49.8	-1.1
KBS				*e*S	Sn	18 51 40.5	-8.8
SPA0	Spitsbergen Ar	10.94	269	*e*P	Pn	18 49 54.1	-1.6
SPA0				*e*S	Sn	18 51 47.8	-10
SPA0				IAML		18 52 06.7	
	comp=Z,4.1nm,0.8s						
SPA0	Spitsbergen Ar	10.94	269	*e*P	Pn	18 49 53.5	-2.2
SPA0				*e*S	Sn	18 51 47.7	-10
SPITS	Spitsbergen Ar	10.94	269	Pn	Pn	18 49 53.7	-2.0
	baz=40,slow=11						
SPITS				Sn	Sn	18 51 50.7	-7.2
	baz=32,slow=23						
SPITS				LR	LR	18 53 35.3	
	comp=Z,800nm,20.8s,baz=344,slow=34						
SPITS	Spitsbergen Ar	10.94	269	P	Pn	18 49 54.3	-1.4
SPB2	Spitsbergen Ar	10.95	269	Pn	Pn	18 49 53.5	-2.2
BRBB	Barentsburg B	11.19	271	*e*P	Pn	18 49 57.4	-1.6
BRBB				*e*S	Sn	18 51 54.9	-9.0
BRBB	Barentsburg B	11.19	271	*e*P	Pn	18 49 57.4	-1.6
BRBB				*e*S	Sn	18 51 54.9	-9.0
BRBA	Barentsburg A	11.22	271	*e*P	Pn	18 49 57.9	-1.6
BRBA				*e*S	Sn	18 51 58.1	-6.5
BRBA				IAML		18 52 22.7	
	comp=Z,5.0nm,0.9s						
BRBA	Barentsburg A	11.22	271	*e*P	Pn	18 49 57.9	-1.6
BRBA				*e*S	Sn	18 51 58.1	-6.5
BRBA				IAML		18 52 22.7	
	comp=Z,5.0nm,0.9s						
HOPEN	Hopen	11.85	257	*e*S	Sn	18 52 14.8	-5.3
HSPB	Hornsund (broa	12.11	267	*e*P	Pn	18 50 08.9	-2.7
EUNU	Eureka	14.42	353	Pn	Pn	18 50 39.9	-3.2
DAG	Danmarks Havn	14.88	299	*e*P	Pn	18 50 51.9	+2.6
DAG	Danmarks Havn	14.88	299	*i* P	Pn	18 50 52.0	+2.6
TIXI	Tiksi	15.66	123	Pn	Pn	18 50 58.8	-0.9
	comp=Z,21nm,0.3s,baz=90,slow=22,SNR=5.8						
TIXI				Sn	Sn	18 53 43.4	-9.4
	comp=Z,51nm,0.3s,baz=90,slow=23,SNR=1.3						
TIXI				LR	LR	18 56 21.0	
	comp=Z,273nm,21.4s,baz=336,slow=35						
	comp=Z,1.9nm,0.4s						
TIXI	Tiksi	15.66	123		Pn	18 50 58.1	-1.5
TIXI	Tiksi	15.66	123⇑	*e*P	Pn	18 51 00.2	+0.6
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
NRIK	Noril'sk	16.35	175	Pn	Pn	18 51 03.8	-4.8
	comp=Z,0.9nm,0.3s,baz=11,slow=13,SNR=10						
NRIK				Sn	Sn	18 53 57.5	-12
	comp=Z,0.5nm,0.3s,baz=168,slow=23,SNR=1.6						
NRIK	Noril'sk	16.35	175		Pn	18 51 02.3	-6.2
NRIK				IAmb	IAmb	18 51 19.3	
	comp=Z,60nm,1.1s						
NRIK	Noril'sk	16.35	175	*ce*P	Pn	18 51 10.2	+1.7
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
DBG	Daneborg	17.37	298	*e*P	P	18 51 26.3	+3.6
TULEG	Thule	17.61	339	Pn	Pn	18 51 15.8	-8.6
KEV	Kevo	18.27	248		Pn	18 51 30.3	-2.1
KEV	Kevo	18.27	248	P	Pn	18 51 30.3	-2.1
KEV				pmax	pmax		
	comp=Z,29nm,1.0s						
ARCES	ARCESS Array B	18.59	249	P	Pn	18 51 36.9	+0.4
	comp=Z,0.4nm,0.3s,baz=20,slow=9.6,SNR=18						
ARCES				S	Sn	18 54 51.9	-12
	comp=Z,1.7nm,0.7s,baz=37,slow=21,SNR=1.8						
ARCES				LR	LR	18 59 20.0	
	comp=Z,750nm,18.5s,baz=3.0,slow=38						
	comp=Z,27nm,1.1s						
ARCES	ARCESS Array B	18.59	249	P	P	18 51 36.0	-0.2
ARCES	ARCESS Array B	18.59	249	P	P	18 51 36.0	-0.2
ARCES				pmax	pmax		
	comp=Z,22nm,1.0s						
LVZ	Lovozero	19.57	238	P	P	18 51 46.6	-0.3
LVZ				IAmb	IAmb	18 51 50.5	
	comp=Z,35nm,1.0s						
LVZ	Lovozero	19.57	238⇓	*e*P	Pn	18 51 48.4	+0.2
LVZ				pmax	pmax		
	comp=Z,59nm,1.7s						
JMIC	Jan Mayen	19.77	284	LR	LR	18 57 47.2	
	comp=Z,129nm,18.5s,baz=80,slow=32						
RES	Resolute Bay	19.87	359	P	P	18 51 50.6	+0.6
	comp=Z,0.2nm,0.3s,baz=4.8,slow=12,SNR=2.5						
RES				LR	LR	18 59 47.7	
	comp=Z,58nm,19.4s,baz=91,slow=38						
	comp=Z,5.4nm,0.9s						
RES	Resolute Bay	19.87	359	P	P	18 51 49.0	-1.1
RES	Resolute Bay	19.87	359	P	P	18 51 49.0	-1.1
RES				pmax	pmax		
	comp=Z,18nm,1.3s						
APA	Apatity	19.98	239⇓	*i*P	P	18 51 49.3	-2.0
APA				*i*		18 55 27.1	
APA				pmax	pmax		
	comp=Z,25nm,0.9s						
APA				MLR	MLR		
	comp=Z,500nm,12.0s						
LSH	Leshukonskoye	21.90	224	*e*P	P	18 52 12.1	+0.1
	comp=Z,88nm,0.8s						
MSF	Maaselka	21.91	243	P	P	18 52 16.9	+4.6
MSF				pmax	pmax		
	comp=Z,47nm,1.3s						
BILL	Bilibino	21.97	86	*i* P	P	18 52 12.4	-0.5
BILL				*i*		18 52 32.3	
BILL				*i*		18 52 50.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,144nm,15.0s						
TOLK	Toolik Lake Re	24.42	45	P	P	18 52 36.8	-0.8
TOLK				IAmb	IAmb	18 53 10.6	
	comp=Z,30nm,1.2s						
C36M	Paulatuk	24.82	23	P	P	18 52 39.2	-1.8
C36M				IAmb	IAmb	18 52 42.6	
	comp=Z,27nm,0.9s						
PRGR	Permogore	25.14	223	*e*P	P	18 52 45.3	+1.3
PRGR				*e**SP	pwP	18 52 52.4	+1.6
PRGR				pmax	pmax		
	comp=Z,53nm,1.0s						
PRGR	Permogore	25.14	223	*e*P	P	18 52 44.9	+1.0
YAK	Yakutsk	25.24	127	P	P	18 52 43.5	-1.4
	comp=Z,3.3nm,0.3s,baz=18,slow=1.9,SNR=6.8						
YAK				LR	LR	19 03 25.0	
	comp=Z,242nm,18.8s,baz=288,slow=38						
	comp=Z,3.3nm,0.3s						
YAK	Yakutsk	25.24	127	P	P	18 52 42.8	-2.1
YAK	Yakutsk	25.24	127	*e*P	P	18 52 44.2	-0.7
YAK				*e*		18 53 19.2	
YAK				*e*S	S	18 57 08.3	-1.6
YAK				pmax	pmax		
	comp=Z,52nm,0.9s						
YAK				pmax	pmax		
	comp=N,29nm,1.3s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,279nm,4.2s						
YAK				pmax	pmax		
	comp=N,205nm,3.3s						
YAK				pmax	pmax		
	comp=E,276nm,4.1s						
YAK				smax	smax		
	comp=E,201nm,3.0s						
YAK				smax	smax		
	comp=N,156nm,3.3s						
INK	Inuvik	25.52	31	P	P	18 52 47.1	-0.3
	comp=N,25nm,0.9s,baz=2.3,slow=14,SNR=12						
INK				LR	LR	19 03 16.4	
	comp=N,59nm,21.1s,baz=344,slow=38						
	comp=N,25nm,0.9s						
INK	Inuvik	25.52	31	P	P	18 52 46.7	-0.7
INK	Inuvik	25.52	31	P	P	18 52 46.7	-0.7
INK				pmax	pmax		

comp=Z,45nm,1.3s
COLD Coldfoot 25.79 46 P **P 18 52 49.0 -0.9**
COLD IAmb IAmb 18 53 01.2
comp=Z,21nm,1.4s
BMAR Burnt Mountain 25.89 41 P **P 18 52 50.1 -0.8**
SEY Seymchan 25.94 102 P **P 18 52 51.8 +0.5**
comp=Z,3.4nm,0.9s,baz=344,slow=6.1,SNR=2.2
comp=Z,3.4nm,0.9s
SEY Seymchan 25.94 102⇑ *e*P **P 18 52 52.5 +1.2**
SEY pmax pmax
comp=Z,4.0nm,1.0s
KLMR Klimovskoe 26.26 230 *e*P **P 18 52 54.8 +0.6**
KLMR pmax pmax
comp=Z,73nm,1.3s
KLMR Klimovskoe 26.26 230 *e*P **P 18 52 54.8 +0.6**
comp=Z,73nm,1.3s
KLMR Klimovskoe 26.26 230 *e*P **P 18 52 54.8 +0.6**
KLMR AMP 18 53 06.3
comp=Z,73nm,1.3s
SFJD Kangerlussuaq 26.42 321 LR LR 19 02 28.7
comp=Z,129nm,20.3s,baz=12,slow=34
FINES FINESS Array B 26.55 245 P **P 18 52 58.3 +1.5**
comp=Z,4.0nm,0.7s,baz=18,slow=11,SNR=17
FINES LR LR 19 04 10.3
comp=Z,510nm,18.1s,baz=28,slow=38
comp=Z,4.0nm,0.7s
FINES FINESS Array B 26.55 245 P **P 18 52 54.9 -1.9**
FYU Fort Yukon 26.72 42 P **P 18 52 56.0 -2.3**
IMAR Indian Mountai 26.83 50 P **P 18 52 58.1 -1.2**
BORG Borgarnes 26.86 293 LR LR 19 02 53.4
comp=Z,48nm,18.1s,baz=21,slow=35
H21K Melozitna Rive 27.21 49 P **P 18 53 01.4 -1.3**
H23K Yukon River 27.23 46 P **P 18 53 02.1 -0.8**
H23K IAmb IAmb 18 53 18.1
comp=Z,26nm,1.4s
H24K Noodor Dome 27.31 44 P **P 18 53 02.6 -1.0**
H24K IAmb IAmb 18 53 24.7
comp=Z,15nm,1.2s
EPYK Eagle Plains 27.32 34 P **P 18 53 03.2 -0.6**
EPYK IAmb IAmb 18 53 04.7
comp=Z,24nm,1.1s
I21K Tanana 27.73 48 P **P 18 53 06.9 -0.4**
I21K IAmb IAmb 18 53 26.6
comp=Z,24nm,1.3s
NC204 NORSAR Array S 27.85 261 P **P 18 53 09.4 +0.9**
NC405 NORSAR Array S 27.94 260 P **P 18 53 09.1 -0.2**
KIRV Kirov 27.99 219 P **P 18 53 10.8 +1.1**
comp=Z,6.3nm,0.6s,baz=29,slow=10,SNR=2.5
KIRV LR LR 19 06 56.0
comp=Z,284nm,20.8s,baz=357,slow=42
comp=Z,6.3nm,0.6s
KIRV Kirov 27.99 219⇑ *e*P **P 18 53 11.1 +1.4**
NB201 NORSAR Array S 28.04 260 P **P 18 53 11.5 +1.4**
NB2 NORSAR Subarra 28.05 260 P **P 18 53 11.9 +1.6**
comp=Z,17nm,2.0s,baz=348,slow=7.4
NOA NORSAR Array B 28.05 260 P **P 18 53 13.1 +2.7**
comp=Z,2.5nm,1.0s,baz=12,slow=9.6,SNR=4.6
NOA LR LR 19 04 10.5
comp=Z,129nm,19.4s,baz=5.0,slow=36
comp=Z,2.5nm,1.0s
I26K Coal Creek Min 28.08 40 P **P 18 53 09.5 -1.0**
I26K IAmb IAmb 18 53 22.0
comp=Z,25nm,1.5s
MDM Murphy Dome 28.16 45 P **P 18 53 11.8 +0.6**
MDM IAmb IAmb 18 53 27.6
comp=Z,14nm,1.3s
I29M Ogilvie Camp, 28.26 36 P **P 18 53 11.2 -0.9**
COLA College 28.27 45⇓ *e*P **P 18 53 10.3 -1.8**
COLA pmax pmax
comp=Z,16nm,1.7s
NC602 NORSAR Array S 28.33 260 P **P 18 53 12.6 -0.1**
NC602 IAmb IAmb 18 53 49.8
comp=Z,29nm,1.2s
IL31 28.42 44 P **P 18 53 13.3 -0.2**
ILAR Eielson Array 28.42 44 P **P 18 53 13.2 -0.3**
comp=Z,2.1nm,0.9s,baz=351,slow=7.8,SNR=16
ILAR LR LR 19 03 12.4
comp=Z,133nm,21.9s,baz=330,slow=34
comp=Z,2.1nm,0.9s
ILAR Eielson Array 28.42 44 P **P 18 53 12.8 -0.7**
CCB Clear Creek Bu 28.50 45 P **P 18 53 14.2 +0.1**
J20K Nowinta River 28.60 50 P **P 18 53 14.0 -1.1**
J20K IAmb IAmb 18 53 50.8
comp=Z,18nm,1.5s
HFS Hagfors 28.76 257 P **P 18 53 19.1 +2.6**
comp=Z,2.4nm,0.8s,baz=39,slow=9.4,SNR=1.9
HFS LR LR 19 04 16.0
comp=Z,239nm,21.9s,baz=10,slow=35
comp=Z,2.4nm,0.8s
BPAW Bear Paw Mtn. 28.86 48 P **P 18 53 16.3 -1.2**
J26L Joseph Creek 28.86 41 P **P 18 53 17.3 -0.3**
MA2 Magadan 29.14 105 LR LR 19 04 42.8
comp=Z,133nm,19.6s,baz=50,slow=36
J29M Klondike Camp 29.17 36 P **P 18 53 20.1 -0.2**
SVE Sverdlovsk 29.28 206 *e*P P 18 53 29.0 +7.8
SVE pmax pmax
comp=Z,22nm,1.4s
SCRK Sand Creek 29.36 41 P **P 18 53 22.3 +0.2**
K20K Telida 29.42 51 P **P 18 53 22.6 +0.1**
K20K IAmb IAmb 18 53 52.8
comp=Z,18nm,1.4s
CAST Castle Rocks 29.48 49 P **P 18 53 23.3 +0.3**
DAWY Dawson 29.50 37 P **P 18 53 22.6 -0.6**
RIDG Independent Ri 29.56 42 P **P 18 53 22.2 -1.5**
ARU Arti 29.75 208 P **P 18 53 26.1 +0.7**
comp=Z,0.9nm,0.4s,baz=7.6,slow=11,SNR=4.5
ARU LR LR 19 06 55.7
comp=Z,158nm,21.0s,baz=1.5,slow=40
comp=Z,0.9nm,0.4s
ARU Arti 29.75 208 P **P 18 53 24.2 -1.2**
ARU IAmb IAmb 18 53 34.5
comp=Z,14nm,1.4s
ARU Arti 29.75 208 P **P 18 53 25.3 -0.1**
ARU PPP PPP 18 54 28.5
ARU S **S 18 58 22.2 +1.1**
PPLA Purkeypile 29.99 49 P **P 18 53 24.9 -2.7**
PPLA IAmb IAmb 18 53 25.7
comp=Z,29nm,1.4s
DHY Denali Highway 30.09 45 P **P 18 53 26.1 -2.4**
DHY IAmb IAmb 18 54 07.1
comp=Z,13nm,1.4s
PAX Paxson 30.29 43 P **P 18 53 29.4 -0.8**
PAX Paxson 30.29 43 P **P 18 53 29.4 -0.8**
PAX pmax pmax
comp=Z,11nm,1.4s
L26K Log Cabin Wild 30.35 41 P **P 18 53 30.6 0.0**
BCAR Beaver Creek A 30.39 40 P **P 18 53 31.3 +0.3**
L27K Beaver Creek, 30.39 40 P **P 18 53 31.1 +0.1**
MENT Mentasta 30.41 41 P **P 18 53 27.8 -3.4**
MENT IAmb IAmb 18 53 32.2
comp=Z,10nm,0.8s
L19K White Mountain 30.54 52 P **P 18 53 31.1 -1.3**
CUT Chulitna 30.59 47 P **P 18 53 31.4 -1.4**
MOS Moscow 31.47 231 *e*P **P 18 53 41.2 +0.7**
MOS *e* 18 54 47.4
M31M Drury Creek, Y 31.59 33 P **P 18 53 41.4 -0.1**
FARO Faro, Yukon 31.61 32 P **P 18 53 42.5 +0.7**
FARO IAmb IAmb 18 53 58.8
comp=Z,5.2nm,0.5s
ZAA0 Zalesovo Array 31.78 178 P **P 18 53 42.5 -0.8**
ZAA0 IAmb IAmb 18 53 51.3
comp=Z,8.2nm,1.1s
ZALV Zalesovo Beam 31.78 178 P **P 18 53 43.0 -0.3**
comp=Z,1.3nm,0.8s,baz=352,slow=9.0,SNR=5.8
ZALV PcP **PcP 18 56 34.7 +0.7**
comp=Z,0.3nm,0.3s,baz=344,slow=4.8,SNR=1.5
ZALV LR LR 19 06 45.6
comp=Z,24nm,21.5s,baz=54,slow=37
comp=Z,1.3nm,0.8s
ZALV Zalesovo Beam 31.78 178 P **P 18 53 42.3 -0.9**
ZALV Zalesovo Beam 31.78 178 *i* P **P 18 53 43.0 -0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.7s
N19K Bonanza Creek 31.93 52 P **P 18 53 44.5 -0.1**
N19K IAmb IAmb 18 53 47.3
comp=Z,11nm,0.9s
YKA Yellowknife Ar 31.93 16 P **P 18 53 44.6 +0.1**
comp=Z,7.1nm,0.9s,baz=353,slow=8.3,SNR=11
YKA PcP **PcP 18 56 34.8 +0.5**
comp=Z,2.2nm,0.7s,baz=338,slow=3.0,SNR=5.2
YKA LR LR 19 06 48.1
comp=Z,153nm,18.9s,baz=345,slow=37
comp=Z,7.1nm,0.9s
YKA Yellowknife Ar 31.93 16 P **P 18 53 43.5 -1.0**
YKA Yellowknife Ar 31.93 16 *i* P **P 18 53 44.5 0.0**
YKA pmax pmax

comp=Z,7.0nm,0.9s
OBN Obninsk 32.16 232 LR LR 19 12 10.4
comp=Z,55nm,18.8s,baz=9.0,slow=46
OBN Obninsk 32.16 232⇑ *e*P **P 18 53 47.3 +0.7**
OBN *e* 18 53 54.0
OBN *e*S **S 18 58 57.8 -0.9**
OBN pmax pmax
comp=Z,6.0nm,0.9s
N31M Braeburn, Yuko 32.24 35 P **P 18 53 46.3 -1.1**
N31M IAmb IAmb 18 53 48.9
comp=Z,16nm,1.1s
PABE Paberze 32.60 245 P **P 18 53 50.8 +0.3**
EYAK Cordova Ski Ar 32.69 44 P **P 18 53 50.6 -0.6**
BRVK Borovoye 32.80 195 P **P 18 53 51.8 -0.4**
BRVK IAmb IAmb 18 54 01.7
comp=Z,21nm,1.3s
BRVK Borovoye 32.80 195 P **P 18 53 51.8 -0.4**
BRVK pmax pmax
comp=Z,21nm,1.3s
HIN Hinchinbrook I 32.80 44 P **P 18 53 51.3 -1.0**
ISLE Juniper Island 32.82 41 P **P 18 53 51.9 -0.6**
HYT Haines Junctio 32.83 36 P **P 18 53 52.8 +0.3**
HYT IAmb IAmb 18 53 57.1
comp=Z,8.9nm,1.0s
BVAR Borovoye Array 32.83 194 LR LR 19 10 08.7
comp=Z,108nm,18.6s,baz=359,slow=42
NACGM Naroch 33.01 242⇓ *e*P **P 18 53 56.0 +2.0**
baz=7.4
MNK Minsk 33.33 241 *i* P P 18 54 07.0 +10
MNK *i* 18 55 15.1
MNK *i* PPP PPP 18 55 29.4
MNK *i* 18 56 46.4
MNK *i* SSS SSS 19 01 49.3
MNK *i* 19 04 18.8
MNK pmax pmax
comp=Z,25nm,0.9s
MNK pmax pmax
comp=N,17nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=Z,204nm,16.0s
MNK MLR MLR
comp=E,71nm,16.0s
MNK MLR MLR
comp=N,325nm,16.0s
MNK Minsk 33.33 241 *i* P P 18 54 07.1 +10
comp=E,1.0nm,0.9s
MNK *i* P P 18 54 07.1 +10
comp=N,17nm,0.9s
MNK *i* P P 18 54 07.1 +10
comp=Z,25nm,0.9s,baz=6.7
MNK *i* PP **PP 18 55 15.2 +3.3**
MNK *i* PPP PPP 18 55 29.4
MNK *i* S S 18 59 32.9 +16
MNK *i* SS **SnSn 19 01 10.0 -7.1**
MNK *i* SSS SSS 19 01 49.3
MNK *i* LQ LQ 19 04 48.4
MNK *i* LR LR 19 07 24.0
MNK *i* LRM MLR 19 08 23.7
comp=Z,204nm,16.4s
MNK *i* LRM MLR 19 08 50.2
comp=E,71nm,16.4s
MNK *i* LRM MLR 19 09 13.7
comp=N,325nm,16.4s
ZEA Zeya 33.36 131 *e*P P 18 54 04.1 +7.0
ZEA pmax pmax
comp=Z,10.0nm,1.1s
P33M Teslin, Yukon 33.65 32 P **P 18 53 59.2 -0.5**
P33M IAmb IAmb 18 54 01.1
comp=Z,13nm,0.9s
Q23K Middleton Isla 33.78 45 P **P 18 53 59.6 -1.1**
MID Middleton Isla 33.78 45 P **P 18 53 59.9 -0.7**
MID Middleton Isla 33.78 45 P **P 18 53 59.9 -0.7**
WTLY Watson Lake, Y 33.90 29 P **P 18 54 02.2 +0.4**
WTLY IAmb IAmb 18 54 03.4
comp=Z,5.5nm,0.8s
BELG Belogornoye 34.26 219 P **P 18 54 06.2 +1.2**
comp=Z,38nm,1.0s,baz=82,slow=2.1,SNR=15
BELG LR LR 19 10 48.4
comp=Z,192nm,20.7s,baz=329,slow=41
comp=Z,38nm,1.0s
BELG Belogornoye 34.26 219*c* *i*P **P 18 54 06.1 +1.2**
BELG pmax pmax
comp=Z,6.0nm,0.9s
EKA Eskdalemuir Ar 34.83 273 P **P 18 54 11.8 +2.0**
comp=Z,4.1nm,1.0s,baz=26,slow=11,SNR=2.8
EKA LR LR 19 05 17.2
comp=Z,167nm,20.2s,baz=2.0,slow=31
comp=Z,4.1nm,1.0s
ESK Eskdalemuir 34.84 273 P **P 18 54 10.7 +0.7**
ESK Eskdalemuir 34.84 273 P **P 18 54 10.7 +0.7**
ESK pmax pmax
comp=Z,39nm,1.4s
KURK Kurchatov 35.03 185 P **P 18 54 10.9 -0.7**
KURK Kurchatov 35.03 185 P **P 18 54 10.9 -0.7**
KURK pmax pmax
comp=Z,6.0nm,0.9s
KDAK Kodiak Island 35.06 51 LR LR 19 07 56.4
comp=Z,218nm,21.6s,baz=18,slow=35
KURBB Kurchatov Arra 35.13 185 LR LR 19 11 08.8
comp=Z,164nm,18.8s,baz=346,slow=41
VORR Voronezh 35.43 228 *e*P **P 18 54 16.0 +0.9**
VORR pmax pmax
comp=Z,40nm,0.4s
JIS Juneau Island 35.51 34 P **P 18 54 15.9 +0.3**
JIS IAmb IAmb 18 54 24.6
comp=Z,17nm,1.1s
DLBC Dease Lake 35.53 30 LR LR 19 08 56.8
comp=Z,183nm,21.5s,baz=334,slow=37
DLBC Dease Lake 35.53 30 P **P 18 54 16.9 +1.0**
DLBC IAmb IAmb 18 54 18.3
comp=Z,17nm,0.8s
AKTO Aktyubinsk 35.77 208 LR LR 19 10 35.9
comp=Z,131nm,21.6s,baz=6.7,slow=39
HILA High Level 35.82 18 P **P 18 54 17.9 -0.4**
DGZ Jazzator, Alta 36.05 175⇓ *e*P **P 18 54 21.7 +1.1**
DGZ pmax pmax
comp=Z,3.0nm,1.0s
PETK Petropavlovsk- 36.09 100 LR LR 19 09 49.9
comp=Z,165nm,18.2s,baz=358,slow=38
PETK Petropavlovsk- 36.09 100 P **P 18 54 19.0 -1.7**
ABKAR Abkulak array 36.88 206 P **P 18 54 27.6 +0.1**
ABKAR Abkulak array 36.88 206 P **P 18 54 27.8 +0.4**
AKASG Malin Array Be 37.02 239 P **P 18 54 29.9 +1.2**
comp=Z,2.6nm,0.5s,baz=7.1,slow=8.8,SNR=16
AKASG LR LR 19 10 11.0
comp=Z,122nm,21.3s,baz=56,slow=37
comp=Z,2.6nm,0.5s
AKASG Malin Array Be 37.02 239 P **P 18 54 29.8 +1.2**
AKASG Malin Array Be 37.02 239 *i* P **P 18 54 29.8 +1.2**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 37.02 239 P **P 18 54 29.5 +0.8**
AKBB IAmb IAmb 18 54 38.7
comp=Z,16nm,0.9s
AKBB Malin Array Si 37.02 239 P **P 18 54 29.5 +0.8**
AKBB pmax pmax
comp=Z,16nm,0.9s
AK05 Malin Array Si 37.11 239 P **P 18 54 30.1 +0.7**
AK05 IAmb IAmb 18 54 39.4
comp=Z,17nm,0.9s
DSB Dublin 37.15 276 P **P 18 54 30.4 +0.7**
HIA Hailar 37.41 140 P **P 18 54 33.5 +1.5**
HIA IAmb IAmb 18 54 56.5
comp=Z,14nm,1.3s
HIA Hailar 37.41 140 P **P 18 54 33.5 +1.5**
HIA pmax pmax
comp=Z,14nm,1.3s
WRAK Wrangell Islan 37.46 32 P **P 18 54 32.7 +0.5**
CLL Collm 37.58 256 P **P 18 54 34.8 +1.4**
CLL IAmb IAmb 18 54 44.1
comp=Z,10nm,0.9s
CLL Collm 37.58 256 *i* P **P 18 54 35.3 +1.9**
CLL *i* 18 54 43.2
CLL pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 37.58 256 *i* P **P 18 54 35.3 +1.9**
comp=Z,5.0nm,1.1s
CLL *i* x x 18 54 43.2
comp=Z,15nm,1.0s
CLL *e*PP **PnPn 18 56 01.0 +1.3**
CLL *e*S **S 19 00 18.0 -4.2**
CLL *e*SS **SS 19 03 12.0 +5.5**
CLL Lmax 19 06 00.0

CLL Lm MLR 19 09 00.0
comp=Z,200nm,21.1s
CLL LmV 23 45 00.0
comp=Z,100nm,20.7s
SHEM Shemya Is, Ala 37.74 83 LR LR 19 11 51.3
comp=Z,146nm,18.3s,baz=109,slow=39
KLR Kul'dur 38.12 127 P **P 18 54 38.2 +0.2**
comp=Z,1.5nm,0.8s,baz=349,slow=8.0,SNR=2.6
KLR LR LR 19 10 58.3
comp=Z,170nm,18.8s,baz=356,slow=37
comp=Z,1.5nm,0.8s
KLR Kul'dur 38.12 127⇑ *e*P **P 18 54 38.5 +0.5**
KLR pmax pmax
comp=Z,2.0nm,1.0s
OJC Ojcow 38.16 249 P **P 18 54 38.3 0.0**
OJC IAmb IAmb 18 54 47.9
comp=Z,22nm,0.9s
OJC Ojcow 38.16 249 P **P 18 54 38.3 0.0**
OJC pmax pmax
comp=Z,22nm,0.9s
ULN Ulaanbaatar 38.28 154 P **P 18 54 40.4 +0.9**
ULN Ulaanbaatar 38.28 154⇑ *e*P **P 18 54 41.0 +1.5**
ULN pmax pmax
comp=Z,7.0nm,1.0s
DPC Dobruska-Polom 38.28 252 *e*P **P 18 54 43.6 +4.2**
DPC *e* 18 54 49.7
DPC MLR MLR
comp=Z,300nm,18.3s
DPC Dobruska-Polom 38.28 252 *e*P **P 18 54 43.6 +4.2**
DPC *ex* x 18 54 49.7
DPC AMS AMS 19 09 20.0
comp=Z,300nm,18.3s
SONM Songino Array 38.29 155 P **P 18 54 40.9 +1.3**
comp=Z,3.7nm,0.9s,baz=348,slow=8.1,SNR=12
SONM LR LR 19 10 58.8
comp=Z,59nm,18.2s,baz=22,slow=37
comp=Z,3.7nm,0.9s
SONM Songino Array 38.29 155 P **P 18 54 40.2 +0.6**
SONM IAmb IAmb 18 54 47.9
comp=Z,12nm,1.0s
SONM Songino Array 38.29 155 P **P 18 54 40.2 +0.6**
SONM pmax pmax
comp=Z,12nm,1.0s
MOX Moxa 38.34 257 P **P 18 54 43.2 +3.4**
MOX pmax pmax
comp=Z,22nm,1.3s
KRLC Kraliky 38.52 252 *e*P **P 18 54 43.9 +2.5**
KRLC Kraliky 38.52 252 *e*P **P 18 54 43.9 +2.5**
OKC Ostrava-Krasne 38.66 250 AMS AMS 19 11 20.0
comp=Z,300nm,18.3s
NKC Novy Kostel 38.69 256 *e*P **P 18 54 45.6 +2.8**
NKC *e* 18 54 53.7
NKC Novy Kostel 38.69 256 *e*P **P 18 54 45.6 +2.8**
NKC *ex* x 18 54 53.7
MORC Moravsky Berou 38.76 251 ⇓P **P 18 54 46.3 +2.8**
MORC Moravsky Berou 38.76 251 P **P 18 54 44.5 +1.0**
MORC IAmb IAmb 18 54 54.6
comp=Z,13nm,1.1s
MORC Moravsky Berou 38.76 251 P **P 18 54 44.5 +1.0**
MORC pmax pmax
comp=Z,13nm,1.1s
MORC Moravsky Berou 38.76 251 *e*P **P 18 54 45.6 +2.2**
MORC *e* 18 54 53.3
PRU Pruhonice 38.78 254 *e*P **P 18 54 46.5 +3.0**
PRU *e* 18 54 53.8
PRU Pruhonice 38.78 254 *e*P **P 18 54 46.5 +3.0**
PRU *ex* x 18 54 53.8
GOPC GO Pecny, Ondr 38.83 254 *e*P P 18 54 49.1 +5.1
GOPC *e* 18 54 53.7
GOPC GO Pecny, Ondr 38.83 254 *e*P P 18 54 49.1 +5.1
GOPC *ex* x 18 54 53.7
STHS Stebnicka Huta 38.85 247 *e*P **P 18 54 46.7 +2.5**
STHS *e* 18 54 54.5
STHS pmax pmax
comp=Z,17nm,1.0s
MAKZ Makanchi 38.93 182 P **P 18 54 44.0 -0.9**
MK31 Makanchi Array 38.94 181 P **P 18 54 43.7 -1.2**
MK31 IAmb IAmb 18 54 52.8
comp=Z,16nm,1.1s
MK31 Makanchi Array 38.94 181 P **P 18 54 43.7 -1.2**
MK31 pmax pmax
comp=Z,16nm,1.2s
MKAR Makanchi Array 38.94 181 P **P 18 54 44.6 -0.3**
comp=Z,4.2nm,0.9s,baz=18,slow=4.2,SNR=23
MKAR LR LR 19 12 14.3
comp=Z,51nm,18.3s,baz=1.0,slow=38
comp=Z,4.2nm,0.9s
MKAR Makanchi Array 38.94 181 P **P 18 54 43.7 -1.2**
MAUC Maruska 39.15 250 *e*P **P 18 54 49.6 +2.9**
MAUC *ex* x 18 54 57.5
KOLS Kolonicke sedl 39.26 246 *e*P P 18 54 58.4 +11
VRAC Vranov 39.30 252 LR LR 19 11 34.2
comp=Z,189nm,19.4s,baz=360,slow=37
VRAC Vranov 39.30 252 *e*P **P 18 54 50.3 +2.4**
VRAC *e* 18 54 57.6
GRA1 Grafenberg Arr 39.32 257 P **P 18 54 47.2 -0.9**
GRA1 IAmb IAmb 18 54 59.8
comp=Z,17nm,0.9s
GRF Grafenberg Arr 39.32 257 P **P 18 54 47.2 -0.9**
GRF pmax pmax
comp=Z,17nm,0.9s
GRFO Grafenberg 39.32 257 P **P 18 54 47.9 -0.1**
GRFO IAmb IAmb 18 54 59.8
comp=Z,18nm,0.9s
GRFO Grafenberg 39.32 257 P **P 18 54 47.9 -0.1**
GRFO pmax pmax
comp=Z,18nm,0.9s
CRVS Cervenica-Dubn 39.35 247 *e*P P 18 54 59.0 +11
KRUC Moravsky 39.56 252 *e*P **P 18 54 52.4 +2.4**
KRUC *e* 18 55 00.0
UZH Uzhgorod 39.56 246 *e*P **P 18 54 51.7 +1.7**
UZH *e* 18 54 55.8
UZH *i* 18 54 59.7
JAVC Velka Javorina 39.67 251 *e*P **P 18 54 53.8 +2.8**
JAVC *e* 18 55 01.3
KHC Kasperske Hory 39.70 255 P **P 18 54 52.1 +0.9**
KHC Kasperske Hory 39.70 255 P **P 18 54 52.1 +0.9**
KHC pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 39.70 255 *e*P **P 18 54 54.1 +2.8**
KHC *ex* x 18 55 02.1
WLF Walferdange 39.73 262 P **P 18 54 51.9 +0.4**
WLF IAmb IAmb 18 55 09.1
comp=Z,17nm,1.2s
WLF Walferdange 39.73 262 P **P 18 54 51.9 +0.4**
WLF pmax pmax
comp=Z,17nm,1.2s
FFC Flin Flon 39.90 5 P **P 18 54 51.8 -0.9**
FFC Flin Flon 39.90 5 P **P 18 54 51.8 -0.9**
FFC pmax pmax
comp=Z,11nm,1.3s
VYHS Vyhne 39.95 249 *e*P **P 18 54 55.5 +2.2**
VYHS *e* 18 55 04.0
VYHS pmax pmax
comp=Z,16nm,1.1s
CKRC Cesky Krumlov 39.95 254 *e*P **P 18 54 56.3 +3.0**
CKRC *ex* x 18 55 03.5
ABAH Abaujker 39.97 247 P **P 18 54 55.1 +1.7**
GEC2 GERESS Array S 39.98 255 P **P 18 54 53.8 +0.2**
GEC2 IAmb IAmb 18 55 05.2
comp=Z,13nm,1.0s
GERES GERESS Array B 39.98 255 P **P 18 54 56.5 +2.9**
comp=Z,1.4nm,0.9s,baz=21,slow=8.6,SNR=9.0
GERES LR LR 19 11 33.2
comp=Z,109nm,19.9s,baz=5.0,slow=36
comp=Z,1.4nm,0.9s
GERES GERESS Array B 39.98 255 P **P 18 54 54.1 +0.5**
TRPA Tarpa 40.04 245 ⇓P **P 18 54 56.8 +2.8**
TRPA Tarpa 40.04 245 P **P 18 54 54.4 +0.3**
MODS Modra-Piesok 40.18 251 *e*P **P 18 54 58.9 +3.7**
MODS *e* 18 55 06.4
MODS pmax pmax
comp=Z,52nm,1.1s
BUR08 Bucovina Ar. S 40.34 243 P **P 18 54 57.6 +1.0**
BURAR Bucovina Array 40.37 243 ⇑P **P 18 54 59.3 +2.4**
BURAR Bucovina Array 40.37 243 P **P 18 54 57.9 +1.0**
BURAR Bucovina Array 40.37 243 P **P 18 54 57.9 +1.0**
BURAR pmax pmax
comp=Z,3.0nm,0.9s
STU Stuttgart 40.39 259 P **P 18 54 58.3 +1.4**
STU IAmb IAmb 18 55 08.6
comp=Z,18nm,1.0s
STU Stuttgart 40.39 259 P **P 18 54 58.3 +1.4**
STU pmax pmax

comp=Z,18nm,1.0s
PSZ Piszkesteto 40.44 248 ⇑P **P 18 55 01.1 +3.6**
PSZ Piszkesteto 40.44 248 P **P 18 54 58.0 +0.5**
PSZ IAmb IAmb 18 55 09.7
comp=Z,30nm,1.2s
PSZ Piszkesteto 40.44 248 P **P 18 54 58.0 +0.5**
PSZ pmax pmax
comp=Z,30nm,1.2s
PSZ Piszkesteto 40.44 248 P **P 18 55 00.3 +2.9**
CONA Conrad Observa 40.73 252 *e*P **P 18 55 03.1 +3.2**
comp=Z,3.3nm,1.1s,SNR=5.4
MOA Molln 40.92 254 *e*P **P 18 55 04.3 +3.0**
comp=Z,1.6nm,0.8s
BIZ Bicaz 40.98 241 ⇓P **P 18 55 04.5 +2.7**
ECH Echery 41.10 261 P **P 18 55 04.2 +1.5**
ECH IAmb IAmb 18 55 15.3
comp=Z,27nm,1.5s
ECH Echery 41.10 261 P **P 18 55 04.3 +1.5**
ECH pmax pmax
comp=Z,27nm,1.5s
CSKK Cskako 41.11 250 P **P 18 55 04.9 +2.0**
EDM Edmonton 41.25 15 P **P 18 55 03.4 -0.6**
EDM IAmb IAmb 18 55 05.5
comp=Z,18nm,0.8s
EDM Edmonton 41.25 15 P **P 18 55 03.4 -0.6**
EDM pmax pmax
comp=Z,18nm,0.8s
BNX BinXian 41.34 133 ⇓P P 18 55 11.1 +6.3
MPLH Magyarpolny 41.36 250 P **P 18 55 06.5 +1.6**
DRGR 41.36 245 ⇑P **P 18 55 07.4 +2.4**
TESR Tescani 41.37 241 ⇑P **P 18 55 07.4 +2.4**
MARR Marisel-Cluj 41.45 245 P **P 18 55 08.5 +2.7**
WATA Walderalm 41.64 256 *e*P **P 18 55 10.0 +2.6**
comp=Z,8.0nm,1.4s
MOTA Moosalm 41.66 257 *e*P **P 18 55 10.6 +3.0**
comp=Z,12nm,1.5s
WTTA Wattenberg 41.70 256 *e*P **P 18 55 11.3 +3.4**
comp=Z,17nm,1.3s
BBB Bella Bella 41.86 29 LR LR 19 12 33.3
comp=Z,100nm,21.8s,baz=336,slow=36
WMQ Urumqi 41.93 175 ⇓*i*P **P 18 55 12.1 +2.4**
SIRR Siria 41.96 246 P **P 18 55 13.0 +3.2**
SOKA Soboth 42.03 253 *e*P **P 18 55 13.7 +3.2**
comp=Z,10.0nm,1.1s
PERS Pernice 42.07 253 *e*P P 18 55 21.6 +11
BEHE Becsehely 42.11 251 P P 18 55 16.3 +5.3
ABTA Abfaltersbach 42.15 255 *e*P **P 18 55 15.0 +3.4**
comp=Z,1.9nm,1.0s
MORH Mrgy, Hungar 42.23 249 P **P 18 55 14.1 +2.1**
OBKA Obir 42.23 253 *e*P **P 18 55 15.6 +3.4**
comp=Z,5.0nm,0.9s,SNR=5.1
PRED Cave del Predi 42.38 254 P **P 18 55 14.3 +1.0**
CLUD Cludinico 42.41 255 P **P 18 55 14.8 +1.2**
CLUD IAmb IAmb 18 55 25.4
comp=Z,19nm,1.1s
MLR Muntele Rosu 42.43 241 ⇓P **P 18 55 17.4 +3.5**
FUORN Ofenpass-Fuorn 42.45 258 P **P 18 55 14.4 +0.2**
GORS Gorjuse 42.47 254 *i*P P 18 55 24.8 +11
STAL STALIGIAL 42.62 255 P **P 18 55 14.6 -0.7**
GOLS Golise 42.65 252 *i*P P 18 55 26.0 +10
TUE Stuetta 42.66 259 P **P 18 55 15.1 -0.7**
TUE IAmb IAmb 18 55 28.1
comp=Z,18nm,0.7s
GZR Gura Zlata 42.75 245 ⇑P **P 18 55 19.2 +2.9**
KK31 Karatay Array 42.75 194 P **P 18 55 16.6 +0.2**
KK31 IAmb IAmb 18 55 26.0
comp=Z,20nm,1.2s
KK31 Karatay Array 42.75 194 P **P 18 55 16.6 +0.2**
KK31 pmax pmax
comp=Z,20nm,1.3s
KKAR Karatay Array 42.75 194 P **P 18 55 16.8 +0.4**
KKAR IAmb IAmb 18 55 26.0
comp=Z,20nm,1.2s
KKAR Karatay Array 42.75 194 P **P 18 55 16.8 +0.4**
KKAR pmax pmax
comp=Z,20nm,1.3s
CTI Castel Tesino 42.91 256 P **P 18 55 19.2 +1.5**
CTI Castel Tesino 42.91 256 P **P 18 55 19.2 +1.5**
CTI pmax pmax
comp=Z,11nm,1.3s
SENIN Lac Senin/Sane 42.93 261 P **P 18 55 18.7 +0.7**
KVAR Kislovodsk Arr 42.93 224 LR LR 19 18 00.2
comp=Z,112nm,18.1s,baz=268,slow=43
KIV Kislovodsk 42.93 224 ⇑P **P 18 55 20.2 +2.3**
KIV Kislovodsk 42.93 224 P **P 18 55 17.6 -0.3**
KIV IAmb IAmb 18 55 29.2
comp=Z,26nm,1.1s
KIV Kislovodsk 42.93 224 *e*P **P 18 55 18.7 +0.8**
KIV pmax pmax
comp=Z,23nm,1.0s
KBZ Khabaz 43.15 223 P **P 18 55 22.0 +2.5**
comp=Z,4.2nm,1.0s,baz=347,slow=9.5,SNR=5.0
KBZ LR LR 19 16 15.8
comp=Z,115nm,21.7s,baz=7.5,slow=40
comp=Z,4.2nm,1.0s
KBZ Khabaz 43.15 223 *de*P **P 18 55 22.0 +2.5**
KBZ pmax pmax
comp=Z,6.0nm,1.1s
USA0B Ussuriysk Arra 43.15 128 P **P 18 55 18.3 -1.2**
USA0B Ussuriysk Arra 43.15 128 P **P 18 55 18.3 -1.2**
USA0B pmax pmax
comp=Z,10.0nm,1.0s
USRK Ussuriysk Ar. 43.15 128 LR LR 19 14 15.3
comp=Z,100nm,18.6s,baz=345,slow=38
AAK Ala-Archa 43.16 190 P **P 18 55 21.2 +1.4**
comp=Z,5.0nm,1.0s,baz=332,slow=4.0,SNR=6.6
AAK LR LR 19 16 14.6
comp=Z,97nm,19.0s,baz=357,slow=40
comp=Z,5.0nm,1.0s
AAK Ala-Archa 43.16 190 P **P 18 55 19.5 -0.3**
AAK IAmb IAmb 18 55 29.9
comp=Z,24nm,1.1s
AAK Ala-Archa 43.16 190 ⇑*e*P **P 18 55 21.9 +2.1**
AAK pmax pmax
comp=Z,8.0nm,1.3s
CN2 Changchun 43.16 135 P P 18 55 26.1 +6.5
NCK Nalchik 43.34 223 ⇓*e*P **P 18 55 24.0 +2.9**
NCK pmax pmax
comp=Z,4.0nm,0.8s
MDVR Moldovita 43.43 246 ⇓P **P 18 55 24.2 +2.3**
ZEI Tsey 44.03 222 *e*P P 18 55 33.5 +6.6
ZEI pmax pmax
comp=Z,11nm,1.4s
DIVS Divibare 44.23 247 P **P 18 55 27.9 -0.5**
ONI Oni 44.25 223 P **P 18 55 28.6 +0.1**
ONI IAmb IAmb 18 55 54.9
comp=Z,13nm,1.3s
ONI Oni 44.25 223 P **P 18 55 28.6 +0.1**
ONI pmax pmax
comp=Z,13nm,1.3s
ULM Lac du Bonnet 44.40 359 P **P 18 55 30.1 +0.6**
comp=Z,9.8nm,1.1s,baz=357,slow=9.2,SNR=3.8
comp=Z,9.8nm,1.1s
BLKB Belogradchik 44.52 245 ⇑P **P 18 55 31.6 +1.0**
AKT Akhty 45.15 218 *e*P **P 18 55 36.8 +1.1**
AKT *e* 18 57 17.1
AKT *e* 18 57 24.1
AKT pmax pmax
comp=Z,30nm,1.0s
WALA Waterton Lakes 45.40 16 P **P 18 55 37.0 -0.7**
HHC Hu-ho-hao-te 45.45 150 *e*P **P 18 55 37.4 -0.7**
OSSC Osservatorio P 45.45 256 P **P 18 55 37.0 -1.0**
VTS Vitosha 45.48 244 P **P 18 55 37.4 -1.0**
VTS Vitosha 45.48 244 P **P 18 55 37.4 -1.0**
VTS pmax pmax
comp=Z,5.0nm,1.2s
MURB Monte Urbino 45.62 255 P **P 18 55 39.4 +0.1**
BTK Batken 45.79 193 P **P 18 55 41.3 +0.5**
BTK Batken 45.79 193 P **P 18 55 41.3 +0.5**
BTK pmax pmax
comp=Z,28nm,1.1s
FDMO Fiordimonte 45.80 254 P **P 18 55 42.3 +1.5**
FDMO IAmb IAmb 18 55 51.7
comp=Z,6.8nm,0.9s
PDG Podgorica 45.95 248 P **P 18 55 42.1 +0.2**
B08A Colville Reser 45.97 21 P **P 18 55 41.2 -0.9**
B08A IAmb IAmb 18 55 43.7
comp=Z,14nm,0.9s
NRCA Norcia 46.00 254 P **P 18 55 42.5 +0.1**
NRCA IAmb IAmb 18 55 53.6
comp=Z,16nm,1.3s
NEW Newport 46.12 19 P **P 18 55 43.6 +0.3**
comp=Z,11nm,0.9s,baz=350,slow=6.9,SNR=15
NEW LR LR 19 15 32.5
comp=Z,76nm,18.3s,baz=1.0,slow=37
comp=Z,11nm,0.9s
NEW Newport 46.12 19 P **P 18 55 42.3 -1.0**
NEW IAmb IAmb 18 55 45.6
comp=Z,14nm,0.9s
NEW Newport 46.12 19 P **P 18 55 42.3 -1.0**
NEW pmax pmax
comp=Z,14nm,1.0s
B04A Port Angeles 46.15 25 P **P 18 55 42.2 -1.2**
KSH Kashi 46.26 188 P P 18 55 56.3 +12
CESX Cesi 46.26 255 P **P 18 55 45.5 +1.1**
CAMP Campotosto 46.27 254 P **P 18 55 44.5 -0.1**
CAMP IAmb IAmb 18 55 56.8
comp=Z,8.0nm,0.9s
B35A Bob, Littlefor 46.28 357 P **P 18 55 43.8 -0.7**
B35A IAmb IAmb 18 55 45.8
comp=Z,16nm,1.1s
LATE Laterza 46.31 256 P **P 18 55 45.9 +1.1**
ILGA Ilgaz 46.34 233 P **P 18 55 47.0 +1.7**
AGMN Agassiz Nation 46.35 359 P **P 18 55 44.7 -0.3**
AGMN IAmb IAmb 18 55 46.0
comp=Z,10nm,1.0s
DRK Karamyk 46.35 192 P **P 18 55 46.0 +0.6**
EGMT Eagleton 46.52 12 P **P 18 55 46.0 -0.4**
EGMT IAmb IAmb 18 55 47.5
comp=Z,11nm,0.9s
GTA Gaotai 46.52 162 *e*P **P 18 55 48.3 +1.7**
GTA pP pwP 18 55 51.6 -1.8
GTA sP sP 18 55 54.3 +5.0
C09A Chrisman Ranch 46.56 20 P **P 18 55 47.0 +0.4**
C09A IAmb IAmb 18 56 03.0
comp=Z,7.9nm,1.2s
GNI Garni 46.62 221 LR LR 19 18 15.7
comp=Z,96nm,21.9s,baz=332,slow=40
INTR Introdacqua 46.76 253 P **P 18 55 49.2 +0.9**
INTR IAmb IAmb 18 55 59.4
comp=Z,12nm,1.1s
GAR Garm 46.85 194 P **P 18 55 49.9 +0.7**
MDUB Mudurnu 47.08 235 P **P 18 55 51.4 +0.4**
LON Longmire 47.51 23 P **P 18 55 53.8 -0.3**
LON IAmb IAmb 18 55 55.7
comp=Z,8.8nm,1.1s
LON Longmire 47.51 23 P **P 18 55 53.8 -0.3**
LON pmax pmax
comp=Z,9.0nm,1.1s
MSO Missoula 47.63 16 P **P 18 55 55.3 +0.1**
BR131 Keskin Array S 47.67 233 P **P 18 55 55.8 +0.2**
BR131 IAmb IAmb 18 56 08.6
comp=Z,10nm,0.9s
BR131 Keskin Array S 47.67 233 P **P 18 55 55.8 +0.2**
BR131 pmax pmax
comp=Z,10.0nm,0.9s
BRTR Keskin Array B 47.67 233 P **P 18 55 58.0 +2.4**
comp=Z,1.4nm,0.6s,baz=1.4,slow=4.9,SNR=8.6
BRTR LR LR 19 20 59.6
comp=Z,95nm,18.6s,baz=1.5,slow=42
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 47.67 233 P **P 18 55 56.4 +0.9**
HAWA Hanford 47.93 21 P **P 18 55 57.2 -0.1**
HAWA IAmb IAmb 18 55 58.8
comp=Z,10nm,0.9s
E38A The Farm, Brul 48.03 355 P **P 18 55 57.7 -0.3**
GEYT Alibeck 48.25 207 P **P 18 56 01.4 +1.4**
comp=Z,3.1nm,1.1s,baz=341,slow=13,SNR=3.7
comp=Z,3.1nm,1.1s
COWI Conover 48.51 353 P **P 18 56 01.0 -0.8**
COWI IAmb IAmb 18 56 03.3
comp=Z,12nm,1.1s
BOZ Bozeman (W) 48.91 14 P **P 18 56 05.5 +0.5**
BOZ IAmb IAmb 18 56 06.8
comp=Z,11nm,1.1s
BOZ Bozeman (W) 48.91 14 P **P 18 56 05.6 +0.5**
BOZ pmax pmax
comp=Z,11nm,1.1s
HOOD Mount Hood Mea 48.94 23 P **P 18 56 05.8 +0.5**
G08A Pilot Rock 49.05 21 P **P 18 56 06.9 +0.8**
G08A IAmb IAmb 18 56 07.7
comp=Z,6.3nm,0.9s
GOMU GeErMu 49.62 168 P **P 18 56 12.5 +1.6**
GOMU pP pwP 18 56 16.6 -1.2
KSRS Korea Array 49.63 133 LR LR 19 18 41.0
comp=Z,46nm,18.3s,baz=0.0,slow=38
MCMT McKenzie Canyo 49.66 15 P **P 18 56 10.9 0.0**
MCMT PcP **PcP 18 57 33.1 +1.0**
YHH Holmes Hill 49.73 13 P **P 18 56 12.0 +0.4**
YHH IAmb IAmb 18 56 13.5
comp=Z,6.7nm,0.9s
LZH Lanzhou 49.94 158 *e*P **P 18 56 15.5 +2.5**
LZH sP pwP 18 56 21.3 +1.4
YFT Old Faithful 50.07 13 P **P 18 56 14.5 +0.5**
YFT IAmb IAmb 18 56 18.6
comp=Z,14nm,1.1s
I07A Izee 50.24 21 P **P 18 56 16.0 +0.8**
ESDC Sonseca Array 50.45 271 P **P 18 56 19.0 +2.2**
comp=Z,0.3nm,0.6s,baz=1.2,slow=6.8,SNR=2.7
ESDC LR LR 19 16 19.1
comp=Z,90nm,19.6s,baz=360,slow=34
comp=Z,0.3nm,0.6s
RSSD Black Hills 50.49 7 P **P 18 56 17.7 +0.5**
RSSD IAmb IAmb 18 56 18.7
comp=Z,9.7nm,1.0s
RSSD Black Hills 50.49 7 P **P 18 56 17.7 +0.5**
RSSD pmax pmax
comp=Z,10.0nm,1.0s
IMW Indian Meadow 50.62 13 P **P 18 56 19.3 +1.0**
MOOW Moose Ponds 50.77 13 P **P 18 56 19.7 +0.4**
FXWY Fox Creek 50.88 13 P **P 18 56 20.8 +0.6**
FXWY IAmb IAmb 18 56 22.5
comp=Z,8.3nm,1.0s
LOHW Long Hollow 50.91 13 P **P 18 56 19.7 -0.7**
ECSD EROS Data Cent 50.91 360 P **P 18 56 19.9 -0.3**
ECSD IAmb IAmb 18 56 21.4
comp=Z,16nm,1.2s
J08A Circle Bar Ran 50.99 20 P **P 18 56 21.9 +1.1**
J08A IAmb IAmb 18 56 23.2
comp=Z,11nm,0.9s
TPAW Teton Pass 51.03 13 P **P 18 56 21.3 0.0**
MJAR Matsushiro Arr 51.17 122 P **P 18 56 22.3 +0.2**
comp=Z,1.0nm,0.9s,baz=5.0,slow=8.3,SNR=2.5
MJAR LR LR 19 19 33.0
comp=Z,48nm,18.4s,baz=12,slow=38
comp=Z,1.0nm,0.9s
VAE Valguarnera 51.23 252 LR LR 19 18 31.5
comp=Z,123nm,19.9s,baz=340,slow=36
LYN LuoYang 51.77 149 *e*P **P 18 56 27.8 +1.2**
BW06 Boulder Array 51.78 12 P **P 18 56 25.6 -1.3**
PD31 Pinedale Array 51.78 12 P **P 18 56 25.9 -1.0**
PDAR Pinedale Array 51.78 12 P **P 18 56 27.2 +0.3**
comp=Z,3.1nm,1.0s,baz=12,slow=3.5,SNR=12
PDAR LR LR 19 20 39.8
comp=Z,41nm,18.5s,baz=10,slow=39
comp=Z,3.1nm,1.0s
WVOR Wild Horse Val 51.91 21 P **P 18 56 28.0 +0.2**
WVOR IAmb IAmb 18 56 52.6
comp=Z,12nm,1.5s
WVOR Wild Horse Val 51.91 21 P **P 18 56 28.0 +0.2**
WVOR pmax pmax
comp=Z,12nm,1.5s
MOD Modoc Plateau 52.39 22 P **P 18 56 31.4 0.0**
MOD IAmb IAmb 18 56 33.7
comp=Z,7.1nm,0.9s
YBH Yreka Blue Hor 52.49 24 P **P 18 56 32.6 +0.5**
comp=Z,1.1nm,0.9s,baz=27,slow=6.8,SNR=2.1
YBH LR LR 19 20 59.3
comp=Z,66nm,19.5s,baz=13,slow=38
comp=Z,1.1nm,0.9s
HVU Hansel Valley 52.70 15 P **P 18 56 33.2 -0.5**
HVU Hansel Valley 52.70 15 P **P 18 56 33.2 -0.5**
HVU pmax pmax
comp=Z,6.0nm,1.0s
RWWY Rawlins 52.89 10 P **P 18 56 34.4 -0.8**
RWWY IAmb IAmb 18 56 36.1
comp=Z,18nm,1.1s
HWUT Hardware Ranch 52.90 14 P **P 18 56 34.4 -0.8**
HWUT IAmb IAmb 18 56 36.8
comp=Z,16nm,1.1s
M55A Ridgway 52.98 343 P **P 18 56 35.9 +0.3**
SPUT South Promonto 53.18 15 P **P 18 56 37.4 +0.2**
KEST Kesra 53.34 257 P **P 18 56 39.8 +1.4**
comp=Z,5.6nm,0.7s,baz=2.6,slow=6.2,SNR=7.6
KEST LR LR 19 20 58.1
comp=Z,26nm,19.0s,baz=258,slow=38
comp=Z,5.6nm,0.7s
KEST Kesra 53.34 257 P **P 18 56 39.0 +0.7**
BGU Big Grassy Mou 53.55 15 P **P 18 56 39.6 -0.4**
ELK Elko 53.68 17 LR LR 19 23 30.1
comp=Z,43nm,18.1s,baz=358,slow=40
ELK Elko 53.68 17 P **P 18 56 40.8 -0.2**
ELK Elko 53.68 17 P **P 18 56 40.8 -0.2**
ELK pmax pmax
comp=Z,3.0nm,1.2s
RDMU Red Mountain 53.97 12 P **P 18 56 42.4 -0.7**
RDMU IAmb IAmb 18 56 44.0
comp=Z,7.5nm,1.0s
MMAI Mount Meron Ar 54.24 230 LR LR 19 24 10.7
comp=Z,55nm,21.9s,baz=222,slow=41
DUG Dugway, Tooele 54.28 15 P **P 18 56 44.9 -0.4**
DUG IAmb IAmb 18 56 47.0
comp=Z,6.7nm,1.1s
DUG Dugway, Tooele 54.28 15 P **P 18 56 44.9 -0.4**
DUG pmax pmax
comp=Z,7.0nm,1.1s
BEKR Beckworth 54.42 22 P **P 18 56 45.7 -0.7**
BEKR IAmb IAmb 18 56 48.2
comp=Z,5.8nm,1.0s
MPU Maple Canyon 54.49 14 P **P 18 56 46.9 +0.1**
MPU IAmb IAmb 18 56 48.5
comp=Z,6.5nm,1.1s
NJ2 Nanjing 54.53 143 *e*P **P 18 56 49.9 +2.9**
NLU North Lily Min 54.54 15 P **P 18 56 47.0 -0.2**
PAHR Pah Rah Range 54.61 21 P **P 18 56 47.0 -0.7**
JHJ Hachijo jima 2 54.67 121 LR LR 19 21 55.4
comp=Z,71nm,19.1s,baz=86,slow=38
P18A Preston Nutter 54.90 13 P **P 18 56 48.8 -1.1**
P18A IAmb IAmb 18 57 00.7
comp=Z,12nm,1.4s
P17A Butcher Ranch, 55.05 13 P **P 18 56 50.8 0.0**
P17A IAmb IAmb 18 56 52.7
comp=Z,10nm,1.3s
TMUT Trail Mountain 55.21 14 P **P 18 56 52.8 +0.5**
TMUT IAmb IAmb 18 56 54.7
comp=Z,4.6nm,0.8s
KVN Kaiserville 55.30 20 P **P 18 56 53.1 +0.4**
KVN IAmb IAmb 18 56 54.9
comp=Z,13nm,1.4s
KVN Kaiserville 55.30 20 P **P 18 56 53.1 +0.4**
KVN pmax pmax
comp=Z,13nm,1.4s
YERR Yerington 55.34 21 IAmb IAmb 18 56 55.0
comp=Z,9.6nm,1.1s
SMCO Snowmass 55.40 10 P **P 18 56 53.2 -0.5**
SMCO IAmb IAmb 18 56 55.9
comp=Z,6.2nm,1.1s
Q16A Castle Valley 55.59 14 P **P 18 56 55.2 +0.4**
RYN Ryan 55.71 21 P **P 18 56 56.3 +0.7**
RYN IAmb IAmb 18 56 57.3
comp=Z,6.1nm,0.9s
NVAR Mina Array Bea 55.92 20 P **P 18 56 58.1 +0.9**
comp=Z,1.9nm,0.8s,baz=358,slow=4.5,SNR=15
NVAR PcP **PcP 18 57 56.9 +1.2**
comp=Z,1.1nm,0.8s,baz=350,slow=2.7,SNR=3.7
NVAR LR LR 19 22 43.8
comp=Z,74nm,18.6s,baz=16,slow=38
comp=Z,1.9nm,0.8s
NVAR Mina Array Bea 55.92 20 P **P 18 56 57.5 +0.3**
NV11 Mina Array Sit 55.92 20 IAmb IAmb 18 56 58.9
comp=Z,6.3nm,1.0s
PSUT Pine Spring 55.92 16 P **P 18 56 58.1 +0.8**
PSUT IAmb IAmb 18 56 59.5
comp=Z,10nm,1.2s
R11A Troy Canyon, C 56.07 18 IAmb IAmb 18 57 00.1
comp=Z,8.8nm,0.9s
PV07 Paradox Valley 56.11 11 P **P 18 56 58.6 0.0**
PV07 IAmb IAmb 18 56 59.9
comp=Z,8.3nm,1.0s
PV15 Paradox Valley 56.21 11 IAmb IAmb 18 57 00.7
comp=Z,11nm,1.2s
PV13 Radium Mtn., P 56.39 12 P **P 18 57 00.6 0.0**
CCM Cathedral Cave 56.57 355 P **P 18 57 00.5 -1.1**
CCM IAmb IAmb 18 57 01.4
comp=Z,9.6nm,1.1s
CCM Cathedral Cave 56.57 355 P **P 18 57 00.5 -1.1**
CCM pmax pmax
comp=Z,10.0nm,1.1s
S22A 4UR Ranch, Cre 56.83 10 IAmb IAmb 18 57 05.9
comp=Z,17nm,1.2s
CCUT Cedar City 56.91 16 P **P 18 57 05.0 +0.7**
CCUT IAmb IAmb 18 57 06.5
comp=Z,7.5nm,1.1s
PRN Pahroc Range 57.02 17 IAmb IAmb 18 57 39.4
comp=Z,7.4nm,1.2s
GMN Gold Mountain 57.07 20 P **P 18 57 05.8 +0.3**
LCH Last Change Ra 57.13 20 P **P 18 57 05.8 +0.1**
LCH IAmb IAmb 18 57 07.7
comp=Z,7.1nm,1.0s
DANN Dangsing 57.35 180 *e*P **P 18 57 08.4 +0.8**
LCMT Little Creek M 57.45 16 IAmb IAmb 18 57 10.2
comp=Z,12nm,0.9s
KNB Kanab 57.46 15 IAmb IAmb 18 57 10.3
comp=Z,10.0nm,1.0s
EIL Elat 57.59 230 LR LR 19 29 39.8
comp=Z,52nm,18.3s,baz=334,slow=44
PYUN Piuthan 57.60 180 *e*P **P 18 57 08.7 -0.6**
comp=Z,26nm,0.9s
GKN Gorkha 57.70 179 *e*P **P 18 57 10.3 +0.4**
comp=Z,20nm,0.9s
T35A Sooner Cattle 57.73 360 P **P 18 57 08.9 -0.9**
T35A IAmb IAmb 18 57 10.2
comp=Z,10nm,0.9s
GUN Gumba 57.80 177 *e*P **P 18 57 11.5 +0.7**
comp=Z,32nm,0.9s
KOLN Koldanda 57.93 180 *e*P **P 18 57 11.8 +0.2**
U15A North Rim 58.05 15 P **P 18 57 12.6 +0.2**
U15A IAmb IAmb 18 57 13.5
comp=Z,6.0nm,1.0s
DMN Daman 58.09 178 *e*P **P 18 57 13.2 +0.4**
comp=Z,18nm,0.9s
PKIN Phulchoki 58.13 178 *e*P **P 18 57 13.3 +0.3**
comp=Z,11nm,0.9s
PKI Pulchoki 58.13 178 *e*P **P 18 57 13.6 +0.5**
comp=Z,15nm,0.9s
HHAR Hobbs 58.35 357 P **P 18 57 13.6 -0.6**
HHAR IAmb IAmb 18 57 14.2
comp=Z,8.3nm,0.9s
QSM Queen of Sheba 58.41 19 P **P 18 57 15.2 +0.6**
QSM IAmb IAmb 18 57 26.1
comp=Z,7.6nm,1.3s
ISA Isabella, Lake 58.67 21 P **P 18 57 16.3 -0.2**
ISA Isabella, Lake 58.67 21 P **P 18 57 16.3 -0.2**
ISA pmax pmax
comp=Z,4.0nm,1.0s
V12A Nelson 58.70 17 P **P 18 57 17.4 +0.6**
V12A IAmb IAmb 18 57 18.7
comp=Z,7.9nm,1.1s
RAMN Ramite 58.76 177 *e*P **P 18 57 17.5 +0.1**
comp=Z,15nm,1.0s
GSC Goldstone, Bar 59.08 19 IAmb IAmb 18 57 21.1
comp=Z,6.9nm,1.1s
PZH PanZhiHua 59.43 161 P **P 18 57 21.3 -0.6**
GYA Guiyang 59.62 156 ⇓P P 18 57 30.5 +7.3
ANMO Albuquerque 59.63 9 LR LR 19 24 12.9
comp=Z,54nm,18.1s,baz=355,slow=37
ANMO Albuquerque 59.63 9 P **P 18 57 23.4 +0.1**
ANMO IAmb IAmb 18 57 24.4
comp=Z,7.7nm,1.1s
ANMO Albuquerque 59.63 9 ⇑*e*P **P 18 57 23.7 +0.4**
ANMO pmax pmax
comp=Z,8.0nm,1.3s
WMOK Wichita Mounta 59.90 2 P **P 18 57 25.0 +0.1**
WMOK IAmb IAmb 18 57 26.1
comp=Z,15nm,1.3s
WMOK Wichita Mounta 59.90 2 P **P 18 57 25.0 +0.1**
WMOK pmax pmax
comp=Z,15nm,1.3s
PFO Pinyon Flats O 60.77 19 LR LR 19 26 02.1
comp=Z,87nm,18.4s,baz=348,slow=38
PFO Pinyon Flats O 60.77 19 ⇑*e*P **P 18 57 29.7 -1.3**
PFO pmax pmax
comp=Z,6.0nm,0.9s
GOGA Godfrey 61.11 347 P **P 18 57 32.9 -0.3**
GOGA Godfrey 61.11 347 P **P 18 57 32.9 -0.3**
GOGA pmax pmax
comp=Z,12nm,1.0s
Z47A Carrollton 61.39 352 P **P 18 57 33.8 -1.3**
154A Montrose 61.90 347 P **P 18 57 38.1 -0.4**
121A Cookes Peak, D 62.02 11 P **P 18 57 39.6 +0.1**
121A IAmb IAmb 18 57 41.1
comp=Z,11nm,1.2s
TUC Tucson 62.19 14 P **P 18 57 40.9 +0.3**
TUC pmax pmax
comp=Z,11nm,1.1s
ESJX Sierra Juarez 62.38 18 IAmb IAmb 18 57 38.9

comp=Z,5.3nm0.8s
BRDH Bariadhala 63.05 171 LR LR 19 28 38.4
comp=Z,56nm,18.9s,baz=134,slow=39
RAYN Ar Rayn 63.13 219 P **P** **18 57 47.4 +0.5**
RAYN IAmb IAmb 18 57 56.9
comp=Z,11nm,1.1s
RAYN Ar Rayn 63.13 219 P **P** **18 57 47.4 +0.5**
RAYN pmax pmax
comp=Z,11nm,1.2s
JCT Junction City 64.14 3 P **P** **18 57 53.1 -0.4**
JCT Junction City 64.14 3 P **P** **18 57 53.1 -0.4**
JCT pmax pmax
comp=Z,14nm,1.0s
TXAR Lajitas Array 65.25 7 P **P** **18 58 00.3 -0.5**
comp=Z,2.4nm,0.9s,baz=344,slow=2.8,SNR=18
TXAR LR LR 19 27 17.5
comp=Z,73nm,18.4s,baz=352,slow=37
comp=Z,2.4nm,0.9s
CMAR Chiang Mai Arr 67.37 164 P **P** **18 58 14.8 +0.4**
comp=Z,1.6nm,0.9s,baz=352,slow=7.1,SNR=6.9
CMAR LR LR 19 30 25.1
comp=Z,21nm,18.3s,baz=0.0,slow=38
comp=Z,1.6nm,0.9s
CMAR Chiang Mai Arr 67.37 164 P **P** **18 58 15.1 +0.7**
CMAR Chiang Mai Arr 67.37 164 *i* P **P** **18 58 15.6 +1.2**
CMAR pmax pmax
comp=Z,2.0nm,1.0s
LPIG La Paz 70.38 13 LR LR 19 30 43.4
comp=Z,50nm,19.3s,baz=27,slow=37
KIP Kipapa 70.89 60⇓*eP* **P** **18 58 35.3 -0.9**
ATD Arta Tunnel 75.17 221 LR LR 19 35 21.9
comp=Z,30nm,18.7s,baz=348,slow=38
TOA0 Torodi Ar. Sit 76.33 263 P **P** **18 59 08.9 +0.7**
TOA0 IAmb IAmb 18 59 22.3
comp=Z,5.5nm,1.1s
TORD Torodi Ar. Bea 76.33 263 P **P** **18 59 09.4 +1.2**
comp=Z,1.9nm,0.8s,baz=358,slow=6.4,SNR=10
comp=Z,1.9nm,0.8s
PALK Pallekele 78.32 183 LR LR 19 38 20.8
comp=Z,62nm,19.0s,baz=94,slow=39
DAV Davao City (W) 79.69 137 LR LR 19 38 41.3
comp=Z,20nm,18.0s,baz=18,slow=39
DBIC Dimbokro 83.25 269 LR LR 19 39 07.7
comp=Z,29nm,18.8s,baz=320,slow=37
PCRV Puerto La Cruz 83.68 328 LR LR 19 37 51.5
comp=Z,60nm,19.4s,slow=36
BAUV El Baul 85.03 332 P **P** **18 59 55.9 +1.1**
MBAR Mbarara 87.89 233 LR LR 19 45 22.4
comp=Z,42nm,19.2s,baz=305,slow=40
HNR Honiara 98.31 104 LR LR 19 39 49.5
comp=Z,858nm,20.4s,baz=352,slow=32

DJA 22 18:54:25.9±0.5, 3°S±4°×12°7'E±°, h11km±6km, M3.8/12, mb4.0/4, MLv3.6/12, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.38**	**219**	P	Pb	18 54 34.5	-0.2
KRAI	**Karang Ratu**	**1.12**	**110**	P	Pb	18 54 47.1	-0.2
AAI	**Ambon**	**1.13**	**131**	P	Pb	18 54 47.1	-0.4
SANI	**Sanana**	**1.61**	**303**	P	Pn	18 54 52.7	-1.6
MSAI	**Masohi**	**1.64**	**104**	P	Pn	18 54 54.7	0.0
LBMI	**Labuha**	**2.29**	**4**	P	Pn	18 55 04.7	+1.0
BNDI	**Bandanaira**	**3.00**	**122**	P	Pn	18 55 14.0	+0.5
SIJI	**Sorong**	**4.43**	**62**	P	Pn	18 55 32.8	-0.3
LUWI	**Luwuk**	**4.94**	**292**	P	Pn	18 55 39.4	-0.7
APSI	**Ampana**	**6.03**	**289**	P	Pn	18 55 56.1	+0.9
	0.1nm25nm,1.1s						

MAN 22 18:58:39.7, 9°.97N×123°.12E, h18km, mb3.8, ML2.5, MS2.0, 3C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.49**	**253**⇑*eP*		Pn	18 58 51.0	-0.9
CNOP				*e*S	Sn	18 59 00.7	+0.7
GUIM	**Jordan**	**0.83**	**321**⇑*eP*		Pb	18 58 55.6	0.0
GUIM				*e*S	Sn	18 59 08.4	+0.1
LLP	**Lapu-Lapu**	**0.90**	**68**⇓*eP*		Pb	18 58 54.6	-2.2
LLP				*i* S	Sb	18 59 06.2	-2.3
LSIP	**Lazi, Siquijor**	**0.98**	**149**⇓*eP*		Pb	18 58 56.7	-1.4
LSIP				*e*S	Sb	18 59 09.5	-1.2
TABP	**Talibon, Bohol**	**1.20**	**84**⇑*eP*		Pn	18 59 00.6	-1.0
TABP				*e*S	Sb	18 59 13.7	-3.4
MSLP	**Maasin**	**1.72**	**85**⇓*eP*		Pn	18 59 09.5	+0.8
MSLP				*e*S	Sb	18 59 32.4	+0.4

MAN 22 19:25:20.2, 17°.39N×120°.22E, h22km, mb3.7, ML2.5, MS2.0, 4C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAMP	**Sagada Mountai**	**0.72**	**115**⇓*eP*		Pb	19 25 34.3	+0.3
SAMP				*e*S	Sn	19 25 46.0	+0.6
BOLP	**Bolinao**	**1.04**	**197**⇑*eP*		Pn	19 25 38.3	-1.2
BOLP				*e*S	Sn	19 25 54.2	+0.9
SMPP	**San Manuel, Pa**	**1.30**	**160**⇑*eP*		Pn	19 25 43.1	0.0
SMPP				*e*S	Sn	19 25 59.7	-0.1
PACPP	**Pamplona Cagay**	**1.52**	**45**⇑*eP*		Pn	19 25 45.0	-1.0
PACPP				*e*S	Sn	19 26 03.6	-1.5
SGCP	**Gonzaga**	**1.94**	**64**⇑*eP*		Pn	19 25 52.6	+0.8
SGCP				*e*S	Sb	19 26 17.1	-1.4

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*IDC **22** 19:33:15.7±2.0, 23°.71S×179°.94W, h520km±21km, mb3.2/6, mbtmp4.1/8, Error ellipse: s-maj=25.0km s-min=20.3km az=59.0*

ISC 22 19:33:16.9±1.0, 23°.8S±0°.1×180°.0W±0°.2, h550km, n12, σ2§06/15, mb3.8/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.30**	**343**	P	**P**	**19 34 55.5**	**-3.1**
	3.5nm,0.4s,baz=231,slow=19,SNR=12						
AFI	**Afiamalu**	**12.52**	**40**	S	S	19 38 01.1	-15
	9.1nm,0.8s,baz=136,slow=23,SNR=1.8						
URZ	**Urewera**	**14.64**	**189**	P	**P**	**19 36 20.7**	**-1.8**
	8.0nm,0.5s,baz=334,slow=11,SNR=7.2						
URZ				S	**S**	**19 38 50.7**	**-4.6**
	6.1nm,0.7s,baz=95,slow=20,SNR=1.4						
RPZ	**Rata Peaks**	**21.20**	**198**	P	**P**	**19 37 24.6**	**+0.9**
	3.6nm,0.5s,baz=28,slow=7.5,SNR=1.6						
	3.6nm,0.5s						
STKA	**Stephens Creek**	**34.78**	**248**	P	**P**	**19 39 23.4**	**+1.5**
	1.0nm,0.6s,baz=97,slow=11,SNR=3.7						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**42.07**	**260**	P	**P**	**19 40 22.4**	**+1.2**
	4.5nm,0.9s,baz=97,slow=7.6,SNR=20						
ASAR				PcP	**pwP**	**19 42 04.6**	**+1.0**
	0.3nm,0.6s,baz=93,slow=6.8,SNR=1.7						
	4.5nm,0.9s						
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**19 40 24.6**	**+0.5**
	3.3nm,0.5s,baz=90,slow=6.0,SNR=50						
WRA				PcP	**pwP**	**19 42 06.1**	**-0.4**
	0.4nm,0.8s,baz=96,slow=7.0,SNR=2.0						
	3.3nm,0.5s						
VNDA	**Vanda**	**54.49**	**185**	P	**P**	**19 41 54.4**	**+1.8**
	0.6nm,0.7s,baz=354,slow=5.7,SNR=5.8						
VNDA				PcP	**PcP**	**19 42 48.9**	**+1.5**
	0.5nm,0.8s,baz=28,slow=1.9,SNR=5.1						
	0.6nm,0.7s						
PLCA	**Paso Flores**	**88.33**	**134**	P	**P**	**19 45 12.6**	**+2.0**
	1.0nm,0.9s,baz=229,slow=9.3,SNR=3.3						
	1.0nm,0.9s						
ARCES	**ARCESS Array B**	**131.78**	**348**	PKP	**PKiKP**	**19 51 27.7**	**-0.4**
	1.6nm,0.9s,baz=36,slow=1.7,SNR=4.9						
AKASG	**Malin Array Be**	**144.89**	**327**	PKP	**PKPab**	**19 51 52.3**	**-0.5**
	1.0nm,0.5s,baz=42,slow=4.2,SNR=6.1						
BRTR	**Keskin Array B**	**147.53**	**307**	PKPbc	**PKiKP**	**19 52 00.5**	**-0.9**
	0.5nm,0.6s,baz=82,slow=2.0,SNR=4.2						

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*NEIC **22** 19:49:49.2±2.1, 17°.73S±0°.10×177°.1W±0°.1, h389km±13km, mb4.2/8, Error ellipse: s-maj=16.5km s-min=13.2km az=60.0*

*IDC **22** 19:49:51.4±2.4, 17°.89S×177°.43W, h393km±23km, mb3.3/8, mbtmp4.1/10, Error ellipse: s-maj=32.4km s-min=19.0km az=143.0*

ISC 22 19:49:49.4±0.6, 17°.7S±0°.1×177°.10W±0°.09, h400km, n25, σ1§73/25, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.62**	**269**	P	**Pn**	**19 51 06.2**	**-1.4**
	65nm,0.8s,baz=96,slow=23,SNR=33						
MSVF	**Nonsavu**	**4.62**	**269**	Pn	**Pn**	**19 51 06.4**	**-1.2**
AFI	**Afiamalu**	**6.37**	**54**	P	**Pn**	**19 51 25.1**	**-1.1**
	17nm,0.5s,baz=122,slow=1.2,SNR=7.4						
AFI				S	**S**	**19 52 40.1**	**-5.1**
	4.4nm,0.3s,baz=350,slow=21,SNR=1.3						
NIUE	**Niue**	**6.94**	**102**	Pn	**P**	**19 51 33.1**	**+0.2**
DZM	**Mont Dzumac**	**16.07**	**252**	P	**P**	**19 53 13.1**	**-0.4**
	3.4nm,0.8s,baz=101,slow=19,SNR=1.4						
URZ	**Urewera**	**21.08**	**193**	P	**P**	**19 54 03.6**	**+0.1**
	13nm,1.0s,baz=10,slow=5.5,SNR=2.7						
	13nm,1.0s						
THZ	**Tophouse**	**25.44**	**198**	P	**P**	**19 54 42.2**	**-0.7**
THZ				IAmb	IAmb	19 55 10.7	
	comp=Z,14nm,1.1s						
CTA	**Charters Tower**	**34.71**	**260**	P	**P**	**19 56 03.0**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=79,slow=5.2,SNR=2.5						
	comp=Z,1.8nm,0.6s						
CTAO	**Charters Tower**	**34.71**	**260**	P	**P**	**19 56 02.4**	**-1.4**
CTAO				IAmb	IAmb	19 56 26.5	
	comp=Z,7.9nm,1.4s						
STKA	**Stephens Creek**	**39.81**	**241**	P	**P**	**19 56 45.6**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=86,slow=8.7,SNR=5.6						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**39.81**	**241**	P	**P**	**19 56 45.9**	**-0.1**
BBOO	**Buckleboo**	**44.59**	**241**	P	**P**	**19 57 23.9**	**-0.1**
BBOO				IAmb	IAmb	19 57 51.8	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	**46.04**	**254**	P	**P**	**19 57 34.9**	**-0.5**
ASAR	**Alice Springs**	**46.04**	**254**	P	**P**	**19 57 35.0**	**-0.5**
	comp=Z,4.1nm,0.3s,baz=90,slow=8.3,SNR=32						
	comp=Z,4.1nm,0.3s						
ASAR	**Alice Springs**	**46.04**	**254**	P	**P**	**19 57 34.4**	**-1.0**
SIJI	**Sorong**	**53.41**	**282**	P	**P**	**19 58 31.1**	**+0.8**
	comp=Z,2.2nm,0.5s,baz=108,slow=17,SNR=1.8						
	comp=Z,2.2nm,0.5s						
PSA00	**Pilbara Seismi**	**59.16**	**255**	P	**P**	**19 59 10.6**	**+0.3**
MBWA	**Marble Bar**	**59.33**	**256**	P	**P**	**19 59 10.5**	**-0.9**
MORW	**Morawa**	**61.70**	**246**	P	**P**	**19 59 27.0**	**-0.1**
MORW				IAmb	IAmb	19 59 43.2	
	comp=Z,13nm,1.4s						
GIRL	**Giralia**	**64.14**	**253**	P	**P**	**19 59 44.0**	**+0.9**
NVAR	**Mina Array Bea**	**78.43**	**43**	P	**P**	**20 01 12.1**	**+4.6**
	comp=Z,0.5nm,0.7s,baz=222,slow=9.8,SNR=4.1						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**84.84**	**57**	P	P	20 01 46.0	+5.3
	comp=Z,0.3nm,0.5s,baz=176,slow=2.6,SNR=4.0						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**85.43**	**12**	P	**P**	**20 01 45.2**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=220,slow=5.4,SNR=6.3						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**145.53**	**316**	PKPbc	**PKiKP**	**20 08 45.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=3.8						
GERES	**GERESS Array B**	**147.74**	**347**	PKPbc	**PKiKP**	**20 08 49.9**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=25,slow=5.4,SNR=2.7						

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*IDC **22** 19:51:55.5±2.6, 6°.74S×130°.98E, h52km±31km, mb3.7/1, mbtmp4.2/6, ML4.1/5, Error ellipse: s-maj=37.5km s-min=22.7km az=71.0*

*DJA **22** 19:51:57.2±0.2, 7°S±3°×13°1E±°, h109km±6km, M4.4/12, mB5.4/3, mb4.0/12, MLv4.5/10, Mw(mB)4.8/3*

ISC 22 19:51:56.5±0.9, 6°.68S±0°.06×130°.91E±0°.08, h100km, n17, σ2§48/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.35**	**163**	P	**Pn**	**19 52 22.6**	**+1.5**
BNDI	**Bandanaira**	**2.36**	**335**	P	**Pn**	**19 52 35.0**	**+1.2**
FAKI	**Fak Fak**	**3.96**	**20**	P	**Pn**	**19 52 55.7**	**+0.4**
KRAI	**Karang Ratu**	**4.17**	**323**	P	**Pn**	**19 53 01.3**	**+3.2**
NLAI	**Namlea**	**5.10**	**312**	P	**Pn**	**19 53 11.6**	**+0.9**
	0.1nm8.5nm,0.5s						
SIJI	**Sorong**	**5.78**	**4**	P	**Pn**	**19 53 19.3**	**-0.6**
	13nm,0.3s,baz=211,slow=23,SNR=167						
SIJI				S	**Sn**	**19 54 19.6**	**-5.4**
	24nm,0.2s,baz=65,slow=23,SNR=10						
	42nm,0.2s						
SIJI	**Sorong**	**5.78**	**4**	P	**Pn**	**19 53 19.6**	**-0.3**
RKPI	**Ransiki, Papua**	**6.08**	**33**	P	**Pn**	**19 53 25.7**	**+1.7**
	0.8nm3μm196nm,0.7s						
SOEI	**Soe**	**7.25**	**245**	P	**Pn**	**19 53 41.3**	**+1.3**
	0.2nm17nm,0.5s						
BATI	**Baumata**	**7.98**	**243**	P	**Pn**	**19 53 51.0**	**+1.2**
	2.4nm,0.3s,baz=285,slow=2.9,SNR=7.9						
BATI				S	**Sn**	**19 55 14.8**	**-3.7**
	12nm,0.4s,baz=85,slow=16,SNR=3.0						
	4.9nm,0.3s						
BATI	**Baumata**	**7.98**	**243**	P	**Pn**	**19 53 51.7**	**+1.9**
WRA	**Warramunga Arr**	**13.60**	**166**	P	**Pn**	**19 55 02.8**	**-2.6**
	0.8nm,0.3s,baz=352,slow=13,SNR=30						
WRA				S	Sn	19 57 23.5	-12
	4.1nm,0.4s,baz=337,slow=22,SNR=11						
	1.8nm,0.5s						
TWSI	**Taliwang, Sumb**	**14.05**	**261**	P	**Pn**	**19 55 11.1**	**-0.1**
	8.3nm,1.5s						
JAGI	**Jajag, Banyuwa**	**16.70**	**263**	P	**Pn**	**19 55 45.3**	**+0.6**
	24nm,1.4s						
ASAR	**Alice Springs**	**17.14**	**171**	P	**Pn**	**19 55 49.2**	**-0.7**
	1.3nm,0.3s,baz=344,slow=11,SNR=54						
ASAR				S	Sn	19 58 48.8	-12
	1.6nm,0.6s,baz=352,slow=29,SNR=5.7						
	4.4nm,0.6s						
CTA	**Charters Tower**	**19.99**	**133**	P	**Pn**	**19 56 24.0**	**+0.1**
	0.1nm,0.3s,baz=304,slow=12,SNR=2.4						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**68.45**	**326**	P	**P**	**20 02 52.7**	**+4.8**
	0.8nm,0.5s,baz=125,slow=7.2,SNR=10						
	0.8nm,0.5s						

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*DJA **22** 20:01:41.3±0.3, 6°S±4°×12°5E±°, h580km±6km, M3.9/13, mb3.8/11, mB4.5/1, MLv3.9/13, Mw(mB)3.7/1*

*IDC **22** 20:01:41.2±0.9, 6°.14S×125°.40E, h573km±12km, mb2.9/4, mbtmp3.9/9, Error ellipse: s-maj=21.1km s-min=12.3km az=74.0*

*NEIC **22** 20:01:42.0±1.6, 6°.2S±0°.1×125°.3E±0°.2, h580km±15km, mb4.2/8, Error ellipse: s-maj=22.5km s-min=16.0km az=84.0*

ISC 22 20:01:41.5±0.6, 6°.17S±0°.07×125°.21E±0°.09, h600km, n49, σ1§46/53, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**3.46**	**33**	P	**P**	**20 03 01.2**	**-2.3**
SOEI	**Soe**	**3.69**	**195**	P	**P**	**20 03 03.1**	**-1.9**
SOEI	**Soe**	**3.69**	**195**	P	**P**	**20 03 03.4**	**-1.6**
SOEI	**Soe**	**3.69**	**195**	P	**P**	**20 03 03.4**	**-1.6**
MMRI	**Maumere**	**3.84**	**230**	P	**P**	**20 03 05.7**	**-0.2**
AAI	**Ambon**	**3.86**	**50**	P	**P**	**20 03 06.5**	**+0.4**
SANI	**Sanana**	**4.16**	**11**	P	**P**	**20 03 06.4**	**-1.8**
SANI	**Sanana**	**4.16**	**11**	P	**P**	**20 03 06.7**	**-1.5**
KRAI	**Karang Ratu**	**4.25**	**48**	P	**P**	**20 03 07.2**	**-1.6**
BATI	**Baumata**	**4.30**	**201**	P	**P**	**20 03 07.9**	**-1.2**
	32nm,0.4s,baz=63,slow=3.8,SNR=22						
BATI				S	**S**	**20 04 16.8**	**-3.8**
	34nm,0.6s,baz=254,slow=22,SNR=9.3						
BATI	**Baumata**	**4.30**	**201**	P	**P**	**20 03 07.6**	**-1.5**
MSAI	**Masohi**	**4.64**	**53**	P	**P**	**20 03 09.8**	**-1.9**
KAPI	**Kappang**	**5.55**	**282**	P	**P**	**20 03 19.1**	**+0.1**
	3.3nm,0.4s,baz=119,slow=11,SNR=7.4						
KAPI	**Kappang**	**5.55**	**282**	P	**P**	**20 03 19.4**	**+0.4**
SPSI	**Sidrap Palu**	**5.85**	**292**	P	**P**	**20 03 20.7**	**-0.7**
	0.1nm8.1nm,0.6s						
LBMI	**Labuha**	**5.95**	**23**	P	**P**	**20 03 22.9**	**+0.6**
	0.3nm970nm110nm,0.8s						
TNTI	**Ternate**	**7.22**	**17**	P	**P**	**20 03 32.6**	**-1.1**
FAKI	**Fak Fak**	**7.72**	**66**	P	**P**	**20 03 38.7**	**+0.4**
FAKI	**Fak Fak**	**7.72**	**66**	P	**P**	**20 03 39.1**	**+0.8**
	0.1nm23nm,1.2s						
FAKI	**Fak Fak**	**7.72**	**66**	P	**P**	**20 03 39.8**	**+1.5**
PLAI	**Plampang**	**7.83**	**250**	P	**P**	**20 03 36.8**	**-2.5**
	0.1nm15nm,1.5s						
PLAI	**Plampang**	**7.83**	**250**	P	**P**	**20 03 37.7**	**-1.6**
SIJI	**Sorong**	**8.01**	**49**	P	**P**	**20 03 39.9**	**-1.1**
	3.2nm,0.5s,baz=240,slow=20,SNR=2.4						
SIJI				S	**S**	**20 05 16.1**	**-2.9**
	2.6nm,0.5s,baz=211,slow=19,SNR=1.5						
TOLI2	**Tolitoli**	**8.48**	**328**	P	**P**	**20 03 44.7**	**-0.8**
TOLI2	**Tolitoli**	**8.48**	**328**	P	**P**	**20 03 44.9**	**-0.6**
TWSI	**Taliwang, Sumb**	**8.65**	**252**	P	**P**	**20 03 45.0**	**-2.1**
	12nm,1.3s						
MTN	**Manton Dam**	**8.84**	**139**	P	**P**	**20 03 48.1**	**-0.8**
KNRA	**Kununurra**	**10.07**	**160**	P	**P**	**20 04 00.0**	**-1.0**
KNRA	**Kununurra**	**10.07**	**160**	P	**P**	**20 04 00.2**	**-0.8**
MYLDM	**Lahad Datu**	**13.11**	**329**	P	**P**	**20 04 33.7**	**+2.1**
MBWA	**Marble Bar**	**15.82**	**199**	P	**P**	**20 04 57.8**	**+0.6**
MBWA	**Marble Bar**	**15.82**	**199**	P	**P**	**20 04 57.9**	**+0.6**
WB0	**Warramunga Arr**	**16.20**	**147**	P	**P**	**20 05 01.1**	**+0.4**
WB0				IAmb	IAmb	20 05 16.0	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**16.31**	**148**	P	**P**	**20 05 02.1**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=342,slow=10,SNR=30						
WRA				S	**S**	**20 07 43.8**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=335,slow=16,SNR=3.8						
WRA	**Warramunga Arr**	**16.31**	**148**	P	**P**	**20 05 02.0**	**+0.2**
WRKA	**Warakurna**	**18.99**	**171**	P	**P**	**20 05 27.4**	**+1.2**
AS31	**Alice Springs**	**19.30**	**155**	P	**P**	**20 05 30.3**	**+1.3**
AS31				IAmb	IAmb	20 05 30.9	
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**19.30**	**155**	P	**P**	**20 05 30.1**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=330,slow=8.9,SNR=23						
ASAR				S	**S**	**20 08 34.3**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=336,slow=18,SNR=2.1						
ASAR	**Alice Springs**	**19.30**	**155**	P	**P**	**20 05 30.6**	**+1.6**
AS01	**Alice Springs**	**19.32**	**155**	P	**P**	**20 05 30.7**	**+1.5**
MORW	**Morawa**	**24.37**	**200**	P	**P**	**20 06 14.9**	**+0.8**
MORW				IAmb	IAmb	20 06 23.5	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**24.63**	**174**	P	**P**	**20 06 16.6**	**+0.2**
NWAO	**Narrogin (SRO)**	**27.64**	**195**	P	**P**	**20 06 43.5**	**+0.7**
	comp=Z,7.2nm,0.9s,baz=76,slow=8.3,SNR=2.3						
	comp=Z,7.2nm,0.9s						
GUMO	**Guam**	**27.68**	**45**	P	**P**	**20 06 43.5**	**+0.1**
BBOO	**Buckleboo**	**28.37**	**161**	P	**P**	**20 06 48.9**	**-0.2**
BBOO				IAmb	IAmb	20 07 17.5	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**29.81**	**151**	P	**P**	**20 07 03.0**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=330,slow=11,SNR=1.1						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**65.00**	**329**	P	**P**	**20 11 25.8**	**+2.2**
	comp=Z,0.4nm,0.5s,baz=124,slow=6.6,SNR=7.3						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**65.00**	**329**	P	**P**	**20 11 25.4**	**+1.8**
ZALV	**Zalesovo Beam**	**68.81**	**336**	P	**P**	**20 11 47.8**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=140,slow=7.0,SNR=1.8						
	comp=Z,0.4nm,0.4s						

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*KRNET **22** 20:10:54.6±0.1, 39°.14N×71°.73E, h9km, mb3.6*

*NNC **22** 20:10:54.7±9.4, 39°.02N×71°.42E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=71.7km s-min=42.4km az=2.0*

*SOME **22** 20:10:54.8, 39°.43N×71°.67E, h5km*

ISC 22 20:10:56.2±1.1, 39°.22N±0°.05×71°.73E±0°.04, h10km, n26, σ3§11/43, 18C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.27**	**12**⇓*eP*		**Pg**	**20 11 01.2**	**-0.5**
	baz=10.0						
DRK				⇓*i*S	**Sg**	**20 11 06.4**	**+1.0**
	baz=10.0						
BTK	**Batken**	**1.09**	**320**⇑*eP*		**Pb**	**20 11 16.4**	**-0.8**
	baz=23						
BTK				⇑*e*S	**Sg**	**20 11 32.2**	**+0.8**
	baz=23						
GAR	**Garm**	**1.12**	**259**⇓*eP*		**Pg**	**20 11 15.7**	**-2.0**
	baz=63						
GAR				⇓*e*S	**Sb**	**20 11 30.7**	**-1.7**
	baz=63						
CHGR	**Chuyangaron**	**2.08**	**255**⇑*eP*		**Pb**	**20 11 31.6**	**-2.5**
	baz=57						
CHGR				⇑*e*S	**Sb**	**20 11 58.8**	**-1.2**
	baz=57						
TRKS	**Terek-Say**	**2.35**	**349**⇑*eP*		**Pn**	**20 11 35.8**	**+0.8**
	baz=50						
TRKS				⇑*e*S	**Sn**	**20 12 05.8**	**+1.8**
	baz=50						
ARK	**Arkit**	**2.58**	**4**⇑*eP*		**Pb**	**20 11 40.0**	**-2.6**
	baz=4.0						
ARK				⇑*e*S	**Sb**	**20 12 13.3**	**-1.1**
	baz=4.0						
TAS	**Tashkent**	**2.81**	**319**⇑*eP*		**Pn**	**20 11 42.7**	**+1.6**
	baz=20						
TAS				⇑*e*S	**Sb**	**20 12 18.0**	**-2.9**
	baz=20						
IUG	**Iuzhnay**	**3.19**	**337**	*e*P	**Pb**	**20 11 51.3**	**-1.8**
	251nm,0.7s						
IUG				*e*S	**Sb**	**20 12 32.7**	**+0.6**
	188nm,0.5s						
AML	**Almayashu**	**3.27**	**27**	P	**Pb**	**20 11 51.8**	**-2.7**
	SNR=24						
ARLS	**Aral**	**3.30**	**36**⇑*eP*		**Pn**	**20 11 49.6**	**+1.6**
	baz=35						
ARLS				⇑*e*S	**Sn**	**20 12 29.8**	**+2.5**
	baz=35						
UCH	**Uchtor**	**3.67**	**34**	P	**Pb**	**20 11 57.3**	**-4.2**
	SNR=8.9						
MRKS	**Merke**	**3.70**	**17**	*e*P	**Pb**	**20 11 57.8**	**-3.8**
	17nm,0.6s						
MRKS				*e*S	**Sb**	**20 12 43.3**	**-3.3**
	25nm,0.9s						
EKS2	**Erkin-Say**	**3.77**	**24**	P	**Pb**	**20 11 58.8**	**-4.1**
	SNR=8.3						
KK31	**Karatay Array**	**3.99**	**347**	⇑Pn	**Pn**	**20 12 01.4**	**+4.1**
	6.1nm,0.4s,baz=183,slow=14,SNR=131						
KK31				⇑Sn	**Sb**	**20 12 51.1**	**-3.7**
	6.4nm,0.5s,baz=184,slow=24,SNR=5.1						
KK31				⇑Lg	Lg	20 13 04.1	
	35nm,0.7s						
AAK	**Ala-Archa**	**4.00**	**31**	P	**Pb**	**20 12 03.0**	**-3.9**
	SNR=7.4						
KBK	**Karagaybulak**	**4.21**	**34**	P	**Pb**	**20 12 06.1**	**-4.3**
	SNR

CHGR ⇓eS Sn 20 13 47.5 +2.3
baz=60

*IDC **22** 20:13:33.9±25.0, 37.°87N×72.°33E, h0km, mb4.2/2, mbtmp4.2/3, ML3.1/2, MS2.7/1, Error ellipse: s-maj=442.7km s-min=39.0km az=162.0*
*KRNET **22** 20:13:45.5±0.1, 39.°15N×71.°87E, h27km, mb3.6*
*SOME **22** 20:13:45.2, 39.°20N×71.°67E, h15km*
*NNC **22** 20:13:49.5±3.2, 39.°25N×71.°70E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=23.9km s-min=13.8km az=5.0*
ISC 22 20:13:45.2±1.0, 39.°16N±0.°05×71.°93E±0.°03, h10km, n48, σ2§12/71, 22C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.34	342	⇓eP	Pb	20 13 53.2	-0.2
DRK	baz=52			⇓eS	Sb	20 13 58.8	-0.2
BTK	Batken	1.24	316	⇑eP	Pb	20 14 07.7	-1.1
BTK	baz=19			⇑eS	Sg	20 14 24.2	-1.0
GAR	Garm	1.27	263	⇑eP	Pn	20 14 07.7	-1.4
GAR	baz=63			⇑eS	Sb	20 14 24.2	-1.5
CHGR	Chuyangaron	2.22	258	⇑eP	Pn	20 14 22.1	-0.1
CHGR	baz=58			⇑eS	Sn	20 14 49.0	-0.7
TRKS	Terek-Say	2.44	346	⇓eP	Pn	20 14 24.8	-0.5
TRKS	baz=47			⇓eS	Sn	20 14 53.7	-1.6
ARK	Arkit	2.63	0	⇑eP	Pn	20 14 28.6	+0.8
ARK	baz=2.0			⇑eS	Sn	20 15 00.4	+0.5
TAS	Tashkent	2.96	318	⇑eP	Pn	20 14 32.7	+0.5
TAS	baz=19			⇑eS	Sn	20 15 07.3	-0.5
ARLS	Aral	3.25	33	⇑eP	Pn	20 14 37.8	+1.4
ARLS	baz=34			⇑eS	Sn	20 15 15.7	+0.4
AML	Almayashu	3.25	24	P	Pb	20 14 43.8	+0.5
IUG	SNR=23 luzhnay	3.31	335	eP	Pb	20 14 42.8	-1.3
IUG	214nm,0.2s			eS	Sb	20 15 24.7	+0.1
IUG	229nm,0.7s luzhnay	3.31	335	Pg	Pb	20 14 42.8	-1.3
IUG	214nm,0.2s			Lg	Lg	20 15 24.7	
UCH	229nm,0.7s Uchtor	3.64	32	P	Pb	20 14 49.0	-0.8
UCH	SNR=5.3 Uchtor	3.64	32	⇑eP	Pn	20 14 43.3	+1.4
UCH	baz=32			⇑eS	Sn	20 15 25.3	+0.2
MRKS	baz=32 Merke	3.71	15	eP	Pb	20 14 49.6	-1.3
MRKS	28nm,0.4s			eS	Sb	20 15 36.5	+0.6
EKS2	35nm,0.8s Erkin-Say	3.77	21	P	Pb	20 14 50.8	-1.0
AAK	SNR=19 Ala-Archa	3.98	28	P	Pb	20 14 54.3	-1.1
KK31	SNR=7.2 Karatay Array	4.08	345	⇓Pn	Pb	20 14 53.0	-4.1
KK31	7.8nm,0.4s,baz=171,slow=13,SNR=27			⇑Sn	Sb	20 15 41.4	-5.1
KK31	10nm,0.5s,baz=169,slow=23,SNR=5.2			⇑Lg	Lg	20 15 56.2	
KBK	17nm,0.6s Karagaybulak	4.17	32	P	Pb	20 14 57.6	-1.2
CHMS	SNR=5.8 Chumysh	4.38	28	P	Pb	20 14 59.1	-3.2
CHMS	30nm,0.6s Chumysh	4.38	28	⇑Pn	Pb	20 14 58.9	-3.4
CHMS	12nm,0.8s			⇑Sn	Sb	20 15 53.2	-2.1
CHMS	7.6nm,0.6s			⇑Lg	Lg	20 16 10.2	
ULHL	Ulahol	4.50	45	P	Pb	20 15 00.1	-4.1
USP	SNR=6.2 Ospenovka	4.54	24	P	Pb	20 15 00.8	-4.0
TKM2	SNR=9.8 Tokmak 2	4.67	35	⇑Pn	Pb	20 15 03.7	-3.5
TKM2	4.7nm,0.5s			Lg	Lg	20 16 20.9	
KST	Kastek	4.93	37	eP	Pg	20 15 18.1	-1.5
KST	4.2nm,0.4s			eS	Sg	20 16 24.7	+1.3
KST	15nm,1.0s Kastek	4.93	37	Pg	Pg	20 15 18.1	-1.5
KST	4.2nm,0.4s			Lg	Lg	20 16 24.7	
DGS	15nm,1.0s Degeres	5.00	34	eP	Pg	20 15 18.9	-2.0
DGS	5.2nm,0.7s			eS	Sg	20 16 26.1	+0.5
DGS	11nm,0.9s Degeres	5.00	34	Pg	Pg	20 15 18.9	-2.0
DGS	5.2nm,0.7s			Lg	Lg	20 16 26.1	
KRBS	11nm,0.9s Karabastau	5.33	31	eP	Pg	20 15 24.5	-2.8
KRBS	2.3nm,0.4s			eS	Sg	20 16 36.1	-0.2
KRBS	5.3nm,0.8s Karabastau	5.33	31	Pg	Pg	20 15 24.5	-2.8
KRBS	2.3nm,0.4s			Lg	Lg	20 16 36.1	
KOTS	5.3nm,0.8s Kotyrbulak	5.64	42	eP	Pg	20 15 32.3	-0.9
KOTS	6.5nm,0.5s			eS	Sg	20 16 48.9	+2.7
KOTS	20nm,0.7s Kotyrbulak	5.64	42	Pg	Pg	20 15 32.3	-0.9
KOTS	6.5nm,0.5s			Lg	Lg	20 16 48.9	
KUU	20nm,0.7s Kurty	5.77	34	eP	Pg	20 15 33.0	-2.6
KUU	2.6nm,0.4s			eS	Sg	20 16 50.1	-0.2
KUU	12nm,0.7s Kurty	5.77	34	Pg	Pg	20 15 33.0	-2.6
KUU	2.6nm,0.4s			Lg	Lg	20 16 50.1	
KTBS	12nm,0.7s Karatobe	5.78	37	eP	Pg	20 15 32.5	-3.4
KTBS	2.2nm,0.6s			eS	Sg	20 16 50.0	-0.6
KTBS	16nm,0.7s Karatobe	5.78	37	Pg	Pg	20 15 32.4	-3.4
KTBS	2.2nm,0.6s			Lg	Lg	20 16 50.0	
CHKK	16nm,0.7s Chushkaly	6.03	37	eP	Pg	20 15 38.7	-1.9
CHKK	1.6nm,0.2s			eS	Sg	20 16 59.9	+1.2
CHKK	7.6nm,0.8s Chushkaly	6.03	37	Pg	Pg	20 15 38.7	-1.9
CHKK	1.6nm,0.2s			Lg	Lg	20 16 59.9	
KPKS	7.6nm,0.8s Kokpek	6.66	48	eP	Pg	20 15 51.3	-1.3
KPKS	4.4nm,0.5s			eS	Sg	20 17 21.7	+3.0
ARXS	8.9nm,0.4s Arharly	6.70	39	eP	Pg	20 15 50.2	-3.2
ARXS	3.9nm,0.7s			eS	Sg	20 17 20.3	0.0
ARXS	6.6nm,0.7s Arharly	6.70	39	Pg	Pg	20 15 50.2	-3.2
ARXS	3.9nm,0.7s			Lg	Lg	20 17 20.3	
BLB	6.6nm,0.7s Baldybastay	6.95	43	eP	Pg	20 15 54.3	-3.9
BLB	3.4nm,0.3s			eS	Sg	20 17 26.8	-1.5
	6.7nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.75	41	Pn	Pn	20 16 21.5	+2.3
MKAR	baz=226,slow=14,SNR=1.7			Lg	Lg	20 19 31.1	
AB31	baz=225,slow=28,SNR=3.4 Akbulak array	13.24	324	⇑Pn	Pn	20 16 56.4	+3.3
AB31	0.5nm,0.5s,baz=172,slow=9.5,SNR=4.1			⇑Sn	Sn	20 19 22.1	+1.7
BVAR	1.9nm,0.8s,baz=150,slow=22,SNR=6.3 Borovoye Array	13.91	356	LR	LR	20 23 18.5	
AKTO	comp=Z,31nm,19.8s,baz=286,slow=38 Aktyubinsk	14.96	323	⇓Sn	Sn	20 20 05.3	+3.1
ZALV	3.1nm,1.1s Zalesovo Beam	17.20	26	P	P	20 17 48.3	+1.4
FINES	0.9nm,0.3s,baz=216,slow=11,SNR=19 FINESS Array B	35.73	324	P	P	20 20 44.5	+0.9
ARCES	4.4nm,1.0s,baz=114,slow=9.3,SNR=2.4 ARCESS Array B	38.99	336	P	P	20 21 12.3	+1.0
	2.2nm,0.9s,baz=116,slow=10,SNR=1.7 2.2nm,0.9s						

*IDC **22** 20:16:23.4±1.9, 0.°06S×17.°63W, h0km, mb3.8/3, mbtmp4.1/4, ML4.6/1, MS3.2/5, Error ellipse: s-maj=39.3km s-min=24.1km az=108.0*
ISC 22 20:16:26.1±1.5, 0.°1S±0.°1×17.°5W±0.°2, h12km, n16, σ2§49/14, mb3.9/3, MS3.2/4, 1C-2D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.26	159	Pn	Pn	20 18 25.0	-0.6
H10N2	baz=339,slow=12			T	T	20 26 52.6	
H10N3	baz=345,slow=74 ASCENSION HYDR	8.27	159	Pn	Pn	20 18 25.1	-0.6
H10N3	baz=339,slow=12			T	T	20 26 54.0	
H10N1	baz=345 ASCENSION HYDR	8.28	159	Pn	Pn	20 18 25.3	-0.6
H10N1	baz=339,slow=12			T	T	20 26 56.0	
H10S3	baz=345,slow=74 ASCENSION HYDR	9.25	162	Pn	Pn	20 18 39.0	-0.3
H10S2	baz=346,slow=74 ASCENSION HYDR	9.27	162	Pn	Pn	20 18 39.7	+0.3
LIC	baz=234,slow=74 Lamto	13.96	63	⇓iP	Pn	20 19 47.4	+3.4
TIC	8.0nm,0.4s Toumodi	14.16	62	⇑iP	Pn	20 19 49.4	+2.7
KIC	16nm,0.2s Kosan Boka	14.28	63	⇓iP	Pn	20 19 51.4	+3.1
DBIC	14nm,0.4s Dimbokro	14.31	62	Pn	Pn	20 19 49.9	+1.1
DBIC	2.9nm,0.3s,baz=238,slow=14,SNR=38			Sn	Sn	20 22 22.8	-4.8
DBIC	0.5nm,0.3s,baz=131,slow=12,SNR=2.2			LR	LR	20 24 12.4	
TORD	comp=Z,40nm,20.0s,baz=216,slow=33 Torodi Ar. Bea	23.15	55	P	P	20 21 32.4	-0.2
TORD	2.7nm,0.7s,baz=232,slow=9.1,SNR=13			S	S	20 25 47.6	+3.4
MDT	0.7nm,0.9s,baz=246,slow=21,SNR=2.9 Midelt	34.92	19	LR	LR	20 36 47.6	
MDP	2.7nm,0.7s Montagnes des	35.45	279	LR	LR	20 35 36.9	
KEST	comp=Z,41nm,18.4s,baz=30,slow=35 Kesra	43.54	32	LR	LR	20 43 45.3	
GERES	comp=Z,37nm,20.9s,baz=68,slow=33 GERESS Array B	55.69	24	P	P	20 26 01.6	-0.8
NNA	comp=Z,47nm,19.5s,baz=196,slow=38 Nana	60.02	256	LR	LR	20 50 29.4	
FINES	0.4nm,0.7s,baz=196,slow=6.6,SNR=4.6 0.4nm,0.7s FINESS Array B	69.72	21	P	P	20 27 34.5	-1.2
	comp=Z,21nm,20.3s,baz=166,slow=34 2.3nm,0.9s,baz=216,slow=6.4,SNR=5.1 2.3nm,0.9s						

IDC 22 20:34:07.4±2.2, 4.°21N×124.°97E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=201.1km s-min=29.1km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.71	159	P	P	20 39 39.4	-0.1
	0.2nm,0.3s,baz=338,slow=10,SNR=6.7 0.2nm,0.3s						
ASAR	Alice Springs	29.04	163	P	P	20 40 09.7	+0.2
	0.3nm,0.6s,baz=342,slow=7.3,SNR=6.1 0.3nm,0.6s						
MKAR	Makanchi Array	56.17	326	P	P	20 43 49.0	-0.1
	0.1nm,0.4s,baz=108,slow=8.7,SNR=1.4 0.1nm,0.4s						

IDC 22 20:42:56.5±2.4, 16.°50N×148.°01E, h0km, mb3.4/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=66.1km s-min=26.1km az=92.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.19	227	Pn	Pn	20 44 00.5	-1.2
GUMO	1.7nm,0.3s,baz=203,slow=22,SNR=1.2			Sn	Sn	20 44 51.8	+0.4
WRA	3.6nm,0.3s,baz=82,slow=21,SNR=1.8 14nm,0.4s Warramunga Arr	38.62	201	P	P	20 50 21.6	-0.1
	0.5nm,0.7s,baz=30,slow=9.1,SNR=5.5 0.5nm,0.7s						
ASAR	Alice Springs	42.23	199	P	P	20 50 52.3	+0.7
	0.4nm,0.8s,baz=7.4,slow=7.9,SNR=1.4 0.4nm,0.8s						
SONM	Songino Array	46.23	322	P	P	20 51 23.7	+0.1
	0.3nm,0.5s,baz=133,slow=6.4,SNR=2.9 0.3nm,0.5s						
MKAR	Makanchi Array	61.57	315	P	P	20 53 15.2	-0.5
	0.6nm,1.0s,baz=100,slow=8.0,SNR=2.5 0.6nm,1.0s						

*NEIC **22** 21:10:13.1±2.3, 5.°79S±0.°09×151.°2E±0.°1, h35km±2km, mb4.6/24, Error ellipse: s-maj=23.6km s-min=10.1km az=122.0*
*IDC **22** 21:10:17.1±1.0, 5.°64S×151.°11E, h72km±9km, mb3.8/12, mbtmp4.1/13, MS3.6/31, Error ellipse: s-maj=25.2km s-min=8.5km az=125.0*
ISC 22 21:10:16.1±0.5, 5.°67S±0.°08×151.°13E±0.°10, h65km, n81, σ1§04/58, mb4.4/22, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.62	34	P	Pn	21 10 42.0	-0.6
KRVT	3μm,0.3s,baz=241,slow=1.5,SNR=349			S	Sn	21 11 04.0	+1.4
RABL	5μm,0.4s,baz=18,slow=17,SNR=25 Rabaul	1.79	35	Pn	Pn	21 10 43.2	-1.7
RABL				Sn	Sn	21 11 08.7	+1.9
PMG	Port Moresby	5.41	226	P	Pn	21 11 36.2	+1.9
PMG	70nm,0.9s,baz=46,slow=8.7,SNR=12			S	Sn	21 12 35.6	+0.3
PMG	58nm,0.5s,baz=56,slow=10,SNR=3.4 Port Moresby	5.41	226		Pn	21 11 32.8	-1.5
HNR	Honiara	9.51	114	LR	LR	21 15 29.9	
CTA	comp=Z,3μm,21.5s,baz=303,slow=33 Charters Tower	15.10	198	P	P	21 13 49.6	0.0
CTA	2.5nm,0.6s,baz=15,slow=11,SNR=5.8			LR	LR	21 19 25.6	
CTAO	comp=Z,226nm,18.1s,baz=64,slow=36 Charters Tower	15.10	198		P	21 13 48.9	-0.7
EIDS	Eidsvold	19.59	180	P	P	21 14 38.9	-0.2
GUMO	Guam	20.12	342	LR	LR	21 21 01.5	
WB0	comp=Z,118nm,21.1s,baz=158,slow=32 Warramunga Arr	21.48	228	P	P	21 14 58.0	-1.5
WRA	Warramunga Arr	21.63	227	P	P	21 15 01.1	-0.1
WRA	5.2nm,1.1s,baz=52,slow=9.9,SNR=12			PcP	PcP	21 19 01.4	+0.6
WRA	1.3nm,0.7s,baz=48,slow=2.1,SNR=5.3			LR	LR	21 23 33.5	
WRA	comp=Z,123nm,19.3s,baz=32,slow=37 5.2nm,1.1s						
WRA	Warramunga Arr	21.63	227	P	P	21 14 59.4	-1.7
DZM	Mont Dzumac	22.03	139	LR	LR	21 23 09.7	
KNRA	comp=Z,188nm,18.3s,baz=222,slow=35 Kununurra	24.10	244	P	P	21 15 24.8	-1.1
KNRA	comp=Z,24nm,1.1s			IAmb	IAmb	21 15 39.5	
AS31	Alice Springs	24.39	221	P	P	21 15 27.4	-1.1
ASAR	Alice Springs	24.40	221	P	P	21 15 29.4	+0.8
ASAR	comp=Z,1.5nm,0.7s,baz=54,slow=8.8,SNR=20			PcP	PcP	21 19 07.1	+0.5
ASAR	comp=Z,2.1nm,1.2s,baz=26,slow=2.4,SNR=2.7			ScP	ScP	21 22 42.6	+2.7
ASAR	comp=Z,0.5nm,0.7s,baz=56,slow=3.5,SNR=4.5			LR	LR	21 24 55.5	
ASAR	comp=Z,127nm,21.6s,baz=72,slow=36 comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	24.40	221	P	P	21 15 28.8	+0.2
STKA	Stephens Creek	27.56	198	P	P	21 15 58.8	+1.7
STKA	comp=Z,1.0nm,0.3s,baz=42,slow=6.3,SNR=3.8			LR	LR	21 26 12.3	
DAV	comp=Z,120nm,20.9s,baz=33,slow=35 comp=Z,1.0nm,0.3s Davao City (W)	28.46	296	LR	LR	21 27 18.4	
LUWI	comp=Z,62nm,18.5s,baz=134,slow=36 Luwuk	28.67	278	P	P	21 16 05.3	-1.9
KAPI	Kappang	31.24	270	LR	LR	21 31 57.1	
MBWA	comp=Z,32nm,19.2s,baz=95,slow=42 Marble Bar	34.10	240	P	P	21 16 53.9	-0.9
MBWA				IAmb	IAmb	21 17 15.0	
AFI	comp=Z,16nm,1.4s Afiamalu	37.42	105	LR	LR	21 30 55.1	
URZ	comp=Z,69nm,18.8s,baz=38,slow=33 Urewera	40.12	148	LR	LR	21 33 05.4	
MORW	comp=Z,82nm,18.8s,baz=44,slow=34 Morawa	40.51	231	P	P	21 17 48.5	-0.5
MORW				IAmb	IAmb	21 18 02.3	
TPUB	comp=Z,17nm,1.3s Ta-pu	41.43	315	P	P	21 17 56.9	+0.3
SSLB	Suanglung	41.52	316	P	P	21 17 58.5	+1.2
SSLB				IAmb	IAmb	21 18 16.7	
RPZ	comp=Z,22nm,1.3s Rata Peaks	41.76	158	LR	LR	21 34 15.9	
LEM	comp=Z,158nm,18.4s,baz=289,slow=34 Lembang	43.26	266	LR	LR	21 40 41.2	
BKNI	comp=Z,53nm,18.3s,baz=104,slow=42 Bangkinang	50.36	275	P	P	21 19 07.5	+0.4
KULM	Kulim	51.56	281	P	P	21 19 16.5	+0.3
CMAR	Chiang Mai Arr	56.75	296	LR	LR	21 44 41.8	
KLR	comp=Z,12nm,19.3s,baz=120,slow=36 Kul'dur	57.23	345	LR	LR	21 41 09.1	
PETK	comp=Z,71nm,22.0s,baz=177,slow=32 Petropavlovsk-	58.82	5	P	P	21 20 07.1	-0.6
	comp=Z,2.5nm,0.8s,baz=195,slow=8.2,SNR=2.1 comp=Z,2.5nm,0.8s						
BRDH	Bariadhala	64.59	298	LR	LR	21 49 54.4	
MA2	comp=Z,27nm,18.1s,baz=277,slow=37 Magadan	65.04	360	LR	LR	21 48 30.6	
SONM	comp=Z,32nm,19.8s,baz=140,slow=35 Songino Array	66.18	329	P	P	21 20 58.2	+1.0
	comp=Z,2.3nm,0.9s,baz=144,slow=5.3,SNR=11 comp=Z,2.3nm,0.9s						
SONM	Songino Array	66.18	329	P	P	21 20 58.1	+1.0
SONM				IAmb	IAmb	21 21 00.0	
YAK	comp=Z,2.8nm,0.9s Yakutsk	69.50	349	LR	LR	21 49 33.0	
VNDA	comp=Z,17nm,21.6s,baz=266,slow=34 Vanda	72.03	178	P	P	21 21 33.0	+0.3
	comp=Z,0.9nm,0.9s,baz=326,slow=9.0,SNR=4.5 comp=Z,0.9nm,0.9s						
VNDA	Vanda	72.03	178	P	P	21 21 32.5	-0.2
KDAK	Kodiak Island	77.70	27	LR	LR	21 49 48.6	
TIXI	comp=Z,37nm,21.4s,baz=11,slow=30 Tiksi	78.54	353	LR	LR	21 53 57.3	
CNPM	comp=Z,20nm,21.8s,baz=184,slow=33 China Poot	79.22	26	P	P	21 22 14.1	0.0
MKAR	Makanchi Array	79.89	319	P	P	21 22 18.3	+0.3
MKAR	comp=Z,0.9nm,1.0s,baz=107,slow=4.8,SNR=5.4			LR	LR	21 56 15.9	
	comp=Z,27nm,21.5s,baz=88,slow=34 comp=Z,0.9nm,1.0s						
MKAR	Makanchi Array	79.89	319	P	P	21 22 19.5	+1.5
K20K	Telida	80.15	22	P	P	21 22 19.6	+0.6
K20K				IAmb	IAmb	21 22 36.7	
ZALV	comp=Z,9.2nm,1.4s Zalesovo Beam	80.95	327	P	P	21 22 22.5	-1.0
ZALV	comp=Z,0.9nm,0.6s,baz=103,slow=6.4,SNR=4.5			LR	LR	21 57 30.2	
	comp=Z,40nm,21.4s,baz=96,slow=35 comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	80.95	327	P	P	21 22 23.2	-0.3
IMAR	Indian Mountai	81.76	20	P	P	21 22 26.9	-0.6
MLY	Manley	82.29	21	P	P	21 22 30.0	-0.4
MLY				IAmb	IAmb	21 22 46.3	
MCK	comp=Z,5.5nm,1.4s McKinley	82.30	23	P	P	21 22 29.5	-0.9
IL31		83.59	22	P	P	21 22 35.2	-1.7
IL31				IAmb	IAmb	21 22 37.8	
ILAR	comp=Z,3.2nm,0.8s Eielson Array	83.59	22	P	P	21 22 35.2	-1.8
	comp=Z,1.6nm,0.7s,baz=250,slow=4.7,SNR=19 comp=Z,1.6nm,0.7s						
J25K	Salcha River,	84.10	23	P	P	21 22 39.0	-0.7
J25K				IAmb	IAmb	21 22 39.7	
MAW	comp=Z,3.9nm,0.7s Mawson	84.13	203	LR	LR	21 57 32.1	
QSPA	comp=Z,36nm,20.3s,baz=112,slow=34 South Pole Qui	84.30	180	P	P	21 22 40.4	-0.4
	comp=Z,1.7nm,0.8s,baz=13,slow=0.6,SNR=4.2 comp=Z,1.7nm,0.8s						
QSPA	South Pole Qui	84.30	180	P	P	21 22 39.7	-1.1
QSPA				IAmb	IAmb	21 23 03.0	
M27K	comp=Z,2.8nm,1.1s Edge Creek, AK	84.57	26	P	P	21 22 42.3	0.0
M27K				IAmb	IAmb	21 23 09.3	
BMAR	comp=Z,10nm,1.4s Burnt Mountain	85.63	20	P	P	21 22 47.6	+0.3
KK31	Karatay Array	87.02	314	P	P	21 22 54.8	+0.1
KK31				IAmb	IAmb	21 23 19.2	
KKAR	comp=Z,3.9nm,1.3s Karatay Array	87.02	314	P	P	21 22 55.1	+0.5
BBB	Bella Bella	88.79	37	LR	LR	21 56 40.9	
DLBC	comp=Z,28nm,20.6s,baz=254,slow=31 Dease Lake	88.98	31	LR	LR	21 56 14.0	
YBH	comp=Z,73nm,20.0s,baz=268,slow=31 Yreka Blue Hor	90.87	48	LR	LR	22 00 12.7	
NVAR	comp=Z,32nm,18.9s,baz=302,slow=33 Mina Array Bea	93.93	52	P	P	21 23 28.0	+0.7
	comp=Z,2.2nm,0.8s,baz=251,slow=5.6,SNR=14 comp=Z,2.2nm,0.8s						
PFO	Pinyon Flats O	95.11	57	LR	LR	21 59 22.9	
NEW	comp=Z,47nm,19.7s,baz=200,slow=31 Newport	95.35	42	LR	LR	22 00 30.4	
ARU	comp=Z,43nm,18.4s,baz=260,slow=32 Arti	96.10	326	LR	LR	22 07 08.1	
AKTO	comp=Z,46nm,20.8s,baz=84,slow=36 Aktyubinsk	96.31	320	LR	LR	22 07 45.3	
ELK	comp=Z,25nm,20.0s,baz=26,slow=36 Elko	96.41	50	LR	LR	22 00 53.4	
YKA	comp=Z,47nm,19.8s,baz=240,slow=32 Yellowknife Ar	96.97	28	P	P	21 23 39.2	-1.1
	comp=Z,1.1nm,0.8s,baz=267,slow=4.9,SNR=2.8 comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	100.66	48	P	Pdif	21 23 57.2	-0.5
BRTR	comp=Z,0.8nm,0.9s,baz=258,slow=2.7,SNR=4.9 Keskin Array B	114.63	311	PKP	PKPdf	21 28 49.3	-0.3
H03S2	comp=Z,0.7nm,0.9s,baz=123,slow=5.3,SNR=3.9 Juan Fernandez	118.52	133	T	T	23 38 15.1	
H03S1	baz=239 Juan Fernandez	118.53	133	T	T	23 38 16.3	
H03S3	baz=239 Juan Fernandez	118.54	133	T	T	23 38 14.0	
GERES	baz=239 GERESS Array B	123.90	327	PKP	PKPdf	21 29 07.3	+0.2
LPAZ	comp=Z,0.6nm,0.6s,baz=223,slow=1.6,SNR=4.0 La Paz	135.45	120	PKP	PKPdf	21 29 30.6	+0.1
TORD	comp=Z,0.9nm,0.6s,baz=223,slow=1.6,SNR=4.0 Torodi Ar. Bea	148.97	286	PKPbc	PKPbc	21 29 58.0	+0.2
BDFB	comp=Z,12nm,0.7s,baz=70,slow=2.8,SNR=78 Brasilia	151.58	138	PKPbc	PKPbc	21 30 04.4	+0.2
	comp=Z,2.6nm,0.7s,baz=214,slow=3.6,SNR=4.6						

*GUC **22** 21:35:24.1±0.7, 21.°12S×68.°82W, h114km±3km, ML3.7*
*VAO **22** 21:35:25.0±0.5, 21.°15S×68.°45W, h100km±5km, mb4.1*
*IDC **22** 21:35:38.2±8.0, 19.°98S×68.°13W, h204km±52km, mb3.3/1, mbtmp3.8/3, Error ellipse: s-maj=98.4km s-min=43.7km az=33.0*
ISC 22 21:35:23.1±0.7, 21.°10S±0.°03×68.°79W±0.°07, h115km±9km, n45, σ1§26/63, 9C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.66**	**274**	⇑*i*P	**Pn**	**21 35 41.7**	**0.0**
PB01				*i* S	**Sn**	**21 35 55.4**	**-0.3**
PB01				IAML		21 35 56.5	
	comp=E,2μm,0.3s						
PB09	**IPOC Station P**	**0.82**	**211**	⇑*i*P	**Pn**	**21 35 43.6**	**+0.4**
PB09				*i* S	**Sn**	**21 35 58.5**	**+0.3**
PB09				IAML		21 36 01.3	
	comp=E,1μm,0.5s						
PB08	**IPOC Station P**	**1.01**	**340**	⇓*i*P	**Pn**	**21 35 46.2**	**+1.0**
PB08				*i* S	**Sn**	**21 36 02.8**	**+0.9**
PB08				IAML		21 36 04.3	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**1.06**	**258**	⇑*i*P	**Pn**	**21 35 45.5**	**+0.2**
PB02				*i* S	**Sn**	**21 36 01.9**	**-0.3**
PB02				IAML		21 36 04.3	
	comp=E,3μm,0.5s						
PB07	**IPOC Station P**	**1.20**	**238**	⇑*i*P	**Pn**	**21 35 47.0**	**0.0**
PB07				*i* S	**Sn**	**21 36 04.8**	**-0.3**
PB07				IAML		21 36 06.8	
	comp=N,960nm,0.4s						
PATCX	**Punta Patache**	**1.30**	**282**	⇑*i*P	**Pn**	**21 35 48.3**	**+0.3**
PATCX				*i* S	**Sn**	**21 36 06.8**	**-0.1**
PATCX				IAML		21 36 08.3	
	comp=N,2μm,0.2s						
PB03	**IPOC Station P**	**1.31**	**223**	⇑*i*P	**Pn**	**21 35 48.2**	**0.0**
PB03				*i* S	**Sn**	**21 36 06.4**	**-0.7**
PB03				IAML		21 36 08.5	
	comp=E,1μm,0.4s						
HMBC	**Humberstone**	**1.31**	**308**	⇓*i*P	**Pn**	**21 35 48.2**	**0.0**
HMBC				*i* S	**Sn**	**21 36 06.9**	**-0.2**
HMBC				IAML		21 36 07.6	
	comp=N,4μm,0.3s						
TA01	**Diego Aracena**	**1.41**	**292**	⇑*i*P	**Pn**	**21 35 49.1**	**0.0**
TA01				*i* S	**Sn**	**21 36 08.2**	**-0.6**
TA01				IAML		21 36 09.8	
	comp=E,2μm,0.2s						
GO01	**Chusmiza**	**1.47**	**345**	⇓*i*P	**Pn**	**21 35 51.2**	**+0.8**
GO01				*i* S	**Sn**	**21 36 12.4**	**+1.4**
GO01				IAML		21 36 14.5	
	comp=N,2μm,0.3s						
TA02	**Huaiquique**	**1.50**	**303**	*e*P	**Pn**	**21 35 50.3**	**+0.1**
TA02				*i* S	**Sn**	**21 36 10.3**	**-0.6**
LVC	**Limon Verde**	**1.51**	**184**	⇓*i*P	**Pn**	**21 35 51.3**	**+0.5**
LVC				*i* S	**Sn**	**21 36 12.4**	**+0.7**
LVC	**Limon Verde**	**1.51**	**184**	*e*P	**Pn**	**21 35 51.2**	**+0.5**
PB11	**IPOC Station P**	**1.56**	**328**	⇓*i*P	**Pn**	**21 35 51.3**	**+0.2**
PB11				*i* S	**Sn**	**21 36 12.8**	**+0.5**
PB11				IAML		21 36 13.7	
	comp=E,4μm,0.2s						
PB06	**IPOC Station P**	**1.76**	**204**	⇑*i*P	**Pn**	**21 35 53.7**	**+0.2**
PB06				*i* S	**Sn**	**21 36 16.5**	**-0.2**
PB06				IAML		21 36 18.6	
	comp=E,1μm,0.3s						
PB04	**IPOC Station P**	**1.77**	**226**	⇑*i*P	**Pn**	**21 35 53.4**	**-0.2**
PB04				*i* S	**Sn**	**21 36 15.7**	**-1.2**
PB04				IAML		21 36 19.5	
	comp=E,538nm,0.2s						
PB15	**IPOC Station P**	**2.20**	**197**	*e*P	**Pn**	**21 35 59.6**	**+0.6**
PB15				*i* S	**Sn**	**21 36 26.6**	**+0.1**
PB16	**IPOC Station P**	**2.83**	**346**	⇓*i*P	**Pn**	**21 36 08.7**	**+1.1**
PB16				*i* S	**Sn**	**21 36 43.4**	**+1.8**
PB16				IAML		21 36 49.0	
	comp=E,67nm,0.6s						
PB12	**IPOC Station P**	**2.86**	**329**	⇓*i*P	**Pn**	**21 36 06.6**	**-1.0**
PB12				IAML		21 36 50.1	
	comp=E,258nm,0.3s						
PB10	**IPOC Station P**	**2.91**	**214**	*e*P	**Pn**	**21 36 07.4**	**-0.7**
PB10				IAML		21 37 06.7	
	comp=N,88nm,0.5s						
LPAZ	**La Paz**	**4.82**	**8**	P	**Pn**	**21 36 36.8**	**+2.6**
	comp=N,2.6nm,0.3s,baz=197,slow=6.4,SNR=18						
LPAZ				S	**Sn**	**21 37 23.2**	**-6.1**
	comp=N,2.1nm,0.5s,baz=172,slow=7.0,SNR=2.3						
LPAZ	**La Paz**	**4.82**	**8**	*e*P	**Pn**	**21 36 36.4**	**+2.2**
BBSD	**Serra de San D**	**8.65**	**65**	*e*P	**Pn**	**21 37 22.9**	**-2.5**
MURT	**Porto Murtinho**	**10.43**	**95**	*e*P	**Pn**	**21 37 46.9**	**-2.6**
SALV	**Santo Antonio**	**13.45**	**70**	*e*P	**Pn**	**21 38 29.2**	**-0.3**
PDRB	**Porto dos Gac**	**14.92**	**53**	*e*P	**Pn**	**21 38 49.2**	**+1.0**
CLDB	**Colider**	**16.09**	**53**	*e*P	**Pn**	**21 39 03.6**	**+0.8**
BB19B	**Bebedouro**	**18.91**	**94**	*e*P	**P**	**21 39 34.7**	**-0.3**
SNDB	**Serra Nova Dou**	**19.05**	**64**	*e*P	**P**	**21 39 36.0**	**-0.5**
NPGB	**Novo Progresso**	**19.07**	**45**	*e*P	**P**	**21 39 37.8**	**+1.0**
IPMB	**Ipameri, GO**	**19.64**	**84**	*e*P	**P**	**21 39 43.0**	**0.0**
RCLB	**Rio Claro- Sao**	**19.79**	**98**	*e*P	**P**	**21 39 44.6**	**+0.1**
BDFB	**Brasilia**	**20.44**	**78**	P	**P**	**21 39 51.6**	**0.0**
	comp=N,2.7nm,0.5s,baz=257,slow=8.8,SNR=6.6						
BDFB	**Brasilia**	**20.44**	**78**	*e*P	**P**	**21 39 52.1**	**+0.4**
ITTB	**Itaituba**	**20.91**	**39**	*e*P	**P**	**21 39 55.6**	**-1.1**
PMNB	**Patos De Minas**	**21.18**	**87**	*e*P	**P**	**21 39 58.7**	**-0.8**
SMTB	**Santa Maria do**	**23.78**	**62**	*e*P	**P**	**21 40 25.7**	**+0.3**
MALB	**Monte Alegre**	**23.80**	**38**	*e*P	**P**	**21 40 26.3**	**+0.8**
MC01	**Montes Claros**	**23.90**	**84**	*e*P	**P**	**21 40 27.3**	**+0.8**
JANB	**Januaria**	**24.01**	**80**	*e*P	**P**	**21 40 27.2**	**-0.4**
SDBA	**SAO DESIDERIO**	**24.42**	**73**	*e*P	**P**	**21 40 31.8**	**+0.6**
MCPB	**Macapa, AP**	**26.30**	**41**	*e*P	**P**	**21 40 51.2**	**+3.0**
NAN01	**Guarapari, ES**	**27.20**	**88**	*e*P	**P**	**21 40 56.7**	**+0.4**
GUA01	**Guaratinga, BA**	**27.77**	**86**	*e*P	**P**	**21 41 01.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**21 47 04.3**	**-0.1**
	comp=N,0.5nm,0.5s,baz=252,slow=6.2,SNR=7.7						
	comp=N,0.5nm,0.5s						

*IDC **22** 21:43:00.5±0.9, 17°.31N×83°.28W, h0km, mb3.6/8, mbtmp3.7/10, ML3.5/2, MS3.3/20, Error ellipse: s-maj=32.2km s-min=19.5km az=41.0*
*NEIC **22** 21:43:01.2±2.4, 17°.49N±0°.06×83°.30W±0°.04, h10km±2km, mb4.2/13, Error ellipse: s-maj=11.3km s-min=3.0km az=325.0*
ISC 22 21:43:02.3±0.5, 17°.41N±0°.07×83°.38W±0°.06, h18km, n64, σ1§84/48, mb3.8/9, MS3.3/15, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**3.85**	**54**	Pn	**Pn**	**21 43 57.8**	**-3.0**
TGUH	**Tegucigalpa,Un**	**5.01**	**229**	Pn	**Pn**	**21 44 17.0**	**+0.2**
MATN	**Matagalpa**	**5.08**	**209**		**Pn**	**21 44 18.8**	**+1.1**
ESPN	**Las Esperanzas**	**5.26**	**190**		**Pn**	**21 44 21.4**	**+1.4**
SOR	**Soroa**	**5.37**	**4**	Pn	**Pn**	**21 44 20.7**	**-0.8**
BOAB	**BOACO BROADBAN**	**5.40**	**204**	Pn	**Pn**	**21 44 23.5**	**+1.5**
TEIG	**Tepich**	**5.41**	**302**	Pn	**Pn**	**21 44 20.4**	**-1.8**
MTDJ	**Mount Denham**	**5.63**	**81**	Pn	**Pn**	**21 44 23.0**	**-2.3**
ACON	**Acoyapa**	**5.68**	**198**		**Pn**	**21 44 27.6**	**+1.7**
PETF	**Flores**	**6.22**	**266**		**Pn**	**21 44 32.3**	**-0.9**
ESQI	**Esquipulas**	**6.39**	**245**		**Pn**	**21 44 36.2**	**+0.5**
MTO3	**Montecristo**	**6.48**	**243**		**Pn**	**21 44 36.9**	**-0.2**
COVE	**Coope Vega, Sa**	**6.72**	**189**	Pn	**Pn**	**21 44 39.6**	**-0.6**
JTS	**Las Juntas de**	**7.24**	**192**	Pn	**Pn**	**21 44 48.8**	**+1.5**
ORTG	**Ortega, Santa**	**7.29**	**196**	Pn	**Pn**	**21 44 50.1**	**+2.1**
DUNO	**Dulce Nombre,**	**7.57**	**196**	Pn	**Pn**	**21 44 52.9**	**+1.1**
RIMA	**Rio Macho**	**7.61**	**184**	Pn	**Pn**	**21 44 53.9**	**+1.3**
SRBA	**San Rafael, Bu**	**8.13**	**180**	Pn	**Pn**	**21 45 00.1**	**+0.6**
GTBY	**Guantanamo Bay**	**8.23**	**71**	Pn	**Pn**	**21 44 58.7**	**-2.1**
CCIG	**Comitan**	**8.46**	**264**	Pn	**Pn**	**21 45 05.0**	**+0.9**
061Z	**Ochoppi**	**8.72**	**15**	Pn	**Pn**	**21 45 06.0**	**-1.6**
BCIP	**Isla Barro Col**	**8.89**	**157**	Pn	**Pn**	**21 45 07.8**	**-2.1**
CMIG	**Matias Romero**	**10.99**	**270**	Pn	**Pn**	**21 45 40.1**	**+1.4**
	0.3nm,0.3s,baz=84,slow=10,SNR=2.4						
CMIG				Sn	**Sn**	**21 47 34.6**	**-6.7**
	0.4nm,0.3s,baz=86,slow=4.6,SNR=2.4						
CMIG				LR	LR	21 49 42.1	
	comp=Z,130nm,20.1s,baz=100,slow=36 1.8nm,0.5s						
SDDR	**Presa de Saban**	**11.60**	**80**		**Pn**	**21 45 47.0**	**-0.1**
GRTK	**Grand Turk**	**12.25**	**69**	Pn	**Pn**	**21 45 54.1**	**-1.8**
250A	**Grady**	**14.74**	**350**	P	**P**	**21 46 34.0**	**-1.9**
SDV	**Santo Domingo**	**15.02**	**123**	Pn	**P**	**21 46 39.6**	**+0.3**
	1.0nm,0.3s,baz=339,slow=5.3,SNR=9.3						
SDV				LR	LR	21 53 14.3	
	comp=Z,142nm,18.8s,baz=288,slow=41						
SDV	**Santo Domingo**	**15.02**	**123**		**Pn**	**21 46 31.8**	**-2.3**
ROSC	**El Rosal**	**15.32**	**144**	LR	LR	21 52 57.0	
	comp=Z,140nm,19.2s,baz=343,slow=39						
SJG	**San Juan**	**16.43**	**85**	LR	LR	21 52 46.0	
	comp=Z,65nm,21.2s,baz=292,slow=36						
HODGE	**Hodges**	**16.78**	**3**		**Pn**	**21 46 56.5**	**0.0**
MTP	**Monte Pirata**	**17.00**	**85**		**Pn**	**21 46 58.7**	**-0.6**
BAUV	**El Baul**	**17.14**	**117**	Pn	**Pn**	**21 46 58.9**	**-2.1**
TKL	**Tuckaleechee C**	**18.18**	**359**	P	**P**	**21 47 16.4**	**+2.4**
	0.1nm,0.3s,baz=170,slow=6.1,SNR=1.6						
TKL				LR	LR	21 54 19.7	
	comp=Z,63nm,19.0s,baz=188,slow=37 1.2nm,0.3s						
833A	**Chaparral WMA,**	**18.30**	**309**		**P**	**21 47 13.5**	**-1.9**
833A				IAmb	IAmb	21 47 34.6	
	comp=Z,11nm,0.8s						
WVT	**Waverly**	**19.06**	**349**	P	**Pn**	**21 47 24.5**	**0.0**
MIAR	**Mount Ida**	**19.35**	**334**	P	**P**	**21 47 27.2**	**+0.3**
MIAR				IAmb	IAmb	21 47 37.7	
	comp=Z,11nm,0.9s						
BOSC	**San Juan Bosco**	**20.99**	**166**	P	**P**	**21 47 44.8**	**-0.2**
BOSC				IAmb	IAmb	21 48 13.9	
	comp=Z,10nm,1.4s						
TXAR	**Lajitas Array**	**22.04**	**306**	P	**P**	**21 47 59.5**	**+3.3**
	comp=Z,0.8nm,0.9s,baz=122,slow=10,SNR=6.9 comp=Z,0.8nm,0.9s						
TXAR	**Lajitas Array**	**22.04**	**306**	P	**P**	**21 47 57.1**	**+0.9**
LPIG	**La Paz**	**26.01**	**289**	LR	LR	22 01 08.7	
	comp=Z,59nm,18.4s,baz=210,slow=42						
ANMO	**Albuquerque**	**26.98**	**315**	LR	LR	22 02 10.3	
	comp=Z,23nm,19.8s,baz=144,slow=42						
SADO	**Sadowa**	**27.51**	**7**	LR	LR	21 59 36.2	
	comp=Z,62nm,19.1s,baz=173,slow=36						
MDP	**Montagnes des**	**32.47**	**108**	LR	LR	22 04 48.2	
	comp=Z,36nm,18.7s,baz=234,slow=40						
PDAR	**Pinedale Array**	**33.68**	**324**	P	**P**	**21 49 44.7**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=115,slow=12,SNR=1.9 comp=Z,0.2nm,0.7s						
LPAZ	**La Paz**	**36.70**	**155**	LR	LR	22 06 41.4	
	comp=Z,48nm,18.5s,baz=285,slow=39						
NVAR	**Mina Array Bea**	**36.97**	**312**	P	**P**	**21 50 13.3**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=113,slow=9.1,SNR=3.7 comp=Z,0.5nm,0.7s						
WVOR	**Wild Horse Val**	**39.00**	**317**	P	**P**	**21 50 28.4**	**+0.5**
WVOR				IAmb	IAmb	21 50 47.5	
	comp=Z,7.1nm,1.1s						
SCHQ	**Schefferville**	**39.46**	**15**	LR	LR	22 07 38.8	
	comp=Z,84nm,18.1s,baz=160,slow=37						
SIV	**San Ignacio**	**39.82**	**145**	LR	LR	22 10 32.7	
	comp=Z,37nm,18.2s,baz=168,slow=42						
YBH	**Yreka Blue Hor**	**41.41**	**314**	LR	LR	22 09 28.6	
	comp=Z,25nm,20.4s,baz=20,slow=38						
LVC	**Limon Verde**	**42.22**	**160**	LR	LR	22 10 02.3	
	comp=Z,44nm,18.1s,baz=338,slow=38						
BDFB	**Brasilia**	**47.90**	**131**	P	**P**	**21 51 40.6**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=292,slow=4.5,SNR=3.1 comp=Z,2.2nm,0.8s						
CPUP	**Villa Florida**	**50.31**	**149**	LR	LR	22 16 22.7	
	comp=Z,43nm,18.1s,baz=328,slow=40						
RPN	**Rapa Nui**	**50.93**	**210**	LR	LR	22 08 53.6	
	comp=Z,22nm,19.2s,baz=332,slow=30						
RCBR	**Riachuelo**	**52.27**	**112**	LR	LR	22 14 59.0	
	comp=Z,27nm,19.6s,baz=131,slow=37						
SFJD	**Kangerlussuaq**	**53.91**	**15**	LR	LR	22 15 32.8	
	comp=Z,67nm,19.0s,baz=168,slow=36						
PLCA	**Paso Flores**	**59.06**	**169**	P	**P**	**21 53 02.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=315,slow=8.6,SNR=1.6 comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**63.18**	**335**	P	**P**	**21 53 30.8**	**+1.8**
	comp=Z,1.5nm,1.1s,baz=114,slow=6.7,SNR=7.1						
ILAR				LR	LR	22 22 47.0	
	comp=Z,22nm,18.3s,baz=116,slow=38 comp=Z,1.5nm,1.1s						
ESDC	**Sonseca Array**	**71.07**	**53**	P	**P**	**21 54 20.8**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=283,slow=6.8,SNR=7.2 comp=Z,1.6nm,0.9s						
NOA	**NORSAR Array B**	**77.14**	**30**	LR	LR	22 25 18.2	
	comp=Z,18nm,20.6s,baz=10.0,slow=33						
TORD	**Torodi Ar. Bea**	**81.55**	**79**	P	**P**	**21 55 19.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=298,slow=6.2,SNR=2.1 comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**144.22**	**260**	PKP	**PKPdf**	**22 02 38.7**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=92,slow=3.2,SNR=3.0						
ASAR	**Alice Springs**	**144.60**	**254**	PKP	PKPbc	22 02 37.6	+0.3
	comp=Z,1.9nm,0.8s,baz=104,slow=3.5,SNR=14						

IDC 22 21:45:53.0±7.0, 17°.14S×176°.41W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=346.7km s-min=55.2km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.65**	**259**	P	P	21 54 23.5	-0.2
	0.3nm,0.4s,baz=94,slow=7.5,SNR=8.9 0.3nm,0.4s						
ASAR	**Alice Springs**	**46.84**	**253**	P	P	21 54 25.0	-0.1
	1.6nm,0.6s,baz=89,slow=7.7,SNR=22 1.6nm,0.6s						
GERES	**GERESS Array B**	**147.32**	**348**	PKPbc	PKPbc	22 05 37.9	-0.8
	0.2nm,0.4s,baz=35,slow=2.4,SNR=2.5						

ROM 22 22:22:15.6±0.0, 42°.767N±0°.002×13°.169E±0°.003, h13km, ML2.6/32, 26C-20D, Error ellipse: s-maj=0.2km s-min=0.1km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**329**	⇓P	Pg	22 22 18.6	+0.2
NRCA				S	Sg	22 22 20.4	0.0
NRCA				AML	AML		
	comp=E,51300μm,0.2s						
NRCA				AML	AML		
	comp=E,53800μm,0.2s						
NRCA				AML	AML		
	comp=N,48150μm,0.1s						
NRCA				AML	AML		
	comp=N,43000μm,0.1s						
NRCA				AML	AML		
	comp=N,43050μm,0.1s						
T1245	**Castelsantange**	**0.09**	**9**	P	Pg	22 22 18.9	+0.2
T1245				S	Sg	22 22 21.0	+0.2
T1245				AML	AML		
	comp=N,24400μm,0.2s						
T1245				AML	AML		
	comp=N,23950μm,0.2s						
T1245				AML	AML		
	comp=E,14400μm,1.5s						
T1245				AML	AML		
	comp=E,15450μm,1.5s						
MC2	**Monte Cornacci**	**0.15**	**6**	⇓P	Pg	22 22 19.7	+0.3
MC2				S	Sb	22 22 22.9	-0.7
T1216	**Preci, Frazion**	**0.17**	**318**	⇓P	Pg	22 22 19.9	+0.3
T1216				S	Sg	22 22 22.9	+0.6
T1216				AML	AML		
	comp=E,11660μm,0.7s						
T1216				AML	AML		
	comp=N,14200μm,1.5s						
MMO1	**Montemonaco**	**0.18**	**41**	P	Pg	22 22 20.1	+0.4
MMO1				S	Sg	22 22 23.2	+0.6
SMA1	**SAN MARTINO**	**0.18**	**138**	⇑P	Pg	22 22 20.2	+0.4
SMA1				S	Sg	22 22 23.5	+0.8
SMA1				AML	AML		
	comp=N,3380μm,0.6s						
SMA1				AML	AML		
	comp=E,2525μm,0.8s						
SMA1				AML	AML		
	comp=N,3375μm,0.6s						
T1217	**Poggiodomo (PG**	**0.18**	**253**	⇑P	Pg	22 22 20.2	+0.4
T1217				S	Sg	22 22 23.6	+0.9
T1217				AML	AML		
	comp=E,2485μm,0.3s						
T1217				AML	AML		
	comp=N,3080μm,0.9s						
T1217				AML	AML		
	comp=E,2370μm,0.3s						
T1217				AML	AML		
	comp=N,3025μm,0.3s						
T1217				AML	AML		
	comp=N,3080μm,0.9s						
T1217				AML	AML		
	comp=E,2375μm,0.3s						
T1217				AML	AML		
	comp=N,3025μm,0.9s						
T1217				AML	AML		
	comp=E,2490μm,0.4s						
T1217				AML	AML		
	comp=E,2375μm,0.4s						
T1217				AML	AML		
	comp=N,3030μm,0.3s						
LNSS	**Leonessa**	**0.19**	**210**	⇑P	Pg	22 22 20.4	+0.5
LNSS				S	Sb	22 22 24.0	-0.7
LNSS				AML	AML		
	comp=E,4255μm,0.7s						
LNSS				AML	AML		
	comp=N,3485μm,0.3s						
LNSS				AML	AML		
	comp=E,4260μm,0.7s						
LNSS				AML	AML		
	comp=N,3490μm,0.3s						
T1243	**Rocca Santa Ma**	**0.22**	**109**	⇑P	Pg	22 22 20.7	+0.3
T1243				S	Sg	22 22 24.5	+0.8
T1215	**Vallo di Nera,**	**0.22**	**279**	⇑P	Pg	22 22 20.9	+0.4
T1215				AML	AML		
	comp=E,1920μm,0.3s						
T1215				AML	AML		
	comp=N,2060μm,0.4s						
T1215				AML	AML		
	comp=N,2050μm,0.4s						
T1215				AML	AML		
	comp=N,2065μm,0.4s						
T1215				AML	AML		
	comp=E,1960μm,0.3s						
T1215				AML	AML		
	comp=E,1915μm,0.3s						
AM05	**Amandola Campo**	**0.25**	**33**	P	Pg	22 22 21.4	+0.4
AM05				S	Sb	22 22 25.7	-0.7
AM05				AML	AML		
	comp=E,1300μm,0.1s						
AM05				AML	AML		
	comp=N,1805μm,0.6s						
AM05				AML	AML		
	comp=E,5345μm,0.2s						
AM05				AML	AML		
	comp=N,654μm,0.6s						
AM05				AML	AML		
	comp=E,1295μm,0.1s						
RM33	**Pellescritta (**	**0.26**	**173**	⇑P	Pg	22 22 21.5	+0.4
RM33				S	Sb	22 22 25.9	-0.7
RM33				AML	AML		
	comp=E,1274μm,0.4s						
RM33				AML	AML		
	comp=N,972μm,0.3s						
RM33				AML	AML		
	comp=E,1255μm,0.4s						
RM33				AML	AML		
	comp=N,938μm,0.3s						
RM33				AML	AML		
	comp=E,1272μm,0.4s						
RM33				AML	AML		
	comp=E,1260μm,0.4s						
RM33				AML	AML		
	comp=N,970μm,0.3s						
FDMO	**Fiordimonte**	**0.28**	**348**	⇓P	Pg	22 22 21.6	+0.2
FDMO				S	Sg	22 22 26.1	+0.8
FDMO				AML	AML		
	comp=N,2260μm,0.1s						
FDMO				AML	AML		
	comp=E,1580μm,0.6s						
CAMP	**Campotosto**	**0.29**	**142**	⇑P	Pg	22 22 21.9	+0.2
CAMP				S	Sg	22 22 26.6	+0.9
CAMP				AML	AML		
	comp=E,929μm,0.6s						
CAMP				AML	AML		
	comp=N,590μm,0.6s						
CESI	**CESI - Serrava**	**0.31**	**321**	⇑P	Pg	22 22 22.3	+0.3
CESI				S	Sb	22 22 27.2	-0.8
CESI				AML	AML		
	comp=E,3040μm,0.3s						
CESI				AML	AML		
	comp=N,5495μm,0.4s						
GUMA	**Gualdo di Mace**	**0.32**	**22**	⇓P	Pb	22 22 22.8	-0.5
GUMA				S	Sb	22 22 28.4	0.0
GUMA				AML	AML		
	comp=E,4940μm,0.7s						
GUMA				AML	AML		
	comp=N,5600μm,0.5s						
GUMA				AML	AML		
	comp=E,7565μm,0.2s						
GUMA				AML	AML		
	comp=N,7050μm,0.3s						
T1211	**Morro Reatino**	**0.33**	**225**	⇑P	Pg	22 22 22.7	+0.3
T1211				AML	AML		
	comp=E,1700μm,1.1s						
T1211				AML	AML		
	comp=N,3110μm,0.3s						
T1211				AML	AML		
	comp=E,1639μm,1.1s						
T1211				AML	AML		
	comp=N,3100μm,0.3s						
T1211				AML	AML		
	comp=E,1695μm,1.1s						
T1211				AML	AML		
	comp=N,3105μm,0.3s						
T1211				AML	AML		
	comp=N,3098μm,0.3s						
T1211				AML	AML		
	comp=E,1635μm,1.1s						
T1247	**Pizzolo (AQ)**	**0.34**	**164**	P	Pg	22 22 22.9	+0.3
T1247				AML	AML		
	comp=E,1192μm,0.4s						
T1247				AML	AML		
	comp=N,1285μm,0.6s						
T1247				AML	AML		
	comp=E,1192μm,0.4s						
ARRO	**Arrone**	**0.35**	**238**	⇑P	Pg	22 22 23.1	+0.4
ARRO				AML	AML		
	comp=E,867μm,0.2s						
ARRO				AML	AML		
	comp=N,1215μm,0.2s						
TERO	**Teramo**	**0.35**	**114**	⇑P	Pg	22 22 22.8	+0.1
TERO				AML	AML		
	comp=E,1216μm,0.3s						
TERO				AML	AML		
	comp=N,1460μm,0.3s						
TERO				AML	AML		
	comp=N,1580μm,0.3s						
TERO				AML	AML		
	comp=E,1340μm,0.8s						
TERO				AML	AML		
	comp=E,1218μm,0.3s						
SEF1	**Sefro**	**0.41**	**337**	⇓P	Pg	22 22 24.2	+0.4
OFFI	**Offida**	**0.42**	**66**	⇑P	Pb	22 22 25.0	+0.1
OFFI				AML	AML		
	comp=E,1965μm,1.5s						
OFFI				AML	AML		
	comp=N,3030μm,0.6s						
GIGS	**Gran Sasso**	**0.43**	**137**	P	Pg	22 22 24.1	-0.2
GIGS				AML	AML		
	comp=E,257μm,0.4s						
GIGS				AML	AML		
	comp=N,252μm,0.2s						
AQU	**L'Aquila**	**0.45**	**157**	⇓P	Pg	22 22 24.8	+0.3
AQU				AML	AML		
	comp=N,470μm,1.1s						
AQU				AML	AML		
	comp=N,454μm,0.3s						
AQU				AML	AML		
	comp=E,406μm,0.4s						
AQU				AML	AML		
	comp=E,394μm,0.4s						
AQU				AML	AML		
	comp=N,454μm,0.3s						
CESX	**Cesi**	**0.46**	**250**	⇑P	Pg	22 22 24.8	+0.1
CESX				AML	AML		
	comp=E,570μm,0.4s						
CESX				AML	AML		
	comp=N,678μm,0.3s						
ASSB	**Assisi San Ben**	**0.47**	**307**	⇑P	Pg	22 22 24.9	0.0
ASSB				AML	AML		
	comp=E,1215μm,0.3s						
ASSB				AML	AML		
	comp=N,1180μm,0.5s						
FIAM	**Fiamignano**	**0.50**	**184**	⇓P	Pg	22 22 25.6	+0.1
FIAM				AML	AML		
	comp=E,274μm,1.0s						
FIAM

TRTR	**Tortoreto Alta**	**0.55**	**85**	⇑P	Pb	22 22 27.7	+0.5
TRTR				AML	AML		
	comp=E,1030μm,1.2s						
TRTR				AML	AML		
	comp=N,1055μm,0.6s						
EL6	**Elcito**	**0.56 355**		P	Pg	22 22 26.7	0.0
EL6				AML	AML		
	comp=E,919μm,0.1s						
EL6				AML	AML		
	comp=N,953μm,0.4s						
EL6				AML	AML		
	comp=E,920μm,0.1s						
EL6				AML	AML		
	comp=N,950μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.57 317**		⇑P	Pg	22 22 26.8	0.0
ATCC				AML	AML		
	comp=E,818μm,1.5s						
ATCC				AML	AML		
	comp=E,818μm,1.5s						
ATCC				AML	AML		
	comp=N,572μm,0.3s						
FAGN	**Fagnano**	**0.59 148**		⇓P	Pg	22 22 26.9	-0.2
FAGN				AML	AML		
	comp=E,1105μm,0.3s						
FAGN				AML	AML		
	comp=N,626μm,0.8s						
FOSV	**Fossato di Vic**	**0.61 331**		⇓P	Pg	22 22 27.4	0.0
FOSV				AML	AML		
	comp=E,320μm,1.0s						
FOSV				AML	AML		
	comp=N,404μm,1.0s						
FOSV				AML	AML		
	comp=E,320μm,1.0s						
CING	**Cingoli**	**0.61**	**2**	⇑P	Pg	22 22 27.5	0.0
CING				AML	AML		
	comp=E,352μm,0.6s						
CING				AML	AML		
	comp=N,362μm,0.7s						
VCEL	**Villa Celiera**	**0.62 127**		⇓P	Pg	22 22 27.8	0.0
VCEL				AML	AML		
	comp=E,628μm,0.5s						
VCEL				AML	AML		
	comp=N,769μm,1.1s						
MURB	**Monte Urbino**	**0.69 317**		P	Pg	22 22 29.0	0.0
MURB				S	Sn	22 22 41.0	-0.8
MURB				AML	AML		
	comp=E,1060μm,0.3s						
MURB				AML	AML		
	comp=N,940μm,0.3s						
MURB				AML	AML		
	comp=E,1120μm,0.3s						
MURB				AML	AML		
	comp=N,939μm,0.4s						
MURB				AML	AML		
	comp=N,938μm,0.3s						
MURB				AML	AML		
	comp=E,1063μm,0.3s						
PP3	**Marolino**	**0.69**	**28**	P	Pb	22 22 30.0	+0.4
PP3				AML	AML		
	comp=E,2080μm,0.4s						
PP3				AML	AML		
	comp=N,1050μm,0.6s						
PP3				AML	AML		
	comp=E,2190μm,0.4s						
PP3				AML	AML		
	comp=N,932μm,0.9s						
PP3				AML	AML		
	comp=N,1048μm,0.6s						
PP3				AML	AML		
	comp=N,932μm,0.9s						
PP3				AML	AML		
	comp=E,2085μm,0.4s						
T0110	**Collepietro**	**0.70 140**		⇑P	Pg	22 22 28.9	-0.4
T0110				AML	AML		
	comp=E,514μm,0.5s						
T0110				AML	AML		
	comp=N,641μm,0.4s						
T0110				AML	AML		
	comp=E,514μm,0.5s						
T0110				AML	AML		
	comp=N,642μm,0.4s						
SRES	**S.Oreste - Sor**	**0.72 223**		AML	AML		
	comp=E,163μm,0.2s						
SRES				AML	AML		
	comp=N,184μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.74 306**		⇓P	Pg	22 22 30.0	+0.1
ATTE				AML	AML		
	comp=N,184μm,0.5s						
ATTE				AML	AML		
	comp=E,186μm,0.3s						
ATFO	**Monte Foce - G**	**0.74 324**		P	Pg	22 22 29.8	-0.2
ATFO				AML	AML		
	comp=E,326μm,0.7s						
ATFO				AML	AML		
	comp=N,339μm,0.4s						
ATFO				AML	AML		
	comp=N,338μm,0.4s						
ARVD	**Arcevia**	**0.75 347**		P	Pg	22 22 30.0	-0.2
ARVD				S	Sb	22 22 42.0	+1.2
ARVD				AML	AML		
	comp=E,228μm,1.6s						
ARVD				AML	AML		
	comp=N,172μm,0.1s						
MGAB	**Montegabbione**	**0.79 281**		⇑P	Pg	22 22 30.9	-0.1
MGAB				AML	AML		
	comp=E,416μm,0.5s						
MGAB				AML	AML		
	comp=N,336μm,0.4s						
MGAB				AML	AML		
	comp=N,376μm,0.3s						
MGAB				AML	AML		
	comp=E,460μm,0.3s						
FRON	**Frontone**	**0.82 337**		⇑P	Pg	22 22 30.5	-0.9
FRON				AML	AML		
	comp=E,149μm,0.7s						
FRON				AML	AML		
	comp=N,246μm,0.5s						
ATVO	**AVT- Monte Val**	**0.83 318**		S	Sn	22 22 45.0	-0.3
AOI	**Ancona**	**0.84**	**22**	P	Pb	22 22 32.5	+0.2
AOI				AML	AML		
	comp=N,163μm,0.7s						
AOI				AML	AML		
	comp=E,194μm,0.4s						
ATMI	**Monte Miggiano**	**0.87 311**		⇑P	Pb	22 22 33.0	+0.3
ATMI				AML	AML		
	comp=N,697μm,1.4s						
ATMI				AML	AML		
	comp=E,804μm,0.5s						
ATPI	**Pietralunga -**	**0.89 321**		⇓P	Pg	22 22 32.6	-0.1
ATPI				AML	AML		
	comp=N,166μm,0.9s						
ATPI				AML	AML		
	comp=E,198μm,0.5s						
PIEI	**Pieia**	**0.90 329**		P	Pg	22 22 32.7	-0.3
PIEI				S	Sn	22 22 47.0	0.0
PIEI				AML	AML		
	comp=E,172μm,0.8s						
PIEI				AML	AML		
	comp=N,155μm,0.4s						
PIEI				AML	AML		
	comp=E,172μm,0.8s						
MPAG	**Monte Paganucc**	**0.91 341**		⇑P	Pg	22 22 33.0	-0.3
SACS	**San Casciano d**	**0.93 276**		⇑P	Pg	22 22 32.0	-1.6
NARO	**Abbazia di Nar**	**0.95 333**		⇓P	Pg	22 22 33.5	-0.4
NARO				S	Sn	22 22 49.0	+0.9
NARO				AML	AML		
	comp=E,101μm,0.4s						
NARO				AML	AML		
	comp=N,102μm,0.7s						
FSSB	**Fossombrone**	**0.97 343**		⇓P	Pb	22 22 34.2	-0.1
FSSB				AML	AML		
	comp=N,566μm,0.3s						
FSSB				AML	AML		
	comp=E,397μm,1.3s						
BADI	**Badiali**	**1.00 318**		⇑P	Pb	22 22 34.9	-0.1
LPEL	**Lama dei Pelig**	**1.04 133**		P	Pb	22 22 35.1	-0.5
LPEL				AML	AML		
	comp=N,140μm,0.8s						
LPEL				AML	AML		
	comp=E,258μm,1.6s						
CAFI	**Castiglion Fio**	**1.04 303**		⇑P	Pg	22 22 35.8	0.0
CAFI				AML	AML		
	comp=E,115μm,0.4s						
CAFI				AML	AML		
	comp=N,95μm,0.6s						
MCIV	**Monte Civitell**	**1.10 271**		⇓P	Pn	22 22 37.4	+0.6
CRE	**Caprese Michel**	**1.23 314**		⇑P	Pg	22 22 39.4	+0.1
RUFI	**Rufina**	**1.62 312**		⇓P	Pb	22 22 45.4	0.0
CASP	**Castiglione de**	**1.70 272**		⇓P	Pn	22 22 45.2	+0.3
MTCR	**Monte La Croce**	**2.02 309**		P	Pn	22 22 50.4	+0.8
SGRT	**San Giovanni R**	**2.16 117**		P	Pb	22 22 53.4	-1.3
GSCL	**Gusciola**	**2.46 311**		⇓P	Pn	22 22 54.3	-1.1
ABTA	**Abfaltersbach**	**4.01 354**		*e*Pn	Pn	22 23 18.7	+1.8
	comp=N,1.7nm,0.3s						
ABTA				*i* Sn	Sn	22 24 04.3	+0.5
	comp=N,2.3nm,0.6s						
KBA	**Koelnbreinsper**	**4.31**	**2**	*e*Pn	Pn	22 23 23.5	+2.3
	comp=N,0.6nm,0.3s						
KBA				*i* Sn	Sn	22 24 13.5	+2.2
	comp=N,1.3nm,0.3s						

ROM 22 22:23:14.9±0.1, 42.772N±0.003×13.168E±0.004, h13km, ML1.6/2, 5C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**328**	⇓P	Pg	22 23 17.9	+0.2
NRCA				S	Sg	22 23 19.7	0.0
NRCA				AML	AML		
	comp=E,435μm,0.1s						
NRCA				AML	AML		
	comp=N,554μm,0.2s						
T1202	**Accumoli, Fraz**	**0.08**	**148**	P	Pg	22 23 18.1	+0.3
T1202				S	Sg	22 23 20.3	+0.5
T1245	**Castelsantange**	**0.09**	**10**	⇑P	Pg	22 23 18.1	+0.2
T1245				S	Sg	22 23 20.2	+0.2
T1245				AML	AML		
	comp=E,288μm,0.7s						
T1245				AML	AML		
	comp=N,434μm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**7**	⇑P	Pg	22 23 18.9	+0.3
MC2				S	Sg	22 23 21.8	+0.5
T1216	**Preci, Frazion**	**0.16**	**317**	⇑P	Pg	22 23 19.1	+0.3
T1216				S	Sg	22 23 22.1	+0.6
MMO1	**Montemonaco**	**0.17**	**42**	P	Pg	22 23 19.3	+0.3
MMO1				S	Sg	22 23 22.6	+0.8
T1217	**Poggiodomo (PG**	**0.18**	**251**	P	Pg	22 23 19.5	+0.4
T1217				S	Sg	22 23 22.6	+0.5
LNSS	**Leonessa**	**0.19**	**209**	⇓P	Pg	22 23 19.7	+0.4
LNSS				S	Sb	22 23 23.2	-0.8
T1243	**Rocca Santa Ma**	**0.22**	**110**	⇑P	Pg	22 23 19.9	+0.2
T1243				S	Sg	22 23 23.5	+0.5
RM33	**Pellescritta (**	**0.27**	**173**	P	Pg	22 23 21.0	+0.5
RM33				S	Sb	22 23 25.5	-0.6
FDMO	**Fiordimonte**	**0.27**	**347**	P	Pg	22 23 20.9	+0.3
FDMO				S	Sb	22 23 25.5	-0.8
TERO	**Teramo**	**0.35**	**115**	⇑P	Pg	22 23 22.3	+0.2
TERO				S	Sb	22 23 27.8	-0.9

*IDC **22** 22:31:42.5±0.6, 2.04S×140.57E, h0km, mb4.2/14, mbtmp4.3/19, ML4.5/4, MS4.1/21, Error ellipse: s-maj=19.0km s-min=11.9km az=82.0*

*NEIC **22** 22:31:44.5±1.4, 2.04S±0.05×140.60E±0.08, h10km±1km, mb4.7/47, Error ellipse: s-maj=14.6km s-min=5.4km az=241.0*

*GCMT **22** 22:31:46.5±0.3, 1.84S±0.02×140.57E±0.04, h14km±1km, MW4.8/84, Moment Tensor Solution. s25,c30; s84,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.93±.14; $M_{\theta\theta}$1.97±.09; $M_{\phi\phi}$-0.03±.09; $M_{r\theta}$1.37±.20; $M_{\theta\phi}$0.04±.06; $M_{\phi r}$-0.09±.23; Best double couple: $M_0$2.38500×10^{16} NP1:ϕ_s272.00000°, δ63.00000°, λ-87.00000°. NP2: ϕ_s86.00000°, δ28.00000°, λ-95.00000°. Principal axes: T 2.4030, Plg18.0000°, Azm360.0000°; N -0.0310, Plg2.0000°, Azm91.0000°; P -2.3670, Plg72.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **22** 22:31:48.5±1.5, 2.3S±6.1×14.1E±, h22km±9km, M4.6/25, mB5.1/7, mb4.6/25, MLv4.6/4, Mw(mB)4.5/7*

ISC 22 22:31:44.3±0.4, 2.04S±0.05×140.63E±0.06, h10km, n145, σ1§37/126, mb4.6/43, MS4.0/14, 1C-1D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.72**	**220**	P	**Pn**	**22 32 00.7**	**+0.2**
GENI	**Genyem**	**0.72**	**220**	P	**Pn**	**22 32 01.4**	**+0.9**
SMPI	**Sarmi**	**1.92**	**271**	P	**Pn**	**22 32 17.4**	**+0.3**
WAMI	**Wamena**	**2.65**	**226**	P	**Pn**	**22 32 29.2**	**+2.0**
SRPI	**Serui, Papua**	**4.39**	**272**	P	**Pn**	**22 32 53.4**	**+2.3**
FAKI	**Fak Fak**	**8.42**	**264**	Pn	**Pn**	**22 33 46.1**	**-0.4**
FAKI	**Fak Fak**	**8.42**	**264**	P	**Pn**	**22 33 48.4**	**+1.9**
36nm,1.0s							
FAKI	**Fak Fak**	**8.42**	**264**	P	**Pn**	**22 33 48.7**	**+2.2**
37nm,0.9s							
SIJI	**Sorong**	**9.43**	**277**	Pn	**Pn**	**22 34 01.1**	**+0.7**
3.7nm,0.5s,baz=118,slow=23,SNR=1.9							
SIJI				LR	LR	22 38 02.2	
	comp=Z,688nm,18.8s,baz=53,slow=40						
SIJI	**Sorong**	**9.43**	**277**	P	**Pn**	**22 34 04.2**	**+3.8**
10nm,1.0s							
PMG	**Port Moresby**	**9.78**	**139**	LR	LR	22 38 13.1	
	comp=Z,811nm,20.7s,baz=307,slow=40						
KRVT	**Keravat (AS076**	**11.60**	**101**	Pn	**Pn**	**22 34 29.7**	**-0.4**
6.2nm,0.3s,baz=258,slow=21,SNR=3.7							
KRVT				LR	LR	22 38 20.0	
	comp=Z,638nm,19.1s,baz=52,slow=34						
76nm,0.7s							
KRAI	**Karang Ratu**	**12.29**	**264**	P	**Pn**	**22 34 41.0**	**+1.5**
13nm,0.8s							
AAI	**Ambon**	**12.53**	**262**	P	**Pn**	**22 34 46.7**	**+3.9**
31nm,1.0s							
LBMI	**Labuha**	**13.20**	**276**	P	**Pn**	**22 34 55.5**	**+3.5**
34nm,1.6s							
KDU	**Kakadu**	**13.31**	**217**	P	**Pn**	**22 34 52.8**	**-0.7**
29nm,0.9s							
TNTI	**Ternate**	**13.55**	**282**	Pn	**Pn**	**22 34 55.6**	**-1.2**
TNTI	**Ternate**	**13.55**	**282**	P	**Pn**	**22 34 59.1**	**+2.3**
1μm27nm,1.9s							
MTN	**Manton Dam**	**14.27**	**221**	Pn	**Pn**	**22 35 05.2**	**-1.4**
SANI	**Sanana**	**14.63**	**270**	P	**Pn**	**22 35 12.7**	**+1.1**
16nm,1.2s							
GUMO	**Guam**	**16.09**	**15**	LR	LR	22 41 45.8	
	comp=Z,427nm,18.8s,baz=219,slow=38						
DAV	**Davao City (W)**	**17.54**	**301**	LR	LR	22 42 49.0	
	comp=Z,308nm,18.2s,baz=138,slow=38						
LUWI	**Luwuk**	**17.88**	**273**	P	**Pn**	**22 35 52.8**	**-0.6**
LUWI				IAmb	IAmb	22 36 12.6	
	comp=Z,106nm,1.3s						
LUWI	**Luwuk**	**17.88**	**273**	P	**P**	**22 35 55.3**	**+1.3**
	comp=Z,2μmcomp=Z,58nm,1.1s						
KNRA	**Kununurra**	**17.90**	**220**		**Pn**	**22 35 53.5**	**-0.2**
KNRA	**Kununurra**	**17.90**	**220**	P	**P**	**22 35 54.4**	**+0.2**
	comp=Z,28nm,1.9s						
SOEI	**Soe**	**17.98**	**244**		**Pn**	**22 35 52.9**	**-1.8**
SOEI				IAmb	IAmb	22 35 59.2	
	comp=Z,64nm,0.8s						
SOEI	**Soe**	**17.98**	**244**	P	**P**	**22 35 56.6**	**+1.3**
	comp=Z,87nm,0.8s						
WB0	**Warramunga Arr**	**18.64**	**199**	P	**P**	**22 36 02.0**	**-0.4**
BATI	**Baumata**	**18.71**	**244**	P	**Pn**	**22 36 04.1**	**+0.5**
	comp=Z,6.2nm,0.3s,baz=20,slow=3.9,SNR=12						
	comp=Z,75nm,0.7s						
BATI	**Baumata**	**18.71**	**244**	P	**Pn**	**22 36 05.7**	**+2.1**
	comp=Z,82nm,0.8s						
CTA	**Charters Tower**	**18.76**	**163**	P	**Pn**	**22 36 04.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=331,slow=9.8,SNR=5.5						
CTA				LR	LR	22 43 36.7	
	comp=Z,545nm,19.3s,baz=352,slow=38						
	comp=Z,7.0nm,1.0s						
CTAO	**Charters Tower**	**18.76**	**163**		**P**	**22 36 02.6**	**-1.2**
WR0	**Warramunga Arr**	**18.78**	**198**	P	**P**	**22 36 02.6**	**-1.3**
WRAB	**Tennant Creek**	**18.81**	**199**	P	**Pn**	**22 36 04.7**	**-0.1**
	comp=Z,22nm,0.9s						
WRA	**Warramunga Arr**	**18.83**	**199**	P	**P**	**22 36 04.5**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=24,slow=12,SNR=29						
WRA				S	Sn	22 39 24.8	-11
	comp=Z,2.8nm,0.9s,baz=16,slow=22,SNR=4.2						
WRA				LR	LR	22 44 11.9	
	comp=Z,1μm,19.8s,baz=44,slow=40						
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**18.83**	**199**	P	**P**	**22 36 03.2**	**-1.2**
MRSI	**Marisa**	**18.85**	**277**	P	**Pn**	**22 36 06.4**	**+1.1**
	comp=Z,797nmcomp=Z,28nm,0.6s						
APSI	**Ampana**	**19.01**	**273**	P	**Pn**	**22 36 09.1**	**+1.9**
	comp=Z,989nmcomp=Z,88nm,1.1s						
TOLI2	**Tolitoli**	**20.09**	**279**	P	**P**	**22 36 17.9**	**-0.5**
TOLI2				IAmb	IAmb	22 36 26.6	
	comp=Z,23nm,0.9s						
TOLI2	**Tolitoli**	**20.09**	**279**	P	Pn	22 36 19.3	-0.8
	comp=Z,27nm,0.9s						
HNR	**Honiara**	**20.56**	**112**	LR	LR	22 44 28.9	
	comp=Z,3μm,19.0s,baz=320,slow=37						
BNSI	**Bone**	**20.62**	**263**	P	Pn	22 36 26.4	0.0
	comp=Z,13nm,1.2s						
TTSI	**Tana Toraja**	**20.82**	**267**	P	Pn	22 36 28.4	-0.2
	comp=Z,1μmcomp=Z,49nm,1.1s						
MPSI	**Mapaga**	**20.86**	**276**	P	Pn	22 36 29.0	-0.2
	comp=Z,479nmcomp=Z,30nm,0.9s						
SPSI	**Sidrap Palu**	**20.92**	**264**	P	Pn	22 36 29.6	-0.2
	comp=Z,29nm,1.8s						
AS01	**Alice Springs**	**22.45**	**196**	P	**P**	**22 36 45.5**	**+1.8**
	comp=Z,16nm,0.9s						
AS31	**Alice Springs**	**22.46**	**196**	P	**P**	**22 36 43.6**	**-0.2**
ASAR	**Alice Springs**	**22.46**	**196**	P	**P**	**22 36 43.9**	**0.0**
	comp=Z,5.3nm,0.8s,baz=28,slow=11,SNR=49						
ASAR				S	**S**	**22 40 49.9**	**-0.8**
	comp=Z,1.2nm,1.0s,baz=2.3,slow=28,SNR=2.6						
ASAR				LR	LR	22 46 04.7	
	comp=Z,879nm,21.7s,baz=15,slow=38						
	comp=Z,5.3nm,0.8s						
ASAR	**Alice Springs**	**22.46**	**196**	P	**P**	**22 36 42.6**	**-1.3**
MYLDM	**Lahad Datu**	**23.24**	**288**	P	**P**	**22 36 51.2**	**-0.8**
MYLDM	**Lahad Datu**	**23.24**	**288**	P	**P**	**22 36 56.0**	**+3.9**
	comp=Z,37nm,1.4s						
BKB	**Balikpapan**	**23.74**	**271**	P	**P**	**22 36 56.7**	**-0.3**
BKB	**Balikpapan**	**23.74**	**271**	P	**P**	**22 36 59.7**	**+2.7**
	comp=Z,55nm,1.0s						
EIDS	**Eidsvold**	**25.29**	**157**	P	**P**	**22 37 13.2**	**+2.1**
EIDS				IAmb	IAmb	22 37 18.7	
	comp=Z,24nm,1.0s						
WRKA	**Warakurna**	**25.77**	**206**	P	**P**	**22 37 15.8**	**+0.2**
	comp=Z,14nm,0.6s						
OOD	**Oodnadatta**	**26.04**	**190**	P	**P**	**22 37 18.4**	**+0.5**
	comp=Z,14nm,0.8s						
MBWA	**Marble Bar**	**27.86**	**225**	P	**P**	**22 37 33.6**	**-0.8**
MBWA				IAmb	IAmb	22 38 02.4	
	comp=Z,9.2nm,0.9s						
PSA00	**Pilbara Seismi**	**28.04**	**225**	P	**P**	**22 37 35.7**	**-0.3**
PSA00				IAmb	IAmb	22 37 46.5	
	comp=Z,16nm,1.4s						
MULG	**Mulgathing**	**28.77**	**192**	P	**P**	**22 37 43.4**	**+1.0**
	comp=Z,17nm,2.3s						
STKA	**Stephens Creek**	**29.69**	**178**	P	**P**	**22 37 50.5**	**0.0**
	comp=Z,3.1nm,0.6s,baz=20,slow=8.8,SNR=6.8						
STKA				LR	LR	22 50 17.9	
	comp=Z,513nm,18.9s,baz=5.2,slow=38						
	comp=Z,3.1nm,0.6s						
STKA	**Stephens Creek**	**29.69**	**178**	P	**P**	**22 37 50.5**	**0.0**
STKA	**Stephens Creek**	**29.69**	**178**	P	**P**	**22 37 50.8**	**+0.2**
	comp=Z,2.3nm,2.6s						
KSM	**Kuching**	**30.52**	**276**	P	**P**	**22 37 56.9**	**-1.2**
BBOO	**Buckleboo**	**30.91**	**188**	P	**P**	**22 38 00.8**	**-0.5**
BBOO				IAmb	IAmb	22 38 05.2	
	comp=Z,16nm,1.0s						
BBOO	**Buckleboo**	**30.91**	**188**	P	**P**	**22 38 01.0**	**-0.3**
	comp=Z,18nm,1.0s						
FORT	**Forrest**	**30.96**	**201**	P	**P**	**22 38 01.6**	**-0.2**
FORT	**Forrest**	**30.96**	**201**	P	**P**	**22 38 01.7**	**-0.2**
	comp=Z,26nm,0.9s						
LIFNC	**LIFOU**	**31.94**	**128**	P	**P**	**22 38 11.0**	**+0.4**
DZM	**Mont Dzumac**	**32.04**	**130**	P	**P**	**22 38 11.4**	**-0.1**
	comp=Z,6.5nm,0.9s,baz=328,slow=14,SNR=3.8						
DZM				LR	LR	22 51 08.6	
	comp=Z,229nm,18.6s,baz=28,slow=36						
	comp=Z,6.5nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**32.77**	**50**	T	T	23 13 55.4	
	baz=232,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**32.78**	**50**	T	T	23 13 51.9	
	baz=232,slow=75,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**32.79**	**50**	T	T	23 13 55.6	
	baz=232,slow=75,SNR=18						
LEM	**Lembang**	**33.24**	**261**	P	**P**	**22 38 20.1**	**-2.2**
	comp=Z,11nm,0.5s,baz=317,slow=21,SNR=2.2						
	comp=Z,11nm,0.5s						
CAN	**Canberra**	**34.02**	**168**	P	**P**	**22 38 29.3**	**+0.8**
ARPS	**Mount Arapiles**	**34.58**	**178**	P	**P**	**22 38 35.1**	**+1.7**
	comp=Z,20nm,1.1s						
JHJ	**Hachijo jima 2**	**34.98**	**359**	LR	LR	22 49 26.5	
	comp=Z,461nm,20.8s,baz=214,slow=30						
MORW	**Morawa**	**35.65**	**219**	P	**P**	**22 38 41.6**	**-1.1**
MORW				IAmb	IAmb	22 38 53.7	
	comp=Z,17nm,1.2s						
MORW	**Morawa**	**35.65**	**219**	P	**P**	**22 38 42.6**	**-0.1**
	comp=Z,15nm,2.4s						
BLDU	**Ballidu**	**36.34**	**216**	P	**P**	**22 38 48.6**	**-0.1**
	comp=Z,13nm,1.4s						
QIZ	**Qiongzhong**	**36.80**	**306**	P	**P**	**22 38 52.2**	**-0.5**
QIZ				IAmb	IAmb	22 39 00.5	
	comp=Z,7.2nm,1.0s						
QIZ	**Qiongzhong**	**36.80**	**306**	P	**P**	**22 38 52.4**	**-0.3**
QIZ				sP	**pwP**	**22 38 58.6**	**0.0**
QIZ				S	**S**	**22 44 34.0**	**-3.1**
QIZ				sS	**sS**	**22 44 43.6**	**+3.0**
NWAO	**Narrogin (SRO)**	**37.77**	**213**	LR	LR	22 56 07.0	
	comp=Z,730nm,18.2s,baz=260,slow=39						
MJAR	**Matsushiro Arr**	**38.45**	**357**	LR	LR	22 54 07.5	
	comp=Z,61nm,19.3s,baz=156,slow=35						
MSVF	**Nonsavu**	**39.90**	**115**	LR	LR	22 54 59.4	
	comp=Z,167nm,19.0s,baz=13,slow=35						
IPM	**Ipoh**	**40.10**	**279**	P	**P**	**22 39 18.7**	**-1.9**
IPM				IAmb	IAmb	22 39 38.1	
	comp=Z,28nm,1.5s						
KSRS	**Korea Array**	**41.02**	**345**	P	**P**	**22 39 26.7**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=156,slow=9.1,SNR=1.9						
KSRS				LR	LR	22 53 38.0	
	comp=Z,143nm,21.9s,baz=155,slow=32						
	comp=Z,1.0nm,0.7s						
RPSI	**Rantau Prapat**	**41.96**	**276**	P	**P**	**22 39 34.5**	**-1.4**
RPSI				IAmb	IAmb	22 39 35.7	
	comp=Z,13nm,1.0s						
GSI	**Gunungsitoli**	**43.18**	**274**	P	**P**	**22 39 44.3**	**-1.5**
GSI	**Gunungsitoli**	**43.18**	**274**	P	**P**	**22 39 44.4**	**-1.5**
	comp=Z,34nm,1.3s						
GSI	**Gunungsitoli**	**43.18**	**274**	P	**P**	**22 39 45.1**	**-0.7**
	comp=Z,34nm,1.3s						
CMAR	**Chiang Mai Arr**	**45.79**	**298**	P	**P**	**22 40 06.0**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=110,slow=6.9,SNR=4.0						
	comp=Z,0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.79**	**298**	P	**P**	**22 40 05.7**	**-1.0**
USRK	**Ussuriysk Ar.**	**46.68**	**351**	LR	LR	22 56 41.5	
	comp=Z,220nm,21.8s,baz=184,slow=32						
USRK	**Ussuriysk Ar.**	**46.68**	**351**	P	**P**	**22 40 13.7**	**+0.5**
PZH	**PanZhiHua**	**47.05**	**310**	P	**P**	**22 40 17.4**	**+0.8**
BJT	**Baijiatuau**	**47.47**	**334**	P	**P**	**22 40 20.4**	**+0.9**
BJT				IAmb	IAmb	22 40 26.7	
	comp=Z,9.8nm,1.2s						
CN2	**Changchun**	**47.63**	**345**	P	P	22 40 27.3	+6.7
AFI	**Afiamalu**	**48.48**	**107**	LR	LR	23 00 08.4	
	comp=Z,104nm,19.2s,baz=318,slow=35						
BNX	**BinXian**	**49.00**	**348**	⇓P	P	22 40 37.3	+6.1
HHC	**Hu-ho-hao-te**	**50.24**	**331**	*e*P	**P**	**22 40 44.3**	**+3.4**
LZH	**Lanzhou**	**51.13**	**321**	*e*P	**P**	**22 40 52.4**	**+4.7**
LZH				pP	pwP	22 40 56.3	+2.6
LZH				sP	sP	22 40 58.6	+7.6
KLR	**Kul'dur**	**51.64**	**353**	P	**P**	**22 40 50.8**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=139,slow=14,SNR=2.0						
	comp=Z,2.0nm,0.9s						
**G

ZALV Zalesovo Beam 72.34 329 P P 22 43 09.2 -1.0
comp=Z,2.3nm,0.7s,baz=324,slow=6.9,SNR=30
comp=Z,2.3nm,0.7s
NIL Nilore 72.47 306 P P 22 43 11.2 -0.4
KBL Kabul 76.08 306 P P 22 43 31.8 -1.0
KBL IAmb IAmb 22 43 40.2
comp=Z,7.3nm,1.2s
GAR Garm 76.10 311 P P 22 43 32.0 -0.8
GAR IAmb IAmb 22 43 43.8
comp=Z,10nm,1.1s
VNDA Vanda 76.28 175 P P 22 43 33.3 +0.5
comp=Z,2.3nm,0.7s,baz=324,slow=6.9,SNR=30
comp=Z,2.3nm,0.7s
VNDA Vanda 76.28 175 P P 22 43 33.2 +0.3
VNDA IAmb IAmb 22 43 35.4
comp=Z,2.7nm,0.8s
CHGR Chuyangaron 76.90 310 P P 22 43 36.3 -0.9
CHGR IAmb IAmb 22 43 45.3
comp=Z,9.6nm,0.9s
KK31 Karatay Array 77.01 315 P P 22 43 37.1 -0.5
KKAR Karatay Array 77.01 315 P P 22 43 37.5 -0.1
KKAR Karatay Array 77.01 315 P P 22 43 37.1 -0.6
SBA Scott Base 77.02 175 P P 22 43 38.0 +1.0
SBA IAmb IAmb 22 43 52.3
comp=Z,4.7nm,1.1s
BRVK Borovoye 79.94 325 P P 22 43 52.9 -0.6
CAST Castle Rocks 81.83 25 P P 22 44 04.3 +0.8
CAST IAmb IAmb 22 44 05.8
comp=Z,5.0nm,1.3s
ILAR Eielson Array 84.44 24 P P 22 44 16.8 -0.1
comp=Z,1.0nm,0.8s,baz=257,slow=4.7,SNR=9.2
comp=Z,1.0nm,0.8s
ILAR Eielson Array 84.44 24 P P 22 44 17.7 +0.7
GEYT Alibeck 85.33 308 P P 22 44 22.2 +0.1
comp=Z,4.5nm,1.1s,baz=174,slow=1.5,SNR=7.6
comp=Z,4.5nm,1.1s
GEYT Alibeck 85.33 308 P P 22 44 21.2 -0.9
GEYT IAmb IAmb 22 44 30.8
comp=Z,6.5nm,1.0s
GYA0B ALIBECK ARRAY 85.33 308 P P 22 44 21.6 -0.5
GYA0B IAmb IAmb 22 44 34.4
comp=Z,8.8nm,1.1s
ABKAR Akbulak array 85.45 320 P P 22 44 21.5 -0.9
ABKAR Akbulak array 85.45 320 P P 22 44 21.4 -0.9
ABKAR IAmb IAmb 22 44 30.5
comp=Z,2.9nm,0.8s
BMAR Burnt Mountain 86.07 22 P P 22 44 25.3 +0.2
DAWY Dawson 87.44 26 P P 22 44 32.1 +0.2
DAWY IAmb IAmb 22 44 35.4
comp=Z,7.5nm,1.4s
QSPA South Pole Qui 87.90 180 P P 22 44 34.0 -0.1
comp=Z,4.7nm,1.1s,baz=305,slow=0.7,SNR=11
comp=Z,4.7nm,1.1s
QSPA South Pole Qui 87.90 180 P P 22 44 33.4 -0.7
QSPA IAmb IAmb 22 44 37.8
comp=Z,5.4nm,1.0s
DLBC Dease Lake 91.38 32 LR LR 23 21 27.6
comp=Z,55nm,19.8s,baz=282,slow=33
BBB Bella Bella 92.37 38 LR LR 23 16 53.4
comp=Z,58nm,21.7s,baz=274,slow=29
DBIC Dimbokro 145.29 279 PKPbc PKPbc 22 51 22.1 -1.2
comp=Z,5.6nm,1.1s,baz=237,slow=1.8,SNR=4.1
LPAZ La Paz 146.25 124 PKPbc PKPbc 22 51 26.9 -0.1
comp=Z,4.9nm,1.0s,baz=256,slow=4.9,SNR=8.7
CPUP Villa Florida 146.88 150 PKPbc PKPdf 22 51 27.1 +1.1
comp=Z,3.6nm,0.8s,baz=217,slow=3.7,SNR=6.7
SDV Santo Domingo 148.16 76 PKPbc PKPdf 22 51 30.3 +1.6
comp=Z,2.4nm,0.3s,baz=324,slow=3.0,SNR=5.1

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*IDC **22** 22:33:28.5±2.3, 1°.76S×140°.33E, h0km, mb4.1/4, mbtmp4.1/5, ML4.1/1, MS3.8/1, Error ellipse: s-maj=147.7km s-min=30.1km az=107.0*
*NEIC **22** 22:33:32.7±0.8, 2°.1S±0°.2×140°.6E±0°.1, h10km±2km, mb4.4/14, Error ellipse: s-maj=34.9km s-min=9.4km az=34.0*
ISC 22 22:33:30.9±1.0, 2°.0S±0°.2×140°.7E±0°.1, h10km, n24, σ0§95/23, mb4.4/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**14.36**	**221**		**P**	**22 37 00.7**	**-0.8**
LUWI	**Luwuk**	**17.92**	**273**		**P**	**22 37 42.7**	**+1.6**
LUWI				IAmb	IAmb	22 37 49.9	
comp=Z,35nm,1.0s
SOEI	**Soe**	**18.06**	**244**		**Pn**	**22 37 42.2**	**-0.1**
SOEI				IAmb	IAmb	22 37 48.4	
comp=Z,31nm,0.8s
WB0	**Warramunga Arr**	**18.74**	**199**	P	**P**	**22 37 49.2**	**-0.8**
BATI	**Baumata**	**18.79**	**243**	LR	LR	22 46 03.5	
comp=Z,249nm,18.4s,baz=74,slow=41
WB2	**Warramunga Arr**	**18.91**	**199**	P	**P**	**22 37 51.2**	**-0.7**
WB2				IAmb	IAmb	22 37 52.2	
comp=Z,11nm,0.7s
WRA	**Warramunga Arr**	**18.92**	**199**	P	**P**	**22 37 51.8**	**-0.1**
comp=Z,0.6nm,0.3s,baz=23,slow=12,SNR=4.1
comp=Z,5.8nm,0.8s
TOLI2	**Tolitoli**	**20.13**	**279**	P	**P**	**22 38 06.0**	**+0.7**
TOLI2				IAmb	IAmb	22 38 18.5	
comp=Z,9.0nm,0.9s
FITZ	**Fitzroy Crossi**	**21.80**	**222**	P	**P**	**22 38 21.6**	**-1.6**
AS31	**Alice Springs**	**22.55**	**196**	P	**P**	**22 38 30.7**	**-0.6**
ASAR	**Alice Springs**	**22.55**	**196**	P	**P**	**22 38 31.8**	**+0.4**
comp=Z,3.8nm,0.7s,baz=26,slow=10,SNR=3.2
comp=Z,3.8nm,0.7s
ASAR	**Alice Springs**	**22.55**	**196**	P	**P**	**22 38 30.9**	**-0.5**
EIDS	**Eidsvold**	**25.34**	**158**	P	**P**	**22 39 00.2**	**+2.1**
EIDS				IAmb	IAmb	22 39 02.0	
comp=Z,13nm,0.8s
STKA	**Stephens Creek**	**29.77**	**178**	P	**P**	**22 39 38.0**	**+0.2**
comp=Z,3.0nm,0.8s,baz=347,slow=10.0,SNR=3.6
comp=Z,3.0nm,0.8s
STKA	**Stephens Creek**	**29.77**	**178**	P	**P**	**22 39 37.5**	**-0.3**
BBOO	**Buckleboo**	**30.99**	**188**	P	**P**	**22 39 47.9**	**-0.7**
BBOO				IAmb	IAmb	22 39 56.4	
comp=Z,12nm,1.2s
FORT	**Forrest**	**31.05**	**201**	P	**P**	**22 39 48.6**	**-0.5**
DZM	**Mont Dzumac**	**32.05**	**131**	P	**P**	**22 39 57.9**	**-0.3**
CASY	**Casey**	**67.62**	**193**	P	**P**	**22 44 27.7**	**+0.1**
VNDA	**Vanda**	**76.36**	**175**	P	**P**	**22 45 20.4**	**+0.6**
comp=Z,2.3nm,0.7s,baz=337,slow=7.1,SNR=9.6
comp=Z,2.3nm,0.7s
VNDA	**Vanda**	**76.36**	**175**	P	**P**	**22 45 20.0**	**+0.2**
VNDA				IAmb	IAmb	22 45 21.2	
comp=Z,2.5nm,0.7s
ILAR	**Eielson Array**	**84.34**	**24**	P	**P**	**22 46 01.7**	**-1.3**
comp=Z,0.5nm,0.7s,baz=260,slow=5.2,SNR=2.8
comp=Z,0.5nm,0.7s
QSPA	**South Pole Qui**	**87.98**	**180**	P	**P**	**22 46 20.6**	**-0.5**
QSPA				IAmb	IAmb	22 46 29.3	
comp=Z,2.2nm,1.0s
LPAZ	**La Paz**	**146.26**	**124**	PKPbc	**PKPdf**	**22 53 14.0**	**+1.5**
comp=Z,1.4nm,0.8s,baz=245,slow=3.7,SNR=2.9

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*IDC **22** 22:36:28.3±2.2, 4°.15S×153°.06E, h87km±14km, mb3.8/7, mbtmp4.2/7, MS3.7/3, Error ellipse: s-maj=33.4km s-min=21.9km az=42.0*
*NEIC **22** 22:36:29.2±1.3, 4°.4S±0°.2×152°.99E±0°.08, h93km±9km, mb4.6/16, Error ellipse: s-maj=22.0km s-min=12.0km az=173.0*
ISC 22 22:36:29.3±0.7, 4°.35S±0°.09×152°.94E±0°.08, h100km, n32, σ1§44/31, mb4.3/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.79**	**282**	Pn	**Pn**	**22 36 47.5**	**-0.2**
RABL				Sn	**Sn**	**22 37 01.0**	**-0.4**
KRVT	**Keravat (AS076**	**0.91**	**273**	P	**Pn**	**22 36 48.8**	**0.0**
682nm,0.5s,baz=21,slow=0.8,SNR=55
KRVT				S	**Sn**	**22 37 03.6**	**+0.1**
247nm,0.3s,baz=230,slow=20,SNR=4.8
PMG	**Port Moresby**	**7.63**	**229**	S	**Sn**	**22 39 42.5**	**-0.1**
52nm,0.6s,baz=337,slow=19,SNR=9.7
PATS	**Pohnpei**	**12.34**	**26**	Pn	**Pn**	**22 39 21.7**	**+0.1**
LIFNC	**LIFOU**	**21.45**	**141**	P	**P**	**22 41 06.8**	**-2.8**
SIJI	**Sorong**	**21.92**	**278**	P	**P**	**22 41 16.7**	**+1.8**
4.1nm,0.3s,baz=161,slow=14,SNR=4.2
4.1nm,0.3s
DZM	**Mont Dzumac**	**21.94**	**145**	P	**P**	**22 41 14.9**	**-0.2**
4.0nm,0.6s,baz=211,slow=18,SNR=8.6
4.0nm,0.6s
DZM	**Mont Dzumac**	**21.94**	**145**	P	**P**	**22 41 13.8**	**-1.2**
WB0	**Warramunga Arr**	**23.70**	**228**	P	**P**	**22 41 30.0**	**-2.2**
WB0				IAmb	IAmb	22 41 36.6	
comp=Z,17nm,1.1s
WRA	**Warramunga Arr**	**23.85**	**228**	P	**P**	**22 41 34.1**	**+0.6**
comp=Z,5.3nm,0.6s,baz=54,slow=9.6,SNR=21
comp=Z,5.3nm,0.6s
WRA	**Warramunga Arr**	**23.85**	**228**	P	**P**	**22 41 31.9**	**-1.6**
KNRA	**Kununurra**	**26.30**	**243**	P	**P**	**22 41 55.7**	**-0.1**
KNRA				IAmb	IAmb	22 42 10.1	
comp=Z,46nm,1.2s
AS31	**Alice Springs**	**26.57**	**222**	P	**P**	**22 41 59.3**	**+1.1**
ASAR	**Alice Springs**	**26.57**	**222**	P	**P**	**22 42 00.8**	**+2.6**
comp=Z,1.2nm,0.6s,baz=52,slow=8.8,SNR=6.4
comp=Z,1.2nm,0.6s
BATI	**Baumata**	**29.60**	**257**	LR	LR	22 56 35.7	
comp=Z,172nm,18.9s,baz=159,slow=41
MBWA	**Marble Bar**	**36.31**	**240**	P	**P**	**22 43 23.0**	**-0.7**
MBWA				IAmb	IAmb	22 43 28.3	
comp=Z,17nm,1.2s
PSA00	**Pilbara Seismi**	**36.38**	**239**	P	**P**	**22 43 22.8**	**-1.4**
PSA00				IAmb	IAmb	22 43 40.2	
comp=Z,11nm,1.2s
KKM	**Kota Kinabalu**	**38.10**	**285**	P	**P**	**22 43 39.1**	**+0.1**
JAGI	**Jajag, Banyuwa**	**38.75**	**262**	P	**P**	**22 43 41.7**	**-2.6**
BKZ	**Black Stump Fm**	**40.71**	**152**	P	**P**	**22 44 00.4**	**+0.1**
THZ	**Tophouse**	**41.31**	**157**	P	**P**	**22 44 03.8**	**-1.4**
THZ				IAmb	IAmb	22 44 06.5	
comp=Z,13nm,1.0s
MORW	**Morawa**	**42.73**	**231**	P	**P**	**22 44 17.0**	**+0.1**
MORW				IAmb	IAmb	22 44 24.8	
comp=Z,13nm,1.5s
KSM	**Kuching**	**42.99**	**277**	P	**P**	**22 44 19.5**	**+0.3**
KSM				IAmb	IAmb	22 44 20.0	
comp=Z,16nm,1.2s
VNDA	**Vanda**	**73.27**	**178**	P	**P**	**22 47 52.5**	**+3.3**
comp=Z,0.9nm,0.8s,baz=308,slow=6.7,SNR=3.9
comp=Z,0.9nm,0.8s
VNDA	**Vanda**	**73.27**	**178**	P	**P**	**22 47 50.3**	**+1.0**
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**22 48 27.9**	**-0.3**
comp=Z,1.8nm,0.7s,baz=83,slow=5.0,SNR=3.9
comp=Z,1.8nm,0.7s
QSPA	**South Pole Qui**	**85.61**	**180**	P	**P**	**22 48 59.0**	**+2.5**
comp=Z,1.9nm,0.8s,baz=308,slow=1.1,SNR=7.2
comp=Z,1.9nm,0.8s
QSPA	**South Pole Qui**	**85.61**	**180**	P	**P**	**22 48 56.7**	**+0.1**
QSPA				IAmb	IAmb	22 49 00.1	
comp=Z,2.7nm,0.9s
PFO	**Pinyon Flats O**	**92.88**	**57**	LR	LR	23 22 57.8	
comp=Z,59nm,21.4s,baz=262,slow=30
RPN	**Rapa Nui**	**94.89**	**118**	LR	LR	23 27 14.1	
comp=Z,16nm,18.0s,baz=313,slow=32
TORD	**Torodi Ar. Bea**	**150.30**	**289**	PKPbc	**PKPbc**	**22 56 10.0**	**0.0**
comp=Z,1.1nm,0.3s,baz=66,slow=2.7,SNR=37
BDFB	**Brasilia**	**151.28**	**134**	PKPbc	**PKPbc**	**22 56 12.2**	**-0.2**
comp=Z,0.9nm,0.4s,baz=195,slow=6.1,SNR=4.2

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*VAO **22** 22:36:48.4±1.5, 16°.66S×71°.61W, h10km, mb4.1*
*GUC **22** 22:37:21.2±0.7, 16°.82S×69°.84W, h204km±4km, ML3.9*
*IDC **22** 22:37:21.5±1.4, 16°.74S×69°.26W, h201km±6km, mb3.5/4, mbtmp3.9/6, Error ellipse: s-maj=30.9km s-min=17.9km az=130.0*
ISC 22 22:37:18.4±0.7, 16°.67S±0°.05×69°.64W±0°.06, h188km±7km, n36, σ2§13/54, mb3.9/3, 2C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.50**	**76**	P	**Pn**	**22 37 53.6**	**+2.0**
407nm,0.3s,baz=291,slow=6.7,SNR=1957
LPAZ				S	**Sn**	**22 38 18.0**	**+0.7**
66nm,0.5s,baz=133,slow=22,SNR=15
LPAZ				LR	LR	22 38 23.1	
comp=Z,24nm,21.8s,baz=248,slow=53
LPAZ	**La Paz**	**1.50**	**76**	↓iP	**Pn**	**22 37 53.6**	**+2.0**
LPAZ				eS	**Sn**	**22 38 14.7**	**-2.6**
PB16	**IPOC Station P**	**1.66**	**176**	eP	**Pn**	**22 37 56.1**	**+2.9**
PB16				eS	**Sn**	**22 38 22.9**	**+2.7**
AP01	**Chacalluta**	**1.82**	**201**	eP	**Pn**	**22 37 55.6**	**+1.5**
AP01				eS	**Sn**	**22 38 22.2**	**+0.2**
AP01				IAML		22 38 23.4	
comp=E,1μm,0.3s
PB12	**IPOC Station P**	**2.04**	**199**	↑iP	**Pn**	**22 37 57.6**	**+1.1**
PB12				eS	**Sn**	**22 38 25.5**	**-0.9**
PB12				IAML		22 38 27.0	
comp=E,428nm,0.2s
GO01	**Chusmiza**	**3.02**	**172**	eP	**Pn**	**22 38 10.3**	**+2.2**
GO01				eS	**Sn**	**22 38 48.0**	**+1.1**
GO01				IAML		22 38 58.1	
comp=N,215nm,0.1s
PB11	**IPOC Station P**	**3.08**	**180**	eP	**Pn**	**22 38 09.7**	**+1.3**
PB11				eS	**Sn**	**22 38 47.0**	**-0.7**
PB11				IAML		22 38 49.8	
comp=N,166nm,0.3s
PB08	**IPOC Station P**	**3.49**	**172**	↑eP	**Pn**	**22 38 15.6**	**+1.9**
PB08				eS	**Sn**	**22 38 56.0**	**-1.0**
HMBC	**Humberstone**	**3.60**	**184**	eP	**Pn**	**22 38 15.4**	**+0.5**
HMBC				eS	**Sn**	**22 38 56.0**	**-3.1**
TA02	**Huaiquique**	**3.61**	**187**	eP	**Pn**	**22 38 14.8**	**-0.1**
TA02				eS	**Sn**	**22 38 55.5**	**-3.7**
TA01	**Diego Aracena**	**3.91**	**187**	eP	**Pn**	**22 38 19.0**	**+0.4**
TA01				eS	**Sn**	**22 39 01.9**	**-3.9**
PATCX	**Punta Patache**	**4.16**	**187**	eS	**Sn**	**22 39 07.9**	**-3.7**
PB01	**IPOC Station P**	**4.36**	**178**	eP	**Pn**	**22 38 24.9**	**+0.6**
PB01				eS	**Sn**	**22 39 12.7**	**-3.4**
PB02	**IPOC Station P**	**4.63**	**183**	eP	**Pn**	**22 38 28.7**	**+0.8**
PB02				eS	**Sn**	**22 39 19.4**	**-3.2**
PB07	**IPOC Station P**	**5.04**	**183**	eP	**Pn**	**22 38 33.9**	**+0.7**
PB07				eS	**Sn**	**22 39 28.6**	**-3.4**
PB09	**IPOC Station P**	**5.12**	**176**	eP	**Pn**	**22 38 35.0**	**+0.9**
PB09				eS	**Sn**	**22 39 31.1**	**-2.7**
LVC	**Limon Verde**	**5.95**	**173**	P	**Pn**	**22 38 46.2**	**+1.1**
comp=N,2.8nm,0.3s,baz=29,slow=8.6,SNR=12
LVC				S	**Sn**	**22 39 50.4**	**-3.2**
comp=N,15nm,0.4s,baz=105,slow=22,SNR=21
SIV	**San Ignacio**	**8.25**	**87**	P	**Pn**	**22 39 12.9**	**-2.1**
comp=N,2.5nm,0.4s,baz=269,slow=10.0,SNR=16
SIV				S	**Sn**	**22 40 42.7**	**-5.0**
comp=N,1.0nm,0.5s,baz=149,slow=23,SNR=1.3
NNA	**Nana**	**8.39**	**303**	P	**Pn**	**22 39 19.3**	**+2.4**
comp=N,10nm,0.4s,baz=240,slow=5.6,SNR=2.2
NNA				S	**Sn**	**22 40 46.9**	**-4.1**
comp=N,5.2nm,0.3s,baz=298,slow=19,SNR=1.6
BBSD	**Serra de San D**	**8.66**	**95**	eP	**Pn**	**22 39 18.5**	**-1.9**
VILB	**Vilhena**	**9.85**	**69**	eP	**Pn**	**22 39 35.4**	**-0.5**
SALV	**Santo Antonio**	**13.41**	**89**	eP	**P**	**22 40 25.1**	**+0.5**
CLDB	**Colider**	**14.62**	**69**	eP	**P**	**22 40 38.8**	**+0.7**
FRBT	**Francisco Belt**	**17.99**	**124**	eP	**Pn**	**22 41 17.6**	**+0.6**
CRSM	**Crissiumal (Br**	**18.01**	**129**	eP	**P**	**22 41 16.1**	**+0.9**
UNIS	**Unistalda (Bra**	**18.21**	**135**	eP	**P**	**22 41 17.9**	**+0.5**
PTGB	**Pitanga**	**18.28**	**119**	eP	**P**	**22 41 19.4**	**+1.2**
ITTB	**Itaituba**	**18.32**	**50**	eP	**P**	**22 41 19.0**	**+0.3**
CPSB	**Cacapava Do Su**	**20.16**	**136**	eP	**P**	**22 41 37.0**	**-1.3**
BDFB	**Brasilia**	**20.80**	**90**	P	**P**	**22 41 44.6**	**-0.8**
comp=N,1.2nm,0.3s,baz=237,slow=13,SNR=3.8
comp=N,1.2nm,0.3s
MCPB	**Macapa, AP**	**23.73**	**49**	eP	**P**	**22 42 13.8**	**+0.3**
PLCA	**Paso Flores**	**23.99**	**182**	P	**P**	**22 42 17.9**	**+2.0**
comp=N,2.2nm,0.9s,baz=359,slow=12,SNR=4.8
comp=N,2.2nm,0.9s
DBIC	**Dimbokro**	**68.12**	**76**	P	**P**	**22 47 58.2**	**-0.3**
comp=N,0.9nm,0.4s,baz=200,slow=5.2,SNR=3.7
comp=N,0.9nm,0.4s
TORD	**Torodi Ar. Bea**	**76.44**	**72**	P	**P**	**22 48 47.5**	**-0.3**
comp=N,1.2nm,0.5s,baz=269,slow=5.6,SNR=25
comp=N,1.2nm,0.5s
ASAR	**Alice Springs**	**133.78**	**210**	PKP	**PKPdf**	**22 56 15.2**	**+1.5**
comp=N,0.3nm,0.7s,baz=114,slow=2.2,SNR=2.0
SONM	**Songino Array**	**148.75**	**5**	PKPbc	**PKPbc**	**22 56 44.9**	**+1.2**
comp=N,0.3nm,0.5s,baz=316,slow=3.3,SNR=2.0

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*NEIC **22** 22:38:01.3±1.4, 19°.68N±0°.07×145°.5E±0°.1, h127km±7km, mb4.7/102, Error ellipse: s-maj=15.4km s-min=10.4km az=85.0*
*IDC **22** 22:38:03.1±0.6, 19°.67N×145°.45E, h153km±5km, mb4.0/24, mbtmp4.5/27, Error ellipse: s-maj=12.9km s-min=7.9km az=84.0*
ISC 22 22:38:02.6±0.3, 19°.68N±0°.04×145°.45E±0°.07, h147km, n166, σ0§93/168, mb4.6/65, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.08**	**185**	P	**Pn**	**22 39 30.9**	**+0.5**
62nm,0.3s,baz=65,slow=1.1,SNR=19
GUMO				S	**Sn**	**22 40 40.3**	**+1.3**
32nm,0.3s,baz=167,slow=21,SNR=1.4
GUMO	**Guam**	**6.08**	**185**	Pn	**Pn**	**22 39 28.7**	**-1.7**
JCJ	**Chichijima**	**7.97**	**339**	P	**Pn**	**22 39 54.4**	**-1.1**
50nm,0.4s,baz=272,slow=23,SNR=5.3
JCJ				S	**Sn**	**22 41 20.6**	**-3.7**
140nm,0.6s,baz=302,slow=23,SNR=6.2
JCJ	**Chichijima**	**7.97**	**339**	Pn	**Pn**	**22 39 53.9**	**-1.7**
JCJ	**Chichijima**	**7.97**	**339**	P	**Pn**	**22 39 56.0**	**+0.5**
JYT	**Yasato**	**17.12**	**345**	P	**P**	**22 41 52.5**	**+0.2**
JYT				IAmb	IAmb	22 42 03.5	
comp=Z,71nm,1.4s
INU	**Inuyama**	**17.30**	**336**	P	**P**	**22 41 54.2**	**-0.1**
INU	**Inuyama**	**17.30**	**336**	P	**Pn**	**22 41 56.1**	**+1.0**
JMN	**Monobe**	**17.38**	**326**	P	**Pn**	**22 41 55.9**	**-0.3**
JMN				IAmb	IAmb	22 42 05.8	
comp=Z,33nm,1.1s
JGF	**Kuroka**	**17.39**	**337**		**Pn**	**22 41 55.9**	**-0.4**
JGF	**Kuroka**	**17.39**	**337**	P	**Pn**	**22 41 56.8**	**+0.5**
PATS	**Pohnpei**	**17.86**	**134**		**Pn**	**22 42 02.0**	**0.0**
PATS	**Pohnpei**	**17.86**	**134**	P	**Pn**	**22 42 04.4**	**+2.4**
JSU	**Suzuyama**	**17.91**	**314**	P	**P**	**22 42 01.3**	**+0.2**
MJAR	**Matsushiro Arr**	**17.96**	**341**	P	**P**	**22 42 01.7**	**+0.1**
comp=Z,4.8nm,0.6s,baz=163,slow=9.3,SNR=30
MJAR				S	**S**	**22 45 21.0**	**+0.9**
comp=Z,3.5nm,0.8s,baz=166,slow=18,SNR=4.8
MAJO	**Matsushiro**	**17.96**	**341**		**P**	**22 42 02.0**	**+0.4**
MAJO	**Matsushiro**	**17.96**	**341**	P	**Pn**	**22 42 02.8**	**-0.3**
MJB9	**Matsu-Tunnel**	**17.97**	**341**	P	**Pn**	**22 42 03.0**	**-0.1**
JMM	**Marumori**	**18.57**	**348**	P	**P**	**22 42 08.9**	**+0.7**
JMM				IAmb	IAmb	22 42 12.7	
comp=Z,38nm,0.9s
JMM	**Marumori**	**18.57**	**348**	P	**Pn**	**22 42 11.4**	**+1.2**
JSD	**Sado**	**19.33**	**343**	P	**P**	**22 42 16.7**	**+0.2**
JSD				IAmb	IAmb	22 42 30.8	
comp=Z,62nm,1.5s
JSD	**Sado**	**19.33**	**343**	P	**Pn**	**22 42 18.0**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**20.11**	**90**	T	T	23 03 19.5	
baz=276,slow=74,SNR=4.2
H11S1	**WAKE ISLAND Hy**	**20.12**	**90**	T	T	23 03 20.7	
baz=276,slow=74,SNR=3.8
H11S2	**WAKE ISLAND Hy**	**20.12**	**90**	T	T	23 03 21.0	
baz=276,slow=74,SNR=3.5
H11N1	**WAKE ISLAND Hy**	**20.19**	**86**	T	T	23 03 39.5	
baz=270,slow=74
H11N2	**WAKE ISLAND Hy**	**20.19**	**86**	T	T	23 03 29.5	
baz=270,slow=74
H11N3	**WAKE ISLAND Hy**	**20.21**	**86**	T	T	23 03 36.3	
baz=270,slow=74
MANU	**Manus Island**	**21.67**	**175**	P	**P**	**22 42 39.6**	**-2.1**
YHNB	**Yeheng**	**22.83**	**287**	P	**P**	**22 42 53.9**	**+0.7**
YHNB				IAmb	IAmb	22 43 00.4	
comp=Z,66nm,1.5s
SSLB	**Suanglung**	**23.11**	**285**	P	**P**	**22 42 56.7**	**+0.9**
TPUB	**Ta-pu**	**23.36**	**283**	P	**P**	**22 42 57.8**	**-0.3**
KSRS	**Korea Array**	**23.39**	**323**	P	**P**	**22 42 58.1**	**0.0**
comp=Z,20nm,0.7s,baz=148,slow=8.9,SNR=47
comp=Z,20nm,0.7s
KSAR	**Wonju Array Be**	**23.41**	**323**	P	**P**	**22 42 58.4**	**+0.1**
KS19	**Wonju Array Si**	**23.46**	**323**	P	**P**	**22 42 58.0**	**-0.7**
KS19				IAmb	IAmb	22 42 59.4	
comp=Z,27nm,0.8s
USA0B	**Ussuriysk Arra**	**26.91**	**338**	P	**P**	**22 43 29.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**26.91**	**338**	P	**P**	**22 43 29.1**	**-0.8**
comp=Z,2.3nm,0.7s,baz=123,slow=7.8,SNR=3.7
comp=Z,2.3nm,0.7s
TOLI2	**Tolitoli**	**30.39**	**236**	P	**P**	**22 44 01.5**	**+0.5**
TOLI2				IAmb	IAmb	22 44 02.9	
comp=Z,19nm,1.1s
KLR	**Kul'dur**	**31.47**	**343**	P	**P**	**22 44 10.6**	**+0.5**
comp=Z,9.5nm,0.6s,baz=161,slow=7.7,SNR=25
comp=Z,9.5nm,0.6s
KKM	**Kota Kinabalu**	**31.48**	**248**	P	**P**	**22 44 11.0**	**+0.3**
KKM				IAmb	IAmb	22 44 12.4	
comp=Z,15nm,0.7s
COEN	**Coen**	**33.50**	**184**	P	**P**	**22 44 26.3**	**-1.8**
XLT	**XiLinHaoTe**	**34.42**	**321**	eP	**P**	**22 44 38.0**	**+2.0**
PETK	**Petropavlovsk-**	**34.69**	**13**	P	**P**	**22 44 38.0**	**-0.1**
comp=Z,2.9nm,0.8s,baz=213,slow=10,SNR=2.2
comp=Z,2.9nm,0.8s
KAPI	**Kappang**	**35.23**	**228**	P	**P**	**22 44 43.1**	**0.0**
comp=Z,3.5nm,0.5s,baz=89,slow=9.6,SNR=1.5
comp=Z,3.5nm,0.5s
MTN	**Manton Dam**	**35.26**	**205**	P	**P**	**22 44 43.1**	**-0.1**
HHC	**Hu-ho-hao-te**	**35.76**	**314**	eP	**P**	**22 44 49.4**	**+1.9**
SBUM	**Sibu**	**36.70**	**246**	P	**P**	**22 44 57.0**	**+1.3**
UBPT	**Khong Chiam**	**38.32**	**270**	P	**P**	**22 45 10.6**	**+1.3**
UBPT				IAmb	IAmb	22 45 12.0	
comp=Z,18nm,1.1s
KNRA	**Kununurra**	**38.78**	**206**	P	**P**	**22 45 13.3**	**+0.4**
KSM	**Kuching**	**38.84**	**247**	P	**P**	**22 45 14.2**	**+0.5**
KSM				IAmb	IAmb	22 45 28.2	
comp=Z,20nm,1.2s
CTA	**Charters Tower**	**39.53**	**179**	P	**P**	**22 45 18.9**	**-0.3**
comp=Z,1.0nm,0.4s,baz=134,slow=14,SNR=1.6
comp=Z,1.0nm,0.4s
LZH	**Lanzhou**	**39.91**	**303**	eP	P	22 45 15.8	-6.7
PZH	**PanZhiHua**	**40.63**	**288**	P	**P**	**22 45 29.6**	**+1.1**
WB0	**Warramunga Arr**	**40.67**	**196**	P	**P**	**22 45 28.2**	**-0.4**
WB0				IAmb	IAmb	22 45 45.5	
comp=Z,17nm,1.4s
WRA	**Warramunga Arr**	**40.85**	**196**	P	**P**	**22 45 29.9**	**-0.3**
comp=Z,1.8nm,0.3s,baz=23,slow=8.4,SNR=10
comp=Z,1.8nm,0.3s
WRA	**Warramunga Arr**	**40.85**	**196**	P	**P**	**22 45 30.2**	**0.0**
ULN	**Ulaanbaatar**	**41.86**	**321**	P	**P**	**22 45 38.3**	**+0.1**
ULN				IAmb	IAmb	22 45 39.4	
comp=Z,10nm,0.7s
SONM	**Songino Array**	**42.24**	**321**	P	**P**	**22 45 41.5**	**+0.3**
comp=Z,1.0nm,0.7s,baz=137,slow=8.4,SNR=77
comp=Z,1.0nm,0.7s
SONM	**Songino Array**	**42.24**	**321**	P	**P**	**22 45 41.4**	**+0.1**
SONM				IAmb	IAmb	22 45 42.2	
comp=Z,9.4nm,0.6s
YAK	**Yakutsk**	**43.72**	**349**	P	**P**	**22 45 52.7**	**-0.1**
GTA	**Gaotai**	**43.77**	**307**	eP	**P**	**22 45 54.3**	**+0.5**
GTA				PcP	**PcP**	**22 47 38.0**	**+0.1**
CHTO	**Chiang Mai**	**43.81**	**277**	P	**P**	**22 45 54.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**43.87**	**276**	P	**P**	**22 45 55.7**	**+1.1**
comp=Z,2.3nm,0.6s,baz=64,slow=8.1,SNR=11
comp=Z,2.3nm,0.6s
CMAR	**Chiang Mai Arr**	**43.87**	**276**	P	**P**	**22 45 55.5**	**+0.8**
AS31	**Alice Springs**	**44.53**	**195**	P	**P**	**22 45 59.2**	**-0.6**
ASAR	**Alice Springs**	**44.53**	**195**	P	**P**	**22 45 59.0**	**-0.7

MK31 IAmb IAmb 22 47 38.4
comp=Z,7.2nm,0.7s
MKAR Makanchi Array 57.62 313 P P 22 47 37.5 +0.2
comp=Z,8.2nm,0.6s,baz=91,slow=9.2,SNR=75
MKAR pP **pwP 22 48 13.8 -1.1**
comp=Z,0.8nm,0.5s,baz=91,slow=8.3,SNR=1.8
comp=Z,8.2nm,0.6s
MKAR Makanchi Array 57.62 313 P P 22 47 37.3 +0.1
N18K Kilae Creek 57.82 30 P P 22 47 39.9 +1.5
MAKZ Makanchi 57.84 313 P P 22 47 39.1 +0.4
P19K Oil Pt 58.80 31 P P 22 47 45.7 +0.5
CAST Castle Rocks 60.34 27 P P 22 47 56.6 +1.0
CAST IAmb IAmb 22 47 58.6
comp=Z,5.9nm,0.7s
KURK Kurchatov 60.39 318 P P 22 47 56.0 -0.2
IMAR Indian Mountai 60.42 24 P P 22 47 57.5 +1.3
NRIK Noril'sk 60.61 340 P P 22 47 57.0 -0.4
comp=Z,3.3nm,0.4s,baz=122,slow=11,SNR=4.4
comp=Z,3.3nm,0.4s
NRIK Noril'sk 60.61 340 P P 22 47 57.7 +0.3
NRIK IAmb IAmb 22 47 58.2
comp=Z,4.6nm,0.7s
BPAW Bear Paw Mtn. 60.99 27 P P 22 48 01.0 +0.9
BPAW IAmb IAmb 22 48 01.6
comp=Z,5.9nm,0.7s
TRF Thorofare Moun 61.12 28 P P 22 48 01.2 0.0
TRF IAmb IAmb 22 48 02.4
comp=Z,6.7nm,0.9s
MLY Manley 61.34 26 P P 22 48 03.1 +0.7
I23K Minto, Yukon-K 61.94 26 P P 22 48 07.4 +1.0
I23K IAmb IAmb 22 48 13.0
comp=Z,7.6nm,1.2s
SCM Sheep Creek Mo 62.11 30 P P 22 48 08.4 +0.7
KSH Kashi 62.12 305 P P 22 48 10.3 +2.1
H24K Noodor Dome 62.70 25 P P 22 48 12.4 +0.9
IL31 62.88 26 P P 22 48 12.0 -0.6
ILAR Eielson Array 62.88 26 P P 22 48 12.1 -0.6
comp=Z,1.8nm,0.7s,baz=256,slow=5.9,SNR=18
ILAR pP **pP 22 48 47.8 +1.2**
comp=Z,0.6nm,0.8s,baz=272,slow=4.8,SNR=3.8
comp=Z,1.8nm,0.7s
AAK Ala-Archa 63.08 309 P P 22 48 14.3 -0.3
SCRK Sand Creek 63.98 28 P P 22 48 20.4 +0.3
SCRK IAmb IAmb 22 48 22.2
comp=Z,9.8nm,1.4s
BMAR Burnt Mountain 64.32 24 P P 22 48 23.4 +1.3
NIL Nilore 64.85 299 P P 22 48 25.8 -0.4
NIL IAmb IAmb 22 48 27.6
comp=Z,6.0nm,0.6s
BRVK Borovoye 65.64 320 P P 22 48 30.9 +0.1
KK31 Karatay Array 65.97 309 P P 22 48 33.2 0.0
KK31 IAmb IAmb 22 48 33.8
comp=Z,5.1nm,0.6s
KKAR Karatay Array 65.97 309 P P 22 48 33.3 +0.1
CHGR Chuyangaron 67.47 305 P P 22 48 42.2 -0.7
KBL Kabul 68.18 300 P P 22 48 46.5 -1.0
INK Inuvik 68.57 23 P P 22 48 49.2 +0.2
INK IAmb IAmb 22 48 50.4
comp=Z,9.0nm,0.9s
DLBC Dease Lake 70.61 34 P P 22 49 02.3 +0.4
DLBC IAmb IAmb 22 49 04.5
comp=Z,9.1nm,1.1s
ARU Arti 72.14 324 P P 22 49 10.7 -0.2
ARU IAmb IAmb 22 49 11.3
comp=Z,8.8nm,1.0s
ABKAR Akbulak array 72.47 317 P P 22 49 12.4 -0.6
ABKAR Akbulak array 72.47 317 P P 22 49 12.5 -0.6
ABKAR IAmb IAmb 22 49 13.1
comp=Z,7.9nm,0.6s
GEYT Alibeck 76.14 306 P P 22 49 34.1 -0.5
comp=Z,1.7nm,0.6s,baz=66,slow=1.7,SNR=5.1
comp=Z,1.7nm,0.6s
GEYT Alibeck 76.14 306 P P 22 49 34.3 -0.3
DGAR Diego Garcia 76.68 257 P P 22 49 38.2 +0.3
EUNU Eureka 76.79 8 P P 22 49 38.1 +0.6
EUNU IAmb IAmb 22 49 38.9
comp=Z,9.5nm,0.7s
YKA Yellowknife Ar 77.24 28 P P 22 49 40.5 +0.3
comp=Z,9.2nm,0.7s,baz=286,slow=5.5,SNR=27
comp=Z,9.2nm,0.7s
YKA Yellowknife Ar 77.24 28 P P 22 49 40.1 -0.1
RES Resolute Bay 78.53 14 P P 22 49 47.8 +0.7
RES IAmb IAmb 22 49 48.6
comp=Z,10.0nm,0.8s
B08A Colville Reser 78.92 43 P P 22 49 50.5 +0.7
PINE Pine Mountain 79.17 47 P P 22 49 52.8 +1.3
HAWA Hanford 79.36 45 P P 22 49 53.0 +0.8
HAWA IAmb IAmb 22 49 54.2
comp=Z,11nm,1.1s
ORV Oroville 80.01 52 P P 22 49 55.7 -0.1
NEW Newport 80.35 42 P P 22 49 58.4 +0.9
NEW IAmb IAmb 22 49 59.3
comp=Z,7.9nm,0.8s
KLMR Klimovskoe 80.49 331 *eP* **P 22 49 56.4 -1.5**
KLMR AMP 22 49 58.0
comp=Z,12nm,1.2s
BEKR Beckworth 80.75 51 P P 22 50 00.7 +0.7
BEKR IAmb IAmb 22 50 01.6
comp=Z,12nm,0.7s
CMB Columbia Colle 81.30 53 P P 22 50 03.4 +0.7
CMB IAmb IAmb 22 50 04.5
comp=Z,10nm,0.7s
ARCES ARCESS Array B 81.49 342 P P 22 50 02.9 -0.2
comp=Z,3.1nm,0.6s,baz=76,slow=8.0,SNR=17
comp=Z,3.1nm,0.6s
ARCES ARCESS Array B 81.49 342 P P 22 50 02.6 -0.5
ARCES IAmb IAmb 22 50 22.7
comp=Z,15nm,1.4s
TULEG Thule 81.78 8 P P 22 50 04.6 +0.1
PLID Pearl Lake 82.12 45 P P 22 50 06.6 -0.6
NVAR Mina Array Bea 82.72 52 P P 22 50 11.6 +1.1
comp=Z,12nm,0.7s,baz=265,slow=5.9,SNR=88
NVAR pP **pwP 22 50 48.8 -1.1**
comp=Z,1.5nm,0.7s,baz=266,slow=6.2,SNR=2.5
NVAR Mina Array Bea 82.72 52 P P 22 50 11.0 +0.5
NV11 Mina Array Sit 82.83 52 P P 22 50 11.6 +0.6
NV11 IAmb IAmb 22 50 12.8
comp=Z,8.4nm,0.7s
HLID Hailey 83.72 46 P P 22 50 15.8 +0.4
ELK Elko 84.16 49 P P 22 50 18.4 +0.6
ELK IAmb IAmb 22 50 19.6
comp=Z,9.9nm,0.9s
GWY Greenwater Val 84.71 54 P P 22 50 20.7 +0.2
GWY IAmb IAmb 22 50 22.0
comp=Z,7.2nm,0.7s
GSC Goldstone, Bar 84.91 54 P P 22 50 21.8 +0.3
KBZ Khabaz 85.29 315 P P 22 50 22.7 -0.3
comp=Z,2.1nm,0.9s,baz=267,slow=9.4,SNR=2.6
comp=Z,2.1nm,0.9s
YHL Hebgen Lake 85.39 44 P P 22 50 25.2 +1.2
HVU Hansel Valley 85.51 47 P P 22 50 25.3 +0.9
HVU IAmb IAmb 22 50 26.5
comp=Z,11nm,1.2s
FINES FINESS Array B 85.90 335 P P 22 50 24.0 -1.6
comp=Z,1.7nm,0.4s,baz=73,slow=4.8,SNR=30
FINES pP **pP 22 51 03.9 +1.6**
comp=Z,1.6nm,0.6s,baz=80,slow=4.6,SNR=1.7
comp=Z,1.7nm,0.4s
FINES FINESS Array B 85.90 335 P P 22 50 23.9 -1.8
IMW Indian Meadow 85.93 45 P P 22 50 27.5 +0.9
IMW IAmb IAmb 22 50 28.8
comp=Z,6.6nm,0.8s
DUG Dugway, Tooele 86.08 49 P P 22 50 27.8 +0.5
DUG IAmb IAmb 22 50 28.8
comp=Z,9.0nm,0.6s
FFC Flin Flon 86.40 32 P P 22 50 28.5 +0.2
FFC IAmb IAmb 22 50 29.6
comp=Z,6.6nm,0.8s
RLMT Red Lodge 86.53 43 P P 22 50 30.9 +1.5
RLMT IAmb IAmb 22 50 31.7
comp=Z,5.6nm,0.7s
W13A Hualapai Mount 87.21 54 P P 22 50 33.1 +0.1
W13A IAmb IAmb 22 50 34.6
comp=Z,4.0nm,0.7s
PD31 Pinedale Array 87.31 45 P P 22 50 33.2 0.0
PDAR Pinedale Array 87.31 45 P P 22 50 33.6 +0.4
comp=Z,0.7nm,0.4s,baz=230,slow=0.8,SNR=10
comp=Z,0.7nm,0.4s
PDAR Pinedale Array 87.31 45 P P 22 50 33.2 0.0
U15A North Rim 87.91 52 P P 22 50 36.9 +0.7
U15A IAmb IAmb 22 50 38.3
comp=Z,3.7nm,0.7s
BRTR Keskin Array B 93.26 314 P P 22 50 59.0 -1.9
comp=Z,1.3nm,0.9s,baz=146,slow=2.4,SNR=7.6
comp=Z,1.3nm,0.9s
TXAR Lajitas Array 97.48 55 P Pdif 22 51 20.5 +0.2
comp=Z,0.1nm,0.7s,baz=268,slow=3.2,SNR=1.5
comp=Z,0.1nm,0.7s
TORD Torodi Ar. Bea 131.66 310 PKP **PKPdf 22 56 57.2 -1.7**
comp=Z,0.5nm,0.4s,baz=8.3,slow=1.3,SNR=6.4
PLCA Paso Flores 142.84 132 PKP **PKPdf 22 57 17.2 -1.7**
comp=Z,0.6nm,0.6s,baz=170,slow=5.9,SNR=2.5
LPAZ La Paz 147.91 89 PKP **PKPdf 22 57 29.0 +0.1**
comp=Z,7.1nm,0.6s,baz=263,slow=3.3,SNR=20
LPAZ PKPbc **PKPbc 22 57 32.1 +0.1**
comp=Z,7.1nm,0.6s,baz=297,slow=2.5,SNR=20

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*IDC **22** 22:41:36.1±1.9, 6°.22S×152°.05E, h0km, mb3.7/3, mbtmp3.9/4, ML2.3/1, Error ellipse: s-maj=66.9km s-min=19.4km az=113.0*
ISC 22 22:41:41.4±1.7, 6°.2S±0°.1×152°.0E±0°.2, h36km, n6, σ0°74/8, mb3.7/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.89**	**1**	Pn		**Pn**	**Pn**	**22 42 10.6**	**-0.5**
	15nm,0.3s,baz=297,slow=2.3,SNR=14								
KRVT				Sn			**Sn**	**22 42 34.5**	**+0.8**
	37nm,0.3s,baz=102,slow=23,SNR=10.0								
PMG	**Port Moresby**	**5.74**	**236**	Pn			**Pn**	**22 43 04.5**	**+0.5**
	5.0nm,0.3s,baz=307,slow=15,SNR=7.5								
PMG				Sn			**Sn**	**22 44 08.4**	**-0.3**
	0.9nm,0.3s,baz=24,slow=15,SNR=2.4								
	23nm,0.6s								
WRA	**Warramunga Arr**	**21.91**	**230**	P			**P**	**22 46 30.6**	**-1.1**
	0.9nm,0.5s,baz=55,slow=10,SNR=2.9								
	0.9nm,0.5s								
ASAR	**Alice Springs**	**24.57**	**223**	P			**P**	**22 46 58.6**	**+0.5**
	2.9nm,0.6s,baz=56,slow=8.6,SNR=12								
	2.9nm,0.6s								
ILAR	**Eielson Array**	**83.76**	**22**	P			**P**	**22 54 06.8**	**+0.2**
	0.5nm,0.8s,baz=238,slow=5.2,SNR=4.1								
	0.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**149.93**	**285**	PKPbc			**PKPbc**	**23 01 28.8**	**-0.2**
	0.5nm,0.7s,baz=89,slow=3.4,SNR=2.5								

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*IDC **22** 22:42:57.1±1.2, 26°.16N×57°.27E, h0km, mb3.8/7, mbtmp3.8/7, MS3.5/2, Error ellipse: s-maj=39.0km s-min=26.8km az=44.0*
*TEH **22** 22:42:58.7, 26°.36N×57°.36E, h20km, ML3.5*
*DSN **22** 22:42:59.4±1.7, 26°.33N×57°.40E, h10km, ML3.6/10, Error ellipse: s-maj=21.7km s-min=10.0km az=175.0*
*OMAN **22** 22:43:02.0±1.4, 26°.28N×57°.51E, h25km, mb5.0/1, ml3.6/21, Mwp4.6/3, Error ellipse: s-maj=12.6km s-min=7.6km az=27.0*
ISC 22 22:42:57.4±1.5, 26°.29N±0°.04×57°.44E±0°.04, h3km±10km, n88, σ1°39/110, mb3.7/7, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JASK	**Jask - Hormozg**	**0.57**	**137**	*eP*	**g**		**Pn**	**22 43 12.7**	**+0.2**
JASK				*e*				22 43 13.7	
	comp=Z,19μm,0.2s								
JASK				*e*	**Sg**		**Sn**	**22 43 22.2**	**-0.2**
BANOM	**Banah**	**1.08**	**251**	*ePn*			**Pn**	**22 43 19.5**	**-0.1**
BANOM	**Banah**	**1.08**	**251**	P			**Pn**	**22 43 19.8**	**+0.2**
	SNR=443								
BANOM				S			**Sn**	**22 43 35.9**	**+0.8**
BANOM	**Banah**	**1.08**	**251**	P			**Pn**	**22 43 19.5**	**-0.1**
BANOM				S			**Sn**	**22 43 35.7**	**+0.5**
SHME	**Shamm**	**1.19**	**259**	*ePn*			**Pn**	**22 43 21.2**	**+0.3**
SHME	**Shamm**	**1.19**	**259**	P			**Pn**	**22 43 21.3**	**+0.3**
	SNR=63								
SHME				P			**Pn**	**22 43 21.3**	**+0.3**
	SNR=63								
SHME				S			**Sn**	**22 43 38.8**	**+1.1**
SHME				S			**Sn**	**22 43 38.8**	**+1.1**
SHME	**Shamm**	**1.19**	**259**	P			**Pn**	**22 43 21.1**	**+0.1**
IBND	**Bandar-abas**	**1.41**	**326**	*ePg*			**Pn**	**22 43 23.4**	**-0.6**
IBND				*e*				22 43 53.9	
	comp=Z,17μm,0.4s								
MASF	**Masafi**	**1.47**	**232**	P			**Pg**	**22 43 25.5**	**-0.1**
	SNR=8.7								
MASF				P			**Pg**	**22 43 25.5**	**-0.1**
	SNR=8.7								
MASF				S			**Sn**	**22 43 47.5**	**+2.9**
MASF				S			**Sn**	**22 43 47.5**	**+2.9**
MSFE	**Esma-Masafi**	**1.47**	**232**	*ePn*			**Pb**	**22 43 25.2**	**-0.3**
MSFE	**Esma-Masafi**	**1.47**	**232**	*eP*			**Pn**	**22 43 24.8**	**-0.2**
	SNR=27								
MSFE				S			**Sn**	**22 43 45.5**	**+0.7**
GENO	**Geno**	**1.58**	**315**	*ePg*			**Pn**	**22 43 26.1**	**-0.5**
GENO				*e*				22 43 50.2	
	comp=Z,9μm,0.5s								
KHNJ	**Kahnooj**	**1.67**	**8**	*ePn*			**Pn**	**22 43 26.4**	**-1.3**
UOSS	**Minazif**	**1.74**	**220**	*ePn*			**Pn**	**22 43 28.3**	**-0.3**
UOSS	**Minazif**	**1.74**	**220**	P			**Pn**	**22 43 28.8**	**+0.3**
UOSS				S			**Sb**	**22 43 52.5**	**+0.2**
UOSS	**Minazif**	**1.74**	**220**	*eP*			**Pn**	**22 43 28.3**	**-0.3**
	SNR=60								
UMQ	**Umm Al-Quwin**	**1.77**	**245**	*ePn*			**Pn**	**22 43 29.5**	**+0.6**
UMQ	**Umm Al-Quwin**	**1.77**	**245**	P			**Pg**	**22 43 33.7**	**+2.4**
	SNR=7.3								
HATD	**Hatta, Dubai**	**1.87**	**219**	*ePn*			**Pn**	**22 43 30.6**	**+0.2**
HATD	**Hatta, Dubai**	**1.87**	**219**	P			**Pn**	**22 43 30.5**	**+0.2**
	SNR=8.7								
HATD				S			**Sn**	**22 43 53.5**	**-1.0**
HATD	**Hatta, Dubai**	**1.87**	**219**	*eP**			**Pn**	**22 43 30.1**	**-0.3**
	SNR=50								
ASHO	**Ashiyiah**	**2.02**	**218**	*ePn*			**Pn**	**22 43 33.6**	**+1.1**
ASHO	**Ashiyiah**	**2.02**	**218**	P			**Pb**	**22 43 34.0**	**-0.9**
	SNR=39								
ASHO	**Ashiyiah**	**2.02**	**218**	*eP**			**Pb**	**22 43 34.0**	**-0.9**
	SNR=40								
NAZ	**Nazwa, Dubai**	**2.06**	**231**	*ePn*			**Pb**	**22 43 34.5**	**-1.0**
NAZ	**Nazwa, Dubai**	**2.06**	**231**	P			**Pg**	**22 43 38.0**	**+1.1**
	SNR=18								
NAZ				S			**Sg**	**22 44 05.0**	**+1.4**
NAZ	**Nazwa, Dubai**	**2.06**	**231**	*eP**			**Pb**	**22 43 35.6**	**+0.1**
	SNR=34								
FAQ	**Al Faqa, Dubai**	**2.26**	**228**	*ePn*			**Pb**	**22 43 37.3**	**-1.7**
FAQ	**Al Faqa, Dubai**	**2.26**	**228**	P			**Pb**	**22 43 39.4**	**+0.4**
	SNR=11								
FAQ				S			**Sg**	**22 44 10.6**	**+0.3**
FAQ	**Al Faqa, Dubai**	**2.26**	**228**	*eP**			**Pb**	**22 43 38.9**	**-0.1**
	SNR=29								
ASUD	**Al Ashush, Dub**	**2.52**	**230**	*ePn*			**Pb**	**22 43 41.8**	**-1.6**
ASUD	**Al Ashush, Dub**	**2.52**	**230**	P			**Pb**	**22 43 43.1**	**-0.3**
	SNR=45								
ASUD				S			**Sg**	**22 44 17.1**	**-1.4**
ASUD	**Al Ashush, Dub**	**2.52**	**230**	*eP**			**Pb**	**22 43 42.4**	**-1.0**
	SNR=45								
ALNE	**Al Ain**	**2.69**	**215**	*ePn*			**Pb**	**22 43 44.5**	**-1.8**
ALNE	**Al Ain**	**2.69**	**215**	P			**Pb**	**22 43 45.2**	**-1.2**
	SNR=17								
ALNE				S			**Sb**	**22 44 20.9**	**+1.1**
ALNE	**Al Ain**	**2.69**	**215**	*eP*			**Pb**	**22 43 44.8**	**-1.5**
	SNR=13								
HOQ	**Hoqain**	**2.69**	**182**	*ePn*			**Pn**	**22 43 41.9**	**+0.2**
HOQ	**Hoqain**	**2.69**	**182**	P			**Pn**	**22 43 42.0**	**+0.2**
	SNR=36								
HOQ				S			**Sn**	**22 44 15.3**	**+0.4**
AJN	**Ajban**	**2.80**	**233**	*ePn*			**Pn**	**22 43 44.9**	**+1.7**
AJN	**Ajban**	**2.80**	**233**	P			**Pb**	**22 43 46.4**	**-1.7**
AJN				S			**Sb**	**22 44 21.1**	**-1.7**
BIDO	**Bidbid**	**2.82**	**167**	*ePn*			**Pn**	**22 43 43.6**	**+0.1**
BIDO	**Bidbid**	**2.82**	**167**	P			**Pn**	**22 43 43.8**	**+0.3**
CHBR	**Chabahar**	**2.83**	**103**	*ePn*			**Pn**	**22 43 45.9**	**+2.4**
CHBR				*e*				22 44 09.1	
	comp=Z,99nm,0.4s								
KBAM	**BAM**	**2.98**	**17**	*ePn*			**Pn**	**22 43 45.9**	**+0.2**
KBAM				*e*				22 44 42.1	
	comp=Z,1μm,0.6s								
ARQ	**Araqi**	**3.05**	**196**	P			**Pb**	**22 43 49.9**	**-2.5**
	SNR=7.0								
ARQ				S			**Sb**	**22 44 28.4**	**-1.7**
LAR1	**LAR**	**3.06**	**297**	*ePn*			**Pn**	**22 43 45.3**	**-1.5**
ESRB	**Sir Abu**	**3.08**	**251**	*ePn*			**Pn**	**22 43 47.6**	**+0.7**
SMDO	**Samad**	**3.26**	**170**	P			**Pn**	**22 43 51.2**	**+1.6**
SMDO				S			**Sn**	**22 44 32.2**	**+3.2**
NGRK	**Negar Kerman**	**3.40**	**350**	*ePn*			**Pn**	**22 43 51.3**	**-0.5**
NGRK				*e*				22 44 53.3	
	comp=Z,926nm,0.7s								
NGCH	**Negor - Chabah**	**3.46**	**105**	*ePn*			**Pn**	**22 43 54.1**	**+1.9**
NGCH				*e*				22 44 21.9	
	comp=Z,1μm,0.6s								
BSY	**Bisya**	**3.53**	**184**	P			**Pn**	**22 43 56.0**	**+2.7**
BSY				S			**Sb**	**22 44 40.1**	**-3.9**
CHMN	**Cheshme madani**	**3.56**	**1**	*ePn*			**Pn**	**22 43 53.6**	**-0.4**
CHMN				*e*				22 45 02.4	
	comp=Z,641nm,0.6s								
KRBR	**Kerman**	**3.73**	**351**	*ePn*			**Pn**	**22 43 56.4**	**+0.1**
TVBK	**TV Kerman**	**3.73**	**351**	*e*			Pg	22 44 14.9	+5.9
	comp=Z,931nm,0.6s								
WBK	**Wadi Bani Khal**	**3.92**	**159**	*ePn*			**Pn**	**22 43 59.4**	**+0.9**
WBK	**Wadi Bani Khal**	**3.92**	**159**	P			**Pn**	**22 43 59.5**	**+0.9**
	SNR=9.4								
JMDO	**Jabal Madar**	**3.94**	**171**	P			**Pn**	**22 44 01.1**	**+2.1**
JMDO				S			**Sn**	**22 44 49.9**	**+4.1**
MZWR	**Madinat Zayed**	**4.09**	**233**	P			**Pn**	**22 44 02.9**	**+2.0**
UMZA	**Um Al Zommool**	**4.12**	**211**	P			**Pn**	**22 44 03.0**	**+1.7**
UMZA				P			**Pn**	**22 44 03.0**	**+1.7**
KHGB	**Koh Gabri**	**4.16**	**349**	*ePn*			**Pn**	**22 44 02.9**	**+0.8**
ZHDN	**Zahedan**	**4.31**	**43**	*e*				22 44 32.9	
	comp=Z,186nm,0.6s								
ZHDN				*ePn*			**Pn**	**22 44 04.6**	**+0.6**
ZHSF	**Zahedan**	**4.44**	**41**	*ePn*			**Pn**	**22 44 06.2**	**+0.3**
MHTO	**MHTO**	**5.30**	**175**	P			**Pn**	**22 44 19.8**	**+2.3**
	SNR=12								
MHTO				S			**Sn**	**22 45 21.2**	**+2.1**
IMEH	**Mehriz**	**5.66**	**335**	*ePn*			**Pn**	**22 44 21.7**	**-1.0**
IMEH				*e*				22 45 42.3	
	comp=Z,126nm,0.6s								
SHMA	**Al-Shehemyia**	**5.84**	**267**	P			**Pn**	**22 44 27.1**	**+2.2**
BSRN	**Basiran**	**5.85**	**14**	*ePn*			**Pn**	**22 44 26.1**	**+0.9**
AHBU	**AHRAM**	**6.03**	**297**	*ePn*			**Pn**	**22 44 27.2**	**-0.3**
SMRA	**Abu-Samra**	**6.17**	**257**	P			**Pn**	**22 44 33.6**	**+4.2**
SAKB	**Bahrain**	**6.21**	**269**	‖P			**Pn**	**22 44 31.6**	**+1.6**
IKOO	**Kooshah**	**6.27**	**12**	*ePn*			**Pn**	**22 44 30.8**	**-0.3**
DQM	**DQM**	**6.33**	**179**	P			**Pn**	**22 44 33.7**	**+2.0**
ISAD	**Sadrabad**	**6.50**	**331**	*ePn*			**Pn**	**22 44 34.7**	**+0.4**
YZKH	**Yazd**	**6.57**	**338**	*ePn*			**Pn**	**22 44 35.1**	**0.0**
ITEG	**Tejag**	**6.69**	**10**	*ePn*			**Pn**	**22 44 36.3**	**-0.5**
IRAM	**Ramesheh**	**7.06**	**322**	*ePn*			**Pn**	**22 44 41.0**	**-0.9**
TABS	**Tabas**	**7.34**	**358**	*ePn*			**Pn**	**22 44 45.9**	**+0.2**
NASN	**Na'in**	**7.64**	**329**	*ePn*			**Pn**	**22 44 49.9**	**-0.1**
AMIS	**Naft Sefid**	**8.92**	**309**	*ePn*			**Pn**	**22 45 07.2**	**-0.1**
KHMZ	**Khomeyn**	**9.85**	**321**	*ePn*			**Pn**	**22 45 20.3**	**0.0**
ASAO	**Ashtian**	**10.42**	**324**	*ePn*			**Pn**	**22 45 27.6**	**-0.5**
BRTR	**Keskin Array B**	**23.95**	**310**	P			**P**	**22 48 12.8**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=127,slow=10,SNR=5.1								
BRTR				LR			LR	22 59 08.0	
	comp=Z,56nm,18.6s,baz=185,slow=41								
	comp=Z,0.6nm,0.8s								
ARCES	**ARCESS Array B**	**47.13**	**345**	P			**P**	**22 51 32.9**	**+2.2**
	comp=Z,3.6nm,1.1s,baz=139,slow=8.4,SNR=1.6								
	comp=Z,3.6nm,1.1s								
ESDC	**Sonseca Array**	**52.28**	**301**	P			**P**	**22 52 08.7**	**-1.7**
	comp=Z,0.6nm,0.9s,baz=71,slow=6.1,SNR=4.7								
	comp=Z,0.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**53.71**	**267**	P			**P**	**22 52 19.8**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=54,slow=7.5,SNR=5.0								
	comp=Z,0.4nm,0.5s								
BOSA	**Boshof**	**62.73**	**212**	P			**P**	**22 53 24.0**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=36,slow=8.7,SNR=4.6								
	comp=Z,1.7nm,0.6s								
WRA	**Warramunga Arr**	**87.59**	**113**	P			**P**	**22 55 47.4**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=322,slow=3.7,SNR=1.7								
	comp=Z,0.7nm,0.8s								
ASAR	**Alice Springs**	**89.04**	**117**	P			**P**	**22 55 54.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=289,slow=5.8,SNR=2.2								
	comp=Z,0.3nm,0.6s								
SADO	**Sadowa**	**98.94**	**330**	LR			LR	23 44 36.9	
	comp=Z,30nm,18.3s,baz=360,slow=37								

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*DJA **22** 22:44:49.1±0.3, 8°.5S±4°.×10°.7E±°, h52km±5km, M4.8/22, mb4.9/22, mB5.3/7, MLv5.0/18, Mw(mB)4.7/7*
*NEIC **22** 22:44:51.1±2.1, 7°.88S±0°.06×107°.61E±0°.03, h68km±6km, mb4.6/76, Error ellipse: s-maj=9.9km s-min=3.8km az=161.0*
*IDC **22** 22:44:54.6±0.8, 7°.71S×107°.63E, h95km±6km, mb4.0/23, mbtmp4.3/25, MS3.4/11, Error ellipse: s-maj=18.2km s-min=10.5km az=51.0*
ISC 22 22:44:50.2±0.3, 7°.97S±0°.05×107°.54E±0°.04, h62km, n221, σ1°40/214, mb4.5/54, 6C-5D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.78**	**328**	P			**Pn**	**22 45 05.2**	**-0.3**
LEM	**Lembang**	**1.14**	**4**	P			**Pn**	**22 45 12.0**	**+1.7**
	11μm,0.6s,baz=308,slow=5.1,SNR=372								
LEM				S			**Sn**	**22 45 28.7**	**+3.5**
	7μm,0.5s,baz=164,slow=23,SNR=18								
SKJI	**Sukabumi**	**1.37**	**314**	P			**Pn**	**22 45 13.5**	**+0.3**
SCJI	**Gunung Srandil**	**1.64**	**80**	P			**Pn**	**22 45 16.7**	**-0.1**
CTJI	**Waduk Cacaban**	**1.89**	**60**	P			**Pn**	**22 45 21.9**	**+1.7**
TNG	**Tangerang**	**2.00**	**334**	P			**Pn**	**22 45 23.7**	**+2.0**
SBJI	**Serang**	**2.31**	**323**	P			**Pn**	**22 45 27.6**	**+1.6**
YOGI	**Yogyakarta**	**2.73**	**87**	P			**Pn**	**22 45 31.9**	**+0.2**
UGM	**Wanagama**	**2.95**	**89**	Pn			**Pn**	**22 45 34.5**	**-0.2**
UGM				Sn			**Sn**	**22 46 07.7**	**-1.4**
UGM	**Wanagama**	**2.95**	**89**	P			**Pn**	**22 45 34.6**	**-0.2**
UGM	**Wanagama**	**2.95**	**89**	P			**Pn**	**22 45 34.6**	**-0.2**
SMRI	**Semarang**	**3.02**	**73**	Pn			**Pn**	**22 45 37.5**	**+1.9**
SMRI	**Semarang**	**3.02**	**73**	P			**Pn**	**22 45 37.6**	**+2.0**
SMRI	**Semarang**	**3.02**	**73**	P			**Pn**	**22 45 37.8**	**+2.2**
XMI	**Christmas Isla**	**3.07**	**216**	P			**Pn**	**22 45 33.6**	**-2.7**
BLSI	**Bandar Lampung**	**3.45**	**318**	P			**Pn**	**22 45 43.3**	**+1.8**
PCJI	**Pacitan**	**3.61**	**94**	P			**Pn**	**22 45 43.9**	**+0.2**
KASI	**Kota Agung**	**3.88**	**309**	P			**Pn**	**22 45 49.7**	**+2.3**
KLI	**Kotabumi**	**4.08**	**319**	P			**Pn**	**22 45 50.8**	**+0.6**
LWLI	**Liwa**	**4.54**	**310**	P			**Pn**	**22 45 57.8**	**+1.3**
KRKI	**Karangkates**	**4.87**	**93**	P			**Pn**	**22 46 01.5**	**+0.6**
PMBI	**Palembang**	**5.72**	**331**	Pn			**Pn**	**22 46 13.6**	**+1.0**
MNAI	**Manna**	**5.80**	**308**	Pn			**Pn**	**22 46 14.9**	**+1.1**
MNAI	**Manna**	**5.80**	**308**	P			**Pn**	**22 46 15.1**	**+1.4**
	2.3nm248nm,1.2s								
MNAI	**Manna**	**5.80**	**308**	P	

SOEI IAmb IAmb 22 48 45.9
comp=Z,37nm,0.8s
SOEI Soe 16.62 97 P **P 22 48 41.5 +0.5**
comp=Z,53nm,0.7s
SOEI Soe 16.62 97 P **P 22 48 42.2 +1.2**
LUWI Luwuk 16.66 66 **Pn 22 48 38.8 -1.0**
LUWI IAmb IAmb 22 48 50.1
comp=Z,32nm,0.7s
LUWI Luwuk 16.66 66 P **P 22 48 44.1 +2.8**
MYLDM Lahad Datu 17.03 40 Pn **P 22 48 47.1 +1.7**
MYLDM IAmb IAmb 22 49 00.9
comp=Z,42nm,0.8s
MYLDM Lahad Datu 17.03 40 P **P 22 48 49.9 +4.5**
comp=Z,60nm,0.8s
MBWA Marble Bar 17.62 139 Pn **Pn 22 48 48.9 -2.7**
MBWA Marble Bar 17.62 139 P **Pn 22 48 50.5 -1.1**
GTOI Gorontalo 17.63 62 P **P 22 48 53.2 +1.2**
comp=Z,13nm,0.8s
PSA00 Pilbara Seismi 17.99 140 P **P 22 48 54.5 -1.5**
PSA00 Pilbara Seismi 17.99 140 P **P 22 48 54.8 -1.2**
PSA00 IAmb IAmb 22 48 59.4
comp=Z,3.2nm,0.9s
PSA00 Pilbara Seismi 17.99 140 P **Pn 22 48 56.3 +0.2**
SANI Sanana 19.29 73 P **P 22 49 10.7 +0.5**
comp=Z,45nm,0.8s
NLAI Namlea 20.02 78 P Pn 22 49 20.5 +0.1
comp=Z,6μmcomp=Z,65nm,0.6s
AAI Ambon 20.98 79 P **P 22 49 27.4 -1.1**
comp=Z,63nm,0.6s
LBMI Labuha 21.18 71 P **P 22 49 31.6 +0.9**
comp=Z,1μmcomp=Z,113nm,0.9s
TNTI Ternate 21.59 67 P **P 22 49 32.6 -2.5**
TNTI IAmb IAmb 22 49 42.8
comp=Z,17nm,0.5s
TNTI Ternate 21.59 67 P **P 22 49 36.6 +1.5**
comp=Z,23nm,0.7s
KNRA Kununurra 22.12 112 P **P 22 49 39.6 -1.2**
KNRA IAmb IAmb 22 49 50.2
comp=Z,28nm,1.2s
KNRA Kununurra 22.12 112 P **P 22 49 41.9 +1.1**
MORW Morawa 22.46 160 P **P 22 49 46.6 +2.3**
MORW IAmb IAmb 22 50 05.4
comp=Z,20nm,1.4s
DAV Davao City (W) 23.38 51 LR LR 22 58 40.9
comp=Z,56nm,21.1s,baz=196,slow=36
MTN Manton Dam 23.70 104 P **P 22 49 56.0 -0.7**
MTN IAmb IAmb 22 50 06.8
comp=Z,21nm,0.9s
SIJI Sorong 24.67 75 P **P 22 50 05.1 -0.5**
comp=Z,4.7nm,0.3s,baz=9.2,slow=23,SNR=6.0
comp=Z,4.7nm,0.3s
FAKI Fak Fak 25.09 80 P **P 22 50 08.1 -1.3**
FAKI IAmb IAmb 22 50 10.7
comp=Z,32nm,0.8s
H01W3 Cape Leeuwin H 27.46 168 T T 23 20 45.2
baz=347,slow=74
H01W1 Cape Leeuwin H 27.47 168 T T 23 20 48.9
baz=347,slow=74
H01W2 Cape Leeuwin H 27.48 168 T T 23 20 40.3
baz=347
CMAR Chiang Mai Arr 27.60 342 P **P 22 50 29.6 -2.3**
comp=Z,1.0nm,0.3s,baz=182,slow=8.0,SNR=5.5
CMAR PcP **PcP 22 53 49.7 +1.3**
comp=Z,1.3nm,0.4s,baz=215,slow=2.8,SNR=5.5
CMAR LR LR 23 03 17.6
comp=Z,74nm,18.0s,baz=140,slow=40
comp=Z,1.0nm,0.3s
WB0 Warramunga Arr 28.53 117 P **P 22 50 40.6 +0.3**
WRA Warramunga Arr 28.55 117 P **P 22 50 40.6 +0.2**
comp=Z,1.0nm,0.7s,baz=289,slow=10,SNR=4.5
WRA PcP **PcP 22 53 51.1 +0.3**
comp=Z,0.9nm,0.5s,baz=299,slow=2.2,SNR=7.0
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 28.55 117 P **P 22 50 40.1 -0.3**
WR0 Warramunga Arr 28.73 117 P **P 22 50 41.9 -0.1**
WR0 IAmb IAmb 22 50 49.0
comp=Z,13nm,1.4s
ASAR Alice Springs 29.69 125 P **P 22 50 52.0 +1.5**
comp=Z,1.0nm,0.8s,baz=303,slow=8.6,SNR=3.0
ASAR PcP **PcP 22 53 54.7 +1.0**
comp=Z,1.5nm,0.7s,baz=304,slow=2.0,SNR=9.4
comp=Z,1.0nm,0.8s
PALK Pallekele 30.75 299 LR LR 23 01 36.4
comp=Z,52nm,21.6s,baz=210,slow=33
OOD Oodnadatta 33.11 130 P **P 22 51 22.0 +1.5**
comp=Z,12nm,2.6s
MULG Mulgathing 33.30 135 P **P 22 51 23.4 +1.2**
H08S2 Diego Garcia H 34.72 268 T T 23 28 37.5
baz=92,slow=75,SNR=81
PZH PanZhiHua 34.73 351 P **P 22 51 37.0 +2.4**
H08S3 Diego Garcia H 34.73 268 T T 23 28 38.2
baz=92,slow=75,SNR=307
H08S1 Diego Carcia H 34.74 268 T T 23 28 46.5
baz=92,slow=75,SNR=11
COEN Coen 35.45 103 P **P 22 51 40.9 -0.1**
BBOO Buckleboo 36.18 137 P **P 22 51 48.1 +1.1**
BBOO IAmb IAmb 22 52 17.7
comp=Z,14nm,1.2s
BBOO Buckleboo 36.18 137 P **P 22 51 48.8 +1.8**
CTA Charters Tower 39.34 112 P **P 22 52 14.9 +1.1**
comp=Z,2.5nm,0.7s,baz=269,slow=12,SNR=4.0
CTA PcP **PcP 22 54 22.2 +0.8**
comp=Z,1.9nm,0.5s,baz=351,slow=7.7,SNR=2.4
CTA LR LR 23 08 32.4
comp=Z,45nm,21.7s,baz=260,slow=36
comp=Z,2.5nm,0.7s
STKA Stephens Creek 39.60 132 P **P 22 52 17.2 +1.4**
comp=Z,8.8nm,0.7s,baz=305,slow=8.9,SNR=20
STKA PcP **PcP 22 54 22.9 +0.8**
comp=Z,2.5nm,0.5s,baz=311,slow=3.6,SNR=3.6
STKA LR LR 23 09 44.1
comp=Z,26nm,20.4s,baz=244,slow=38
comp=Z,8.8nm,0.7s
STKA Stephens Creek 39.60 132 P **P 22 52 16.7 +0.9**
STKA Stephens Creek 39.60 132 P **P 22 52 17.6 +1.8**
EIDS Eidsvold 44.91 118 P **P 22 53 00.3 +1.2**
EIDS IAmb IAmb 22 53 43.3
comp=Z,24nm,1.5s
CAN Canberra 46.66 132 P **P 22 53 13.5 +0.6**
GTA Gaotai 47.68 352 *e*P **P 22 53 20.0 -0.7**
GTA pP pP 22 53 29.9 -6.7
GTA sP sP 22 53 34.9 -8.7
KSRS Korea Array 49.05 22 P **P 22 53 31.6 +0.5**
comp=Z,1.3nm,0.6s,baz=204,slow=8.7,SNR=3.2
comp=Z,1.3nm,0.6s
INU Inuyama 51.28 31 P **P 22 53 45.5 -2.5**
NIL Nilore 52.66 324 P **P 22 53 57.7 -0.7**
NIL IAmb IAmb 22 54 00.1
comp=Z,5.8nm,0.7s
MJAR Matsushiro Arr 52.81 31 LR LR 23 18 42.6
comp=Z,20nm,19.0s,baz=197,slow=39
WMQ Urumqi 54.60 342 *e*P **P 22 54 13.8 +1.4**
SONM Songino Array 55.57 359 P **P 22 54 18.6 -0.8**
comp=Z,1.1nm,0.4s,baz=176,slow=8.9,SNR=12
SONM PcP **PcP 22 55 18.7 +0.1**
comp=Z,4.1nm,0.5s,baz=178,slow=4.0,SNR=20
comp=Z,1.1nm,0.4s
SONM Songino Array 55.57 359 P **P 22 54 18.7 -0.8**
ULN Ulaanbaatar 55.59 360 P **P 22 54 19.0 -0.7**
KBL Kabul 55.80 322 P **P 22 54 20.0 -1.4**
KBL IAmb IAmb 22 54 20.7
comp=Z,5.2nm,0.6s
USRK Ussuriysk Ar. 56.44 21 P **P 22 54 24.3 -1.2**
comp=Z,1.9nm,0.7s,baz=184,slow=6.5,SNR=2.1
comp=Z,1.9nm,0.7s
USRK Ussuriysk Ar. 56.44 21 P **P 22 54 24.5 -1.0**
NRN Naryn 57.05 332 P **P 22 54 29.6 -0.8**
GAR Garm 58.12 326 P **P 22 54 36.5 -1.2**
GAR IAmb IAmb 22 54 57.9
comp=Z,7.2nm,1.1s
DZM Mont Dzumac 58.26 111 LR LR 23 19 07.7
comp=Z,20nm,21.4s,baz=193,slow=35
DZM Mont Dzumac 58.26 111 P **P 22 54 38.8 -0.2**
DZM IAmb IAmb 22 55 17.4
comp=Z,9.2nm,1.1s
CHGR Chuyangaron 58.52 325 P **P 22 54 38.0 -2.4**
BTK Batken 58.60 327 P **P 22 54 39.1 -1.9**
MK31 Makanchi Array 58.98 340 P **P 22 54 41.2 -2.1**
MK31 IAmb IAmb 22 54 52.9
comp=Z,5.1nm,1.5s
MKAR Makanchi Array 58.98 340 P **P 22 54 41.3 -2.0**
comp=Z,2.6nm,0.4s,baz=158,slow=7.8,SNR=66
comp=Z,2.6nm,0.4s
MKAR Makanchi Array 58.98 340 P **P 22 54 41.2 -2.2**
MAKZ Makanchi 59.10 340 P **P 22 54 42.5 -1.6**
UOSS Minazif 59.74 305 P **P 22 54 48.7 -0.4**

UOSS Minazif 59.74 305 P **P 22 54 49.5 +0.5**
ASHO Ashiyiah 59.74 305 *i*P **P 22 54 49.9 +0.8**
SNR=8.9
HATD Hatta, Dubai 59.74 305 *i*P **P 22 54 49.9 +0.8**
SNR=6.1
MSFE Esma-Masafi 59.96 305 P **P 22 54 51.5 +0.9**
VOI Vohitsoka 59.96 249 P **P 22 54 51.1 +0.3**
HRA Herat 60.08 317 P **P 22 54 50.2 -1.3**
BANOM Banah 60.10 306 P **P 22 54 52.3 +0.7**
FAQ Al Faqa, Dubai 60.15 304 *i*P **P 22 54 52.6 +0.8**
SNR=34
NAZ Nazwa, Dubai 60.20 305 P **P 22 54 53.3 +1.1**
SHME Shamm 60.28 306 P **P 22 54 53.3 +0.6**
ASUD Al Ashush, Dub 60.31 304 P **P 22 54 54.1 +1.1**
KK31 Karatay Array 60.97 330 P **P 22 54 55.4 -1.6**
KK31 IAmb IAmb 22 54 57.2
comp=Z,1.9nm,0.5s
KKAR Karatay Array 60.97 330 P **P 22 54 55.6 -1.4**
KKAR Karatay Array 60.97 330 P **P 22 54 55.6 -1.4**
KKAR IAmb IAmb 22 54 57.2
comp=Z,1.9nm,0.5s
MZR Muzera 61.18 302 *i*P **P 22 54 59.7 +0.8**
SNR=8.0
KURK Kurchatov 63.59 340 P **P 22 55 13.6 -0.7**
KURK IAmb IAmb 22 55 15.6
comp=Z,5.6nm,0.6s
ZAA0 Zalesovo Array 64.60 345 P **P 22 55 18.9 -2.0**
ZALV Zalesovo Beam 64.60 345 P **P 22 55 18.8 -2.2**
comp=Z,3.1nm,0.3s,baz=152,slow=6.4,SNR=28
comp=Z,3.1nm,0.3s
GEYT Alibeck 64.84 318 P **P 22 55 22.8 -0.1**
comp=Z,3.5nm,0.4s,baz=134,slow=6.4,SNR=16
comp=Z,3.5nm,0.4s
GEYT Alibeck 64.84 318 P **P 22 55 22.0 -1.0**
GEYT IAmb IAmb 22 55 23.7
comp=Z,7.0nm,0.7s
GYA0B ALIBECK ARRAY 64.84 318 P **P 22 55 22.2 -0.7**
GYA0B IAmb IAmb 22 55 23.7
comp=Z,7.6nm,0.6s
RPZ Rata Peaks 65.47 134 LR LR 23 24 24.6
comp=Z,47nm,19.4s,baz=271,slow=36
THZ Tophouse 66.40 132 P **P 22 55 34.3 +1.2**
MAW Mawson 66.60 197 P **P 22 55 35.6 +2.0**
comp=Z,1.0nm,0.6s,baz=19,slow=20,SNR=2.5
comp=Z,1.0nm,0.6s
MAW Mawson 66.60 197 P **P 22 55 35.2 +1.6**
BSWZ Blackbirch Sta 67.11 132 P **P 22 55 38.2 +0.7**
SNZO South Karori 67.66 131 P **P 22 55 40.7 -0.1**
RAYN Ar Rayn 68.19 299 P **P 22 55 44.1 -0.5**
RAYN Ar Rayn 68.19 299 P **P 22 55 44.9 +0.3**
BRVK Borovoye 68.53 337 P **P 22 55 44.8 -1.2**
BRVK IAmb IAmb 22 55 46.4
comp=Z,6.7nm,0.5s
KIBK Kibwezi 69.38 270 P **P 22 55 52.3 0.0**
KIBK IAmb IAmb 22 56 09.3
comp=Z,9.2nm,1.5s
ABKAR Abkulak array 70.52 329 P **P 22 55 57.6 -0.8**
ABKAR Abkulak array 70.52 329 P **P 22 55 57.7 -0.8**
ABKAR IAmb IAmb 22 55 58.8
comp=Z,31nm,0.7s
YAK Yakutsk 71.88 11 P **P 22 56 04.8 -1.5**
PETK Petropavlovsk- 74.18 29 P **P 22 56 19.9 -0.3**
comp=Z,1.8nm,0.7s,baz=243,slow=1.6,SNR=1.9
comp=Z,1.8nm,0.7s
PETK Petropavlovsk- 74.18 29 P **P 22 56 19.3 -0.9**
VNDA Vanda 74.92 169 P **P 22 56 26.0 +2.0**
comp=Z,0.7nm,0.7s,baz=328,slow=6.8,SNR=3.9
comp=Z,0.7nm,0.7s
VNDA Vanda 74.92 169 P **P 22 56 25.0 +0.9**
GNI Garni 75.02 315 P **P 22 56 25.2 -0.3**
GNI IAmb IAmb 22 56 51.3
comp=Z,4.4nm,0.8s
ARU Arti 75.72 334 P **P 22 56 28.6 -0.4**
SBA Scott Base 75.99 169 P **P 22 56 33.1 +2.9**
GURO Guroymak-BITLI 76.32 313 P **P 22 56 32.1 -0.9**
GURO IAmb IAmb 22 56 35.6
comp=Z,3.0nm,0.6s
KARS Kars 76.37 315 P **P 22 56 33.3 +0.1**
MARD Mardin 76.80 311 P **P 22 56 34.5 -1.2**
ONI Oni 76.90 317 P **P 22 56 35.5 -0.5**
KBZ Khabaz 77.73 318 P **P 22 56 41.1 +0.6**
comp=Z,3.4nm,0.7s,baz=120,slow=4.2,SNR=7.2
comp=Z,3.4nm,0.7s
KIV Kislovodsk 77.96 318 P **P 22 56 42.3 +0.3**
KIV IAmb IAmb 22 56 44.9
comp=Z,6.9nm,0.7s
NRIK Noril'sk 78.37 353 P **P 22 56 42.7 -0.8**
comp=Z,2.8nm,0.5s,baz=99,slow=4.3,SNR=2.3
comp=Z,2.8nm,0.5s
GHAJ Ghor Haditha 78.98 304 P **P 22 56 47.2 -0.6**
GHAJ IAmb IAmb 22 57 10.3
comp=Z,14nm,1.1s
BOSA Boshof 79.48 242 P **P 22 56 52.6 +1.8**
comp=Z,3.2nm,1.0s,baz=105,slow=4.2,SNR=8.3
comp=Z,3.2nm,1.0s
BOSA Boshof 79.48 242 P **P 22 56 50.3 -0.5**
BOSA IAmb IAmb 22 57 27.9
comp=Z,13nm,1.3s
TIXI Tiksi 80.70 7 P **P 22 56 54.0 -2.2**
BNN Bunyan 80.98 311 P **P 22 56 57.2 -1.3**
BNN IAmb IAmb 22 57 18.7
comp=Z,12nm,1.3s
CSS Mathiatis 81.79 307 P **P 22 57 03.1 +0.3**
CSS IAmb IAmb 22 57 04.7
comp=Z,7.9nm,0.8s
BR131 Keskin Array S 82.87 312 P **P 22 57 07.8 -0.6**
BR131 IAmb IAmb 22 57 08.9
comp=Z,4.9nm,0.8s
BRTR Keskin Array B 82.87 312 P **P 22 57 08.4 0.0**
comp=Z,2.7nm,0.7s,baz=139,slow=6.6,SNR=22
comp=Z,2.7nm,0.7s
BRTR Keskin Array B 82.87 312 P **P 22 57 07.9 -0.6**
SUR Sutherland 83.04 238 LR LR 23 26 21.2
comp=Z,43nm,20.4s,baz=134,slow=30
KLMR Klimovskoe 86.48 333 *e*P **P 22 57 24.5 -1.5**
KLMR AMP 22 57 26.9
comp=Z,19nm,1.4s
KARP Karpathos 86.83 306 **P 22 57 28.5 +0.2**
TSUM Tsumeb 87.38 251 P **P 22 57 32.1 +0.6**
TSUM IAmb IAmb 22 57 38.8
comp=Z,8.1nm,1.4s
TIRR Tirgusor 87.84 315 P **P 22 57 32.9 0.0**
MILM Milestii Mici 88.14 318 ⇓P **P 22 57 34.5 +0.2**
CFR Carcaliu 88.20 316 ⇑P **P 22 57 35.2 +0.6**
HARR Harsova 88.23 315 ⇑P **P 22 57 34.9 +0.1**
IDI Anoyia 88.60 306 P **P 22 57 37.3 +0.4**
SNAA Sanae 88.77 197 P **P 22 57 38.2 +1.2**
SNAA Sanae 88.77 197 LR LR 23 35 13.1
comp=Z,120nm,18.0s,baz=190,slow=34
SNAA Sanae 88.77 197 P **P 22 57 37.9 +1.0**
SNAA IAmb IAmb 22 57 40.0
comp=Z,6.0nm,1.4s
AKASG Malin Array Be 88.78 321 P **P 22 57 36.9 -0.3**
comp=Z,1.2nm,0.5s,baz=82,slow=4.8,SNR=9.5
comp=Z,1.2nm,0.5s
VRI Vrincioaia 89.32 316 ⇑P **P 22 57 40.1 +0.2**
PLOR Plostina 89.37 316 ⇓P **P 22 57 41.7 +1.5**
MLR Muntele Rosu 89.78 316 ⇓P **P 22 57 42.9 +0.6**
MLR Muntele Rosu 89.78 316 P **P 22 57 42.0 -0.2**
MLR IAmb IAmb 22 58 05.6
comp=Z,5.3nm,1.1s
ARR Arges 90.66 316 ⇑P **P 22 57 46.8 +0.6**
BURAR Bucovina Array 90.69 318 ⇑P **P 22 57 47.9 +1.5**
BUR08 Bucovina Ar. S 90.70 318 P **P 22 57 47.1 +0.6**
BUR08 IAmb IAmb 22 57 50.5
comp=Z,2.1nm,0.9s
VTS Vitosha 91.17 313 P **P 22 57 49.0 +0.2**
BLKB Belogradchik 91.74 314 ⇓P **P 22 57 51.9 +0.6**
MARR Marisel-Cluj 91.93 317 P **P 22 57 52.8 +0.6**
GZR Gura Zlata 91.95 315 ⇓P **P 22 57 53.6 +1.4**
BOVS Bovan 92.44 314 P **P 22 57 53.9 -0.5**
FINES FINESS Array B 92.88 332 P **P 22 57 55.9 -0.1**
comp=Z,2.6nm,0.8s,baz=90,slow=5.7,SNR=6.4
comp=Z,2.6nm,0.8s
ARCES ARCESS Array B 94.63 340 P **P 22 58 03.2 -0.7**
comp=Z,0.5nm,0.4s,baz=90,slow=4.9,SNR=8.2
comp=Z,0.5nm,0.4s
MORH Mrgy, Hungar 94.93 316 ⇑P **P 22 58 05.8 -0.1**
GERES GERESS Array B 98.47 318 P **P 22 58 20.9 -1.1**
comp=Z,0.1nm,0.5s,baz=104,slow=8.2,SNR=1.5
comp=Z,0.1nm,0.5s
TORD Torodi Ar. Bea 107.13 281 PKiKP **PKiKP 23 03 10.7 +0.3**
comp=Z,0.3nm,0.6s,baz=38,slow=1.3,SNR=4.7
YKA Yellowknife Ar 117.58 21 PKP **PKPdf 23 03 28.3 -0.5**
comp=Z,0.5nm,0.5s,baz=196,slow=6.5,SNR=7.0

SCHQ Schefferville 133.05 356 PKP **PKPdf 23 03 58.0 -0.7**
comp=Z,3.5nm,0.8s,baz=81,slow=5.9,SNR=3.8
TXAR Lajitas Array 143.79 50 PKP PKPbc 23 04 18.0 +1.1
comp=Z,0.5nm,0.4s,baz=221,slow=1.4,SNR=13
BDFB Brasilia 146.28 226 PKPbc **PKPab 23 04 26.8 +1.0**
comp=Z,4.9nm,0.7s,baz=49,slow=3.2,SNR=11

ATH 22 22:54:30.4, 38°.37N×21°.82E, h9km±3km, ML1.4/7, Error ellipse: s-maj=3.2km s-min=0.7km az=96.0, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
EFP	**Efpalio**	**0.09**	**51**	P	Pg		22 54 32.6	-0.1
EFP				S	Sg		22 54 34.3	0.0
EFP				AML	AML		22 54 34.6	
	comp=E,1006μm,0.2s							
EFP				AML	AML		22 54 34.9	
	comp=N,1033μm,0.2s							
LAKA	**Lakka**	**0.18**	**136**	P	Pg		22 54 34.1	0.0
LAKA				S	Sg		22 54 37.0	+0.2
LAKA				AML	AML		22 54 37.9	
	comp=E,178μm,0.1s							
LAKA				AML	AML		22 54 38.2	
	comp=N,112μm,0.2s							
SERG	**Sergoula**	**0.19**	**77**	P	Pg		22 54 34.4	0.0
PVO	**Paravola**	**0.34**	**317**	P	Pg		22 54 37.0	0.0
KLV	**Kalavryta, Ach**	**0.42**	**141**	P	Pg		22 54 38.2	-0.4
KLV				S	Sg		22 54 44.7	+0.6
KLV				AML	AML		22 54 46.5	
	comp=E,69μm,0.2s							
KLV				AML	AML		22 54 47.2	
	comp=N,48μm,0.2s							
RLS	**Riolos of Patr**	**0.42**	**222**	P	Pg		22 54 38.6	0.0
RLS				S	Sg		22 54 45.0	+0.9
DRO	**Drossia**	**0.43**	**192**	P	Pg		22 54 38.6	-0.1
DRO				S	Sg		22 54 45.3	+0.9
DRO				AML	AML		22 54 46.1	
	comp=N,203μm,0.1s							
DRO				AML	AML		22 54 46.8	
	comp=E,404μm,0.2s							
EVR	**Evrytania**	**0.54**	**359**	P	Pg		22 54 40.6	-0.3
EVR				S	Sg		22 54 48.7	+0.6
EVR				AML	AML		22 54 51.9	
	comp=N,48μm,0.1s							
EVR				AML	AML		22 54 51.9	
	comp=E,73μm,0.2s							
MAKR	**Makrakomi, Fth**	**0.69**	**21**	P	Pg		22 54 43.6	-0.1
MAKR				S	Sg		22 54 53.2	+0.6
MAKR				AML	AML		22 54 56.4	
	comp=E,351μm,0.3s							
MAKR				AML	AML		22 54 56.4	
	comp=N,163μm,0.4s							
THAL	**Thalero**	**0.74**	**116**	P	Pg		22 54 44.3	-0.4
AXAR	**Agios Charalam**	**0.77**	**59**	P	Pg		22 54 44.8	-0.4
AXAR				S	Sb		22 54 55.9	-0.5
AXAR				AML	AML		22 54 58.8	
	comp=N,78μm,0.2s							
AXAR				AML	AML		22 55 00.1	
	comp=E,66μm,0.3s							
VLS	**Valsamata**	**0.99**	**259**	P	Pg		22 54 48.5	-0.9

*GUC **22** 23:03:07.8±0.8, 22°.18S×67°.54W, h184km±9km, ML3.7*
*SCB **22** 23:03:10.0±1.2, 22°.05S×67°.48W, h162km±13km, ML3.4/3, MW3.1, Error ellipse: s-maj=6.5km s-min=2.8km az=0.0*
ISC 22 23:03:05.9±2.1, 22°.12S±0°.06×67°.47W±0°.05, h183km±18km, n24, σ1§45/38, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LVC	**Limon Verde**	**1.42**	**250**	*e*P	**Pn**		**23 03 38.3**	**+0.6**
LVC				*i*S	**Sn**		**23 04 02.5**	**+0.2**
LVC	**Limon Verde**	**1.42**	**250**	P	**Pn**		**23 03 39.0**	**+1.3**
YJA	**Yavi**	**1.82**	**92**	P	**Pn**		**23 03 42.6**	**+0.9**
YJA				S	**Sn**		**23 04 06.3**	**-3.1**
YJA				IAML			23 04 10.9	
	59nm,0.2s							
MOCB	**Mochara**	**1.92**	**63**	P	**Pn**		**23 03 43.8**	**+1.0**
PB06	**IPOC Station P**	**2.03**	**253**	*e*P	**Pn**		**23 03 44.3**	**+0.7**
PB06				*i*S	**Sn**		**23 04 12.8**	**-0.1**
PB06				IAML			23 04 14.9	
	comp=E,178nm,0.1s							
PB06	**IPOC Station P**	**2.03**	**253**	P	**Pn**		**23 03 44.4**	**+0.8**
PB03	**IPOC Station P**	**2.12**	**272**	*e*P	**Pn**		**23 03 45.5**	**+0.9**
PB03				*i*S	**Sn**		**23 04 14.2**	**-0.3**
PB03				IAML			23 04 15.2	
	comp=E,400nm,0.2s							
PB15	**IPOC Station P**	**2.14**	**239**	P	**Pn**		**23 03 46.8**	**+1.9**
PB01	**IPOC Station P**	**2.16**	**299**	⇑*i*P	**Pn**		**23 03 46.0**	**+1.0**
PB01				*i*S	**Sn**		**23 04 15.6**	**+0.2**
PB01				IAML			23 04 16.2	
	comp=N,276nm,0.4s							
PB07	**IPOC Station P**	**2.28**	**280**	*e*P	**Pn**		**23 03 47.2**	**+0.8**
PB07				*i*S	**Sn**		**23 04 17.0**	**-0.8**
PB07				IAML			23 04 17.9	
	comp=N,356nm,0.2s							
PB02	**IPOC Station P**	**2.39**	**289**	⇑*i*P	**Pn**		**23 03 48.3**	**+0.7**
PB02				*i*S	**Sn**		**23 04 19.1**	**-1.0**
PB02				IAML			23 04 20.2	
	comp=N,381nm,0.4s							
PB02	**IPOC Station P**	**2.39**	**289**	P	**Pn**		**23 03 48.7**	**+1.1**
PB02				S	**Sn**		**23 04 16.6**	**-3.4**
PB02				IAML			23 04 20.0	
	comp=N,291nm,0.4s							
PB04	**IPOC Station P**	**2.49**	**265**	⇑*i*P	**Pn**		**23 03 49.4**	**+0.6**
PB04				*i*S	**Sn**		**23 04 21.0**	**-1.2**
PB04				IAML			23 04 23.6	
	comp=N,316nm,0.1s							
PB04	**IPOC Station P**	**2.49**	**265**	P	**Pn**		**23 03 49.6**	**+0.8**
PB08	**IPOC Station P**	**2.52**	**321**	⇑*i*P	**Pn**		**23 03 51.3**	**+1.9**
PB08				*i*S	**Sn**		**23 04 24.5**	**+1.3**
PB08				IAML			23 04 26.1	
	comp=E,89nm,0.2s							
PATCX	**Punta Patache**	**2.81**	**297**	⇓*i*P	**Pn**		**23 03 53.0**	**+0.5**
PATCX				*i*S	**Sn**		**23 04 27.4**	**-1.4**
PATCX				IAML			23 04 28.8	
	comp=E,356nm,0.2s							
HMBC	**Humberstone**	**2.91**	**309**	⇑*i*P	**Pn**		**23 03 53.8**	**+0.1**
HMBC				*i*S	**Sn**		**23 04 29.3**	**-1.7**
HMBC				IAML			23 04 32.3	
	comp=N,264nm,0.7s							
GO01	**Chusmiza**	**2.93**	**326**	⇑*i*P	**Pn**		**23 03 55.7**	**+1.4**
GO01				*i*S	**Sn**		**23 04 32.7**	**+0.7**
GO01				IAML			23 04 36.7	
	comp=N,222nm,0.2s							
TA01	**Diego Aracena**	**2.96**	**301**	P	**Pn**		**23 03 54.2**	**0.0**
TA01				S	**Sn**		**23 04 27.7**	**-4.2**
TA01				IAML			23 04 31.3	
	comp=N,136nm,0.3s							
TA02	**Huaiquique**	**3.09**	**306**	P	**Pn**		**23 03 55.6**	**-0.2**
PB10	**IPOC Station P**	**3.16**	**243**	*e*P	**Pn**		**23 03 57.2**	**+0.6**
PB10				IAML			23 04 35.4	
	comp=N,56nm,0.2s							
GO02	**Mina Guanaco**	**3.59**	**212**	*e*P	**Pn**		**23 04 03.2**	**+1.0**
BBOE	**La Paz, Chanca**	**5.31**	**355**	P	**Pn**		**23 04 25.3**	**+0.8**
BBOD	**La Paz, Gloria**	**5.56**	**349**	P	**Pn**		**23 04 29.0**	**+1.2**

IDC 22 23:09:43.8±1.3, 1°.92S×140°.87E, h0km, mb3.6/4, mbtmp3.6/5, ML3.5/1, MS2.4/1, Error ellipse: s-maj=63.8km s-min=25.3km az=93.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PMG	**Port Moresby**	**9.72**	**140**	LR	LR		23 16 58.6	
	comp=Z,26nm,21.8s,baz=46,slow=45							
WRA	**Warramunga Arr**	**19.02**	**199**	P	P		23 14 06.7	-0.7
	0.1nm,0.3s,baz=20,slow=12,SNR=5.2							
	1.4nm,0.7s							
ASAR	**Alice Springs**	**22.64**	**197**	P	P		23 14 46.0	-0.7
	1.2nm,0.7s,baz=29,slow=11,SNR=18							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**70.50**	**322**	P	P		23 21 00.6	+0.1
	0.6nm,0.8s,baz=100,slow=8.1,SNR=5.0							
	0.6nm,0.8s							
VNDA	**Vanda**	**76.38**	**175**	P	P		23 21 35.4	+0.9
	0.6nm,0.7s,baz=330,slow=5.4,SNR=6.1							
	0.6nm,0.7s							
ILAR	**Eielson Array**	**84.23**	**24**	P	P		23 22 16.7	-0.3
	0.3nm,0.8s,baz=263,slow=3.5,SNR=2.5							
	0.3nm,0.8s							

*IDC **22** 23:40:55.0±1.4, 26°.78S×178°.16W, h225km±14km, mb3.4/4, mbtmp4.1/6, Error ellipse: s-maj=29.2km s-min=21.2km az=81.0*

ISC 22 23:40:53.2±1.0, **26°.68S**±0°.09×**178°.3W**±0°.3, **h200**km, **n14, σ1§76/15, mb3.6/4, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.58**	**172**	P	**Pn**	**23 41 39.3**	**+1.3**
	382nm,0.2s,baz=90,slow=8.3,SNR=15						
RAO				S	**Sn**	**23 42 16.5**	**+3.3**
	506nm,0.2s,baz=289,slow=23,SNR=7.0						
MSVF	**Nonsavu**	**9.52**	**339**	P	**Pn**	**23 43 09.2**	**+2.8**
	14nm,0.8s,baz=163,slow=13,SNR=6.6						
URZ	**Urewera**	**12.17**	**197**	P	**Pn**	**23 43 38.6**	**-1.5**
	8.6nm,0.9s,baz=70,slow=16,SNR=1.7						
URZ				S	Sn	23 45 44.6	-11
	3.5nm,0.3s,baz=39,slow=19,SNR=1.6						
ASAR	**Alice Springs**	**43.15**	**263**	P	**P**	**23 48 35.1**	**+0.8**
	0.7nm,0.5s,baz=96,slow=7.1,SNR=19						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.79**	**268**	P	**P**	**23 48 39.5**	**0.0**
	0.8nm,0.8s,baz=106,slow=7.0,SNR=4.6						
	0.8nm,0.8s						
MJAR	**Matsushiro Arr**	**75.04**	**325**	P	**P**	**23 52 12.6**	**-0.2**
	3.4nm,0.9s,baz=160,slow=6.1,SNR=7.4						
	3.4nm,0.9s						
KSRS	**Korea Array**	**81.34**	**320**	P	**P**	**23 52 47.5**	**+0.1**
	0.9nm,0.6s,baz=127,slow=5.2,SNR=1.8						
	0.9nm,0.6s						
ARCES	**ARCESS Array B**	**134.91**	**348**	PKP	**PKPdf**	**23 59 47.8**	**+0.3**
	3.0nm,1.1s,baz=333,slow=1.0,SNR=1.9						
FINES	**FINESS Array B**	**141.56**	**341**	PKhKP	PKPpre	23 59 53.5	
	2.0nm,0.8s,baz=11,slow=1.9,SNR=8.8						
NB2	**NORSAR Subarra**	**145.05**	**352**	PKP	**PKPbc**	**00 00 04.5**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=13,slow=2.9						
NOA	**NORSAR Array B**	**145.05**	**352**	PKPbc	**PKPbc**	**00 00 04.7**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=17,slow=4.6,SNR=4.4						
AKASG	**Malin Array Be**	**148.12**	**326**	PKPbc	**PKPbc**	**00 00 13.4**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=44,slow=3.8,SNR=6.0						
BRTR	**Keskin Array B**	**150.43**	**304**	PKPbc	**PKPbc**	**00 00 20.2**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=130,slow=2.3,SNR=2.5						
BRTR				PKPab	**PKPab**	**00 00 27.6**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=135,slow=2.3,SNR=6.9						
TORD	**Torodi Ar. Bea**	**166.53**	**180**	PKPab	**PKPab**	**00 01 35.6**	**-2.6**
	comp=Z,0.3nm,0.7s,baz=167,slow=2.7,SNR=1.7						

MAN 23 00:03:12.8, 8°.51N×125°.49E, h65km, mb4.0, ML2.8, MS2.4, 6C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.76**	**214**	⇑eP	Pn	00 03 30.1	+2.0
BUKP				*i* S	Sn	00 03 42.8	+3.4
CGP	**Cagayan de Oro**	**0.79**	**266**	⇑eP	Pn	00 03 29.9	+1.5
CGP				*e*S	Sn	00 03 41.7	+1.8
BIPH	**Bislig**	**0.92**	**111**	⇑eP	Pn	00 03 30.5	+0.4
BIPH				*e*S	Sn	00 03 45.0	+2.1
GLSP	**General Luna,**	**1.41**	**27**	⇓eP	Pn	00 03 37.1	+0.7
GLSP				*e*S	Sn	00 03 56.3	+2.1
GHBP	**Garcia Hernand**	**1.60**	**314**	⇑iP	Pn	00 03 40.4	+1.4
GHBP				*i* S	Sn	00 04 00.9	+2.1
LSIP	**Lazi, Siquijor**	**1.94**	**289**	⇑iP	Pn	00 03 44.6	+1.1
LSIP				*i* S	Sn	00 04 07.1	+0.3
TABP	**Talibon, Bohol**	**1.94**	**324**	⇑iP	Pn	00 03 44.5	+1.0
TABP				*e*S	Sn	00 04 07.1	+0.2
TBP	**Tagbilaran**	**1.99**	**306**	*e*P	Pn	00 03 45.0	+0.8
TBP				*i* S	Sn	00 04 09.8	+1.7

*IDC **23** 00:28:51.5±1.0, 34°.57N×73°.15E, h0km, mb3.7/6, mbtmp3.5/9, ML3.0/3, MS2.7/1, Error ellipse: s-maj=29.4km s-min=23.3km az=74.0*

*NDI **23** 00:28:51.9±2.2, 34°.74N×72°.42E, h33km, ML3.1*

ISC 23 00:28:55.7±0.6, **34°.66N**±0°.06×**73°.37E**±0°.09, **h22**km, **n27, σ2§20/33, mb3.8/5, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.33**	**146**	*e*P	**Pb**	**00 29 36.1**	**-0.8**
JMU				*e*S	**Sb**	**00 30 07.7**	**+2.5**
THN	**Thein Dam**	**2.97**	**138**	*e*P	**Pb**	**00 29 46.0**	**-1.9**
THN				*e*S	**Sb**	**00 30 25.0**	**+1.3**
BHK	**Bhakra**	**4.13**	**141**	*e*x	Pg	00 30 14.7	
BHK				*e*S	**Sn**	**00 30 49.8**	**+4.7**
BHK				*e*S	**Sb**	**00 30 52.3**	**-4.9**
BHK				*e*x	x	00 31 03.8	
SMLA	**Simla**	**4.76**	**137**	*e*P	**Pn**	**00 30 08.6**	**+2.4**
SMLA				*e*S	**Sn**	**00 31 05.7**	**+5.1**
SMLA				IAML		00 31 08.2	
	comp=N,38nm,0.3s						
SMLA				IAML		00 31 08.4	
	comp=E,28nm,0.2s						
KHET	**Khetri**	**6.89**	**162**	*e*P	**Pn**	**00 30 34.6**	**-0.9**
KHET				*e*S	**Sn**	**00 31 50.4**	**-2.8**
AAK	**Ala-Archa**	**8.01**	**6**	Sn	**Sn**	**00 32 21.2**	**+0.3**
	comp=E,0.3nm,0.3s,baz=141,slow=14,SNR=2.2						
AAK				LR	LR	00 34 23.7	
	comp=E,48nm,19.1s,baz=15,slow=41						
KK31	**Karatay Array**	**8.71**	**346**	P	**Pn**	**00 31 01.6**	**+1.1**
	comp=E,1.9nm,0.3s,baz=152,slow=11,SNR=63						
KK31				⇓S	**Sn**	**00 32 37.3**	**-0.8**
	comp=E,0.8nm,0.3s,baz=172,slow=21,SNR=7.4						
DANN	**Dangsing**	**10.87**	**123**	*e*P	**Pn**	**00 31 30.8**	**+0.5**
	comp=E,18nm,0.3s						
GKN	**Gorkha**	**11.70**	**122**	*e*P	**Pn**	**00 31 41.2**	**-0.3**
	comp=E,11nm,0.3s						
DMN	**Daman**	**12.27**	**122**	*e*P	**Pn**	**00 31 49.0**	**-0.4**
	comp=E,9.4nm,0.3s						
PKIN	**Phulchoki**	**12.49**	**121**	*e*P	**Pn**	**00 31 51.7**	**-0.7**
	comp=E,3.5nm,0.2s						
PKI	**Pulchoki**	**12.50**	**121**	*e*P	**Pn**	**00 31 52.4**	**-0.3**
	comp=E,5.5nm,0.3s						
GUN	**Gumba**	**12.64**	**119**	*e*P	**Pn**	**00 31 53.4**	**-1.1**
	comp=E,8.6nm,0.4s						
GEYT	**Alibeck**	**12.72**	**289**	Pn	**Pn**	**00 31 59.4**	**+4.0**
	baz=115,slow=16						
JIRN	**Jiri**	**13.01**	**119**	*e*P	**Pn**	**00 31 58.6**	**-1.0**
	comp=E,28nm,0.4s						
RAMN	**Ramite**	**13.72**	**120**	*e*P	**Pn**	**00 32 07.2**	**-2.0**
	comp=E,6.3nm,0.3s						
MKAR	**Makanchi Array**	**13.87**	**26**	Pn	**Pn**	**00 32 11.4**	**+0.5**
	baz=206,slow=13,SNR=2.0						
	comp=E,0.1nm,0.5s						
TAPN	**Taplejung**	**14.29**	**117**	*e*P	**Pn**	**00 32 15.2**	**-1.9**
	comp=E,11nm,0.3s						
KURBB	**Kurchatov Arra**	**16.39**	**12**	Pn	**Pn**	**00 32 42.3**	**-1.9**
	baz=200,slow=10,SNR=2.9						
	comp=E,0.1nm,0.4s						
AB31	**Akbulak array**	**17.63**	**330**	P	**Pn**	**00 32 58.0**	**-1.8**
	comp=E,0.2nm,0.5s,baz=140,slow=13,SNR=6.3						
AKTO	**Aktyubinsk**	**19.34**	**329**	P	**P**	**00 33 18.1**	**-1.4**
	comp=E,0.2nm,0.3s,baz=119,slow=5.9,SNR=5.4						
	comp=E,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**20.90**	**19**	P	**P**	**00 33 35.4**	**-1.0**
	comp=E,1.3nm,0.4s,baz=212,slow=9.8,SNR=9.6						
	comp=E,1.3nm,0.4s						
ARCES	**ARCESS Array B**	**43.57**	**338**	P	**P**	**00 36 57.1**	**-0.5**
	comp=E,1.3nm,0.7s,baz=93,slow=6.4,SNR=4.3						
	comp=E,1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**67.64**	**271**	P	**P**	**00 39 49.2**	**-2.1**
	comp=E,0.4nm,0.4s,baz=53,slow=5.3,SNR=8.7						
	comp=E,0.4nm,0.4s						
ILAR	**Eielson Array**	**76.00**	**17**	P	**P**	**00 40 42.6**	**+1.9**
	comp=E,0.2nm,0.7s,baz=322,slow=5.7,SNR=1.8						
	comp=E,0.2nm,0.7s						
WRA	**Warramunga Arr**	**79.38**	**123**	P	**P**	**00 41 00.2**	**0.0**
	comp=E,0.6nm,0.6s,baz=327,slow=5.3,SNR=6.1						
	comp=E,0.6nm,0.6s						
ASAR	**Alice Springs**	**81.62**	**126**	P	**P**	**00 41 11.9**	**-0.3**
	comp=E,0.4nm,0.7s,baz=320,slow=5.6,SNR=5.2						
	comp=E,0.4nm,0.7s						

MAN 23 00:42:06.6, 9°.22N×125°.97E, h5km, mb3.7, ML2.4, MS1.9, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.42**	**234**	⇓eP	Pb	00 42 15.8	-0.7
BUTP				*e*S	Sb	00 42 21.9	-1.3
GLSP	**General Luna,**	**0.59**	**16**	⇓eP	Pn	00 42 21.0	-0.6
GLSP				*e*S	Sn	00 42 31.5	-0.1
SCPH	**Surigao**	**0.73**	**320**	⇓eP	Pg	00 42 20.5	-0.2
SCPH				*i* S	Sg	00 42 30.7	+0.4
BIPH	**Bislig**	**1.10**	**159**	⇑eP	Pg	00 42 27.2	-0.5
BIPH				*e*S	Sn	00 42 47.1	+2.9
MSLP	**Maasin**	**1.42**	**310**	⇑eP	Pn	00 42 32.8	-0.4
CGP	**Cagayan de Oro**	**1.47**	**239**	⇑eP	Pn	00 42 33.3	-0.5
CGP				*e*S	Sn	00 42 50.8	-2.6
BUKP	**Musuan**	**1.60**	**214**	⇓eP	Pg	00 42 38.4	+1.0
BUKP				*e*S	Sg	00 42 59.4	+1.2

*IDC **23** 01:01:25.0±0.8, 26°.98N×130°.30E, h0km, mb4.0/16, mbtmp4.0/17, ML3.0/1, MS3.2/7, Error ellipse: s-maj=25.1km s-min=16.7km az=75.0*

*MOS **23** 01:01:25.7±1.1, 27°.01N×130°.11E, h14km, mb4.4/19, Error ellipse: s-maj=15.8km s-min=7.4km az=109.7*

*NEIC **23** 01:01:26.5±1.0, 26°.99N±0°.09×130°.2E±0°.1, h7km±4km, mb4.3/15, Error ellipse: s-maj=16.5km s-min=11.3km az=118.0*

*NIED **23** 01:01:27.0, 26°.98N×130°.32E, h60km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.85; $M_{\theta\theta}$0.22; $M_{\phi\phi}$0.63; $M_{r\theta}$-0.40; $M_{\theta\phi}$0.42; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.25000×10^{15} NP1: ϕ_s216.00000°, δ22.00000°, λ-83.00000°. NP2: ϕ_s28.00000°, δ68.00000°, λ-93.00000°.*

*JMA **23** 01:01:27.0±0.1, 27°.0N±0°.5×130°.3E±0°.6, h60km, MV3.9/24, NEAR MINAMI-DAITOJIMA IS*

ISC 23 01:01:24.9±2.9, **27°.00N**±0°.03×**130°.32E**±0°.04, **h2**km±17km, **n89, σ1§50/106, mb4.2/28, MS3.5/6, 7C-3D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.35**	**347**	P	**Pn**	**01 01 51.0**	**+0.3**
JZK				S	**Sn**	**01 02 08.6**	**-0.7**
JKDJ	**Kitadaitoujima**	**1.36**	**140**	P	**Pn**	**01 01 50.2**	**-0.7**
JKDJ				S	**Sn**	**01 02 06.3**	**-3.3**
JMZ	**Minamidaito 2**	**1.43**	**145**	P	**Pn**	**01 01 50.7**	**-1.1**
JMZ				S	**Sn**	**01 02 07.8**	**-3.2**
JTK	**Tokunoshima**	**1.45**	**303**	P	**Pn**	**01 01 51.8**	**-0.3**
JTK				S	**Sn**	**01 02 09.6**	**-2.1**
JAM	**Amami Oshima**	**1.54**	**336**	P	**Pn**	**01 01 52.8**	**-0.6**
JAM				S	**Sn**	**01 02 11.7**	**-2.4**
JOKE	**Okinoerabujima**	**1.60**	**284**	P	**Pn**	**01 01 53.9**	**-0.3**
JOKE				S	**Sn**	**01 02 13.3**	**-2.0**
JAMN	**Amaminishikomi**	**1.60**	**321**	P	**Pn**	**01 01 53.5**	**-0.7**
JAMN				S	**Sn**	**01 02 12.2**	**-3.3**
JYRO	**Yoronjima**	**1.67**	**271**	*i* P	**Pn**	**01 01 54.7**	**-0.3**
JYRO				S	**Sn**	**01 02 14.1**	**-2.9**
JOW	**Kunigami**	**1.83**	**265**	Pn	**Pn**	**01 01 57.1**	**-0.3**
	93nm,0.3s,baz=112,slow=28,SNR=99						
JOW				Sn	**Sn**	**01 02 18.9**	**-2.2**
	296nm,0.3s,baz=141,slow=27,SNR=36						
JOW				LR	LR	01 02 44.5	
	comp=Z,230nm,20.9s,baz=147,slow=44						
JOW	**Kunigami**	**1.83**	**265**		**Pn**	**01 01 56.6**	**-0.8**
JOW	**Kunigami**	**1.83**	**265**	P	**Pn**	**01 01 57.1**	**-0.3**
JOW				S	**Sn**	**01 02 19.1**	**-2.0**
JIH	**Iheya**	**2.10**	**272**	P	**Pn**	**01 02 01.1**	**+0.1**
JIH				S	**Sn**	**01 02 26.3**	**-1.4**
JNTH	**Nagotoyohara**	**2.11**	**257**	P	**Pn**	**01 02 00.6**	**-0.6**
JNTH				S	**Sn**	**01 02 25.2**	**-2.7**
JTAJ	**Takarajima**	**2.36**	**336**	P	**Pn**	**01 02 03.9**	**-0.8**
JTAJ				S	**Sn**	**01 02 30.4**	**-3.8**
JJT3	**Tamagusuku3**	**2.42**	**250**	P	**Pn**	**01 02 05.4**	**-0.1**
JJT3				*e*S	**Sn**	**01 02 33.8**	**-1.9**
JAGN	**Aguni-jima**	**2.78**	**262**	P	**Pn**	**01 02 10.0**	**-0.3**
JAGN				S	**Sn**	**01 02 41.9**	**-2.6**
JNN	**Nakanoshima**	**2.86**	**352**	*e*S	**Sn**	**01 02 43.7**	**-2.9**
JKE	**Kume jima 2**	**3.23**	**259**	P	**Pn**	**01 02 15.8**	**-0.8**
JKE				S	**Sn**	**01 02 52.7**	**-2.9**
JYAK	**Yakushimahirau**	**3.23**	**3**	P	**Pn**	**01 02 16.0**	**-0.7**
JYAK				S	**Sn**	**01 02 51.7**	**-4.1**
JMTN	**Minamitane**	**3.43**	**8**	P	**Pn**	**01 02 19.0**	**-0.4**
JMTN				S	**Sn**	**01 02 56.4**	**-4.2**
JKC	**Kuchinoerabu**	**3.46**	**358**	*e*S	**Sn**	**01 02 57.1**	**-4.1**
JSU	**Suzuyama**	**4.50**	**2**	Pn	**Pn**	**01 02 35.3**	**+1.2**
KSAR	**Wonju Array Be**	**10.62**	**349**	Pn	**Pn**	**01 03 57.9**	**-0.1**
KSAR	**Wonju Array Be**	**10.62**	**349**	P	**Pn**	**01 03 57.9**	**-0.1**
KSRS	**Korea Array**	**10.62**	**350**	Pn	**Pn**	**01 03 59.3**	**+1.3**
	0.1nm,0.3s,baz=168,slow=11,SNR=3.7						
	2.5nm,0.8s						
USA0B	**Ussuriysk Arra**	**17.22**	**4**		**P**	**01 05 27.8**	**-0.3**
USA0B	**Ussuriysk Arra**	**17.22**	**4**	P	**P**	**01 05 27.8**	**-0.3**
USA0B				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJT	**Baijiatuan**	**17.52**	**321**	Pn	**Pn**	**01 05 28.2**	**-2.1**
BJT				IAmb	IAmb	01 05 34.7	
	comp=Z,13nm,1.3s						
BJT	**Baijiatuan**	**17.52**	**321**	P	**Pn**	**01 05 28.2**	**-2.1**
BJT				pmax	pmax		
	comp=Z,13nm,1.3s						
ERM	**Erimo**	**18.31**	**32**	⇑eP	**P**	**01 05 44.2**	**+4.0**
ERM				pmax	pmax		
	comp=Z,70nm,1.4s						
GUMO	**Guam**	**19.06**	**132**	LR	LR	01 12 22.8	
	comp=Z,15nm,19.1s,baz=138,slow=34						
KLR	**Kul'dur**	**22.23**	**2**	P	**P**	**01 06 23.0**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=190,slow=13,SNR=3.8						
	comp=Z,2.1nm,0.9s						
KLR	**Kul'dur**	**22.23**	**2**	⇓eP	**P**	**01 06 23.0**	**+0.3**
KLR				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SONM	**Songino Array**	**27.97**	**324**	LR	LR	01 19 15.5	
	comp=Z,30nm,19.9s,baz=56,slow=38						
CMAR	**Chiang Mai Arr**	**30.09**	**260**	LR	LR	01 20 02.9	
	comp=Z,14nm,18.3s,baz=65,slow=37						
YAK	**Yakutsk**	**35.03**	**359**	*ce*P	**P**	**01 08 18.4**	**-0.3**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	**Makanchi Array**	**42.43**	**311**	P	**P**	**01 09 20.3**	**-0.8**
MK31	**Makanchi Array**	**42.43**	**311**	P	**P**	**01 09 20.3**	**-0.8**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**42.43**	**311**	P	**P**	**01 09 22.1**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=97,slow=10.0,SNR=9.3						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**42.43**	**311**	P	**P**	**01 09 22.4**	**+1.4**
ZAA0	**Zalesovo Array**	**42.79**	**322**	P	**P**	**01 09 22.8**	**-1.0**
ZAA0				IAmb	IAmb	01 09 25.4	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**42.79**	**322**	P	**P**	**01 09 24.5**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=108,slow=8.0,SNR=11						
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**42.79**	**322**	P	**P**	**01 09 23.3**	**-0.4**
TIXI	**Tiksi**	**44.70**	**359**	⇑eP	**P**	**01 09 40.4**	**+1.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	**Kurchatov**	**45.56**	**316**	⇑eP	**P**	**01 09 45.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**45.60**	**316**	P	**P**	**01 09 46.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=101,slow=9.0,SNR=11						
KURBB				LR	LR	01 30 43.8	
	comp=Z,57nm,19.1s,baz=43,slow=39						
	comp=Z,1.5nm,0.8s						
WRA	**Warramunga Arr**	**46.82**	**175**	P	**P**	**01 09 56.5**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=355,slow=8.4,SNR=13						
	comp=Z,1.6nm,0.6s						
NIL	**Nilore**	**49.18**	**292**	P	**P**	**01 10 14.4**	**-0.2**
NIL	**Nilore**	**49.18**	**292**	P	**P**	**01 10 14.4**	**-0.2**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PSA00	**Pilbara Seismi**	**49.33**	**193**	P	**P**	**01 10 16.4**	**+0.8**
AS31	**Alice Springs**	**50.48**	**176**	P	**P**	**01 10 24.7**	**+0.3**
ASAR	**Alice Springs**	**50.48**	**176**	P	**P**	**01 10 24.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=5.1,slow=14,SNR=20						
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**50.48**	**176**	P	**P**	**01 10 24.7**	**+0.3**
KK31	**Karatay Array**	**50.50**	**305**	P	**P**	**01 10 23.2**	**-1.3**
KK31				IAmb	IAmb	01 10 27.0	
	comp=Z,4.5nm,1.5s						
KK31	**Karatay Array**	**50.50**	**305**	P	**P**	**01 10 23.2**	**-1.3**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KKAR	**Karatay Array**	**50.50**	**305**	P	**P**	**01 10 24.0**	**-0.5**
KKAR	**Karatay Array**	**50.50**	**305**	P	**P**	**01 10 24.0**	**-0.5**
BVAR	**Borovoye Array**	**50.96**	**318**	P	**P**	**01 10 28.8**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=78,slow=9.2,SNR=18						
BVAR				LR	LR	01 34 07.6	
	comp=Z,42nm,18.2s,baz=86,slow=38						
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**51.02**	**318**	P	**P**	**01 10 27.8**	**-0.5**
BRVK				IAmb	IAmb	01 10 29.9	
	comp=Z,4.9nm,0.8s						
BRVK	**Borovoye**	**51.02**	**318**	*de*P	**P**	**01 10 28.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBL	**Kabul**	**52.49**	**294**	P	**P**	**01 10 39.7**	**-0.1**
KBL				IAmb	IAmb	01 10 55.8	
	comp=Z,2.9nm,0.7s						
KBL	**Kabul**	**52.49**	**294**	P	**P**	**01 10 39.7**	**-0.1**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABKAR	**Akbulak array**	**57.49**	**313**	P	**P**	**01 11 15.2**	**-0.2**
ARU	**Arti**	**57.95**	**322**	P	**P**	**01 11 19.5**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=117,slow=16,SNR=3.6						
ARU				LR	LR	01 38 59.3	
	comp=Z,40nm,18.5s,baz=1.5,slow=39						
	comp=Z,0.6nm,0.3s						
ARU	**Arti**	**57.95**	**322**	P	**P**	**01 11 18.8**	**+0.3**
ARU				IAmb	IAmb	01 11 20.1	
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**57.95**	**322**	*c*P	**P**	**01 11 19.4**	**+0.9**
ARU				S	**S**	**01 19 20.7**	**+1.3**
ARU				SS	**SS**	**01 23 10.3**	**+0.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HRA	**Herat**	**58.04**	**295**	P	**P**	**01 11 19.3**	**-0.5**
HRA				IAmb	IAmb	01 11 21.9	
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**62.88**	**29**	P	**P**	**01 11 52.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=250,slow=6.4,SNR=4.6						
	comp=Z,0.4nm,0.8s						
INK	**Inuvik**	**67.45**	**24**	P	**P**	**01 12 22.8**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=294,slow=10.0,SNR=1.1						
	comp=Z,0.7nm,0.6s						
ZEI	**Tsey**	**69.72**	**308**	*e*P	**P**	**01 12 35.5**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**70.11**	**310**	P	**P**	**01 12 39.7**	**+0.9**
	comp=Z,3.3nm,1.0s,baz=113,slow=7.7,SNR=4.0						
	comp=Z,3.3nm,1.0s						
FINES	**FINESS Array B**	**73.11**	**331**	P	**P**	**01 12 56.2**	**-0.2**
	comp=Z,4.4nm,1.1s,baz=76,slow=8.0,SNR=8.2						
	comp=Z,4.4nm,1.1s						
FINES	**FINESS Array B**	**73.11**	**331**	*i* P	**P**	**01 12 57.0**	**+0.5**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MARD	**Mardin**	**73.84**	**304**	P	**P**	**01 13 00.8**	**-0.6**
RAYN	**Ar Rayn**	**75.33**	**289**	P	**P**	**01 13 10.0**	**-0.2**
RAYN				IAmb	IAmb	01 13 11.9	
	comp=Z,2.6nm,0.9s						
RAYN	**Ar Rayn**	**75.33**	**289**	P	**P**	**01 13 10.0**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**76.16**	**320**	P	**P**	**01 13 14.1**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=55,slow=5.0,SNR=6.7						
AKASG				LR	LR	01 50 17.7	
	comp=Z,48nm,18.1s,baz=11,slow=38						
	comp=Z,0.8nm,0.5s						
AKASG	**Malin Array Be**	**76.16**	**320**	*ce*P	**P**	**01 13 14.6**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**76.16**	**320**	⇓eP	**P**	**01 13 16.3**	**+2.0**
BR131	**Keskin Array S**	**78.03**	**308**	P	**P**	**01 13 24.8**	**-0.5**
BR131				IAmb	IAmb	01 13 26.6	
	comp=Z,4.5nm,0.9s						
BR131	**Keskin Array S**	**78.03**	**308**	P	**P**	**01 13 24.8**	**-0.5**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	**Keskin Array B**	**78.03**	**308**	P	**P**	**01 13 25.9**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=103,slow=5.3,SNR=15						
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**78.03**	**308**	P	**P**	**01 13 25.4**	**+0.1**
BRTR	**Keskin Array B**	**78.03**	**308**	*ce*P	**P**	**01 13 26.0**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	**NORSAR Subarra**	**79.44**	**334**	P	**P**	**01 13 32.0**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=47,slow=5.6						
NOA	**NORSAR Array B**	**79.44**	**334**	P	**P**	**01 13 32.1**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=48,slow=5.4,SNR=3.8						
	comp=Z,1.3nm,0.7s						
CLL	**Collm**	**84.58**	**326**	*e*P	**P**	**01 14 00.0**	**+0.3**
GERES	**GERESS Array B**	**85.70**	**324**	P	**P**	**01 14 05.9**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=58,slow=5.0,SNR=6.5						
	comp=Z,0.5nm,0.7s						
GERES	**GERESS Array B**	**85.70**	**324**	P	**P**	**01 14 05.3**	**-0.2**

*IDC **23** 01:27:02.7±1.6, 43°.70N×86°.03E, h0km, mb3.4/2, mbtmp3.4/6,

KPKS Lg Lg 01 29 47.0
17nm,0.6s
BLB Baldybastay 5.09 278 *eP* **Pb 01 28 37.4 +2.0**
9.4nm,0.3s
BLB *eS* **Sg 01 29 44.5 -5.0**
9.5nm,0.5s
BLB Baldybastay 5.09 278 Pg **Pb 01 28 37.4 +2.0**
9.4nm,0.3s
BLB Lg Lg 01 29 44.5
9.5nm,0.5s
TDK Taldyqorghan 5.27 288 *eP* **Pg 01 28 43.6 -3.3**
17nm,0.2s
TDK *eS* **Sg 01 29 55.5 +0.4**
50nm,0.9s
KURS Kuram 5.32 271 *eP* **Pb 01 28 43.3 +4.0**
3.6nm,1.2s
KURS *eS* **Sg 01 29 53.9 -3.0**
7.7nm,1.4s
ARXS Arharly 5.57 279 *eP* **Pg 01 28 50.4 -2.3**
3.7nm,0.3s
ARXS *eS* **Sg 01 30 06.2 +1.5**
10nm,1.0s
ARXS Arharly 5.57 279 Pg **Pg 01 28 49.2 -3.5**
3.7nm,0.3s
ARXS Lg Lg 01 30 05.2
10nm,1.0s
KTBS Karatobe 6.39 274 *eP* **Pg 01 29 06.3 -2.1**
3.0nm,0.8s
KTBS *eS* **Sg 01 30 33.5 +2.3**
12nm,0.6s
KTBS Karatobe 6.39 274 Pg **Pb 01 29 01.0 +3.6**
1.1nm,0.6s
KTBS Lg Lg 01 30 24.1
4.3nm,0.6s
TKM2 Tokmak 2 7.25 268 ⇑Lg Lg 01 30 56.3
5.2nm,0.9s
KURBB Kurchatov Arra 8.45 328 Pn **Pn 01 29 08.4 -0.2**
0.1nm,0.3s,baz=143,slow=15,SNR=11
KURBB Lg Lg 01 31 35.1
0.1nm,0.3s,baz=138,slow=28,SNR=5.5
0.7nm,0.5s
KURBB Kurchatov Arra 8.45 328 ⇑Pn **Pn 01 29 09.0 +0.4**
3.1nm,0.9s
KURBB ⇑Sn **Sn 01 30 45.9 +1.9**
2.6nm,0.5s
KURBB ⇑Lg Lg 01 31 33.3
14nm,0.8s
ZALV Zalesovo Beam 10.34 358 Pn **Pn 01 29 31.9 -2.6**
0.8nm,0.3s,baz=182,slow=13,SNR=20
ZALV Sn **Sn 01 31 27.1 -3.2**
0.6nm,0.3s,baz=177,slow=29,SNR=5.1
4.2nm,0.6s
BVAR Borovoye Array 13.73 318 Pn **Pn 01 30 20.4 -0.4**
0.1nm,0.3s,baz=119,slow=15,SNR=3.0
0.4nm,0.6s
TORD Torodi Ar. Bea 76.59 275 P **P 01 38 56.8 -0.3**
0.1nm,0.5s,baz=45,slow=5.2,SNR=1.1
0.1nm,0.5s
WRA Warramunga Arr 77.50 133 P P 01 38 58.7 -3.3
0.3nm,0.6s,baz=334,slow=4.6,SNR=1.6
0.3nm,0.6s

IDC 23 01:53:11.0±2.5, 18°.83S×176°.73W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=213.5km s-min=25.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.04**	**260**	P	P	02 01 36.5	-0.3
	3.3nm,0.5s,baz=97,slow=7.6,SNR=61						
	3.3nm,0.5s						
ASAR	**Alice Springs**	**46.08**	**255**	P	P	02 01 37.1	0.0
	14nm,0.7s,baz=88,slow=8.4,SNR=210						
	14nm,0.7s						
NVAR	**Mina Array Bea**	**79.00**	**43**	P	P	02 05 17.4	+0.2
	0.5nm,0.7s,baz=222,slow=8.8,SNR=4.8						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**85.15**	**57**	P	P	02 05 49.4	-0.2
	0.5nm,0.8s,baz=224,slow=8.8,SNR=6.7						
	0.5nm,0.8s						

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*SJA **23** 02:10:14.3±0.6, 23°.37S×68°.97W, h101km±4km, ML4.4, MW4.3*
*GUC **23** 02:10:14.9±0.8, 23°.41S×68°.90W, h94km±4km, ML4.5*
*IDC **23** 02:10:15.7±0.5, 23°.29S×68°.70W, h97km±3km, mb3.9/11, mbtmp4.1/14, MS3.0/4, Error ellipse: s-maj=16.6km s-min=9.5km az=63.0*
*NEIC **23** 02:10:15.1±1.1, 23°.44S±0°.02×68°.85W±0°.06, h97km±6km, mb4.4/26, Mwr4.4/37, Mwr4.4(GUC), Error ellipse: s-maj=8.8km s-min=1.9km az=79.0*
*NEIC **23** 02:10:15, 23°.44S×68°.85W, h99km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=2.14; $M_{\theta\theta}$0.02; $M_{\phi\phi}$2.12; $M_{r\theta}$1.53; $M_{\theta\phi}$-0.69; $M_{\phi r}$-3.47; Fault plane solution: M_o4.40000×10^{15} NP1:ϕ_s170.75000°, δ15.60000°, λ-76.78000°. NP2:ϕ_s337.04000°, δ74.82000°, λ-93.66000°. Principal axes: T 4.4801, Plg30.0000°, Azm70.0000°; N -0.1574, Plg4.0000°, Azm338.0000°; P -4.3226, Plg60.0000°, Azm242.0000°;*
*VAO **23** 02:10:17.9±0.5, 22°.92S×68°.38W, h76km±5km, mb4.9*
ISC 23 02:10:14.7±0.4, 23°.37S±0°.03×68°.86W±0°.04, h97km±3km, n180, σ1§50/193, mb4.4/20, 8C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.59**	**286**		**Pn**	**02 10 31.5**	**+0.4**
PB15	**IPOC Station P**	**0.59**	**286**	⇑*iP*	**Pn**	**02 10 31.4**	**+0.4**
PB15				*eS*	**Sn**	**02 10 43.6**	**+0.2**
PB15	**IPOC Station P**	**0.59**	**286**	*eP*	**Pn**	**02 10 31.0**	**-0.1**
AF01	**San Pedro de A**	**0.75**	**56**		**Pn**	**02 10 33.6**	**+0.9**
AF01	**San Pedro de A**	**0.75**	**56**	⇓*iP*	**Pn**	**02 10 33.5**	**+0.9**
AF01				IAML		02 10 48.7	
	comp=E,40μm,0.4s						
LVC	**Limon Verde**	**0.76**	**356**	P	**Pn**	**02 10 33.6**	**+0.8**
	comp=E,3μm,0.3s,baz=174,slow=7.0,SNR=4992						
LVC				S	**Sn**	**02 10 47.4**	**+1.1**
	comp=E,6μm,0.4s,baz=226,slow=19,SNR=93						
LVC	**Limon Verde**	**0.76**	**356**	Pn	**Pn**	**02 10 33.7**	**+0.8**
LVC	**Limon Verde**	**0.76**	**356**	⇓*iP*	**Pn**	**02 10 33.6**	**+0.8**
LVC				*eS*	**Sn**	**02 10 47.1**	**+0.8**
LVC	**Limon Verde**	**0.76**	**356**	*eP*	**Pn**	**02 10 33.6**	**+0.8**
LVC				*eS*	**Sn**	**02 10 47.6**	**+1.2**
LVC	**Limon Verde**	**0.76**	**356**	*eP*	**Pn**	**02 10 33.6**	**+0.8**
PB06	**IPOC Station P**	**0.93**	**315**		**Pn**	**02 10 35.2**	**+0.8**
PB06	**IPOC Station P**	**0.93**	**315**	⇑*iP*	**Pn**	**02 10 35.1**	**+0.8**
PB06				*eS*	**Sn**	**02 10 50.2**	**+1.1**
PB06				IAML		02 10 51.3	
	comp=E,37μm,0.2s						
PB06	**IPOC Station P**	**0.93**	**315**	*eP*	**Pn**	**02 10 35.0**	**+0.6**
PB06				IAML		02 10 51.8	
	comp=Z,11μm,0.3s						
PB03	**IPOC Station P**	**1.55**	**328**		**Pn**	**02 10 42.7**	**+1.0**
PB03	**IPOC Station P**	**1.55**	**328**	⇓*iP*	**Pn**	**02 10 42.7**	**+1.0**
PB03				*eS*	**Sn**	**02 11 03.4**	**+1.3**
PB03				IAML		02 11 12.2	
	comp=E,4μm,0.2s						
PB03	**IPOC Station P**	**1.55**	**328**	*eP*	**Pn**	**02 10 42.0**	**+0.4**
PB03				IAML		02 11 11.4	
	comp=Z,3μm,0.3s						
PB10	**IPOC Station P**	**1.57**	**264**	Pn	**Pn**	**02 10 41.9**	**+0.3**
PB10	**IPOC Station P**	**1.57**	**264**	⇑*iP*	**Pn**	**02 10 41.8**	**+0.2**
PB10				*i* S	**Sn**	**02 11 01.6**	**-0.4**
PB10				IAML		02 11 09.5	
	comp=E,4μm,0.4s						
PB10	**IPOC Station P**	**1.57**	**264**	*eP*	**Pn**	**02 10 41.0**	**-0.6**
PB10				IAML		02 11 07.1	
	comp=Z,4μm,0.8s						
PB04	**IPOC Station P**	**1.58**	**311**		**Pn**	**02 10 42.6**	**+0.7**
PB04	**IPOC Station P**	**1.58**	**311**	⇑*iP*	**Pn**	**02 10 42.5**	**+0.6**
PB04				*eS*	**Sn**	**02 11 03.6**	**+1.0**
PB04				IAML		02 11 06.1	
	comp=N,6μm,0.5s						
PB04	**IPOC Station P**	**1.58**	**311**	*eP*	**Pn**	**02 10 42.0**	**+0.1**
PB04				IAML		02 11 11.6	
	comp=Z,3μm,0.6s						
PB09	**IPOC Station P**	**1.61**	**347**		**Pn**	**02 10 44.4**	**+2.0**
PB09	**IPOC Station P**	**1.61**	**347**	⇓*iP*	**Pn**	**02 10 44.3**	**+2.0**
PB09				*eS*	**Sn**	**02 11 04.8**	**+1.5**
PB09				IAML		02 11 10.5	
	comp=E,3μm,0.5s						
PB09	**IPOC Station P**	**1.61**	**347**	*eP*	**Pn**	**02 10 44.0**	**+1.7**
PB09				IAML		02 11 10.5	
	comp=Z,3μm,0.3s						
PB14	**IPOC Station P**	**1.89**	**228**	Pn	**Pn**	**02 10 45.8**	**-0.2**
PB14	**IPOC Station P**	**1.89**	**228**	⇑*iP*	**Pn**	**02 10 45.7**	**-0.3**
PB14				*eS*	**Sn**	**02 11 09.0**	**-0.8**
PB14	**IPOC Station P**	**1.89**	**228**	*eP*	**Pn**	**02 10 46.0**	**0.0**
PB14				IAML		02 11 12.6	
	comp=Z,4μm,0.4s						
PB07	**IPOC Station P**	**1.89**	**330**		**Pn**	**02 10 47.1**	**+1.1**
PB07	**IPOC Station P**	**1.89**	**330**	*eP*	**Pn**	**02 10 47.0**	**+1.1**
PB07				*eS*	**Sn**	**02 11 09.1**	**-0.7**
PB07				IAML		02 11 17.6	
	comp=E,3μm,0.1s						
PB07	**IPOC Station P**	**1.89**	**330**	*eP*	**Pn**	**02 10 47.0**	**+1.1**
PB07				IAML		02 11 18.7	
	comp=Z,2μm,0.4s						
GO02	**Mina Guanaco**	**1.91**	**200**	Pn	**Pn**	**02 10 46.5**	**+0.3**
GO02	**Mina Guanaco**	**1.91**	**200**	⇑*iP*	**Pn**	**02 10 46.5**	**+0.3**
GO02				*eS*	**Sn**	**02 11 09.8**	**-0.4**
GO02				IAML		02 11 12.1	
	comp=N,8μm,0.1s						
PB02	**IPOC Station P**	**2.26**	**335**		**Pn**	**02 10 51.8**	**+1.1**
PB02	**IPOC Station P**	**2.26**	**335**	*i* P	**Pn**	**02 10 51.7**	**+1.1**
PB02				IAML		02 11 48.0	
	comp=E,3μm,0.6s						
PB02	**IPOC Station P**	**2.26**	**335**	*eP*	**Pn**	**02 10 52.0**	**+1.4**
PB02				IAML		02 11 30.8	
	comp=Z,4μm,0.4s						
PB01	**IPOC Station P**	**2.39**	**346**		**Pn**	**02 10 53.5**	**+1.2**
PB01	**IPOC Station P**	**2.39**	**346**	*eP*	**Pn**	**02 10 53.5**	**+1.2**
PB01				IAML		02 11 33.0	
	comp=E,2μm,0.6s						
PB01	**IPOC Station P**	**2.39**	**346**	*eP*	**Pn**	**02 10 53.0**	**+0.7**
PB01				IAML		02 11 28.0	
	comp=Z,1μm,0.4s						
PATCX	**Punta Patache**	**2.81**	**334**		**Pn**	**02 10 57.8**	**-0.1**
PATCX	**Punta Patache**	**2.81**	**334**	*eP*	**Pn**	**02 10 57.9**	**+0.1**
PATCX				IAML		02 12 03.8	
	comp=E,2μm,0.3s						
PATCX	**Punta Patache**	**2.81**	**334**	*eP*	**Pn**	**02 10 58.0**	**+0.1**
PATCX				*eP*	**Pn**	**02 10 58.0**	**+0.1**
PATCX				*eS*	**Sn**	**02 11 25.9**	**-5.2**
PATCX				IAML		02 11 52.5	
	comp=Z,1μm,0.8s						
TA01	**Diego Aracena**	**3.05**	**336**	Pn	**Pn**	**02 11 00.9**	**-0.1**
TA01	**Diego Aracena**	**3.05**	**336**	*eP*	**Pn**	**02 11 00.6**	**-0.4**
TA01	**Diego Aracena**	**3.05**	**336**	*eP*	**Pn**	**02 11 01.0**	**-0.1**
TA01				IAML		02 12 01.2	
	comp=Z,816nm,0.4s						
HJA	**Humahuaca**	**3.17**	**88**	*eP*	**Pn**	**02 11 06.0**	**+3.0**
AC01	**Pan de Azucar**	**3.19**	**209**	Pn	**Pn**	**02 11 01.5**	**-1.4**
AC01	**Pan de Azucar**	**3.19**	**209**	*eP*	**Pn**	**02 11 01.2**	**-1.6**
AC01	**Pan de Azucar**	**3.19**	**209**	*eP*	**Pn**	**02 11 01.0**	**-1.9**
AC01				*eP*	**Pn**	**02 11 01.4**	**-1.4**
AC01				*eS*	**Sn**	**02 11 39.2**	**-0.9**
AC01				IAML		02 11 48.8	
	comp=Z,2μm,0.6s						
HMBC	**Humberstone**	**3.22**	**343**	*eP*	**Pn**	**02 11 03.4**	**-0.1**
PB08	**IPOC Station P**	**3.23**	**355**		**Pn**	**02 11 04.9**	**+1.2**
PB08	**IPOC Station P**	**3.23**	**355**	⇑*iP*	**Pn**	**02 11 04.8**	**+1.0**
PB08				IAML		02 12 10.2	
	comp=N,773nm,0.3s						
PB08	**IPOC Station P**	**3.23**	**355**	*eP*	**Pn**	**02 11 05.0**	**+1.2**
PB08				IAML		02 12 14.0	
	comp=Z,463nm,0.8s						
TA02	**Huaiquique**	**3.30**	**339**		**Pn**	**02 11 04.3**	**-0.2**
TA02	**Huaiquique**	**3.30**	**339**	*eP*	**Pn**	**02 11 03.9**	**-0.5**
YJA	**Yavi**	**3.31**	**70**	*eP*	**Pn**	**02 11 08.0**	**+3.1**
SLA	**San Lorenzo**	**3.35**	**114**	*eP*	**Pn**	**02 11 08.0**	**+2.8**
AC02	**Maricunga**	**3.46**	**184**	Pn	**Pn**	**02 11 06.9**	**-0.1**
AC02	**Maricunga**	**3.46**	**184**	*i* P	**Pn**	**02 11 07.5**	**+0.5**
AC02				IAML		02 12 17.1	
	comp=E,2μm,0.2s						
AC02	**Maricunga**	**3.46**	**184**	*eP*	**Pn**	**02 11 07.0**	**0.0**
AC02				IAML		02 12 15.0	
	comp=Z,742nm,0.6s						
AZAP	**Zapla**	**3.57**	**105**	*eP*	**Pn**	**02 11 11.0**	**+2.7**
PB11	**IPOC Station P**	**3.67**	**348**	Pn	**Pn**	**02 11 11.6**	**+2.1**
PB11	**IPOC Station P**	**3.67**	**348**	*eP*	**Pn**	**02 11 09.4**	**-0.1**
PB11	**IPOC Station P**	**3.67**	**348**	*eP*	**Pn**	**02 11 09.0**	**-0.5**
PB11				IAML		02 12 19.3	
	comp=Z,772nm,0.4s						
GO01	**Chusmiza**	**3.70**	**355**	*eP*	**Pn**	**02 11 10.8**	**+0.6**
ASTB	**Santa Barbara**	**4.08**	**99**	*eP*	**Pn**	**02 11 17.0**	**+2.0**
AC06	**Mina Casimiro**	**4.20**	**199**		**Pn**	**02 11 16.2**	**-0.2**
AC06	**Mina Casimiro**	**4.20**	**199**	*i* P	**Pn**	**02 11 14.3**	**-2.2**
GO03	**Copiap**	**4.39**	**196**		**Pn**	**02 11 17.4**	**-1.6**
GO03	**Copiap**	**4.39**	**196**	*eP*	**Pn**	**02 11 17.2**	**-1.8**
ALOL	**LOMAS DE OLMED**	**4.49**	**97**	*eP*	**Pn**	**02 11 23.0**	**+2.5**
PB16	**IPOC Station P**	**5.05**	**353**	*eP*	**Pn**	**02 11 30.0**	**+1.4**
PB16				IAML		02 12 56.2	
	comp=Z,193nm,0.6s						
AC04	**Llanos de Chal**	**5.21**	**202**	Pn	**Pn**	**02 11 29.2**	**-1.0**
AC04	**Llanos de Chal**	**5.21**	**202**	*eP**	**Pn**	**02 11 26.3**	**-4.0**
AC04	**Llanos de Chal**	**5.21**	**202**	*eP**	**Pn**	**02 11 26.5**	**-3.7**
AC04				*eS*	**Sn**	**02 12 32.7**	**+3.6**
AC04				IAML		02 12 48.0	
	comp=Z,675nm,0.6s						
LPAZ	**La Paz**	**7.08**	**6**	P	**Pn**	**02 11 56.9**	**+0.6**
	comp=Z,2.3nm,0.3s,baz=301,slow=1.1,SNR=24						
LPAZ				LR	LR	02 14 47.1	
	comp=Z,33nm,18.5s,baz=208,slow=39						
BBRB	**Robore, Bolivi**	**9.86**	**61**	*eP*	Pn	02 12 28.4	-5.1
SIV	**San Ignacio**	**10.37**	**46**	P	**Pn**	**02 12 38.0**	**-2.5**
	comp=Z,78nm,0.4s,baz=231,slow=9.8,SNR=290						
SIV				S	**Sn**	**02 14 29.7**	**-5.2**
	comp=Z,11nm,0.6s,baz=298,slow=20,SNR=4.2						
SIV				LR	LR	02 17 31.1	
	comp=Z,170nm,20.5s,baz=227,slow=43						
MURT	**Porto Murtinho**	**10.54**	**83**	*eP*	**Pn**	**02 12 38.8**	**-3.9**
MT09	**Talagante**	**10.54**	**190**		**Pn**	**02 12 42.2**	**-0.6**
BO04	**La Punta**	**10.69**	**188**		**Pn**	**02 12 44.3**	**-0.5**
CPUP	**Villa Florida**	**10.87**	**108**	P	**Pn**	**02 12 46.3**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=265,slow=12,SNR=9.5						
CPUP	**Villa Florida**	**10.87**	**108**	Pn	**Pn**	**02 12 46.9**	**-0.4**
BO01	**Tunca**	**11.15**	**190**		**Pn**	**02 12 49.8**	**-1.2**
ANTJ	**Antonio Joao (**	**11.94**	**86**	*eP*	**Pn**	**02 12 59.2**	**-2.5**
AZCA	**Azaras, Argent**	**12.51**	**115**	*eP*	**Pn**	**02 13 09.0**	**-0.2**
AQDB	**Aquidauana**	**12.55**	**79**	Pn	**Pn**	**02 13 08.3**	**-1.4**
AQDB	**Aquidauana**	**12.55**	**79**	*eP*	**Pn**	**02 13 05.1**	**-4.6**
H03N1	**Juan Fernandez**	**13.37**	**219**	T	T	02 25 33.6	
	baz=42,slow=74,SNR=65						
H03N2	**Juan Fernandez**	**13.38**	**219**	T	T	02 25 29.9	
	baz=42,SNR=59						
H03N3	**Juan Fernandez**	**13.39**	**219**	T	T	02 25 26.5	
	baz=42,slow=74,SNR=69						
MCR1	**Marechal Candi**	**13.60**	**98**	*eP*	**Pn**	**02 13 21.8**	**-1.7**
UNIS	**Unistalda (Bra**	**13.61**	**118**	*eP*	**Pn**	**02 13 25.3**	**+1.7**
ETMB	**Extrema**	**13.71**	**11**	*eP*	**Pn**	**02 13 21.9**	**-3.2**
SALV	**Santo Antonio**	**14.45**	**61**	*eP*	**Pn**	**02 13 30.0**	**-4.6**
FRBT	**Francisco Belt**	**14.59**	**103**	*eP*	**Pn**	**02 13 37.7**	**+1.4**
TRCB	**Terra Rica**	**14.94**	**91**		**P**	**02 13 42.7**	**-1.3**
TRCB	**Terra Rica**	**14.94**	**91**	*eP*	**Pn**	**02 13 40.6**	**-0.3**
ALGR	**Alto Alegre (B**	**15.21**	**114**	*eP*	**P**	**02 13 46.1**	**-0.9**
PTGB	**Pitanga**	**15.40**	**98**	*eP*	**P**	**02 13 48.3**	**-0.8**
CPSB	**Cacapava Do Su**	**15.43**	**120**	*eP*	**P**	**02 13 48.3**	**-1.0**
ITAB	**Concordia**	**15.61**	**108**	Pn	**Pn**	**02 13 48.8**	**-0.3**
ITAB				IAmb	IAmb	02 13 51.4	
	comp=Z,22nm,0.7s						
ITAB	**Concordia**	**15.61**	**108**	*eP*	**Pn**	**02 13 48.5**	**-0.6**
C2SB	**Chapadao do Su**	**15.63**	**76**	*eP*	**Pn**	**02 13 47.9**	**-1.7**
CZSB	**Cruzeiro do Su**	**15.98**	**346**	*eP*	**Pn**	**02 13 54.8**	**+0.8**
GO06	**Curarrehue**	**16.32**	**187**	IAmb	IAmb	02 14 01.5	
	comp=Z,22nm,0.8s						
PCMB	**Pacaembu**	**16.36**	**87**	*eP*	**Pn**	**02 13 58.6**	**0.0**
PDRB	**Porto dos Gac**	**16.43**	**47**	*eP*	**Pn**	**02 13 56.2**	**-3.3**
LR04	**Corral**	**16.91**	**192**	IAmb	IAmb	02 14 07.8	
	comp=Z,28nm,0.6s						
PLCA	**Paso Flores**	**17.37**	**184**	P	**Pn**	**02 14 11.1**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=351,slow=10,SNR=20						
ITRB	**Iturama**	**17.59**	**82**	*eP*	**P**	**02 14 13.2**	**-0.1**
CLDB	**Colider**	**17.59**	**47**	*eP*	**P**	**02 14 10.8**	**-2.6**
FRTB	**Fartura**	**17.72**	**94**	*eP*	**P**	**02 14 14.4**	**-0.3**
LL04	**Puerto Octay**	**17.74**	**189**	IAmb	IAmb	02 14 17.2	
	comp=Z,22nm,0.7s						
BB19B	**Bebedouro**	**18.96**	**87**	*eP*	**P**	**02 14 27.5**	**-0.9**
LL07	**Hotel Espejo d**	**19.79**	**190**	P	**P**	**02 14 37.4**	**+0.3**
LL02	**Futaleuf**	**19.92**	**186**	IAmb	IAmb	02 14 43.2	
	comp=Z,9.0nm,0.8s						
IPMB	**Ipameri, GO**	**20.04**	**78**	*eP*	**P**	**02 14 39.4**	**-0.7**
GO07	**Milladeo Hill,**	**20.09**	**190**	P	**P**	**02 14 39.9**	**-0.5**
SNDB	**Serra Nova Dou**	**20.18**	**59**	*eP*	**P**	**02 14 39.6**	**-2.0**
NPGB	**Novo Progresso**	**20.78**	**41**	*eP*	**P**	**02 14 45.4**	**-2.7**
BDFB	**Brasilia**	**21.08**	**72**	P	**P**	**02 14 49.7**	**-1.7**
	comp=Z,12nm,0.4s,baz=232,slow=9.2,SNR=35						
BDFB	**Brasilia**	**21.08**	**72**	P	**P**	**02 14 50.3**	**-1.1**
BDFB				IAmb	IAmb	02 14 52.7	
	comp=Z,19nm,0.7s						
BDFB	**Brasilia**	**21.08**	**72**	*eP*	**P**	**02 14 49.5**	**-1.9**
AY01	**Puyuhuapi**	**21.23**	**188**	P	**P**	**02 14 51.3**	**-1.2**
MACA	**Manacapuru-AM**	**21.59**	**23**	*eP*	**P**	**02 14 56.1**	**-0.6**
COYC	**Coyhaique**	**22.30**	**186**	P	**P**	**02 15 02.5**	**-1.5**
COYC				IAmb	IAmb	02 15 05.1	
	comp=Z,8.8nm,0.8s						
ITTB	**Itaituba**	**22.75**	**36**	*eP*	**P**	**02 15 07.1**	**-1.8**
SGCB	**S£o Gabriel d**	**23.18**	**5**	*eP*	**P**	**02 15 12.6**	**-0.4**
SLOR	**San Lorenzo -**	**24.37**	**336**	P	**P**	**02 15 25.7**	**+1.3**
SMTB	**Santa Maria do**	**24.96**	**58**	*eP*	**P**	**02 15 28.4**	**-0.8**
PRPB	**Parauapebas**	**25.07**	**50**	*eP*	**P**	**02 15 29.6**	**-0.6**
SDBA	**SAO DÉSIDERIO**	**25.23**	**69**	*eP*	**P**	**02 15 31.6**	**-0.1**
MALB	**Monte Alegre**	**25.64**	**36**	*eP*	**P**	**02 15 35.0**	**-0.4**
BOAV	**Boa Vista**	**26.87**	**19**	*eP*	**P**	**02 15 47.0**	**+0.6**
MDP	**Montagnes des**	**32.43**	**31**	LR	LR	02 30 02.2	
	comp=Z,41nm,19.6s,baz=234,slow=37						
RPN	**Rapa Nui**	**36.69**	**256**	LR	LR	02 27 30.4	
	comp=Z,27nm,18.2s,baz=120,slow=28						
ZAIG	**Zacatecas**	**56.37**	**322**	P	**P**	**02 19 45.2**	**-1.1**
ZAIG				IAmb	IAmb	02 19 49.8	
	comp=Z,3.2nm,0.5s						
BELA	**Belgrano 2**	**56.90**	**172**	P	**P**	**02 19 48.8**	**-0.2**
BELA				IAmb	IAmb	02 19 51.0	
	comp=Z,3.6nm,0.8s						
VNA3	**Neumayer Olymp**	**58.30**	**161**	P	**P**	**02 19 59.7**	**+0.8**
VNA1	**Neumayer--Stat**	**58.52**	**160**	P	**P**	**02 20 01.5**	**+1.2**
VNA2	**Neumayer--Watz**	**58.88**	**160**	P	**P**	**02 20 03.7**	**+0.8**
	baz=283,slow=7.3						
SNAA	**Sanae**	**60.51**	**161**	P	**P**	**02 20 14.7**	**+0.6**
SNAA	**Sanae**	**60.51**	**161**	P	**P**	**02 20 14.8**	**+0.7**
	comp=Z,6.5nm,0.6s,baz=284,slow=8.8,SNR=66						
	comp=Z,6.5nm,0.6s						
SNAA	**Sanae**	**60.51**	**161**	P	**P**	**02 20 13.7**	**-0.4**
TXAR	**Lajitas Array**	**62.19**	**326**	P	**P**	**02 20 26.7**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=144,slow=8.7,SNR=4.8						
TXAR				pP	**pP**	**02 20 51.4**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=116,slow=8.7,SNR=2.7						
TXAR				sP	**sP**	**02 21 02.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=139,slow=6.1,SNR=3.5						
	comp=Z,0.3nm,0.7s						
TROLL	**Troll, Antarti**	**62.22**	**161**	P	**P**	**02 20 26.8**	**+1.0**
LIC	**Lamto**	**68.87**	**73**	⇓*iP*	**P**	**02 21 09.6**	**+0.3**
	comp=Z,6.2nm,0.5s						
TIC	**Toumodi**	**69.07**	**73**	⇑*iP*	**P**	**02 21 11.5**	**+0.9**
KIC	**Kosan Boka**	**69.19**	**73**	⇓*iP*	**P**	**02 21 11.7**	**+0.4**
DBIC	**Dimbokro**	**69.23**	**73**	P	**P**	**02 21 11.8**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=213,slow=8.0,SNR=6.4						
	comp=Z,5.3nm,0.8s						
KNB	**Kanab**	**72.97**	**324**	P	**P**	**02 21 33.3**	**-0.5**
KNB				IAmb	IAmb	02 21 38.0	
	comp=Z,3.2nm,1.0s						
VNDA	**Vanda**	**75.03**	**190**	P	**P**	**02 21 46.8**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=131,slow=5.6,SNR=11						
	comp=Z,1.3nm,0.8s						
PDAR	**Pinedale Array**	**75.75**	**330**	P	**P**	**02 21 51.4**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=138,slow=6.9,SNR=3.4						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**76.99**	**322**	P	**P**	**02 21 59.1**	**+2.1**
	comp=Z,0.7nm,0.9s,baz=163,slow=3.6,SNR=3.9						
NVAR				pP	**pP**	**02 22 23.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=156,slow=8.1,SNR=3.3						
NVAR				sP	**sP**	**02 22 34.9**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=167,slow=9.8,SNR=3.9						
	comp=Z,0.7nm,0.9s						
KVN	**Kaiserville**	**77.31**	**323**	P	**P**	**02 22 00.4**	**+1.6**
TOA0	**Torodi Ar. Sit**	**77.94**	**70**	P	**P**	**02 22 02.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**77.94**	**70**	P	**P**	**02 22 03.0**	**+0.4**
	comp=Z,16nm,0.6s,baz=256,slow=5.6,SNR=208						
TORD				pP	**pP**	**02 22 28.5**	**0.0**
	comp=Z,7.3nm,0.6s,baz=253,slow=5.3,SNR=4.9						
TORD				sP	**sP**	**02 22 38.7**	**-0.6**
	comp=Z,5.6nm,0.6s,baz=255,slow=5.3,SNR=3.4						
PAHR	**Pah Rah Range**	**78.48**	**323**	P	**P**	**02 22 06.9**	**+1.7**
PAHR				IAmb	IAmb	02 22 08.9	
	comp=Z,4.5nm,0.9s						
HLID	**Hailey**	**78.65**	**328**	P	**P**	**02 22 07.3**	**+1.3**
TSUM	**Tsumeb**	**79.46**	**106**	P	**P**	**02 22 12.2**	**+1.1**
	comp=Z,1.7nm,0.5s,baz=233,slow=5.1,SNR=2.2						
TSUM				pP	**pP**	**02 22 37.3**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=241,slow=3.2,SNR=3.0						
	comp=Z,1.7nm,

OPO	Ambohidratompo	27.86	212	LR	LR	02 26 19.8	
	comp=Z,90nm,18.4s,baz=209,slow=33						
MBAR	Mbarara	31.91	260	LR	LR	02 30 12.2	
	comp=Z,46nm,18.6s,baz=64,slow=37						
BRDH	Bariadhala	33.35	56	LR	LR	02 32 12.2	
	comp=Z,168nm,19.1s,baz=273,slow=38						
EIL	Elat	35.38	317	LR	LR	02 31 18.4	
	comp=Z,122nm,18.2s,baz=240,slow=35						
PSI	Prapat	36.75	92	LR	LR	02 31 28.6	
	comp=Z,60nm,19.1s,baz=249,slow=33						
GNI	Garni	38.16	338	LR	LR	02 34 33.2	
	comp=Z,45nm,18.2s,baz=112,slow=38						
CMAR	Chiang Mai Arr	38.23	67	LR	LR	02 33 10.7	
	comp=Z,31nm,21.1s,baz=260,slow=34						
AAK	Ala-Archa	38.85	15	LR	LR	02 35 49.3	
	comp=Z,68nm,18.7s,baz=218,slow=39						
LSZ	Lusaka	39.33	238	LR	LR	02 32 30.1	
	comp=Z,131nm,19.0s,baz=56,slow=33						
KBZ	Khabaz	41.95	339	LR	LR	02 36 35.2	
	comp=Z,57nm,19.2s,baz=188,slow=37						
BRTR	Keskin Array B	42.92	327	P	P	02 18 55.1	-1.3
	comp=Z,1.0nm,0.8s,baz=144,slow=8.6,SNR=7.9						
BRTR				LR	LR	02 36 57.1	
	comp=Z,81nm,19.5s,baz=126,slow=37						
	comp=Z,1.0nm,0.8s						
ABKAR	Akbulak array	43.93	358	P	P	02 19 05.8	+1.6
BORA	Eskisehir	44.80	325	P	P	02 19 11.1	-0.3
MAKZ	Makanchi	44.84	19	P	P	02 19 10.6	-1.0
MAKZ				IAmb	IAmb	02 19 23.1	
	comp=Z,3.7nm,1.1s						
MK31	Makanchi Array	44.93	20	P	P	02 19 12.1	-0.2
MKAR	Makanchi Array	44.93	20	P	P	02 19 15.8	+3.5
	comp=Z,0.4nm,0.8s,baz=213,slow=5.0,SNR=1.9						
MKAR				LR	LR	02 39 31.2	
	comp=Z,44nm,18.1s,baz=299,slow=38						
	comp=Z,0.4nm,0.8s						
AKTO	Aktyubinsk	45.20	356	LR	LR	02 38 57.1	
	comp=Z,37nm,18.9s,baz=181,slow=38						
LBTB	Lobatse	46.54	228	LR	LR	02 36 03.1	
	comp=Z,110nm,19.4s,baz=46,slow=32						
KURBB	Kurchatov Arra	47.30	14	LR	LR	02 40 15.6	
	comp=Z,63nm,21.4s,baz=214,slow=37						
BVAR	Borovoye Array	48.14	7	LR	LR	02 41 55.4	
	comp=Z,70nm,19.3s,baz=194,slow=39						
BOSA	Boshof	48.91	224	LR	LR	02 38 41.0	
	comp=Z,99nm,18.9s,baz=14,slow=34						
TSUM	Tsumeb	50.14	240	LR	LR	02 39 19.1	
	comp=Z,75nm,19.6s,baz=16,slow=34						
VTS	Vitosha	50.74	323	P	P	02 19 57.8	+0.1
VTS				IAmb	IAmb	02 20 04.8	
	comp=Z,2.6nm,0.9s						
MLR	Muntele Rosu	51.00	328	LR	LR	02 41 42.9	
	comp=Z,71nm,19.8s,baz=225,slow=37						
MLR	Muntele Rosu	51.00	328	P	P	02 19 59.7	+0.2
ARU	Arti	51.16	357	LR	LR	02 43 07.2	
	comp=Z,50nm,18.3s,baz=230,slow=38						
ZALV	Zalesovo Beam	51.97	17	P	P	02 20 10.5	+4.1
	comp=Z,0.3nm,0.3s,baz=238,slow=4.9,SNR=1.7						
ZALV				LR	LR	02 44 28.4	
	comp=Z,42nm,18.4s,baz=242,slow=39						
	comp=Z,0.3nm,0.3s						
AKASG	Malin Array Be	53.05	334	LR	LR	02 45 03.2	
	comp=Z,39nm,18.5s,baz=228,slow=39						
KIRV	Kirov	54.15	352	LR	LR	02 44 57.3	
	comp=Z,52nm,18.7s,baz=182,slow=38						
SUR	Sutherland	54.23	224	LR	LR	02 41 48.3	
	comp=Z,50nm,18.1s,baz=72,slow=34						
SONM	Songino Array	56.81	34	P	P	02 20 47.5	+5.5
	comp=Z,0.4nm,0.5s,baz=232,slow=8.7,SNR=2.7						
SONM				LR	LR	02 45 38.2	
	comp=Z,54nm,18.7s,baz=122,slow=37						
	comp=Z,0.4nm,0.5s						
TAM	Tamanrasset	57.30	294	P	P	02 20 45.2	-0.7
TAM				IAmb	IAmb	02 20 46.6	
	comp=Z,3.7nm,1.2s						
TORD	Torodi Ar. Bea	60.09	282	P	P	02 21 04.7	-0.6
	comp=Z,0.9nm,1.0s,baz=73,slow=5.0,SNR=4.0						
TORD				LR	LR	02 45 07.7	
	comp=Z,37nm,19.9s,baz=219,slow=34						
	comp=Z,0.9nm,1.0s						
DAV	Davao City (W)	63.05	85	LR	LR	02 48 18.3	
	comp=Z,53nm,19.5s,baz=252,slow=35						
NWAO	Narrogin (SRO)	64.49	130	LR	LR	02 47 49.6	
	comp=Z,17nm,18.1s,baz=334,slow=34						
NOA	NORSAR Array B	67.40	336	LR	LR	02 53 02.3	
	comp=Z,23nm,18.2s,baz=260,slow=38						
KSRS	Korea Array	67.67	52	LR	LR	02 51 49.2	
	comp=Z,28nm,20.7s,baz=255,slow=36						
MDT	Midelt	67.70	303	LR	LR	02 48 47.3	
	comp=Z,28nm,21.0s,baz=330,slow=34						
ESDC	Sonseca Array	68.38	311	P	P	02 21 59.4	+0.1
	comp=Z,1.2nm,1.0s,baz=86,slow=5.3,SNR=3.9						
	comp=Z,1.2nm,1.0s						
ARCES	ARCESS Array B	68.56	347	P	P	02 22 00.1	+0.3
	comp=Z,1.4nm,0.8s,baz=131,slow=6.1,SNR=6.3						
ARCES				LR	LR	02 54 16.6	
	comp=Z,21nm,18.4s,baz=220,slow=38						
	comp=Z,1.4nm,0.8s						
MAW	Mawson	72.65	180	LR	LR	02 47 36.8	
	comp=Z,50nm,19.9s,baz=8.0,slow=30						
KLR	Kul'dur	72.80	40	LR	LR	02 56 05.6	
	comp=Z,64nm,18.4s,baz=288,slow=37						
YAK	Yakutsk	74.98	27	LR	LR	02 56 52.3	
	comp=Z,48nm,18.1s,baz=265,slow=37						
WRA	Warramunga Arr	75.16	112	P	P	02 22 50.8	+10
	comp=Z,4.9nm,0.9s,baz=288,slow=4.9,SNR=18						
	comp=Z,4.9nm,0.9s						
ASAR	Alice Springs	75.52	116	P	P	02 22 52.7	+10
	comp=Z,2.9nm,0.9s,baz=285,slow=5.4,SNR=21						
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	75.52	116	P	P	02 22 43.5	+1.0
MJAR	Matsushiro Arr	75.71	54	LR	LR	02 58 52.8	
	comp=Z,28nm,18.5s,baz=358,slow=38						
SPITS	Spitsbergen Ar	76.62	351	LR	LR	03 00 46.7	
	comp=Z,25nm,18.5s,baz=118,slow=39						
TIXI	Tiksi	77.86	17	LR	LR	02 59 25.9	
	comp=Z,31nm,21.7s,baz=270,slow=37						
CTA	Charters Tower	86.25	110	LR	LR	03 01 22.3	
	comp=Z,37nm,18.1s,baz=72,slow=35						
SNAA	Sanae	87.27	197	LR	LR	02 55 41.4	
	comp=Z,42nm,20.6s,baz=10.0,slow=31						
SFJD	Kangerlussuaq	93.93	339	LR	LR	03 07 21.2	
	comp=Z,21nm,19.4s,baz=130,slow=36						
QSPA	South Pole Qui	95.17	180	LR	LR	03 01 13.3	
	comp=Z,42nm,19.9s,baz=254,slow=32						
RCBR	Riachuelo	98.51	265	LR	LR	03 02 04.5	
	comp=Z,34nm,21.2s,baz=145,slow=31						
TXAR	Lajitas Array	143.05	339	PKP	PKiKP	02 30 35.1	-0.5
	comp=Z,0.3nm,0.8s,baz=30,slow=4.2,SNR=2.6						

INET ***23*** *02:11:01.4±0.4, 12°.11N×87°.70W, h8km±22km, MW2.7*
SNET ***23*** *02:11:01.7±1.0, 12°.14N×87°.91W, h13km±22km, ML2.9*

ISC 23 02:11:01.6±3.0, 12°.0N±0°.2×87°.7W±0°.1, h35km, n10, σ0°.45/12, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	Cerro Negro	1.12	65	eP	Pn	02 11 20.2	-0.6
COPN	Copaltepe	1.13	82	eP	Pn	02 11 21.1	+0.2
MOMN	Momotombo	1.23	72	eP	Pn	02 11 22.3	0.0
CNCH	Conchagua	1.24	356	eP	Pn	02 11 22.1	-0.5
CNCH				eS	Sn	02 11 38.7	+0.6
CNCH				IAML		02 11 44.2	
	comp=Z,488nm,0.3s						
PACA	Pacayal	1.54	338	eP	Pn	02 11 26.4	-0.3
PACA				eS	Sn	02 11 45.0	-0.6
PACA				IAML		02 11 53.6	
	comp=Z,659nm,0.3s						
PACA	Pacayal	1.54	338	eP	Pn	02 11 27.1	+0.4
SCLA	Alcaldia de Sa	1.92	330	eP	Pn	02 11 32.1	+0.3
SCLA				IAML		02 11 57.8	
	comp=Z,14nm,0.4s						
MATN	Matagalpa	1.98	63	eP	Pn	02 11 32.9	+0.2
TGUH	Tegucigalpa,Un	2.06	13	eP	Pn	02 11 34.3	+0.4
P5NO	Presa 5 de nov	2.18	333	eP	Pn	02 11 35.4	-0.1

JMA 23 02:22:11.9±0.1, 35°.4N±0°.5×133°.9E±0°.3, h5km±1km, MV1.4/22, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.04	238	iP	Pg	02 22 13.0	0.0
JAD	Aida	0.52	151	P	Pg	02 22 22.0	+0.1
JAD				eS	Sg	02 22 29.1	+0.3
JKS	Kasai	0.91	117	eS	Sg	02 22 41.0	-0.1

JMA 23 02:22:24.5±0.0, 35°.4N±0°.1×133°.90E±0°.08, h8km, MV1.5/32, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.06	271	iP	Pg	02 22 26.3	-0.1
JKR				eS	Sg	02 22 28.7	+0.9
JAD	Aida	0.49	153	iP	Pg	02 22 34.1	+0.1
JAD				S	Sg	02 22 40.7	+0.3
JKSM	Kasumi	0.66	71	eS	Pg	02 22 37.2	-0.1
JKSM	Kasumi	0.66	71	eP	Pg	02 22 37.2	-0.1
JKSM				eS	Sg	02 22 46.1	+0.3
JHS	Saijyo	0.74	240	eP	Pg	02 22 38.5	-0.3
JHS				eS	Sg	02 22 48.6	+0.1

KRNET ***23*** *02:33:17.8±0.1, 39°.15N×71°.83E, h20km, mb3.6*
SOME ***23*** *02:33:21.3, 39°.47N×71°.57E, h0km*
NNC ***23*** *02:33:22.1±2.0, 39°.33N×71°.61E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=15.0km s-min=9.5km az=9.0*

ISC 23 02:33:18.1±1.3, 39°.24N±0°.05×71°.76E±0°.03, h17km±7km, n45, σ2°.43/73, 25C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.24	8	↓iP	Pg	02 33 24.8	+1.0
DRK				↓iS	Sg	02 33 30.1	+2.4
	baz=57						
BTK	Batken	1.09	319	↓iP	Pn	02 33 39.9	+1.3
BTK				↓iS	Sn	02 33 56.2	+2.8
	baz=20						
GAR	Garm	1.15	258	↑iP	Pn	02 33 39.4	0.0
GAR				↑iS	Sn	02 33 55.7	+1.0
	baz=63						
CHGR	Chuyangaron	2.11	255	↑iP	Pb	02 33 54.9	-0.9
CHGR				↑iS	Sb	02 34 22.0	+0.3
	baz=58						
TRKS	Terek-Say	2.33	349	↑iP	Pb	02 33 58.3	-1.5
TRKS				↑iS	Sb	02 34 27.5	-0.9
	baz=48						
ARK	Arkit	2.56	3	↑eP	Pb	02 34 02.1	-1.5
ARK				↑iS	Sb	02 34 34.3	-0.5
	baz=2.0						
IUG	Iuzhnay	3.19	336	eP	Pg	02 34 16.5	-2.6
IUG				eS	Sg	02 34 56.6	-3.8
	181nm,0.5s						
IUG	Iuzhnay	3.19	336	Pg	Pb	02 34 15.8	+1.6
IUG				Lg	Lg	02 34 56.5	
	181nm,0.5s						
	158nm,0.6s						
AML	Almayashu	3.24	26	P	Pb	02 34 15.3	0.0
	SNR=39						
ARLS	Aral	3.27	36	↓iP	Pn	02 34 11.2	+2.6
ARLS				↓iS	Sn	02 34 50.1	+2.9
	baz=34						
UCH	Uchtor	3.65	34	P	Pb	02 34 20.5	-1.8
	SNR=14						
UCH	Uchtor	3.65	34	↓iP	Pn	02 34 16.8	+2.7
UCH				↓iS	Sn	02 34 59.9	+3.0
	baz=33						
MRKS	Merke	3.67	17	eP	Pg	02 34 28.8	+0.4
MRKS				eS	Sg	02 35 17.7	+1.6
	12nm,0.4s						
	24nm,0.4s						
MRKS	Merke	3.67	17	Pg	Pg	02 34 27.7	-0.7
MRKS				Lg	Lg	02 35 17.7	
	11nm,0.3s						
	10nm,0.3s						
EKS2	Erkin-Say	3.75	23	P	Pb	02 34 22.2	-1.6
	SNR=14						
EKS2	Erkin-Say	3.75	23	↑iP	Pn	02 34 18.1	+2.9
EKS2				↑eS	Sn	02 35 02.1	+3.2
	baz=22						
NRN	Naryn	3.91	55	↑iP	Pn	02 34 19.4	+1.7
NRN				↑iS	Sn	02 35 04.5	+1.2
	baz=53						
KK31	Karatay Array	3.97	347	↓Pn	Pb	02 34 23.4	-4.2
	4.6nm,0.5s,baz=167,slow=12,SNR=72						
KK31				↑Pg	Pg	02 34 32.8	-1.3
	6.4nm,0.4s,baz=169,slow=13,SNR=19						
KK31				↑Sn	Sb	02 35 11.1	-4.2
	8.5nm,0.4s,baz=174,slow=23,SNR=5.9						
KK31				Lg	Lg	02 35 26.2	
	6.7nm,0.4s,baz=168,slow=25,SNR=8.0						
AAK	Ala-Archa	3.98	31	P	Pb	02 34 25.5	-2.3
	SNR=14						
AAK	Ala-Archa	3.98	31	↑iP	Pn	02 34 21.1	+2.7
AAK				↑iS	Sn	02 35 07.6	+2.9
	baz=29						
KBK	Karagaybulak	4.18	34	P	Pb	02 34 28.3	-2.9
	SNR=14						
KBK	Karagaybulak	4.18	34	↑iP	Pn	02 34 23.8	+2.6
KBK				↑iS	Sn	02 35 12.1	+2.4
	baz=33						
CHMS	Chumysh	4.38	30	P	Pb	02 34 30.8	-3.8
	SNR=33						
CHMS	Chumysh	4.38	30	↓iP	Pn	02 34 27.0	+3.2
CHMS				↓iS	Sn	02 35 17.0	+2.5
	baz=29						
CHMS	Chumysh	4.38	30	↑Pn	Pb	02 34 30.3	-4.3
CHMS				↓Sn	Sb	02 35 24.3	-2.8
	39nm,0.7s						
	11nm,0.8s						
USP	Ospenovka	4.52	26	P	Pb	02 34 32.4	-4.6
	SNR=21						
USP	Ospenovka	4.52	26	↑iP	Pn	02 34 28.9	+3.1
USP				↑iS	Sn	02 35 20.5	+2.5
	baz=25						
TKM2	Tokmak 2	4.68	37	P	Pb	02 34 35.5	-4.3
	SNR=8.7						
TKM2	Tokmak 2	4.68	37	↑iP	Pn	02 34 30.8	+2.7
TKM2				↑iS	Sn	02 35 24.4	+2.2
	baz=36						
TKM2	Tokmak 2	4.68	37	↓Pn	Pb	02 34 35.1	-4.7
	4.6nm,0.6s						
KST	Kastek	4.95	39	eP	Pg	02 34 52.8	-0.1
	4.6nm,0.4s						
KST				eS	Sg	02 35 58.5	+1.5
	12nm,0.6s						
KST	Kastek	4.95	39	Pg	Pg	02 34 52.1	-0.7
KST				Lg	Lg	02 35 58.3	
	3.3nm,0.2s						
	12nm,0.6s						
DGS	Degeres	5.01	36	eP	Pg	02 34 52.8	-1.3
DGS				eS	Sg	02 35 58.9	-0.1
	1.9nm,0.2s						
	5.5nm,0.3s						
DGS	Degeres	5.01	36	Pg	Pg	02 34 52.8	-1.3
DGS				Lg	Lg	02 35 58.9	
	1.9nm,0.2s						
	5.5nm,0.3s						
MTBS	Maitube	5.25	41	eP	Pg	02 34 58.6	+0.1
MTBS				eS	Sg	02 36 08.1	+1.7
	3.4nm,0.5s						
	4.9nm,0.5s						
KRBS	Karabastau	5.34	32	eP	Pg	02 34 58.4	-1.9
KRBS				eS	Sg	02 36 07.9	-1.4
	1.2nm,0.2s						
	4.0nm,0.8s						
KRBS	Karabastau	5.34	32	Pg	Pg	02 34 58.5	-1.7
KRBS				Lg	Lg	02 36 07.8	
	1.2nm,0.2s						
	4.0nm,0.8s						
KUU	Kurty	5.78	35	eP	Pg	02 35 05.9	-2.8
KUU				eS	Sg	02 36 22.0	-1.5
	0.6nm,0.2s						
	10nm,0.5s						
KUU	Kurty	5.78	35	Pg	Pg	02 35 05.9	-2.8
KUU				Lg	Lg	02 36 22.0	
	0.6nm,0.2s						
	10nm,0.5s						
KTBS	Karatobe	5.80	38	eP	Pg	02 35 06.3	-2.7
	1.6nm,0.2s						
KTBS				eS	Sg	02 36 22.5	-1.6
	11nm,0.4s						
KTBS	Karatobe	5.80	38	Pg	Pg	02 35 06.3	-2.7
	1.6nm,0.2s						
KTBS				Lg	Lg	02 36 22.5	
	11nm,0.4s						
BTLS	Baital	6.04	16	eP	Pg	02 35 12.6	-1.1
	3.2nm,0.8s						
BTLS				eS	Sg	02 36 32.2	+0.4
	4.0nm,0.8s						
ARXS	Arharly	6.73	40	eP	Pg	02 35 24.5	-2.3
	3.8nm,0.7s						
ARXS				eS	Sg	02 36 52.7	-1.2
	3.5nm,0.8s						
AB31	Akbulak array	13.10	324	↑P	Pn	02 36 25.8	+2.6
	1.0nm,0.7s,baz=140,slow=11,SNR=15						
AKTO	Aktyubinsk	14.81	324	↑P	P	02 36 51.1	-1.3
	2.5nm,1.0s						

NNC ***23*** *02:39:16.1±2.5, 38°.08N×72°.06E, h147km±44km, mb2.9, mpv3.6, Error ellipse: s-maj=22.8km s-min=13.8km az=178.0*
IDC ***23*** *02:39:17.1±5.5, 38°.10N×72°.19E, h127km±43km, mb3.2/5, mbtmp3.6/10, MS2.7/1, Error ellipse: s-maj=47.7km s-min=26.2km az=167.0*

ISC 23 02:39:16.2±1.3, 38°.1N±0°.1×71°.90E±0°.07, h113km, n19, σ1°.87/24, mb3.1/5, 4C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.97	23	P	Pn	02 40 28.6	-0.1
	7.2nm,0.4s,baz=185,slow=6.1,SNR=27						
AAK				S	Sn	02 41 24.3	-1.0
	16nm,0.7s,baz=337,slow=20,SNR=25						
KK31	Karatay Array	5.14	349	↑P	Pn	02 40 32.8	+1.9
	9.1nm,0.5s,baz=159,slow=12,SNR=160						
KK31				S	Sn	02 41 31.3	+2.4
	21nm,0.5s,baz=185,slow=28,SNR=24						
CHMS	Chumysh	5.38	23	↑P	Pn	02 40 33.6	-0.5
	4.2nm,0.5s						
CHMS				↑S	Sn	02 41 34.4	-0.5
	24nm,0.8s						
TKM2	Tokmak 2	5.60	29	↑P	Pn	02 40 36.2	-1.2
	2.4nm,0.6s						
TKM2				↓S	Sn	02 41 40.3	-0.3
	6.6nm,0.6s						
GEYT	Alibeck	10.88	274	S	Sn	02 43 43.7	-4.6
	0.8nm,0.4s,baz=100,slow=16,SNR=2.4						
GYA0B	ALIBECK ARRAY	10.88	274	↓S	Sn	02 43 49.4	+1.1
MKAR	Makanchi Array	11.61	38	P	Pn	02 42 01.7	+3.5
	0.3nm,0.6s,baz=218,slow=7.3,SNR=3.8						
KURBB	Kurchatov Arra	13.41	18	P	Pn	02 42 21.8	+0.1
	0.5nm,0.2s,baz=208,slow=10,SNR=4.9						
AB31	Akbulak array	14.12	326	P	Pn	02 42 31.3	+0.4
	0.7nm,0.6s,baz=146,slow=11,SNR=20						
AB31				S	Sn	02 45 04.1	-2.3
	0.5nm,0.5s,baz=130,slow=26,SNR=6.0						
BVAR	Borovoye Array	14.99	356	P	Pn	02 42 42.3	+0.3
	0.3nm,0.3s,baz=163,slow=10,SNR=5.4						
AKTO	Aktyubinsk	15.83	326	P	P	02 42 53.6	-0.4
	1.3nm,0.4s,baz=123,slow=11,SNR=11						
AKTO	Aktyubinsk	15.83	326	↓P	Pn	02 42 52.7	+0.2
	2.2nm,0.7s						
AKTO				↓S	Sn	02 45 49.4	+1.7
	2.9nm,1.1s						
ZALV	Zalesovo Beam	18.19	25	P	P	02 43 17.1	-2.9
	0.6nm,0.4s,baz=214,slow=10,SNR=2.7						
GNI	Garni	21.15	284	LR	LR	02 55 14.3	
	comp=Z,19nm,19.4s,baz=334,slow=45						
SONM	Songino Array	26.87	58	P	P	02 44 44.7	-1.6
	0.2nm,0.3s,baz=244,slow=11,SNR=2.7						
	0.2nm,0.3s						
BRTR	Keskin Array B	29.68	285	P	P	02 45 13.8	+2.5
	0.2nm,0.6s,baz=72,slow=9.3,SNR=2.2						
	0.2nm,0.6s						
FINES	FINESS Array B	36.60	325	P	P	02 46 12.0	+1.1
	2.6nm,0.9s,baz=116,slow=13,SNR=1.0						
	2.6nm,0.9s						
ARCES	ARCESS Array B	39.98	337	P	P	02 46 38.9	-0.3
	2.2nm,1.0s,baz=102,slow=8.6,SNR=4.2						
	2.2nm,1.0s						
TORD	Torodi Ar. Bea	66.47	268	P	P	02 49 53.6	-0.3
	0.1nm,0.5s,baz=43,slow=5.1,SNR=1.0						
	0.1nm,0.5s						

IDC ***23*** *03:05:51.6±2.2, 17°.16S×178°.72W, h554km±20km, mb3.3/4, mbtmp4.2/5, Error ellipse: s-maj=92.4km s-min=24.1km az=151.0*

ISC 23 03:05:50.9±1.7, 17°.3S±0°.8×178°.6W±0°.4, h550km, n6, σ0°.55/6, mb3.9/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.22	261	P	P	03 07 08.1	+0.7
	50nm,0.7s,baz=131,slow=13,SNR=31						
STKA	Stephens Creek	38.77	240	P	P	03 12 28.6	-0.1
	1.3nm,0.3s,baz=88,slow=10,SNR=9.5						
	1.3nm,0.3s						
WRA	Warramunga Arr	44.56	259	P	P	03 13 13.9	-0.7
	0.7nm,0.3s,baz=92,slow=7.7,SNR=29						
	0.7nm,0.3s						
ASAR	Alice Springs	44.78	254	P	P	03 13 16.2	0.0
	9.3nm,0.4s,baz=88,slow=8.1,SNR=139						
	9.3nm,0.4s						
TXAR	Lajitas Array	85.82	58	P	P	03 17 32.9	0.0
	0.3nm,0.8s,baz=212,slow=6.9,SNR=4.8						
	0.3nm,0.8s						
GERES	GERESS Array B	146.94	345	PKPbc	PKPbc	03 24 32.0	-0.1
	0.1nm,0.4s,baz=15,slow=4.2,SNR=2.3						

BUC 23 03:10:34.2±0.3, 45°.63N×26°.47E, h144km±2km, ml3.7/47, 110C-113D, Error ellipse: s-maj=1.9km s-min=1.6km az=172.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.24	211	↓P	Pn	03 10 54.6	+0.6
NEHR				↑S	Sn	03 11 09.7	+0.8
NEHR	Nehoiu	0.24	211	↓P	Pn	03 10 54.6	+0.6
NEHR				↑S	Sn	03 11 09.7	+0.8
PLOR	Plostina	0.25	30	↑S	Sn	03 11 09.9	+0.8
PLOR	Plostina	0.25	30	↑S	Sn	03 11 09.9	+0.8
COVR	Voineasa-Covas	0.28	319	↓P	Pn	03 10 54.0	-0.1
COVR				↓S	Sn	03 11 09.0	-0.3
COVR	Voineasa-Covas	0.28	319	↓P	Pn	03 10 54.0	-0.1
COVR				↓S	Sn	03 11 09.0	-0.3
VRI	Vrincioaia	0.30	37	↑P	Pn	03 10 54.4	+0.3
VRI				↑S	Sn	03 11 09.7	+0.5
VRI	Vrincioaia	0.30	37	↓P	Pn	03 10 54.5	+0.4
VRI				↑S	Sn	03 11 09.7	+0.5
MLR	Muntele Rosu	0.40	249	↑P	Pn	03 10 54.8	+0.2
MLR				↓S	Sn	03 11 10.0	0.0
MLR	Muntele Rosu	0.40	249	↑P	Pn	03 10 54.8	+0.2
MLR				↓S	Sn	03 11 10.0	0.0
ODBI	Odobesti	0.43	72	↑P	Pn	03 10 55.9	+1.3
ODBI				↓S	Sn	03 11 12.2	+2.1
ODBI	Odobesti	0.43	72	↑P	Pn	03 10 55.9	+1.3
ODBI				↓S	Sn	03 11 12.2	+2.1
ISR	Istrita	0.52	174	↑P	Pn	03 10 55.8	+0.7
ISR				↑S	Sn	03 11 13.1	+2.1
ISR	Istrita	0.52	174	↑P	Pn	03 10 55.8	+0.7
ISR				↑S	Sn	03

GHRR			⇑S	Sn	03 11 14.6	+0.8
GHRR		**0.78 56**	⇑P	Pn	03 10 57.3	+0.6
GHRR			⇑S	Sn	03 11 14.6	+0.8
PGOR	**Pogoanele**	**0.81 153**	⇓P	Pn	03 10 57.8	+0.9
PGOR			⇑S	Sn	03 11 16.1	+2.0
PGOR	**Pogoanele**	**0.81 153**	⇓P	Pn	03 10 57.8	+0.9
PGOR			⇑S	Sn	03 11 16.1	+2.0
DOPR	**Dopca**	**0.83 294**	⇑P	Pn	03 10 57.0	-0.1
DOPR			⇑S	Sn	03 11 14.3	-0.2
DOPR	**Dopca**	**0.83 294**	⇑P	Pn	03 10 57.0	-0.1
DOPR			⇑S	Sn	03 11 14.3	-0.2
TUDR		**0.84 92**	⇓P	Pn	03 10 57.3	+0.2
TUDR			⇓S	Sn	03 11 14.9	+0.4
TUDR		**0.84 92**	⇓P	Pn	03 10 57.3	+0.2
TUDR			⇓S	Sn	03 11 14.9	+0.4
TESR	**Tescani**	**0.89 8**	⇓P	Pn	03 10 57.4	-0.2
TESR			⇑S	Sn	03 11 14.5	-0.9
TESR	**Tescani**	**0.89 8**	⇓P	Pn	03 10 57.4	-0.2
TESR			⇑S	Sn	03 11 14.5	-0.9
IZVR	**Izvoarele**	**0.91 95**	⇓P	Pn	03 10 57.8	+0.1
IZVR			⇑S	Sn	03 11 15.2	-0.3
IZVR	**Izvoarele**	**0.91 95**	⇓P	Pn	03 10 57.8	+0.1
IZVR			⇑S	Sn	03 11 15.2	-0.3
SCHL	**Schela**	**0.96 97**	⇓S	Sn	03 11 16.8	+0.5
SCHL	**Schela**	**0.96 97**	⇓S	Sn	03 11 16.8	+0.5
SULR		**0.96 189**	⇑P	Pn	03 10 58.7	+0.6
SULR			⇓S	Sn	03 11 17.6	+1.3
SULR		**0.96 189**	⇑P	Pn	03 10 58.7	+0.6
SULR			⇓S	Sn	03 11 17.6	+1.3
VARL	**Varlezi**	**1.00 74**	⇑P	Pn	03 10 58.8	+0.4
VARL			⇑S	Sn	03 11 17.0	+0.1
VARL	**Varlezi**	**1.00 74**	⇑P	Pn	03 10 58.8	+0.4
VARL			⇑S	Sn	03 11 17.0	+0.1
VOIR		**1.02 260**	⇑P	Pn	03 10 58.5	-0.2
VOIR			⇓S	Sn	03 11 16.9	-0.4
VOIR		**1.02 260**	⇑P	Pn	03 10 58.5	-0.2
VOIR			⇓S	Sn	03 11 16.9	-0.4
BIR	**Birlad**	**1.03 51**	⇑P	Pn	03 10 59.1	+0.4
BIR			⇑S	Sn	03 11 17.1	-0.2
BIR	**Birlad**	**1.03 51**	⇑P	Pn	03 10 59.1	+0.4
BIR			⇑S	Sn	03 11 17.1	-0.2
SCTR	**Scanteiesti**	**1.07 87**	⇑P	Pn	03 10 59.6	+0.6
SCTR			⇓S	Sn	03 11 18.3	+0.4
SCTR	**Scanteiesti**	**1.07 87**	⇑P	Pn	03 10 59.6	+0.6
SCTR			⇓S	Sn	03 11 18.3	+0.4
MTUR	**Matau**	**1.07 248**	⇓P	Pn	03 10 59.2	0.0
MTUR	**Matau**	**1.07 248**	⇓P	Pn	03 10 59.2	0.0
TATR	**Tatarca**	**1.11 91**	⇓P	Pn	03 10 60.0	+0.6
TATR			⇑S	Sn	03 11 18.9	+0.4
TATR	**Tatarca**	**1.11 91**	⇓P	Pn	03 10 60.0	+0.6
TATR			⇑S	Sn	03 11 18.9	+0.4
GISR	**Galati**	**1.13 99**	⇓S	Sn	03 11 19.6	+0.7
GISR	**Galati**	**1.13 99**	⇓S	Sn	03 11 19.6	+0.7
VLDR	**Vladesti**	**1.15 79**	⇑P	Pn	03 11 00.3	+0.5
VLDR			⇓S	Sn	03 11 19.3	+0.1
VLDR	**Vladesti**	**1.15 79**	⇑P	Pn	03 11 00.3	+0.5
VLDR			⇓S	Sn	03 11 19.3	+0.1
LEHL	**Lehliu**	**1.18 168**	⇓P	Pn	03 11 00.7	+0.6
LEHL			⇓S	Sn	03 11 20.6	+0.7
LEHL	**Lehliu**	**1.18 168**	⇓P	Pn	03 11 00.7	+0.6
LEHL			⇓S	Sn	03 11 20.6	+0.7
AMRR	**Amara**	**1.19 149**	⇓P	Pn	03 11 00.9	+0.7
AMRR			⇑S	Sn	03 11 20.4	+0.5
AMRR	**Amara**	**1.19 149**	⇓P	Pn	03 11 00.9	+0.7
AMRR			⇑S	Sn	03 11 20.4	+0.5
INCR	**INCERC-Sediu C**	**1.21 191**	⇑S	Sn	03 11 20.3	0.0
INCR	**INCERC-Sediu C**	**1.21 191**	⇑S	Sn	03 11 20.3	0.0
GIUM	**Giurgiulesti**	**1.23 96**	⇓P	Pn	03 11 01.2	+0.7
GIUM			⇓S	Sn	03 11 21.0	+0.4
GIUM	**Giurgiulesti**	**1.23 96**	⇓P	Pn	03 11 01.2	+0.7
GIUM			⇓S	Sn	03 11 21.0	+0.4
CFR	**Carcaliu**	**1.26 111**	⇓P	Pn	03 11 00.7	-0.1
CFR			⇑S	Sn	03 11 21.0	-0.1
CFR	**Carcaliu**	**1.26 111**	⇓P	Pn	03 11 00.7	-0.1
CFR			⇑S	Sn	03 11 21.0	-0.1
STFAR	**Stefanesti-Arg**	**1.31 235**	⇓P	Pn	03 11 01.9	+0.5
STFAR			⇓S	Sn	03 11 23.6	+1.4
STFAR	**Stefanesti-Arg**	**1.31 235**	⇓P	Pn	03 11 01.9	+0.5
STFAR			⇓S	Sn	03 11 23.6	+1.4
ARR	**Arges**	**1.32 259**	⇓P	Pn	03 11 02.3	+0.8
ARR			⇓S	Sn	03 11 21.9	-0.4
ARR	**Arges**	**1.32 259**	⇓P	Pn	03 11 02.3	+0.8
ARR			⇓S	Sn	03 11 21.9	-0.4
BUC1	**Bucharest**	**1.32 194**	⇓P	Pn	03 11 01.8	+0.3
BUC1			⇓S	Sn	03 11 22.4	+0.1
BUC1	**Bucharest**	**1.32 194**	⇓P	Pn	03 11 01.8	+0.3
BUC1			⇓S	Sn	03 11 22.4	+0.1
GIRR	**Girov**	**1.32 1**	⇑P	Pn	03 11 01.9	+0.4
GIRR	**Girov**	**1.32 1**	⇑P	Pn	03 11 01.9	+0.4
BIZ	**Bicaz**	**1.33 349**	⇓P	Pn	03 11 02.5	+0.9
BIZ			⇑S	Sn	03 11 23.5	+0.9
BIZ	**Bicaz**	**1.33 349**	⇓P	Pn	03 11 02.5	+0.9
BIZ			⇑S	Sn	03 11 23.5	+0.9
VASR	**Vaslui**	**1.36 42**	⇓P	Pn	03 11 02.1	+0.2
VASR			⇑S	Sn	03 11 22.7	-0.4
VASR	**Vaslui**	**1.36 42**	⇓P	Pn	03 11 02.1	+0.2
VASR			⇑S	Sn	03 11 22.7	-0.4
HARR	**Harsova**	**1.40 132**	⇑P	Pn	03 11 02.6	+0.3
HARR	**Harsova**	**1.40 132**	⇑P	Pn	03 11 02.6	+0.3
SGRR	**Singureni**	**1.45 194**	⇑P	Pn	03 11 02.8	0.0
SGRR			⇓S	Sn	03 11 23.9	-0.7
SGRR	**Singureni**	**1.45 194**	⇑P	Pn	03 11 02.8	0.0
SGRR			⇓S	Sn	03 11 23.9	-0.7
LEOM	**Leova**	**1.50 55**	⇓P	Pn	03 11 03.6	+0.4
LEOM			⇑S	Sn	03 11 25.5	0.0
LEOM	**Leova**	**1.50 55**	⇓P	Pn	03 11 03.6	+0.4
LEOM			⇑S	Sn	03 11 25.5	0.0
RASA	**Rasa**	**1.50 161**	⇓S	Sn	03 11 25.6	+0.2
RASA	**Rasa**	**1.50 161**	⇓S	Sn	03 11 25.6	+0.2
HUMR	**Humele**	**1.53 224**	⇑P	Pn	03 11 03.5	-0.2
HUMR			⇑S	Sn	03 11 25.5	-0.6
HUMR	**Humele**	**1.53 224**	⇑P	Pn	03 11 03.5	-0.2
HUMR			⇑S	Sn	03 11 25.5	-0.6
TLBR	**Topalu**	**1.56 134**	⇑P	Pn	03 11 04.3	+0.4
TLBR			⇓S	Sn	03 11 25.9	-0.8
TLBR	**Topalu**	**1.56 134**	⇑P	Pn	03 11 04.3	+0.4
TLBR			⇓S	Sn	03 11 25.9	-0.8
TPGR	**Topolog**	**1.58 119**	⇓P	Pn	03 11 04.2	-0.1
TPGR			⇓S	Sn	03 11 26.0	-1.2
TPGR	**Topolog**	**1.58 119**	⇓P	Pn	03 11 04.2	-0.1
TPGR			⇓S	Sn	03 11 26.0	-1.2
CVDA	**Cernavoda**	**1.71 139**	⇑P	Pn	03 11 06.0	+0.4
CVDA			⇑S	Sn	03 11 29.1	-0.5
CVDA	**Cernavoda**	**1.71 139**	⇑P	Pn	03 11 06.0	+0.4
CVDA			⇑S	Sn	03 11 29.1	-0.5
TLCR		**1.71 104**	⇓P	Pn	03 11 05.8	+0.2
TLCR			⇓S	Sn	03 11 29.9	+0.3
TLCR		**1.71 104**	⇓P	Pn	03 11 05.8	+0.2
TLCR			⇓S	Sn	03 11 29.9	+0.3
IAS	**Iasi**	**1.73 25**	⇑S	Sn	03 11 29.0	-1.1
IAS	**Iasi**	**1.73 25**	⇑S	Sn	03 11 29.0	-1.1
COPA	**Copaceanca**	**1.74 211**	⇑S	Sn	03 11 29.4	-0.9
COPA	**Copaceanca**	**1.74 211**	⇑S	Sn	03 11 29.4	-0.9
ICOR	**Ion Corvin**	**1.79 148**	⇓P	Pn	03 11 07.1	+0.6
ICOR			⇑S	Sn	03 11 30.9	-0.3
ICOR	**Ion Corvin**	**1.79 148**	⇓P	Pn	03 11 07.1	+0.6
ICOR			⇑S	Sn	03 11 30.9	-0.3
TIRR	**Tirgusor**	**1.81 130**	⇑P	Pn	03 11 07.0	+0.3
TIRR			⇑S	Sn	03 11 30.8	-0.9
TIRR	**Tirgusor**	**1.81 130**	⇑P	Pn	03 11 07.0	+0.3
TIRR			⇑S	Sn	03 11 30.8	-0.9
LOT	**Lotru**	**1.91 265**	⇓P	Pn	03 11 08.8	+0.8
LOT			⇑S	Sn	03 11 33.8	-0.1
LOT	**Lotru**	**1.91 265**	⇓P	Pn	03 11 08.8	+0.8
LOT			⇑S	Sn	03 11 33.8	-0.1
MILM	**Milestii Mici**	**2.07 51**	⇓P	Pn	03 11 09.8	0.0
MILM			⇓S	Sn	03 11 35.8	-1.4
MILM	**Milestii Mici**	**2.07 51**	⇓P	Pn	03 11 09.8	0.0
MILM			⇓S	Sn	03 11 35.8	-1.4
MILM	**Milestii Mici**	**2.07 51**	⇑i P	Pn	03 11 09.8	0.0
MILM	12nm,0.2s		*i* S	Sn	03 11 35.5	-1.7
	28nm,0.3s					
KIS	**Kishinev**	**2.12 49**	⇑S	Sn	03 11 37.0	-1.3
KIS	**Kishinev**	**2.12 49**	⇑S	Sn	03 11 37.0	-1.3
KIS	**Kishinev**	**2.12 49**	*i* S	Sn	03 11 37.0	-1.3
	56nm,0.4s					
ZIMR		**2.13 202**	⇑S	Sn	03 11 38.1	-0.2
ZIMR		**2.13 202**	⇑S	Sn	03 11 38.1	-0.2
TSCT	**Constanta Port**	**2.14 133**	⇑S	Sn	03 11 38.2	-0.4
TSCT	**Constanta Port**	**2.14 133**	⇑S	Sn	03 11 38.2	-0.4
BURAR	**Bucovina Array**	**2.17 337**	⇑P	Pn	03 11 12.2	+1.1
BURAR	**Bucovina Array**	**2.17 337**	⇑P	Pn	03 11 12.2	+1.1
EFOR	**EFORIE**	**2.18 134**	⇑P	Pn	03 11 11.6	+0.5
EFOR			⇑S	Sn	03 11 39.5	0.0
EFOR	**EFORIE**	**2.18 134**	⇑P	Pn	03 11 11.6	+0.5
EFOR			⇑S	Sn	03 11 39.5	0.0
CJR	**Cluj-Napoca**	**2.27 299**	⇑P	Pn	03 11 11.8	-0.5
CJR	**Cluj-Napoca**	**2.27 299**	⇑P	Pn	03 11 11.8	-0.5
MANR	**Mangalia**	**2.36 140**	⇓S	Sn	03 11 43.3	-0.1
MANR	**Mangalia**	**2.36 140**	⇓S	Sn	03 11 43.3	-0.1
SRE	**Strehaia**	**2.51 248**	⇑S	Sn	03 11 45.5	-1.1
SRE	**Strehaia**	**2.51 248**	⇑S	Sn	03 11 45.5	-1.1
MARR	**Marisel-Cluj**	**2.55 295**	⇑P	Pn	03 11 15.1	-0.6
MARR	**Marisel-Cluj**	**2.55 295**	⇑P	Pn	03 11 15.1	-0.6
GZR	**Gura Zlata**	**2.61 266**	⇑P	Pn	03 11 16.7	+0.3
GZR			⇓S	Sn	03 11 49.7	+0.7
GZR	**Gura Zlata**	**2.61 266**	⇑P	Pn	03 11 16.7	+0.3
GZR			⇓S	Sn	03 11 49.7	+0.7
DRGR		**2.86 295**	⇓P	Pn	03 11 18.5	-1.0
DRGR		**2.86 295**	⇓P	Pn	03 11 18.5	-1.0
BZS	**Buzias**	**3.41 271**	⇓P	Pn	03 11 25.8	-0.7
BZS	**Buzias**	**3.41 271**	⇓P	Pn	03 11 25.8	-0.7
MDVR	**Moldovita**	**3.47 258**	⇓P	Pn	03 11 27.6	+0.1
MDVR	**Moldovita**	**3.47 258**	⇓P	Pn	03 11 27.6	+0.1

*NOU **23** 03:15:35.8, 14.″28S×168.″03E, h147km, MLv4.9/12, Vanuatu Islands*
*NEIC **23** 03:15:46.1±1.8, 15.″2S±0.″1×167.″7E±0.″2, h110km±12km, mb4.3/12, Error ellipse: s-maj=25.0km s-min=10.7km az=58.0*
*IDC **23** 03:15:49.1±8.8, 15.″24S×167.″47E, h127km±56km, mb3.7/5, mbtmp4.1/6, MS2.7/1, Error ellipse: s-maj=78.0km s-min=29.1km az=39.0*
ISC 23 03:15:44.5±1.3, 15.″1S±0.″1×167.″7E±0.″1, h100km, n35, σ1.9 43/35, mb4.2/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.71**	**169**	P	**Pn**	**03 16 28.6**	**+2.2**
LIFNC	**LIFOU**	**5.71**	**184**	Pn	**Pn**	**03 17 06.1**	**-0.8**
LIFNC	**LIFOU**	**5.71**	**184**	P	**Pn**	**03 17 07.8**	**+0.9**
KOUNC	**Koumac, New Ca**	**6.35**	**210**	Pn	**Pn**	**03 17 15.5**	**0.0**
MARNC	**Mare, Loyalty**	**6.41**	**177**	Pn	**Pn**	**03 17 15.9**	**-0.5**
MARNC	**Mare, Loyalty**	**6.41**	**177**	P	**Pn**	**03 17 17.3**	**+1.0**
YATNC	**Mamie plateau,**	**7.01**	**186**	P	**Pn**	**03 17 25.8**	**+1.2**
DZM	**Mont Dzumac**	**7.08**	**189**	P	**Pn**	**03 17 27.7**	**+2.1**
DZM	21nm,0.3s,baz=38,slow=19,SNR=102			S	**Sn**	**03 18 43.8**	**-0.8**
	23nm,0.3s,baz=117,slow=20,SNR=13						
DZM	**Mont Dzumac**	**7.08**	**189**		**Pn**	**03 17 26.2**	**+0.6**
DZM	**Mont Dzumac**	**7.08**	**189**	P	**Pn**	**03 17 28.0**	**+2.4**
NOUC	**Port Laguerre**	**7.13**	**190**	P	**Pn**	**03 17 29.3**	**+3.1**
ONTNC	**Ouen Toro**	**7.31**	**189**		**Pn**	**03 17 29.9**	**+1.3**
ONTNC	**Ouen Toro**	**7.31**	**189**	P	**Pn**	**03 17 31.9**	**+3.3**
OUENC	**Ouen Island, N**	**7.37**	**186**		**Pn**	**03 17 29.5**	**0.0**
OUENC	**Ouen Island, N**	**7.37**	**186**	P	**Pn**	**03 17 31.8**	**+2.3**
EIDS	**Eidsvold**	**18.62**	**234**	P	**P**	**03 19 54.2**	**-0.2**
EIDS	comp=Z,11nm,0.8s			IAmb	IAmb	03 19 56.7	
AFI	**Afiamalu**	**19.94**	**89**	LR	LR	03 26 47.9	
	comp=Z,22nm,20.6s,baz=298,slow=33						
CTA	**Charters Tower**	**21.01**	**253**	P	**P**	**03 20 22.1**	**+1.9**
	comp=Z,2.8nm,0.8s,baz=58,slow=12,SNR=4.2						
	comp=Z,2.8nm,0.8s						
COEN	**Coen**	**23.73**	**269**	P	**P**	**03 20 49.1**	**+1.3**
COEN	comp=Z,18nm,1.2s			IAmb	IAmb	03 20 50.4	
MANU	**Manus Island**	**23.84**	**301**		**S**	**03 24 59.7**	**+2.2**
BKZ	**Black Stump Fm**	**25.25**	**164**	P	**P**	**03 21 01.6**	**+0.3**
BKZ	comp=Z,12nm,1.1s			IAmb	IAmb	03 21 08.1	
STKA	**Stephens Creek**	**29.08**	**230**	P	**P**	**03 21 35.3**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=32,slow=9.0,SNR=5.6						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**29.08**	**230**	P	**P**	**03 21 34.8**	**-0.9**
WB2	**Warramunga Arr**	**32.11**	**256**	P	**P**	**03 22 01.2**	**-1.3**
WB2	comp=Z,7.7nm,1.2s			IAmb	IAmb	03 22 05.3	
WRA	**Warramunga Arr**	**32.12**	**256**	P	**P**	**03 22 01.9**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=86,slow=8.9,SNR=14						
	comp=Z,2.5nm,0.8s						
AS31	**Alice Springs**	**32.92**	**250**	P	**P**	**03 22 08.7**	**-1.0**
AS31	comp=Z,3.1nm,0.5s			IAmb	IAmb	03 22 10.3	
ASAR	**Alice Springs**	**32.92**	**250**	P	**P**	**03 22 09.4**	**-0.2**
	comp=Z,6.0nm,0.6s,baz=77,slow=9.1,SNR=78						
	comp=Z,6.0nm,0.6s						
ASAR	**Alice Springs**	**32.92**	**250**	P	**P**	**03 22 08.4**	**-1.2**
BBOO	**Buckleboo**	**33.69**	**233**	P	**P**	**03 22 16.1**	**-0.1**
FORT	**Forrest**	**39.46**	**240**	P	**P**	**03 23 05.0**	**-0.3**
PSA00	**Pilbara Seismi**	**45.72**	**254**	P	**P**	**03 23 55.6**	**-0.4**
VNDA	**Vanda**	**62.55**	**181**	P	**P**	**03 25 57.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=9.4,slow=6.8,SNR=5.2						
	comp=Z,0.4nm,0.8s						
QSPA	**South Pole Qui**	**74.98**	**180**	P	**P**	**03 27 14.8**	**0.0**
QSPA	comp=Z,4.6nm,1.1s			IAmb	IAmb	03 27 16.0	
BELA	**Belgrano 2**	**86.37**	**175**	P	**P**	**03 28 14.2**	**-0.9**
SNAA	**Sanae**	**93.25**	**183**	P	**P**	**03 28 46.5**	**-1.2**

*DNK **23** 03:37:57.4±2.5, 83.″52N×3.″82W, h36km±97km, ML2.0*
BER 23 03:37:58.5±1.1, 83.″28N×4.″72W, h10km, ML2.1,1C, Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.31**	**229**	*e*P	Pn	03 38 34.1	-2.4
NOR				*e*S	Sn	03 39 01.4	-3.4
NOR	**Nord**	**2.31**	**229**	⇑*i*P	Pn	03 38 33.9	-2.6
NOR				*i* S	Sn	03 39 02.2	-2.6
NOR	comp=Z,14nm,0.8s			IAML		03 39 02.5	
KBS	**Kingsbay**	**5.04**	**141**	*e*P	Pn	03 39 11.6	-2.4
KBS				*e*S	Sn	03 40 06.4	-5.8
KBS	comp=Z,5.6nm,0.6s			IAML		03 40 08.9	
KBS	**Kingsbay**	**5.04**	**141**	*e*P	Pn	03 39 11.5	-2.6
KBS				*e*S	Sn	03 40 04.5	-7.7
BRBB	**Barentsburg B**	**5.99**	**140**	*e*P	Pn	03 39 24.8	-2.2
BRBA	**Barentsburg A**	**6.03**	**140**	*e*P	Pn	03 39 25.2	-2.2
SPA0	**Spitsbergen Ar**	**6.08**	**136**	*e*P	Pn	03 39 25.7	-2.6
SPA0				*e*S	Sn	03 40 29.9	-7.9
SPA0	comp=Z,3.8nm,0.8s			IAML		03 40 43.5	
DAG	**Danmarks Havn**	**6.94**	**207**	*e*P	Pn	03 39 37.8	-2.2
DAG				*e*S	Sn	03 40 51.3	-7.4
DAG	**Danmarks Havn**	**6.94**	**207**	*e*P	Pn	03 39 37.4	-2.5
DAG				*e*S	Sn	03 40 53.2	-5.6
HSPB	**Hornsund (broa**	**7.12**	**141**	*e*P	Pn	03 39 40.7	-1.8
DBG	**Daneborg**	**9.44**	**206**	*e*P	Pn	03 40 11.1	-3.2
SUMG	**Summit**	**12.47**	**231**	*e*P	Pn	03 40 51.2	-4.8

*IDC **23** 04:10:07.5±0.6, 55.″28S×27.″83W, h0km, mb4.5/10, mbtmp4.5/11, ML4.9/1, MS3.5/4, Error ellipse: s-maj=21.6km s-min=16.2km az=84.0*
*NEIC **23** 04:10:09.1±2.3, 55.″43S±0.″09×28.″3W±0.″2, h10km±1km, mb4.6/23, Error ellipse: s-maj=21.2km s-min=7.9km az=46.0*
ISC 23 04:10:11.0±0.4, 55.″41S±0.″07×28.″20W±0.″08, h26km, n86, σ0.9 92/80, mb4.7/16, MS3.5/3, 3C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**4.92**	**280**	Pn	**Pn**	**04 11 23.2**	**+0.1**
ESPZ	**Base Esperanza**	**16.57**	**229**	Pn	**Pn**	**04 13 59.1**	**-2.0**
ESPZ	comp=Z,45nm,1.1s			IAmb	IAmb	04 14 06.7	
VNA1	**Neumayer--Stat**	**17.61**	**158**	P	**P**	**04 14 15.7**	**+0.8**
VNA3	**Neumayer Olymp**	**17.79**	**160**	P	**P**	**04 14 17.5**	**+0.4**
VNA2	**Neumayer--Watz**	**18.01**	**158**	P	**P**	**04 14 19.9**	**+0.5**
VNA2	baz=314,slow=12			S	S	04 17 59.7	+15
EFI	**East Falkland**	**18.06**	**269**	Pn	**Pn**	**04 14 16.4**	**-3.4**
SNAA	**Sanae**	**19.57**	**156**	P	**P**	**04 14 36.4**	**-0.2**
SNAA	**Sanae**	**19.57**	**156**	P	**P**	**04 14 36.9**	**+0.4**
	comp=Z,3.7nm,0.3s,baz=299,slow=10,SNR=244						
	comp=Z,9.4nm,0.5s						
SNAA	**Sanae**	**19.57**	**156**	P	**P**	**04 14 35.7**	**-0.8**
PMSA	**Palmer Station**	**19.90**	**227**	P	**Pn**	**04 14 43.9**	**+2.0**
	comp=Z,11nm,0.6s,baz=66,slow=6.4,SNR=17						
PMSA				LR	LR	04 21 41.1	
	comp=Z,126nm,18.8s,baz=88,slow=34						
	comp=Z,11nm,0.6s						
PMSA	**Palmer Station**	**19.90**	**227**	P	**P**	**04 14 38.5**	**-1.6**
PMSA				IAmb	IAmb	04 14 47.2	
	comp=Z,37nm,1.4s						
PMSA	**Palmer Station**	**19.90**	**227**	*e*P	**Pn**	**04 14 44.0**	**+2.2**
TROLL	**Troll, Antarti**	**21.08**	**154**	P	**P**	**04 14 53.4**	**+0.4**
SMAI	**San Martin Ant**	**21.89**	**219**	P	**P**	**04 15 00.1**	**-1.5**
BELA	**Belgrano 2**	**22.68**	**184**	P	**P**	**04 15 08.9**	**-1.1**
BELA	comp=Z,28nm,1.4s			IAmb	IAmb	04 15 12.7	
PLTB	**Pedras Altas**	**29.64**	**312**	*e*P	**P**	**04 16 15.2**	**+1.1**
CPSB	**Cacapava Do Su**	**30.75**	**314**	*e*P	**P**	**04 16 25.0**	**+1.1**
ALGR	**Alto Alegre (B**	**32.01**	**316**	*e*P	**P**	**04 16 36.0**	**+0.9**
UNIS	**Unistalda (Bra**	**32.60**	**313**	*e*P	**P**	**04 16 41.1**	**+0.9**
ITQB	**Itaqui**	**32.74**	**310**	*e*P	**P**	**04 16 42.1**	**+0.7**
CRSM	**Crissiumal (Br**	**33.57**	**316**	*e*P	**P**	**04 16 49.1**	**+0.4**
AZCA	**Azaras, Argent**	**33.85**	**312**	*e*P	**P**	**04 16 51.7**	**+0.6**
QSPA	**South Pole Qui**	**34.85**	**180**	P	**P**	**04 17 00.8**	**+1.2**
	comp=Z,5.7nm,0.6s,baz=203,slow=2.2,SNR=66						
QSPA				LR	LR	04 30 31.3	
	comp=Z,84nm,19.4s,baz=204,slow=35						
	comp=Z,5.7nm,0.6s						
QSPA	**South Pole Qui**	**34.85**	**180**	P	**P**	**04 16 59.9**	**+0.2**
QSPA				IAmb	IAmb	04 17 02.7	
	comp=Z,7.3nm,0.7s						
CAM01	**Campos-RJ**	**35.01**	**338**	*e*P	**P**	**04 17 02.4**	**+1.2**
CPUP	**Villa Florida**	**35.95**	**312**	P	**P**	**04 17 09.5**	**+0.3**
	comp=Z,7.5nm,1.0s,baz=156,slow=7.9,SNR=8.6						
	comp=Z,7.5nm,1.0s						
CPUP	**Villa Florida**	**35.95**	**312**	P	**P**	**04 17 08.4**	**-0.8**
CPUP				IAmb	IAmb	04 17 10.2	
	comp=Z,12nm,1.2s						
CPUP	**Villa Florida**	**35.95**	**312**	*e*P	**P**	**04 17 09.6**	**+0.3**
VA06	**Catapilco**	**37.66**	**289**	P	**P**	**04 17 24.5**	**+0.8**
NAN01	**Guarapari, ES**	**38.58**	**342**	*e*P	**P**	**04 17 31.1**	**-0.5**
GO04	**Tololo Observa**	**39.25**	**292**	P	**P**	**04 17 38.0**	**+0.5**
GO04				IAmb	IAmb	04 17 40.4	
	comp=Z,22nm,1.4s						
PMNB	**Patos De Minas**	**39.33**	**332**	*e*P	**P**	**04 17 38.6**	**+0.6**
RPRD	**Ribas do Rio P**	**39.79**	**321**	*e*P	**P**	**04 17 42.0**	**+0.3**
MC01	**Montes Claros**	**40.47**	**336**	*e*P	**P**	**04 17 48.4**	**+1.0**
AQDB	**Aquidauana**	**40.54**	**318**	P	**P**	**04 17 47.1**	**-0.8**
AQDB	**Aquidauana**	**40.54**	**318**	*e*P	**P**	**04 17 47.3**	**-0.5**
MAW	**Mawson**	**41.01**	**144**	P	**P**	**04 17 51.2**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=233,slow=7.1,SNR=3.1						
	comp=Z,1.9nm,0.8s						
AC02	**Maricunga**	**41.07**	**297**	P	**P**	**04 17 53.4**	**+0.6**
GO02	**Mina Guanaco**	**42.68**	**298**	P	**P**	**04 18 06.3**	**+0.5**
LVC	**Limon Verde**	**44.48**	**301**	*e*P	**P**	**04 18 22.2**	**+1.8**
SALV	**Santo Antonio**	**44.73**	**321**	*e*P	**P**	**04 18 22.0**	**+0.1**
SDBA	**SAO DESIDERIO**	**44.84**	**337**	*e*P	**P**	**04 18 22.7**	**-0.2**
BBSD	**Serra de San D**	**45.45**	**314**	*e*P	**P**	**04 18 27.2**	**-0.5**
PB01	**IPOC Station P**	**46.09**	**301**	P	**P**	**04 18 32.5**	**-0.3**
BOSA	**Boshof**	**46.38**	**77**	P	**P**	**04 18 33.4**	**-1.7**
	comp=Z,4.1nm,0.8s,baz=203,slow=7.3,SNR=9.1						
BOSA				LR	LR	04 35 32.6	
	comp=Z,41nm,18.4s,baz=194,slow=33						
	comp=Z,4.1nm,0.8s						
PTLB	**Pontes e Lacer**	**46.43**

OK049 IAmb_Lg 04 17 28.8
comp=Z,7.4nm,0.8s
OK049 Sg Sg 04 17 29.0 -0.3
OK050 Pawnee Station 0.74 30 Pg Pg 04 17 21.6 -0.8
OK050 IAmb_Lg 04 17 31.8
comp=Z,9.3nm,0.8s
OK050 Sg Sg 04 17 32.0 0.0
OK046 Pawnee Station 0.77 34 Pg Pg 04 17 22.3 -0.7
OK046 IAmb_Lg 04 17 32.3
comp=Z,9.5nm,0.7s
OK046 Sg Sg 04 17 32.8 -0.3
OK048 Pawnee Station 0.77 32 Pg Pg 04 17 22.3 -0.7
OK048 Sg Sg 04 17 32.7 -0.4
OK045 Pawnee Station 0.81 31 Pg Pg 04 17 23.0 -0.7
OK045 Sg Sg 04 17 33.6 -0.6
OK044 Pawnee Station 0.81 40 Pg Pg 04 17 22.9 -0.8
OK044 Sg Sg 04 17 33.8 -0.4
OK051 E0350 and S346 0.89 33 Pg Pg 04 17 24.5 -0.8
OK051 Sg Sg 04 17 36.0 -0.9
X34A Smith Ranch, M 1.20 195 Pg Pg 04 17 30.3 -0.9
X34A IAmb_Lg 04 17 46.3
comp=Z,8.0nm,0.9s
X34A Sg Sb 04 17 47.2 +0.3
OK032 Salt Plains WL 1.21 330 Pg Pg 04 17 30.4 -1.1
KAN13 South Haven SW 1.25 359 Pg Pb 04 17 30.8 -1.4
KAN13 Sg Sg 04 17 48.2 -0.2
KAN14 Manchester OK 1.27 341 Pg Pn 04 17 31.0 -1.4
OK038 West end E0370 1.27 305 Pg Pn 04 17 30.1 -2.4
KAN17 Caldwell West 1.31 349 Pn 04 17 31.6 -1.3
TUL1 Leonard 1.35 83 Pn 04 17 31.7 -1.8
T35A Sooner Cattle 1.38 33 Pn 04 17 32.6 -1.3
KAN09 Caldwell North 1.38 354 Pn 04 17 32.9 -1.1
U32A Winter Ranch, 1.41 297 Pn 04 17 33.0 -1.3
KS20 Mayfield South 1.47 357 Pn 04 17 33.9 -1.3
WMOK Wichita Mounta 1.49 227 Pn 04 17 34.5 -1.1
X37A Clayton 2.06 124 Pn Pn 04 17 43.0 -0.3
MIAR Mount Ida 3.39 110 Pn Pn 04 18 01.1 -0.5

*IDC **23** 04:19:15.7±0.8,55.′17S×27.′55W,h0km,mb4.1/7, mbtmp4.1/8,ML3.9/1,MS3.6/1,Error ellipse: s-maj=27.9km s-min=19.1km az=80.0*
ISC 23 04:19:17.1±0.7,**55.′1S**±0.′1×**27.′6W**±0.′2,**h10**km,**n15,** σ**2**°**02/14,mb4.2/7,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.94**	**161**	P	**P**	**04 23 28.8**	**+1.9**
VNA2	**Neumayer--Watz** baz=312,slow=13	**18.14**	**159**	P	**Pn**	**04 23 26.1**	**-2.6**
SNAA	**Sanae**	**19.68**	**157**	P	**Pn**	**04 23 45.9**	**-1.6**
SNAA	**Sanae** 0.4nm,0.3s,baz=297,slow=12,SNR=20 3.7nm,0.7s	**19.68**	**157**	P	**Pn**	**04 23 46.0**	**-1.4**
TROLL	**Troll, Antarti**	**21.18**	**154**	P	**P**	**04 24 07.2**	**+4.9**
QSPA	**South Pole Qui** 1.5nm,0.6s,baz=195,slow=3.5,SNR=17 1.5nm,0.6s	**35.13**	**180**	P	**P**	**04 26 10.1**	**-0.3**
CPUP	**Villa Florida** 2.1nm,0.8s,baz=150,slow=9.4,SNR=4.1 2.1nm,0.8s	**36.03**	**311**	P	**P**	**04 26 17.9**	**-0.4**
VNDA	**Vanda** 0.9nm,0.8s,baz=228,slow=4.8,SNR=6.8 0.9nm,0.8s	**47.49**	**183**	P	**P**	**04 27 50.8**	**-0.6**
LBTB	**Lobatse** 2.2nm,0.8s,baz=106,slow=20,SNR=3.6 2.2nm,0.8s	**48.97**	**74**	P	**P**	**04 28 01.9**	**-1.7**
LPAZ	**La Paz** 2.1nm,0.8s,baz=143,slow=5.3,SNR=7.8 2.1nm,0.8s	**49.66**	**305**	P	**P**	**04 28 09.8**	**+0.3**
LSZ	**Lusaka** comp=Z,48nm,18.9s,baz=156,slow=33	**58.26**	**70**	LR	LR	04 51 08.0	
DBIC	**Dimbokro** 2.6nm,0.8s,baz=169,slow=5.2,SNR=1.7 2.6nm,0.8s	**64.42**	**25**	P	**P**	**04 29 53.6**	**+0.3**
TORD	**Torodi Ar. Bea** 3.4nm,0.8s,baz=200,slow=6.0,SNR=13 3.4nm,0.8s	**72.36**	**30**	P	**P**	**04 30 44.1**	**+1.1**
ILAR	**Eielson Array** 2.5nm,0.8s,baz=130,slow=2.1,SNR=20	**149.32**	**313**	PKPbc	**PKiKP**	**04 39 05.1**	**-0.6**
SONM	**Songino Array** 0.5nm,0.4s,baz=204,slow=3.2,SNR=1.8	**150.89**	**85**	PKPbc	**PKiKP**	**04 39 10.2**	**+0.6**

*IDC **23** 04:37:12.8±3.8,14.′28N×51.′60E,h0km,mb3.7/6, mbtmp3.7/6,MS3.4/3,Error ellipse: s-maj=102.0km s-min=29.6km az=160.0*
*OMAN **23** 04:37:16.3±0.8,14.′49N×51.′69E,h10km,ml3.4/5,Error ellipse: s-maj=30.3km s-min=10.8km az=296.0*
ISC 23 04:37:15.2±1.6,**14.′5N**±0.′2×**51.′6E**±0.′2,**h10**km,**n14,** σ**0**°**61/16,mb3.6/6,MS3.2/3,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTO	**Aybut** SNR=5.7	**3.32**	**30**	P	**Pn**	**04 38 07.5**	**+0.2**
ABTO				S	**Sn**	**04 38 47.2**	**+0.3**
RBK	**Rabkut** SNR=23	**3.94**	**39**	P	**Pn**	**04 38 16.2**	**+0.3**
RBK				S	**Sn**	**04 39 02.2**	**0.0**
WHFO	**Wadi Hawf** SNR=6.2	**4.03**	**31**	P	**Pn**	**04 38 17.1**	**0.0**
WHFO				S	**Sn**	**04 39 03.2**	**-1.3**
DMTO	**DMTO** SNR=14	**4.58**	**45**	P	**Pn**	**04 38 23.9**	**-0.7**
DMTO				S	**Sn**	**04 39 18.0**	**+0.1**
DOK	**Doka** SNR=14	**4.80**	**30**	P	**Pn**	**04 38 27.9**	**+0.2**
DOK				S	**Sn**	**04 39 22.7**	**-0.7**
KBZ	**Khabaz** comp=Z,36nm,18.5s,baz=310,slow=40	**30.10**	**347**	LR	LR	04 57 36.0	
AAK	**Ala-Archa** comp=Z,43nm,18.7s,baz=331,slow=38	**34.32**	**31**	LR	LR	04 58 59.9	
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=218,slow=8.9,SNR=6.1 0.4nm,0.5s	**41.19**	**32**	P	**P**	**04 45 00.6**	**+0.5**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=233,slow=7.0,SNR=1.9 0.4nm,0.3s	**47.23**	**26**	P	**P**	**04 45 47.8**	**-0.5**
TORD	**Torodi Ar. Bea** 0.6nm,0.8s,baz=94,slow=6.5,SNR=3.8 0.6nm,0.8s	**48.39**	**275**	P	**P**	**04 45 56.9**	**-1.0**
FINES	**FINESS Array B** 3.4nm,0.9s,baz=133,slow=13,SNR=4.9 3.4nm,0.9s	**50.38**	**344**	P	**P**	**04 46 12.7**	**+0.3**
ESDC	**Sonseca Array** 0.4nm,0.7s,baz=98,slow=7.0,SNR=1.9 0.4nm,0.7s	**54.49**	**309**	P	**P**	**04 46 44.0**	**+0.6**
SONM	**Songino Array** 0.2nm,0.5s,baz=226,slow=7.7,SNR=3.0 0.2nm,0.5s	**55.98**	**42**	P	**P**	**04 46 54.4**	**+0.3**
RES	**Resolute Bay** comp=Z,36nm,18.6s,baz=112,slow=39	**88.59**	**352**	LR	LR	05 34 32.2	

*MEX **23** 05:19:36.0±0.6,32.′10N×116.′09W,h16km±23km,MD3.5*
ECX 23 05:19:20.1±0.6,**31.′22N**×**117.′86W,h10**km±21km,**MD2.4, ML2.6,3C-3D,Off west coast of Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCX	**Cicese**	**1.21**	**57**	*eP*	Pn	05 19 41.8	-1.2
CCX				*eS*	Sb	05 19 56.9	-1.8
CCX				IAML		05 19 57.5	
	comp=N,297nm,0.1s						
CCX				⇑*e*		05 19 57.5	
SVX	**San Vicente**	**1.38**	**85**	*eP*	Pn	05 19 43.8	-1.6
CBX	**Cerro Bola**	**1.49**	**43**	*eP*	Pn	05 19 45.2	-1.8
CBX				*eS*	Sn	05 19 51.7	-15
CBX	**Cerro Bola**	**1.49**	**43**	*eP*	Pn	05 19 45.6	-1.4
TJIG	**Tijuana**	**1.57**	**39**	*eP*	Pn	05 19 46.0	-2.2
TJIG				*eS*	Sn	05 19 52.7	-16
TJIG	**Tijuana**	**1.57**	**39**	*eP*	Pn	05 19 46.6	-1.5
SDRC	**San Diego Road**	**1.70**	**27**	*eP*	Pn	05 19 48.5	-1.4
SJX	**San Joaquin**	**1.71**	**71**	*eP*	Pn	05 19 50.5	+0.6
SJX				IAML		05 20 15.3	
	comp=N,54nm,0.2s						
SJX				⇑*e*		05 20 15.3	
SJX				IAML		05 20 16.9	
	comp=E,63nm,0.1s						
SJX				*e*		05 20 16.9	
BAR	**Barrett** comp=N,41nm,0.2s	**1.77**	**34**	IAML		05 20 14.9	
BAR				⇓*e*		05 20 14.9	
BAR				⇓*e*		05 20 17.6	
BAR				IAML		05 20 17.6	
	comp=E,52nm,0.2s						
SQX	**San Quintin**	**1.82**	**110**	*eP*	Pn	05 19 50.5	-1.0
SQX				⇓*e*		05 20 20.2	
SQX				IAML		05 20 20.2	
	comp=N,67nm,0.3s						
SQX				IAML		05 20 20.3	
	comp=E,41nm,0.4s						
SQX				⇑*e*		05 20 20.3	
ALAMX	**Rancho Alamar**	**1.99**	**66**	*eP*	Pn	05 19 53.7	-0.2
SPIG	**San Pedro Mart**	**2.06**	**94**	*eP*	Pn	05 19 53.9	-1.1
SPIG				*eS*	Sn	05 20 06.6	-14
SPIG	**San Pedro Mart**	**2.06**	**94**	*eP*	Pn	05 19 54.5	-0.6

IDC 23 05:31:04.1±9.7,**15.′68S**×**179.′40W,h0**km,**mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=439.8km s-min=33.5km az=141.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.0nm,1.1s,baz=88,slow=7.5,SNR=5.9 1.0nm,1.1s	**44.15**	**257**	P	P	05 39 14.7	-0.2
ASAR	**Alice Springs** 0.5nm,0.3s,baz=84,slow=8.7,SNR=14 0.5nm,0.3s	**44.53**	**252**	P	P	05 39 17.9	0.0
ILAR	**Eielson Array** 0.4nm,0.5s,baz=208,slow=7.1,SNR=12 0.4nm,0.5s	**83.95**	**13**	P	P	05 43 35.7	0.0

*KRNET **23** 05:31:10.4±0.1,41.′50N×77.′90E,h29km,mb2.4*
*NNC **23** 05:31:12.8±1.0,42.′13N×78.′10E,h0km,mb3.1,mpv2.9, Error ellipse: s-maj=7.8km s-min=3.7km az=173.0*
*SOME **23** 05:31:12.2,42.′00N×78.′12E,h30km*
ISC 23 05:31:12.0±1.3,**41.′77N**±0.′08×**77.′99E**±0.′04,**h24**km±9km, **n30,** σ**1**°**92/50,6C-6D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy** baz=42	**0.14**	**253**	⇓*iP*	**Pb**	**05 31 16.9**	**-0.6**
TARG				⇓*iS*	**Sb**	**05 31 21.9**	**+0.8**
ULHL	**Ulahol** baz=2.0	**1.39**	**291**	⇓*iP*	**Pb**	**05 31 36.7**	**-0.7**
ULHL				⇓*iS*	**Sb**	**05 31 55.7**	**+1.0**
NRN	**Naryn** baz=68	**1.53**	**258**	⇑*iP*	**Pb**	**05 31 36.7**	**-3.2**
NRN				⇑*iS*	**Sb**	**05 31 55.9**	**-3.1**
MDOK	**Medeo** 2.3nm,0.1s	**1.55**	**334**	*eP*	**Pn**	**05 31 36.9**	**-1.5**
MDOK				*eS*	**Sn**	**05 31 54.7**	**-3.2**
MDOK	**Medeo** 2.3nm,0.1s	**1.55**	**334**	Pg	**Pn**	**05 31 36.9**	**-1.5**
MDOK				Lg	Lg	05 31 54.7	
UZB	**Uzynbulak** 0.6nm,0.1s	**1.57**	**29**	*eP*	**Pn**	**05 31 35.5**	**-3.1**
UZB				*eS*	Sn	05 31 52.3	-6.0
SHLS	**Shalkode** 2.3nm,0.1s	**1.76**	**38**	*eP*	**Pn**	**05 31 43.6**	**+2.4**
SHLS				*eS*	**Sn**	**05 32 06.3**	**+3.4**
SHLS	**Shalkode** 2.3nm,0.1s	**1.76**	**38**	P	**Pn**	**05 31 43.6**	**+2.4**
SHLS				S	**Sn**	**05 32 05.7**	**+2.7**
KPKS	**Kokpek** 0.7nm,0.1s	**1.77**	**17**	*eP*	**Pn**	**05 31 38.9**	**-2.3**
KPKS				*eS*	Sn	05 31 58.1	-4.9
KPKS	**Kokpek** 0.7nm,0.1s	**1.77**	**17**	P	**Pn**	**05 31 38.9**	**-2.3**
KPKS				S	Sn	05 31 58.2	-4.9
MTBS	**Maitube** 1.2nm,0.1s	**1.78**	**320**	*eP*	**Pn**	**05 31 41.6**	**+0.2**
MTBS				*eS*	**Sn**	**05 32 02.6**	**-0.7**
KST	**Kastek** 1.5nm,0.2s	**1.96**	**311**	*eP*	**Pn**	**05 31 45.5**	**+1.6**
KST				*eS*	**Sn**	**05 32 09.8**	**+1.8**
KST	**Kastek** 1.5nm,0.2s	**1.96**	**311**	P	**Pn**	**05 31 45.5**	**+1.6**
KST				S	**Sn**	**05 32 10.1**	**+2.2**
TKM2	**Tokmak 2** baz=10.0	**2.11**	**304**	⇓*iP*	**Pn**	**05 31 47.8**	**+1.7**
TKM2				⇓*iS*	**Sb**	**05 32 14.9**	**-0.7**
KTBS	**Karatobe** 2.0nm,0.2s	**2.16**	**334**	*eP*	**Pn**	**05 31 47.6**	**+1.0**
KTBS				*eS*	**Sn**	**05 32 13.0**	**+0.2**
KTBS	**Karatobe** 2.0nm,0.2s	**2.16**	**334**	P	**Pn**	**05 31 47.6**	**+1.0**
KTBS				S	**Sn**	**05 32 13.0**	**+0.2**
DGS	**Degeres** 1.8nm,0.1s	**2.20**	**313**	*eP*	**Pb**	**05 31 50.2**	**-1.0**
DGS				*eS*	**Sn**	**05 32 17.6**	**+3.9**
DGS	**Degeres** 1.8nm,0.1s	**2.20**	**313**	Pg	**Pb**	**05 31 50.2**	**-1.0**
DGS				Lg	Lg	05 32 17.3	
BLB	**Baldybastay** 2.8nm,0.2s	**2.35**	**9**	*eP*	**Pn**	**05 31 49.1**	**-0.2**
BLB				*eS*	**Sn**	**05 32 15.7**	**-1.8**
BLB	**Baldybastay** 2.8nm,0.2s	**2.35**	**9**	Pg	**Pn**	**05 31 49.1**	**-0.2**
BLB				Lg	Lg	05 32 15.7	
KBK	**Karagaybulak** baz=99	**2.42**	**292**	⇑*iP*	**Pn**	**05 31 51.3**	**+0.9**
KBK				⇑*iS*	**Sn**	**05 32 21.2**	**+1.8**
ARXS	**Arharly** 1.8nm,0.3s	**2.44**	**357**	*eP*	**Pn**	**05 31 50.8**	**+0.3**
ARXS				*eS*	**Sn**	**05 32 18.7**	**-1.0**
ARXS	**Arharly** 1.8nm,0.3s	**2.44**	**357**	Pg	**Pn**	**05 31 50.8**	**+0.3**
ARXS				Lg	Lg	05 32 19.6	
KUU	**Kurty** 0.4nm,0.1s	**2.44**	**331**	*eP*	**Pn**	**05 31 52.2**	**+1.8**
KUU				*eS*	**Sn**	**05 32 21.1**	**+1.5**
KUU	**Kurty** 0.4nm,0.1s	**2.44**	**331**	Pg	**Pn**	**05 31 52.2**	**+1.8**
KUU				Lg	Lg	05 32 21.1	
KRBS	**Karabastau** 1.1nm,0.3s	**2.57**	**319**	*eP*	**Pn**	**05 31 54.9**	**+2.7**
KRBS				*eS*	**Sn**	**05 32 25.8**	**+3.0**
KRBS	**Karabastau** 1.1nm,0.3s	**2.57**	**319**	Pg	**Pn**	**05 31 54.9**	**+2.7**
KRBS				Lg	Lg	05 32 26.5	
UCH	**Uchtor** baz=87	**2.63**	**281**	⇑*iP*	**Pn**	**05 31 53.5**	**+0.1**
UCH				⇑*iS*	**Sn**	**05 32 25.0**	**+0.2**
DJR	**Jarkent** 0.9nm,0.1s	**2.88**	**27**	*eP*	**Pn**	**05 31 57.9**	**+1.4**
DJR				*eS*	**Sn**	**05 32 30.8**	**+0.4**
DJR	**Jarkent** 0.9nm,0.1s	**2.88**	**27**	Pg	**Pn**	**05 31 57.9**	**+1.4**
DJR				Lg	Lg	05 32 30.8	

*IDC **23** 05:40:20.9±2.8,23.′82S×179.′68W,h520km±25km,mb3.3/3, mbtmp4.3/5,Error ellipse: s-maj=44.5km s-min=29.1km az=129.0*
ISC 23 05:40:20.3±1.9,**23.′9S**±0.′1×**179.′7W**±0.′3,**h512**km,**n6,** σ**0**°**90/6,mb3.8/3,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 7.0nm,0.4s,baz=186,slow=18,SNR=23	**6.49**	**340**	P	**P**	**05 42 02.2**	**+0.2**
URZ	**Urewera** 3.1nm,0.3s,baz=29,slow=5.7,SNR=7.4	**14.59**	**190**	P	**P**	**05 43 26.1**	**+0.2**
CTA	**Charters Tower** 6.1nm,0.4s,baz=97,slow=9.2,SNR=16 6.1nm,0.4s	**31.79**	**270**	P	**P**	**05 46 03.5**	**+0.9**
ASAR	**Alice Springs** 0.9nm,0.4s,baz=95,slow=7.4,SNR=22 0.9nm,0.4s	**42.35**	**261**	P	**P**	**05 47 28.7**	**-0.6**
WRA	**Warramunga Arr** 1.2nm,0.4s,baz=94,slow=8.3,SNR=47 1.2nm,0.4s	**42.72**	**266**	P	**P**	**05 47 31.2**	**-1.0**
AKASG	**Malin Array Be** 0.7nm,0.3s,baz=46,slow=4.5,SNR=9.0	**145.13**	**328**	PKPbc	**PKPdf**	**05 58 58.6**	**-0.3**

*DJA **23** 05:45:43.6±0.5,8.°S±2.°×10.°7E±.°,h19km±4km,M4.8/17, mB5.5/7,mb4.7/17,MLv4.8/17,Mw(mB)5.0/7*
*NEIC **23** 05:45:43.1±1.6,7.°52S±0.°04×107.°01E±0.°08,h38km±7km, mb4.5/41,Error ellipse: s-maj=11.3km s-min=5.2km az=78.0*
*IDC **23** 05:45:47.8±1.7,7.°64S×107.°01E,h83km±13km,mb4.0/16, mbtmp4.4/18,MS3.4/19,Error ellipse: s-maj=26.1km s-min=11.5km az=57.0*
ISC 23 05:45:44.9±0.8,**7.°80S**±0.°06×**107.°04E**±0.°04,**h59**km±7km, **n132,** σ**1**°**70/124,mb4.4/31,MS3.4/17,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.49**	**10**	P	**Pn**	**05 45 56.3**	**-0.4**
CNJI				S	**Sn**	**05 46 04.8**	**-0.4**
SKJI	**Sukabumi**	**0.92**	**328**	P	**Pn**	**05 46 02.3**	**+0.4**
SKJI				S	**Sn**	**05 46 15.2**	**+0.8**
LEM	**Lembang** 4μm,0.4s,baz=123,slow=2.3,SNR=287	**1.12**	**31**	P	**Pn**	**05 46 06.0**	**+1.4**
LEM				S	**Sn**	**05 46 22.7**	**+3.4**
LEM	**Lembang** 4μm,0.7s,baz=332,slow=23,SNR=14	**1.12**	**31**	P	**Pn**	**05 46 06.0**	**+1.4**
LEM				S	**Sn**	**05 46 23.3**	**+4.0**
TNG	**Tangerang**	**1.66**	**346**	P		05 46 17.7	
TNG				P	**Pn**	**05 46 13.9**	**+2.1**
JCJI	**Jatiwangi**	**1.78**	**43**	P	**Pn**	**05 46 13.0**	**-0.4**
JCJI				S	**Sn**	**05 46 33.3**	**-1.7**
SBJI	**Serang**	**1.90**	**331**	P	**Pn**	**05 46 17.1**	**+2.1**
SBJI				S	**Sn**	**05 46 41.1**	**+3.3**
SCJI	**Gunung Srandil**	**2.11**	**87**	P	**Pn**	**05 46 17.8**	**-0.1**
SCJI				S	**Sn**	**05 46 42.8**	**-0.2**
CTJI	**Waduk Cacaban**	**2.26**	**70**	P	**Pn**	**05 46 21.3**	**+1.3**
CTJI				S	**Sn**	**05 46 48.5**	**+1.7**
BLSI	**Bandar Lampung**	**3.00**	**323**	S	Sn	05 47 28.0	+23
KASI	**Kota Agung**	**3.39**	**312**	P	**Pn**	**05 46 37.8**	**+2.4**
KASI				S	**Sn**	**05 47 15.4**	**+1.0**
SMRI	**Semarang**	**3.45**	**78**	P	**Pn**	**05 46 34.7**	**-1.6**
SMRI	**Semarang**	**3.45**	**78**	P	**Pn**	**05 46 37.9**	**+1.7**
SMRI				S	**Sn**	**05 47 17.8**	**+1.9**
UGM	**Wanagama**	**3.45**	**92**	Pn	**Pn**	**05 46 35.6**	**-0.7**
UGM	**Wanagama**	**3.45**	**92**	P	**Pn**	**05 46 35.5**	**-0.7**
UGM				S	**Sn**	**05 47 13.7**	**-2.2**
KLI	**Kotabumi**	**3.63**	**323**	P	**Pn**	**05 46 41.6**	**+2.9**
LWLI	**Liwa**	**4.05**	**313**	P	**Pn**	**05 46 47.3**	**+2.8**
PCJI	**Pacitan**	**4.12**	**96**	P	**Pn**	**05 46 45.1**	**-0.2**
MNAI	**Manna** 2.1nm318nm,1.1s	**5.31**	**310**	P	**Pn**	**05 47 03.9**	**+2.2**
KRKI	**Karangkates** 0.7nm1μm40nm,0.5s	**5.37**	**94**	P	**Pn**	**05 47 02.3**	**-0.2**
PPBI	**Pangkal Pinang** 0.7nm17μm71nm,0.7s	**5.67**	**351**	P	**Pn**	**05 47 09.3**	**+2.7**
JAGI	**Jajag, Banyuwa**	**7.07**	**96**		**Pn**	**05 47 24.7**	**-1.2**
JAGI	**Jajag, Banyuwa** 0.6nm2μm82nm,0.7s	**7.07**	**96**	P	**Pn**	**05 47 26.8**	**+0.9**
DSRI	**Dabo** 0.2nm51nm,1.4s	**7.67**	**341**	P	**Pn**	**05 47 37.3**	**+3.2**
RTBI	**Rangdo, Negare**	**7.85**	**95**	P	**Pn**	**05 47 38.4**	**+1.9**
SRBI	**Singaraja**	**8.10**	**93**	P	**Pn**	**05 47 42.0**	**+2.1**
PPSI	**Pulau Pagai**	**8.60**	**305**	P	**Pn**	**05 47 45.7**	**-1.1**
KSM	**Kuching**	**9.77**	**20**	Pn	Pn	05 47 57.3	-5.5
TWSI	**Taliwang, Sumb** 33nm,0.5s	**9.78**	**96**	P	**Pn**	**05 48 03.4**	**+0.4**
PLAI	**Plampang** 596nm45nm,0.5s	**10.67**	**96**	P	**Pn**	**05 48 14.6**	**-0.5**
PBSI	**Pulau Batu**	**11.64**	**311**	P	**Pn**	**05 48 27.3**	**-1.0**
KAPI	**Kappang** 3.5nm,0.7s,baz=257,slow=18,SNR=2.2	**12.93**	**78**	P	**Pn**	**05 48 47.1**	**+1.2**
KAPI				LR	LR	05 54 29.6	
	comp=Z,134nm,18.5s,baz=264,slow=40						
KAPI	**Kappang**	**12.93**	**78**	Pn	**Pn**	**05 48 43.2**	**-2.8**
GSI	**Gunungsitoli**	**13.07**	**313**	Pn	Pn	05 48 43.5	-4.4
RPSI	**Rantau Prapat**	**13.20**	**322**	Pn	Pn	05 48 44.1	-5.5
BKSI	**Bulukumba** 24nm,0.7s	**13.22**	**80**	P	**Pn**	**05 48 51.0**	**+1.0**
PSI	**Prapat** comp=Z,108nm,18.3s,baz=72,slow=41	**13.28**	**322**	LR	LR	05 54 44.4	
BSSI	**Bau Bau, Buton** 900nm51nm,0.9s	**13.45**	**84**	P	**Pn**	**05 48 52.5**	**-0.6**
MMRI	**Maumere**	**15.06**	**94**		**Pn**	**05 49 13.8**	**-0.6**
MMRI	**Maumere** 65nm,0.5s	**15.06**	**94**	P	**Pn**	**05 49 15.8**	**+1.4**
MPSI	**Mapaga** 4μm18nm,1.1s	**15.15**	**58**	P	**P**	**05 49 18.5**	**-0.9**
GIRL	**Giralia**	**16.30**	**156**	Pn	**Pn**	**05 49 27.6**	**-2.5**
GIRL				IAmb	IAmb	05 49 29.8	
	comp=Z,45nm,0.9s						
TOLI2	**Tolitoli**	**16.31**	**58**		**Pn**	**05 49 27.8**	**-2.5**
LHMI	**Lhok Sumawe**	**16.40**	**322**	Pn	**Pn**	**05 49 26.1**	**-5.2**
BATI	**Baumata** comp=Z,31nm,0.5s,baz=233,slow=5.1,SNR=1.7	**16.59**	**100**	P	**P**	**05 49 35.1**	**-0.4**
MRSI	**Marisa** comp=Z,22nm,0.8s	**16.98**	**62**	P	**P**	**05 49 40.9**	**+1.2**
LUWI	**Luwuk**	**17.05**	**68**	P	**Pn**	**05 49 37.2**	**-2.3**
LUWI				IAmb	IAmb	05 49 46.1	
	comp=Z,55nm,0.8s						
SOEI	**Soe**	**17.14**	**98**	P	**P**	**05 49 41.0**	**-0.6**
SOEI				IAmb	IAmb	05 50 04.8	
	comp=Z,51nm,0.9s						
SOEI	**Soe** comp=Z,62nm,0.9s	**17.14**	**98**	P	**Pn**	**05 49 40.0**	**-0.7**
MYLDM	**Lahad Datu**	**17.23**	**42**	P	**Pn**	**05 49 38.6**	**-3.1**
GTOI	**Gorontalo** comp=Z,5.4nm,0.5s	**17.99**	**63**	P	**Pn**	**05 49 53.2**	**+2.1**
MBWA	**Marble Bar**	**18.08**	**139**	P	**Pn**	**05 49 52.1**	**0.0**
PSA00	**Pilbara Seismi**	**18.45**	**139**	P	**Pn**	**05 49 56.3**	**-0.3**
PSA00	**Pilbara Seismi**	**18.45**	**139**	P	**Pn**	**05 49 56.2**	**-0.3**
PSA00				IAmb	IAmb	05 50 05.5	
	comp=Z,3.6nm,0.8s						
SANI	**Sanana**	**19.71**	**74**	P	**P**	**05 50 09.4**	**-0.4**
NLAI	**Namlea** comp=Z,91μmcomp=Z,25nm,0.5s	**20.47**	**78**	P	Pn	05 50 20.0	-0.6
KNRA	**Kununurra** comp=Z,25nm,0.8s	**22.65**	**112**	P	**P**	**05 50 40.3**	**-1.1**
KNRA				IAmb	IAmb	05 50 42.9	
MORW	**Morawa**	**22.80**	**159**	P	**P**	**05 50 43.7**	**+0.9**
MORW				IAmb	IAmb	05 51 04.7	
	comp=Z,23nm,1.4s						
DAV	**Davao City (W)** comp=Z,48nm,19.5s,baz=159,slow=43	**23.66**	**52**	LR	LR	06 02 39.4	
MTN	**Manton Dam** comp=Z,30nm,1.2s	**24.22**	**104**	P	**P**	**05 50 57.1**	**+0.7**
MTN				IAmb	IAmb	05 51 15.3	
FAKI	**Fak Fak**	**25.55**	**80**	P	**P**	**05 51 06.5**	**-2.0**
CMAR	**Chiang Mai Arr** comp=Z,1.6nm,0.4s,baz=180,slow=9.1,SNR=9.1	**27.28**	**343**	P	**P**	**05 51 22.0**	**-2.0**
CMAR				LR	LR	06 03 02.0	
	comp=Z,41nm,18.0s,baz=150,slow=38 comp=Z,1.6nm,0.4s						
CHTO	**Chiang Mai**	**27.62**	**343**	P	**P**	**05 51 23.7**	**-3.3**
H01W3	**Cape Leeuwin H** baz=345,slow=72,SNR=11	**27.74**	**167**	T	T	06 20 59.2	
H01W1	**Cape Leeuwin H** baz=345,slow=72,SNR=5.1	**27.75**	**167**	T	T	06 21 09.3	
H01W2	**Cape Leeuwin H** baz=345,slow=72,SNR=12	**27.75**	**167**	T	T	06 20 58.9	
WB0	**Warramunga Arr** comp=Z,5.4nm,0.9s	**29.05**	**117**	P	**P**	**05 51 40.6**	**+0.7**
WB0				IAmb	IAmb	05 51 41.7	
WRA	**Warramunga Arr** comp=Z,4.0nm,0.8s,baz=290,slow=10,SNR=15	**29.07**	**117**	P	**P**	**05 51 40.0**	**0.0**
WRA				PcP	**PcP**	**05 54 48.2**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=299,slow=2.1,SNR=5.7 comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**29.07**	**117**	P	**P**	**05 51 40.9**	**+0.9**

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WB2  Warramunga Arr  29.08 117  P     P     05 51 40.8 +0.7
WB2                             IAmb  IAmb  05 51 41.5
     comp=Z,5.1nm,0.9s
WR0  Warramunga Arr  29.25 117  P     P     05 51 42.6 +1.0
WR0                             IAmb  IAmb  05 51 43.6
     comp=Z,9.7nm,1.1s
FORT Forrest         30.15 142  P     P     05 51 50.9 +1.5
AS31 Alice Springs   30.20 125  P     P     05 51 50.6 +0.6
ASAR Alice Springs   30.20 125  P     P     05 51 51.0 +0.9
     comp=Z,3.4nm,0.9s,baz=302,slow=8.3,SNR=27
ASAR                            PcP   PcP   05 54 50.6 +0.6
     comp=Z,1.0nm,0.8s,baz=317,slow=3.4,SNR=5.8
ASAR                            LR    LR    06 04 29.4
     comp=Z,44nm,21.2s,baz=338,slow=37
     comp=Z,3.4nm,0.9s
ASAR Alice Springs   30.20 125  P     P     05 51 50.9 +0.9
PALK Pallekele       30.23 299  LR    LR    06 02 29.6
     comp=Z,49nm,21.0s,baz=230,slow=33
BRDH Bariadhala      33.83 334  LR    LR    06 07 13.6
     comp=Z,71nm,18.6s,baz=214,slow=38
H08S2 Diego Garcia H 34.23 268  T     T     06 29 52.5
     baz=92,slow=75,SNR=30
H08S3 Diego Garcia H 34.24 268  T     T     06 29 55.5
     baz=92,slow=75,SNR=30
H08S1 Diego Carcia H 34.25 268  T     T     06 29 54.4
     baz=92,slow=75,SNR=10.0
PZH  PanZhiHua       34.48 352  P     P     05 52 30.0 +2.5
COEN Coen            35.98 103  P     P     05 52 40.8 +0.4
BBOO Buckleboo       36.64 137  P     P     05 52 47.1 +1.1
BBOO                            IAmb  IAmb  05 53 07.9
     comp=Z,6.2nm,1.0s
CTA  Charters Tower  39.86 112  LR    LR    06 09 51.9
     comp=Z,32nm,20.6s,baz=263,slow=36
CTAO Charters Tower  39.86 112  P     P     05 53 14.7 +1.5
CTAO                            IAmb  IAmb  05 53 16.1
     comp=Z,9.0nm,0.8s
STKA Stephens Creek  40.08 131  P     P     05 53 16.1 +1.3
     comp=Z,23nm,0.7s,baz=304,slow=8.8,SNR=59
STKA                            LR    LR    06 10 51.0
     comp=Z,37nm,21.2s,baz=215,slow=37
     comp=Z,23nm,0.7s
STKA Stephens Creek  40.08 131  P     P     05 53 16.5 +1.7
STKA                            IAmb  IAmb  05 53 18.1
     comp=Z,5.5nm,0.8s
EIDS Eidsvold        45.43 118  P     P     05 53 59.5 +1.2
EIDS                            IAmb  IAmb  05 54 05.4
     comp=Z,12nm,1.2s
CAN  Canberra        47.15 132  P     P     05 54 14.4 +2.7
HHC  Hu-ho-hao-te    48.58  5  eP     P     05 54 24.1 +1.5
KSRS Korea Array     49.07  22 P     P     05 54 25.7 -0.6
     comp=Z,1.7nm,0.8s,baz=209,slow=9.7,SNR=2.3
     comp=Z,1.7nm,0.8s
WMQ  Urumqi          54.29 343  eP    P     05 55 06.3 +1.1
WMQ                             pP    pP    05 55 16.5 -3.9
WMQ                             sP    sP    05 55 20.3 -6.7
KSH  Kashi           55.17 331  P     P     05 55 12.8 +1.0
SONM Songino Array   55.39 359  P     P     05 55 12.5 -0.7
     comp=Z,0.5nm,0.4s,baz=175,slow=7.4,SNR=3.6
SONM                            PcP   PcP   05 56 13.6 +0.7
     comp=Z,1.1nm,0.5s,baz=177,slow=3.6,SNR=5.8
SONM                            ScP   ScP   06 00 05.1 -1.8
     comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=3.8
SONM                            LR    LR    06 22 19.7
     comp=Z,29nm,18.0s,baz=155,slow=40
     comp=Z,0.5nm,0.4s
USRK Ussuriysk Ar.   56.46  21 P     P     05 55 18.6 -2.0
     comp=Z,2.3nm,0.6s,baz=183,slow=6.6,SNR=4.9
USRK                            LR    LR    06 23 00.2
     comp=Z,15nm,18.1s,baz=56,slow=40
     comp=Z,2.3nm,0.6s
USRK Ussuriysk Ar.   56.46  21 P     P     05 55 19.9 -0.8
AAK  Ala-Archa       58.30 332  LR    LR    06 25 17.5
     comp=Z,33nm,18.5s,baz=94,slow=41
CASY Casey           58.44 178  P     P     05 55 35.9 +1.5
CASY                            IAmb  IAmb  05 56 03.5
     comp=Z,5.7nm,1.4s
MK31 Makanchi Array  58.65 340  P     P     05 55 34.4 -1.7
MK31                            IAmb  IAmb  05 55 37.6
     comp=Z,2.9nm,1.1s
MKAR Makanchi Array  58.65 340  P     P     05 55 34.0 -2.1
     comp=Z,2.8nm,0.7s,baz=145,slow=7.7,SNR=21
MKAR                            LR    LR    06 24 12.2
     comp=Z,37nm,18.2s,baz=185,slow=39
     comp=Z,2.8nm,0.7s
VOI  Vohitsoka       59.56 249  P     P     05 55 39.7 -3.4
KURK Kurchatov       63.26 340  P     P     05 56 06.0 -1.2
ZAA0 Zalesovo Array  64.31 346  P     P     05 56 12.2 -1.9
ZALV Zalesovo Beam   64.31 346  P     P     05 56 11.6 -2.5
     comp=Z,0.7nm,0.3s,baz=73,slow=5.0,SNR=5.0
     comp=Z,0.7nm,0.3s
ZALV Zalesovo Beam   64.31 346  P     P     05 56 12.0 -2.1
GEYT Alibeck         64.38 319  P     P     05 56 13.0 -2.0
     comp=Z,3.6nm,0.7s,baz=153,slow=8.3,SNR=6.7
     comp=Z,3.6nm,0.7s
GEYT Alibeck         64.38 319  P     P     05 56 13.0 -2.0
GEYT                            IAmb  IAmb  05 56 16.0
     comp=Z,5.0nm,0.9s
RPZ  Rata Peaks      65.94 134  LR    LR    06 26 38.7
     comp=Z,68nm,18.1s,baz=240,slow=37
BRVK Borovoye        68.18 337  P     P     05 56 38.4 -0.5
BRVK                            IAmb  IAmb  05 56 39.5
     comp=Z,4.3nm,0.6s
BKZ  Black Stump Fm  69.20 129  P     P     05 56 47.3 +1.5
ABKAR Abkulak array  70.11 329  P     P     05 56 50.6 -0.4
YAK  Yakutsk         71.80  11 LR    LR    06 31 31.4
     comp=Z,18nm,21.1s,baz=198,slow=38
VNDA Vanda           75.18 169  P     P     05 57 22.0 +1.3
     comp=Z,1.8nm,0.8s,baz=304,slow=4.2,SNR=13
     comp=Z,1.8nm,0.8s
VNDA Vanda           75.18 169  P     P     05 57 22.2 +1.6
VNDA                            IAmb  IAmb  05 57 26.4
     comp=Z,2.5nm,0.8s
ARU  Arti            75.35 335  LR    LR    06 34 51.9
     comp=Z,38nm,20.6s,baz=312,slow=39
ARU  Arti            75.35 335  P     P     05 57 20.6 -1.3
ARU                             IAmb  IAmb  05 57 22.6
     comp=Z,5.8nm,0.6s
GURO Guroymak-BITLI  75.84 313  P     P     05 57 23.7 -1.6
GURO                            IAmb  IAmb  05 57 28.6
     comp=Z,3.3nm,0.4s
SBA  Scott Base      76.26 169  P     P     05 57 29.7 +2.9
KBZ  Khabaz          77.27 318  P     P     05 57 32.7 -0.3
     comp=Z,1.4nm,0.4s,baz=203,slow=6.4,SNR=3.8
     comp=Z,1.4nm,0.4s
LSZ  Lusaka          77.28 256  LR    LR    06 26 44.5
     comp=Z,31nm,21.0s,baz=170,slow=32
BRTR Keskin Array B  82.39 312  P     P     05 58 01.1 +0.1
     comp=Z,1.8nm,0.6s,baz=138,slow=6.2,SNR=9.6
     comp=Z,1.8nm,0.6s
BRTR Keskin Array B  82.39 312  P     P     05 57 59.7 -1.3
SUR  Sutherland      82.71 238  LR    LR    06 28 40.9
     comp=Z,53nm,21.2s,baz=178,slow=31
AKASG Malin Array Be 88.34 322  P     P     05 58 31.1 +0.8
     comp=Z,0.7nm,0.5s,baz=84,slow=5.0,SNR=9.0
     comp=Z,0.7nm,0.5s
SNAA Sanae           88.78 197  LR    LR    06 32 48.2
     comp=Z,40nm,21.1s,baz=12,slow=32
SNAA Sanae           88.78 197  P     P     05 58 33.2 +1.1
SNAA                            IAmb  IAmb  05 58 35.6
     comp=Z,2.0nm,0.8s
FINES FINESS Array B 92.49 332  P     P     05 58 49.5 +0.2
     comp=Z,7.1nm,1.1s,baz=100,slow=5.8,SNR=5.8
     comp=Z,7.1nm,1.1s
ARCES ARCESS Array B 94.29 340  P     P     05 58 56.9 -0.6
     comp=Z,2.6nm,0.8s,baz=101,slow=6.3,SNR=5.9
     comp=Z,2.6nm,0.8s
NVAR Mina Array Bea  129.08  46 PKP   PKiKP 06 04 47.9 +0.1
     comp=Z,0.4nm,0.7s,baz=236,slow=2.1,SNR=5.4
PDAR Pinedale Array  132.61  37 PKP   PKiKP 06 04 54.5 -0.3
     comp=Z,0.3nm,0.6s,baz=341,slow=2.2,SNR=4.7
TXAR Lajitas Array   144.05  49 PKP   PKPdf 06 05 13.9 -0.9
     comp=Z,0.8nm,0.5s,baz=245,slow=1.5,SNR=18
BDFB Brasilia        146.05 227 PKPbc  PKPab 06 05 20.5 +0.4
     comp=Z,2.8nm,0.7s,baz=174,slow=4.6,SNR=5.5
```

IDC 23 06:00:16.9±5.5, 29°21S×178°65W, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=249.4km s-min=88.0km az=165.0, Kermadec Islands

```
Code Station Name        Δ°   AZ°  Phase ID   Time      Res
                                  Op    ISC  h m s     ISC
ASAR Alice Springs       42.62 266  P     P    06 08 14.7 -0.5
     0.3nm,0.7s,baz=104,slow=6.9,SNR=2.6
     0.3nm,0.7s
WRA  Warramunga Arr      43.50 271  P     P    06 08 22.6 +0.2
     0.2nm,0.4s,baz=111,slow=8.0,SNR=6.3
     0.2nm,0.4s
FINES FINESS Array B     143.84 340 PKP   PKPdf 06 19 52.6 -0.8
     3.1nm,0.9s,baz=62,slow=3.3,SNR=5.4
```

IDC 23 06:07:35.7±10.0, 10°34N×92°31E, h0km, mb3.7/3, mbtmp3.7/3, MS2.6/1, Error ellipse: s-maj=572.2km s-min=30.6km az=60.0, Andaman Islands region

```
Code Station Name        Δ°   AZ°  Phase ID   Time      Res
                                  Op    ISC  h m s     ISC
PALK Pallekele           11.87 256  LR    LR   06 13 57.8
     comp=Z,26nm,18.8s,baz=161,slow=32
H08S3 Diego Garcia H     26.61 229  T     T    06 41 15.0
     baz=46,slow=76,SNR=98
H08S2 Diego Garcia H     26.61 229  T     T    06 41 13.8
     baz=46,slow=76,SNR=100
H08S1 Diego Carcia H     26.63 229  T     T    06 41 12.1
     baz=46,slow=76,SNR=24
MKAR Makanchi Array      37.32 349  P     P    06 14 49.6 -0.1
     0.5nm,0.9s,baz=160,slow=9.2,SNR=2.5
     0.5nm,0.9s
WRA  Warramunga Arr      51.16 126  P     P    06 16 40.8 -0.2
     1.1nm,0.5s,baz=308,slow=8.0,SNR=30
     1.1nm,0.5s
ASAR Alice Springs       52.88 130  P     P    06 16 53.7  0.0
     0.4nm,0.4s,baz=304,slow=6.9,SNR=10
     0.4nm,0.4s
```

*SJA **23** 06:09:13.4±0.7, 30°80S×71°67W, h20km±3km, ML4.3, MW4.1*
*GUC **23** 06:09:17.8±0.8, 30°83S×71°36W, h42km±1km, ML4.4*
*IDC **23** 06:09:17.4±0.8, 30°88S×71°24W, h46km±6km, mb4.0/7, mbtmp4.1/12, ML3.9/5, MS3.2/3, Error ellipse: s-maj=24.0km s-min=19.4km az=99.0*
*NEIC **23** 06:09:17.0±1.8, 30°88S±0°03×71°53W±0°06, h37km±5km, mb4.6/39, Mwr4.0/31, ML4.4(GUC), Error ellipse: s-maj=7.8km s-min=4.6km az=78.0*
*NEIC **23** 06:09:17.3, 30°86S×71°50W, h40km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.95; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-1.21; $M_{r\theta}$0.28; $M_{\theta\phi}$0.06; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.18000×10^{15} NP1:φs15.48000°, δ39.31000°, λ117.90000°. NP2:φs161.10000°, δ55.96000°, λ69.04000°. Principal axes: T 1.0883, Plg71.0000°, Azm22.0000°; N 0.1741, Plg17.0000°, Azm173.0000°; P -1.2624, Plg9.0000°, Azm266.0000°;*
*VAO **23** 06:09:23.0±2.0, 30°62S×70°83W, h55km±8km, mb4.1*

ISC 23 06:09:16.7±0.5, 30°83S±0°02×71°43W±0°04, h37km±1km, n196, σ2°09/226, mb4.5/26, 1C-6D, Near coast of central Chile

```
Code Station Name        Δ°   AZ°  Phase ID   Time      Res
                                  Op    ISC  h m s     ISC
CO06 Fray Jorge          0.23 310  Pn    Pn   06 09 26.2 +0.8
CO06 Fray Jorge          0.23 310 ↑iP    Pn   06 09 26.3 +0.8
CO06                              eS    Sn   06 09 32.7 -0.9
CO06                              IAML       06 09 33.4
     comp=E,25μm,0.2s
CO02 Combarbal           0.53 136           Pn   06 09 28.6 +0.7
CO02                                        Sn   06 09 37.0 +1.3
CO02 Combarbal           0.53 136 ↓iP       Pn   06 09 28.8 +0.9
CO02                              i S       Sn   06 09 36.8 +1.2
CO02 Combarbal           0.53 136 eP        Pn   06 09 23.6 -4.4
CO03 El Pedregal         0.63  91           Pn   06 09 30.3 +0.8
CO03                                        Sn   06 09 39.6 +1.3
CO03 El Pedregal         0.63  91 ↓↓iP      Pn   06 09 30.2 +0.8
CO03                              i S       Sn   06 09 39.3 +1.0
CO03                              IAML       06 09 40.0
     comp=E,28μm,0.3s
CO03 El Pedregal         0.63  91 eP        Pn   06 09 30.0 +0.6
CO03                              eP        Pn   06 09 30.1 +0.6
CO03                              eS        Sn   06 09 39.5 +1.1
CO03                              IAML       06 09 40.7
     comp=Z,9μm,0.3s
GO04 Tololo Observa      0.85  40           Pn   06 09 33.8 +1.4
GO04                                        Sn   06 09 45.9 +2.2
GO04 Tololo Observa      0.85  40 eP        Pn   06 09 33.7 +1.3
GO04                              eS        Sn   06 09 45.5 +1.8
CO05 La Serena           0.92  10 Pn        Pn   06 09 34.6 +1.5
CO05                                        Sn   06 09 46.4 +1.3
CO05 La Serena           0.92  10 ↓↓iP      Pn   06 09 34.8 +1.7
CO05                              eS        Sn   06 09 46.7 +1.7
CO01 Juntas del Tor      1.43  54           Pn   06 09 42.6 +2.3
CO01                                  Sn    Sn   06 10 01.1 +3.1
CO01 Juntas del Tor      1.43  54 ↓iP       Pn   06 09 42.6 +2.3
CO01                              eS        Sn   06 10 00.9 +3.0
CO01 Juntas del Tor      1.43  54 eP        Pn   06 09 42.7 +2.3
CO01                              eS        Sn   06 10 01.6 +3.7
VA06 Catapilco           1.73 176  Pn        Pn   06 09 45.8 +1.5
VA06 Catapilco           1.73 176 ↓iP       Pn   06 09 45.5 +1.2
VA06                              IAML       06 10 15.8
     comp=N,5μm,0.6s
AROD Rodeo               1.81  69 eP        Pn   06 09 49.5 +3.8
AROD                              eS        Sn   06 10 13.5 +6.0
LCO  Las Campanas        1.91  19 i P       Pn   06 09 49.0 +1.9
LCO                               eS        Sn   06 10 12.4 +2.4
LCO  Las Campanas        1.91  19 eP        Pn   06 09 49.3 +2.2
LCO                               eS        Sn   06 10 14.0 +4.0
LCO                               IAML       06 10 20.2
     comp=Z,7μm,0.5s
ACCO Cerro Coronel       2.05  84 eP        Pn   06 09 53.0 +4.1
ACCO                              eP        Pn   06 09 53.0 +4.1
RTLS Leoncito            2.06 119 eP        Pn   06 09 53.0 +3.8
RTLS                              eS        Sn   06 10 06.8 -7.0
RTLS                              IAML       06 10 22.0
     comp=Z,1μm,0.4s
RTLS                              eS         06 10 23.5
VA03 San Esteban         2.07 159           Pn   06 09 50.8 +1.8
VA03 San Esteban         2.07 159 eP        Pn   06 09 50.6 +1.5
VA03                              eS        Sn   06 10 16.7 +3.0
VA03                              IAML       06 10 19.9
     comp=E,6μm,0.2s
VA03 San Esteban         2.07 159 eP        Pn   06 09 50.6 +1.5
VA03                              eS        Sn   06 10 18.8 +5.1
VA03                              IAML       06 10 26.9
     comp=Z,2μm,0.3s
ACDV Cuesta del Vie      2.10  72 eP        Pn   06 09 53.0 +3.6
ACDV                              eS        Sn   06 10 06.8 -7.6
ACDV                              IAML       06 10 08.0
     comp=Z,620nm,1.1s
ROCH El Roble            2.17 171 eP        Pn   06 09 52.1 +1.5
ROCH                              eS        Sn   06 10 18.6 +2.3
ROCH                              IAML       06 10 34.1
     comp=N,3μm,0.2s
ROC1 El Roble            2.17 171           Pn   06 09 52.0 +1.4
ROC1 El Roble            2.17 171 eP        Pn   06 09 53.0 +2.4
AC05 El Transito         2.22  27           Pn   06 09 53.9 +2.7
AC05 El Transito         2.22  27 ↓↓iP      Pn   06 09 53.8 +2.7
AC05                              eS        Sn   06 10 21.6 +4.2
AC05                              IAML       06 10 36.5
     comp=N,2μm,0.5s
AC05 El Transito         2.22  27 eP        Pn   06 09 53.9 +2.7
AC05                              eS        Sn   06 10 17.1 -0.3
AC05                              eS         06 10 27.2
AC05                              IAML       06 10 29.7
     comp=Z,2μm,0.3s
PEL  Peldehue            2.40 165 eP        Pn   06 09 55.1 +1.6
PEL                               eS        Sn   06 10 24.6 +3.0
PEL                               IAML       06 10 29.8
     comp=E,2μm,0.2s
PEL  Peldehue            2.40 165 eP        Pn   06 09 55.0 +1.6
PEL                               eS        Sn   06 10 10.6 -11
PEL                               eS         06 10 32.6
MT02 Curacav             2.44 174           Pn   06 09 54.7 +0.7
MT02 Curacav             2.44 174 eP        Pn   06 09 54.9 +0.8
MT02 Curacav             2.44 174 eP        Pn   06 09 55.0 +1.0
MT02                              eP        Pn   06 09 55.1 +1.0
MT02                              eS        Sn   06 10 28.4 +5.8
MT02                              IAML       06 10 36.0
     comp=Z,2μm,0.3s
ZON  Zonda               2.46 108 eP        Pn   06 09 58.0 +3.6
ZON                               eS        Sn   06 10 30.8 +7.5
ZON                               IAML       06 10 51.9
     comp=Z,726nm,0.4s
RTLL Cerro Villicun      2.58 102 eP        Pn   06 09 59.0 +3.0
MT05 Renca               2.62 167 Pn        Pn   06 09 58.3 +1.6
MT05 Renca               2.62 167 eP        Pn   06 09 58.2 +1.6
MT05                              eS        Sn   06 10 29.4 +2.1
MT05                              IAML       06 10 43.9
     comp=E,4μm,0.3s
MT05 Renca               2.62 167 eP        Pn   06 09 58.3 +1.6
MT05                              eP        Pn   06 09 59.0 +2.4
MT05                              eS        Sn   06 10 31.1 +3.8
MT05                              IAML       06 10 41.2
     comp=Z,1μm,1.1s
AC04 Llanos de Chal      2.63  7  Pn        Pn   06 09 58.7 +2.1
AC04 Llanos de Chal      2.63  7  eP        Pn   06 09 58.7 +2.1
AC04                              IAML       06 10 41.0
     comp=E,775nm,0.6s
AC04 Llanos de Chal      2.63  7  eP        Pn   06 09 58.0 +1.4
AC04                              eP        Pn   06 09 58.8 +2.1
AC04                              eS        Sn   06 10 30.1 +2.8
AC04                              IAML       06 10 40.0
     comp=Z,528nm,0.3s
FCH  Farellones          2.67 159 eP        Pn   06 09 59.8 +2.2
FCH                               IAML       06 10 42.2
     comp=N,1μm,0.2s
RTCV Cerro Valdivia      2.68 113 eP        Pn   06 10 02.0 +4.7
MT03 Universidad Ad      2.77 164 Pn        Pn   06 10 00.7 +2.0
MT03 Universidad Ad      2.77 164 eP        Pn   06 10 00.6 +1.9
MT03                              IAML       06 10 45.0
     comp=E,3μm,0.2s
MT03 Universidad Ad      2.77 164 eP        Pn   06 10 00.9 +2.2
MT03                              eS        Sn   06 10 36.1 +5.1
MT03                              IAML       06 10 42.4
     comp=Z,1μm,0.1s
VA05 Santo Domingo       2.83 183           Pn   06 09 59.5 +0.2
VA05 Santo Domingo       2.83 183 eP        Pn   06 09 59.5 +0.2
VA05                              IAML       06 10 54.0
     comp=E,2μm,0.4s
MT09 Talagante           2.97 173           Pn   06 10 02.9 +1.5
MT09 Talagante           2.97 173 i P       Pn   06 10 02.9 +1.5
MT09                              eS        Sn   06 10 37.2 +1.5
MT09                              IAML       06 10 53.1
     comp=N,2μm,0.2s
MT01 Popeta              3.03 177 eP        Pn   06 10 02.7 +0.5
MT01                              IAML       06 10 56.9
     comp=N,745nm,0.7s
MT01 Popeta              3.03 177 eP        Pn   06 10 00.9 -1.3
MT01                              eP        Pn   06 10 03.3 +1.1
MT01                              eS        Sn   06 10 42.6 +5.3
MT01                              IAML       06 10 51.3
     comp=Z,675nm,0.3s
LMEL Las Melosas         3.19 161 eP        Pn   06 10 07.2 +2.7
LMEL                              eS        Sn   06 10 45.6 +4.4
LMEL                              IAML       06 10 53.4
     comp=N,1μm,0.3s
BO04 La Punta            3.23 168           Pn   06 10 06.5 +1.6
BO04 La Punta            3.23 168 i P       Pn   06 10 06.5 +1.6
BO04                              eS        Sn   06 10 44.2 +2.0
BO04                              IAML       06 10 58.3
     comp=E,919nm,0.4s
GO03 Copiap              3.38  18 eP        Pn   06 10 09.3 +2.2
GO03                              IAML       06 11 07.2
     comp=N,844nm,0.5s
BO01 Tunca               3.57 175 Pn        Pn   06 10 10.3 +0.8
BO01 Tunca               3.57 175 eP        Pn   06 10 10.3 +0.8
BO01                              IAML       06 11 10.1
     comp=E,296nm,0.4s
BO01 Tunca               3.57 175 eP        Pn   06 10 10.6 +1.0
BO01                              eS        Sn   06 10 57.1 +6.6
BO01                              IAML       06 11 15.4
     comp=Z,234nm,1.2s
AC06 Mina Casimiro       3.58  15           Pn   06 10 11.5 +1.8
AC06 Mina Casimiro       3.58  15 i P       Pn   06 10 11.7 +1.9
AC06                              IAML       06 11 08.8
     comp=N,686nm,0.4s
BO03 Pichilemu           3.69 187 eP        Pn   06 10 10.7 -0.5
BO02 Sierra Bellavi      3.99 172           Pn   06 10 16.6 +1.2
BO02 Sierra Bellavi      3.99 172 eP        Pn   06 10 16.2 +0.8
BO02 Sierra Bellavi      3.99 172 eP        Pn   06 10 17.1 +1.6
BO02                              IAML       06 11 29.0
     comp=Z,405nm,0.2s
ACLC CERRO LA CRUZ       4.12  71 eP        Pn   06 10 20.4 +3.1
ACLC                              eS        Sn   06 11 06.1 +1.7
ACLC                              IAML       06 11 17.1
     comp=Z,1μm,0.8s
GO05 Huala               4.20 186 Pn        Pn   06 10 17.5 -0.6
GO05 Huala               4.20 186 i P       Pn   06 10 17.6 -0.6
APLL PUNTA DE LOS L      4.25  85 eS        Sn   06 11 23.4 +16
AC02 Maricunga           4.46  27 Pn        Pn   06 10 24.9 +2.7
AC02 Maricunga           4.46  27 eP        Pn   06 10 24.9 +2.7
AC02 Maricunga           4.46  27 eP        Pn   06 10 25.1 +2.8
AC02                              eS        Sn   06 11 21.1 +8.0
AC02                              IAML       06 11 47.5
     comp=Z,280nm,1.4s
RFA  San Rafael          4.66 148 eP        Pn   06 10 21.1 -3.5
RFA                               eP        Pn   06 10 26.6 +2.1
RFA                               IAML       06 11 50.8
     comp=Z,138nm,0.7s
AC01 Pan de Azucar       4.72  9  Pn        Pn   06 10 25.2 -0.1
AC01 Pan de Azucar       4.72  9  eP        Pn   06 10 25.3 -0.1
AC01 Pan de Azucar       4.72  9  eP        Pn   06 10 25.4  0.0
AC01                              eS        Sn   06 11 29.6 +11
AC01                              IAML       06 11 46.3
     comp=Z,233nm,0.6s
ML02 Panimavida          4.92 180           Pn   06 10 28.4 +0.2
MRA  San Martin          5.12 110 eP        Pn   06 10 32.6 +1.6
GO02 Mina Guanaco        5.87  16           Pn   06 10 42.5 +1.1
BI05 Punta Hualpn        6.09 193 Pn        Pn   06 10 42.6 -1.5
H03N1 Juan Fernandez     6.86 246 T         T    06 17 47.1
     baz=75,slow=72,SNR=1688
VA04 Juan Fernndez       6.87 244           Pn   06 10 54.2 -0.7
H03N3 Juan Fernandez     6.88 246 T         T    06 17 43.2
     baz=75,slow=72,SNR=1802
H03N2 Juan Fernandez     6.88 246 T         T    06 17 44.5
     baz=75,slow=72,SNR=1647
PB10 IPOC Station P      7.32  6  Pn        Pn   06 11 01.5 +0.3
PB15 IPOC Station P      7.78  13 Pn        Pn   06 11 08.1 +0.4
LVC  Limon Verde         8.48  16 P         Pn   06 11 17.3 -0.2
     comp=Z,1.0nm,0.3s,baz=199,slow=5.8,SNR=8.6
     comp=Z,2.1nm,0.3s
LVC  Limon Verde         8.48  16           Pn   06 11 17.5 +0.1
LVC  Limon Verde         8.48  16 eP        Pn   06 11 20.3 +2.9
GO06 Curarrehue          8.74 180           Pn   06 11 20.8 +0.1
PB03 IPOC Station P      8.87  10 Pn        Pn   06 11 21.6 -0.9
PLCA Paso Flores         9.91 176 P         Pn   06 11 36.4 -0.3
     comp=Z,0.2nm,0.3s,baz=312,slow=13,SNR=7.9
PLCA                              LR    LR   06 15 19.0
     comp=Z,84nm,19.2s,baz=302,slow=37
     comp=Z,0.5nm,0.4s
PLCA Paso Flores         9.91 176 Pn        Pn   06 11 37.0 +0.3
LL04 Puerto Octay       10.10 184           Pn   06 11 37.7 -1.4
ITQB Itaqui              12.85  89           Pn   06 12 14.9 -2.0
ITQB Itaqui              12.85  89 eP        Pn   06 12 14.4 -2.5
CPUP Villa Florida       13.17  74 P         Pn   06 12 18.6 -2.6
     comp=Z,0.4nm,0.3s,baz=250,slow=11,SNR=7.7
CPUP                              LR    LR   06 18 03.3
     comp=Z,84nm,18.3s,baz=236,slow=40
     comp=Z,0.7nm,0.3s
RODS Rosario do Sul      13.99  92 eP        Pn   06 12 31.5 -0.9
LPAZ La Paz              14.78  12 P         Pn   06 12 44.3 +0.6
     comp=Z,0.1nm,0.3s,baz=173,slow=5.8,SNR=8.8
     comp=Z,1.8nm,0.7s
LPAZ La Paz              14.78  12           Pn   06 12 43.3 -0.5
LPAZ La Paz              14.78  12 eP        Pn   06 12 44.1 +0.4
PLTB Pedras Altas        15.27  98 eP        Pn   06 12 48.8 -0.8
MURT Porto Murtinho      15.38  57 eP        Pn   06 12 49.4 -1.6
CPSB Cacapava Do Su      15.50  93 eP        Pn   06 12 51.1 -1.5
CRSM Crissiumal (Br      15.54  82 eP        Pn   06 12 51.7 -1.5
ALGR Alto Alegre (B      16.10  87 eP        Pn   06 12 58.7 -1.6
BBRB Robore, Bolivi      16.35  43 eP        Pn   06 13 01.6 -1.9
ANTJ Antonio Joao (      16.36  61 eP        Pn   06 13 02.3 -1.4
MCR1 Marechal Candi      16.66  72 eP        Pn   06 13 06.2 -1.2
BBSD Serra de San D      16.77  38 eP        Pn   06 13 07.9 -1.0
FRBT Francisco Belt      16.86  78 eP        Pn   06 13 08.5 -1.5
ITAB Concordia           17.25  83 P         Pn   06 13 16.4 +1.7
ITAB Concordia           17.25  83 eP        Pn   06 13 13.4 -1.4
AQDB Aquidauana          17.51  58 eP        Pn   06 13 16.5 -1.6
SIV  San Ignacio         17.54  35 P         Pn   06 13 18.3 -0.1
     comp=Z,0.1nm,0.3s,baz=208,slow=9.4,SNR=29
     comp=Z,4.3nm,0.6s
CNLB Canela              17.87  90 eP        Pn   06 13 21.1 -1.5
PTGB Pitanga             18.17  75 eP        P    06 13 25.4 -0.9
TRCB Terra Rica          18.57  69 P         P    06 13 31.7 +1.1
PTLB Pontes e Lacer      19.00  39 eP        P    06 13 34.5 -0.8
TER01 Tubaro-SC          19.51  89 eP        P    06 13 40.9 +0.1
PCMB Pacaembu            20.26  68 eP        P    06 13 48.9 -0.2
VILB Vilhena             20.59  33 eP        P    06 13 52.4 -0.3
SALV Santo Antonio       20.68  48 eP        P    06 13 53.2 -0.4
FRTB Fartura             20.82  74 eP        P    06 13 53.5 -1.7
ETMB Extrema             21.46  14 eP        P    06 14 03.2 +1.2
ITRB Iturama             22.00  65 eP        P    06 14 07.2 -0.5
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BB19B	Bebedouro	22.73	70	eP		P	06 14 13.7	-2.0
VAO	Valinhos	23.13	76	eP		P	06 14 18.8	-1.0
PDRB	Porto dos Gac	23.47	39	eP		P	06 14 22.9	-0.2
CLDB	Colider	24.59	39	eP		P	06 14 32.3	-1.2
IPMB	Ipameri, GO	24.64	64	eP		P	06 14 33.0	-1.0
PMNB	Patos De Minas	25.73	67	eP		P	06 14 43.5	-0.3
BDFB	Brasilia	26.21	60	P		P	06 14 46.7	-1.6
	comp=Z,4.9nm,0.6s,baz=239,slow=7.9,SNR=11							
	comp=Z,4.9nm,0.6s							
BDFB	Brasilia	26.21	60	P		P	06 14 47.9	-0.5
BDFB	Brasilia	26.21	60	eP		P	06 14 47.8	-0.5
VAS01	Vassouras-RJ	26.39	78	eP		P	06 14 50.1	+0.3
SNDB	Serra Nova Dou	26.43	49	eP		P	06 14 49.6	-0.6
MC01	Montes Claros	28.71	67	eP		P	06 15 09.6	-1.1
BAUV	El Baul	39.67	5	P		P	06 16 45.4	0.0
BAUV				IAmb		IAmb	06 16 46.2	
	comp=Z,7.7nm,0.7s							
FDF	Fort de France	46.36	14	P		P	06 17 38.4	-1.0
MTO3	Montecristo	48.16	336	P		P	06 17 53.1	-0.6
MLPR	Magueyes Islan	48.70	6	P		P	06 17 57.1	-0.3
CRPR	Cabo Rojo, PR	48.73	5	P		P	06 17 57.5	-0.2
CELP	Cerrillos	48.84	6	P		P	06 17 57.6	-1.0
VNA2	Neumayer--Watz	52.74	158	P		P	06 18 27.3	-0.1
	baz=280,slow=7.4							
SNAA	Sanae	54.34	159	P		P	06 18 39.0	-0.3
SNAA	Sanae	54.34	159	P		P	06 18 38.9	-0.3
TROLL	Troll, Antarti	56.05	159	P		P	06 18 51.5	-0.1
V58A	Windy Hill, Pi	66.66	353	P		P	06 20 04.0	+0.5
V58A				IAmb		IAmb	06 20 17.5	
	comp=Z,12nm,1.1s							
V55A	Taylorsville	66.96	351	P		P	06 20 05.8	+0.4
V55A				IAmb		IAmb	06 20 06.2	
	comp=Z,6.3nm,0.9s							
CPCT	Cooper Cave	67.06	348	P		P	06 20 06.8	+0.7
SWET	Sewanee	67.09	347	P		P	06 20 06.3	0.0
SWET				IAmb		IAmb	06 20 13.5	
	comp=Z,8.7nm,1.2s							
TKL	Tuckaleechee C	67.14	349	P		P	06 20 06.5	-0.1
TKL				IAmb		IAmb	06 20 21.5	
	comp=Z,7.6nm,1.2s							
TXAR	Lajitas Array	67.24	330	P		P	06 20 08.6	+1.1
	comp=Z,0.2nm,0.5s,baz=156,slow=9.2,SNR=6.4							
TXAR				pP		sP	06 20 22.3	+0.2
	comp=Z,0.3nm,0.8s,baz=153,slow=8.1,SNR=3.5							
	comp=Z,0.2nm,0.5s							
TXAR	Lajitas Array	67.24	330	P		P	06 20 08.8	+1.3
V52A	Sevierville	67.29	349	P		P	06 20 07.6	+0.1
V52A				IAmb		IAmb	06 20 08.5	
	comp=Z,14nm,1.4s							
U54A	Nelsons Funny	67.70	351	P		P	06 20 10.2	+0.1
CLTN	Cedars of Leba	68.02	347	P		P	06 20 13.2	+1.2
CLTN				IAmb		IAmb	06 20 27.0	
	comp=Z,4.3nm,1.0s							
U49A	Red Boiling Sp	68.33	348	P		P	06 20 13.8	-0.2
U49A				IAmb		IAmb	06 20 14.7	
	comp=Z,3.4nm,0.7s							
S54A	Dingess, Beckl	68.89	352	P		P	06 20 18.0	+0.4
S54A				IAmb		IAmb	06 20 35.8	
	comp=Z,5.6nm,1.0s							
LCAR	Lake Charles	69.07	343	P		P	06 20 19.1	+0.4
LCAR				IAmb		IAmb	06 20 19.6	
	comp=Z,4.2nm,0.7s							
HHAR	Hobbs	70.02	341	P		P	06 20 25.3	+0.7
HHAR				IAmb		IAmb	06 20 25.3	
	comp=Z,3.2nm,0.5s							
P48A	Milroy	71.13	349	P		P	06 20 31.0	-0.2
P48A				IAmb		IAmb	06 20 36.2	
	comp=Z,16nm,1.5s							
R40A	Maddies Statio	71.46	343	P		P	06 20 33.7	+0.4
R40A				IAmb		IAmb	06 20 34.3	
	comp=Z,6.6nm,0.7s							
N47A	Urbana	72.56	349	P		P	06 20 39.4	-0.3
DBIC	Dimbokro	73.68	72	P		P	06 20 46.7	-0.3
	comp=Z,6.2nm,0.6s,baz=198,slow=5.7,SNR=12							
	comp=Z,6.2nm,0.6s							
DBIC	Dimbokro	73.68	72	P		P	06 20 47.0	0.0
DBIC				IAmb		IAmb	06 20 47.4	
	comp=Z,6.6nm,0.7s							
L40A	Anamosa	74.79	345	P		P	06 20 53.0	+0.2
L40A				IAmb		IAmb	06 20 54.0	
	comp=Z,10nm,1.0s							
MAW	Mawson	76.07	164	P		P	06 20 60.0	0.0
	comp=Z,1.2nm,0.6s,baz=222,slow=7.5,SNR=6.1							
	comp=Z,1.2nm,0.6s							
Q24A	Divide	76.20	334	IAmb		IAmb	06 21 03.8	
	comp=Z,4.0nm,0.8s							
ECSD	EROS Data Cent	77.70	342	IAmb		IAmb	06 21 10.4	
	comp=Z,4.6nm,0.8s							
D41A	Chassel	79.05	348	P		P	06 21 17.7	+1.0
TSUM	Tsumeb	79.59	106	LR		LR	06 52 07.5	
	comp=Z,28nm,21.9s,baz=324,slow=32							
BOSA	Boshof	81.09	118	P		P	06 21 27.8	-0.7
	comp=Z,1.8nm,0.8s,baz=231,slow=4.4,SNR=3.5							
	comp=Z,1.8nm,0.8s							
BOSA	Boshof	81.09	118	P		P	06 21 28.3	-0.3
BOSA				IAmb		IAmb	06 21 29.5	
	comp=Z,4.8nm,1.1s							
MDPB	Devils Postpil	81.37	324	IAmb		IAmb	06 21 28.6	
	comp=Z,5.6nm,0.9s							
TOA0	Torodi Ar. Sit	82.64	70	P		P	06 21 36.7	0.0
TOA0				IAmb		IAmb	06 21 37.0	
	comp=Z,2.7nm,0.7s							
TORD	Torodi Ar. Bea	82.64	70	P		P	06 21 35.8	-0.8
	comp=Z,2.1nm,0.7s,baz=279,slow=7.1,SNR=16							
	comp=Z,2.1nm,0.7s							
LBTB	Lobatse	83.17	115	P		P	06 21 39.3	-0.2
LBTB				IAmb		IAmb	06 21 39.3	
	comp=Z,3.1nm,0.8s							
ULM	Lac du Bonnet	83.58	344	P		P	06 21 40.5	-0.1
	comp=Z,2.7nm,0.6s,baz=206,slow=5.5,SNR=3.0							
	comp=Z,2.7nm,0.6s							
HUMO	Hull Mountain	87.07	325	P		P	06 21 58.7	+0.4
ASAR	Alice Springs	120.62	207	PKP		PKPdf	06 28 02.6	-2.6
	comp=Z,0.2nm,0.5s,baz=104,slow=1.6,SNR=4.5							
WRA	Warramunga Arr	123.78	209	PKP		PKPdf	06 28 09.6	-1.7
	comp=Z,0.4nm,0.5s,baz=153,slow=1.7,SNR=9.0							
H11S2	WAKE ISLAND Hyl	26.28	271	T		T	08 47 04.3	
	baz=116,slow=75,SNR=130							
H11S1	WAKE ISLAND Hyl	26.29	271	T		T	08 47 13.9	
	baz=116,slow=75,SNR=18							
H11S3	WAKE ISLAND Hyl	26.30	271	T		T	08 47 05.4	
	baz=116,slow=75,SNR=98							
H11N3	WAKE ISLAND Hyl	26.61	273	T		T	08 47 29.3	
	baz=118,slow=74,SNR=12							
H11N1	WAKE ISLAND Hyl	26.63	273	T		T	08 47 23.3	
	baz=118							
H11N2	WAKE ISLAND Hyl	26.63	273	T		T	08 47 30.6	
	baz=118,slow=74,SNR=20							
ZALV	Zalesovo Beam	151.24	30	PKPbc		PKPbc	06 29 05.2	-0.4
	comp=Z,1.7nm,0.5s,baz=289,slow=3.4,SNR=8.8							
ZALV				pPKPbc		pPKPbc	06 29 18.6	+0.9
	comp=Z,1.2nm,0.5s,baz=302,slow=5.4,SNR=3.4							
MKAR	Makanchi Array	154.21	44	PKPbc		PKPbc	06 29 11.3	-1.3
	comp=Z,0.1nm,0.4s,baz=298,slow=3.1,SNR=1.9							
MKAR				pPKPbc		pPKPbc	06 29 26.1	+1.5
	comp=Z,0.5nm,0.8s,baz=336,slow=3.2,SNR=3.3							
PZH	PanZhiHua	172.62	124	PKP		PKPdf	06 29 21.3	-1.0

IDC 23 06:16:55.6±8.8, 3°.50S×101°.39E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=437.5km s-min=31.6km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	29.04	261	T	T	06 52 39.1	
	baz=84,slow=75,SNR=23						
H08S3	Diego Garcia H	29.05	261	T	T	06 52 49.6	
	baz=84,slow=75,SNR=48						
H08S1	Diego Carcia H	29.06	261	T	T	06 52 45.1	
	baz=84,slow=75,SNR=9.4						
WRA	Warramunga Arr	36.05	120	P	P	06 23 58.5	-0.6
	0.6nm,1.0s,baz=291,slow=7.3,SNR=2.8						
	0.6nm,1.0s						
ASAR	Alice Springs	37.26	125	P	P	06 24 10.1	+0.7
	0.2nm,0.7s,baz=302,slow=7.8,SNR=2.3						
	0.2nm,0.7s						
MKAR	Makanchi Array	52.85	344	P	P	06 26 12.8	-0.3
	0.3nm,0.7s,baz=157,slow=6.8,SNR=2.3						
	0.3nm,0.7s						
TXAR	Lajitas Array	145.00	40	PKPbc	PKPab	06 36 33.9	-1.1
	0.3nm,0.7s,baz=336,slow=1.8,SNR=3.5						

IDC 23 06:34:54.1±1.0, 26°.93N×130°.19E, h0km, mb3.9/8, mbtmp3.9/8, MS3.1/7, Error ellipse: s-maj=31.7km s-min=17.4km az=55.0
JMA 23 06:34:56.0±0.1, 27°.0N±0°.8×130°.3E±0°.9, h49km, MV4.0/20, NEAR MINAMI-DAITOJIMA IS
NIED 23 06:34:56.0, 26°.96N×130°.30E, h49km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15Nm; Mrr-1.13; Mθθ-0.10; Mφφ1.23; Mrθ0.89; Mrφ0.68; Mθφ-0.73; Fault plane solution: M0 1.76000×10^15 NP1: φs=231.00000°, δ=47.00000°, λ=-40.00000°. NP2: φs=351.00000°, δ=62.00000°, λ=-129.00000°.
ISC 23 06:34:54.6±2.0, 26°.98N±0°.04×130°.33E±0°.05, h11km±13km, n34, σ1s=66/40, mb4.0/8, MS3.0/5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKDJ	Kitadaitoujima	1.34	140	P	Pn	06 35 19.0	-0.3
JKDJ				eS	Sb	06 35 34.7	-2.3
JKDJ	Kitadaitoujima	1.34	140	A	A	06 35 19.0	
	comp=E,6.0nm,0.5s,comp=E,6.0nm,5.7s						
JZK	Kikaishima	1.36	346	P	Pg	06 35 20.7	-0.1
JZK				S	Sb	06 35 37.8	+0.2
JMZ	Minamidaito 2	1.41	145	P	Pn	06 35 19.4	-0.7
JMZ				S	Sb	06 35 36.6	-2.2
JMZ	Minamidaito 2	1.41	145	A	A	06 35 19.4	
	comp=E,6.0nm,6.7s,comp=E,6.0nm,5.0s						
JTK	Tokunoshima	1.47	303	P	Pn	06 35 20.4	-0.6
JTK				eS	Sn	06 35 38.0	-2.2
JAM	Amami Oshima	1.56	336	P	Pn	06 35 21.4	-0.8
JAM				eS	Sn	06 35 40.0	-2.5
JOKE	Okinoerabujima	1.61	284	eP	Pn	06 35 22.8	-0.2
JOKE				eS	Sn	06 35 42.2	-1.7
JAMN	Amaminishikomi	1.62	321	eP	Pn	06 35 22.1	-1.0
JAMN				eS	Sn	06 35 40.8	-3.2
JYRO	Yoronjima	1.68	272	P	Pn	06 35 23.4	-0.6
JYRO				eS	Sn	06 35 42.9	-2.6
JOW	Kunigami	1.85	266	Pn	Pn	06 35 25.8	-0.4
	125nm,0.3s,baz=110,slow=21,SNR=111						
JOW				Sn	Sn	06 35 47.7	-1.9
	511nm,0.3s,baz=163,slow=29,SNR=28						
JOW	Kunigami	1.85	266	P	Pn	06 35 25.8	-0.4
JOW				S	Sn	06 35 47.7	-1.9
JOW	Kunigami	1.85	266	A	A	06 35 25.8	
	comp=E,2.0nm,9.0s,comp=E,3.0nm,1.1s						
JIH	Iheya	2.11	272	P	Pn	06 35 30.0	+0.2
JIH				eS	Sn	06 35 54.3	-1.8
JNTH	Nagotoyohara	2.12	258	P	Pn	06 35 29.3	-0.7
JNTH				eS	Sn	06 35 54.1	-2.2
JTAJ	Takarajima	2.38	335	eP	Pn	06 35 33.4	-0.2
JTAJ				S	Sn	06 35 58.8	-3.9
JJT3	Tamagusuku3	2.43	250	P	Pn	06 35 34.2	-0.1
JJT3				eS	Sn	06 36 02.4	-1.6
JAGN	Aguni-jima	2.79	263	P	Pn	06 35 38.9	-0.3
JAGN				S	Sn	06 36 10.9	-2.0
JKE	Kume jima 2	3.24	259	P	Pn	06 35 44.9	-0.6
JKE				S	Sn	06 36 21.6	-2.4
MJAR	Matsushiro Arr	11.64	33	LR	LR	06 42 30.6	
	comp=Z,55nm,18.4s,baz=210,slow=39						
GUMO	Guam	19.04	132	LR	LR	06 45 02.7	
	comp=Z,30nm,19.7s,baz=316,slow=32						
KLR	Kul'dur	22.24	2	LR	LR	06 48 46.3	
	comp=Z,34nm,19.2s,baz=294,slow=37						
CMAR	Chiang Mai Arr	30.11	260	LR	LR	06 53 32.0	
	comp=Z,27nm,18.6s,baz=65,slow=37						
BRDH	Bariadhala	35.28	272	LR	LR	06 57 59.2	
	comp=Z,47nm,19.4s,baz=198,slow=39						
MA2	Magadan	35.50	18	LR	LR	06 57 55.2	
	comp=Z,28nm,18.8s,baz=108,slow=39						
MKAR	Makanchi Array	42.45	311	P	P	06 42 49.9	+0.3
	0.5nm,0.7s,baz=94,slow=10,SNR=5.2						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	42.81	322	P	P	06 42 54.6	+2.4
	0.5nm,0.5s,baz=123,slow=7.1,SNR=2.3						
	0.5nm,0.5s						
WRA	Warramunga Arr	46.81	175	P	P	06 43 25.2	+0.7
	2.2nm,0.7s,baz=354,slow=8.6,SNR=15						
	2.2nm,0.7s						
CTA	Charters Tower	49.27	160	P	P	06 43 44.5	+1.0
	3.8nm,0.7s,baz=345,slow=8.4,SNR=5.7						
	3.8nm,0.7s						
ASAR	Alice Springs	50.47	176	P	P	06 43 53.6	+1.0
	1.7nm,0.8s,baz=3.5,slow=16,SNR=22						
	1.7nm,0.8s						
BVAR	Borovoye Array	50.98	318	LR	LR	07 06 50.8	
	comp=Z,69nm,18.5s,baz=85,slow=38						
FINES	FINESS Array B	73.13	331	P	P	06 46 26.4	+1.6
	3.5nm,0.9s,baz=70,slow=6.1,SNR=4.5						
	3.5nm,0.9s						
BRTR	Keskin Array B	78.05	308	P	P	06 46 53.5	-0.1
	0.8nm,0.7s,baz=95,slow=7.4,SNR=4.8						
	0.8nm,0.7s						
GERES	GERESS Array B	85.72	324	P	P	06 47 34.3	+0.5
	0.3nm,0.7s,baz=99,slow=5.1,SNR=3.6						
	0.3nm,0.7s						

IDC 23 06:36:39.6±1.7, 26°.87N×130°.11E, h0km, mb3.4/4, mbtmp3.4/4, MS3.7/2, Error ellipse: s-maj=40.0km s-min=23.8km az=43.0
JMA 23 06:36:40.2±0.1, 26°.9N±0°.8×130°.2E±0°.9, h53km, MV3.4/15, NEAR AMAMI-OSHIMA ISLAND
ISC 23 06:36:37.5±1.5, 26°.92N±0°.04×130°.18E±0°.04, h2km±11km, n19, σ1s=86/24, mb3.4/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.39	309	P	Pg	06 37 04.2	0.0
JTK				eS	Sg	06 37 22.0	-0.2
JKDJ	Kitadaitoujima	1.39	134	P	Pb	06 37 03.6	-0.7
JKDJ				S	Sn	06 37 19.7	-3.3
JZK	Kikaishima	1.40	353	eP	Pg	06 37 05.2	+0.8
JZK				eS	Sg	06 37 22.9	+0.3
JMZ	Minamidaito 2	1.44	139	P	Pb	06 37 04.0	-1.1
JMZ				eS	Sn	06 37 20.9	-3.4
JOKE	Okinoerabujima	1.50	287	eP	Pb	06 37 05.5	-0.6
JYRO	Yoronjima	1.54	274	P	Pb	06 37 05.5	-1.4
JAM	Amami Oshima	1.57	341	P	Pb	06 37 06.1	-1.2
JAM				eS	Sn	06 37 23.9	-3.5
JAMN	Amaminishikomi	1.59	326	P	Pb	06 37 06.1	-1.5
JAMN				S	Sn	06 37 25.3	-2.6
JOW	Kunigami	1.70	267	Pn	Pg	06 37 10.2	0.0
	91nm,0.3s,baz=113,slow=28,SNR=8.9						
JOW				Sn	Sg	06 37 31.9	-0.4
	161nm,0.3s,baz=126,slow=28,SNR=8.4						
JOW	Kunigami	1.70	267	eP	Pb	06 37 08.4	-1.2
JNTH	Nagotoyohara	1.97	259	eP	Pn	06 37 11.3	-0.6
JIH	Iheya	1.98	274	eP	Pb	06 37 13.7	-0.6
JJT3	Tamagusuku3	2.28	251	eP	Pn	06 37 16.6	+0.3
MKAR	Makanchi Array	42.39	311	P	P	06 44 35.6	+2.1
	0.3nm,0.7s,baz=106,slow=9.1,SNR=2.4						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	42.77	322	P	P	06 44 38.5	+2.1
	0.4nm,0.4s,baz=122,slow=11,SNR=1.8						
	0.4nm,0.4s						
WRA	Warramunga Arr	46.76	175	P	P	06 45 09.6	+1.1
	0.5nm,0.6s,baz=356,slow=8.4,SNR=3.0						
	0.5nm,0.6s						
ASAR	Alice Springs	50.42	176	P	P	06 45 39.2	+2.5
	0.3nm,0.7s,baz=3.9,slow=15,SNR=2.4						
	0.3nm,0.7s						
ARU	Arti	57.93	322	LR	LR	07 13 24.0	
	comp=Z,53nm,18.3s,baz=280,slow=38						
AKTO	Aktyubinsk	58.59	314	LR	LR	07 12 56.5	
	comp=Z,52nm,18.1s,baz=281,slow=37						

ISK 23 07:18:47.1, 39°.52N×26°.02E, h6km, ML3.0/21
ATH 23 07:18:47.2, 39°.52N×25°.96E, h20km±1km, ML2.9/4, Error ellipse: s-maj=2.7km s-min=0.9km az=249.0
DDA 23 07:18:47.0±0.0, 39°.48N×26°.09E, h14km, ML2.9
THE 23 07:18:47.7, 39°.52N×26°.01E, h7km±3km, ML2.8/4, Error ellipse: s-maj=3.3km s-min=0.7km az=112.0
ISC 23 07:18:47.7±0.9, 39°.52N±0°.02×26°.02E±0°.02, h8km±6km, n56, σ0s=81/77, 1C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.09	98	P	Pg	07 18 49.9	-0.1
KOCA				i AML	AML	07 18 51.0	
	comp=N,8μm,0.2s						
KOCA				S	Sg	07 18 51.6	-0.1
KOCA				i AML	AML	07 18 52.0	
	comp=E,9μm,0.2s						
GPNR	Gulpinar-Canak	0.11	124	PG	Pg	07 18 49.9	-0.3
GPNR				SG	Sg	07 18 51.9	0.0
BOZC	Bozcaada	0.33	5	PG	Pg	07 18 54.3	+0.2
BOZC				SG	Sg	07 18 59.4	+0.9
SIGR	SIGRI	0.33	203	PG	Pg	07 18 54.3	+0.1
SIGR				SG	Sg	07 18 59.2	+0.7
SIGR	SIGRI	0.33	203	P	Pg	07 18 54.2	+0.1
SIGR				S	Sg	07 18 58.7	+0.2
	3μm,0.2s						
SIGR	SIGRI	0.33	203	P	Pg	07 18 54.3	+0.1
SIGR				S	Sg	07 18 58.9	+0.4
SIGR				AML	AML	07 18 59.6	
	comp=E,6572μm,0.5s						
SIGR				AML	AML	07 19 00.3	
	comp=N,6423μm,0.3s						
PRK	Paraskevi	0.33	144	P	Pg	07 18 55.0	+0.8
PRK				S	Sg	07 18 59.3	+0.6
	comp=N,4μm,0.2s						
PRK	Paraskevi	0.33	144	P	Pg	07 18 55.0	+0.8
PRK				S	Sg	07 19 00.1	+1.4
PRK				AML	AML	07 19 00.3	
	comp=E,5896μm,0.2s						
PRK				AML	AML	07 19 00.4	
	comp=N,11040μm,0.2s						
EZN	Ezine	0.39	37	PG	Pg	07 18 55.1	-0.3
EZN				SG	Sg	07 19 00.8	+0.3
EZN	Ezine	0.39	37	P	Pg	07 18 55.0	-0.3
EZN				S	Sg	07 19 00.8	+0.3
	comp=N,2μm,0.1s						
BAYC	CANAKKALE_Bayr	0.47	61	P	Pg	07 18 56.4	-0.3
BAYC				S	Sg	07 19 02.0	-0.9
BAYC				i AML	AML	07 19 03.0	
	comp=N,490nm,0.1s						
ECEA	Canakkale, Ece	0.54	13	P	Pg	07 18 57.5	-0.7
ECEA				S	Sg	07 19 06.4	+1.2
ECEA				i AML	AML	07 19 07.0	
	comp=N,741nm,0.4s						
ECEA				i AML	AML	07 19 07.0	
	comp=N,1μm,0.3s						
GOKA	anakkale-Gk	0.68	353	P	Pg	07 19 01.0	+0.2
GADA	Gvkgeada	0.68	352	PG	Pg	07 19 00.6	-0.2
GADA				SG	Sg	07 19 10.7	+1.0
BUHA	Balikesir, Bur	0.82	91	P	Pg	07 19 03.1	-0.3
BUHA				S	Sg	07 19 12.6	-1.5
DKL	Dikili	0.82	123	PG	Pg	07 19 03.6	+0.2
DKL				SG	Sb	07 19 15.3	0.0
GELI	Tayfur-Gelibol	0.95	22	PG	Pg	07 19 05.4	-0.5
FOCM	Foa	0.97	145	PG	Pg	07 19 06.0	-0.4
ZEDA	zmir-Bergama	0.99	123	P	Pg	07 19 06.8	+0.1
SMTH	Samothraki Isl	1.02	339	P	Pg	07 19 07.1	-0.2
SMTH				S	Sb	07 19 21.8	+0.5
	comp=N,302nm,0.2s						
SMTH	Samothraki Isl	1.02	339	P	Pg	07 19 07.2	-0.2
SMTH				S	Sg	07 19 19.9	-0.7
SMTH				AML	AML	07 19 23.0	
	comp=E,617μm,0.2s						
SMTH				AML	AML	07 19 23.9	
	comp=N,607μm,0.1s						
CAVK	Edirne/Enez-Ca	1.18	6	P	Pg	07 19 08.9	-1.5
STEP	BALIKESIR_Sava	1.32	95	P	Pn	07 19 11.8	-0.6
STEP				S	Sb	07 19 28.6	-1.3
ZEYE	Izmir, Urla-Ze	1.33	163	P	Pn	07 19 12.9	-1.6
ZEYE				S	Sb	07 19 28.0	-2.0
ZEYE				i AML	AML	07 19 29.0	
	comp=N,117nm,0.3s						
BLCB	Balcova	1.38	144	PN	Pn	07 19 13.7	+0.5
KNL	Balıkesir	1.38	57	P	Pn	07 19 12.0	-1.2
KNL				S	Sb	07 19 31.2	-0.4
KNL				i AML	AML	07 19 37.0	
	comp=N,168nm,0.3s						
GONE	Gonen-Balikesi	1.39	67	PN	Pn	07 19 12.7	-0.6
MRMT	Marmara Adasi	1.63	48	PN	Pn	07 19 16.9	+0.2
MRMT				SN	Sn	07 19 38.3	+0.5
RDO	Rodhopi	1.67	347	PN	Pn	07 19 16.8	-0.4
RDO	Rodhopi	1.67	347	P	Pn	07 19 16.6	-0.6
RDO	Rodhopi	1.67	347	P	Pn	07 19 17.1	-0.1
UKOP	Uzunkopru-Edir	1.68	16	PN	Pn	07 19 17.5	+0.2
KYMI	Kymi, Euboea I	1.73	240	P	Pn	07 19 16.6	-1.5
KAVA	Kavala	1.87	323	P	Pn	07 19 19.4	-0.5
KAVA	Kavala	1.87	323	P	Pn	07 19 19.5	-0.5
SMG	Samos	1.92	160	P	Pn	07 19 21.6	+1.0
SMG				S	Sn	07 19 46.2	+1.4
SMG				AML	AML	07 19 50.9	
	comp=E,531μm,0.4s						
SMG				AML	AML	07 19 52.7	
	comp=N,473μm,0.3s						
DST	Dursunbey	2.01	87	PN	Pn	07 19 22.2	+0.3
KOKK	Kokkinochori,	2.02	311	P	Pn	07 19 22.0	0.0
AYDB	Zeytinkoy-Aydi	2.15	136	PN	Pn	07 19 24.3	+0.5
KDZ	Kurdzhali	2.18	348	PN	Pn	07 19 24.1	-0.1
MDNY	Mudanya-Bursa	2.36	68	PN	Pn	07 19 27.5	+0.8
EDRB	Edirne	2.39	13	PN	Pn	07 19 27.9	+0.8
SLVT	Silivri	2.40	44	PN	Pn	07 19 27.6	+0.5
ARMT	Armutlu	2.42	63	PN	Pn	07 19 28.3	+0.8
SRS	Serrai	2.45	312	P	Pn	07 19 28.0	+0.1
NVR	Nevrokopi	2.46	319	P	Pn	07 19 28.0	-0.1
APE	Apeiranthos	2.47	189	⇓P	Pn	07 19 23.8	-4.5
APE	Apeiranthos	2.47	189	PN	Pn	07 19 26.7	-1.6
HORT	Hortiatis	2.49	297	PN	Pn	07 19 29.1	+0.6
CTKS	Kestanelik-??a	2.56	47	PN	Pn	07 19 30.1	+0.7
CTYL	Yalikoy Yolu	2.61	41	PN	Pn	07 19 30.9	+0.8
TVSB	Tavsanli	2.67	90	PN	Pn	07 19 30.1	-0.9
BLKB	Belogradchik	4.81	330	⇑P	Pn	07 20 00.8	+0.5
BOVS	Bovan	5.23	323	⇓P

ECEA *i* AML AML 07 23 18.0
comp=N,1μm,0.3s
AYVA Ayvalik 0.55 112 P **Pg** **07 23 08.6 -0.5**
GOKA anakkale-Gk 0.68 352 P **Pg** **07 23 11.8 +0.2**
GOKA S **Sg** **07 23 20.6 0.0**
GOKA *i* AML AML 07 23 25.0
comp=N,925nm,0.2s
GADA Gvkgeada 0.68 351 PG **Pg** **07 23 11.7 +0.1**
GADA SG **Sb** **07 23 21.5 -0.3**
BUHA Balikesir, Bur 0.80 91 P **Pg** **07 23 13.3 -0.7**
BUHA S **Sg** **07 23 24.2 -0.2**
DKL Dikili 0.81 123 PG **Pg** **07 23 14.3 +0.3**
GELI Tayfur-Gelibol 0.94 21 PG **Pg** **07 23 16.5 -0.1**
FOCM Foa 0.97 146 PG **Pg** **07 23 17.3 +0.3**
ZEDA zmir-Bergama 0.98 124 P **Pg** **07 23 17.0 -0.2**
SMTH Samothraki Isl 1.03 338 P **Pg** **07 23 18.0 -0.3**
SMTH S **Sb** **07 23 31.7 -0.2**
comp=N,238nm,0.1s
SMTH Samothraki Isl 1.03 338 P **Pg** **07 23 18.2 -0.1**
SMTH S **Sb** **07 23 32.0 +0.1**
SMTH AML AML 07 23 34.0
comp=E,443μm,0.2s
SMTH AML AML 07 23 34.0
comp=N,490μm,0.1s
CHOS Chios island 1.13 179 P **Pb** **07 23 19.2 -0.8**
CAVK Edirne/Enez-Ca 1.18 5 P **Pb** **07 23 19.9 -0.9**
STEP BALIKESIR_Sava 1.31 96 P **Pn** **07 23 21.8 -0.9**
STEP S **Sb** **07 23 39.2 -0.7**
STEP *i* AML AML 07 23 49.0
comp=N,114nm,0.5s
ZEYE Izmir, Urla-Ze 1.33 164 P **Pn** **07 23 20.5 -2.4**
KNL Balıkesir 1.37 56 P **Pn** **07 23 23.4 -0.1**
BLCB Balcova 1.37 145 PN **Pb** **07 23 24.8 +0.7**
RKY Sarkoy-Tekirda 1.46 36 PN **Pb** **07 23 25.5 -0.2**
MRMT Marmara Adasi 1.61 47 PN **Pb** **07 23 27.9 -0.4**
RDO Rodhopi 1.67 347 PN **Pn** **07 23 28.1 +0.4**
RDO Rodhopi 1.67 347 P **Pn** **07 23 27.6 -0.1**
RDO Rodhopi 1.67 347 P **Pn** **07 23 28.0 +0.4**
UKOP Uzunkopru-Edir 1.67 16 PN **Pn** **07 23 28.4 +0.7**
PAIG Paliouri 1.86 283 P **Pn** **07 23 29.7 -0.6**
PAIG Paliouri 1.86 283 P **Pn** **07 23 30.2 -0.1**
KAVA Kavala 1.88 322 P **Pn** **07 23 30.7 +0.2**
KAVA Kavala 1.88 322 P **Pn** **07 23 30.7 +0.2**
SMG Samos 1.91 161 P **Pn** **07 23 31.6 +0.7**
KOKK Kokkinochori, 2.03 310 P **Pn** **07 23 32.7 +0.1**
KDZ Kurdzhali 2.18 348 PN **Pn** **07 23 34.9 +0.2**
SLVT Silivri 2.38 43 PN **Pn** **07 23 38.4 +1.0**
EDRB Edirne 2.39 13 PN **Pn** **07 23 38.7 +1.2**
ARMT Armutlu 2.41 63 PN **Pn** **07 23 39.1 +1.3**
HORT Hortiatis 2.50 297 PN **Pn** **07 23 39.6 +0.5**
TVSB Tavsanli 2.65 90 PN **Pn** **07 23 42.6 +1.4**

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*IDC **23** 07:26:57.9±0.5,3˙09S×147˙67E,h0km,mb4.4/21, mbtmp4.4/25,ML2.8/2,MS4.4/55,Error ellipse: s-maj=20.5km s-min=12.2km az=83.0*
*NEIC **23** 07:26:59.2±1.2,2˙96S±0˙05×147˙69E±0˙09,h10km±1km, mb4.8/44,Error ellipse: s-maj=15.1km s-min=7.7km az=69.0*
*GCMT **23** 07:27:04.2±0.1,3˙01S±0˙01×147˙66E±0˙01,h12km, MW5.2/138,Moment Tensor Solution. s79,c103; s138,c218; Duration: 0 Moment tensor: Scale 1016Nm; Mrr0.78±.10; Mθθ1.07±.11; Mϕϕ-1.84±.12; Mrθ-0.12±.26; Mθϕ6.34±.08; Mϕr-0.93±.27; Best double couple: M0=6.57400×1016 NP1:ϕs186.00000°,δ88.00000°, λ172.00000°. NP2:ϕs277.00000°,δ82.00000°,λ2.00000°. Principal axes: T 6.2040, Plg7.0000°, Azm141.0000°; N 0.7480, Plg81.0000°, Azm356.0000°; P -6.9450, Plg5.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **23** 07:27:04.2±0.9,3˙5S±5˙×14˙8E±˙,h37km±8km,M5.0/25, mb4.8/25,mB5.4/17,MLv5.3/2,Mw(mB)4.9/17, MwMwp4.8/2,Mwp5.2/2*
ISC 23 07:26:59.6±0.4,3˙03S±0˙05×147˙80E±0˙06,h10km,n197, σ1°**85**/154,**mb4.8**/48,**MS4.5**/52,**3C**,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MANU	**Manus Island**	**1.07 336**			**Pg**		**07 27 17.1**	**-3.1**
MANU					Sn		**07 27 32.6**	**-3.0**
MANU	**Manus Island**	**1.07 336**			**Pg**		**07 27 17.4**	**-2.7**
KRVT	**Keravat (AS076**	**4.41 107**		Pn	**Pn**		**07 28 07.7**	**+1.1**
	287nm,0.6s,baz=345,slow=1.1,SNR=8.0							
KRVT					LR		07 29 23.0	
	comp=Z,2μm,20.3s,baz=27,slow=32							
RABL	**Rabaul**	**4.51 105**			**Pn**		**07 28 07.2**	**-0.8**
RABL	**Rabaul**	**4.51 105**		P	**Pn**		**07 28 10.7**	**+2.7**
PMG	**Port Moresby**	**6.37 186**		Pn	**Pn**		**07 28 32.2**	**-1.3**
	1.6nm,0.3s,baz=337,slow=13,SNR=3.0							
PMG					LR		07 30 38.1	
	comp=Z,2μm,20.8s,baz=8.5,slow=35							
	8.5nm,0.5s							
PMG	**Port Moresby**	**6.37 186**		P	**Pn**		**07 28 31.6**	**-2.0**
PMG	**Port Moresby**	**6.37 186**		P	**Pn**		**07 28 35.7**	**+2.1**
GENI	**Genyem**	**7.63 273**		P	**Pn**		**07 28 52.7**	**+1.8**
	1.0nm4μm176nm,1.1s							
GENI	**Genyem**	**7.63 273**		P	**Pn**		**07 28 50.9**	**0.0**
SMPI	**Sarmi**	**9.14 276**		P	Pn		07 29 14.9	+3.3
	3μm6μm106nm,1.1s							
COEN	**Coen**	**11.78 203**		Pn	**Pn**		**07 29 47.4**	**-0.5**
COEN	**Coen**	**11.78 203**		P	**Pn**		**07 29 48.1**	**+0.3**
HNR	**Honiara**	**13.65 118**		LR	LR		07 35 25.8	
	comp=Z,26μm,18.1s,baz=290,slow=37							
MTSU	**Mount Surprise**	**15.40 193**		P	**Pn**		**07 30 38.0**	**+0.9**
TV1H	**Townsville Har**	**16.16 183**		P	**Pn**		**07 30 48.0**	**+1.0**
SIJI	**Sorong**	**16.66 277**		Pn	**Pn**		**07 30 52.7**	**-0.7**
	9.2nm,0.8s,baz=230,slow=23,SNR=2.2							
SIJI					LR		07 37 38.3	
	comp=Z,2μm,18.4s,baz=92,slow=39							
SIJI	**Sorong**	**16.66 277**		P	**P**		**07 30 55.8**	**0.0**
	684nm44nm,1.2s							
SWI	**Sorong**	**16.67 277**		P	**P**		**07 30 55.8**	**0.0**
	68nm,1.2s							
GUMO	**Guam**	**16.76 350**		LR	LR		07 37 15.5	
	comp=Z,925nm,18.1s,baz=168,slow=37							
CTA	**Charters Tower**	**17.02 185**		Pn	**Pn**		**07 30 58.4**	**+0.4**
	0.2nm,0.3s,baz=3.3,slow=12,SNR=7.2							
CTA					LR		07 37 27.8	
	comp=Z,2μm,18.1s,baz=6.0,slow=37							
	10nm,1.1s							
CTAO	**Charters Tower**	**17.02 185**		P	**Pn**		**07 30 58.3**	**+0.4**
KDU	**Kakadu**	**17.95 237**		P	**Pn**		**07 31 08.1**	**-1.3**
MTN	**Manton Dam**	**19.15 238**		P	**P**		**07 31 21.9**	**-1.5**
MTN					IAmb		IAmb	07 31 23.9
	comp=Z,80nm,0.9s							
MTN	**Manton Dam**	**19.15 238**		P	**P**		**07 31 22.2**	**-1.1**
QIS	**Mount Isa**	**19.17 204**		P	**P**		**07 31 23.6**	**+0.2**
KRAI	**Karang Ratu**	**19.38 269**		P	**Pn**		**07 31 27.9**	**+1.0**
	comp=Z,4μmcomp=Z,30nm,1.0s							
AAI	**Ambon**	**19.58 268**		P	**Pn**		**07 31 28.6**	**-0.7**
	comp=Z,2μmcomp=Z,79nm,0.9s							
RK1H	**Rockhampton Ha**	**20.41 173**		P	**P**		**07 31 38.0**	**+1.1**
LBMI	**Labuha**	**20.42 276**		P	Pn		07 31 39.8	+0.5
	comp=Z,2μmcomp=Z,74nm,1.1s							
GAMI	**Galela, Maluku**	**20.58 283**		P	Pn		07 31 41.7	+0.6
	comp=Z,55nm,1.0s							
NLAI	**Namlea**	**20.67 269**		P	Pn		07 31 40.9	-1.3
	comp=Z,17nm,0.8s							
TNTI	**Ternate**	**20.77 280**		P	**P**		**07 31 38.0**	**-2.9**
TNTI					IAmb		IAmb	07 31 48.4
	comp=Z,74nm,1.4s							
TNTI	**Ternate**	**20.77 280**		P	Pn		07 31 41.2	-2.1
	comp=Z,2μmcomp=Z,52nm,1.8s							
WB0	**Warramunga Arr**	**21.17 217**		P	**P**		**07 31 43.9**	**-1.4**
WB0					IAmb		IAmb	07 31 55.2
	comp=Z,81nm,1.5s							
WR0	**Warramunga Arr**	**21.23 217**		P	**P**		**07 31 44.7**	**-1.2**
WR0					IAmb		IAmb	07 31 58.4
	comp=Z,36nm,1.0s							
WRAB	**Tennant Creek**	**21.32 217**		P	**P**		**07 31 45.8**	**-1.1**
WRAB					IAmb		IAmb	07 32 07.6
	comp=Z,39nm,1.0s							
WRAB	**Tennant Creek**	**21.32 217**		P	**P**		**07 31 46.9**	**0.0**
WB2	**Warramunga Arr**	**21.33 217**		P	**P**		**07 31 46.0**	**-1.0**
WB2					IAmb		IAmb	07 31 51.8
	comp=Z,32nm,0.8s							
WRA	**Warramunga Arr**	**21.34 217**		P	**P**		**07 31 45.8**	**-1.3**
	comp=Z,15nm,0.6s,baz=45,slow=11,SNR=55							
WRA					LR		LR	07 41 01.5
	comp=Z,2μm,18.1s,baz=38,slow=40							
	comp=Z,15nm,0.6s							
WRA	**Warramunga Arr**	**21.34 217**		P	**P**		**07 31 45.7**	**-1.3**
SANI	**Sanana**	**21.81 272**		P	**P**		**07 31 54.1**	**+1.9**
	comp=Z,1μmcomp=Z,42nm,1.0s							
SANI	**Sanana**	**21.81 272**		P	**P**		**07 31 50.3**	**-1.9**
EIDS	**Eidsvold**	**22.44 172**		P	**P**		**07 31 58.6**	**-0.1**
EIDS					IAmb		IAmb	07 32 02.4
	comp=Z,45nm,1.2s							
EIDS	**Eidsvold**	**22.44 172**		P	**P**		**07 31 59.1**	**+0.3**
KNRA	**Kununurra**	**22.57 235**		P	**P**		**07 31 58.3**	**-2.0**
KNRA					IAmb		IAmb	07 32 20.9
	comp=Z,34nm,0.9s							
KNRA	**Kununurra**	**22.57 235**		P	**P**		**07 31 59.4**	**-0.8**
RMQ	**Roma**	**23.34 178**		P	**P**		**07 32 08.4**	**+0.2**
QLP	**Quilpie**	**23.67 188**		P	**P**		**07 32 11.7**	**+0.3**
AUBSH	**Beerwah State**	**24.21 169**		P	**P**		**07 32 16.9**	**+0.4**
SOEI	**Soe**	**24.31 253**		P	**P**		**07 32 15.6**	**-2.1**
SOEI	**Soe**	**24.31 253**		P	**P**		**07 32 16.4**	**-1.3**
DAV	**Davao City (W)**	**24.34 294**		LR	LR		07 40 45.6	
	comp=Z,445nm,19.2s,baz=124,slow=34							
DAV	**Davao City (W)**	**24.34 294**		P	**P**		**07 32 20.4**	**+2.5**
	comp=Z,285nm,0.5s							
AS01	**Alice Springs**	**24.50 212**		P	**P**		**07 32 18.8**	**-0.5**
AS31	**Alice Springs**	**24.52 212**		P	**P**		**07 32 17.9**	**-1.6**
ASAR	**Alice Springs**	**24.53 212**		P	**P**		**07 32 18.8**	**-0.8**
	comp=Z,15nm,0.8s,baz=36,slow=7.5,SNR=143							
ASAR					S		**S**	**07 36 47.6**	**+7.4**
	comp=Z,1.4nm,1.1s,baz=28,slow=20,SNR=5.0							
ASAR					LR		LR	07 42 44.8
	comp=Z,2μm,19.2s,baz=45,slow=39							
	comp=Z,15nm,0.8s							
BATI	**Baunata**	**25.00 252**		P	**P**		**07 32 21.4**	**-2.5**
GTOI	**Gorontalo**	**25.04 278**		P	**P**		**07 32 24.4**	**+0.1**
LUWI	**Luwuk**	**25.09 274**		P	**P**		**07 32 22.9**	**-1.8**
LUWI	**Luwuk**	**25.09 274**		P	**P**		**07 32 23.9**	**-0.8**
LUWI	**Luwuk**	**25.09 274**		P	**P**		**07 32 22.8**	**-1.8**
INKA	**Innaminka**	**25.48 195**		P	**P**		**07 32 28.1**	**0.0**
LIFNC	**LIFOU**	**25.88 134**		P	**P**		**07 32 31.0**	**-0.8**
MRSI	**Marisa**	**26.08 277**		P	**P**		**07 32 34.0**	**+0.3**
	comp=Z,26nm,0.9s							
NOUC	**Port Laguerre**	**26.12 138**		P	**P**		**07 32 36.0**	**+2.0**
DZM	**Mont Dzumac**	**26.20 138**		*e*P	**P**		**07 32 35.9**	**+1.1**
	comp=Z,64nm,1.1s							
DZM					*e*LR		LR	07 39 10.1
	comp=Z,4μm,26.0s							
DZM	**Mont Dzumac**	**26.20 138**		P	**P**		**07 32 36.3**	**+1.6**
	comp=Z,9.2nm,0.6s,baz=339,slow=9.7,SNR=10							
DZM					LR		LR	07 41 25.1
	comp=Z,3μm,20.7s,baz=320,slow=33							
	comp=Z,9.2nm,0.6s							
DZM	**Mont Dzumac**	**26.20 138**		P	**P**		**07 32 34.6**	**-0.1**
DZM	**Mont Dzumac**	**26.20 138**		P	**P**		**07 32 36.7**	**+1.9**
AULRC	**Lightning Ridg**	**26.26 180**		P	**P**		**07 32 34.1**	**-1.0**
YATNC	**Mamie plateau,**	**26.49 137**		P	**P**		**07 32 38.1**	**+0.8**
MARNC	**Mare, Loyalty**	**26.90 135**		P	**P**		**07 32 40.8**	**-0.2**
OOD	**Oodnadatta**	**27.21 204**		P	**P**		**07 32 42.8**	**-0.9**
BSSI	**Bau Bau, Buton**	**27.39 263**		P	**P**		**07 32 47.8**	**+2.3**
	comp=Z,821nmcomp=Z,47nm,1.0s							
ARMA	**Armidale**	**27.48 173**		P	**P**		**07 32 46.7**	**+0.4**
ARMA	**Armidale**	**27.48 173**		P	**P**		**07 32 46.9**	**+0.6**
BNSI	**Bone**	**27.66 266**		P	**P**		**07 32 51.0**	**+3.0**
BKSI	**Bulukumba**	**27.69 264**		P	**P**		**07 32 47.5**	**-0.7**
	comp=Z,13nm,1.1s							
TTSI	**Tana Toraja**	**27.94 269**		P	**P**		**07 32 52.9**	**+2.5**
PCI	**Palu**	**28.02 274**		P	**P**		**07 32 52.3**	**+1.1**
KAPI	**Kappang**	**28.04 265**		LR	LR		07 45 27.2	
	comp=Z,329nm,20.8s,baz=82,slow=40							
KAPI	**Kappang**	**28.04 265**		P	**P**		**07 32 53.3**	**+1.9**
	comp=Z,14nm,1.9s							
H11S3	**WAKE ISLAND Hy**	**28.35 40**		T	T		08 02 37.2	
	baz=223,slow=76,SNR=835							
H11S2	**WAKE ISLAND Hy**	**28.35 40**		T	T		08 02 35.2	
	baz=223,slow=76,SNR=1672							
H11S1	**WAKE ISLAND Hy**	**28.36 40**		T	T		08 02 37.0	
	baz=223,slow=76,SNR=1218							
CMSA	**Cobar Meteorol**	**28.43 184**		P	**P**		**07 32 53.7**	**-0.9**
LCRK	**Leigh Creek**	**28.74 197**		P	**P**		**07 32 56.3**	**-1.1**
WRKA	**Warakurna**	**28.84 219**		P	**P**		**07 32 56.9**	**-1.5**
PMSI	**Majene**	**28.84 268**		P	P		07 32 45.0	-1.4
STKA	**Stephens Creek**	**29.29 191**		P	**P**		**07 33 00.4**	**-1.8**
	comp=Z,2.1nm,0.8s,baz=341,slow=10,SNR=3.8							
STKA					LR		LR	07 45 22.3
	comp=Z,1μm,18.5s,baz=6.2,slow=38							
	comp=Z,2.1nm,0.8s							
STKA	**Stephens Creek**	**29.29 191**		P	**P**		**07 33 00.9**	**-1.3**
H11N3	**WAKE ISLAND Hy**	**29.39 39**		T	T		08 03 53.6	
	baz=221,slow=76,SNR=260							
H11N3	**WAKE ISLAND Hy**	**29.39 39**		T	T		08 03 54.7	
	baz=221,slow=76,SNR=514							
H11N2	**WAKE ISLAND Hy**	**29.39 39**		T	T		08 03 54.8	
	baz=221,slow=76,SNR=390							
MULG	**Mulgathing**	**30.07 204**		P	**P**		**07 33 07.9**	**-1.2**
MYLDM	**Lahad Datu**	**30.38 285**		P	P		07 33 25.5	+13
JCJ	**Chichijima**	**30.43 350**		LR	LR		07 43 39.2	
	comp=Z,624nm,21.9s,baz=168,slow=33							
TWSI	**Taliwang, Sumb**	**31.26 258**		P	**P**		**07 33 22.2**	**+2.3**
BBOO	**Buckleboo**	**31.61 199**		P	**P**		**07 33 21.5**	**-1.2**
CAN	**Canberra**	**32.15 178**		P	**P**		**07 33 27.6**	**+0.1**
CAN					IAmb		IAmb	07 33 40.3
	comp=Z,22nm,1.2s							
SRBI	**Singaraja**	**32.81 260**		P	P		07 33 45.6	+12
MSVF	**Nonsavu**	**33.07 118**		LR	LR		07 45 25.2	
	comp=Z,865nm,21.6s,baz=301,slow=33							
FORT	**Forrest**	**33.31 212**		P	**P**		**07 33 36.5**	**-1.2**
FORT	**Forrest**	**33.31 212**		P	**P**		**07 33 36.6**	**-1.1**
TOO	**Toolangi**	**34.44 183**		P	**P**		**07 33 46.5**	**-1.0**
TOO					IAmb		IAmb	07 33 48.5
	comp=Z,20nm,1.4s							
JOW	**Kunigami**	**35.17 329**		LR	LR		07 45 16.5	
	comp=Z,1μm,20.4s,baz=158,slow=31							
SBUM	**Sibu**	**35.98 278**		P	**P**		**07 33 59.1**	**-1.9**
SBUM					IAmb		IAmb	07 34 05.6
	comp=Z,15nm,1.0s							
JHJ	**Hachijo jima 2**	**36.74 349**		LR	LR		07 48 41.6	
	comp=Z,430nm,18.1s,baz=136,slow=36							
YULB	**Yu-li**	**36.83 317**		P	**P**		**07 34 06.0**	**-2.2**
NACB	**Ninganchiao**	**37.16 318**		P	**P**		**07 34 07.1**	**-3.8**
KSM	**Kuching**	**37.74 276**		P	**P**		**07 34 13.7**	**-2.3**
KSM					IAmb		IAmb	07 34 20.0
	comp=Z,20nm,1.0s							
KSM	**Kuching**	**37.74 276**		P	**P**		**07 34 15.3**	**-0.7**
	comp=Z,20nm,1.1s							
MJAR	**Matsushiro Arr**	**40.37 348**		P	**P**		**07 34 36.7**	**-1.0**
	comp=Z,3.3nm,0.9s,baz=160,slow=9.3,SNR=3.3							
MJAR					LR		LR	07 49 13.2
	comp=Z,317nm,19.2s,baz=152,slow=33							
	comp=Z,3.3nm,0.9s							
SKJI	**Sukabumi**	**41.26 263**		P	**P**		**07 34 46.6**	**+1.2**
	comp=Z,5μmcomp=Z,427nm,0.5s							
NWAO	**Narrogin (SRO)**	**41.27 220**		LR	LR		07 52 52.3	
	comp=Z,2μm,19.0s,baz=266,slow=38							
AFI	**Afiamalu**	**41.35 108**		LR	LR		07 50 13.7	
	comp=Z,396nm,18.5s,baz=212,slow=34							
SBJI	**Serang**	**41.64 264**		P	**P**		**07 34 51.2**	**+2.7**
RAO	**Raoul Island**	**41.71 132**		LR	LR		07 49 41.8	
	comp=Z,524nm,20.6s,baz=303,slow=33							
QIZ	**Qiongzhong**	**43.29 302**		P	**P**		**07 34 58.3**	**-3.6**
QIZ				S	**S**		**07 41 31.9**	**+2.4**
QIZ				SS	**SS**		**07 44 44.6**	**+1.5**
URZ	**Urewera**	**44.12 146**		LR	LR		07 51 02.9	
	comp=Z,1μm,21.1s,baz=32,slow=33							
KSRS	**Korea Array**	**44.31 337**		P	**P**		**07 35 10.2**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=156,slow=9.1,SNR=7.4							
KSRS					LR		LR	07 51 45.1
	comp=Z,469nm,19.5s,baz=150,slow=34							
	comp=Z,3.6nm,0.8s							
NJ2	**Nanjing**	**44.41 324**		*e*P	**P**		**07 35 10.6**	**0.0**
TUWZ	**Tuamarina**	**44.87 152**		P	**P**		**07 35 14.0**	**-0.2**
RPZ	**Rata Peaks**	**45.46 156**		LR	LR		07 51 11.9	
	comp=Z,362nm,21.7s,baz=315,slow=32							
SDSI	**Sungai Dareh**	**46.38 272**		P	**P**		**07 35 26.2**	**-0.5**
	comp=Z,19nm,0.9s							
TIA	**Tai'an**	**48.41 327**		P	**P**		**07 35 44.3**	**+2.2**
TIA				S	**S**		**07 42 47.9**	**+5.0**
USRK	**Ussuriysk Ar.**	**49.11 345**		P	**P**		**07 35 48.7**	**+1.5**
	comp=Z,4.1nm,0.8s,baz=203,slow=14,SNR=6.4							
USRK					LR		LR	07 55 29.1
	comp=Z,284nm,18.8s,baz=145,slow=35							
	comp=Z,4.1nm,0.8s							
PSI	**Prapat**	**49.19 276**		LR	LR		07 58 15.7	
	comp=Z,226nm,19.1s,baz=121,slow=38							
HNS	**HongShan**	**50.61 326**		⇑P	**P**		**07 36 02.4**	**+3.6**
HNS				S	**S**		**07 43 18.5**	**+4.9**
CN2	**Changchun**	**50.76 339**		P	P		07 36 09.0	+9.2
CN2				*e*S	**S**		**07 43 20.8**	**+5.3**
BNX	**BinXian**	**51.82 342**		⇑P	**P**		**07 36 09.6**	**+1.8**
XAN	**Xi'an**	**51.95 319**		⇑*i*P	**P**		**07 36 10.6**	**+1.6**
XAN				pP	sP		07 36 17.1	+4.0
CMAR	**Chiang Mai Arr**	**52.61 296**		P	**P**		**07 36 15.1**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=115,slow=6.1,SNR=1.1							
CMAR					LR		LR	07 56 29.2
	comp=Z,156nm,21.5s,baz=105,slow=34							
	comp=Z,1.2nm,0.4s							
PZH	**PanZhiHua**	**53.29 306**		P	**P**		**07 36 18.8**	**-0.4**
PZH				S	**S**		**07 43 54.5**	**+3.4**
CD2	**Chengdu**	**53.83 312**		*e*P	**P**		**07 36 22.0**	**-1.0**
KLR	**Kul'dur**	**53.88 347**		P	**P**		**07 36 23.0**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=74,slow=1.7,SNR=4.2							
KLR					LR		LR	07 57 03.3
	comp=Z,230nm,21.2s,baz=174,slow=34							
	comp=Z,1.8nm,0.7s							
RAR	**Rarotonga**	**54.05 114**		LR	LR		07 56 36.6	
	comp=Z,156nm,21.8s,baz=281,slow=33							
HHC	**Hu-ho-hao-te**	**54.77 327**		*e*P	**P**		**07 36 29.5**	**-0.2**
LZH	**Lanzhou**	**56.53 318**		*e*P	**P**		**07 36 44.3**	**+1.8**
LZH				pP	sP		07 36 47.8	+1.2
LZH				sP	pP		07 36 50.0	+4.5
LZH				S	**S**		**07 44 38.3**	**+3.9**
LZH	**Lanzhou**	**56.53 318**		SS	**SS**		**07 48 26.3**	**+4.3**
PETK	**Petropavlovsk-**	**56.55 7**		P	**P**		**07 36 42.1**	**0.0**
	comp=Z,6.5nm,0.6s,baz=178,slow=6.6,SNR=25							
PETK					LR		LR	07 57 11.2
	comp=Z,340nm,21.9s,baz=189,slow=32							
	comp=Z,6.5nm,0.6s							
SHEM	**Shemya Is, Ala**	**59.81 18**		LR	LR		07 57 43.9	
	comp=Z,163nm,19.8s,baz=262,slow=31							
BRDH	**Bariadhala**	**60.42 298**		LR	LR		08 01 39.3	
	comp=Z,140nm,22.0s,baz=106,slow=34							
GTA	**Gaotai**	**61.01 319**		*e*P	**P**		**07 37 16.0**	**+2.4**
GTA				pP	sP		07 37 19.3	+1.5
GTA				sP	pP		07 37 22.3	+5.7
SHL	**Shillong**	**61.12 301**		P	**P**		**07 37 13.4**	**-1.3**
SHL				IAmb	IAmb		07 37 22.9	
	comp=Z,9.6nm,0.8s							
ULN	**Ulaanbaatar**	**61.92 330**		P	**P**		**07 37 18.3**	**-1.4**
SONM	**Songino Array**	**62.23 330**		P	**P**		**07 37 22.9**	**+1.2**
	comp=Z,2.2nm,1.1s,baz=138,slow=5.2,SNR=7.3							
SONM					LR		LR	08 02 26.3
	comp=Z,436nm,21.7s,baz=125,slow=34							
	comp=Z,2.2nm,1.1s							
GOMU	**GeErMu**	**62.91 313**		P	**P**		**07 37 28.9**	**+2.2**
GOMU				pP	sP		07 37 32.0	+1.1
GOMU				sP	pP		07 37 33.9	+4.1
PPT	**Papeete**	**63.02 108**		LR	LR		07 58 05.6	
	comp=Z,110nm,21.6s,baz=294,slow=30							
PPT2	**Papeete2**	**63.02 108**		*e*LR	LR		07 56 14.2	
	comp=Z,268nm,25.0s							
PPT2				*e*LR	LR		07 56 14.3	
	comp=Z,311nm,23.8s							
TBI	**Tubuai**	**63.83 114**		*e*LR	LR		07 56 36.6	
	comp=Z,8μm,28.0s							
TBI				*e*LR	LR		07 56 37.0	
	comp=Z,620nm,30.2s							
YAK	**Yakutsk**	**66.35 351**		LR	LR		08 07 16.8	
	comp=Z,117nm,18.4s,baz=90,slow=36							
WMQ	**Urumqi**	**71.09 318**		*e*P	**P**		**07 38 19.1**	**+0.8**
WMQ				sP	sP		07 38 28.6	+6.1
VNDA	**Vanda**	**74.81 177**		P	**P**		**07 38 38.7**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=338,slow=6.4,SNR=17							
VNDA					LR		LR	08 09 40.2
	comp=Z,232nm,19.0s,baz=348,slow=34							
	comp=Z,1.5nm,0.6s							
VNDA	**Vanda**	**74.81 177**		P	**P**		**07 38 38.9**	**-0.8**
SBA	**Scott Base**	**75.44 176**		P	**P**		**07 38 43.7**	**+0.4**
TIXI	**Tiksi**	**75.56 354**		P	**P**		**07 38 44.9**	**+0.9**
	comp=Z,3.2nm,0.6s,baz=270,slow=24,SNR=13							
	comp=Z,3.2nm,0.6s							
TIXI	**Tiksi**	**75.56 354**		P	**P**		**07 38 43.8**	**-0.1**
TIXI				IAmb	IAmb		07 38 50.2	
	comp=Z,9.3nm,1.2s							
MK31	**Makanchi Array**	**75.74 320**		P	**P**		**07 38 43.4**	**-2.3**
MKAR	**Makanchi Array**	**75.74 320**		P	**P**		**07 38 44.9**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=100,slow=7.4,SNR=7.0							
MKAR					LR		LR	08 12 36.6
	comp=Z,360nm,18.8s,baz=109,slow=36							
	comp=Z,0.9nm,0.8s							
MKAR	**Makanchi Array**	**75.74 320**		P	**P**		**07

comp=Z,205nm,20.0s,baz=264,slow=31
PLCA Paso Flores 124.13 145 PKP **PKPdf 07 45 58.0 -0.9**
comp=Z,1.2nm,1.0s,baz=272,slow=1.4,SNR=4.4
CPUP Villa Florida 142.02 142 PKP **PKPdf 07 46 31.5 -1.3**
comp=Z,2.8nm,0.9s,baz=177,slow=1.6,SNR=6.4
TORD Torodi Ar. Bea 145.01 289 PKP **PKPab 07 46 36.0 -1.6**
comp=Z,1.3nm,0.8s,baz=74,slow=3.0,SNR=5.8

AZER ***23*** *08:21:51.8±0.9, 38°.22N×40°.62E, h10km, Error ellipse: s-maj=12.8km s-min=7.1km az=160.0*
IDC ***23*** *08:22:00.7±0.8, 38°.37N×41°.85E, h0km, mb3.8/14, mbtmp3.8/25, ML3.3/9, MS3.5/10, Error ellipse: s-maj=13.4km s-min=9.0km az=156.0*
MOS ***23*** *08:22:00.7±1.1, 38°.25N×41°.96E, h10km, mb4.3/11, Error ellipse: s-maj=6.9km s-min=3.8km az=79.6*
ISK ***23*** *08:22:00.1, 38°.37N×41°.99E, h5km, ML4.3/44*
DDA ***23*** *08:22:01.1±0.0, 38°.42N×41°.93E, h2km, MW4.2*
GII ***23*** *08:22:02.9±0.0, 38°.37N×42°.10E, h14km, mb4.7/2, MD4.7/2*
NEIC ***23*** *08:22:03.1, 38°.34N×42°.06E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.21; Mθθ=1.76; Mφφ 1.97; Mrθ=0.44; Mrφ0.52; Mθφ1.07; Fault plane solution: M0=2.26000×10^15^ NP1:φs=323.59000°, δ89.20000°, λ150.07000°. NP2:φs=54.05000°, δ60.08000°, λ0.92000°. Principal axes: T 2.4287, Plg21.0000°, Azm275.0000°; N -0.3886, Plg60.0000°, Azm142.0000°; P -2.0402, Plg20.0000°, Azm13.0000°;*
NSSP ***23*** *08:22:03.1, 38°.50N×42°.08E, h10km, Ms4.0*
NEIC ***23*** *08:22:03.4±1.9, 38°.39N±0°.04×42°.04E±0°.06, h10km±1km, mb4.2/10, Mwr4.2/17, ML4.3(ISK), Error ellipse: s-maj=8.6km s-min=6.4km az=313.0*
ISC 23 08:22:02.5±0.7,**38°.37N**±0°.02×**41°.95E**±0°.01,**h8**km±4km, **n268**, σ1$**82**/317,**mb4.1**/29,**MS3.4**/10,**7C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLIS	**Bitlis-Merkez**	**0.14**	**71**	P	**Pg**	**08 22 04.3**	**-1.3**
BLIS				S	**Sg**	**08 22 06.9**	**-0.7**
GURO	**Guroymak-BITLI**	**0.19**	**19**	PG	**Pg**	**08 22 05.0**	**-1.5**
GURO				SG	**Sg**	**08 22 07.9**	**-1.3**
GURO	**Guroymak-BITLI**	**0.19**	**19**		**Pg**	**08 22 05.0**	**-1.5**
GURO				Sg	**Sg**	**08 22 08.0**	**-1.3**
MUSM	**Mu-Merkez**	**0.49**	**316**	P	**Pg**	**08 22 10.5**	**-1.7**
MUSM				*i* AML	AML	08 22 17.0	
	comp=N,1μm,0.6s						
MUSM				S	**Sg**	**08 22 17.2**	**-1.5**
MUSM				*i* AML	AML	08 22 18.0	
	comp=E,9μm,0.5s						
SVAN	**Silvan-Diyarba**	**0.63**	**250**	PG	**Pg**	**08 22 14.0**	**-0.7**
SVAN				SG	**Sb**	**08 22 24.3**	**-0.6**
BTMN	**Batman**	**0.72**	**229**	P	**Pg**	**08 22 16.2**	**-0.2**
BTMN				S	**Sb**	**08 22 27.1**	**-0.3**
BTMN				*i* AML	AML	08 22 30.0	
	comp=E,5μm,0.3s						
BTMN				*i* AML	AML	08 22 30.0	
	comp=N,1μm,0.7s						
ADCV	**BITLIS_Adilcev**	**0.75**	**54**	P	**Pg**	**08 22 15.6**	**-1.3**
ADCV				S	**Sg**	**08 22 26.2**	**-0.4**
ADCV				*i* AML	AML	08 22 28.0	
	comp=N,8μm,0.7s						
AKDM	**Akdamar-Van**	**0.81**	**93**	PG	**Pg**	**08 22 16.0**	**-2.1**
AKDM				SG	**Sg**	**08 22 28.1**	**-0.5**
GEVA	**Gevas**	**0.87**	**93**	Pg	**Pg**	**08 22 17.5**	**-1.8**
GEVA	**Gevas**	**0.87**	**93**	P	**Pg**	**08 22 17.3**	**-2.0**
GEVA				S	**Sb**	**08 22 32.0**	**+0.2**
GEVA				*i* AML	AML	08 22 35.0	
	comp=E,4μm,0.7s						
GEVA				*i* AML	AML	08 22 38.0	
	comp=N,3μm,0.6s						
VRTB	**Varto-Mus**	**0.88**	**334**	PG	**Pg**	**08 22 17.3**	**-2.1**
EKAR	**Karacoban**	**0.89**	**6**	P	**Pg**	**08 22 16.9**	**-2.7**
EKAR				S	**Sg**	**08 22 30.0**	**-1.2**
MLAZ	**Malazgirt-MUS**	**0.90**	**31**	PG	**Pg**	**08 22 18.2**	**-1.6**
MLAZ				SG	**Sg**	**08 22 31.6**	**+0.1**
SLHN	**Bingol, Solhan**	**0.93**	**309**	P	**Pg**	**08 22 18.5**	**-2.0**
SLHN				S	**Sg**	**08 22 31.8**	**-0.8**
SLHN				*i* AML	AML	08 22 32.0	
	comp=N,8μm,0.6s						
SLHN				*i* AML	AML	08 22 38.0	
	comp=E,9μm,0.7s						
MIDY	**Mardin/Midyat-**	**1.06**	**205**	P	**Pg**	**08 22 22.3**	**-0.5**
MIDY				S	**Sb**	**08 22 37.3**	**+0.2**
MIDY				*i* AML	AML	08 22 38.0	
	comp=N,7μm,1.0s						
MIDY				*i* AML	AML	08 22 39.0	
	comp=E,5μm,0.5s						
VANB	**Van**	**1.15**	**78**	PN	**Pg**	**08 22 22.5**	**-2.1**
TVAN	**Van**	**1.15**	**82**	P	**Pg**	**08 22 22.3**	**-2.3**
TVAN				S	**Sb**	**08 22 39.9**	**-0.1**
TVAN				*i* AML	AML	08 22 43.0	
	comp=N,3μm,0.5s						
TVAN				*i* AML	AML	08 22 43.0	
	comp=E,2μm,0.5s						
KARO	**Karliova-Bingo**	**1.17**	**323**	PN	**Pg**	**08 22 23.9**	**-1.1**
BNGB	**Bingl**	**1.18**	**302**	PN	**Pg**	**08 22 23.7**	**-1.4**
HANI	**Diyarbakir_Han**	**1.22**	**273**	P	**Pg**	**08 22 24.2**	**-1.8**
HANI				S	**Sg**	**08 22 41.5**	**-0.3**
HANI				*i* AML	AML	08 22 43.0	
	comp=N,4μm,0.9s						
HANI				*i* AML	AML	08 22 43.0	
	comp=E,6μm,0.4s						
MARD	**Mardin**	**1.41**	**222**		**Pn**	**08 22 27.5**	**-1.1**
MARD	**Mardin**	**1.41**	**222**	P	**Pn**	**08 22 27.3**	**-1.2**
MARD				S	**Sb**	**08 22 46.3**	**-0.9**
MARD				*i* AML	AML	08 22 48.0	
	comp=E,1μm,0.7s						
MARD				*i* AML	AML	08 22 49.0	
	comp=N,2μm,0.8s						
VMUR	**Van-Muradiye**	**1.41**	**63**	P	**Pn**	**08 22 27.0**	**-1.6**
VMUR				S	**Sn**	**08 22 47.8**	**+0.3**
VMUR				*i* AML	AML	08 22 58.0	
	comp=N,3μm,1.0s						
AGRB	**Hanur-Agry**	**1.45**	**34**	PN	**Pn**	**08 22 28.1**	**-1.1**
ECAT	**Cat-ERZURUM**	**1.45**	**329**	P	**Pn**	**08 22 27.8**	**-1.5**
ECAT				S	**Sb**	**08 22 48.0**	**-0.6**
ECAT				*i* AML	AML	08 22 49.0	
	comp=E,3μm,0.5s						
ECAT				*i* AML	AML	08 22 55.0	
	comp=N,2μm,0.7s						
DYBB	**Diyarbakir**	**1.49**	**254**	PN	**Pn**	**08 22 28.8**	**-0.8**
MAZI	**Mazidag**	**1.50**	**233**	PN	**Pn**	**08 22 28.3**	**-1.5**
DIYA	**Diyarbakir**	**1.51**	**253**	P	**Pn**	**08 22 29.0**	**-0.9**
DIYA				S	**Sn**	**08 22 48.3**	**-1.6**
DIYA				*i* AML	AML	08 22 56.0	
	comp=N,4μm,0.7s						
DIYA				*i* AML	AML	08 22 56.0	
	comp=E,4μm,0.9s						
YEDI	**Yedisu-Bingol**	**1.53**	**315**	PN	**Pn**	**08 22 29.8**	**-0.5**
EJDE	**Erzurum, Palan**	**1.55**	**341**	P	**Pn**	**08 22 29.1**	**-1.6**
EJDE				S	**Sn**	**08 22 50.8**	**-0.3**
EJDE				*i* AML	AML	08 22 57.0	
	comp=E,7μm,0.6s						
EJDE				*i* AML	AML	08 22 58.0	
	comp=N,3μm,0.6s						
EATA	**Eleskirt**	**1.55**	**16**	P	**Pn**	**08 22 29.1**	**-1.6**
EATA				S	**Sn**	**08 22 49.8**	**-1.4**
ERZM	**Erzurum**	**1.60**	**344**	P	**Pn**	**08 22 31.1**	**-0.2**
HAKT	**HAKKARI**	**1.61**	**120**	P	**Pn**	**08 22 30.7**	**-0.6**
HAKT				S	**Sg**	**08 22 55.6**	**+1.4**
KOPR	**Koprukoy-ERZUR**	**1.62**	**357**	PN	**Pn**	**08 22 31.7**	**+0.1**
HOMI	**Horasan**	**1.67**	**359**	P	**Pn**	**08 22 31.3**	**-1.0**
HOMI				S	**Sg**	**08 22 57.8**	**+1.5**
KOVA	**Elazig, Kovanc**	**1.71**	**282**	P	**Pn**	**08 22 32.1**	**-0.6**
KOVA				S	**Sb**	**08 22 56.0**	**+0.1**
KOVA				*i* AML	AML	08 23 01.0	
	comp=N,958nm,0.7s						
KOVA				*i* AML	AML	08 23 04.0	
	comp=E,2μm,1.2s						
CLDR	**Caldiran**	**1.72**	**63**	PN	**Pn**	**08 22 31.9**	**-1.0**
KOTA	**Agri, Merkez-K**	**1.73**	**34**	P	**Pn**	**08 22 32.4**	**-0.6**
KOTA				S	**Sb**	**08 22 56.0**	**-0.6**
DYDN	**Diyadin**	**1.79**	**49**	P	**Pn**	**08 22 33.6**	**-0.3**
EMRE	**Erzurum,Aziziy**	**1.82**	**336**	P	**Pn**	**08 22 35.2**	**+0.8**
KOPT	**Kop Dagi**	**2.00**	**326**		**Pb**	**08 22 38.2**	**-1.1**
KOPT	**Kop Dagi**	**2.00**	**326**	P	**Pb**	**08 22 38.6**	**-0.6**
YOVA	**Hakkari_Yksek**	**2.00**	**112**	P	**Pb**	**08 22 38.5**	**-0.8**
YOVA				S	**Sg**	**08 23 07.9**	**+1.0**
TNCL	**Tunceli-Merkez**	**2.03**	**292**	P	**Pn**	**08 22 36.7**	**-0.4**
PTK	**Pertek**	**2.07**	**285**	PN	**Pn**	**08 22 37.2**	**-0.6**
KRIK	**Erzurum-spir**	**2.12**	**338**	P	**Pb**	**08 22 40.0**	**-1.3**
ERZN	**Erzincan**	**2.12**	**306**	PN	**Pn**	**08 22 38.7**	**+0.3**
EUZM	**Uzumlu**	**2.21**	**308**	P	**Pn**	**08 22 39.3**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.21**	**8**	PN	**Pn**	**08 22 39.4**	**-0.3**
IGDI	**IGDIR**	**2.23**	**47**	P	**Pn**	**08 22 40.2**	**+0.4**
VNNZ	**Vanand**	**2.26**	**39**	*eP*	**Pb**	**08 22 41.8**	**-1.8**
VNNZ				*eS*	**Sb**	**08 23 11.6**	**-0.2**
BAYB	**BAYBURT**	**2.30**	**326**	P	**Pn**	**08 22 42.4**	**+1.5**
ELZG	**Elazig**	**2.33**	**274**	P	**Pn**	**08 22 40.2**	**-1.1**
TASB	**TASBURUN-IGDIR**	**2.40**	**47**	PN	**Pn**	**08 22 41.7**	**-0.4**
KARS	**Kars**	**2.42**	**21**	PN	**Pn**	**08 22 42.5**	**0.0**
KARS	**Kars**	**2.42**	**21**		**Pn**	**08 22 43.0**	**+0.6**
KARS	**Kars**	**2.42**	**21**	P	**Pn**	**08 22 43.0**	**+0.6**
METS	**Metsamor**	**2.43**	**42**	*eP*	**Pn**	**08 22 44.0**	**+1.5**
METS				*eS*	**Sb**	**08 23 14.7**	**-1.8**
BAYT	**Aydıntepe-Bayb**	**2.46**	**326**	PN	**Pn**	**08 22 43.1**	**0.0**
DDEM	**Demirkent**	**2.52**	**357**	P	**Pn**	**08 22 44.7**	**+0.8**
ARUZ	**Aruch**	**2.53**	**40**	*eP*	**Pb**	**08 22 46.6**	**-1.6**
ARUZ				*eS*	**Sb**	**08 23 19.4**	**-0.1**
HYR	**Heyderabad**	**2.63**	**58**	P	**Pb**	**08 22 48.1**	**-1.8**
	SNR=44						
HYR				S	**Sg**	**08 23 31.6**	**+4.7**
SANL	**SANLIURFA_Merk**	**2.64**	**244**	P	**Pn**	**08 22 46.9**	**+1.5**
DBAD	**Bademkaya**	**2.65**	**356**	P	**Pn**	**08 22 45.5**	**-0.2**
NRKZ	**NAREK**	**2.66**	**51**	*eP*	**Pn**	**08 22 45.9**	**+0.2**
NRKZ				*eS*	**Sn**	**08 23 18.9**	**+0.6**
AMBZ	**Amberd**	**2.69**	**41**	*eP*	**Pn**	**08 22 47.4**	**+1.0**
AMBZ				*eS*	**Sn**	**08 23 21.0**	**+1.7**
DAGI	**Agillar**	**2.70**	**359**	P	**Pn**	**08 22 46.6**	**+0.3**
GNI	**Garni**	**2.80**	**50**	Pn	**Pn**	**08 22 48.8**	**+1.1**
	46nm,0.9s,baz=248,slow=3.3,SNR=18						
GNI				Lg	Lg	08 23 31.7	
	10nm,0.3s,baz=179,slow=23,SNR=9.8						
GNI	**Garni**	**2.80**	**50**	*i P*	**Pn**	**08 22 48.9**	**+1.2**
GNI				↑↑ *i S*	**Sb**	**08 23 24.7**	**-2.7**
GNI	**Garni**	**2.80**	**50**	PN	**Pn**	**08 22 47.6**	**-0.1**
GNI	**Garni**	**2.80**	**50**		**Pn**	**08 22 48.6**	**+0.9**
KEMA	**Kemaliye**	**2.85**	**289**	P	**Pb**	**08 22 51.4**	**-2.2**
CHOM	**Cayeli-Rize**	**2.87**	**342**	PN	**Pn**	**08 22 48.9**	**+0.3**
NAX	**Nakhchivan**	**2.88**	**73**	P	**Pb**	**08 22 51.5**	**-2.7**
	SNR=33						
NAX				S	**Sg**	**08 23 40.0**	**+4.9**
KAPZ	**Kaputan**	**2.89**	**47**	*eP*	**Pn**	**08 22 50.2**	**+1.2**
KAPZ				*eS*	**Sn**	**08 23 26.2**	**+2.3**
REFA	**Refahiye_ERZN**	**2.92**	**303**	P	**Pn**	**08 22 49.4**	**+0.1**
ARPR	**Arapgir-MALATY**	**2.92**	**285**	PN	**Pn**	**08 22 50.1**	**+0.7**
SBZ	**Shahbuz**	**2.99**	**69**	P	**Pb**	**08 22 54.1**	**-2.0**
	SNR=57						
SBZ				S	**Sg**	**08 23 42.5**	**+4.0**
KTUT	**Trabzon**	**3.11**	**328**	PN	**Pn**	**08 22 52.5**	**+0.7**
AZMN	**Azmana**	**3.12**	**19**	P	Pg	08 23 10.4	+8.2
ALUC	**Giresun/Alucra**	**3.16**	**310**	P	**Pn**	**08 22 55.9**	**+3.2**
AKCD	**Akcadag**	**3.17**	**270**	P	**Pn**	**08 22 51.6**	**-1.2**
ORD	**Ordubad**	**3.21**	**79**	P	**Pb**	**08 22 56.5**	**-3.4**
	SNR=54						
ORD				S	**Sg**	**08 23 48.5**	**+2.8**
BATM	**Batumi**	**3.24**	**357**	P	**Pn**	**08 22 54.0**	**+0.4**
AKH	**Akhalkalaki**	**3.26**	**21**	PN	**Pn**	**08 22 54.3**	**+0.2**
AKH	**Akhalkalaki**	**3.26**	**21**	P	**Pn**	**08 22 54.8**	**+0.7**
AKH	**Akhalkalaki**	**3.26**	**21**	P	**Pn**	**08 22 54.8**	**+0.7**
DMNI	**Dmanisi**	**3.42**	**30**	P	**Pn**	**08 22 57.1**	**+0.9**
DMNI				S	**Sg**	**08 23 56.0**	**+3.6**
DMNI	**Dmanisi**	**3.42**	**30**	P	**Pn**	**08 22 57.1**	**+0.9**
ABS	**Abastumani**	**3.44**	**11**	P	**Pn**	**08 22 57.2**	**+0.5**
ABS				S	**Sg**	**08 23 53.5**	**+0.3**
ABS	**Abastumani**	**3.44**	**11**	P	**Pn**	**08 22 57.1**	**+0.5**
DARE	**Darende-Malaty**	**3.51**	**275**	PN	**Pn**	**08 22 58.3**	**+0.8**
BRNG	**Burnasheti**	**3.55**	**23**	P	**Pn**	**08 22 59.9**	**+1.7**
BRNG	**Burnasheti**	**3.55**	**23**	P	**Pn**	**08 22 59.8**	**+1.7**
ESPY	**Espiye-Giresun**	**3.56**	**317**	PN	**Pn**	**08 22 58.9**	**+0.9**
BKRG	**Bakuriani**	**3.59**	**19**	P	**Pn**	**08 22 59.9**	**+1.2**
BKRG	**Bakuriani**	**3.59**	**19**	P	**Pn**	**08 22 59.8**	**+1.2**
GDB	**GEDABAY**	**3.76**	**50**	P	**Pn**	**08 23 02.5**	**+1.5**
	SNR=5.6						
GDB				S	**Sb**	**08 23 58.4**	**+3.4**
QZX	**Qazax, Azerbai**	**3.76**	**43**	P	**Pn**	**08 23 02.5**	**+1.7**
	SNR=12						
QZX				S	**Sb**	**08 23 57.4**	**+2.4**
GAZ	**Gaziantep**	**3.94**	**254**	PN	**Pn**	**08 23 04.8**	**+1.4**
GAZ	**Gaziantep**	**3.94**	**254**	Pn	**Pn**	**08 23 05.6**	**+2.2**
ALIG	**Mtskhetisjvari**	**3.95**	**19**	P	**Pn**	**08 23 04.5**	**+1.0**
ALIG	**Mtskhetisjvari**	**3.95**	**19**	P	**Pn**	**08 23 04.4**	**+1.0**
BTNK	**Botanikuri**	**3.96**	**33**	P	**Pn**	**08 23 06.2**	**+2.6**
BTNK				S	**Sb**	**08 24 03.2**	**+2.5**
BTNK	**Botanikuri**	**3.96**	**33**	P	**Pn**	**08 23 06.2**	**+2.6**
TKB	**Tkibuli**	**4.05**	**11**	P	**Pn**	**08 23 06.1**	**+1.2**
TKB				S	**Sg**	**08 24 19.4**	**+6.7**
TKB	**Tkibuli**	**4.05**	**11**	P	**Pn**	**08 23 06.1**	**+1.2**
GANJ	**Ganja**	**4.07**	**55**	P	**Pn**	**08 23 07.2**	**+2.1**
	SNR=9.7						
GANJ				S	**Sb**	**08 24 06.8**	**+2.9**
KMRS	**Kahramanmaras**	**4.09**	**259**	PN	**Pn**	**08 23 07.1**	**+1.8**
RSDY	**Resadiye-TOKAT**	**4.12**	**301**	PN	**Pn**	**08 23 06.9**	**+1.2**
SVSK	**Karacayir**	**4.15**	**293**	PN	**Pn**	**08 23 07.9**	**+1.8**
SARI	**SarD1z-Kayseri**	**4.35**	**272**	PN	**Pn**	**08 23 10.2**	**+1.1**
ONI	**Oni**	**4.37**	**15**	PN	**Pn**	**08 23 10.1**	**+0.9**
ONI	**Oni**	**4.37**	**15**		**Pn**	**08 23 09.2**	**+0.1**
ONI	**Oni**	**4.37**	**15**	P	**Pb**	**08 23 21.5**	**+2.0**
ONI	**Oni**	**4.37**	**15**	*eP*	**Pn**	**08 23 10.3**	**+1.1**
TOKT	**Tokat**	**4.62**	**297**	PN	**Pn**	**08 23 14.4**	**+1.7**
TOKA	**Tokat**	**4.67**	**296**		**Pn**	**08 23 14.8**	**+1.5**
PNSH	**Pansheti**	**4.72**	**25**	P	**Pn**	**08 23 13.1**	**-1.0**
PNSH	**Pansheti**	**4.72**	**25**	P	**Pn**	**08 23 13.1**	**-1.0**
LGD	**Lagodekhi**	**4.77**	**42**	P	**Pb**	**08 23 24.2**	**-2.2**
LGD				S	**Sg**	**08 24 32.2**	**-3.5**
LGD	**Lagodekhi**	**4.77**	**42**	P	**Pb**	**08 23 24.2**	**-2.2**
BNN	**Bunyan**	**4.81**	**278**	PN	**Pn**	**08 23 17.0**	**+1.7**
BNN	**Bunyan**	**4.81**	**278**		**Pn**	**08 23 17.6**	**+2.3**
NEY	**Neytrino**	**4.91**	**7**	*eP*	**Pn**	**08 23 17.7**	**+1.0**
KOZT	**Kozan**	**4.92**	**261**	PN	**Pn**	**08 23 18.5**	**+1.7**
SHTL	**Shatili**	**4.93**	**29**	P	**Pn**	**08 23 19.4**	**+2.4**
SHTL	**Shatili**	**4.93**	**29**	P	**Pn**	**08 23 19.3**	**+2.4**
YRD	**Yardimli**	**4.95**	**82**	P	**Pn**	**08 23 20.4**	**+3.0**
	SNR=12						
YRD				S	**Sb**	**08 24 30.4**	**+1.0**
TAHT	**Tahtakopru-Hat**	**5.01**	**248**	PN	**Pn**	**08 23 19.6**	**+1.7**
CEYT	**Ceyhan**	**5.11**	**256**	PN	**Pn**	**08 23 21.5**	**+2.2**
ARXR	**Arkhyz**	**5.21**	**355**	*i P*	**Pn**	**08 23 23.7**	**+2.8**
YAYL	**Yayladag**	**5.22**	**245**	PN	**Pn**	**08 23 23.1**	**+2.2**
KDMR	**Kurdemir**	**5.23**	**66**	S	**Sb**	**08 24 34.3**	**-2.7**
NCK	**Nalchik**	**5.27**	**13**	*i P*	**Pn**	**08 23 22.9**	**+1.4**
KVT	**Kavak**	**5.30**	**303**	PN	**Pn**	**08 23 24.1**	**+2.1**
YOZ	**Yozgat**	**5.32**	**286**	PN	**Pn**	**08 23 24.6**	**+2.2**
BTLR	**Botlikh**	**5.38**	**36**	*i P*	**Pn**	**08 23 26.6**	**+3.5**
SHA1	**Shidzhatmaz**	**5.39**	**5**	*i P*	**Pn**	**08 23 25.0**	**+1.6**
KBZ	**Khabaz**	**5.40**	**7**	Pn	**Pn**	**08 23 24.9**	**+1.6**
	0.4nm,0.3s,baz=192,slow=14,SNR=9.9						
KBZ				Lg	Lg	08 24 51.4	
	0.1nm,0.3s,baz=115,slow=19,SNR=0.9						
	2.4nm,0.6s						
KBZ	**Khabaz**	**5.40**	**7**	*ceP*	**Pn**	**08 23 26.1**	**+2.8**
AKT	**Akhty**	**5.42**	**53**	*eP*	Pn	08 23 30.1	+6.4
AKT				*eS*	**Sb**	**08 24 35.8**	**-6.8**
AKT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKT				smax	smax		
	comp=N,15nm,0.8s						
AKT				smax	smax		
	comp=N,11nm,1.0s						
AKT				smax	smax		
	comp=E,10.0nm,0.4s						
AKT				MLR	MLR		
	comp=Z,36nm,4.0s						
SOC	**Sochi**	**5.48**	**343**	*eP*	**Pn**	**08 23 23.9**	**-0.4**
SOC				*e*		08 24 25.6	
SOC				pmax	pmax		
	comp=Z,18nm,0.8s						
SOC				MLR	MLR		
	comp=Z,100nm,12.0s						
CMRD	**Camardi-Nigde**	**5.54**	**265**	PN	**Pn**	**08 23 27.8**	**+2.4**
GNBR	**Gunib**	**5.54**	**42**	*i P*	**Pn**	**08 23 28.7**	**+3.3**
DVE	**Vedeno**	**5.57**	**33**	*i P*	**Pn**	**08 23 28.9**	**+3.2**
KIV	**Kislovodsk**	**5.61**	**5**	Pn	**Pn**	**08 23 25.9**	**-0.4**
KIV	**Kislovodsk**	**5.61**	**5**	*eP*	**Pn**	**08 23 28.6**	**+2.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KVAR	**Kislovodsk Arr**	**5.61**	**5**	Pn	**Pn**	**08 23 29.9**	**+3.6**
	baz=198,slow=20						
	comp=Z,2.9nm,0.4s						
GUZR	**Guzeripl'**	**5.79**	**347**	*eP*	**Pn**	**08 23 30.5**	**+1.8**
CORM	**Corum**	**5.96**	**290**	PN	**Pn**	**08 23 33.6**	**+2.4**
GULA	**Gulagac**	**6.07**	**272**	PN	**Pn**	**08 23 35.2**	**+2.6**
MERS	**Mersin**	**6.09**	**258**	PN	**Pn**	**08 23 35.6**	**+2.8**
DIKM	**Dikmen**	**6.09**	**305**	PN	**Pn**	**08 23 35.6**	**+2.8**
MAK	**Makhachkala**	**6.23**	**41**	*eP*	**Pn**	**08 23 34.4**	**-0.3**
MAK				*eS*	**Sn**	**08 24 46.6**	**+0.5**
MAK				pmax	pmax		
	comp=Z,335nm,1.6s						
MAK				MLR	MLR		
	comp=Z,475nm,10.0s						
HWQ	**Hawqa**	**6.34**	**232**	*eP*	**Pn**	**08 23 36.5**	**+0.2**
BR131	**Keskin Array S**	**6.61**	**284**		**Pn**	**08 23 41.4**	**+1.3**
BR131	**Keskin Array S**	**6.61**	**284**	P	**Pn**	**08 23 41.4**	**+1.3**
BRTR	**Keskin Array B**	**6.61**	**284**	Pn	**Pn**	**08 23 39.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=107,slow=13,SNR=2.2						
BRTR				Lg	Lg	08 25 25.1	
	comp=Z,0.1nm,0.3s,baz=121,slow=28,SNR=2.1						
	comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**6.61**	**284**		**Pn**	**08 23 41.5**	**+1.4**
BRTR	**Keskin Array B**	**6.61**	**284**	P	**Pn**	**08 23 41.5**	**+1.4**
BHL	**Bhannes**	**6.77**	**231**	*eP*	**Pn**	**08 23 41.9**	**-0.4**
ILGA	**Ilgaz**	**6.89**	**295**		**Pn**	**08 23 44.0**	**0.0**
DQRL	**Deir Qamar**	**6.96**	**230**	*eP*	**Pn**	**08 23 43.5**	**-1.3**
NATI	**Neve Ativ**	**7.17**	**227**	Pn	**Pn**	**08 23 49.6**	**+1.9**
GEM	**Giv'at Ha'Em**	**7.25**	**227**	Pn	**Pn**	**08 23 50.0**	**+1.2**
GEM				Sn	**Sn**	**08 25 13.8**	**+2.5**
ANTO	**Ankara**	**7.28**	**285**	Pn	**Pn**	**08 23 50.9**	**+1.7**
ANTO	**Ankara**	**7.28**	**285**	P	**Pn**	**08 23 50.9**	**+1.7**
ASF	**Jabal al Asfar**	**7.44**	**215**	Pn	**Pn**	**08 23 49.8**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=54,slow=8.7,SNR=7.0						
ASF				Lg	Lg	08 25 54.8	
	comp=Z,2.1nm,0.3s,baz=227,slow=22,SNR=2.1						
	comp=Z,4.8nm,0.8s						
MMA0B	**Mount Meron ar**	**7.54**	**227**	Pn	**Pn**	**08 23 52.8**	**-0.1**
MMA0B				Sn	**Sn**	**08 25 21.0**	**+2.4**
MMAI	**Mount Meron Ar**	**7.54**	**227**	Pn	**Pn**	**08 23 52.8**	**0.0**
	comp=Z,1.7nm,0.3s,baz=52,slow=15,SNR=2.5						
MMAI				Lg	Lg	08 25 58.2	
	comp=Z,3.4nm,0.3s,baz=59,slow=18,SNR=3.6						
	comp=Z,0.8nm,0.4s						
HNTI	**Hanita**	**7.63**	**228**	Pn	**Pn**	**08 23 55.0**	**+1.1**
CSS	**Mathiatis**	**7.72**	**246**	Pn	**Pn**	**08 23 58.7**	**+3.5**
BLGI	**Bet Lehem HaGe**	**7.87**	**226**	Pn	**Pn**	**08 23 58.9**	**+1.6**
MMLI	**Mount Malkishu**	**7.96**	**224**	Pn	**Pn**	**08 24 00.5**	**+1.9**
HMDT	**Nahal Hemdat**	**8.05**	**223**	Pn	**Pn**	**08 24 00.7**	**+1.0**
SUDU	**Sudak**	**8.34**	**324**	*eP*	**Pn**	**08 24 06.8**	**+3.2**
SUDU				Pm		08 24 09.3	
	comp=Z,4.0nm,0.4s						
SUDU				*eS*	**Sn**	**08 25 41.4**	**+3.5**
SUDU				Sm		08 25 42.9	
	comp=N,11nm,0.5s						
SUDU				Sm		08 25 42.9	
	comp=E,4.0nm,0.3s						
SUDU	**Sudak**	**8.34**	**324**	*eP*	**Pn**	**08 24 06.8**	**+3.2**
SUDU				*eS*	**Sn**	**08 25 41.4**	**+3.5**
ISP	**Isparta**	**9.03**	**270**	*i P*	**Pn**	**08 24 15.6**	**+2.4**
HRFI	**Mount Harif**	**10.09**	**217**	Pn	**Pn**	**08 24 29.1**	**+1.4**
EIL	**Elat**	**10.44**	**216**	Lg	Lg	08 27 29.7	
	comp=E,0.3nm,0.3s,baz=28,slow=17,SNR=1.7						
EIL	**Elat**	**10.44**	**216**	Pn	**Pn**	**08 24 33.6**	**+1.1**
ARG	**Arkhangelos**	**11.22**	**263**	Pn	**Pn**	**08 24 45.1**	**+1.9**
ARG	**Arkhangelos**	**11.22**	**263**	P	**Pn**	**08 24 45.1**	**+1.9**
GEYT	**Alibeck**	**12.73**	**87**	Pn	**Pn**	**08 25 05.7**

GERES	GERESS Array B	22.86	306	P	P	08 27 04.0	-2.2
KHC	Kasperske Hory	23.02	307	eP	P	08 27 07.0	-0.8
KHC	Kasperske Hory	23.02	307	eP	P	08 27 07.0	-0.8
CTI	Castel Tesino	23.62	299	P	P	08 27 13.8	-0.2
CTI				IAmb	IAmb	08 27 15.0	
	comp=Z,11nm,1.1s						
CTI	Castel Tesino	23.62	299	P	P	08 27 13.8	-0.2
CTI				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	24.08	312	eP	P	08 27 20.0	+1.8
CLL				i		08 27 24.5	
CLL	Collm	24.08	312	eP	P	08 27 20.0	+1.8
CLL				i sP	sP	08 27 24.5	+2.1
	comp=Z,11nm,1.3s						
MOTA	Moosalm	24.20	302	eP	P	08 27 19.6	0.0
	comp=Z,4.7nm,0.9s						
BRVK	Borovoye	24.43	44	i P	P	08 27 20.6	-0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	Borovoye Array	24.47	44	P	P	08 27 20.7	-1.1
	comp=Z,0.5nm,0.5s,baz=271,slow=6.8,SNR=1.9						
BVAR				LR	LR	08 39 35.8	
	comp=Z,77nm,19.2s,baz=252,slow=43						
	comp=Z,0.5nm,0.5s						
AAK	Ala-Archa	25.02	70	P	P	08 27 26.6	-0.5
	comp=Z,1.4nm,0.5s,baz=236,slow=3.6,SNR=6.3						
	comp=Z,1.4nm,0.5s						
AAK	Ala-Archa	25.02	70	P	P	08 27 26.8	-0.3
AAK	Ala-Archa	25.02	70	ceP	P	08 27 28.6	+1.5
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	25.12	342	P	P	08 27 26.8	-0.7
	comp=Z,3.4nm,0.7s,baz=150,slow=8.1,SNR=4.4						
	comp=Z,3.4nm,0.7s						
FINES	FINESS Array B	25.12	342	i P	P	08 27 28.6	+1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURBB	Kurchatov Arra	28.52	53	P	P	08 27 58.1	-0.2
	comp=Z,1.3nm,0.5s,baz=264,slow=9.0,SNR=8.5						
	comp=Z,1.3nm,0.5s						
KURK	Kurchatov	28.60	52	P	P	08 27 57.3	-1.7
KURK	Kurchatov	28.60	52	ceP	P	08 27 58.7	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	30.59	61	i P	P	08 28 17.2	+0.5
MKAR	Makanchi Array	30.59	61	P	P	08 28 16.9	+0.1
	comp=Z,1.7nm,0.9s,baz=268,slow=6.2,SNR=8.0						
	comp=Z,1.7nm,0.9s						
ZALV	Zalesovo Beam	32.95	48	P	P	08 28 36.8	-0.5
	comp=Z,1.0nm,0.6s,baz=278,slow=12,SNR=3.8						
ZALV				LR	LR	08 44 10.0	
	comp=Z,72nm,18.7s,baz=248,slow=40						
	comp=Z,1.0nm,0.6s						
DGZ	Jazzator, Alta	34.10	56	i P	P	08 28 47.6	-0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WMQ	Urumqi	34.55	66	eP	P	08 28 53.4	+1.9
KMBO	Kilima Mbogo	39.54	187	LR	LR	08 46 01.0	
	comp=Z,67nm,19.1s,baz=96,slow=36						
TORD	Torodi Ar. Bea	43.61	246	P	P	08 30 05.0	-2.4
	comp=Z,0.9nm,0.9s,baz=47,slow=7.7,SNR=3.0						
	comp=Z,0.9nm,0.9s						
SONM	Songino Array	46.74	57	P	P	08 30 32.1	-0.1
	comp=Z,0.2nm,0.3s,baz=299,slow=9.0,SNR=2.2						
SONM				LR	LR	08 52 53.0	
	comp=Z,39nm,18.1s,baz=288,slow=40						
	comp=Z,0.2nm,0.3s						
ULN	Ulaanbaatar	47.16	56	ceP	P	08 30 33.4	-2.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PZH	PanZhiHua	51.04	85	P	P	08 31 06.8	+1.4
HHC	Hu-ho-hao-te	52.37	64	eP	P	08 31 16.9	+1.7
CMAR	Chiang Mai Arr	53.06	95	P	P	08 31 21.9	+1.6
	comp=Z,1.8nm,0.3s,baz=297,slow=8.0,SNR=5.0						
CMAR				LR	LR	08 56 44.4	
	comp=Z,18nm,18.4s,baz=330,slow=39						
	comp=Z,1.8nm,0.3s						
CMAR	Chiang Mai Arr	53.06	95	P	P	08 31 22.0	+1.6
TIXI	Tiksi	53.15	23	i P	P	08 31 18.7	-1.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YAK	Yakutsk	55.95	35	LR	LR	09 00 31.7	
	comp=Z,34nm,18.3s,baz=268,slow=41						
NJ2	Nanjing	61.46	70	eP	P	08 32 16.3	-3.3
KLR	Kul'dur	62.05	48	P	P	08 32 25.1	+1.7
	comp=Z,0.9nm,0.5s,baz=305,slow=12,SNR=1.8						
	comp=Z,0.9nm,0.5s						
BILL	Bilibino	66.04	20⇑	eP	P	08 32 47.6	-1.6
BILL				e		08 33 18.5	
BILL				S	S	08 41 34.0	-3.0
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,60nm,16.0s						
PCRV	Puerto La Cruz	96.46	288	LR	LR	09 15 23.8	
	comp=Z,112nm,21.6s,slow=33						

*IDC **23** 08:43:07.9±4.5, 11°.57S×115°.90E, h0km, mb3.3/2, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=262.6km s-min=28.7km az=45.0*

ISC 23 08:43:09.9±1.0, 11°.42S±0°.10×116°.33E±0°.09, h10km, n10, σ1§22/9, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	2.94	29	P	Pn	08 43 56.5	-0.3
JAGI	Jajag, Banyuwa	3.63	324	P	Pn	08 44 04.9	-1.4
UGM	Wanagama	6.70	301	P	Pn	08 44 49.8	+1.2
MBWA	Marble Bar	10.22	162	P	Pn	08 45 36.0	-0.8
PSA00	Pilbara Seismi	10.64	162	P	Pn	08 45 41.8	-0.8
	13nm,1.2s						
GIRL	Giralia	11.34	190	P	Pn	08 45 51.9	-0.2
TNTI	Ternate	16.34	43	P	P	08 47 04.2	+1.7
WRA	Warramunga Arr	19.28	118	P	Pn	08 47 37.0	+0.9
	0.1nm,0.3s,baz=291,slow=12,SNR=6.4						
	0.7nm,1.0s						
ASAR	Alice Springs	20.68	128	P	Pn	08 47 53.1	+0.4
	0.3nm,0.5s,baz=300,slow=9.9,SNR=4.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	65.46	335	P	P	08 53 52.5	-0.7
	0.4nm,0.4s,baz=150,slow=7.4,SNR=5.0						
	0.4nm,0.4s						

*ARE **23** 08:44:42±1.6, 10°.10S±0°.09×75°.60W±0°.05, h15km±7km, ML4.1, mb3.7/5(NEIC), Error ellipse: s-maj=13.3km s-min=6.7km az=172.0*

NEIC 23 08:44:44.4±1.2, 10°.17S±0°.08×75°.66W±0°.10, h65km±21km, Error ellipse: s-maj=14.0km s-min=11.3km az=116.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.15	213		Pn	08 45 18.2	+0.2
BOSC	San Juan Bosco	7.52	338		Pn	08 46 29.8	-1.8
COHC	Cochancay	8.44	335	Pn	Pn	08 46 43.3	-0.8
PB01	IPOC Station P	12.34	152	Pn	Pn	08 47 36.0	-1.4
PB03	IPOC Station P	13.10	155	Pn	Pn	08 47 47.3	-0.5
AC01	Pan de Azucar	16.60	164	Pn	P	08 48 33.9	-0.6
AC01				IAmb	IAmb	08 48 51.1	
	comp=Z,6.8nm,1.1s						
PAYG	Puerto Ayora	17.33	302	P	P	08 48 43.1	+0.5
AC02	Maricunga	17.69	160	P	Pn	08 48 46.5	-0.4
AC02				IAmb	IAmb	08 49 17.7	
	comp=Z,6.9nm,1.4s						

*JMA **23** 08:46:26.1±0.3, 25°N±1°×12°8E±°, h76km, MV3.4/23, NEAR OKINAWAJIMA ISLAND*

*IDC **23** 08:46:27.9±1.2, 25°.16N×128°.25E, h42km±8km, mb3.6/6, mbtmp3.8/6, Error ellipse: s-maj=38.0km s-min=11.4km az=92.0*

ISC 23 08:46:26.4±0.8, 25°.01N±0°.05×128°.11E±0°.04, h41km±8km, n26, σ2§27/49, mb3.7/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.17	345	P	Pn	08 46 45.6	-0.7
JJT3				S	Sn	08 47 00.1	-1.0
JNTH	Nagotoyohara	1.50	357	P	Pn	08 46 49.7	-1.2
JNTH				eS	Sn	08 47 06.0	-3.4
JAGN	Aguni-jima	1.76	334	P	Pn	08 46 53.8	-0.6
JAGN				eS	Sn	08 47 13.8	-1.7
JKE	Kume jima 2	1.77	318	P	Pn	08 46 53.4	-1.2
JKE				eS	Sn	08 47 13.7	-2.3
JOW	Kunigami	1.82	5	P	Pn	08 46 54.4	-0.9
	90nm,0.3s,baz=87,slow=25,SNR=3.3						
JOW				S	Sn	08 47 14.4	-2.8
	123nm,0.3s,baz=108,slow=25,SNR=3.8						
JOW	Kunigami	1.82	5	P	Pn	08 46 54.4	-0.9
JOW				eS	Sn	08 47 14.6	-2.5
JIH	Iheya	2.02	356	P	Pn	08 46 57.5	-0.5
JIH				eS	Sn	08 47 20.7	-1.3
JYRO	Yoronjima	2.03	9	P	Pn	08 46 57.2	-0.9
JYRO				S	Sn	08 47 19.4	-2.9
JOKE	Okinoerabujima	2.38	10	eP	Pn	08 47 02.5	-0.4
JOKE				eS	Sn	08 47 28.1	-2.7
JMJ2	Miyako jima3	2.54	265	P	Pn	08 47 04.4	-0.8
JMJ2				eS	Sn	08 47 32.2	-2.8
JIKM	Ikemajima	2.60	269	eP	Pn	08 47 05.3	-0.7
JIKM				eS	Sn	08 47 34.6	-1.8
JIRB	Irabujima	2.67	267	P	Pn	08 47 06.0	-1.0
JTK	Tokunoshima	2.87	15	eP	Pn	08 47 09.1	-0.5
JTK				eS	Sn	08 47 39.1	-3.8
JMZ	Minamidaito 2	2.92	73	P	Pn	08 47 08.5	-1.9
JMZ				eS	Sn	08 47 41.3	-3.1
JKDJ	Kitadaitoujima	3.03	71	P	Pn	08 47 10.0	-1.8
JKDJ				S	Sn	08 47 43.5	-3.4
JTJ	Tarama	3.12	264	P	Pn	08 47 11.9	-1.3
JTJ				eS	Sn	08 47 45.0	-4.2
JAMN	Amaminishikomi	3.36	16	eP	Pn	08 47 16.1	-0.3
JAMN				eS	Sn	08 47 51.6	-3.4
JAM	Amami Oshima	3.64	21	P	Pn	08 47 20.3	0.0
JAM				S	Sn	08 47 58.1	-3.9
JIJ	Ishigaki jima	3.67	261	P	Pn	08 47 18.8	-1.8
JIJ				eS	Sn	08 47 57.7	-5.0
JZK	Kikaishima	3.69	26	P	Pn	08 47 21.0	0.0
JZK				eS	Sn	08 48 00.9	-2.3
KLR	Kul'dur	24.34	6	P	P	08 51 42.0	+1.6
	2.6nm,0.8s,baz=187,slow=5.2,SNR=4.4						
	2.6nm,0.8s						
SONM	Songino Array	28.52	329	P	P	08 52 18.1	-0.1
	0.3nm,0.4s,baz=142,slow=7.3,SNR=1.9						
SONM				pP	pwP	08 52 32.0	-1.7
	0.3nm,0.4s,baz=120,slow=8.7,SNR=2.4						
	0.3nm,0.4s						
MKAR	Makanchi Array	42.27	313	P	P	08 54 16.7	+0.7
	0.6nm,0.4s,baz=100,slow=9.7,SNR=7.9						
MKAR				pP	pP	08 54 28.1	+2.5
	0.9nm,0.5s,baz=97,slow=10.0,SNR=5.6						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	43.16	324	P	P	08 54 24.6	+1.7
	0.8nm,0.5s,baz=114,slow=11,SNR=2.1						
	0.8nm,0.5s						
WRA	Warramunga Arr	45.09	172	P	P	08 54 39.9	+1.1
	0.5nm,0.7s,baz=346,slow=7.8,SNR=2.8						
WRA				pP	pP	08 54 52.5	+4.2
	0.7nm,0.7s,baz=352,slow=9.0,SNR=3.2						
	0.5nm,0.7s						
FINES	FINESS Array B	73.87	331	P	P	08 57 57.8	+1.0
	2.2nm,0.8s,baz=72,slow=14,SNR=1.5						
FINES				pP	PcP	08 58 10.4	-1.7
	7.3nm,1.1s,baz=76,slow=5.9,SNR=2.2						
	2.2nm,0.8s						

*IDC **23** 08:46:25.6±1.1, 1°.93N×126°.67E, h0km, mb3.9/6, mbtmp3.9/7, ML3.8/1, MS3.3/2, Error ellipse: s-maj=71.0km s-min=18.2km az=64.0*

*DJA **23** 08:46:36.7±0.8, 2°N±2°×12°7E±°, h29km±9km, M3.9/7, mb4.0/1, MLv3.9/7*

ISC 23 08:46:34.9±0.9, 2°.35N±0°.05×127°.42E±0°.07, h64km, n24, σ2§47/24, mb3.7/6, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.63	145	P	Pn	08 46 50.8	+2.2
TNTI	Ternate	1.57	182	P	Pn	08 47 03.0	+2.4
TNTI				S	Sn	08 47 23.6	+3.5
SGSI	Sangihe	2.31	305	P	Pn	08 47 11.4	+0.8
SGSI				S	Sn	08 47 38.6	+0.6
LBMI	Labuha	2.97	179	P	Pn	08 47 21.8	+2.1
LBMI				S	Sn	08 47 56.6	+2.4
SANI	Sanana	4.60	198	P	Pn	08 47 41.8	-0.2
SANI				S	Sn	08 48 29.1	-5.1
GTOI	Gorontalo	4.73	249	P	Pn	08 47 46.3	+2.6
GTOI				S	Sn	08 48 38.3	+1.0
SIJI	Sorong	5.00	130	Pn	Pn	08 47 47.8	+0.3
	3.4nm,0.3s,baz=323,slow=20,SNR=7.5						
	6.3nm,0.2s						
KCP	Kidapawan	5.18	333	⇓eP	Pn	08 47 51.7	+1.8
KCP				eS	Sn	08 48 51.8	+3.4
TOLI2	Tolitoli	6.75	260	P	Pn	08 48 12.6	+1.2
PLAI	Plampang	14.69	221	P	P	08 50 05.4	+1.5
KNRA	Kununurra	17.96	176	P	P	08 50 39.4	-0.7
COEN	Coen	22.50	136	P	P	08 51 22.3	-7.1
PMG	Port Moresby	22.87	121	LR	LR	09 01 41.5	
	comp=Z,35nm,19.2s,baz=336,slow=39						
WRAB	Tennant Creek	23.17	163	P	P	08 51 33.3	-2.9
WRA	Warramunga Arr	23.17	163	P	P	08 51 33.0	-3.2
	1.1nm,0.3s,baz=337,slow=11,SNR=34						
	1.1nm,0.3s						
ASAR	Alice Springs	26.62	167	P	P	08 52 04.5	-3.1
	0.6nm,0.3s,baz=346,slow=7.6,SNR=12						
	0.6nm,0.3s						
AS01	Alice Springs	26.63	167	P	P	08 52 05.0	-2.7
WRKA	Warakurna	27.24	178	P	P	08 52 11.0	-2.1
OOD	Oodnadatta	31.01	166	P	P	08 52 44.6	-1.9
STKA	Stephens Creek	36.60	160	P	P	08 53 31.8	-3.3
	1.8nm,0.6s,baz=338,slow=8.7,SNR=5.3						
	1.8nm,0.6s						
SONM	Songino Array	48.82	341	P	P	08 55 13.0	-0.9
	0.4nm,0.6s,baz=163,slow=7.3,SNR=3.1						
	0.4nm,0.6s						
MKAR	Makanchi Array	59.08	325	P	P	08 56 27.8	-0.8
	1.0nm,0.3s,baz=116,slow=7.6,SNR=18						
	1.0nm,0.3s						
VNDA	Vanda	81.98	173	P	P	08 58 44.4	-3.0
	0.4nm,0.6s,baz=311,slow=7.7,SNR=2.4						
	0.4nm,0.6s						
RES	Resolute Bay	99.03	10	LR	LR	09 52 00.2	
	comp=Z,23nm,18.4s,baz=86,slow=40						

*SOME **23** 09:00:06.5, 39°.92N×78°.58E, h0km*

*KRNET **23** 09:00:07.3±0.1, 40°.11N×78°.81E, mb3.0*

*NNC **23** 09:00:12.8±2.0, 40°.13N×78°.89E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=14.1km s-min=11.6km az=153.0*

ISC 23 09:00:09.8±2.2, 39°.96N±0°.10×78°.77E±0°.05, h10km, n49, σ2§11/81, 14C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.92	338	⇑eP	Pn	09 00 40.6	-2.3
	baz=35						
TARG				⇑eS	Sn	09 01 04.8	-2.5
	baz=35						
NRN	Naryn	2.57	306	⇓eP	Pn	09 00 51.3	-0.6
	baz=2.0						
NRN				⇓eS	Sn	09 01 23.5	+0.1
	baz=2.0						
ULHL	Ulahol	2.98	321	⇑eP	Pn	09 00 56.3	-1.1
	baz=19						
ULHL				⇑eS	Sn	09 01 32.1	-1.2
	baz=19						
SATY	Saty	3.11	355	eP	Pb	09 01 06.1	+0.8
	13nm,0.5s						
SATY				eS	Sg	09 01 48.8	-1.0
	25nm,0.2s						
SATY	Saty	3.11	355	Pg	Pb	09 01 06.1	+0.8
	13nm,0.5s						
SATY				Lg	Lg	09 01 48.8	
	25nm,0.2s						
UZB	Uzynbulak	3.19	3	eP	Pb	09 01 05.1	-1.6
	3.1nm,0.2s						
UZB				eS	Sg	09 01 47.4	-5.0
	25nm,0.3s						
UZB	Uzynbulak	3.19	3	Pg	Pb	09 01 05.1	-1.6
	3.1nm,0.2s						
UZB				Lg	Lg	09 01 47.4	
	25nm,0.3s						
ZHN	Zhinishke	3.22	356	eP	Pb	09 01 08.3	+1.2
	6.5nm,0.3s						
ZHN				eS	Sg	09 01 52.7	-0.5
	37nm,0.3s						
SHLS	Shalkode	3.24	9	eP	Pg	09 01 09.7	-2.3
	13nm,0.4s						
SHLS				eS	Sg	09 01 55.4	+1.5
	33nm,0.4s						
SHLS	Shalkode	3.24	9	Pg	Pg	09 01 09.7	-2.3
	13nm,0.4s						
SHLS				Lg	Lg	09 01 55.4	
	33nm,0.4s						
PDGK	Podgornoye	3.41	9	⇑Pn	Pn	09 01 04.2	+1.0
	1.7nm,0.8s						
PDGK				⇓Pg	Pb	09 01 11.3	+0.8
	14nm,0.8s						
PDGK				⇑Sn	Sn	09 01 45.2	+1.4
	15nm,0.7s						
PDGK				⇑Lg	Lg	09 01 56.3	
	28nm,0.7s						
MDOK	Medeo	3.46	339	eP	Pb	09 01 11.7	+0.5
	10nm,0.3s						
MDOK				eS	Sg	09 01 59.0	-1.8
	18nm,0.7s						
MDOK	Medeo	3.46	339	Pn	Pb	09 01 09.5	-1.7
	5.4nm,0.4s						
MDOK				Pg	Pb	09 01 11.7	+0.5
	10nm,0.3s						
MDOK				Pg	Pg	09 01 15.1	-0.9
	16nm,0.5s						
MDOK				Lg	Lg	09 01 58.6	
	38nm,0.7s						
MDOK				Lg	Lg	09 01 59.0	
	18nm,0.7s						
KOTS	Kotyrbulak	3.50	340	eP	Pb	09 01 13.8	+1.8
	9.3nm,0.2s						
KOTS				eS	Sg	09 02 01.7	-0.7
	25nm,0.3s						
KOTS	Kotyrbulak	3.50	340	Pg	Pb	09 01 13.8	+1.8
	9.3nm,0.2s						
KOTS				Lg	Lg	09 02 01.7	
	25nm,0.3s						
KPKS	Kokpek	3.51	359	eP	Pb	09 01 12.9	+0.9
	7.0nm,0.2s						
KPKS				eS	Sg	09 02 00.6	-1.9
	46nm,0.4s						
KPKS	Kokpek	3.51	359	Pg	Pb	09 01 12.9	+0.9
	7.0nm,0.2s						
KPKS				Lg	Lg	09 02 00.6	
	46nm,0.4s						
KNDC	Almaty	3.53	338	⇓Lg	Lg	09 02 01.0	
	147nm,0.8s						
AAA	Alma-Ata	3.54	337	eP	Pb	09 01 14.5	+2.0
	20nm,0.1s						
AAA				eS	Sg	09 02 03.2	-0.2
	72nm,0.5s						
KURS	Kuram	3.56	353	eP	Pb	09 01 15.4	+2.5
	4.7nm,0.4s						
KURS				eS	Sg	09 02 05.2	+1.1
	12nm,0.8s						
KURS	Kuram	3.56	353	Pg	Pb	09 01 15.4	+2.5
	4.7nm,0.4s						
KURS				Lg	Lg	09 02 05.2	
	12nm,0.8s						
MTBS	Maitube	3.63	332	eP	Pb	09 01 14.2	+0.1
	7.0nm,0.2s						
MTBS				eS	Sg	09 02 02.9	-3.4
	13nm,0.3s						
MTBS	Maitube	3.63	332	Pg	Pb	09 01 14.2	+0.1
	7.0nm,0.2s						
MTBS				Lg	Lg	09 02 02.9	
	13nm,0.3s						
KST	Kastek	3.74	327	eP	Pb	09 01 16.6	+0.7
	4.0nm,0.3s						
KST				eS	Sg	09 02 07.3	-2.5
	20nm,0.5s						
KST	Kastek	3.74	327	Pg	Pb	09 01 16.7	+0.7
	4.0nm,0.3s						
KST				Lg	Lg	09 02 07.3	
	20nm,0.5s						
TKM2	Tokmak 2	3.80	322	⇓eP	Pn	09 01 08.0	-0.7
	baz=20						
TKM2				⇓eS	Sn	09 01 51.9	-1.7
	baz=20						
TKM2	Tokmak 2	3.80	322	⇑Pn	Pn	09 01 12.9	+4.2
	1.8nm,0.4s						
TKM2				⇓Pg	Pg	09 01 21.8	-0.9
	2.5nm,0.4s						
TKM2				⇑Lg	Lg	09 02 09.5	
	13nm,0.8s						
ARLS	Aral	3.87	301	⇑eP	Pn	09 01 09.4	-0.2
	baz=99						
ARLS				⇑eS	Sn	09 01 54.5	-0.7
	baz=99						
UCH	Uchtor	3.94	307	⇑eP	Pn	09 01 10.6	-0.1
	baz=5.0						
UCH				⇑eS	Sn	09 01 56.0	-1.2
	baz=5.0						
DGS	Degeres	3.98	327	eP	Pb	09 01 20.4	+0.3
	4.8nm,0.4s						
DGS				eS	Sg	09 02 13.5	-4.1
	9.4nm,0.5s						
DGS	Degeres	3.98	327	Pg	Pb	09 01 20.4	+0.3
	4.8nm,0.4s						
DGS				Lg	Lg	09 02 14.6	
	9.4nm,0.5s						
KTBS	Karatobe	4.07	338	eP	Pb	09 01 22.3	+0.8
	4.8nm,0.4s						
KTBS				eS	Sg	09 02 17.0	-3.3
	27nm,0.5s						
KTBS	Karatobe	4.07	338	Pg	Pb	09 01 22.3	+0.8
	4.8nm,0.4s						
KTBS				Lg	Lg	09 02 18.1	
	27nm,0.5s						
CHKK	Chushkaly	4.12	342	eP	Pb	09 01 24.0	+1.6
	3.7nm,0.2s						
CHKK				eS	Sg	09 02 20.1	-1.9
	25nm,0.6s						
CHKK	Chushkaly	4.12	342	Pg	Pb	09 01 24.0	+1.6
	3.7nm,0.2s						
CHKK				Lg	Lg	09 02 20.1	
	25nm,0.6s						
BLB	Baldybastay	4.14	357	eP	Pg	09 01 26.4	-2.8
	6.6nm,0.2s						
BLB				eS	Sg	09 02 24.2	+1.3
	17nm,0.5s						
BLB	Baldybastay	4.14	357	Pg	Pg	09 01 26.4	-2.8
	6.6nm,0.2s						
BLB				Lg	Lg	09 02 24.2	
	17nm,0.5s						
CHMS	Chumysh	4.29	317	⇓Pn	Pn	09 01 21.8	+6.7
	3.3nm,0.5s						
CHMS				⇑Pg	Pg	09 01 33.8	+1.9
	4.1nm,0.7s						
CHMS				⇓Lg	Lg	09 02 23.8	
	5.7nm,0.5s						
ARXS	Arharly	4.31	351	eP	Pb	09 01 27.9	+2.2
	4.6nm,0.4s						
ARXS				eS	Sg	09 02 26.8	-1.5
	17nm,0.6s						
ARXS	Arharly	4.31	351	Pg	Pb	09 01 27.9	+2.2
	4.6nm,0.4s						
ARXS				Lg	Lg	09 02 26.8	
	17nm,0.6s						
KUU	Kurty	4.33	336	eP	Pb	09 01 27.5	+1.4
	3.4nm,0.5s						
KUU				eS	Sg	09 02 25.4	-3.5
	18nm,0.5s						
KRBS	Karabastau	4.39	329	eP	Pb	09 01 27.7	+0.6
	2.8nm,0.4s						
KRBS				eS	Sg	09 02 26.8	-4.2
	3.1nm,0.6s						
KRBS	Karabastau	4.39	329	Pg	Pb	09 01 27.7	+0.6
	2.8nm,0.4s						
KRBS				Lg	Lg	09 02 26.8	
	3.1nm,0.6s						
DJR	Jarkent	4.44	9	eP	Pb	09 01 29.4	+1.5
	1.5nm,0.2s						
DJR				eS	Sg	09 02 28.7	-3.6
	10nm,0.5s						
DJR	Jarkent	4.44	9	Pg	Pb	09 01 29.4	+1.5
	1.5nm,0.2s						
DJR				Lg	Lg	09 02 28.7	
	10nm,0.5s						
MRKS	Merke	5.02	306	eP	Pb	09 01 36.6	-1.2
	0.7nm,0.1s						

MK31 Sn **Sn** **09 03 18.3 -1.1**
0.3nm,0.2s,baz=207,slow=26,SNR=5.4

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*IDC **23** 09:06:29.4±2.6, 34°.56S×70°.21W, h112km±23km, mb3.6/9, mbtmp3.9/12, MS3.8/2, Error ellipse: s-maj=26.4km s-min=14.6km az=87.0*
*GUC **23** 09:06:30.6±0.7, 34°.61S×70°.44W, h126km±2km, ML4.2*
*NEIC **23** 09:06:30.4±1.4, 34°.62S±0°.05×70°.39W±0°.08, h123km±6km, Error ellipse: s-maj=9.6km s-min=7.0km az=92.0*
*VAO **23** 09:06:37.7±5.4, 34°.57S×69°.90W, h194km±26km, mb4.0*
ISC 23 09:06:30.2±0.6, 34°.62S±0°.03×70°.40W±0°.06, h127km±5km, n83, σ1°.33/106, mb4.0/12, 11C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO02	**Sierra Bellavi**	**0.36**	**241**		**Pn**	**09 06 48.2**	**-0.1**
BO02	**Sierra Bellavi**	**0.36**	**241**	⇓*iP*	**Pn**	**09 06 48.2**	**-0.1**
BO02				*i* S	**Sn**	**09 07 01.6**	**-0.4**
BO02				IAML		09 07 07.4	
	comp=N,14μm,0.4s						
BO01	**Tunca**	**0.61**	**291**	Pn	**Pn**	**09 06 49.5**	**0.0**
BO01	**Tunca**	**0.61**	**291**	⇑*iP*	**Pn**	**09 06 49.6**	**0.0**
BO01				*i* S	**Sn**	**09 07 04.0**	**-0.2**
BO01				IAML		09 07 05.0	
	comp=E,9μm,0.5s						
BO04	**La Punta**	**0.65**	**344**	⇓*iP*	**Pn**	**09 06 49.8**	**-0.2**
BO04				*i* S	**Sn**	**09 07 04.7**	**-0.2**
BO04				IAML		09 07 06.2	
	comp=E,6μm,0.3s						
LMEL	**Las Melosas**	**0.79**	**12**		**Pn**	**09 06 51.1**	**-0.1**
LMEL	**Las Melosas**	**0.79**	**12**	⇓*iP*	**Pn**	**09 06 51.1**	**-0.1**
LMEL				*i* S	**Sn**	**09 07 07.2**	**+0.3**
MT09	**Talagante**	**0.97**	**330**		**Pn**	**09 06 52.6**	**-0.1**
MT09	**Talagante**	**0.97**	**330**	⇓*iP*	**Pn**	**09 06 52.7**	**-0.1**
MT09				*i* S	**Sn**	**09 07 09.2**	**-0.5**
MT01	**Popeta**	**1.03**	**317**	⇑*iP*	**Pn**	**09 06 53.0**	**-0.1**
MT01				*i* S	**Sn**	**09 07 09.6**	**-0.9**
MT01				IAML		09 07 11.4	
	comp=E,5μm,0.3s						
MT03	**Universidad Ad**	**1.12**	**355**	⇓*iP*	**Pn**	**09 06 54.2**	**0.0**
MT03				*i* S	**Sn**	**09 07 12.5**	**+0.1**
MT03				IAML		09 07 13.7	
	comp=N,3μm,0.5s						
MT05	**Renca**	**1.25**	**347**	⇓*iP*	**Pn**	**09 06 55.6**	**+0.1**
MT05				*i* S	**Sn**	**09 07 14.3**	**-0.4**
MT05				IAML		09 07 16.0	
	comp=E,6μm,0.3s						
FCH	**Farellones**	**1.29**	**4**	⇓*iP*	**Pn**	**09 06 56.3**	**+0.2**
FCH				*i* S	**Sn**	**09 07 16.1**	**+0.3**
BO03	**Pichilemu**	**1.29**	**275**	⇑*iP*	**Pn**	**09 06 56.0**	**+0.2**
BO03				*i* S	**Sn**	**09 07 14.8**	**-0.4**
BO03				IAML		09 07 17.8	
	comp=N,4μm,0.3s						
GO05	**Huala**	**1.32**	**252**		**Pn**	**09 06 55.7**	**-0.4**
GO05	**Huala**	**1.32**	**252**	⇑*iP*	**Pn**	**09 06 55.7**	**-0.4**
GO05				*i* S	**Sn**	**09 07 15.0**	**-0.8**
GO05				IAML		09 07 15.9	
	comp=N,3μm,0.2s						
VA05	**Santo Domingo**	**1.39**	**313**	⇑*iP*	**Pn**	**09 06 56.9**	**0.0**
VA05				*i* S	**Sn**	**09 07 16.4**	**-0.7**
ML02	**Panimavida**	**1.42**	**216**		**Pn**	**09 06 57.2**	**+0.1**
ML02	**Panimavida**	**1.42**	**216**	⇑*iP*	**Pn**	**09 06 57.2**	**+0.1**
ML02				*i* S	**Sn**	**09 07 17.5**	**-0.2**
ML02				IAML		09 07 20.4	
	comp=N,3μm,0.4s						
MT02	**Curacav**	**1.49**	**335**	⇑*iP*	**Pn**	**09 06 58.0**	**0.0**
MT02				*i* S	**Sn**	**09 07 18.2**	**-0.8**
PEL	**Peldehue**	**1.49**	**351**	⇓*iP*	**Pn**	**09 06 58.1**	**0.0**
PEL				*i* S	**Sn**	**09 07 19.3**	**+0.1**
PEL				IAML		09 07 21.4	
	comp=E,2μm,0.4s						
ROCH	**El Roble**	**1.72**	**343**	*eP*		09 07 01.1	
ROCH				*eP*	**Pn**	**09 07 00.9**	**0.0**
ROCH				*i* S	**Sn**	**09 07 24.3**	**+0.1**
ROCH				*i* S		09 07 24.6	
ROCH				IAML		09 07 27.9	
	comp=N,2μm,0.3s						
ROCH				IAML		09 07 29.6	
	comp=N,3μm,0.5s						
VA03	**San Esteban**	**1.85**	**356**		**Pn**	**09 07 02.8**	**+0.4**
VA03	**San Esteban**	**1.85**	**356**	⇑*iP*	**Pn**	**09 07 03.0**	**+0.6**
VA03				*i* S	**Sn**	**09 07 27.2**	**+0.3**
VA03				IAML		09 07 32.0	
	comp=E,2μm,0.4s						
VA06	**Catapilco**	**2.18**	**340**	⇑*iP*	**Pn**	**09 07 06.2**	**-0.1**
VA06				*i* S	**Sn**	**09 07 32.7**	**-1.2**
VA06				IAML		09 07 37.0	
	comp=E,2μm,0.5s						
BI05	**Punta Hualpn**	**3.11**	**226**	Pn	**Pn**	**09 07 16.5**	**-1.6**
BI05	**Punta Hualpn**	**3.11**	**226**	⇓*iP*	**Pn**	**09 07 16.9**	**-1.2**
BI05				*i* S	**Sn**	**09 07 51.3**	**-3.8**
BI05				IAML		09 07 55.5	
	comp=N,648nm,0.3s						
CCSP	**San Pedro de C**	**3.13**	**224**	*eP*	**Pn**	**09 07 17.4**	**-1.0**
CCSP				*eS*	**Sn**	**09 07 52.9**	**-2.7**
CCSP				IAML		09 07 56.5	
	comp=N,1μm,0.4s						
ZON	**Zonda**	**3.39**	**26**	Pn	**Pn**	**09 07 21.6**	**-0.3**
CO02	**Combarbal**	**3.44**	**351**		**Pn**	**09 07 22.1**	**-0.6**
CO02	**Combarbal**	**3.44**	**351**	⇑*iP*	**Pn**	**09 07 22.0**	**-0.6**
CO02				*i* S	**Sn**	**09 08 01.3**	**-1.9**
CO03	**El Pedregal**	**3.78**	**356**	⇓*iP*	**Pn**	**09 07 27.0**	**-0.1**
CO03				*i* S	**Sn**	**09 08 09.5**	**-1.5**
CO06	**Fray Jorge**	**4.07**	**345**	⇑*iP*	**Pn**	**09 07 30.3**	**-0.5**
CO06				*i* S	**Sn**	**09 08 12.2**	**-5.6**
CO05	**La Serena**	**4.74**	**351**	*eP*	**Pn**	**09 07 39.1**	**-0.7**
CO05				*i* S	**Sn**	**09 08 29.6**	**-4.2**
GO06	**Curarrehue**	**5.03**	**189**	Pn	**Pn**	**09 07 43.0**	**-0.7**
LR03	**Panguipulli**	**5.24**	**197**		**Pn**	**09 07 44.9**	**-1.5**
AC05	**El Transito**	**5.76**	**1**		**Pn**	**09 07 52.9**	**-0.8**
PLCA	**Paso Flores**	**6.11**	**181**	P	**Pn**	**09 07 57.6**	**-0.5**
	comp=N,1.2nm,0.4s,baz=6.9,slow=19,SNR=19						
LL04	**Puerto Octay**	**6.48**	**194**		**Pn**	**09 08 00.0**	**-3.0**
TRQA	**Tornquist**	**7.61**	**119**	Pn	**Pn**	**09 08 16.2**	**-2.2**
LVC	**Limon Verde**	**12.04**	**7**	P	**Pn**	**09 09 16.5**	**-1.5**
	comp=N,3.0nm,0.6s,baz=170,slow=12,SNR=3.1						
RODS	**Rosario do Sul**	**13.52**	**76**	*eP*	**Pn**	**09 09 36.2**	**-0.7**
CPUP	**Villa Florida**	**13.96**	**57**	P	**Pn**	**09 09 39.1**	**-3.4**
	comp=N,1.0nm,0.4s,baz=248,slow=8.1,SNR=5.2						
CRSM	**Crissiumal (Br**	**15.70**	**68**	*eP*	**Pn**	**09 10 04.5**	**0.0**
ALGR	**Alto Alegre (B**	**15.87**	**73**	*eP*	**Pn**	**09 10 05.7**	**-0.9**
MURT	**Porto Murtinho**	**17.12**	**44**	*eP*	**P**	**09 10 19.9**	**-1.6**
FRBT	**Francisco Belt**	**17.25**	**65**	*eP*	**Pn**	**09 10 21.5**	**-1.5**
ANTJ	**Antonio Joao (**	**17.82**	**49**	*eP*	**P**	**09 10 29.2**	**0.0**
LPAZ	**La Paz**	**18.37**	**7**	P	**Pn**	**09 10 38.4**	**+1.1**
	comp=N,0.7nm,0.4s,baz=184,slow=6.6,SNR=7.0						
PTGB	**Pitanga**	**18.71**	**63**	*eP*	**P**	**09 10 38.0**	**-1.1**
BBRB	**Robore, Bolivi**	**18.81**	**33**	*eP*	**P**	**09 10 38.8**	**-1.2**
AQDB	**Aquidauana**	**19.16**	**46**	P	**P**	**09 10 43.6**	**-0.1**
AQDB				IAmb	IAmb	09 10 44.1	
	comp=Z,12nm,0.7s						
AQDB	**Aquidauana**	**19.16**	**46**	*eP*	**P**	**09 10 42.7**	**-1.0**
BBSD	**Serra de San D**	**19.44**	**29**	*eP*	**P**	**09 10 48.1**	**+1.3**
USHA	**Ushuaia**	**20.26**	**177**	LR	LR	09 19 26.6	
	comp=Z,571nm,19.6s,baz=300,slow=38						
SIV	**San Ignacio**	**20.35**	**27**	P	**P**	**09 10 55.9**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=197,slow=8.7,SNR=15						
	comp=Z,2.0nm,0.5s						
PCMB	**Pacaembu**	**21.23**	**57**	*eP*	**P**	**09 11 03.3**	**-2.8**
PP1B	**Ponte de Pedra**	**21.89**	**43**	*eP*	**P**	**09 11 11.9**	**-1.3**
BDFB	**Brasilia**	**27.60**	**52**	P	**P**	**09 12 04.8**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=248,slow=5.4,SNR=3.9						
	comp=Z,2.2nm,0.6s						
JANB	**Januaria**	**30.50**	**57**	*eP*	**P**	**09 12 29.2**	**-2.2**
BELA	**Belgrano 2**	**46.04**	**170**	P	**P**	**09 14 41.2**	**+0.7**
SNAA	**Sanae**	**50.50**	**158**	P	**P**	**09 15 15.2**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=301,slow=11,SNR=6.8						
SNAA				LR	LR	09 35 09.0	
	comp=Z,42nm,18.8s,baz=11,slow=34						
	comp=Z,0.5nm,0.3s						
SNAA	**Sanae**	**50.50**	**158**	P	**P**	**09 15 14.7**	**-0.2**
SNAA				IAmb	IAmb	09 15 24.1	
	comp=Z,5.5nm,1.4s						
CELP	**Cerrillos**	**52.52**	**5**	P	**P**	**09 15 30.2**	**-0.2**
QSPA	**South Pole Qui**	**55.62**	**180**	P	**P**	**09 15 54.2**	**+1.7**
QSPA				IAmb	IAmb	09 15 55.4	
	comp=Z,4.3nm,0.9s						
VNDA	**Vanda**	**63.76**	**191**	P	**P**	**09 16 50.2**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=121,slow=2.4,SNR=2.7						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**63.76**	**191**	P	**P**	**09 16 50.5**	**+2.6**
GOGA	**Godfrey**	**68.77**	**348**	P	**P**	**09 17 20.5**	**+0.2**
GOGA				IAmb	IAmb	09 17 21.0	
	comp=Z,3.8nm,0.6s						
Z47A	**Carrollton**	**69.47**	**344**	P	**P**	**09 17 25.2**	**+0.6**
TXAR	**Lajitas Array**	**70.94**	**330**	P	**P**	**09 17 35.4**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=157,slow=8.6,SNR=28						
	comp=Z,0.9nm,0.6s						
TXAR	**Lajitas Array**	**70.94**	**330**	P	**P**	**09 17 35.6**	**+1.8**
SWET	**Sewanee**	**70.97**	**347**	P	**P**	**09 17 34.4**	**+0.6**
PLAL	**Pickwick Lake**	**71.19**	**345**	P	**P**	**09 17 35.0**	**0.0**
PLAL				IAmb	IAmb	09 17 35.8	
	comp=Z,7.5nm,1.0s						
MAW	**Mawson**	**72.20**	**163**	P	**P**	**09 17 41.7**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=239,slow=4.3,SNR=6.1						
	comp=Z,1.2nm,0.6s						
MAW	**Mawson**	**72.20**	**163**	P	**P**	**09 17 41.5**	**+0.7**
U49A	**Red Boiling Sp**	**72.20**	**347**	P	**P**	**09 17 41.1**	**0.0**
U49A				IAmb	IAmb	09 18 11.3	
	comp=Z,5.5nm,1.1s						
BOSA	**Boshof**	**78.58**	**117**	P	**P**	**09 18 19.9**	**+1.8**
	comp=Z,2.9nm,1.0s,baz=254,slow=5.3,SNR=4.1						
	comp=Z,2.9nm,1.0s						
PDAR	**Pinedale Array**	**84.93**	**332**	P	**P**	**09 18 51.7**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=148,slow=5.3,SNR=8.0						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**85.17**	**324**	P	**P**	**09 18 53.8**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=151,slow=5.9,SNR=9.6						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**117.61**	**205**	PKP	**PKPdf**	**09 25 01.2**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=139,slow=1.3,SNR=1.6						
WRA	**Warramunga Arr**	**120.86**	**207**	PKP	**PKPdf**	**09 25 07.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=157,slow=1.8,SNR=14						
ARCES	**ARCESS Array B**	**124.00**	**25**	PKP	**PKPdf**	**09 25 12.7**	**+0.3**
	comp=Z,2.4nm,1.2s,baz=243,slow=4.0,SNR=1.1						
ZALV	**Zalesovo Beam**	**153.99**	**34**	PKPbc	**PKPbc**	**09 26 13.5**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=287,slow=1.3,SNR=5.0						

IDC 23 09:32:07.0±1.6, 4°.61S×151°.13E, h0km, mb3.0/2, mbtmp3.1/2, Error ellipse: s-maj=74.2km s-min=16.3km az=153.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.95**	**71**	Pn	Pn	09 32 28.1	+0.6
	157nm,0.3s,baz=255,slow=2.6,SNR=125						
KRVT				Sn	Sn	09 32 42.2	+0.4
	337nm,0.3s,baz=236,slow=20,SNR=9.9						
WRA	**Warramunga Arr**	**22.35**	**226**	P	P	09 37 07.2	+0.4
	0.5nm,0.8s,baz=54,slow=10,SNR=5.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**25.20**	**220**	P	P	09 37 34.7	+0.2
	0.3nm,0.7s,baz=55,slow=9.1,SNR=5.3						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.66**	**288**	PKPbc	PKPbc	09 51 55.6	-1.6
	0.7nm,0.6s,baz=86,slow=1.7,SNR=3.9						

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*IDC **23** 09:45:46.0±0.9, 19°.77N×66°.18W, h0km, mb3.7/6, mbtmp3.8/8, ML3.2/2, MS2.6/1, Error ellipse: s-maj=26.8km s-min=20.2km az=79.0*
*OSPL **23** 09:45:48.8±3.5, 19°.62N×66°.15W, h1km±88km, ML3.4*
*RSPR **23** 09:45:49.8, 19°.81N×66°.20W, h16km±6km, MD3.6/21*
*NEIC **23** 09:45:50.3±2.9, 19°.68N±0°.07×66°.30W±0°.07, h48km±14km, mb4.4/13, Error ellipse: s-maj=11.5km s-min=8.2km az=211.0*
ISC 23 09:45:49.5±0.6, 19°.78N±0°.05×66°.21W±0°.03, h35km, n116, σ1°.30/119, mb4.0/9, 21C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.33**	**193**	⇑*eP*	**Pn**	**09 46 11.3**	**-0.3**
EMPR	**Esperanza - Ma**	**1.33**	**193**	*eS*	**Sn**	**09 46 27.8**	**-0.3**
EMPR	**Esperanza - Ma**	**1.33**	**193**	Pn	**Pn**	**09 46 11.2**	**-0.4**
GCPR	**Guaynabo City**	**1.47**	**175**	⇑*eP*	**Pn**	**09 46 12.5**	**-1.0**
GCPR	**Guaynabo City**	**1.47**	**175**	*eS*	**Sn**	**09 46 30.3**	**-1.2**
GCPR	**Guaynabo City**	**1.47**	**175**		**Pn**	**09 46 12.6**	**-1.0**
AOPR	**Arecibo Observ**	**1.52**	**200**	⇑*eP*	**Pn**	**09 46 13.4**	**-0.8**
AOPR	**Arecibo Observ**	**1.52**	**200**	*eS*	**Sn**	**09 46 32.2**	**-0.5**
AOPR	**Arecibo Observ**	**1.52**	**200**		**Pn**	**09 46 13.3**	**-0.8**
AOPR	**Arecibo Observ**	**1.52**	**200**	*eP*	**Pn**	**09 46 13.4**	**-0.8**
AOPR	**Arecibo Observ**	**1.52**	**200**	*e*	**Pn**	**09 46 14.4**	**+0.2**
CBYP	**Canovanas**	**1.54**	**167**	⇑*eP*	**Pn**	**09 46 13.6**	**-1.0**
CBYP	**Canovanas**	**1.54**	**167**	*eS*	**Sn**	**09 46 32.6**	**-0.7**
CBYP	**Canovanas**	**1.54**	**167**		**Pn**	**09 46 13.5**	**-1.0**
AGPR	**Aguadilla, PR**	**1.56**	**213**	⇑*eP*	**Pn**	**09 46 14.6**	**-0.2**
AGPR	**Aguadilla, PR**	**1.56**	**213**	*eS*	**Sn**	**09 46 33.6**	**-0.1**
AGPR	**Aguadilla, PR**	**1.56**	**213**		**Pn**	**09 46 14.2**	**-0.5**
AGPR	**Aguadilla, PR**	**1.56**	**213**	*i P*	**Pn**	**09 46 14.0**	**-0.8**
AGPR				*eS*	**Sn**	**09 46 30.8**	**-2.9**
AGPR				IAML		09 46 44.6	
	comp=Z,128nm,0.2s						
UUPR	**Utuado, UPR, P**	**1.59**	**198**	⇑*eP*	**Pn**	**09 46 15.0**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.59**	**198**	*eS*	**Sn**	**09 46 35.9**	**+1.3**
UUPR	**Utuado, UPR, P**	**1.59**	**198**	Pn	**Pn**	**09 46 14.6**	**-0.7**
SJG	**San Juan**	**1.66**	**178**	Pn	**Pn**	**09 46 15.6**	**-0.6**
	comp=Z,32nm,0.3s,baz=7.3,slow=9.8,SNR=71						
SJG				Sn	**Sn**	**09 46 34.3**	**-1.9**
	comp=Z,24nm,0.3s,baz=318,slow=22,SNR=7.9						
HUMP	**Col San Antoni**	**1.67**	**168**	⇑*eP*	**Pn**	**09 46 15.1**	**-1.1**
HUMP	**Col San Antoni**	**1.67**	**168**	*eS*	**Sn**	**09 46 36.2**	**-0.2**
HUMP	**Col San Antoni**	**1.67**	**168**		**Pn**	**09 46 15.1**	**-1.1**
CUPR	**Culebra, Puert**	**1.71**	**149**	⇑*eP*	**Pn**	**09 46 15.9**	**-0.9**
CUPR	**Culebra, Puert**	**1.71**	**149**	*eS*	**Sn**	**09 46 35.7**	**-1.7**
CUPR	**Culebra, Puert**	**1.71**	**149**		**Pn**	**09 46 16.0**	**-0.9**
CELP	**Cerrillos**	**1.73**	**192**	⇑*eP*	**Pn**	**09 46 16.6**	**-0.6**
CELP	**Cerrillos**	**1.73**	**192**	*eS*	**Sn**	**09 46 39.6**	**+1.5**
CELP	**Cerrillos**	**1.73**	**192**		**Pn**	**09 46 16.5**	**-0.7**
MTP	**Monte Pirata**	**1.79**	**159**	⇑*eP*	**Pn**	**09 46 17.3**	**-0.6**
MTP	**Monte Pirata**	**1.79**	**159**	*eS*	**Sn**	**09 46 38.8**	**-0.6**
MTP	**Monte Pirata**	**1.79**	**159**		**Pn**	**09 46 16.8**	**-1.1**
PRSN	**Puerto Rico Se**	**1.79**	**210**	⇑*eP*	**Pn**	**09 46 17.6**	**-0.3**
PRSN	**Puerto Rico Se**	**1.79**	**210**	*eS*	**Sn**	**09 46 39.8**	**+0.4**
PRSN	**Puerto Rico Se**	**1.79**	**210**		**Pn**	**09 46 17.5**	**-0.3**
LSP	**Las Mesas**	**1.80**	**208**	⇑*eP*	**Pn**	**09 46 17.9**	**-0.2**
LSP	**Las Mesas**	**1.80**	**208**	*eS*	**Sn**	**09 46 39.9**	**+0.2**
IGPR	**InterUniversit**	**1.81**	**177**	⇑*eP*	**Pn**	**09 46 17.7**	**-0.4**
IGPR	**InterUniversit**	**1.81**	**177**	*eS*	**Sn**	**09 46 39.5**	**-0.3**
IDE	**Isla Desecheo**	**1.83**	**221**	⇑*eP*	**Pn**	**09 46 18.4**	**-0.1**
IDE	**Isla Desecheo**	**1.83**	**221**	*eS*	**Sn**	**09 46 41.5**	**+1.1**
STVI	**Saint Thomas**	**1.85**	**140**	⇑*eP*	**Pn**	**09 46 18.9**	**+0.1**
STVI	**Saint Thomas**	**1.85**	**140**	*eS*	**Sn**	**09 46 41.5**	**+0.5**
STVI	**Saint Thomas**	**1.85**	**140**		**Pn**	**09 46 19.1**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.90**	**199**	⇑*eP*	**Pn**	**09 46 21.0**	**+1.5**
GBPR	**Guanica, Bosqu**	**1.90**	**199**	*eS*	**Sn**	**09 46 45.2**	**+3.0**
CRPR	**Cabo Rojo, PR**	**1.96**	**206**	⇑*eP*	**Pn**	**09 46 20.2**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.96**	**206**	*eS*	**Sn**	**09 46 43.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.96**	**206**		**Pn**	**09 46 20.5**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.96**	**206**	*i P*	**Pn**	**09 46 20.1**	**-0.1**
CRPR				*eS*	**Sn**	**09 46 44.2**	**+0.6**
CRPR				IAML		09 46 53.7	
	comp=Z,157nm,0.6s						
MLPR	**Magueyes Islan**	**1.97**	**204**	⇑*eP*	**Pn**	**09 46 20.1**	**-0.3**
MLPR	**Magueyes Islan**	**1.97**	**204**	*eS*	**Sn**	**09 46 43.1**	**-0.7**
MLPR	**Magueyes Islan**	**1.97**	**204**		**Pn**	**09 46 20.0**	**-0.3**
SJVI	**Gifft Hill Sch**	**1.98**	**136**	⇑*eP*	**Pn**	**09 46 20.6**	**+0.1**
SJVI	**Gifft Hill Sch**	**1.98**	**136**	*eS*	**Sn**	**09 46 43.7**	**-0.5**
SJVI	**Gifft Hill Sch**	**1.98**	**136**	Pn	**Pn**	**09 46 20.9**	**+0.3**
TBVI	**Tortola**	**2.03**	**132**	⇑*eP*	**Pn**	**09 46 21.0**	**-0.2**
TBVI	**Tortola**	**2.03**	**132**	*eS*	**Sn**	**09 46 45.5**	**+0.2**
PCDR	**Punta Cana, DR**	**2.41**	**239**	⇑*eP*	**Pn**	**09 46 26.8**	**+0.5**
PCDR	**Punta Cana, DR**	**2.41**	**239**	*eS*	**Sn**	**09 46 55.2**	**+0.5**
PCDR	**Punta Cana, DR**	**2.41**	**239**		**Pn**	**09 46 27.2**	**+0.8**
PCDR	**Punta Cana, DR**	**2.41**	**239**	*i P*	**Pn**	**09 46 26.9**	**+0.5**
PCDR				*eS*	**Sn**	**09 46 54.1**	**-0.5**
PCDR				IAML		09 47 04.8	
	comp=Z,209nm,1.1s						
CDVI	**St. Croix**	**2.44**	**146**	⇓*eP*	**Pn**	**09 46 28.3**	**+1.4**
CDVI	**St. Croix**	**2.44**	**146**	*eS*	**Sn**	**09 46 57.3**	**+1.8**
CDVI	**St. Croix**	**2.44**	**146**	Pn	**Pn**	**09 46 27.7**	**+0.8**
CDVI	**St. Croix**	**2.44**	**146**	*eP*	**Pn**	**09 46 28.4**	**+1.5**
SMRT	**St. Maarten**	**3.43**	**120**		**Pn**	**09 46 40.9**	**+0.3**
SMRT	**St. Maarten**	**3.43**	**120**	*eP*	**Pn**	**09 46 40.9**	**+0.3**
SMRT				*eS*	**Sn**	**09 47 22.1**	**+2.1**
SDD	**Santo Domingo**	**3.74**	**250**	Pn	Pn	09 46 37.3	-7.4
BANI	**BANI**	**4.16**	**251**	*i P*	Pn	09 46 33.6	-17
BANI				*eS*	Sn	09 47 20.8	-17
SC01	**Santiago de lo**	**4.27**	**266**		**Pn**	**09 46 53.9**	**+1.8**
ANWB	**Willy Bob**	**4.69**	**116**	*eP*	**Pn**	**09 46 56.5**	**-1.4**
ANWB	**Willy Bob**	**4.69**	**116**	*eP*	**Pn**	**09 46 57.2**	**-0.6**
ANWB	**Willy Bob**	**4.69**	**116**	*eS*	**Sn**	**09 47 48.1**	**-3.0**
MBFL	**Flemmings, Mon**	**4.85**	**128**	*eP*	**Pn**	**09 47 02.1**	**+2.0**
SDDR	**Presa de Saban**	**4.86**	**261**		**Pn**	**09 47 01.8**	**+1.6**
SDDR	**Presa de Saban**	**4.86**	**261**	*i* P	**Pn**	**09 47 02.0**	**+1.8**
SDDR				*eS*	**Sn**	**09 47 57.1**	**+1.9**
SDDR				IAML		09 48 01.9	
	comp=Z,28nm,0.4s						
GRTK	**Grand Turk**	**4.92**	**291**	Pn	**Pn**	**09 47 01.6**	**+0.7**
GRTK	**Grand Turk**	**4.92**	**291**	*i* P	**Pn**	**09 47 01.7**	**+0.7**
GRTK				IAML		09 47 52.7	
	comp=Z,75nm,2.5s						
ANBD	**Bethesda, Anti**	**5.02**	**122**	*eP*	**Pn**	**09 47 01.8**	**-0.6**
ANBD	**Bethesda, Anti**	**5.02**	**122**	*e*	**Pn**	**09 47 03.3**	**+0.9**
ANBD	**Bethesda, Anti**	**5.02**	**122**	*eS*	**Sn**	**09 47 57.6**	**-1.6**
GDHS	**Morne Mazeau,**	**5.48**	**129**	Pn	**Pn**	**09 47 08.9**	**+0.1**
CBE	**Ff, Capester**	**5.73**	**129**	Pn	**Pn**	**09 47 13.6**	**+1.4**
CBE	**Ff, Capester**	**5.73**	**129**	*eP*	**Pn**	**09 47 13.2**	**+1.0**
TBG	**Guadaloupe-3**	**5.85**	**131**	*eP*	**Pn**	**09 47 15.2**	**+1.5**
TDBA	**Terre de Bas,**	**5.86**	**131**	*eP*	**Pn**	**09 47 16.3**	**+2.4**
MAGL	**Barre de l'ile**	**6.05**	**128**	*eP*	**Pn**	**09 47 17.7**	**+1.2**
DSLB	**Salisbury**	**6.29**	**133**	*e*	**Pn**	**09 47 21.9**	**+2.1**
SLBI	**Saint Lucia, B**	**7.61**	**138**	*eP*	Pn	09 47 45.3	+7.3
PCRV	**Puerto La Cruz**	**9.67**	**171**	Pn	**Pn**	**09 48 08.4**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=4.0,SNR=1.9						
	comp=Z,6.4nm,0.9s						
BAUV	**El Baul**	**10.92**	**190**	Pn	**Pn**	**09 48 24.4**	**+1.1**
SDV	**Santo Domingo**	**11.64**	**202**	Pn	**Pn**	**09 48 34.5**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=42,slow=12,SNR=4.0						
SDV				LR	LR	09 54 47.7	
	comp=Z,31nm,19.0s,baz=85,slow=46						
	comp=Z,5.0nm,0.5s						
BBSR	**BB Station**	**12.61**	**6**	Pn	**Pn**	**09 48 42.6**	**-3.8**
061Z	**Ochoppi**	**14.84**	**297**	Pn	**Pn**	**09 49 14.4**	**-2.4**
656A	**Willston**	**17.63**	**306**	P	**P**	**09 49 53.8**	**+0.6**
656A				IAmb	IAmb	09 50 28.9	
	comp=Z,60nm,1.1s						
456A	**Hilliard**	**17.96**	**310**	P	**P**	**09 49 57.0**	**+0.3**
V61A	**Roper**	**18.38**	**332**	P	**P**	**09 49 59.2**	**-2.1**
Y58A	**Scranton**	**18.47**	**322**	P	**P**	**09 49 59.7**	**-2.7**
ESPN	**Las Esperanzas**	**18.94**	**249**	P	**P**	**09 50 05.4**	**-2.3**
ESPN				IAmb	IAmb	09 50 13.4	
	comp=Z,23nm,0.6s						
255A	**H

INDI	Punta indio, G	2.83	297	*e*P		Pn		09 57 47.8	+0.3
ACAL	Aguas Claras	2.90	315	*e*P		Pn		09 57 49.9	+1.4
PTEN	Parque Tenorio	2.92	316	*e*P		Pn		09 57 50.1	+1.3
DUNO	Dulce Nombre,	2.92	300	Pn		Pn		09 57 49.4	+0.6
VERA	Finca Concepci	2.94	320	*e*P		Pn		09 57 50.2	+1.1
CUI	Cuipilapa	3.01	313	*e*P		Pn		09 57 51.1	+1.1
COLC	Colonia	3.04	313	*e*P		Pn		09 57 52.1	+1.7
ORTG	Ortega, Santa	3.05	305	Pn		Pn		09 57 51.7	+1.1
HORNC	Hornillas	3.05	314	*e*P		Pn		09 57 51.9	+1.2
GUAB	Guayabo de Bag	3.09	313	*e*P		Pn		09 57 53.6	+2.4
SAJU	San Juanillo,	3.11	298	*e*P		Pn		09 57 52.4	+1.1
BCIP	Isla Barro Col	3.11	79	Pn		Pn		09 57 50.7	-0.7
BCIP	Isla Barro Col	3.11	79	*e*P		Pn		09 57 50.6	-0.7
BCIP	Isla Barro Col	3.11	79	*e*P		Pn		09 57 51.4	0.0
BCIP				*e*S		Sn		09 58 29.1	+1.4
GPS3	Bodega del ICE	3.22	312	*e*P		Pn		09 57 55.0	+2.1
GPS1	Guardaparques	3.22	312	*e*P		Pn		09 57 55.5	+2.6
LAPC	Finca la Perla	3.27	311	*e*P		Pn		09 57 54.9	+1.2
BUEV	Buena Vista	3.28	312	*e*P		Pn		09 57 55.2	+1.5
GB1A	Borinquen Arri	3.28	312	*e*P		Pn		09 57 55.5	+1.7
GBS3	Finca Las Img	3.30	311	*e*P		Pn		09 57 55.7	+1.7
UPA	Univ. de Panam	3.38	83	*e*P		Pn		09 57 54.8	-0.3
UPA	Univ. de Panam	3.38	83	*e*P		Pn		09 57 55.4	+0.3
UPA				*e*S		Sn		09 58 36.0	+1.7
ESPN	Las Esperanzas	3.82	340	Pn		Pn		09 58 00.8	-0.4
ACON	Acoyapa	4.01	327			Pn		09 58 03.3	-0.5
BOAB	BOACO BROADBAN	4.68	325	Pn		Pn		09 58 12.6	-0.3
MATN	Matagalpa	5.21	326	Pn		Pn		09 58 19.9	-0.5
PTAC	Punta Ardita,	5.28	105	*e*P		Pn		09 58 19.0	-2.2
CNGN	Cerro Negro	5.36	317	Pn		Pn		09 58 23.3	+0.9
TGUH	Tegucigalpa,Un	6.90	322	Pn		Pn		09 58 45.8	+2.2
CBOC	Ciudad Bolivar	7.38	111	*e*P		Pn		09 58 48.8	-1.5
PLMC	San Jos del P	7.55	119	*e*P		Pn		09 58 50.8	-1.8
HELC	Santa Helena	7.72	108	*e*P		Pn		09 58 55.7	+0.6
SJCC	San Jacinto, C	7.76	80	*e*P		Pn		09 58 55.8	+0.4
YOTC	Yotoco, Valle	7.99	125	*e*P		Pn		09 58 52.5	-6.1
GUY2C	Guyana, Caldas	8.23	114	*e*P		Pn		09 59 03.1	+1.0
NORC	Norcasia	8.55	110	*e*P		Pn		09 59 07.9	+1.7
ORTC	Ortega, Tolima	8.95	121	*e*P		Pn		09 59 13.6	+1.9
GCUF	Volcan Galeras	9.20	142	*e*P		Pn		09 59 17.1	+1.7
SPBC	San Pablo de B	9.27	108	*e*P		Pn		09 59 18.5	+2.4
ROSC	El Rosal	9.33	113	Pn		Pn		09 59 19.8	+2.5
	2.1nm,0.3s,baz=338,slow=19,SNR=7.5								
ROSC				LR		LR		10 02 41.1	
	comp=Z,134nm,21.0s,baz=238,slow=36								
	7.9nm,0.4s								
ROSC	El Rosal	9.33	113	Pn		Pn		09 59 21.2	+4.0
OCAC	Ocana	9.52	91	*e*P		Pn		09 59 19.7	+0.1
GARC	Garzon, Huila	9.77	130	*e*P		Pn		09 59 26.4	+3.3
CHIC	Chingaza	9.95	113	*e*P		Pn		09 59 28.9	+3.1
FLOC	Florencia	10.05	133	*e*P		Pn		09 59 29.3	+2.4
RUSC	La Rusia	10.13	105	*e*P		Pn		09 59 29.9	+1.5
PAMC	Pamplona, Colo	10.21	96	*e*P		Pn		09 59 31.1	+1.6
SLOR	San Lorenzo -	10.26	154	Pn		Pn		09 59 34.2	+4.1
SDV	Santo Domingo	12.16	88	LR		LR		10 04 56.7	
	comp=Z,116nm,21.8s,baz=262,slow=38								
CMIG	Matias Romero	14.38	307	Pn		Pn		10 00 24.3	-1.7
	0.4nm,0.3s,baz=114,slow=12,SNR=10								
	6.1nm,0.7s								
BAUV	El Baul	14.72	88	Pn		Pn		10 00 29.2	-1.5
SDDR	Presa de Saban	15.30	46			Pn		10 00 38.4	-0.1
SDDR				IAmb		IAmb		10 00 54.3	
	comp=Z,12nm,0.8s								
ATAH	Atahualpa	16.27	164	LR		LR		10 06 26.6	
	comp=Z,79nm,20.8s,baz=11,slow=35								
PCRV	Puerto La Cruz	18.12	84	P		P		10 01 16.2	+2.1
	comp=Z,0.4nm,0.3s,baz=202,slow=11,SNR=2.8								
	comp=Z,11nm,1.0s								
CELP	Cerrillos	18.48	58	P		Pn		10 01 18.6	+0.3
SJG	San Juan	18.86	58	P		Pn		10 01 23.7	+0.8
	comp=Z,1.3nm,0.3s,baz=251,slow=8.7,SNR=7.4								
SJG				LR		LR		10 08 05.0	
	comp=Z,52nm,19.4s,baz=244,slow=35								
	comp=Z,11nm,0.7s								
MTP	Monte Pirata	19.35	59	P		P		10 01 27.4	-0.3
152A	Waverly Hall	24.01	356	P		P		10 02 16.3	-0.3
152A				IAmb		IAmb		10 02 17.6	
	comp=Z,5.9nm,0.7s								
HKT	Hockley	24.44	332	P		P		10 02 21.4	+0.9
HKT				IAmb		IAmb		10 02 22.6	
	comp=Z,11nm,1.4s								
LRAL	Lakeview Retre	24.61	352	P		P		10 02 23.6	+1.5
GOGA	Godfrey	24.70	359	P		P		10 02 22.8	-0.1
GOGA				IAmb		IAmb		10 02 25.0	
	comp=Z,8.9nm,0.8s								
435B	Jarrell	25.97	330	P		P		10 02 35.2	+0.8
TKL	Tuckaleechee C	26.95	358	LR		LR		10 13 30.1	
	comp=Z,38nm,18.2s,baz=152,slow=37								
TXAR	Lajitas Array	28.36	319	P		P		10 02 55.9	-0.2
	comp=Z,0.4nm,1.0s,baz=125,slow=11,SNR=3.7								
TXAR				LR		LR		10 13 39.7	
	comp=Z,22nm,21.9s,baz=90,slow=35								
	comp=Z,0.4nm,1.0s								
MDP	Montagnes des	30.27	95	LR		LR		10 16 02.5	
	comp=Z,95nm,18.2s,baz=262,slow=38								
LVC	Limon Verde	33.92	156	LR		LR		10 16 11.7	
	comp=Z,34nm,21.0s,baz=155,slow=34								
ANMO	Albuquerque	33.95	324	LR		LR		10 21 20.9	
	comp=Z,32nm,18.6s,baz=96,slow=43								
PFO	Pinyon Flats O	39.67	314	LR		LR		10 21 09.5	
	comp=Z,53nm,18.6s,baz=92,slow=37								
PDAR	Pinedale Array	41.28	330	P		P		10 04 46.2	-1.2
	comp=Z,0.3nm,0.7s,baz=126,slow=9.3,SNR=2.7								
	comp=Z,0.3nm,0.7s								
H03N2	Juan Fernandez	41.97	175	T		T		10 49 19.0	
	baz=353								
H03N1	Juan Fernandez	41.98	175	T		T		10 49 15.7	
	baz=353								
H03N3	Juan Fernandez	41.99	175	T		T		10 49 20.2	
	baz=353								
CPUP	Villa Florida	42.71	145	LR		LR		10 24 21.1	
	comp=Z,31nm,19.4s,baz=246,slow=38								
ULM	Lac du Bonnet	42.90	348	P		P		10 04 57.6	-2.5
	comp=Z,3.2nm,0.7s,baz=161,slow=10,SNR=4.5								
	comp=Z,3.2nm,0.7s								
NVAR	Mina Array Bea	43.51	319	P		P		10 05 04.7	-0.9
	comp=Z,0.6nm,0.7s,baz=130,slow=6.9,SNR=6.6								
	comp=Z,0.6nm,0.7s								
WVOR	Wild Horse Val	46.03	323	P		P		10 05 26.0	+0.6
WVOR				IAmb		IAmb		10 05 26.4	
	comp=Z,4.3nm,0.9s								
RCBR	Riachuelo	49.03	105	LR		LR		10 28 01.0	
	comp=Z,55nm,18.5s,baz=124,slow=38								
PLCA	Paso Flores	50.39	168	P		P		10 05 57.3	-1.7
	comp=Z,1.0nm,0.8s,baz=317,slow=11,SNR=4.8								
	comp=Z,1.0nm,0.8s								
DLBC	Dease Lake	61.29	334	LR		LR		10 35 54.2	
	comp=Z,34nm,19.2s,baz=303,slow=38								
ILAR	Eielson Array	71.32	336	P		P		10 08 19.6	-1.3
	comp=Z,0.4nm,0.6s,baz=102,slow=4.2,SNR=6.4								
	comp=Z,0.4nm,0.6s								
ESDC	Sonseca Array	76.09	51	P		P		10 08 51.0	+1.5
	comp=Z,1.8nm,1.3s,baz=279,slow=8.6,SNR=1.7								
	comp=Z,1.8nm,1.3s								

JMA 23 10:03:22.4±0.1, **35°.1N**±0°.3×**135°.6E**±0°.4, **h16**km±1km, **MV0.8**/28, **MID KYOTO PREF, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.27	313	P	Pg	10 03 28.3	0.0
JWT				S	Sg	10 03 32.3	-0.1
JHE	Heguri	0.44	176	*e*P	Pg	10 03 31.0	-0.3
JHE				*e*S	Sg	10 03 37.0	-0.3
JKS	Kasai	0.67	260	*e*P	Pg	10 03 35.2	-0.3
JKS				*e*S	Sg	10 03 44.0	-0.3
TSUJ	Tsu 2	0.74	121	*e*S	Sg	10 03 45.9	-0.9

IDC ***23*** *10:03:25.9±2.2, 36°.43N×70°.98E, h174km±19km, mb3.8/13, mbtmp4.4/19, MS3.4/2, Error ellipse: s-maj=15.4km s-min=11.3km az=18.0*
MOS ***23*** *10:03:28.4±0.9, 36°.64N×71°.12E, h205km, mb4.2/18, Error ellipse: s-maj=9.1km s-min=4.1km az=78.8*
NEIC ***23*** *10:03:29.7±2.2, 36°.61N±0°.06×70°.95E±0°.08, h206km±7km, mb4.3/34, Error ellipse: s-maj=9.5km s-min=9.3km az=46.0*
NNC ***23*** *10:03:30.6±1.5, 36°.91N×70°.79E, h219km±17km, mb3.6, mpv5.0, Error ellipse: s-maj=16.0km s-min=7.4km az=162.0*
BJI ***23*** *10:03:31.8±0.0, 37°.00N×71°.19E, h207km, mb4.4/13, mB4.5/6*

ISC 23 10:03:28.6±0.4, **36°.62N**±0°.04×**71°.08E**±0°.04, **h200**km, **n206**, σ1**59**/220, **mb4.3**/38, **10C-12D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.45	346	Pn	Pn	10 04 12.8	+0.8
CHGR	Chuyangaron	2.54	324		Pn	10 04 13.2	+0.2
CHGR	Chuyangaron	2.54	324	PN	Pn	10 04 13.2	+0.2
KBL	Kabul	2.66	219	Pn	Pn	10 04 14.8	+0.3
KBL	Kabul	2.66	219	PN	Pn	10 04 14.8	+0.3
CEP	Cherat	2.87	166	P	Pn	10 04 19.0	+2.1
CEP				S	Sn	10 04 56.0	+1.4
BTK	Batken	3.44	357	Pn	Pn	10 04 25.4	+1.9
BTK	Batken	3.44	357	PN	Pn	10 04 25.4	+1.9
CHCP	Chirah Chowk	3.45	148	P	Pn	10 04 25.4	+1.7
NIL	Nilore	3.45	148	Pn	Pn	10 04 25.6	+1.9
NIL	Nilore	3.45	148	PN	Pn	10 04 25.6	+1.9
THW	Thamme Wali	3.85	172	P	Pn	10 04 29.5	+0.8
KSH	Kashi	4.82	52	P	Pn	10 04 37.9	-2.9
KSH				S	Sn	10 05 27.6	-10
SARP	Sargodha	4.87	164	P	Pn	10 04 41.8	+0.5
TAS	Tashkent	4.90	344		Pn	10 04 41.9	+0.2
TAS	Tashkent	4.90	344	PN	Pn	10 04 41.9	+0.2
JMU	Jammu	5.00	140	*e*P	Pn	10 04 43.3	+0.3
JMU				*e*S	Sn	10 05 34.2	-7.5
IUG	luzhnay	5.58	352	*d i*PN	Pn	10 04 51.4	+0.9
IUG	luzhnay	5.58	352	⇓*i*P	Pn	10 04 51.4	+0.9
	baz=349						
IUG				*e*S	Sn	10 05 52.1	-3.2
	baz=349						
THN	Thein Dam	5.66	136	*e*P	Pn	10 04 52.7	+1.2
THN				*e*P		10 04 53.5	
THN				*e*S	Sn	10 05 55.5	-1.5
THN				*e*S		10 05 55.5	
AML	Almayashu	5.87	19	P	Pn	10 04 55.1	+0.7
	SNR=621						
NRN	Naryn	6.14	37	Pn	Pn	10 04 57.4	-0.6
NRN	Naryn	6.14	37	PN	Pn	10 04 57.4	-0.6
UCH	Uchtor	6.20	24	P	Pn	10 04 59.6	+0.9
	SNR=364						
DZA	Taraz	6.27	2	*e*PN	Pn	10 05 00.3	+1.1
DZA	Taraz	6.27	2	*e*P	Pn	10 05 00.4	+1.1
	baz=360						
DZA				*e*S	Sn	10 06 08.1	-3.1
	baz=360						
EKS2	Erkin-Say	6.38	18	P	Pn	10 05 01.7	+0.9
	SNR=216						
KK31	Karatay Array	6.49	356		Pn	10 05 02.4	+0.2
KK31	Karatay Array	6.49	356	PN	Pn	10 05 01.8	-0.4
KK31	Karatay Array	6.49	356	⇑P	Pn	10 05 01.8	-0.4
	17nm,0.4s,baz=174,slow=12,SNR=344						
KK31				⇑S	Sn	10 06 12.6	-3.7
	29nm,0.3s,baz=173,slow=15,SNR=14						
KKAR	Karatay Array	6.49	356	Pn	Pn	10 05 02.4	+0.2
KKAR	Karatay Array	6.49	356	Pn	Pn	10 05 02.2	+0.1
KKAR	Karatay Array	6.49	356	PN	Pn	10 05 02.4	+0.2
AAK	Ala-Archa	6.56	23	P	Pn	10 05 04.3	+1.1
	SNR=97						
AAK	Ala-Archa	6.56	23	P	Pn	10 05 04.1	+0.9
	60nm,0.3s,baz=169,slow=5.8,SNR=190						
AAK				S	Sn	10 06 16.5	-1.7
	74nm,0.7s,baz=136,slow=19,SNR=15						
KBK	Karagaybulak	6.73	25	P	Pn	10 05 06.6	+1.2
	SNR=68						
BHK	Bhakra	6.82	138	*e*P	Pn	10 05 07.0	+0.4
BHK				*e*S	Sn	10 06 20.4	-3.8
ULHL	Ulahol	6.89	34	P	Pn	10 05 08.9	+1.3
	SNR=5.7						
CHMS	Chumysh	6.97	23	P	Pn	10 05 09.0	+0.6
	SNR=17						
CHMS	Chumysh	6.97	23	PN	Pn	10 05 08.9	+0.6
CHMS				S	Sn	10 06 25.3	-2.3
CHMS	Chumysh	6.97	23	⇓P	Pn	10 05 08.9	+0.6
	52nm,0.6s						
CHMS				⇓S	Sn	10 06 25.3	-2.3
	136nm,1.3s						
USP	Ospenovka	7.14	20	P	Pn	10 05 10.5	-0.1
	SNR=116						
TKM2	Tokmak 2	7.19	28	P	Pn	10 05 12.1	+0.7
	SNR=290						
TKM2	Tokmak 2	7.19	28	PN	Pn	10 05 12.2	+0.8
TKM2	Tokmak 2	7.19	28	⇓P	Pn	10 05 12.2	+0.8
	209nm,0.7s						
TARG	Taragay, Kyrgy	7.30	44	Pn	Pn	10 05 11.1	-1.9
TARG	Taragay, Kyrgy	7.30	44	PN	Pn	10 05 11.1	-1.9
SGDS	Sogindy	7.35	21	*d i*PN	Pn	10 05 13.1	-0.2
SGDS				pmax	pmax		
	comp=Z,6.0nm,0.2s						
SGDS	Sogindy	7.35	21	⇓*i*P	Pn	10 05 13.2	-0.2
	comp=Z,5.7nm,0.2s,baz=20						
SMLA	Simla	7.45	136	*e*P	Pn	10 05 14.7	-0.1
SMLA				*e*S	Sn	10 06 35.6	-3.5
SMLA				IAML		10 06 39.6	
	comp=N,344nm,0.6s						
SMLA				IAML		10 06 39.6	
	comp=E,285nm,0.5s						
HRA	Herat	7.54	255	Pn	Pn	10 05 16.0	-0.1
TNSS	Tian-Shan	7.84	33	*e*PN	Pn	10 05 20.2	+0.2
TNSS	Tian-Shan	7.84	33	*e*P	Pn	10 05 20.3	+0.2
	baz=34						
AAA	Alma-Ata	7.96	32	*e*PN	Pn	10 05 21.6	+0.3
AAA	Alma-Ata	7.96	32	*e*P	Pn	10 05 21.6	+0.3
	baz=33						
MDOK	Medeo	7.98	33	*e*PN	Pn	10 05 22.3	+0.7
MDOK	Medeo	7.98	33	*e*P	Pn	10 05 22.4	+0.7
	baz=34						
MDOK	Medeo	7.98	33	⇑P	Pn	10 05 22.5	+0.8
	comp=E,49nm,0.6s						
KUU	Kurty	8.30	27	*d i*PN	Pn	10 05 25.0	-0.6
KUU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KUU	Kurty	8.30	27	⇓*i*P	Pn	10 05 25.1	-0.6
	comp=Z,9.6nm,0.6s,baz=28						
CHKK	Chushkaly	8.52	30	*e*PN	Pn	10 05 28.0	-0.5
CHKK	Chushkaly	8.52	30	*e*P	Pn	10 05 28.1	-0.5
	baz=31						
SATY	Saty	8.55	39	*e*PN	Pn	10 05 28.8	-0.2
SATY	Saty	8.55	39	*e*P	Pn	10 05 28.8	-0.2
	baz=40						
BTLS	Baital	8.71	14	*e*PN	Pn	10 05 31.1	+0.2
BTLS	Baital	8.71	14	*e*P	Pn	10 05 31.1	+0.2
	baz=14						
UZB	Uzynbulak	8.93	41	*e*PN	Pn	10 05 33.6	-0.4
UZB	Uzynbulak	8.93	41	*e*P	Pn	10 05 33.6	-0.4
	baz=42						
KPKS	Kokpek	8.98	38	*e*PN	Pn	10 05 33.5	-1.1
KPKS	Kokpek	8.98	38	*e*P	Pn	10 05 33.5	-1.1
	baz=39						
SHLS	Shalkode	9.17	42	*e*P	Pn	10 05 39.6	+2.6
SHLS	Shalkode	9.17	42	*e*P	Pn	10 05 39.7	+2.6
	baz=44						
PDGK	Podgornoye	9.30	41	P	Pn	10 05 39.5	+0.7
PDGK	Podgornoye	9.30	41	⇑P	Pn	10 05 39.5	+0.7
	comp=Z,15nm,0.8s						
KHET	Khetri	9.41	154	*e*P	Pn	10 05 39.3	-0.9
PTH	Pithoragarh	10.41	130	*e*P	Pn	10 05 52.7	-0.6
GEYT	Alibeck	10.42	281	P	Pn	10 05 50.7	-2.5
	comp=Z,9.3nm,0.8s,baz=104,slow=12,SNR=15						
GEYT				S	Sn	10 07 45.7	-3.9
	comp=Z,12nm,0.6s,baz=124,slow=9.2,SNR=8.0						
GYA0	ALIBECK ARRAY	10.42	281	P	Pn	10 05 50.4	-2.8
GYA0				S	Sn	10 07 44.9	-4.6
GYA0B	ALIBECK ARRAY	10.42	281	Pn	Pn	10 05 51.1	-2.1
GYA0B	ALIBECK ARRAY	10.42	281	⇑P	Pn	10 05 50.0	-3.2
GYA0B				⇓S	Sn	10 07 44.9	-4.6
LGTI	Lohaghat	10.49	130	*e*P	Pn	10 05 52.8	-1.4
OTUK	Ortayu	11.65	4	P	Pn	10 06 07.8	-1.2
OTUK	Ortayu	11.65	4	P	Pn	10 06 07.8	-1.2
MAKZ	Makanchi	13.02	35	P	Pn	10 06 26.8	+0.6
MAKZ	Makanchi	13.02	35	P	Pn	10 06 26.8	+0.6
MAKZ	Makanchi	13.02	35	⇓P	Pn	10 06 26.0	-0.2
	comp=Z,14nm,0.7s						
MK31	Makanchi Array	13.15	36		P	10 06 29.0	-1.9
MK31	Makanchi Array	13.15	36	P	P	10 06 29.0	-1.9
MK31	Makanchi Array	13.15	36	P	Pn	10 06 28.0	+0.1
	comp=Z,2.7nm,0.5s,baz=222,slow=8.7,SNR=34						
MKAR	Makanchi Array	13.15	36	P	Pn	10 06 28.6	+0.6
	comp=Z,5.4nm,0.8s,baz=220,slow=9.2,SNR=33						
MKAR	Makanchi Array	13.15	36		P	10 06 29.0	-1.9
MKAR	Makanchi Array	13.15	36	P	P	10 06 29.0	-1.9
PYUN	Piuthan	13.16	127	*e*P	Pn	10 06 27.8	-0.5
	comp=Z,29nm,0.2s						
PYUN				*e*S	S	10 08 43.7	-12
BRZS	Berezniki	13.41	4	*e*P	Pn	10 06 30.9	-0.1
BRZS	Berezniki	13.41	4	*e*P	Pn	10 06 31.0	-0.1
	baz=3.9						
DANN	Dangsing	13.50	124	*e*P	Pn	10 06 31.8	-0.8
	comp=Z,29nm,0.3s						
KOLN	Koldanda	13.78	126	*e*P	Pn	10 06 36.4	+0.4
GKN	Gorkha	14.31	123	*e*P	Pn	10 06 41.7	-0.9
	comp=Z,38nm,0.2s						
DMN	Daman	14.88	123	*e*P	P	10 06 50.0	-0.5
	comp=Z,94nm,0.6s						
KKN	Kakani	14.88	122	*e*P	P	10 06 50.0	-0.5
KURBB	Kurchatov Arra	14.99	19	P	P	10 06 50.3	-0.9
	comp=Z,3.4nm,0.7s,baz=210,slow=10,SNR=24						
AB31	Akbulak array	15.01	331	P	Pn	10 06 46.4	-4.4
AB31	Akbulak array	15.01	331	⇓P	Pn	10 06 46.4	-4.4
	comp=Z,2.7nm,0.6s,baz=146,slow=12,SNR=47						
ABKAR	Akbulak array	15.01	331	P	Pn	10 06 49.8	-1.0
ABKAR	Akbulak array	15.01	331	P	Pn	10 06 50.2	-0.6
KURK	Kurchatov	15.10	19		P	10 06 52.5	+0.3
KURK	Kurchatov	15.10	19	P	P	10 06 52.6	+0.3
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	15.10	19	⇑P	Pn	10 06 51.0	-0.8
	comp=Z,3.7nm,0.7s						
PKI	Pulchoki	15.11	123	*e*P	Pn	10 06 52.4	-0.1
GUN	Gumba	15.22	121	*e*P	P	10 06 53.9	-0.4
	comp=Z,35nm,0.4s						
JIRN	Jiri	15.59	121	*e*P	P	10 06 58.2	-0.2
RAMN	Ramite	16.32	122	*e*P	Pn	10 07 07.2	+0.1
	comp=Z,20nm,0.3s						
BRVK	Borovoye	16.45	358	P	Pn	10 07 09.0	+0.9
BRVK				IAmb	IAmb	10 07 10.2	
	comp=Z,10nm,0.9s						
BRVK	Borovoye	16.45	358	P	Pn	10 07 09.0	+0.9
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKTO	Aktyubinsk	16.71	330	P	Pn	10 07 11.6	+0.3
	comp=Z,8.6nm,0.5s,baz=138,slow=11,SNR=29						
AKTO				S	Sn	10 10 17.2	-2.0
	comp=Z,2.1nm,0.7s,baz=229,slow=20,SNR=2.2						
AKTO				LR	LR	10 14 03.8	
	comp=Z,38nm,18.6s,baz=310,slow=38						
AKTO	Aktyubinsk	16.71	330	⇑P	P	10 07 08.1	-2.0
	comp=Z,15nm,0.9s						
TAPN	Taplejung	16.84	119	*e*P	Pn	10 07 14.1	+0.8
ODAN	Odare	16.92	120	*e*P	Pn	10 07 15.6	+1.4
UOSS	Minazif	17.26	232	P	Pn	10 07 20.0	+2.0
UOSS				IAmb	IAmb	10 07 20.3	
	comp=Z,14nm,0.8s						
DGZ	Jazzator, Alta	17.65	37	*i* P	Pn	10 07 22.7	+0.3
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GOMU	GeErMu	19.10	84	P	P	10 07 32.6	-4.1
MAK	Makhachkala	19.16	297	*e*P	P	10 07 37.7	+0.8
MAK				pmax	pmax		
	comp=Z,263nm,1.4s						
ZAA0	Zalesovo Array	19.78	25	P	P	10 07 44.1	+0.7
ZAA0				IAmb	IAmb	10 07 45.0	
	comp=Z,11nm,0.8s						
ZAA0	Zalesovo Array	19.78	25	P	P	10 07 42.2	-1.2
ZALV	Zalesovo Beam	19.78	25	P	P	10 07 44.2	+0.9
	comp=Z,11nm,0.6s,baz=222,slow=11,SNR=50						
ZALV	Zalesovo Beam	19.78	25	P	P	10 07 44.0	+0.6
SHL	Shillong	20.90	116	P	P	10 07 57.9	+2.1
SHL				IAmb	IAmb	10 07 59.1	
	comp=Z,13nm,0.9s						
SHL	Shillong	20.90	116	P	P	10 07 57.9	+2.1
SHL				pmax	pmax		
	comp=Z,13nm,0.9s						
GNI	Garni	20.92	288	*i* P	Pn	10 07 58.5	-3.5
GNI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU	Arti	21.54	341	P	P	10 08 02.6	+0.6
	comp=Z,3.4nm,0.4s,baz=153,slow=10,SNR=7.9						
	comp=Z,3.4nm,0.4s						
ARU	Arti	21.54	341	P	P	10 08 02.4	+0.4
ARU				IAmb	IAmb	10 08 05.5	
	comp=Z,14nm,1.2s						
ARU	Arti	21.54	341	*c i*P	P	10 08 02.8	+0.9
ARU				*PP	pP	10 08 37.7	+1.3
ARU				S	S	10 11 49.2	+2.0
ARU				pmax	pmax		
	comp=Z,16nm,1.3s						
GTA	Gaotai	22.77	74	*e*P	P	10 08 16.5	+2.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s

KONS	Konsvik	44.34	331	*e*P		**P**	10 11 19.1 +0.7
NBO00	NORSAR Array S	44.54	323	P		**P**	10 11 20.6 +0.4
KLR	Kul'dur	45.02	54	*i* P		**P**	10 11 22.9 -1.2
KLR				pmax	pmax		
	comp=Z,13nm,1.7s						
KONO	Kongsberg	45.04	321	*e*P		**P**	10 11 24.5 +0.5
TIXI	Tiksi	45.64	22	P		**P**	10 11 29.9 +1.3
TIXI	Tiksi	45.64	22	*ce*P		**P**	10 11 28.7 +0.1
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
SPITS	Spitsbergen Ar	47.39	347	P		**P**	10 11 44.0 +1.8
SPITS				pmax	pmax		
	comp=Z,42nm,1.4s						
TOA0	Torodi Ar. Sit	65.79	269	P		**P**	10 13 50.1 -2.4
TORD	Torodi Ar. Bea	65.79	269	P		**P**	10 13 50.9 -1.6
	comp=Z,0.7nm,0.4s,baz=51,slow=6.0,SNR=10						
	comp=Z,0.7nm,0.4s						
SHEM	Shemya Is, Ala	68.82	39	LR		LR	10 48 20.8
	comp=Z,74nm,18.6s,baz=328,slow=39						
TOLK	Toolik Lake Re	70.79	15	P		**P**	10 14 24.5 +1.7
TOLK				IAmb		IAmb	10 14 24.9
	comp=Z,8.2nm,0.8s						
IMAR	Indian Mountai	72.04	18	P		**P**	10 14 31.0 +0.7
H21K	Melozitna Rive	72.53	18	P		**P**	10 14 34.3 +1.1
H21K				IAmb		IAmb	10 14 35.8
	comp=Z,13nm,1.4s						
BMAR	Burnt Mountain	72.81	14	P		**P**	10 14 37.2 +2.4
H23K	Yukon River	73.16	16	P		**P**	10 14 38.2 +1.3
H24K	Noodor Dome	73.52	16	P		**P**	10 14 40.3 +1.3
H24K				IAmb		IAmb	10 14 49.9
	comp=Z,4.3nm,1.1s						
INK	Inuvik	73.78	9	P		**P**	10 14 42.0 +1.7
INK				IAmb		IAmb	10 14 42.6
	comp=Z,6.6nm,0.8s						
INK	Inuvik	73.78	9	P		**P**	10 14 42.1 +1.7
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
K20K	Telida	74.08	19	P		**P**	10 14 43.8 +1.5
K20K				IAmb		IAmb	10 14 44.6
	comp=Z,5.6nm,0.8s						
CAST	Castle Rocks	74.55	19	P		**P**	10 14 46.5 +1.5
ILAR	Eielson Array	74.65	16	P		**P**	10 14 46.0 +0.5
	comp=Z,1.8nm,0.9s,baz=313,slow=4.7,SNR=17						
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	74.65	16	P		**P**	10 14 46.3 +0.8
ILAR	Eielson Array	74.65	16	P		**P**	10 14 46.3 +0.8
KTH	Kantishna Hill	74.73	18	P		**P**	10 14 46.8 +0.7
KTH				IAmb		IAmb	10 14 48.3
	comp=Z,5.7nm,0.9s						
KNRA	Kununurra	75.23	123	P		**P**	10 14 50.0 +0.5
EGAK	Eagle	75.81	14	P		**P**	10 14 53.5 +1.3
EGAK				IAmb		IAmb	10 14 54.1
	comp=Z,4.7nm,1.1s						
SCRK	Sand Creek	75.96	15	P		**P**	10 14 54.4 +1.2
SCRK				IAmb		IAmb	10 14 55.0
	comp=Z,8.6nm,1.2s						
DAWY	Dawson	76.79	13	P		**P**	10 14 58.7 +1.0
YKA	Yellowknife Ar	81.12	3	P		**P**	10 15 22.3 +1.1
	comp=Z,1.5nm,0.7s,baz=351,slow=5.2,SNR=8.6						
	comp=Z,1.5nm,0.7s						
YKA	Yellowknife Ar	81.12	3	*i* P		**P**	10 15 23.1 +1.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB0	Warramunga Arr	81.91	122	P		**P**	10 15 25.3 -0.7
WB0				IAmb		IAmb	10 15 32.5
	comp=Z,7.8nm,1.3s						
WRA	Warramunga Arr	82.00	122	P		**P**	10 15 25.9 -0.5
	comp=Z,3.4nm,0.8s,baz=325,slow=5.0,SNR=38						
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	82.00	122	P		**P**	10 15 25.9 -0.5
WRAB	Tennant Creek	82.00	122	*ce*P		**P**	10 15 25.0 -1.4
WRAB				pmax	pmax		
	comp=Z,18nm,2.5s						
WB2	Warramunga Arr	82.00	122	P		**P**	10 15 26.0 -0.4
WB2				IAmb		IAmb	10 15 26.5
	comp=Z,7.0nm,0.9s						
WR0	Warramunga Arr	82.14	122	P		**P**	10 15 26.1 -1.1
WR0				IAmb		IAmb	10 15 42.9
	comp=Z,12nm,1.4s						
AS31	Alice Springs	84.27	125	P		**P**	10 15 37.3 -0.7
ASAR	Alice Springs	84.27	125	P		**P**	10 15 37.5 -0.5
	comp=Z,3.9nm,0.7s,baz=310,slow=4.9,SNR=61						
	comp=Z,3.9nm,0.7s						
FORT	Forrest	85.70	134	P		**P**	10 15 44.8 0.0
PLCA	Paso Flores	149.93	250	PKPbc		**PKiKP**	10 22 55.2 -0.7
	comp=Z,2.3nm,1.0s,baz=316,slow=2.6,SNR=4.6						

JMA 23 10:03:28.0±0.1,35°.4N±0°.3×133°.8E±0°.2,h7km±1km, MV0.5/21,EASTERN TOTTORI PREF,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.06	195	*i* P	Pg	10 03 29.6	-0.1
JAD	Aida	0.56	151	*e*P	Pg	10 03 38.9	0.0
JAD				*e*S	Sg	10 03 46.3	+0.1
JNM	Ikuma	0.66	276	*e*S	Sg	10 03 48.7	-0.7
JKSM	Kasumi	0.69	77	*e*P	Pg	10 03 40.2	-1.2
JKSM	Kasumi	0.69	77	*e*P	Pg	10 03 40.2	-1.2

*DJA **23** 10:37:25.6±0.3,3°.5±4°.1×13°.7E±°,h102km±6km,M4.5/6, mb4.4/4,mB4.9/2,MLv4.5/6,Mw(mB)4.2/2*
*NEIC **23** 10:37:25.7±1.6,3°.6S±0°.1×137°.04E±0°.06,h68km±11km, mb4.4/14,Error ellipse: s-maj=18.5km s-min=6.8km az=198.0*
*IDC **23** 10:37:30.2±3.3,3°.61S×136°.66E,h114km±31km,mb3.8/6, mbtmp4.3/8,MS2.9/8,Error ellipse: s-maj=30.5km s-min=12.6km az=84.0*
ISC 23 10:37:26.7±0.6,3°.50S±0°.06×137°.03E±0°.04,h100km,n56, σ2°.74/58,mb4.2/8,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.80	334	P	Pn	10 37 53.7	-3.0
SRPI				S	Sn	10 38 15.0	-4.5
SMPI	Sarmi	2.25	48	P	Pn	10 38 00.2	-2.3
SMPI				S	Sn	10 38 24.5	-5.5
GENI	Genyem	3.26	74	P	Pn	10 38 14.9	-1.1
GENI				S	Sn	10 38 53.1	-0.9
RKPI	Ransiki, Papua	3.46	305	P	Pn	10 38 16.9	-1.8
RKPI				S	Sn	10 38 57.5	-1.4
MWPI	Manokwari, Pap	3.92	310	P	Pn	10 38 22.8	-2.1
MWPI				S	Sn	10 39 08.2	-1.8
FAKI	Fak Fak	4.81	277	Pn	Pn	10 38 35.6	-1.2
FAKI	Fak Fak	4.81	277	P	Pn	10 38 35.5	-1.3
FAKI				S	Sn	10 39 26.3	-5.1
SIJI	Sorong	6.32	294	P	Pn	10 38 55.9	-1.5
	12nm,0.3s,baz=135,slow=10.0,SNR=14						
SIJI				S	Sn	10 40 05.5	-2.7
	6.7nm,0.4s,baz=93,slow=23,SNR=1.2						
SIJI				LR	LR	10 41 26.9	
	comp=Z,31nm,19.4s,baz=342,slow=39						
SIJI	Sorong	6.32	294	P	Pn	10 38 55.3	-2.1
SIJI				S	Sn	10 40 07.1	-1.2
BNDI	Bandanaira	7.18	262	S	Sn	10 40 28.3	-0.8
KDU	Kakadu	10.18	206	P	Pn	10 39 45.0	-5.0
	85nm,0.5s						
MTN	Manton Dam	10.97	212	Pn	Pn	10 39 58.0	-2.6
MTN	Manton Dam	10.97	212	P	Pn	10 39 57.0	-3.6
	108nm,0.4s						
PMG	Port Moresby	11.65	121	LR	LR	10 45 40.8	
	comp=Z,60nm,18.7s,baz=84,slow=41						
COEN	Coen	12.04	150	Pn	Pn	10 40 12.1	-2.9
KNRA	Kununurra	14.58	213	Pn	Pn	10 40 45.2	-3.0
KNRA	Kununurra	14.58	213	P	Pn	10 40 45.7	-2.5
APSI	Ampana	15.58	279	P	P	10 41 04.7	+1.7
MTSU	Mount Surprise	16.21	154	P	Pn	10 41 05.9	-2.8
WB0	Warramunga Arr	16.38	189	P	Pn	10 41 06.2	-4.6
WB0				IAmb	IAmb	10 41 13.3	
	comp=Z,29nm,0.9s						
WR0	Warramunga Arr	16.54	188	P	Pn	10 41 09.8	-3.0
WR0				IAmb	IAmb	10 41 15.3	
	comp=Z,27nm,0.8s						
WRAB	Tennant Creek	16.55	189	P	Pn	10 41 07.8	-5.0
WRAB				IAmb	IAmb	10 41 15.4	
	comp=Z,26nm,0.8s						
WB2	Warramunga Arr	16.55	189		Pn	10 41 08.2	-4.7
WB2				IAmb	IAmb	10 41 15.5	
	comp=Z,24nm,0.8s						
WRA	Warramunga Arr	16.56	189	P	Pn	10 41 08.2	-4.7
	comp=Z,2.6nm,0.3s,baz=6.7,slow=13,SNR=20						
WRA				S	Sn	10 44 00.9	-16
	comp=Z,3.1nm,0.5s,baz=8.7,slow=22,SNR=3.0						
WRA				LR	LR	10 47 31.7	
	comp=Z,72nm,20.5s,baz=204,slow=37						
WRA	Warramunga Arr	16.56	189		Pn	10 41 06.8	-6.1
QIS	Mount Isa	17.14	172	P	Pn	10 41 16.0	-4.2
GUMO	Guam	18.67	24	LR	LR	10 49 05.8	
	comp=Z,12nm,21.2s,baz=178,slow=37						
CTA	Charters Tower	18.79	152	P	Pn	10 41 40.8	+0.8
	comp=Z,8.0nm,0.7s,baz=324,slow=11,SNR=16						
CTA				LR	LR	10 48 12.8	
	comp=Z,42nm,21.3s,baz=280,slow=34						
CTA	Charters Tower	18.79	152	P	Pn	10 41 39.4	-0.5
CTAO	Charters Tower	18.79	152		Pn	10 41 39.2	-0.7
CTAO				IAmb	IAmb	10 41 44.3	
	comp=Z,18nm,1.1s						
CTAO	Charters Tower	18.79	152	P	Pn	10 41 39.5	-0.5
AS31	Alice Springs	20.28	188		Pn	10 41 56.1	-1.3
ASAR	Alice Springs	20.28	188	P	Pn	10 41 56.2	-1.2
	comp=Z,59nm,0.7s,baz=15,slow=10,SNR=635						
ASAR				S	**S**	**10 45 34.4**	**-2.2**
	comp=Z,2.0nm,0.8s,baz=11,slow=26,SNR=4.2						
ASAR				LR	LR	10 50 30.7	
	comp=Z,57nm,20.2s,baz=28,slow=39						
	comp=Z,59nm,0.7s						
ASAR	Alice Springs	20.28	188	P	Pn	10 41 56.4	-1.0
WRKA	Warakurna	23.01	201	P	**P**	10 42 23.0	-0.2
OOD	Oodnadatta	24.20	183	P	**P**	10 42 35.3	+1.3
MBWA	Marble Bar	24.32	222	P	**P**	10 42 37.1	+1.9
MBWA				IAmb	IAmb	10 43 03.9	
	comp=Z,14nm,1.1s						
MBWA	Marble Bar	24.32	222	P	**P**	10 42 38.1	+2.9
INKA	Innaminka	24.37	172	P	**P**	10 42 38.2	+2.7
PSA00	Pilbara Seismi	24.53	221	P	**P**	10 42 38.1	+1.0
PSA00				IAmb	IAmb	10 42 58.3	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	24.53	221	P	**P**	10 42 39.9	+2.8
MULG	Mulgathing	26.79	186	P	**P**	10 42 58.5	+1.1
LCRK	Leigh Creek	26.83	178	P	**P**	10 42 58.4	+0.6
FORT	Forrest	28.43	196	P	**P**	10 43 12.2	+0.1
STKA	Stephens Creek	28.56	172	P	**P**	10 43 15.9	+2.7
	comp=Z,0.9nm,0.5s,baz=319,slow=11,SNR=3.1						
STKA				LR	LR	10 54 34.6	
	comp=Z,73nm,19.0s,baz=25,slow=36						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	28.56	172	P	**P**	10 43 13.5	+0.3
GIRL	Giralia	29.15	227	P	**P**	10 43 20.4	+1.8
USRK	Ussuriysk Ar.	47.70	355	P	**P**	10 45 55.8	+2.6
	comp=Z,2.6nm,0.5s,baz=187,slow=8.3,SNR=9.1						
	comp=Z,2.6nm,0.5s						
USRK	Ussuriysk Ar.	47.70	355	P	**P**	10 45 55.4	+2.3
TUWZ	Tuamarina	50.20	144	P	**P**	10 46 13.7	+1.3
KLR	Kul'dur	52.71	356	LR	LR	11 07 40.1	
	comp=Z,15nm,19.5s,baz=280,slow=34						
MKAR	Makanchi Array	69.39	323	P	**P**	10 48 25.7	+1.7
	comp=Z,0.5nm,0.9s,baz=115,slow=9.7,SNR=2.8						
	comp=Z,0.5nm,0.9s						
VNDA	Vanda	75.16	175	P	**P**	10 48 59.7	+2.1
	comp=Z,1.3nm,0.9s,baz=327,slow=7.6,SNR=11						
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	75.16	175	P	**P**	10 48 59.4	+1.8
QSPA	South Pole Qui	86.46	180	P	**P**	10 49 59.4	+1.3
QSPA				IAmb	IAmb	10 50 01.1	
	comp=Z,7.4nm,1.5s						
ILAR	Eielson Array	87.24	25	P	**P**	10 50 03.6	+1.9
	comp=Z,1.7nm,0.8s,baz=263,slow=4.7,SNR=13						
	comp=Z,1.7nm,0.8s						

*IDC **23** 10:53:15.8±1.6,39°.68N×20°.88E,h0km,mb3.6/4, mbtmp3.7/4,Error ellipse: s-maj=49.6km s-min=27.1km az=116.0*
*ATH **23** 10:53:18.7,39°.76N×20°.75E,h17km±1km,ML3.1/13,Error ellipse: s-maj=1.5km s-min=0.8km az=314.0*
*TIR **23** 10:53:18.4,39°.76N×20°.73E,h4km±4km,Md3.1,Ml3.3*
*THE **23** 10:53:19.3,39°.77N×20°.75E,h12km,ML3.1/10,Error ellipse: s-maj=1.0km s-min=0.5km az=326.0*
*ROM **23** 10:53:19.6±0.2,40°.02N±0°.02×20°.876E±0°.009, h36km,ML3.4/24,Error ellipse: s-maj=1.8km s-min=0.8km az=6.0*
*BEO **23** 10:53:20.0±0.7,39°.70N×20°.75E,h22km±4km,ML3.0/8*
ISC 23 10:53:18.7±0.8,39°.73N±0°.02×20.71E±0°.02,h18km±5km, n140,σ1°.33/195,mb3.6/4,22C-17D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.13	123	P	Pg	10 53 22.3	-0.4
JAN				S	Sg	10 53 25.7	+0.2
	26μm,0.4s						
JAN	Janina	0.13	123	P	Pg	10 53 22.3	-0.4
JAN				S	Sg	10 53 25.5	0.0
JAN				AML	AML	10 53 26.3	
	comp=N,35524μm,0.3s						
JAN				AML	AML	10 53 26.4	
	comp=E,67568μm,0.3s						
IGT	Igoumenitsa	0.35	236	P	Pb	10 53 26.7	+0.3
IGT				S	Sb	10 53 33.1	+1.4
	comp=E,4μm,0.3s						
IGT	Igoumenitsa	0.35	236	P	Pb	10 53 26.5	+0.1
	baz=234						
IGT				S	Sb	10 53 34.2	+2.5
	baz=234						
IGT	Igoumenitsa	0.35	236	P	Pb	10 53 26.6	+0.1
IGT				S	Sb	10 53 33.3	+1.7
IGT				AML	AML	10 53 35.5	
	comp=N,9229μm,0.3s						
IGT				AML	AML	10 53 37.5	
	comp=E,9216μm,0.6s						
LSK	Leskovik	0.43	349	P	Pg	10 53 27.3	-0.3
LSK				S	Sg	10 53 33.1	-0.5
	comp=E,6μm,0.5s						
LSK	Leskovik	0.43	349	P	Pg	10 53 27.5	-0.1
	baz=346						
LSK				S	Sg	10 53 33.8	+0.2
	baz=346						
LSK				AMP			
	comp=N,20nm,0.5s,baz=346						
KPRO	Kipourio	0.55	65	P	Pb	10 53 29.1	-0.7
KPRO				S	Sb	10 53 37.1	-0.3
	comp=N,4μm,0.5s						
KPRO	Kipourio	0.55	65	P	Pb	10 53 29.2	-0.7
KPRO				S	Sb	10 53 36.9	-0.5
KPRO				AML	AML	10 53 39.1	
	comp=E,8839μm,0.5s						
KPRO				AML	AML	10 53 39.1	
	comp=N,6800μm,0.5s						
SRN	Sarande	0.57	286	P	Pg	10 53 30.2	+0.2
SRN				S	Sb	10 53 39.5	+1.7
	comp=N,2μm,0.3s						
SRN	Sarande	0.57	286	P	Pg	10 53 29.7	-0.3
	baz=282						
SRN				S	Sb	10 53 39.4	+1.7
	baz=282						
KASA	Kassiopi	0.60	272	P	Pg	10 53 30.6	0.0
KASA				S	Sb	10 53 39.8	+1.2
KASA				AML	AML	10 53 43.8	
	comp=N,3779μm,0.4s						
KASA				AML	AML	10 53 44.2	
	comp=E,4054μm,0.3s						
KEK	Kerkira	0.70	269	P	Pg	10 53 32.4	-0.1
KEK				S	Sb	10 53 44.4	+2.7
	comp=E,2μm,0.3s						
KEK	Kerkira	0.70	269	P	Pg	10 53 32.1	-0.4
KEK				S	Sb	10 53 43.7	+2.0
KEK				AML	AML	10 53 47.8	
	comp=N,2628μm,0.3s						
KEK				AML	AML	10 53 49.0	
	comp=E,3497μm,0.3s						
NEST	Nestorio	0.73	21	P	Pg	10 53 32.6	-0.5
NEST	Nestorio	0.73	21	P	Pg	10 53 32.6	-0.5
NEST				AML	AML	10 53 49.4	
	comp=N,3106μm,0.6s						
NEST				AML	AML	10 53 53.4	
	comp=E,1722μm,0.7s						
KBN	Korca	0.90	4	P	Pg	10 53 35.6	-0.6
KBN	Korca	0.90	4	P	Pg	10 53 35.4	-0.8
	baz=2.0						
KBN				S	Sn	10 53 50.1	+1.1
	baz=2.0						
KBN				AMP			
	comp=N,3.2nm,0.6s,baz=2.0						
TSLK	Tsoukalades, L	0.90	183	P	Pn	10 53 36.7	+0.2
TSLK				S	Sn	10 53 51.5	+2.5
	comp=N,1μm,0.5s						
TSLK	Tsoukalades, L	0.90	183	P	Pn	10 53 36.4	-0.1
TSLK				AML	AML	10 53 55.0	
	comp=N,3062μm,0.5s						
TSLK				AML	AML	10 53 55.6	
	comp=E,2300μm,0.3s						
KZN	Kozani	1.00	54	P	Pg	10 53 36.9	-1.2
KZN	Kozani	1.00	54	P	Pg	10 53 36.8	-1.4
KZN				AML	AML	10 53 56.0	
	comp=E,1871μm,0.5s						
KZN				AML	AML	10 53 58.7	
	comp=N,2093μm,0.7s						
NYDR	Nydri-Lefkada	1.01	181	P	Pn	10 53 38.7	+0.7
NYDR				S	Sn	10 53 54.1	+2.4
	comp=N,888nm,0.5s						
THL	Klokotos Trika	1.02	99	P	Pg	10 53 37.1	-1.4
THL				S	Sn	10 53 52.3	+0.4
	comp=N,510nm,0.6s						
THL	Klokotos Trika	1.02	99	P	Pg	10 53 36.8	-1.7
THL				AML	AML	10 53 54.4	
	comp=N,1181μm,0.6s						
THL				AML	AML	10 53 54.8	
	comp=E,858μm,0.6s						
DRAG	Dragano-Lefkad	1.05	186	P	Pn	10 53 39.1	+0.6
DRAG				S	Sn	10 53 55.5	+2.9
EVGI	Lefkada island	1.11	182	P	Pn	10 53 40.6	+1.3
EVGI	Lefkada island	1.11	182	P	Pn	10 53 40.3	+1.0
EVR	Evrytania	1.18	133	P	Pn	10 53 40.6	+0.3
EVR	Evrytania	1.18	133	P	Pn	10 53 40.5	+0.2
EVR				AML	AML	10 54 03.6	
	comp=N,792μm,0.9s						
EVR				AML	AML	10 54 05.7	
	comp=E,1167μm,0.6s						
VLO	Vlora	1.19	309	P	Pn	10 53 39.6	-0.8
KTI	Kastanea	1.27	58	P	Pn	10 53 41.7	+0.1
FSK	Fiskardo	1.27	185	P	Pg	10 53 42.8	-0.5
FSK				S	Sn	10 54 00.7	+2.6
	comp=E,595nm,0.3s						
FSK	Fiskardo	1.27	185	P	Pg	10 53 42.6	-0.7
FSK				AML	AML	10 54 03.8	
	comp=E,1569μm,0.2s						
FSK				AML	AML	10 54 06.2	
	comp=N,830μm,0.4s						
PVO	Paravola	1.28	150	P	Pg	10 53 44.0	+0.7
MAKR	Makrakomi, Fth	1.31	122	P	Pg	10 53 43.1	-0.9
MAKR	Makrakomi, Fth	1.31	122	P	Pg	10 53 43.2	-0.9
MAKR				S	Sg	10 54 01.3	+0.1
MAKR				AML	AML	10 54 09.7	
	comp=N,2728μm,0.5s						
MAKR				AML	AML	10 54 10.2	
	comp=E,3165μm,0.5s						
OHR	Ohrid	1.38	3	*e*Pg	Pg	10 53 45.3	-0.2
OHR				*e*Sg	Sg	10 54 05.2	+1.7
OHR	Ohrid	1.38	3	*i* Pn	Pg	10 53 45.2	-0.2
OHR				*i* Sn	Sg	10 54 05.4	+1.9
LIT	Litokhoron	1.42	74	P	Pn	10 53 43.7	+0.1
LIT	Litokhoron	1.42	74	P	Pn	10 53 43.9	+0.3
KEF4	Livadi, Kephal	1.48	189	P	Pg	10 53 46.2	-1.1
KEF4	Livadi, Kephal	1.48	189	P	Pg	10 53 47.0	-0.3
KEF3	Kipouria, Keph	1.55	191	P	Pg	10 53 48.0	-0.5
VLS	Valsamata	1.55	184	P	Pb	10 53 47.1	+0.2
VLS	Valsamata	1.55	184	P	Pb	10 53 47.1	+0.2
EFP	Efpalio	1.60	144	P	Pg	10 53 49.1	-0.3
EFP				AML	AML	10 54 23.4	
	comp=E,858μm,0.5s						
EFP				AML	AML	10 54 24.7	
	comp=N,728μm,0.6s						
PSDA	Pessada-Kefalo	1.61	184	P	Pg	10 53 49.4	-0.4
TIR	Tirane	1.74	339	⇓P	Pn	10 53 49.4	+1.4
TIR				⇑S	Sg	10 54 15.3	+0.5
TIR	Tirane	1.74	339	*e*Pn	Pb	10 53 50.4	+0.3
TIR				*e*Sn	Sn	10 54 11.0	+1.2
TIR	Tirane	1.74	339	P	Pn	10 53 49.4	+1.4
	baz=338						
TIR				S	Sg	10 54 14.7	-0.2
	baz=338						
SCTE	Santa Cesarea	1.76	282	⇑P	Pn	10 53 48.9	+0.7
SCTE				S	Sn	10 54 11.6	+1.5
SCTE				AML	AML		
	comp=N,527μm,1.0s						
SCTE				AML	AML		
	comp=E,593μm,0.8s						
GRG	Griva	1.78	46	P	Pn	10 53 48.9	+0.3
GRG	Griva	1.78	46	P	Pn	10 53 49.2	+0.6
LAKA	Lakka	1.78	146	P	Pg	10 53 51.6	-1.4
AXAR	Agios Charalam	1.79	122	P	Pg	10 53 51.5	-1.6
DRO	Drossia	1.94	156	P	Pb	10 53 53.3	-0.2
XOR	Xorichti	1.95	100	P	Pb	10 53 53.1	-0.7
PHP	Peshkopia	1.97	354	P	Pb	10 53 54.0	0.0
	baz=354						
PHP				S	Sn	10 54 17.6	+2.2
	baz=354						
NEO	Neokhori	1.99	101	P	Pb	10 53 54.2	-0.2
HORT	Hortiatis	2.03	64	P	Pn	10 53 52.8	+0.7
VAY	Valandovo	2.13	41	*e*Pn	Pn	10 53 54.3	+0.9
VAY				*e*Sn	Sn	10 54 21.0	+1.6
VAY	Valandovo	2.13	41	*i* Pn	Pn	10 53 54.7	+1.3
VAY				*i* Sn	Sb	10 54 21.8	-1.1
STIP	Stip	2.26	29	*i* Pn	Pb	10 53 58.6	-0.4
SKO	Skopje	2.31	14	*e*Pn	Pn	10 53 57.0	+1.1
SKO				*e*Sn	Sn	10 54 25.0	+1.2
SKO	Skopje	2.31	14	*i* Pn	Pb	10 54 00.3	+0.5
MESG	Mesagne	2.35	292	⇑P	Pn	10 53 56.9	+0.4
MESG				S	Sn	10 54 23.5	-1.4
MESG				AML	AML		
	comp=E,369μm,1.5s						
MESG				AML	AML		
	comp=N,378μm,0.3s						
MESG				AML	AML		
	comp=E,369μm,0.5s						
VIL2	Platees	2.50	126	P	Pb	10 54 01.7	-1.4
SRS	Serrai	2.60	57	*e*Pn	Pn	10 54 00.3	+0.4
SRS				*e*Sn	Sn	10 54 31.6	+0.6
PDG	Podgorica	2.92	338	⇑P	Pn	10 54 05.1	+0.9
NOCI	Noci	2.98	292	⇓P	Pn	10 54 05.3	+0.2
NOCI				S	Sn	10 54 39.0	-1.5
NOCI				AML	AML		
	comp=E,234μm,0.3s						
NOCI				AML	AML		
	comp=N,270μm,0.4s						
LTRZ	Laterza	3.11	288	⇓P	Pn	10 54 07.0	+0.2
TIP	Timpagrande	3.11	261	⇑P	Pn	10 54 05.9	-1.0
TIP				⇓S	Sn	10 54 43.8	+0.3
BARS	Barje	3.20	15	*e*Pn	Pn	10 54 09.7	+1.7
BARS				*e*Sn	Sn	10 54 47.5	+1.8
MATE	Matera	3.20	288	⇑P	Pn	10 54 08.1	0.0
MATE	Matera	3.20	288	P	Pn	10 54 08.3	+0.2
MATE				AML	AML		
	comp=E,130μm,0.4s						
MATE				AML	AML		
	comp=N,126μm,0.3s						
MATE				AML	AML		
	comp=N,126μm,1.7s						
AMUR	Altamura	3.35	292	P	Pn

SCHR				S	Sn	10 54 55.0	-0.5
SCHR				AML	AML		
	comp=N,49μm,0.3s						
SCHR				AML	AML		
	comp=E,46μm,0.9s						
CET2	**Cetraro**	**3.68**	**268**	⇓P	**Pn**	**10 54 16.9**	**+2.2**
CET2				S	**Sn**	**10 54 58.5**	**+0.9**
CET2				AML	AML		
	comp=N,204μm,0.6s						
CET2				AML	AML		
	comp=E,234μm,0.4s						
MRVN	**Minervino Murg**	**3.69**	**293**	P	**Pn**	**10 54 15.2**	**+0.3**
MRVN				S	**Sn**	**10 54 55.9**	**-2.1**
MRVN				AML	AML		
	comp=E,58μm,0.4s						
MRVN				AML	AML		
	comp=N,59μm,0.5s						
AG11	**Viggiano (PZ)**	**3.70**	**281**	⇑P	**Pn**	**10 54 16.8**	**+1.8**
AG11				S	**Sn**	**10 54 57.3**	**-1.0**
SIRI	**Monte Sirino -**	**3.75**	**279**	P	**Pn**	**10 54 17.4**	**+1.7**
SIRI				AML	AML		
	comp=N,87μm,0.3s						
SIRI				AML	AML		
	comp=E,110μm,1.0s						
CUC	**Castrocucco**	**3.78**	**276**	P	**Pn**	**10 54 17.8**	**+1.8**
CUC				AML	AML		
	comp=E,61μm,0.5s						
CUC				AML	AML		
	comp=N,54μm,0.4s						
ACER	**Acerenza**	**3.80**	**288**	⇓P	**Pn**	**10 54 17.0**	**+0.7**
ACER				S	**Sn**	**10 54 58.8**	**-1.8**
ACER				AML	AML		
	comp=E,150μm,0.3s						
ACER				AML	AML		
	comp=N,158μm,0.4s						
MCEL	**Monticello**	**3.81**	**281**	P	**Pn**	**10 54 17.9**	**+1.2**
MCEL				S	**Sn**	**10 55 00.6**	**-0.4**
MCEL				AML	AML		
	comp=E,90μm,0.5s						
MCEL				AML	AML		
	comp=N,89μm,0.3s						
MCEL				AML	AML		
	comp=E,90μm,1.5s						
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn	**Pn**	**10 54 18.3**	**+1.6**
PALZ	**Palazzo San Ge**	**3.83**	**290**	⇑P	**Pn**	**10 54 17.5**	**+0.8**
PALZ				S	**Sn**	**10 54 59.3**	**-2.0**
PALZ				AML	AML		
	comp=E,164μm,1.0s						
PALZ				AML	AML		
	comp=N,167μm,0.9s						
PALZ				AML	AML		
	comp=E,164μm,1.0s						
MTSN	**Montesano sull**	**3.85**	**280**	P	**Pn**	**10 54 18.6**	**+1.5**
MTSN				AML	AML		
	comp=E,60μm,1.3s						
MTSN				AML	AML		
	comp=N,70μm,0.6s						
MTSN				AML	AML		
	comp=N,70μm,1.4s						
MTSN				AML	AML		
	comp=E,60μm,0.7s						
STON	**Ston**	**3.87**	**325**	P	**Pn**	**10 54 16.0**	**-1.3**
STON				AML	AML		
	comp=N,76μm,0.2s						
STON				AML	AML		
	comp=E,84μm,0.4s						
BOVS	**Bovan**	**3.98**	**10**	⇑P	**Pn**	**10 54 20.0**	**+1.2**
BOVS	**Bovan**	**3.98**	**10**	*e*Pn	**Pn**	**10 54 19.6**	**+0.9**
BOVS				*e*Sn	**Sn**	**10 55 05.2**	**+0.4**
MGR	**Morigerati**	**3.98**	**278**	P	**Pn**	**10 54 20.9**	**+2.0**
MGR				S	**Sn**	**10 55 05.1**	**0.0**
MGR				AML	AML		
	comp=E,60μm,1.5s						
MGR				AML	AML		
	comp=N,65μm,0.4s						
MGR				AML	AML		
	comp=E,60μm,0.5s						
CAPA	**Cerignola FG**	**4.00**	**293**	⇓P	**Pn**	**10 54 19.5**	**+0.5**
CAPA				S	**Sn**	**10 55 02.6**	**-2.8**
CAPA				AML	AML		
	comp=E,240μm,0.7s						
CAPA				AML	AML		
	comp=N,158μm,0.7s						
GMB	**Gambarie**	**4.11**	**249**	S	**Sb**	**10 55 18.0**	**-2.0**
GRUS	**Gruza**	**4.16**	**0**	*e*Pn	**Pn**	**10 54 22.5**	**+1.3**
BLKB	**Belogradchik**	**4.16**	**20**	⇓P	**Pn**	**10 54 23.0**	**+1.7**
CDRU	**Civita di Ruta**	**4.21**	**282**	P	**Pn**	**10 54 23.0**	**+0.9**
CDRU				AML	AML		
	comp=E,65μm,0.3s						
CDRU				AML	AML		
	comp=N,39μm,1.0s						
ZAGS	**Zajecar**	**4.24**	**15**	*e*Pn	**Pn**	**10 54 24.5**	**+2.2**
ZAGS				*e*Sn	**Sn**	**10 55 11.0**	**-0.3**
BBLS	**Lazići**	**4.25**	**347**	*e*Pn	**Pn**	**10 54 23.8**	**+1.2**
SGRT	**San Giovanni R**	**4.28**	**300**	⇑P	**Pn**	**10 54 23.5**	**+0.4**
SGRT				S	**Sn**	**10 55 09.2**	**-3.3**
SGRT				AML	AML		
	comp=E,147μm,0.6s						
SGRT				AML	AML		
	comp=N,169μm,0.3s						
SNAL	**S. Angelo Dei**	**4.37**	**288**	P	**Pn**	**10 54 24.9**	**+0.7**
SNAL				AML	AML		
	comp=E,76μm,1.2s						
SNAL				AML	AML		
	comp=E,76μm,0.8s						
SNAL				AML	AML		
	comp=N,81μm,1.0s						
DIVS	**Divibare**	**4.40**	**353**	*e*Pn	**Pn**	**10 54 25.6**	**+0.9**
DIVS				*e*Sn	**Sn**	**10 55 14.9**	**-0.5**
DIVS	**Divibare**	**4.40**	**353**	P	**Pn**	**10 54 25.6**	**+0.9**
DIVS				S	**Sn**	**10 55 15.0**	**-0.5**
DIVS				AML	AML		
	comp=N,30μm,0.4s						
DIVS				AML	AML		
	comp=E,20μm,1.1s						
TRUS	**Trudelj**	**4.50**	**357**	*e*Pn	**Pn**	**10 54 27.6**	**+1.7**
TREM	**Isole Tremiti**	**4.61**	**303**	P	**Pn**	**10 54 26.9**	**-0.5**
TREM				S	**Sn**	**10 55 16.7**	**-3.8**
BSSO	**Busso**	**5.00**	**293**	P	**Pn**	**10 54 35.2**	**+2.4**
TRIV	**Trivento**	**5.10**	**296**	⇑P	**Pn**	**10 54 35.7**	**+1.4**
HPAC	**Pachino**	**5.35**	**237**	P	**Pb**	**10 54 48.0**	**-3.6**
RNI2	**Rionero Sannit**	**5.36**	**294**	⇓P	**Pn**	**10 54 40.1**	**+2.3**
RNI2				AML	AML		
	comp=E,86μm,1.6s						
RNI2				AML	AML		
	comp=N,73μm,1.5s						
RNI2				AML	AML		
	comp=N,60μm,0.7s						
RNI2				AML	AML		
	comp=N,73μm,0.5s						
RNI2				AML	AML		
	comp=E,54μm,0.4s						
RNI2				AML	AML		
	comp=E,86μm,0.4s						
RNI2				AML	AML		
	comp=N,60μm,1.3s						
LPEL	**Lama dei Pelig**	**5.46**	**297**	⇑P	**Pn**	**10 54 40.1**	**+0.9**
LPEL				AML	AML		
	comp=E,72μm,0.1s						
LPEL				AML	AML		
	comp=N,47μm,0.1s						
FRGS	**Fruska Gora**	**5.47**	**353**	*e*Pn	**Pn**	**10 54 39.4**	**+0.1**
IDI	**Anoyia**	**5.54**	**142**	⇓P	**Pn**	**10 54 38.5**	**-1.7**
IDI				⇓S	**Sn**	**10 55 41.3**	**-2.2**
POFI	**Posta Fibreno**	**5.68**	**293**	P	**Pn**	**10 54 44.4**	**+2.2**
LIK	**San Giovanni I**	**5.72**	**290**	⇑P	**Pb**	**10 54 57.9**	**-0.1**
ALJA	**Alia**	**5.79**	**252**	⇑P	**Pg**	**10 55 05.5**	**-4.0**
T0110	**Collepietro**	**5.81**	**298**	⇓P	**Pn**	**10 54 45.3**	**+1.3**
T0110				AML	AML		
	comp=E,44μm,0.5s						
T0110				AML	AML		
	comp=E,44μm,1.5s						
T0110				AML	AML		
	comp=N,47μm,1.5s						
GZR	**Gura Zlata**	**5.86**	**14**	⇑P	**Pn**	**10 54 46.0**	**+1.3**
BZS	**Buzias**	**5.92**	**6**	⇑P	**Pn**	**10 54 46.7**	**+1.2**
SMA1	**SAN MARTINO**	**6.27**	**300**	⇓P	**Pn**	**10 54 51.6**	**+1.2**
MLR	**Muntele Rosu**	**6.93**	**32**	⇑P	**Pn**	**10 55 00.9**	**+1.4**
BOJS	**Bojanci**	**7.04**	**327**	⇓P	**Pn**	**10 55 00.1**	**-0.6**
ATFO	**Monte Foce - G**	**7.10**	**303**	⇑P	**Pn**	**10 55 02.5**	**+0.8**
FSSB	**Fossombrone**	**7.13**	**306**	⇑P	**Pn**	**10 55 03.2**	**+1.1**
PIEI	**Pieia**	**7.21**	**305**	P	**Pn**	**10 55 02.4**	**-0.8**
PLOR	**Plostina**	**7.52**	**34**	⇑P	**Pn**	**10 55 09.4**	**+2.0**
VRI	**Vrincioaia**	**7.56**	**34**	⇓P	**Pn**	**10 55 09.0**	**+1.0**
MNTV	**Mantova**	**9.12**	**310**	⇑P	**Pn**	**10 55 31.6**	**+2.4**
ABTA	**Abfaltersbach**	**9.22**	**322**	*i* Pn	**Pn**	**10 55 31.1**	**+0.3**
	comp=N,0.2nm,0.2s						
ROVR	**Rover Verones**	**9.23**	**313**	⇓P	**Pn**	**10 55 30.2**	**-0.8**
DOSS	**Dosso del Somm**	**9.31**	**314**	⇓P	**Pn**	**10 55 31.8**	**-0.3**
FINES	**FINESS Array B**	**21.99**	**7**	P	**P**	**10 58 11.7**	**+0.2**
	comp=N,3.0nm,0.9s,baz=182,slow=9.3,SNR=3.9						
	comp=N,3.0nm,0.9s						
NOA	**NORSAR Array B**	**22.13**	**348**	P	**P**	**10 58 13.6**	**+0.5**
	comp=N,1.2nm,0.8s,baz=162,slow=11,SNR=2.1						
	comp=N,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.34**	**218**	P	**P**	**10 59 38.4**	**+0.3**
	comp=N,0.8nm,0.6s,baz=33,slow=8.6,SNR=4.8						
	comp=N,0.8nm,0.6s						
MKAR	**Makanchi Array**	**44.38**	**60**	P	**P**	**11 01 27.1**	**-0.8**
	comp=N,0.4nm,0.5s,baz=274,slow=7.0,SNR=5.5						
	comp=N,0.4nm,0.5s						

*IDC **23** 11:03:13.9±0.6, 11°.92S×89°.49E, h0km, mb4.2/19, mbtmp4.2/20, ML4.1/1, MS3.5/13, Error ellipse: s-maj=16.4km s-min=15.0km az=50.0*
*NEIC **23** 11:03:15.9±2.3, 11°.98S±0°.09×89°.58E±0°.08, h10km±1km, mb4.6/22, Error ellipse: s-maj=19.2km s-min=3.7km az=220.0*
ISC 23 11:03:15.6±0.5, 11°.89S±0°.08×89°.53E±0°.06, h10km, n85, σ1ᵍ91/74, mb4.5/33, MS3.5/11, 1C-1D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**7.15**	**93**	Pn	**Pn**	**11 04 57.8**	**-2.5**
PPSI	**Pulau Pagai**	**13.78**	**50**	P	**Pn**	**11 06 32.6**	**+1.4**
	8μm813nm,0.9s						
SISI	**Saibi**	**14.14**	**43**	P	**Pn**	**11 06 37.1**	**+1.0**
	6μm348nm,0.5s						
PBSI	**Pulau Batu**	**14.62**	**37**	P	**Pn**	**11 06 43.4**	**+0.8**
	322nm,0.7s						
UBSI	**University, Be**	**14.97**	**58**	P	**Pn**	**11 06 49.0**	**+1.5**
	318nm,0.8s						
MNAI	**Manna**	**15.24**	**62**	Pn	**Pn**	**11 06 51.5**	**+0.4**
MNAI	**Manna**	**15.24**	**62**	P	**Pn**	**11 06 53.1**	**+2.0**
	298nm,1.6s						
MASI	**Maura Aman, Be**	**15.29**	**56**	P	**Pn**	**11 06 53.1**	**+1.3**
	112nm,1.0s						
KSI	**Kapahiang**	**15.30**	**59**	P	**Pn**	**11 06 54.4**	**+2.5**
	24μm179nm,0.8s						
GSI	**Gunungsitoli**	**15.35**	**32**		**Pn**	**11 06 52.2**	**-0.3**
GSI				IAmb	IAmb	11 07 10.2	
	comp=Z,26nm,0.7s						
GSI	**Gunungsitoli**	**15.35**	**32**	P	**Pn**	**11 06 52.0**	**-0.5**
	comp=Z,45nm,0.9s						
LWLI	**Liwa**	**15.90**	**66**	P	**P**	**11 07 02.2**	**-1.3**
	comp=Z,165nm,0.6s						
SDSI	**Sungai Dareh**	**16.05**	**48**	P	**P**	**11 07 04.3**	**-0.8**
	comp=Z,2μmcomp=Z,184nm,0.9s						
MNSI	**Mandailing Nat**	**16.07**	**39**	P	**Pn**	**11 07 03.6**	**+1.7**
	comp=Z,4μmcomp=Z,77nm,0.5s						
BKNI	**Bangkinang**	**16.67**	**44**	P	**P**	**11 07 12.0**	**+0.1**
	comp=Z,2μmcomp=Z,219nm,0.7s						
RPSI	**Rantau Prapat**	**17.23**	**33**	P	**P**	**11 07 18.8**	**+0.6**
H08S2	**Diego Garcia H**	**17.31**	**283**	P	**P**	**11 07 20.1**	**+1.4**
	baz=83,slow=11,SNR=14						
H08S2				T	T	11 25 02.1	
	baz=105,slow=73,SNR=232						
PSI	**Prapat**	**17.32**	**33**	P	**Pn**	**11 07 18.9**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=199,slow=9.5,SNR=5.9						
PSI				LR	LR	11 12 32.6	
	comp=Z,222nm,19.6s,baz=226,slow=32						
	comp=Z,16nm,1.1s						
PSI	**Prapat**	**17.32**	**33**	P	**P**	**11 07 20.2**	**+0.9**
	comp=Z,7.5nm,1.0s						
PSI				P	**Pn**	**11 07 18.1**	**+0.2**
	comp=Z,7.5nm,1.0s						
H08S3	**Diego Garcia H**	**17.33**	**283**	P	**P**	**11 07 20.9**	**+2.0**
	baz=83,slow=11,SNR=14						
H08S3				T	T	11 25 05.0	
	baz=105,slow=73,SNR=238						
H08S1	**Diego Carcia H**	**17.33**	**283**	P	**P**	**11 07 22.0**	**+3.0**
	baz=83,slow=11,SNR=6.1						
H08S1				T	T	11 25 07.0	
	baz=105,slow=73,SNR=135						
KCSI	**Kotacane, Aceh**	**17.36**	**29**	P	**P**	**11 07 20.8**	**+1.2**
	comp=Z,30nm,1.7s						
DGAR	**Diego Garcia**	**17.41**	**283**	P	**P**	**11 07 22.2**	**+2.1**
CNJI	**Cibinong**	**17.93**	**77**	P	**P**	**11 07 32.6**	**+6.7**
LEM	**Lembang**	**18.53**	**76**	P	**Pn**	**11 07 36.4**	**+3.5**
	comp=Z,12nm,0.6s,baz=308,slow=23,SNR=1.4						
LEM				S	**Sn**	**11 10 55.7**	**-4.6**
	comp=Z,14nm,0.4s,baz=198,slow=20,SNR=2.1						
LEM				LR	LR	11 13 25.5	
	comp=Z,83nm,20.2s,baz=216,slow=33						
DSRI	**Dabo**	**18.75**	**54**	P	**Pn**	**11 07 38.5**	**+3.2**
	comp=Z,2μmcomp=Z,24nm,0.8s						
MYKOM	**Kota Tinggi**	**19.67**	**47**	P	**Pn**	**11 07 49.2**	**+2.8**
KAAM	**Kaadhehdhoo**	**20.52**	**306**	P	Pn	11 07 56.6	+0.2
PALK	**Pallekele**	**20.96**	**335**	P	**P**	**11 08 00.5**	**+1.4**
	comp=Z,22nm,0.9s,baz=274,slow=13,SNR=4.4						
PALK				S	**S**	**11 11 45.5**	**-7.3**
	comp=Z,5.4nm,0.5s,baz=315,slow=13,SNR=1.8						
PALK				LR	LR	11 14 59.2	
	comp=Z,130nm,18.5s,baz=255,slow=34						
	comp=Z,22nm,0.9s						
PCHI	**Peechi**	**25.84**	**329**	*e*P	**P**	**11 08 49.9**	**+2.4**
CMAR	**Chiang Mai Arr**	**31.55**	**17**	P	**P**	**11 09 38.9**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=203,slow=8.4,SNR=4.4						
CMAR				LR	LR	11 22 47.3	
	comp=Z,49nm,18.2s,baz=230,slow=37						
	comp=Z,0.8nm,0.4s						
H01W3	**Cape Leeuwin H**	**31.98**	**140**	T	T	11 43 07.5	
	baz=310,slow=74,SNR=5.6						
H01W2	**Cape Leeuwin H**	**31.99**	**140**	T	T	11 43 12.0	
	baz=310,slow=74,SNR=6.1						
H01W1	**Cape Leeuwin H**	**32.00**	**140**	T	T	11 43 10.2	
	baz=310,slow=74,SNR=6.2						
BRDH	**Bariadhala**	**34.41**	**3**	LR	LR	11 22 51.5	
	comp=Z,90nm,18.2s,baz=234,slow=34						
SHL	**Shillong**	**37.30**	**4**	P	**P**	**11 10 28.7**	**+0.5**
SHL				IAmb	IAmb	11 11 04.7	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**38.25**	**100**	P	**P**	**11 10 35.9**	**-0.4**
KNRA				IAmb	IAmb	11 10 53.4	
	comp=Z,26nm,1.2s						
OPO	**Ambohidratompo**	**41.32**	**255**	P	**P**	**11 11 02.2**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=71,slow=4.7,SNR=5.6						
	comp=Z,6.3nm,0.8s						
ASAR	**Alice Springs**	**43.68**	**112**	P	**P**	**11 11 21.0**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=282,slow=7.6,SNR=40						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**43.68**	**112**	P	**P**	**11 11 20.6**	**-0.4**
AS31	**Alice Springs**	**43.68**	**112**	P	**P**	**11 11 20.8**	**-0.3**
WRA	**Warramunga Arr**	**43.72**	**106**	P	**P**	**11 11 21.4**	**0.0**
	comp=Z,1.2nm,0.7s,baz=277,slow=9.8,SNR=14						
WRA				LR	LR	11 30 49.7	
	comp=Z,26nm,18.4s,baz=356,slow=38						
	comp=Z,1.2nm,0.7s						
WRA	**Warramunga Arr**	**43.72**	**106**	P	**P**	**11 11 20.3**	**-1.1**
WB2	**Warramunga Arr**	**43.73**	**106**	P	**P**	**11 11 21.4**	**-0.1**
WB2				IAmb	IAmb	11 11 57.6	
	comp=Z,9.5nm,1.2s						
WB0	**Warramunga Arr**	**43.76**	**106**	P	**P**	**11 11 21.1**	**-0.6**
WR0	**Warramunga Arr**	**43.91**	**106**	P	**P**	**11 11 22.3**	**-0.6**
WR0				IAmb	IAmb	11 11 38.1	
	comp=Z,9.4nm,1.2s						
BBOO	**Buckleboo**	**47.35**	**124**	P	**P**	**11 11 48.6**	**-1.4**
BBOO				IAmb	IAmb	11 12 03.0	
	comp=Z,14nm,1.4s						
XAN	**Xi'an**	**49.26**	**21**	⇓*i*P	P	11 12 09.9	+5.3
XAN				pP	pwP	11 12 16.4	+3.3
XAN				pmax	pmax		
	comp=Z,11nm,0.5s						
STKA	**Stephens Creek**	**51.72**	**121**	P	**P**	**11 12 22.9**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=280,slow=6.1,SNR=4.1						
STKA				LR	LR	11 34 43.8	
	comp=Z,64nm,18.1s,baz=210,slow=36						
	comp=Z,1.7nm,0.8s						
STKA	**Stephens Creek**	**51.72**	**121**	P	**P**	**11 12 22.1**	**-1.3**
GTA	**Gaotai**	**51.92**	**10**	*e*P	P	11 12 30.9	+6.1
GTA				pP	pwP	11 12 35.8	+2.5
GTA				sP	sP	11 12 38.9	+12
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	**Nanjing**	**51.93**	**32**	*e*P	P	11 12 36.9	+12
KSH	**Kashi**	**52.68**	**347**	P	**P**	**11 12 28.5**	**-1.9**
KSH				sP	pwP	11 12 38.0	-0.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA	**Tai'an**	**54.47**	**27**	P	P	11 12 49.0	+5.6
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	**Ala-Archa**	**55.98**	**347**	LR	LR	11 37 48.7	
	comp=Z,24nm,18.4s,baz=250,slow=37						
KKAR	**Karatay Array**	**57.43**	**344**	P	**P**	**11 13 04.2**	**-0.3**
GEYT	**Alibeck**	**57.64**	**331**	P	**P**	**11 13 06.0**	**-0.2**
	comp=Z,6.8nm,0.7s,baz=157,slow=7.8,SNR=14						
	comp=Z,6.8nm,0.7s						
GEYT	**Alibeck**	**57.64**	**331**	P	**P**	**11 13 05.6**	**-0.5**
GEYT				IAmb	IAmb	11 13 07.1	
	comp=Z,7.1nm,0.8s						
MKAR	**Makanchi Array**	**58.77**	**354**	P	**P**	**11 13 13.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=168,slow=8.0,SNR=4.2						
MKAR				PcP	**PcP**	**11 13 59.9**	**-3.6**
	comp=Z,0.5nm,0.6s,baz=184,slow=3.9,SNR=3.7						
	comp=Z,0.2nm,0.4s						
MAKZ	**Makanchi**	**58.82**	**354**	P	**P**	**11 13 14.2**	**0.0**
MAKZ				IAmb	IAmb	11 13 14.6	
	comp=Z,4.4nm,1.1s						
MATP	**Matopo**	**58.96**	**253**	P	**P**	**11 13 15.7**	**-0.2**
	comp=Z,5.3nm,0.8s,baz=94,slow=6.3,SNR=9.6						
	comp=Z,5.3nm,0.8s						
LSZ	**Lusaka**	**59.56**	**259**	P	**P**	**11 13 20.3**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=101,slow=6.1,SNR=7.9						
	comp=Z,1.8nm,0.3s						
KSRS	**Korea Array**	**60.88**	**34**	P	**P**	**11 13 30.1**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=230,slow=8.1,SNR=2.9						
	comp=Z,2.2nm,0.8s						
LBTB	**Lobatse**	**61.56**	**248**	LR	LR	11 35 51.5	
	comp=Z,40nm,18.6s,baz=104,slow=32						
BOSA	**Boshof**	**61.90**	**244**	P	**P**	**11 13 35.0**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=87,slow=8.2,SNR=5.8						
BOSA				LR	LR	11 35 28.7	
	comp=Z,65nm,19.3s,baz=26,slow=31						
	comp=Z,2.4nm,0.7s						
BOSA	**Boshof**	**61.90**	**244**	P	**P**	**11 13 35.0**	**-0.9**
KURBB	**Kurchatov Arra**	**62.98**	**352**	P	**P**	**11 13 42.1**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=182,slow=6.5,SNR=25						
	comp=Z,2.5nm,0.8s						
KURK	**Kurchatov**	**63.06**	**352**	P	**P**	**11 13 42.6**	**-0.3**
KURK				IAmb	IAmb	11 13 43.6	
	comp=Z,6.5nm,1.0s						
ZALV	**Zalesovo Beam**	**65.70**	**357**	P	**P**	**11 13 59.7**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=198,slow=3.8,SNR=11						
	comp=Z,2.3nm,0.6s						
SUR	**Sutherland**	**65.82**	**240**	LR	LR	11 37 17.6	
	comp=Z,29nm,20.2s,baz=116,slow=31						
ABKAR	**Akbulak array**	**66.23**	**339**	P	**P**	**11 14 03.5**	**-0.2**
MJAR	**Matsushiro Arr**	**66.47**	**41**	P	**P**	**11 14 09.3**	**+3.7**
	comp=Z,1.9nm,0.7s,baz=227,slow=7.7,SNR=5.0						
BVAR	**Borovoye Array**	**66.71**	**348**	P	**P**	**11 14 05.9**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=160,slow=9.1,SNR=4.7						
	comp=Z,0.7nm,0.6s						
BNX	**BinXian**	**66.73**	**28**	⇑P	P	11 14 12.8	+5.8
BNX				pmax	pmax		
	comp=Z,15nm,1.0s						
BNX				pmax	pmax		
	comp=Z,200nm,4.7s						
EIL	**Elat**	**66.87**	**310**	LR	LR	11 40 08.3	
	comp=Z,20nm,19.4s,baz=304,slow=33						
AKTO	**Aktyubinsk**	**67.90**	**339**	P	**P**	**11 14 13.8**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=158,slow=8.5,SNR=4.6						
	comp=Z,0.8nm,0.5s						
KBZ	**Khabaz**	**69.74**	**326**	P	**P**	**11 14 26.0**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=130,slow=3.6,SNR=6.3						
	comp=Z,4.9nm,0.9s						
BRTR	**Keskin Array B**	**72.96**	**318**	P	**P**	**11 14 45.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=140,slow=6.0,SNR=5.2						
BRTR				LR	LR	11 48 14.2	
	comp=Z,47nm,18.2s,baz=134,slow=37						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	**74.67**	**168**	P	**P**	**11 14 54.5**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=283,slow=7.5,SNR=6.3						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**74.67**	**168**	P	**P**	**11 14 53.5**	**-1.4**
VNDA				IAmb	IAmb	11 15 01.5	
	comp=Z,6.7nm,1.5s						
QSPA	**South Pole Qui**	**78.15**	**180**	P	**P**	**11 15 14.0**	**-1.0**
QSPA				IAmb	IAmb	11 15 15.1	
	comp=Z,5.8nm,1.1s						
SNAA	**Sanae**	**79.55**	**199**	P	**P**	**11 15 22.9**	**+0.4**
SNAA				IAmb	IAmb	11 15 23.1	
	comp=Z,4.3nm,1.1s						
NVAR	**Mina Array Bea**	**143.76**	**38**	PKP	**PKPdf**	**11 22 53.0**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=289,slow=2.8,SNR=4.3						
LPAZ	**La Paz**	**144.34**	**219**	PKP	PKPbc	11 22 51.9	-0.2
	comp=Z,1.4nm,0.8s,baz=180,slow=4.0,SNR=5.3						
PDAR	**Pinedale Array**	**145.05**	**25**	PKPbc	**PKPbc**	**11 22 52.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=196,slow=1.1,SNR=3.7						

*IDC **23** 11:07:05.9±1.1, 53°.24N×108°.37E, h0km, mb3.5/4, mbtmp3.4/7, ML3.0/3, MS3.0/1, Error ellipse: s-maj=24.6km s-min=19.3km az=99.0*
*MOS **23** 11:07:06.2±1.1, 53°.17N×108°.31E, h11km, mb3.7/1, Error ellipse: s-maj=12.6km s-min=8.5km az=63.0*
*BYKL **23** 11:07:07.4±0.1, 53°.29N×108°.19E, h13km±3km*
ISC 23 11:07:07.1±1.1, 53°.26N±0°.02×108°.27E±0°.02, h9km±8km, n55, σ2ᵍ02/111, mb3.5/4, 3C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.28**	**89**	⇑*i*Pg	**Pb**	**11 07 13.8**	**-0.6**
MXMB				*e*Sg	**Sb**	**11 07 18.4**	**-0.8**
KELR	**Kotokel**	**0.52**	**193**	⇑*i*Pg	**Pg**	**11 07 17.0**	**-0.1**
KELR				*e*Sg	**Sg**	**11 07 24.3**	**+0.5**
OGRR	**Ongureny**	**0.56**	**314**	⇑*i*PG	**Pg**	**11 07 18.9**	**+1.0**
OGRR				*e*		11 07 25.9	
OGRR				pmax	pmax		
	comp=Z,314nm,0.1s						
OGRR				smax	smax		
	comp=E,3μm,0.2s						
ZRHB	**Zarechye**	**0.98**	**224**	*e*Pg	**Pb**	**11 07 25.6**	**-0.6**
ZRHB				*e*Pb	**P

comp=N,2μm,0.4s
STDB Stepnoy Dvoret 1.59 227 *e*Pg **Pn 11 07 35.7 +0.2**
STDB *e*Sg **Sb 11 07 57.4 +0.5**
BGT Bolshoye Golou 2.13 236 *e*Pn **Pn 11 07 42.9 +0.1**
BGT *e*Pg **Pb 11 07 45.4 -0.4**
BGT *e*Sn **Sn 11 08 08.6 -0.8**
BGT *e*Sg **Sb 11 08 12.6 +0.3**
BGT Pmax
comp=N,68nm,0.3s
BGT Smax
comp=N,480nm,0.4s
YLYR Ulyunkhan 2.35 45 *e*Pn **Pn 11 07 46.2 +0.3**
YLYR *e*Pg **Pb 11 07 49.1 -0.5**
YLYR *e* 11 07 55.1
YLYR *e*Sg **Sg 11 08 21.2 -1.3**
YLYR max
comp=N,110nm,0.7s
YLYR Smax
comp=N,882nm,1.0s
LSTR Listvyanka 2.52 238 *e*PN **Pn 11 07 47.5 -0.7**
LSTR *e* 11 07 50.8
LSTR *e* 11 08 22.4
LSTR pmax pmax
comp=Z,16nm,0.2s
LSTR smax smax
comp=N,150nm,0.6s
LSTR Listvyanka 2.52 238 *e*Pn **Pn 11 07 47.9 -0.3**
LSTR *e*Pg **Pb 11 07 52.6 +0.1**
LSTR *e*Sn **Sn 11 08 17.9 -1.1**
LSTR *e*Sg **Sb 11 08 24.0 +0.4**
LSTR Pmax
comp=N,49nm,0.6s
LSTR Smax
comp=N,190nm,0.4s
NIZ Nizh Angarsk 2.63 16 *e*PN **Pb 11 07 53.4 -0.9**
NIZ *e* 11 07 57.8
NIZ *e*S **Sn 11 08 23.7 +2.1**
NIZ *e* 11 08 28.5
NIZ pmax pmax
comp=Z,73nm,0.7s
NIZ smax smax
comp=E,262nm,0.8s
NIZ Nizh Angarsk 2.63 16 *e*Pn **Pn 11 07 49.3 -0.4**
NIZ *e*Pg **Pb 11 07 54.5 +0.2**
NIZ *e* 11 08 01.3
NIZ *e*Sn **Sn 11 08 20.8 -0.8**
NIZ *e*Sg **Sb 11 08 28.3 +1.7**
NIZ max
comp=E,74nm,0.4s
NIZ Smax
comp=E,263nm,0.5s
IRK Irkutsk 2.64 249 *e*PN **Pb 11 07 52.6 -1.9**
IRK *e* 11 08 26.5
IRK pmax pmax
comp=Z,216nm,0.1s
IRK smax smax
comp=N,990nm,0.4s
IRK Irkutsk 2.64 249 *e*Pn **Pn 11 07 50.2 +0.4**
IRK *e*Pg **Pb 11 07 54.6 +0.1**
IRK *e*Sn **Sn 11 08 20.9 -1.0**
IRK *e*Sg **Sb 11 08 27.0 +0.1**
IRK Pmax
comp=N,218nm,0.2s
IRK Smax
comp=N,996nm,0.5s
IVK Ivanovka 2.77 240 *e*Pn **Pn 11 07 51.6 -0.1**
IVK *e* 11 07 54.2
IVK *e*Pg **Pb 11 07 56.3 -0.5**
IVK *e*Sn **Sn 11 08 24.1 -1.2**
IVK *e*Sg **Sb 11 08 31.5 +0.6**
IVK Pmax
comp=N,40nm,0.3s
IVK Smax
comp=N,494nm,0.7s
KMO Kumora 3.13 32 *e*PN **Pn 11 07 57.6 +1.0**
KMO *e* 11 08 05.4
KMO *e* 11 08 45.2
KMO pmax pmax
comp=Z,25nm,0.3s
KMO smax smax
comp=E,298nm,0.8s
KMO Kumora 3.13 32 *e*Pn **Pn 11 07 57.2 +0.6**
KMO *e*Pg **Pb 11 08 04.8 +1.8**
KMO *e*Sn **Sn 11 08 33.9 -0.3**
KMO *e*Sg **Sg 11 08 45.2 -2.5**
KMO Pmax
comp=E,79nm,0.6s
KMO Smax
comp=E,306nm,0.9s
TLY Talaya 3.24 243 *e*PN **Pn 11 07 57.2 -0.9**
TLY *e* 11 08 04.5
TLY *e* 11 08 45.1
TLY pmax pmax
comp=Z,36nm,0.5s
TLY smax smax
comp=E,299nm,1.4s
TLY Talaya 3.24 243 *e*Pn **Pn 11 07 57.3 -0.9**
TLY *e*Pg **Pb 11 08 04.7 -0.1**
TLY *e*Sn **Sn 11 08 35.0 -1.9**
TLY *e*Sg **Sb 11 08 45.7 +1.3**
TLY Pmax
comp=E,38nm,0.5s
TLY Smax
comp=E,293nm,0.5s
CIT Chita 3.45 109 *e*PN **Pn 11 08 00.6 -0.4**
CIT *e* 11 08 09.8
CIT *e* 11 08 56.8
CIT pmax pmax
comp=Z,147nm,0.4s
CIT smax smax
comp=E,930nm,1.0s
CIT Chita 3.45 109 *e*Pg **Pb 11 08 10.2 +1.9**
CIT *e* 11 08 20.4
CIT *e*Sn **Sn 11 08 41.7 -0.2**
CIT *e*Sg **Sg 11 08 55.7 -2.0**
CIT Pmax
comp=E,206nm,0.1s
CIT Smax
comp=E,579nm,0.2s
ARS Arshan 3.81 252 *e*PN **Pn 11 08 05.9 -0.1**
ARS *e* 11 08 13.9
ARS *e* 11 09 01.8
ARS pmax pmax
comp=Z,58nm,0.2s
ARS smax smax
comp=E,1μm,0.6s
ARS Arshan 3.81 252 *e*Pn **Pn 11 08 07.1 +1.1**
ARS *e*Pg **Pb 11 08 14.4 -0.1**
ARS *e* 11 08 19.0
ARS *e*Sn **Sn 11 08 50.3 -0.7**
ARS *e* 11 09 01.2
ARS *e*Sg **Sb 11 09 03.8 +3.0**
ARS *e* 11 09 16.5
ARS max
comp=E,78nm,0.7s
ARS Smax
comp=E,1μm,0.6s
UKT Uakit 3.84 52 *e*PN **Pb 11 08 17.8 +2.7**
UKT *e* 11 09 08.9
UKT pmax pmax
comp=Z,32nm,0.6s
UKT smax smax
comp=N,149nm,0.5s
UKT Uakit 3.84 52 *e*Pn **Pn 11 08 08.3 +1.8**
UKT *e*Pg **Pb 11 08 17.8 +2.7**
UKT *e* 11 08 22.1
UKT *e*Sn **Sn 11 08 50.5 -1.3**
UKT *e*Sg **Sg 11 09 07.1 -3.4**
UKT max
comp=N,51nm,0.8s
UKT Smax
comp=N,150nm,0.8s
ZAK Zakamensk 4.23 229 *e*Pg **Pb 11 08 23.8 +2.1**
ZAK *e*Sg **Sb 11 09 17.6 +4.7**
ZAK Pmax
comp=N,42nm,0.5s
ZAK Smax
comp=N,140nm,0.7s
KPC Khapcheranga 4.39 143 *e*PN **Pn 11 08 13.1 -0.8**
KPC *e* 11 08 25.6
KPC *e*S **Sn 11 09 03.5 -1.7**
KPC *e* 11 09 23.5
KPC pmax pmax
comp=Z,22nm,0.3s
KPC smax smax
comp=E,352nm,1.0s
KPC Khapcheranga 4.39 143 *e*Pn **Pn 11 08 13.4 -0.5**
KPC *e*Pg **Pb 11 08 27.2 +2.8**
KPC *e*Sn **Sn 11 09 03.3 -1.9**
KPC *e*Sg **Sg 11 09 23.6 -4.3**
KPC Pmax
comp=E,45nm,0.9s
KPC Smax
comp=E,352nm,0.8s
MOY Mondy 4.73 253 *e*PN **Pn 11 08 20.8 +2.2**
MOY *e* 11 08 32.2
MOY *e* 11 09 30.4
MOY pmax pmax
comp=Z,45nm,0.8s
MOY smax smax
comp=E,598nm,1.2s
MOY Mondy 4.73 253 *e*Pn **Pn 11 08 20.1 +1.5**
MOY *e* 11 08 28.2
MOY *e* 11 08 36.6
MOY *e* 11 09 13.7
MOY *e* 11 09 28.4
MOY *e*Sg **Sb 11 09 31.4 +4.2**
MOY *e* 11 09 42.4
MOY max
comp=E,46nm,0.9s
MOY max
comp=E,597nm,1.7s
ORL Orlik 5.17 265 *e*Pn **Pn 11 08 26.2 +1.4**
ORL *e* 11 08 33.0
ORL *e*Sn **Sn 11 09 21.6 -3.0**
ORL *e*Sg **Sb 11 09 45.5 +5.5**
ORL max
comp=E,81nm,1.2s
ORL Smax
comp=E,303nm,1.0s
NLYR Nelyaty 5.37 50 *e*Pn **Pn 11 08 28.2 +0.8**
NLYR *e*Pg **Pb 11 08 44.7 +3.6**
NLYR *e*Sg **Sg 11 09 54.2 -5.2**
NLYR Pmax
comp=E,45nm,1.5s
NLYR Smax
comp=E,218nm,1.0s
SONM Songino Array 5.56 193 Pn **Pn 11 08 30.7 +0.6**
comp=E,0.8nm,0.3s,baz=7.2,slow=12,SNR=12
SONM Pg **Pb 11 08 48.6 +4.2**
comp=E,1.9nm,0.3s,baz=5.7,slow=16,SNR=6.4
SONM Sn **Sn 11 09 35.7 +1.5**
comp=E,2.9nm,0.3s,baz=8.5,slow=21,SNR=4.5
SONM Lg Lg 11 10 02.5
comp=E,15nm,0.3s,baz=7.9,slow=32,SNR=16
comp=E,1.4nm,0.4s
BOD Bodaibo 5.61 33 *e*Pn **Pn 11 08 31.0 +0.4**
BOD *e*Pg **Pb 11 08 48.4 +3.4**
BOD *e*Sn **Sn 11 09 31.7 -3.3**
BOD *e*Sg **Sg 11 10 01.4 -5.5**
BOD Pmax
comp=E,12nm,0.9s
BOD Smax
comp=E,81nm,1.5s
CRS Chara 6.80 54 *e*Pn **Pn 11 08 48.2 +1.3**
CRS *e*Pg Pb 11 09 11.0 +5.7
CRS *e*Sg **Sg 11 10 39.9 -5.2**
CRS Pmax
comp=E,42nm,1.5s
CRS Smax
comp=E,206nm,1.7s
TUP Tupik 7.01 76 *e*Pn **Pn 11 08 50.0 +0.1**
TUP *e*Pg Pb 11 09 14.1 +5.1
TUP *e*Sg **Sg 11 10 45.2 -6.7**
TUP Pmax
comp=E,10.0nm,0.7s
TUP Smax
comp=E,422nm,1.0s
KHNR Khani 7.65 57 *e*Sg Sb 11 11 04.3 +13
YKLR Yuktali 8.40 61 *e*Sg Sb 11 11 28.5 +16
CLNS Chul'man 10.18 63 *e*Sg Sn 11 12 24.5 +57
KLR Kul'dur 15.22 96 Lg Lg 11 15 09.4
comp=E,0.1nm,0.3s,baz=191,slow=18,SNR=4.7
MKAR Makanchi Array 17.84 259 P **P 11 11 16.2 +0.1**
baz=64,slow=11,SNR=2.4
comp=E,0.2nm,0.5s
KURK Kurchatov 18.38 274 P **P 11 11 21.8 -0.1**
KURBB Kurchatov Arra 18.46 274 P **P 11 11 21.8 -1.1**
baz=68,slow=12,SNR=4.9
comp=E,0.6nm,0.6s
NRIK Noril'sk 18.77 337 LR LR 11 19 14.4
comp=E,47nm,22.0s,baz=345,slow=39
BVAR Borovoye Array 22.55 285 P **P 11 12 09.0 +1.8**
comp=E,1.3nm,0.8s,baz=84,slow=15,SNR=7.8
comp=E,1.3nm,0.8s
ILAR Eielson Array 48.98 33 P **P 11 15 53.7 +0.3**
comp=E,0.3nm,0.7s,baz=308,slow=6.4,SNR=5.1
comp=E,0.3nm,0.7s
WRA Warramunga Arr 76.31 155 P **P 11 18 55.6 -0.5**
comp=E,0.5nm,0.6s,baz=349,slow=6.3,SNR=6.4
comp=E,0.5nm,0.6s
ASAR Alice Springs 79.77 156 P **P 11 19 15.2 -0.1**
comp=E,0.5nm,0.7s,baz=353,slow=5.0,SNR=7.2
comp=E,0.5nm,0.7s

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*IDC **23** 11:20:06.6±1.5, 61°.97N×152°.03W, h73km±15km, mb3.7/15, mbtmp4.1/20, Error ellipse: s-maj=15.3km s-min=10.2km az=107.0*
*NEIC **23** 11:20:08.8±1.1, 61°.92N±0°.04×151°.73W±0°.08, h102km±6km, Error ellipse: s-maj=6.8km s-min=4.9km az=203.0*
*AEIC **23** 11:20:09±1.2, 61°.92N±0°.04×151°.75W±0°.09, h100km±7km, ML3.9, ML4.2/182(NEIC), Mwr4.1/68(NEIC), Error ellipse: s-maj=6.6km s-min=5.8km az=119.0*
*NEIC **23** 11:20:10, 61°.93N×151°.72W, h107km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.06; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$1.05; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.77; $M_{\phi r}$1.00; Fault plane solution: $M_0$1.70000×10^{15} NP1:φ332.42000°, δ87.06000°, λ141.77000°. NP2:φ64.73000°, δ51.83000°, λ3.74000°. Principal axes: T 1.7551, Plg28.0000°, Azm282.0000°; N -0.1222, Plg52.0000°, Azm149.0000°; P -1.6329, Plg24.0000°, Azm25.0000°;*
ISC 23 11:20:09.2±0.7, 61°.92N±0°.03×151°.73W±0°.03, h101km±5km, n243, σ0°84/259, mb4.1/15, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.11**	**58**		**Pn**	**11 20 23.2**	**-0.1**
SKT	**Skwentna**	**0.11**	**58**	P	**Pn**	**11 20 22.8**	**-0.5**
SKT	baz=240			S	**Sn**	**11 20 33.5**	**-0.4**
SUA	**Susitna One**	**0.66**	**134**		**Pn**	**11 20 26.7**	**+0.2**
SUA	comp=E,9μm,0.5s			IAML		11 20 40.7	
SUA	**Susitna One**	**0.66**	**134**	P	**Pn**	**11 20 26.6**	**+0.1**
SUA	baz=314			S	**Sn**	**11 20 39.5**	**+0.1**
M20K	**Styx River**	**0.66**	**267**		**Pn**	**11 20 25.8**	**-0.7**
M20K	comp=E,4μm,0.8s			IAML		11 20 39.0	
M20K	**Styx River**	**0.66**	**267**	P	**Pn**	**11 20 26.1**	**-0.4**
M20K	baz=86			S	**Sn**	**11 20 38.4**	**-1.0**
SPU	**Mount Spurr**	**0.76**	**192**		**Pn**	**11 20 26.7**	**-0.5**
SPCR	**Spurr Chakacha**	**0.76**	**198**	P	**Pn**	**11 20 26.9**	**-0.4**
M22K	**Willow**	**0.78**	**102**		**Pn**	**11 20 27.6**	**+0.2**
M22K	**Willow**	**0.78**	**102**	P	**Pn**	**11 20 27.5**	**+0.2**
CUT	**Chulitna**	**0.84**	**54**		**Pn**	**11 20 28.3**	**+0.3**
CUT	**Chulitna**	**0.84**	**54**	P	**Pn**	**11 20 28.2**	**+0.3**
CUT	baz=236			S	**Sn**	**11 20 42.6**	**+0.5**
PPLA	**Purkeypile**	**1.00**	**348**	Pn	**Pn**	**11 20 29.8**	**0.0**
PPLA	**Purkeypile**	**1.00**	**348**	P	**Pn**	**11 20 29.7**	**-0.1**
PPLA	baz=168			S	**Sn**	**11 20 45.0**	**-0.3**
FIS	**Fire Island**	**1.07**	**136**		**Pn**	**11 20 32.0**	**+1.7**
FIS	comp=E,7μm,0.4s			IAML		11 20 52.5	
L20K	**Farewell, AK**	**1.15**	**300**	P	**Pn**	**11 20 30.6**	**-0.7**
	baz=118						
CAPN	**Captain Cook N**	**1.19**	**166**		**Pn**	**11 20 33.4**	**+1.7**
CAPN	**Captain Cook N**	**1.19**	**166**	P	**Pn**	**11 20 33.4**	**+1.7**
	baz=346						
M19K	**Big River Lodg**	**1.26**	**270**		**Pn**	**11 20 32.4**	**-0.2**
M19K	comp=N,2μm,0.8s			IAML		11 20 50.3	
M19K	comp=E,2μm,0.7s			IAML		11 20 51.0	
M19K	**Big River Lodg**	**1.26**	**270**	P	**Pn**	**11 20 32.5**	**-0.1**
	baz=88						
RC01	**Rabbit Creek A**	**1.27**	**130**		**Pn**	**11 20 32.8**	**+0.1**
RC01	comp=E,5μm,0.5s			IAML		11 20 53.4	
RC01	comp=N,5μm,0.5s			IAML		11 20 53.7	
RC01	**Rabbit Creek A**	**1.27**	**130**	P	**Pn**	**11 20 32.7**	**+0.1**
	baz=312						
RC01	baz=312			S	**Sn**	**11 20 50.5**	**0.0**
PMR	**Palmer**	**1.28**	**104**		**Pn**	**11 20 32.1**	**-0.6**
PMR	comp=E,2μm,0.3s			IAML		11 20 51.1	
PMR	comp=N,2μm,0.4s			IAML		11 20 53.6	
PMR	**Palmer**	**1.28**	**104**	P	**Pn**	**11 20 32.0**	**-0.8**
	baz=286						
PMR	baz=286			S	**Sn**	**11 20 50.8**	**+0.1**
GHO	**Glory Hole Cre**	**1.34**	**95**		**Pn**	**11 20 33.3**	**-0.3**
GHO	comp=N,2μm,0.5s			IAML		11 20 54.0	
GHO	comp=E,5μm,0.5s			IAML		11 20 57.4	
L19K	**White Mountain**	**1.49**	**281**		**Pn**	**11 20 35.4**	**0.0**
L19K	comp=N,1μm,0.9s			IAML		11 20 55.4	
L19K	**White Mountain**	**1.49**	**281**	P	**Pn**	**11 20 35.4**	**0.0**
	baz=99						
L19K	baz=99			S	**Sn**	**11 20 54.7**	**-0.5**
CAST	**Castle Rocks**	**1.51**	**354**		**Pn**	**11 20 35.3**	**-0.3**
CAST	**Castle Rocks**	**1.51**	**354**	P	**Pn**	**11 20 35.3**	**-0.3**
	baz=174						
RSO	**Redoubt South**	**1.55**	**199**		**Pn**	**11 20 36.4**	**+0.2**
SML	**Sawmill**	**1.62**	**93**		**Pn**	**11 20 36.2**	**-0.7**
SML	comp=E,2μm,0.6s			IAML		11 21 03.5	
SML	comp=N,2μm,0.5s			IAML		11 21 05.7	
SML	**Sawmill**	**1.62**	**93**	P	**Pn**	**11 20 36.6**	**-0.3**
	baz=276						
KNK	**Knik Glacier**	**1.64**	**107**		**Pn**	**11 20 36.8**	**-0.4**
KNK	**Knik Glacier**	**1.64**	**107**	P	**Pn**	**11 20 36.8**	**-0.4**
	baz=289						
KNK	baz=289			S	**Sn**	**11 20 58.7**	**+0.1**
TRF	**Thorofare Moun**	**1.67**	**23**		**Pn**	**11 20 37.9**	**+0.2**
TRF	**Thorofare Moun**	**1.67**	**23**	P	**Pn**	**11 20 37.9**	**+0.2**
	baz=204						
TRF	baz=204			S	**Sn**	**11 20 59.7**	**+0.2**
KTH	**Kantishna Hill**	**1.68**	**13**		**Pn**	**11 20 37.8**	**+0.1**
KTH	comp=E,3μm,0.4s			IAML		11 21 00.5	
KTH	comp=N,3μm,0.5s			IAML		11 21 01.4	
N19K	**Bonanza Creek**	**1.73**	**231**	Pn	**Pn**	**11 20 38.3**	**-0.1**
N19K	**Bonanza Creek**	**1.73**	**231**	P	**Pn**	**11 20 38.1**	**-0.3**
	baz=49						
WAT1	**Susitna Watana**	**1.74**	**57**	P	**Pn**	**11 20 38.3**	**-0.2**
	baz=240						
WAT1	baz=240			S	**Sn**	**11 21 00.9**	**+0.2**
O22K	**Cooper Landing**	**1.74**	**145**		**Pn**	**11 20 38.8**	**+0.4**
O22K	**Cooper Landing**	**1.74**	**145**	P	**Pn**	**11 20 38.6**	**+0.2**
	baz=327						
K20K	**Telida**	**1.80**	**324**		**Pn**	**11 20 39.0**	**-0.2**
K20K	comp=E,1μm,1.0s			IAML		11 21 01.4	
K20K	**Telida**	**1.80**	**324**	P	**Pn**	**11 20 39.0**	**-0.2**
	baz=142						
O20K	**Slope Mountain**	**1.90**	**194**	P	**Pn**	**11 20 40.6**	**+0.1**
	baz=13						
PWL	**Port Wells**	**1.95**	**122**		**Pn**	**11 20 40.2**	**-1.0**
WAT6	**Susitna Watana**	**1.98**	**69**	P	**Pn**	**11 20 41.4**	**-0.3**
	baz=252						
CHUM	**Lake Minchumin**	**1.99**	**353**	P	**Pn**	**11 20 41.4**	**-0.1**
	baz=172						
RND	**Reindeer**	**2.00**	**40**		**Pn**	**11 20 41.5**	**-0.3**
RND	comp=N,2μm,0.3s			IAML		11 21 06.9	
RND	comp=E,2μm,0.3s			IAML		11 21 06.9	
SVW2	**Sparrevohn**	**2.02**	**248**		**Pn**	**11 20 41.8**	**-0.2**
SVW2	comp=N,1μm,0.6s			IAML		11 21 07.1	
SVW2	comp=E,2μm,0.8s			IAML		11 21 07.1	
SCM	**Sheep Creek Mo**	**2.09**	**90**		**Pn**	**11 20 42.5**	**-0.5**
SCM	comp=N,1μm,0.8s			IAML		11 21 12.1	
SEW	**Seward**	**2.13**	**148**		**Pn**	**11 20 43.4**	**0.0**
SEW	**Seward**	**2.13**	**148**	P	**Pn**	**11 20 43.0**	**-0.4**
	baz=330						
O19K	**Port Alsworth**	**2.14**	**217**		**Pn**	**11 20 43.5**	**0.0**
O19K	comp=E,894nm,0.5s			IAML		11 21 12.0	
O19K	**Port Alsworth**	**2.14**	**217**	P	**Pn**	**11 20 43.5**	**0.0**
	baz=35						
BPAW	**Bear Paw Mtn.**	**2.21**	**9**	Pn	**Pn**	**11 20 43.9**	**-0.6**
BPAW	comp=E,2μm,0.6s			IAML		11 21 11.1	
BPAW	comp=N,1μm,0.9s			IAML		11 21 11.8	
BPAW	**Bear Paw Mtn.**	**2.21**	**9**	P	**Pn**	**11 20 44.0**	**-0.5**
	baz=189						
MCK	**McKinley**	**2.23**	**34**		**Pn**	**11 20 44.6**	**-0.1**
MCK	comp=N,652nm,0.5s			IAML		11 21 13.5	
MCK	comp=E,891nm,0.4s			IAML		11 21 15.2	
MCK	**McKinley**	**2.23**	**34**	P	**Pn**	**11 20 44.5**	**-0.1**
	baz=217						
TTA	**Tatalina**	**2.23**	**299**	Pn	**Pn**	**11 20 44.2**	**-0.5**
TTA	**Tatalina**	**2.23**	**299**	P	**Pn**	**11 20 44.3**	**-0.5**
	baz=115						
BRSE	**Bradley Lake S**	**2.24**	**167**	P	**Pn**	**11 20 44.0**	**-0.9**
	baz=348						
HOM	**Homer**	**2.27**	**179**		**Pn**	**11 20 44.9**	**-0.3**
HOM	comp=N,1μm,0.4s			IAML		11 21 14.6	
HOM	comp=E,1μm,0.7s			IAML		11 21 26.7	
HOM	**Homer**	**2.27**	**179**	P	**Pn**	**11 20 45.3**	**+0.1**
	baz=359						
DHY	**Denali Highway**	**2.33**	**58**		**Pn**	**11 20 45.9**	**-0.3**
DHY	**Denali Highway**	**2.33**	**58**	P	**Pn**	**11 20 45.8**	**-0.3**
	baz=242						
DHY	baz=242			S	**Sn**	**11 21 14.3**	**-0.1**
N18K	**Kilae Creek**	**2.36**	**240**	Pn	**Pn**	**11 20 46.0**	**-0.4**
N18K	**Kilae Creek**	**2.36**	**240**	P	**Pn**	**11 20 46.0**	**-0.4**
	baz=56						
OPT	**Oil Point**	**2.39**	**199**	P	**Pn**	**11 20 47.1**	**+0.3**
	baz=17						
P19K	**Oil Pt**	**2.39**	**199**	Pn	**Pn**	**11 20 47.0**	**+0.2**
P19K	comp=E,1μm,0.6s			IAML		11 21 18.9	
P19K	comp=N,942nm,0.3s			IAML		11 21 19.0	
P19K	**Oil Pt**	**2.39**	**199**	P	**Pn**	**11 20 47.0**	**+0.2**
	baz=17						
CNPM	**China Poot**	**2.42**	**174**	Pn	**Pn**	**11 20 46.2**	**-1.0**
CNPM	comp=E,617nm,0.6s			IAML		11 21 19.0	
CNPM	comp=N,672nm,0.3s			IAML		11 21 20.8	
GLI	**Glacier Island**	**2.46**	**113**		**Pn**	**11 20 46.2**	**-1.6**
GLI	**Glacier Island**	**2.46**	**113**	P	**Pn**	**11 20 46.2**	**-1.6**
	baz=297						
BWN	**Browne**	**2.48**	**24**		**Pn**	**11 20 48.2**	**+0.2**
BWN	comp=N,940nm,1.0s			IAML		11 21 34.4	
BWN	comp=E,821nm,1.0s			IAML		11 21 53.9	
J20K	**Nowinta River**	**2.52**	**335**	Pn	**Pn**	**11 20 48.2**	**-0.3**
J20K				IAML		11 21 19.6	

comp=N,1μm,0.8s
J20K IAML 11 21 19.7
comp=E,693nm,0.8s
J20K Nowinta River 2.52 335 P Pn 11 20 48.1 -0.3
baz=153
M24K Tolsona, Glenn 2.63 84 Pn 11 20 50.0 0.0
M24K Tolsona, Glenn 2.63 84 P Pn 11 20 50.0 0.0
baz=268
O18K Koktuh Hills 2.68 221 Pn 11 20 50.7 +0.1
O18K Koktuh Hills 2.68 221 P Pn 11 20 50.8 +0.1
baz=38
FID Port Fidalgo 2.79 113 Pn 11 20 50.1 -2.0
KLU Klutina 2.80 96 Pn 11 20 51.3 -1.0
KLU IAML 11 21 25.7
comp=N,850nm,0.4s
KLU IAML 11 21 37.9
comp=E,620nm,0.5s
KLU Klutina 2.80 96 P Pn 11 20 51.3 -1.0
baz=281
NEA2 Nenana 2.94 23 Pn 11 20 53.2 -0.9
NEA2 Nenana 2.94 23 P Pn 11 20 53.1 -0.9
baz=206
HIN Hinchinbrook I 2.96 119 Pn **Pn 11 20 52.9 -1.5**
DIV Divide 2.96 103 Pn 11 20 53.0 -1.5
WRH Wood River Hil 3.05 31 Pn 11 20 54.8 -0.7
P18K Big Mountain, 3.07 216 Pn **Pn 11 20 56.0 +0.2**
P18K Big Mountain, 3.07 216 P **Pn 11 20 56.0 +0.2**
baz=32
PAX Paxson 3.10 67 Pn **Pn 11 20 56.3 +0.1**
PAX Paxson 3.10 67 P **Pn 11 20 56.2 +0.1**
baz=253
HARP HAARP 3.12 78 P **Pn 11 20 56.7 +0.2**
baz=264
Q19K Cape Douglas, 3.15 198 Pn **Pn 11 20 56.9 0.0**
Q19K IAML 11 22 19.4
comp=N,394nm,1.2s
Q19K IAML 11 22 36.8
comp=E,454nm,0.9s
Q19K Cape Douglas, 3.15 198 P **Pn 11 20 56.9 0.0**
baz=17
MLY Manley 3.15 8 Pn 11 20 56.4 -0.5
MLY Manley 3.15 8 P **Pn 11 20 56.4 -0.5**
baz=189
EYAK Cordova Ski Ar 3.20 113 Pn **Pn 11 20 56.1 -1.5**
EYAK Cordova Ski Ar 3.20 113 P **Pn 11 20 55.8 -1.7**
baz=298
CCB Clear Creek Bu 3.26 31 Pn 11 20 57.5 -0.8
I21K Tanana 3.27 358 Pn 11 20 57.9 -0.6
I21K Tanana 3.27 358 P **Pn 11 20 58.2 -0.3**
baz=178
HDA Harding Lake 3.31 39 Pn 11 20 58.4 -0.6
HDA IAML 11 21 36.5
comp=N,804nm,0.5s
HDA IAML 11 21 36.9
comp=E,583nm,0.5s
HDA Harding Lake 3.31 39 P **Pn 11 20 58.3 -0.6**
baz=223
N25K Chitina, Valde 3.41 92 Pn 11 20 59.6 -0.8
N25K IAML 11 21 40.7
comp=E,335nm,0.4s
N25K IAML 11 21 41.2
comp=N,458nm,0.4s
N25K Chitina, Valde 3.41 92 P **Pn 11 20 59.5 -0.8**
baz=278
I23K Minto, Yukon-K 3.41 17 Pn 11 20 59.7 -0.6
I23K IAML 11 21 40.0
comp=E,238nm,0.5s
I23K Minto, Yukon-K 3.41 17 P **Pn 11 21 00.1 -0.2**
baz=199
MDM Murphy Dome 3.43 26 Pn 11 21 00.2 -0.5
MDM IAML 11 21 40.1
comp=N,408nm,0.8s
TCOL CIGO, UAF Yank 3.44 29 Pn 11 21 00.1 -0.6
TCOL IAML 11 21 44.0
comp=E,759nm,0.6s
TCOL CIGO, UAF Yank 3.44 29 P **Pn 11 21 00.3 -0.3**
baz=212
COLA College 3.44 29 Pn 11 21 00.2 -0.5
COLA IAML 11 21 39.5
comp=E,800nm,0.5s
BMRM Bremner River 3.56 102 Pn **Pn 11 21 00.8 -1.5**
BMRM Bremner River 3.56 102 P **Pn 11 21 00.5 -1.8**
baz=289
IL31 3.60 35 Pn 11 21 02.1 -0.7
ILAR Eielson Array 3.60 35 P **Pn 11 21 02.0 -0.8**
comp=E,50nm,0.4s,baz=220,slow=14,SNR=303
ILAR S **Sn 11 21 42.7 -1.7**
comp=E,32nm,0.4s,baz=323,slow=33,SNR=2.5
ILAR Eielson Array 3.60 35 Pn **Pn 11 21 01.8 -1.1**
Q23K Middleton Isla 3.64 131 P **Pn 11 21 02.6 -0.8**
baz=316
MID Middleton Isla 3.65 131 Pn **Pn 11 21 03.3 -0.2**
MID IAML 11 21 45.6
comp=N,529nm,0.4s
MID IAML 11 21 46.1
comp=E,597nm,0.4s
RIDG Independent Ri 3.65 57 Pn 11 21 04.1 +0.5
RIDG Independent Ri 3.65 57 P **Pn 11 21 04.1 +0.5**
baz=243
GCSA Galena City Sc 3.66 323 P **Pn 11 21 03.6 0.0**
baz=138
KAHC Katmai Hardscr 3.67 208 P **Pn 11 21 04.2 +0.3**
baz=25
POKR Poker Plat Res 3.74 29 Pn 11 21 04.3 -0.5
POKR Poker Plat Res 3.74 29 P **Pn 11 21 04.2 -0.5**
baz=213
RAGM Ragged Mountai 3.75 111 Pn 11 21 04.4 -0.5
RAGM IAML 11 22 07.8
comp=E,583nm,0.5s
H21K Melozitna Rive 3.78 353 Pn 11 21 04.8 -0.5
H21K Melozitna Rive 3.78 353 P **Pn 11 21 04.8 -0.5**
baz=172
GLB Gilahina Butte 3.81 94 Pn **Pn 11 21 04.8 -0.9**
GLB IAML 11 21 51.0
comp=E,246nm,0.5s
GLB IAML 11 21 53.9
comp=N,271nm,0.4s
MENT Mentasta 3.86 71 Pn 11 21 06.0 -0.4
MENT IAML 11 22 04.0
comp=E,584nm,0.4s
MENT IAML 11 22 05.1
comp=N,564nm,0.6s
DOT Dot Lake 3.93 60 Pn 11 21 06.8 -0.5
J25K Salcha River, 3.94 44 Pn 11 21 07.0 -0.6
J25K IAML 11 21 51.2
comp=E,331nm,0.5s
J25K IAML 11 21 51.5
comp=N,315nm,0.4s
J25K Salcha River, 3.94 44 P **Pn 11 21 06.9 -0.6**
baz=230
HMT Hamilton 3.96 110 Pn 11 21 06.2 -1.5
HMT IAML 11 22 14.6
comp=N,548nm,0.6s
VRDI Verde Repeater 4.02 96 Pn 11 21 07.3 -1.4
VRDI IAML 11 22 14.6
comp=N,169nm,0.5s
H23K Yukon River 4.04 13 Pn 11 21 07.5 -1.2
H23K IAML 11 21 56.3
comp=N,191nm,0.8s
H23K Yukon River 4.04 13 P **Pn 11 21 08.2 -0.6**
baz=195
L26K Log Cabin Wild 4.05 70 Pn 11 21 09.1 +0.2
L26K IAML 11 22 08.9
comp=N,468nm,0.3s
L26K IAML 11 22 14.5
comp=E,432nm,0.5s
L26K Log Cabin Wild 4.05 70 P **Pn 11 21 09.3 +0.4**
baz=258
KAIM Kayak Island 4.09 116 Pn 11 21 07.9 -1.6
KAIM IAML 11 22 03.8
comp=N,242nm,0.4s
KAIM IAML 11 22 24.0
comp=E,252nm,2.0s
KAIM Kayak Island 4.09 116 P **Pn 11 21 08.1 -1.4**
baz=302
SCRK Sand Creek 4.10 56 Pn **Pn 11 21 09.3 -0.4**
SCRK Sand Creek 4.10 56 P **Pn 11 21 09.2 -0.4**
baz=243
M26K Nabesna, AK 4.13 79 Pn **Pn 11 21 09.5 -0.5**
M26K IAML 11 22 11.8
comp=E,299nm,0.4s
M26K IAML 11 22 18.9
comp=N,321nm,0.5s
M26K Nabesna, AK 4.13 79 P **Pn 11 21 09.5 -0.5**
baz=267
IMAR Indian Mountai 4.17 349 Pn 11 21 10.3 -0.2

KDAK Kodiak Island 4.17 186 P **Pn 11 21 08.2 -2.4**
comp=N,18nm,0.3s,baz=60,slow=17,SNR=132
KDAK S **Sn 11 21 55.1 -3.2**
comp=N,27nm,0.3s,baz=286,slow=22,SNR=4.1
KDAK Kodiak Island 4.17 186 Pn 11 21 08.8 -1.8
BERG Berg Lake 4.18 108 Pn 11 21 09.7 -1.0
MCARA McCarthy VSAT 4.19 94 Pn 11 21 10.4 -0.4
MCARA IAML 11 22 18.4
comp=N,401nm,0.7s
MCARA McCarthy VSAT 4.19 94 P **Pn 11 21 10.2 -0.6**
baz=281
H24K Noodor Dome 4.28 22 Pn **Pn 11 21 11.4 -0.7**
H24K IAML 11 22 01.2
comp=E,122nm,0.7s
H24K Noodor Dome 4.28 22 P **Pn 11 21 11.4 -0.7**
baz=205
SUCK Suckling Hills 4.29 112 Pn 11 21 11.5 -0.7
SUCK IAML 11 22 22.8
comp=N,196nm,0.5s
TGL Tana Glacier 4.45 101 Pn 11 21 13.4 -0.9
TGL IAML 11 22 05.4
comp=N,262nm,0.5s
TGL IAML 11 22 06.0
comp=E,272nm,0.5s
BGLC Bering Glacier 4.49 110 P **Pn 11 21 14.3 -0.6**
baz=297
J26L Joseph Creek 4.51 51 Pn 11 21 15.4 +0.1
J26L Joseph Creek 4.51 51 P **Pn 11 21 15.3 +0.1**
baz=239
PRP Porcupine Dome 4.54 35 Pn 11 21 17.9 +2.2
PRP IAML 11 22 09.1
comp=N,120nm,0.3s
PRP Porcupine Dome 4.54 35 P **Pn 11 21 14.7 -1.0**
baz=220
WAX Waxell Ridge 4.54 105 Pn 11 21 16.2 +0.5
WAX IAML 11 22 38.9
comp=E,254nm,0.4s
M27K Edge Creek, AK 4.65 80 Pn 11 21 17.4 +0.2
M27K IAML 11 22 35.5
comp=N,126nm,1.0s
M27K IAML 11 22 36.3
comp=E,96nm,0.7s
M27K Edge Creek, AK 4.65 80 P **Pn 11 21 17.4 +0.2**
baz=269
SNH Sunshine Point 4.66 108 Pn 11 21 18.3 +1.0
SNH IAML 11 22 13.9
comp=N,115nm,0.3s
SNH IAML 11 22 15.1
comp=E,157nm,0.5s
ISLE Juniper Island 4.72 102 Pn 11 21 17.4 -0.8
ISLE IAML 11 22 35.1
comp=E,185nm,0.8s
ISLE IAML 11 22 39.4
comp=N,192nm,0.9s
L27K Beaver Creek, 4.74 72 Pn 11 21 17.9 -0.3
L27K Beaver Creek, 4.74 72 P **Pn 11 21 17.8 -0.3**
baz=260
BCAR Beaver Creek A 4.75 72 Pn **Pn 11 21 17.9 -0.5**
OHAK Old Harbor 4.78 190 Pn **Pn 11 21 17.4 -1.4**
OHAK Old Harbor 4.78 190 P **Pn 11 21 17.5 -1.4**
baz=8.8
K27K Chicken 4.89 60 Pn 11 21 19.6 -0.7
K27K IAML 11 22 36.8
comp=E,94nm,0.8s
K27K IAML 11 22 39.8
comp=N,115nm,0.8s
K27K Chicken 4.89 60 P **Pn 11 21 19.7 -0.5**
baz=249
BARN Barnard Glacie 4.91 96 Pn 11 21 20.4 -0.3
BARN IAML 11 22 18.3
comp=N,100nm,0.5s
BARN IAML 11 22 42.1
comp=E,124nm,0.8s
MESA MESA 5.07 106 Pn 11 21 22.7 -0.1
MESA IAML 11 22 21.0
comp=E,191nm,0.5s
MESA MESA 5.07 106 P **Pn 11 21 21.7 -1.1**
baz=294
CTG Chitna Glacier 5.08 96 P **Pn 11 21 22.5 -0.5**
baz=285
CTGM Chitina Glacie 5.08 96 Pn 11 21 22.6 -0.4
CTGM IAML 11 22 45.0
comp=N,94nm,0.6s
YAH Yahtse 5.09 103 Pn 11 21 22.6 -0.6
YAH IAML 11 22 42.9
comp=E,76nm,0.8s
YAH IAML 11 22 48.3
comp=N,140nm,0.7s
I26K Coal Creek Min 5.12 45 Pn 11 21 23.4 +0.1
I26K IAML 11 22 20.8
comp=E,246nm,0.4s
I26K Coal Creek Min 5.12 45 P **Pn 11 21 23.1 -0.2**
baz=232
BVCY Beaver Creek 5.12 80 P **Pn 11 21 23.5 +0.1**
baz=269
LOGN Logan Glacier 5.28 97 Pn 11 21 25.1 -0.6
LOGN IAML 11 22 27.3
comp=E,108nm,0.5s
LOGN IAML 11 22 53.0
comp=N,92nm,0.6s
TABL Table Mountain 5.34 101 Pn 11 21 26.9 +0.4
TABL IAML 11 22 56.9
comp=N,70nm,0.9s
YUK3 Moose Creek 5.34 87 P **Pn 11 21 26.1 -0.5**
baz=276
COLD Coldfoot 5.37 6 Pn **Pn 11 21 27.2 +0.4**
COLD Coldfoot 5.37 6 P **Pn 11 21 26.8 +0.1**
baz=188
FYU Fort Yukon 5.46 28 Pn **Pn 11 21 28.1 +0.2**
SII Sitkinak Islan 5.52 194 P **Pn 11 21 27.2 -1.7**
baz=12
EGAK Eagle 5.55 54 Pn 11 21 28.6 -0.6
EGAK Eagle 5.55 54 P **Pn 11 21 28.6 -0.6**
baz=244
PCA Pinnacle 5.87 103 Pn **Pn 11 21 33.1 -0.5**
PINM Pinnacle 5.88 103 P **Pn 11 21 33.2 -0.6**
baz=293
DAWY Dawson 6.02 64 Pn **Pn 11 21 35.3 -0.3**
DAWY Dawson 6.02 64 P **Pn 11 21 35.3 -0.3**
baz=255
BCPM Bancas Point 6.22 103 Pn 11 21 38.2 0.0
YUK4 Talbot Arm 6.27 90 P **Pn 11 21 39.2 0.0**
baz=280
BMAR Burnt Mountain 6.32 26 Pn **Pn 11 21 38.9 -0.7**
CHIR Chirikof Islan 6.44 200 P **Pn 11 21 39.1 -2.2**
baz=16
YUK6 Outpost Mounta 6.49 93 P **Pn 11 21 41.8 -0.4**
baz=284
CHGN Chignik 6.60 214 Pn **Pn 11 21 43.4 -0.1**
CHGN Chignik 6.60 214 P **Pn 11 21 43.2 -0.2**
baz=28
J29M Klondike Camp 6.62 62 Pn 11 21 44.0 +0.2
TOLK Toolik Lake Re 6.81 7 Pn **Pn 11 21 47.8 +1.5**
TOLK Toolik Lake Re 6.81 7 P **Pn 11 21 47.2 +1.0**
baz=189
I29M Ogilvie Camp, 6.90 54 Pn 11 21 46.8 -0.7
HYT Haines Junctio 6.93 93 Pn **Pn 11 21 47.6 -0.4**
HYT Haines Junctio 6.93 93 P **Pn 11 21 47.1 -0.9**
baz=285
P29M Windy Craggy 7.23 102 Pn **Pn 11 21 51.9 -0.1**
N31M Braeburn, Yuko 7.60 86 Pn 11 21 56.6 -0.4
EPYK Eagle Plains 7.92 49 Pn 11 22 00.4 -1.0
EPYK Eagle Plains 7.92 49 P **Pn 11 22 01.0 -0.5**
baz=243
PLBC Pleasant Camp 7.93 101 P **Pn 11 22 01.3 -0.3**
baz=295
M31M Drury Creek, Y 8.15 80 Pn 11 22 04.4 -0.1
WHY Whitehorse 8.21 91 Pn **Pn 11 22 04.3 -1.2**
WHY Whitehorse 8.21 91 P **Pn 11 22 04.2 -1.2**
baz=286
CHNA Chernabura Isl 8.22 214 P **Pn 11 22 03.0 -2.4**
baz=27
SKAG Skagway 8.41 100 Pn **Pn 11 22 07.2 -0.9**
FARO Faro, Yukon 8.63 80 Pn 11 22 11.0 0.0
SIT Sitka 9.65 113 Pn **Pn 11 22 23.6 -1.2**
INK Inuvik 9.96 42 P **Pn 11 22 27.8 -1.1**
comp=N,31nm,0.8s,baz=233,slow=16,SNR=69
INK Inuvik 9.96 42 Pn **Pn 11 22 28.9 0.0**
INK Inuvik 9.96 42 P **Pn 11 22 27.9 -1.1**
baz=239
DLBC Dease Lake 11.34 98 P **Pn 11 22 47.4 -0.4**
comp=N,1.9nm,0.3s,baz=331,slow=12,SNR=18
DLBC S **Sn 11 24 48.2 -4.1**
comp=N,1.1nm,0.5s,baz=169,slow=20,SNR=1.3
WRAK Wrangell Islan 11.35 110 Pn **Pn 11 22 47.9 +0.1**
CRAG Craig 11.61 115 P **Pn 11 22 50.6 -0.7**

baz=311
YKA Yellowknife Ar 17.17 72 P **P 11 24 02.3 -0.1**
comp=N,3.4nm,0.6s,baz=282,slow=11,SNR=13
RES Resolute Bay 23.35 34 P **P 11 25 08.1 +0.1**
comp=N,3.2nm,0.5s,baz=273,slow=5.6,SNR=9.1
comp=N,3.2nm,0.5s
NVAR Mina Array Bea 31.19 123 P **P 11 26 21.6 +2.9**
comp=N,0.4nm,0.7s,baz=325,slow=9.3,SNR=4.0
comp=N,0.4nm,0.7s
ULM Lac du Bonnet 32.23 85 P **P 11 26 28.6 +1.2**
comp=N,3.8nm,0.5s,baz=312,slow=9.8,SNR=4.8
comp=N,3.8nm,0.5s
NRIK Noril'sk 42.45 333 P **P 11 27 53.5 +0.2**
comp=N,1.9nm,0.3s,baz=42,slow=6.4,SNR=4.2
comp=N,1.9nm,0.3s
TXAR Lajitas Array 45.13 114 P **P 11 28 17.6 +2.3**
comp=N,0.4nm,0.6s,baz=308,slow=5.6,SNR=8.4
comp=N,0.4nm,0.6s
ARCES ARCESS Array B 48.81 1 P **P 11 28 42.7 -0.6**
comp=N,2.2nm,0.8s,baz=8.5,slow=9.1,SNR=5.6
ARCES PcP **PcP 11 30 06.3 -0.1**
comp=N,1.2nm,0.6s,baz=352,slow=4.9,SNR=6.0
comp=N,2.2nm,0.8s
KSRS Korea Array 53.37 282 P **P 11 29 17.9 +0.1**
comp=N,1.0nm,0.6s,baz=26,slow=6.5,SNR=6.1
comp=N,1.0nm,0.6s
SONM Songino Array 54.17 306 P **P 11 29 24.7 +1.0**
comp=N,1.5nm,0.8s,baz=42,slow=8.7,SNR=6.6
comp=N,1.5nm,0.8s
ZALV Zalesovo Beam 56.19 324 P **P 11 29 37.5 -0.4**
comp=N,1.4nm,0.3s,baz=29,slow=7.2,SNR=7.5
comp=N,1.4nm,0.3s
FINES FINESS Array B 56.95 1 P **P 11 29 42.4 -0.7**
comp=N,1.6nm,0.7s,baz=26,slow=14,SNR=4.5
comp=N,1.6nm,0.7s
BVAR Borovoye Array 60.65 332 P **P 11 30 08.6 -0.3**
comp=N,0.9nm,0.5s,baz=38,slow=5.2,SNR=8.5
comp=N,0.9nm,0.5s
MKAR Makanchi Array 63.31 322 P **P 11 30 26.1 -0.7**
comp=N,1.0nm,0.5s,baz=39,slow=6.2,SNR=15
comp=N,1.0nm,0.5s
AKASG Malin Array Be 67.72 359 P **P 11 30 54.4 -0.7**
comp=N,2.2nm,0.5s,baz=2.0,slow=6.3,SNR=11
comp=N,2.2nm,0.5s
GERES GERESS Array B 68.97 10 P **P 11 31 02.7 -0.4**
comp=N,0.4nm,0.6s,baz=13,slow=6.1,SNR=5.0
comp=N,0.4nm,0.6s
ESDC Sonseca Array 75.45 25 P **P 11 31 41.8 +0.1**
comp=N,0.8nm,0.8s,baz=333,slow=5.9,SNR=4.6
comp=N,0.8nm,0.8s
BOSA Boshof 146.63 5 PKPbc **PKPbc 11 39 38.6 +0.1**
comp=N,1.3nm,0.5s,baz=326,slow=3.6,SNR=4.2

MAN 23 11:24:18.5, 11°.40N×126°.01E, h8km, mb3.8, ML2.6, MS2.1, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.60**	**290**	⇓*e*P	Pg	11 24 30.3	+0.2
BESP				*e*S	Sb	11 24 39.0	-0.8
GLSP	**General Luna,**	**1.61**	**176**	⇓*e*P	Pn	11 24 46.1	-1.2
GLSP				*e*S	Sb	11 25 08.9	-0.1
MSLP	**Maasin**	**1.69**	**222**	⇓*e*P	Pn	11 24 48.5	+0.2
MSLP				*e*S	Sg	11 25 13.2	+0.3
CNP	**Catarman**	**1.72**	**310**	⇑*e*P	Pn	11 24 48.1	-0.7
TABP	**Talibon, Bohol**	**2.10**	**232**	*e*P	Pn	11 24 53.9	-0.2
TABP				*i* S	Sb	11 25 22.6	-0.6
GHBP	**Garcia Hernand**	**2.42**	**224**	⇑*i*P	Pn	11 24 58.8	+0.4
GHBP				*i* S	Sb	11 25 32.8	+0.5
RCP	**Roxas**	**3.21**	**273**	⇑*e*P	Pn	11 25 11.3	+2.0
RCP				*e*S	Sn	11 25 45.5	-2.2

MAN 23 11:40:29.0, 9°.37N×122°.47E, h27km, mb4.0, ML2.8, MS2.4, 3C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.48**	**20**	⇓*i*P	Pb	11 40 39.5	+0.4
CNOP				*i* S	Sn	11 40 47.2	-0.6
LSIP	**Lazi, Siquijor**	**1.17**	**102**	⇑*i*P	Pn	11 40 49.5	-0.1
LSIP				*i* S	Sn	11 41 05.0	+0.2
GUIM	**Jordan**	**1.25**	**5**	⇑*e*P	Pn	11 40 50.9	+0.2
GUIM				*e*S	Sb	11 41 07.3	-0.4
GHBP	**Garcia Hernand**	**1.85**	**82**	⇑*e*P	Pn	11 40 60.0	+1.0
GHBP				*e*S	Sn	11 41 21.6	+0.2
CUYO	**Cuyo Island**	**2.05**	**316**	⇓*e*P	Pn	11 41 01.8	0.0
CUYO				*e*S	Sn	11 41 25.2	-1.3
RCP	**Roxas**	**2.19**	**7**	⇓*e*P	Pb	11 41 06.6	-1.4
RCP				*e*S	Sb	11 41 34.6	-0.2

MAN 23 11:43:40.1, 11°.29N×124°.61E, h7km, mb4.5, ML3.4, MS3.2, 7C-5D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.24**	**180**	⇑*e*P	Pg	11 43 45.3	+0.4
OCLP				*e*S	Sg	11 43 50.1	+1.9
BESP	**Borongan**	**0.87**	**69**	⇑*e*P	Pb	11 43 57.2	-0.3
BESP				*e*S	Sn	11 44 10.9	-0.7
LLP	**Lapu-Lapu**	**1.16**	**213**	⇑*i*P	Pg	11 44 01.2	-1.2
LLP				*i* S	Sg	11 44 17.4	0.0
MSLP	**Maasin**	**1.18**	**168**	⇑*e*P	Pb	11 44 02.9	0.0
MSLP				*e*S	Sn	11 44 22.2	+2.8
CNP	**Catarman**	**1.21**	**2**	⇓*e*P	Pg	11 44 02.5	-0.9
CNP				*e*S	Sn	11 44 20.5	+0.4
TABP	**Talibon, Bohol**	**1.23**	**193**	⇓*e*P	Pb	11 44 01.6	-2.0
TABP				*i* S	Sg	11 44 18.1	-1.6
GHBP	**Garcia Hernand**	**1.68**	**190**	⇑*i*P	Pn	11 44 10.3	+0.4
GHBP				*i* S	Sg	11 44 33.8	-0.4
TBP	**Tagbilaran**	**1.75**	**205**	*e*P	Pn	11 44 09.9	-1.1
TBP				*i* S	Sb	11 44 34.8	-0.2
RCP	**Roxas**	**1.85**	**278**	⇑*e*P	Pn	11 44 12.1	-0.2
RCP				*e*S	Sb	11 44 38.5	+0.8
GUIM	**Jordan**	**2.09**	**252**	⇓*e*P	Pn	11 44 15.8	+0.1
GUIM				*e*S	Sn	11 44 43.2	+1.2
GLSP	**General Luna,**	**2.12**	**135**	⇑*e*P	Pb	11 44 17.5	-1.4
PVCP	**Virac**	**2.33**	**349**	⇓*e*P	Pn	11 44 19.3	+0.4
PVCP				*e*S	Sg	11 44 54.5	-0.6
LSIP	**Lazi, Siquijor**	**2.36**	**204**	⇓*e*P	Pb	11 44 23.5	+0.6

*NEIC **23** 11:46:15.0±1.0, 23°.18N±0°.10×142°.1E±0°.2, h42km±8km, mb5.0/28, Error ellipse: s-maj=24.8km s-min=14.3km az=96.0*

*IDC **23** 11:46:15.8±3.3, 23°.25N×142°.15E, h56km±29km, mb3.7/13, mbtmp4.0/16, ML3.4/3, MS3.5/38, Error ellipse: s-maj=22.0km s-min=14.5km az=99.0*

ISC 23 11:46:14.1±0.6, 23°.25N±0°.07×142°.0E±0°.1, h35km, n89, σ1§14/55, mb4.7/28, MS3.6/35, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.83**	**2**	P	**Pn**	**11 47 11.8**	**+1.2**
	26nm,0.3s,baz=269,slow=21,SNR=5.3						
JCJ				S	**Sn**	**11 47 50.2**	**-4.1**
	74nm,0.3s,baz=275,slow=21,SNR=1.6						
JCJ				LR	LR	11 48 31.5	
	comp=Z,674nm,19.5s,baz=146,slow=35						
	82nm,0.3s						
JHJ	**Hachijo jima 2**	**10.03**	**349**	LR	LR	11 52 02.6	
	comp=Z,190nm,18.3s,baz=276,slow=34						
MJAR	**Matsushiro Arr**	**13.65**	**347**	P	**Pn**	**11 49 26.9**	**+1.8**
	0.1nm,0.3s,baz=226,slow=51,SNR=5.0						
MJAR				LR	LR	11 54 40.5	
	comp=Z,400nm,18.1s,baz=158,slow=37						
	0.9nm,0.7s						
KSRS	**Korea Array**	**18.63**	**323**	P	**P**	**11 50 29.4**	**+0.7**
	0.1nm,0.3s,baz=142,slow=11,SNR=4.1						
KSRS				LR	LR	11 57 29.9	
	comp=Z,162nm,18.6s,baz=130,slow=36						
	2.6nm,1.0s						
DAV	**Davao City (W)**	**22.55**	**227**	LR	LR	11 58 03.7	
	comp=Z,194nm,21.4s,baz=47,slow=31						
H11N1	**WAKE ISLAND Hy**	**23.40**	**94**	T	T	12 15 20.3	
	baz=283,slow=75,SNR=1097						
H11N2	**WAKE ISLAND Hy**	**23.40**	**94**	T	T	12 15 26.2	
	baz=283,slow=75,SNR=1335						
H11N3	**WAKE ISLAND Hy**	**23.42**	**94**	T	T	12 15 27.3	
	baz=283,slow=75,SNR=1192						
H11S3	**WAKE ISLAND Hy**	**23.52**	**97**	T	T	12 15 34.1	
	baz=286,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**23.53**	**97**	T	T	12 15 33.2	
	baz=286,slow=75,SNR=18						

H11S2	WAKE ISLAND Hy	23.54	97	T	T	12 15 33.9	
	baz=286,slow=75,SNR=34						
SIJI	Sorong	26.16	205	LR	LR	11 59 32.7	
	comp=Z,162nm,20.4s,baz=56,slow=30						
KLR	Kul'dur	27.16	345	LR	LR	12 01 47.6	
	comp=Z,110nm,21.4s,baz=151,slow=34						
MYLDM	Lahad Datu	28.94	235	P	P	11 52 10.7	+0.5
PETK	Petropavlovsk-	32.11	18	LR	LR	12 07 29.3	
	comp=Z,24nm,18.9s,baz=199,slow=40						
PMG	Port Moresby	32.85	171	LR	LR	12 06 09.8	
	comp=Z,38nm,19.4s,baz=94,slow=36						
MA2	Magadan	36.82	7	LR	LR	12 09 37.2	
	comp=Z,36nm,18.2s,baz=243,slow=38						
HNR	Honiara	36.92	150	LR	LR	12 06 58.5	
	comp=Z,894nm,20.1s,baz=318,slow=34						
MTN	Manton Dam	37.42	198	P	P	11 53 22.3	-1.8
MTN				IAmb	IAmb	11 53 41.1	
	comp=Z,60nm,1.7s						
SONM	Songino Array	37.46	320	LR	LR	12 09 32.6	
	comp=Z,108nm,18.3s,baz=64,slow=37						
SHEM	Shemya Is, Ala	38.23	31	LR	LR	12 09 31.0	
	comp=Z,112nm,18.4s,baz=258,slow=36						
YAK	Yakutsk	39.66	351	LR	LR	12 10 06.7	
	comp=Z,70nm,18.4s,baz=94,slow=36						
CM31	Chiang Mai Arr	40.43	272	P	P	11 53 48.6	-0.7
CMAR	Chiang Mai Arr	40.43	272	P	P	11 53 51.0	+1.7
	comp=Z,1.7nm,0.6s,baz=58,slow=8.7,SNR=9.6						
	comp=Z,1.7nm,0.6s						
CTA	Charters Tower	43.28	174	P	P	11 54 14.3	+1.9
	comp=Z,3.1nm,0.8s,baz=14,slow=9.9,SNR=2.5						
CTA				LR	LR	12 12 21.0	
	comp=Z,42nm,19.3s,baz=268,slow=36						
WB0	Warramunga Arr	43.40	190	P	P	11 54 12.3	-1.1
WR0	Warramunga Arr	43.56	190	P	P	11 54 13.4	-1.4
WB2	Warramunga Arr	43.58	190	P	P	11 54 13.7	-1.2
WB2				IAmb	IAmb	11 54 22.1	
	comp=Z,34nm,1.1s						
WRA	Warramunga Arr	43.58	191	P	P	11 54 14.5	-0.4
	comp=Z,3.4nm,0.6s,baz=11,slow=8.3,SNR=18						
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	43.58	191	P	P	11 54 13.9	-1.0
LEM	Lembang	44.99	233	LR	LR	12 13 52.7	
	comp=Z,16nm,21.8s,baz=27,slow=37						
AS31	Alice Springs	47.30	190	P	P	11 54 43.0	-1.4
ASAR	Alice Springs	47.30	190	P	P	11 54 43.9	-0.5
	comp=Z,1.1nm,0.7s,baz=12,slow=12,SNR=16						
ASAR				LR	LR	12 13 10.6	
	comp=Z,91nm,21.3s,baz=22,slow=34						
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	47.30	190	P	P	11 54 42.5	-1.9
TIXI	Tiksi	49.00	355	LR	LR	12 14 59.0	
	comp=Z,34nm,21.4s,baz=359,slow=35						
ZALV	Zalesovo Beam	52.33	321	LR	LR	12 18 18.2	
	comp=Z,36nm,18.1s,baz=78,slow=37						
MKAR	Makanchi Array	52.86	312	P	P	11 55 26.6	+0.3
	comp=Z,0.3nm,0.5s,baz=89,slow=9.5,SNR=5.2						
MKAR				LR	LR	12 20 27.2	
	comp=Z,52nm,18.1s,baz=74,slow=39						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	52.86	312	P	P	11 55 26.5	+0.1
STKA	Stephens Creek	54.82	180	P	P	11 55 40.1	-0.6
	comp=Z,1.1nm,0.6s,baz=327,slow=15,SNR=6.0						
STKA				LR	LR	12 19 14.4	
	comp=Z,26nm,19.7s,baz=25,slow=36						
	comp=Z,1.1nm,0.6s						
STKA	Stephens Creek	54.82	180	P	P	11 55 39.5	-1.1
FORT	Forrest	55.37	195	P	P	11 55 44.2	-0.4
O18K	Koktuh Hills	56.55	33	P	P	11 55 52.3	-0.6
KDAK	Kodiak Island	57.55	35	P	P	11 55 59.2	-0.7
	comp=Z,8.7nm,1.1s,baz=296,slow=5.3,SNR=5.1						
KDAK				LR	LR	12 17 25.5	
	comp=Z,78nm,21.9s,baz=265,slow=32						
	comp=Z,8.7nm,1.1s						
KDAK	Kodiak Island	57.55	35	P	P	11 55 59.1	-0.8
M20K	Styx River	57.94	30	P	P	11 56 02.7	0.0
M20K				IAmb	IAmb	11 57 35.9	
	comp=Z,37nm,1.9s						
J20K	Nowinta River	57.96	28	P	P	11 56 03.1	+0.4
J20K				IAmb	IAmb	11 56 34.6	
	comp=Z,42nm,1.9s						
AFI	Afiamalu	58.38	125	LR	LR	12 19 11.7	
	comp=Z,35nm,18.5s,baz=281,slow=34						
IMAR	Indian Mountai	58.55	26	P	P	11 56 07.4	+0.6
PPLA	Purkeypile	58.55	29	P	P	11 56 07.5	+0.4
H21K	Melozitna Rive	58.85	26	P	P	11 56 08.9	-0.1
H21K				IAmb	IAmb	11 56 37.5	
	comp=Z,24nm,1.9s						
HYBB	Hyderabad (bro	59.40	277	eP	P	11 56 13.9	+0.3
PMR	Palmer	59.77	31	P	P	11 56 13.9	-1.3
TOLK	Toolik Lake Re	60.71	23	P	P	11 56 22.9	+1.2
TOLK				IAmb	IAmb	11 58 17.0	
	comp=Z,27nm,1.8s						
H24K	Noodor Dome	60.88	26	P	P	11 56 23.2	+0.3
H24K				IAmb	IAmb	11 56 37.4	
	comp=Z,9.7nm,1.3s						
ILAR	Eielson Array	61.16	28	P	P	11 56 23.8	-1.0
	comp=Z,0.8nm,0.9s,baz=270,slow=5.1,SNR=5.7						
ILAR				LR	LR	12 20 37.5	
	comp=Z,30nm,20.9s,baz=206,slow=34						
	comp=Z,0.8nm,0.9s						
M24K	Tolsona, Glenn	61.22	31	P	P	11 56 25.3	0.0
KLU	Klutina	61.29	31	P	P	11 56 26.0	+0.2
KLU				IAmb	IAmb	11 57 45.7	
	comp=Z,29nm,1.6s						
J26L	Joseph Creek	62.56	28	P	P	11 56 34.1	-0.2
J26L				IAmb	IAmb	11 56 41.2	
	comp=Z,17nm,1.6s						
TGL	Tana Glacier	62.76	32	P	P	11 56 36.1	+0.3
L27K	Beaver Creek,	63.27	30	P	P	11 56 39.3	+0.3
L27K				IAmb	IAmb	11 57 57.8	
	comp=Z,13nm,1.6s						
BCAR	Beaver Creek A	63.29	30	P	P	11 56 39.4	+0.2
DAWY	Dawson	64.37	29	P	P	11 56 46.3	+0.1
DAWY				IAmb	IAmb	11 57 28.4	
	comp=Z,21nm,1.9s						
HYT	Haines Junctio	65.37	32	P	P	11 56 54.5	+1.6
HYT				IAmb	IAmb	11 58 12.1	
	comp=Z,33nm,1.9s						
M30M	Minto, Yukon	65.59	30	P	P	11 56 54.6	+0.4
M30M				IAmb	IAmb	11 57 24.1	
	comp=Z,23nm,1.9s						
INK	Inuvik	66.58	24	P	P	11 57 00.2	-0.1
	comp=Z,1.2nm,0.6s,baz=269,slow=3.0,SNR=6.5						
	comp=Z,1.2nm,0.6s						
INK	Inuvik	66.58	24	P	P	11 56 59.8	-0.6
INK				IAmb	IAmb	11 57 23.1	
	comp=Z,33nm,1.9s						
ARU	Arti	67.38	323	LR	LR	12 29 38.1	
	comp=Z,50nm,18.1s,baz=356,slow=39						
AKTO	Aktyubinsk	68.70	317	LR	LR	12 27 34.4	
	comp=Z,38nm,20.0s,baz=1.7,slow=36						
DLBC	Dease Lake	69.44	34	LR	LR	12 24 13.3	
	comp=Z,55nm,21.8s,baz=292,slow=33						
KIRV	Kirov	71.79	327	LR	LR	12 32 04.1	
	comp=Z,80nm,18.2s,baz=32,slow=38						
BBB	Bella Bella	71.90	40	LR	LR	12 30 51.0	
	comp=Z,13nm,18.3s,baz=278,slow=37						
SPITS	Spitsbergen Ar	74.12	350	LR	LR	12 31 44.0	
	comp=Z,46nm,18.2s,baz=341,slow=37						
YKA	Yellowknife Ar	75.59	28	P	P	11 57 54.8	-0.2
	comp=Z,0.5nm,0.5s,baz=290,slow=5.9,SNR=4.2						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	77.11	341	LR	LR	12 36 08.4	
	comp=Z,49nm,19.9s,baz=296,slow=39						
KBZ	Khabaz	80.52	313	P	P	11 58 22.4	-0.3
	comp=Z,3.9nm,0.9s,baz=62,slow=0.4,SNR=5.1						
	comp=Z,3.9nm,0.9s						
FINES	FINESS Array B	81.32	334	P	P	11 58 26.0	-0.6
	comp=Z,1.1nm,0.6s,baz=73,slow=4.7,SNR=7.4						
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	83.02	51	P	P	11 58 38.8	+2.4
	comp=Z,0.6nm,0.7s,baz=246,slow=6.6,SNR=5.1						
ELK	Elko	84.20	48	LR	LR	12 37 39.7	
	comp=Z,12nm,18.1s,baz=318,slow=37						
AKASG	Malin Array Be	85.62	324	P	P	11 58 47.2	-1.7
	comp=Z,0.1nm,0.3s,baz=44,slow=5.5,SNR=4.4						
	comp=Z,0.1nm,0.3s						
PFO	Pinyon Flats O	86.39	55	LR	LR	12 29 43.1	
	comp=Z,41nm,21.3s,baz=266,slow=30						
PDAR	Pinedale Array	87.05	44	LR	LR	12 31 19.8	
	comp=Z,44nm,19.6s,baz=326,slow=31						
NOA	NORSAR Array B	87.11	338	LR	LR	12 39 52.9	
	comp=Z,36nm,19.0s,baz=285,slow=37						
BRTR	Keskin Array B	88.50	313	P	P	11 59 02.9	-0.4
	comp=Z,0.4nm,0.4s,baz=28,slow=6.5,SNR=3.5						
	comp=Z,0.4nm,0.4s						
SFJD	Kangerlussuaq	89.53	5	LR	LR	12 43 38.2	
	comp=Z,26nm,18.1s,baz=140,slow=38						
VRAC	Vranov	92.99	328	LR	LR	12 44 03.6	
	comp=Z,81nm,18.2s,baz=31,slow=37						
GERES	GERESS Array B	94.70	329	LR	LR	12 45 48.4	
	comp=Z,60nm,19.0s,baz=348,slow=38						
TXAR	Lajitas Array	98.01	53	LR	LR	12 35 32.4	
	comp=Z,20nm,21.0s,baz=312,slow=30						
PLCA	Paso Flores	147.58	130	PKPbc	PKPdf	12 05 52.4	+0.2
	comp=Z,1.9nm,1.1s,baz=243,slow=6.8,SNR=2.5						
LPAZ	La Paz	150.83	82	PKPbc	PKPbc	12 06 03.1	-1.3
	comp=Z,0.5nm,0.5s,baz=326,slow=3.6,SNR=2.3						
LPAZ				PKPab	pPKPdf	12 06 09.8	+0.3
	comp=Z,1.9nm,0.5s,baz=283,slow=3.2,SNR=15						

*ISU **23** 12:07:30.40±83.0N×69.64±.64E, h5km*
*NNC **23** 12:07:32.8±3.0, 40.83N×70.20E, h0km, mb3.3, mpv3.3,*
Error ellipse: s-maj=20.7km s-min=12.4km az=27.0
*SOME **23** 12:07:33.7, 40.85N×70.32E, h15km*
*KRNET **23** 12:07:34.1±0.1, 41.10N×70.18E, mb3.1*

ISC 23 12:07:34.1±1.2, 40.97N±0.03×70.34E±0.03, h1km±12km, n20, σ2°48/34, 9C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMG	Chimgan	0.63	337	P	Pg	12 07 44.1	-2.1
CHMG				S	Sg	12 07 55.1	+0.7
TRKS	Terek-Say	0.82	47	⇑eP	Pb	12 07 50.1	-1.2
	baz=64						
TRKS				⇑eS	Sb	12 08 01.4	-1.5
	baz=64						
BTK	Batken	0.98	158	⇓eP	Pn	12 07 55.7	+0.7
	baz=55						
BTK				⇓eS	Sn	12 08 11.7	+2.1
	baz=55						
IUG	Iuzhnay	1.20	349	eP	Pb	12 07 58.0	+0.3
	137nm,0.2s						
IUG				eS	Sg	12 08 15.8	+3.2
	136nm,0.3s						
IUG	Iuzhnay	1.20	349	P	Pb	12 07 58.0	+0.3
	137nm,0.2s						
IUG				S	Sg	12 08 15.8	+3.2
	136nm,0.3s						
FRG	Fergana	1.25	118	P	Pg	12 08 01.8	+3.8
FRG				S	Sg	12 08 24.7	+11
ANR	Andizhan	1.55	97	P	Pg	12 08 34.7	+31
GAR	Garm	1.97	181	⇑eP	Pg	12 08 12.1	+0.3
	baz=77						
GAR				⇑eS	Sg	12 08 40.0	+2.7
	baz=77						
KK31	Karatay Array	2.14	3	Pn	Pn	12 08 12.0	+1.1
	3.3nm,0.5s,baz=189,slow=16,SNR=38						
KK31				⇑Sn	Sb	12 08 42.1	+1.5
	3.7nm,0.4s,baz=189,slow=26,SNR=10.0						
KKAR	Karatay Array	2.14	3	⇑eP	Pn	12 08 11.0	+0.1
	baz=7.0						
KKAR				⇑eS	Sn	12 08 37.9	-0.1
	baz=7.0						
CHGR	Chuyangaron	2.48	202	⇓eP	Pg	12 08 18.6	-3.1
	baz=98						
CHGR				⇓eS	Sg	12 08 50.9	-2.9
	baz=98						
MRKS	Merke	2.79	50	eP	Pb	12 08 26.0	+1.2
	3.6nm,0.3s						
MRKS				eS	Sg	12 09 03.3	-0.4
	15nm,0.8s						
MRKS	Merke	2.79	50	Pg	Pb	12 08 26.0	+1.2
	3.6nm,0.3s						
MRKS				Lg	Lg	12 09 03.3	
	15nm,0.8s						
ARLS	Aral	3.12	72	⇑eP	Pb	12 08 27.5	-3.0
	baz=75						
ARLS				⇑eS	Sb	12 09 06.4	-2.8
	baz=75						
UCH	Uchtor	3.37	67	⇓eP	Pb	12 08 31.0	-3.9
	baz=69						
UCH				⇓eS	Sb	12 09 12.3	-4.3
	baz=69						
KST	Kastek	4.67	62	eP	Pb	12 09 00.4	+3.5
	1.5nm,0.2s						
KST				eS	Sg	12 10 03.2	-1.0
	7.5nm,0.6s						
KRBS	Karabastau	4.80	54	eP	Pb	12 09 02.9	+3.9
	0.9nm,0.4s						
KRBS				eS	Sg	12 10 07.3	-1.0
	2.4nm,0.7s						
KRBS	Karabastau	4.80	54	Pg	Pb	12 09 02.9	+3.9
	0.9nm,0.4s						
KRBS				Lg	Lg	12 10 07.3	
	2.4nm,0.7s						
KTBS	Karatobe	5.44	58	eP	Pg	12 09 16.2	-2.1
	0.8nm,0.8s						
KTBS				eS	Sg	12 10 29.6	+0.8
	3.4nm,0.7s						
KTBS	Karatobe	5.44	58	Pg	Pg	12 09 16.2	-2.1
	0.8nm,0.8s						
KTBS				Lg	Lg	12 10 29.5	
	3.4nm,0.7s						

*DDA **23** 12:11:44.7±0.0, 35.28N×28.59E, h11km±1km, ML2.5*
*NIC **23** 12:11:46.0±0.0, 35.03N×28.84E, h32km±19km, Ml3.6/6*
*ISK **23** 12:11:45.5, 35.22N×28.72E, h13km, ML2.8/18*

ISC 23 12:11:43.1±1.4, 35.07N±0.04×28.79E±0.03, h12km±10km, n38, σ1°56/52, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	1.27	335	PN	Pg	12 12 07.3	-0.2
ARG				SN	Sn	12 12 22.9	-0.7
ARG	Arkhangelos	1.27	335	P	Pg	12 12 08.2	+0.7
ARG				S	Sn	12 12 25.0	+1.4
AKAS	Kas	1.34	29	PN	Pb	12 12 09.0	+0.8
AKAS				SN	Sg	12 12 26.3	0.0
AKAS	Kas	1.34	29	P	Pn	12 12 08.3	+0.5
AKAS				S	Sg	12 12 26.1	-0.2
AKAS				*i* AML	AML	12 12 29.0	
	comp=E,100nm,0.4s						
AKAS				*i* AML	AML	12 12 34.0	
	comp=N,113nm,0.4s						
KARP	Karpathos	1.42	290	PN	Pb	12 12 10.2	+0.7
KARP	Karpathos	1.42	290	P	Pb	12 12 10.0	+0.5
KARP				AML	AML	12 12 29.0	
	0.3nm,0.5s						
KARP				AML	AML	12 12 29.0	
	0.3nm,0.5s						
KARP				S	Sg	12 12 29.0	+0.3
KARP				AML	AML	12 12 32.2	
	0.3nm,0.3s						
KARP				AML	AML	12 12 32.2	
	0.3nm,0.3s						
FETY	Fethiye	1.58	9	PN	Pb	12 12 11.9	-0.4
FETY				SN	Sg	12 12 31.3	-2.7
DALY	Dalyan (Mula)	1.75	356	PN	Pb	12 12 14.1	-1.0
TURN	Turunc	1.76	346	PN	Pb	12 12 14.2	-1.1
AKUM	Antalya-Kumluc	1.78	45	P	Pn	12 12 09.6	-4.1
AKUM				S	Sn	12 12 33.8	-2.3
ELL	Elmali	1.91	28	PN	Pn	12 12 17.4	+1.9
CAME	Cameli-Denizli	1.92	12	PN	Pn	12 12 16.8	+1.1
DAT	Datca	1.93	330	PN	Pn	12 12 16.3	+0.5
NIS1	Nisyros Isl.	2.02	320	PN	Pn	12 12 17.9	+0.9
YER	Yerkesik	2.10	349	PN	Pn	12 12 18.9	+0.7
ZKR	Zakros	2.11	272	P	Pn	12 12 19.2	+0.9
ZKR				AML	AML	12 12 43.6	
	0.2nm,0.6s						
ZKR				AML	AML	12 12 46.3	
	0.1nm,0.3s						
MULA	Mugla, Merkez-	2.22	350	P	Pb	12 12 23.7	+0.6
GOLH	Golhisar	2.25	16	P	Pb	12 12 23.1	-0.7
GOLH				S	Sb	12 12 50.7	-1.0
GOLH				*i* AML	AML	12 12 54.0	
	comp=E,48nm,0.4s						
GOLH				*i* AML	AML	12 12 57.0	
	comp=N,38nm,0.5s						
KORT	Korkueli	2.31	33	PN	Pn	12 12 22.6	+1.6
KORT	Korkueli	2.31	33	P	Pn	12 12 23.4	+2.4
BODT	Bodrum	2.32	329	PN	Pn	12 12 22.2	+1.0
TAVA	DENIZLI_Tavas	2.40	2	P	Pn	12 12 23.9	+1.6
TAVA				S	Sb	12 12 53.5	-2.2
APMY	Acipayam-Deniz	2.43	10	PN	Pn	12 12 24.4	+1.6
OSC1	CSNet OBS 1	2.58	127	P	Pn	12 12 24.6	-0.1
OSC1				S	Sn	12 12 55.5	-0.6
AYDN	Tasoluk	2.69	344	P	Pn	12 12 27.7	+1.4
AYDN				S	Sn	12 12 57.5	-1.3
AYDN				*i* AML	AML	12 13 01.0	
	comp=N,20nm,0.5s						
AYDN				*i* AML	AML	12 13 01.0	
	comp=E,27nm,0.3s						
AKMS	Akamas	2.91	90	P	Pn	12 12 29.8	+0.6
AKMS				S	Sn	12 13 03.6	-0.5
AKMS				AML	AML	12 13 04.1	
	0.5nm,0.3s						
AKMS				AML	AML	12 13 04.1	
	0.5nm,0.3s						
AKMS				AML	AML	12 13 07.6	
	0.4nm,0.8s						
AKMS				AML	AML	12 13 07.6	
	0.4nm,0.8s						
KEPZ	Antalya-Kepez	2.92	50	P	Pn	12 12 31.7	+2.3
KEPZ				S	Sn	12 13 05.7	+1.1
KEPZ				*i* AML	AML	12 13 09.0	
	comp=E,19nm,0.8s						
AYDB	Zeytinkoy-Aydi	2.96	346	PN	Pn	12 12 31.5	+1.4
GAZI	Gazipasa	3.10	67	PN	Pn	12 12 35.5	+3.7
ALFC	Alefka	3.12	87	P	Pn	12 12 32.6	+0.4
ALFC				AML	AML	12 13 09.1	
	0.4nm,0.6s						
ALFC				AML	AML	12 13 09.1	
	0.4nm,0.6s						
ALFC				S	S	12 13 09.1	-0.3
ALFC				AML	AML	12 13 13.6	
	0.7nm,0.5s						
ALFC				AML	AML	12 13 13.6	
	0.7nm,0.5s						
BAGO	Egridir - ISPA	3.33	28	P	Pn	12 12 38.5	+3.4
SEDI	Konya, Seydise	3.38	44	P	Pn	12 12 37.4	+1.7
SZAC	Souni	3.38	94	P	Pn	12 12 36.5	+0.9
SZAC				S	Sn	12 13 15.3	-0.4
SZAC				AML	AML	12 13 16.1	
	0.4nm,0.3s						
SZAC				AML	AML	12 13 16.1	
	0.4nm,0.3s						
SZAC				AML	AML	12 13 18.0	
	0.3nm,0.3s						
SZAC				AML	AML	12 13 18.0	
	0.3nm,0.3s						
SEYD	Seydisehir-KON	3.39	46	PN	Pn	12 12 39.6	+3.6
HDMB	Hadim	3.54	57	PN	Pn	12 12 41.2	+3.1
ASGA	Asgata	3.67	93	P	Pn	12 12 40.1	+0.4
ASGA				AML	AML	12 13 23.4	
	0.3nm,0.5s						
ASGA				AML	AML	12 13 25.8	
	0.3nm,0.4s						
CSS	Mathiatis	3.73	90	P	Pn	12 12 41.3	+0.8
MVOU	Mavrovouni	3.97	89	P	Pn	12 12 45.3	+1.5

*PDG **23** 12:16:05.5±0.0, 41.90N×19.26E, h20km, MD2.5/2,*
ML2.4/11, Error ellipse: s-maj=0.0km s-min=0.0km
az=90.0
*RHSSO **23** 12:16:05.5±0.9, 41.82N×19.17E, h5km±2km, ML2.3/5*
*BEO **23** 12:16:07.3±0.4, 41.90N×19.16E, h4km±2km, ML2.0/8*

ISC 23 12:16:06.6±0.9, 41.92N±0.03×19.18E±0.02, h12km±6km, n38, σ0°97/74, 3C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.07	44	⇑*i*Pg	Pg	12 16 08.9	-0.3
ULC				*i* Sg	Sg	12 16 11.8	+0.7
DRME	Dracevica, Mon	0.27	0	⇓*i*Pg	Pb	12 16 12.3	-1.1
DRME				*e*Sg	Sb	12 16 17.3	-0.7
DRME	Dracevica, Mon	0.27	0	*e*Pg	Pg	12 16 11.8	-0.5
DRME				*i* Sg	Sb	12 16 17.1	-0.9
BUM	Brajici-Budva	0.44	331	*e*Pg	Pg	12 16 15.0	-0.4
BUM				*i* Sg	Sb	12 16 23.1	+0.2
PDG	Podgorica	0.52	6	*e*Pg	Pg	12 16 16.3	-0.5
PDG				*e*Sg	Sb	12 16 24.4	-0.6
TTG	Podgorica	0.52	6	⇓*i*Pg	Pg	12 16 15.7	-1.1
TTG				*i* Sg	Sb	12 16 24.4	-0.6
CEME	Cevo	0.66	343	*e*Pg	Pg	12 16 18.7	-0.8
CEME				*i* Sg	Sb	12 16 29.9	+0.7
HCY	Herceg Novi	0.74	316	*e*Pg	Pg	12 16 20.2	-0.7
HCY				*e*Sg	Sb	12 16 31.8	+0.4
HCY	Herceg Novi	0.74	316	*e*Pg	Pb	12 16 20.4	-1.0
HCY				*i* Sg	Sn	12 16 33.1	-0.8
TIR	Tirane	0.76	138	*e*Pg	Pb	12 16 20.7	-1.1
TIR				*e*Sg	Sb	12 16 32.0	-0.1
PVY	Plav	0.89	40	⇑*i*Pg	Pg	12 16 21.8	-2.0
PVY				*i* Sg	Sb	12 16 35.6	-0.3
KOME	Kolasin	0.97	15	⇓*i*Pg	Pg	12 16 23.6	-1.7
KOME				*i* Sg	Sb	12 16 39.0	+0.9
DBRK	Dubrovnik	1.08	315	*e*Pg	Pb	12 16 26.6	-0.6
DBRK				Sg	Sn	12 16 43.1	+0.8
IVA	Berane	1.09	29	*e*Pg	Pg	12 16 25.6	-2.0
IVA				*i* Sg	Sb	12 16 42.7	+1.1
BRY	Bratogost	1.09	334	*e*Pg	Pb	12 16 27.2	-0.3
BRY				*e*Sg	Sn	12 16 43.4	+0.4
BRY	Bratogost	1.09	334	*e*Pg	Pg	12 16 26.6	-1.1
BRY				*i* Sg	Sn	12 16 44.6	+1.6
UPM	Unac-Piva	1.30	351	*e*Pg	Pg	12 16 30.2	-1.5
UPM				*e*Sg	Sn	12 16 50.2	+2.0
UPM	Unac-Piva	1.30	351	*e*Pg	Pg	12 16 30.0	-1.7
UPM				*i* Sg	Sn	12 16 49.5	+1.3
PLE	Pljevlja	1.42	6	*e*Pg	Pn	12 16 31.4	-0.9
PLE				*i* Sg	Sg	12 16 52.0	-0.4
OHR	Ohrid	1.46	123	*e*Pg	Pg	12 16 33.6	-1.0
OHR				*e*Sg	Sg	12 16 54.4	+0.9
STON	Ston	1.46	312	⇑*i*Pn	Pn	12 16 32.8	+0.2
STON				*e*Sn	Sg	12 16 52.9	-0.6
STON	Ston	1.46	312	*e*Pn	Pn	12 16 32.4	-0.3
STON				Sg	Sg	12 16 53.3	-0.1
STON	Ston	1.46	312	*e*Pg	Pb	12 16 33.3	-0.3
STON				*e*Sg	Sg	12 16 53.8	+0.3
SJES	Sjenica	1.47	23	*e*Pn	Pb	12 16 33.7	-0.1
SJES				*e*Sn	Sg	12 16 54.8	+1.0
SJES	Sjenica	1.47	23	*e*Pg	Pg	12 16 34.0	-0.8
SJES				*e*Sg	Sg	12 16 55.0	+1.2
RUDO	Rudo	1.71	5	*e*Pn	Pb	12 16 37.5	-0.4
RUDO				*e*Sn	Sb	12 17 00.1	+0.8
LSTV	Lastovo	1.90	297	*e*Pn	Pn	12 16 38.8	0.0
LSTV				Sn	Sb	12 17 05.2	+0.4
SELS	Selova	1.94	47	*e*Pn	Pb	12 16 41.0	-0.8
SELS				*e*Sn	Sb	12 17 06.0	+0.1
BBLS	Lazići	1.96	5	*e*Pn	Pn

comp=Z,58nm,19.9s,baz=147,slow=36
WB0 Warramunga Arr 39.66 197 P **P 12 26 32.7 -0.4**
WB0 IAmb IAmb 12 26 34.5
comp=Z,6.1nm,1.0s
WR0 Warramunga Arr 39.80 197 P **P 12 26 34.5 +0.3**
WR0 IAmb IAmb 12 26 37.8
comp=Z,6.9nm,1.2s
WB2 Warramunga Arr 39.84 197 P **P 12 26 34.2 -0.4**
WB2 IAmb IAmb 12 26 43.1
comp=Z,14nm,1.4s
WRA Warramunga Arr 39.84 197 P **P 12 26 34.0 -0.6**
comp=Z,1.1nm,0.3s,baz=13,slow=8.1,SNR=46
comp=Z,1.1nm,0.3s
WRA Warramunga Arr 39.84 197 P **P 12 26 34.4 -0.2**
AS31 Alice Springs 43.51 196 P **P 12 27 04.6 +0.3**
ASAR Alice Springs 43.51 196 P **P 12 27 03.5 -0.8**
comp=Z,0.6nm,0.6s,baz=12,slow=6.1,SNR=17
comp=Z,0.6nm,0.6s
ASAR Alice Springs 43.51 196 P **P 12 27 04.4 +0.1**
PSA00 Pilbara Seismi 47.30 214 P **P 12 27 35.4 +1.3**
PSA00 IAmb IAmb 12 27 40.5
comp=Z,11nm,1.2s
MORW Morawa 55.40 212 P **P 12 28 33.1 -0.9**
MKAR Makanchi Array 58.79 314 P P 12 28 57.1 -0.6
comp=Z,0.2nm,0.5s,baz=111,slow=7.9,SNR=3.1
comp=Z,0.2nm,0.5s

*NNC **23** 12:20:58.5±4.3, 48°.76N×78°.32E, h0km, mb2.6, mpv2.3, Error ellipse: s-maj=64.9km s-min=9.3km az=70.0, Suspected Mining explosion.*
*IDC **23** 12:20:59.1±4.3, 48°.71N×78°.27E, h0km, mbtmp2.6/2, ML2.0/1, Error ellipse: s-maj=51.9km s-min=25.4km az=72.0*
ISC 23 12:21:05.0±1.3, 49°.41N±0°.05×80°.5E±0°.1, h0km, n6, σ0§70/8, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**1.77**	**318**	⇓Pn	Pn	12 21 31.7	-5.2
KURK	11nm,1.2s			⇓Sn	**Sn**	**12 21 59.8**	**-0.3**
	7.6nm,0.6s						
MAKZ	**Makanchi**	**2.79**	**158**	⇑Pn	**Pn**	**12 21 51.1**	**+0.2**
MAKZ	0.6nm,0.6s			⇑Pg	**Pb**	**12 21 55.3**	**-0.4**
	1.1nm,0.8s						
MAKZ				⇑Lg	Lg	12 22 37.6	
	3.8nm,0.8s						
MK31	**Makanchi Array**	**2.89**	**154**	⇓Pn	**Pn**	**12 21 52.8**	**+0.6**
	0.2nm,0.3s,baz=306,slow=9.9,SNR=6.3						
MK31				⇑Pg	**Pb**	**12 21 57.2**	**-0.1**
	0.1nm,0.2s,baz=275,slow=22,SNR=4.9						
MK31				⇑Lg	Lg	12 22 43.7	
	4.3nm,0.7s,baz=322,slow=15,SNR=12						
MKAR	**Makanchi Array**	**2.89**	**154**	Pn	**Pn**	**12 21 53.0**	**+0.8**
	0.1nm,0.3s,baz=304,slow=13,SNR=9.3						
MKAR				Lg	Lg	12 22 44.8	
	0.4nm,0.3s,baz=306,slow=27,SNR=15						
	0.7nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.29**	**29**	I		13 02 00.0	
	baz=219,slow=332,SNR=5.3						
ZALV	**Zalesovo Beam**	**5.29**	**29**	Pn	**Pb**	**12 22 38.7**	**+0.5**
	0.5nm,0.4s,baz=225,slow=14,SNR=2.0						
ZALV				Sn	**Sg**	**12 23 53.8**	**-1.0**
	baz=228,slow=21,SNR=2.6						

IDC 23 12:21:16.9±1.0, 29°.34S×61°.29E, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=32.6km s-min=27.0km az=60.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**24.01**	**28**	T	T	12 51 11.7	
	baz=208,slow=79						
H08S2	**Diego Garcia H**	**24.02**	**28**	T	T	12 51 12.9	
	baz=208,slow=79						
H08S3	**Diego Garcia H**	**24.03**	**28**	T	T	12 51 13.3	
	baz=208,slow=79						
H01W2	**Cape Leeuwin H**	**44.67**	**111**	T	T	13 17 08.9	
	baz=261						
H01W3	**Cape Leeuwin H**	**44.68**	**111**	T	T	13 17 08.6	
	baz=261						
H01W1	**Cape Leeuwin H**	**44.69**	**111**	T	T	13 17 08.9	
	baz=261						
QSPA	**South Pole Qui**	**60.82**	**180**	P	P	12 31 31.3	+0.6
	1.6nm,1.2s,baz=289,slow=2.4,SNR=2.1						
	1.6nm,1.2s						
VNDA	**Vanda**	**63.83**	**166**	P	P	12 31 50.5	0.0
	1.0nm,0.9s,baz=256,slow=7.2,SNR=6.7						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**64.29**	**104**	P	P	12 31 54.2	-0.3
	1.5nm,0.9s,baz=241,slow=6.5,SNR=10						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**66.12**	**100**	P	P	12 32 05.8	-0.6
	0.9nm,0.9s,baz=248,slow=5.5,SNR=4.6						
	0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.32**	**298**	P	P	12 32 38.3	-0.5
	1.2nm,0.9s,baz=121,slow=4.4,SNR=4.3						
	1.2nm,0.9s						
SIJI	**Sorong**	**72.16**	**81**	P	P	12 32 44.5	+0.5
	5.1nm,0.7s,baz=245,slow=8.2,SNR=4.6						
	5.1nm,0.7s						
MKAR	**Makanchi Array**	**78.12**	**15**	P	P	12 33 17.8	+0.2
	0.5nm,0.8s,baz=178,slow=4.3,SNR=3.7						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**85.41**	**14**	P	P	12 33 56.4	+0.6
	0.6nm,0.3s,baz=169,slow=3.7,SNR=2.6						
	0.6nm,0.3s						

*IDC **23** 12:22:50.4±1.4, 2°.78S×147°.31E, h0km, mb3.9/5, mbtmp3.9/6, ML3.4/1, MS3.5/15, Error ellipse: s-maj=76.2km s-min=25.7km az=119.0*
ISC 23 12:22:55.8±1.3, 2°.8S±0°.3×147°.2E±0°.5, h35km, n24, σ0§81/6, mb3.8/5, MS3.5/12, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**14.24**	**118**	LR	LR	12 31 35.6	
	comp=Z,2μm,18.7s,baz=276,slow=37						
GUMO	**Guam**	**16.47**	**352**	LR	LR	12 31 38.1	
	comp=Z,115nm,18.3s,baz=168,slow=32						
CTA	**Charters Tower**	**17.19**	**183**	P	**P**	**12 26 54.7**	**0.0**
	0.1nm,0.3s,baz=2.1,slow=13,SNR=3.2						
CTA				LR	LR	12 33 29.0	
	comp=Z,114nm,18.2s,baz=304,slow=37						
	4.0nm,0.9s						
WRA	**Warramunga Arr**	**21.17**	**216**	P	**P**	**12 27 38.7**	**+0.4**
	7.2nm,0.9s,baz=42,slow=11,SNR=22						
WRA				LR	LR	12 36 53.5	
	comp=Z,99nm,18.9s,baz=7.5,slow=40						
	7.2nm,0.9s						
DAV	**Davao City (W)**	**23.75**	**295**	LR	LR	12 36 36.7	
	comp=Z,28nm,18.8s,baz=122,slow=35						
ASAR	**Alice Springs**	**24.41**	**211**	P	**P**	**12 28 11.3**	**+0.1**
	6.1nm,1.0s,baz=35,slow=7.3,SNR=24						
ASAR				LR	LR	12 38 27.9	
	comp=Z,99nm,18.1s,baz=346,slow=38						
	6.1nm,1.0s						
DZM	**Mont Dzumac**	**26.73**	**137**	LR	LR	12 37 16.2	
	comp=Z,145nm,21.1s,baz=10,slow=32						
H11S3	**WAKE ISLAND Hy**	**28.56**	**41**	T	T	12 58 23.7	
	baz=223,slow=76,SNR=193						
H11S2	**WAKE ISLAND Hy**	**28.57**	**41**	T	T	12 58 24.8	
	baz=223,slow=76,SNR=171						
H11S1	**WAKE ISLAND Hy**	**28.57**	**41**	T	T	12 58 24.7	
	baz=223,slow=76,SNR=201						
H11N1	**WAKE ISLAND Hy**	**29.57**	**40**	T	T	12 59 40.9	
	baz=221,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**29.58**	**40**	T	T	12 59 43.2	
	baz=221,slow=76,SNR=66						
H11N2	**WAKE ISLAND Hy**	**29.58**	**40**	T	T	12 59 43.3	
	baz=221,slow=76,SNR=89						
JCJ	**Chichijima**	**30.14**	**351**	LR	LR	12 39 28.5	
	comp=Z,46nm,20.3s,baz=115,slow=33						
JOW	**Kunigami**	**34.70**	**329**	LR	LR	12 40 57.3	
	comp=Z,88nm,20.8s,baz=334,slow=31						
KSRS	**Korea Array**	**43.90**	**338**	LR	LR	12 47 34.7	
	comp=Z,32nm,20.2s,baz=215,slow=34						
URZ	**Urewera**	**44.61**	**146**	LR	LR	12 46 43.6	
	comp=Z,98nm,19.7s,baz=61,slow=32						
VNDA	**Vanda**	**75.05**	**177**	P	**P**	**12 34 32.9**	**-0.6**
	0.6nm,0.7s,baz=334,slow=6.7,SNR=4.1						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**76.47**	**327**	LR	LR	13 08 33.6	
	comp=Z,34nm,19.2s,baz=75,slow=36						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**79.30**	**314**	LR	LR	13 11 34.3	
	comp=Z,34nm,18.5s,baz=146,slow=37						
ILAR	**Eielson Array**	**82.48**	**23**	P	**P**	**12 35 13.8**	**-0.7**
	0.4nm,0.9s,baz=240,slow=5.1,SNR=2.4						
	0.4nm,0.9s						
BVAR	**Borovoye Array**	**84.36**	**324**	LR	LR	13 13 14.9	
	comp=Z,25nm,18.8s,baz=231,slow=36						
ARU	**Arti**	**91.59**	**326**	LR	LR	13 16 27.1	
	comp=Z,50nm,21.6s,baz=97,slow=35						
NVAR	**Mina Array Bea**	**95.23**	**52**	P	**P**	**12 36 17.5**	**+1.0**
	0.3nm,0.8s,baz=251,slow=5.6,SNR=2.9						
	0.3nm,0.8s						

*IDC **23** 12:26:02.1±1.1, 11°.69N×141°.60E, h0km, mb3.8/5, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=44.5km s-min=20.2km az=112.0*
ISC 23 12:26:06.3±1.1, 11°.7N±0°.2×141°.6E±0°.2, h27km, n6, σ1§25/7, mb3.8/5, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.76**	**59**	Pn	**Pn**	**12 27 01.4**	**-1.1**
	8.2nm,0.3s,baz=235,slow=12,SNR=2.3						
GUMO				Sn	**Sn**	**12 27 47.4**	**+1.5**
	6.9nm,0.3s,baz=238,slow=11,SNR=1.7						
	26nm,0.4s						
WRA	**Warramunga Arr**	**32.19**	**193**	P	**P**	**12 32 32.3**	**+0.1**
	1.0nm,0.8s,baz=12,slow=9.2,SNR=4.6						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**35.89**	**192**	P	**P**	**12 33 04.8**	**+0.4**
	0.3nm,0.7s,baz=18,slow=12,SNR=6.3						
	0.3nm,0.7s						
KLR	**Kul'dur**	**38.34**	**350**	P	**P**	**12 33 25.6**	**+0.8**
	1.6nm,0.5s,baz=160,slow=12,SNR=4.8						
	1.6nm,0.5s						
ILAR	**Eielson Array**	**71.69**	**25**	P	**P**	**12 37 24.3**	**-1.3**
	1.1nm,0.6s,baz=245,slow=6.0,SNR=14						
	1.1nm,0.6s						
NVAR	**Mina Array Bea**	**90.64**	**51**	P	**P**	**12 39 07.5**	**+0.4**
	0.1nm,0.4s,baz=267,slow=6.0,SNR=2.2						
	0.1nm,0.4s						

*KRNET **23** 12:28:24.9±0.1, 41°.51N×73°.95E, h22km, mb2.3*
*SOME **23** 12:28:25.0, 41°.48N×73°.88E, h15km*
*NNC **23** 12:28:26.8±1.2, 41°.58N×73°.86E, h0km, mb3.0, mpv2.9, Error ellipse: s-maj=9.5km s-min=4.5km az=7.0*
ISC 23 12:28:24.3±1.7, 41°.48N±0°.07×73°.91E±0°.03, h12km±12km, n23, σ1§10/40, 4C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.50**	**39**	⇓*iP*	**Pg**	**12 28 34.2**	**+0.1**
	baz=39						
ARLS				⇓*iS*	**Sg**	**12 28 40.7**	**0.0**
	baz=39						
UCH	**Uchtor**	**0.88**	**31**	⇓*iP*	**Pg**	**12 28 40.9**	**-0.4**
	baz=30						
UCH				⇓*iS*	**Sg**	**12 28 52.5**	**-0.4**
	baz=30						
AAK	**Ala-Archa**	**1.24**	**20**	⇑*iP*	**Pn**	**12 28 47.0**	**-0.7**
	baz=20						
AAK				⇑*iS*	**Sb**	**12 29 03.2**	**-0.7**
	baz=20						
MRKS	**Merke**	**1.37**	**339**	*eP*	**Pg**	**12 28 50.6**	**+0.1**
	3.8nm,0.3s						
MRKS				*eS*	**Sg**	**12 29 08.8**	**+0.5**
	5.2nm,0.4s						
MRKS	**Merke**	**1.37**	**339**	P	**Pg**	**12 28 50.6**	**+0.1**
	3.8nm,0.3s						
MRKS				S	**Sg**	**12 29 08.0**	**-0.3**
	5.2nm,0.4s						
NRN	**Naryn**	**1.57**	**91**	⇓*iP*	**Pn**	**12 28 52.5**	**+0.1**
	baz=92						
NRN				⇓*iS*	**Sn**	**12 29 12.8**	**-0.1**
	baz=92						
TKM2	**Tokmak 2**	**1.92**	**40**	⇑Pn	**Pg**	**12 29 00.5**	**-0.5**
	6.2nm,0.9s						
TKM2				⇓Sn	**Sg**	**12 29 27.0**	**+1.1**
	2.9nm,0.5s						
KST	**Kastek**	**2.19**	**44**	*eP*	**Pg**	**12 29 06.1**	**-0.1**
	3.0nm,0.5s						
KST				*eS*	**Sg**	**12 29 35.4**	**+0.8**
	10.0nm,0.5s						
KST	**Kastek**	**2.19**	**44**	Pg	**Pg**	**12 29 06.1**	**-0.1**
	3.0nm,0.5s						
KST				Lg	Lg	12 29 34.4	
	10.0nm,0.5s						
DGS	**Degeres**	**2.24**	**37**	*eP*	**Pg**	**12 29 07.2**	**-0.1**
	2.9nm,0.5s						
DGS				*eS*	**Sg**	**12 29 37.4**	**+1.0**
	1.7nm,0.1s						
MTBS	**Maitube**	**2.50**	**48**	*eP*	**Pg**	**12 29 12.4**	**+0.2**
	2.6nm,0.3s						
MTBS				*eS*	**Sg**	**12 29 45.8**	**+1.3**
	6.6nm,0.5s						
KRBS	**Karabastau**	**2.58**	**30**	*eP*	**Pg**	**12 29 12.6**	**-1.0**
	5.8nm,0.3s						
KRBS				*eS*	**Sg**	**12 29 46.2**	**-0.8**
	7.2nm,0.5s						
MDOK	**Medeo**	**2.88**	**53**	*eP*	**Pg**	**12 29 17.9**	**-1.5**
	2.1nm,0.3s						
MDOK				*eS*	**Sg**	**12 29 56.0**	**-0.7**
	3.6nm,0.4s						
MDOK	**Medeo**	**2.88**	**53**	Pg	**Pg**	**12 29 18.6**	**-0.8**
	1.7nm,0.3s						
MDOK				Lg	Lg	12 29 56.0	
	3.6nm,0.4s						
KOTS	**Kotyrbulak**	**2.96**	**52**	*eP*	**Pg**	**12 29 19.6**	**-1.4**
	2.7nm,0.5s						
KOTS				*eS*	**Sg**	**12 29 58.9**	**-0.4**
	7.9nm,0.6s						
IUG	**Iuzhnay**	**2.97**	**284**	*eP*	**Pg**	**12 29 20.1**	**-1.2**
	49nm,0.3s						
IUG				*eS*	**Sg**	**12 29 59.3**	**-0.5**
	4.2nm,0.4s						
KK31	**Karatay Array**	**3.00**	**304**	⇓Pg	**Pb**	**12 29 19.0**	**+1.4**
	0.4nm,0.3s,baz=120,slow=17						
KK31				⇑Lg	Lg	12 29 60.0	
	0.4nm,0.3s,baz=124,slow=30,SNR=5.2						
KUU	**Kurty**	**3.01**	**36**	*eP*	**Pg**	**12 29 20.1**	**-1.9**
	2.1nm,0.2s						
KUU				*eS*	**Sg**	**12 29 59.2**	**-1.8**
	8.7nm,0.5s						
KUU	**Kurty**	**3.01**	**36**	Pg	**Pg**	**12 29 20.4**	**-1.5**
	2.1nm,0.2s						
KUU				Lg	Lg	12 29 59.2	
	8.7nm,0.5s						
KTBS	**Karatobe**	**3.03**	**42**	*eP*	**Pb**	**12 29 20.2**	**+1.9**
	2.4nm,0.3s						
KTBS				*eS*	**Sg**	**12 30 00.0**	**-1.7**
	7.8nm,0.4s						
KTBS	**Karatobe**	**3.03**	**42**	Pg	**Pb**	**12 29 20.2**	**+1.9**
	2.4nm,0.3s						
KTBS				Lg	Lg	12 29 59.2	
	7.8nm,0.4s						
CHKK	**Chushkaly**	**3.29**	**43**	*eP*	**Pg**	**12 29 25.6**	**-1.7**
	1.3nm,0.1s						
CHKK				*eS*	**Sg**	**12 30 08.5**	**-1.4**
	6.4nm,0.3s						
CHKK	**Chushkaly**	**3.29**	**43**	Pg	**Pg**	**12 29 25.9**	**-1.4**
	1.3nm,0.1s						
CHKK				Lg	Lg	12 30 08.5	
	6.4nm,0.3s						

*IDC **23** 12:39:07.9±1.6, 24°.46S×175°.31W, h0km, mb4.1/6, mbtmp4.1/7, ML5.2/1, MS3.4/4, Error ellipse: s-maj=57.2km s-min=29.4km az=159.0*
ISC 23 12:39:11.3±1.3, 24°.4S±0°.2×175°.4W±0°.2, h19km, n11, σ1§23/9, mb4.1/6, MS3.5/3, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.00**	**316**	Pn	**Pn**	**12 41 19.9**	**-0.5**
	0.9nm,0.3s,baz=120,slow=15,SNR=8.5						
MSVF				LR	LR	12 44 34.3	
	comp=Z,111nm,18.5s,baz=127,slow=36						
	11nm,0.7s						
RAR	**Rarotonga**	**14.74**	**81**	Pn	Pn	12 42 30.5	-8.2
	4.7nm,0.3s,baz=268,slow=10,SNR=7.3						
PPT	**Papeete**	**25.01**	**79**	LR	LR	12 52 14.1	
	comp=Z,49nm,19.0s,baz=124,slow=32						
CTA	**Charters Tower**	**35.69**	**269**	P	**P**	**12 46 08.0**	**-0.7**
	2.3nm,0.7s,baz=8.2,slow=5.3,SNR=2.0						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**46.11**	**260**	P	**P**	**12 47 35.2**	**+0.6**
	0.7nm,0.8s,baz=94,slow=7.1,SNR=14						
ASAR				LR	LR	13 07 15.7	
	comp=Z,110nm,18.5s,baz=280,slow=37						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**46.57**	**265**	P	**P**	**12 47 37.7**	**-0.6**
	1.1nm,0.6s,baz=104,slow=8.5,SNR=20						
WRA				LR	LR	13 06 54.5	
	comp=Z,54nm,18.1s,baz=202,slow=36						
	1.1nm,0.6s						
PETK	**Petropavlovsk-**	**80.62**	**344**	P	**P**	**12 51 23.6**	**+1.3**
	6.6nm,1.0s,baz=120,slow=7.7,SNR=2.8						
	6.6nm,1.0s						
TXAR	**Lajitas Array**	**87.14**	**56**	P	**P**	**12 51 55.7**	**-0.6**
	0.4nm,0.9s,baz=224,slow=3.8,SNR=3.6						
	0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.65**	**288**	P	**P**	**12 52 28.8**	**+1.8**
	0.6nm,0.5s,baz=141,slow=4.1,SNR=6.4						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**147.55**	**330**	PKPbc	**PKPbc**	**12 58 53.1**	**-0.9**
	0.7nm,0.5s,baz=46,slow=3.8,SNR=1.8						
BRTR	**Keskin Array B**	**151.18**	**309**	PKPbc	**PKPbc**	**12 59 02.4**	**-1.2**
	0.3nm,0.3s,baz=98,slow=6.1,SNR=2.0						

*NOU **23** 12:46:13.8, 40°.83S×176°.42E, h22km, MLv3.4/8, North Island, New Zealand*
*WEL **23** 12:46:16.0, 41°.5±2°.×17°.6E±°, h18km±3km, M3.4/18, ML3.7/18, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=92.3*
ISC 23 12:46:16.0±0.9, 40°.66S±0°.02×176°.20E±0°.03, h29km±5km, n108, σ1§20/122, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.04**	**115**	P	**Pb**	**12 46 20.3**	**-0.7**
BFZ				S	**Sb**	**12 46 23.8**	**-0.5**
BFZ	**Birch Farm**	**0.04**	**115**	P	**Pb**	**12 46 20.5**	**-0.4**
PRWZ	**Pori Road**	**0.20**	**302**	P	**Pb**	**12 46 20.5**	**-1.6**
CPWZ	**Castlepoint**	**0.25**	**179**	P	**Pn**	**12 46 24.7**	**+1.0**
CPWZ				S	**Sn**	**12 46 32.3**	**+5.1**
TIWZ	**Tintock**	**0.26**	**244**	P	**Pb**	**12 46 22.4**	**-0.5**
TIWZ				S	**Sb**	**12 46 27.1**	**-0.5**
ANWZ	**Angora Road**	**0.29**	**47**	P	**Pb**	**12 46 23.4**	**+0.1**
ANWZ				S	**Sn**	**12 46 30.3**	**+0.5**
DVHZ	**Dannevirke**	**0.36**	**357**	P	**Pb**	**12 46 22.8**	**-1.5**
DVHZ				S	**Sb**	**12 46 28.0**	**-2.0**
POWZ	**Post Office Ro**	**0.42**	**310**	P	**Pb**	**12 46 23.6**	**-1.6**
POWZ				S	**Sb**	**12 46 29.1**	**-2.3**
MRZ	**Mangatainoka R**	**0.47**	**270**	P	**Pb**	**12 46 24.7**	**-1.2**
MRZ				S	**Sb**	**12 46 31.2**	**-1.5**
TMWZ	**Te Maipa**	**0.50**	**207**	P	**Pn**	**12 46 27.7**	**+0.5**
TMWZ				S	**Sn**	**12 46 37.4**	**+2.5**
PRHZ	**Porangahau**	**0.52**	**40**	P	**Pn**	**12 46 27.4**	**-0.1**
PRHZ				S	**Sn**	**12 46 36.8**	**+1.4**
HOWZ	**Holdsworth Sta**	**0.57**	**245**	P	**Pb**	**12 46 27.3**	**-0.2**
HOWZ				S	**Sb**	**12 46 36.0**	**+0.7**
WPHZ	**Waipukurau**	**0.63**	**18**	P	**Pb**	**12 46 28.5**	**0.0**
WPHZ				S	**Sn**	**12 46 38.3**	**+0.3**
TSZ	**Takapari Road**	**0.63**	**343**	P	**Pb**	**12 46 27.1**	**-1.4**
TSZ				S	**Sb**	**12 46 35.4**	**-1.7**
MTW	**Mount Morrison**	**0.72**	**227**	P	**Pb**	**12 46 30.3**	**+0.3**
PNHZ	**Pukenui**	**0.75**	**0**	P	**Pb**	**12 46 29.8**	**-0.8**
PNHZ				S	**Sb**	**12 46 40.6**	**+0.1**
OGWZ	**Otaki Gorge**	**0.79**	**259**	P	**Pb**	**12 46 30.7**	**-0.6**
OHWZ	**Ohakea**	**0.81**	**304**	P	**Pb**	**12 46 31.0**	**-0.6**
PXZ	**Pawanui**	**0.81**	**39**	P	**Pb**	**12 46 31.5**	**0.0**
TRWZ	**Traveller**	**0.83**	**207**	P	**Pb**	**12 46 32.0**	**+0.1**
TRWZ				P	**Pb**	**12 46 32.0**	**+0.1**
PAWZ	**Paruwai Farm**	**0.92**	**219**	P	**Pb**	**12 46 33.0**	**-0.5**
CAW	**Cannon Point**	**0.96**	**242**	P	**Pn**	**12 46 33.4**	**-0.2**
KIW	**Kapiti Island**	**1.00**	**258**	P	**Pn**	**12 46 34.0**	**0.0**
KAHZ	**Kahuranaki**	**1.01**	**31**	P	**Pn**	**12 46 34.3**	**0.0**
MSWZ	**Moikau Station**	**1.04**	**223**	P	**Pn**	**12 46 34.2**	**-0.4**
PLWZ	**Palliser**	**1.15**	**218**	P	**Pn**	**12 46 35.7**	**-0.5**
BHHZ	**Black Hill Sta**	**1.18**	**355**	P	**Pn**	**12 46 36.8**	**+0.3**
CKHZ	**Cape Kidnapper**	**1.21**	**34**	P	**Pn**	**12 46 36.6**	**-0.3**
WEL	**Wellington**	**1.25**	**240**	P	**Pn**	**12 46 37.2**	**-0.3**
KWHZ	**Kaweka Forest**	**1.25**	**8**	P	**Pn**	**12 46 37.5**	**-0.1**
WAZ	**Wanganui**	**1.30**	**314**	P	**Pn**	**12 46 39.0**	**+0.9**
MOVZ	**Moawhango**	**1.30**	**345**	P	**Pn**	**12 46 38.5**	**+0.3**
SNZO	**South Karori**	**1.30**	**240**	P	**Pn**	**12 46 38.0**	**-0.2**
MTVZ	**Mangateitei**	**1.39**	**336**	P	**Pn**	**12 46 40.3**	**+0.8**
WNVZ	**Wahianoa**	**1.41**	**341**	P	**Pn**	**12 46 40.6**	**+0.7**
TRVZ	**Turoa**	**1.45**	**340**	P	**Pn**	**12 46 41.3**	**+0.8**
TUVZ	**Tukino**	**1.45**	**343**	P	**Pn**	**12 46 41.6**	**+1.1**
WHVZ	**Whangaehu Hut**	**1.46**	**341**	P	**Pn**	**12 46 41.5**	**+1.0**
FWVZ	**Far West T-bar**	**1.49**	**340**	P	**Pn**	**12 46 41.9**	**+0.9**
BKZ	**Black Stump Fm**	**1.51**	**9**	P	**Pn**	**12 46 40.9**	**-0.3**
BKZ	**Black Stump Fm**	**1.51**	**9**	P	**Pn**	**12 46 41.2**	**0.0**
PKVZ	**Pokaka**	**1.52**	**334**	P	**Pn**	**12 46 42.4**	**+1.1**
ARHZ	**Aropaoanui**	**1.53**	**24**	P	**Pn**	**12 46 41.7**	**+0.3**
SNVZ	**South Ngauruho**	**1.54**	**344**	P	**Pn**	**12 46 42.6**	**+1.0**
OTVZ	**Oturere**	**1.55**	**345**	P	**Pn**	**12 46 42.6**	**+0.8**
TCW	**Tory Channel**	**1.55**	**249**	P	**Pn**	**12 46 41.2**	**-0.5**
NGZ	**Ngauruhoe**	**1.55**	**343**	P	**Pn**	**12 46 42.8**	**+0.9**
ETVZ	**East Tongariro**	**1.57**	**346**	P	**Pn**	**12 46 42.9**	**+0.9**
TMVZ	**Te Maari**	**1.59**	**346**	P	**Pn**	**12 46 43.4**	**+1.1**
NNVZ	**North Ngauruho**	**1.59**	**344**	P	**Pn**	**12 46 43.3**	**+0.9**
WTVZ	**West Tongariro**	**1.61**	**343**	P	**Pb**	**12 46 44.2**	**-1.0**
KRVZ	**Karewarewa**	**1.62**	**345**	P	**Pb**	**12 46 44.3**	**-1.0**
NMHZ	**Naumai**	**1.63**	**17**	P	**Pn**	**12 46 43.3**	**+0.4**
KATZ	**Kakaramea**	**1.73**	**347**	P	**Pb**	**12 46 48.0**	**+0.8**
DUWZ	**D'Urville Isla**	**1.73**	**265**	P	**Pn**	**12 46 43.9**	**-0.2**
RATZ	**Rangitukua**	**1.82**	**350**	P	**Pb**	**12 46 50.2**	**+1.5**
LREZ	**Lake Rotokare**	**1.83**	**311**	P	**Pn**	**12 46 46.8**	**+1.4**
MRHZ	**Matea Rd**	**1.83**	**5**	P	**Pn**	**12 46 45.8**	**+0.1**
CMWZ	**Cape Campbell**	**1.85**	**233**	P	**Pn**	**12 46 45.4**	**-0.3**
TUWZ	**Tuamarina**	**1.87**

*DDA **23** 12:53:22.2±0.0,39°.51N×26°.08E,h12km±1km,ML2.5*
*THE **23** 12:53:22.7,39°.52N×26°.01E,h3km±4km,ML2.4/3,Error ellipse: s-maj=4.3km s-min=0.7km az=121.0*
ISC 23 12:53:22.2±0.9,39°.51N±0°.02×26°.06E±0°.03,h14km±6km, n23,σ0.967/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.06**	**94**	P	**Pg**	**12 53 24.6**	**-0.3**
KOCA				S	**Sg**	**12 53 26.6**	**-0.1**
KOCA				*i* AML	AML	12 53 27.0	
	comp=E,2μm,0.5s						
PRK	**Paraskevi**	**0.31**	**147**	P	**Pb**	**12 53 29.9**	**+0.4**
PRK				S	**Sg**	**12 53 34.2**	**+1.4**
	2μm,0.2s						
PRK	**Paraskevi**	**0.31**	**147**	P	**Pb**	**12 53 30.1**	**+0.5**
PRK				S	**Sb**	**12 53 35.0**	**+0.5**
PRK				AML	AML	12 53 35.1	
	comp=E,2617μm,0.2s						
PRK				AML	AML	12 53 35.1	
	comp=N,3821μm,0.2s						
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**12 53 29.2**	**+0.2**
SIGR				S	**Sg**	**12 53 33.5**	**-0.1**
	comp=N,900nm,0.4s						
SIGR	**SIGRI**	**0.33**	**208**	P	**Pg**	**12 53 29.2**	**+0.2**
SIGR				S	**Sg**	**12 53 34.1**	**+0.5**
SIGR				AML	AML	12 53 34.5	
	comp=E,1871μm,0.5s						
SIGR				AML	AML	12 53 35.3	
	comp=N,1694μm,0.3s						
BOZC	**Bozcaada**	**0.34**	**359**	P	**Pg**	**12 53 28.7**	**-0.4**
BOZC				P	**Pg**	**12 53 28.8**	**-0.4**
BOZC				S	**Sg**	**12 53 33.5**	**-0.2**
BOZC				*i* AML	AML	12 53 34.0	
	comp=N,686nm,0.3s						
BOZC				*i* AML	AML	12 53 34.0	
	comp=N,601nm,0.3s						
EZN	**Ezine**	**0.38**	**33**	P	**Pg**	**12 53 30.1**	**+0.2**
EZN				S	**Sg**	**12 53 35.8**	**+0.7**
	comp=N,540nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.45**	**58**	P	**Pg**	**12 53 31.4**	**+0.3**
BAYC				S	**Sg**	**12 53 37.1**	**0.0**
ECEA	**Canakkale, Ece**	**0.55**	**9**	P	**Pg**	**12 53 33.2**	**+0.2**
ECEA				S	**Sb**	**12 53 41.1**	**-0.2**
ECEA				*i* AML	AML	12 53 44.0	
	comp=N,363nm,0.5s						
GOKA	**anakkale-Gk**	**0.69**	**350**	P	**Pg**	**12 53 35.2**	**-0.6**
BUHA	**Balikesir, Bur**	**0.79**	**90**	P	**Pg**	**12 53 38.2**	**+0.7**
BUHA				S	**Sg**	**12 53 47.6**	**-0.2**
ZEDA	**zmir-Bergama**	**0.96**	**124**	P	**Pb**	**12 53 40.8**	**+0.1**
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pg**	**12 53 42.0**	**-0.4**
SMTH	**Samothraki Isl**	**1.04**	**337**	P	**Pn**	**12 53 42.2**	**-0.3**
SMTH				S	**Sn**	**12 53 56.9**	**-0.1**
SMTH				AML	AML	12 53 58.0	
	comp=E,142μm,0.2s						
SMTH				AML	AML	12 53 59.0	
	comp=N,157μm,0.3s						
URLA	**Izmir**	**1.22**	**160**	P	**Pn**	**12 53 42.5**	**-2.4**
URLA				S	**Sb**	**12 53 59.7**	**-1.0**
BALY	**Balya**	**1.23**	**79**	P	**Pn**	**12 53 44.1**	**-1.0**
BALY				S	**Sb**	**12 54 00.2**	**-0.8**
BALY				*i* AML	AML	12 54 02.0	
	comp=N,163nm,0.5s						
BALY				*i* AML	AML	12 54 03.0	
	comp=N,54nm,0.2s						
KESN	**Edirne-Kesan**	**1.40**	**20**	P	**Pn**	**12 53 48.2**	**+0.5**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**12 53 51.9**	**+0.6**
RDO	**Rodhopi**	**1.69**	**347**	P	**Pn**	**12 53 52.0**	**+0.7**
DURS	**Dursunbey**	**1.87**	**86**	P	**Pn**	**12 53 53.6**	**-0.4**
DURS				S	**Sn**	**12 54 17.4**	**0.0**
SMG	**Samos**	**1.90**	**161**	P	**Pn**	**12 53 54.8**	**+0.6**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**12 53 54.4**	**+0.1**
KAVA	**Kavala**	**1.90**	**322**	P	**Pn**	**12 53 54.4**	**+0.1**

*IDC **23** 12:59:14.7±1.0,38°.33N×22°.15E,h0km,mb3.8/6, mbtmp3.8/9,ML3.5/3,Error ellipse: s-maj=20.1km s-min=19.1km az=128.0*
*ISK **23** 12:59:15.8,38°.29N×22°.20E,h9km,ML3.3/20*
*DDA **23** 12:59:15.0±0.0,38°.41N×22°.27E,h15km,MW3.6*
*ATH **23** 12:59:16.4,38°.28N×22°.07E,h5km±1km,ML3.4/21,Error ellipse: s-maj=1.6km s-min=0.7km az=271.0*
*THE **23** 12:59:16.5,38°.27N×22°.07E,h8km,ML3.3/17,Error ellipse: s-maj=0.4km s-min=0.3km az=350.0*
ISC 23 12:59:16.2±0.7,38°.27N±0°.02×22°.07E±0°.01,h10km±4km, n134,σ1.03/171,mb3.9/5,7C-5D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIK	**Aliki, Aigiali**	**0.04**	**109**	P	**Pg**	**12 59 18.0**	**-0.1**
ALIK				S	**Sg**	**12 59 19.5**	**+0.1**
LAKA	**Lakka**	**0.08**	**246**	P	**Pg**	**12 59 18.5**	**0.0**
LAKA				S	**Sg**	**12 59 20.2**	**0.0**
LAKA	**Lakka**	**0.08**	**246**	P	**Pg**	**12 59 18.4**	**-0.1**
LAKA				S	**Sg**	**12 59 19.8**	**-0.4**
LAKA				AML	AML	12 59 20.5	
LAKA				AML	AML	12 59 20.5	
SERG	**Sergoula**	**0.14**	**356**	P	**Pg**	**12 59 19.3**	**-0.2**
SERG				S	**Sg**	**12 59 21.4**	**-0.3**
	64μm,0.3s						
SERG	**Sergoula**	**0.14**	**356**	P	**Pg**	**12 59 19.2**	**-0.3**
SERG				S	**Sg**	**12 59 21.6**	**-0.2**
SERG				AML	AML	12 59 21.9	
SERG				AML	AML	12 59 23.7	
EFP	**Efpalio**	**0.20**	**321**	P	**Pg**	**12 59 20.4**	**0.0**
EFP				S	**Sg**	**12 59 23.6**	**+0.3**
EFP	**Efpalio**	**0.20**	**321**	P	**Pg**	**12 59 20.3**	**-0.2**
EFP				S	**Sg**	**12 59 23.6**	**+0.3**
EFP				AML	AML	12 59 24.3	
	comp=E,41875μm,0.2s						
EFP				AML	AML	12 59 25.6	
	comp=N,43238μm,0.4s						
UPR	**University Cam**	**0.22**	**273**	P	**Pg**	**12 59 21.3**	**+0.5**
UPR				S	**Sg**	**12 59 24.9**	**+1.0**
KLV	**Kalavryta, Ach**	**0.24**	**164**	P	**Pg**	**12 59 21.1**	**0.0**
KLV				S	**Sg**	**12 59 25.0**	**+0.6**
	comp=N,5μm,0.3s						
KLV	**Kalavryta, Ach**	**0.24**	**164**	P	**Pg**	**12 59 21.1**	**0.0**
KLV				S	**Sg**	**12 59 25.2**	**+0.8**
KLV				AML	AML	12 59 26.8	
	comp=N,9046μm,0.2s						
KLV				AML	AML	12 59 27.0	
	comp=E,12190μm,0.4s						
DLFA	**Delphi**	**0.39**	**58**	P	**Pg**	**12 59 23.7**	**-0.3**
DLFA				S	**Sg**	**12 59 29.4**	**+0.2**
DLFA				AML	AML	12 59 30.0	
	comp=N,12492μm,0.3s						
DLFA				AML	AML	12 59 31.0	
	comp=E,8234μm,0.2s						
DRO	**Drossia**	**0.43**	**222**	P	**Pg**	**12 59 24.7**	**+0.1**
DRO				S	**Sb**	**12 59 31.5**	**-0.9**
	comp=E,14μm,0.3s						
DRO	**Drossia**	**0.43**	**222**	P	**Pg**	**12 59 24.6**	**+0.1**
DRO				S	**Sg**	**12 59 31.1**	**+0.9**
DRO				AML	AML	12 59 33.4	
	comp=E,29347μm,0.2s						
DRO				AML	AML	12 59 35.5	
	comp=N,25347μm,0.4s						
THAL	**Thalero**	**0.53**	**116**	P	**Pg**	**12 59 26.5**	**+0.1**
THAL				S	**Sg**	**12 59 33.3**	**0.0**
	comp=N,8μm,0.2s						
THAL	**Thalero**	**0.53**	**116**	P	**Pg**	**12 59 26.3**	**-0.1**
THAL				S	**Sg**	**12 59 33.6**	**+0.3**
THAL				AML	AML	12 59 37.9	
	comp=E,15124μm,0.2s						
THAL				AML	AML	12 59 39.6	
	comp=N,14601μm,0.2s						
PVO	**Paravola**	**0.55**	**309**	P	**Pg**	**12 59 27.1**	**+0.2**
PVO				S	**Sb**	**12 59 35.4**	**-0.5**
	comp=N,4μm,0.3s						
PVO	**Paravola**	**0.55**	**309**	P	**Pg**	**12 59 26.7**	**-0.2**
PVO				S	**Sg**	**12 59 34.8**	**+0.7**
EVR	**Evrytania**	**0.68**	**343**	P	**Pg**	**12 59 28.8**	**-0.5**
EVR				S	**Sb**	**12 59 39.1**	**-0.6**
	comp=N,6μm,0.3s						
EVR	**Evrytania**	**0.68**	**343**	P	**Pg**	**12 59 28.6**	**-0.7**
EVR				S	**Sb**	**12 59 38.7**	**-0.9**
EVR				AML	AML	12 59 42.1	
	comp=E,10622μm,0.2s						
EVR				AML	AML	12 59 42.2	
	comp=N,12526μm,0.6s						
AXAR	**Agios Charalam**	**0.68**	**43**	P	**Pg**	**12 59 28.7**	**-0.6**
AXAR				S	**Sb**	**12 59 39.4**	**-0.2**
AXAR	**Agios Charalam**	**0.68**	**43**	P	**Pg**	**12 59 28.4**	**-1.0**
AXAR				AML	AML	12 59 40.4	
	comp=N,22693μm,0.4s						
AXAR				AML	AML	12 59 42.0	
	comp=E,27795μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.74**	**4**	P	**Pg**	**12 59 30.4**	**-0.2**
MAKR				S	**Sb**	**12 59 41.6**	**+0.1**
	comp=E,8μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.74**	**4**	P	**Pg**	**12 59 30.3**	**-0.3**
MAKR				AML	AML	12 59 43.4	
	comp=E,16101μm,0.2s						
MAKR				AML	AML	12 59 44.1	
	comp=N,15922μm,0.5s						
LOUT	**Loutraki**	**0.77**	**111**	P	**Pg**	**12 59 31.1**	**0.0**
LOUT	**Loutraki**	**0.77**	**111**	P	**Pg**	**12 59 31.1**	**0.0**
AGG	**Agios Georgios**	**0.78**	**15**	PG	**Pg**	**12 59 30.2**	**-1.0**
AGG				SG	**Sb**	**12 59 41.7**	**-0.8**
VIL2	**Platees**	**0.95**	**93**	P	**Pb**	**12 59 34.9**	**+0.2**
VIL2				AML	AML	12 59 53.7	
	comp=E,4963μm,0.7s						
VIL2				AML	AML	12 59 55.2	
	comp=N,2401μm,0.3s						
VILL	**Villia**	**0.99**	**96**	P	**Pg**	**12 59 35.0**	**-0.2**
VILL				S	**Sb**	**12 59 49.0**	**+0.5**
	comp=N,2μm,0.7s						
EPID	**Epidavros**	**1.06**	**128**	P	**Pg**	**12 59 35.7**	**-0.9**
ITM	**Ithomi**	**1.10**	**186**	PN	**Pg**	**12 59 36.5**	**-0.8**
ITM				SN	**Sn**	**12 59 54.2**	**+1.3**
ITM	**Ithomi**	**1.10**	**186**	P	**Pg**	**12 59 36.4**	**-0.8**
ITM				S	**Sn**	**12 59 53.5**	**+0.6**
	comp=N,902nm,0.4s						
ITM	**Ithomi**	**1.10**	**186**	P	**Pg**	**12 59 36.3**	**-1.0**
ITM				AML	AML	13 00 01.9	
	comp=E,2282μm,0.7s						
ITM				AML	AML	13 00 02.6	
	comp=N,1680μm,0.4s						
LTHK	**Lithakia**	**1.12**	**240**	P	**Pb**	**12 59 37.2**	**-0.6**
LTHK	**Lithakia**	**1.12**	**240**	P	**Pb**	**12 59 37.1**	**-0.6**
LTHK				AML	AML	13 00 04.5	
	comp=N,4590μm,0.8s						
LTHK				AML	AML	13 00 07.3	
	comp=E,3068μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.16**	**293**	P	**Pb**	**12 59 37.5**	**-0.9**
NYDR				S	**Sn**	**12 59 55.4**	**+0.9**
EVGI	**Lefkada island**	**1.16**	**288**	P	**Pb**	**12 59 37.9**	**-0.5**
EVGI				S	**Sn**	**12 59 55.1**	**+0.6**
	comp=E,642nm,0.3s						
EVGI	**Lefkada island**	**1.16**	**288**	P	**Pb**	**12 59 37.4**	**-1.0**
VLS	**Valsamata**	**1.17**	**266**	P	**Pb**	**12 59 37.6**	**-0.9**
VLS				S	**Sn**	**12 59 55.4**	**+0.7**
	comp=E,2μm,0.3s						
VLS	**Valsamata**	**1.17**	**266**	P	**Pb**	**12 59 37.4**	**-1.1**
VLS				AML	AML	12 59 56.9	
	comp=N,3848μm,0.3s						
VLS				AML	AML	12 59 57.2	
	comp=E,2489μm,0.3s						
PSDA	**Pessada-Kefalo**	**1.18**	**263**	P	**Pb**	**12 59 37.9**	**-0.8**
PSDA	**Pessada-Kefalo**	**1.18**	**263**	P	**Pb**	**12 59 37.7**	**-1.0**
FSK	**Fiskardo**	**1.20**	**279**	P	**Pb**	**12 59 38.1**	**-0.9**
FSK				S	**Sn**	**12 59 56.3**	**+0.9**
	comp=E,840nm,0.3s						
FSK	**Fiskardo**	**1.20**	**279**	P	**Pb**	**12 59 38.1**	**-0.9**
FSK				AML	AML	13 00 03.8	
	comp=E,2421μm,0.3s						
FSK				AML	AML	13 00 05.5	
	comp=N,1666μm,0.4s						
KLMT	**Kalamata**	**1.21**	**180**	P	**Pn**	**12 59 38.8**	**-0.4**
KRND	**KRANIDI**	**1.23**	**136**	P	**Pn**	**12 59 39.0**	**-0.5**
KRND				S	**Sn**	**12 59 56.7**	**+0.4**
	comp=N,1μm,0.7s						
KRND	**KRANIDI**	**1.23**	**136**	P	**Pn**	**12 59 39.1**	**-0.5**
TSLK	**Tsoukalades, L**	**1.24**	**297**	P	**Pn**	**12 59 39.4**	**-0.2**
TSLK	**Tsoukalades, L**	**1.24**	**297**	P	**Pn**	**12 59 39.3**	**-0.2**
DRAG	**Dragano-Lefkad**	**1.24**	**290**	P	**Pn**	**12 59 39.1**	**-0.6**
THL	**Klokotos Trika**	**1.29**	**358**	P	**Pb**	**12 59 40.4**	**-0.2**
THL				S	**Sn**	**12 59 57.9**	**+0.2**
	comp=N,945nm,0.6s						
THL	**Klokotos Trika**	**1.29**	**358**	P	**Pb**	**12 59 40.5**	**-0.1**
THL				AML	AML	13 00 01.1	
	comp=E,2494μm,0.8s						
THL				AML	AML	13 00 05.7	
	comp=N,994μm,0.5s						
KEF4	**Livadi, Kephal**	**1.29**	**270**	P	**Pn**	**12 59 39.7**	**-0.7**
KEF4				S	**Sg**	**12 59 58.3**	**+0.5**
KEF4	**Livadi, Kephal**	**1.29**	**270**	P	**Pn**	**12 59 39.6**	**-0.7**
DMLN	**Damouliana-K**	**1.33**	**269**	P	**Pn**	**12 59 40.5**	**-0.5**
ATH	**Athens Observa**	**1.33**	**102**	P	**Pn**	**12 59 39.8**	**-1.1**
ATH				S	**Sg**	**12 59 59.4**	**+0.2**
	comp=N,940nm,0.5s						
ATH	**Athens Observa**	**1.33**	**102**	P	**Pb**	**12 59 41.4**	**+0.1**
ATH				AML	AML	13 00 05.0	
	comp=E,2158μm,0.6s						
ATH				AML	AML	13 00 06.8	
	comp=N,1714μm,0.8s						
KEF3	**Kipouria, Keph**	**1.36**	**268**	P	**Pn**	**12 59 40.4**	**-0.8**
KEF3	**Kipouria, Keph**	**1.36**	**268**	P	**Pn**	**12 59 40.1**	**-1.1**
NEO	**Neokhori**	**1.37**	**41**	P	**Pn**	**12 59 41.5**	**0.0**
NEO	**Neokhori**	**1.37**	**41**	P	**Pn**	**12 59 41.2**	**-0.3**
ATHU	**Athens Univers**	**1.39**	**102**	P	**Pn**	**12 59 41.8**	**+0.1**
ATHU				S	**Sb**	**12 59 59.9**	**-0.2**
ATHU	**Athens Univers**	**1.39**	**102**	P	**Pb**	**12 59 42.0**	**-0.2**
ATHU				AML	AML	13 00 05.2	
	comp=N,918μm,0.6s						
ATHU				AML	AML	13 00 05.6	
	comp=E,304μm,0.4s						
PYL	**PYLOS**	**1.40**	**191**	P	**Pn**	**12 59 41.9**	**+0.1**
PYL	**PYLOS**	**1.40**	**191**	P	**Pn**	**12 59 41.7**	**-0.1**
XOR	**Xorichti**	**1.40**	**38**	P	**Pn**	**12 59 41.8**	**-0.1**
VLY	**Voula,Athens**	**1.43**	**107**	P	**Pn**	**12 59 42.1**	**-0.1**
VLY	**Voula,Athens**	**1.43**	**107**	P	**Pn**	**12 59 42.4**	**+0.2**
VLY				AML	AML	13 00 09.1	
	comp=E,932μm,0.4s						
VLY				AML	AML	13 00 09.5	
	comp=N,1194μm,0.6s						
PTL	**Penteli**	**1.43**	**98**	P	**Pn**	**12 59 42.1**	**-0.2**
PTL				S	**Sg**	**13 00 01.8**	**-0.6**
	comp=N,538nm,0.6s						
PTL	**Penteli**	**1.43**	**98**	P	**Pn**	**12 59 42.4**	**0.0**
DION	**Dionisos Attik**	**1.48**	**97**	P	**Pn**	**12 59 43.2**	**+0.2**
DION				S	**Sb**	**13 00 03.0**	**+0.2**
	comp=N,1μm,0.5s						
DION	**Dionisos Attik**	**1.48**	**97**	P	**Pb**	**12 59 43.4**	**-0.5**
DION				AML	AML	13 00 08.2	
	comp=E,1848μm,0.5s						
DION				AML	AML	13 00 09.8	
	comp=N,1356μm,0.4s						
KYMI	**Kymi, Euboea I**	**1.64**	**77**	P	**Pn**	**12 59 44.8**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.64**	**77**	P	**Pn**	**12 59 45.0**	**-0.1**
VLI	**Veliai**	**1.70**	**156**	P	**Pb**	**12 59 46.7**	**-0.8**
VLI				AML	AML	13 00 17.0	
	comp=N,1210μm,0.7s						
VLI				AML	AML	13 00 18.2	
	comp=E,976μm,0.5s						
LIT	**Litokhoron**	**1.85**	**10**	P	**Pn**	**12 59 47.6**	**-0.5**
LIT	**Litokhoron**	**1.85**	**10**	P	**Pn**	**12 59 48.0**	**-0.1**
KTHR	**Kythira**	**2.14**	**159**	P	**Pb**	**12 59 54.0**	**-1.1**
KTHA	**Kythira Island**	**2.16**	**158**	PN	**Pn**	**12 59 53.0**	**+0.7**
HORT	**Hortiatis**	**2.46**	**19**	PN	**Pn**	**12 59 55.9**	**-0.6**
OUR	**Ouranopolis**	**2.54**	**35**	PN	**Pn**	**12 59 57.0**	**-0.5**
GRG	**Griva**	**2.69**	**5**	PN	**Pn**	**13 00 00.1**	**+0.4**
KNT	**Kendrikon**	**2.96**	**12**	PN	**Pn**	**13 00 03.9**	**+0.6**
APE	**Apeiranthos**	**3.00**	**113**	⇑P	**Pn**	**13 00 04.8**	**+0.9**
APE	**Apeiranthos**	**3.00**	**113**	PN	**Pn**	**13 00 03.6**	**-0.3**
APE	**Apeiranthos**	**3.00**	**113**	PG	**Pn**	**13 00 04.4**	**+0.5**
APE	**Apeiranthos**	**3.00**	**113**	P	**Pn**	**13 00 04.8**	**+0.9**
OHR	**Ohrid**	**3.00**	**341**	*i* Pg	**Pb**	**13 00 07.8**	**-1.9**
VAY	**Valandovo**	**3.07**	**7**	*i* Pg	**Pn**	**13 00 04.8**	**0.0**
SIGR	**SIGRI**	**3.11**	**71**	PN	**Pn**	**13 00 04.8**	**-0.5**
CHOS	**Chios island**	**3.14**	**87**	PG	**Pn**	**13 00 06.7**	**+0.9**
IMMV	**Iera Moni Meta**	**3.20**	**151**	PN	**Pn**	**13 00 07.4**	**+0.8**
KNDR	**Palaiochora Ch**	**3.30**	**156**	PN	**Pn**	**13 00 08.5**	**+0.6**
SANT	**Santorini**	**3.30**	**124**	PN	**Pn**	**13 00 11.2**	**+3.2**
ZEYE	**Izmir, Urla-Ze**	**3.49**	**89**	P	**Pn**	**13 00 10.7**	**+0.1**
TIR	**Tirane**	**3.51**	**332**	⇑P	**Pn**	**13 00 14.4**	**+3.6**
MMB	**Musomiste**	**3.55**	**21**	*e*P	**Pn**	**13 00 11.1**	**-0.3**
URLA	**Izmir**	**3.56**	**87**	PN	**Pn**	**13 00 11.4**	**-0.2**
URLA	**Izmir**	**3.56**	**87**	P	**Pn**	**13 00 11.4**	**-0.2**
IDI	**Anoyia**	**3.74**	**142**	⇓P	**Pn**	**13 00 14.3**	**+0.2**
IDI	**Anoyia**	**3.74**	**142**	Pn	**Pn**	**13 00 13.6**	**-0.5**
	comp=E,3.3nm,0.3s,baz=297,slow=2.3,SNR=25						
IDI				Sn	**Sn**	**13 00 58.1**	**-0.2**
	comp=E,2.9nm,0.3s,baz=302,slow=18,SNR=1.9						
	comp=E,7.1nm,0.3s						
IDI	**Anoyia**	**3.74**	**142**	PN	**Pn**	**13 00 14.7**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**3.79**	**66**	P	**Pn**	**13 00 14.2**	**-0.5**
GVDS	**Gavdos**	**3.79**	**154**	PN	**Pn**	**13 00 16.0**	**+1.3**
GVD	**Gavdhos**	**3.79**	**154**	PN	**Pn**	**13 00 16.0**	**+1.3**
RDO	**Rodhopi**	**3.92**	**42**	PN	**Pn**	**13 00 16.9**	**+0.4**
RZN	**Rozhen**	**3.97**	**30**	*e*P	**Pn**	**13 00 17.3**	**-0.1**
ZEDA	**zmir-Bergama**	**3.98**	**78**	P	**Pn**	**13 00 16.6**	**-0.8**
BUHA	**Balikesir, Bur**	**4.10**	**71**	P	**Pn**	**13 00 19.3**	**+0.4**
KDZ	**Kurdzhali**	**4.24**	**36**	PN	**Pn**	**13 00 20.2**	**-0.7**
KDZ	**Kurdzhali**	**4.24**	**36**	*e*P	**Pn**	**13 00 19.8**	**-1.1**
TIP	**Timpagrande**	**4.25**	**284**	⇑P	**Pn**	**13 00 23.2**	**+2.1**
TIP				⇓S	**Sn**	**13 01 13.2**	**+2.4**
VTS	**Vitosha**	**4.43**	**11**	⇑P	**Pn**	**13 00 26.3**	**+2.7**
BALY	**Balya**	**4.57**	**70**	P	**Pn**	**13 00 23.8**	**-1.6**
ZKR	**Zakros**	**4.59**	**132**	PN	**Pn**	**13 00 26.8**	**+1.1**
PDG	**Podgorica**	**4.68**	**334**	⇓P	**Pn**	**13 00 30.7**	**+3.8**
MATE	**Matera**	**4.78**	**301**	⇑P	**Pn**	**13 00 30.8**	**+2.5**
KARP	**Karpathos**	**4.90**	**122**	PN	**Pn**	**13 00 31.2**	**+1.1**
EDRB	**Edirne**	**5.06**	**44**	PN	**Pn**	**13 00 33.3**	**+1.1**
BLKB	**Belogradchik**	**5.37**	**5**	⇑P	**Pn**	**13 00 39.6**	**+3.2**
VOIR		**7.50**	**16**	⇑P	**Pn**	**13 01 09.5**	**+3.8**
MLR	**Muntele Rosu**	**7.77**	**21**	⇓P	**Pn**	**13 01 12.5**	**+3.0**
MLR	**Muntele Rosu**	**7.77**	**21**	Pn	**Pn**	**13 01 08.8**	**-0.7**
	comp=E,0.2nm,0.3s,baz=329,slow=23,SNR=1.8						
	comp=E,0.6nm,0.3s						
PLOR	**Plostina**	**8.30**	**23**	⇓P	**Pn**	**13 01 20.7**	**+4.0**
BRTR	**Keskin Array B**	**9.13**	**77**	Pn	**Pn**	**13 01 30.1**	**+1.9**
	comp=E,0.3nm,0.3s,baz=258,slow=13,SNR=7.5						
	comp=E,1.3nm,0.5s						
ABTA	**Abfaltersbach**	**11.01**	**323**	*e*Pn	**Pn**	**13 01 53.8**	**-0.1**
	comp=E,2.0nm,0.6s						
WTTA	**Wattenberg**	**11.80**	**323**	*e*Pn	**Pn**	**13 02 05.0**	**+0.3**
	comp=E,1.2nm,0.4s						
MOTA	**Moosalm**	**12.11**	**322**	*e*Pn	**Pn**	**13 02 09.7**	**+0.8**
	comp=E,1.2nm,0.5s						
ESDC	**Sonseca Array**	**20.27**	**282**	P	Pn	13 03 53.7	-0.2
	comp=E,1.3nm,0.8s,baz=78,slow=11,SNR=6.9						
	comp=E,1.3nm,0.8s						
HFS	**Hagfors**	**22.52**	**349**	P	**P**	**13 04 15.2**	**-0.6**
	comp=E,4.1nm,1.0s,baz=163,slow=15,SNR=2.1						
	comp=E,4.1nm,1.0s						
EKA	**Eskdalemuir Ar**	**24.07**	**323**	P	**P**	**13 04 30.7**	**-0.9**
	comp=E,2.0nm,0.8s,baz=126,slow=8.8,SNR=6.4						
	comp=E,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.89**	**221**	P	**P**	**13 05 33.9**	**+0.9**
	comp=E,1.1nm,0.6s,baz=31,slow=9.7,SNR=7.7						
	comp=E,1.1nm,0.6s						
MKAR	**Makanchi Array**	**44.21**	**59**	P	**P**	**13 07 25.3**	**-0.2**
	comp=E,1.0nm,0.4s,baz=273,slow=7.9,SNR=24						
	comp=E,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**44.72**	**48**	P	**P**	**13 07 28.6**	**-0.8**
	comp=E,1.3nm,0.4s,baz=273,slow=9.2,SNR=9.2						
	comp=E,1.3nm,0.4s						
ASAR	**Alice Springs**	**120.97**	**97**	PKP	**PKPdf**	**13 18 08.2**	**-1.0**
	comp=E,1.0nm,0.7s,baz=306,slow=1.6,SNR=7.8						

*ISK **23** 12:59:46.6,37°.42N×26°.55E,h15km,ML2.0/4*
DDA 23 12:59:53.6±0.0,37°.17N×27°.87E,h7km±1km,ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.33**	**96**	P	Pg	13 00 00.4	+0.4
BDRM	**Kayabasi**	**0.36**	**253**	P	Pg	13 00 00.0	-0.6
MULA	**Mugla, Merkez-**	**0.37**	**77**	P	Pg	13 00 01.2	+0.5
BODT	**Bodrum**	**0.46**	**256**	PG	Pg	13 00 01.0	-1.6
BODT				SG	Sb	13 00 10.8	-0.4
BODT	**Bodrum**	**0.46**	**256**	P	Pg	13 00 02.3	-0.2
BODT				S	Sb	13 00 10.2	-0.9
BODT				*i* AML	AML	13 00 11.0	
	comp=E,16nm,0.2s						
AYDN	**Tasoluk**	**0.49**	**0**	P	Pb	13 00 04.2	-0.4
AYDN				S	Sg	13 00 10.3	+0.9
AYDN				*i* AML	AML	13 00 12.0	
	comp=N,20nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.77**	**1**	PN	Pb	13 00 09.4	-0.1
AYDB				SN	Sn	13 00 25.7	+2.7
TAVA	**DENIZLI_Tavas**	**0.88**	**70**	P	Pg	13 00 10.0	-0.5

IDC 23 13:10:25.3±60.0,16°.80S×179°.32W,h0km,mb3.9/3, mbtmp3.9/3,Error ellipse: s-maj=1101.0km s-min=161.2km az=77.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.42**	**240**	P	P	13 17 48.3	-0.5
	1.6nm,0.6s,baz=102,slow=5.3,SNR=5.2						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**43.99**	**259**	P	P	13 18 34.9	+0.1
	0.2nm,0.3s,baz=90,slow=7.8,SNR=5.7						
	0.2nm,0.3s						
ASAR	**Alice

I21K IAmb IAmb 13 18 42.8
comp=Z,14nm,1.1s
H21K Melozitna Rive 18.44 31 P **Pn 13 18 38.5 +1.6**
HIN Hinchinbrook I 18.60 50 P **Pn 13 18 38.5 -0.4**
RND Reindeer 18.65 40 P **Pn 13 18 39.8 +0.3**
SCM Sheep Creek Mo 18.66 45 P **P 13 18 38.6 -0.3**
FID Port Fidalgo 18.71 49 P **P 13 18 37.2 -2.2**
MLY Manley 18.76 34 P **P 13 18 40.2 +0.2**
MLY IAmb IAmb 13 18 49.3
comp=Z,17nm,1.5s
MCK McKinley 18.77 39 P **Pn 13 18 40.4 -0.4**
DHY Denali Highway 19.11 42 P **P 13 18 43.6 -0.4**
DHY IAmb IAmb 13 18 49.3
comp=Z,5.6nm,0.7s
NEA2 Nenana 19.14 37 P **P 13 18 41.2 -2.8**
KLU Klutina 19.18 47 P **P 13 18 44.4 -0.2**
KLU IAmb IAmb 13 18 52.2
comp=Z,16nm,1.4s
M24K Tolsona, Glenn 19.27 45 P **Pn 13 18 46.7 -0.1**
WRH Wood River Hil 19.44 38 P **Pn 13 18 48.4 -0.5**
H23K Yukon River 19.62 33 P **P 13 18 50.0 +0.6**
H23K IAmb IAmb 13 19 13.8
comp=Z,13nm,1.4s
MDM Murphy Dome 19.63 36 P **Pn 13 18 50.4 -0.7**
MDM IAmb IAmb 13 18 56.5
comp=Z,4.7nm,0.6s
CCB Clear Creek Bu 19.64 37 P **P 13 18 48.4 -1.0**
CCB IAmb IAmb 13 18 56.9
comp=Z,5.1nm,0.6s
HMT Hamilton 19.67 51 P **Pn 13 18 50.8 -0.8**
HDA Harding Lake 19.85 38 P **P 13 18 52.3 +0.5**
HDA IAmb IAmb 13 18 56.7
comp=Z,8.9nm,1.0s
IL31 20.04 38 P **P 13 18 53.6 -0.3**
ILAR Eielson Array 20.04 38 P **P 13 18 53.3 -0.6**
comp=Z,0.8nm,0.5s,baz=223,slow=9.5,SNR=27
ILAR Eielson Array 20.04 38 P **P 13 18 53.1 -0.8**
GLB Gilahina Butte 20.14 48 P **P 13 18 55.2 +0.1**
GLB IAmb IAmb 13 19 25.4
comp=Z,11nm,1.3s
H24K Noodor Dome 20.21 34 P **P 13 18 56.6 +0.9**
H24K IAmb IAmb 13 19 02.0
comp=Z,9.3nm,1.1s
MA2 Magadan 20.24 306 LR LR 13 25 56.6
comp=Z,57nm,20.2s,baz=219,slow=34
SEY Seymchan 20.31 316 P **P 13 18 58.2 +1.5**
comp=Z,6.4nm,1.1s,baz=131,slow=10,SNR=4.3
comp=Z,6.4nm,1.1s
RIDG Independent Ri 20.42 41 P **P 13 18 57.2 -0.9**
RIDG IAmb IAmb 13 19 04.5
comp=Z,6.3nm,0.6s
J25K Salcha River, 20.56 39 P **P 13 18 58.2 -1.3**
J25K IAmb IAmb 13 19 04.9
comp=Z,6.0nm,0.7s
DOT Dot Lake 20.71 42 P **P 13 19 00.0 -1.1**
SCRK Sand Creek 20.86 41 P **P 13 19 01.9 -1.0**
PRP Porcupine Dome 20.90 36 P **P 13 19 03.4 +0.1**
YAH Yahtse 20.90 52 P **P 13 19 04.7 +1.2**
J26L Joseph Creek 21.23 40 P **P 13 19 06.0 -0.7**
J26L IAmb IAmb 13 19 22.2
comp=Z,5.3nm,0.5s
M27K Edge Creek, AK 21.26 46 P **P 13 19 08.8 +1.6**
M27K IAmb IAmb 13 19 50.7
comp=Z,14nm,1.5s
TOLK Toolik Lake Re 21.32 27 P **P 13 19 08.0 +0.3**
TOLK IAmb IAmb 13 19 19.1
comp=Z,8.5nm,1.1s
L27K Beaver Creek, 21.48 44 P **P 13 19 08.5 -0.9**
BCAR Beaver Creek A 21.50 44 P **P 13 19 08.8 -0.8**
K27K Chicken 21.67 42 P **P 13 19 11.6 +0.2**
K27K IAmb IAmb 13 19 19.4
comp=Z,5.5nm,0.7s
I26K Coal Creek Min 21.70 38 P **P 13 19 11.7 -0.1**
I26K IAmb IAmb 13 19 33.8
comp=Z,9.2nm,1.4s
EGAK Eagle 22.30 40 P **P 13 19 17.2 -0.8**
EGAK IAmb IAmb 13 19 20.4
comp=Z,3.6nm,0.7s
DAWY Dawson 22.81 43 P **P 13 19 23.8 +0.2**
DAWY IAmb IAmb 13 19 47.1
comp=Z,11nm,1.5s
CRAG Craig 25.51 64 P **P 13 19 50.7 +2.0**
INK Inuvik 26.34 34 P **P 13 19 55.1 -1.0**
comp=Z,1.2nm,0.5s,baz=231,slow=6.5,SNR=1.9
comp=Z,1.2nm,0.5s
INK Inuvik 26.34 34 P **P 13 19 55.3 -0.8**
INK IAmb IAmb 13 20 29.2
comp=Z,8.6nm,1.4s
KLR Kul'dur 32.80 287 P **P 13 20 53.1 -0.5**
comp=Z,1.4nm,0.4s,baz=63,slow=8.9,SNR=6.2
KLR LR LR 13 33 38.3
comp=Z,27nm,21.3s,baz=330,slow=35
comp=Z,1.4nm,0.4s
H11N2 WAKE ISLAND Hy 34.47 209 T T 13 57 48.7
baz=18,slow=76,SNR=53
H11N3 WAKE ISLAND Hy 34.48 209 T T 13 57 46.7
baz=18,slow=76,SNR=46
H11N1 WAKE ISLAND Hy 34.48 209 T T 13 57 47.4
baz=18,slow=76,SNR=56
H11S1 WAKE ISLAND Hy 35.68 209 T T 13 59 19.7
baz=18,slow=76,SNR=46
H11S2 WAKE ISLAND Hy 35.69 209 T T 13 59 19.4
baz=18,slow=76,SNR=40
H11S3 WAKE ISLAND Hy 35.69 209 T T 13 59 16.2
baz=18,slow=76,SNR=19
B08A Colville Reser 35.84 72 P **P 13 21 20.2 +0.2**
NEW Newport 37.19 71 P **P 13 21 32.1 +0.6**
EDM Edmonton 37.21 62 P **P 13 21 31.6 0.0**
MCMT McKenzie Canyo 41.47 74 P **P 13 22 06.1 -1.4**
BOZ Bozeman (W) 41.79 72 P **P 13 22 09.5 -0.4**
BOZ IAmb IAmb 13 22 26.4
comp=Z,2.6nm,0.8s
YHH Holmes Hill 42.69 72 P **P 13 22 17.1 -0.3**
RLMT Red Lodge 43.44 71 P **P 13 22 25.0 +1.5**
BW06 Boulder Array 44.60 74 P **P 13 22 32.5 -0.2**
BW06 IAmb IAmb 13 22 38.5
comp=Z,6.3nm,1.4s
PD31 Pinedale Array 44.60 74 P **P 13 22 33.1 +0.4**
PD31 IAmb IAmb 13 22 45.0
comp=Z,2.4nm,1.0s
PDAR Pinedale Array 44.60 74 P **P 13 22 32.2 -0.6**
comp=Z,0.6nm,0.4s,baz=336,slow=3.3,SNR=5.9
PDAR pP **pP 13 22 46.3 +1.1**
comp=Z,2.1nm,0.6s,baz=304,slow=4.9,SNR=7.8
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 55.16 315 PcP **PcP 13 24 53.3 +0.2**
comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=4.0
TXAR Lajitas Array 56.91 83 P **P 13 24 04.6 -0.8**
comp=Z,0.4nm,0.6s,baz=307,slow=4.5,SNR=6.7
TXAR pP **pP 13 24 18.2 +0.5**
comp=Z,1.0nm,0.7s,baz=297,slow=5.5,SNR=7.6
comp=Z,0.4nm,0.6s
KURK Kurchatov 60.15 315 P **P 13 24 27.8 +0.3**
KURBB Kurchatov Arra 60.26 315 P **P 13 24 27.6 -0.6**
comp=Z,1.1nm,0.4s,baz=43,slow=6.6,SNR=8.9
comp=Z,1.1nm,0.4s
MK31 Makanchi Array 61.28 310 P **P 13 24 33.9 -1.4**
MK31 IAmb IAmb 13 25 17.6
comp=Z,1.2nm,1.1s
MKAR Makanchi Array 61.28 310 P **P 13 24 34.5 -0.8**
comp=Z,0.7nm,0.3s,baz=49,slow=6.2,SNR=15
comp=Z,0.7nm,0.3s
MKAR Makanchi Array 61.28 310 P **P 13 24 34.1 -1.2**
BVAR Borovoye Array 61.87 321 P **P 13 24 38.3 -0.8**
comp=Z,0.5nm,0.4s,baz=52,slow=6.3,SNR=6.9
comp=Z,0.5nm,0.4s
L56A Greenwood 63.02 56 P **P 13 24 47.1 +0.1**
TKL Tuckaleechee C 64.32 65 LR LR 13 54 02.9
comp=Z,31nm,19.5s,baz=54,slow=37
NOA NORSAR Array B 67.62 356 LR LR 13 58 36.0
comp=Z,18nm,18.1s,baz=270,slow=39
CMAR Chiang Mai Arr 72.72 278 P **P 13 25 48.6 +0.3**
comp=Z,0.7nm,0.5s,baz=17,slow=7.8,SNR=6.0
comp=Z,0.7nm,0.5s
CLL Collm 77.24 354 *e*P **P 13 26 13.0 -0.8**
GEYT Alibeck 79.12 319 LR LR 14 04 50.5
comp=Z,40nm,18.7s,baz=134,slow=38
WRA Warramunga Arr 83.36 226 P **P 13 26 48.7 +1.7**
comp=Z,0.6nm,1.1s,baz=28,slow=5.4,SNR=2.1
comp=Z,0.6nm,1.1s
ASAR Alice Springs 86.80 225 P **P 13 27 03.8 -0.5**
comp=Z,0.2nm,0.8s,baz=28,slow=4.2,SNR=1.8
ASAR pP **pP 13 27 18.6 +1.1**
comp=Z,0.3nm,0.6s,baz=25,slow=5.8,SNR=2.7
comp=Z,0.2nm,0.8s

NNC 23 13:18:43.0±4.9, 36°.77N×69°.95E, h0km, mb4.1, mpv3.9, 2C-1D, Error ellipse: s-maj=54.1km s-min=35.2km az=57.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.34**	**4**	P	Pn	13 20 16.6	-1.2
KK31	4.2nm,0.6s,baz=186,slow=13,SNR=42			⇓S	Sn	13 21 32.3	+1.4
CHMS	**Chumysh**	**7.24**	**29**	P	Pn	13 20 30.1	+0.1
TKM2	**Tokmak 2**	**7.53**	**34**	⇑P	Pn	13 20 36.1	+1.9
	10nm,0.7s,baz=175,slow=28,SNR=9.0 5.2nm,0.5s						
MDOK	**Medeo**	**8.39**	**38**	⇑P	Pn	13 20 45.0	-1.1
	3.1nm,0.6s						
AB31	**Akbulak array**	**14.45**	**333**	P	Pn	13 22 10.0	+1.3
	1.7nm,0.9s,baz=132,slow=12,SNR=16						

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*IDC **23** 13:20:07.2±1.1, 33°.85N×94°.24E, h0km, mb3.7/5, mbtmp3.7/6, ML3.4/1, MS2.8/3, Error ellipse: s-maj=47.3km s-min=24.7km az=62.0*

ISC 23 13:20:12.5±1.2, 33°.9N±0°.2×94°.3E±0°.2, h35km, n9, σ0$80/6, mb4.0/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.79**	**328**	LR	LR	13 30 28.4	
	comp=Z,36nm,18.8s,baz=261,slow=39						
CMAR	**Chiang Mai Arr**	**15.90**	**164**	LR	LR	13 29 31.4	
	comp=Z,11nm,20.1s,baz=330,slow=36						
SONM	**Songino Array**	**16.68**	**30**	Pn	**Pn**	**13 24 04.2**	**+0.6**
	0.1nm,0.3s,baz=213,slow=16,SNR=2.4 0.6nm,0.4s						
AAK	**Ala-Archa**	**17.79**	**305**	LR	LR	13 32 13.1	
	comp=Z,69nm,21.1s,baz=98,slow=41						
KURBB	**Kurchatov Arra**	**20.33**	**330**	P	**P**	**13 24 46.0**	**+0.5**
	0.6nm,0.2s,baz=138,slow=10,SNR=6.4 0.6nm,0.2s						
WRA	**Warramunga Arr**	**65.74**	**138**	P	**P**	**13 30 54.1**	**+0.2**
	1.3nm,0.9s,baz=331,slow=7.4,SNR=6.8 1.3nm,0.9s						
ASAR	**Alice Springs**	**68.53**	**141**	P	**P**	**13 31 12.0**	**+0.4**
	1.0nm,0.8s,baz=319,slow=6.4,SNR=11 1.0nm,0.8s						
ILAR	**Eielson Array**	**70.80**	**23**	P	**P**	**13 31 24.0**	**-1.0**
	0.3nm,0.7s,baz=301,slow=5.8,SNR=3.0 0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**84.88**	**282**	P	**P**	**13 32 44.0**	**-0.1**
	0.9nm,1.0s,baz=49,slow=5.5,SNR=4.0 0.9nm,1.0s						

MAN 23 13:35:03.1, 12°.80N×122°.36E, h1km, mb3.9, ML2.7, MS2.2, 6C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.83**	**323**	⇑*e*P	Pg	13 35 19.1	+0.1
BOAC				*e*S	Sb	13 35 30.9	-1.1
SJMP	**San Jose**	**1.26**	**255**	⇓*e*P	Pb	13 35 27.5	-0.1
SJMP				*e*S	Sn	13 35 46.4	+1.0
RCP	**Roxas**	**1.29**	**163**	⇓*e*P	Pn	13 35 29.3	+1.1
RCP				*e*S	Sn	13 35 49.1	+3.0
JCNP	**Jose Panganiba**	**1.52**	**12**	⇓*e*P	Pn	13 35 31.6	+0.2
JCNP				*e*S	Sg	13 35 52.4	+0.4
LQP	**Lukban**	**1.53**	**329**	⇑*i*P	Pn	13 35 31.1	-0.6
LQP				*i*S	Sn	13 35 52.8	+0.4
MACP	**Maragondon, Ca**	**2.16**	**313**	⇑*e*P	Pb	13 35 41.7	-1.3
LUBP	**Lubang**	**2.26**	**295**	⇑*e*P	Pb	13 35 43.3	-1.4
LUBP				*e*S	Sb	13 36 13.5	+0.3
CUYO	**Cuyo Island**	**2.34**	**214**	⇑*e*P	Pn	13 35 42.6	-0.1
BALP	**Baler**	**3.02**	**346**	⇑*e*P	Pn	13 35 53.5	+1.4

IDC 23 13:42:54.2±2.0, 0°.34N×124°.60E, h0km, mb3.0/3, mbtmp3.1/3, Error ellipse: s-maj=182.7km s-min=28.3km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.30**	**155**	P	P	13 47 52.4	-1.1
	0.3nm,0.5s,baz=333,slow=11,SNR=6.5 0.3nm,0.5s						
ASAR	**Alice Springs**	**25.52**	**160**	P	P	13 48 25.5	+0.8
	0.3nm,1.0s,baz=345,slow=12,SNR=6.0 0.3nm,1.0s						
MKAR	**Makanchi Array**	**59.18**	**327**	P	P	13 52 56.9	-0.1
	0.2nm,0.5s,baz=137,slow=7.2,SNR=1.9 0.2nm,0.5s						

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*IDC **23** 14:45:54.0±0.8, 6°.77N×73°.02W, h154km±12km, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=39.1km s-min=7.9km az=132.0*

*RSNC **23** 14:45:56.1±0.9, 6°.81N×73°.14W, h146km±4km, ML3.6, Mw3.9*

ISC 23 14:45:54.4±0.9, 6°.81N±0°.03×73°.10W±0°.04, h155km±6km, n26, σ1$15/48, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**200**	*e*P	**Pn**	**14 46 15.8**	**+0.1**
BARC				*e*S	**Sn**	**14 46 31.0**	**-0.9**
BARC				*i*		14 46 33.0	
	comp=Z,911nm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**37**	*e*P	**Pn**	**14 46 18.7**	**+0.9**
PAMC				*e*S	**Sn**	**14 46 35.7**	**+0.1**
PAMC				*i*		14 46 38.0	
	comp=Z,1μm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**296**	⇑*i*P	**Pn**	**14 46 17.6**	**+0.4**
BRRC				*e*S	**Sn**	**14 46 34.3**	**-0.5**
BRRC				*i*		14 46 38.7	
	comp=Z,354nm,0.3s						
RUSC	**La Rusia**	**0.91**	**179**	*e*P	**Pn**	**14 46 19.8**	**+0.2**
RUSC				*e*S	**Sn**	**14 46 38.6**	**-0.1**
RUSC				*i*		14 46 39.7	
	comp=Z,620nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**106**	*i*P	**Pn**	**14 46 24.2**	**+1.3**
TAMC				*e*S	**Sn**	**14 46 45.6**	**+0.9**
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	*e*P	**Pn**	**14 46 22.9**	**-0.2**
PTBC				*e*S	**Sn**	**14 46 43.7**	**-1.3**
PTBC				*i*		14 46 50.7	
	comp=Z,383nm,0.6s						
OCAC	**Ocana**	**1.44**	**351**	*e*P	**Pn**	**14 46 23.9**	**+0.1**
OCAC				*e*S	**Sn**	**14 46 45.9**	**-0.7**
OCAC				*i*		14 46 49.0	
	comp=Z,683nm,0.5s						
SPBC	**San Pablo de B**	**1.50**	**220**	*e*P	**Pn**	**14 46 24.5**	**0.0**
SPBC				*e*S	**Sn**	**14 46 47.0**	**-0.5**
SPBC				*i*		14 46 49.3	
	comp=Z,672nm,0.3s						
NORC	**Norcasia**	**2.15**	**235**	*e*P	**Pn**	**14 46 31.9**	**+0.3**
NORC				*e*S	**Sn**	**14 47 00.4**	**0.0**
NORC				*i*		14 47 05.0	
	comp=Z,374nm,0.4s						
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**14 46 33.9**	**+0.6**
CHIC				*e*S	**Sn**	**14 47 03.0**	**-0.2**
CHIC				*i*		14 47 06.6	
	comp=Z,256nm,0.4s						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**14 46 35.4**	**+1.7**
	comp=Z,218nm,0.3s,baz=297,slow=23,SNR=164						
ROSC				S	**Sn**	**14 47 03.9**	**-0.3**
	comp=Z,298nm,0.3s,baz=134,slow=19,SNR=7.4						
ROSC	**El Rosal**	**2.30**	**212**	*e*P	**Pn**	**14 46 35.5**	**+1.7**
ROSC				*e*S	**Sn**	**14 47 05.2**	**+1.0**
HELC	**Santa Helena**	**2.49**	**256**	*e*P	**Pn**	**14 46 37.2**	**+1.2**
HELC				*e*S	**Sn**	**14 47 07.7**	**-0.4**
HELC				*i*		14 47 14.7	
	comp=Z,213nm,0.4s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**14 46 39.2**	**+0.2**
VILC				*e*S	**Sn**	**14 47 13.7**	**+0.3**
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**14 46 40.0**	**+0.7**
GUY2C				*e*S	**Sn**	**14 47 15.3**	**+1.4**
GUY2C				*i*		14 47 21.1	
	comp=Z,182nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**14 46 40.9**	**+2.0**
LL1C				*e*S	**Sn**	**14 47 15.0**	**+1.7**
PTGC	**Puerto Gaitan,**	**2.77**	**160**	*e*P	**Pn**	**14 46 39.0**	**-0.2**
PTGC				*e*S	**Sn**	**14 47 11.4**	**-2.3**
PTGC				*i*		14 47 17.3	
	comp=Z,300nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**14 46 43.6**	**+1.0**
CBOC				*e*S	**Sn**	**14 47 20.2**	**+0.3**
CBOC				*i*		14 47 23.9	
	comp=Z,68nm,0.5s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**14 46 45.4**	**+0.7**
	comp=Z,17nm,0.2s,baz=242,slow=3.2,SNR=12						
SDV				S	**Sn**	**14 47 22.1**	**-1.6**
	comp=Z,150nm,0.5s,baz=51,slow=20,SNR=46						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**14 46 47.1**	**+2.1**
ARGC				*e*S	**Sn**	**14 47 24.4**	**+0.2**
ARGC				*i*		14 47 36.0	
	comp=Z,73nm,0.3s						
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**14 46 49.0**	**-0.1**
PRAC				*e*S	**Sn**	**14 47 31.6**	**+0.1**
PRAC				*i*		14 47 36.1	
	comp=Z,114nm,0.2s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*i*P	**Pn**	**14 46 50.0**	**-0.8**
SJCC				*e*S	**Sn**	**14 47 30.6**	**-4.1**
SJCC				*i*		14 47 35.5	
	comp=Z,75nm,0.6s						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**14 52 45.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=124,slow=9.1,SNR=4.3 comp=Z,0.2nm,0.3s						
PDAR	**Pinedale Array**	**48.10**	**324**	P	**P**	**14 54 18.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=131,slow=9.7,SNR=1.9 comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPbc**	**15 05 24.6**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=127,slow=3.6,SNR=2.5						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**15 05 27.5**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.9,SNR=5.6						

IDC 23 14:51:19.9±49.0, 16°.06S×177°.32W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=910.9km s-min=172.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.45**	**240**	P	P	14 59 00.2	-0.1
	2.2nm,1.1s,baz=77,slow=14,SNR=3.0 2.2nm,1.1s						
WRA	**Warramunga Arr**	**46.02**	**258**	P	P	14 59 45.6	0.0
	0.1nm,0.3s,baz=91,slow=7.6,SNR=7.5 0.1nm,0.3s						
ASAR	**Alice Springs**	**46.32**	**252**	P	P	14 59 47.7	-0.2
	2.7nm,0.6s,baz=90,slow=8.2,SNR=40 2.7nm,0.6s						

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*NEIC **23** 15:03:07.0±1.5, 17°.5S±0°.2×178°.9W±0°.1, h533km±11km, mb4.3/29, Error ellipse: s-maj=24.0km s-min=15.6km az=161.0*

*IDC **23** 15:03:10.4±1.7, 17°.20S×179°.26W, h556km±17km, mb3.3/6, mbtmp4.2/7, Error ellipse: s-maj=45.0km s-min=16.0km az=152.0*

ISC 23 15:03:07.1±0.6, 17°.6S±0°.1×178°.88W±0°.09, h539km, n49, σ1$27/49, mb4.2/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.93**	**267**	P	**P**	**15 04 24.2**	**+3.3**
	77nm,0.8s,baz=119,slow=3.6,SNR=55						
MSVF	**Nonsavu**	**2.93**	**267**	P	**P**	**15 04 23.9**	**+3.0**
AFI	**Afiamalu**	**7.77**	**63**	P	**P**	**15 05 01.2**	**-1.2**
	33nm,0.7s,baz=233,slow=10,SNR=6.3						
AFI	**Afiamalu**	**7.77**	**63**	P	**P**	**15 04 59.6**	**-2.9**
NIUE	**Niue**	**8.62**	**101**	P	**P**	**15 05 10.2**	**-0.6**
MARNC	**Mare, Loyalty**	**12.92**	**251**	P	**P**	**15 05 55.2**	**0.0**
LIFNC	**LIFOU**	**13.48**	**254**	P	**P**	**15 06 00.3**	**-0.7**
ONTNC	**Ouen Toro**	**14.55**	**249**	P	**P**	**15 06 11.3**	**-0.8**
KOUNC	**Koumac, New Ca**	**16.17**	**257**	P	**P**	**15 06 29.1**	**+0.3**
URZ	**Urewera**	**20.86**	**189**	P	**P**	**15 07 08.8**	**-2.5**
URZ				IAmb	IAmb	15 07 16.5	
	comp=Z,14nm,1.1s						
BKZ	**Black Stump Fm**	**21.84**	**190**	P	**P**	**15 07 17.6**	**-2.7**
BKZ				IAmb	IAmb	15 07 46.9	
	comp=Z,19nm,1.4s						
HNR	**Honiara**	**22.12**	**289**	P	**P**	**15 07 20.6**	**-2.4**
	comp=Z,790nm,0.4s,baz=206,slow=9.6,SNR=5.7						
HNR	**Honiara**	**22.12**	**289**	P	**P**	**15 07 20.8**	**-2.2**
QRZ	**Quartz Range**	**24.28**	**196**	P	**P**	**15 07 41.8**	**-0.1**
EIDS	**Eidsvold**	**28.94**	**249**	P	**P**	**15 08 23.7**	**+0.6**
EIDS				IAmb	IAmb	15 09 05.9	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**15 08 30.8**	**+1.1**
CTAO	**Charters Tower**	**33.05**	**260**	P	**P**	**15 08 59.2**	**+0.7**
CTAO				IAmb	IAmb	15 09 39.8	
	comp=Z,21nm,1.5s						
TOO	**Toolangi**	**37.00**	**230**	P	**P**	**15 09 31.8**	**+0.7**
STKA	**Stephens Creek**	**38.37**	**241**	P	**P**	**15 09 43.0**	**+0.7**
	comp=Z,2.1nm,0.3s,baz=84,slow=5.7,SNR=11 comp=Z,2.1nm,0.3s						
STKA	**Stephens Creek**	**38.37**	**241**	P	**P**	**15 09 43.2**	**+0.8**
BBOO	**Buckleboo**	**43.15**	**241**	P	**P**	**15 10 20.8**	**+0.4**
BBOO				IAmb	IAmb	15 10 21.8	
	comp=Z,6.2nm,0.8s						
WR0	**Warramunga Arr**	**44.05**	**259**	P	**P**	**15 10 27.3**	**-0.2**
WR0				IAmb	IAmb	15 10 54.1	
	comp=Z,7.7nm,1.4s						
WB2	**Warramunga Arr**	**44.23**	**259**	P	**P**	**15 10 28.6**	**-0.3**
WB2				IAmb	IAmb	15 10 58.2	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**44.24**	**259**	P	**P**	**15 10 28.9**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=97,slow=7.6,SNR=31 comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**44.24**	**259**	P	**P**	**15 10 28.5**	**-0.6**
AS31	**Alice Springs**	**44.43**	**254**	P	**P**	**15 10 30.7**	**+0.2**
AS31				IAmb	IAmb	15 10 31.8	
	comp=Z,3.3nm,0.6s						
ASAR	**Alice Springs**	**44.44**	**254**	P	**P**	**15 10 31.0**	**+0.5**
	comp=Z,9.2nm,0.4s,baz=87,slow=8.4,SNR=82 comp=Z,9.2nm,0.4s						
ASAR	**Alice Springs**	**44.44**	**254**	P	**P**	**15 10 30.3**	**-0.2**
MTN	**Manton Dam**	**48.36**	**268**	P	**P**	**15 10 59.1**	**-1.2**
SAUI	**Saumlaki**	**49.39**	**275**	P	**P**	**15 11 06.5**	**-1.5**
FORT	**Forrest**	**49.72**	**244**	P	**P**	**15 11 10.0**	**-0.1**
FORT				IAmb	IAmb	15 11 46.9	
	comp=Z,16nm,0.9s						
KNRA	**Kununurra**	**50.07**	**264**	P	**P**	**15 11 13.2**	**+0.3**
KNRA				IAmb	IAmb	15 11 34.6	
	comp=Z,26nm,1.4s						
PSA00	**Pilbara Seismi**	**57.54**	**255**	P	**P**	**15 12 05.9**	**+0.2**
MBWA	**Marble Bar**	**57.71**	**256**	P	**P**	**15 12 06.6**	**-0.2**
MBWA				IAmb	IAmb	15 12 22.3	
	comp=Z,16nm,1.4s						
TOLI2	**Tolitoli**	**62.22**	**281**	P	**P**	**15 12 35.6**	**-1.3**
PNTR	**Pine Nut**	**79.04**	**43**	P	**P**	**15 14 16.8**	**+1.0**
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**15 14 19.9**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=228,slow=9.0,SNR=9.1 comp=Z,0.9nm,0.7s						
SCM	**Sheep Creek Mo**	**83.07**	**14**	P	**P**	**15 14 35.9**	**0.0**
SCM				IAmb	IAmb	15 15 14.0	
	comp=Z,12nm,1.2s						
N25K	**Chitina, Valde**	**83.55**	**16**	P	**P**	**15 14 38.8**	**+0.5**
N25K				IAmb	IAmb	15 15 09.3	
	comp=Z,18nm,1.5s						
TRF	**Thorofare Moun**	**83.83**	**12**	P	**P**	**15 14 39.5**	**-0.2**
TRF				IAmb	IAmb	15 15 06.3	
	comp=Z,9.6nm,1.4s						
SRU	**San Rafael Swe**	**85.15**	**47**	P	**P**	**15 14 47.8**	**+1.0**
IMAR	**Indian Mountai**	**85.48**	**10**	P	**P**	**15 14 47.5**	**0.0**
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**15 14 48.4**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=222,slow=5.3,SNR=10.0 comp=Z,0.8nm,0.9s						
J25K	**Salcha River,**	**85.92**	**14**	P	**P**	**15 14 49.7**	**0.0**
J25K				IAmb	IAmb	15 15 09.8	
	comp=Z,6.9nm,1.5s						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	**15 14 53.7**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=219,slow=6.1,SNR=12 comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	**15 14 53.1**	**+1.1**
J26L	**Joseph Creek**	**86.24**	**15**	P	**P**	**15 14 50.8**	**-0.5**
BRTR	**Keskin Array B**	**144.26**	**315**	PKP	**PKPdf**	**15 21 42.7**	**+0

STCW				S	Sg	15 10 46.7	0.0
VAC	**Vackov**	**0.05 244**	⇓P		Pg	15 10 45.6	0.0
VAC				S	Sg	15 10 46.7	0.0
POCW	**Potky**	**0.06 347**	⇓P		Pg	15 10 45.8	+0.1
POCW				S	Sg	15 10 47.2	+0.1
KVC	**Kvetna**	**0.07 141**	⇓P		Pg	15 10 45.8	+0.1
KVC				S	Sg	15 10 47.1	0.0
KRCW	**Kraslice**	**0.09 35**	⇑P		Pg	15 10 46.1	0.0
KRCW				S	Sg	15 10 47.7	0.0
SKC	**Skalna**	**0.10 213**	⇑P		Pg	15 10 46.3	0.0
SKC				S	Sg	15 10 48.0	0.0
KACW	**Kaceov**	**0.12 159**	⇓P		Pg	15 10 46.7	+0.1
KACW				S	Sg	15 10 48.7	+0.3
TRCW	**Trojmez**	**0.20 283**	⇓P		Pg	15 10 47.8	-0.1
TRCW				S	Sg	15 10 50.5	-0.1
LACW	**Lazy**	**0.24 151**	⇓P		Pg	15 10 48.7	+0.1
LACW				S	Sg	15 10 52.0	+0.3

PRU ***23*** *15:11:14.4±0.0, 50°.27N×12°.45E, h2km, West Bohemia*
WBNET 23 15:11:14.2, 50°.26N×12°.45E, h8km, MI0.7, 4C-7D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.03 288**		⇓P		Pg	15 11 15.9	+0.1
LBCW				S		Sg	15 11 17.0	+0.2
NKC	**Novy Kostel**	**0.03 182**		*e*PG		Pg	15 11 14.7	-1.0
NKC				*e*SG		Sg	15 11 16.6	-0.2
	comp=Z,12nm,0.3s							
NKC	**Novy Kostel**	**0.03 182**		⇑P		Pg	15 11 15.8	+0.1
NKC				S		Sg	15 11 16.9	+0.1
STCW	**Studenec**	**0.04 89**		⇑P		Pg	15 11 16.0	+0.1
STCW				S		Sg	15 11 17.1	0.0
VAC	**Vackov**	**0.05 244**		⇓P		Pg	15 11 16.0	0.0
VAC				S		Sg	15 11 17.2	0.0
POCW	**Potky**	**0.06 347**		⇓P		Pg	15 11 16.3	+0.1
POCW				S		Sg	15 11 17.7	+0.1
KVC	**Kvetna**	**0.07 141**		⇓P		Pg	15 11 16.2	+0.1
KVC				S		Sg	15 11 17.5	0.0
KRCW	**Kraslice**	**0.09 35**		⇑P		Pg	15 11 16.5	0.0
KRCW				S		Sg	15 11 18.1	0.0
SKC	**Skalna**	**0.10 213**		⇑P		Pg	15 11 16.7	0.0
SKC				S		Sg	15 11 18.4	+0.1
KACW	**Kaceov**	**0.12 159**		⇓P		Pg	15 11 17.1	+0.1
KACW				S		Sg	15 11 19.1	+0.3
TRCW	**Trojmez**	**0.20 283**		⇓P		Pg	15 11 18.2	-0.1
TRCW				S		Sg	15 11 20.9	-0.1
LACW	**Lazy**	**0.24 151**		⇓P		Pg	15 11 19.1	+0.1
LACW				S		Sg	15 11 22.4	+0.3
KHC	**Kasperske Hory**	**1.35 147**		*e*SG		Sn	15 11 57.6	+0.1

IDC ***23*** *15:14:58.2±0.8, 16°.31S×178°.26E, h0km, mb4.0/8, mbtmp4.0/8, MS3.6/34, Error ellipse: s-maj=29.6km s-min=17.0km az=124.0*
NEIC ***23*** *15:15:00.1±1.1, 16°.4S±0°.1×178°.3E±0°.2, h16km±5km, mb4.9/30, Error ellipse: s-maj=30.3km s-min=13.5km az=105.0*
GCMT ***23*** *15:15:02.2±0.4, 16°.45S±0°.03×178°.34E±0°.03, h32km, MW4.9/53, Moment Tensor Solution. s26,c30; s53,c76; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.52±.20; Mθθ=0.55±.13; Mφφ=3.08±.14; Mrθ=-0.41±.15; Mrφ=1.03±.08; Mθφ=-0.12±.16; Best double couple: M=2.98100×10^16 NP1:φs=26.00000°, δ48.00000°, λ-75.00000°. NP2: φs=183.00000°, δ44.00000°, λ-107.00000°. Principal axes: T 3.3600, Plg2.0000°, Azm105.0000°; N -0.7520, Plg11.0000°, Azm195.0000°; P -2.6020, Plg78.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 15:14:59.6±0.6, 16°.31S±0°.08×178°.3E±0°.2, h10km, n87, σ0.93/49, mb4.9/22, MS3.7/35, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.43 188**		Pn	**Pn**	**15 15 24.9**	**-0.9**
	147nm,0.3s,baz=248,slow=6.7,SNR=488						
MSVF				Sn	**Sg**	**15 15 48.1**	**+2.4**
	548nm,0.3s,baz=94,slow=24,SNR=6.2						
MSVF	**Nonsavu**	**1.43 188**		**Pn**	**Pn**	**15 15 24.7**	**-1.1**
AFI	**Afiamalu**	**9.92 77**		LR	LR	15 20 22.6	
	comp=Z,263nm,20.5s,baz=250,slow=33						
DZM	**Mont Dzumac**	**12.54 241**		*e*LR	LR	15 21 08.8	
	comp=Z,418nm,24.2s						
DZM	**Mont Dzumac**	**12.54 241**		LR	LR	15 22 01.9	
	comp=Z,321nm,21.3s,baz=42,slow=34						
HNR	**Honiara**	**19.09 289**		LR	LR	15 25 42.2	
	comp=Z,2μm,18.8s,baz=124,slow=34						
RAR	**Rarotonga**	**21.37 107**		LR	LR	15 26 31.5	
	comp=Z,73nm,18.5s,baz=254,slow=32						
URZ	**Urewera**	**21.89 182**		LR	LR	15 26 49.6	
	comp=Z,220nm,19.4s,baz=90,slow=32						
BFZ	**Birch Farm**	**24.35 184**		P	**P**	**15 20 15.8**	**-1.9**
NNZ	**Nelson**	**25.18 189**		P	**P**	**15 20 23.9**	**-1.3**
RPZ	**Rata Peaks**	**28.00 191**		LR	LR	15 30 34.5	
	comp=Z,90nm,18.5s,baz=336,slow=33						
KRVT	**Keravat (AS076**	**28.37 292**		LR	LR	15 32 22.3	
	comp=Z,116nm,19.1s,baz=248,slow=37						
CTA	**Charters Tower**	**30.60 258**		LR	LR	15 32 56.1	
	comp=Z,38nm,18.2s,baz=80,slow=35						
PPT2	**Papeete2**	**30.79 97**		*e*LR	LR	15 28 54.6	
	comp=Z,317nm,30.5s						
PPT	**Papeete**	**30.79 97**		LR	LR	15 32 44.2	
	comp=Z,20nm,18.4s,baz=288,slow=35						
PMG	**Port Moresby**	**31.05 279**		LR	LR	15 32 54.5	
	comp=Z,72nm,18.1s,baz=16,slow=35						
TBI	**Tubuai**	**31.13 108**		*e*LR	LR	15 29 11.3	
	comp=Z,315nm,31.2s						
H11S2	**WAKE ISLAND Hy**	**36.40 341**		T	T	16 00 56.0	
	baz=156,slow=75,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**36.41 341**		T	T	16 00 55.1	
	baz=156,slow=75,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**36.41 341**		T	T	16 00 57.0	
	baz=156,slow=75,SNR=5.9						
STKA	**Stephens Creek**	**36.67 238**		P	**P**	**15 22 07.6**	**+0.8**
	1.4nm,0.7s,baz=56,slow=10,SNR=2.2						
STKA				LR	LR	15 36 22.7	
	comp=Z,122nm,18.0s,baz=36,slow=35						
	1.4nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**37.49 342**		T	T	16 02 26.6	
	baz=156						
H11N1	**WAKE ISLAND Hy**	**37.49 342**		T	T	16 02 29.6	
	baz=156,slow=74,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**37.51 342**		T	T	16 02 24.6	
	baz=156,slow=74,SNR=4.0						
TAOE	**Nuku Hiva Isla**	**41.21 85**		*e*LR	LR	15 33 35.9	
	comp=Z,230nm,27.6s						
BBOO	**Buckleboo**	**41.44 239**		P	**P**	**15 22 45.9**	**-0.8**
BBOO				IAmb	IAmb	15 24 01.0	
	comp=Z,44nm,1.6s						
WB0	**Warramunga Arr**	**41.76 258**		P	**P**	**15 22 48.6**	**-0.8**
WRA	**Warramunga Arr**	**41.80 258**		P	**P**	**15 22 49.3**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=93,slow=9.8,SNR=5.4						
WRA				LR	LR	15 39 04.3	
	comp=Z,40nm,19.0s,baz=34,slow=35						
	comp=Z,0.7nm,0.9s						
WRA	**Warramunga Arr**	**41.80 258**		P	**P**	**15 22 50.3**	**+0.5**
AS31	**Alice Springs**	**42.18 253**		P	**P**	**15 22 51.3**	**-1.6**
ASAR	**Alice Springs**	**42.18 253**		P	**P**	**15 22 52.6**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=87,slow=8.9,SNR=19						
ASAR				LR	LR	15 39 50.9	
	comp=Z,39nm,18.1s,baz=98,slow=35						
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**42.18 253**		P	**P**	**15 22 52.0**	**-0.8**
GUMO	**Guam**	**44.39 310**		LR	LR	15 40 21.9	
	comp=Z,29nm,19.1s,baz=128,slow=34						
SIJI	**Sorong**	**48.76 284**		LR	LR	15 43 05.4	
	comp=Z,90nm,21.8s,baz=194,slow=35						
JCJ	**Chichijima**	**55.56 320**		LR	LR	15 43 33.5	
	comp=Z,70nm,21.1s,baz=144,slow=31						
DAV	**Davao City (W)**	**57.05 290**		LR	LR	15 48 42.7	
	comp=Z,30nm,18.3s,baz=184,slow=36						
VNDA	**Vanda**	**61.79 184**		LR	LR	15 48 24.4	
	comp=Z,52nm,18.4s,baz=358,slow=32						
MJAR	**Matsushiro Arr**	**64.74 325**		LR	LR	15 54 37.6	
	comp=Z,24nm,18.1s,baz=158,slow=37						
KSRS	**Korea Array**	**71.40 320**		LR	LR	15 52 18.7	
	comp=Z,34nm,21.3s,baz=130,slow=31						
USRK	**Ussuriysk Ar.**	**73.52 327**		LR	LR	15 52 52.8	
	comp=Z,38nm,21.2s,baz=152,slow=31						
QSPA	**South Pole Qui**	**73.74 180**		LR	LR	15 55 57.6	
	comp=Z,49nm,18.7s,baz=47,slow=33						
QSPA	**South Pole Qui**	**73.74 180**		P	**P**	**15 26 34.0**	**+0.2**
KLR	**Kul'dur**	**77.14 331**		LR	LR	15 55 57.4	
	comp=Z,48nm,19.7s,baz=120,slow=32						
KDAK	**Kodiak Island**	**77.67 16**		LR	LR	15 54 06.1	
	comp=Z,48nm,20.9s,baz=231,slow=30						
MA2	**Magadan**	**78.85 346**		LR	LR	15 57 29.9	
	comp=Z,28nm,19.3s,baz=118,slow=32						
YBH	**Yreka Blue Hor**	**79.36 41**		LR	LR	15 57 28.0	
	comp=Z,36nm,18.2s,baz=270,slow=32						
LPIG	**La Paz**	**80.45 61**		LR	LR	15 54 34.3	
	comp=Z,39nm,20.5s,baz=252,slow=30						
NVAR	**Mina Array Bea**	**80.54 45**		P	**P**	**15 27 13.2**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=228,slow=9.3,SNR=11						
	comp=Z,1.6nm,0.8s						
M19K	**Big River Lodg**	**80.91 13**		P	**P**	**15 27 13.5**	**-0.3**
L19K	**White Mountain**	**81.06 12**		P	**P**	**15 27 15.3**	**+0.7**
L19K				IAmb	IAmb	15 27 16.3	
	comp=Z,8.5nm,0.9s						
I07A	**Izee**	**82.60 40**		P	**P**	**15 27 23.6**	**+0.3**
J20K	**Nowinta River**	**83.00 12**		P	**P**	**15 27 25.4**	**+0.8**
N25K	**Chitina, Valde**	**83.06 17**		P	**P**	**15 27 24.7**	**-0.5**
N25K				IAmb	IAmb	15 29 49.5	
	comp=Z,18nm,1.4s						
KTH	**Kantishna Hill**	**83.12 13**		P	**P**	**15 27 24.9**	**-0.5**
TRF	**Thorofare Moun**	**83.18 14**		P	**P**	**15 27 24.9**	**-0.9**
TRF				IAmb	IAmb	15 27 39.1	
	comp=Z,10.0nm,1.1s						
BELA	**Belgrano 2**	**84.13 173**		P	**P**	**15 27 29.9**	**-0.6**
BELA				IAmb	IAmb	15 30 27.6	
	comp=Z,18nm,2.0s						
MAW	**Mawson**	**84.26 200**		LR	LR	16 01 28.3	
	comp=Z,53nm,18.2s,baz=72,slow=33						
M27K	**Edge Creek, AK**	**84.44 17**		P	**P**	**15 27 32.2**	**0.0**
M27K				IAmb	IAmb	15 27 33.6	
	comp=Z,8.2nm,1.1s						
MLY	**Manley**	**84.45 13**		P	**P**	**15 27 31.7**	**-0.5**
MLY				IAmb	IAmb	15 27 32.3	
	comp=Z,5.8nm,1.0s						
H21K	**Melozitna Rive**	**84.59 12**		P	**P**	**15 27 32.6**	**-0.2**
H21K				IAmb	IAmb	15 28 15.9	
	comp=Z,16nm,1.6s						
IMAR	**Indian Mountai**	**84.70 11**		P	**P**	**15 27 33.6**	**+0.3**
CCB	**Clear Creek Bu**	**84.77 14**		P	**P**	**15 27 32.7**	**-1.0**
CCB				IAmb	IAmb	15 27 33.9	
	comp=Z,7.7nm,0.9s						
HDA	**Harding Lake**	**84.77 14**		P	**P**	**15 27 33.5**	**-0.2**
DOT	**Dot Lake**	**84.87 16**		P	**P**	**15 27 34.0**	**-0.3**
MDM	**Murphy Dome**	**84.94 14**		P	**P**	**15 27 33.5**	**-1.1**
MDM				IAmb	IAmb	15 27 34.7	
	comp=Z,7.2nm,0.9s						
TCOL	**CIGO, UAF Yank**	**84.95 14**		P	**P**	**15 27 33.8**	**-0.8**
IL31		**85.09 14**		P	**P**	**15 27 33.6**	**-1.7**
IL31				IAmb	IAmb	15 27 35.6	
	comp=Z,7.3nm,0.9s						
ILAR	**Eielson Array**	**85.09 14**		P	**P**	**15 27 34.8**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=234,slow=6.2,SNR=39						
ILAR				LR	LR	15 58 23.4	
	comp=Z,37nm,20.3s,baz=276,slow=31						
	comp=Z,4.6nm,0.8s						
ILAR	**Eielson Array**	**85.09 14**		P	**P**	**15 27 33.8**	**-1.5**
SCRK	**Sand Creek**	**85.16 16**		P	**P**	**15 27 35.7**	**-0.2**
J25K	**Salcha River,**	**85.33 15**		P	**P**	**15 27 36.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**85.33 291**		P	**P**	**15 27 38.6**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=107,slow=3.6,SNR=5.1						
	comp=Z,1.1nm,0.9s						
J26L	**Joseph Creek**	**85.69 16**		P	**P**	**15 27 37.6**	**-0.9**
J26L				IAmb	IAmb	15 27 39.8	
	comp=Z,7.9nm,1.0s						
NEW	**Newport**	**86.14 37**		LR	LR	16 02 59.2	
	comp=Z,30nm,19.2s,baz=38,slow=33						
M30M	**Minto, Yukon**	**86.14 19**		P	**P**	**15 27 40.9**	**+0.2**
DAWY	**Dawson**	**86.48 17**		P	**P**	**15 27 42.4**	**0.0**
DAWY				IAmb	IAmb	15 29 37.4	
	comp=Z,15nm,1.7s						
EGAK	**Eagle**	**86.54 16**		P	**P**	**15 27 42.6**	**+0.1**
EGAK				IAmb	IAmb	15 28 43.0	
	comp=Z,18nm,1.6s						
ANMO	**Albuquerque**	**87.64 53**		LR	LR	16 02 10.5	
	comp=Z,47nm,18.6s,baz=43,slow=32						
BMAR	**Burnt Mountain**	**87.82 13**		P	**P**	**15 27 48.6**	**-0.2**
TXAR	**Lajitas Array**	**87.87 59**		P	**P**	**15 27 50.1**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=238,slow=4.3,SNR=3.4						
TXAR				LR	LR	16 02 50.2	
	comp=Z,42nm,18.3s,baz=304,slow=33						
	comp=Z,0.4nm,0.9s						
PDAR	**Pinedale Array**	**88.43 45**		P	**P**	**15 27 52.4**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=238,slow=2.8,SNR=6.3						
PDAR				LR	LR	16 00 02.7	
	comp=Z,36nm,19.6s,baz=350,slow=31						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**88.43 45**		P	**P**	**15 27 52.1**	**-0.3**
HRY	**Holter Researc**	**88.60 40**		P	**P**	**15 27 52.4**	**-0.7**
SNAA	**Sanae**	**92.24 180**		LR	LR	16 06 17.4	
	comp=Z,28nm,19.6s,baz=186,slow=33						
PLCA	**Paso Flores**	**94.73 135**		LR	LR	16 00 31.8	
	comp=Z,31nm,20.7s,baz=200,slow=29						
GERES	**GERESS Array B**	**145.18 342**		PKPbc	**PKPbc**	**15 34 37.6**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=297,slow=0.6,SNR=8.2						
FUORN	**Ofenpass-Fuorn**	**148.16 344**		PKPbc	**PKPdf**	**15 34 45.5**	**+2.6**

MAN ***23*** *15:20:55.0, 12°.17N×121°.86E, h11km, mb4.3, ML3.1, MS2.8*
IDC ***23*** *15:20:55.1±1.3, 11°.90N×121°.67E, h0km, mb3.6/5, mbtmp3.6/5, MS3.1/6, Error ellipse: s-maj=60.9km s-min=18.5km az=62.0*
ISC 23 15:20:53.8±1.2, 12°.22N±0°.02×121°.96E±0°.03, h6km±9km, n38, σ1.87/46, mb3.7/5, MS3.0/4, 10C-15D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.86 286**		⇑*e*P	**Pb**	**15 21 10.2**	**-1.0**
SJMP				*e*S	**Sn**	15 21 23.0	-2.3
RCP	**Roxas**	**1.01 130**		⇓*e*P	**Pn**	15 21 13.4	-1.1
RCP				*e*S	**Sn**	15 21 29.3	+0.3
BOAC	**Boac**	**1.24 355**		⇓*e*P	**Pg**	15 21 17.2	-0.4
BOAC				*e*S	**Sn**	15 21 36.7	+2.0
JAP	**San Jose, Anti**	**1.46 181**		⇓*e*P	**Pg**	15 21 23.1	+1.1
CUYO	**Cuyo Island**	**1.65 214**		⇓*e*P	**Pn**	15 21 21.4	-1.9
GUIM	**Jordan**	**1.70 159**		⇓*e*P	**Pb**	15 21 25.0	-0.5
GUIM				*e*S	**Sg**	15 21 53.3	+4.8
BUSP	**Coron**	**1.74 263**		⇓*e*P	**Pn**	15 21 23.0	-1.6
BUSP				*e*S	**Sg**	15 21 48.6	-1.2
GQP	**Guinayangan**	**1.74 16**		⇑*i*P	**Pg**	15 21 26.1	-1.1
GQP				*i* S	**Sg**	15 21 50.0	+0.2
LQP	**Lukban**	**1.93 348**		⇑*e*P	**Pn**	15 21 27.0	-0.4
LQP				*e*S	Sg	15 22 09.8	+14
TGY	**Tagaytay City**	**2.12 332**		Pn	**Pg**	**15 21 34.3**	**-0.2**
	baz=270,slow=20						
TGY	**Tagaytay City**	**2.12 332**		⇓*e*P	**Pb**	**15 21 32.9**	**+0.1**
JCNP	**Jose Panganiba**	**2.18 19**		⇓*e*P	**Pb**	15 21 31.6	-2.0
JCNP				*i* S	**Sb**	15 21 59.9	-1.0
LUBP	**Lubang**	**2.25 312**		⇑*e*P	**Pb**	15 21 32.3	-2.7
LUBP				*i* S	**Sb**	15 22 01.3	-1.8
MACP	**Maragondon, Ca**	**2.37 329**		⇓*e*P	**Pn**	15 21 33.8	+0.6
MACP				*e*S	**Sn**	15 22 01.9	-0.6
CNOP	**Candoni, Negro**	**2.47 164**		⇑*e*P	**Pn**	15 21 35.3	+0.7
CNOP				*i* S	**Sg**	15 22 11.8	-1.4
PVCP	**Virac**	**2.54 57**		⇑*e*P	**Pb**	15 21 37.8	-2.0
CNP	**Catarman**	**2.65 83**		⇑*e*P	**Pb**	15 21 42.4	+0.6
LLP	**Lapu-Lapu**	**2.73 134**		⇓*i*P	**Pb**	15 21 41.6	-1.4
LLP				*i* S	**Sb**	15 22 15.1	-1.6
OCLP	**Ormoc**	**2.84 114**		⇓*e*P	**Pb**	15 21 42.4	-2.6
OCLP				*e*S	**Sb**	15 22 17.5	-2.5
TBP	**Tagbilaran**	**3.13 143**		*e*P	**Pn**	15 21 45.4	+1.7
TBP				*i* S	Sg	15 22 47.3	+13
TABP	**Talibon, Bohol**	**3.14 132**		⇑*e*P	**Pn**	15 21 44.6	+0.7
TABP				*i* S	**Sn**	15 22 19.7	-2.1
PCPH	**Palayan**	**3.43 346**		⇑*e*P	**Pn**	15 21 49.5	+1.7
GHBP	**Garcia Hernand**	**3.46 138**		*e*P	**Pn**	15 21 46.6	-1.7
LSIP	**Lazi, Siquijor**	**3.48 152**		⇓*e*P	**Pn**	15 21 50.2	+1.7
LSIP				*e*S	Sn	15 22 19.4	-11
MSLP	**Maasin**	**3.52 126**		⇓*e*P	**Pn**	15 21 49.1	+0.1
MSLP				*e*S	**Sb**	15 22 36.2	-3.3
BALP	**Baler**	**3.52 354**		⇓*e*P	**Pn**	15 21 51.7	+2.5
PPR	**Puerto Princes**	**4.00 233**		⇓*e*P	**Pg**	15 22 12.5	+2.0
SAMP	**Sagada Mountai**	**4.94 348**		⇑*e*P	**Pn**	15 22 12.4	+3.7
DAV	**Davao City (W)**	**6.24 145**		LR	LR	15 25 20.6	
	comp=Z,224nm,19.8s,baz=182,slow=43						
SIJI	**Sorong**	**15.95 144**		LR	LR	15 31 48.5	
	comp=Z,22nm,18.5s,baz=20,slow=41						
CMAR	**Chiang Mai Arr**	**23.04 288**		P	**P**	**15 26 00.0**	**0.0**
	1.3nm,0.7s,baz=100,slow=8.1,SNR=8.3						
CMAR				LR	LR	15 34 09.0	
	comp=Z,14nm,21.0s,baz=110,slow=35						
	1.3nm,0.7s						
KSRS	**Korea Array**	**25.69 11**		LR	LR	15 35 53.2	
	comp=Z,16nm,21.3s,baz=60,slow=34						
WRA	**Warramunga Arr**	**34.20 159**		P	**P**	**15 27 40.7**	**+0.3**
	1.1nm,0.9s,baz=338,slow=8.8,SNR=5.7						
	1.1nm,0.9s						
ASAR	**Alice Springs**	**37.53 162**		P	**P**	**15 28 09.2**	**+0.3**
	0.7nm,0.6s,baz=351,slow=7.8,SNR=11						
	0.7nm,0.6s						
NWAO	**Narrogin (SRO)**	**45.12 186**		LR	LR	15 47 23.7	
	comp=Z,145nm,21.1s,baz=236,slow=36						
MKAR	**Makanchi Array**	**47.95 324**		P	**P**	**15 29 36.1**	**+2.8**
	0.6nm,0.8s,baz=122,slow=7.1,SNR=3.8						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**50.93 333**		P	P	15 29 59.6	+3.7
	0.5nm,0.5s,baz=120,slow=8.5,SNR=2.2						
	0.5nm,0.5s						
AAK	**Ala-Archa**	**50.98 316**		LR	LR	15 52 44.9	
	comp=Z,50nm,20.4s,baz=21,slow=37						

WEL ***23*** *15:27:30.5±0.6, 43°.5±5°×17°.2E±°, h5km, M3.0/7, ML3.3/7, MLv3.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=11.4*
NOU ***23*** *15:27:31.3, 42°.70S×171°.77E, h0km, MLv3.5/8, South Island, New Zealand*
ISC 23 15:27:30.5±1.2, 42°.71S±0°.03×171°.73E±0°.03, h2km±13km, n52, σ1.13/59, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.21 267**		P	**Pg**	**15 27 33.7**	**-0.8**
INZ				S	**Sg**	**15 27 38.3**	**+1.0**
LTZ	**Lake Taylor**	**0.41 100**		P	**Pg**	**15 27 38.8**	**+0.5**
LTZ				S	**Sg**	**15 27 44.2**	**+0.7**
OXZ	**Oxford**	**0.65 160**		P	**Pg**	**15 27 43.8**	**+0.7**
OXZ				S	**Sg**	**15 27 51.5**	**0.0**
WVZ	**Waitaha Valley**	**0.81 243**		P	**Pg**	**15 27 46.0**	**-0.1**
AMCZ	**Amberley**	**0.82 125**		P	**Pb**	**15 27 47.4**	**0.0**
DSZ	**Denniston Nort**	**0.97 3**		P	**Pg**	**15 27 49.1**	**0.0**
GVZ	**Greta Valley S**	**0.99 105**		P	**Pb**	**15 27 50.7**	**+0.3**
GVZ				S	**Sb**	**15 28 05.1**	**+1.2**
RACZ	**Rakaia**	**1.06 164**		P	**Pg**	**15 27 51.2**	**+0.4**
RACZ				S	**Sg**	**15 28 05.1**	**+0.6**
RPZ	**Rata Peaks**	**1.11 206**		P	**Pg**	**15 27 52.0**	**+0.1**
RPZ				S	**Sb**	**15 28 07.7**	**+0.2**
RPZ	**Rata Peaks**	**1.11 206**		P	**Pg**	**15 27 52.0**	**+0.1**
GCSZ	**Gaunt Creek Bo**	**1.19 239**		P	**Pg**	**15 27 52.8**	**-0.6**
GCSZ				S	**Sg**	**15 28 09.6**	**+0.8**
MQZ	**McQueen's Vall**	**1.20 146**		P	**Pg**	**15 27 52.5**	**-1.0**
WACZ	**Wakanui South**	**1.23 176**		P	**Pg**	**15 27 54.2**	**+0.1**
THZ	**Tophouse**	**1.29 43**		P	**Pg**	**15 27 53.7**	**-1.6**
ARCZ	**Arundel**	**1.30 198**		P	**Pg**	**15 27 55.2**	**-0.1**
KHZ	**Kahutara**	**1.37 78**		P	**Pn**	**15 27 56.3**	**-0.2**
KHZ	**Kahutara**	**1.37 78**		P	**Pn**	**15 27 56.4**	**-0.2**
OKCZ	**Okains Bay**	**1.40 137**		P	**Pn**	**15 27 55.9**	**-1.2**
AKCZ	**Akaroa Harbour**	**1.44 144**		P	**Pn**	**15 27 56.3**	**-1.3**
MRNZ	**Matariki Terra**	**1.52 31**		P	**Pn**	**15 27 58.9**	**+0.2**
FOZ	**Fox Glacier**	**1.62 239**		P	**Pn**	**15 27 59.6**	**-0.5**
TMZ	**Timaru**	**1.75 197**		P	**Pn**	**15 28 00.3**	**-1.6**
BSWZ	**Blackbirch Sta**	**1.88 59**		P	**Pn**	**15 28 04.4**	**+0.7**
TKNZ	**Takaka Hill**	**1.91 29**		P	**Pn**	**15 28 04.1**	**-0.1**
NNZ	**Nelson**	**1.94 40**		P	**Pn**	**15 28 04.6**	**+0.2**
QRZ	**Quartz Range**	**1.98 18**		P	**Pn**	**15 28 04.8**	**-0.3**
QRZ	**Quartz Range**	**1.98 18**		P	**Pn**	**15 28 05.0**	**0.0**
LBZ	**Lake Benmore**	**2.01 213**		P	**Pn**	**15 28 06.3**	**+0.8**
CMWZ	**Cape Campbell**	**2.08 63**		P	**Pb**	**15 28 09.1**	**+0.2**
TUWZ	**Tuamarina**	**2.09 53**		P	**Pn**	**15 28 07.1**	**+0.6**
TCW	**Tory Channel**	**2.42 53**		P	**Pn**	**15 28 11.4**	**+0.3**
ODZ	**Otahua Downs**	**2.46 198**		P	**Pn**	**15 28 10.1**	**-1.5**
ODZ	**Otahua Downs**	**2.46 198**		P	**Pn**	**15 28 13.8**	**+2.2**
DUWZ	**D'Urville Isla**	**2.52 41**		P	**Pn**	**15 28 13.1**	**+0.6**
JCZ	**Jackson Bay**	**2.54 237**		P	**Pn**	**15 28 14.2**	**+1.4**
SNZO	**South Karori**	**2.

MOKO	**MOKOCHONG**	**3.90**	**83**	*e*P	**Pn**	**15 57 39.9**	**0.0**
MOKO				*e*S	**Sn**	**15 58 22.8**	**-2.0**
MOKO				IAML		15 58 50.8	
	comp=N,2μm,0.6s						
MOKO				IAML		15 58 54.8	
	comp=E,2μm,0.4s						
JIRN	**Jiri**	**3.98**	**297**	*e*Pn	**Pn**	**15 57 42.9**	**+1.8**
GUN	**Gumba**	**4.33**	**298**	*e*Pn	**Pn**	**15 57 47.9**	**+1.9**
BOK	**Bokaro**	**4.46**	**242**	*e*P	**Pn**	**15 57 49.4**	**+2.1**
PKI	**Pulchoki**	**4.59**	**292**	*e*Pn	**Pn**	**15 57 50.7**	**+1.3**
PKIN	**Phulchoki**	**4.60**	**292**	*e*Pn	**Pn**	**15 57 50.8**	**+1.2**
KKN	**Kakani**	**4.77**	**294**	*e*Pn	**Pn**	**15 57 53.2**	**+1.3**
KKN	**Kakani**	**4.77**	**294**	*e*Pn	**Pn**	**15 57 53.2**	**+1.3**
KKN	**Kakani**	**4.77**	**294**	*e*Pn	**Pn**	**15 57 54.1**	**+2.2**
DMN	**Daman**	**4.85**	**291**	*e*Pn	**Pn**	**15 57 54.0**	**+1.0**
GKN	**Gorkha**	**5.38**	**294**	*e*Sn	**Sn**	**15 59 01.9**	**+0.6**
	comp=E,417nm,0.3s						
JHSG	**JHARSUGUGA**	**7.20**	**236**	*e*P	**Pn**	**15 58 26.2**	**+1.2**
ALBI	**Allahabad**	**7.60**	**267**	*e*P	**Pn**	**15 58 30.6**	**+0.1**
BLSP	**Bilaspur**	**8.29**	**245**	*e*P	**Pn**	**15 58 41.8**	**+1.7**
RAGD	**RAYAGADA**	**9.11**	**224**	*e*P	**Pn**	**15 58 52.9**	**+1.6**
LGTI	**Lohaghat**	**9.49**	**294**	*e*P	**Pn**	**15 58 58.8**	**+2.3**
PTH	**Pithoragarh**	**9.55**	**294**	*e*P	**Pn**	**15 58 57.5**	**0.0**
JBP	**Jabalpur**	**9.70**	**256**	*e*P	**Pn**	**15 58 59.7**	**+0.4**
JBP				*e*S	**Sn**	**16 00 43.3**	**-4.1**
VIS	**Vishakhapatnam**	**10.36**	**219**	IAmb	IAmb	15 59 49.2	
	comp=Z,9.1nm,0.5s						
PZH	**PanZhiHua**	**10.38**	**84**	P	**Pn**	**15 59 11.6**	**+2.8**
PZH				S	**Sn**	**16 01 10.3**	**+5.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,70nm,5.1s						
PZH				LR	LR		
	comp=Z,390nm,16.6s						
PZH				LR	LR		
	comp=Z,350nm,15.7s						
PZH				LR	LR		
	comp=Z,340nm,17.1s						
JHNI	**Jhansi**	**10.53**	**270**	*e*P	**Pn**	**15 59 08.3**	**-2.4**
GOMU	**GeErMu**	**10.97**	**20**	P	**Pn**	**15 59 17.5**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,78nm,4.8s						
CMAR	**Chiang Mai Arr**	**10.99**	**131**	Pn	**Pn**	**15 59 16.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=307,slow=13,SNR=5.7						
	comp=Z,0.5nm,0.6s						
NGP	**Nagpur**	**11.28**	**247**	*e*P	**Pn**	**15 59 21.4**	**+0.4**
BHPL	**Bhopal**	**11.93**	**260**	*e*P	**Pn**	**15 59 26.6**	**-3.3**
AKL	**Akola**	**13.18**	**249**	*e*P	**Pn**	**15 59 46.6**	**-0.4**
HYBB	**Hyderabad (bro**	**13.74**	**234**	*e*P	**Pn**	**15 59 58.7**	**+4.0**
HYBB				*e*S	**Sn**	**16 02 31.0**	**+4.5**
HYBB				IVMs_BB	IVMs_BB	16 04 50.2	
	comp=Z,164nm,3.7s						
HYB	**Hyderabad**	**13.74**	**234**	IAmb	IAmb	16 00 06.3	
	comp=Z,6.6nm,0.7s						
PBA	**Port Blair**	**14.40**	**170**	Pn	**Pn**	**16 00 04.1**	**+0.4**
LZH	**Lanzhou**	**15.46**	**46**	*e*P	**Pn**	**16 00 18.6**	**+0.7**
LZH				pP	P	16 00 23.9	+1.8
GTA	**Gaotai**	**15.68**	**29**	*e*P	**P**	**16 00 25.3**	**+0.7**
GTA				pP	sP	16 00 33.3	-1.8
GTA				sP	pP	16 00 37.3	+5.6
CHCP	**Chirah Chowk**	**16.59**	**302**	P	**Pn**	**16 00 29.1**	**-3.1**
NIL	**Nilore**	**16.59**	**302**		**Pn**	**16 00 28.6**	**-3.7**
NIL				IAmb	IAmb	16 00 30.8	
	comp=Z,26nm,0.7s						
THW	**Thamme Wali**	**17.47**	**297**	P	**Pn**	**16 00 39.4**	**-4.0**
ENH	**Enshi**	**17.55**	**71**		**Pn**	**16 00 43.8**	**-0.5**
CEP	**Cherat**	**17.69**	**301**	P	**Pn**	**16 00 44.1**	**-2.1**
CEP				S	Sn	16 03 45.0	-18
WMQ	**Urumqi**	**17.97**	**354**	*e*P	**P**	**16 00 50.3**	**+0.5**
KSH	**Kashi**	**18.05**	**322**	P	**Pn**	**16 00 48.0**	**-2.5**
KSH				pP	P	16 00 51.6	+0.8
KSH				S	**Sn**	**16 04 04.9**	**-6.2**
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KBL	**Kabul**	**20.17**	**300**	P	**P**	**16 01 15.0**	**+0.8**
KBL				IAmb	IAmb	16 01 16.1	
	comp=Z,9.5nm,0.7s						
DRK	**Karamyk**	**20.50**	**316**	P	**P**	**16 01 17.4**	**-0.4**
AAK	**Ala-Archa**	**21.07**	**326**	P	**P**	**16 01 24.2**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=138,slow=10,SNR=5.7						
AAK				LR	LR	16 10 24.6	
	comp=Z,46nm,18.7s,baz=112,slow=39						
	comp=Z,2.5nm,0.8s						
AAK	**Ala-Archa**	**21.07**	**326**		**P**	**16 01 23.1**	**-0.6**
GAR	**Garm**	**21.19**	**313**	P	**P**	**16 01 22.2**	**-2.8**
GAR				IAmb	IAmb	16 01 29.9	
	comp=Z,13nm,1.0s						
BTK	**Batken**	**21.45**	**316**	P	**P**	**16 01 26.3**	**-1.5**
BTK				IAmb	IAmb	16 01 29.7	
	comp=Z,24nm,0.8s						
MK31	**Makanchi Array**	**21.75**	**345**	P	**P**	**16 01 29.9**	**-1.0**
MKAR	**Makanchi Array**	**21.75**	**345**	P	**P**	**16 01 30.0**	**-0.9**
	comp=Z,9.4nm,0.6s,baz=160,slow=12,SNR=43						
	comp=Z,9.4nm,0.6s						
CHGR	**Chuyangaron**	**21.79**	**311**	P	**P**	**16 01 31.0**	**-0.5**
CHGR				IAmb	IAmb	16 01 34.9	
	comp=Z,14nm,0.7s						
MAKZ	**Makanchi**	**21.84**	**345**	P	**P**	**16 01 31.2**	**-0.7**
HHC	**Hu-ho-hao-te**	**23.14**	**45**	*e*P	**P**	**16 01 47.3**	**+1.5**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,310nm,5.2s						
KK31	**Karatay Array**	**23.50**	**322**	P	**P**	**16 01 49.8**	**+0.6**
KKAR	**Karatay Array**	**23.50**	**322**	P	**P**	**16 01 49.0**	**-0.2**
SONM	**Songino Array**	**25.31**	**26**	P	**P**	**16 02 06.4**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=216,slow=7.1,SNR=2.3						
	comp=Z,1.6nm,0.9s						
NJ2	**Nanjing**	**25.75**	**70**	*e*P	**P**	**16 02 08.9**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,13nm,1.6s						
KURBB	**Kurchatov Arra**	**26.24**	**343**	P	**P**	**16 02 14.4**	**+0.2**
	comp=Z,5.4nm,0.7s,baz=162,slow=8.9,SNR=58						
	comp=Z,5.4nm,0.7s						
KURK	**Kurchatov**	**26.30**	**343**	P	**P**	**16 02 14.5**	**-0.3**
KURK				IAmb	IAmb	16 02 15.8	
	comp=Z,6.1nm,0.8s						
ZAA0	**Zalesovo Array**	**28.27**	**353**	P	**P**	**16 02 32.0**	**-0.4**
ZALV	**Zalesovo Beam**	**28.27**	**353**	P	**P**	**16 02 31.6**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=156,slow=11,SNR=5.4						
ZALV				LR	LR	16 14 53.8	
	comp=Z,64nm,19.0s,baz=126,slow=39						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**28.27**	**353**	P	**P**	**16 02 32.1**	**-0.3**
GEYT	**Alibeck**	**29.60**	**302**	P	**P**	**16 02 45.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=94,slow=4.5,SNR=4.1						
	comp=Z,0.9nm,0.6s						
ABKAR	**Akbulak array**	**33.05**	**323**	P	**P**	**16 03 14.8**	**+0.2**
KBZ	**Khabaz**	**42.08**	**307**	P	**P**	**16 04 29.9**	**-1.2**
	comp=Z,2.5nm,0.9s,baz=111,slow=9.3,SNR=3.7						
	comp=Z,2.5nm,0.9s						
YAK	**Yakutsk**	**44.67**	**25**	LR	LR	16 24 02.4	
	comp=Z,31nm,20.0s,baz=91,slow=37						
AKASG	**Malin Array Be**	**52.16**	**315**	P	**P**	**16 05 48.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=77,slow=7.1,SNR=6.4						
	comp=Z,0.1nm,0.3s						
VRI	**Vrincioaia**	**53.69**	**309**	⇑P	**P**	**16 06 02.1**	**+1.0**
PLOR	**Plostina**	**53.75**	**309**	⇓P	**P**	**16 06 02.5**	**+1.0**
MLR	**Muntele Rosu**	**54.25**	**309**	⇓P	**P**	**16 06 06.6**	**+1.3**
MLR	**Muntele Rosu**	**54.25**	**309**	P	**P**	**16 06 06.2**	**+0.9**
MLR				IAmb	IAmb	16 06 07.3	
	comp=Z,5.9nm,0.7s						
BURAR	**Bucovina Array**	**54.70**	**311**	P	**P**	**16 06 08.7**	**+0.2**
ARR	**Arges**	**55.18**	**309**	⇓P	**P**	**16 06 11.5**	**-0.5**
FINES	**FINESS Array B**	**55.23**	**328**	P	**P**	**16 06 11.3**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=93,slow=12,SNR=6.6						
	comp=Z,2.9nm,0.7s						
FINES	**FINESS Array B**	**55.23**	**328**	P	**P**	**16 06 11.9**	**0.0**
SANT	**Santorini**	**55.47**	**298**	P	**P**	**16 06 13.2**	**-0.9**
PABE	**Paberze**	**55.66**	**321**	P	**P**	**16 06 14.5**	**-0.6**
VTS	**Vitosha**	**56.40**	**305**	⇓P	**P**	**16 06 20.4**	**-0.4**
DRGR		**56.44**	**310**	⇓P	**P**	**16 06 21.7**	**+0.8**
ARCES	**ARCESS Array B**	**57.15**	**338**	P	**P**	**16 06 25.7**	**+0.2**
ARCES				IAmb	IAmb	16 06 32.7	
	comp=Z,12nm,1.2s						
MORC	**Moravsky Berou**	**59.66**	**314**	P	**P**	**16 06 43.6**	**+0.2**
MORC				IAmb	IAmb	16 06 55.5	
	comp=Z,4.6nm,1.3s						
SGRT	**San Giovanni R**	**62.03**	**305**	P	**P**	**16 06 59.2**	**-0.5**
NC405	**NORSAR Array S**	**62.13**	**327**	P	**P**	**16 06 59.7**	**-0.3**
NC602	**NORSAR Array S**	**62.24**	**327**	P	**P**	**16 07 00.4**	**-0.3**
GEC2	**GERESS Array S**	**62.27**	**313**	P	**P**	**16 07 01.0**	**-0.2**
GEC2				IAmb	IAmb	16 07 02.0	
	comp=Z,1.9nm,0.7s						
GERES	**GERESS Array B**	**62.27**	**313**	P	**P**	**16 07 01.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=90,slow=6.7,SNR=15						
	comp=Z,1.2nm,0.6s						
GERES	**GERESS Array B**	**62.27**	**313**	P	**P**	**16 07 00.9**	**-0.2**
NC303	**NORSAR Array S**	**62.29**	**328**	P	**P**	**16 07 00.7**	**-0.4**
NB2	**NORSAR Subarra**	**62.38**	**327**	P	**P**	**16 07 00.7**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=85,slow=6.5						
NOA	**NORSAR Array B**	**62.38**	**327**	P	**P**	**16 07 01.0**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=86,slow=6.6,SNR=4.9						
	comp=Z,1.4nm,0.7s						
WB0	**Warramunga Arr**	**62.49**	**132**	P	**P**	**16 07 03.9**	**+1.0**
WB0				IAmb	IAmb	16 07 18.9	
	comp=Z,4.8nm,1.0s						
WRA	**Warramunga Arr**	**62.58**	**132**	P	**P**	**16 07 05.1**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=324,slow=7.1,SNR=6.8						
	comp=Z,0.3nm,0.7s						
NC204	**NORSAR Array S**	**62.58**	**328**	P	**P**	**16 07 02.4**	**-0.6**
WB2	**Warramunga Arr**	**62.59**	**132**	P	**P**	**16 07 05.0**	**+1.4**
WB2				IAmb	IAmb	16 07 22.5	
	comp=Z,13nm,1.5s						
FDMO	**Fiordimonte**	**63.71**	**307**	P	**P**	**16 07 10.7**	**-0.1**
NRCA	**Norcia**	**63.73**	**307**	P	**P**	**16 07 10.8**	**-0.2**
NRCA				IAmb	IAmb	16 07 53.8	
	comp=Z,7.2nm,1.3s						
OSSC	**Osservatorio P**	**64.92**	**308**	P	**P**	**16 07 18.4**	**-0.4**
AS31	**Alice Springs**	**64.96**	**136**	P	**P**	**16 07 20.6**	**+1.4**
ASAR	**Alice Springs**	**64.96**	**136**	P	**P**	**16 07 20.8**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=316,slow=6.5,SNR=8.7						
	comp=Z,0.2nm,0.5s						
KEST	**Kesra**	**68.33**	**300**	P	**P**	**16 07 41.2**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=27,slow=4.5,SNR=4.6						
	comp=Z,3.8nm,0.8s						
KEST	**Kesra**	**68.33**	**300**	P	**P**	**16 07 41.4**	**+0.7**
KEST				IAmb	IAmb	16 07 43.9	
	comp=Z,5.1nm,0.9s						
BMAR	**Burnt Mountain**	**78.42**	**19**	P	**P**	**16 08 40.6**	**+1.1**
PESTR	**Estremoz**	**79.83**	**308**	P	**P**	**16 08 47.1**	**-0.7**
PESTR				IAmb	IAmb	16 09 22.0	
	comp=Z,11nm,1.3s						
TORD	**Torodi Ar. Bea**	**83.04**	**281**	P	**P**	**16 09 05.4**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=64,slow=4.7,SNR=1.6						
	comp=Z,0.4nm,0.8s						

*DJA **23** 15:57:28.5±0.3,3°N±3°×9°9E±°, h18km±3km, M3.7/12, mb3.9/1, MLv3.5/12*

ISC 23 15:57:29.8±0.9, 3°39N±0°04×98°55E±0°04, h10km, n17, σ1°86/21, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**0.11**	**7**	P	**Pg**	**15 57 33.5**	**+1.0**
TSI				S	**Sg**	**15 57 35.8**	**+1.4**
PSI	**Prapat**	**0.70**	**148**	P	**Pn**	**15 57 45.0**	**-0.9**
PSI				P	**Pb**	**15 57 45.3**	**+1.1**
PSI				S	**Sn**	**15 57 55.1**	**-1.7**
PSI				S	**Sb**	**15 57 55.4**	**+1.5**
PSI	**Prapat**	**0.70**	**148**	P	**Pn**	**15 57 45.7**	**-0.2**
KCSI	**Kotacane, Aceh**	**0.79**	**279**	P	**Pn**	**15 57 47.1**	**+0.1**
KCSI				S	**Sn**	**15 57 59.0**	**+0.1**
LASI	**Langsa, Aceh**	**1.21**	**331**	P	**Pn**	**15 57 50.5**	**-2.3**
TRSI	**Tarutung**	**1.42**	**163**	P	**Pn**	**15 57 52.4**	**-3.4**
GSI	**Gunungsitoli**	**2.29**	**205**	P	**Pn**	**15 58 06.2**	**-1.6**
GSI	**Gunungsitoli**	**2.29**	**205**	P	**Pb**	**15 58 11.7**	**+0.4**
MLSI	**Meulaboh, Aceh**	**2.31**	**292**	P	**Pn**	**15 58 04.8**	**-3.2**
LHMI	**Lhok Sumawe**	**2.42**	**319**	P	**Pg**	**15 58 17.1**	**+0.7**
IPM	**Ipoh**	**2.69**	**66**	P	**Pn**	**15 58 10.1**	**-3.2**
IPM	**Ipoh**	**2.69**	**66**	P	**Pn**	**15 58 12.4**	**-0.9**
MNSI	**Mandailing Nat**	**2.78**	**158**	P	**Pn**	**15 58 13.3**	**-1.1**
KULM	**Kulim**	**2.82**	**48**	P	**Pn**	**15 58 12.1**	**-2.8**
BKNI	**Bangkinang**	**3.93**	**141**	P	Pn	15 58 25.3	-5.0
SKLT	**Songkhla**	**4.28**	**29**	P	**Pn**	**15 58 35.1**	**0.0**
SDSI	**Sungai Dareh**	**5.17**	**146**	P	**Pn**	**15 58 45.9**	**-1.4**

TAP 23 16:12:17.6, 24°13N×121°66E, h12km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.05**	**316**	*i* P	Pg	16 12 20.6	+0.7
	baz=315						
ETL				S	Sg	16 12 22.1	+0.6
	baz=315						
TWD	**Chiawan**	**0.07**	**231**	*i* P	Pg	16 12 20.6	+0.5
	baz=227						
TWD				*i* S	Sg	16 12 22.3	+0.4
	baz=227						
NACB	**Ninganchiao**	**0.07**	**309**	*e*P	Pg	16 12 20.9	+0.8
	baz=309						
NACB				S	Sg	16 12 22.7	+0.7
	baz=309						
HWA	**Hwalien**	**0.16**	**198**	P	Pb	16 12 22.1	-0.4
	baz=195						
HWA				*e*S	Sg	16 12 25.9	+2.1
	baz=195						
ETLH	**Xiulin Townshi**	**0.18**	**297**	P	Pb	16 12 22.7	-0.2
	baz=296						
ETLH				S	Sg	16 12 25.6	+1.1
	baz=296						
ETM	**Tongmen**	**0.22**	**223**	*i* P	Pb	16 12 23.1	-0.5
	baz=223						
ETM				*e*S	Sg	16 12 26.2	+0.7
	baz=223						
WHF	**Hehuan Shan**	**0.36**	**273**	P	Pb	16 12 26.0	-0.2
	baz=272						
WHF				*i* S	Sb	16 12 31.5	-0.5
	baz=272						
ESL	**Shilin**	**0.37**	**214**	P	Pg	16 12 25.5	+0.5
	baz=212						
ESL				*e*S	Sg	16 12 30.1	0.0
	baz=212						
NNSB	**Datong**	**0.39**	**320**	*e*P	Pb	16 12 27.0	+0.4
	baz=320						
NNSB				S	Sb	16 12 32.6	0.0
	baz=320						
FUSS	**Fushou**	**0.40**	**288**	*e*P	Pb	16 12 27.7	+0.9
	baz=287						
FUSS				S	Sb	16 12 33.0	+0.1
	baz=287						
NNS	**Nan Shan**	**0.41**	**320**	*i* P	Pb	16 12 26.3	-0.6
	baz=320						
NNS				*e*S	Sg	16 12 32.1	+0.9
	baz=320						
LATG	**Datong**	**0.42**	**344**	*i* P	Pb	16 12 26.6	-0.5
	baz=343						
LATG				S	Sb	16 12 33.7	+0.1
	baz=343						
CHGB	**Renai**	**0.45**	**262**	*e*P	Pb	16 12 27.9	+0.3
	baz=261						
CHGB				S	Sb	16 12 34.2	-0.1
	baz=261						
NDT	**Datong Townshi**	**0.49**	**344**	*e*P	Pg	16 12 27.2	-0.1
	baz=344						
NDT				*e*S	Sg	16 12 33.8	-0.1
	baz=344						
WUSB	**Renai**	**0.51**	**255**	*e*P	Pb	16 12 29.4	+0.8
	baz=254						
WUSB				S	Sb	16 12 35.9	-0.2
	baz=254						
ENTT	**Nioudou**	**0.52**	**351**	P	Pb	16 12 28.3	-0.4
	baz=351						
ENTT				*e*S	Sb	16 12 35.5	-0.7
	baz=351						
YHNB	**Yeheng**	**0.60**	**335**	*e*P	Pb	16 12 31.1	+0.9
	baz=334						
YHNB				S	Sb	16 12 39.2	+0.6
	baz=334						
ILA	**Ilan**	**0.64**	**7**	*i* P	Pb	16 12 30.6	-0.1
	baz=8.0						
NFF	**Wufeng Townshi**	**0.70**	**316**	P	Pg	16 12 31.4	+0.1
	baz=315						
NFF				S	Sb	16 12 42.1	+0.5
	baz=315						
SSLB	**Suanglung**	**0.73**	**243**	*i* P	Pb	16 12 32.2	0.0
	baz=242						
SSLB				S	Sb	16 12 42.5	+0.3
	baz=242						
TIPB	**Shuangxi**	**0.86**	**10**	*e*S	Sn	16 12 48.2	+0.2
	baz=10.0						
YOJ	**Yonaguni jima**	**1.28**	**75**	*e*S	Sn	16 12 58.5	+0.1
	baz=74						

JMA 23 16:12:26.8±0.1, 25°N±1°×122°9E±0°4, h116km±1km, MV1.8/12, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.41**	**164**	P	Pn	16 12 43.7	0.0
YOJ				S	Sn	16 12 57.0	+0.5
IRIF	**Iriomote-Funau**	**0.93**	**124**	P	Pn	16 12 47.8	+0.1
IRIF				S	Sn	16 13 03.7	+0.2
HATJ	**Hateruma jima**	**1.15**	**133**	P	Pn	16 12 50.0	-0.1
HATJ				S	Sn	16 13 08.2	+0.6
JKRS	**Kuro-shima**	**1.19**	**121**	P	Pn	16 12 51.0	+0.5
JKRS				S	Sn	16 13 08.6	+0.2
JIJ	**Ishigaki jima**	**1.24**	**113**	P	Pn	16 12 51.3	+0.3
JIJ				S	Sn	16 13 09.5	+0.1
JISG	**Ishigakijimahi**	**1.32**	**101**	P	Pn	16 12 52.2	+0.3
JISG				S	Sn	16 13 11.1	+0.2
JTJ	**Tarama**	**1.66**	**97**	P	Pn	16 12 56.2	+0.3
JTJ				S	Sn	16 13 18.4	+0.4
JIKM	**Ikemajima**	**2.14**	**88**	P	Pn	16 13 02.4	+0.5
JIKM				S	Sn	16 13 29.2	+0.5
JMJ2	**Miyako jima3**	**2.22**	**92**	P	Pn	16 13 03.8	+0.9
JMJ2				S	Sn	16 13 31.4	+1.0

*NEIC **23** 16:24:13.8±1.1, 14°2S±0°2×167°3E±0°3, h166km±10km, mb4.5/6, Error ellipse: s-maj=43.1km s-min=18.6km az=126.0*

*IDC **23** 16:24:16.0±10.0, 14°22S×167°01E, h171km±105km, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=188.0km s-min=73.8km az=82.0*

ISC 23 16:24:12.2±1.5, 14°0S±0°1×167°1E±0°2, h150km, n14, σ0°83/15, mb4.2/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**6.70**	**179**	Pn	**Pn**	**16 25 48.6**	**+0.5**
MARNC	**Mare, Loyalty**	**7.44**	**174**	Pn	**Pn**	**16 25 57.8**	**-0.3**
DZM	**Mont Dzumac**	**8.01**	**185**	P	**Pn**	**16 26 07.3**	**+1.5**
	2.1nm,0.5s,baz=23,slow=13,SNR=7.3						
DZM				S	**Sn**	**16 27 35.2**	**0.0**
	2.5nm,0.8s,baz=188,slow=19,SNR=1.3						
DZM	**Mont Dzumac**	**8.01**	**185**	Pn	**Pn**	**16 26 05.1**	**-0.7**
STKA	**Stephens Creek**	**29.34**	**228**	P	**P**	**16 30 01.2**	**+0.2**
	0.8nm,0.4s,baz=46,slow=11,SNR=6.3						
	0.8nm,0.4s						
STKA	**Stephens Creek**	**29.34**	**228**	P	**P**	**16 30 00.7**	**-0.3**
WB0	**Warramunga Arr**	**31.81**	**255**	P	**P**	**16 30 23.6**	**+0.7**
WB0				IAmb	IAmb	16 30 50.1	
	comp=Z,7.2nm,1.4s						
WRAB	**Tennant Creek**	**31.86**	**255**	P	**P**	**16 30 24.2**	**+0.9**
WRAB				IAmb	IAmb	16 31 07.2	
	comp=Z,4.6nm,1.0s						
WRA	**Warramunga Arr**	**31.88**	**255**	P	**P**	**16 30 23.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=86,slow=8.9,SNR=9.1						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**32.80**	**248**	P	**P**	**16 30 31.6**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=78,slow=9.4,SNR=35						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**32.80**	**248**	P	**P**	**16 30 29.8**	**-1.7**
BBOO	**Buckleboo**	**33.90**	**231**	P	**P**	**16 30 40.4**	**-0.5**
BBOO				IAmb	IAmb	16 31 11.9	
	comp=Z,22nm,1.4s						
FORT	**Forrest**	**39.54**	**238**	P	**P**	**16 31 28.0**	**-0.6**
MCARA	**McCarthy VSAT**	**84.84**	**22**	P	**P**	**16 36 29.7**	**+0.1**
MCARA				IAmb	IAmb	16 36 39.2	
	comp=Z,20nm,1.4s						

MAN 23 16:32:43.9, 12°17N×121°93E, h25km, mb4.6, ML3.5, MS3.3, 8C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**1.00**	**127⇑**	*e*P	Pn	16 33 01.8	-0.6
BOAC	**Boac**	**1.28**	**356⇑**	*e*P	Pn	16 33 05.5	-0.8
BOAC				*e*S	Sb	16 33 23.3	-0.2
JAP	**San Jose, Anti**	**1.41**	**179⇓**	*e*P	Pb	16 33 11.6	+1.9
CUYO	**Cuyo Island**	**1.59**	**214⇑**	*e*P	Pn	16 33 10.1	-0.4
GUIM	**Jordan**	**1.66**	**157⇑**	*e*P	Pb	16 33 13.9	+0.1
GUIM				*e*S	Sb	16 33 41.0	+6.6
GQP	**Guinayangan**	**1.80**	**16⇑**	*i*P	Pn	16 33 14.2	+0.9
GQP				*i* S	Sb	16 33 38.4	+0.1
LQP	**Lukban**	**1.97**	**349**	*e*P	Pb	16 33 18.4	-0.8
JCNP	**Jose Panganiba**	**2.23**	**19⇓**	*e*P	Pn	16 33 19.9	+0.5
JCNP				*e*S	Sn	16 33 46.7	+0.5
LUBP	**Lubang**	**2.26**	**314⇑**	*e*P	Pn	16 33 20.6	+0.9
LUBP				*e*S	Sb	16 33 52.5	+0.9
MACP	**Maragondon, Ca**	**2.39**	**331⇑**	*e*P	Pn	16 33 22.1	+0.6
CNOP	**Candoni, Negro**	**2.43**	**163⇑**	*e*P	Pb	16 33 26.0	-0.9
CNOP				*e*S	Sb	16 34 00.9	+4.5

MAN 23 16:42:19.6, 12°30N×121°96E, h70km, mb3.9, ML2.7, MS2.2, 4C-7D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**1.06**	**134⇑**	*e*P	Pn	16 42 36.0	-2.9
RCP				*e*S	Sn	16 42 50.5	-2.8
BOAC	**Boac**	**1.16**	**354⇓**	*e*P	Pn	16 42 39.8	-0.3
BOAC				*e*S	Sn	16 42 57.4	+2.0
JAP	**San Jose, Anti**	**1.54**	**181⇓**	*e*P	Pn	16 42 45.7	+0.6

baz=173
O20K Slope Mountain 1.28 33 P Pn 16 52 25.3 +0.1
baz=214
HOM Homer 1.37 61 Pn Pn 16 52 26.2 +0.1
HOM IAML 16 52 47.1
comp=E,889nm,0.7s
HOM IAML 16 52 47.0
comp=N,809nm,0.4s
HOM Homer 1.37 61 P Pn 16 52 26.5 +0.4
baz=242
HOM S Sn 16 52 46.0 +0.4
baz=242
KDAK Kodiak Island 1.44 148 P Pn 16 52 25.6 -1.4
comp=N,173nm,0.3s,baz=351,slow=13,SNR=708
KDAK S Sn 16 52 44.3 -2.7
comp=N,47nm,0.3s,baz=14,slow=17,SNR=5.6
KDAK Kodiak Island 1.44 148 Pn 16 52 25.5 -1.4
KDAK IAML 16 52 47.0
comp=N,232nm,0.3s
KDAK IAML 16 52 47.1
comp=N,334nm,0.3s
CNPM China Poot 1.51 69 Pn 16 52 27.5 -0.3
CNPM IAML 16 52 49.9
comp=N,350nm,0.3s
CNPM IAML 16 52 50.0
comp=E,338nm,0.3s
RSO Redoubt South 1.58 23 Pn 16 52 28.7 -0.1
BRLK Bradley Lake 1.76 63 Pn 16 52 30.1 -0.7
BRLK IAML 16 52 54.2
comp=N,456nm,0.1s
BRLK IAML 16 52 54.4
comp=E,215nm,0.1s
BRSE Bradley Lake S 1.82 65 P Pn 16 52 31.5 0.0
baz=247
N19K Bonanza Creek 1.82 352 Pn Pn 16 52 31.3 -0.3
N19K Bonanza Creek 1.82 352 P Pn 16 52 31.6 0.0
baz=173
OHAK Old Harbor 1.84 168 Pn 16 52 30.0 -1.7
OHAK IAML 16 52 53.8
comp=E,494nm,0.4s
OHAK IAML 16 52 54.7
comp=N,361nm,0.3s
OHAK Old Harbor 1.84 168 P Pn 16 52 30.1 -1.5
baz=348
N18K Kilae Creek 1.93 331 Pn Pn 16 52 32.5 -0.3
N18K Kilae Creek 1.93 331 P Pn 16 52 32.7 -0.1
baz=151
SVW2 Sparrevohn 2.24 340 Pn 16 52 36.5 -0.2
SPCR Spurr Chakacha 2.37 21 P Pn 16 52 38.4 -0.1
baz=203
SPU Mount Spurr 2.38 23 Pn 16 52 38.3 -0.3
SII Sitkinak Islan 2.46 182 Pn Pn 16 52 38.0 -1.6
SII IAML 16 53 07.3
comp=E,324nm,0.4s
SII IAML 16 53 08.7
comp=N,174nm,0.6s
SII Sitkinak Islan 2.46 182 P Pn 16 52 38.2 -1.5
baz=17
SEW Seward 2.56 63 Pn Pn 16 52 40.1 -0.7
SEW Seward 2.56 63 P Pn 16 52 40.9 +0.2
baz=246
O22K Cooper Landing 2.62 54 Pn 16 52 41.0 -0.5
M19K Big River Lodg 2.91 356 Pn 16 52 44.9 -0.4
M19K Big River Lodg 2.91 356 P Pn 16 52 45.1 -0.3
baz=176
M20K Styx River 2.91 8 Pn 16 52 45.2 -0.3
M20K Styx River 2.91 8 P Pn 16 52 45.8 +0.3
baz=189
SUA Susitna One 2.94 32 Pn 16 52 45.9 -0.1
SUA IAML 16 53 22.0
comp=E,140nm,0.6s
SUA IAML 16 53 24.0
comp=N,142nm,0.4s
SUA Susitna One 2.94 32 P Pn 16 52 46.2 +0.2
baz=215
RC01 Rabbit Creek A 2.98 44 Pn 16 52 45.8 -0.5
RC01 IAML 16 53 23.3
comp=E,196nm,0.2s
RC01 IAML 16 53 24.3
comp=N,163nm,0.3s
RC01 Rabbit Creek A 2.98 44 P Pn 16 52 46.4 0.0
baz=227
L19K White Mountain 3.21 353 Pn 16 52 49.0 -0.4
L19K White Mountain 3.21 353 P Pn 16 52 49.4 0.0
baz=173
SKT Skwentna 3.22 21 Pn Pn 16 52 49.1 -0.4
SKT IAML 16 53 31.4
comp=E,38nm,0.5s
SKT Skwentna 3.22 21 P Pn 16 52 49.4 0.0
baz=204
CHIR Chirikof Islan 3.32 196 Pn Pn 16 52 48.8 -2.0
CHIR IAML 16 53 26.3
comp=N,102nm,1.4s
CHIR IAML 16 53 26.9
comp=E,93nm,0.5s
CHIR Chirikof Islan 3.32 196 P Pn 16 52 48.9 -2.0
baz=14
M22K Willow 3.35 33 Pn 16 52 50.8 -0.4
M22K Willow 3.35 33 P Pn 16 52 51.0 -0.2
baz=217
PWL Port Wells 3.40 55 Pn 16 52 51.0 -0.8
PWL IAML 16 53 37.1
comp=N,88nm,0.5s
L20K Farewell, AK 3.48 1 P Pn 16 52 52.8 -0.1
baz=181
PMR Palmer 3.54 41 Pn 16 52 52.6 -1.1
PMR IAML 16 53 37.4
comp=N,50nm,0.3s
PMR IAML 16 53 37.8
comp=E,48nm,0.5s
PMR Palmer 3.54 41 P Pn 16 52 53.2 -0.6
baz=225
CHGN Chignik 3.61 223 Pn Pn 16 52 53.5 -1.1
CHGN IAML 16 53 34.4
comp=N,27nm,0.6s
CHGN IAML 16 53 35.4
comp=E,35nm,0.2s
KNK Knik Glacier 3.66 47 Pn 16 52 54.5 -0.9
KNK IAML 16 53 38.4
comp=N,112nm,0.4s
KNK IAML 16 53 38.5
comp=E,107nm,0.3s
KNK Knik Glacier 3.66 47 P Pn 16 52 54.6 -0.8
baz=231
GHO Glory Hole Cre 3.74 40 Pn 16 52 55.6 -0.9
GHO IAML 16 53 39.9
comp=N,79nm,0.3s
GHO IAML 16 53 40.4
comp=E,97nm,0.4s
CUT Chulitna 3.86 27 Pn 16 52 57.5 -0.4
CUT IAML 16 53 45.3
comp=N,82nm,0.5s
CUT Chulitna 3.86 27 P Pn 16 52 58.1 +0.1
baz=210
GLI Glacier Island 3.94 59 Pn Pn 16 52 57.4 -1.7
GLI IAML 16 53 45.5
comp=N,67nm,0.2s
GLI Glacier Island 3.94 59 P Pn 16 52 57.6 -1.5
baz=244
Q23K Middleton Isla 3.95 81 Pn Pn 16 52 58.4 -0.7
Q23K Middleton Isla 3.95 81 P Pn 16 52 59.5 +0.3
baz=267
MID Middleton Isla 3.96 81 Pn Pn 16 52 58.5 -0.7
SML Sawmill 3.97 43 Pn Pn 16 52 58.4 -1.0
SML IAML 16 53 44.4
comp=E,49nm,0.7s
SML IAML 16 53 44.6
comp=N,50nm,0.5s
SML Sawmill 3.97 43 P Pn 16 52 58.4 -1.0
baz=228
PPLA Purkeypile 3.99 12 Pn Pn 16 53 00.4 +0.5
HIN Hinchinbrook I 4.04 67 Pn Pn 16 53 00.0 -0.4
FID Port Fidalgo 4.17 62 Pn Pn 16 53 00.2 -1.9
FID IAML 16 53 48.5
comp=N,82nm,0.3s
SCM Sheep Creek Mo 4.35 47 Pn Pn 16 53 03.6 -0.9
SCM IAML 16 53 54.0
comp=E,69nm,0.7s
SCM IAML 16 53 56.3
comp=N,60nm,0.8s
K20K Telida 4.36 360 Pn Pn 16 53 04.1 -0.5
K20K Telida 4.36 360 P Pn 16 53 04.2 -0.5
baz=180
EYAK Cordova Ski Ar 4.44 66 Pn Pn 16 53 05.0 -0.7
EYAK Cordova Ski Ar 4.44 66 P Pn 16 53 04.8 -0.9
baz=253

CAST Castle Rocks 4.52 11 Pn 16 53 06.9 +0.1
CAST Castle Rocks 4.52 11 P Pn 16 53 07.2 +0.4
baz=193
WAT1 Susitna Watana 4.66 32 P Pn 16 53 07.6 -1.1
baz=217
WAT6 Susitna Watana 4.71 38 P Pn 16 53 08.4 -1.1
baz=223
KLU Klutina 4.73 55 Pn 16 53 08.7 -1.0
KLU IAML 16 54 04.3
comp=E,52nm,0.3s
KLU Klutina 4.73 55 P Pn 16 53 08.9 -0.7
baz=242
KTH Kantishna Hill 4.79 17 Pn Pn 16 53 10.2 -0.3
KTH IAML 16 55 06.3
comp=E,16nm,3.6s
KTH IAML 16 56 03.7
comp=N,14nm,2.8s
TRF Thorofare Moun 4.80 20 Pn Pn 16 53 09.9 -0.7
TRF IAML 16 54 12.5
comp=E,24nm,3.1s
TRF IAML 16 54 26.9
comp=N,22nm,3.6s
TRF Thorofare Moun 4.80 20 P Pn 16 53 10.2 -0.4
baz=204
RAGM Ragged Mountai 4.92 70 Pn Pn 16 53 11.3 -0.9
M24K Tolsona, Glenn 4.95 48 Pn 16 53 11.8 -0.9
M24K Tolsona, Glenn 4.95 48 P Pn 16 53 12.3 -0.4
baz=234
KAIM Kayak Island 4.97 75 Pn Pn 16 53 12.2 -0.6
KAIM Kayak Island 4.97 75 P Pn 16 53 12.9 +0.1
baz=263
BMRM Bremner River 5.11 63 Pn Pn 16 53 13.8 -0.9
HMT Hamilton 5.11 71 Pn Pn 16 53 14.2 -0.5
J20K Nowinta River 5.18 359 Pn Pn 16 53 14.9 -0.8
J20K IAML 16 54 09.5
comp=N,13nm,3.5s
J20K IAML 16 56 35.7
comp=E,13nm,4.2s
J20K Nowinta River 5.18 359 P Pn 16 53 15.4 -0.3
baz=179
DHY Denali Highway 5.19 35 Pn 16 53 14.8 -1.1
DHY IAML 16 54 14.5
comp=E,28nm,0.2s
DHY IAML 16 54 16.3
comp=N,34nm,0.2s
DHY Denali Highway 5.19 35 P Pn 16 53 14.8 -1.1
baz=221
SUCK Suckling Hills 5.31 74 Pn Pn 16 53 16.9 -0.5
MCK McKinley 5.32 25 Pn Pn 16 53 17.1 -0.5
MCK IAML 16 54 12.3
comp=N,16nm,3.1s
MCK IAML 16 54 47.6
comp=E,20nm,3.4s
MCK McKinley 5.32 25 P Pn 16 53 17.6 0.0
baz=210
N25K Chitina, Valde 5.35 57 Pn 16 53 17.3 -0.7
N25K IAML 16 54 18.2
comp=N,24nm,0.4s
N25K IAML 16 54 22.3
comp=E,16nm,0.6s
N25K Chitina, Valde 5.35 57 P Pn 16 53 17.7 -0.3
baz=245
BERG Berg Lake 5.39 71 Pn Pn 16 53 17.9 -0.7
GLB Gilahina Butte 5.63 60 Pn Pn 16 53 21.1 -0.7
VRDI Verde Repeater 5.72 63 Pn Pn 16 53 22.5 -0.7
PAX Paxson 5.74 43 Pn Pn 16 53 23.3 0.0
PAX Paxson 5.74 43 P Pn 16 53 23.3 0.0
baz=230
SNH Sunshine Point 5.79 74 Pn Pn 16 53 23.8 -0.1
WAX Waxell Ridge 5.82 71 Pn Pn 16 53 23.2 -1.1
TGL Tana Glacier 5.89 68 Pn Pn 16 53 23.8 -1.6
MCARA McCarthy VSAT 5.96 62 Pn Pn 16 53 26.0 -0.3
MCARA McCarthy VSAT 5.96 62 P Pn 16 53 26.6 +0.3
baz=251
NEA2 Nenana 6.07 21 Pn 16 53 26.0 -1.6
NEA2 Nenana 6.07 21 P Pn 16 53 26.2 -1.4
baz=205
ISLE Juniper Island 6.09 70 Pn Pn 16 53 27.6 -0.6
WRH Wood River Hil 6.15 25 Pn Pn 16 53 27.3 -1.5
MLY Manley 6.23 13 Pn Pn 16 53 28.7 -1.1
MLY Manley 6.23 13 P Pn 16 53 28.7 -1.1
baz=196
I21K Tanana 6.26 8 Pn Pn 16 53 29.7 -0.5
YAH Yahtse 6.35 72 Pn Pn 16 53 31.3 -0.4
HDA Harding Lake 6.36 29 Pn 16 53 30.3 -1.3
CCB Clear Creek Bu 6.37 25 Pn 16 53 29.5 -2.1
M26K Nabesna, AK 6.38 53 Pn 16 53 31.1 -0.8
M26K Nabesna, AK 6.38 53 P Pn 16 53 31.6 -0.2
baz=243
RIDG Independent Ri 6.46 39 Pn Pn 16 53 31.5 -1.5
BARN Barnard Glacie 6.51 66 Pn Pn 16 53 33.6 -0.2
I23K Minto, Yukon-K 6.53 17 P Pn 16 53 32.7 -1.1
baz=202
L26K Log Cabin Wild 6.55 48 Pn Pn 16 53 34.0 -0.1
MDM Murphy Dome 6.55 22 Pn 16 53 32.7 -1.5
CTG Chitna Glacier 6.64 67 P Pn 16 53 35.7 +0.2
baz=258
CTGM Chitina Glacie 6.65 67 Pn Pn 16 53 36.2 +0.5
TABL Table Mountain 6.66 72 Pn Pn 16 53 35.9 0.0
DOT Dot Lake 6.66 42 Pn Pn 16 53 35.9 +0.2
IL31 6.68 27 Pn 16 53 33.9 -1.9
ILAR Eielson Array 6.68 27 P Pn 16 53 34.0 -1.9
comp=E,0.9nm,0.3s,baz=215,slow=14,SNR=22
ILAR S Sn 16 54 46.1 -4.4
comp=E,1.3nm,0.4s,baz=201,slow=17,SNR=10
H21K Melozitna Rive 6.69 4 Pn 16 53 35.2 -0.9
LOGN Logan Glacier 6.78 69 Pn Pn 16 53 37.8 +0.4
M27K Edge Creek, AK 6.83 55 Pn Pn 16 53 38.2 +0.1
M27K Edge Creek, AK 6.83 55 P Pn 16 53 36.8 -1.2
baz=246
POKR Poker Plat Res 6.85 24 Pn Pn 16 53 37.3 -1.0
POKR Poker Plat Res 6.85 24 P Pn 16 53 37.3 -1.0
baz=210
SCRK Sand Creek 6.90 40 Pn Pn 16 53 37.7 -1.3
SCRK Sand Creek 6.90 40 P Pn 16 53 38.4 -0.7
baz=228
J25K Salcha River, 6.94 32 Pn 16 53 38.4 -1.1
J25K Salcha River, 6.94 32 P Pn 16 53 38.9 -0.6
baz=220
IMAR Indian Mountai 7.00 1 Pn Pn 16 53 39.7 -0.5
PCA Pinnacle 7.07 75 Pn Pn 16 53 41.3 +0.1
H23K Yukon River 7.14 15 Pn 16 53 40.2 -2.0
L27K Beaver Creek, 7.16 53 Pn Pn 16 53 41.9 -0.6
BCAR Beaver Creek A 7.18 50 Pn Pn 16 53 42.6 -0.1
J26L Joseph Creek 7.40 38 Pn Pn 16 53 45.8 +0.1
J26L Joseph Creek 7.40 38 P Pn 16 53 45.4 -0.3
baz=227
H24K Noodor Dome 7.41 20 Pn Pn 16 53 44.5 -1.3
PRP Porcupine Dome 7.62 28 Pn Pn 16 53 47.8 -0.9
I26K Coal Creek Min 8.09 34 Pn Pn 16 53 54.3 -0.6
P29M Windy Craggy 8.34 79 Pn Pn 16 53 58.1 -0.2
EGAK Eagle 8.36 41 Pn Pn 16 53 57.8 -0.8
DAWY Dawson 8.61 48 Pn Pn 16 54 01.7 -0.3
M30M Minto, Yukon 9.13 60 Pn Pn 16 54 09.2 +0.2
N31M Braeburn, Yuko 9.38 67 Pn Pn 16 54 12.3 -0.2
BMAR Burnt Mountain 9.44 23 Pn Pn 16 54 10.6 -2.6
BESE Bessie Mountai 9.94 84 Pn Pn 16 54 20.3 +0.3
SIT Sitka 10.09 93 Pn Pn 16 54 21.0 -1.0
DLBC Dease Lake 12.45 82 P Pn 16 54 55.8 +2.3
comp=E,1.6nm,0.3s,baz=272,slow=8.8,SNR=11
INK Inuvik 12.94 36 P Pn 16 55 00.2 +0.6
comp=E,2.5nm,0.9s,baz=246,slow=15,SNR=2.7
PDAR Pinedale Array 31.68 101 P P 16 58 14.4 +1.6
comp=E,0.3nm,0.6s,baz=335,slow=6.6,SNR=4.4
comp=E,0.3nm,0.6s
TXAR Lajitas Array 45.13 108 P P 17 00 06.2 +1.1
comp=E,0.3nm,0.8s,baz=316,slow=7.0,SNR=3.5
comp=E,0.3nm,0.8s
SONM Songino Array 54.96 306 P P 17 01 19.3 +0.1
comp=E,0.7nm,0.5s,baz=40,slow=12,SNR=1.9
comp=E,0.7nm,0.5s

MAN 23 17:00:18.6, 12°.36N×121°.97E, h15km, mb4.1, ML2.9, MS2.6, 6C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**1.09**	**136**	↑	*e*P	Pb	17 00 38.3	-0.9
RCP					*e*S	Sn	17 00 54.3	0.0
BOAC	**Boac**	**1.10**	**353**	↑	*e*P	Pg	17 00 41.0	+1.0
BOAC					*e*S	Sn	17 00 58.8	+4.2
JAP	**San Jose, Anti**	**1.60**	**181**	↓	*e*P	Pn	17 00 46.7	+0.3
GQP	**Guinayangan**	**1.61**	**17**	↑	*e*P	Pn	17 00 46.8	+0.3
GQP					*e*S	Sg	17 01 12.1	+1.6
CUYO	**Cuyo Island**	**1.77**	**212**	↑	*e*P	Pn	17 00 44.9	-3.8
BUSP	**Coron**	**1.77**	**259**	↓	*e*P	Pn	17 00 47.3	-1.4
BUSP					*e*S	Sb	17 01 12.2	-0.6
LQP	**Lukban**	**1.80**	**346**	↑	*e*P	Pn	17 00 48.4	-0.8
LQP					*e*S	Sg	17 01 20.9	+4.3
GUIM	**Jordan**	**1.82**	**161**	↑	*e*P	Pn	17 00 49.1	-0.3
GUIM					*e*S	Sg	17 01 16.3	-1.0

*IDC **23** 17:32:00.7±1.8, 21°.24S×179°.10W, h621km±21km, mb2.9/7, mbtmp4.0/9, Error ellipse: s-maj=25.9km s-min=15.7km az=94.0*
ISC 23 17:31:59.4±1.1, 21°.3S±0°.1×179°.0W±0°.2, h600km, n11, σ1§36/11, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**322**		P	**P**	**17 33 30.7**	**+2.1**
	60nm,0.5s,baz=116,slow=23,SNR=112							
URZ	**Urewera**	**17.23**	**190**		P	**P**	**17 35 27.6**	**-0.2**
	4.4nm,0.3s,baz=352,slow=2.3,SNR=14							
URZ					S	**S**	**17 38 16.1**	**-1.1**
	4.1nm,0.7s,baz=265,slow=23,SNR=7.0							
STKA	**Stephens Creek**	**36.59**	**245**		P	**P**	**17 38 16.4**	**+0.1**
	1.1nm,0.6s,baz=107,slow=11,SNR=3.5							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**43.41**	**258**		P	**P**	**17 39 10.5**	**-0.3**
	1.7nm,0.8s,baz=98,slow=7.6,SNR=19							
	1.7nm,0.8s							
WRA	**Warramunga Arr**	**43.55**	**263**		P	**P**	**17 39 10.8**	**-1.1**
	0.1nm,0.3s,baz=98,slow=7.7,SNR=10							
	0.1nm,0.3s							
VNDA	**Vanda**	**57.03**	**185**		P	**P**	**17 40 50.0**	**+1.1**
	0.4nm,0.4s,baz=28,slow=7.3,SNR=8.1							
	0.4nm,0.4s							
MJAR	**Matsushiro Arr**	**70.30**	**324**		P	**P**	**17 42 12.7**	**-1.0**
	0.6nm,0.6s,baz=155,slow=5.5,SNR=1.9							
	0.6nm,0.6s							
PETK	**Petropavlovsk-**	**76.80**	**346**		P	**P**	**17 42 49.1**	**-1.0**
	5.8nm,1.0s,baz=171,slow=5.7,SNR=6.2							
	5.8nm,1.0s							
ILAR	**Eielson Array**	**89.31**	**13**		P	**P**	**17 43 51.2**	**-1.0**
	0.3nm,0.5s,baz=214,slow=5.0,SNR=6.9							
	0.3nm,0.5s							
AKASG	**Malin Array Be**	**143.24**	**330**		PKP	PKPab	17 50 23.1	-1.2
	1.0nm,0.4s,baz=43,slow=4.3,SNR=13							
BRTR	**Keskin Array B**	**146.66**	**311**		PKPbc	**PKPdf**	**17 50 34.2**	**+1.8**
	0.3nm,0.5s,baz=97,slow=4.4,SNR=2.1							

*IDC **23** 17:43:00.8±7.7, 14°.13N×91°.19W, h74km±52km, mb3.4/3, mbtmp3.6/5, ML3.9/2, Error ellipse: s-maj=61.5km s-min=38.1km az=171.0*
*UCR **23** 17:43:01.6±1.1, 13°.71N×91°.43W, h72km±50km, ML3.5*
*SNET **23** 17:43:01.6±1.1, 13°.72N×91°.43W, h72km±50km, ML3.6*
*GCG **23** 17:43:07.7±0.5, 14°.72N×91°.21W, h36km±23km, MD4.0*
ISC 23 17:43:02.8±1.1, 14°.2N±0°.1×91°.30W±0°.08, h89km±9km, n26, σ1§10/39, mb3.9/3, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.49**	**64**	↓	*i*P	**Pn**	**17 43 17.9**	**+0.3**
FUG					*e*S	**Sn**	**17 43 26.2**	**-2.5**
PCG	**Pacaya**	**0.69**	**77**		*e*P	**Pn**	**17 43 19.7**	**+0.3**
NBG	**Las Nubes**	**0.99**	**69**		*e*P	**Pn**	**17 43 23.9**	**+1.3**
NBG					*e*S	**Sn**	**17 43 36.7**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.48**	**98**		*e*P	**Pn**	**17 43 27.8**	**-0.6**
SLOZ					*e*S	**Sn**	**17 43 50.1**	**+2.3**
SLOZ					IAML		17 43 57.5	
	comp=Z,673nm,0.6s							
NUBE	**Las Nubes**	**1.51**	**102**		*e*P	**Pn**	**17 43 28.3**	**-0.6**
NUBE					*e*S	**Sn**	**17 43 48.9**	**+0.4**
NUBE					IAML		17 43 50.9	
	comp=Z,989nm,0.5s							
NUBE	**Las Nubes**	**1.51**	**102**		*e*P	**Pn**	**17 43 28.3**	**-0.6**
NUBE					*e*S	**Sn**	**17 43 48.9**	**+0.4**
NUBE					IAML		17 43 50.9	
	comp=Z,989nm,0.5s							
CEVE	**Cerro Verde**	**1.68**	**104**		*e*P	**Pn**	**17 43 31.1**	**+0.1**
CEVE					*e*S	**Sn**	**17 43 54.4**	**+2.0**
CEVE	**Cerro Verde**	**1.68**	**104**		*e*P	**Pn**	**17 43 31.1**	**+0.1**
CEVE					*e*S	**Sn**	**17 43 54.4**	**+2.0**
MRL	**Marmol**	**1.77**	**62**		*e*P	**Pn**	**17 43 33.5**	**+1.2**
MRL					*e*S	**Sn**	**17 43 53.0**	**-1.7**
UEES	**Universidad Ev**	**2.06**	**104**		*e*P	**Pn**	**17 43 36.1**	**+0.1**
UEES					IAML		17 44 10.2	
	comp=Z,320nm,0.2s							
UEES	**Universidad Ev**	**2.06**	**104**		*e*P	**Pn**	**17 43 36.1**	**+0.1**
UEES					IAML		17 44 10.2	
	comp=Z,320nm,0.2s							
SJTE	**Alcalda de S**	**2.31**	**105**		*e*P	**Pn**	**17 43 38.8**	**-0.4**
SJTE					*e*S	**Sn**	**17 44 07.1**	**+0.1**
SJTE	**Alcalda de S**	**2.31**	**105**		*e*P	**Pn**	**17 43 38.8**	**-0.4**
SJTE					*e*S	**Sn**	**17 44 07.1**	**+0.1**
PAVA	**Las Pavas**	**2.35**	**102**		*e*P	**Pn**	**17 43 39.3**	**-0.5**
PAVA	**Las Pavas**	**2.35**	**102**		*e*P	**Pn**	**17 43 39.3**	**-0.5**
COEG	**Centro de Oper**	**2.43**	**104**		*e*P	**Pn**	**17 43 41.0**	**+0.3**
COEG					*e*S	**Sn**	**17 44 10.5**	**+0.7**
COEG					IAML		17 44 18.3	
	comp=Z,213nm,0.4s							
COEG	**Centro de Oper**	**2.43**	**104**		*e*P	**Pn**	**17 43 41.0**	**+0.3**
COEG					*e*S	**Sn**	**17 44 10.5**	**+0.7**
COEG					IAML		17 44 18.3	
	comp=Z,213nm,0.4s							
SCLA	**Alcaldia de Sa**	**2.55**	**102**		*e*P	**Pn**	**17 43 42.1**	**-0.2**
SCLA	**Alcaldia de Sa**	**2.55**	**102**		*e*P	**Pn**	**17 43 42.1**	**-0.2**
CMIG	**Matias Romero**	**4.47**	**310**		P	**Pn**	**17 44 08.4**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=154,slow=9.6,SNR=20							
CMIG					S	**Sn**	**17 45 00.1**	**+1.0**
	comp=Z,9.5nm,0.3s,baz=314,slow=19,SNR=5.7							
	comp=Z,6.2nm,0.3s							
TXAR	**Lajitas Array**	**18.89**	**325**		P	**Pn**	**17 47 18.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=144,slow=11,SNR=9.5							
	comp=Z,0.3nm,0.5s							
TKL	**Tuckaleechee C**	**22.38**	**16**		P	**P**	**17 47 53.9**	**+0.1**
	comp=Z,3.3nm,0.5s,baz=176,slow=12,SNR=8.9							
	comp=Z,3.3nm,0.5s							
NVAR	**Mina Array Bea**	**33.92**	**320**		P	**P**	**17 49 39.8**	**+2.1**
	comp=Z,1.2nm,0.6s,baz=134,slow=8.4,SNR=13							
	comp=Z,1.2nm,0.6s							
ILAR	**Eielson Array**	**62.89**	**337**		P	**P**	**17 53 18.1**	**-1.2**
	comp=Z,0.1nm,0.6s,baz=163,slow=5.1,SNR=4.4							
	comp=Z,0.1nm,0.6s							
ASAR	**Alice Springs**	**136.38**	**251**		PKP	**PKiKP**	**18 02 15.5**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=90,slow=2.6,SNR=2.0							
CMAR	**Chiang Mai Arr**	**145.98**	**342**		PKPbc	**PKPab**	**18 02 31.7**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=334,slow=3.3,SNR=8.0							

*JMA **23** 17:43:13.0±0.2, 44°.N±1°.×14°.6E±°, h137km±2km, MV2.0/25, NEAR KUNASHIRI ISLAND*
SKHL 23 17:43:12.8±0.0, 43°.60N×146°.80E, h113km±7km, mb3.6/2, msh4.3/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.80**	**253**		*e*P	Pn	17 43 33.5	+1.2
NEM2					*e*S	Sn	17 43 48.5	+1.5
YUK	**Yuzh-Kuril'sk**	**0.81**	**303**		*e*P	Pn	17 43 32.1	-0.2
YUK					AMB	AMB	17 43 34.6	
	50nm,0.5s							
YUK					*e*S	Sn	17 43 46.5	-0.6
YUK					A	A	17 43 58.7	
	50nm,0.4s							
YUK					A	A	17 43 58.7	
	60nm,0.4s							
NMR	**Nemuro--Hokkai**	**0.81**	**254**		*e*P	Pn	17 43 32.4	0.0
NMR					AMB	AMB	17 43 33.4	
	30nm,0.4s							
NMR					*e*S	Sn	17 43 47.1	0.0
NMR					A	A	17 43 49.4	
	70nm,0.3s							
NMR					A	A	17 43 49.4	
	50nm,0.3s							
JRA	**Rausu**	**1.26**	**286**		*e*P	Pn	17 43 33.5	-3.5
JKHN	**Kushirohamanak**	**1.30**	**247**		*e*S	Sn	17 43 54.9	-1.2
JNSB	**Nemuroshibetsu**	**1.31**	**278**		*e*P	Pn	17 43 34.5	-3.1
JNK	**Nakash**	**1.51**	**270**		*e*P	Pn	17 43 36.7	-3.2
JNK					*e*S	Sn	17 43 54.6	-5.8
AKK	**Akkeshi**	**1.54**	**248**		*e*S	Sn	17 43 58.5	-2.6
JAK	**Akkeshi**	**1.65**	**249**		*e*P	Pn	17 43 39.8	-1.7
JAK					*e*S	Sn	17 43 59.8	-3.6
JTKR	**Abashiri--Toko**	**2.13**	**281**		*e*P	Pn	17 43 41.4	-6.0
JAR	**Ashorobuto**	**2.23**	**263**		*e*S	Sn	17 44 09.0	-7.3
JOB	**Onbets**	**2.28**	**253**		*e*P	Pn	17 43 46.2	-3.1

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JOB					eS	Sn	17 44 10.7	-6.7
JMP	**Maruseppu**	**2.52**	**280**		eP	Pn	17 43 45.9	-6.7
JCH	**Churui**	**2.70**	**250**		eP	Pn	17 43 51.3	-3.6
JCH					eS	Sn	17 44 20.1	-7.2

MAN 23 17:54:29.8, 9°.29N×125°.65E, h41km, mb4.2, ML3.0, MS2.7, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
BUTP	**Butuan**	**0.32**	**185**	⇓	eP	Pn	17 54 40.2	+1.7
BUTP					eS	Sn	17 54 47.0	+2.5
SCPH	**Surigao**	**0.51**	**342**	⇓	iP	Pn	17 54 46.8	+6.0
SCPH					iS	Sn	17 54 56.8	+8.3
GLSP	**General Luna,**	**0.68**	**44**	⇑	eP	Pn	17 54 44.5	+1.4
GLSP					eS	Sn	17 54 54.6	+2.1
CGP	**Cagayan de Oro**	**1.26**	**229**	⇑	eP	Pn	17 54 57.2	+6.2
CGP					eS	Sn	17 55 15.4	+8.8
BIPH	**Bislig**	**1.31**	**147**	⇑	iP	Pn	17 54 52.2	+0.6
BIPH					iS	Sn	17 55 05.7	-2.2
BUKP	**Musuan**	**1.52**	**202**	⇑	eP	Pn	17 55 00.4	+5.8
BUKP					iS	Sn	17 55 24.3	+11

IDC 23 18:05:53.8±1.8, 3°.14S×147°.93E, h0km, mb3.7/3, mbtmp3.8/4, ML3.4/1, MS3.5/15, Error ellipse: s-maj=63.4km s-min=30.2km az=119.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PMG	**Port Moresby**	**6.27**	**187**		LR	LR	18 09 57.8	
	comp=Z,164nm,20.5s,baz=308,slow=39							
HNR	**Honiara**	**13.48**	**118**		LR	LR	18 14 29.7	
	comp=Z,1μm,18.2s,baz=224,slow=38							
SIJI	**Sorong**	**16.80**	**277**		Pn	Pn	18 09 50.2	-0.5
	0.1nm,0.3s,baz=104,slow=6.7,SNR=5.9							
	3.9nm,0.9s							
CTA	**Charters Tower**	**16.92**	**185**		LR	LR	18 16 45.0	
	comp=Z,84nm,18.2s,baz=54,slow=38							
WRA	**Warramunga Arr**	**21.32**	**217**		P	P	18 10 42.1	-0.4
	3.7nm,0.8s,baz=44,slow=11,SNR=15							
WRA					LR	LR	18 19 38.8	
	comp=Z,102nm,18.9s,baz=50,slow=39							
	3.7nm,0.8s							
ASAR	**Alice Springs**	**24.50**	**212**		P	P	18 11 15.2	+0.1
	2.0nm,0.6s,baz=38,slow=7.1,SNR=27							
ASAR					LR	LR	18 21 33.0	
	comp=Z,112nm,20.0s,baz=41,slow=38							
	2.0nm,0.6s							
DAV	**Davao City (W)**	**24.51**	**295**		LR	LR	18 20 21.4	
	comp=Z,78nm,18.1s,baz=114,slow=35							
DZM	**Mont Dzumac**	**26.02**	**138**		LR	LR	18 20 20.3	
	comp=Z,90nm,20.8s,baz=18,slow=33							
STKA	**Stephens Creek**	**29.20**	**191**		LR	LR	18 23 38.1	
	comp=Z,62nm,18.9s,baz=22,slow=36							
MSVF	**Nonsavu**	**32.90**	**118**		LR	LR	18 24 21.6	
	comp=Z,40nm,21.5s,baz=191,slow=34							
URZ	**Urewera**	**43.95**	**146**		LR	LR	18 30 39.9	
	comp=Z,59nm,18.2s,baz=26,slow=34							
RPZ	**Rata Peaks**	**45.30**	**156**		LR	LR	18 31 13.4	
	comp=Z,44nm,19.4s,baz=300,slow=34							
PETK	**Petropavlovsk-**	**56.65**	**7**		LR	LR	18 35 52.5	
	comp=Z,25nm,21.9s,baz=186,slow=32							
KDAK	**Kodiak Island**	**76.96**	**28**		LR	LR	18 44 43.2	
	comp=Z,41nm,21.9s,baz=265,slow=30							
ILAR	**Eielson Array**	**82.51**	**23**		P	P	18 18 17.8	-0.3
	0.2nm,0.7s,baz=263,slow=5.4,SNR=1.7							
	0.2nm,0.7s							
YBH	**Yreka Blue Hor**	**91.59**	**48**		LR	LR	18 51 58.8	
	comp=Z,24nm,19.5s,baz=318,slow=30							
ELK	**Elko**	**97.22**	**50**		LR	LR	18 57 34.6	
	comp=Z,20nm,18.5s,baz=344,slow=32							
TORD	**Torodi Ar. Bea**	**145.18**	**289**		PKPbc	PKPbc	18 25 33.9	-0.2
	0.6nm,0.8s,baz=93,slow=3.0,SNR=3.3							

*IDC **23** 18:17:40.7±13.0, 21°.86S×178°.87W, h424km±93km, mb2.9/3, mbtmp3.7/4, Error ellipse: s-maj=232.5km s-min=26.3km az=141.0*

ISC 23 18:17:37.8±1.5, 22°.2S±0°.3×178°.7W±0°.3, h400km, n8, σ1°38/8, mb3.2/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MSVF	**Nonsavu**	**5.38**	**324**		P	**Pn**	**18 19 04.3**	**+0.3**
	14nm,0.5s,baz=79,slow=23,SNR=15							
ASAR	**Alice Springs**	**43.57**	**258**		P	**P**	**18 25 04.5**	**-0.1**
	1.3nm,0.8s,baz=93,slow=8.4,SNR=16							
ASAR					PcP	**PcP**	**18 26 44.2**	**+0.2**
	0.3nm,0.5s,baz=113,slow=3.8,SNR=7.0							
	1.3nm,0.8s							
WRA	**Warramunga Arr**	**43.80**	**264**		P	**P**	**18 25 05.5**	**-0.8**
	0.6nm,0.7s,baz=92,slow=7.9,SNR=5.9							
	0.6nm,0.7s							
ILAR	**Eielson Array**	**90.06**	**13**		P	**P**	**18 29 52.1**	**-0.6**
	0.3nm,0.7s,baz=231,slow=5.7,SNR=4.1							
	0.3nm,0.7s							
ARCES	**ARCESS Array B**	**130.43**	**349**		PKP	**PKPdf**	**18 35 60.0**	**-0.8**
	1.2nm,0.7s,baz=28,slow=3.3,SNR=4.2							
AKASG	**Malin Array Be**	**144.14**	**329**		PKP	PKPab	18 36 24.5	-1.1
	0.8nm,0.4s,baz=43,slow=4.5,SNR=12							
BRTR	**Keskin Array B**	**147.47**	**310**		PKPbc	**PKPdf**	**18 36 35.4**	**+2.7**
	0.3nm,0.4s,baz=98,slow=4.0,SNR=4.0							
GERES	**GERESS Array B**	**151.61**	**343**		PKPbc	**PKPbc**	**18 36 44.8**	**-0.6**
	0.2nm,0.4s,baz=45,slow=4.0,SNR=4.2							

*SOME **23** 18:35:49.3, 39°.08N×71°.47E, h20km*
*KRNET **23** 18:35:50.6±0.1, 39°.13N×71°.74E, h11km, mb3.4*
*NNC **23** 18:35:52.7±2.9, 39°.09N×71°.56E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=23.2km s-min=16.9km az=18.0*

ISC 23 18:35:53.1±1.1, 39°.21N±0°.05×71°.67E±0°.04, h10km, n29, σ2°34/50, 22C-15D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
DRK	**Karamyk**	**0.28**	**20**	⇓	iP	**Pg**	**18 35 57.5**	**-1.5**
	baz=8.0							
DRK					iS	**Sg**	**18 36 02.8**	**-0.1**
	baz=8.0							
BTK	**Batken**	**1.07**	**322**	⇑	eP	**Pb**	**18 36 12.8**	**-1.0**
	baz=23							
BTK				⇑	iS	**Sb**	**18 36 29.1**	**+1.2**
	baz=23							
GAR	**Garm**	**1.08**	**259**	⇓	iP	**Pg**	**18 36 11.7**	**-2.1**
	baz=64							
GAR				⇓	iS	**Sg**	**18 36 27.4**	**-0.4**
	baz=64							
OHH	**Osh**	**1.56**	**33**	⇑	iP	**Pn**	**18 36 20.7**	**-0.3**
	baz=30							
OHH				⇑	iS	**Sb**	**18 36 42.6**	**+0.5**
	baz=30							
CHGR	**Chuyangaron**	**2.04**	**255**	⇓	iP	**Pb**	**18 36 28.5**	**-1.8**
	baz=58							
CHGR				⇓	iS	**Sb**	**18 36 56.2**	**+0.5**
	baz=58							
TRKS	**Terek-Say**	**2.35**	**350**	⇑	iP	**Pn**	**18 36 32.8**	**+0.9**
	baz=50							
TRKS				⇑	iS	**Sb**	**18 37 03.5**	**-1.3**
	baz=50							
ARK	**Arkit**	**2.59**	**5**	⇑	iP	**Pn**	**18 36 36.9**	**+1.7**
	baz=4.0							
ARK				⇑	iS	**Sb**	**18 37 10.9**	**-0.8**
	baz=4.0							
IUG	**Iuzhnay**	**3.19**	**337**		eP	**Pb**	**18 36 48.0**	**-1.9**
	150nm,0.5s							
IUG					eS	**Sb**	**18 37 29.4**	**+0.6**
	111nm,0.6s							
AML	**Almayashu**	**3.30**	**27**		P	**Pb**	**18 36 48.4**	**-3.5**
	SNR=29							
ARLS	**Aral**	**3.33**	**36**	⇓	iP	**Pn**	**18 36 46.5**	**+1.2**
	baz=35							
ARLS				⇓	iS	**Sn**	**18 37 27.3**	**+2.3**
	baz=35							
UCH	**Uchtor**	**3.71**	**35**		P	**Pn**	**18 36 53.8**	**+3.0**
	SNR=7.2							
UCH	**Uchtor**	**3.71**	**35**	⇑	iP	**Pn**	**18 36 52.1**	**+1.3**
	baz=33							
UCH				⇑	iS	**Sn**	**18 37 36.5**	**+1.8**
	baz=33							
MRKS	**Merke**	**3.72**	**18**		eP	**Pb**	**18 36 59.8**	**+0.9**
	3.8nm,0.4s							
MRKS					eS	**Sg**	**18 37 50.1**	**-2.4**
	9.8nm,0.7s							
EKS2	**Erkin-Say**	**3.80**	**24**		P	**Pn**	**18 36 55.4**	**+3.7**
	SNR=9.1							
EKS2	**Erkin-Say**	**3.80**	**24**	⇑	iP	**Pn**	**18 36 53.4**	**+1.7**
	baz=23							
EKS2				⇑	iS	**Sn**	**18 37 39.2**	**+2.7**
	baz=23							
KK31	**Karatay Array**	**3.98**	**348**	⇑	Pn	**Pn**	**18 36 57.6**	**+3.4**
	1.2nm,0.3s,baz=173,slow=14,SNR=82							
KK31				⇑	Pg	**Pb**	**18 37 04.6**	**+1.2**
	3.8nm,0.4s,baz=168,slow=12,SNR=10.0							
KK31				⇓	Sn	**Sb**	**18 37 46.9**	**-4.8**
	2.5nm,0.3s,baz=176,slow=24,SNR=5.2							
KK31					Lg	Lg	18 38 01.3	
	5.8nm,0.5s,baz=165,slow=24,SNR=7.8							
KKAR	**Karatay Array**	**3.98**	**348**	⇑	iP	**Pn**	**18 36 56.4**	**+2.2**
	baz=47							
KKAR				⇑	iS	**Sn**	**18 37 44.4**	**+3.4**
	baz=47							
AAK	**Ala-Archa**	**4.03**	**31**		P	**Pn**	**18 36 55.5**	**+0.5**
	SNR=7.4							
AAK	**Ala-Archa**	**4.03**	**31**	⇓	iP	**Pn**	**18 36 56.4**	**+1.4**
	baz=30							
AAK				⇓	iS	**Sn**	**18 37 44.4**	**+2.0**
	baz=30							
KBK	**Karagaybulak**	**4.24**	**35**		P	Pb	18 37 02.6	-5.2
	SNR=7.0							
KBK	**Karagaybulak**	**4.24**	**35**	⇑	iP	**Pn**	**18 36 59.3**	**+1.4**
	baz=34							
KBK				⇑	iS	**Sn**	**18 37 49.5**	**+2.0**
	baz=34							
CHMS	**Chumysh**	**4.44**	**31**		P	**Pn**	**18 37 03.7**	**+3.2**
	SNR=18							
CHMS	**Chumysh**	**4.44**	**31**	⇓	iP	**Pn**	**18 37 02.0**	**+1.5**
	baz=30							
CHMS				⇓	iS	**Sn**	**18 37 54.2**	**+2.0**
	baz=30							
CHMS	**Chumysh**	**4.44**	**31**	⇓	Pn	**Pn**	**18 37 03.5**	**+3.1**
	16nm,0.7s							
CHMS				⇑	Sn	**Sb**	**18 37 58.6**	**-6.2**
	7.4nm,0.9s							
USP	**Ospenovka**	**4.58**	**27**		P	**Pn**	**18 37 05.8**	**+3.4**
	SNR=10							
USP	**Ospenovka**	**4.58**	**27**	⇑	iP	**Pn**	**18 37 04.0**	**+1.6**
	baz=26							
USP				⇑	iS	**Sn**	**18 37 57.6**	**+2.0**
	baz=26							
TKM2	**Tokmak 2**	**4.75**	**37**	⇓	Pn	**Pn**	**18 37 07.4**	**+2.6**
	4.2nm,0.9s							
KST	**Kastek**	**5.01**	**39**		eP	**Pb**	**18 37 24.0**	**+3.0**
	1.4nm,0.4s							
KST					eS	**Sg**	**18 38 30.9**	**-3.1**
	6.3nm,0.5s							
AB31	**Akbulak array**	**13.08**	**324**		Pn	**Pn**	**18 38 59.5**	**+0.6**
	0.5nm,0.6s,baz=133,slow=12,SNR=9.2							
AB31				⇑	Sn	**Sn**	**18 41 23.4**	**-0.9**
	0.3nm,0.3s,baz=149,slow=20,SNR=4.3							

IDC 23 18:48:50.4±5.7, 1°.71N×98°.24E, h73km±81km, mb3.3/2, mbtmp3.4/3, ML3.5/1, MS3.3/2, Error ellipse: s-maj=221.6km s-min=59.3km az=112.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PSI	**Prapat**	**1.28**	**32**		P	Pn	18 49 11.6	-1.1
	9.2nm,0.3s,baz=202,slow=5.4,SNR=12							
PSI					S	Sn	18 49 27.4	-2.0
	16nm,0.5s,baz=303,slow=15,SNR=7.5							
PSI					LR	LR	18 49 32.3	
	comp=Z,38nm,21.5s,baz=228,slow=35							
CMAR	**Chiang Mai Arr**	**16.66**	**2**		P	P	18 52 40.6	+0.1
	0.1nm,0.3s,baz=193,slow=11,SNR=4.3							
	0.1nm,0.4s							
MKAR	**Makanchi Array**	**47.01**	**345**		P	P	18 57 13.2	-1.1
	0.4nm,0.5s,baz=159,slow=9.1,SNR=7.5							
	0.4nm,0.5s							
JCJ	**Chichijima**	**49.07**	**55**		LR	LR	19 19 22.0	
	comp=Z,16nm,18.5s,baz=99,slow=37							
JHJ	**Hachijo jima 2**	**49.91**	**47**		LR	LR	19 17 42.0	
	comp=Z,58nm,20.4s,baz=295,slow=35							
ZALV	**Zalesovo Beam**	**53.23**	**350**		P	P	18 58 02.2	+1.0
	0.3nm,0.3s,baz=149,slow=6.7,SNR=2.5							
	0.3nm,0.3s							

*PDG **23** 18:59:12.8±0.5, 39°.43N×20°.71E, h0km±11km, ML3.5/12, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BEO **23** 18:59:12.0±0.7, 39°.25N×20°.62E, h5km±4km, ML3.4/7*
*ATH **23** 18:59:12.2, 39°.43N×20°.73E, h10km±31km, ML3.4/13, Error ellipse: s-maj=31.6km s-min=0.9km az=0.0*
*THE **23** 18:59:12.3, 39°.44N×20°.72E, h0km±1km, ML3.5/10, Error ellipse: s-maj=1.5km s-min=0.3km az=67.0*
*SOF **23** 18:59:15.4, 39°.37N×21°.00E, h10km, MD3.6*
*IDC **23** 18:59:16.4±3.6, 39°.38N×20°.71E, h33km±32km, mb3.7/8, mbtmp3.8/14, ML3.4/6, MS3.2/7, Error ellipse: s-maj=17.4km s-min=16.0km az=38.0*

ISC 23 18:59:12.7±1.1, 39°.40N±0°.02×20°.70E±0°.02, h1km±8km, n147, σ1°79/188, mb3.9/8, MS3.4/5, 12C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JAN	**Janina**	**0.28**	**25**		P	**Pg**	**18 59 16.5**	**-1.6**
JAN					S	**Sg**	**18 59 20.7**	**-1.1**
	17μm,0.3s							
JAN	**Janina**	**0.28**	**25**		P	**Pg**	**18 59 16.4**	**-1.7**
JAN					S	**Sg**	**18 59 21.3**	**-0.5**
JAN					AML	AML	18 59 23.6	
	comp=N,21835μm,0.3s							
JAN					AML	AML	18 59 23.9	
	comp=E,42470μm,0.4s							
IGT	**Igoumenitsa**	**0.31**	**295**		P	**Pg**	**18 59 18.1**	**-0.5**
IGT					S	**Sg**	**18 59 23.3**	**+0.7**
	comp=E,8μm,0.6s							
IGT	**Igoumenitsa**	**0.31**	**295**		P	**Pg**	**18 59 18.1**	**-0.5**
IGT					S	**Sg**	**18 59 23.9**	**+1.2**
IGT					AML	AML	18 59 27.1	
	comp=N,14780μm,0.5s							
IGT					AML	AML	18 59 30.0	
	comp=E,16061μm,0.7s							
TSLK	**Tsoukalades, L**	**0.57**	**183**		P	**Pg**	**18 59 24.0**	**+0.3**
TSLK	**Tsoukalades, L**	**0.57**	**183**		P	**Pg**	**18 59 23.9**	**+0.3**
TSLK					S	**Sg**	**18 59 32.1**	**+1.0**
TSLK					AML	AML	18 59 40.6	
	comp=N,10672μm,0.5s							
TSLK					AML	AML	18 59 41.3	
	comp=E,5985μm,0.8s							
KASA	**Kassiopi**	**0.68**	**301**		P	**Pg**	**18 59 25.7**	**-0.1**
KASA					AML	AML	18 59 41.6	
	comp=N,4464μm,0.4s							
KASA					AML	AML	18 59 42.4	
	comp=E,7979μm,1.1s							
NYDR	**Nydri-Lefkada**	**0.69**	**180**		P	**Pg**	**18 59 25.5**	**-0.3**
NYDR					S	**Sb**	**18 59 37.1**	**-0.2**
	comp=E,3μm,0.5s							
SRN	**Sarande**	**0.72**	**312**		P	**Pg**	**18 59 25.7**	**-0.8**
LSK	**Leskovik**	**0.75**	**354**		P	**Pg**	**18 59 26.2**	**-0.9**
LSK					S	**Sg**	**18 59 36.8**	**-0.1**
	comp=E,5μm,0.7s							
KPRO	**Kipourio**	**0.76**	**43**		P	**Pg**	**18 59 26.0**	**-1.2**
KPRO					S	**Sg**	**18 59 36.5**	**-0.5**
	comp=E,5μm,0.8s							
KPRO	**Kipourio**	**0.76**	**43**		P	**Pg**	**18 59 25.8**	**-1.4**
KPRO					AML	AML	18 59 45.8	
	comp=E,10511μm,0.7s							
KPRO					AML	AML	18 59 50.2	
	comp=N,10641μm,0.9s							
KEK	**Kerkira**	**0.76**	**295**		P	**Pg**	**18 59 26.7**	**-0.5**
KEK					S	**Sg**	**18 59 38.3**	**+1.2**
	comp=N,3μm,0.8s							
KEK	**Kerkira**	**0.76**	**295**		P	**Pg**	**18 59 26.7**	**-0.5**
KEK					AML	AML	18 59 46.6	
	comp=E,4677μm,0.5s							
KEK					AML	AML	18 59 47.0	
	comp=N,7686μm,0.7s							
EVGI	**Lefkada island**	**0.78**	**182**		P	**Pg**	**18 59 27.4**	**-0.2**
EVGI	**Lefkada island**	**0.78**	**182**		P	**Pg**	**18 59 27.0**	**-0.6**
FSK	**Fiskardo**	**0.94**	**186**		P	**Pg**	**18 59 30.3**	**-0.5**
FSK					S	**Sb**	**18 59 45.9**	**+1.1**
	comp=N,4μm,0.7s							
FSK	**Fiskardo**	**0.94**	**186**		P	**Pg**	**18 59 29.9**	**-0.9**
FSK					AML	AML	18 59 50.3	
	comp=N,7014μm,0.8s							
FSK					AML	AML	18 59 54.6	
	comp=E,7530μm,0.7s							
EVR	**Evrytania**	**0.99**	**119**		P	**Pg**	**18 59 30.6**	**-1.1**
EVR	**Evrytania**	**0.99**	**119**		P	**Pg**	**18 59 30.6**	**-1.1**
EVR					S	**Sg**	**18 59 43.8**	**-0.7**
EVR					AML	AML	18 59 52.0	
	comp=N,2963μm,0.6s							
EVR					AML	AML	18 59 55.9	
	comp=E,2343μm,1.0s							
PVO	**Paravola**	**1.02**	**140**		P	**Pg**	**18 59 31.9**	**-0.2**
PVO	**Paravola**	**1.02**	**140**		P	**Pg**	**18 59 31.8**	**-0.2**
PVO					S	**Sg**	**18 59 45.7**	**+0.4**
THL	**Klokotos Trika**	**1.03**	**80**		P	**Pg**	**18 59 30.9**	**-1.6**
THL	**Klokotos Trika**	**1.03**	**80**		P	**Pg**	**18 59 30.9**	**-1.6**
THL					AML	AML	18 59 52.8	
	comp=E,1372μm,0.8s							
THL					AML	AML	18 59 53.3	
	comp=N,1598μm,0.6s							
NEST	**Nestorio**	**1.05**	**15**		P	**Pg**	**18 59 31.6**	**-1.2**
NEST	**Nestorio**	**1.05**	**15**		P	**Pg**	**18 59 31.2**	**-1.6**
NEST					AML	AML	18 59 55.0	
	comp=E,2079μm,0.8s							
NEST					AML	AML	18 59 56.9	
	comp=N,2279μm,0.5s							
KEF4	**Livadi, Kephal**	**1.16**	**191**		P	**Pg**	**18 59 34.9**	**0.0**
KEF4					S	**Sn**	**18 59 53.0**	**+0.6**
KEF4	**Livadi, Kephal**	**1.16**	**191**		P	**Pg**	**18 59 34.9**	**0.0**
MAKR	**Makrakomi, Fth**	**1.18**	**109**		P	**Pg**	**18 59 34.4**	**-0.9**
MAKR					S	**Sg**	**18 59 51.7**	**+1.1**
	comp=N,4μm,0.5s							
MAKR	**Makrakomi, Fth**	**1.18**	**109**		P	**Pg**	**18 59 34.2**	**-1.1**
MAKR					AML	AML	19 00 00.6	
	comp=E,8138μm,0.6s							
MAKR					AML	AML	19 00 05.3	
	comp=N,9265μm,0.5s							
DMLN	**Damoulianata-K**	**1.19**	**192**		P	**Pg**	**18 59 35.8**	**+0.4**
DMLN					S	**Sn**	**18 59 53.8**	**+0.7**
	comp=N,4μm,0.5s							
VLS	**Valsamata**	**1.22**	**184**		P	**Pg**	**18 59 35.7**	**-0.4**
VLS					S	**Sn**	**18 59 54.6**	**+0.5**
	comp=N,3μm,0.6s							
VLS	**Valsamata**	**1.22**	**184**		P	**Pg**	**18 59 34.9**	**-1.2**
VLS					AML	AML	18 59 57.6	
	comp=E,5170μm,0.6s							
VLS					AML	AML	19 00 02.0	
	comp=N,5094μm,0.6s							
KEF3	**Kipouria, Keph**	**1.23**	**193**		P	**Pg**	**18 59 36.1**	**0.0**
KEF3					S	**Sn**	**18 59 55.2**	**+1.2**
KEF3	**Kipouria, Keph**	**1.23**	**193**		P	**Pg**	**18 59 35.7**	**-0.5**
KZN	**Kozani**	**1.23**	**42**		P	**Pg**	**18 59 35.0**	**-1.2**
KZN	**Kozani**	**1.23**	**42**		P	**Pg**	**18 59 34.9**	**-1.3**
KZN					AML	AML	18 59 57.5	
	comp=E,2182μm,0.6s							
KZN					AML	AML	19 00 00.7	
	comp=N,1525μm,0.9s							
EFP	**Efpalio**	**1.36**	**135**		P	**Pg**	**18 59 37.9**	**-0.7**
LIT	**Litokhoron**	**1.55**	**63**		P	**Pn**	**18 59 40.2**	**-1.2**
OHR	**Ohrid**	**1.71**	**3**		eP	**Pn**	**18 59 44.6**	**+1.0**
OHR					eS	**Sg**	**19 00 11.5**	**+3.8**
OHR	**Ohrid**	**1.71**	**3**		iP	**Pn**	**18 59 43.5**	**-0.1**
OHR					iS	**Sg**	**19 00 16.9**	**+3.1**
TIR	**Tirane**	**2.05**	**342**	⇑	P	**Pb**	**18 59 51.1**	**+0.5**
TIR				⇓	S	**Sg**	**19 00 18.6**	**+0.2**
TIR	**Tirane**	**2.05**	**342**		ePn	**Pn**	**18 59 49.4**	**+1.2**
TIR					eSn	**Sn**	**19 00 15.6**	**+1.3**
VAY	**Valandovo**	**2.40**	**36**		ePn	**Pn**	**18 59 54.4**	**+1.4**
VAY					eSn	**Sn**	**19 00 25.9**	**+3.0**
VAY	**Valandovo**	**2.40**	**36**		iPn	**Pn**	**18 59 54.5**	**+1.6**
STIP	**Stip**	**2.56**	**26**		iPn	**Pn**	**18 59 58.1**	**+2.9**
SKO	**Skopje**	**2.63**	**12**		ePn	**Pn**	**18 59 59.0**	**+2.8**
SKO					eSn	**Sn**	**19 00 31.8**	**+3.0**
SKO	**Skopje**	**2.63**	**12**		iPn	**Pb**	**18 59 59.8**	**-0.8**
ULC	**Ulcinj**	**2.79**	**337**		ePn	**Pn**	**18 59 59.2**	**+0.8**
ULC					iSn	**Sn**	**19 00 35.8**	**+3.1**
SRS	**Serrai**	**2.80**	**51**		ePn	**Pn**	**18 59 57.8**	**-0.8**
SRS					eSn	**Sn**	**19 00 34.8**	**+1.8**
DRME	**Dracevica, Mon**	**3.01**	**338**		ePn	**Pn**	**19 00 01.1**	**-0.4**
DRME	**Dracevica, Mon**	**3.01**	**338**		ePn	**Pn**	**19 00 02.1**	**+0.6**
DRME					iSn	**Sn**	**19 00 41.2**	**+3.1**
KKB	**Krupnik**	**3.06**	**36**		iP	**Pn**	**19 00 04.1**	**+1.9**
TIP	**Timpagrande**	**3.06**	**267**	⇓	P	**Pn**	**19 00 02.9**	**+0.7**
TIP				⇑	S	**Sn**	**19 00 39.6**	**+0.1**
MMB	**Musomiste**	**3.18**	**46**		iP	**Pn**	**19 00 04.9**	**+1.0**
BUM	**Brajici-Budva**	**3.20**	**335**		ePn	**Pn**	**19 00 03.8**	**-0.4**
BUM					iSn	**Sn**	**19 00 45.8**	**+2.8**
PDG	**Podgorica**	**3.22**	**341**	⇓	P	**Pn**	**19 00 06.0**	**+1.8**
TTG	**Podgorica**	**3.22**	**341**		ePn	**Pn**	**19 00 05.2**	**+0.9**
TTG					iSn	**Sn**	**19 00 46.2**	**+3.0**
PVY	**Plav**	**3.24**	**350**		ePn	**Pn**	**19 00 05.6**	**+0.9**
PVY					iSn	**Sn**	**19 00 46.7**	**+2.7**
MATE	**Matera**	**3.31**	**293**	⇑	P	**Pn**	**19 00 06.8**	**+1.3**
CEME	**Cevo**	**3.42**	**337**		ePn	**Pn**	**19 00 07.3**	**+0.2**
CEME					iSn	**Sn**	**19 00 51.1**	**+2.8**
HCY	**Herceg Novi**	**3.47**	**332**		ePn	**Pn**	**19 00 06.4**	**-1.4**
HCY	**Herceg Novi**	**3.47**	**332**		ePn	**Pn**	**19 00 08.1**	**+0.3**
BARS	**Barje**	**3.52**	**14**		ePn	**Pn**	**19 00 09.6**	**+1.2**
IVA	**Berane**	**3.52**	**350**	⇑	iPn	**Pn**	**19 00 09.4**	**+0.9**
IVA					iSn	**Sn**	**19 00 53.4**	**+2.5**
KOME	**Kolasin**	**3.56**	**346**		ePn	**Pn**	**19 00 10.1**	**+1.0**
KOME					iSn	**Sn**	**19 00 54.3**	**+2.5**
VTS	**Vitosha**	**3.75**	**30**	⇑	P	**Pn**	**19 00 14.0**	**+2.3**
VTS				⇑	S	**Sn**	**19 01 01.3**	**+4.8**
VTS	**Vitosha**	**3.75**	**30**		iP	**Pn**	**19 00 13.8**	**+2.1**
RZN	**Rozhen**	**3.82**	**52**		iP	**Pn**	**19 00 14.2**	**+1.4**
SELS	**Selova**	**3.83**	**5**		ePn	**Pn**	**19 00 13.2**	**+0.5**
BRY	**Bratogost**	**

MPLH	Magyarpolny	8.10	345	P	Pn	19 01 14.8	+3.5
SOKA	Soboth	8.37	332	ePn	Pn	19 01 14.0	-1.1
	comp=N,2.4nm,0.5s						
SOKA				eSn	Sn	19 02 45.1	-5.2
OBKA	Obir	8.41	330	ePn	Pn	19 01 14.0	-1.7
OBKA	Obir	8.41	330	ePn	Pn	19 01 14.9	-0.8
	comp=N,4.0nm,0.4s						
PSZ	Piszkesteto	8.54	356	⇑P	Pn	19 01 21.1	+3.8
PSZ	Piszkesteto	8.54	356	P	Pn	19 01 20.9	+3.5
ARSA	Arzberg	8.70	336	ePn	Pn	19 01 18.0	-1.6
	comp=N,2.7nm,0.7s						
ABTA	Abfaltersbach	9.47	323	ePn	Pn	19 01 28.9	-1.3
	comp=N,1.9nm,0.4s						
ABTA				eSn	Sn	19 03 13.5	-3.7
	comp=N,6.5nm,0.9s						
MOA	Molln	9.64	333	ePn	Pn	19 01 32.3	-0.2
	comp=N,1.3nm,0.3s						
BIOA	Bad Ischl, Aus	9.74	331	ePn	Pn	19 01 32.4	-1.5
	comp=N,1.4nm,0.3s						
BRTR	Keskin Array B	10.00	84	Pn	Pn	19 01 40.8	+3.2
	comp=N,0.1nm,0.3s,baz=283,slow=13,SNR=2.7						
	comp=N,0.5nm,0.7s						
WTTA	Wattenberg	10.26	323	ePn	Pn	19 01 40.8	-0.3
	comp=N,2.5nm,0.3s						
WATA	Walderalm	10.34	323	ePn	Pn	19 01 40.7	-1.4
	comp=N,1.0nm,0.3s						
WATA				eSn	Sn	19 03 35.8	-2.8
	comp=N,5.5nm,0.7s						
SQTA	Sankt Quirin	10.43	322	ePn	Pn	19 01 42.0	-1.3
	comp=N,4.1nm,0.7s						
MOTA	Moosalm	10.57	322	ePn	Pn	19 01 44.2	-1.0
	comp=N,5.4nm,0.7s						
MOTA				eSn	Sn	19 03 40.8	-3.5
	comp=N,5.4nm,0.8s						
GERES	GERESS Array B	10.69	334	Pn	Pn	19 01 46.4	-0.5
	comp=N,0.1nm,0.3s,baz=150,slow=14,SNR=6.3						
GERES				LR	LR	19 05 42.3	
	comp=N,69nm,21.4s,baz=322,slow=36						
	comp=N,0.5nm,0.6s						
DAVOX	Davos/Dischmat	10.81	317	Pn	Pn	19 01 47.8	-0.8
	comp=N,0.1nm,0.3s,baz=305,slow=22,SNR=3.8						
	comp=N,3.2nm,0.9s						
RETA	Reutte	10.83	321	Pn	Pn	19 01 48.3	-0.5
	comp=N,2.3nm,0.7s						
DAVA	Damuels	11.13	319	Pn	Pn	19 01 51.9	-1.2
	comp=N,1.5nm,0.3s						
ESDC	Sonseca Array	19.01	279	P	Pn	19 03 36.7	+0.2
	baz=72,slow=10,SNR=7.0						
	comp=N,1.4nm,0.9s						
HFS	Hagfors	21.22	350	P	P	19 04 00.2	+0.6
	comp=N,3.5nm,0.9s,baz=152,slow=9.9,SNR=5.9						
	comp=N,3.5nm,0.9s						
FINES	FINESS Array B	22.32	7	P	P	19 04 12.6	+1.3
	comp=N,5.9nm,0.9s,baz=200,slow=8.4,SNR=9.3						
	comp=N,5.9nm,0.9s						
NOA	NORSAR Array B	22.45	348	P	P	19 04 13.3	+0.4
	comp=N,1.2nm,0.8s,baz=164,slow=11,SNR=3.7						
NOA				LR	LR	19 14 13.2	
	comp=N,23nm,21.9s,baz=255,slow=40						
	comp=N,1.2nm,0.8s						
EKA	Eskdalemuir Ar	22.52	323	P	P	19 04 14.2	+0.6
	comp=N,2.1nm,0.7s,baz=128,slow=11,SNR=6.0						
	comp=N,2.1nm,0.7s						
ARCES	ARCESS Array B	30.31	3	P	P	19 05 25.1	-0.1
	comp=N,5.5nm,1.2s,baz=191,slow=9.9,SNR=3.7						
	comp=N,5.5nm,1.2s						
TORD	Torodi Ar. Bea	31.07	218	P	P	19 05 31.6	-0.8
	comp=N,1.4nm,0.8s,baz=32,slow=9.0,SNR=10						
	comp=N,1.4nm,0.8s						
MBAR	Mbarara	40.86	165	LR	LR	19 23 32.3	
	comp=N,13nm,20.8s,baz=312,slow=36						
MKAR	Makanchi Array	44.55	59	P	P	19 07 23.6	-2.4
	comp=N,0.7nm,0.5s,baz=278,slow=7.4,SNR=4.9						
	comp=N,0.7nm,0.5s						
ZALV	Zalesovo Beam	44.78	49	P	P	19 07 24.9	-2.7
	comp=N,2.9nm,0.7s,baz=280,slow=8.9,SNR=5.0						
	comp=N,2.9nm,0.7s						
NRIK	Noril'sk	45.65	27	LR	LR	19 27 53.7	
	comp=N,47nm,21.1s,baz=358,slow=38						
SFJD	Kangerlussuaq	47.24	330	LR	LR	19 28 28.8	
	comp=N,36nm,18.5s,baz=161,slow=37						
DAV	Davao City (W)	96.91	75	LR	LR	20 00 55.3	
	comp=N,77nm,18.5s,baz=98,slow=38						

*IDC **23** 19:07:40.9±2.4, 6°.82S×129°.71E, h149km±27km, mb3.3/2, mbtmp3.6/5, Error ellipse: s-maj=37.3km s-min=21.7km az=86.0*

ISC 23 19:07:40.0±1.0, 6°.69S±0°.10×129°.6E±0°.1, h150km, n6, σ3§57/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.01	16	P	Pn	19 09 09.2	+2.3
	0.6nm,0.3s,baz=276,slow=22,SNR=12						
SIJI				S	Sn	19 10 09.7	-5.2
	2.3nm,0.2s,baz=290,slow=24,SNR=8.4						
BATI	Baumata	6.85	239	P	Pn	19 09 19.4	+1.3
	9.0nm,0.6s,baz=63,slow=9.0,SNR=1.8						
BATI				S	Sn	19 10 31.9	-3.1
	9.5nm,0.8s,baz=304,slow=20,SNR=1.5						
WRA	Warramunga Arr	13.95	161	P	Pn	19 10 44.3	-7.0
	0.3nm,0.3s,baz=340,slow=13,SNR=2.6						
WRA				S	Sn	19 13 08.7	-17
	0.4nm,0.7s,baz=333,slow=22,SNR=1.8						
ASAR	Alice Springs	17.38	167	P	P	19 11 30.7	-1.8
	0.4nm,0.5s,baz=344,slow=9.6,SNR=16						
ASAR				S	S	19 14 31.8	-14
	0.5nm,1.0s,baz=345,slow=27,SNR=2.0						
STKA	Stephens Creek	27.45	157	P	P	19 13 12.2	+0.2
	1.3nm,0.8s,baz=334,slow=18,SNR=2.9						
	1.3nm,0.8s						
MKAR	Makanchi Array	67.76	327	P	P	19 18 23.5	+2.0
	0.2nm,0.4s,baz=117,slow=8.1,SNR=4.8						
	0.2nm,0.4s						

*NEIC **23** 19:15:04.2±0.5, 20°.4S±0°.2×177°.46W±0°.07, h515km±12km, mb4.4/27, Error ellipse: s-maj=27.0km s-min=7.6km az=168.0*

*IDC **23** 19:15:05.2±1.7, 20°.38S×177°.68W, h509km±15km, mb3.6/12, mbtmp4.4/15, Error ellipse: s-maj=25.2km s-min=14.1km az=147.0*

ISC 23 19:15:03.2±0.6, 20°.3S±0°.1×177°.52W±0°.08, h500km, n47, σ1§54/51, mb4.4/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.92	301	P	P	19 16 31.9	+2.3
	36nm,0.4s,baz=179,slow=5.1,SNR=150						
MSVF				S	S	19 17 41.3	+1.3
	2.8nm,0.5s,baz=51,slow=23,SNR=0.6						
MSVF	Nonsavu	4.92	301	P	P	19 16 31.8	+2.1
NIUE	Niue	7.26	81	P	P	19 16 52.5	+0.5
AFI	Afiamalu	8.41	42	P	P	19 17 02.7	-1.3
	14nm,0.3s,baz=212,slow=22,SNR=5.1						
AFI				S	S	19 18 36.7	-6.4
	39nm,0.4s,baz=180,slow=23,SNR=8.3						
DZM	Mont Dzumac	15.06	261	P	P	19 18 15.5	+1.3
	4.1nm,0.5s,baz=130,slow=21,SNR=2.4						
DZM	Mont Dzumac	15.06	261	P	P	19 18 15.0	+0.8
DZM				IAmb	IAmb	19 18 18.6	
	comp=Z,8.1nm,1.0s						
OUZ	Omahuta	16.78	206	P	P	19 18 30.1	-1.7
OUZ				IAmb	IAmb	19 18 46.2	
	comp=Z,9.4nm,1.1s						
KOUNC	Koumac, New Ca	17.06	266	P	P	19 18 34.6	-0.2
URZ	Urewera	18.47	193	P	P	19 18 47.4	-0.3
	comp=Z,1.5nm,0.4s,baz=65,slow=6.6,SNR=1.5						
EIDS	Eidsvold	29.33	254	P	P	19 20 24.7	-0.2
EIDS				IAmb	IAmb	19 20 25.1	
	comp=Z,14nm,1.1s						
ARMA	Armidale	29.55	244	P	P	19 20 27.3	+0.4
CTA	Charters Tower	33.96	264	P	P	19 21 04.9	+0.3
	comp=Z,8.1nm,0.4s,baz=90,slow=10,SNR=38						
	comp=Z,8.1nm,0.4s						
CTAO	Charters Tower	33.96	264	P	P	19 21 04.9	+0.3
COEN	Coen	38.02	273	P	P	19 21 37.0	-1.3
COEN				IAmb	IAmb	19 21 39.1	
	comp=Z,8.7nm,0.8s						
STKA	Stephens Creek	38.27	244	P	P	19 21 40.5	+0.3
	comp=Z,2.0nm,0.5s,baz=77,slow=10,SNR=8.1						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	38.27	244	P	P	19 21 39.7	-0.5
BBOO	Buckleboo	43.03	243	P	P	19 22 17.6	-0.6
BBOO				IAmb	IAmb	19 22 22.0	
	comp=Z,7.7nm,1.1s						
WR0	Warramunga Arr	44.88	262	P	P	19 22 32.2	-0.6
WR0				IAmb	IAmb	19 22 33.4	
	comp=Z,5.9nm,0.4s						
AS31	Alice Springs	45.00	256	P	P	19 22 33.4	-0.3
AS31				IAmb	IAmb	19 22 34.2	
	comp=Z,5.9nm,0.5s						
ASAR	Alice Springs	45.00	256	P	P	19 22 33.6	0.0
	comp=Z,18nm,0.5s,baz=91,slow=7.8,SNR=317						
ASAR				PcP	PcP	19 24 04.3	-0.1
	comp=Z,0.7nm,0.7s,baz=79,slow=4.8,SNR=2.7						
ASAR				ScP	ScP	19 27 09.2	+0.2
	comp=Z,0.3nm,0.7s,baz=101,slow=4.1,SNR=2.5						
ASAR				S	S	19 28 31.0	-4.5
	comp=Z,1.8nm,0.9s,baz=91,slow=17,SNR=9.6						
	comp=Z,18nm,0.5s						
WB0	Warramunga Arr	45.05	262	P	P	19 22 33.5	-0.6
WB2	Warramunga Arr	45.06	262	P	P	19 22 33.5	-0.7
WB2				IAmb	IAmb	19 22 34.4	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	45.07	262	P	P	19 22 33.8	-0.5
WRAB				IAmb	IAmb	19 22 34.0	
	comp=Z,8.9nm,0.8s						
WRA	Warramunga Arr	45.08	262	P	P	19 22 33.6	-0.7
	comp=Z,9.8nm,0.7s,baz=96,slow=7.6,SNR=102						
WRA				S	S	19 28 28.2	-8.4
	comp=Z,1.1nm,1.2s,baz=95,slow=13,SNR=2.0						
	comp=Z,9.8nm,0.7s						
WRA	Warramunga Arr	45.08	262	P	P	19 22 33.1	-1.2
MTN	Manton Dam	49.62	270	P	P	19 23 08.2	-0.3
FORT	Forrest	49.78	246	P	P	19 23 09.0	-0.6
FORT				IAmb	IAmb	19 23 21.7	
	comp=Z,21nm,0.9s						
KNRA	Kununurra	51.12	266	P	P	19 23 19.0	-0.6
KNRA				IAmb	IAmb	19 23 20.2	
	comp=Z,15nm,0.7s						
SIJI	Sorong	53.63	285	P	P	19 23 38.0	+0.4
	comp=Z,21nm,0.8s,baz=87,slow=6.2,SNR=20						
	comp=Z,21nm,0.8s						
SOEI	Soe	56.95	271	P	P	19 24 00.1	-0.9
BATI	Baumata	57.38	271	P	P	19 24 03.3	-0.5
	comp=Z,15nm,0.6s,baz=148,slow=2.8,SNR=5.1						
	comp=Z,15nm,0.6s						
PSA00	Pilbara Seismi	58.15	257	P	P	19 24 08.5	-0.4
MBWA	Marble Bar	58.34	257	P	P	19 24 08.1	-2.1
MBWA				IAmb	IAmb	19 24 10.1	
	comp=Z,6.3nm,0.6s						
MORW	Morawa	60.32	247	P	P	19 24 22.4	-0.9
TOLI2	Tolitoli	64.01	282	P	P	19 24 47.4	-0.2
TOLI2				IAmb	IAmb	19 24 48.5	
	comp=Z,4.8nm,0.8s						
QSPA	South Pole Qui	69.75	180	P	P	19 25 22.1	-0.2
KKM	Kota Kinabalu	70.15	285	P	P	19 25 24.8	-0.8
MJAR	Matsushiro Arr	70.34	323	P	P	19 25 26.4	+0.3
	comp=Z,1.8nm,0.6s,baz=154,slow=6.0,SNR=8.8						
	comp=Z,1.8nm,0.6s						
MAJO	Matsushiro	70.34	323	P	P	19 25 25.9	-0.2
MAJO				IAmb	IAmb	19 25 27.8	
	comp=Z,11nm,1.1s						
UGM	Wanagama	70.42	269	P	P	19 25 27.0	-0.2
UGM				IAmb	IAmb	19 25 32.6	
	comp=Z,16nm,1.0s						
NVAR	Mina Array Bea	80.58	43	P	P	19 26 25.6	+2.1
	comp=Z,0.7nm,0.6s,baz=229,slow=9.8,SNR=6.9						
	comp=Z,0.7nm,0.6s						
TXAR	Lajitas Array	86.58	57	P	P	19 26 56.1	+2.8
	comp=Z,0.8nm,0.7s,baz=215,slow=6.5,SNR=13						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	88.04	13	P	P	19 26 59.6	+0.3
	comp=Z,0.2nm,0.4s,baz=212,slow=5.3,SNR=4.7						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	88.52	43	P	P	19 27 04.0	+1.6
	comp=Z,0.4nm,0.6s,baz=245,slow=4.7,SNR=4.9						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	90.48	289	P	P	19 27 13.6	+2.0
	comp=Z,1.4nm,0.7s,baz=123,slow=3.3,SNR=7.8						
	comp=Z,1.4nm,0.7s						
AKASG	Malin Array Be	143.07	332	PKP	PKPab	19 33 37.6	+0.6
	comp=Z,0.5nm,0.5s,baz=40,slow=3.3,SNR=5.5						
BRTR	Keskin Array B	147.05	313	PKPbc	PKPbc	19 33 50.8	+0.9
	comp=Z,0.3nm,0.7s,baz=90,slow=3.0,SNR=2.1						

*IDC **23** 19:32:48.1±1.1, 18°.36S×177°.79W, h616km±10km, mb3.5/15, mbtmp4.4/17, Error ellipse: s-maj=17.1km s-min=10.8km az=145.0*

ISC 23 19:32:46.2±0.4, 18°.55S±0°.09×177°.65W±0°.08, h600km, n206, σ1§32/211, mb4.0/15, 15C-26D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.17	281	P	P	19 34 14.2	+1.2
	31nm,0.5s,baz=300,slow=23,SNR=54						
MSVF				S	S	19 35 26.3	+2.6
	37nm,1.1s,baz=8.5,slow=6.8,SNR=8.3						
AFI	Afiamalu	7.28	52	P	P	19 34 37.3	-1.8
	16nm,0.4s,baz=132,slow=5.8,SNR=6.6						
AFI				S	S	19 36 06.9	-4.4
	18nm,0.5s,baz=47,slow=22,SNR=6.0						
DZM	Mont Dzumac	15.33	254	P	P	19 35 57.3	-0.3
	6.9nm,0.7s,baz=1.2,slow=20,SNR=11						
URZ	Urewera	20.17	192	P	P	19 36 40.5	-0.8
	6.0nm,0.3s,baz=18,slow=3.2,SNR=1.1						
URZ				S	S	19 39 44.7	-6.4
	5.3nm,1.0s,baz=0.6,slow=15,SNR=2.3						
CTA	Charters Tower	34.06	261	P	P	19 38 42.5	-0.1
	3.4nm,0.6s,baz=68,slow=11						
	3.4nm,0.6s						
STKA	Stephens Creek	38.96	242	P	P	19 39 23.4	+0.9
	3.3nm,0.8s,baz=74,slow=8.3,SNR=8.0						
STKA				PcP	PcP	19 41 18.1	+0.9
	2.4nm,0.8s,baz=315,slow=5.7,SNR=3.8						
	3.3nm,0.8s						
WRA	Warramunga Arr	45.23	260	P	P	19 40 11.5	-0.2
	1.4nm,0.6s,baz=97,slow=7.6,SNR=45						
WRA				PcP	PcP	19 41 39.0	+0.2
	1.3nm,0.5s,baz=87,slow=3.9,SNR=8.4						
WRA				S	S	19 46 02.4	-7.0
	0.7nm,1.0s,baz=94,slow=14,SNR=2.7						
	1.4nm,0.6s						
ASAR	Alice Springs	45.32	255	P	P	19 40 12.4	+0.1
	4.9nm,0.7s,baz=95,slow=7.3,SNR=72						
ASAR				PcP	PcP	19 41 39.0	+0.1
	2.7nm,0.5s,baz=105,slow=3.8,SNR=20						
ASAR				S	S	19 46 09.2	-1.4
	3.3nm,0.8s,baz=90,slow=15,SNR=23						
	4.9nm,0.7s						
VNDA	Vanda	59.88	185	P	P	19 41 56.6	+1.8
	0.6nm,0.6s,baz=346,slow=7.8,SNR=6.0						
	0.6nm,0.6s						
MJAR	Matsushiro Arr	68.85	323	P	P	19 42 50.6	-1.4
	1.7nm,0.5s,baz=156,slow=6.0,SNR=7.3						
	1.7nm,0.5s						
PETK	Petropavlovsk-	74.48	345	P	P	19 43 23.2	-1.0
	3.7nm,0.6s,baz=120,slow=8.1,SNR=15						
	3.7nm,0.6s						
VES	Vestal, Richgr	77.42	45	P	P	19 43 41.8	+0.9
	baz=236						
BFSC	Mount Baldy Ra	77.52	47	P	P	19 43 42.3	+0.7
	baz=237						
EDW2	Edwards Air Fo	77.64	47	P	P	19 43 43.0	+0.9
	baz=237,SNR=6.7						
MONP2	Monument Peak	77.68	49	P	P	19 43 43.7	+1.1
	baz=238,SNR=10						
ISA	Isabella, Lake	77.74	46	P	P	19 43 43.8	+1.1
	baz=237						
IKP	In-Ko-Pah, Jac	77.78	49	P	P	19 43 44.3	+1.4
	baz=239						
SWSC	Sam W. Stewart	78.16	49	P	P	19 43 46.0	+1.2
	baz=239						
OHAK	Old Harbor	78.18	13	P	P	19 43 44.4	0.0
	baz=204						
BELC	Belle Mtn. Jos	78.56	48	P	P	19 43 48.4	+1.2
	baz=238						
Q17K	Contact Creek	78.62	12	P	P	19 43 46.3	-0.5
	baz=201						
HEC	Hector,Ludlow	78.76	47	P	P	19 43 49.0	+0.9
	baz=238,SNR=5.5						
BC3	Big Chuckawall	78.77	49	P	P	19 43 49.6	+1.3
	baz=239						
Q18K	Katmai Hardscr	79.15	12	P	P	19 43 49.1	-0.5
	baz=202						
IRM	Iron Mountain	79.25	48	P	P	19 43 52.0	+1.3
	baz=239						
TUQ	Turquoise Moun	79.37	47	P	P	19 43 52.4	+1.0
	baz=238						
NVAR	Mina Array Bea	79.38	43	P	P	19 43 52.2	+0.7
	3.2nm,0.6s,baz=224,slow=8.8,SNR=24						
	3.2nm,0.6s						
O17K	Koliganek Bris	79.82	10	P	P	19 43 52.2	-0.7
	baz=200						
TPNV	Topopah Spring	79.94	46	P	P	19 43 55.4	+1.0
	baz=238						
PDMCI	Parker Dam,Lak	80.04	49	P	P	19 43 56.1	+1.4
	baz=240						
O18K	Koktuh Hills	80.23	11	P	P	19 43 54.9	-0.3
	baz=202						
O19K	Port Alsworth	80.72	12	P	P	19 43 57.1	-0.5
	baz=202,SNR=6.0						
CN2	Changchun	80.97	322	eP	P	19 43 59.9	+0.6
BRSE	Bradley Lake S	81.03	13	P	P	19 43 59.2	-0.1
	baz=206						
R11A	Troy Canyon, C	81.13	45	P	P	19 44 01.1	+0.6
	baz=238						
TUC	Tucson	81.52	52	P	P	19 44 04.4	+1.9
	baz=242						
SUA	Susitna One	82.59	13	P	P	19 44 07.1	-0.1
	baz=206						
WUAZ	Wupatki	82.61	49	P	P	19 44 09.6	+1.5
	baz=241						
GLI	Glacier Island	82.88	15	P	P	19 44 08.1	-0.5
	baz=209						
SKT	Skwentna	82.90	12	P	P	19 44 07.5	-1.2
	baz=205						
M22K	Willow	82.98	13	P	P	19 44 08.5	-0.5
	baz=206						
KNK	Knik Glacier	83.04	14	P	P	19 44 09.1	-0.3
	baz=208						
PMR	Palmer	83.05	13	P	P	19 44 08.8	-0.6
	baz=207						
SML	Sawmill	83.42	14	P	P	19 44 10.7	-0.6
	baz=208						
MAW	Mawson	83.51	200	P	P	19 44 12.8	+1.1
	1.5nm,0.4s,baz=194,slow=5.9,SNR=6.8						
	1.5nm,0.4s						
CUT	Chulitna	83.54	12	P	P	19 44 11.1	-0.7
	baz=206						
MESA	MESA	83.61	17	P	P	19 44 12.6	+0.1
	baz=214						
SCM	Sheep Creek Mo	83.67	14	P	P	19 44 12.3	-0.2
	baz=209,SNR=5.1						
K20K	Telida	83.70	10	P	P	19 44 12.5	-0.1
	baz=202						
121A	Cookes Peak, D	83.88	53	P	P	19 44 16.3	+1.9
	baz=244						
CAST	Castle Rocks	84.11	11	P	P	19 44 13.0	-1.6
	baz=204,SNR=9.5						
N25K	Chitina, Valde	84.12	15	P	P	19 44 14.9	+0.1
	baz=211,SNR=8.3						
M24K	Tolsona, Glenn	84.17	14	P	P	19 44 15.7	+0.6
	baz=210						
WAT6	Susitna Watana	84.23	13	P	P	19 44 15.1	-0.4
	baz=208,SNR=7.3						
WAT1	Susitna Watana	84.28	13	P	P	19 44 14.9	-0.6
	baz=208						
CTG	Chitna Glacier	84.44	17	P	P	19 44 16.6	+0.2
	baz=214						
J20K	Nowinta River	84.44	10	P	P	19 44 16.6	+0.3
	baz=202						
TRF	Thorofare Moun	84.48	12	P	P	19 44 15.8	-0.9
	baz=206,SNR=9.5						
CHUM	Lake Minchumin	84.49	11	P	P	19 44 15.4	-1.1
	baz=204						
O28M	Mount Upton	84.60	17	P	P	19 44 17.5	+0.1
	baz=216						
HLID	Hailey	84.64	41	P	P	19 44 19.0	+1.1
	baz=238,SNR=6.9						
DHY	Denali Highway	84.75	13	P	P	19 44 17.5	-0.5
	baz=209						
MCK	McKinley	85.00	12	P	P	19 44 18.4	-0.6
	baz=207,SNR=6.4						
PAX	Paxson	85.09	14	P	P	19 44 18.7	-0.8
	baz=210						
YUK8	Steele Glacier	85.14	17	P	P	19 44 20.3	+0.3
	baz=216						
M26K	Nabesna, AK	85.20	15	P	P	19 44 20.1	+0.1
	baz=213						
YUK3	Moose Creek	85.34	17	P	P	19 44 21.1	+0.2
	baz=215,SNR=6.5						
S34M	Telegraph Cree	85.35	23	P	P	19 44 21.3	+0.6
	baz=224						
HYT	Haines Junctio	85.43	18	P	P	19 44 22.0	+0.8
	baz=218						
M27K	Edge Creek, AK	85.45	16	P	P	19 44 21.7	+0.4
	baz=214,SNR=5.5						
NEW	Newport	85.60	36	P	P	19 44 22.1	-0.1
	baz=236						
L26K	Log Cabin Wild	85.64	15	P	P	19 44 22.0	0.0
	baz=212						
TXAR	Lajitas Array	85.73	57	P	P	19 44 24.9	+1.6
	7.7nm,0.7s,baz=218,slow=6.4,SNR=106						
	7.7nm,0.7s						
BVCY	Beaver Creek	85.76	16	P	P	19 44 23.1	+0.4
	baz=215,SNR=5.3						
ANMO	Albuquerque	85.93	51	P	P	19 44 25.3	+1.0
	baz=244						
HDA	Harding Lake	86.02	13	P	P	19 44 23.2	-0.5
	baz=209,SNR=7.3						
L27K	Beaver Creek,	86.05	15	P	P	19 44 24.2	+0.2
	baz=214						
I23K	Minto, Yukon-K	86.19	12	P	P	19 44 23.4	-1.1
	baz=207						
TCOL	CIGO, UAF Yank	86.24	12	P	P	19 44 24.0	-0.8
	baz=208						
SCRK	Sand Creek	86.30	14	P	P	19 44 25.1	-0.2
	baz=212						
ILAR	Eielson Array	86.34	13	P	P	19 44 24.1	-1.3
	2.2nm,0.4s,baz=216,slow=5.0,SNR=65						
	2.2nm,0.4s						
M29M	Somme Creek	86.44	17	P	P	19 44 26.3	+0.3
	baz=217						
H22K	Ishtalitna Cre	86.49	10	P	P	19 44 25.9	-0.2
	baz=205,SNR=5.1						
J25K	Salcha River,	86.53	13	P	P	19 44 25.9	-0.3
	baz=211,SNR=5.7						
POKR	Poker Plat Res	86.54	12	P	P	19 44 25.2	-1.0
	baz=209						
J26L	Joseph Creek	86.84	14	P	P	19 44 28.2	+0.4
	baz=212,SNR=8.5						
S22A	4UR Ranch, Cre	86.88	49	P	P	19 44 29.9	+1.0
	baz=244						
M30M	Minto, Yukon	87.02	18	P	P	19 44 28.8	+0.2
	baz=218,SNR=6.3						
L29M	L29M	87.06	17	P	P	19 44 29.2	+0.4
	baz=217,SNR=7.8						
PRP	Porcupine Dome	87.28	13	P	P	19 44 29.8	0.0
	baz=210						
BW06	Boulder Array	87.32	43	P	P	19 44 31.1	+0.4
	baz=242						
PDAR	Pinedale

VNA3 **Neumayer Olymp 90.06 176** P **P** **19 44 43.2 +0.5**
PZH **PanZhiHua 90.09 298** P **P** **19 44 43.6 -0.2**
PLCA **Paso Flores 90.37 133** P **P** **19 44 46.1 +1.3**
1.0nm,0.7s,baz=270,slow=2.7,SNR=5.9
1.0nm,0.7s
VNA2 **Neumayer--Watz 90.51 177** P **P** **19 44 45.3 +0.5**
baz=189,slow=3.9
VNA2 **Neumayer--Watz 90.51 177** pP pP 19 46 53.7 +0.2
VNA1 **Neumayer--Stat 90.73 176** P **P** **19 44 46.5 +0.8**
F31M **Tsiigehtchic 91.60 16** P **P** **19 44 49.6 0.0**
baz=221
YKA **Yellowknife Ar 94.61 25** P **P** **19 45 02.8 -0.7**
1.4nm,0.7s,baz=238,slow=4.6,SNR=6.2
1.4nm,0.7s
ZALV **Zalesovo Beam 109.18 322** PKiKP **PKiKP** **19 50 06.5 -2.1**
0.9nm,0.5s,baz=114,slow=3.5,SNR=4.6
MKAR **Makanchi Array 110.10 314** PKiKP **PKiKP** **19 50 09.2 -1.5**
1.0nm,0.5s,baz=72,slow=1.5,SNR=24
AAK **Ala-Archa 115.34 309** PKP **PKPdf** **19 50 20.2 -0.8**
0.6nm,0.5s,baz=292,slow=5.4,SNR=3.6
AKTO **Aktyubinsk 125.82 319** PKP **PKPdf** **19 50 40.4 -0.2**
0.7nm,0.5s,baz=55,slow=4.0,SNR=4.9
ARCES **ARCESS Array B 127.07 350** PKP **PKPdf** **19 50 41.7 -0.8**
1.8nm,0.4s,baz=28,slow=1.8,SNR=29
GEYT **Alibeck 127.99 304** PKP **PKPdf** **19 50 45.0 -0.3**
1.0nm,0.4s,baz=85,slow=3.3,SNR=4.9
BOSA **Boshof 128.15 206** PKP **PKPdf** **19 50 46.5 +0.4**
2.5nm,1.1s,baz=295,slow=3.9,SNR=3.8
FINES **FINESS Array B 134.00 344** PKhKP PKPpre 19 50 50.3
1.7nm,0.8s,baz=32,slow=7.6,SNR=1.5
FINES PKP **PKPdf** **19 50 55.2 -0.6**
1.7nm,0.4s,baz=90,slow=7.6,SNR=14
NOA **NORSAR Array B 137.09 354** PKP **PKPdf** **19 51 01.9 +0.2**
1.1nm,0.7s,baz=14,slow=3.7,SNR=2.9
HFS **Hagfors 137.67 352** PKhKP PKPpre 19 50 51.2
1.5nm,0.6s,baz=70,slow=2.1,SNR=10
AKASG **Malin Array B6 141.46 331** PKhKP PKPpre 19 51 04.4
3.3nm,0.4s,baz=42,slow=4.1,SNR=26
AKASG PKP **PKPdf** **19 51 11.3 +1.6**
1.8nm,0.6s,baz=35,slow=3.0,SNR=6.0
EKA **Eskdalemuir Ar 143.04 5** PKhKP PKPpre 19 51 09.2
1.3nm,0.4s,baz=341,slow=2.0,SNR=14
MILM **Milestii Mici 144.33 328** ⇑P PKPbc 19 51 14.1 -0.8
VASR **Vaslui 145.03 329** ⇑P **PKPdf** **19 51 17.3 +1.1**
VLDR **Vladesti 145.44 328** ⇓P **PKPdf** **19 51 18.3 +1.5**
TLCR **145.50 326** ⇓P **PKPdf** **19 51 18.2 +1.2**
BUR01 **Bucovina Ar. S 145.51 332** ⇑P **PKPbc** **19 51 19.5 +0.9**
BIZ **Bicaz 145.62 331** ⇑P **PKPdf** **19 51 18.9 +1.7**
TESR **Tescani 145.67 330** ⇑P **PKPdf** **19 51 18.3 +1.1**
BRTR **Keskin Array B 145.74 315** PKPbc **PKPdf** **19 51 19.4 +1.5**
4.2nm,0.7s,baz=136,slow=4.6,SNR=26
PANC **Panciu 145.88 329** ⇓P **PKPdf** **19 51 19.5 +1.9**
TPGR **Topolog 145.93 326** ⇑P **PKPdf** **19 51 18.3 +0.5**
ODBI **Odobesti 146.01 328** ⇓P **PKPdf** **19 51 19.4 +1.6**
VRI **Vrincioaia 146.10 329** ⇓P **PKPdf** **19 51 19.4 +1.4**
PLOR **Plostina 146.15 329** ⇑P **PKPdf** **19 51 18.6 +0.5**
OSTC **Ostas 146.20 344** *e*PKP **PKPdf** **19 51 20.4 +2.3**
CHVC **Chvalec 146.22 344** *e*PKP **PKPab** **19 51 23.0 +0.2**
TRPA **Tarpa 146.23 335** ⇑P **PKPdf** **19 51 19.8 +1.6**
CLL **Collm 146.24 348** ⇓*i*PKPbc **PKPdf** **19 51 20.3 +2.2**
comp=Z,28nm,0.9s
ARCR **ARCALIA 146.30 333** ⇑P **PKPdf** **19 51 20.8 +2.5**
UPC **Upice 146.30 344** *e*PKP **PKPdf** **19 51 20.7 +2.5**
HARR **Harsova 146.30 326** ⇓P **PKPdf** **19 51 20.7 +2.3**
OKC **Ostrava-Krasne 146.31 341** *e*PKP **PKPdf** **19 51 20.6 +2.4**
DPC **Dobruska-Polom 146.36 344** *e*PKP **PKPdf** **19 51 20.9 +2.5**
DPC *ex* x 19 51 23.7
KRLC **Kraliky 146.49 343** *e*PKP **PKPdf** **19 51 20.3 +1.7**
MORC **Moravsky Berou 146.54 342** ⇑P **PKPdf** **19 51 18.0 -0.7**
MORC **Moravsky Berou 146.54 342** *e*PKP **PKPdf** **19 51 21.3 +2.6**
PVCC **Panska Ves 146.63 346** *e*PKP **PKPbc** **19 51 21.6 +0.1**
DOPR **Dopca 146.67 330** ⇓P **PKPbc** **19 51 22.2 +0.5**
ISR **Istrita 146.72 328** ⇓P **PKPdf** **19 51 19.7 +0.6**
MLR **Muntele Rosu 146.75 329** ⇓P **PKPdf** **19 51 21.5 +2.2**
MAUC **Maruska 146.82 341** *e*PKP **PKPbc** **19 51 22.3 +0.2**
CBBR **Cluj-Babes-Bol 146.89 333** ⇓P **PKPbc** **19 51 22.6 +0.3**
PRU **Pruhonice 147.14 345** *e*PKP **PKPdf** **19 51 22.5 +2.9**
VOIR **147.22 330** ⇓P **PKPdf** **19 51 22.6 +2.6**
DRGR **147.23 334** ⇓P **PKPdf** **19 51 22.7 +2.7**
NKC **Novy Kostel 147.37 348** *e*PKP **PKPdf** **19 51 23.0 +3.0**
PSZ **Piszkesteto 147.40 338** ⇓P **PKPdf** **19 51 22.8 +2.6**
ARR **Arges 147.47 330** ⇑P **PKPbc** **19 51 24.4 +0.5**
KRUC **Moravsky 147.51 343** *e*PKP **PKPbc** **19 51 23.7 -0.1**
BTNL **Ternell 147.89 355** *d*PKiKP **PKPbc** **19 51 24.7 -0.1**
HUMR **Humele 147.92 329** ⇓P **PKPdf** **19 51 23.6 +2.6**
SNF **Seneffe 148.07 358** *d*PKiKP **PKPbc** **19 51 25.2 +0.1**
SIRR **Siria 148.08 334** ⇑P **PKPbc** **19 51 25.4 0.0**
KHC **Kasperske Hory 148.17 346** *e*PKP **PKPdf** **19 51 24.8 +3.4**
KHC *ex* x 19 51 30.6
BMRD **Maredsous 148.26 357** *d*PKiKP **PKPbc** **19 51 25.5 -0.1**
CKRC **Cesky Krumlov 148.29 345** *e*PKP **PKPdf** **19 51 25.0 +3.4**
GZR **Gura Zlata 148.30 332** ⇑P **PKPbc** **19 51 25.3 -0.7**
GERES **GERESS Array B 148.41 346** PKPbc **PKPbc** **19 51 26.1 -0.1**
comp=Z,3.8nm,0.7s,baz=35,slow=3.3,SNR=33
DOU **Dourbes 148.47 357** *d*PKiKP **PKPbc** **19 51 25.9 -0.3**
BZS **Buzias 148.62 334** ⇑P **PKPbc** **19 51 26.1 -0.7**
CONA **Conrad Observa 148.69 342** *i* P **PKPbc** **19 51 27.1 +0.2**
comp=Z,9.4nm,0.9s
RONA **Rosalia, Austr 148.77 342** *i* P **PKPbc** **19 51 27.4 +0.4**
comp=Z,11nm,0.8s,SNR=8.6
WLF **Walferdange 148.81 355** *d*PKiKP **PKPbc** **19 51 27.4 +0.3**
HERR **Herculane 148.86 332** ⇓P **PKPbc** **19 51 26.6 -0.7**
MOA **Molln 149.20 344** *i* P **PKPbc** **19 51 27.9 -0.2**
comp=Z,5.2nm,0.8s
MORH **Mrgy, Hungar 149.30 338** ⇓P **PKPbc** **19 51 28.5 +0.2**
BIOA **Bad Ischl, Aus 149.50 345** *e*P **PKPbc** **19 51 28.4 -0.4**
comp=Z,4.6nm,0.7s,SNR=4.7
BLKB **Belogradchik 149.70 330** ⇓P **PKPbc** **19 51 28.9 -0.6**
FRGS **Fruska Gora 149.74 335** ⇓P **PKPbc** **19 51 29.2 -0.2**
SOKA **Soboth 150.06 342** *e*P **PKPbc** **19 51 29.6 -0.7**
comp=Z,2.5nm,0.6s,SNR=6.4
KBA **Koelnbreinsper 150.15 345** *i* P **PKPbc** **19 51 29.9 -0.6**
comp=Z,8.7nm,0.8s,SNR=11
BOVS **Bovan 150.15 331** ⇑P **PKPbc** **19 51 29.1 -1.3**
VTS **Vitosha 150.18 328** ⇓P **PKPbc** **19 51 30.2 -0.5**
WATA **Walderalm 150.31 347** *i* P **PKPbc** **19 51 30.3 -0.5**
comp=Z,5.1nm,0.5s,SNR=11
RETA **Reutte 150.32 348** *i* P **PKPbc** **19 51 30.5 -0.3**
comp=Z,17nm,1.7s,SNR=5.4
WTTA **Wattenberg 150.36 347** *i* P **PKPbc** **19 51 30.8 -0.3**
comp=Z,8.5nm,0.5s,SNR=18
MOTA **Moosalm 150.39 348** *e*P **PKPbc** **19 51 30.6 -0.5**
comp=Z,8.2nm,0.9s,SNR=7.3
MYKA **Terra Mystica 150.49 344** *e*P **PKPbc** **19 51 30.1 -1.1**
comp=Z,7.5nm,0.6s,SNR=4.6
SQTA **Sankt Quirin 150.49 348** *e*P **PKPbc** **19 51 30.9 -0.4**
comp=Z,5.7nm,0.6s,SNR=9.6
ABTA **Abfaltersbach 150.66 346** *i* P **PKPbc** **19 51 30.8 -0.8**
comp=Z,16nm,0.6s,SNR=13
DAVA **Damuels 150.68 350** *i* P **PKPbc** **19 51 32.0 +0.2**
comp=Z,5.7nm,0.6s
FETA **Feichten 150.78 348** *i* P **PKPbc** **19 51 31.9 -0.1**
comp=Z,6.5nm,0.6s,SNR=6.1
CRNS **Crni Vrh 150.82 343** *i* PKPbc **PKPbc** **19 51 31.3 -0.7**
BOJS **Bojanci 151.06 341** *i* PKPbc **PKPbc** **19 51 32.5 0.0**
PDG **Podgorica 152.20 333** ⇓P **PKPbc** **19 51 34.4 -0.6**
DBIC **Dimbokro 166.26 148** PKP **PKPdf** **19 51 43.4 -1.1**
comp=Z,2.2nm,0.6s,baz=242,slow=4.0,SNR=4.0
TORD **Torodi Ar. Bea 174.59 173** PKP **PKPdf** **19 51 47.7 -1.2**
comp=Z,1.6nm,1.0s,baz=305,slow=1.9,SNR=6.1
TORD PKPab **PKPab** **19 53 26.2 -0.4**
comp=Z,0.5nm,0.7s,baz=200,slow=3.6,SNR=3.1

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*NOU **23** 19:33:26.7, 32°53S×178°91W, h382km, mb3.9/8, South of Kermadec Islands*
*WEL **23** 19:33:56.5±0.7, 34°S±8°×17°9E±1°1, h280km±13km, M3.7/19, mB4.2/6, ML4.5/2, MLv4.0/19, Mw(mB)3.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=119.1*
ISC 23 19:33:48.5±2.8, 34°2S±0°2×179°4E±0°2, h350km, n43, σ2974/67, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.48**	**194**	P	**Pn**	**19 34 52.7**	**+0.5**
MXZ				S	**S**	**19 35 38.2**	**-5.3**
MXZ	**Matakaoa Point**	**3.48**	**194**	P	**Pn**	**19 34 53.4**	**+1.3**
WMGZ	**Waiomatatini S**	**3.71**	**192**	P	**Pn**	**19 34 55.9**	**+1.6**
WMGZ				S	**S**	**19 35 43.5**	**-4.0**
HAZ	**Te Kaha**	**3.79**	**200**	P	**Pn**	**19 34 56.1**	**+0.9**
HAZ				S	**S**	**19 35 44.1**	**-5.0**
PKGZ	**Pakihiroa**	**3.84**	**196**	P	**Pn**	**19 34 56.6**	**+0.8**
PUZ	**Puketiti**	**3.98**	**193**	P	**Pn**	**19 34 58.1**	**+0.9**
PUZ				S	**S**	**19 35 49.1**	**-3.5**
RUGZ	**Raukumara Rang**	**4.02**	**200**	P	**Pn**	**19 34 59.2**	**+1.6**
RUGZ				S	**S**	**19 35 48.8**	**-4.6**
TWGZ	**Tauwhareparae**	**4.14**	**196**	P	**Pn**	**19 35 02.0**	**+3.2**
TWGZ				S	**S**	**19 35 53.9**	**-1.7**
MWZ	**Matawai**	**4.40**	**200**	P	**Pn**	**19 35 03.0**	**+1.5**
MWZ				S	**S**	**19 35 57.9**	**-2.7**
TKGZ	**Te Karaka**	**4.42**	**196**	P	**Pn**	**19 35 04.3**	**+2.6**
TKGZ				S	**S**	**19 35 58.6**	**-2.3**
URZ	**Urewera**	**4.46**	**204**	P	**Pn**	**19 35 04.1**	**+2.0**
URZ				S	**S**	**19 35 58.3**	**-3.3**
URZ	**Urewera**	**4.46**	**204**	P	**Pn**	**19 35 04.4**	**+2.3**
RIGZ	**Rimuhau**	**4.70**	**196**	P	**Pn**	**19 35 07.1**	**+2.5**
RIGZ				S	**S**	**19 36 03.4**	**-2.9**
RTZ	**Ruatahuna**	**4.83**	**203**	P	**Pn**	**19 35 07.7**	**+1.6**
SNGZ	**Shannon Statio**	**4.87**	**199**	P	**Pn**	**19 35 08.3**	**+1.7**
SNGZ				S	**S**	**19 36 07.6**	**-2.2**
OUZ	**Omahuta**	**4.89**	**256**	P	**Pn**	**19 35 06.7**	**-0.1**
OUZ	**Omahuta**	**4.89**	**256**	P	**Pn**	**19 35 07.5**	**+0.7**
KNZ	**Kokohu**	**5.02**	**196**	P	**Pn**	**19 35 10.9**	**+2.8**
RAHZ	**Arahi**	**5.07**	**201**	P	**Pn**	**19 35 11.8**	**+3.0**
RAHZ				S	**S**	**19 36 11.5**	**-2.2**
MTHZ	**Maungataniwha**	**5.09**	**203**	P	**Pn**	**19 35 10.9**	**+1.9**
MTHZ				S	**S**	**19 36 11.6**	**-2.5**
MHGZ	**Mahia Peninsul**	**5.09**	**193**	P	**Pn**	**19 35 12.2**	**+3.3**
MHGZ				S	**S**	**19 36 10.3**	**-3.8**
NMHZ	**Naumai**	**5.32**	**202**	P	**Pn**	**19 35 14.3**	**+2.7**
NMHZ				S	**S**	**19 36 17.6**	**-1.3**
ARHZ	**Aropaoanui**	**5.42**	**200**	P	**Pn**	**19 35 15.4**	**+2.9**
ARHZ				S	**S**	**19 36 19.3**	**-1.4**
BKZ	**Black Stump Fm**	**5.49**	**204**	P	**Pn**	**19 35 16.6**	**+3.2**
BKZ				S	**S**	**19 36 20.1**	**-2.1**
BKZ	**Black Stump Fm**	**5.49**	**204**	P	**Pn**	**19 35 17.1**	**+3.7**
HIZ	**Hauiti**	**5.66**	**219**	P	**Pn**	**19 35 19.6**	**+4.3**
TMVZ	**Te Maari**	**5.74**	**210**	P	**Pn**	**19 35 19.6**	**+3.3**
ETVZ	**East Tongariro**	**5.76**	**210**	P	**Pn**	**19 35 19.7**	**+3.2**
CKHZ	**Cape Kidnapper**	**5.76**	**198**	P	**Pn**	**19 35 18.8**	**+2.3**
CKHZ				S	**S**	**19 36 25.5**	**-2.3**
OTVZ	**Oturere**	**5.80**	**210**	P	**Pn**	**19 35 19.7**	**+2.7**
OTVZ				S	**S**	**19 36 28.7**	**-0.1**
SNVZ	**South Ngauruho**	**5.83**	**210**	P	**Pn**	**19 35 20.1**	**+2.7**
BHHZ	**Black Hill Sta**	**5.92**	**206**	P	**Pn**	**19 35 20.9**	**+2.5**
BHHZ				S	**S**	**19 36 28.1**	**-3.2**
KAHZ	**Kahuranaki**	**5.95**	**199**	P	**Pn**	**19 35 20.8**	**+2.3**
MOVZ	**Moawhango**	**5.97**	**208**	P	**Pn**	**19 35 21.1**	**+2.2**
MOVZ				S	**S**	**19 36 28.3**	**-3.9**
PXZ	**Pawanui**	**6.17**	**198**	P	**Pn**	**19 35 23.8**	**+2.7**
PXZ				S	**S**	**19 36 33.8**	**-2.4**
PNHZ	**Pukenui**	**6.26**	**203**	P	**Pn**	**19 35 24.3**	**+2.1**
PNHZ				S	**S**	**19 36 34.8**	**-3.4**
PRHZ	**Porangahau**	**6.45**	**199**	P	**Pn**	**19 35 27.4**	**+3.0**
TSZ	**Takapari Road**	**6.47**	**204**	P	**Pn**	**19 35 27.0**	**+2.4**
WAZ	**Wanganui**	**6.58**	**211**	P	**Pn**	**19 35 29.3**	**+3.5**
WAZ				S	**S**	**19 36 43.7**	**-1.2**
BFZ	**Birch Farm**	**6.95**	**200**	P	**Pn**	**19 35 33.5**	**+3.4**
SNZO	**South Karori**	**8.02**	**206**	P	**Pn**	**19 35 44.9**	**+2.3**
QRZ	**Quartz Range**	**8.58**	**217**	P	**P**	**19 35 52.9**	**+0.9**
40nm,1.9s							
KHZ	**Kahutara**	**9.41**	**208**	P	**P**	**19 36 01.6**	**+0.4**

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*ISK **23** 19:41:56.1, 37°31N×22°05E, h6km, ML3.7/19*
*THE **23** 19:41:57.5, 37°21N×22°05E, h8km, ML3.8/13, Error ellipse: s-maj=0.7km s-min=0.4km az=267.0*
*ATH **23** 19:41:57.1, 37°23N×22°08E, h8km±2km, ML3.8/12, Error ellipse: s-maj=2.1km s-min=0.8km az=216.0*
*DDA **23** 19:41:59.0±0.0, 37°47N×22°16E, h2km±6km, MW3.9*
*IDC **23** 19:42:02.0±1.6, 37°16N×22°08E, h63km±16km, mb3.5/17, mbtmp3.8/26, MS3.0/4, Error ellipse: s-maj=16.6km s-min=12.9km az=178.0*
ISC 23 19:41:57.0±0.6, 37°22N±0°02×22°04E±0°02, h16km±4km, n184, σ1985/209, mb3.9/16, 11C-4D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.10**	**246**	PG	**Pg**	**19 42 00.3**	**-0.2**
ITM				SG	**Sg**	**19 42 02.5**	**-0.3**
ITM	**Ithomi**	**0.10**	**246**	P	**Pg**	**19 42 00.2**	**-0.2**
ITM				S	**Sg**	**19 42 02.1**	**-0.6**
287μm,0.4s							
ITM	**Ithomi**	**0.10**	**246**	P	**Pg**	**19 42 00.2**	**-0.2**
ITM				S	**Sg**	**19 42 02.2**	**-0.6**
ITM				AML	AML	19 42 02.7	
ITM				AML	AML	19 42 02.7	
KLMT	**Kalamata**	**0.16**	**175**	P	**Pg**	**19 42 01.0**	**-0.1**
KLMT				S	**Sg**	**19 42 03.2**	**-0.7**
59μm,0.2s							
PYL	**PYLOS**	**0.41**	**217**	P	**Pg**	**19 42 04.8**	**-0.4**
PYL				S	**Sg**	**19 42 10.9**	**+0.1**
24μm,0.4s							
PYL	**PYLOS**	**0.41**	**217**	P	**Pg**	**19 42 04.7**	**-0.6**
PYL				S	**Sg**	**19 42 11.1**	**+0.3**
PYL				AML	AML	19 42 11.8	
comp=E,56445μm,0.4s							
PYL				AML	AML	19 42 12.9	
comp=N,40163μm,0.4s							
DRO	**Drossia**	**0.78**	**340**	P	**Pg**	**19 42 12.3**	**+0.1**
DRO				S	**Sb**	**19 42 24.1**	**+1.7**
comp=N,15μm,0.3s							
DRO	**Drossia**	**0.78**	**340**	P	**Pg**	**19 42 11.9**	**-0.2**
DRO				S	**Sg**	**19 42 22.2**	**-0.2**
DRO				AML	AML	19 42 31.6	
comp=E,34139μm,0.4s							
DRO				AML	AML	19 42 34.4	
comp=N,28626μm,0.4s							
KLV	**Kalavryta, Ach**	**0.82**	**6**	P	**Pg**	**19 42 12.7**	**-0.4**
KLV				S	**Sb**	**19 42 25.6**	**+1.7**
comp=N,5μm,0.5s							
KLV	**Kalavryta, Ach**	**0.82**	**6**	P	**Pg**	**19 42 12.1**	**-1.0**
KLV				S	**Sg**	**19 42 23.3**	**-0.7**
KLV				AML	AML	19 42 27.2	
comp=E,10208μm,0.6s							
KLV				AML	AML	19 42 29.9	
comp=N,9018μm,0.4s							
VLI	**Veliai**	**0.87**	**125**	P	**Pg**	**19 42 13.5**	**-0.5**
VLI	**Veliai**	**0.87**	**125**	P	**Pg**	**19 42 13.2**	**-0.8**
VLI				S	**Sg**	**19 42 24.3**	**-1.1**
VLI				AML	AML	19 42 29.7	
comp=E,8163μm,0.5s							
VLI				AML	AML	19 42 38.4	
comp=N,7827μm,1.1s							
KRND	**KRANIDI**	**0.90**	**79**	P	**Pg**	**19 42 14.1**	**-0.3**
KRND				S	**Sn**	**19 42 27.9**	**+0.3**
comp=N,6μm,0.6s							
KRND	**KRANIDI**	**0.90**	**79**	P	**Pg**	**19 42 14.0**	**-0.4**
KRND				S	**Sb**	**19 42 26.3**	**+0.4**
KRND				AML	AML	19 42 30.6	
comp=E,12069μm,0.7s							
KRND				AML	AML	19 42 32.9	
comp=N,13291μm,0.4s							
EPID	**Epidavros**	**0.94**	**65**	P	**Pg**	**19 42 14.7**	**-0.6**
EPID	**Epidavros**	**0.94**	**65**	P	**Pg**	**19 42 14.6**	**-0.6**
THAL	**Thalero**	**0.95**	**31**	P	**Pg**	**19 42 15.1**	**-0.4**
THAL				S	**Sn**	**19 42 29.7**	**+0.8**
THAL	**Thalero**	**0.95**	**31**	P	**Pg**	**19 42 14.3**	**-1.1**
LAKA	**Lakka**	**1.02**	**357**	P	**Pg**	**19 42 16.2**	**-0.5**
LAKA				S	**Sn**	**19 42 31.9**	**+1.3**
LAKA	**Lakka**	**1.02**	**357**	P	**Pg**	**19 42 15.7**	**-1.1**
ALIK	**Aliki, Aigiali**	**1.04**	**3**	P	**Pg**	**19 42 16.6**	**-0.5**
ALIK				S	**Sn**	**19 42 33.0**	**+2.0**
LOUT	**Loutraki**	**1.06**	**44**	P	**Pg**	**19 42 17.1**	**-0.5**
LOUT				S	**Sn**	**19 42 33.3**	**+1.6**
comp=N,5μm,0.9s							
LOUT	**Loutraki**	**1.06**	**44**	P	**Pg**	**19 42 16.8**	**-0.8**
LTHK	**Lithakia**	**1.08**	**297**	P	**Pg**	**19 42 17.3**	**-0.5**
LTHK				S	**Sb**	**19 42 33.4**	**+2.4**
SERG	**Sergoula**	**1.19**	**1**	P	**Pg**	**19 42 18.9**	**-1.1**
SERG				S	**Sn**	**19 42 36.5**	**+1.6**
comp=N,4μm,0.5s							
SERG	**Sergoula**	**1.19**	**1**	P	**Pg**	**19 42 18.7**	**-1.2**
SERG				AML	AML	19 42 40.1	
comp=E,10975μm,0.5s							
SERG				AML	AML	19 42 40.6	
comp=N,9699μm,0.4s							
EFP	**Efpalio**	**1.21**	**355**	P	**Pb**	**19 42 19.7**	**+0.2**
EFP				S	**Sn**	**19 42 37.5**	**+2.2**
comp=N,6μm,0.5s							
EFP	**Efpalio**	**1.21**	**355**	P	**Pb**	**19 42 19.2**	**-0.3**
EFP				S	**Sg**	**19 42 34.3**	**-1.8**
EFP				AML	AML	19 42 41.0	
comp=N,16333μm,0.6s							
EFP				AML	AML	19 42 41.4	
comp=E,6650μm,0.5s							
KTHR	**Kythira**	**1.23**	**141**	P	**Pb**	**19 42 20.0**	**+0.1**
KTHR				S	**Sn**	**19 42 37.4**	**+1.6**
comp=E,3μm,0.5s							
KTHR	**Kythira**	**1.23**	**141**	P	**Pb**	**19 42 19.7**	**-0.1**
KTHA	**Kythira Island**	**1.26**	**139**	PN	**Pb**	**19 42 21.4**	**+1.0**
KTHA				SN	**Sn**	**19 42 40.6**	**+4.0**
KTHA	**Kythira Island**	**1.26**	**139**	P	**Pn**	**19 42 20.6**	**+0.6**
KTHA				S	**Sn**	**19 42 38.4**	**+1.8**
comp=E,4μm,0.9s							
KTHA	**Kythira Island**	**1.26**	**139**	P	**Pn**	**19 42 20.4**	**+0.4**
KTHA				AML	AML	19 42 45.3	
comp=N,4833μm,0.8s							
KTHA				AML	AML	19 42 48.8	
comp=E,12416μm,0.7s							
VILL	**Villia**	**1.38**	**47**	P	**Pn**	**19 42 22.5**	**+0.9**
VILL				S	**Sg**	**19 42 41.1**	**-0.4**
comp=E,3μm,0.7s							
VIL2	**Platees**	**1.39**	**44**	P	**Pn**	**19 42 22.2**	**+0.5**
VIL2				AML	AML	19 42 50.0	
comp=E,6703μm,0.6s							
VIL2				AML	AML	19 42 51.0	
comp=N,4857μm,0.8s							
PSDA	**Pessada-Kefalo**	**1.46**	**308**	P	**Pn**	**19 42 23.9**	**+1.2**
PSDA	**Pessada-Kefalo**	**1.46**	**308**	P	**Pn**	**19 42 24.2**	**+1.6**
VLS	**Valsamata**	**1.50**	**310**	P	**Pn**	**19 42 24.4**	**+1.2**
VLS	**Valsamata**	**1.50**	**310**	P	**Pn**	**19 42 24.3**	**+1.2**
VLS				AML	AML	19 42 54.7	
comp=E,2200μm,0.3s							
VLS				AML	AML	19 42 55.8	
comp=N,3027μm,0.3s							
ATH	**Athens Observa**	**1.53**	**60**	P	**Pn**	**19 42 24.7**	**+1.1**
VLY	**Voula,Athens**	**1.53**	**65**	P	**Pn**	**19 42 24.5**	**+0.9**
VLY				S	**Sb**	**19 42 45.0**	**+1.0**
comp=N,1μm,0.4s							
VLY	**Voula,Athens**	**1.53**	**65**	P	**Pn**	**19 42 24.2**	**+0.6**
VLY				AML	AML	19 42 51.8	
comp=N,2916μm,0.4s							
VLY				AML	AML	19 42 52.5	
comp=E,3603μm,0.5s							
ATHU	**Athens Univers**	**1.57**	**61**	P	**Pn**	**19 42 25.0**	**+0.8**
KEF4	**Livadi, Kephal**	**1.65**	**309**	P	**Pn**	**19 42 26.9**	**+1.6**
PTL	**Penteli**	**1.67**	**60**	P	**Pn**	**19 42 26.3**	**+0.8**
FSK	**Fiskardo**	**1.70**	**317**	P	**Pn**	**19 42 28.3**	**+2.3**
DION	**Dionisos Attik**	**1.73**	**60**	P	**Pn**	**19 42 27.5**	**+1.1**
AGG	**Agios Georgios**	**1.81**	**7**	PN	**Pn**	**19 42 27.6**	**0.0**
IMMV	**Iera Moni Meta**	**2.35**	**138**	PN	**Pn**	**19 42 37.6**	**+2.7**
KNDR	**Palaiochora Ch**	**2.39**	**146**	PN	**Pn**	**19 42 37.8**	**+2.4**
APE	**Apeiranthos**	**2.79**	**92**	PN	**Pn**	**19 42 42.2**	**+1.2**
SANT	**Santorini**	**2.87**	**106**	PN	**Pn**	**19 42 44.2**	**+2.1**
GVDS	**Gavdos**	**2.90**	**144**	PN	**Pn**	**19 42 44.9**	**+2.5**
GVD	**Gavdhos**	**2.90**	**145**	PN	**Pn**	**19 42 45.4**	**+3.0**
IDI	**Anoyia**	**3.00**	**129**	P	**Pn**	**19 42 46.5**	**+2.5**
comp=E,11nm,0.3s,baz=279,slow=7.8,SNR=34							
IDI				LR	LR	19 44 18.2	
comp=E,163nm,21.6s,baz=337,slow=46							
IDI	**Anoyia**	**3.00**	**129**	PN	**Pn**	**19 42 46.2**	**+2.3**
HRKL	**Herakleio**	**3.12**	**127**	PN	**Pn**	**19 42 47.8**	**+2.3**
OUR	**Ouranopolis**	**3.46**	**25**	PN	**Pn**	**19 42 51.1**	**+1.0**
HORT	**Hortiatis**	**3.47**	**13**	PN	**Pn**	**19 42 50.9**	**+0.5**
SIGR	**SIGRI**	**3.60**	**55**	PN	**Pn**	**19 42 53.2**	**+1.1**
ZEYE	**Izmir, Urla-Ze**	**3.68**	**73**	P	**Pn**	**19 42 54.1**	**+1.0**
ZEYE				S	**Sg**	**19 44 00.6**	**+5.5**
URLA	**Izmir**	**3.78**	**71**	P	**Pn**	**19 42 54.9**	**+0.3**
DGB	**zmir**	**3.93**	**76**	P	**Pn**	**19 42 57.6**	**+1.0**
DGB				S	**Sn**	**19 43 43.0**	**+0.6**
KOCA	**Canakkale, Ayv**	**3.94**	**53**	P	**Pn**	**19 42 57.1**	**+0.3**
ZKR	**Zakros**	**3.98**	**121**	PN	**Pn**	**19 43 00.3**	**+3.0**
KOSK	**Kos Island**	**3.98**	**95**	PN	**Pn**	**19 42 59.9**	**+2.6**
KNT	**Kendrikon**	**3.99**	**9**	PN	**Pn**	**19 42 58.3**	**+0.8**
OHR	**Ohrid**	**4.00**	**346**	*i* Pn	**Pn**	**19 43 01.2**	**+3.5**
BOZC	**Bozcaada**	**4.09**	**49**	PN	**Pn**	**19 42 59.9**	**+1.1**
BOZC	**Bozcaada**	**4.09**	**49**	P	**Pn**	**19 42 59.3**	**+0.5**
VAY	**Valandovo**	**4.12**	**6**	*i* Pn	**Pn**	**19 43 02.1**	**+3.0**
BLCB	**Balcova**	**4.13**	**72**	PN	**Pn**	**19 43 01.2**	**+1.9**
DDIM	**Aydin, Didim**	**4.15**	**85**	P	**Pg**	**19 43 15.0**	**-1.5**
GCAM	**G?zelcaml?**	**4.16**	**82**	PN	**Pn**	**19 43 01.9**	**+2.2**
GCAM	**G?zelcaml?**	**4.16**	**82**	P	**Pn**	**19 43 00.7**	**+1.0**
AYVA	**Ayvalik**	**4.21**	**59**	P	**Pn**	**19 43 00.5**	**+0.1**
BODT	**Bodrum**	**4.21**	**91**	PN	**Pn**	**19 43 01.8**	**+1.3**
GADA	**Gvkgeada**	**4.23**	**44**	PN	**Pn**	**19 43 02.1**	**+1.4**
GOKA	**anakkale-Gk**	**4.23**	**44**	P	**Pn**	**19 43 00.8**	**0.0**
EZN	**Ezine**	**4.25**	**51**	PN

comp=E,0.7nm,0.5s,baz=205,slow=14,SNR=1.0
SOKA Soboth 10.79 333 *e*Pn **Pn 19 44 30.7 -0.1**
comp=E,0.7nm,0.3s
OBKA Obir 10.83 331 *e*Pn **Pn 19 44 33.5 +2.2**
OBKA Obir 10.83 331 *e*Pn **Pn 19 44 34.2 +2.9**
comp=E,1.2nm,0.3s
ARSA Arzberg 11.12 336 *e*Pn **Pn 19 44 35.3 +0.1**
comp=E,2.1nm,0.7s
MMAI Mount Meron Ar 11.71 107 P **Pn 19 44 41.4 -2.1**
comp=E,0.6nm,0.3s,baz=298,slow=12,SNR=3.7
MMAI S **Sn 19 46 49.2 -4.8**
comp=E,0.6nm,0.4s,baz=303,slow=19,SNR=1.9
MOA Molln 12.06 334 *e*Pn **Pn 19 44 49.3 +1.1**
comp=E,0.3nm,0.2s
BIOA Bad Ischl, Aus 12.16 332 *e*Pn **Pn 19 44 52.2 +2.8**
comp=E,2.1nm,0.5s
WTTA Wattenberg 12.64 326 *e*Pn **Pn 19 44 58.7 +2.5**
comp=E,1.1nm,0.3s
WATA Walderalm 12.72 326 *e*Pn **Pn 19 44 59.7 +2.4**
comp=E,1.0nm,0.4s
MOTA Moosalm 12.95 325 *e*Pn **Pn 19 45 01.4 +1.0**
comp=E,2.3nm,0.6s
GERES GERESS Array B 13.11 335 P Pn 19 45 08.2 +5.6
comp=E,0.6nm,0.5s,baz=150,slow=14,SNR=5.1
DAVOX Davos/Dischmat 13.14 320 P **Pn 19 45 06.8 +3.8**
comp=E,0.7nm,0.5s,baz=160,slow=19,SNR=1.4
DAVOX S **Sn 19 47 25.8 -3.0**
comp=E,1.5nm,0.6s,baz=155,slow=3.6,SNR=3.4
DAVOX LR LR 19 52 29.2
comp=E,78nm,18.9s,baz=275,slow=48
EIL Elat 13.14 121 P **Pn 19 45 02.2 -0.7**
comp=E,3.3nm,0.7s,baz=287,slow=14,SNR=2.8
EIL S Sn 19 47 20.1 -8.6
comp=E,2.2nm,0.7s,baz=313,slow=13,SNR=1.6
AKASG Malin Array Be 14.42 19 P **Pn 19 45 21.5 +1.1**
comp=E,1.0nm,0.7s,baz=212,slow=12,SNR=3.5
CLL Collm 15.48 338 *e*Px Px 19 45 41.0
KBZ Khabaz 17.13 61 P **P 19 45 59.0 +1.9**
comp=E,2.3nm,0.9s,baz=321,slow=15,SNR=2.6
ESDC Sonseca Array 20.50 285 P **P 19 46 35.4 +1.2**
comp=E,2.5nm,1.1s,baz=79,slow=11,SNR=3.9
comp=E,2.5nm,1.1s
MDT Midelt 22.23 267 P **P 19 46 53.6 +0.6**
comp=E,1.7nm,0.8s,baz=79,slow=5.2,SNR=2.3
comp=E,1.7nm,0.8s
HFS Hagfors 23.55 350 P **P 19 47 06.2 0.0**
comp=E,2.4nm,0.6s,baz=150,slow=12,SNR=14
comp=E,2.4nm,0.6s
FINES FINESS Array B 24.38 5 P **P 19 47 14.5 +0.4**
comp=E,4.3nm,0.9s,baz=185,slow=8.0,SNR=6.9
comp=E,4.3nm,0.9s
NB2 NORSAR Subarra 24.80 347 P **P 19 47 17.7 -0.3**
comp=Z,0.9nm,0.7s,baz=156,slow=9.3
NOA NORSAR Array B 24.80 347 P **P 19 47 17.8 -0.2**
comp=Z,0.7nm,0.6s,baz=156,slow=8.8,SNR=4.3
comp=Z,0.7nm,0.6s
EKA Eskdalemuir Ar 24.91 325 P **P 19 47 20.4 +1.4**
comp=Z,2.3nm,0.6s,baz=127,slow=9.2,SNR=7.7
comp=Z,2.3nm,0.6s
GEYT Alibeck 28.49 77 P **P 19 47 51.4 -0.1**
comp=Z,0.7nm,0.6s,baz=282,slow=10,SNR=2.0
comp=Z,0.7nm,0.6s
TORD Torodi Ar. Bea 30.09 222 P **P 19 48 05.2 -0.6**
comp=Z,0.5nm,0.5s,baz=32,slow=9.5,SNR=8.7
comp=Z,0.5nm,0.5s
ARCES ARCESS Array B 32.43 2 P **P 19 48 25.9 0.0**
comp=Z,0.9nm,0.5s,baz=187,slow=10,SNR=6.6
ARCES LR LR 20 03 32.2
comp=Z,44nm,19.4s,baz=282,slow=40
comp=Z,0.9nm,0.5s
AAK Ala-Archa 40.05 65 P **P 19 49 30.5 -1.0**
comp=Z,0.5nm,0.3s,baz=231,slow=6.5,SNR=1.7
comp=Z,0.5nm,0.3s
MKAR Makanchi Array 44.78 58 PcP **PcP 19 51 51.4 -0.2**
comp=Z,0.2nm,0.6s,baz=288,slow=1.8,SNR=1.6
ZALV Zalesovo Beam 45.44 48 P **P 19 50 13.1 -1.7**
comp=Z,0.8nm,0.4s,baz=272,slow=7.7,SNR=5.3
comp=Z,0.8nm,0.4s
CMAR Chiang Mai Arr 68.82 83 P **P 19 52 59.2 -1.6**
comp=Z,0.3nm,0.4s,baz=302,slow=8.4,SNR=3.2
comp=Z,0.3nm,0.4s
YKA Yellowknife Ar 74.69 341 P **P 19 53 34.5 -0.8**
comp=Z,0.6nm,0.7s,baz=30,slow=5.0,SNR=2.5
comp=Z,0.6nm,0.7s
ILAR Eielson Array 77.97 355 P **P 19 53 54.3 +0.3**
comp=Z,0.3nm,0.6s,baz=351,slow=2.3,SNR=4.5
comp=Z,0.3nm,0.6s
KSRS Korea Array 78.99 51 P **P 19 53 59.3 -0.8**
comp=Z,1.1nm,0.6s,baz=304,slow=4.1,SNR=4.7
comp=Z,1.1nm,0.6s
MJAR Matsushiro Arr 85.78 46 P **P 19 54 35.1 -0.5**
comp=Z,1.2nm,0.8s,baz=327,slow=3.6,SNR=2.8
comp=Z,1.2nm,0.8s
PDAR Pinedale Array 89.01 327 P **P 19 54 51.0 -0.3**
comp=Z,0.5nm,0.7s,baz=66,slow=5.0,SNR=4.5
comp=Z,0.5nm,0.7s
ASAR Alice Springs 120.86 98 PKP **PKPdf 20 00 48.5 -0.2**
comp=Z,0.2nm,0.6s,baz=310,slow=1.7,SNR=1.9

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*IDC **23** 20:10:50.9±1.0, 39°.69N×20°.62E, h0km, mb3.9/10, mbtmp3.8/17, ML3.4/7, MS2.9/2, Error ellipse: s-maj=19.2km s-min=14.7km az=50.0*
*THE **23** 20:10:54.7, 39°.72N×20°.64E, h5km±1km, ML3.5/14, Error ellipse: s-maj=1.1km s-min=0.4km az=342.0*
*ATH **23** 20:10:54.8, 39°.78N×20°.61E, h5km±1km, ML3.6/15, Error ellipse: s-maj=2.0km s-min=0.9km az=352.0*
*PDG **23** 20:10:55.3±0.5, 39°.80N×20°.65E, h13km, ML3.5/13, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*BEO **23** 20:10:55.2±0.4, 39°.66N×20°.62E, h21km±4km, ML3.2/9*
ISC 23 20:10:53.9±0.8, 39°.71N±0°.02×20°.60E±0°.02, h16km±5km, n162, σ1.9±64/208, mb3.9/9, 19C-10D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.20**	**106**	P	**Pg**	**20 10 58.2**	**-0.4**
JAN				S	**Sg**	**20 11 01.1**	**-0.8**
	116μm,0.4s						
JAN	**Janina**	**0.20**	**106**	P	**Pg**	**20 10 58.4**	**-0.2**
JAN				S	**Sg**	**20 11 02.1**	**+0.3**
JAN				AML	AML	20 11 03.0	
JAN				AML	AML	20 11 03.1	
IGT	**Igoumenitsa**	**0.28**	**230**	P	**Pb**	**20 11 00.8**	**+0.3**
IGT				S	**Sb**	**20 11 05.6**	**+0.7**
	11μm,0.4s						
IGT	**Igoumenitsa**	**0.28**	**230**	*e*Pg	**Pb**	**20 11 01.1**	**+0.6**
IGT				*e*Sg	**Sb**	**20 11 07.6**	**+2.7**
IGT	**Igoumenitsa**	**0.28**	**230**	P	**Pb**	**20 11 01.0**	**+0.6**
IGT				S	**Sb**	**20 11 05.8**	**+0.9**
IGT				AML	AML	20 11 08.8	
	comp=E,21823μm,0.4s						
IGT				AML	AML	20 11 10.7	
	comp=N,21576μm,0.4s						
LSK	**Leskovik**	**0.44**	**360**	P	**Pg**	**20 11 02.5**	**-0.3**
LSK				S	**Sg**	**20 11 09.7**	**+0.9**
	comp=N,14μm,0.4s						
SRN	**Sarande**	**0.49**	**290**	P	**Pb**	**20 11 04.2**	**0.0**
SRN				S	**Sn**	**20 11 12.7**	**-1.8**
	comp=N,4μm,0.4s						
KASA	**Kassiopi**	**0.52**	**274**	P	**Pb**	**20 11 04.7**	**+0.1**
KASA				S	**Sb**	**20 11 11.9**	**+0.1**
KASA				AML	AML	20 11 17.2	
	comp=N,10621μm,0.4s						
KASA				AML	AML	20 11 18.0	
	comp=E,9514μm,0.5s						
KEK	**Kerkira**	**0.62**	**270**	P	**Pb**	**20 11 06.4**	**0.0**
KEK	**Kerkira**	**0.62**	**270**	P	**Pb**	**20 11 06.2**	**-0.2**
KEK				AML	AML	20 11 23.5	
	comp=E,6951μm,0.4s						
KEK				AML	AML	20 11 24.1	
	comp=N,4083μm,0.4s						
KPRO	**Kipourio**	**0.63**	**67**	P	**Pg**	**20 11 05.9**	**-0.5**
KPRO				S	**Sg**	**20 11 15.6**	**+0.7**
	comp=N,14μm,0.4s						
KPRO	**Kipourio**	**0.63**	**67**	P	**Pg**	**20 11 05.9**	**-0.5**
KPRO				S	**Sg**	**20 11 14.4**	**-0.5**
KPRO				AML	AML	20 11 17.8	
	comp=E,25872μm,0.4s						
KPRO				AML	AML	20 11 18.1	
	comp=N,30739μm,0.5s						
NEST	**Nestorio**	**0.78**	**26**	P	**Pb**	**20 11 08.6**	**-0.7**
NEST				S	**Sb**	**20 11 20.8**	**+1.2**
	comp=N,3μm,0.4s						
NEST	**Nestorio**	**0.78**	**26**	P	**Pb**	**20 11 08.5**	**-0.7**
NEST				AML	AML	20 11 22.8	
	comp=E,8737μm,0.4s						
NEST				AML	AML	20 11 23.5	
	comp=N,7194μm,0.5s						
TSLK	**Tsoukalades, L**	**0.89**	**177**	P	**Pg**	**20 11 11.5**	**+0.4**
TSLK	**Tsoukalades, L**	**0.89**	**177**	P	**Pg**	**20 11 11.7**	**+0.6**
TSLK				AML	AML	20 11 31.5	
	comp=N,8432μm,0.5s						
TSLK				AML	AML	20 11 33.3	
	comp=E,5398μm,0.5s						
KBN	**Korca**	**0.92**	**9**	P	**Pb**	**20 11 11.1**	**-0.5**
KBN				S	**Sb**	**20 11 25.2**	**+1.5**
	comp=E,2μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.00**	**176**	P	**Pg**	**20 11 13.4**	**+0.2**
NYDR				S	**Sn**	**20 11 27.6**	**+0.6**
	comp=E,2μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.03**	**181**	P	**Pn**	**20 11 13.9**	**+0.2**
KZN	**Kozani**	**1.08**	**56**	P	**Pn**	**20 11 13.8**	**-0.6**
KZN				S	**Sb**	**20 11 30.2**	**+2.1**
	comp=E,3μm,0.5s						
KZN	**Kozani**	**1.08**	**56**	P	**Pn**	**20 11 13.6**	**-0.8**
KZN				AML	AML	20 11 33.8	
	comp=N,5366μm,0.4s						
KZN				AML	AML	20 11 35.9	
	comp=E,5260μm,0.5s						
EVGI	**Lefkada island**	**1.09**	**178**	P	**Pn**	**20 11 14.8**	**+0.3**
EVGI				S	**Sn**	**20 11 31.4**	**+2.1**
	comp=E,3μm,0.3s						
EVGI	**Lefkada island**	**1.09**	**178**	P	**Pg**	**20 11 15.1**	**+0.2**
THL	**Klokotos Trika**	**1.10**	**97**	P	**Pn**	**20 11 14.1**	**-0.5**
THL				S	**Sb**	**20 11 30.0**	**+1.4**
	comp=E,1μm,0.4s						
THL	**Klokotos Trika**	**1.10**	**97**	P	**Pn**	**20 11 13.9**	**-0.8**
THL				AML	AML	20 11 34.8	
	comp=N,3247μm,0.6s						
THL				AML	AML	20 11 34.9	
	comp=E,1954μm,0.3s						
EVR	**Evrytania**	**1.23**	**130**	P	**Pn**	**20 11 17.3**	**+0.8**
EVR	**Evrytania**	**1.23**	**130**	P	**Pn**	**20 11 17.3**	**+0.8**
EVR				AML	AML	20 11 42.6	
	comp=N,4123μm,0.3s						
EVR				AML	AML	20 11 42.6	
	comp=E,3175μm,0.3s						
FSK	**Fiskardo**	**1.25**	**181**	P	**Pg**	**20 11 18.1**	**+0.1**
FSK				S	**Sg**	**20 11 36.1**	**+1.7**
	comp=E,2μm,0.4s						
FSK	**Fiskardo**	**1.25**	**181**	P	**Pg**	**20 11 18.2**	**+0.2**
FSK				S	**Sg**	**20 11 36.0**	**+1.7**
FSK				AML	AML	20 11 38.0	
	comp=N,3400μm,0.4s						
FSK				AML	AML	20 11 39.2	
	comp=E,4810μm,0.3s						
PVO	**Paravola**	**1.31**	**146**	P	**Pb**	**20 11 19.6**	**+1.5**
KTI	**Kastanea**	**1.35**	**59**	P	**Pn**	**20 11 18.4**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.38**	**120**	P	**Pn**	**20 11 20.0**	**+1.5**
MAKR				S	**Sb**	**20 11 39.1**	**+2.5**
	comp=E,4μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.38**	**120**	P	**Pn**	**20 11 20.2**	**+1.7**
MAKR				AML	AML	20 11 45.1	
	comp=E,9180μm,0.4s						
MAKR				AML	AML	20 11 54.5	
	comp=N,8178μm,0.8s						
OHR	**Ohrid**	**1.41**	**6**	*e*Pg	**Pn**	**20 11 20.8**	**+1.8**
OHR				*e*Sg	**Sg**	**20 11 41.9**	**+2.5**
OHR	**Ohrid**	**1.41**	**6**	*i* Pn	**Pn**	**20 11 21.0**	**+2.0**
OHR				*i* Sn	**Sg**	**20 11 41.4**	**+2.1**
DMLN	**Damoulianata-K**	**1.48**	**187**	P	**Pb**	**20 11 21.4**	**+0.3**
LIT	**Litokhoron**	**1.50**	**74**	P	**Pn**	**20 11 21.1**	**+0.9**
KEF3	**Kipouria, Keph**	**1.52**	**188**	P	**Pb**	**20 11 21.7**	**0.0**
VLS	**Valsamata**	**1.53**	**180**	P	**Pb**	**20 11 22.0**	**+0.1**
VLS				S	**Sg**	**20 11 42.8**	**-0.5**
	comp=N,2μm,0.6s						
SCTE	**Santa Cesarea**	**1.68**	**283**	P	**Pb**	**20 11 23.7**	**-0.8**
SERG	**Sergoula**	**1.72**	**138**	P	**Pb**	**20 11 26.4**	**+1.3**
TIR	**Tirane**	**1.73**	**341**	⇑P	**Pn**	**20 11 25.1**	**+1.7**
TIR	**Tirane**	**1.73**	**341**	*e*Pn	**Pb**	**20 11 26.2**	**+0.9**
TIR				*e*Sn	**Sb**	**20 11 47.5**	**+0.7**
LAKA	**Lakka**	**1.82**	**143**	P	**Pb**	**20 11 27.7**	**+0.9**
LAKA				AML	AML	20 12 03.1	
	comp=E,2066μm,0.6s						
LAKA				AML	AML	20 12 09.6	
	comp=N,1879μm,0.5s						
AXAR	**Agios Charalam**	**1.85**	**120**	P	**Pn**	**20 11 27.8**	**+2.7**
AXAR				AML	AML	20 12 03.5	
	comp=E,2581μm,0.5s						
AXAR				AML	AML	20 12 06.4	
	comp=N,4059μm,0.9s						
XOR	**Xorichti**	**2.03**	**99**	P	**Pn**	**20 11 29.4**	**+1.8**
KLV	**Kalavryta, Ach**	**2.06**	**144**	P	**Pb**	**20 11 30.7**	**-0.2**
KLV				AML	AML	20 12 13.4	
	comp=N,698μm,0.5s						
KLV				AML	AML	20 12 15.8	
	comp=E,750μm,0.8s						
NEO	**Neokhori**	**2.07**	**100**	P	**Pn**	**20 11 29.5**	**+1.5**
LKR	**Lokris**	**2.14**	**119**	P	**Pn**	**20 11 31.1**	**+2.1**
VAY	**Valandovo**	**2.20**	**42**	*e*Pn	**Pn**	**20 11 31.4**	**+1.6**
VAY				*e*Sn	**Sn**	**20 11 59.2**	**+2.6**
VAY	**Valandovo**	**2.20**	**42**	*i* Pn	**Pn**	**20 11 30.5**	**+0.7**
STIP	**Stip**	**2.32**	**31**	*i* Pn	**Pn**	**20 11 34.8**	**+3.4**
THAL	**Thalero**	**2.32**	**135**	P	**Pn**	**20 11 33.9**	**+2.5**
SKO	**Skopje**	**2.35**	**15**	*e*Pn	**Pn**	**20 11 34.6**	**+2.8**
SKO				*e*Sn	**Sn**	**20 12 01.2**	**+0.9**
SKO	**Skopje**	**2.35**	**15**	*i* Pn	**Pn**	**20 11 34.8**	**+3.0**
ULC	**Ulcinj**	**2.48**	**336**	*e*Pn	**Pn**	**20 11 35.5**	**+1.9**
ULC				*i* Sn	**Sn**	**20 12 06.1**	**+2.6**
LOUT	**Loutraki**	**2.53**	**132**	P	**Pn**	**20 11 36.9**	**+2.6**
VIL2	**Platees**	**2.56**	**125**	P	**Pn**	**20 11 38.1**	**+3.4**
SRS	**Serrai**	**2.68**	**57**	*e*Pn	**Pn**	**20 11 37.4**	**+1.0**
SRS				*e*Sn	**Sn**	**20 12 08.5**	**0.0**
DRME	**Dracevica, Mon**	**2.70**	**337**	*e*Pn	**Pn**	**20 11 38.4**	**+1.8**
DRME	**Dracevica, Mon**	**2.70**	**337**	*e*Pn	**Pn**	**20 11 38.7**	**+2.1**
DRME				*i* Sn	**Sn**	**20 12 12.1**	**+3.2**
KKB	**Krupnik**	**2.86**	**40**	*i* P	**Pn**	**20 11 41.6**	**+2.7**
EPID	**Epidavros**	**2.87**	**136**	P	**Pn**	**20 11 41.3**	**+2.2**
BUM	**Brajici-Budva**	**2.89**	**334**	*e*Pn	**Pn**	**20 11 41.4**	**+2.0**
BUM				*i* Sn	**Sn**	**20 12 16.4**	**+2.5**
PDG	**Podgorica**	**2.90**	**340**	⇑P	**Pn**	**20 11 41.6**	**+2.2**
TTG	**Podgorica**	**2.90**	**340**	⇑*i*Pn	**Pn**	**20 11 41.5**	**+2.1**
TTG				*i* Sn	**Sn**	**20 12 17.0**	**+3.0**
PVY	**Plav**	**2.92**	**351**	⇑*i*Pn	**Pn**	**20 11 41.7**	**+1.9**
PVY				*i* Sn	**Sn**	**20 12 17.3**	**+2.6**
KYMI	**Kymi, Euboea I**	**2.92**	**110**	P	**Pn**	**20 11 41.1**	**+1.4**
MMB	**Musomiste**	**3.03**	**51**	*i* P	**Pn**	**20 11 43.6**	**+2.4**
DION	**Dionisos Attik**	**3.07**	**121**	P	**Pn**	**20 11 44.5**	**+2.8**
CEME	**Cevo**	**3.11**	**336**	*e*Pn	**Pn**	**20 11 44.3**	**+2.0**
CEME				*i* Sn	**Sn**	**20 12 22.0**	**+2.9**
MATE	**Matera**	**3.13**	**289**	⇑P	**Pn**	**20 11 43.1**	**+0.6**
HCY	**Herceg Novi**	**3.16**	**330**	*e*Pn	**Pn**	**20 11 45.1**	**+2.0**
HCY				*i* Sn	**Sn**	**20 12 23.7**	**+3.2**
IVA	**Berane**	**3.20**	**351**	⇑*i*Pn	**Pn**	**20 11 45.6**	**+1.9**
IVA				*i* Sn	**Sn**	**20 12 24.1**	**+2.5**
BARS	**Barje**	**3.23**	**16**	*e*Pn	**Pn**	**20 11 45.8**	**+1.8**
KOME	**Kolasin**	**3.24**	**346**	⇑*i*Pn	**Pn**	**20 11 46.2**	**+2.0**
KOME				*i* Sn	**Sn**	**20 12 25.2**	**+2.7**
NKME	**Niksic**	**3.30**	**338**	*e*Pn	**Pn**	**20 11 47.1**	**+2.2**
NKME				*i* Sn	**Sn**	**20 12 26.7**	**+2.9**
VTS	**Vitosha**	**3.52**	**34**	⇑P	**Pn**	**20 11 50.7**	**+2.7**
VTS	**Vitosha**	**3.52**	**34**	*i* P	**Pn**	**20 11 50.8**	**+2.7**
SELS	**Selova**	**3.53**	**6**	*e*Pn	**Pn**	**20 11 49.7**	**+1.6**
BRY	**Bratogost**	**3.55**	**335**	*e*Pn	**Pn**	**20 11 49.1**	**+0.7**
BRY	**Bratogost**	**3.55**	**335**	*e*Pn	**Pn**	**20 11 50.6**	**+2.2**
BRY				*i* Sn	**Sn**	**20 12 32.9**	**+2.8**
SJES	**Sjenica**	**3.58**	**353**	*e*Pn	**Pn**	**20 11 51.0**	**+2.1**
UPM	**Unac-Piva**	**3.71**	**340**	*e*Pn	**Pn**	**20 11 53.3**	**+2.5**
UPM	**Unac-Piva**	**3.71**	**340**	*e*Pn	**Pn**	**20 11 52.9**	**+2.1**
UPM				*i* Sn	**Sn**	**20 12 36.8**	**+2.5**
PLE	**Pljevlja**	**3.73**	**346**	⇓*i*Pn	**Pn**	**20 11 52.9**	**+2.0**
PLE				*i* Sn	**Sn**	**20 12 36.9**	**+2.3**
STON	**Ston**	**3.84**	**326**	*e*Pn	**Pn**	**20 11 50.9**	**-1.4**
ZAPS	**Zavoj**	**3.87**	**23**	*e*Pn	**Pn**	**20 11 55.7**	**+2.9**
BOVS	**Bovan**	**4.01**	**12**	⇓P	**Pn**	**20 11 55.5**	**+0.9**
BOVS	**Bovan**	**4.01**	**12**	*e*Pn	**Pn**	**20 11 55.6**	**+0.9**
BOVS				*e*Sn	**Sn**	**20 12 42.3**	**+1.1**
RUDO	**Rudo**	**4.01**	**347**	*e*Pn	**Pn**	**20 11 54.5**	**-0.2**
KDZ	**Kurdzhali**	**4.14**	**61**	*i* P	**Pn**	**20 11 57.1**	**+0.6**
GRUS	**Gruza**	**4.17**	**1**	*e*Pn	**Pn**	**20 11 58.6**	**+1.7**
BLKB	**Belogradchik**	**4.21**	**21**	⇓P	**Pn**	**20 11 59.6**	**+2.2**
BBLS	**Lazići**	**4.25**	**348**	*e*Pn	**Pn**	**20 11 59.7**	**+1.7**
BBLS	**Lazići**	**4.25**	**348**	*e*Pn	**Pn**	**20 11 59.6**	**+1.6**
ZAGS	**Zajecar**	**4.28**	**16**	*e*Pn	**Pn**	**20 11 59.2**	**+0.9**
ZAGS				*e*Sn	**Sn**	**20 12 46.6**	**-1.3**
DIVS	**Divibare**	**4.41**	**354**	*e*Pn	**Pn**	**20 12 01.2**	**+1.0**
DIVS	**Divibare**	**4.41**	**354**	*e*Pn	**Pn**	**20 12 01.2**	**+1.0**
DIVS				*e*Sn	**Sn**	**20 12 50.4**	**-0.9**
TRUS	**Trudelj**	**4.51**	**358**	*e*Pn	**Pn**	**20 12 03.5**	**+1.9**
APE	**Apeiranthos**	**4.68**	**123**	⇓P	**Pn**	**20 12 06.3**	**+2.3**
KUBS	**Kucevo**	**4.76**	**9**	*e*Pn	**Pn**	**20 12 05.8**	**+0.7**
TEKS	**Tekeris**	**4.90**	**351**	*e*Pn	**Pn**	**20 12 06.2**	**-0.7**
TEKS	**Tekeris**	**4.90**	**351**	*e*Pn	**Pn**	**20 12 07.0**	**+0.1**
SRKY	**Kupres RS**	**5.05**	**331**	*e*Pn	**Pn**	**20 12 09.8**	**+0.7**
VAE	**Valguarnera**	**5.34**	**247**	Pn	Pn	20 12 19.0	+6.0
	comp=E,1.1nm,0.3s,baz=325,slow=8.0,SNR=3.3						
VAE				Sn	**Sn**	**20 13 14.4**	**+0.2**
	comp=E,0.9nm,0.3s,baz=24,slow=17,SNR=1.8						
HERR	**Herculane**	**5.34**	**14**	⇓P	**Pn**	**20 12 15.1**	**+2.2**
MGRS	**Mrkonjic Grad**	**5.38**	**332**	*e*Pn	**Pn**	**20 12 14.2**	**+0.6**
FRGS	**Fruska Gora**	**5.47**	**354**	⇓P	**Pn**	**20 12 16.0**	**+1.2**
FRGS	**Fruska Gora**	**5.47**	**354**	*e*Pn	**Pn**	**20 12 15.1**	**+0.3**
FRGS	**Fruska Gora**	**5.47**	**354**	*e*Pn	**Pn**	**20 12 15.1**	**+0.3**
IDI	**Anoyia**	**5.58**	**141**	⇑P	**Pn**	**20 12 16.5**	**+0.2**
IDI				⇓S	**Sn**	**20 13 21.1**	**+1.0**
IDI	**Anoyia**	**5.58**	**141**	Pn	**Pn**	**20 12 16.3**	**0.0**
	comp=E,1.0nm,0.3s,baz=275,slow=6.9,SNR=17						
IDI				Sn	**Sn**	**20 13 17.8**	**-2.3**
	comp=E,4.4nm,0.3s,baz=278,slow=23,SNR=7.6						
	comp=E,3.1nm,0.2s						
BLY	**Banja Luka**	**5.64**	**334**	*e*Pn	**Pn**	**20 12 16.2**	**-0.8**
GZR	**Gura Zlata**	**5.90**	**15**	⇑P	**Pn**	**20 12 22.9**	**+2.2**
GZR				⇑S	**Sn**	**20 13 30.2**	**+2.2**
BZS	**Buzias**	**5.95**	**7**	⇑P	**Pn**	**20 12 22.9**	**+1.6**
A051A	**Mrakovica**	**5.96**	**334**	*e*Pn	**Pn**	**20 12 20.2**	**-1.4**
ARR	**Arges**	**6.39**	**26**	⇑P	**Pn**	**20 12 29.7**	**+2.3**
VOIR		**6.60**	**28**	⇑P	**Pn**	**20 12 32.6**	**+2.3**
SIRR	**Siria**	**6.60**	**6**	⇑P	**Pn**	**20 12 32.5**	**+2.3**
KOVH	**Kovagotottos**	**6.63**	**345**	P	**Pn**	**20 12 31.8**	**+1.1**
MORH	**Mrgy, Hungar**	**6.66**	**348**	⇑P	**Pn**	**20 12 31.4**	**+0.4**
MORH	**Mrgy, Hungar**	**6.66**	**348**	P	**Pn**	**20 12 31.5**	**+0.5**
MLR	**Muntele Rosu**	**6.99**	**33**	⇑P	**Pn**	**20 12 37.3**	**+1.6**
MLR	**Muntele Rosu**	**6.99**	**33**	Pn	**Pn**	**20 12 37.3**	**+1.6**
	comp=E,0.2nm,0.3s,baz=169,slow=10,SNR=6.1						
MLR				LR	LR	20 16 03.4	
	comp=E,84nm,20.1s,baz=214,slow=45						
	comp=E,2.4nm,0.5s						
BOJS	**Bojanci**	**7.00**	**327**	*e*Pn	**Pn**	**20 12 35.8**	**0.0**
COVR	**Voineasa-Covas**	**7.38**	**32**	⇑P	**Pn**	**20 12 43.5**	**+2.5**
OZUR		**7.43**	**29**	⇓P	**Pn**	**20 12 43.9**	**+2.2**
CEY	**Cerknica**	**7.54**	**325**	*e*Pn	**Pn**	**20 12 43.3**	**+0.1**
PLOR	**Plostina**	**7.58**	**34**	⇓P	**Pn**	**20 12 46.5**	**+2.9**
SKDS	**Skadanscina**	**7.59**	**322**	*e*Pn	**Pn**	**20 12 42.9**	**-0.9**
VRI	**Vrincioaia**	**7.62**	**34**	⇓P	**Pn**	**20 12 46.0**	**+1.7**
SOKA	**Soboth**	**8.06**	**332**	*e*Pn	**Pn**	**20 12 50.6**	**+0.2**
	comp=E,1.5nm,0.3s						
OBKA	**Obir**	**8.11**	**329**	*e*Pn	**Pn**	**20 12 51.9**	**+0.9**
OBKA	**Obir**	**8.11**	**329**	*e*Pn	**Pn**	**20 12 52.0**	**+0.9**
	comp=E,1.0nm,0.3s						
PSZ	**Piszkesteto**	**8.22**	**357**	⇑P	**Pn**	**20 12 54.1**	**+1.5**
PSZ	**Piszkesteto**	**8.22**	**357**	P	**Pn**	**20 12 54.8**	**+2.2**
PSZ				S	**Sn**	**20 14 21.9**	**-3.2**
ARSA	**Arzberg**	**8.39**	**336**	*e*Pn	**Pn**	**20 12 56.5**	**+1.6**
	comp=E,1.5nm,0.5s						
ABTA	**Abfaltersbach**	**9.18**	**323**	*e*Pn	**Pn**	**20 13 05.9**	**+0.2**
	comp=E,0.4nm,0.2s						
MOA	**Molln**	**9.33**	**333**	*e*Pn	**Pn**	**20 13 08.9**	**+1.2**
	comp=E,0.9nm,0.3s						
BIOA	**Bad Ischl, Aus**	**9.43**	**330**	*e*Pn	**Pn**	**20 13 10.0**	**+0.8**
	comp=E,0.9nm,0.3s						
WTTA	**Wattenberg**	**9.97**	**322**	*e*Pn	**Pn**	**20 13 17.3**	**+0.7**
	comp=E,1.9nm,0.2s						
BRTR	**Keskin Array B**	**10.05**	**86**	Pn	**Pn**	**20 13 20.4**	**+2.7**
	comp=E,0.1nm,0.3s,baz=260,slow=13,SNR=1.8						
BRTR				LR	LR	20 17 49.0	
	comp=E,67nm,18.0s,baz=296,slow=42						
	comp=E,0.3nm,0.4s						
WATA	**Walderalm**	**10.05**	**322**	*e*Pn	**Pn**	**20 13 17.8**	**+0.2**
	comp=E,1.5nm,0.3s,SNR=4.4						
SQTA	**Sankt Quirin**	**10.14**	**321**	*e*Pn	**Pn**	**20 13 19.5**	**+0.6**
	comp=E,1.2nm,0.4s						
MOTA	**Moosalm**	**10.28**	**321**	*e*Pn	**Pn**	**20 13 20.9**	**+0.1**
	comp=E,1.2nm,0.3s						
GERES	**GERESS Array B**	**10.38**	**334**	Pn	**Pn**	**20 13 23.5**	**+1.3**
	comp=E,0.1nm,0.3s,baz=150,slow=14,SNR=4.4						
	comp=E,0.3nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.53**

NIED ***23*** *20:25:24.8, 43°.77N×147°.97E, h0km, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 1017Nm; Mrr4.09; Mθθ-2.07; Mφφ-2.02; Mrθ3.31; Mrφ-2.68; Mθφ4.94; Fault plane solution: M0 7.41000×1017 NP1: φs237.00000°, δ19.00000°, λ110.00000°. NP2: φs36.00000°, δ72.00000°, λ83.00000°.*

JMA ***23*** *20:25:24.8±0.3, 44°.N±1°×14°.8E±1°, h0km, MD6.0/39, MW5.9/39, E OFF HOKKAIDO*

JMA Felt II J1 at E OFF HOKKAIDO .

BJI ***23*** *20:25:25.1±0.0, 44°.11N×148°.00E, h31km, mb5.8/84, mB6.0/74, Ms5.9/99, Ms7 5.8/93*

SKHL ***23*** *20:25:25.9±0.3, 43°.90N×148°.30E, h56km±6km, mb6.2/4, Ms5.6/8, msh5.6/8*

SKHL Felt (III-IV) at Gorny, Goryachie Klyuchi, (III) at Malokuril'skoe, (II) at Kuril'sk, Reydovo, Yushno-Kuril'sk.

IDC ***23*** *20:25:25.5±2.3, 44°.13N×148°.03E, h25km±15km, mb5.2/43, mbtmp5.4/50, ML4.5/7, MS5.5/93, Error ellipse: s-maj=9.6km s-min=7.4km az=118.0*

NEIC ***23*** *20:25:26.7±1.8, 44°.05N±0°.07×148°.1E±0°.1, h29km±1km, mb5.9/286, Ms_20 5.5/406, Mwb5.8/98, Mww5.9, Error ellipse: s-maj=14.1km s-min=10.6km az=128.0*

NEIC ***23*** *20:25:26.4, 44°.06N×148°.07E, h31km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr4.19; Mθθ-1.48; Mφφ-2.71; Mrθ1.33; Mrφ-1.61; Mθφ3.43; Fault plane solution: M0 5.45000×1017 NP1: φs221.15000°, δ24.39000°, λ103.86000°. NP2: φs25.99000°, δ66.37000°, λ83.80000°. Principal axes: T 5.6624, Plg68.0000°, Azm284.0000°; N -0.4598, Plg6.0000°, Azm28.0000°; P -5.2026, Plg21.0000°, Azm121.0000°;*

MOS ***23*** *20:25:26.0±1.0, 44°.05N×148°.11E, h42km, mb6.0/91, MS5.8/65, Mw6.2 Error ellipse: s-maj=5.2km s-min=3.7km az=115.3 Broadband fault plane solution: P waves. M0 2.60000×1018 NP1: φs48.00000°, δ71.00000°, λ80.00000°. NP2: φs256.00000°, δ21.00000°, λ117.00000°. Principal axes: T Plg63.0000°, Azm303.0000°; N Plg9.0000°, Azm51.0000°; P Plg25.0000°, Azm146.0000°;*

MOS Fault plane solution: P-wave C80, D14 . Felt (III-IV) at Gornyy, Goryachiye Klyuchi; (III) at Malokuril'skoye; (II) at Reydovo, Yuzhno-Kuril'sk, Kuril'sk.

KEA ***23*** *20:25:28.4, 43°.44N×147°.99E, h36km, MS5.2/3*

GCMT ***23*** *20:25:29.7±0.1, 44°.07N×148°.26E, h35km, MW5.9/172, Moment Tensor Solution. s162, c347; s172, c530; Duration: 28±1 Moment tensor: Scale 1018Nm; Mrr0.64±.01; Mθθ-0.25±.00; Mφφ-0.39±.00; Mrθ0.17±.01; Mrφ-0.42±.00; Mθφ0.46±.01; Best double couple: M0 0.85500×1018 NP1: φs28.00000°, δ63.00000°, λ77.00000°. NP2: φs234.00000°, δ30.00000°, λ113.00000°. Principal axes: T 0.8190, Plg69.0000°, Azm272.0000°; N 0.0710, Plg11.0000°, Azm34.0000°; P -0.8910, Plg17.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *20:25:32, 43°.98N×148°.44E, h24km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 1017Nm; Mrr5.66; Mθθ-2.23; Mφφ-3.43; Mrθ2.22; Mθφ-3.19; Mθφ5.08; Fault plane solution: M0 8.08000×1017 NP1: φs231.00000°, δ25.00000°, λ111.00000°. NP2: φs28.00000°, δ67.00000°, λ81.00000°. Principal axes: T 7.9875, Plg67.0000°, Azm282.0000°; N 0.1800, Plg9.0000°, Azm32.0000°; P -8.1674, Plg21.0000°, Azm126.0000°;*

ISC 23 20:25:26.8±0.2, 44°.05N±0°.02×148°.07E±0°.02, h35km±1km, h35km: pP-P, n2293, σ1§40/2374, mb5.8/493, MS5.6/350, 294C-85D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.19**	**353**	*d iPN*	**Pn**	**20 25 47.5**	**+0.6**
KUR				*eS*	**Sb**	**20 26 03.2**	**-0.8**
KUR	comp=N,6μm,0.6s			pmax	pmax		
KUR	comp=E,5μm,0.6s			pmax	pmax		
KUR	comp=Z,20μm,0.6s			pmax	pmax		
KUR	comp=Z,88μm,1.9s			pmax	pmax		
KUR	comp=N,40μm,0.5s			smax	smax		
KUR	comp=E,26μm,0.5s			smax	smax		
KUR	comp=N,435μm,4.6s			smax	smax		
KUR	comp=E,715μm,4.6s			smax	smax		
KUR	**Kuril'sk**	**1.19**	**353**	*i P*	**Pn**	**20 25 47.5**	**+0.6**
KUR				AMB	AMB	20 25 48.7	
KUR	comp=E,20μm,0.6s			AMB	AMB	20 25 48.7	
KUR	comp=E,88μm,2.0s			*e*S	**Sb**	**20 26 03.5**	**-0.5**
KUR				A	A	20 26 05.2	
KUR	comp=E,40μm,0.5s			A	A	20 26 05.2	
KUR	comp=E,26μm,0.5s			A	A	20 26 05.6	
KUR	comp=E,435μm,5.0s			A	A	20 26 05.6	
KUR	comp=E,715μm,5.0s						
YUK	**Yuzh-Kuril'sk**	**1.59**	**270**	*d iPN*	**Pn**	**20 25 53.4**	**+0.9**
YUK				*e*S	**Sn**	**20 26 13.1**	**+1.2**
YUK	comp=E,4μm,0.2s			pmax	pmax		
YUK	comp=Z,17μm,0.2s			pmax	pmax		
YUK	comp=N,2μm,0.3s			pmax	pmax		
YUK	comp=Z,55μm,1.4s			smax	smax		
YUK	comp=N,208μm,2.5s			smax	smax		
YUK	comp=E,221μm,2.5s			smax	smax		
YUK	comp=E,39μm,0.4s			smax	smax		
YUK	comp=N,78μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.59**	**270**	*i P*	**Pn**	**20 25 53.3**	**+0.8**
YUK				AMB	AMB	20 25 55.4	
YUK	comp=N,14μm,0.2s			AMB	AMB	20 25 57.9	
YUK	comp=N,55μm,2.0s			*e*S	**Sn**	**20 26 13.4**	**+1.5**
YUK				A	A	20 26 16.5	
YUK	comp=N,208μm,3.0s			A	A	20 26 16.5	
YUK	comp=N,221μm,3.0s			A	A	20 26 21.0	
YUK	comp=N,78μm,0.5s			A	A	20 26 21.0	
YUK	comp=N,39μm,0.5s						
NEM2	**Nemuro 2**	**1.82**	**249**	‖*eP*	**Pn**	**20 25 55.3**	**-0.3**
NEM2				‖*e*S	**Sn**	**20 26 17.8**	**+0.3**
NEM2	**Nemuro 2**	**1.82**	**249**	A	A	20 25 55.3	
	comp=N,155nm,3.1s,comp=N,173nm,7.1s						
NMR	**Nemuro--Hokkai**	**1.83**	**249**	‖*i* PN	**Pn**	**20 25 55.3**	**-0.5**
NMR				*i* S	**Sn**	**20 26 19.0**	**+1.3**
NMR	**Nemuro--Hokkai**	**1.83**	**249**	*i* P	**Pn**	**20 25 56.4**	**+0.6**
NMR				*i* S	**Sn**	**20 26 19.1**	**+1.3**
RUSJ	**Misakicho**	**2.04**	**272**	‖*i* PN	**Pn**	**20 26 00.4**	**+1.8**
RUSJ				*i* S	**Sb**	**20 26 26.0**	**-2.1**
JRA	**Rausu**	**2.13**	**268**	‖*eP*	**Pn**	**20 26 01.3**	**+1.4**
JRA	**Rausu**	**2.13**	**268**	A	A	20 26 01.3	
	comp=N,165nm,5.7s,comp=N,255nm,4.0s						
JNSB	**Nemuroshibetsu**	**2.23**	**264**	*eP*	**Pn**	**20 26 02.8**	**+1.5**
JNSB	**Nemuroshibetsu**	**2.23**	**264**	A	A	20 26 02.8	
	comp=N,208nm,2.6s,comp=N,296nm,3.9s						
JKHN	**Kushirohamanak**	**2.33**	**246**	*eP*	**Pn**	**20 26 02.8**	**+0.2**
JKHN	**Kushirohamanak**	**2.33**	**246**	A	A	20 26 02.8	
	comp=N,148nm,3.3s,comp=N,258nm,2.7s						
JNK	**Nakash**	**2.47**	**260**	‖*eP*	**Pn**	**20 26 05.6**	**+1.0**
JNK				‖*e*S	**Sn**	**20 26 35.7**	**+2.2**
JNK	**Nakash**	**2.47**	**260**	A	A	20 26 05.6	
	comp=N,89nm,5.4s,comp=N,105nm,5.0s						
JAK	**Akkeshi**	**2.67**	**248**	*e*S	**Sn**	**20 26 39.5**	**+1.0**
JAK	**Akkeshi**	**2.67**	**248**	A	A	20 26 39.5	
	comp=N,176nm,3.4s,comp=N,164nm,1.7s						
JTKR	**Abashiri--Toko**	**3.01**	**270**	‖*P*	**Pn**	**20 26 14.1**	**+2.2**
JTKR	**Abashiri--Toko**	**3.01**	**270**	A	A	20 26 14.1	
	comp=N,48nm,3.3s,comp=N,81nm,4.8s						
JAR	**Ashorobuto**	**3.21**	**258**	‖*eP*	**Pn**	**20 26 16.3**	**+1.5**
JAR				‖*e*S	**Sn**	**20 26 54.7**	**+2.9**
JAR	**Ashorobuto**	**3.21**	**258**	A	A	20 26 16.3	
	comp=N,91nm,2.1s,comp=N,95nm,2.5s						
JOB	**Onbets**	**3.29**	**251**	*eP*	**Pn**	**20 26 16.8**	**+0.9**
JOB	**Onbets**	**3.29**	**251**	A	A	20 26 16.8	
	comp=N,140nm,3.4s,comp=N,164nm,3.4s						
JMP	**Maruseppu**	**3.40**	**271**	‖*eP*	**Pn**	**20 26 19.9**	**+2.5**
JMP	**Maruseppu**	**3.40**	**271**	A	A	20 26 19.9	
	comp=N,49nm,8.3s,comp=N,53nm,6.9s						
JCH	**Churui**	**3.73**	**249**	*eP*	**Pn**	**20 26 22.1**	**+0.3**
JCH				*e*S	**Sn**	**20 27 04.9**	**+0.4**
JCH	**Churui**	**3.73**	**249**	A	A	20 26 22.1	
	comp=N,76nm,4.2s,comp=N,128nm,2.5s						
JKK2	**Kamakawa 2**	**3.85**	**269**	‖*eP*	**Pn**	**20 26 26.3**	**+2.8**
JKK2	**Kamakawa 2**	**3.85**	**269**	A	A	20 26 26.3	
	comp=N,47nm,6.0s,comp=N,58nm,2.9s						
JTHR	**Tokachihiroo**	**3.91**	**245**	A	A	20 26 25.2	
	comp=N,173nm,2.9s,comp=N,112nm,2.6s						
ASAJ	**Asahikawa**	**3.95**	**273**	A	A	20 26 27.7	
	comp=N,38nm,8.5s,comp=N,38nm,2.7s						
ASAJ	**Asahikawa**	**3.95**	**273**	P	**Pn**	**20 26 27.9**	**+3.1**
JSE	**Soyaes**	**4.03**	**285**	*eP*	**Pn**	**20 26 28.6**	**+2.6**
JSE	**Soyaes**	**4.03**	**285**	A	A	20 26 28.6	
	comp=N,33nm,3.4s,comp=N,47nm,4.4s						
JFR	**Furan**	**4.08**	**259**	A	A	20 26 28.6	
	comp=N,45nm,3.2s,comp=N,78nm,5.3s						
JFR	**Furan**	**4.08**	**259**	P	**Pn**	**20 26 29.3**	**+2.6**
ERM	**Erimo**	**4.14**	**242**	Pn	**Pn**	**20 26 29.8**	**+2.3**
ERM	**Erimo**	**4.14**	**242**	PN	**Pn**	**20 26 29.8**	**+2.3**
ERM	**Erimo**	**4.14**	**242**	P	**Pn**	**20 26 30.7**	**+3.2**
ERM	**Erimo**	**4.14**	**242**	⇑*P*	**Pn**	**20 26 29.5**	**+2.0**
JEM	**Erimo**	**4.14**	**242**	Pn	**Pn**	**20 26 29.8**	**+2.3**
JEM	**Erimo**	**4.14**	**242**	P	**Pn**	**20 26 31.0**	**+3.5**
JEM	**Erimo**	**4.14**	**242**	A	A	20 26 28.3	
	comp=N,118nm,6.0s,comp=N,122nm,3.4s						
JAB	**Ashibetsu**	**4.27**	**265**	A	A	20 26 31.7	
	comp=N,105nm,3.3s,comp=N,92nm,4.5s						
JAB	**Ashibetsu**	**4.27**	**265**	‖*P*	**Pn**	**20 26 33.3**	**+4.0**
JNBK	**Urakawa-nobuka**	**4.28**	**247**	*eP*	**Pn**	**20 26 29.8**	**+0.4**
JNBK				*e*S	**Sn**	**20 27 18.6**	**+0.6**
JNBK	**Urakawa-nobuka**	**4.28**	**247**	A	A	20 26 29.8	
	comp=N,225nm,1.7s,comp=N,156nm,2.5s						
JBT2	**Biratori 2**	**4.35**	**255**	A	A	20 26 32.1	
	comp=N,50nm,2.5s,comp=N,67nm,4.0s						
JBT2	**Biratori 2**	**4.35**	**255**	P	**Pn**	**20 26 32.1**	**+1.7**
JSHD	**Hidakashinhida**	**4.41**	**250**	A	A	20 26 32.7	
	comp=N,243nm,2.9s,comp=N,278nm,2.1s						
JSS	**Shosan**	**4.48**	**277**	*eP*	**Pn**	**20 26 36.5**	**+4.3**
JSS	**Shosan**	**4.48**	**277**	A	A	20 26 36.5	
	comp=N,88nm,5.6s,comp=N,56nm,4.5s						
JWK2	**Keihoku**	**4.58**	**288**	*eP*	**Pn**	**20 26 37.5**	**+4.0**
JWK2	**Keihoku**	**4.58**	**288**	A	A	20 26 37.5	
	comp=N,54nm,3.9s,comp=N,46nm,5.0s						
JHR	**Hokuryu**	**4.60**	**268**	A	A	20 26 36.5	
	comp=N,143nm,6.8s,comp=N,96nm,4.8s						
JIAM	**Iburiatsuma**	**4.71**	**254**	A	A	20 26 37.1	
	comp=N,183nm,3.1s,comp=N,202nm,3.9s						
YSS	**Yuzh-Sakhalins**	**4.73**	**310**	Pn	**Pn**	**20 26 38.1**	**+2.5**
YSS	**Yuzh-Sakhalins**	**4.73**	**310**	κ *i* PN	**Pn**	**20 26 38.3**	**+2.7**
YSS				*e*S	**Sn**	**20 27 33.1**	**+3.9**
YSS	comp=Z,1μm,0.5s			pmax	pmax		
YSS	comp=Z,4μm,3.8s			pmax	pmax		
YSS	comp=E,2μm,1.0s			smax	smax		
YSS	comp=Z,87μm,16.0s			MLR	MLR		
YSS	comp=N,39μm,18.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**4.73**	**310**	*P*	**Pn**	**20 26 38.6**	**+3.0**
YSS	**Yuzh-Sakhalins**	**4.73**	**310**	*i* P	**Pn**	**20 26 38.3**	**+2.7**
YSS				AMB	AMB	20 26 40.6	
YSS	comp=N,1μm,0.5s			AMB	AMB	20 26 41.5	
YSS	comp=N,4μm,4.0s			*e*S	**Sn**	**20 27 33.1**	**+3.9**
YSS				A	A	20 27 36.0	
YSS	comp=N,2μm,1.0s			AMS	AMS	20 28 31.0	
YSS	comp=N,39μm,18.0s			AMS	AMS	20 28 31.0	
YSS	comp=N,87μm,18.0s						
YSS	**Yuzh-Sakhalins**	**4.73**	**310**	‖*P*	**Pn**	**20 26 38.3**	**+2.7**
JYG	**Yagishiri**	**4.79**	**277**	A	A	20 26 39.8	
	comp=N,51nm,5.4s,comp=N,37nm,6.0s						
JISS	**Ishikarishitsu**	**4.89**	**263**	A	A	20 26 40.2	
	comp=N,135nm,5.7s,comp=N,143nm,4.8s						
JRR	**Rishiri**	**4.95**	**285**	A	A	20 26 42.7	
	comp=N,142nm,5.8s,comp=N,120nm,3.2s						
JEW	**Eniwo**	**4.97**	**258**	Pn	**Pn**	**20 26 42.1**	**+3.2**
JEW	**Eniwo**	**4.97**	**258**	P	**Pn**	**20 26 42.5**	**+3.6**
JEW	**Eniwo**	**4.97**	**258**	*eP*	**Pn**	**20 26 41.9**	**+3.0**
JEW	**Eniwo**	**4.97**	**258**	A	A	20 26 41.9	
	comp=N,100nm,3.5s,comp=N,99nm,4.7s						
JEW	**Eniwo**	**4.97**	**258**	‖*P*	**Pn**	**20 26 42.1**	**+3.2**
JRBN	**Rebuntou**	**5.18**	**288**	*eP*	**Pn**	**20 26 45.5**	**+3.8**
JRBN	**Rebuntou**	**5.18**	**288**	A	A	20 26 45.5	
	comp=N,20nm,10.3s,comp=N,18nm,6.5s						
JNB	**Noboribetsu**	**5.38**	**255**	A	A	20 26 46.5	
	comp=N,59nm,2.7s,comp=N,49nm,2.0s						
JNB	**Noboribetsu**	**5.38**	**255**	P	**Pn**	**20 26 47.5**	**+3.1**
JSK	**Shakotan**	**5.55**	**265**	A	A	20 26 49.7	
	comp=N,48nm,7.7s,comp=N,36nm,3.4s						
JKB	**Kayabe**	**5.60**	**250**	A	A	20 26 49.3	
	comp=N,121nm,2.4s,comp=N,179nm,1.7s						
JKB	**Kayabe**	**5.60**	**250**	P	**Pn**	**20 26 49.4**	**+1.8**
JAHD	**Aomorihigashid**	**5.69**	**243**	A	A	20 26 50.2	
	comp=N,87nm,1.3s,comp=N,90nm,1.3s						
JARK	**Aomorirokkasho**	**5.81**	**241**	A	A	20 26 51.8	
	comp=N,30nm,4.1s,comp=N,34nm,4.4s						
JOT	**Ohata**	**5.82**	**245**	A	A	20 26 52.1	
	comp=N,47nm,2.4s,comp=N,44nm,2.7s						
JOT	**Ohata**	**5.82**	**245**	P	**Pn**	**20 26 51.4**	**+0.8**
JYM2	**Yakumo 2**	**5.96**	**254**	A	A	20 26 54.6	
	comp=N,51nm,2.9s,comp=N,71nm,2.2s						
JYM2	**Yakumo 2**	**5.96**	**254**	P	**Pn**	**20 26 54.8**	**+2.3**
JSH	**Shimam**	**6.02**	**259**	A	A	20 26 55.8	
	comp=N,21nm,2.5s,comp=N,28nm,6.4s						
JKEN	**Kujiedanarisaw**	**6.09**	**233**	A	A	20 26 55.3	
	comp=N,23nm,1.2s,comp=N,19nm,1.9s						
JANG	**Nango**	**6.10**	**235**	A	A	20 26 55.5	
	comp=N,18nm,6.4s,comp=N,19nm,4.2s						
JANG	**Nango**	**6.10**	**235**	P	**Pn**	**20 26 54.1**	**-0.3**
JTM	**Tenmabayashi**	**6.12**	**240**	Pn	**Pn**	**20 26 55.4**	**+0.6**
JTM	**Tenmabayashi**	**6.12**	**240**	P	**Pn**	**20 26 55.8**	**+1.0**
	comp=N,2μm,1.0s						
JTM	**Tenmabayashi**	**6.12**	**240**	A	A	20 26 56.1	
	comp=N,37nm,2.8s,comp=N,44nm,2.3s						
JTM	**Tenmabayashi**	**6.12**	**240**	P	**Pn**	**20 26 55.0**	**+0.2**
JTM	**Tenmabayashi**	**6.12**	**240**	⇑*P*	**Pn**	**20 26 55.0**	**+0.2**
JSR	**Shiriuchi**	**6.17**	**249**	A	A	20 26 57.2	
	comp=N,34nm,3.6s,comp=N,38nm,4.7s						
JTH	**Tanohata**	**6.19**	**230**	A	A	20 26 56.5	
	comp=N,12nm,2.1s,comp=N,11nm,5.1s						
JHST	**Hiyamasetana**	**6.21**	**258**	A	A	20 26 58.2	
	comp=N,60nm,2.4s,comp=N,55nm,2.1s						
JHST	**Hiyamasetana**	**6.21**	**258**	P	**Pn**	**20 26 59.6**	**+3.8**
JSI2	**Shiura 2**	**6.40**	**245**	A	A	20 27 00.2	
	comp=N,44nm,1.6s,comp=N,37nm,3.0s						
JOMM	**Oshimamatsumae**	**6.45**	**250**	A	A	20 27 01.2	
	comp=N,21nm,2.9s,comp=N,27nm,1.9s						
JKZ	**Kuzumaki**	**6.46**	**233**	A	A	20 27 00.4	
	comp=N,12nm,3.7s,comp=N,15nm,3.1s						
MIYJ	**Miyakonagasawa**	**6.47**	**228**	A	A	20 27 00.3	
	comp=N,11nm,4.3s,comp=N,10.0nm,3.4s						
UGL	**Uglegorsk**	**6.51**	**323**	*e*PN	**Pn**	**20 27 03.3**	**+3.3**
UGL				*e*S	**Sn**	**20 28 18.3**	**+5.3**
UGL	comp=Z,1μm,0.9s			pmax	pmax		
UGL	comp=E,12μm,3.7s			smax	smax		
UGL	comp=N,13μm,3.3s			smax	smax		
UGL	comp=E,37μm,13.0s			MLR	MLR		
UGL	comp=Z,27μm,13.0s			MLR	MLR		
UGL	comp=N,25μm,10.0s			MLR	MLR		
UGL	**Uglegorsk**	**6.51**	**323**	*eP*	**Pn**	**20 27 03.3**	**+3.3**
UGL				AMB	AMB	20 27 06.5	
UGL	comp=N,1μm,0.7s			*e*S	**Sn**	**20 28 17.1**	**+4.1**
UGL				A	A	20 28 25.2	
UGL	comp=N,13μm,4.0s			A	A	20 28 25.2	
UGL	comp=N,12μm,4.0s			A	A	20 28 33.9	
UGL	comp=N,940nm,0.7s			A	A	20 28 33.9	
UGL	comp=N,840nm,0.7s			AMS	AMS	20 30 29.0	
UGL	comp=N,25μm,13.0s			AMS	AMS	20 30 29.0	
UGL	comp=N,37μm,13.0s			AMS	AMS	20 30 29.0	
UGL	comp=N,27μm,13.0s						
JOSM	**Okushiri--Mats**	**6.60**	**256**	P	**Pn**	**20 27 03.7**	**+2.4**
JOSM				S	**Sn**	**20 28 18.2**	**+3.0**
JHHS	**Hirosakihyakuz**	**6.65**	**242**	A	A	20 27 03.5	
	comp=N,94nm,2.9s,comp=N,123nm,4.2s						
JAH	**Hinai**	**6.74**	**238**	P	**Pn**	**20 27 03.2**	**-0.1**
JOM	**Ohasama**	**6.83**	**230**	P	**Pn**	**20 27 03.5**	**-0.9**
JMK	**Ichinoseki**	**7.24**	**228**	P	**Pn**	**20 27 08.8**	**-1.3**
JMK				S	**Sn**	**20 28 26.9**	**-4.1**
JRG	**Rokugo**	**7.25**	**233**	P	**Pn**	**20 27 07.5**	**-2.8**
JIO	**Ouri**	**7.54**	**224**	P	**Pn**	**20 27 12.4**	**-1.8**
TYV	**Tymovskoe**	**7.74**	**334**	*e*PN	**Pn**	**20 27 21.1**	**+4.3**
TYV	comp=Z,4μm,3.4s			pmax	pmax		
TYV	comp=Z,184nm,0.7s			pmax	pmax		
TYV	comp=N,46μm,16.0s			MLR	MLR		
TYV	comp=Z,50μm,16.0s			MLR	MLR		
TYV	**Tymovskoe**	**7.74**	**334**	*eP*	**Pn**	**20 27 20.2**	**+3.4**
TYV				AMB	AMB	20 27 23.4	
TYV	comp=Z,4μm,3.0s			AMB	AMB	20 27 25.9	
TYV	comp=Z,180nm,0.7s			*e*S	**Sn**	**20 28 45.3**	**+2.2**
TYV				A	A	20 28 45.5	
TYV	comp=Z,3μm,5.0s			A	A	20 28 45.5	
TYV	comp=Z,1μm,5.0s			A	A	20 28 45.8	
TYV	comp=Z,150nm,1.0s			A	A	20 28 45.8	
TYV	comp=Z,310nm,1.0s			AMS	AMS	20 30 26.6	
TYV	comp=Z,46μm,15.0s			AMS	AMS	20 30 26.6	
TYV	comp=Z,50μm,15.0s						
JOU	**Okura**	**7.96**	**227**	P	**Pn**	**20 27 19.1**	**-1.0**
TEY	**Ternei**	**8.25**	**281**	⇑*e*PN	**Pn**	**20 27 27.8**	**+3.9**
TEY	comp=Z,70nm,1.1s			pmax	pmax		
TEY	comp=E,70nm,1.1s			pmax	pmax		
TEY	comp=N,20nm,1.7s			pmax	pmax		
TEY	comp=E,4μm,3.7s			pmax	pmax		
TEY	comp=Z,3μm,5.0s			MLR	MLR		
TEY	comp=E,25μm,16.0s			MLR	MLR		
TEY	comp=Z,33μm,15.0s						
TEY	**Ternei**	**8.25**	**281**	*eP*	**Pn**	**20 27 27.8**	**+3.9**
TEY				AMB	AMB	20 27 29.1	
TEY	comp=Z,70nm,1.0s			AMB	AMB	20 27 30.5	
TEY	comp=Z,3μm,5.0s			*e*S	**Sn**	**20 28 59.0**	**+3.1**
TEY				AMS	AMS	20 30 59.1	
TEY	comp=Z,8μm,15.0s			AMS	AMS	20 30 59.1	
TEY	comp=Z,25μm,15.0s			AMS	AMS	20 30 59.1	
TEY	comp=Z,33μm,15.0s						
JMM	**Marumori**	**8.28**	**224**		**Pn**	**20 27 22.4**	**-1.9**
JMM	**Marumori**	**8.28**	**224**	P	**Pn**	**20 27 23.3**	**-1.0**
	comp=Z,270nm,1.0s						
JMM	**Marumori**	**8.28**	**224**	⇑*P*	**Pn**	**20 27 22.0**	**-2.3**
JYS	**Shiratake**	**8.39**	**229**	P	**Pn**	**20 27 25.4**	**-0.5**
SKR	**Severo-Kuril's**	**8.59**	**37**	‖*i* PN	**Pn**	**20 27 29.6**	**+1.1**
SKR	comp=Z,820nm,0.6s			pmax	pmax		
SKR	comp=Z,2μm,5.1s			pmax	pmax		
SKR	comp=Z,24μm,15.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**8.59**	**37**	*i* P	**Pn**	**20 27 29.3**	**+0.8**
SKR				AMB	AMB	20 27 33.5	
SKR	comp=Z,820nm,0.6s			AMB	AMB	20 27 37.7	
SKR	comp=Z,2μm,5.0s			*e*S	**Sn**	**20 29 01.2**	**-2.8**
SKR				A	A	20 29 13.4	
SKR	comp=Z,360nm,0.9s			A	A	20 29 13.4	
SKR	comp=Z,430nm,0.9s			AMS	AMS	20 30 40.0	
SKR	comp=Z,13μm,15.0s			AMS	AMS	20 30 40.0	
SKR	comp=Z,17μm,15.0s			AMS	AMS	20 30 40.0	
SKR	comp=Z,24μm,15.0s						
PAU	**Pauzhetka**	**9.46**	**35**	*eP*	**Pn**	**20 27 40.8**	**+0.3**
PAU				AMB	AMB	20 27 43.5	
PAU	comp=Z,230nm,0.4s			*e*S	**Sn**	**20 29 23.4**	**-2.1**
PAU				A	A	20 29 33.9	
PAU	comp=Z,280nm,0.6s			A	A	20 29 33.9	
PAU	comp=Z,420nm,0.6s						
JSD	**Sado**	**9.54**	**234**	Pn	**Pn**	**20 27 40.0**	**-1.6**
JSD	**Sado**	**9.54**	**234**	P	**Pn**	**20 27 42.3**	**+0.7**
	comp=Z,715nm,1.1s						
JSD	**Sado**	**9.54**	**234**	P	**Pn**	**20 27 41.5**	**-0.2**
JSD	**Sado**	**9.54**	**234**	⇑*P*	**Pn**	**20 27 41.4**	**-0.2**
JUON	**Uonuma**	**9.68**	**228**	P	**Pn**	**20 27 43.7**	**+0.2**
JYT	**Yasato**	**9.87**	**220**	Pn	**Pn**	**20 27 44.5**	**-1.6**
JYT	**Yasato**	**9.87**	**220**	P	**Pn**	**20 27 45.0**	**-1.1**
	comp=Z,467nm,1.0s						
JYT	**Yasato**	**9.87**	**220**	‖*P*	**Pn**	**20 27 44.5**	**-1.6**
JKT	**Katashina**	**9.91**	**226**	P	**Pn**	**20 27 47.5**	**+0.8**
JAG	**Ashikaga**	**10.07**	**224**	P	**Pn**	**20 27 47.3**	**-1.6**
OKH	**Okha**	**10.09**	**342**	*d iPN*	Pn	20 27 56.4	+7.4
OKH				*i* S	Sn	20 29 58.5	+18
OKH	comp=Z,3μm,16.9s			pmax	pmax		
OKH	comp=N,11μm,10.5s			smax	smax		
OKH	comp=N,41μm,13.0s			MLR	MLR		
OKH	comp=E,36μm,14.0s			MLR	MLR		
OKH	comp=Z,31μm,13.0s			MLR	MLR		
OKH	**Okha**	**10.09**	**342**	*eP*	**Pn**	**20 27 52.2**	**+3.2**
OKH				AMB	AMB	20 27 57.1	
OKH	comp=Z,550nm,0.6s			*e*S	**Sn**	**20 29 42.6**	**+1.8**
OKH				A	A	20 29 56.6	
OKH	comp=Z,100nm,0.7s			A	A	20 29 56.6	
OKH	comp=Z,320nm,0.7s			A	A	20 30 15.4	
OKH	comp=Z,11μm,10.0s			AMS	AMS	20 30 23.3	
OKH	comp=Z,41μm,14.0s			AMS	AMS	20 30 23.3	
OKH	comp=Z,36μm,14.0s			AMS	AMS	20 30 23.3	
OKH	comp=Z,31μm,14.0s						
NKL	**Nikolayevsk**	**10.33**	**334**	*e*PN	**Pn**	**20 27 53.6**	**+1.3**
NKL				*e*S	Sn	20 29 59.0	+12
NKL	comp=E,160nm,1.2s			pmax	pmax		
NKL	comp=N,266nm,1.3s			pmax	pmax		
NKL	comp=Z,416nm,1.1s			pmax	pmax		

NKL				smax	smax	
	comp=E,426nm,4.3s					
NKL				smax	smax	
	comp=N,368nm,2.4s					
NKL				MLR	MLR	
	comp=N,5μm,10.0s					
NKL				MLR	MLR	
	comp=E,7μm,10.0s					
NKL				MLR	MLR	
	comp=Z,6μm,9.0s					
NKL	**Nikolayevsk**	**10.33 334**		*e*P	**Pn**	**20 27 55.6 +3.3**
NKL				AMB	AMB	20 27 57.5
	comp=Z,420nm,1.0s					
NKL				*e*S	**Sn**	**20 29 48.4 +1.7**
NKL				AMS	AMS	20 30 03.6
	comp=Z,5μm,10.0s					
NKL				AMS	AMS	20 30 03.6
	comp=Z,7μm,10.0s					
NKL				AMS	AMS	20 30 03.6
	comp=Z,6μm,10.0s					
GRNR	**Gornyy**	**10.36 315**	⇓	*i*PN	Pn	20 27 59.2 +6.4
GRNR				*e*S	Sn	20 30 00.9 +13
GRNR				pmax	pmax	
	comp=E,110nm,0.9s					
GRNR				pmax	pmax	
	comp=N,90nm,1.0s					
GRNR				pmax	pmax	
	comp=Z,160nm,1.1s					
GRNR				smax	smax	
	comp=N,20nm,1.0s					
GRNR	**Gornyy**	**10.36 315**		*e*P	**Pn**	**20 27 56.0 +3.2**
GRNR				AMB	AMB	20 28 00.9
	comp=N,160nm,1.0s					
GRNR				AMS	AMS	20 31 58.5
	comp=N,7μm,19.0s					
GRNR				AMS	AMS	20 31 58.5
	comp=N,13μm,19.0s					
GRNR				AMS	AMS	20 31 58.5
	comp=N,20μm,19.0s					
MJB9	**Matsu-Tunnel**	**10.62 228**			**Pn**	**20 27 58.0 +1.5**
MAJO	**Matsushiro**	**10.63 228**		Pn	**Pn**	**20 27 56.7 +0.2**
MAJO	**Matsushiro**	**10.63 228**		PN	**Pn**	**20 27 56.7 +0.2**
MAJO	**Matsushiro**	**10.63 228**		P	**Pn**	**20 27 56.9 +0.4**
	comp=N,334nm,0.8s					
MAJO	**Matsushiro**	**10.63 228**	⇑	P	**Pn**	**20 27 55.9 -0.7**
MAT	**Matsushiro**	**10.63 228**		P	**Pn**	**20 27 56.0 -0.5**
MJAR	**Matsushiro Arr**	**10.63 228**		Pn	**Pn**	**20 27 55.9 -0.6**
	comp=N,1.2nm,0.3s,baz=29,slow=13,SNR=122					
	comp=N,75nm,0.9s					
JTT	**Ttatey**	**11.06 231**		P	**Pn**	**20 28 03.2 +0.7**
PEA0B	**Petropavlovsk-**	**11.07 32**		Pn	**Pn**	**20 28 03.1 +0.6**
PEA0B	**Petropavlovsk-**	**11.07 32**		PN	**Pn**	**20 28 03.1 +0.6**
PETK	**Petropavlovsk-**	**11.07 32**		Pn	**Pn**	**20 28 01.8 -0.7**
	comp=N,6.9nm,0.3s,baz=190,slow=5.7,SNR=83					
	comp=N,35nm,0.6s					
PETK	**Petropavlovsk-**	**11.07 32**		Pn	**Pn**	**20 28 02.8 +0.3**
PETK	**Petropavlovsk-**	**11.07 32**		PN	**Pn**	**20 28 02.8 +0.3**
PET	**Petropavlovsk**	**11.38 34**			**Pn**	**20 28 07.0 +0.3**
PET	**Petropavlovsk**	**11.38 34**		*e*PN	**Pn**	**20 28 06.2 -0.5**
PET				pmax	pmax	
	comp=Z,228nm,0.8s					
PET				MLR	MLR	
	comp=Z,31μm,17.0s					
PET				MLR	MLR	
	comp=Z,28μm,15.0s					
PET	**Petropavlovsk**	**11.38 34**		*e*P	**Pn**	**20 28 06.2 -0.5**
PET				AMB	AMB	20 28 27.8
	comp=Z,230nm,0.8s					
PET				*e*S	**Sn**	**20 30 08.5 -3.9**
PET				AMS	AMS	20 33 56.2
	comp=Z,28μm,15.0s					
USA0B	**Ussuriysk Arra**	**11.56 276**			**Pn**	**20 28 11.3 +2.1**
USA0B	**Ussuriysk Arra**	**11.56 276**		PN	**Pn**	**20 28 11.4 +2.1**
USRK	**Ussuriysk Ar.**	**11.56 276**		Pn	**Pn**	**20 28 11.8 +2.5**
	comp=Z,2.8nm,0.3s,baz=87,slow=13,SNR=37					
USRK				Sn	**Sn**	**20 30 20.9 +3.8**
	baz=32,slow=14					
USRK				LR	LR	20 32 54.3
	comp=Z,51μm,18.3s,baz=77,slow=39					
USRK	**Ussuriysk Ar.**	**11.56 276**		Pn	**Pn**	**20 28 13.7 +4.4**
USRK	**Ussuriysk Ar.**	**11.56 276**		PN	**Pn**	**20 28 13.7 +4.4**
JGF	**Kuroka**	**11.79 228**			**Pn**	**20 28 12.7 +0.2**
JGF	**Kuroka**	**11.79 228**		P	**Pn**	**20 28 13.1 +0.7**
	comp=Z,152nm,0.9s					
JGF	**Kuroka**	**11.79 228**	⇑	P	**Pn**	**20 28 11.8 -0.7**
JYTA	**Yamagatataniai**	**12.13 230**		P	**Pn**	**20 28 16.4 -0.7**
INU	**Inuyama**	**12.16 228**		Pn	**Pn**	**20 28 17.3 -0.2**
INU	**Inuyama**	**12.16 228**		P	**Pn**	**20 28 17.8 +0.3**
	comp=Z,181nm,1.3s					
INU	**Inuyama**	**12.16 228**	⇓	P	**Pn**	**20 28 16.7 -0.7**
KLR	**Kul'dur**	**12.35 301**		Pn	**Pn**	**20 28 24.1 +4.2**
	comp=Z,1.0nm,0.3s,baz=103,slow=14,SNR=69					
KLR				LR	LR	20 33 35.0
	comp=Z,45μm,19.0s,baz=114,slow=40					
KLR	**Kul'dur**	**12.35 301**		*ce*PN	**Pn**	**20 28 22.8 +2.8**
KLR				pmax	pmax	
	comp=Z,680nm,2.5s					
KLR	**Kul'dur**	**12.35 301**		*e*P	**Pn**	**20 28 21.8 +1.8**
MSHR	**Mys Shultsa**	**12.41 269**		*ce*PN	**Pn**	**20 28 22.0 +1.1**
MSHR				pmax	pmax	
	comp=Z,427nm,1.7s					
JHJ	**Hachijo jima 2**	**12.69 213**		Pn	**Pn**	**20 28 23.6 -1.1**
	comp=Z,13nm,0.3s,baz=101,slow=5.2,SNR=2.0					
JHJ				Sn	Sn	20 30 27.8 -17
	comp=Z,18nm,0.3s,baz=99,slow=19,SNR=1.0					
JHJ				LR	LR	20 32 43.6
	comp=Z,3μm,19.9s,baz=46,slow=34					
	comp=Z,101nm,0.4s					
JKY	**Yasaka**	**13.03 234**		P	**Pn**	**20 28 29.4 0.0**
JWT	**Wachi**	**13.10 232**		P	**Pn**	**20 28 30.4 0.0**
JKSM	**Kasumi**	**13.32 235**		P	**Pn**	**20 28 33.6 +0.4**
JKN2	**Miekihoku**	**13.40 227**		P	**Pn**	**20 28 32.9 -1.5**
JHE	**Heguri**	**13.40 230**		P	**Pn**	**20 28 33.4 -1.1**
JKS	**Kasai**	**13.63 233**		P	**Pn**	**20 28 36.9 -0.7**
JAD	**Aida**	**14.06 234**		P	**Pn**	**20 28 42.6 -0.8**
JHS	**Saijyo**	**14.64 237**		Pn	**Pn**	**20 28 50.9 -0.5**
JHS	**Saijyo**	**14.64 237**		P	**Pn**	**20 28 51.3 -0.1**
	comp=Z,273nm,1.4s					
JHS	**Saijyo**	**14.64 237**	⇑	P	**Pn**	**20 28 50.6 -0.8**
BNX	**BinXian**	**14.74 284**	⇑	P	**Pn**	**20 28 52.3 -0.4**
BNX				pP	**P**	**20 29 00.0 +1.7**
BNX				sP		20 29 03.3
BNX				S	**Sn**	**20 31 38.8 +4.1**
BNX				pmax	pmax	
	comp=Z,36nm,1.4s					
BNX				pmax	pmax	
	comp=Z,2μm,6.4s					
BNX				LR	LR	
	comp=Z,7μm,11.4s					
BNX				LR	LR	
	comp=Z,37μm,14.4s					
BNX				LR	LR	
	comp=Z,38μm,14.8s					
JMN	**Monobe**	**15.09 232**		P	**Pn**	**20 28 57.9 +0.5**
	comp=Z,278nm,1.8s					
JMN	**Monobe**	**15.09 232**	⇑	P	**Pn**	**20 28 55.9 -1.6**
MA2	**Magadan**	**15.63 5**		Pn	**Pn**	**20 29 04.6 +0.4**
	comp=Z,3.9nm,0.3s,baz=175,slow=9.4,SNR=27					
MA2				LR	LR	20 34 56.9
	comp=Z,18μm,19.7s,baz=190,slow=37					
MA2	**Magadan**	**15.63 5**		Pn	**Pn**	**20 29 05.4 +1.2**
MA2	**Magadan**	**15.63 5**		*ce*P	**Pn**	**20 29 05.0 +0.8**
MA2				pmax	pmax	
	comp=Z,404nm,1.7s					
MA2	**Magadan**	**15.63 5**		P	**P**	**20 29 06.6 -1.4**
	comp=Z,274nm,0.9s					
MA2	**Magadan**	**15.63 5**	⇑	P	**Pn**	**20 29 04.5 +0.3**
HHU	**Hamhung**	**15.81 262**		P	**Pn**	**20 29 05.3 -1.4**
HHU				pP	**P**	**20 29 13.6 +3.4**
HHU				S	**Sn**	**20 31 57.4 -3.4**
HHU				AMS	AMS	
	comp=N,7μm,4.1s					
HHU				AMS	AMS	
	comp=E,31μm,17.5s					
HHU				AMS	AMS	
	comp=Z,34μm,19.6s					
CN2	**Changchun**	**16.30 277**		P	**Pn**	**20 29 11.0 -1.9**
CN2				S	Sn	20 32 01.5 -11
CN2				pmax	pmax	
	comp=Z,4μm,13.0s					
CN2				LR	LR	
	comp=Z,17μm,14.0s					
CN2				LR	LR	
	comp=Z,29μm,14.0s					
CN2				LR	LR	
	comp=Z,36μm,18.0s					
KSRS	**Korea Array**	**16.61 254**		Pn	**Pn**	**20 29 16.4 -0.4**
	comp=Z,1.7nm,0.3s,baz=62,slow=9.9,SNR=27					
KSRS				Sn	**Sn**	**20 32 20.9 +0.7**
	baz=47,slow=26					
KSRS				PcP	**PcP**	**20 34 06.5 +0.9**
	comp=Z,8.0nm,0.8s,baz=322,slow=0.3,SNR=5.9					
KSRS				LR	LR	20 35 56.0
	comp=Z,23μm,19.7s,baz=60,slow=38					
KSRS				ScP	**ScP**	**20 37 38.6 +1.2**
	comp=Z,2.9nm,1.0s,baz=48,slow=1.9,SNR=4.6					
	comp=Z,72nm,1.0s					
KS19	**Wonju Array Si**	**16.63 254**		Pn	**Pn**	**20 29 16.9 -0.2**
KSAR	**Wonju Array Be**	**16.64 254**		Pn	**Pn**	**20 29 17.0 -0.3**
KSAR	**Wonju Array Be**	**16.64 254**		P	**Pn**	**20 29 17.0 -0.3**
ZEA	**Zeya**	**16.71 313**		*ce*P	**P**	**20 29 19.5 -0.6**
ZEA				*e*S	**Sn**	**20 32 15.9 -6.6**
ZEA				pmax	pmax	
	comp=N,130nm,1.1s					
ZEA				pmax	pmax	
	comp=E,130nm,1.1s					
ZEA				pmax	pmax	
	comp=Z,230nm,1.1s					
ZEA				pmax	pmax	
	comp=E,2μm,5.1s					
ZEA				pmax	pmax	
	comp=N,2μm,4.6s					
ZEA				pmax	pmax	
	comp=Z,2μm,7.1s					
ZEA				smax	smax	
	comp=E,2μm,7.7s					
ZEA				smax	smax	
	comp=N,2μm,6.7s					
ZEA				MLR	MLR	
	comp=N,6μm,18.0s					
ZEA				MLR	MLR	
	comp=Z,9μm,15.0s					
ZEA	**Zeya**	**16.71 313**		*e*P	**Pn**	**20 29 17.3 -0.8**
ZEA				AMB	AMB	20 29 22.1
	comp=Z,230nm,1.0s					
JTU	**Tsushima**	**17.27 243**		P	**P**	**20 29 26.7 +0.3**
	comp=Z,315nm,1.6s					
INCN	**Inchon**	**17.49 255**		P	**Pn**	**20 29 26.8 -1.1**
INCN				P	**Pn**	**20 29 26.8 -1.1**
INCN	**Inchon**	**17.49 255**		P	**P**	**20 29 30.0 +1.2**
	comp=Z,180nm,0.9s					
INCN	**Inchon**	**17.49 255**	⇑	P	**P**	**20 29 30.0 +1.2**
TJN	**Taejon**	**17.55 251**		Pn	**Pn**	**20 29 28.0 -0.6**
TJN	**Taejon**	**17.55 251**		P	**Pn**	**20 29 28.0 -0.6**
TJN				pmax	pmax	
	comp=Z,4μm,2.0s					
TJN	**Taejon**	**17.55 251**		P	**P**	**20 29 31.3 +1.9**
	comp=Z,902nm,1.5s					
JCJ	**Chichijima**	**17.58 198**		P	**Pn**	**20 29 28.9 -0.1**
	comp=Z,6.4nm,0.3s,baz=34,slow=15,SNR=3.3					
JCJ				S	Sn	20 32 26.5 -17
	comp=Z,69nm,0.7s,baz=314,slow=20,SNR=2.0					
JCJ				LR	LR	20 35 34.3
	comp=Z,4μm,19.6s,baz=358,slow=34					
	comp=Z,134nm,0.8s					
HJU	**Haeju**	**17.87 258**		P	**Pn**	**20 29 31.3 -1.2**
HJU				sP	**pP**	**20 29 43.1 +1.2**
HJU				S	**Sn**	**20 32 49.8 -0.8**
HJU				AMS	AMS	
	comp=N,9μm,4.8s					
HJU				AMS	AMS	
	comp=E,32μm,17.7s					
HJU				AMS	AMS	
	comp=Z,21μm,11.8s					
SUJ	**Sinuiju**	**17.93 265**		P	**P**	**20 29 34.2 +0.7**
SUJ				pP	**pP**	**20 29 42.7 +0.2**
SUJ				S	**Sn**	**20 32 50.9 -1.1**
SUJ				AMS	AMS	
	comp=N,9μm,3.5s					
SUJ				AMS	AMS	
	comp=E,51μm,19.8s					
SUJ				AMS	AMS	
	comp=Z,49μm,19.0s					
SNY	**Shenyang**	**18.06 271**	⇓	P	**P**	**20 29 36.4 +1.4**
SNY				S	**Sn**	**20 32 53.8 -1.3**
SNY				pmax	pmax	
	comp=Z,120nm,0.8s					
SNY				pmax	pmax	
	comp=Z,5μm,6.2s					
SNY				LR	LR	
	comp=Z,14μm,15.9s					
SNY				LR	LR	
	comp=Z,26μm,19.0s					
SNY				LR	LR	
	comp=Z,44μm,18.2s					
JSU	**Suzuyama**	**18.68 234**		P	**Pn**	**20 29 43.1 +0.6**
	comp=Z,375nm,1.7s					
JSU	**Suzuyama**	**18.68 234**	⇑	P	**P**	**20 29 42.2 +0.2**
SEY	**Seymchan**	**19.08 6**		P	**P**	**20 29 45.3 -0.7**
	comp=Z,4.2nm,0.3s,baz=180,slow=8.5,SNR=73					
SEY				S	**S**	**20 33 20.8 +0.5**
	comp=Z,16nm,1.0s,baz=181,slow=23,SNR=1.4					
SEY				LR	LR	20 37 07.8
	comp=Z,20μm,20.6s,baz=185,slow=37					
	comp=Z,130nm,1.0s					
SEY	**Seymchan**	**19.08 6**		*ce*P	**P**	**20 29 45.1 -0.9**
SEY				pmax	pmax	
	comp=Z,146nm,1.0s					
SEY				MLR	MLR	
	comp=Z,16μm,16.0s					
SHEM	**Shemya Is, Ala**	**19.25 54**		P	**P**	**20 29 47.9 -0.1**
	comp=Z,1.4nm,0.3s,baz=287,slow=19,SNR=1.8					
SHEM				S	Sn	20 33 09.3 -14
	comp=Z,112nm,1.0s,baz=253,slow=20,SNR=2.3					
SHEM				LR	LR	20 38 09.9
	comp=Z,6μm,19.0s,baz=264,slow=40					
	comp=Z,134nm,1.0s					
HIA	**Hailar**	**20.07 295**		P	**P**	**20 29 56.5 -0.5**
HIA	**Hailar**	**20.07 295**		IAMs_20	IAMs_20	20 38 22.9
	comp=Z,30μm,18.0s					
HIA	**Hailar**	**20.07 295**		P	**P**	**20 29 56.5 -0.5**
HIA				pmax	pmax	
	comp=Z,395nm,1.6s					
HIA				MLR	MLR	
	comp=Z,30μm,18.0s					
DL2	**Dalian**	**20.43 265**		P	**P**	**20 30 01.4 +0.5**
DL2				S	**S**	**20 33 45.6 -2.1**
DL2				pmax	pmax	
	comp=Z,250nm,0.9s					
DL2				pmax	pmax	
	comp=Z,4μm,7.3s					
DL2				LR	LR	
	comp=Z,7μm,17.5s					
DL2				LR	LR	
	comp=Z,12μm,18.6s					
DL2				LR	LR	
	comp=Z,17μm,19.6s					
YAK	**Yakutsk**	**20.99 335**		P	**P**	**20 30 04.8 -2.0**
	comp=Z,137nm,0.7s,baz=124,slow=1.9,SNR=73					
YAK				S	**S**	**20 33 54.3 -4.1**
	comp=Z,29nm,0.9s,baz=120,slow=20,SNR=2.7					
YAK				LR	LR	20 38 46.8
	comp=Z,25μm,19.1s,baz=142,slow=38					
	comp=Z,137nm,0.7s					
YAK	**Yakutsk**	**20.99 335**		P	**P**	**20 30 04.8 -2.0**
YAK				IAMs_20	IAMs_20	20 38 26.0
	comp=Z,25μm,20.0s					
YAK	**Yakutsk**	**20.99 335**		*c i*P	**P**	**20 30 03.6 -3.2**
YAK				*e*		20 30 18.9
YAK				*e*S	**S**	**20 33 57.1 -1.3**
YAK				*e*		20 34 09.4
YAK				*e**SS	**sS**	**20 34 13.3 +0.3**
YAK				*e*		20 41 26.5
YAK				pmax	pmax	
	comp=Z,220nm,0.9s					
YAK				pmax	pmax	
	comp=N,45nm,1.0s					
YAK				pmax	pmax	
	comp=E,46nm,1.0s					
YAK				smax	smax	
	comp=E,1μm,3.1s					
YAK				smax	smax	
	comp=N,1μm,2.5s					
YAK				MLR	MLR	
	comp=Z,24μm,19.0s					
YAK				MLR	MLR	
	comp=N,20μm,19.0s					
YAK				MLR	MLR	
	comp=E,7μm,17.0s					
YAK	**Yakutsk**	**20.99 335**	⇑	P	**P**	**20 30 04.5 -2.3**
JAM	**Amami Oshima**	**21.50 230**		P	**P**	**20 30 14.7 +2.2**
JAMN	**Amaminishikomi**	**21.87 230**		P	**P**	**20 30 17.6 +1.1**
XLT	**XiLinHaoTe**	**22.95 281**	⇑	*i*P	**P**	**20 30 26.5 -1.5**
XLT				pP	pP	20 30 37.9 +0.7
XLT				sP	sP	20 30 44.3 +2.9
XLT				S	**S**	**20 34 35.8 0.0**
XLT				pmax	pmax	
	comp=E,330nm,0.8s					
XLT				pmax	pmax	
	comp=E,4μm,4.9s					
XLT				LR	LR	
	comp=E,15μm,15.6s					
XLT				LR	LR	
	comp=E,24μm,16.5s					
XLT				LR	LR	
	comp=E,30μm,16.4s					
JOW	**Kunigami**	**23.47 229**		P	**P**	**20 30 33.7 +0.6**
	comp=E,289nm,1.1s,baz=41,slow=8.9,SNR=22					
JOW				LR	LR	20 39 02.1
	comp=E,6μm,21.8s,baz=40,slow=35					
	comp=E,289nm,1.1s					
JOW	**Kunigami**	**23.47 229**		P	**P**	**20 30 34.6 +1.4**
JOW	**Kunigami**	**23.47 229**		P	**P**	**20 30 34.4 +1.2**
	comp=E,632nm,1.9s					
JOW	**Kunigami**	**23.47 229**	⇑	P	**P**	**20 30 34.2 +1.0**
BJI	**Beijing**	**23.94 271**		P	**P**	**20 30 37.3 -0.2**
BJI				pP	**pP**	**20 30 42.5 -4.8**
BJI				sP	**sP**	**20 30 46.1 -5.3**
BJI				S	**S**	**20 34 48.5 -3.2**
BJI				pmax	pmax	
	comp=E,290nm,1.5s					
BJI				pmax	pmax	
	comp=E,5μm,4.6s					
BJI				LR	LR	
	comp=E,3μm,16.5s					
BJI				LR	LR	
	comp=E,19μm,18.7s					
BJI				LR	LR	
	comp=E,29μm,17.6s					
BJT	**Baijiatuau**	**23.95 271**		P	**P**	**20 30 37.6 -0.1**
BJT				IAmb	IAmb	20 30 41.2
	comp=Z,278nm,0.9s					
BJT	**Baijiatuau**	**23.95 271**		P	**P**	**20 30 37.6 -0.1**
BJT				pmax	pmax	
	comp=Z,278nm,0.9s					
BJT				MLR	MLR	
	comp=Z,26μm,19.0s					
CIT	**Chita**	**24.23 301**		*e*P	**P**	**20 30 40.4 +0.2**
CIT				*e*		20 31 13.7
CIT				*e*		20 31 25.8
CIT				*e*		20 35 01.6
CIT				*e*		20 35 16.7
CIT				pmax	pmax	
	comp=Z,451nm,2.5s					
ADK	**Adak**	**24.67 59**		P	**P**	**20 30 45.4 +1.3**
	comp=Z,236nm,1.1s					
ADK	**Adak**	**24.67 59**	⇓	P	**P**	**20 30 45.7 +1.6**
SSE	**Sheshan**	**24.80 248**		P	**P**	**20 30 47.0 +1.5**
SSE				S	**S**	**20 35 07.8 +2.1**
SSE				pmax	pmax	
	comp=Z,39nm,0.5s					
SSE				pmax	pmax	
	comp=Z,3μm,5.4s					
SSE				LR	LR	
	comp=Z,5μm,19.6s					
SSE				LR	LR	
	comp=Z,5μm,19.2s					
TIA	**Tai'an**	**24.82 262**	⇑	P	**P**	**20 30 46.3 +0.7**
TIA				S	**S**	**20 35 04.0 -1.9**
TIA				pmax	pmax	
	comp=Z,280nm,1.3s					
TIA				pmax	pmax	
	comp=Z,3μm,3.7s					
TIA				LR	LR	
	comp=Z,4μm,15.7s					
TIA				LR	LR	
	comp=Z,10μm,17.1s					
TIA				LR	LR	
	comp=Z,12μm,17.8s					
GSTR	**Great Sitkin T**	**25.07 59**		P	**P**	**20 30 48.1 +0.4**
BOD	**Bodaibo**	**25.18 315**		*e*P	**P**	**20 30 45.8 -2.9**
BOD				pmax	pmax	
	comp=Z,171nm,2.0s					
NJ2	**Nanjing**	**25.80 252**	⇑	*i*P	**P**	**20 30 55.6 +1.1**
NJ2				pP	**pP**	**20 31 01.8 -2.5**
NJ2				sP	**sP**	**20 31 07.3 -1.1**
NJ2				PP	**PnPn**	**20 31 34.1 +2.0**
NJ2				S	**S**	**20 35 28.6 +7.1**
NJ2				sS	**sS**	**20 35 35.9 -2.0**
NJ2				pmax	pmax	
	comp=Z,360nm,1.0s					
NJ2				pmax	pmax	
	comp=Z,5μm,6.4s					
NJ2				LR	LR	
	comp=Z,15μm,17.0s					
NJ2				LR	LR	
	comp=Z,24μm,16.6s					
NJ2				LR	LR	
	comp=Z,32μm,18.0s					
BILL	**Bilibino**	**25.89 16**		P	**P**	**20 30 54.8 -0.2**
BILL				IAMs_20	IAMs_20	20 41 58.5
	comp=Z,15μm,19.0s					
BILL	**Bilibino**	**25.89 16**	⇑	*e*P	**P**	**20 30 50.7 -4.3**
BILL				*i*		20 30 58.5
BILL				*i* *PP	**sP**	**20 31 07.2 -1.7**
BILL				SS		20 36 40.0
BILL				pmax	pmax	
	comp=Z,32nm,0.7s					
BILL				MLR	MLR	
	comp=Z,13μm,17.0s					
HNS	**HongShan**	**26.02 267**	⇑	P	**P**	**20 30 57.3 +0.8**
HNS				pP	**pP**	**20 31 06.8 +0.5**
HNS				sP	**sP**	**20 31 12.8 +2.5**
HNS				PcP	**PcP**	**20 34 25.1 +1.3**
HNS				S	**S**	**20 35 26.6 +1.7**
HNS				ScS	**ScS**	**20 41 53.3 +3.0**
HNS				pmax	pmax	
	comp=Z,200nm,1.2s					
HNS				pmax	pmax	
	comp=Z,5μm,6.1s					
HNS				LR	LR	
	comp=Z,6μm,13.9s					
HNS				LR	LR	
	comp=Z,12μm,15.5s					
HNS				LR	LR	
	comp=Z,15μm,15.9s					
HHC	**Hu-ho-hao-te**	**26.99 276**	⇑	P	**P**	**20 31 06.4 +1.1**
HHC				sP	sP	20 31 20.9 +1.7
HHC				S	**S**	**20 35 40.4 0.0**
HHC				sS	pS	20 35 53.4 +2.2
HHC				pmax	pmax	
	comp=Z,370nm,1.8s					
HHC				pmax	pmax	
	comp=Z,8μm,7.5s					
HHC				LR	LR	
	comp=Z,16μm,13.6s					
HHC				LR	LR	
	comp=Z,32μm,15.8s					
HHC				LR	LR	
	comp=Z,50μm,19.9s					
TIY	**Taiyuan**	**27.53 269**	⇑	P	**P**	**20 31 11.8 +1.6**
TIY				pP	**sP**	**20 31 22.8 -1.2**
TIY				S	**S**	**20 35 55.8 +6.9**
TIY				pmax	pmax	
	comp=Z,200nm,1.3s					
TIY				LR	LR	
	comp=Z,4μm,21.1s					
TIY				LR	LR	
	comp=Z,8μm,18.6s					
TIY				LR	LR	
	comp=Z,10μm,18.6s					
BTO	**Baotou**	**28.18 276**		*e*P	**P**	**20 31 16.9 +0.9**
BTO				S	**S**	**20 36 02.8 +3.7**
BTO				LR	LR	
	comp=Z,47μm,17.4s					
BTO				LR	LR	
	comp=Z,77μm,19.4s					
ULN	**Ulaanbaatar**	**28.53 292**		*c i*P	**P**	**20 31 18.7 -0.4**
ULN				pmax	pmax	
	comp=Z,72nm,1.0s					
ULN				MLR	MLR	
	comp=Z,32μm,16.0s					
ULN	**Ulaanbaatar**	**28.53 292**		P	**P**	**20 31 18.2 -0.9**
ULN	**Ulaanbaatar**	**28.53 292**		P	**P**	**20 31 17.2 -1.9**
	comp=Z,48μmcomp=Z,9μmcomp=Z,253nm,0.9s					
ULN	**Ulaanbaatar**	**28.53 292**		*e*P	**P**	**20 31 18.7 -0.4**
ULN	**Ulaanbaatar**	**28.53 292**	⇑	P	**P**	**20 31 18.6 -0.5**
TATO	**Taipei**	**28.82 237**		IAMs_20	IAMs_20	20 44 30.4

comp=Z,18μm,19.0s
H11N2 WAKE ISLAND Hy 28.91 141 T T 21 02 03.9
baz=332,slow=76,SNR=3054
H11N1 WAKE ISLAND Hy 28.92 141 T T 21 02 04.9
baz=332,slow=76,SNR=1937
H11N3 WAKE ISLAND Hy 28.92 141 T T 21 02 05.2
baz=332,slow=76,SNR=1990
LYN LuoYang 28.95 263 ⇑*i*P **P 20 31 23.8 +1.1**
LYN pP pP 20 31 33.8 +1.2
LYN S **S 20 36 08.9 -2.2**
LYN pmax pmax
comp=Z,160nm,1.6s
LYN pmax pmax
comp=Z,2μm,3.2s
LYN LR LR
comp=Z,5μm,16.8s
LYN LR LR
comp=Z,10μm,19.4s
LYN LR LR
comp=Z,10μm,20.0s
SONM Songino Array 28.97 292 P **P 20 31 21.9 -1.1**
comp=Z,30nm,0.8s,baz=82,slow=7.3,SNR=56
SONM PcP **PcP 20 34 31.2 +0.2**
comp=Z,11nm,0.8s,baz=94,slow=4.6,SNR=3.2
SONM LR LR 20 43 55.1
comp=Z,24μm,20.3s,baz=86,slow=38
comp=Z,30nm,0.8s
SONM Songino Array 28.97 292 P **P 20 31 23.3 +0.3**
SONM Songino Array 28.97 292 P **P 20 31 23.3 +0.3**
SONM pmax pmax
comp=Z,100nm,1.3s
YHNB Yeheng 29.11 237 IAMs_20 IAMs_20 20 44 56.8
comp=Z,16μm,19.0s
WAKE Wake Island 29.19 142 P **P 20 31 26.7 +1.8**
comp=Z,120nm,1.2s
TIXI Tiksi 29.20 348 P **P 20 31 20.0 -4.6**
comp=Z,11nm,0.8s,baz=269,slow=23,SNR=25
TIXI PcP **PcP 20 34 30.2 -0.7**
comp=Z,17nm,0.8s,baz=270,slow=2.3,SNR=4.5
TIXI LR LR 20 44 03.6
comp=Z,6μm,18.4s,baz=1.5,slow=38
TIXI Tiksi 29.20 348 P **P 20 31 23.5 -1.1**
TIXI PcP **PcP 20 34 31.9 +1.0**
TIXI Tiksi 29.20 348*ce*P **P 20 31 20.7 -3.9**
TIXI pmax pmax
comp=Z,13nm,0.8s
TIXI MLR MLR
comp=Z,8μm,16.0s
TIXI Tiksi 29.20 348 ⇓P **P 20 31 20.9 -3.7**
NACB Ninganchiao 29.35 236 IAMs_20 IAMs_20 20 44 32.1
comp=Z,14μm,19.0s
WHN Wuhan 29.80 255 ⇑P **P 20 31 30.8 +0.5**
WHN S **S 20 36 23.3 -1.2**
WHN pmax pmax
comp=Z,370nm,1.1s
WHN LR LR
comp=Z,12μm,19.4s
WHN LR LR
comp=Z,42μm,19.6s
WHN LR LR
comp=Z,47μm,20.1s
H11S1 WAKE ISLAND Hy 29.89 143 T T 21 03 12.7
baz=333,slow=76,SNR=5338
H11S3 WAKE ISLAND Hy 29.90 143 T T 21 03 16.6
baz=333,slow=76,SNR=6354
H11S2 WAKE ISLAND Hy 29.91 143 T T 21 03 14.0
baz=333,slow=76,SNR=5381
IRK Irkutsk 29.95 302 *e*P **P 20 31 32.4 +0.9**
IRK *e* 20 32 41.1
IRK pmax pmax
comp=Z,132nm,1.8s
IRK Irkutsk 29.95 302 *e*P **P 20 31 32.4 +0.9**
SSLB Suanglung 30.03 237 P **P 20 31 33.8 +1.4**
comp=Z,48nm,2.0s
YULB Yu-li 30.12 236 IAMs_20 IAMs_20 20 44 48.4
comp=Z,9μm,21.0s
YULB Yu-li 30.12 236 P **P 20 31 34.5 +1.3**
comp=Z,53nm,1.1s
TPUB Ta-pu 30.59 236 P **P 20 31 37.6 +0.3**
TPUB IAmb IAmb 20 31 40.5
comp=Z,118nm,0.9s
TPUB Ta-pu 30.59 236 P **P 20 31 38.9 +1.5**
comp=Z,177nm,1.5s
QZH Quanzhou 30.64 241 ⇑*i*P **P 20 31 39.3 +1.5**
QZH S **S 20 36 41.3 +3.6**
QZH LR LR
comp=Z,6μm,18.9s
QZH LR LR
comp=Z,3μm,24.6s
QZH LR LR
comp=Z,6μm,20.8s
TWGBT Beinan 30.69 235 P **P 20 31 39.6 +1.4**
comp=Z,105nm,1.5s
TWG Pinlang 30.69 235 P **P 20 31 39.4 +1.2**
XAN Xi'an 31.75 265 ⇑*i*P **P 20 31 47.8 +0.3**
XAN S **S 20 36 51.5 -3.6**
XAN sS sS 20 37 09.6 -2.0
XAN pmax pmax
comp=Z,110nm,1.0s
XAN pmax pmax
comp=Z,2μm,6.1s
XAN LR LR
comp=Z,6μm,22.0s
XAN LR LR
comp=Z,10μm,17.8s
XAN LR LR
comp=Z,15μm,15.1s
XAN Xi'an 31.75 265 P **P 20 31 47.7 +0.1**
XAN pP **pP 20 31 55.5 -2.0**
MOY Mondy 32.01 301 *e*P **P 20 31 50.8 +1.0**
MOY pmax pmax
comp=Z,84nm,2.3s
MOY Mondy 32.01 301 *e*P **P 20 31 50.8 +1.0**
CNSH ChangSha 32.22 252 ⇑P **P 20 31 52.3 +0.6**
CNSH S **S 20 36 57.3 -5.1**
CNSH LR LR
comp=Z,7μm,17.8s
CNSH LR LR
comp=Z,13μm,17.1s
CNSH LR LR
comp=Z,18μm,17.5s
TNA Tin City 32.23 33 P **P 20 31 52.7 +1.3**
TNA IAmb IAmb 20 32 08.0
comp=Z,156nm,1.1s
ENH Enshi 33.37 259 P **P 20 32 01.3 -0.5**
ENH IAmb IAmb 20 32 03.0
comp=Z,118nm,0.8s
ENH IAMs_20 IAMs_20 20 47 01.3
comp=Z,9μm,20.0s
ENH Enshi 33.37 259 P **P 20 32 01.7 -0.1**
ENH pP **pP 20 32 09.9 -1.8**
LZH Lanzhou 34.43 272 ⇑P **P 20 32 12.4 +1.3**
LZH pP sP 20 32 23.1 -1.9
LZH sP pP 20 32 27.3 +6.3
LZH PP **PP 20 33 29.8 +0.5**
LZH S **S 20 37 34.1 -2.8**
LZH pmax pmax
comp=Z,580nm,1.7s
LZH pmax pmax
comp=Z,3μm,6.2s
LZH LR LR
comp=Z,14μm,18.6s
LZH LR LR
comp=Z,14μm,20.6s
LZH LR LR
comp=Z,20μm,20.4s
CNBA Chernabura Isl 34.91 53 IAMs_20 IAMs_20 20 47 54.6
comp=Z,10μm,20.0s
N16K Nishlik Lake 35.30 43 P **P 20 32 19.1 +0.9**
baz=267,SNR=40
GZH Guangzhou 35.33 245 P **P 20 32 14.9 -3.8**
GZH S **S 20 37 47.0 -3.6**
GZH pmax pmax
comp=Z,1μm,3.7s
GZH LR LR
comp=Z,5μm,17.9s
GZH LR LR
comp=Z,4μm,17.3s
HKC Hong Kong Obse 35.35 243 ⇑P **P 20 32 21.0 +2.1**
HKPS Hong Kong Po S 35.38 243 IAMs_20 IAMs_20 20 47 21.4
comp=Z,9μm,20.0s
HKPS Hong Kong Po S 35.38 243 P **P 20 32 21.1 +1.9**
comp=Z,127nm,1.2s
O16K Kokwok River B 35.61 45 P **P 20 32 21.1 +0.4**
baz=268,SNR=7.6
P16K Nushagak River 35.65 46 P **P 20 32 22.2 +1.1**
baz=269,SNR=6.9
GULI GuiLin 35.83 251 ⇑P **P 20 32 20.8 -2.2**
GULI S **S 20 37 51.3 -7.0**
GULI pmax pmax
comp=Z,150nm,1.4s
GULI LR LR
comp=Z,4μm,21.7s
GULI LR LR
comp=Z,6μm,21.7s
GULI LR LR
comp=Z,9μm,19.5s
GTA Gaotai 35.90 280 ⇑P **P 20 32 24.8 +1.1**
GTA pP pP 20 32 30.0 -3.6
GTA sP sP 20 32 33.5 -4.2
GTA PP **PP 20 33 49.0 +3.5**
GTA PcP **PcP 20 34 50.9 +0.7**
GTA S **S 20 38 00.1 +0.7**
GTA PcS **PcS 20 38 38.9 +1.2**
GTA SS **SnSn 20 40 20.9 -3.4**
GTA ScS **ScS 20 42 38.4 -0.6**
GTA pmax pmax
comp=Z,150nm,1.5s
GTA pmax pmax
comp=Z,2μm,7.1s
GTA LR LR
comp=Z,7μm,14.5s
GTA LR LR
comp=Z,10μm,13.5s
GTA LR LR
comp=Z,17μm,14.5s
O17K Koliganek Bris 36.12 45 P **P 20 32 26.1 +1.0**
baz=269,SNR=20
Q16K King Salmon 36.35 46 P **P 20 32 27.8 +0.7**
baz=271,SNR=8.7
N18K Kilae Creek 36.73 43 P **P 20 32 31.8 +1.4**
baz=269,SNR=26
Q17K Contact Creek 36.77 47 P **P 20 32 30.5 -0.3**
baz=272,SNR=13
TTA Tatalina 36.77 39 P **P 20 32 31.6 +0.8**
baz=266,SNR=24
TTA Tatalina 36.77 39 ⇑P **P 20 32 31.5 +0.8**
SVW2 Sparrevohn 36.89 42 P **P 20 32 32.6 +0.9**
P18K Big Mountain, 37.07 45 P **P 20 32 33.3 0.0**
P18K IAmb IAmb 20 32 46.0
comp=Z,117nm,0.9s
P18K Big Mountain, 37.07 45 P **P 20 32 34.0 +0.7**
baz=271
O18K Koktuh Hills 37.07 44 P **P 20 32 34.0 +0.7**
O18K IAmb IAmb 20 32 47.1
comp=Z,121nm,1.0s
O18K Koktuh Hills 37.07 44 P **P 20 32 34.3 +1.0**
baz=271
CHIR Chirikof Islan 37.08 51 P **P 20 32 32.9 -0.4**
CHIR IAmb IAmb 20 32 45.3
comp=Z,366nm,1.4s
CHIR IAMs_20 IAMs_20 20 49 32.9
comp=Z,10μm,19.0s
CHIR Chirikof Islan 37.08 51 P **P 20 32 33.2 -0.2**
baz=276
CD2 Chengdu 37.10 265 P **P 20 32 34.4 +0.5**
CD2 pP pP 20 32 43.8 -0.1
CD2 PP **PnPn 20 34 01.5 +2.3**
CD2 S **S 20 38 16.1 -1.6**
CD2 sS sS 20 38 35.5 +1.2
CD2 pmax pmax
comp=Z,380nm,0.8s
CD2 LR LR
comp=Z,5μm,17.6s
CD2 LR LR
comp=Z,7μm,16.5s
CD2 LR LR
comp=Z,7μm,17.5s
Q18K Katmai Hardscr 37.21 46 P **P 20 32 34.3 -0.2**
baz=272,SNR=17
L19K White Mountain 37.27 41 P **P 20 32 35.9 +1.0**
baz=268,SNR=19
N19K Bonanza Creek 37.42 43 P **P 20 32 37.6 +1.2**
N19K Bonanza Creek 37.42 43 P **P 20 32 37.5 +1.2**
baz=270,SNR=13
M19K Big River Lodg 37.48 41 P **P 20 32 37.8 +1.1**
baz=269,SNR=18
GYA Guiyang 37.64 256 ⇑*i*P **P 20 32 38.9 +0.3**
GYA sP sP 20 32 57.0 +4.4
GYA PP **PnPn 20 34 08.6 +2.7**
GYA S **S 20 38 22.3 -3.9**
GYA sS sS 20 38 45.6 +2.8
GYA ScS **ScS 20 42 47.6 -1.4**
GYA pmax pmax
comp=Z,160nm,1.0s
GYA pmax pmax
comp=Z,2μm,4.7s
GYA LR LR
comp=Z,4μm,20.2s
GYA LR LR
comp=Z,10μm,20.6s
GYA LR LR
comp=Z,16μm,18.5s
K20K Telida 37.68 39 P **P 20 32 39.4 +1.0**
K20K IAmb IAmb 20 32 56.3
comp=Z,308nm,1.6s
K20K Telida 37.68 39 P **P 20 32 39.3 +1.0**
baz=267,SNR=18
J20K Nowinta River 37.69 37 P **P 20 32 39.6 +1.1**
J20K IAmb IAmb 20 32 40.8
comp=Z,164nm,0.9s
J20K Nowinta River 37.69 37 P **P 20 32 39.5 +1.0**
baz=266,SNR=82
L20K Farewell, AK 37.73 40 P **P 20 32 39.6 +0.8**
baz=268,SNR=28
SII Sitkinak Islan 37.81 50 P **P 20 32 39.2 -0.3**
SII IAmb IAmb 20 32 51.8
comp=Z,361nm,1.4s
SII IAMs_20 IAMs_20 20 49 22.2
comp=Z,12μm,21.0s
SII Sitkinak Islan 37.81 50 P **P 20 32 39.7 +0.2**
baz=276,SNR=7.5
SII Sitkinak Islan 37.81 50 P **P 20 32 39.4 -0.1**
comp=Z,194nm,1.2s
Q19K Cape Douglas, 37.91 46 P **P 20 32 39.9 -0.4**
baz=273,SNR=5.1
A21K Barrow 37.98 25 P **P 20 32 40.6 -0.1**
A21K IAMs_20 IAMs_20 20 49 29.3
comp=Z,7μm,20.0s
A21K Barrow 37.98 25 P **P 20 32 40.2 -0.5**
baz=254,SNR=5.4
IMAR Indian Mountai 38.02 34 P **P 20 32 42.1 +0.9**
IMAR PcP **PcP 20 34 57.3 +1.3**
PATS Pohnpei 38.14 163 IAMs_20 IAMs_20 20 44 34.0
comp=Z,9μm,22.0s
PATS Pohnpei 38.14 163 P **P 20 32 45.1 +2.4**
comp=Z,500nm,2.1s
G21K Allakaket 38.17 34 P **P 20 32 43.4 +0.9**
baz=264,SNR=128
OHAK Old Harbor 38.23 49 P **P 20 32 42.5 -0.6**
OHAK IAmb IAmb 20 32 55.3
comp=Z,323nm,1.4s
OHAK Old Harbor 38.23 49 P **P 20 32 42.4 -0.6**
baz=276,SNR=13
F21K Alatna River 38.27 32 P **P 20 32 43.7 +0.4**
baz=263,SNR=75
O20K Slope Mountain 38.36 44 P **P 20 32 44.6 +0.4**
baz=272,SNR=5.6
H21K Melozitna Rive 38.38 35 P **P 20 32 45.2 +1.0**
H21K IAmb IAmb 20 32 46.4
comp=Z,145nm,0.9s
H21K Melozitna Rive 38.38 35 P **P 20 32 45.0 +0.8**
baz=265,SNR=101
CHUM Lake Minchumin 38.48 38 P **P 20 32 46.6 +1.5**
baz=268,SNR=40
PPLA Purkeypile 38.52 39 P **P 20 32 47.2 +1.6**
baz=269,SNR=35
N20K Mount Spurr 38.53 42 P **P 20 32 46.8 +1.2**
baz=271,SNR=19
SPCR Spurr Chakacha 38.53 42 P **P 20 32 46.7 +1.1**
baz=271,SNR=17
KDAK Kodiak Island 38.55 48 P **P 20 32 44.8 -1.0**
comp=Z,120nm,0.8s,baz=312,slow=5.3,SNR=64
KDAK LR LR 20 50 26.1
comp=Z,7μm,20.1s,baz=259,slow=39
comp=Z,120nm,0.8s
KDAK Kodiak Island 38.55 48 P **P 20 32 45.4 -0.3**
KDAK IAmb IAmb 20 33 05.4
comp=Z,193nm,0.8s
KDAK Kodiak Island 38.55 48 IAMs_20 IAMs_20 20 49 34.1
comp=Z,11μm,21.0s
KDAK Kodiak Island 38.55 48 P **P 20 32 45.4 -0.3**
KDAK pmax pmax
comp=Z,193nm,0.8s
KDAK MLR MLR
comp=Z,11μm,21.0s
KDAK Kodiak Island 38.55 48 P **P 20 32 44.9 -0.8**
baz=275
KDAK Kodiak Island 38.55 48 ⇑P **P 20 32 45.3 -0.5**
KDAK Kodiak Island 38.55 48 P **P 20 32 45.2 -0.5**
KDAK pP **pP 20 32 55.7 +0.2**
CAST Castle Rocks 38.58 39 P **P 20 32 47.4 +1.5**
CAST IAmb IAmb 20 33 03.4
comp=Z,295nm,1.4s
CAST Castle Rocks 38.58 39 P **P 20 32 47.2 +1.3**
baz=269,SNR=46
Q20K Shuyak Island 38.58 46 P **P 20 32 45.2 -0.8**
baz=275,SNR=12
I21K Tanana 38.69 36 P **P 20 32 48.2 +1.4**
I21K IAMs_20 IAMs_20 20 51 12.0
comp=Z,7μm,20.0s
I21K Tanana 38.69 36 P **P 20 32 47.9 +1.1**
baz=267,SNR=75
SKT Skwentna 38.83 41 P **P 20 32 48.6 +0.5**
baz=271
H22K Ishtalitna Cre 38.98 35 P **P 20 32 50.5 +1.2**
baz=266,SNR=94
G22K Bettles 39.00 33 P **P 20 32 49.8 +0.4**
baz=265,SNR=167
BPAW Bear Paw Mtn. 39.08 38 P **P 20 32 50.3 +0.2**
BPAW IAmb IAmb 20 33 08.1
comp=Z,377nm,1.8s
BPAW IAMs_20 IAMs_20 20 51 20.6
comp=Z,6μm,18.0s
BPAW Bear Paw Mtn. 39.08 38 P **P 20 32 51.1 +1.0**
baz=269,SNR=14
KTH Kantishna Hill 39.10 38 P **P 20 32 51.7 +1.4**
KTH IAMs_20 IAMs_20 20 51 40.2
comp=Z,5μm,18.0s
MLY Manley 39.20 36 P **P 20 32 51.9 +0.7**
MLY IAMs_20 IAMs_20 20 51 36.9
comp=Z,7μm,20.0s
MLY Manley 39.20 36 P **P 20 32 52.3 +1.0**
baz=268,SNR=76
SUA Susitna One 39.22 42 P **P 20 32 51.4 -0.1**
baz=272,SNR=5.5
NRIK Noril'sk 39.31 331 P **P 20 32 49.4 -2.5**
comp=Z,5.0nm,0.8s,baz=118,slow=9.6,SNR=4.2
NRIK PcP **PcP 20 35 00.5 +0.6**
comp=Z,24nm,0.7s,baz=96,slow=2.9,SNR=8.0
NRIK LR LR 20 50 29.7
comp=Z,12μm,18.3s,baz=98,slow=38
comp=Z,5.0nm,0.8s
NRIK Noril'sk 39.31 331*ce*P **P 20 32 48.8 -3.1**
NRIK pmax pmax
comp=Z,43nm,1.7s
NRIK MLR MLR
comp=Z,11μm,18.0s
BRSE Bradley Lake S 39.33 44 P **P 20 32 51.6 -0.7**
baz=274,SNR=5.5
TRF Thorofare Moun 39.38 39 P **P 20 32 53.4 +0.6**
baz=270,SNR=12
D23K Nanushuk River 39.52 30 P **P 20 32 54.3 +0.6**
baz=263,SNR=22
COLD Coldfoot 39.54 33 P **P 20 32 54.6 +0.7**
COLD IAmb IAmb 20 32 56.5
comp=Z,156nm,1.0s
COLD Coldfoot 39.54 33 P **P 20 32 54.6 +0.7**
baz=266,SNR=79
G23K Bananza Creek 39.57 33 P **P 20 32 54.9 +0.6**
baz=267,SNR=100
C23K Itkillik River 39.65 28 P **P 20 32 55.1 +0.3**
baz=262,SNR=57
H23K Yukon River 39.73 35 P **P 20 32 57.0 +1.4**
H23K IAmb IAmb 20 32 58.2
comp=Z,191nm,0.8s
H23K Yukon River 39.73 35 P **P 20 32 57.0 +1.4**
baz=268,SNR=173
RC01 Rabbit Creek A 39.73 42 IAMs_20 IAMs_20 20 52 14.1
comp=Z,7μm,20.0s
RC01 Rabbit Creek A 39.73 42 P **P 20 32 55.4 -0.2**
baz=274,SNR=8.4
BWN Browne 39.74 37 P **P 20 32 57.2 +1.6**
O22K Cooper Landing 39.78 43 P **P 20 32 55.7 -0.3**
baz=274
I23K Minto, Yukon-K 39.79 36 P **P 20 32 57.1 +1.1**
I23K IAmb IAmb 20 33 14.1
comp=Z,277nm,1.4s
I23K PcP **PcP 20 35 03.4 +1.9**
I23K ScP **ScP 20 38 47.7 +0.1**
I23K IAMs_20 IAMs_20 20 51 46.2
comp=Z,6μm,20.0s
I23K Minto, Yukon-K 39.79 36 P **P 20 32 57.0 +1.1**
baz=269,SNR=78
E23K Chandalar 39.82 31 P **P 20 32 57.1 +0.7**
baz=265,SNR=68
TOLK Toolik Lake Re 39.89 30 P **P 20 32 57.3 +0.4**
TOLK PcP **PcP 20 35 03.1 +1.3**
TOLK ScP **ScP 20 38 48.6 +0.6**
TOLK IAMs_20 IAMs_20 20 49 53.7
comp=Z,7μm,22.0s
TOLK Toolik Lake Re 39.89 30 P **P 20 32 57.2 +0.4**
baz=265,SNR=48
NEA2 Nenana 39.91 37 P **P 20 32 58.0 +0.9**
NEA2 IAmb IAmb 20 32 59.1
comp=Z,149nm,0.8s
NEA2 PcP **PcP 20 35 02.5 +0.5**
NEA2 Nenana 39.91 37 P **P 20 32 57.9 +0.9**
baz=270,SNR=136
SEW Seward 39.95 44 P **P 20 32 56.8 -0.5**
baz=275
MCK McKinley 39.98 38 P **P 20 32 58.6 +0.9**
MCK IAmb IAmb 20 33 14.8
comp=Z,200nm,1.2s
MCK IAMs_20 IAMs_20 20 52 16.6
comp=Z,5μm,18.0s
MCK McKinley 39.98 38 P **P 20 32 58.6 +0.9**
MCK pmax pmax
comp=Z,200nm,1.2s
MCK MLR MLR
comp=Z,5μm,18.0s
MCK McKinley 39.98 38 P **P 20 32 57.9 +0.2**
baz=271,SNR=43
PMR Palmer 39.99 41 P **P 20 32 56.8 -0.8**
baz=274
WAT1 Susitna Watana 40.19 39 P **P 20 32 59.2 -0.2**
baz=273
D24K Happy Valley 40.20 30 P **P 20 32 59.7 +0.3**
baz=265
MDM Murphy Dome 40.27 36 P **P 20 33 00.7 +0.7**
MDM IAmb IAmb 20 33 02.2
comp=Z,157nm,0.8s
C24K Franklin Bluff 40.30 29 P **P 20 33 00.2 +0.1**
baz=264
KNK Knik Glacier 40.32 42 IAMs_20 IAMs_20 20 52 53.8
comp=Z,9μm,20.0s
KNK Knik Glacier 40.32 42 P **P 20 33 00.8 +0.3**
baz=274,SNR=7.4
WRH Wood River Hil 40.34 37 P **P 20 33 01.1 +0.5**
SML Sawmill 40.35 41 P **P 20 33 01.6 +0.8**
SML IAmb IAmb 20 33 17.4
comp=Z,352nm,1.1s
SML IAMs_20 IAMs_20 20 50 40.6
comp=Z,6μm,21.0s
SML Sawmill 40.35 41 P **P 20 33 01.0 +0.3**
baz=274
H24K Noodor Dome 40.41 35 P **P 20 33 02.6 +1.4**
H24K IAmb IAmb 20 33 03.9
comp=Z,150nm,0.9s
H24K Noodor Dome 40.41 35 P **P 20 33 02.6 +1.4**
baz=270,SNR=120
TCOL CIGO, UAF Yank 40.43 36 IAMs_20 IAMs_20 20 52 17.1
comp=Z,6μm,19.0s
TCOL CIGO, UAF Yank 40.43 36 P **P 20 33 02.3 +1.1**
baz=271,SNR=31
PWL Port Wells 40.43 43 IAMs_20 IAMs_20 20 52 38.7
comp=Z,7μm,21.0s
PWL Port Wells 40.43 43 P **P 20 33 01.2 -0.2**
baz=275,SNR=11
COLA College 40.43 36 IAMs_20 IAMs_20 20 52 17.1
comp=Z,6μm,19.0s
COLA College 40.43 36*c i*P **P 20 33 02.0 +0.7**
COLA pmax pmax
comp=Z,267nm,0.9s
COLA MLR MLR
comp=Z,6μm,19.0s
COLA College 40.43 36 P **P 20 33 02.3 +1.0**
baz=271
COLA College 40.43 36 P **P 20 33 02.3 +1.0**

comp=Z,361nm,1.2s
COLA College 40.43 36 ⇑P **P 20 33 02.0 +0.7**
COLA College 40.43 36 P **P 20 33 02.1 +0.8**
F24K Squaw Lake 40.45 32 P **P 20 33 02.0 +0.5**
baz=268,SNR=45
CCB Clear Creek Bu 40.46 37 IAMs_20 IAMs_20 20 52 26.2
comp=Z,6μm,20.0s
QIZ Qiongzhong 40.50 244 IAMs_20 IAMs_20 20 50 06.3
comp=Z,7μm,20.0s
QIZ Qiongzhong 40.50 244 ⇑*i*P **P 20 33 04.5 +2.1**
QIZ PP **PnPn 20 34 39.1 -0.9**
QIZ S **S 20 39 09.8 +0.8**
QIZ pmax pmax
comp=Z,59nm,1.8s
QIZ pmax pmax
comp=Z,2μm,6.3s
QIZ LR LR
comp=Z,6μm,15.9s
QIZ LR LR
comp=Z,5μm,17.5s
QIZ LR LR
comp=Z,7μm,19.1s
QIZ Qiongzhong 40.50 244 P **P 20 33 04.3 +1.9**
WAT6 Susitna Watana 40.58 40 P **P 20 33 02.7 -0.1**
baz=274,SNR=16
G24K Hadweenzic Riv 40.59 33 P **P 20 33 04.1 +1.5**
baz=269,SNR=130
POKR Poker Plat Res 40.61 36 P **P 20 33 04.3 +1.5**
POKR IAMs_20 IAMs_20 20 52 21.8
comp=Z,7μm,20.0s
POKR Poker Plat Res 40.61 36 P **P 20 33 03.9 +1.2**
baz=271,SNR=118
M23K Glacier View 40.64 41 P **P 20 33 03.0 -0.1**
baz=274,SNR=8.9
DHY Denali Highway 40.71 39 P **P 20 33 03.9 0.0**
baz=273,SNR=43
SCM Sheep Creek Mo 40.83 41 P **P 20 33 05.2 +0.5**
baz=275,SNR=11
HDA Harding Lake 40.84 37 IAMs_20 IAMs_20 20 51 58.2
comp=Z,6μm,20.0s
HDA Harding Lake 40.84 37 P **P 20 33 04.4 -0.3**
baz=272,SNR=88
DGZ Jazzator, Alta 40.84 300*c i*P **P 20 33 06.3 +1.2**
DGZ pmax pmax
comp=Z,163nm,2.0s
DGZ MLR MLR
comp=Z,22μm,15.0s
IL31 40.85 36 P **P 20 33 05.2 +0.5**
IL31 IAmb IAmb 20 33 21.8
comp=Z,188nm,1.2s
ILAR Eielson Array 40.85 36 P **P 20 33 04.4 -0.4**
comp=Z,75nm,0.8s,baz=260,slow=4.4,SNR=98
ILAR ScP **ScP 20 38 50.1 -1.7**
comp=Z,1.0nm,0.8s,baz=207,slow=4.7,SNR=3.5
ILAR S **S 20 39 11.7 -1.6**
comp=Z,2.4nm,1.0s,baz=229,slow=13,SNR=2.6
ILAR LR LR 20 53 07.7
comp=Z,5μm,18.3s,baz=264,slow=41
comp=Z,75nm,0.8s
ILAR Eielson Array 40.85 36 P **P 20 33 05.1 +0.3**
GOMU GeErMu 40.86 278 P **P 20 33 06.4 +0.7**
GOMU pP pP 20 33 12.3 -3.4
GOMU pmax pmax
comp=Z,120nm,0.9s
GOMU LR LR
comp=Z,17μm,19.0s
GOMU LR LR
comp=Z,23μm,16.6s
GOMU LR LR
comp=Z,29μm,17.0s
P23K Montague Islan 40.98 44 P **P 20 33 06.2 +0.3**
baz=277,SNR=7.9
GLI Glacier Island 41.03 42 IAMs_20 IAMs_20 20 53 15.3
comp=Z,6μm,19.0s
GLI Glacier Island 41.03 42 P **P 20 33 06.3 -0.1**
baz=276,SNR=7.0
PZH PanZhiHua 41.09 260 ⇑P **P 20 33 08.0 +0.6**
PZH pP **pP 20 33 16.6 -0.8**
PZH PP **PP 20 34 45.4 +3.0**
PZH ScP **ScP 20 38 54.3 +0.8**
PZH S **S 20 39 16.6 -1.3**
PZH sS **sS 20 39 33.3 -1.3**
PZH SS **SS 20 42 17.6 -3.4**
PZH ScS **ScS 20 43 03.3 -6.0**
PZH pmax pmax
comp=Z,200nm,1.2s
PZH pmax pmax
comp=Z,2μm,6.0s
PZH LR LR
comp=Z,6μm,19.6s
PZH LR LR
comp=Z,4μm,19.1s
PZH LR LR
comp=Z,5μm,16.7s
G25K Bearman Lake 41.13 33 P **P 20 33 08.5 +1.4**
baz=270,SNR=77
KMI Kunming 41.23 258 ⇑P **P 20 33 09.5 +0.8**
KMI pP pP 20 33 18.0 -0.8
KMI PP **PP 20 34 45.1 +1.0**
KMI ScP **ScP 20 38 54.3 +0.1**
KMI S **S 20 39 17.8 -2.5**
KMI sS sS 20 39 36.8 -0.2
KMI SS **SS 20 42 17.8 -6.3**
KMI pmax pmax
comp=Z,270nm,1.1s
KMI pmax pmax
comp=Z,3μm,4.5s
KMI LR LR
comp=Z,6μm,17.4s
KMI LR LR
comp=Z,8μm,15.5s
KMI LR LR
comp=Z,9μm,17.7s
KMI Kunming 41.23 258 P **P 20 33 09.4 +0.8**
KMI sP **sP 20 33 21.1 -1.6**
H25K Birch Creek 41.25 34 P **P 20 33 09.6 +1.6**
baz=271,SNR=87
F25K Christian Rive 41.31 32 P **P 20 33 09.9 +1.3**
baz=270,SNR=35
E25K Arctic Village 41.34 31 P **P 20 33 09.9 +1.1**
baz=269,SNR=43
M24K Tolsona, Glenn 41.34 40 P **P 20 33 10.0 +1.0**
M24K IAmb IAmb 20 33 27.0
comp=Z,254nm,1.2s
M24K Tolsona, Glenn 41.34 40 P **P 20 33 10.1 +1.2**
baz=276,SNR=14
ZAA0 Zalesovo Array 41.35 307 P **P 20 33 09.7 +0.7**
ZALV Zalesovo Beam 41.35 307 P **P 20 33 08.0 -1.0**
comp=Z,5.0nm,0.3s,baz=79,slow=7.7,SNR=38
ZALV PcP **PcP 20 35 07.4 +0.7**
comp=Z,88nm,0.8s,baz=72,slow=2.8,SNR=26
ZALV S S 20 38 57.0 -24
comp=Z,5.8nm,1.0s,baz=40,slow=22,SNR=3.3
ZALV LR LR 20 51 26.8
comp=Z,9μm,19.9s,baz=80,slow=38
comp=Z,5.0nm,0.3s
ZALV Zalesovo Beam 41.35 307 P **P 20 33 09.3 +0.4**
ZALV PcP **PcP 20 35 08.1 +1.3**
ZALV Zalesovo Beam 41.35 307 *i* P **P 20 33 09.1 +0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.3s
K24K Donnelly Dome 41.38 38 P **P 20 33 09.2 0.0**
baz=274,SNR=68
PRP Porcupine Dome 41.40 35 P **P 20 33 10.3 +0.9**
PRP IAmb IAmb 20 33 11.7
comp=Z,220nm,0.8s
PRP IAMs_20 IAMs_20 20 52 45.9
comp=Z,6μm,21.0s
PRP Porcupine Dome 41.40 35 P **P 20 33 10.3 +0.9**
baz=272,SNR=181
FYU Fort Yukon 41.48 34 P **P 20 33 11.4 +1.5**
FYU IAmb IAmb 20 33 12.3
comp=Z,296nm,0.9s
J25K Salcha River, 41.51 37 P **P 20 33 10.2 -0.1**
J25K IAMs_20 IAMs_20 20 52 26.6
comp=Z,7μm,21.0s
J25K Salcha River, 41.51 37 P **P 20 33 09.3 -1.0**
baz=273,SNR=71
KLU Klutina 41.53 41 P **P 20 33 11.6 +1.1**
KLU Klutina 41.53 41 P **P 20 33 11.0 +0.6**
baz=276,SNR=25
PAX Paxson 41.59 39 P **P 20 33 10.7 -0.3**
baz=275,SNR=26
C26K Camden Bay 41.62 29 P **P 20 33 11.9 +0.9**
baz=268,SNR=13
DIV Divide 41.64 42 P **P 20 33 12.4 +1.0**
DIV IAmb IAmb 20 33 28.4
comp=Z,250nm,1.1s
BMAR Burnt Mountain 41.72 32 P **P 20 33 13.6 +1.6**
EYAK Cordova Ski Ar 41.73 43 P **P 20 33 13.2 +1.2**
EYAK Cordova Ski Ar 41.73 43 P **P 20 33 12.6 +0.6**
baz=278,SNR=7.5
DAV Davao City (W) 41.77 215 P **P 20 33 13.2 +0.4**
DAV P **P 20 33 13.2 +0.4**
HARP HAARP 41.79 40 P **P 20 33 13.4 +0.9**
baz=276,SNR=24
RIDG Independent Ri 41.80 38 IAMs_20 IAMs_20 20 52 47.7
comp=Z,7μm,19.0s
RIDG Independent Ri 41.80 38 P **P 20 33 12.3 -0.4**
baz=275,SNR=30
F26K Sheenjek River 41.88 32 P **P 20 33 14.8 +1.5**
baz=271,SNR=112
C27K Jago River 42.03 29 P **P 20 33 15.0 +0.6**
baz=269,SNR=53
G26K Porcupine Rive 42.04 33 P **P 20 33 16.1 +1.6**
baz=272,SNR=158
N25K Chitina, Valde 42.14 41 P **P 20 33 16.6 +1.1**
N25K IAMs_20 IAMs_20 20 53 26.5
comp=Z,5μm,19.0s
N25K Chitina, Valde 42.14 41 P **P 20 33 16.4 +0.9**
baz=277,SNR=13
DOT Dot Lake 42.16 38 P **P 20 33 15.3 -0.2**
DOT ScP **ScP 20 38 56.9 -0.1**
SCRK Sand Creek 42.16 38 P **P 20 33 16.0 +0.3**
SCRK IAMs_20 IAMs_20 20 53 00.1
comp=Z,6μm,20.0s
SCRK Sand Creek 42.16 38 P **P 20 33 15.3 -0.3**
baz=275,SNR=80
BMRM Bremner River 42.23 42 P **P 20 33 16.8 +0.6**
baz=278,SNR=13
J26L Joseph Creek 42.29 37 IAMs_20 IAMs_20 20 53 42.4
comp=Z,6μm,20.0s
J26L Joseph Creek 42.29 37 P **P 20 33 15.9 -0.8**
baz=275,SNR=55
I26K Coal Creek Min 42.40 36 IAMs_20 IAMs_20 20 53 44.3
comp=Z,6μm,20.0s
KAIM Kayak Island 42.48 44 P **P 20 33 19.4 +1.2**
KAIM IAmb IAmb 20 33 34.5
comp=Z,222nm,1.1s
KAIM IAMs_20 IAMs_20 20 49 13.8
comp=Z,6μm,22.0s
KAIM Kayak Island 42.48 44 P **P 20 33 19.7 +1.5**
baz=279,SNR=6.4
GLB Gilahina Butte 42.54 41 P **P 20 33 19.7 +1.0**
GLB IAMs_20 IAMs_20 20 52 10.2
comp=Z,8μm,22.0s
L26K Log Cabin Wild 42.54 39 P **P 20 33 19.7 +1.0**
baz=277,SNR=76
WMQ Urumqi 42.60 292 *e*P **P 20 33 20.5 +1.0**
WMQ pP pP 20 33 29.8 +0.2
WMQ PcP **PcP 20 35 11.8 +0.6**
WMQ S **S 20 39 39.8 -0.1**
WMQ sS sS 20 39 55.3 -1.3
WMQ pmax pmax
comp=Z,180nm,1.1s
WMQ pmax pmax
comp=Z,3μm,5.3s
WMQ LR LR
comp=Z,28μm,16.7s
WMQ LR LR
comp=Z,38μm,15.5s
WMQ LR LR
comp=Z,23μm,17.7s
WMQ Urumqi 42.60 292 P **P 20 33 20.5 +1.0**
VRDI Verde Repeater 42.74 42 IAMs_20 IAMs_20 20 52 45.7
comp=Z,8μm,22.0s
SUCK Suckling Hills 42.77 43 P **P 20 33 22.1 +1.5**
SUCK IAMs_20 IAMs_20 20 54 30.5
comp=Z,6μm,19.0s
M26K Nabesna, AK 42.79 40 P **P 20 33 22.1 +1.4**
baz=278,SNR=96
E27K Coleen River 42.83 31 P **P 20 33 21.9 +1.0**
baz=273,SNR=35
G27K Doyon Strip 42.89 33 P **P 20 33 22.8 +1.3**
baz=274,SNR=40
MCARA McCarthy VSAT 42.92 41 IAMs_20 IAMs_20 20 52 31.5
comp=Z,8μm,22.0s
MCARA McCarthy VSAT 42.92 41 P **P 20 33 22.8 +1.1**
baz=279,SNR=28
K27K Chicken 42.99 37 IAMs_20 IAMs_20 20 53 33.9
comp=Z,5μm,21.0s
H27K Steamboat Moun 42.99 34 P **P 20 33 24.1 +1.8**
baz=275,SNR=192
I27K Kandik River 43.01 35 P **P 20 33 22.6 +0.1**
baz=276,SNR=42
TGL Tana Glacier 43.12 42 IAMs_20 IAMs_20 20 54 34.7
comp=Z,7μm,19.0s
ZSN Zaisan 43.16 298 *e*P **P 20 33 23.1 -0.7**
ZSN pmax pmax
comp=Z,147nm,2.0s
ZSN Zaisan 43.16 298 *e*P **P 20 33 23.1 -0.7**
comp=Z,146nm,2.0s,baz=297
SNH Sunshine Point 43.22 43 IAMs_20 IAMs_20 20 54 22.3
comp=Z,6μm,20.0s
L27K Beaver Creek, 43.23 39 IAMs_20 IAMs_20 20 54 56.3
comp=Z,6μm,19.0s
L27K Beaver Creek, 43.23 39 P **P 20 33 25.6 +1.3**
baz=278,SNR=161
BCAR Beaver Creek A 43.24 39 P **P 20 33 26.0 +1.6**
EGAK Eagle 43.29 36 P **P 20 33 25.2 +0.5**
EGAK IAmb IAmb 20 33 26.2
comp=Z,195nm,0.9s
EGAK IAMs_20 IAMs_20 20 54 12.8
comp=Z,5μm,20.0s
EGAK Eagle 43.29 36 P **P 20 33 24.8 +0.1**
baz=277,SNR=130
M27K Edge Creek, AK 43.31 40 P **P 20 33 26.1 +1.1**
baz=279,SNR=78
ISLE Juniper Island 43.38 42 IAMs_20 IAMs_20 20 55 00.5
comp=Z,7μm,19.0s
BARN Barnard Glacie 43.63 42 P **P 20 33 29.0 +1.3**
BARN IAmb IAmb 20 33 44.5
comp=Z,223nm,1.1s
BARN IAMs_20 IAMs_20 20 52 29.1
comp=Z,7μm,22.0s
MESA MESA 43.65 43 IAMs_20 IAMs_20 20 54 13.8
comp=Z,6μm,20.0s
MESA MESA 43.65 43 P **P 20 33 29.1 +1.2**
baz=281,SNR=16
YAH Yahtse 43.72 43 IAMs_20 IAMs_20 20 54 30.5
comp=Z,5μm,20.0s
BVCY Beaver Creek 43.77 40 P **P 20 33 29.7 +1.1**
baz=280,SNR=51
CTG Chitna Glacier 43.80 42 P **P 20 33 30.1 +1.1**
baz=281,SNR=56
CTGM Chitina Glacie 43.80 42 IAMs_20 IAMs_20 20 52 42.7
comp=Z,7μm,22.0s
LOGN Logan Glacier 43.99 42 IAMs_20 IAMs_20 20 55 19.6
comp=Z,6μm,20.0s
TABL Table Mountain 43.99 42 IAMs_20 IAMs_20 20 54 27.9
comp=Z,5μm,20.0s
YUK3 Moose Creek 44.06 40 P **P 20 33 31.9 +0.7**
baz=280,SNR=37
DAWY Dawson 44.15 37 P **P 20 33 32.1 +0.4**
baz=279,SNR=40
DAWY Dawson 44.15 37 ⇑P **P 20 33 31.1 -0.6**
O28M Mount Upton 44.39 42 P **P 20 33 34.6 +0.7**
baz=282,SNR=40
I29M Ogilvie Camp, 44.41 35 IAMs_20 IAMs_20 20 54 39.6
comp=Z,6μm,20.0s
I29M Ogilvie Camp, 44.41 35 P **P 20 33 34.7 +1.0**
baz=279,SNR=119
YUK8 Steele Glacier 44.49 41 P **P 20 33 35.3 +0.6**
baz=282,SNR=18
PINM Pinnacle 44.50 43 P **P 20 33 34.9 +0.4**
baz=282,SNR=19
J29M Klondike Camp 44.60 36 IAMs_20 IAMs_20 20 54 45.5
comp=Z,8μm,20.0s
LKP Lekhapani 44.82 266 ⇑*i*P **P 20 33 38.5 +1.2**
M29M Somme Creek 44.86 39 P **P 20 33 38.7 +1.3**
baz=281,SNR=35
L29M L29M 44.88 38 P **P 20 33 39.2 +1.7**
baz=281,SNR=76
JOHN Johnston Islan 44.89 114 IAMs_20 IAMs_20 20 48 31.2
comp=Z,6μm,20.0s
EPYK Eagle Plains 44.90 34 P **P 20 33 39.0 +1.4**
baz=279,SNR=99
G30M tAoh Zraii Nji 45.00 33 P **P 20 33 39.5 +1.1**
baz=279,SNR=168
YUK4 Talbot Arm 45.00 41 P **P 20 33 39.6 +1.0**
baz=282,SNR=22
K29M Barlow Dome 45.01 37 P **P 20 33 39.8 +1.2**
baz=281,SNR=74
PNL Peninsula 45.02 43 P **P 20 33 39.2 +0.6**
baz=283
MK31 Makanchi Array 45.03 298 P **P 20 33 40.0 +1.1**
MK31 IAmb IAmb 20 33 40.8
comp=Z,109nm,0.9s
MK31 Makanchi Array 45.03 298 P **P 20 33 40.0 +1.1**
MK31 pmax pmax
comp=Z,109nm,1.0s
MKAR Makanchi Array 45.03 298 P **P 20 33 39.1 +0.2**
comp=Z,88nm,0.8s,baz=75,slow=7.2,SNR=354
MKAR PcP **PcP 20 35 19.7 +0.3**
comp=Z,31nm,0.7s,baz=64,slow=4.3,SNR=4.4
MKAR ScP **ScP 20 39 11.7 +2.7**
comp=Z,2.1nm,0.9s,baz=82,slow=10,SNR=2.4
MKAR S **S 20 40 12.8 -2.4**
comp=Z,1.4nm,0.8s,baz=58,slow=3.1,SNR=1.5
MKAR LR LR 20 53 52.2
comp=Z,32μm,18.3s,baz=76,slow=38
comp=Z,88nm,0.8s
MKAR Makanchi Array 45.03 298 P **P 20 33 40.0 +1.1**
MKAR Makanchi Array 45.03 298 *i* P **P 20 33 39.0 +0.1**
MKAR pmax pmax
comp=Z,88nm,0.8s
MKAR Makanchi Array 45.03 298 *e*P **P 20 33 39.0 +0.1**
YUK6 Outpost Mounta 45.23 41 P **P 20 33 41.6 +1.1**
baz=283,SNR=10
MAKZ Makanchi 45.23 298 P **P 20 33 41.4 +0.9**
MAKZ IAmb IAmb 20 33 42.4
comp=Z,112nm,0.9s
MAKZ Makanchi 45.23 298 P **P 20 33 41.4 +0.9**
MAKZ pmax pmax
comp=Z,112nm,1.0s
MAKZ MLR MLR
comp=Z,37μm,18.0s
MAKZ Makanchi 45.23 298 ⇑P **P 20 33 40.1 -0.4**
MAKZ Makanchi 45.23 298 P **P 20 33 40.9 +0.4**
MAKZ pP **pP 20 33 50.2 -0.5**
O29M Mount Kennedy 45.27 42 P **P 20 33 41.9 +1.1**
baz=283,SNR=12
DIBR DIBRUGARH 45.41 267 *e*P **P 20 33 43.6 +1.6**
M30M Minto, Yukon 45.59 39 P **P 20 33 44.6 +1.5**
baz=283,SNR=45
HYT Haines Junctio 45.66 41 P **P 20 33 45.6 +1.8**
baz=284,SNR=223
N30M Aishikik Lake 45.71 40 P **P 20 33 45.3 +1.2**
baz=283,SNR=8.5
GAMI Galela, Maluku 45.73 209 P **P 20 33 43.5 -1.2**
comp=Z,4μmcomp=Z,2μmcomp=Z,59nm,1.0s
INK Inuvik 45.80 31 P **P 20 33 44.9 +0.3**
comp=Z,72nm,0.6s,baz=285,slow=7.3,SNR=155
INK LR LR 20 55 46.8
comp=Z,2μm,19.4s,baz=272,slow=40
comp=Z,72nm,0.6s
INK Inuvik 45.80 31 P **P 20 33 45.6 +0.9**
INK IAmb IAmb 20 33 46.2
comp=Z,119nm,0.9s
INK Inuvik 45.80 31 P **P 20 33 45.6 +0.9**
INK pmax pmax
comp=Z,119nm,0.9s
INK Inuvik 45.80 31 P **P 20 33 45.5 +0.9**
baz=280,SNR=58
INK Inuvik 45.80 31 ⇑P **P 20 33 45.4 +0.8**
P29M Windy Craggy 45.84 43 IAMs_20 IAMs_20 20 55 54.4
comp=Z,6μm,20.0s
P29M Windy Craggy 45.84 43 P **P 20 33 46.9 +1.8**
baz=285,SNR=95
F31M Tsiigehtchic 45.88 32 P **P 20 33 46.0 +0.8**
baz=280,SNR=111
MANU Manus Island 45.90 181 P **P 20 33 46.8 +0.9**
KURK Kurchatov 45.91 304 P **P 20 33 46.2 +0.5**
KURK IAmb IAmb 20 33 47.3
comp=Z,99nm,1.0s
KURK Kurchatov 45.91 304 P **P 20 33 46.2 +0.5**
KURK pmax pmax
comp=Z,99nm,1.0s
KURK MLR MLR
comp=Z,11μm,18.0s
KURK Kurchatov 45.91 304 P **P 20 33 44.0 -1.7**
KURK P **P 20 33 44.0 -1.7**
KURK P **P 20 33 44.0 -1.7**
KURK Kurchatov 45.91 304 *e*P **P 20 33 44.2 -1.5**
KURK Kurchatov 45.91 304 ⇑P **P 20 33 44.5 -1.3**
KURK Kurchatov 45.91 304 P **P 20 33 45.7 0.0**
KURBB Kurchatov Arra 46.00 304 P **P 20 33 46.8 +0.3**
comp=Z,26nm,0.4s,baz=72,slow=8.4,SNR=228
KURBB PcP **PcP 20 35 22.8 +0.2**
comp=Z,40nm,0.8s,baz=76,slow=3.5,SNR=14
comp=Z,26nm,0.4s
UBPT Khong Chiam 46.08 245 P **P 20 33 48.4 +1.0**
comp=Z,3μmcomp=Z,149nm,1.5s
UBPT Khong Chiam 46.08 245 P **P 20 33 48.9 +1.5**
comp=Z,156nm,1.5s
UBPT Khong Chiam 46.08 245 ⇑P **P 20 33 48.7 +1.3**
P30M Million Dollar 46.10 42 P **P 20 33 49.0 +1.9**
baz=285
ZIRO ZIRO 46.14 268 *i* P **P 20 33 49.3 +1.2**
ZIRO *i* x x 20 49 38.9
N31M Braeburn, Yuko 46.31 40 P **P 20 33 50.4 +1.6**
N31M IAMs_20 IAMs_20 20 56 19.8
comp=Z,6μm,19.0s
N31M Braeburn, Yuko 46.31 40 P **P 20 33 50.7 +1.9**
baz=284,SNR=50
JORH JORHAT 46.31 267 *i* x x 20 35 41.3
O30N Mendenhall 46.35 41 P **P 20 33 50.5 +1.4**
baz=285,SNR=24
MOKO MOKOCHONG 46.37 266 ⇑*i*P **P 20 33 51.1 +1.3**
MOKO *i* x x 20 35 42.6
ITAN ITANAGAR 46.46 267 *e*P **P 20 33 51.5 +1.1**
ITAN *i* x x 20 50 03.0
PLBC Pleasant Camp 46.56 43 P **P 20 33 52.3 +1.6**
baz=286,SNR=36
SMPI Sarmi 46.60 193 P **P 20 33 52.3 +0.8**
comp=Z,3μmcomp=Z,2μmcomp=Z,200nm,1.3s
MYLDM Lahad Datu 46.63 223 P **P 20 33 53.6 +1.9**
comp=Z,6μmcomp=Z,3μmcomp=Z,140nm,1.4s
MYLDM Lahad Datu 46.63 223 ⇑P **P 20 33 53.9 +2.1**
M31M Drury Creek, Y 46.76 39 P **P 20 33 53.3 +0.9**
M31M IAmb IAmb 20 34 10.1
comp=Z,192nm,1.3s
M31M IAMs_20 IAMs_20 20 57 17.9
comp=Z,4μm,19.0s
M31M Drury Creek, Y 46.76 39 P **P 20 33 53.7 +1.4**
baz=285,SNR=55
LSA Lhasa 46.85 272 P **P 20 33 55.0 +1.0**
LSA IAmb IAmb 20 34 12.3
comp=Z,178nm,1.1s
LSA IAMs_20 IAMs_20 20 54 19.7
comp=Z,8μm,20.0s
LSA Lhasa 46.85 272 P **P 20 33 55.8 +1.9**
LSA sP **sP 20 34 08.8 +0.7**
LSA PP **PP 20 35 45.9 +1.6**
LSA S **S 20 40 42.0 -0.5**
LSA pmax pmax
comp=Z,81nm,0.8s
LSA pmax pmax
comp=Z,2μm,6.6s
LSA LR LR
comp=Z,3μm,15.7s
LSA LR LR
comp=Z,5μm,19.2s
LSA LR LR
comp=Z,10μm,18.5s
LSA Lhasa 46.85 272 P **P 20 33 55.0 +1.0**
LSA pmax pmax
comp=Z,178nm,1.1s
LSA MLR MLR
comp=Z,8μm,20.0s
LSA Lhasa 46.85 272 P **P 20 33 55.3 +1.4**
LSA P **P 20 33 55.3 +1.4**
LSA P **P 20 33 55.3 +1.4**
LSA Lhasa 46.85 272 P **P 20 33 55.4 +1.4**
LSA Lhasa 46.85 272 P **P 20 33 55.6 +1.6**
TNTI Ternate 46.87 209 P **P 20 33 53.4 -0.2**
comp=Z,2μmcomp=Z,1μmcomp=Z,60nm,1.8s
TNTI Ternate 46.87 209 P **P 20 33 54.6 +1.0**
comp=Z,60nm,1.8s
WHY Whitehorse 46.95 41 P **P 20 33 54.9 +1.0**
WHY IAmb IAmb 20 34 09.9
comp=Z,98nm,1.1s
WHY Whitehorse 46.95 41 P **P 20 33 55.4 +1.5**
baz=286,SNR=29
GENI Genyem 46.98 191 P **P 20 33 55.5 +1.1**
comp=Z,3μmcomp=Z,3μmcomp=Z,151nm,1.2s
KOHI KOHIMA 47.02 266 *i* P **P 20 33 55.7 +0.7**
KKM Kota Kinabalu 47.04 226 IAMs_20 IAMs_20 20 55 34.5
comp=Z,6μm,20.0s

KKM	**Kota Kinabalu**	47.04 226	P	P	20 33 55.6	+0.5
	comp=Z,6μmcomp=Z,2μmcomp=Z,82nm,1.9s					
RKPI	**Ransiki, Papua**	47.04 199	P	P	20 33 55.0	+0.1
	comp=Z,3μmcomp=Z,2μmcomp=Z,97nm,1.1s					
SKAG	**Skagway**	47.07 43	P	P	20 33 56.3	+1.6
	baz=287					
SKAG	**Skagway**	47.07 43	⇓P	P	20 33 55.7	+1.1
SIJI	**Sorong**	47.18 203	P	P	20 33 56.1	+0.1
	comp=Z,47nm,1.1s,baz=359,slow=11,SNR=44					
SIJI			S	S	20 40 44.2	-2.2
	comp=Z,1.6nm,0.6s,baz=270,slow=20,SNR=0.9					
SIJI			LR	LR	20 53 36.4	
	comp=Z,1μm,18.8s,baz=14,slow=36					
	comp=Z,47nm,1.1s					
SIJI	**Sorong**	47.18 203	P	P	20 33 56.1	+0.1
	comp=Z,3μmcomp=Z,2μmcomp=Z,76nm,1.4s					
FARO	**Faro, Yukon**	47.23 39	P	P	20 33 56.9	+0.9
FARO			IAmb	IAmb	20 34 09.3	
	comp=Z,74nm,0.8s					
FARO	**Faro, Yukon**	47.23 39	P	P	20 33 57.2	+1.2
	baz=286,SNR=22					
TEZP	**TEZPUR**	47.43 268	*i* P	P	20 33 58.4	+0.5
TEZP			*i* x	x	20 50 07.1	
A36M	**Sachs Harbour**	47.81 25	P	P	20 34 01.2	+0.9
A36M	**Sachs Harbour**	47.81 25	P	P	20 34 00.6	+0.3
	baz=284,SNR=10.0					
P32M	**Atlin**	47.82 42	P	P	20 34 01.9	+1.3
	baz=288,SNR=14					
R32K	**Eaglecrest**	47.83 44	P	P	20 34 02.3	+1.7
	baz=288,SNR=9.4					
MND	**Mandalay**	47.89 260	P	P	20 34 02.2	+0.7
	comp=Z,297nm,1.3s					
CHTO	**Chiang Mai**	48.01 255	P	P	20 34 03.6	+1.1
CHTO	**Chiang Mai**	48.01 255	P	P	20 34 03.6	+1.1
MMPY	**Sheldon Lake,**	48.05 38	P	P	20 34 03.9	+1.6
	baz=287,SNR=39					
P33M	**Teslin, Yukon**	48.06 41	P	P	20 34 04.0	+1.6
P33M			IAmb	IAmb	20 34 16.2	
	comp=Z,148nm,1.1s					
P33M	**Teslin, Yukon**	48.06 41	P	P	20 34 03.9	+1.4
	baz=288,SNR=58					
S32K	**Killisnoo**	48.06 45	P	P	20 34 04.0	+1.6
	baz=289					
LBMI	**Labuha**	48.14 208	P	P	20 34 03.4	-0.1
	comp=Z,2μmcomp=Z,103nm,1.8s					
RABL	**Rabaul**	48.17 175	P	P	20 34 06.7	+3.0
	comp=Z,434nm,1.4s					
RABL	**Rabaul**	48.17 175	⇓P	P	20 34 05.4	+1.7
TDK	**Taldyqorghan**	48.23 297	*c i* P	P	20 34 04.1	+0.1
TDK			*e* S	S	20 40 58.5	-2.5
TDK			MLR	MLR		
	comp=Z,13μm,14.0s					
TDK	**Taldyqorghan**	48.23 297	⇑*i* P	P	20 34 04.1	+0.1
	baz=297					
TDK			*e* S	S	20 40 58.5	-2.5
	baz=297					
TDK			*e* LR	LR	20 55 06.7	
	comp=Z,13μm,14.5s,baz=297					
CMAR	**Chiang Mai Arr**	48.25 254	P	P	20 34 04.9	+0.5
	comp=Z,32nm,0.8s,baz=41,slow=7.4,SNR=138					
CMAR			LR	LR	20 56 42.9	
	comp=Z,9μm,18.7s,baz=55,slow=39					
	comp=Z,32nm,0.8s					
KRVT	**Keravat (AS076**	48.27 175	P	P	20 34 05.0	+0.5
	comp=Z,29nm,0.5s,baz=279,slow=4.6,SNR=7.6					
KRVT			LR	LR	20 50 50.9	
	comp=Z,4μm,21.4s,baz=136,slow=32					
	comp=Z,29nm,0.5s					
SHLS	**Shalkode**	48.34 294	*e* P	P	20 34 02.8	-2.2
SHLS			*e* S	S	20 40 57.6	-5.1
SHLS			pmax	pmax		
	comp=Z,230nm,1.9s					
SHLS			smax	smax		
	comp=E,100nm,3.3s					
SHLS	**Shalkode**	48.34 294	*e* P	P	20 34 02.8	-2.2
	comp=E,230nm,1.9s,baz=294					
SHLS			*e* S	S	20 40 57.7	-5.1
	comp=E,100nm,3.3s,baz=294					
SILR	**SILCHAR**	48.53 266	*i* P	P	20 34 08.4	+2.0
UZB	**Uzynbulak**	48.64 294	*e* P	P	20 34 06.6	-0.7
UZB			*e* S	S	20 41 04.6	-2.3
UZB			pmax	pmax		
	comp=Z,149nm,2.3s					
UZB			smax	smax		
	comp=N,146nm,4.4s					
UZB	**Uzynbulak**	48.64 294	*e* P	P	20 34 06.6	-0.7
	comp=N,149nm,2.3s,baz=294					
UZB			*e* S	S	20 41 04.6	-2.3
	comp=N,146nm,4.4s,baz=294					
GTOI	**Gorontalo**	48.64 214	P	P	20 34 06.6	-0.8
	comp=N,870nmcomp=N,39nm,1.7s					
KPKS	**Kokpek**	48.72 295	*c i* P	P	20 34 08.0	+0.2
KPKS			*e* S	S	20 41 06.9	-1.1
KPKS	**Kokpek**	48.72 295	⇑*i* P	P	20 34 08.1	+0.2
	baz=295					
KPKS			*e* S	S	20 41 06.9	-1.1
	baz=295					
SHL	**Shillong**	48.72 267	P	P	20 34 08.5	+0.4
SHL	**Shillong**	48.72 267	P	P	20 34 08.5	+0.4
SHL			pmax	pmax		
	comp=Z,255nm,0.9s					
SHL	**Shillong**	48.72 267	P	P	20 34 08.0	-0.1
	SNR=76					
SHL	**Shillong**	48.72 267	⇑*i* P	P	20 34 08.0	-0.1
SHL			IAmb	IAmb	20 34 13.0	
	comp=Z,142nm,1.0s					
SHL			*i* x	x	20 36 02.7	
Q32M	**Nakina River**	48.72 43	P	P	20 34 09.4	+1.6
	baz=289,SNR=9.9					
FAKI	**Fak Fak**	48.87 201	P	P	20 34 09.1	+0.1
FAKI			IAmb	IAmb	20 34 26.2	
	comp=Z,218nm,1.2s					
FAKI	**Fak Fak**	48.87 201	P	P	20 34 08.5	-0.6
	comp=Z,2μmcomp=Z,2μmcomp=Z,164nm,1.3s					
FAKI	**Fak Fak**	48.87 201	P	P	20 34 09.2	+0.1
	comp=Z,163nm,1.3s					
C36M	**Paulatuk**	48.90 28	P	P	20 34 09.5	+0.8
C36M	**Paulatuk**	48.90 28	P	P	20 34 09.0	+0.3
	baz=287,SNR=14					
ZHN	**Zhinishke**	49.01 295	*e* P	P	20 34 10.2	+0.1
ZHN			*e* S	S	20 41 09.7	-2.4
ZHN	**Zhinishke**	49.01 295	*e* P	P	20 34 10.3	+0.1
	baz=294					
ZHN			*e* S	S	20 41 09.8	-2.4
	baz=294					
SATY	**Saty**	49.08 295	*c i* P	P	20 34 11.2	+0.6
SATY			*e* S	S	20 41 11.0	-2.1
SATY			pmax	pmax		
	comp=Z,83nm,0.9s					
SATY			smax	smax		
	comp=N,243nm,5.4s					
SATY	**Saty**	49.08 295	⇑*i* P	P	20 34 11.2	+0.6
	comp=N,83nm,0.9s,baz=294					
SATY			*e* S	S	20 41 11.1	-2.1
	comp=N,243nm,5.4s,baz=294					
TOLI2	**Tolitoli**	49.16 217	P	P	20 34 11.0	-0.3
	comp=N,59nm,1.8s					
R33M	**Jennings River**	49.21 42	P	P	20 34 13.2	+1.8
	baz=290,SNR=52					
MRSI	**Marisa**	49.23 216	P	P	20 34 11.7	-0.1
	comp=N,4μmcomp=N,4μmcomp=N,295nm,1.4s					
CRAG	**Craig**	49.51 47	P	P	20 34 14.0	+0.4
CRAG			IAmb	IAmb	20 34 42.4	
	comp=Z,99nm,1.1s					
CRAG	**Craig**	49.51 47	⇓P	P	20 34 17.6	+4.1
NAYO	**Nakonayok**	49.52 248	P	P	20 34 15.9	+1.8
	comp=Z,2μm,1.7s					
WRAK	**Wrangell Islan**	49.57 46	IAMs_20	IAMs_20	20 51 56.1	
	comp=Z,5μm,22.0s					
WRAK	**Wrangell Islan**	49.57 46	P	P	20 34 15.7	+1.7
	baz=291,SNR=7.1					
S34M	**Telegraph Cree**	49.65 44	P	P	20 34 16.3	+1.8
	baz=291,SNR=16					
CHKK	**Chushkaly**	49.65 296	⇑*i* P	P	20 34 14.6	-0.2
CHKK	**Chushkaly**	49.65 296	⇑*i* P	P	20 34 14.6	-0.2
	baz=296					
BRZS	**Berezniki**	49.72 305	*c i* P	P	20 34 13.9	-1.4
BRZS			*e* S	S	20 41 21.7	+0.1
BRZS			pmax	pmax		
	comp=Z,81nm,0.9s					
BRZS	**Berezniki**	49.72 305	⇑*i* P	P	20 34 13.9	-1.4
	comp=Z,81nm,0.9s,baz=305					
BRZS			*e* S	S	20 41 21.8	+0.1
	baz=305					
TGTN	**Hyland Airport**	49.73 39	P	P	20 34 16.6	+1.3
	baz=290,SNR=29					
DHUB	**DHUBRI**	49.81 269	⇑*i* P	P	20 34 16.1	-0.1
DHUB			*i* x	x	20 51 43.9	
SAIH	**SAIHA**	49.82 263	⇑*i* P	P	20 34 16.8	+0.3
SAIH			*i* x	x	20 53 28.7	
BVAR	**Borovoye Array**	49.83 309	S	S	20 41 27.6	+4.5
	comp=Z,4.0nm,0.9s,baz=95,slow=14,SNR=5.5					
BVAR			LR	LR	20 56 59.3	
	comp=Z,10μm,20.6s,baz=74,slow=38					
BRVK	**Borovoye**	49.87 310	P	P	20 34 17.0	+0.6
BRVK			IAmb	IAmb	20 35 49.9	
	comp=Z,167nm,1.6s					
BRVK	**Borovoye**	49.87 310	P	P	20 34 17.0	+0.6
BRVK			pmax	pmax		
	comp=Z,167nm,1.6s					
BRVK			MLR	MLR		
	comp=Z,16μm,18.0s					
BRVK	**Borovoye**	49.87 310	P	P	20 34 15.3	-1.1
BRVK			P	P	20 34 15.3	-1.1
BRVK			P	P	20 34 15.3	-1.1
BRVK	**Borovoye**	49.87 310	*e* P	P	20 34 17.0	+0.6
BRVK	**Borovoye**	49.87 310	⇑P	P	20 34 15.1	-1.2
BRVK	**Borovoye**	49.87 310	P	P	20 34 15.8	-0.6
MDOK	**Medeo**	49.92 295	*i* P	P	20 34 16.9	-0.2
MDOK			*e* S	S	20 41 22.9	-2.0
MDOK			MLR	MLR		
	comp=Z,5μm,14.0s					
MDOK	**Medeo**	49.92 295	*i* P	P	20 34 16.9	-0.2
	baz=295					
MDOK			*e* S	S	20 41 22.9	-2.0
	baz=295					
MDOK			*e* LR	LR	20 56 28.7	
	comp=Z,5μm,14.3s,baz=295					
SANI	**Sanana**	49.98 209	P	P	20 34 16.4	-1.1
	comp=Z,4μmcomp=Z,3μmcomp=Z,142nm,1.4s					
SANI	**Sanana**	49.98 209	P	P	20 34 16.7	-0.8
	comp=Z,142nm,1.4s					
AAA	**Alma-Ata**	49.99 295	*c i* P	P	20 34 17.3	-0.2
AAA			*e* S	S	20 41 23.9	-1.8
AAA			MLR	MLR		
	comp=Z,8μm,14.0s					
AAA	**Alma-Ata**	49.99 295	⇑*i* P	P	20 34 17.4	-0.2
	baz=295					
AAA			*e* S	S	20 41 23.9	-1.8
	baz=295					
AAA			*e* LR	LR	20 56 28.4	
	comp=Z,8μm,13.6s,baz=295					
AAA	**Alma-Ata**	49.99 295	*e* P	P	20 34 17.3	-0.2
DLBC	**Dease Lake**	50.00 43	LR	LR	20 58 37.2	
	comp=Z,3μm,18.1s,baz=293,slow=40					
DLBC	**Dease Lake**	50.00 43	P	P	20 34 19.0	+1.7
DLBC			IAmb	IAmb	20 34 37.0	
	comp=Z,304nm,1.8s					
DLBC	**Dease Lake**	50.00 43	P	P	20 34 19.3	+1.9
	baz=291,SNR=29					
GTK	**Tadong**	50.04 271	⇑*i* P	P	20 34 19.1	+0.9
GTK			*i* x	x	20 52 32.2	
KUU	**Kurty**	50.05 296	*c i* P	P	20 34 17.2	-0.7
KUU			*e* S	S	20 41 25.1	-1.4
KUU	**Kurty**	50.05 296	⇑*i* P	P	20 34 17.2	-0.7
	baz=296					
KUU			*e* S	S	20 41 25.1	-1.4
	baz=296					
MPSI	**Mapaga**	50.24 218	P	P	20 34 19.0	-0.5
	comp=Z,4μmcomp=Z,1μmcomp=Z,42nm,1.3s					
LUWI	**Luwuk**	50.27 214	P	P	20 34 17.4	-2.3
	comp=Z,2μmcomp=Z,175nm,1.2s					
LUWI	**Luwuk**	50.27 214	P	P	20 34 18.4	-1.3
	comp=Z,174nm,1.3s					
KRAI	**Karang Ratu**	50.36 206	P	P	20 34 21.3	+0.9
	comp=Z,2μmcomp=Z,95nm,1.6s					
T35M	**Bob Quinn**	50.43 45	P	P	20 34 22.9	+2.3
	baz=292,SNR=24					
BELO	**BELONIA**	50.45 265	*i* x	x	20 34 49.6	
SLGI	**Shiliguri**	50.54 271	*e* P	P	20 34 22.6	+0.8
APSI	**Ampana**	50.60 215	P	P	20 34 21.6	-0.7
	comp=Z,3μmcomp=Z,3μmcomp=Z,294nm,1.3s					
BRDH	**Bariadhala**	50.66 264	P	P	20 34 23.1	+0.3
	comp=Z,224nm,0.6s,baz=74,slow=9.2,SNR=16					
BRDH			LR	LR	20 59 36.9	
	comp=Z,4μm,18.1s,baz=47,slow=40					
	comp=Z,224nm,0.6s					
TAPN	**Taplejung**	50.67 272	*e* P	P	20 34 24.0	+0.9
NLAI	**Namlea**	50.71 208	P	P	20 34 22.9	-0.1
	comp=Z,6μmcomp=Z,26nm,1.3s					
H02S1	**DAWSON INLET T**	50.73 50	P	P	20 34 23.4	+0.6
AAI	**Ambon**	50.77 206	P	P	20 34 24.0	+0.5
	comp=Z,2μmcomp=Z,111nm,0.8s					
ULHL	**Ulahol**	50.87 295	P	P	20 34 25.5	+1.1
	SNR=38					
TKM2	**Tokmak 2**	50.98 296	P	P	20 34 25.9	+0.7
	SNR=135					
SRDT	**SRDT**	50.98 250	P	P	20 34 26.2	+1.0
	comp=Z,3μmcomp=Z,114nm,2.1s					
SRDT	**SRDT**	50.98 250	P	P	20 34 25.7	+0.5
	comp=Z,120nm,2.1s					
BTLS	**Baital**	51.00 299	*c i* P	P	20 34 24.3	-0.7
BTLS			*e* S	S	20 41 37.5	-2.0
BTLS			pmax	pmax		
	comp=Z,151nm,1.8s					
BTLS	**Baital**	51.00 299	⇑*i* P	P	20 34 24.4	-0.7
	comp=Z,151nm,1.8s,baz=298					
BTLS			*e* S	S	20 41 37.6	-2.0
	baz=298					
ODAN	**Odare**	51.19 272	*e* P	P	20 34 26.8	-0.1
WRGLY	**Wrigley**	51.21 36	P	P	20 34 27.7	+1.4
	baz=292,SNR=23					
SGDS	**Sogindy**	51.35 297	*c i* P	P	20 34 28.4	+0.6
SGDS			pmax	pmax		
	comp=Z,334nm,2.2s					
SGDS	**Sogindy**	51.35 297	⇑*i* P	P	20 34 28.5	+0.6
	comp=Z,334nm,2.2s,baz=296					
NRN	**Naryn**	51.41 294	P	P	20 34 29.1	+0.5
NRN	**Naryn**	51.41 294	P	P	20 34 29.1	+0.5
NRN			pmax	pmax		
	comp=Z,102nm,1.2s					
CHMS	**Chumysh**	51.49 296	P	P	20 34 29.5	+0.8
	SNR=31					
LIRD	**Liard River Hi**	51.52 41	P	P	20 34 30.1	+1.4
	baz=293,SNR=6.1					
KBK	**Karagaybulak**	51.52 296	P	P	20 34 29.7	+0.5
	SNR=178					
USP	**Ospenovka**	51.52 296	P	P	20 34 29.5	+0.5
	SNR=165					
JIRN	**Jiri**	51.58 273	*e* P	P	20 34 30.9	+0.8
	comp=Z,493nm,0.9s					
GUN	**Gumba**	51.66 274	*e* P	P	20 34 31.4	+0.8
	comp=Z,814nm,0.9s					
RAMN	**Ramite**	51.70 272	*e* P	P	20 34 31.4	+0.6
AAK	**Ala-Archa**	51.83 296	P	P	20 34 32.3	+0.9
	SNR=13					
AAK	**Ala-Archa**	51.83 296	S	S	20 41 50.3	-1.1
	comp=Z,1.4nm,0.7s,baz=150,slow=20,SNR=1.4					
AAK			LR	LR	20 59 00.6	
	comp=Z,4μm,18.2s,baz=74,slow=39					
AAK	**Ala-Archa**	51.83 296	IAMs_20	IAMs_20	21 00 31.1	
	comp=Z,5μm,20.0s					
AAK	**Ala-Archa**	51.83 296	*c i* P	P	20 34 32.0	+0.5
AAK			pmax	pmax		
	comp=Z,156nm,1.1s					
AAK			MLR	MLR		
	comp=Z,12μm,16.0s					
AAK	**Ala-Archa**	51.83 296	P	P	20 34 32.0	+0.5
AAK			P	P	20 34 32.0	+0.5
AAK	**Ala-Archa**	51.83 296	*e* P	P	20 34 32.0	+0.5
AAK	**Ala-Archa**	51.83 296	*i* P	P	20 34 31.8	+0.4
	SNR=104					
AAK	**Ala-Archa**	51.83 296	⇑P	P	20 34 31.9	+0.5
AAK	**Ala-Archa**	51.83 296	P	P	20 34 32.2	+0.7
UCH	**Uchtor**	52.01 295	P	P	20 34 34.1	+0.9
	SNR=24					
KKN	**Kakani**	52.16 274	*e* P	P	20 34 34.2	0.0
SBUM	**Sibu**	52.17 228	IAMs_20	IAMs_20	20 58 02.9	
	comp=Z,4μm,20.0s					
SBUM	**Sibu**	52.17 228	P	P	20 34 34.0	0.0
	comp=Z,1μmcomp=Z,46nm,1.2s					
SBUM	**Sibu**	52.17 228	⇑P	P	20 34 35.0	+0.9
KOTAN	**Kotaneelee Air**	52.17 39	P	P	20 34 35.3	+1.7
	baz=294,SNR=13					
PKI	**Pulchoki**	52.20 274	*e* P	P	20 34 35.0	+0.4
	comp=Z,1μm,1.4s					
PKIN	**Phulchoki**	52.20 274	*e* P	P	20 34 35.0	+0.4
	comp=Z,450nm,1.0s					
EKS2	**Erkin-Say**	52.28 296	P	P	20 34 35.5	+0.8
	SNR=101					
KSH	**Kashi**	52.37 292	P	P	20 34 40.3	+4.8
KSH			pP	sP	20 34 50.0	+0.3
KSH			PcP	PcP	20 35 49.3	+3.2
KSH			ScP	ScP	20 39 47.3	+6.9
KSH			S	S	20 42 05.9	+7.1
KSH			ScS	ScS	20 44 26.8	+4.2
KSH			pmax	pmax		
	comp=Z,150nm,1.7s					
KSH			pmax	pmax		
	comp=Z,3μm,4.9s					
KSH			LR	LR		
	comp=Z,16μm,20.3s					
KSH			LR	LR		
	comp=Z,11μm,19.7s					
KSH			LR	LR		
	comp=Z,25μm,14.6s					
DMN	**Daman**	52.39 274	*e* P	P	20 34 36.6	+0.6
	comp=Z,581nm,0.8s					
GKN	**Gorkha**	52.50 275	*e* P	P	20 34 37.2	+0.6
	comp=Z,711nm,0.9s					
AML	**Almayashu**	52.59 296	P	P	20 34 38.4	+1.0
	SNR=90					
ALE	**Alert**	52.75 5	P	P	20 34 34.9	-2.7
DANN	**Dangsing**	52.93 275	*e* P	P	20 34 41.1	+1.1
	comp=Z,924nm,0.8s					
BKB	**Balikpapan**	53.02 220	IAMs_20	IAMs_20	21 00 32.8	
	comp=Z,5μm,20.0s					
BKB	**Balikpapan**	53.02 220	P	P	20 34 36.1	-4.2
	comp=Z,5μmcomp=Z,6μmcomp=Z,384nm,1.2s					
BKB	**Balikpapan**	53.02 220	P	P	20 34 41.2	+0.9
	comp=Z,385nm,1.2s					
PMG	**Port Moresby**	53.21 181	P	P	20 34 42.5	+0.9
	comp=Z,8.7nm,0.5s,baz=4.5,slow=17,SNR=4.7					
PMG			S	S	20 42 07.4	-2.9
	comp=Z,5.5nm,0.6s,baz=270,slow=12,SNR=2.0					
PMG			LR	LR	20 55 00.5	
	comp=Z,1μm,22.0s,baz=352,slow=33					
	comp=Z,8.7nm,0.5s					
PMG	**Port Moresby**	53.21 181	*c e* P	P	20 34 42.3	+0.7
PMG			pmax	pmax		
	comp=Z,34nm,1.3s					
PMG	**Port Moresby**	53.21 181	P	P	20 34 42.5	+0.9
	comp=Z,3μmcomp=Z,989nmcomp=Z,49nm,1.4s					
PMG	**Port Moresby**	53.21 181	P	P	20 34 42.4	+0.8
	comp=Z,49nm,1.4s					
PMG	**Port Moresby**	53.21 181	P	P	20 34 42.6	+0.9
	comp=Z,49nm,1.4s					
SVE	**Sverdlovsk**	53.38 317	*d e* P	P	20 34 41.4	-1.1
SVE			*e*		20 36 45.0	
SVE			*e* S	S	20 42 06.1	-5.7
SVE			pmax	pmax		
	comp=Z,87nm,1.2s					
SVE			MLR	MLR		
	comp=E,8μm,16.0s					
SVE			MLR	MLR		
	comp=Z,11μm,16.0s					
KOLN	**Koldanda**	53.38 275	*e* P	P	20 34 43.1	-0.1
VLK	**Valmikinagar**	53.46 274	⇑*i* P	P	20 34 44.0	+0.5
KKSI	**Kolaka, Sulawe**	53.56 213	P	P	20 34 45.0	+0.7
	comp=Z,2μmcomp=Z,72nm,1.5s					
BBB	**Bella Bella**	53.57 50	LR	LR	20 55 48.1	
	comp=Z,2μm,21.5s,baz=297,slow=34					
PYUN	**Piuthan**	53.63 276	*e* P	P	20 34 45.6	+0.6
	comp=Z,708nm,0.9s					
MTKI	**Muara Teweh, K**	53.70 223	P	P	20 34 45.5	+0.2
	comp=Z,4μmcomp=Z,5μmcomp=Z,312nm,1.3s					
DZA	**Taraz**	53.74 297	*c i* P	P	20 34 45.6	+0.2
DZA	**Taraz**	53.74 297	⇑*i* P	P	20 34 45.7	+0.2
	baz=297					
OHH	**Osh**	53.98 294	P	P	20 34 48.0	+0.7
OHH			pmax	pmax		
	comp=Z,275nm,1.3s					
KSM	**Kuching**	54.02 229	P	P	20 34 48.7	+1.0
	comp=Z,3μmcomp=Z,186nm,1.3s					
KSM	**Kuching**	54.02 229	P	P	20 34 49.3	+1.6
	comp=Z,186nm,1.3s					
KSM	**Kuching**	54.02 229	⇑P	P	20 34 48.9	+1.2
PMSI	**Majene**	54.09 217	P	P	20 34 45.2	-3.0
	comp=Z,2μmcomp=Z,140nm,0.7s					
BOK	**Bokaro**	54.12 270	⇑*i* P	P	20 34 49.0	+0.7
BOK			IAmb	IAmb	20 34 51.2	
	comp=Z,100nm,1.1s					
SPSI	**Sidrap Palu**	54.15 216	P	P	20 34 48.0	-0.5
	comp=Z,4μmcomp=Z,1μmcomp=Z,64nm,1.5s					
KK31	**Karatay Array**	54.16 298	P	P	20 34 49.3	+0.9
KK31			IAmb	IAmb	20 34 50.2	
	comp=Z,146nm,0.8s					
KK31	**Karatay Array**	54.16 298	P	P	20 34 49.3	+0.9
KK31			pmax	pmax		
	comp=Z,146nm,0.9s					
KKAR	**Karatay Array**	54.16 298	P	P	20 34 48.2	-0.2
KKAR	**Karatay Array**	54.16 298	P	P	20 34 47.9	-0.6
KKAR			IAmb	IAmb	20 34 50.2	
	comp=Z,146nm,0.8s					
KKAR	**Karatay Array**	54.16 298	P	P	20 34 47.9	-0.6
KKAR			pmax	pmax		
	comp=Z,146nm,0.9s					
KKAR	**Karatay Array**	54.16 298	⇑P	P	20 34 48.6	+0.2
HNR	**Honiara**	54.31 166	LR	LR	20 54 34.3	
	comp=Z,55μm,22.0s,baz=332,slow=32					
HNR	**Honiara**	54.31 166	IAMs_20	IAMs_20	20 54 22.8	
	comp=Z,4μm,21.0s					
NOR	**Nord**	54.33 357	*e* P	P	20 34 46.4	-2.8
NOR			IAmb	IAmb	20 34 50.6	
	comp=Z,10nm,0.8s					
NOR	**Nord**	54.33 357	⇑P	P	20 34 47.1	-2.0
BNSI	**Bone**	54.40 215	P	P	20 34 49.3	-1.1
	comp=Z,2μmcomp=Z,1μmcomp=Z,45nm,2.0s					
BBSI	**Bau Bau**	54.41 212	P	P	20 34 50.5	+0.1
	comp=Z,1μmcomp=Z,51nm,1.3s					
SURA	**Surathani**	54.41 245	P	P	20 34 52.7	+2.2
	comp=Z,127nm,2.3s					
RES	**Resolute Bay**	54.48 17	P	P	20 34 49.2	-1.1
	comp=Z,115nm,0.8s,baz=323,slow=7.2,SNR=80					
RES			LR	LR	21 01 10.9	
	comp=Z,7μm,20.2s,baz=314,slow=39					
	comp=Z,115nm,0.8s					
RES	**Resolute Bay**	54.48 17	P	P	20 34 49.4	-0.9
RES			IAmb	IAmb	20 34 51.7	
	comp=Z,109nm,0.8s					
RES	**Resolute Bay**	54.48 17	P	P	20 34 49.4	-0.9
RES			pmax	pmax		
	comp=Z,109nm,0.8s					
RES	**Resolute Bay**	54.48 17	⇑P	P	20 34 49.3	-0.9
ARU	**Arti**	54.58 317	S	S	20 42 27.3	-0.7
	comp=Z,4.6nm,1.0s,baz=180,slow=20,SNR=1.1					
ARU			LR	LR	21 00 45.6	
	comp=Z,12μm,18.1s,baz=46,slow=39					
ARU	**Arti**	54.58 317	P	P	20 34 51.4	+0.1
ARU	**Arti**	54.58 317	*c i* P	P	20 34 49.8	-1.5
ARU			*PP	pP	20 35 03.0	+1.4
ARU					20 35 52.4	
ARU			PPP	PPP	20 38 01.8	
ARU			S	S	20 42 26.8	-1.2
ARU					20 44 32.9	
ARU			SS	SS	20 46 12.1	+1.8
ARU			pmax	pmax		
	comp=Z,125nm,1.4s					
ARU			MLR	MLR		
	comp=Z,11μm,17.0s					
ARU	**Arti**	54.58 317	*e* P	P	20 34 49.8	-1.5
ARU	**Arti**	54.58 317	⇑P	P	20 34 49.8	-1.5
ARU	**Arti**	54.58 317	P	P	20 34 49.7	-1.6
KBS	**Kingsbay**	54.59 351	*e* P	P	20 34 51.6	+0.5
KBS			IAmb	IAmb	20 34 54.9	
	comp=Z,38nm,1.0s					
SPA0	**Spitsbergen Ar**	54.61 349	*e* P	P	20 34 51.7	+0.5
SPITS	**Spitsbergen Ar**	54.61 349	LR	LR	21 00 45.1	
	comp=Z,

KAPI **Kappang** 55.10 215 P P 20 34 55.5 +0.1
comp=Z,2μmcomp=Z,78nm,2.1s
KAPI **Kappang** 55.10 215 P P 20 34 56.0 +0.6
comp=Z,86nm,2.1s
KAPI **Kappang** 55.10 215 ⇑P P 20 34 55.1 -0.4
KAPI **Kappang** 55.10 215 P P 20 34 55.8 +0.4
KAPI sP sP 20 35 10.2 +0.5
CHM **Chimkent** 55.13 298 *e*P P 20 34 56.0 +0.5
CHM *e*S S 20 42 35.2 -0.7
CHM **Chimkent** 55.13 298 *e*P P 20 34 56.0 +0.5
baz=298
CHM *e*S S 20 42 35.2 -0.7
baz=298
DRK **Karamyk** 55.16 294 P P 20 34 56.3 +0.2
DRK IAmb IAmb 20 35 00.8
comp=Z,150nm,0.9s
YKA **Yellowknife Ar** 55.18 34 P P 20 34 55.9 +0.4
comp=Z,41nm,0.8s,baz=298,slow=7.1,SNR=128
YKA LR LR 21 02 57.1
comp=Z,2μm,18.4s,baz=298,slow=41
comp=Z,41nm,0.8s
YKA **Yellowknife Ar** 55.18 34 P P 20 34 55.5 0.0
BKSI **Bulukumba** 55.23 215 P P 20 34 55.7 -0.6
comp=Z,3μmcomp=Z,1μmcomp=Z,66nm,1.2s
VAR **Varanasi** 55.27 273 *e*P P 20 34 56.9 +0.3
SKLT **Songkhla** 55.27 243 P P 20 34 58.2 +1.5
comp=Z,3μmcomp=Z,154nm,1.6s
SKLT **Songkhla** 55.27 243 P P 20 34 59.1 +2.4
comp=Z,162nm,1.6s
BTK **Batken** 55.51 295 P P 20 34 58.7 +0.4
BTK IAmb IAmb 20 35 00.2
comp=Z,144nm,0.9s
BTK **Batken** 55.51 295 P P 20 34 58.7 +0.4
BTK pmax pmax
comp=Z,144nm,1.0s
BSSI **Bau Bau, Buton** 55.82 214 P P 20 35 00.1 -0.5
comp=Z,2μmcomp=Z,133nm,1.7s
TAS **Tashkent** 55.84 297 P P 20 35 01.8 +1.2
TAS pmax pmax
comp=Z,451nm,1.1s
DDI **Dehra Dun** 55.87 281 ⇑*i*P P 20 35 01.9 +0.9
DDI IAmb IAmb 20 35 04.1
comp=Z,198nm,0.8s
DDI *i* x x 20 57 43.9
BBKI **Banjar Baru** 55.91 221 P P 20 34 58.7 -2.6
comp=Z,8μmcomp=Z,5μmcomp=Z,232nm,1.6s
SMLA **Simla** 56.03 282 ⇑*i*P P 20 35 02.5 +0.5
SMLA IAmb IAmb 20 35 05.3
comp=Z,356nm,0.5s
ALBI **Allahabad** 56.13 274 ⇑*i*P P 20 35 02.1 -0.7
THN **Thein Dam** 56.31 284 ⇑*i*P P 20 35 04.7 +0.6
THN *e*P sP 20 35 16.5 -1.9
BWNR **Bhubaneshwar** 56.37 266 ⇑*i*P P 20 35 05.1 +0.5
GAR **Garm** 56.40 294 P P 20 35 04.2 -0.6
BHK **Bhakra** 56.40 283 ⇑*i*P P 20 35 05.8 +1.0
KULM **Kulim** 56.69 241 P P 20 35 08.3 +1.4
comp=Z,3μmcomp=Z,160nm,1.4s
KULM **Kulim** 56.69 241 ⇑P P 20 35 08.2 +1.4
JMU **Jammu** 56.72 285 ⇑*i*P P 20 35 08.4 +1.4
WAPA **Wapiti River** 56.75 43 P P 20 35 07.2 +0.3
IPM **Ipoh** 57.07 240 IAMs_20 IAMs_20 21 03 34.3
comp=Z,3μm,18.0s
IPM **Ipoh** 57.07 240 P P 20 35 10.2 +0.6
comp=Z,3μmcomp=Z,85nm,1.8s
IPM **Ipoh** 57.07 240 P P 20 35 10.6 +0.9
comp=Z,85nm,1.8s
IPM **Ipoh** 57.07 240 ⇑P P 20 35 10.2 +0.6
IPM ⇑P P 20 35 10.4 +0.7
PBA **Port Blair** 57.26 253 P P 20 35 11.1 +0.3
PBA **Port Blair** 57.26 253 ⇓P P 20 35 11.2 +0.3
NIL **Nilore** 57.34 287 P P 20 35 13.0 +1.6
NIL **Nilore** 57.34 287 IAMs_20 IAMs_20 21 01 45.1
comp=Z,5μm,21.0s
NIL **Nilore** 57.34 287 P P 20 35 13.0 +1.6
NIL pmax pmax
comp=Z,468nm,0.9s
NIL MLR MLR
comp=Z,5μm,21.0s
NIL **Nilore** 57.34 287 P P 20 35 12.6 +1.2
NIL P P 20 35 12.6 +1.2
NIL **Nilore** 57.34 287 P P 20 35 12.6 +1.2
NIL sP sP 20 35 25.5 -0.3
CHGR **Chuyangaron** 57.34 294 P P 20 35 11.9 +0.5
CHGR **Chuyangaron** 57.34 294 P P 20 35 11.9 +0.5
CHGR pmax pmax
comp=Z,554nm,0.8s
ABKAR **Akbulak array** 57.39 309 P P 20 35 11.5 0.0
ABKAR **Akbulak array** 57.39 309 P P 20 35 12.0 +0.5
ABKAR IAmb IAmb 20 35 13.1
comp=Z,118nm,0.8s
ABKAR **Akbulak array** 57.39 309 ⇑P P 20 35 10.9 -0.5
NDI **New Delhi** 57.41 280 *e*P P 20 35 13.0 +1.1
NDI *e*S S 20 43 06.0 -0.4
TULEG **Thule** 57.42 10 IAMs_20 IAMs_20 21 01 50.6
comp=Z,5μm,20.0s
TULEG **Thule** 57.42 10 *i*P P 20 35 10.0 -1.2
TULEG IAmb IAmb 20 35 11.5
comp=Z,149nm,1.2s
TULEG **Thule** 57.42 10 ⇑P P 20 35 10.4 -0.8
MMRI **Maumere** 57.43 211 P P 20 35 11.3 -0.8
comp=Z,3μmcomp=Z,4μmcomp=Z,140nm,1.7s
MMRI **Maumere** 57.43 211 P P 20 35 12.2 +0.1
comp=Z,138nm,1.7s
SIMJ **Simiganj** 57.44 294 P P 20 35 12.5 +0.3
SIMJ pP pP 20 35 21.7 -0.9
MYKOM **Kota Tinggi** 57.45 236 P P 20 35 13.2 +0.9
comp=Z,5μmcomp=Z,3μmcomp=Z,101nm,2.0s
MYKOM **Kota Tinggi** 57.45 236 ⇑P P 20 35 14.0 +1.7
BHGR **Bahadurgarh** 57.60 280 ⇑*i*P P 20 35 13.5 +0.2
PRGR **Permogore** 57.68 327 *e*P P 20 35 12.1 -1.2
PRGR *e* 20 36 01.5
PRGR *e*S S 20 43 08.6 -0.4
PRGR pmax pmax
comp=Z,75nm,0.9s
SOEI **Soe** 57.75 208 P P 20 35 15.0 +0.6
comp=Z,149nm,1.3s
TPRI **Tanjung Pinang** 57.75 235 P P 20 35 15.4 +1.0
comp=Z,4μmcomp=Z,3μmcomp=Z,104nm,2.0s
SONA **Sohna** 57.76 280 *e*P P 20 35 13.9 -0.5
KIRV **Kirov** 57.76 322 LR LR 21 02 23.0
comp=Z,9μm,19.5s,baz=56,slow=38
KIRV **Kirov** 57.76 322 *ce*P P 20 35 12.0 -1.9
LVZ **Lovozero** 57.80 336 *ce*P P 20 35 12.0 -2.1
LVZ pmax pmax
comp=Z,29nm,1.0s
AKTO **Aktyubinsk** 57.84 311 LR LR 21 01 58.2
comp=Z,6μm,20.9s,baz=58,slow=38
BTDF **Bukit Timah Da** 57.84 236 P P 20 35 16.5 +1.5
comp=Z,3μmcomp=Z,2μmcomp=Z,93nm,1.0s
BLSP **Bilaspur** 57.85 271 ⇑*i*P P 20 35 14.4 -0.7
BLSP *i* x x 20 37 24.2
COEN **Coen** 57.90 186 P P 20 35 15.7 +0.4
COEN IAmb IAmb 20 35 32.3
comp=Z,99nm,1.0s
COEN **Coen** 57.90 186 P P 20 35 16.5 +1.2
comp=Z,113nm,1.2s
COEN **Coen** 57.90 186 ⇑P P 20 35 16.4 +1.0
PGC **Sidney** 57.90 51 P P 20 35 14.6 -0.4
B04A **Port Angeles** 58.19 52 P P 20 35 17.4 +0.3
NEEM **North Greenlan** 58.19 5 *i*P P 20 35 15.4 -1.7
NEEM IAmb IAmb 20 35 18.1
comp=Z,72nm,0.9s
KDU **Kakadu** 58.23 198 P P 20 35 17.7 +0.1
comp=Z,163nm,1.1s
KDU **Kakadu** 58.23 198 ⇑P P 20 35 17.4 -0.2
NLWA **Neilton Lookou** 58.33 53 P P 20 35 18.9 +0.7
NLWA IAMs_20 IAMs_20 20 56 37.5
comp=Z,3μm,22.0s
NLWA **Neilton Lookou** 58.33 53 ⇓P P 20 35 19.2 +1.0
APA **Apatity** 58.37 336 ⇓*i*P P 20 35 11.0 -7.1
BATI **Baumata** 58.38 209 P P 20 35 17.6 -1.1
comp=Z,18nm,0.6s,baz=315,slow=1.4,SNR=4.5
BATI LR LR 21 00 21.5
comp=Z,799nm,21.6s,baz=6.5,slow=36
comp=Z,18nm,0.6s
JHNI **Jhansi** 58.38 276 ⇑*i*P P 20 35 17.8 -1.0
KEV **Kevo** 58.66 340 ⇑P P 20 35 18.6 -1.4
KEV **Kevo** 58.66 340 P P 20 35 19.0 -1.1
MTN **Manton Dam** 58.69 199 P P 20 35 20.9 +0.1
MTN **Manton Dam** 58.69 199 P P 20 35 20.9 +0.1
comp=Z,183nm,1.2s
MTN **Manton Dam** 58.69 199 ⇑P P 20 35 20.9 +0.1
RAGD **RAYAGADA** 58.73 267 ⇑*i*P P 20 35 21.9 +0.6
HAMF **Hammerfest** 58.84 341 *e*P P 20 35 20.1 -1.1
HAMF IAmb IAmb 20 35 37.3
comp=Z,68nm,1.5s
DSRI **Dabo** 58.85 234 P P 20 35 23.9 +1.8
comp=Z,3μmcomp=Z,122nm,2.0s
LASI **Langsa, Aceh** 59.03 243 P P 20 35 23.6 +0.3
comp=Z,8μmcomp=Z,9μmcomp=Z,592nm,1.5s
LHMI **Lhok Sumawe** 59.11 245 IAMs_20 IAMs_20 21 01 30.3
comp=Z,5μm,21.0s
DAG **Danmarks Havn** 59.16 356 *i*P P 20 35 21.0 -2.4
DAG IAmb IAmb 20 35 23.2
comp=Z,99nm,1.7s
ARA0 **ARCESS Array S** 59.19 340 *e*P P 20 35 23.2 -0.5
ARA0 IAmb IAmb 20 35 32.0
comp=Z,32nm,1.1s
ARCES **ARCESS Array B** 59.19 340 P P 20 35 22.2 -1.5
comp=Z,6.1nm,0.5s,baz=48,slow=8.4,SNR=49
ARCES LR LR 21 04 39.1
comp=Z,8μm,19.9s,baz=38,slow=40
ARCES PKP2bc 21 05 03.7
comp=Z,5.6nm,1.1s,baz=261,slow=4.8,SNR=3.7
comp=Z,6.1nm,0.5s
ARCES **ARCESS Array B** 59.19 340 P P 20 35 22.9 -0.8
ARCES **ARCESS Array B** 59.19 340 P P 20 35 22.9 -0.8
ARCES pmax pmax
comp=Z,36nm,0.9s
F03A **Seaside** 59.30 54 P P 20 35 25.2 +0.4
PPBI **Pangkal Pinang** 59.34 231 P P 20 35 26.7 +1.3
comp=Z,4μmcomp=Z,209nm,1.5s
PLAI **Plampang** 59.36 215 P P 20 35 20.5 -5.0
comp=Z,3μmcomp=Z,1μmcomp=Z,69nm,1.5s
PLAI **Plampang** 59.36 215 P P 20 35 24.3 -1.2
comp=Z,69nm,1.5s
KMMI **Kalianget** 59.47 220 P P 20 35 26.7 +0.4
comp=Z,2μmcomp=Z,77nm,1.1s
D05A **Enumclaw** 59.52 52 P P 20 35 26.1 -0.3
D05A IAmb IAmb 20 35 44.5
comp=Z,119nm,1.2s
TWSI **Taliwang, Sumb** 59.66 216 P P 20 35 25.8 -1.8
comp=Z,3μmcomp=Z,1μmcomp=Z,82nm,1.2s
PNT **Penticton** 59.67 49 ⇑P P 20 35 26.9 -0.5
PSI **Prapat** 59.69 241 P P 20 35 28.4 +0.4
comp=Z,72nm,1.0s,baz=2.9,slow=3.3,SNR=26
PSI LR LR 21 04 56.6
comp=Z,2μm,18.1s,baz=20,slow=40
comp=Z,72nm,1.0s
PSI **Prapat** 59.69 241 P P 20 35 28.2 +0.2
comp=Z,3μmcomp=Z,1μmcomp=Z,69nm,1.4s,comp=Z,6μm,1.4s,
comp=Z,2μm,1.4s,comp=Z,112nm,1.4s
PSI P P 20 35 28.7 +0.7
comp=Z,3μmcomp=Z,1μmcomp=Z,69nm,1.4s,comp=Z,6μm,1.4s,
comp=Z,2μm,1.4s,comp=Z,112nm,1.4s
PSI **Prapat** 59.69 241 P P 20 35 29.1 +1.1
comp=Z,112nm,1.4s
KBL **Kabul** 59.71 290 P P 20 35 28.0 -0.1
KBL **Kabul** 59.71 290 P P 20 35 28.0 -0.1
KBL pmax pmax
comp=Z,249nm,1.0s
KBL **Kabul** 59.71 290 P P 20 35 27.6 -0.5
SNR=125
KBL P P 20 35 27.6 -0.5
SNR=125
KBL P P 20 35 27.6 -0.5
SNR=125
KLNI **Mataram** 59.72 217 P P 20 35 27.7 -0.3
comp=Z,2μmcomp=Z,90nm,2.3s
SRBI **Singaraja** 59.81 218 P P 20 35 27.4 -1.2
comp=Z,4μmcomp=Z,5μmcomp=Z,378nm,1.2s
KCSI **Kotacane, Aceh** 59.87 243 P P 20 35 25.9 -3.3
comp=Z,32nm,1.2s
ABJI **Asem Bagus** 60.00 220 P P 20 35 30.2 +0.3
comp=Z,5μmcomp=Z,222nm,1.7s
KTK1 **Kautokeino** 60.13 340 *e*P P 20 35 30.0 -0.2
KTK1 IAmb IAmb 20 35 31.2
comp=Z,23nm,0.8s
MLSI **Meulaboh, Aceh** 60.19 244 P P 20 35 31.0 -0.3
comp=Z,94nm,0.9s
RTBI **Rangdo, Negare** 60.26 219 P P 20 35 27.4 -4.4
comp=Z,3μmcomp=Z,176nm,1.4s
BKNI **Bangkinang** 60.31 237 P P 20 35 33.6 +1.5
comp=Z,5μmcomp=Z,7μmcomp=Z,605nm,1.0s
BKNI **Bangkinang** 60.31 237 P P 20 35 34.1 +2.0
comp=Z,605nm,1.0s
BYJI **Banyuwangi** 60.31 219 P P 20 35 32.4 +0.4
comp=Z,213nm,1.2s
JMBI **JAMBI** 60.33 234 P P 20 35 34.8 +2.6
comp=Z,3μmcomp=Z,199nm,1.1s
B08A **Colville Reser** 60.36 50 P P 20 35 32.1 -0.1
JETT **Jettan, Norway** 60.40 341 *e*P P 20 35 31.6 -0.4
JETT IAmb IAmb 20 35 34.9
comp=Z,48nm,0.7s
KLMR **Klimovskoe** 60.53 328 *c i*P P 20 35 33.0 -0.1
KLMR *e**PP sP 20 35 46.6 -0.8
KLMR PPP PPP 20 39 18.4
KLMR S S 20 43 44.0 -2.0
KLMR pmax pmax
comp=Z,93nm,0.9s
KLMR MLR MLR
comp=Z,6μm,20.0s
KLMR **Klimovskoe** 60.53 328 ⇑*i*P P 20 35 33.0 -0.1
KLMR ⇑*i*P P 20 35 33.0 -0.1
KLMR *e*P P 20 35 33.0 -0.1
KLMR AMP 20 35 34.2
comp=Z,93nm,0.9s
KLMR *e*pP sP 20 35 46.6 -0.8
KLMR PPP PPP 20 39 18.4
KLMR S S 20 43 44.0 -2.0
KLMR S S 20 43 44.0 -2.0
KLMR SS SS 20 47 53.1 +10
KLMR SS SS 20 47 53.1 +10
KLMR LQ LQ 20 55 38.5
KLMR LQ LQ 20 55 38.5
KLMR LR LR 20 57 21.1
KLMR AMP 21 03 47.0
comp=Z,6μm,20.0s
BHPL **Bhopal** 60.55 275 ⇑*i*P P 20 35 32.9 -0.9
BHPL IAmb IAmb 20 35 36.4
comp=Z,144nm,0.9s
BHPL *i* x x 20 59 51.4
AJM **Ajmer** 60.55 279 ⇓*i*P P 20 35 30.0 -3.8
AJM ⇑*i*P P 20 35 34.3 +0.5
BUCK **Buck Mountain** 60.60 56 P P 20 35 34.8 +0.9
JAGI **Jajag, Banyuwa** 60.63 219 P P 20 35 31.1 -3.1
comp=Z,3μmcomp=Z,869nmcomp=Z,43nm,1.2s
JAGI **Jajag, Banyuwa** 60.63 219 P P 20 35 32.3 -1.9
comp=Z,44nm,0.9s
TRO **Tromso** 60.68 342 *e*P P 20 35 32.8 -1.1
TRO IAmb IAmb 20 35 34.8
comp=Z,56nm,1.0s
NGP **Nagpur** 60.69 272 ⇑*i*P P 20 35 34.5 -0.2
EDM **Edmonton** 60.73 43 P P 20 35 34.7 +0.1
EDM **Edmonton** 60.73 43 P P 20 35 34.7 +0.1
EDM pmax pmax
comp=Z,137nm,0.9s
PMBI **Palembang** 60.73 232 P P 20 35 36.2 +1.2
comp=Z,5μmcomp=Z,7μmcomp=Z,365nm,1.4s
PMBI **Palembang** 60.73 232 P P 20 35 37.6 +2.6
comp=Z,320nm,1.2s
HOOD **Mount Hood Mea** 60.75 54 P P 20 35 36.0 +1.0
MSF **Maaselka** 60.77 336 P P 20 35 33.7 -0.9
MSF pmax pmax
comp=Z,56nm,1.0s
NGJI **Ngawi** 60.94 223 P P 20 35 37.7 +1.4
comp=Z,4μmcomp=Z,91nm,1.9s
DBO **Dodson Butte** 61.05 57 P P 20 35 37.6 +0.6
SMRI **Semarang** 61.17 224 P P 20 35 38.4 +0.5
comp=Z,6μmcomp=Z,7μmcomp=Z,377nm,1.3s
SMRI **Semarang** 61.17 224 P P 20 35 39.1 +1.2
comp=Z,376nm,1.3s
D08A **Wollman Farm,** 61.33 51 P P 20 35 38.9 +0.2
PWJI **Pagerwojo** 61.34 222 P P 20 35 38.2 -0.8
comp=Z,4μmcomp=Z,400nm,1.0s
HAWA **Hanford** 61.36 52 ⇑P P 20 35 39.5 +0.6
HUMO **Hull Mountain** 61.51 57 P P 20 35 41.1 +1.0
HUMO IAMs_20 IAMs_20 20 56 27.9
comp=Z,4μm,22.0s
HUMO **Hull Mountain** 61.51 57 ⇓P P 20 35 41.3 +1.2
KRMB **Red Mountain** 61.55 59 P P 20 35 41.0 +0.5
NEW **Newport** 61.63 49 LR LR 21 02 35.4
comp=Z,2μm,19.9s,baz=308,slow=36
NEW **Newport** 61.63 49 P P 20 35 41.1 +0.4
NEW IAmb IAmb 20 35 58.0
comp=Z,75nm,1.1s
NEW **Newport** 61.63 49 P P 20 35 41.2 +0.4
NEW pmax pmax
comp=Z,75nm,1.2s
NEW MLR MLR
comp=Z,2μm,21.0s
NEW **Newport** 61.63 49 P P 20 35 41.0 +0.2
baz=305,SNR=20
GSI **Gunungsitoli** 61.69 241 P P 20 35 43.5 +2.0
comp=Z,121nm,2.1s
CTJI **Waduk Cacaban** 61.76 225 P P 20 35 42.1 +0.1
comp=Z,4μmcomp=Z,236nm,1.9s
UGM **Wanagama** 61.87 223 P P 20 35 42.1 -0.6
comp=Z,4μmcomp=Z,6μmcomp=Z,359nm,1.6s
UGM **Wanagama** 61.87 223 P P 20 35 42.4 -0.3
comp=Z,358nm,1.6s
YOGI **Yogyakarta** 61.90 223 P P 20 35 41.6 -1.2
comp=Z,3μmcomp=Z,218nm,1.5s
MTSU **Mount Surprise** 61.98 184 P P 20 35 44.5 +1.2
comp=Z,50nm,1.1s
KNRA **Kununurra** 62.01 201 P P 20 35 43.5 +0.1
KNRA IAmb IAmb 20 35 45.1
comp=Z,179nm,1.4s
KNRA **Kununurra** 62.01 201 P P 20 35 44.0 +0.6
comp=Z,108nm,1.5s
KHMM **Horse Mountain** 62.04 59 P P 20 35 44.5 +0.8
KHMM IAmb IAmb 20 36 12.6
comp=Z,77nm,1.2s
PINE **Pine Mountain** 62.04 55 P P 20 35 44.8 +1.0
PINE IAmb IAmb 20 36 06.7
comp=Z,74nm,0.8s
E09A **Wood Farm, Sta** 62.08 51 P P 20 35 44.5 +0.7
E09A IAmb IAmb 20 36 01.3
comp=Z,145nm,1.2s
BELG **Belogornoye** 62.13 317 LR LR 21 05 08.5
comp=Z,7μm,19.2s,baz=46,slow=38
BELG **Belogornoye** 62.13 317 *c i*P P 20 35 43.4 -0.6
BELG pmax pmax
comp=Z,20nm,0.9s
BELG MLR MLR
comp=Z,1μm,17.0s
YBH **Yreka Blue Hor** 62.17 58 LR LR 20 58 38.6
comp=Z,2μm,21.8s,baz=314,slow=32
YBH **Yreka Blue Hor** 62.17 58 P P 20 35 44.8 +0.2
YBH IAMs_20 IAMs_20 20 57 20.2
comp=Z,3μm,22.0s
YBH **Yreka Blue Hor** 62.17 58 P P 20 35 44.8 +0.2
YBH pmax pmax
comp=Z,30nm,1.0s
KLI **Kotabumi** 62.27 230 P P 20 35 45.8 +0.4
comp=Z,5μmcomp=Z,299nm,1.2s
G08A **Pilot Rock** 62.33 53 P P 20 35 45.3 -0.3
MASI **Maura Aman, Be** 62.36 234 P P 20 35 46.0 0.0
comp=Z,2μmcomp=Z,3μmcomp=Z,168nm,1.0s
LEM **Lembang** 62.42 227 P P 20 35 46.8 +0.3
comp=Z,126nm,1.0s,baz=96,slow=6.3,SNR=25
LEM LR LR 21 01 26.4
comp=Z,890nm,21.9s,baz=14,slow=35
comp=Z,126nm,1.0s
AKL **Akola** 62.44 273 ⇑*i*P P 20 35 46.9 +0.3
VJD **Vijayawada** 62.53 267 ⇑*i*P P 20 35 48.0 +0.9
K05A **Summer Lake** 62.69 56 P P 20 35 49.0 +0.8
SISI **Saibi** 62.80 238 P P 20 35 48.8 -0.1
comp=Z,14μmcomp=Z,4μmcomp=Z,206nm,1.1s
KCPM **Cahto Peak** 62.82 60 P P 20 35 48.9 -0.1
KCPM IAmb IAmb 20 36 12.1
comp=Z,237nm,1.9s
LWLI **Liwa** 62.85 231 P P 20 35 48.6 -0.8
comp=Z,4μmcomp=Z,3μmcomp=Z,265nm,1.3s
STEI **Steigen** 62.85 342 *e*P P 20 35 47.5 -1.0
STEI IAmb IAmb 20 35 48.0
comp=Z,30nm,1.2s
WALA **Waterton Lakes** 62.88 47 P P 20 35 49.3 0.0
WALA IAmb IAmb 20 36 03.9
comp=Z,103nm,1.1s
WALA **Waterton Lakes** 62.88 47 ⇑P P 20 35 49.3 0.0
JASL **Jaisalmer** 62.93 282 *e*P P 20 35 50.5 +0.8
TV1H **Townsville Har** 63.01 181 P P 20 35 51.2 +1.1
comp=Z,46nm,1.0s
KASI **Kota Agung** 63.02 230 P P 20 35 49.2 -1.1
comp=Z,2μmcomp=Z,110nm,1.4s
LOF **Lofoten** 63.06 343 *e*P P 20 35 49.1 -0.8
LOF IAmb IAmb 20 35 59.6
comp=Z,76nm,1.2s
CNJI **Cibinong** 63.08 227 P P 20 35 48.7 -2.1
comp=Z,696nmcomp=Z,74nm,1.1s
SKJI **Sukabumi** 63.13 228 P P 20 35 49.6 -1.5
comp=Z,62nm,1.3s
FAUS **Fauske** 63.28 341 *e*P P 20 35 51.0 -0.4
FAUS IAmb IAmb 20 35 52.9
comp=Z,28nm,0.7s
HYB **Hyderabad** 63.45 269 ⇑*i*P P 20 35 53.1 -0.2
HYB IAmb IAmb 20 35 55.0
comp=Z,137nm,1.0s
HYBB **Hyderabad (biro** 63.45 269 IVmB_BB 20 35 51.5
comp=Z,872nm,4.8s
HYBB *e*P P 20 35 53.3 0.0
HYBB *e*pP pP 20 36 02.9 -0.9
HYBB *e*PcP PcP 20 36 30.7 +0.8
HYBB *e*PP PP 20 38 13.9 +1.0
HYBB *e*S S 20 44 25.8 +1.8
HYBB *e*ScS ScS 20 45 44.8 +0.7
HYBB *e*SS SS 20 48 34.4 +3.3
HYBB IVMs_BB IVMs_BB 21 05 48.1
comp=Z,629nm,22.3s
MOD **Modoc Plateau** 63.53 56 IAMs_20 IAMs_20 20 59 15.1
comp=Z,3μm,22.0s
BMO **Blue Mountains** 63.53 52 IAMs_20 IAMs_20 20 59 21.0
comp=Z,3μm,22.0s
HOPS **Hopland Field** 63.55 60 IAMs_20 IAMs_20 21 01 08.9
comp=Z,3μm,21.0s
SUMG **Summit** 63.58 2 *i*P P 20 35 53.5 -0.4
SUMG IAmb IAmb 20 35 56.0
comp=Z,144nm,1.0s
CTA **Charters Tower** 63.85 182 P P 20 35 55.9 +0.3
comp=Z,9.7nm,0.8s,baz=358,slow=7.1,SNR=12
CTA LR LR 21 00 03.2
comp=Z,2μm,21.5s,baz=340,slow=32
comp=Z,9.7nm,0.8s
CTA **Charters Tower** 63.85 182 P P 20 35 56.1 +0.4
comp=Z,56nm,1.6s
CTAO **Charters Tower** 63.85 182 P P 20 35 56.5 +0.8
comp=Z,48nm,1.6s
CTAO **Charters Tower** 63.85 182 ⇓P P 20 35 56.0 +0.3
CTAO **Charters Tower** 63.85 182 P P 20 35 55.3 -0.4
CTAO pP pP 20 36 05.7 -0.3
CTAO sP sP 20 36 10.2 0.0
JMIC **Jan Mayen** 64.04 352 LR LR 21 04 55.0
comp=Z,1μm,18.6s,baz=24,slow=37
PLID **Pearl Lake** 64.13 52 P P 20 35 56.8 -0.9
PLID IAmb IAmb 20 36 15.5
comp=Z,86nm,1.1s
PLID IAMs_20 IAMs_20 21 00 15.8
comp=Z,4μm,22.0s
MCCM **Marconi Confer** 64.17 61 IAMs_20 IAMs_20 20 57 27.5
comp=Z,3μm,22.0s
WVOR **Wild Horse Val** 64.20 55 IAMs_20 IAMs_20 20 59 31.9
comp=Z,3μm,22.0s
WVOR **Wild Horse Val** 64.20 55 ⇑P P 20 35 58.6 +0.5
MSO **Missoula** 64.22 49 IAmb IAmb 20 36 16.0
comp=Z,118nm,1.1s
MSO **Missoula** 64.22 49 P P 20 35 58.3 +0.2
baz=308,SNR=34
HRA **Herat** 64.35 294 IAmb IAmb 20 36 01.0
comp=Z,153nm,1.1s
MOR8 **Moi Rana** 64.47 341 *e*P P 20 35 57.5 -1.8
MOR8 IAmb IAmb 20 35 59.5
comp=Z,44nm,0.8s
KONS **Konsvik** 64.50 342 *e*P P 20 36 00.3 +0.8
MOS **Moscow** 64.60 324 *e*P P 20 35 59.4 -0.8
MOS *e* 20 36 15.7
MOS *e* 20 36 33.2
MOS *e*S S 20 44 34.1 -3.0
MOS pmax pmax
comp=Z,800nm,2.7s
MOS pmax pmax
comp=Z,55nm,0.8s
MOS pmax pmax
comp=N,1μm,4.1s
MOS pmax pmax
comp=E,600nm,3.7s
MOS smax smax
comp=N,1μm,4.8s
MOS MLR MLR
comp=Z,4μm,17.0s
QIS **Mount Isa** 64.76 189 P P 20 36 01.6 0.0
comp=Z,53nm,1.3s
GEYT **Alibeck** 64.88 299 P P 20 36 02.9 +0.4
comp=Z,115nm,0.8s,baz=14,slow=3.1,SNR=273
GEYT S S 20 44 41.4 +0.1
comp=Z,0.4nm,0.3s,baz=106,slow=26,SNR=1.1

GEYT LR LR 21 06 26.6
comp=Z,8μm,20.9s,baz=78,slow=38
comp=Z,115nm,0.8s
GEYT Alibeck 64.88 299 P **P** **20 36 03.1 +0.7**
GYA0B ALIBECK ARRAY 64.88 299 P **P** **20 36 02.2 -0.2**
WR0 Warramunga Arr 64.89 194 P **P** **20 36 01.3 -1.2**
WR0 IAmb IAmb 20 36 16.1
comp=Z,230nm,1.8s
WRAB Tennant Creek 64.90 194 *ce*P **P** **20 36 01.6 -1.0**
WRAB pmax pmax
comp=Z,52nm,1.3s
WRAB Tennant Creek 64.90 194 P **P** **20 36 02.4 -0.2**
comp=Z,77nm,1.4s
WRAB Tennant Creek 64.90 194 P **P** **20 36 01.1 -1.5**
WRAB sP **pP** **20 36 14.3 +1.4**
FIA1 FINESS Array S 64.90 333 P **P** **20 36 01.4 -0.8**
FINES FINESS Array B 64.91 333 P **P** **20 36 01.2 -0.9**
comp=Z,100nm,0.8s,baz=52,slow=7.5,SNR=108
FINES LR LR 21 06 13.8
comp=Z,5μm,21.9s,baz=42,slow=38
comp=Z,100nm,0.8s
FINES FINESS Array B 64.91 333 P **P** **20 36 01.1 -1.1**
WB2 Warramunga Arr 64.91 194 P **P** **20 36 02.1 -0.5**
WB2 IAmb IAmb 20 36 15.4
comp=Z,91nm,1.1s
WRA Warramunga Arr 64.91 194 P **P** **20 36 02.0 -0.7**
comp=Z,13nm,0.8s,baz=13,slow=6.9,SNR=29
WRA PKP2bc 21 04 48.4
comp=Z,3.5nm,0.9s,baz=202,slow=2.5,SNR=12
comp=Z,13nm,0.8s
WRA Warramunga Arr 64.91 194 P **P** **20 36 01.1 -1.6**
WRA Warramunga Arr 64.91 194 P **P** **20 36 01.1 -1.6**
WRA pmax pmax
comp=Z,17nm,1.7s
WB1 Warramunga Ar. 64.93 194 P **P** **20 36 02.5 -0.3**
comp=Z,62nm,1.1s
FFC Flin Flon 65.06 37 P **P** **20 36 03.8 +0.5**
FFC IAmb IAmb 20 36 20.5
comp=Z,112nm,0.9s
FFC Flin Flon 65.06 37 IAMs_20 IAMs_20 21 07 17.5
comp=Z,3μm,20.0s
FFC Flin Flon 65.06 37 P **P** **20 36 03.8 +0.5**
FFC pmax pmax
comp=Z,112nm,0.9s
FFC MLR MLR
comp=Z,3μm,20.0s
FFC Flin Flon 65.06 37 P **P** **20 36 03.6 +0.3**
FFC pP **pP** **20 36 14.3 +0.7**
MDRS Chennai 65.11 264 *eP* **P** **20 36 04.0 -0.1**
MDRS IAmb IAmb 20 36 09.0
comp=Z,41nm,0.7s
FCC Fort Churchill 65.42 30 IAmb IAmb 20 36 22.1
comp=Z,180nm,1.2s
OBN Obninsk 65.46 324 LR LR 21 07 12.2
comp=Z,2μm,19.0s,baz=38,slow=38
OBN Obninsk 65.46 324 *c i*P **P** **20 36 05.0 -0.8**
OBN *i* *PP **sP** **20 36 18.1 -2.2**
OBN *e**SP **pP** **20 36 21.6 +5.2**
OBN *e* 20 36 33.2
OBN *e*S **S** **20 44 45.8 -1.9**
OBN *i* *SS **sS** **20 45 08.3 +3.7**
OBN pmax pmax
comp=Z,230nm,2.1s
OBN MLR MLR
comp=Z,7μm,16.0s
SCO Scoresbysund 65.55 356 IAMs_20 IAMs_20 21 05 07.6
comp=Z,4μm,20.0s
SCO Scoresbysund 65.55 356 ⇓P **P** **20 36 07.3 +1.1**
PNTR Pine Nut 65.65 59 IAmb IAmb 20 36 21.7
comp=Z,71nm,0.9s
EGMT Eagleton 65.70 46 IAMs_20 IAMs_20 21 06 09.1
comp=Z,3μm,20.0s
EGMT Eagleton 65.70 46 P **P** **20 36 07.9 +0.3**
baz=309,SNR=19
VRH Novokhopyorsk 65.74 319 *eP* **P** **20 36 06.5 -1.2**
VRH *e*S **S** **20 44 45.7 -5.6**
VRH pmax pmax
comp=Z,140nm,0.8s
VRH pmax pmax
comp=Z,920nm,2.4s
VRH smax smax
comp=N,1μm,8.2s
VRH MLR MLR
comp=Z,7μm,16.0s
CMB Columbia Colle 65.81 60 IAmb IAmb 20 36 28.1
comp=Z,148nm,1.8s
DLMT Dillon 65.86 50 IAmb IAmb 20 36 49.2
comp=Z,122nm,1.4s
HLID Hailey 65.97 52 P **P** **20 36 10.0 +0.4**
baz=308,SNR=27
KOUNC Koumac, New Ca 65.98 163 IAMs_20 IAMs_20 21 09 27.9
comp=Z,4μm,18.0s
KOUNC Koumac, New Ca 65.98 163 P **P** **20 36 11.5 +2.0**
KOUNC Koumac, New Ca 65.98 163 ⇑sP sP 20 36 20.9 -3.1
BHUJ Bhuj 66.10 280 ⇑*iP* **P** **20 36 11.2 +0.7**
BHUJ IAmb IAmb 20 36 14.2
comp=Z,118nm,1.0s
BHUJ *i* x x 21 02 39.4
LPSR Galich'ya Gora 66.12 321 *eP* **P** **20 36 09.5 -0.6**
LPSR *e*S **S** **20 44 51.4 -4.4**
LPSR pmax pmax
comp=Z,170nm,2.0s
LPSR smax smax
comp=N,670nm,7.0s
LPSR MLR MLR
comp=Z,7μm,16.0s
ILULI Ilulissat 66.16 7 *eP* **P** **20 36 09.3 -0.8**
ILULI IAmb IAmb 20 36 10.0
comp=Z,95nm,1.0s
BOZ Bozeman (W) 66.24 49 P **P** **20 36 11.7 +0.4**
baz=309,SNR=56
MEF Metsahovi 66.37 333 *eP* **P** **20 36 11.5 -0.1**
NSS Namsos 66.41 341 *eP* **P** **20 36 12.1 +0.3**
NSS IAmb IAmb 20 36 18.7
comp=Z,47nm,1.2s
XMI Christmas Isla 66.48 226 P **P** **20 36 13.3 +0.4**
comp=Z,243nm,1.4s
XMI Christmas Isla 66.48 226 ⇑P **P** **20 36 13.3 +0.4**
XMI ⇓P **P** **20 36 13.5 +0.5**
KVN Kaiserville 66.59 58 IAmb IAmb 20 36 27.6
comp=Z,102nm,1.0s
RAF Rauma 66.59 335 *eP* **P** **20 36 12.6 -0.3**
VORR Voronezh 66.61 320 *eP* **P** **20 36 13.4 +0.1**
VORR pmax pmax
comp=Z,120nm,1.0s
KAD Karad 66.67 272 ⇑*iP* **P** **20 36 13.8 -0.4**
NVAR Mina Array Bea 66.85 58 P **P** **20 36 15.9 +0.6**
comp=Z,36nm,0.7s,baz=287,slow=6.8,SNR=204
NVAR LR LR 21 03 43.6
comp=Z,2μm,20.1s,baz=299,slow=34
NVAR PKP2bc 21 04 47.2
comp=Z,1.2nm,0.8s,baz=144,slow=2.4,SNR=4.8
comp=Z,36nm,0.7s
LIFNC LIFOU 66.86 160 IAMs_20 IAMs_20 21 08 53.2
comp=Z,2μm,18.0s
LIFNC LIFOU 66.86 160 P **P** **20 36 16.3 +1.2**
VSU Vasula 66.90 331 *eP* **P** **20 36 15.3 +0.3**
VSR Storozhevoye 66.94 320 *eP* **P** **20 36 14.7 -0.7**
VSR *e*S **S** **20 44 59.0 -6.8**
VSR pmax pmax
comp=Z,410nm,2.2s
VSR pmax pmax
comp=Z,1μm,2.4s
VSR smax smax
comp=N,1μm,11.7s
VSR MLR MLR
comp=Z,8μm,15.0s
MLAC Mammoth, Mammo 67.02 59 P **P** **20 36 17.4 +1.0**
baz=309
ICESG Greenland Ices 67.03 3 *i*P **P** **20 36 15.9 -0.2**
ICESG IAmb IAmb 20 36 18.2
comp=Z,331nm,0.9s
GCMT Greycliff 67.17 48 P **P** **20 36 18.5 +1.3**
YHH Holmes Hill 67.18 49 P **P** **20 36 18.5 +1.0**
ELK Elko 67.25 55 LR LR 21 01 43.0
comp=Z,2μm,21.8s,baz=320,slow=32
ELK Elko 67.25 55 IAMs_20 IAMs_20 21 06 05.6
comp=Z,3μm,20.0s
MSVF Nonsavu 67.33 149 P **P** **20 36 20.0 +1.7**
comp=Z,6.5nm,0.8s,baz=298,slow=11,SNR=4.2
MSVF LR LR 21 00 00.6
comp=Z,3μm,21.2s,baz=339,slow=31
comp=Z,6.5nm,0.8s
MSVF Nonsavu 67.33 149 IAMs_20 IAMs_20 21 08 59.4
comp=Z,4μm,19.0s
MSVF Nonsavu 67.33 149 P **P** **20 36 20.0 +1.7**

SALM Salem 67.54 264 *eP* **P** **20 36 19.9 +0.2**
H17A Grant Village 67.58 49 P **P** **20 36 22.0 +2.1**
baz=310,SNR=25
MTSE Matsula 67.71 332 *eP* **P** **20 36 20.0 -0.2**
MARNC Mare, Loyalty 67.73 160 ⇓sP sP 20 36 37.8 +2.7
SMMC Simmler 67.74 62 P **P** **20 36 21.4 +0.6**
baz=309
TIN Tinemaha, Big 67.76 60 P **P** **20 36 21.8 +0.8**
baz=309,SNR=5.3
AAL Aland 67.80 335 *eP* **P** **20 36 19.7 -0.9**
RLMT Red Lodge 67.82 48 IAmb IAmb 20 36 40.0
comp=Z,100nm,1.2s
RLMT IAMs_20 IAMs_20 21 07 20.3
comp=Z,3μm,21.0s
RLMT Red Lodge 67.82 48 P **P** **20 36 22.1 +0.7**
baz=311,SNR=22
TBLU Trondheim 67.90 341 *eP* **P** **20 36 19.1 -2.2**
TBLU IAmb IAmb 20 36 19.2
comp=Z,30nm,0.9s
MOOW Moose Ponds 67.91 50 IAmb IAmb 20 36 40.7
comp=Z,76nm,1.1s
NOUC Port Laguerre 67.92 162 P **P** **20 36 23.3 +1.5**
comp=Z,80nm,1.4s
NOUC Port Laguerre 67.92 162 P **P** **20 36 24.9 +3.1**
NOUC pP **pwP** **20 36 33.1 -1.2**
DZM Mont Dzumac 67.92 162 *eP* **P** **20 36 23.7 +1.8**
comp=Z,264nm,1.7s
DZM *e*S **S** **20 45 18.0 -0.3**
comp=Z,1μm,25.1s
DZM *e*SS **SS** **20 49 40.8 -0.4**
comp=Z,2μm,28.1s
DZM *e*LR LR 20 56 51.7
comp=Z,4μm,30.9s
DZM Mont Dzumac 67.92 162 P **P** **20 36 22.1 +0.2**
comp=Z,8.5nm,0.9s,baz=38,slow=5.0,SNR=5.2
DZM LR LR 21 02 16.6
comp=Z,2μm,20.5s,baz=3.0,slow=32
comp=Z,8.5nm,0.9s
DZM Mont Dzumac 67.92 162 P **P** **20 36 23.1 +1.2**
DZM Mont Dzumac 67.92 162 ⇓sP **sP** **20 36 33.5 -2.9**
DZM ⇑sP pwP 20 36 34.0 -0.4
DZM Mont Dzumac 67.92 162 P **P** **20 36 24.0 +2.0**
DZM pP **pP** **20 36 32.9 +0.8**
TPAW Teton Pass 67.96 50 IAmb IAmb 20 36 41.2
comp=Z,162nm,1.1s
VES Vestal, Richgr 67.98 61 P **P** **20 36 22.0 -0.3**
baz=309,SNR=11
MAK Makhachkala 68.07 309 *eP* **P** **20 36 21.6 -1.1**
MAK *e* 20 38 52.8
MAK *e*PPP PPP 20 40 28.4
MAK *e*S **S** **20 45 19.2 -0.5**
MAK *e*SS **SS** **20 49 42.6 +1.0**
MAK pmax pmax
comp=Z,864nm,1.6s
MAK MLR MLR
comp=Z,3μm,15.0s
DGMT Dagmar 68.22 43 IAMs_20 IAMs_20 21 04 04.6
comp=Z,4μm,22.0s
DGMT Dagmar 68.22 43 P **P** **20 36 23.9 +0.3**
baz=312,SNR=6.8
DGMT Dagmar 68.22 43 P **P** **20 36 23.7 +0.1**
baz=312,SNR=6.8
CWC Cottonwood Cre 68.24 60 P **P** **20 36 24.3 +0.2**
baz=309
AFI Afiamalu 68.31 138 LR LR 21 00 12.5
comp=Z,3μm,21.2s,baz=320,slow=30
AFI Afiamalu 68.31 138 IAMs_20 IAMs_20 21 00 22.1
comp=Z,3μm,21.0s
GRAC Grapevine Rang 68.33 59 P **P** **20 36 25.4 +0.9**
baz=309,SNR=5.5
AHID Auburn Hatcher 68.34 51 IAMs_20 IAMs_20 21 02 30.3
comp=Z,3μm,22.0s
SFJD Kangerlussuaq 68.36 8 LR LR 21 06 57.9
comp=Z,4μm,21.9s,baz=345,slow=36
SFJD Kangerlussuaq 68.36 8 P **P** **20 36 24.1 0.0**
SFJD IAmb IAmb 20 36 26.3
comp=Z,103nm,1.1s
SFJD Kangerlussuaq 68.36 8 P **P** **20 36 24.1 0.0**
SFJD pmax pmax
comp=Z,103nm,1.1s
SFJD MLR MLR
comp=Z,6μm,20.0s
SFJD Kangerlussuaq 68.36 8 *eP* **P** **20 36 23.8 -0.3**
SFJD IAmb IAmb 20 36 24.8
comp=Z,113nm,1.1s
SFJD Kangerlussuaq 68.36 8 ⇑P **P** **20 36 23.6 -0.5**
SFJD Kangerlussuaq 68.36 8 P **P** **20 36 23.5 -0.6**
LAO LASA Array 68.39 45 IAMs_20 IAMs_20 21 04 40.3
comp=Z,3μm,22.0s
LAO LASA Array 68.39 45 P **P** **20 36 25.3 +0.6**
baz=312,SNR=9.0
LAO LASA Array 68.39 45 P **P** **20 36 25.4 +0.6**
baz=312,SNR=9.0
ISA Isabella, Lake 68.48 61 P **P** **20 36 24.8 -0.7**
baz=309,SNR=12
R11A Troy Canyon, C 68.56 57 P **P** **20 36 26.3 +0.2**
baz=310,SNR=14
ARVC Arvin 68.59 62 P **P** **20 36 26.0 -0.1**
baz=309
AS01 Alice Springs 68.62 194 P **P** **20 36 26.7 +0.5**
comp=Z,39nm,0.9s
ASAR Alice Springs 68.63 194 P **P** **20 36 26.6 +0.3**
comp=Z,11nm,1.0s,baz=9.7,slow=5.5,SNR=54
ASAR PKP2bc 21 04 41.5
comp=Z,3.5nm,0.9s,baz=176,slow=2.9,SNR=17
ASAR LR LR 21 08 08.9
comp=Z,566nm,18.9s,baz=17,slow=37
comp=Z,11nm,1.0s
ASAR Alice Springs 68.63 194 P **P** **20 36 26.5 +0.2**
FRB Frobisher Bay 68.70 17 P **P** **20 36 25.3 -0.9**
comp=Z,119nm,0.8s,baz=351,slow=7.4,SNR=28
FRB LR LR 21 09 30.2
comp=Z,4μm,20.6s,baz=325,slow=38
comp=Z,119nm,0.8s
FRB Frobisher Bay 68.70 17 ⇑P **P** **20 36 25.7 -0.5**
FRB ⇑P **P** **20 36 25.8 -0.5**
PALK Pallekele 68.75 259 P **P** **20 36 27.6 +0.3**
comp=Z,35nm,1.0s,baz=119,slow=9.7,SNR=7.1
PALK LR LR 21 09 33.9
comp=Z,3μm,19.4s,baz=148,slow=38
comp=Z,35nm,1.0s
PALK Pallekele 68.75 259 IAMs_20 IAMs_20 21 08 53.9
comp=Z,3μm,21.0s
PALK Pallekele 68.75 259 P **P** **20 36 27.3 -0.1**
PALK P **P** **20 36 27.3 -0.1**
PALK P **P** **20 36 27.7 +0.3**
PALK P **P** **20 36 27.7 +0.3**
PALK Pallekele 68.75 259 P **P** **20 36 26.6 -0.8**
comp=Z,4μmcomp=Z,77nm,1.9s
PALK Pallekele 68.75 259 P **P** **20 36 27.5 +0.1**
UPP Uppsala 68.77 336 *eP* **P** **20 36 26.4 -0.3**
HWUT Hardware Ranch 68.83 52 P **P** **20 36 28.1 +0.4**
MPMC Manual Prospec 68.85 60 P **P** **20 36 28.2 +0.2**
baz=310,SNR=37
GROC Groznyy 68.87 310 *eP* **P** **20 36 28.0 +0.3**
GROC *e**PP **sP** **20 36 40.0 -2.2**
GROC *e**SP **pP** **20 36 44.9 +6.6**
GROC *e* 20 36 51.9
GROC *e* 20 38 58.9
GROC *e*S **S** **20 45 29.8 +0.7**
GROC *e**SS **sS** **20 45 49.5 +3.4**
GROC pmax pmax
comp=Z,105nm,0.7s
AKT Akhty 68.90 308 *eP* **P** **20 36 28.9 +0.8**
AKT *e* 20 36 52.4
AKT *e*S **S** **20 45 31.6 +1.7**
AKT pmax pmax
comp=Z,280nm,0.7s
WCT Wildcat Mounta 68.92 59 P **P** **20 36 27.9 -0.3**
FURC Furnace Creek, 68.98 59 P **P** **20 36 29.0 +0.6**
baz=310,SNR=41
OSI Osito Audit: C 68.99 62 P **P** **20 36 28.9 +0.2**
baz=310
DUG Dugway, Tooele 69.03 54 P **P** **20 36 28.5 -0.4**
DUG IAmb IAmb 20 36 47.2
comp=Z,100nm,1.1s
DUG IAMs_20 IAMs_20 21 06 17.5
comp=Z,3μm,20.0s
DUG Dugway, Tooele 69.03 54 P **P** **20 36 28.5 -0.4**
DUG pmax pmax
comp=Z,100nm,1.2s
DUG MLR MLR
comp=Z,3μm,20.0s
DUG Dugway, Tooele 69.03 54 P **P** **20 36 29.4 +0.5**
baz=310,SNR=35
TPNV Topopah Spring 69.05 59 P **P** **20 36 29.7 +0.5**

TPNV IAmb IAmb 20 36 47.1
comp=Z,160nm,1.3s
TPNV Topopah Spring 69.05 59 P **P** **20 36 29.7 +0.5**
TPNV pmax pmax
comp=Z,160nm,1.3s
TPNV Topopah Spring 69.05 59 P **P** **20 36 29.5 +0.3**
baz=310,SNR=55
TPNV Topopah Spring 69.05 59 ⇑P **P** **20 36 29.4 +0.3**
SLIT Slitere, Latvi 69.06 332 *eP* **P** **20 36 27.9 -0.7**
MOL Molde 69.12 342 *eP* **P** **20 36 27.8 -1.1**
MOL IAmb IAmb 20 36 29.7
comp=Z,24nm,0.9s
GOF Gofitskoye 69.13 313 *i*P **P** **20 36 30.1 +0.8**
GOF *e*S **S** **20 45 33.4 +1.2**
GOF pmax pmax
comp=Z,744nm,0.8s
EIDS Eidsvold 69.14 177 P **P** **20 36 30.2 +0.8**
EIDS IAmb IAmb 20 36 54.1
comp=Z,109nm,1.6s
EIDS Eidsvold 69.14 177 P **P** **20 36 30.6 +1.2**
comp=Z,46nm,1.5s
BW06 Boulder Array 69.20 50 **P** **20 36 29.8 -0.3**
BW06 IAMs_20 IAMs_20 21 08 28.0
comp=Z,3μm,20.0s
BW06 Boulder Array 69.20 50 P **P** **20 36 30.1 0.0**
baz=311,SNR=32
PD31 Pinedale Array 69.20 50 P **P** **20 36 30.2 +0.1**
PDAR Pinedale Array 69.20 50 P **P** **20 36 29.9 -0.1**
comp=Z,16nm,0.8s,baz=267,slow=2.1,SNR=142
PDAR PcP **PcP** **20 36 57.0 +3.2**
comp=Z,25nm,1.0s,baz=290,slow=0.4,SNR=4.6
PDAR PKP2bc 21 04 34.6
comp=Z,2.6nm,1.0s,baz=120,slow=2.4,SNR=12
PDAR LR LR 21 07 51.5
comp=Z,2μm,19.7s,baz=334,slow=37
comp=Z,16nm,0.8s
PDAR Pinedale Array 69.20 50 P **P** **20 36 30.2 +0.1**
DOMB Dombas 69.23 341 *eP* **P** **20 36 28.9 -0.7**
DOMB IAmb IAmb 20 36 29.6
comp=Z,45nm,1.0s
DY2G Dye2 69.25 6 *eP* **P** **20 36 29.7 -0.3**
DY2G IAmb IAmb 20 36 30.9
comp=Z,210nm,1.1s
GWY Greenwater Val 69.28 59 P **P** **20 36 31.1 +0.5**
GWY IAmb IAmb 20 36 44.2
comp=Z,77nm,1.0s
EDW2 Edwards Air Fo 69.28 61 P **P** **20 36 30.7 +0.3**
baz=310,SNR=30
ISAL Salakas 69.29 329 *eP* **P** **20 36 30.6 +0.5**
QSM Queen of Sheba 69.29 60 P **P** **20 36 31.2 +0.7**
QSM IAmb IAmb 20 36 44.2
comp=Z,95nm,1.2s
SNCC San Nicolas Is 69.34 63 P **P** **20 36 31.2 +0.4**
baz=310
NC303 NORSAR Array S 69.36 339 P **P** **20 36 30.4 -0.1**
NC405 NORSAR Array S 69.37 339 P **P** **20 36 30.5 0.0**
NC405 IAmb IAmb 20 36 55.4
comp=Z,144nm,1.1s
SEKA Sheki 69.38 308 P **P** **20 36 31.5 +0.5**
IIGN Ignalina 69.42 329 *eP* **P** **20 36 31.1 +0.2**
MNK Minsk 69.43 327 *i*P **P** **20 36 29.4 -1.5**
MNK *i* *PP **sP** **20 36 43.6 -1.8**
MNK *i* 20 39 02.1
MNK *i* PPP PPP 20 40 43.4
MNK *i*S **S** **20 45 33.8 -1.6**
MNK *i* *SS **sS** **20 45 57.1 +4.3**
MNK *i*SS **SS** **20 50 01.8 -0.1**
MNK pmax pmax
comp=N,82nm,0.8s
MNK pmax pmax
comp=Z,191nm,0.8s
MNK pmax pmax
comp=E,7.0nm,0.8s
MNK MLR MLR
comp=N,9μm,20.0s
MNK MLR MLR
comp=Z,9μm,20.0s
MNK MLR MLR
comp=E,592nm,15.0s
MNK Minsk 69.43 327 *i*P **P** **20 36 29.4 -1.5**
comp=E,7.0nm,0.8s
MNK *i*P **P** **20 36 29.4 -1.5**
comp=N,82nm,0.8s
MNK *i*P **P** **20 36 29.4 -1.5**
comp=Z,191nm,0.8s,baz=42
MNK *i*pP **sP** **20 36 43.6 -1.8**
MNK *i*PP **PP** **20 39 02.1 -1.9**
MNK *i*PPP PPP 20 40 43.4
MNK *i*S **S** **20 45 33.8 -1.6**
MNK *i*sS **sS** **20 45 57.2 +4.3**
MNK *i*SS **SS** **20 50 01.9 -0.1**
MNK *i*SSS SSS 20 53 20.5
MNK *i*LQ LQ 21 02 14.5
MNK *i*LR LR 21 06 32.9
MNK *i*LRM MLR 21 09 20.0
comp=N,9μm,19.5s
MNK *i*LRM MLR 21 09 23.4
comp=Z,9μm,20.4s
MNK *i*LRM MLR 21 09 48.0
comp=E,592nm,15.2s
ZKTA Zakatala 69.43 308 P **P** **20 36 32.0 +0.8**
NC204 NORSAR Array S 69.47 340 P **P** **20 36 31.2 0.0**
PRN Pahroc Range 69.49 58 P **P** **20 36 31.8 0.0**
PRN IAmb IAmb 20 36 50.2
comp=Z,193nm,1.7s
NB201 NORSAR Array S 69.53 339 P **P** **20 36 31.3 -0.2**
NB201 IAmb IAmb 20 36 56.3
comp=Z,152nm,1.1s
NACGM Naroch 69.55 328 ⇑*eP* **P** **20 36 31.7 0.0**
baz=41
NB2 NORSAR Subarra 69.56 339 P **P** **20 36 31.1 -0.6**
comp=Z,557nm,2.5s,baz=30,slow=6.5
NB2 NORSAR Subarra 69.56 339 P **P** **20 36 31.1 -0.6**
baz=30,slow=6.5
NOA NORSAR Array B 69.56 339 P **P** **20 36 30.3 -1.4**
comp=Z,19nm,0.7s,baz=31,slow=6.1,SNR=61
NOA LR LR 21 10 07.5
comp=Z,5μm,21.5s,baz=25,slow=39
comp=Z,19nm,0.7s
AKN Aaknes 69.59 342 *eP* **P** **20 36 31.9 +0.1**
AKN IAmb IAmb 20 36 35.1
comp=Z,32nm,1.0s
PASC Pasadena Art C 69.61 62 IAMs_20 IAMs_20 21 00 02.5
comp=Z,4μm,22.0s
PCHI Peechi 69.63 265 ⇑*eP* **P** **20 36 32.9 +0.1**
PCHI *e*S S 20 45 15.0 -24
HFS Hagfors 69.67 338 LR LR 21 10 35.1
comp=Z,4μm,20.4s,baz=32,slow=39
NBO00 NORSAR Array S 69.68 339 P **P** **20 36 32.7 +0.2**
NBO00 IAmb IAmb 20 36 32.8
comp=Z,124nm,1.1s
SHOC Shoshone, Teco 69.70 59 P **P** **20 36 33.6 +0.6**
baz=310
MNGR Mingechevir, A 69.73 307 P **P** **20 36 34.6 +1.5**
NC602 NORSAR Array S 69.73 339 P **P** **20 36 32.4 -0.3**
NC602 IAmb IAmb 20 36 57.2
comp=Z,122nm,1.4s
NC602 NORSAR Array S 69.73 339 *eP* **P** **20 36 32.1 -0.6**
NC602 IAmb IAmb 20 36 32.5
comp=Z,37nm,1.1s
GSC Goldstone, Bar 69.76 60 P **P** **20 36 33.5 +0.1**
baz=310,SNR=18
VSVD Vaisvydziai 69.78 330 *eP* **P** **20 36 33.1 0.0**
NAO01 NORSAR Array S 69.81 339 P **P** **20 36 32.8 -0.4**
NAO01 IAmb IAmb 20 37 00.7
comp=Z,88nm,1.1s
MBWA Marble Bar 69.90 208 P **P** **20 36 34.1 -0.1**
MBWA P **P** **20 36 34.1 -0.1**
MBWA Marble Bar 69.90 208 P **P** **20 36 34.3 +0.2**
comp=Z,49nm,1.2s
MBWA Marble Bar 69.90 208 ⇑P **P** **20 36 34.3 +0.2**
MBWA ⇑P **P** **20 36 34.5 +0.3**
MBWA Marble Bar 69.90 208 P **P** **20 36 34.3 +0.2**
MBWA pP **sP** **20 36 46.8 -1.9**
MBWA sP **PcP** **20 36 50.5 -5.9**
BFSC Mount Baldy Ra 69.90 62 P **P** **20 36 34.5 +0.1**
baz=310,SNR=12
KVAR Kislovodsk Arr 70.05 312 LR LR 21 11 36.6
comp=Z,7μm,20.3s,baz=280,slow=40
KIV Kislovodsk 70.06 312 P **P** **20 36 36.7 +1.5**
KIV Kislovodsk 70.06 312 *eP* **P** **20 36 35.9 +0.8**
KIV *e* 20 39 10.8
KIV *e*S **S** **20 45 43.9 +0.5**
KIV *e*SS **SS** **20 50 15.4 +3.0**
KIV pmax pmax

comp=Z,418nm,1.1s
KIV pmax pmax
comp=Z,833nm,4.7s
KIV MLR MLR
comp=Z,7μm,18.0s
KIV Kislovodsk 70.06 312 P **P 20 36 36.0 +0.9**
KIV P **P 20 36 36.0 +0.9**
KIV Kislovodsk 70.06 312 *e*P **P 20 36 35.9 +0.8**
KIV Kislovodsk 70.06 312 *i* P **P 20 36 36.2 +1.1**
SNR=132
KIV Kislovodsk 70.06 312 P **P 20 36 36.1 +0.9**
KBZ Khabaz 70.09 312 P **P 20 36 35.8 +0.5**
comp=Z,232nm,0.8s,baz=52,slow=3.7,SNR=267
KBZ LR LR 21 11 34.4
comp=Z,12μm,20.2s,baz=36,slow=40
KBZ Khabaz 70.09 312*c i*P **P 20 36 36.2 +1.0**
KBZ pmax pmax
comp=Z,296nm,0.9s
KBZ MLR MLR
comp=Z,12μm,19.0s
LKRN Lenkeran, Azer 70.09 305 P **P 20 36 36.3 +1.0**
PABE Paberze 70.13 330 P **P 20 36 35.6 +0.4**
PABE IAmb IAmb 20 36 36.4
comp=Z,122nm,0.8s
PABE Paberze 70.13 330 *e*P **P 20 36 35.0 -0.2**
VIKU Vikbolandet 70.15 335 *e*P **P 20 36 35.3 0.0**
RMQ Roma 70.20 179 P **P 20 36 37.5 +1.6**
comp=Z,58nm,0.9s
TUQ Turquoise Moun 70.22 60 P **P 20 36 36.7 +0.3**
baz=310,SNR=43
PSA00 Pilbara Seismi 70.24 208 P **P 20 36 36.2 0.0**
PSA00 Pilbara Seismi 70.24 208 P **P 20 36 36.5 +0.2**
comp=Z,81nm,1.9s
GANJ Ganja 70.25 308 P **P 20 36 37.6 +1.3**
HEC Hector,Ludlow 70.36 60 P **P 20 36 37.5 +0.4**
baz=310,SNR=25
QLP Quilpie 70.38 184 P **P 20 36 37.9 +0.9**
comp=Z,169nm,1.5s
ELS Elsinore Mount 70.43 62 P **P 20 36 37.1 -0.4**
ELS IAmb IAmb 20 36 55.2
comp=Z,120nm,1.4s
PBUR Paburge 70.45 331 *e*P **P 20 36 36.6 -0.6**
MSU Marysvale 70.49 55 P **P 20 36 38.8 +0.7**
MSU Marysvale 70.49 55 P **P 20 36 38.8 +0.7**
FOO Floro 70.54 342 *e*P **P 20 36 37.7 +0.1**
FOO IAmb IAmb 20 36 39.1
comp=Z,39nm,0.9s
ONI Oni 70.56 311 P **P 20 36 39.8 +1.6**
ONI Oni 70.56 311 P **P 20 36 39.8 +1.6**
ONI pmax pmax
comp=Z,195nm,0.9s
TRD Trivandrum 70.57 263 *e*P **P 20 36 38.1 -0.4**
ANGG Ammassalik, Gr 70.58 3 *e*P **P 20 36 36.6 -1.2**
ANGG IAmb IAmb 20 36 38.1
comp=Z,116nm,1.0s
SKAR Skarslia 70.59 340 *e*P **P 20 36 38.1 0.0**
SKAR IAmb IAmb 20 36 38.6
comp=Z,62nm,1.3s
ISOG Isortoq, Green 70.60 3 *e*P **P 20 36 37.9 0.0**
ISOG IAmb IAmb 20 36 38.0
comp=Z,142nm,1.0s
MURC Murrieta 70.61 62 P **P 20 36 38.7 +0.1**
baz=310,SNR=11
OSL Oslo 70.63 339 *e*P **P 20 36 38.7 +0.5**
RDMU Red Mountain 70.65 52 P **P 20 36 39.5 +0.5**
HYA Hoyanger 70.67 342 *e*P **P 20 36 38.4 0.0**
HYA IAmb IAmb 20 36 40.0
comp=Z,75nm,0.7s
NGCH Negor - Chabah 70.73 287 P **P 20 36 41.3 +1.9**
SNR=5.4
GMRC Granite Mounta 70.81 60 P **P 20 36 40.2 +0.2**
baz=311,SNR=27
LCMT Little Creek M 70.84 57 P **P 20 36 40.6 +0.5**
LCMT IAmb IAmb 20 36 57.9
comp=Z,81nm,1.1s
ULM Lac du Bonnet 70.85 38 P **P 20 36 38.9 -0.8**
comp=Z,11nm,0.5s,baz=306,slow=5.9,SNR=14
ULM LR LR 21 11 00.5
comp=Z,2μm,19.3s,baz=324,slow=39
comp=Z,11nm,0.5s
ULM Lac du Bonnet 70.85 38 P **P 20 36 39.2 -0.6**
ULM IAmb IAmb 20 36 56.3
comp=Z,295nm,1.9s
ULM Lac du Bonnet 70.85 38 P **P 20 36 39.2 -0.6**
ULM pmax pmax
comp=Z,295nm,1.9s
MDND Maddock 70.87 41 P **P 20 36 40.4 +0.4**
baz=315,SNR=6.8
MDND Maddock 70.87 41 P **P 20 36 40.2 +0.2**
baz=315,SNR=6.8
K22A Casper 70.94 49 P **P 20 36 40.6 -0.1**
baz=313,SNR=20
K22A Casper 70.94 49 P **P 20 36 40.5 -0.2**
baz=313,SNR=20
NUUK Nuuk 70.98 9 *e*P **P 20 36 41.0 +0.7**
NUUK IAmb IAmb 20 36 41.2
comp=Z,186nm,1.0s
PFO Pinyon Flats O 71.07 61 LR LR 21 02 51.4
comp=Z,3μm,21.5s,baz=292,slow=32
PFO Pinyon Flats O 71.07 61 P **P 20 36 41.6 +0.1**
PFO Pinyon Flats O 71.07 61 P **P 20 36 41.6 +0.1**
PFO pmax pmax
comp=Z,46nm,1.2s
PFO Pinyon Flats O 71.07 61 P **P 20 36 42.0 +0.4**
baz=311,SNR=5.6
PFO Pinyon Flats O 71.07 61 P **P 20 36 41.1 -0.4**
PFO sP **sP 20 36 54.5 -1.2**
SRU San Rafael Swe 71.07 54 P **P 20 36 41.8 +0.3**
SRU IAmb IAmb 20 36 59.4
comp=Z,94nm,0.9s
SRU San Rafael Swe 71.07 54 P **P 20 36 41.8 +0.3**
SRU pmax pmax
comp=Z,94nm,0.9s
TPFO Pinon Flats 71.08 61 P **P 20 36 41.7 +0.1**
baz=311,SNR=7.2
SUE Sulen 71.08 342 *e*P **P 20 36 41.3 +0.4**
SUE IAmb IAmb 20 36 41.5
comp=Z,51nm,0.8s
KNB Kanab 71.09 57 P **P 20 36 41.7 0.0**
KNB IAmb IAmb 20 37 00.2
comp=Z,142nm,1.3s
KNB Kanab 71.09 57 P **P 20 36 41.7 0.0**
KNB pmax pmax
comp=Z,142nm,1.3s
WRKA Warakurna 71.11 199 P **P 20 36 42.4 +0.9**
comp=Z,45nm,1.1s
BELC Belle Mtn. Jos 71.11 61 P **P 20 36 41.7 -0.1**
baz=311
109C Camp Elliot, M 71.13 62 P **P 20 36 41.8 0.0**
baz=311
KONO Kongsberg 71.17 339 *e*P **P 20 36 41.4 -0.1**
KONO Kongsberg 71.17 339 ⇑P **P 20 36 41.2 -0.3**
KONO ⇓P **P 20 36 41.7 +0.2**
RWWY Rawlins 71.22 50 IAms_20 IAms_20 21 09 06.4
comp=Z,3μm,20.0s
BORG Borgarnes 71.22 355 P **P 20 36 42.7 +1.0**
BORG Borgarnes 71.22 355 P **P 20 36 42.7 +1.0**
BORG pmax pmax
comp=Z,174nm,1.0s
BORG Borgarnes 71.22 355 P **P 20 36 43.2 +1.5**
RSSD Black Hills 71.27 46 P **P 20 36 42.7 0.0**
RSSD IAmb IAmb 20 36 56.8
comp=Z,98nm,1.4s
RSSD Black Hills 71.27 46 P **P 20 36 42.7 0.0**
RSSD pmax pmax
comp=Z,98nm,1.4s
RSSD MLR MLR
comp=Z,2μm,20.0s
RSSD Black Hills 71.27 46 P **P 20 36 42.5 -0.2**
baz=314,SNR=21
RSSD Black Hills 71.27 46 P **P 20 36 42.4 -0.3**
baz=314
RSSD Black Hills 71.27 46 ⇑P **P 20 36 42.3 -0.3**
RSSD ⇑P **P 20 36 42.4 -0.2**
RSSD Black Hills 71.27 46 P **P 20 36 42.3 -0.3**
STRU Stroemstad 71.28 338 *i* P **P 20 36 40.8 -1.3**
NEE2 Needles Airpor 71.47 59 P **P 20 36 43.9 +0.2**
baz=311
GNI Garni 71.48 308 LR LR 21 11 31.2
comp=Z,5μm,19.1s,baz=62,slow=39
GNI Garni 71.48 308 P **P 20 36 46.1 +2.1**
GNI Garni 71.48 308 P **P 20 36 46.1 +2.1**
GNI pmax pmax
comp=Z,284nm,1.0s
GNI MLR MLR
comp=Z,6μm,18.0s

GNI Garni 71.48 308 P **P 20 36 46.0 +2.0**
GNI P **P 20 36 46.0 +2.0**
GNI Garni 71.48 308 P **P 20 36 46.0 +2.0**
GNI Garni 71.48 308 ⇑P **P 20 36 46.0 +2.0**
GNI ⇑P pP 20 36 46.0 -8.6
GNI Garni 71.48 308 P **P 20 36 46.0 +2.1**
GNI sP **sP 20 36 58.1 -0.4**
ASK Askoy 71.50 342 *e*P **P 20 36 44.0 +0.6**
ASK IAmb IAmb 20 36 44.1
comp=Z,118nm,0.9s
BAR Barrett 71.54 62 P **P 20 36 43.7 -0.5**
IRM Iron Mountain 71.54 60 P **P 20 36 44.6 +0.3**
baz=311,SNR=23
BER Bergen 71.56 342 *e*P **P 20 36 44.3 +0.5**
BER IAmb IAmb 20 36 44.4
comp=Z,66nm,0.9s
MONP2 Monument Peak 71.56 62 P **P 20 36 44.6 0.0**
baz=311,SNR=9.7
ODD1 Odda 71.67 341 *e*P **P 20 36 45.0 +0.4**
ODD1 IAmb IAmb 20 36 45.2
comp=Z,82nm,1.2s
BC3 Big Chuckawall 71.67 61 P **P 20 36 45.1 0.0**
baz=311,SNR=23
O20A White River Ci 71.69 52 P **P 20 36 45.3 0.0**
baz=312,SNR=16
NAX Nakhchivan 71.71 307 P **P 20 36 45.7 +0.5**
AKASG Malin Array Be 71.73 324 P **P 20 36 44.7 -0.3**
comp=Z,156nm,0.8s,baz=39,slow=6.2,SNR=482
AKASG PKPPKP **P'P'df 21 04 34.5 -6.5**
comp=Z,0.1nm,0.3s,baz=231,slow=11,SNR=1.2
AKASG LR LR 21 12 18.3
comp=Z,3μm,19.6s,baz=35,slow=39
comp=Z,156nm,0.8s
AKASG Malin Array Be 71.73 324 *i* P **P 20 36 44.7 -0.3**
AKASG pmax pmax
comp=Z,158nm,0.8s
AKBB Malin Array Si 71.73 324 P **P 20 36 44.8 -0.2**
AKBB Malin Array Si 71.73 324 P **P 20 36 44.8 -0.2**
AKBB pmax pmax
comp=Z,250nm,0.9s
INKA Innaminka 71.76 187 P **P 20 36 46.6 +1.3**
comp=Z,113nm,1.0s
SOC Sochi 71.88 313 *e*P **P 20 36 44.8 -1.3**
SOC *e**PP **sP 20 36 58.2 -2.4**
SOC *e**SP **PcP 20 37 01.5 -3.2**
SOC *e* 20 39 21.4
SOC *e*S **S 20 46 04.1 -0.2**
SOC *e*SS **SS 20 50 37.6 -2.5**
SOC *e*SSS SSS 20 53 56.8
SOC pmax pmax
comp=Z,176nm,0.7s
SOC MLR MLR
comp=Z,10μm,19.0s
IKP In-Ko-Pah, Jac 71.92 62 P **P 20 36 46.8 +0.1**
baz=311,SNR=13
SWSC Sam W. Stewart 71.92 62 P **P 20 36 46.2 -0.3**
baz=311,SNR=11
TJOU Tjoern 72.02 337 *i* P **P 20 36 44.4 -2.2**
BORU Boraas 72.03 337 *i* P **P 20 36 45.0 -1.7**
YUH Yuha Desert 72.04 62 P **P 20 36 46.7 -0.5**
PDMCI Parker Dam,Lak 72.07 60 P **P 20 36 47.6 +0.2**
baz=311,SNR=15
BLS5 Blasjo 72.15 341 *e*P **P 20 36 47.9 +0.5**
BLS5 IAmb IAmb 20 36 48.1
comp=Z,52nm,1.0s
ANN Anapa 72.20 316 *e*P **P 20 36 47.7 -0.3**
ANN *e**PP **pP 20 36 59.4 +0.8**
ANN *e*S **S 20 46 08.3 +0.4**
ANN pmax pmax
comp=Z,463nm,1.9s
ANN MLR MLR
comp=N,5μm,16.0s
ANN MLR MLR
comp=E,2μm,14.0s
ANN MLR MLR
comp=Z,7μm,15.0s
ANN Anapa 72.20 316 *e*P **P 20 36 47.7 -0.3**
BLEU Blekinge 72.24 334 *i* P **P 20 36 45.6 -2.3**
AGMN Agassiz Nation 72.29 39 IAMs_20 IAMs_20 21 14 44.8
comp=Z,2μm,20.0s
AGMN Agassiz Nation 72.29 39 P **P 20 36 47.7 -0.7**
baz=317,SNR=9.6
AGMN Agassiz Nation 72.29 39 P **P 20 36 47.9 -0.6**
baz=317,SNR=9.6
OOD Oodnadatta 72.39 191 P **P 20 36 50.0 +0.9**
comp=Z,42nm,1.0s
ESJX Sierra Juarez 72.44 62 P **P 20 36 49.8 0.0**
N23A Red Feather La 72.46 50 P **P 20 36 50.5 +0.6**
baz=313,SNR=21
GLA Glamis 72.47 61 P **P 20 36 50.3 +0.5**
baz=311,SNR=9.7
FABU Falkenberg 72.59 336 *i* P **P 20 36 46.8 -3.2**
D32B Dogwood Acres, 72.61 40 P **P 20 36 50.0 -0.3**
baz=317,SNR=6.6
KMY Karmoy 72.62 341 *e*P **P 20 36 50.7 +0.5**
KMY IAmb IAmb 20 36 52.2
comp=Z,75nm,0.8s
JASK Jask - Hormozg 72.64 289 P **P 20 36 52.4 +1.4**
DEL Delary 72.69 335 *e*P **P 20 36 50.6 -0.1**
DEL Delary 72.69 335 *i* P **P 20 36 48.6 -2.1**
PV13 Radium Mtn., P 72.70 54 P **P 20 36 51.4 +0.1**
PV13 IAmb IAmb 20 37 09.3
comp=Z,115nm,1.2s
SNART Snartemo 72.92 340 *e*P **P 20 36 52.4 +0.4**
SNART IAmb IAmb 20 36 52.7
comp=Z,219nm,1.0s
WUAZ Wupatki 72.96 57 IAMs_20 IAMs_20 21 07 39.2
comp=Z,2μm,20.0s
WUAZ Wupatki 72.96 57 P **P 20 36 53.3 +0.4**
baz=312,SNR=36
SMCO Snowmass 73.06 52 P **P 20 36 53.5 -0.3**
SMCO IAMs_20 IAMs_20 21 03 42.6
comp=Z,3μm,22.0s
AULRC Lightning Ridg 73.13 180 P **P 20 36 54.7 +1.3**
comp=Z,61nm,1.6s
LRW Lerwick 73.16 344 *e*P **P 20 36 53.4 0.0**
B35A Bob, Littlefor 73.20 38 P **P 20 36 53.3 -0.5**
baz=318,SNR=14
BJUU Bjuv 73.28 336 *i* P **P 20 36 53.4 -0.8**
BSD Bornholm Skovb 73.51 334 *e*P **P 20 36 55.2 -0.3**
BSD Bornholm Skovb 73.51 334 *i* P **P 20 36 54.0 -1.5**
BSD IAmb IAmb 20 36 56.1
comp=Z,126nm,0.9s
BSD IVmB_BB 20 36 56.3
comp=Z,2μm,1.0s
MVCO Mesa Verde 73.53 54 P **P 20 36 55.5 -0.7**
MVCO IAMs_20 IAMs_20 21 05 24.3
comp=Z,2μm,21.0s
MVCO Mesa Verde 73.53 54 P **P 20 36 56.4 +0.1**
baz=313,SNR=15
LUNU Lund 73.53 335 *i* P **P 20 36 54.6 -1.0**
GOET G??ttrup 73.54 338 *i* P **P 20 36 55.2 -0.4**
GOET IAmb IAmb 20 36 57.0
comp=Z,187nm,0.8s
SUSD Miller 73.62 43 P **P 20 36 56.4 0.0**
baz=316
SUSD Miller 73.62 43 P **P 20 36 56.0 -0.5**
baz=316
KTUT Trabzon 73.66 311 ⇑P **P 20 36 56.2 -0.5**
BANOM Banah 73.67 290 P **P 20 36 57.6 +0.5**
SNR=29
BANOM P **P 20 36 57.6 +0.5**
SNR=29
BANOM Banah 73.67 290 *i* P **P 20 36 57.5 +0.5**
SNR=18
SHME Shamm 73.69 290 P **P 20 36 57.5 +0.4**
SNR=23
SHME P **P 20 36 57.5 +0.4**
SNR=23
SHME Shamm 73.69 290 *i* P **P 20 36 57.4 +0.3**
SNR=49
SIM Simferopol' 73.74 317*c i*P **P 20 36 57.4 +0.3**
SIM *e*S **SKiKP 20 46 24.0 +0.5**
SIM pmax pmax
comp=Z,378nm,0.9s
SIM MLR MLR
comp=Z,5μm,16.6s
COP Copenhagen 73.79 336 *i* P **P 20 36 55.2 -1.9**
COP IAmb IAmb 20 36 58.9
comp=Z,338nm,0.9s
COP IVmBBB 20 36 59.0
comp=Z,4μm,1.0s
WSAR Wadi Sarin 73.84 287 LR LR 21 15 13.4
comp=Z,3μm,18.0s,baz=72,slow=40
F33A 5 Mile Ranch, 73.89 41 P **P 20 36 57.7 -0.3**
baz=317,SNR=8.1

BIDO Bidbid 74.00 287 P **P 20 37 00.1 +1.1**
SNR=38
BIDO P **P 20 37 00.1 +1.1**
SNR=38
WBK Wadi Bani Khal 74.02 286 P **P 20 37 00.6 +1.5**
SNR=44
WBK P **P 20 37 00.6 +1.5**
SNR=44
MUD Monsted U'grnd 74.06 338 *i* P **P 20 36 59.0 +0.3**
MUD IAmb IAmb 20 36 59.9
comp=Z,102nm,1.1s
S22A 4UR Ranch, Cre 74.13 53 P **P 20 37 00.5 +0.7**
baz=314,SNR=28
MASF Masafi 74.13 290 P **P 20 37 00.3 +0.6**
SNR=13
MASF P **P 20 37 00.3 +0.6**
SNR=13
MSFE Esma-Masafi 74.14 290 *i* P **P 20 37 00.2 +0.4**
SNR=22
ARMA Armidale 74.18 177 P **P 20 37 02.5 +2.7**
comp=Z,59nm,1.6s
BEL Belsk 74.19 329 *i* P **P 20 37 00.1 +0.5**
BEL *e*L L 21 11 42.0
comp=Z,7μm,20.8s
W18A Petrified Fore 74.22 56 P **P 20 37 00.8 +0.5**
baz=313
Q24A Divide 74.23 51 P **P 20 37 00.6 +0.1**
baz=314,SNR=12
IVI Ivigtut 74.27 8 *e*P **P 20 37 00.0 +0.2**
GKP Gorka Klasztor 74.29 332 *i* P **P 20 36 59.4 -0.7**
GKP *e*L L 21 12 42.8
comp=Z,9μm,19.6s
GKP Gorka Klasztor 74.29 332 *e*P **P 20 37 00.1 0.0**
SMDO Samad 74.36 287 P **P 20 37 02.2 +1.0**
SNR=38
SMDO P **P 20 37 02.2 +1.0**
SNR=38
UMQ Umm Al-Quwin 74.36 290 P **P 20 37 02.4 +1.3**
UMQ P **P 20 37 02.4 +1.3**
UMQ Umm Al-Quwin 74.36 290 *i* P **P 20 37 02.3 +1.3**
SNR=6.7
UOSS Minazif 74.38 290 P **P 20 37 01.2 +0.1**
UOSS IAmb IAmb 20 37 02.8
comp=Z,139nm,0.8s
UOSS Minazif 74.38 290 IAMs_20 IAMs_20 21 13 41.5
comp=Z,3μm,20.0s
UOSS Minazif 74.38 290 P **P 20 37 01.2 +0.1**
UOSS P **P 20 37 01.2 +0.1**
UOSS Minazif 74.38 290 *i* P **P 20 37 01.3 +0.1**
SNR=34
214A Organ Pipe Nat 74.46 61 P **P 20 37 01.9 +0.3**
baz=312,SNR=14
X18A Snowflake 74.49 57 P **P 20 37 01.7 -0.2**
EYMN Ely 74.49 37 IAMs_20 IAMs_20 21 13 48.0
comp=Z,2μm,20.0s
EYMN Ely 74.49 37 P **P 20 37 01.1 -0.4**
baz=320,SNR=8.4
EYMN Ely 74.49 37 P **P 20 37 01.0 -0.5**
baz=320,SNR=8.4
HATD Hatta, Dubai 74.51 290 P **P 20 37 02.5 +0.6**
SNR=43
HATD P **P 20 37 02.5 +0.6**
SNR=43
HATD Hatta, Dubai 74.51 290 *i* P **P 20 37 02.5 +0.6**
SNR=49
HOQ Hoqain 74.52 288 P **P 20 37 02.5 +0.5**
SNR=41
HOQ P **P 20 37 02.5 +0.5**
SNR=41
OGNE Ogallala 74.54 48 P **P 20 37 02.0 0.0**
baz=315
OGNE Ogallala 74.54 48 P **P 20 37 02.0 0.0**
baz=315
LVV L'vov 74.55 326 *e*P **P 20 37 02.0 +0.3**
LVV *e* 20 37 17.5
LVV *e*S **SKiKP 20 46 28.1 +3.5**
LVV MLR MLR
comp=Z,5μm,16.0s
NRS Narsarsuaq 74.57 7 *e*P **P 20 37 02.0 +0.4**
ASHO Ashiyiah 74.65 289 P **P 20 37 03.3 +0.5**
SNR=50
ASHO P **P 20 37 03.3 +0.5**
SNR=50
ASHO Ashiyiah 74.65 289 *i* P **P 20 37 03.2 +0.5**
SNR=44
LCRK Leigh Creek 74.69 189 P **P 20 37 04.0 +1.5**
comp=Z,100nm,0.8s
KIS Kishinev 74.69 322 ⇑P **P 20 37 02.8 +0.2**
KIS Kishinev 74.69 322 ⇑*i*P **P 20 37 02.5 -0.1**
comp=Z,610nm,1.6s
KIS Kishinev 74.69 322 *e*PcP **PcP 20 37 15.0 -1.7**
KIS *e*S **S 20 46 32.0 -4.0**
KIS *e*L L 21 06 53.0
KIS LQM 21 07 18.0
comp=Z,2μm,20.0s
KIS LRM MLR 21 12 36.0
comp=Z,2μm,17.0s
KIS Kishinev 74.69 322*c i*P **P 20 37 02.5 -0.1**
KIS *e* 20 37 15.0
KIS *e* 20 37 24.0
KIS *e*S **S 20 46 32.0 -4.0**
KIS pmax pmax
comp=Z,600nm,1.6s
KIS MLR MLR
comp=Z,3μm,16.0s
KIS MLR MLR
comp=N,2μm,17.0s
NAZ Nazwa, Dubai 74.72 290 P **P 20 37 03.4 +0.3**
SNR=21
NAZ P **P 20 37 03.4 +0.3**
SNR=21
NAZ Nazwa, Dubai 74.72 290 *i* P **P 20 37 03.4 +0.3**
SNR=24
MILM Milestii Mici 74.76 322 ⇓P **P 20 37 03.2 +0.3**
MILM Milestii Mici 74.76 322 ⇑*i*P **P 20 37 02.7 -0.2**
comp=N,2μm,3.5s
MILM Milestii Mici 74.76 322 *e*PcP **PcP 20 37 12.0 -5.0**
MILM ⇓*i*S **S 20 46 34.0 -2.7**
MILM *e*L L 21 04 45.0
MILM LQM 21 07 13.0
comp=N,4μm,21.0s
MILM LRM MLR 21 12 36.0
comp=N,6μm,16.0s
MILM Milestii Mici 74.76 322*c i*P **P 20 37 02.7 -0.2**
MILM *e* 20 37 12.0
MILM *e* 20 37 23.0
MILM *i* S **S 20 46 34.0 -2.7**
MILM pmax pmax
comp=Z,2μm,3.5s
MILM MLR MLR
comp=Z,6μm,16.0s
MILM MLR MLR
comp=E,2μm,15.5s
JMDO Jabal Madar 74.78 286 P **P 20 37 04.3 +0.8**
SNR=50
JMDO P **P 20 37 04.3 +0.8**
SNR=50
AUPHS Peel High Scho 74.84 177 P **P 20 37 04.7 +1.3**
comp=E,66nm,1.2s
SDCO Great Sand Dun 74.88 52 IAMs_20 IAMs_20 21 05 58.9
comp=Z,3μm,22.0s
SDCO Great Sand Dun 74.88 52 P **P 20 37 04.5 +0.2**
baz=314,SNR=19
SDCO Great Sand Dun 74.88 52 P **P 20 37 04.5 +0.2**
baz=314,SNR=19
FAQ Al Faqa, Dubai 74.93 290 P **P 20 37 04.5 +0.2**
SNR=20
FAQ P **P 20 37 04.5 +0.2**
SNR=20
FAQ Al Faqa, Dubai 74.93 290 *i* P **P 20 37 04.4 +0.1**
SNR=43
K31A O'Neill 75.04 45 P **P 20 37 04.5 -0.3**
baz=317
MULG Mulgathing 75.08 193 P **P 20 37 05.8 +1.0**
comp=Z,52nm,0.9s
IAS Iasi 75.10 323 ⇓P **P 20 37 05.6 +0.6**
IAS Iasi 75.10 323 P **P 20 37 09.1 +4.1**
BSY Bisya 75.15 287 P **P 20 37 06.4 +0.7**
SNR=60
BSY P **P 20 37 06.4 +0.7**
SNR=60
F36A Milaca 75.17 39 P **P 20 37 04.8 -0.5**
F36A Milaca 75.17 39 P **P 20 37 04.5 -0.9**
baz=319
ASUD Al Ashush, Dub 75.18 290 P **P 20 37 06.5 +0.6**
SNR=14

ASUD	Al Ashush, Dub	75.18 290	*i* P		P	20 37 06.4	+0.6
	SNR=32						
BIGH	Upper Bighouse	75.20 345	*e*P		P	20 37 05.3	0.0
ARQ	Araqi	75.23 288	P		P	20 37 07.0	+0.9
	SNR=47						
ARQ			P		P	20 37 07.0	+0.9
	SNR=47						
CMSA	Cobar Meteorol	75.26 182	P		P	20 37 07.7	+1.9
	comp=Z,81nm,1.4s						
ALNE	Al Ain	75.28 289	P		P	20 37 06.9	+0.6
	SNR=65						
ALNE			P		P	20 37 06.9	+0.6
	SNR=65						
ALNE	Al Ain	75.28 289	*i* P		P	20 37 06.9	+0.6
	SNR=32						
MLA1	Latheron	75.28 345	⇑*e*P		P	20 37 05.8	+0.1
ECSD	EROS Data Cent	75.29 43	IAMs_20	IAMs_20		21 08 13.4	
	comp=Z,4μm,22.0s						
ECSD	EROS Data Cent	75.29 43	P		P	20 37 05.8	-0.4
	baz=318,SNR=22						
ECSD	EROS Data Cent	75.29 43	P		P	20 37 05.7	-0.4
	baz=318,SNR=22						
LEOM	Leova	75.35 322	⇑P		P	20 37 07.1	+0.7
LEOM	Leova	75.35 322	P		P	20 37 08.2	+1.8
MEEK	Meekatharra	75.35 207	P		P	20 37 06.4	-0.1
	comp=Z,50nm,2.1s						
VASR	Vaslui	75.42 322	⇑P		P	20 37 07.5	+0.7
AJN	Ajban	75.46 290	P		P	20 37 07.2	-0.1
	SNR=11						
AJN			P		P	20 37 07.2	-0.1
	SNR=11						
AJN	Ajban	75.46 290	*i* P		P	20 37 07.4	0.0
	SNR=18						
TUC	Tucson	75.49 59	IAMs_20	IAMs_20		21 07 01.1	
	comp=Z,3μm,20.0s						
TUC	Tucson	75.49 59	P		P	20 37 07.9	+0.3
	baz=313						
E38A	The Farm, Brul	75.49 38	P		P	20 37 06.1	-1.1
E38A			IAmb	IAmb		20 37 23.5	
	comp=Z,91nm,0.8s						
E38A	The Farm, Brul	75.49 38	P		P	20 37 06.7	-0.5
	baz=320,SNR=10						
DIKM	Dikmen	75.57 314	⇑P		P	20 37 07.6	-0.2
KSCO	Kaye Shedlock'	75.60 49	P		P	20 37 08.3	+0.2
	baz=315						
KSCO	Kaye Shedlock'	75.60 49	P		P	20 37 07.8	-0.3
	baz=315						
BUR08	Bucovina Ar. S	75.77 324	P		P	20 37 09.7	+0.8
BIR	Birlad	75.78 322	⇑P		P	20 37 09.8	+0.9
BIR	Birlad	75.78 322	P		P	20 37 11.1	+2.2
BURAR	Bucovina Array	75.78 324	⇑P		P	20 37 09.4	+0.3
BURAR	Bucovina Array	75.78 324	P		P	20 37 09.3	+0.3
BURAR	Bucovina Array	75.78 324	P		P	20 37 10.7	+1.7
MHTO	MHTO	75.79 285	P		P	20 37 10.2	+0.9
	SNR=77						
MHTO			P		P	20 37 10.2	+0.9
	SNR=77						
STKA	Stephens Creek	75.80 186	P		P	20 37 08.7	-0.2
	comp=Z,6.3nm,1.1s,baz=5.4,slow=4.9,SNR=6.5						
STKA			LR	LR		21 07 39.9	
	comp=Z,1μm,21.7s,baz=3.7,slow=33						
	comp=Z,6.3nm,1.1s						
STKA	Stephens Creek	75.80 186	P		P	20 37 10.6	+1.7
	comp=Z,10.0nm,1.4s						
OJC	Ojcow	75.87 329	*i* P		P	20 37 07.9	-1.4
OJC			*e*L		L	21 12 38.9	
	comp=Z,7μm,21.2s						
OJC	Ojcow	75.87 329	P		P	20 37 07.9	-1.4
OJC	Ojcow	75.87 329	P		P	20 37 07.9	-1.4
OJC			pmax	pmax			
	comp=Z,289nm,1.1s						
VLDR	Vladesti	75.90 321	⇓P		P	20 37 09.8	+0.3
AUDCS	Dubbo College	75.92 180	P		P	20 37 12.1	+2.5
	comp=Z,97nm,1.5s						
T25A	Trinidad	75.93 52	P		P	20 37 10.4	+0.2
	baz=315,SNR=22						
BIZ	Bicaz	75.93 323	⇑P		P	20 37 10.4	+0.6
MCD	Coleburn Disti	75.93 345	⇑*e*P		P	20 37 09.1	-0.5
KOLS	Kolonicke sedl	75.95 327	*e*P		P	20 37 10.3	+0.5
KOLS			pmax	pmax			
	comp=Z,150nm,0.8s						
VARL	Varlezi	75.97 322	⇑P		P	20 37 10.5	+0.6
STHS	Stebnicka Huta	75.97 327	*e*P		P	20 37 10.3	+0.4
STHS			pmax	pmax			
	comp=Z,130nm,0.9s						
BZK	Bozkurt	75.98 315	P		P	20 37 08.9	-1.2
SPMN	Marine on St.	75.98 40	P		P	20 37 09.8	-0.3
	baz=320,SNR=8.8						
TESR	Tescani	76.03 323	⇑P		P	20 37 10.7	+0.4
GHRR		76.04 322	⇑P		P	20 37 11.2	+0.8
LEWI	Lewis, Hebride	76.05 347	⇑*e*P		P	20 37 09.1	-1.1
LEWI			IAmb	IAmb		20 37 09.5	
	comp=Z,96nm,1.0s						
SCTR	Scanteiesti	76.07 321	⇓P		P	20 37 10.9	+0.3
TLCR		76.07 321	⇑P		P	20 37 11.2	+0.7
TLCR		76.07 321	P		P	20 37 12.3	+1.8
RUE	Ruedersdorf	76.10 333	*e*P		P	20 37 10.8	+0.3
TATR	Tatarca	76.11 321	⇑P		P	20 37 11.5	+0.8
GIUM	Giurgiulesti	76.12 321	⇓P		P	20 37 11.9	+1.1
UZH	Uzhgorod	76.18 326	⇑*i*P		P	20 37 10.0	-1.1
UZH			*i*			20 37 20.3	
UZH			*i*			20 37 27.4	
UZH			*e*S		S	20 46 49.0	-3.5
UZH			*i*			20 47 12.0	
UZH			*e*PS		PnS	20 47 31.5	-0.9
UZH			MLR	MLR			
	comp=N,2μm,17.0s						
UZH			MLR	MLR			
	comp=E,900nm,17.0s						
BGNE	Belgrade	76.24 45	P		P	20 37 11.0	-0.6
	baz=317						
SLCR	Slobozia Conac	76.24 321	⇓P		P	20 37 12.4	+1.0
IZVR	Izvoarele	76.28 321	⇑P		P	20 37 12.5	+0.8
MDO	Dochfour	76.28 345	⇑*e*P		P	20 37 11.2	-0.3
SCHL	Schela	76.28 321	⇓P		P	20 37 12.3	+0.6
TUDR		76.28 321	⇓P		P	20 37 12.5	+0.8
ANMO	Albuquerque	76.28 55	LR	LR		21 08 09.7	
	comp=E,1μm,21.7s,baz=330,slow=34						
ANMO	Albuquerque	76.28 55	P		P	20 37 12.4	+0.3
ANMO	Albuquerque	76.28 55	IAMs_20	IAMs_20		21 06 29.0	
	comp=Z,3μm,22.0s						
ANMO	Albuquerque	76.28 55	P		P	20 37 12.5	+0.3
ANMO			pmax	pmax			
	comp=Z,55nm,1.3s						
ANMO			MLR	MLR			
	comp=Z,3μm,22.0s						
ANMO	Albuquerque	76.28 55	P		P	20 37 12.8	+0.6
	baz=314,SNR=28						
ANMO	Albuquerque	76.28 55	P		P	20 37 12.7	+0.5
	baz=314						
CRVS	Cervenica-Dubn	76.30 327	*e*P		P	20 37 12.4	+0.6
CRVS			pmax	pmax			
	comp=Z,243nm,1.1s						
PANC	Panciu	76.30 322	⇓P		P	20 37 12.8	+1.0
JURR	Jurilovca	76.36 320	⇓P		P	20 37 13.1	+0.9
CFR	Carcaliu	76.39 321	⇑P		P	20 37 12.9	+0.6
CFR	Carcaliu	76.39 321	P		P	20 37 16.1	+3.8
KAC	Achnashellach	76.39 346	⇑*e*P		P	20 37 12.2	+0.1
DRUM	Mains of Drumt	76.41 344	*e*P		P	20 37 12.1	-0.2
ODBI	Odobesti	76.42 322	⇑P		P	20 37 13.7	+1.2
D41A	Chassel	76.43 36	P		P	20 37 12.9	+0.4
	baz=322,SNR=7.9						
BMR	Baia Mare	76.46 325	⇑P		P	20 37 13.7	+1.0
BMR	Baia Mare	76.46 325	P		P	20 37 17.1	+4.4
TRPA	Tarpa	76.48 326	⇑P		P	20 37 13.6	+0.8
TRPA	Tarpa	76.48 326	P		P	20 37 13.6	+0.8
VRI	Vrincioaia	76.49 322	⇑P		P	20 37 13.9	+1.0
VRI	Vrincioaia	76.49 322	P		P	20 37 15.6	+2.6
TPGR	Topolog	76.50 321	⇑P		P	20 37 13.8	+0.8
PLOR	Plostina	76.54 322	⇑P		P	20 37 14.1	+0.8
PLOR	Plostina	76.54 322	P		P	20 37 16.6	+3.4
ARCR	ARCALIA	76.56 324	⇓P		P	20 37 14.5	+1.2
UMZA	Um Al Zommool	76.57 289	P		P	20 37 13.6	-0.2
UMZA			P		P	20 37 13.6	-0.2
KPL	Plockton	76.61 346	⇑*e*P		P	20 37 13.5	+0.2
KPL			IAmb	IAmb		20 37 14.4	
	comp=Z,144nm,0.8s						
Y22D	IRIS PASSCAL I	76.62 56	IAMs_20	IAMs_20		21 06 14.9	
	comp=Z,4μm,22.0s						
I37B	Waseca	76.62 41	P		P	20 37 14.2	+0.5
	baz=319,SNR=13						
KSP	Ksiaz	76.63 331	*i* P		P	20 37 14.1	+0.5
KSP			*e*L		L	21 14 01.6	
	comp=Z,7μm,18.8s						
FORT	Forrest	76.69 198	P		P	20 37 14.4	+0.4
FORT			IAmb	IAmb		20 37 31.5	
	comp=Z,81nm,0.9s						
FORT	Forrest	76.69 198	P		P	20 37 14.9	+0.9
	comp=Z,110nm,0.9s						
OZUR		76.72 323	⇑P		P	20 37 15.3	+1.0
BNM	Barren Site	76.74 55	P		P	20 37 15.3	+0.5
COVR	Voineasa-Covas	76.74 322	⇑P		P	20 37 15.2	+0.9
MZWR	Madinat Zayed	76.74 290	P		P	20 37 14.4	-0.3
MZWR			P		P	20 37 14.4	-0.3
DQM	DQM	76.79 285	P		P	20 37 15.3	+0.2
	SNR=10.0						
DQM			P		P	20 37 15.3	+0.2
	SNR=10.0						
OKC	Ostrava-Krasne	76.80 329	*e*P		P	20 37 14.6	0.0
OKC			MLR	MLR			
	comp=Z,6μm,21.9s						
OKC	Ostrava-Krasne	76.80 329	*e*P		P	20 37 14.6	0.0
OKC			*e*S		S	20 46 45.8	-13
OKC			AMS	AMS		21 13 30.0	
	comp=Z,6μm,21.9s						
TIRR	Tirgusor	76.81 320	⇑P		P	20 37 15.5	+0.8
TIRR	Tirgusor	76.81 320	⇑P		P	20 37 15.5	+0.8
TIRR	Tirgusor	76.81 320	P		P	20 37 17.8	+3.1
EDU	Dundee	76.86 344	⇑*e*P		P	20 37 15.1	+0.4
HARR	Harsova	76.86 321	⇑P		P	20 37 15.6	+0.7
HARR	Harsova	76.86 321	P		P	20 37 16.7	+1.7
ABAH	Abaujker	76.87 327	P		P	20 37 15.5	+0.5
OSTC	Ostas	76.89 331	*e*P		P	20 37 15.5	+0.3
OSTC			*e*S		S	20 46 56.7	-3.6
OSTC			AMS	AMS		21 14 00.0	
	comp=Z,7μm,19.6s						
TLBR	Topalu	76.91 321	⇓P		P	20 37 16.0	+0.7
CHVC	Chvalec	76.92 331	*e*P		P	20 37 15.8	+0.5
CHVC			AMS	AMS		21 14 10.0	
	comp=Z,7μm,19.0s						
COWI	Conover	76.94 37	P		P	20 37 14.7	-0.8
COWI			IAMs_20	IAMs_20		21 14 52.8	
	comp=Z,3μm,21.0s						
COWI	Conover	76.94 37	P		P	20 37 15.0	-0.5
	baz=322						
DOPR	Dopca	77.00 323	⇑P		P	20 37 17.0	+1.2
UPC	Upice	77.01 331	*e*P		P	20 37 16.3	+0.5
UPC			*e*S		S	20 47 00.4	-1.1
UPC			MLR	MLR			
	comp=Z,8μm,18.5s						
UPC	Upice	77.01 331	*e*P		P	20 37 16.3	+0.5
UPC			*e*S		S	20 47 00.4	-1.1
UPC			AMS	AMS		21 14 20.0	
	comp=Z,8μm,18.5s						
KECS	Kecovo	77.02 327	*e*P		P	20 37 16.5	+0.7
KECS			pmax	pmax			
	comp=Z,119nm,0.9s						
DPC	Dobruska-Polom	77.03 331	*e*P		P	20 37 16.6	+0.7
DPC			*e*S		S	20 46 49.4	-12
DPC			MLR	MLR			
	comp=Z,5μm,19.4s						
DPC	Dobruska-Polom	77.03 331	*e*P		P	20 37 16.6	+0.7
DPC			*e*S		S	20 46 49.4	-12
DPC			AMS	AMS		21 13 30.0	
	comp=Z,5μm,19.4s						
319A	Douglas	77.06 59	P		P	20 37 17.1	+0.6
319A			IAmb	IAmb		20 37 34.8	
	comp=Z,126nm,1.0s						
MORC	Moravsky Berou	77.07 330	⇑P		P	20 37 16.8	+0.6
MORC	Moravsky Berou	77.07 330	P		P	20 37 15.7	-0.5
MORC	Moravsky Berou	77.07 330	P		P	20 37 15.7	-0.5
MORC			pmax	pmax			
	comp=Z,191nm,0.9s						
MORC	Moravsky Berou	77.07 330	⇑*i*P		P	20 37 16.7	+0.6
CVDA	Cernavoda	77.08 320	⇑P		P	20 37 17.2	+0.9
KRLC	Kraliky	77.09 330	*e*P		P	20 37 16.6	+0.3
KRLC			*e*S		S	20 46 54.9	-7.6
KRLC			MLR	MLR			
	comp=Z,5μm,18.6s						
KRLC	Kraliky	77.09 330	*e*P		P	20 37 16.6	+0.3
KRLC			*e*S		S	20 46 54.9	-7.6
KRLC			AMS	AMS		21 14 00.0	
	comp=Z,5μm,18.6s						
MESR	Meseseni	77.10 325	⇑P		P	20 37 17.3	+0.9
SCHQ	Schefferville	77.11 20	P		P	20 37 15.9	-0.4
	comp=Z,39nm,0.8s,baz=279,slow=6.8,SNR=18						
SCHQ			LR	LR		21 14 00.4	
	comp=Z,5μm,20.8s,baz=341,slow=38						
	comp=Z,39nm,0.8s						
SCHQ	Schefferville	77.11 20	IAmb	IAmb		20 37 34.1	
	comp=Z,165nm,1.4s						
PGOR	Pogoanele	77.12 321	⇑P		P	20 37 16.8	+0.3
G40A	Rib Lake	77.12 38	P		P	20 37 16.0	-0.5
	baz=321,SNR=14						
MLR	Muntele Rosu	77.13 322	⇑P		P	20 37 17.1	+0.4
MLR	Muntele Rosu	77.13 322	LR	LR		21 14 29.7	
	comp=Z,8μm,19.3s,baz=36,slow=38						
MLR	Muntele Rosu	77.13 322	IAmb	IAmb		20 37 18.9	
	comp=Z,126nm,1.0s						
MLR	Muntele Rosu	77.13 322	P		P	20 37 19.0	+2.3
CBBR	Cluj-Babes-Bol	77.15 324	⇑P		P	20 37 17.8	+1.2
ISR	Istrita	77.15 322	⇓P		P	20 37 17.7	+1.0
121A	Cookes Peak, D	77.17 57	IAmb	IAmb		20 37 35.9	
	comp=Z,118nm,1.2s						
121A	Cookes Peak, D	77.17 57	P		P	20 37 18.1	+0.9
	baz=314,SNR=24						
121A	Cookes Peak, D	77.17 57	P		P	20 37 18.1	+0.9
	baz=314,SNR=24						
CJR	Cluj-Napoca	77.17 324	⇑P		P	20 37 17.9	+1.1
CJR	Cluj-Napoca	77.17 324	P		P	20 37 22.0	+5.2
AMRR	Amara	77.19 321	⇑P		P	20 37 18.0	+1.1
AMRR	Amara	77.19 321	P		P	20 37 21.4	+4.6
MANR	Mangalia	77.22 320	⇓P		P	20 37 17.8	+0.7
BBOO	Buckleboo	77.28 190	P		P	20 37 18.6	+1.3
	comp=Z,48nm,1.1s						
SHMA	Al-Shehemyia	77.28 294	P		P	20 37 17.5	-0.2
GHWR	Ruwais	77.28 291	P		P	20 37 17.4	-0.3
GHWR			P		P	20 37 17.4	-0.3
CBKS	Cedar Bluff	77.30 48	IAMs_20	IAMs_20		21 17 06.8	
	comp=Z,2μm,19.0s						
CBKS	Cedar Bluff	77.30 48	P		P	20 37 16.6	-1.1
	baz=317						
MAUC	Maruska	77.30 329	*e*P		P	20 37 17.9	+0.4
MAUC			AMS	AMS		21 13 40.0	
	comp=Z,9μm,18.1s						
LTVH	Ltavrtes, Hu	77.34 326	⇑P		P	20 37 18.9	+1.3
LTVH	Ltavrtes, Hu	77.34 326	P		P	20 37 18.8	+1.1
CLL	Collm	77.35 333	⇑*i*P		P	20 37 17.5	-0.1
CLL			*i*			20 37 32.5	
CLL			*e*S		S	20 47 04.0	-1.1
CLL			pmax	pmax			
	comp=Z,316nm,1.0s						
CLL			MLR	MLR			
	comp=Z,6μm,20.3s						
CLL	Collm	77.35 333	⇑*i*P		P	20 37 17.5	-0.1
	comp=Z,316nm,1.0s						
CLL			*i* sP		sP	20 37 32.5	+0.3
CLL			*i* sPcP			20 37 40.8	
CLL			*e*PP		PP	20 40 09.0	-2.4
CLL			*e*PPP		PPP	20 42 00.0	
CLL			*e*S		S	20 47 04.0	-1.1
CLL			*e*PS		PnS	20 47 51.0	+3.8
CLL			*e*SS		SS	20 52 12.0	+9.4
CLL			*e*SSS		SSS	20 55 18.0	
CLL			*e*x		x	20 57 48.0	
CLL			LmV			21 15 00.0	
	comp=Z,6μm,20.3s						
CLL			Lmax			21 15 00.0	
ICOR	Ion Corvin	77.36 320	⇓P		P	20 37 18.5	+0.7
ESY	Stoneypath	77.36 344	⇑*e*P		P	20 37 17.8	+0.1
SECR		77.43 322	⇓P		P	20 37 18.2	-0.1
EAB	Aberfoyle	77.45 345	⇑*e*P		P	20 37 17.9	-0.2
EDI	Edinburgh	77.47 344	⇑*e*P		P	20 37 18.0	-0.2
EDI			IAmb	IAmb		20 37 20.5	
	comp=Z,72nm,0.9s						
DRGR		77.48 325	⇑P		P	20 37 19.3	+0.7
DRGR		77.48 325	P		P	20 37 21.7	+3.1
SAKB	Bahrain	77.48 294	P		P	20 37 18.5	-0.3
PVCC	Panska Ves	77.49 332	*e*P		P	20 37 18.8	+0.4
PVCC			*e*S		S	20 47 02.2	-4.5
PVCC			MLR	MLR			
	comp=Z,10μm,17.8s						
PVCC	Panska Ves	77.49 332	*e*P		P	20 37 18.8	+0.4
PVCC			*e*S		S	20 47 02.2	-4.5
PVCC			AMS	AMS		21 15 00.0	
	comp=Z,10μm,17.8s						
PSN	Preselentsi	77.51 320	*e*P		P	20 37 19.8	+1.1
LEHL	Lehliu	77.53 321	⇑P		P	20 37 19.9	+1.1
VOIR		77.56 323	⇑P		P	20 37 20.1	+1.0
VOIR		77.56 323	P		P	20 37 21.3	+2.2
HTT	Hallett	77.57 188	P		P	20 37 20.2	+1.3
	comp=Z,44nm,1.1s						
RASA	Rasa	77.58 321	⇓P		P	20 37 19.5	+0.5
LAWE	Loch Awe, Argy	77.58 345	⇑*e*P		P	20 37 18.3	-0.6
LAWE			IAmb	IAmb		20 37 20.6	
	comp=Z,91nm,0.9s						
EBL	Broad Law	77.59 344	⇑*e*P		P	20 37 18.7	-0.2
SULR		77.62 322	⇓P		P	20 37 20.1	+0.8
BORR	Bors	77.62 326	⇓P		P	20 37 20.3	+1.1
E43A	Lone Tree Farm	77.64 36	IAmb	IAmb		20 37 31.2	
	comp=Z,242nm,1.8s						
E43A	Lone Tree Farm	77.64 36	P		P	20 37 19.0	-0.4
	baz=323,SNR=7.2						
F42A	Maple Grove Fa	77.64 37	P		P	20 37 19.3	-0.1
	baz=322,SNR=7.9						
VYHS	Vyhne	77.64 328	*e*P		P	20 37 20.1	+0.7
VYHS			pmax	pmax			
	comp=Z,1μm,2.4s						
PSZ	Piszkesteto	77.71 327	P		P	20 37 20.2	+0.4
JAVC	Velka Javorina	77.78 329	⇑*i*P		P	20 37 21.7	+1.5
ARR	Arges	77.80 323	⇓P		P	20 37 21.0	+0.7
VRAC	Vranov	77.80 330	⇑P		P	20 37 21.2	+0.9
VRAC	Vranov	77.80 330	LR	LR		21 14 54.6	
	comp=Z,7μm,19.3s,baz=28,slow=38						
VRAC	Vranov	77.80 330	P		P	20 37 22.6	+2.4
VRAC	Vranov	77.80 330	⇑*i*P		P	20 37 20.9	+0.7
BRTR	Keskin Array B	77.81 314	P		P	20 37 20.9	+0.2
	comp=Z,34nm,0.8s,baz=72,slow=4.1,SNR=188						
BRTR			LR	LR		21 16 45.6	
	comp=Z,5μm,20.3s,baz=73,slow=40						
	comp=Z,34nm,0.8s						
BRTR	Keskin Array B	77.81 314	P		P	20 37 21.4	+0.7
BRTR	Keskin Array B	77.81 314	P		P	20 37 21.4	+0.7
PGBU	Glenifferbraes	77.83 345	*e*P		P	20 37 20.1	-0.1
PGBU			IAmb	IAmb		20 37 21.1	
	comp=Z,312nm,1.2s						
GOPC	GO Pecny, Ondr	77.93 331	*e*P		P	20 37 21.4	+0.4
GOPC			*e*S		S	20 47 09.5	-2.1
GOPC			MLR	MLR			
	comp=Z,8μm,18.3s						
GOPC	GO Pecny, Ondr	77.93 331	*e*P		P	20 37 21.4	+0.4
GOPC			*e*S		S	20 47 09.5	-2.1
GOPC			AMS	AMS		21 15 00.0	
	comp=Z,8μm,18.3s						
PRU	Pruhonice	77.95 331	*e*P		P	20 37 21.1	0.0
PRU			*e*S		S	20 47 07.7	-4.0
PRU			MLR	MLR			
	comp=Z,11μm,19.6s						
PRU	Pruhonice	77.95 331	*e*P		P	20 37 21.1	0.0
PRU			*e*S		S	20 47 07.7	-4.0
PRU			AMS	AMS		21 15 00.0	
	comp=Z,11μm,19.6s						
I40A	Norwalk	78.00 39	P		P	20 37 20.9	-0.6
	baz=321,SNR=6.7						
SLWR	Sila	78.01 292	P		P	20 37 21.6	-0.2
SLWR			P		P	20 37 21.6	-0.2
EKA	Eskdalemuir Ar	78.02 344	LR	LR		21 17 20.1	
	comp=Z,2μm,19.6s,baz=35,slow=40						
ESK	Eskdalemuir	78.05 344	⇑*e*P		P	20 37 21.0	-0.4
ESK	Eskdalemuir	78.05 344	P		P	20 37 21.6	+0.2
ESK			IAmb	IAmb		20 37 22.3	
	comp=Z,86nm,1.0s						
ESK	Eskdalemuir	78.05 344	P		P	20 37 21.6	+0.2
ESK			pmax	pmax			
	comp=Z,87nm,1.0s						
STFAR	Stefanesti-Arg	78.05 322	⇓P		P	20 37 22.8	+1.0
BSZH	Besenyszg	78.06 327	⇑P		P	20 37 22.6	+0.9
BSZH	Besenyszg	78.06 327	P		P	20 37 22.9	+1.2
KRUC	Moravsky	78.08 330	⇑*i*P		P	20 37 22.3	+0.5
SGRR	Singureni	78.10 322	⇓P		P	20 37 22.3	+0.4
LOT	Lotru	78.11 324	⇑P		P	20 37 22.4	+0.3
DEV	Deva	78.13 324	⇓P		P	20 37 23.1	+1.0
SMRA	Abu-Samra	78.13 293	P		P	20 37 22.2	-0.2
ANTO	Ankara	78.14 315	⇓P		P	20 37 22.7	+0.3
ANTO	Ankara	78.14 315	P		P	20 37 23.4	+1.0
ANTO	Ankara	78.14 315	P		P	20 37 23.4	+1.0
ANTO			pmax	pmax			
	comp=Z,165nm,0.8s						
ANTO	Ankara	78.14 315	P		P	20 37 23.6	+1.2
ANTO			P		P	20 37 23.6	+1.2
SMOL	Smolenice	78.16 329	*e*P		P	20 37 23.3	+1.1
SMOL			pmax	pmax			
	comp=Z,94nm,1.0s						
TREC	Trest	78.21 331	*e*P		P	20 37 22.9	+0.4
TREC			MLR	MLR			
	comp=Z,6μm,18.3s						
TREC	Trest	78.21 331	*e*P		P	20 37 22.9	+0.4
TREC			AMS	AMS		21 14 40.0	
	comp=Z,6μm,18.3s						
EDMD	Edmundbyers	78.24 343	⇑*e*P		P	20 37 22.4	-0.1
EDMD			IAmb	IAmb		20 37 24.2	
	comp=Z,94nm,1.1s						
PRD	Provadia	78.25 320	*e*P		P	20 37 23.7	+0.9
HUMR	Humele	78.31 322	⇑P		P	20 37 23.3	+0.2
SCIA	State Center	78.31 42	P		P	20 37 23.1	-0.1
	baz=320						
MODS	Modra-Piesok	78.33 329	*e*P		P	20 37 24.2	+1.0
MODS			pmax	pmax			
	comp=Z,424nm,1.1s						
SIRR	Siria	78.34 325	⇑P		P	20 37 24.0	+0.8
MOX	Moxa	78.37 333	P		P	20 37 23.7	+0.3
MOX			pmax	pmax			
	comp=Z,182nm,1.5s						
GDLE	Glaisdale, N Y	78.37 342	*e*P		P	20 37 23.2	0.0
RAZG	Razgrad	78.37 321	⇑P		P	20 37 23.4	-0.1
BUD	Budapest	78.40 327	P		P	20 37 24.5	+1.0
SRO	Srobarova	78.40 328	*e*P		P	20 37 24.9	+1.4
SRO			pmax	pmax			
	comp=Z,204nm,1.0s						
NEWG	New Galloway	78.44 344	*e*P		P	20 37 23.1	-0.6
NEWG			IAmb	IAmb		20 37 24.1	
	comp=Z,79nm,1.1s						
MORW	Morawa	78.45 208	P		P	20 37 24.0	+0.1
MORW	Morawa	78.45 208	P		P	20 37 24.5	+0.6
	comp=Z,54nm,1.2s						
NKC	Novy Kostel	78.45 333	*e*P		P	20 37 23.5	-0.4
NKC			MLR	MLR			
	comp=Z,8μm,15.9s						
NKC	Novy Kostel	78.45 333	*e*P		P	20 37 23.5	-0.4
NKC			AMS	AMS		21 15 40.0	
	comp=Z,8μm,15.9s						
KIDD	KIDD Seismic O	78.48 57	P		P	20 37 24.6	+0.2
	baz=315						
MDUB	Mudur

CAN Canberra 79.00 179 P **P** **20 37 28.2 +1.4**
comp=Z,128nm,1.2s
KHC Kasperske Hory 79.01 331 P **P** **20 37 26.9 -0.1**
KHC Kasperske Hory 79.01 331 *e*P **P** **20 37 27.5 +0.5**
KHC *e*S **S** **20 47 25.1 +1.9**
KHC AMS AMS 21 15 50.0
comp=Z,11µm,17.9s
CKRC Cesky Krumlov 79.03 331 *e*P **P** **20 37 26.8 -0.2**
CKRC *e*S S 20 47 13.2 -10
AMTX Amarillo 79.08 52 IAms_20 IAms_20 21 08 47.1
comp=Z,3µm,22.0s
AMTX Amarillo 79.08 52 P **P** **20 37 28.0 +0.3**
baz=316,SNR=20
AMTX Amarillo 79.08 52 P **P** **20 37 28.0 +0.3**
baz=316
IDGL Inch Island, C 79.09 346 *e*P **P** **20 37 27.1 -0.1**
IDGL IAmb IAmb 20 37 28.3
comp=Z,157nm,1.0s
EGYH Egyhazaskeszo 79.10 328 P **P** **20 37 28.2 +0.8**
ISK Istanbul-Kandi 79.10 318 P **P** **20 37 27.0 -0.5**
MSTX Muleshoe 79.12 53 P **P** **20 37 27.8 -0.1**
baz=316,SNR=11
MSTX Muleshoe 79.12 53 P **P** **20 37 27.5 -0.4**
baz=316,SNR=11
HERR Herculane 79.14 324 ⇑P **P** **20 37 27.8 +0.1**
L40A Anamosa 79.14 41 P **P** **20 37 26.9 -0.9**
baz=321,SNR=10
N38A Joes South For 79.16 43 P **P** **20 37 27.6 -0.2**
baz=320,SNR=7.3
SOP Sopron 79.17 329 P **P** **20 37 28.5 +0.7**
PVL Pavlikeni 79.18 321 *e*P **P** **20 37 28.6 +0.7**
GEC2 GERESS Array S 79.22 331 P **P** **20 37 28.3 +0.2**
GEC2 IAmb IAmb 20 37 29.1
comp=Z,81nm,1.0s
GERES GERESS Array B 79.22 331 P **P** **20 37 26.1 -2.1**
comp=Z,41nm,0.8s,baz=38,slow=5.4,SNR=140
GERES PKKPbc **PKKPbc** **20 56 18.3 +0.9**
comp=Z,0.2nm,0.5s,baz=202,slow=1.4,SNR=3.6
GERES LR LR 21 16 25.0
comp=Z,9µm,19.5s,baz=32,slow=39
comp=Z,41nm,0.8s
CONA Conrad Observa 79.22 330 *i* P **P** **20 37 29.1 +0.9**
comp=Z,66nm,0.8s,SNR=72
MPLH Magyarpolny 79.23 328 P **P** **20 37 28.8 +0.7**
RONA Rosalia, Austr 79.25 329 *i* P **P** **20 37 29.4 +1.0**
comp=Z,58nm,0.8s,SNR=63
DJES Djerdap 79.26 324 ⇑P **P** **20 37 28.7 +0.3**
G45A Suttons Bay 79.27 36 P **P** **20 37 28.0 -0.4**
baz=324
G45A P **P** **20 37 28.0 -0.4**
baz=324
BANR Banloc 79.27 325 ⇑P **P** **20 37 29.1 +0.8**
IOMK Kirk Michael 79.31 344 *e*P **P** **20 37 28.0 -0.4**
IOMK IAmb IAmb 20 37 30.8
comp=Z,262nm,1.1s
RAO Raoul Island 79.31 150 LR LR 21 05 53.7
comp=Z,3µm,21.5s,baz=346,slow=31
TIH Tihany 79.32 328 P **P** **20 37 28.7 +0.1**
GRFO Grafenberg 79.32 333 P **P** **20 37 29.6 +1.0**
GRFO Grafenberg 79.32 333 P **P** **20 37 29.6 +1.0**
GRFO pmax pmax
comp=Z,310nm,0.9s
GRFO MLR MLR
comp=Z,7µm,18.0s
PUNG Punghina 79.40 323 ⇓P **P** **20 37 29.0 -0.1**
OK035 E0210 Rd and N 79.40 49 IAms_20 IAms_20 21 18 34.3
comp=Z,2µm,21.0s
GDL2 Guadalupe Moun 79.45 55 P **P** **20 37 29.7 -0.1**
U32A Winter Ranch, 79.48 49 P **P** **20 37 29.7 -0.1**
baz=318,SNR=8.1
MDVR Moldovita 79.51 324 ⇑P **P** **20 37 29.3 -0.5**
OK038 West end E0370 79.55 49 IAms_20 IAms_20 21 09 56.3
comp=Z,2µm,20.0s
MORH Mrgy, Hungar 79.59 327 ⇑P **P** **20 37 29.6 -0.5**
MORH Mrgy, Hungar 79.59 327 P **P** **20 37 29.4 -0.7**
OK032 Salt Plains WL 79.60 48 IAms_20 IAms_20 21 14 03.5
comp=Z,2µm,20.0s
GMM Mts of Mourne 79.60 345⇑*e*P **P** **20 37 29.7 -0.3**
EDRB Edirne 79.60 320 P **P** **20 37 29.5 -0.8**
WACR West Acre 79.61 341⇑*e*P **P** **20 37 30.1 +0.1**
BLDU Ballidu 79.65 207 P **P** **20 37 30.9 +0.5**
comp=Z,46nm,1.1s
MOA Molln 79.86 330 *i* P **P** **20 37 32.0 +0.4**
comp=Z,42nm,0.8s,SNR=29
GLMI Grayling 79.87 35 P **P** **20 37 31.9 +0.2**
baz=324
GLMI Grayling 79.87 35 P **P** **20 37 31.6 -0.1**
baz=324
VLDQ Val d'Or 79.88 29 P **P** **20 37 30.0 -1.6**
VLDQ IAmb IAmb 20 37 47.2
comp=Z,76nm,0.9s
KOVH Kovagotottos 79.91 327 P **P** **20 37 31.2 -0.6**
L42A Oliver, Polo 79.91 40 P **P** **20 37 31.4 -0.5**
baz=322,SNR=5.9
ARSA Arzberg 79.92 329 *e*P **P** **20 37 32.5 +0.6**
comp=Z,23nm,0.9s,SNR=36
FRGS Fruska Gora 79.99 326 ⇑P **P** **20 37 32.8 +0.4**
FRGS Fruska Gora 79.99 326⇑*i*P **P** **20 37 32.4 0.0**
HGN Heimansgroeve 80.00 337⇑*e*P **P** **20 37 32.2 0.0**
BLKB Belogradchik 80.03 323 ⇑P **P** **20 37 32.5 -0.1**
BEBN Eben Emael 80.04 337 *d*P **P** **20 37 32.4 0.0**
comp=Z,220nm,0.8s
DOK Doka 80.05 286 P **P** **20 37 33.1 +0.1**
SNR=62
DOK P **P** **20 37 33.1 +0.1**
SNR=62
CWF Charnwood Fore 80.05 342 *e*P **P** **20 37 31.4 -1.1**
DMTO DMTO 80.09 285 P **P** **20 37 33.2 0.0**
SNR=22
DMTO P **P** **20 37 33.2 0.0**
SNR=22
BTNL Ternell 80.10 336 *d*P **P** **20 37 32.9 +0.1**
comp=Z,76nm,1.1s
ELMS Elmsett, Ipswi 80.10 340⇑*e*P **P** **20 37 33.1 +0.4**
BEHE Becsehely 80.10 328 P **P** **20 37 32.6 -0.3**
MEM Membach 80.11 337 *d*P **P** **20 37 32.8 -0.1**
comp=Z,101nm,0.9s
WLF1 Llynfaes 80.19 344 *e*P **P** **20 37 32.1 -1.1**
WLF1 IAmb IAmb 20 37 33.7
comp=Z,278nm,1.4s
KLBR Kellerberrin 80.22 206 P **P** **20 37 33.8 +0.3**
comp=Z,63nm,1.3s
BIOA Bad Ischl, Aus 80.22 331 *i* P **P** **20 37 34.1 +0.5**
comp=Z,44nm,0.8s,SNR=65
YLL Llanberis 80.29 343⇑*e*P **P** **20 37 33.8 0.0**
KOGS Kog 80.32 328 *i* P **P** **20 37 33.8 -0.2**
FOEL Foel Wylfa 80.32 343⇑*e*P **P** **20 37 33.3 -0.7**
FOEL IAmb IAmb 20 37 34.5
comp=Z,197nm,1.0s
BHOU Houvegnez 80.34 336 *d*P **P** **20 37 34.4 +0.3**
comp=Z,66nm,1.0s
BHOU *dx* x 20 37 49.4
N41A Harden Midland 80.37 41 P **P** **20 37 34.4 0.0**
baz=321
OK049 E0420 Rd and N 80.38 48 IAms_20 IAms_20 21 14 27.2
comp=Z,2µm,21.0s
T35A Sooner Cattle 80.42 47 P **P** **20 37 34.0 -0.8**
T35A IAmb IAmb 20 37 49.6
comp=Z,185nm,1.1s
T35B Sooner Cattle 80.42 47 P **P** **20 37 34.6 -0.2**
baz=319,SNR=27
BOVS Bovan 80.44 324 ⇓P **P** **20 37 34.5 -0.3**
LLW Llanuwychllyn 80.46 343 *e*P **P** **20 37 34.5 -0.1**
BCLA Clavier 80.48 337 *d*P **P** **20 37 34.9 +0.1**
comp=Z,74nm,0.9s
OK051 E0350 and S346 80.56 48 IAms_20 IAms_20 21 12 35.9
comp=Z,2µm,22.0s
OK050 Pawnee Station 80.56 48 IAms_20 IAms_20 21 12 37.0
comp=Z,2µm,22.0s
BGES Gesves 80.58 337 *b*P **P** **20 37 35.3 -0.1**
comp=Z,82nm,0.9s
L44A Lake County Fo 80.58 39 IAms_20 IAms_20 21 16 46.1
comp=Z,3µm,21.0s
SOKA Soboth 80.58 329 *i* P **P** **20 37 35.7 +0.1**
comp=Z,160nm,0.9s,SNR=109
PERS Pernice 80.58 329 *i* P **P** **20 37 35.8 +0.2**
PERS *i* pP **sP** **20 37 50.9 +0.7**
HWQ Hawqa 80.58 309 *e*P **P** **20 37 36.0 +0.1**
RAR Rarotonga 80.59 132 LR LR 21 06 04.1
comp=Z,1µm,21.8s,baz=321,slow=30
VTS Vitosha 80.59 322 ⇑P **P** **20 37 36.4 +0.6**
VTS Vitosha 80.59 322 *e*P **P** **20 37 36.1 +0.3**
HLM1 Long Mynd 80.60 342⇑*e*P **P** **20 37 35.7 +0.2**
HLM1 IAmb IAmb 20 37 38.1
comp=Z,117nm,1.0s
TEKS Tekeris 80.61 325 *e*P **P** **20 37 33.5 -2.2**

DSB Dublin 80.62 345 *e*P **P** **20 37 35.4 -0.1**
DSB Dublin 80.62 345 P **P** **20 37 35.8 +0.2**
DSB IAmb IAmb 20 37 37.9
comp=Z,108nm,0.9s
ARPS Mount Arapiles 80.65 185 P **P** **20 37 37.2 +1.6**
comp=Z,68nm,0.9s
OK044 Pawnee Station 80.68 48 IAms_20 IAms_20 21 12 40.1
comp=Z,2µm,22.0s
SNF Seneffe 80.69 338 *d*P **P** **20 37 36.1 +0.2**
comp=Z,81nm,1.0s
P40A Paris 80.71 43 P **P** **20 37 36.2 0.0**
baz=321,SNR=14
RDO Rodhopi 80.72 320 P **P** **20 37 36.9 +0.7**
RDO Rodhopi 80.72 320 P **P** **20 37 36.3 +0.1**
BMRD Maredsous 80.74 337 *d*P **P** **20 37 36.2 0.0**
comp=Z,124nm,0.9s
RCHB Rochefort 80.74 337 *b*P **P** **20 37 36.1 -0.1**
comp=Z,80nm,1.1s
RBK Rabkut 80.75 285 P **P** **20 37 36.7 -0.2**
SNR=38
RBK P **P** **20 37 36.7 -0.2**
SNR=38
OK029 Liberty Lake 80.75 49 IAms_20 IAms_20 21 14 20.2
comp=Z,2µm,20.0s
WHFO Wadi Hawf 80.77 286 P **P** **20 37 36.6 -0.4**
SNR=47
WHFO P **P** **20 37 36.6 -0.4**
SNR=47
DIVS Divibare 80.79 325 P **P** **20 37 36.5 -0.2**
DIVS IAmb IAmb 20 37 38.0
comp=Z,79nm,0.8s
DIVS Divibare 80.79 325⇑*i*P **P** **20 37 36.5 -0.2**
WMOK Wichita Mounta 80.81 50 P **P** **20 37 36.5 -0.5**
WMOK Wichita Mounta 80.81 50 IAms_20 IAms_20 21 15 22.8
comp=Z,2µm,19.0s
WMOK Wichita Mounta 80.81 50 P **P** **20 37 36.5 -0.5**
WMOK pmax pmax
comp=Z,47nm,1.0s
WMOK MLR MLR
comp=Z,2µm,19.0s
WMOK Wichita Mounta 80.81 50 P **P** **20 37 36.7 -0.2**
baz=318,SNR=22
WMOK Wichita Mounta 80.81 50 P **P** **20 37 37.0 0.0**
baz=318,SNR=22
KBA Koelnbreinsper 80.85 331 *i* P **P** **20 37 37.1 0.0**
comp=Z,131nm,0.9s,SNR=83
OBKA Obir 80.90 330⇑*i*P **P** **20 37 37.3 0.0**
OBKA Obir 80.90 330 *i* P **P** **20 37 37.3 0.0**
comp=Z,62nm,0.8s,SNR=25
WLF Walferdange 80.91 336 *d*P **P** **20 37 37.9 +0.7**
comp=Z,59nm,1.4s
ZAHL Zahle 80.93 309 *e*P **P** **20 37 38.6 +0.9**
ELSH Elham, Standar 80.93 340⇑*e*P **P** **20 37 37.9 +0.7**
ELSH IAmb IAmb 20 37 39.5
comp=Z,291nm,0.8s
A052A Srbac 80.96 327⇑*i*P **P** **20 37 37.1 -0.4**
DOU Dourbes 80.97 337 *b*P **P** **20 37 36.7 -0.8**
comp=Z,46nm,1.1s
OK025 Westminster Rd 80.98 49 IAms_20 IAms_20 21 14 34.1
comp=Z,2µm,21.0s
BHL Bhannes 81.02 309 *e*P **P** **20 37 38.7 +0.5**
MUN Mundaring 81.07 207 P **P** **20 37 38.5 +0.5**
comp=Z,50nm,1.4s
J47A Sunmer 81.08 36 P **P** **20 37 38.6 +0.4**
baz=324
J47A P **P** **20 37 38.6 +0.4**
baz=324
MCH1 Michaelchurch 81.11 342⇑*e*P **P** **20 37 38.1 -0.1**
MCH1 IAmb IAmb 20 37 39.0
comp=Z,149nm,1.0s
MYKA Terra Mystica 81.13 330 *i* P **P** **20 37 38.2 -0.3**
comp=Z,64nm,0.9s,SNR=21
STRD Stroud 81.14 342⇑*e*P **P** **20 37 38.5 +0.3**
STRD IAmb IAmb 20 37 41.0
comp=Z,258nm,1.0s
M44A Midewin, Midew 81.14 39 P **P** **20 37 38.2 -0.3**
baz=323,SNR=12
MMB Musomiste 81.19 321 *e*P **P** **20 37 38.9 0.0**
BBLS Lazići 81.22 325⇑*i*P **P** **20 37 39.4 +0.4**
MONM Monmouth 81.22 342 *e*P **P** **20 37 38.7 0.0**
MONM IAmb IAmb 20 37 41.4
comp=Z,203nm,0.9s
RCY Rachaya 81.22 308 *e*P **P** **20 37 40.1 +0.8**
HDIL Hopedale 81.23 40 P **P** **20 37 38.8 -0.2**
baz=322,SNR=12
HDIL Hopedale 81.23 40 P **P** **20 37 38.7 -0.3**
baz=322,SNR=12
LPW Lampeter 81.23 343 *e*P **P** **20 37 38.6 -0.2**
WATA Walderalm 81.24 332 *i* P **P** **20 37 39.6 +0.4**
comp=Z,145nm,0.8s,SNR=57
SMTH Samothraki Isl 81.25 319 P **P** **20 37 38.1 -1.1**
KKB Krupnik 81.26 322 *e*P **P** **20 37 39.9 +0.7**
A051A Mrakovica 81.27 327⇑*i*P **P** **20 37 38.4 -0.9**
QRWL Qaraoun 81.27 309 *e*P **P** **20 37 40.1 +0.6**
TOO Toolangi 81.28 182 P **P** **20 37 41.5 +2.5**
comp=Z,47nm,1.7s
WTTA Wattenberg 81.28 332 *i* P **P** **20 37 40.0 +0.5**
comp=Z,137nm,0.7s,SNR=51
SWN1 Swindon 81.30 342 *e*P **P** **20 37 39.5 +0.3**
LJU Ljubljana 81.30 329 *i* P **P** **20 37 38.9 -0.4**
LJU *e*pP **sP** **20 37 53.9 -0.1**
NVR Nevrokopi 81.32 321 P **P** **20 37 39.2 -0.4**
I49A Point Hope 81.34 35 P **P** **20 37 38.9 -0.6**
baz=326,SNR=5.5
I49A P **P** **20 37 38.9 -0.6**
baz=326,SNR=5.5
BLY Banja Luka 81.38 327⇑*i*P **P** **20 37 39.5 -0.2**
SHBL Chebaa 81.38 308 *e*P **P** **20 37 41.1 +1.0**
RETA Reutte 81.39 332 *i* P **P** **20 37 40.2 +0.3**
comp=Z,140nm,1.0s,SNR=35
HMNX Herstmonceux 81.39 340⇑*e*P **P** **20 37 39.2 -0.4**
MOTA Moosalm 81.40 332 *i* P **P** **20 37 40.2 +0.2**
comp=Z,238nm,0.9s,SNR=71
ABTA Abfaltersbach 81.43 331 *i* P **P** **20 37 39.4 -0.7**
comp=Z,49nm,1.1s,SNR=14
L46A Eue Claire 81.43 38 P **P** **20 37 39.8 -0.3**
baz=324,SNR=6.0
L46A P **P** **20 37 39.8 -0.3**
baz=324,SNR=6.0
RUDO Rudo 81.44 325 *e*P **P** **20 37 39.5 -0.6**
BFO Black Forest 81.44 334 P **P** **20 37 40.2 +0.2**
BFO IAmb IAmb 20 37 41.0
comp=Z,125nm,1.1s
BFO Black Forest 81.44 334 P **P** **20 37 40.2 +0.2**
BFO pmax pmax
comp=Z,125nm,1.1s
LPIG La Paz 81.45 65 LR LR 21 06 50.9
comp=Z,1µm,21.7s,baz=322,slow=30
SQTA Sankt Quirin 81.47 332 *i* P **P** **20 37 40.7 +0.4**
comp=Z,143nm,0.9s,SNR=58
ABTO Aybut 81.48 286 P **P** **20 37 40.8 0.0**
SNR=52
ABTO P **P** **20 37 40.8 0.0**
SNR=52
S39A Bolivar 81.49 45 P **P** **20 37 39.1 -1.4**
baz=320,SNR=13
BOJS Bojanci 81.49 329⇑*i*P **P** **20 37 40.1 -0.2**
THAS Thassos island 81.52 320 P P 20 37 35.0 -5.5
CSS Mathiatis 81.52 311 P **P** **20 37 40.8 +0.1**
CSS IAmb IAmb 20 37 43.3
comp=Z,131nm,1.0s
CSS IAms_20 IAms_20 21 19 17.5
comp=Z,3µm,20.0s
RSBS Rosebush, Pemb 81.53 343 *e*P **P** **20 37 39.9 -0.5**
IWEX Carrickbyrne, 81.53 345 *e*P **P** **20 37 40.2 -0.1**
CLUD Cludinico 81.55 330 P **P** **20 37 40.0 -0.7**
CLUD IAmb IAmb 20 37 41.9
comp=Z,69nm,0.8s
R40A Maddies Statio 81.56 44 P **P** **20 37 39.9 -0.9**
R40A IAmb IAmb 20 37 55.9
comp=Z,83nm,1.1s
R40A Maddies Statio 81.56 44 P **P** **20 37 40.3 -0.5**
baz=321,SNR=33
TUL1 Leonard 81.56 47 **P** **20 37 40.4 -0.5**
TUL1 IAmb IAmb 20 37 55.7
comp=Z,105nm,1.2s
TUL1 IAms_20 IAms_20 21 16 06.4
comp=Z,2µm,21.0s
TUL1 Leonard 81.56 47 P **P** **20 37 40.6 -0.3**
baz=319,SNR=16
TUL1 Leonard 81.56 47 P **P** **20 37 40.8 -0.1**
baz=319,SNR=16
ASF Jabal al Asfar 81.59 307 LR LR 21 18 37.0
comp=Z,4µm,18.5s,baz=37,slow=39
CEY Cerknica 81.60 329⇑*i*P **P** **20 37 40.4 -0.5**
NWAO Narrogin (SRO) 81.62 206 LR LR 21 13 05.8
comp=Z,666nm,21.8s,baz=248,slow=35
NWAO Narrogin (SRO) 81.62 206 P **P** **20 37 41.3 +0.5**
NWAO IAmb IAmb 20 37 42.7
comp=Z,134nm,1.3s
NWAO Narrogin (SRO) 81.62 206 P **P** **20 37 41.3 +0.5**
NWAO pmax pmax
comp=Z,135nm,1.3s
NWAO Narrogin (SRO) 81.62 206 P **P** **20 37 41.4 +0.5**
comp=Z,107nm,1.5s
SRS Serrai 81.63 321 P **P** **20 37 40.8 -0.4**
PLE Pljevlja 81.67 325 *e*P **P** **20 37 41.8 +0.4**
MGRS Mrkonjic Grad 81.70 327⇑*i*P **P** **20 37 42.2 +0.7**
STIP Stip 81.80 322 *i* P **P** **20 37 41.3 -0.7**
FETA Feichten 81.80 332 *i* P **P** **20 37 42.4 +0.3**
comp=Z,93nm,1.0s,SNR=30
MMAI Mount Meron Ar 81.82 308 LR LR 21 18 49.2
comp=Z,6µm,18.8s,baz=246,slow=39
IVA Berane 81.83 324 *e*P **P** **20 37 42.5 +0.2**
P43A Skaggs, Pawnee 81.84 41 P **P** **20 37 42.5 +0.2**
baz=322,SNR=8.2
DAVA Damuels 81.86 333 *i* P **P** **20 37 42.4 0.0**
comp=Z,136nm,0.9s,SNR=42
PRK Paraskevi 81.86 318 P **P** **20 37 42.0 -0.4**
ABTX Abilene, Hawle 81.89 52 P **P** **20 37 42.9 +0.2**
baz=318,SNR=7.0
ABTX Abilene, Hawle 81.89 52 P **P** **20 37 42.6 -0.1**
baz=318,SNR=7.0
U38A Gravette 81.90 46 P **P** **20 37 42.2 -0.5**
baz=320,SNR=24
SKO Skopje 81.90 323 *i* P **P** **20 37 43.5 +1.0**
ECH Echery 81.90 335 P **P** **20 37 42.4 -0.1**
ECH IAmb IAmb 20 37 45.1
comp=Z,134nm,1.1s
ECH IAms_20 IAms_20 21 21 06.3
comp=Z,3µm,20.0s
ECH Echery 81.90 335 P **P** **20 37 42.4 -0.1**
ECH pmax pmax
comp=Z,134nm,1.1s
ECH MLR MLR
comp=Z,3µm,20.0s
KNT Kendrikon 81.91 321 P **P** **20 37 41.7 -0.9**
SKDS Skadanscina 81.92 329⇑*i*P **P** **20 37 41.7 -0.9**
TX31 Lajitas Ar. Si 81.92 57 P **P** **20 37 43.1 +0.1**
TX31 Lajitas Ar. Si 81.92 57 P **P** **20 37 43.3 +0.2**
baz=316,SNR=154
TX32 Lajitas Array 81.92 57 P **P** **20 37 43.1 +0.1**
TX32 IAmb IAmb 20 37 56.7
comp=Z,120nm,1.2s
TXAR Lajitas Array 81.93 57 P **P** **20 37 42.8 -0.2**
comp=Z,49nm,0.7s,baz=300,slow=4.1,SNR=567
TXAR PKKPbc **PKKPbc** **20 56 12.4 +1.4**
comp=Z,2.5nm,0.8s,baz=143,slow=5.0,SNR=23
TXAR PKPPKP **P'P'df** **21 04 18.6 -3.2**
comp=Z,0.9nm,1.1s,baz=145,slow=4.6,SNR=5.7
TXAR LR LR 21 13 35.4
comp=Z,2µm,19.1s,baz=322,slow=35
comp=Z,49nm,0.7s
TXAR Lajitas Array 81.93 57 P **P** **20 37 43.3 +0.3**
TXAR Lajitas Array 81.93 57 P **P** **20 37 43.3 +0.3**
VAY Valandovo 81.93 322 *i* P **P** **20 37 43.2 +0.5**
SRKY Kupres RS 81.96 327⇑*i*P **P** **20 37 43.0 +0.1**
UPM Unac-Piva 81.97 325⇑*i*P **P** **20 37 42.5 -0.6**
UPM Unac-Piva 81.97 325 *e*P **P** **20 37 42.7 -0.4**
SLBS Sierra La Lagu 81.98 65 P **P** **20 37 43.7 +0.4**
ELL Elmali 81.98 314 P **P** **20 37 43.1 -0.1**
ELL Elmali 81.98 314 P **P** **20 37 43.1 -0.1**
ELL pmax pmax
comp=Z,409nm,1.0s
KOME Kolasin 82.01 324 *e*P **P** **20 37 43.1 -0.1**
PVY Plav 82.03 324 *e*P **P** **20 37 43.3 -0.1**
OUR Ouranopolis 82.08 320 P **P** **20 37 43.2 -0.3**
SIGR SIGRI 82.09 318 P **P** **20 37 42.8 -0.8**
SADO Sadowa 82.10 32 LR LR 21 17 14.4
comp=Z,2µm,19.8s,baz=356,slow=38
CCM Cathedral Cave 82.25 43 P **P** **20 37 44.1 -0.3**
CCM IAmb IAmb 20 37 45.3
comp=Z,68nm,0.8s
CCM Cathedral Cave 82.25 43 IAms_20 IAms_20 21 11 27.5
comp=Z,3µm,22.0s
CCM Cathedral Cave 82.25 43 P **P** **20 37 44.1 -0.3**
CCM pmax pmax
comp=Z,68nm,0.9s
CCM MLR MLR
comp=Z,3µm,22.0s
CCM Cathedral Cave 82.25 43 P **P** **20 37 44.1 -0.3**
baz=321,SNR=38
CCM Cathedral Cave 82.25 43 P **P** **20 37 44.1 -0.3**
baz=321
OUZ Omahuta 82.25 159 IAms_20 IAms_20 21 06 59.6
comp=Z,3µm,22.0s
HHAR Hobbs 82.25 46 P **P** **20 37 43.8 -0.7**
HHAR IAmb IAmb 20 37 58.2
comp=Z,186nm,1.6s
HHAR Hobbs 82.25 46 P **P** **20 37 43.8 -0.7**
baz=320
SLM Saint Louis 82.29 42 P **P** **20 37 44.7 +0.1**
baz=322,SNR=6.0
GRG Griva 82.30 322 P **P** **20 37 44.0 -0.7**
L48A N Adams 82.30 37 P **P** **20 37 44.7 0.0**
baz=325,SNR=10.0
L48A P **P** **20 37 44.7 0.0**
baz=325,SNR=10.0
DAVOX Davos/Dischmat 82.30 332 LR LR 21 18 59.6
comp=Z,4µm,18.6s,baz=26,slow=39
FUORN Ofenpass-Fuorn 82.31 332 P **P** **20 37 45.2 +0.3**
FUORN IAmb IAmb 20 37 47.0
comp=Z,106nm,0.9s
NKME Niksic 82.31 325 *e*P **P** **20 37 44.3 -0.5**
CTI Castel Tesino 82.33 331 P **P** **20 37 44.0 -0.9**
CTI IAmb IAmb 20 37 45.2
comp=Z,64nm,0.8s
CTI Castel Tesino 82.33 331 P **P** **20 37 44.0 -0.9**
CTI pmax pmax
comp=Z,64nm,0.8s
AAM Ann Arbor 82.34 36 IAms_20 IAms_20 21 18 00.6
comp=Z,3µm,21.0s
AAM Ann Arbor 82.34 36 P **P** **20 37 45.1 +0.3**
baz=325
BRY Bratogost 82.37 325⇑*i*P **P** **20 37 44.4 -0.8**
BRY Bratogost 82.37 325 *e*P **P** **20 37 44.4 -0.8**
HTL Hartland 82.38 343 *e*P **P** **20 37 45.0 +0.2**
SFIN Lafayette 82.38 39 P **P** **20 37 44.8 -0.3**
baz=323,SNR=11
SFIN Lafayette 82.38 39 P **P** **20 37 44.7 -0.4**
baz=323,SNR=11
PDG Podgorica 82.46 324 ⇑P **P** **20 37 45.4 0.0**
PDG Podgorica 82.46 324 P **P** **20 37 45.2 -0.3**
TTG Podgorica 82.46 324 *e*P **P** **20 37 45.2 -0.3**
RAYN Ar Rayn 82.47 295 P **P** **20 37 46.7 +0.8**
RAYN IAmb IAmb 20 37 47.5
comp=Z,110nm,1.1s
RAYN Ar Rayn 82.47 295 P **P** **20 37 46.7 +0.8**
RAYN pmax pmax
comp=Z,110nm,1.1s
RAYN MLR MLR
comp=Z,4µm,20.0s
RAYN Ar Rayn 82.47 295 P **P** **20 37 46.5 +0.6**
RAYN Ar Rayn 82.47 295 *i* P **P** **20 37 46.7 +0.8**
SNR=85
CEME Cevo 82.51 325 *e*P **P** **20 37 45.3 -0.5**
YER Yerkesik 82.52 316 P **P** **20 37 46.1 +0.2**
PAIG Paliouri 82.54 320 P **P** **20 37 44.3 -1.6**
PHP Peshkopia 82.57 323 P **P** **20 37 45.7 -0.4**
N47A Urbana 82.61 38 P **P** **20 37 45.7 -0.6**
baz=324,SNR=14
N47A P **P** **20 37 45.7 -0.6**
baz=324,SNR=14
CHOS Chios island 82.64 318 P **P** **20 37 46.1 -0.5**
Q44A Meyer Farm, Va 82.66 41 P **P** **20 37 46.5 -0.1**
baz=322,SNR=12
DRME Dracevica, Mon 82.69 324⇑*i*P **P** **20 37 46.6 -0.1**
DRME Dracevica, Mon 82.69 324 *e*P **P** **20 37 46.5 -0.1**
FVM French Village 82.70 43 P **P** **20 37 47.0 +0.2**
baz=322
Z35A Perchaven, San 82.71 50 P **P** **20 37 46.6 -0.3**
baz=319
BUM Brajici-Budva 82.72 325 *e*P **P** **20 37 46.5 -0.4**
STON Ston 82.74 326 *e*P **P** **20 37 44.6 -2.3**
U40A Yellville 82.75 45 P **P** **20 37 46.5 -0.6**
baz=321,SNR=42
U40A P **P** **20 37 46.5 -0.6**
baz=321,SNR=42
HCY Herceg Novi 82.77 325⇑*i*P **P** **20 37 46.2 -0.9**
HCY Herceg Novi 82.77 325 *e*P **P** **20 37 46.2 -0.9**
X37A Clayton 82.78 48 **P** **20 37 47.2 -0.1**

X37A	Clayton	82.78	48	P	P	20 37 47.2	-0.1	
	baz=320,SNR=9.8							
DYA	Yadsworthy	82.78	342⇑	eP	P	20 37 47.0	0.0	
DYA				IAmb	IAmb	20 37 47.7		
	comp=Z,312nm,1.2s							
ULC	Ulcinj	82.85	324	eP	P	20 37 47.1	-0.4	
OHR	Ohrid	82.88	323	i P	P	20 37 48.1	+0.4	
TEOL	Teolo	82.92	331	P	P	20 37 47.7	-0.1	
P46A	Rosedale	82.94	40	P	P	20 37 48.1	+0.1	
	baz=323,SNR=31							
LIT	Litokhoron	82.95	321	P	P	20 37 47.4	-0.7	
GHAJ	Ghor Haditha	82.99	307	P	P	20 37 49.1	+0.8	
BODT	Bodrum	83.06	316	P	P	20 37 42.8	-5.9	
TIR	Tirane	83.09	323	⇑P	P	20 37 49.1	+0.3	
TIR	Tirane	83.09	323	P	P	20 37 48.6	-0.2	
KZN	Kozani	83.11	322	P	P	20 37 45.5	-3.5	
T42A	Van Buren	83.12	44	P	P	20 37 48.6	-0.4	
	baz=321							
OLIL	Olney	83.23	41	P	P	20 37 49.5	0.0	
	baz=323,SNR=8.5							
N49A	Columbus Grove	83.24	37	P	P	20 37 49.4	-0.2	
	baz=325,SNR=15							
N49A				P	P	20 37 49.4	-0.2	
	baz=325,SNR=15							
KBN	Korca	83.28	322	P	P	20 37 49.1	-0.8	
TAOE	Nuku Hiva Isla	83.29	109	eP	P	20 37 50.7	+0.5	
	comp=Z,227nm,25.3s							
TAOE	Nuku Hiva Isla	83.29	109	eS	S	20 48 07.6	-1.0	
	comp=Z,1μm,24.9s							
TAOE	Nuku Hiva Isla	83.29	109	eLR	LR	21 03 59.0		
	comp=Z,8μm,25.3s							
ARG	Arkhangelos	83.31	315	P	P	20 37 50.6	+0.6	
ARG	Arkhangelos	83.31	315	P	P	20 37 49.3	-0.7	
ARG	Arkhangelos	83.31	315	P	P	20 37 50.6	+0.6	
ARG				pmax	pmax			
	comp=Z,678nm,1.4s							
M50A	Fremont	83.34	36	P	P	20 37 50.0	-0.1	
	baz=326,SNR=6.2							
M50A				P	P	20 37 50.0	-0.1	
	baz=326,SNR=6.2							
NEST	Nestorio	83.34	322	P	P	20 37 49.5	-0.7	
O48B	Farmland	83.36	38	P	P	20 37 49.8	-0.4	
	baz=324,SNR=12							
O48B	Farmland	83.36	38	P	P	20 37 49.6	-0.5	
	baz=324,SNR=12							
JCT	Junction City	83.38	54	P	P	20 37 50.2	-0.3	
JCT				IAmb	IAmb	20 38 04.6		
	comp=Z,114nm,1.1s							
JCT				IAMs_20	IAMs_20	21 12 13.9		
	comp=Z,2μm,21.0s							
JCT	Junction City	83.38	54	P	P	20 37 50.2	-0.3	
JCT				pmax	pmax			
	comp=Z,114nm,1.2s							
JCT				MLR	MLR			
	comp=Z,2μm,21.0s							
JCT	Junction City	83.38	54	P	P	20 37 50.4	-0.1	
	baz=318,SNR=23							
JCT	Junction City	83.38	54	P	P	20 37 50.3	-0.1	
	baz=318,SNR=23							
FCAR	Ozark Folk Cen	83.49	45	P	P	20 37 50.2	-0.7	
FCAR				IAmb	IAmb	20 38 05.3		
	comp=Z,141nm,1.4s							
S44A	Carbondale	83.50	42	P	P	20 37 51.0	+0.1	
	baz=322,SNR=28							
SENIN	Lac Senin/Sane	83.51	334	P	P	20 37 51.1	0.0	
SENIN				IAmb	IAmb	20 37 53.2		
	comp=Z,64nm,0.8s							
JQE	Queens East	83.51	341⇑	eP	P	20 37 50.7	-0.1	
D62A	Allapoint, All	83.51	25	P	P	20 37 50.6	-0.2	
	baz=334							
D62A				P	P	20 37 50.6	-0.2	
	baz=334							
JSA	Saint Aubin	83.56	341⇑	eP	P	20 37 50.9	-0.1	
JSA				IAmb	IAmb	20 37 51.8		
	comp=Z,219nm,1.1s							
WHTX	Lake Whitney,	83.60	51	P	P	20 37 51.8	+0.2	
	baz=319,SNR=6.6							
WHTX	Lake Whitney,	83.60	51	P	P	20 37 51.5	0.0	
	baz=319,SNR=6.6							
PPT	Papeete	83.61	122	P	P	20 37 55.1	+3.5	
	comp=Z,15nm,0.7s,baz=353,slow=8.1,SNR=3.6							
PPT				LR	LR	21 07 35.2		
	comp=Z,3μm,21.4s,baz=348,slow=30							
PPT2	Papeete2	83.63	122	eP	P	20 37 52.6	+0.8	
	comp=Z,387nm,27.0s							
PPT2	Papeete2	83.63	122	eS	S	20 48 10.6	-1.1	
	comp=Z,974nm,24.8s							
PPT2				eSS	SS	20 53 38.9	-0.3	
	comp=Z,1μm,27.0s							
PPT2	Papeete2	83.63	122	eLR	LR	21 04 08.2		
	comp=Z,9μm,25.5s							
PPT2				eLR	LR	21 04 08.3		
	comp=Z,7μm,29.0s							
PPT2	Papeete2	83.63	122	eT	T	22 10 08.5		
	comp=Z,20nm,0.3s							
PBMO	Poplar Bluff	83.65	44	P	P	20 37 51.8	+0.1	
	baz=322							
PAE	Paea	83.68	122	eT	T	22 10 11.7		
	comp=Z,2.8nm,0.3s							
BMNY	Brushton-Moira	83.73	29	P	P	20 37 51.3	-0.6	
	baz=331,SNR=6.3							
TIAR	Tiarei	83.74	122	eP	P	20 38 02.3	+10	
	comp=Z,14nm,1.0s							
TIAR	Tiarei	83.74	122	eT	T	22 10 16.8		
	comp=Z,5.6nm,0.2s							
LSK	Leskovik	83.75	322	P	P	20 37 52.3	0.0	
MIAR	Mount Ida	83.77	47	P	P	20 37 51.7	-0.7	
MIAR				IAmb	IAmb	20 38 07.3		
	comp=Z,174nm,1.4s							
MIAR				IAMs_20	IAMs_20	21 18 11.0		
	comp=Z,2μm,20.0s							
MIAR	Mount Ida	83.77	47	P	P	20 37 51.7	-0.7	
MIAR				pmax	pmax			
	comp=Z,174nm,1.4s							
MIAR				MLR	MLR			
	comp=Z,2μm,20.0s							
MIAR	Mount Ida	83.77	47	P	P	20 37 52.4	-0.1	
	baz=320,SNR=48							
MIAR	Mount Ida	83.77	47	P	P	20 37 52.3	-0.1	
	baz=320,SNR=48							
O49A	Covington	83.78	38	P	P	20 37 51.6	-0.7	
O49A	Covington	83.78	38	P	P	20 37 52.1	-0.2	
	baz=325,SNR=8.1							
O49A				P	P	20 37 52.1	-0.2	
	baz=325,SNR=8.1							
E62A	Clayton Lake	83.78	25	P	P	20 37 52.0	-0.2	
	baz=334,SNR=5.7							
E62A				P	P	20 37 52.0	-0.2	
	baz=334,SNR=5.7							
WHAR	Wooly Hollow	83.87	46	P	P	20 37 51.9	-1.0	
P48A	Milroy	83.88	39	P	P	20 37 52.5	-0.3	
	baz=324,SNR=8.1							
P48A				P	P	20 37 52.5	-0.3	
	baz=324,SNR=8.1							
LONY	Lake Ozonia	83.89	29	IAMs_20	IAMs_20	21 18 05.6		
	comp=Z,3μm,21.0s							
M52A	Chesterland	83.93	35	P	P	20 37 53.3	+0.2	
	baz=327,SNR=6.5							
M52A				P	P	20 37 53.3	+0.2	
	baz=327,SNR=6.5							
APE	Apeiranthos	83.94	317	⇓P	P	20 37 51.9	-1.4	
TVO	Taravao	83.97	122	eP	P	20 38 12.2	+19	
	comp=Z,1.5nm,1.2s							
MAKR	Makrakomi, Fth	83.99	321	P	P	20 37 52.2	-1.3	
ERPA	Erie	84.00	34	IAMs_20	IAMs_20	21 21 43.6		
	comp=Z,2μm,21.0s							
ERPA	Erie	84.00	34	P	P	20 37 53.4	0.0	
	baz=327							
ERPA	Erie	84.00	34	P	P	20 37 53.1	-0.3	
	baz=327							
N51A	Ashland	84.02	36	P	P	20 37 53.4	-0.2	
	baz=326,SNR=5.7							
N51A				P	P	20 37 53.4	-0.2	
	baz=326,SNR=5.7							
SSF	Saint Saulge	84.03	337	eP	P	20 37 52.8	-0.7	
SSF				pmax	pmax			
	comp=Z,123nm,0.9s							
ZCCA	Zocca	84.04	331	P	P	20 37 54.6	+0.9	
JAN	Janina	84.05	322	P	P	20 37 52.6	-1.1	
P49A	Miami Univ. Ec	84.14	38	P	P	20 37 53.9	-0.2	
	baz=325,SNR=17							
P49A	Miami Univ. Ec	84.14	38	P	P	20 37 54.0	-0.2	
	baz=325,SNR=17							
EVR	Evrytania	84.22	321	P	P	20 37 53.5	-1.2	
SRN	Sarande	84.24	322	P	P	20 37 53.1	-1.5	
M53A	WI Miller and	84.30	35	P	P	20 37 55.2	+0.2	
	baz=327,SNR=7.3							
E63A	Oxbow	84.30	24	P	P	20 37 54.3	-0.5	
	baz=334							
E63A				P	P	20 37 54.3	-0.5	
	baz=334							
F62A	Pittston Farm,	84.30	26	P	P	20 37 55.1	+0.3	
F62A	Pittston Farm,	84.30	26	P	P	20 37 55.1	+0.3	
	baz=334							
F62A				P	P	20 37 55.1	+0.3	
	baz=334							
MMNY	Mt. Morris Dam	84.30	32		P	20 37 54.5	-0.4	
MMNY				IAmb	IAmb	20 38 06.8		
	comp=Z,153nm,1.3s							
WVNY	West Valley, N	84.31	33	P	P	20 37 54.9	-0.1	
	baz=328,SNR=7.3							
KARP	Karpathos	84.32	315	P	P	20 37 55.0	-0.2	
KARP	Karpathos	84.32	315	P	P	20 37 54.0	-1.2	
ACSO	Alum Creek Sta	84.33	37	IAMs_20	IAMs_20	21 21 23.4		
	comp=Z,3μm,19.0s							
ACSO	Alum Creek Sta	84.33	37	P	P	20 37 55.1	0.0	
	baz=326,SNR=13							
ACSO	Alum Creek Sta	84.33	37	P	P	20 37 55.0	-0.2	
	baz=326,SNR=13							
ALLY	Alegheny Colle	84.33	34	P	P	20 37 55.3	+0.1	
	baz=327,SNR=7.6							
IGT	Igoumenitsa	84.38	322	P	P	20 37 54.3	-1.1	
FDMO	Fiordimonte	84.41	329	P	P	20 37 55.7	+0.2	
435B	Jarrell	84.43	52	IAMs_20	IAMs_20	21 17 45.6		
	comp=Z,2μm,20.0s							
435B	Jarrell	84.43	52	P	P	20 37 55.9	+0.1	
	baz=319							
435B	Jarrell	84.43	52	P	P	20 37 55.5	-0.3	
	baz=319							
WCI	Wyandotte Cave	84.48	40	P	P	20 37 55.5	-0.4	
WCI				IAmb	IAmb	20 38 08.5		
	comp=Z,86nm,1.1s							
WCI	Wyandotte Cave	84.48	40	IAMs_20	IAMs_20	21 19 15.5		
	comp=Z,3μm,20.0s							
WCI	Wyandotte Cave	84.48	40	P	P	20 37 55.5	-0.4	
WCI				pmax	pmax			
	comp=Z,86nm,1.2s							
WCI				MLR	MLR			
	comp=Z,3μm,20.0s							
WCI	Wyandotte Cave	84.48	40	P	P	20 37 56.0	+0.1	
	baz=324,SNR=17							
WCI	Wyandotte Cave	84.48	40	P	P	20 37 56.0	+0.1	
	baz=324							
EIL	Elat	84.56	306	LR	LR	21 20 40.0		
	comp=Z,3μm,19.4s,baz=42,slow=39							
NRCA	Norcia	84.57	328	P	P	20 37 56.5	+0.1	
MSSA	Maissana	84.58	331	P	P	20 37 56.1	-0.4	
NCB	Newcomb	84.59	29	P	P	20 37 55.9	-0.5	
	baz=331							
PVO	Paravola	84.59	321	P	P	20 37 55.2	-1.2	
ROSF	Rostrenen	84.61	341	eP	P	20 37 56.4	0.0	
LAKA	Lakka	84.69	320	P	P	20 37 56.2	-0.8	
G62A	West of Eustis	84.72	26	P	P	20 37 57.9	+0.9	
	baz=333,SNR=5.3							
G62A				P	P	20 37 57.9	+0.9	
	baz=333,SNR=5.3							
J58A	Remsen	84.74	30	P	P	20 37 56.5	-0.6	
J58A				IAmb	IAmb	20 38 09.0		
	comp=Z,88nm,1.2s							
J58A	Remsen	84.74	30	P	P	20 37 56.7	-0.5	
	baz=330,SNR=5.7							
J58A				P	P	20 37 56.7	-0.5	
	baz=330,SNR=5.7							
N53A	Lisbon	84.76	35	P	P	20 37 57.3	0.0	
	baz=327,SNR=16							
N53A				P	P	20 37 57.3	0.0	
	baz=327,SNR=16							
KLV	Kalavryta, Ach	84.76	320	P	P	20 37 55.6	-1.8	
MEH	Mehetia	84.77	121	eT	T	22 11 34.4		
	comp=Z,63nm,0.2s							
VT1	Waterbury	84.78	28	P	P	20 37 57.1	-0.2	
	baz=332							
TSLK	Tsoukalades, L	84.81	321	P	P	20 37 56.5	-1.1	
F64A	Sherman	84.82	25	P	P	20 37 57.0	-0.5	
F64A				IAmb	IAmb	20 38 14.1		
	comp=Z,72nm,1.1s							
F64A	Sherman	84.82	25	P	P	20 37 56.6	-0.9	
	baz=334							
F64A				P	P	20 37 56.6	-0.9	
	baz=334							
BNI	Bardonecchia	84.87	334	P	P	20 37 57.7	-0.3	
BNI				IAmb	IAmb	20 38 03.4		
	comp=Z,57nm,0.8s							
BNI	Bardonecchia	84.87	334	P	P	20 37 57.7	-0.3	
BNI				pmax	pmax			
	comp=Z,57nm,0.8s							
BNI				MLR	MLR			
	comp=Z,5μm,19.0s							
P51A	Williamsport	84.91	37	P	P	20 37 57.8	-0.3	
	baz=326,SNR=11							
P51A				P	P	20 37 57.8	-0.3	
	baz=326,SNR=11							
O52A	Adamsville	84.92	36	P	P	20 37 58.0	0.0	
	baz=326,SNR=10							
O52A				P	P	20 37 58.0	0.0	
	baz=326,SNR=10							
J59A	Piesco	84.93	30	P	P	20 37 57.7	-0.4	
	baz=331,SNR=6.1							
J59A				P	P	20 37 57.7	-0.4	
	baz=331,SNR=6.1							
L56A	Greenwood	84.94	32	P	P	20 37 57.8	-0.5	
	baz=329,SNR=7.6							
L56A				P	P	20 37 57.8	-0.5	
	baz=329,SNR=7.6							
R49A	Shelbyville	84.95	39	P	P	20 37 58.3	0.0	
	baz=325,SNR=6.0							
R49A				P	P	20 37 58.3	0.0	
	baz=325,SNR=6.0							
EVGI	Lefkada island	84.98	321	P	P	20 37 57.0	-1.4	
MATE	Matera	85.00	325	⇑P	P	20 37 58.1	-0.3	
M55A	Ridgway	85.04	33	P	P	20 37 57.6	-1.2	
	baz=328,SNR=13							
M55A				P	P	20 37 57.6	-1.2	
	baz=328,SNR=13							
DRO	Drossia	85.04	320	P	P	20 37 57.9	-0.9	
O53A	New Philadelph	85.07	36	IAMs_20	IAMs_20	21 23 32.9		
	comp=Z,2μm,19.0s							
O53A	New Philadelph	85.07	36	P	P	20 37 58.7	-0.2	
	baz=327,SNR=11							
RLS	Riolos of Patr	85.07	321	P	P	20 37 57.6	-1.3	
H62A	Milan	85.10	27	P	P	20 37 59.5	+0.6	
	baz=333,SNR=8.8							
H62A				P	P	20 37 59.5	+0.6	
	baz=333,SNR=8.8							
T47A	Sharon Grove	85.10	41	P	P	20 37 59.3	+0.2	
	baz=324,SNR=33							
ZKR	Zakros	85.14	316	P	P	20 37 58.9	-0.4	
LBNH	Lisbon	85.14	28	P	P	20 37 59.6	+0.4	
	baz=332							
LBNH	Lisbon	85.14	28	P	P	20 37 59.7	+0.6	
	baz=332							
FSK	Fiskardo	85.15	321	P	P	20 37 55.1	-4.2	
Q51A	Peebles	85.16	38	P	P	20 37 59.5	+0.1	
	baz=326,SNR=35							
Q51A				P	P	20 37 59.5	+0.1	
	baz=326,SNR=35							
P52A	Corning	85.19	37	IAMs_20	IAMs_20	21 19 18.1		
	comp=Z,3μm,22.0s							
P52A	Corning	85.19	37	P	P	20 37 58.8	-0.7	
	baz=326,SNR=10							
833A	Chaparral WMA,	85.21	55	P	P	20 38 00.3	+0.6	
	baz=318,SNR=6.9							
833A	Chaparral WMA,	85.21	55	P	P	20 37 60.0	+0.2	
	baz=318,SNR=6.9							
ACCN	Adirondack Com	85.30	29	IAmb	IAmb	20 38 12.1		
	comp=Z,84nm,1.2s							
ACCN	Adirondack Com	85.30	29	P	P	20 37 59.8	-0.1	
	baz=331							
NATX	Nacogdoches	85.32	49	IAMs_20	IAMs_20	21 16 21.1		
	comp=Z,2μm,21.0s							
NATX	Nacogdoches	85.32	49	P	P	20 38 01.4	+1.1	
	baz=320,SNR=5.5							
NATX	Nacogdoches	85.32	49	P	P	20 38 00.8	+0.5	
	baz=320,SNR=5.5							
PSDB	Penn State Uni	85.33	34	P	P	20 38 00.2	0.0	
	baz=328							
SSB	Saint Sauveur	85.33	335	P	P	20 38 00.8	+0.6	
SSB				IAmb	IAmb	20 38 01.6		
	comp=Z,107nm,1.1s							
SSB	Saint Sauveur	85.33	335	P	P	20 38 00.8	+0.6	
SSB				pmax	pmax			
	comp=Z,107nm,1.1s							
SSB				MLR	MLR			
	comp=Z,4μm,19.0s							
R50A	Paris	85.34	39	P	P	20 38 00.3	+0.1	
	baz=325,SNR=11							
R50A				P	P	20 38 00.3	+0.1	
	baz=325,SNR=11							
UPAO	U. Pittsburgh	85.37	35	P	P	20 38 00.2	-0.2	
	baz=327							
VLS	Valsamata	85.37	321	P	P	20 37 59.2	-1.2	
KEF4	Livadi, Kephal	85.38	321	P	P	20 37 59.5	-0.9	
WVT	Waverly	85.44	42	P	P	20 38 00.7	0.0	
WVT				IAmb	IAmb	20 38 24.0		
	comp=Z,53nm,1.0s							
WVT	Waverly	85.44	42	P	P	20 38 00.7	0.0	
WVT	Waverly	85.44	42	P	P	20 38 00.8	+0.1	
	baz=323,SNR=23							
WVT	Waverly	85.44	42	P	P	20 38 00.7	0.0	
	baz=323							
MFF	Saint Martin d	85.45	339	eP	P	20 38 00.6	0.0	
MFF				pmax	pmax			
	comp=Z,153nm,0.9s							
KEF3	Kipouria, Keph	85.46	321	P	P	20 37 58.1	-2.7	
O54A	Avella	85.47	35	P	P	20 38 00.6	-0.3	
	baz=327,SNR=12							
O54A				P	P	20 38 00.6	-0.3	
	baz=327,SNR=12							
BINY	Binghamton	85.48	31	IAMs_20	IAMs_20	21 19 16.8		
	comp=Z,3μm,20.0s							
BINY	Binghamton	85.48	31	P	P	20 38 00.7	-0.2	
	baz=330							
BINY	Binghamton	85.48	31	P	P	20 38 01.0	0.0	
	baz=330							
HNH	Hanover	85.49	28	P	P	20 38 00.7	-0.1	
	baz=332							
ITM	Ithomi	85.57	320	P	P	20 37 59.7	-1.7	
P53A	Whipple	85.63	36	P	P	20 38 01.8	+0.2	
	baz=327,SNR=7.0							
P53A				P	P	20 38 01.8	+0.2	
	baz=327,SNR=7.0							
IDI	Anoyia	85.66	317	⇓P	P	20 38 01.1	-0.9	
IDI	Anoyia	85.66	317	LR	LR	21 21 25.9		
	comp=Z,2μm,19.2s,baz=51,slow=39							
IDI	Anoyia	85.66	317	P	P	20 38 01.9	-0.1	
IDI	Anoyia	85.66	317	P	P	20 37 59.9	-2.1	
Q52A	Bidwell	85.69	37	P	P	20 38 01.7	-0.2	
	baz=326,SNR=8.8							
Q52A				P	P	20 38 01.7	-0.2	
	baz=326,SNR=8.8							
J61A	Chester	85.72	28	P	P	20 38 01.5	-0.5	
	baz=332							
J61A				P	P	20 38 01.5	-0.5	
	baz=332							
MXZ	Matakaoa Point	85.73	156	IAMs_20	IAMs_20	21 14 09.9		
	comp=Z,3μm,21.0s							
735A	Kenedy	85.74	53	P	P	20 38 03.4	+1.0	
	baz=319,SNR=6.0							
M57A	Sunshine Farm,	85.79	32	IAmb	IAmb	20 38 14.9		
	comp=Z,132nm,1.1s							
M57A	Sunshine Farm,	85.79	32	P	P	20 38 02.6	+0.1	
	baz=329,SNR=12							
M57A				P	P	20 38 02.6	+0.1	
	baz=329,SNR=12							
L59A	Walton	85.84	31	IAmb	IAmb	20 38 15.6		
	comp=Z,93nm,1.1s							
L59A	Walton	85.84	31	P	P	20 38 02.5	-0.2	
	baz=330,SNR=8.3							
L59A				P	P	20 38 02.5	-0.2	
	baz=330,SNR=8.3							
PYL	PYLOS	85.88	320	P	P	20 38 00.3	-2.7	
OXF	Oxford	85.94	44	IAMs_20	IAMs_20	21 18 22.4		
	comp=Z,2μm,21.0s							
OXF	Oxford	85.94	44	P	P	20 38 03.3	0.0	
	baz=322,SNR=14							
OXF	Oxford	85.94	44	P	P	20 38 03.1	-0.2	
	baz=322,SNR=14							
IMMV	Iera Moni Meta	85.97	317	P	P	20 38 01.6	-1.8	
URZ	Urewera	86.05	157	LR	LR	21 12 47.6		
	comp=Z,1μm,19.4s,baz=86,slow=33							
URZ	Urewera	86.05	157	IAMs_20	IAMs_20	21 12 27.2		
	comp=Z,2μm,21.0s							
HKT	Hockley	86.05	51	IAMs_20	IAMs_20	21 23 42.1		
	comp=Z,2μm,18.0s							
SSPA	Standing Stone	86.10	33	P	P	20 38 03.9	0.0	
SSPA				IAmb	IAmb	20 38 16.5		
	comp=Z,99nm,1.2s							
SSPA	Standing Stone	86.10	33	IAMs_20	IAMs_20	21 20 17.0		
	comp=Z,2μm,20.0s							
SSPA	Standing Stone	86.10	33	P	P	20 38 04.2	+0.2	
	baz=329,SNR=9.4							
SSPA	Standing Stone	86.10	33	P	P	20 38 04.0	+0.1	
	baz=329							
U49A	Red Boiling Sp	86.11	41	P	P	20 38 04.2	+0.1	
	baz=324,SNR=34							
KSPA	Keystone Colle	86.12	31	P	P	20 38 03.8	-0.2	
	baz=330,SNR=5.1							
MCWV	Mont Chateau	86.13	35	P	P	20 38 04.5	+0.4	
	baz=328,SNR=12							
MCWV	Mont Chateau	86.13	35	P	P	20 38 04.5	+0.4	
	baz=328,SNR=12							
T50A	Nancy	86.14	40	P	P	20 38 04.2	-0.1	
	baz=325							
T50A				P	P	20 38 04.2	-0.1	
	baz=325							
TIP	Timpagrande	86.22	324	⇑P	P	20 38 04.1	-0.6	
TIP	Timpagrande	86.22	324	P	P	20 38 04.5	-0.1	
PLAL	Pickwick Lake	86.23	43	IAMs_20	IAMs_20	21 18 09.0		
	comp=Z,3μm,22.0s							
V48A	Smith Brothers	86.24	42	P	P	20 38 04.6	-0.1	
	baz=324,SNR=16							
Q54A	Coxs Mills	86.29	36	P	P	20 38 04.9	0.0	
	baz=327,SNR=24							
Q54A				P	P	20 38 04.9	0.0	
	baz=327,SNR=24							
R53A	Hurricane	86.35	37	P	P	20 38 05.2	0.0	
	baz=326,SNR=9.9							
R53A				P	P	20 38 05.2	0.0	
	baz=326,SNR=9.9							
N58A	Sunbury	86.38	32	P	P	20 38 05.5	+0.1	
	baz=329,SNR=8.0							
N58A				P	P	20 38 05.5	+0.1	
	baz=329,SNR=8.0							
Y45A	Yeager Farm, C	86.39	45	P	P	20 38 06.0	+0.5	
	baz=322,SNR=16							
CAF	Calviac	86.39	337	eP	P	20 38 00.0	-5.4	
L61B	Northampton	86.46	29	IAMs_20	IAMs_20	21 20 45.6		
	comp=Z,3μm,20.0s							
BKZ	Black Stump Fm	86.73	158	IAMs_20	IAMs_20	21 15 19.2		
	comp=Z,2μm,22.0s							
QUA2	Belchertown	86.73	29	IAMs_20	IAMs_20	21 17 30.6		
	comp=Z,3μm,22.0s							
HRV	Adam Dziewonsk	86.80	28	IAMs_20	IAMs_20	21 21 37.4		
	comp=Z,3μm,21.0s							
Q56A	Snyder Ridge,	86.93	35	P	P	20 38 08.3	+0.2	
	baz=328,SNR=9.1							
Q56A				P	P	20 38 08.3	+0.2	
	baz=328,SNR=9.1							
P57A	Homestead Farm	87.03	34	P	P	20 38 08.3	-0.3	
	baz=329,SNR=9.4							
P57A				P	P	20 38 08.3	-0.3	
	baz=329,SNR=9.4							
S54A	Dingess, Beckl	87.07	37	P	P	20 38 08.9	0.0	
	baz=327,SNR=9.7							
S54A				P	P	20 38 08.9	0.0	
	baz=327,SNR=9.7							
TZTN

146A **Union** 87.61 45 P P 20 38 12.4 +1.0
baz=323,SNR=14
Z47A **Carrollton** 87.66 44 P P 20 38 12.1 +0.4
baz=323,SNR=8.1
344A **Westbrook Farm** 87.67 47 P P 20 38 12.8 +1.0
baz=322,SNR=6.9
V52A **Sevierville** 87.67 40 P P 20 38 11.9 +0.2
baz=326,SNR=17
GEDE **Greenville** 87.68 32 P P 20 38 11.6 -0.1
baz=330,SNR=7.9
TKL **Tuckaleechee C** 87.74 40 LR LR 21 18 05.2
comp=Z,2μm,21.9s,baz=343,slow=36
TKL **Tuckaleechee C** 87.74 40 P P 20 38 12.1 +0.1
baz=325,SNR=18
NNZ **Nelson** 87.89 161 IAms_20 IAms_20 21 11 11.9
comp=Z,2μm,21.0s
U54A **Nelsons Funny** 87.91 38 P P 20 38 12.7 -0.2
baz=326,SNR=13
U54A P P 20 38 12.7 -0.2
baz=326,SNR=13
BLA **Blacksburg** 87.95 37 IAms_20 IAms_20 21 21 45.2
comp=Z,2μm,20.0s
BLA **Blacksburg** 87.95 37 P P 20 38 13.2 +0.1
baz=327,SNR=9.6
BLA **Blacksburg** 87.95 37 P P 20 38 13.0 -0.1
baz=327,SNR=9.6
Y49A **Blount Mountai** 87.95 43 P P 20 38 12.8 -0.3
baz=324,SNR=8.2
BFZ **Birch Farm** 88.08 159 IAms_20 IAms_20 21 12 29.1
comp=Z,2μm,21.0s
TBI **Tubuai** 88.09 125 *e*T T 22 15 52.6
comp=Z,15nm,0.3s
S57A **Dark Hollow, R** 88.11 35 P P 20 38 14.5 +0.8
baz=328,SNR=8.2
S57A P P 20 38 14.5 +0.8
baz=328,SNR=8.2
X51A **Calhoun** 88.13 41 P P 20 38 13.8 -0.2
baz=325,SNR=6.9
X51A P P 20 38 13.8 -0.2
baz=325,SNR=6.9
W52A **Murphy** 88.13 40 P P 20 38 13.5 -0.5
baz=325,SNR=6.4
V53A **Saluda** 88.17 39 P P 20 38 14.1 -0.1
baz=326,SNR=9.5
V53A P P 20 38 14.1 -0.1
baz=326,SNR=9.5
THZ **Tophouse** 88.30 162 IAms_20 IAms_20 21 11 56.7
comp=Z,3μm,21.0s
LRAL **Lakeview Retre** 88.33 44 IAms_20 IAms_20 21 18 14.4
comp=Z,3μm,22.0s
LRAL **Lakeview Retre** 88.33 44 P P 20 38 14.4 -0.4
baz=324,SNR=8.3
LRAL **Lakeview Retre** 88.33 44 P P 20 38 14.3 -0.6
baz=324,SNR=8.3
CBN **Corbin Frederi** 88.38 34 IAms_20 IAms_20 21 21 26.5
comp=Z,3μm,21.0s
R58B **Mineral** 88.38 35 P P 20 38 15.6 +0.5
baz=329,SNR=6.1
R58B P P 20 38 15.6 +0.5
baz=329,SNR=6.1
T57A **Hurt** 88.63 36 IAmb IAmb 20 38 31.7
comp=Z,48nm,1.0s
T57A **Hurt** 88.63 36 P P 20 38 16.3 +0.1
baz=328,SNR=12
T57A P P 20 38 16.3 +0.1
baz=328,SNR=12
VAE **Valguarnera** 88.64 325 LR LR 21 22 31.3
comp=Z,2μm,18.7s,baz=13,slow=39
CASEE **Lake Jocassee** 88.68 40 P P 20 38 17.0 +0.4
baz=326,SNR=29
U56A **King** 88.69 37 P P 20 38 16.5 -0.1
baz=327,SNR=10
U56A P P 20 38 16.5 -0.1
baz=327,SNR=10
V55A **Taylorsville** 88.74 38 P P 20 38 16.7 -0.1
baz=327,SNR=6.4
V55A P P 20 38 16.7 -0.1
baz=327,SNR=6.4
Z51A **Franklin** 88.99 42 P P 20 38 17.8 -0.3
baz=325,SNR=18
Y52A **Lilburn** 89.08 41 P P 20 38 18.7 +0.3
baz=325,SNR=15
Y52A P P 20 38 18.7 +0.3
baz=325,SNR=15
LTZ **Lake Taylor** 89.13 162 IAms_20 IAms_20 21 26 06.7
comp=Z,3μm,18.0s
KMSC **Kings Mountain** 89.28 38 P P 20 38 19.2 -0.1
baz=327,SNR=13
KMSC **Kings Mountain** 89.28 38 P P 20 38 19.1 -0.1
baz=327,SNR=13
PAULI **Pauline** 89.33 39 P P 20 38 19.6 0.0
baz=327,SNR=15
T59A **Double "B" Far** 89.36 35 P P 20 38 20.0 +0.4
baz=329,SNR=7.2
T59A P P 20 38 20.0 +0.4
baz=329,SNR=7.2
250A **Grady** 89.54 44 P P 20 38 21.1 +0.4
baz=324,SNR=12
OXZ **Oxford** 89.60 163 IAms_20 IAms_20 21 11 35.1
comp=Z,3μm,22.0s
HODGE **Hodges** 89.62 40 P P 20 38 21.0 +0.1
baz=326,SNR=12
V58A **Windy Hill, Pi** 89.71 37 P P 20 38 21.4 +0.1
baz=328,SNR=6.4
V58A P P 20 38 21.4 +0.1
baz=328,SNR=6.4
GOGA **Godfrey** 89.73 41 P P 20 38 21.7 +0.3
baz=326,SNR=8.0
GOGA **Godfrey** 89.73 41 P P 20 38 21.5 0.0
baz=326,SNR=8.0
152A **Waverly Hall** 89.74 42 P P 20 38 21.2 -0.4
baz=325,SNR=10
RPZ **Rata Peaks** 89.76 164 P P 20 38 26.1 +5.1
comp=Z,17nm,0.9s,baz=32,slow=8.7,SNR=3.8
RPZ LR LR 21 13 21.2
comp=Z,3μm,21.9s,baz=356,slow=32
U59A **Littleton** 89.79 35 P P 20 38 22.0 +0.3
baz=329
U59A P P 20 38 22.0 +0.3
baz=329
BRAL **Brewton** 89.80 45 IAms_20 IAms_20 21 20 53.6
comp=Z,2μm,22.0s
W57A **Gilead** 89.87 38 IAmb IAmb 20 38 37.9
comp=Z,46nm,0.9s
W57A **Gilead** 89.87 38 P P 20 38 20.8 -1.3
baz=328,SNR=9.3
W57A P P 20 38 20.8 -1.3
baz=328,SNR=9.3
JSC **Jenkinsville** 90.03 39 P P 20 38 22.8 0.0
baz=327,SNR=7.6
BIRD **Birdtown, Kers** 90.09 38 P P 20 38 23.1 +0.1
baz=327,SNR=8.1
MQZ **McQueen's Vall** 90.09 162 IAms_20 IAms_20 21 19 40.2
comp=Z,2μm,20.0s
MAHO **Mahon** 90.28 333 IAms_20 IAms_20 21 24 06.2
comp=Z,2μm,18.0s
154A **Montrose** 90.56 41 P P 20 38 25.8 +0.5
baz=326
HAW **Hawthorne Fire** 90.64 40 P P 20 38 25.3 -0.4
baz=327,SNR=9.5
TIGA **Tifton** 91.30 42 P P 20 38 29.1 +0.4
baz=326
255A **Hazlehurst** 91.43 41 P P 20 38 30.0 +0.7
baz=326
PBRG **Braganca** 91.58 341 *e*P P 20 38 28.9 -1.1
PGAV **Gavieira, Arco** 91.77 343 *e*LR LR 21 22 22.1
comp=Z,3μm,20.0s
KEST **Kesra** 92.18 328 P P 20 38 32.5 -0.4
comp=Z,13nm,0.7s,baz=357,slow=0.9,SNR=40
KEST LR LR 21 25 08.7
comp=Z,6μm,18.2s,baz=330,slow=39
comp=Z,13nm,0.7s
KEST **Kesra** 92.18 328 IAmb IAmb 20 38 33.3
comp=Z,31nm,1.0s
POLO **Lamas de Olo** 92.23 342 *e*P P 20 38 32.2 -0.9
comp=Z,42nm,1.5s
MVO **Moncorvo** 92.26 341 *e*P P 20 38 32.4 -0.8
comp=Z,70nm,1.7s
MVO **Moncorvo** 92.26 341 *e*LR LR 21 19 16.1
comp=Z,4μm,20.0s
PVRL **Vila Real** 92.31 342 *e*P P 20 38 32.6 -0.8
comp=Z,65nm,1.7s
ATD **Arta Tunnel** 92.75 289 LR LR 21 26 12.2
comp=Z,7μm,18.1s,baz=36,slow=39
PVIS **Viseu** 92.88 342 *e*P P 20 38 35.1 -0.9
ESBB **Sonseca Array** 92.92 339 IAmb IAmb 20 38 51.6
comp=Z,49nm,1.4s
ESDC **Sonseca Array** 92.92 339 P P 20 38 35.5 -0.7
comp=Z,14nm,0.8s,baz=14,slow=3.9,SNR=60
ESDC LR LR 21 24 43.4
comp=Z,4μm,21.9s,baz=28,slow=38
comp=Z,14nm,0.8s
MTE **Manteigas** 93.11 342 *e*P P 20 38 36.2 -0.9
comp=Z,65nm,1.7s
MTE **Manteigas** 93.11 342 *e*LR LR 21 20 15.3
comp=Z,3μm,20.0s
PAB **San Pablo** 93.14 339 P P 20 38 36.9 -0.4
PAB **San Pablo** 93.14 339 P P 20 38 36.9 -0.4
PAB pmax pmax
comp=Z,31nm,1.2s
PAB MLR MLR
comp=Z,5μm,20.0s
PCBR **Castelo Branco** 93.62 341 *e*P P 20 38 38.3 -1.1
comp=Z,55nm,1.7s
PMRV **Marv??o** 94.00 341 *e*P P 20 38 43.1 +2.0
PMRV **Marv??o** 94.00 341 *e*LR LR 21 21 08.0
comp=Z,4μm,20.0s
CART **Cartagena** 94.04 336 IAms_20 IAms_20 21 26 57.5
comp=Z,2μm,20.0s
PSBE **So Bento** 94.23 342 *e*P P 20 38 41.1 -1.1
PESTR **Estremoz** 94.58 341 *e*P P 20 38 43.3 -0.5
comp=Z,57nm,1.7s
MSEY **Mahe Island** 95.08 268 IAms_20 IAms_20 21 24 31.5
comp=Z,2μm,18.0s
DWPF **Disney Wildern** 95.10 42 IAms_20 IAms_20 21 24 14.7
comp=Z,2μm,20.0s
PVAQ **Vaqueiros** 96.00 341 *e*LR LR 21 22 20.0
comp=Z,3μm,18.0s
CMIG **Matias Romero** 96.38 59 LR LR 21 16 54.2
comp=Z,2μm,22.0s,baz=310,slow=32
TEIG **Tepich** 97.88 52 IAms_20 IAms_20 21 25 40.8
comp=Z,1μm,22.0s
MDT **Midelt** 99.54 337 LR LR 21 30 39.9
comp=Z,1μm,18.6s,baz=28,slow=39
AVE **Averroes** 99.83 339 IAms_20 IAms_20 21 26 27.7
comp=Z,2μm,20.0s
SNET **Serv Nac Est T** 102.45 57 IAms_20 IAms_20 21 19 54.1
comp=Z,2μm,22.0s
LODK **Lodwar** 103.70 289 IAms_20 IAms_20 21 31 37.5
comp=Z,2μm,22.0s
GTBY **Guantanamo Bay** 105.06 42 IAms_20 IAms_20 21 27 28.4
comp=Z,2μm,22.0s
TAM **Tamanrasset** 105.15 324 IAms_20 IAms_20 21 31 48.1
comp=Z,2μm,22.0s
MTDJ **Mount Denham** 105.31 45 IAms_20 IAms_20 21 30 48.0
comp=Z,2μm,20.0s
ABPO **Ambohimpanom** 110.66 263 IAms_20 IAms_20 21 30 21.3
comp=Z,2μm,20.0s
SJG **San Juan** 110.67 35 IAms_20 IAms_20 21 33 44.3
comp=Z,1μm,20.0s
BCIP **Isla Barro Col** 111.56 52 IAms_20 IAms_20 21 41 39.1
comp=Z,1μm,20.0s
SMRT **St. Maarten** 111.94 32 IAms_20 IAms_20 21 35 14.0
comp=Z,1μm,20.0s
SEUS **St. Eustatius** 112.49 32 IAms_20 IAms_20 21 35 04.4
comp=Z,2μm,21.0s
ANWB **Willy Bob** 112.78 31 IAms_20 IAms_20 21 36 02.2
comp=Z,2μm,21.0s
VOI **Vohitsoka** 112.83 261 IAms_20 IAms_20 21 34 43.6
comp=Z,1μm,19.0s
ABD **La Joyeuse, An** 113.98 31 IAms_20 IAms_20 21 38 42.0
comp=Z,2μm,20.0s
GDHS **Morne Mazeau,** 114.06 32 IAms_20 IAms_20 21 36 14.1
comp=Z,1μm,20.0s
TDBA **Terre de Bas,** 114.50 32 IAms_20 IAms_20 21 31 19.6
comp=Z,2μm,22.0s
MAGL **Barre de l'ile** 114.54 31 IAms_20 IAms_20 21 39 06.8
comp=Z,2μm,21.0s
HATO **Hato, Curacao** 114.68 40 IAms_20 IAms_20 21 39 60.0
comp=Z,1μm,20.0s
TORD **Torodi Ar. Bea** 115.36 323 Pdiff **Pdif** 20 40 16.8 -0.1
comp=Z,0.7nm,0.8s,baz=33,slow=5.1,SNR=4.4
TORD PKP **PKiKP** 20 44 04.2 -0.9
comp=Z,2.4nm,0.6s,baz=30,slow=1.9,SNR=43
TORD PP **PP** 20 45 01.3 -4.1
comp=Z,4.2nm,0.9s,baz=31,slow=8.0,SNR=5.0
TORD PKKPbc **PKKPbc** 20 54 33.0 -4.6
comp=Z,1.4nm,1.0s,baz=87,slow=2.7,SNR=6.5
TORD PKKPab **PKKPab** 20 54 50.7 +3.8
comp=Z,4.2nm,1.1s,baz=245,slow=1.1,SNR=6.7
TORD SKKP 20 58 39.1
comp=Z,3.7nm,1.4s,baz=185,slow=8.7,SNR=3.8
SVN **Savane Anatole** 115.60 32 IAms_20 IAms_20 21 33 00.8
comp=Z,2μm,22.0s
ILAM **Ilet Lapin Mar** 115.77 31 IAms_20 IAms_20 21 40 13.3
comp=Z,2μm,20.0s
SDV **Santo Domingo** 116.72 44 PKP **PKPdf** 20 44 06.7 -1.3
comp=Z,3.0nm,0.4s,baz=4.8,slow=12,SNR=1.3
SDV **Santo Domingo** 116.72 44 IAms_20 IAms_20 21 41 27.3
comp=Z,1μm,20.0s
GRGR **Grenville** 117.88 33 IAms_20 IAms_20 21 34 08.4
comp=Z,2μm,22.0s
VNDA **Vanda** 121.60 177 PKP **PKPdf** 20 44 14.8 -0.4
comp=Z,6.3nm,1.0s,baz=313,slow=4.0,SNR=30
VNDA PKKPbc **PKKPab** 20 54 13.0 +0.3
comp=Z,2.5nm,1.0s,baz=204,slow=3.9,SNR=11
SBA **Scott Base** 122.18 175 IAms_20 IAms_20 21 39 59.2
comp=Z,884nm,20.0s
DBIC **Dmbokro** 123.90 327 PKP **PKPdf** 20 44 20.9 -0.7
comp=Z,13nm,0.7s,baz=340,slow=2.5,SNR=14
TIC **Toumodi** 123.99 327⇑ *i*PKIKP **PKPdf** 20 44 21.0 -0.8
comp=Z,7.2nm,0.2s
KIC **Kosan Boka** 124.14 327⇓ *i*PKIKP **PKPdf** 20 44 21.7 -0.3
comp=Z,5.0nm,0.4s
LIC **Lamto** 124.38 327⇑ *i*PKIKP **PKPdf** 20 44 21.8 -0.7
comp=Z,30nm,0.5s
ATAH **Atahualpa** 125.33 62 PKP **PKiKP** 20 44 25.0 -0.1
comp=Z,8.9nm,0.8s,baz=348,slow=2.4,SNR=7.2
MDP **Montagnes des** 127.63 26 PKP **PKiKP** 20 44 29.4 +0.1
comp=Z,8.2nm,0.9s,baz=9.5,slow=6.1,SNR=4.2
MAW **Mawson** 128.09 209 PKP **PKiKP** 20 44 28.4 0.0
comp=Z,6.0nm,0.9s,baz=18,slow=2.9,SNR=8.3
NNA **Nana** 129.99 64 PKP **PKPdf** 20 44 32.7 -0.4
comp=Z,13nm,0.8s,baz=311,slow=5.5,SNR=9.4
NNA **Nana** 129.99 64 IAms_20 IAms_20 21 30 23.1
comp=Z,1μm,21.0s
BOSA **Boshof** 132.35 269 PKhKP PKPpre 20 44 33.1
comp=Z,3.5nm,0.8s,baz=23,slow=5.2,SNR=3.4
BOSA PP **PP** 20 46 59.5 -1.5
comp=Z,7.5nm,0.9s,baz=65,slow=5.7,SNR=5.0
QSPA **South Pole Qui** 133.79 180 IAms_20 IAms_20 21 41 40.1
comp=Z,874nm,20.0s
LPAZ **La Paz** 138.75 59 PKhKP PKPpre 20 44 38.8
comp=Z,0.8nm,0.6s,baz=360,slow=3.8,SNR=2.8
LPAZ PKP **PKPdf** 20 44 49.3 -0.9
comp=Z,4.3nm,0.8s,baz=11,slow=4.5,SNR=16
RCBR **Riachuelo** 141.77 6 IAms_20 IAms_20 21 51 49.7
comp=Z,1μm,21.0s
H03N2 **Juan Fernandez** 142.30 90 T T 23 23 41.3
baz=305,slow=77,SNR=256
H03N3 **Juan Fernandez** 142.31 90 T T 23 23 42.1
baz=305,slow=77,SNR=249
H03N1 **Juan Fernandez** 142.31 90 T T 23 23 46.7
baz=305,slow=77,SNR=208
SIV **San Ignacio** 142.69 51 PKhKP PKPpre 20 44 50.5
comp=Z,7.6nm,0.7s,baz=319,slow=3.8,SNR=13
LVC **Limon Verde** 142.85 67 PKP **PKPdf** 20 44 54.6 -2.6
comp=Z,4.7nm,0.7s,baz=322,slow=8.1,SNR=5.3
AC01 **Pan de Azucar** 144.06 73 PKPdf PKPbc 20 44 57.2 +0.5
AC01 **Pan de Azucar** 144.06 73⇑ *e*P **PKPab** 20 44 56.1 -0.2
GO02 **Mina Guanaco** 144.12 71 PKPdf **PKPdf** 20 44 58.5 -0.7
GO02 **Mina Guanaco** 144.12 71⇑ *e*P PKPbc 20 44 57.4 +0.1
SHEL **Horse Pasture** 144.27 313 PKPdf **PKPdf** 20 44 58.8 -0.6
SHEL **Horse Pasture** 144.27 313 PKiKP **PKPdf** 20 44 58.8 -0.6
AC06 **Mina Casimiro** 145.00 75 PKPdf **PKPdf** 20 45 00.8 +0.4
AC06 **Mina Casimiro** 145.00 75⇑ *e*P **PKPdf** 20 45 00.1 -0.2
GO03 **Copiap** 145.23 75 *e*P **PKPab** 20 45 00.6 0.0
NVL **N'lazarevskaya** 145.72 204⇑ *i*PKP2 **PKPdf** 20 44 59.3 -0.8
NVL *e*SS SS 21 07 12.5 -0.4
NVL pmax pmax
comp=Z,315nm,1.2s
LCO **Las Campanas** 145.76 77 *e*P **PKPbc** 20 45 02.2 -0.1
CO05 **La Serena** 145.91 79 *e*P **PKPdf** 20 45 01.8 +0.1
AC05 **El Transito** 145.96 76 PKPbc **PKPab** 20 45 03.9 +0.5
AC05 **El Transito** 145.96 76⇑ *e*P **PKPbc** 20 45 02.8 -0.1
BELA **Belgrano 2** 146.05 179 PKPdf **PKPbc** 20 45 01.8 +0.3
CO06 **Fray Jorge** 146.06 80 PKPdf **PKPbc** 20 45 02.6 -0.3
CO06 **Fray Jorge** 146.06 80 *e*P **PKPdf** 20 45 02.2 +0.2
GO04 **Tololo Observa** 146.37 79 PKPdf **PKPbc** 20 45 04.4 +0.2
GO04 **Tololo Observa** 146.37 79 *e*P **PKPbc** 20 45 03.9 -0.3
CO01 **Juntas del Tor** 146.75 78⇑ *e*P **PKPbc** 20 45 05.5 +0.2
CO02 **Combarbal** 146.81 81 PKPdf **PKPdf** 20 45 04.3 +0.9
CO02 **Combarbal** 146.81 81 *e*P **PKPdf** 20 45 04.2 +0.8
CO03 **El Pedregal** 146.83 80 *e*P **PKPdf** 20 45 03.0 -0.5
VA06 **Catapilco** 147.34 83⇓ *e*P **PKPdf** 20 45 04.5 +0.5
TROLL **Troll, Antarti** 147.50 199 PKPbc **PKPbc** 20 45 06.7 +0.7
TROLL **Troll, Antarti** 147.50 199 PKPdf **PKPdf** 20 45 03.8 +0.4
ROCH **El Roble** 147.76 83⇑ *e*P **PKPdf** 20 45 05.4 +0.3
MT02 **Curacav** 147.81 84 **PKPbc** 20 45 06.5 -1.3
VA03 **San Esteban** 147.98 83 *e*P **PKPdf** 20 45 06.5 +1.2
MT01 **Popeta** 148.04 85 PKPbc **PKPbc** 20 45 08.4 0.0
BO01 **Tunca** 148.42 86 PKPbc **PKPbc** 20 45 09.3 0.0
BDFB **Brasilia** 148.55 31 PKPbc **PKPbc** 20 45 10.1 -0.2
comp=Z,30nm,0.9s,baz=337,slow=3.7,SNR=40
SNAA **Sanae** 148.94 197 PKPbc **PKPbc** 20 45 09.9 +0.2
SNAA **Sanae** 148.94 197 PKPdf **PKPdf** 20 45 05.2 -0.4
SNAA **Sanae** 148.94 197 IAms_20 IAms_20 22 03 46.1
comp=Z,690nm,20.0s
SMAI **San Martin Ant** 149.68 155 PKPbc **PKiKP** 20 45 12.6 +0.2
GO06 **Curarrehue** 150.39 95 PKPbc **PKiKP** 20 45 14.7 -0.3
VNA2 **Neumayer--Watz** 150.46 196 PKPbc **PKiKP** 20 45 13.8 -0.3
baz=123,slow=1.6
VNA2 **Neumayer--Watz** 150.46 196 PKPdf **PKPdf** 20 45 07.9 -0.1
baz=123,slow=1.4
VNA3 **Neumayer Olymp** 150.64 194 PKPbc **PKPbc** 20 45 14.0 +0.3
VNA3 **Neumayer Olymp** 150.64 194 PKPdf **PKPdf** 20 45 08.0 -0.2
VNA1 **Neumayer--Stat** 150.86 196 PKPbc **PKiKP** 20 45 14.8 0.0
PLCA **Paso Flores** 151.46 97 PKP **PKPdf** 20 45 09.4 -1.1
comp=Z,8.3nm,1.1s,baz=311,slow=2.5,SNR=8.7
PLCA PKPbc **PKiKP** 20 45 17.0 -0.1
comp=Z,25nm,0.8s,baz=254,slow=3.3,SNR=48
PLCA PKPab **sPKPdf** 20 45 25.6 0.0
comp=Z,46nm,0.9s,baz=256,slow=2.0,SNR=12
PLCA **Paso Flores** 151.46 97 PKPbc **PKiKP** 20 45 17.0 -0.1
COYC **Coyhaique** 151.68 107 IAms_20 IAms_20 21 39 11.7
comp=Z,1μm,21.0s
MG05 **Puerto Natales** 152.03 120 PKPbc **PKiKP** 20 45 17.8 +0.1
GO09 **Cerro Castillo** 152.13 119 PKPbc **PKiKP** 20 45 18.4 +0.4
CPUP **Villa Florida** 152.90 58 PKP **PKPdf** 20 45 11.9 -1.1
comp=Z,2.6nm,0.8s,baz=9.5,slow=4.7,SNR=5.6
CPUP PKPbc **PKPbc** 20 45 19.9 -0.4
comp=Z,5.4nm,0.8s,baz=26,slow=3.3,SNR=6.9

JMA 23 20:26:05.1±0.0, 35°.4N±0°.1×133°.8E±0°.1, h7km, MV1.7/20, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.06**	**184**	*i* P			Pg	20 26 06.7	-0.1
JKR				S			Sg	20 26 07.8	-0.1
JAD	**Aida**	**0.57**	**150**	*i* P			Pg	20 26 15.9	-0.1
JAD				S			Sg	20 26 23.6	+0.1
JNM	**Ikuma**	**0.65**	**276**	P			Pg	20 26 17.8	+0.2
JKSM	**Kasumi**	**0.70**	**77**	P			Pg	20 26 18.4	-0.2
JKSM				S			Sg	20 26 27.1	-0.7
JHS	**Saijyo**	**0.72**	**233**	S			Sg	20 26 28.6	+0.1

JMA 23 20:27:35.0±0.1, 35°.4N±0°.2×133°.9E±0°.1, h13km, MV0.8/14, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAD	**Aida**	**0.49**	**150**	*e*P			Pg	20 27 44.6	-0.2
JAD				*e*S			Sg	20 27 51.2	-0.2

*IDC **23** 20:34:53.5±0.9, 4°.90S×151°.52E, h90km±10km, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=63.6km s-min=13.3km az=127.0*

ISC 23 20:34:53.5±1.9, 5°.0S±0°.3×151°.7E±0°.4, h100km, n6, σ1ş08/8, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.78**	**23**	P			**Pn**	**20 35 11.1**	**-0.7**
	306nm,0.3s,baz=226,slow=2.5,SNR=65								
KRVT				S			**Sn**	**20 35 24.7**	**-0.7**
	672nm,0.3s,baz=292,slow=23,SNR=8.6								
PMG	**Port Moresby**	**6.28**	**226**	P			**Pn**	**20 36 23.9**	**+0.3**
	8.0nm,0.3s,baz=31,slow=7.4,SNR=2.2								
PMG				S			**Sn**	**20 37 32.1**	**-1.9**
	16nm,0.5s,baz=67,slow=11,SNR=2.0								
WRA	**Warramunga Arr**	**22.49**	**227**	P			**P**	**20 39 45.0**	**+0.1**
	0.9nm,0.3s,baz=50,slow=10,SNR=12								
	0.9nm,0.3s								
ASAR	**Alice Springs**	**25.26**	**221**	P			**P**	**20 40 11.5**	**+0.8**
	1.4nm,0.5s,baz=57,slow=8.4,SNR=14								
	1.4nm,0.5s								
SONM	**Songino Array**	**65.95**	**328**	P			**P**	**20 45 30.0**	**+0.8**
	0.8nm,0.4s,baz=123,slow=11,SNR=2.7								
	0.8nm,0.4s								
ILAR	**Eielson Array**	**82.78**	**22**	P			**P**	**20 47 06.3**	**+0.1**
	0.3nm,0.6s,baz=243,slow=4.8,SNR=6.4								
	0.3nm,0.6s								

ATH 23 20:35:29.6, 38°.65N×23°.54E, h10km±31km, ML1.8/7, Error ellipse: s-maj=31.6km s-min=0.8km az=0.0, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.42**	**270**	P			Pg	20 35 37.0	-0.8
LKR				S			Sg	20 35 43.7	+0.3
KYMI	**Kymi, Euboea I**	**0.44**	**92**	P			Pg	20 35 37.8	-0.4
KYMI				S			Sg	20 35 44.5	+0.3
KYMI				AML			AML	20 35 45.2	
	comp=N,144μm,0.2s								
KYMI				AML			AML	20 35 47.1	
	comp=E,163μm,0.2s								
VIL2	**Platees**	**0.49**	**206**	P			Pg	20 35 39.5	+0.4
VIL2				S			Sb	20 35 47.4	-0.1
VIL2				AML			AML	20 35 50.4	
	comp=E,182μm,0.2s								
VIL2				AML			AML	20 35 50.6	
	comp=N,221μm,0.2s								
ALNA	**Alonissos**	**0.56**	**28**	P			Pb	20 35 41.1	-0.4
ALNA				S			Sg	20 35 48.1	+0.3
DION	**Dionisos Attik**	**0.65**	**151**	P			Pg	20 35 42.1	-0.2
DION				S			Sg	20 35 51.6	+0.7
DION				AML			AML	20 35 54.9	
	comp=N,440μm,0.5s								
DION				AML			AML	20 35 55.1	
	comp=E,306μm,0.4s								
PTL	**Penteli**	**0.66**	**157**	P			Pg	20 35 42.3	0.0
PTL				S			Sg	20 35 51.2	+0.3
PTL				AML			AML	20 35 55.4	
	comp=E,194μm,0.4s								
PTL				AML			AML	20 35 55.7	
	comp=N,210μm,0.2s								
AXAR	**Agios Charalam**	**0.69**	**280**	P			Pg	20 35 42.9	-0.1
AXAR				AML			AML	20 35 58.3	
	comp=N,239μm,0.4s								
AXAR				AML			AML	20 36 00.6	
	comp=E,243μm,0.4s								
ATH	**Athens Observa**	**0.69**	**168**	P			Pg	20 35 43.2	+0.2
NEO	**Neokhori**	**0.70**	**340**	P			Pg	20 35 43.2	+0.1
ATHU	**Athens Univers**	**0.71**	**164**	P			Pg	20 35 43.0	-0.3
ATHU				S			Sb	20 35 53.3	-0.6
ATHU				AML			AML	20 35 56.6	
	comp=N,160μm,0.3s								
ATHU				AML			AML	20 35 56.8	
	comp=E,101μm,0.3s								
XOR	**Xorichti**	**0.76**	**340**	P			Pg	20 35 44.6	+0.3
XOR				S			Sg	20 35 54.5	+0.3
LOUT	**Loutraki**	**0.80**	**214**	P			Pg	20 35 44.4	-0.6
LOUT				S			Sb	20 35 56.3	-0.1
VLY	**Voula,Athens**	**0.82**	**166**	P			Pg	20 35 45.3	-0.2
VLY				S			Sg	20 35 56.2	0.0
VLY				AML			AML	20 35 59.9	
	comp=N,213μm,0.2s								
VLY				AML			AML	20 36 00.1	
	comp=E,459μm,0.2s								
THAL	**Thalero**	**0.92**	**228**	P			Pg	20 35 46.8	-0.5
EPID	**Epidavros**	**1.09**	**198**	P			Pn	20 35 50.7	-0.2
KLV	**Kalavryta, Ach**	**1.25**	**241**	P			Pn	20 35 53.0	-0.1
LAKA	**Lakka**	**1.29**	**252**	P			Pg	20 35 54.4	0.0
KRND	**KRANIDI**	**1.30**	**194**	P			Pn	20 35 53.9	0.0

*IDC **23** 20:41:58.1±0.7, 76°.97N×19°.21E, h0km, mb3.4/5, mbtmp3.5/9, ML2.9/4, Error ellipse: s-maj=20.0km s-min=8.3km az=69.0*
*NAO **23** 20:41:59.0±1.1, 76°.95N×18°.95E, h4km±10km, ML3.8*
*IEPN **23** 20:42:01.0, 77°.04N×19°.06E, h10km*
*KOLA **23** 20:42:02.7, 76°.80N×19°.38E, h0km, ML3.1*
*BER **23** 20:42:03.0±1.6, 76°.99N×18°.68E, h23km±10km, ML3.4, MW3.7, ML3.8(NAO), Confirmed Earthquake*

ISC 23 20:42:00.6±1.0, 76°.98N±0°.03×19°.07E±0°.03, h30km±9km, n62, σ2ˢ33/96, mb3.4/6, 3C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.80**	**273**	Pg	**Pb**	**20 42 14.7**	**-1.2**
HSPB				Lg	Lg	20 42 24.1	
HSPB	**Hornsund (broa**	**0.80**	**273**	*e*P	**Pb**	**20 42 14.7**	**-1.2**
HSPB				*e*L	L	20 59 01.8	
	comp=Z,4μm,21.1s						
HSPB	**Hornsund (broa**	**0.80**	**273**	⇓*i*P	**Pb**	**20 42 14.7**	**-1.2**
HSPB				*e*S	**Sb**	**20 42 24.0**	**-2.4**
HSPB				IAML		20 42 28.8	
	comp=Z,1μm,0.4s						
SPA0	**Spitsbergen Ar**	**1.34**	**335**	Pn	**Pb**	**20 42 24.6**	**-0.4**
	baz=153,slow=22						
SPA0				Lg	Lg	20 42 41.7	
	baz=142,slow=56						
SPA0	**Spitsbergen Ar**	**1.34**	**335**	Pn	**Pb**	**20 42 24.6**	**-0.4**
SPA0				Sg	**Sb**	**20 42 41.7**	**+0.1**
SPA0	**Spitsbergen Ar**	**1.34**	**335**	⇑*i*P	**Pb**	**20 42 24.1**	**-0.8**
SPA0				*i*S	**Sb**	**20 42 41.8**	**+0.1**
SPITS	**Spitsbergen Ar**	**1.34**	**335**	Pn	**Pb**	**20 42 24.2**	**-0.8**
	baz=150,slow=19						
SPITS				Sn	**Sb**	**20 42 41.6**	**-0.1**
	baz=147,slow=17						
HOPEN	**Hopen**	**1.45**	**106**	Pn	**Pb**	**20 42 26.6**	**-0.2**
HOPEN				Lg	Lg	20 42 45.2	
HOPEN	**Hopen**	**1.45**	**106**	*e*P	**Pb**	**20 42 26.6**	**-0.2**
HOPEN				*e*S	**Sb**	**20 42 45.3**	**+0.5**
HOPEN				IAML		20 42 51.2	
	comp=Z,2μm,0.3s						
HOPEN	**Hopen**	**1.45**	**106**	⇑*i*P	**Pb**	**20 42 26.4**	**-0.4**
HOPEN				*i*S	**Sb**	**20 42 45.1**	**+0.3**
BRBA	**Barentsburg A**	**1.51**	**318**	Pn	**Pb**	**20 42 27.2**	**-0.7**
BRBA				Lg	Lg	20 42 46.6	
BRBA	**Barentsburg A**	**1.51**	**318**	*e*P	**Pb**	**20 42 26.6**	**-1.3**
BRBA				*e*Pg	**Pn**	**20 42 28.3**	**+2.7**
BRBA				*e*Sg	**Sb**	**20 42 47.2**	**+0.5**
BRBA				IAML		20 42 51.6	
	comp=Z,2μm,0.4s						
BRBB	**Barentsburg B**	**1.54**	**319**	Pn	**Pb**	**20 42 27.5**	**-0.9**
BRBB				Lg	Lg	20 42 47.1	
BRBB	**Barentsburg B**	**1.54**	**319**	*e*P	**Pn**	**20 42 26.9**	**+1.0**
BRBB				*e*Pg	**Pb**	**20 42 28.5**	**+0.2**
BRBB				*e*Sg	**Sb**	**20 42 47.1**	**-0.2**
KBS	**Kingsbay**	**2.46**	**326**	Pn	**Pn**	**20 42 39.0**	**+0.4**
KBS				Pg	**Pb**	**20 42 44.8**	**+0.8**
KBS				Lg	Lg	20 43 16.0	
KBS	**Kingsbay**	**2.46**	**326**	*e*P	**Pn**	**20 42 38.9**	**+0.4**
KBS				*e*Pg	**Pb**	**20 42 44.9**	**+0.9**
KBS				*e*Sg	**Sb**	**20 43 15.2**	**+1.4**
KBS				IAML		20 43 21.9	
	comp=Z,802nm,0.7s						
KBS	**Kingsbay**	**2.46**	**326**	*e*P	**Pn**	**20 42 40.8**	**+2.2**
KBS				*e*S	**Sb**	**20 43 16.0**	**+2.2**
KBS	**Kingsbay**	**2.46**	**326**	*e*P	**Pn**	**20 42 38.9**	**+0.4**
BJO1	**Bjornoya**	**2.49**	**180**	Pn	**Pn**	**20 42 39.0**	**0.0**
BJO1				Pg	**Pb**	**20 42 45.5**	**+0.9**
BJO1				Lg	Lg	20 43 17.4	
BJO1	**Bjornoya**	**2.49**	**180**	*e*Pg	**Pb**	**20 42 45.6**	**+1.0**
BJO1				*e*Sg	**Sb**	**20 43 18.6**	**+3.8**
BJO1				IAML		20 43 24.5	
	comp=Z,304nm,0.3s						
BJO1	**Bjornoya**	**2.49**	**180**	⇑*i*P	**Pb**	**20 42 45.3**	**+0.7**
BJO1				*i*S	**Sb**	**20 43 17.3**	**+2.5**
HAMF	**Hammerfest**	**6.50**	**166**	Pn	**Pn**	**20 43 33.8**	**-0.2**
HAMF				Sn	**Sn**	**20 44 41.9**	**-5.1**
HAMF	**Hammerfest**	**6.50**	**166**	*e*P	**Pn**	**20 43 34.8**	**+0.8**
HAMF				*e*S	**Sn**	**20 44 42.9**	**-4.1**
HAMF				IAML		20 44 51.7	
	comp=Z,16nm,0.4s						
ZFI	**Zemlya Franca-**	**6.64**	**42**	*e*P	**Pn**	**20 43 37.2**	**+1.4**
ZFI				*e*S	**Sn**	**20 44 47.0**	**-3.3**
	comp=Z,44nm,1.4s						
OMEGA	**Omega**	**6.64**	**42**	*e*P	**Pn**	**20 43 37.2**	**+1.3**
OMEGA				*e*S	**Sn**	**20 44 47.6**	**-2.7**
	comp=Z,31nm,1.8s						
TRO	**Tromso**	**7.39**	**180**	Pn	**Pn**	**20 43 45.8**	**-0.4**
TRO				Sn	**Sn**	**20 45 03.0**	**-5.9**
TRO	**Tromso**	**7.39**	**180**	*e*P	**Pn**	**20 43 46.9**	**+0.8**
TRO				*e*S	**Sn**	**20 45 05.2**	**-3.6**
JETT	**Jettan, Norway**	**7.48**	**176**	Pn	**Pn**	**20 43 47.6**	**+0.2**
JETT	**Jettan, Norway**	**7.48**	**176**	Pn	**Pn**	**20 43 47.6**	**+0.2**
JETT				*e*S	**Sn**	**20 45 07.5**	**-3.6**
KEV	**Kevo**	**7.60**	**159**	Pn	**Pn**	**20 43 48.7**	**-0.4**
KEV				Sn	**Sn**	**20 45 09.8**	**-4.3**
KEV	**Kevo**	**7.60**	**159**	*e*P	**Pn**	**20 43 48.9**	**-0.2**
KEV				*e*S	**Sn**	**20 45 10.1**	**-3.9**
ARA0	**ARCESS Array S**	**7.71**	**163**	Pn	**Pn**	**20 43 50.7**	**+0.2**
	baz=350,slow=12						
ARA0				Sn	**Sn**	**20 45 11.7**	**-5.0**
	baz=349,slow=22						
ARA0	**ARCESS Array S**	**7.71**	**163**	Pn	**Pn**	**20 43 50.7**	**+0.2**
	slow=12						
ARA0				Sn	**Sn**	**20 45 11.7**	**-5.0**
	slow=22						
ARCES	**ARCESS Array B**	**7.71**	**163**	Pn	**Pn**	**20 43 49.2**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=352,slow=12,SNR=69						
ARCES				Sn	Sn	20 45 06.7	-10
	comp=Z,0.5nm,0.3s,baz=344,slow=18,SNR=1.6						
	comp=Z,3.8nm,0.4s						
ARCES	**ARCESS Array B**	**7.71**	**163**	P	**Pn**	**20 43 51.5**	**+1.0**
ARCES				S	**Sn**	**20 45 12.6**	**-4.1**
NOR	**Nord**	**7.93**	**321**	Pn	**Pn**	**20 43 53.5**	**-0.1**
NOR	**Nord**	**7.93**	**321**	Pn	**Pn**	**20 43 53.5**	**-0.1**
KIF	**Kilpisjarvi**	**8.04**	**176**	Pn	**Pn**	**20 43 55.2**	**+0.1**
KIF				Sn	**Sn**	**20 45 19.9**	**-4.8**
KIF	**Kilpisjarvi**	**8.04**	**176**	Pn	**Pn**	**20 43 55.2**	**+0.1**
KIF				Sn	**Sn**	**20 45 19.9**	**-4.8**
KTK1	**Kautokeino**	**8.10**	**169**	*e*P	**Pn**	**20 43 57.5**	**+1.5**
PRVG	**Vayda Guba**	**8.15**	**146**	P	**Pn**	**20 43 58.6**	**+1.9**
PRVG				S	**Sn**	**20 45 24.5**	**-3.1**
HEF	**Hetta**	**8.72**	**169**	*e*P	**Pn**	**20 44 04.9**	**+0.4**
LOF	**Lofoten**	**9.04**	**193**	*e*P	**Pn**	**20 44 10.7**	**+1.8**
TERR	**Teriberka**	**9.05**	**141**	P	**Pn**	**20 44 08.0**	**-1.0**
TERR				S	**Sn**	**20 45 44.1**	**-5.6**
STEI	**Steigen**	**9.17**	**189**	*e*P	**Pn**	**20 44 13.4**	**+2.8**
JMIC	**Jan Mayen**	**9.59**	**246**	Pn	**Pn**	**20 44 16.1**	**-0.2**
	comp=Z,5.4nm,0.3s,baz=125,slow=19,SNR=1.4						
JMIC	**Jan Mayen**	**9.59**	**246**	*e*P	**Pn**	**20 44 19.8**	**+3.5**
SALU	**Saltoluokta**	**9.65**	**181**	*e*P	**Pn**	**20 44 19.0**	**+1.7**
APA0	**Apatity Array**	**10.28**	**149**	Pn	**Pn**	**20 44 24.6**	**-1.1**
	baz=346,slow=12						
APA0	**Apatity Array**	**10.28**	**149**	Pn	**Pn**	**20 44 24.6**	**-1.1**
	slow=12						
APA0	**Apatity Array**	**10.28**	**149**	P	**Pn**	**20 44 24.4**	**-1.4**
APA0				S	**Sn**	**20 46 12.9**	**-6.9**
FIA0	**FINESS Array S**	**15.79**	**168**	P	**Pn**	**20 45 38.8**	**-1.5**
	baz=2.4,slow=14						
FIA0	**FINESS Array S**	**15.79**	**168**	P	**Pn**	**20 45 38.8**	**-1.5**
	slow=14						
FINES	**FINESS Array B**	**15.79**	**168**	Pn	**Pn**	**20 45 38.0**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=6.4,slow=9.8,SNR=5.7						
	comp=Z,0.6nm,0.4s						
NOA	**NORSAR Array B**	**16.23**	**194**	Pn	**Pn**	**20 45 44.0**	**-2.1**
	baz=26,slow=14,SNR=1.5						
	comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**17.03**	**189**	Pn	**Pn**	**20 45 54.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=29,slow=3.3,SNR=1.2						
	comp=Z,1.9nm,0.9s						
KURBB	**Kurchatov Arra**	**34.49**	**104**	P	**P**	**20 48 46.6**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=336,slow=7.4,SNR=1.4						
	comp=Z,0.2nm,0.5s						
YAK	**Yakutsk**	**34.78**	**51**	P	**P**	**20 48 48.2**	**+0.5**
	comp=Z,5.0nm,0.4s,baz=314,slow=1.1,SNR=6.0						
ILAR	**Eielson Array**	**38.21**	**350**	P	**P**	**20 49 19.2**	**+2.2**
	comp=Z,0.3nm,1.0s,baz=2.6,slow=7.3,SNR=4.3						
	comp=Z,0.3nm,1.0s						
MKAR	**Makanchi Array**	**38.93**	**103**	P	**P**	**20 49 26.3**	**+3.1**
	comp=Z,0.6nm,0.8s,baz=350,slow=7.3,SNR=3.6						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**43.38**	**79**	P	**P**	**20 50 01.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=19,slow=9.2,SNR=1.6						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**68.43**	**308**	P	**P**	**20 52 59.7**	**+0.4**
	comp=Z,0.4nm,1.0s,baz=7.8,slow=7.3,SNR=2.1						
	comp=Z,0.4nm,1.0s						

MAN 23 20:42:48.4, 9°.68N×126°.35E, h20km, mb4.1, ML2.9, MS2.5, 4C-5D, Mindanao

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.24**	**295**	⇑*e*P	Pb	20 42 55.3	+1.1
GLSP				*e*S	Sb	20 42 59.9	+1.7
SCPH	**Surigao**	**0.86**	**277**	⇓*i*P	Pb	20 43 04.0	-0.6
SCPH				*i*S	Sb	20 43 15.1	-0.5
BUTP	**Butuan**	**1.01**	**226**	⇓*e*P	Pb	20 43 07.0	-0.2
BUTP				*e*S	Sn	20 43 21.7	+0.6
BIPH	**Bislig**	**1.49**	**180**	⇓*i*P	Pn	20 43 13.8	-0.2
BIPH				*i*S	Sn	20 43 33.1	+0.2
MSLP	**Maasin**	**1.54**	**287**	⇓*e*P	Pb	20 43 16.3	+0.1
MSLP				*e*S	Sb	20 43 37.3	+2.0
GHBP	**Garcia Hernand**	**2.00**	**269**	⇑*i*P	Pn	20 43 21.4	+0.3
GHBP				*i*S	Sn	20 43 46.5	+0.8
TABP	**Talibon, Bohol**	**2.03**	**282**	⇑*i*P	Pn	20 43 22.2	+0.7
TABP				*i*S	Sn	20 43 47.1	+0.8
BUKP	**Musuan**	**2.20**	**216**	⇓*e*P	Pb	20 43 26.5	-1.1
BUKP				*e*S	Sb	20 43 54.7	+0.3
RCP	**Roxas**	**4.01**	**298**	⇑*e*P	Pn	20 43 51.2	+2.4

*IDC **23** 20:48:43.0±0.8, 6°.73N×72°.90W, h158km±9km, mb2.7/1, mbtmp3.8/4, Error ellipse: s-maj=41.1km s-min=7.7km az=133.0*

*RSNC **23** 20:48:45.0±1.0, 6°.77N×73°.13W, h145km±4km, ML3.4*

ISC 23 20:48:43.0±0.9, 6°.82N±0°.03×73°.07W±0°.04, h154km±6km, n38, σ1ˢ49/70, 2C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**206**	⇓*i*P	**Pn**	**20 49 04.6**	**+0.4**
BARC				*e*S	**Sn**	**20 49 19.4**	**-0.9**
BARC				*i*		20 49 21.0	
	comp=Z,885nm,0.4s						
PAMC	**Pamplona, Colo**	**0.64**	**36**	⇓*i*P	**Pn**	**20 49 07.4**	**+1.3**
PAMC				*e*S	**Sn**	**20 49 24.4**	**+0.7**
PAMC				*i*		20 49 26.6	
	comp=Z,324nm,0.5s						
BRRC	**Barranca, Sant**	**0.70**	**295**	⇓*i*P	**Pn**	**20 49 06.5**	**+0.7**
BRRC				*e*S	**Sn**	**20 49 23.6**	**+0.3**
BRRC				*i*		20 49 28.8	
	comp=Z,344nm,0.2s						
RUSC	**La Rusia**	**0.92**	**181**	*e*P	**Pn**	**20 49 08.5**	**+0.4**
RUSC				*e*S	**Sn**	**20 49 26.6**	**-0.6**
RUSC				*i*		20 49 27.7	
	comp=Z,363nm,0.4s						
TAMC	**Tame, Arauca**	**1.33**	**106**	⇑*i*P	**Pn**	**20 49 12.8**	**+1.6**
TAMC				*e*S	**Sn**	**20 49 34.2**	**+1.4**
TAMC				*i*		20 49 35.3	
	comp=Z,190nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.40**	**259**	*e*P	**Pn**	**20 49 11.2**	**-0.7**
PTBC				*e*S	**Sn**	**20 49 33.0**	**-1.0**
PTBC				*i*		20 49 35.0	
	comp=Z,268nm,0.2s						
OCAC	**Ocana**	**1.43**	**350**	*e*P	**Pn**	**20 49 12.8**	**+0.4**
OCAC				*e*S	**Sn**	**20 49 34.9**	**-0.1**
SPBC	**San Pablo de B**	**1.52**	**221**	*e*P	**Pn**	**20 49 13.4**	**+0.2**
SPBC				*e*S	**Sn**	**20 49 35.0**	**-1.3**
SPBC				*i*		20 49 38.0	
	comp=Z,364nm,0.2s						
NORC	**Norcasia**	**2.18**	**235**	*e*P	**Pn**	**20 49 20.6**	**+0.2**
NORC				*e*S	**Sn**	**20 49 48.1**	**-1.3**
NORC				*i*		20 49 51.0	
	comp=Z,229nm,0.4s						
CHIC	**Chingaza**	**2.27**	**197**	*e*P	**Pn**	**20 49 22.4**	**+0.5**
CHIC				*e*S	**Sn**	**20 49 51.5**	**-0.5**
CHIC				*i*		20 49 58.0	
	comp=Z,133nm,0.2s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**20 49 23.9**	**+1.3**
	comp=Z,51nm,0.3s,baz=311,slow=22,SNR=31						
ROSC				S	**Sn**	**20 49 54.4**	**+1.3**
	comp=Z,153nm,0.4s,baz=87,slow=19,SNR=9.3						
ROSC	**El Rosal**	**2.32**	**212**	*e*P	**Pn**	**20 49 24.2**	**+1.7**
ROSC				*e*S	**Sn**	**20 49 55.1**	**+2.0**
ROSC				*i*		20 50 02.5	
	comp=Z,179nm,0.4s						
HELC	**Santa Helena**	**2.52**	**256**	*e*P	**Pn**	**20 49 25.5**	**+0.6**
HELC				*e*S	**Sn**	**20 49 56.8**	**-0.4**
HELC				*i*		20 50 03.4	
	comp=Z,206nm,0.4s						
LL1C	**La Loma 1 Cana**	**2.75**	**350**	*e*P	**Pn**	**20 49 31.1**	**+3.7**
LL1C				*e*S	**Sn**	**20 50 03.7**	**+2.0**
VILC	**Villavicencio,**	**2.76**	**193**	*e*P	**Pn**	**20 49 27.1**	**-0.6**
VILC				*e*S	**Sn**	**20 50 01.8**	**-0.3**
PTGC	**Puerto Gaitan,**	**2.76**	**160**	⇑*i*P	**Pn**	**20 49 27.5**	**-0.1**
PTGC				*e*S	**Sn**	**20 50 00.7**	**-1.4**
PTGC				*i*		20 50 02.5	
	comp=Z,83nm,0.6s						
GUY2C	**Guyana, Caldas**	**2.77**	**235**	*e*P	**Pn**	**20 49 28.9**	**+0.8**
GUY2C				*e*S	**Sn**	**20 50 05.6**	**+2.6**
GUY2C				*i*		20 50 11.1	
	comp=Z,138nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.91**	**356**	*e*P	Pn	20 49 10.0	-19
LL6C				*e*S	Sn	20 49 45.3	-20
LL6C				*i*		20 49 51.5	
	comp=Z,54nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.07**	**252**	*e*P	**Pn**	**20 49 33.3**	**+1.7**
CBOC				*e*S	**Sn**	**20 50 09.3**	**+0.2**
CBOC				*i*		20 50 11.8	
	comp=Z,55nm,0.5s						
DBBC	**Dabeiba**	**3.12**	**274**	*e*P	**Pn**	**20 49 33.0**	**+0.9**
DBBC				*e*S	**Sn**	**20 50 07.9**	**-2.2**
SDV	**Santo Domingo**	**3.17**	**49**	P	**Pn**	**20 49 33.6**	**+0.7**
	comp=Z,48nm,0.4s,baz=232,slow=9.8,SNR=38						
SDV				S	**Sn**	**20 50 10.2**	**-1.4**
	comp=Z,54nm,0.5s,baz=246,slow=20,SNR=12						
ARGC	**Ariguani, Magd**	**3.24**	**339**	*e*P	**Pn**	**20 49 35.5**	**+2.0**
ARGC				*e*S	**Sn**	**20 50 14.8**	**+2.0**
ARGC				*i*		20 50 28.4	
	comp=Z,48nm,0.4s						
ANIL	**Santa Ana**	**3.27**	**225**	*e*P	**Pn**	**20 49 36.0**	**+1.8**
ANIL				*e*S	**Sn**	**20 50 16.4**	**+2.5**
ANIL				*i*		20 50 20.9	
	comp=Z,239nm,0.3s						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**20 49 38.0**	**+0.1**
PRAC				*e*S	**Sn**	**20 50 20.8**	**+0.3**
PRAC				*i*		20 50 27.1	
	comp=Z,124nm,0.4s						
ORTC	**Ortega, Tolima**	**3.61**	**217**	*e*P	**Pn**	**20 49 38.7**	**+0.4**
ORTC				*e*S	**Sn**	**20 50 22.5**	**+1.1**
ORTC				*i*		20 50 28.8	
	comp=Z,93nm,0.3s						
SJCC	**San Jacinto, C**	**3.70**	**326**	*e*P	**Pn**	**20 49 38.6**	**-1.0**
SJCC				*e*S	**Sn**	**20 50 20.5**	**-3.0**
SJCC				*i*		20 50 24.7	
	comp=Z,134nm,0.5s						
PLMC	**San Jos del P**	**3.71**	**239**	*e*P	**Pn**	**20 49 40.4**	**+0.7**
PLMC				*e*S	**Sn**	**20 50 23.1**	**-0.7**
PLMC				*i*		20 50 28.3	
	comp=Z,49nm,0.3s						
LCBC	**Los crdobas,**	**3.84**	**302**	*e*P	**Pn**	**20 49 40.8**	**-0.5**
LCBC				*e*S	**Sn**	**20 50 26.5**	**-0.1**
LCBC				*i*		20 50 30.2	
	comp=Z,58nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P	**Pn**	**20 49 44.6**	**-1.2**
CRJC				*e*S	**Sn**	**20 50 32.1**	**-2.6**
CRJC				*i*		20 50 38.4	
	comp=Z,62nm,0.5s						
GUVC	**San Jose del G**	**4.27**	**174**	*e*P	**Pn**	**20 49 46.0**	**-0.8**
GUVC				*e*S	**Sn**	**20 50 35.3**	**-1.4**
GUVC				*i*		20 50 41.0	
	comp=Z,44nm,0.2s						
YOTC	**Yotoco, Valle**	**4.30**	**229**	*e*P	**Pn**	**20 49 47.4**	**-0.1**
YOTC				*e*S	**Sn**	**20 50 37.0**	**-0.7**
URIC	**Uribia, Colomb**	**4.97**	**12**	*e*P	**Pn**	**20 49 55.1**	**-1.0**
URIC				*e*S	**Sn**	**20 50 49.0**	**-4.2**
URIC				*i*		20 50 51.4	
	comp=Z,11nm,0.4s						
GARC	**Garzon, Huila**	**5.19**	**208**	*e*P	**Pn**	**20 49 58.7**	**-0.6**
GARC				*e*S	**Sn**	**20 50 56.7**	**-2.2**
GARC				*i*		20 51 02.6	
	comp=Z,28nm,0.3s						
BBAC	**Balboa, Cauca**	**6.32**	**221**	*e*P	**Pn**	**20 50 15.4**	**+1.1**
BBAC				*e*S	**Sn**	**20 51 22.4**	**-3.4**
BBAC				*i*		20 51 30.5	
	comp=Z,7.8nm,0.4s						
PCRV	**Puerto La Cruz**	**8.99**	**68**	P	**Pn**	**20 50 48.0**	**-1.7**
	comp=Z,11nm,1.1s,baz=248,slow=5.4,SNR=1.7						
TXAR	**Lajitas Array**	**36.50**	**312**	P	**P**	**20 55 34.9**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=124,slow=9.2,SNR=2.8						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**21 08 13.3**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=118,slow=3.7,SNR=8.3						
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc	**PKiKP**	**21 08 16.6**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=108,slow=2.8,SNR=13						

IDC 23 20:59:36.3±2.3, 2°.03N×127°.53E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=185.6km s-min=25.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.83**	**163**	P	P	21 04 39.7	-1.5
	0.4nm,0.4s,baz=340,slow=9.7,SNR=11						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.28**	**167**	P	P	21 05 13.0	-0.6
	0.7nm,0.9s,baz=344,slow=12,SNR=4.6						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**59.40**	**325**	P	P	21 09 42.0	+1.3
	0.2nm,0.4s,baz=117,slow=8.2,SNR=6.1						
	0.2nm,0.4s						

NNC 23 21:19:55.9±1.4, 41°.93N×87°.92E, h0km, mb3.6, mpv3.3, 3C-5D, Error ellipse: s-maj=10.3km s-min=8.3km az=153.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**6.32**	**322**	⇑Pn	Pn	21 21 30.3	-0.1
	0.4nm,0.3s,baz=137,slow=14,SNR=6.2						
MK31				⇑Sn	Sn	21 22 44.5	+1.3
	0.7nm,0.6s						
MK31				⇓Lg	Lg	21 23 16.4	
	1.5nm,0.6s						
PDGK	**Podgornoye**	**6.37**	**286**	⇓Pn	Pn	21 21 30.5	-0.6
	4.9nm,1.3s						
PDGK				⇓Sn	Sn	21 22 45.8	+1.1
	4.9nm,0.6s						
PDGK				⇓Lg	Lg	21 23 20.1	
	8.4nm,0.8s						
MAKZ	**Makanchi**	**6.47**	**321**	⇑Pn	Pn	21 21 32.7	+0.2
	4.2nm,1.4s						
MAKZ				⇓Lg	Lg	21 23 20.3	
	2.9nm,1.1s						

*IDC **23** 21:25:57.3±2.5, 1°.73N×127°.41E, h119km±23km, mb4.0/11, mbtmp4.4/13, Error ellipse: s-maj=26.9km s-min=12.8km az=79.0*

*DJA **23** 21:25:57.0±0.3, 2°N±2°×12°7E±°, h76km±4km, M4.7/13, mb4.9/13, mB5.3/9, MLv4.5/13, Mw(mB)4.7/9*

*NEIC **23** 21:25:57.8±1.7, 1°.64N±0°.07×127°.23E±0°.08, h116km±7km, mb4.6/33, Error ellipse: s-maj=12.4km s-min=9.1km az=54.0*

ISC 23 21:25:55.9±0.4, 1°.75N±0°.04×127°.27E±0°.05, h100km, n114, σ1ˢ59/123, mb4.6/26, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.53**	**81**	P	**Pn**	**21 26 12.6**	**+0.8**
GAMI				S	**Sn**	**21 26 23.0**	**-0.8**
TNTI	**Ternate**	**0.98**	**174**	Pn	**Pn**	**21 26 17.8**	**+1.7**
TNTI				Sn	**Sn**	**21 26 33.8**	**+2.5**
TNTI	**Ternate**	**0.98**	**174**	P	**Pn**	**21 26 17.8**	**+1.7**
TNTI				S	**Sn**	**21 26 32.9**	**+1.6**
TNTI	**Ternate**	**0.98**	**174**	P	**Pn**	**21 26 18.7**	**+2.6**
LBMI	**Labuha**	**2.39**	**174**	P	**Pn**	**21 26 35.8**	**+2.3**
SGSI	**Sangihe**	**2.59**	**318**	P	Pn	21 26 32.1	-4.1
SGSI				S	**Sn**	**21 27 05.2**	**-1.9**
SANI	**Sanana**	**3.99**	**199**	P	**Pn**	**21 26 54.7**	**-0.2**
SANI	**Sanana**	**3.99**	**199**	P	**Pn**	**21 26 54.7**	**-0.2**
GTOI	**Gorontalo**	**4.40**	**255**	P	**Pn**	**21 27 02.5**	**+2.1**
GTOI				S	**Sn**	**21 27 52.1**	**+1.5**
SIJI	**Sorong**	**4.77**	**123**	P	**Pn**	**21 27 07.0**	**+1.5**
	6.9nm,0.3s,baz=315,slow=17,SNR=9.4						
SIJI	**Sorong**	**4.77**	**123**	P	**Pn**	**21 27 06.9**	**+1.4**
NLAI	**Namlea**	**4.96**	**182**	P	**Pn**	**21 27 10.8**	**+2.7**
LUWI	**Luwuk**	**5.28**	**238**		**Pn**	**21 27 11.6**	**-0.9**
LUWI	**Luwuk**	**5.28**	**238**	P	**Pn**	**21 27 14.2**	**+1.8**
	2.2nm7μm116nm,0.5s						
LUWI	**Luwuk**	**5.28**	**238**	P	**Pn**	**21 27 15.0**	**+2.6**
MRSI	**Marisa**	**5.47**	**257**	P	**Pn**	**21 27 16.1**	**+1.1**
	0.9nm3μm180nm,0.5s						
DAV	**Davao City (W)**	**5.54**	**342**	S	**Sn**	**21 28 20.3**	**+1.9**
	160nm,0.4s,baz=147,slow=7.1,SNR=3.0						
DAV	**Davao City (W)**	**5.54**	**342**	Pn	**Pn**	**21 27 20.1**	**+4.1**
KCP	**Kidapawan**	**5.66**	**337**	⇑*e*P	**Pn**	**21 27 19.5**	**+1.9**
KCP				*e*S	**Sn**	**21 28 21.1**	**-0.1**
APSI	**Ampana**	**6.21**	**245**	P	**Pn**	**21 27 26.5**	**+1.5**
	0.9nm4μm224nm,0.6s						
BIPH	**Bislig**	**6.45**	**352**

PSA00 IAmb IAmb 21 31 36.0
comp=Z,3.3nm,1.2s
QIS Mount Isa 25.25 152 P **P** **21 31 12.8 -0.1**
AS31 Alice Springs 26.08 166 P **P** **21 31 19.2 -1.1**
ASAR Alice Springs 26.08 166 P **P** **21 31 19.1 -1.2**
comp=Z,4.2nm,0.4s,baz=348,slow=7.4,SNR=92
ASAR PcP **PcP** **21 34 45.1 -0.6**
comp=Z,0.8nm,0.9s,baz=4.5,slow=2.0,SNR=4.0
comp=Z,4.2nm,0.4s
AS01 Alice Springs 26.09 166 P **P** **21 31 19.3 -1.1**
BKNI Bangkinang 26.26 267 P **P** **21 31 22.0 -0.1**
WRKA Warakurna 26.65 178 P **P** **21 31 24.5 -0.9**
MEEK Meekatharra 29.43 196 P **P** **21 31 49.7 -0.5**
GSI Gunungsitoli 29.68 270 P **P** **21 31 51.6 -1.0**
OOD Oodnadatta 30.47 165 P **P** **21 31 58.1 -1.2**
FORT Forrest 32.36 179 P **P** **21 32 14.8 -1.1**
FORT Forrest 32.36 179 P **P** **21 32 14.8 -1.1**
MORW Morawa 32.48 199 P **P** **21 32 16.2 -0.7**
MORW IAmb IAmb 21 32 16.6
comp=Z,14nm,1.3s
MORW Morawa 32.48 199 P **P** **21 32 16.5 -0.5**
MULG Mulgathing 32.51 169 P **P** **21 32 16.3 -0.9**
BLDU Ballidu 33.72 197 P **P** **21 32 27.0 -0.8**
KLBR Kellerberrin 34.37 194 P **P** **21 32 32.8 -0.6**
MUN Mundaring 35.15 196 P **P** **21 32 40.0 0.0**
BBOO Buckleboo 35.37 167 P **P** **21 32 40.8 -1.1**
BBOO IAmb IAmb 21 33 10.1
comp=Z,18nm,1.2s
BBOO Buckleboo 35.37 167 P **P** **21 32 40.8 -1.1**
KSRS Korea Array 35.53 1 P **P** **21 32 43.6 +0.4**
comp=Z,1.3nm,0.7s,baz=174,slow=9.9,SNR=4.8
comp=Z,1.3nm,0.7s
MJAR Matsushiro Arr 36.07 15 P **P** **21 32 46.1 -1.8**
comp=Z,0.9nm,0.4s,baz=166,slow=9.1,SNR=2.3
comp=Z,0.9nm,0.4s
STKA Stephens Creek 36.10 159 P **P** **21 32 47.3 -0.9**
comp=Z,10nm,0.3s,baz=335,slow=9.1,SNR=49
comp=Z,10nm,0.3s
STKA Stephens Creek 36.10 159 P **P** **21 32 47.7 -0.6**
STKA IAmb IAmb 21 32 48.8
comp=Z,4.5nm,0.8s
STKA Stephens Creek 36.10 159 P **P** **21 32 47.6 -0.6**
HTT Hallett 36.68 164 P **P** **21 32 52.5 -0.7**
CMSA Cobar Meteorol 37.45 154 P **P** **21 32 59.4 -0.2**
ARMA Armidale 39.53 146 P **P** **21 33 17.8 +0.5**
ARMA IAmb IAmb 21 33 18.1
comp=Z,30nm,1.4s
ARMA Armidale 39.53 146 P **P** **21 33 17.7 +0.5**
ARPS Mount Arapiles 40.65 162 P **P** **21 33 26.1 -0.2**
CAN Canberra 42.12 153 P **P** **21 33 38.6 +0.2**
TOO Toolangi 42.62 158 P **P** **21 33 43.1 +0.7**
TOO IAmb IAmb 21 34 00.5
comp=Z,24nm,1.4s
DZM Mont Dzumac 44.98 124 P **P** **21 34 01.4 -0.2**
DZM IAmb IAmb 21 34 40.6
comp=Z,12nm,1.2s
LIFNC LIFOU 45.08 122 P **P** **21 34 02.3 0.0**
MK31 Makanchi Array 59.48 326 P **P** **21 35 48.5 +0.1**
MKAR Makanchi Array 59.48 326 P **P** **21 35 48.5 +0.1**
comp=Z,2.0nm,0.4s,baz=116,slow=7.5,SNR=36
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 59.48 326 P **P** **21 35 48.7 +0.2**
MAKZ Makanchi 59.66 326 P **P** **21 35 49.6 -0.1**
MAKZ IAmb IAmb 21 35 52.5
comp=Z,7.3nm,1.4s
LBZ Lake Benmore 59.76 146 P **P** **21 35 49.4 -1.0**
TUWZ Tuamarina 60.28 141 P **P** **21 35 52.5 -1.4**
KHZ Kahutara 60.58 142 P **P** **21 35 53.9 -2.1**
BKZ Black Stump Fm 60.77 138 P **P** **21 35 56.7 -0.7**
BKZ IAmb IAmb 21 36 30.8
comp=Z,17nm,1.5s
ZALV Zalesovo Beam 62.58 333 P **P** **21 36 10.5 +1.3**
comp=Z,0.5nm,0.4s,baz=125,slow=7.1,SNR=3.0
comp=Z,0.5nm,0.4s
KURK Kurchatov 63.69 328 P **P** **21 36 16.4 -0.2**
KURK IAmb IAmb 21 36 19.3
comp=Z,7.0nm,0.7s
GYA0B ALIBECK ARRAY 72.55 309 P **P** **21 37 11.1 -1.3**
VNDA Vanda 81.41 173 P **P** **21 38 00.1 -1.1**
comp=Z,1.2nm,0.5s,baz=319,slow=7.7,SNR=17
comp=Z,1.2nm,0.5s
MAW Mawson 82.10 200 P **P** **21 38 05.2 +0.3**
comp=Z,2.9nm,0.7s,baz=74,slow=4.4,SNR=6.2
comp=Z,2.9nm,0.7s
ILAR Eielson Array 86.65 25 P **P** **21 38 26.1 -2.0**
comp=Z,0.2nm,0.5s,baz=253,slow=4.7,SNR=4.9
comp=Z,0.2nm,0.5s
INK Inuvik 91.79 22 P **P** **21 38 50.3 -1.8**
comp=Z,1.6nm,0.9s,baz=315,slow=2.9,SNR=1.7
comp=Z,1.6nm,0.9s
TXAR Lajitas Array 122.36 53 PKP **PKPdf** **21 44 38.9 -1.3**
comp=Z,0.6nm,0.7s,baz=282,slow=1.8,SNR=2.1
TORD Torodi Ar. Bea 124.03 287 PKP **PKPdf** **21 44 42.5 -1.1**
comp=Z,0.2nm,0.4s,baz=97,slow=1.6,SNR=8.0

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*JMA **23** 21:32:16.1±0.1,24.°0N±0.°3×121.°8E±0.°3,h45km,MV3.4/15, TAIWAN REGION*
*TAP **23** 21:32:17.4,24.°15N×121.°78E,h39km,ML4.2,C*
ISC 23 21:32:15.8±0.7,**24.°08N**±0.°02×**121.°84E**±0.°02,**h17**km,**n148,**
σ1⁹**32**/251,**28C-13D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=274	**0.21**	**293**	P	**Pb**	**21 32 24.1**	**+2.9**
ETL	baz=274			S	**Sb**	**21 32 29.5**	**+4.6**
TWD	**Chiawan** baz=248	**0.22**	**271**	⇑*iP*	**Pb**	**21 32 24.3**	**+3.0**
TWD	baz=248			*i* S	**Sb**	**21 32 29.6**	**+4.5**
HWA	**Hwalien** baz=218	**0.23**	**245**	⇑*iP*	**Pb**	**21 32 25.1**	**+3.5**
HWA	baz=218			*i* S	**Sb**	**21 32 31.6**	**+6.1**
NACB	**Ninganchiao**	**0.24**	**293**	P	**Pb**	**21 32 24.2**	**+2.5**
NACB	**Ninganchiao** baz=279	**0.24**	**293**	⇑*iP*	**Pb**	**21 32 24.2**	**+2.5**
NACB	baz=279			*i* S	**Sb**	**21 32 29.7**	**+4.0**
EHP	**Heping Village** baz=342	**0.25**	**339**	*i* P	**Pb**	**21 32 24.4**	**+2.6**
EHP	baz=342			S	**Sb**	**21 32 29.9**	**+4.0**
TEYL	**Yanliau Villag** baz=207	**0.30**	**226**	P	**Pn**	**21 32 25.7**	**+0.2**
TEYL	baz=207			S	**Sn**	**21 32 32.4**	**+0.9**
ETM	**Tongmen** baz=244	**0.33**	**251**	P	**Pn**	**21 32 25.7**	**-0.2**
ETM	baz=244			S	**Sn**	**21 32 32.0**	**-0.3**
ETLH	**Xiulin Townshi** baz=277	**0.35**	**292**	⇓*iP*	**Pn**	**21 32 25.5**	**-0.7**
ETLH	baz=277			*i* S	**Sn**	**21 32 31.4**	**-1.4**
EWUT	**Wuta** baz=358	**0.37**	**352**	⇑*iP*	**Pn**	**21 32 24.7**	**-1.7**
EWUT	baz=358			S	**Sn**	**21 32 30.9**	**-2.3**
ESL	**Shilin** baz=234	**0.45**	**235**	⇑*iP*	**Pn**	**21 32 27.1**	**-0.4**
ESL	baz=234			S	**Sn**	**21 32 34.6**	**-0.7**
TEGC	**Jichi Village** baz=199	**0.46**	**217**	P	**Pn**	**21 32 27.9**	**+0.4**
TEGC	baz=199			*e*S	**Sn**	**21 32 37.0**	**+1.6**
WHF	**Hehuan Shan** baz=263	**0.53**	**277**	⇓*iP*	**Pn**	**21 32 28.1**	**-0.8**
WHF	baz=263			*i* S	**Sn**	**21 32 35.9**	**-1.8**
TWC	**Suao** baz=15	**0.53**	**1**	⇑*iP*	**Pn**	**21 32 28.0**	**-0.6**
TWC	baz=15			*i* S	**Sn**	**21 32 35.9**	**-1.3**
LATG	**Datong** baz=322	**0.54**	**328**	⇑*iP*	**Pn**	**21 32 27.6**	**-1.3**
LATG	baz=322			S	**Sn**	**21 32 35.4**	**-2.1**
NNSB	**Datong** baz=307	**0.54**	**310**	⇑*iP*	**Pn**	**21 32 27.9**	**-0.9**
NNSB	baz=307			S	**Sn**	**21 32 35.4**	**-2.3**
EGFH	**Guangfu** baz=225	**0.55**	**223**	P	**Pn**	**21 32 28.5**	**-0.4**
EGFH	baz=225			*e*S	**Sn**	**21 32 37.0**	**-0.7**
NNS	**Nan Shan** baz=300	**0.56**	**311**	⇑*iP*	**Pn**	**21 32 27.1**	**-2.0**
NNS	baz=300			*i* S	**Sn**	**21 32 35.1**	**-2.9**
FUSS	**Fushou** baz=281	**0.57**	**287**	⇓*iP*	**Pn**	**21 32 28.7**	**-0.6**
FUSS	baz=281			*i* S	**Sn**	**21 32 36.9**	**-1.6**
NDT	**Datong Townshi** baz=325	**0.60**	**331**	P	**Pn**	**21 32 26.9**	**-2.7**
NDT	baz=325			S	**Sn**	**21 32 35.2**	**-3.7**
CHGB	**Renai** baz=254	**0.61**	**269**	⇓*iP*	**Pn**	**21 32 29.4**	**-0.5**
CHGB	baz=254			S	**Sn**	**21 32 37.9**	**-1.5**
ENTT	**Nioudou** baz=333	**0.61**	**336**	⇑*iP*	**Pn**	**21 32 27.8**	**-1.9**
ENTT	baz=333			S	**Sn**	**21 32 36.4**	**-2.8**
OWD	**Renai** baz=250	**0.62**	**259**	⇓*iP*	**Pn**	**21 32 29.5**	**-0.4**
OWD	baz=250			S	**Sn**	**21 32 37.2**	**-2.3**
TWT	**Tachien** baz=275	**0.63**	**286**	⇓P	**Pn**	**21 32 29.9**	**-0.3**
TWT	baz=275			S	**Sn**	**21 32 38.8**	**-1.1**
TDCB	**Techi** baz=275	**0.64**	**286**	⇓*iP*	**Pn**	**21 32 29.9**	**-0.4**
TDCB	baz=275			*i* S	**Sn**	**21 32 38.6**	**-1.6**
TWE	**Neicheng** baz=350	**0.66**	**346**	⇑*iP*	**Pn**	**21 32 29.7**	**-0.6**
TWE	baz=350			*i* S	**Sn**	**21 32 38.6**	**-1.7**
WUSB	**Renai** baz=250	**0.66**	**263**	⇓*iP*	**Pn**	**21 32 30.2**	**-0.3**
WUSB	baz=250			*e*S	**Sn**	**21 32 39.2**	**-1.4**
ILA	**Ilan** baz=357	**0.69**	**353**	⇑*iP*	**Pn**	**21 32 30.5**	**-0.3**
ILA	baz=357			S	**Sn**	**21 32 40.5**	**-0.6**
HGSD	**Ruisui** baz=219	**0.69**	**213**	⇑*iP*	**Pn**	**21 32 30.9**	**0.0**
HGSD	baz=219			S	**Sn**	**21 32 42.4**	**+1.1**
VWDT	**VWDT** baz=228	**0.71**	**243**	⇑*iP*	**Pn**	**21 32 31.2**	**+0.2**
VWDT	baz=228			S	**Sn**	**21 32 40.9**	**-0.8**
FUSB	**Fushanzhiwuyua** baz=335	**0.72**	**342**	⇑*iP*	**Pn**	**21 32 30.4**	**-0.8**
FUSB	baz=335			S	**Sn**	**21 32 39.9**	**-2.0**
YHNB	**Yeheng**	**0.72**	**325**	P	**Pn**	**21 32 30.6**	**-0.8**
YHNB	**Yeheng** baz=316	**0.72**	**325**	⇑*iP*	**Pn**	**21 32 30.5**	**-0.8**
YHNB	baz=316			S	**Sn**	**21 32 39.5**	**-2.6**
EHY	**Hungye** baz=213	**0.74**	**220**	⇑P	**Pn**	**21 32 30.8**	**-0.7**
EHY	baz=213			*e*S	**Sn**	**21 32 41.3**	**-1.0**
NSK	**Sanguang** baz=315	**0.74**	**324**	⇑*iP*	**Pn**	**21 32 29.6**	**-1.9**
NSK	baz=315			*i* S	**Sn**	**21 32 38.8**	**-3.6**
EGS	baz=11	**0.77**	**6**	P	**Pn**	**21 32 31.9**	**0.0**
EGS	baz=11			*e*S	**Sn**	**21 32 43.2**	**+0.1**
NTC	**Toucheng** baz=9.0	**0.77**	**360**	*e*P	**Pn**	**21 32 31.8**	**-0.1**
WHP	**Taichung City** baz=273	**0.84**	**284**	P	**Pn**	**21 32 32.9**	**0.0**
WHP	baz=273			S	**Sn**	**21 32 44.2**	**-0.7**
YULB	**Yu-li**	**0.84**	**216**	P	**Pg**	**21 32 32.4**	**+0.2**
YULB	**Yu-li** baz=220	**0.84**	**216**	⇑*iP*	**Pg**	**21 32 32.2**	**0.0**
WCS	**Beigang Elemen** baz=259	**0.85**	**269**	*e*P	**Pn**	**21 32 31.7**	**-1.2**
WCS	baz=259			*e*S	**Sn**	**21 32 42.9**	**-2.1**
NFF	**Wufeng Townshi** baz=310	**0.86**	**310**	*e*P	**Pn**	**21 32 32.1**	**-1.1**
SSLB	**Suanglung**	**0.86**	**251**	P	**Pn**	**21 32 33.2**	**+0.1**
SSLB	**Suanglung** baz=244	**0.86**	**251**	P	**Pn**	**21 32 33.1**	**0.0**
SSLB	baz=244			*e*S	**Sn**	**21 32 43.6**	**-1.7**
EYUL	**Yuli** baz=218	**0.87**	**213**	*e*P	**Pg**	**21 32 32.7**	**0.0**
SMLT	**Sun Moon Lake** baz=247	**0.88**	**257**	⇓*iP*	**Pn**	**21 32 33.6**	**+0.1**
SMLT	baz=247			S	**Sn**	**21 32 45.1**	**-0.8**
TIPB	**Shuangxi** baz=352	**0.89**	**359**	⇑*iP*	**Pn**	**21 32 33.6**	**0.0**
TIPB	baz=352			S	**Sn**	**21 32 45.6**	**-0.5**
TYC	**Yuchr** baz=246	**0.91**	**259**	⇓*iP*	**Pn**	**21 32 34.0**	**+0.1**
TYC	baz=246			S	**Sn**	**21 32 45.7**	**-0.9**
NHDH	**Xindian Distri** baz=334	**0.93**	**342**	P	**Pn**	**21 32 34.0**	**0.0**
NHDH	baz=334			S	**Sn**	**21 32 45.8**	**-1.2**
TWA	**Mucha** baz=338	**0.93**	**346**	⇑P	**Pn**	**21 32 34.0**	**-0.1**
TWA	baz=338			S	**Sn**	**21 32 45.8**	**-1.3**
TWB1	**Santiao Chiao** baz=12	**0.94**	**8**	P	**Pn**	**21 32 34.0**	**-0.2**
TWB1	baz=12			S	**Sn**	**21 32 46.5**	**-0.7**
LIOB	**Emei** baz=299	**0.94**	**307**	P	**Pn**	**21 32 34.7**	**+0.5**
LIOB	baz=299			S	**Sn**	**21 32 46.7**	**-0.6**
NSTT	**Nanjuang** baz=303	**0.94**	**306**	⇓*iP*	**Pn**	**21 32 34.5**	**+0.3**
NSTT	baz=303			*i* S	**Sn**	**21 32 46.1**	**-1.2**
TATO	**Taipei**	**0.95**	**341**	P	**Pn**	**21 32 34.5**	**+0.1**
WHYT	**Xinyi Township** baz=242	**0.98**	**247**	*e*P	**Pn**	**21 32 35.6**	**+0.8**
WHYT	baz=242			*e*S	**Sn**	**21 32 48.4**	**+0.1**
NWF	**Wu-fen Shan** baz=354	**0.99**	**357**	P	**Pn**	**21 32 35.4**	**+0.4**
NWF	baz=354			S	**Sn**	**21 32 48.5**	**-0.2**
YUS	**Yu-Shan** baz=220	**1.00**	**234**	⇑*iP*	**Pn**	**21 32 35.9**	**+0.4**
YUS	baz=220			*i* S	**Sn**	**21 32 49.5**	**0.0**
TAP	**Taipei** baz=344	**1.00**	**343**	P	**Pn**	**21 32 35.5**	**+0.4**
TAP	baz=344			S	**Sn**	**21 32 48.2**	**-0.6**
FULB	**Fuli** baz=216	**1.01**	**210**	P	**Pg**	**21 32 35.5**	**+0.1**
TWQ1	**Liyutan** baz=281	**1.01**	**286**	⇓*iP*	**Pn**	**21 32 36.0**	**+0.9**
TWQ1	baz=281			*e*S	**Sn**	**21 32 49.5**	**+0.5**
SXI1	**Grass Mountain** baz=352	**1.01**	**2**	P	**Pn**	**21 32 35.5**	**+0.2**
SXI1	baz=352			S	**Sn**	**21 32 48.9**	**-0.3**
NSY	**Sanyi** baz=285	**1.04**	**289**	⇓P	**Pn**	**21 32 36.5**	**+0.9**
NSY	baz=285			S	**Sn**	**21 32 50.4**	**+0.6**
WJS	**Zhushan** baz=246	**1.05**	**256**	*e*P	**Pg**	**21 32 37.0**	**+0.9**
WJS	baz=246			S	**Sn**	**21 32 51.0**	**+1.1**
SBCB	**Hsinchu** baz=311	**1.05**	**313**	*e*P	**Pn**	**21 32 36.1**	**+0.3**
SBCB	baz=311			*e*S	**Sn**	**21 32 50.8**	**+0.7**
NMLH	**Miaoli** baz=292	**1.06**	**296**	*e*P	**Pg**	**21 32 36.9**	**+0.5**
NMLH	baz=292			*e*S	**Sn**	**21 32 50.7**	**+0.5**
NCUH	**Zhongli** baz=326	**1.07**	**326**	*e*P	**Pg**	**21 32 35.8**	**-0.6**
NCUH	baz=326			*e*S	**Sn**	**21 32 50.4**	**-0.1**
NCU	**National Centr** baz=326	**1.07**	**326**	*e*P	**Pg**	**21 32 36.0**	**-0.4**
NCU	baz=326			*e*S	**Sn**	**21 32 50.4**	**-0.1**
HSN	**Hsinchu** baz=313	**1.07**	**313**	*e*P	**Pg**	**21 32 36.4**	**-0.1**
HSN	baz=313			*e*S	**Sn**	**21 32 50.6**	**+0.1**
WNT	**Mingjian** baz=253	**1.07**	**260**	P	**Pg**	**21 32 37.4**	**+0.9**
WNT	baz=253			S	**Sn**	**21 32 51.9**	**+1.4**
JYNG	**Yonagunijimaku**	**1.08**	**70**	P	**Pn**	**21 32 36.2**	**+0.1**
JYNG				*e*S	**Sn**	**21 32 50.4**	**-0.3**
TWS1	**Kuangyinshan** baz=341	**1.09**	**340**	*e*P	**Pg**	**21 32 36.3**	**-0.6**
TWS1	baz=341			*e*S	**Sn**	**21 32 50.5**	**-0.4**
EHD	**Haiduan** baz=216	**1.09**	**212**	*e*P	**Pn**	**21 32 34.6**	**-1.8**
EHD	baz=216			*e*S	**Sn**	**21 32 51.2**	**+0.2**
YM01	**YM01** baz=336	**1.09**	**347**	*e*P	**Pg**	**21 32 36.1**	**-0.9**
YM01	baz=336			*e*S	**Sn**	**21 32 49.8**	**-1.4**
ALS	**Alishan** baz=233	**1.10**	**239**	⇑*iP*	**Pg**	**21 32 37.5**	**+0.3**
ALS	baz=233			S	**Sn**	**21 32 51.8**	**+0.1**
WDJ	**Dajia District** baz=280	**1.12**	**284**	*e*P	**Pg**	**21 32 37.5**	**-0.1**
WDJ	baz=280			*e*S	**Sg**	**21 32 52.5**	**+0.2**
NTST	**Danshui** baz=343	**1.14**	**342**	*e*P	**Pg**	**21 32 36.7**	**-1.1**
YOJ	**Yonaguni jima**	**1.14**	**70**	P	**Pb**	**21 32 37.0**	**0.0**
YOJ	**Yonaguni jima** baz=74	**1.14**	**70**	*e*P	**Pb**	**21 32 36.8**	**-0.2**
YOJ	baz=74			*e*S	**Sb**	**21 32 51.2**	**-0.3**
YOJ	**Yonaguni jima**	**1.14**	**70**	P	**Pb**	**21 32 37.0**	**0.0**
YOJ				*e*S	**Sn**	**21 32 52.0**	**-0.2**
ANP	**Anpu** baz=340	**1.14**	**345**	*e*P	**Pg**	**21 32 37.5**	**-0.4**
ANP	baz=340			*e*S	**Sn**	**21 32 51.5**	**-0.9**
ELDTW	**Lidau** baz=216	**1.16**	**221**	⇑*iP*	**Pn**	**21 32 36.9**	**-0.5**
ELDTW	baz=216			*e*S	**Sg**	**21 32 53.4**	**-0.1**
CHN5	**Tsauling** baz=230	**1.16**	**246**	*e*P	**Pg**	**21 32 37.6**	**-0.7**
CHN5	baz=230			*e*S	**Sg**	**21 32 53.3**	**-0.3**
WCHH	**Zhanghua** baz=266	**1.17**	**270**	*e*P	**Pg**	**21 32 38.5**	**+0.1**
EDH	**Donghe** baz=193	**1.20**	**204**	*e*P	**Pn**	**21 32 37.4**	**-0.4**
EDH	baz=193			*e*S	**Sb**	**21 32 52.4**	**-1.0**
WDLH	**Douliu** baz=246	**1.25**	**252**	*e*P	**Pg**	**21 32 40.0**	**0.0**
WDLH	baz=246			*e*S	**Sg**	**21 32 56.7**	**+0.4**
WCKO	**Fanlu** baz=235	**1.30**	**241**	P	**Pg**	**21 32 40.0**	**-0.8**
WCKO	baz=235			S	**Sg**	**21 32 56.9**	**-0.8**
STYH	**Taoyuan** baz=223	**1.33**	**227**	P	**Pn**	**21 32 39.4**	**-0.2**
STYH	baz=223			*e*S	**Sb**	**21 32 57.0**	**0.0**
LONT	**Longtian** baz=196	**1.33**	**209**	*e*P	**Pn**	**21 32 39.1**	**-0.5**
WRL	**Guolierlin Hig** baz=257	**1.35**	**263**	*e*P	**Pb**	**21 32 39.7**	**-0.9**
WRL	baz=257			*e*S	**Sg**	**21 32 57.3**	**-2.1**
TPUB	**Ta-pu**	**1.35**	**235**	P	**Pg**	**21 32 40.8**	**-1.1**
TPUB	**Ta-pu** baz=221	**1.35**	**235**	⇑P	**Pg**	**21 32 41.2**	**-0.6**
TPUB	baz=221			S	**Sg**	**21 32 59.2**	**-0.3**
CHN2	**Minshiung** baz=241	**1.36**	**247**	*e*P	**Pg**	**21 32 42.3**	**+0.3**
CHN2	baz=241			*e*S	**Sg**	**21 33 00.6**	**+0.8**
WTP	**Ta-pu** baz=219	**1.39**	**234**	⇑*iP*	**Pg**	**21 32 42.0**	**-0.7**
WTP	baz=219			S	**Sg**	**21 33 00.4**	**-0.5**
CHY	**Chiayi** baz=231	**1.42**	**246**	*e*P	**Pg**	**21 32 42.8**	**-0.3**
CHY	baz=231			*e*S	**Sg**	**21 33 02.0**	**+0.4**
TWGBT	**Beinan**	**1.43**	**209**	P	**Pn**	**21 32 40.4**	**-0.6**
TWGBT	**Beinan** baz=196	**1.43**	**209**	*e*P	**Pn**	**21 32 40.0**	**-1.0**
TWG	**Pinlang** baz=196	**1.44**	**209**	*e*P	**Pn**	**21 32 40.0**	**-1.0**
LDUT	**Ludao** baz=183	**1.44**	**194**	*e*P	**Pn**	**21 32 39.5**	**-1.5**
LDUT	baz=183			*e*S	**Sn**	**21 32 56.8**	**-2.8**
WTCT	**Ta-ch'eng** baz=255	**1.44**	**262**	*e*P	**Pg**	**21 32 42.4**	**-1.1**
WTCT	baz=255			*e*S	**Sg**	**21 33 00.9**	**-1.4**
TWK	**Hsinying** baz=232	**1.48**	**237**	⇑*iP*	**Pg**	**21 32 43.1**	**-1.2**
TWK	baz=232			*i* S	**Sg**	**21 33 02.6**	**-0.9**
SGST	**Jiashian** baz=216	**1.52**	**230**	⇑*iP*	**Pb**	**21 32 43.1**	**-0.4**
SGST	baz=216			S	**Sg**	**21 33 03.5**	**-1.3**
WSF	**Szhu** baz=260	**1.54**	**254**	P	**Pg**	**21 32 43.8**	**-1.7**
WSF	baz=260			S	**Sg**	**21 33 04.0**	**-1.6**
WSL	**Shuilin Townsh** baz=245	**1.57**	**250**	*e*P	**Pb**	**21 32 43.4**	**-1.1**
WSL	baz=245			*e*S	**Sg**	**21 33 04.3**	**-2.3**
ICHU	**Yijhu** baz=226	**1.60**	**244**	*e*P	**Pg**	**21 32 44.9**	**-1.6**
ICHU	baz=226			*e*S	**Sg**	**21 33 06.7**	**-0.6**
CHN8	**Yiju** baz=227	**1.66**	**244**	*e*P	**Pb**	**21 32 45.7**	**-0.2**
CHN8	baz=227			*e*S	**Sg**	**21 33 07.7**	**-1.6**
ECL	**Taimali** baz=199	**1.68**	**209**	*e*P	**Pn**	**21 32 44.4**	**0.0**
SSHA	**Shanhua** baz=232	**1.70**	**237**	*e*P	**Pn**	**21 32 43.7**	**-1.0**
SSHA	baz=232			*e*S	**Sg**	**21 33 09.8**	**-0.9**
SCST	**Cishan** baz=222	**1.71**	**226**	*e*P	**Pg**	**21 32 47.6**	**-1.2**
SSD	**Sandimen** baz=217	**1.73**	**220**	*e*P	**Pb**	**21 32 46.4**	**-0.7**
IRIF	**Iriomote-Funau**	**1.75**	**81**	P	**Pn**	**21 32 45.5**	**+0.2**
IRIF				*e*S	**Sn**	**21 33 07.2**	**0.0**
TSMG	**Majia** baz=216	**1.75**	**219**	*e*P	**Pb**	**21 32 47.2**	**-0.3**
SCLT	**Jiali** baz=235	**1.75**	**240**	*e*P	**Pb**	**21 32 47.2**	**-0.4**
SCLT	baz=235			*e*S	**Sg**	**21 33 10.7**	**-1.6**
HATJ	**Hateruma jima**	**1.80**	**90**	P	**Pn**	**21 32 46.6**	**+0.6**
HATJ				*e*S	**Sn**	**21 33 08.6**	**+0.1**
TWM1	**Shoushan** baz=223	**1.80**	**226**	*e*P	**Pg**	**21 32 49.3**	**-1.2**
MASBT	**Mashibuluo** baz=214	**1.83**	**217**	*e*P	**Pb**	**21 32 48.3**	**-0.5**
TSCK	**Chigu Township** baz=236	**1.85**	**240**	*e*P	**Pn**	**21 32 47.0**	**+0.2**

TSCK					*e*S	**Sb**	**21 33 10.4**	**-1.7**
	baz=236								
EAST	**Anshuo**	**1.92**	**209**	*e*P		**Pn**	**21 32 47.6**	**-0.1**
	baz=199								
TAWH	**Dawu Township**	**1.94**	**207**	*e*P		**Pn**	**21 32 46.5**	**-1.5**
	baz=198								
JKRS	**Kuro-shima**	**1.99**	**85**	P		**Pn**	**21 32 49.4**	**+0.7**
JKRS				*e*S		**Sn**	**21 33 13.6**	**+0.4**
SCZT	**Fangliau**	**2.03**	**214**	*e*P		**Pb**	**21 32 51.0**	**-1.3**
	baz=212								
LAY	**Lan-yu**	**2.05**	**187**	*e*P		**Pn**	**21 32 48.4**	**-1.1**
	baz=187								
LYUB	**Lan-yu**	**2.08**	**186**	*e*P		**Pn**	**21 32 48.2**	**-1.7**
	baz=186								
SLIU	**Shizi**	**2.08**	**207**	*e*P		**Pn**	**21 32 50.3**	**+0.3**
	baz=199								
JIJ	**Ishigaki jima**	**2.12**	**82**	P		**Pn**	**21 32 51.0**	**+0.4**
JIJ				S		**Sn**	**21 33 15.6**	**-0.9**
PHUB	**P'eng-hu**	**2.15**	**255**	*e*P		**Pn**	**21 32 50.8**	**-0.1**
	baz=249								
PHUB				*e*S		**Sn**	**21 33 15.6**	**-1.5**
	baz=249								
PNG	**Penghu**	**2.15**	**257**	P		**Pn**	**21 32 50.9**	**0.0**
	baz=251								
PNG				*e*S		**Sn**	**21 33 15.8**	**-1.4**
	baz=251								
WDGT	**Dungji**	**2.15**	**248**	P		**Pn**	**21 32 51.6**	**+0.7**
	baz=242								
WDGT				S		**Sn**	**21 33 17.6**	**+0.3**
	baz=242								
SMST	**Manzhou Townsh**	**2.25**	**204**	*e*P		**Pn**	**21 32 52.2**	**0.0**
	baz=194								
JISG	**Ishigakijimahi**	**2.31**	**77**	P		**Pn**	**21 32 53.6**	**+0.5**
JISG				*e*S		**Sn**	**21 33 20.5**	**-0.7**
TWK1	**Hengchun**	**2.33**	**204**	*e*P		**Pn**	**21 32 53.9**	**+0.6**
	baz=194								
TWKBT	**Hengchun**	**2.33**	**204**	*e*P		**Pn**	**21 32 54.0**	**+0.7**
	baz=194								
VWUC	**VWUC**	**2.36**	**293**	*e*P		**Pn**	**21 32 52.6**	**-1.1**
	baz=290								
VCHM	**Qimei**	**2.37**	**249**	*e*P		**Pn**	**21 32 54.2**	**+0.2**
	baz=232								
VCHM				*e*S		**Sn**	**21 33 22.0**	**-0.6**
	baz=232								
PTMZ	**Houxiangcun**	**2.65**	**292**	*e*P		**Pn**	**21 32 56.8**	**-1.0**
	baz=288								
JTJ	**Tarama**	**2.67**	**77**	P		**Pn**	**21 32 58.7**	**+0.6**
JTJ				*e*S		**Sn**	**21 33 29.7**	**-0.4**
MATB	**Ma-tsu**	**2.68**	**321**	*e*P		**Pn**	**21 32 56.5**	**-1.8**
	baz=319								
LYJJ	**Jianjiangzhen**	**3.10**	**323**	*e*P		**Pn**	**21 33 02.0**	**-1.9**
	baz=321								
KNM	**Kinmen**	**3.12**	**277**	*e*P		**Pn**	**21 33 05.1**	**+0.8**
	baz=272								
JIRB	**Irabujima**	**3.13**	**76**	P		**Pn**	**21 33 04.8**	**+0.5**
JIRB				*e*S		**Sn**	**21 33 41.8**	**+0.5**
KNMB	**Chin-men Tao**	**3.17**	**278**	*e*P		**Pn**	**21 33 04.0**	**-0.9**
	baz=273								
XPSS	**Dashiqiu**	**3.21**	**333**	*e*P		**Pn**	**21 33 03.8**	**-1.6**
	baz=333								
JIKM	**Ikemajima**	**3.22**	**74**	S		**Sn**	**21 33 44.3**	**+0.7**
JMJ	**Miyako jima 2**	**3.23**	**76**	P		**Pn**	**21 33 07.2**	**+1.4**
JMJ2	**Miyako jima3**	**3.25**	**78**	P		**Pn**	**21 33 07.0**	**+1.0**
JMJ2				*e*S		**Sn**	**21 33 45.1**	**+0.8**
JOGS	**Gusukube**	**3.32**	**77**	P		**Pn**	**21 33 08.1**	**+1.1**
JOGS				S		**Sn**	**21 33 46.9**	**+0.7**
AXDP	**Jialang**	**3.62**	**284**	*e*P		**Pn**	**21 33 09.8**	**-1.3**
	baz=280								
ZPLA	**Ao Xicun**	**3.74**	**269**	*e*P		**Pn**	**21 33 11.5**	**-1.2**
	baz=264								
DSXP	**Dongshan**	**4.05**	**266**	*e*P		**Pn**	**21 33 16.0**	**-1.1**
	baz=261								

JMA ***23*** *21:34:11.6±0.3,27°N×12°6E±°, h140km±3km, MV3.6/25, NW OFF OKINAWA,JIMA IS*
IDC ***23*** *21:34:11.4±21.0,26°80N×128°32E, h253km± 120km, mb3.2/3, mbtmp3.8/3, Error ellipse: s-maj=558.8km s-min=2.1km az=125.0*

ISC 23 21:34:10.5±0.9,**26°71N**±0°08×**126°34E**±0°06,**h155**km±9km, **n25**,σ1§**23**/44,**mb3.5**/3,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.56**	**133**	P	**Pn**	**21 34 32.9**	**+0.2**
JKE				S	**Sn**	**21 34 48.8**	**-0.8**
JAGN	**Aguni-jima**	**0.82**	**98**	P	**Pn**	**21 34 34.9**	**+0.6**
JAGN				S	**Sn**	**21 34 51.4**	**-1.1**
JJT3	**Tamagusuku3**	**1.42**	**113**	P	**Pn**	**21 34 41.4**	**+1.8**
JJT3				S	**Sn**	**21 35 02.4**	**+0.6**
JIH	**Iheya**	**1.49**	**77**	P	**Pn**	**21 34 41.3**	**+0.9**
JIH				S	**Sn**	**21 35 02.0**	**-1.2**
JNTH	**Nagotoyohara**	**1.52**	**97**	P	**Pn**	**21 34 41.9**	**+1.3**
JNTH				S	**Sn**	**21 35 02.6**	**-1.2**
JOW	**Kunigami**	**1.74**	**86**	P	**Pn**	**21 34 44.0**	**+1.1**
	245nm,0.3s,baz=125,slow=24,SNR=116						
JOW				S	**Sn**	**21 35 06.7**	**-1.2**
	288nm,0.3s,baz=111,slow=25,SNR=16						
JOW	**Kunigami**	**1.74**	**86**	P	**Pn**	**21 34 44.1**	**+1.1**
JOW				S	**Sn**	**21 35 06.3**	**-1.6**
JYRO	**Yoronjima**	**1.92**	**80**	P	**Pn**	**21 34 45.9**	**+1.0**
JYRO				S	**Sn**	**21 35 09.9**	**-1.5**
JIKM	**Ikemajima**	**2.03**	**209**	P	**Pn**	**21 34 46.4**	**+0.1**
JIKM				S	**Sn**	**21 35 13.4**	**-0.5**
JOKE	**Okinoerabujima**	**2.10**	**71**	P	**Pn**	**21 34 47.7**	**+0.7**
JOGS	**Gusukube**	**2.12**	**204**	P	**Pn**	**21 34 48.3**	**+1.0**
JOGS				S	**Sn**	**21 35 15.0**	**-0.6**
JIRB	**Irabujima**	**2.15**	**209**	P	**Pn**	**21 34 48.2**	**+0.6**
JIRB				S	**Sn**	**21 35 15.5**	**-0.8**
JMJ2	**Miyako jima3**	**2.16**	**205**	P	**Pn**	**21 34 48.8**	**+1.0**
JMJ2				S	**Sn**	**21 35 16.4**	**-0.1**
JTJ	**Tarama**	**2.53**	**216**	P	**Pn**	**21 34 53.1**	**+0.8**
JTJ				S	**Sn**	**21 35 23.4**	**-1.1**
JTK	**Tokunoshima**	**2.56**	**65**	P	**Pn**	**21 34 53.1**	**+0.5**
JTK				S	**Sn**	**21 35 24.1**	**-1.1**
JISG	**Ishigakijimahi**	**2.79**	**221**	P	**Pn**	**21 34 55.9**	**+0.4**
JISG				S	**Sn**	**21 35 28.8**	**-1.5**
JAMN	**Amaminishikomi**	**2.95**	**58**	P	**Pn**	**21 34 57.6**	**+0.3**
JIJ	**Ishigaki jima**	**3.06**	**221**	P	**Pn**	**21 34 58.8**	**-0.1**
JIJ				S	**Sn**	**21 35 33.9**	**-2.4**
JKRS	**Kuro-shima**	**3.24**	**221**	P	**Pn**	**21 35 01.6**	**+0.5**
JKRS				S	**Sn**	**21 35 38.8**	**-1.5**
IRIF	**Iriomote-Funau**	**3.34**	**225**	P	**Pn**	**21 35 02.2**	**-0.1**
JMZ	**Minamidaito 2**	**4.48**	**100**	P	**Pn**	**21 35 18.1**	**+1.0**
JMZ				S	**Sn**	**21 36 05.6**	**-3.4**
JKDJ	**Kitadaitoujima**	**4.52**	**99**	P	**Pn**	**21 35 18.0**	**+0.4**
JKDJ				S	**Sn**	**21 36 08.2**	**-1.7**
SONM	**Songino Array**	**26.25**	**329**	P	**P**	**21 39 29.8**	**-1.4**
	0.6nm,0.5s,baz=129,slow=11,SNR=2.2 0.6nm,0.5s						
MKAR	**Makanchi Array**	**39.95**	**312**	P	**P**	**21 41 31.1**	**+1.5**
	0.4nm,0.4s,baz=85,slow=7.9,SNR=15 0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**40.84**	**323**	P	**P**	**21 41 38.1**	**+1.4**
	0.9nm,0.4s,baz=119,slow=9.8,SNR=4.6 0.9nm,0.4s						

TRN ***23*** *21:48:00.6,9°87N×61°97W, h49km, MD4.1*
TRN Felt in Trinidad MMI III.
FUNV ***23*** *21:48:02.2, 10°07N×62°01W, h17km, MW3.8*
IDC ***23*** *21:48:03.4±2.3, 10°11N×62°16W, h52km±21km, mb3.2/7, mbtmp3.5/9, ML2.5/2, Error ellipse: s-maj=23.9km s-min=17.3km az=152.0*

ISC 23 21:48:01.7±1.1,**9°99N**±0°06×**62°01W**±0°05,**h42**km±11km, **n46**,σ1§**45**/59,**mb3.5**/7,**1C**,**Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.89**	**43**	*i* P	**Pn**	**21 48 17.6**	**-0.1**
TRN				*e*S	**Sn**	**21 48 30.3**	**+0.8**
CRUV	**Carupano**	**1.38**	**300**	*e*P	**Pn**	**21 48 24.3**	**-0.2**
CRUV				*e*S	**Sn**	**21 48 41.6**	**0.0**
COAV	**Cumanacoa**	**1.79**	**275**	*e*P	**Pn**	**21 48 32.1**	**+1.8**
COAV				*e*S	**Sn**	**21 48 54.6**	**+2.6**
TOSP	**Speyside**	**1.95**	**48**	*e*P	**Pn**	**21 48 33.0**	**+0.7**
TOSP				*e*S	**Sn**	**21 48 56.1**	**+0.6**
GRFF	**Grenada Fort F**	**2.06**	**8**	*e*P	**Pn**	**21 48 35.0**	**+1.1**
GRFF				*e*S	**Sn**	**21 49 00.2**	**+1.8**
GRGR	**Grenville**	**2.16**	**9**	*e*P	**Pn**	**21 48 35.6**	**+0.5**
GRGR				*e*S	**Sn**	**21 49 02.8**	**+2.1**
CUMV	**Cumana_UDO**	**2.19**	**282**	*e*P	**Pn**	**21 48 37.1**	**+1.5**
CUMV				*e*S	**Sn**	**21 49 02.6**	**+1.1**
GCMP	**Grenada, Carri**	**2.54**	**13**	*e*P	**Pn**	**21 48 40.7**	**+0.2**
GCMP				*e*S	**Sn**	**21 49 11.1**	**+0.8**
PCRV	**Puerto La Cruz**	**2.59**	**274**	P	**Pn**	**21 48 42.0**	**+0.8**
	1.4nm,0.3s,baz=78,slow=3.5,SNR=59 7.0nm,0.2s						
PCRV	**Puerto La Cruz**	**2.59**	**274**	*e*P	**Pn**	**21 48 42.1**	**+1.0**
PCRV				*e*S	**Sn**	**21 49 12.4**	**+1.0**
PRGV	**PARIAGUAN**	**2.87**	**245**	*e*P	**Pn**	**21 48 46.9**	**+1.9**
PRGV				*e*S	**Sn**	**21 49 20.5**	**+2.2**
SVB	**Belmont**	**3.34**	**13**	*e*P	**Pn**	**21 48 53.4**	**+1.9**
SSV	**Crater Summit**	**3.41**	**14**	*e*P	**Pn**	**21 48 54.8**	**+2.3**
MCLT	**Moule a Chique**	**3.84**	**16**	*e*P	**Pn**	**21 48 59.6**	**+1.3**
MCLT				*e*S	**Sn**	**21 49 42.2**	**0.0**
SLBI	**Saint Lucia, B**	**4.13**	**14**	*e*P	**Pn**	**21 49 03.6**	**+1.3**
SLBI	**Saint Lucia, B**	**4.13**	**14**	*e*S	**Sn**	**21 49 48.7**	**-0.7**
MERV	**Las Mercedes**	**4.29**	**260**	*e*P	**Pn**	**21 49 04.9**	**+0.5**
H05S1	**Guadeloupe/Mar**	**4.55**	**15**	P	**Pn**	**21 49 09.1**	**+1.0**
H05S1				S	**Sn**	**21 49 58.3**	**-1.5**
MPOM	**Morne Pois Mar**	**4.57**	**14**	*e*P	**Pn**	**21 49 08.8**	**+0.5**
MPOM	**Morne Pois Mar**	**4.57**	**14**	*e*S	**Sn**	**21 49 59.2**	**-0.9**
BIM	**Bigot**	**4.59**	**11**	*e*P	**Pn**	**21 49 09.9**	**+1.2**
BIM	**Bigot**	**4.59**	**11**	*e*S	**Sn**	**21 50 01.5**	**+0.7**
FDF	**Fort de France**	**4.79**	**10**	*e*P	**Pn**	**21 49 13.0**	**+1.6**
CACV	**CAICARA DEL OR**	**5.08**	**242**	⇑*i*P	Pn	21 49 10.5	-4.9
DSLB	**Salisbury**	**5.44**	**6**	*e*	**Pn**	**21 49 21.1**	**+0.7**
BENV	**Belln**	**5.50**	**270**	*e*P	**Pn**	**21 49 21.4**	**+0.2**
BAUV	**El Baul**	**6.04**	**261**	*e*P	**Pn**	**21 49 28.3**	**-0.2**
BAUV	**El Baul**	**6.04**	**261**	*e*S	**Sn**	**21 50 33.1**	**-3.3**
BAUV	**El Baul**	**6.04**	**261**	*e*P	**Pn**	**21 49 28.4**	**-0.1**
CBE	**Ff, Capester**	**6.05**	**4**	*e*P	**Pn**	**21 49 31.0**	**+2.2**
MAPV	**Macapo**	**6.35**	**269**	*e*P	**Pn**	**21 49 32.8**	**-0.1**
H05N1	**Guadeloupe/Mar**	**6.36**	**8**	P	**Pn**	**21 49 32.4**	**-0.5**
ANBD	**Bethesda, Anti**	**7.02**	**2**	*e*P	**Pn**	**21 49 42.2**	**+0.3**
ANBD	**Bethesda, Anti**	**7.02**	**2**	*e*S	**Sn**	**21 50 59.4**	**-1.1**
CURV	**Curarigua**	**7.83**	**271**	*e*P	**Pn**	**21 49 55.7**	**+2.5**
SDV	**Santo Domingo**	**8.57**	**263**	P	**Pn**	**21 50 02.5**	**-1.0**
	0.5nm,0.3s,baz=77,slow=8.6,SNR=9.8						
SDV				S	**Sn**	**21 51 35.3**	**-3.9**
	5.7nm,0.4s,baz=33,slow=19,SNR=2.0 13nm,0.7s						
SOCV	**Socops**	**8.89**	**260**	*e*P	**Pn**	**21 50 07.2**	**-0.6**
MDP	**Montagnes des**	**10.48**	**117**	P	**Pn**	**21 50 27.3**	**-2.2**
	1.7nm,0.3s,baz=299,slow=14,SNR=12						
MDP				S	Sn	21 52 15.1	-11
	6.7nm,0.3s,baz=46,slow=18,SNR=8.8						
SIV	**San Ignacio**	**25.83**	**178**	P	**P**	**21 53 31.2**	**+1.8**
	1.0nm,0.6s,baz=359,slow=8.5,SNR=5.5 1.0nm,0.6s						
TXAR	**Lajitas Array**	**43.39**	**302**	P	**P**	**21 56 01.4**	**+0.9**
	0.2nm,0.6s,baz=113,slow=6.9,SNR=2.5						
TXAR				PcP	**PcP**	**21 57 48.3**	**-0.2**
	0.2nm,0.6s,baz=149,slow=7.3,SNR=2.5 0.2nm,0.6s						
PDAR	**Pinedale Array**	**52.68**	**317**	P	**P**	**21 57 11.2**	**-1.0**
	0.3nm,0.6s,baz=108,slow=5.8,SNR=3.8 0.3nm,0.6s						
ESDC	**Sonseca Array**	**59.21**	**50**	P	**P**	**21 58 00.5**	**+1.7**
	0.7nm,0.9s,baz=258,slow=6.6,SNR=2.7 0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**62.36**	**80**	P	**P**	**21 58 21.4**	**+0.9**
	0.5nm,0.7s,baz=299,slow=7.6,SNR=6.5 0.5nm,0.7s						
GERES	**GERESS Array B**	**73.14**	**42**	P	**P**	**21 59 27.9**	**-0.2**
	0.3nm,0.6s,baz=217,slow=11,SNR=4.3 0.3nm,0.6s						
ILAR	**Eielson Array**	**78.84**	**334**	P	**P**	**21 59 58.4**	**-1.7**
	0.3nm,0.6s,baz=112,slow=4.8,SNR=4.9 0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**146.05**	**34**	PKPbc	**PKPab**	**22 07 38.8**	**+0.3**
	1.1nm,0.3s,baz=314,slow=4.8,SNR=6.2						

SKHL ***23*** *22:15:52.3±0.7, 44°90N×151°20E, h58km±2km, mb5.2/4, Ms4.5/4, msh4.5/4*
BJI ***23*** *22:15:52.6±0.0, 45°09N×150°89E, h51km, mb4.9/54, mB5.0/28, Ms4.5/39, Ms7 4.4/37*
NIED ***23*** *22:15:53.5, 45°20N×150°88E, h30km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; M_{rr}1.09; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.77; $M_{\phi r}$1.19; Fault plane solution: $M_0$1.76000×10^16 NP1: ϕ_s=235.00000°, δ25.00000°, λ119.00000°. NP2: ϕ_s=23.00000°, δ69.00000°, λ77.00000°.*
IDC ***23*** *22:15:53.6±4.1, 45°35N×150°68E, h33km±30km, mb4.4/31, mbtmp4.6/36, ML3.4/5, MS4.3/41 Error ellipse: s-maj=14.4km s-min=11.2km az=140.0*
JMA ***23*** *22:15:53.5±0.9, 45°8N×15°1E±°, h30km, MD5.0/19, MV5.3/19, KURILE ISLANDS REGION*
MOS ***23*** *22:15:55.1±1.0, 45°13N×150°68E, h64km, mb5.2/73, MS4.3/12, Error ellipse: s-maj=6.2km s-min=4.7km az=116.7*
NEIC ***23*** *22:15:57.2±1.5, 45°24N±0°10×150°7E±0°1, h63km±6km, mb4.9/190, Error ellipse: s-maj=15.0km s-min=10.7km az=148.0*
GCMT ***23*** *22:15:57.2±0.4, 45°20N±0°03×150°90E±0°04, h33km±1km, MW5.1/70, Moment Tensor Solution. s27,c31; s70,c85; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}4.52±.44; $M_{\theta\theta}$-2.62±.26; $M_{\phi\phi}$-1.90±.25; $M_{r\theta}$1.88±.24; $M_{\theta\phi}$-1.84±.11; $M_{\phi r}$2.35±.22; Best double couple: $M_0$5.26800×10^16 NP1: ϕ_s44.00000°, δ62.00000°, λ85.00000°. NP2: ϕ_s236.00000°, δ28.00000°, λ100.00000°. Principal axes: T 5.4870, Plg72.0000°, Azm302.0000°; N -0.4380, Plg5.0000°, Azm47.0000°; P -5.0490, Plg17.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 22:15:54.9±0.4,**45°16N**±0°04×**150°78E**±0°04,**h50**km±3km, **h50**km:**pP-P**,**n674**,σ1§**26**/676,**mb4.9**/209,**MS4.4**/50, **61C-34D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.06**	**273**	⇓*i*PN	**Pn**	**22 16 26.9**	**-0.2**
KUR				*i* S	**Sn**	**22 16 53.6**	**+2.0**
KUR				pmax	pmax		
	comp=Z,837nm,0.5s						
KUR				pmax	pmax		
	comp=N,292nm,0.3s						
KUR				pmax	pmax		
	comp=E,137nm,0.3s						
KUR				smax	smax		
	comp=N,3μm,0.6s						
KUR				smax	smax		
	comp=E,2μm,0.6s						
KUR	**Kuril'sk**	**2.06**	**273**	*i* P	**Pn**	**22 16 27.2**	**+0.1**
KUR				AMB	AMB	22 16 28.6	
	comp=E,840nm,0.5s						
KUR				*i* S	**Sn**	**22 16 53.6**	**+2.0**
KUR				A	A	22 16 58.1	
	comp=E,3μm,0.5s						
KUR				A	A	22 16 58.1	
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**254**	*d i*PN	**Pn**	**22 16 50.5**	**+1.1**
YUK				*i* S	**Sn**	**22 17 33.3**	**+1.7**
YUK				pmax	pmax		
	comp=Z,2μm,1.1s						
YUK				pmax	pmax		
	comp=E,398nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,3μm,0.6s						
YUK				smax	smax		
	comp=E,7μm,0.7s						
YUK				smax	smax		
	comp=N,4μm,1.3s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**254**	*i* P	**Pn**	**22 16 50.1**	**+0.7**
YUK				AMB	AMB	22 16 52.0	
	comp=N,690nm,0.2s						
YUK				AMB	AMB	22 16 54.0	
	comp=N,2μm,1.0s						
YUK				*i* S	**Sn**	**22 17 33.0**	**+1.4**
YUK				A	A	22 17 40.1	
	comp=N,2μm,0.6s						
YUK				A	A	22 17 40.1	
	comp=N,3μm,0.6s						
YUK				A	A	22 17 40.1	
	comp=N,4μm,1.0s						
YUK				A	A	22 17 40.1	
	comp=N,7μm,1.0s						
NEM2	**Nemuro 2**	**4.04**	**245**	*e*P	**Pn**	**22 16 53.6**	**-0.6**
NEM2				*e*S	**Sn**	**22 17 38.2**	**-2.0**
NMR	**Nemuro--Hokkai**	**4.05**	**246**	⇑*i*PN	**Pn**	**22 16 53.6**	**-0.7**
NMR				*i* S	**Sn**	**22 17 38.2**	**-2.2**
NMR	**Nemuro--Hokkai**	**4.05**	**246**	*i* P	**Pn**	**22 16 53.8**	**-0.5**
NMR				*e*S	**Sn**	**22 17 39.7**	**-0.7**
RUSJ	**Misakicho**	**4.09**	**257**	⇑*i*PN	**Pn**	**22 16 57.5**	**+2.6**
JRA	**Rausu**	**4.23**	**255**	*e*P	**Pn**	**22 16 58.2**	**+1.4**
JRA	**Rausu**	**4.23**	**255**	A	A	22 16 58.2	
	comp=N,5.0nm,5.0s,comp=N,5.0nm,2.0s						
JNSB	**Nemuroshibetsu**	**4.36**	**254**	A	A	22 16 57.9	
	comp=N,8.0nm,3.2s,comp=N,7.0nm,1.4s						
JNK	**Nakash**	**4.62**	**252**	*e*P	**Pn**	**22 17 03.0**	**+0.7**
JNK				*e*S	**Sn**	**22 17 54.9**	**+0.3**
AKK	**Akkeshi**	**4.79**	**245**	*e*P	**Pn**	**22 17 03.8**	**-0.6**
AKK				*e*S	**Sn**	**22 17 57.8**	**-0.8**
JAK	**Akkeshi**	**4.89**	**246**	*e*P	**Pn**	**22 17 05.3**	**-0.6**
JAK				*e*S	**Sn**	**22 17 58.9**	**-2.3**
JAK	**Akkeshi**	**4.89**	**246**	A	A	22 17 05.3	
	comp=N,7.0nm,1.1s,comp=N,5.0nm,2.6s						
JTKR	**Abashiri--Toko**	**5.06**	**259**	*e*P	**Pn**	**22 17 09.9**	**+1.8**
JAR	**Ashorobuto**	**5.38**	**252**	*e*P	**Pn**	**22 17 13.8**	**+1.2**
JAR				*e*S	**Sn**	**22 18 14.3**	**+1.2**
JAR	**Ashorobuto**	**5.38**	**252**	A	A	22 17 13.8	
	comp=N,5.0nm,1.4s,comp=N,5.0nm,1.5s						
JOB	**Onbets**	**5.50**	**248**	*e*P	**Pn**	**22 17 14.5**	**+0.3**
JOB	**Onbets**	**5.50**	**248**	A	A	22 17 14.5	
	comp=N,4.0nm,1.2s,comp=N,5.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**5.87**	**291**		**Pn**	**22 17 20.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**5.87**	**291**	*e*PN	**Pn**	**22 17 21.4**	**+2.2**
YSS				*e*S	**Sn**	**22 18 26.4**	**+1.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				pmax	pmax		
	comp=Z,200nm,4.3s						
YSS				smax	smax		
	comp=E,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,2μm,17.0s						
YSS	**Yuzh-Sakhalins**	**5.87**	**291**	P	Pn	22 17 27.9	+8.7
YSS	**Yuzh-Sakhalins**	**5.87**	**291**	*e*P	**Pn**	**22 17 21.5**	**+2.2**
YSS				AMB	AMB	22 17 25.1	
	comp=E,40nm,0.6s						
YSS				AMB	AMB	22 17 25.3	
	comp=E,200nm,4.0s						
YSS				*e*S	**Sn**	**22 18 26.7**	**+1.6**
YSS				A	A	22 18 29.2	
	comp=E,40nm,1.0s						
YSS				AMS	AMS	22 19 29.0	
	comp=E,4μm,19.0s						
YSS				AMS	AMS	22 19 29.0	
	comp=E,4μm,19.0s						
JKK2	**Kamakawa 2**	**5.89**	**260**	*e*P	**Pn**	**22 17 21.9**	**+2.3**
JCH	**Churui**	**5.94**	**247**	*e*P	**Pn**	**22 17 19.9**	**-0.3**
JCH				*e*S	**Sn**	**22 18 25.5**	**-1.3**
JCH	**Churui**	**5.94**	**247**	A	A	22 17 19.9	
	comp=E,4.0nm,1.1s,comp=E,4.0nm,1.3s						
JWK2	**Keihoku**	**6.28**	**275**	*e*P	**Pn**	**22 17 29.0**	**+4.1**
JAB	**Ashibetsu**	**6.36**	**258**	*e*P	**Pn**	**22 17 28.6**	**+2.6**
JEM	**Erimo**	**6.37**	**243**	P	**Pn**	**22 17 29.4**	**+3.3**
JEM	**Erimo**	**6.37**	**243**	A	A	22 17 25.5	
	comp=E,11nm,2.5s,comp=E,13nm,1.3s						
ERM	**Erimo**	**6.37**	**243**		**Pn**	**22 17 27.4**	**+1.3**
ERM	**Erimo**	**6.37**	**243**	*i* PN	**Pn**	**22 17 27.7**	**+1.6**
ERM	**Erimo**	**6.37**	**243**	P	**Pn**	**22 17 29.6**	**+3.5**
JNBK	**Urakawa-nobuka**	**6.49**	**246**	*e*P	**Pn**	**22 17 27.2**	**-0.6**
JNBK	**Urakawa-nobuka**	**6.49**	**246**	A	A	22 17 27.2	
	comp=E,10.0nm,4.0s,comp=E,9.0nm,1.8s						
SKR	**Severo-Kuril's**	**6.58**	**31**	*e*PN	**Pn**	**22 17 27.6**	**-1.4**
SKR				pmax	pmax		
	comp=Z,400nm,5.5s						
SKR				pmax	pmax		
	comp=Z,84nm,0.8s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR	**Severo-Kuril's**	**6.58**	**31**	*e*P	**Pn**	**22 17 28.7**	**-0.3**
SKR				AMB	AMB	22 17 29.9	
	comp=Z,400nm,6.0s						
SKR				AMB	AMB	22 17 32.4	
	comp=Z,80nm,0.8s						
SKR				*e*S	**Sn**	**22 18 39.6**	**-3.0**
SKR				A	A	22 18 49.9	
	comp=Z,130nm,0.9s						
SKR				A	A	22 18 49.9	
	comp=Z,130nm,0.9s						
SKR				AMS	AMS	22 20 02.5	
	comp=Z,2μm,15.0s						
SKR				AMS	AMS	22 20 02.5	
	comp=Z,2μm,15.0s						
SKR				AMS	AMS	22 20 02.5	
	comp=Z,2μm,15.0s						
JSHD	**Hidakashinhida**	**6.62**	**248**	A	A	22 17 28.9	
	comp=Z,8.0nm,1.3s,comp=Z,6.0nm,1.7s						
JRBN	**Rebuntou**	**6.86**	**276**	*e*P	**Pn**	**22 17 36.7**	**+3.9**
JEW	**Eniwo**	**7.12**	**254**		**Pn**	**22 17 38.1**	**+1.7**
JEW	**Eniwo**	**7.12**	**254**	P	**Pn**	**22 17 39.3**	**+2.9**
PAU	**Pauzhetka**	**7.48**	**30**	*e*P	**Pn**	**22 17 42.1**	**+0.8**
PAU				AMB	AMB	22 17 47.8	
	comp=Z,40nm,0.6s						
PAU				*e*S	**Sn**	**22 19 02.8**	**-1.8**
PAU				A	A	22 19 27.8	
	comp=

comp=Z,100nm,3.0s
TEY AMS AMS 22 23 20.0
comp=Z,1µm,18.0s
TEY AMS AMS 22 23 20.0
comp=Z,3µm,18.0s
TEY AMS AMS 22 23 20.0
comp=Z,100nm,18.0s
JMM Marumori 10.45 229 Pn **Pn 22 18 19.5 -2.5**
GRNR Gornyy 11.14 305 ⇓*i*PN **Pn 22 18 35.1 +3.8**
GRNR pmax pmax
comp=E,9.0nm,0.9s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,3µm,17.0s
GRNR MLR MLR
comp=N,960nm,18.0s
GRNR MLR MLR
comp=Z,1µm,11.0s
GRNR Gornyy 11.14 305 *e*P **Pn 22 18 35.1 +3.8**
GRNR AMB AMB 22 18 36.6
comp=Z,100nm,1.0s
MJAR Matsushiro Arr 12.82 232 Pn **Pn 22 18 52.9 -1.6**
comp=Z,0.2nm,0.3s,baz=37,slow=11,SNR=13
MJAR Sn **Sn 22 21 16.0 +0.4**
comp=Z,0.1nm,0.3s,baz=306,slow=39,SNR=2.0
MJAR LR LR 22 24 24.1
comp=Z,761nm,20.8s,baz=37,slow=40
comp=Z,10nm,0.9s
MJB9 Matsu-Tunnel 12.82 232 Pn 22 18 54.0 -0.5
MAJO Matsushiro 12.82 232 Pn 22 18 52.9 -1.6
MAJO Matsushiro 12.82 232 PN **Pn 22 18 52.9 -1.6**
USA0B Ussuriysk Arra 13.41 273 Pn 22 19 02.3 -0.1
USA0B Ussuriysk Arra 13.41 273 PN **Pn 22 19 02.3 -0.1**
USRK Ussuriysk Ar. 13.41 273 Pn **Pn 22 19 01.0 -1.4**
comp=Z,0.9nm,0.3s,baz=86,slow=15,SNR=12
USRK LR LR 22 24 16.2
comp=Z,1µm,19.2s,baz=67,slow=38
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 13.41 273 Pn 22 19 02.8 +0.4
USRK Ussuriysk Ar. 13.41 273 PN **Pn 22 19 02.8 +0.4**
KLR Kul'dur 13.56 294 Pn **Pn 22 19 07.1 +2.7**
comp=Z,0.2nm,0.3s,baz=100,slow=12,SNR=31
KLR LR LR 22 24 35.5
comp=Z,1µm,18.4s,baz=102,slow=39
KLR Kul'dur 13.56 294*ce*P **Pn 22 19 06.4 +2.0**
KLR pmax pmax
comp=Z,35nm,1.0s
KLR Kul'dur 13.56 294 *e*P **Pn 22 19 05.1 +0.7**
INU Inuyama 14.35 232 P **P 22 19 20.6 -0.4**
MA2 Magadan 14.44 360 LR LR 22 24 45.0
comp=Z,636nm,18.8s,baz=180,slow=37
MDJ Mudanjiang 15.03 275 Pn **Pn 22 19 24.7 +0.7**
JWT Wachi 15.32 235 P **P 22 19 33.1 +1.4**
comp=Z,9.1nm,0.5s
BNX BinXian 16.41 280 ⇑P **Pn 22 19 42.6 +1.0**
BNX pmax pmax
comp=Z,11nm,0.8s
BNX pmax pmax
comp=Z,220nm,5.0s
JHS Saijyo 16.87 239 P **P 22 19 51.4 +2.4**
SHEM Shemya Is, Ala 17.03 55 LR LR 22 25 03.2
comp=Z,552nm,21.7s,baz=259,slow=32
ZEA Zeya 17.48 308 *e*P **Pn 22 19 55.0 +0.2**
ZEA pmax pmax
comp=N,40nm,1.0s
ZEA pmax pmax
comp=E,30nm,1.0s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA MLR MLR
comp=E,700nm,12.0s
ZEA MLR MLR
comp=Z,800nm,13.0s
ZEA Zeya 17.48 308 *e*P **Pn 22 19 55.0 +0.2**
ZEA AMB AMB 22 19 58.8
comp=Z,700nm,1.0s
ZEA AMS AMS 22 27 19.0
comp=Z,700nm,13.0s
ZEA AMS AMS 22 27 19.0
comp=Z,800nm,13.0s
SEY Seymchan 17.83 2 P **Pn 22 19 57.8 -1.3**
comp=Z,0.3nm,0.3s,baz=204,slow=10.0,SNR=2.7
comp=Z,5.7nm,0.8s
SEY Seymchan 17.83 2*ce*P **P 22 20 01.9 +2.6**
SEY pmax pmax
comp=Z,26nm,1.7s
SEY Seymchan 17.83 2 *e*P **P 22 20 01.9 +2.6**
CN2 Changchun 18.11 275 P **P 22 20 02.3 -0.2**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,400nm,4.0s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,1µm,16.0s
KSRS Korea Array 18.78 254 P **P 22 20 11.0 +1.1**
comp=Z,0.7nm,0.3s,baz=63,slow=11,SNR=22
KSRS PcP **PcP 22 24 37.4 +2.0**
comp=Z,2.2nm,0.8s,baz=56,slow=13,SNR=4.8
KSRS LR LR 22 28 20.9
comp=Z,561nm,18.0s,baz=55,slow=40
comp=Z,10nm,0.8s
JCJ Chichijima 19.30 204 LR LR 22 26 50.2
comp=Z,113nm,21.7s,baz=95,slow=34
TJN Taejon 19.74 252*ce*P **P 22 20 21.6 +1.2**
TJN Taejon 19.74 252 P **Pn 22 20 28.0 +5.8**
comp=Z,180nm,2.2s
SNY Shenyang 19.98 270 ⇓P **P 22 20 23.8 +0.8**
SNY S S 22 23 51.8 -13
SNY pmax pmax
comp=Z,58nm,1.1s
SNY LR LR
comp=Z,460nm,12.0s
SNY LR LR
comp=Z,900nm,17.7s
SNY LR LR
comp=Z,1µm,17.2s
YAK Yakutsk 20.86 332 P **P 22 20 31.0 -1.3**
comp=Z,8.1nm,0.3s,baz=126,slow=3.6,SNR=13
YAK LR LR 22 28 21.6
comp=Z,668nm,21.7s,baz=92,slow=36
comp=Z,8.1nm,0.3s
YAK Yakutsk 20.86 332 P **P 22 20 32.3 -0.1**
YAK Yakutsk 20.86 332 *e*P Pn 22 20 37.2 +1.9
YAK *e* 22 20 58.6
YAK *e* 22 24 42.9
YAK *e**SS sS 22 24 56.3 +18
YAK *e*SS SnSn 22 25 01.7 +17
YAK *e* 22 31 51.1
YAK pmax pmax
comp=Z,266nm,1.0s
YAK pmax pmax
comp=N,78nm,1.1s
YAK pmax pmax
comp=E,51nm,1.1s
YAK pmax pmax
comp=Z,542nm,3.8s
YAK pmax pmax
comp=E,537nm,4.1s
YAK pmax pmax
comp=N,216nm,4.2s
BILL Bilibino 24.32 14 P **P 22 21 09.0 +1.7**
BILL Bilibino 24.32 14⇑*e*P **P 22 21 09.1 +1.7**
BILL *e**PP **sP 22 21 24.8 -0.8**
BILL *SP pwP 22 21 33.0 +13
BILL *e* 22 21 41.1
BILL SS 22 26 25.0
BILL pmax pmax
comp=Z,21nm,1.7s
BILL MLR MLR
comp=Z,540nm,16.0s
XLT XiLinHaoTe 24.66 279 ⇓*i*P **P 22 21 11.4 +0.5**
XLT pmax pmax
comp=Z,59nm,0.7s
XLT LR LR
comp=Z,570nm,16.7s
XLT LR LR
comp=Z,810nm,16.7s
XLT LR LR
comp=Z,930nm,16.0s
BJT Baijiatuau 25.87 271 P **P 22 21 23.1 +1.3**
BJT Baijiatuau 25.87 271 P **P 22 21 23.1 +1.3**
BJT pmax pmax
comp=Z,15nm,0.8s
TIA Tai'an 26.89 262 ⇓P **P 22 21 32.0 +1.0**
TIA pmax pmax
comp=Z,110nm,1.4s
TIA LR LR
comp=Z,260nm,12.1s
TIA LR LR
comp=Z,110nm,5.3s
TIA LR LR
comp=Z,270nm,14.2s
NJ2 Nanjing 27.98 253 *e*P **P 22 21 41.9 +1.1**
NJ2 pmax pmax
comp=Z,21nm,0.8s
NJ2 LR LR
comp=Z,580nm,17.1s
NJ2 LR LR
comp=Z,750nm,20.8s
NJ2 LR LR
comp=Z,960nm,19.9s
HNS HongShan 28.02 267 ⇑P **P 22 21 42.0 +0.9**
HNS S **S 22 26 17.3 -4.6**
HNS pmax pmax
comp=Z,11nm,0.8s
HNS LR LR
comp=Z,280nm,18.0s
HNS LR LR
comp=Z,410nm,15.9s
HNS LR LR
comp=Z,360nm,20.7s
TIXI Tiksi 28.57 346 P **P 22 21 42.9 -2.7**
comp=Z,1.8nm,0.4s,baz=270,slow=4.1,SNR=12
TIXI PcP **PcP 22 24 55.3 -0.3**
comp=Z,2.2nm,0.8s,baz=270,slow=4.1,SNR=4.5
TIXI LR LR 22 33 26.7
comp=Z,313nm,19.1s,baz=39,slow=37
comp=Z,1.8nm,0.4s
TIXI Tiksi 28.57 346*ce*P **P 22 21 43.6 -2.0**
TIXI pmax pmax
comp=Z,21nm,2.5s
H11N2 WAKE ISLAND Hy 28.66 147 T T 22 52 32.4
baz=336,slow=75,SNR=1108
H11N1 WAKE ISLAND Hy 28.68 147 T T 22 52 26.3
baz=336,slow=75,SNR=537
H11N3 WAKE ISLAND Hy 28.68 147 T T 22 52 34.0
baz=336,slow=75,SNR=669
H11S1 WAKE ISLAND Hy 29.70 148 T T 22 54 02.4
baz=336,slow=76,SNR=1222
H11S3 WAKE ISLAND Hy 29.71 148 T T 22 53 45.7
baz=336,slow=76,SNR=1418
H11S2 WAKE ISLAND Hy 29.72 148 T T 22 54 03.8
baz=336,slow=76,SNR=959
ULN Ulaanbaatar 29.92 291 P **P 22 21 57.4 -0.7**
ULN Ulaanbaatar 29.92 291*ce*P **P 22 21 58.0 -0.1**
ULN pmax pmax
comp=Z,12nm,0.8s
ULN Ulaanbaatar 29.92 291 P **P 22 21 58.5 +0.4**
comp=Z,59nm,1.0s
SONM Songino Array 30.36 291 P **P 22 22 00.5 -1.4**
comp=Z,4.7nm,0.9s,baz=78,slow=7.0,SNR=21
SONM PcP **PcP 22 25 01.5 +0.7**
comp=Z,1.0nm,0.5s,baz=102,slow=3.0,SNR=4.5
SONM LR LR 22 35 19.6
comp=Z,812nm,18.5s,baz=59,slow=39
comp=Z,4.7nm,0.9s
LYN LuoYang 31.00 264⇑*i*P **P 22 22 08.4 +0.9**
GUMO Guam 31.87 191 LR LR 22 32 38.6
comp=Z,184nm,21.8s,baz=25,slow=31
WHN Wuhan 31.96 255 ⇓P **P 22 22 16.9 +0.9**
WHN LR LR
comp=Z,1µm,16.3s
TPUB Ta-pu 32.82 238 P **P 22 22 24.9 +1.3**
XAN Xi'an 33.77 266 ⇓*i*P **P 22 22 32.6 +0.8**
XAN pP pP 22 22 41.3 -2.8
XAN pmax pmax
comp=Z,14nm,1.0s
ENH Enshi 35.48 260 P **P 22 22 46.5 -0.2**
ENH IAmb IAmb 22 22 47.8
comp=Z,22nm,1.0s
ENH Enshi 35.48 260 P **P 22 22 46.7 +0.1**
ENH pP **sP 22 23 02.4 -2.4**
LZH Lanzhou 36.32 272 *e*P **P 22 22 55.3 +1.4**
LZH pP pP 22 23 04.3 -2.4
LZH sP sP 22 23 10.9 -1.6
LZH pmax pmax
comp=Z,77nm,1.4s
LZH pmax pmax
comp=Z,140nm,4.1s
LZH LR LR
comp=Z,340nm,17.9s
LZH LR LR
comp=Z,420nm,18.2s
LZH LR LR
comp=Z,640nm,19.6s
H21K Melozitna Rive 36.35 36 P **P 22 22 52.8 -0.8**
H21K IAmb IAmb 22 23 25.2
comp=Z,20nm,1.5s
CAST Castle Rocks 36.49 39 P **P 22 22 55.5 +0.6**
I21K Tanana 36.65 36 P **P 22 22 57.0 +0.8**
I21K IAmb IAmb 22 22 58.0
comp=Z,9.1nm,0.9s
KTH Kantishna Hill 37.02 39 P **P 22 22 59.5 +0.1**
KTH IAmb IAmb 22 23 31.5
comp=Z,21nm,1.0s
MLY Manley 37.16 37 P **P 22 23 00.4 -0.2**
MLY **PcP 22 25 19.2 -0.5**
COLD Coldfoot 37.55 33 P **P 22 23 05.0 +1.1**
GTA Gaotai 37.62 280 ⇑P **P 22 23 05.9 +1.0**
GTA pP pwP 22 23 18.3 +0.6
GTA sP sP 22 23 22.8 -0.6
GTA PcP **PcP 22 25 23.5 +1.9**
GTA pmax pmax
comp=Z,36nm,1.0s
GTA pmax pmax
comp=Z,100nm,6.8s
GTA LR LR
comp=Z,180nm,14.9s
GTA LR LR
comp=Z,380nm,14.2s
GTA LR LR
comp=Z,400nm,14.5s
BWN Browne 37.68 38 P **P 22 23 01.8 -3.1**
H23K Yukon River 37.71 36 P **P 22 23 05.8 +0.7**
H23K IAmb IAmb 22 23 42.2
comp=Z,9.4nm,1.0s
NEA2 Nenana 37.86 38 P **P 22 23 05.7 -0.8**
MCK McKinley 37.91 39 P **P 22 23 07.5 +0.6**
MCK IAmb IAmb 22 23 09.7
comp=Z,14nm,1.1s
MCK McKinley 37.91 39 P **P 22 23 07.5 +0.6**
MCK pmax pmax
comp=Z,14nm,1.1s
TOLK Toolik Lake Re 37.95 31 P **P 22 23 07.0 -0.2**
TOLK IAmb IAmb 22 23 08.8
comp=Z,12nm,1.0s
RND Reindeer 37.95 40 P **P 22 23 07.7 +0.4**
RND IAmb IAmb 22 23 16.8
comp=Z,12nm,1.1s
RND Reindeer 37.95 40 P **P 22 23 07.7 +0.4**
RND pmax pmax
comp=Z,12nm,1.1s
KNK Knik Glacier 38.20 43 P **P 22 23 10.4 +1.0**
KNK IAmb IAmb 22 23 11.2
comp=Z,16nm,1.0s
MDM Murphy Dome 38.23 37 P **P 22 23 10.9 +1.3**
SML Sawmill 38.24 42 P **P 22 23 10.2 +0.4**
SML IAmb IAmb 22 23 11.5
comp=Z,20nm,0.8s
TCOL CIGO, UAF Yank 38.38 37 P **P 22 23 11.3 +0.5**
TCOL IAmb IAmb 22 23 13.0
comp=Z,12nm,0.8s
COLA College 38.39 37 P **P 22 23 11.2 +0.3**
COLA IAmb IAmb 22 23 12.6
comp=Z,16nm,0.9s
COLA College 38.39 37 P **P 22 23 11.2 +0.3**
COLA pmax pmax
comp=Z,16nm,1.0s
COLA College 38.39 37 P **P 22 23 11.0 +0.1**
H24K Noodor Dome 38.39 36 P **P 22 23 11.9 +0.9**
CCB Clear Creek Bu 38.41 37 P **P 22 23 12.1 +1.1**
CCB IAmb IAmb 22 23 45.3
comp=Z,23nm,1.8s
POKR Poker Plat Res 38.56 37 P **P 22 23 13.5 +1.1**
POKR IAmb IAmb 22 23 14.4
comp=Z,16nm,0.9s
DHY Denali Highway 38.62 40 P **P 22 23 13.2 +0.1**
DHY IAmb IAmb 22 23 13.6
comp=Z,11nm,1.2s
HDA Harding Lake 38.78 38 P **P 22 23 14.5 +0.3**
IL31 38.80 37 P **P 22 23 14.0 -0.3**
IL31 IAmb IAmb 22 23 45.5
comp=Z,14nm,1.4s
ILAR Eielson Array 38.80 37 P **P 22 23 12.9 -1.4**
comp=Z,2.8nm,0.9s,baz=259,slow=7.3,SNR=22
ILAR PcP **PcP 22 25 24.5 -0.1**
comp=Z,1.1nm,0.9s,baz=308,slow=3.5,SNR=2.9
ILAR LR LR 22 40 14.6
comp=Z,190nm,20.3s,baz=268,slow=38
comp=Z,2.8nm,0.9s
NRIK Noril'sk 39.30 330 LR LR 22 40 13.6
comp=Z,322nm,19.1s,baz=80,slow=37
PRP Porcupine Dome 39.37 36 P **P 22 23 20.2 +1.0**
KLU Klutina 39.41 42 P **P 22 23 21.2 +1.6**
KLU IAmb IAmb 22 23 32.9
comp=Z,17nm,1.2s
J25K Salcha River, 39.45 38 P **P 22 23 19.7 -0.2**
FYU Fort Yukon 39.48 34 P **P 22 23 21.4 +1.5**
FYU IAmb IAmb 22 23 21.9
comp=Z,24nm,1.2s
BMAR Burnt Mountain 39.74 33 P **P 22 23 23.6 +1.3**
DOT Dot Lake 40.08 39 P **P 22 23 24.8 -0.3**
SCRK Sand Creek 40.09 38 P **P 22 23 25.1 -0.2**
SCRK IAmb IAmb 22 24 02.8
comp=Z,22nm,1.8s
VRDI Verde Repeater 40.62 43 P **P 22 23 30.9 +1.2**
M26K Nabesna, AK 40.69 41 P **P 22 23 31.9 +1.7**
M26K IAmb IAmb 22 23 33.2
comp=Z,17nm,0.9s
MCARA McCarthy VSAT 40.80 42 P **P 22 23 31.8 +0.7**
MCARA IAmb IAmb 22 23 44.3
comp=Z,12nm,1.0s
K27K Chicken 40.93 38 P **P 22 23 32.9 +0.9**
K27K IAmb IAmb 22 23 34.0
comp=Z,15nm,1.0s
TGL Tana Glacier 40.99 43 P **P 22 23 34.1 +1.4**
TGL IAmb IAmb 22 24 28.3
comp=Z,53nm,1.8s
L27K Beaver Creek, 41.14 40 P **P 22 23 35.3 +1.5**
L27K IAmb IAmb 22 23 36.4
comp=Z,11nm,0.9s
BCAR Beaver Creek A 41.16 40 P **P 22 23 35.5 +1.4**
M27K Edge Creek, AK 41.21 41 P **P 22 23 35.7 +1.2**
M27K IAmb IAmb 22 23 38.6
comp=Z,16nm,1.1s
EGAK Eagle 41.25 37 P **P 22 23 34.5 -0.1**
EGAK IAmb IAmb 22 23 35.7
comp=Z,12nm,0.9s
ISLE Juniper Island 41.25 43 P **P 22 23 35.4 +0.5**
ISLE IAmb IAmb 22 23 46.7
comp=Z,14nm,0.8s
BARN Barnard Glacie 41.51 43 P **P 22 23 38.0 +0.9**
BARN IAmb IAmb 22 23 39.9
comp=Z,15nm,0.9s
CTGM Chitina Glacie 41.68 43 P **P 22 23 39.3 +1.0**
CTGM IAmb IAmb 22 23 41.2
comp=Z,14nm,0.8s
DGZ Jazzator, Alta 41.97 300 *i*P **P 22 23 41.3 +0.4**
DGZ pmax pmax
comp=Z,16nm,3.5s
ZALV Zalesovo Beam 42.24 307 P **P 22 23 41.4 -1.4**
comp=Z,0.6nm,0.3s,baz=50,slow=7.7,SNR=2.8
ZALV PcP **PcP 22 25 35.4 -0.5**
comp=Z,5.1nm,0.8s,baz=72,slow=3.4,SNR=12
ZALV LR LR 22 42 26.1
comp=Z,512nm,18.5s,baz=69,slow=38
comp=Z,0.6nm,0.3s
ZALV Zalesovo Beam 42.24 307 *i*P **P 22 23 46.4 +3.6**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
GOMU GeErMu 42.62 278 P **P 22 23 47.3 +0.6**
GOMU pmax pmax
comp=Z,30nm,0.9s
GOMU LR LR
comp=Z,420nm,17.4s
GOMU LR LR
comp=Z,590nm,17.0s
GOMU LR LR
comp=Z,780nm,15.7s
EPYK Eagle Plains 42.90 34 P **P 22 23 49.7 +1.6**
EPYK IAmb IAmb 22 23 50.2
comp=Z,12nm,0.9s
PZH PanZhiHua 43.18 262 P **P 22 23 51.6 +0.7**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.9s
KMI Kunming 43.35 259 ⇑P **P 22 23 53.3 +0.8**
KMI pP pwP 22 24 07.8 -0.4
KMI sP sP 22 24 14.1 +3.5
KMI pmax pmax
comp=Z,18nm,1.1s
HYT Haines Junctio 43.54 42 P **P 22 23 53.5 0.0**
HYT IAmb IAmb 22 23 56.5
comp=Z,18nm,1.1s
INK Inuvik 43.85 31 P **P 22 23 55.0 -0.7**
comp=Z,5.9nm,0.8s,baz=273,slow=3.8,SNR=12
comp=Z,5.9nm,0.8s
INK Inuvik 43.85 31 P **P 22 23 55.0 -0.7**
INK Inuvik 43.85 31 P **P 22 23 55.0 -0.7**
INK pmax pmax
comp=Z,12nm,1.1s
N31M Braeburn, Yuko 44.21 41 P **P 22 23 60.0 +1.3**
N31M IAmb IAmb 22 24 12.6
comp=Z,21nm,1.1s
ZSN Zaisan 44.36 298 *e*P **P 22 23 59.3 -0.8**
ZSN Zaisan 44.36 298 *e*P **P 22 23 59.3 -0.8**
baz=298
M31M Drury Creek, Y 44.68 40 P **P 22 24 04.3 +1.9**
FARO Faro, Yukon 45.14 40 P **P 22 24 08.3 +2.2**
P33M Teslin, Yukon 45.94 42 P **P 22 24 14.3 +1.8**
P33M IAmb IAmb 22 24 26.1
comp=Z,19nm,1.1s
MK31 Makanchi Array 46.23 298 P **P 22 24 15.1 +0.1**
MK31 IAmb IAmb 22 24 17.0
comp=Z,17nm,1.0s
MK31 Makanchi Array 46.23 298 P **P 22 24 15.1 +0.1**
MK31 pmax pmax
comp=Z,17nm,1.0s
MKAR Makanchi Array 46.23 298 P **P 22 24 14.3 -0.6**
comp=Z,18nm,0.9s,baz=73,slow=7.3,SNR=68
MKAR PcP **PcP 22 25 50.6 +0.8**
comp=Z,4.8nm,0.8s,baz=64,slow=5.5,SNR=5.0
MKAR LR LR 22 44 42.9
comp=Z,701nm,19.8s,baz=57,slow=38
comp=Z,18nm,0.9s
MKAR Makanchi Array 46.23 298 P **P 22 24 15.2 +0.3**
MKAR Makanchi Array 46.23 298 *i*P **P 22 24 15.5 +0.6**
MKAR pmax pmax
comp=Z,18nm,0.9s
MKAR Makanchi Array 46.23 298 *e*P **P 22 24 15.5 +0.6**
MAKZ Makanchi 46.42 298 P **P 22 24 16.7 +0.3**
MAKZ IAmb IAmb 22 24 18.6
comp=Z,14nm,1.1s
MAKZ Makanchi 46.42 298 P **P 22 24 16.7 +0.3**
MAKZ pmax pmax
comp=Z,14nm,1.1s
MAKZ Makanchi 46.42 298 P **P 22 24 16.7 +0.3**
KURK Kurchatov 46.90 304 P **P 22 24 19.4 -0.6**
KURK IAmb IAmb 22 24 21.1
comp=Z,8.2nm,0.7s
KURK Kurchatov 46.90 304 P **P 22 24 19.4 -0.6**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURK Kurchatov 46.90 304 *e*P **P 22 24 19.4 -0.6**
KURK Kurchatov 46.90 304 P **P 22 24 20.4 +0.4**
DLBC Dease Lake 47.87 44 LR LR 22 47 55.1
comp=Z,106nm,18.3s,baz=317,slow=40
LSA Lhasa 48.73 273 P **P 22 24 35.4 +0.3**
LSA IAmb IAmb 22 24 38.2
comp=Z,24nm,1.0s
LSA Lhasa 48.73 273 P **P 22 24 37.0 +1.9**
LSA pmax pmax
comp=Z,22nm,1.1s
LSA LR LR
comp=Z,190nm,22.8s
LSA LR LR
comp=Z,290nm,18.5s
LSA LR LR
comp=Z,310nm,28.5s
LSA Lhasa 48.73 273 P **P 22 24 35.4 +0.3**
LSA pmax pmax
comp=Z,24nm,1.0s

LSA Lhasa 48.73 273 *eP* **P 22 24 35.4 +0.3**
LSA Lhasa 48.73 273 P **P 22 24 37.0 +1.9**
SIJI Sorong 49.00 206 P **P 22 24 38.4 +1.8**
comp=Z,12nm,1.7s
KRVT Keravat (AS076 49.26 178 LR LR 22 41 13.6
comp=Z,142nm,21.1s,baz=121,slow=31
TDK Taldyqorghan 49.46 297 *eP* **P 22 24 39.5 -0.3**
TDK Taldyqorghan 49.46 297 *eP* **P 22 24 39.6 -0.3**
baz=297
SHLS Shalkode 49.65 295 *eP* **P 22 24 38.5 -3.0**
SHLS Shalkode 49.65 295 *eP* **P 22 24 38.6 -3.0**
baz=294
UZB Uzynbulak 49.94 295 *eP* **P 22 24 43.4 -0.3**
UZB Uzynbulak 49.94 295 *eP* **P 22 24 43.4 -0.3**
baz=295
KPKS Kokpek 50.00 295 *eP* **P 22 24 44.2 +0.1**
KPKS pmax pmax
comp=Z,7.0nm,0.6s
KPKS Kokpek 50.00 295 *eP* **P 22 24 44.2 +0.1**
comp=Z,6.9nm,0.6s,baz=295
CHTO Chiang Mai 50.16 256 P **P 22 24 46.3 +0.8**
CHTO Chiang Mai 50.16 256 P **P 22 24 46.3 +0.8**
SATY Saty 50.37 295 *eP* **P 22 24 46.8 -0.2**
SATY Saty 50.37 295 *eP* **P 22 24 46.9 -0.2**
baz=295
CMAR Chiang Mai Arr 50.41 256 P **P 22 24 47.5 +0.2**
comp=Z,5.9nm,0.9s,baz=40,slow=7.3,SNR=21
CMAR PcP **PcP 22 26 06.5 +1.3**
comp=Z,3.4nm,1.0s,baz=16,slow=2.6,SNR=6.7
CMAR LR LR 22 48 07.0
comp=Z,200nm,18.3s,baz=50,slow=38
comp=Z,5.9nm,0.9s
CMAR Chiang Mai Arr 50.41 256 P **P 22 24 47.0 -0.4**
BVAR Borovoye Array 50.61 310 LR LR 22 47 47.3
comp=Z,340nm,18.0s,baz=32,slow=38
BRVK Borovoye 50.66 310 *ceP* **P 22 24 49.3 +0.5**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 50.66 310 *eP* **P 22 24 49.3 +0.5**
BRZS Berezniki 50.66 305 *eP* **P 22 24 47.5 -1.4**
BRZS Berezniki 50.66 305 *eP* **P 22 24 47.5 -1.4**
baz=305
SHL Shillong 50.70 268 P **P 22 24 49.6 -0.1**
SHL Shillong 50.70 268 P **P 22 24 49.6 -0.1**
SHL pmax pmax
comp=Z,33nm,0.8s
CHKK Chushkaly 50.89 296 *eP* **P 22 24 49.6 -1.2**
CHKK Chushkaly 50.89 296 *eP* **P 22 24 49.7 -1.1**
baz=296
EUNU Eureka 51.00 11 P **P 22 24 50.6 -0.5**
MDOK Medeo 51.19 296 *eP* **P 22 24 53.1 -0.1**
MDOK Medeo 51.19 296 *eP* **P 22 24 53.2 0.0**
baz=296
KUU Kurty 51.29 297 *eP* **P 22 24 52.0 -1.7**
KUU Kurty 51.29 297 *eP* **P 22 24 52.0 -1.7**
baz=297
BBB Bella Bella 51.37 51 LR LR 22 43 37.1
comp=Z,52nm,21.4s,baz=7.5,slow=32
ALE Alert 51.48 5 P **P 22 24 53.4 -1.2**
SANI Sanana 51.92 212 P **P 22 24 59.0 +0.4**
comp=Z,9.3nm,0.7s
ULHL Ulahol 52.16 295 P **P 22 25 02.0 +1.5**
SNR=9.2
TKM2 Tokmak 2 52.24 296 P **P 22 25 02.5 +1.4**
SNR=8.8
SGDS Sogindy 52.58 297 *eP* **P 22 25 03.3 -0.1**
SGDS Sogindy 52.58 297 *eP* **P 22 25 03.3 -0.1**
baz=297
CHMS Chumysh 52.73 297 P **P 22 25 05.6 +1.1**
SNR=5.1
USP Ospenovka 52.76 297 P **P 22 25 06.0 +1.3**
SNR=22
KBK Karagaybulak 52.78 296 P **P 22 25 06.4 +1.4**
SNR=11
RES Resolute Bay 52.85 18 LR LR 22 50 36.8
comp=Z,244nm,20.3s,baz=343,slow=40
AAK Ala-Archa 53.08 296 P **P 22 25 08.4 +1.2**
SNR=14
AAK Ala-Archa 53.08 296 P **P 22 25 06.7 -0.5**
AAK IAmb IAmb 22 25 09.0
comp=Z,16nm,0.9s
AAK Ala-Archa 53.08 296 *ceP* **P 22 25 07.9 +0.7**
AAK pmax pmax
comp=Z,14nm,0.7s
AAK Ala-Archa 53.08 296 *eP* **P 22 25 07.9 +0.7**
AAK Ala-Archa 53.08 296 P **P 22 25 08.1 +0.9**
AAK pP **sP 22 25 25.0 -1.3**
ODAN Odare 53.08 273 *eP* **P 22 25 08.7 +1.2**
YKA Yellowknife Ar 53.16 35 P **P 22 25 07.1 -0.2**
comp=Z,4.4nm,1.0s,baz=299,slow=7.4,SNR=9.0
comp=Z,4.4nm,1.0s
YKA Yellowknife Ar 53.16 35 *i* P **P 22 25 07.9 +0.6**
YKA pmax pmax
comp=Z,4.0nm,1.0s
UCH Uchtor 53.28 296 P P 22 25 40.1 +31
SNR=52
JIRN Jiri 53.45 274 *eP* **P 22 25 11.6 +1.3**
GUN Gumba 53.51 275 *eP* **P 22 25 11.9 +1.1**
comp=Z,90nm,0.7s
EKS2 Erkin-Say 53.52 297 P **P 22 25 11.6 +1.2**
SNR=12
RAMN Ramite 53.59 273 *eP* **P 22 25 12.1 +0.9**
KSH Kashi 53.75 292 P P 22 25 17.3 +5.2
KSH pmax pmax
comp=Z,21nm,1.4s
KSH LR LR
comp=Z,510nm,16.3s
KSH LR LR
comp=Z,190nm,12.5s
KSH LR LR
comp=Z,540nm,20.6s
AML Almayashu 53.85 296 P **P 22 25 14.8 +1.7**
SNR=8.5
SVE Sverdlovsk 53.89 317 *eP* **P 22 25 11.3 -1.4**
SVE pmax pmax
comp=Z,14nm,0.9s
KKN Kakani 54.01 275 *eP* **P 22 25 15.3 +1.0**
comp=Z,20nm,1.3s
PKI Pulchoki 54.05 275 *eP* **P 22 25 15.5 +0.8**
PKIN Phulchoki 54.06 275 *eP* **P 22 25 15.6 +0.9**
DMN Daman 54.24 275 *eP* **P 22 25 17.3 +1.3**
GKN Gorkha 54.33 275 *eP* **P 22 25 17.5 +0.9**
comp=Z,131nm,1.0s
WAPA Wapiti River 54.60 45 P **P 22 25 17.9 -0.1**
WAPA IAmb IAmb 22 25 20.3
comp=Z,15nm,0.9s
DANN Dangsing 54.74 276 *eP* **P 22 25 21.1 +1.4**
comp=Z,140nm,0.9s
HNR Honiara 54.97 169 LR LR 22 46 04.5
comp=Z,2μm,21.8s,baz=312,slow=33
ARU Arti 55.08 317 LR LR 22 51 03.6
comp=Z,261nm,19.9s,baz=2.5,slow=38
ARU Arti 55.08 317 P **P 22 25 19.6 -1.8**
ARU IAmb IAmb 22 25 23.5
comp=Z,12nm,0.9s
ARU Arti 55.08 317 *c i* P **P 22 25 19.1 -2.3**
ARU *PP **sP 22 25 36.6 -3.7**
ARU 22 26 21.1
ARU S **S 22 32 57.7 -2.3**
ARU SS **SS 22 36 36.1 -7.6**
ARU pmax pmax
comp=Z,13nm,0.9s
ARU MLR MLR
comp=Z,237nm,19.0s
ARU Arti 55.08 317 P **P 22 25 19.9 -1.4**
KK31 Karatay Array 55.34 299 P **P 22 25 23.1 -0.3**
KK31 IAmb IAmb 22 25 24.8
comp=Z,11nm,0.9s
KK31 Karatay Array 55.34 299 P **P 22 25 23.1 -0.3**
KK31 pmax pmax
comp=Z,11nm,0.9s
KKAR Karatay Array 55.34 299 P **P 22 25 23.1 -0.4**
KKAR IAmb IAmb 22 25 24.8
comp=Z,11nm,0.9s
KKAR Karatay Array 55.34 299 P **P 22 25 23.0 -0.4**
KKAR Karatay Array 55.34 299 P **P 22 25 23.1 -0.4**
KKAR pmax pmax
comp=Z,11nm,0.9s
IUG Iuzhnay 56.15 298 *eP* **P 22 25 29.2 -0.2**
IUG Iuzhnay 56.15 298 *eP* **P 22 25 29.2 -0.2**
baz=298
DRK Karamyk 56.48 294 P **P 22 25 31.9 -0.1**
BTK Batken 56.79 295 P **P 22 25 33.8 -0.2**
BTK Batken 56.79 295 P **P 22 25 33.8 -0.2**
BTK pmax pmax
comp=Z,40nm,1.1s

NEEM North Greenlan 56.91 6 *eP* **P 22 25 33.4 -1.1**
NEEM IAmb IAmb 22 25 34.2
comp=Z,34nm,1.0s
GAR Garm 57.71 295 P **P 22 25 41.1 +0.6**
PRGR Permogore 57.82 327 *eP* **P 22 25 37.2 -3.5**
PRGR pmax pmax
comp=Z,8.0nm,0.8s
KIRV Kirov 58.06 323 LR LR 22 52 59.1
comp=Z,575nm,18.9s,baz=353,slow=38
DAG Danmarks Havn 58.16 357 *i* P **P 22 25 42.2 -0.7**
DAG IAmb IAmb 22 25 42.9
comp=Z,16nm,1.1s
ABKAR Akbulak array 58.19 310 P **P 22 25 42.8 -0.8**
ABKAR IAmb IAmb 22 25 44.9
comp=Z,6.9nm,0.9s
ABKAR Akbulak array 58.19 310 P **P 22 25 42.7 -0.8**
AKTO Aktyubinsk 58.57 312 LR LR 22 53 01.3
comp=Z,694nm,19.0s,baz=43,slow=38
CHGR Chuyangaron 58.65 295 P **P 22 25 47.4 +0.4**
CHGR Chuyangaron 58.65 295 P **P 22 25 47.4 +0.4**
CHGR pmax pmax
comp=Z,132nm,0.9s
ARCES ARCESS Array B 58.81 340 P **P 22 25 46.7 -0.9**
comp=Z,6.3nm,1.0s,baz=40,slow=9.6,SNR=5.5
comp=Z,6.3nm,1.0s
NIL Nilore 58.86 288 P **P 22 25 49.5 +1.0**
NIL Nilore 58.86 288 P **P 22 25 49.5 +1.0**
NIL pmax pmax
comp=Z,122nm,1.0s
NIL Nilore 58.86 288 P **P 22 25 49.9 +1.4**
KLMR Klimovskoe 60.62 328 *eP* **P 22 25 57.8 -2.3**
KLMR pmax pmax
comp=Z,17nm,2.1s
KLMR Klimovskoe 60.62 328 *eP* **P 22 25 57.8 -2.3**
KLMR AMP 22 25 59.7
comp=Z,17nm,2.1s
KBL Kabul 61.13 291 P **P 22 26 04.2 -0.1**
KBL Kabul 61.13 291 P **P 22 26 04.2 -0.1**
KBL pmax pmax
comp=Z,62nm,1.0s
PLID Pearl Lake 61.92 53 P **P 22 26 10.0 +0.5**
MSO Missoula 62.02 51 P **P 22 26 10.6 +0.6**
MSO IAmb IAmb 22 26 20.2
comp=Z,12nm,1.1s
SUMG Summit 62.38 3 *i* P **P 22 26 12.8 +0.4**
SUMG IAmb IAmb 22 26 13.9
comp=Z,65nm,1.0s
BELG Belogornoye 62.63 318 LR LR 22 55 24.1
comp=Z,222nm,18.3s,baz=75,slow=38
FFC Flin Flon 62.99 38 P **P 22 26 17.2 +1.0**
FFC pP **sP 22 26 34.9 +0.6**
PAHR Pah Rah Range 63.17 60 P **P 22 26 18.4 +0.6**
JMIC Jan Mayen 63.20 353 LR LR 22 53 22.6
comp=Z,114nm,19.7s,baz=195,slow=36
SDSI Sungal Dareh 63.30 238 P **P 22 26 20.1 +1.4**
comp=Z,1μmcomp=Z,15nm,1.0s
LRM Limekiln Ridge 63.45 51 P **P 22 26 20.7 +1.0**
PWJI Pagerwojo 63.47 224 P **P 22 26 20.6 +0.9**
comp=Z,33nm,1.5s
YERR Yerington 63.70 60 P **P 22 26 22.7 +1.3**
YERR IAmb IAmb 22 26 35.2
comp=Z,16nm,1.5s
BOZ Bozeman (W) 64.04 51 P **P 22 26 24.4 +1.0**
BOZ Bozeman (W) 64.04 51 P **P 22 26 24.5 +1.0**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
NVAR Mina Array Bea 64.62 60 P **P 22 26 29.2 +1.8**
comp=Z,0.6nm,0.6s,baz=291,slow=6.9,SNR=5.5
comp=Z,0.6nm,0.6s
YHL Hebgen Lake 64.76 51 P **P 22 26 29.5 +1.2**
FINES FINESS Array B 64.77 334 P **P 22 26 25.9 -1.8**
comp=Z,6.3nm,0.9s,baz=33,slow=7.2,SNR=16
FINES LR LR 22 58 14.1
comp=Z,292nm,18.2s,baz=262,slow=39
comp=Z,6.3nm,0.9s
FINES FINESS Array B 64.77 334 *i* P **P 22 26 25.8 -1.9**
FINES pmax pmax
comp=Z,6.0nm,0.9s
YHB Horse Butte 64.81 51 P **P 22 26 29.6 +1.0**
YHH Holmes Hill 64.98 51 P **P 22 26 30.7 +0.9**
HRA Herat 65.66 295 P **P 22 26 34.2 +0.1**
HRA IAmb IAmb 22 26 36.2
comp=Z,22nm,1.0s
OBN Obninsk 65.69 325 *ceP* **P 22 26 32.1 -1.6**
OBN *e**PP **sP 22 26 55.6 +2.9**
OBN *e**SP **PcP 22 27 05.1 +0.4**
OBN *e**SS sS 22 35 59.0 +20
OBN SS **SS 22 39 31.0 +1.5**
OBN pmax pmax
comp=Z,17nm,1.7s
OBN MLR MLR
comp=Z,184nm,15.0s
MOOW Moose Ponds 65.70 52 P **P 22 26 35.9 +1.5**
TPAW Teton Pass 65.75 52 P **P 22 26 35.5 +0.7**
TPAW IAmb IAmb 22 26 37.7
comp=Z,7.2nm,0.9s
ICESG Greenland Ices 65.81 4 *eP* **P 22 26 35.1 +0.4**
ICESG IAmb IAmb 22 26 37.1
comp=Z,60nm,1.1s
HVU Hansel Valley 65.81 55 P **P 22 26 35.9 +0.9**
HVU Hansel Valley 65.81 55 P **P 22 26 35.9 +0.9**
HVU pmax pmax
comp=Z,9.0nm,1.5s
GEYT Alibeck 66.01 300 P **P 22 26 36.1 -0.1**
comp=Z,19nm,0.9s,baz=29,slow=3.4,SNR=43
comp=Z,19nm,0.9s
GEYT Alibeck 66.01 300 P **P 22 26 35.8 -0.4**
GEYT IAmb IAmb 22 26 38.0
comp=Z,25nm,0.9s
GYA0B ALIBECK ARRAY 66.01 300 P **P 22 26 35.8 -0.4**
GYA0B IAmb IAmb 22 26 38.0
comp=Z,22nm,0.9s
VRH Novokhopyorsk 66.17 319 *eP* P 22 26 30.7 -6.2
VRH pmax pmax
comp=Z,6.0nm,0.8s
LAO LASA Array 66.23 47 P **P 22 26 38.5 +1.0**
LAO IAmb IAmb 22 27 17.4
comp=Z,39nm,1.6s
WB0 Warramunga Arr 66.32 197 P **P 22 26 39.0 +0.8**
WB0 IAmb IAmb 22 26 53.1
comp=Z,12nm,0.9s
LPSR Galich'ya Gora 66.46 322 *eP* **P 22 26 37.7 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
WRAB Tennant Creek 66.49 197 *ceP* **P 22 26 39.2 0.0**
WRAB pmax pmax
comp=Z,7.0nm,1.0s
WRAB Tennant Creek 66.49 197 P **P 22 26 40.5 +1.3**
WRAB pP **pwP 22 26 56.8 -1.3**
WRAB sP **PcP 22 27 04.5 -3.9**
WB2 Warramunga Arr 66.50 197 P **P 22 26 40.0 +0.7**
WB2 IAmb IAmb 22 26 53.8
comp=Z,12nm,1.1s
WRA Warramunga Arr 66.50 197 P **P 22 26 40.0 +0.7**
comp=Z,6.4nm,0.8s,baz=16,slow=6.8,SNR=28
comp=Z,6.4nm,0.8s
WRA Warramunga Arr 66.50 197 P **P 22 26 39.1 -0.2**
WRA Warramunga Arr 66.50 197 *i* P **P 22 26 40.7 +1.4**
WRA pmax pmax
comp=Z,7.0nm,0.8s
DUG Dugway, Tooele 66.80 56 P **P 22 26 42.7 +1.3**
DUG Dugway, Tooele 66.80 56 P **P 22 26 42.7 +1.3**
DUG pmax pmax
comp=Z,5.0nm,1.2s
VORR Voronezh 66.98 321 *eP* **P 22 26 45.5 +3.4**
VORR pmax pmax
comp=Z,10.0nm,0.4s
BW06 Boulder Array 67.00 52 P **P 22 26 42.6 -0.1**
PD31 Pinedale Array 67.00 52 P **P 22 26 42.6 -0.1**
PDAR Pinedale Array 67.00 52 P **P 22 26 43.0 +0.4**
comp=Z,2.9nm,0.8s,baz=273,slow=1.5,SNR=24
comp=Z,2.9nm,0.8s
FRB Frobisher Bay 67.07 18 P **P 22 26 41.9 -0.5**
comp=Z,18nm,0.9s,baz=326,slow=10,SNR=4.0
comp=Z,18nm,0.9s
VSR Storozhevoye 67.32 321 *eP* **P 22 26 43.0 -1.2**
VSR pmax pmax
comp=Z,7.0nm,0.6s
MSVF Nonsavu 67.33 152 LR LR 22 50 35.5
comp=Z,170nm,20.9s,baz=43,slow=31
AFI Afiamalu 67.87 140 LR LR 22 50 08.3
comp=Z,130nm,20.5s,baz=22,slow=30
CCUT Cedar City 68.19 58 P **P 22 26 51.7 +1.4**
RDMU Red Mountain 68.43 54 P **P 22 26 52.8 +1.1**
RDMU IAmb IAmb 22 26 54.4
comp=Z,9.7nm,0.8s
LCMT Little Creek M 68.61 59 P **P 22 26 54.0 +1.2**
SRU San Rafael Swe 68.85 56 P **P 22 26 54.6 +0.3**
SRU San Rafael Swe 68.85 56 P **P 22 26 54.6 +0.3**
SRU pmax pmax
comp=Z,6.0nm,1.0s
KNB Kanab 68.86 59 P **P 22 26 55.0 +0.6**
KNB Kanab 68.86 59 P **P 22 26 55.0 +0.6**
KNB pmax pmax
comp=Z,7.0nm,1.1s
NC405 NORSAR Array S 69.00 340 P **P 22 26 54.7 0.0**
NC204 NORSAR Array S 69.09 341 P **P 22 26 55.1 -0.1**
RSSD Black Hills 69.09 48 P **P 22 26 55.8 0.0**
RSSD IAmb IAmb 22 26 57.1
comp=Z,10nm,1.1s
RSSD Black Hills 69.09 48 P **P 22 26 55.8 0.0**
RSSD pmax pmax
comp=Z,10.0nm,1.1s
RSSD Black Hills 69.09 48 P **P 22 26 56.3 +0.5**
NB201 NORSAR Array S 69.16 340 P **P 22 26 55.1 -0.5**
NB2 NORSAR Subarra 69.19 340 P **P 22 26 55.1 -0.7**
comp=Z,15nm,0.9s,baz=30,slow=6.5
NB2 NORSAR Subarra 69.19 340 P **P 22 26 55.1 -0.7**
baz=30,slow=6.5
NOA NORSAR Array B 69.19 340 P **P 22 26 54.6 -1.2**
comp=Z,14nm,0.8s,baz=30,slow=6.2,SNR=21
NOA LR LR 23 01 47.1
comp=Z,141nm,18.3s,baz=245,slow=40
comp=Z,14nm,0.8s
HFS Hagfors 69.36 339 P **P 22 26 55.9 -0.9**
comp=Z,14nm,0.9s,baz=39,slow=5.7,SNR=12
HFS LR LR 23 01 42.8
comp=Z,211nm,18.9s,baz=209,slow=40
comp=Z,14nm,0.9s
NAO01 NORSAR Array S 69.44 340 P **P 22 26 57.0 -0.3**
MNK Minsk 69.52 328 *i* P **P 22 26 58.7 +0.8**
MNK *i* *PP **sP 22 27 17.4 +0.4**
MNK *i* 22 29 32.9
MNK *i* PPP PPP 22 31 14.5
MNK *i* S **S 22 36 02.4 +0.9**
MNK *i* *SS **SKiKP 22 36 34.8 -6.8**
MNK *i* SS **SS 22 40 31.3 +2.6**
MNK pmax pmax
comp=Z,25nm,0.9s
MNK pmax pmax
comp=E,3.0nm,1.4s
MNK pmax pmax
comp=N,18nm,0.9s
MNK MLR MLR
comp=Z,310nm,14.0s
MNK MLR MLR
comp=N,559nm,20.0s
MNK MLR MLR
comp=E,56nm,15.0s
MNK Minsk 69.52 328 *i* P **P 22 26 58.7 +0.8**
comp=E,3.0nm,1.4s
MNK *i* P **P 22 26 58.7 +0.8**
comp=N,18nm,0.9s
MNK *i* P **P 22 26 58.7 +0.8**
comp=Z,25nm,0.9s,baz=40
MNK *i* pP **sP 22 27 17.5 +0.4**
MNK *i* PP **PP 22 29 32.9 +1.5**
MNK *i* PPP PPP 22 31 14.5
MNK *i* S **S 22 36 02.5 +0.9**
MNK *i* sS **SKiKP 22 36 34.8 -6.8**
MNK *i* SS **SS 22 40 31.3 +2.6**
MNK *i* SSS SSS 22 43 50.0
MNK *i* LQ LQ 22 52 47.3
MNK *i* LR LR 22 57 56.2
MNK *i* LRM MLR 23 00 12.6
comp=Z,310nm,14.4s
MNK *i* LRM MLR 23 00 24.6
comp=N,559nm,20.4s
MNK *i* LRM MLR 23 00 49.2
comp=E,56nm,15.3s
U15A North Rim 69.57 59 P **P 22 26 59.1 +0.1**
NACGM Naroch 69.61 329⇑ *eP* **P 22 26 56.9 -1.5**
baz=39
AKT Akhty 69.74 309 *eP* **P 22 27 00.6 +0.9**
AKT *e* 22 27 23.8
AKT pmax pmax
comp=Z,56nm,0.9s
AS31 Alice Springs 70.20 196 P **P 22 27 03.6 +1.2**
ASAR Alice Springs 70.21 196 P **P 22 27 04.8 +2.3**
comp=Z,4.7nm,0.8s,baz=13,slow=5.6,SNR=32
comp=Z,4.7nm,0.8s
ASAR Alice Springs 70.21 196 P **P 22 27 03.5 +1.1**
KVAR Kislovodsk Arr 70.72 313 LR LR 23 02 01.9
comp=Z,331nm,19.0s,baz=280,slow=39
KIV Kislovodsk 70.72 313 ⇓P **P 22 27 05.9 +0.3**
KIV Kislovodsk 70.72 313 P **P 22 27 05.6 0.0**
KIV Kislovodsk 70.72 313 *eP* **P 22 27 05.9 +0.3**
KIV pmax pmax
comp=Z,50nm,1.1s
KIV MLR MLR
comp=Z,283nm,17.0s
KIV Kislovodsk 70.72 313 *eP* **P 22 27 05.9 +0.3**
KIV Kislovodsk 70.72 313 P **P 22 27 06.3 +0.7**
WUAZ Wupatki 70.73 59 P **P 22 27 06.2 +0.3**
KBZ Khabaz 70.77 313 P **P 22 27 05.9 +0.1**
comp=Z,45nm,0.9s,baz=57,slow=2.3,SNR=54
KBZ LR LR 23 02 00.9
comp=Z,533nm,20.7s,baz=31,slow=39
KBZ Khabaz 70.77 313 *ceP* **P 22 27 06.5 +0.8**
KBZ pmax pmax
comp=Z,56nm,0.9s
KBZ Khabaz 70.77 313 *eP* **P 22 27 06.5 +0.8**
SMCO Snowmass 70.85 54 P **P 22 27 07.3 +0.5**
ONI Oni 71.28 312 P **P 22 27 10.2 +1.2**
ONI Oni 71.28 312 P **P 22 27 10.2 +1.2**
ONI pmax pmax
comp=Z,38nm,1.0s
PCHI Peechi 71.64 266⇑ *eP* **P 22 27 12.3 +0.9**
S22A 4UR Ranch, Cre 71.91 55 P **P 22 27 13.1 0.0**
AKASG Malin Array Be 71.94 325 P **P 22 27 11.6 -1.1**
comp=Z,3.5nm,0.5s,baz=35,slow=6.3,SNR=28
AKASG LR LR 23 01 18.8
comp=Z,278nm,18.2s,baz=30,slow=38
comp=Z,3.5nm,0.5s
AKASG Malin Array Be 71.94 325 P **P 22 27 11.9 -0.8**
AKASG Malin Array Be 71.94 325 P **P 22 27 11.9 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,1.0s
AKBB Malin Array Si 71.94 325 P **P 22 27 12.2 -0.5**
AKBB IAmb IAmb 22 27 13.1
comp=Z,16nm,1.0s
AKBB Malin Array Si 71.94 325 P **P 22 27 12.2 -0.5**
AKBB pmax pmax
comp=Z,16nm,1.0s
GNI Garni 72.30 309 LR LR 23 02 14.6
comp=Z,181nm,19.5s,baz=223,slow=39
GNI Garni 72.30 309 P **P 22 27 15.4 +0.2**
GNI Garni 72.30 309 *ceP* **P 22 27 15.5 +0.2**
GNI pmax pmax
comp=Z,42nm,1.3s
SOC Sochi 72.50 315 *eP* **P 22 27 15.2 -1.0**
SOC *e* 22 30 01.9
SOC *e*PPP PPP 22 31 37.7
SOC *e*S **S 22 36 35.1 -1.4**
SOC *e*SS **SS 22 41 11.9 -3.0**
SOC pmax pmax
comp=Z,27nm,1.0s
SOC MLR MLR
comp=Z,267nm,19.0s
KARS Kars 72.86 311 P **P 22 27 19.5 +0.9**
KARS Kars 72.86 311 P **P 22 27 19.5 +0.9**
KARS pmax pmax
comp=Z,128nm,1.0s
ECSD EROS Data Cent 73.16 44 P **P 22 27 19.7 -0.4**
T25A Trinidad 73.72 54 P **P 22 27 25.0 +1.2**
ANMO Albuquerque 74.06 56 *ceP* **P 22 27 25.7 -0.1**
ANMO pmax pmax
comp=Z,5.0nm,1.7s
GKP Gorka Klasztor 74.20 333 *eP* P 22 27 21.0 -4.9
BEL Belsk 74.21 330 *eP* **P 22 27 26.9 +0.9**
LENM Lemitar 74.30 57 P **P 22 27 28.0 +0.8**
KOPT Kop Dagi 74.68 312 P **P 22 27 29.4 +0.1**
KOPT IAmb IAmb 22 27 32.9
comp=Z,21nm,1.0s
LVV L'vov 74.68 327 *eP* **P 22 27 29.1 +0.3**
319A Douglas 74.83 61 P **P 22 27 30.8 +0.6**
319A IAmb IAmb 22 27 51.6
comp=Z,8.6nm,0.9s
121A Cookes Peak, D 74.94 59 P **P 22 27 32.1 +1.2**
KIS Kishinev 75.00 323 *eP* **P 22 27 30.0 -0.7**

comp=Z,18nm,0.5s
KIS eL L 23 02 05.0
KIS LRM MLR 23 03 17.0
comp=Z,200nm,16.5s
KIS Kishinev 75.00 323 *e*P **P 22 27 30.0 -0.7**
KIS pmax pmax
comp=Z,18nm,0.5s
KIS MLR MLR
comp=Z,200nm,16.5s
MILM Milestii Mici 75.06 323 ⇓P **P 22 27 30.9 -0.2**
MILM Milestii Mici 75.06 323 ⇑*i*P **P 22 27 30.5 -0.6**
comp=Z,40nm,0.9s
MILM eL L 23 01 48.0
MILM LRM MLR 23 03 11.0
comp=Z,400nm,16.5s
MILM Milestii Mici 75.06 323*c i*P **P 22 27 30.5 -0.6**
MILM pmax pmax
comp=Z,40nm,0.9s
MILM MLR MLR
comp=Z,400nm,16.5s
MILM MLR MLR
comp=N,300nm,16.0s
IAS Iasi 75.38 324 ⇑P **P 22 27 32.8 -0.1**
SCHQ Schefferville 75.39 21 P **P 22 27 33.1 +0.2**
comp=N,10nm,0.9s,baz=288,slow=3.2,SNR=3.7
comp=N,10nm,0.9s
VASR Vaslui 75.71 323 ⇓P **P 22 27 35.3 +0.5**
UOSS Minazif 75.81 291 P **P 22 27 36.4 +0.6**
UOSS IAmb IAmb 22 27 48.1
comp=Z,24nm,1.2s
OJC Ojcow 75.90 330 *e*P **P 22 27 34.4 -1.5**
OJC Ojcow 75.90 330 P **P 22 27 34.4 -1.5**
OJC Ojcow 75.90 330 P **P 22 27 34.4 -1.5**
OJC pmax pmax
comp=Z,27nm,0.8s
BUR08 Bucovina Ar. S 75.98 325 P **P 22 27 37.0 +0.5**
BUR08 IAmb IAmb 22 27 37.7
comp=Z,22nm,0.8s
BURAR Bucovina Array 76.00 325 ⇑P **P 22 27 36.7 +0.1**
BURAR Bucovina Array 76.00 325 P **P 22 27 36.8 +0.2**
BURAR Bucovina Array 76.00 325 P **P 22 27 36.9 +0.3**
STHS Stebnicka Huta 76.05 329 *e*P **P 22 27 37.2 +0.4**
STHS pmax pmax
comp=Z,22nm,1.0s
KOLS Kolonicke sedl 76.07 328 *e*P **P 22 27 37.3 +0.5**
KOLS pmax pmax
comp=Z,30nm,0.9s
BIZ Bicaz 76.18 325 ⇓P **P 22 27 37.9 +0.4**
VLDR Vladesti 76.22 323 ⇑P **P 22 27 38.5 +0.8**
VARL Varlezi 76.28 323 ⇓P **P 22 27 38.6 +0.5**
TESR Tescani 76.29 324 ⇓P **P 22 27 38.3 +0.1**
UZH Uzhgorod 76.31 328 ⇑*i*P **P 22 27 38.3 +0.1**
UZH *i* 22 27 52.6
GHRR 76.33 323 ⇑P **P 22 27 38.7 +0.3**
SCTR Scanteiesti 76.39 323 ⇑P **P 22 27 39.3 +0.6**
CRVS Cervenica-Dubn 76.40 328 *e*P **P 22 27 39.3 +0.6**
CRVS pmax pmax
comp=Z,26nm,1.0s
TLCR 76.42 322 ⇓P **P 22 27 39.5 +0.6**
TATR Tatarca 76.43 323 ⇓P **P 22 27 39.7 +0.8**
MARD Mardin 76.49 310 P **P 22 27 41.0 +1.4**
TOKA Tokat 76.53 314 P **P 22 27 40.3 +0.7**
TOKA IAmb IAmb 22 27 42.0
comp=Z,14nm,0.9s
KSP Ksiaz 76.57 332 *e*P **P 22 27 40.0 +0.4**
IZVR Izvoarele 76.59 323 ⇓P **P 22 27 40.9 +1.1**
PANC Panciu 76.59 323 ⇓P **P 22 27 40.1 +0.3**
TRPA Tarpa 76.62 327 ⇑P **P 22 27 40.8 +0.8**
TRPA Tarpa 76.62 327 P **P 22 27 40.4 +0.5**
BMR Baia Mare 76.63 326 ⇑P **P 22 27 40.9 +0.8**
ODBI Odobesti 76.72 323 ⇑P **P 22 27 41.4 +0.9**
CFR Carcaliu 76.72 322 ⇑P **P 22 27 40.5 -0.1**
ARCR ARCALIA 76.77 326 ⇑P **P 22 27 41.6 +0.8**
VRI Vrincioaia 76.78 324 ⇓P **P 22 27 42.0 +1.0**
VRI Vrincioaia 76.78 324 P **P 22 27 43.2 +2.3**
OKC Ostrava-Krasne 76.80 331 *e*P **P 22 27 41.3 +0.3**
OKC Ostrava-Krasne 76.80 331 *e*P **P 22 27 41.3 +0.3**
PLOR Plostina 76.82 324 ⇑P **P 22 27 41.7 +0.4**
OSTC Ostas 76.84 332 *e*P **P 22 27 41.2 0.0**
TPGR Topolog 76.85 322 ⇑P **P 22 27 42.1 +0.7**
CHVC Chvalec 76.87 332 *e*P **P 22 27 41.8 +0.4**
AMTX Amarillo 76.87 54 P **P 22 27 42.9 +1.2**
AMTX IAmb IAmb 22 27 56.2
comp=Z,9.7nm,0.8s
UPC Upice 76.95 332 *e*P **P 22 27 42.2 +0.4**
UPC Upice 76.95 332 *e*P **P 22 27 42.2 +0.4**
DPC Dobruska-Polom 76.98 332 *e*P **P 22 27 42.4 +0.3**
DPC Dobruska-Polom 76.98 332 *e*P **P 22 27 42.4 +0.3**
OZUR 76.99 324 ⇓P **P 22 27 43.0 +0.9**
COVR Voineasa-Covas 77.01 324 ⇑P **P 22 27 43.0 +0.8**
MORC Moravsky Berou 77.06 331 ⇑P **P 22 27 42.9 +0.4**
MORC Moravsky Berou 77.06 331 P **P 22 27 42.7 +0.2**
MORC Moravsky Berou 77.06 331 P **P 22 27 42.7 +0.2**
MORC pmax pmax
comp=Z,38nm,1.0s
MORC Moravsky Berou 77.06 331 *e*P **P 22 27 42.8 +0.3**
KRLC Kraliky 77.07 332 *e*P **P 22 27 43.0 +0.5**
KRLC Kraliky 77.07 332 *e*P **P 22 27 43.0 +0.5**
KECS Kecovo 77.10 329 *e*P **P 22 27 43.6 +0.9**
STKA Stephens Creek 77.13 188 LR LR 23 02 50.5
comp=Z,109nm,20.6s,baz=194,slow=36
KAN12 Harper NE Stat 77.16 50 P **P 22 27 43.9 +0.6**
HARR Harsova 77.20 322 ⇓P **P 22 27 43.4 +0.2**
CLL Collm 77.22 334 P **P 22 27 43.3 0.0**
CLL Collm 77.22 334 ⇑*i*P **P 22 27 43.0 -0.2**
CLL *e*S **S 22 37 30.0 +1.3**
CLL pmax pmax
comp=Z,40nm,0.9s
CLL Collm 77.22 334 ⇑*i*P **P 22 27 43.0 -0.2**
comp=Z,40nm,0.9s
CLL *e*S **S 22 37 30.0 +1.3**
DOPR Dopca 77.25 324 ⇓P **P 22 27 44.4 +0.8**
TLBR Topalu 77.26 322 ⇓P **P 22 27 44.5 +0.8**
MESR Meseseni 77.27 326 ⇓P **P 22 27 44.4 +0.7**
MAUC Maruska 77.31 331 *e*P **P 22 27 44.7 +0.8**
CBBR Cluj-Babes-Bol 77.35 326 ⇑P **P 22 27 44.7 +0.6**
ILGA Ilgaz 77.36 316 P **P 22 27 45.4 +0.9**
CJR Cluj-Napoca 77.37 326 ⇑P **P 22 27 44.4 +0.1**
PVCC Panska Ves 77.40 333 *e*P **P 22 27 44.7 +0.4**
PVCC Panska Ves 77.40 333 *e*P **P 22 27 44.7 +0.4**
MLR Muntele Rosu 77.41 324 ⇑P **P 22 27 45.1 +0.5**
MLR Muntele Rosu 77.41 324 P **P 22 27 45.1 +0.5**
comp=Z,17nm,0.9s,baz=104,slow=4.4,SNR=24
MLR LR LR 23 05 14.8
comp=Z,432nm,18.3s,baz=209,slow=38
comp=Z,17nm,0.9s
MLR Muntele Rosu 77.41 324 P **P 22 27 45.4 +0.8**
MLR IAmb IAmb 22 27 46.9
comp=Z,28nm,1.1s
MLR Muntele Rosu 77.41 324 P **P 22 27 45.4 +0.8**
MLR pmax pmax
comp=Z,28nm,1.1s
ISR Istrita 77.45 323 ⇑P **P 22 27 45.7 +0.9**
EKA Eskdalemuir Ar 77.48 345 P **P 22 27 44.5 -0.2**
comp=Z,1.6nm,0.3s,baz=18,slow=5.1,SNR=23
comp=Z,1.6nm,0.3s
AMRR Amara 77.52 322 ⇓P **P 22 27 45.7 +0.6**
DRGR 77.66 326 ⇑P **P 22 27 46.3 +0.4**
DRGR 77.66 326 P **P 22 27 46.1 +0.2**
VYHS Vyhne 77.69 330 *e*P **P 22 27 46.7 +0.7**
VYHS pmax pmax
comp=Z,23nm,1.0s
ICOR Ion Corvin 77.71 322 ⇑P **P 22 27 46.8 +0.7**
VRAC Vranov 77.78 331 ⇑P **P 22 27 47.5 +1.0**
VRAC Vranov 77.78 331 P **P 22 27 46.8 +0.3**
comp=Z,25nm,0.9s,baz=40,slow=5.4,SNR=36
comp=Z,25nm,0.9s
VRAC Vranov 77.78 331 *e*P **P 22 27 47.2 +0.7**
PSZ Piszkesteto 77.79 329 ⇑P **P 22 27 47.5 +0.9**
PSZ Piszkesteto 77.79 329 P **P 22 27 47.1 +0.4**
PSZ IAmb IAmb 22 27 48.4
comp=Z,23nm,1.0s
PSZ Piszkesteto 77.79 329 P **P 22 27 47.1 +0.4**
PSZ pmax pmax
comp=Z,23nm,1.0s
PSZ Piszkesteto 77.79 329 P **P 22 27 46.8 +0.1**
GOPC GO Pecny, Ondr 77.86 333 *e*P **P 22 27 47.2 +0.3**
GOPC GO Pecny, Ondr 77.86 333 *e*P **P 22 27 47.2 +0.3**
PRU Pruhonice 77.88 333 *e*P **P 22 27 47.0 0.0**
PRU Pruhonice 77.88 333 *e*P **P 22 27 47.0 0.0**
RASA Rasa 77.92 322 ⇓P **P 22 27 48.2 +0.9**
SULR 77.93 323 ⇓P **P 22 27 48.1 +0.8**
BNN Bunyan 77.96 314 P **P 22 27 47.9 +0.1**

ARR Arges 78.05 324 ⇑P **P 22 27 49.0 +0.9**
KRUC Moravsky 78.06 331 *e*P **P 22 27 48.6 +0.6**
TREC Trest 78.17 332 *e*P **P 22 27 49.2 +0.6**
TREC Trest 78.17 332 *e*P **P 22 27 49.2 +0.6**
BSZH Besenyszg 78.17 328 ⇓P **P 22 27 49.7 +1.1**
BSZH Besenyszg 78.17 328 P **P 22 27 50.5 +1.8**
SMOL Smolenice 78.18 330 *e*P **P 22 27 49.6 +0.9**
SMOL pmax pmax
comp=Z,14nm,0.9s
T35A Sooner Cattle 78.24 49 P **P 22 27 49.4 +0.2**
T35A IAmb IAmb 22 28 02.7
comp=Z,31nm,1.5s
NKC Novy Kostel 78.33 334 *e*P **P 22 27 49.9 +0.4**
NKC Novy Kostel 78.33 334 *e*P **P 22 27 49.9 +0.4**
DEV Deva 78.33 326 ⇑P **P 22 27 50.5 +1.0**
LOT Lotru 78.34 325 ⇑P **P 22 27 49.9 +0.1**
MODS Modra-Piesok 78.35 330 *e*P **P 22 27 51.0 +1.4**
MODS pmax pmax
comp=Z,54nm,1.0s
BR131 Keskin Array S 78.41 316 P **P 22 27 50.8 +0.5**
BR131 IAmb IAmb 22 27 52.1
comp=Z,19nm,0.9s
BR131 Keskin Array S 78.41 316 P **P 22 27 50.8 +0.5**
BR131 pmax pmax
comp=Z,19nm,1.0s
BRTR Keskin Array B 78.41 316 P **P 22 27 51.1 +0.8**
comp=Z,9.2nm,0.9s,baz=63,slow=4.6,SNR=46
comp=Z,9.2nm,0.9s
SRO Srobarova 78.46 330 *e*P **P 22 27 51.6 +1.4**
SRO pmax pmax
comp=Z,31nm,1.0s
BUD Budapest 78.48 329 P **P 22 27 51.3 +1.0**
SIRR Siria 78.50 327 ⇓P **P 22 27 51.1 +0.6**
GAZ Gaziantep 78.51 312 P **P 22 27 51.5 +0.6**
GAZ IAmb IAmb 22 27 53.5
comp=Z,20nm,1.3s
P40A Paris 78.57 45 P **P 22 27 50.9 -0.1**
P40A IAmb IAmb 22 28 05.9
comp=Z,16nm,1.2s
RAZG Razgrad 78.71 322 ⇑P **P 22 27 52.8 +1.1**
ANTO Ankara 78.71 316 P **P 22 27 52.5 +0.6**
ANTO Ankara 78.71 316 P **P 22 27 52.5 +0.6**
ANTO pmax pmax
comp=Z,30nm,1.1s
BR231 Keskin MP Arra 78.74 316 P **P 22 27 52.7 +0.6**
COPA Copaceanca 78.81 323 ⇑P **P 22 27 52.3 +0.1**
CSKK Cskako 78.86 329 P **P 22 27 53.5 +1.0**
KHC Kasperske Hory 78.94 333 P **P 22 27 53.5 +0.6**
KHC Kasperske Hory 78.94 333 P **P 22 27 53.5 +0.6**
KHC pmax pmax
comp=Z,30nm,0.9s
KHC Kasperske Hory 78.94 333 *e*P **P 22 27 53.3 +0.4**
CKRC Cesky Krumlov 78.97 332 *e*P **P 22 27 53.2 +0.1**
MDUB Mudurnu 79.02 317 P **P 22 27 53.9 +0.3**
EGYH Egyhazaskeszo 79.14 330 P **P 22 27 55.4 +1.4**
GEC2 GERESS Array S 79.15 333 P **P 22 27 53.3 -0.8**
GEC2 IAmb IAmb 22 27 55.7
comp=Z,11nm,0.9s
GERES GERESS Array B 79.15 333 P **P 22 27 53.9 -0.3**
comp=Z,6.8nm,0.8s,baz=48,slow=7.9,SNR=48
comp=Z,6.8nm,0.8s
GERES GERESS Array B 79.15 333 P **P 22 27 53.1 -1.0**
GRA1 Grafenberg Arr 79.18 335 P **P 22 27 54.8 +0.6**
GRF Grafenberg Arr 79.18 335 P **P 22 27 54.8 +0.6**
GRF pmax pmax
comp=Z,36nm,0.9s
GRFO Grafenberg 79.18 335 P **P 22 27 54.6 +0.5**
GRFO Grafenberg 79.18 335 P **P 22 27 54.7 +0.5**
GRFO pmax pmax
comp=Z,38nm,1.0s
SOP Sopron 79.19 330 P **P 22 27 56.2 +1.9**
CONA Conrad Observa 79.22 331 *e*P **P 22 27 55.3 +0.8**
comp=Z,17nm,0.9s,SNR=10
VLAD Vladila 79.26 324 ⇓P **P 22 27 55.5 +0.9**
RONA Rosalia, Austr 79.27 331 *e*P **P 22 27 56.0 +1.3**
comp=Z,20nm,0.9s,SNR=8.4
MPLH Magyarpolny 79.28 330 P **P 22 27 55.4 +0.6**
R40A Maddies Statio 79.41 46 P **P 22 27 54.5 -1.1**
R40A IAmb IAmb 22 28 05.5
comp=Z,14nm,1.0s
DJES Djerdap 79.48 325 ⇑P **P 22 27 56.1 +0.2**
PUNG Punghina 79.64 325 ⇓P **P 22 27 56.9 +0.2**
MORH Mrgy, Hungar 79.69 328 ⇓P **P 22 27 57.0 0.0**
MORH Mrgy, Hungar 79.69 328 P **P 22 27 56.5 -0.4**
TX31 Lajitas Ar. Si 79.69 59 P **P 22 27 58.6 +1.2**
TX31 IAmb IAmb 22 28 11.6
comp=Z,20nm,0.8s
TX32 Lajitas Array 79.69 59 P **P 22 27 58.7 +1.3**
TXAR Lajitas Array 79.70 59 P **P 22 27 57.9 +0.5**
comp=Z,1.5nm,0.9s,baz=290,slow=4.0,SNR=15
comp=Z,1.5nm,0.9s
MDVR Moldovita 79.71 326 ⇓P **P 22 27 57.6 +0.3**
MOA Molln 79.83 332 *i*P **P 22 27 57.9 +0.1**
comp=Z,6.5nm,0.9s
BORA Eskisehir 79.84 318 P **P 22 27 58.5 +0.5**
BORA IAmb IAmb 22 28 00.6
comp=Z,12nm,1.1s
ARSA Arzberg 79.92 331 *i*P **P 22 27 58.4 +0.1**
comp=Z,9.9nm,1.1s
KOVH Kovagotottos 80.00 329 P **P 22 27 58.7 +0.1**
HHAR Hobbs 80.08 48 P **P 22 27 59.5 +0.2**
HHAR IAmb IAmb 22 28 12.2
comp=Z,11nm,1.1s
CCM Cathedral Cave 80.10 45 P **P 22 27 59.7 +0.3**
CCM IAmb IAmb 22 28 09.9
comp=Z,14nm,0.9s
CCM Cathedral Cave 80.10 45 P **P 22 27 59.7 +0.3**
CCM pmax pmax
comp=Z,14nm,1.0s
FRGS Fruska Gora 80.14 327 ⇓P **P 22 27 59.9 +0.4**
BIOA Bad Ischl, Aus 80.17 332 *e*P **P 22 28 00.0 +0.4**
comp=Z,26nm,1.1s,SNR=12
DIM Dimitrovgrad 80.36 322 *e*P **P 22 28 01.3 +0.6**
PGB Panagyurishte 80.54 323 *e*P **P 22 28 01.8 +0.1**
SOKA Soboth 80.58 331 *e*P **P 22 28 02.2 +0.2**
comp=Z,15nm,0.9s,SNR=8.9
PERS Pernice 80.59 331 *i*P **P 22 28 02.1 +0.1**
BOVS Bovan 80.67 325 ⇑P **P 22 28 01.4 -0.9**
KBA Koelnbreinsper 80.81 332 *e*P **P 22 28 04.2 +1.0**
comp=Z,34nm,0.9s,SNR=12
VTS Vitosha 80.88 324 ⇑P **P 22 28 04.3 +0.6**
VTS Vitosha 80.88 324 P **P 22 28 04.1 +0.4**
VTS Vitosha 80.88 324 P **P 22 28 04.1 +0.4**
VTS pmax pmax
comp=Z,47nm,1.0s
VTS Vitosha 80.88 324 *e*P **P 22 28 04.7 +1.0**
OBKA Obir 80.90 331 *e*P **P 22 28 03.9 +0.3**
comp=Z,6.5nm,0.9s
GOLS Golise 80.95 330 *i*P **P 22 28 03.8 -0.1**
DIVS Divibare 80.96 326 P **P 22 28 04.1 +0.1**
DIVS IAmb IAmb 22 28 04.9
comp=Z,15nm,1.0s
RDO Rodhopi 81.09 321 P **P 22 28 05.4 +0.8**
MYKA Terra Mystica 81.10 332 *i*P **P 22 28 04.7 +0.1**
comp=Z,13nm,1.1s
WATA Walderalm 81.15 333 *i*P **P 22 28 05.6 +0.6**
comp=Z,25nm,1.1s,SNR=9.8
WTTA Wattenberg 81.20 333 *i*P **P 22 28 06.0 +0.7**
comp=Z,21nm,0.9s,SNR=8.0
BFO Black Forest 81.26 336 P **P 22 28 04.6 -0.8**
BFO IAmb IAmb 22 28 07.6
comp=Z,15nm,1.0s
BFO Black Forest 81.26 336 P **P 22 28 04.6 -0.8**
BFO pmax pmax
comp=Z,15nm,1.0s
RETA Reutte 81.28 334 *i*P **P 22 28 06.0 +0.4**
comp=Z,14nm,1.0s
PRED Cave del Predi 81.29 332 P **P 22 28 05.5 -0.2**
MOTA Moosalm 81.30 334 *i*P **P 22 28 06.3 +0.5**
comp=Z,23nm,1.0s,SNR=7.3
FCAR Ozark Folk Cen 81.32 47 P **P 22 28 05.8 -0.1**
FCAR IAmb IAmb 22 28 16.1
comp=Z,8.4nm,1.0s
ABTA Abfaltersbach 81.37 332 *i*P **P 22 28 06.2 +0.1**
comp=Z,12nm,1.2s
SIUC Southern Illin 81.37 44 P **P 22 28 06.3 +0.2**
SIUC IAmb IAmb 22 28 17.1
comp=Z,21nm,1.0s
SQTA Sankt Quirin 81.37 333 *e*P **P 22 28 06.8 +0.6**
comp=Z,16nm,1.0s,SNR=6.9
ISP Isparta 81.42 316 P **P 22 28 06.2 -0.3**
ISP IAmb IAmb 22 28 10.1
comp=Z,6.7nm,0.8s
ISP Isparta 81.42 316 P **P 22 28 06.2 -0.3**

ISP pmax pmax
comp=Z,7.0nm,0.8s
CLUD Cludinico 81.50 332 P **P 22 28 05.3 -1.5**
CLUD IAmb IAmb 22 28 07.8
comp=Z,9.2nm,0.9s
MMB Musomiste 81.51 323 *e*P **P 22 28 07.5 +0.6**
MIAR Mount Ida 81.59 49 P **P 22 28 07.4 0.0**
MIAR IAmb IAmb 22 28 21.0
comp=Z,12nm,1.0s
MIAR Mount Ida 81.59 49 P **P 22 28 07.4 0.0**
MIAR pmax pmax
comp=Z,12nm,1.0s
ECH Echery 81.69 336 P **P 22 28 07.2 -0.5**
ECH IAmb IAmb 22 28 08.8
comp=Z,17nm,1.0s
ECH Echery 81.69 336 P **P 22 28 07.2 -0.5**
ECH pmax pmax
comp=Z,17nm,1.0s
FETA Feichten 81.70 334 *e*P **P 22 28 08.3 +0.3**
comp=Z,9.6nm,1.0s
DAVA Damuels 81.73 334 *i*P **P 22 28 08.2 +0.1**
comp=Z,13nm,1.0s
STAL STALIGIAL 81.73 332 P **P 22 28 07.1 -0.9**
STAL IAmb IAmb 22 28 09.8
comp=Z,14nm,1.1s
SRS Serrai 81.96 323 P **P 22 28 08.8 -0.4**
STIP Stip 82.08 324 *i*P **P 22 28 09.5 -0.4**
SKO Skopje 82.16 324 *i*P **P 22 28 10.8 +0.6**
DAVOX Davos/Dischmat 82.18 334 P **P 22 28 09.7 -0.8**
comp=Z,5.6nm,0.9s,baz=12,slow=11
comp=Z,5.6nm,0.9s
FUORN Ofenpass-Fuorn 82.20 334 P **P 22 28 10.5 -0.2**
FUORN IAmb IAmb 22 28 12.5
comp=Z,14nm,1.1s
KNT Kendrikon 82.22 323 P **P 22 28 09.4 -1.2**
CSS Mathiatis 82.23 313 P **P 22 28 09.8 -1.0**
CSS IAmb IAmb 22 28 12.3
comp=Z,12nm,0.9s
VAY Valandovo 82.23 323 *i*P **P 22 28 11.6 +1.0**
ELL Elmali 82.56 316 P **P 22 28 12.1 -0.5**
ELL Elmali 82.56 316 P **P 22 28 12.1 -0.5**
ELL pmax pmax
comp=Z,32nm,1.0s
MMAI Mount Meron Ar 82.62 310 LR LR 23 10 02.2
comp=Z,276nm,18.3s,baz=162,slow=39
PDG Podgorica 82.66 326 ⇑P **P 22 28 13.5 +0.7**
PDG Podgorica 82.66 326 P **P 22 28 11.8 -0.9**
PDG IAmb IAmb 22 28 13.6
comp=Z,26nm,1.0s
TEOL Teolo 82.87 332 P **P 22 28 14.3 +0.5**
TEOL IAmb IAmb 22 28 14.7
comp=Z,19nm,1.0s
OHR Ohrid 83.14 324 *i*P **P 22 28 16.1 +0.6**
WVT Waverly 83.30 44 P **P 22 28 16.7 +0.4**
WVT Waverly 83.30 44 P **P 22 28 16.7 +0.4**
WVT pmax pmax
comp=Z,6.0nm,1.0s
KBN Korca 83.56 324 P **P 22 28 16.9 -0.7**
KBN IAmb IAmb 22 28 18.6
comp=Z,18nm,1.1s
KBN Korca 83.56 324 P **P 22 28 16.9 -0.7**
KBN pmax pmax
comp=Z,18nm,1.1s
NEST Nestorio 83.62 324 P **P 22 28 17.1 -0.9**
RAYN Ar Rayn 83.72 297 P **P 22 28 18.4 -0.3**
RAYN IAmb IAmb 22 28 21.0
comp=Z,11nm,1.1s
RAYN Ar Rayn 83.72 297 P **P 22 28 18.4 -0.3**
RAYN pmax pmax
comp=Z,11nm,1.1s
LSK Leskovik 84.03 324 P **P 22 28 19.7 -0.3**
T50A Nancy 84.03 42 P **P 22 28 20.2 +0.2**
T50A IAmb IAmb 22 28 31.6
comp=Z,27nm,1.6s
CLTN Cedars of Leba 84.07 43 P **P 22 28 20.3 +0.1**
CLTN IAmb IAmb 22 28 31.4
comp=Z,9.2nm,1.0s
LPL La Plagne 84.27 335 *e*P **P 22 28 21.5 +0.2**
LPL pmax pmax
comp=Z,9.0nm,0.8s
MURB Monte Urbino 84.43 331 P **P 22 28 22.5 +0.5**
FDMO Fiordimonte 84.44 330 P **P 22 28 21.9 -0.1**
FDMO IAmb IAmb 22 28 25.7
comp=Z,15nm,0.9s
NRCA Norcia 84.61 330 P **P 22 28 23.3 +0.4**
CAMP Campotosto 84.76 330 P **P 22 28 24.1 +0.4**
SERG Sergoula 84.86 322 P **P 22 28 22.3 -1.9**
EFP Efpalio 84.91 322 P **P 22 28 23.1 -1.3**
AQU L'Aquila 84.92 330 P **P 22 28 25.1 +0.6**
AQU L'Aquila 84.92 330 P **P 22 28 25.1 +0.6**
AQU pmax pmax
comp=Z,32nm,1.2s
SWET Sewanee 84.96 43 P **P 22 28 24.3 -0.5**
SWET IAmb IAmb 22 28 37.0
comp=Z,11nm,1.0s
INTR Introdacqua 85.04 329 P **P 22 28 24.5 -0.6**
INTR IAmb IAmb 22 28 26.6
comp=Z,13nm,0.8s
RLS Riolos of Patr 85.41 322 P **P 22 28 26.5 -0.4**
EIL Elat 85.42 308 LR LR 23 10 26.8
comp=Z,302nm,18.2s,baz=190,slow=38
146A Union 85.44 47 P **P 22 28 27.6 +0.4**
ITM Ithomi 85.94 321 P **P 22 28 29.2 -0.4**
ITM IAmb IAmb 22 28 40.5
comp=Z,13nm,0.9s
CAF Calviac 86.11 338 *e*P **P 22 28 31.1 +0.8**
CAF pmax pmax
comp=Z,24nm,1.1s
IDI Anoyia 86.15 318 P **P 22 28 28.8 -1.9**
comp=Z,3.2nm,0.5s,baz=26,slow=13,SNR=2.2
comp=Z,3.2nm,0.5s
IDI Anoyia 86.15 318 P **P 22 28 27.4 -3.3**
TIP Timpagrande 86.42 326 P **P 22 28 31.8 -0.2**
LFF La Frestale 86.43 339 *e*P **P 22 28 32.4 +0.6**
LFF pmax pmax
comp=Z,14nm,1.1s
KEST Kesra 92.25 329 P **P 22 28 59.0 -0.5**
comp=Z,3.9nm,0.9s,baz=337,slow=1.6,SNR=4.5
comp=Z,3.9nm,0.9s
ESDC Sonseca Array 92.55 341 P **P 22 28 59.3 -1.5**
comp=Z,1.3nm,1.0s,baz=20,slow=4.7,SNR=4.2
comp=Z,1.3nm,1.0s
TORD Torodi Ar. Bea 115.57 326 PKP **PKiKP 22 34 31.0 -0.7**
comp=Z,0.4nm,0.5s,baz=31,slow=2.5,SNR=6.4
VNDA Vanda 122.60 177 PKP **PKPdf 22 34 43.1 -0.1**
comp=Z,0.3nm,0.7s,baz=310,slow=8.7,SNR=3.6
DBIC Dimbokro 123.96 330 PKP **PKPdf 22 34 45.8 -2.1**
comp=Z,4.6nm,1.1s,baz=312,slow=4.6,SNR=3.1
LPAZ La Paz 136.52 61 PKP **PKPdf 22 35 13.1 +0.8**
comp=Z,0.8nm,0.8s,baz=310,slow=0.3,SNR=3.8
H03N2 Juan Fernandez 140.37 91 T T 01 12 08.1
baz=306,slow=77,SNR=20
H03N3 Juan Fernandez 140.38 91 T T 01 12 07.7
baz=306,slow=77,SNR=21
H03N1 Juan Fernandez 140.38 91 T T 01 12 02.6
baz=306,slow=77,SNR=21
BDFB Brasilia 146.57 34 PKPbc **PKPbc 22 35 30.7 -0.4**
comp=Z,13nm,0.9s,baz=326,slow=2.8,SNR=19
NVL N'lazarevskaya 147.52 204 *e*PKP2 PKPab 22 35 45.7 +11
NVL pmax pmax
comp=Z,12nm,1.0s
TROLL Troll, Antarti 149.17 199 P **PKiKP 22 35 38.0 +0.3**
PLCA Paso Flores 149.66 96 PKPbc **PKiKP 22 35 39.6 0.0**
comp=Z,2.3nm,0.8s,baz=236,slow=6.9,SNR=5.3
SNAA Sanae 150.57 197 P **PKiKP 22 35 41.0 +0.4**
CPUP Villa Florida 150.67 60 PKPbc **PKPbc 22 35 41.5 +0.2**
comp=Z,4.1nm,0.8s,baz=314,slow=3.8,SNR=8.7
VNA3 Neumayer Olymp 152.18 193 P **PKiKP 22 35 44.3 +0.5**

LDG ***23*** *22:23:48.7±0.1, 40°.12N×7°.94W, h11km, Ml2.8/10, Error ellipse: s-maj=2.9km s-min=1.7km az=73.0*
SFS ***23*** *22:23:48.0, 40°.09N×7°.96W, h11km, ML2.9, PAMPILHOSA DA SENA (PORTUGAL)*
INMG ***23*** *22:23:49.1±1.4, 40°.10N×7°.93W, h21km±1km, MD2.5, ML2.9, Error ellipse: s-maj=1.5km s-min=1.2km az=88.0*
CNRM ***23*** *22:23:52.1, 39°.95N×7°.23W, h68km, ml2.5*
MDD 23 22:23:48.1±0.2, 40°.10N×7°.97W, h11km, mb_Lg2.9/26, 3C-6D, Error ellipse: s-maj=2.0km s-min=1.2km az=97.0, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COI	**Coimbra**	**0.36**	**288**	⇓*i*Pg	Pb	22 23 56.7	+0.2

COI			*e*Sg	Sb	22 24 02.1	-0.1
COI			A	A	22 24 03.6	
	910nm,0.6s					
PCAS	**Casmilo, Conde**	**0.41 264⇑**	*e*Pg	Pb	22 23 57.7	+0.3
PCAS			*e*Sg	Sb	22 24 03.8	+0.1
PCAS			A	A	22 24 05.0	
	301nm,0.3s					
MTE	**Manteigas**	**0.44 47⇓**	*i*Pg	Pb	22 23 57.5	-0.5
MTE			*e*Sg	Sg	22 24 03.5	+0.7
MTE			A	A	22 24 04.2	
	384nm,0.3s					
PCBR	**Castelo Branco**	**0.45 124⇓**	*e*Pg	Pg	22 23 57.5	+0.4
PCBR			*e*Sg	Sg	22 24 03.9	+0.8
PCBR			A	A	22 24 04.1	
	362nm,0.2s					
PVIS	**Viseu**	**0.62 5⇓**	*i*Pg	Pg	22 24 00.6	+0.4
PVIS			*e*Sg	Sb	22 24 09.2	-0.6
PVIS			A	A	22 24 10.8	
	1μm,0.3s					
PMRV	**Marv??o**	**0.80 146⇓**	*e*P	Pg	22 24 03.6	0.0
PMRV			*e*S	Sg	22 24 14.1	0.0
PMRV			A	A	22 24 15.1	
	332nm,0.2s					
PSBE	**So Bento**	**0.86 228⇑**	*e*P	Pb	22 24 05.7	+0.5
PSBE			*e*S	Sb	22 24 17.5	+0.8
PSBE			A	A	22 24 19.1	
	93nm,0.5s					
PSANT	**Santarm**	**1.02 214**	*e*P	Pn	22 24 08.5	+0.1
PSANT			*e*S	Sb	22 24 21.9	+0.7
PSANT			A	A	22 24 24.5	
	435nm,0.9s					
PMTG	**Montargil**	**1.05 191⇓**	*e*Pn	Pb	22 24 07.3	-0.9
PMTG	**Montargil**	**1.05 191**	*e*Pg	Pb	22 24 08.2	0.0
PMTG			*e*Sg	Sb	22 24 22.1	+0.2
PMTG			A	A	22 24 22.8	
	112nm,0.1s					
PCDRA	**Caldas da Rain**	**1.13 233**	*e*Sg	Sn	22 24 26.1	+0.7
PTO	**Porto**	**1.15 335**	*e*Pg	Pb	22 24 09.7	-0.3
PTO			*e*Sg	Sb	22 24 25.0	+0.1
PTO			A	A	22 24 26.0	
	492nm,0.1s					
PVRL	**Vila Real**	**1.19 9**	*e*Pn	Pb	22 24 09.3	-1.5
PVRL	**Vila Real**	**1.19 9**	*e*Pg	Pn	22 24 10.8	0.0
PVRL			*e*Sg	Sb	22 24 25.9	-0.3
PVRL			A	A	22 24 27.2	
	274nm,0.2s					
PESTR	**Estremoz**	**1.26 167**	*e*Pn	Pn	22 24 10.2	-1.5
PESTR	**Estremoz**	**1.26 167**	*e*Pg	Pn	22 24 11.7	0.0
PESTR			*e*Sg	Sb	22 24 27.8	-0.4
PESTR			A	A	22 24 28.8	
	69nm,0.1s					
PESTR	**Estremoz**	**1.26 167**	P	Pn	22 24 10.6	-1.1
PESTR			S	Sb	22 24 27.8	-0.3
MVO	**Moncorvo**	**1.28 33⇑**	*e*Pn	Pn	22 24 10.1	-1.9
MVO			*e*Sg	Sb	22 24 28.6	-0.2
MVO			A	A	22 24 29.5	
	212nm,0.3s					
POLO	**Lamas de Olo**	**1.28 6**	*e*Pn	Pn	22 24 10.5	-1.6
POLO	**Lamas de Olo**	**1.28 6**	*e*Pg	Pn	22 24 12.1	0.0
POLO			*e*Sn	Sb	22 24 26.6	-2.2
POLO			*e*Sg	Sn	22 24 29.1	-0.2
POLO			A	A	22 24 29.3	
	64nm,0.2s					
PBEN	**Benavente**	**1.33 210**	*e*Sg	Sg	22 24 31.3	+0.4
EPLA	**Plasencia**	**1.45 91**	Pg	Pb	22 24 14.7	-0.4
EPLA			Sg	Sn	22 24 32.0	-1.3
EPLA			*i* Vmb_Lg		22 24 33.9	
PACT	**Alcochete**	**1.49 207**	*e*Pg	Pg	22 24 16.3	-0.4
PACT			*e*Sg	Sg	22 24 36.0	0.0
PACT			A	A	22 24 41.3	
	98nm,0.3s					
EBAD	**Badajoz**	**1.53 151**	Pn	Pn	22 24 13.6	-1.7
EBAD			Pg	Pb	22 24 16.1	-0.3
EBAD			Sn	Sn	22 24 32.7	-2.4
EBAD			Sg	Sb	22 24 35.8	0.0
EBAD			*i* Vmb_Lg		22 24 38.2	
PMAFR	**Mafra**	**1.53 222**	*e*Pn	Pn	22 24 14.7	-0.7
PMAFR			*e*Sg	Sb	22 24 36.4	+0.6
PMAFR			A	A	22 24 40.1	
	60nm,0.2s					
EVO	**Evora**	**1.56 181**	P	Pn	22 24 15.8	0.0
EVO			S	Sb	22 24 36.7	-0.1
EVO	**Evora**	**1.56 181**	*e*Pn	Pn	22 24 14.5	-1.3
EVO	**Evora**	**1.56 181**	*e*Pg	Pb	22 24 17.1	0.0
EVO			*e*Sg	Sb	22 24 37.5	+0.7
EVO			A	A	22 24 41.5	
	119nm,0.2s					
PCAB	**Cabril**	**1.61 358**	*e*Pn	Pn	22 24 15.2	-1.3
PCAB	**Cabril**	**1.61 358**	*e*Pg	Pb	22 24 17.5	-0.4
PCAB			*e*Sn	Sn	22 24 34.2	-3.1
PCAB			*e*Sg	Sg	22 24 39.3	-0.7
PCAB			A	A	22 24 46.2	
	92nm,0.4s					
PMST	**Lisbon--Monsan**	**1.65 215**	*e*Pg	Pb	22 24 19.0	+0.4
PMST			*e*Sg	Sg	22 24 40.8	-0.5
PMST			A	A	22 24 46.9	
	61nm,0.6s					
LIS	**Lisbon**	**1.66 214**	*e*Sg	Sg	22 24 41.7	+0.3
ELOB	**Lobios**	**1.77 358**	Pn	Pn	22 24 17.2	-1.5
ELOB			Pg	Pb	22 24 20.3	-0.3
ELOB			Sn	Sn	22 24 38.2	-3.1
ELOB			Sg	Sb	22 24 42.5	-0.3
ELOB			*i* Vmb_Lg		22 24 47.1	
PGAV	**Gavieira, Arco**	**1.88 353**	*e*Pn	Pn	22 24 18.9	-1.4
PGAV	**Gavieira, Arco**	**1.88 353**	*e*Pg	Pb	22 24 22.5	0.0
PGAV			*e*Sg	Sb	22 24 47.3	+1.2
PGAV			A	A	22 24 51.8	
	60nm,0.2s					
PBRG	**Braganca**	**1.94 28**	*e*Pn	Pn	22 24 19.6	-1.5
PBRG			*e*Sn	Sn	22 24 42.8	-2.7
PBRG			*e*Sg	Sb	22 24 49.1	+1.3
PBRG			A	A	22 24 53.8	
	49nm,0.3s					
PNCL	**Nicolau / Gran**	**2.03 193**	*e*Pn	Pn	22 24 21.3	-0.9
PNCL			*e*Sg	Sb	22 24 51.7	+1.5
PNCL			A	A	22 24 57.7	
	27nm,0.5s					
PBAR	**Barrancos**	**2.05 159**	*e*Pn	Pn	22 24 21.3	-1.2
PBAR	**Barrancos**	**2.05 159**	*e*Pg	Pb	22 24 25.6	+0.2
PBAR			*e*Sg	Sb	22 24 52.4	+1.6
PBAR			A	A	22 24 56.0	
	56nm,0.4s					
ECAL	**Calabor**	**2.06 26**	Pn	Pn	22 24 21.2	-1.6
ECAL			Sn	Sn	22 24 46.3	-2.3
ECAL			Sg	Sg	22 24 52.9	-1.5
ECAL			*i* Vmb_Lg		22 24 58.5	
PBEJ	**Beja**	**2.07 178**	*e*Pn	Pn	22 24 21.6	-1.2
PBEJ			*e*Sg	Sg	22 24 53.2	-1.5
PBEJ			A	A	22 24 57.1	
	60nm,0.4s					
EZAM	**Zamans**	**2.12 345**	Pn	Pn	22 24 22.3	-1.2
EZAM			Sn	Sn	22 24 46.8	-3.1
EZAM			Sg	Sb	22 24 54.1	+1.2
EZAM			*i* Vmb_Lg		22 24 57.4	
PCVE	**Castro Verde**	**2.46 181**	*e*Pn	Pn	22 24 26.9	-1.3
PCVE			*e*Sg	Sg	22 25 06.0	-1.3
PCVE			A	A	22 25 08.0	
	25nm,0.6s					
EMIN	**Mina Concepcio**	**2.54 156**	Pn	Pn	22 24 28.2	-1.0
EMIN			Sn	Sn	22 24 59.1	-1.0
EMIN			Sg	Sb	22 25 06.7	+1.9
EMIN			*i* Vmb_Lg		22 25 11.8	
EGRO	**El Granado**	**2.59 171**	Pn	Pn	22 24 28.7	-1.2
EGRO			Sn	Sn	22 24 59.3	-2.0
EGRO			Sg	Sg	22 25 09.1	-2.2
EGRO			*i* Vmb_Lg		22 25 14.7	
PTEO	**Sao Teotonio**	**2.62 193**	*e*Pn	Pn	22 24 29.4	-0.9
PTEO			*e*Sg	Sg	22 25 11.4	-0.8
PTEO			A	A	22 25 15.3	
	56nm,0.4s					
PVAQ	**Vaqueiros**	**2.70 176**	*e*Pn	Pn	22 24 30.2	-1.2
PVAQ			*e*Sg	Sb	22 25 11.9	+2.5
PVAQ			A	A	22 25 15.8	
	31nm,0.6s					
PVAQ	**Vaqueiros**	**2.70 176**	P	Pn	22 24 30.3	-1.1
PVAQ			S	Sn	22 25 03.0	-1.0
EAGO	**Agolada(Pontev**	**2.71 358**	Pn	Pn	22 24 30.2	-1.3
EAGO			Sg	Sg	22 25 13.0	-2.1
EAGO			*i* Vmb_Lg		22 25 16.0	
ECAB	**El Cabril**	**2.83 135**	Pn	Pn	22 24 32.1	-1.1
ECAB			Sn	Sn	22 25 05.7	-1.6
ECAB			Sg	Sb	22 25 15.5	+2.2
ECAB			*i* Vmb_Lg		22 25 19.0	
PAB	**San Pablo**	**2.84 100**	Pn	Pn	22 24 32.4	-1.1
PAB			Sn	Sn	22 25 03.2	-4.5
PAB			Sg	Sb	22 25 14.1	+0.5
PAB			*i* Vmb_Lg		22 25 18.7	
MORF	**Marmelete**	**2.84 191**	*e*Pn	Pn	22 24 32.2	-1.2
MORF			*e*Sn	Sn	22 25 04.6	-3.0
MORF			*e*Sg	Sg	22 25 17.8	-1.6
MORF			A	A	22 25 18.5	
	21nm,0.4s					
EMAZ	**Mazaricos**	**2.95 345**	Pn	Pn	22 24 33.8	-1.1
EMAZ			Sn	Sn	22 25 07.4	-2.8
EMAZ			Sg	Sg	22 25 20.6	-2.2
EMAZ			*i* Vmb_Lg		22 25 26.7	
GUD	**Guadarrama**	**2.96 78**	Pn	Pn	22 24 33.0	-2.2
GUD			Sg	Sb	22 25 20.1	+2.9
GUD			*i* Vmb_Lg		22 25 24.3	
PFVI	**Vila Bisbo**	**3.04 193**	*e*Pn	Pn	22 24 34.9	-1.2
PFVI			*e*Sn	Sn	22 25 08.6	-3.8
PFVI			A	A	22 25 32.5	
	27nm,0.8s					
ESDC	**Sonseca Array**	**3.11 97**	Pn	Pn	22 24 35.5	-1.6
ESDC			Sn	Sn	22 25 09.0	-5.2
ESDC			Sg	Sb	22 25 22.7	+1.3
ESDC			*i* Vmb_Lg		22 25 26.8	
EADA	**Adamuz**	**3.26 125**	Pn	Pn	22 24 37.4	-1.8
EADA			Sn	Sn	22 25 14.7	-3.3
EADA			Sg	Sb	22 25 26.3	+0.5
EADA			*i* Vmb_Lg		22 25 33.1	
EPON	**Pontenova**	**3.28 10**	Pn	Pn	22 24 37.4	-2.1
EPON			Sn	Sn	22 25 15.2	-3.3
EPON			Sg	Sg	22 25 31.6	-2.0
EPON			*i* Vmb_Lg		22 25 36.3	
UCM	**Universidad Co**	**3.62 85**	P	Pg	22 25 37.0	+40
UCM			S	Sg	22 26 04.9	+20
ESPR	**Espera**	**3.62 152**	Pn	Pn	22 24 43.8	-0.4
ESPR			*i* Vmb_Lg		22 25 51.4	
EARI	**Arriondas**	**3.81 32**	Pn	Pn	22 24 45.5	-1.2
EARI			Sn	Sn	22 25 27.6	-3.9
EARI			Sg	Sg	22 25 48.1	-2.3
EARI			*i* Vmb_Lg		22 25 57.6	
EGOR	**Sierra Gorda,**	**4.25 133**	Pn	Pn	22 24 53.0	+0.2
EGOR			Sn	Sn	22 25 40.3	-2.1
EGOR			*i* Vmb_Lg		22 26 10.2	
EMIJ	**Mijas**	**4.33 144**	Pn	Pn	22 24 54.1	+0.2
EMIJ			Sn	Sn	22 25 42.1	-2.2
EMIJ			*i* Vmb_Lg		22 26 18.0	
EQES	**Quesada**	**4.45 119**	Pn	Pn	22 24 53.0	-2.6
EQES			Sn	Sn	22 25 42.9	-4.6
EQES			Sg	Sg	22 26 07.5	-3.6
ETOR	**Torete**	**4.57 79**	Pn	Pn	22 24 56.0	-1.2
ETOR			Sn	Sn	22 25 45.4	-4.9
ETOR			Sg	Sg	22 26 11.0	-3.8
ETOR			*i* Vmb_Lg		22 26 17.0	
ELAN	**Lanestosa**	**4.62 46**	Pn	Pn	22 24 56.3	-1.5
ELAN			Sn	Sn	22 25 47.2	-4.3
ELAN			*i* Vmb_Lg		22 26 24.2	
ELGU	**Los Guajares,**	**4.69 132**	Pn	Pn	22 24 57.4	-1.4
ELGU			Sn	Sn	22 25 50.8	-2.5
ELGU			*i* Vmb_Lg		22 26 24.3	
EBER	**Berja**	**5.10 127**	Pn	Pn	22 25 03.5	-1.2
EBER			Sn	Sn	22 26 00.5	-3.2
EBER			*i* Vmb_Lg		22 26 40.8	
ETOB	**Tobarra**	**5.18 104**	Pn	Pn	22 25 04.4	-1.2
ETOB			Sn	Sn	22 26 02.0	-3.4
ETOB			Sg	Sg	22 26 28.8	-5.7
ETOB			*i* Vmb_Lg		22 26 39.4	
EORO	**Oroz-Betelu**	**5.72 59**	Pn	Pn	22 25 11.9	-1.2
EORO			Sn	Sn	22 26 14.5	-4.3
SJPF	**Ste Jean**	**5.88 57**	*e*Pn	Pn	22 25 13.4	-1.8
SJPF			*e*Sn	Sn	22 26 16.5	-6.1
	1.5nm,0.3s					
SJPF			*e*Sg	Sg	22 26 52.4	-4.5
	1.5nm,0.4s					
ETSF	**Etsaut**	**6.22 61**	*e*Pn	Pn	22 25 18.0	-2.0
ETSF	**Etsaut**	**6.22 61**	*e*Pg	Pg	22 25 42.2	-5.1
ETSF			*e*Sn	Sn	22 26 24.9	-6.2
	1.0nm,0.2s					
ETSF			*e*Sg	Sg	22 27 02.8	-5.1
	1.2nm,0.4s					
EPF	**Esparros**	**6.88 62**	*e*Pn	Pn	22 25 27.4	-1.6
EPF			*e*Sn	Sn	22 26 41.0	-6.3
	1.4nm,0.4s					
EPF			*e*Sg	Sg	22 27 23.7	-5.3
	1.5nm,0.4s					
MD31	**MD31**	**7.66 159**	P	Pn	22 25 38.1	-1.7
MD31			S	Sn	22 26 59.5	-7.1
MDT	**Midelt**	**7.75 159**	P	Pn	22 25 39.4	-1.6
MDT			S	Sn	22 27 00.5	-8.3
LFF	**La Frestale**	**8.04 50**	*e*Pn	Pn	22 25 42.6	-2.2
LFF			*e*Sn	Sn	22 27 08.2	-7.5
QUIF	**Quistinic**	**8.55 22**	*e*Pn	Pn	22 25 49.4	-2.3
QUIF			*e*Sn	Sn	22 27 19.8	-8.2
	0.5nm,0.3s					
MFF	**Saint Martin d**	**8.64 39**	*e*Pn	Pn	22 25 50.6	-2.4
MFF			*e*Sn	Sn	22 27 22.5	-7.9
RJF	**Les Rejaudoux**	**8.71 50**	*e*Pn	Pn	22 25 51.1	-2.8
CAF	**Calviac**	**8.84 54**	*e*Pn	Pn	22 25 53.0	-2.8
CAF			*e*Sn	Sn	22 27 27.2	-8.1
	0.4nm,0.2s					
CAF			*e*Sg	Sg	22 28 23.5	-8.1
	1.2nm,0.2s					
ROSF	**Rostrenen**	**8.90 21**	*e*Pn	Pn	22 25 54.1	-2.4
SGMF	**Saint Gilles**	**9.03 24**	*e*Pn	Pn	22 25 55.6	-2.7
LASF	**Ste Croix**	**9.64 62**	*e*Pn	Pn	22 26 04.0	-2.8
TCF	**Toulx Ste Croi**	**9.66 47**	*e*Pn	Pn	22 26 04.0	-3.1
TCF			*e*Sn	Sn	22 27 46.5	-9.1
	1.0nm,0.5s					
GRR	**Gorron**	**9.73 29**	*e*Pn	Pn	22 26 05.4	-2.5
LDF	**La Druitiere**	**10.18 31**	*e*Pn	Pn	22 26 11.3	-2.8
AVF	**Avril sur Loir**	**10.60 47**	*e*Pn	Pn	22 26 16.9	-2.9
SSF	**Saint Saulge**	**10.84 46**	*e*Pn	Pn	22 26 20.6	-2.6
ORIF	**Oris-en-Rattie**	**11.29 60**	*e*Pn	Pn	22 26 26.8	-2.7

SOME ***23*** *22:31:53.9, 38.°43N×71.°33E, h15km, MS3.9*
IDC ***23*** *22:32:21.5±0.6, 39.°02N×71.°88E, h0km, mb4.1/30, mbtmp4.1/38, MLL3.8/9, MS3.2/2, Error ellipse: s-maj=12.3km s-min=8.9km az=157.0*
BJI ***23*** *22:32:22.2±0.0, 39.°18N×71.°63E, h15km, mb4.2/20, mB4.6/11, ML4.0/4, Ms4.0/5, Ms7 3.6/5*
MOS ***23*** *22:32:23.6±1.2, 39.°17N×71.°71E, h13km, mb4.6/13, Error ellipse: s-maj=5.5km s-min=3.3km az=75.0*
MOS Felt (III) at Kara-Teyit, Karamyk; (II-III) at Zhar-Bashy.
NEIC ***23*** *22:32:26.0±1.9, 39.°25N±0.°03×71.°66E±0.°06, h17km±4km, mb4.6/35, Error ellipse: s-maj=6.5km s-min=4.5km az=102.0*
NNC ***23*** *22:32:25.9±1.4, 39.°26N×71.°70E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=12.5km s-min=7.3km az=164.0*
KRNET ***23*** *22:32:25.7±0.1, 39.°32N×71.°62E, h23km, mb4.9*
ISC 23 22:32:24.0±0.9, 39.°16N±0.°03×71.°67E±0.°02, h11km±5km, n296, σ2°46/337, mb4.3/57, 48C-28D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.34**	**18**	**⇑***i*P	**Pg**	**22 32 30.8**	**-0.2**
	baz=41						
DRK				⇑*i*S	**Sg**	**22 32 35.0**	**-0.6**
	baz=41						
DRK	**Karamyk**	**0.34**	**18**		**Pg**	**22 32 30.4**	**-0.6**
DRK				Sg	**Sg**	**22 32 35.7**	**+0.1**
GAR	**Garm**		**1.06 262**	⇓*i*P	**Pn**	**22 32 45.3**	**+0.3**
	baz=53						
GAR				⇓*i*S	**Sn**	**22 33 00.0**	**+0.1**
	baz=53						
GAR	**Garm**		**1.06 262**		**Pn**	**22 32 44.8**	**-0.3**
GAR				Sn	**Sn**	**22 33 00.4**	**+0.5**
GAR	**Garm**		**1.06 262**	*i* PG	**Pn**	**22 32 45.3**	**+0.3**
GAR				*i* S	**Sn**	**22 33 00.0**	**+0.1**
BTK	**Batken**		**1.11 324**	⇑*e*P	**Pb**	**22 32 43.8**	**-1.6**
	baz=20						
BTK				⇑*i*S	**Sb**	**22 32 56.9**	**-3.1**
	baz=20						
BTK	**Batken**		**1.11 324**		**Pb**	**22 32 46.0**	**+0.6**
BTK				Sn	**Sb**	**22 32 59.3**	**-0.8**
BTK	**Batken**		**1.11 324**	PG	**Pb**	**22 32 46.0**	**+0.6**
BTK						22 32 59.3	
OHH	**Osh**		**1.62 32**	⇑*e*P	**Pn**	**22 32 52.9**	**+0.3**
	baz=36						
OHH				⇑*i*S	**Sn**	**22 33 12.5**	**-1.0**
	baz=36						
OHH	**Osh**		**1.62 32**	*e*PN	**Pn**	**22 32 52.9**	**+0.3**
OHH				*i* S	**Sn**	**22 33 12.5**	**-1.0**
CHGR	**Chuyangaron**		**2.02 257**	⇑*i*P	**Pb**	**22 33 01.1**	**+0.3**
	baz=52						
CHGR				⇑*i*S	**Sb**	**22 33 26.7**	**+0.7**
	baz=52						
CHGR	**Chuyangaron**		**2.02 257**		**Pb**	**22 33 01.5**	**+0.7**
CHGR	**Chuyangaron**		**2.02 257**	*i* PN	**Pb**	**22 33 01.1**	**+0.3**
CHGR				*i* S	**Sb**	**22 33 26.7**	**+0.7**
TRKS	**Terek-Say**		**2.41 351**	⇑*i*P	**Pn**	**22 33 03.3**	**-0.3**
	baz=51						
TRKS				⇑*i*S	**Sn**	**22 33 30.4**	**-2.8**
	baz=51						
TRKS	**Terek-Say**		**2.41 351**	*i* PN	**Pn**	**22 33 03.3**	**-0.3**
TRKS				*i* S	**Sn**	**22 33 30.4**	**-2.8**
ARK	**Arkit**		**2.65 5**	⇑*i*P	**Pn**	**22 33 07.5**	**+0.6**
	baz=6.0						
ARK				⇑*i*S	**Sn**	**22 33 38.0**	**-1.1**
	baz=6.0						
ARK	**Arkit**		**2.65 5**	*i* PN	**Pn**	**22 33 07.5**	**+0.6**
ARK				*i* S	**Sn**	**22 33 38.0**	**-1.1**
TAS	**Tashkent**		**2.83 321**	⇑*e*P	**Pn**	**22 33 09.8**	**+0.6**
	baz=19						
TAS				⇑*i*S	**Sn**	**22 33 42.1**	**-1.2**
	baz=19						
TAS	**Tashkent**		**2.83 321**	Pn	**Pn**	**22 33 09.9**	**+0.7**
TAS	**Tashkent**		**2.83 321**	*e*PN	**Pn**	**22 33 09.8**	**+0.6**
TAS				*i* S	**Sn**	**22 33 42.1**	**-1.2**
IUG	**Iuzhnay**		**3.24 338**	*e*PN	**Pb**	**22 33 19.3**	**-2.3**
IUG	**Iuzhnay**		**3.24 338**	*e*P	Pn	22 33 05.6	-9.3
	13nm,0.5s						
IUG				*e*S	**Sn**	**22 33 56.9**	**+3.3**
	2μm,0.8s						
AML	**Almayashu**		**3.35 27**	P	**Pn**	**22 33 20.5**	**+3.7**
	SNR=426						
AML	**Almayashu**		**3.35 27**	*i* PN	**Pn**	**22 33 17.8**	**+1.1**
AML				*i* S	**Sn**	**22 33 55.5**	**-1.2**
KSH	**Kashi**		**3.36 82**	Pn	**Pn**	**22 33 14.9**	**-1.7**
KSH				Sn	Sn	22 33 46.3	-10
KSH				smax	smax		
	comp=N,750nm,0.5s						
KSH				smax	smax		
	comp=E,560nm,0.8s						
CHM	**Chimkent**		**3.53 334**	*e*P	Pn	22 33 10.1	-8.7
	1.4nm,0.3s						
CHM				*e*S	**Sn**	**22 34 04.6**	**+4.0**
	807nm,0.7s						
DZA	**Taraz**		**3.74 356**	*e*P	Pn	22 33 14.9	-6.9
	424nm,0.6s						
DZA				*e*S	**Sb**	**22 34 12.8**	**-2.7**
	1μm,0.5s						
UCH	**Uchtor**		**3.75 34**	P	**Pn**	**22 33 26.1**	**+3.7**
	SNR=142						
MRKS	**Merke**		**3.78 18**	*e*P	Pn	22 33 15.4	-6.9
	0.3nm,0.1s						
MRKS				*e*S	**Sb**	**22 34 13.7**	**-2.9**
	362nm,0.8s						
EKS2	**Erkin-Say**		**3.85 24**	P	**Pn**	**22 33 27.8**	**+4.4**
	SNR=249						
EKS2	**Erkin-Say**		**3.85 24**	⇑*i*P	**Pn**	**22 33 24.6**	**+1.2**
	baz=25						
EKS2				⇑*i*S	**Sn**	**22 34 07.4**	**-1.3**
	baz=25						
EKS2	**Erkin-Say**		**3.85 24**	*i* PN	**Pn**	**22 33 24.6**	**+1.2**
EKS2				*i* S	**Sn**	**22 34 07.4**	**-1.3**
NRN	**Naryn**		**4.02 54**	⇑*e*P	**Pn**	**22 33 27.5**	**+1.6**
	baz=56						
NRN				⇑*i*S	**Sn**	**22 34 12.3**	**-0.9**
	baz=56						
NRN	**Naryn**		**4.02 54**		**Pn**	**22 33 26.6**	**+0.7**
NRN	**Naryn**		**4.02 54**	*e*PN	**Pn**	**22 33 27.5**	**+1.6**
NRN				*i* S	**Sn**	**22 34 12.3**	**-0.9**
KK31	**Karatay Array**		**4.04 348**		**Pn**	**22 33 29.5**	**+3.7**
KK31	**Karatay Array**		**4.04 348**	PN	**Pn**	**22 33 29.2**	**+3.3**
KK31				PG	**Pb**	**22 33 36.8**	**+1.6**
KK31				SN	**Sn**	**22 34 18.1**	**+4.9**
KK31	**Karatay Array**		**4.04 348**	Pn	**Pn**	**22 33 29.2**	**+3.3**
	45nm,0.4s,baz=172,slow=13,SNR=1574						
KK31				⇑Pg	**Pb**	**22 33 36.8**	**+1.6**
	116nm,0.5s,baz=171,slow=13,SNR=8.9						
KK31				⇑Sn	**Sn**	**22 34 18.1**	**+4.9**
	122nm,0.4s,baz=179,slow=23,SNR=5.6						
KK31				⇑Lg	Lg	22 34 32.0	
	118nm,0.5s,baz=163,slow=27,SNR=7.4						
KKAR	**Karatay Array**		**4.04 348**	⇑*e*P	**Pn**	**22 33 26.8**	**+0.9**
	baz=48						
KKAR				⇑*i*S	**Sn**	**22 34 10.9**	**-2.3**
	baz=48						
KKAR	**Karatay Array**		**4.04 348**	Pn	**Pn**	**22 33 29.7**	**+3.8**
KKAR	**Karatay Array**		**4.04 348**	Pn	**Pn**	**22 33 28.9**	**+3.0**
KKAR	**Karatay Array**		**4.04 348**	*e*PN	**Pn**	**22 33 26.8**	**+0.9**
AAK	**Ala-Archa**		**4.09 31**	P	**Pn**	**22 33 30.9**	**+4.2**
	SNR=198						
AAK	**Ala-Archa**		**4.09 31**	Pn	**Pn**	**22 33 29.8**	**+3.2**
	42nm,0.3s,baz=208,slow=8.4,SNR=320						
AAK				Sn	**Sn**	**22 34 13.3**	**-1.2**
	baz=202,slow=20						
AAK				Lg	Lg	22 34 24.8	
	22nm,0.3s,baz=162,slow=20,SNR=7.4						
AAK				LR	LR	22 34 31.1	
	comp=Z,60nm,19.8s,baz=110,slow=31						
	125nm,0.4s						
AAK	**Ala-Archa**		**4.09 31**	⇓*i*P	**Pn**	**22 33 28.1**	**+1.5**
	baz=32						
AAK				⇓*i*S	**Sn**	**22 34 13.2**	**-1.4**
	baz=32						
AAK	**Ala-Archa**		**4.09 31**	Pn	**Pn**	**22 33 29.5**	**+2.8**
AAK	**Ala-Archa**		**4.09 31**	*i* PN	**Pn**	**22 33 28.1**	**+1.5**
AAK				*i* S	**Sn**	**22 34 13.2**	**-1.4**
FRU1	**Bishkek**		**4.29 31**	⇓*i*P	**Pn**	**22 33 30.8**	**+1.5**
	baz=32						
FRU1				⇓*e*S	**Sn**	**22 34 18.4**	**-0.9**
	baz=32						
FRU1	**Bishkek**		**4.29 31**	*i* PN	**Pn**	**22 33 30.8**	**+1.5**
FRU1				*e*S	**Sn**	**22 34 18.4**	**-0.9**
KBK	**Karagaybulak**		**4.29 34**	P	**Pn**	**22 33 33.8**	**+4.3**
	SNR=133						
KBK	**Kar

SGDS Sogindy 4.84 27 *e*PN **Pn 22 33 40.3 +3.4**
SGDS Sogindy 4.84 27 *e*P **Pn 22 33 39.2 +2.3**
216nm,0.6s
SGDS *e*S **Sb 22 34 54.6 +7.5**
174nm,0.7s
SGDS Sogindy 4.84 27 *e*P **Pn 22 33 40.4 +3.4**
baz=26
KST Kastek 5.06 39 *e*P **Pn 22 33 43.6 +3.6**
60nm,0.6s
KST *e*S **Sg 22 35 02.9 -3.6**
112nm,0.6s
KST Kastek 5.06 39 Pg **Pn 22 33 43.6 +3.6**
60nm,0.6s
KST Lg Lg 22 35 02.9
112nm,0.6s
KBL Kabul 5.06 205 Pn **Pn 22 33 43.4 +3.3**
KBL Kabul 5.06 205 PN **Pn 22 33 43.4 +3.3**
CEP Cherat 5.32 178 P Pn 22 33 49.0 +5.3
CEP S **Sn 22 34 50.0 +4.9**
MTBS Maitube 5.36 41 *e*P **Pn 22 33 47.3 +3.3**
96nm,0.6s
MTBS *e*S **Sb 22 35 09.6 +7.5**
68nm,0.7s
MTBS Maitube 5.36 41 Pg **Pn 22 33 47.3 +3.3**
96nm,0.6s
MTBS Lg Lg 22 35 09.6
68nm,0.7s
KRBS Karabastau 5.45 32 *e*P **Pn 22 33 49.6 +4.4**
31nm,0.3s
KRBS *e*S **Sb 22 35 13.2 +8.6**
59nm,0.7s
KRBS Karabastau 5.45 32 Pg **Pn 22 33 49.6 +4.4**
31nm,0.3s
KRBS Lg Lg 22 35 13.2
59nm,0.7s
TNSS Tian-Shan 5.56 44 *e*PN **Pn 22 33 49.7 +2.6**
TNSS Tian-Shan 5.56 44 *e*P **Pn 22 33 49.8 +2.6**
baz=44
CHCP Chirah Chowk 5.63 166 P Pn 22 33 52.7 +4.9
NIL Nilore 5.64 166 **Pn 22 33 51.9 +4.0**
NIL Nilore 5.64 166 PN **Pn 22 33 51.9 +4.0**
AAA Alma-Ata 5.66 43 *e*PN **Pn 22 33 50.0 +1.8**
AAA Alma-Ata 5.66 43 *e*P **Pn 22 33 51.8 +3.5**
22nm,0.4s
AAA *e*S **Sb 22 35 16.0 +5.2**
195nm,0.8s
AAA Alma-Ata 5.66 43 *e*P **Pn 22 33 50.1 +1.8**
baz=42
KNDC Almaty 5.70 43 PN **Pn 22 33 50.9 +2.2**
KNDC PG Pg 22 34 09.5 -3.6
KNDC Almaty 5.70 43 ⇓Pn **Pn 22 33 50.9 +2.2**
48nm,0.7s
KNDC ⇑Pg Pg 22 34 09.5 -3.6
221nm,0.8s
KNDC ⇓Lg Lg 22 35 23.0
345nm,0.9s
MDOK Medeo 5.70 44 PN **Pn 22 33 51.8 +2.9**
MDOK PG Pb 22 34 09.5 +5.9
MDOK Medeo 5.70 44 *e*P **Pn 22 33 53.5 +4.7**
34nm,0.7s
MDOK *e*S **Sb 22 35 19.6 +7.6**
78nm,1.2s
MDOK Medeo 5.70 44 *e*P **Pn 22 33 51.6 +2.8**
baz=44
MDOK Medeo 5.70 44 ⇓Pn **Pn 22 33 51.8 +2.9**
46nm,0.7s
MDOK Pg Pb 22 33 53.5 -10
34nm,0.7s
MDOK ⇑Pg Pg 22 34 09.5 -3.7
46nm,0.7s
MDOK Lg Lg 22 35 19.7
78nm,1.2s
MDOK ⇑Lg Lg 22 35 27.0
165nm,1.3s
KOTS Kotyrbulak 5.79 43 *e*P Pn 22 33 56.3 +6.3
28nm,0.6s
KOTS *e*S **Sg 22 35 23.9 -5.8**
125nm,0.9s
KOTS Kotyrbulak 5.79 43 Pg Pn 22 33 56.3 +6.3
28nm,0.6s
KOTS Lg Lg 22 35 23.9
125nm,0.9s
KUU Kurty 5.89 35 *e*PN **Pn 22 33 53.2 +1.9**
KUU Kurty 5.89 35 *e*P Pn 22 33 58.1 +6.8
9.2nm,0.7s
KUU *e*S **Sg 22 35 27.4 -5.6**
146nm,0.7s
KUU Kurty 5.89 35 *e*P **Pn 22 33 53.3 +1.9**
baz=35
KUU Kurty 5.89 35 Pg Pn 22 33 58.1 +6.8
9.2nm,0.7s
KUU Lg Lg 22 35 27.4
146nm,0.7s
KTBS Karatobe 5.91 38 *e*P Pn 22 33 58.3 +6.7
6.4nm,0.5s
KTBS *e*S **Sg 22 35 28.0 -5.7**
129nm,0.5s
KTBS Karatobe 5.91 38 Pg Pn 22 33 58.3 +6.7
6.4nm,0.5s
KTBS Lg Lg 22 35 28.0
129nm,0.5s
BTLS Baital 6.14 16 *e*PN **Pn 22 33 56.1 +1.4**
BTLS Baital 6.14 16 *e*P Pn 22 34 00.6 +5.9
11nm,0.2s
BTLS *e*S **Sb 22 35 31.9 +7.3**
39nm,0.9s
BTLS Baital 6.14 16 *e*P **Pn 22 33 56.1 +1.4**
baz=16
BTLS Baital 6.14 16 Pg Pn 22 34 00.6 +5.9
11nm,0.2s
BTLS Lg Lg 22 35 31.9
39nm,0.9s
CHKK Chushkaly 6.16 39 *e*P Pn 22 34 02.7 +7.7
5.7nm,0.3s
CHKK *e*S **Sg 22 35 35.6 -6.2**
68nm,0.7s
CHKK Chushkaly 6.16 39 Pg Pn 22 34 02.7 +7.7
5.7nm,0.3s
CHKK Lg Lg 22 35 35.6
68nm,0.7s
THW Thamme Wali 6.35 179 P **Pn 22 34 01.4 +3.8**
SATY Saty 6.41 50 *e*PN **Pn 22 34 00.5 +2.0**
SATY Saty 6.41 50 *e*P Pn 22 34 05.4 +6.8
20nm,0.9s
SATY *e*S **Sb 22 35 40.4 +8.0**
52nm,0.7s
SATY Saty 6.41 50 *e*P **Pn 22 34 00.5 +2.0**
baz=50
SATY Saty 6.41 50 Pg Pn 22 34 05.4 +6.8
20nm,0.9s
SATY Lg Lg 22 35 40.4
52nm,0.7s
KURS Kuram 6.53 46 *e*P Pn 22 34 08.6 +8.4
10nm,0.6s
KURS *e*S Sb 22 35 46.3 +10
53nm,2.0s
KURS Kuram 6.53 46 Pg Pn 22 34 08.6 +8.4
10nm,0.6s
KURS Lg Lg 22 35 46.3
53nm,2.0s
KPKS Kokpek 6.81 49 *e*PN **Pn 22 34 06.1 +2.1**
KPKS Kokpek 6.81 49 *e*P Pn 22 34 14.2 +10
21nm,0.6s
KPKS *e*S **Sg 22 35 55.8 -6.9**
74nm,0.8s
KPKS Kokpek 6.81 49 *e*P **Pn 22 34 06.2 +2.1**
baz=48
KPKS Kokpek 6.81 49 Pg Pn 22 34 14.2 +10
21nm,0.6s
KPKS Lg Lg 22 35 55.8
74nm,0.8s
UZB Uzynbulak 6.83 52 *e*PN **Pn 22 34 06.4 +2.1**
UZB Uzynbulak 6.83 52 *e*P Pn 22 34 14.5 +10
23nm,0.5s
UZB *e*S Sb 22 35 55.1 +10
49nm,1.0s
UZB Uzynbulak 6.83 52 *e*P **Pn 22 34 06.5 +2.1**
baz=52
UZB Uzynbulak 6.83 52 Pg Pn 22 34 14.5 +10
23nm,0.5s
UZB Lg Lg 22 35 55.1
49nm,1.0s
ARXS Arharly 6.84 40 *e*PN **Pn 22 34 06.3 +1.9**
ARXS Arharly 6.84 40 *e*P Pb 22 34 15.3 -7.7
39nm,0.6s
ARXS *e*S **Sg 22 35 57.6 -5.9**
46nm,0.7s
ARXS Arharly 6.84 40 Pg Pb 22 34 15.3 -7.6
39nm,0.6s
ARXS Lg Lg 22 35 57.6
46nm,0.7s
JMU Jammu 6.94 157 *e*P **Pn 22 34 05.3 -0.3**
BLB Baldybastay 7.10 44 *e*P Pn 22 34 18.1 +10
21nm,1.0s
BLB *e*S Sb 22 36 02.3 +10
55nm,0.8s
BLB Baldybastay 7.10 44 Pg Pn 22 34 18.1 +10
21nm,1.0s
BLB Lg Lg 22 36 02.3
55nm,0.8s
SHLS Shalkode 7.11 53 *e*P Pn 22 34 14.0 +5.8
SHLS Shalkode 7.11 53 *e*P Pb 22 34 24.4 -3.2
5.8nm,0.5s
SHLS *e*S **Sg 22 36 12.2 0.0**
31nm,0.8s
SHLS Shalkode 7.11 53 *e*P Pn 22 34 14.1 +5.9
baz=54
SHLS Shalkode 7.11 53 Pg Pb 22 34 24.4 -3.2
5.8nm,0.5s
SHLS Lg Lg 22 36 12.2
31nm,0.8s
PDGK Podgornoye 7.22 52 PN **Pn 22 34 11.6 +1.9**
PDGK PG Pg 22 34 37.7 -4.5
PDGK Podgornoye 7.22 52 ⇓Pn **Pn 22 34 11.6 +1.9**
38nm,0.9s
PDGK ⇓Pg Pg 22 34 37.7 -4.5
32nm,0.7s
PDGK ⇑Lg Lg 22 36 15.6
60nm,0.9s
THN Thein Dam 7.47 153 *e*P **Pn 22 34 14.8 +1.8**
THN *e*S **Sn 22 35 36.6 -1.1**
TDK Taldyqorghan 7.70 38 *e*P Pb 22 34 29.7 -7.8
30nm,0.8s
TDK *e*S Sg 22 36 22.0 -8.9
127nm,0.8s
TDK Taldyqorghan 7.70 38 Pg Pb 22 34 29.7 -7.8
30nm,0.8s
TDK Lg Lg 22 36 22.0
127nm,0.8s
DJR Jarkent 7.97 47 *e*P Pb 22 34 33.6 -8.6
4.9nm,0.5s
DJR *e*S Sb 22 36 29.4 +12
23nm,0.6s
DJR Jarkent 7.97 47 Pg Pb 22 34 33.6 -8.6
4.9nm,0.5s
DJR Lg Lg 22 36 29.4
23nm,0.6s
BHK Bhakra 8.64 152 *e*P **Pn 22 34 30.6 +1.6**
BHK *e*S **Sn 22 36 04.4 -2.1**
HRA Herat 8.93 241 Pn **Pn 22 34 34.7 +1.4**
OTUK Ortayu 9.10 3 P **Pn 22 34 36.9 +1.6**
OTUK Ortayu 9.10 3 ⇑Pn **Pn 22 34 36.9 +1.6**
7.1nm,0.8s
OTUK ⇑Lg Lg 22 37 13.2
99nm,1.2s
SMLA Simla 9.19 149 *e*P **Pn 22 34 37.0 +0.5**
SMLA *e*S **Sn 22 36 16.2 -3.6**
SMLA IAML 22 36 25.0
comp=N,103nm,0.6s
SMLA IAML 22 36 25.7
comp=E,98nm,0.5s
GEYT Alibeck 10.69 268 Pn **Pn 22 34 55.9 -1.2**
comp=E,0.7nm,0.3s,baz=87,slow=12,SNR=5.4
GEYT Sn **Sn 22 36 54.1 -2.7**
comp=E,2.4nm,0.3s,baz=91,slow=18,SNR=5.8
comp=E,1.6nm,0.3s
GEYT Alibeck 10.69 268 Pn **Pn 22 34 58.0 +0.9**
GYA0 ALIBECK ARRAY 10.69 268 P **Pn 22 34 57.7 +0.6**
GYA0 SN **Sn 22 36 58.1 +1.3**
GYA0B ALIBECK ARRAY 10.69 268 **Pn 22 34 58.4 +1.3**
GYA0B ALIBECK ARRAY 10.69 268 ⇑Pn **Pn 22 34 57.7 +0.6**
GYA0B ⇓Sn **Sn 22 36 58.1 +1.4**
MAKZ Makanchi 10.74 41 Pn **Pn 22 34 59.1 +1.3**
MAKZ Makanchi 10.74 41 P **Pn 22 34 59.1 +1.3**
MAKZ Makanchi 10.74 41 ⇓Pn **Pn 22 34 59.8 +2.0**
comp=E,5.3nm,0.8s
MAKZ ⇓Lg Lg 22 38 05.7
comp=E,12nm,1.1s
BRZS Berezniki 10.85 3 *e*P **Pn 22 34 59.6 +0.4**
BRZS Berezniki 10.85 3 *e*P **Pn 22 34 59.7 +0.4**
baz=3.4
MK31 Makanchi Array 10.89 42 **Pn 22 35 01.3 +1.4**
MK31 Makanchi Array 10.89 42 P **Pn 22 35 01.3 +1.4**
MK31 Makanchi Array 10.89 42 ⇑Pn **Pn 22 35 01.9 +2.0**
comp=E,13nm,0.8s,baz=233,slow=13,SNR=62
MK31 ⇑Lg Lg 22 38 09.8
comp=E,5.5nm,0.8s,baz=230,slow=30,SNR=3.9
MKAR Makanchi Array 10.89 42 Pn **Pn 22 35 01.3 +1.4**
comp=E,0.5nm,0.3s,baz=234,slow=14,SNR=36
MKAR Lg Lg 22 38 05.3
comp=E,0.2nm,0.3s,baz=238,slow=23,SNR=2.4
comp=E,17nm,1.0s
MKAR Makanchi Array 10.89 42 Pn **Pn 22 35 00.9 +1.0**
MKAR Makanchi Array 10.89 42 P **Pn 22 35 00.9 +1.0**
KURBB Kurchatov Arra 12.45 21 Pn **Pn 22 35 19.9 -1.2**
comp=E,0.4nm,0.3s,baz=212,slow=13,SNR=20
KURBB Lg Lg 22 38 57.4
comp=E,0.1nm,0.3s,baz=173,slow=31,SNR=3.9
comp=E,4.8nm,1.0s
KURK Kurchatov 12.56 21 Pn **Pn 22 35 21.3 -1.3**
KURK Kurchatov 12.56 21 P **Pn 22 35 21.3 -1.3**
KURK Kurchatov 12.56 21 ⇓Pn **Pn 22 35 21.0 -1.5**
comp=E,11nm,1.3s
KURK ⇑Lg Lg 22 39 04.7
comp=E,30nm,0.9s
AB31 Akbulak array 13.12 324 P **Pn 22 35 30.8 +0.5**
AB31 SN **Sn 22 37 57.6 +1.3**
AB31 Akbulak array 13.12 324 Pn **Pn 22 35 30.8 +0.5**
comp=E,10nm,0.7s,baz=133,slow=14,SNR=163
AB31 Sn **Sn 22 37 57.6 +1.3**
comp=E,12nm,0.5s,baz=131,slow=22,SNR=11
ABKAR Akbulak array 13.12 324 Pn **Pn 22 35 30.7 +0.4**
ABKAR Akbulak array 13.12 324 Pn **Pn 22 35 30.3 0.0**
BVAR Borovoye Array 13.90 357 Pn **Pn 22 35 40.3 -0.6**
comp=E,0.7nm,0.3s,baz=154,slow=12,SNR=32
BVAR Sn **Sn 22 38 13.2 -2.0**
comp=E,0.4nm,0.3s,baz=167,slow=21,SNR=4.2
BVAR Lg Lg 22 39 44.1
comp=E,0.1nm,0.3s,baz=203,slow=26,SNR=1.3
comp=E,3.2nm,0.5s
BRVK Borovoye 13.94 357 Pn **Pn 22 35 40.9 -0.5**
BRVK Borovoye 13.94 357 *ce*P **Pn 22 35 40.9 -0.5**
BRVK pmax pmax
comp=Z,17nm,1.7s
BRVK Borovoye 13.94 357 ⇓Pn **Pn 22 35 40.6 -0.8**
comp=Z,12nm,1.1s
DANN Dangsing 14.73 133 *e*P Pn 22 35 47.1 -5.5
AKTO Aktyubinsk 14.84 324 Pn **Pn 22 35 54.0 +0.3**
comp=Z,0.7nm,0.3s,baz=143,slow=12,SNR=15
AKTO Sn **Sn 22 38 34.5 -3.6**
comp=Z,0.9nm,0.3s,baz=156,slow=20,SNR=8.4
comp=Z,4.3nm,0.6s
AKTO Aktyubinsk 14.84 324 ⇓Pn **Pn 22 35 54.9 +1.1**
comp=Z,24nm,0.8s
AKTO ⇑Sn **Sn 22 38 41.1 +3.0**
comp=Z,21nm,0.6s
DGZ Jazzator, Alta 15.39 42 *i* P **Pn 22 36 00.3 -1.0**
DGZ pmax pmax
comp=Z,18nm,1.0s
GKN Gorkha 15.49 132 *e*P **Pn 22 35 57.1 -5.6**
comp=Z,8.8nm,0.3s
PKIN Phulchoki 16.25 131 *e*P **Pn 22 36 06.6 -6.0**
PKI Pulchoki 16.26 131 *e*P **Pn 22 36 06.9 -5.9**
GUN Gumba 16.29 129 *e*P **Pn 22 36 07.3 -5.9**
comp=Z,5.4nm,0.4s
JIRN Jiri 16.66 129 *e*P **Pn 22 36 11.7 -6.2**
comp=Z,6.3nm,0.4s
ZAA0 Zalesovo Array 17.30 27 P **Pn 22 36 24.7 -0.6**
ZAA0 IAmb IAmb 22 36 28.2
comp=Z,36nm,0.6s
ZAA0 Zalesovo Array 17.30 27 ⇑Pn **Pn 22 36 25.5 +0.2**
comp=Z,4.4nm,0.6s
ZALV Zalesovo Beam 17.30 27 P **Pn 22 36 24.5 -0.9**
comp=Z,8.9nm,0.3s,baz=218,slow=11,SNR=104
ZALV Lg Lg 22 41 28.5
comp=Z,0.1nm,0.3s,baz=223,slow=23,SNR=1.1
ZALV Zalesovo Beam 17.30 27 P **Pn 22 36 24.6 -0.8**
RAMN Ramite 17.43 130 *e*P **Pn 22 36 21.9 -5.6**
TAPN Taplejung 17.82 127 *e*P **Pn 22 36 26.7 -5.6**
AKT Akhty 18.39 285 *i* P **P 22 36 44.6 +5.5**
AKT *e*S **S 22 40 06.8 -2.4**
AKT pmax pmax
comp=Z,7.0nm,0.6s
AKT smax smax
comp=N,9.0nm,0.7s
AKT smax smax
comp=E,8.0nm,0.4s
GOMU GeErMu 18.55 92 P **P 22 36 39.3 -1.9**
GOMU S **Sn 22 40 10.3 +1.5**
GOMU LR LR
comp=E,430nm,19.0s
GOMU LR LR
comp=E,590nm,17.5s
GOMU LR LR
comp=E,680nm,17.9s
SEKA Sheki 18.80 284 P **Pn 22 36 45.6 +1.6**
SVE Sverdlovsk 19.12 341 *e*P **Pn 22 36 48.4 +0.7**
SVE pmax pmax
comp=Z,9.0nm,0.9s
ZKTA Zakatala 19.22 285 P **Pn 22 36 50.7 +1.6**
ARU Arti 19.34 338 P **P 22 36 49.6 +0.3**
baz=155,slow=8.0,SNR=14
ARU S **Sn 22 40 22.6 -4.4**
comp=Z,1.8nm,0.7s,baz=58,slow=22,SNR=2.0
comp=Z,4.4nm,0.5s
ARU Arti 19.34 338 P **P 22 36 49.0 -0.2**
ARU Arti 19.34 338 *d i* P **P 22 36 49.1 -0.2**
ARU S **Sn 22 40 26.8 -0.1**
ARU pmax pmax
comp=Z,18nm,1.6s
WSAR Wadi Sarin 19.36 219 P **P 22 36 49.5 -0.2**
comp=Z,0.1nm,0.3s,baz=58,slow=9.5,SNR=1.6
comp=Z,2.3nm,0.9s
GANJ Ganja 19.49 282 P **Pn 22 36 54.1 +1.8**
GNI Garni 20.73 281 P Pn 22 37 07.9 +0.7
comp=Z,6.3nm,1.0s,baz=158,slow=17,SNR=2.7
GNI Garni 20.73 281 *i* P Pn 22 37 08.5 +1.4
GNI pmax pmax
comp=Z,23nm,1.2s
BELG Belogornoye 21.24 316 P **P 22 37 10.2 +0.3**
comp=Z,18nm,0.9s,baz=65,slow=1.9,SNR=10
BELG S **S 22 41 03.4 -2.3**
comp=Z,2.5nm,0.5s,baz=38,slow=18,SNR=1.5
comp=Z,18nm,0.9s
BELG Belogornoye 21.24 316 *i* P **P 22 37 09.8 -0.1**
BELG pmax pmax
comp=Z,4.0nm,1.0s
NCK Nalchik 21.48 291 *i* P **P 22 37 15.1 +2.5**
NCK pmax pmax
comp=Z,23nm,0.7s
ONI Oni 21.57 288 P **P 22 37 14.6 +1.0**
ONI IAmb IAmb 22 37 32.6
comp=Z,17nm,0.9s
ONI Oni 21.57 288 P **P 22 37 14.6 +1.0**
ONI pmax pmax
comp=Z,17nm,0.9s
GTA Gaotai 21.76 80 ⇓P **P 22 37 16.3 +0.5**
GTA pmax pmax
comp=Z,10.0nm,1.1s
KBZ Khabaz 21.99 291 P **P 22 37 18.3 +0.2**
comp=Z,2.6nm,0.9s,baz=95,slow=8.3,SNR=2.8
KBZ S **S 22 41 18.4 -2.2**
comp=Z,2.6nm,0.9s,baz=87,slow=17,SNR=1.2
comp=Z,2.6nm,0.9s
KBZ Khabaz 21.99 291 *i* P **P 22 37 20.4 +2.4**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KVAR Kislovodsk Arr 22.15 292 P **P 22 37 21.7 +1.8**
comp=Z,3.0nm,0.9s,baz=88,slow=17,SNR=1.6
comp=Z,3.0nm,0.9s
KIV Kislovodsk 22.15 292 P **P 22 37 21.3 +1.4**
KIV IAmb IAmb 22 37 46.5
comp=Z,9.4nm,0.7s
KIV Kislovodsk 22.15 292 *e*P **P 22 37 23.2 +3.3**
KIV *e*S **S 22 41 22.0 -1.9**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIRV Kirov 24.13 331 P **P 22 37 40.3 +0.7**
comp=Z,15nm,0.7s,baz=109,slow=2.5,SNR=9.6
comp=Z,15nm,0.7s
KIRV Kirov 24.13 331 *ce*P **P 22 37 40.4 +0.7**
KIRV *i* *PP **pP 22 37 43.6 -0.2**
VSR Storozhevoye 25.66 309 *e*P **P 22 37 54.8 +1.1**
VSR pmax pmax
comp=Z,9.0nm,1.2s
VORR Voronezh 25.76 310 *e*P **P 22 37 54.2 -0.4**
VORR pmax pmax
comp=Z,20nm,0.4s
ANN Anapa 25.94 294 *e*P P 22 38 04.2 +7.9
ANN pmax pmax
comp=Z,62nm,1.0s
LPSR Galich'ya Gora 26.20 312 *e*P **P 22 37 59.2 +0.6**
LPSR pmax pmax
comp=Z,8.0nm,0.6s
SONM Songino Array 26.46 59 P **P 22 37 59.9 -1.3**
comp=Z,4.0nm,0.8s,baz=277,slow=9.4,SNR=12
comp=Z,4.0nm,0.8s
SONM Songino Array 26.46 59 P **P 22 38 01.3 +0.1**
SONM Songino Array 26.46 59 P **P 22 38 01.3 +0.1**
SONM pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 26.90 60 P **P 22 38 04.7 -0.5**
ULN Ulaanbaatar 26.90 60 *ce*P **P 22 38 04.3 -0.9**
ULN pmax pmax
comp=Z,13nm,2.5s
RAYN Ar Rayn 27.11 243 P **P 22 38 08.3 +1.2**
RAYN Ar Rayn 27.11 243 P **P 22 38 08.3 +1.2**
RAYN pmax pmax
comp=Z,3.0nm,0.9s
PZH PanZhiHua 28.11 108 P **P 22 38 19.3 +3.1**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,80nm,3.8s
ASF Jabal al Asfar 28.97 267 LR LR 22 50 41.6
comp=Z,291nm,21.6s,baz=285,slow=38
BRTR Keskin Array B 29.23 283 P **P 22 38 27.8 +1.7**
comp=Z,0.6nm,0.8s,baz=112,slow=3.9,SNR=3.9
comp=Z,0.6nm,0.8s
BRTR Keskin Array B 29.23 283 *ce*P **P 22 38 29.2 +3.1**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
MMAI Mount Meron Ar 29.80 269 P **P 22 38 29.8 -1.3**
comp=Z,0.2nm,0.3s,baz=57,slow=10,SNR=1.2
comp=Z,0.2nm,0.3s
NRIK Noril'sk 31.42 11 P **P 22 38 44.0 -0.9**
comp=Z,5.6nm,0.8s,baz=203,slow=6.4,SNR=6.1
comp=Z,5.6nm,0.8s
NRIK Noril'sk 31.42 11 *ce*P **P 22 38 45.1 +0.2**
NRIK pmax pmax
comp=Z,6.0nm,0.8s
AKASG Malin Array Be 31.77 305 P **P 22 38 48.5 +0.4**
comp=Z,0.2nm,0.2s,baz=81,slow=8.0,SNR=5.1
comp=Z,0.2nm,0.2s
AKASG Malin Array Be 31.77 305 *ce*P **P 22 38 50.7 +2.6**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 34.02 296 P **P 22 39 09.5 +1.4**
comp=Z,2.1nm,0.9s,baz=135,slow=13
comp=Z,2.1nm,0.9s
BJT Baijiatuau 34.04 74 P **P 22 39 08.3 +0.2**
BJT IAmb IAmb 22 39 23.5
comp=Z,4.5nm,0.7s
BJT Baijiatuau 34.04 74 P **P 22 39 08.3 +0.2**
BJT pmax pmax
comp=Z,5.0nm,0.7s
FIA1 FINESS Array S 35.61 324 P **P 22 39 22.0 +0.5**
FINES FINESS Array B 35.62 324 P **P 22 39 22.3 +0.9**
comp=Z,3.4nm,0.8s,baz=115,slow=8.2,SNR=18
comp=Z,3.4nm,0.8s
IDI Anoyia 37.13 279 P **P 22 39 36.9 +2.0**
comp=Z,3.6nm,1.0s,baz=74,slow=19,SNR=1.1
comp=Z,3.6nm,1.0s
VYHS Vyhne 38.55 302 *e*P **P 22 39 48.5 +1.9**
NJ2 Nanjing 38.66 86 *e*P **P 22 39 46.0 -1.7**
NJ2 pmax pmax
comp=Z,9.0nm,1.5s
ARA0 ARCESS Array S 38.91 336 *e*P **P 22 39 50.4 +1.0**
ARCES ARCESS Array B 38.91 336 P **P 22 39 50.2 +0.8**
comp=Z,2.0nm,0.6s,baz=111,slow=9.4,SNR=14
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 38.91 336 P **P 22 39 50.2 +0.8**
ARCES IAmb IAmb 22 40 02.8
comp=Z,22nm,1.4s
KTK1 Kautokeino 39.42 335 *e*P **P 22 39 54.1 +0.5**
KTK1 IAmb IAmb 22 40 00.8
comp=Z,10nm,1.1s
DPC Dobruska-Polom 39.99 305 *e*P **P 22 39 59.7 +1.0**
DPC Dobruska-Polom 39.99 305 *e*P **P 22 39 59.7 +1.0**
HFS Hagfors 41.34 320 P **P 22 40 10.1 +0.5**

comp=Z,4.4nm,0.5s,baz=96,slow=11,SNR=26
comp=Z,4.4nm,0.5s
CKRC Cesky Krumlov 41.49 303 *e*P P 22 40 19.0 +8.0
YAK Yakutsk 41.52 37 P **P 22 40 08.9 -2.1**
comp=Z,7.2nm,0.4s,baz=276,slow=0.6,SNR=6.8
comp=Z,7.2nm,0.4s
YAK Yakutsk 41.52 37 P **P 22 40 10.0 -1.0**
YAK Yakutsk 41.52 37 *e*P **P 22 40 10.0 -1.0**
YAK pmax pmax
comp=Z,36nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,13nm,1.4s
MOR8 Moi Rana 41.79 329 *e*P **P 22 40 13.5 +0.2**
MOR8 IAmb IAmb 22 40 23.3
comp=Z,22nm,1.2s
GERES GERESS Array B 41.88 303 P **P 22 40 14.2 -0.1**
comp=Z,0.8nm,0.6s,baz=64,slow=9.2,SNR=9.7
comp=Z,0.8nm,0.6s
KHC Kasperske Hory 41.91 303 P **P 22 40 14.6 +0.1**
KHC IAmb IAmb 22 40 40.0
comp=Z,10nm,1.4s
KHC Kasperske Hory 41.91 303 P **P 22 40 14.6 +0.1**
KHC pmax pmax
comp=Z,10.0nm,1.4s
KHC Kasperske Hory 41.91 303 *e*P **P 22 40 14.2 -0.3**
NC602 NORSAR Array S 42.44 321 *e*P **P 22 40 19.2 +0.7**
NB2 NORSAR Subarra 42.61 321 P **P 22 40 20.3 +0.3**
comp=Z,0.9nm,0.6s,baz=93,slow=8.6
NB2 NORSAR Subarra 42.61 321 P **P 22 40 20.3 +0.3**
baz=93,slow=8.6
NOA NORSAR Array B 42.61 321 P **P 22 40 19.7 -0.3**
comp=Z,2.4nm,0.8s,baz=92,slow=8.0,SNR=5.0
comp=Z,2.4nm,0.8s
NC204 NORSAR Array S 42.84 322 P **P 22 40 22.3 +0.4**
BJO1 Bjornoya 42.91 342 *e*P **P 22 40 23.3 +1.1**
TIXI Tiksi 43.12 23 P **P 22 40 23.5 -0.4**
TIXI IAmb IAmb 22 40 24.6
comp=Z,10nm,0.8s
TIXI Tiksi 43.12 23 *c e*P **P 22 40 22.3 -1.6**
TIXI pmax pmax
comp=Z,11nm,0.8s
KLR Kul'dur 43.19 56 P **P 22 40 23.8 -1.0**
comp=Z,1.8nm,0.5s,baz=275,slow=6.5,SNR=12
comp=Z,1.8nm,0.5s
USRK Ussuriysk Ar. 44.45 63 P **P 22 40 33.4 -1.6**
comp=Z,0.7nm,0.6s,baz=326,slow=14,SNR=2.3
comp=Z,0.7nm,0.6s
SENIN Lac Senin/Sane 46.64 301 P **P 22 40 53.0 +0.4**
SENIN IAmb IAmb 22 41 00.4
comp=Z,5.9nm,0.8s
KEST Kesra 48.74 287 P **P 22 41 10.4 +1.6**
comp=Z,2.7nm,0.9s,baz=64,slow=16,SNR=2.1
comp=Z,2.7nm,0.9s
EKA Eskdalemuir Ar 50.77 315 P **P 22 41 24.7 +0.7**
comp=Z,2.7nm,0.8s,baz=74,slow=10,SNR=4.6
comp=Z,2.7nm,0.8s
KMBO Kilima Mbogo 51.02 227 P **P 22 41 27.5 +0.9**
comp=Z,0.7nm,0.5s,baz=45,slow=19,SNR=2.7
comp=Z,0.7nm,0.5s
MJAR Matsushiro Arr 51.53 71 P **P 22 41 28.2 -1.8**
comp=Z,1.8nm,0.7s,baz=306,slow=9.5,SNR=5.1
comp=Z,1.8nm,0.7s
DAG Danmarks Havn 52.34 343 *i* P **P 22 41 35.0 -0.4**
ESDC Sonseca Array 56.71 297 P **P 22 42 08.2 +0.4**
comp=Z,0.9nm,0.9s,baz=61,slow=5.8,SNR=3.8
comp=Z,0.9nm,0.9s
SUMG Summit 58.73 341 *i* P **P 22 42 22.0 +0.1**
EUNU Eureka 60.40 356 P **P 22 42 33.4 +0.5**
EUNU IAmb IAmb 22 42 40.9
comp=Z,6.7nm,1.1s
A21K Barrow 64.62 15 P **P 22 43 01.2 +0.2**
TOA0 Torodi Ar. Sit 66.33 268 P **P 22 43 12.5 -0.5**
TOA0 IAmb IAmb 22 43 39.7
comp=Z,8.1nm,1.4s
TORD Torodi Ar. Bea 66.33 268 P **P 22 43 12.2 -0.7**
comp=Z,0.7nm,0.5s,baz=45,slow=5.3,SNR=11
comp=Z,0.7nm,0.5s
TOLK Toolik Lake Re 68.22 15 P **P 22 43 24.6 +0.4**
COLD Coldfoot 69.28 16 P **P 22 43 31.2 +0.4**
IMAR Indian Mountai 69.49 18 P **P 22 43 31.8 -0.3**
H21K Melozitna Rive 69.98 18 P **P 22 43 35.3 +0.1**
H21K IAmb IAmb 22 43 43.6
comp=Z,5.1nm,1.1s
BMAR Burnt Mountain 70.24 14 P **P 22 43 37.6 +0.8**
H23K Yukon River 70.60 17 P **P 22 43 39.0 0.0**
H23K IAmb IAmb 22 43 40.2
comp=Z,4.9nm,0.8s
J20K Nowinta River 70.85 19 P **P 22 43 40.8 +0.3**
J20K IAmb IAmb 22 43 41.6
comp=Z,5.7nm,0.7s
INK Inuvik 71.20 10 P **P 22 43 42.9 +0.3**
comp=Z,5.7nm,0.5s,baz=343,slow=5.6,SNR=35
comp=Z,5.7nm,0.5s
INK Inuvik 71.20 10 P **P 22 43 42.8 +0.3**
CAST Castle Rocks 72.00 19 P **P 22 43 47.5 0.0**
CAST IAmb IAmb 22 43 48.3
comp=Z,4.8nm,0.7s
ILAR Eielson Array 72.09 16 P **P 22 43 46.8 -1.1**
comp=Z,3.0nm,0.9s,baz=320,slow=5.1,SNR=33
comp=Z,3.0nm,0.9s
SCRK Sand Creek 73.40 16 P **P 22 43 55.9 0.0**
SCRK IAmb IAmb 22 43 56.3
comp=Z,4.7nm,0.9s
DHY Denali Highway 73.44 17 P **P 22 43 55.5 -0.7**
K27K Chicken 73.74 15 P **P 22 43 58.2 +0.5**
K27K IAmb IAmb 22 43 59.1
comp=Z,3.9nm,0.8s
L27K Beaver Creek, 74.66 15 P **P 22 44 03.7 +0.5**
HYT Haines Junctio 77.55 14 P **P 22 44 20.9 +1.1**
HYT IAmb IAmb 22 44 21.4
comp=Z,7.0nm,0.9s
YKA Yellowknife Ar 78.57 3 P **P 22 44 25.2 0.0**
comp=Z,4.1nm,0.8s,baz=348,slow=5.7,SNR=17
comp=Z,4.1nm,0.8s
WRA Warramunga Arr 82.96 123 P **P 22 44 47.4 -1.9**
comp=Z,1.3nm,0.7s,baz=326,slow=4.8,SNR=7.6
comp=Z,1.3nm,0.7s
ASAR Alice Springs 85.35 126 P **P 22 44 59.2 -2.2**
comp=Z,0.5nm,0.5s,baz=313,slow=5.8,SNR=5.2
comp=Z,0.5nm,0.5s

*LDG **23** 22:33:28.8±0.1, 48.°72N×8.°02E, h6km, Md2.0/1, Ml1.8/5, Error ellipse: s-maj=1.5km s-min=1.2km az=56.0*
STR 23 22:33:28.9±0.3, 49.°N±2.°×.°±.°, h0km, MLv1.2/18, 1D, Error ellipse: s-maj=0.0km s-min=0.0km az=73.4, preliminary, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUBF	**Surbourg**	**0.23**	**334**	Pg	Pg	22 33 33.3	-0.1
OPP	**Oppenau**	**0.24**	**149**	⇓Pg	Pg	22 33 33.0	-0.5
SZBH	**soultz borehol**	**0.24**	**338**	Pg	Pg	22 33 33.4	-0.3
SZBH				Sg	Sg	22 33 37.2	+0.4
CIEL	**Dossenheim-sur**	**0.44**	**287**	Pg	Pb	22 33 39.2	-0.4
CIEL				Sg	Sg	22 33 43.6	+0.6
WLS	**Welschbruch**	**0.52**	**236**	Pg	Pg	22 33 39.0	+0.1
WLS				Sg	Sg	22 33 45.9	+0.3
CDF	**Champ du Feu**	**0.56**	**239**	*e*Pg	Pg	22 33 39.5	-0.2
CDF				*e*Sg	Sg	22 33 47.8	+0.8
	6.8nm,0.2s						
ECH	**Echery**	**0.74**	**229**	Pg	Pg	22 33 43.7	+0.5
ECH				Sg	Sg	22 33 53.2	+0.4
KIZ	**Kirchzarten**	**0.75**	**184**	Pg	Pg	22 33 43.4	+0.1
KIZ	**Kirchzarten**	**0.75**	**184**	Sg	Sg	22 33 53.9	+0.9
GUT	**Gutenstein**	**0.98**	**130**	Sg	Sg	22 34 00.0	-0.3
GUT	**Gutenstein**	**0.98**	**130**	Pg	Pg	22 33 47.2	-0.4
SLE	**Schleitheim**	**1.00**	**161**	Pg	Pg	22 33 47.3	-0.7
SLE	**Schleitheim**	**1.00**	**161**	Sg	Sg	22 34 00.6	-0.3
MOF	**Molkenrain**	**1.03**	**214**	Pg	Pg	22 33 48.5	-0.2
MOF				Sg	Sb	22 34 03.3	-0.6
HINF	**Hinteralfeld**	**1.18**	**221**	*e*Pn	Pg	22 33 50.3	-1.1
HINF	**Hinteralfeld**	**1.18**	**221**	*e*Pg	Pg	22 33 51.2	-0.2
HINF				*e*Sg	Sg	22 34 06.7	+0.1
	3.8nm,0.2s						
ABH	**Alteburg**	**1.21**	**346**	Pg	Pg	22 33 51.1	-1.1
HAU	**Haudompre**	**1.31**	**238**	*e*Pn	Pg	22 33 51.4	-2.5
HAU	**Haudompre**	**1.31**	**238**	*e*Pg	Pg	22 33 53.4	-0.5
HAU				*e*Sg	Sg	22 34 10.6	-0.3
	3.8nm,0.3s						
BALST	**Balsthal**	**1.39**	**189**	Pn	Pg	22 33 54.8	-0.7
PAGF	**Fort de Pagny**	**1.52**	**265**	*e*Pn	Pn	22 33 55.0	-2.3
PAGF	**Fort de Pagny**	**1.52**	**265**	*e*P	Pn	22 33 56.9	-0.4
PAGF				*e*Sg	Sg	22 34 17.5	-0.1
	0.3nm,0.2s						
SAVF	**Savonnieres en**	**1.91**	**268**	*e*P	Pn	22 34 02.1	-0.6
SFTF	**Sexfontaines**	**2.04**	**257**	*e*Pn	Pn	22 34 01.2	-3.2
SFTF				*e*Sg	Sb	22 34 33.4	+0.8
	0.9nm,0.2s						
LOR	**Lormes**	**3.13**	**244**	*e*Pn	Pn	22 34 16.6	-2.9
LOR				*e*Sg	Sg	22 35 07.9	-1.6
	0.5nm,0.2s						

MAN 23 22:47:06.0, 9.°97N×126.°27E, h74km, mb3.9, ML2.7, MS2.3, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.23**	**217**	⇑*e*P	Pn	22 47 17.9	+0.6
GLSP				*e*S	Sn	22 47 28.2	+2.7
SCPH	**Surigao**	**0.79**	**256**	⇑*i*P	Pn	22 47 24.5	+2.3
SCPH				*i* S	Sn	22 47 35.1	+0.8
MSLP	**Maasin**	**1.40**	**277**	⇓*e*P	Pn	22 47 30.4	+0.7
MSLP				*e*S	Sn	22 47 48.8	+1.1
BESP	**Borongan**	**1.81**	**333**	⇓*e*P	Pn	22 47 36.2	+0.9
BESP				*e*S	Sn	22 47 58.5	+0.9
TABP	**Talibon, Bohol**	**1.91**	**274**	⇑*i*P	Pn	22 47 38.1	+1.5
TABP				*i* S	Sn	22 48 00.8	+1.0
GHBP	**Garcia Hernand**	**1.95**	**260**	⇑*i*P	Pn	22 47 40.3	+3.2
GHBP				*e*S	Sn	22 48 01.7	+1.0
TBP	**Tagbilaran**	**2.39**	**264**	*e*P	Pn	22 47 47.0	+4.0
TBP				*i* S	Sn	22 48 17.6	+6.3

*IDC **23** 22:47:22.8±1.8, 60.°06N×153.°26W, h87km±29km, mb3.4/2, mbtmp3.9/7, Error ellipse: s-maj=34.2km s-min=10.7km az=108.0*
*NEIC **23** 22:47:24.3±0.9, 60.°01N±0.°05×153.°08W±0.°05, h125km±6km, Error ellipse: s-maj=7.3km s-min=3.7km az=181.0*
*AEIC **23** 22:47:26±1.3, 60.°02N±0.°05×153.°04W±0.°07, h113km±5km, ML3.3, ML3.4/106(NEIC), Error ellipse: s-maj=7.2km s-min=5.2km az=194.0*
ISC 23 22:47:24.4±0.9, 60.°00N±0.°04×153.°02W±0.°03, h122km±6km, n162, σ0.972/172, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O20K	**Slope Mountain**	**0.21**	**68**	P	**Pn**	**22 47 41.6**	**+0.3**
	baz=255						
O20K				S	**Sn**	**22 47 54.3**	**+0.1**
	baz=255						
P19K	**Oil Pt**	**0.37**	**197**		**Pn**	**22 47 42.2**	**+0.3**
P19K				Sn	**Sn**	**22 47 54.0**	**-1.1**
P19K	**Oil Pt**	**0.37**	**197**	P	**Pn**	**22 47 42.2**	**+0.3**
	baz=14						
P19K				S	**Sn**	**22 47 55.1**	**0.0**
	baz=14						
RSO	**Redoubt South**	**0.48**	**16**		**Pn**	**22 47 41.8**	**-0.9**
O19K	**Port Alsworth**	**0.68**	**287**		**Pn**	**22 47 43.8**	**0.0**
O19K				Sn	**Sn**	**22 47 57.3**	**-1.0**
O19K				IAML		22 47 58.4	
	comp=N,2μm,0.5s						
O19K				IAML		22 47 59.9	
	comp=E,956nm,0.5s						
O19K	**Port Alsworth**	**0.68**	**287**	P	**Pn**	**22 47 43.7**	**0.0**
	baz=104						
O19K				S	**Sn**	**22 47 57.6**	**-0.8**
	baz=104						
HOM	**Homer**	**0.78**	**116**		**Pn**	**22 47 45.3**	**+0.7**
HOM				Sn	**Sn**	**22 48 00.3**	**+0.6**
HOM	**Homer**	**0.78**	**116**	P	**Pn**	**22 47 45.3**	**+0.7**
	baz=298						
HOM				S	**Sn**	**22 48 00.6**	**+0.8**
	baz=298						
CNPM	**China Poot**	**1.02**	**117**		**Pn**	**22 47 47.4**	**+0.6**
CNPM				IAML		22 48 05.6	
	comp=N,708nm,0.4s						
CNPM				IAML		22 48 05.0	
	comp=E,951nm,0.6s						
N19K	**Bonanza Creek**	**1.09**	**319**	Pn	**Pn**	**22 47 47.6**	**+0.1**
N19K				IAML		22 48 05.0	
	comp=E,508nm,0.7s						
N19K	**Bonanza Creek**	**1.09**	**319**	P	**Pn**	**22 47 47.6**	**+0.1**
	baz=137						
BRLK	**Bradley Lake**	**1.10**	**102**		**Pn**	**22 47 48.0**	**+0.4**
BRLK				IAML		22 48 06.0	
	comp=N,884nm,0.6s						
BRLK				IAML		22 48 06.1	
	comp=E,1μm,0.4s						
O18K	**Koktuh Hills**	**1.11**	**263**		**Pn**	**22 47 47.9**	**+0.2**
O18K	**Koktuh Hills**	**1.11**	**263**	P	**Pn**	**22 47 47.7**	**0.0**
	baz=80						
Q19K	**Cape Douglas,**	**1.12**	**197**		**Pn**	**22 47 48.1**	**+0.3**
Q19K				IAML		22 48 06.4	
	comp=N,834nm,0.7s						
Q19K				IAML		22 48 12.7	
	comp=E,631nm,0.7s						
Q19K	**Cape Douglas,**	**1.12**	**197**	P	**Pn**	**22 47 48.2**	**+0.3**
	baz=15						
BRSE	**Bradley Lake S**	**1.18**	**102**	P	**Pn**	**22 47 48.8**	**+0.4**
	baz=285						
CAPN	**Captain Cook N**	**1.21**	**50**	P	**Pn**	**22 47 50.8**	**+2.2**
	baz=232						
SPCR	**Spurr Chakacha**	**1.27**	**18**	P	**Pn**	**22 47 49.7**	**+0.4**
	baz=200						
P18K	**Big Mountain,**	**1.28**	**242**		**Pn**	**22 47 49.4**	**0.0**
P18K	**Big Mountain,**	**1.28**	**242**	P	**Pn**	**22 47 49.4**	**0.0**
	baz=59						
SPU	**Mount Spurr**	**1.28**	**22**		**Pn**	**22 47 49.8**	**+0.3**
N18K	**Kilae Creek**	**1.58**	**297**	Pn	**Pn**	**22 47 52.9**	**0.0**
N18K	**Kilae Creek**	**1.58**	**297**	P	**Pn**	**22 47 52.8**	**0.0**
	baz=114						
SVW2	**Sparrevohn**	**1.68**	**312**		**Pn**	**22 47 53.8**	**-0.1**
KAHC	**Katmai Hardscr**	**1.70**	**218**	P	**Pn**	**22 47 54.9**	**+0.5**
	baz=35						
O22K	**Cooper Landing**	**1.71**	**72**		**Pn**	**22 47 54.9**	**+0.5**
O22K	**Cooper Landing**	**1.71**	**72**	P	**Pn**	**22 47 54.9**	**+0.5**
	baz=256						
SEW	**Seward**	**1.79**	**85**	Pn	**Pn**	**22 47 55.6**	**+0.3**
SEW	**Seward**	**1.79**	**85**	P	**Pn**	**22 47 55.5**	**+0.2**
	baz=269						
SUA	**Susitna One**	**1.84**	**36**		**Pn**	**22 47 57.0**	**+0.8**
SUA				IAML		22 48 22.1	
	comp=E,641nm,1.0s						
SUA				IAML		22 48 22.0	
	comp=N,412nm,0.6s						
SUA	**Susitna One**	**1.84**	**36**	P	**Pn**	**22 47 56.9**	**+0.8**
	baz=219						
M20K	**Styx River**	**1.89**	**358**		**Pn**	**22 47 57.3**	**+0.7**
M20K	**Styx River**	**1.89**	**358**	P	**Pn**	**22 47 57.2**	**+0.7**
	baz=179						
RC01	**Rabbit Creek A**	**1.96**	**55**	Pn	**Pn**	**22 47 57.6**	**+0.3**
RC01	**Rabbit Creek A**	**1.96**	**55**	P	**Pn**	**22 47 57.7**	**+0.4**
	baz=238						
M19K	**Big River Lodg**	**2.02**	**341**		**Pn**	**22 47 58.5**	**+0.4**
M19K	**Big River Lodg**	**2.02**	**341**	P	**Pn**	**22 47 58.4**	**+0.2**
	baz=160						
SKT	**Skwentna**	**2.11**	**19**		**Pn**	**22 47 59.8**	**+0.5**
SKT	**Skwentna**	**2.11**	**19**	P	**Pn**	**22 47 59.8**	**+0.5**
	baz=201						
KDAK	**Kodiak Island**	**2.24**	**174**	P	**Pn**	**22 48 00.6**	**-0.3**
	comp=N,47nm,0.4s,baz=24,slow=12,SNR=123						
KDAK				S	**Sn**	**22 48 27.0**	**-1.8**
	comp=N,158nm,0.4s,baz=268,slow=21,SNR=77						
KDAK	**Kodiak Island**	**2.24**	**174**		**Pn**	**22 48 00.5**	**-0.3**
KDAK				IAML		22 48 29.8	
	comp=N,423nm,0.3s						
M22K	**Willow**	**2.26**	**38**		**Pn**	**22 48 02.0**	**+1.0**
M22K	**Willow**	**2.26**	**38**	P	**Pn**	**22 48 02.0**	**+1.0**
	baz=221						
L19K	**White Mountain**	**2.36**	**339**	Pn	**Pn**	**22 48 02.6**	**+0.2**
L19K	**White Mountain**	**2.36**	**339**	P	**Pn**	**22 48 02.7**	**+0.2**
	baz=157						
PWL	**Port Wells**	**2.48**	**68**		**Pn**	**22 48 03.4**	**-0.5**
PWL				IAML		22 48 33.6	
	comp=E,404nm,0.2s						
PMR	**Palmer**	**2.49**	**48**		**Pn**	**22 48 03.4**	**-0.6**
PMR				IAML		22 48 34.6	
	comp=E,237nm,0.4s						
PMR				IAML		22 48 34.7	
	comp=N,170nm,0.6s						
PMR	**Palmer**	**2.49**	**48**	P	**Pn**	**22 48 03.6**	**-0.4**
	baz=232						
L20K	**Farewell, AK**	**2.52**	**351**	P	**Pn**	**22 48 05.2**	**+0.7**
	baz=170						
KNK	**Knik Glacier**	**2.65**	**56**		**Pn**	**22 48 05.7**	**-0.4**
KNK	**Knik Glacier**	**2.65**	**56**	P	**Pn**	**22 48 05.8**	**-0.4**
	baz=240						
GHO	**Glory Hole Cre**	**2.68**	**47**		**Pn**	**22 48 06.2**	**-0.3**
GHO				IAML		22 48 39.8	
	comp=N,204nm,0.4s						
GHO				IAML		22 48 45.1	
	comp=E,276nm,0.7s						
CUT	**Chulitna**	**2.75**	**28**		**Pn**	**22 48 07.9**	**+0.5**
CUT				IAML		22 48 41.4	
	comp=E,283nm,0.3s						
CUT				IAML		22 48 42.2	
	comp=N,256nm,0.3s						
CUT	**Chulitna**	**2.75**	**28**	P	**Pn**	**22 48 08.1**	**+0.6**
	baz=211						
OHAK	**Old Harbor**	**2.79**	**183**	Pn	**Pn**	**22 48 07.3**	**-0.7**
OHAK				IAML		22 48 40.7	
	comp=N,107nm,0.3s						
OHAK				IAML		22 48 42.0	
	comp=E,104nm,0.6s						
OHAK	**Old Harbor**	**2.79**	**183**	P	**Pn**	**22 48 07.3**	**-0.7**
	baz=2.5						
SML	**Sawmill**	**2.92**	**50**		**Pn**	**22 48 09.2**	**-0.5**
SML				IAML		22 48 51.0	
	comp=E,158nm,1.0s						
SML				IAML		22 48 56.3	
	comp=N,143nm,0.8s						
SML	**Sawmill**	**2.92**	**50**	P	**Pn**	**22 48 09.2**	**-0.5**
	baz=234						
PPLA	**Purkeypile**	**2.93**	**7**		**Pn**	**22 48 10.9**	**+1.0**
PPLA	**Purkeypile**	**2.93**	**7**	P	**Pn**	**22 48 11.3**	**+1.4**
	baz=186						
GLI	**Glacier Island**	**3.07**	**71**	P	**Pn**	**22 48 10.9**	**-0.7**
	baz=256						
HIN	**Hinchinbrook I**	**3.28**	**80**		**Sn**	**22 48 50.9**	**-2.1**
SCM	**Sheep Creek Mo**	**3.33**	**54**		**Pn**	**22 48 14.7**	**-0.4**
SCM				IAML		22 48 57.7	
	comp=N,201nm,0.8s						
FID	**Port Fidalgo**	**3.33**	**74**	Pn	**Pn**	**22 48 14.0**	**-1.1**
K20K	**Telida**	**3.40**	**352**		**Pn**	**22 48 16.5**	**+0.5**
K20K	**Telida**	**3.40**	**352**	P	**Pn**	**22 48 16.7**	**+0.7**
	baz=171						
Q23K	**Middleton Isla**	**3.43**	**97**	P	**Pn**	**22 48 16.8**	**+0.6**
	baz=283						
CAST	**Castle Rocks**	**3.46**	**7**	Pn	**Pn**	**22 48 17.3**	**+0.6**
CAST	**Castle Rocks**	**3.46**	**7**	P	**Pn**	**22 48 17.3**	**+0.6**
	baz=188						
SII	**Sitkinak Islan**	**3.51**	**191**	Pn	**Pn**	**22 48 16.7**	**-0.7**
SII				IAML		22 48 58.0	
	comp=E,110nm,0.3s						
SII				IAML		22 48 58.3	
	comp=N,102nm,0.7s						
SII	**Sitkinak Islan**	**3.51**	**191**	P	**Pn**	**22 48 16.6**	**-0.7**
	baz=9.3						
WAT1	**Susitna Watana**	**3.56**	**35**	P	**Pn**	**22 48 18.1**	**+0.1**
	baz=220						
WAT6	**Susitna Watana**	**3.63**	**42**	P	**Pn**	**22 48 18.8**	**-0.3**
	baz=227						
EYAK	**Cordova Ski Ar**	**3.66**	**78**	P	**Pn**	**22 48 19.6**	**+0.2**
	baz=265						
TRF	**Thorofare Moun**	**3.70**	**19**		**Pn**	**22 48 20.3**	**+0.2**
TRF				IAML		22 49 07.8	
	comp=E,32nm,0.7s						
TRF				IAML		22 49 28.6	
	comp=N,45nm,2.5s						
TRF	**Thorofare Moun**	**3.70**	**19**	P	**Pn**	**22 48 20.2**	**+0.2**
	baz=202						
KTH	**Kantishna Hill**	**3.70**	**15**	Pn	**Pn**	**22 48 20.2**	**+0.3**
KTH				IAML		22 49 24.0	
	comp=N,27nm,1.1s						
KLU	**Klutina**	**3.79**	**64**		**Pn**	**22 48 20.5**	**-0.7**
KLU	**Klutina**	**3.79**	**64**	P	**Pn**	**22 48 20.6**	**-0.5**
	baz=250						
CHUM	**Lake Minchumin**	**3.91**	**5**	P	**Pn**	**22 48 23.4**	**+0.8**
	baz=185						
M24K	**Tolsona, Glenn**	**3.94**	**55**	Pn	**Pn**	**22 48 23.3**	**+0.1**
M24K	**Tolsona, Glenn**	**3.94**	**55**	P	**Pn**	**22 48 23.3**	**+0.1**
	baz=241						
RND	**Reindeer**	**3.95**	**28**		**Pn**	**22 48 23.3**	**0.0**
RND				IAML		22 49 18.0	
	comp=E,21nm,0.7s						
DHY	**Denali Highway**	**4.10**	**39**		**Pn**	**22 48 25.3**	**0.0**
DHY				IAML		22 49 14.2	
	comp=N,90nm,0.4s						
DHY				IAML		22 49 15.1	
	comp=E,73nm,0.4s						
DHY	**Denali Highway**	**4.10**	**39**	P	**Pn**	**22 48 25.3**	**0.0**
	baz=224						
MCK	**McKinley**	**4.21**	**26**	Pn	**Pn**	**22 48 27.1**	**+0.4**
MCK				IAML		22 49 53.9	
	comp=N,26nm,1.3s						
MCK				IAML		22 49 56.4	
	comp=E,21nm,1.3s						
MCK	**McKinley**	**4.21**	**26**	P	**Pn**	**22 48 27.1**	**+0.4**
	baz=209						
BPAW	**Bear Paw Mtn.**	**4.22**	**12**	Pn	**Pn**	**22 48 26.8**	**0.0**
BPAW				IAML		22 50 36.5	
	comp=E,30nm,0.6s						
BPAW				IAML		22 50 54.1	
	comp=N,16nm,3.3s						
BPAW	**Bear Paw Mtn.**	**4.22**	**12**	P	**Pn**	**22 48 26.9**	**+0.1**
	baz=194						
J20K	**Nowinta River**	**4.22**	**353**	Pn	**Pn**	**22 48 27.4**	**+0.6**
J20K				IAML		22 49 25.8	
	comp=N,20nm,3.6s						
J20K	**Nowinta River**	**4.22**	**353**	P	**Pn**	**22 48 27.6**	**+0.8**
	baz=172						
KAIM	**Kayak Island**	**4.33**	**87**	P	**Pn**	**22 48 28.8**	**+0.6**
	baz=275						
HMT	**Hamilton**	**4.39**	**82**	Pn	**Pn**	**22 48 29.4**	**+0.3**
CHIR	**Chirikof Islan**	**4.42**	**199**	P	**Pn**	**22 48 28.8**	**-0.7**
	baz=17						
N25K	**Chitina, Valde**	**4.43**	**65**	Pn	**Pn**	**22 48 29.3**	**-0.3**
N25K				IAML		22 49 20.7	
	comp=E,72nm,0.5s						
N25K	**Chitina, Valde**	**4.43**	**65**	P	**Pn**	**22 48 29.4**	**-0.3**
	baz=253						
HARP	**HAARP**	**4.50**	**54**	P	**Pn**	**22 48 30.8**	**+0.2**
	baz=242						
BWN	**Browne**	**4.50**	**20**		**Pn**	**22 48 31.7**	**+1.1**
BWN				IAML		22 49 30.9	
	comp=E,36nm,3.3s						
BWN				IAML		22 50 07.2	
	comp=N,52nm,1.5s						
CHGN	**Chignik**	**4.68**	**220**		**Pn**	**22 48 33.5**	**+0.5**
PAX	**Paxson**	**4.69**	**47**	Pn	**Pn**	**22 48 33.3**	**+0.2**
PAX	**Paxson**	**4.69**	**47**	P	**Pn**	**22 48 33.2**	**+0.2**
	baz=234						
GLB	**Gilahina Butte**	**4.75**	**68**		**Pn**	**22 48 34.0**	**+0.1**
GLB				IAML		22 49 28.8	
	comp=E,58nm,0.5s						
GLB				IAML		22 49 29.3	
	comp=N,62nm,0.4s						
VRDI	**Verde Repeater**	**4.87**	**71**	Pn	**Pn**	**22 48 36.1**	**+0.4**
VRDI				IAML		22 49 32.7	
	comp=E,35nm,0.4s						
NEA2	**Nenana**	**4.96**	**20**		**Pn**	**22 48 36.7**	**0.0**
NEA2				IAML		22 49 49.6	
	comp=N,13nm,4.4s						
NEA2				IAML		22 49 52.6	
	comp=E,13nm,4.8s						
NEA2	**Nenana**	**4.96**	**20**	P	**Pn**	**22 48 36.7**	**0.0**
	baz=204						
MCARA	**McCarthy VSAT**	**5.11**	**70**	P	**Pn**	**22 48 39.1**	**+0.4**
	baz=259						
MLY	**Manley**	**5.16**	**11**		**Pn**	**22 48 39.1**	**-0.2**
MLY				IAML		22 49 20.0	
	comp=E,11nm,3.6s						
MLY				IAML		22 50 25.4	
	comp=N,11nm,3.6s						
MLY	**Manley**	**5.16**	**11**	P	**Pn**	**22 48 39.4**	**+0.1**
	baz=193						
I21K	**Tanana**	**5.22**	**5**		**Pn**	**22 48 40.5**	**+0.3**
I21K				IAML		22 49 57.9	
	comp=N,21nm,3.2s						
I21K				IAML		22 50 42.3	
	com

	comp=E,40nm,0.8s							
RIDG					IAML			22 50 06.7
	comp=N,35nm,1.0s							
M26K	**Nabesna, AK**	**5.41**	**59**			**Pn**		**22 48 42.9 +0.1**
M26K	**Nabesna, AK**	**5.41**	**59**	P		**Pn**		**22 48 43.2 +0.4**
	baz=248							
I23K	**Minto, Yukon-K**	**5.43**	**17**			**Pn**		**22 48 43.1 +0.1**
I23K	**Minto, Yukon-K**	**5.43**	**17**	P		**Pn**		**22 48 43.7 +0.7**
	baz=200							
TCOL	**CIGO, UAF Yank**	**5.44**	**24**			**Pn**		**22 48 43.3 +0.2**
TCOL	**CIGO, UAF Yank**	**5.44**	**24**	P		**Pn**		**22 48 43.3 +0.2**
	baz=209							
COLA	**College**	**5.45**	**24**			**Pn**		**22 48 43.5 +0.3**
MDM	**Murphy Dome**	**5.45**	**22**			**Pn**		**22 48 43.3 +0.1**
L26K	**Log Cabin Wild**	**5.53**	**53**			**Pn**		**22 48 45.2 +0.8**
MESA	**MESA**	**5.54**	**83**			**Pn**		**22 48 46.1 +1.3**
MESA	**MESA**	**5.54**	**83**	P		**Pn**		**22 48 45.8 +1.0**
	baz=273							
IL31		**5.57**	**28**			**Pn**		**22 48 44.6 -0.3**
ILAR	**Eielson Array**	**5.57**	**28**	P		**Pn**		**22 48 44.3 -0.6**
	comp=N,31nm,0.4s,baz=214,slow=14,SNR=703							
ILAR					S	**Sn**		**22 49 44.5 -3.2**
	comp=N,2.9nm,0.4s,baz=219,slow=14,SNR=6.2							
ILAR	**Eielson Array**	**5.57**	**28**			**Pn**		**22 48 44.7 -0.2**
DOT	**Dot Lake**	**5.60**	**45**			**Pn**		**22 48 45.3 0.0**
YAH	**Yahtse**	**5.64**	**81**			**Pn**		**22 48 46.6 +0.6**
H21K	**Melozitna Rive**	**5.68**	**1**	Pn		**Pn**		**22 48 46.6 +0.2**
H21K	**Melozitna Rive**	**5.68**	**1**	P		**Pn**		**22 48 46.8 +0.4**
	baz=181							
BARN	**Barnard Glacie**	**5.71**	**74**			**Pn**		**22 48 48.4 +1.4**
POKR	**Poker Plat Res**	**5.75**	**24**			**Pn**		**22 48 47.1 -0.1**
POKR	**Poker Plat Res**	**5.75**	**24**	P		**Pn**		**22 48 47.1 -0.1**
	baz=209							
SCRK	**Sand Creek**	**5.83**	**43**	Pn		**Pn**		**22 48 47.9 -0.6**
SCRK	**Sand Creek**	**5.83**	**43**	P		**Pn**		**22 48 47.9 -0.6**
	baz=231							
J25K	**Salcha River,**	**5.84**	**34**			**Pn**		**22 48 48.6 0.0**
J25K	**Salcha River,**	**5.84**	**34**	P		**Pn**		**22 48 48.6 0.0**
	baz=221							
CTG	**Chitna Glacier**	**5.86**	**75**	P		**Pn**		**22 48 50.1 +1.2**
	baz=266							
CTGM	**Chitina Glacie**	**5.86**	**75**			**Pn**		**22 48 50.3 +1.4**
M27K	**Edge Creek, AK**	**5.88**	**62**			**Pn**		**22 48 50.4 +1.1**
M27K	**Edge Creek, AK**	**5.88**	**62**	P		**Pn**		**22 48 50.2 +0.9**
	baz=252							
IMAR	**Indian Mountai**	**6.01**	**357**	Pn		**Pn**		**22 48 51.4 +0.5**
H23K	**Yukon River**	**6.06**	**14**			**Pn**		**22 48 52.1 +0.6**
H23K	**Yukon River**	**6.06**	**14**	P		**Pn**		**22 48 52.1 +0.6**
	baz=197							
L27K	**Beaver Creek,**	**6.17**	**55**			**Pn**		**22 48 53.7 +0.7**
H24K	**Noodor Dome**	**6.31**	**20**	Pn		**Pn**		**22 48 54.9 +0.1**
H24K	**Noodor Dome**	**6.31**	**20**	P		**Pn**		**22 48 55.0 +0.1**
	baz=204							
J26L	**Joseph Creek**	**6.31**	**40**			**Pn**		**22 48 54.9 -0.1**
YUK3	**Moose Creek**	**6.38**	**68**	P		**Pn**		**22 48 57.4 +1.3**
	baz=260							
PINM	**Pinnacle**	**6.40**	**84**	P		**Pn**		**22 48 56.8 +0.7**
	baz=275							
PRP	**Porcupine Dome**	**6.51**	**29**	Pn		**Pn**		**22 48 57.7 0.0**
PRP	**Porcupine Dome**	**6.51**	**29**	P		**Pn**		**22 48 57.7 0.0**
	baz=216							
I26K	**Coal Creek Min**	**6.99**	**36**			**Pn**		**22 49 03.5 -0.6**
FYU	**Fort Yukon**	**7.46**	**25**			**Pn**		**22 49 10.1 -0.2**
DAWY	**Dawson**	**7.59**	**52**			**Pn**		**22 49 12.7 +0.5**
INK	**Inuvik**	**11.84**	**37**	P		**Pn**		**22 50 08.5 -0.6**
	comp=N,1.3nm,0.5s,baz=231,slow=11,SNR=8.5							
DLBC	**Dease Lake**	**11.87**	**88**	P		**Pn**		**22 50 11.8 +2.1**
	comp=N,1.8nm,0.4s,baz=280,slow=12,SNR=26							
DLBC					S	**Sn**		**22 52 17.3 -2.8**
	comp=N,1.6nm,0.7s,baz=203,slow=7.7,SNR=1.9							
YKA	**Yellowknife Ar**	**18.46**	**66**	P		**Pn**		**22 51 32.2 +0.3**
	comp=N,0.7nm,0.5s,baz=276,slow=10.0,SNR=9.2							
SONM	**Songino Array**	**54.78**	**306**	P		**P**		**22 56 42.0 +0.8**
	comp=N,0.9nm,0.7s,baz=33,slow=6.2,SNR=5.5							
	comp=N,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**57.37**	**324**	P		**P**		**22 57 00.3 +1.0**
	comp=N,0.5nm,0.5s,baz=28,slow=6.7,SNR=2.6							
	comp=N,0.5nm,0.5s							

ECX ***23*** *22:59:19.8±1.8, 18°.32N×104°.03W, h0km±55km, MD4.9, ML5.3*
IDC ***23*** *22:59:26.3±0.6, 18°.93N×104°.48W, h0km, mb4.5/23, mbtmp4.5/26, ML4.0/4, MS5.0/65, Error ellipse: s-maj=17.0km s-min=11.4km az=56.0*
NEIC ***23*** *22:59:29.7±1.9, 18°.90N±0°.05×104°.57W±0°.06, h12km±1km, mb5.3/510, Ms_20 5.0/284, Mwb5.4/43, Mww5.6, Md5.6/178(MEX), Error ellipse: s-maj=10.9km s-min=6.4km az=228.0*
MEX ***23*** *22:59:29.9±0.8, 18°.82N×104°.74W, h14km±9km, MD5.6*
MOS ***23*** *22:59:29.3±1.1, 18°.94N×104°.50W, h26km, mb5.7/19, MS5.1/16, Error ellipse: s-maj=8.7km s-min=5.4km az=89.3*
GCMT ***23*** *22:59:32.9±0.2, 19°.00N±0°.01×104°.66W±0°.01, h19km, MW5.5/155, Moment Tensor Solution. s130,c214; s155,c282; Duration: 1s4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.76±.03; $M_{\theta\theta}$-1.07±.02; $M_{\phi\phi}$-0.68±.02; $M_{r\theta}$1.30±.06; $M_{\theta\phi}$1.08±.02; $M_{\phi r}$-0.69±.06; Best double couple: $M_0$2.38100×10^{17} NP1:ϕ_s122.00000°, δ64.00000°, λ82.00000°. NP2:ϕ_s319.00000°, δ27.00000°, λ105.00000°. Principal axes: T 2.2920, Plg70.0000°, Azm17.0000°; N 0.1830, Plg7.0000°, Azm125.0000°; P -2.4710, Plg19.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***23*** *22:59:36.2, 19°.11N×104°.58W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.66; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-0.20; $M_{r\theta}$1.04; $M_{\theta\phi}$0.55; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.37000×10^{17} NP1:ϕ_s112.89000°, δ73.31000°, λ78.02000°. NP2:ϕ_s329.35000°, δ20.44000°, λ124.69000°. Principal axes: T 1.2828, Plg60.0000°, Azm6.0000°; N 0.1681, Plg11.0000°, Azm116.0000°; P -1.4509, Plg27.0000°, Azm212.0000°;*
NEIC ***23*** *22:59:39, 19°.00N×104°.59W, h26km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.74; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$-0.79; $M_{r\theta}$1.87; $M_{\theta\phi}$0.42; $M_{\phi r}$-1.28; Fault plane solution: $M_0$2.75000×10^{17} NP1: ϕ_s311.00000°, δ17.00000°, λ95.00000°. NP2: ϕ_s125.00000°, δ73.00000°, λ88.00000°. Principal axes: T 2.9468, Plg62.0000°, Azm33.0000°; N -0.4477, Plg2.0000°, Azm126.0000°; P -2.4991, Plg28.0000°, Azm217.0000°;*
ISC 23 22:59:29.2±0.6, 18°.87N±0°.03×104°.58W±0°.03, h16km±3km, n1218, σ2.22/1002, mb5.3/243, MS5.1/230, 71C-22D, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**0.55**	**83**	⇓*eP*	**Pn**	**22 59 41.1**	**-1.3**
CDAR				*eS*	**Sn**	**22 59 50.1**	**-1.1**
R15V		**0.64**	**62**		**Pn**	**22 59 42.5**	**-1.3**
R15V		**0.64**	**62**	*eP*	**Pn**	**22 59 42.5**	**-1.3**
R15V				⇓*eS*	**Sn**	**22 59 52.3**	**-1.4**
CJM	**Chamela**	**0.76**	**325**	⇓*eP*	**Pg**	**22 59 41.8**	**-2.3**
CJM				*eS*	**Sg**	**22 59 51.0**	**-3.2**
COIG	**Colima**	**0.90**	**70**	⇓*eP*	**Pn**	**22 59 47.0**	**-0.4**
COIG				*eS*	**Sn**	**22 59 59.9**	**-0.2**
COMA	**Comala**	**0.90**	**60**	⇓*eP*	**Pn**	**22 59 47.0**	**-0.4**
COMA				*eS*	**Sn**	**22 59 59.7**	**-0.4**
MNGA	**Volcan de Coli**	**1.08**	**57**	⇓*eP*	**Pn**	**22 59 50.5**	**+0.4**
MNGA				*eS*	**Sn**	**23 00 04.9**	**-0.1**
EZ5V		**1.11**	**57**		**Pn**	**22 59 50.9**	**+0.5**
EZ5V		**1.11**	**57**	⇓*eP*	**Pn**	**22 59 50.9**	**+0.5**
EZ5V				*eS*	**Sn**	**23 00 06.5**	**+1.0**
INCO	**Volcan de Coli**	**1.13**	**55**	⇓*eP*	**Pg**	**22 59 50.1**	**-1.0**
INCO				*eS*	**Sn**	**23 00 06.8**	**+0.5**
JUBC	**Volcan de Coli**	**1.15**	**56**	⇓*eP*	**Pg**	**22 59 51.7**	**+0.2**
JUBC				*eS*	**Sn**	**23 00 06.7**	**+0.1**
MMIG	**Aquila**	**1.31**	**116**		**Pn**	**22 59 52.5**	**-0.5**
MMIG					**Sn**	**23 00 09.5**	**-0.6**
MMIG	**Aquila**	**1.31**	**116**	⇑*eP*	**Pn**	**22 59 52.5**	**-0.5**
MMIG				*eS*	**Sn**	**23 00 09.5**	**-0.6**
PUVA	**Puert Vallarta**	**1.84**	**341**		**Pn**	**22 59 60.0**	**-0.3**
PUVA					**Sn**	**23 00 20.2**	**-3.1**
PUVA	**Puert Vallarta**	**1.84**	**341**	⇓*eP*	**Pn**	**22 59 60.0**	**-0.3**
PUVA				*eS*	**Sn**	**23 00 20.2**	**-3.1**
GDLP	**Chapalita**	**2.10**	**31**	⇓*eP*	**Pb**	**23 00 06.0**	**-1.0**
GDLP				*eS*	**Sb**	**23 00 32.0**	**-0.9**
ANIG	**Ahuacatlan**	**2.17**	**2**		**Pn**	**23 00 04.3**	**-0.6**
ANIG					**Sn**	**23 00 30.7**	**-0.9**
ANIG	**Ahuacatlan**	**2.17**	**2**	⇑*eP*	**Pn**	**23 00 04.3**	**-0.6**
ANIG				*eS*	**Sn**	**23 00 30.7**	**-0.9**
TPICX	**Tepic**	**2.61**	**355**	*eP*	**Pn**	**23 00 11.7**	**+0.8**
TPICX				*eS*	**Sg**	**23 00 52.4**	**-0.8**
TEPI	**Tepic**	**2.66**	**353**	*eP*	**Pn**	**23 00 12.9**	**+1.3**
TEPI				*eS*	**Sn**	**23 00 42.5**	**-1.1**
UON	**La Union**	**2.78**	**108**	*eP*	**Pn**	**23 00 14.2**	**+1.0**
UON				*eS*	**Sb**	**23 00 51.5**	**-0.9**
ZIIG	**Zihuatanejo**	**3.22**	**113**		**Pn**	**23 00 19.4**	**+0.2**
ZIIG					**Sb**	**23 01 00.5**	**-4.6**
ZIIG	**Zihuatanejo**	**3.22**	**113**	⇑*eP*	**Pn**	**23 00 19.4**	**+0.2**
ZIIG				*eS*	**Sb**	**23 01 00.5**	**-4.6**
MOIG	**Morelia**	**3.31**	**75**		**Pb**	**23 00 24.6**	**-3.1**
MOIG				Sn	**Sb**	**23 01 03.2**	**-4.6**
MOIG	**Morelia**	**3.31**	**75**	⇑*eP*	**Pn**	**23 00 20.5**	**-0.2**
MOIG				*eS*	**Sn**	**23 01 00.5**	**+0.7**
IGIG	**Irapuato, Guan**	**3.59**	**58**		**Pn**	**23 00 25.0**	**+0.5**
IGIG					**Sn**	**23 01 08.1**	**+1.4**
IGIG	**Irapuato, Guan**	**3.59**	**58**	⇑*eP*	**Pn**	**23 00 25.0**	**+0.5**
IGIG				*eS*	**Sn**	**23 01 08.1**	**+1.4**
AAIG	**Aguscalientes**	**3.71**	**33**		**Pn**	**23 00 27.1**	**+0.9**
AAIG					**Sn**	**23 01 11.1**	**+1.4**
AAIG	**Aguscalientes**	**3.71**	**33**	⇑*eP*	**Pn**	**23 00 27.1**	**+0.9**
AAIG				*eS*	**Sn**	**23 01 11.1**	**+1.4**
ARIG	**Puente Sto Nin**	**4.06**	**98**		**Pn**	**23 00 32.0**	**+1.2**
ARIG					**Sn**	**23 01 20.2**	**+2.1**
ARIG	**Puente Sto Nin**	**4.06**	**98**	⇑*eP*	**Pn**	**23 00 32.0**	**+1.2**
ARIG				*eS*	**Sn**	**23 01 20.2**	**+2.1**
TEJU	**Tejupilco**	**4.19**	**89**	⇓*eP*	**Pn**	**23 00 32.3**	**-0.4**
TEJU				*i S*	**Sn**	**23 01 21.6**	**+0.2**
ZAIG	**Zacatecas**	**4.31**	**26**	Pn	**Pn**	**23 00 35.4**	**+0.9**
ZAIG	**Zacatecas**	**4.31**	**26**	⇑*eP*	**Pn**	**23 00 36.0**	**+1.5**
ZAIG				*eS*	**Sn**	**23 01 27.0**	**+2.4**
CAIG	**El Cayaco**	**4.49**	**113**		**Pn**	**23 00 37.3**	**+0.6**
CAIG					**Sn**	**23 01 30.0**	**+1.3**
CAIG	**El Cayaco**	**4.49**	**113**	⇑*eP*	**Pn**	**23 00 37.3**	**+0.6**
CAIG				*eS*	**Sn**	**23 01 30.0**	**+1.3**
ATVM	**ATLACOMULCO**	**4.56**	**78**		**Pn**	**23 00 40.7**	**+2.7**
ATVM					**Sn**	**23 01 33.4**	**+2.4**
ATVM	**ATLACOMULCO**	**4.56**	**78**	⇑*eP*	**Pn**	**23 00 40.7**	**+2.7**
ATVM				*eS*	**Sn**	**23 01 33.4**	**+2.4**
ACIG	**Acambay**	**4.57**	**75**		**Pn**	**23 00 41.7**	**+3.7**
ACIG					**Sn**	**23 01 34.9**	**+4.0**
ACIG	**Acambay**	**4.57**	**75**	⇑*eP*	**Pn**	**23 00 41.7**	**+3.7**
ACIG				*eS*	**Sn**	**23 01 34.9**	**+4.0**
MAIG	**Mazatlaan**	**4.63**	**338**		**Pn**	**23 00 38.4**	**-0.1**
MAIG					**Sn**	**23 01 31.5**	**-0.5**
MAIG	**Mazatlaan**	**4.63**	**338**	⇑*eP*	**Pn**	**23 00 38.4**	**-0.1**
MAIG				*eS*	**Sn**	**23 01 31.5**	**-0.5**
MAIG	**Mazatlaan**	**4.63**	**338**	IAML		23 02 28.9	
	comp=N,2μm,2.0s						
TOVM	**TOLUCA**	**4.66**	**84**		**Pb**	**23 00 46.1**	**-4.7**
TOVM					**Sn**	**23 01 37.2**	**+4.0**
TOVM	**TOLUCA**	**4.66**	**84**	*e*	**Pb**	**23 00 46.1**	**-4.7**
TOVM				*e*		23 01 37.2	
MEIG	**Mezcala**	**4.80**	**101**		**Pn**	**23 00 44.2**	**+3.1**
MEIG					**Sn**	**23 01 35.8**	**-0.8**
MEIG	**Mezcala**	**4.80**	**101**	⇑*eP*	**Pn**	**23 00 44.2**	**+3.1**
MEIG				*eS*	**Sn**	**23 01 35.8**	**-0.8**
PLIG	**Platanillo**	**4.84**	**95**		**Pn**	**23 00 44.3**	**+2.6**
PLIG					**Sn**	**23 01 41.5**	**+4.0**
PLIG	**Platanillo**	**4.84**	**95**	⇑*eP*	**Pn**	**23 00 44.3**	**+2.6**
PLIG				*eS*	**Sn**	**23 01 41.5**	**+4.0**
ACP2	**Acapulco**	**4.89**	**113**		**Sg**	**23 02 02.2**	**-4.3**
ACP2	**Acapulco**	**4.89**	**113**	*e*	**Sg**	**23 02 02.2**	**-4.3**
INVM	**La Marquesa**	**4.94**	**84**	⇑*eP*	Pb	23 00 49.6	-6.0
INVM				*eS*	**Sn**	**23 01 44.2**	**+4.0**
VNTA	**La Mica**	**4.94**	**112**	*e*	**Sn**	**23 01 45.8**	**+6.1**
AOVM	**Tlapan**	**4.99**	**85**	⇑*eP*	**Pn**	**23 00 46.4**	**+2.4**
AOVM				*eS*	**Sb**	**23 01 52.2**	**-4.4**
DAIG	**Los Arroyos**	**5.04**	**111**		**Pn**	**23 00 46.8**	**+2.5**
DAIG					**Sn**	**23 01 45.2**	**+2.9**
DAIG	**Los Arroyos**	**5.04**	**111**	⇑*eP*	**Pn**	**23 00 46.8**	**+2.5**
DAIG				*eS*	**Sn**	**23 01 45.2**	**+2.9**
MHVM	**Bosque de Chap**	**5.11**	**83**	⇑*eP*	**Pn**	**23 00 48.1**	**+2.6**
MHVM				*eS*	**Sn**	**23 01 45.8**	**+1.5**
APVM	**Azcapotzalco**	**5.12**	**82**	*eP*	Pn	23 00 50.8	+5.3
APVM				*eS*	**Sn**	**23 01 47.8**	**+3.3**
UNM	**Universidad Na**	**5.13**	**84**		**Pn**	**23 00 47.0**	**+1.2**
UNM	**Universidad Na**	**5.13**	**84**	P	**Pn**	**23 00 47.0**	**+1.2**
BJVM	**Benito Juarez**	**5.14**	**84**	⇑*eP*	Pn	23 00 50.5	+4.6
BJVM				*eS*	**Sn**	**23 01 47.9**	**+2.8**
TLVM	**San Miguel Top**	**5.15**	**85**	*e*	Pb	23 00 53.3	-5.8
TLVM				*e*		23 01 48.3	
CTVM	**Cuauhtemoc**	**5.15**	**83**	*e*	**Sb**	**23 02 02.3**	**+1.3**
COVM	**Coyoacan**	**5.15**	**84**	*e*	**Sb**	**23 01 59.0**	**-2.0**
COVM				*e*		23 02 11.1	
XCVM	**Xochimilco**	**5.18**	**85**	⇓*eP*	Pn	23 00 52.3	+5.8
XCVM				*eS*	**Sb**	**23 01 55.0**	**-7.0**
GMVM	**Gustavo A Made**	**5.21**	**82**	⇑*eP*	**Pn**	**23 00 48.6**	**+1.7**
GMVM				*eS*	**Sn**	**23 01 50.4**	**+3.6**
PTVM	**Pico Tres Padr**	**5.22**	**81**		**Pn**	**23 00 50.4**	**+3.5**
PTVM					**Sn**	**23 01 50.6**	**+3.6**
PTVM	**Pico Tres Padr**	**5.22**	**81**	*eP*	**Pn**	**23 00 50.4**	**+3.5**
PTVM				*eS*	**Sn**	**23 01 50.6**	**+3.6**
YAIG	**Yautepec**	**5.22**	**89**		Pn	23 00 52.0	+5.1
YAIG					**Sb**	**23 01 56.2**	**-6.7**
YAIG	**Yautepec**	**5.22**	**89**	⇓*eP*	Pn	23 00 52.0	+5.1
YAIG				*eS*	**Sb**	**23 01 56.2**	**-6.7**
RPIG	**Rio Verde**	**5.25**	**54**		**Pn**	**23 00 50.3**	**+3.0**
RPIG					**Sn**	**23 01 47.1**	**-0.6**
RPIG	**Rio Verde**	**5.25**	**54**	⇑*eP*	**Pn**	**23 00 50.3**	**+3.0**
RPIG				*eS*	**Sn**	**23 01 47.1**	**-0.6**
ZUVM	**ZUMPANGO**	**5.28**	**79**		**Pn**	**23 00 51.1**	**+3.2**
ZUVM					**Sn**	**23 01 49.6**	**+0.9**
ZUVM	**ZUMPANGO**	**5.28**	**79**	⇑*eP*	**Pn**	**23 00 51.1**	**+3.2**
ZUVM				*eS*	**Sn**	**23 01 49.6**	**+0.9**
THVM	**De Xico**	**5.32**	**84**	*e*	Pn	23 00 54.0	+5.7
THVM				*e*		23 01 52.5	
DHIG	**Demacu**	**5.42**	**74**		**Pn**	**23 00 53.0**	**+3.3**
DHIG					**Sb**	**23 02 04.0**	**-4.6**
DEIG	**Demacu**	**5.42**	**74**	⇑*eP*	**Pn**	**23 00 53.0**	**+3.3**
DEIG				*e*		23 02 04.0	
AMVM	**AMECAMECA**	**5.49**	**86**		**Pn**	**23 00 51.6**	**+0.8**
AMVM					**Sb**	**23 02 02.2**	**-8.6**
AMVM	**AMECAMECA**	**5.49**	**86**	⇑*eP*	**Pn**	**23 00 51.6**	**+0.8**
AMVM				*eS*	**Sb**	**23 02 02.2**	**-8.6**
VTVM	**Tizayuca**	**5.56**	**80**		**Pn**	**23 00 54.8**	**+3.1**
VTVM					**Sn**	**23 02 01.5**	**+6.1**
VTVM	**Tizayuca**	**5.56**	**80**	⇑*eP*	**Pn**	**23 00 54.8**	**+3.1**
VTVM				*eS*	**Sn**	**23 02 01.5**	**+6.1**
CRIG	**Cruz Grande**	**5.61**	**111**		**Pn**	**23 00 53.1**	**+1.0**
CRIG					**Sn**	**23 01 59.6**	**+3.3**
CRIG	**Cruz Grande**	**5.61**	**111**	⇑*eP*	**Pn**	**23 00 53.1**	**+1.0**
CRIG				*eS*	**Sn**	**23 01 59.6**	**+3.3**
PPIG	**Popocatepetl**	**5.64**	**87**		**Pn**	**23 00 56.2**	**+3.2**
PPIG					**Sn**	**23 02 02.8**	**+5.1**
PPM	**Popocatepetl**	**5.64**	**87**	⇑*eP*	**Pn**	**23 00 56.2**	**+3.2**
PPM				*eS*	**Sn**	**23 02 02.8**	**+5.1**
HMTT	**Tlapaneco**	**5.82**	**100**		**Pn**	**23 00 57.6**	**+2.6**
HMTT					**Sn**	**23 02 05.3**	**+3.7**
HMTT	**Tlapaneco**	**5.82**	**100**	*eP*	**Pn**	**23 00 57.6**	**+2.6**
HMTT				*eS*	**Sn**	**23 02 05.3**	**+3.7**
TLIG	**Tlapa**	**5.86**	**102**		**Pn**	**23 00 57.4**	**+1.7**
TLIG	**Tlapa**	**5.86**	**102**	⇑*eP*	**Pn**	**23 00 59.2**	**+3.4**
TLIG				*eS*	**Sn**	**23 02 01.9**	**-0.9**
MGIG	**Malinaltepec**	**5.89**	**105**		**Pn**	**23 00 59.5**	**+3.4**
MGIG					**Sn**	**23 02 08.0**	**+4.5**
MGIG	**Malinaltepec**	**5.89**	**105**	⇑*eP*	**Pn**	**23 00 59.5**	**+3.4**
MGIG				*eS*	**Sn**	**23 02 08.0**	**+4.5**
H06N1	**SOCORRO T-PHAS**	**6.06**	**271**	Pn	**Pn**	**23 00 56.9**	**-1.5**
PDIG	**Papasquiaro**	**6.18**	**353**		**Pn**	**23 00 59.7**	**-0.4**
PDIG					Sn	23 01 55.2	-16
PDIG	**Papasquiaro**	**6.18**	**353**	⇑*eP*	**Pn**	**23 00 59.7**	**-0.4**
PDIG				*eS*	Sn	23 01 55.2	-16
FTIG	**Fresnillo de T**	**6.20**	**98**		**Pn**	**23 01 03.4**	**+3.1**
FTIG					**Sn**	**23 02 16.3**	**+5.3**
FTIG	**Fresnillo de T**	**6.20**	**98**	⇑*eP*	**Pn**	**23 01 03.4**	**+3.1**
FTIG				*eS*	**Sn**	**23 02 16.3**	**+5.3**
SSIG	**Sanalona**	**6.38**	**339**		**Pn**	**23 01 05.6**	**+2.9**
SSIG					**Sn**	**23 02 15.4**	**+0.2**
SSIG	**Sanalona**	**6.38**	**339**	⇓*eP*	**Pn**	**23 01 05.6**	**+2.9**
SSIG				*eS*	**Sn**	**23 02 15.4**	**+0.2**
GTIG	**Gomez Farias**	**6.56**	**50**		**Pn**	**23 01 07.3**	**+2.2**
GTIG					**Sn**	**23 02 20.9**	**+1.2**
GTIG	**Gomez Farias**	**6.56**	**50**	⇑*eP*	**Pn**	**23 01 07.3**	**+2.2**
GTIG				*eS*	**Sn**	**23 02 20.9**	**+1.2**
PNIG	**Pinotepa**	**6.63**	**111**		**Pn**	**23 01 08.2**	**+2.0**
PNIG					**Sn**	**23 02 25.2**	**+3.7**
PNIG	**Pinotepa**	**6.63**	**111**	⇑*eP*	**Pn**	**23 01 08.2**	**+2.0**
PNIG				*eS*	**Sn**	**23 02 25.2**	**+3.7**
TXIG	**Tlaxiaco**	**6.68**	**103**		**Pn**	**23 01 10.9**	**+3.9**
TXIG					Sn	23 02 31.4	+8.3
TXIG	**Tlaxiaco**	**6.68**	**103**	⇑*eP*	**Pn**	**23 01 10.9**	**+3.9**
TXIG				*eS*	Sn	23 02 31.4	+8.3
CXUV	**Coxquihui**	**6.72**	**78**	⇑*eP*	Pn	23 01 13.0	+5.6
CXUV				*eS*	**Sn**	**23 02 27.6**	**+3.9**
TPIG	**Tehuac#an**	**6.86**	**93**		**Pn**	**23 01 12.6**	**+3.2**
TPIG					**Sn**	**23 02 34.9**	**+7.5**
TPIG	**Tehuac#an**	**6.86**	**93**	⇑*eP*	**Pn**	**23 01 12.6**	**+3.2**
TPIG				*eS*	**Sn**	**23 02 34.9**	**+7.5**
SLBS	**Sierra La Lagu**	**6.92**	**315**	Pn	**Pn**	**23 01 11.6**	**+1.4**
SLBS	**Sierra La Lagu**	**6.92**	**315**	*e*	**Sn**	**23 02 23.2**	**-5.5**
SLBS	**Sierra La Lagu**	**6.92**	**315**	*eP*	**Pn**	**23 01 12.8**	**+2.6**
SLBS				IAML		23 04 11.9	
	comp=N,458μm,7.8s						
SLBS				IAML		23 04 14.6	
	comp=N,582μm,6.8s						
YOIG	**Yosondua**	**7.00**	**106**		**Pn**	**23 01 15.2**	**+3.8**
YOIG					**Sn**	**23 02 26.1**	**-4.8**
YOIG	**Yosondua**	**7.00**	**106**	⇑*eP*	**Pn**	**23 01 15.2**	**+3.8**
YOIG				*eS*	**Sn**	**23 02 26.1**	**-4.8**
OZST	**Orizaba**	**7.09**	**89**	*e*		23 03 09.3	
TOIG	**Toxpalan**	**7.18**	**95**		Pn	23 01 18.4	+4.6
TOIG					**Sn**	**23 02 40.0**	**+4.9**
TOIG	**Toxpalan**	**7.18**	**95**	*eP*	Pn	23 01 18.4	+4.6
TOIG				⇓*eS*	**Sn**	**23 02 40.0**	**+4.9**
JAUV	**Jalcomulco**	**7.37**	**85**	⇑*eP*	**Pn**	**23 01 20.5**	**+4.2**
JAUV				*eS*	**Sn**	**23 02 45.2**	**+5.5**
LPIG	**La Paz**	**7.45**	**315**	Pn	**Pn**	**23 01 18.4**	**+1.0**
	comp=N,5.4nm,0.3s,baz=293,slow=2.8,SNR=13						
LPIG				LR	LR	23 03 26.7	
	comp=N,8μm,19.1s,baz=133,slow=32						
	comp=N,37nm,0.6s						
LPIG	**La Paz**	**7.45**	**315**	*eP*	**Pn**	**23 01 20.5**	**+3.2**
LPIG				*eS*	Sb	23 02 55.1	-12
LPIG				IAML		23 03 57.8	
	comp=N,183nm,2.8s						
LPIG				IAML		23 04 33.0	
	comp=E,189nm,6.3s						
LNIG	**Linares**	**7.65**	**37**	⇑*eP*	**Pn**	**23 01 24.0**	**+3.9**
LNIG				*eS*	**Sn**	**23 02 48.5**	**+1.9**
PEIG	**Puerto Escondi**	**7.65**	**111**		**Pn**	**23 01 21.7**	**+1.6**
PEIG					**Sn**	**23 02 51.6**	**+5.0**
PEIG	**Puerto Escondi**	**7.65**	**111**	⇑*eP*	**Pn**	**23 01 21.7**	**+1.6**
PEIG				*eS*	**Sn**	**23 02 51.6**	**+5.0**
OXIG	**Oaxaca**	**7.68**	**102**		**Pn**	**23 01 23

baz=218
HKT S Sn 23 05 20.1 +7.8
baz=218
121A Cookes Peak, D 13.90 349 Pn 23 02 46.7 +0.8
121A Cookes Peak, D 13.90 349 P **Pn 23 02 48.6 +2.7**
baz=167,SNR=11
121A Cookes Peak, D 13.90 349 *e* **Pn 23 02 49.5 +3.5**
121A Cookes Peak, D 13.90 349 P **Pn 23 02 48.6 +2.7**
baz=167,SNR=11
APG El Apazote 14.04 104 Pn **Pn 23 02 44.8 -3.1**
comp=N,422nm,0.3s,baz=181,slow=23,SNR=1.7
CPRX Cap Rock 14.12 2 Pn **Pn 23 02 49.2 +0.4**
PETF Flores 14.14 96 P **Pn 23 02 50.7 +1.6**
ABTX Abilene, Hawle 14.40 17 Pn **Pn 23 02 52.9 +0.4**
ABTX Abilene, Hawle 14.40 17 P **Pn 23 02 54.3 +1.8**
baz=199,SNR=35
ABTX S Sn 23 05 29.7 -2.2
baz=199
ABTX Abilene, Hawle 14.40 17 P **Pn 23 02 53.9 +1.3**
baz=199,SNR=35
TUC Tucson 14.50 339 P **P 23 02 58.0 -2.6**
TUC Tucson 14.50 339 P **Pn 23 02 55.7 +1.7**
baz=156
WHTX Lake Whitney, 14.56 25 Pn 23 02 55.5 +0.8
WHTX Lake Whitney, 14.56 25 P **Pn 23 02 56.8 +2.1**
baz=208,SNR=21
WHTX S **S 23 05 54.1 -1.0**
baz=208
WHTX Lake Whitney, 14.56 25 P **Pn 23 02 56.3 +1.6**
baz=208,SNR=21
PIX Pinacate 14.96 329 Pn **Pn 23 03 01.0 +0.9**
PIX Pinacate 14.96 329 *i* P **Pn 23 03 02.2 +2.1**
214A Organ Pipe Nat 14.99 332 Pn **Pn 23 03 01.0 +0.4**
214A Organ Pipe Nat 14.99 332 *e* **Pn 23 03 00.8 +0.2**
214A Organ Pipe Nat 14.99 332 P **Pn 23 03 02.3 +1.7**
baz=148,SNR=18
214A Organ Pipe Nat 14.99 332 ⇑*i* P **Pn 23 03 02.3 +1.7**
MSTX Muleshoe 15.12 6 Pn **Pn 23 03 02.9 +0.5**
MSTX IAmb IAmb 23 03 09.8
comp=Z,287nm,1.9s
MSTX Muleshoe 15.12 6 P **Pn 23 03 03.8 +1.3**
baz=187,SNR=50
MSTX S **S 23 06 04.7 -2.2**
baz=187
MSTX Muleshoe 15.12 6 P **Pn 23 03 03.2 +0.7**
baz=187,SNR=50
CRNM Carthage 15.14 353 Pn 23 03 03.0 +0.3
Y22A Socorro 15.15 352 P **Pn 23 03 05.0 +2.1**
baz=171,SNR=25
Y22A S **S 23 06 08.1 +0.4**
baz=171
ESQI Esquipulas 15.21 104 Pn **Pn 23 03 05.7 +2.0**
SBM South Baldy 15.22 352 Pn 23 03 03.5 -0.5
MTO3 Montecristo 15.25 105 Pn **Pn 23 03 03.1 -1.2**
SFX San Felipe 15.27 324 Pn **Pn 23 03 05.1 +0.9**
237A Washetta, Mont 15.28 29 Pn 23 03 04.4 +0.1
237A IAmb IAmb 23 03 10.9
comp=Z,470nm,1.6s
237A Washetta, Mont 15.28 29 P **Pn 23 03 05.6 +1.2**
baz=214,SNR=8.8
237A S **S 23 06 10.2 +0.4**
baz=214
Y22D IRIS PASSCAL I 15.28 353 Pn **Pn 23 03 04.7 +0.1**
Y22D IRIS PASSCAL I 15.28 353 P **P 23 03 07.0 -2.4**
baz=172
Y22F Passcal Instru 15.28 353 P **P 23 03 07.1 -2.3**
baz=172
BNM Barren Site 15.33 354 Pn 23 03 05.9 +0.7
LENM Lemitar 15.38 353 Pn 23 03 06.1 +0.2
SPIG San Pedro Mart 15.62 323 *e* **Pn 23 03 10.4 +1.3**
SPIG San Pedro Mart 15.62 323 *e*P **P 23 03 11.6 -1.7**
NATX Nacogdoches 15.64 33 Pn **Pn 23 03 09.7 +0.6**
NATX IAmb IAmb 23 03 16.2
comp=Z,279nm,1.3s
NATX Nacogdoches 15.64 33 P **Pn 23 03 09.9 +0.7**
baz=218,SNR=13
NATX Nacogdoches 15.64 33 P **Pn 23 03 09.8 +0.6**
baz=218,SNR=13
441A DeRidder 15.70 39 Pn **Pn 23 03 08.9 -0.9**
441A IAmb IAmb 23 03 16.7
comp=Z,120nm,0.7s
ECBX El Chinero 15.71 325 *i* P **Pn 23 03 12.1 +2.1**
Z35A Perchaven, San 15.82 23 Pn **Pn 23 03 11.4 -0.1**
Z35A Perchaven, San 15.82 23 P **P 23 03 13.8 -1.4**
baz=207,SNR=7.6
ANMO Albuquerque 16.10 354 Pn **Pn 23 03 13.8 -1.4**
comp=Z,0.1nm,0.3s,baz=176,slow=12,SNR=21
ANMO Lg Lg 23 07 57.7
comp=Z,0.1nm,0.3s,baz=107,slow=22,SNR=2.5
ANMO LR LR 23 08 56.7
comp=Z,6μm,19.7s,baz=176,slow=36
comp=Z,3.6nm,1.0s
ANMO Albuquerque 16.10 354 Pn **Pn 23 03 15.7 +0.5**
ANMO Albuquerque 16.10 354 *ce*P **P 23 03 17.0 -1.4**
ANMO pmax pmax
comp=Z,130nm,2.5s
ANMO Albuquerque 16.10 354 P **P 23 03 17.1 -1.4**
baz=174,SNR=48
ANMO S **S 23 06 24.6 -2.4**
baz=174
ANMO Albuquerque 16.10 354 P **P 23 03 17.1 -1.4**
baz=174
113A Mohawk Valley, 16.11 331 Pn **Pn 23 03 15.8 +0.7**
113A IAmb IAmb 23 03 23.2
comp=Z,578nm,1.7s
AMTX Amarillo 16.16 9 Pn 23 03 15.8 -0.1
AMTX IAmb IAmb 23 03 20.8
comp=Z,447nm,1.9s
AMTX Amarillo 16.16 9 P **P 23 03 19.1 +0.1**
baz=190,SNR=15
AMTX S **S 23 06 29.6 +1.7**
baz=190
AMTX Amarillo 16.16 9 P **P 23 03 17.9 -1.1**
baz=190
X18A Snowflake 16.31 344 Pn **Pn 23 03 18.6 +0.7**
SJX San Joaquin 16.43 324 ⇑*i*P **P 23 03 24.1 +2.1**
ALAMX Rancho Alamar 16.48 325 ⇑*i*P **P 23 03 22.2 -0.3**
CPBX Cerro Prieto 16.58 327 Pn **Pn 23 03 21.8 +0.6**
ESJX Sierra Juarez 16.61 324 Pn 23 03 22.9 +1.2
ESJX IAmb IAmb 23 03 29.3
comp=Z,241nm,1.6s
WMOK Wichita Mounta 16.62 17 Pn **Pn 23 03 21.2 -0.5**
WMOK IAmb IAmb 23 03 25.2
comp=Z,321nm,1.8s
WMOK Wichita Mounta 16.62 17 P **Pn 23 03 21.2 -0.5**
WMOK pmax pmax
comp=Z,321nm,1.8s
WMOK Wichita Mounta 16.62 17 P **Pn 23 03 21.4 -0.4**
baz=200,SNR=37
WMOK S **S 23 06 41.2 +3.8**
baz=200
WMOK Wichita Mounta 16.62 17 P **Pn 23 03 21.1 -0.5**
baz=200,SNR=37
342B Flagon Creek P 16.66 39 P **Pn 23 03 22.3 +0.1**
baz=225,SNR=12
Z38A Mt. Pleasant 16.71 29 Pn **Pn 23 03 22.9 +0.1**
Z38A Mt. Pleasant 16.71 29 P **Pn 23 03 22.9 +0.1**
baz=214
X34A Smith Ranch, M 16.78 20 Pn **Pn 23 03 24.2 +0.5**
X34A IAmb IAmb 23 03 26.9
comp=Z,867nm,1.8s
Y14A Wickenburg 16.78 335 Pn **Pn 23 03 24.4 +0.7**
GLA Glamis 16.84 329 Pn **Pn 23 03 25.2 +0.7**
GLA IAmb IAmb 23 03 31.2
comp=Z,391nm,1.6s
GLA Glamis 16.84 329 P **Pn 23 03 25.2 +0.7**
GLA pmax pmax
comp=Z,391nm,1.6s
GLA Glamis 16.84 329 P **P 23 03 26.6 0.0**
baz=144,SNR=5.6
CCX Cicese 16.91 322 Pn **Pn 23 03 25.9 +0.5**
CCX IAmb IAmb 23 03 32.6
comp=Z,278nm,1.6s
YUH Yuha Desert 17.08 326 Pn 23 03 28.5 +1.0
YUH IAmb IAmb 23 03 34.3
comp=Z,366nm,1.7s
RMX La Rumorosa 17.13 325 Pn **Pn 23 03 27.8 -0.5**
RMX IAmb IAmb 23 03 34.3
comp=Z,483nm,1.7s
IKP In-Ko-Pah, Jac 17.19 325 P **P 23 03 30.9 +0.4**
baz=140,SNR=32
CBX Cerro Bola 17.24 323 Pn 23 03 30.5 +0.9
CBX Cerro Bola 17.24 323 *e* Pn 23 03 06.5 -23
CBX Cerro Bola 17.24 323 ⇑*i*P **P 23 03 31.7 +0.6**
SWSC Sam W. Stewart 17.25 327 P **P 23 03 31.5 +0.5**
baz=141,SNR=52

BLYC Blythe 17.27 331 P 23 03 31.8 +0.6
BLYC IAmb IAmb 23 03 36.1
comp=Z,384nm,1.8s
TGUH Tegucigalpa,Un 17.27 104 P 23 03 31.0 -0.6
TKX Tecate 17.40 324 Pn 23 03 31.8 +0.4
BAR Barrett 17.52 324 P 23 03 34.1 +0.1
FNO Franklin 17.52 20 Pn **Pn 23 03 32.6 -0.3**
MONP2 Monument Peak 17.54 325 P **P 23 03 36.0 +1.5**
baz=140,SNR=20
PDMCI Parker Dam,Lak 17.57 333 P **P 23 03 35.3 +0.7**
baz=148,SNR=9.3
WUAZ Wupatki 17.64 341 P 23 03 35.3 -0.2
WUAZ Wupatki 17.64 341 P **P 23 03 36.7 +1.2**
baz=158,SNR=14
BC3 Big Chuckawall 17.64 329 P **P 23 03 36.4 +1.0**
baz=144,SNR=38
X37A Clayton 17.67 26 P 23 03 35.2 -0.4
X37A Clayton 17.67 26 P **P 23 03 35.1 -0.6**
baz=210,SNR=14
X37A S S 23 07 13.2 +15
baz=210
344A Westbrook Farm 17.70 42 P **P 23 03 35.8 -0.2**
344A Westbrook Farm 17.70 42 P **P 23 03 36.0 0.0**
baz=229,SNR=6.0
344A S S 23 07 15.1 +16
baz=229
OK025 Westminster Rd 17.84 20 P **Pn 23 03 36.9 +0.1**
OK025 IAmb IAmb 23 03 46.9
comp=Z,365nm,2.0s
IRM Iron Mountain 17.90 330 P **P 23 03 39.5 +1.3**
baz=145,SNR=36
109C Camp Elliot, M 17.91 324 P **P 23 03 38.9 +0.5**
109C IAmb IAmb 23 03 42.1
comp=Z,368nm,1.9s
109C Camp Elliot, M 17.91 324 P **P 23 03 39.8 +1.5**
baz=138,SNR=5.6
WLAR White Oak Lake 17.96 33 IAmb IAmb 23 03 48.4
comp=Z,571nm,1.9s
OK029 Liberty Lake 18.00 19 IAmb IAmb 23 03 49.7
comp=Z,362nm,1.9s
TPFO Pinon Flats 18.11 326 P **P 23 03 42.7 +2.1**
baz=141,SNR=29
PFO Pinyon Flats O 18.11 326 P **P 23 03 42.5 +1.8**
comp=Z,29nm,1.1s,baz=135,slow=12,SNR=47
PFO LR LR 23 10 05.8
comp=Z,5μm,18.2s,baz=149,slow=35
PFO Pinyon Flats O 18.11 326 P **P 23 03 41.0 +0.2**
PFO IAmb IAmb 23 03 46.5
comp=Z,386nm,1.9s
PFO Pinyon Flats O 18.11 326 *c i*P **P 23 03 42.0 +1.3**
PFO Pinyon Flats O 18.11 326 P **P 23 03 42.9 +2.1**
baz=141,SNR=29
U32A Winter Ranch, 18.12 15 P **P 23 03 40.8 +0.1**
U32A IAmb IAmb 23 03 42.3
comp=Z,270nm,1.7s
U32A Winter Ranch, 18.12 15 P **P 23 03 41.0 +0.3**
baz=197,SNR=7.0
W13A Hualapai Mount 18.15 335 P **P 23 03 41.6 +0.5**
143A Socs Landing, 18.16 38 P **P 23 03 41.6 +0.6**
baz=224
NEE2 Needles Airpor 18.17 333 P **P 23 03 42.7 +1.6**
baz=148
BELC Belle Mtn. Jos 18.18 328 P **P 23 03 43.3 +1.8**
baz=143,SNR=29
T25A Trinidad 18.20 0 P 23 03 42.2 +0.5
T25A IAmb IAmb 23 03 50.6
comp=Z,265nm,1.9s
T25A Trinidad 18.20 0 P **P 23 03 42.4 +0.6**
baz=181,SNR=17
OK038 West end E0370 18.28 15 P **Pn 23 03 41.2 -1.1**
OK038 IAmb IAmb 23 03 51.5
comp=Z,240nm,1.7s
OK031 S. Brethren Rd 18.34 20 P **Pn 23 03 42.2 -0.8**
VBMS Vicksburg 18.35 41 P **P 23 03 43.2 +0.1**
VBMS IAmb IAmb 23 03 47.0
comp=Z,881nm,2.0s
VBMS Vicksburg 18.35 41 P **P 23 03 42.9 -0.2**
baz=227
OK033 Mehan 18.39 20 P **Pn 23 03 43.1 -0.5**
OK033 IAmb IAmb 23 03 46.2
comp=Z,197nm,1.5s
MIAR Mount Ida 18.43 30 P **P 23 03 42.8 -1.2**
baz=215,SNR=5.1
MIAR S S 23 07 26.8 +13
baz=215
MIAR Mount Ida 18.43 30 P **P 23 03 42.9 -1.1**
baz=215,SNR=5.1
OK034 N. Norfolk Rd. 18.43 21 P **P 23 03 43.3 -0.8**
OK034 IAmb IAmb 23 03 44.7
comp=Z,63nm,0.5s
MURC Murrieta 18.50 325 P **Pn 23 03 46.8 +1.8**
baz=139,SNR=20
MVCO Mesa Verde 18.59 350 Pn 23 03 46.6 +0.3
MVCO Mesa Verde 18.59 350 P **Pn 23 03 46.8 +0.5**
baz=168,SNR=23
OK049 E0420 Rd and N 18.61 19 P **P 23 03 45.4 -0.6**
GMRC Granite Mounta 18.66 330 P **Pn 23 03 48.4 +1.4**
baz=145,SNR=35
ELS Elsinore Mount 18.66 325 P **Pn 23 03 47.2 +0.1**
TUL1 Leonard 18.66 23 P **P 23 03 45.8 -0.9**
TUL1 IAmb IAmb 23 03 58.1
comp=Z,445nm,1.7s
TUL1 Leonard 18.66 23 P **P 23 03 46.1 -0.5**
baz=207,SNR=16
TUL1 S S 23 07 34.4 +16
baz=207
TUL1 Leonard 18.66 23 P **P 23 03 45.9 -0.7**
baz=207,SNR=16
OK050 Pawnee Station 18.70 19 P **P 23 03 45.4 -1.6**
OK032 Salt Plains WL 18.72 16 P **P 23 03 46.2 -1.1**
OK046 Pawnee Station 18.72 20 P **P 23 03 46.1 -1.2**
OK048 Pawnee Station 18.73 20 P **P 23 03 45.6 -1.7**
OK048 IAmb IAmb 23 03 57.6
comp=Z,429nm,2.0s
OK044 Pawnee Station 18.73 20 P **P 23 03 46.5 -0.9**
OK044 IAmb IAmb 23 03 58.7
comp=Z,148nm,1.2s
U15A North Rim 18.76 340 P **Pn 23 03 48.5 +0.1**
OK045 Pawnee Station 18.76 20 P **P 23 03 47.0 -0.7**
OK045 IAmb IAmb 23 03 58.0
comp=Z,342nm,1.8s
SCI2 San Clemente I 18.82 321 P **Pn 23 03 51.9 +3.1**
baz=135
SDCO Great Sand Dun 18.82 358 P **Pn 23 03 49.4 +0.3**
SDCO Great Sand Dun 18.82 358 P **Pn 23 03 49.7 +0.5**
baz=177,SNR=14
SDCO S **S 23 07 30.4 +7.9**
baz=177
SDCO Great Sand Dun 18.82 358 P **Pn 23 03 49.4 +0.3**
baz=177,SNR=14
OK051 E0350 and S346 18.84 20 P **P 23 03 47.7 -0.9**
OK051 IAmb IAmb 23 03 59.2
comp=Z,166nm,1.3s
CCAR Cane Creek 18.85 35 P **P 23 03 48.4 -0.2**
CCAR IAmb IAmb 23 03 51.4
comp=Z,247nm,1.4s
S22A 4UR Ranch, Cre 18.91 354 P 23 03 49.8 +0.2
S22A IAmb IAmb 23 03 54.1
comp=Z,225nm,1.9s
S22A 4UR Ranch, Cre 18.91 354 P **Pn 23 03 52.3 +2.1**
baz=173,SNR=41
KAN14 Manchester OK 18.93 17 P **P 23 03 48.5 -1.0**
HEC Hector,Ludlow 19.01 329 P **Pn 23 03 52.4 +1.1**
baz=144,SNR=39
KAN17 Caldwell West 19.07 17 P **P 23 03 50.3 -0.7**
V12A Nelson 19.09 334 P **Pn 23 03 52.7 +0.5**
V12A IAmb IAmb 23 03 57.5
comp=Z,263nm,1.6s
KAN13 South Haven SW 19.12 18 P **P 23 03 50.4 -1.2**
KAN13 IAmb IAmb 23 04 04.7
comp=Z,474nm,1.8s
KAN16 Harper SW Stat 19.16 16 P **P 23 03 51.3 -0.7**
KAN16 IAmb IAmb 23 03 53.4
comp=Z,300nm,1.4s
KAN01 Argonia South 19.17 17 P **P 23 03 51.5 -0.7**
KAN01 IAmb IAmb 23 03 54.2
comp=Z,269nm,1.4s
KAN08 Anthony NE Sta 19.18 16 P **P 23 03 50.3 -2.0**
KAN08 IAmb IAmb 23 03 54.5
comp=Z,292nm,1.6s
KAN09 Caldwell North 19.20 17 P **P 23 03 51.4 -1.1**
KAN09 IAmb IAmb 23 03 53.8
comp=Z,78nm,0.7s
UALR University of 19.21 32 P 23 03 51.9 -0.7
UALR IAmb IAmb 23 04 03.6
comp=Z,305nm,1.8s

BFSC Mount Baldy Ra 19.23 325 P **Pn 23 03 54.8 +0.8**
baz=139,SNR=45
KAN06 Argonia West S 19.23 16 P **P 23 03 51.9 -0.9**
KAN06 IAmb IAmb 23 03 54.2
comp=Z,276nm,1.5s
KAN12 Harper NE Stat 19.24 16 P **P 23 03 52.1 -0.9**
KAN12 IAmb IAmb 23 03 55.3
comp=Z,244nm,1.3s
BOAB BOACO BROADBAN 19.29 107 P 23 03 53.8 +0.1
KS20 Mayfield South 19.30 17 P **P 23 03 52.7 -0.9**
KS20 IAmb IAmb 23 03 54.9
comp=Z,111nm,1.0s
TUQ Turquoise Moun 19.31 331 P **Pn 23 03 55.7 +0.7**
baz=146,SNR=39
T35A Sooner Cattle 19.32 20 P **P 23 03 52.7 -1.1**
T35A IAmb IAmb 23 03 55.1
comp=Z,310nm,1.8s
T35B Sooner Cattle 19.32 20 P **P 23 03 53.1 -0.8**
baz=204,SNR=27
T35B S **S 23 07 41.6 +9.4**
baz=204
RRX Edison Barstow 19.38 328 P **Pn 23 03 56.4 +0.8**
baz=142
PASC Pasadena Art C 19.47 324 P **Pn 23 03 56.6 -0.1**
PASC IAmb IAmb 23 04 01.9
comp=Z,444nm,1.9s
KNB Kanab 19.47 340 Pn 23 03 56.9 0.0
KNB Kanab 19.47 340 P **Pn 23 03 56.9 0.0**
KNB pmax pmax
comp=Z,134nm,1.5s
146A Union 19.55 42 P **Pn 23 03 56.8 -0.9**
146A IAmb IAmb 23 04 01.0
comp=Z,130nm,1.2s
PV13 Radium Mtn., P 19.57 350 P **P 23 03 56.6 -0.2**
SNCC San Nicolas Is 19.59 320 P **P 23 03 57.1 +0.3**
SNCC IAmb IAmb 23 04 03.2
comp=Z,497nm,1.9s
LCMT Little Creek M 19.61 339 P **P 23 03 57.8 +0.7**
DECC Green Verdugo 19.61 324 P **Pn 23 03 58.8 +0.4**
baz=138,SNR=5.9
GSC Goldstone, Bar 19.62 329 P **Pn 23 03 58.4 -0.2**
GSC Goldstone, Bar 19.62 329 P **Pn 23 03 58.4 -0.2**
GSC pmax pmax
comp=Z,662nm,1.9s
GSC Goldstone, Bar 19.62 329 P **Pn 23 03 59.1 +0.5**
baz=143,SNR=96
WHAR Wooly Hollow 19.65 31 P **P 23 03 56.8 -0.6**
U38A Gravette 19.67 25 P **P 23 03 56.8 -0.9**
U38A IAmb IAmb 23 04 11.4
comp=Z,195nm,1.9s
U38A Gravette 19.67 25 P **P 23 03 56.7 -0.9**
baz=210,SNR=12
PV15 Paradox Valley 19.70 351 P **P 23 03 57.9 -0.3**
PKCU Pink Cliffs 19.70 341 P **Pn 23 03 59.4 -0.4**
PKCU IAmb IAmb 23 04 10.3
comp=Z,405nm,1.9s
PV11 David Mesa, Pa 19.71 350 P **P 23 03 58.7 +0.3**
HHAR Hobbs 19.72 26 P **P 23 03 57.3 -0.9**
HHAR IAmb IAmb 23 04 13.0
comp=Z,219nm,1.7s
PV07 Paradox Valley 19.82 351 P **P 23 03 59.8 +0.3**
PV07 IAmb IAmb 23 04 05.9
comp=Z,186nm,1.9s
PV10 Paradox Valley 19.82 350 P **P 23 03 58.4 -1.1**
SHOC Shoshone, Teco 19.86 331 P **Pn 23 04 01.4 +0.1**
baz=145,SNR=32
SHPR Sheep Range 19.88 334 P **P 23 04 01.0 +0.9**
SHPR IAmb IAmb 23 04 03.7
comp=Z,185nm,1.8s
PV23 Carpenter Ridg 19.89 350 P **P 23 04 00.3 0.0**
EDW2 Edwards Air Fo 19.90 326 P **Pn 23 04 01.3 -0.6**
baz=140,SNR=25
BRAL Brewton 20.02 49 P **P 23 04 01.6 0.0**
BRAL IAmb IAmb 23 04 06.6
comp=Z,262nm,1.4s
BRAL Brewton 20.02 49 P **Pn 23 04 02.8 -0.5**
baz=237
BRAL Brewton 20.02 49 P **P 23 04 01.1 -0.4**
baz=237
Q24A Divide 20.03 359 P **P 23 04 01.4 -0.4**
Q24A Divide 20.03 359 P **P 23 04 02.2 +0.4**
baz=178,SNR=14
Y45A Yeager Farm, C 20.08 39 P **P 23 04 01.9 -0.2**
Y45A IAmb IAmb 23 04 09.8
comp=Z,162nm,1.1s
Y45A Yeager Farm, C 20.08 39 P **P 23 04 02.2 +0.2**
baz=226,SNR=12
Y45A S Sn 23 07 59.5 +10
baz=226
SZCU Shurtz Canyon 20.08 340 P **P 23 04 02.9 +0.5**
CCAC Calif City Air 20.12 326 P **P 23 04 03.7 +1.1**
CCAC IAmb IAmb 23 04 05.8
comp=Z,270nm,1.6s
CCUT Cedar City 20.13 339 P 23 04 03.5 +0.6
KSCO Kaye Shedlock' 20.14 4 P **P 23 04 02.8 -0.1**
KSCO Kaye Shedlock' 20.14 4 P Pn 23 04 03.8 -1.0
baz=185,SNR=12
KSCO Kaye Shedlock' 20.14 4 P **P 23 04 02.8 -0.1**
baz=185,SNR=12
R32A Long Quarter, 20.14 13 P **P 23 04 01.4 -1.4**
R32A IAmb IAmb 23 04 15.2
comp=Z,307nm,1.7s
R32A Long Quarter, 20.14 13 P **P 23 04 01.8 -1.0**
baz=196,SNR=5.1
R32A S Sn 23 08 02.7 +12
baz=196
QSM Queen of Sheba 20.19 330 P **P 23 04 03.6 +0.3**
QSM IAmb IAmb 23 04 07.6
comp=Z,163nm,1.3s
LRMC Laurel Mtn Rad 20.20 328 P Pn 23 04 05.3 -0.2
baz=141,SNR=24
FCAR Ozark Folk Cen 20.21 30 P **P 23 04 02.8 -0.7**
FCAR IAmb IAmb 23 04 18.0
comp=Z,168nm,1.7s
MTPU Mount Pierson 20.22 342 IAmb IAmb 23 04 11.2
comp=Z,110nm,1.2s
GWY Greenwater Val 20.27 331 IAmb IAmb 23 04 08.5
comp=Z,184nm,1.3s
CBKS Cedar Bluff 20.31 11 P **P 23 04 03.9 -0.8**
CBKS IAmb IAmb 23 04 05.4
comp=Z,354nm,1.8s
CBKS Cedar Bluff 20.31 11 P **P 23 04 03.9 -0.8**
CBKS pmax pmax
comp=Z,354nm,1.8s
CBKS MLR MLR
comp=Z,4μm,20.0s
CBKS Cedar Bluff 20.31 11 P **P 23 04 04.5 -0.2**
baz=193,SNR=6.3
CBKS S Sn 23 08 00.6 +5.4
baz=193
CBKS Cedar Bluff 20.31 11 P **P 23 04 03.7 -1.0**
baz=193,SNR=6.3
ARVC Arvin 20.53 325 P Pn 23 04 08.6 -0.7
baz=138,SNR=23
SOR Soroa 20.54 75 P **P 23 04 06.0 -1.2**
SOR Soroa 20.54 75 P **P 23 04 06.0 -1.2**
SOR pmax pmax
comp=Z,42nm,1.1s
Z47A Carrollton 20.54 43 IAmb IAmb 23 04 12.3
comp=Z,74nm,0.7s
Z47A Carrollton 20.54 43 P **P 23 04 07.0 -0.2**
baz=230,SNR=20
Z47A S Sn 23 08 07.9 +7.1
baz=230
MPMC Manual Prospec 20.56 329 P Pn 23 04 09.2 -0.6
baz=143,SNR=125
FURC Furnace Creek, 20.59 331 P Pn 23 04 09.2 -0.7
baz=145,SNR=31
OXF Oxford 20.61 38 IAmb IAmb 23 04 13.1
comp=Z,184nm,1.2s
OXF Oxford 20.61 38 P **P 23 04 07.7 -0.1**
baz=225
OXF S Sn 23 08 06.9 +4.6
baz=225
PRN Pahroc Range 20.62 336 IAmb IAmb 23 04 14.8
comp=Z,204nm,1.9s
MVU Marysvale 20.66 343 IAmb IAmb 23 04 13.2
comp=Z,281nm,1.3s
HBAR Harrisburg 20.68 34 IAmb IAmb 23 04 15.8
comp=Z,314nm,1.5s
TPNV Topopah Spring 20.72 333 IAmb IAmb 23 04 13.9
comp=Z,194nm,1.1s
TPNV Topopah Spring 20.72 333 P Pn 23 04 11.3 -0.3
baz=147,SNR=70
ISA Isabella, Lake 20.75 327 IAmb IAmb 23 04 13.1
comp=Z,416nm,1.8s

ISA	Isabella, Lake	20.75	327	P	Pn	23 04 11.2	-0.7
	baz=140,SNR=52						
WCT	Wildcat Mounta	20.75	332	IAmb	IAmb	23 04 13.2	
	comp=Z,306nm,1.9s						
JTS	Las Juntas de	20.81	111	*i* P	Pn	23 04 12.1	-0.6
LCAR	Lake Charles	20.83	32	IAmb	IAmb	23 04 25.6	
	comp=Z,303nm,1.7s						
ISCO	Idaho Springs	20.88	358	S	Sn	23 08 09.0	-0.2
	baz=177						
250A	Grady	21.03	48	P	**P**	**23 04 12.5**	**+0.1**
	baz=236,SNR=5.1						
S11A	Rachel	21.10	335	IAmb	IAmb	23 04 19.0	
	comp=Z,318nm,1.6s						
LRAL	Lakeview Retre	21.14	45	IAmb	IAmb	23 04 31.6	
	comp=Z,167nm,1.6s						
LRAL	Lakeview Retre	21.14	45	P	**P**	**23 04 13.4**	**-0.2**
	baz=233,SNR=17						
LRAL				S	Sn	23 08 12.5	-2.7
	baz=233						
LRAL	Lakeview Retre	21.14	45	P	**P**	**23 04 14.4**	**+0.8**
	baz=233,SNR=17						
CWC	Cottonwood Cre	21.15	329	P	**P**	**23 04 15.7**	**+1.8**
	baz=142						
S39A	Bolivar	21.18	25	IAmb	IAmb	23 04 28.4	
	comp=Z,174nm,1.5s						
PSUT	Pine Spring	21.19	340	IAmb	IAmb	23 04 17.6	
	comp=Z,171nm,2.0s						
W45A	Hickory Valley	21.20	37	IAmb	IAmb	23 04 31.1	
	comp=Z,483nm,1.8s						
W45A	Hickory Valley	21.20	37	P	**P**	**23 04 14.2**	**0.0**
	baz=224						
VES	Vestal, Richgr	21.21	326	P	**P**	**23 04 16.2**	**+1.9**
	baz=139,SNR=54						
GRAC	Grapevine Rang	21.26	331	IAmb	IAmb	23 04 19.5	
	comp=Z,287nm,1.4s						
GRAC	Grapevine Rang	21.26	331	P	**P**	**23 04 17.2**	**+2.3**
	baz=144,SNR=19						
KSU1	Kansas State U	21.31	17	IAmb	IAmb	23 04 16.9	
	comp=Z,61nm,0.7s						
KSU1	Kansas State U	21.31	17	P	**P**	**23 04 14.6**	**-0.8**
	baz=201,SNR=14						
KSU1				S	Sn	23 08 21.3	+2.1
	baz=201						
KSU1	Kansas State U	21.31	17	P	**P**	**23 04 14.4**	**-1.0**
	baz=201,SNR=14						
SMMC	Simmler	21.32	323	P	**P**	**23 04 17.0**	**+1.5**
	baz=136,SNR=6.3						
GMN	Gold Mountain	21.46	331	IAmb	IAmb	23 04 21.7	
	comp=Z,200nm,1.5s						
LCH	Last Change Ra	21.58	331	IAmb	IAmb	23 04 22.8	
	comp=Z,357nm,1.9s						
BRIGG	Briggsdale	21.64	1	IAmb	IAmb	23 04 20.3	
	comp=Z,298nm,1.8s						
R11A	Troy Canyon, C	21.64	336	IAmb	IAmb	23 04 23.3	
	comp=Z,233nm,1.8s						
R11A	Troy Canyon, C	21.64	336	P	**P**	**23 04 20.3**	**+1.1**
	baz=150,SNR=70						
TIN	Tinemaha, Big	21.71	329	P	**P**	**23 04 22.0**	**+2.1**
	baz=143,SNR=11						
LNXT	Lenox	21.72	35	IAmb	IAmb	23 04 23.9	
	comp=Z,303nm,1.5s						
PLAL	Pickwick Lake	21.72	39	IAmb	IAmb	23 04 21.2	
	comp=Z,124nm,1.6s						
VOG	Valley Oaks Go	21.73	326	P	**P**	**23 04 21.3**	**+1.5**
	baz=139						
352A	Blakely	21.73	51	IAmb	IAmb	23 04 34.2	
	comp=Z,128nm,1.6s						
352A	Blakely	21.73	51	S	Sn	23 08 31.4	+2.1
	baz=240						
MPU	Maple Canyon	21.93	345	IAmb	IAmb	23 04 27.9	
	comp=Z,167nm,1.5s						
RIMA	Rio Macho	22.00	111	IAmb	IAmb	23 04 46.1	
	comp=Z,99nm,1.4s						
X48A	Hartselle	22.00	42	IAmb	IAmb	23 04 29.5	
	comp=Z,92nm,1.3s						
X48A	Hartselle	22.00	42	P	**P**	**23 04 21.1**	**-1.7**
	baz=230,SNR=12						
Y49A	Blount Mountai	22.03	44	P	**P**	**23 04 22.0**	**-1.2**
	baz=232,SNR=9.3						
Y49A				S	Sn	23 08 36.8	+0.2
	baz=232						
RDMU	Red Mountain	22.05	350	IAmb	IAmb	23 04 28.4	
	comp=Z,118nm,1.6s						
OGNE	Ogallala	22.11	5	P	**P**	**23 04 23.5**	**-0.5**
OGNE				IAmb	IAmb	23 04 27.5	
	comp=Z,94nm,0.8s						
OGNE	Ogallala	22.11	5	P	**P**	**23 04 23.6**	**-0.5**
	baz=186,SNR=15						
OGNE	Ogallala	22.11	5	P	**P**	**23 04 23.2**	**-0.8**
	baz=186,SNR=15						
R40A	Maddies Statio	22.12	26	IAmb	IAmb	23 04 47.6	
	comp=Z,126nm,1.4s						
R40A	Maddies Statio	22.12	26	P	**P**	**23 04 23.6**	**-0.5**
	baz=213,SNR=12						
HICK	Hickman	22.19	34	P	**P**	**23 04 24.5**	**-0.3**
CCM	Cathedral Cave	22.38	29	P	**P**	**23 04 25.1**	**-1.8**
CCM	Cathedral Cave	22.38	29	P	**P**	**23 04 25.1**	**-1.8**
CCM				pmax	pmax		
	comp=Z,74nm,1.4s						
CCM				MLR	MLR		
	comp=Z,18μm,20.0s						
CCM	Cathedral Cave	22.38	29	P	**P**	**23 04 25.2**	**-1.6**
	baz=215,SNR=12						
CCM	Cathedral Cave	22.38	29	P	**P**	**23 04 25.2**	**-1.6**
	baz=215						
DUG	Dugway, Tooele	22.40	343	IAmb	IAmb	23 04 32.4	
	comp=Z,121nm,1.5s						
DUG	Dugway, Tooele	22.40	343	P	**P**	**23 04 27.8**	**+0.5**
	baz=159,SNR=35						
MLAC	Mammoth, Mammo	22.46	329	P	**P**	**23 04 29.7**	**+1.7**
	baz=142						
152A	Waverly Hall	22.50	48	P	**P**	**23 04 27.7**	**-0.6**
	baz=238,SNR=8.0						
OMMB	Old Mammoth Mi	22.53	329	IAmb	IAmb	23 04 33.2	
	comp=Z,115nm,1.5s						
Z51A	Franklin	22.54	47	IAmb	IAmb	23 04 47.4	
	comp=Z,143nm,1.6s						
Z51A	Franklin	22.54	47	P	**P**	**23 04 27.8**	**-0.9**
	baz=236,SNR=6.6						
WVT	Waverly	22.66	37	P	**P**	**23 04 28.0**	**-1.9**
WVT				IAmb	IAmb	23 04 53.0	
	comp=Z,92nm,1.4s						
WVT	Waverly	22.66	37	P	**P**	**23 04 28.0**	**-1.9**
WVT				pmax	pmax		
	comp=Z,92nm,1.5s						
WVT				MLR	MLR		
	comp=Z,2μm,20.0s						
WVT	Waverly	22.66	37	P	**P**	**23 04 27.8**	**-2.1**
	baz=225,SNR=16						
WVT				S	Sn	23 08 54.0	+2.4
	baz=225						
WVT	Waverly	22.66	37	P	**P**	**23 04 28.0**	**-1.9**
	baz=225						
Q09A	Carvers	22.70	334	IAmb	IAmb	23 04 48.3	
	comp=Z,182nm,1.5s						
TIGA	Tifton	22.70	53	IAmb	IAmb	23 04 49.8	
	comp=Z,143nm,1.6s						
NV11	Mina Array Sit	22.79	332	IAmb	IAmb	23 04 36.2	
	comp=Z,142nm,1.3s						
RIOS	Rincon, Osa	22.80	113	IAmb	IAmb	23 04 32.0	
	comp=Z,97nm,0.9s						
LHV	Little Huntoon	22.80	331	IAmb	IAmb	23 04 44.0	
	comp=Z,201nm,1.8s						
RWWY	Rawlins	22.85	355	IAmb	IAmb	23 04 55.4	
	comp=Z,94nm,1.4s						
RWWY				IAMs_20	IAMs_20	23 13 16.9	
	comp=Z,6μm,19.0s						
NVAR	Mina Array Bea	22.86	331	P	**P**	**23 04 33.1**	**+0.9**
	comp=Z,7.1nm,0.6s,baz=155,slow=12,SNR=40						
NVAR				PcP	**PcP**	**23 08 23.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=89,slow=5.8,SNR=1.7						
NVAR				LR	LR	23 12 56.4	
	comp=Z,3μm,19.2s,baz=148,slow=36						
	comp=Z,7.1nm,0.6s						
V48A	Smith Brothers	22.99	39	IAmb	IAmb	23 04 56.8	
	comp=Z,149nm,1.4s						
V48A	Smith Brothers	22.99	39	P	**P**	**23 04 31.3**	**-2.1**
	baz=228,SNR=11						
V48A				S	Sn	23 08 57.5	-1.9
	baz=228						
S44A	Carbondale	23.05	32	S	Sn	23 08 59.7	-1.1
	baz=220						
BGNE	Belgrade	23.13	12	P	**P**	**23 04 33.7**	**-1.1**
BGNE				IAmb	IAmb	23 05 00.4	
	comp=Z,132nm,1.1s						
BGNE	Belgrade	23.13	12	P	**P**	**23 04 33.6**	**-1.1**
	baz=196						
SAO	San Andreas Ge	23.18	324	P	**P**	**23 04 35.2**	**-0.1**
SAO				pmax	pmax		
	comp=Z,65nm,1.5s						
SAO				MLR	MLR		
	comp=Z,3μm,21.0s						
P40A	Paris	23.27	25	IAmb	IAmb	23 04 53.3	
	comp=Z,88nm,1.2s						
P40A	Paris	23.27	25	S	Sn	23 09 03.3	-2.7
	baz=212						
SLM	Saint Louis	23.31	29	IAmb	IAmb	23 04 37.8	
	comp=Z,48nm,0.7s						
HWUT	Hardware Ranch	23.43	347	IAMs_20	IAMs_20	23 14 01.3	
	comp=Z,8μm,20.0s						
X51A	Calhoun	23.49	44	IAmb	IAmb	23 05 03.1	
	comp=Z,122nm,1.4s						
X51A	Calhoun	23.49	44	P	**P**	**23 04 36.7**	**-1.6**
	baz=234,SNR=8.5						
X51A				P	**P**	**23 04 36.7**	**-1.6**
	baz=234,SNR=8.5						
CLTN	Cedars of Leba	23.52	39	IAmb	IAmb	23 04 38.8	
	comp=Z,188nm,1.6s						
CMB	Columbia Colle	23.55	327	IAmb	IAmb	23 04 41.7	
	comp=Z,268nm,1.9s						
W50A	Signal Mountai	23.58	43	IAmb	IAmb	23 04 39.5	
	comp=Z,48nm,0.7s						
W50A	Signal Mountai	23.58	43	P	**P**	**23 04 37.7**	**-1.7**
	baz=232,SNR=28						
W50A				S	**S**	**23 08 51.6**	**-1.5**
	baz=232						
Y52A	Lilburn	23.62	47	IAmb	IAmb	23 05 04.7	
	comp=Z,139nm,1.6s						
Y52A	Lilburn	23.62	47	P	**P**	**23 04 38.4**	**-1.3**
	baz=236,SNR=9.5						
Y52A				P	**P**	**23 04 38.4**	**-1.3**
	baz=236,SNR=9.5						
Y52A				S	**S**	**23 08 53.0**	**-0.7**
	baz=236						
Y52A				S	**S**	**23 08 53.0**	**-0.7**
	baz=236						
154A	Montrose	23.63	50	IAmb	IAmb	23 05 04.2	
	comp=Z,144nm,1.2s						
154A	Montrose	23.63	50	S	Sn	23 09 06.8	-8.1
	baz=240						
ELK	Elko	23.64	339	P	**P**	**23 04 40.3**	**+0.2**
	comp=Z,6.4nm,0.9s,baz=160,slow=8.4,SNR=37						
ELK				LR	LR	23 13 39.3	
	comp=Z,4μm,18.9s,baz=164,slow=36						
	comp=Z,6.4nm,0.9s						
ELK	Elko	23.64	339	IAMs_20	IAMs_20	23 13 27.9	
	comp=Z,4μm,19.0s						
T47A	Sharon Grove	23.68	37	P	**P**	**23 04 38.8**	**-1.5**
	baz=225,SNR=16						
T47A				S	**S**	**23 09 02.1**	**+7.5**
	baz=225						
K22A	Casper	23.76	356	IAmb	IAmb	23 05 09.7	
	comp=Z,190nm,1.8s						
K22A	Casper	23.76	356	P	**P**	**23 04 41.3**	**+0.1**
	baz=175,SNR=14						
K22A	Casper	23.76	356	P	**P**	**23 04 40.4**	**-0.8**
	baz=175,SNR=14						
GOGA	Godfrey	23.79	48	IAmb	IAmb	23 04 42.0	
	comp=Z,42nm,0.6s						
GOGA	Godfrey	23.79	48	P	**P**	**23 04 40.2**	**-1.1**
GOGA				pmax	pmax		
	comp=Z,71nm,0.6s						
GOGA	Godfrey	23.79	48	P	**P**	**23 04 39.9**	**-1.4**
	baz=238,SNR=38						
GOGA				S	**S**	**23 08 54.9**	**-1.4**
	baz=238						
GOGA	Godfrey	23.79	48	P	**P**	**23 04 39.2**	**-2.1**
	baz=238,SNR=38						
N38A	Joes South For	23.92	22	IAmb	IAmb	23 05 07.2	
	comp=Z,77nm,1.1s						
N38A	Joes South For	23.92	22	S	**S**	**23 09 02.9**	**+4.5**
	baz=208						
PNTR	Pine Nut	23.98	330	P	**P**	**23 04 44.0**	**+0.6**
L34A	Svendsen Farm,	24.06	15	IAmb	IAmb	23 05 00.2	
	comp=Z,39nm,0.6s						
L34A	Svendsen Farm,	24.06	15	S	S	23 09 15.4	+15
	baz=200						
Q44A	Meyer Farm, Va	24.10	31	P	**P**	**23 04 43.2**	**-1.0**
	baz=219,SNR=23						
Q44A				S	S	23 09 15.2	+14
	baz=219						
U49A	Red Boiling Sp	24.13	39	IAmb	IAmb	23 04 52.8	
	comp=Z,132nm,2.0s						
U49A	Red Boiling Sp	24.13	39	P	**P**	**23 04 42.7**	**-1.8**
	baz=228,SNR=8.7						
U49A				S	**S**	**23 09 05.2**	**+3.4**
	baz=228						
BW06	Boulder Array	24.19	351	IAMs_20	IAMs_20	23 13 20.3	
	comp=Z,6μm,19.0s						
PDAR	Pinedale Array	24.19	351	P	**P**	**23 04 43.5**	**-1.8**
	comp=Z,1.3nm,0.5s,baz=142,slow=13,SNR=17						
PDAR				PcP	**PcP**	**23 08 24.8**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=176,slow=4.1,SNR=1.5						
PDAR				LR	LR	23 14 29.3	
	comp=Z,3μm,20.4s,baz=182,slow=37						
	comp=Z,1.3nm,0.5s						
CPCT	Cooper Cave	24.24	43	IAmb	IAmb	23 04 45.6	
	comp=Z,33nm,0.5s						
PAHR	Pah Rah Range	24.38	331	IAmb	IAmb	23 04 51.4	
	comp=Z,173nm,1.3s						
W52A	Murphy	24.41	44	IAmb	IAmb	23 04 48.3	
	comp=Z,51nm,0.6s						
W52A	Murphy	24.41	44	P	**P**	**23 04 46.4**	**-0.8**
	baz=234,SNR=23						
OLIL	Olney	24.43	32	IAmb	IAmb	23 05 07.5	
	comp=Z,141nm,1.4s						
OLIL	Olney	24.43	32	P	**P**	**23 04 46.9**	**-0.3**
	baz=221,SNR=7.6						
P43A	Skaggs, Pawnee	24.45	29	P	**P**	**23 04 46.8**	**-0.6**
	baz=217,SNR=11						
P43A				S	S	23 09 20.0	+13
	baz=217						
AHID	Auburn Hatcher	24.45	348	IAMs_20	IAMs_20	23 15 28.2	
	comp=Z,6μm,18.0s						
AFDM	Forest Hills D	24.54	328	IAmb	IAmb	23 05 07.2	
	comp=Z,133nm,2.0s						
V51A	Loudon	24.57	43	IAmb	IAmb	23 05 17.4	
	comp=Z,125nm,1.6s						
V51A	Loudon	24.57	43	P	**P**	**23 04 47.2**	**-1.3**
	baz=232,SNR=16						
V51A				S	S	23 09 24.4	+16
	baz=232						
N41A	Harden Midland	24.75	26	IAmb	IAmb	23 05 08.2	
	comp=Z,99nm,1.1s						
TKL	Tuckaleechee C	24.85	44	P	**P**	**23 04 49.0**	**-2.1**
	comp=Z,18nm,0.7s,baz=210,slow=11,SNR=40						
TKL				LR	LR	23 16 52.2	
	comp=Z,1μm,21.7s,baz=252,slow=42						
	comp=Z,18nm,0.7s						
TKL	Tuckaleechee C	24.85	44	IAmb	IAmb	23 05 22.2	
	comp=Z,195nm,1.8s						
TKL	Tuckaleechee C	24.85	44	P	**P**	**23 04 49.0**	**-2.1**
TKL	Tuckaleechee C	24.85	44	P	**P**	**23 04 49.7**	**-1.4**
	baz=233,SNR=9.8						
TKL				S	S	23 09 28.0	+15
	baz=233						
BEKR	Beckworth	24.96	330	P	**P**	**23 04 53.0**	**+0.8**
BEKR				IAmb	IAmb	23 04 56.7	
	comp=Z,158nm,1.4s						
MCCM	Marconi Confer	24.96	324	IAMs_20	IAMs_20	23 13 29.1	
	comp=Z,3μm,20.0s						
REDW	Red Top Meadow	24.98	349	IAmb	IAmb	23 05 13.7	
	comp=Z,72nm,1.4s						
REDW				IAMs_20	IAMs_20	23 14 10.3	
	comp=Z,5μm,19.0s						
WCI	Wyandotte Cave	25.01	36	P	**P**	**23 04 51.2**	**-1.3**
WCI				IAmb	IAmb	23 05 11.5	
	comp=Z,62nm,1.1s						
WCI	Wyandotte Cave	25.01	36	IAMs_20	IAMs_20	23 15 50.2	
	comp=Z,4μm,18.0s						
WCI	Wyandotte Cave	25.01	36	P	**P**	**23 04 51.2**	**-1.3**
WCI				pmax	pmax		
	comp=Z,62nm,1.2s						
WCI				MLR	MLR		
	comp=Z,4μm,18.0s						
WCI	Wyandotte Cave	25.01	36	P	**P**	**23 04 51.2**	**-1.3**
	baz=225,SNR=7.8						
WCI				S	**S**	**23 09 23.2**	**+7.1**
	baz=225						
WCI	Wyandotte Cave	25.01	36	P	**P**	**23 04 51.5**	**-1.1**
	baz=225						
BG3	Lake Jocassee	25.02	46	IAmb	IAmb	23 04 54.9	
	comp=Z,121nm,1.4s						
CASEE	Lake Jocassee	25.02	46	P	**P**	**23 04 52.3**	**-0.4**
	baz=236,SNR=25						
CASEE				S	S	23 09 33.6	+17
	baz=236						
T50A	Nancy	25.03	40	IAmb	IAmb	23 05 23.1	
	comp=Z,106nm,1.5s						
T50A	Nancy	25.03	40	P	**P**	**23 04 51.0**	**-1.8**
	baz=229						
T50A				P	**P**	**23 04 51.0**	**-1.8**
	baz=229						
T50A				S	**S**	**23 09 22.4**	**+6.0**
	baz=229						
T50A				S	**S**	**23 09 22.4**	**+6.0**
	baz=229						
SNOW	Snow King Moun	25.06	349	IAmb	IAmb	23 05 14.6	
	comp=Z,73nm,1.2s						
SNOW				IAMs_20	IAMs_20	23 15 00.3	
	comp=Z,6μm,19.0s						
HODGE	Hodges	25.07	48	IAmb	IAmb	23 04 54.7	
	comp=Z,27nm,0.6s						
HODGE	Hodges	25.07	48	P	**P**	**23 04 52.6**	**-0.5**
	baz=238,SNR=19						
HODGE				S	S	23 09 28.1	+11
	baz=238						
V52A	Sevierville	25.07	43	IAmb	IAmb	23 05 18.9	
	comp=Z,184nm,1.9s						
V52A	Sevierville	25.07	43	P	**P**	**23 04 51.6**	**-1.6**
	baz=233,SNR=14						
V52A				S	S	23 09 33.4	+16
	baz=233						
HAW	Hawthorne Fire	25.09	50	S	**S**	**23 09 23.1**	**+5.7**
	baz=241						
TPAW	Teton Pass	25.12	349	IAmb	IAmb	23 04 58.2	
	comp=Z,111nm,1.5s						
TPAW				IAMs_20	IAMs_20	23 14 14.1	
	comp=Z,4μm,18.0s						
RSSD	Black Hills	25.18	1	P	**P**	**23 04 53.2**	**-1.0**
RSSD	Black Hills	25.18	1	P	**P**	**23 04 53.2**	**-1.0**
RSSD				pmax	pmax		
	comp=Z,53nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,1μm,18.0s						
RSSD	Black Hills	25.18	1	P	**P**	**23 04 53.5**	**-0.7**
	baz=181,SNR=14						
RSSD				S	S	23 09 30.2	+11
	baz=181						
RSSD	Black Hills	25.18	1	P	**P**	**23 04 54.5**	**+0.3**
	baz=181						
LOHW	Long Hollow	25.18	350	IAMs_20	IAMs_20	23 16 11.6	
	comp=Z,6μm,18.0s						
ORV	Oroville	25.27	328	IAmb	IAmb	23 05 00.7	
	comp=Z,193nm,1.5s						
FXWY	Fox Creek	25.28	349	IAmb	IAmb	23 04 59.9	
	comp=Z,60nm,1.4s						
FXWY				IAMs_20	IAMs_20	23 15 08.2	
	comp=Z,5μm,21.0s						
MOOW	Moose Ponds	25.34	350	IAmb	IAmb	23 05 20.5	
	comp=Z,72nm,1.9s						
MOOW				IAMs_20	IAMs_20	23 15 06.7	
	comp=Z,5μm,18.0s						
V53A	Saluda	25.49	45	IAmb	IAmb	23 04 58.7	
	comp=Z,25nm,0.6s						
V53A	Saluda	25.49	45	P	**P**	**23 04 57.2**	**+0.2**
	baz=235,SNR=15						
V53A				P	**P**	**23 04 57.2**	**+0.2**
	baz=235,SNR=15						
V53A				S	S	23 09 40.1	+16
	baz=235						
V53A				S	S	23 09 40.1	+16
	baz=235						
IMW	Indian Meadow	25.52	349	IAmb	IAmb	23 05 22.4	
	comp=Z,90nm,1.9s						
IMW				IAMs_20	IAMs_20	23 15 22.3	
	comp=Z,4μm,19.0s						
TZTN	Tazewell	25.53	42	IAmb	IAmb	23 05 30.0	
	comp=Z,90nm,1.3s						
TZTN	Tazewell	25.53	42	P	**P**	**23 04 56.6**	**-0.7**
	baz=232,SNR=8.6						
TZTN	Tazewell	25.53	42	P	**P**	**23 04 56.8**	**-0.5**
	baz=232,SNR=8.6						
FLWY	Flagg Ranch	25.66	350	IAMs_20	IAMs_20	23 15 15.1	
	comp=Z,5μm,22.0s						
HOPS	Hopland Field	25.67	325	IAMs_20	IAMs_20	23 13 56.9	
	comp=Z,3μm,20.0s						
ECSD	EROS Data Cent	25.68	13	P	**P**	**23 04 58.3**	**-0.2**
ECSD	EROS Data Cent	25.68	13	P	**P**	**23 04 56.9**	**-1.7**
	baz=198,SNR=6.1						
ECSD	EROS Data Cent	25.68	13	P	**P**	**23 04 56.8**	**-1.7**
	baz=198,SNR=6.1						
R49A	Shelbyville	25.69	37	S	S	23 09 38.9	+12
	baz=227						
R49A				S	S	23 09 38.9	+12
	baz=227						
PAULI	Pauline	25.70	47	IAmb	IAmb	23 05 01.4	
	comp=Z,45nm,0.7s						
PAULI	Pauline	25.70	47	P	**P**	**23 04 58.6**	**-0.2**
	baz=238,SNR=20						
PAULI				S	S	23 09 40.0	+13
	baz=238						
K38A	Parkersburg	25.73	20	S	S	23 09 41.2	+14
	baz=207						
L40A	Anamosa	25.76	23	IAmb	IAmb	23 05 23.6	
	comp=Z,73nm,1.1s						
L40A	Anamosa	25.76	23	P	**P**	**23 04 59.5**	**+0.2**
	baz=210						
JSC	Jenkinsville	25.81	49	P	**P**	**23 04 58.9**	**-0.9**
JSC				IAmb	IAmb	23 05 33.8	
	comp=Z,48nm,1.2s						
JSC	Jenkinsville	25.81	49	P	**P**	**23 04 58.9**	**-0.9**
JSC				pmax	pmax		
	comp=Z,48nm,1.2s						
H17A	Grant Village	25.94	350	P	**P**	**23 05 04.9**	**+3.7**
	baz=167,SNR=5.3						
HLID	Hailey	25.97	344	IAMs_20	IAMs_20	23 15 11.5	
	comp=Z,4μm,18.0s						
HLID	Hailey	25.97	344	P	**P**	**23 05 02.0**	**+0.6**
	baz=158,SNR=27						
R50A	Paris	26.17	38	P	**P**	**23 05 01.5**	**-1.6**
	baz=228,SNR=6.9						
R50A				P	**P**	**23 05 01.5**	**-1.6**
	baz=228,SNR=6.9						
R50A				S	**S**	**23 09 43.9**	**+10**
	baz=228						
R50A				S	**S**	**23 09 43.9**	**+10**
	baz=228						
SFIN	Lafayette	26.18	31	IAmb	IAmb	23 05 03.6	
	comp=Z,51nm,0.6s						
SFIN	Lafayette	26.18	31	P	**P**	**23 05 02.1**	**-1.0**
	baz=220,SNR=11						
SFIN				S	S	23 09 51.6	+17
	baz=220						
SFIN	Lafayette	26.18	31	P	**P**	**23 05 02.2**	**-0.8**
	baz=220,SNR=11						
KMSC	Kings Mountain	26.20	47	IAmb	IAmb	23 05 27.7	
	comp=Z,56nm,1.4s						
KMSC	Kings Mountain	26.20	47	S	S	23 09 47.9	+13
	baz=238						
KMSC	Kings Mountain	26.20	47	P	**P**	**23 05 02.4**	**-0.9**
	baz=238						
MFID	Camas Ranch	26.24	341	IAmb	IAmb	23 05 06.1	
	comp=Z,116nm,1.9s						
MFID				IAMs_20	IAMs_20	23 17 00.7	
	comp=Z,3μm,18.0s						
YNM	Yellowstone No	26.28	350	IAmb	IAmb	23 05 09.3	
	comp=Z,53nm,0.6s						
WVOR	Wild Horse Val	26.34	336	IAmb	IAmb	23 05 06.9	
	comp=Z,143nm,1.9s						
WVOR				IAMs_20	IAMs_20	23 16 45.5	
	comp=Z,4μm,18.0s						
WVOR	Wild Horse Val	26.34	336	P	**P**	**23 05 05.3**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,21nm,1.8s						
P48A	Milroy	26.37	35	IAmb	IAmb	23 05 46.6	
	comp=Z,97nm,1.5s						
P48A	Milroy	26.37	35	S	S	23 09 50.3	+13
	baz=225						
P48A				S	S	23 09 50.3	+13
	baz=225						
KCPM	Cahto Peak	26.44	326	IAmb	IAmb	23 05 09.3	
	comp=Z,212nm,1.8s						
RLMT	Red Lodge	26.46	353	IAmb	IAmb	23 05 41.7	
	comp=Z,69nm,1.8s						
M44A	Midewin, Midew	26.52	29	S	S	23 09 55.3	+15
	ba

I37A	Lemond, Waseca	26.77	18	IAmb	IAmb	23 05 51.9		
	comp=Z,124nm,1.6s							
I37B	Waseca	26.77	18	S	S	23 10 03.1	+19	
	baz=204							
P49A	Miami Univ. Ec	26.81	36	P	P	23 05 07.4	-1.4	
	baz=226							
P49A				S	S	23 10 01.2	+17	
	baz=226							
P49A	Miami Univ. Ec	26.81	36	P	P	23 05 07.7	-1.1	
	baz=226							
JFWS	Jewell Farm	26.86	24	IAmb	IAmb	23 05 40.4		
	comp=Z,69nm,1.0s							
JFWS	Jewell Farm	26.86	24	S	S	23 09 58.0	+13	
	baz=211							
J08A	Circle Bar Ran	27.08	337	IAmb	IAmb	23 05 13.8		
	comp=Z,257nm,1.9s							
O48B	Farmland	27.08	34	P	P	23 05 09.4	-1.8	
	baz=224							
O48B				S	S	23 10 03.3	+15	
	baz=224							
O48B	Farmland	27.08	34	P	P	23 05 10.5	-0.8	
	baz=224							
W57A	Gilead	27.15	48	S	S	23 10 02.7	+13	
	baz=240							
W57A				S	S	23 10 02.7	+13	
	baz=240							
Q51A	Peebles	27.24	38	IAmb	IAmb	23 05 53.3		
	comp=Z,108nm,1.7s							
Q51A	Peebles	27.24	38	P	P	23 05 11.5	-1.2	
	baz=229,SNR=6.1							
Q51A				P	P	23 05 11.5	-1.2	
	baz=229,SNR=6.1							
Q51A				S	S	23 10 17.0	+26	
	baz=229							
Q51A				S	S	23 10 17.0	+26	
	baz=229							
N47A	Urbana	27.26	32	P	P	23 05 11.6	-1.2	
	baz=222							
N47A				P	P	23 05 11.6	-1.2	
	baz=222							
N47A				S	S	23 10 11.5	+20	
	baz=222							
N47A				S	S	23 10 11.5	+20	
	baz=222							
BOZ	Bozeman (W)	27.29	349	IAms_20	IAms_20	23 16 19.2		
	comp=Z,4µm,20.0s							
BOZ	Bozeman (W)	27.29	349	P	P	23 05 13.2	0.0	
	baz=165,SNR=10							
X58A	Rowland	27.32	50	S	S	23 10 07.0	+14	
	baz=242							
X58A				S	S	23 10 07.0	+14	
	baz=242							
KHMM	Horse Mountain	27.39	327	IAmb	IAmb	23 05 18.0		
	comp=Z,148nm,1.3s							
K43A	Burlington	27.46	27	S	S	23 10 17.6	+23	
	baz=215							
O49A	Covington	27.47	35	IAmb	IAmb	23 05 49.9		
	comp=Z,51nm,1.2s							
O49A	Covington	27.47	35	P	P	23 05 13.7	-1.1	
	baz=225							
O49A				P	P	23 05 13.7	-1.1	
	baz=225							
O49A				S	S	23 10 24.0	+29	
	baz=225							
O49A				S	S	23 10 24.0	+29	
	baz=225							
JCC	Jacoby Creek,	27.50	327	IAms_20	IAms_20	23 16 13.3		
	comp=Z,5µm,18.0s							
YBH	Yreka Blue Hor	27.53	330	P	P	23 05 13.5	-1.8	
	comp=Z,5.9nm,0.8s,baz=112,slow=4.4,SNR=8.6							
YBH				LR	LR	23 15 26.4		
	comp=Z,1µm,20.9s,baz=162,slow=35							
	comp=Z,5.9nm,0.8s							
R53A	Hurricane	27.63	41	IAmb	IAmb	23 05 17.4		
	comp=Z,47nm,0.9s							
R53A	Hurricane	27.63	41	P	P	23 05 15.3	-0.9	
	baz=232,SNR=9.8							
R53A				P	P	23 05 15.3	-0.9	
	baz=232,SNR=9.8							
S54A	Dingess, Beckl	27.71	42	IAmb	IAmb	23 05 54.4		
	comp=Z,56nm,1.5s							
S54A	Dingess, Beckl	27.71	42	P	P	23 05 15.5	-1.5	
	baz=234							
S54A				P	P	23 05 15.5	-1.5	
	baz=234							
S54A				S	S	23 10 15.3	+16	
	baz=234							
S54A				S	S	23 10 15.3	+16	
	baz=234							
GTBY	Guantanamo Bay	27.80	83	IAms_20	IAms_20	23 17 07.1		
	comp=Z,3µm,21.0s							
E28A	Huff	27.81	6	IAmb	IAmb	23 05 18.4		
	comp=Z,36nm,0.8s							
E28A	Huff	27.81	6	P	P	23 05 16.2	-1.6	
	baz=188,SNR=5.3							
PLID	Pearl Lake	27.82	343	IAms_20	IAms_20	23 16 30.4		
	comp=Z,4µm,20.0s							
Q52A	Bidwell	27.84	39	IAmb	IAmb	23 05 18.9		
	comp=Z,98nm,1.4s							
Q52A	Bidwell	27.84	39	P	P	23 05 17.1	-0.9	
	baz=231,SNR=9.6							
Q52A				P	P	23 05 17.1	-0.9	
	baz=231,SNR=9.6							
BLA	Blacksburg	27.95	44	IAmb	IAmb	23 06 02.7		
	comp=Z,50nm,1.4s							
BLA	Blacksburg	27.95	44	P	P	23 05 19.2	+0.1	
	baz=236							
BMO	Blue Mountains	28.00	341	IAmb	IAmb	23 05 21.9		
	comp=Z,48nm,1.4s							
BMO				IAms_20	IAms_20	23 16 43.2		
	comp=Z,4µm,19.0s							
N49A	Columbus Grove	28.07	34	IAmb	IAmb	23 05 20.3		
	comp=Z,73nm,1.4s							
N49A	Columbus Grove	28.07	34	P	P	23 05 18.8	-1.4	
	baz=225,SNR=6.7							
N49A				P	P	23 05 18.8	-1.4	
	baz=225,SNR=6.7							
N49A				S	S	23 10 31.4	+27	
	baz=225							
N49A				S	S	23 10 31.4	+27	
	baz=225							
I42A	Draeger Farm,	28.20	24	S	S	23 10 32.5	+26	
	baz=213							
ACSO	Alum Creek Sta	28.25	37	IAmb	IAmb	23 06 20.2		
	comp=Z,36nm,1.1s							
ACSO				IAms_20	IAms_20	23 18 23.0		
	comp=Z,6µm,19.0s							
P52A	Corning	28.35	38	IAmb	IAmb	23 05 21.5		
	comp=Z,73nm,1.6s							
P52A	Corning	28.35	38	P	P	23 05 21.8	-0.8	
	baz=230							
PINE	Pine Mountain	28.39	335	IAmb	IAmb	23 05 25.6		
	comp=Z,109nm,1.6s							
F36A	Milaca	28.43	16	IAmb	IAmb	23 06 27.8		
	comp=Z,82nm,1.9s							
T57A	Hurt	28.61	46	P	P	23 05 25.2	+0.2	
L48A	N Adams	28.68	32	IAmb	IAmb	23 06 25.3		
	comp=Z,114nm,1.8s							
P53A	Whipple	28.70	39	IAmb	IAmb	23 05 26.4		
	comp=Z,22nm,0.7s							
P53A	Whipple	28.70	39	P	P	23 05 24.1	-1.5	
	baz=231,SNR=6.6							
P53A				P	P	23 05 24.1	-1.5	
	baz=231,SNR=6.6							
Q54A	Coxs Mills	28.72	41	IAmb	IAmb	23 06 21.6		
	comp=Z,117nm,1.6s							
R55A	Marlinton	28.76	43	IAmb	IAmb	23 06 15.2		
	comp=Z,75nm,1.6s							
MSO	Missoula	28.93	347	IAmb	IAmb	23 06 10.8		
	comp=Z,58nm,1.5s							
MSO				IAms_20	IAms_20	23 17 23.6		
	comp=Z,4µm,19.0s							
MSO	Missoula	28.93	347	P	P	23 05 28.8	+1.1	
	baz=161,SNR=7.0							
G08A	Pilot Rock	28.93	339	IAmb	IAmb	23 05 30.5		
	comp=Z,168nm,1.7s							
O53A	New Philadelph	29.28	38	IAms_20	IAms_20	23 18 30.3		
	comp=Z,4µm,21.0s							
AAM	Ann Arbor	29.34	33	IAmb	IAmb	23 05 32.4		
	comp=Z,56nm,1.2s							
AAM	Ann Arbor	29.34	33	P	P	23 05 30.4	-1.0	
	baz=224							
EGMT	Eagleton	29.38	353	IAmb	IAmb	23 06 25.4		
	comp=Z,44nm,1.4s							
EGMT				IAms_20	IAms_20	23 17 01.7		
	comp=Z,3µm,21.0s							
DGMT	Dagmar	29.53	1	IAmb	IAmb	23 06 25.8		
	comp=Z,49nm,1.4s							
DGMT	Dagmar	29.53	1	P	P	23 05 32.0	-1.0	
	baz=181							
DGMT	Dagmar	29.53	1	P	P	23 05 32.3	-0.7	
	baz=181							
MCWV	Mont Chateau	29.74	41	P	P	23 05 33.4	-1.6	
	baz=233							
E09A	Wood Farm, Sta	29.75	341	IAmb	IAmb	23 05 36.2		
	comp=Z,48nm,1.6s							
F07A	Phinny Hill Vi	29.79	338	IAmb	IAmb	23 05 37.4		
	comp=Z,58nm,1.6s							
Q56A	Snyder Ridge,	29.79	42	IAmb	IAmb	23 06 29.1		
	comp=Z,113nm,1.9s							
SJCC	San Jacinto, C	29.81	103	eP	P	23 05 34.9	-1.0	
COWI	Conover	30.00	22	IAms_20	IAms_20	23 17 42.1		
	comp=Z,2µm,18.0s							
HAWA	Hanford	30.09	339	IAmb	IAmb	23 06 25.6		
	comp=Z,64nm,1.9s							
HAWA				IAms_20	IAms_20	23 18 39.5		
	comp=Z,3µm,18.0s							
AGMN	Agassiz Nation	30.20	12	IAms_20	IAms_20	23 17 18.1		
	comp=Z,3µm,20.0s							
AGMN	Agassiz Nation	30.20	12	P	P	23 05 37.5	-1.4	
	baz=197,SNR=13							
AGMN	Agassiz Nation	30.20	12	P	P	23 05 37.3	-1.6	
	baz=197,SNR=13							
CBOC	Ciudad Bolivar	30.69	111	eP	P	23 05 46.8	+3.0	
B35A	Bob, Littlefor	30.71	14	IAmb	IAmb	23 05 44.9		
	comp=Z,68nm,1.7s							
B35A	Bob, Littlefor	30.71	14	P	P	23 05 41.0	-2.4	
	baz=200							
P57A	Homestead Farm	30.79	43	IAmb	IAmb	23 05 48.2		
	comp=Z,67nm,1.6s							
EYMN	Ely	30.90	17	IAms_20	IAms_20	23 18 11.7		
	comp=Z,4µm,20.0s							
EYMN	Ely	30.90	17	IAmb	IAmb	23 06 22.5		
	comp=Z,59nm,1.4s							
EYMN	Ely	30.90	17	P	P	23 05 43.7	-1.4	
	baz=205,SNR=5.6							
PLMC	San Jos del P	30.91	113	eP	P	23 05 46.7	+1.1	
C09A	Chrisman Ranch	30.94	342	IAmb	IAmb	23 05 48.6		
	comp=Z,42nm,1.5s							
HELC	Santa Helena	30.97	110	eP	P	23 05 42.0	-4.5	
NEW	Newport	31.04	344	P	P	23 05 46.1	-0.3	
	comp=Z,3.2nm,0.6s,baz=144,slow=6.2,SNR=10							
NEW				LR	LR	23 18 40.8		
	comp=Z,3µm,19.5s,baz=166,slow=37							
	comp=Z,3.2nm,0.6s							
NEW	Newport	31.04	344	IAms_20	IAms_20	23 18 30.6		
	comp=Z,3µm,19.0s							
NEW	Newport	31.04	344	IAmb	IAmb	23 05 48.3		
	comp=Z,63nm,1.9s							
NEW	Newport	31.04	344	P	P	23 05 47.1	+0.8	
	baz=156,SNR=5.8							
ERPA	Erie	31.19	37	IAms_20	IAms_20	23 20 11.8		
	comp=Z,4µm,18.0s							
LON	Longmire	31.20	337	IAmb	IAmb	23 05 51.1		
	comp=Z,42nm,1.1s							
GRTK	Grand Turk	31.47	79	IAms_20	IAms_20	23 20 31.1		
	comp=Z,3µm,18.0s							
SSPA	Standing Stone	31.53	41	P	P	23 05 49.3	-1.5	
SSPA				IAmb	IAmb	23 07 00.4		
	comp=Z,72nm,1.5s							
SSPA	Standing Stone	31.53	41	P	P	23 05 49.3	-1.5	
	baz=235							
GUY2C	Guyana, Caldas	31.56	112	eP	P	23 05 50.7	-1.1	
CRJC	Cerrejon, Guaj	31.57	100	eP	P	23 05 51.3	-0.2	
PTBC	PUERTO BERRIO,	31.78	109	eP	P	23 05 54.2	+1.0	
NORC	Norcasia	31.84	111	eP	P	23 05 56.1	+2.3	
GCUF	Volcan Galeras	31.95	120	eP	P	23 05 51.7	-3.6	
ULM	Lac du Bonnet	32.07	11	P	P	23 05 53.5	-1.8	
	comp=Z,5.4nm,0.5s,baz=186,slow=9.4,SNR=5.5							
ULM				LR	LR	23 19 56.5		
	comp=Z,4µm,18.7s,baz=198,slow=38							
	comp=Z,5.4nm,0.5s							
OCAC	Ocana	32.12	105	eP	P	23 05 56.1	-0.3	
URIC	Uribia, Colomb	32.20	98	eP	P	23 05 57.6	+0.8	
BRRC	Barranca, Sant	32.21	107	eP	P	23 05 58.6	+1.6	
ORTC	Ortega, Tolima	32.29	114	eP	P	23 05 58.4	+0.6	
SPBC	San Pablo de B	32.51	110	eP	P	23 06 01.7	+2.0	
NLWA	Neilton Lookou	32.52	335	IAms_20	IAms_20	23 20 07.1		
	comp=Z,4µm,22.0s							
B06A	Marblemount	32.59	339	IAmb	IAmb	23 06 02.6		
	comp=Z,51nm,1.1s							
ROSC	El Rosal	32.66	111	P	P	23 06 05.4	+4.1	
	comp=Z,5.7nm,0.3s,baz=335,slow=15,SNR=4.1							
ROSC	El Rosal	32.66	111	eP	P	23 06 05.1	+3.8	
PRAC	Prado	32.70	114	eP	P	23 05 60.0	-1.4	
BARC	Barichara	32.90	108	eP	P	23 06 04.6	+1.3	
PAMC	Pamplona, Colo	33.03	106	eP	P	23 06 06.3	+1.6	
CHIC	Chingaza	33.27	111	eP	P	23 06 05.0	-1.7	
RUSC	La Rusia	33.28	109	eP	P	23 06 05.2	-1.7	
SADO	Sadowa	33.41	34	P	P	23 06 04.5	-2.6	
	comp=Z,14nm,0.6s,baz=261,slow=9.1,SNR=14							
SADO				LR	LR	23 21 32.4		
	comp=Z,2µm,18.4s,baz=212,slow=40							
	comp=Z,14nm,0.6s							
BINY	Binghamton	33.60	40	P	P	23 06 07.6	-1.3	
	baz=235							
BOSC	San Juan Bosco	33.73	128	P	P	23 06 09.7	-0.8	
BOSC				IAmb	IAmb	23 06 53.9		
	comp=Z,36nm,1.2s							
L59A	Walton	34.17	41	IAmb	IAmb	23 06 15.6		
	comp=Z,33nm,1.1s							
TAMC	Tame, Arauca	34.22	107	eP	P	23 06 16.9	+2.3	
SDV	Santo Domingo	34.36	102	LR	LR	23 20 38.9		
	comp=Z,2µm,21.5s,baz=319,slow=37							
SDV	Santo Domingo	34.36	102	P	P	23 06 16.3	+0.3	
SDV				IAmb	IAmb	23 06 36.2		
	comp=Z,53nm,1.5s							
LLLB	Lillooet	34.53	340	IAmb	IAmb	23 06 18.0		
	comp=Z,55nm,1.6s							
PTLC	Puerto Leguiza	34.64	119	eP	P	23 06 20.2	+2.0	
PTGC	Puerto Gaitan,	34.88	111	eP	P	23 06 20.8	+0.5	
HATO	Hato, Curacao	34.92	96	IAms_20	IAms_20	23 21 49.9		
	comp=Z,2µm,19.0s							
ACCN	Adirondack Com	35.68	40	IAmb	IAmb	23 07 27.8		
	comp=Z,140nm,2.0s							
L61B	Northampton	35.79	42	IAms_20	IAms_20	23 20 13.5		
	comp=Z,2µm,22.0s							
LONY	Lake Ozonia	35.84	38	IAms_20	IAms_20	23 22 38.7		
	comp=Z,4µm,19.0s							
FFC	Flin Flon	35.84	3	P	P	23 06 26.3	-1.8	
FFC	Flin Flon	35.84	3	P	P	23 06 26.3	-1.8	
FFC				pmax	pmax			
	comp=Z,18nm,0.8s							
FFC				MLR	MLR			
	comp=Z,20µm,21.0s							
SJG	San Juan	36.41	85	P	P	23 06 33.2	-0.2	
SJG	San Juan	36.41	85	P	P	23 06 33.2	-0.2	
SJG				pmax	pmax			
	comp=Z,12nm,0.9s							
SJG				MLR	MLR			
	comp=Z,2µm,21.0s							
BRLDA	Berland Lookou	36.52	347	IAmb	IAmb	23 06 36.0		
	comp=Z,38nm,1.0s							
ATAH	Atahualpa	36.53	133	LR	LR	23 17 07.7		
	comp=Z,405nm,19.5s,baz=314,slow=29							
HNH	Hanover	36.69	40	IAms_20	IAms_20	23 24 28.4		
	comp=Z,2µm,20.0s							
BAUV	El Baul	36.75	100	IAmb	IAmb	23 06 41.4		
	comp=Z,79nm,1.5s							
TRQ	Mont Tremblant	36.81	35	IAmb	IAmb	23 07 12.6		
	comp=Z,163nm,1.9s							
FFD	Franklin Falls	36.96	41	IAms_20	IAms_20	23 22 58.5		
	comp=Z,2µm,19.0s							
BBB	Bella Bella	38.01	336	LR	LR	23 22 50.8		
	comp=Z,1µm,19.0s,baz=154,slow=37							
MANA	Manning	39.16	349	IAmb	IAmb	23 06 57.1		
	comp=Z,122nm,1.5s							
PCRV	Puerto La Cruz	39.55	97	LR	LR	23 25 17.2		
	comp=Z,2µm,19.2s,slow=39							
EMMW	East Machias	40.20	42	IAms_20	IAms_20	23 22 02.3		
	comp=Z,2µm,18.0s							
D62A	Allapoint, All	40.42	38	P	P	23 07 06.4	-0.4	
GDHS	Morne Mazeau,	40.83	87	IAms_20	IAms_20	23 26 00.4		
	comp=Z,2µm,19.0s							
TDBA	Terre de Bas,	41.03	87	IAms_20	IAms_20	23 25 56.6		
	comp=Z,2µm,20.0s							
NNA	Nana	41.09	136	LR	LR	23 20 51.6		
	comp=Z,548nm,21.4s,baz=333,slow=31							
MAGL	Barre de l'ile	41.35	87	IAms_20	IAms_20	23 26 25.0		
	comp=Z,2µm,19.0s							
SVN	Savane Anatole	41.67	89	IAms_20	IAms_20	23 23 58.6		
	comp=Z,2µm,20.0s							
FDF	Fort de France	41.71	89	IAms_20	IAms_20	23 24 39.7		
	comp=Z,2µm,19.0s							
BIM	Bigot	41.83	89	IAms_20	IAms_20	23 24 33.9		
	comp=Z,2µm,20.0s							
ILAM	Ilet Lapin Mar	41.96	89	IAms_20	IAms_20	23 24 37.3		
	comp=Z,3µm,20.0s							
MPOM	Morne Pois Mar	42.04	89	IAms_20	IAms_20	23 24 29.5		
	comp=Z,2µm,20.0s							
CRAG	Craig	42.44	336	P	P	23 07 24.2	+1.1	
T35M	Bob Quinn	42.58	339	P	P	23 07 25.9	+1.5	
	baz=143,SNR=5.5							
WRAK	Wrangell Islan	42.87	338	P	P	23 07 27.4	+0.7	
WRAK				IAmb	IAmb	23 07 30.5		
	comp=Z,157nm,1.7s							
WRAK	Wrangell Islan	42.87	338	IAms_20	IAms_20	23 25 41.6		
	comp=Z,3µm,20.0s							
WRAK	Wrangell Islan	42.87	338	P	P	23 07 28.6	+1.9	
	baz=140							
T33K	Petersburg	43.39	338	P	P	23 07 33.0	+2.1	
	baz=139							
KOTAN	Kotaneelee Air	43.51	346	P	P	23 07 32.6	+0.8	
	baz=153,SNR=8.0							
BBGH	Gun Hill	43.56	91	IAms_20	IAms_20	23 27 29.9		
	comp=Z,3µm,20.0s							
DLBC	Dease Lake	43.68	341	LR	LR	23 25 34.3		
	comp=Z,1µm,18.2s,baz=142,slow=36							
DLBC	Dease Lake	43.68	341	P	P	23 07 33.9	+0.6	
DLBC				IAmb	IAmb	23 07 36.5		
	comp=Z,125nm,1.4s							
DLBC	Dease Lake	43.68	341	P	P	23 07 34.6	+1.3	
	baz=144,SNR=16							
YKA	Yellowknife Ar	44.14	353	P	P	23 07 35.0	-1.8	
	comp=Z,2.8nm,0.6s,baz=173,slow=7.0,SNR=22							
YKA				LR	LR	23 25 36.9		
	comp=Z,3µm,19.4s,baz=164,slow=36							
	comp=Z,2.8nm,0.6s							
TAOE	Nuku Hiva Isla	44.60	235	eS	S	23 14 19.6	+2.6	
	comp=Z,858nm,25.1s							
TAOE				eSS	ScS	23 17 42.0	+2.7	
	comp=Z,600nm,25.6s							
TAOE				eLR	LR	23 20 19.3		
	comp=Z,2µm,23.4s							
TAOE	Nuku Hiva Isla	44.60	235	eT	T	23 55 10.8		
	comp=Z,136nm,0.2s							
R33M	Jennings River	44.74	341	P	P	23 07 42.9	+1.0	
	baz=143,SNR=14							
JIS	Juneau Island	45.00	338	IAms_20	IAms_20	23 26 36.9		
	comp=Z,2µm,18.0s							
R32K	Eaglecrest	45.04	338	P	P	23 07 45.4	+1.2	
	baz=138							
S31K	Pelican	45.44	337	P	P	23 07 48.0	+0.8	
	baz=136							
TGTN	Hyland Airport	45.76	344	P	P	23 07 50.1	+0.3	
	baz=148,SNR=14							
P32M	Atlin	45.77	340	P	P	23 07 50.5	+0.5	
	baz=140							
SCHQ	Schefferville	45.94	30	P	P	23 07 50.0	-1.3	
	comp=Z,6.7nm,0.5s,baz=250,slow=7.0,SNR=11							
SCHQ				LR	LR	23 28 06.0		
	comp=Z,3µm,20.6s,baz=236,slow=38							
	comp=Z,6.7nm,0.5s							
RPN	Rapa Nui	45.96	186	LR	LR	23 22 37.9		
	comp=Z,2µm,20.5s,baz=358,slow=30							
P33M	Teslin, Yukon	45.96	341	IAmb	IAmb	23 07 53.9		
	comp=Z,71nm,1.6s							
P33M				IAms_20	IAms_20	23 27 56.4		
	comp=Z,2µm,19.0s							
P33M	Teslin, Yukon	45.96	341	P	P	23 07 52.3	+0.8	
	baz=141,SNR=6.2							
WRGLY	Wrigley	46.18	348	P	P	23 07 52.8	-0.2	
	baz=155,SNR=7.6							
SKAG	Skagway	46.21	339	P	P	23 07 54.0	+0.7	
	baz=138							
PLBC	Pleasant Camp	46.57	338	P	P	23 07 57.3	+1.2	
	baz=137,SNR=11							
N32M	Quiet Lake	46.78	341	P	P	23 07 58.6	+0.7	
	baz=142							
WHY	Whitehorse	46.96	340	P	P	23 07 59.9	+0.5	
	baz=139,SNR=5.6							
O30N	Mendenhall	47.44	340	P	P	23 08 03.9	+0.9	
	baz=138,SNR=12							
MMPY	Sheldon Lake,	47.45	344	P	P	23 08 04.3	+1.2	
	baz=145,SNR=32							
FARO	Faro, Yukon	47.71	342	IAmb	IAmb	23 08 06.5		
	comp=Z,52nm,1.8s							
FARO	Faro, Yukon	47.71	342	P	P	23 08 05.6	+0.5	
	baz=142							
N31M	Braeburn, Yuko	47.88	340	IAms_20	IAms_20	23 28 18.9		
	comp=Z,2µm,20.0s							
N31M	Braeburn, Yuko	47.88	340	P	P	23 08 07.4	+1.0	
	baz=139,SNR=14							
O29M	Mount Kennedy	47.95	338	P	P	23 08 07.8	+0.7	
	baz=134,SNR=9.5							
HYT	Haines Junctio	47.95	339	P	P	23 08 08.5	+1.4	
	baz=136,SNR=15							
M31M	Drury Creek, Y	48.00	342	P	P	23 08 08.1	+0.9	
	baz=141,SNR=9.1							
BCPM	Bancas Point	48.09	337	IAms_20	IAms_20	23 30 58.8		
	comp=Z,2µm,18.0s							
N30M	Aishikik Lake	48.28	340	P	P	23 08 10.8	+1.2	
	baz=137,SNR=5.4							
YUK6	Outpost Mounta	48.33	339	P	P	23 08 11.6	+1.5	
	baz=135,SNR=11							
PCA	Pinnacle	48.42	337	IAmb	IAmb	23 08 13.6		
	comp=Z,82nm,1.4s							
YUK4	Talbot Arm	48.72	339	P	P	23 08 14.8	+1.8	
	baz=135,SNR=13							
O28M	Mount Upton	48.85	338	P	P	23 08 15.8	+1.6	
	baz=133,SNR=17							
TABL	Table Mountain	48.98	337	IAmb	IAmb	23 08 18.2		
	comp=Z,86nm,1.4s							
TABL				IAms_20	IAms_20	23 31 31.2		
	comp=Z,2µm,18.0s							
M30M	Minto, Yukon	49.01	341	IAmb	IAmb	23 08 17.7		
	comp=Z,83nm,1.8s							
M30M	Minto, Yukon	49.01	341	P	P	23 08 15.5	+0.4	
	baz=138,SNR=8.7							
YUK8	Steele Glacier	49.06	338	P	P	23 08 17.3	+1.5	
	baz=134,SNR=36							
MESA	MESA	49.11	336	IAmb	IAmb	23 08 20.3		
	comp=Z,74nm,1.2s							
MESA				IAms_20	IAms_20	23 27 48.7		
	comp=Z,1µm,19.0s							
MESA	MESA	49.11	336	P	P	23 08 17.0	+0.9	
	baz=130							
YAH	Yahtse	49.15	337	IAms_20	IAms_20	23 31 15.8		
	comp=Z,2µm,18.0s							
LOGN	Logan Glacier	49.19	337	IAmb	IAmb	23 08 19.9		
	comp=Z,89nm,1.5s							
CTG	Chitna Glacier	49.40	337	P	P	23 08 19.9	+1.6	
	baz=132,SNR=13							
M29M	Somme Creek	49.44	340	P	P	23 08 19.7	+1.2	
	baz=136,SNR=19							
MAYO	Mayo, Yukon	49.51	342	IAmb	IAmb	23 08 23.4		
	comp=Z,39nm,0.9s							
ISLE	Juniper Island	49.53	337	IAms_20	IAms_20	23 31 26.9	

EYAK	Cordova Ski Ar	50.82 335	P	P	23 08 30.4	+1.6
	baz=126,SNR=5.3					
J29M	Klondike Camp	50.83 342	IAMs_20	IAMs_20	23 29 15.1	
	comp=Z,1μm,18.0s					
DAWY	Dawson	50.90 341	IAmb	IAmb	23 08 31.6	
	comp=Z,32nm,1.2s					
DAWY	Dawson	50.90 341	P	P	23 08 29.9	+0.4
	baz=136,SNR=17					
M26K	Nabesna, AK	50.95 338	IAmb	IAmb	23 08 33.5	
	comp=Z,26nm,1.1s					
M26K	Nabesna, AK	50.95 338	P	P	23 08 30.8	+0.9
	baz=131,SNR=22					
L27K	Beaver Creek,	50.98 339	IAmb	IAmb	23 08 32.9	
	comp=Z,83nm,1.6s					
L27K			IAMs_20	IAMs_20	23 30 48.1	
	comp=Z,1μm,22.0s					
L27K	Beaver Creek,	50.98 339	P	P	23 08 30.9	+0.8
	baz=132,SNR=18					
N25K	Chitina, Valde	51.02 337	IAMs_20	IAMs_20	23 30 05.1	
	comp=Z,1μm,20.0s					
N25K	Chitina, Valde	51.02 337	P	P	23 08 31.9	+1.4
	baz=128,SNR=17					
FRB	Frobisher Bay	51.06 20	LR	LR	23 29 23.6	
	comp=Z,1μm,21.6s,baz=226,slow=35					
P23K	Montague Islan	51.17 334	P	P	23 08 32.8	+1.3
	baz=124					
DIV	Divide	51.17 336	IAmb	IAmb	23 08 34.6	
	comp=Z,99nm,1.5s					
RKT	Rikitea	51.21 217	eT	T	00 03 19.4	
	comp=Z,37nm,0.3s					
KLU	Klutina	51.45 336	IAMs_20	IAMs_20	23 33 08.6	
	comp=Z,2μm,19.0s					
KLU	Klutina	51.45 336	P	P	23 08 34.9	+1.2
	baz=127,SNR=18					
L26K	Log Cabin Wild	51.48 339	IAmb	IAmb	23 08 36.4	
	comp=Z,60nm,1.4s					
L26K			IAMs_20	IAMs_20	23 29 32.2	
	comp=Z,1μm,18.0s					
L26K	Log Cabin Wild	51.48 339	P	P	23 08 34.7	+0.9
	baz=131,SNR=14					
I29M	Ogilvie Camp,	51.53 343	IAmb	IAmb	23 08 35.9	
	comp=Z,95nm,1.6s					
I29M	Ogilvie Camp,	51.53 343	P	P	23 08 33.9	-0.3
	baz=138,SNR=17					
GLI	Glacier Island	51.55 335	P	P	23 08 35.0	+0.7
	baz=125,SNR=6.2					
MENT	Mentasta	51.55 338	IAmb	IAmb	23 08 37.0	
	comp=Z,35nm,1.2s					
HARP	HAARP	51.72 337	P	P	23 08 36.8	+1.2
	baz=128,SNR=8.1					
K27K	Chicken	51.72 340	IAmb	IAmb	23 08 39.4	
	comp=Z,52nm,1.1s					
K27K			IAMs_20	IAMs_20	23 31 49.6	
	comp=Z,2μm,19.0s					
K27K	Chicken	51.72 340	P	P	23 08 36.9	+1.4
	baz=133					
EPYK	Eagle Plains	51.87 344	IAMs_20	IAMs_20	23 30 30.4	
	comp=Z,2μm,19.0s					
EPYK	Eagle Plains	51.87 344	P	P	23 08 37.4	+0.8
	baz=140,SNR=23					
C36M	Paulatuk	51.88 351	IAMs_20	IAMs_20	23 28 42.6	
	comp=Z,2μm,22.0s					
M24K	Tolsona, Glenn	51.92 337	IAMs_20	IAMs_20	23 30 23.9	
	comp=Z,1μm,18.0s					
M24K	Tolsona, Glenn	51.92 337	P	P	23 08 38.8	+1.7
	baz=127,SNR=9.5					
EGAK	Eagle	51.95 341	IAmb	IAmb	23 08 39.3	
	comp=Z,26nm,1.0s					
EGAK			IAMs_20	IAMs_20	23 31 01.6	
	comp=Z,2μm,19.0s					
EGAK	Eagle	51.95 341	P	P	23 08 37.6	+0.4
	baz=134,SNR=12					
F31M	Tsiigehtchic	52.00 346	P	P	23 08 37.5	0.0
	baz=144,SNR=31					
PWL	Port Wells	52.04 335	IAMs_20	IAMs_20	23 34 08.1	
	comp=Z,1μm,18.0s					
PWL	Port Wells	52.04 335	P	P	23 08 38.4	+0.4
	baz=124,SNR=7.9					
SEW	Seward	52.09 333	P	P	23 08 38.9	+0.6
	baz=122					
DOT	Dot Lake	52.13 339	IAmb	IAmb	23 08 41.2	
	comp=Z,92nm,1.4s					
PAX	Paxson	52.19 338	P	P	23 08 39.6	+0.4
	baz=128,SNR=25					
SCM	Sheep Creek Mo	52.20 336	IAmb	IAmb	23 08 42.8	
	comp=Z,101nm,1.6s					
SCM			IAMs_20	IAMs_20	23 33 17.3	
	comp=Z,1μm,18.0s					
SCM	Sheep Creek Mo	52.20 336	P	P	23 08 39.9	+0.7
	baz=126					
G30M	tAoh Zraii Nji	52.22 345	P	P	23 08 39.3	0.0
	baz=141,SNR=6.6					
SCRK	Sand Creek	52.32 339	IAmb	IAmb	23 08 42.8	
	comp=Z,89nm,1.4s					
SCRK			IAMs_20	IAMs_20	23 29 31.4	
	comp=Z,1μm,18.0s					
SCRK	Sand Creek	52.32 339	P	P	23 08 41.0	+0.8
	baz=130,SNR=24					
KDAK	Kodiak Island	52.34 330	LR	LR	23 29 04.1	
	comp=Z,631nm,21.0s,baz=135,slow=34					
KDAK	Kodiak Island	52.34 330	P	P	23 08 40.9	+0.7
KDAK	Kodiak Island	52.34 330	P	P	23 08 40.9	+0.7
KDAK			pmax	pmax		
	comp=Z,164nm,1.6s					
KDAK			MLR	MLR		
	comp=Z,700nm,20.0s					
KDAK	Kodiak Island	52.34 330	P	P	23 08 41.2	+1.0
	baz=117					
KNK	Knik Glacier	52.40 335	P	P	23 08 41.3	+0.7
	baz=124,SNR=9.1					
OHAK	Old Harbor	52.43 329	P	P	23 08 42.0	+1.2
	baz=116,SNR=11					
BRSE	Bradley Lake S	52.45 333	P	P	23 08 41.7	+0.7
	baz=120,SNR=8.3					
RIDG	Independent Ri	52.46 339	IAMs_20	IAMs_20	23 29 11.0	
	comp=Z,1μm,22.0s					
RIDG	Independent Ri	52.46 339	P	P	23 08 42.0	+0.9
	baz=129,SNR=10					
J26L	Joseph Creek	52.52 340	IAMs_20	IAMs_20	23 32 13.8	
	comp=Z,2μm,18.0s					
J26L	Joseph Creek	52.52 340	P	P	23 08 42.9	+1.3
	baz=131					
SML	Sawmill	52.57 336	IAmb	IAmb	23 08 44.8	
	comp=Z,40nm,1.0s					
SML			IAMs_20	IAMs_20	23 33 55.2	
	comp=Z,981nm,19.0s					
SML	Sawmill	52.57 336	P	P	23 08 42.0	+0.1
	baz=124,SNR=7.8					
INK	Inuvik	52.66 347	LR	LR	23 31 30.9	
	comp=Z,2μm,19.5s,baz=136,slow=37					
INK	Inuvik	52.66 347	P	P	23 08 42.3	-0.1
	baz=145,SNR=37					
I27K	Kandik River	52.67 342	P	P	23 08 43.2	+0.5
	baz=134,SNR=9.1					
RC01	Rabbit Creek A	52.74 334	IAmb	IAmb	23 08 45.4	
	comp=Z,84nm,1.5s					
RC01	Rabbit Creek A	52.74 334	P	P	23 08 43.4	+0.3
	baz=122,SNR=6.0					
PMR	Palmer	52.77 335	IAmb	IAmb	23 08 45.6	
	comp=Z,110nm,1.5s					
PMR	Palmer	52.77 335	P	P	23 08 43.4	+0.1
	baz=123,SNR=14					
GHO	Glory Hole Cre	52.78 335	IAmb	IAmb	23 08 45.8	
	comp=Z,107nm,1.4s					
WAT6	Susitna Watana	52.79 337	P	P	23 08 44.4	+0.7
	baz=126,SNR=25					
K24K	Donnelly Dome	52.82 338	P	P	23 08 44.5	+0.7
	baz=128,SNR=24					
I26K	Coal Creek Min	52.93 341	IAmb	IAmb	23 08 45.6	
	comp=Z,36nm,1.2s					
I26K			IAMs_20	IAMs_20	23 31 32.6	
	comp=Z,1μm,19.0s					
I26K	Coal Creek Min	52.93 341	P	P	23 08 44.8	+0.3
	baz=132					
DHY	Denali Highway	52.95 337	IAmb	IAmb	23 08 46.8	
	comp=Z,66nm,1.6s					
DHY	Denali Highway	52.95 337	P	P	23 08 44.9	+0.1
	baz=126,SNR=14					
H27K	Steamboat Moun	53.08 342	P	P	23 08 45.8	+0.1
	baz=135,SNR=14					
J25K	Salcha River,	53.19 339	IAmb	IAmb	23 08 49.8	
	comp=Z,79nm,1.4s					
J25K	Salcha River,	53.19 339	P	P	23 08 46.9	+0.4
	baz=129,SNR=38					
WAT1	Susitna Watana	53.24 337	P	P	23 08 46.8	0.0
	baz=125					
M22K	Willow	53.25 335	P	P	23 08 47.4	+0.5
	baz=122					
SUA	Susitna One	53.35 334	IAMs_20	IAMs_20	23 34 18.8	
	comp=Z,970nm,18.0s					
SUA	Susitna One	53.35 334	P	P	23 08 48.3	+0.5
	baz=122,SNR=19					
O20K	Slope Mountain	53.45 332	P	P	23 08 50.5	+2.0
	baz=119					
G27K	Doyon Strip	53.53 343	P	P	23 08 49.2	+0.3
	baz=135,SNR=35					
HDA	Harding Lake	53.60 339	IAmb	IAmb	23 08 52.0	
	comp=Z,65nm,1.4s					
HDA	Harding Lake	53.60 339	P	P	23 08 49.4	-0.1
	baz=128,SNR=21					
CUT	Chulitna	53.66 336	IAMs_20	IAMs_20	23 33 49.0	
	comp=Z,1μm,19.0s					
CUT	Chulitna	53.66 336	P	P	23 08 50.4	+0.5
	baz=123,SNR=17					
ILAR	Eielson Array	53.80 339	P	P	23 08 50.5	-0.4
	comp=Z,22nm,1.0s,baz=168,slow=5.7,SNR=94					
ILAR			LR	LR	23 32 30.2	
	comp=Z,1μm,18.4s,baz=113,slow=37					
	comp=Z,22nm,1.0s					
N20K	Mount Spurr	53.82 334	P	P	23 08 51.2	0.0
	baz=120,SNR=10					
PRP	Porcupine Dome	53.82 340	P	P	23 08 51.7	+0.5
	baz=130,SNR=26					
SPCR	Spurr Chakacha	53.82 334	P	P	23 08 51.4	+0.2
	baz=120,SNR=7.2					
Q18K	Katmai Hardscr	53.88 330	P	P	23 08 51.6	-0.2
	baz=115					
MCK	McKinley	53.90 337	P	P	23 08 52.0	+0.3
	baz=125,SNR=23					
SKT	Skwentna	53.94 335	P	P	23 08 52.4	+0.4
	baz=121,SNR=30					
LVC	Limon Verde	53.99 138	LR	LR	23 27 44.4	
	comp=Z,394nm,19.9s,baz=339,slow=32					
WRH	Wood River Hil	54.03 338	IAmb	IAmb	23 08 55.9	
	comp=Z,31nm,1.4s					
WRH			IAMs_20	IAMs_20	23 34 39.7	
	comp=Z,2μm,18.0s					
CCB	Clear Creek Bu	54.04 339	IAmb	IAmb	23 08 55.2	
	comp=Z,17nm,1.0s					
Q17K	Contact Creek	54.14 329	P	P	23 08 53.4	-0.2
	baz=114,SNR=5.9					
COLA	College	54.19 339	P	P	23 08 53.6	-0.1
COLA			IAmb	IAmb	23 08 55.2	
	comp=Z,62nm,1.4s					
COLA	College	54.19 339	IAMs_20	IAMs_20	23 35 18.9	
	comp=Z,1μm,19.0s					
COLA	College	54.19 339	P	P	23 08 53.6	-0.1
COLA			pmax	pmax		
	comp=Z,62nm,1.5s					
COLA			MLR	MLR		
	comp=Z,1μm,19.0s					
COLA	College	54.19 339	P	P	23 08 53.6	-0.1
	baz=127					
TCOL	CIGO, UAF Yank	54.19 339	IAmb	IAmb	23 08 55.2	
	comp=Z,67nm,1.5s					
TCOL			IAMs_20	IAMs_20	23 35 18.9	
	comp=Z,1μm,19.0s					
TCOL	CIGO, UAF Yank	54.19 339	P	P	23 08 53.8	0.0
	baz=127					
POKR	Poker Plat Res	54.20 339	IAMs_20	IAMs_20	23 32 53.0	
	comp=Z,2μm,21.0s					
POKR	Poker Plat Res	54.20 339	P	P	23 08 54.0	+0.2
	baz=127,SNR=13					
G26K	Porcupine Rive	54.23 342	P	P	23 08 54.4	+0.4
	baz=132,SNR=28					
TRF	Thorofare Moun	54.24 337	IAMs_20	IAMs_20	23 32 41.3	
	comp=Z,1μm,19.0s					
TRF	Thorofare Moun	54.24 337	P	P	23 08 54.6	+0.3
	baz=123,SNR=55					
O19K	Port Alsworth	54.25 332	IAmb	IAmb	23 08 55.9	
	comp=Z,92nm,1.6s					
O19K	Port Alsworth	54.25 332	P	P	23 08 54.1	-0.1
	baz=117					
P18K	Big Mountain,	54.30 331	P	P	23 08 54.5	-0.2
	baz=116					
BWN	Browne	54.34 338	IAMs_20	IAMs_20	23 34 22.4	
	comp=Z,2μm,21.0s					
MDM	Murphy Dome	54.37 339	IAmb	IAmb	23 09 05.1	
	comp=Z,38nm,1.4s					
MDM			IAMs_20	IAMs_20	23 35 23.7	
	comp=Z,2μm,18.0s					
H25K	Birch Creek	54.39 341	P	P	23 08 56.0	+0.8
	baz=130,SNR=20					
FYU	Fort Yukon	54.41 341	IAMs_20	IAMs_20	23 32 16.6	
	comp=Z,1μm,20.0s					
NEA2	Nenana	54.45 338	IAMs_20	IAMs_20	23 32 33.6	
	comp=Z,1μm,20.0s					
NEA2	Nenana	54.45 338	P	P	23 08 55.6	0.0
	baz=125,SNR=24					
E27K	Coleen River	54.49 344	P	P	23 08 56.4	+0.4
	baz=136,SNR=47					
O18K	Koktuh Hills	54.50 331	P	P	23 08 56.1	0.0
	baz=116					
KTH	Kantishna Hill	54.53 337	IAMs_20	IAMs_20	23 33 04.1	
	comp=Z,1μm,18.0s					
M20K	Styx River	54.54 334	IAMs_20	IAMs_20	23 35 05.4	
	comp=Z,2μm,18.0s					
N19K	Bonanza Creek	54.61 333	P	P	23 08 56.9	-0.1
	baz=127,SNR=16					
PPLA	Purkeypile	54.67 336	P	P	23 08 57.7	+0.3
	baz=121,SNR=20					
H24K	Noodor Dome	54.78 340	IAMs_20	IAMs_20	23 33 30.5	
	comp=Z,1μm,19.0s					
H24K	Noodor Dome	54.78 340	P	P	23 08 58.4	+0.3
	baz=127,SNR=35					
G25K	Bearman Lake	54.80 341	P	P	23 08 58.9	+0.7
	baz=130,SNR=33					
F26K	Sheenjek River	54.84 343	P	P	23 08 59.0	+0.5
	baz=132,SNR=22					
BPAW	Bear Paw Mtn.	54.86 337	P	P	23 08 58.5	-0.1
	baz=123,SNR=6.5					
I23K	Minto, Yukon-K	54.87 339	IAMs_20	IAMs_20	23 36 55.8	
	comp=Z,2μm,20.0s					
I23K	Minto, Yukon-K	54.87 339	P	P	23 08 59.0	+0.4
	baz=125,SNR=29					
CAST	Castle Rocks	54.91 336	IAMs_20	IAMs_20	23 35 39.9	
	comp=Z,2μm,19.0s					
CAST	Castle Rocks	54.91 336	P	P	23 08 58.7	-0.3
	baz=121,SNR=25					
M19K	Big River Lodg	55.08 334	IAMs_20	IAMs_20	23 35 13.5	
	comp=Z,2μm,18.0s					
M19K	Big River Lodg	55.08 334	P	P	23 09 00.6	+0.4
	baz=118					
SIV	San Ignacio	55.08 126	LR	LR	23 30 15.4	
	comp=Z,1μm,21.6s,baz=334,slow=34					
L20K	Farewell, AK	55.14 335	P	P	23 09 00.6	-0.2
	baz=119,SNR=20					
N18K	Kilae Creek	55.16 332	P	P	23 09 00.8	-0.1
	baz=116,SNR=13					
G24K	Hadweenzic Riv	55.18 341	P	P	23 09 01.5	+0.5
	baz=128,SNR=29					
F25K	Christian Rive	55.20 342	P	P	23 09 01.8	+0.7
	baz=131,SNR=20					
CHUM	Lake Minchumin	55.24 337	P	P	23 09 00.9	-0.4
	baz=121,SNR=8.9					
MLY	Manley	55.28 338	IAmb	IAmb	23 09 03.8	
	comp=Z,74nm,1.3s					
MLY			IAMs_20	IAMs_20	23 32 57.8	
	comp=Z,1μm,20.0s					
MLY	Manley	55.28 338	P	P	23 09 01.7	0.0
	baz=124,SNR=19					
H23K	Yukon River	55.33 339	IAmb	IAmb	23 09 04.1	
	comp=Z,78nm,1.3s					
H23K			IAMs_20	IAMs_20	23 34 22.9	
	comp=Z,2μm,20.0s					
H23K	Yukon River	55.33 339	P	P	23 09 02.2	+0.2
	baz=126,SNR=19					
O17K	Koliganek Bris	55.33 331	P	P	23 09 01.7	-0.3
	baz=114,SNR=5.6					
L19K	White Mountain	55.40 334	IAMs_20	IAMs_20	23 35 32.0	
	comp=Z,1μm,19.0s					
L19K	White Mountain	55.40 334	P	P	23 09 02.5	-0.1
	baz=118,SNR=15					
E25K	Arctic Village	55.53 343	P	P	23 09 03.8	+0.3
	baz=131,SNR=16					
K20K	Telida	55.65 335	IAMs_20	IAMs_20	23 36 15.5	
	comp=Z,1μm,20.0s					
K20K	Telida	55.65 335	P	P	23 09 04.1	-0.3
	baz=119,SNR=18					
O16K	Kokwok River B	55.72 330	P	P	23 09 04.6	-0.3
	baz=113					
I21K	Tanana	55.80 338	IAmb	IAmb	23 09 08.1	
	comp=Z,57nm,1.1s					
I21K			IAMs_20	IAMs_20	23 35 19.6	
	comp=Z,2μm,19.0s					
I21K	Tanana	55.80 338	P	P	23 09 05.5	+0.1
	baz=122,SNR=23					
F24K	Squaw Lake	55.82 341	P	P	23 09 06.0	+0.5
	baz=128,SNR=14					
H22K	Ishtalitna Cre	55.99 339	P	P	23 09 06.4	-0.4
	baz=124,SNR=27					
G23K	Bananza Creek	56.00 340	P	P	23 09 07.0	+0.2
	baz=126,SNR=19					
C27K	Jago River	56.05 345	P	P	23 09 07.4	+0.2
	baz=134,SNR=8.8					
J20K	Nowinta River	56.08 336	IAMs_20	IAMs_20	23 35 57.0	
	comp=Z,2μm,20.0s					
J20K	Nowinta River	56.08 336	P	P	23 09 07.0	-0.4
	baz=120,SNR=22					
RES	Resolute Bay	56.08 3	LR	LR	23 34 00.4	
	comp=Z,8μm,18.3s,baz=186,slow=37					
TTA	Tatalina	56.22 335	P	P	23 09 08.0	-0.5
	baz=117,SNR=9.6					
H21K	Melozitna Rive	56.35 338	IAMs_20	IAMs_20	23 34 48.1	
	comp=Z,2μm,18.0s					
H21K	Melozitna Rive	56.35 338	P	P	23 09 09.2	-0.2
	baz=122,SNR=36					
COLD	Coldfoot	56.36 340	P	P	23 09 10.0	+0.7
	baz=126,SNR=20					
D25K	Kavik River	56.54 344	P	P	23 09 10.8	+0.1
	baz=131					
E23K	Chandalar	56.67 341	P	P	23 09 12.5	+0.8
	baz=127,SNR=41					
TOLK	Toolik Lake Re	57.01 342	P	P	23 09 14.1	+0.1
	baz=127,SNR=21					
G21K	Allakaket	57.05 339	P	P	23 09 13.8	-0.4
	baz=122,SNR=5.4					
PPT	Papeete	57.16 233	LR	LR	23 27 20.6	
	comp=Z,882nm,19.6s,baz=24,slow=29					
PPT2	Papeete2	57.17 233	eP	P	23 09 21.6	+5.7
PPT2			eS	S	23 17 12.6	+1.5
	comp=Z,1μm,28.8s					
PPT2			eSS	SS	23 21 04.0	+3.5
	comp=Z,514nm,26.5s					
PPT2			eLR	LR	23 26 08.4	
	comp=Z,1μm,19.8s					
PPT2			eLR	LR	23 26 08.8	
	comp=Z,2μm,23.0s					
F21K	Alatna River	57.42 340	P	P	23 09 17.3	+0.4
	baz=122,SNR=20					
H03N2	Juan Fernandez	57.49 155	T	T	00 11 43.0	
	baz=333,slow=77,SNR=306					
H03N1	Juan Fernandez	57.50 155	T	T	00 11 36.6	
	baz=333,slow=77,SNR=442					
H03N3	Juan Fernandez	57.51 155	T	T	00 11 29.2	
	baz=333,slow=77,SNR=444					
D23K	Nanushuk River	57.53 342	P	P	23 09 18.3	+0.7
	baz=126,SNR=28					
C23K	Itkillik River	58.03 343	P	P	23 09 21.2	+0.2
	baz=126,SNR=16					
SFJD	Kangerlussuaq	59.03 22	LR	LR	23 37 53.1	
	comp=Z,1μm,18.1s,baz=242,slow=39					
CO03	El Pedregal	59.20 146	IAmb	IAmb	23 10 04.8	
	comp=Z,21nm,1.3s					
A21K	Barrow	60.52 343	IAMs_20	IAMs_20	23 33 52.2	
	comp=Z,868nm,21.0s					
TBI	Tubuai	60.66 228	eS	S	23 17 58.0	+1.9
	comp=Z,566nm,29.0s					
TBI			eSS	SS	23 21 58.7	+3.6
	comp=Z,293nm,31.2s					
TBI			eLR	LR	23 27 46.1	
	comp=Z,2μm,22.2s					
TBI			eLR	LR	23 27 46.2	
	comp=Z,50μm,23.2s					
TBI	Tubuai	60.66 228	eT	T	00 15 26.3	
	comp=Z,5.3nm,0.2s					
EUNU	Eureka	61.77 4	IAmb	IAmb	23 09 47.3	
	comp=Z,37nm,1.6s					
BO01	Tunca	61.82 149	P	P	23 09 48.5	+0.9
CPUP	Villa Florida	64.22 133	P	P	23 10 03.5	-0.2
	comp=Z,2.5nm,1.1s,baz=257,slow=6.4,SNR=3.3					
CPUP			LR	LR	23 37 43.2	
	comp=Z,762nm,19.6s,baz=338,slow=36					
	comp=Z,2.5nm,1.1s					
BDFB	Brasilia	65.39 118	P	P	23 10 11.7	+0.1
	comp=Z,1.9nm,0.5s,baz=271,slow=11,SNR=4.9					
	comp=Z,1.9nm,0.5s					
BDFB	Brasilia	65.39 118	P	P	23 10 12.7	+1.0
BDFB			IAmb	IAmb	23 11 13.2	
	comp=Z,17nm,1.4s					
BDFB	Brasilia	65.39 118	P	P	23 10 12.7	+1.0
BDFB			pmax	pmax		
	comp=Z,17nm,1.4s					
RAR	Rarotonga	67.13 236	LR	LR	23 31 22.2	
	comp=Z,936nm,21.1s,baz=66,slow=28					
PLCA	Paso Flores	67.21 153	P	P	23 10 22.9	+0.1
	comp=Z,1.0nm,0.7s,baz=2.3,slow=8.7,SNR=1.9					
PLCA			LR	LR	23 33 45.5	
	comp=Z,1μm,18.4s,baz=336,slow=31					
	comp=Z,1.0nm,0.7s					
TRQA	Tornquist	69.34 145	IAMs_20	IAMs_20	23 35 04.8	
	comp=Z,696nm,19.0s					
BORG	Borgarnes	70.24 27	LR	LR	23 42 48.2	
	comp=Z,1μm,18.1s,baz=291,slow=37					
DAG	Danmarks Havn	70.83 14	iP	P	23 10 43.0	-1.8
RCBR	Riachuelo	71.94 103	LR	LR	23 44 03.1	
	comp=Z,1μm,18.4s,baz=86,slow=37					
BILL	Bilibino	72.35 337	P	P	23 10 54.1	0.0
BILL			IAmb	IAmb	23 10 56.1	
	comp=Z,76nm,1.5s					
BILL	Bilibino	72.35 337	diP	P	23 10 54.3	+0.2
BILL			e		23 10 59.8	
BILL			*PP	PcP	23 11 07.0	-5.0
BILL			eSSS	SSS	23 28 02.6	
BILL			pmax	pmax		
	comp=Z,46nm,1.7s					
AFI	Afiamalu	73.76 249	LR	LR	23 35 26.7	
	comp=Z,988nm,18.9s,baz=66,slow=29					
JMIC	Jan Mayen	74.28 20	LR	LR	23 43 45.7	
	comp=Z,409nm,18.1s,baz=280,slow=36					
SPA0	Spitsbergen Ar	77.63 10	eP	P	23 11 25.3	+0.8
SPITS	Spitsbergen Ar	77.63 10	LR	LR	23 47 00.4	
	comp=Z,2μm,18.8s,baz=284,slow=37					
PET	Petropavlovsk	79.11 322	eP	P	23 11 35.4	+2.4
PET			eS	S	23 21 29.8	-2.1
PET			ePPS	PPS	23 22 26.1	
PET			eSS	SS	23 26 37.1	-0.2
PET			pmax	pmax		
	comp=Z,300nm,13.0s					
PET			MLR	MLR		
	comp=Z,300nm,19.0s					
SEY	Seymchan	79.15 333	ceP	P	23 11 33.1	0.0
SEY			pmax	pmax		
	comp=Z,83nm,2.5s					
PEA0B	Petropavlovsk-	79.64 323	P	P	23 11 36.7	+0.8
PEA0B	Petropavlovsk-	79.64 323	P	P	23 11 36.7	+0.8
PEA0B			pmax	pmax		
	comp=Z,380nm,2.0s					
PETK	Petropavlovsk-	79.64 323	P	P	23 11 35.7	-0.2
	comp=Z,24nm,1.0s,baz=108,slow=8.0,SNR=8.2					
	comp=Z,24nm,1.0s					
EKA	Eskdalemuir Ar	80.98 35	LR	LR	23 47 29.3	
	comp=Z,1μm,19.2s,baz=282,slow=36					
FOO	Floro	82.51 27	eP	P	23 11 52.2	+1.2
PSBE	So Bento	82.54 51	eP	P	23 11 54.4	+2.7
	comp=Z,136nm,1.8s					
PCAS	Casmilo, Conde	82.59 50	eP	P	23 11 54.8	+2.9
	comp=Z,100nm,1.4s					
SUE	Sulen	82.63 28	eP	P	23 11 52.5	+0.9
SUE			IAmb	IAmb	23 11 54.1	
	comp=Z,153nm,1.5s					
POLO	Lamas de Olo	82.68 49	eP	P	23 11 55.1	+2.6
	comp=Z,43nm,1.4s					
TIXI	Tiksi	82.74 345	LR	LR	23 54 44.8	
	comp=Z,728nm,18.1s,baz=359,slow=40					
TIXI	Tiksi	82.74 345	P	P	23 11 51.1	-1.0
TIXI			IAMs_20	IAMs_20	23 48 02.4	
	comp=Z,917nm,21.0s					
TIXI	Tiksi	82.74 345	ceP	P	23 11 50.7	-1.3
TIXI			pmax	pmax		
	comp=Z,126nm,1.7s					
PVIS	Viseu	82.81 50	eP	P	23 11 55.9	+2.8
PMTG	Montargil	83.10 51	eP	P	23 11 57.1	+2.5
	comp=Z,75nm,1.6s					
STEI	Steigen	83.12 19	eP	P	23 11 55.3	+1.2
STEI			IAmb	IAmb	23 11 57.0	
	comp=Z,57nm,0.9s					
MTE	Manteigas	83.17 50	eP	P	23 11 57.8	+2.8
	comp=Z,67nm,1.8s					
PNCL	Nicolau / Gran	83.17 52	eP	P	23 11 58.2	+3.2
TRO	Tromso	83.22 17	eP	P	23

STOK Stokkvaagen 83.28 21 *eP* **P 23 11 57.1 +2.2**
MVO Moncorvo 83.29 49 *eP* **P 23 11 58.4 +2.8**
comp=Z,39nm,2.3s
PCBR Castelo Branco 83.40 50 *eP* **P 23 11 58.1 +2.0**
EVO Evora 83.43 52 *eP* **P 23 11 59.0 +2.7**
comp=Z,70nm,2.1s
FAUS Fauske 83.45 20 *eP* **P 23 11 56.8 +1.1**
FAUS IAmb IAmb 23 12 09.2
comp=Z,83nm,1.5s
BBTS Babate 83.57 77 LR LR 23 44 48.2
comp=Z,1µm,20.6s,baz=256,slow=33
PMRV Marv??o 83.59 51 *eP* **P 23 11 59.8 +2.7**
PESTR Estremoz 83.63 51 *eP* **P 23 12 00.0 +2.7**
comp=Z,64nm,1.8s
JETT Jettan, Norway 83.67 17 *eP* **P 23 11 58.0 +1.1**
JETT IAmb IAmb 23 11 59.6
comp=Z,50nm,0.7s
PCVE Castro Verde 83.70 53 *eP* **P 23 12 01.0 +3.3**
comp=Z,62nm,1.7s
HAMF Hammerfest 83.83 15 *eP* **P 23 11 57.8 +0.1**
MOR8 Moi Rana 83.85 21 *eP* **P 23 11 59.1 +1.2**
MOR8 IAmb IAmb 23 12 00.6
comp=Z,22nm,0.8s
NSS Namsos 83.86 23 *eP* **P 23 11 58.6 +0.7**
NSS IAML 23 12 01.8
comp=Z,6.5nm,0.6s
TBLU Trondheim 83.88 24 *eP* **P 23 11 58.2 +0.2**
DOMB Dombas 84.00 26 *eP* **P 23 12 00.0 +1.3**
BLS5 Blasjo 84.11 29 *eP* **P 23 12 01.0 +1.6**
MSVF Nonsavu 84.26 249 LR LR 23 40 30.9
comp=Z,939nm,20.6s,baz=46,slow=29
MSVF Nonsavu 84.26 249 IAms_20 IAms_20 23 39 57.6
comp=Z,1µm,20.0s
PBAR Barrancos 84.27 52 *eP* **P 23 12 01.1 +0.5**
KTK1 Kautokeino 84.79 17 *eP* **P 23 12 03.2 +0.6**
ARA0 ARCESS Array S 85.04 16 *eP* **P 23 12 04.4 +0.5**
ARA0 IAmb IAmb 23 12 05.8
comp=Z,34nm,1.4s
ARCES ARCESS Array B 85.04 16 P **P 23 12 03.7 -0.1**
comp=Z,6.8nm,0.8s,baz=330,slow=4.5,SNR=28
ARCES LR LR 23 50 21.5
comp=Z,1µm,19.7s,baz=312,slow=36
comp=Z,6.8nm,0.8s
ARCES ARCESS Array B 85.04 16 P **P 23 12 03.8 -0.1**
ARCES ARCESS Array B 85.04 16 P **P 23 12 03.8 -0.1**
ARCES pmax pmax
comp=Z,65nm,1.7s
KEV Kevo 85.26 15 P **P 23 12 05.2 +0.3**
KEV Kevo 85.26 15 P **P 23 12 05.2 +0.3**
KEV pmax pmax
comp=Z,112nm,1.8s
KEV MLR MLR
comp=Z,2µm,20.0s
RAO Raoul Island 85.35 237 LR LR 23 40 43.6
comp=Z,485nm,21.6s,baz=14,slow=29
NB2 NORSAR Subarra 85.39 26 P **P 23 12 05.7 -0.1**
comp=Z,46nm,1.7s,baz=300,slow=4.6
NB2 NORSAR Subarra 85.39 26 P **P 23 12 05.7 -0.1**
baz=300,slow=4.6
NOA NORSAR Array B 85.39 26 P **P 23 12 05.0 -0.8**
comp=Z,6.3nm,1.0s,baz=302,slow=4.9,SNR=7.4
NOA LR LR 23 51 03.3
comp=Z,684nm,18.5s,baz=295,slow=36
comp=Z,6.3nm,1.0s
KONO Kongsberg 85.41 28 IAms_20 IAms_20 23 51 12.2
comp=Z,910nm,18.0s
AVE Averroes 85.60 56 P **P 23 12 08.0 +0.6**
PAB San Pablo 85.77 50 P **P 23 12 08.4 +0.3**
PAB San Pablo 85.77 50 P **P 23 12 08.5 +0.3**
PAB pmax pmax
comp=Z,198nm,2.0s
ESDC Sonseca Array 86.00 50 P **P 23 12 08.8 -0.5**
comp=Z,8.3nm,1.2s,baz=297,slow=4.2,SNR=12
ESDC LR LR 23 51 24.4
comp=Z,878nm,18.7s,baz=304,slow=36
comp=Z,8.3nm,1.2s
ESDC Sonseca Array 86.00 50 P **P 23 12 09.7 +0.3**
HFS Hagfors 86.91 26 LR LR 23 51 50.5
comp=Z,887nm,18.6s,baz=295,slow=36
MDT Midelt 87.98 56 LR LR 23 47 06.6
comp=Z,416nm,21.6s,baz=314,slow=33
YAK Yakutsk 88.69 337 LR LR 23 53 46.5
comp=Z,713nm,21.7s,baz=86,slow=37
YAK Yakutsk 88.69 337 P **P 23 12 22.4 +0.7**
YAK IAMs_20 IAMs_20 23 57 31.8
comp=Z,904nm,20.0s
YAK Yakutsk 88.69 337 *eP* **P 23 12 22.8 +1.1**
YAK *e* 23 12 27.8
YAK pmax pmax
comp=Z,43nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
PMSA Palmer Station 88.97 164 LR LR 23 43 27.8
comp=E,608nm,20.4s,baz=325,slow=30
FINES FINESS Array B 90.83 21 P **P 23 12 31.0 -0.8**
comp=E,2.4nm,0.5s,baz=324,slow=3.5,SNR=28
FINES LR LR 23 53 08.8
comp=E,1µm,19.8s,baz=318,slow=36
comp=E,2.4nm,0.5s
FINES FINESS Array B 90.83 21 P **P 23 12 31.0 -0.8**
GRFO Grafenberg 91.33 36 P **P 23 12 34.9 +0.5**
GRFO Grafenberg 91.33 36 P **P 23 12 34.9 +0.5**
GRFO pmax pmax
comp=Z,54nm,1.5s
GRFO MLR MLR
comp=Z,2µm,19.0s
CLL Collm 91.43 34 *i* P **P 23 12 34.6 -0.2**
CLL pmax pmax
comp=Z,42nm,2.2s
CLL MLR MLR
comp=Z,1µm,18.9s
CLL Collm 91.43 34 *i* P **P 23 12 34.6 -0.2**
comp=Z,42nm,2.2s
CLL *e*PP **PP 23 16 12.0 +0.1**
CLL *e*SKSac **SKSac 23 23 06.0 -0.7**
CLL *ex* x 23 23 48.0
CLL *e*PS **PnS 23 24 44.0 -0.3**
CLL *e*PPS PPS 23 25 06.0
CLL *ex* x 23 25 48.0
CLL *ex* x 23 28 00.0
CLL *e*SS **SS 23 29 42.0 +3.7**
CLL *e*SSS SSS 23 33 30.0
CLL Lm MLR 23 54 00.0
comp=N,500nm,21.2s
CLL Lm MLR 23 54 00.0
comp=E,800nm,18.9s
CLL Lm MLR 23 54 00.0
comp=Z,1µm,18.9s
MXZ Matakaoa Point 91.57 231 IAMs_20 IAMs_20 23 43 10.8
comp=Z,657nm,22.0s
NRIK Noril'sk 91.60 356 P **P 23 12 33.7 -1.5**
comp=Z,6.0nm,0.9s,baz=350,slow=1.6,SNR=8.9
NRIK LR LR 23 54 07.1
comp=Z,1µm,21.8s,baz=22,slow=36
comp=Z,6.0nm,0.9s
NRIK Noril'sk 91.60 356 *ceP* **P 23 12 35.1 -0.1**
NRIK pmax pmax
comp=Z,46nm,1.6s
NKC Novy Kostel 91.71 35 AMS AMS 23 54 20.0
comp=Z,2µm,17.6s
DAVOX Davos/Dischmat 92.06 39 LR LR 23 54 55.2
comp=Z,3µm,18.1s,baz=303,slow=36
RETA Reutte 92.22 38 *eP* **P 23 12 39.8 +1.2**
comp=Z,5.9nm,1.2s
MOTA Moosalm 92.49 38 *eP* **P 23 12 39.8 -0.1**
comp=Z,13nm,1.9s
SQTA Sankt Quirin 92.61 38 *eP* **P 23 12 41.8 +1.3**
comp=Z,13nm,1.4s
PVCC Panska Ves 92.69 34 AMS AMS 23 55 30.0
comp=Z,1µm,19.1s
URZ Urewera 92.70 231 LR LR 23 44 54.8
comp=Z,638nm,21.4s,baz=162,slow=29
WATA Walderalm 92.77 38 *eP* **P 23 12 41.3 0.0**
comp=Z,16nm,1.9s
WTTA Wattenberg 92.84 38 *eP* **P 23 12 42.1 +0.5**
comp=Z,23nm,1.8s
KHC Kasperske Hory 92.93 35 IAmb IAmb 23 12 44.7
comp=Z,20nm,1.6s
KHC Kasperske Hory 92.93 35 *eP* **P 23 12 41.4 -0.4**
KHC MLR MLR
comp=Z,2µm,20.8s
KHC Kasperske Hory 92.93 35 *eP* **P 23 12 41.4 -0.4**
KHC AMS AMS 23 54 50.0
comp=Z,2µm,20.8s

PRU Pruhonice 92.98 34 AMS AMS 23 55 00.0
comp=Z,2µm,24.4s
GOPC GO Pecny, Ondr 93.15 34 AMS AMS 23 55 20.0
comp=Z,1µm,19.6s
GERES GERESS Array B 93.16 36 P **P 23 12 42.6 -0.3**
comp=Z,1.5nm,0.9s,baz=325,slow=1.6,SNR=14
GERES LR LR 23 55 20.2
comp=Z,1µm,18.7s,baz=302,slow=36
comp=Z,1.5nm,0.9s
CHVC Chvalec 93.43 33 AMS AMS 23 56 30.0
comp=Z,1µm,19.8s
UPC Upice 93.46 33 AMS AMS 23 56 30.0
comp=Z,1µm,14.7s
CKRC Cesky Krumlov 93.50 35 *eP* **P 23 12 43.5 -0.9**
OSTC Ostas 93.53 33 AMS AMS 23 56 40.0
comp=Z,900nm,11.6s
ABTA Abfaltersbach 93.62 38 *eP* **P 23 12 44.9 -0.2**
comp=Z,17nm,1.6s,SNR=6.2
DPC Dobruska-Polom 93.71 33 AMS AMS 23 56 40.0
comp=Z,1µm,15.9s
BIOA Bad Ischl, Aus 93.75 37 *eP* **P 23 12 45.4 -0.2**
comp=Z,28nm,1.7s,SNR=12
TREC Trest 93.88 35 AMS AMS 23 55 40.0
comp=Z,2µm,19.5s
KBA Koelnbreinsper 93.92 37 *eP* **P 23 12 46.6 0.0**
comp=Z,25nm,1.4s,SNR=8.2
MOA Molln 94.02 36 *eP* **P 23 12 46.7 -0.1**
comp=Z,28nm,1.4s,SNR=8.6
KRLC Kraliky 94.11 33 AMS AMS 23 57 00.0
comp=Z,1µm,19.0s
OUZ Omahuta 94.26 234 IAMs_20 IAMs_20 23 44 54.3
comp=Z,537nm,20.0s
MYKA Terra Mystica 94.34 38 *eP* **P 23 12 47.7 -0.7**
comp=Z,16nm,1.5s
VRAC Vranov 94.46 34 LR LR 23 56 50.8
comp=Z,1µm,18.2s,baz=312,slow=36
CONA Conrad Observa 94.86 36 *eP* **P 23 12 50.9 +0.1**
comp=Z,25nm,1.4s,SNR=9.1
OBKA Obir 94.93 37 *eP* **P 23 12 51.3 +0.2**
comp=Z,17nm,1.4s
OKC Ostrava-Krasne 94.96 33 AMS AMS 23 59 00.0
comp=Z,800nm,17.8s
ARSA Arzberg 95.06 36 *eP* **P 23 12 51.4 -0.2**
comp=Z,9.8nm,1.1s
ZEA Zeya 95.11 332 *eP* P 23 12 56.9 +5.3
SOKA Soboth 95.11 37 *eP* **P 23 12 51.4 -0.5**
comp=Z,26nm,1.3s,SNR=9.6
RONA Rosalia, Austr 95.23 36 *eP* **P 23 12 52.3 -0.1**
comp=Z,32nm,1.2s,SNR=13
SMOL Smolenice 95.37 34 *eP* **P 23 12 53.4 +0.4**
SMOL pmax pmax
comp=Z,20nm,1.7s
MODS Modra-Piesok 95.37 35 *eP* **P 23 12 53.3 +0.3**
MODS pmax pmax
comp=Z,161nm,2.0s
SOP Sopron 95.39 36 P **P 23 12 54.1 +1.1**
KLMR Klimovskoe 95.46 17 *eP* **P 23 12 49.8 -3.3**
KLMR pmax pmax
comp=Z,24nm,1.4s
KLMR MLR MLR
comp=Z,790nm,17.0s
KLMR Klimovskoe 95.46 17 *eP* **P 23 12 49.8 -3.3**
KLMR AMP 23 12 54.3
comp=Z,24nm,1.4s
KLMR LR LR 23 48 02.9
KLMR AMP 23 59 33.4
comp=Z,790nm,16.6s
NACGM Naroch 95.68 26⇑ *eP* **P 23 12 57.5 +3.2**
baz=315
DZM Mont Dzumac 95.99 249 *e*LR LR 23 44 06.2
comp=Z,2µm,22.6s
DZM Mont Dzumac 95.99 249 LR LR 23 46 33.1
comp=Z,1µm,21.4s,baz=44,slow=29
VYHS Vyhne 96.13 34 *eP* **P 23 12 56.1 -0.4**
VYHS pmax pmax
comp=Z,54nm,2.2s
MPLH Magyarpolny 96.23 36 P **P 23 12 56.9 0.0**
SRO Srobarova 96.27 35 *eP* **P 23 12 58.0 +1.0**
SRO pmax pmax
comp=Z,122nm,2.0s
MNK Minsk 96.42 26 *i* P **P 23 12 54.4 -3.1**
MNK *i* 23 16 48.7
MNK *i* PPP PPP 23 18 52.4
MNK *i* S **SKSac 23 23 26.4 -7.3**
MNK *i* SS **SS 23 30 45.1 -3.9**
MNK *i* SSS SSS 23 34 30.8
MNK pmax pmax
comp=E,4.0nm,1.6s
MNK pmax pmax
comp=Z,18nm,1.6s
MNK pmax pmax
comp=N,40nm,1.0s
MNK MLR MLR
comp=Z,815nm,13.0s
MNK MLR MLR
comp=N,1µm,17.0s
MNK MLR MLR
comp=E,119nm,17.0s
MNK Minsk 96.42 26 *i* P **P 23 12 54.5 -3.1**
comp=E,4.0nm,1.6s
MNK *i* P **P 23 12 54.5 -3.1**
comp=Z,18nm,1.6s,baz=315
MNK *i* P **PcP 23 12 54.9 -2.8**
comp=N,40nm,1.0s
MNK *i* pP **sP 23 13 09.2 +5.1**
MNK *i* PP **PP 23 16 48.8 -1.9**
MNK *i* PPP PPP 23 18 52.4
MNK *i* S **SKSac 23 23 26.4 -7.3**
MNK *i* sS **SKKSac 23 23 53.1 -6.0**
MNK *i* SS **SS 23 30 45.2 -3.9**
MNK *i* SSS SSS 23 34 30.9
MNK *i* LQ LQ 23 50 31.0
MNK *i* LR LR 23 54 58.3
MNK *i* LRM MLR 23 58 29.5
comp=Z,815nm,13.3s
MNK *i* LRM MLR 23 58 53.0
comp=N,1µm,16.5s
MNK *i* LRM MLR 23 58 57.5
comp=E,119nm,16.6s
CSKK Cskako 96.51 35 P **P 23 12 59.3 +1.1**
BUD Budapest 96.85 35 P **P 23 12 59.7 0.0**
DBIC Dimbokro 97.00 81 LR LR 23 57 33.9
comp=E,313nm,18.4s,baz=265,slow=36
PSZ Piszkesteto 97.05 34 P **P 23 13 00.5 -0.2**
KEST Kesra 97.21 49 LR LR 23 56 56.7
comp=E,252nm,18.6s,baz=261,slow=36
KOUNC Koumac, New Ca 97.45 251 IAMs_20 IAMs_20 23 47 29.1
comp=Z,422nm,20.0s
ABAH Abaujker 97.51 33 P Pdif 23 13 03.1 +0.4
MQZ McQueen's Vall 97.75 227 IAMs_20 IAMs_20 23 53 08.4
comp=Z,728nm,19.0s
HNR Honiara 98.13 263 LR LR 23 47 53.5
comp=Z,6µm,21.7s,baz=59,slow=30
HNR Honiara 98.13 263 IAMs_20 IAMs_20 23 49 03.9
comp=Z,527nm,20.0s
TRPA Tarpa 98.29 33 P **P 23 13 06.0 -0.2**
RPZ Rata Peaks 98.86 227 LR LR 23 48 41.9
comp=Z,506nm,21.1s,baz=48,slow=30
MOS Moscow 99.09 21 *eP* **Pdif 23 13 05.5 -4.1**
OBN Obninsk 99.24 21 LR LR 23 59 48.2
comp=Z,275nm,18.6s,baz=342,slow=36
OBN Obninsk 99.24 21 *c i*P **Pdif 23 13 08.3 -1.9**
OBN *e*PP **sP 23 13 17.9 +1.1**
OBN *e* 23 17 11.1
OBN *e*S **SKSac 23 23 43.2 -4.9**
OBN *e*PS **PS 23 26 14.8 +5.8**
OBN SSS SSS 23 35 20.0
OBN pmax pmax
comp=Z,10.0nm,1.1s
OBN MLR MLR
comp=Z,1µm,16.0s
ODZ Otahua Downs 99.53 226 IAMs_20 IAMs_20 23 58 11.5
comp=Z,626nm,18.0s
AKASG Malin Array Be 99.71 28 P **Pdif 23 13 10.9 -1.5**
comp=Z,0.3nm,0.4s,baz=304,slow=3.9,SNR=12
AKASG LR LR 23 59 31.3
comp=Z,488nm,18.8s,baz=323,slow=36
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 99.71 28 *ceP* **Pdif 23 13 10.6 -1.9**
AKBB Malin Array Si 99.71 28 *i* P **Pdif 23 13 09.6 -2.9**
VAE Valguarnera 99.81 45 LR LR 00 00 09.4
comp=Z,716nm,18.1s,baz=52,slow=37
KIRV Kirov 99.90 13 LR LR 23 59 36.5
comp=Z,1µm,20.2s,baz=345,slow=36
TAM Tamanrasset 100.17 62 IAMs_20 IAMs_20 00 02 50.0
comp=Z,597nm,18.0s

TORD Torodi Ar. Bea 100.71 72 P **Pdif 23 13 15.3 -2.3**
comp=Z,0.7nm,1.0s,baz=305,slow=3.0,SNR=2.6
MILM Milestii Mici 102.23 31⇑ *iP* **Pdif 23 13 17.0 -6.8**
comp=Z,300nm,5.1s
MILM LR LR 00 01 53.0
comp=Z,1µm,14.5s
MILM Milestii Mici 102.23 31 *c iP* **Pdif 23 13 17.0 -6.8**
MILM pmax pmax
comp=Z,300nm,5.1s
SANT Santorini 107.57 40 IAMs_20 IAMs_20 00 04 55.5
comp=Z,539nm,20.0s
IDI Anoyia 107.91 42 IAMs_20 IAMs_20 00 04 41.7
comp=Z,342nm,20.0s
KARP Karpathos 109.15 40 IAMs_20 IAMs_20 00 05 44.3
comp=Z,633nm,21.0s
ANTO Ankara 109.33 34 IAMs_20 IAMs_20 00 06 53.3
comp=Z,565nm,19.0s
PMG Port Moresby 110.18 267 IAMs_20 IAMs_20 23 57 27.0
comp=Z,514nm,18.0s
KIV Kislovodsk 110.66 25 *i* PKIKP **PKiKP 23 17 59.1 -2.6**
KIV *e* 23 18 35.7
KIV *e* 23 24 33.7
KIV *e*PS **PS 23 28 06.7 -1.4**
KIV *e*SS SS 23 34 01.4 -4.0
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,810nm,21.0s
HHC Hu-ho-hao-te 111.75 331 *e*PKP **PKiKP 23 18 04.6 +0.8**
HHC PP **PP 23 18 48.3 +3.2**
HHC AMB AMB
comp=Z,430nm,7.3s
HHC LR LR
comp=Z,2µm,18.0s
HHC LR LR
comp=Z,980nm,15.5s
HHC LR LR
comp=Z,2µm,17.2s
HNS HongShan 112.90 327 ⇓PKP **PKiKP 23 18 06.0 +0.1**
HNS LR LR
comp=Z,880nm,18.2s
HNS LR LR
comp=Z,350nm,14.1s
HNS LR LR
comp=Z,960nm,18.1s
CSS Mathiatis 113.19 37 IAMs_20 IAMs_20 00 08 53.9
comp=Z,392nm,20.0s
MAK Makhachkala 113.32 22 *eP* **Pdif 23 14 08.9 -4.3**
MAK *i* 23 18 06.6
MAK *e* 23 18 57.7
MAK *e* 23 24 48.2
MAK *e*PS **PS 23 28 32.8 +0.5**
MAK *e*SS SS 23 34 33.5 -6.9
MAK *e*SSS SSS 23 38 52.9
MAK pmax pmax
comp=Z,465nm,1.3s
NJ2 Nanjing 114.46 320 *e*PKP PKPdf 23 18 12.0 +2.9
WMQ Urumqi 116.61 350 *e*PKP **PKiKP 23 18 15.8 +2.8**
WMQ LR LR
comp=Z,650nm,19.9s
WMQ LR LR
comp=Z,820nm,19.9s
WMQ LR LR
comp=Z,790nm,23.3s
GTA Gaotai 117.69 339 PKP **PKiKP 23 18 17.0 +1.7**
GTA AMB AMB
comp=Z,270nm,8.0s
GTA LR LR
comp=Z,550nm,15.3s
GTA LR LR
comp=Z,550nm,17.1s
GTA LR LR
comp=Z,500nm,17.1s
WHN Wuhan 118.22 322 ⇑PKP **PKiKP 23 18 17.3 +0.9**
LZH Lanzhou 119.08 334 *e*PKP **PKiKP 23 18 20.3 +2.2**
LZH LR LR
comp=Z,840nm,17.5s
LZH LR LR
comp=Z,780nm,18.9s
LZH LR LR
comp=Z,830nm,20.6s
STKA Stephens Creek 119.63 244 PKP **PKPdf 23 18 17.5 -1.4**
comp=Z,0.6nm,0.2s,baz=178,slow=12,SNR=2.9
ENH Enshi 121.15 326 IAMs_20 IAMs_20 00 20 02.6
comp=Z,467nm,19.0s
GEYT Alibeck 121.20 16 PKP **PKiKP 23 18 24.1 +2.0**
comp=Z,0.9nm,0.5s,baz=248,slow=6.2,SNR=2.6
KSH Kashi 121.92 359 PKP PKiKP 23 18 32.0 +8.4
FAKI Fak Fak 122.25 279 IAMs_20 IAMs_20 00 01 06.5
comp=Z,526nm,20.0s
CD2 Chengdu 123.50 331 PKP **PKiKP 23 18 27.3 +0.5**
WRA Warramunga Arr 124.67 258 PKP **PKPdf 23 18 27.9 -1.1**
comp=Z,3.2nm,0.8s,baz=76,slow=2.2,SNR=18
WRA Warramunga Arr 124.67 258 **PKPdf 23 18 27.4 -1.6**
WRA Warramunga Arr 124.67 258 PKIKP **PKPdf 23 18 27.4 -1.6**
ASAR Alice Springs 125.60 254 PKP **PKPdf 23 18 30.4 -0.3**
comp=Z,3.0nm,0.8s,baz=88,slow=2.0,SNR=21
ASAR Alice Springs 125.60 254 PKPdf **PKPdf 23 18 30.1 -0.6**
ASAR Alice Springs 125.60 254 PKIKP **PKPdf 23 18 30.1 -0.6**
GYA Guiyang 125.68 325 ⇓PKP **PKiKP 23 18 32.0 +0.6**
GYA PP **PP 23 20 26.3 +4.6**
GYA AMB AMB
comp=Z,93nm,5.7s
GYA LR LR
comp=Z,500nm,20.3s
GYA LR LR
comp=Z,470nm,17.4s
GYA LR LR
comp=Z,660nm,16.8s
PZH PanZhiHua 128.16 330 PKP **PKPdf 23 18 34.0 -1.7**
PZH SKKS 23 27 30.8
PZH AMB AMB
comp=Z,210nm,12.0s
PZH LR LR
comp=Z,380nm,15.5s
PZH LR LR
comp=Z,380nm,16.5s
PZH LR LR
comp=Z,500nm,16.7s
RAYN Ar Rayn 128.74 36 IAMs_20 IAMs_20 00 21 54.5
comp=Z,371nm,20.0s
MAW Mawson 130.63 174 PKP **PKPdf 23 18 37.4 -1.5**
comp=Z,2.3nm,0.9s,baz=314,slow=7.8,SNR=3.6
SOEI Soe 131.94 274 IAMs_20 IAMs_20 00 14 40.5
comp=Z,469nm,20.0s
UOSS Minazif 132.60 24 IAMs_20 IAMs_20 00 25 17.5
comp=Z,330nm,19.0s
BOSA Boshof 133.35 112 PKP **PKPdf 23 18 45.3 -0.1**
comp=Z,2.4nm,0.8s,baz=221,slow=2.0,SNR=5.3
LODK Lodwar 134.78 65 IAMs_20 IAMs_20 00 27 07.5
comp=Z,360nm,19.0s
ATD Arta Tunnel 135.91 49 IAMs_20 IAMs_20 00 21 14.3
comp=Z,411nm,19.0s
CHTO Chiang Mai 136.00 327 IAMs_20 IAMs_20 00 23 25.8
comp=Z,343nm,20.0s
CMAR Chiang Mai Arr 136.29 327 PKP **PKPdf 23 18 48.7 -2.4**
comp=Z,0.4nm,0.3s,baz=348,slow=4.0,SNR=0.9
BOK Bokaro 136.38 346 *i* x x 23 18 49.4
SBUM Sibu 138.06 296 IAMs_20 IAMs_20 00 13 06.8
comp=Z,218nm,20.0s
BHPL Bhopal 138.10 357 *i* x x 23 18 58.8
KMBO Kilima Mbogo 138.65 69 IAMs_20 IAMs_20 00 21 54.3
comp=Z,403nm,19.0s
KIBK Kibwezi 139.90 70 IAMs_20 IAMs_20 00 20 23.9
comp=Z,429nm,19.0s
HYBB Hyderabad (bro 143.81 355 *eP* PKPab 23 19 00.7 -0.9
HYBB *e*PKiKP **PKiKP 23 19 08.1 -0.1**
HYBB *e*PP **PP 23 22 18.1 +2.3**
HYBB *e*SKPdf **SKPdf 23 22 38.1 -0.7**
HYBB *e*SKSdf **SKSdf 23 26 13.3 -1.0**
HYBB *e*SKKSac **SKKSac 23 29 10.6 +0.5**
HYB Hyderabad 143.81 355 *i* x x 23 19 00.5
MYKOM Kota Tinggi 145.32 303 IAMs_20 IAMs_20 00 34 54.1
comp=Z,309nm,20.0s
IPM Ipoh 145.73 310 **PKPdf 23 19 08.5 +0.3**
PSI Prapat 148.40 311 PKP2 **PKPbc 23 19 16.3 +0.1**
RPSI Rantau Prapat 148.47 310 **PKPbc 23 19 16.3 +0.1**
PCHI Peechi 150.77 358 *eP* **PKPdf 23 19 13.5 -2.9**
PCHI *ex* x 23 28 56.2

IDC ***23*** *22:59:29.5±1.0, 12°.80N×58°.15E, h0km, mb3.6/10, mbtmp3.7/11, ML3.9/1, Error ellipse: s-maj=25.7km s-min=22.5km az=134.0*
ISC 23 22:59:31.9±0.9, 12°.8N±0°.1×58°.1E±0°.1, h16km, n19,

σ0983/21, **mb3.7**/10, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMTO	**DMTO**	**5.71**	**329**	P	**Pn**	**23 00 56.0**	**-0.1**
	SNR=7.8						
WHFO	**Wadi Hawf**	**6.53**	**321**	P	**Pn**	**23 01 06.2**	**-1.3**
DOK	**Doka**	**6.88**	**327**	P	**Pn**	**23 01 11.3**	**-0.9**
DQM	**DQM**	**7.07**	**356**	P	**Pn**	**23 01 14.3**	**-0.4**
MHTO	**MHTO**	**8.10**	**359**	P	**Pn**	**23 01 29.0**	**0.0**
	SNR=7.1						
JMDO	**Jabal Madar**	**9.48**	**0**	P	**Pn**	**23 01 48.0**	**+0.1**
	SNR=60						
JMDO				P	**Pn**	**23 01 48.0**	**+0.1**
	SNR=60						
WBK	**Wadi Bani Khal**	**9.75**	**5**	P	**Pn**	**23 01 51.0**	**-0.7**
	SNR=37						
WBK				P	**Pn**	**23 01 51.0**	**-0.7**
	SNR=37						
BSY	**Bisya**	**9.88**	**355**	P	**Pn**	**23 01 53.7**	**+0.3**
WSAR	**Wadi Sarin**	**10.35**	**3**	Pn	**Pn**	**23 01 59.0**	**-0.8**
	1.0nm,0.3s,baz=221,slow=6.4,SNR=24						
	2.9nm,0.4s						
KMBO	**Kilima Mbogo**	**24.89**	**238**	P	**P**	**23 04 55.9**	**+1.4**
	1.0nm,0.6s,baz=47,slow=13,SNR=4.4						
	1.0nm,0.6s						
GEYT	**Alibeck**	**24.98**	**0**	P	**P**	**23 04 55.9**	**+0.9**
	1.9nm,0.7s,baz=205,slow=6.6,SNR=6.2						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**39.50**	**26**	P	**P**	**23 07 02.9**	**+1.1**
	0.3nm,0.6s,baz=199,slow=9.6,SNR=2.4						
	0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.69**	**77**	P	**P**	**23 07 02.8**	**-1.0**
	0.9nm,0.3s,baz=323,slow=10,SNR=1.4						
	0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**46.14**	**22**	P	**P**	**23 07 56.0**	**+0.6**
	0.6nm,0.6s,baz=226,slow=7.6,SNR=3.1						
	0.6nm,0.6s						
SONM	**Songino Array**	**53.12**	**39**	P	**P**	**23 08 49.7**	**+0.7**
	0.3nm,0.6s,baz=242,slow=6.2,SNR=2.0						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**54.83**	**277**	P	**P**	**23 09 02.3**	**+0.5**
	0.3nm,0.8s,baz=57,slow=5.5,SNR=1.8						
	0.3nm,0.8s						
NOA	**NORSAR Array B**	**58.83**	**335**	P	**P**	**23 09 28.3**	**-1.2**
	1.0nm,0.8s,baz=122,slow=6.7,SNR=1.9						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**81.78**	**113**	P	**P**	**23 11 50.0**	**-0.7**
	0.5nm,0.8s,baz=304,slow=4.3,SNR=2.2						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**82.49**	**116**	P	**P**	**23 11 53.9**	**-0.5**
	0.7nm,0.6s,baz=284,slow=4.7,SNR=6.0						
	0.7nm,0.6s						

*NEIC **23** 23:29:29.0±3.0, 9°.79S±0°.05×121°.95E±0°.02, h31km±8km, mb4.1/8, Error ellipse: s-maj=7.5km s-min=1.6km az=201.0*

*DJA **23** 23:29:33.0±0.2, 10°S±2°×12°2E±°, h54km, M4.4/13, mb4.4/12, mB5.2/5, MLv4.4/13, Mw(mB)4.6/5*

*IDC **23** 23:29:33.4±2.4, 9°.53S×122°.03E, h100km±21km, mb3.8/4, mbtmp4.2/7, MS3.5/3, Error ellipse: s-maj=46.5km s-min=21.5km az=55.0*

ISC 23 23:29:29.5±0.6, **9.70S**±0°.05×**121°.90E**±0°.05, **h44**km, **n58**, σ2°67/60, **mb4.2/6, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.11**	**17**	Pn	**Pn**	**23 29 48.8**	**+0.1**
MMRI				Sn	**Sn**	**23 30 03.1**	**+0.3**
MMRI	**Maumere**	**1.11**	**17**	P	**Pn**	**23 29 49.0**	**+0.4**
MMRI				S	**Sn**	**23 30 02.6**	**-0.2**
MMRI	**Maumere**	**1.11**	**17**	P	**Pn**	**23 29 49.4**	**+0.8**
BATI	**Baumata**	**1.81**	**106**	P	**Pn**	**23 30 02.2**	**+4.1**
	149nm,0.3s,baz=8.6,slow=4.0,SNR=24						
BATI				S	Sn	23 30 30.1	+10
	312nm,0.4s,baz=304,slow=22,SNR=4.9						
BATI				LR	LR	23 31 02.9	
	comp=Z,445nm,20.9s,baz=6.0,slow=51						
BATI	**Baumata**	**1.81**	**106**	P	Pn	23 30 04.1	+6.0
BATI				S	Sn	23 30 29.2	+9.3
SOEI	**Soe**	**2.33**	**91**		**Pn**	**23 30 06.1**	**+0.7**
SOEI	**Soe**	**2.33**	**91**	P	Pn	23 30 10.6	+5.1
SOEI				S	**Sn**	**23 30 41.3**	**+8.3**
BSSI	**Bau Bau, Buton**	**3.80**	**338**	P	**Pn**	**23 30 28.5**	**+2.9**
BSSI				S	**Sn**	**23 31 11.9**	**+2.8**
PLAI	**Plampang**	**4.17**	**282**	P	**Pn**	**23 30 32.1**	**+1.5**
PLAI	**Plampang**	**4.17**	**282**	P	**Pn**	**23 30 32.3**	**+1.7**
BBSI	**Bau Bau**	**4.24**	**9**	P	**Pn**	**23 30 33.0**	**+1.4**
BKSI	**Bulukumba**	**4.70**	**338**	P	**Pn**	**23 30 40.4**	**+2.5**
TWSI	**Taliwang, Sumb**	**5.05**	**281**	P	**Pn**	**23 30 45.7**	**+3.0**
TWSI				S	**Sn**	**23 31 42.4**	**+2.6**
KAPI	**Kappang**	**5.12**	**335**	P	**Pn**	**23 30 46.9**	**+3.2**
	44nm,0.5s,baz=162,slow=10,SNR=23						
KAPI				S	**Sn**	**23 31 38.1**	**-3.5**
	5.9nm,0.3s,baz=139,slow=19,SNR=0.9						
KAPI				LR	LR	23 32 59.7	
	comp=Z,121nm,21.3s,baz=162,slow=41						
KAPI	**Kappang**	**5.12**	**335**	P	**Pn**	**23 30 47.0**	**+3.3**
	0.3nm632nm74nm,0.8s						
KAPI	**Kappang**	**5.12**	**335**	P	**Pn**	**23 30 47.3**	**+3.6**
KKSI	**Kolaka, Sulawe**	**5.50**	**357**	P	Pn	23 30 53.8	+4.9
	0.4nm3μm52nm,0.6s						
BNSI	**Bone**	**5.56**	**341**	P	**Pn**	**23 30 52.4**	**+2.7**
	0.1nm522nm38nm,0.8s						
KLNI	**Mataram**	**5.88**	**282**	P	**Pn**	**23 30 55.9**	**+1.8**
	0.3nm52nm,0.8s						
IGBI	**Denpasar**	**6.73**	**277**	P	**Pn**	**23 31 08.5**	**+2.7**
	0.3nm46nm,0.9s						
JAGI	**Jajag, Banyuwa**	**7.75**	**278**		**Pn**	**23 31 19.5**	**-0.3**
JAGI					**Sn**	**23 32 45.5**	**-0.8**
JAGI	**Jajag, Banyuwa**	**7.75**	**278**	P	**Pn**	**23 31 20.4**	**+0.6**
	0.2nm23nm,0.8s						
JAGI	**Jajag, Banyuwa**	**7.75**	**278**	P	**Pn**	**23 31 20.9**	**+1.1**
NLAI	**Namlea**	**8.24**	**39**	P	**Pn**	**23 31 30.4**	**+3.9**
	5μm19nm,1.0s						
LUWI	**Luwuk**	**8.65**	**6**	Pn	**Pn**	**23 31 32.8**	**+0.7**
KNRA	**Kununurra**	**8.95**	**132**		**Pn**	**23 31 35.3**	**-0.9**
KNRA					**Sn**	**23 33 11.0**	**-4.6**
KNRA	**Kununurra**	**8.95**	**132**	P	**Pn**	**23 31 36.8**	**+0.6**
MTN	**Manton Dam**	**9.57**	**110**	Pn	**Pn**	**23 31 44.4**	**-0.4**
MTN					**Sn**	**23 33 26.3**	**-4.8**
MTN	**Manton Dam**	**9.57**	**110**	P	**Pn**	**23 31 46.6**	**+1.8**
MPSI	**Mapaga**	**10.17**	**349**	P	**Pn**	**23 31 57.6**	**+4.6**
	3μm4.1nm,0.9s						
PCJI	**Pacitan**	**10.70**	**277**	P	**Pn**	**23 32 02.7**	**+2.5**
	30nm,1.7s						
KDU	**Kakadu**	**10.79**	**107**	P	**Pn**	**23 32 02.6**	**+1.2**
UGM	**Wanagama**	**11.39**	**278**	Pn	**Pn**	**23 32 10.1**	**+0.4**
UGM	**Wanagama**	**11.39**	**278**	P	**Pn**	**23 32 12.6**	**+2.9**
	75nm,1.7s						
MBWA	**Marble Bar**	**11.58**	**190**	Pn	**Pn**	**23 32 11.6**	**-0.6**
MBWA	**Marble Bar**	**11.58**	**190**	P	**Pn**	**23 32 12.5**	**+0.3**
PSA00	**Pilbara Seismi**	**11.97**	**189**	Pn	**Pn**	**23 32 16.9**	**-0.6**
PSA00	**Pilbara Seismi**	**11.97**	**189**	Pn	**Pn**	**23 32 16.6**	**-0.9**
SIJI	**Sorong**	**12.80**	**47**	P	**Pn**	**23 32 30.1**	**+1.2**
	2.4nm,0.3s,baz=189,slow=22,SNR=1.1						
SIJI	**Sorong**	**12.80**	**47**	P	**Pn**	**23 32 33.1**	**+4.2**
GIRL	**Giralia**	**14.82**	**209**	Pn	**Pn**	**23 32 55.3**	**-0.9**
WB0	**Warramunga Arr**	**15.67**	**131**	Pn	**Pn**	**23 33 04.7**	**-2.7**
WRA	**Warramunga Arr**	**15.74**	**132**	P	**Pn**	**23 33 04.5**	**-3.8**
	0.8nm,0.7s,baz=305,slow=15,SNR=6.1						
WRA				S	Sn	23 35 48.0	-14
	8.7nm,1.0s,baz=302,slow=24,SNR=10						
WRA	**Warramunga Arr**	**15.74**	**132**	Pn	**Pn**	**23 33 05.0**	**-3.3**
WB2	**Warramunga Arr**	**15.75**	**132**	Pn	**Pn**	**23 33 06.0**	**-2.5**
WB2				IAmb	IAmb	23 33 19.0	
	comp=Z,22nm,1.5s						
WR0	**Warramunga Arr**	**15.90**	**131**	Pn	**Pn**	**23 33 06.8**	**-3.5**
WR0				IAmb	IAmb	23 33 30.4	
	comp=Z,10nm,1.2s						
DAV	**Davao City (W)**	**17.06**	**13**	LR	LR	23 39 14.8	
	comp=Z,80nm,21.7s,baz=86,slow=34						
ASAR	**Alice Springs**	**18.01**	**142**	P	**P**	**23 33 37.4**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=311,slow=11,SNR=14						
ASAR				S	Sn	23 36 42.7	-14
	comp=Z,1.0nm,0.9s,baz=314,slow=20,SNR=3.9						
MORW	**Morawa**	**20.03**	**195**		**P**	**23 33 58.0**	**-0.8**
MJAR	**Matsushiro Arr**	**48.49**	**18**	P	P	23 38 04.5	-3.4
	comp=Z,1.1nm,0.5s,baz=234,slow=12,SNR=2.7						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**58.91**	**348**	P	**P**	**23 39 21.2**	**-3.0**
	comp=Z,0.6nm,0.8s,baz=165,slow=9.0,SNR=4.3						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**66.41**	**331**	P	**P**	**23 40 11.7**	**-2.4**
	comp=Z,3.4nm,0.6s,baz=139,slow=7.5,SNR=35						
	comp=Z,3.4nm,0.6s						
MAW	**Mawson**	**69.57**	**201**	LR	LR	00 08 30.0	
	comp=Z,300nm,21.8s,baz=195,slow=34						
ZALV	**Zalesovo Beam**	**70.74**	**338**	P	P	23 40 37.2	-3.7
	comp=Z,2.9nm,0.6s,baz=134,slow=5.0,SNR=15						
	comp=Z,2.9nm,0.6s						
VNDA	**Vanda**	**70.86**	**171**	P	**P**	**23 40 41.2**	**-0.1**
VNDA				IAmb	IAmb	23 41 08.6	
	comp=Z,3.2nm,1.4s						
QSPA	**South Pole Qui**	**80.29**	**180**	P	**P**	**23 41 39.0**	**+3.4**
QSPA				IAmb	IAmb	23 42 06.0	
	comp=Z,5.3nm,1.4s						
SNAA	**Sanae**	**91.08**	**195**	P	**P**	**23 42 30.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**121.40**	**279**	PKP	**PKPdf**	**23 48 16.8**	**-2.2**
	comp=Z,0.4nm,0.9s,baz=52,slow=1.5,SNR=2.1						

JMA 24 00:28:20.8±0.0, **36°.8N**±0°.1×**140°.6E**±0°.2, **h6**km, **MV0.1**/8, **NORTHERN IBARAKI PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.19**	**183**	P	Pg	00 28 24.6	+0.1

*BJI **24** 00:28:50.0±0.0, 40°.30N×144°.10E, h10km, mb4.7/62, mB4.9/35, Ms4.4/48, Ms7 4.2/45*

*IDC **24** 00:28:51.2±0.6, 40°.17N×144°.08E, h0km, mb4.2/24, mbtmp4.3/29, ML3.4/4, MS3.8/26, Error ellipse: s-maj=15.9km s-min=13.6km az=140.0*

*NIED **24** 00:28:53.8, 40°.27N×143°.97E, h33km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.78; $M_{\theta\theta}$0.87; $M_{\phi\phi}$-4.65; $M_{r\theta}$0.67; $M_{\theta\phi}$-1.97; $M_{\phi r}$0.13; Fault plane solution: M_0=4.62000×10^{15} NP1: ϕ_s=184.00000°, δ45.00000°, λ70.00000°. NP2:ϕ_s=31.00000°, δ49.00000°, λ109.00000°.*

*JMA **24** 00:28:53.8±0.2, 40°.3N±0°.6×14°.4E±°, h33km, MD4.5/33, MV4.4/33, FAR E OFF SANRIKU*

*MOS **24** 00:28:54.0±1.1, 40°.33N×143°.94E, h26km, mb5.0/43, MS4.0/5, Error ellipse: s-maj=7.0km s-min=4.4km az=115.3*

*NEIC **24** 00:28:57.4±1.1, 40°.21N±0°.06×143°.9E±0°.1, h35km±5km, mb4.8/65, Error ellipse: s-maj=12.1km s-min=7.9km az=103.0*

ISC 24 00:28:55.5±0.4, **40°.24N**±0°.04×**144°.06E**±0°.04, **h29**km±2km, **h28**km:**pP-P**, **n361**, σ1§49/351, **mb4.7**/112, **MS4.1**/41, **21C-13D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.71**	**261**	P	**Pn**	**00 29 21.4**	**-1.9**
JKEN	**Kujiedanarisaw**	**1.80**	**270**	P	**Pn**	**00 29 22.4**	**-2.1**
JKEN				*e*S	**Sn**	**00 29 43.0**	**-3.3**
JKEN	**Kujiedanarisaw**	**1.80**	**270**	A	A	00 29 22.4	
	comp=E,7.0nm,2.0s,comp=E,8.0nm,1.5s						
MIYJ	**Miyakonagasawa**	**1.84**	**250**	*i* P	**Pn**	**00 29 23.6**	**-1.5**
ERM	**Erimo**	**1.90**	**339**	Pn	**Pn**	**00 29 24.9**	**-1.1**
ERM				Sn	**Sn**	**00 29 49.4**	**+0.5**
ERM	**Erimo**	**1.90**	**339**	P	**Pn**	**00 29 24.9**	**-1.1**
ERM						00 29 49.4	
ERM	**Erimo**	**1.90**	**339**	P	**Pn**	**00 29 24.8**	**-1.1**
JEM	**Erimo**	**1.90**	**339**	P	**Pn**	**00 29 24.8**	**-1.2**
JEM	**Erimo**	**1.90**	**339**	P	**Pn**	**00 29 24.5**	**-1.1**
JEM				*e*S	**Sn**	**00 29 47.5**	**-1.5**
JANG	**Nango**	**1.95**	**275**	*i* P	**Pn**	**00 29 25.0**	**-1.7**
JANG				*e*S	**Sn**	**00 29 47.1**	**-3.0**
JANG	**Nango**	**1.95**	**275**	A	A	00 29 25.0	
	comp=E,3.0nm,2.0s						
JOM	**Ohasama**	**2.26**	**251**	*i* P	**Pn**	**00 29 30.1**	**-0.8**
JOM				S	**Sn**	**00 29 56.8**	**-1.0**
JNBK	**Urakawa-nobuka**	**2.27**	**335**	P	**Pn**	**00 29 29.9**	**-1.0**
JNBK				S	**Sn**	**00 29 58.2**	**+0.3**
JNBK	**Urakawa-nobuka**	**2.27**	**335**	A	A	00 29 29.9	
	comp=E,5.0nm,0.5s,comp=E,4.0nm,1.4s						
JAHD	**Aomorihigashid**	**2.31**	**297**	A	A	00 29 29.8	
	comp=E,8.0nm,1.5s,comp=E,9.0nm,1.4s						
JTM	**Tenmabayashi**	**2.34**	**285**		**Pn**	**00 29 31.1**	**-1.0**
JTM	**Tenmabayashi**	**2.34**	**285**	P	**Pn**	**00 29 31.3**	**-0.7**
JTM	**Tenmabayashi**	**2.34**	**285**	A	A	00 29 30.4	
	comp=E,4.0nm,2.5s,comp=E,4.0nm,1.8s						
JCH	**Churui**	**2.43**	**348**	P	**Pn**	**00 29 31.5**	**-1.7**
JCH				*e*S	**Sn**	**00 29 59.8**	**-2.3**
JSZI	**Iwateshizukuis**	**2.43**	**259**	A	A	00 29 31.9	
	comp=E,15nm,4.3s,comp=E,15nm,1.8s						
JSHD	**Hidakashinhida**	**2.48**	**332**	A	A	00 29 32.5	
	comp=E,11nm,1.7s,comp=E,9.0nm,4.2s						
JMK	**Ichinoseki**	**2.54**	**241**	*i* P	**Pn**	**00 29 33.6**	**-1.1**
JMK				*e*S	**Sn**	**00 30 03.5**	**-1.2**
JOT	**Ohata**	**2.55**	**298**	*i* P	**Pn**	**00 29 33.9**	**-1.0**
JOT				S	**Sn**	**00 30 03.2**	**-1.8**
JOT	**Ohata**	**2.55**	**298**	A	A	00 29 33.9	
	comp=E,3.0nm,2.6s,comp=E,3.0nm,1.9s						
JAH	**Hinai**	**2.62**	**270**	A	A	00 29 34.5	
	comp=E,6.0nm,1.7s,comp=E,5.0nm,2.2s						
JRG	**Rokugo**	**2.77**	**253**	A	A	00 29 36.7	
	comp=E,5.0nm,4.6s,comp=E,7.0nm,2.0s						
JAK	**Akkeshi**	**2.80**	**10**	P	**Pn**	**00 29 36.5**	**-1.8**
JAK				S	**Sn**	**00 30 09.5**	**-1.6**
JHHS	**Hirosakihyakuz**	**2.85**	**280**	A	A	00 29 37.7	
	comp=E,10.0nm,2.7s,comp=E,12nm,2.1s						
JSI2	**Shiura 2**	**2.89**	**288**	A	A	00 29 38.2	
	comp=E,5.0nm,5.1s,comp=E,5.0nm,1.2s						
JYW	**Yuwa**	**3.04**	**258**	A	A	00 29 40.6	
	comp=E,12nm,3.0s,comp=E,12nm,2.1s						
JAR	**Ashorobuto**	**3.06**	**356**	*i* P	**Pn**	**00 29 39.8**	**-2.2**
JAR				S	**Sn**	**00 30 15.3**	**-2.4**
JIW	**Iwasaki**	**3.11**	**278**	A	A	00 29 41.4	
	comp=E,3.0nm,1.0s,comp=E,5.0nm,1.5s						
JYK	**Kaneyama**	**3.15**	**246**	*i* P	**Pn**	**00 29 42.5**	**-0.6**
JOU	**Okura**	**3.23**	**236**	A	A	00 29 43.5	
	comp=E,4.0nm,2.3s,comp=E,5.0nm,1.7s						
JEW	**Eniwo**	**3.25**	**324**	Pn	**Pn**	**00 29 45.0**	**+0.4**
JEW	**Eniwo**	**3.25**	**324**	P	**Pn**	**00 29 45.1**	**+0.5**
JEW	**Eniwo**	**3.25**	**324**	P	**Pn**	**00 29 44.7**	**+0.1**
JEW				S	**Sn**	**00 30 23.1**	**+0.8**
NEM2	**Nemuro 2**	**3.37**	**21**	P	**Pn**	**00 29 43.9**	**-2.2**
NEM2				*e*S	**Sn**	**00 30 20.8**	**-4.4**
NMR	**Nemuro--Hokkai**	**3.37**	**21**	⇑*i* P	**Pn**	**00 29 43.9**	**-2.3**
NMR				*i* S	**Sn**	**00 30 21.5**	**-3.7**
JMM	**Marumori**	**3.47**	**228**		**Pn**	**00 29 45.2**	**-2.4**
JMM	**Marumori**	**3.47**	**228**	P	**Pn**	**00 29 45.6**	**-2.0**
JYS	**Shirataka**	**3.69**	**238**	A	A	00 29 50.1	
	comp=E,5.0nm,2.0s						
JTKR	**Abashiri--Toko**	**3.73**	**358**	P	**Pn**	**00 29 49.7**	**-1.4**
JTKR				S	**Sn**	**00 30 32.5**	**-1.6**
JYA	**Atsumi**	**3.74**	**245**	A	A	00 29 50.7	
	comp=E,7.0nm,1.3s,comp=E,8.0nm,1.5s						
JKK2	**Kamakawa 2**	**3.76**	**345**	P	**Pn**	**00 29 50.8**	**-0.7**
JHR	**Hokuryu**	**3.91**	**334**	P	**Pn**	**00 29 54.6**	**+1.0**
JHR				*e*S	**Sn**	**00 30 40.2**	**+1.7**
RUSJ	**Misakicho**	**3.96**	**13**	P	**Pn**	**00 29 53.3**	**-1.0**
RUSJ				*e*S	**Sn**	**00 30 39.0**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**4.03**	**19**	P	**Pn**	**00 29 53.7**	**-1.5**
YUK				*e*S	**Sn**	**00 30 37.4**	**-3.9**
YUK				pmax	pmax		
	comp=Z,276nm,0.4s						
YUK				pmax	pmax		
	comp=E,68nm,0.2s						
YUK				smax	smax		
	comp=N,552nm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
JSD	**Sado**	**5.01**	**246**	Pn	**Pn**	**00 30 08.2**	**-0.6**
JSD	**Sado**	**5.01**	**246**	P	**Pn**	**00 30 08.2**	**-0.6**
JYT	**Yasato**	**5.03**	**218**	Pn	**Pn**	**00 30 06.8**	**-2.2**
JYT	**Yasato**	**5.03**	**218**	P	**Pn**	**00 30 08.9**	**0.0**
KUR	**Kuril'sk**	**5.73**	**28**	*e*P	**Pn**	**00 30 18.1**	**-0.4**
KUR				S	**Sn**	**00 31 18.5**	**-4.7**
KUR				pmax	pmax		
	comp=Z,265nm,0.7s						
KUR				pmax	pmax		
	comp=N,85nm,0.3s						
KUR				smax	smax		
	comp=E,461nm,0.5s						
KUR				smax	smax		
	comp=N,188nm,0.3s						
MJAR	**Matsushiro Arr**	**5.89**	**233**	Pn	**Pn**	**00 30 20.4**	**-0.5**
	comp=N,0.8nm,0.3s,baz=38,slow=12,SNR=51						
MJAR				LR	LR	00 32 50.4	
	comp=N,321nm,20.4s,baz=66,slow=41						
	comp=N,17nm,0.5s						
MAJO	**Matsushiro**	**5.89**	**233**	Pn	**Pn**	**00 30 20.8**	**-0.1**
MAJO	**Matsushiro**	**5.89**	**233**	P	**Pn**	**00 30 20.8**	**-0.1**
MAJO	**Matsushiro**	**5.89**	**233**	P	**Pn**	**00 30 20.9**	**0.0**
MJB9	**Matsu-Tunnel**	**5.89**	**233**		**Pn**	**00 30 21.5**	**+0.6**
YSS	**Yuzh-Sakhalins**	**6.78**	**352**	*e*P	**Pn**	**00 30 32.0**	**-1.0**
YSS				*e*S	**Sn**	**00 31 47.2**	**-2.0**
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
YSS				MLR	MLR		
	comp=E,1μm,12.0s						
JGF	**Kuroka**	**7.03**	**231**		**Pn**	**00 30 36.4**	**-0.1**
JGF	**Kuroka**	**7.03**	**231**	P	**Pn**	**00 30 36.8**	**+0.3**
TEY	**Ternei**	**7.29**	**314**	⇑*e*P	**Pn**	**00 30 42.8**	**+2.8**
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=E,60nm,0.8s						
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
INU	**Inuyama**	**7.41**	**231**		**Pn**	**00 30 41.7**	**+0.1**
USA0B	**Ussuriysk Arra**	**9.79**	**298**		**Pn**	**00 31 15.0**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.79**	**298**	P	**Pn**	**00 31 15.0**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.79**	**298**	Pn	**Pn**	**00 31 15.4**	**+1.2**
	comp=Z,2.3nm,0.3s,baz=96,slow=14,SNR=24						
USRK				LR	LR	00 35 09.1	
	comp=Z,395nm,19.5s,baz=65,slow=38						
	comp=Z,17nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.79**	**298**	Pn	**Pn**	**00 31 14.9**	**+0.6**
JHS	**Saijyo**	**10.13**	**242**		**Pn**	**00 31 19.5**	**+0.5**
MDJ	**Mudanjiang**	**11.55**	**297**	Pn	**Pn**	**00 31 39.0**	**+0.7**
KLR	**Kul'dur**	**12.53**	**320**	Pn	**Pn**	**00 31 51.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=124,slow=3,SNR=29						
KLR				LR	LR	00 37 52.3	
	comp=Z,309nm,18.2s,baz=88,slow=43						
	comp=Z,40nm,1.1s						
KLR	**Kul'dur**	**12.53**	**320**	*ce*P	**Pn**	**00 31 51.0**	**-0.7**
KLR				pmax	pmax		
	comp=Z,64nm,1.3s						
KSRS	**Korea Array**	**12.88**	**263**	Pn	**Pn**	**00 31 56.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=76,slow=13,SNR=3.4						
KSRS				LR	LR	00 36 05.8	
	comp=Z,223nm,21.1s,baz=60,slow=34						
	comp=Z,3.4nm,0.8s						
JCJ	**Chichijima**	**13.20**	**187**	Pn	**Pn**	**00 31 59.0**	**-2.0**
	comp=Z,30nm,0.4s,baz=18,slow=20,SNR=1.5						
JCJ				Sn	Sn	00 34 13.7	-13
	comp=Z,9.5nm,0.3s,baz=295,slow=17,SNR=1.8						
BNX	**BinXian**	**13.37**	**300**	⇓P	**Pn**	**00 32 02.5**	**-0.6**
BNX				pmax	pmax		
	comp=Z,23nm,1.1s						
BNX				pmax	pmax		
	comp=Z,190nm,4.2s						
TJN	**Taejon**	**13.66**	**259**	*ce*P	**Pn**	**00 32 09.4**	**+2.2**
CN2	**Changchun**	**14.28**	**291**	P	**Pn**	**00 32 15.0**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
SNY	**Shenyang**	**15.54**	**283**	⇑P	**Pn**	**00 32 32.3**	**-0.1**
SNY				pmax	pmax		
	comp=Z,29nm,0.8s						
SNY				pmax	pmax		
	comp=Z,340nm,4.5s						
SNY				LR	LR		
	comp=Z,600nm,12.6s						
SNY				LR	LR		
	comp=Z,570nm,10.9s						
SNY				LR	LR		
	comp=Z,860nm,13.9s						
PETK	**Petropavlovsk-**	**15.88**	**31**	LR	LR	00 38 26.4	
	comp=Z,141nm,19.6s,baz=227,slow=36						
ZEA	**Zeya**	**17.65**	**325**	*e*P	**Pn**	**00 32 55.5**	**-3.6**
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=N,30nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA				pmax	pmax		
	comp=N,200nm,3.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,3.9s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,13.0s						
HIA	**Hailar**	**19.41**	**306**		**P**	**00 33 18.5**	**-0.8**
HIA	**Hailar**	**19.41**	**306**	P	**P**	**00 33 18.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,24nm,0.9s						
XLT	**XiLinHaoTe**	**21.04**	**289**	*

YAK pmax pmax
comp=Z,24nm,0.7s
SHEM Shemya Is, Ala 23.97 49 LR LR 00 41 50.2
comp=Z,38nm,21.6s,baz=268,slow=32
LYN LuoYang 25.65 267⇓*i*P **P 00 34 23.4 +0.8**
LYN pP sP 00 34 32.8 +0.2
LYN PP **PnPn 00 35 02.3 +3.0**
LYN pmax pmax
comp=Z,230nm,14.8s
LYN LR LR
comp=Z,520nm,13.3s
LYN LR LR
comp=Z,610nm,12.6s
BTO Baotou 25.82 282 *e*P **P 00 34 25.6 +1.3**
WHN Wuhan 25.97 257⇓*i*P **P 00 34 26.1 +0.5**
WHN sP **sP 00 34 35.8 +0.2**
WHN pmax pmax
comp=Z,120nm,1.2s
WHN LR LR
comp=Z,2μm,12.5s
WHN LR LR
comp=Z,1μm,12.8s
BOD Bodaibo 26.09 322 *e*P **P 00 34 25.7 -0.7**
BOD pmax pmax
comp=Z,57nm,1.1s
GUMO Guam 26.56 178 LR LR 00 45 26.1
comp=Z,78nm,18.5s,baz=152,slow=38
ULN Ulaanbaatar 27.46 298 P **P 00 34 39.6 +0.5**
ULN Ulaanbaatar 27.46 298 P **P 00 34 39.6 +0.5**
ULN pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 27.90 298 P **P 00 34 43.4 +0.4**
comp=Z,6.4nm,0.7s,baz=89,slow=8.7,SNR=35
SONM LR LR 00 47 01.8
comp=Z,171nm,18.9s,baz=140,slow=39
comp=Z,6.4nm,0.7s
SONM Songino Array 27.90 298 P **P 00 34 43.5 +0.5**
SONM Songino Array 27.90 298 P **P 00 34 43.5 +0.5**
SONM pmax pmax
comp=Z,13nm,1.0s
H11N2 WAKE ISLAND Hy 28.30 130 T T 01 04 22.0
baz=322,slow=75,SNR=13
H11N1 WAKE ISLAND Hy 28.31 130 T T 01 04 22.0
baz=322,slow=75,SNR=10
H11N3 WAKE ISLAND Hy 28.32 130 T T 01 04 20.6
baz=322,slow=75,SNR=16
XAN Xi'an 28.55 269⇓*i*P **P 00 34 49.5 +0.6**
XAN pP sP 00 34 58.5 -0.4
XAN pmax pmax
comp=Z,18nm,0.9s
H11S1 WAKE ISLAND Hy 29.14 131 T T 01 05 26.0
baz=323,slow=76,SNR=9.8
H11S3 WAKE ISLAND Hy 29.14 131 T T 01 05 27.1
baz=323,slow=76,SNR=7.3
H11S2 WAKE ISLAND Hy 29.16 131 T T 01 05 28.5
baz=323,slow=76,SNR=7.1
ENH Enshi 29.77 261 P **P 00 34 59.0 -0.6**
BILL Bilibino 30.37 16 *e*P **P 00 35 05.1 +0.6**
BILL *e* 00 35 15.6
BILL *e*PPP PPP 00 36 07.9
BILL pmax pmax
comp=Z,26nm,1.2s
BILL MLR MLR
comp=Z,90nm,17.0s
LZH Lanzhou 31.70 276 *e*P **P 00 35 17.9 +1.1**
LZH sP sP 00 35 28.1 +1.3
LZH pmax pmax
comp=Z,26nm,1.5s
LZH LR LR
comp=Z,470nm,15.1s
LZH LR LR
comp=Z,430nm,17.2s
LZH LR LR
comp=Z,550nm,17.9s
TIXI Tiksi 32.40 351 P **P 00 35 22.1 -0.2**
comp=Z,3.0nm,0.8s,baz=270,slow=20,SNR=7.3
TIXI LR LR 00 50 18.2
comp=Z,248nm,19.4s,baz=354,slow=40
comp=Z,3.0nm,0.8s
TIXI Tiksi 32.40 351*ce*P **P 00 35 21.4 -0.9**
TIXI pmax pmax
comp=Z,15nm,2.5s
GTA Gaotai 33.72 283⇑P **P 00 35 35.0 +0.6**
GTA pP sP 00 35 44.8 +0.3
GTA pmax pmax
comp=Z,28nm,1.2s
GTA pmax pmax
comp=Z,77nm,6.0s
GTA LR LR
comp=Z,190nm,13.8s
GTA LR LR
comp=Z,320nm,16.0s
GTA LR LR
comp=Z,350nm,16.4s
CD2 Chengdu 33.83 267 P **P 00 35 34.8 -0.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,540nm,11.8s
CD2 LR LR
comp=Z,400nm,14.2s
CD2 LR LR
comp=Z,390nm,13.2s
GYA Guiyang 33.86 258⇑P **P 00 35 36.4 +0.7**
GYA pP sP 00 35 46.0 +0.2
GYA pmax pmax
comp=Z,18nm,0.9s
GYA LR LR
comp=Z,530nm,17.1s
GYA LR LR
comp=Z,380nm,11.1s
KMI Kunming 37.55 259⇓P **P 00 36 06.6 -0.9**
KMI sP sP 00 36 18.0 +0.4
KMI S **S 00 41 49.9 -5.2**
KMI pmax pmax
comp=Z,14nm,0.6s
KMI pmax pmax
comp=Z,100nm,5.8s
KMI LR LR
comp=Z,370nm,14.3s
KMI LR LR
comp=Z,220nm,14.1s
KMI LR LR
comp=Z,200nm,13.7s
PZH PanZhiHua 37.55 262 P **P 00 36 07.6 +0.2**
PZH pP **sP 00 36 17.8 +0.3**
PZH S **S 00 41 53.1 -1.8**
PZH pmax pmax
comp=Z,40nm,0.6s
PZH pmax pmax
comp=Z,100nm,3.5s
PZH LR LR
comp=Z,510nm,15.5s
PZH LR LR
comp=Z,560nm,15.5s
PZH LR LR
comp=Z,620nm,14.2s
GOMU GeErMu 38.50 280 P **P 00 36 15.9 +0.3**
GOMU pP pP 00 36 17.8 -5.2
GOMU pmax pmax
comp=Z,6.0nm,0.8s
GOMU pmax pmax
comp=Z,150nm,4.8s
DGZ Jazzator, Alta 40.29 303*c i*P **P 00 36 31.4 +1.3**
DGZ pmax pmax
comp=Z,25nm,0.8s
NRIK Noril'sk 41.28 333 LR LR 00 56 26.1
comp=Z,240nm,18.0s,baz=126,slow=40
WMQ Urumqi 41.33 294 *e*P **P 00 36 39.5 +0.8**
WMQ pP sP 00 36 49.8 +0.9
WMQ pmax pmax
comp=Z,41nm,1.1s
WMQ LR LR
comp=Z,270nm,13.7s
WMQ LR LR
comp=Z,540nm,10.1s
WMQ LR LR
comp=Z,140nm,11.7s
ZAA0 Zalesovo Array 41.37 310 IAmb IAmb 00 36 49.9
comp=Z,16nm,0.7s
ZALV Zalesovo Beam 41.37 310 P **P 00 36 39.4 +0.7**
comp=Z,5.1nm,0.8s,baz=88,slow=7.7,SNR=25
comp=Z,5.1nm,0.8s
MYLDM Lahad Datu 41.79 220 P **P 00 36 42.4 -0.2**
MYLDM IAmb IAmb 00 37 05.8
comp=Z,22nm,1.0s

N19K Bonanza Creek 42.26 40 P **P 00 36 47.2 +1.2**
N19K IAmb IAmb 00 37 23.9
comp=Z,29nm,1.6s
M19K Big River Lodg 42.32 38 P **P 00 36 48.2 +1.8**
M19K IAmb IAmb 00 37 50.3
comp=Z,18nm,1.4s
ZSN Zaisan 42.38 300 *e*P **P 00 36 46.0 -1.1**
ZSN Zaisan 42.38 300 *e*P **P 00 36 46.1 -1.1**
baz=300
H21K Melozitna Rive 43.20 33 P **P 00 36 55.2 +1.7**
KDAK Kodiak Island 43.35 44 P **P 00 36 55.5 +0.7**
comp=Z,7.5nm,1.0s,baz=297,slow=9.0,SNR=4.2
comp=Z,7.5nm,1.0s
KDAK Kodiak Island 43.35 44 P **P 00 36 55.9 +1.1**
KDAK IAmb IAmb 00 37 41.5
comp=Z,26nm,1.2s
KDAK Kodiak Island 43.35 44 P **P 00 36 55.9 +1.1**
KDAK pmax pmax
comp=Z,26nm,1.3s
CHTO Chiang Mai 44.11 255 P **P 00 37 01.1 -0.3**
CHTO Chiang Mai 44.11 255 P **P 00 37 01.1 -0.3**
MK31 Makanchi Array 44.25 300 IAmb IAmb 00 37 13.8
comp=Z,23nm,0.9s
MK31 Makanchi Array 44.25 300 *i*P **P 00 37 01.6 -0.6**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 44.25 300 P **P 00 37 02.3 +0.1**
comp=Z,10nm,0.9s,baz=82,slow=8.6,SNR=43
MKAR LR LR 00 56 33.1
comp=Z,154nm,18.9s,baz=222,slow=38
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 44.34 254 P **P 00 37 04.0 +0.9**
comp=Z,1.1nm,0.3s,baz=49,slow=6.0,SNR=8.5
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 44.34 254 *i*P **P 00 37 04.4 +1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
MAKZ Makanchi 44.45 300 P **P 00 37 04.2 +0.4**
MAKZ Makanchi 44.45 300 P **P 00 37 04.2 +0.4**
MAKZ pmax pmax
comp=Z,32nm,1.0s
MAKZ Makanchi 44.45 300 P **P 00 37 04.1 +0.3**
MAKZ pP **pP 00 37 10.6 -0.8**
MAKZ sP **sP 00 37 14.5 +0.4**
H23K Yukon River 44.56 33 P **P 00 37 06.2 +1.8**
H23K IAmb IAmb 00 37 24.7
comp=Z,23nm,1.4s
COLA College 45.27 34 *i*P **P 00 37 08.4 -1.6**
COLA pmax pmax
comp=Z,9.0nm,1.1s
COLA College 45.27 34 P **P 00 37 11.1 +1.1**
COLA sP **sP 00 37 21.0 +1.1**
KURK Kurchatov 45.65 306 P **P 00 37 13.4 +0.1**
KURK Kurchatov 45.65 306 P **P 00 37 13.4 +0.1**
KURK pmax pmax
comp=Z,41nm,0.9s
KURK Kurchatov 45.65 306 P **P 00 37 13.3 0.0**
KURK pP **pP 00 37 20.6 0.0**
KURK sP **sP 00 37 23.4 -0.2**
HDA Harding Lake 45.67 35 P **P 00 37 14.6 +1.3**
IL31 45.69 34 P **P 00 37 15.0 +1.7**
IL31 IAmb IAmb 00 37 34.6
comp=Z,6.7nm,0.8s
ILAR Eielson Array 45.69 34 P **P 00 37 14.1 +0.7**
comp=Z,1.1nm,0.7s,baz=258,slow=6.9,SNR=11
comp=Z,1.1nm,0.7s
ILAR Eielson Array 45.69 34 P **P 00 37 14.3 +0.9**
ILAR Eielson Array 45.69 34 P **P 00 37 14.3 +0.9**
M24K Tolsona, Glenn 46.19 38 P **P 00 37 18.6 +1.2**
SCRK Sand Creek 47.00 35 P **P 00 37 24.7 +0.8**
SCRK IAmb IAmb 00 37 34.9
comp=Z,6.6nm,0.8s
PDGK Podgornoye 47.17 296 *i*P **P 00 37 25.1 -0.4**
PDGK pmax pmax
comp=Z,9.0nm,0.8s
SHLS Shalkode 47.24 296 *e*P P 00 37 21.1 -5.0
SHLS Shalkode 47.24 296 *e*P P 00 37 21.1 -4.9
baz=296
TDK Taldyqorghan 47.36 299 *e*P **P 00 37 23.3 -3.5**
TDK Taldyqorghan 47.36 299 *e*P **P 00 37 23.4 -3.5**
baz=298
L26K Log Cabin Wild 47.39 36 P **P 00 37 28.2 +1.4**
L26K IAmb IAmb 00 37 39.4
comp=Z,11nm,0.9s
UZB Uzynbulak 47.55 296 *e*P **P 00 37 26.9 -1.6**
UZB Uzynbulak 47.55 296 *e*P **P 00 37 26.1 -2.4**
baz=296
KPKS Kokpek 47.67 296 *e*P **P 00 37 28.3 -1.0**
KPKS Kokpek 47.67 296 *e*P **P 00 37 28.4 -1.0**
baz=296
TAPN Taplejung 47.83 273 *e*P **P 00 37 32.1 +1.1**
K27K Chicken 47.83 35 P **P 00 37 32.5 +2.3**
K27K IAmb IAmb 00 37 52.4
comp=Z,6.2nm,0.7s
SATY Saty 48.01 296 *e*P **P 00 37 30.4 -1.5**
SATY Saty 48.01 296 *e*P **P 00 37 30.5 -1.5**
baz=296
BCAR Beaver Creek A 48.09 36 P **P 00 37 33.9 +1.7**
CHKK Chushkaly 48.70 298 *e*P **P 00 37 36.0 -1.2**
CHKK Chushkaly 48.70 298 *e*P **P 00 37 36.0 -1.2**
baz=297
RAMN Ramite 48.88 273 *e*P **P 00 37 39.3 +0.3**
comp=Z,37nm,1.1s
MDOK Medeo 48.90 297 *e*P **P 00 37 38.8 -0.1**
MDOK Medeo 48.90 297 *e*P **P 00 37 38.8 -0.1**
baz=296
GUN Gumba 48.94 274 *e*P **P 00 37 40.1 +0.5**
comp=Z,18nm,0.6s
KUU Kurty 49.13 298 *e*P **P 00 37 38.3 -2.1**
KUU Kurty 49.13 298 *e*P **P 00 37 38.3 -2.1**
baz=298
I29M Ogilvie Camp, 49.24 33 P **P 00 37 42.1 +1.1**
I29M IAmb IAmb 00 37 53.5
comp=Z,8.6nm,1.0s
PKI Pulchoki 49.47 274 *e*P **P 00 37 43.6 -0.1**
BRZS Berezniki 49.52 306 *e*P **P 00 37 42.0 -1.3**
BRZS Berezniki 49.52 306 *e*P **P 00 37 42.0 -1.3**
baz=306
GKN Gorkha 49.84 275 *e*P **P 00 37 46.4 +0.1**
TKM2 Tokmak 2 49.98 297 P **P 00 37 47.4 +0.2**
BVAR Borovoye Array 50.00 311 LR LR 01 01 43.4
comp=Z,78nm,18.8s,baz=121,slow=39
BRVK Borovoye 50.05 311 P **P 00 37 48.0 +0.7**
BRVK Borovoye 50.05 311 P **P 00 37 48.0 +0.7**
BRVK pmax pmax
comp=Z,20nm,1.1s
BRVK Borovoye 50.05 311 P **P 00 37 47.9 +0.6**
BRVK pP **pP 00 37 56.9 +2.2**
NRN Naryn 50.26 295 P **P 00 37 49.4 -0.1**
NRN Naryn 50.26 295 P **P 00 37 49.4 -0.1**
NRN pmax pmax
comp=Z,5.0nm,0.8s
KAPI Kappang 50.27 212 *i*P **P 00 37 51.8 +2.5**
OTUK Ortayu 50.28 304 P **P 00 37 48.9 -0.2**
DANN Dangsing 50.34 276 *e*P **P 00 37 50.7 +0.5**
comp=Z,21nm,0.6s
SGDS Sogindy 50.44 298 *e*P **P 00 37 48.9 -1.6**
SGDS Sogindy 50.44 298 *e*P **P 00 37 48.9 -1.6**
baz=298
HYT Haines Junctio 50.50 38 P **P 00 37 52.6 +1.9**
HYT IAmb IAmb 00 38 04.1
comp=Z,12nm,0.9s
INK Inuvik 50.59 28 P **P 00 37 52.3 +1.2**
comp=Z,0.8nm,0.4s,baz=297,slow=6.8,SNR=6.8
comp=Z,0.8nm,0.4s
AAK Ala-Archa 50.84 297 LR LR 01 00 28.1
comp=Z,98nm,19.1s,baz=196,slow=37
AAK Ala-Archa 50.84 297 P **P 00 37 53.5 -0.1**
AAK IAmb IAmb 00 38 04.9
comp=Z,14nm,1.4s
AAK Ala-Archa 50.84 297*ce*P **P 00 37 53.5 -0.1**
AAK pmax pmax
comp=Z,3.0nm,1.3s
AAK Ala-Archa 50.84 297 P **P 00 37 53.9 +0.2**
AAK pP **pP 00 38 01.5 +0.5**
KSH Kashi 51.04 293 P **P 00 37 59.6 +4.5**
KSH pP pwP 00 38 09.9 +2.8
KSH pmax pmax
comp=Z,5.0nm,1.0s
KSH LR LR
comp=Z,280nm,15.2s
KSH LR LR
comp=Z,250nm,14.0s
KSH LR LR
comp=Z,240nm,13.2s

DZA Taraz 52.88 298 *e*P **P 00 38 07.6 -1.1**
DZA Taraz 52.88 298 *e*P **P 00 38 07.6 -1.1**
baz=298
KK31 Karatay Array 53.35 299 P **P 00 38 11.8 -0.4**
KK31 IAmb IAmb 00 38 29.6
comp=Z,6.4nm,0.8s
KK31 Karatay Array 53.35 299 P **P 00 38 11.8 -0.4**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 53.35 299 IAmb IAmb 00 38 29.6
comp=Z,6.4nm,0.8s
IUG Iuzhnay 54.07 298 *e*P **P 00 38 16.5 -1.0**
IUG Iuzhnay 54.07 298 *e*P **P 00 38 16.5 -1.0**
baz=298
SVE Sverdlovsk 54.15 318 *e*P **P 00 38 18.2 +0.5**
SVE pmax pmax
comp=Z,19nm,0.8s
SVE MLR MLR
comp=Z,500nm,15.0s
BTK Batken 54.41 295 IAmb IAmb 00 38 48.7
comp=Z,12nm,1.2s
GAR Garm 55.23 294 IAmb IAmb 00 38 38.3
comp=Z,15nm,1.0s
ARU Arti 55.36 318 LR LR 01 04 36.3
comp=Z,125nm,18.4s,baz=66,slow=39
ARU Arti 55.36 318 P **P 00 38 26.8 +0.3**
ARU IAmb IAmb 00 38 44.2
comp=Z,12nm,0.8s
ARU Arti 55.36 318*c i*P **P 00 38 26.8 +0.3**
ARU 00 39 25.2
ARU S **S 00 46 14.1 +5.4**
ARU SS **SS 00 49 57.8 +5.0**
ARU pmax pmax
comp=Z,18nm,1.2s
ARU MLR MLR
comp=Z,330nm,16.0s
ARU Arti 55.36 318 P **P 00 38 26.8 +0.3**
ARU pP **pP 00 38 35.5 +1.5**
NIL Nilore 55.61 287 P **P 00 38 29.7 +1.0**
NIL Nilore 55.61 287 P **P 00 38 29.7 +1.0**
NIL pmax pmax
comp=Z,29nm,0.9s
NIL Nilore 55.61 287 P **P 00 38 29.9 +1.2**
NIL pP **pP 00 38 37.4 +1.3**
CHGR Chuyangaron 56.19 295 P **P 00 38 32.5 -0.3**
CHGR Chuyangaron 56.19 295 P **P 00 38 32.5 -0.3**
CHGR pmax pmax
comp=Z,36nm,0.8s
EUNU Eureka 56.71 9 P **P 00 38 38.2 +2.3**
AB31 Akbulak array 57.48 309 *i*P **P 00 38 41.8 +0.1**
AKTO Aktyubinsk 58.10 311 P **P 00 38 46.4 +0.4**
KBL Kabul 58.23 290 P **P 00 38 46.9 -0.5**
KBL Kabul 58.23 290 P **P 00 38 46.9 -0.5**
KBL pmax pmax
comp=Z,17nm,0.9s
KIRV Kirov 58.96 322 LR LR 01 07 28.2
comp=Z,126nm,18.6s,baz=84,slow=39
KIRV Kirov 58.96 322*ce*P **P 00 38 52.1 +0.3**
RES Resolute Bay 58.98 15 P **P 00 38 52.6 +0.8**
comp=Z,2.9nm,0.6s,baz=327,slow=5.8,SNR=2.1
comp=Z,2.9nm,0.6s
PRGR Permogore 59.22 327 *e*P **P 00 38 53.7 +0.1**
PRGR pmax pmax
comp=Z,11nm,1.0s
YKA Yellowknife Ar 60.00 32 P **P 00 38 60.0 +1.0**
comp=Z,0.6nm,0.7s,baz=300,slow=6.4,SNR=3.6
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 60.00 32 P **P 00 39 00.0 +1.0**
WRA Warramunga Arr 60.55 191 P **P 00 39 02.5 -0.7**
comp=Z,3.3nm,1.1s,baz=8.4,slow=6.9,SNR=10
comp=Z,3.3nm,1.1s
ARCES ARCESS Array B 61.73 339 P **P 00 39 11.1 +0.4**
comp=Z,3.7nm,1.0s,baz=36,slow=7.8,SNR=2.3
comp=Z,3.7nm,1.0s
KLMR Klimovskoe 62.16 328 *e*P **P 00 39 12.4 -1.3**
KLMR pmax pmax
comp=Z,25nm,1.6s
KLMR Klimovskoe 62.16 328 *e*P **P 00 39 12.4 -1.3**
KLMR AMP 00 39 15.8
comp=Z,25nm,1.6s
DAG Danmarks Havn 62.76 356 *i*P **P 00 39 21.0 +3.6**
BELG Belogornoye 62.88 317 LR LR 01 07 59.4
comp=Z,75nm,20.2s,baz=157,slow=37
HRA Herat 63.13 293 P **P 00 39 20.9 0.0**
HRA IAmb IAmb 00 39 32.5
comp=Z,11nm,1.2s
GEYT Alibeck 64.10 299 P **P 00 39 27.2 +0.2**
comp=Z,4.2nm,1.0s,baz=39,slow=5.7,SNR=8.9
comp=Z,4.2nm,1.0s
GEYT Alibeck 64.10 299 P **P 00 39 26.9 -0.1**
GEYT IAmb IAmb 00 39 39.0
comp=Z,15nm,1.2s
GYA0B ALIBECK ARRAY 64.10 299 P **P 00 39 27.1 +0.1**
GYA0B IAmb IAmb 00 39 38.9
comp=Z,13nm,1.1s
ASAR Alice Springs 64.27 190 P **P 00 39 28.3 +0.3**
comp=Z,1.0nm,0.8s,baz=15,slow=5.4,SNR=4.3
comp=Z,1.0nm,0.8s
ASAR Alice Springs 64.27 190 P **P 00 39 28.9 +0.8**
ASAR Alice Springs 64.27 190 P **P 00 39 28.9 +0.8**
MOS Moscow 65.91 324 *e*P **P 00 39 38.2 -0.2**
VRH Novokhopyorsk 66.59 318 *e*P **P 00 39 42.7 -0.1**
VRH pmax pmax
comp=Z,10.0nm,1.4s
OBN Obninsk 66.77 323 *e*P **P 00 39 42.9 -0.9**
OBN *e* 00 40 10.2
OBN *e* 00 42 09.4
OBN *e*PPP PPP 00 43 46.0
OBN pmax pmax
comp=Z,21nm,1.7s
OBN MLR MLR
comp=Z,49nm,13.0s
FINES FINESS Array B 66.94 333 P **P 00 39 45.1 +0.2**
comp=Z,4.9nm,0.7s,baz=52,slow=5.5,SNR=13
FINES LR LR 01 11 19.6
comp=Z,126nm,18.2s,baz=53,slow=38
comp=Z,4.9nm,0.7s
FINES FINESS Array B 66.94 333 *i*P **P 00 39 45.4 +0.6**
FINES pmax pmax
comp=Z,5.0nm,0.7s
LPSR Galich'ya Gora 67.17 320 *e*P **P 00 39 45.7 -0.8**
LPSR pmax pmax
comp=Z,30nm,1.9s
SUMG Summit 67.47 1 *i*P P 00 39 54.0 +5.4
VORR Voronezh 67.59 319 *e*P **P 00 39 49.9 +0.8**
VORR pmax pmax
comp=Z,20nm,0.4s
VSR Storozhevoye 67.88 319 *e*P **P 00 39 49.8 -1.2**
VSR pmax pmax
comp=Z,10.0nm,1.1s
MAK Makhachkala 68.11 308 *e*P P 00 39 46.8 -5.8
MAK *e*S **S 00 48 45.2 -5.2**
MAK MLR MLR
comp=Z,159nm,13.0s
BEKR Beckworth 69.30 55 pP 00 40 10.9 +3.1
KVAR Kislovodsk Arr 70.36 311 LR LR 01 12 37.5
comp=Z,142nm,18.7s,baz=82,slow=37
KIV Kislovodsk 70.36 311⇓P P 00 39 57.5 -9.1
KIV Kislovodsk 70.36 311 P **P 00 40 07.5 +0.9**
KIV Kislovodsk 70.36 311 *e*P **P 00 40 07.6 +0.9**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,65nm,18.0s
KIV Kislovodsk 70.36 311 P **P 00 40 07.9 +1.2**
KIV sP **sP 00 40 18.0 +0.7**
KBZ Khabaz 70.38 311 P **P 00 40 07.8 +1.2**
comp=Z,5.2nm,1.0s,baz=208,slow=1.7,SNR=5.4
comp=Z,5.2nm,1.0s
KBZ Khabaz 70.38 311 *i*P **P 00 40 07.5 +0.9**
KBZ pmax pmax
comp=Z,9.0nm,1.1s
ONI Oni 70.74 310 P **P 00 40 10.2 +1.3**
ONI Oni 70.74 310 P **P 00 40 10.2 +1.3**
ONI pmax pmax
comp=Z,59nm,1.9s
MNK Minsk 70.99 326 *i*P P 00 39 58.7 -11
MNK *i*SSS SSS 00 57 07.7
MNK pmax pmax
comp=N,43nm,1.0s
MNK pmax pmax
comp=E,4.0nm,1.5s
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK Minsk 70.99 326 *i*P P 00 39 58.8 -11
comp=E,4.0nm,1.5s

MNK *i* P P 00 39 58.8 -11
comp=N,43nm,1.0s
MNK *i* P P 00 39 58.8 -11
comp=Z,8.0nm,0.7s,baz=226
MNK *i* PP PP 00 42 35.7 -11
MNK *i* PPP PPP 00 44 18.5
MNK *i* S S 00 49 06.5 -17
MNK *i* SS SS 00 53 40.6 -16
MNK *i* SSS SSS 00 57 07.7
BOZ Bozeman (W) 71.02 46 P **P 00 40 12.1 +1.4**
BOZ Bozeman (W) 71.02 46 P **P 00 40 12.1 +1.4**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
NACGM Naroch 71.17 327 *e*P **P 00 40 11.6 +0.4**
baz=46
NVAR Mina Array Bea 71.44 55 P **P 00 40 14.4 +0.9**
comp=Z,0.3nm,0.5s,baz=317,slow=5.2,SNR=2.0
comp=Z,0.3nm,0.5s
GNI Garni 71.44 307 *i* P **P 00 40 12.5 -0.9**
GNI pmax pmax
comp=Z,20nm,1.7s
HFS Hagfors 72.01 336 LR LR 01 14 13.3
comp=Z,59nm,18.7s,baz=50,slow=38
NB2 NORSAR Subarra 72.02 338 P **P 00 40 16.3 0.0**
comp=Z,10nm,1.1s,baz=35,slow=6.2
NOA NORSAR Array B 72.02 338 P **P 00 40 16.6 +0.3**
comp=Z,2.8nm,0.8s,baz=37,slow=6.1,SNR=7.4
NOA LR LR 01 16 34.3
comp=Z,55nm,18.6s,baz=265,slow=40
comp=Z,2.8nm,0.8s
ANN Anapa 72.79 314 *e*P **P 00 40 18.7 -2.4**
ANN *e**PP **pP 00 40 23.1 -5.7**
ANN *e* 00 40 36.0
ANN *e*S **S 00 49 43.7 -1.2**
ANN *e*SS **SS 00 54 22.8 -1.3**
ANN pmax pmax
comp=Z,34nm,0.9s
AKASG Malin Array Be 73.01 323 P **P 00 40 22.6 +0.2**
comp=Z,4.3nm,0.6s,baz=44,slow=6.1,SNR=27
comp=Z,4.3nm,0.6s
AKASG Malin Array Be 73.01 323 P **P 00 40 22.5 +0.2**
AKASG Malin Array Be 73.01 323 *i* P **P 00 40 22.6 +0.2**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 73.01 323 P **P 00 40 22.4 +0.1**
AKBB IAmb IAmb 00 40 23.5
comp=Z,10nm,0.8s
AKBB Malin Array Si 73.01 323 P **P 00 40 22.4 +0.1**
AKBB pmax pmax
comp=Z,10.0nm,0.9s
R11A Troy Canyon, C 73.18 54 P **P 00 40 24.9 +1.0**
DUG Dugway, Tooele 73.72 51 P **P 00 40 27.7 +0.8**
DUG Dugway, Tooele 73.72 51 P **P 00 40 27.7 +0.8**
DUG pmax pmax
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 73.96 47 P **P 00 40 29.0 +0.6**
comp=Z,0.5nm,0.6s,baz=327,slow=6.5,SNR=1.6
PDAR LR LR 01 16 09.0
comp=Z,19nm,18.8s,baz=16,slow=38
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 73.96 47 P **P 00 40 29.0 +0.6**
GURO Guroymak-BITLI 74.08 307 P **P 00 40 30.3 +1.2**
BUR08 Bucovina Ar. S 77.04 323 P **P 00 40 46.3 +0.5**
BUR08 IAmb IAmb 00 40 47.7
comp=Z,6.0nm,0.8s
BURAR Bucovina Array 77.06 323 ⇑P **P 00 40 46.8 +0.9**
BURAR Bucovina Array 77.06 323 P **P 00 40 46.6 +0.8**
BURAR IAmb IAmb 00 40 48.1
comp=Z,7.4nm,0.8s
BURAR Bucovina Array 77.06 323 ⇑P **P 00 40 46.8 +0.9**
BIZ Bicaz 77.13 322 ⇑P **P 00 40 47.3 +1.2**
TESR Tescani 77.17 321 ⇑P P 00 40 40.8 -5.6
KOLS Kolonicke sedl 77.42 325 *e*P **P 00 40 49.1 +1.3**
OJC Ojcow 77.51 327 *e*P **P 00 40 47.4 -0.9**
OJC Ojcow 77.51 327 P **P 00 40 47.6 -0.6**
OJC IAmb IAmb 00 40 48.5
comp=Z,12nm,1.1s
OJC Ojcow 77.51 327 P **P 00 40 47.6 -0.6**
OJC pmax pmax
comp=Z,13nm,1.1s
VRI Vrincioaia 77.60 321 ⇑P P 00 40 32.8 -16
OZUR 77.89 321 ⇓P P 00 40 43.6 -6.9
TRPA Tarpa 77.90 324 ⇓P **P 00 40 51.6 +1.2**
DOPR Dopca 78.17 321 ⇑P P 00 40 45.4 -6.6
BRTR Keskin Array B 78.25 312 P **P 00 40 53.3 +0.6**
comp=Z,0.9nm,0.9s,baz=116,slow=2.9,SNR=6.6
comp=Z,0.9nm,0.9s
BRTR Keskin Array B 78.25 312 *i* P **P 00 40 53.2 +0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
KSP Ksiaz 78.44 329 *e*P **P 00 40 54.9 +1.5**
CHVC Chvalec 78.73 329 *e*P P 00 41 05.1 +10
MORC Moravsky Berou 78.78 328 ⇓P **P 00 40 56.3 +1.0**
MORC Moravsky Berou 78.78 328 P **P 00 40 56.2 +0.9**
MORC Moravsky Berou 78.78 328 P **P 00 40 56.2 +0.9**
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 78.78 328 *e*P **P 00 40 56.0 +0.7**
DPC Dobruska-Polom 78.82 329 *e*P **P 00 40 57.0 +1.5**
DPC Dobruska-Polom 78.82 329 *e*P **P 00 40 57.0 +1.5**
ARR Arges 78.97 321 ⇓P **P 00 40 58.6 +2.1**
PSZ Piszkesteto 79.22 325 ⇓P **P 00 40 58.8 +1.0**
PSZ Piszkesteto 79.22 325 P **P 00 40 58.2 +0.3**
PSZ IAmb IAmb 00 41 00.3
comp=Z,10nm,1.1s
PSZ Piszkesteto 79.22 325 P **P 00 40 58.2 +0.3**
PSZ pmax pmax
comp=Z,10.0nm,1.1s
VYHS Vyhne 79.24 326 *e*P **P 00 40 59.1 +1.3**
VYHS pmax pmax
comp=Z,18nm,1.9s
CLL Collm 79.32 331 P **P 00 40 58.3 +0.1**
CLL Collm 79.32 331 *i* P **P 00 40 58.9 +0.7**
CLL *i* 00 41 08.6
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 79.32 331 *i* P **P 00 40 58.9 +0.7**
comp=Z,6.0nm,1.0s
CLL *i* pP **sP 00 41 08.6 0.0**
CLL *es*PcP 00 41 23.0
CLL *e*PP **PP 00 43 54.0 -3.5**
EYMN Ely 79.33 34 P **P 00 40 58.9 +0.5**
VRAC Vranov 79.53 328 ⇓P **P 00 41 01.0 +1.6**
VRAC Vranov 79.53 328 LR LR 01 21 13.2
comp=Z,137nm,18.7s,baz=48,slow=40
VRAC Vranov 79.53 328 ⇓P **P 00 41 01.0 +1.6**
VRAC Vranov 79.53 328 *e*P **P 00 41 00.5 +1.1**
PRU Pruhonice 79.80 330 *e*P **P 00 41 02.7 +1.9**
PRU Pruhonice 79.80 330 *e*P **P 00 41 02.7 +1.9**
KRUC Moravsky 79.80 328 *e*P **P 00 41 02.6 +1.7**
SMOL Smolenice 79.81 327 *e*P **P 00 41 02.6 +1.7**
SMOL pmax pmax
comp=Z,8.0nm,1.7s
GZR Gura Zlata 79.83 322 ⇑P P 00 40 54.8 -6.4
MODS Modra-Piesok 79.98 327 *e*P **P 00 41 02.0 +0.1**
KHC Kasperske Hory 80.86 330 *e*P **P 00 41 07.6 +1.0**
KHC Kasperske Hory 80.86 330 *e*P **P 00 41 07.6 +1.0**
CONA Conrad Observa 80.92 328 *e*P **P 00 41 08.6 +1.6**
comp=Z,5.0nm,1.0s
RONA Rosalia, Austr 80.92 327 *e*P **P 00 41 08.8 +1.8**
comp=Z,5.5nm,0.8s
GERES GERESS Array B 81.05 329 P **P 00 41 08.5 +0.8**
comp=Z,1.0nm,0.8s,baz=54,slow=6.8,SNR=7.8
comp=Z,1.0nm,0.8s
GERES GERESS Array B 81.05 329 P **P 00 41 07.8 +0.1**
RAYN Ar Rayn 81.32 293 P **P 00 41 09.8 +0.3**
RAYN IAmb IAmb 00 41 21.2
comp=Z,19nm,1.8s
RAYN Ar Rayn 81.32 293 P **P 00 41 09.8 +0.3**
RAYN pmax pmax
comp=Z,19nm,1.8s
ARSA Arzberg 81.60 327 *e*P **P 00 41 10.4 -0.1**
comp=Z,3.6nm,0.8s
MOA Molln 81.63 328 *e*P **P 00 41 11.5 +0.8**
comp=Z,5.1nm,1.6s
VTS Vitosha 81.69 320 P **P 00 41 11.8 +0.5**
VTS IAmb IAmb 00 41 23.9
comp=Z,27nm,1.7s
VTS Vitosha 81.69 320 P **P 00 41 11.8 +0.5**
VTS pmax pmax
comp=Z,27nm,1.7s
SOKA Soboth 82.25 327 *e*P **P 00 41 14.7 +0.6**
comp=Z,5.3nm,0.8s
KBA Koelnbreinsper 82.62 329 *e*P **P 00 41 16.5 +0.4**
comp=Z,8.8nm,1.6s
WATA Walderalm 83.11 330 *e*P **P 00 41 20.0 +1.5**
comp=Z,8.8nm,1.6s
MOOA Moosalm 83.28 330 *e*P **P 00 41 20.5 +1.0**
comp=Z,9.2nm,1.2s
RETA Reutte 83.29 330 *e*P **P 00 41 20.5 +1.0**
comp=Z,4.6nm,0.8s
SQTA Sankt Quirin 83.34 330 *e*P **P 00 41 19.5 -0.2**
comp=Z,11nm,1.9s
FETA Feichten 83.69 330 *e*P **P 00 41 22.7 +1.1**
comp=Z,7.5nm,1.2s
PDG Podgorica 83.74 322 IAmb IAmb 00 41 23.2
comp=Z,12nm,0.9s
FUORN Ofenpass-Fuorn 84.20 330 P **P 00 41 25.3 +1.0**
FUORN **pP 00 41 33.7 +1.7**
FUORN IAmb IAmb 00 41 40.1
comp=Z,9.0nm,1.1s
DAVOX Davos/Dischmat 84.22 330 LR LR 01 22 43.9
comp=Z,132nm,18.4s,baz=69,slow=38
PPT Papeete 84.28 119 LR LR 01 19 46.6
comp=Z,125nm,18.5s,baz=346,slow=36
IDI Anoyia 86.28 314 LR LR 01 26 14.1
comp=Z,60nm,18.0s,baz=124,slow=40
TXAR Lajitas Array 86.55 54 P **P 00 41 37.0 +0.8**
comp=Z,0.6nm,0.7s,baz=309,slow=4.3,SNR=4.1
comp=Z,0.6nm,0.7s
TXAR Lajitas Array 86.55 54 P **P 00 41 37.0 +0.8**
TORD Torodi Ar. Bea 116.43 318 PKP **PKPdf 00 47 36.7 -0.2**
comp=Z,0.2nm,0.5s,baz=17,slow=2.6,SNR=4.7
PLCA Paso Flores 153.77 102 PKPab **PKPab 00 49 02.5 -2.1**
comp=Z,3.1nm,1.0s,baz=247,slow=2.5,SNR=5.3

*NEIC **24** 00:33:34.4±0.8, 36°.808N±0°.006×97°.56W±0°.02, h6km±7km, Error ellipse: s-maj=1.9km s-min=0.7km az=75.0*
*TUL **24** 00:33:34.2±0.8, 36°.82N±0°.01×97°.55W±0°.01, h8km±7km, ML3.3, mb_Lg3.2/69(NEIC), Error ellipse: s-maj=1.8km s-min=1.3km az=49.0*
*ANF **24** 00:33:34.7±0.2, 36°.80N×97°.58W, h8km, ML3.8/14, Error ellipse: s-maj=2.9km s-min=2.5km az=43.0*
ISC 24 00:33:34.6±1.0, 36°.81N±0°.02×97°.57W±0°.02, h4km±10km, n79, σ0°61/65, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.22**	**20**	Pg	**Pg**	**00 33 38.7**	**-0.1**
KAN13				Sg	**Sg**	**00 33 41.8**	**+0.1**
KAN17	**Caldwell West**	**0.28**	**327**	Pg	**Pg**	**00 33 40.1**	**0.0**
KAN17				Sg	**Sg**	**00 33 44.3**	**+0.4**
KAN09	**Caldwell North**	**0.33**	**353**		**Pg**	**00 33 40.9**	**-0.2**
KAN09				Sg	**Sg**	**00 33 45.5**	**+0.1**
KAN14	**Manchester OK**	**0.35**	**296**		**Pg**	**00 33 41.4**	**0.0**
KAN14				Sg	**Sg**	**00 33 46.4**	**+0.5**
KAN01	**Argonia South**	**0.38**	**336**	Pg	**Pg**	**00 33 41.9**	**-0.1**
KAN01				Sg	**Sg**	**00 33 47.0**	**+0.1**
KS20	**Mayfield South**	**0.42**	**2**	Pg	**Pg**	**00 33 42.3**	**-0.5**
KS20				Sg	**Sg**	**00 33 48.3**	**0.0**
OK049	**E0420 Rd and N**	**0.45**	**152**	Pg	**Pg**	**00 33 43.2**	**-0.1**
OK049				Sg	**Sg**	**00 33 49.2**	**+0.1**
KS21	**Milan North St**	**0.48**	**351**	Pg	**Pg**	**00 33 43.6**	**-0.3**
KAN06	**Argonia West S**	**0.50**	**332**		**Pg**	**00 33 44.1**	**-0.1**
KAN06				Sg	**Sg**	**00 33 51.0**	**+0.3**
OK032	**Salt Plains WL**	**0.51**	**270**	Pg	**Pg**	**00 33 44.5**	**0.0**
OK032				Sg	**Sb**	**00 33 53.4**	**-0.6**
KAN08	**Anthony NE Sta**	**0.53**	**323**		**Pg**	**00 33 44.7**	**0.0**
KAN16	**Harper SW Stat**	**0.58**	**317**	Pg	**Pg**	**00 33 45.8**	**+0.1**
KAN12	**Harper NE Stat**	**0.60**	**325**	Pg	**Pg**	**00 33 45.7**	**-0.4**
OK050	**Pawnee Station**	**0.63**	**131**		**Pg**	**00 33 46.2**	**-0.4**
OK045	**Pawnee Station**	**0.63**	**124**		**Pg**	**00 33 46.3**	**-0.4**
OK051	**E0350 and S346**	**0.66**	**117**	Pg	**Pg**	**00 33 46.8**	**-0.5**
OK046	**Pawnee Station**	**0.67**	**127**	Pg	**Pg**	**00 33 47.0**	**-0.5**
T35A	**Sooner Cattle**	**0.85**	**82**	Pg	**Pg**	**00 33 50.1**	**-0.9**
T35B	**Sooner Cattle**	**0.85**	**82**	P	**Pg**	**00 33 50.1**	**-0.9**
baz=264,SNR=274							
OK035	**E0210 Rd and N**	**0.92**	**264**		**Pg**	**00 33 52.0**	**-0.3**
OK038	**West end E0370**	**1.00**	**251**	Pg	**Pg**	**00 33 52.3**	**-1.4**
U32A	**Winter Ranch,**	**1.23**	**250**	Pn	**Pn**	**00 33 57.4**	**-1.2**
U32A	**Winter Ranch,**	**1.23**	**250**	P	**Pn**	**00 33 57.3**	**-1.2**
baz=69,SNR=107							
U32A				S	**Sg**	**00 34 14.3**	**+0.2**
baz=69							
OK025	**Westminster Rd**	**1.24**	**171**	Pn	**Pn**	**00 33 57.5**	**-1.2**
TUL1	**Leonard**	**1.69**	**121**	IAmb_Lg		00 34 30.5	
comp=Z,113nm,0.8s							
TUL1	**Leonard**	**1.69**	**121**	P	**Pn**	**00 34 04.6**	**-0.2**
baz=303,SNR=69							
TUL1				S	**Sb**	**00 34 27.4**	**-0.4**
baz=303							
R32A	**Long Quarter,**	**1.85**	**331**	P	**Pb**	**00 34 07.9**	**-1.1**
baz=150,SNR=39							
R32A				S	**Sb**	**00 34 32.4**	**-0.1**
baz=150							
X34A	**Smith Ranch, M**	**2.21**	**186**		**Pn**	**00 34 12.7**	**+0.7**
X34A				IAmb_Lg		00 34 49.6	
comp=Z,87nm,0.8s							
WMOK	**Wichita Mounta**	**2.29**	**206**		**Pn**	**00 34 12.8**	**-0.3**
WMOK	**Wichita Mounta**	**2.29**	**206**	P	**Pn**	**00 34 13.2**	**+0.1**
baz=25,SNR=135							
KSU1	**Kansas State U**	**2.41**	**18**	Pn	**Pn**	**00 34 14.9**	**+0.1**
KSU1	**Kansas State U**	**2.41**	**18**	P	**Pn**	**00 34 14.9**	**+0.1**
baz=198							
U38A	**Gravette**	**2.59**	**97**	Pn	**Pn**	**00 34 17.3**	**+0.1**
U38A	**Gravette**	**2.59**	**97**	P	**Pn**	**00 34 17.4**	**+0.1**
baz=279,SNR=104							
CBKS	**Cedar Bluff**	**2.64**	**320**		**Pn**	**00 34 17.6**	**-0.4**
CBKS	**Cedar Bluff**	**2.64**	**320**	S	**Sn**	**00 34 51.2**	**+0.7**
baz=138							
X37A	**Clayton**	**2.84**	**140**	P	**Pn**	**00 34 21.1**	**+0.4**
baz=322,SNR=30							
HHAR	**Hobbs**	**2.97**	**99**		**Pn**	**00 34 22.6**	**+0.1**
Z35A	**Perchaven, San**	**3.48**	**176**		**Pb**	**00 34 37.5**	**+0.9**
Z35A	**Perchaven, San**	**3.48**	**176**	S	**Sn**	**00 35 11.8**	**+0.8**
baz=356							
S39A	**Bolivar**	**3.50**	**74**		**Pb**	**00 34 37.5**	**+0.4**
S39A				IAmb_Lg		00 35 31.0	
comp=Z,52nm,0.8s							
AMTX	**Amarillo**	**3.85**	**241**		**Pb**	**00 34 45.0**	**+1.8**
AMTX				IAmb_Lg		00 35 37.2	
comp=Z,69nm,0.8s							
MIAR	**Mount Ida**	**3.96**	**124**		**Pb**	**00 34 45.7**	**+0.9**
MIAR				IAmb_Lg		00 35 43.5	
comp=Z,62nm,0.7s							
Z38A	**Mt. Pleasant**	**4.12**	**148**		**Pg**	**00 34 53.1**	**-0.5**
Z38A				IAmb_Lg		00 35 48.8	
comp=Z,70nm,0.8s							
N35A	**Tabor**	**4.32**	**20**	Pn	**Pn**	**00 34 40.9**	**-0.1**
N35A	**Tabor**	**4.32**	**20**	P	**Pn**	**00 34 40.9**	**-0.1**
baz=201,SNR=8.5							
R40A	**Maddies Statio**	**4.47**	**69**	P	**Pn**	**00 34 42.8**	**-0.2**
baz=252,SNR=36							
FCAR	**Ozark Folk Cen**	**4.49**	**100**	Pn	**Pn**	**00 34 43.4**	**0.0**
FCAR				IAmb_Lg		00 35 53.4	
comp=Z,40nm,0.8s							
ABTX	**Abilene, Hawle**	**4.51**	**203**	Pn	**Pn**	**00 34 42.9**	**-0.7**
WHAR	**Wooly Hollow**	**4.54**	**108**	IAmb_Lg		00 36 03.7	
comp=Z,45nm,1.0s							
KSCO	**Kaye Shedlock'**	**4.56**	**300**	Pn	**Pn**	**00 34 45.0**	**+0.5**
KSCO				IAmb_Lg		00 36 05.7	
comp=Z,49nm,0.7s							
BGNE	**Belgrade**	**4.62**	**355**	IAmb_Lg		00 36 04.6	
comp=Z,52nm,0.9s							
BGNE	**Belgrade**	**4.62**	**355**	P	**Pn**	**00 34 44.8**	**-0.3**
baz=174,SNR=6.8							
UALR	**University of**	**4.71**	**114**	IAmb_Lg		00 36 13.9	
comp=Z,35nm,1.0s							
WLAR	**White Oak Lake**	**4.79**	**129**	IAmb_Lg		00 36 14.2	
comp=Z,36nm,0.7s							
P40A	**Paris**	**5.13**	**56**	IAmb_Lg		00 36 21.4	
comp=Z,55nm,0.7s							
CCM	**Cathedral Cave**	**5.19**	**74**	IAmb_Lg		00 36 25.0	
comp=Z,42nm,0.9s							
T42A	**Van Buren**	**5.20**	**86**	P	**Pn**	**00 34 52.8**	**-0.2**
baz=270							
LCAR	**Lake Charles**	**5.22**	**96**	IAmb_Lg		00 36 25.6	
comp=Z,36nm,1.2s							
OGNE	**Ogallala**	**5.40**	**321**	IAmb_Lg		00 36 31.9	
comp=Z,52nm,0.8s							
CCAR	**Cane Creek**	**5.54**	**120**	IAmb_Lg		00 36 34.0	
comp=Z,34nm,0.9s							
PBMO	**Poplar Bluff**	**5.73**	**88**	IAmb_Lg		00 36 36.9	
comp=Z,41nm,1.0s							
FVM	**French Village**	**5.81**	**76**	IAmb_Lg		00 36 37.0	
comp=Z,28nm,0.9s							
K31A	**O'Neill**	**5.88**	**351**	IAmb_Lg		00 36 46.0	
comp=Z,45nm,0.8s							
435B	**Jarrell**	**6.01**	**180**	IAmb_Lg		00 36 55.3	
comp=Z,31nm,0.9s							
SLM	**Saint Louis**	**6.09**	**70**	IAmb_Lg		00 36 48.4	
comp=Z,46nm,0.7s							
143A	**Socs Landing,**	**6.52**	**127**	IAmb_Lg		00 37 06.6	
comp=Z,24nm,0.9s							
JCT	**Junction City**	**6.58**	**197**	P	**Pn**	**00 35 11.5**	**-0.7**
baz=16							
GLAT	**Glass**	**6.69**	**92**	IAmb_Lg		00 37 23.3	
comp=Z,43nm,0.8s							
S44A	**Carbondale**	**6.69**	**80**	IAmb_Lg		00 37 03.6	
comp=Z,36nm,0.8s							
ECSD	**EROS Data Cent**	**6.96**	**6**	P	**Pn**	**00 35 15.8**	**-1.4**
baz=186,SNR=14							
W45A	**Hickory Valley**	**6.99**	**101**	IAmb_Lg		00 37 22.1	
comp=Z,25nm,0.7s							
OXF	**Oxford**	**7.03**	**107**	IAmb_Lg		00 37 24.4	
comp=Z,37nm,1.2s							
T45A	**Paducah**	**7.15**	**86**	IAmb_Lg		00 37 17.2	
comp=Z,26nm,0.8s							
L40A	**Anamosa**	**7.19**	**41**	IAmb_Lg		00 37 19.7	
comp=Z,34nm,0.8s							
N23A	**Red Feather La**	**7.70**	**305**	IAmb_Lg		00 37 48.1	
comp=Z,33nm,0.8s							
USIN	**University of**	**7.97**	**79**	IAmb_Lg		00 37 51.6	
comp=Z,27nm,0.9s							
JFWS	**Jewell Farm**	**8.30**	**40**	IAmb_Lg		00 37 57.7	
comp=Z,25nm,0.8s							
RSSD	**Black Hills**	**8.81**	**328**	IAmb_Lg		00 38 20.3	
comp=Z,14nm,1.0s							

*IDC **24** 00:56:21.7±3.7, 35°.73N×71°.31E, h73km±30km, mb3.6/10, mbtmp4.0/16, Error ellipse: s-maj=29.1km s-min=21.3km az=161.0*
*MOS **24** 00:56:26.2±1.1, 36°.24N×71°.16E, h104km, mb4.2/6, Error ellipse: s-maj=11.1km s-min=5.0km az=85.4*
*NNC **24** 00:56:26.7±6.6, 36°.73N×70°.61E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=57.7km s-min=46.3km az=161.0*
*NEIC **24** 00:56:27.1±2.3, 36°.21N±0°.06×71°.03E±0°.05, h99km±12km, mb4.4/12, Error ellipse: s-maj=9.5km s-min=5.2km az=154.0*
ISC 24 00:56:26.3±0.5, 36°.16N±0°.05×71°.15E±0°.05, h102km, n107, σ1°84/119, mb3.9/14, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.36**	**227**	Pn	**Pn**	**00 57 05.0**	**+1.2**
KBL	**Kabul**	**2.36**	**227**	PN	**Pn**	**00 57 05.1**	**+1.2**
GAR	**Garm**	**2.91**	**347**		**Pn**	**00 57 11.4**	**+0.4**
CHGR	**Chuyangaron**	**2.95**	**328**		**Pn**	**00 57 11.1**	**-0.4**
CHGR				Sn	**Sn**	**00 57 44.8**	**-1.6**
CHGR	**Chuyangaron**	**2.95**	**328**	PN	**Pn**	**00 57 11.1**	**-0.4**
CHGR						00 57 44.8	
NIL	**Nilore**	**3.04**	**145**	Pn	**Pn**	**00 57 15.6**	**+2.8**
NIL	**Nilore**	**3.04**	**145**	PN	**Pn**	**00 57 15.6**	**+2.8**
DRK	**Karamyk**	**3.35**	**9**		**Pn**	**00 57 18.9**	**+1.8**
BTK	**Batken**	**3.90**	**356**	Pn	**Pn**	**00 57 26.0**	**+1.7**
BTK	**Batken**	**3.90**	**356**	PN	**Pn**	**00 57 26.0**	**+1.7**
JMU	**Jammu**	**4.63**	**137**	*e*P	**Pn**	**00 57 35.4**	**+1.4**
JMU				*e*S	**Sn**	**00 58 26.0**	**-0.6**
KSH	**Kashi**	**5.08**	**47**	P	**Pn**	**00 57 37.3**	**-2.9**
KSH				S	Sn	00 58 27.8	-10
THN	**Thein Dam**	**5.30**	**133**	*e*P	**Pn**	**00 57 45.0**	**+1.8**
THN				*e*P		00 57 45.7	
THN				*e*S	**Sn**	**00 58 42.0**	**-1.0**
THN				*e*S		00 58 42.9	
TAS	**Tashkent**	**5.36**	**345**		**Sn**	**00 58 41.0**	**-3.3**
AML	**Almayashu**	**6.28**	**18**	P	**Pn**	**00 57 57.3**	**+0.5**
SNR=126							
BHK	**Bhakra**	**6.45**	**136**	*e*P	**Pn**	**00 58 00.4**	**+1.6**
BHK				*e*S	**Sn**	**00 59 09.7**	**-1.3**
NRN	**Naryn**	**6.49**	**34**	Pn	**Pn**	**00 57 59.0**	**-0.5**
NRN	**Naryn**	**6.49**	**34**	PN	**Pn**	**00 57 59.0**	**-0.5**
UCH	**Uchtor**	**6.60**	**22**	P		00 59 51.3	
SNR=11							
EKS2	**Erkin-Say**	**6.80**	**17**	P	**Pn**	**00 58 04.3**	**+0.7**
SNR=30							
KK31	**Karatay Array**	**6.95**	**356**		**Pn**	**00 58 05.2**	**-0.3**
KK31	**Karatay Array**	**6.95**	**356**	PN	**Pn**	**00 58 03.4**	**-2.1**
KK31	**Karatay Array**	**6.95**	**356**	P	**Pn**	**00 58 03.4**	**-2.1**
10nm,0.3s,baz=178,slow=12,SNR=173							
KK31				⇑S	**Sn**	**00 59 18.1**	**-4.9**
37nm,0.5s,baz=188,slow=26,SNR=14							
KKAR	**Karatay Array**	**6.95**	**356**	Pn	**Pn**	**00 58 05.3**	**-0.2**
KKAR	**Karatay Array**	**6.95**	**356**	Pn	**Pn**	**00 58 05.3**	**-0.2**
KKAR	**Karatay Array**	**6.95**	**356**	PN	**Pn**	**00 58 05.3**	**-0.2**
AAK	**Ala-Archa**	**6.97**	**21**	P	**Pn**	**00 58 06.7**	**+0.9**
SNR=47							
AAK	**Ala-Archa**	**6.97**	**21**	P	**Pn**	**00 58 06.7**	**+0.9**
33nm,0.4s,baz=185,slow=6.1,SNR=131							
AAK				S	**Sn**	**00 59 22.0**	**-1.6**
12nm,0.5s,baz=312,slow=20,SNR=7.7							
AAK	**Ala-Archa**	**6.97**	**21**	Pn	**Pn**	**00 58 06.2**	**+0.4**
AAK	**Ala-Archa**	**6.97**	**21**	*c i*PN	**Pn**	**00 58 06.3**	**+0.4**
SMLA	**Simla**	**7.10**	**133**	*e*P	**Pn**	**00 58 08.1**	**+0.6**
SMLA				*e*S	**Sn**	**00 59 24.2**	**-2.4**
SMLA				IAML		00 59 26.3	
comp=E,49nm,0.3s							
SMLA				IAML		00 59 26.4	
comp=N,80nm,0.3s							
KBK	**Karagaybulak**	**7.12**	**23**	P	**Pn**	**00 58 09.2**	**+1.2**
SNR=12							
ULHL	**Ulahol**	**7.25**	**32**	P	**Pn**	**00 58 10.6**	**+0.9**
SNR=9.5							
CHMS	**Chumysh**	**7.37**	**21**	P	**Pn**	**00 58 12.3**	**+1.1**
SNR=21							
CHMS	**Chumysh**	**7.37**	**21**	PN	**Pn**	**00 58 11.6**	**+0.3**
CHMS	**Chumysh**	**7.37**	**21**	⇑P	**Pn**	**00 58 11.6**	**+0.3**
comp=N,12nm,0.3s							
CHMS				⇑S	**Sn**	**00 59 31.6**	**-1.7**
comp=N,15nm,0.6s							
USP	**Ospenovka**	**7.55**	**19**	P	**Pn**	**00 58 14.2**	**+0.6**
SNR=29							
TKM2	**Tokmak 2**	**7.58**	**26**	P	**Pn**	**00 58 14.8**	**+0.6**
SNR=27							
TKM2	**Tokmak 2**	**7.58**	**26**	PN	**Pn**	**00 58 14.5**	**+0.4**
TKM2	**Tokmak 2**	**7.58**	**26**	⇓P	**Pn**	**00 58 14.5**	**+0.4**
comp=N,12nm,0.5s							
TKM2				⇓S	**Sn**	**00 59 36.5**	**-2.0**
comp=N,7.0nm,0.7s							
MDOK	**Medeo**	**8.34**	**31**	PN	**Pn**	**00 58 25.0**	**+0.5**
MDOK	**Medeo**	**8.34**	**31**	P	**Pn**	**00 58 25.0**	**+0.5**
comp=N,8.4nm,0.8s							
GEYT	**Alibeck**	**10.56**	**283**	P	**Pn**	**00 58 52.8**	**-1.9**
comp=N,2.1nm,0.4s,baz=160,slow=10,SNR=9.4							
GEYT				S	**Sn**	**01 00 45.7**	**-5.3**
comp=N,3.4nm,0.4s,baz=110,slow=24,SNR=6.3							
GEYT	**Alibeck**	**10.56**	**283**	Pn	**Pn**	**00 58 53.5**	**-1.2**
GYA0	**ALIBECK ARRAY**	**10.56**	**283**	P	**Pn**	**00 58 53.5**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**10.56**	**283**	Pn	**Pn**	**00 58 53.5**	**-1.1**
OTUK	**Ortayu**	**12.11**	**4**	P	**Pn**	**00 59 12.5**	**-2.7**
OTUK	**Ortayu**	**12.11**	**4**	⇑P	**Pn**	**00 59 12.5**	**-2.7**
comp=N,4.4nm,0.8s							
DANN	**Dangsing**	**13.21**	**123**	*e*P	**Pn**	**00 59 27.3**	**-2.8**
comp=N,14nm,0.3s							
MAKZ	**Makanchi**	**13.37**	**34**	Pn	**Pn**	**00 59 30.0**	**-1.8**
MAKZ	**Makanchi**	**13.37**	**34**	P	**Pn**	**00 59 30.0**	**-1.8**

ABKAR	**Akbulak array**	15.44	331	Pn	Pn	00 59 57.3	-1.0
ABKAR	**Akbulak array**	15.44	331	Pn	Pn	00 59 57.6	-0.7
KURK	**Kurchatov**	15.51	18		P	01 00 01.6	+0.2
KURK	**Kurchatov**	15.51	18	P	Pn	01 00 00.3	+1.1
RAMN	**Ramite**	16.04	121	*e*P	Pn	01 00 02.6	-3.6
	comp=N,4.8nm,0.3s						
BVAR	**Borovoye Array**	16.87	358	P	P	01 00 17.6	+1.2
	comp=N,1.0nm,0.5s,baz=162,slow=13,SNR=8.5						
BRVK	**Borovoye**	16.91	358	P	Pn	01 00 16.7	+0.2
BRVK	**Borovoye**	16.91	358	P	Pn	01 00 16.7	+0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKTO	**Aktyubinsk**	17.13	330	P	P	01 00 21.2	+1.9
	comp=Z,9.3nm,0.6s,baz=138,slow=8.7,SNR=32						
AKTO				S	Sn	01 03 18.4	-11
	comp=Z,3.2nm,0.7s,baz=234,slow=20,SNR=3.3						
AKTO	**Aktyubinsk**	17.13	330	⇓P	P	01 00 20.7	+1.3
	comp=Z,15nm,1.1s						
DGZ	**Jazzator, Alta**	17.98	36	*i* P	P	01 00 28.6	-0.2
HYBB	**Hyderabad (bro**	19.79	159	*e*P	Pn	01 00 50.2	-0.9
HYBB				*e*S	S	01 04 29.7	+3.5
ZAA0	**Zalesovo Array**	20.18	24	P	P	01 00 53.1	+0.7
ZAA0				IAmb	IAmb	01 00 53.7	
	comp=Z,4.1nm,0.7s						
ZALV	**Zalesovo Beam**	20.18	24	P	P	01 00 52.8	+0.4
	comp=Z,3.6nm,0.4s,baz=217,slow=10,SNR=23						
	comp=Z,3.6nm,0.4s						
SHL	**Shillong**	20.66	115	P	P	01 00 59.0	+0.9
SHL				IAmb	IAmb	01 01 02.9	
	comp=Z,7.0nm,0.7s						
SHL	**Shillong**	20.66	115	P	P	01 00 59.0	+0.9
SHL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ARU	**Arti**	21.99	341	P	P	01 01 15.9	+4.0
	comp=Z,6.7nm,0.6s,baz=136,slow=7.5,SNR=15						
	comp=Z,6.7nm,0.6s						
ARU	**Arti**	21.99	341	P	P	01 01 13.3	+1.4
ARU				IAmb	IAmb	01 01 16.7	
	comp=Z,10nm,0.8s						
ARU	**Arti**	21.99	341	*d i* P	P	01 01 13.5	+1.7
ARU						01 01 46.8	
ARU				S	S	01 05 12.8	+4.7
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
KIRV	**Kirov**	26.60	334	*ce*P	P	01 01 56.1	+1.4
PZH	**PanZhiHua**	27.75	102	P	P	01 02 09.6	+4.0
ULN	**Ulaanbaatar**	28.87	55	*i* P	P	01 02 16.3	+0.9
ULN				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	**Obninsk**	30.27	320	*e*P	P	01 02 27.5	+0.1
OBN				*e**PP	pP	01 02 52.5	+1.2
OBN				*e*		01 03 31.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	33.25	309	P	P	01 02 55.2	+1.6
	comp=Z,0.1nm,0.3s,baz=106,slow=9.7,SNR=3.4						
	comp=Z,0.1nm,0.3s						
FIA1	**FINESS Array S**	37.83	326	P	P	01 03 36.0	+3.4
FINES	**FINESS Array B**	37.83	326	P	P	01 03 34.2	+1.6
	comp=Z,2.2nm,0.8s,baz=140,slow=7.4,SNR=8.0						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	37.83	326	P	P	01 03 34.1	+1.5
FINES	**FINESS Array B**	37.83	326	*i* P	P	01 03 34.0	+1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	41.50	338	P	P	01 04 04.8	+1.8
	comp=Z,0.8nm,0.6s,baz=117,slow=8.5,SNR=8.0						
	comp=Z,0.8nm,0.6s						
NC405	**NORSAR Array S**	44.49	323	P	P	01 04 27.8	+0.7
NC303	**NORSAR Array S**	44.67	324	P	P	01 04 30.0	+1.4
NC303				IAmb	IAmb	01 05 07.2	
	comp=Z,21nm,1.4s						
NB201	**NORSAR Array S**	44.68	323	P	P	01 04 29.7	+1.0
NB2	**NORSAR Subarra**	44.72	323	P	P	01 04 29.5	+0.5
	comp=Z,1.6nm,0.7s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	44.72	323	P	P	01 04 30.3	+1.3
	comp=Z,0.7nm,0.5s,baz=97,slow=7.7,SNR=3.9						
	comp=Z,0.7nm,0.5s						
NC204	**NORSAR Array S**	44.96	324	P	P	01 04 30.1	-0.9
NC204				IAmb	IAmb	01 04 32.1	
	comp=Z,18nm,1.2s						
BILL	**Bilibino**	58.86	26	*e*P	P	01 06 15.0	+1.1
BILL				*e*		01 06 59.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TORD	**Torodi Ar. Bea**	65.83	269	P	P	01 07 00.5	-0.6
	comp=Z,0.7nm,0.5s,baz=53,slow=6.0,SNR=20						
	comp=Z,0.7nm,0.5s						
INK	**Inuvik**	74.22	9	P	P	01 07 52.7	+1.2
	comp=Z,2.3nm,1.2s,baz=307,slow=5.1,SNR=1.6						
	comp=Z,2.3nm,1.2s						
YKA	**Yellowknife Ar**	81.58	3	P	P	01 08 33.1	+0.8
	comp=Z,0.5nm,0.7s,baz=351,slow=5.1,SNR=4.9						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	81.71	122	P	P	01 08 31.1	-2.6
	comp=Z,0.6nm,1.0s,baz=329,slow=4.8,SNR=2.4						
	comp=Z,0.6nm,1.0s						

*IDC **24** 01:00:16.4±5.7, 22°.24S×68°.42W, h0km, mb3.7/1, mbtmp3.7/2, ML3.8/1, Error ellipse: s-maj=164.6km s-min=54.7km az=69.0*
*GUC **24** 01:00:32.8±0.6, 21°.17S×68°.75W, h108km±3km, ML3.4*
ISC 24 01:00:32.2±1.0, **21°.17S**±0°.03×**68°.84W**±0°.08, **h115**km±9km, **n20**, σ0**53**/36, **7C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.62	282	⇑*i*P	Pn	01 00 50.3	-0.2
PB01				*i* S	Sn	01 01 03.6	-0.8
PB09	**IPOC Station P**	0.73	211	⇓*i*P	Pn	01 00 51.9	+0.4
PB09				*i* S	Sn	01 01 06.3	+0.2
PB09				IAML		01 01 07.7	
	comp=N,705nm,0.5s						
PB08	**IPOC Station P**	1.07	344	⇓*i*P	Pn	01 00 55.2	+0.2
PB08				*i* S	Sn	01 01 12.3	+0.2
PB08				IAML		01 01 14.5	
	comp=E,661nm,0.1s						
PB07	**IPOC Station P**	1.12	240	⇑*i*P	Pn	01 00 55.5	+0.2
PB07				*i* S	Sn	01 01 13.3	+0.6
PB07				IAML		01 01 15.1	
	comp=N,758nm,0.2s						
PB03	**IPOC Station P**	1.22	224	⇑*i*P	Pn	01 00 56.5	+0.1
PB03				*i* S	Sn	01 01 14.7	+0.1
PB03				IAML		01 01 16.2	
	comp=N,664nm,0.1s						
PATCX	**Punta Patache**	1.28	286	⇑*i*P	Pn	01 00 57.3	+0.4
PATCX				*i* S	Sn	01 01 16.2	+0.6
PATCX				IAML		01 01 18.3	
	comp=N,632nm,0.2s						
HMBC	**Humberstone**	1.33	312	⇑*i*P	Pn	01 00 57.5	0.0
HMBC				*i* S	Sn	01 01 16.7	+0.1
HMBC				IAML		01 01 18.0	
	comp=N,836nm,0.5s						
TA01	**Diego Aracena**	1.39	295	⇑*i*P	Pn	01 00 58.3	+0.3
TA01				*i* S	Sn	01 01 17.9	+0.2
TA01				IAML		01 01 18.7	
	comp=E,632nm,0.2s						
LVC	**Limon Verde**	1.43	183	*e*P	Pn	01 00 59.2	+0.2
LVC				*e*S	Sn	01 01 19.5	+0.2
LVC				IAML		01 01 21.5	
	comp=E,512nm,0.2s						
TA02	**Huaiquique**	1.51	306	*e*P	Pn	01 00 59.6	+0.2
TA02				*e*S	Sn	01 01 20.5	+0.4
TA02				IAML		01 01 25.6	
	comp=E,1μm,0.1s						
GO01	**Chusmiza**	1.53	347	⇓*i*P	Pn	01 01 00.2	0.0
GO01				*i* S	Sn	01 01 21.6	+0.2
GO01				IAML		01 01 24.8	
	comp=N,1μm,0.1s						
PB11	**IPOC Station P**	1.60	331	⇑*i*P	Pn	01 01 00.7	0.0
PB11				*i* S	Sn	01 01 22.4	0.0
PB11				IAML		01 01 23.5	
	comp=E,924nm,0.1s						
PB06	**IPOC Station P**	1.67	204	⇓*i*P	Pn	01 01 01.8	+0.2
PB06				*e*S	Sn	01 01 24.3	+0.3
PB06				IAML		01 01 25.4	
	comp=E,377nm,0.3s						
PB04	**IPOC Station P**	1.68	226	*e*P	Pn	01 01 02.2	+0.5
PB04				*e*S	Sn	01 01 24.2	+0.1
PB04				IAML		01 01 32.8	
	comp=N,387nm,0.1s						
PB15	**IPOC Station P**	2.11	196	*e*P	Pn	01 01 07.3	+0.3
PB15				*e*S	Sn	01 01 34.2	+0.5
PB10	**IPOC Station P**	2.82	214	*e*P	Pn	01 01 16.4	+0.4
PB10				IAML		01 02 04.8	
	comp=N,46nm,0.5s						
PB16	**IPOC Station P**	2.89	347	*e*P	Pn	01 01 16.8	-0.7
PB16				*e*S	Sn	01 01 53.3	+1.1
LPAZ	**La Paz**	4.90	8	Pn	Pn	01 01 46.0	+1.6
	comp=N,1.2nm,0.3s,baz=214,slow=7.2,SNR=35						
	comp=N,4.0nm,0.4s						
TORD	**Torodi Ar. Bea**	77.18	70	P	P	01 12 12.6	-1.3
	comp=N,0.3nm,0.5s,baz=252,slow=5.9,SNR=9.2						
	comp=N,0.3nm,0.5s						
MKAR	**Makanchi Array**	145.33	36	PKPbc	PKPab	01 19 57.1	+0.4
	comp=N,0.3nm,0.8s,baz=302,slow=2.0,SNR=2.3						

*ANF **24** 01:12:31.9±0.1, 33°.26N×116°.41W, h14km±1km, ML3.2/25, Error ellipse: s-maj=1.3km s-min=1.0km az=79.0*
*PAS **24** 01:12:32.8±1.1, 33°.249N±0°.009×116°.42W±0°.01, h5km±5km, ML3.3/185, ML3.0/52(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=60.0*
*NEIC **24** 01:12:32.4±0.8, 33°.248N±0°.008×116°.43W±0°.01, h17km±1km, Error ellipse: s-maj=1.4km s-min=1.1km az=56.0*
ISC 24 01:12:32.2±0.8, **33°.25N**±0°.01×**116°.43W**±0°.01, **h15**km±5km, **n121**, σ0**62**/186, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORC	**Borrego Spring**	0.02	22		Pg	01 12 34.6	-0.3
SLH	**Sleepy Hollow**	0.15	111		Pg	01 12 36.0	-0.3
SLH					Sg	01 12 38.5	-0.4
MATG	**Mataguay Scout**	0.19	255		Pg	01 12 37.1	+0.3
MATG					Sg	01 12 40.2	+0.3
FRD	**Ford Ranch, An**	0.29	329		Pg	01 12 38.6	+0.2
FRD					Sg	01 12 42.6	0.0
BZNA	**Buzz No.'s Pla**	0.32	320		Pg	01 12 39.2	+0.3
BZNA					Sg	01 12 43.5	+0.1
SNDA	**J Saunders Pla**	0.34	333		Pg	01 12 39.7	+0.4
SNDA					Sg	01 12 44.5	+0.3
MONP2	**Monument Peak**	0.36	179		Pg	01 12 39.9	+0.2
MONP2					Sg	01 12 44.6	0.0
MONP2	**Monument Peak**	0.36	179	P	Pg	01 12 39.8	+0.2
	baz=1.1,SNR=385						
MONP2				S	Sg	01 12 44.6	0.0
	baz=1.1						
TPFO	**Pinon Flats**	0.36	356	P	Pg	01 12 39.5	-0.1
	baz=175,SNR=324						
TPFO				S	Sg	01 12 44.3	-0.4
	baz=175						
DNR	**Dunn Ranch,Anz**	0.36	332		Pg	01 12 40.1	+0.4
DNR					Sb	01 12 45.6	-0.3
XPFO	**Pion Flat**	0.36	356		Pg	01 12 39.6	-0.1
XPFO					Sg	01 12 44.6	-0.2
PFO	**Pinyon Flats O**	0.36	356		Pg	01 12 39.5	-0.1
PFO				Sg	Sg	01 12 44.4	-0.5
PFO	**Pinyon Flats O**	0.36	356		Pg	01 12 39.7	-0.1
PFO					Sg	01 12 44.6	-0.3
PFO	**Pinyon Flats O**	0.36	356	P	Pg	01 12 39.6	-0.1
	baz=174,SNR=367						
PFO				S	Sg	01 12 44.5	-0.3
	baz=174						
SALN	**Salton City**	0.37	85		Pg	01 12 40.0	+0.2
SALN					Sg	01 12 45.3	+0.4
PLM	**Palomar**	0.38	286		Pb	01 12 40.5	-0.2
PLM					Sb	01 12 46.1	-0.4
CRY	**Cary Ranch**	0.41	321		Pg	01 12 40.9	+0.4
CRY					Sg	01 12 46.7	+0.5
GVDA	**Garner Valley**	0.47	334		Pg	01 12 41.7	+0.1
GVDA					Sg	01 12 48.0	0.0
DPP	**Dos Picos Cty**	0.50	240		Pg	01 12 42.4	+0.3
DPP					Sg	01 12 49.2	+0.4
EML	**El Monte Cty P**	0.50	225		Pg	01 12 42.5	+0.3
EML					Sg	01 12 49.1	+0.2
ERRC	**Elmore Ranch**	0.52	104		Pb	01 12 43.2	+0.2
ERRC					Sb	01 12 51.1	+0.7
CRR	**Carrizo Plain**	0.53	133		Pg	01 12 42.8	+0.1
CRR					Sg	01 12 50.1	+0.4
CTCC	**Cactus City**	0.55	42		Pg	01 12 43.2	+0.2
CTCC					Sg	01 12 50.6	+0.3
SUP	**Superstition M**	0.58	120		Pg	01 12 43.7	0.0
SUP					Sg	01 12 51.9	+0.4
BAR	**Barrett**	0.60	200		Pg	01 12 43.9	-0.1
BAR				Sg	Sg	01 12 51.9	-0.2
POB	**Polly Butte**	0.60	317		Pg	01 12 44.4	+0.3
POB					Sg	01 12 52.5	+0.3
SWSC	**Sam W. Stewart**	0.61	120		Pg	01 12 44.2	0.0
SWSC					Sg	01 12 52.2	+0.1
SWSC	**Sam W. Stewart**	0.61	120	P	Pg	01 12 44.2	0.0
	baz=301,SNR=237						
SWSC				S	Sg	01 12 52.3	+0.1
	baz=301						
BACC	**Bachelor Mtn.**	0.63	305		Pg	01 12 44.7	+0.1
BACC					Sg	01 12 53.0	+0.1
CTW	**Cottonwood Mou**	0.63	47		Pg	01 12 44.5	-0.1
CTW					Sg	01 12 53.0	0.0
DGR	**Domenigoni Val**	0.63	310		Pg	01 12 44.8	+0.2
DGR					Sg	01 12 53.0	0.0
IKP	**In-Ko-Pah, Jac**	0.65	156		Pg	01 12 45.0	0.0
IKP					Sg	01 12 53.7	0.0
IKP	**In-Ko-Pah, Jac**	0.65	156	P	Pg	01 12 45.1	0.0
	baz=337,SNR=139						
IKP				S	Sg	01 12 53.7	0.0
	baz=337						
HMTC	**Hemet**	0.67	314		Pg	01 12 45.4	+0.1
HMTC					Sg	01 12 53.9	-0.2
SDRC	**San Diego Road**	0.67	220		Pg	01 12 45.2	-0.1
SDRC					Sg	01 12 54.1	-0.1
109C	**Camp Elliot, M**	0.67	238	Pg	Pg	01 12 45.4	+0.1
109C				Sg	Sg	01 12 54.2	-0.1
109C	**Camp Elliot, M**	0.67	238	P	Pg	01 12 45.5	+0.1
	baz=58,SNR=150						
109C				S	Sg	01 12 54.4	+0.2
	baz=58						
CPE	**Camp Elliot**	0.67	238		Pg	01 12 45.5	+0.1
CPE					Sg	01 12 54.4	+0.1
GORC	**Green Oak Ranc**	0.68	262		Pg	01 12 45.5	0.0
GORC					Sg	01 12 54.7	+0.2
EW2	**E Wide Canyon**	0.69	1		Pg	01 12 45.8	+0.1
EW2					Sb	01 12 55.4	+0.1
TKX	**Tecate**	0.69	193		Pg	01 12 45.7	-0.1
TKX				Sg	Sg	01 12 54.7	-0.3
DEVC	**Devers**	0.70	350		Pg	01 12 46.0	+0.2
DEVC					Sb	01 12 55.6	+0.1
COK2	**Cook Ranch 2**	0.71	124		Pg	01 12 46.5	+0.4
COK2					Sg	01 12 56.9	+1.5
RMX	**La Rumorosa**	0.71	155		Pb	01 12 47.0	+0.7
RMX				Sg	Sb	01 12 57.0	+1.1
RMX				IAML		01 12 59.8	
	comp=N,519nm,0.4s						
MURC	**Murrieta**	0.73	299		Pg	01 12 46.7	+0.2
MURC					Sb	01 12 56.3	-0.2
MURC	**Murrieta**	0.73	299	P	Pg	01 12 46.7	+0.2
	baz=118,SNR=201						
MURC				S	Sg	01 12 56.5	+0.3
	baz=118						
YUH	**Yuha Desert**	0.73	145	Pg	Pb	01 12 46.3	-0.4
YUH				Sg	Sb	01 12 55.8	-0.7
YUH				IAML		01 12 57.9	
	comp=E,437nm,0.6s						
WEMD	**Westmorland, C**	0.74	106		Pb	01 12 46.8	0.0
WEMD					Sn	01 12 58.2	-0.8
WESC	**Westside Schoo**	0.76	130		Pg	01 12 47.4	+0.4
WESC					Sn	01 12 58.4	-1.1
OLP	**Otay Lakes Par**	0.77	214		Pb	01 12 47.0	-0.3
OLP					Sb	01 12 56.9	-0.5
HAY	**Hayfield**	0.77	53		Pg	01 12 47.5	+0.2
HAY					Sg	01 12 58.0	+0.6
BBSC	**Beaumont Base**	0.81	326		Pb	01 12 48.1	-0.1
BBSC					Sg	01 12 59.8	+0.9
BLAC	**Blackrock camp**	0.82	2		Pb	01 12 48.1	-0.2
BLAC					Sg	01 12 59.5	+0.5
BELC	**Belle Mtn. Jos**	0.83	25		Pb	01 12 48.2	-0.2
BELC					Sb	01 12 59.0	-0.5
BELC	**Belle Mtn. Jos**	0.83	25	P	Pb	01 12 48.2	-0.2
	baz=205,SNR=177						
BELC				S	Sb	01 12 59.3	-0.2
	baz=205						
SGL	**Mount Signal**	0.84	135		Pb	01 12 48.5	0.0
SGL					Sg	01 12 60.0	+0.4
PEC	**Perris**	0.89	317		Pb	01 12 49.3	0.0
PEC					Sb	01 13 00.7	-0.3
TJX	**Tijuana**	0.91	216	Pg	Pg	01 12 49.9	+0.1
TJX				Sg	Sg	01 13 02.0	+0.3
BC3	**Big Chuckawall**	0.91	63		Pb	01 12 49.4	-0.3
BC3					Sb	01 13 01.2	-0.4
BC3	**Big Chuckawall**	0.91	63	P	Pb	01 12 49.3	-0.4
	baz=243,SNR=171						
BC3				S	Sb	01 13 01.3	-0.4
	baz=243						
TPC	**Twentynine Pal**	0.91	20		Pb	01 12 49.5	-0.2
SNR	**Schaffner Ranc**	0.92	115		Pb	01 12 49.4	-0.4
SNR					Sn	01 13 04.0	+0.7
ELS	**Elsinore Mount**	0.93	296		Pb	01 12 49.8	-0.2
ELS				Sg	Sb	01 13 01.8	-0.4
ELS				IAML		01 13 02.4	
	comp=N,620nm,0.3s						
ELS				IAML		01 13 02.4	
	comp=E,512nm,0.2s						
CBX	**Cerro Bola**	0.95	192		Pb	01 12 50.2	-0.3
CBX				Sg	Sb	01 13 02.6	-0.3
CBX				IAML		01 13 04.2	
	comp=N,388nm,0.3s						
CBX				IAML		01 13 05.2	
	comp=E,499nm,0.3s						
SME	**Santa Rosa Min**	0.96	307		Pb	01 12 50.5	-0.1
CFT	**Crafton Hills**	0.97	324		Pn	01 12 51.3	0.0
SVD	**Seven Oaks Dam**	1.02	327		Pg	01 12 52.2	+0.2
GTM	**Goat Mountain**	1.04	3		Pb	01 12 52.0	-0.1
RVR	**Riverside**	1.08	313		Pn	01 12 52.8	-0.1
BBRC	**Big Bear Solar**	1.09	338		Pn	01 12 53.2	0.0
BBRC	**Big Bear Solar**	1.09	338	P	Pn	01 12 53.1	0.0
	baz=157,SNR=32						
BBRC				S	Sg	01 13 07.6	0.0
	baz=157						
SIL	**Silver Peak**	1.15	343		Pb	01 12 54.1	+0.3
COA	**Coachella**	1.16	109		Pn	01 12 52.7	-1.2
CPBX	**Cerro Prieto**	1.25	131	Pg	Pb	01 12 55.7	+0.1
ESJX	**Sierra Juarez**	1.30	162		Pn	01 12 56.2	+0.2
ESJX				IAML		01 13 15.0	
	comp=E,258nm,0.1s						
ESJX				IAML		01 13 18.8	
	comp=N,182nm,0.4s						
GLA	**Glamis**	1.36	98	Pn	Pn	01 12 55.3	-1.3
GLA				IAML		01 13 24.7	
	comp=E,269nm,0.6s						
GLA				IAML		01 13 25.3	
	comp=N,193nm,0.6s						
GLA	**Glamis**	1.36	98	P	Pn	01 12 55.5	-1.1
	baz=279,SNR=51						
CCX	**Cicese**	1.39	188	Pn	Pb	01 12 57.6	-0.3
CCX				IAML		01 13 18.1	
	comp=E,339nm,0.6s						
CCX				IAML		01 13 19.1	
	comp=N,434nm,0.5s						
IRM	**Iron Mountain**	1.40	49	S	Sb	01 13 16.3	+0.5
	baz=230						
BFSC	**Mount Baldy Ra**	1.42	314	Pb	Pb	01 12 58.4	-0.1
	baz=133						
BFSC				S	Sb	01 13 16.8	+0.3
	baz=133						
HEC	**Hector,Ludlow**	1.58	3	P	Pg	01 13 02.3	-0.3
	baz=182,SNR=44						
FMP	**Fort Macarthur**	1.63	287	P	Pb	01 13 01.3	-0.6
	baz=106,SNR=7.2						
GMRC	**Granite Mounta**	1.66	22	P	Pg	01 13 03.5	-0.6
	baz=202,SNR=42						
BLYC	**Blythe**	1.67	72	Pn	Pn	01 13 00.1	-0.8
BLYC				IAML		01 13 33.1	
	comp=N,138nm,0.6s						
CIS	**Catalina Islan**	1.67	276	P	Pn	01 13 01.2	+0.2
	baz=95,SNR=67						
RRX	**Edison Barstow**	1.69	344	P	Pg	01 13 04.8	+0.1
	baz=163,SNR=7.3						
PASC	**Pasadena Art C**	1.73	303	Pn	Pb	01 13 02.9	-0.8
PASC				IAML		01 13 27.6	
	comp=N,150nm,0.7s						
PASC				IAML		01 13 30.3	
	comp=E,173nm,0.5s						
SCI2	**San Clemente I**	1.80	262	P	Pn	01 13 03.5	+0.9
	baz=81						
GSC	**Goldstone, Bar**	2.07	351	Pn	Pb	01 13 08.6	-0.9
GSC				IAML		01 13 42.9	
	comp=N,82nm,0.5s						
GSC				IAML		01 13 46.9	
	comp=E,110nm,0.7s						
EDW2	**Edwards Air Fo**	2.08	322	P	Pb	01 13 10.8	+1.1
	baz=141,SNR=36						
EDW2				Sb	Sg	01 13 37.5	-1.8
	baz=141						
NEE2	**Needles Airpor**	2.13	44	Sb	Sb	01 13 38.5	+1.7
	baz=225						
TUQ	**Turquoise Moun**	2.22	11	P	Pg	01 13 13.7	-1.1
	baz=191,SNR=41						
113A	**Mohawk Valley,**	2.29	101	Pn	Pn	01 13 10.2	+0.9
LRMC	**Laurel Mtn Rad**	2.46	335	S	Sg	01 13 51.1	0.0
	baz=154						
SNCC	**San Nicolas Is**	2.60	271	Pn	Pn	01 13 14.3	+0.7
SNCC				IAML		01 13 47.8	
	comp=E,100nm,4.8s						
SNCC				IAML		01 14 02.6	
	comp=N,57nm,4.8s						
QSM	**Queen of Sheba**	2.73	352	Pn	Pn	01 13 16.4	+0.8
ARVC	**Arvin**	2.73	314	P	Pb	01 13 22.5	+1.7
	baz=132						
V12A	**Nelson**	2.79	27	Pn	Pn	01 13 17.6	+1.2
W13A	**Hualapai Mount**	2.80	48	Pn	Pn	01 13 17.8	+1.1
MPMC	**Manual Prospec**	2.94	343	P	Pg	01 13 27.1	-1.5
	baz=162,SNR=13						
GWY	**Greenwater Val**	2.94	356	Pn	Pn	01 13 18.6	+0.2
Y14A	**Wickenburg**	2.94	76	Pn	Pn	01 13 19.4	+1.0
ISA	**Isabella, Lake**	2.94	325	Pn	Pn	01 13 19.5	+1.0
ISA				IAML		01 14 08.9	
	comp=E,44nm,1.0s						
PIX	**Pinacate**	3.02	123	Pn	Pn	01 13 19.1	-0.4
214A	**Organ Pipe Nat**	3.31	112	Pn	Pn	01 13 22.8	-0.7
TPNV	**Topopah Spring**	3.69	2	Pn	Pn	01 13 30.0	+1.1
TPNV				IAML		01 14 48.8	
	comp=E,21nm,3.9s						
GRAC	**Grapevine Rang**	3.82	349	Pn	Pn	01 13 32.8	+2.3
GRAC				IAML		01 14 42.2	
	comp=E,28nm,0.6s						
LCH	**Last Change Ra**	4.10	346	Pn	Pn	01 13 35.3	+0.9
LCMT	**Little Creek M**	4.57	34	Pn	Pn	01 13 42.1	+1.2
U15A	**North Rim**	4.65	46	Pn	Pn

UZB	**Uzynbulak**	**1.15 310**	*e*P		**Pn**	**01 36 10.4**	**-2.1**
	4.0nm,0.2s						
UZB			*e*S		**Sb**	**01 36 25.5**	**-1.8**
	20nm,0.4s						
UZB	**Uzynbulak**	**1.15 310**	P		**Pn**	**01 36 10.4**	**-2.1**
	4.0nm,0.2s						
UZB			S		**Sb**	**01 36 25.5**	**-1.8**
	20nm,0.4s						
SATY	**Saty**	**1.49 296**	*e*P		**Pb**	**01 36 17.7**	**0.0**
	3.7nm,0.1s						
SATY			*e*S		**Sg**	**01 36 38.0**	**+0.7**
	23nm,0.1s						
SATY	**Saty**	**1.49 296**	P		**Pb**	**01 36 17.7**	**0.0**
	3.7nm,0.1s						
SATY			S		**Sg**	**01 36 38.0**	**+0.7**
	23nm,0.1s						
ZHN	**Zhinishke**	**1.52 300**	*e*P		**Pb**	**01 36 18.4**	**+0.1**
	15nm,0.2s						
ZHN			*e*S		**Sg**	**01 36 39.2**	**+0.9**
	32nm,0.2s						
ZHN	**Zhinishke**	**1.52 300**	P		**Pb**	**01 36 18.4**	**+0.1**
	15nm,0.2s						
ZHN			S		**Sg**	**01 36 39.2**	**+0.9**
	32nm,0.2s						
KPKS	**Kokpek**	**1.54 313**	*e*P		**Pn**	**01 36 17.6**	**-0.2**
	3.0nm,0.1s						
KPKS			*e*S		**Sn**	**01 36 37.9**	**-0.5**
	19nm,0.2s						
KPKS	**Kokpek**	**1.54 313**	P		**Pn**	**01 36 17.6**	**-0.2**
	3.0nm,0.1s						
KPKS			S		**Sn**	**01 36 37.9**	**-0.5**
	19nm,0.2s						
KURS	**Kuram**	**1.85 306**	*e*P		**Pb**	**01 36 23.5**	**-0.4**
	3.6nm,0.4s						
KURS			*e*S		**Sb**	**01 36 48.4**	**+1.0**
	13nm,0.6s						
ANVS	**Anan'yevo**	**1.93 282**	⇑*e*P		**Pn**	**01 36 23.2**	**0.0**
	baz=88						
ANVS			⇑*e*S		**Sg**	**01 36 51.9**	**+0.5**
	baz=88						
TARG	**Taragay, Kyrgy**	**1.93 250**	⇑*i*P		**Pn**	**01 36 21.0**	**-2.5**
	baz=61						
TARG			⇑*i*S		**Sb**	**01 36 48.4**	**-1.7**
	baz=61						
DJR	**Jarkent**	**1.94 351**	*e*P		**Pb**	**01 36 25.6**	**+0.2**
	1.3nm,0.1s						
DJR			*e*S		**Sb**	**01 36 51.5**	**+1.5**
	24nm,0.3s						
DJR	**Jarkent**	**1.94 351**	Pg		**Pb**	**01 36 25.6**	**+0.2**
	1.3nm,0.1s						
DJR			Lg		Lg	01 36 51.5	
	24nm,0.3s						
BLB	**Baldybastay**	**2.11 323**	*e*P		**Pb**	**01 36 27.9**	**-0.5**
	21nm,0.2s						
BLB			*e*S		**Sb**	**01 36 55.4**	**+0.4**
	74nm,0.4s						
BLB	**Baldybastay**	**2.11 323**	Pg		**Pb**	**01 36 27.9**	**-0.5**
	21nm,0.2s						
BLB			Lg		Lg	01 36 55.4	
	74nm,0.4s						
KOTS	**Kotyrbulak**	**2.43 291**	*e*P		**Pb**	**01 36 33.1**	**-0.8**
	12nm,0.5s						
KOTS			*e*S		**Sb**	**01 37 05.0**	**+0.7**
	41nm,0.3s						
KOTS	**Kotyrbulak**	**2.43 291**	Pg		**Pb**	**01 36 33.1**	**-0.8**
	12nm,0.5s						
KOTS			Lg		Lg	01 37 06.1	
	41nm,0.3s						
MDOK	**Medeo**	**2.46 289**	*e*P		**Pb**	**01 36 33.8**	**-0.5**
	4.5nm,0.2s						
MDOK			*e*S		**Sb**	**01 37 06.1**	**+1.1**
	8.3nm,0.5s						
MDOK	**Medeo**	**2.46 289**	Pn		**Pb**	**01 36 32.7**	**-1.6**
	10nm,1.0s						
MDOK			Pg		**Pb**	**01 36 33.8**	**-0.5**
	4.5nm,0.2s						
MDOK			Lg		Lg	01 37 06.1	
	8.3nm,0.5s						
MDOK			Sn		**Sb**	**01 37 06.4**	**+1.5**
	9.4nm,0.6s						
TNSS	**Tian-Shan**	**2.50 285**	*e*P		**Pb**	**01 36 34.4**	**-0.7**
	4.8nm,0.2s						
TNSS			*e*S		**Sb**	**01 37 06.6**	**+0.2**
	7.4nm,0.3s						
TNSS	**Tian-Shan**	**2.50 285**	Pg		**Pb**	**01 36 34.4**	**-0.7**
	4.8nm,0.2s						
TNSS			Lg		Lg	01 37 06.6	
	7.4nm,0.3s						
CHKK	**Chushkaly**	**2.77 302**	*e*P		**Pb**	**01 36 39.3**	**-0.3**
	0.7nm,0.1s						
CHKK			*e*S		**Sb**	**01 37 15.0**	**+1.1**
	15nm,0.3s						
CHKK	**Chushkaly**	**2.77 302**	Pg		**Pb**	**01 36 39.3**	**-0.3**
	0.7nm,0.1s						
CHKK			Lg		Lg	01 37 15.0	
	15nm,0.3s						
MTBS	**Maitube**	**2.89 286**	*e*P		**Pb**	**01 36 41.5**	**0.0**
	2.7nm,0.2s						
MTBS			*e*S		**Sb**	**01 37 18.9**	**+1.6**
	9.8nm,0.3s						
MTBS	**Maitube**	**2.89 286**	Pg		**Pb**	**01 36 41.5**	**0.0**
	2.7nm,0.2s						
MTBS			Lg		Lg	01 37 18.9	
	9.8nm,0.3s						
KTBS	**Karatobe**	**2.90 298**	*e*P		**Pb**	**01 36 41.6**	**-0.2**
	1.8nm,0.2s						
KTBS			*e*S		**Sb**	**01 37 18.9**	**+1.3**
	38nm,0.3s						
KTBS	**Karatobe**	**2.90 298**	Pg		**Pb**	**01 36 41.6**	**-0.2**
	1.8nm,0.2s						
KTBS			Lg		Lg	01 37 18.9	
	38nm,0.3s						
ULHL	**Ulahol**	**2.96 268**	⇑*i*P		**Pn**	**01 36 36.6**	**-0.8**
	baz=74						
ULHL			⇑*i*S		**Sn**	**01 37 15.3**	**+1.8**
	baz=74						
KST	**Kastek**	**3.21 283**	*e*P		**Pb**	**01 36 47.5**	**+0.5**
	4.8nm,0.4s						
KST			*e*S		**Sb**	**01 37 29.0**	**+2.6**
	8.1nm,0.6s						
KST	**Kastek**	**3.21 283**	Pg		**Pb**	**01 36 47.5**	**+0.5**
	4.8nm,0.4s						
KST			Lg		Lg	01 37 29.0	
	8.1nm,0.6s						
KUU	**Kurty**	**3.21 299**	*e*P		**Pb**	**01 36 46.9**	**-0.1**
	1.2nm,0.4s						
KUU			*e*S		**Sb**	**01 37 28.1**	**+1.7**
	8.3nm,0.3s						
KUU	**Kurty**	**3.21 299**	Pg		**Pb**	**01 36 46.9**	**-0.1**
	1.2nm,0.4s						
KUU			Lg		Lg	01 37 28.1	
	8.3nm,0.3s						
DGS	**Degeres**	**3.38 286**	*e*P		**Pb**	**01 36 49.8**	**-0.2**
	3.1nm,0.3s						
DGS			*e*S		**Sb**	**01 37 32.9**	**+1.5**
	8.0nm,0.4s						
DGS	**Degeres**	**3.38 286**	Pg		**Pb**	**01 36 49.8**	**-0.2**
	3.1nm,0.3s						
DGS			Lg		Lg	01 37 32.9	
	8.0nm,0.4s						
TKM2	**Tokmak 2**	**3.45 280**	⇑*e*P		**Pn**	**01 36 44.1**	**-0.1**
	baz=84						
TKM2			⇑*i*S		**Sn**	**01 37 28.2**	**+2.6**
	baz=84						
TKM2	**Tokmak 2**	**3.45 280**	⇓Pn		**Pb**	**01 36 47.7**	**-3.6**
	2.5nm,0.9s						
TKM2			⇓Lg		Lg	01 37 35.5	
	3.9nm,0.5s						
KRBS	**Karabastau**	**3.57 292**	*e*P		**Pb**	**01 36 53.2**	**-0.1**
	1.1nm,0.3s						
KRBS			*e*S		**Sb**	**01 37 38.8**	**+1.8**
	4.4nm,0.4s						
KRBS	**Karabastau**	**3.57 292**	Pg		**Pb**	**01 36 53.2**	**-0.1**
	1.1nm,0.3s						
KRBS			Lg		Lg	01 37 38.8	
	4.4nm,0.4s						
ARLS	**Aral**	**4.43 265**	⇑*e*P		**Pn**	**01 36 56.4**	**-1.1**
	baz=69						
ARLS			⇑*e*S		**Sn**	**01 37 49.5**	**-0.1**
	baz=69						
MAKZ	**Makanchi**	**4.56 15**	⇑Pn		**Pn**	**01 36 59.5**	**+0.2**
	1.4nm,0.8s						
MAKZ			⇑Lg		Lg	01 38 11.5	
	0.7nm,0.6s						
MK31	**Makanchi Array**	**4.62 18**	Pn		**Pn**	**01 37 02.2**	**+2.3**
	0.1nm,0.2s,baz=199,slow=13,SNR=11						
MK31			⇑Lg		Lg	01 38 11.4	
	1.1nm,0.6s						

IDC ***24*** *01:54:17.8±0.9, 35°.44N×140°.87E, h0km, mb3.8/10, mbtmp3.8/11, ML2.8/1, MS4.2/1, Error ellipse: s-maj=25.4km s-min=18.8km az=62.0*
JMA ***24*** *01:54:19.7±0.2, 35°.6N±0°.5×140°.9E±0°.8, h17km±1km, MD4.2/36, MV4.1/36, NEAR CHOSHI CITY*
JMA Felt II J1 at NEAR CHOSHI CITY .
NIED ***24*** *01:54:19.7, 35°.58N×140°.93E, h17km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-6.68; Mθθ-1.48; Mφφ8.16; Mrθ1.46; Mθφ1.19; Mφr-0.04; Fault plane solution: M0 7.69000×10^14 NP1: φs352.00000°, δ46.00000°, λ-111.00000°. NP2: φs201.00000°, δ47.00000°, λ-70.00000°.*
NEIC ***24*** *01:54:25.9±1.7, 35°.83N±0°.06×140°.70E±0°.05, h43km±7km, mb4.4/10 Error ellipse: s-maj=10.4km s-min=3.4km az=145.0*

ISC 24 01:54:18.9±1.2, 35°.56N±0°.03×140°.66E±0°.05, h6km±8km, n72, σ1§10/54, mb3.9/16, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.19 294**		P	Pg	01 54 27.9	+5.2
JSMT				S	Sg	01 54 34.9	+10
JSMT	**Sammumatsuo**	**0.19 294**		A	A	01 54 27.9	
	comp=E,37nm,5.1s,comp=E,19nm,0.3s						
CHOJ	**Chosi**	**0.21**	**49**	⇓P	**Pg**	**01 54 23.7**	**+0.6**
CHOJ				⇓S	**Sg**	**01 54 26.6**	**+0.7**
CHOJ	**Chosi**	**0.21**	**49**	A	A	01 54 23.7	
	comp=E,51nm,2.6s,comp=E,38nm,0.8s						
JCN	**Nagara**	**0.40**	**249**	P	**Pn**	**01 54 32.3**	**+1.0**
JCN	**Nagara**	**0.40**	**249**	A	A	01 54 32.3	
	comp=E,29nm,0.4s,comp=E,27nm,0.4s						
JIHU	**Itakohorinouch**	**0.42**	**344**	P	**Pn**	**01 54 30.3**	**-1.2**
JIHU				S	**Sb**	**01 54 38.0**	**+2.6**
JIHU	**Itakohorinouch**	**0.42**	**344**	A	A	01 54 30.3	
	comp=E,46nm,0.4s,comp=E,48nm,0.4s						
KTR	**Katsuura**	**0.50**	**215**	P	**Pn**	**01 54 32.3**	**-0.3**
KTR				S	**Sn**	**01 54 41.8**	**+0.2**
JKUC	**kamogawauchiur**	**0.55**	**223**	A	A	01 54 33.5	
	comp=E,16nm,0.5s,comp=E,14nm,3.3s						
BSO4	**Boso 4**	**0.63**	**205**	P	**Pn**	**01 54 34.7**	**+0.4**
TOK	**Tokyo**	**0.75**	**280**	A	A	01 54 37.5	
	comp=E,14nm,0.7s,comp=E,22nm,0.8s						
JYT	**Yasato**	**0.77**	**330**	Pn	**Pn**	**01 54 35.6**	**-0.6**
JYT				Sn	**Sn**	**01 54 47.0**	**-1.1**
JYT	**Yasato**	**0.77**	**330**	*i* P	**Pn**	**01 54 35.8**	**-0.5**
JYT				S	**Sn**	**01 54 47.4**	**-0.7**
JYT	**Yasato**	**0.77**	**330**	A	A	01 54 35.8	
	comp=E,21nm,0.3s,comp=E,20nm,0.4s						
BSO3	**Boso 3**	**0.77**	**189**	*i* P	**Pn**	**01 54 35.9**	**-0.2**
JHYU	**Hitachinakayam**	**0.78**	**355**	A	A	01 54 34.9	
	comp=E,7.0nm,1.1s,comp=E,6.0nm,0.6s						
TATJ	**Tateyama 2**	**0.83**	**230**	A	A	01 54 38.3	
	comp=E,12nm,1.7s,comp=E,10.0nm,3.2s						
JYO	**Yokosk**	**0.88**	**248**	A	A	01 54 39.7	
	comp=E,9.0nm,0.8s,comp=E,9.0nm,4.0s						
BSO1	**Boso 1**	**0.94**	**164**	P	**Pg**	**01 54 36.4**	**-0.6**
JHO	**Hitachi**	**1.05**	**356**	P	**Pg**	**01 54 38.6**	**-0.4**
JHU	**Hanno**	**1.16**	**285**	A	A	01 54 44.1	
	comp=E,2.0nm,2.4s,comp=E,2.0nm,0.8s						
JOD2	**Odawara 2**	**1.32**	**257**	A	A	01 54 46.7	
	comp=E,3.0nm,2.7s,comp=E,2.0nm,5.5s						
JSB	**Shiboa**	**1.53**	**337**	A	A	01 54 47.8	
	comp=E,4.0nm,2.3s,comp=E,5.0nm,2.6s						
MJAR	**Matsushiro Arr**	**2.22**	**297**	Pn	**Pb**	**01 54 58.7**	**-0.7**
	2.3nm,0.3s,baz=96,slow=15,SNR=42						
MJAR				Sn	**Sg**	**01 55 29.4**	**-0.8**
	1.9nm,0.3s,baz=151,slow=15,SNR=3.7						
	23nm,0.5s						
MAJO	**Matsushiro**	**2.22**	**297**	Pn	**Pb**	**01 54 58.6**	**-0.8**
MJB9	**Matsu-Tunnel**	**2.22**	**297**	Pn	**Pb**	**01 54 58.9**	**-0.7**
JMM	**Marumori**	**2.30**	**3**	Pn	**Pn**	**01 54 56.8**	**-0.6**
JMM				Sn	**Sn**	**01 55 23.4**	**-2.7**
JGF	**Kuroka**	**2.70**	**272**	Pn	**Pb**	**01 55 07.3**	**-0.3**
INU	**Inuyama**	**2.98**	**267**	Pn	**Pb**	**01 55 10.1**	**-2.4**
JSD	**Sado**	**3.13**	**323**	Pn	**Pn**	**01 55 09.4**	**+0.6**
JTM	**Tenmabayashi**	**5.22**	**3**	Pn	**Pn**	**01 55 36.9**	**-0.7**
ERM	**Erimo**	**6.73**	**16**	Pn	**Pn**	**01 55 58.4**	**+0.2**
KSRS	**Korea Array**	**10.43**	**284**	LR	LR	02 00 13.0	
	comp=Z,39nm,20.5s,baz=105,slow=33						
H11N2	**WAKE ISLAND Hy**	**27.96**	**117**	T	T	02 29 13.9	
	baz=310,slow=75,SNR=102						
H11N1	**WAKE ISLAND Hy**	**27.97**	**117**	T	T	02 29 10.5	
	baz=310,slow=75,SNR=79						
H11N3	**WAKE ISLAND Hy**	**27.98**	**117**	T	T	02 29 15.3	
	baz=310,slow=75,SNR=62						
SONM	**Songino Array**	**28.14**	**306**	P	**P**	**02 00 14.7**	**+2.9**
	0.6nm,0.6s,baz=107,slow=9.1,SNR=1.7						
	0.6nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**28.62**	**120**	T	T	02 29 56.6	
	baz=312,slow=76,SNR=354						
H11S3	**WAKE ISLAND Hy**	**28.62**	**120**	T	T	02 29 58.4	
	baz=312,slow=76,SNR=187						
H11S2	**WAKE ISLAND Hy**	**28.63**	**120**	T	T	02 29 57.8	
	baz=312,slow=76,SNR=222						
ZALV	**Zalesovo Beam**	**42.47**	**314**	P	**P**	**02 02 16.0**	**+1.4**
	1.1nm,0.5s,baz=111,slow=8.1,SNR=3.5						
	1.1nm,0.5s						
MK31	**Makanchi Array**	**44.40**	**303**	P	**P**	**02 02 29.7**	**-0.6**
MKAR	**Makanchi Array**	**44.40**	**303**	P	**P**	**02 02 31.6**	**+1.3**
	0.7nm,0.7s,baz=81,slow=7.3,SNR=4.1						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.40**	**303**	P	**P**	**02 02 30.3**	**-0.1**
IL31		**51.06**	**32**	P	**P**	**02 03 20.9**	**-0.7**
IL31				IAmb	IAmb	02 03 29.1	
	comp=Z,1.3nm,1.1s						
ILAR	**Eielson Array**	**51.06**	**32**	P	**P**	**02 03 21.6**	**0.0**
	comp=Z,0.8nm,0.7s,baz=268,slow=6.1,SNR=12						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**51.06**	**32**	P	**P**	**02 03 21.3**	**-0.4**
BMAR	**Burnt Mountain**	**51.91**	**28**	P	**P**	**02 03 28.2**	**+0.1**
SCRK	**Sand Creek**	**52.37**	**33**	P	**P**	**02 03 32.1**	**+0.5**
SCRK				IAmb	IAmb	02 03 37.2	
	comp=Z,3.4nm,1.3s						
VRDI	**Verde Repeater**	**52.92**	**36**	P	**P**	**02 03 36.1**	**+0.2**
K27K	**Chicken**	**53.20**	**32**	P	**P**	**02 03 37.6**	**0.0**
BCAR	**Beaver Creek A**	**53.45**	**34**	P	**P**	**02 03 40.0**	**+0.5**
EPYK	**Eagle Plains**	**55.10**	**29**	P	**P**	**02 03 51.8**	**+0.3**
EPYK				IAmb	IAmb	02 03 52.3	
	comp=Z,8.4nm,1.4s						
WR0	**Warramunga Arr**	**55.52**	**187**	P	**P**	**02 03 53.4**	**-1.5**
WB2	**Warramunga Arr**	**55.52**	**187**	P	**P**	**02 03 52.6**	**-2.3**
WB2				IAmb	IAmb	02 04 19.2	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**55.53**	**187**	P	**P**	**02 03 53.9**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=5.1,slow=7.7,SNR=20						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**55.53**	**187**	P	**P**	**02 03 52.8**	**-2.2**
M30M	**Minto, Yukon**	**55.79**	**34**	P	**P**	**02 03 56.8**	**+0.3**
M30M				IAmb	IAmb	02 04 03.9	
	comp=Z,2.9nm,1.2s						
INK	**Inuvik**	**55.97**	**27**	P	**P**	**02 03 57.7**	**+0.1**
INK				IAmb	IAmb	02 03 59.1	
	comp=Z,8.2nm,1.4s						
ABKAR	**Akbulak array**	**58.43**	**311**	P	**P**	**02 04 15.5**	**+0.1**
ASAR	**Alice Springs**	**59.25**	**187**	P	**P**	**02 04 20.4**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=21,slow=10,SNR=6.8						
	comp=Z,0.4nm,0.5s						
FINES	**FINESS Array B**	**69.83**	**332**	P	**P**	**02 05 30.4**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=46,slow=6.0,SNR=4.1						
	comp=Z,2.3nm,0.9s						
AKASG	**Malin Array Be**	**75.09**	**322**	P	**P**	**02 06 01.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=46,slow=5.3,SNR=4.9						
	comp=Z,0.4nm,0.5s						
NOA	**NORSAR Array B**	**75.31**	**337**	P	**P**	**02 06 02.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=34,slow=4.8,SNR=2.2						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**76.36**	**52**	P	**P**	**02 06 09.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=286,slow=6.5,SNR=2.5						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**79.13**	**45**	LR	LR	02 37 58.7	
	comp=Z,151nm,21.4s,baz=159,slow=33						
CLL	**Collm**	**82.06**	**330**	*e*P	**P**	**02 06 40.0**	**0.0**
H03N2	**Juan Fernandez**	**147.45**	**98**	T	T	04 58 36.0	
	baz=289,slow=76,SNR=9.1						
H03N3	**Juan Fernandez**	**147.46**	**98**	T	T	04 58 38.8	
	baz=289,slow=76,SNR=8.4						
H03N1	**Juan Fernandez**	**147.46**	**98**	T	T	04 58 38.4	
	baz=289,slow=76,SNR=9.2						
LPAZ	**La Paz**	**147.95**	**61**	PKPbc	**PKPbc**	**02 14 05.1**	**-1.3**

KRNET ***24*** *01:54:59.7±0.1, 41°.04N×74°.03E, h17km, mb2.5*

SOME ***24*** *01:55:00.8, 41°.12N×74°.03E, h5km*
KNET ***24*** *01:55:01.4±0.5, 41°.16N×74°.09E, h5km±2km, ml2.0, Error ellipse: s-maj=2.8km s-min=2.5km az=7.0*
NNC ***24*** *01:55:03.8±1.7, 41°.17N×74°.03E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=14.0km s-min=7.7km az=167.0*

ISC 24 01:54:59.8±1.6, 41°.07N±0°.06×74°.05E±0°.03, h1km±11km, n39, σ1§07/66, 24C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.81**	**14**	⇑*i*P	**Pg**	**01 55 15.6**	**+0.2**
	baz=15						
ARLS				⇑*i*S	**Sb**	**01 55 27.4**	**-1.0**
	baz=15						
AML	**Almayashu**	**1.09**	**346**	⇓P	**Pg**	**01 55 20.9**	**+0.1**
	7.9nm,0.2s,SNR=20						
AML				⇑S	**Sb**	**01 55 36.2**	**-0.5**
	32nm,0.3s						
UCH	**Uchtor**	**1.21**	**17**	⇓P	**Pg**	**01 55 23.1**	**+0.2**
	2.6nm,0.1s,SNR=20						
UCH				⇑S	**Sn**	**01 55 40.2**	**-1.3**
	16nm,0.2s						
UCH	**Uchtor**	**1.21**	**17**	⇑*i*P	**Pg**	**01 55 23.2**	**+0.2**
	baz=17						
UCH				⇑*i*S	**Sn**	**01 55 40.1**	**-1.3**
	baz=17						
NRN	**Naryn**	**1.51**	**76**	⇑*i*P	**Pn**	**01 55 27.9**	**-0.4**
	baz=75						
NRN				⇑*i*S	**Sn**	**01 55 48.3**	**-0.5**
	baz=75						
AAK	**Ala-Archa**	**1.60**	**12**	⇓P	**Pb**	**01 55 30.4**	**+0.2**
	2.0nm,0.2s						
AAK				⇓S	**Sg**	**01 55 52.3**	**+1.1**
	20nm,0.6s						
AAK	**Ala-Archa**	**1.60**	**12**	⇑*i*P	**Pb**	**01 55 29.8**	**-0.4**
	baz=12						
AAK				⇑*i*S	**Sg**	**01 55 51.9**	**+0.7**
	baz=12						
EKS2	**Erkin-Say**	**1.60**	**353**	⇑P	**Pb**	**01 55 30.1**	**-0.1**
	1.3nm,0.1s,SNR=6.1						
EKS2				⇓S	**Sg**	**01 55 52.0**	**+0.7**
	5.3nm,0.2s						
EKS2	**Erkin-Say**	**1.60**	**353**	⇑*i*P	**Pn**	**01 55 29.7**	**+0.3**
	baz=53						
EKS2				⇑*i*S	**Sg**	**01 55 51.7**	**+0.4**
	baz=53						
MRKS	**Merke**	**1.78**	**340**	*e*P	**Pg**	**01 55 33.9**	**-0.1**
	14nm,0.3s						
MRKS				*e*S	**Sg**	**01 55 57.7**	**+0.6**
	20nm,0.3s						
MRKS	**Merke**	**1.78**	**340**	P	**Pg**	**01 55 34.5**	**+0.5**
	14nm,0.3s						
MRKS				S	**Sg**	**01 55 57.9**	**+0.8**
	20nm,0.3s						
CHMS	**Chumysh**	**1.99**	**15**	⇑Pn	**Pb**	**01 55 37.6**	**+0.7**
	0.8nm,0.4s						
CHMS				⇓Sn	**Sg**	**01 56 03.5**	**-0.3**
	4.1nm,0.5s						
ULHL	**Ulahol**	**2.02**	**54**	⇑P	**Pb**	**01 55 37.4**	**+0.1**
	5.8nm,0.1s,SNR=42						
ULHL				⇓S	**Sg**	**01 56 05.3**	**+0.7**
	6.3nm,0.2s						
ULHL	**Ulahol**	**2.02**	**54**	⇑*i*P	**Pn**	**01 55 36.6**	**+1.5**
	baz=53						
ULHL				⇑*i*S	**Sb**	**01 56 03.7**	**+0.7**
	baz=53						
TKM2	**Tokmak 2**	**2.18**	**31**	⇓P	**Pb**	**01 55 40.8**	**+0.7**
	2.1nm,0.2s,SNR=7.0						
TKM2				⇑S	**Sg**	**01 56 10.2**	**+0.5**
	12nm,0.3s						
TKM2	**Tokmak 2**	**2.18**	**31**	⇓*i*P	**Pb**	**01 55 39.0**	**-1.1**
	baz=31						
TKM2				⇓*i*S	**Sb**	**01 56 07.7**	**+0.1**
	baz=31						
TKM2	**Tokmak 2**	**2.18**	**31**	⇑Pn	**Pb**	**01 55 41.1**	**+1.0**
	3.2nm,0.8s						
TKM2				⇓Sn	**Sg**	**01 56 10.2**	**+0.5**
	10nm,0.7s						
USP	**Ospenovka**	**2.22**	**8**	⇓P	**Pb**	**01 55 41.2**	**+0.5**
	3.6nm,0.2s,SNR=11						
TRKS	**Terek-Say**	**2.24**	**283**	⇑*i*P	**Pn**	**01 55 38.9**	**+0.7**
	baz=82						
TRKS				⇑*i*S	**Sn**	**01 56 07.5**	**+0.9**
	baz=82						
KST	**Kastek**	**2.43**	**35**	*e*P	**Pg**	**01 55 46.0**	**-0.4**
	5.8nm,0.3s						
KST				*e*S	**Sg**	**01 56 18.5**	**+0.7**
	9.6nm,0.3s						
KST	**Kastek**	**2.43**	**35**	Pg	**Pg**	**01 55 46.0**	**-0.4**
	5.8nm,0.3s						
KST				Lg	Lg	01 56 19.0	
	9.6nm,0.3s						
DGS	**Degeres**	**2.52**	**30**	*e*P	**Pg**	**01 55 47.3**	**-0.8**
	6.9nm,0.7s						
DGS				*e*S	**Sg**	**01 56 20.7**	**+0.1**
	6.9nm,0.4s						
DGS	**Degeres**	**2.52**	**30**	Pg	**Pg**	**01 55 47.3**	**-0.8**
	6.9nm,0.7s						
DGS				Lg	Lg	01 56 21.1	
	6.9nm,0.4s						
MTBS	**Maitube**	**2.71**	**40**	*e*P	**Pb**	**01 55 50.7**	**+1.5**
	3.9nm,0.2s						
MTBS				*e*S	**Sg**	**01 56 26.5**	**-0.5**
	14nm,0.3s						
MTBS	**Maitube**	**2.71**	**40**	Pg	**Pb**	**01 55 50.7**	**+1.5**
	3.9nm,0.2s						
MTBS				Lg	Lg	01 56 26.5	
	14nm,0.3s						
KRBS	**Karabastau**	**2.88**	**24**	*e*P	**Pb**	**01 55 53.1**	**+1.0**
	1.6nm,0.3s						
KRBS				*e*S	**Sg**	**01 56 31.1**	**-1.4**
	5.7nm,0.4s						
KRBS	**Karabastau**	**2.88**	**24**	Pg	**Pb**	**01 55 53.7**	**+1.6**
	1.6nm,0.3s						
KRBS				Lg	Lg	01 56 31.2	
	5.7nm,0.4s						
TNSS	**Tian-Shan**	**2.92**	**47**	*e*P	**Pb**	**01 55 54.0**	**+1.2**
	3.2nm,0.2s						
TNSS				*e*S	**Sg**	**01 56 32.3**	**-1.2**
	4.2nm,0.5s						
TNSS	**T

s-maj=15.2km s-min=13.7km az=110.0
MOS **24** *01:55:05.3±1.4, 35°.96S×102°.66W, h10km, mb5.4/21, Error ellipse: s-maj=12.2km s-min=9.6km az=89.1*
NEIC **24** *01:55:06.9±2.1, 35°.99S±0°.09×102°.6W±0°.1, h10km±1km, mb5.2/393, Ms_20 5.2/211, Mwb5.5/26, Error ellipse: s-maj=17.6km s-min=15.4km az=248.0*
NEIC **24** *01:55:07.2, 36°.04S×102°.67W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.49; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.20; $M_{r\theta}$0.35; $M_{\theta\phi}$-1.88; $M_{\phi r}$-0.12; Fault plane solution: $M_0$1.96000×10^{17} NP1:ϕ_s89.62000°, δ81.97000°, λ166.71000°. NP2:ϕ_s181.51000°, δ76.84000°, λ8.25000°. Principal axes: T 1.7215, Plg15.0000°, Azm45.0000°; N 0.4120, Plg75.0000°, Azm239.0000°; P -2.1335, Plg4.0000°, Azm136.0000°;*
GCMT **24** *01:55:08.9±0.1, 35°.97S±0°.01×102°.73W±0°.01, h15km, MW5.6/166, Moment Tensor Solution. s148,c277; s166,c331; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.39±.03; $M_{\theta\theta}$-0.41±.03; $M_{\phi\phi}$0.80±.03; $M_{r\theta}$0.39±.06; $M_{\theta\phi}$-2.93±.03; $M_{\phi r}$-0.51±.06; Best double couple: $M_0$3.04800×10^{17} NP1:ϕ_s186.00000°, δ83.00000°, λ7.00000°. NP2:ϕ_s95.00000°, δ83.00000°, λ173.00000°. Principal axes: T 3.2980, Plg10.0000°, Azm51.0000°; N -0.4990, Plg80.0000°, Azm228.0000°; P -2.7980, Plg1.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 01:55:07.2±0.2,**36°.01S**±0°.06×**102°.60W**±0°.05,**h16**km, **n668**,σ1§**29**/416,**mb5.2**/202,**MS5.2**/163,**7C-2D**,**Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**10.55**	**325**	Pn	**Pn**	**01 57 36.5**	**-1.3**
	1.9nm,0.3s,baz=159,slow=9.9,SNR=32						
RPN				LR	LR	02 00 29.2	
	comp=Z,22μm,19.3s,baz=102,slow=31						
	67nm,0.9s						
VA02	**Isla de Pascua**	**10.57**	**325**		**Pn**	**01 57 38.9**	**+0.8**
H03S2	**Juan Fernandez**	**19.52**	**91**	T	T	02 19 57.1	
	baz=254,slow=75,SNR=59						
H03S1	**Juan Fernandez**	**19.54**	**91**	T	T	02 19 55.0	
	baz=254,slow=75,SNR=98						
H03S3	**Juan Fernandez**	**19.54**	**91**	T	T	02 20 11.8	
	baz=254,slow=75,SNR=98						
H03N2	**Juan Fernandez**	**19.61**	**89**	T	T	02 19 58.4	
	baz=248,slow=72,SNR=47						
H03N3	**Juan Fernandez**	**19.62**	**89**	T	T	02 20 01.2	
	baz=248,slow=72,SNR=31						
H03N1	**Juan Fernandez**	**19.63**	**89**	T	T	02 19 55.7	
	baz=248,slow=72,SNR=48						
VA04	**Juan Fernndez**	**19.65**	**90**	P	**P**	**01 59 34.9**	**-0.3**
VA04				IAmb	IAmb	01 59 40.7	
	comp=Z,164nm,1.0s						
LR04	**Corral**	**23.28**	**108**	P	**P**	**02 00 16.9**	**+2.9**
LL05	**Los Muermos**	**23.30**	**112**	P	**P**	**02 00 16.6**	**+2.3**
GO07	**Milladeo Hill,**	**23.33**	**117**	P	**P**	**02 00 15.8**	**+1.2**
LL07	**Hotel Espejo d**	**23.43**	**116**	P	**P**	**02 00 17.8**	**+2.3**
BI05	**Punta Hualpn**	**23.65**	**101**	P	**P**	**02 00 18.1**	**+0.3**
BI05				IAmb	IAmb	02 00 22.8	
	comp=Z,60nm,0.8s						
LL04	**Puerto Octay**	**24.07**	**111**	P	**P**	**02 00 22.5**	**+0.7**
LL03	**Petrohue**	**24.09**	**111**	P	**P**	**02 00 23.8**	**+1.9**
LR03	**Panguipulli**	**24.11**	**108**	P	**P**	**02 00 23.5**	**+1.3**
LR03				IAmb	IAmb	02 00 31.8	
	comp=Z,120nm,1.2s						
LL01	**San Ignacio de**	**24.16**	**114**	P	**P**	**02 00 21.6**	**-1.0**
AY01	**Puyuhuapi**	**24.26**	**119**	P	**P**	**02 00 24.5**	**+1.1**
LL02	**Futaleuf**	**24.66**	**116**	P	**P**	**02 00 29.3**	**+2.1**
GO06	**Curarrehue**	**24.79**	**108**	P	**P**	**02 00 30.0**	**+1.5**
GO06				IAmb	IAmb	02 00 52.6	
	comp=Z,114nm,1.4s						
COYC	**Coyhaique**	**24.87**	**122**	P	**P**	**02 00 31.2**	**+2.2**
COYC				IAmb	IAmb	02 00 34.5	
	comp=Z,86nm,1.0s						
COYC	**Coyhaique**	**24.87**	**122**	IAMs_20	IAMs_20	02 07 33.2	
	comp=Z,9μm,21.0s						
GO05	**Huala**	**24.94**	**97**	P	**P**	**02 00 30.8**	**+1.0**
ML02	**Panimavida**	**25.21**	**99**	P	**P**	**02 00 33.0**	**+0.8**
PLCA	**Paso Flores**	**25.48**	**110**	P	**P**	**02 00 37.4**	**+2.7**
	comp=Z,21nm,0.8s,baz=273,slow=10,SNR=28						
PLCA				LR	LR	02 08 05.5	
	comp=Z,3μm,20.0s,baz=264,slow=30						
	comp=Z,21nm,0.8s						
PLCA	**Paso Flores**	**25.48**	**110**	P	**P**	**02 00 35.5**	**+0.9**
PLCA				IAmb	IAmb	02 00 43.7	
	comp=Z,67nm,1.1s						
PLCA	**Paso Flores**	**25.48**	**110**	P	**P**	**02 00 35.6**	**+0.9**
PLCA				pmax	pmax		
	comp=Z,67nm,1.1s						
VA05	**Santo Domingo**	**25.49**	**94**	P	**P**	**02 00 36.5**	**+1.8**
VA05				IAmb	IAmb	02 00 41.6	
	comp=Z,73nm,0.8s						
MT01	**Popeta**	**25.73**	**94**	P	**P**	**02 00 39.2**	**+2.2**
MT01				IAmb	IAmb	02 00 50.9	
	comp=Z,47nm,1.0s						
BO01	**Tunca**	**25.75**	**96**	P	**P**	**02 00 39.0**	**+2.0**
BO01				IAmb	IAmb	02 00 47.5	
	comp=Z,51nm,0.8s						
BO02	**Sierra Bellavi**	**25.91**	**97**	P	**P**	**02 00 39.6**	**+0.9**
MT09	**Talagante**	**25.97**	**94**	P	**P**	**02 00 40.6**	**+1.3**
MT09				IAmb	IAmb	02 00 50.9	
	comp=Z,58nm,0.9s						
MT02	**Curacav**	**25.98**	**93**	P	**P**	**02 00 40.5**	**+1.3**
MT02				IAmb	IAmb	02 01 01.9	
	comp=Z,78nm,1.6s						
VA06	**Catapilco**	**26.03**	**92**	P	**P**	**02 00 40.3**	**+0.7**
VA06				IAmb	IAmb	02 00 59.3	
	comp=Z,112nm,1.5s						
ROC1	**El Roble**	**26.15**	**93**	P	**P**	**02 00 42.5**	**+1.4**
BO04	**La Punta**	**26.22**	**95**	P	**P**	**02 00 42.8**	**+1.3**
BO04				IAmb	IAmb	02 00 49.2	
	comp=Z,68nm,0.9s						
MT05	**Renca**	**26.26**	**94**	P	**P**	**02 00 41.6**	**-0.3**
CO06	**Fray Jorge**	**26.34**	**87**	P	**P**	**02 00 43.4**	**+0.9**
CO06				IAmb	IAmb	02 00 50.9	
	comp=Z,55nm,1.0s						
MT03	**Universidad Ad**	**26.42**	**94**	P	**P**	**02 00 44.3**	**+0.9**
MT03				IAmb	IAmb	02 01 08.8	
	comp=Z,73nm,1.1s						
GO09	**Cerro Castillo**	**26.44**	**135**	P	**P**	**02 00 43.5**	**+0.3**
MG05	**Puerto Natales**	**26.51**	**136**	P	**P**	**02 00 45.3**	**+1.5**
MG05				IAmb	IAmb	02 00 56.0	
	comp=Z,99nm,1.2s						
VA03	**San Esteban**	**26.58**	**92**	P	**P**	**02 00 45.1**	**+0.4**
LMEL	**Las Melosas**	**26.58**	**95**	P	**P**	**02 00 47.0**	**+2.1**
CO02	**Combarbal**	**26.68**	**89**	P	**P**	**02 00 46.9**	**+1.2**
CO05	**La Serena**	**26.93**	**86**	P	**P**	**02 00 47.6**	**-0.2**
CO05				IAmb	IAmb	02 01 02.0	
	comp=Z,65nm,0.8s						
CO03	**El Pedregal**	**27.06**	**88**	P	**P**	**02 00 49.0**	**0.0**
GO04	**Tololo Observa**	**27.20**	**87**	P	**P**	**02 00 51.8**	**+1.3**
GO04				IAmb	IAmb	02 01 07.4	
	comp=Z,72nm,0.9s						
MG04	**Isla Riesco**	**27.53**	**137**	P	**P**	**02 00 54.7**	**+1.7**
LCO	**Las Campanas**	**27.71**	**85**	P	**P**	**02 00 55.9**	**+0.8**
LCO				IAmb	IAmb	02 01 11.9	
	comp=Z,56nm,0.9s						
LCO	**Las Campanas**	**27.71**	**85**	P	**P**	**02 00 55.9**	**+0.8**
LCO				pmax	pmax		
	comp=Z,56nm,1.0s						
CO01	**Juntas del Tor**	**27.84**	**87**	P	**P**	**02 00 57.5**	**+1.3**
AC05	**El Transito**	**28.12**	**85**	P	**P**	**02 00 58.7**	**0.0**
AC05				IAmb	IAmb	02 01 07.0	
	comp=Z,54nm,1.1s						
ZON	**Zonda**	**28.46**	**91**	P	**P**	**02 01 00.8**	**-0.7**
ZON				IAmb	IAmb	02 01 08.3	
	comp=Z,46nm,1.3s						
ZON	**Zonda**	**28.46**	**91**	P	**P**	**02 01 00.8**	**-0.7**
ZON				pmax	pmax		
	comp=Z,46nm,1.3s						
GO03	**Copiap**	**28.66**	**82**	P	**P**	**02 01 03.7**	**+0.4**
AC06	**Mina Casimiro**	**28.66**	**82**	P	**P**	**02 01 02.8**	**-0.5**
AC01	**Pan de Azucar**	**29.01**	**79**	P	**P**	**02 01 06.7**	**+0.3**
AC01				IAmb	IAmb	02 01 23.8	
	comp=Z,39nm,1.1s						
AC02	**Maricunga**	**29.87**	**82**	P	**P**	**02 01 14.6**	**0.0**
AC02				IAmb	IAmb	02 01 21.2	
	comp=Z,35nm,0.8s						
PB14	**IPOC Station P**	**29.89**	**77**	P	**P**	**02 01 14.2**	**-0.4**
PB14				IAmb	IAmb	02 01 26.0	
	comp=Z,38nm,1.0s						
USHA	**Ushuaia**	**30.05**	**140**	P	**P**	**02 01 17.9**	**+2.6**
	comp=Z,64nm,0.9s,baz=293,slow=7.3,SNR=8.2						
USHA				LR	LR	02 10 31.7	
	comp=Z,10μm,20.0s,baz=288,slow=31						
	comp=Z,64nm,0.9s						
GO02	**Mina Guanaco**	**30.27**	**78**	P	**P**	**02 01 18.1**	**+0.1**
GO02				IAmb	IAmb	02 01 25.1	
	comp=Z,46nm,1.1s						
PB04	**IPOC Station P**	**31.28**	**73**	P	**P**	**02 01 26.8**	**+0.1**
PB06	**IPOC Station P**	**31.53**	**74**	IAmb	IAmb	02 01 31.2	
	comp=Z,45nm,0.9s						
PB07	**IPOC Station P**	**31.82**	**72**	IAmb	IAmb	02 01 35.0	
	comp=Z,35nm,0.7s						
LVC	**Limon Verde**	**32.10**	**75**	LR	LR	02 11 12.6	
	comp=Z,6μm,18.8s,baz=248,slow=30						
LVC	**Limon Verde**	**32.10**	**75**	P	**P**	**02 01 35.0**	**+0.9**
LVC				IAmb	IAmb	02 01 37.5	
	comp=Z,40nm,1.1s						
LVC	**Limon Verde**	**32.10**	**75**	IAMs_20	IAMs_20	02 11 09.7	
	comp=Z,7μm,19.0s						
LVC	**Limon Verde**	**32.10**	**75**	P	**P**	**02 01 35.1**	**+0.9**
LVC				pmax	pmax		
	comp=Z,40nm,1.1s						
PATCX	**Punta Patache**	**32.12**	**71**	P	**P**	**02 01 34.5**	**+0.4**
TA01	**Diego Aracena**	**32.25**	**70**	P	**P**	**02 01 36.1**	**+1.1**
TRQA	**Tornquist**	**32.31**	**106**	IAMs_20	IAMs_20	02 12 20.9	
	comp=Z,5μm,19.0s						
PB01	**IPOC Station P**	**32.51**	**72**	P	**P**	**02 01 38.1**	**+0.7**
NNA	**Nana**	**33.35**	**51**	LR	LR	02 11 59.7	
	comp=Z,10μm,19.2s,baz=236,slow=30						
NNA	**Nana**	**33.35**	**51**	P	**P**	**02 01 44.7**	**-0.1**
NNA				IAmb	IAmb	02 01 47.3	
	comp=Z,39nm,1.1s						
NNA	**Nana**	**33.35**	**51**	P	**P**	**02 01 44.7**	**-0.1**
NNA				pmax	pmax		
	comp=Z,39nm,1.1s						
GO01	**Chusmiza**	**33.52**	**70**	P	**P**	**02 01 47.1**	**+0.4**
PB16	**IPOC Station P**	**34.08**	**68**	IAmb	IAmb	02 01 58.6	
	comp=Z,36nm,1.0s						
EFI	**East Falkland**	**35.12**	**131**	IAMs_20	IAMs_20	02 13 35.1	
	comp=Z,6μm,20.0s						
EFI	**East Falkland**	**35.12**	**131**	*i* P	**P**	**02 01 59.5**	**-0.2**
EFI				pmax	pmax		
	comp=Z,67nm,1.2s						
ATAH	**Atahualpa**	**36.29**	**43**	P	**P**	**02 02 11.9**	**+1.3**
	comp=Z,14nm,0.9s,baz=224,slow=9.4,SNR=16						
ATAH				LR	LR	02 13 18.0	
	comp=Z,5μm,20.9s,baz=238,slow=30						
	comp=Z,14nm,0.9s						
LPAZ	**La Paz**	**36.38**	**66**	P	**P**	**02 02 13.7**	**+2.1**
	comp=Z,98nm,0.9s,baz=232,slow=5.7,SNR=174						
LPAZ				LR	LR	02 14 20.3	
	comp=Z,2μm,19.4s,baz=233,slow=32						
	comp=Z,98nm,0.9s						
LPAZ	**La Paz**	**36.38**	**66**	P	**P**	**02 02 13.2**	**+1.6**
LPAZ	**La Paz**	**36.38**	**66**	P	**P**	**02 02 13.2**	**+1.6**
LPAZ				pmax	pmax		
	comp=Z,95nm,0.9s						
PMSA	**Palmer Station**	**36.81**	**154**	LR	LR	02 13 08.7	
	comp=Z,7μm,21.7s,baz=306,slow=29						
PAYG	**Puerto Ayora**	**36.98**	**21**	IAMs_20	IAMs_20	02 13 08.3	
	comp=Z,5μm,20.0s						
SMAI	**San Martin Ant**	**37.81**	**159**	IAmb	IAmb	02 02 26.4	
	comp=Z,49nm,1.0s						
ITQB	**Itaqui**	**38.86**	**94**	P	**P**	**02 02 31.8**	**0.0**
BOSC	**San Juan Bosco**	**39.56**	**40**	P	**P**	**02 02 37.1**	**-0.8**
BOSC				IAmb	IAmb	02 02 44.9	
	comp=Z,46nm,0.7s						
CPUP	**Villa Florida**	**39.62**	**89**	P	**P**	**02 02 38.9**	**+0.7**
	comp=Z,9.6nm,1.0s,baz=252,slow=9.7,SNR=15						
CPUP				LR	LR	02 16 48.7	
	comp=Z,1μm,19.3s,baz=249,slow=33						
	comp=Z,9.6nm,1.0s						
CPUP	**Villa Florida**	**39.62**	**89**	P	**P**	**02 02 38.2**	**0.0**
CPUP	**Villa Florida**	**39.62**	**89**	P	**P**	**02 02 38.2**	**0.0**
CPUP				pmax	pmax		
	comp=Z,29nm,1.3s						
COHC	**Cochancay**	**39.76**	**38**	P	**P**	**02 02 38.7**	**-0.6**
PLTB	**Pedras Altas**	**40.55**	**99**	P	**P**	**02 02 46.7**	**+0.8**
PLTB				IAmb	IAmb	02 02 49.9	
	comp=Z,43nm,0.9s						
SIV	**San Ignacio**	**41.92**	**73**	LR	LR	02 18 05.7	
	comp=Z,3μm,21.9s,baz=257,slow=33						
TBI	**Tubuai**	**42.25**	**274**	*e*LR	LR	02 14 37.1	
	comp=Z,3μm,24.2s						
TBI	**Tubuai**	**42.25**	**274**	*e*T	T	02 47 37.8	
	comp=Z,9.0nm,0.3s						
TULM	**Tulcn-Chalpat**	**43.23**	**38**	IAmb	IAmb	02 03 12.5	
	comp=Z,56nm,1.1s						
ITAB	**Concordia**	**43.45**	**93**	P	**P**	**02 03 10.9**	**+1.3**
ITAB				IAmb	IAmb	02 03 14.0	
	comp=Z,67nm,1.0s						
TAOE	**Nuku Hiva Isla**	**43.55**	**299**	*e*P	**P**	**02 03 10.9**	**+0.3**
	comp=Z,96nm,25.4s						
TAOE				*e*S	**S**	**02 09 38.9**	**-0.4**
	comp=Z,739nm,25.7s						
TAOE				*e*LR	LR	02 15 13.5	
	comp=Z,4μm,25.4s						
AQDB	**Aquidauana**	**43.70**	**82**	P	**P**	**02 03 11.8**	**+0.1**
AQDB				IAmb	IAmb	02 03 17.2	
	comp=Z,56nm,1.0s						
GCUF	**Volcan Galeras**	**43.89**	**38**	*i*eP	**P**	**02 03 14.2**	**+0.5**
MEH	**Mehetia**	**43.94**	**282**	*e*T	T	02 49 43.2	
	comp=Z,27nm,0.3s						
PTLC	**Puerto Leguiza**	**44.32**	**42**	*e*P	**P**	**02 03 14.2**	**-2.5**
BBAC	**Balboa, Cauca**	**44.63**	**38**	*e*P	**P**	**02 03 19.1**	**-0.3**
FLOC	**Florencia**	**45.06**	**40**	*e*P	**P**	**02 03 22.0**	**-0.6**
TIAR	**Tiarei**	**45.13**	**281**	*e*T	T	02 51 11.0	
	comp=Z,2.4nm,0.3s						
PPTF	**Pamatai, Papee**	**45.29**	**281**	P	**P**	**02 03 24.5**	**0.0**
PPT2	**Papeete2**	**45.30**	**281**	*e*P	**P**	**02 03 24.2**	**-0.3**
	comp=Z,110nm,1.3s						
PPT2	**Papeete2**	**45.30**	**281**	*e*P	**P**	**02 03 24.8**	**+0.3**
	comp=Z,57nm,24.8s						
PPT2				*e*S	**S**	**02 10 04.2**	**-0.4**
	comp=Z,355nm,24.8s						
PPT2				*e*SS	**SS**	**02 13 27.2**	**-0.4**
	comp=Z,2μm,23.2s						
PPT2				*e*LR	LR	02 16 01.2	
	comp=Z,1μm,31.0s						
PPT2				*e*LR	LR	02 16 01.7	
	comp=Z,793nm,31.5s						
PPT	**Papeete**	**45.31**	**281**	P	**P**	**02 03 24.7**	**+0.2**
	comp=Z,23nm,0.9s,baz=74,slow=19,SNR=2.8						
PPT				LR	LR	02 16 57.4	
	comp=Z,525nm,18.9s,baz=120,slow=29						
	comp=Z,23nm,0.9s						
BETC	**Betania**	**46.10**	**39**	*e*P	P	02 03 20.0	-11
YOTC	**Yotoco, Valle**	**46.77**	**37**	*e*P	**P**	**02 03 36.5**	**+0.4**
ORTC	**Ortega, Tolima**	**47.25**	**39**	*e*P	**P**	**02 03 39.4**	**-0.4**
PRAC	**Prado**	**47.27**	**39**	*e*P	**P**	**02 03 40.4**	**+0.4**
PLMC	**San Jos del P**	**47.59**	**37**	*e*P	**P**	**02 03 40.4**	**-2.2**
ANIL	**Santa Ana**	**47.67**	**38**	*e*P	**P**	**02 03 43.3**	**-0.1**
CDITO	**Canoas**	**48.08**	**27**	P	**P**	**02 03 46.0**	**-0.1**
HOPE	**Hope Point**	**48.19**	**134**	P	**P**	**02 03 46.9**	**+0.3**
HOPE	**Hope Point**	**48.19**	**134**	P	**P**	**02 03 46.9**	**+0.3**
HOPE				pmax	pmax		
	comp=Z,122nm,1.0s						
GUY2C	**Guyana, Caldas**	**48.32**	**38**	*e*P	**P**	**02 03 49.1**	**+0.5**
BRU2	**Volcan**	**48.35**	**27**	P	**P**	**02 03 46.8**	**-1.7**
JACO	**JACO, Garabito**	**48.48**	**24**	P	**P**	**02 03 48.8**	**-0.4**
JACO				IAmb	IAmb	02 03 53.2	
	comp=Z,41nm,1.2s						
ROSC	**El Rosal**	**48.52**	**39**	P	**P**	**02 03 51.4**	**+1.3**
	comp=Z,86nm,1.0s,baz=125,slow=7.6,SNR=30						
ROSC				LR	LR	02 20 40.0	
	comp=Z,5μm,20.7s,baz=228,slow=32						
	comp=Z,86nm,1.0s						
ROSC	**El Rosal**	**48.52**	**39**	P	**P**	**02 03 50.7**	**+0.7**
ROSC	**El Rosal**	**48.52**	**39**	*e*P	**P**	**02 03 51.0**	**+1.0**
ROSC	**El Rosal**	**48.52**	**39**	P	**P**	**02 03 50.7**	**+0.7**
ROSC				pmax	pmax		
	comp=Z,126nm,1.1s						
SRBA	**San Rafael, Bu**	**48.52**	**26**	P	**P**	**02 03 49.0**	**-0.7**
CBOC	**Ciudad Bolivar**	**48.56**	**36**	*e*P	**P**	**02 03 51.0**	**+0.9**
CHIC	**Chingaza**	**48.64**	**40**	*e*P	**P**	**02 03 51.0**	**0.0**
NORC	**Norcasia**	**48.86**	**38**	*e*P	**P**	**02 03 51.0**	**-1.2**
JTS	**Las Juntas de**	**48.97**	**23**	P	**P**	**02 03 53.0**	**0.0**
JTS				IAmb	IAmb	02 03 56.8	
	comp=Z,37nm,1.1s						
JTS	**Las Juntas de**	**48.97**	**23**	IAMs_20	IAMs_20	02 19 25.3	
	comp=Z,3μm,20.0s						
JTS	**Las Juntas de**	**48.97**	**23**	*e*P	**P**	**02 03 54.9**	**+1.9**
JTS	**Las Juntas de**	**48.97**	**23**	P	**P**	**02 03 53.0**	**0.0**
JTS				pmax	pmax		
	comp=Z,37nm,1.2s						
HELC	**Santa Helena**	**49.08**	**37**	*e*P	**P**	**02 03 53.9**	**-0.4**
SPBC	**San Pablo de B**	**49.34**	**39**	*e*P	**P**	**02 03 55.9**	**-0.1**
COVE	**Coope Vega, Sa**	**49.55**	**24**	IAmb	IAmb	02 04 01.2	
	comp=Z,39nm,1.1s						
PTBC	**PUERTO BERRIO,**	**49.90**	**38**	*i*eP	**P**	**02 03 59.7**	**-0.5**
RUSC	**La Rusia**	**50.05**	**40**	*e*P	**P**	**02 04 00.7**	**-1.1**
BELA	**Belgrano 2**	**50.47**	**165**	P	**P**	**02 04 04.9**	**+1.2**
BELA				IAmb	IAmb	02 04 28.4	
	comp=Z,38nm,1.2s						
BARC	**Barichara**	**50.59**	**39**	*e*P	**P**	**02 04 04.6**	**-1.1**
BRRC	**Barranca, Sant**	**50.76**	**38**	*e*P	**P**	**02 04 05.5**	**-1.1**
BOAB	**BOACO BROADBAND**	**50.79**	**22**	P	**P**	**02 04 06.8**	**0.0**
SNET	**Serv Nac Est T**	**51.02**	**17**	IAMs_20	IAMs_20	02 19 58.5	
	comp=Z,2μm,21.0s						
MATN	**Matagalpa**	**51.17**	**21**	P	**P**	**02 04 08.8**	**-1.0**
PAMC	**Pamplona, Colo**	**51.48**	**39**	*e*P	**P**	**02 04 10.4**	**-2.2**
RAR	**Rarotonga**	**51.64**	**270**	LR	LR	02 21 18.7	
	comp=Z,364nm,20.4s,baz=133,slow=31						
TGUH	**Tegucigalpa,Un**	**51.87**	**19**	P	**P**	**02 04 14.7**	**-0.3**
TGUH				IAmb	IAmb	02 04 24.9	
	comp=Z,30nm,1.0s						
BDFB	**Brasilia**	**52.45**	**82**	P	**P**	**02 04 20.4**	**+0.9**
	comp=Z,20nm,0.9s,baz=238,slow=6.2,SNR=28						
BDFB				LR	LR	02 24 10.9	
	comp=Z,2μm,21.6s,baz=246,slow=33						
	comp=Z,20nm,0.9s						
BDFB	**Brasilia**	**52.45**	**82**	P	**P**	**02 04 20.1**	**+0.6**
BDFB				IAmb	IAmb	02 04 29.0	
	comp=Z,39nm,1.1s						
BDFB	**Brasilia**	**52.45**	**82**	P	**P**	**02 04 20.1**	**+0.6**
BDFB				pmax	pmax		
	comp=Z,39nm,1.1s						
SJCC	**San Jacinto, C**	**52.47**	**35**	*i*eP	**P**	**02 04 19.1**	**-0.4**
CMIG	**Matias Romero**	**53.32**	**9**	LR	LR	02 21 25.3	
	comp=Z,2μm,19.2s,baz=180,slow=30						
TLIG	**Tlapa**	**53.42**	**5**	IAmb	IAmb	02 04 47.2	
	comp=Z,37nm,1.4s						
SDV	**Santo Domingo**	**53.85**	**40**	LR	LR	02 23 33.0	
	comp=Z,2μm,21.4s,baz=217,slow=32						
SDV	**Santo Domingo**	**53.85**	**40**	P	**P**	**02 04 27.3**	**-2.6**
SDV				IAmb	IAmb	02 04 38.8	
	comp=Z,31nm,0.8s						
SDV	**Santo Domingo**	**53.85**	**40**	IAMs_20	IAMs_20	02 26 19.9	
	comp=Z,2μm,18.0s						
QSPA	**South Pole Qui**	**54.20**	**180**	P	**P**	**02 04 32.9**	**+1.2**
	comp=Z,23nm,1.0s,baz=127,slow=1.4,SNR=49						
QSPA				LR	LR	02 25 31.6	
	comp=Z,694nm,18.1s,baz=114,slow=34						
	comp=Z,23nm,1.0s						
QSPA	**South Pole Qui**	**54.20**	**180**	P	**P**	**02 04 31.2**	**-0.5**
QSPA				IAmb	IAmb	02 05 00.0	
	comp=Z,27nm,0.9s						
SBA	**Scott Base**	**55.24**	**195**	P	**P**	**02 04 39.7**	**+0.8**
SBA				IAmb	IAmb	02 04 49.3	
	comp=Z,20nm,1.0s						
SBA	**Scott Base**	**55.24**	**195**	P	**P**	**02 04 39.7**	**+0.8**
SBA				pmax	pmax		
	comp=Z,20nm,1.0s						
VNDA	**Vanda**	**56.34**	**195**	P	**P**	**02 04 48.2**	**+1.4**
	comp=Z,3.4nm,0.9s,baz=95,slow=6.9,SNR=10						
VNDA				LR	LR	02 23 15.0	
	comp=Z,1μm,21.9s,baz=98,slow=30						
	comp=Z,3.4nm,0.9s						
VNDA	**Vanda**	**56.34**	**195**	P	**P**	**02 04 46.6**	**-0.2**
VNDA	**Vanda**	**56.34**	**195**	P	**P**	**02 04 46.6**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,16nm,1.2s						
VNA3	**Neumayer Olymp**	**57.28**	**157**	P	**P**	**02 04 54.7**	**+1.1**
TEIG	**Tepich**	**57.55**	**16**	IAMs_20	IAMs_20	02 25 25.6	
	comp=Z,2μm,18.0s						
VNA1	**Neumayer--Stat**	**57.89**	**157**	P	**P**	**02 04 59.5**	**+1.6**
VNA2	**Neumayer--Watz**	**58.08**	**157**	P	**P**	**02 05 00.5**	**+1.3**
	baz=269,slow=7.0						
PCRV	**Puerto La Cruz**	**58.23**	**45**	LR	LR	02 27 42.3	
	comp=Z,3μm,20.1s,slow=34						
ZAIG	**Zacatecas**	**58.46**	**0**	P	**P**	**02 05 02.9**	**+0.1**
ZAIG				IAmb	IAmb	02 05 24.0	
	comp=Z,35nm,1.3s						
MTDJ	**Mount Denham**	**58.93**	**28**	IAMs_20	IAMs_20	02 24 29.3	
	comp=Z,2μm,22.0s						
SNAA	**Sanae**	**59.21**	**159**	P	**P**	**02 05 07.7**	**+0.5**
SNAA	**Sanae**	**59.21**	**159**	LR	LR	02 28 28.9	
	comp=Z,2μm,18.0s,baz=200,slow=34						
SNAA	**Sanae**	**59.21**	**159**	P	**P**	**02 05 07.6**	**+0.5**
SNAA				IAmb	IAmb	02 05 10.8	
	comp=Z,22nm,1.0s						
SNAA	**Sanae**	**59.21**	**159**	P	**P**	**02 05 07.6**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,23nm,1.0s						
SLBS	**Sierra La Lagu**	**59.78**	**352**	P	**P**	**02 05 10.9**	**-0.7**
SLBS				IAmb	IAmb	02 05 14.3	
	comp=Z,26nm,1.2s						
TROLL	**Troll, Antarti**	**60.62**	**160**	P	**P**	**02 05 18

TXAR	Lajitas Array	65.01	359		P	P	02 05 46.0	-0.5	
	comp=Z,2.1nm,0.8s,baz=186,slow=8.8,SNR=21								
TXAR					LR	LR	02 28 30.8		
	comp=Z,549nm,21.1s,baz=170,slow=31								
	comp=Z,2.1nm,0.8s								
SEUS	St. Eustatius	65.09	42		IAMs_20	IAMs_20	02 30 26.8		
	comp=Z,2µm,21.0s								
ABD	La Joyeuse, An	65.10	44		IAMs_20	IAMs_20	02 34 06.9		
	comp=Z,1µm,19.0s								
GDSD	La Dsirade Is	65.21	45		IAMs_20	IAMs_20	02 33 53.8		
	comp=Z,1µm,20.0s								
SMRT	St. Maarten	65.50	42		IAMs_20	IAMs_20	02 30 47.5		
	comp=Z,2µm,21.0s								
HKT	Hockley	65.92	6	*i*	P	P	02 05 52.4	+0.2	
HKT					pmax	pmax			
	comp=Z,28nm,1.7s								
HKT	Hockley	65.92	6		P	P	02 05 53.8	+1.6	
	baz=186								
OUZ	Omahuta	65.94	243		IAMs_20	IAMs_20	02 27 05.7		
	comp=Z,2µm,22.0s								
JCT	Junction City	66.19	3		P	P	02 05 55.2	+1.1	
	baz=182								
JCT	Junction City	66.19	3		P	P	02 05 55.5	+1.4	
	baz=182								
435B	Jarrell	66.61	5		P	P	02 05 56.7	0.0	
435B					IAmb	IAmb	02 06 17.1		
	comp=Z,27nm,1.1s								
435B	Jarrell	66.61	5		P	P	02 05 58.1	+1.4	
	baz=184								
435B	Jarrell	66.61	5		P	P	02 05 58.4	+1.7	
	baz=184								
DWPF	Disney Wildern	66.83	20		IAMs_20	IAMs_20	02 30 46.4		
	comp=Z,2µm,19.0s								
342B	Flagon Creek P	67.72	9		P	P	02 06 06.6	+2.8	
	baz=189								
RCBR	Riachuelo	67.78	81		LR	LR	02 33 12.0		
	comp=Z,898nm,21.0s,baz=16,slow=34								
WHTX	Lake Whitney,	67.82	5		P	P	02 06 06.0	+1.7	
	baz=185								
GDL2	Guadalupe Moun	67.88	358		P	P	02 06 03.7	-1.2	
237A	Washetta, Mont	67.96	6		P	P	02 06 06.7	+1.5	
	baz=186								
214A	Organ Pipe Nat	68.29	351		IAmb	IAmb	02 07 01.1		
	comp=Z,20nm,1.4s								
214A	Organ Pipe Nat	68.29	351		P	P	02 06 08.4	+1.0	
	baz=171								
TUC	Tucson	68.40	353		P	P	02 06 07.3	-0.8	
TUC	Tucson	68.40	353		P	P	02 06 07.3	-0.8	
TUC					pmax	pmax			
	comp=Z,10.0nm,1.0s								
TUC	Tucson	68.40	353		P	P	02 06 08.4	+0.3	
	baz=173								
BRAL	Brewton	68.41	14		IAMs_20	IAMs_20	02 30 33.0		
	comp=Z,1µm,19.0s								
250A	Grady	69.35	15		IAmb	IAmb	02 06 32.6		
	comp=Z,25nm,0.9s								
RMX	La Rumorosa	69.42	348		IAmb	IAmb	02 06 20.3		
	comp=Z,16nm,1.0s								
IKP	In-Ko-Pah, Jac	69.47	348		P	P	02 06 15.2	+0.5	
	baz=168,SNR=5.3								
BAR	Barrett	69.60	347		P	P	02 06 16.0	+0.5	
BAR					IAmb	IAmb	02 06 18.5		
	comp=Z,26nm,1.4s								
MSTX	Muleshoe	69.62	360		IAmb	IAmb	02 06 34.6		
	comp=Z,21nm,1.2s								
MSTX	Muleshoe	69.62	360		P	P	02 06 16.5	+0.8	
	baz=180								
MSTX	Muleshoe	69.62	360		P	P	02 06 16.9	+1.2	
	baz=180								
WLAR	White Oak Lake	69.91	8		IAmb	IAmb	02 06 33.8		
	comp=Z,18nm,0.9s								
Z47A	Carrollton	70.18	13		P	P	02 06 19.0	0.0	
	baz=192								
LRAL	Lakeview Retre	70.23	14		IAmb	IAmb	02 06 38.0		
	comp=Z,21nm,1.1s								
LRAL					IAMs_20	IAMs_20	02 31 41.3		
	comp=Z,2µm,22.0s								
LRAL	Lakeview Retre	70.23	14		P	P	02 06 19.2	0.0	
	baz=193								
BLYC	Blythe	70.29	349		IAmb	IAmb	02 06 55.7		
	comp=Z,34nm,1.4s								
BC3	Big Chuckawall	70.34	349		P	P	02 06 20.1	0.0	
	baz=169,SNR=7.2								
152A	Waverly Hall	70.35	16		IAmb	IAmb	02 06 38.6		
	comp=Z,25nm,1.1s								
152A	Waverly Hall	70.35	16		P	P	02 06 22.2	+2.1	
	baz=195								
TPFO	Pinon Flats	70.46	348		P	P	02 06 21.0	+0.1	
	baz=168								
PFO	Pinyon Flats O	70.47	348		LR	LR	02 29 44.2		
	comp=Z,620nm,21.0s,baz=166,slow=30								
PFO	Pinyon Flats O	70.47	348		P	P	02 06 20.8	-0.1	
PFO					IAmb	IAmb	02 07 34.1		
	comp=Z,32nm,1.7s								
PFO	Pinyon Flats O	70.47	348		P	P	02 06 20.8	-0.1	
PFO					pmax	pmax			
	comp=Z,32nm,1.7s								
PFO	Pinyon Flats O	70.47	348		P	P	02 06 21.4	+0.5	
	baz=168								
X18A	Snowflake	70.52	354		P	P	02 06 21.1	-0.2	
X18A					IAmb	IAmb	02 06 25.7		
	comp=Z,34nm,1.3s								
AMTX	Amarillo	70.54	1		IAmb	IAmb	02 06 59.3		
	comp=Z,37nm,1.2s								
AMTX	Amarillo	70.54	1		P	P	02 06 21.3	0.0	
	baz=181								
MURC	Murrieta	70.59	347		P	P	02 06 21.5	0.0	
	baz=168								
ELS	Elsinore Mount	70.67	347		IAmb	IAmb	02 07 07.0		
	comp=Z,39nm,1.8s								
ANMO	Albuquerque	70.69	357		P	P	02 06 21.9	-0.4	
ANMO	Albuquerque	70.69	357		P	P	02 06 21.9	-0.4	
ANMO					pmax	pmax			
	comp=Z,16nm,1.5s								
ANMO	Albuquerque	70.69	357		P	P	02 06 23.0	+0.7	
	baz=177								
ANMO	Albuquerque	70.69	357		P	P	02 06 24.6	+2.3	
	baz=177								
MIAR	Mount Ida	70.70	8		IAmb	IAmb	02 06 39.8		
	comp=Z,19nm,1.3s								
MIAR	Mount Ida	70.70	8		P	P	02 06 23.0	+0.9	
	baz=188								
MIAR	Mount Ida	70.70	8		P	P	02 06 23.6	+1.5	
	baz=188								
BELC	Belle Mtn. Jos	70.77	348		P	P	02 06 23.1	+0.4	
	baz=169,SNR=6.4								
PDMCI	Parker Dam,Lak	70.78	350		P	P	02 06 23.0	+0.4	
	baz=170								
IRM	Iron Mountain	70.79	349		P	P	02 06 22.9	+0.1	
	baz=169,SNR=5.1								
Z51A	Franklin	70.87	15		IAmb	IAmb	02 06 45.4		
	comp=Z,55nm,1.8s								
FNO	Franklin	71.07	4		IAmb	IAmb	02 07 02.5		
	comp=Z,31nm,1.0s								
W18A	Petrified Fore	71.08	354		P	P	02 06 27.0	+2.3	
	baz=174								
MSVF	Nonsavu	71.34	261		LR	LR	02 30 15.2		
	comp=Z,962nm,21.3s,baz=137,slow=30								
MSVF	Nonsavu	71.34	261		IAMs_20	IAMs_20	02 29 19.5		
	comp=Z,1µm,22.0s								
MSVF	Nonsavu	71.34	261	*i*	P	P	02 06 26.3	-0.3	
MSVF					pmax	pmax			
	comp=Z,26nm,1.3s								
GOGA	Godfrey	71.35	17		IAmb	IAmb	02 06 45.4		
	comp=Z,20nm,1.1s								
GMRC	Granite Mounta	71.48	349		P	P	02 06 27.5	+0.5	
	baz=169,SNR=7.4								
X48A	Hartselle	71.59	14		IAmb	IAmb	02 06 46.0		
	comp=Z,27nm,1.2s								
X48A	Hartselle	71.59	14		P	P	02 06 28.0	+0.5	
	baz=193								
WUAZ	Wupatki	71.63	352		IAmb	IAmb	02 07 10.8		
	comp=Z,19nm,1.1s								
WUAZ	Wupatki	71.63	352		P	P	02 06 29.1	+1.1	
	baz=173								
OK031	S. Brethren Rd	71.80	5		P	P	02 06 28.5	-0.3	
OK031					IAmb	IAmb	02 07 11.8		
	comp=Z,41nm,1.5s								
TUL1	Leonard	71.84	6		IAmb	IAmb	02 06 48.4		
	comp=Z,23nm,1.0s								
OK034	N. Norfolk Rd.	71.87	5		IAmb	IAmb	02 06 48.1		
	comp=Z,36nm,1.3s								
NHSC	New Hope	71.89	20		P	P	02 06 29.2	-0.1	
NHSC					IAMs_20	IAMs_20	02 33 43.4		
	comp=Z,1µm,21.0s								
NHSC	New Hope	71.89	20		P	P	02 06 30.1	+0.7	
	baz=199								
PLAL	Pickwick Lake	71.92	13		IAmb	IAmb	02 06 47.5		
	comp=Z,23nm,1.1s								
U32A	Winter Ranch,	72.11	3		IAmb	IAmb	02 06 53.7		
	comp=Z,24nm,1.0s								
U32A	Winter Ranch,	72.11	3		P	P	02 06 31.0	+0.4	
	baz=183								
TUQ	Turquoise Moun	72.16	349		P	P	02 06 32.0	+0.9	
	baz=169								
GSC	Goldstone, Bar	72.18	348		IAmb	IAmb	02 06 35.3		
	comp=Z,35nm,1.6s								
GSC	Goldstone, Bar	72.18	348		P	P	02 06 31.5	+0.4	
	baz=168,SNR=8.2								
FCAR	Ozark Folk Cen	72.20	9		IAmb	IAmb	02 07 08.7		
	comp=Z,42nm,1.9s								
OK038	West end E0370	72.22	3		P	P	02 06 30.4	-0.9	
OK038					IAmb	IAmb	02 06 49.8		
	comp=Z,33nm,1.0s								
OK044	Pawnee Station	72.22	5		IAmb	IAmb	02 07 09.4		
	comp=Z,26nm,1.2s								
OK050	Pawnee Station	72.23	5		IAmb	IAmb	02 06 49.9		
	comp=Z,17nm,1.0s								
CCAC	Calif City Air	72.25	347		IAmb	IAmb	02 07 12.5		
	comp=Z,21nm,1.1s								
OK048	Pawnee Station	72.25	5		IAmb	IAmb	02 06 50.6		
	comp=Z,23nm,1.1s								
PKM	Mcpherson Peak	72.34	345		P	P	02 06 32.9	+0.6	
	baz=166								
OK051	E0350 and S346	72.35	5		IAmb	IAmb	02 06 51.1		
	comp=Z,24nm,1.1s								
HHAR	Hobbs	72.38	7		IAmb	IAmb	02 07 09.6		
	comp=Z,25nm,1.3s								
HODGE	Hodges	72.42	18		IAmb	IAmb	02 06 52.2		
	comp=Z,24nm,1.1s								
U38A	Gravette	72.49	7		IAmb	IAmb	02 06 52.6		
	comp=Z,24nm,1.1s								
LCAR	Lake Charles	72.50	10		IAmb	IAmb	02 06 58.0		
	comp=Z,44nm,1.7s								
OK032	Salt Plains WL	72.56	4		IAmb	IAmb	02 06 52.8		
	comp=Z,34nm,1.1s								
SHOC	Shoshone, Teco	72.67	348		P	P	02 06 35.0	+1.0	
	baz=168								
JSC	Jenkinsville	72.72	18		IAmb	IAmb	02 06 57.4		
	comp=Z,26nm,1.1s								
T35A	Sooner Cattle	72.78	5		P	P	02 06 35.1	+0.5	
T35A					IAmb	IAmb	02 06 54.1		
	comp=Z,22nm,1.1s								
T25A	Trinidad	72.80	358		IAmb	IAmb	02 06 39.0		
	comp=Z,53nm,1.6s								
T25A	Trinidad	72.80	358		P	P	02 06 38.0	+3.0	
	baz=178								
KAN13	South Haven SW	72.81	4		IAmb	IAmb	02 06 52.3		
	comp=Z,33nm,1.3s								
ISA	Isabella, Lake	72.83	347		P	P	02 06 35.7	+0.7	
	baz=167								
KAN17	Caldwell West	72.83	4		IAmb	IAmb	02 06 54.5		
	comp=Z,29nm,1.1s								
V48A	Smith Brothers	72.89	13		IAmb	IAmb	02 06 53.9		
	comp=Z,26nm,1.0s								
V48A	Smith Brothers	72.89	13		P	P	02 06 34.2	-1.0	
	baz=193								
KAN09	Caldwell North	72.93	4		IAmb	IAmb	02 06 55.1		
	comp=Z,17nm,0.9s								
KAN01	Argonia South	72.94	4		IAmb	IAmb	02 07 14.3		
	comp=Z,30nm,1.1s								
KAN08	Anthony NE Sta	73.00	4		IAmb	IAmb	02 06 55.6		
	comp=Z,22nm,1.1s								
MPMC	Manual Prospec	73.03	347		P	P	02 06 36.6	+0.2	
	baz=168,SNR=12								
MVCO	Mesa Verde	73.06	355		IAmb	IAmb	02 07 12.4		
	comp=Z,37nm,1.1s								
MVCO	Mesa Verde	73.06	355		P	P	02 06 36.4	-0.1	
	baz=175								
CPCT	Cooper Cave	73.07	15		IAmb	IAmb	02 07 54.7		
	comp=Z,25nm,1.5s								
WVT	Waverly	73.08	12		P	P	02 06 35.9	-0.5	
WVT					IAmb	IAmb	02 06 54.4		
	comp=Z,22nm,1.2s								
WVT	Waverly	73.08	12		IAMs_20	IAMs_20	02 33 57.8		
	comp=Z,1µm,22.0s								
WVT	Waverly	73.08	12		P	P	02 06 35.9	-0.5	
WVT					pmax	pmax			
	comp=Z,21nm,1.3s								
WVT	Waverly	73.08	12		P	P	02 06 36.4	0.0	
	baz=192								
PAULI	Pauline	73.09	18		IAmb	IAmb	02 06 55.8		
	comp=Z,33nm,1.1s								
VES	Vestal, Richgr	73.12	346		P	P	02 06 37.1	+0.4	
	baz=166								
KNB	Kanab	73.28	351		IAmb	IAmb	02 07 13.9		
	comp=Z,27nm,1.3s								
LCMT	Little Creek M	73.33	351		P	P	02 06 37.1	-0.9	
TKL	Tuckaleechee C	73.43	16		LR	LR	02 36 08.2		
	comp=Z,472nm,19.1s,baz=190,slow=34								
TKL	Tuckaleechee C	73.43	16		P	P	02 06 37.4	-1.1	
	baz=196								
SDCO	Great Sand Dun	73.44	358		P	P	02 06 38.8	-0.1	
	baz=178								
SDCO	Great Sand Dun	73.44	358		P	P	02 06 39.2	+0.3	
	baz=178								
S22A	4UR Ranch, Cre	73.50	357		IAmb	IAmb	02 06 43.5		
	comp=Z,31nm,1.4s								
S22A	4UR Ranch, Cre	73.50	357		P	P	02 06 39.8	+0.6	
	baz=176								
KMSC	Kings Mountain	73.52	18		IAmb	IAmb	02 06 57.5		
	comp=Z,36nm,1.4s								
PKCU	Pink Cliffs	73.64	352		P	P	02 06 40.4	+0.3	
PKCU					IAmb	IAmb	02 07 11.4		
	comp=Z,40nm,1.2s								
V53A	Saluda	73.66	17		IAmb	IAmb	02 07 03.3		
	comp=Z,44nm,1.3s								
TPNV	Topopah Spring	73.69	349		IAmb	IAmb	02 07 16.7		
	comp=Z,48nm,1.6s								
TPNV	Topopah Spring	73.69	349		P	P	02 06 40.9	+0.7	
	baz=169								
PMPB	Monarch Peak	73.83	345		P	P	02 06 41.0	+0.1	
PMPB					IAmb	IAmb	02 06 50.9		
	comp=Z,37nm,1.1s								
U49A	Red Boiling Sp	73.83	14		IAmb	IAmb	02 06 59.1		
	comp=Z,31nm,1.1s								
CCUT	Cedar City	73.87	351		IAmb	IAmb	02 06 45.6		
	comp=Z,42nm,1.4s								
PRN	Pahroc Range	73.96	350		IAmb	IAmb	02 07 21.7		
	comp=Z,26nm,1.3s								
PV13	Radium Mtn., P	74.03	355		P	P	02 06 42.1	-0.1	
PV13					IAmb	IAmb	02 06 46.0		
	comp=Z,24nm,1.3s								
T47A	Sharon Grove	74.05	13		IAmb	IAmb	02 07 00.3		
	comp=Z,31nm,1.1s								
R32A	Long Quarter,	74.15	3		IAmb	IAmb	02 07 34.5		
	comp=Z,34nm,1.4s								
PV11	David Mesa, Pa	74.17	355		IAmb	IAmb	02 06 46.7		
	comp=Z,44nm,1.4s								
PV15	Paradox Valley	74.19	355		IAmb	IAmb	02 07 14.4		
	comp=Z,21nm,1.0s								
LCH	Last Change Ra	74.20	348		P	P	02 06 42.4	-0.8	
PV23	Carpenter Ridg	74.33	355		IAmb	IAmb	02 07 07.4		
	comp=Z,23nm,0.9s								
S44A	Carbondale	74.37	11		IAmb	IAmb	02 07 03.7		
	comp=Z,33nm,1.1s								
S44A	Carbondale	74.37	11		P	P	02 06 44.5	+0.5	
	baz=191								
CCM	Cathedral Cave	74.45	9		P	P	02 06 44.0	-0.4	
CCM					IAmb	IAmb	02 07 01.1		
	comp=Z,37nm,1.1s								
CCM	Cathedral Cave	74.45	9		P	P	02 06 44.0	-0.4	
CCM					pmax	pmax			
	comp=Z,37nm,1.1s								
CCM	Cathedral Cave	74.45	9		P	P	02 06 44.2	-0.1	
	baz=190								
CCM	Cathedral Cave	74.45	9		P	P	02 06 44.4	0.0	
	baz=190								
CASY	Casey	74.89	193		IAMs_20	IAMs_20	02 34 36.8		
	comp=Z,2µm,21.0s								
PSUT	Pine Spring	74.91	351		P	P	02 06 46.9	-0.4	
SMCO	Snowmass	74.93	356		IAmb	IAmb	02 07 26.7		
	comp=Z,22nm,1.1s								
R11A	Troy Canyon, C	74.96	349		P	P	02 06 48.1	+0.5	
	baz=169,SNR=9.2								
Q16A	Castle Valley	74.98	353		IAmb	IAmb	02 07 16.0		
	comp=Z,29nm,1.2s								
LHV	Little Huntoon	75.35	347		IAmb	IAmb	02 06 54.3		
	comp=Z,35nm,1.3s								
TMUT	Trail Mountain	75.36	353		IAmb	IAmb	02 06 59.8		
	comp=Z,21nm,1.0s								
WCI	Wyandotte Cave	75.40	13		P	P	02 06 49.2	-0.7	
WCI					IAmb	IAmb	02 07 11.9		
	comp=Z,26nm,1.1s								
WCI	Wyandotte Cave	75.40	13		P	P	02 06 49.2	-0.7	
WCI					pmax	pmax			
	comp=Z,26nm,1.1s								
NV11	Mina Array Sit	75.46	347		IAmb	IAmb	02 07 18.9		
	comp=Z,20nm,1.1s								
NVAR	Mina Array Bea	75.48	347		P	P	02 06 51.1	+0.4	
	comp=Z,9.3nm,0.8s,baz=176,slow=6.6,SNR=36								
	comp=Z,9.3nm,0.8s								
CMB	Columbia Colle	75.50	346		IAMs_20	IAMs_20	02 32 14.1		
	comp=Z,1µm,21.0s								
P18A	Preston Nutter	75.60	354		P	P	02 06 50.7	-0.7	
U59A	Littleton	75.60	20		IAmb	IAmb	02 07 13.3		
	comp=Z,29nm,1.1s								
BLA	Blacksburg	75.71	18		IAMs_20	IAMs_20	02 35 56.4		
	comp=Z,1µm,19.0s								
WAKR	Walker	75.77	346		P	P	02 06 52.5	+0.3	
WAKR					IAmb	IAmb	02 07 08.0		
	comp=Z,41nm,1.6s								
O20A	White River Ci	75.95	356		IAmb	IAmb	02 07 30.6		
	comp=Z,33nm,1.3s								
O20A	White River Ci	75.95	356		P	P	02 06 54.8	+1.6	
	baz=175								
KVN	Kaiserville	76.05	348		IAmb	IAmb	02 07 22.1		
	comp=Z,24nm,1.1s								
MAW	Mawson	76.11	174		P	P	02 06 54.8	+1.1	
	comp=Z,4.2nm,0.8s,baz=176,slow=7.5,SNR=9.4								
MAW					LR	LR	02 38 24.6		
	comp=Z,913nm,20.3s,baz=205,slow=34								
	comp=Z,4.2nm,0.8s								
MAW	Mawson	76.11	174		P	P	02 06 54.0	+0.3	
MAW	Mawson	76.11	174		P	P	02 06 54.0	+0.3	
MAW					pmax	pmax			
	comp=Z,5.0nm,1.3s								
BRIGG	Briggsdale	76.24	359		IAmb	IAmb	02 07 23.4		
	comp=Z,42nm,1.4s								
T59A	Double "B" Far	76.25	20		IAmb	IAmb	02 07 18.6		
	comp=Z,25nm,1.1s								
DUG	Dugway, Tooele	76.42	352		P	P	02 06 56.2	+0.4	
	baz=172,SNR=11								
AFDM	Forest Hills D	76.50	345		IAmb	IAmb	02 07 00.1		
	comp=Z,38nm,1.5s								
OGNE	Ogallala	76.59	0		P	P	02 06 58.3	+1.6	
	baz=180								
OGNE	Ogallala	76.59	0		P	P	02 06 58.3	+1.6	
	baz=180								
N23A	Red Feather La	76.60	357		P	P	02 06 56.8	-0.2	
N23A					IAmb	IAmb	02 07 20.2		
	comp=Z,25nm,1.4s								
JLU	Jordanelle	76.68	353		IAmb	IAmb	02 07 01.3		
	comp=Z,32nm,1.5s								
Q51A	Peebles	76.76	15		IAmb	IAmb	02 07 17.7		
	comp=Z,24nm,1.0s								
Q51A	Peebles	76.76	15		P	P	02 06 59.0	+1.4	
	baz=196								
Q51A					P	P	02 06 59.0	+1.4	
	baz=196								
Q52A	Bidwell	76.93	16		P	P	02 07 00.7	+2.1	
	baz=197								
Q52A					P	P	02 07 00.7	+2.1	
	baz=197								
P49A	Miami Univ. Ec	76.97	14		IAMs_20	IAMs_20	02 37 11.9		
	comp=Z,1µm,20.0s								
R58B	Mineral	77.09	20		IAmb	IAmb	02 07 22.4		
	comp=Z,32nm,1.2s								
BGNE	Belgrade	77.16	3		P	P	02 07 00.1	+0.3	
BGNE					IAmb	IAmb	02 07 04.2		
	comp=Z,32nm,1.1s								
HDIL	Hopedale	77.17	10		P	P	02 07 01.2	+1.3	
	baz=191								
ORV	Oroville	77.19	345		IAmb	IAmb	02 07 15.6		
	comp=Z,20nm,1.2s								
BMN	Battle Mountai	77.25	349		IAmb	IAmb	02 07 28.0		
	comp=Z,20nm,1.1s								
P51A	Williamsport	77.26	15		P	P	02 07 01.6	+1.2	
	baz=196								
P51A					P	P	02 07 01.6	+1.2	
	baz=196								
BEKR	Beckworth	77.26	346		IAmb	IAmb	02 07 41.3		
	comp=Z,22nm,1.2s								
Q54A	Coxs Mills	77.29	17		P	P	02 07 02.4	+1.8	
	baz=198								
Q54A					P	P	02 07 02.4	+1.8	
	baz=198								
RWWY	Rawlins	77.44	356		IAmb	IAmb	02 07 32.1		
	comp=Z,20nm,1.1s								
P52A	Corning	77.61	16		P	P	02 07 03.5	+1.2	
DZM	Mont Dzumac	78.10	251	*e*S		S	02 16 58.1	-1.7	
	comp=Z,580nm,25.2s								
DZM				*e*SS		SS	02 22 01.4	+0.4	
	comp=Z,330nm,27.9s								
DZM				*e*LR		LR	02 31 14.9		
	comp=Z,5µm,27.4s								
DZM	Mont Dzumac	78.10	251		LR	LR	02 33 18.4		
	comp=Z,2µm,21.8s,baz=196,slow=29								
LIFNC	LIFOU	78.21	253		IAMs_20	IAMs_20	02 32 58.3		
	comp=Z,1µm,21.0s								
K22A	Casper	78.37	357		IAmb	IAmb	02 07 10.8		
	comp=Z,38nm,1.4s								
K22A	Casper	78.37	357		P	P	02 07 09.1	+2.3	
	baz=177								
L40A	Anamosa	78.40	9		IAmb	IAmb	02 07 23.1		
	comp=Z,30nm,1.1s								
BW06	Boulder Array	78.66	355		IAmb	IAmb	02 07 18.2		
	comp=Z,15nm,0.7s								
BW06	Boulder Array	78.66	355		P	P	02 07 08.1	-0.4	
	baz=174,SNR=19								
PDAR	Pinedale Array	78.66	355		P	P	02 07 07.8	-0.7	
	comp=Z,6.4nm,0.6s,baz=163,slow=6.0,SNR=23								
	comp=Z,6.4nm,0.6s								
SDMD	Soldier's Deli	78.72	20		P	P	02 07 09.8	+1.2	
	baz=201								
AHID	Auburn Hatcher	78.79	354		P	P	02 07 08.1	-1.0	
N53A	Lisbon	79.02	17		IAmb	IAmb	02 07 21.5		
	comp=Z,41nm,1.2s								
M50A	Fremont	79.10	15		IAmb	IAmb	02 07 26.0		
	comp=Z,35nm,1.0s								
MOD	Modoc Plateau	79.22	347		IAmb	IAmb	02 07 39.8		
	comp=Z,21nm,0.9s								
REDW	Red Top Meadow	79.36	354		IAmb	IAmb	02 07 15.8		
	comp=Z,51nm,1.6s								
TPAW	Teton Pass	79.49	354

SPMN	Marine on St.	81.35	7	P	P	02 07 22.6	0.0
	baz=188						
BOZ	Bozeman (W)	81.64	354	P	P	02 07 24.4	+0.1
	baz=173,SNR=10						
G40A	Rib Lake	81.68	9	P	P	02 07 26.8	+2.5
	baz=190						
F36A	Milaca	81.91	6	IAmb	IAmb	02 07 29.9	
	comp=Z,17nm,0.9s						
E28A	Huff	82.23	1	P	P	02 07 27.6	+0.3
	baz=182						
LAO	LASA Array	82.39	357	IAmb	IAmb	02 07 38.0	
	comp=Z,24nm,0.9s						
LAO	LASA Array	82.39	357	P	P	02 07 28.9	+0.8
	baz=177						
LAO	LASA Array	82.39	357	P	P	02 07 28.6	+0.5
	baz=177,SNR=10						
COWI	Conover	82.64	9	IAmb	IAmb	02 07 38.8	
	comp=Z,18nm,0.9s						
MSO	Missoula	83.10	352	IAmb	IAmb	02 08 00.9	
	comp=Z,16nm,1.2s						
SADO	Sadowa	83.17	17	LR	LR	02 41 10.1	
	comp=Z,1µm,18.8s,baz=182,slow=33						
HAWA	Hanford	83.44	348	P	P	02 07 33.1	-0.3
HAWA				IAmb	IAmb	02 08 01.5	
	comp=Z,22nm,1.2s						
E08A	Dider Farm, El	83.46	349	IAmb	IAmb	02 08 44.8	
	comp=Z,17nm,1.3s						
D08A	Wollman Farm,	83.98	349	IAmb	IAmb	02 08 03.9	
	comp=Z,24nm,1.3s						
ARMA	Armidale	84.00	237	IAmb	IAmb	02 07 58.0	
	comp=Z,30nm,1.2s						
DGMT	Dagmar	84.12	359	P	P	02 07 37.2	+0.3
	baz=179						
AGMN	Agassiz Nation	84.15	5	IAmb	IAmb	02 07 41.0	
	comp=Z,11nm,0.9s						
AGMN	Agassiz Nation	84.15	5	P	P	02 07 38.4	+1.3
	baz=186						
LON	Longmire	84.18	347	IAmb	IAmb	02 07 59.3	
	comp=Z,13nm,1.1s						
LTY	Liberty	84.47	348	IAmb	IAmb	02 08 04.9	
	comp=Z,32nm,1.4s						
C09A	Chrisman Ranch	84.61	349	P	P	02 07 39.2	-0.3
C09A				IAmb	IAmb	02 08 03.1	
	comp=Z,26nm,1.2s						
NEW	Newport	84.90	350	LR	LR	02 38 29.3	
	comp=Z,403nm,21.7s,baz=166,slow=31						
NEW	Newport	84.90	350	IAmb	IAmb	02 08 09.1	
	comp=Z,25nm,1.1s						
NEW	Newport	84.90	350	P	P	02 07 41.1	+0.2
	baz=168						
B08A	Colville Reser	85.32	349	IAmb	IAmb	02 07 47.1	
	comp=Z,19nm,1.5s						
ULM	Lac du Bonnet	86.10	4	P	P	02 07 47.0	+0.2
	comp=Z,8.6nm,0.8s,baz=199,slow=6.0,SNR=5.3						
	comp=Z,8.6nm,0.8s						
ULM	Lac du Bonnet	86.10	4	IAmb	IAmb	02 07 50.3	
	comp=Z,23nm,1.1s						
ULM	Lac du Bonnet	86.10	4	*i* P	P	02 07 45.7	-1.1
STKA	Stephens Creek	89.58	230	P	P	02 08 03.2	-1.0
	comp=Z,2.4nm,0.9s,baz=126,slow=11,SNR=3.2						
STKA				LR	LR	02 41 57.2	
	comp=Z,2µm,18.9s,baz=142,slow=31						
	comp=Z,2.4nm,0.9s						
STKA	Stephens Creek	89.58	230	*i* P	P	02 08 02.2	-2.0
HNR	Honiara	90.48	258	LR	LR	02 39 30.3	
	comp=Z,5µm,22.0s,baz=151,slow=30						
BBB	Bella Bella	90.62	345	LR	LR	02 39 24.3	
	comp=Z,206nm,21.7s,baz=144,slow=29						
BRLDA	Berland Lookou	90.65	351	P	P	02 08 08.1	-0.4
BRLDA				IAmb	IAmb	02 08 17.3	
	comp=Z,16nm,0.9s						
SUR	Sutherland	93.77	135	LR	LR	02 42 59.2	
	comp=Z,779nm,20.8s,baz=223,slow=31						
CTA	Charters Tower	94.30	242	LR	LR	02 45 15.9	
	comp=Z,775nm,19.2s,baz=114,slow=32						
CTAO	Charters Tower	94.30	242	IAMs_20	IAMs_20	02 44 34.9	
	comp=Z,951nm,20.0s						
BBTS	Babate	95.36	76	LR	LR	02 48 02.9	
	comp=Z,746nm,19.6s,baz=237,slow=33						
SCHQ	Schefferville	95.56	20	LR	LR	02 48 08.6	
	comp=Z,1µm,19.6s,baz=234,slow=33						
DLBC	Dease Lake	96.86	346	LR	LR	02 46 11.7	
	comp=Z,369nm,18.8s,baz=117,slow=32						
JIS	Juneau Island	97.64	344	IAMs_20	IAMs_20	02 43 40.7	
	comp=Z,661nm,20.0s						
YKA	Yellowknife Ar	98.64	354	P	Pdif	02 08 45.5	+0.7
	comp=Z,1.4nm,0.9s,baz=171,slow=4.7,SNR=4.3						
	comp=Z,1.4nm,0.9s						
BOSA	Boshof	99.12	135	LR	LR	02 49 03.0	
	comp=Z,1µm,19.1s,baz=214,slow=33						
KRVT	Keravat (AS076	99.83	257	LR	LR	02 45 55.7	
	comp=Z,530nm,21.9s,baz=281,slow=31						
ASAR	Alice Springs	100.17	231	P	Pdif	02 08 51.4	-1.4
	comp=Z,0.8nm,0.9s,baz=132,slow=4.6,SNR=4.5						
PMG	Port Moresby	100.47	250	IAMs_20	IAMs_20	02 43 47.0	
	comp=Z,688nm,22.0s						
TABL	Table Mountain	101.18	342	IAMs_20	IAMs_20	02 46 38.5	
	comp=Z,522nm,18.0s						
YAH	Yahtse	101.27	341	IAMs_20	IAMs_20	02 46 30.8	
	comp=Z,618nm,18.0s						
H01W1	Cape Leeuwin H	101.57	210	T	T	04 03 10.7	
	baz=150,slow=76,SNR=277						
H01W2	Cape Leeuwin H	101.58	210	T	T	04 03 10.9	
	baz=150,slow=76,SNR=234						
H01W3	Cape Leeuwin H	101.59	210	T	T	04 03 11.8	
	baz=150,slow=76,SNR=221						
BERG	Berg Lake	101.82	341	IAMs_20	IAMs_20	02 44 26.2	
	comp=Z,563nm,20.0s						
HMT	Hamilton	101.92	340	IAMs_20	IAMs_20	02 43 39.0	
	comp=Z,710nm,22.0s						
M30M	Minto, Yukon	102.03	345	IAMs_20	IAMs_20	02 46 03.9	
	comp=Z,626nm,19.0s						
RAGM	Ragged Mountai	102.08	340	IAMs_20	IAMs_20	02 44 08.1	
	comp=Z,563nm,20.0s						
KDAK	Kodiak Island	102.42	335	IAMs_20	IAMs_20	02 44 03.2	
	comp=Z,808nm,19.0s						
HIN	Hinchinbrook I	102.60	339	IAMs_20	IAMs_20	02 45 19.9	
	comp=Z,696nm,20.0s						
FID	Port Fidalgo	102.88	340	IAMs_20	IAMs_20	02 44 29.8	
	comp=Z,616nm,20.0s						
GLI	Glacier Island	103.16	339	IAMs_20	IAMs_20	02 44 28.8	
	comp=Z,698nm,21.0s						
CNPM	China Poot	103.33	337	IAMs_20	IAMs_20	02 45 58.3	
	comp=Z,916nm,19.0s						
BRLK	Bradley Lake	103.41	337	IAMs_20	IAMs_20	02 45 31.2	
	comp=Z,1µm,21.0s						
PWL	Port Wells	103.50	339	IAMs_20	IAMs_20	02 45 38.8	
	comp=Z,744nm,21.0s						
Q19K	Cape Douglas,	103.66	335	IAMs_20	IAMs_20	02 47 03.9	
	comp=Z,794nm,18.0s						
KNK	Knik Glacier	103.98	339	IAMs_20	IAMs_20	02 45 12.6	
	comp=Z,668nm,21.0s						
J29M	Klondike Camp	103.99	345	IAMs_20	IAMs_20	02 46 54.7	
	comp=Z,550nm,20.0s						
RC01	Rabbit Creek A	104.10	338	IAMs_20	IAMs_20	02 45 54.7	
	comp=Z,991nm,21.0s						
SML	Sawmill	104.27	339	IAMs_20	IAMs_20	02 45 23.0	
	comp=Z,634nm,21.0s						
P18K	Big Mountain,	104.55	335	IAMs_20	IAMs_20	02 47 03.4	
	comp=Z,616nm,19.0s						
SUA	Susitna One	104.70	338	IAMs_20	IAMs_20	02 45 53.4	
	comp=Z,753nm,21.0s						
M22K	Willow	104.74	339	IAMs_20	IAMs_20	02 45 56.5	
	comp=Z,724nm,21.0s						
O18K	Koktuh Hills	104.89	335	IAMs_20	IAMs_20	02 47 14.3	
	comp=Z,718nm,19.0s						
CUT	Chulitna	105.30	339	IAMs_20	IAMs_20	02 46 15.2	
	comp=Z,626nm,20.0s						
SKT	Skwentna	105.34	338	IAMs_20	IAMs_20	02 46 35.3	
	comp=Z,1µm,21.0s						
N19K	Bonanza Creek	105.36	336	IAMs_20	IAMs_20	02 45 49.0	
	comp=Z,671nm,20.0s						
M20K	Styx River	105.75	338	IAMs_20	IAMs_20	02 46 47.1	
	comp=Z,1µm,21.0s						
I26K	Coal Creek Min	105.81	344	IAMs_20	IAMs_20	03 05 15.9	
	comp=Z,507nm,19.0s						
M19K	Big River Lodg	106.16	337	IAMs_20	IAMs_20	02 47 10.9	
	comp=Z,881nm,22.0s						
ILAR	Eielson Array	106.27	342	PKKPbc	PKKPbc	02 24 55.0	+2.4
	comp=Z,0.3nm,0.6s,baz=318,slow=3.7,SNR=4.1						
KTH	Kantishna Hill	106.38	340	IAMs_20	IAMs_20	02 46 52.9	
	comp=Z,547nm,20.0s						
L19K	White Mountain	106.51	337	IAMs_20	IAMs_20	02 47 10.3	
	comp=Z,809nm,21.0s						
CAST	Castle Rocks	106.61	339	IAMs_20	IAMs_20	02 47 47.0	
	comp=Z,839nm,20.0s						
BPAW	Bear Paw Mtn.	106.83	340	IAMs_20	IAMs_20	02 47 07.7	
	comp=Z,616nm,22.0s						
K20K	Telida	107.15	338	IAMs_20	IAMs_20	02 47 43.2	
	comp=Z,744nm,21.0s						
J20K	Nowinta River	107.79	339	IAMs_20	IAMs_20	02 48 45.0	
	comp=Z,639nm,20.0s						
I21K	Tanana	107.93	340	IAMs_20	IAMs_20	02 47 54.9	
	comp=Z,502nm,20.0s						
H21K	Melozitna Rive	108.52	340	IAMs_20	IAMs_20	02 48 34.5	
	comp=Z,583nm,21.0s						
A36M	Sachs Harbour	108.88	353	IAMs_20	IAMs_20	03 00 34.1	
	comp=Z,613nm,20.0s						
TORD	Torodi Ar. Bea	109.11	87	PKiKP	PKiKP	02 13 38.3	+1.6
	comp=Z,0.6nm,1.0s,baz=238,slow=4.4,SNR=1.6						
TORD				PP	PP	02 13 58.1	-7.0
	comp=Z,1.8nm,0.9s,baz=260,slow=6.2,SNR=4.9						
VOI	Vohitsoka	115.52	148	IAMs_20	IAMs_20	02 52 53.3	
	comp=Z,623nm,20.0s						
FAKI	Fak Fak	115.89	245	IAMs_20	IAMs_20	02 58 46.1	
	comp=Z,708nm,20.0s						
ESDC	Sonseca Array	117.79	60	PKP	PKiKP	02 13 53.5	+0.8
	comp=Z,0.7nm,0.6s,baz=272,slow=2.0,SNR=5.2						
KAPI	Kappang	123.10	233	IAMs_20	IAMs_20	03 02 44.2	
	comp=Z,701nm,20.0s						
BILL	Biiibino	123.26	333	*e*PKIKP	PKPdf	02 13 58.1	-4.1
BILL				*e*PPP	PPP	02 18 18.9	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,122nm,15.0s						
EKA	Eskdalemuir Ar	123.81	43	PKP	PKPdf	02 14 03.8	+0.2
	comp=Z,1.6nm,0.7s,baz=219,slow=3.9,SNR=4.9						
JAGI	Jajag, Banyuwa	123.84	225	IAMs_20	IAMs_20	03 00 07.3	
	comp=Z,752nm,22.0s						
LUWI	Luwuk	123.98	239	IAMs_20	IAMs_20	03 06 30.1	
	comp=Z,419nm,19.0s						
TOLI2	Tolitoli	126.90	239	IAMs_20	IAMs_20	03 05 00.5	
	comp=Z,421nm,20.0s						
LODK	Lodwar	129.48	120	IAMs_20	IAMs_20	03 05 57.3	
	comp=Z,519nm,20.0s						
DAVOX	Davos/Dischmat	129.66	56	PKP	PKPdf	02 14 16.1	+0.7
	comp=Z,3.9nm,0.9s,baz=204,slow=11,SNR=7.4						
FUORN	Ofenpass-Fuorn	129.88	56	PKPdf	PKiKP	02 14 16.7	0.0
RETA	Reutte	130.41	55	*e*P	PKiKP	02 14 17.8	+0.4
	comp=Z,11nm,1.4s						
MOTA	Moosalm	130.60	55	*e*P	PKPdf	02 14 17.1	0.0
	comp=Z,14nm,1.2s						
SQTA	Sankt Quirin	130.65	55	*i* P	PKPdf	02 14 17.2	+0.1
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	130.94	55	*e*P	PKiKP	02 14 18.6	-0.1
	comp=Z,8.4nm,1.2s						
CLUD	Cludinico	131.61	57	PKPdf	PKPdf	02 14 17.2	-1.6
CEL	Celeste	131.72	68	IAMs_20	IAMs_20	03 07 36.2	
	comp=Z,641nm,22.0s						
NKC	Novy Kostel	132.00	52	AMS	AMS	03 12 00.0	
	comp=Z,2µm,7.9s						
NOA	NORSAR Array B	132.12	37	PKP	PKPdf	02 14 19.8	+0.4
	comp=Z,1.1nm,1.0s,baz=283,slow=2.2,SNR=2.6						
BIOA	Bad Ischl, Aus	132.36	55	*e*P	PKiKP	02 14 21.9	+0.6
	comp=Z,8.0nm,1.1s						
CLL	Collm	132.50	50	*e*PKIKP	PKiKP	02 14 22.0	+0.6
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,400nm,19.3s						
CLL	Collm	132.50	50	*e*PKPdf	PKiKP	02 14 22.0	+0.6
	comp=Z,9.0nm,1.2s						
CLL				*e*PS	PS	02 27 00.0	-0.9
CLL				*e*(PPS)		02 28 30.0	
CLL				*ex*	x	02 33 48.0	
CLL				*e*SS	SS	02 34 30.0	+6.4
CLL				*e*SSS	SSS	02 39 24.0	
CLL				LmV		03 11 00.0	
	comp=Z,400nm,19.3s						
KHC	Kasperske Hory	132.56	53	*e*PKIKP	PKiKP	02 14 22.6	+0.9
KHC				MLR	MLR		
	comp=Z,900nm,7.1s						
KHC	Kasperske Hory	132.56	53	*e*PKPDF	PKiKP	02 14 22.6	+0.9
KHC				AMS	AMS	03 09 20.0	
	comp=Z,900nm,7.1s						
GERES	GERESS Array B	132.59	54	PKP	PKPdf	02 14 20.9	+0.2
	comp=Z,2.5nm,0.9s,baz=69,slow=4.4,SNR=13						
TIP	Timpagrande	132.63	67	IAMs_20	IAMs_20	03 13 46.3	
	comp=Z,635nm,19.0s						
MOA	Molin	132.80	55	*e*P	PKiKP	02 14 23.5	+1.2
	comp=Z,9.1nm,1.2s						
CKRC	Cesky Krumlov	132.99	54	*e*PKPDF	PKiKP	02 14 23.8	+1.3
CKRC				AMS	AMS	03 11 20.0	
	comp=Z,600nm,13.9s						
PRU	Pruhonice	133.30	52	AMS	AMS	03 11 30.0	
	comp=Z,900nm,7.1s						
HFS	Hagfors	133.36	38	PKP	PKPdf	02 14 22.5	+0.9
	comp=Z,1.2nm,0.8s,baz=235,slow=0.2,SNR=8.6						
PVCC	Panska Ves	133.39	51	AMS	AMS	03 08 50.0	
	comp=Z,800nm,7.0s						
GOPC	GO Pecny, Ondr	133.45	52	AMS	AMS	03 09 10.0	
	comp=Z,1µm,6.8s						
ARSA	Arzberg	133.54	56	*e*P	PKiKP	02 14 24.4	+0.7
	comp=Z,8.9nm,0.9s						
PMBI	Palembang	133.58	219	IAMs_20	IAMs_20	03 01 50.3	
	comp=Z,455nm,22.0s						
SBUM	Sibu	133.62	232	IAMs_20	IAMs_20	03 08 55.1	
	comp=Z,498nm,20.0s						
TREC	Trest	133.82	53	AMS	AMS	03 11 00.0	
	comp=Z,900nm,24.6s						
CONA	Conrad Observa	133.87	55	*e*P	PKPdf	02 14 23.7	+0.6
	comp=Z,8.3nm,1.5s						
KSM	Kuching	134.06	229	IAMs_20	IAMs_20	03 06 02.3	
	comp=Z,501nm,22.0s						
UPC	Upice	134.30	52	AMS	AMS	03 11 20.0	
	comp=Z,700nm,11.3s						
CHVC	Chvalec	134.34	51	*e*PKPDF	PKiKP	02 14 27.2	+2.0
CHVC				AMS	AMS	03 11 30.0	
	comp=Z,800nm,25.4s						
KRUC	Moravsky	134.38	54	*e*PKP	PKPdf	02 14 24.6	+0.6
OSTC	Ostas	134.44	52	*e*PKPDF	PKiKP	02 14 27.4	+2.0
OSTC				AMS	AMS	03 12 30.0	
	comp=Z,800nm,7.2s						
DPC	Dobruska-Polom	134.48	52	AMS	AMS	03 12 50.0	
	comp=Z,700nm,16.6s						
VRAC	Vranov	134.54	53	PKP	PKiKP	02 14 25.7	+0.1
	comp=Z,1.5nm,0.6s,baz=162,slow=3.3,SNR=3.2						
VRAC	Vranov	134.54	53	*e*PKP	PKPdf	02 14 24.4	+0.1
MSEY	Mahe Island	134.61	148	IAMs_20	IAMs_20	03 01 11.9	
	comp=Z,718nm,22.0s						
KRLC	Kraliky	134.75	52	AMS	AMS	03 10 00.0	
	comp=Z,800nm,26.7s						
MODS	Modra-Piesok	134.88	55	*e*PKIKP	PKiKP	02 14 27.9	+1.5
MORC	Moravsky Berou	135.21	53	*e*PKP	PKPdf	02 14 25.9	+0.4
MAUC	Matuska	135.35	53	AMS	AMS	03 15 40.0	
	comp=Z,2µm,5.8s						
OKC	Ostrava-Krasne	135.60	53	AMS	AMS	03 13 00.0	
	comp=Z,700nm,7.5s						
FURI	Furi	135.64	118	IAMs_20	IAMs_20	03 07 07.9	
	comp=Z,512nm,22.0s						
TIXI	Tiksi	135.66	339	PKPdf	PKPdf	02 14 24.7	-0.9
TIXI	Tiksi	135.66	339	*i* PKIKP	PKPdf	02 14 25.7	0.0
VYHS	Vyhne	135.92	55	*e*PKIKP	PKiKP	02 14 28.4	-0.1
ARCES	ARCESS Array B	136.38	24	PKP	PKPdf	02 14 27.1	0.0
	comp=Z,4.2nm,0.9s,baz=343,slow=3.8,SNR=5.2						
MYKOM	Kota Tinggi	138.05	222	IAMs_20	IAMs_20	03 12 17.5	
	comp=Z,502nm,21.0s						
USRK	Ussuriysk Ar.	138.12	299	PKP	PKPdf	02 14 31.1	+0.1
	comp=Z,1.6nm,0.8s,baz=46,slow=4.2,SNR=2.5						
BKNI	Bangkinang	138.25	217	IAMs_20	IAMs_20	03 16 43.3	
	comp=Z,448nm,19.0s						
YAK	Yakutsk	138.60	326	*i* PKIKP	PKPdf	02 14 31.4	+0.1
KLR	Kul'dur	138.75	306	PKP	PKPdf	02 14 32.5	+0.4
	comp=Z,2.8nm,0.8s,baz=314,slow=4.0,SNR=5.1						
KLR	Kul'dur	138.75	306	*i* PKIKP	PKiKP	02 14 33.3	-0.9
FINES	FINESS Array B	139.19	35	PKP	PKPdf	02 14 32.7	+0.3
	comp=Z,3.9nm,0.9s,baz=122,slow=2.5,SNR=8.5						
KARP	Karpathos	139.61	75	IAMs_20	IAMs_20	03 20 47.3	
	comp=Z,332nm,19.0s						
KSRS	Korea Array	139.88	288	PKP	PKPdf	02 14 34.0	-0.4
	comp=Z,2.1nm,0.8s,baz=124,slow=2.1,SNR=5.0						
BURAR	Bucovina Array	140.12	56	PKPdf	PKPdf	02 14 32.4	-2.4
MLR	Muntele Rosu	140.48	60	IAMs_20	IAMs_20	03 15 30.3	
	comp=Z,549nm,18.0s						
NACGM	Naroch	140.80	45⇑	*e*PKP	PKPdf	02 14 35.2	-0.4
	baz=278						
RPSI	Rantau Prapat	141.33	216	IAMs_20	IAMs_20	03 15 35.8	
	comp=Z,576nm,20.0s						
AKASG	Malin Array Be	142.71	51	PKP	PKPdf	02 14 40.2	+1.1
	comp=Z,1.0nm,0.5s,baz=275,slow=2.5,SNR=9.3						
AKASG	Malin Array Be	142.71	51*c*	*i* PKIKP	PKPdf	02 14 40.5	+1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	142.71	51	PKPdf	PKPdf	02 14 39.3	+0.2
AKBB	Malin Array Si	142.71	51	*i* PKIKP	PKPdf	02 14 38.9	-0.2
CN2	Changchun	142.77	297	P	PKiKP	02 14 47.3	+4.7
ISP	Isparta	142.78	73	IAMs_20	IAMs_20	03 17 10.0	
	comp=Z,330nm,20.0s						
CSS	Mathiatis	144.33	78	IAMs_20	IAMs_20	03 18 36.3	
	comp=Z,373nm,22.0s						
ANTO	Ankara	144.88	70	PKPdf	PKPab	02 14 42.9	+0.3
ANTO	Ankara	144.88	70	PKiKP	PKPab	02 14 42.9	+0.3
MMAI	Mount Meron Ar	145.46	82	PKPbc	PKPab	02 14 45.2	+0.4
	comp=Z,15nm,0.9s,baz=166,slow=0.9,SNR=15						
KLMR	Klimovskoe	145.46	32	*e*PKP2	PKPdf	02 14 42.4	-1.1
KLMR				pmax	pmax		
	comp=Z,72nm,1.1s						
KLMR	Klimovskoe	145.46	32	*e*PKPdf	PKPdf	02 14 42.5	-1.1
KLMR				AMP		02 14 51.1	
	comp=Z,72nm,1.1s						
BR131	Keskin Array S	145.51	70	*i* PKIKP	PKPdf	02 14 44.1	-0.5
BRTR	Keskin Array B	145.51	70	PKPbc	PKPdf	02 14 44.8	+0.2
	comp=Z,7.9nm,0.9s,baz=224,slow=3.4,SNR=26						
NJ2	Nanjing	145.60	276	*e*PKPbc	PKiKP	02 14 50.1	+1.3
NRIK	Noril'sk	146.15	354	PKPbc	PKPbc	02 14 45.6	0.0
	comp=Z,7.6nm,0.6s,baz=12,slow=3.2,SNR=7.6						
NRIK	Noril'sk	146.15	354	PKPdf	PKPdf	02 14 45.2	+0.6
NRIK	Noril'sk	146.15	354	*i* PKIKP	PKPdf	02 14 44.0	-0.6
SIM	Simferopol'	146.23	61	*i* PKP2	PKiKP	02 14 48.9	-0.8
SIM				pmax	pmax		
	comp=Z,23nm,1.0s						
OBN	Obninsk	146.26	43	PKPbc	PKPbc	02 14 46.3	+0.1
	comp=Z,7.3nm,0.6s,baz=239,slow=3.6,SNR=11						
OBN	Obninsk	146.26	43	PKPdf	PKPdf	02 14 44.9	-0.2
OBN	Obninsk	146.26	43	*e*PKIKP	PKPdf	02 14 44.2	-0.9
OBN				*i*		02 18 06.6	
OBN				*e*PPP	PPP	02 21 23.5	
OBN				pmax	pmax		
	comp=Z,45nm,1.1s						
HIA	Hailar	146.60	307	IAMs_20	IAMs_20	03 13 24.4	
	comp=Z,418nm,19.0s						
MOS	Moscow	146.63	41	*i* PKP2	PKPdf	02 14 46.6	+0.8
QIZ	Qiongzhong	146.83	248	IAMs_20	IAMs_20	03 28 08.3	
	comp=Z,326nm,20.0s						
QIZ	Qiongzhong	146.83	248	PKPbc	PKPdf	02 14 47.5	+0.3
QIZ				SS	SS	02 37 12.1	-0.4
QIZ				AMB	AMB		
	comp=Z,140nm,7.6s						
QIZ				LR	LR		
	comp=Z,250nm,19.2s						
QIZ				LR	LR		
	comp=Z,210nm,23.9s						
QIZ				LR	LR		
	comp=Z,420nm,33.0s						
BOD	Bodaibo	147.44	324	*e*PKP2	PKPbc	02 14 50.2	+0.6
BOD				pmax	pmax		
	comp=Z,40nm,1.4s						
PRGR	Permogore	147.51	28	*e*PKP2	PKPbc	02 14 48.8	-0.8
PRGR				pmax	pmax		
	comp=Z,25nm,0.7s						
UBPT	Khong Chiam	147.54	238	PKPbc	PKPbc	02 14 50.5	-0.6
TIA	Tai'an	148.06	282	*e*PKPbc	PKPdf	02 14 50.3	+1.5
TIA				LR	LR		
	comp=Z,230nm,17.9s						
TIA				LR	LR		
	comp=Z,230nm,19.0s						
TIA				LR	LR		
	comp=Z,410nm,17.8s						
LPSR	Galich'ya Gora	148.33	46	*e*PKIKP	PKPdf	02 14 49.5	+0.8
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VORR	Voronezh	148.74	48	*e*PKIKP	PKPdf	02 14 50.5	+1.1
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
WHN	Wuhan	148.76	271	PKPbc	PKPbc	02 14 53.4	-0.5
VSR	Storozhevoye	148.83	49	*e*PKIKP	PKPdf	02 14 51.3	+1.8
VSR				pmax	pmax		
	comp=Z,30nm,1.4s						
XLT	XiLinHaoTe	149.54	297	*e*PKPbc	PKPbc	02 14 53.6	-2.0
RAYN	Ar Rayn	149.78	105	PKPdf	PKPdf	02 14 50.7	-1.3
RAYN	Ar Rayn	149.78	105	PKIKP	PKPdf	02 14 50.7	-1.3
RAYN				MLR	MLR		
	comp=Z,600nm,20.0s						
GULI	GuiLin	149.82	259	PKPbc	PKPdf	02 14 54.4	+2.4
HNS	HongShan	150.18	284	⇓PKPbc	PKPbc	02 14 56.8	-0.4
HNS				*e*PP	PP	02 18 37.6	+4.8
HNS				SKKS		02 25 20.9	
HNS				LR	LR		
	comp=Z,160nm,15.5s						
HNS				LR	LR		
	comp=Z,300nm,17.5s						
HNS				LR	LR		
	comp=Z,260nm,19.6s						
SOC	Sochi	150.27	64	*i* PKIKP	PKPbc	02 14 56.5	-0.8
SOC				*e*		02 18 32.3	
SOC				*e*PPP	PPP	02 21 52.8	
SOC				*e*SS	SS	02 37 56.1	+5.0
SOC				*e*SSS	SSS	02 43 33.7	
SOC

comp=Z,452nm,20.0s
ZALV Zalesovo Beam 161.34 346 PKP **PKPdf 02 15 04.9 -1.5**
comp=Z,3.9nm,0.9s,baz=278,slow=1.0,SNR=12
GTA Gaotai 161.95 288 *e*PKP **PKPdf 02 15 08.8 +1.1**
GTA PKPab **pPKPab 02 15 57.0 -1.3**
GTA LR LR
comp=Z,220nm,24.0s
GTA LR LR
comp=Z,190nm,18.5s
GTA LR LR
comp=Z,430nm,22.9s
BRVK Borovoye 162.24 14 PKPdf **PKPdf 02 15 06.9 -0.5**
BRVK Borovoye 162.24 14 PKIKP **PKPdf 02 15 06.9 -0.5**
GEYT Alibeck 164.47 77 PKP **PKPdf 02 15 10.7 +0.7**
comp=Z,2.6nm,0.8s,baz=290,slow=4.4,SNR=7.5
MKAR Makanchi Array 168.62 343 PKP **PKPdf 02 15 11.6 -1.4**
comp=Z,1.0nm,0.9s,baz=342,slow=0.4,SNR=4.0
MKAR PKPab **PKPab 02 16 22.4 -0.4**
comp=Z,0.9nm,0.8s,baz=8.4,slow=4.2,SNR=3.8
MKAR PP **PP 02 20 11.2 -0.3**
comp=Z,0.8nm,0.9s,baz=45,slow=10,SNR=2.6
WMQ Urumqi 168.90 318 *e*PKP **PKPdf 02 15 13.9 +0.6**
WMQ LR LR
comp=Z,830nm,17.1s
WMQ LR LR
comp=Z,510nm,19.5s
GAR Garm 173.63 60 PKPdf **PKPdf 02 15 14.8 -1.2**
KSH Kashi 176.32 18 PKP **PKPdf 02 15 18.3 +1.6**

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*IDC **24** 01:59:20.2±2.1, 0°.75N×126°.72E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=160.2km s-min=28.1km az=66.0*
*DJA **24** 01:59:30.7±0.5, 1°.N±2°.×12°.8E±°, h10km, M3.3/7, mb3.7/1, MLv3.1/7*
ISC 24 01:59:28.8±1.4, 0°.54N±0°.05×128°.09E±0°.10, h10km, n9, σ1§61/11, mb3.5/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.76**	**288**	P	**Pg**	**01 59 42.3**	**-1.1**
TNTI				S	**Sb**	**01 59 52.8**	**-1.6**
LBMI	**Labuha**	**1.31**	**207**	P	**Pn**	**01 59 53.6**	**+0.5**
LBMI				S	**Sn**	**02 00 13.3**	**+2.6**
GAMI	**Galela, Maluku**	**1.32**	**347**	P	**Pn**	**01 59 54.3**	**+0.9**
GAMI				S	**Sg**	**02 00 12.7**	**+1.2**
SANI	**Sanana**	**3.32**	**219**	P	**Pn**	**02 00 21.9**	**+1.1**
NLAI	**Namlea**	**3.88**	**195**	P	**Pn**	**02 00 28.9**	**+0.4**
GTOI	**Gorontalo**	**5.08**	**271**	P	**Pn**	**02 00 46.4**	**+1.4**
WRA	**Warramunga Arr**	**21.26**	**164**	P	**P**	**02 04 14.4**	**-1.0**
	1.1nm,0.4s,baz=339,slow=11,SNR=18						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**24.71**	**167**	P	**P**	**02 04 48.7**	**-1.8**
	0.4nm,0.4s,baz=351,slow=15,SNR=7.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**60.94**	**326**	P	P	02 09 28.6	-13
	0.1nm,0.3s,baz=119,slow=6.9,SNR=1.7						
	0.1nm,0.3s						

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*JMA **24** 02:00:23.7±0.2, 28°.N±2°.×14°.0E±°, h526km, MV4.0/33, W OFF OGASAWARA*
*NEIC **24** 02:00:23.8±0.9, 27°.9N±0°.1×139°.5E±0°.1, h504km±16km, mb4.3/12, Error ellipse: s-maj=22.7km s-min=11.7km az=212.0*
*IDC **24** 02:00:23.2±0.9, 27°.84N×139°.34E, h492km±26km, mb3.0/6, mbtmp3.9/10, Error ellipse: s-maj=63.9km s-min=11.9km az=76.0*
ISC 24 02:00:23.2±0.7, 27°.93N±0°.06×139°.6E±0°.1, h507km, n44, σ1§59/53, mb3.9/11, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.43**	**109**	P	**P**	**02 01 32.3**	**+1.0**
CBIJ				S	**S**	**02 02 26.8**	**+0.2**
JCJ	**Chichijima**	**2.43**	**109**	P	**P**	**02 01 32.2**	**+0.9**
	59nm,0.4s,baz=357,slow=18,SNR=8.2						
JCJ				S	**S**	**02 02 26.5**	**-0.1**
	108nm,0.4s,baz=108,slow=24,SNR=11						
JHH2	**Haha-jima-NKT2**	**2.62**	**119**	P	**P**	**02 01 34.3**	**+1.9**
JHH2				S	**S**	**02 02 29.5**	**+0.9**
BSO1	**Boso 1**	**6.80**	**10**	P	**P**	**02 02 09.4**	**+2.5**
BSO1				S	**S**	**02 03 32.8**	**+0.7**
BSO3	**Boso 3**	**6.89**	**6**	P	**P**	**02 02 09.9**	**+1.8**
BSO3				S	**S**	**02 03 33.9**	**-0.3**
JIE	**Ise**	**6.90**	**340**	P	**P**	**02 02 11.6**	**+3.0**
JKN2	**Miekihoku**	**6.91**	**336**	P	**P**	**02 02 11.6**	**+3.0**
BSO4	**Boso 4**	**7.07**	**5**	P	**P**	**02 02 11.9**	**+1.8**
BSO4				S	**S**	**02 03 37.7**	**+0.1**
JMN	**Monobe**	**7.59**	**321**	P	**P**	**02 02 16.6**	**+1.0**
JTO	**Tosashimizu**	**7.66**	**312**	P	**P**	**02 02 18.5**	**+2.3**
INJ	**Inuyama**	**7.72**	**344**	P	**P**	**02 02 19.1**	**+2.4**
JGF	**Kuroka**	**7.88**	**346**	P	**P**	**02 02 19.7**	**+1.2**
JHU	**Hanno**	**7.90**	**358**	P	**P**	**02 02 18.6**	**0.0**
JHU				S	**S**	**02 03 48.9**	**-4.5**
JRY	**Ryogami san**	**8.09**	**356**	P	**P**	**02 02 21.4**	**+0.8**
JRY				S	**S**	**02 03 54.4**	**-2.5**
JAG	**Ashikaga**	**8.47**	**359**	P	**P**	**02 02 24.4**	**-0.1**
JAG				S	**S**	**02 03 58.7**	**-5.4**
MJAR	**Matsushiro Arr**	**8.67**	**352**	P	**P**	**02 02 26.8**	**+0.2**
	4.1nm,0.4s,baz=174,slow=12,SNR=9.4						
MAJO	**Matsushiro**	**8.67**	**352**	P	**P**	**02 02 27.1**	**+0.6**
MJB9	**Matsu-Tunnel**	**8.67**	**352**	P	**P**	**02 02 28.1**	**+1.4**
JHS	**Saijyo**	**8.96**	**323**	P	**P**	**02 02 31.2**	**+1.6**
JMM	**Marumori**	**9.96**	**5**	P	**P**	**02 02 41.1**	**+1.1**
JSD	**Sado**	**10.14**	**354**	P	**P**	**02 02 41.9**	**-0.1**
JTM	**Tenmabayashi**	**12.88**	**5**	P	**P**	**02 03 12.4**	**+1.6**
KSRS	**Korea Array**	**13.66**	**317**	P	**P**	**02 03 18.0**	**-1.1**
	1.3nm,0.6s,baz=126,slow=11,SNR=2.3						
NACB	**Ninganchiao**	**16.61**	**261**	P	**P**	**02 03 48.7**	**-1.5**
SSLB	**Suanglung**	**17.29**	**260**	P	**P**	**02 03 56.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**17.35**	**341**	P	**P**	**02 03 57.9**	**+0.9**
	10.0nm,0.6s,baz=167,slow=9.6,SNR=21						
USRK	**Ussuriysk Ar.**	**17.35**	**341**	P	**P**	**02 03 57.7**	**+0.6**
USA0B	**Ussuriysk Arra**	**17.35**	**341**	P	**P**	**02 03 57.9**	**+0.8**
USA0B				IAmb	IAmb	02 03 59.3	
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**22.11**	**346**	P	**P**	**02 04 41.4**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=177,slow=10,SNR=6.3						
	comp=Z,1.1nm,0.3s						
KULM	**Kulim**	**43.30**	**246**	P	**P**	**02 07 40.3**	**+0.3**
KNRA	**Kununurra**	**44.60**	**195**	P	**P**	**02 07 49.3**	**-0.7**
KNRA				IAmb	IAmb	02 07 56.2	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**47.36**	**319**	P	**P**	**02 08 10.3**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=124,slow=7.2,SNR=2.6						
	comp=Z,0.5nm,0.4s						
WB0	**Warramunga Arr**	**47.68**	**187**	P	**P**	**02 08 13.0**	**-0.4**
WB0				IAmb	IAmb	02 08 54.5	
	comp=Z,8.0nm,1.4s						
WR0	**Warramunga Arr**	**47.86**	**186**	P	**P**	**02 08 14.3**	**-0.5**
WR0				IAmb	IAmb	02 08 23.8	
	comp=Z,14nm,1.4s						
WB2	**Warramunga Arr**	**47.86**	**187**	P	**P**	**02 08 14.6**	**-0.2**
WB2				IAmb	IAmb	02 08 48.3	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**47.86**	**187**	P	**P**	**02 08 14.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=0.9,slow=7.7,SNR=36						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**47.86**	**187**	P	**P**	**02 08 13.9**	**-0.9**
MKAR	**Makanchi Array**	**48.18**	**309**	P	**P**	**02 08 17.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=90,slow=8.7,SNR=2.7						
	comp=Z,0.2nm,0.4s						
AS31	**Alice Springs**	**51.59**	**187**	P	**P**	**02 08 41.7**	**-0.5**
ASAR	**Alice Springs**	**51.59**	**187**	P	**P**	**02 08 42.4**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=19,slow=13,SNR=13						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**51.59**	**187**	P	**P**	**02 08 42.3**	**0.0**
MBWA	**Marble Bar**	**52.45**	**204**	P	**P**	**02 08 48.0**	**-0.4**
MBWA				IAmb	IAmb	02 09 22.1	
	comp=Z,15nm,1.4s						
PSA00	**Pilbara Seismi**	**52.79**	**203**	P	**P**	**02 08 50.4**	**-0.5**
FINES	**FINESS Array B**	**76.18**	**333**	P	**P**	**02 11 19.6**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=129,slow=5.2,SNR=3.7						
	comp=Z,3.1nm,0.9s						

IDC 24 02:18:21.9±2.1, 7°.03S×125°.81E, h0km, mb3.2/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=226.2km s-min=32.4km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.27**	**148**	Pn	Pn	02 21 58.6	-0.4
	0.1nm,0.3s,baz=321,slow=13,SNR=8.0						
WRA				Sn	Sn	02 24 39.2	-10
	0.1nm,0.3s,baz=328,slow=21,SNR=1.4						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**18.28**	**156**	P	P	02 22 37.4	0.0
	0.2nm,0.3s,baz=336,slow=13,SNR=8.3						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**66.04**	**329**	P	P	02 29 10.5	0.0
	0.1nm,0.5s,baz=140,slow=6.4,SNR=1.4						
	0.1nm,0.5s						

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*IDC **24** 02:31:38.4±1.1, 44°.06N×87°.36E, h0km, mb3.7/9, mbtmp3.6/15, ML3.1/6, MS4.1/3, Error ellipse: s-maj=21.2km s-min=14.6km az=30.0*
*NNC **24** 02:31:42.7±1.7, 43°.98N×86°.87E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=12.6km s-min=8.4km az=111.0*
ISC 24 02:31:40.0±1.0, 43°.88N±0°.07×87°.09E±0°.07, h10km, n42, σ1§94/44, mb3.9/9, 11C-10D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.90**	**337**	Pg	**Pg**	**02 32 55.3**	**+0.7**
	105nm,0.8s						
ZSN				Lg	Lg	02 33 45.8	
	147nm,0.7s						
MK31	**Makanchi Array**	**4.47**	**312**	⇓Pn	**Pn**	**02 32 48.5**	**+0.7**
	2.7nm,0.5s,baz=129,slow=14,SNR=59						
MK31				⇓Sn	**Sn**	**02 33 40.9**	**+1.1**
	9.7nm,0.4s						
MK31				⇑Lg	Lg	02 33 59.5	
	3.5nm,0.4s,baz=132,slow=26,SNR=5.9						
MKAR	**Makanchi Array**	**4.47**	**312**	Pn	**Pn**	**02 32 48.8**	**+1.1**
	1.8nm,0.3s,baz=127,slow=14,SNR=50						
MKAR				Sn	**Sn**	**02 33 40.9**	**+1.1**
	4.4nm,0.3s,baz=151,slow=25,SNR=5.4						
MKAR				Lg	Lg	02 34 01.0	
	5.7nm,0.3s,baz=128,slow=28,SNR=7.1						
	5.3nm,0.5s						
MAKZ	**Makanchi**	**4.64**	**311**	⇑Pn	**Pn**	**02 32 50.8**	**+0.7**
	8.4nm,0.5s						
MAKZ				⇓Sn	**Sn**	**02 33 45.1**	**+1.0**
	16nm,0.8s						
MAKZ				⇑Lg	Lg	02 34 04.7	
	44nm,1.0s						
KTMS	**Ketmen**	**4.91**	**267**	Pg	**Pb**	**02 33 08.8**	**+2.8**
	9.0nm,0.5s						
DJR	**Jarkent**	**5.28**	**277**	Pg	**Pg**	**02 33 18.0**	**-3.0**
	13nm,0.6s						
DJR				Lg	Lg	02 34 24.3	
	35nm,0.8s						
PDGK	**Podgornoye**	**5.55**	**267**	⇑Pn	**Pn**	**02 33 03.0**	**+0.3**
	4.7nm,0.7s						
PDGK				⇑Pg	**Pb**	**02 33 20.1**	**+3.2**
	24nm,0.9s						
PDGK				⇑Sn	**Sn**	**02 34 06.7**	**+0.1**
	24nm,0.6s						
PDGK				⇓Lg	Lg	02 34 32.8	
	78nm,0.8s						
SHLS	**Shalkode**	**5.59**	**265**	Pg	**Pb**	**02 33 19.4**	**+1.7**
	36nm,0.7s						
SHLS				Lg	Lg	02 34 25.5	
	42nm,0.8s						
UZB	**Uzynbulak**	**5.91**	**266**	Pg	**Pg**	**02 33 30.7**	**-2.5**
	8.3nm,0.4s						
UZB				Lg	Lg	02 34 45.7	
	23nm,1.2s						
KPKS	**Kokpek**	**6.11**	**269**	Pg	**Pg**	**02 33 35.7**	**-1.2**
	14nm,0.4s						
KPKS				Lg	Lg	02 34 54.0	
	46nm,0.6s						
BLB	**Baldybastay**	**6.22**	**275**	Pg	**Pg**	**02 33 36.0**	**-3.0**
	32nm,0.5s						
BLB				Lg	Lg	02 34 54.7	
	25nm,0.5s						
TDK	**Taldyqorghan**	**6.32**	**283**	Pg	**Pg**	**02 33 39.6**	**-1.3**
	37nm,0.3s						
TDK				Lg	Lg	02 35 00.1	
	60nm,0.5s						
SATY	**Saty**	**6.37**	**266**	Pg	**Pg**	**02 33 39.4**	**-2.6**
	11nm,0.5s						
SATY				Lg	Lg	02 35 00.1	
	25nm,0.6s						
ARXS	**Arharly**	**6.69**	**276**	Pg	**Pg**	**02 33 44.3**	**-3.6**
	8.9nm,0.7s						
ARXS				Lg	Lg	02 35 08.9	
	23nm,0.8s						
CHKK	**Chushkaly**	**7.30**	**273**	Pg	**Pg**	**02 33 55.9**	**-3.8**
	5.0nm,0.6s						
CHKK				Lg	Lg	02 35 28.6	
	8.8nm,0.4s						
MDOK	**Medeo**	**7.34**	**268**	⇓Pn	**Pn**	**02 33 27.6**	**+0.3**
	5.0nm,0.8s						
MDOK				Pg	**Pg**	**02 33 59.1**	**-1.3**
	4.9nm,0.7s						
MDOK				⇓Lg	Lg	02 35 30.3	
	37nm,1.3s						
MDOK				Lg	Lg	02 35 33.9	
	14nm,0.7s						
KTBS	**Karatobe**	**7.54**	**272**	Pg	**Pg**	**02 34 03.5**	**-0.6**
	6.0nm,0.5s						
KUU	**Kurty**	**7.77**	**274**	Pg	**Pg**	**02 34 05.5**	**-3.2**
	2.5nm,0.8s						
KUU				Lg	Lg	02 35 44.8	
	9.7nm,0.6s						
MTBS	**Maitube**	**7.79**	**268**	Pg	**Pg**	**02 34 08.6**	**-0.5**
	4.3nm,0.7s						
SEM	**Semipalatinsk**	**8.02**	**327**	Pg	Pg	02 34 07.1	-6.3
	3.2nm,0.1s						
SEM				Lg	Lg	02 35 47.1	
	37nm,0.1s						
TKM2	**Tokmak 2**	**8.43**	**267**	⇓Pn	**Pn**	**02 33 42.1**	**-0.1**
	2.7nm,0.8s						
TKM2				⇓Lg	Lg	02 36 03.7	
	18nm,1.1s						
KURBB	**Kurchatov Arra**	**8.91**	**322**	Pn	**Pn**	**02 33 48.2**	**-0.4**
	0.3nm,0.3s,baz=136,slow=12,SNR=17						
KURBB				Lg	Lg	02 36 20.4	
	0.2nm,0.3s,baz=122,slow=29,SNR=4.9						
	2.2nm,0.5s						
KURK	**Kurchatov**	**8.93**	**323**	⇑Pn	**Pn**	**02 33 49.4**	**+0.4**
	5.1nm,1.0s						
KURK				⇑Lg	Lg	02 36 21.9	
	27nm,1.0s						
CHMS	**Chumysh**	**9.02**	**269**	⇑Lg	Lg	02 36 24.0	
	9.9nm,0.7s						
AAK	**Ala-Archa**	**9.28**	**267**	Pn	**Pn**	**02 33 58.5**	**+4.6**
	0.2nm,0.3s,baz=80,slow=12,SNR=1.8						
AAK				Lg	Lg	02 36 39.9	
	0.3nm,0.3s,baz=114,slow=10.0,SNR=1.9						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**10.19**	**352**	Pn	**Pn**	**02 34 04.0**	**-2.1**
	0.5nm,0.3s,baz=178,slow=14,SNR=7.9						
ZALV				Sn	**Sn**	**02 35 56.7**	**-3.6**
	0.7nm,0.3s,baz=170,slow=26,SNR=5.1						
ZALV				Lg	Lg	02 36 57.5	
	baz=179,slow=30						
	1.1nm,0.3s						
OTUK	**Ortayu**	**11.14**	**298**	⇓Pn	**Pn**	**02 34 19.1**	**-0.1**
	3.1nm,1.1s						
OTUK				⇑Sn	**Sn**	**02 36 23.9**	**+0.1**
	5.5nm,0.9s						
OTUK				⇑Lg	Lg	02 37 29.9	
	20nm,1.1s						
KK31	**Karatay Array**	**12.07**	**272**	Pn	**Pn**	**02 34 34.2**	**+2.2**
	0.1nm,0.3s,baz=65,slow=15,SNR=6.9						
KK31				⇓Lg	Lg	02 37 58.7	
	3.9nm,0.9s						
SONM	**Songino Array**	**14.02**	**67**	Pn	Pn	02 34 55.2	-3.4
	0.1nm,0.3s,baz=279,slow=9.6,SNR=2.2						
SONM				Lg	Lg	02 38 56.6	
	0.1nm,0.3s,baz=269,slow=24,SNR=1.3						
SONM				LR	LR	02 40 37.2	
	comp=Z,136nm,20.3s,baz=3.0,slow=39						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**14.34**	**315**	Pn	**Pn**	**02 35 01.0**	**-1.9**
	0.1nm,0.3s,baz=125,slow=9.1,SNR=2.5						
	0.4nm,0.5s						
AKTO	**Aktyubinsk**	**20.74**	**299**	P	Pn	02 36 22.9	-0.1
	0.6nm,0.6s,baz=99,slow=12,SNR=3.9						
	0.6nm,0.6s						
ARU	**Arti**	**21.99**	**315**	P	**P**	**02 36 33.6**	**-0.3**
	3.5nm,0.5s,baz=153,slow=6.9,SNR=8.1						
	3.5nm,0.5s						
NRIK	**Noril'sk**	**25.53**	**0**	P	**P**	**02 37 10.2**	**+1.9**
	3.1nm,0.5s,baz=166,slow=9.4,SNR=2.4						
FINES	**FINESS Array B**	**39.27**	**318**	P	**P**	**02 39 08.2**	**-0.2**
	1.7nm,0.9s,baz=97,slow=11,SNR=0.9						
	1.7nm,0.9s						
ARCES	**ARCESS Array B**	**39.86**	**331**	P	**P**	**02 39 12.8**	**-0.4**
	2.3nm,0.7s,baz=81,slow=8.3,SNR=4.4						
	2.3nm,0.7s						
NOA	**NORSAR Array B**	**46.43**	**319**	P	**P**	**02 40 06.0**	**-0.5**
	1.2nm,0.9s,baz=74,slow=8.0,SNR=2.7						
	1.2nm,0.9s						
DAVOX	**Davos/Dischmat**	**52.28**	**302**	LR	LR	03 05 34.2	
	comp=Z,426nm,19.2s,baz=264,slow=39						
VAE	**Valguarnera**	**53.86**	**290**	LR	LR	03 09 44.8	
	comp=Z,419nm,20.1s,baz=333,slow=42						
ILAR	**Eielson Array**	**63.78**	**23**	P	**P**	**02 42 10.8**	**-0.8**
	0.3nm,0.7s,baz=302,slow=5.8,SNR=4.2						
	0.3nm,0.7s						
ESDC	**Sonseca Array**	**64.60**	**301**	P	**P**	**02 42 17.2**	**-0.2**
	0.5nm,0.6s,baz=50,slow=6.6,SNR=6.1						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**76.84**	**135**	P	**P**	**02 43 31.5**	**-0.6**
	0.8nm,0.8s,baz=335,slow=5.1,SNR=3.1						
	0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.72**	**276**	P	**P**	**02 43 38.7**	**+1.5**
	0.6nm,0.8s,baz=50,slow=5.9,SNR=7.2						
	0.6nm,0.8s						

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*NEIC **24** 02:35:58±1.4, 5°.79S±0°.06×151°.2E±0°.1, h54km±9km, mb4.4/19, Error ellipse: s-maj=15.4km s-min=8.4km az=108.0*
*IDC **24** 02:36:00.9±1.3, 5°.85S×151°.04E, h70km±11km, mb3.8/5, mbtmp4.2/6, MS4.5/1, Error ellipse: s-maj=54.6km s-min=8.4km az=127.0*
ISC 24 02:35:57.2±0.6, 5°.9S±0°.1×151°.2E±0°.1, h43km, n48, σ1§69/49, mb4.3/16, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.77**	**26**	P	**Pn**	**02 36 29.6**	**+4.1**
	124nm,0.3s,baz=225,slow=1.4,SNR=22						
KRVT				S	**Sn**	**02 36 53.0**	**+6.2**
	582nm,0.5s,baz=198,slow=23,SNR=22						
KRVT				LR	LR	02 37 32.4	
	comp=Z,271nm,21.8s,baz=60,slow=50						
RABL	**Rabaul**	**1.94**	**29**	Pn	**Pn**	**02 36 28.3**	**+0.6**
PMG	**Port Moresby**	**5.33**	**229**	P	**Pn**	**02 37 16.3**	**+2.0**
	37nm,0.3s,baz=26,slow=3.9,SNR=13						
PMG				S	**Sn**	**02 38 16.1**	**+1.6**
	230nm,0.4s,baz=260,slow=20,SNR=17						
PMG	**Port Moresby**	**5.33**	**229**	P	**Pn**	**02 37 18.0**	**+3.7**
PMG	**Port Moresby**	**5.33**	**229**	P	**Pn**	**02 37 18.6**	**+4.3**
COEN	**Coen**	**11.27**	**224**		**Pn**	**02 38 35.3**	**-0.5**
QIS	**Mount Isa**	**18.43**	**217**	P	**P**	**02 40 10.1**	**+1.0**
WB0	**Warramunga Arr**	**21.40**	**228**	P	**P**	**02 40 41.5**	**-0.1**
WB0				IAmb	IAmb	02 40 43.1	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**21.41**	**228**	P	**P**	**02 40 41.6**	**0.0**
WRAB	**Tennant Creek**	**21.53**	**228**	P	**P**	**02 40 42.5**	**-0.5**
WRAB				IAmb	IAmb	02 40 44.5	
	comp=Z,12nm,1.0s						
WRAB	**Tennant Creek**	**21.53**	**228**	P	**P**	**02 40 42.8**	**-0.1**
WB2	**Warramunga Arr**	**21.54**	**228**	P	**P**	**02 40 43.0**	**0.0**
WB2				IAmb	IAmb	02 40 44.5	
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	**21.55**	**228**	P	**P**	**02 40 43.0**	**-0.1**
	comp=Z,7.2nm,0.6s,baz=53,slow=10,SNR=80						
	comp=Z,7.2nm,0.6s						
WRA	**Warramunga Arr**	**21.55**	**228**	P	**P**	**02 40 41.8**	**-1.3**
DZM	**Mont Dzumac**	**21.78**	**139**	P	**P**	**02 40 45.4**	**-0.3**
DZM				IAmb	IAmb	02 41 02.7	
	comp=Z,20nm,1.5s						
KNRA	**Kununurra**	**24.09**	**244**	P	**P**	**02 41 08.5**	**-0.5**
KNRA				IAmb	IAmb	02 41 31.7	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**24.09**	**244**	P	**P**	**02 41 09.2**	**+0.3**
AS01	**Alice Springs**	**24.26**	**222**	P	**P**	**02 41 10.1**	**-0.4**
AS31	**Alice Springs**	**24.29**	**222**	P	**P**	**02 41 10.2**	**-0.6**
AS31				IAmb	IAmb	02 41 12.2	
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**24.29**	**222**	P	**P**	**02 41 11.2**	**+0.4**
	comp=Z,9.5nm,0.7s,baz=57,slow=8.9,SNR=85						
	comp=Z,9.5nm,0.7s						
ASAR	**Alice Springs**	**24.29**	**222**	P	**P**	**02 41 10.8**	**0.0**
STKA	**Stephens Creek**	**27.37**	**198**	P	**P**	**02 41 40.4**	**+1.9**
	comp=Z,2.1nm,0.7s,baz=356,slow=13,SNR=3.4						
	comp=Z,2.1nm,0.7s						
WRKA	**Warakurna**	**29.07**	**227**	P	**P**	**02 41 53.4**	**-0.4**
MULG	**Mulgathing**	**29.14**	**212**	P	**P**	**02 41 53.3**	**-1.0**
FORT	**Forrest**	**32.95**	**219**	P	**P**	**02 42 27.2**	**-0.7**
PLAI	**Plampang**	**33.30**	**263**	P	**P**	**02 42 30.1**	**-1.1**
MBWA	**Marble Bar**	**34.07**	**241**	P	**P**	**02 42 37.3**	**-0.4**
MBWA				IAmb	IAmb	02 43 02.2	
	comp=Z,15nm,1.4s						
MBWA	**Marble Bar**	**34.07**	**241**	P	**P**	**02 42 38.2**	**+0.4**
PSA00	**Pilbara Seismi**	**34.13**	**240**	P	**P**	**02 42 36.6**	**-1.7**
JAGI	**Jajag, Banyuwa**	**36.87**	**264**	P	**P**	**02 42 59.2**	**-2.7**
JAGI	**Jajag, Banyuwa**	**36.87**	**264**	P	**P**	**02 43 00.7**	**-1.2**
MEEK	**Meekatharra**	**37.30**	**233**	P	**P**	**02 43 05.4**	**0.0**
MORW	**Morawa**	**40.44**	**231**	P	**P**	**02 43 30.4**	**-1.3**
MORW				IAmb	IAmb	02 43 49.5	
	comp=Z,9.5nm,1.1s						
MORW	**Morawa**	**40.44**	**231**	P	**P**	**02 43 31.5**	**-0.2**
PEA0B	**Petropavlovsk-**	**59.05**	**5**	P	**P**	**02 45 51.4**	**-1.4**
PETK	**Petropavlovsk-**	**59.05**	**5**	P	**P**	**02 45 50.8**	**-1.9**
SONM	**Songino Array**	**66.44**	**329**	LR	LR	03 16 56.1	
	comp=Z,348nm,20.2s,baz=59,slow=37						
MKAR	**Makanchi Array**	**80.14**	**319**	P	**P**	**02 48 03.2**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=121,slow=8.2,SNR=4.3						
	comp=Z,0.2nm,0.4s						
IMAR	**Indian Mountai**	**81.94**	**20**	P	**P**	**02 48 10.9**	**-1.2**
M24K	**Tolsona, Glenn**	**82.81**	**25**	P	**P**	**02 48 15.2**	**-1.6**
M24K				IAmb	IAmb	02 48 41.7	
	comp=Z,12nm,1.2s						
IL31		**83.77**	**22**	P	**P**	**02 48 20.3**	**-1.2**
IL31				IAmb	IAmb	02 48 37.0	
	comp=Z,3.3nm,1.2s

KUR A A 03 02 03.1
comp=E,2µm,0.5s
KUR A A 03 02 03.1
comp=E,550nm,0.5s
KUR AMS AMS 03 02 52.0
comp=E,11µm,12.0s
KUR AMS AMS 03 02 52.0
comp=E,5µm,12.0s
KUR AMS AMS 03 02 52.0
comp=E,5µm,12.0s
YUK Yuzh-Kuril'sk 3.77 254 PN **Pn 03 01 56.6 +1.1**
YUK S **Sn 03 02 43.1 +4.6**
YUK pmax pmax
comp=Z,423nm,0.5s
YUK pmax pmax
comp=N,355nm,0.2s
YUK pmax pmax
comp=E,271nm,0.3s
YUK smax smax
comp=E,961nm,0.6s
YUK smax smax
comp=N,270nm,0.3s
YUK Yuzh-Kuril'sk 3.77 254 *e*P **Pn 03 01 56.2 +0.7**
YUK AMB AMB 03 01 59.1
comp=N,310nm,0.3s
YUK *e*S **Sn 03 02 40.2 +1.7**
YUK A A 03 02 45.5
comp=N,270nm,0.6s
YUK A A 03 02 45.5
comp=N,960nm,0.6s
YUK AMS AMS 03 03 30.0
comp=N,7µm,18.0s
YUK AMS AMS 03 03 30.0
comp=N,5µm,18.0s
NEM2 Nemuro 2 4.11 246 *e*P **Pn 03 01 59.3 -0.9**
NEM2 *e*S **Sn 03 02 45.1 -1.9**
NMR Nemuro--Hokkai 4.12 246 *e*PN **Pn 03 01 59.0 -1.3**
NMR Nemuro--Hokkai 4.12 246 *e*P **Pn 03 01 59.4 -0.9**
NMR *e*S **Sn 03 02 46.3 -0.9**
RUSJ Misakicho 4.17 257 *e*PN **Pn 03 02 03.0 +2.0**
RUSJ *e*S Sn 03 02 57.8 +9.4
JRA Rausu 4.30 256 *e*P **Pn 03 02 03.9 +1.1**
JNK Nakash 4.70 253 *e*P **Pn 03 02 08.9 +0.6**
JNK *e*S **Sn 03 03 03.9 +2.4**
AKK Akkeshi 4.86 246 *e*P **Pn 03 02 09.7 -0.7**
AKK *e*S **Sn 03 03 05.0 -0.3**
JAK Akkeshi 4.96 246 *e*P **Pn 03 02 10.9 -1.0**
JTKR Abashiri--Toko 5.13 259 *e*P **Pn 03 02 15.6 +1.4**
JAR Ashorobuto 5.45 253 *e*P **Pn 03 02 19.8 +1.2**
JAR Ashorobuto 5.45 253 A A 03 02 19.8
comp=N,2.0nm,1.0s,comp=N,2.0nm,1.9s
JOB Onbets 5.57 249 *e*P **Pn 03 02 20.1 -0.1**
YSS Yuzh-Sakhalins 5.95 291 *e*PN **Pn 03 02 27.7 +2.4**
YSS *e*S **Sn 03 03 32.7 +0.6**
YSS MLR MLR
comp=E,1µm,16.0s
YSS MLR MLR
comp=Z,2µm,16.0s
YSS Yuzh-Sakhalins 5.95 291 *e*P **Pn 03 02 27.7 +2.4**
YSS AMB AMB 03 02 30.8
comp=Z,10.0nm,0.4s
YSS *e*S **Sn 03 03 33.4 +1.3**
YSS A A 03 03 47.2
comp=Z,30nm,0.6s
YSS A A 03 03 47.2
comp=Z,30nm,0.6s
YSS AMS AMS 03 04 55.0
comp=Z,1µm,16.0s
YSS AMS AMS 03 04 55.0
comp=Z,2µm,16.0s
JKK2 Kamakawa 2 5.97 260 P **Pn 03 02 27.4 +1.8**
JCH Churui 6.01 248 *e*P **Pn 03 02 25.7 -0.6**
JCH Churui 6.01 248 A A 03 02 25.7
comp=Z,2.0nm,4.0s,comp=Z,3.0nm,1.1s
ERM Erimo 6.44 244 Pn **Pn 03 02 32.6 +0.5**
ERM Erimo 6.44 244 *ce*PN **Pn 03 02 33.7 +1.6**
ERM pmax pmax
comp=Z,382nm,0.7s
JAB Ashibetsu 6.44 258 *e*P **Pn 03 02 34.6 +2.5**
SKR Severo-Kuril's 6.55 30 *e*P **Pn 03 02 32.3 -1.3**
SKR AMB AMB 03 02 36.9
comp=Z,40nm,0.4s
SKR *e*S **Sn 03 03 43.3 -3.5**
SKR A A 03 03 45.3
comp=Z,60nm,0.6s
SKR A A 03 03 45.3
comp=Z,20nm,0.6s
JNBK Urakawa-nobuka 6.56 247 *e*P **Pn 03 02 32.9 -0.9**
UGL Uglegorsk 7.19 306 *e*P **Pn 03 02 44.7 +2.3**
UGL AMB AMB 03 02 46.2
comp=Z,70nm,0.7s
JEW Eniwo 7.20 255 Pn **Pn 03 02 42.5 0.0**
PAU Pauzhetka 7.44 30 *e*P **Pn 03 02 45.6 -0.2**
PAU AMB AMB 03 02 48.6
comp=Z,20nm,0.6s
PAU *e*S **Sn 03 04 06.0 -2.8**
PAU A A 03 04 24.3
comp=Z,50nm,0.5s
PAU A A 03 04 24.3
comp=Z,90nm,0.5s
TYV Tymovskoe 7.95 319 *e*P **Pn 03 02 55.4 +2.7**
TYV AMB AMB 03 02 55.8
comp=Z,10.0nm,0.3s
JANG Nango 8.39 239 *e*P **Pn 03 02 56.1 -2.8**
JTM Tenmabayashi 8.42 242 Pn **Pn 03 02 58.1 -1.2**
PEA0B Petropavlovsk- 9.12 27 Pn **Pn 03 03 08.4 -0.4**
PEA0B Petropavlovsk- 9.12 27 PN **Pn 03 03 08.4 -0.4**
PETK Petropavlovsk- 9.12 27 Pn **Pn 03 03 07.5 -1.3**
comp=Z,0.2nm,0.3s,baz=207,slow=19,SNR=2.9
comp=Z,8.3nm,1.0s
PETK Petropavlovsk- 9.12 27 Pn **Pn 03 03 08.1 -0.7**
JMM Marumori 10.50 230 Pn **Pn 03 03 25.3 -2.5**
MAJO Matsushiro 12.88 233 Pn **Pn 03 03 57.8 -2.5**
MAJO Matsushiro 12.88 233 PN **Pn 03 03 57.8 -2.5**
MJAR Matsushiro Arr 12.88 233 Pn **Pn 03 03 58.4 -1.9**
comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=2.4
comp=Z,1.7nm,0.6s
MJB9 Matsu-Tunnel 12.88 233 Pn **Pn 03 03 57.8 -2.5**
USA0B Ussuriysk Arra 13.49 273 Pn **Pn 03 04 07.0 -1.6**
USA0B Ussuriysk Arra 13.49 273 PN **Pn 03 04 07.0 -1.6**
USRK Ussuriysk Ar. 13.49 273 Pn **Pn 03 04 09.2 +0.6**
comp=Z,0.3nm,0.3s,baz=78,slow=14,SNR=6.6
USRK Ussuriysk Ar. 13.49 273 Pn **Pn 03 04 06.3 -2.3**
USRK Ussuriysk Ar. 13.49 273 PN **Pn 03 04 06.3 -2.3**
KLR Kul'dur 13.64 294 Pn **P 03 04 15.2 -2.9**
comp=Z,0.2nm,0.3s,baz=102,slow=17,SNR=5.4
KLR Kul'dur 13.64 294 **P 03 04 15.2 -2.9**
KLR Kul'dur 13.64 294 *i* P **P 03 04 14.9 -3.2**
JGF Kuroka 14.04 232 Pn **Pn 03 04 15.0 -1.1**
KSRS Korea Array 18.86 254 P **Pn 03 05 17.0 +0.2**
comp=Z,1.8nm,0.6s,baz=58,slow=12,SNR=4.9
KSRS Korea Array 18.86 254 P **Pn 03 05 17.0 +0.2**
KSRS Korea Array 18.86 254 *e*P **Pn 03 05 17.5 +0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.6s
YAK Yakutsk 20.91 331 *i* P **P 03 05 38.6 +0.6**
YAK Yakutsk 20.91 331 *e*P **P 03 05 38.6 +0.6**
BILL Bilibino 24.30 14 *e*P **P 03 06 13.6 +1.1**
BILL *e* 03 06 45.4
BILL *e*SS S 03 11 16.1 +48
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,299nm,18.0s
BILL Bilibino 24.30 14 *e*P **P 03 06 13.6 +1.1**
NJ2 Nanjing 28.05 253 *e*P **P 03 06 45.3 -1.3**
TIXI Tiksi 28.60 346 P **P 03 06 49.1 -2.0**
TIXI Tiksi 28.60 346 *i* P **P 03 06 49.4 -1.7**
TIXI pmax pmax
comp=Z,1.0nm,0.4s
ULN Ulaanbaatar 30.00 291 *i* P **P 03 07 04.7 +0.8**
ULN pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 30.00 291 *e*P **P 03 07 04.7 +0.8**
SONM Songino Array 30.44 291 P **P 03 07 08.3 +0.5**
comp=Z,1.0nm,0.9s,baz=171,slow=24,SNR=4.2
comp=Z,1.0nm,0.9s
SONM Songino Array 30.44 291 P **P 03 07 07.1 -0.7**
SVW2 Sparrevohn 34.71 43 P **P 03 07 45.6 +0.7**
J20K Nowinta River 35.59 38 P **P 03 07 52.9 +0.6**
Q19K Cape Douglas, 35.68 47 P **P 03 07 53.7 +0.5**
IMAR Indian Mountai 35.96 35 P **P 03 07 55.9 +0.3**
H21K Melozitna Rive 36.31 36 P **P 03 07 59.5 +1.0**
H21K IAmb IAmb 03 08 05.9
comp=Z,4.4nm,1.3s
KDAK Kodiak Island 36.31 49 P **P 03 07 59.1 +0.6**
comp=Z,2.8nm,0.9s,baz=262,slow=7.1,SNR=1.4
comp=Z,2.8nm,0.9s
PPLA Purkeypile 36.38 40 P **P 03 08 00.5 +1.2**
PPLA IAmb IAmb 03 08 08.1
comp=Z,8.7nm,1.4s
SPU Mount Spurr 36.42 43 P **P 03 07 57.9 -1.7**
KTH Kantishna Hill 36.98 39 P **P 03 08 04.8 +0.5**
TRF Thorofare Moun 37.26 39 P **P 03 08 07.7 +0.9**
TRF IAmb IAmb 03 08 10.9
comp=Z,7.3nm,1.4s
I23K Minto, Yukon-K 37.71 37 P **P 03 08 11.3 +0.9**
GHO Glory Hole Cre 37.91 42 P **P 03 08 12.7 +0.5**
GHO IAmb IAmb 03 08 21.2
comp=Z,11nm,1.4s
TOLK Toolik Lake Re 37.91 31 P **P 03 08 12.8 +0.7**
MDM Murphy Dome 38.18 37 P **P 03 08 14.7 +0.3**
SML Sawmill 38.19 42 P **P 03 08 14.9 +0.4**
SML IAmb IAmb 03 08 16.5
comp=Z,5.1nm,0.8s
H24K Noodor Dome 38.35 36 P **P 03 08 16.4 +0.6**
CCB Clear Creek Bu 38.36 37 P **P 03 08 16.8 +0.9**
POKR Poker Plat Res 38.52 37 P **P 03 08 18.4 +1.1**
POKR IAmb IAmb 03 08 25.5
comp=Z,3.6nm,0.6s
DHY Denali Highway 38.58 40 P **P 03 08 18.7 +0.8**
SCM Sheep Creek Mo 38.66 42 P **P 03 08 19.7 +1.2**
SCM IAmb IAmb 03 08 21.1
comp=Z,14nm,1.4s
SCM Sheep Creek Mo 38.66 42 P **P 03 08 19.7 +1.2**
SCM pmax pmax
comp=Z,14nm,1.4s
HDA Harding Lake 38.73 38 P **P 03 08 19.1 +0.1**
IL31 38.76 37 P **P 03 08 19.7 +0.5**
ILAR Eielson Array 38.76 37 P **P 03 08 19.5 +0.3**
comp=Z,0.2nm,0.6s,baz=258,slow=7.4,SNR=7.1
comp=Z,0.2nm,0.6s
M24K Tolsona, Glenn 39.19 42 P **P 03 08 23.8 +0.9**
M24K IAmb IAmb 03 08 27.5
comp=Z,16nm,1.5s
J25K Salcha River, 39.41 38 P **P 03 08 24.2 -0.5**
BMAR Burnt Mountain 39.70 33 P **P 03 08 27.4 +0.3**
SCRK Sand Creek 40.05 38 P **P 03 08 29.9 -0.2**
J26L Joseph Creek 40.20 38 P **P 03 08 31.0 -0.3**
M26K Nabesna, AK 40.64 41 P **P 03 08 36.3 +1.3**
K27K Chicken 40.88 38 P **P 03 08 37.7 +0.9**
EGAK Eagle 41.21 37 P **P 03 08 40.1 +0.6**
BARN Barnard Glacie 41.46 43 P **P 03 08 43.3 +1.5**
CTGM Chitina Glacie 41.63 43 P **P 03 08 43.6 +0.4**
CTGM IAmb IAmb 03 08 45.7
comp=Z,9.6nm,1.4s
DGZ Jazzator, Alta 42.04 300 *i* P **P 03 08 45.8 -0.9**
DGZ pmax pmax
comp=Z,1.0nm,1.1s
GOMU GeErMu 42.70 278 P **P 03 08 50.8 -1.7**
GOMU pP pP 03 09 02.6 -2.4
GOMU sP pwP 03 09 08.3 +1.3
GOMU S S 03 14 45.0 -28
HYT Haines Junctio 43.49 42 P **P 03 08 58.7 +0.4**
INK Inuvik 43.82 31 P **P 03 09 01.3 +0.8**
comp=Z,1.1nm,0.8s,baz=290,slow=5.3,SNR=1.6
comp=Z,1.1nm,0.8s
INK Inuvik 43.82 31 P **P 03 09 01.4 +0.8**
INK IAmb IAmb 03 09 03.3
comp=Z,6.8nm,1.3s
INK Inuvik 43.82 31 P **P 03 09 01.4 +0.8**
INK pmax pmax
comp=Z,7.0nm,1.3s
M31M Drury Creek, Y 44.63 40 P **P 03 09 08.0 +0.8**
MK31 Makanchi Array 46.31 298 P **P 03 09 20.6 -0.1**
MK31 IAmb IAmb 03 09 22.5
comp=Z,5.3nm,1.2s
MK31 Makanchi Array 46.31 298 P **P 03 09 20.6 -0.1**
MK31 pmax pmax
comp=Z,5.0nm,1.2s
MKAR Makanchi Array 46.31 298 P **P 03 09 21.3 +0.6**
comp=Z,2.3nm,0.7s,baz=71,slow=7.9,SNR=18
comp=Z,2.3nm,0.7s
MKAR Makanchi Array 46.31 298 P **P 03 09 20.6 -0.1**
MAKZ Makanchi 46.50 298 P **P 03 09 22.1 -0.1**
MAKZ IAmb IAmb 03 09 24.4
comp=Z,2.0nm,0.6s
MAKZ Makanchi 46.50 298 P **P 03 09 22.1 -0.1**
MAKZ pmax pmax
comp=Z,2.0nm,0.6s
C36M Paulatuk 46.97 29 P **P 03 09 26.9 +1.4**
KURK Kurchatov 46.97 304 P **P 03 09 24.4 -1.4**
KURK IAmb IAmb 03 09 26.6
comp=Z,2.9nm,0.6s
KURK Kurchatov 46.97 304 P **P 03 09 24.4 -1.4**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 46.97 304 *e*P **P 03 09 25.4 -0.4**
KURBB Kurchatov Arra 47.06 304 P **P 03 09 26.7 +0.3**
comp=Z,1.5nm,0.4s,baz=71,slow=8.7,SNR=5.8
comp=Z,1.5nm,0.4s
DLBC Dease Lake 47.81 44 P **P 03 09 32.1 -0.2**
DLBC IAmb IAmb 03 09 39.5
comp=Z,7.7nm,1.4s
CMAR Chiang Mai Arr 50.48 256 P **P 03 09 54.0 +0.9**
comp=Z,1.5nm,0.3s,baz=41,slow=7.3,SNR=4.1
comp=Z,1.5nm,0.3s
BRVK Borovoye 50.73 310 *i* P **P 03 09 55.2 +0.7**
BRVK pmax pmax
comp=Z,1.0nm,1.1s
BRVK Borovoye 50.73 310 *e*P **P 03 09 55.2 +0.7**
EUNU Eureka 50.99 11 P **P 03 09 56.0 -0.2**
EUNU IAmb IAmb 03 09 57.1
comp=Z,3.3nm,0.8s
RES Resolute Bay 52.83 18 P **P 03 10 10.7 +0.8**
comp=Z,1.9nm,0.5s,baz=328,slow=7.7,SNR=7.1
comp=Z,1.9nm,0.5s
RES Resolute Bay 52.83 18 P **P 03 10 10.3 +0.4**
RES IAmb IAmb 03 10 13.7
comp=Z,9.1nm,1.4s
RES Resolute Bay 52.83 18 P **P 03 10 10.3 +0.4**
RES pmax pmax
comp=Z,9.0nm,1.4s
YKA Yellowknife Ar 53.12 35 P **P 03 10 13.0 +0.8**
comp=Z,0.4nm,0.6s,baz=297,slow=6.5,SNR=2.8
comp=Z,0.4nm,0.6s
AAK Ala-Archa 53.16 296 P **P 03 10 12.8 -0.2**
AAK IAmb IAmb 03 10 14.5
comp=Z,3.0nm,0.8s
AAK Ala-Archa 53.16 296 *ce*P **P 03 10 13.4 +0.4**
AAK pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 53.16 296 *e*P **P 03 10 13.4 +0.4**
JIRN Jiri 53.53 274 *e*P **P 03 10 17.3 +1.2**
comp=Z,25nm,0.6s
GUN Gumba 53.59 275 *e*P **P 03 10 18.2 +1.6**
comp=Z,19nm,0.5s
RAMN Ramite 53.67 273 *e*P **P 03 10 17.9 +0.9**
comp=Z,33nm,0.6s
PKI Pulchoki 54.13 275 *e*P **P 03 10 21.0 +0.5**
comp=Z,10nm,0.5s
PKIN Phulchoki 54.14 275 *e*P **P 03 10 21.3 +0.8**
DMN Daman 54.32 275 *e*P **P 03 10 23.0 +1.2**
comp=Z,25nm,0.7s
GKN Gorkha 54.41 276 *e*P **P 03 10 23.3 +0.9**
DANN Dangsing 54.82 276 *e*P **P 03 10 26.6 +1.1**
comp=Z,14nm,0.5s
ARU Arti 55.14 317 *d i* P **P 03 10 27.5 +0.5**
ARU *PP **pP 03 10 41.0 +1.3**
ARU 03 11 25.2
ARU 03 12 29.6
ARU S **S 03 18 09.7 +3.5**
ARU SS **SS 03 21 46.8 -3.1**
ARU Arti 55.14 317 *e*P **P 03 10 27.5 +0.5**
KK31 Karatay Array 55.41 299 P **P 03 10 28.5 -0.7**
KK31 IAmb IAmb 03 10 29.9
comp=Z,3.5nm,1.2s
KK31 Karatay Array 55.41 299 P **P 03 10 28.5 -0.7**
KK31 pmax pmax
comp=Z,4.0nm,1.2s
KKAR Karatay Array 55.41 299 P **P 03 10 29.3 +0.1**
KKAR Karatay Array 55.41 299 P **P 03 10 29.3 +0.1**
BTK Batken 56.87 295 P **P 03 10 39.1 -0.6**
BTK Batken 56.87 295 P **P 03 10 39.1 -0.6**
BTK pmax pmax
comp=Z,8.0nm,1.1s
GAR Garm 57.78 295 P **P 03 10 45.7 -0.6**
ABKAR Akbulak array 58.26 310 P **P 03 10 49.1 -0.1**
EDM Edmonton 58.53 45 P **P 03 10 50.7 -0.4**
EDM IAmb IAmb 03 11 01.2
comp=Z,3.3nm,0.9s
EDM Edmonton 58.53 45 P **P 03 10 50.7 -0.4**
EDM pmax pmax
comp=Z,3.0nm,0.9s
CHGR Chuyangaron 58.72 295 P **P 03 10 52.7 -0.1**
CHGR Chuyangaron 58.72 295 P **P 03 10 52.7 -0.1**
CHGR pmax pmax
comp=Z,21nm,0.8s
NIL Nilore 58.94 288 P **P 03 10 54.0 -0.2**
NIL Nilore 58.94 288 P **P 03 10 54.0 -0.2**
NIL pmax pmax
comp=Z,19nm,0.8s
WALA Waterton Lakes 60.65 49 P **P 03 11 05.8 -0.1**
WALA IAmb IAmb 03 11 15.8
comp=Z,3.7nm,1.4s
KBL Kabul 61.21 291 P **P 03 11 09.6 -0.4**
KBL Kabul 61.21 291 P **P 03 11 09.6 -0.4**
KBL pmax pmax
comp=Z,9.0nm,0.7s
SUMG Summit 62.39 3 *i* P **P 03 11 17.0 -0.6**
FFC Flin Flon 62.95 38 P **P 03 11 21.4 +0.3**
FFC IAmb IAmb 03 11 23.8
comp=Z,2.9nm,0.8s
FFC Flin Flon 62.95 38 P **P 03 11 21.4 +0.3**
FFC pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 63.99 51 P **P 03 11 29.3 +1.0**
BOZ Bozeman (W) 63.99 51 P **P 03 11 29.3 +1.0**
BOZ pmax pmax
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 64.55 60 P **P 03 11 34.4 +2.2**
comp=Z,0.3nm,0.7s,baz=305,slow=11,SNR=1.4
comp=Z,0.3nm,0.7s
FINES FINESS Array B 64.81 334 P **P 03 11 31.9 -1.3**
comp=Z,3.8nm,0.9s,baz=29,slow=9.1,SNR=8.4
comp=Z,3.8nm,0.9s
FINES FINESS Array B 64.81 334 P **P 03 11 31.6 -1.6**
FINES FINESS Array B 64.81 334 *e*P **P 03 11 30.8 -2.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
RLMT Red Lodge 65.58 50 P **P 03 11 38.7 0.0**
OBN Obninsk 65.74 325 *e*P **P 03 11 39.6 +0.3**
OBN *e* 03 11 55.5
OBN *e* 03 12 10.1
OBN *e*PPP PPP 03 15 37.8
OBN *e*S **S 03 20 21.2 -0.4**
OBN *e*SS **SS 03 24 37.4 +1.8**
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,237nm,18.0s
OBN Obninsk 65.74 325 *e*P **P 03 11 39.6 +0.3**
REDW Red Top Meadow 65.83 52 P **P 03 11 41.2 +0.8**
GEYT Alibeck 66.08 300 P **P 03 11 42.4 +0.5**
comp=Z,3.5nm,0.6s,baz=350,slow=1.6,SNR=7.9
comp=Z,3.5nm,0.6s
GEYT Alibeck 66.08 300 P **P 03 11 42.0 +0.2**
GEYT IAmb IAmb 03 11 43.4
comp=Z,4.0nm,0.7s
GYA0B ALIBECK ARRAY 66.08 300 P **P 03 11 41.5 -0.4**
GYA0B IAmb IAmb 03 11 43.4
comp=Z,3.8nm,0.7s
WB0 Warramunga Arr 66.34 197 P **P 03 11 44.2 +0.7**
WB0 IAmb IAmb 03 11 44.3
comp=Z,7.0nm,1.2s
WB2 Warramunga Arr 66.52 197 P **P 03 11 45.6 +1.0**
WB2 IAmb IAmb 03 11 48.1
comp=Z,6.6nm,1.2s
WRA Warramunga Arr 66.52 197 P **P 03 11 46.1 +1.5**
comp=Z,2.5nm,0.8s,baz=14,slow=6.6,SNR=14
comp=Z,2.5nm,0.8s
WRA Warramunga Arr 66.52 197 P **P 03 11 45.4 +0.8**
WRA Warramunga Arr 66.52 197 *e*P **P 03 11 45.9 +1.3**
WRA pmax pmax
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 66.94 52 P **P 03 11 49.0 +1.4**
comp=Z,0.6nm,0.8s,baz=217,slow=0.7,SNR=6.1
comp=Z,0.6nm,0.8s
PDAR Pinedale Array 66.94 52 P **P 03 11 48.5 +0.9**
K22A Casper 68.69 51 P **P 03 11 58.5 0.0**
K22A IAmb IAmb 03 11 59.8
comp=Z,7.5nm,1.4s
NC303 NORSAR Array S 69.03 340 P **P 03 11 60.0 0.0**
RSSD Black Hills 69.04 48 P **P 03 12 00.2 -0.5**
RSSD IAmb IAmb 03 12 02.8
comp=Z,4.3nm,1.4s
RSSD Black Hills 69.04 48 P **P 03 12 00.2 -0.5**
RSSD pmax pmax
comp=Z,4.0nm,1.4s
NB2 NORSAR Subarra 69.22 340 P **P 03 12 00.8 -0.5**
comp=Z,4.6nm,0.6s,baz=30,slow=6.5
NOA NORSAR Array B 69.22 340 P **P 03 12 01.0 -0.2**
comp=Z,1.4nm,0.5s,baz=29,slow=6.4,SNR=4.6
comp=Z,1.4nm,0.5s
NOA NORSAR Array B 69.22 340 *e*P **P 03 12 01.2 -0.1**
NOA pmax pmax
comp=Z,1.0nm,0.6s
AKT Akhty 69.81 309 *e*P **P 03 12 06.3 +1.0**
AKT *e* 03 12 28.7
AKT pmax pmax
comp=Z,21nm,0.8s
ASAR Alice Springs 70.22 197 P **P 03 12 10.4 +2.7**
comp=Z,1.7nm,0.8s,baz=9.7,slow=6.1,SNR=12
comp=Z,1.7nm,0.8s
ASAR Alice Springs 70.22 197 P **P 03 12 08.7 +1.0**
ASAR Alice Springs 70.22 197 P **P 03 12 08.7 +1.0**
LGD Lagodekhi 70.38 310 P **P 03 12 09.7 +1.0**
SHTL Shatili 70.40 311 P **P 03 12 08.8 -0.1**
DDFL Dedoflistskaro 70.72 310 P **P 03 12 14.6 +3.8**
KIV Kislovodsk 70.79 313 P **P 03 12 11.0 -0.2**
KIV Kislovodsk 70.79 313 *e*P **P 03 12 12.6 +1.4**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,209nm,17.0s
KIV Kislovodsk 70.79 313 *e*P **P 03 12 12.6 +1.4**
KBZ Khabaz 70.84 313 P **P 03 12 12.8 +1.5**
comp=Z,7.6nm,0.9s,baz=12,slow=1.0,SNR=13
comp=Z,7.6nm,0.9s
KBZ Khabaz 70.84 313 P **P 03 12 12.8 +1.5**
KBZ Khabaz 70.84 313 *ce*P **P 03 12 11.6 +0.2**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 70.84 313 *e*P **P 03 12 11.6 +0.2**
GUDG Gudauri 70.89 311 P **P 03 12 12.9 +0.9**
SHA1 Shidzhatmaz 70.96 313 *e*P **P 03 12 12.7 +0.3**
ONI Oni 71.35 312 P **P 03 12 14.5 -0.1**
ONI IAmb IAmb 03 12 17.0
comp=Z,4.7nm,0.8s
ONI Oni 71.35 312 P **P 03 12 14.5 -0.1**
ONI pmax pmax
comp=Z,5.0nm,0.8s
ALIG Mtskhetisjvari 71.58 311 P **P 03 12 17.0 +1.0**
BKRG Bakuriani 71.89 311 P **P 03 12 19.8 +1.8**
AKASG Malin Array Be 72.00 325 P **P 03 12 17.9 -0.3**
comp=Z,1.0nm,0.4s,baz=37,slow=6.2,SNR=11
comp=Z,1.0nm,0.4s
ABS Abastumani 72.27 312 P **P 03 12 21.2 +0.9**
ANN Anapa 72.80 317 *e*P **P 03 12 19.4 -3.7**
ANN *e*PP **pP 03 12 36.7 +0.2**
ANN *e*S **S 03 21 38.9 -6.3**
ANN pmax pmax
comp=Z,37nm,0.8s
KARS Kars 72.93 311 P **P 03 12 24.0 -0.2**
KARS Kars 72.93 311 P **P 03 12 24.0 -0.2**
KARS pmax pmax
comp=Z,20nm,0.8s
GURO Guroymak-BITLI 74.98 310 P **P 03 12 36.4 +0.2**
GURO IAmb IAmb 03 12 38.9
comp=Z,4.1nm,0.9s
MILM Milestii Mici 75.12 323 ⇓P **P 03 12 36.3 -0.3**
OJC Ojcow 75.95 330 P **P 03 12 40.0 -1.4**
OJC IAmb IAmb 03 12 41.2
comp=Z,6.0nm,0.9s
OJC Ojcow 75.95 330 P **P 03 12 40.0 -1.4**
OJC pmax pmax
comp=Z,6.0nm,0.9s
BUR08 Bucovina Ar. S 76.03 326 P **P 03 12 41.8 -0.2**
BURAR Bucovina Array 76.05 326 ⇑P **P 03 12 42.4 +0.3**
BURAR Bucovina Array 76.05 326 P **P 03 12 41.8 -0.3**
BURAR Bucovina Array 76.05 326 ⇑P **P 03 12 42.4 +0.3**
GIRR Girov 76.06 324 ⇓P **P 03 12 40.3 -1.8**
KOLS Kolonicke sedl 76.12 328 *e*P **P 03 12 43.3 +0.9**
KOLS *e* 03 12 58.0

MARD Mardin 76.56 310 P **P 03 12 44.4 -0.8**
TRPA Tarpa 76.68 327 ⇑P **P 03 12 46.5 +1.0**
CFR Carcaliu 76.78 322 ⇑P **P 03 12 44.1 -2.0**
CFR Carcaliu 76.78 322 ⇑P **P 03 12 44.1 -2.0**
PLOR Plostina 76.88 324 ⇓P P 03 12 52.2 +5.4
PLOR Plostina 76.88 324 ⇓P P 03 12 52.2 +5.5
OSTC Ostas 76.89 332 *ep*P pP 03 13 02.9 +3.0
CHVC Chvalec 76.92 332 *e*P **P 03 12 47.5 +0.6**
CHVC *ep*P **pwP 03 13 02.7 -0.5**
UPC Upice 77.00 332 *ep*P pP 03 13 03.5 +3.0
DPC Dobruska-Polom 77.03 332 *e*P **P 03 12 48.5 +1.0**
DPC *e**PP **pwP 03 13 03.7 -0.1**
DPC Dobruska-Polom 77.03 332 *e*P **P 03 12 48.5 +1.0**
DPC *ep*P **pwP 03 13 03.7 -0.1**
OZUR 77.04 324 ⇓P **P 03 12 49.2 +1.6**
MORC Moravsky Berou 77.11 331 ⇓P **P 03 12 48.8 +0.8**
MORC Moravsky Berou 77.11 331 P **P 03 12 47.6 -0.3**
MORC IAmb IAmb 03 12 49.5
comp=Z,6.2nm,0.9s
MORC Moravsky Berou 77.11 331 P **P 03 12 47.7 -0.3**
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 77.11 331 *e*P **P 03 12 48.4 +0.4**
KRLC Kraliky 77.11 332 *e*P **P 03 12 48.8 +0.8**
KRLC *e**PP **pwP 03 13 03.9 -0.4**
KRLC Kraliky 77.11 332 *e*P **P 03 12 48.8 +0.8**
KRLC *ep*P **pwP 03 13 03.9 -0.4**
HARR Harsova 77.25 322 ⇑P **P 03 12 49.0 +0.2**
HARR Harsova 77.25 322 ⇑P **P 03 12 49.0 +0.2**
CLL Collm 77.26 334 P **P 03 12 48.1 -0.6**
CLL IAmb IAmb 03 12 50.0
comp=Z,5.6nm,0.8s
CLL Collm 77.26 334 *i* P **P 03 12 48.8 +0.1**
comp=Z,8.0nm,1.1s
DOPR Dopca 77.31 324 ⇑P **P 03 12 49.7 +0.6**
PVCC Panska Ves 77.45 333 *e*P **P 03 12 50.5 +0.7**
PVCC *e**PP **pwP 03 13 05.7 -0.4**
PVCC Panska Ves 77.45 333 *e*P **P 03 12 50.5 +0.7**
PVCC *ep*P **pwP 03 13 05.7 -0.4**
MLR Muntele Rosu 77.46 324 ⇓P **P 03 12 50.3 +0.2**
MLR ⇑P **P 03 12 51.0 +0.8**
MLR Muntele Rosu 77.46 324 P **P 03 12 50.8 +0.7**
MLR IAmb IAmb 03 12 52.4
comp=Z,3.7nm,0.8s
MLR Muntele Rosu 77.46 324 P **P 03 12 50.8 +0.7**
MLR pmax pmax
comp=Z,4.0nm,0.8s
DRGR 77.71 326 ⇑P **P 03 12 51.2 -0.2**
DRGR 77.71 326 ⇑P **P 03 12 51.2 -0.2**
VYHS Vyhne 77.74 330 *e*P **P 03 12 52.5 +1.0**
VYHS *e* 03 13 07.4
VRAC Vranov 77.83 331 *e*P **P 03 12 52.4 +0.4**
VRAC *e* 03 13 07.9
PSZ Piszkesteto 77.84 329 ⇓P **P 03 12 53.0 +0.9**
PSZ Piszkesteto 77.84 329 P **P 03 12 51.7 -0.4**
PSZ IAmb IAmb 03 12 54.4
comp=Z,4.6nm,0.9s
PSZ Piszkesteto 77.84 329 P **P 03 12 51.7 -0.4**
PSZ pmax pmax
comp=Z,5.0nm,0.9s
JAVC Velka Javorina 77.84 331 *e*P **P 03 12 54.3 +2.2**
JAVC *e* 03 13 09.0
VOIR 77.88 324 ⇓P **P 03 12 52.9 +0.5**
VOIR 77.88 324 ⇓P **P 03 12 52.9 +0.5**
GOPC GO Pecny, Ondr 77.91 333 *e*P **P 03 12 53.3 +0.9**
GOPC *e**PP **pwP 03 13 08.5 -0.2**
GOPC GO Pecny, Ondr 77.91 333 *e*P **P 03 12 53.3 +0.9**
GOPC *ep*P **pwP 03 13 08.5 -0.2**
PRU Pruhonice 77.92 333 *e*P **P 03 12 53.1 +0.6**
PRU *e**PP **pwP 03 13 08.4 -0.4**
PRU Pruhonice 77.92 333 *e*P **P 03 12 53.1 +0.6**
PRU *ep*P **pwP 03 13 08.4 -0.4**
KRUC Moravsky 78.11 331 *e*P **P 03 12 54.7 +1.2**
KRUC *e* 03 13 09.3
NKC Novy Kostel 78.37 334 *ep*P pP 03 13 10.7 +2.5
MODS Modra-Piesok 78.40 330 *e*P **P 03 12 56.8 +1.7**
MODS *e* 03 13 11.6
BRTR Keskin Array B 78.47 316 P **P 03 12 56.8 +0.9**
comp=Z,1.2nm,0.8s,baz=78,slow=5.7,SNR=8.7
comp=Z,1.2nm,0.8s
BRTR Keskin Array B 78.47 316 P **P 03 12 56.0 +0.1**
ANTO Ankara 78.78 316 P **P 03 12 57.0 -0.5**
ANTO Ankara 78.78 316 P **P 03 12 57.0 -0.5**
ANTO pmax pmax
comp=Z,5.0nm,0.6s
GZR Gura Zlata 78.84 326 ⇑P **P 03 12 57.3 -0.4**
GZR Gura Zlata 78.84 326 ⇑P **P 03 12 57.3 -0.4**
KHC Kasperske Hory 78.98 333 P **P 03 12 58.8 +0.5**
KHC IAmb IAmb 03 13 00.0
comp=Z,4.4nm,0.7s
KHC Kasperske Hory 78.98 333 P **P 03 12 58.8 +0.5**
KHC pmax pmax
comp=Z,4.0nm,0.7s
KHC Kasperske Hory 78.98 333 *e*P **P 03 12 59.2 +0.8**
CKRC Cesky Krumlov 79.01 332 *e*P **P 03 12 59.1 +0.6**
CKRC *ep*P **pwP 03 13 14.2 -0.6**
BZS Buzias 79.11 326 ⇓P **P 03 12 58.2 -0.8**
BZS Buzias 79.11 326 ⇓P **P 03 12 58.2 -0.8**
GEC2 GERESS Array S 79.19 333 P **P 03 12 59.6 +0.1**
GEC2 IAmb IAmb 03 13 00.6
comp=Z,2.0nm,0.7s
GERES GERESS Array B 79.19 333 P **P 03 13 00.0 +0.4**
comp=Z,1.1nm,0.5s,baz=46,slow=5.8,SNR=13
comp=Z,1.1nm,0.5s
GERES GERESS Array B 79.19 333 P **P 03 12 59.7 +0.1**
R40A Maddies Statio 79.36 46 P **P 03 13 01.0 +0.4**
R40A IAmb IAmb 03 13 06.4
comp=Z,5.9nm,1.2s
TX31 Lajitas Ar. Si 79.63 59 P **P 03 13 01.7 -0.7**
TX32 Lajitas Array 79.63 59 P **P 03 13 01.4 -0.9**
TXAR Lajitas Array 79.63 59 P **P 03 13 03.7 +1.4**
comp=Z,0.3nm,0.5s,baz=307,slow=4.4,SNR=7.5
comp=Z,0.3nm,0.5s
TXAR Lajitas Array 79.63 59 P **P 03 13 01.8 -0.5**
MORH Mrgy, Hungar 79.74 329 ⇓P **P 03 13 02.2 -0.2**
BOVS Bovan 80.72 325 ⇓P **P 03 13 05.7 -2.1**
VTS Vitosha 80.93 324 ⇑P **P 03 13 09.7 +0.5**
VTS Vitosha 80.93 324 P **P 03 13 09.7 +0.5**
VTS Vitosha 80.93 324 ⇑P **P 03 13 09.7 +0.5**
RDO Rodhopi 81.15 321 P **P 03 13 09.7 -0.4**
RDO IAmb IAmb 03 13 11.8
comp=Z,4.8nm,0.9s
FCAR Ozark Folk Cen 81.27 47 P **P 03 13 10.6 -0.3**
MIAR Mount Ida 81.54 49 P **P 03 13 13.1 +0.8**
MIAR IAmb IAmb 03 13 23.6
comp=Z,5.0nm,1.1s
MIAR Mount Ida 81.54 49 P **P 03 13 13.1 +0.8**
MIAR pmax pmax
comp=Z,5.0nm,1.1s
WHAR Wooly Hollow 81.64 48 P **P 03 13 12.8 -0.1**
FUORN Ofenpass-Fuorn 82.25 334 P **P 03 13 15.4 -0.8**
FUORN IAmb IAmb 03 13 19.5
comp=Z,2.2nm,0.8s
PDG Podgorica 82.71 326 ⇑P **P 03 13 18.2 -0.1**
FDMO Fiordimonte 84.48 330 P **P 03 13 27.4 0.0**
TORD Torodi Ar. Bea 115.62 326 PKP **PKPdf 03 19 37.4 +0.4**
comp=Z,0.2nm,0.8s,baz=17,slow=2.5,SNR=1.3
BDFB Brasilia 146.54 34 PKPbc **PKPab 03 20 37.4 +0.1**
comp=Z,0.8nm,0.7s,baz=259,slow=5.2,SNR=3.8
PLCA Paso Flores 149.58 97 PKPbc **PKiKP 03 20 45.3 +0.6**
comp=Z,1.0nm,0.7s,baz=285,slow=1.8,SNR=5.2
CPUP Villa Florida 150.60 60 PKPbc **PKiKP 03 20 47.5 +0.4**
comp=Z,0.3nm,0.4s,baz=323,slow=5.1,SNR=3.8

IDC ***24*** *03:01:09.7±0.5, 45°.26N×150°.76E, h0km, mb4.4/24, mbtmp4.4/27, ML3.3/3, Error ellipse: s-maj=15.7km s-min=11.6km az=154.0*
MOS ***24*** *03:01:12.4±0.9, 45°.13N×150°.74E, h34km, mb5.1/27, Error ellipse: s-maj=8.9km s-min=6.6km az=93.6*
SKHL ***24*** *03:01:14.3±0.5, 45°.00N×151°.00E, h55km±4km, mb5.3/4*
NEIC ***24*** *03:01:15.4±1.4, 45°.24N±0°.10×150°.6E±0°.1, h40km±7km, mb4.7/117, Error ellipse: s-maj=16.1km s-min=10.4km az=139.0*
ISC 24 03:01:14.5±0.4, 45°.18N±0°.07×150°.78E±0°.06, h35km, n302, σ0°90/302, mb4.7/117, 9C-15D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.06**	**272**	*e*P	**Pn**	**03 01 47.7**	**+1.1**
KUR				AMB	AMB	03 01 49.5	
	610nm,0.4s						
KUR				*e*S	**Sn**	**03 02 12.6**	**+1.6**
KUR				A	A	03 02 23.8	
	1μm,0.5s						
KUR				A	A	03 02 23.8	
	1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.70**	**254**	*e*P	**Pn**	**03 02 10.4**	**+1.3**
YUK				AMB	AMB	03 02 12.1	
	530nm,0.4s						
YUK				*e*S	**Sn**	**03 02 52.5**	**+1.1**
YUK				A	A	03 03 11.3	
	2μm,0.6s						
YUK				A	A	03 03 11.3	
	1μm,0.6s						
NMR	**Nemuro--Hokkai**	**4.06**	**245**	*e*P	**Pn**	**03 02 15.1**	**+1.1**
NMR				*e*S	**Sn**	**03 03 00.7**	**+0.5**
AKK	**Akkeshi**	**4.79**	**245**	*e*P	**Pn**	**03 02 24.7**	**+0.5**
AKK				*e*S	**Sn**	**03 03 18.2**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.86**	**290**	Pn	**Pn**	**03 02 36.5**	**-2.3**
YSS	**Yuzh-Sakhalins**	**5.86**	**290**	*e*P	**Pn**	**03 02 42.0**	**+3.2**
YSS				AMB	AMB	03 02 43.4	
	20nm,0.4s						
ERM	**Erimo**	**6.38**	**243**	Pn	**Pn**	**03 02 46.0**	**+0.1**
ERM	**Erimo**	**6.38**	**243**	PN	**Pn**	**03 02 46.0**	**+0.1**
SKR	**Severo-Kuril's**	**6.57**	**31**	*e*PN	**Pn**	**03 02 49.3**	**+0.8**
SKR				pmax	pmax		
	comp=Z,98nm,0.6s						
SKR	**Severo-Kuril's**	**6.57**	**31**	*e*P	**Pn**	**03 02 50.1**	**+1.6**
SKR				AMB	AMB	03 02 51.9	
	comp=Z,110nm,0.5s						
SKR				*e*S	**Sn**	**03 04 01.9**	**-0.1**
SKR				A	A	03 04 16.5	
	comp=Z,100nm,0.6s						
SKR				A	A	03 04 16.5	
	comp=Z,100nm,0.6s						
UGL	**Uglegorsk**	**7.11**	**306**	*e*P	**Pn**	**03 02 58.2**	**+2.3**
UGL				AMB	AMB	03 03 00.0	
	comp=Z,60nm,0.6s						
PAU	**Pauzhetka**	**7.46**	**30**	*e*P	**Pn**	**03 03 03.8**	**+3.1**
PAU				AMB	AMB	03 03 08.7	
	comp=Z,60nm,0.4s						
TYV	**Tymovskoe**	**7.87**	**319**	*e*PN	Pn	03 03 11.2	+4.9
TYV				pmax	pmax		
	comp=Z,36nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,3.3s						
TYV	**Tymovskoe**	**7.87**	**319**	*e*P	Pn	03 03 11.2	+4.9
TYV				AMB	AMB	03 03 11.8	
	comp=Z,40nm,1.0s						
JTM	**Tenmabayashi**	**8.36**	**242**		**Pn**	**03 03 11.9**	**-1.3**
PEA0B	**Petropavlovsk-**	**9.13**	**27**	Pn	**Pn**	**03 03 25.2**	**+1.6**
PEA0B	**Petropavlovsk-**	**9.13**	**27**	PN	**Pn**	**03 03 25.2**	**+1.6**
PETK	**Petropavlovsk-**	**9.13**	**27**	Pn	**Pn**	**03 03 23.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=187,slow=10,SNR=1.9						
	comp=Z,2.5nm,0.6s						
PETK	**Petropavlovsk-**	**9.13**	**27**	Pn	**Pn**	**03 03 25.0**	**+1.3**
PETK	**Petropavlovsk-**	**9.13**	**27**	PN	**Pn**	**03 03 25.0**	**+1.3**
PET	**Petropavlovsk**	**9.39**	**30**	*e*P	**Pn**	**03 03 29.2**	**+2.1**
JMM	**Marumori**	**10.46**	**229**		**Pn**	**03 03 39.6**	**-2.2**
MAJO	**Matsushiro**	**12.84**	**232**	Pn	**Pn**	**03 04 11.8**	**-2.6**
MAJO	**Matsushiro**	**12.84**	**232**	PN	**Pn**	**03 04 11.8**	**-2.6**
MJAR	**Matsushiro Arr**	**12.84**	**232**	Pn	**Pn**	**03 04 12.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=6.0						
	comp=Z,2.8nm,0.7s						
MJB9	**Matsu-Tunnel**	**12.84**	**232**	Pn	**Pn**	**03 04 13.5**	**-0.9**
USA0B	**Ussuriysk Arra**	**13.41**	**272**	Pn	**Pn**	**03 04 21.0**	**-1.2**
USA0B	**Ussuriysk Arra**	**13.41**	**272**	PN	**Pn**	**03 04 21.0**	**-1.2**
USRK	**Ussuriysk Ar.**	**13.41**	**272**	Pn	**Pn**	**03 04 24.6**	**+2.4**
	comp=Z,0.8nm,0.3s,baz=86,slow=14,SNR=13						
USRK	**Ussuriysk Ar.**	**13.41**	**272**	Pn	**Pn**	**03 04 21.6**	**-0.5**
USRK	**Ussuriysk Ar.**	**13.41**	**272**	PN	**Pn**	**03 04 21.6**	**-0.5**
JGF	**Kuroka**	**13.99**	**231**	Pn	**Pn**	**03 04 30.1**	**-0.1**
ZEA	**Zeya**	**17.46**	**308**	*e*P	**Pn**	**03 05 14.3**	**-0.8**
ZEA	**Zeya**	**17.46**	**308**	*e*P	**Pn**	**03 05 14.3**	**-0.8**
CN2	**Changchun**	**18.11**	**275**	P	**P**	**03 05 24.8**	**+1.6**
KSRS	**Korea Array**	**18.79**	**254**	P	**Pn**	**03 05 31.3**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=62,slow=10,SNR=9.3						
	comp=Z,6.1nm,0.8s						
BJI	**Beijing**	**25.85**	**271**	P	**P**	**03 06 42.3**	**-0.3**
BJI				pP	**pP**	**03 06 52.8**	**+0.8**
BJT	**Baijiatuau**	**25.87**	**271**		**P**	**03 06 42.2**	**-0.5**
BJT				IAmb	IAmb	03 06 44.9	
	comp=Z,12nm,0.5s						
BJT	**Baijiatuau**	**25.87**	**271**	P	**P**	**03 06 42.2**	**-0.5**
BJT				pmax	pmax		
	comp=Z,12nm,0.5s						
HNS	**HongShan**	**28.02**	**267**	⇑P	**P**	**03 07 02.6**	**+0.5**
TIXI	**Tiksi**	**28.55**	**346**	PcP	**PcP**	**03 10 17.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=270,slow=3.4,SNR=3.6						
TIXI	**Tiksi**	**28.55**	**346**	P	**P**	**03 07 04.0**	**-2.4**
TIXI	**Tiksi**	**28.55**	**346**	P	**P**	**03 07 04.0**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**28.68**	**147**	T	T	03 38 02.5	
	baz=336,slow=76,SNR=312						
H11N1	**WAKE ISLAND Hy**	**28.70**	**147**	T	T	03 37 55.5	
	baz=336,slow=76,SNR=100						
H11N3	**WAKE ISLAND Hy**	**28.70**	**147**	T	T	03 37 55.9	
	baz=336,slow=76,SNR=115						
H11S1	**WAKE ISLAND Hy**	**29.72**	**148**	T	T	03 39 08.0	
	baz=337,slow=76,SNR=466						
H11S3	**WAKE ISLAND Hy**	**29.73**	**148**	T	T	03 39 08.8	
	baz=337,slow=76,SNR=244						
H11S2	**WAKE ISLAND Hy**	**29.74**	**148**	T	T	03 39 04.0	
	baz=337,slow=76,SNR=407						
SONM	**Songino Array**	**30.35**	**291**	P	**P**	**03 07 23.5**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=81,slow=7.2,SNR=11						
SONM				PcP	**PcP**	**03 10 22.5**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=102,slow=2.3,SNR=4.9						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**30.35**	**291**	P	**P**	**03 07 21.5**	**-1.4**
SONM	**Songino Array**	**30.35**	**291**	P	**P**	**03 07 21.5**	**-1.4**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WHN	**Wuhan**	**31.96**	**255**	⇓P	**P**	**03 07 37.8**	**+0.8**
TPUB	**Ta-pu**	**32.83**	**238**	P	**P**	**03 07 44.4**	**-0.3**
SVW2	**Sparrevohn**	**34.75**	**43**	P	**P**	**03 08 01.6**	**+0.6**
SVW2				IAmb	IAmb	03 08 40.2	
	comp=Z,17nm,1.4s						
J20K	**Nowinta River**	**35.62**	**38**	P	**P**	**03 08 08.8**	**+0.4**
Q19K	**Cape Douglas,**	**35.73**	**47**	P	**P**	**03 08 10.3**	**+0.8**
IMAR	**Indian Mountai**	**35.99**	**35**	P	**P**	**03 08 11.8**	**+0.2**
A21K	**Barrow**	**36.13**	**26**	P	**P**	**03 08 12.8**	**+0.1**
A21K				IAmb	IAmb	03 08 56.4	
	comp=Z,170nm,1.1s						
LZH	**Lanzhou**	**36.32**	**272**	*e*P	**P**	**03 08 16.3**	**+1.3**
LZH				pP	pP	03 08 24.6	0.0
LZH				sP	sP	03 08 29.1	+0.5
H21K	**Melozitna Rive**	**36.34**	**36**	P	**P**	**03 08 14.0**	**-0.6**
KDAK	**Kodiak Island**	**36.36**	**49**	P	**P**	**03 08 14.7**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=276,slow=8.3,SNR=5.3						
	comp=Z,3.3nm,0.6s						
PPLA	**Purkeypile**	**36.41**	**40**	P	**P**	**03 08 15.9**	**+0.4**
PPLA				IAmb	IAmb	03 08 45.0	
	comp=Z,19nm,1.5s						
KTH	**Kantishna Hill**	**37.01**	**39**	P	**P**	**03 08 21.3**	**+0.9**
KTH				IAmb	IAmb	03 08 22.8	
	comp=Z,12nm,1.0s						
TRF	**Thorofare Moun**	**37.29**	**39**	P	**P**	**03 08 23.1**	**+0.2**
TRF				IAmb	IAmb	03 09 05.1	
	comp=Z,11nm,1.4s						
GTA	**Gaotai**	**37.62**	**280**	*e*P	**P**	**03 08 27.3**	**+1.4**
GTA				pP	sP	03 08 40.6	+1.0
GTA				sP	pwP	03 08 47.0	+9.1
I23K	**Minto, Yukon-K**	**37.74**	**37**	P	**P**	**03 08 27.2**	**+0.8**
TOLK	**Toolik Lake Re**	**37.93**	**31**	P	**P**	**03 08 28.1**	**-0.1**
TOLK				IAmb	IAmb	03 08 36.4	
	comp=Z,13nm,1.2s						
GHO	**Glory Hole Cre**	**37.95**	**42**	P	**P**	**03 08 28.8**	**+0.4**
GHO				IAmb	IAmb	03 08 59.2	
	comp=Z,10nm,1.2s						
MDM	**Murphy Dome**	**38.21**	**37**	P	**P**	**03 08 30.9**	**+0.4**
SML	**Sawmill**	**38.23**	**42**	P	**P**	**03 08 29.7**	**-1.0**
SML				IAmb	IAmb	03 08 32.3	
	comp=Z,16nm,0.9s						
H24K	**Noodor Dome**	**38.38**	**36**	P	**P**	**03 08 32.3**	**+0.4**
CCB	**Clear Creek Bu**	**38.39**	**38**	P	**P**	**03 08 31.7**	**-0.2**
POKR	**Poker Plat Res**	**38.55**	**37**	P	**P**	**03 08 34.0**	**+0.7**
POKR				IAmb	IAmb	03 08 35.1	
	comp=Z,9.3nm,0.8s						
DHY	**Denali Highway**	**38.61**	**40**	P	**P**	**03 08 32.8**	**-1.3**
DHY				IAmb	IAmb	03 08 34.9	
	comp=Z,14nm,1.4s						
SCM	**Sheep Creek Mo**	**38.70**	**42**	P	**P**	**03 08 35.6**	**+0.9**
SCM				IAmb	IAmb	03 09 09.4	
	comp=Z,17nm,1.3s						
SCM	**Sheep Creek Mo**	**38.70**	**42**	P	**P**	**03 08 35.6**	**+0.9**
SCM				pmax	pmax		
	comp=Z,17nm,1.3s						
HDA	**Harding Lake**	**38.76**	**38**	P	**P**	**03 08 34.9**	**-0.2**
IL31		**38.78**	**37**	P	**P**	**03 08 35.0**	**-0.2**
ILAR	**Eielson Array**	**38.78**	**37**	P	**P**	**03 08 35.0**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=256,slow=6.1,SNR=12						
ILAR				PcP	**PcP**	**03 10 45.0**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=288,slow=4.8,SNR=4.8						
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**38.78**	**37**	P	**P**	**03 08 35.0**	**-0.3**
CD2	**Chengdu**	**39.13**	**265**	P	**P**	**03 08 39.1**	**+0.5**
M24K	**Tolsona, Glenn**	**39.22**	**42**	P	**P**	**03 08 39.4**	**+0.3**
M24K				IAmb	IAmb	03 09 15.2	
	comp=Z,27nm,1.4s						
J25K	**Salcha River,**	**39.44**	**38**	P	**P**	**03 08 40.3**	**-0.6**
GYA	**Guiyang**	**39.78**	**257**	⇑P	**P**	**03 08 44.3**	**+0.1**
SCRK	**Sand Creek**	**40.08**	**38**	P	**P**	**03 08 45.3**	**-0.9**
J26L	**Joseph Creek**	**40.23**	**38**	P	**P**	**03 08 47.7**	**+0.3**
VRDI	**Verde Repeater**	**40.61**	**43**	P	**P**	**03 08 51.0**	**+0.2**
M26K	**Nabesna, AK**	**40.67**	**41**	P	**P**	**03 08 51.5**	**+0.4**
M26K				IAmb	IAmb	03 08 53.1	
	comp=Z,6.5nm,0.7s						
K27K	**Chicken**	**40.91**	**38**	P	**P**	**03 08 52.8**	**-0.1**
BCAR	**Beaver Creek A**	**41.15**	**40**	P	**P**	**03 08 55.6**	**+0.6**
M27K	**Edge Creek, AK**	**41.20**	**41**	P	**P**	**03 08 55.5**	**0.0**
EGAK	**Eagle**	**41.23**	**37**	P	**P**	**03 08 55.8**	**+0.2**
BARN	**Barnard Glacie**	**41.49**	**43**	P	**P**	**03 08 59.0**	**+1.0**
BARN				IAmb	IAmb	03 09 00.2	
	comp=Z,7.5nm,0.8s						
CTGM	**Chitina Glacie**	**41.67**	**43**	P	**P**	**03 09 00.4**	**+1.0**
CTGM				IAmb	IAmb	03 09 01.4	
	comp=Z,8.8nm,0.8s						
DAWY	**Dawson**	**42.08**	**38**	P	**P**	**03 09 03.1**	**+0.5**
ZALV	**Zalesovo Beam**	**42.22**	**307**	P	**P**	**03 09 03.8**	**0.0**
	comp=Z,0.5nm,0.3s,baz=50,slow=9.5,SNR=1.7						
ZALV				PcP	**PcP**	**03 10 57.9**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=83,slow=2.7,SNR=8.5						
	comp=Z,0.5nm,0.3s						
EPYK	**Eagle Plains**	**42.88**	**34**	P	**P**	**03 09 09.9**	**+0.8**
EPYK				IAmb	IAmb	03 09 26.1	
	comp=Z,9.5nm,1.0s						
PZH	**PanZhiHua**	**43.18**	**261**	P	**P**	**03 09 13.5**	**+1.5**
KMI	**Kunming**	**43.35**	**259**	⇑P	**P**	**03 09 13.4**	**-0.2**
M30M	**Minto, Yukon**	**43.49**	**40**	P	**P**	**03 09 15.1**	**+1.0**
HYT	**Haines Junctio**	**43.53**	**42**	P	**P**	**03 09 15.5**	**+1.1**
HYT				IAmb	IAmb	03 09 17.4	
	comp=Z,11nm,1.1s						
P29M	**Windy Craggy**	**43.69**	**44**	P	**P**	**03 09 17.1**	**+1.4**
P29M				IAmb	IAmb	03 09 18.5	
	comp=Z,12nm,0.9s						
INK	**Inuvik**	**43.84**	**31**	P	**P**	**03 09 16.7**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=288,slow=6.0,SNR=7.5						
	comp=Z,2.7nm,0.6s						
INK	**Inuvik**	**43.84**	**31**	P	**P**	**03 09 16.9**	**+0.3**
INK	**Inuvik**	**43.84**	**31**	P	**P**	**03 09 17.0**	**+0.3**
INK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WMQ	**Urumqi**	**43.98**	**292**	*e*P	**P**	**03 09 19.8**	**+1.5**
M31M	**Drury Creek, Y**	**44.66**	**40**	P	**P**	**03 09 24.9**	**+1.4**
MK31	**Makanchi Array**	**46.22**	**298**	P	**P**	**03 09 36.4**	**+0.4**
MK31				IAmb	IAmb	03 09 37.2	
	comp=Z,6.5nm,0.7s						
MK31	**Makanchi Array**	**46.22**	**298**	P	**P**	**03 09 36.4**	**+0.4**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	**Makanchi Array**	**46.22**	**298**	P	**P**	**03 09 36.3**	**+0.3**
	comp=Z,9.9nm,0.9s,baz=73,slow=7.7,SNR=23						
MKAR				PcP	**PcP**	**03 11 11.5**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=74,slow=0.9,SNR=6.7						
	comp=Z,9.9nm,0.9s						
KURK	**Kurchatov**	**46.88**	**304**	P	**P**	**03 09 39.8**	**-1.2**
KURK				IAmb	IAmb	03 09 41.9	
	comp=Z,5.2nm,0.6s						
KURK	**Kurchatov**	**46.88**	**304**	P	**P**	**03 09 39.8**	**-1.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	**Kurchatov Arra**	**46.97**	**304**	P	**P**	**03 09 42.0**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=72,slow=8.6,SNR=11						
KURBB				PcP	**PcP**	**03 11 14.1**	**+0.4**
	comp=Z,1.3nm,0.2s,baz=71,slow=3.3,SNR=4.4						
	comp=Z,4.5nm,0.7s						
C36M	**Paulatuk**	**46.98**	**29**	P	**P**	**03 09 42.1**	**+0.6**
DLBC	**Dease Lake**	**47.85**	**44**	P	**P**	**03 09 50.1**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=255,slow=12,SNR=4.7						
	comp=Z,2.2nm,0.8s						
DLBC	**Dease Lake**	**47.85**	**44**	P	**P**	**03 09 50.6**	**+2.1**
DLBC				IAmb	IAmb	03 09 55.5	
	comp=Z,9.6nm,1.4s						
GRNB	**Grenville Isla**	**49.64**	**50**	P	**P**	**03 10 03.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**50.41**	**256**	P	**P**	**03 10 08.9**	**+0.3**
	comp=Z,3.6nm,0.3s,baz=47,slow=6.8,SNR=9.4						
CMAR				PcP	**PcP**	**03 11 27.8**	**+1.2**
	comp=Z,2.1nm,0.3s,baz=6.7,slow=4.5,SNR=4.7						
	comp=Z,3.6nm,0.3s						
EUNU	**Eureka**	**50.98**	**11**	P	**P**	**03 10 11.5**	**-0.6**
EUNU				IAmb	IAmb	03 10 12.5	
	comp=Z,8.2nm,0.9s						
RES	**Resolute Bay**	**52.83**	**18**	P	**P**	**03 10 25.7**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=355,slow=5.0,SNR=10						
	comp=Z,4.2nm,0.5s						
RES	**Resolute Bay**	**52.83**	**18**	P	**P**	**03 10 25.4**	**-0.4**
RES				IAmb	IAmb	03 10 52.6	
	comp=Z,17nm,1.4s						
RES	**Resolute Bay**	**52.83**	**18**	P	**P**	**03 10 25.4**	**-0.4**
RES				pmax	pmax		
	comp=Z,17nm,1.4s						
AAK	**Ala-Archa**	**53.07**	**296**	P	**P**	**03 10 28.5**	**+0.2**
AAK				IAmb	IAmb	03 10 30.2	
	comp=Z,7.2nm,0.8s						
AAK	**Ala-Archa**	**53.07**	**296**	P	**P**	**03 10 28.5

LRM	Limekiln Ridge	63.44	51	P	P	03 11 41.7	+0.9
DLMT	Dillon	63.65	51	P	P	03 11 42.0	-0.1
BOZ	Bozeman (W)	64.03	51	P	P	03 11 45.1	+0.5
BOZ				IAmb	IAmb	03 11 46.4	
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	64.03	51	P	P	03 11 45.1	+0.5
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	64.61	60	P	P	03 11 49.1	+0.5
	comp=Z,0.9nm,0.6s,baz=293,slow=6.5,SNR=7.6						
	comp=Z,0.9nm,0.6s						
NVAR	Mina Array Bea	64.61	60	P	P	03 11 49.2	+0.6
FINES	FINESS Array B	64.75	334	P	P	03 11 48.1	-0.7
	comp=Z,3.5nm,0.7s,baz=36,slow=7.5,SNR=12						
	comp=Z,3.5nm,0.7s						
FINES	FINESS Array B	64.75	334	P	P	03 11 47.6	-1.2
YHH	Holmes Hill	64.97	51	P	P	03 11 51.6	+0.6
GCMT	Greycliff	64.98	50	P	P	03 11 51.9	+1.2
RLMT	Red Lodge	65.62	50	P	P	03 11 55.8	+0.8
RLMT				IAmb	IAmb	03 12 30.3	
	comp=Z,8.0nm,1.4s						
MOOW	Moose Ponds	65.69	52	P	P	03 11 56.4	+0.8
TPAW	Teton Pass	65.74	52	P	P	03 11 57.3	+1.4
TPAW				IAmb	IAmb	03 11 58.4	
	comp=Z,3.7nm,0.8s						
REDW	Red Top Meadow	65.88	52	P	P	03 11 57.3	+0.5
REDW				IAmb	IAmb	03 11 59.1	
	comp=Z,8.4nm,1.3s						
GEYT	Alibeck	66.00	300	P	P	03 11 57.9	+0.6
	comp=Z,11nm,0.7s,baz=8.5,slow=3.0,SNR=18						
	comp=Z,11nm,0.7s						
GEYT	Alibeck	66.00	300	P	P	03 11 57.7	+0.3
GYA0B	ALIBECK ARRAY	66.00	300	P	P	03 11 56.9	-0.5
WB0	Warramunga Arr	66.34	197	P	P	03 11 59.9	+0.4
WB0				IAmb	IAmb	03 12 00.9	
	comp=Z,9.4nm,0.8s						
WR0	Warramunga Arr	66.50	197	P	P	03 12 01.0	+0.6
WR0				IAmb	IAmb	03 12 02.5	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	66.52	197	P	P	03 12 01.2	+0.6
WB2				IAmb	IAmb	03 12 02.1	
	comp=Z,9.5nm,0.8s						
WRA	Warramunga Arr	66.52	197	P	P	03 12 01.4	+0.8
	comp=Z,7.2nm,0.8s,baz=14,slow=6.7,SNR=26						
	comp=Z,7.2nm,0.8s						
WRA	Warramunga Arr	66.52	197	P	P	03 11 59.5	-1.2
WRA	Warramunga Arr	66.52	197	P	P	03 11 59.5	-1.2
BW06	Boulder Array	66.99	52	P	P	03 12 04.8	+0.9
PD31	Pinedale Array	66.99	52	P	P	03 12 04.3	+0.5
PDAR	Pinedale Array	66.99	52	P	P	03 12 04.2	+0.4
	comp=Z,2.0nm,0.7s,baz=303,slow=1.0,SNR=18						
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	66.99	52	P	P	03 12 04.4	+0.5
K22A	Casper	68.74	51	P	P	03 12 14.7	0.0
K22A				IAmb	IAmb	03 12 19.0	
	comp=Z,12nm,1.4s						
NC303	NORSAR Array S	68.97	340	P	P	03 12 15.0	-0.7
NC303				IAmb	IAmb	03 12 52.8	
	comp=Z,9.3nm,1.1s						
RSSD	Black Hills	69.08	48	P	P	03 12 16.7	-0.2
RSSD				IAmb	IAmb	03 12 17.9	
	comp=Z,6.0nm,0.7s						
RSSD	Black Hills	69.08	48	P	P	03 12 16.7	-0.2
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NOA	NORSAR Array B	69.17	340	P	P	03 12 16.4	-0.5
	comp=Z,4.6nm,0.5s,baz=29,slow=6.4,SNR=12						
	comp=Z,4.6nm,0.5s						
NACGM	Naroch	69.59	329	eP	P	03 12 13.7	-5.9
	baz=39						
ASAR	Alice Springs	70.22	196	P	P	03 12 25.2	+1.4
	comp=Z,4.4nm,0.8s,baz=13,slow=5.4,SNR=18						
	comp=Z,4.4nm,0.8s						
BORG	Borgarnes	70.24	356	P	P	03 12 23.8	+0.4
BORG	Borgarnes	70.24	356	P	P	03 12 23.8	+0.4
BORG				pmax	pmax		
	comp=Z,60nm,1.2s						
N23A	Red Feather La	70.25	52	P	P	03 12 25.2	+1.0
N23A				IAmb	IAmb	03 12 50.0	
	comp=Z,7.3nm,1.1s						
KIV	Kislovodsk	70.71	313	P	P	03 12 24.8	-2.0
KBZ	Khabaz	70.76	313	P	P	03 12 27.6	+0.7
	comp=Z,22nm,0.8s,baz=60,slow=3.2,SNR=22						
KONO	Kongsberg	70.78	340	P	P	03 12 26.6	-0.1
KONO	Kongsberg	70.78	340	P	P	03 12 26.7	-0.1
KONO				pmax	pmax		
	comp=Z,38nm,1.4s						
SMCO	Snowmass	70.84	54	P	P	03 12 28.8	+0.7
ONI	Oni	71.27	312	P	P	03 12 30.1	-0.1
ONI	Oni	71.27	312	P	P	03 12 30.1	-0.1
ONI				pmax	pmax		
	comp=Z,15nm,0.9s						
AKASG	Malin Array Be	71.92	325	P	P	03 12 33.4	-0.5
	comp=Z,2.5nm,0.5s,baz=35,slow=6.1,SNR=15						
	comp=Z,2.5nm,0.5s						
AKBB	Malin Array Si	71.92	325	P	P	03 12 32.8	-1.1
AKBB				IAmb	IAmb	03 12 33.8	
	comp=Z,7.2nm,0.7s						
AKBB	Malin Array Si	71.92	325	P	P	03 12 32.8	-1.1
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OGNE	Ogallala	72.35	49	P	P	03 12 37.2	+0.5
KARS	Kars	72.85	311	P	P	03 12 40.3	+0.5
KARS	Kars	72.85	311	P	P	03 12 40.3	+0.5
KARS				pmax	pmax		
	comp=Z,97nm,1.2s						
ECSD	EROS Data Cent	73.14	44	P	P	03 12 41.4	+0.1
ECSD				IAmb	IAmb	03 12 42.0	
	comp=Z,6.8nm,0.9s						
LVV	L'vov	74.66	327	eP	P	03 12 49.4	-0.6
VASR	Vaslui	75.69	323	⇑P	P	03 12 55.7	-0.3
OJC	Ojcow	75.89	330	eP	P	03 12 55.4	-1.8
OJC	Ojcow	75.89	330	P	P	03 12 55.3	-1.8
OJC	Ojcow	75.89	330	P	P	03 12 55.3	-1.8
OJC				pmax	pmax		
	comp=Z,18nm,0.9s						
BUR08	Bucovina Ar. S	75.96	325	P	P	03 12 57.4	-0.2
BURAR	Bucovina Array	75.98	325	P	P	03 12 57.7	-0.1
STHS	Stebnicka Huta	76.03	329	eP	P	03 12 58.1	+0.2
STHS				pmax	pmax		
	comp=Z,11nm,0.7s						
BIZ	Bicaz	76.16	325	⇑P	P	03 12 58.6	-0.1
VLDR	Vladesti	76.20	323	⇑P	P	03 12 59.0	+0.1
CRVS	Cervenica-Dubn	76.38	328	eP	P	03 13 00.2	+0.3
CRVS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSP	Ksiaz	76.55	332	eP	P	03 13 00.8	-0.1
KSU1	Kansas State U	76.55	48	P	P	03 13 00.2	-0.9
KSU1				IAmb	IAmb	03 13 01.1	
	comp=Z,7.5nm,0.7s						
ARCR	ARCALIA	76.75	326	⇓P	P	03 13 02.3	+0.3
VRI	Vrincioaia	76.76	324	⇓P	P	03 13 00.9	-1.2
VRI	Vrincioaia	76.76	324	⇓P	P	03 13 00.9	-1.2
MORC	Moravsky Berou	77.04	331	P	P	03 13 03.7	+0.1
MORC	Moravsky Berou	77.04	331	P	P	03 13 03.7	+0.1
MORC				pmax	pmax		
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	77.04	331	e	P	03 13 03.8	+0.1
CLL	Collm	77.20	334	P	P	03 13 04.0	-0.4
CLL	Collm	77.20	334	⇑/sP	P	03 13 03.7	-0.7
	comp=Z,26nm,1.0s						
MLR	Muntele Rosu	77.39	324	P	P	03 13 05.7	-0.1
MLR				IAmb	IAmb	03 13 07.6	
	comp=Z,9.3nm,0.8s						
MLR	Muntele Rosu	77.39	324	P	P	03 13 05.7	-0.1
MLR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ISR	Istrita	77.44	323	⇑P	P	03 13 06.2	+0.2
ISR	Istrita	77.44	323	⇑P	P	03 13 06.2	+0.2
ESK	Eskdalemuir	77.48	345	P	P	03 13 05.8	-0.1
ESK	Eskdalemuir	77.48	345	P	P	03 13 05.8	-0.1
ESK				pmax	pmax		
	comp=Z,25nm,1.4s						
PSZ	Piszkesteto	77.78	329	P	P	03 13 08.4	+0.6
PSZ				IAmb	IAmb	03 13 09.2	
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	77.78	329	P	P	03 13 08.5	+0.6
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s						
ARR	Arges	78.03	324	⇓P	P	03 13 09.8	+0.5
SMOL	Smolenice	78.16	330	eP	P	03 13 10.7	+0.8
SMOL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
T35A	Sooner Cattle	78.23	49	P	P	03 13 09.8	-0.7
T35A				IAmb	IAmb	03 13 11.1	
	comp=Z,8.7nm,0.9s						
BR131	Keskin Array S	78.39	316	P	P	03 13 11.2	-0.3
BR131				IAmb	IAmb	03 13 12.9	
	comp=Z,7.8nm,0.9s						
BR131	Keskin Array S	78.39	316	P	P	03 13 11.2	-0.3
BR131				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	Keskin Array B	78.39	316	P	P	03 13 11.9	+0.4
	comp=Z,4.4nm,0.9s,baz=66,slow=4.5,SNR=22						
	comp=Z,4.4nm,0.9s						
SRO	Srobarova	78.44	330	eP	P	03 13 12.5	+1.1
KHC	Kasperske Hory	78.92	333	P	P	03 13 14.2	+0.1
KHC	Kasperske Hory	78.92	333	P	P	03 13 14.2	+0.1
KHC				pmax	pmax		
	comp=Z,14nm,0.8s						
KHC	Kasperske Hory	78.92	333	epP	P	03 13 14.5	+0.4
GEC2	GERESS Array S	79.13	333	P	P	03 13 15.2	-0.1
GEC2				IAmb	IAmb	03 13 15.9	
	comp=Z,6.4nm,0.8s						
GERES	GERESS Array B	79.13	333	P	P	03 13 15.1	-0.2
	comp=Z,3.2nm,0.6s,baz=43,slow=6.0,SNR=21						
	comp=Z,3.2nm,0.6s						
GERES	GERESS Array B	79.13	333	P	P	03 13 14.8	-0.5
CONA	Conrad Observa	79.20	331	iP	P	03 13 16.2	+0.5
	comp=Z,4.6nm,0.7s						
RONA	Rosalia, Austr	79.25	331	eP	P	03 13 16.6	+0.7
	comp=Z,13nm,1.1s						
R40A	Maddies Statio	79.39	46	P	P	03 13 16.6	-0.2
R40A				IAmb	IAmb	03 13 16.8	
	comp=Z,7.9nm,0.9s						
TX31	Lajitas Ar. Si	79.69	59	P	P	03 13 18.8	+0.1
TX31				IAmb	IAmb	03 13 32.6	
	comp=Z,13nm,1.2s						
TX32	Lajitas Array	79.69	59	P	P	03 13 18.5	-0.2
TXAR	Lajitas Array	79.69	59	P	P	03 13 19.1	+0.4
	comp=Z,1.1nm,0.5s,baz=299,slow=3.9,SNR=12						
	comp=Z,1.1nm,0.5s						
TXAR	Lajitas Array	79.69	59	P	P	03 13 18.7	-0.1
BTNL	Ternell	79.81	338	dP	P	03 13 18.8	-0.1
	comp=Z,12nm,0.9s						
MOA	Molln	79.81	332	eP	P	03 13 18.9	-0.1
	comp=Z,6.2nm,0.9s						
MEM	Membach	79.82	338	dP	P	03 13 18.8	-0.1
	comp=Z,14nm,0.8s						
BSTI	Sart Tilman	79.95	338	dP	P	03 13 20.0	+0.4
	comp=Z,4.3nm,0.6s						
MPEP	Malo Peshtene	80.04	324	eP	P	03 13 20.3	0.0
BHOU	Houvegnez	80.05	338	dP	P	03 13 20.5	+0.3
	comp=Z,11nm,0.9s						
BIOA	Bad Ischl, Aus	80.16	332	eP	P	03 13 21.2	+0.4
	comp=Z,7.7nm,1.0s						
BCLA	Clavier	80.17	338	dP	P	03 13 20.9	0.0
	comp=Z,11nm,0.8s						
BGES	Gesves	80.26	339	dP	P	03 13 21.2	-0.1
	comp=Z,8.8nm,0.8s						
BLKB	Belogradchik	80.27	325	⇓P	P	03 13 20.5	-1.0
BMRD	Maredsous	80.42	339	dP	P	03 13 21.9	-0.3
	comp=Z,11nm,0.8s						
RCHB	Rochefort	80.44	338	dP	P	03 13 22.3	+0.1
	comp=Z,6.9nm,1.0s						
SOKA	Soboth	80.57	331	eP	P	03 13 23.0	-0.1
	comp=Z,7.7nm,0.8s,SNR=5.5						
PERS	Pernice	80.57	331	iP	P	03 13 23.1	0.0
WLF	Walferdange	80.64	338	dP	P	03 13 24.7	+1.4
	comp=Z,5.9nm,1.0s						
KBA	Koelnbreinsper	80.79	332	eP	P	03 13 25.0	+0.5
	comp=Z,7.4nm,0.8s						
VTS	Vitosha	80.86	324	P	P	03 13 25.2	+0.4
VTS	Vitosha	80.86	324	P	P	03 13 25.2	+0.4
VTS				pmax	pmax		
	comp=Z,19nm,0.8s						
VTS	Vitosha	80.86	324	eP	P	03 13 24.9	0.0
OBKA	Obir	80.88	331	eP	P	03 13 24.4	-0.4
	comp=Z,6.0nm,0.9s						
DIVS	Divibare	80.94	326	P	P	03 13 24.7	-0.5
DIVS				IAmb	IAmb	03 13 25.7	
	comp=Z,6.8nm,1.0s						
RDO	Rodhopi	81.07	321	P	P	03 13 25.6	-0.2
WATA	Walderalm	81.14	333	iP	P	03 13 26.5	+0.2
	comp=Z,8.4nm,0.7s,SNR=4.3						
CRES	Cresnjev	81.16	330	iP	P	03 13 25.6	-0.6
WTTA	Wattenberg	81.18	333	eP	P	03 13 26.7	+0.2
	comp=Z,12nm,0.6s,SNR=6.5						
RETA	Reutte	81.26	334	eP	P	03 13 27.0	+0.2
	comp=Z,7.7nm,1.1s						
MOTA	Moosalm	81.28	334	iP	P	03 13 27.2	+0.2
	comp=Z,13nm,0.9s						
FCAR	Ozark Folk Cen	81.31	47	P	P	03 13 26.8	-0.4
FCAR				IAmb	IAmb	03 13 27.4	
	comp=Z,5.7nm,0.7s						
SQTA	Sankt Quirin	81.35	333	eP	P	03 13 27.5	+0.2
	comp=Z,7.2nm,0.8s,SNR=4.3						
S44A	Carbondale	81.36	44	P	P	03 13 27.2	-0.2
S44A				IAmb	IAmb	03 13 28.2	
	comp=Z,9.2nm,0.8s						
MMB	Musomiste	81.50	323	eP	P	03 13 28.0	-0.1
MIAR	Mount Ida	81.58	49	P	P	03 13 28.7	+0.1
MIAR				IAmb	IAmb	03 13 29.5	
	comp=Z,5.6nm,0.7s						
MIAR	Mount Ida	81.58	49	P	P	03 13 28.7	+0.1
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WHAR	Wooly Hollow	81.69	47	P	P	03 13 29.0	-0.2
WHAR				IAmb	IAmb	03 14 03.2	
	comp=Z,16nm,1.5s						
STAL	STALIGIAL	81.72	332	P	P	03 13 28.0	-1.2
STAL				IAmb	IAmb	03 13 28.6	
	comp=Z,5.7nm,0.8s						
FUORN	Ofenpass-Fuorn	82.19	334	P	P	03 13 32.2	+0.3
FUORN				IAmb	IAmb	03 13 33.2	
	comp=Z,13nm,1.4s						
PDG	Podgorica	82.64	326	P	P	03 13 33.6	-0.4
PDG				IAmb	IAmb	03 13 34.4	
	comp=Z,11nm,0.9s						
TEOL	Teolo	82.85	332	P	P	03 13 35.2	+0.1
FDMO	Fiordimonte	84.42	330	P	P	03 13 42.2	-1.0
SWET	Sewanee	84.95	43	P	P	03 13 45.4	-0.6
SWET				IAmb	IAmb	03 13 46.5	
	comp=Z,6.1nm,0.8s						
TORD	Torodi Ar. Bea	115.55	326	PKP	PKiKP	03 19 52.7	-0.4
	comp=Z,0.3nm,0.5s,baz=28,slow=2.0,SNR=5.7						
VNDA	Vanda	122.62	177	PKP	PKiKP	03 20 05.1	+0.2
	comp=Z,0.5nm,0.8s,baz=330,slow=5.6,SNR=4.2						
H03N2	Juan Fernandez	140.37	91	T	T	05 57 08.3	
	baz=306,slow=77,SNR=18						
H03N3	Juan Fernandez	140.38	91	T	T	05 57 25.6	
	baz=306,slow=77,SNR=22						
H03N1	Juan Fernandez	140.38	90	T	T	05 57 09.7	
	baz=306,slow=77,SNR=16						
BDFB	Brasilia	146.56	34	PKPbc	PKPbc	03 20 52.5	0.0
	comp=Z,8.0nm,0.8s,baz=243,slow=4.0,SNR=14						
PLCA	Paso Flores	149.67	96	PKPbc	PKiKP	03 21 00.6	-0.5
	comp=Z,2.6nm,0.7s,baz=255,slow=2.8,SNR=12						
SNAA	Sanae	150.59	197	PKP	PKiKP	03 21 01.7	-0.3
CPUP	Villa Florida	150.66	60	PKPbc	PKPbc	03 21 03.0	+0.2
	comp=Z,3.5nm,0.6s,baz=334,slow=1.7,SNR=11						
CPUP	Villa Florida	150.66	60	PKIKP	PKPbc	03 21 03.0	+0.2
VNA2	Neumayer--Watz	152.07	195	PKP	PKiKP	03 21 04.9	-0.1
	baz=133,slow=1.7						
VNA3	Neumayer Olymp	152.20	193	PKP	PKPbc	03 21 05.1	+0.1
VNA1	Neumayer--Stat	152.46	195	PKP	PKiKP	03 21 06.0	+0.3

*SNET **24** 03:28:11.8±0.8, 13°.75N×91°.18W, h20km±4km, ML2.9*
*GCG **24** 03:28:14.5±0.3, 13°.97N×91°.16W, h34km, MD3.5*

ISC 24 03:28:11.6±3.8, 13°.8N±0°.1×91°.2W±0°.2, h22km±16km, n7, σ0°41/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.77	28	eP	Pb	03 28 26.5	0.0
FUG				eS	Sn	03 28 38.2	-0.1
PCG	Pacaya	0.86	44	eP	Pn	03 28 28.4	-0.2
PCG				eS	Sb	03 28 39.4	+0.1
NBG	Las Nubes	1.18	46	eP	Pn	03 28 33.0	0.0
NBG				eS	Sb	03 28 48.8	+0.4
NUBE	Las Nubes	1.41	84	eP	Pn	03 28 35.5	-0.5
NUBE				eS	Sb	03 28 54.6	-0.2
NUBE				IAML		03 28 54.9	
	comp=Z,139nm,0.4s						
SLOZ	Alcaldia de Sa	1.42	79	eP	Pn	03 28 35.8	-0.3
SLOZ				eS	Sb	03 28 54.8	-0.3
JAYA	Jayaque - finc	1.73	93	eP	Pn	03 28 40.4	0.0
JAYA				eS	Sn	03 29 01.5	-0.3
JAYA				IAML		03 29 03.6	
	comp=Z,469nm,0.2s						
SJTE	Alcalda de S	2.16	94	eP	Pn	03 28 46.6	+0.3
SJTE				eS	Sn	03 29 13.3	+0.9
SJTE				IAML		03 29 17.1	
	comp=Z,40nm,0.3s						

IDC 24 03:46:38.5±3.7, 49°.83S×118°.91E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=132.1km s-min=70.6km az=122.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.33	345	T	T	04 06 14.8	
	baz=160,slow=74,SNR=48						
H01W1	Cape Leeuwin H	15.33	345	T	T	04 06 15.5	
	baz=160,slow=74,SNR=58						
H01W3	Cape Leeuwin H	15.35	345	T	T	04 06 24.9	
	baz=160,slow=74,SNR=44						
STKA	Stephens Creek	24.66	52	P	P	03 52 01.1	+0.2
	3.2nm,0.7s,baz=218,slow=9.5,SNR=5.8						
	3.2nm,0.7s						
ASAR	Alice Springs	28.64	30	P	P	03 52 36.5	-0.2
	0.7nm,0.8s,baz=192,slow=8.5,SNR=4.6						
	0.7nm,0.8s						
WRA	Warramunga Arr	32.26	28	P	P	03 53 08.7	-0.1
	0.3nm,0.6s,baz=197,slow=8.1,SNR=2.1						
	0.3nm,0.6s						
YKA	Yellowknife Ar	148.62	46	PKPbc	PKPbc	04 06 25.6	-0.6
	0.2nm,0.4s,baz=264,slow=1.9,SNR=5.0						

*IDC **24** 04:16:12.6±1.5, 35°.68N×70°.74E, h0km, mb3.6/4, mbtmp3.6/8, ML3.3/4, MS3.3/2, Error ellipse: s-maj=34.2km s-min=25.7km az=115.0*

ISC 24 04:16:29.6±1.8, 36°.7N±0°.1×70°.3E±0°.1, h100km, n12, σ1°84/11, mb3.4/3, 4C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.42	1	⇑Pn	Pn	04 18 00.0	-1.5
	0.7nm,0.3s,baz=183,slow=12,SNR=17						
KK31				⇑Lg	Lg	04 19 10.6	
	3.8nm,0.5s,baz=187,slow=23,SNR=7.5						
AAK	Ala-Archa	6.76	27	Pn	Pn	04 18 06.8	+0.5
	1.2nm,0.3s,baz=125,slow=6.5,SNR=5.0						
AAK				Sn	Sn	04 19 21.0	-0.7
	0.9nm,0.3s,baz=145,slow=21,SNR=7.1						
	2.9nm,0.4s						
TKM2	Tokmak 2	7.43	31	⇑Pn	Pn	04 18 16.2	+0.7
	5.7nm,0.8s						
TKM2				⇑Lg	Lg	04 19 54.4	
	7.3nm,1.3s						
MKAR	Makanchi Array	13.46	38	Pn	Pn	04 19 36.0	-0.5
	0.1nm,0.3s,baz=212,slow=12,SNR=1.5						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	15.13	20	Pn	Pn	04 19 56.6	-1.2
	baz=205,slow=10,SNR=1.8						
	0.2nm,0.4s						
BVAR	Borovoye Array	16.34	0	LR	LR	04 26 25.2	
	comp=Z,48nm,20.3s,baz=330,slow=35						
AKTO	Aktyubinsk	16.36	331	P	P	04 20 16.9	+2.7
	0.6nm,0.3s,baz=146,slow=12,SNR=4.8						
AKTO				S	Sn	04 23 12.6	-1.8
	0.9nm,0.5s,baz=143,slow=20,SNR=2.0						
	1.5nm,0.3s						
ZALV	Zalesovo Beam	19.98	26	P	P	04 20 52.9	-0.9
	0.8nm,0.4s,baz=229,slow=11,SNR=2.2						
	0.8nm,0.4s						
ARCES	ARCESS Array B	40.77	338	P	P	04 24 03.0	+2.5
	3.0nm,1.1s,baz=116,slow=10,SNR=1.6						
	3.0nm,1.1s						
LEM	Lembang	55.60	133	LR	LR	04 50 20.3	
	comp=Z,42nm,18.1s,baz=140,slow=37						
TORD	Torodi Ar. Bea	65.19	268	P	P	04 26 58.4	-2.1
	0.2nm,0.6s,baz=50,slow=4.7,SNR=1.6						
	0.2nm,0.6s						
WRA	Warramunga Arr	82.54	121	P	P	04 28 33.2	-8.4
	0.5nm,1.0s,baz=326,slow=5.0,SNR=4.9						
	0.5nm,1.0s						

*REN **24** 04:24:13.1±0.8, 39°.33N±0°.03×118°.45W±0°.03, h14km±3km, ML3.1/24, ML3.0/50(NEIC), Error ellipse: s-maj=4.8km s-min=2.6km az=218.0*

NEIC 24 04:24:12.9±0.9, 39°.35N±0°.03×118°.45W±0°.03, h12km±4km, Error ellipse: s-maj=4.7km s-min=1.9km az=215.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVN	Kaiserville	0.40	137		Pg	04 24 21.1	+0.3
KVN				Sg	Sg	04 24 26.8	+0.5
KVN				IAML		04 24 27.0	
	comp=E,2μm,0.5s						
KVN				IAML		04 24 27.0	
	comp=N,2μm,0.3s						
YERR	Yerington	0.71	240		Pg	04 24 26.8	0.0
YERR				Sg	Sg	04 24 36.2	+0.1
RYN	Ryan	0.72	185		Pg	04 24 26.7	-0.2
RYN				Sg	Sg	04 24 36.3	0.0
RYN				IAML		04 24 38.4	
	comp=N,539nm,0.3s						
PAHR	Pah Rah Range	0.81	297		Pg	04 24 28.7	+0.1
PAHR				Sg	Sg	04 24 39.5	+0.2
NV09	Mina Array Sit	0.91	174		Pg	04 24 30.3	-0.2
NVAR	Mina Array Bea	0.92	173	Pg	Pg	04 24 30.4	-0.3
PNTR	Pine Nut	0.93	254		Pg	04 24 30.8	-0.1
PNTR				IAML		04 24 47.5	
	comp=E,739nm,0.6s						
VCNR	Virginia City	0.94	267		Pg	04 24 30.7	-0.3
VCNR					Sg	04 24 43.4	+0.2
VCNR				IAML		04 24 46.0	
	comp=E,535nm,0.7s						
VCNR				IAML		04 24 46.6	
	comp=N,578nm,0.6s						
NV11	Mina Array Sit	0.94	166		Pg	04 24 30.6	-0.5
NV11				Sg	Sg	04 24 43.1	-0.2
NV11				IAML		04 24 45.0	
	comp=E,384nm,0.3s						
NV11				IAML		04 24 46.0	
	comp=N,381nm,0.5s						
NV08	Mina Array Sit	0.94	174		Pg	04 24 30.9	-0.3
LHV	Little Huntoon	1.09	182		Pb	04 24 33.6	-0.1
LHV	

R11A	**Troy Canyon, C**	**2.45**	**113**	Pn	Pn	04 24 52.5	-0.4
R11A				IAML		04 25 31.9	
comp=N,44nm,0.6s							
GRAC	**Grapevine Rang**	**2.50**	**160**	Pn	Pn	04 24 52.9	-0.5
SGV	**South Grapevin**	**2.61**	**154**		Pn	04 24 55.9	+0.8
LBCM	**Butte Creek Ri**	**2.68**	**305**		Pn	04 24 57.9	+1.9
ELK	**Elko**	**2.83**	**59**	Pn	Pn	04 24 58.3	+0.1
WCT	**Wildcat Mounta**	**2.93**	**150**	Pn	Pn	04 24 59.3	0.0
WVOR	**Wild Horse Val**	**3.09**	**357**	Pn	Pn	04 25 00.9	-0.7
WVOR				IAML		04 25 54.0	
comp=N,27nm,0.5s							
PRN	**Pahroc Range**	**3.30**	**125**	Pn	Pn	04 25 04.5	0.0
AMDNV	**Amargosa**	**3.36**	**149**		Pn	04 25 06.5	+1.3
GWY	**Greenwater Val**	**3.45**	**155**	Pn	Pn	04 25 06.0	-0.6
QSM	**Queen of Sheba**	**3.60**	**159**	Pn	Pn	04 25 07.8	-0.8
YBH	**Yreka Blue Hor**	**4.03**	**308**	Pn	Pn	04 25 14.5	0.0
YBH				IAML		04 26 24.4	
comp=E,14nm,3.8s							
YBH				IAML		04 26 60.0	
comp=N,17nm,4.4s							
BGU	**Big Grassy Mou**	**4.44**	**67**	Pn	Pn	04 25 20.0	-0.3
MVU	**Marysvale**	**4.93**	**98**	Pn	Pn	04 25 27.0	-0.1
HVU	**Hansel Valley**	**4.96**	**59**	Pn	Pn	04 25 27.4	+0.1
SPUT	**South Promonto**	**4.99**	**65**	Pn	Pn	04 25 27.7	0.0
HLID	**Hailey**	**5.19**	**34**	Pn	Pn	04 25 29.9	-0.7
JLU	**Jordanelle**	**5.52**	**75**	Pn	Pn	04 25 35.6	+0.4
Q16A	**Castle Valley**	**5.67**	**92**	Pn	Pn	04 25 36.0	-1.3

*DDA **24** 04:43:14.3±0.0, 35°.15N×26°.54E, h7km±3km, MW3.7*
*IDC **24** 04:43:15.0±1.5, 35°.20N×26°.57E, h0km, mb3.5/3, mbtmp3.4/4, ML2.7/1, Error ellipse: s-maj=65.0km s-min=23.1km az=149.0*
*NIC **24** 04:43:16.2±0.0, 34°.98N×26°.82E, h18km±1km, MI4.2/7*
*ISK **24** 04:43:17.3, 35°.08N×26°.80E, h16km, ML3.6/20*
*ATH **24** 04:43:18.3, 35°.06N×26°.78E, h12km±1km, ML3.6/3, Error ellipse: s-maj=3.7km s-min=0.9km az=333.0*
*THE **24** 04:43:19.4, 35°.22N×26°.69E, h0km±1km, ML3.4/5, Error ellipse: s-maj=2.5km s-min=0.6km az=154.0*

ISC 24 04:43:17.0±1.1, 34°.99N±0°.04×26°.81E±0°.02, h17km±7km, n103, σ1§24/131, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**285**	PG	**Pg**	**04 43 27.3**	**+0.2**
ZKR				SG	**Sb**	**04 43 34.6**	**+0.2**
ZKR	**Zakros**	**0.50**	**285**	P	**Pg**	**04 43 27.0**	**-0.1**
ZKR				S	**Sg**	**04 43 34.2**	**+0.3**
6μm,0.5s							
ZKR	**Zakros**	**0.50**	**285**	P	**Pg**	**04 43 26.4**	**-0.7**
ZKR				S	**Sg**	**04 43 34.0**	**+0.2**
ZKR				AML	AML	04 43 34.1	
11nm,0.4s							
ZKR				AML	AML	04 43 34.1	
11nm,0.4s							
ZKR				AML	AML	04 43 38.8	
10.0nm,0.3s							
ZKR				AML	AML	04 43 38.8	
10.0nm,0.3s							
ZKR	**Zakros**	**0.50**	**285**	P	**Pg**	**04 43 27.2**	**+0.1**
ZKR				S	**Sg**	**04 43 33.9**	**0.0**
ZKR				AML	AML	04 43 35.3	
comp=N,12020μm,0.4s							
ZKR				AML	AML	04 43 35.5	
comp=E,10921μm,0.3s							
KARP	**Karpathos**	**0.63**	**27**	PG	**Pg**	**04 43 28.8**	**-0.6**
KARP				SG	**Sg**	**04 43 37.1**	**-0.7**
KARP	**Karpathos**	**0.63**	**27**	P	**Pg**	**04 43 29.2**	**-0.2**
KARP				S	**Sg**	**04 43 37.9**	**+0.1**
comp=E,20μm,0.4s							
KARP	**Karpathos**	**0.63**	**27**	P	**Pg**	**04 43 29.1**	**-0.4**
KARP				S	**Sg**	**04 43 37.9**	**+0.1**
KARP				AML	AML	04 43 39.2	
comp=E,42nm,0.4s							
KARP				AML	AML	04 43 39.2	
comp=E,42nm,0.4s							
KARP				AML	AML	04 43 39.2	
comp=E,48nm,0.4s							
KARP				AML	AML	04 43 39.2	
comp=E,48nm,0.4s							
KARP	**Karpathos**	**0.63**	**27**	P	**Pg**	**04 43 29.2**	**-0.2**
KARP				S	**Sg**	**04 43 37.7**	**-0.2**
KARP				AML	AML	04 43 39.7	
comp=E,32318μm,0.2s							
KARP				AML	AML	04 43 40.3	
comp=N,42385μm,0.2s							
FRMA	**Ierapetra Chan**	**0.88**	**272**	P	**Pb**	**04 43 32.3**	**-1.6**
FRMA				S	**Sb**	**04 43 43.1**	**-2.3**
FRMA				AML	AML	04 43 47.1	
comp=E,7913μm,0.4s							
FRMA				AML	AML	04 43 48.2	
comp=N,9003μm,0.4s							
HRKL	**Herakleio**	**1.44**	**283**	PN	**Pb**	**04 43 43.1**	**-0.2**
HRKL	**Herakleio**	**1.44**	**283**	P	**Pn**	**04 43 42.7**	**+0.4**
IDI	**Anoyia**	**1.60**	**281**	PN	**Pn**	**04 43 45.5**	**+0.9**
IDI	**Anoyia**	**1.60**	**281**	P	**Pb**	**04 43 46.1**	**-0.1**
IDI	**Anoyia**	**1.60**	**281**	P	**Pb**	**04 43 46.6**	**+0.4**
ARG	**Arkhangelos**	**1.63**	**41**	PN	**Pn**	**04 43 45.4**	**+0.5**
ARG	**Arkhangelos**	**1.63**	**41**	P	**Pb**	**04 43 47.4**	**+0.8**
ARG				S	**Sb**	**04 44 08.2**	**+1.3**
comp=N,1μm,0.5s							
ARG	**Arkhangelos**	**1.63**	**41**	S	**Sn**	**04 44 04.2**	**-1.3**
ARG	**Arkhangelos**	**1.63**	**41**	P	**Pb**	**04 43 47.0**	**+0.4**
NIS1	**Nisyros Isl.**	**1.64**	**10**	PN	**Pn**	**04 43 45.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.64**	**10**	P	**Pn**	**04 43 45.2**	**+0.2**
NIS1	**Nisyros Isl.**	**1.64**	**10**	P	**Pn**	**04 43 45.2**	**+0.2**
NISR	**Nisiros**	**1.64**	**9**	P	**Pn**	**04 43 45.2**	**+0.1**
NISR	**Nisiros**	**1.64**	**9**	P	**Pn**	**04 43 45.2**	**+0.1**
KOSK	**Kos Island**	**1.76**	**4**	PN	**Pn**	**04 43 46.9**	**+0.1**
KOSK	**Kos Island**	**1.76**	**4**	P	**Pn**	**04 43 46.6**	**-0.2**
KOSK				S	**Sn**	**04 44 08.1**	**-0.7**
comp=N,640nm,0.4s							
KOSK	**Kos Island**	**1.76**	**4**	P	**Pn**	**04 43 46.9**	**+0.1**
THR8	**Santorini-Mono**	**1.78**	**323**	P	**Pn**	**04 43 47.2**	**+0.2**
THR6	**Thira Island,**	**1.78**	**320**	P	**Pn**	**04 43 46.9**	**-0.2**
THR6	**Thira Island,**	**1.78**	**320**	P	**Pn**	**04 43 47.3**	**+0.3**
THR3	**Thira Island,**	**1.82**	**321**	P	**Pn**	**04 43 47.6**	**0.0**
THR3	**Thira Island,**	**1.82**	**321**	P	**Pn**	**04 43 47.7**	**+0.2**
THT2	**Imerovigli**	**1.83**	**322**	PN	**Pn**	**04 43 48.1**	**+0.4**
THR5	**Thira Island,**	**1.86**	**321**	P	**Pn**	**04 43 48.1**	**0.0**
THR5	**Thira Island,**	**1.86**	**321**	P	**Pn**	**04 43 48.3**	**+0.2**
BODT	**Bodrum**	**2.11**	**11**	PN	**Pn**	**04 43 51.2**	**-0.3**
TURN	**Turunc**	**2.13**	**33**	PN	**Pn**	**04 43 52.4**	**+0.6**
TURN	**Turunc**	**2.13**	**33**	P	**Pn**	**04 43 53.4**	**+1.6**
TURN				S	**Sb**	**04 44 21.6**	**+0.3**
TURN				*i* AML	AML	04 44 30.0	
comp=N,120nm,0.6s							
BDRM	**Kayabasi**	**2.13**	**14**	P	**Pn**	**04 43 51.7**	**-0.2**
BDRM				S	**Sg**	**04 44 28.2**	**+2.4**
BDRM				*i* AML	AML	04 44 32.0	
comp=N,43nm,0.6s							
GVDS	**Gavdos**	**2.24**	**267**	PN	**Pn**	**04 43 55.2**	**+1.9**
GVD	**Gavdhos**	**2.24**	**267**	PN	**Pn**	**04 43 54.9**	**+1.6**
GVD	**Gavdhos**	**2.24**	**267**	P	**Pn**	**04 43 55.0**	**+1.6**
APE	**Apeiranthos**	**2.32**	**334**	PN	**Pn**	**04 43 54.1**	**-0.3**
APE	**Apeiranthos**	**2.32**	**334**	P	**Pn**	**04 43 54.2**	**-0.3**
APE				S	**Sn**	**04 44 20.5**	**-2.1**
comp=N,448nm,0.5s							
APE	**Apeiranthos**	**2.32**	**334**	P	**Pn**	**04 43 54.2**	**-0.3**
DALY	**Dalyan (Mula)**	**2.36**	**39**	PN	**Pn**	**04 43 55.8**	**+0.8**
IMMV	**Iera Moni Meta**	**2.36**	**282**	PN	**Pn**	**04 43 56.7**	**+1.7**
IMMV	**Iera Moni Meta**	**2.36**	**282**	P	**Pn**	**04 43 57.0**	**+2.0**
IMMV	**Iera Moni Meta**	**2.36**	**282**	P	**Pn**	**04 43 56.3**	**+1.3**
YER	**Yerkesik**	**2.45**	**29**	PN	**Pn**	**04 43 57.1**	**+0.8**
FETY	**Fethiye**	**2.47**	**48**	PN	**Pn**	**04 43 56.7**	**+0.1**
DDIM	**Aydin, Didim**	**2.49**	**8**	P	**Pn**	**04 43 58.7**	**+1.9**
DDIM				S	**Sg**	**04 44 39.1**	**+2.1**
DDIM				*i* AML	AML	04 45 13.0	
comp=N,96nm,1.3s							
KSL	**Kastellorizon**	**2.54**	**62**	P	**Pn**	**04 43 58.2**	**+0.8**
KSL				S	**Sn**	**04 44 28.1**	**+0.1**
KSL				AML	AML	04 44 58.7	
comp=N,0.3nm,1.5s							
KSL				AML	AML	04 44 58.7	
comp=N,0.3nm,1.5s							
KSL				AML	AML	04 45 05.2	
comp=N,0.3nm,0.7s							
KSL				AML	AML	04 45 05.2	
comp=N,0.3nm,0.7s							
KSL	**Kastellorizon**	**2.54**	**62**	P	**Pn**	**04 43 58.8**	**+1.3**
RODP	**Rodopos**	**2.56**	**284**	PN	**Pn**	**04 43 59.2**	**+1.4**
RODP	**Rodopos**	**2.56**	**284**	P	**Pn**	**04 43 59.9**	**+2.1**
KNDR	**Palaiochora Ch**	**2.57**	**276**	PN	**Pn**	**04 44 00.2**	**+2.3**
MULA	**Mugla, Merkez-**	**2.57**	**28**	P	**Pn**	**04 43 59.9**	**+1.9**
MULA				S	**Sb**	**04 44 32.8**	**-1.4**
MULA				*i* AML	AML	04 44 46.0	
comp=N,55nm,0.5s							
AKAS	**Kas**	**2.59**	**61**	PN	**Pn**	**04 43 58.6**	**+0.3**
AKAS	**Kas**	**2.59**	**61**	P	**Pn**	**04 43 58.4**	**+0.1**
AKAS				S	**Sn**	**04 44 28.4**	**-1.2**
AKAS				*i* AML	AML	04 44 56.0	
comp=N,55nm,0.9s							
GCAM	**G?zelcaml?**	**2.73**	**7**	P	**Pn**	**04 43 58.7**	**-1.3**
GCAM				*i* AML	AML	04 44 53.0	
comp=N,35nm,0.5s							
AYDN	**Tasoluk**	**2.80**	**18**	P	**Pn**	**04 44 01.9**	**+0.8**
AYDN				S	**Sn**	**04 44 36.7**	**+2.1**
AYDN				*i* AML	AML	04 44 49.0	
comp=N,40nm,0.8s							
CAME	**Cameli-Denizli**	**2.81**	**45**	PN	**Pn**	**04 44 02.5**	**+1.2**
CAEL	**Denizli, Camel**	**2.94**	**43**	P	**Pn**	**04 44 04.5**	**+1.4**
CAEL				S	**Sg**	**04 44 49.4**	**-2.3**
CAEL				*i* AML	AML	04 45 07.0	
comp=N,245nm,0.6s							
ANKY	**Antikythira Is**	**3.00**	**288**	P	**Pn**	**04 44 04.9**	**+1.2**
TAVA	**DENİZLİ_Tavas**	**3.00**	**34**	P	**Pn**	**04 44 04.8**	**+0.9**
TAVA				S	**Sb**	**04 44 45.0**	**-1.4**
TAVA				*i* AML	AML	04 44 54.0	
comp=N,74nm,0.7s							
DGB	**zmir**	**3.06**	**1**	P	**Pn**	**04 44 04.0**	**-0.5**
DGB				S	**Sn**	**04 44 41.1**	**+0.3**
DGB				*i* AML	AML	04 45 01.0	
comp=N,18nm,1.5s							
ELL	**Elmali**	**3.07**	**54**	PN	**Pn**	**04 44 06.3**	**+1.4**
ELL	**Elmali**	**3.07**	**54**	P	**Pn**	**04 44 05.2**	**+0.3**
GOLH	**Golhisar**	**3.16**	**44**	P	**Pn**	**04 44 07.8**	**+1.7**
GOLH				S	**Sg**	**04 44 56.5**	**-2.1**
GOLH				*i* AML	AML	04 45 02.0	
comp=N,48nm,0.5s							
AKUM	**Antalya-Kumluc**	**3.17**	**64**	P	**Pn**	**04 44 07.1**	**+1.0**
AKUM				S	**Sn**	**04 44 43.3**	**-0.2**
AKUM				*i* AML	AML	04 44 55.0	
comp=N,23nm,0.6s							
APMY	**Acipayam-Deniz**	**3.19**	**38**	PN	**Pn**	**04 44 07.5**	**+1.0**
ZEYE	**Izmir, Urla-Ze**	**3.25**	**356**	P	**Pn**	**04 44 06.4**	**-0.8**
ZEYE				*i* AML	AML	04 45 04.0	
comp=N,41nm,1.0s							
KTHA	**Kythira Island**	**3.30**	**294**	PN	**Pn**	**04 44 09.7**	**+1.7**
KTHA	**Kythira Island**	**3.30**	**294**	P	**Pn**	**04 44 08.7**	**+0.7**
KTHA	**Kythira Island**	**3.30**	**294**	P	**Pn**	**04 44 09.2**	**+1.2**
KTHR	**Kythira**	**3.35**	**293**	P	**Pn**	**04 44 10.0**	**+1.4**
KTHR	**Kythira**	**3.35**	**293**	P	**Pn**	**04 44 09.8**	**+1.2**
URLA	**Izmir**	**3.37**	**357**	P	**Pn**	**04 44 07.2**	**-1.7**
URLA				*i* AML	AML	04 45 15.0	
comp=N,40nm,0.7s							
KORT	**Korkueli**	**3.50**	**54**	PN	**Pn**	**04 44 12.4**	**+1.6**
KORT	**Korkueli**	**3.50**	**54**	P	**Pn**	**04 44 14.8**	**+3.9**
KORT				*i* AML	AML	04 45 32.0	
comp=N,27nm,0.9s							
VLI	**Veliai**	**3.59**	**300**	P	**Pn**	**04 44 12.7**	**+0.8**
BUCA	**Burdur, Bucak-**	**3.83**	**51**	P	**Pn**	**04 44 17.8**	**+2.5**
BUCA				*i* AML	AML	04 45 29.0	
comp=N,18nm,0.5s							
PASA	**Karahalli, USA**	**3.98**	**32**	P	**Pn**	**04 44 17.8**	**+0.4**
PASA				*i* AML	AML	04 45 07.0	
comp=N,8.4nm,0.8s							
OSC1	**CSNet OBS 1**	**3.99**	**111**	S	**Sn**	**04 45 04.0**	**+0.3**
USAK	**Uak-Merkez**	**4.12**	**25**	P	**Pn**	**04 44 19.7**	**+0.5**
USAK				*i* AML	AML	04 45 44.0	
comp=N,11nm,0.9s							
KEPZ	**Antalya-Kepez**	**4.33**	**62**	P	**Pn**	**04 44 23.3**	**+1.2**
KEPZ				S	**Sn**	**04 45 12.5**	**+0.2**
KEPZ				*i* AML	AML	04 45 20.0	
comp=N,16nm,0.5s							
AKMS	**Akamas**	**4.54**	**88**	P	**Pn**	**04 44 24.8**	**-0.1**
AKMS				AML	AML	04 45 18.1	
comp=N,1.0nm,0.4s							
AKMS				AML	AML	04 45 21.4	
comp=N,0.7nm,0.4s							
GAZI	**Gazipasa**	**4.66**	**73**	P	**Pn**	**04 44 26.0**	**-0.5**
GAZI				S	**Sn**	**04 45 16.5**	**-3.7**
SEDI	**Konya, Seydise**	**4.69**	**57**	P	**Pn**	**04 44 29.9**	**+2.8**
SEDI				S	**Sn**	**04 45 22.9**	**+1.6**
SEDI				*i* AML	AML	04 45 45.0	
comp=N,15nm,0.5s							
NATA	**Nata**	**4.74**	**91**	P	**Pn**	**04 44 28.1**	**+0.3**
NATA				S	**Sn**	**04 45 22.9**	**+0.6**
NATA				AML	AML	04 45 25.1	
comp=N,1.6nm,0.5s							
NATA				AML	AML	04 45 25.1	
comp=N,1.6nm,0.5s							
NATA				AML	AML	04 45 31.1	
comp=N,1.2nm,0.5s							
NATA				AML	AML	04 45 31.1	
comp=N,1.2nm,0.5s							
ALFC	**Alefka**	**4.75**	**86**	P	**Pn**	**04 44 27.7**	**-0.2**
ALFC				AML	AML	04 45 22.9	
comp=N,1.1nm,0.4s							
ALFC				AML	AML	04 45 23.9	
comp=N,1.2nm,0.6s							
BALY	**Balya**	**4.79**	**8**	P	**Pn**	**04 44 28.4**	**0.0**
BALY				*i* AML	AML	04 47 03.0	
comp=N,9.7nm,1.6s							
YVAC	**Isparta, Yalva**	**4.84**	**46**	P	**Pn**	**04 44 30.9**	**+1.7**
YVAC				*i* AML	AML	04 46 09.0	
comp=N,5.1nm,1.6s							
OSC2	**CSNet OBS 4**	**4.92**	**111**	P	**Pn**	**04 44 29.8**	**-0.4**
DOGA	**KONYA_Doganhis**	**5.00**	**50**	P	**Pn**	**04 44 33.5**	**+2.1**
DOGA				*i* AML	AML	04 45 42.0	
comp=N,12nm,1.2s							
SZAC	**Souni**	**5.00**	**91**	P	**Pn**	**04 44 31.1**	**-0.2**
SZAC				AML	AML	04 45 29.5	
comp=N,0.4nm,0.8s							
SZAC				AML	AML	04 45 31.6	
comp=N,0.5nm,0.5s							
ASGA	**Asgata**	**5.30**	**90**	P	**Pn**	**04 44 35.1**	**-0.3**
CSS	**Mathiatis**	**5.36**	**88**	P	**Pn**	**04 44 36.0**	**-0.2**
BRTR	**Keskin Array B**	**7.21**	**47**	Pn	**Pn**	**04 45 04.8**	**+3.2**
comp=N,0.1nm,0.3s,baz=217,slow=14,SNR=4.3							
comp=N,0.6nm,0.6s							
AKASG	**Malin Array Be**	**15.80**	**6**	Pn	**Pn**	**04 46 59.5**	**+0.9**
comp=N,0.4nm,0.3s,baz=198,slow=12,SNR=2.4							
ESDC	**Sonseca Array**	**24.84**	**290**	P	**P**	**04 48 36.9**	**-1.6**
comp=N,0.5nm,0.7s,baz=84,slow=10,SNR=2.1							
comp=N,0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.44**	**232**	P	**P**	**04 49 38.0**	**+0.4**
comp=N,0.3nm,0.4s,baz=32,slow=9.3,SNR=14							
comp=N,0.3nm,0.4s							
MKAR	**Makanchi Array**	**42.74**	**57**	P	**P**	**04 51 13.7**	**+0.4**
comp=N,0.3nm,0.4s,baz=269,slow=8.5,SNR=5.4							
comp=N,0.3nm,0.4s							

*IDC **24** 05:00:12.1±4.0, 18°.75N×104°.82W, h0km, mb3.6/2, mbtmp3.5/4, ML3.3/2, MS3.0/4, Error ellipse: s-maj=88.6km s-min=37.2km az=32.0*
*MEX **24** 05:00:13.6±0.7, 18°.71N×104°.81W, h16km±999km, MD4.3*

ISC 24 05:00:12.1±3.1, 18°.78N±0°.05×104°.70W±0°.05, h6km±22km, n36, σ1§86/56, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**0.67**	**76**	*e*P	**Pb**	**05 00 26.2**	**-0.1**
CDAR				*i* S	**Sb**	**05 00 36.1**	**+0.2**
R15V		**0.78**	**60**	*e*P	**Pb**	**05 00 27.5**	**-0.7**
R15V				*e*S	**Sb**	**05 00 37.2**	**-1.9**
CJM	**Chamela**	**0.78**	**336**	*e*P	**Pb**	**05 00 26.7**	**-1.5**
CJM				*i* S	**Sb**	**05 00 36.2**	**-2.9**
COIG	**Colima**	**1.04**	**67**	*e*P	**Pn**	**05 00 31.1**	**-2.2**
COMA	**Comala**	**1.04**	**59**	*e*P	**Pn**	**05 00 31.9**	**-1.4**
COMA				*e*S	**Sb**	**05 00 45.2**	**-1.3**
MNGA	**Volcan de Coli**	**1.23**	**56**	*e*P	**Pn**	**05 00 35.4**	**-0.7**
MNGA				*e*S	**Sn**	**05 00 51.4**	**-1.7**
EZ5V		**1.25**	**56**	*i* P	**Pn**	**05 00 35.9**	**-0.5**
EZ5V				*i* S	**Sn**	**05 00 51.9**	**-1.8**
INCO	**Volcan de Coli**	**1.27**	**54**	*e*P	**Pn**	**05 00 35.0**	**-1.9**
INCO				*e*S	**Sn**	**05 00 51.3**	**-3.2**
JUBC	**Volcan de Coli**	**1.29**	**56**	*e*P	**Pn**	**05 00 36.6**	**-0.4**
JUBC				*e*S	**Sn**	**05 00 53.5**	**-1.3**
MMIG	**Aquila**	**1.38**	**111**	*e*P	**Pn**	**05 00 37.7**	**-0.2**
MMIG				*e*S	**Sn**	**05 00 54.3**	**-2.1**
PUVA	**Puert Vallarta**	**1.90**	**345**	*e*P	**Pn**	**05 00 44.8**	**-0.3**
PUVA				*e*S	**Sn**	**05 01 08.6**	**-0.8**
ANIG	**Ahuacatlan**	**2.27**	**4**	*e*P	**Pn**	**05 00 49.4**	**-0.9**
ANIG				*e*S	**Sn**	**05 01 18.1**	**-0.5**
TEPI	**Tepic**	**2.73**	**356**	*e*P	**Pn**	**05 00 59.1**	**+2.4**
TEPI				*e*S	**Sn**	**05 01 31.6**	**+1.5**
ZIIG	**Zihuatanejo**	**3.29**	**110**	*e*P	**Pn**	**05 01 01.5**	**-2.7**
ZIIG				*e*S	**Sn**	**05 01 41.3**	**-2.4**
MOIG	**Morelia**	**3.44**	**74**	*e*P	**Pn**	**05 01 08.0**	**+1.5**
MOIG				*e*S	**Sn**	**05 01 44.2**	**-3.4**
AAIG	**Aguscalientes**	**3.85**	**34**	*e*P	**Pn**	**05 01 13.4**	**+1.3**
AAIG				*i* S	**Sn**	**05 01 57.8**	**+0.1**
ARIG	**Puente Sto Nin**	**4.16**	**96**	*e*P	**Pn**	**05 01 18.1**	**+1.9**
ARIG				*e*S	**Sn**	**05 02 04.2**	**-1.0**
ZAIG	**Zacatecas**	**4.44**	**26**	*e*P	**Pn**	**05 01 21.9**	**+1.6**
ZAIG				*e*S	**Sn**	**05 02 12.6**	**0.0**
CAIG	**El Cayaco**	**4.56**	**112**	*e*P	**Pn**	**05 01 18.7**	**-3.0**
CAIG				*e*S	**Sn**	**05 02 14.9**	**-0.1**
TOVM	**TOLUCA**	**4.78**	**83**	*e*P	**Pn**	**05 01 27.5**	**+2.5**
TOVM				*e*S	**Sn**	**05 02 17.0**	**-3.9**
MEIG	**Mezcala**	**4.90**	**99**	*e*P	**Pn**	**05 01 26.1**	**-0.4**
MEIG				*e*S	**Sn**	**05 02 24.6**	**+1.0**
MAVM	**Malinalco, Edo**	**4.93**	**87**	*e*	Pn	05 01 34.7	+7.7
MAVM				*e*S	**Sn**	**05 02 25.2**	**+0.7**
PLIG	**Platanillo**	**4.95**	**94**	*e*P	**Pn**	**05 01 29.0**	**+1.9**
PLIG				*e*S	**Sn**	**05 02 24.7**	**0.0**
AOVM	**Tlapan**	**5.11**	**84**	*e*P	**Pn**	**05 01 33.5**	**+3.8**
AOVM				*e*S	**Sn**	**05 02 28.2**	**-1.1**
YAIG	**Yautepec**	**5.34**	**88**	*e*P	**Pn**	**05 01 34.0**	**+1.5**
YAIG				*e*S	**Sn**	**05 02 33.7**	**-0.7**
PPM	**Popocatepetl**	**5.76**	**86**	*e*P	**Pn**	**05 01 38.4**	**-0.2**
PPM				*e*S	**Sn**	**05 02 47.3**	**+2.0**
TLIG	**Tlapa**	**5.96**	**101**	*e*P	**Pn**	**05 01 42.6**	**+1.6**
TLIG				*e*S	**Sn**	**05 02 52.3**	**+2.6**
LPIG	**La Paz**	**7.43**	**316**	LR	LR	05 04 11.6	
comp=Z,50nm,21.4s,baz=127,slow=32							
CMIG	**Matias Romero**	**9.49**	**99**	Pn	**Pn**	**05 02 31.9**	**+2.4**
0.2nm,0.3s,baz=18,slow=20,SNR=2.0							
CMIG				Lg	Lg	05 05 08.8	
0.2nm,0.3s,baz=230,slow=17,SNR=3.2							
CMIG				LR	LR	05 06 26.1	
comp=Z,57nm,20.6s,baz=52,slow=39							
2.3nm,0.8s							
TXAR	**Lajitas Array**	**10.55**	**5**	Pn	**Pn**	**05 02 46.8**	**+2.8**
0.1nm,0.3s,baz=187,slow=16,SNR=7.8							
TXAR				Lg	Lg	05 05 35.5	
baz=178,slow=31,SNR=3.3							
TXAR				LR	LR	05 07 14.9	
comp=Z,96nm,18.5s,baz=201,slow=40							
0.7nm,0.8s							
NVAR	**Mina Array Bea**	**22.88**	**332**	P	**P**	**05 05 18.1**	**+1.3**
1.2nm,0.7s,baz=151,slow=12,SNR=6.7							
1.2nm,0.7s							
PDAR	**Pinedale Array**	**24.26**	**351**	LR	LR	05 15 47.5	
comp=Z,78nm,18.7s,baz=69,slow=38							
ILAR	**Eielson Array**	**53.84**	**339**	P	**P**	**05 09 36.0**	**+0.4**
1.3nm,0.9s,baz=151,slow=5.9,SNR=11							
1.3nm,0.9s							
H03N2	**Juan Fernandez**	**57.46**	**154**	T	T	06 12 17.7	
baz=333,slow=77,SNR=7.0							
H03N1	**Juan Fernandez**	**57.47**	**154**	T	T	06 12 22.0	
baz=333,slow=77,SNR=7.5							
H03N3	**Juan Fernandez**	**57.48**	**154**	T	T	06 12 19.5	
baz=333,slow=77,SNR=5.9							

ZUR 24 05:01:29.1, 46°.20N×7°.14E, h4km±2km, MLh0.2/3, 2D, Error ellipse: s-maj=4.4km s-min=1.0km az=309.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRYON	**Gryon**	**0.06**	**340**	||Pg	Pg	05 01 30.6	+0.2
GRYON				Sg	Sg	05 01 31.5	+0.2
SALAN	**Lac Salanfe**	**0.13**	**245**	||Pg	Pg	05 01 32.0	+0.3
SALAN				Sg	Sg	05 01 33.8	+0.4
SENIN	**Lac Senin/Sane**	**0.20**	**34**	Sg	Sg	05 01 36.1	+0.4
DIX	**Grande Dixence**	**0.22**	**122**	Sg	Sg	05 01 37.0	+0.7

ROM 24 05:02:33.7±0.1, 42°.654N±0°.004×13°.173E±0°.004, h16km, ML1.2/2, 3D, Error ellipse: s-maj=0.4km s-min=0.1km az=193.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.11**	**243**	P	Pb	05 02 37.5	0.0
LNSS				S	Sb	05 02 40.1	0.0
LNSS				AML	AML		
comp=N,118μm,0.9s							
LNSS				AML	AML		
comp=N,118μm,0.9s							
LNSS				AML	AML		
comp=E,75μm,0.2s							
SMA1	**SAN MARTINO**	**0.12**	**101**	||P	Pb	05 02 37.7	-0.1
SMA1				S	Sb	05 02 40.5	+0.1
SMA1

CAVK	Edirne/Enez-Ca	1.17	4	P	Pb	05 09 22.6	-0.2
CAVK				S	Sn	05 09 38.8	+0.2
BALY	Balya	1.22	79	P	Pn	05 09 22.2	-1.3
BALY				S	Sb	05 09 38.9	-0.5
GONE	Gonen-Balikesi	1.36	67	PN	Pg	05 09 26.4	-0.2
RKY	Sarkoy-Tekirda	1.45	36	PN	Pb	05 09 27.6	+0.2
MRMT	Marmara Adasi	1.60	47	PN	Pb	05 09 29.7	-0.3
EDC	Edincik	1.61	59	PN	Pb	05 09 30.0	-0.2
UKOP	Uzunkopru-Edir	1.67	15	PN	Pb	05 09 30.6	-0.5
RDO	Rodhopi	1.67	346	PN	Pb	05 09 30.5	-0.8
KDZ	Kurdzhali	2.18	347	PN	Pn	05 09 37.8	+1.1
EDRB	Edirne	2.38	12	PN	Pn	05 09 40.8	+1.4

*IDC **24** 05:16:43.9±8.9, 2°.33N×128°.59E, h212km±82km, mb3.5/5, mbtmp4.0/5, MS2.9/1, Error ellipse: s-maj=143.1km s-min=21.6km az=65.0*
*NEIC **24** 05:16:46.0±0.7, 2°.4N±0°.1×128°.62E±0°.07, h232km±12km, mb4.4/12, Error ellipse: s-maj=19.4km s-min=7.9km az=156.0*

ISC 24 05:16:47.1±0.8, 2°.3N±0°.1×128°.6E±0°.1, h250km, n25, σ0$84/22, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.96	218	Pn	Pn	05 17 27.2	-2.1
LUWI	Luwuk	6.70	240	Pn	Pn	05 18 23.1	-0.9
TOLI2	Tolitoli	7.88	261	Pn	Pn	05 18 38.4	-0.6
MTN	Manton Dam	15.29	170		P	05 20 09.6	-0.7
MTN				IAmb	IAmb	05 20 28.1	
	comp=Z,32nm,1.5s						
KNRA	Kununurra	17.90	179		P	05 20 39.3	+0.6
KNRA				IAmb	IAmb	05 20 40.3	
	comp=Z,11nm,0.5s						
WB0	Warramunga Arr	22.70	166	P	P	05 21 28.0	+0.4
WB0				IAmb	IAmb	05 21 29.8	
	comp=Z,17nm,1.2s						
WRA	Warramunga Arr	22.85	166	P	P	05 21 29.2	+0.2
	comp=Z,2.3nm,0.4s,baz=344,slow=9.8,SNR=42						
	comp=Z,2.3nm,0.4s						
WRA	Warramunga Arr	22.85	166	P	P	05 21 28.4	-0.6
WB2	Warramunga Arr	22.86	166	P	P	05 21 29.3	+0.2
WB2				IAmb	IAmb	05 21 31.4	
	comp=Z,5.9nm,0.7s						
WR0	Warramunga Arr	22.92	165	P	P	05 21 29.9	+0.3
WR0				IAmb	IAmb	05 21 55.2	
	comp=Z,5.1nm,1.0s						
AS31	Alice Springs	26.36	169	P	P	05 22 00.8	+0.1
ASAR	Alice Springs	26.36	169	P	P	05 22 01.1	+0.4
	comp=Z,1.7nm,0.7s,baz=355,slow=7.9,SNR=22						
ASAR				PcP	PcP	05 25 20.8	+1.1
	comp=Z,0.3nm,0.4s,baz=353,slow=2.3,SNR=5.0						
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	26.36	169	P	P	05 22 00.6	-0.1
JCJ	Chichijima	27.87	27	P	P	05 22 12.9	-1.1
BBOO	Buckleboo	35.67	169	P	P	05 23 22.5	+0.7
STKA	Stephens Creek	36.20	161	P	P	05 23 25.6	-0.7
	comp=Z,1.3nm,0.3s,baz=337,slow=9.0,SNR=11						
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	36.20	161	P	P	05 23 27.3	+1.0
ARMA	Armidale	39.31	148	P	P	05 23 52.1	-0.3
ARMA				IAmb	IAmb	05 24 06.1	
	comp=Z,13nm,1.4s						
H11N1	WAKE ISLAND Hy	41.23	62	T	T	06 07 46.5	
	baz=248,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	41.24	62	T	T	06 07 49.4	
	baz=248,slow=76,SNR=5.9						
H11N3	WAKE ISLAND Hy	41.25	62	T	T	06 07 50.1	
	baz=248,slow=76,SNR=6.3						
KLR	Kul'dur	46.80	3	LR	LR	05 43 27.8	
	comp=Z,13nm,20.4s,baz=285,slow=34						
PEA0B	Petropavlovsk-	56.05	21	P	P	05 25 59.8	-0.3
MKAR	Makanchi Array	59.74	325	P	P	05 26 26.5	+0.7
	comp=Z,0.7nm,0.7s,baz=124,slow=7.8,SNR=6.2						
	comp=Z,0.7nm,0.7s						
VNDA	Vanda	81.82	173	P	P	05 28 38.9	+1.1
	comp=Z,0.6nm,0.4s,baz=317,slow=6.0,SNR=5.0						
	comp=Z,0.6nm,0.4s						

*IDC **24** 05:27:41.0±2.5, 22°.92S×69°.00W, h0km, mb3.4/2, mbtmp3.6/3, ML4.2/1, Error ellipse: s-maj=71.8km s-min=47.7km az=41.0*
*GUC **24** 05:27:59.5±0.7, 21°.83S×68°.67W, h94km±4km, ML3.9*

ISC 24 05:27:58.6±0.9, 21°.83S±0°.03×68°.74W±0°.06, h106km±8km, n20, σ0$70/36, 13C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.47	274	⇑iP	Pn	05 28 15.2	+0.2
PB09				i S	Sn	05 28 26.9	-0.4
LVC	Limon Verde	0.79	191	eP	Pn	05 28 17.6	-0.2
LVC				i S	Sn	05 28 32.1	-0.1
PB03	IPOC Station P	0.96	257	⇑iP	Pn	05 28 19.6	+0.3
PB03				i S	Sn	05 28 35.3	+0.5
PB03				IAML		05 28 35.8	
	comp=N,3μm,0.2s						
PB01	IPOC Station P	1.05	318	⇑iP	Pn	05 28 19.7	-0.4
PB01				i S	Sn	05 28 36.5	+0.2
PB01				IAML		05 28 39.1	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.07	275	⇑iP	Pn	05 28 20.5	+0.1
PB07				i S	Sn	05 28 36.7	-0.1
PB07				IAML		05 28 38.5	
	comp=N,2μm,0.2s						
PB06	IPOC Station P	1.16	221	⇑iP	Pn	05 28 21.9	+0.5
PB06				i S	Sn	05 28 39.0	+0.4
PB06				IAML		05 28 41.3	
	comp=E,2μm,0.3s						
AF01	San Pedro de A	1.23	155	⇑iP	Pn	05 28 23.2	+0.9
AF01				i S	Sn	05 28 39.1	-1.1
AF01				IAML		05 28 57.9	
	comp=E,2μm,0.6s						
PB04	IPOC Station P	1.40	249	⇑iP	Pn	05 28 24.3	+0.2
PB04				i S	Sn	05 28 44.3	+0.8
PB15	IPOC Station P	1.53	206	⇑iP	Pn	05 28 26.4	+0.7
PB15				i S	Sn	05 28 47.4	+1.1
PATCX	Punta Patache	1.66	307	⇑iP	Pn	05 28 27.1	0.0
PATCX				i S	Sn	05 28 49.1	+0.3
PATCX				IAML		05 28 51.2	
	comp=E,3μm,0.3s						
PB08	IPOC Station P	1.73	347	⇑iP	Pn	05 28 29.0	+0.6
PB08				i S	Sn	05 28 51.8	+0.9
PB08				IAML		05 28 54.8	
	comp=E,829nm,0.3s						
TA01	Diego Aracena	1.84	313	⇑iP	Pn	05 28 29.2	-0.2
TA01				i S	Sn	05 28 52.9	0.0
TA01				IAML		05 28 54.9	
	comp=E,2μm,0.4s						
TA02	Huaiquique	2.02	320	eP	Pn	05 28 32.1	+0.3
TA02				eS	Sn	05 28 56.9	-0.2
TA02				IAML		05 28 58.4	
	comp=N,2μm,0.1s						
GO01	Chusmiza	2.19	349	⇑iP	Pn	05 28 34.5	+0.1
GO01				i S	Sn	05 29 02.2	+0.5
GO01				IAML		05 29 04.1	
	comp=N,1μm,0.2s						
PB11	IPOC Station P	2.23	337	⇑iP	Pn	05 28 34.2	-0.4
PB11				i S	Sn	05 29 01.9	-0.2
PB11				IAML		05 29 03.8	
	comp=N,1μm,0.2s						
PB10	IPOC Station P	2.37	225	eP	Pn	05 28 37.3	+1.1
PB10				eS	Sn	05 29 03.5	-1.4
LPAZ	La Paz	5.54	6	Pn	Pn	05 29 20.9	+1.5
	comp=N,2.4nm,0.3s,baz=194,slow=4.8,SNR=64						
	comp=N,5.2nm,0.3s						
TXAR	Lajitas Array	60.99	325	P	P	05 38 01.2	+0.1
	comp=N,0.1nm,0.4s,baz=164,slow=9.5,SNR=4.3						
	comp=N,0.1nm,0.4s						
TORD	Torodi Ar. Bea	77.32	70	P	P	05 39 40.6	-1.5
	comp=N,0.5nm,0.7s,baz=252,slow=5.5,SNR=2.4						
	comp=N,0.5nm,0.7s						
MKAR	Makanchi Array	145.81	36	PKPbc	PKPdf	05 47 25.4	+0.6
	comp=N,0.4nm,0.6s,baz=310,slow=4.1,SNR=4.4						

*IDC **24** 05:42:13.9±1.8, 39°.02N×142°.66E, h0km, mb3.8/4, mbtmp3.7/7, ML2.8/3, MS2.7/1, Error ellipse: s-maj=37.2km s-min=25.2km az=80.0*
*JMA **24** 05:42:23.2±0.1, 38°.9N±0°.3×141°.9E±0°.6, h51km, MV3.7/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .

ISC 24 05:42:20.4±1.8, 38°.85N±0°.05×142°.16E±0°.09, h31km±10km, n24, σ1$24/26, mb3.8/4, 14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.45	302	⇓iP	Pn	05 42 32.1	+1.4
OFUJ				⇓S	Sn	05 42 38.2	+0.5
JKMT	Kesennumamotoy	0.53	266	⇓iP	Pn	05 42 33.0	+1.1
JKMT				⇓iS	Sb	05 42 39.7	+0.7
JMK	Ichinoseki	0.74	278	⇓iP	Pn	05 42 35.1	+0.4
JMK				⇓S	Sb	05 42 43.5	-1.1
JIO	Ouri	0.74	238	⇓iP	Pn	05 42 36.1	+1.3
JIO				⇓S	Sb	05 42 44.9	+0.1
JOM	Ohasama	0.92	313	⇓iP	Pn	05 42 37.5	+0.3
JOM				⇓S	Sb	05 42 48.0	-1.7
JTH	Tanohata	1.11	348	P	Pb	05 42 41.5	+0.3
JTH				S	Sb	05 42 54.4	-0.9
JOU	Okura	1.26	248	⇓iP	Pn	05 42 42.5	+0.5
JOU				⇓S	Sn	05 42 56.7	-1.3
JRG	Rokugo	1.30	295	⇓P	Pn	05 42 42.4	-0.2
JYK	Kaneyama	1.40	273	⇓P	Pn	05 42 44.0	+0.1
JMM	Marumori	1.45	228	P	Pb	05 42 45.5	-1.4
JMM				S	Sn	05 42 03.6	+0.1
JANG	Nango	1.60	342	P	Pn	05 42 47.3	+0.6
MJAR	Matsushiro Arr	3.88	235	Pn	Pn	05 43 20.7	+2.7
	0.5nm,0.3s,baz=36,slow=12,SNR=11						
MJAR				Pg	Pb	05 43 32.6	+4.3
	0.2nm,0.3s,baz=45,slow=12,SNR=2.1						
	2.8nm,0.4s						
USRK	Ussuriysk Ar.	9.31	308	Pn	Pn	05 44 34.1	+1.7
	0.2nm,0.3s,baz=132,slow=15,SNR=4.7						
USRK				LR	LR	05 47 47.5	
	comp=Z,43nm,18.9s,baz=52,slow=35						
	3.8nm,0.7s						
KSRS	Korea Array	11.29	267	Pn	Pn	05 45 02.0	+2.3
	0.2nm,0.3s,baz=72,slow=14,SNR=2.4						
	0.7nm,0.3s						
SONM	Songino Array	27.31	301	P	P	05 48 03.3	+0.9
	0.2nm,0.5s,baz=84,slow=7.7,SNR=1.7						
	0.2nm,0.5s						
H11N2	WAKE ISLAND Hy	28.63	125	T	T	06 18 39.7	
	baz=317,slow=76,SNR=168						
H11N1	WAKE ISLAND Hy	28.64	125	T	T	06 18 42.0	
	baz=317,slow=76,SNR=231						
H11N3	WAKE ISLAND Hy	28.65	125	T	T	06 18 41.5	
	baz=317,slow=76,SNR=157						
H11S1	WAKE ISLAND Hy	29.41	127	T	T	06 19 39.0	
	baz=318,slow=76,SNR=110						
H11S3	WAKE ISLAND Hy	29.41	127	T	T	06 19 38.9	
	baz=318,slow=76,SNR=159						
H11S2	WAKE ISLAND Hy	29.43	127	T	T	06 19 40.0	
	baz=318,slow=76,SNR=115						
MKAR	Makanchi Array	43.68	301	P	P	05 50 21.0	-1.3
	1.6nm,0.7s,baz=86,slow=9.6,SNR=16						
	1.6nm,0.7s						
WRA	Warramunga Arr	58.94	189	P	P	05 52 16.6	-0.2
	0.3nm,0.4s,baz=4.8,slow=7.0,SNR=10						
	0.3nm,0.4s						
FINES	FINESS Array B	67.49	332	P	P	05 53 11.8	-1.1
	1.9nm,0.8s,baz=50,slow=13,SNR=3.9						
	1.9nm,0.8s						

*IDC **24** 06:29:35.3±1.5, 40°.12N×144°.18E, h0km, mb3.8/9, mbtmp3.8/11, ML2.6/2, MS2.9/3, Error ellipse: s-maj=31.6km s-min=28.4km az=97.0*
*NEIC **24** 06:29:37.9±1.5, 40°.25N±0°.06×143°.9E±0°.1, h10km±1km, mb4.4/2, Error ellipse: s-maj=16.0km s-min=9.9km az=86.0*
*JMA **24** 06:29:38.8±0.2, 40°.3N±0°.5×14°4E±°, h25km, MV3.5/29, FAR E OFF SANRIKU*
*NIED **24** 06:29:38.8, 40°.28N×143°.91E, h25km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.03; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-5.10; $M_{r\theta}$-1.24; $M_{\theta\phi}$-1.94; $M_{\phi r}$-0.43; Fault plane solution: $M_0$5.57000×10^{14} NP1:$\phi_0$6.00000°, δ42.00000°, λ71.00000°. NP2:$\phi_0$211.00000°, δ51.00000°, λ106.00000°.*

ISC 24 06:29:38.1±0.8, 40°.24N±0°.05×144°.04E±0°.07, h16km, n54, σ1$26/54, mb3.8/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.70	260	P	Pn	06 30 06.3	-0.8
JKEN	Kujiedanarisaw	1.79	270	P	Pn	06 30 07.4	-0.9
MIYJ	Miyakonagasawa	1.83	249	P	Pn	06 30 08.6	-0.4
ERM	Erimo	1.89	340	Pn	Pn	06 30 09.6	-0.1
JEM	Erimo	1.89	340	eP	Pn	06 30 09.7	-0.1
JEM				eS	Sn	06 30 32.7	-0.6
JANG	Nango	1.94	275	P	Pn	06 30 09.7	-0.7
JANG				eS	Sn	06 30 33.1	-1.3
JOM	Ohasama	2.25	251	i P	Pn	06 30 14.9	+0.1
JNBK	Urakawa-nobuka	2.25	335	P	Pn	06 30 14.8	0.0
JNBK				S	Sn	06 30 40.6	-1.7
JTM	Tenmabayashi	2.33	284		Pn	06 30 14.9	-0.9
JCH	Churui	2.42	348	eP	Pn	06 30 16.9	-0.2
JMK	Ichinoseki	2.53	240	P	Pn	06 30 18.4	-0.2
JMK				eS	Sn	06 30 47.7	-1.4
JOT	Ohata	2.54	298	P	Pn	06 30 18.8	+0.1
JOT				S	Sn	06 30 48.3	-1.0
JAR	Ashorobuto	3.06	356	P	Pn	06 30 24.5	-1.4
JAR				S	Sn	06 31 00.3	-1.7
JYK	Kaneyama	3.14	246	P	Pn	06 30 27.3	+0.4
JEW	Eniwo	3.24	324	Pn	Pn	06 30 28.7	+0.4
JEW	Eniwo	3.24	324	eP	Pn	06 30 30.7	+2.3
JEW				eS	Sn	06 31 07.6	+1.0
NEM2	Nemuro 2	3.37	22	eP	Pn	06 30 28.9	-1.2
NEM2				eS	Sn	06 31 06.7	-3.0
JMM	Marumori	3.47	228		Pn	06 30 30.4	-1.1
JTKR	Abashiri--Toko	3.73	359	P	Pn	06 30 34.5	-0.4
JTKR				eS	Sn	06 31 17.1	-1.4
JKK2	Kamakawa 2	3.75	346	eP	Pn	06 30 35.8	+0.4
JSD	Sado	5.00	246	Pn	Pn	06 30 52.9	+0.4
JYT	Yasato	5.02	218	Pn	Pn	06 30 51.6	-1.2
MAJO	Matsushiro	5.88	233		Pn	06 31 03.1	-1.6
MJAR	Matsushiro Arr	5.88	233	Pn	Pn	06 31 04.9	+0.2
	0.2nm,0.3s,baz=40,slow=12,SNR=7.6						
	2.7nm,0.5s						
MJB9	Matsu-Tunnel	5.88	233		Pn	06 31 02.6	-2.1
JGF	Kuroka	7.03	231	Pn	Pn	06 31 18.6	-1.7
JHJ2	Mitsune	7.88	207	Pn	Pn	06 31 31.9	-0.2
USA0B	Ussuriysk Arra	9.78	298	Pn	Pn	06 31 56.0	-2.0
USRK	Ussuriysk Ar.	9.78	298	Pn	Pn	06 32 00.1	+2.2
	0.4nm,0.3s,baz=95,slow=16,SNR=5.8						
	2.5nm,0.6s						
USRK	Ussuriysk Ar.	9.78	298	Pn	Pn	06 31 56.1	-1.9
JHS	Saijyo	10.12	242	Pn	Pn	06 32 00.6	-2.2
KLR	Kul'dur	12.52	320	LR	LR	06 37 26.7	
	comp=Z,53nm,18.8s,baz=260,slow=37						
KSRS	Korea Array	12.87	263	LR	LR	06 36 47.8	
	comp=Z,18nm,18.8s,baz=95,slow=33						
AMKA	Amchitka	26.73	54	P	P	06 35 17.9	+1.2
SONM	Songino Array	27.89	298	P	P	06 35 28.3	+1.0
	0.8nm,0.6s,baz=72,slow=8.6,SNR=4.3						
	0.8nm,0.6s						
H11N2	WAKE ISLAND Hy	28.31	130	T	T	07 05 00.7	
	baz=322,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	28.32	130	T	T	07 05 01.7	
	baz=322,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	28.33	130	T	T	07 05 02.8	
	baz=322,slow=75,SNR=9.7						
H11S1	WAKE ISLAND Hy	29.15	131	T	T	07 06 09.8	
	baz=323,slow=76,SNR=4.8						
H11S3	WAKE ISLAND Hy	29.16	131	T	T	07 06 08.0	
	baz=323,slow=76,SNR=4.9						
H11S2	WAKE ISLAND Hy	29.17	131	T	T	07 06 08.0	
	baz=323,slow=76,SNR=3.9						
ZALV	Zalesovo Beam	41.36	310	P	P	06 37 25.5	+2.4
	0.9nm,0.4s,baz=91,slow=8.8,SNR=2.1						
	0.9nm,0.4s						
MK31	Makanchi Array	44.24	300	P	P	06 37 46.0	-0.6
MK31				IAmb	IAmb	06 38 03.3	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	44.24	300	P	P	06 37 46.9	+0.3
	comp=Z,0.6nm,0.5s,baz=78,slow=10,SNR=7.6						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	44.24	300	P	P	06 37 44.9	-1.6
CMAR	Chiang Mai Arr	44.33	254	P	P	06 37 47.5	0.0
KURK	Kurchatov	45.64	306	P	P	06 37 58.9	+1.3
KURK				IAmb	IAmb	06 38 15.6	
	comp=Z,5.4nm,0.7s						
ILAR	Eielson Array	45.69	34	P	P	06 37 58.8	+1.0
	comp=Z,0.2nm,0.6s,baz=270,slow=6.3,SNR=1.8						
	comp=Z,0.2nm,0.6s						
KURBB	Kurchatov Arra	45.72	306	P	P	06 37 59.0	+0.7
	comp=Z,1.9nm,0.8s,baz=77,slow=8.2,SNR=11						
	comp=Z,1.9nm,0.8s						
BVAR	Borovoye Array	49.99	311	P	P	06 38 32.1	+0.8
	comp=Z,0.4nm,0.5s,baz=64,slow=7.0,SNR=2.2						
	comp=Z,0.4nm,0.5s						
AAK	Ala-Archa	50.83	297	LR	LR	07 01 27.7	
	comp=Z,28nm,19.1s,baz=132,slow=38						
WRA	Warramunga Arr	60.55	190	P	P	06 39 46.6	-1.2
	comp=Z,0.4nm,0.8s,baz=7.9,slow=6.9,SNR=1.7						
	comp=Z,0.4nm,0.8s						
FINES	FINESS Array B	66.93	333	P	P	06 40 29.8	+0.4
	comp=Z,5.1nm,1.0s,baz=86,slow=4.3,SNR=2.9						
	comp=Z,5.1nm,1.0s						
AKASG	Malin Array Be	73.00	323	P	P	06 41 06.5	-0.3
	comp=Z,0.5nm,0.5s,baz=46,slow=5.7,SNR=4.7						
	comp=Z,0.5nm,0.5s						

*IDC **24** 06:31:31.2±3.4, 37°.12N×71°.80E, h118km±28km, mb3.5/11, mbtmp3.9/17, MS3.1/1, Error ellipse: s-maj=29.0km s-min=19.9km az=171.0*
*NEIC **24** 06:31:34.2±0.9, 37°.35N±0°.04×71°.73E±0°.10, h134km±9km, mb4.4/9, Error ellipse: s-maj=11.4km s-min=5.0km az=88.0*
*NNC **24** 06:31:35.3±2.5, 37°.81N×71°.58E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=20.9km s-min=15.7km az=158.0*

ISC 24 06:31:30.7±0.5, 37°.29N±0°.05×71°.72E±0°.06, h100km, n76, σ2$40/79, mb3.9/13, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.04	327		Pn	06 32 08.2	+4.3
DRK	Karamyk	2.19	2		Pn	06 32 10.5	+4.5
CHGR	Chuyangaron	2.44	305		Pn	06 32 13.2	+4.1
BTK	Batken	2.85	346	Pn	Pn	06 32 19.7	+5.2
CEP	Cherat	3.46	177	P	Pn	06 32 29.0	+6.2
CEP				S	Sn	06 33 11.0	+8.0
KBL	Kabul	3.50	219	Pn	Pn	06 32 28.4	+5.1
CHCP	Chirah Chowk	3.84	160	P	Pn	06 32 33.0	+5.3
NIL	Nilore	3.84	161	Pn	Pn	06 32 33.2	+5.4
THW	Thamme Wali	4.49	180	P	Pn	06 32 40.8	+4.3
AML	Almayashu	5.07	17	P	Pn	06 32 47.6	+2.9
	SNR=222						
JMU	Jammu	5.25	149	eP	Pn	06 32 50.5	+3.6
JMU				eS	Sn	06 33 46.7	+0.6
NRN	Naryn	5.30	37	Pn	Pn	06 32 49.3	+1.6
UCH	Uchtor	5.38	23	P	Pn	06 32 51.8	+2.9
	SNR=33						
EKS2	Erkin-Say	5.59	16	P	Pn	06 32 54.6	+3.1
	SNR=16						
AAK	Ala-Archa	5.75	21	P	Pn	06 32 56.9	+3.2
	SNR=18						
AAK	Ala-Archa	5.75	21	P	Pn	06 32 56.8	+3.2
	24nm,0.3s,baz=177,slow=6.2,SNR=56						
AAK				S	Sn	06 33 58.7	+0.4
	39nm,0.6s,baz=105,slow=18,SNR=14						
THN	Thein Dam	5.85	145	eP	Pn	06 32 58.0	+3.1
THN				eP		06 32 58.1	
THN				eS	Sn	06 34 00.0	-0.7
THN				eS		06 34 01.1	
KK31	Karatay Array	5.88	351		Pn	06 32 58.3	+3.0
KK31	Karatay Array	5.88	351	⇑P	Pn	06 32 58.1	+2.8
	48nm,0.5s,baz=174,slow=12,SNR=449						
KK31				S	Sn	06 33 59.9	-1.4
	52nm,0.6s,baz=170,slow=17,SNR=16						
KKAR	Karatay Array	5.88	351	Pn	Pn	06 32 58.2	+2.9
KBK	Karagaybulak	5.90	24	P	Pn	06 32 59.5	+3.8
	SNR=5.0						
CHMS	Chumysh	6.16	21	P	Pn	06 33 01.8	+2.8
	SNR=5.9						
CHMS	Chumysh	6.16	21	⇑P	Pn	06 33 01.7	+2.6
	9.8nm,0.5s						
CHMS				⇑S	Sn	06 34 09.3	+1.3
	32nm,0.6s						
USP	Ospenovka	6.34	19	P	Pn	06 33 03.7	+2.2
	SNR=17						
TKM2	Tokmak 2	6.36	27	P	Pn	06 33 04.6	+2.6
	SNR=13						
TKM2	Tokmak 2	6.36	27	⇑P	Pn	06 33 04.8	+2.8
	15nm,0.6s						
TKM2				⇑S	Sn	06 34 14.7	+1.4
	23nm,1.2s						
BHK	Bhakra	7.03	145	eP	Pn	06 33 13.4	+2.5
BHK				eS	Sn	06 34 26.9	-2.5
DDI	Dehra Dun	8.72	141	IAML		06 35 11.8	
	comp=N,264nm,0.3s						
DDI				IAML		06 35 12.4	
	comp=E,174nm,0.0s						
KHET	Khetri	9.81	158	eP	Pn	06 33 49.0	+0.2
KHET				i x	x	06 33 52.3	
KHET				eS	Sn	06 35 31.4	-5.8
GEYT	Alibeck	10.81	278	P	Pn	06 34 03.1	+0.7
	comp=E,2.1nm,0.3s,baz=105,slow=6.9,SNR=6.3						
GEYT				S	Sn	06 35 56.1	-5.3
	comp=E,7.5nm,0.4s,baz=116,slow=18,SNR=4.2						
GEYT	Alibeck	10.81	278	Pn	Pn	06 34 03.4	+1.0
GYA0B	ALIBECK ARRAY	10.81	278	Pn	Pn	06 34 03.3	+0.9
MK31	Makanchi Array	12.31	36	Pn	Pn	06 34 23.1	+0.7
MKAR	Makanchi Array	12.31	36	P	Pn	06 34 22.8	+0.4
	comp=E,0.5nm,0.7s,baz=213,slow=10,SNR=4.4						
MKAR	Makanchi Array	12.31	36	Pn	Pn	06 34 24.3	+1.9
JHNI	Jhansi	13.14	152	eP	Pn	06 34 33.5	+0.1
JHNI				i x	x	06 34 35.4	
JHNI				ex	x	06 36 46.9	
PYUN	Piuthan	13.18	131	eP	Pn	06 34 32.3	-1.8
	comp=E,42nm,0.4s						
DANN	Dangsing	13.48	128	eP	Pn	06 34 36.0	-2.1
	comp=E,22nm,0.2s						
KOLN	Koldanda	13.79	130	eP	Pn	06 34 40.6	-1.5
KURBB	Kurchatov Arra	14.19	18	P	P	06 34 49.9	-1.3
	comp=E,0.7nm,0.4s,baz=205,slow=11,SNR=11						
GKN	Gorkha	14.28	127	eP	Pn	06 34 46.6	-1

comp=Z,1.7nm,0.6s,baz=116,slow=9.5,SNR=10
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 40.64 337 P P 06 38 59.7 -0.8
ARCES IAmb IAmb 06 39 13.5
comp=Z,19nm,1.4s
NB201 NORSAR Array S 44.06 323 P **P 06 39 27.5 -0.8**
NOA NORSAR Array B 44.10 323 P **P 06 39 28.7 +0.1**
comp=Z,1.3nm,0.7s,baz=94,slow=7.9,SNR=3.2
comp=Z,1.3nm,0.7s
ESDC Sonseca Array 57.60 298 P **P 06 41 09.1 -1.1**
comp=Z,0.7nm,0.8s,baz=56,slow=6.5,SNR=2.5
comp=Z,0.7nm,0.8s
TORD Torodi Ar. Bea 66.31 269 P **P 06 42 06.6 -2.1**
comp=Z,0.2nm,0.3s,baz=46,slow=6.1,SNR=1.5
comp=Z,0.2nm,0.3s
C36M Paulatuk 73.04 6 P **P 06 42 48.7 -0.4**
PPLA Purkeypile 74.15 19 P **P 06 42 55.2 -0.8**
PPLA IAmb IAmb 06 42 59.1
comp=Z,17nm,1.4s
YKA Yellowknife Ar 80.43 3 P **P 06 43 29.0 -1.8**
comp=Z,0.5nm,0.8s,baz=353,slow=4.6,SNR=2.5
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 81.92 122 P **P 06 43 37.7 -1.7**
comp=Z,0.5nm,1.0s,baz=325,slow=4.5,SNR=1.9
comp=Z,0.5nm,1.0s

IDC 24 06:55:49.6±12.0, 15°.07S×164°.07E, h0km, mb3.9/3, mbtmp3.8/4, ML2.7/1, Error ellipse: s-maj=234.0km s-min=43.2km az=42.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.32**	**162**	Pn	Pn	06 57 38.0	+0.1
	0.1nm,0.3s,baz=46,slow=16,SNR=1.7						
	5.4nm,1.2s						
STKA	**Stephens Creek**	**26.46**	**227**	P	P	07 01 28.0	-0.5
	1.1nm,0.4s,baz=68,slow=8.2,SNR=5.7						
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**28.74**	**256**	P	P	07 01 49.5	+0.4
	0.7nm,0.7s,baz=84,slow=9.2,SNR=14						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**29.66**	**249**	P	P	07 01 57.1	-0.1
	0.6nm,0.4s,baz=76,slow=9.6,SNR=9.4						
	0.6nm,0.4s						

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*NEIC **24** 06:56:39.9±1.1, 19°.87N±0°.09×147°.4E±0°.3, h10km±2km, mb4.3/5, Error ellipse: s-maj=40.1km s-min=13.9km az=82.0*
*IDC **24** 06:56:45.4±0.6, 20°.36N×147°.31E, h0km, mb4.0/15, mbtmp4.1/17, ML3.6/2, MS3.2/8, Error ellipse: s-maj=23.5km s-min=15.4km az=93.0*
ISC 24 06:56:43.0±0.9, 19°.71N±0°.07×146°.9E±0°.2, h10km, n39, σ2°08/23, mb4.0/15, MS3.6/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.39**	**198**	Pn	Pb	06 58 30.6	-3.8
	2.9nm,0.3s,baz=349,slow=18,SNR=1.5						
GUMO				Sn	**Sb**	**06 59 48.5**	**-2.3**
	3.1nm,0.3s,baz=79,slow=19,SNR=1.1						
GUMO				LR	LR	07 01 09.3	
	comp=Z,112nm,18.2s,baz=4.5,slow=37						
	11nm,0.3s						
GUMO	**Guam**	**6.39**	**198**	Pn	**Pn**	**06 58 17.8**	**+0.5**
JCJ	**Chichijima**	**8.53**	**330**	Pn	**Pn**	**06 58 44.2**	**-2.5**
JGF	**Kuroka**	**17.93**	**334**	P	**Pn**	**07 00 50.0**	**-2.5**
JGF				IAmb	IAmb	07 00 58.1	
	comp=Z,13nm,1.0s						
JMN	**Monobe**	**18.14**	**323**	P	**Pn**	**07 00 53.8**	**-1.4**
JMN				IAmb	IAmb	07 01 13.2	
	comp=Z,45nm,1.2s						
MJAR	**Matsushiro Arr**	**18.42**	**337**	P	**Pn**	**07 00 58.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=158,slow=11,SNR=5.3						
	comp=Z,2.1nm,0.6s						
JOW	**Kunigami**	**18.51**	**296**	P	**P**	**07 01 00.2**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**18.74**	**90**	T	T	07 19 46.0	
	baz=280						
H11S1	**WAKE ISLAND Hy**	**18.75**	**90**	T	T	07 19 48.0	
	baz=280						
H11S2	**WAKE ISLAND Hy**	**18.76**	**90**	T	T	07 19 47.3	
	baz=280						
H11N1	**WAKE ISLAND Hy**	**18.82**	**87**	T	T	07 19 50.2	
	baz=275						
H11N2	**WAKE ISLAND Hy**	**18.83**	**87**	T	T	07 19 51.5	
	baz=275						
H11N3	**WAKE ISLAND Hy**	**18.84**	**87**	T	T	07 19 54.8	
	baz=275						
JHS	**Saijyo**	**19.50**	**324**	P	**P**	**07 01 08.1**	**-2.4**
JHS				IAmb	IAmb	07 01 21.1	
	comp=Z,27nm,1.1s						
JHS	**Saijyo**	**19.50**	**324**	*e*P	**P**	**07 01 07.7**	**-2.7**
KSRS	**Korea Array**	**24.21**	**321**	P	**P**	**07 02 02.5**	**+2.6**
	comp=Z,2.4nm,1.0s,baz=145,slow=8.6,SNR=2.4						
KSRS				LR	LR	07 10 50.3	
	comp=Z,20nm,21.0s,baz=125,slow=35						
	comp=Z,2.4nm,1.0s						
SIJI	**Sorong**	**25.56**	**219**	LR	LR	07 11 18.7	
	comp=Z,34nm,18.5s,baz=186,slow=33						
USRK	**Ussuriysk Ar.**	**27.41**	**336**	P	**P**	**07 02 28.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=140,slow=9.1,SNR=3.0						
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**41.28**	**198**	P	P	07 04 38.5	+10
	comp=Z,1.0nm,0.7s,baz=19,slow=8.7,SNR=9.1						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**41.28**	**198**	P	**P**	**07 04 27.9**	**-0.9**
SONM	**Songino Array**	**43.08**	**320**	P	**P**	**07 04 46.1**	**+2.7**
	comp=Z,1.1nm,0.7s,baz=136,slow=7.8,SNR=7.5						
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**44.94**	**197**	P	P	07 05 07.2	+8.8
	comp=Z,0.9nm,0.8s,baz=10,slow=7.6,SNR=7.3						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**44.94**	**197**	P	**P**	**07 04 57.5**	**-0.8**
PSI	**Prapat**	**49.74**	**256**	LR	LR	07 27 41.1	
	comp=Z,55nm,18.0s,baz=282,slow=37						
STKA	**Stephens Creek**	**51.54**	**186**	P	P	07 05 59.0	+10
	comp=Z,1.4nm,0.6s,baz=345,slow=9.9,SNR=3.3						
	comp=Z,1.4nm,0.6s						
KDAK	**Kodiak Island**	**57.90**	**33**	LR	LR	07 31 10.0	
	comp=Z,14nm,18.7s,baz=270,slow=36						
ZALV	**Zalesovo Beam**	**57.91**	**322**	P	**P**	**07 06 37.4**	**+2.1**
	comp=Z,2.8nm,0.6s,baz=96,slow=6.7,SNR=6.7						
ZALV				PcP	**PcP**	**07 07 30.1**	**+2.6**
	comp=Z,1.2nm,0.5s,baz=92,slow=3.3,SNR=2.1						
	comp=Z,2.8nm,0.6s						
MKAR	**Makanchi Array**	**58.59**	**313**	P	**P**	**07 06 43.2**	**+3.0**
	comp=Z,0.7nm,0.6s,baz=84,slow=7.3,SNR=5.0						
MKAR				PcP	**PcP**	**07 07 33.6**	**+3.2**
	comp=Z,0.5nm,0.6s,baz=66,slow=5.7,SNR=1.7						
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**62.24**	**26**	P	**P**	**07 07 02.8**	**-2.0**
	comp=Z,1.3nm,0.8s,baz=256,slow=6.1,SNR=16						
	comp=Z,1.3nm,0.8s						
INK	**Inuvik**	**68.00**	**23**	P	**P**	**07 07 41.2**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=225,slow=9.7,SNR=3.5						
	comp=Z,2.4nm,1.0s						
YKA	**Yellowknife Ar**	**76.57**	**28**	P	P	07 08 33.2	-0.2
	comp=Z,3.0nm,0.7s,baz=284,slow=5.7,SNR=12						
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**81.63**	**52**	P	P	07 09 03.3	+1.4
	comp=Z,1.5nm,0.7s,baz=270,slow=7.4,SNR=11						
	comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**81.88**	**342**	P	**P**	**07 09 02.2**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=67,slow=9.3,SNR=5.5						
	comp=Z,3.1nm,0.8s						
PDAR	**Pinedale Array**	**86.31**	**46**	P	P	07 09 26.2	+0.4
	comp=Z,0.2nm,0.6s,baz=260,slow=4.5,SNR=2.2						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**86.44**	**336**	P	**P**	**07 09 26.8**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=45,slow=6.5,SNR=5.2						
	comp=Z,3.3nm,0.8s						
SFJD	**Kangerlussuaq**	**92.57**	**7**	LR	LR	07 57 30.2	
	comp=Z,20nm,18.0s,baz=115,slow=40						
LPIG	**La Paz**	**93.12**	**63**	LR	LR	07 42 02.1	
	comp=Z,23nm,20.0s,baz=254,slow=29						
BORG	**Borgarnes**	**95.32**	**355**	LR	LR	07 54 27.7	
	comp=Z,18nm,18.4s,baz=211,slow=37						
LPAZ	**La Paz**	**146.55**	**90**	PKPbc	**PKiKP**	**07 16 29.1**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=234,slow=4.0,SNR=5.3						

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*DDA **24** 06:59:37.3±0.0, 39°.55N×40°.98E, h19km±2km, ML2.5*
*ISK **24** 06:59:38.1, 39°.56N×40°.99E, h8km, ML2.3/5*
ISC 24 06:59:36.7±1.0, 39°.57N±0°.03×41°.06E±0°.04, h17km±5km, n15, σ1°14/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECAT	**Cat-ERZURUM**	**0.07**	**302**	P	**Pg**	**06 59 40.6**	**+0.3**
ECAT				S	**Sg**	**06 59 42.9**	**+0.2**
ECAT				*i* AML	AML	06 59 43.0	
	comp=N,1μm,0.4s						
ECAT				*i* AML	AML	06 59 43.0	
	comp=E,1μm,0.4s						
KARO	**Karliova-Bingo**	**0.26**	**181**	PG	**Pb**	**06 59 43.5**	**+0.5**
KARO				SG	**Sb**	**06 59 47.9**	**+0.7**
EJDE	**Erzurum, Palan**	**0.33**	**35**	P	**Pb**	**06 59 45.1**	**+0.8**
EJDE				S	**Sb**	**06 59 51.6**	**+2.1**
EJDE				*i* AML	AML	06 59 52.0	
	comp=N,546nm,0.3s						
EJDE				*i* AML	AML	06 59 56.0	
	comp=E,459nm,0.6s						
ERZM	**Erzurum**	**0.41**	**35**	P	**Pb**	**06 59 46.9**	**+1.1**
ERZM				S	**Sn**	**06 59 54.7**	**-0.9**
YEDI	**Yedisu-Bingol**	**0.42**	**252**	PG	**Pb**	**06 59 45.7**	**0.0**
YEDI				SG	**Sb**	**06 59 51.5**	**-0.3**
EMRE	**Erzurum,Aziziy**	**0.47**	**352**	P	**Pb**	**06 59 47.3**	**+0.6**
EMRE				S	**Sn**	**06 59 57.6**	**+0.7**
SLHN	**Bingol, Solhan**	**0.61**	**182**	S	**Sn**	**06 59 59.1**	**-1.1**
KOPT	**Kop Dagi**	**0.62**	**316**	P	**Pb**	**06 59 50.2**	**+0.9**
BNGB	**Bingl**	**0.65**	**207**	PG	**Pn**	**06 59 50.5**	**-0.7**
BNGB				SG	**Sb**	**06 59 59.5**	**+1.0**
KRIK	**Erzurum-spir**	**0.78**	**353**	P	**Pb**	**06 59 50.6**	**-1.3**
KRIK				S	**Sb**	**06 59 59.4**	**-2.9**
HOMI	**Horasan**	**0.81**	**54**	P	**Pb**	**06 59 51.7**	**-0.8**
MUSM	**Mu-Merkez**	**0.91**	**157**	P	**Pb**	**06 59 53.8**	**-0.3**
ERZN	**Erzincan**	**1.03**	**272**	PG	**Pg**	**06 59 57.4**	**+0.7**
BAYT	**Aydıntepe-Bayb**	**1.08**	**320**	PG	**Pg**	**06 59 58.9**	**+1.1**
CHOM	**Cayeli-Rize**	**1.55**	**352**	PN	**Pg**	**07 00 06.8**	**+0.3**

JMA 24 07:00:53.7±0.0, 35°.4N±0°.1×133°.89E±0°.08, h7km, MV1.5/32, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.06**	**255**	*i* P	Pg	07 00 55.2	-0.1
JAD	**Aida**	**0.51**	**153**	P	Pg	07 01 03.5	0.0
JAD				S	Sg	07 01 10.4	+0.3
JKSM	**Kasumi**	**0.66**	**73**	P	Pg	07 01 06.4	0.0
JKSM				*e*S	Sg	07 01 15.2	+0.2
JNM	**Ikuma**	**0.71**	**279**	*e*P	Pg	07 01 07.8	+0.4

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*IDC **24** 07:04:13.5±1.0, 7°.63N×127°.32E, h0km, mb3.8/6, mbtmp3.8/6, MS2.7/3, Error ellipse: s-maj=31.8km s-min=21.3km az=72.0*
*NEIC **24** 07:04:15.4±1.4, 7°.61N±0°.09×127°.28E±0°.06, h10km±2km, mb4.6/16, Error ellipse: s-maj=17.2km s-min=5.3km az=28.0*
*MAN **24** 07:04:19.8, 7°.69N×126°.84E, h23km, mb4.6, ML3.5, MS3.4*
ISC 24 07:04:16.9±1.7, 7°.61N±0°.04×127°.02E±0°.07, h27km±12km, n49, σ1°93/55, mb4.3/14, 10C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.86**	**311**	⇑*i*P	**Pn**	**07 04 33.1**	**-0.2**
BIPH				*i* S	**Sb**	**07 04 42.1**	**-2.5**
MATI	**Mati**	**1.01**	**229**	⇑*e*P	**Pb**	**07 04 36.3**	**+0.6**
MATI				*e*S	**Sb**	**07 04 48.7**	**+0.1**
DAV	**Davao City (W)**	**1.53**	**249**	Pn	**Pb**	**07 04 45.1**	**+0.5**
	243nm,0.3s,baz=63,slow=3.8,SNR=18						
DAV				Sn	**Sb**	**07 05 06.8**	**+3.2**
	251nm,0.3s,baz=108,slow=20,SNR=7.8						
DAV				LR	LR	07 05 44.6	
	comp=Z,293nm,21.2s,baz=354,slow=50						
BUTP	**Butuan**	**1.93**	**314**	⇓*e*P	**Pb**	**07 04 50.5**	**-1.0**
BUTP				*e*S	**Sb**	**07 05 14.4**	**-0.8**
BUKP	**Musuan**	**1.96**	**278**	⇓*e*P	**Pn**	**07 04 49.8**	**+1.3**
BUKP				*e*S	**Sn**	**07 05 10.6**	**-1.6**
DDMP	**Don Marcelino,**	**1.98**	**221**	⇓*e*P	**Pb**	**07 04 50.8**	**-1.6**
DDMP				*e*S	**Sb**	**07 05 16.3**	**-0.4**
KCP	**Kidapawan**	**2.01**	**253**	⇑*i*P	**Pn**	**07 04 49.7**	**+0.6**
KCP				*i* S	**Sn**	**07 05 05.2**	**-8.1**
GLSP	**General Luna,**	**2.33**	**338**	⇓*e*P	**Pn**	**07 04 54.7**	**+1.2**
GLSP				*e*S	**Sn**	**07 05 23.2**	**+2.0**
CGP	**Cagayan de Oro**	**2.45**	**290**	⇑*i*P	**Pn**	**07 04 56.3**	**+1.2**
CGP				*i* S	**Sn**	**07 05 23.0**	**-1.2**
CTBH	**Cotabato--PC H**	**2.78**	**262**	⇓*i*P	**Pn**	**07 05 00.5**	**+0.8**
GHBP	**Garcia Hernand**	**3.34**	**307**	⇑*i*P	**Pn**	**07 05 09.6**	**+2.3**
GHBP				*e*S	**Sn**	**07 05 45.7**	**-0.5**
PAGZ	**Pagadian**	**3.61**	**274**	⇑*e*P	**Pn**	**07 05 12.3**	**+1.2**
TABP	**Talibon, Bohol**	**3.62**	**313**	⇑*e*P	**Pn**	**07 05 13.0**	**+1.8**
TABP				*e*S	Sn	07 05 45.6	-7.5
LSIP	**Lazi, Siquijor**	**3.68**	**294**	⇑*e*P	**Pn**	**07 05 12.8**	**+0.8**
LSIP				*e*S	**Sn**	**07 05 51.3**	**-3.2**
TBP	**Tagbilaran**	**3.74**	**304**	⇑*i*P	**Pn**	**07 05 14.5**	**+1.6**
TBP				*i* S	**Sn**	**07 05 55.1**	**-1.1**
RCP	**Roxas**	**5.76**	**313**	⇑*e*P	**Pn**	**07 05 43.5**	**+2.8**
TNTI	**Ternate**	**6.80**	**177**	Pn	**Pn**	**07 05 54.7**	**-0.3**
MYLDM	**Lahad Datu**	**8.81**	**255**	Pn	**Pn**	**07 06 26.3**	**+3.8**
TOLI2	**Tolitoli**	**8.97**	**224**	Pn	**Pn**	**07 06 25.4**	**+0.6**
GUMO	**Guam**	**18.51**	**70**	LR	LR	07 15 47.5	
	comp=Z,36nm,19.1s,baz=152,slow=38						
KNRA	**Kununurra**	**23.20**	**176**	P	**P**	**07 09 22.9**	**+1.0**
COEN	**Coen**	**26.77**	**143**	P	**P**	**07 09 51.1**	**-3.6**
COEN				IAmb	IAmb	07 10 12.0	
	comp=Z,9.3nm,1.0s						
WB0	**Warramunga Arr**	**28.16**	**165**	P	**P**	**07 10 07.0**	**-0.2**
WB0				IAmb	IAmb	07 10 07.2	
	comp=Z,8.9nm,1.3s						
WRA	**Warramunga Arr**	**28.31**	**165**	P	**P**	**07 10 08.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=344,slow=10,SNR=19						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**28.31**	**165**	P	**P**	**07 10 08.2**	**-0.3**
WB2	**Warramunga Arr**	**28.32**	**165**	P	**P**	**07 10 08.9**	**+0.4**
WB2				IAmb	IAmb	07 10 35.3	
	comp=Z,6.8nm,1.1s						
WR0	**Warramunga Arr**	**28.38**	**165**	P	**P**	**07 10 09.7**	**+0.6**
KSRS	**Korea Array**	**29.72**	**1**	LR	LR	07 24 48.1	
	comp=Z,8.3nm,18.4s,baz=30,slow=42						
PSA00	**Pilbara Seismi**	**29.85**	**194**	P	**P**	**07 10 22.8**	**+0.7**
MAJO	**Matsushiro**	**30.55**	**18**	P	**P**	**07 10 27.6**	**-0.6**
MAJO				IAmb	IAmb	07 10 31.8	
	comp=Z,14nm,1.3s						
MJB9	**Matsu-Tunnel**	**30.55**	**18**	P	**P**	**07 10 27.8**	**-0.5**
MJB9				IAmb	IAmb	07 10 32.8	
	comp=Z,14nm,1.3s						
JYT	**Yasato**	**30.92**	**21**	P	**P**	**07 10 29.3**	**-2.2**
AS31	**Alice Springs**	**31.81**	**168**	P	**P**	**07 10 38.9**	**-0.6**
ASAR	**Alice Springs**	**31.81**	**168**	P	**P**	**07 10 40.2**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=341,slow=7.6,SNR=13						
	comp=Z,0.5nm,0.3s						
MORW	**Morawa**	**37.97**	**196**	P	**P**	**07 11 33.2**	**+0.7**
MORW				IAmb	IAmb	07 11 57.1	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**38.19**	**179**	P	**P**	**07 11 35.5**	**+1.2**
H11N1	**WAKE ISLAND Hy**	**40.45**	**69**	T	T	07 55 41.3	
	baz=265,slow=75,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**40.46**	**69**	T	T	07 55 48.1	
	baz=265,slow=75,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**40.47**	**69**	T	T	07 55 52.2	
	baz=265,slow=75,SNR=6.3						
BBOO	**Buckleboo**	**41.11**	**168**	P	**P**	**07 12 00.0**	**+1.4**
BBOO				IAmb	IAmb	07 12 25.7	
	comp=Z,23nm,1.4s						
NWAO	**Narrogin (SRO)**	**41.38**	**192**	P	**P**	**07 12 01.5**	**+0.7**
NWAO				IAmb	IAmb	07 12 09.7	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**41.66**	**161**	P	**P**	**07 12 03.9**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=355,slow=8.7,SNR=6.7						
	comp=Z,2.1nm,0.5s						
STKA	**Stephens Creek**	**41.66**	**161**	P	**P**	**07 12 03.5**	**+0.3**
KLR	**Kul'dur**	**41.67**	**5**	LR	LR	07 28 29.1	
	comp=Z,9.5nm,21.4s,baz=302,slow=35						
MKAR	**Makanchi Array**	**54.59**	**324**	P	**P**	**07 13 46.3**	**+3.4**
	comp=Z,0.5nm,0.5s,baz=124,slow=8.5,SNR=5.5						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**54.59**	**324**	P	**P**	**07 13 44.5**	**+1.5**
ILAR	**Eielson Array**	**81.50**	**26**	P	**P**	**07 16 31.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=244,slow=4.6,SNR=5.2						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**87.22**	**173**	P	**P**	**07 16 59.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=317,slow=8.6,SNR=3.6						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**118.96**	**51**	PKP	**PKPdf**	**07 23 03.9**	**0.0**
	comp=Z,0.2nm,0.6s,baz=222,slow=1.2,SNR=2.3						

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*NEIC **24** 07:14:52.0±0.9, 61°.75S±0°.10×165°.4E±0°.3, h10km±2km, mb4.4/10, Error ellipse: s-maj=29.2km s-min=8.0km az=57.0*
*IDC **24** 07:15:02.1±13.0, 62°.64S×166°.66E, h0km, mb3.8/3, mbtmp3.8/4, ML3.3/1, MS3.7/25, Error ellipse: s-maj=473.9km s-min=44.9km az=77.0*
ISC 24 07:14:51.7±1.0, 61°.72S±0°.08×165°.5E±0°.3, h10km, n54, σ0°69/12, mb4.0/4, MS3.8/25, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**8.02**	**332**	Pn	**Pn**	**07 16 48.2**	**+0.1**
PYZ	**Puysegur Point**	**15.60**	**3**	Pn	**Pn**	**07 18 32.0**	**+0.5**
VNDA	**Vanda**	**15.92**	**183**	Pn	**Pn**	**07 18 35.5**	**+0.2**
	0.1nm,0.3s,baz=6.1,slow=15,SNR=5.5						
VNDA				LR	LR	07 23 19.1	
	comp=Z,575nm,18.9s,baz=8.0,slow=33						
	1.0nm,0.5s						
VNDA	**Vanda**	**15.92**	**183**		**Pn**	**07 18 35.8**	**+0.4**
WHZ	**Wether Hill Ro**	**15.93**	**6**	Pn	**Pn**	**07 18 36.1**	**+0.4**
WHZ				IAmb	IAmb	07 19 17.6	
	comp=Z,44nm,1.4s						
SBA	**Scott Base**	**16.21**	**179**		**Pn**	**07 18 39.2**	**0.0**
DCZ	**Deep Cove**	**16.32**	**4**	Pn	**P**	**07 18 42.3**	**-1.4**
DCZ				IAmb	IAmb	07 18 44.5	
	comp=Z,35nm,1.2s						
MLZ	**Mavora Lakes**	**16.46**	**7**	Pn	**Pn**	**07 18 43.7**	**+1.1**
MLZ				IAmb	IAmb	07 18 51.1	
	comp=Z,33nm,1.2s						
ODZ	**Otahua Downs**	**16.98**	**13**		**P**	**07 18 50.9**	**-0.1**
ODZ				IAmb	IAmb	07 18 52.1	
	comp=Z,37nm,1.5s						
WKZ	**Wanaka**	**17.05**	**9**	Pn	**Pn**	**07 18 50.4**	**+0.4**
RPZ	**Rata Peaks**	**18.34**	**13**	LR	LR	07 25 47.1	
	comp=Z,277nm,19.7s,baz=193,slow=34						
RPZ	**Rata Peaks**	**18.34**	**13**	P	**P**	**07 19 05.5**	**-0.6**
RPZ				IAmb	IAmb	07 19 29.0	
	comp=Z,24nm,1.0s						
URZ	**Urewera**	**24.57**	**22**	LR	LR	07 28 26.9	
	comp=Z,304nm,19.5s,baz=314,slow=32						
QSPA	**South Pole Qui**	**28.37**	**180**	LR	LR	07 30 29.8	
	comp=Z,215nm,18.7s,baz=25,slow=34						
QSPA	**South Pole Qui**	**28.37**	**180**	P	**P**	**07 20 45.5**	**-0.2**
QSPA				IAmb	IAmb	07 20 59.3	
	comp=Z,8.5nm,1.1s						
STKA	**Stephens Creek**	**33.64**	**322**	P	P	07 21 53.5	+21
	comp=Z,4.2nm,1.0s,baz=175,slow=8.9,SNR=4.3						
	comp=Z,4.2nm,1.0s						
MAW	**Mawson**	**39.43**	**216**	LR	LR	07 38 36.8	
	comp=Z,64nm,18.8s,baz=117,slow=36						
DZM	**Mont Dzumac**	**39.63**	**1**	*e*LR	LR	07 33 13.0	
	comp=Z,111nm,23.6s						
H01W1	**Cape Leeuwin H**	**41.81**	**286**	T	T	08 08 27.6	
	baz=146,slow=75,SNR=36						
H01W2	**Cape Leeuwin H**	**41.81**	**286**	T	T	08 08 27.9	
	baz=146,slow=75,SNR=40						
H01W3	**Cape Leeuwin H**	**41.83**	**286**	T	T	08 08 28.8	
	baz=146,slow=75,SNR=32						
NWAO	**Narrogin (SRO)**	**42.06**	**291**	LR	LR	07 36 27.7	
	comp=Z,84nm,18.8s,baz=67,slow=30						
ASAR	**Alice Springs**	**43.70**	**316**	P	P	07 23 16.9	+20
	comp=Z,0.7nm,0.7s,baz=157,slow=7.5,SNR=6.2						
ASAR				LR	LR	07 39 50.3	
	comp=Z,91nm,18.9s,baz=154,slow=33						
	comp=Z,0.7nm,0.7s						
CTA	**Charters Tower**	**43.71**	**333**	LR	LR	07 39 39.8	
	comp=Z,135nm,18.2s,baz=106,slow=33						
MSVF	**Nonsavu**	**44.83**	**17**	LR	LR	07 40 30.0	
	comp=Z,72nm,18.9s,baz=163,slow=34						
WRA	**Warramunga Arr**	**47.03**	**318**	P	P	07 23 43.0	+20
	comp=Z,0.5nm,0.8s,baz=160,slow=6.1,SNR=4.9						
WRA				LR	LR	07 41 35.0	
	comp=Z,122nm,20.6s,baz=150,slow=33						
	comp=Z,0.5nm,0.8s						
RAR	**Rarotonga**	**47.05**	**47**	LR	LR	07 39 55.1	
	comp=Z,31nm,18.6s,baz=216,slow=32						
PMSA	**Palmer Station**	**48.54**	**154**	LR	LR	07 40 17.9	
	comp=Z,124nm,19.2s,baz=209,slow=32						
TBI	**Tubuai**	**49.03**	**59**	*e*LR	LR	07 37 07.7	
	comp=Z,115nm,25.5s						
TBI				*e*LR	LR	07 37 08.0	
	comp=Z,2μm,23.5s						
TBI	**Tubuai**	**49.03**	**59**	*e*T	T	08 16 34.7	
	comp=Z,12nm,0.4s						
PMG	**Port Moresby**	**53.93**	**337**	LR	LR	07 44 03.5	
	comp=Z,77nm,21.3s,baz=39,slow=32						
PAE	**Paea**	**54.09**	**56**	*e*T	T	08 22 59.1	
	comp=Z,2.2nm,0.3s						
TVO	**Taravao**	**54.11**	**57**	*e*T	T	08 22 59.4	
	comp=Z,1.3nm,0.2s						
PPT2	**Papeete2**	**54.15**	**56**	*e*LR	LR	07 39 31.2	
	comp=Z,100nm,24.5s						
PPT2	**Papeete2**	**54.15**	**56**	*e*T	T	08 22 59.0	
	comp=Z,4.9nm,0.3s						
PPT	**Papeete**	**54.17**	**56**	LR	LR	07 42 06.4	
	comp=

APSI	Ampana	6.66	12	P	Pn	07 30 17.0	+0.1
	0.1nm20nm,0.5s						
LUWI	Luwuk	6.86	21	P	Pn	07 30 18.2	-0.9
SANI	Sanana	7.84	47	P	Pn	07 30 29.7	-0.5
	0.1nm31nm,0.7s						
NLAI	Namlea	7.99	59	P	Pn	07 30 26.1	-5.8
GTOI	Gorontalo	8.51	19	P	P	07 30 38.8	+0.8
KNRA	Kununurra	11.64	135	P	Pn	07 31 22.8	+8.7
WRA	Warramunga Arr	18.43	134	P	P	07 32 27.0	+0.8
	2.5nm,0.5s,baz=316,slow=11,SNR=31						
WRAB	Tennant Creek	18.43	134	P	P	07 32 27.0	+0.8
WB1	Warramunga Ar.	18.44	134	P	P	07 32 27.3	+1.0
MEEK	Meekatharra	19.12	185	P	P	07 32 33.7	+0.5
ASAR	Alice Springs	20.75	142	P	P	07 32 49.6	+1.3
	3.0nm,0.6s,baz=316,slow=8.3,SNR=41						
	3.0nm,0.6s						
AS01	Alice Springs	20.77	142	P	P	07 32 50.4	+1.8
BLDU	Ballidu	23.26	188	P	P	07 33 11.0	0.0
	13nm,2.2s						
FORT	Forrest	24.31	164	P	P	07 33 21.7	+1.3
OOD	Oodnadatta	24.93	146	P	P	07 33 27.1	+1.1
MULG	Mulgathing	26.12	152	P	P	07 33 38.2	+1.7
STKA	Stephens Creek	31.37	144	P	P	07 34 24.0	+1.3
	1.5nm,0.3s,baz=331,slow=14,SNR=9.8						
	1.5nm,0.3s						
SONM	Songino Array	56.42	349	P	P	07 37 38.2	-0.5
	0.4nm,0.4s,baz=163,slow=10,SNR=1.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	63.70	332	P	P	07 38 27.1	-0.3
	1.0nm,0.5s,baz=146,slow=7.5,SNR=7.1						
	1.0nm,0.5s						
ZALV	Zalesovo Beam	68.08	338	P	P	07 38 53.6	-1.2
	1.9nm,0.3s,baz=166,slow=4.0,SNR=5.8						
	1.9nm,0.3s						
KURBB	Kurchatov Arra	68.18	333	P	P	07 38 55.0	-0.5
	0.5nm,0.3s,baz=148,slow=5.3,SNR=1.4						
	0.5nm,0.3s						
BVAR	Borovoye Array	73.56	331	P	P	07 39 26.6	-0.9
	0.4nm,0.5s,baz=111,slow=8.0,SNR=2.6						
	0.4nm,0.5s						

NEIC ***24*** *07:49:57.4±1.0, 7°.50S±0°.10×128°.2E±0°.1, h176km±28km, mb4.4/2, Error ellipse: s-maj=21.8km s-min=6.4km az=128.0*

IDC ***24*** *07:49:57.2±1.8, 7°.48S×128°.02E, h178km±20km, mb3.4/6, mbtmp4.1/10, Error ellipse: s-maj=19.1km s-min=15.1km az=50.0*

ISC 24 07:49:55.3±0.7, 7°.42S±0°.08×128°.19E±0°.08, h142km, n36, σ1§57/36, mb3.6/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	4.52	239	Pn	Pn	07 51 04.8	+2.4
SOEI	Soe	4.52	239	P	Pn	07 51 05.3	+2.9
BATI	Baumata	5.26	238	P	Pn	07 51 13.7	+1.5
	136nm,0.7s,baz=119,slow=1.8,SNR=8.0						
BATI				S	Sn	07 52 11.2	-0.8
	95nm,0.4s,baz=210,slow=19,SNR=8.7						
FAKI	Fak Fak	6.03	42		Pn	07 51 23.8	+1.4
FAKI	Fak Fak	6.03	42	P	Pn	07 51 24.2	+1.8
MTN	Manton Dam	6.12	152		Pn	07 51 24.7	+1.1
MTN	Manton Dam	6.12	152	P	Pn	07 51 24.6	+1.1
KDU	Kakadu	6.72	141	P	Pn	07 51 32.6	+1.0
SIJI	Sorong	7.20	25	P	Pn	07 51 40.9	+2.8
	17nm,0.3s,baz=343,slow=16,SNR=8.4						
KNRA	Kununurra	8.22	176	P	Pn	07 51 51.2	-0.5
KNRA	Kununurra	8.22	176	P	Pn	07 51 51.6	-0.2
WB0	Warramunga Arr	13.67	154	Pn	Pn	07 53 01.7	-1.8
WRAB	Tennant Creek	13.80	155		Pn	07 53 04.3	-0.8
WRAB	Tennant Creek	13.80	155	P	Pn	07 53 04.2	-0.8
WRA	Warramunga Arr	13.80	155	P	Pn	07 53 03.9	-1.3
	4.7nm,0.8s,baz=324,slow=13,SNR=70						
WRA				S	Sn	07 55 26.6	-11
	14nm,0.7s,baz=323,slow=24,SNR=12						
WRA	Warramunga Arr	13.80	155		Pn	07 53 04.4	-0.7
WB2	Warramunga Arr	13.81	155		Pn	07 53 04.3	-0.9
WR0	Warramunga Arr	13.90	154		Pn	07 53 05.7	-0.7
MBWA	Marble Bar	15.92	210	P	Pn	07 53 32.5	+0.9
COEN	Coen	16.09	115	P	P	07 53 35.5	+1.2
PSA00	Pilbara Seismi	16.21	209	P	Pn	07 53 36.4	+1.2
AS31	Alice Springs	17.06	162		Pn	07 53 45.6	+0.2
AS31				IAmb	IAmb	07 53 46.7	
	comp=Z,6.0nm,0.6s						
ASAR	Alice Springs	17.06	162	P	Pn	07 53 45.3	-0.1
	comp=Z,16nm,0.7s,baz=337,slow=9.9,SNR=226						
ASAR				S	S	07 56 43.8	-12
	comp=Z,2.2nm,0.7s,baz=341,slow=26,SNR=5.8						
AS01	Alice Springs	17.07	162	P	Pn	07 53 46.5	+0.9
WRKA	Warakurna	17.52	180	P	P	07 53 50.4	+0.4
MEEK	Meekatharra	21.17	204	P	P	07 54 31.1	+1.6
OOD	Oodnadatta	21.47	162	P	P	07 54 32.6	-0.1
CTA	Charters Tower	21.56	128	P	P	07 54 35.1	+1.3
	comp=Z,4.5nm,0.5s,baz=350,slow=9.8,SNR=16						
	comp=Z,4.5nm,0.5s						
CTA	Charters Tower	21.56	128	P	P	07 54 31.8	-2.0
MULG	Mulgathing	23.40	167	P	P	07 54 52.0	+0.5
BBOO	Buckleboo	26.30	165	P	P	07 55 14.8	-2.9
BBOO				IAmb	IAmb	07 55 55.9	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	27.35	155	P	P	07 55 24.5	-2.7
	comp=Z,0.7nm,0.6s,baz=334,slow=16,SNR=1.5						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	58.29	343	P	P	07 59 34.0	-1.3
	comp=Z,0.4nm,0.5s,baz=178,slow=3.8,SNR=4.2						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	67.61	328	P	P	08 00 35.2	-1.6
	comp=Z,0.4nm,0.5s,baz=128,slow=6.1,SNR=4.7						
	comp=Z,0.4nm,0.5s						
ZALV	Zalesovo Beam	71.18	335	P	P	08 00 54.8	-3.7
	comp=Z,0.9nm,0.5s,baz=110,slow=6.3,SNR=2.2						
	comp=Z,0.9nm,0.5s						
BVAR	Borovoye Array	77.47	328	P	P	08 01 32.6	-2.4
	comp=Z,1.1nm,1.0s,baz=126,slow=7.5,SNR=4.5						
	comp=Z,1.1nm,1.0s						

IDC ***24*** *08:02:51.2±0.7, 27°.89N×53°.12E, h0km, mb4.1/25, mbtmp4.1/32, ML3.9/7, MS3.3/17, Error ellipse: s-maj=16.3km s-min=12.7km az=174.0*

MOS ***24*** *08:02:51.5±1.0, 27°.92N×53°.13E, h16km, mb4.6/18, Error ellipse: s-maj=7.8km s-min=5.4km az=81.0*

NEIC ***24*** *08:02:52.8±1.3, 27°.91N±0°.06×53°.13E±0°.06, h10km±1km, mb4.3/24, mb_Lg4.4(TEH), Error ellipse: s-maj=11.4km s-min=7.5km az=212.0*

TEH ***24*** *08:02:53.0, 27°.95N×53°.18E, h15km, ML4.4*

DSN ***24*** *08:02:55.3±1.1, 27°.80N×53°.13E, h10km, ML4.2/13, Error ellipse: s-maj=16.4km s-min=5.5km az=9.0*

OMAN ***24*** *08:03:01.1±99.0, 27°.28N×53°.16E, h13km±999km, mb5.9/12, mlA4.4/15, Error ellipse: s-maj=26.9km s-min=7.1km az=343.0*

ISC 24 08:02:53.2±0.3, 27°.96N±0°.03×53°.12E±0°.03, h14km, n267, σ1§56/272, mb4.2/42, MS3.2/14, 7C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	Qir	0.52	353	eSg	Sb	08 03 11.7	+0.2
QIR1				ePg	Pg	08 03 03.4	0.0
LMD1	Lamerd	0.62	176	Pg	Pg	08 03 05.6	+0.3
LMD1	Lamerd	0.62	176	eSg	Sb	08 03 14.4	0.0
LMD1				ePg	Pg	08 03 05.2	-0.1
LMD1				e		08 03 21.0	
	comp=Z,18μm,0.6s						
JHRM	Jahrom	0.68	37	e		08 03 25.2	
	comp=Z,34μm,0.4s						
JHRM				ePg	Pg	08 03 05.3	-1.1
LAR1	LAR	1.15	104	Pg	Pb	08 03 14.8	-0.1
LAR1	LAR	1.15	104	ePg	Pb	08 03 14.1	-0.8
LAR1				e		08 03 43.7	
	comp=Z,75μm,0.3s						
SHI	Shiraz	1.76	343	ePn	Pb	08 03 25.2	-0.1
SHI				e		08 04 16.2	
	comp=Z,21μm,0.7s						
AHBU	AHRAM	1.84	300	ePn	Pb	08 03 26.3	-0.3
AHBU				e		08 04 08.7	
	comp=Z,99nm,0.6s						
KAZ1	Kazerun	2.11	322	Pn	Pb	08 03 31.8	+0.6
KAZ1	Kazerun	2.11	322	ePn	Pb	08 03 30.3	-0.9
KAZ1				e		08 04 18.6	
	comp=Z,40μm,0.4s						
GENO	Geno	2.77	101	Pn	Pn	08 03 37.8	+0.6
GENO	Geno	2.77	101	ePn	Pn	08 03 37.4	+0.2
SHMA	Al-Shehemyia	2.84	223	P	Pn	08 03 40.7	+2.6
ESRB	Sir Abu	2.91	160	ePn	Pn	08 03 40.0	+1.0
IBND	Bandar-abas	3.08	99	ePn	Pn	08 03 42.0	+0.7
SHME	Shamm	3.30	125	ePn	Pn	08 03 45.1	+0.7
SHME	Shamm	3.30	125	P	Pn	08 03 45.7	+1.2
	SNR=14						
SHME	Shamm	3.30	125	i P	Pn	08 03 45.4	+0.9
	SNR=13						
KLNJ	Kolanjah	3.32	337	ePn	Pn	08 03 45.8	+0.8
UMQ	Umm Al-Quwin	3.33	136	P	Pn	08 03 47.9	+3.2
BANOM	Banah	3.49	125	ePn	Pn	08 03 47.3	+0.2
BANOM	Banah	3.49	125	P	Pn	08 03 48.5	+1.4
	SNR=58						
BANOM	Banah	3.49	125	i P	Pn	08 03 48.2	+1.1
	SNR=58						
NGRK	Negar Kerman	3.59	61	Pn	Pn	08 03 49.5	+0.8
NGRK	Negar Kerman	3.59	61	ePn	Pn	08 03 50.0	+1.3
NGRK				e		08 05 05.5	
	comp=Z,4μm,0.7s						
ABEH	Behbahan	3.63	317	ePn	Pn	08 03 50.7	+1.7
IMEH	Mehriz	3.66	20	Pn	Pn	08 03 52.2	+2.6
IMEH	Mehriz	3.66	20	ePn	Pn	08 03 51.6	+2.0
NAZ	Nazwa, Dubai	3.74	142	ePn	Pn	08 03 52.3	+1.9
NAZ	Nazwa, Dubai	3.74	142	i P	Pn	08 03 52.1	+1.7
	SNR=13						
MASF	Masafi	3.75	133	P	Pn	08 03 52.4	+1.7
	SNR=30						
MSFE	Esma-Masafi	3.76	133	ePn	Pn	08 03 52.3	+1.5
MSFE	Esma-Masafi	3.76	133	i P	Pn	08 03 52.1	+1.3
	SNR=40						
MSFE				S	Sn	08 04 35.0	+0.2
KRBR	Kerman	3.77	57	ePn	Pn	08 03 53.4	+2.2
AJN	Ajban	3.78	153	ePn	Pn	08 03 53.3	+2.3
AJN	Ajban	3.78	153	P	Pn	08 03 53.8	+2.8
	SNR=6.6						
AJN	Ajban	3.78	153	i P	Pn	08 03 53.0	+2.0
	SNR=6.3						
TVBK	TV Kerman	3.78	57	Pn	Pn	08 03 53.0	+1.7
TVBK	TV Kerman	3.78	57	ePn	Pn	08 03 52.3	+1.0
TVBK				e		08 05 04.8	
	comp=Z,9μm,0.6s						
KHGB	Koh Gabri	3.80	50	Pn	Pn	08 03 52.8	+1.3
KHGB	Koh Gabri	3.80	50	ePn	Pn	08 03 53.0	+1.5
KHGB				e		08 04 11.4	
	comp=Z,3μm,1.0s						
SMRA	Abu-Samra	3.81	213	P	Pn	08 03 53.5	+2.2
ASUD	Al Ashush, Dub	3.87	149	ePn	Pn	08 03 54.2	+1.9
ASUD	Al Ashush, Dub	3.87	149	i P	Pn	08 03 53.6	+1.4
	SNR=21						
IRAM	Ramesheh	3.89	351	ePn	Pn	08 03 55.2	+2.5
FAQ	Al Faqa, Dubai	3.90	145	ePn	Pn	08 03 53.7	+1.1
FAQ	Al Faqa, Dubai	3.90	145	i P	Pn	08 03 54.0	+1.4
	SNR=14						
ISAD	Sadrabad	3.97	7	Pn	Pn	08 03 56.3	+2.4
ISAD	Sadrabad	3.97	7	ePn	Pn	08 03 56.1	+2.2
GHWR	Ruwais	3.99	183	ePn	Pn	08 03 56.1	+2.2
GHWR	Ruwais	3.99	183	P	Pn	08 03 54.0	+0.2
KHNJ	Kahnooj	4.06	89	ePn	Pn	08 03 56.2	+1.3
SLWR	Sila	4.08	199	ePn	Pn	08 03 56.0	+0.8
SLWR	Sila	4.08	199	P	Pn	08 03 56.3	+1.1
UOSS	Minazif	4.08	137		Pn	08 03 55.5	+0.3
UOSS	Minazif	4.08	137	ePn	Pn	08 03 55.8	+0.6
UOSS	Minazif	4.08	137	P	Pn	08 03 56.0	+0.8
UOSS	Minazif	4.08	137	i P	Pn	08 03 56.0	+0.8
	SNR=31						
HATD	Hatta, Dubai	4.13	138	ePn	Pn	08 03 56.8	+0.9
HATD	Hatta, Dubai	4.13	138	i P	Pn	08 03 57.0	+1.1
	SNR=30						
ASHO	Ashiyiah	4.20	140	ePn	Pn	08 03 57.9	+1.1
ASHO	Ashiyiah	4.20	140	P	Pn	08 03 58.0	+1.1
	SNR=106						
ASHO	Ashiyiah	4.20	140	i P	Pn	08 03 57.8	+1.0
	SNR=106						
IBAF	Bafgh	4.20	30	ePn	Pn	08 03 59.0	+2.1
IBAF				e		08 04 00.0	
	comp=Z,4μm,0.2s						
MZWR	Madinat Zayed	4.24	171	ePn	Pn	08 03 59.0	+1.7
MZWR	Madinat Zayed	4.24	171	P	Pn	08 03 58.5	+1.2
IBRJ	Brojen	4.25	338	ePn	Pn	08 04 00.2	+2.4
CHMN	Cheshme madani	4.31	63	ePn	Pn	08 04 00.1	+1.4
CHMN				e		08 05 22.5	
	comp=Z,3μm,0.6s						
ICHK	Chekchek	4.41	14	ePn	Pn	08 04 02.7	+2.8
IGAR	Gharneh	4.53	348	ePn	Pn	08 04 03.5	+2.0
ALNE	Al Ain	4.55	148	ePn	Pn	08 04 03.1	+1.5
ALNE	Al Ain	4.55	148	P	Pn	08 04 03.5	+1.8
	SNR=20						
ALNE	Al Ain	4.55	148	i P	Pn	08 04 03.2	+1.5
	SNR=20						
YZKH	Yazd	4.59	16	ePn	Pn	08 04 05.0	+2.7
JASK	Jask - Hormozg	4.72	115	ePn	Pn	08 04 04.2	+0.2
JASK	Jask - Hormozg	4.72	115	P	Pn	08 04 05.5	+1.4
	SNR=14						
SHK1	Shahrekord	4.76	337	ePn	Pn	08 04 05.6	+0.8
NASN	Na'in	4.83	357	ePn	Pn	08 04 07.7	+1.9
KBAM	BAM	4.84	75	ePn	Pn	08 04 07.5	+1.9
SOHO	SOHO	4.89	140	ePn	Pn	08 04 06.8	+0.4
SOHO	SOHO	4.89	140	P	Pn	08 04 07.1	+0.8
SOHO	SOHO	4.89	140	i P	Pn	08 04 07.0	+0.7
	SNR=58						
MZR	Muzera	4.95	176	ePn	Pn	08 04 08.5	+1.4
MZR	Muzera	4.95	176	P	Pn	08 04 08.0	+0.9
IZEF	Zefreh	4.97	352	ePn	Pn	08 04 09.2	+1.6
AMIS	Naft Sefid	4.97	319	ePn	Pn	08 04 07.3	-0.1
IPIR	Pirpir	5.09	338	ePn	Pn	08 04 11.2	+1.9
ANAR	Anarak	5.24	6	ePn	Pn	08 04 13.4	+2.2
IKLH	Kolahrood	5.50	346	ePn	Pn	08 04 16.9	+1.9
ARQ	Araqi	5.54	146	P	Pn	08 04 16.0	+0.8
	SNR=40						
UMZA	Um Al Zommool	5.54	160	ePn	Pn	08 04 15.9	+0.7
UMZA	Um Al Zommool	5.54	160	P	Pn	08 04 15.9	+0.7
HOQ	Hoqain	5.77	138	ePn	Pn	08 04 17.4	-1.0
HOQ	Hoqain	5.77	138	P	Pn	08 04 19.2	+0.8
	SNR=14						
TPRV	Parvadeh(Tabas	5.92	30	ePn	Pn	08 04 22.1	+1.6
QAMS	Qamsar	5.94	346	ePn	Pn	08 04 22.0	+1.0
KRSH	Karshahi	6.05	352	ePn	Pn	08 04 23.1	+0.7
BIDO	Bidbid	6.32	133	ePn	Pn	08 04 25.9	-0.1
BIDO	Bidbid	6.32	133	P	Pn	08 04 26.3	+0.3
	SNR=12						
KHMZ	Khomeyn	6.37	336	ePn	Pn	08 04 29.1	+2.3
BSY	Bisya	6.37	144	P	Pn	08 04 27.3	+0.6
	SNR=40						
ISFB	Sefidab	6.42	353	ePn	Pn	08 04 28.3	+1.0
BSRN	Basiran	6.56	51	ePn	Pn	08 04 30.0	+0.6
TKDS	Koohdasht(Taba	6.60	30	ePn	Pn	08 04 31.3	+1.4
SMDO	Samad	6.61	137	P	Pn	08 04 30.1	+0.1
	SNR=96						
TABS	Tabas	6.63	30	ePn	Pn	08 04 31.2	+0.9
GHVR	GHOM	6.68	347	ePn	Pn	08 04 33.7	+2.7
TNSJ	Nastanj	6.69	26	ePn	Pn	08 04 32.4	+1.3
WSAR	Wadi Sarin	6.84	132	Pn	Pn	08 04 33.2	0.0
	comp=Z,18nm,0.3s,baz=315,slow=10,SNR=98						
WSAR				Sn	Sn	08 05 48.5	-2.5
	comp=Z,8.7nm,0.3s,baz=35,slow=16,SNR=7.4						
WSAR				LR	LR	08 07 36.3	
	comp=Z,139nm,20.5s,baz=328,slow=42						
	comp=Z,59nm,0.4s						
IKMR	Kamar-syah	6.88	325	ePn	Pn	08 04 34.2	+0.6
ZHDN	Zahedan	6.91	76	ePn	Pn	08 04 35.7	+1.5
ITEG	Tejag	6.92	43	ePn	Pn	08 04 35.4	+1.1
ZHSF	Zahedan	6.92	74	ePn	Pn	08 04 34.6	+0.3
NHDN	Nehbandan	6.93	59	ePn	Pn	08 04 35.8	+1.3
CHBR	Chabahar	6.99	108	ePn	Pn	08 04 35.0	-0.1
CHBR				e	Pn	08 04 35.1	-0.1
ASAO	Ashtian	7.08	339	ePn	Pn	08 04 39.4	+2.8
IQOM	Qom	7.08	346	ePn	Pn	08 04 37.0	+0.4
IVRN	Varamin	7.11	351	ePn	Pn	08 04 38.3	+1.4
IKFM	Kafar-mosalman	7.16	322	ePn	Pn	08 04 39.2	+1.7
JMDO	Jabal Madar	7.17	140	P	Pn	08 04 37.4	-0.2
	SNR=14						
IDOB	Doab	7.19	325	ePn	Pn	08 04 37.8	-0.3
HSAM	Samen	7.33	329	ePn	Pn	08 04 40.9	+0.8
WBK	Wadi Bani Khal	7.51	134	ePn	Pn	08 04 42.1	-0.2
WBK	Wadi Bani Khal	7.51	134	P	Pn	08 04 42.1	-0.2
	SNR=29						
IANJ	Anjilo	7.51	5	ePn	Pn	08 04 44.2	+1.6
NGCH	Negor - Chabah	7.63	108	ePn	Pn	08 04 44.1	+0.2
NGCH	Negor - Chabah	7.63	108	P	Pn	08 04 44.2	+0.3
	SNR=10						
HAGD	Aghdareh	7.64	335	ePn	Pn	08 04 46.3	+2.1
IDMV	Damavand	7.65	353	ePn	Pn	08 04 45.5	+1.0
DAMV	Damavand	7.71	353	ePn	Pn	08 04 46.3	+1.1
ISHM	Shahmirzad	7.82	1	ePn	Pn	08 04 48.7	+1.9
IKOM	Komasi	7.84	324	ePn	Pn	08 04 46.8	-0.2
IRAZ	Razeghan	7.90	341	ePn	Pn	08 04 45.8	-2.1
CHTH	Charan	8.10	348	ePn	Pn	08 04 52.7	+2.1
RAYN	Ar Rayn	8.16	239		Pn	08 04 51.5	+0.2
RAYN	Ar Rayn	8.16	239	P	Pn	08 04 51.5	+0.2
RAYN	Ar Rayn	8.16	239	i P	Pn	08 04 51.6	+0.2
	SNR=35						
MHTO	MHTO	8.23	146	P	Pn	08 04 52.0	-0.2
	SNR=29						
SHRO	Shahrood	8.37	16	ePn	Pn	08 04 55.9	+1.7
SHRT	Shahrakht	8.38	46	ePn	Pn	08 04 55.6	+1.4
IGHG	Ghaleghazi	8.47	320	ePn	Pn	08 04 51.5	-4.2
IGLO	Ghaloghah	8.54	4	ePn	Pn	08 04 58.8	+2.2
SNGE	Sanandaj	8.65	327	ePn	Pn	08 05 00.5	+2.4
ILIN	Lien	8.70	324	ePn	Pn	08 05 00.0	+1.1
IDHR	Dehrash	8.84	321	ePn	Pn	08 05 01.6	+0.8
DQM	DQM	8.96	152	P	Pn	08 05 01.4	-0.8
	SNR=14						
DOK	Doka	9.35	174	P	Pn	08 05 06.3	-1.2
	SNR=39						
TBJM	Torbat-e-JAM	9.53	38	ePn	Pn	08 05 11.7	+1.6
MRVT	Maraveh tapeh	9.99	14	ePn	Pn	08 05 18.1	+1.8
WHFO	Wadi Hawf	10.01	176	P	Pn	08 05 15.3	-1.4
	SNR=21						
IMYA	Miami	10.24	34	ePn	Pn	08 05 21.5	+1.7
DMTO	DMTO	10.34	170	P	Pn	08 05 19.3	-1.7
RBK	Rabkut	10.46	174	P	Pn	08 05 22.0	-0.8
ABTO	Aybut	10.56	179	P	Pn	08 05 22.8	-1.4
	SNR=11						
GEYT	Alibeck	10.79	22	Pn	Pn	08 05 29.1	+1.8
	comp=Z,0.9nm,0.3s,baz=199,slow=13,SNR=7.2						
GEYT				LR	LR	08 09 50.0	
	comp=Z,94nm,18.3s,baz=200,slow=39						
	comp=Z,3.2nm,0.3s						
GEYT	Alibeck	10.79	22	Pn	Pn	08 05 28.8	+1.5
GYA0	ALIBECK ARRAY	10.79	22	P	Pn	08 05 27.2	-0.1
GYA0B	ALIBECK ARRAY	10.79	22	Pn	Pn	08 05 28.0	+0.7
GEVA	Gevas	13.32	323	Pn	Pn	08 06 01.7	-0.2
MARD	Mardin	13.95	315		Pn	08 06 11.4	+0.8
GNI	Garni	13.99	332	Pn	P	08 06 20.5	+1.4
	comp=Z,1.3nm,0.3s,baz=142,slow=19,SNR=4.6						
GNI				LR	LR	08 11 31.7	
	comp=Z,53nm,18.6s,baz=140,slow=37						
GNI	Garni	13.99	332	Pn	Pn	08 06 12.2	+1.2
GNI	Garni	13.99	332	P	Pn	08 06 12.3	+1.2
ASF	Jabal al Asfar	14.66	291	Pn	Pn	08 06 20.5	+0.3
	comp=Z,0.6nm,0.3s,baz=63,slow=11,SNR=2.6						
ASF				Sn	Sn	08 08 59.4	-3.2
	comp=Z,0.4nm,0.3s,baz=120,slow=20,SNR=2.1						
	comp=Z,1.7nm,0.3s						
EIL	Elat	16.02	280	Pn	Pn	08 06 37.5	-0.6
	comp=Z,0.1nm,0.3s,baz=3.0,slow=14,SNR=2.1						
EIL				LR	LR	08 13 14.6	
	comp=Z,77nm,21.6s,baz=38,slow=39						
	comp=Z,5.4nm,0.9s						
MMAI	Mount Meron Ar	16.08	293	Pn	Pn	08 06 39.0	+0.1
	comp=Z,0.9nm,0.3s,baz=100,slow=18,SNR=6.2						
MMAI				LR	LR	08 13 31.4	
	comp=Z,90nm,20.7s,baz=280,slow=40						
	comp=Z,0.7nm,0.3s						
ZEI	Tsey	16.58	336	eP	Pn	08 06 46.0	+0.7
ZEI				pmax	pmax		
	comp=Z,14nm,1.0s						
CHGR	Chuyangaron	17.11	47		Pn	08 06 51.5	-0.5
CHGR				IAmb	IAmb	08 06 54.6	
	comp=Z,18nm,0.8s						
CHGR	Chuyangaron	17.11	47	P	Pn	08 06 51.5	-0.5
CHGR				pmax	pmax		
	comp=Z,18nm,0.8s						
KBZ	Khabaz	17.76	335	P	P	08 07 01.1	+0.5
	comp=Z,0.1nm,0.3s,baz=125,slow=12,SNR=2.1						
	comp=Z,2.9nm,0.7s						
KIV	Kislovodsk	18.03	335	eP	Pn	08 07 03.4	0.0
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
GAR	Garm	18.05	48		Pn	08 07 02.4	-1.3
GAR				IAmb	IAmb	08 07 28.4	
	comp=Z,15nm,0.6s						
NIL	Nilore	18.19	67	P	Pn	08 07 05.2	-0.2
NIL				IAmb	IAmb	08 07 15.1	
	comp=Z,42nm,1.1s						
NIL	Nilore	18.19	67	P	Pn	08 07 05.2	-0.2
NIL				pmax	pmax		
	comp=Z,42nm,1.1s						
CSS	Mathiatis	18.25	297	P	Pn	08 07 04.7	-1.4
GOF	Gofitskoye	18.86	337⇑	eP	Pn	08 07 27.8	+14
BTK	Batken	18.96	46	P	P	08 07 13.7	-0.3
BTK				IAmb	IAmb	08 07 40.6	
	comp=Z,15nm,1.1s						
BTK	Batken	18.96	46	P	P	08 07 13.7	-0.3
BTK				pmax	pmax		
	comp=Z,15nm,1.1s						

comp=Z,30nm,0.7s
BVAR Borovoye Array 28.12 22 P P 08 08 44.9 +0.3
comp=Z,0.9nm,0.4s,baz=235,slow=5.2,SNR=8.6
BVAR LR LR 08 21 44.9
comp=Z,48nm,20.1s,baz=199,slow=40
comp=Z,0.9nm,0.4s
ARU Arti 28.72 6d *i* P **P 08 08 49.3 -0.5**
ARU S **S 08 13 36.9 -1.4**
ARU SS **SnSn 08 14 58.1 -1.0**
ARU pmax pmax
comp=Z,6.0nm,1.3s
AKASG Malin Array Be 29.04 328 P P 08 08 52.5 -0.2
comp=Z,1.0nm,0.6s,baz=132,slow=7.9,SNR=5.5
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 29.04 328 *i* P **P 08 08 53.4 +0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 29.04 328 P P 08 08 50.9 -1.8
AKBB IAmb IAmb 08 08 53.3
comp=Z,13nm,1.5s
AKBB Malin Array Si 29.04 328⇑ *eP* **P 08 08 55.5 +2.8**
AKBB pmax pmax
comp=Z,3.0nm,0.6s
BURAR Bucovina Array 29.27 320 P P 08 08 54.5 -0.5
BUR08 Bucovina Ar. S 29.29 320 P P 08 08 55.2 +0.1
MAKZ Makanchi 29.41 42 P P 08 08 55.7 -0.4
MAKZ IAmb IAmb 08 08 57.6
comp=Z,3.5nm,0.7s
MAKZ Makanchi 29.41 42 P P 08 08 55.7 -0.4
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 29.59 43 P P 08 08 58.1 +0.4
MK31 Makanchi Array 29.59 43 P P 08 08 58.1 +0.4
MK31 pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 29.59 43 P P 08 08 58.2 +0.4
comp=Z,1.2nm,0.6s,baz=230,slow=9.5,SNR=11
comp=Z,1.2nm,0.6s
MKAR Makanchi Array 29.59 43 P P 08 08 57.4 -0.3
OBN Obninsk 29.67 341 *eP* **P 08 08 58.5 +0.3**
OBN *e* 08 09 56.3
OBN *e*PPP PPP 08 10 04.9
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,32nm,11.0s
KURBB Kurchatov Arra 29.72 33 P P 08 08 59.8 +1.0
comp=Z,1.9nm,0.5s,baz=233,slow=8.9,SNR=16
comp=Z,1.9nm,0.5s
KURK Kurchatov 29.82 33⇑ *eP* **P 08 09 00.1 +0.5**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KIRV Kirov 30.72 356 *ceP* **P 08 09 10.6 +3.1**
WMQ Urumqi 31.90 51 *eP* **P 08 09 20.0 +1.8**
WMQ sP sP 08 09 26.8 +2.3
MNK Minsk 32.27 332 *i* P P 08 09 15.4 -5.8
MNK *i* PPP PPP 08 10 30.5
MNK *i* S **S 08 14 28.1 -5.9**
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=N,21nm,0.9s
MNK pmax pmax
comp=Z,6.0nm,0.9s
MNK MLR MLR
comp=E,149nm,23.0s
MNK MLR MLR
comp=N,929nm,21.0s
MNK MLR MLR
comp=Z,93nm,21.0s
MNK Minsk 32.27 332 *i* P P 08 09 15.5 -5.7
comp=E,2.0nm,1.0s
MNK *i* P P 08 09 15.5 -5.7
comp=N,21nm,0.9s
MNK *i* P P 08 09 15.5 -5.7
comp=Z,6.0nm,0.9s,baz=315
MNK *i* PP **PnPn 08 10 20.0 -7.4**
MNK *i* PPP PPP 08 10 30.5
MNK *i* PcP PcP 08 11 58.8 -10
MNK *i* S **S 08 14 28.1 -5.9**
MNK *i* SS SnSn 08 16 09.8 -16
MNK *i* LQ LQ 08 19 51.7
MNK *i* LR LR 08 21 17.0
MNK *i* LRM MLR 08 24 19.7
comp=E,149nm,23.2s
MNK *i* LRM MLR 08 24 28.5
comp=N,929nm,20.6s
MNK *i* LRM MLR 08 24 28.9
comp=Z,93nm,20.6s
KLMR Klimovskoe 34.15 348 *eP* **P 08 09 36.8 -0.7**
KLMR pmax pmax
comp=Z,13nm,1.6s
KLMR Klimovskoe 34.15 348 *eP* **P 08 09 36.8 -0.7**
KLMR AMP 08 09 40.1
comp=Z,13nm,1.6s
ZAA0 Zalesovo Array 34.81 33 P P 08 09 43.1 -0.2
ZALV Zalesovo Beam 34.81 33 P P 08 09 43.8 +0.5
comp=Z,6.7nm,0.4s,baz=240,slow=9.4,SNR=15
comp=Z,6.7nm,0.4s
ZALV Zalesovo Beam 34.81 33 P P 08 09 43.4 +0.1
VSU Vasula 35.58 336⇓ *eP* **P 08 09 50.1 +0.2**
VSU pmax pmax
comp=Z,80nm,1.3s
GOMU GeErMu 36.05 66 P P 08 09 51.3 -3.4
GERES GERESS Array B 36.72 315 P P 08 10 00.3 +0.4
comp=Z,0.2nm,0.2s,baz=87,slow=9.9,SNR=1.7
comp=Z,0.2nm,0.2s
FINES FINESS Array B 38.04 339 P P 08 10 11.1 +0.3
comp=Z,4.2nm,0.7s,baz=145,slow=8.8,SNR=19
comp=Z,4.2nm,0.7s
GTA Gaotai 40.10 61 *eP* **P 08 10 29.8 +1.3**
GTA pP sP 08 10 34.4 -0.5
GTA sP pP 08 10 36.8 +3.7
HFS Hagfors 41.77 332 LR LR 08 28 57.8
comp=Z,57nm,19.4s,baz=141,slow=37
CMAR Chiang Mai Arr 42.96 93 P P 08 10 51.4 -0.6
comp=Z,1.4nm,0.4s,baz=67,slow=24,SNR=1.5
CMAR LR LR 08 32 30.5
comp=Z,25nm,18.1s,baz=290,slow=41
comp=Z,1.4nm,0.4s
PZH PanZhiHua 43.03 80 P P 08 10 54.0 +1.3
NB2 NORSAR Subarra 43.29 332 P P 08 10 53.7 -0.5
comp=Z,3.6nm,0.9s,baz=121,slow=8.6
NOA NORSAR Array B 43.29 332 P P 08 10 54.1 -0.1
comp=Z,1.2nm,0.6s,baz=121,slow=8.2,SNR=4.5
NOA LR LR 08 29 02.7
comp=Z,35nm,18.5s,baz=235,slow=36
comp=Z,1.2nm,0.6s
LZH Lanzhou 43.36 66 *eP* **P 08 10 58.4 +3.1**
LZH sP sP 08 11 04.4 +2.7
ARCES ARCESS Array B 44.58 347 P P 08 11 05.0 +0.6
comp=Z,0.4nm,0.3s,baz=139,slow=9.5,SNR=12
comp=Z,0.4nm,0.3s
ARCES ARCESS Array B 44.58 347 P P 08 11 05.0 +0.6
SONM Songino Array 45.49 49 P P 08 11 12.7 +0.6
comp=Z,1.0nm,0.7s,baz=267,slow=7.9,SNR=5.1
comp=Z,1.0nm,0.7s
ULN Ulaanbaatar 45.94 49⇑ *eP* **P 08 11 16.4 +0.7**
ULN pmax pmax
comp=Z,12nm,2.5s
NRIK Noril'sk 45.98 16 P P 08 11 16.4 +1.0
comp=Z,2.1nm,0.4s,baz=170,slow=6.1,SNR=1.9
comp=Z,2.1nm,0.4s
XAN Xi'an 47.72 68⇑ *iP* **P 08 11 34.3 +4.6**
XAN pP sP 08 11 41.0 +4.8
ESDC Sonseca Array 48.12 300 P P 08 11 33.8 +1.0
comp=Z,0.5nm,0.9s,baz=92,slow=9.1,SNR=1.9
comp=Z,0.5nm,0.9s
MDT Midelt 49.51 291 LR LR 08 37 53.8
comp=Z,105nm,18.0s,baz=290,slow=42
TOA0 Torodi Ar. Sit 50.00 264 P P 08 11 46.7 -0.7
TOA0 IAmb IAmb 08 11 52.8
comp=Z,9.8nm,1.4s
TORD Torodi Ar. Bea 50.00 264 P P 08 11 47.3 -0.1
comp=Z,3.9nm,1.1s,baz=61,slow=8.6,SNR=9.7
comp=Z,3.9nm,1.1s
NJ2 Nanjing 56.29 69 *eP* **P 08 12 30.5 -3.0**
DBIC Dimbokro 58.68 260 P P 08 12 50.4 -0.2
comp=Z,3.1nm,0.6s,baz=73,slow=6.8,SNR=5.0
comp=Z,3.1nm,0.6s
KSRS Korea Array 62.16 60 P P 08 13 13.8 -0.2
comp=Z,1.9nm,0.8s,baz=278,slow=6.2,SNR=4.6
comp=Z,1.9nm,0.8s
KLR Kul'dur 62.19 47 LR LR 08 41 29.3
comp=Z,52nm,18.6s,baz=266,slow=37
KLR Kul'dur 62.19 47 *i* P **P 08 13 12.8 -1.3**
KLR pmax pmax
comp=Z,20nm,2.1s
BOSA Boshof 62.27 208 P P 08 13 15.2 +0.3
comp=Z,0.7nm,0.3s,baz=2.0,slow=10,SNR=3.9
comp=Z,0.7nm,0.3s
SUMG Summit 64.06 340 *i* P **P 08 13 28.0 +1.4**
JOW Kunigami 65.68 71 LR LR 08 44 54.0
comp=Z,31nm,18.8s,baz=17,slow=38
BILL Bilibino 72.46 21 *eP* **P 08 14 18.8 0.0**
BILL *e* 08 14 37.4
BILL *e* 08 17 03.5
BILL *e*PPP PPP 08 18 45.3
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL MLR MLR
comp=Z,36nm,16.0s
ILAR Eielson Array 86.26 8 P P 08 15 34.7 +0.6
comp=Z,0.4nm,0.7s,baz=324,slow=4.9,SNR=2.1
comp=Z,0.4nm,0.7s
YKA Yellowknife Ar 89.33 354 P P 08 15 49.6 +0.8
comp=Z,0.5nm,0.5s,baz=6.6,slow=5.3,SNR=1.9
comp=Z,0.5nm,0.5s
WRA Warramunga Arr 91.78 112 P P 08 16 01.7 +0.7
comp=Z,0.4nm,0.7s,baz=313,slow=3.9,SNR=1.8
comp=Z,0.4nm,0.7s
ASAR Alice Springs 93.23 115 P P 08 16 07.4 -0.2
comp=Z,0.6nm,0.7s,baz=307,slow=5.2,SNR=3.0
comp=Z,0.6nm,0.7s

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*NEIC **24** 08:21:26.5±0.6, 12°.4N±0°.1×47°.1E±0°.1, h10km±2km, mb4.2/9, Error ellipse: s-maj=24.7km s-min=15.8km az=123.0*
*IDC **24** 08:21:27.2±1.1, 12°.65N×46°.95E, h0km, mb3.8/10, mbtmp3.9/13, MLL3.5/3, MS3.5/28, Error ellipse: s-maj=28.0km s-min=21.2km az=146.0*
ISC 24 08:21:27.4±0.7, 12°.51N±0°.10×47°.0E±0°.1, h10km, n49, σ1°.27/27, mb4.0/13, MS3.5/25, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**4.13**	**257**	Pn	**Pn**	**08 22 31.3**	**+0.7**
	2.4nm,0.3s,baz=41,slow=8.8,SNR=9.6						
ATD				LR	LR	08 23 45.5	
	comp=Z,110nm,19.7s,baz=8.0,slow=33						
	18nm,0.5s						
ATD	**Arta Tunnel**	**4.13**	**257**		**Pn**	**08 22 30.8**	**+0.2**
RAYN	**Ar Rayn**	**11.04**	**353**	Pn	**Pn**	**08 24 05.0**	**-0.6**
UOSS	**Minazif**	**15.15**	**34**		**Pn**	**08 24 59.9**	**-1.7**
WSAR	**Wadi Sarin**	**15.40**	**45**	Pn	**Pn**	**08 25 03.7**	**-1.2**
	0.2nm,0.3s,baz=212,slow=15,SNR=2.0						
WSAR				LR	LR	08 31 10.3	
	comp=Z,100nm,18.8s,baz=248,slow=38						
	1.5nm,0.4s						
KMBO	**Kilima Mbogo**	**16.62**	**216**	Pn	**P**	**08 25 22.8**	**-0.5**
	0.2nm,0.3s,baz=40,slow=11,SNR=5.4						
KMBO				LR	LR	08 30 56.9	
	comp=Z,95nm,21.0s,baz=97,slow=34						
	1.1nm,0.3s						
KMBO	**Kilima Mbogo**	**16.62**	**216**	Pn	**Pn**	**08 25 18.6**	**-2.3**
KMBO				IAmb	IAmb	08 25 29.8	
	comp=Z,13nm,1.5s						
KIBK	**Kibwezi**	**17.20**	**212**	Pn	**Pn**	**08 25 25.7**	**-2.3**
EIL	**Elat**	**20.39**	**329**	LR	LR	08 33 24.9	
	comp=Z,169nm,19.4s,baz=90,slow=35						
ASF	**Jabal al Asfar**	**21.64**	**336**	P	**P**	**08 26 17.9**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=127,slow=10,SNR=1.6						
	comp=Z,0.9nm,0.4s						
MMAI	**Mount Meron Ar**	**22.99**	**334**	LR	LR	08 34 52.5	
	comp=Z,28nm,21.9s,baz=80,slow=35						
GEVA	**Gevas**	**25.93**	**353**	P	**P**	**08 26 59.9**	**-0.2**
GEYT	**Alibeck**	**27.21**	**20**	P	**P**	**08 27 12.7**	**+1.2**
	comp=Z,1.5nm,0.5s,baz=224,slow=12,SNR=2.1						
GEYT				LR	LR	08 39 50.8	
	comp=Z,181nm,21.0s,baz=201,slow=41						
	comp=Z,1.5nm,0.5s						
GNI	**Garni**	**27.60**	**356**	LR	LR	08 39 06.8	
	comp=Z,79nm,20.2s,baz=146,slow=39						
BRTR	**Keskin Array B**	**29.55**	**339**	LR	LR	08 38 54.0	
	comp=Z,83nm,18.6s,baz=156,slow=36						
OPO	**Ambohidratompo**	**30.88**	**180**	LR	LR	08 40 06.9	
	comp=Z,88nm,19.4s,baz=126,slow=36						
KBZ	**Khabaz**	**31.31**	**354**	LR	LR	08 40 08.0	
	comp=Z,59nm,22.0s,baz=201,slow=36						
LSZ	**Lusaka**	**33.27**	**214**	LR	LR	08 41 28.8	
	comp=Z,80nm,20.1s,baz=22,slow=36						
MLR	**Muntele Rosu**	**37.42**	**335**	LR	LR	08 45 45.0	
	comp=Z,91nm,21.0s,baz=190,slow=39						
ABKAR	**Akbulak array**	**38.18**	**14**	P	**P**	**08 28 47.4**	**+0.3**
AAK	**Ala-Archa**	**38.36**	**33**	LR	LR	08 45 52.1	
	comp=Z,32nm,18.4s,baz=349,slow=38						
AKTO	**Aktyubinsk**	**38.89**	**11**	LR	LR	08 46 53.9	
	comp=Z,57nm,21.7s,baz=198,slow=39						
BURAR	**Bucovina Array**	**39.45**	**337**	P	**P**	**08 28 57.4**	**-0.4**
BELG	**Belogornoye**	**39.78**	**1**	LR	LR	08 47 43.3	
	comp=Z,72nm,19.4s,baz=142,slow=40						
AKASG	**Malin Array Be**	**40.75**	**343**	P	**P**	**08 29 09.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=161,slow=7.1,SNR=2.8						
	comp=Z,0.1nm,0.3s						
LBTB	**Lobatse**	**42.72**	**209**	LR	LR	08 45 41.4	
	comp=Z,40nm,21.4s,baz=35,slow=34						
TSUM	**Tsumeb**	**42.78**	**223**	LR	LR	08 48 25.0	
	comp=Z,63nm,20.5s,baz=342,slow=38						
TORD	**Torodi Ar. Bea**	**44.08**	**276**	P	**P**	**08 29 37.4**	**+1.3**
	comp=Z,0.9nm,1.0s,baz=87,slow=9.2,SNR=3.5						
	comp=Z,0.9nm,1.0s						
BVAR	**Borovoye Array**	**44.55**	**20**	LR	LR	08 51 17.2	
	comp=Z,108nm,19.9s,baz=214,slow=40						
ARU	**Arti**	**44.74**	**9**	LR	LR	08 51 13.7	
	comp=Z,106nm,20.1s,baz=202,slow=40						
MK31	**Makanchi Array**	**45.28**	**34**	P	**P**	**08 29 44.0**	**-1.3**
MK31				IAmb	IAmb	08 30 01.8	
	comp=Z,2.6nm,1.0s						
MKAR	**Makanchi Array**	**45.28**	**34**	P	**P**	**08 29 45.1**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=226,slow=9.6,SNR=10						
MKAR				LR	LR	08 49 30.8	
	comp=Z,40nm,18.7s,baz=316,slow=37						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**45.28**	**34**	P	**P**	**08 29 43.0**	**-2.2**
GERES	**GERESS Array B**	**45.49**	**329**	P	**P**	**08 29 46.9**	**0.0**
BOSA	**Boshof**	**45.95**	**207**	LR	LR	08 49 22.1	
	comp=Z,67nm,18.9s,baz=11,slow=36						
KURK	**Kurchatov**	**46.02**	**28**	P	**P**	**08 29 50.0**	**-0.9**
KURK				IAmb	IAmb	08 30 03.4	
	comp=Z,6.8nm,1.4s						
KIRV	**Kirov**	**46.02**	**2**	LR	LR	08 51 05.6	
	comp=Z,62nm,18.6s,baz=212,slow=39						
ZAA0	**Zalesovo Array**	**51.01**	**28**	P	**P**	**08 30 28.8**	**-0.5**
ZAA0				IAmb	IAmb	08 30 33.3	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**51.01**	**28**	P	**P**	**08 30 28.8**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=231,slow=7.0,SNR=4.3						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**51.01**	**28**	P	**P**	**08 30 28.6**	**-0.8**
FINES	**FINESS Array B**	**51.16**	**347**	P	**P**	**08 30 30.5**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=158,slow=13,SNR=1.6						
	comp=Z,2.9nm,1.0s						
SUR	**Sutherland**	**51.16**	**209**	LR	LR	08 52 31.3	
	comp=Z,63nm,19.0s,baz=45,slow=36						
HFS	**Hagfors**	**53.49**	**340**	LR	LR	08 53 39.7	
	comp=Z,98nm,18.8s,baz=207,slow=36						
NOA	**NORSAR Array B**	**54.98**	**340**	LR	LR	08 54 45.2	
	comp=Z,40nm,18.2s,baz=205,slow=36						
ARCES	**ARCESS Array B**	**58.59**	**351**	LR	LR	08 57 17.4	
	comp=Z,48nm,18.8s,baz=226,slow=37						
SONM	**Songino Array**	**60.43**	**42**	P	**P**	**08 31 37.6**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=262,slow=7.6,SNR=4.4						
SONM				LR	LR	09 00 00.2	
	comp=Z,45nm,19.9s,baz=312,slow=38						
	comp=Z,0.6nm,0.4s						
MAW	**Mawson**	**80.73**	**174**	LR	LR	09 02 11.3	
	comp=Z,26nm,18.8s,baz=16,slow=30						
WRA	**Warramunga Arr**	**91.78**	**110**	P	**P**	**08 34 38.2**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=298,slow=2.9,SNR=5.6						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**92.20**	**114**	P	**P**	**08 34 40.3**	**+2.3**
	comp=Z,0.4nm,0.9s,baz=282,slow=4.6,SNR=2.2						
	comp=Z,0.4nm,0.9s						

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*DDA **24** 08:25:33.1±0.0, 39°.08N×37°.33E, h7km±1km, ML1.9*
*ISK **24** 08:25:34.8, 38°.97N×37°.27E, h13km, ML2.6/5*
ISC 24 08:25:34.0±1.3, 39°.03N±0°.03×37°.32E±0°.03, h3km±13km, n13, σ1°.21/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUGUR	**Gurin_SVAS**	**0.30**	**188**	P	**Pg**	**08 25 40.5**	**+0.7**
CUGUR				S	**Sb**	**08 25 48.7**	**+1.0**
CUGUR				*i* AML	AML	08 25 54.0	
	comp=E,461nm,0.5s						
CUGUR				*i* AML	AML	08 25 58.0	
	comp=N,354nm,0.5s						
CUKAN	**kangal_SIVAS**	**0.31**	**21**	P	**Pg**	**08 25 38.5**	**-1.5**
CUKAN				*i* AML	AML	08 25 53.0	
	comp=E,156nm,0.6s						
CUKAN				*i* AML	AML	08 25 53.0	
	comp=N,141nm,0.5s						
DARE	**Darende-Malaty**	**0.47**	**165**	PG	**Pb**	**08 25 43.9**	**-1.1**
CUAYA	**Sivas-Altinyay**	**0.51**	**298**	P	**Pg**	**08 25 43.0**	**-0.8**
CUAYA				*i* AML	AML	08 26 00.0	
	comp=E,77nm,0.5s						
CUAYA				*i* AML	AML	08 26 01.0	
	comp=N,83nm,0.6s						
ARPR	**Arapgir-MALATY**	**0.79**	**85**	PG	**Pb**	**08 25 51.5**	**+1.0**
AKCD	**Akcadag**	**0.87**	**147**	P	**Pb**	**08 25 51.6**	**-0.2**
AKCD				*i* AML	AML	08 26 13.0	
	comp=E,76nm,0.5s						
AKCD				*i* AML	AML	08 26 14.0	
	comp=N,63nm,0.4s						
SVSK	**Karacayir**	**0.92**	**344**	PG	**Pg**	**08 25 53.6**	**+1.9**
SVSK				SG	**Sn**	**08 26 08.3**	**+0.6**
KEMA	**Kemaliye**	**0.94**	**75**	P	**Pb**	**08 25 50.8**	**-2.2**
KEMA				S	**Sg**	**08 26 05.2**	**+0.9**
KEMA				*i* AML	AML	08 26 13.0	
	comp=N,43nm,0.5s						
KEMA				*i* AML	AML	08 26 14.0	
	comp=E,37nm,0.6s						
SARI	**SarD1z-Kayseri**	**0.94**	**229**	PG	**Pb**	**08 25 51.9**	**-1.2**
ELZG	**Elazig**	**1.40**	**112**	P	**Pn**	**08 25 60.0**	**-0.7**
ELZG				S	**Sb**	**08 26 19.9**	**+0.5**
ELZG				*i* AML	AML	08 26 28.0	
	comp=E,26nm,0.5s						
ELZG				*i* AML	AML	08 26 31.0	
	comp=N,25nm,0.6s						
HACI	**Hacifakili, Ak**	**1.41**	**299**	P	**Pn**	**08 26 00.3**	**-0.4**
HACI				S	**Sg**	**08 26 20.0**	**+0.8**
HACI				*i* AML	AML	08 26 26.0	
	comp=N,16nm,1.5s						
HACI				*i* AML	AML	08 26 29.0	
	comp=E,9.4nm,0.7s						
TOKT	**Tokat**	**1.43**	**335**	PN	**Pb**	**08 26 01.5**	**+0.2**
YOZ	**Yozgat**	**1.67**	**292**	PN	**Pb**	**08 26 04.5**	**-1.0**

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*GUC **24** 09:09:16.7±0.8, 22°.36S×67°.83W, h187km±7km, ML3.5*
*SCB **24** 09:09:20.4±0.9, 22°.30S×67°.66W, h138km, ML3.3/2, MW3.0, Error ellipse: s-maj=4.9km s-min=2.8km az=0.0*
ISC 24 09:09:14.5±2.1, 22°.40S±0°.06×67°.64W±0°.05, h176km±16km, n24, σ1°.74/41, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.74**	**222**	P	**Pn**	**09 09 41.2**	**+0.7**
LVC	**Limon Verde**	**1.19**	**259⇑**	*iP*	**Pn**	**09 09 44.9**	**+1.1**
LVC				*e*S	**Sn**	**09 10 06.2**	**-0.1**
LVC	**Limon Verde**	**1.19**	**259**	P	**Pn**	**09 09 45.2**	**+1.4**
PB09	**IPOC Station P**	**1.60**	**292⇑**	*iP*	**Pn**	**09 09 49.0**	**+1.7**
PB09				*e*S	**Sn**	**09 10 13.6**	**+0.9**
PB06	**IPOC Station P**	**1.81**	**260**	*eP*	**Pn**	**09 09 50.8**	**+1.3**
PB06				*e*S	**Sn**	**09 10 16.4**	**-0.1**
PB06				IAML		09 10 18.2	
	comp=N,255nm,0.1s						
PB06	**IPOC Station P**	**1.81**	**260**	P	**Pn**	**09 09 51.2**	**+1.7**
PB06				S	**Sn**	**09 10 13.1**	**-3.4**
PB06				IAML		09 10 18.2	
	comp=N,211nm,0.2s						
PB15	**IPOC Station P**	**1.87**	**244**	*eP*	**Pn**	**09 09 51.7**	**+1.6**
PB15				*e*S	**Sn**	**09 10 18.1**	**+0.4**
PB15	**IPOC Station P**	**1.87**	**244**	P	**Pn**	**09 09 51.9**	**+1.7**
PB15				S	**Sn**	**09 10 14.8**	**-3.0**
YJA	**Yavi**	**1.98**	**84**	P	**Pn**	**09 09 52.7**	**+1.1**
PB03	**IPOC Station P**	**1.99**	**280⇑**	*iP*	**Pn**	**09 09 52.4**	**+1.0**
PB03				*e*S	**Sn**	**09 10 18.9**	**-0.9**
PB03				IAML		09 10 19.7	
	comp=E,360nm,0.2s						
MOCB	**Mochara**	**2.18**	**59**	P	**Pn**	**09 09 55.8**	**+2.0**
MOCB				S	**Sn**	**09 10 20.2**	**-4.0**
PB01	**IPOC Station P**	**2.18**	**308⇑**	*iP*	**Pn**	**09 09 54.4**	**+0.9**
PB01				*e*S	**Sn**	**09 10 23.2**	**-0.4**
PB01				IAML		09 10 24.9	
	comp=E,222nm,0.2s						
PB04	**IPOC Station P**	**2.32**	**271**	*iP*	**Pn**	**09 09 56.1**	**+1.0**
PB04				*e*S	**Sn**	**09 10 25.4**	**-1.2**
PB04				IAML		09 10 27.6	
	comp=N,243nm,0.3s						
PB04	**IPOC Station P**	**2.32**	**271**	P	**Pn**	**09 09 56.4**	**+1.3**
PB08	**IPOC Station P**	**2.65**	**328⇑**	*iP*	**Pn**	**09 10 01.0**	**+1.8**
PB08				*e*S	**Sn**	**09 10 34.2**	**+0.4**
PB08				IAML		09 10 36.0	
	comp=E,46nm,0.1s						
PATCX	**Punta Patache**	**2.81**	**303**	*eP*	**Pn**	**09 10 01.2**	**+0.4**
PATCX				*e*S	**Sn**	**09 10 35.1**	**-1.7**
PATCX				IAML		09 10 36.9	
	comp=E,111nm,0.3s						
PB10	**IPOC Station P**	**2.91**	**247**	*eP*	**Pn**	**09 10 02.7**	**+0.9**
PB10				*e*S	**Sn**	**09 10 37.1**	**-1.6**
PB10				IAML		09 10 41.8	
	comp=E,63nm,0.3s						
TA01	**Diego Aracena**	**2.98**	**307**	*eP*	**Pn**	**09 10 02.9**	**+0.1**
TA01				*e*S	**Sn**	**09 10 38.0**	**-2.4**
TA01				IAML		09 10 42.0	
	comp=N,72nm,0.3s						
TA01	**Diego Aracena**	**2.98**	**307**	P	**Pn**	**09 10 03.8**	**+1.0**
TA01				S	**Sn**	**09 10 36.0**	**-4.4**
TA01				IAML		09 10 42.0	
	comp=N,63nm,0.4s						
GO01	**Chusmiza**	**3.08**	**332**	*eP*	**Pn**	**09 10 05.7**	**+1.3**
GO01				*e*S	**Sn**	**09 10 43.3**	**0.0**
GO01				IAML		09 10 46.0	
	comp=N,96nm,0.2s						
TA02	**Huaiquique**	**3.14**	**312**	P	**Pn**	**09 10 06.1**	**+1.4**
PB11	**IPOC Station P**	**3.23**	**324**	*eP*	**Pn**	**09 10 06.2**	**+0.3**
PB11				*e*S	**Sn**	**09 10 44.5**	**-1.5**
PB11				IAML		09 10 45.7	
	comp=E,80nm,0.2s						
BBOE	**La Paz, Chanca**	**5.56**	**357**	P	**Pn**	**09 10 37.9**	**+1.5**
LPAZ	**La Paz**	**6.09**	**356**	P	**Pn**	**09 10 44.8**	**+1.4**

IDC 24 09:21:24.6±2.7, 2°.86N×128°.73E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=184.4km s-min=29.2km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.32**	**167**	P	P	09 26 34.5	0.0
	0.2nm,0.4s,baz=346,slow=10,SNR=2.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**26.84**	**169**	P	P	09 27 06.5	-0.5
	0.2nm,0.5s,baz=355,slow=7.6,SNR=5.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.41**	**325**	P	P	09 31 29.5	+0.4
	0.2nm,0.4s,baz=123,slow=7.7,SNR=2.3						
	0.2nm,0.4s						

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*IDC **24** 09:28:20.3±2.8, 18°.15S×178°.44W, h547km±22km, mb2.8/5, mbtmp3.7/6, Error ellipse: s-maj=87.0km s-min=21.8km az=148.0*
ISC 24 09:28:23.1±1.6, 18°.1S±0°.6×178°.6W±0°.4, h579km, n6, σ0°.31/7, mb3.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.24**	**276**	P	P	09 29 37.4	-4.6
	6.5nm,0.3s,baz=68,slow=5.4,SNR=7.6						
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**09 34 55.9**	**-0.3**
	1.9nm,1.0s,baz=95,slow=10,SNR=4.1						
	1.9nm,1.0s						
WRA	**Warramunga Arr**	**44.45**	**260**	P	**P**	**09 35 43.9**	**0.0**
	0.2nm,0.5s,baz=96,slow=7.1,SNR=12						
WRA				PcP	**PcP**	**09 37 15.2**	**+0.4**
	0.5nm,1.2s,baz=105,slow=3.2,SNR=1.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**44.59**	**254**	P	**P**	**09 35 45.4**	**+0.3**
	1.9nm,0.5s,baz=90,slow=8.6,SNR=50						
ASAR				PcP	**PcP**	**09 37 15.1**	**-0.2**
	0.2nm,0.6s,baz=99,slow=3.7,SNR=1.5						
	1.9nm,0.5s						
ILAR	**Eielson Array

0.2nm,0.4s
TXAR Lajitas Array 86.23 58 P **P 09 40 04.5 +0.1**
0.4nm,0.8s,baz=223,slow=7.8,SNR=4.9
0.4nm,0.8s

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*IDC **24** 09:31:54.4±2.3, 37.03N×143.00E, h0km, mb3.6/3, mbtmp3.6/4, ML2.6/1, MS3.6/2, Error ellipse: s-maj=50.5km s-min=31.7km az=55.0*
*JMA **24** 09:32:00.7±0.2, 37.2N±0.5×142.3E±0.8, h19km±2km, MV3.5/36, E OFF FUKUSHIMA PREF*
*NIED **24** 09:32:00.7, 37.24N×142.30E, h19km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr1.45; Mθθ0.01; Mφφ-1.47; Mrθ0.88; Mφθ-0.55; Mφr2.03; Fault plane solution: M0 2.70000×1014 NP1: φs192.00000°, δ18.00000°, λ80.00000°. NP2: φs23.00000°, δ73.00000°, λ93.00000°.*
ISC 24 09:32:01.8±2.7, 37.18N±0.07×142.41E±0.09, h35km±12km, n25, σ1.316/26, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.24 279**		P	**Pn**	**09 32 21.7**	**-1.0**
JMST	**Minamisoumatoc**	**1.33 295**		*i* P	**Pn**	**09 32 22.7**	**-1.2**
JMST				*e*S	**Sn**	**09 32 38.8**	**-1.5**
JIKH	**Ishinomakikobu**	**1.35 327**		*e*P	**Pn**	**09 32 23.1**	**-1.1**
JMM	**Marumori**	**1.46 298**		P	**Pn**	**09 32 24.7**	**-0.9**
JFFD	**Fukushimafurud**	**1.48 267**		*i* P	**Pn**	**09 32 25.4**	**-0.6**
JFFD				*e*S	**Sn**	**09 32 44.1**	**0.0**
JIO	**Ouri**	**1.53 327**		P	**Pn**	**09 32 25.9**	**-0.7**
JIO				*e*S	**Sn**	**09 32 44.2**	**-0.9**
JOTO	**OTAMA OYAMA**	**1.70 283**		*i* P	**Pn**	**09 32 29.2**	**+0.2**
JOTO				*e*S	**Sn**	**09 32 49.0**	**-0.5**
JOU	**Okura**	**1.82 311**		*e*P	**Pn**	**09 32 30.7**	**0.0**
JOU				S	**Sn**	**09 32 51.7**	**-0.8**
JMK	**Ichinoseki**	**2.00 332**		P	**Pn**	**09 32 33.6**	**+0.5**
JYS	**Shiratake**	**2.13 300**		P	**Pn**	**09 32 35.9**	**+1.0**
JYS				*e*S	**Sn**	**09 33 00.8**	**+0.7**
JYK	**Kaneyama**	**2.37 318**		*e*P	**Pn**	**09 32 38.5**	**+0.2**
JOM	**Ohasama**	**2.45 339**		P	**Pn**	**09 32 40.4**	**+1.1**
JOM				*e*S	**Sn**	**09 33 08.7**	**+0.7**
JAG	**Ashikaga**	**2.49 253**		P	**Pn**	**09 32 40.5**	**+0.6**
JAG				*e*S	**Sn**	**09 33 09.5**	**+0.4**
MJAR	**Matsushiro Arr**	**3.43 261**		Pn	**Pn**	**09 32 55.1**	**+2.3**
	0.4nm,0.3s,baz=86,slow=16,SNR=13						
MJAR				Sn	**Sb**	**09 33 42.6**	**-0.6**
	0.3nm,0.3s,baz=92,slow=29,SNR=2.5						
	5.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**27.54 122**		T	T	10 06 41.6	
	baz=315,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**27.55 122**		T	T	10 06 46.5	
	baz=315,slow=75,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**27.56 122**		T	T	10 06 46.8	
	baz=315,slow=75,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**28.27 125**		T	T	10 07 43.5	
	baz=316,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**28.28 125**		T	T	10 07 46.9	
	baz=316,slow=76,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**28.29 125**		T	T	10 07 50.3	
	baz=316,slow=76,SNR=6.2						
SONM	**Songino Array**	**28.37 304**		P	**P**	**09 37 53.9**	**+1.3**
	0.9nm,0.7s,baz=108,slow=9.0,SNR=4.3						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**46.54 308**		P	**P**	**09 40 27.1**	**+1.4**
	0.8nm,0.5s,baz=83,slow=8.0,SNR=4.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**57.32 189**		P	**P**	**09 41 43.7**	**-2.6**
	0.2nm,0.6s,baz=5.5,slow=7.6,SNR=5.3						
	0.2nm,0.6s						
AKTO	**Aktyubinsk**	**59.17 312**		LR	LR	10 06 50.2	
	comp=Z,28nm,18.3s,baz=314,slow=35						
KIRV	**Kirov**	**60.61 323**		LR	LR	10 12 11.5	
	comp=Z,62nm,19.0s,baz=259,slow=40						

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*IDC **24** 09:38:06.6±2.3, 37.02N×142.56E, h0km, mb3.5/4, mbtmp3.4/5, ML2.1/1, MS2.7/3, Error ellipse: s-maj=48.5km s-min=33.4km az=57.0*
*JMA **24** 09:38:08.8±0.3, 37.2N±0.5×142.3E±0.9, h22km±3km, MV3.5/37, E OFF FUKUSHIMA PREF*
*NIED **24** 09:38:08.8, 37.23N×142.28E, h22km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr-0.63; Mθθ2.87; Mφφ-2.24; Mrθ0.14; Mφθ-0.09; Mφr2.77; Fault plane solution: M0 3.60000×1014 NP1: φs129.00000°, δ63.00000°, λ-26.00000°. NP2: φs232.00000°, δ67.00000°, λ-150.00000°.*
ISC 24 09:38:07.8±2.5, 37.25N±0.06×142.24E±0.08, h1km±12km, n27, σ1.913/27, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.09 277**		P	**Pg**	**09 38 29.1**	**+0.3**
JFK				*e*S	**Sg**	**09 38 43.6**	**+0.7**
JMST	**Minamisoumatoc**	**1.17 294**		P	**Pb**	**09 38 30.1**	**-0.8**
JMST				S	**Sg**	**09 38 45.2**	**-0.4**
JIKH	**Ishinomakikobu**	**1.22 330**		P	**Pn**	**09 38 31.4**	**-0.6**
JMM	**Marumori**	**1.30 299**		P	**Pn**	**09 38 32.1**	**-1.0**
JMM				*e*S	**Sb**	**09 38 49.4**	**-0.9**
JFFD	**Fukushimafurud**	**1.35 264**		*i* P	**Pn**	**09 38 32.9**	**-0.9**
JIO	**Ouri**	**1.39 330**		*e*P	**Pn**	**09 38 33.2**	**-1.2**
JIO				*e*S	**Sb**	**09 38 51.5**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.55 282**		*i* P	**Pn**	**09 38 36.7**	**+0.2**
JOTO				*e*S	**Sn**	**09 38 56.4**	**-0.9**
JOU	**Okura**	**1.67 312**		*e*P	**Pn**	**09 38 38.3**	**0.0**
JOU				S	**Sn**	**09 38 59.4**	**-1.0**
JMK	**Ichinoseki**	**1.88 335**		P	**Pn**	**09 38 41.3**	**+0.2**
JYS	**Shiratake**	**1.98 300**		P	**Pn**	**09 38 43.2**	**+0.8**
JYS				*e*S	**Sn**	**09 39 08.8**	**+0.9**
JFY	**Yanaizu**	**2.02 275**		P	**Pn**	**09 38 43.6**	**+0.5**
JYK	**Kaneyama**	**2.23 319**		P	**Pn**	**09 38 46.3**	**+0.4**
JOM	**Ohasama**	**2.34 342**		P	**Pn**	**09 38 47.8**	**+0.3**
JAG	**Ashikaga**	**2.38 251**		P	**Pn**	**09 38 47.8**	**-0.2**
MJAR	**Matsushiro Arr**	**3.31 259**		Pn	**Pn**	**09 39 01.8**	**+1.1**
	0.2nm,0.3s,baz=80,slow=15,SNR=9.5						
MJAR				Sn	**Sb**	**09 39 46.9**	**-1.1**
	0.3nm,0.3s,baz=75,slow=24,SNR=3.3						
MJAR				LR	LR	09 40 03.8	
	comp=Z,25nm,21.1s,baz=60,slow=33						
	2.5nm,0.6s						
KSRS	**Korea Array**	**11.40 275**		LR	LR	09 44 58.6	
	comp=Z,25nm,18.6s,baz=25,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.70 122**		T	T	10 13 10.6	
	baz=315						
H11N1	**WAKE ISLAND Hy**	**27.71 122**		T	T	10 12 56.3	
	baz=315						
H11N3	**WAKE ISLAND Hy**	**27.72 122**		T	T	10 13 00.3	
	baz=315						
SONM	**Songino Array**	**28.21 303**		P	**P**	**09 44 03.7**	**+1.6**
	0.3nm,0.5s,baz=98,slow=7.1,SNR=1.6						
	0.3nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**28.43 124**		T	T	10 14 05.4	
	baz=316,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.43 124**		T	T	10 14 02.0	
	baz=316,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.45 124**		T	T	10 13 52.9	
	baz=316						
MKAR	**Makanchi Array**	**44.56 302**		P	**P**	**09 46 22.4**	**+1.2**
	0.4nm,0.7s,baz=81,slow=9.5,SNR=3.3						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**46.39 308**		P	**P**	**09 46 38.0**	**+2.5**
	0.3nm,0.5s,baz=82,slow=7.5,SNR=2.0						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**57.37 189**		P	**P**	**09 47 55.4**	**-2.3**
	0.5nm,0.9s,baz=7.2,slow=7.1,SNR=1.7						
	0.5nm,0.9s						
GEYT	**Alibeck**	**64.31 299**		LR	LR	10 17 26.1	
	comp=Z,34nm,21.1s,baz=96,slow=36						

IDC 24 10:15:29.3±5.1, 2.47N×128.50E, h76km±52km, mb3.3/3, mbtmp3.6/4, ML3.7/1, MS2.7/3, Error ellipse: s-maj=88.6km s-min=23.8km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.32 140**		P	Pn	10 16 32.4	-0.1
	3.7nm,0.3s,baz=215,slow=23,SNR=14						
SIJI				S	Sn	10 17 21.9	+0.1
	7.2nm,0.5s,baz=114,slow=24,SNR=1.7						
SIJI				LR	LR	10 18 35.0	
	comp=Z,48nm,18.8s,baz=104,slow=43						
	7.5nm,0.3s						
DAV	**Davao City (W)**	**5.42 328**		LR	LR	10 19 06.5	
	comp=Z,64nm,21.6s,baz=183,slow=40						
WRA	**Warramunga Arr**	**23.00 166**		P	P	10 20 28.1	+0.2
	1.1nm,0.4s,baz=343,slow=10,SNR=36						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**26.50 169**		P	P	10 20 59.5	-0.3
	0.4nm,0.6s,baz=355,slow=8.1,SNR=10						
ASAR				PcP	PcP	10 24 22.4	-0.6
	0.2nm,0.4s,baz=348,slow=2.2,SNR=5.6						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**36.35 161**		LR	LR	10 40 01.7	
	comp=Z,27nm,20.9s,baz=28,slow=40						
MKAR	**Makanchi Array**	**59.59 325**		P	P	10 25 25.8	+0.5
	0.3nm,0.5s,baz=123,slow=8.1,SNR=4.3						
	0.3nm,0.5s						

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*IDC **24** 10:29:00.5±0.8, 30.51N×41.8W, h0km, mb3.9/13, mbtmp3.9/13, MS3.6/40, Error ellipse: s-maj=27.5km s-min=18.5km az=4.0*
ISC 24 10:29:02.8±0.8, 30.5N±0.2×41.8W±0.1, h15km, n52, σ0.973/14, mb3.9/14, MS3.6/40, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.34 246**		LR	LR	10 42 19.2	
	comp=Z,36nm,20.8s,baz=68,slow=32						
BBTS	**Babate**	**28.04 119**		LR	LR	10 43 47.3	
	comp=Z,228nm,18.4s,baz=322,slow=32						
SCHQ	**Schefferville**	**30.20 331**		LR	LR	10 47 08.8	
	comp=Z,119nm,18.2s,baz=123,slow=36						
SADO	**Sadowa**	**32.53 307**		LR	LR	10 46 41.9	
	comp=Z,94nm,19.0s,baz=111,slow=33						
TKL	**Tuckaleechee C**	**35.37 290**		LR	LR	10 46 57.9	
	comp=Z,106nm,21.3s,baz=64,slow=30						
RCBR	**Riachuelo**	**36.55 170**		LR	LR	10 49 19.5	
	comp=Z,78nm,18.0s,baz=138,slow=33						
SFJD	**Kangerlussuaq**	**36.91 354**		LR	LR	10 47 40.5	
	comp=Z,45nm,21.4s,baz=169,slow=30						
FRB	**Frobisher Bay**	**37.34 341**		LR	LR	10 49 52.9	
	comp=Z,43nm,18.5s,baz=18,slow=34						
ROSC	**El Rosal**	**39.88 237**		LR	LR	10 51 21.9	
	comp=Z,53nm,21.7s,baz=33,slow=34						
DBIC	**Dimbokro**	**41.95 117**		P	**P**	**10 36 52.2**	**-1.1**
	1.9nm,0.8s,baz=306,slow=19,SNR=1.9						
DBIC				LR	LR	10 51 53.1	
	comp=Z,106nm,19.8s,baz=312,slow=33						
	1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**43.59 104**		P	**P**	**10 37 06.3**	**-0.3**
	1.7nm,1.0s,baz=301,slow=7.1,SNR=5.8						
TORD				LR	LR	10 53 20.0	
	comp=Z,61nm,18.6s,baz=213,slow=34						
	1.7nm,1.0s						
ULM	**Lac du Bonnet**	**44.59 312**		LR	LR	10 54 20.5	
	comp=Z,53nm,19.1s,baz=26,slow=34						
JTS	**Las Juntas de**	**44.84 253**		LR	LR	10 55 15.3	
	comp=Z,37nm,18.4s,baz=140,slow=35						
H10N2	**ASCENSION HYDR**	**46.24 141**		T	T	11 26 51.5	
	baz=326,slow=75,SNR=317						
H10N3	**ASCENSION HYDR**	**46.24 141**		T	T	11 26 51.7	
	baz=326,slow=75,SNR=302						
H10N1	**ASCENSION HYDR**	**46.26 141**		T	T	11 26 52.9	
	baz=326,slow=75,SNR=389						
VAE	**Valguarnera**	**46.53 66**		LR	LR	10 53 44.7	
	comp=Z,40nm,19.7s,baz=134,slow=32						
H10S3	**ASCENSION HYDR**	**47.08 142**		T	T	11 27 55.7	
	baz=326,slow=74,SNR=84						
H10S2	**ASCENSION HYDR**	**47.10 142**		T	T	11 28 00.5	
	baz=254,slow=74,SNR=33						
SIV	**San Ignacio**	**49.81 205**		LR	LR	10 57 20.5	
	comp=Z,63nm,18.4s,baz=18,slow=34						
CMIG	**Matias Romero**	**49.98 267**		LR	LR	10 59 49.7	
	comp=Z,24nm,18.1s,baz=26,slow=37						
ATAH	**Atahualpa**	**51.30 229**		LR	LR	11 00 07.7	
	comp=Z,36nm,18.5s,baz=20,slow=36						
LPAZ	**La Paz**	**52.98 212**		P	**P**	**10 38 20.7**	**+1.0**
	2.5nm,1.1s,baz=22,slow=9.4,SNR=3.9						
	2.5nm,1.1s						
TXAR	**Lajitas Array**	**53.04 285**		P	**P**	**10 38 18.8**	**-0.7**
	0.5nm,0.9s,baz=69,slow=6.9,SNR=4.2						
TXAR				LR	LR	10 59 38.6	
	comp=Z,21nm,19.0s,baz=48,slow=35						
	0.5nm,0.9s						
ANMO	**Albuquerque**	**53.76 293**		LR	LR	10 58 55.4	
	comp=Z,81nm,21.0s,baz=66,slow=33						
PDAR	**Pinedale Array**	**54.41 303**		P	**P**	**10 38 29.1**	**-0.4**
	1.2nm,0.8s,baz=79,slow=7.7,SNR=8.9						
PDAR				LR	LR	11 00 43.5	
	comp=Z,131nm,18.8s,baz=96,slow=35						
	1.2nm,0.8s						
AKASG	**Malin Array Be**	**55.36 47**		P	**P**	**10 38 35.2**	**-0.8**
	0.2nm,0.3s,baz=271,slow=6.8,SNR=7.2						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**55.56 327**		LR	LR	11 02 04.0	
	comp=Z,93nm,19.3s,baz=49,slow=36						
NEW	**Newport**	**58.56 311**		LR	LR	11 02 01.3	
	comp=Z,41nm,21.2s,baz=64,slow=34						
LVC	**Limon Verde**	**58.88 209**		LR	LR	11 03 05.0	
	comp=Z,16nm,20.9s,baz=18,slow=35						
ELK	**Elko**	**59.00 302**		LR	LR	11 03 05.7	
	comp=Z,84nm,19.3s,baz=68,slow=35						
LPIG	**La Paz**	**60.41 282**		LR	LR	11 05 17.7	
	comp=Z,16nm,18.8s,baz=57,slow=36						
BRTR	**Keskin Array B**	**60.72 59**		P	**P**	**10 39 14.8**	**+0.8**
	0.4nm,0.5s,baz=224,slow=3.4,SNR=4.2						
	0.4nm,0.5s						
NVAR	**Mina Array Bea**	**61.93 300**		P	**P**	**10 39 22.0**	**-0.2**
	0.4nm,0.4s,baz=87,slow=5.5,SNR=2.4						
NVAR				LR	LR	11 05 30.6	
	comp=Z,109nm,19.0s,baz=92,slow=35						
	0.4nm,0.4s						
PFO	**Pinyon Flats O**	**62.06 294**		LR	LR	11 05 02.2	
	comp=Z,59nm,18.5s,baz=92,slow=35						
INK	**Inuvik**	**62.68 335**		LR	LR	11 05 02.3	
	comp=Z,81nm,20.9s,baz=348,slow=34						
DLBC	**Dease Lake**	**63.68 324**		LR	LR	11 07 12.8	
	comp=Z,127nm,19.0s,baz=94,slow=36						
YBH	**Yreka Blue Hor**	**64.11 305**		LR	LR	11 05 41.4	
	comp=Z,53nm,20.9s,baz=106,slow=34						
BBB	**Bella Bella**	**64.41 317**		LR	LR	11 08 19.5	
	comp=Z,64nm,18.1s,baz=70,slow=37						
ILAR	**Eielson Array**	**68.91 334**		P	**P**	**10 40 06.4**	**-0.3**
	2.3nm,1.1s,baz=61,slow=4.6,SNR=11						
ILAR				LR	LR	11 09 39.0	
	comp=Z,90nm,19.7s,baz=54,slow=35						
	2.3nm,1.1s						
ARU	**Arti**	**70.50 35**		P	**P**	**10 40 17.3**	**+0.7**
	5.8nm,0.2s,baz=297,slow=7.9,SNR=5.6						
AKTO	**Aktyubinsk**	**72.89 41**		P	**P**	**10 40 31.4**	**+0.4**
	1.1nm,0.5s,baz=310,slow=9.7,SNR=5.0						
AKTO				LR	LR	11 11 38.3	
	comp=Z,32nm,18.3s,baz=289,slow=35						
	1.1nm,0.5s						
KDAK	**Kodiak Island**	**74.80 329**		LR	LR	11 14 39.4	
	comp=Z,131nm,18.9s,baz=88,slow=37						
MBAR	**Mbarara**	**75.28 100**		LR	LR	11 15 18.4	
	comp=Z,55nm,18.0s,baz=70,slow=37						
TSUM	**Tsumeb**	**75.49 123**		LR	LR	11 11 11.9	
	comp=Z,30nm,18.2s,baz=332,slow=34						
LSZ	**Lusaka**	**81.19 113**		LR	LR	11 16 20.7	
	comp=Z,20nm,19.8s,baz=270,slow=35						
KURBB	**Kurchatov Arra**	**83.58 34**		P	**P**	**10 41 30.8**	**+0.5**
	3.3nm,1.1s,baz=309,slow=5.8,SNR=14						
	3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**84.08 28**		P	**P**	**10 41 33.4**	**+0.7**
	0.5nm,0.3s,baz=300,slow=10.0,SNR=5.8						
	0.5nm,0.3s						
LBTB	**Lobatse**	**84.90 123**		LR	LR	11 16 42.6	
	comp=Z,26nm,18.1s,baz=318,slow=34						
SUR	**Sutherland**	**86.15 131**		LR	LR	11 10 58.4	
	comp=Z,33nm,21.9s,baz=327,slow=29						
BOSA	**Boshof**	**86.82 126**		LR	LR	11 15 06.7	
	comp=Z,20nm,19.1s,baz=10.0,slow=32						
MKAR	**Makanchi Array**	**88.01 35**		P	**P**	**10 41 52.9**	**+0.5**
	0.5nm,0.9s,baz=327,slow=2.4,SNR=4.3						
	0.5nm,0.9s						

IDC 24 10:33:00.5±5.2, 12.74N×145.50E, h52km±53km, mb3.1/3, mbtmp3.3/3, Error ellipse: s-maj=67.7km s-min=24.8km az=99.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.04 324**		P	Pn	10 33 19.8	+0.9
	90nm,0.3s,baz=166,slow=4.2,SNR=86						
GUMO				S	Sn	10 33 32.7	+0.3
	684nm,0.3s,baz=123,slow=22,SNR=23						
WRA	**Warramunga Arr**	**34.28 199**		P	P	10 39 41.0	-0.9
	0.3nm,0.5s,baz=29,slow=9.0,SNR=8.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**37.92 197**		P	P	10 40 13.5	+0.4
	0.4nm,0.9s,baz=18,slow=12,SNR=5.9						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**69.07 25**		P	P	10 44 00.9	+0.2
	0.4nm,1.0s,baz=273,slow=8.0,SNR=2.3						
	0.4nm,1.0s						

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*NDI **24** 10:51:54.7±2.5, 34.31N×72.11E, h10km, ML4.2*
*IDC **24** 10:51:55.8±0.7, 34.64N×73.17E, h0km, mb4.2/14, mbtmp4.1/20, ML3.7/6, MS3.1/6, Error ellipse: s-maj=17.9km s-min=14.1km az=64.0*
*BJI **24** 10:52:02.0±0.0, 34.50N×73.30E, h66km, mb4.1/12, mB4.1/4, Ms4.2/2, Ms7.3/2*
*NNC **24** 10:52:03.2±6.8, 35.05N×72.87E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=76.7km s-min=48.1km az=122.0*
ISC 24 10:51:59.2±0.5, 34.64N±0.05×73.15E±0.07, h21km, n36, σ2.945/44, mb4.3/15, MS3.4/4, 4C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.41 142**		*e*P	**Pn**	**10 52 40.1**	**+2.8**
JMU				*e*S	**Sb**	**10 53 12.3**	**+1.3**
THN	**Thein Dam**	**3.07 135**		*e*P	**Pn**	**10 52 49.4**	**+3.0**
THN				*e*PN	**Pb**	**10 52 50.0**	**-3.1**
THN				*e*S	**Sb**	**10 53 29.8**	**-0.3**
THN				*e*SN	Sn	10 53 33.0	+10
BHK	**Bhakra**	**4.22 139**		*e*P	**Pn**	**10 53 04.7**	**+2.4**
BHK				*e*S	**Sn**	**10 53 56.3**	**+5.2**
SMLA	**Simla**	**4.87 135**		*e*P	**Pn**	**10 53 13.0**	**+1.9**
SMLA				*e*S	**Sn**	**10 54 10.5**	**+3.7**
SMLA				IAML		10 54 31.6	
	comp=N,323nm,0.7s						
SMLA				IAML		10 54 32.1	
	comp=E,551nm,0.6s						
KSH	**Kashi**	**5.37 24**		P	**Pn**	**10 53 17.8**	**-0.3**
KSH				sP	Pb	10 53 30.3	-2.0
KSH				S	**Sn**	**10 54 13.3**	**-6.0**
KSH				LR	LR		
	comp=E,300nm,5.7s						
KSH				LR	LR		
	comp=E,340nm,6.8s						
KSH				LR	LR		
	comp=E,360nm,7.9s						
AAK	**Ala-Archa**	**8.05 7**		Pn	**Pn**	**10 53 57.6**	**+2.5**
	comp=E,1.1nm,0.3s,baz=192,slow=14,SNR=5.6						
AAK				Sn	**Sn**	**10 55 27.1**	**+1.6**
	comp=E,0.9nm,0.3s,baz=182,slow=11,SNR=4.1						
AAK				LR	LR	10 57 26.0	
	comp=E,97nm,19.8s,baz=192,slow=41						
	comp=E,2.2nm,0.3s						
TKM2	**Tokmak 2**	**8.49 12**		⇑P	**Pn**	**10 54 04.7**	**+3.7**
	comp=E,17nm,1.2s						
TKM2				⇑S	**Sn**	**10 55 34.7**	**-1.5**
	comp=E,12nm,0.6s						
KK31	**Karatay Array**	**8.70 347**		⇓P	**Pn**	**10 54 05.4**	**+1.6**
	comp=E,4.8nm,0.3s,baz=154,slow=11,SNR=102						
KK31				⇓S	**Sn**	**10 55 40.6**	**-0.5**
	comp=E,4.0nm,0.4s,baz=165,slow=21,SNR=6.6						
JHNI	**Jhansi**	**10.26 152**		*e*P	**Pn**	**10 54 23.8**	**-1.4**
JHNI				*e*S	**Sn**	**10 56 12.7**	**-7.0**
BHPL	**Bhopal**	**11.96 161**		*e*P	Pn	10 54 31.5	-17
BHPL				*e*S	**Sn**	**10 56 55.6**	**-5.6**
GEYT	**Alibeck**	**12.57 289**		Pn	**Pn**	**10 54 58.0**	**+1.3**
	comp=E,0.4nm,0.3s,baz=116,slow=13,SNR=3.8						
	comp=E,2.7nm,0.7s						
JBP	**Jabalpur**	**12.90 151**		*e*P	**Pn**	**10 55 00.6**	**-0.7**
JBP				*e*S	Sn	10 57 13.2	-11
MKAR	**Makanchi Array**	**13.97 27**		Pn	**Pn**	**10 55 15.4**	**-0.4**
	comp=E,0.1nm,0.3s,baz=206,slow=14,SNR=5.6						
MKAR				LR	LR	11 01 12.4	
	comp=E,88nm,21.7s,baz=253,slow=40						
	comp=E,0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**16.45 12**		Pn	**Pn**	**10 55 46.6**	**-2.0**
	comp=E,0.1nm,0.3s,baz=199,slow=11,SNR=4.2						
	comp=E,0.5nm,0.5s						
WSAR	**Wadi Sarin**	**17.02 232**		LR	LR	11 03 10.5	
	comp=E,32nm,18.4s,baz=85,slow=40						
AB31	**Akbulak array**	**17.56 330**		⇑P	**Pn**	**10 56 01.1**	**-1.4**
	comp=E,2.1nm,0.6s,baz=143,slow=13,SNR=28						
BVAR	**Borovoye Array**	**18.48 355**		P	**P**	**10 56 12.8**	**-0.8**
	comp=E,0.5nm,0.3s,baz=180,slow=9.9,SNR=9.0						
	comp=E,1.4nm,0.4s						
AKTO	**Aktyubinsk**	**19.27 330**		P	**P**	**10 56 23.2**	**+0.9**
	comp=E,1.0nm,0.3s,baz=139,slow=11,SNR=32						
	comp=E,12nm,0.7s						
AKTO	**Aktyubinsk**	**19.27 330**		⇑P	**P**	**10 56 22.8**	**+0.5**
	comp=E,13nm,0.8s						
ZALV	**Zalesovo Beam**	**20.98 20**		P	**P**	**10 56 39.9**	**-1.0**
	comp=E,10nm,0.4s,baz=212,slow=10,SNR=32						
	comp=E,10nm,0.4s						
GTA	**Gaotai**	**21.78 70**		*e*P	**P**	**10 56 50.3**	**+0.6**
GTA				pmax	pmax		
	comp=E,6.0nm,1.0s						
ARU	**Arti**	**23.97 340**		P	**P**	**10 57 12.3**	**+0.4**
	comp=E,6.5nm,0.2s,baz=99,slow=16,SNR=3.8						
	comp=E,6.5nm,0.2s						
SONM	**Songino Array**	**28.03 52**		P	**P**	**10 57 50.0**	**+1.2**
	comp=E,0.8nm,0.8s,baz=246,slow=8.9,SNR=3.5						
SONM				LR	LR	11 10 31.2	
	comp=E,118nm,18.2s,baz=186,slow=40						
	comp=E,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.03 118**		P	**P**	**10 57 49.5**	**+0.6**
	comp=E,3.1nm,0.6s,baz=304,slow=10,SNR=13						
CMAR				LR	LR	11 10 53.5	
	comp=E,19nm,20.2s,baz=205,slow=41						
	comp=E

σ1°36/13, mb3.5/4, MS3.0/6, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.02**	**30**	⇓P	**Pg**	**11 05 52.9**	**-1.1**
JKR				⇓*e*S	**Sg**	**11 05 54.5**	**-0.8**
JAD	**Aida**	**0.51**	**144**	*i* P	**Pg**	**11 06 01.0**	**-1.2**
JAD				S	**Sg**	**11 06 07.8**	**-1.1**
MJAR	**Matsushiro Arr**	**3.76**	**70**	Pn	**Pn**	**11 06 50.8**	**+0.5**
	0.2nm,0.3s,baz=252,slow=13,SNR=19						
MJAR				Pg	**Pg**	**11 07 02.2**	**-2.0**
	0.5nm,0.3s,baz=235,slow=16,SNR=22						
MJAR				Lg	Lg	11 07 51.1	
	0.6nm,0.3s,baz=230,slow=22,SNR=11						
MJAR				LR	LR	11 08 38.2	
	comp=Z,220nm,20.2s,baz=231,slow=44 8.2nm,0.8s						
KSRS	**Korea Array**	**5.18**	**296**	Pn	**Pn**	**11 07 08.4**	**-1.4**
	0.8nm,0.3s,baz=110,slow=15,SNR=5.8						
KSRS				Sn	**Sn**	**11 08 08.4**	**-1.2**
	1.0nm,0.3s,baz=114,slow=24,SNR=7.1						
KSRS				LR	LR	11 09 13.0	
	comp=Z,88nm,20.2s,baz=115,slow=39 1.5nm,0.3s						
USRK	**Ussuriysk Ar.**	**8.94**	**352**	LR	LR	11 11 02.2	
	comp=Z,171nm,19.7s,baz=186,slow=35						
KLR	**Kul'dur**	**13.95**	**354**	Pn	**Pn**	**11 09 11.2**	**+1.4**
	0.1nm,0.3s,baz=180,slow=15,SNR=3.3						
KLR				LR	LR	11 13 59.6	
	comp=Z,121nm,19.5s,baz=194,slow=35 2.5nm,0.9s						
SONM	**Songino Array**	**23.85**	**310**	P	**P**	**11 11 06.3**	**+0.7**
	1.5nm,0.7s,baz=115,slow=8.9,SNR=6.4 1.5nm,0.7s						
PETK	**Petropavlovsk-**	**24.47**	**36**	LR	LR	11 21 16.6	
	comp=Z,42nm,19.2s,baz=240,slow=38						
MA2	**Magadan**	**26.64**	**19**	LR	LR	11 22 26.1	
	comp=Z,36nm,18.4s,baz=97,slow=37						
DAV	**Davao City (W)**	**29.15**	**197**	LR	LR	11 23 17.9	
	comp=Z,27nm,21.2s,baz=335,slow=36						
CMAR	**Chiang Mai Arr**	**35.12**	**251**	LR	LR	11 27 19.7	
	comp=Z,19nm,19.2s,baz=270,slow=37						
TIXI	**Tiksi**	**36.45**	**357**	LR	LR	11 28 28.5	
	comp=Z,113nm,18.5s,baz=345,slow=37						
MKAR	**Makanchi Array**	**39.82**	**303**	P	**P**	**11 13 26.0**	**+0.5**
	0.3nm,0.6s,baz=88,slow=7.6,SNR=3.5 0.3nm,0.6s						
WRA	**Warramunga Arr**	**55.00**	**179**	P	**P**	**11 15 25.0**	**+1.2**
	0.6nm,0.7s,baz=355,slow=7.7,SNR=5.8 0.6nm,0.7s						
ASAR	**Alice Springs**	**58.70**	**180**	P	**P**	**11 15 51.5**	**+1.5**
	0.2nm,0.8s,baz=10,slow=13,SNR=4.6 0.2nm,0.8s						
KBZ	**Khabaz**	**67.20**	**308**	LR	LR	11 46 36.2	
	comp=Z,20nm,19.6s,baz=30,slow=36						

KRSC 24 11:07:57.5±1.9, 48°.45N×157°.13E, h19km±53km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.03**	**356**	S	Sn	11 09 22.1	+2.0
KDTR	**Khodutka, Kamc**	**3.42**	**10**	*e*P	Pn	11 08 52.2	+2.5
KDTR				*e*S	Sb	11 09 34.3	-4.3
RUS	**Russkaya**	**4.09**	**12**	*e*P	Pn	11 09 02.3	+3.4
RUS				S	Sn	11 09 49.8	+3.7
MTVR	**Mutnovka**	**4.10**	**9**	P	Pn	11 09 03.1	+3.9
MTVR				S	Sn	11 09 50.9	+4.3
GRL	**Gorelyy**	**4.16**	**8**	*e*P	Pn	11 09 04.4	+4.5
GRL				S	Sn	11 09 53.5	+5.5
KRMR	**Karymshinskiy**	**4.43**	**8**	S	Sn	11 10 00.8	+6.1
PET	**Petropavlovsk**	**4.68**	**11**	*e*P	Pn	11 09 09.1	+2.0
DALK	**Dalny**	**4.71**	**12**	*e*P	Pn	11 09 11.4	+4.0
DALK				*e*S	Sn	11 10 06.4	+5.1
AVH	**Avacha**	**4.93**	**11**	*e*P	Pn	11 09 16.8	+6.2
KOK	**Koryaka**	**4.95**	**11**	P	Pn	11 09 15.7	+4.9
SPN	**Mys Shipunski**	**5.01**	**20**	S	Sn	11 10 14.8	+6.1
KRX	**Arik**	**5.01**	**10**	*e*P	Pn	11 09 16.9	+5.2
GNL	**Ganaly**	**5.28**	**5**	P	Pn	11 09 19.6	+4.2

*ISU **24** 11:17:59, 41°.78N×70°.87E, h9km*
*KRNET **24** 11:18:02.6±0.1, 41°.00N×70°.29E, mb3.2*
ISC 24 11:18:06.3±1.4, 41°.20N±0°.06×70°.33E±0°.06, h10km, n7, σ2°22/13, 9C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMG	**Chimgan**	**0.42**	**326**	P	**Pg**	**11 18 12.4**	**-2.3**
CHMG				S	**Sb**	**11 18 22.8**	**+0.3**
TRKS	**Terek-Say**	**0.70**	**61**	⇑*i*P	**Pg**	**11 18 18.3**	**-1.5**
	baz=55						
TRKS				⇑*i*S	**Sg**	**11 18 29.8**	**+0.9**
	baz=55						
FRG	**Fergana**	**1.38**	**126**	P	**Pg**	**11 18 31.3**	**-1.4**
FRG				S	**Sg**	**11 18 53.1**	**+2.5**
KK31	**Karatay Array**	**1.91**	**4**	Pn	**Pb**	**11 18 40.9**	**-0.3**
	2.3nm,0.3s,baz=187,slow=14,SNR=28						
KK31				⇑Sn	**Sg**	**11 19 09.5**	**+1.9**
	7.3nm,0.6s,baz=187,slow=26,SNR=5.8						
KKAR	**Karatay Array**	**1.91**	**4**	⇑*i*P	**Pb**	**11 18 41.3**	**+0.1**
	baz=5.0						
KKAR				⇑*i*S	**Sg**	**11 19 09.5**	**+1.9**
	baz=5.0						
ARLS	**Aral**	**3.07**	**76**	⇑*i*P	Pb	11 18 55.7	-5.4
	baz=73						
ARLS				⇑*i*S	**Sb**	**11 19 34.5**	**-4.2**
	baz=73						
UCH	**Uchtor**	**3.30**	**70**	⇑*e*P	**Pn**	**11 18 59.2**	**+0.8**
	baz=67						
UCH				⇑*i*S	**Sn**	**11 19 40.6**	**+2.7**
	baz=67						

ROM 24 11:18:48.9±0.3, 38°.42N±0°.02×15°.33E±0°.03, h132km±2km, ML2.2/5, 8D, Error ellipse: s-maj=2.0km s-min=1.9km az=252.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILZ	**Milazzo**	**0.17**	**207**	P	Pn	11 19 06.5	-0.4
MILZ	**Milazzo**	**0.17**	**207**	P	Pn	11 19 06.5	-0.4
MILZ				S	Sn	11 19 19.9	-0.6
MSRU	**Castanea**	**0.21**	**137**	⇓P	Pn	11 19 06.7	-0.4
MSRU				AML	AML		
	comp=N,93μm,1.6s						
MSRU				AML	AML		
	comp=N,110μm,1.3s						
MSRU				AML	AML		
	comp=E,136μm,1.0s						
MSRU	**Castanea**	**0.21**	**137**	⇓P	Pn	11 19 06.6	-0.5
MSRU				S	Sn	11 19 20.3	-0.5
MSRU				AML	AML		
	comp=E,137μm,1.0s						
MSRU				AML	AML		
	comp=N,93μm,1.6s						
MSRU				AML	AML		
	comp=E,136μm,1.0s						
MSRU				AML	AML		
	comp=N,110μm,1.3s						
MSRU				AML	AML		
	comp=E,136μm,1.0s						
MSRU				AML	AML		
	comp=N,110μm,0.7s						
VPL	**Vulcano Piano**	**0.27**	**262**	P	Pn	11 19 07.2	-0.1
VPL	**Vulcano Piano**	**0.27**	**262**	P	Pn	11 19 07.2	0.0
VPL				S	Sn	11 19 21.1	0.0
MSCL	**Scilla**	**0.41**	**117**	P	Pn	11 19 07.6	-0.3
MSCL				S	Sn	11 19 22.1	-0.1
AIO	**Antillo**	**0.45**	**190**	P	Pn	11 19 08.5	+0.4
AIO				S	Sn	11 19 23.6	+1.0
AIO				AML	AML		
	comp=E,39μm,0.6s						
AIO				AML	AML		
	comp=N,51μm,1.1s						
AIO				AML	AML		
	comp=N,51μm,1.1s						
AIO	**Antillo**	**0.45**	**190**	P	Pn	11 19 08.4	+0.3
AIO				S	Sn	11 19 23.6	+1.1
AIO				AML	AML		
	comp=E,39μm,0.6s						
AIO				AML	AML		
	comp=N,51μm,1.1s						
AIO				AML	AML		
	comp=E,39μm,0.6s						
AIO				AML	AML		
	comp=N,51μm,1.1s						
AIO				AML	AML		
	comp=N,43μm,1.8s						
AIO				AML	AML		
	comp=E,39μm,0.6s						
GMB	**Gambarie**	**0.47**	**122**	P	Pn	11 19 08.2	-0.1
GMB				AML	AML		
	comp=N,303μm,1.1s						
GMB				AML	AML		
	comp=E,364μm,1.0s						
GMB	**Gambarie**	**0.47**	**122**	P	Pn	11 19 08.2	-0.1
GMB				AML	AML		
	comp=E,364μm,1.0s						
GMB				AML	AML		
	comp=N,303μm,1.1s						
GMB				AML	AML		
	comp=E,364μm,1.0s						
GMB				AML	AML		
	comp=N,303μm,1.1s						
GMB				AML	AML		
	comp=N,303μm,0.9s						
GMB				AML	AML		
	comp=E,364μm,1.0s						
MTTG	**Motta San Giov**	**0.51**	**145**	P	Pn	11 19 08.5	+0.2
MTTG				AML	AML		
	comp=E,78μm,0.9s						
MTTG				AML	AML		
	comp=N,92μm,0.4s						
MTTG	**Motta San Giov**	**0.51**	**145**	⇓P	Pn	11 19 08.6	+0.2
MTTG				S	Sn	11 19 22.9	0.0
MTTG				AML	AML		
	comp=E,78μm,0.9s						
MTTG				AML	AML		
	comp=N,92μm,0.4s						
MTTG				AML	AML		
	comp=E,78μm,0.9s						
MTTG				AML	AML		
	comp=N,92μm,0.4s						
MTTG				AML	AML		
	comp=E,78μm,0.9s						
MTTG				AML	AML		
	comp=N,92μm,0.4s						
SOI	**Samo**	**0.67**	**121**	⇓P	Pn	11 19 09.4	+0.1
SOI	**Samo**	**0.67**	**121**	⇓P	Pn	11 19 09.4	+0.1
SOI	**Samo**	**0.67**	**121**	⇓P	Pn	11 19 09.4	+0.1
SOI				S	Sn	11 19 24.8	0.0
MNO	**Monte Soro**	**0.69**	**226**	P	Pn	11 19 10.8	+1.1
MSFR	**San Fratello**	**0.70**	**237**	P	Pn	11 19 09.6	0.0
EPZF	**Pizzo Felice**	**0.70**	**212**	P	Pn	11 19 10.5	+0.8
PLAC	**Placanica**	**0.87**	**88**	⇓P	Pn	11 19 11.3	+0.4
PLAC				AML	AML		
	comp=E,81μm,0.3s						
PLAC				AML	AML		
	comp=N,77μm,0.5s						
PLAC				AML	AML		
	comp=E,81μm,0.3s						
PLAC	**Placanica**	**0.87**	**88**	⇓P	Pn	11 19 11.3	+0.4
PLAC				S	Sn	11 19 27.9	+0.3
PLAC				AML	AML		
	comp=E,81μm,0.3s						
PLAC				AML	AML		
	comp=N,77μm,0.5s						
PLAC				AML	AML		
	comp=E,81μm,0.3s						
PLAC				AML	AML		
	comp=N,77μm,0.5s						
PLAC				AML	AML		
	comp=N,77μm,1.5s						
PLAC				AML	AML		
	comp=E,81μm,1.7s						
CAR1	**CAROLEI**	**1.08**	**39**	P	Pn	11 19 13.1	+0.2
CET2	**Cetraro**	**1.21**	**24**	P	Pn	11 19 14.6	+0.5
CET2				S	Sn	11 19 33.8	+0.4
TDS	**Terranova Siba**	**1.47**	**32**	P	Pn	11 19 17.2	+0.4

HEL 24 11:19:04.6±0.1, 65°.84N×24°.01E, h0km, ML1.1, ML1.3(UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALU	**Kalix**	**0.27**	**274**	*e*P	Pg	11 19 08.7	-1.0
KALU				*e*S	Sg	11 19 12.6	-0.6
TOF	**Tornio**	**0.27**	**29**	*e*P	Pg	11 19 09.2	-0.6
TOF				*e*S	Sg	11 19 13.0	-0.3
ERTU	**Ertsjaerv**	**1.03**	**315**	*e*P	Pg	11 19 23.0	-1.2
ERTU				*e*SB	Sg	11 19 36.7	-0.8
SJUU	**Sjulsmark**	**1.05**	**252**	*e*P	Pg	11 19 23.8	-0.9
OUL	**Oulu**	**1.10**	**133**	*e*P	Pg	11 19 23.7	-1.9
OUL				*e*S	Sg	11 19 37.8	-1.9
RNF	**Rovaniemi**	**1.12**	**46**	*e*PB	Pg	11 19 25.1	-0.9
RNF				*e*SN	Sn	11 19 44.4	+0.8
OBF4	**Vikkela, Lumij**	**1.13**	**155**	*e*P	Pg	11 19 24.7	-1.6
OBF4				*e*SB	Sg	11 19 40.4	-0.5
PAJU	**Pajala**	**1.24**	**344**	*e*P	Pg	11 19 26.9	-1.5
PAJU				*e*SB	Sg	11 19 44.5	+0.1
HARU	**Harads**	**1.28**	**286**	*e*P	Pg	11 19 27.8	-1.3
KLF	**Kolari**	**1.40**	**359**	*e*PG	Pn	11 19 30.0	-1.3
KLF				*e*SB	Sg	11 19 47.8	-1.7
OUF	**Merijarvi**	**1.51**	**168**	*e*P	Pn	11 19 31.5	-1.4
OUF				MSG		11 19 49.7	
	comp=Z,1.2nm,0.2s						
OUF				*e*SB	Sg	11 19 51.4	-1.7
OBF8	**Ulkokalla**	**1.54**	**189**	*e*PN	Pn	11 19 32.8	-0.4
BURU	**Burvik**	**1.68**	**222**	*e*PG	Pn	11 19 34.6	-0.6
BURU				*e*SN	Sb	11 19 57.9	-0.1
LILU	**Lilltraesk**	**1.82**	**254**	*e*P	Pn	11 19 36.8	-0.2
MSF	**Maaselka**	**2.07**	**86**	*e*SG	Sb	11 20 08.6	-0.7
OLKF	**Oulanka, Finla**	**2.25**	**75**	*e*SB	Sn	11 20 12.5	+1.0
LANU	**Lannavaara**	**2.35**	**341**	*e*SG	Sb	11 20 17.7	+0.3
KU6	**Riekki**	**2.42**	**83**	*e*S	Sn	11 20 15.6	0.0
KU6				MSG		11 20 16.1	
	comp=Z,1.0nm,0.2s						
HEF	**Hetta**	**2.58**	**357**	MSG		11 20 20.5	
	comp=Z,0.4nm,0.2s						
HEF				*e*SG	Sb	11 20 23.2	-0.7
KAF	**Kangasniemi**	**3.88**	**164**	*e*P	Pn	11 20 03.9	-1.5
HEMU	**Hemsoen**	**4.11**	**222**	*e*S	Sn	11 20 56.1	-1.1

*EST **24** 11:20:09.0±0.1, 59°.24N×27°.73E, h0km, ML1.6(HEL), Explosion*
LVSN 24 11:20:10.3±0.6, 59°.24N×28°.11E, h0km±348km, ML1.8, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.18**	**319**	*e*P	Pg	11 20 11.7	-2.1
EE04				*e*S	Sg	11 20 14.0	-2.2
EE03	**Tooma soojaam,**	**1.02**	**250**	*e*P	Pg	11 20 23.9	-5.9
EE03				*e*S	Sg	11 20 34.6	-8.3
VJF	**Virojoki**	**1.34**	**348**	*e*P	Pg	11 20 32.3	-3.7
VJF				MSG		11 20 48.4	
	comp=Z,4.7nm,0.2s						
VJF				*e*SB	Sg	11 20 49.9	-3.4
EE07	**Piusa Caves, O**	**1.44**	**194**	*e*SB	Sg	11 20 52.8	-3.6
PVF	**Pernaja**	**1.74**	**320**	*e*PG	Pn	11 20 38.0	-3.6
PVF				MSG		11 20 57.7	
	comp=Z,5.1nm,0.2s						
PVF				*e*SG	Sn	11 20 58.7	-5.7
EE02	**Kiisa, Saku**	**1.76**	**270**	*e*PG	Pn	11 20 37.1	-4.8
EE02				*e*S	Sn	11 20 56.8	-8.2
MEF	**Metsahovi**	**2.12**	**299**	*e*P	Pn	11 20 44.2	-2.7
MEF				AML	AML	11 20 44.5	
	comp=E,15nm,0.1s						
MEF				AML	AML	11 20 44.6	
	comp=Z,9.6nm,0.1s						
MEF				*e*S	Sn	11 21 08.8	-5.3
MEF				AML	AML	11 21 10.2	
	comp=N,19nm,0.1s						
MEF	**Metsahovi**	**2.12**	**299**	*e*PG	Pn	11 20 44.1	-2.9
MEF				*e*SG	Sn	11 21 08.8	-5.2
NUR	**Nurmijrvi**	**2.16**	**308**	*e*PG	Pn	11 20 45.0	-2.6
NUR				*e*SG	Sn	11 21 10.7	-4.3
NUR				MSG		11 21 11.5	
	comp=Z,3.2nm,0.1s						
RUF	**Ruokolahti**	**2.24**	**10**	*e*PB	Pn	11 20 48.5	0.0
RUF				*e*SG	Sb	11 21 18.6	-1.1
MTSE	**Matsula**	**2.29**	**259**	*e*P	Pn	11 20 46.2	-3.0
MTSE				*e*S	Sn	11 21 12.9	-5.1
MTSE	**Matsula**	**2.29**	**259**	*e*PB	Pn	11 20 46.0	-3.2
MTSE				*e*SG	Sn	11 21 13.0	-5.0
EE01	**Perakula, Nova**	**2.31**	**271**	*e*P	Pn	11 20 43.8	-5.7
EE01				*e*PB	Pb	11 20 46.3	-6.4
EE01				*e*SG	Sn	11 21 13.5	-5.0
FIA0	**FINESS Array S**	**2.44**	**336**	*e*P	Pn	11 20 48.6	-2.6
FIA0				*e*PB	Pb	11 20 50.1	-4.8
FIA0				*e*S	Sn	11 21 18.0	-3.7
FIA0				*e*SG	Sb	11 21 21.9	-3.6
FIA0				MSG		11 21 23.9	
	comp=Z,2.2nm,0.1s						
FIA1	**FINESS Array S**	**2.44**	**336**	*e*P	Pn	11 20 48.7	-2.6
FIA1				*e*PB	Pb	11 20 50.1	-4.8
FIA1				*e*S	Sn	11 21 17.6	-4.1
FIA1				*e*SG	Sb	11 21 21.5	-3.9
FIA1				MSG		11 21 23.5	
	comp=Z,2.0nm,0.1s						
EE06	**Soera, Palade,**	**2.73**	**267**	*e*PB	Pn	11 20 52.8	-2.5
EE06				*e*SB	Sn	11 21 25.0	-3.9
KAF	**Kangasniemi**	**3.02**	**344**	*e*PB	Pn	11 21 00.2	+0.8
KAF				MSG		11 21 36.3	
	comp=Z,1.5nm,0.2s						
KAF				*e*SG	Sb	11 21 39.6	-2.7
KAF	**Kangasniemi**	**3.02**	**344**	*e*SB	Pn	11 21 00.2	+0.8
RAF	**Rauma**	**3.65**	**302**	*e*P	Pn	11 21 05.3	-2.6
RAF				AML	AML	11 21 56.0	
	comp=Z,4.2nm,0.7s						
RAF	**Rauma**	**3.65**	**302**	*e*P	Pn	11 21 05.2	-2.6
KPF	**Kankaanpaa**	**3.96**	**314**	*e*P	Pn	11 21 10.0	-2.2

*NEIC **24** 11:25:50.7±1.7, 18°.72N±0°.10×145°.4E±0°.2, h159km±9km, mb4.2/23, Error ellipse: s-maj=32.8km s-min=13.6km az=95.0*
*IDC **24** 11:25:53.5±2.8, 18°.59N×145°.65E, h196km±26km, mb3.0/4, mbtmp3.6/5, Error ellipse: s-maj=53.6km s-min=21.2km az=100.0*
ISC 24 11:25:54.2±0.8, 18°.60N±0°.08×145°.4E±0°.2, h200km, n32, σ1°05/33, mb4.0/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.01**	**186**	P	**Pn**	**11 27 09.8**	**+1.0**
	13nm,0.3s,baz=66,slow=3.7,SNR=6.3						
GUMO				S	**Sn**	**11 28 06.1**	**-1.4**
	14nm,0.3s,baz=353,slow=20,SNR=1.5						
GUMO	**Guam**	**5.01**	**186**	Pn	**Pn**	**11 27 06.5**	**-2.3**
JGF	**Kuroka**	**18.37**	**339**	P	**P**	**11 29 51.7**	**-2.4**
JGF				IAmb	IAmb	11 30 11.5	
	comp=Z,27nm,1.5s						
KNRA	**Kununurra**	**37.80**	**207**	P	**P**	**11 32 51.9**	**+0.5**
WB0	**Warramunga Arr**	**39.63**	**196**	P	**P**	**11 33 07.2**	**+0.5**
WB0				IAmb	IAmb	11 33 41.0	
	comp=Z,8.9nm,1.3s						
WR0	**Warramunga Arr**	**39.77**	**196**	P	**P**	**11 33 07.9**	**+0.1**
WR0				IAmb	IAmb	11 33 19.0	
	comp=Z,10nm,1.5s						
WRAB	**Tennant Creek**	**39.80**	**196**	P	**P**	**11 33 07.9**	**-0.1**
WB2	**Warramunga Arr**	**39.81**	**196**	P	**P**	**11 33 09.1**	**+0.9**
WB2				IAmb	IAmb	11 33 44.9	
	comp=Z,6.5nm,1.2s						
WRA	**Warramunga Arr**	**39.81**	**196**	P	**P**	**11 33 08.2**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=14,slow=8.1,SNR=26 comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**39.81**	**196**	P	**P**	**11 33 08.0**	**-0.1**
ASAR	**Alice Springs**	**43.48**	**195**	P	**P**	**11 33 37.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=22,slow=8.2,SNR=4.9 comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**43.48**	**195**	P	**P**	**11 33 39.4**	**+1.5**
UNV	**Unalaska Valle**	**50.90**	**35**	P	**P**	**11 34 34.9**	**+0.2**
BBOO	**Buckleboo**	**51.89**	**190**	P	**P**	**11 34 43.9**	**+1.6**
MKAR	**Makanchi Array**	**58.33**	**314**	P	**P**	**11 35 29.4**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=82,slow=7.7,SNR=2.8 comp=Z,0.3nm,0.6s						
CAST	**Castle Rocks**	**61.31**	**27**	P	**P**	**11 35 48.5**	**+0.2**
TRF	**Thorofare Moun**	**62.10**	**27**	P	**P**	**11 35 52.5**	**-1.2**
TRF				IAmb	IAmb	11 36 16.2	
	comp=Z,11nm,1.5s						
GHO	**Glory Hole Cre**	**62.31**	**29**	P	**P**	**11 35 54.4**	**-0.7**
MDM	**Murphy Dome**	**63.34**	**26**	P	**P**	**11 36 02.8**	**+1.0**
MDM				IAmb	IAmb	11 36 35.7	
	comp=Z,4.2nm,1.4s						
M24K	**Tolsona, Glenn**	**63.65**	**29**	P	**P**	**11 36 03.4**	**-0.4**
H24K	**Noodor Dome**	**63.69**	**25**	P	**P**	**11 36 04.7**	**+0.6**
H24K				IAmb	IAmb	11 36 15.5	
	comp=Z,4.0nm,1.2s						
TOLK	**Toolik Lake Re**	**63.79**	**22**	P	**P**	**11 36 05.3**	**+0.7**
TOLK				IAmb	IAmb	11 36 27.3	
	comp=Z,8.7nm,1.4s						
ILAR	**Eielson Array**	**63.86**	**26**	P	**P**	**11 36 03.8**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=248,slow=5.4,SNR=4.3 comp=Z,0.2nm,0.5s						
J26L	**Joseph Creek**	**65.22**	**27**	P	**P**	**11 36 13.8**	**-0.2**
J26L				IAmb	IAmb	11 36 14.5	
	comp=Z,3.9nm,1.4s						
BMAR	**Burnt Mountain**	**65.32**	**24**	P	**P**	**11 36 15.4**	**+0.8**
L27K	**Beaver Creek,**	**65.78**	**28**	P	**P**	**11 36 17.2**	**-0.4**
L27K				IAmb	IAmb	11 36 25.2	
	comp=Z,3.3nm,1.2s						
K27K	**Chicken**	**65.79**	**27**	P	**P**	**11 36 16.4**	**-1.2**
K27K				IAmb	IAmb	11 36 26.1	
	comp=Z,3.7nm,1.4s						
BCAR	**Beaver Creek A**	**65.80**	**28**	P	**P**	**11 36 16.1**	**-1.6**
EGAK	**Eagle**	**66.28**	**27**	P	**P**	**11 36 20.9**	**+0.2**
EGAK				IAmb	IAmb	11 36 43.9	
	comp=Z,7.4nm,1.5s						
DAWY	**Dawson**	**66.97**	**28**	P	**P**	**11 36 25.2**	**+0.1**
M30M	**Minto, Yukon**	**68.05**	**29**	P	**P**	**11 36 32.8**	**+0.8**
M30M				IAmb	IAmb	11 36 39.9	
	comp=Z,4.6nm,1.3s						
ABKAR	**Akbulak array**	**73.22**	**317**	P	**P**	**11 37 03.1**	**-0.2**

*IDC **24** 11:38:32.0±1.9, 35°.38N×133°.80E, h0km, mb3.4/1, mbtmp3.2/3, ML2.4/2, MS2.7/3, Error ellipse: s-maj=36.6km s-min=18.8km az=167.0*
*JMA **24** 11:38:33.1±0.0, 35°.4N±0°.1×133°.89E±0°.09, h8km, MV3.5/20, EASTERN TOTTORI PREF*
JMA Felt III J1 at EASTERN TOTTORI PREF .
*NIED **24** 11:38:33.1, 35°.38N×133°.89E, h8km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.37; $M_{\theta\theta}$2.43; $M_{\phi\phi}$-1.06; $M_{r\theta}$-0.66; $M_{\theta\phi}$-1.50; $M_{\phi r}$0.89; Fault plane solution: $M_0$2.68000×10^{14} NP1: ϕ_s251.00000°, δ51.00000°, λ-154.00000°. NP2: ϕ_s145.00000°, δ70.00000°, λ-42.00000°.*
ISC 24 11:38:33.5±0.9, 35°.35N±0°.05×133°.79E±0°.05, h7km±6km, n14, σ1°18/17, 4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.04**	**34**	⇓P	**Pg**	**11 38 34.8**	**-0.2**
JKR				⇓S	**Sg**	**11 38 36.2**	**+0.2**
JAD	**Aida**	**0.51**	**143**	⇓P	**Pg**	**11 38 42.8**	**-0.6**
JAD				⇓S	**Sg**	**11 38 49.4**	**-0.6**
JHS	**Saijyo**	**0.66**	**238**	P	**Pb**	**11 38 47.1**	**-0.2**
JMN	**Monobe**	**1.62**	**177**	P	**Pb**	**11 39 03.6**	**-0.1**
INU	**Inuyama**	**2.63**	**89**	P	**Pn**	**11 39 15.9**	**-0.6**
JGF	**Kuroka**	**2.92**	**84**	P	**Pn**	**11 39 19.4**	**-1.0**
JTU	**Tsushima**	**3.70**	**258**	P	**Pn**	**11 39 33.7**	**+2.6**
MAJO	**Matsushiro**	**3.77**	**70**	P	**Pn**	**11 39 32.3**	**+0.1**
MJAR	**Matsushiro Arr**	**3.78**	**70**	Pn	**Pn**	**11 39 32.1**	**-0.1**
	0.1nm,0.3s,baz=255,slow=14,SNR=4.2						
MJ

mbtmp3.4/4, ML3.9/1, Error ellipse: s-maj=77.7km s-min=25.9km az=59.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.23**	**123**	Pn	Pn	11 40 36.0	-1.1
	2.6nm,0.3s,baz=258,slow=21,SNR=8.2						
WRA	**Warramunga Arr**	**23.79**	**160**	P	P	11 44 18.5	+0.2
	0.4nm,0.6s,baz=335,slow=10,SNR=20						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**27.16**	**164**	P	P	11 44 50.3	+1.3
	0.1nm,0.6s,baz=357,slow=15,SNR=4.2						
	0.1nm,0.6s						
STKA	**Stephens Creek**	**37.29**	**158**	P	P	11 46 16.7	-0.9
	1.3nm,0.8s,baz=319,slow=11,SNR=3.3						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**58.13**	**326**	P	P	11 48 59.0	-0.3
	0.2nm,0.5s,baz=128,slow=5.7,SNR=2.0						
	0.2nm,0.5s						

*IDC **24** 12:06:11.7±0.7, 6°.75N×72°.91W, h164km±7km, mb3.4/7, mbtmp4.0/10, Error ellipse: s-maj=16.3km s-min=7.6km az=129.0*
*RSNC **24** 12:06:13.0±0.9, 6°.79N×73°.15W, h152km±3km, ML4.0, Mw4.2, Fault plane solution: NP1:φs18.00000°, δ45.00000°, λ16.00000°.*

ISC 24 12:06:11.3±0.7, 6°.82N±0°.03×73°.09W±0°.04, h160km±5km, n46, σ1956/79, mb3.7/7, 8C-8D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**202**	⇑iP	**Pn**	**12 06 33.2**	**0.0**
	comp=Z,6μm,0.4s						
BARC				eS	**Sn**	**12 06 48.8**	**-1.2**
BARC				i		12 06 51.2	
	comp=Z,6μm,0.4s						
PAMC	**Pamplona, Colo**	**0.64**	**37**	⇑iP	**Pn**	**12 06 36.0**	**+0.9**
	comp=Z,949nm,0.7s						
PAMC				eS	**Sn**	**12 06 54.0**	**+0.6**
PAMC				i		12 06 55.2	
	comp=Z,949nm,0.7s						
BRRC	**Barranca, Sant**	**0.68**	**295**	⇑iP	**Pn**	**12 06 35.1**	**+0.3**
	comp=Z,1μm,0.3s						
BRRC				eS	**Sn**	**12 06 52.4**	**-0.3**
BRRC				i		12 06 55.6	
	comp=Z,1μm,0.3s						
RUSC	**La Rusia**	**0.93**	**180**	⇓iP	**Pn**	**12 06 37.1**	**+0.1**
	comp=Z,3μm,0.3s						
RUSC				eS	**Sn**	**12 06 55.8**	**-1.0**
RUSC				i		12 06 57.2	
	comp=Z,3μm,0.3s						
TAMC	**Tame, Arauca**	**1.35**	**107**	iP	**Pn**	**12 06 41.5**	**+1.4**
	comp=Z,677nm,0.4s						
TAMC				i		12 07 02.4	
	comp=Z,677nm,0.4s						
TAMC				eS	**Sn**	**12 07 03.4**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	⇓eP	**Pn**	**12 06 39.5**	**-0.9**
PTBC				eS	**Sn**	**12 07 01.1**	**-1.8**
PTBC				i		12 07 08.3	
	comp=Z,943nm,0.5s						
OCAC	**Ocana**	**1.43**	**351**	⇑eP	**Pn**	**12 06 41.2**	**+0.2**
OCAC				eS	**Sn**	**12 07 04.4**	**+0.4**
OCAC				i		12 07 13.2	
	comp=Z,2μm,0.4s						
SPBC	**San Pablo de B**	**1.52**	**220**	eP	**Pn**	**12 06 41.9**	**0.0**
SPBC				eS	**Sn**	**12 07 04.4**	**-1.1**
SPBC				i		12 07 06.8	
	comp=Z,2μm,0.4s						
NORC	**Norcasia**	**2.17**	**235**	eP	**Pn**	**12 06 48.8**	**-0.2**
NORC				eS	**Sn**	**12 07 17.1**	**-1.1**
NORC				i		12 07 23.0	
	comp=N,2μm,0.4s						
CHIC	**Chingaza**	**2.27**	**196**	⇓iP	**Pn**	**12 06 50.9**	**+0.3**
CHIC				eS	**Sn**	**12 07 20.4**	**-0.5**
CHIC				i		12 07 26.3	
	comp=Z,855nm,0.4s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**12 06 53.0**	**+1.8**
	comp=Z,796nm,0.3s,baz=306,slow=13,SNR=371						
ROSC				S	**Sn**	**12 07 23.5**	**+1.5**
	comp=Z,2μm,0.4s,baz=64,slow=23,SNR=7.7						
ROSC	**El Rosal**	**2.32**	**212**	⇓eP	**Pn**	**12 06 52.7**	**+1.5**
	comp=Z,2μm,0.5s						
ROSC				eS	**Sn**	**12 07 23.5**	**+1.5**
ROSC				i		12 07 27.6	
	comp=Z,2μm,0.5s						
HELC	**Santa Helena**	**2.50**	**256**	eP	**Pn**	**12 06 53.6**	**+0.4**
HELC				eS	**Sn**	**12 07 24.5**	**-1.2**
HELC				i		12 07 32.2	
	comp=Z,394nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.74**	**350**	eP	**Pn**	**12 06 58.0**	**+2.1**
LL1C				eS	**Sn**	**12 07 32.8**	**+2.4**
VILC	**Villavicencio,**	**2.76**	**193**	eP	**Pn**	**12 06 56.4**	**+0.2**
VILC				eS	**Sn**	**12 07 30.8**	**-0.3**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	eP	**Pn**	**12 06 57.2**	**+0.7**
GUY2C				eS	**Sn**	**12 07 30.5**	**-1.1**
GUY2C				i		12 07 45.5	
	comp=Z,740nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.77**	**160**	⇓eP	**Pn**	**12 06 56.2**	**-0.1**
PTGC				eS	**Sn**	**12 07 29.7**	**-1.5**
PTGC				i		12 07 31.6	
	comp=Z,337nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.06**	**252**	⇑eP	**Pn**	**12 07 00.4**	**+0.5**
CBOC				eS	**Sn**	**12 07 36.8**	**-0.9**
CBOC				i		12 07 53.0	
	comp=Z,218nm,0.5s						
DBBC	**Dabeiba**	**3.10**	**274**	eP	**Pn**	**12 07 01.2**	**+0.8**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**12 07 02.6**	**+1.1**
	comp=Z,257nm,0.3s,baz=230,slow=9.9,SNR=184						
SDV				S	**Sn**	**12 07 39.6**	**-1.0**
	comp=Z,195nm,0.4s,baz=36,slow=12,SNR=16						
ARGC	**Ariguani, Magd**	**3.23**	**339**	eP	**Pn**	**12 07 03.3**	**+1.4**
ARGC				eS	**Sn**	**12 07 42.2**	**+0.9**
ARGC				i		12 07 51.3	
	comp=Z,247nm,0.4s						
ANIL	**Santa Ana**	**3.27**	**225**	eP	**Pn**	**12 07 03.7**	**+1.0**
ANIL				eS	**Sn**	**12 07 42.9**	**+0.3**
PRAC	**Prado**	**3.57**	**210**	⇓eP	**Pn**	**12 07 06.2**	**-0.2**
PRAC				eS	**Sn**	**12 07 49.1**	**-0.1**
PRAC				i		12 07 55.3	
	comp=Z,925nm,0.5s						
ORTC	**Ortega, Tolima**	**3.60**	**217**	⇑eP	**Pn**	**12 07 07.3**	**+0.6**
ORTC				eS	**Sn**	**12 07 50.6**	**+0.6**
ORTC				i		12 07 56.6	
	comp=Z,645nm,0.6s						
SJCC	**San Jacinto, C**	**3.69**	**326**	⇓eP	**Pn**	**12 07 06.8**	**-1.1**
SJCC				eS	**Sn**	**12 07 48.4**	**-3.5**
SJCC				i		12 08 07.6	
	comp=Z,225nm,0.5s						
PLMC	**San Jos del P**	**3.70**	**239**	⇑eP	**Pn**	**12 07 08.6**	**+0.6**
PLMC				eS	**Sn**	**12 07 51.7**	**-0.5**
PLMC				i		12 08 03.8	
	comp=Z,195nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	eP	**Pn**	**12 07 13.4**	**-0.7**
CRJC				eS	**Sn**	**12 07 59.5**	**-3.8**
CRJC				i		12 08 03.1	
	comp=Z,256nm,0.3s						
GUVC	**San Jose del G**	**4.28**	**174**	eP	**Pn**	**12 07 15.6**	**+0.1**
GUVC				eS	**Sn**	**12 08 04.5**	**-0.9**
GUVC				i		12 08 10.1	
	comp=Z,223nm,0.3s						
YOTC	**Yotoco, Valle**	**4.30**	**229**	eP	**Pn**	**12 07 15.6**	**-0.2**
PTAC	**Punta Ardita,**	**4.70**	**274**	eP	**Pn**	**12 07 20.1**	**-0.8**
BETC	**Betania**	**4.74**	**210**	eP	**Pn**	**12 07 21.2**	**-0.2**
BETC				eS	**Sn**	**12 08 08.7**	**-7.7**
BETC				i		12 08 24.1	
	comp=Z,132nm,0.5s						
URIC	**Uribia, Colomb**	**4.97**	**13**	eP	**Pn**	**12 07 23.7**	**-0.7**
URIC				eS	**Sn**	**12 08 18.3**	**-3.4**
URIC				i		12 08 30.0	
	comp=Z,45nm,0.4s						
MALC	**Bahia Malaga**	**5.07**	**237**	eP	**Pn**	**12 07 27.5**	**+1.8**
MALC				eS	**Sn**	**12 08 24.0**	**0.0**
GARC	**Garzon, Huila**	**5.19**	**208**	eP	**Pn**	**12 07 27.2**	**-0.5**
GARC				eS	**Sn**	**12 08 23.9**	**-3.5**
GARC				i		12 08 29.7	
	comp=Z,169nm,0.4s						
FLOC	**Florencia**	**5.80**	**206**	⇓eP	**Pn**	**12 07 35.2**	**-0.3**
GCUF	**Volcan Galeras**	**6.99**	**218**	eP	**Pn**	**12 07 53.5**	**+1.7**
PCRV	**Puerto La Cruz**	**9.00**	**68**	P	**Pn**	**12 08 17.2**	**-0.8**
	comp=Z,17nm,0.8s,baz=221,slow=6.0,SNR=6.3						
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**12 11 06.6**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=6.9,slow=9.1,SNR=5.6						
LPAZ				pP	**pP**	**12 11 39.3**	**+1.2**
	comp=Z,2.9nm,0.7s,baz=340,slow=12,SNR=10						
	comp=Z,1.0nm,0.4s						
SIV	**San Ignacio**	**25.60**	**152**	P	**P**	**12 11 24.8**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=312,slow=10,SNR=3.9						
SIV				pP	**pP**	**12 11 58.7**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=321,slow=14,SNR=2.7						
	comp=Z,0.5nm,0.4s						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**12 13 02.7**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=131,slow=9.7,SNR=7.2						
	comp=Z,0.3nm,0.5s						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**12 14 29.1**	**+0.6**
	comp=Z,2.8nm,0.4s,baz=150,slow=7.2,SNR=4.8						
	comp=Z,2.8nm,0.4s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**12 14 36.4**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=116,slow=8.1,SNR=5.4						
	comp=Z,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**12 16 23.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=133,slow=6.5,SNR=11						
	comp=Z,1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.71**	**78**	P	**P**	**12 17 26.0**	**-2.2**
	comp=Z,0.9nm,1.1s,baz=251,slow=4.4,SNR=2.8						
	comp=Z,0.9nm,1.1s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**12 25 41.4**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=116,slow=3.9,SNR=32						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**12 25 44.7**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=108,slow=2.7,SNR=48						

WEL 24 12:19:19.9±0.9, 32°.5±16°.×18°.0E±4°.1, h371km±19km, M4.0/10, mB4.5/6, ML4.4/11, MLv4.3/10, Mw(mB)3.6/6, Error ellipse: s-maj=0.1km s-min=0.0km az=110.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.62**	**35**	S	S	12 21 20.3	-0.2
WMGZ	**Waiomatatini S**	**5.63**	**191**	P	Pn	12 20 47.9	+0.7
WMGZ				S	S	12 21 59.1	+0.8
HAZ	**Te Kaha**	**5.69**	**196**	P	Pn	12 20 46.5	-1.4
HAZ				S	S	12 22 01.9	+2.4
PKGZ	**Pakihiroa**	**5.76**	**193**	P	Pn	12 20 50.9	+2.1
PUZ	**Puketiti**	**5.91**	**191**	P	Pn	12 20 50.4	+0.1
PUZ				S	S	12 22 04.6	+0.7
RUGZ	**Raukumara Rang**	**5.92**	**196**	P	Pn	12 20 50.1	-0.5
RUGZ				S	S	12 22 04.2	-0.1
TWGZ	**Tauwhareparae**	**6.06**	**193**	P	Pn	12 20 54.0	+2.0
TWGZ				S	S	12 22 09.5	+2.5
MWZ	**Matawai**	**6.30**	**196**	P	Pn	12 20 54.1	-0.7
MWZ				S	S	12 22 14.7	+2.7
TKGZ	**Te Karaka**	**6.34**	**193**	P	Pn	12 20 54.6	-0.5
TKGZ				S	S	12 22 12.1	-0.6
URZ	**Urewera**	**6.34**	**199**	P	Pn	12 20 54.1	-1.1
URZ				S	S	12 22 11.4	-1.3
RRRZ	**Republican Roa**	**6.59**	**203**	P	P	12 21 02.0	+2.9
RIGZ	**Rimuhau**	**6.61**	**193**	P	Pn	12 20 57.8	-0.5
RIGZ				S	S	12 22 18.9	+0.4
MUGZ	**Murupara**	**6.64**	**200**	P	Pn	12 20 57.6	-1.0
MUGZ				S	S	12 22 18.6	-0.4
SNGZ	**Shannon Statio**	**6.78**	**196**	P	Pn	12 21 00.4	+0.3
KNZ	**Kokohu**	**6.93**	**193**	P	Pn	12 21 01.7	-0.2
KNZ				S	S	12 22 24.9	-0.2
RAHZ	**Arahi**	**6.96**	**197**	P	Pn	12 21 01.7	-0.6
RAHZ				S	S	12 22 26.6	+0.8
WHHZ	**Waihua**	**7.08**	**196**	P	Pn	12 21 03.8	+0.2
WHHZ				S	S	12 22 24.6	-3.7

AUST 24 13:02:38.5±0.0, 19°.72S×112°.61E, h20km, Error ellipse: s-maj=0.8km s-min=0.1km az=303.0, Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIRL	**Giralia**	**3.28**	**153**	P	Pn	13 03 27.1	-1.7
	baz=3.1						
GIRL				S	Sn	13 04 04.7	-2.5
	baz=3.1						
MEEK	**Meekatharra**	**8.82**	**142**	P	Pn	13 04 42.9	-2.1
	baz=8.6						
MEEK				S	Sn	13 06 17.0	-6.9
	baz=8.6						
BLDU	**Ballidu**	**11.46**	**162**	P	Pn	13 05 17.8	-3.4
	baz=11						
MUN	**Mundaring**	**12.63**	**166**	P	Pn	13 05 33.5	-3.5
	baz=13						
MUN				S	Sn	13 07 44.7	-12
	baz=13						
KLBR	**Kellerberrin**	**12.70**	**160**	P	Pn	13 05 34.3	-3.7
	baz=13						
KLBR				S	Sn	13 07 43.9	-15
	baz=13						
WRKA	**Warakurna**	**15.44**	**113**	P	Pn	13 06 09.0	-6.3
	baz=15						
WRKA				S	Sn	13 08 51.8	-14
	baz=15						
KNRA	**Kununurra**	**15.90**	**78**	P	Pn	13 06 16.4	-4.9
	baz=16						
KNRA				S	Sn	13 09 04.4	-13
	baz=16						
FORT	**Forrest**	**17.77**	**131**	P	Pn	13 06 39.4	-5.3
	baz=18						
MTN	**Manton Dam**	**19.04**	**72**	P	P	13 06 58.4	-1.1
	baz=19						
AUKAT	**Katherine High**	**19.51**	**78**	P	P	13 07 01.5	-3.2
	baz=19						
ASPA	**Alice Springs**	**20.16**	**105**	P	P	13 07 09.9	-2.0
	baz=20						
WB2	**Warramunga Arr**	**20.45**	**94**	P	P	13 07 14.8	-0.2
	baz=20						

*JMA **24** 13:15:13.0±0.0, 35°.4N±0°.1×133°.9E±0°.1, h8km, MV3.1/20, EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .
*IDC **24** 13:15:12.7±1.9, 35°.53N×133°.74E, h0km, mb3.3/1, mbtmp2.9/3, ML2.2/2, Error ellipse: s-maj=39.9km s-min=20.7km az=172.0*

ISC 24 13:15:11.1±1.1, 35°.52N±0°.08×133°.98E±0°.06, h10km, n5, σ2319/8, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.19**	**223**	P	**Pg**	**13 15 14.3**	**-0.8**
JKR				S	**Sg**	**13 15 15.2**	**-2.6**
JAD	**Aida**	**0.60**	**165**	P	**Pg**	**13 15 22.8**	**+0.1**
JAD				S	**Sg**	**13 15 29.7**	**-0.8**
MJAR	**Matsushiro Arr**	**3.58**	**72**	Pn	**Pb**	**13 16 12.4**	**-2.1**
	0.1nm,0.3s,baz=253,slow=13,SNR=4.5						
MJAR				Lg	Lg	13 17 12.9	
	0.2nm,0.3s,baz=231,slow=31,SNR=5.1						
	0.8nm,0.4s						
KSRS	**Korea Array**	**5.25**	**293**	Pn	**Pn**	**13 16 29.9**	**+0.4**
	0.2nm,0.3s,baz=110,slow=15,SNR=1.8						
KSRS				Sn	**Sn**	**13 17 30.7**	**+0.6**
	0.4nm,0.3s,baz=135,slow=29,SNR=1.9						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**55.16**	**180**	P	**P**	**13 24 47.1**	**+3.3**
	0.3nm,0.7s,baz=359,slow=8.0,SNR=1.9						
	0.3nm,0.7s						

IDC 24 13:24:01.2±2.2, 4°.04S×151°.66E, h0km, mb3.3/3, mbtmp3.3/3, MS3.7/1, Error ellipse: s-maj=143.1km s-min=30.0km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.13**	**225**	P	P	13 29 09.2	0.0
	0.5nm,0.5s,baz=52,slow=10,SNR=11						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**25.97**	**220**	P	P	13 29 35.9	+0.1
	0.2nm,0.6s,baz=52,slow=9.0,SNR=2.2						
	0.2nm,0.6s						
RPZ	**Rata Peaks**	**43.08**	**159**	LR	LR	13 49 58.9	
	comp=Z,89nm,19.6s,baz=248,slow=36						
ILAR	**Eielson Array**	**81.89**	**22**	P	P	13 36 21.9	-0.3
	0.2nm,0.5s,baz=251,slow=5.6,SNR=2.0						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**148.99**	**289**	PKPbc	PKPbc	13 43 52.1	-0.2
	0.5nm,0.6s,baz=74,slow=3.9,SNR=3.0						

*IDC **24** 13:25:54.4±2.6, 37°.35N×97°.90W, h0km, mb3.6/1, mbtmp3.3/4, ML4.2/2, MS2.8/1, Error ellipse: s-maj=36.6km s-min=14.8km az=85.0*
*NEIC **24** 13:25:54.8±0.8, 37°.16N±0°.01×97°.82W±0°.02, h5km±1km, Error ellipse: s-maj=3.1km s-min=2.7km az=326.0*
*ANF **24** 13:25:55.1±0.4, 37°.16N×97°.82W, h5km, ML4.5/17, Error ellipse: s-maj=4.3km s-min=3.8km az=102.0*

ISC 24 13:25:54.9±0.8, 37°.16N±0°.02×97°.82W±0°.02, h8km±5km, n127, σ0570/111, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN01	**Argonia South**	**0.05**	**97**	Pg	**Pg**	**13 25 56.5**	**-0.2**
KAN01				Sg	**Sg**	**13 25 57.4**	**-0.5**
KAN06	**Argonia West S**	**0.09**	**342**	Pg	**Pg**	**13 25 57.1**	**0.0**
KAN06				Sg	**Sg**	**13 25 58.5**	**-0.3**
KAN17	**Caldwell West**	**0.12**	**158**	Pg	**Pg**	**13 25 57.8**	**+0.1**
KAN08	**Anthony NE Sta**	**0.14**	**300**		**Pg**	**13 25 58.0**	**+0.2**
KAN08				Sg	**Sg**	**13 26 00.1**	**+0.3**
KAN09	**Caldwell North**	**0.17**	**98**		**Pg**	**13 25 58.6**	**+0.3**
KS21	**Milan North St**	**0.18**	**45**	Pg	**Pg**	**13 25 58.7**	**+0.1**
KAN12	**Harper NE Stat**	**0.20**	**315**	Pg	**Pg**	**13 25 59.1**	**+0.2**
KAN16	**Harper SW Stat**	**0.20**	**289**	Pg	**Pg**	**13 25 59.2**	**+0.2**
KS20	**Mayfield South**	**0.23**	**72**	Pg	**Pg**	**13 25 59.8**	**+0.3**
KAN14	**Manchester OK**	**0.23**	**209**		**Pg**	**13 25 59.7**	**+0.1**
KAN13	**South Haven SW**	**0.31**	**118**	Pg	**Pg**	**13 26 01.2**	**+0.1**
OK032	**Salt Plains WL**	**0.47**	**221**		**Pg**	**13 26 04.1**	**0.0**
OK032	**Salt Plains WL**	**0.47**	**221**		**Sg**	**13 26 10.7**	**+0.4**
OK035	**E0210 Rd and N**	**0.84**	**238**		**Pg**	**13 26 10.8**	**-0.2**
OK049	**E0420 Rd and N**	**0.86**	**151**	Pg	**Pg**	**13 26 11.3**	**-0.1**
OK038	**West end E0370**	**1.00**	**228**		**Pg**	**13 26 13.0**	**-1.2**
OK045	**Pawnee Station**	**1.01**	**134**		**Pg**	**13 26 14.0**	**-0.3**
OK050	**Pawnee Station**	**1.02**	**138**		**Pg**	**13 26 14.2**	**-0.3**
OK048	**Pawnee Station**	**1.02**	**136**		**Pg**	**13 26 14.2**	**-0.4**
OK051	**E0350 and S346**	**1.03**	**129**		**Pg**	**13 26 14.3**	**-0.4**
OK046	**Pawnee Station**	**1.06**	**136**		**Pg**	**13 26 14.8**	**-0.4**
T35A	**Sooner Cattle**	**1.08**	**103**		**Pg**	**13 26 15.2**	**-0.4**
T35A	**Sooner Cattle**	**1.08**	**103**		**Sg**	**13 26 29.8**	**+0.2**
T35B	**Sooner Cattle**	**1.08**	**103**	P	**Pg**	**13 26 15.3**	**-0.3**
	baz=284						
T35B				S	**Sg**	**13 26 29.8**	**+0.2**
	baz=284						
OK044	**Pawnee Station**	**1.14**	**133**		**Pg**	**13 26 16.3**	**-0.5**
U32A	**Winter Ranch,**	**1.23**	**231**		**Pg**	**13 26 17.9**	**-0.5**
U32A	**Winter Ranch,**	**1.23**	**231**	P	**Pg**	**13 26 17.9**	**-0.5**
	baz=50,SNR=60						
U32A				S	**Sb**	**13 26 34.7**	**+0.4**
	baz=50						
OK033	**Mehan**	**1.32**	**147**	Pn	**Pn**	**13 26 19.6**	**-0.1**
OK029	**Liberty Lake**	**1.39**	**168**		**Pn**	**13 26 20.6**	**-0.1**
OK031	**S. Brethren Rd**	**1.44**	**146**		**Pn**	**13 26 21.3**	**0.0**
R32A	**Long Quarter,**	**1.44**	**331**		**Pn**	**13 26 21.6**	**+0.1**
R32A	**Long Quarter,**	**1.44**	**331**	P	**Pn**	**13 26 21.8**	**+0.3**
	baz=151,SNR=81						
OK034	**N. Norfolk Rd.**	**1.45**	**142**		**Pn**	**13 26 21.7**	**+0.2**
OK025	**Westminster Rd**	**1.62**	**166**	Pn	**Pn**	**13 26 23.7**	**-0.2**
FNO	**Franklin**	**1.93**	**170**		**Pn**	**13 26 28.3**	**+0.3**
TUL1	**Leonard**	**2.06**	**127**	Pn	**Pn**	**13 26 30.1**	**+0.2**
TUL1				IAmb_Lg		13 27 00.6	
	comp=Z,357nm,0.9s						
TUL1	**Leonard**	**2.06**	**127**	S	**Sb**	**13 26 59.4**	**+1.2**
	baz=308						
KSU1	**Kansas State U**	**2.16**	**26**	Pn	**Pn**	**13 26 31.9**	**+0.7**
KSU1	**Kansas State U**	**2.16**	**26**	P	**Pn**	**13 26 32.7**	**+1.4**
	baz=206,SNR=40						
KSU1				S	**Sb**	**13 27 02.0**	**+0.7**
	baz=206						
CBKS	**Cedar Bluff**	**2.24**	**318**	Pn	**Pn**	**13 26 33.1**	**+0.8**
CBKS				IAmb_Lg		13 27 05.7	
	comp=Z,232nm,0.8s						
CBKS	**Cedar Bluff**	**2.24**	**318**	P	**Pn**	**13 26 33.6**	**+1.2**
	baz=137,SNR=38						
CBKS				S	**Sb**	**13 27 04.8**	**+1.2**
	baz=137						
WMOK	**Wichita Mounta**	**2.54**	**198**	Pn	**Pn**	**13 26 36.8**	**+0.3**
WMOK	**Wichita Mounta**	**2.54**	**198**	P	**Pn**	**13 26 37.3**	**+0.8**
	baz=18,SNR=28						
WMOK				S	**Sn**	**13 27 09.7**	**+2.1**
	baz=18						
X34A	**Smith Ranch, M**	**2.55**	**180**	IAmb_Lg		13 27 21.9	
	comp=Z,150nm,0.8s						
HHAR	**Hobbs**	**3.24**	**105**		**Pn**	**13 26 46.3**	**+0.2**
X37A	**Clayton**	**3.25**	**141**	Pn	**Pn**	**13 26 46.7**	**+0.5**
X37A				IAmb_Lg		13 27 46.1	
	comp=Z,152nm,0.8s						
X37A	**Clayton**	**3.25**	**141**	P	**Pn**	**13 26 47.3**	**+1.1**
	baz=323,SNR=17						
N33B	**J Bar K, Exete**	**3.58**	**5**	P	**Pn**	**13 26 51.6**	**+0.7**
	baz=185,SNR=12						
N33B				S	**Sn**	**13 27 34.0**	**+0.6**
	baz=185						
N33A	**J Bar K, Exete**	**3.58**	**5**	Pn	**Pn**	**13 26 51.1**	**+0.2**
N33A				IAmb_Lg		13 27 55.9	
	comp=Z,182nm,1.0s						
S39A	**Bolivar**	**3.62**	**80**		**Pn**	**13 26 51.5**	**+0.2**
S39A	**Bolivar**	**3.62**	**80**	P	**Pn**	**13 26 52.9**	**+1.6**
	baz=263,SNR=8.8						
Z35A	**Perchaven, San**	**3.85**	**173**		**Pn**	**13 26 55.0**	**+0.6**
Z35A				IAmb_Lg		13 28 06.0	
	comp=Z,153nm,1.2s						
Z35A	**Perchaven, San**	**3.85**	**173**	S	**Sn**	**13 27 41.7**	**+1.8**
	baz=353						
AMTX	**Amarillo**	**3.87**	**235**	P	**Pn**	**13 26 56.3**	**+1.5**
	baz=53,SNR=19						
N35A	**Tabor**	**4.07**	**24**	Pn	**Pn**	**13 26 55.3**	**-2.2**
KSCO	**Kaye Shedlock'**	**4.22**	**297**		**Pn**	**13 26 59.7**	**0.0**
KSCO				IAmb_Lg		13 28 10.6	
	comp=Z,77nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.22**	**297**	S	**Sn**	**13 27 49.2**	**0.0**
	baz=115						
BGNE	**Belgrade**	**4.25**	**357**	Pn	**Pn**	**13 27 00.5**	**+0.5**
BGNE	**Belgrade**	**4.25**	**357**	P	**Pn**	**13 27 00.5**	**+0.5**
	baz=176,SNR=10.0						
MIAR	**Mount Ida**	**4.32**	**126**	IAmb_Lg		13 28 21.9	
	comp=Z,84nm,0.8s						
MGMO	**Mountain Grove**	**4.44**	**88**		**Pn**	**13 27 02.5**	**-0.1**

Q24A	**Divide**	**6.05**	**290**		**Pn**	**13 27 24.9**	**-0.2**
Q24A				IAmb_Lg		13 29 09.4	
	comp=Z,50nm,0.7s						
BRIGG	**Briggsdale**	**6.11**	**306**	IAmb_Lg		13 29 13.3	
	comp=Z,53nm,0.9s						
N41A	**Harden Midland**	**6.48**	**55**	Pn	**Pn**	**13 27 30.8**	**+0.1**
N41A				IAmb_Lg		13 29 22.2	
	comp=Z,96nm,0.8s						
ECSD	**EROS Data Cent**	**6.63**	**8**		**Pn**	**13 27 31.6**	**-1.1**
ECSD				IAmb_Lg		13 29 28.0	
	comp=Z,53nm,0.9s						
ECSD	**EROS Data Cent**	**6.63**	**8**	P	**Pn**	**13 27 33.0**	**+0.3**
	baz=188,SNR=8.0						
ECSD				S	**Sn**	**13 28 46.7**	**-1.7**
	baz=188						
CLN7	**Carlsbad 7**	**6.83**	**228**	Pn	**Pn**	**13 27 35.5**	**-0.1**
S44A	**Carbondale**	**6.84**	**83**	Pn	**Pn**	**13 27 36.1**	**+0.6**
S44A				IAmb_Lg		13 29 30.2	
	comp=Z,67nm,0.8s						
JCT	**Junction City**	**6.86**	**194**	Pn	**Pn**	**13 27 35.6**	**-0.3**
143A	**Socs Landing,**	**6.89**	**128**	IAmb_Lg		13 29 48.6	
	comp=Z,41nm,0.9s						
L40A	**Anamosa**	**7.07**	**44**	Pn	**Pn**	**13 27 38.8**	**+0.2**
L40A				IAmb_Lg		13 29 43.1	
	comp=Z,77nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.17**	**73**	IAmb_Lg		13 29 52.1	
	comp=Z,54nm,0.8s						
PHWY	**Pilot Hill**	**7.22**	**307**	Pn	**Pn**	**13 27 41.3**	**+0.2**
W45A	**Hickory Valley**	**7.27**	**103**	IAmb_Lg		13 29 48.9	
	comp=Z,73nm,0.8s						
OXF	**Oxford**	**7.33**	**109**	Pn	**Pn**	**13 27 42.1**	**-0.1**
OXF				IAmb_Lg		13 29 50.9	
	comp=Z,61nm,1.1s						
SUSD	**Miller**	**7.33**	**354**	IAmb_Lg		13 29 54.8	
	comp=Z,74nm,0.8s						
ANMO	**Albuquerque**	**7.33**	**255**	Pn	**Pn**	**13 27 44.5**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=94,slow=18,SNR=1.6						
ANMO				Lg	Lg	13 29 44.6	
	comp=Z,2.9nm,0.3s,baz=344,slow=23,SNR=7.5						
T45A	**Paducah**	**7.34**	**88**	IAmb_Lg		13 29 47.6	
	comp=Z,70nm,0.8s						
HDIL	**Hopedale**	**7.47**	**60**	Pn	**Pn**	**13 27 44.5**	**+0.4**
HDIL				IAmb_Lg		13 30 07.2	
	comp=Z,79nm,0.8s						
Y45A	**Yeager Farm, C**	**7.51**	**114**	IAmb_Lg		13 29 59.9	
	comp=Z,42nm,0.8s						
OLIL	**Olney**	**7.84**	**75**	IAmb_Lg		13 30 24.3	
	comp=Z,63nm,0.9s						
O44A	**Mansfield**	**7.91**	**65**	IAmb_Lg		13 30 21.7	
	comp=Z,76nm,1.0s						
CRNM	**Carthage**	**7.94**	**249**	Pn	**Pn**	**13 27 51.3**	**+0.5**
L42A	**Oliver, Polo**	**7.94**	**50**	Pn	**Pn**	**13 27 51.4**	**+0.7**
Y22D	**IRIS PASSCAL I**	**8.02**	**250**	IAmb_Lg		13 30 17.0	
	comp=Z,51nm,0.8s						
WVT	**Waverly**	**8.10**	**94**	Pn	**Pn**	**13 27 53.1**	**+0.3**
JFWS	**Jewell Farm**	**8.17**	**43**	Pn	**Pn**	**13 27 53.4**	**-0.4**
JFWS				IAmb_Lg		13 30 32.3	
	comp=Z,55nm,0.8s						
PLAL	**Pickwick Lake**	**8.19**	**102**	Pn	**Pn**	**13 27 53.8**	**-0.3**
735A	**Kenedy**	**8.28**	**180**	IAmb_Lg		13 30 38.5	
	comp=Z,49nm,0.9s						
K22A	**Casper**	**8.64**	**312**	IAmb_Lg		13 30 47.6	
	comp=Z,45nm,0.9s						
Z47A	**Carrollton**	**8.91**	**113**	IAmb_Lg		13 30 45.1	
	comp=Z,29nm,1.0s						
K43A	**Burlington**	**9.15**	**50**	IAmb_Lg		13 30 56.8	
	comp=Z,52nm,0.8s						
TX31	**Lajitas Ar. Si**	**9.21**	**214**	Pn	**Pn**	**13 28 07.6**	**-0.6**
TX32	**Lajitas Array**	**9.21**	**214**	Pn	**Pn**	**13 28 07.5**	**-0.7**
TXAR	**Lajitas Array**	**9.21**	**214**	Pn	**Pn**	**13 28 07.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=32,slow=11,SNR=11						
TXAR				Pg		13 28 44.2	
	comp=Z,0.4nm,0.3s,baz=44,slow=16,SNR=4.7						
TXAR				Lg	Lg	13 30 45.1	
	comp=Z,1.3nm,0.3s,baz=33,slow=28,SNR=9.0						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**9.21**	**214**	Pn	**Pn**	**13 28 07.5**	**-0.7**
F36A	**Milaca**	**9.27**	**19**	Pn	**Pn**	**13 28 08.7**	**-0.2**
I42A	**Draeger Farm,**	**9.55**	**42**	IAmb_Lg		13 31 12.5	
	comp=Z,31nm,1.0s						
E28A	**Huff**	**9.65**	**348**	IAmb_Lg		13 31 11.0	
	comp=Z,42nm,0.7s						
PDAR	**Pinedale Array**	**10.60**	**306**	Pn	**Pn**	**13 28 26.0**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=112,slow=17,SNR=7.0						
PDAR				Pg		13 29 09.5	
	comp=Z,0.4nm,0.3s,baz=114,slow=15,SNR=4.2						
PDAR				Lg	Lg	13 31 20.0	
	comp=Z,0.3nm,0.3s,baz=111,slow=26,SNR=2.9						
	comp=Z,0.6nm,0.3s						
CMIG	**Matias Romero**	**20.16**	**172**	LR	LR	13 41 48.6	
	comp=Z,24nm,18.1s,baz=28,slow=47						
ILAR	**Eielson Array**	**39.85**	**330**	P	**P**	**13 33 28.8**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=110,slow=7.9,SNR=5.1						
	comp=Z,0.8nm,0.8s						

WEL 24 13:28:06.9±0.6, 45°S±4°×16°7E±°, h64km±6km, M3.2/12, ML3.7/20, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.09**	**138**	P	Pn	13 28 17.1	+0.7
DCZ				S	Sn	13 28 24.4	+1.1
MLZ	**Mavora Lakes**	**0.74**	**88**	P	Pn	13 28 23.2	+1.3
MLZ				S	Sn	13 28 35.2	+2.2
WHZ	**Wether Hill Ro**	**0.79**	**129**	P	Pn	13 28 23.6	+1.1
WHZ				S	Sn	13 28 35.5	+1.5
PYZ	**Puysegur Point**	**0.82**	**199**	P	Pn	13 28 23.1	+0.3
PYZ				S	Sn	13 28 34.7	+0.1
MSZ	**Milford Sound**	**0.95**	**40**	P	Pn	13 28 26.1	+1.7
MSZ				S	Sn	13 28 39.3	+1.9
WKZ	**Wanaka**	**1.49**	**68**	P	Pn	13 28 33.4	+1.8
WKZ				S	Sn	13 28 52.5	+2.3
APZ	**The Paps**	**1.57**	**156**	P	Pn	13 28 33.0	+0.3
APZ				S	Sn	13 28 52.4	+0.3
EAZ	**Earnscleugh**	**1.59**	**85**	P	Pn	13 28 34.5	+1.6
EAZ				S	Sn	13 28 53.7	+1.2
JCZ	**Jackson Bay**	**1.80**	**43**	P	Pn	13 28 36.8	+1.0
SYZ	**Scrubby Hill**	**1.84**	**129**	P	Pn	13 28 36.9	+0.7
SYZ				S	Sn	13 28 58.8	+0.3
TUZ	**Tuapeka**	**1.88**	**108**	P	Pn	13 28 38.3	+1.5
TUZ				S	Sn	13 28 59.5	0.0
LBZ	**Lake Benmore**	**2.44**	**67**	P	Pn	13 28 44.5	+0.1
LBZ				S	Sn	13 29 12.1	-0.9
HHSZ	**Highcliff Hill**	**2.52**	**102**	P	Pn	13 28 46.6	+1.0
HHSZ				S	Sn	13 29 14.1	-1.0
ODZ	**Otahua Downs**	**2.55**	**83**	P	Pn	13 28 46.3	+0.4
FOZ	**Fox Glacier**	**2.71**	**47**	P	Pn	13 28 47.6	-0.5
FOZ				S	Sn	13 29 20.6	+0.9
TMZ	**Timaru**	**2.98**	**71**	P	Pn	13 28 51.3	-0.4
GCSZ	**Gaunt Creek Bo**	**3.13**	**49**	P	Pn	13 28 53.3	-0.5
ARCZ	**Arundel**	**3.27**	**65**	P	Pn	13 28 54.8	-0.9
RPZ	**Rata Peaks**	**3.31**	**61**	P	Pn	13 28 55.5	-0.8
WVZ	**Waitaha Valley**	**3.51**	**50**	P	Pn	13 28 58.0	-1.0
WACZ	**Wakanui South**	**3.70**	**69**	P	Pn	13 29 00.7	-0.9
OXZ	**Oxford**	**4.12**	**62**	P	Pn	13 29 05.7	-1.7
INZ	**Inchbonnie**	**4.13**	**51**	P	Pn	13 29 07.1	-0.4
LTZ	**Lake Taylor**	**4.57**	**57**	P	Pn	13 29 12.1	-1.4
DSZ	**Denniston Nort**	**5.02**	**45**	P	Pn	13 29 19.0	-0.6
QRZ	**Quartz Range**	**6.07**	**43**	P	Pn	13 29 33.9	-0.1

MAN 24 13:31:29.0, 10°.23N×125°.99E, h30km, mb3.8, ML2.6, MS2.1, 4C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.47**	**163↑**	*e*P	Pn	13 31 40.2	+0.5
GLSP				*e*S	Sn	13 31 48.5	+1.6
SCPH	**Surigao**	**0.67**	**228↑**	*i*P	Pb	13 31 42.2	0.0
SCPH				*i* S	Sn	13 31 52.5	+0.6
MSLP	**Maasin**	**1.12**	**265↑**	*e*P	Pn	13 31 49.2	+0.5
MSLP				*e*S	Sb	13 32 05.0	+0.9
BESP	**Borongan**	**1.46**	**338↓**	*e*P	Pn	13 31 53.9	+0.5
BESP				*e*S	Sn	13 32 11.5	-0.1
TABP	**Talibon, Bohol**	**1.64**	**265↓**	*e*P	Pn	13 31 54.0	-1.8
TABP				*e*S	Sn	13 32 16.7	+0.8
GHBP	**Garcia Hernand**	**1.75**	**250↑**	*e*P	Pn	13 31 57.6	+0.2
GHBP				*e*S	Sn	13 32 13.6	-5.1

*NEIC **24** 13:38:07.8±0.7, 59°.2S±0°.1×159°.4E±0°.4, h10km±2km, mb4.5/4, Error ellipse: s-maj=38.8km s-min=21.2km az=94.0*
*IDC **24** 13:38:32.4±3.3, 59°.25S×149°.44E, h0km, mb3.9/3, mbtmp3.9/4, ML3.1/1, MS3.7/13, Error ellipse: s-maj=289.5km s-min=22.6km az=77.0*

ISC 24 13:38:07.8±2.2, 59°.2S±0°.2×159°.4E±0°.3, h10km, n23, σ0°69/7, mb3.8/4, MS3.7/12, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**4.68**	**357**	Pn	**Pn**	**13 39 17.9**	**-0.5**
WHZ	**Wether Hill Ro**	**14.25**	**25**	P	**P**	**13 41 37.1**	**+0.2**
DCZ	**Deep Cove**	**14.50**	**22**	P	**P**	**13 41 40.0**	**+0.4**
LBZ	**Lake Benmore**	**16.20**	**29**	P	**P**	**13 41 57.9**	**-0.6**
LBZ				IAmb	IAmb	13 42 23.9	
	comp=Z,52nm,1.3s						
TAU	**Tasmania Unive**	**17.90**	**330**		**P**	**13 42 16.9**	**-0.4**
VNDA	**Vanda**	**18.47**	**178**	P	Pn	13 42 52.0	+29
	comp=Z,0.1nm,0.3s,baz=345,slow=9.3,SNR=7.2						
VNDA				LR	LR	13 49 11.3	
	comp=Z,227nm,18.1s,baz=1.5,slow=34						
	comp=Z,2.2nm,0.9s						
CASY	**Casey**	**22.94**	**231**	P	**P**	**13 43 11.3**	**-0.4**
CASY				IAmb	IAmb	13 43 51.7	
	comp=Z,21nm,1.4s						
STKA	**Stephens Creek**	**29.80**	**328**	LR	LR	13 54 31.3	
	comp=Z,173nm,18.9s,baz=201,slow=34						
QSPA	**South Pole Qui**	**30.94**	**180**	P	P	13 44 50.9	+26
	comp=Z,1.8nm,1.1s,baz=41,slow=6.5,SNR=3.2						
	comp=Z,1.8nm,1.1s						
ASAR	**Alice Springs**	**39.78**	**322**	P	P	13 45 46.4	+5.6
	comp=Z,1.6nm,0.8s,baz=167,slow=9.1,SNR=10						
	comp=Z,1.6nm,0.8s						
CTA	**Charters Tower**	**40.16**	**341**	LR	LR	14 00 55.1	
	comp=Z,70nm,18.3s,baz=130,slow=34						
WRA	**Warramunga Arr**	**43.14**	**324**	P	P	13 46 13.5	+5.1
	comp=Z,1.6nm,0.9s,baz=165,slow=7.2,SNR=6.5						
	comp=Z,1.6nm,0.9s						
WRAB	**Tennant Creek**	**43.15**	**324**	P	**P**	**13 46 09.2**	**+0.9**
SNAA	**Sanae**	**48.87**	**187**	LR	LR	14 08 26.0	
	comp=Z,134nm,18.0s,baz=194,slow=37						
HNR	**Honiara**	**49.62**	**1**	LR	LR	14 04 48.0	
	comp=Z,584nm,18.1s,baz=200,slow=31						
PMG	**Port Moresby**	**50.51**	**344**	LR	LR	14 06 08.0	
	comp=Z,45nm,18.4s,baz=81,slow=33						
PMSA	**Palmer Station**	**52.12**	**158**	LR	LR	14 11 02.9	
	comp=Z,93nm,18.0s,baz=248,slow=36						
BATI	**Baumata**	**55.77**	**316**	LR	LR	14 09 07.4	
	comp=Z,69nm,19.4s,baz=208,slow=35						
KAPI	**Kappang**	**61.99**	**314**	LR	LR	14 12 52.2	
	comp=Z,24nm,20.7s,baz=158,slow=35						
LEM	**Lembang**	**65.31**	**301**	LR	LR	14 11 43.8	
	comp=Z,35nm,21.6s,baz=206,slow=32						
PALK	**Pallekele**	**90.43**	**283**	LR	LR	14 23 47.5	
	comp=Z,30nm,18.0s,baz=269,slow=32						
CMAR	**Chiang Mai Arr**	**91.64**	**304**	LR	LR	14 27 31.3	
	comp=Z,16nm,22.0s,baz=20,slow=34						
TSUM	**Tsumeb**	**95.88**	**216**	LR	LR	14 31 26.6	
	comp=Z,28nm,18.4s,baz=146,slow=34						

IDC 24 13:46:35.4±2.2, 2°.49N×127°.84E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=158.8km s-min=25.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.18**	**164**	P	P	13 51 43.6	-0.4
	1.1nm,0.4s,baz=344,slow=10,SNR=12						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**26.66**	**168**	P	P	13 52 16.0	-0.1
	0.2nm,0.4s,baz=351,slow=11,SNR=1.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.20**	**325**	P	P	13 56 38.8	+0.3
	0.2nm,0.4s,baz=108,slow=7.9,SNR=6.4						
	0.2nm,0.4s						

IDC 24 13:49:21.5±4.9, 26°.99S×132°.70E, h0km, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=60.9km s-min=30.0km az=65.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**3.48**	**18**	Pn	Pn	13 50 17.8	+0.8
	0.2nm,0.3s,baz=198,slow=13,SNR=11						
ASAR				Pg	Pb	13 50 24.1	+0.1
	0.3nm,0.3s,baz=202,slow=15,SNR=9.6						
ASAR				Sn	Sn	13 50 58.7	-0.2
	0.5nm,0.3s,baz=196,slow=21,SNR=6.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**7.17**	**12**	Pn	Pn	13 51 08.4	+0.7
	0.2nm,0.3s,baz=195,slow=14,SNR=17						
WRA				Sn	Sn	13 52 22.4	-7.5
	0.3nm,0.3s,baz=194,slow=23,SNR=9.1						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**9.15**	**124**	Pn	Pn	13 51 34.4	-0.5
	0.1nm,0.3s,baz=301,slow=18,SNR=1.4						
	1.2nm,0.9s						

DJA 24 14:00:55.1±1.1, 9°S±28°×11°8E±°, h220km±7km, M2.8/5, MLv2.8/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.38**	**144**	P	Pn	14 01 24.1	-0.1
PLAI				S	S	14 01 48.1	+1.1
TWSI	**Taliwang, Sumb**	**0.69**	**252**	P	Pn	14 01 25.5	+0.2
TWSI				S	S	14 01 51.5	+2.7
KLNI	**Mataram**	**1.44**	**274**	P	Pn	14 01 30.1	0.0
KLNI				S	S	14 01 58.4	+1.1
IGBI	**Denpasar**	**2.40**	**263**	P	Pn	14 01 41.3	+2.1
IGBI				S	S	14 02 14.2	+0.8
JAGI	**Jajag, Banyuwa**	**3.36**	**271**	P	Pn	14 01 50.3	+0.3
JAGI				S	S	14 02 32.3	-0.6

IDC 24 14:01:44.2±2.0, 7°.88S×118°.57E, h0km, mb3.5/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=51.1km s-min=23.9km az=72.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.08**	**23**	Pn	Pn	14 02 33.3	-0.9
	6.9nm,0.3s,baz=180,slow=7.9,SNR=6.0						
KAPI				Sn	Sn	14 03 14.2	+2.5
	21nm,0.3s,baz=274,slow=22,SNR=12						
	17nm,0.2s						
WRA	**Warramunga Arr**	**19.42**	**130**	P	P	14 06 12.1	-0.2
	0.2nm,0.3s,baz=304,slow=12,SNR=9.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.51**	**139**	P	P	14 06 35.3	+0.3
	1.0nm,0.6s,baz=312,slow=8.6,SNR=22						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**63.27**	**333**	P	P	14 12 14.9	+0.1
	0.4nm,0.6s,baz=142,slow=5.4,SNR=2.0						
	0.4nm,0.6s						

ASRS 24 14:05:41.8±0.3, 51°N±2°×9°7E±°, h5km, MLh3.8/9, Error ellipse: s-maj=4.7km s-min=2.4km az=0.5, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERNS	**Erzin**	**1.46**	**256**	Pg	Pg	14 06 16.1	+6.3
ERNS				Sg	Sg	14 06 37.6	+8.8
KZLR	**Kyzyl**	**2.13**	**302**	Pg	Pg	14 06 27.8	+5.2
KZLR				Sg	Sg	14 06 57.1	+6.9
MOY	**Mondy**	**2.51**	**64**	Pg	Pg	14 06 32.0	+2.2
MOY				Sg	Sg	14 07 05.0	+2.7
ARDR	**Aradan**	**3.14**	**310**	Pg	Pg	14 06 42.8	+0.9
ARDR				Sg	Sg	14 07 26.9	+4.2
ZAK	**Zakamensk**	**3.78**	**91**	Pg	Pg	14 06 55.0	+0.8
ZAK				Sg	Sg	14 07 43.9	+0.9
DJOS	**Djoyskaya Sosn**	**4.30**	**303**	Sg	Sg	14 08 08.4	+8.5
CERR	**Cheremushki**	**4.32**	**303**	Pg	Pg	14 07 03.6	-0.9
CERR				Sg	Sg	14 08 05.9	+5.4
DJO	**Djoy, Khakassi**	**4.39**	**302**	Pg	Pg	14 07 04.6	-1.3
DJO				Sg	Sg	14 08 06.7	+3.8
MINR	**Mina**	**4.70**	**337**	Pg	Pg	14 07 11.9	+0.3
MINR				Sg	Sg	14 08 18.1	+5.7
CUR	**Chagan-Uzun**	**5.80**	**268**	Pg	Pg	14 07 32.2	-0.6
CUR				Sg	Sg	14 08 48.9	+1.0
ULGR	**Ulagan, Altay**	**5.99**	**274**	Pg	Pg	14 07 35.5	-1.0
ULGR				Sg	Sg	14 08 57.8	+3.8
LUZB	**Luzhba, Kemero**	**6.04**	**303**	Sg	Sg	14 08 59.4	+3.9
GZLN	**Zheleznogorsk**	**6.15**	**341**	Sg	Sg	14 08 59.7	+0.5
TASR	**Tashtagol**	**6.28**	**294**	Pg	Pg	14 07 41.0	-1.0
TASR				Sg	Sg	14 09 05.9	+2.7
CHBI	**Chibit, Altay**	**6.31**	**271**	Pn	Pn	14 07 13.8	-1.7
CHBI				Pg	Pg	14 07 40.9	-1.6
CHBI				S	Sn	14 08 26.6	-1.4
CHBI				Sg	Sg	14 09 09.0	+4.7
ARTR	**Artybash**	**6.45**	**284**	Pg	Pg	14 07 44.4	-0.9
ARTR				Sg	Sg	14 09 12.6	+3.8
DGZ	**Jazzator, Alta**	**6.46**	**266**	Pg	Pg	14 07 45.1	-0.3
DGZ				Sg	Sg	14 09 12.7	+3.8
ULN	**Ulaanbaatar**	**6.91**	**110**	Sg	Sg	14 09 23.2	-0.4
BRCR	**Berchikul'**	**7.41**	**316**	Sg	Sg	14 09 43.0	+3.7

*DDA **24** 14:06:43.9±0.0, 35°.13N×27°.88E, h17km±4km, ML2.7*
*ISK **24** 14:06:43.5, 35°.16N×27°.66E, h7km, ML2.8/8*
*ATH **24** 14:06:45.8, 35°.21N×27°.62E, h10km±31km, ML3.3/1, Error ellipse: s-maj=31.6km s-min=2.0km az=0.0*
*THE **24** 14:06:46.2, 35°.29N×27°.60E, h0km±1km, ML2.8/3, Error ellipse: s-maj=3.8km s-min=1.8km az=150.0*

ISC 24 14:06:44.0±1.7, 35°.16N±0°.07×27°.68E±0°.04, h5km±11km, n33, σ0°66/46, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.57**	**313**	PG	**Pg**	**14 06 54.8**	**-0.3**
KARP				SG	**Sg**	**14 07 03.1**	**+0.5**
KARP	**Karpathos**	**0.57**	**313**	P	**Pg**	**14 06 54.7**	**-0.3**
KARP				S	**Sg**	**14 07 02.6**	**0.0**
	5μm,0.3s						
KARP	**Karpathos**	**0.57**	**313**	P	**Pg**	**14 06 54.9**	**-0.3**
KARP				S	**Sg**	**14 07 02.6**	**0.0**
KARP				AML	AML	14 07 03.8	
	comp=N,9006μm,0.3s						
KARP				AML	AML	14 07 03.9	
	comp=E,9617μm,0.3s						
ARG	**Arkhangelos**	**1.12**	**19**	PN	**Pg**	**14 07 05.4**	**-0.1**
ARG				SN	**Sn**	**14 07 21.4**	**-0.8**
ARG	**Arkhangelos**	**1.12**	**19**	P	**Pg**	**14 07 06.0**	**+0.5**
ARG				S	**Sb**	**14 07 20.8**	**0.0**
	comp=E,398nm,0.6s						
ARG	**Arkhangelos**	**1.12**	**19**	P	**Pg**	**14 07 06.0**	**+0.5**
ARG				S	**Sb**	**14 07 20.8**	**0.0**
ZKR	**Zakros**	**1.20**	**268**	PN	**Pb**	**14 07 06.6**	**-0.7**
ZKR	**Zakros**	**1.20**	**268**	P	**Pb**	**14 07 06.5**	**-0.7**
ZKR				S	**Sn**	**14 07 25.1**	**+1.0**
	comp=E,285nm,0.4s						
ZKR	**Zakros**	**1.20**	**268**	P	**Pb**	**14 07 06.6**	**-0.7**
NIS1	**Nisyros Isl.**	**1.50**	**344**	PN	**Pn**	**14 07 11.5**	**-0.1**
TURN	**Turunc**	**1.68**	**16**	PN	**Pn**	**14 07 14.2**	**+0.1**
TURN	**Turunc**	**1.68**	**16**	P	**Pn**	**14 07 14.8**	**+0.7**
TURN				S	**Sg**	**14 07 38.7**	**+0.7**
KOSK	**Kos Island**	**1.69**	**341**	PN	**Pn**	**14 07 14.2**	**0.0**
KOSK	**Kos Island**	**1.69**	**341**	P	**Pn**	**14 07 14.0**	**-0.2**
DALY	**Dalyan (Mula)**	**1.84**	**25**	PN	**Pn**	**14 07 16.5**	**+0.2**
KSL	**Kastellorizon**	**1.84**	**57**	P	**Pn**	**14 07 16.9**	**+0.5**
FETY	**Fethiye**	**1.87**	**37**	PN	**Pn**	**14 07 16.7**	**0.0**
AKAS	**Kas**	**1.90**	**55**	PN	**Pn**	**14 07 17.2**	**-0.1**
AKAS				SN	**Sn**	**14 07 42.3**	**+0.6**
AKAS	**Kas**	**1.90**	**55**	P	**Pn**	**14 07 16.8**	**-0.5**
AKAS				S	**Sn**	**14 07 40.2**	**-1.5**
AKAS				*i* AML	AML	14 07 44.0	
	comp=E,83nm,0.7s						
BDRM	**Kayabasi**	**1.92**	**354**	P	**Pn**	**14 07 18.7**	**+1.4**
YER	**Yerkesik**	**2.04**	**14**	PN	**Pn**	**14 07 19.2**	**+0.1**
MULA	**Mugla, Merkez-**	**2.16**	**14**	P	**Pb**	**14 07 23.2**	**-0.5**
THR6	**Thira Island,**	**2.21**	**304**	P	**Pn**	**14 07 21.4**	**+0.1**
THR6	**Thira Island,**	**2.21**	**304**	P	**Pn**	**14 07 21.4**	**+0.1**
CAME	**Cameli-Denizli**	**2.22**	**36**	PN	**Pn**	**14 07 21.9**	**+0.2**
IDI	**Anoyia**	**2.29**	**274**	P	**Pn**	**14 07 23.3**	**+0.8**
IDI	**Anoyia**	**2.29**	**274**	P	**Pn**	**14 07 23.3**	**+0.8**
AKUM	**Antalya-Kumluc**	**2.46**	**61**	P	**Pn**	**14 07 25.4**	**+0.6**
AKUM				S	**Sn**	**14 07 54.4**	**-0.9**
AYDN	**Tasoluk**	**2.50**	**4**	P	**Pn**	**14 07 25.6**	**0.0**
TAVA	**DENIZLI_Tavas**	**2.51**	**23**	P	**Pn**	**14 07 25.1**	**-0.6**
GOLH	**Golhisar**	**2.58**	**36**	P	**Pn**	**14 07 27.5**	**+1.0**
GOLH				S	**Sn**	**14 07 59.1**	**+0.8**
GAZI	**Gazipasa**	**3.93**	**73**	P	**Pn**	**14 07 44.5**	**-0.6**
SEDI	**Konya, Seydise**	**4.01**	**54**	P	**Pn**	**14 07 48.2**	**+1.9**
SEDI				S	**Sn**	**14 08 33.9**	**+0.1**
SEDI				*i* AML	AML	14 08 40.0	
	comp=E,12nm,1.3s						

MAN 24 14:10:14.5, 6°.63N×126°.52E, h43km, mb3.9, ML2.7, MS2.2, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.41**	**320↓**	*e*P	Pn	14 10 25.6	+1.4
MATI				*e*S	Sn	14 10 34.4	+3.3
DDMP	**Don Marcelino,**	**0.96**	**237↑**	*e*P	Pn	14 10 31.9	+0.3
DDMP				*e*S	Sn	14 10 46.0	+1.9
KCP	**Kidapawan**	**1.47**	**285↑**	*e*P	Pn	14 10 38.7	+0.1
KCP				*i* S	Sn	14 10 55.0	-1.6
BIPH	**Bislig**	**1.55**	**354↑**	*e*P	Pn	14 10 40.2	+0.5
BIPH				*e*S

mbtmp3.4/4,ML2.1/2,Error ellipse: s-maj=34.4km s-min=11.0km az=78.0

ISC 24 14:28:16.3±0.8,59°34N±0°02×27°36E±0°03,h0km,n29,σ1§24/49,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.27**	**82**	*e*P	**Pb**	**14 28 23.9**	**0.0**
ARBE	**Arbavere**	**0.71**	**279**	*e*P	**Pb**	**14 28 31.5**	**0.0**
EE03	**Tooma soojaam,**	**0.73**	**231**	*e*P	**Pg**	**14 28 30.5**	**+0.3**
EE03				*e*S	**Sg**	**14 28 39.3**	**-0.3**
VSU	**Vasula**	**0.94**	**201**	*e*S	**Sg**	**14 28 43.5**	**-2.7**
VSU				AML	AML	14 29 04.6	
	comp=N,168nm,0.6s						
VSU				AML	AML	14 29 05.3	
	comp=Z,2μm,0.9s						
VSU				AML	AML	14 29 28.8	
	comp=E,181nm,0.7s						
VSU	**Vasula**	**0.94**	**201**	*e*P	**Pb**	**14 28 34.9**	**-0.4**
VSU				*e*S	**Sg**	**14 28 45.9**	**-0.3**
VJF	**Virojoki**	**1.21**	**5**	*e*P	**Pn**	**14 28 40.7**	**+0.3**
VJF				MSG		14 28 54.0	
	comp=Z,2.5nm,0.2s						
VJF				*e*SB	**Sn**	**14 28 57.7**	**+0.2**
EE02	**Kiisa, Saku**	**1.38**	**265**	*e*PB	**Pn**	**14 28 42.8**	**+0.2**
EE02				*e*SN	**Sn**	**14 29 03.2**	**+1.7**
PVF	**Pernaja**	**1.43**	**329**	*e*P	**Pb**	**14 28 44.4**	**+0.7**
PVF				*e*SB	**Sn**	**14 29 03.8**	**+0.9**
PVF				MSG		14 29 08.3	
	comp=Z,7.1nm,0.3s						
EE07	**Piusa Caves, O**	**1.50**	**178**	*e*P	**Pn**	**14 28 44.6**	**+0.3**
EE07				*e*SB	**Sg**	**14 29 03.9**	**-0.5**
MEF	**Metsahovi**	**1.74**	**302**	*e*P	**Pg**	**14 28 50.3**	**+0.7**
MEF				AML	AML	14 28 51.5	
	comp=Z,22nm,0.4s						
MEF				AML	AML	14 28 51.8	
	comp=E,34nm,0.5s						
MEF				*e*S	**Sg**	**14 29 13.0**	**+0.9**
MEF				AML	AML	14 29 14.1	
	comp=N,25nm,0.3s						
MEF	**Metsahovi**	**1.74**	**302**	*e*PG	**Pg**	**14 28 49.8**	**+0.2**
MEF				*e*SN	**Sg**	**14 29 12.6**	**+0.5**
MEF				MSG		14 29 14.5	
	comp=Z,4.1nm,0.2s						
NUR	**Nurmijrvi**	**1.80**	**312**	*e*PG	**Pg**	**14 28 51.3**	**+0.5**
NUR				*e*S	**Sb**	**14 29 13.6**	**+0.4**
EE01	**Perakula, Nova**	**1.92**	**268**	*e*PG	**Pb**	**14 28 52.4**	**+0.3**
EE01				*e*SG	**Sb**	**14 29 16.9**	**+0.2**
MTSE	**Matsula**	**1.94**	**253**	*e*P	**Pb**	**14 28 52.7**	**+0.3**
MTSE				*e*S	**Sb**	**14 29 17.5**	**+0.4**
MTSE	**Matsula**	**1.94**	**253**	*e*PG	**Pb**	**14 28 52.5**	**+0.2**
MTSE				*e*SG	**Sb**	**14 29 17.9**	**+0.9**
FIA0	**FINESS Array S**	**2.21**	**344**	*e*P	**Pb**	**14 28 57.1**	**+0.1**
FIA0				*e*SG	**Sg**	**14 29 27.7**	**+0.5**
FIA1	**FINESS Array S**	**2.21**	**344**	*e*P	**Pb**	**14 28 57.0**	**0.0**
FIA1				*e*SG	**Sg**	**14 29 27.3**	**+0.1**
FINES	**FINESS Array B**	**2.21**	**344**	Pn	**Pb**	**14 28 56.3**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=163,slow=16,SNR=29						
FINES				Sn	**Sb**	**14 29 25.1**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=169,slow=24,SNR=17						
FINES				Rg	Rg	14 29 37.2	
	comp=Z,98nm,1.2s,baz=164,slow=28,SNR=16						
	comp=Z,8.5nm,0.5s						
RUF	**Ruokolahti**	**2.24**	**20**	*e*PB	**Pg**	**14 28 58.5**	**-0.7**
RUF				*e*SG	**Sg**	**14 29 29.5**	**+1.4**
EE06	**Soera, Palade,**	**2.35**	**263**	*e*PG	**Pb**	**14 28 59.7**	**+0.2**
EE06				*e*SB	**Sb**	**14 29 28.9**	**-0.1**
KAF	**Kangasniemi**	**2.83**	**350**	*e*P	**Pb**	**14 29 06.0**	**-1.7**
KAF				*e*S	**Sn**	**14 29 40.2**	**+2.7**
KAF				MSG		14 29 41.1	
	comp=Z,1.5nm,0.2s						
KEF	**Keuruu**	**3.09**	**338**	*e*PB	**Pb**	**14 29 11.8**	**-0.3**
KEF				*e*SG	**Sg**	**14 29 54.1**	**-1.4**
KEF				MSG		14 29 59.8	
	comp=Z,0.9nm,0.2s						
RAF	**Rauma**	**3.27**	**304**	*e*P	**Pb**	**14 29 12.1**	**-3.0**
RAF				*e*S	**Sb**	**14 29 52.8**	**-2.5**
RAF				AML	AML	14 30 07.1	
	comp=Z,6.0nm,0.6s						
RAF				AML	AML	14 30 07.5	
	comp=N,8.1nm,0.5s						
RAF				AML	AML	14 30 15.8	
	comp=E,7.4nm,0.6s						
RAF	**Rauma**	**3.27**	**304**	*e*P	**Pb**	**14 29 12.1**	**-3.0**
AAL	**Aland**	**3.82**	**286**	*e*SG	**Sg**	**14 30 17.3**	**-1.6**
JOF	**Joensuu**	**4.07**	**26**	*e*P	**Pn**	**14 29 22.3**	**+2.6**
JOF				*e*S	**Sn**	**14 30 09.7**	**+1.7**
JOF				MSG		14 30 13.6	
	comp=Z,0.8nm,0.2s						
AKASG	**Malin Array Be**	**8.72**	**172**	Pn	**Pn**	**14 30 24.9**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=350,slow=13,SNR=5.7						
ARCES	**ARCESS Array B**	**10.27**	**356**	Pn	**Pn**	**14 30 43.3**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=4.7						
	comp=Z,3.3nm,1.0s						
BVAR	**Borovoye Array**	**24.41**	**86**	P	P	14 33 44.2	+8.2
	comp=Z,0.7nm,0.8s,baz=302,slow=9.6,SNR=5.8						
	comp=Z,0.7nm,0.8s						

GEN ***24*** *14:44:10.8,46°33N×7°57E,h11km±1km,Ml3.8*
MOS ***24*** *14:44:10.4±1.0,46°40N×7°65E,h14km,mb4.4/7,Error ellipse: s-maj=6.2km s-min=3.6km az=62.3*
NEIC ***24*** *14:44:11.2±1.6,46°42N±0°04×7°58E±0°04,h6km±4km, mb4.4/4,ML4.1(VIE),ML4.2(CSEM),Error ellipse: s-maj=6.6km s-min=4.5km az=174.0*
ZUR ***24*** *14:44:11.6,46°34N×7°58E,h8km,MLh4.1/101,Error ellipse: s-maj=0.8km s-min=0.3km az=65.0*
BGR ***24*** *14:44:12.6±0.4,46°38N×7°53E,h10km,ML4.3/16,Error ellipse: s-maj=3.3km s-min=3.3km az=163.0*
PRU ***24*** *14:44:12.7±0.0,46°33N×7°68E,h12km,M4.4*
LDG ***24*** *14:44:12.5±0.1,46°32N×7°62E,h8km,Md4.4/2,Ml4.3/48, Error ellipse: s-maj=1.4km s-min=1.1km az=123.0*
STR ***24*** *14:44:12.1±0.4,46°N±°×°±°,h0km±3km,ML4.2/74,Error ellipse: s-maj=0.0km s-min=0.0km az=118.0,preliminary*
IDC ***24*** *14:44:12.2±2.4,46°46N×7°51E,h10km±14km,mb3.6/6, mbtmp3.7/12,ML4.3/4,MS3.1/2,Error ellipse: s-maj=22.2km s-min=12.1km az=153.0*
ROM ***24*** *14:44:12.7±0.2,46°227N±0°009×7°60E±0°01,h6km±1km, ML3.8/57,Error ellipse: s-maj=1.1km s-min=0.2km az=322.0*
BGS ***24*** *14:44:12.2±1.6,46°36N×7°50E,h10km,ML4.3,ML4.3*
BNS ***24*** *14:44:14.2±0.3,46°44N×7°81E,h10km,ML3.9*

ISC 24 14:44:11.6±0.6,46°346N±0°009×7°577E±0°009, h10km±3km,n666,σ1§35/982,mb4.2/10,130C-125D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBD	**Leukerbad**	**0.05**	**40**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD	**Leukerbad**	**0.05**	**40**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD				Sg	**Sg**	**14 44 15.2**	**-0.4**
LKBD	**Leukerbad**	**0.05**	**40**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD				Sg	**Sg**	**14 44 15.2**	**-0.4**
LKBD	**Leukerbad**	**0.05**	**40**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD				Sg	**Sg**	**14 44 15.2**	**-0.4**
LKBD2	**Leukerbad 2**	**0.05**	**58**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD2				Sg	**Sg**	**14 44 15.3**	**-0.4**
LKBD2	**Leukerbad 2**	**0.05**	**58**	⇑Pg	**Pg**	**14 44 13.8**	**-0.1**
LKBD2				Sg	**Sg**	**14 44 15.3**	**-0.4**
SIEB	**Ecole de Borzu**	**0.06**	**210**	⇑Pg	**Pg**	**14 44 13.6**	**-0.1**
SIEB	**Ecole de Borzu**	**0.06**	**210**	⇑Pg	**Pg**	**14 44 13.6**	**-0.1**
SIEB				Sg	**Sg**	**14 44 15.0**	**-0.3**
SIEB	**Ecole de Borzu**	**0.06**	**210**	⇑Pg	**Pg**	**14 44 13.6**	**-0.1**
SIEB				Sg	**Sg**	**14 44 15.0**	**-0.3**
SIEB	**Ecole de Borzu**	**0.06**	**210**	⇑Pg	**Pg**	**14 44 13.6**	**-0.1**
SIEB				Sg	**Sg**	**14 44 15.0**	**-0.3**
VANNI	**Vissoie, Val d**	**0.14**	**174**	⇑Pg	**Pg**	**14 44 15.0**	**+0.1**
VANNI				Sg	**Sg**	**14 44 17.0**	**-0.2

VARE	Varese	0.96	120	⇓Pn	Pg	14 44 29.6 -0.5
VARE	Varese	0.96	120	⇓Pn	Pg	14 44 29.6 -0.5
VARE	Varese	0.96	120	P	Pg	14 44 29.5 -0.5
VARE	Varese	0.96	120	⇓P	Pg	14 44 29.5 -0.5
VARE				S	Sg	14 44 42.8 +0.3
VARE				AML	AML	
	comp=N,6910µm,0.2s					
VARE				AML	AML	
	comp=E,4645µm,0.4s					
MUO	Muotathal	0.96	49	⇑Pg	Pg	14 44 30.2 +0.2
MUO	Muotathal	0.96	49	⇑Pn	Pg	14 44 30.2 +0.2
MUO	Muotathal	0.96	49	⇑Pn	Pg	14 44 30.2 +0.2
OG02	Monnetier-Morn	0.96	259	Pg	Pg	14 44 30.3 +0.3
OG02	Monnetier-Morn	0.96	259	Pn	Pg	14 44 30.3 +0.3
OG02	Monnetier-Morn	0.96	259	Pn	Pg	14 44 30.3 +0.3
BRANT	Les Verrieres	0.96	308	⇓Pg	Pg	14 44 30.5 +0.4
BRANT	Les Verrieres	0.96	308	⇓Pn	Pg	14 44 30.5 +0.4
BRANT	Les Verrieres	0.96	308	⇓Pn	Pg	14 44 30.5 +0.4
BRANT	Les Verrieres	0.96	308	⇓Pg	Pg	14 44 30.5 +0.4
BRANT	Les Verrieres	0.96	308	Sg	Sb	14 44 44.8 +1.6
BALST	Balsthal	0.99	5	⇓Pg	Pg	14 44 31.0 +0.3
BALST	Balsthal	0.99	5	⇓Pn	Pg	14 44 31.0 +0.3
BALST	Balsthal	0.99	5	⇓Pn	Pg	14 44 31.0 +0.3
BALST	Balsthal	0.99	5	*e*Pn	Pg	14 44 31.0 +0.3
BALST				Pg	Pn	14 44 31.9 +0.3
BALST	Balsthal	0.99	5	Sn	Sn	14 44 47.0 +1.3
BALST	Balsthal	0.99	5	Sg	Sg	14 44 44.2 +0.5
BALST	Balsthal	0.99	5	⇓Pg	Pg	14 44 31.0 +0.3
LPL	La Plagne	1.02	216	*e*Pn	Pg	14 44 30.5 -0.6
LPL				*e*Sg	Sg	14 44 45.1 +0.7
	comp=E,2µm,0.6s					
LPL	La Plagne	1.02	216	P	Pg	14 44 30.6 -0.6
LPL				S	Sg	14 44 44.1 -0.3
LPG	La Plagne	1.03	214	*e*Pn	Pg	14 44 30.7 -0.6
LPG				*e*Sg	Sg	14 44 45.5 +0.8
	comp=E,1µm,0.3s					
CABF	La Chapelle	1.06	285	*e*Pg	Pg	14 44 31.9 -0.1
CABF				*e*Sg	Sb	14 44 47.3 +1.2
	comp=E,1µm,0.3s					
CABF	La Chapelle	1.06	285	P	Pg	14 44 31.6 -0.4
CABF				SG	Sg	14 44 45.1 -0.8
BOURR	Bourrignon	1.07	347	⇓Pn	Pg	14 44 32.6 +0.3
BOURR	Bourrignon	1.07	347	Sg	Sn	14 44 48.0 +0.3
BOURR				Sn	Sb	14 44 49.4 +3.0
BOURR	Bourrignon	1.07	347	⇓Pg	Pg	14 44 32.5 +0.3
MUGIO	Muggio	1.10	112	P	Pg	14 44 32.4 -0.4
MUGIO				S	Sg	14 44 46.3 -0.8
MUGIO	Muggio	1.10	112	⇓P	Pg	14 44 32.4 -0.4
MUGIO				S	Sg	14 44 46.3 -0.8
MUGIO				AML	AML	
	comp=N,4525µm,0.4s					
MUGIO				AML	AML	
	comp=N,4525µm,1.6s					
MUGIO				AML	AML	
	comp=E,7515µm,0.2s					
CHMF	Charmoille	1.10	325	⇓Pg	Pg	14 44 32.9 +0.1
CHMF				Sg	Sn	14 44 48.7 +0.3
RIVEL	MONT RIVEL	1.21	290	Pg	Pn	14 44 34.8 +0.1
RIVEL				Sg	Sb	14 44 50.0 -0.4
TUE	Stuetta	1.23	83		Pb	14 44 34.3 -0.7
TUE	Stuetta	1.23	83	P	Pb	14 44 34.7 -0.3
TUE				S	Sb	14 44 50.4 -0.6
TUE	Stuetta	1.23	83	⇓P	Pb	14 44 34.7 -0.3
TUE				S	Sb	14 44 51.0 0.0
TUE				AML	AML	
	comp=E,3940µm,0.3s					
TUE				AML	AML	
	comp=N,5395µm,0.8s					
TUE				AML	AML	
	comp=N,7065µm,0.9s					
TUE				AML	AML	
	comp=N,5390µm,0.8s					
TUE				AML	AML	
	comp=E,3935µm,0.3s					
TUE				AML	AML	
	comp=N,5390µm,1.2s					
TUE				AML	AML	
	comp=E,4770µm,0.3s					
TUE				AML	AML	
	comp=N,7065µm,1.1s					
ZUR	Degenried	1.23	34	P	Pn	14 44 35.3 +0.4
ZUR	Degenried	1.23	34	⇑Pg	Pn	14 44 35.3 +0.4
ZUR	Degenried	1.23	34	Sg	Sn	14 44 52.1 +0.5
SULZ	Cheisacher	1.24	17	*e*Pn	Pn	14 44 35.0 +0.1
SULZ				Pg	Pg	14 44 36.1 +0.8
SULZ	Cheisacher	1.24	17	Sg	Sg	14 44 51.8 +0.4
SULZ	Cheisacher	1.24	17	⇑Pn	Pn	14 44 35.0 +0.1
BOUC	Bouclans	1.28	315	⇓Pg	Pn	14 44 35.9 +0.4
BOUC				Pg	Pg	14 44 36.9 +0.7
BOUC				Sn	Sg	14 44 53.6 +0.9
MONC	Moncucco Torin	1.30	169	P	Pg	14 44 37.2 +0.8
MONC	Moncucco Torin	1.30	169	⇓P	Pg	14 44 37.2 +0.8
MONC				AML	AML	
	comp=E,5635µm,0.6s					
MONC				AML	AML	
	comp=E,5630µm,0.6s					
MONC				AML	AML	
	comp=N,6335µm,0.5s					
OGMO	Fort Saint-Gob	1.30	209	P	Pn	14 44 35.4 -0.4
OGMO	Fort Saint-Gob	1.30	209	⇑Pg	Pn	14 44 35.2 -0.6
ENDD	Endenburg	1.37	5	⇑Pn	Pn	14 44 36.3 -0.5
ENDD				Pg	Pg	14 44 38.4 +0.4
ENDD				Sn	Sb	14 44 53.7 -1.3
ENDD				Sg	Sg	14 44 56.5 +0.8
WILA	Wila	1.41	40	*e*Pn	Pn	14 44 37.8 +0.5
WILA				*e*Pg	Pg	14 44 39.7 +1.2
OG35	Corcelles	1.43	259	Pn	Pb	14 44 38.8 +0.6
OG35				Sn	Sg	14 44 58.6 +1.2
PLONS	Plons/SG	1.43	60	*e*Pg	Pg	14 44 39.3 +0.3
PLONS	Plons/SG	1.43	60	⇑P	Pb	14 44 38.4 +0.2
PLONS				S	Sg	14 44 58.9 +1.5
PLONS				AML	AML	
	comp=N,4410µm,0.8s					
PLONS				AML	AML	
	comp=E,5320µm,0.6s					
PLONS				AML	AML	
	comp=E,5320µm,1.4s					
BNI	Bardonecchia	1.44	206	Pn	Pn	14 44 37.5 -0.3
BNI	Bardonecchia	1.44	206	P	Pn	14 44 37.5 -0.3
BNI	Bardonecchia	1.44	206	P	Pn	14 44 38.0 +0.2
BNI	Bardonecchia	1.44	206	⇑P	Pn	14 44 38.0 +0.2
BNI				S	Sn	14 44 57.3 +0.5
BNI				AML	AML	
	comp=E,753µm,0.7s					
BNI				AML	AML	
	comp=E,584µm,0.7s					
BNI				AML	AML	
	comp=N,1260µm,0.5s					
BNI				AML	AML	
	comp=N,1530µm,0.5s					
METMA	Mettma DE	1.44	18	*e*Pn	Pn	14 44 37.3 -0.4
METMA				*e*Pg	Pg	14 44 39.8 +0.5
METMA				Sn	Sn	14 44 56.0 -0.7
METMA				*e*Sg	Sg	14 44 58.5 +0.5
MILN	Milano	1.44	126	P	Pb	14 44 39.2 +0.7
OGSM	Saint Maurice	1.50	241	⇑Pn	Pn	14 44 39.7 +1.1
OGSM				Sn	Sg	14 45 00.7 +0.7
RONF	Ronchamp	1.51	335	Pn	Pn	14 44 38.9 +0.3
RONF				Pg	Pg	14 44 40.7 +0.2
RONF				Sn	Sb	14 44 59.8 +1.1
BHB	Bricherasio	1.52	188	⇑P	Pn	14 44 38.7 -0.1
BHB				S	Sn	14 44 57.6 -1.0
RRL	Rocca Remolon	1.53	201	⇑P	Pn	14 44 39.4 +0.3
RRL				S	Sn	14 45 00.2 +1.1
RRL				AML	AML	
	comp=E,2175µm,0.5s					
RRL				AML	AML	
	comp=N,2490µm,0.5s					
GDM	Grand'Maison	1.53	222	⇑Pn	Pn	14 44 39.6 +0.5
GDM				Sn	Sb	14 45 00.5 +0.8
MOF	Molkenrain	1.54	349	P	Pn	14 44 39.1 0.0
MOF				S	Sg	14 45 01.1 +0.1
MOF	Molkenrain	1.54	349	Pn	Pn	14 44 39.1 0.0
MOF				Pg	Pg	14 44 41.4 +0.4
MOF				Sg	Sg	14 45 01.2 +0.1
MOF	Molkenrain	1.54	349	⇑Pn	Pn	14 44 38.9 -0.2
MOF				Pg	Pg	14 44 41.3 +0.3
MOF				Sn	Sg	14 45 01.1 +0.1
SLE	Schleitheim	1.55	23	P	Pn	14 44 38.8 -0.4
SLE				S	Sg	14 45 02.7 +1.2
SLE	Schleitheim	1.55	23	⇑Pn	Pn	14 44 38.8 -0.4
SLE				*e*Pg	Pg	14 44 41.5 +0.1
SLE				*e*Sg	Sg	14 45 01.9 +0.5
SLE	Schleitheim	1.55	23	⇑Pn	Pn	14 44 38.8 -0.4
HINF	Hinteralfeld	1.55	342	*e*Pn	Pn	14 44 39.1 -0.2
HINF	Hinteralfeld	1.55	342	*e*Pg	Pb	14 44 41.4 +1.0
HINF				*e*Sg	Sb	14 45 01.1 +1.0
	comp=N,2µm,0.2s					
FELD	Feldberg im Sc	1.56	11	⇑*i*Pn	Pn	14 44 38.8 -0.6
FELD				Pg	Pg	14 44 41.5 +0.1
FELD				Sg	Sg	14 45 02.0 +0.2
FELD	Feldberg im Sc	1.56	11	⇑Pn	Pn	14 44 38.9 -0.6
BERGE	Lenzkirch (DE)	1.58	15	*e*Pn	Pn	14 44 39.2 -0.5
BERGE				*e*Pg	Pb	14 44 41.8 +0.9
BERGE				*e*Sg	Sg	14 45 02.2 -0.2
ROTM	Rocchetta Tana	1.59	160	P	Pg	14 44 42.6 +0.5
ROTM				AML	AML	
	comp=E,5810µm,0.5s					
ROTM				AML	AML	
	comp=N,10610µm,0.5s					
KIZ	Kirchzarten	1.63	8	⇑*i*Pn	Pn	14 44 39.6 -0.7
KIZ				Pg	Pg	14 44 42.8 0.0
KIZ				Sn	Sn	14 44 59.3 -2.0
KIZ				Sg	Sg	14 45 03.6 -0.3
KIZ	Kirchzarten	1.63	8	⇑Pn	Pn	14 44 39.6 -0.7
DAVOX	Davos/Dischmat	1.65	74	Pg	Pb	14 44 42.2 +0.2
	comp=N,216nm,0.3s,baz=262,slow=8.3,SNR=269					
DAVOX				Lg	Lg	14 45 05.3
	comp=N,314nm,0.3s,baz=344,slow=19,SNR=18					
DAVOX	Davos/Dischmat	1.65	74	P	Pb	14 44 42.3 +0.2
DAVOX				S	Sg	14 45 06.8 +2.3
DAVOX				AML	AML	
	comp=E,1865µm,0.9s					
DAVOX				AML	AML	
	comp=N,3275µm,0.6s					
DAVOX				AML	AML	
	comp=N,3270µm,0.6s					
DAVOX				AML	AML	
	comp=E,1865µm,1.1s					
BERNI	Berninapass	1.69	87	⇓P	Pb	14 44 42.8 -0.2
BERNI				S	Sg	14 45 05.6 -0.5
BERNI				AML	AML	
	comp=N,1675µm,1.3s					
BERNI				AML	AML	
	comp=E,1270µm,0.9s					
BERNI				AML	AML	
	comp=N,1675µm,0.7s					
BERNI				AML	AML	
	comp=E,1270µm,1.1s					
MBDF	Montbardon	1.71	200	*e*Pg	Pn	14 44 43.0 +1.4
MBDF				*e*Sg	Sb	14 45 06.3 +1.4
	comp=E,2µm,0.6s					
MBDF	Montbardon	1.71	200	P	Pb	14 44 43.3 +0.1
MBDF				SN	Sn	14 45 03.8 +0.2
VOGT	Vogtsburg - To	1.74	2	Pg	Pg	14 44 45.0 +0.1
VOGT	Vogtsburg - To	1.74	2	⇑Pn	Pn	14 44 41.4 -0.4
VOGT	Vogtsburg - To	1.74	2	Sn	Sg	14 45 07.1 -0.4
SARZ	Sarezzano	1.75	147	⇑P	Pb	14 44 45.0 +1.3
SARZ				AML	AML	
	comp=E,4890µm,0.4s					
SARZ				AML	AML	
	comp=E,5010µm,0.4s					
SARZ				AML	AML	
	comp=N,4345µm,1.1s					
SARZ				AML	AML	
	comp=N,4430µm,1.1s					
SARZ				AML	AML	
	comp=E,5015µm,0.4s					
SARZ				AML	AML	
	comp=N,4430µm,0.9s					
SARZ				AML	AML	
	comp=N,4345µm,0.9s					
WALHA	Wallhausen, DE	1.76	36	*e*Pn	Pn	14 44 42.2 +0.1
WALHA				*e*Pg	Pg	14 44 45.5 +0.1
WALHA				*e*Sg	Sg	14 45 09.0 +0.8
EMING	Emmingen-Lipti	1.77	29	*e*Pn	Pn	14 44 41.9 -0.3
EMING				*e*Pg	Pg	14 44 45.7 +0.2
EMING				*e*Sg	Sg	14 45 08.5 -0.1
DAVA	Damuels	1.84	58	*e*Pn	Pn	14 44 44.6 +1.3
	comp=N,16nm,0.2s,SNR=120					
DAVA				*i* Pg	Pg	14 44 47.1 +0.3
	comp=N,382nm,0.5s					
DAVA				*e*Sg	Sg	14 45 11.9 +1.2
	comp=N,2µm,0.4s					
DAVA	Damuels	1.84	58	Pn	Pn	14 44 44.6 +1.3
DAVA				Pg	Pg	14 44 47.2 +0.3
DAVA				Sg	Sg	14 45 12.1 +1.4
ORIF	Oris-en-Rattie	1.86	220	*e*Pg	Pb	14 44 45.8 +0.1
ORIF				*e*Sg	Sb	14 45 11.2 +2.2
	comp=N,1µm,0.8s					
ORIF	Oris-en-Rattie	1.86	220	AML	AML	
	comp=E,1132µm,1.2s					
ORIF				AML	AML	
	comp=N,787µm,0.7s					
ORIF				AML	AML	
	comp=E,1132µm,0.8s					
ORIF	Oris-en-Rattie	1.86	220	Sn	Sb	14 45 09.6 +0.7
ORIF	Oris-en-Rattie	1.86	220	Pn	Pb	14 44 45.6 0.0
HAU	Haudompre	1.86	334	*e*Pn	Pn	14 44 43.5 0.0
HAU	Haudompre	1.86	334	*e*Pg	Pb	14 44 47.0 +1.4
HAU				*e*Sg	Sg	14 45 11.3 -0.1
	comp=E,1µm,0.2s					
ZONE	Zone	1.86	107	P	Pb	14 44 46.4 +0.8
ZONE				S	Sg	14 45 11.1 -0.3
ZONE				AML	AML	
	comp=N,2718µm,1.3s					
ZONE				AML	AML	
	comp=N,2635µm,0.8s					
ZONE				AML	AML	
	comp=E,598µm,0.3s					
ZONE				AML	AML	
	comp=E,2585µm,1.1s					
ZONE				AML	AML	
	comp=E,2585µm,0.9s					
PZZ	Stroppo	1.87	190	⇓P	Pn	14 44 44.0 +0.3
PZZ				S	Sb	14 45 10.2 +0.9
PZZ				AML	AML	
	comp=N,2750µm,0.5s					
PZZ				AML	AML	
	comp=N,2750µm,1.5s					
PZZ				AML	AML	
	comp=E,2895µm,0.6s					
FUORN	Ofenpass-Fuorn	1.88	81	⇑P	Pb	14 44 46.3 +0.3
FUORN				S	Sg	14 45 12.0 +0.1
ECH	Echery	1.89	351	Pn	Pn	14 44 42.3 -1.6
ECH	Echery	1.89	351	P	Pn	14 44 42.3 -1.6
ECH	Echery	1.89	351	*e*Pn	Pn	14 44 43.6 -0.3
ECH				*e*Pg	Pb	14 44 47.5 +1.3
ECH				*e*Sg	Sb	14 45 11.3 +1.4
ECH	Echery	1.89	351	⇑Pn	Pn	14 44 43.6 -0.3
ECH				Pg	Pb	14 44 47.5 +1.3
ECH				Sn	Sb	14 45 11.1 +1.2
ORZI	Orzinuovi	1.89	119	AML	AML	
	comp=N,4455µm,1.0s					
ORZI				AML	AML	
	comp=E,3560µm,0.3s					
CREF	Crivoux	1.92	201	Pn	Pb	14 44 46.8 +0.1
CREF				Sn	Sb	14 45 12.6 +1.9
PCP	Piancastagn	1.93	159	⇓P	Pb	14 44 46.5 -0.4
PCP				AML	AML	
	comp=E,2955µm,0.8s					
PCP				AML	AML	
	comp=N,2460µm,1.4s					
PCP				AML	AML	
	comp=E,2955µm,1.2s					
PCP				AML	AML	
	comp=N,2460µm,0.6s					
BRMO	Bormio	1.94	85	⇑P	Pb	14 44 47.3 +0.2
BRMO				S	Sg	14 45 13.0 -0.9
BRMO				AML	AML	
	comp=N,918µm,1.5s					
BRMO				AML	AML	
	comp=E,1115µm,0.7s					
BRMO				AML	AML	
	comp=N,918µm,0.5s					
BRMO				AML	AML	
	comp=E,1115µm,1.3s					
SURF	Saint Ours	1.94	196	⇑Pn	Pb	14 44 46.9 -0.2
SURF				Sn	Sb	14 45 12.2 +0.8
JAUF	Jausiers	2.00	197	Pn	Pb	14 44 48.2 0.0
JAUF				Sn	Sb	14 45 13.9 +0.7
GUT	Gutenstein	2.02	31	⇑Pn	Pn	14 44 45.0 -0.7
GUT	Gutenstein	2.02	31	Sn	Sb	14 45 13.9 +0.3
OGAG	Argentiere	2.03	201	Pn	Pn	14 44 43.2 -2.7
OGAG				Sn	Sn	14 45 06.3 -5.0
PLYF	Puligny Montra	2.04	288	Pn	Pn	14 44 47.2 +1.2
PLYF				Pg	Pb	14 44 50.2 +1.4
BFO	Black Forest	2.05	14		Pn	14 44 44.9 -1.2
BFO	Black Forest	2.05	14	*e*P	Pn	14 44 44.9 -1.2
BFO	Black Forest	2.05	14	*e*Pn	Pn	14 44 45.3 -0.8
BFO				*e*Sg	Sg	14 45 16.4 -1.0
BOB	Bobbio (Coli)	2.05	140	⇓P	Pb	14 44 50.2 +1.3
MABI	Malga Bissina	2.06	97	P	Pb	14 44 48.5 -0.6
MABI				S	Sb	14 45 16.7 +1.8
MABI				AML	AML	
	comp=N,1350µm,1.2s					
MABI				AML	AML	
	comp=E,1270µm,0.5s					
MABI				AML	AML	
	comp=N,1350µm,0.8s					
MOSI	Grossmontoni	2.07	81	P	Pb	14 44 50.1 +0.7
MOSI				S	Sg	14 45 17.7 -0.4
MOSI				AML	AML	
	comp=E,7100µm,1.5s					
MOSI				AML	AML	
	comp=N,7145µm,0.9s					
MOSI				AML	AML	
	comp=E,7100µm,0.5s					
MOSI				AML	AML	
	comp=N,7145µm,1.1s					
WLS	Welschbruch	2.07	356	P	Pn	14 44 46.2 -0.3
WLS	Welschbruch	2.07	356	⇑Pn	Pn	14 44 46.2 -0.3
WLS				Sg	Sg	14 45 18.0 -0.2
WLS	Welschbruch	2.07	356	⇑Pn	Pn	14 44 46.1 -0.3
CDF	Champ du Feu	2.08	354	*e*Pn	Pn	14 44 46.2 -0.3
CDF	Champ du Feu	2.08	354	*e*Pg	Pg	14 44 51.1 -0.3
CDF				*e*Sn	Sn	14 45 11.4 -1.1
CDF				*e*Sg	Sg	14 45 17.5 -0.8
	comp=N,804nm,0.2s					
QLNO	Quiliano	2.09	165	P	Pb	14 44 49.0 -0.6
QLNO				AML	AML	
	comp=E,794µm,0.4s					
QLNO				AML	AML	
	comp=N,590µm,0.7s					
STV	Sant Anna di V	2.11	185	⇓P	Pn	14 44 47.1 +0.2
STV				AML	AML	
	comp=E,278µm,0.6s					
STV				AML	AML	
	comp=N,338µm,0.7s					
STV				AML	AML	
	comp=N,338µm,1.3s					
RNCA	Ronca, Sant'Ol	2.11	152	P	Pn	14 44 48.4 +1.5
RNCA				AML	AML	
	comp=E,532µm,0.6s					
RNCA				AML	AML	
	comp=N,490µm,0.3s					
GORR	Gorreto	2.12	145	P	Pb	14 44 49.6 -0.4
ENR	Entracque	2.12	183	P	Pn	14 44 47.5 +0.3
ENR				S	Sn	14 45 12.2 -1.4
ENR				AML	AML	
	comp=N,499µm,0.4s					
ENR				AML	AML	
	comp=E,520µm,0.6s					
OBER	Oberstdorf	2.14	59	*e*Pn	Pn	14 44 48.5 +1.1
OBER				*e*Pg	Pg	14 44 53.3 +0.6
OBER				*e*Sg	Sg	14 45 21.6 +1.1
SALO	Salr	2.18	108	Pn	Pn	14 44 48.5 +0.7
SALO	Salr	2.18	108	P	Pn	14 44 49.0 +1.1
SALO				S	Sb	14 45 19.5 +1.3
SALO				AML	AML	
	comp=N,1580µm,0.7s					
SALO				AML	AML	
	comp=E,2065µm,0.6s					
SALO				AML	AML	
	comp=N,1650µm,0.9s					
SALO				AML	AML	
	comp=E,2205µm,0.6s					
SALO				AML	AML	
	comp=N,1650µm,1.1s					
UBR	Ueberruh	2.19	51	*e*Pn	Pn	14 44 48.6 +0.6
UBR				Pg	Pg	14 44 53.4 -0.1
UBR				Sg	Sg	14 45 22.8 +1.0
CANO	Canova, Maglio	2.19	167	⇓P	Pn	14 44 49.9 +1.9
CANO				AML	AML	
	comp=E,2210µm,0.6s					
CANO				AML	AML	
	comp=N,1595µm,0.3s					
CANO				AML	AML	
	comp=E,2210µm,1.4s					
OPP	Oppenau	2.19	11	⇑Pn	Pn	14 44 47.1 -0.9
RORO	Rocca Rossa	2.26	171	⇑P	Pn	14 44 50.9 +2.0
RORO				AML	AML	
	comp=E,572µm,0.6s					
RORO				AML	AML	
	comp=N,461µm,1.5s					
RORO				AML	AML	
	comp=N,461µm,0.5s					
FETA	Feichten	2.27	72	*e*Pn	Pb	14 44 51.9 -0.9
	comp=N,22nm,0.3s,SNR=67					
FETA				*e*Pg	Pg	14 44 55.2 +0.1
	comp=N,105nm,0.3s					
FETA				*e*Sn	Sb	14 45 19.6 -1.3
	comp=N,40nm,0.2s					
FETA				*e*Sg	Sg	14 45 26.3 +1.7
	comp=N,352nm,0.6s					
SPIF	crte de Spivo	2.30	186	⇑Pn	Pn	14 44 50.3 +0.7
ENAUX	Enaux	2.31	194	Pn	Pb	14 44 52.4 -0.9
MGRO	Montegrosso	2.31	176	P	Pn	14 44 51.2 +1.5
MGRO				S	Sn	14 45 19.4 +1.1
MGRO				AML	AML	
	comp=E,686µm,1.6s					
MGRO				AML	AML	
	comp=N,872µm,1.4s					
MGRO				AML	AML	
	comp=E,686µm,0.4s					
MGRO				AML	AML	
	comp=N,872µm,0.6s					
SAOF	Saorge	2.36	180	⇓Pn	Pn	14 44 51.4 +1.0
GAGG	Gaggia	2.36	95	P	Pb	14 44 53.2 -1.1
GAGG				AML	AML	
	comp=E,1935µm,1.3s					
GAGG				AML	AML	
	comp=E,1415µm,0.9s					
GAGG				AML	AML	
	comp=N,1440µm,0.9s					
GAGG				AML	AML	
	comp=E,1935µm,0.7s					
GAGG				AML	AML	
	comp=N,1915µm,0.9s					
LUSI	Trento, Gardas	2.37	98	P	Pn	14 44 52.8 +2.3
LUSI				AML	AML	
	comp=E,1460µm,0.6s					
LUSI				AML	AML	
	comp=N,2695µm,1.0s					
TURF	col de Turini	2.38	183	Pn	Pn	14 44 51.5 +0.8
TURF				Sn	Sb	14 45 23.8 -0.1
SSB	Saint Sauveur	2.38	244	Pn	Pn	14 44 50.6 0.0
SSB	Saint Sauveur	2.38	244	P	Pn	14 44 50.6 0.0
SSB	Saint Sauveur	2.38	244	Pn	Pn	14 44 50.5 -0.1
SSB				Pg	Pb	14 44 55.8 +1.4
OGDI	Digne	2.41	202	Pn	Pb	14 44 54.8 -0.2
IMI	Imperia	2.45	175	P	Pn	14 44 53.4 +1.9
IMI				S	Sn	14 45 23.5 +2.0
MSSA	Maissana	2.45	145	⇓P	Pn	14 44 54.2 +2.6
MSSA				AML	AML	
	comp=N,1210µm,1.3s					
MSSA				AML	AML	
	comp=E,1765µm,1.3s					
MSSA				AML	AML	
	comp=N,1210µm,0.7s					
MSSA				AML	AML	
	comp=E,1765µm,0.7s					
RETA	Reutte	2.46	61	*e*Pn	Pn	14 44 52.8 +1.0
	comp=E,22nm,0.3s,SNR=19					
RETA				*e*Sn	Sn	14 45 22.8 +0.8
	comp=E,54nm,0.2s					
RETA				*e*Sg	Sg	14 45 30.0 -0.7
	comp=E,228nm,0.3s					
RETA	Reutte	2.46	61	Pn	Pn	14 44 53.0 +1.2
MVIF	Mont Vial	2.47	187	⇑Pn	Pn	14 44 53.2 +1.3
MVIF				Sn	Sb	14 45 27.5 +1.0
SBF	Sospel	2.48	182	*e*Pn	Pn	14 44 53.5 +1.4
SBF	Sospel	2.48	182	*e*Pg	Pb	14 44 57.3 +1.0
SBF				*e*Sg	Sg	14 45 30.6 -0.8
SBF	Sospel	2.48	182	P	Pn	14 44 52.2 +0.1
SBF				S	Sn	14 45 22.2 -0.3
PRMA	PARMA	2.49	128	Pn	Pn	14 44 53.0 +0.9
CIEL	Dossenheim-sur	2.49	357	⇑Pn	Pn	14 44 51.8 -0.3
ESCA	l'Escarene	2.52	183	Pn	Pn	14 44 53.9 +1.3
VIVF	Saint-Julien-l	2.52	235	*e*Pn	Pn	14 44 53.2 +0.6
VIVF	Saint-Julien-l	2.52	235	*e*Pg	Pb	14 44 58.9 +1.9

VIVF *e*Sg **Sb** **14 45 31.4 +3.3**
comp=E,566nm,0.3s
VIVF Saint-Julien-I 2.52 235 P **Pn** **14 44 53.2 +0.6**
VIVF S **Sb** **14 45 30.2 +2.1**
ROVR Rover Verones 2.53 105 P **Pn** **14 44 53.8 +1.0**
ROVR S **Sb** **14 45 28.0 -0.4**
ROVR AML AML
comp=N,1535µm,1.1s
ROVR AML AML
comp=N,640µm,1.1s
ROVR AML AML
comp=E,1359µm,0.3s
ROVR AML AML
comp=N,640µm,0.9s
ROVR AML AML
comp=N,1535µm,0.9s
ROVR AML AML
comp=E,520µm,0.3s
SFTF Sexfontaines 2.54 318 *e*Pn **Pn** **14 44 53.6 +0.8**
baz=138
SFTF Sexfontaines 2.54 318 *e*Pg **Pg** **14 45 00.3 +0.1**
SFTF *e*Sg **Sg** **14 45 33.4 +0.3**
comp=E,1µm,0.4s
PAGF Fort de Pagny 2.54 331 *e*Pn **Pn** **14 44 53.7 +0.9**
baz=150
PAGF *e*Sg **Sg** **14 45 33.0 -0.2**
comp=E,1µm,0.5s
GRAM Graiana 2.55 136 P **Pn** **14 44 55.1 +2.1**
GRAM AML AML
comp=E,1685µm,0.8s
GRAM AML AML
comp=N,2945µm,0.6s
GRAM AML AML
comp=E,1685µm,1.2s
DOSS Dosso del Somm 2.56 99 P **Pn** **14 44 55.0 +1.8**
DOSS AML AML
comp=N,1395µm,0.8s
DOSS AML AML
comp=N,1315µm,1.4s
DOSS AML AML
comp=E,1435µm,0.8s
DOSS AML AML
comp=E,1260µm,1.4s
DOSS AML AML
comp=E,1260µm,0.6s
DOSS AML AML
comp=N,1315µm,0.6s
SUBF Surbourg 2.58 4 Sg **Sg** **14 45 34.8 +0.5**
SUBF Surbourg 2.58 4 Pn **Pn** **14 44 53.0 -0.3**
SMF Signal de Mont 2.60 278 *e*Pn **Pn** **14 44 53.8 +0.2**
SMF Signal de Mont 2.60 278 *e*Pg **Pg** **14 45 01.1 -0.2**
SMF *e*Sn **Sn** **14 45 24.3 -0.9**
SMF *e*Sg **Sg** **14 45 33.7 -1.3**
comp=N,260nm,0.2s
SMF Signal de Mont 2.60 278 P **Pn** **14 44 53.8 +0.2**
SMF SG **Sb** **14 45 30.9 +0.7**
MOTA Moosalm 2.62 66 **Pn** **14 44 55.8 +1.7**
MOTA **Sn** **14 45 27.2 +1.4**
MOTA Lg 14 45 36.1
MOTA Moosalm 2.62 66 *e*Pn **Pn** **14 44 55.8 +1.7**
comp=N,24nm,0.2s,SNR=18
MOTA *e*Sn **Sn** **14 45 27.3 +1.4**
comp=N,46nm,0.2s
MOTA *e*Sg **Sg** **14 45 36.1 +0.4**
comp=N,188nm,0.2s
BLAF les Blancs 2.63 205 Pn **Pn** **14 44 55.7 +1.7**
KOSI Kohlern 2.63 86 ⇑P **Pb** **14 44 57.9 -1.0**
KOSI AML AML
comp=E,988µm,0.9s
KOSI AML AML
comp=N,740µm,1.4s
KOSI AML AML
comp=N,740µm,0.6s
CALF Calern 2.63 190 Pn **Pn** **14 44 56.6 +2.4**
SQTA Sankt Quirin 2.64 69 **Pn** **14 44 56.6 +2.3**
SQTA **Pg** **14 45 02.3 0.0**
SQTA **Sn** **14 45 27.8 +1.3**
SQTA Lg 14 45 37.1
SQTA Sankt Quirin 2.64 69 P **Pn** **14 44 56.7 +2.3**
SQTA SN **Sn** **14 45 27.8 +1.3**
SQTA Sankt Quirin 2.64 69 *e*Pn **Pn** **14 44 56.6 +2.3**
comp=N,54nm,0.2s,SNR=34
SQTA *e*Pg **Pg** **14 45 02.3 0.0**
comp=N,97nm,0.3s
SQTA *e*Sn **Sn** **14 45 27.8 +1.3**
comp=N,224nm,0.5s
SQTA *e*Sg **Sg** **14 45 37.1 +0.6**
comp=N,541nm,0.6s
STU Stuttgart 2.66 24 **Pn** **14 44 53.2 -1.3**
STU Stuttgart 2.66 24 P **Pn** **14 44 53.2 -1.3**
STU Stuttgart 2.66 24 *e*Pn **Pn** **14 44 53.2 -1.3**
ROSI Rosskopf 2.71 76 ⇑P **Pb** **14 44 58.4 -1.7**
ROSI AML AML
comp=E,1915µm,0.6s
ROSI AML AML
comp=N,2775µm,0.5s
ROSI AML AML
comp=N,2775µm,1.5s
LOR Lormes 2.71 291 *e*Pn **Pn** **14 44 55.6 +0.4**
baz=107
LOR Lormes 2.71 291 *e*Pg **Pg** **14 45 03.2 -0.4**
baz=108
LOR *e*Sg **Sg** **14 45 37.2 -1.6**
comp=N,646nm,0.5s,baz=107
LOR Lormes 2.71 291 Pg **Pg** **14 45 03.4 -0.2**
LOR Lormes 2.71 291 Pn **Pn** **14 44 55.6 +0.4**
TRIGF Trigance 2.73 198 Pn **Pn** **14 44 58.5 +3.0**
MEZF Maizieres J'vi 2.75 322 *e*Pn **Pn** **14 44 56.7 +1.0**
baz=142
MEZF Maizieres J'vi 2.75 322 *e*Pg **Pg** **14 45 03.8 -0.6**
baz=142
MEZF *e*Sn **Sn** **14 45 28.4 -0.6**
MEZF *e*Sg **Sg** **14 45 40.1 +0.1**
comp=N,945nm,0.4s
SMRF Simiane la Rot 2.76 212 *e*Pn **Pn** **14 44 57.2 +1.3**
SMRF Simiane la Rot 2.76 212 *e*Pg **Pb** **14 45 03.6 +2.6**
SMRF *e*Sg **Sg** **14 45 39.6 -0.6**
comp=N,315nm,0.8s
SAVF Savonnieres en 2.81 325 *e*Pn **Pn** **14 44 57.7 +1.1**
baz=144
SAVF Savonnieres en 2.81 325 *e*Pg **Pg** **14 45 05.6 +0.1**
SAVF *e*Sn **Sn** **14 45 29.6 -0.9**
SAVF *e*Sg **Sg** **14 45 41.5 -0.4**
comp=N,342nm,0.3s
EQUI Equi 2.84 139 P **Pn** **14 44 59.4 +2.5**
EQUI AML AML
comp=E,360µm,1.4s
EQUI AML AML
comp=N,399µm,0.7s
EQUI AML AML
comp=E,360µm,0.6s
CTI Castel Tesino 2.84 95 ⇑P **Pn** **14 44 59.5 +2.5**
CTI AML AML
comp=E,724µm,1.2s
CTI AML AML
comp=N,932µm,0.4s
SSF Saint Saulge 2.89 286 *e*Pn **Pn** **14 44 58.7 +1.1**
SSF Saint Saulge 2.89 286 *e*Pg **Pg** **14 45 06.8 -0.2**
SSF *e*Sg **Sg** **14 45 43.3 -1.1**
comp=N,331nm,0.4s
SSF Saint Saulge 2.89 286 P **Pn** **14 44 58.3 +0.7**
SSF SN **Sn** **14 45 29.9 -2.5**
WATA Walderalm 2.92 69 **Pn** **14 45 00.0 +1.9**
WATA **Sg** **14 45 46.4 +1.2**
WATA Walderalm 2.92 69 *e*Pn **Pn** **14 45 00.0 +1.9**
comp=N,26nm,0.2s,SNR=13
WATA *e*Sg **Sg** **14 45 46.4 +1.2**
comp=N,96nm,0.3s
WTTA Wattenberg 2.94 70 *e*Pn **Pn** **14 45 00.8 +2.4**
comp=N,68nm,0.3s,SNR=15
WTTA *e*Sn **Sb** **14 45 37.6 -2.4**
comp=N,163nm,0.5s
WTTA Sg **Sg** **14 45 46.4 +0.5**
comp=N,404nm,0.4s
WTTA Wattenberg 2.94 70 ⇑P **Pn** **14 45 00.8 +2.4**
WTTA AML AML
comp=N,954µm,0.4s
WTTA AML AML
comp=E,1250µm,0.5s
AVF Avril sur Loir 2.95 280 *e*Pn **Pn** **14 44 58.7 +0.3**
AVF *e*Sg **Sg** **14 45 45.5 -0.7**
comp=E,104nm,0.2s
VLC Villacollemand 2.95 137 **Pn** **14 44 59.7 +1.2**
VLC Villacollemand 2.95 137 P **Pn** **14 45 00.7 +2.2**
VLC AML AML
comp=N,550µm,1.3s
VLC AML AML
comp=E,450µm,1.6s
VLC AML AML
comp=N,583µm,1.3s
VLC AML AML
comp=E,468µm,1.6s
VLC AML AML
comp=E,468µm,0.4s
VLC AML AML
comp=N,550µm,0.7s
VLC AML AML
comp=N,583µm,0.7s
VLC AML AML
comp=E,450µm,0.4s
CGRP Cima Grappa 2.97 97 P **Pn** **14 45 00.8 +1.9**
CGRP AML AML
comp=E,1040µm,0.6s
CGRP AML AML
comp=N,992µm,0.6s
CGRP AML AML
comp=N,974µm,0.6s
CGRP AML AML
comp=N,974µm,1.4s
CGRP AML AML
comp=E,1062µm,0.6s
CGRP AML AML
comp=N,992µm,1.4s
KTD Kalmit 3.00 6 *e*Pn **Pn** **14 44 58.2 -0.9**
TEOL Teolo 3.02 108 Pn **Pn** **14 44 59.8 +0.4**
AGOR Agordo 3.10 90 P **Pb** **14 45 04.6 -2.2**
AGOR AML AML
comp=E,470µm,0.8s
AGOR AML AML
comp=N,502µm,1.2s
AGOR AML AML
comp=E,359µm,1.1s
AGOR AML AML
comp=N,635µm,1.2s
AGOR AML AML
comp=E,470µm,1.2s
AGOR AML AML
comp=E,359µm,0.9s
LMR La Mourre 3.11 195 *e*Pn **Pn** **14 45 01.9 +1.3**
LMR La Mourre 3.11 195 *e*Pg **Pb** **14 45 09.6 +2.8**
LMR *e*Sg **Sn** **14 45 41.8 +4.1**
comp=E,228nm,0.6s
LMR La Mourre 3.11 195 P **Pn** **14 45 02.8 +2.2**
LMR SN **Sn** **14 45 36.4 -1.3**
FUR Furstenfeldbru 3.11 53 *e*Pn **Pn** **14 45 00.6 0.0**
FUR *e*Sg **Sg** **14 45 50.1 -1.3**
ZCCA Zocca 3.12 129 **Pn** **14 45 00.8 +0.1**
NORI Noerdlinger Ri 3.15 40 *e*Pn **Pn** **14 44 59.9 -1.2**
NORI *e*Sg **Sg** **14 45 51.6 -1.0**
RISI Rein 3.16 77 P **Pn** **14 45 04.6 +3.1**
RISI AML AML
comp=E,1115µm,0.4s
RISI AML AML
comp=N,2925µm,0.4s
MAIM Mastiano 3.19 139 P **Pn** **14 45 03.2 +1.6**
MAIM AML AML
comp=E,466µm,0.6s
MAIM AML AML
comp=N,334µm,0.9s
MAIM AML AML
comp=E,466µm,1.4s
MAIM AML AML
comp=N,334µm,1.1s
POPM Popiglio 3.22 135 AML AML
comp=E,782µm,1.1s
POPM AML AML
comp=E,782µm,0.9s
POPM AML AML
comp=N,1010µm,1.3s
BGF Bois d'Agland 3.28 275 *e*Pn **Pn** **14 45 03.1 +0.2**
BGF Bois d'Agland 3.28 275 *e*Pg **Pg** **14 45 13.9 -0.4**
BGF *e*Sn **Sn** **14 45 40.8 -1.1**
BGF *e*Sg **Sg** **14 45 56.1 -0.7**
comp=N,462nm,0.4s
CIMO Cimolais 3.37 89 AML AML
comp=E,397µm,1.6s
CIMO AML AML
comp=E,400µm,1.6s
CIMO AML AML
comp=N,348µm,0.9s
CIMO AML AML
comp=N,350µm,1.0s
CIMO AML AML
comp=E,397µm,0.4s
CIMO AML AML
comp=E,400µm,0.4s
RIVT Riveris 3.41 351 *e*Pn **Pn** **14 45 04.5 -0.2**
RIVT *e*Sg **Sg** **14 45 58.7 -2.3**
ABTA Abfaltersbach 3.43 81 *i* Pn **Pn** **14 45 08.5 +3.4**
comp=E,7.4nm,0.3s,SNR=6.7
ABTA *i* Sn **Sb** **14 45 50.8 -3.4**
comp=E,44nm,0.4s
WLF Walferdange 3.46 344 P **Pn** **14 45 08.5 +3.1**
WLF Walferdange 3.46 344 *d*P **Pn** **14 45 06.5 +1.1**
WLF Walferdange 3.46 344 *e*Pn **Pn** **14 45 06.1 +0.8**
WLF Walferdange 3.46 344 Pn **Pn** **14 45 06.6 +1.2**
LASF Ste Croix 3.47 231 *e*Pn **Pn** **14 45 06.7 +1.1**
LASF Ste Croix 3.47 231 *e*Pg **Pg** **14 45 16.7 -1.4**
LASF *e*Sg **Sb** **14 45 59.9 +4.6**
comp=E,268nm,0.6s
HYF Humbligny 3.51 287 *e*Pn **Pn** **14 45 07.3 +1.1**
HYF Humbligny 3.51 287 *e*Pg **Pg** **14 45 18.1 -0.8**
HYF *e*Sn **Sn** **14 45 46.0 -1.8**
HYF *e*Sg **Sg** **14 46 02.9 -1.5**
ABH Alteburg 3.54 360 *e*Pn **Pn** **14 45 06.3 -0.2**
STAL STALIGIAL 3.56 90 **Pn** **14 45 07.1 +0.3**
STAL STALIGIAL 3.56 90 P **Pn** **14 45 10.0 +3.2**
STAL AML AML
comp=E,521µm,1.5s
STAL AML AML
comp=N,488µm,0.6s
STAL AML AML
comp=N,403µm,1.1s
STAL AML AML
comp=E,428µm,1.5s
STAL AML AML
comp=E,521µm,0.5s
STAL AML AML
comp=N,403µm,0.9s
FVI Forni Avoltri 3.60 84 AML AML
comp=E,280µm,0.4s
FVI AML AML
comp=N,435µm,0.6s
MILB Miltenberg 3.67 18 *e*Pn **Pn** **14 45 06.6 -1.7**
CLUD Cludinico 3.67 86 AML AML
comp=E,228µm,1.1s
CLUD AML AML
comp=E,228µm,0.9s
CLUD AML AML
comp=N,270µm,0.9s
CLUD AML AML
comp=E,252µm,0.8s
CLUD AML AML
comp=N,242µm,1.5s
TCF Toulx Ste Croi 3.72 271 *e*Pn **Pn** **14 45 09.5 +0.5**
TCF Toulx Ste Croi 3.72 271 *e*Pg **Pg** **14 45 21.8 -1.0**
TCF *e*Sn **Sn** **14 45 51.8 -1.1**
TCF *e*Sg **Sg** **14 46 09.3 -1.7**
comp=N,348nm,0.7s
TCF Toulx Ste Croi 3.72 271 P **Pn** **14 45 09.3 +0.3**
TCF SN **Sn** **14 45 50.4 -2.5**
ZOU Zoufplan 3.74 85 AML AML
comp=E,556µm,0.8s
ZOU AML AML
comp=N,456µm,1.6s
ZOU AML AML
comp=N,456µm,1.6s
ZOU AML AML
comp=E,516µm,0.8s
ZOU AML AML
comp=N,456µm,0.4s
ZOU AML AML
comp=N,456µm,0.4s
ZOU AML AML
comp=E,556µm,1.2s
ZOU AML AML
comp=E,516µm,1.2s
NAST IGS Nastaetten 3.86 3 *e*Pn **Pn** **14 45 10.8 -0.1**
BGG Burgeitz 3.87 358 *e*Pn **Pn** **14 45 11.1 +0.1**
CSNT Castellina Chi 3.90 136 P **Pn** **14 45 12.7 +1.2**
CSNT AML AML
comp=E,202µm,0.4s
CSNT AML AML
comp=N,483µm,0.9s
TNS Taunus Mts 3.92 8 *e*Pn **Pn** **14 45 10.6 -1.2**
ASQU Asqua 3.92 129 P **Pn** **14 45 13.3 +1.4**
ASQU AML AML
comp=N,161µm,1.6s
ASQU AML AML
comp=N,161µm,0.4s
ASQU AML AML
comp=E,147µm,0.8s
PGF Pioggiola 3.93 164 *e*Pn **Pn** **14 45 12.8 +0.8**
PGF *e*Sn **Sn** **14 45 55.9 -2.3**
comp=E,61nm,0.6s
PGF Pioggiola 3.93 164 P **Pn** **14 45 12.8 +0.8**
PGF SN **Sn** **14 45 57.9 -0.3**
HILG Hillesheim 3.99 352 *e*Pn **Pn** **14 45 13.1 +0.3**
CLF Chambon-Foret 4.00 297 **Pn** **14 45 13.9 +1.2**
PTCC Patocco-Chiusa 4.00 87 ⇑P **Pn** **14 45 15.6 +2.7**
PTCC AML AML
comp=N,179µm,0.5s
PTCC AML AML
comp=E,190µm,0.7s
PTCC AML AML
comp=E,190µm,1.3s
KBA Koelnbreinsper 4.04 77 *i* Pn **Pn** **14 45 16.1 +2.6**
comp=E,20nm,0.2s,SNR=22
KBA *e*Pg **Pg** **14 45 28.7 -0.1**
comp=E,35nm,0.3s
KBA *i* Sn **Sn** **14 46 04.9 +4.0**
comp=E,16nm,0.2s
KOE Koeppel 4.08 1 *e*Pn **Pn** **14 45 14.0 0.0**
ACOM Acomizza, Ital 4.11 85 ⇑P **Pn** **14 45 17.6 +3.1**
ACOM AML AML
comp=E,339µm,0.8s
ACOM AML AML
comp=E,336µm,0.8s
ACOM AML AML
comp=N,530µm,0.6s
ACOM AML AML
comp=N,515µm,0.6s
CAF Calviac 4.12 252 *e*Pn **Pn** **14 45 14.9 +0.4**
CAF *e*Sg **Sg** **14 46 21.6 -2.2**
comp=N,264nm,0.6s
RCHB Rochefort 4.12 338 *d*P **Pn** **14 45 15.7 +1.2**
RCHB Rochefort 4.12 338 ⇑Pn **Pn** **14 45 15.7 +1.2**
CRE Caprese Michel 4.13 130 P **Pn** **14 45 15.7 +1.0**
CRE AML AML
comp=E,280µm,0.6s
CRE AML AML
comp=N,316µm,0.4s
GRFO Grafenberg 4.14 35 Pn **Pn** **14 45 13.0 -1.8**
GRFO Grafenberg 4.14 35 P **Pn** **14 45 13.0 -1.8**
GRA1 Grafenberg Arr 4.15 35 Pn **Pn** **14 45 12.6 -2.3**
GRF Grafenberg Arr 4.15 35 P **Pn** **14 45 12.6 -2.3**
GRF Grafenberg Arr 4.15 35 *e*Pn **Pn** **14 45 12.7 -2.3**
GIVF Givet 4.18 335 *e*Pn **Pn** **14 45 16.8 +1.4**
GIVF *e*Sg **Sg** **14 46 23.6 -2.3**
comp=N,429nm,0.6s
MYKA Terra Mystica 4.20 84 *i* Pn **Pn** **14 45 18.5 +2.9**
comp=N,5.1nm,0.2s,SNR=5.5
MYKA *e*Pg **Pg** **14 45 32.2 +0.2**
comp=N,40nm,0.5s
MYKA *i* Sn **Sn** **14 46 08.4 +3.7**
comp=N,17nm,0.4s
SABO M.te Sabotino 4.20 93 P **Pn** **14 45 18.0 +2.4**
SABO AML AML
comp=E,1475µm,0.7s
SABO AML AML
comp=N,1560µm,1.2s
SABO AML AML
comp=E,330µm,0.7s
SABO AML AML
comp=N,420µm,0.7s
DOU Dourbes 4.25 333 *e*P **Pn** **14 45 17.4 +1.2**
DOU Dourbes 4.25 333 *d*P **Pn** **14 45 17.5 +1.2**
DOU *d*S **Sn** **14 46 03.2 -2.7**
DOU Dourbes 4.25 333 ⇑Pn **Pn** **14 45 17.4 +1.2**
CASP Castiglione de 4.26 145 Pn **Pn** **14 45 16.8 +0.3**
CASP Castiglione de 4.26 145 P **Pn** **14 45 17.4 +0.9**
CASP AML AML
comp=N,172µm,1.3s
CASP AML AML
comp=E,122µm,1.6s
CASP AML AML
comp=N,172µm,0.7s
CASP AML AML
comp=E,122µm,0.4s
CADS Cadrg 4.27 89 *i* Pn **Pn** **14 45 18.9 +2.2**
STB Steinbach 4.28 354 *e*Pn **Pn** **14 45 17.1 +0.4**
STB *e*Sn **Sn** **14 46 04.6 -2.0**
comp=E,82nm,0.4s
CAFI Castiglion Fio 4.34 132 AML AML
comp=N,100µm,1.4s
CAFI AML AML
comp=E,182µm,0.7s
BAIF Baives 4.34 330 *e*Pn **Pn** **14 45 18.8 +1.2**
BAIF *e*Sn **Sn** **14 46 06.7 -1.5**
BAIF *e*Sg **Sg** **14 46 29.2 -1.8**
comp=E,199nm,0.5s
BAIF Baives 4.34 330 P **Pn** **14 45 18.2 +0.6**
BAIF SN **Sn** **14 46 07.2 -1.0**
BCLA Clavier 4.35 340 *d*P **Pn** **14 45 18.7 +1.1**
BTNL Ternell 4.35 348 *d*P **Pn** **14 45 18.1 +0.4**
BIOA Bad Ischl, Aus 4.36 70 **Pn** **14 45 19.0 +1.2**
BIOA **Pg** **14 45 35.2 +0.1**
BIOA **Sn** **14 46 11.2 +2.5**
BIOA Lg 14 46 33.5
BIOA Bad Ischl, Aus 4.36 70 *i* Pn **Pn** **14 45 19.0 +1.2**
comp=E,12nm,0.3s
BIOA *e*Pg **Pg** **14 45 35.2 +0.1**
comp=E,42nm,0.3s
BIOA *e*Sn **Sn** **14 46 11.2 +2.5**
comp=E,68nm,0.4s
BIOA Sg **Sg** **14 46 33.5 +2.0**
comp=E,180nm,0.5s
RJF Les Rejaudoux 4.36 258 *e*Pn **Pn** **14 45 18.7 +0.8**
RJF Les Rejaudoux 4.36 258 *e*Pg **Pg** **14 45 33.6 -1.5**
RJF *e*Sg **Sg** **14 46 29.4 -2.2**
comp=E,193nm,0.6s
BGES Gesves 4.37 339 *d*P **Pn** **14 45 19.1 +1.2**
BGES *d*S **Sn** **14 46 07.1 -1.7**
BMRD Maredsous 4.38 336 *d*P **Pn** **14 45 19.3 +1.2**
KLL Kalltalsperre 4.38 349 *e*Pn **Pn** **14 45 18.7 +0.6**
VOJS Vojsko 4.39 92 *i* Pn **Pn** **14 45 20.1 +1.8**
MEM Membach 4.39 347 *d*P **Pn** **14 45 19.1 +0.9**
MEM *d*S **Sn** **14 46 07.1 -2.2**
DREG Dreilaegerbach 4.41 349 *e*Pn **Pn** **14 45 18.9 +0.4**
BSTI Sart Tilman 4.45 343 *d*P **Pn** **14 45 20.0 +1.1**
PIEI Pieia 4.50 127 AML AML
comp=N,94µm,0.9s
PIEI AML AML
comp=E,131µm,0.4s
HGN Heimansgroeve 4.55 347 *e*P **Pn** **14 45 21.2 +0.8**
SKDS Skadanscina 4.56 98 *e*Pn **Pn** **14 45 21.6 +1.0**
BEBN Eben Emael 4.63 345 *d*P **Pn** **14 45 22.4 +1.0**
HOBG Hohbusch 4.64 358 *e*Pn **Pn** **14 45 22.0 +0.3**
MURB Monte Urbino 4.68 129 **Pn** **14 45 22.4 +0.1**
SNF Seneffe 4.71 333 *d*P **Pn** **14 45 24.0 +1.4**
LATE Laterza 4.80 139 Pn **Pn** **14 45 25.1 +1.2**
CEY Cerknica 4.81 95 *e*Pn **Pn** **14 45 24.8 +0.8**
MOA Molln 4.81 69 *i* Pn **Pn** **14 45 24.9 +1.0**
comp=E,20nm,0.3s,SNR=10
MOA *e*Pg **Pg** **14 45 42.6 -1.1**
comp=E,41nm,0.4s
MOA *e*Sn **Sn** **14 46 17.8 -1.9**
comp=E,32nm,0.3s
MOA *e*Sg **Sg** **14 46 45.4 -0.5**
comp=E,78nm,0.6s
KNDS Knezji Dol 4.82 97 *i* Pn **Pn** **14 45 25.6 +1.4**
OBKA Obir 4.82 86 *e*Pn **Pn** **14 45 27.0 +2.7**
OBKA Obir 4.82 86 *i* Pn **Pn** **14 45 26.9 +2.6**
comp=E,9.8nm,0.2s
OBKA *e*Sn **Sn** **14 46 21.0 +0.8**
comp=E,34nm,0.5s
GEC2 GERESS Array S 4.84 57 Pn **Pn** **14 45 24.0 -0.4**
GERES GERESS Array B 4.84 57 Pn **Pn** **14 45 24.2 -0.2**
comp=E,7.4nm,0.3s,baz=246,slow=12,SNR=94
GERES Sn **Sn** **14 46 17.4 -3.2**
comp=E,4.9nm,0.3s,baz=241,slow=22,SNR=1.6
GERES Lg Lg 14 46 47.1
comp=E,21nm,0.3s,baz=240,slow=21,SNR=6.5
comp=E,11nm,0.3s
GERES GERESS Array B 4.84 57 **Pn** **14 45 22.3 -2.2**
MTLF Montolieu 4.85 234 *e*Pn **Pn** **14 45 25.8 +1.2**
MTLF Montolieu 4.85 234 *e*Pg **Pg** **14 45 42.3 -2.2**

MTLF *e*Sg **Sg** **14 46 43.0 -4.3**
comp=E,104nm,0.5s
KHC Kasperske Hory 4.91 53 Pn 14 45 24.9 -0.6
KHC Kasperske Hory 4.91 53 *e*P **Pn 14 45 25.0 -0.4**
KHC Kasperske Hory 4.91 53 *e*PN **Pn 14 45 25.0 -0.4**
KHC *e*PG **Pg 14 45 42.8 -2.8**
KHC *e*SG **Sg 14 46 46.2 -3.1**
comp=E,218nm,0.6s
LFF La Frestale 5.00 256 *e*Pn **Pn 14 45 27.8 +1.3**
LFF La Frestale 5.00 256 *e*Pg **Pg 14 45 45.4 -1.8**
LFF *e*Sg **Sg 14 46 48.9 -3.0**
comp=E,180nm,0.5s
LFF La Frestale 5.00 256 P **Pn 14 45 28.9 +2.4**
LAUG Laupendahl 5.03 355 *e*Pn **Pn 14 45 27.2 +0.3**
NKC Novy Kostel 5.07 38 *e*P **Pn 14 45 25.1 -2.4**
NKC Novy Kostel 5.07 38 *e*PN **Pn 14 45 25.1 -2.4**
NKC *e*PG **Pg 14 45 46.9 -1.7**
NKC *e*SG **Sg 14 46 52.0 -2.2**
comp=E,126nm,0.7s
FDMO Fiordimonte 5.14 128 Pn 14 45 29.2 +0.7
SOKA Soboth 5.16 84 *i* Pn **Pn 14 45 30.6 +1.8**
comp=E,6.8nm,0.3s
SOKA *e*Sn **Sn 14 46 31.4 +3.0**
comp=E,3.0nm,0.2s
CESX Cesi 5.17 134 Pn **Pn 14 45 30.4 +1.4**
CKRC Cesky Krumlov 5.18 59 *e*PN **Pn 14 45 29.4 +0.3**
CKRC *e*SG **Sg 14 46 54.6 -3.3**
comp=E,74nm,0.4s
NRCA Norcia 5.29 130 Pn 14 45 31.0 +0.4
MFF Saint Martin d 5.34 276 *e*Pn **Pn 14 45 32.0 +0.7**
MFF *e*Sn **Sn 14 46 30.7 -2.1**
MFF *e*Sg **Sg 14 46 59.7 -3.3**
comp=E,66nm,0.4s
MFF Saint Martin d 5.34 276 P **Pn 14 45 30.0 -1.3**
BOJS Bojanci 5.42 96 *e*Pn **Pn 14 45 34.0 +1.6**
BOJS Bojanci 5.42 96 *i* Pn **Pn 14 45 34.1 +1.8**
ARSA Arzberg 5.53 78 *i* Pn **Pn 14 45 35.0 +1.0**
comp=E,11nm,0.3s,SNR=7.5
ARSA *e*Sn **Sn 14 46 38.7 +1.2**
comp=E,12nm,0.4s
ARSA *e*Sg **Sg 14 47 12.1 +3.0**
comp=E,14nm,0.6s
CAMP Campotosto 5.65 130 Pn **Pn 14 45 36.0 +0.4**
LDF La Druitiere 5.68 296 *e*Pn **Pn 14 45 36.4 +0.4**
LDF La Druitiere 5.68 296 *e*Pg **Pg 14 45 57.9 -2.5**
LDF *e*Sn **Sn 14 46 38.5 -2.7**
LDF *e*Sg **Sg 14 47 10.6 -3.3**
comp=E,124nm,0.5s
LDF La Druitiere 5.68 296 P **Pn 14 45 36.4 +0.4**
LDF SN **Sn 14 46 38.0 -3.2**
CONA Conrad Observa 5.87 71 *i* Pn **Pn 14 45 39.1 +0.5**
comp=E,8.6nm,0.2s,SNR=10
CONA *e*Sn **Sn 14 46 42.4 -3.6**
comp=E,49nm,0.5s
CONA Sg **Sg 14 47 19.9 0.0**
comp=E,15nm,0.3s
PRU Pruhonice 5.91 49 *e*P **Pn 14 45 37.9 -1.2**
PRU Pruhonice 5.91 49 *e*PN **Pn 14 45 37.9 -1.2**
PRU *e*PG **Pg 14 46 00.6 -4.2**
PRU *e*SG **Sg 14 47 16.8 -4.5**
comp=E,79nm,0.5s
FLN La Foliniere 5.97 297 *e*Pn **Pn 14 45 40.3 +0.5**
baz=110
FLN La Foliniere 5.97 297 *e*Pg **Pg 14 46 03.7 -2.1**
FLN *e*Sn **Sn 14 46 46.9 -1.3**
FLN *e*Sg **Sg 14 47 20.4 -2.6**
comp=E,131nm,0.5s,baz=110
FLN La Foliniere 5.97 297 P **Pn 14 45 38.9 -0.9**
GOPC GO Pecny, Ondr 6.00 51 *e*P **Pn 14 45 39.5 -0.9**
GOPC GO Pecny, Ondr 6.00 51 *e*PN **Pn 14 45 39.5 -0.9**
GOPC *e*SG **Sg 14 47 21.4 -2.7**
comp=E,55nm,0.5s
GRR Gorron 6.08 293 *e*Pn **Pn 14 45 41.9 +0.5**
GRR Gorron 6.08 293 *e*Pg **Pg 14 46 05.6 -2.4**
GRR *e*Sn **Sn 14 46 48.1 -2.9**
GRR *e*Sg **Sg 14 47 23.6 -3.1**
comp=E,68nm,0.5s
TREC Trest 6.09 58 *e*P **Pn 14 45 41.2 -0.3**
TREC Trest 6.09 58 *e*PN **Pn 14 45 41.2 -0.3**
TREC *e*SG **Sg 14 47 25.6 -1.3**
comp=E,139nm,1.4s
RONA Rosalia, Austr 6.11 74 Pn 14 45 42.7 +0.8
RONA **Sn 14 46 49.1 -2.7**
RONA Lg 14 47 28.9
RONA Rosalia, Austr 6.11 74 *i* Pn **Pn 14 45 42.7 +0.8**
comp=E,26nm,0.2s,SNR=18
RONA *i* Sn **Sn 14 46 49.1 -2.7**
comp=E,16nm,0.3s
RONA *e*Sg **Sg 14 47 28.9 +1.2**
comp=E,14nm,0.3s
CLL Collm 6.12 34 *e*P **Pn 14 45 43.0 +1.0**
CLL Collm 6.12 34 *e*Pn **Pn 14 45 43.0 +1.0**
CLL *e*x x 14 46 01.0
CLL *e*Pg **Pg 14 46 08.0 -0.7**
CLL *e*x x 14 46 10.0
CLL *e*x x 14 46 15.0
CLL *e*x x 14 46 31.0
CLL *e*Sg **Sg 14 47 26.0 -1.9**
comp=Z,79nm,0.7s
EPF Esparros 6.13 240 *e*Pn **Pn 14 45 42.3 +0.1**
EPF Esparros 6.13 240 *e*Pg **Pg 14 46 06.5 -2.4**
EPF *e*Sg **Sg 14 47 24.8 -3.5**
comp=Z,184nm,0.9s
PVCC Panska Ves 6.26 45 *e*SG **Sg 14 47 30.8 -1.4**
comp=Z,67nm,0.6s
INTR Introdacqua 6.28 131 Pn **Pn 14 45 45.3 +1.1**
SOP Sopron 6.29 74 P **Pn 14 45 45.3 +1.1**
SOP S **Sn 14 46 52.8 -3.2**
KRUC Moravsky 6.54 62 *e*PN **Pn 14 45 47.4 -0.3**
KRUC *e*SN **Sn 14 46 57.9 -4.4**
KRUC *e*SG **Sg 14 47 39.7 -1.7**
A051A Mrakovica 6.67 98 *e*Pn **Pn 14 45 50.9 +1.3**
ETSF Etsaut 6.75 242 *e*Pn **Pn 14 45 54.0 +3.3**
ETSF Etsaut 6.75 242 *e*Pg **Pg 14 46 17.8 -3.0**
ETSF *e*Sg **Sg 14 47 44.7 -3.5**
comp=Z,38nm,0.5s
VRAC Vranov 6.75 61 Pn **Pn 14 45 49.1 -1.6**
comp=Z,2.5nm,0.3s,baz=257,slow=15,SNR=6.6
VRAC Sn **Sn 14 47 06.2 -1.4**
comp=Z,4.7nm,0.3s,baz=348,slow=19,SNR=6.6
VRAC Lg Lg 14 47 47.4
comp=Z,7.5nm,0.3s,baz=9.5,slow=17,SNR=12
comp=Z,5.7nm,0.4s
VRAC Vranov 6.75 61 *e*PN **Pn 14 45 50.4 -0.3**
VRAC *e*SN **Sn 14 47 03.8 -3.8**
VRAC *e*SG **Sg 14 47 45.6 -2.6**
EGYH Egyhazaskeszo 6.77 77 P **Pn 14 45 51.6 +0.7**
EGYH S **Sn 14 47 02.6 -5.4**
MODS Modra-Piesok 6.89 69 *e*P **Pn 14 45 52.7 +0.1**
MODS *e* 14 47 06.3
MODS MLR MLR
comp=Z,100nm,1.0s
MPLH Magyarpolny 6.89 80 P **Pn 14 45 52.7 +0.1**
MPLH S **Sn 14 47 08.5 -2.6**
BLY Banja Luka 6.93 100 *e*Pn Pb 14 46 05.6 -6.4
MGRS Mrkonjic Grad 6.97 103 *e*Pn **Pn 14 45 53.7 +0.1**
UPC Upice 6.99 50 *e*P **Pn 14 45 53.0 -0.8**
UPC Upice 6.99 50 *e*PN **Pn 14 45 53.0 -0.8**
UPC *e*SG **Sg 14 47 52.2 -3.5**
comp=Z,85nm,0.8s
SMOL Smolenice 7.03 68 *e*P **Pn 14 45 55.1 +0.7**
SMOL *e* 14 47 11.0
SJPF Ste Jean 7.05 246 *e*Pn **Pn 14 45 56.0 +1.2**
SJPF *e*Sg **Sg 14 47 53.3 -4.5**
comp=Z,80nm,1.0s
CHVC Chvalec 7.05 50 *e*PN **Pn 14 45 53.7 -1.1**
CHVC *e*SG **Sg 14 47 54.9 -2.9**
comp=Z,73nm,0.7s
DPC Dobruska-Polom 7.07 52 *e*P **Pn 14 45 55.0 0.0**
DPC Dobruska-Polom 7.07 52 *e*PN **Pn 14 45 55.0 0.0**
DPC *e*SG **Sg 14 47 52.7 -5.6**
comp=Z,59nm,0.5s
JQE Queens East 7.08 297 *e*P **Pn 14 45 54.7 -0.4**
JRS Jersey 7.11 297 *e*P **Pn 14 45 55.6 +0.1**
JRS IAML 14 47 15.3
comp=N,36nm,0.2s
JRS IAML 14 47 16.7
comp=E,38nm,0.3s
OSTC Ostas 7.12 51 *e*PN **Pn 14 45 54.7 -1.0**
OSTC *e*SG **Sg 14 47 56.9 -3.1**
comp=E,175nm,1.2s
TIH Tihany 7.13 82 P **Pn 14 45 55.4 -0.4**
JLP Les Platons 7.13 297 *e*P **Pn 14 45 56.3 +0.4**
SRKY Kupres RS 7.14 105 *e*Pn **Pn 14 45 57.5 +1.4**

SGMF Saint Gilles 7.15 289 *e*Pn **Pn 14 45 56.7 +0.6**
SGMF *e*Sn **Sn 14 47 12.8 -4.5**
comp=E,48nm,0.4s
SGMF *e*Sg **Sg 14 47 56.9 -4.0**
comp=E,60nm,0.7s
JSA Saint Aubin 7.16 297 *e*P **Pn 14 45 56.2 0.0**
JSA IAML 14 48 12.3
comp=E,27nm,0.5s
JSA IAML 14 48 20.6
comp=N,34nm,0.6s
JVM Valle D.L. Mar 7.19 297 *e*P **Pn 14 45 56.2 -0.4**
KRLC Kraliky 7.19 55 *e*P **Pn 14 45 56.9 +0.2**
KRLC Kraliky 7.19 55 *e*PN **Pn 14 45 56.9 +0.2**
KRLC *e*SG **Sg 14 47 59.1 -3.2**
comp=N,70nm,0.6s
JAVC Velka Javorina 7.27 66 *e*PN **Pn 14 45 57.9 +0.1**
KOVH Kovagotottos 7.30 88 P **Pn 14 46 00.8 +2.6**
KOVH S **Sn 14 47 19.5 -1.7**
SGRT San Giovanni R 7.46 125 Pn **Pn 14 45 59.2 -1.3**
QUIF Quistinic 7.50 286 *e*Pn **Pn 14 46 00.5 -0.3**
QUIF *e*Sn **Sn 14 47 21.3 -4.5**
QUIF *e*Sg **Sg 14 48 08.1 -3.9**
comp=N,101nm,0.8s
MORC Moravsky Berou 7.51 59 Pn **Pn 14 46 00.4 -0.6**
MORC Moravsky Berou 7.51 59 P **Pn 14 46 00.4 -0.6**
MORC Moravsky Berou 7.51 59 *e*PN **Pn 14 46 00.5 -0.5**
MORC Moravsky Berou 7.51 59 *e*SG **Sg 14 48 12.6 +0.3**
MAUC Maruska 7.53 63 *e*PN **Pn 14 46 01.9 +0.6**
MAUC *e*SG **Sg 14 48 12.1 -0.9**
comp=N,201nm,1.1s
ROSF Rostrenen 7.64 289 *e*Pn **Pn 14 46 04.3 +1.5**
ROSF *e*Sn **Sn 14 47 25.2 -4.1**
ROSF *e*Sg **Sg 14 48 12.2 -4.3**
comp=N,90nm,0.7s
ROSF Rostrenen 7.64 289 *e*P **Pn 14 46 03.0 +0.3**
ROSF *e*S **Sn 14 47 23.7 -5.5**
ROSF IAML 14 47 26.9
comp=E,8.6nm,0.3s
ROSF IAML 14 47 29.7
comp=N,22nm,0.5s
MORH Mrgy, Hungar 7.67 87 P **Pn 14 46 03.4 +0.2**
MORH S **Sn 14 47 28.7 -1.4**
OKC Ostrava-Krasne 7.89 60 *e*P **Pn 14 46 05.6 -0.6**
OKC Ostrava-Krasne 7.89 60 *e*PN **Pn 14 46 05.6 -0.6**
OKC *e*SG **Sg 14 48 21.9 -2.7**
comp=N,67nm,0.8s
VYHS Vyhne 7.93 70 *e*P **Pn 14 46 06.0 -0.9**
VYHS *e* 14 47 30.0
STON Ston 8.01 112 *e*Pn **Pn 14 46 06.8 -1.1**
HAPS Han Pijesak,Bl 8.34 102 *e*Pn **Pn 14 46 14.4 +1.8**
STRD Stroud 8.39 314 *e*P **Pn 14 46 14.8 +1.7**
BRY Bratogost 8.54 110 *e*Pn **Pn 14 46 15.4 +0.1**
PSZ Piszkesteto 8.55 75 Pn **Pn 14 46 12.9 -2.3**
PSZ Piszkesteto 8.55 75 P **Pn 14 46 13.0 -2.3**
PSZ Piszkesteto 8.55 75 P **Pn 14 46 16.1 +0.8**
CWF Charnwood Fore 8.62 321 *e*P **Pn 14 46 15.7 -0.4**
CWF IAML 14 47 49.5
comp=N,45nm,0.3s
CWF IAML 14 47 50.2
comp=E,38nm,0.2s
DYA Yadsworthy 8.68 302 *e*P **Pn 14 46 16.9 -0.1**
DYA IAML 14 47 53.9
comp=E,22nm,0.4s
DYA IAML 14 48 03.9
comp=N,13nm,0.6s
BBLS Lazići 8.73 102 *e*Pn **Pn 14 46 19.5 +1.7**
MONM Monmouth 8.75 313 *e*P **Pn 14 46 18.6 +0.6**
MONM IAML 14 47 56.0
comp=N,46nm,0.4s
MONM IAML 14 47 59.8
comp=E,28nm,0.6s
RUDO Rudo 8.79 104 *e*Pn **Pn 14 46 14.8 -3.8**
MCH1 Michaelchurch 8.94 313 *e*P **Pn 14 46 20.6 0.0**
MCH1 IAML 14 48 00.3
comp=E,24nm,0.3s
MCH1 IAML 14 48 00.4
comp=N,25nm,0.6s
KECS Kecovo 9.01 72 *e*P **Pn 14 46 22.3 +0.7**
OJC Ojcow 9.02 60 Pn **Pn 14 46 20.0 -1.8**
OJC Ojcow 9.02 60 P **Pn 14 46 20.0 -1.8**
HLM1 Long Mynd 9.19 316 *e*P **Pn 14 46 24.4 +0.4**
HLM1 IAML 14 48 05.7
comp=N,30nm,0.6s
HLM1 IAML 14 48 05.8
comp=E,42nm,0.4s
HTL Hartland 9.23 305 *e*P **Pn 14 46 24.3 -0.4**
DRME Dracevica, Mon 9.31 112 *e*Pn **Pn 14 46 25.6 -0.1**
CCA1 Carnmenellis 9.36 299 *e*P **Pn 14 46 27.1 +0.7**
STHS Stebnicka Huta 9.68 67 *e*P **Pn 14 46 30.9 +0.1**
LLW Llanuwychllyn 9.77 316 *e*P **Pn 14 46 32.1 +0.1**
RSBS Rosebush, Pemb 9.83 309 *e*P **Pn 14 46 32.9 +0.1**
RSBS IAML 14 48 21.5
comp=E,17nm,0.3s
RSBS IAML 14 48 23.4
comp=N,13nm,0.2s
KOLS Kolonicke sedl 10.25 70 *e*P **Pn 14 46 37.4 -1.2**
WLF1 Llynfaes 10.39 316 *e*P **Pn 14 46 40.5 +0.1**
EDMD Edmundbyers 10.43 328 *e*P **Pn 14 46 39.9 -1.1**
YRC Rhoscolyn 10.45 316 *e*P **Pn 14 46 42.3 +1.0**
ESDC Sonseca Array 10.76 236 Pn **Pn 14 46 46.5 +0.9**
comp=N,0.3nm,0.3s,baz=51,slow=14,SNR=8.0
comp=N,0.9nm,0.4s
KEK Kerkira 11.13 122 Pn **Pn 14 46 50.3 -0.3**
EKA Eskdalemuir Ar 11.26 327 Pn **Pn 14 46 50.5 -1.8**
baz=139,slow=15
EKA Sn **Sn 14 48 50.9 -7.2**
baz=142,slow=25
comp=N,2.6nm,0.4s
ESK Eskdalemuir 11.26 327 Pn **Pn 14 46 50.5 -1.9**
ESK Eskdalemuir 11.26 327 P **Pn 14 46 50.5 -1.9**
DSB Dublin 11.35 313 Pn **Pn 14 46 51.7 -1.9**
NEWG New Galloway 11.52 324 *e*P **Pn 14 46 55.5 -0.4**
NEWG IAML 14 48 59.5
comp=N,5.9nm,0.2s
NEWG IAML 14 48 59.8
comp=E,7.8nm,0.3s
EBL Broad Law 11.55 329 *e*P **Pn 14 46 56.7 +0.3**
BUR08 Bucovina Ar. S 12.11 77 Pn **Pn 14 47 04.3 +0.2**
KONO Kongsberg 13.38 4⇓ *e*P **Pn 14 47 20.9 -0.4**
NACGM Naroch 14.86 48⇑ *e*P **Pn 14 47 42.8 +1.3**
baz=242
NOA NORSAR Array B 14.88 7 Pn Pn 14 47 37.1 -4.7
comp=E,0.2nm,0.4s,baz=188,slow=14,SNR=1.6
NOA LR LR 14 54 17.5
comp=E,43nm,20.1s,baz=195,slow=41
APE Apeiranthos 16.27 118⇑ *e*P **Pn 14 48 01.5 +1.4**
FINES FINESS Array B 18.53 29 P **P 14 48 26.0 -1.9**
comp=E,1.4nm,0.6s,baz=242,slow=15,SNR=4.6
FINES FINESS Array B 18.53 29 P **P 14 48 27.2 -0.7**
BR131 Keskin Array S 20.11 100⇑ *e*P Pn 14 48 47.7 +0.4
BRTR Keskin Array B 20.11 100 P Pn 14 48 47.4 0.0
comp=E,1.4nm,0.9s,baz=300,slow=11,SNR=4.6
comp=E,1.4nm,0.9s
OBN Obninsk 20.21 54 *e*P **P 14 48 46.2 -0.1**
OBN *e* 14 49 01.8
OBN pmax pmax
comp=Z,3.0nm,0.7s
ANN Anapa 20.90 83 *e*P **P 14 48 50.3 -3.6**
ANN *e*PP Pn 14 48 51.2 -5.2
ANN *e* 14 49 09.4
ANN *e*S **S 14 52 43.1 -3.6**
ANN pmax pmax
comp=Z,24nm,0.7s
VSR Storozhevoye 21.28 65 *e*P **P 14 48 56.2 -1.7**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 21.32 64 *e*P **P 14 48 53.7 -4.6**
KOPT Kop Dagi 24.70 93 P **P 14 49 33.4 +0.4**
KIV Kislovodsk 24.75 83 *e*P **P 14 49 32.1 -1.1**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,14nm,15.0s
ARCES ARCESS Array B 24.92 15 P **P 14 49 34.1 -0.2**
comp=Z,3.7nm,0.8s,baz=204,slow=11,SNR=5.4
comp=Z,3.7nm,0.8s
KBZ Khabaz 24.97 83 P **P 14 49 36.4 +1.4**
comp=Z,1.5nm,0.7s,baz=333,slow=18,SNR=1.8
comp=Z,1.5nm,0.7s
KBZ Khabaz 24.97 83⇑ *e*P **P 14 49 33.6 -1.4**
KBZ pmax pmax
comp=Z,6.0nm,1.4s
BELG Belogornoye 26.51 62⇓ *e*P **P 14 49 47.4 -1.4**
BELG pmax pmax
comp=Z,1.0nm,0.9s
ARU Arti 32.65 53 P **P 14 50 45.7 +2.3**
comp=Z,1.4nm,0.5s,baz=185,slow=3.7,SNR=4.0
comp=Z,1.4nm,0.5s
ARU Arti 32.65 53*c i*P **P 14 50 44.6 +1.2**
ARU 14 51 48.0
ARU S **S 14 56 02.6 +3.5**
ARU SS **SnSn 14 57 56.8 +3.3**
ARU pmax pmax
comp=Z,8.0nm,1.8s
TORD Torodi Ar. Bea 33.46 190 P **P 14 50 52.5 +1.8**
comp=Z,0.2nm,0.5s,baz=359,slow=9.5,SNR=2.3
comp=Z,0.2nm,0.5s
ABKAR Akbulak array 34.72 66 P **P 14 51 01.4 0.0**
CHGR Chuyangaron 45.03 77 P **P 14 52 27.4 +0.2**
CHGR IAmb IAmb 14 52 39.2
comp=Z,9.4nm,1.4s
CHGR Chuyangaron 45.03 77 P **P 14 52 27.5 +0.2**
CHGR pmax pmax
comp=Z,9.0nm,1.4s
EUNU Eureka 45.43 346 P **P 14 52 29.4 -0.5**
EUNU IAmb IAmb 14 53 05.3
comp=Z,4.9nm,1.4s
KSH Kashi 49.13 72 P **P 14 53 00.6 +1.3**
MKAR Makanchi Array 49.50 61 P **P 14 53 01.0 -0.9**
comp=Z,0.4nm,0.8s,baz=302,slow=8.4,SNR=3.0
comp=Z,0.4nm,0.8s
WMQ Urumqi 54.29 61 *e*P **P 14 53 40.5 +2.7**
PZH PanZhiHua 74.04 68 P **P 14 55 47.4 -0.3**
PDAR Pinedale Array 75.21 317 LR LR 15 31 31.0
comp=Z,20nm,18.2s,baz=56,slow=38
KMI Kunming 75.64 69 ⇓P **P 14 55 58.8 +1.7**

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*ZUR **24** 14:45:04.3, 46°.34N×7°.58E, h7km, MLh2.8/7, Error ellipse: s-maj=1.5km s-min=0.4km az=285.0*
*LDG **24** 14:45:04.2±0.0, 46°.34N×7°.58E, h8km, Ml3.6/13, Error ellipse: s-maj=0.6km s-min=0.5km az=2.0*
*STR **24** 14:45:04.9±0.5, 46°.N±.3°×°±°, h0km, MLv3.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=65.2, preliminary*
ISC 24 14:45:04.5±0.8, 46°.35N±0°.02×7°.56E±0°.02, h9km±4km, n57, σ0°79/76, 15C-13D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBD	**Leukerbad**	**0.06**	**53**	⇑Pg	**Pg**	**14 45 06.4**	**-0.2**
LKBD	**Leukerbad**	**0.06**	**53**	⇑Pg	**Pg**	**14 45 06.4**	**-0.2**
LKBD				Sg	**Sg**	**14 45 07.7**	**-0.3**
LKBD2	**Leukerbad 2**	**0.06**	**70**	⇑Pg	**Pg**	**14 45 06.4**	**-0.2**
LKBD2	**Leukerbad 2**	**0.06**	**70**	⇑Pg	**Pg**	**14 45 06.4**	**-0.2**
LKBD2				Sg	**Sg**	**14 45 07.8**	**-0.5**
SIEB	**Ecole de Borzu**	**0.06**	**198**	⇑Pg	**Pg**	**14 45 06.3**	**-0.2**
SIEB	**Ecole de Borzu**	**0.06**	**198**	⇑Pg	**Pg**	**14 45 06.3**	**-0.2**
SIEB				Sg	**Sg**	**14 45 07.6**	**-0.2**
VANNI	**Vissoie, Val d**	**0.14**	**170**	⇑Pg	**Pg**	**14 45 07.6**	**-0.1**
VANNI	**Vissoie, Val d**	**0.14**	**170**	⇑Pg	**Pg**	**14 45 07.6**	**-0.1**
VANNI				Sg	**Sg**	**14 45 09.7**	**-0.3**
LAUCH	**Lauchernalp**	**0.16**	**67**	⇓Pg	**Pg**	**14 45 07.8**	**-0.1**
LAUCH	**Lauchernalp**	**0.16**	**67**	⇓Pg	**Pg**	**14 45 07.8**	**-0.1**
LAUCH				Sg	**Sg**	**14 45 10.1**	**-0.4**
SIOO	**Sion-Ophtalmol**	**0.17**	**226**	⇑Pg	**Pg**	**14 45 08.1**	**0.0**
SIOO	**Sion-Ophtalmol**	**0.17**	**226**	⇑Pg	**Pg**	**14 45 08.1**	**0.0**
SIOV	**Sion-Valere**	**0.18**	**229**	⇑Pg	**Pg**	**14 45 08.1**	**-0.1**
SIOV	**Sion-Valere**	**0.18**	**229**	⇑Pg	**Pg**	**14 45 08.1**	**-0.1**
SENIN	**Lac Senin/Sane**	**0.18**	**273**	⇓Pg	**Pg**	**14 45 08.4**	**0.0**
SENIN	**Lac Senin/Sane**	**0.18**	**273**	⇓Pg	**Pg**	**14 45 08.4**	**0.0**
SENIN				Sg	**Sg**	**14 45 11.4**	**+0.3**
SVIO	**Visp Obere Sta**	**0.23**	**106**	⇓Pg	**Pg**	**14 45 08.8**	**-0.3**
SVIO	**Visp Obere Sta**	**0.23**	**106**	⇓Pg	**Pg**	**14 45 08.8**	**-0.3**
SVIO				Sg	**Sg**	**14 45 11.8**	**-0.5**
EMBD	**Embd, Matterta**	**0.23**	**126**	Sg	**Sg**	**14 45 11.8**	**-0.6**
EMBD	**Embd, Matterta**	**0.23**	**126**	Sg	**Sg**	**14 45 11.8**	**-0.6**
EMBD	**Embd, Matterta**	**0.23**	**126**	⇓Pg	**Pg**	**14 45 08.9**	**-0.3**
SVIL	**Visp Littennar**	**0.23**	**105**	Pg	**Pg**	**14 45 09.0**	**-0.2**
SVIL	**Visp Littennar**	**0.23**	**105**	Pg	**Pg**	**14 45 09.0**	**-0.2**
SVIL				Sg	**Sg**	**14 45 12.1**	**-0.3**
SVIT	**Visp-Terbiners**	**0.23**	**106**	⇓Pg	**Pg**	**14 45 08.9**	**-0.3**
SVIT	**Visp-Terbiners**	**0.23**	**106**	⇓Pg	**Pg**	**14 45 08.9**	**-0.3**
SVIT				Sg	**Sg**	**14 45 12.0**	**-0.4**
SNIB	**St. Niklaus Ba**	**0.24**	**136**	Sg	**Sg**	**14 45 12.3**	**-0.4**
SGRA	**Graechen Ausbl**	**0.25**	**130**	Pg	**Pg**	**14 45 09.3**	**-0.2**
SGRA	**Graechen Ausbl**	**0.25**	**130**	Pg	**Pg**	**14 45 09.3**	**-0.2**
SGRA				Sg	**Sg**	**14 45 12.7**	**-0.3**
BIBA	**Brigerbad**	**0.26**	**101**	⇓Pg	**Pg**	**14 45 09.4**	**-0.3**
BIBA	**Brigerbad**	**0.26**	**101**	⇓Pg	**Pg**	**14 45 09.4**	**-0.3**
BIBA				Sg	**Sg**	**14 45 12.7**	**-0.5**
DIX	**Grande Dixence**	**0.29**	**201**	⇑Pg	**Pg**	**14 45 10.1**	**-0.3**
DIX	**Grande Dixence**	**0.29**	**201**	⇑Pg	**Pg**	**14 45 10.1**	**-0.3**
DIX	**Grande Dixence**	**0.29**	**201**	Sg	**Sg**	**14 45 14.0**	**-0.4**
DIX	**Grande Dixence**	**0.29**	**201**	⇑Pg	**Pg**	**14 45 10.1**	**-0.3**
SBRS	**Brig, Spital**	**0.29**	**97**	⇓Pg	**Pg**	**14 45 10.1**	**-0.3**
SBRS	**Brig, Spital**	**0.29**	**97**	⇓Pg	**Pg**	**14 45 10.1**	**-0.3**
SBRS				Sg	**Sg**	**14 45 13.9**	**-0.3**
GRYON	**Gryon**	**0.33**	**252**	Sg	**Sg**	**14 45 15.6**	**+0.2**
SIMPL	**Simplonpass**	**0.34**	**110**	Pg	**Pg**	**14 45 10.9**	**-0.4**
SIMPL	**Simplonpass**	**0.34**	**110**	Pg	**Pg**	**14 45 10.9**	**-0.4**
SIMPL				Sg	**Sg**	**14 45 15.0**	**-0.6**
OGSI	**Sixt**	**0.63**	**243**	Pg	**Pn**	**14 45 20.4**	**+0.7**
OGSI				Sg	**Sg**	**14 45 24.8**	**-0.1**
LPL	**La Plagne**	**1.02**	**215**	*e*Pg	**Pg**	**14 45 23.5**	**-0.5**
LPL				*e*Sg	**Sg**	**14 45 37.0**	**-0.3**
	210nm,0.7s						
LPG	**La Plagne**	**1.03**	**214**	*e*Pg	**Pg**	**14 45 23.6**	**-0.6**
LPG				*e*Sg	**Sg**	**14 45 37.1**	**-0.4**
	165nm,0.5s						
CABF	**La Chapelle**	**1.05**	**285**	*e*Sg	**Sg**	**14 45 38.2**	**-0.1**
	685nm,0.7s						
SULZ	**Cheisacher**	**1.23**	**18**	Sg	**Sn**	**14 45 45.6**	**+0.8**
SULZ	**Cheisacher**	**1.23**	**18**	Pg	**Pg**	**14 45 28.7**	**+0.5**
BOUC	**Bouclans**	**1.27**	**315**	Pg	**Pg**	**14 45 29.4**	**+0.7**
BOUC				Sg	**Sg**	**14 45 45.7**	**+0.5**
HINF	**Hinteralfeld**	**1.54**	**342**	*e*Pg	**Pb**	**14 45 33.1**	**-0.2**
HINF				*e*Sg	**Sb**	**14 45 53.4**	**+0.5**
	155nm,0.3s						
SLE	**Schleitheim**	**1.55**	**24**	Pn	**Pg**	**14 45 33.9**	**-0.3**
MBDF	**Montbardon**	**1.72**	**199**	*e*Pg	**Pb**	**14 45 36.2**	**-0.1**
MBDF				*e*Sg	**Sb**	**14 45 58.3**	**+0.2**
	111nm,0.6s						
HAU	**Haudompre**	**1.85**	**334**	*e*Sg	**Sb**	**14 46 02.7**	**+1.0**
	144nm,0.4s						
CDF	**Champ du Feu**	**2.07**	**355**	*e*Sg	**Sb**	**14 46 09.8**	**+1.7**
	88nm,0.4s						
VIVF	**Saint-Julien-l**	**2.52**	**235**	*e*Sg	**Sg**	**14 46 23.5**	**-1.9**
	56nm,0.4s						
SMF	**Signal de Mont**	**2.59**	**278**	*e*Sg	**Sg**	**14 46 25.8**	**-1.7**
	44nm,0.3s						
LOR	**Lormes**	**2.70**	**291**	*e*Sg	**Sg**	**14 46 29.5**	**-1.8**
	58nm,0.3s						
MEZF	**Maizieres J'vi**	**2.74**	**323**	*e*Sg	**Sg**	**14 46 30.7**	**-1.8**
	188nm,0.7s						
GIVF	**Givet**	**4.17**	**335**	*e*Sg	**Sg**	**14 47 15.4**	**-3.0**
	34nm,0.4s						
BAIF	**Baives**	**4.33**	**330**	*e*Sg	**Sg**	**14 47 20.3**	**-3.2**
	32nm,0.7s						

ZUR 24 14:57:43.5, 46°.33N×7°.58E, h8km±1km, MLh0.7/6, 5C-1D, Error ellipse: s-maj=2.2km s-min=0.6km az=83.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIEB	**Ecole de Borzu**	**0.04**	**219**	⇑Pg	Pg	14 57 45.7	+0.4
LKBD2	**Leukerbad 2**	**0.07**	**47**	⇑Pg	Pg	14 57 46.0	+0.2
LKBD2				Sg	Sg	14 57 47.4	+0.1
LKBD	**Leukerbad**	**0.07**	**32**	⇑Pg	Pg	14 57 45.9	+0.2
LKBD				Sg	Sg	14 57 47.3	+0.1
VANNI	**Vissoie, Val d**	**0.12**	**173**	Sg	Sg	14 57 49.0	+0.6
LAUCH	**Lauchernalp**	**0.16**	**58**	⇑Pg	Pg	14 57 47.4	+0.3
LAUCH				Sg	Sg	14 57 49.8	+0.3
SIOV	**Sion-Valere**	**0.17**	**237**	Pg	Pg	14 57 47.5	+0.3
SIOV				Sg	Sg	14 57 50.0	+0.3
SENIN	**Lac Senin/Sane**	**0.19**	**280**	Pg	Pg	14 57 47.8	+0.2
SENIN				Sg	Sg	14 57 50.7	+0.3
DIX	**Grande Dixence**	**0.28**	**205**	⇑Pg	Pg	14 57 49.5	+0.3
DIX				Sg	Sg	14 57 53.2	+0.3
SIMPL	**Simplonpass**	**0.32**	**106**	⇓Pg	Pg	14 57 50.4	+0.4
SIMPL				Sg	Sg	14 57 54.5	+0.3
GRYON	**Gryon**	**0.33**	**256**	Pg	Pg	14 57 50.3	+0.2
GRYON				Sg	Sg	14 57 54.8	+0.2

*IDC **24** 14:58:02.9±3.4, 30.°93N×141.°94E, h0km, mb3.6/5, mbtmp3.6/8, ML3.3/3, MS3.0/4, Error ellipse: s-maj=136.4km s-min=17.5km az=72.0*
*JMA **24** 14:58:07.0±0.5, 32.°N±2.°×14.°2E±.°, h0km, MV4.1/24, NEAR TORISHIMA IS*
ISC 24 14:58:05.8±1.3, 31.°13N±0.°09×142.°2E±0.°1, h24km, n21, σ1§58/26, mb3.7/5, MS3.4/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.80**	**314**	*eP*	**Pn**	**14 59 49.9**	**+0.8**
JHCJ				*eS*	**Sn**	**14 59 21.8**	**-0.2**
JHJ	**Hachijo jima 2**	**2.84**	**315**	Pn	**Pn**	**14 58 49.1**	**-0.5**
	12nm,0.3s,baz=252,slow=21,SNR=1.3						
JHJ				Sn	**Sn**	**14 59 21.4**	**-1.6**
	24nm,0.3s,baz=91,slow=22,SNR=1.7						
	48nm,0.3s						
BSO1	**Boso 1**	**3.65**	**344**	*eP*	**Pn**	**14 59 01.6**	**+1.3**
BSO1				*eS*	**Sn**	**14 59 41.3**	**-1.1**
BSO3	**Boso 3**	**3.92**	**339**	*eP*	**Pn**	**14 59 04.0**	**-0.2**
JOD2	**Odawara 2**	**4.87**	**329**	P	**Pn**	**14 59 18.8**	**+1.3**
JHU	**Hanno**	**5.29**	**334**	P	**Pn**	**14 59 24.5**	**+1.1**
JHU				S	**Sn**	**15 00 20.2**	**-3.4**
JYT	**Yasato**	**5.34**	**343**	P	**Pn**	**14 59 26.4**	**+2.4**
JYT				*eS*	**Sn**	**15 00 25.2**	**+0.4**
JRY	**Ryogami san**	**5.58**	**332**	P	**Pn**	**14 59 29.0**	**+1.6**
JRY				*eS*	**Sn**	**15 00 29.1**	**-1.7**
JHO	**Hitachi**	**5.62**	**347**	P	**Pn**	**14 59 28.4**	**+0.5**
JHO				*eS*	**Sn**	**15 00 28.7**	**-3.1**
JAG	**Ashikaga**	**5.74**	**337**	P	**Pn**	**14 59 29.9**	**+0.3**
JAG				*eS*	**Sn**	**15 00 32.0**	**-2.7**
MJAR	**Matsushiro Arr**	**6.32**	**330**	Pn	**Pn**	**14 59 38.8**	**+1.2**
	0.4nm,0.3s,baz=151,slow=13,SNR=25						
MJAR				Sn	**Sn**	**15 00 50.6**	**+1.6**
	0.1nm,0.3s,baz=153,slow=27,SNR=1.9						
	2.1nm,0.3s						
KSRS	**Korea Array**	**13.36**	**302**	LR	LR	15 06 03.1	
	comp=Z,37nm,18.4s,baz=70,slow=36						
KLR	**Kul'dur**	**19.72**	**339**	P	**Pn**	**15 02 35.4**	**+0.4**
	0.2nm,0.3s,baz=141,slow=10,SNR=2.3						
	0.8nm,0.5s						
SONM	**Songino Array**	**31.91**	**312**	P	**P**	**15 04 30.6**	**+1.1**
	0.2nm,0.4s,baz=99,slow=7.4,SNR=2.4						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.98**	**262**	LR	LR	15 24 04.3	
	comp=Z,9.1nm,18.6s,baz=145,slow=38						
ZALV	**Zalesovo Beam**	**46.50**	**317**	P	**P**	**15 06 31.2**	**+0.3**
	0.4nm,0.3s,baz=98,slow=6.3,SNR=1.5						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**47.98**	**307**	P	**P**	**15 06 43.2**	**+0.6**
	0.6nm,0.7s,baz=89,slow=7.5,SNR=4.5						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**51.34**	**189**	P	**P**	**15 07 07.0**	**-1.4**
	0.5nm,0.3s,baz=6.5,slow=7.7,SNR=25						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**55.06**	**189**	P	**P**	**15 07 35.0**	**-0.8**
	0.5nm,0.7s,baz=0.5,slow=5.4,SNR=11						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**55.12**	**316**	LR	LR	15 30 59.7	
	comp=Z,28nm,19.3s,baz=273,slow=36						
MMAI	**Mount Meron Ar**	**85.92**	**306**	LR	LR	15 54 57.8	
	comp=Z,13nm,18.2s,baz=180,slow=40						

*MOS **24** 15:01:24.0±0.0, 42.°57N×48.°26E, h12km, MPVA3.8*
*DRS **24** 15:01:26.3±0.0, 42.°59N×48.°32E, h16km*
ISC 24 15:01:25.5±1.8, 42.°57N±0.°04×48.°31E±0.°06, h4km±11km, n20, σ0§76/40, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.49**	**257**	*ePg*	**Pb**	**15 01 36.3**	**-0.4**
SGKR				*eSg*	**Sb**	**15 01 44.1**	**-0.1**
DRN	**Derbent**	**0.54**	**178**	*ePg*	**Pb**	**15 01 37.3**	**-0.2**
DRN				*eSg*	**Sb**	**15 01 46.1**	**+0.6**
URKR	**Urkarakh**	**0.64**	**231**	*ePg*	**Pg**	**15 01 38.3**	**+0.5**
URKR				*eSg*	**Sb**	**15 01 48.0**	**-0.7**
KANR	**Karaman**	**0.87**	**316**	*ePg*	**Pg**	**15 01 42.6**	**+0.5**
KANR				*eSg*	**Sb**	**15 01 54.8**	**-0.3**
BUJR	**Buynaksk**	**0.92**	**287**	*ePg*	**Pg**	**15 01 43.6**	**+0.5**
BUJR				*eSg*	**Sb**	**15 01 56.4**	**-0.2**
KMKR	**Kumukh**	**1.00**	**244**	*ePg*	**Pg**	**15 01 44.5**	**0.0**
KMKR				*eSg*	**Sb**	**15 01 59.0**	**+0.1**
GNBR	**Gunib**	**1.01**	**260**	*ePg*	**Pg**	**15 01 44.5**	**-0.3**
GNBR				*eSg*	**Sb**	**15 01 59.2**	**-0.1**
KRNR	**Karanay**	**1.06**	**285**	*ePg*	**Pg**	**15 01 44.8**	**-1.0**
KRNR				*eSg*	**Sg**	**15 02 00.7**	**+1.0**
UNCR	**Uncukul**	**1.13**	**278**	*ePg*	**Pg**	**15 01 46.9**	**-0.2**
UNCR				*eSg*	**Sg**	**15 02 02.4**	**+0.8**
AKT	**Akhty**	**1.17**	**202**	*i Pg*	**Pg**	**15 01 47.0**	**-0.9**
AKT				*eSg*	**Sb**	**15 02 04.6**	**+0.8**
DBC	**Dubki**	**1.18**	**293**	*ePg*	**Pg**	**15 01 47.0**	**-1.1**
DBC				*eSg*	**Sb**	**15 02 04.4**	**+0.3**
XNZR	**Khunzakh**	**1.18**	**269**	*ePg*	**Pg**	**15 01 46.9**	**-1.2**
XNZR				*eSg*	**Sg**	**15 02 03.7**	**+0.2**
DLMR	**Dylym**	**1.33**	**293**	*ePg*	**Pg**	**15 01 49.9**	**-1.1**
DLMR				*eSg*	**Sb**	**15 02 09.4**	**+0.9**
BTLR	**Botlikh**	**1.54**	**274**	*ePg*	**Pn**	**15 01 54.1**	**+0.3**
BTLR				*eSg*	**Sb**	**15 02 15.2**	**+0.7**
DVE	**Vedeno**	**1.65**	**284**	*ePg*	**Pn**	**15 01 54.1**	**-1.2**
DVE				*eSg*	**Sn**	**15 02 16.6**	**-0.5**
LGD	**Lagodekhi**	**1.70**	**245**	P	**Pn**	**15 01 55.7**	**-0.2**
LGD				S	**Sb**	**15 02 19.8**	**+0.8**
SHTL	**Shatili**	**2.33**	**273**	P	**Pn**	**15 02 05.9**	**+1.2**
SHTL				S	**Sb**	**15 02 37.2**	**-0.1**
LACR	**Lac**	**2.97**	**276**	*ePn*	**Pb**	**15 02 19.1**	**+0.1**
LACR				*eSn*	**Sb**	**15 02 55.6**	**0.0**
ZEI	**Tsey**	**3.26**	**275**	*i Pn*	**Pg**	**15 02 29.7**	**+1.8**
ZEI				*eSn*	**Sg**	**15 03 08.5**	**-1.6**
DMNI	**Dmanisi**	**3.31**	**249**	P	**Pn**	**15 02 18.2**	**0.0**
DMNI				S	**Sn**	**15 02 58.2**	**+0.2**

*ARE **24** 15:21:01±3.1, 11.°8S±0.°1×77.°1W±0.°1, h69km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=147.0*
*NEIC **24** 15:21:02.8±1.6, 11.°7S±0.°1×76.°9W±0.°2, h71km±8km, mb4.4/4, ML4.3(ARE), Error ellipse: s-maj=22.6km s-min=15.3km az=71.0*
*IDC **24** 15:21:02.2±0.7, 11.°88S×76.°95W, h79km±6km, mb3.5/4, mbtmp4.0/7, MS2.5/1, Error ellipse: s-maj=15.5km s-min=11.9km az=116.0*
ISC 24 15:21:02.5±0.8, 11.°77S±0.°08×76.°9W±0.°1, h79km±7km, n42, σ1§66/39, mb3.8/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.22**	**172**	P	**Pn**	**15 21 14.5**	**+0.2**
	2μm,0.3s,baz=319,slow=6.9,SNR=663						
NNA				S	**Sn**	**15 21 23.8**	**+0.8**
	4μm,0.3s,baz=279,slow=21,SNR=42						
NNA	**Nana**	**0.22**	**172**	Pn	**Pn**	**15 21 14.4**	**0.0**
NNA				Sn	**Sn**	**15 21 22.4**	**-0.6**
ATAH	**Atahualpa**	**4.84**	**342**	P	**Pn**	**15 22 13.8**	**+0.6**
	42nm,0.3s,baz=140,slow=4.1,SNR=30						
ATAH				S	**Sn**	**15 23 11.3**	**+3.0**
	58nm,0.7s,baz=44,slow=9.2,SNR=5.2						
ATAH				LR	LR	15 24 18.7	
	comp=Z,52nm,18.2s,baz=139,slow=40						
BOSC	**San Juan Bosco**	**8.71**	**349**		**Pn**	**15 23 01.6**	**-4.3**
AP01	**Chacalluta**	**9.11**	**137**	Pn	**Pn**	**15 23 13.1**	**+1.9**
PB12	**IPOC Station P**	**9.29**	**138**	Pn	**Pn**	**15 23 15.3**	**+1.5**
COHC	**Cochancay**	**9.54**	**346**		**Pn**	**15 23 16.6**	**-0.4**
LPAZ	**La Paz**	**9.60**	**119**	P	**Pn**	**15 23 19.0**	**+0.5**
	3.0nm,0.5s,baz=289,slow=6.3,SNR=11						
LPAZ	**La Paz**	**9.60**	**119**	Pn	**Pn**	**15 23 19.3**	**+0.8**
PB16	**IPOC Station P**	**9.66**	**133**	Pn	**Pn**	**15 23 19.8**	**+0.6**
PB11	**IPOC Station P**	**10.56**	**140**	Pn	**Pn**	**15 23 30.2**	**-0.9**
GO01	**Chusmiza**	**10.79**	**138**		**Pn**	**15 23 34.0**	**-0.5**
PB08	**IPOC Station P**	**11.15**	**139**	Pn	**Pn**	**15 23 39.4**	**0.0**
PB01	**IPOC Station P**	**11.63**	**143**	Pn	**Pn**	**15 23 46.7**	**+1.0**
PB07	**IPOC Station P**	**11.95**	**147**	Pn	**Pn**	**15 23 52.4**	**+2.3**
PB09	**IPOC Station P**	**12.36**	**145**	Pn	**Pn**	**15 23 58.2**	**+2.6**
TULM	**Tulcn-Chalpat**	**12.43**	**356**		**Pn**	**15 23 55.1**	**-1.9**
PB10	**IPOC Station P**	**13.14**	**154**	Pn	**Pn**	**15 24 08.0**	**+2.0**
FLOC	**Florencia**	**13.32**	**5**	*eP*	**Pn**	**15 24 06.7**	**-1.7**
BBAC	**Balboa, Cauca**	**13.70**	**358**	*eP*	**Pn**	**15 24 13.4**	**-0.2**
AF01	**San Pedro de A**	**13.87**	**144**	Pn	**Pn**	**15 24 18.7**	**+2.8**
GARC	**Garzon, Huila**	**13.93**	**6**	*eP*	**Pn**	**15 24 13.8**	**-2.8**
ORTC	**Ortega, Tolima**	**15.66**	**6**	*eP*	**Pn**	**15 24 40.4**	**+1.8**
SIV	**San Ignacio**	**15.91**	**107**	P	**Pn**	**15 24 43.3**	**+1.5**
	2.8nm,0.7s,baz=286,slow=11,SNR=11						
GUY2C	**Guyana, Caldas**	**16.95**	**5**	*eP*	**P**	**15 24 57.4**	**+1.5**
NORC	**Norcasia**	**17.33**	**7**	*eP*	**P**	**15 25 02.1**	**+2.3**
SDV	**Santo Domingo**	**21.43**	**17**	P	**P**	**15 25 46.0**	**+1.5**
	8.0nm,0.5s,baz=170,slow=7.7,SNR=6.1						
	8.0nm,0.5s						
SDV	**Santo Domingo**	**21.43**	**17**	P	**P**	**15 25 43.7**	**-0.8**
SDV				IAmb	IAmb	15 25 46.7	
	comp=Z,7.7nm,0.7s						
H03N1	**Juan Fernandez**	**21.66**	**185**	T	T	15 48 08.5	
	baz=3.6,slow=75,SNR=6.3						
H03N2	**Juan Fernandez**	**21.66**	**185**	T	T	15 48 08.4	
	baz=3.6,slow=75,SNR=7.9						
H03N3	**Juan Fernandez**	**21.67**	**185**	T	T	15 48 06.9	
	baz=3.6,slow=75,SNR=6.1						
BAUV	**El Baul**	**22.37**	**23**	P	**P**	**15 25 53.7**	**-0.7**
TXAR	**Lajitas Array**	**48.35**	**328**	P	**P**	**15 29 35.9**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=138,slow=6.9,SNR=4.7						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**63.17**	**324**	P	**P**	**15 31 22.8**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=8.5,SNR=5.6						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.76**	**75**	P	**P**	**15 33 13.2**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=262,slow=3.3,SNR=3.1						
TORD				pP	**pP**	**15 33 35.6**	**0.0**
	comp=Z,0.9nm,0.9s,baz=261,slow=4.7,SNR=3.8						
	comp=Z,0.7nm,0.9s						
BCAR	**Beaver Creek A**	**89.50**	**336**	P	**P**	**15 33 50.6**	**-0.1**
L27K	**Beaver Creek,**	**89.52**	**336**	P	**P**	**15 33 50.4**	**-0.4**
L27K				IAmb	IAmb	15 34 21.5	
	comp=Z,4.3nm,1.4s						
H11S2	**WAKE ISLAND Hyl**	**18.51**	**285**	T	T	17 48 40.9	
	baz=94,slow=74,SNR=16						
H11S1	**WAKE ISLAND Hyl**	**18.52**	**285**	T	T	17 48 43.6	
	baz=94,slow=74,SNR=24						
H11S3	**WAKE ISLAND Hyl**	**18.53**	**285**	T	T	17 48 47.6	
	baz=94,slow=74,SNR=22						
KSH	**Kashi**	**143.36**	**36**	PKP	PKPbc	15 40 26.8	+1.1
PZH	**PanZhiHua**	**165.28**	**5**	PKP	**PKPdf**	**15 40 56.9**	**-1.8**

MAN 24 15:53:45.1, 9.°48N×122.°64E, h21km, mb3.8, ML2.5, MS2.0, 3C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.35**	**1**	⇓*iP*	Pb	15 53 53.3	+0.9
CNOP				*i* S	Sn	15 54 01.4	+0.2
SNPH	**Sibulan**	**0.61**	**103**	⇓*iP*	Pb	15 53 57.3	+0.1
SNPH				*i* S	Sn	15 54 07.9	+0.2
LSIP	**Lazi, Siquijor**	**1.04**	**109**	⇓*eP*	Pb	15 54 03.2	-1.2
LSIP				*eS*	Sn	15 54 19.0	+0.6
GUIM	**Jordan**	**1.14**	**358**	⇓*eP*	Pn	15 54 05.5	-0.3
GUIM				*eS*	Sn	15 54 20.7	-0.1
GHBP	**Garcia Hernand**	**1.67**	**85**	⇑*eP*	Pn	15 54 14.0	+1.0
TABP	**Talibon, Bohol**	**1.78**	**70**	⇑*eP*	Pn	15 54 15.1	+0.6
TABP				*eS*	Sn	15 54 37.6	+1.1
RCP	**Roxas**	**2.07**	**3**	⇑*eP*	Pb	15 54 20.9	-1.1
RCP				*eS*	Sb	15 54 48.2	+1.0

*NEIC **24** 16:08:01.7±1.2, 23.°9S±0.°2×179.°7W±0.°2, h492km±16km, mb4.3/21, Error ellipse: s-maj=35.4km s-min=16.3km az=46.0*
*IDC **24** 16:08:04.0±2.3, 24.°03S×179.°87W, h499km±17km, mb3.5/4, mbtmp4.3/6, Error ellipse: s-maj=37.8km s-min=24.9km az=84.0*
ISC 24 16:08:03.6±1.2, 24.°0S±0.°1×179.°9W±0.°2, h500km, n31, σ0§87/33, mb4.3/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.50**	**343**	P	**P**	**16 09 46.1**	**+1.1**
	3.9nm,0.6s,baz=126,slow=16,SNR=6.4						
MSVF	**Nonsavu**	**6.50**	**343**	P	**P**	**16 09 45.6**	**+0.7**
URZ	**Urewera**	**14.45**	**189**	P	**P**	**16 11 08.6**	**+0.8**
	2.9nm,0.3s,baz=20,slow=2.8,SNR=9.5						
URZ	**Urewera**	**14.45**	**189**	P	**P**	**16 11 07.2**	**-0.6**
BKZ	**Black Stump Fm**	**15.44**	**190**	P	**P**	**16 11 17.8**	**-0.4**
BKZ				IAmb	IAmb	16 11 34.5	
	comp=Z,15nm,1.3s						
THZ	**Tophouse**	**18.71**	**197**	P	**P**	**16 11 49.5**	**-0.8**
LTZ	**Lake Taylor**	**19.83**	**197**	P	**P**	**16 11 59.8**	**-0.7**
RPZ	**Rata Peaks**	**21.03**	**198**	P	**P**	**16 12 11.1**	**-0.2**
	comp=Z,19nm,1.1s,baz=14,slow=9.1,SNR=3.5						
	comp=Z,19nm,1.1s						
WHZ	**Wether Hill Ro**	**23.96**	**201**	P	**P**	**16 12 37.9**	**+0.3**
EIDS	**Eidsvold**	**26.36**	**261**	P	**P**	**16 13 00.2**	**+1.1**
EIDS				IAmb	IAmb	16 13 14.9	
	comp=Z,17nm,1.4s						
CTA	**Charters Tower**	**31.54**	**270**	P	**P**	**16 13 46.0**	**+1.6**
	comp=Z,4.8nm,0.5s,baz=93,slow=8.6,SNR=8.5						
	comp=Z,4.8nm,0.5s						
CTAO	**Charters Tower**	**31.54**	**270**	P	**P**	**16 13 45.6**	**+1.3**
CTAO				IAmb	IAmb	16 14 08.7	
	comp=Z,10.0nm,1.1s						
PMG	**Port Moresby**	**34.58**	**289**	P	**P**	**16 14 07.8**	**-2.4**
STKA	**Stephens Creek**	**34.75**	**248**	P	**P**	**16 14 10.6**	**-0.8**
BBOO	**Buckleboo**	**39.47**	**247**	P	**P**	**16 14 50.8**	**+0.6**
BBOO				IAmb	IAmb	16 15 10.6	
	comp=Z,16nm,1.5s						
AS31	**Alice Springs**	**42.08**	**261**	P	**P**	**16 15 10.6**	**-0.7**
ASAR	**Alice Springs**	**42.08**	**261**	P	**P**	**16 15 12.4**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=99,slow=7.2,SNR=54						
ASAR				ScP	**ScP**	**16 19 57.8**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=114,slow=4.1,SNR=4.7						
	comp=Z,1.2nm,0.3s						
ASAR	**Alice Springs**	**42.08**	**261**	P	**P**	**16 15 10.4**	**-0.9**
WR0	**Warramunga Arr**	**42.27**	**266**	P	**P**	**16 15 12.6**	**-0.2**
WB2	**Warramunga Arr**	**42.45**	**266**	P	**P**	**16 15 14.6**	**+0.4**
WB2				IAmb	IAmb	16 15 52.6	
	comp=Z,9.4nm,1.4s						
WRAB	**Tennant Creek**	**42.45**	**266**	P	**P**	**16 15 14.2**	**0.0**
WRAB				IAmb	IAmb	16 15 39.5	
	comp=Z,9.1nm,1.3s						
WRA	**Warramunga Arr**	**42.46**	**266**	P	**P**	**16 15 14.3**	**0.0**
	comp=Z,3.5nm,0.6s,baz=96,slow=8.3,SNR=110						
WRA				ScP	**ScP**	**16 19 59.4**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=103,slow=3.6,SNR=4.7						
	comp=Z,3.5nm,0.6s						
FORT	**Forrest**	**46.34**	**250**	P	**P**	**16 15 44.5**	**+0.4**
MTN	**Manton Dam**	**47.52**	**274**	P	**P**	**16 15 52.6**	**-0.6**
MTN				IAmb	IAmb	16 15 58.0	
	comp=Z,17nm,1.2s						
KNRA	**Kununurra**	**48.75**	**270**	P	**P**	**16 16 03.0**	**+0.6**
KNRA				IAmb	IAmb	16 16 04.0	
	comp=Z,18nm,1.2s						
PSA00	**Pilbara Seismi**	**55.21**	**260**	P	**P**	**16 16 49.0**	**0.0**
PSA00				IAmb	IAmb	16 17 02.7	
	comp=Z,19nm,1.4s						
MORW	**Morawa**	**56.90**	**250**	P	**P**	**16 17 01.1**	**+0.5**
MORW				IAmb	IAmb	16 17 15.2	
	comp=Z,19nm,1.2s						
QSPA	**South Pole Qui**	**66.10**	**180**	P	**P**	**16 17 60.0**	**-0.4**
QSPA				IAmb	IAmb	16 18 08.3	
	comp=Z,10nm,1.4s						
BELA	**Belgrano 2**	**76.34**	**173**	P	**P**	**16 18 59.5**	**-0.7**
MAW	**Mawson**	**77.69**	**200**	P	**P**	**16 19 08.6**	**+0.9**
AKASG	**Malin Array Be**	**145.07**	**327**	PKPbc	**PKPab**	**16 26 44.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=46,slow=4.9,SNR=2.0						

*NNC **24** 16:13:33.1±0.8, 53.°66N×87.°65E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=6.9km s-min=3.5km az=48.0, Suspected Mining explosion.*
*BJI **24** 16:13:33.1±0.0, 53.°66N×87.°43E, h10km, mb4.4/9, mB4.6/6, ML4.3/1, Ms3.8/3, Ms7 3.7/2*
*ASRS **24** 16:13:33.4, 53.°4N±0.°6×87.°4E±0.°6, h1km, MLh3.9/24, confirmed*
*MOS **24** 16:13:34.7±1.4, 53.°50N×87.°34E, h12km, mb4.5/6, Error ellipse: s-maj=8.1km s-min=6.0km az=83.9*
*IDC **24** 16:13:34.4±1.0, 53.°45N×87.°47E, h0km, mb4.1/5, mbtmp4.0/9, ML3.7/3, Error ellipse: s-maj=13.2km s-min=10.1km az=132.0*
*NEIC **24** 16:13:37.0±0.7, 53.°53N±0.°09×87.°3E±0.°2, h15km±6km, mb4.2/11, Error ellipse: s-maj=15.2km s-min=13.2km az=75.0*
ISC 24 16:13:34.2±0.4, 53.°49N±0.°02×87.°40E±0.°02, h0km, n116, σ1§84/150, mb4.2/15, 19C-34D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALIN	**Malinovka, Kuz**	**0.10**	**227**	⇓Pg	**Pg**	**16 13 36.1**	**+0.1**
MALIN				Sg	**Sg**	**16 13 37.5**	**+0.3**
TAIL	**Tailep, Kuzbas**	**0.12**	**252**	⇓Pg	**Pg**	**16 13 37.2**	**+0.6**
TAIL				Sg	**Sg**	**16 13 40.0**	**+1.8**
ERU	**Erunakovo, Kuz**	**0.65**	**359**	⇓Pg	**Pb**	**16 13 48.5**	**0.0**
ERU				Sg	**Sb**	**16 13 59.4**	**+1.2**
ELT	**Eltsovka**	**0.73**	**252**	PG	**Pg**	**16 13 47.8**	**-0.3**
ELT						16 13 56.6	
ELT	**Eltsovka**	**0.73**	**252**	⇓Pg	**Pg**	**16 13 47.9**	**-0.2**
ELT				Sg	**Sg**	**16 13 58.1**	**+0.6**
VCHU	**Verkh-Chumysh,**	**0.73**	**310**	⇓Pg	**Pg**	**16 13 49.2**	**+1.0**
VCHU				Sg	**Sb**	**16 14 00.9**	**+0.4**
KOTO	**Kotino, Kuzbas**	**0.76**	**338**	⇓Pg	**Pb**	**16 13 50.7**	**+0.5**
KOTO				Sg	**Sn**	**16 14 03.5**	**-0.8**
TASR	**Tashtagol**	**0.79**	**158**	PG	**Pg**	**16 13 47.6**	**-1.6**
TASR						16 13 58.3	
TASR	**Tashtagol**	**0.79**	**158**	⇓Pg	**Pg**	**16 13 47.6**	**-1.6**
TASR				Sg	**Sg**	**16 13 57.7**	**-1.6**
LUZB	**Luzhba, Kemero**	**0.92**	**78**	PG	**Pg**	**16 13 51.7**	**0.0**
LUZB						16 14 04.5	
LUZB	**Luzhba, Kemero**	**0.92**	**78**	⇓Pg	**Pg**	**16 13 51.1**	**-0.6**
LUZB				Sg	**Sg**	**16 14 04.2**	**+0.7**
POMOR	**Pomortsevo, Ku**	**1.05**	**331**	⇓Pg	**Pn**	**16 13 57.2**	**+0.9**
POMOR				Sg	**Sn**	**16 14 13.8**	**+2.1**
BJR2	**Bachatsky-2, K**	**1.09**	**317**	⇓Pg	**Pn**	**16 13 57.3**	**+0.5**
BJR2				Sg	**Sn**	**16 14 13.2**	**+0.6**
BJR1	**Bachatsky 1, K**	**1.10**	**314**	⇓Pg	**Pb**	**16 13 56.0**	**-0.1**
BJR1				Sg	**Sn**	**16 14 12.5**	**-0.2**
SALR	**Pechorkino, Sa**	**1.37**	**314**	PG	Pg	16 13 55.4	-5.0
SALR						16 14 15.9	
SALR	**Pechorkino, Sa**	**1.37**	**314**	⇓Pg	Pg	16 13 55.5	-4.9
SALR				Sg	**Sg**	**16 14 15.5**	**-2.5**
ZAA0	**Zalesovo Array**	**1.60**	**288**	Pn	**Pn**	**16 14 03.9**	**+0.2**
ZAA0	**Zalesovo Array**	**1.60**	**288**	⇓P	**Pn**	**16 14 04.1**	**+0.4**
	24nm,1.1s						
ZAA0				⇑S	**Sg**	**16 14 26.7**	**+1.2**
	43nm,0.7s						
ZALV	**Zalesovo Beam**	**1.60**	**288**	Pg	**Pn**	**16 14 04.1**	**+0.4**
	20nm,0.3s,baz=108,slow=16,SNR=164						
ZALV				Lg	Lg	16 14 27.9	
	15nm,0.3s,baz=114,slow=30,SNR=13						
ZALV	**Zalesovo Beam**	**1.60**	**288**	Pn	**Pn**	**16 14 03.9**	**+0.2**
ARTR	**Artybash**	**1.69**	**182**	PN	**Pn**	**16 14 04.2**	**-0.8**
ARTR						16 14 25.8	
ARTR	**Artybash**	**1.69**	**182**	⇓Pg	**Pn**	**16 14 03.6**	**-1.4**
ARTR				Sg	**Sn**	**16 14 25.3**	**-2.1**
GALT	**Gorno-Altaysk,**	**1.77**	**210**	Pg	**Pn**	**16 14 05.6**	**-0.4**
GALT				Sg	**Sn**	**16 14 28.8**	**-0.4**
SHRR	**Shira**	**1.92**	**57**	PN	**Pn**	**16 14 08.7**	**+0.6**
SHRR						16 14 34.7	
KEM	**Kemerovo**	**2.01**	**338**	⇓P	**Pb**	**16 14 11.2**	**-0.4**
KEM				S	**Sg**	**16 14 39.2**	**+0.4**
BRCR	**Berchikul'**	**2.22**	**14**	⇓P	**Pb**	**16 14 14.4**	**-0.8**
BRCR				S	**Sg**	**16 14 44.7**	**-0.9**
DJO	**Djoy, Khakassi**	**2.41**	**106**	PN	**Pn**	**16 14 16.1**	**+1.2**
DJO						16 14 48.3	
DJO	**Djoy, Khakassi**	**2.41**	**106**	⇑P	**Pn**	**16 14 16.0**	**+1.2**
DJO				S	**Sb**	**16 14 47.6**	**-1.0**
ABNR	**Abakan**	**2.42**	**83**	⇑*e*PN	**Pb**	**16 14 17.3**	**-1.3**
CERR	**Cheremushki**	**2.50**	**103**	PN	**Pb**	**16 14 19.2**	**-0.8**
CERR						16 14 52.2	
CERR	**Cheremushki**	**2.50**	**103**	⇑P	**Pn**	**16 14 18.1**	**+2.0**
CERR				S	**Sn**	**16 14 49.4**	**+2.1**
DJOS	**Djoyskaya Sosn**	**2.51**	**104**	P	**Pn**	**16 14 17.0**	**+0.7**
DJOS				S	**Sb**	**16 14 50.8**	**-0.8**
KHAR	**Kharino, NSO,**	**2.51**	**298**	P	**Pn**	**16 14 17.4**	**+1.2**
KHAR				S	**Sb**	**16 14 50.0**	**-1.5**
NVSII	**Novosibirsk**	**2.79**	**301**	⇑P	**Pn**	**16 14 21.9**	**+1.8**
NVSII				Pg	**Pb**	**16 14 24.1**	**-0.8**
NVSII				S	**Sb**	**16 14 58.5**	**-1.2**
NVSII				Sg	**Sg**	**16 15 02.2**	**-1.8**
NVS	**Novosibirsk**	**2.80**	**301**	⇑P	**Pn**	**16 14 22.1**	**+1.9**
NVS				S	**Sb**	**16 14 57.6**	**-2.2**
ULGR	**Ulagan, Altay**	**2.89**	**173**	P

baz=311,slow=26
ULN Ulaanbaatar 13.66 106⇓ eP Pn 16 16 48.0 -1.1
AAK Ala-Archa 13.84 224⇑ eP Pn 16 16 52.9 +1.2
ARU Arti 16.76 292 c iP P 16 17 33.0 +0.6
ARU S Sn 16 20 41.6 +4.9
ARU pmax pmax
comp=Z,5.0nm,1.5s
ABKAR Akbulak array 17.60 267 Pn **Pn 16 17 36.9 -3.8**
AKTO Aktyubinsk 18.30 272 P **Pn 16 17 49.1 -0.2**
comp=Z,0.1nm,0.3s,baz=59,slow=12,SNR=2.9
comp=Z,0.7nm,0.5s
GAR Garm 18.62 226 P **P 16 17 52.5 -0.7**
GAR IAmb IAmb 16 17 55.9
comp=Z,20nm,1.2s
CHGR Chuyangaron 19.41 228 P **P 16 18 01.8 0.0**
CHGR Chuyangaron 19.41 228 P **P 16 18 01.8 0.0**
CHGR pmax pmax
comp=Z,11nm,1.1s
LZH Lanzhou 20.86 140 eP **P 16 18 19.5 +1.8**
LZH pP Pn 16 18 24.4 +4.2
LZH pmax pmax
comp=Z,21nm,0.9s
KIRV Kirov 21.61 299⇓ eP **P 16 18 25.8 +0.5**
ZEA Zeya 23.43 73 eP **P 16 18 46.6 +1.9**
GEYT Alibeck 25.45 244 P **P 16 19 04.3 +0.7**
comp=Z,1.2nm,0.5s,baz=5.7,slow=5.8,SNR=2.9
comp=Z,1.2nm,0.5s
GEYT Alibeck 25.45 244 P **P 16 19 03.5 -0.1**
TIXI Tiksi 25.53 29 P **P 16 19 03.6 -0.4**
comp=Z,5.6nm,0.8s,baz=270,slow=23,SNR=24
comp=Z,5.6nm,0.8s
TIXI Tiksi 25.53 29 P **P 16 19 04.2 +0.2**
TIXI IAmb IAmb 16 19 07.2
comp=Z,6.8nm,0.8s
TIXI Tiksi 25.53 29⇓ iP **P 16 19 05.1 +1.1**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI MLR MLR
comp=Z,25nm,15.0s
KLMR Klimovskoe 26.44 305 eP **P 16 19 09.8 -2.5**
KLMR pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 26.44 305 eP **P 16 19 09.9 -2.4**
KLMR AMP 16 19 14.1
comp=Z,5.0nm,0.8s
PZH PanZhiHua 28.99 153 P **P 16 19 34.9 -0.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,80nm,3.6s
FINES FINESS Array B 32.76 309 P **P 16 20 07.8 -0.5**
comp=Z,2.9nm,0.8s,baz=95,slow=16,SNR=3.8
comp=Z,2.9nm,0.8s
FINES FINESS Array B 32.76 309 iP **P 16 20 11.6 +3.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s
ANN Anapa 33.20 275 eP P 16 20 07.6 -4.8
ANN e*PP 16 20 11.6
ANN e 16 21 22.1
ANN eS **S 16 25 25.2 -7.7**
NACGM Naroch 34.52 297⇓ eP **P 16 20 19.7 -4.0**
baz=68
BILL Bilibino 38.16 37 eP **P 16 20 56.2 +1.5**
BILL e 16 22 25.1
BILL ePPP PPP 16 22 41.5
BILL pmax pmax
comp=Z,6.0nm,1.1s
BILL MLR MLR
comp=Z,33nm,13.0s
HFS Hagfors 38.91 310 P **P 16 21 02.8 +1.7**
comp=Z,3.1nm,0.7s,baz=91,slow=7.2,SNR=4.8
comp=Z,3.1nm,0.7s
RAYN Ar Rayn 43.40 243 P **P 16 21 38.5 0.0**
RAYN IAmb IAmb 16 21 39.8
comp=Z,4.1nm,0.9s
RAYN Ar Rayn 43.40 243 P **P 16 21 38.5 0.0**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 43.52 299 P **P 16 21 39.5 +0.3**
CLL Collm 43.52 299 iP **P 16 21 39.6 +0.5**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 43.52 299 iP **P 16 21 39.6 +0.5**
comp=Z,6.0nm,0.9s
CLL epP 16 21 43.0
GERES GERESS Array B 44.54 295 P **P 16 21 47.0 -0.4**
GERES GERESS Array B 44.54 295 P **P 16 21 47.0 -0.4**
COLD Coldfoot 52.13 25 P **P 16 22 46.1 +0.5**
COLD IAmb IAmb 16 23 12.6
comp=Z,3.8nm,1.2s
IMAR Indian Mountai 52.15 27 P **P 16 22 45.2 -0.6**
BMAR Burnt Mountain 53.30 22 P **P 16 22 54.8 +0.5**
H23K Yukon River 53.39 25 P **P 16 22 55.4 +0.4**
H23K IAmb IAmb 16 23 14.2
comp=Z,2.8nm,1.3s
IL31 54.91 25 P **P 16 23 05.7 -0.3**
IL31 IAmb IAmb 16 23 41.0
comp=Z,4.6nm,1.4s
ILAR Eielson Array 54.91 25 P **P 16 23 06.0 0.0**
comp=Z,0.9nm,0.8s,baz=321,slow=4.1,SNR=11
comp=Z,0.9nm,0.8s
ILAR Eielson Array 54.91 25 P **P 16 23 05.7 -0.3**
SCM Sheep Creek Mo 57.18 27 P **P 16 23 21.5 -0.9**
SCM Sheep Creek Mo 57.18 27 P **P 16 23 21.5 -0.9**
SCM pmax pmax
comp=Z,15nm,1.4s
L27K Beaver Creek, 57.58 24 P **P 16 23 25.9 +0.7**
L27K IAmb IAmb 16 24 00.9
comp=Z,4.1nm,1.4s
BCAR Beaver Creek A 57.59 24 P **P 16 23 25.9 +0.7**

NOU 24 16:21:01.2, 16°.48S×167°.63E, h0km, MLv4.0/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.35**	**157**	P	Pg	16 21 26.7	-0.4
RTV	**Rentapao**	**1.51**	**150**	P	Pn	16 21 28.4	-1.1
LIFNC	**LIFOU**	**4.29**	**185**	P	Pn	16 22 06.9	-0.9
MARNC	**Mare, Loyalty**	**4.99**	**176**	P	Pn	16 22 16.5	-0.9
KOUNC	**Koumac, New Ca**	**5.14**	**218**	P	Pn	16 22 19.7	+0.2
YATNC	**Mamie plateau,**	**5.59**	**187**	P	Pn	16 22 24.4	-1.3

JMA 24 16:42:02.7±0.0, 35°.4N±0°.2×133°.9E±0°.1, h6km, MV0.2/10, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.03**	**264**	P	Pg	16 42 04.0	0.0

*IDC **24** 16:42:39.9±1.5, 35°.29N×133°.85E, h0km, mb3.2/3, mbtmp3.1/4, ML2.1/1, Error ellipse: s-maj=34.8km s-min=29.5km az=158.0*
*JMA **24** 16:42:43.1±0.6, 34°.N±2°.×14°.2E±°, h30km±3km, MV2.7/19, FAR SE OFF BOSO PEN*

ISC 24 16:42:45.3±1.7, 34°.44N±0°.09×141°.8E±0°.1, h21km, n10, σ1§14/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.70**	**288**	eP	**Pb**	**16 42 58.2**	**-0.3**
BSO3	**Boso 3**	**1.11**	**289**	P	**Pn**	**16 43 05.2**	**-0.2**
BSO4	**Boso 4**	**1.31**	**295**	eP	**Pn**	**16 43 08.2**	**-0.1**
CHOJ	**Chosi**	**1.47**	**329**	P	**Pn**	**16 43 09.4**	**-1.2**
CHOJ				eS	**Sn**	**16 43 28.4**	**-0.7**
JKUC	**kamogawauchiur**	**1.49**	**299**	P	**Pn**	**16 43 10.1**	**-0.8**
JKUC				eS	**Sn**	**16 43 29.1**	**-0.5**
JMKN	**Mikurajimanish**	**1.90**	**254**	P	**Pn**	**16 43 15.3**	**-1.2**
MJAR	**Matsushiro Arr**	**3.59**	**307**	Pn	**Pn**	**16 43 40.3**	**+0.5**
	0.1nm,0.3s,baz=30,slow=7.1,SNR=12						
MJAR				Sn	**Sn**	**16 44 23.6**	**+2.0**
	0.2nm,0.3s,baz=16,slow=27,SNR=4.9						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**45.79**	**304**				
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**54.55**	**189**	P	**P**	**16 52 11.5**	**-0.4**
	0.2nm,0.5s,baz=0.8,slow=7.6,SNR=6.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**58.27**	**189**	P	**P**	**16 52 40.0**	**+1.6**
	0.2nm,0.8s,baz=0.0,slow=6.8,SNR=1.6						
	0.2nm,0.8s						

ROM 24 17:08:34.6±0.1, 42°.853N±0°.002×12°.847E±0°.006, h11km, ML1.2/1, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.1km az=94.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	**0.05**	**163**	P	Pg	17 08 37.1	+0.3
T1215				S	Sg	17 08 38.8	+0.4
T1216	**Preci, Frazion**	**0.13**	**73**	P	Pg	17 08 38.3	+0.5
T1216				S	Sg	17 08 41.0	+0.9
T1217	**Poggiodomo (PG**	**0.15**	**156**	⇓P	Pg	17 08 38.7	+0.5
T1217				S	Sg	17 08 41.5	+0.9
CESI	**CESI - Serrava**	**0.16**	**15**	⇑P	Pg	17 08 38.7	+0.5
CESI				S	Sg	17 08 41.7	+0.9
CESI				AML	AML		
	comp=E,105μm,0.4s						
CESI				AML	AML		
	comp=E,105μm,0.4s						
CESI				AML	AML		
	comp=N,154μm,0.3s						
FDMO	**Fiordimonte**	**0.25**	**44**	P	Pg	17 08 40.2	+0.4
LNSS	**Leonessa**	**0.29**	**150**	P	Pg	17 08 40.8	+0.4
LNSS				S	Sg	17 08 45.5	+1.1
T1211	**Morro Reatino**	**0.32**	**179**	P	Pb	17 08 41.7	-0.6
T1211				AML	AML		
	comp=E,700μm,1.6s						
T1211				AML	AML		
	comp=N,536μm,1.6s						
CSP1	**Cessapalombo**	**0.35**	**48**	P	Pg	17 08 42.1	+0.4

ZUR 24 17:10:19.6, 46°.34N×7°.58E, h8km±1km, MLh0.8/10, 7C-5D, Error ellipse: s-maj=1.9km s-min=0.6km az=272.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBD2	**Leukerbad 2**	**0.06**	**49**	⇑Pg	Pg	17 10 21.9	+0.2
LKBD2				Sg	Sg	17 10 23.3	0.0
SIEB	**Ecole de Borzu**	**0.06**	**218**	⇑Pg	Pg	17 10 21.8	+0.3
LKBD	**Leukerbad**	**0.06**	**32**	⇓Pg	Pg	17 10 21.9	+0.2
LKBD				Sg	Sg	17 10 23.2	0.0
VANNI	**Vissoie, Val d**	**0.13**	**176**	⇑Pg	Pg	17 10 23.0	+0.4
VANNI				Sg	Sg	17 10 25.1	+0.5
LAUCH	**Lauchernalp**	**0.15**	**59**	⇑Pg	Pg	17 10 23.3	+0.3
LAUCH				Sg	Sg	17 10 25.6	+0.2
SIOV	**Sion-Valere**	**0.18**	**236**	⇑Pg	Pg	17 10 23.6	+0.2
SENIN	**Lac Senin/Sane**	**0.20**	**277**	⇓Pg	Pg	17 10 23.9	+0.1
SENIN				Sg	Sg	17 10 26.9	+0.3
EMBD	**Embd, Matterta**	**0.21**	**125**	Pg	Pg	17 10 24.3	+0.4
EMBD				Sg	Sg	17 10 27.4	+0.5
DIX	**Grande Dixence**	**0.29**	**205**	⇑Pg	Pg	17 10 25.6	+0.2
DIX				Sg	Sg	17 10 29.5	+0.3
SIMPL	**Simplonpass**	**0.32**	**108**	⇓Pg	Pg	17 10 26.2	+0.3
SIMPL				Sg	Sg	17 10 30.4	+0.2
WIMIS	**Wimmis**	**0.33**	**5**	Sg	Sg	17 10 31.1	+0.6
GRYON	**Gryon**	**0.34**	**255**	⇓Pg	Pg	17 10 26.4	+0.1
GRYON				Sg	Sg	17 10 31.0	+0.2
FIESA	**Fiescheralp**	**0.38**	**75**	⇑Pg	Pg	17 10 27.2	+0.2
MMK	**Mattmark**	**0.39**	**137**	⇓Pg	Pg	17 10 27.4	+0.1

*NOU **24** 17:10:43.6, 37°.84S×177°.83E, h111km, MLv3.0/6, Off E. Coast of N. Island, N.Z.*
WEL 24 17:10:38.6±0.7, 37°.S±5°×17°.8E±°, h151km±6km, M3.1/31, ML3.2/7, MLv3.1/31, Error ellipse: s-maj=0.0km s-min=0.0km az=117.5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.42**	**158**	P	Pn	17 10 59.3	-0.3
HAZ				S	Sn	17 11 14.0	-1.8
RUGZ	**Raukumara Rang**	**0.60**	**173**	P	Pn	17 11 00.2	-0.5
MXZ	**Matakaoa Point**	**0.61**	**109**	P	Pn	17 11 00.9	+0.4
MXZ	**Matakaoa Point**	**0.61**	**109**	P	Pn	17 11 01.0	+0.4
PKGZ	**Pakihiroa**	**0.66**	**143**	P	Pn	17 11 01.7	+0.8
WMGZ	**Waiomatatini S**	**0.81**	**125**	P	Pn	17 11 02.8	+1.0
TWGZ	**Tauwhareparae**	**0.87**	**159**	P	Pn	17 11 03.7	+1.3
PUZ	**Puketiti**	**0.89**	**143**	P	Pn	17 11 03.4	+0.9
URZ	**Urewera**	**0.97**	**202**	P	Pn	17 11 03.3	+0.2
URZ	**Urewera**	**0.97**	**202**	P	Pn	17 11 03.2	+0.1
MWZ	**Matawai**	**0.97**	**182**	P	Pn	17 11 03.7	+0.6
TKGZ	**Te Karaka**	**1.09**	**169**	P	Pn	17 11 05.3	+1.1
RAGZ	**Rawiri**	**1.14**	**186**	P	Pn	17 11 05.9	+1.3
RTZ	**Ruatahuna**	**1.34**	**201**	P	Pn	17 11 06.8	+0.2
RTZ				S	Sn	17 11 28.0	-0.1
RIGZ	**Rimuhau**	**1.35**	**174**	P	Pn	17 11 07.7	+1.1
RIGZ				S	Sn	17 11 29.4	+1.1
SNGZ	**Shannon Statio**	**1.43**	**187**	P	Pn	17 11 08.4	+1.0
SNGZ				S	Sn	17 11 30.0	+0.3
ALRZ	**Allen Road**	**1.54**	**219**	P	Pn	17 11 09.1	+0.5
MTHZ	**Maungataniwha**	**1.60**	**201**	P	Pn	17 11 09.6	+0.4
MTHZ				S	Sn	17 11 33.0	+0.1
RAHZ	**Arahi**	**1.60**	**194**	P	Pn	17 11 10.2	+1.0
RAHZ				S	Sn	17 11 33.1	+0.3
KUZ	**Kuaotunu**	**1.61**	**292**	P	Pn	17 11 17.8	+8.5
KNZ	**Kokohu**	**1.66**	**177**	P	Pn	17 11 10.8	+1.0
KNZ				S	Sn	17 11 34.7	+0.8
WHHZ	**Waihua**	**1.73**	**189**	P	Pn	17 11 11.6	+0.9
MHGZ	**Mahia Peninsul**	**1.81**	**172**	P	Pn	17 11 12.9	+1.4
NMHZ	**Naumai**	**1.83**	**199**	P	Pn	17 11 13.0	+1.1
NMHZ				S	Sn	17 11 39.4	+1.8
TLZ	**Tolley Road**	**1.88**	**239**	P	Pn	17 11 12.9	+0.5
MKAZ	**Moumakai**	**1.95**	**277**	P	Pn	17 11 12.7	-0.4
ARHZ	**Aropaoanui**	**1.95**	**193**	P	Pn	17 11 13.1	0.0
ARHZ				S	Sn	17 11 40.8	+1.1
BKZ	**Black Stump Fm**	**1.99**	**205**	P	Pn	17 11 13.9	+0.3
BKZ	**Black Stump Fm**	**1.99**	**205**	P	Pn	17 11 13.9	+0.2
KWHZ	**Kaweka Forest**	**2.25**	**203**	P	Pn	17 11 16.8	+0.1
KWHZ				S	Sn	17 11 46.3	+0.2
TMVZ	**Te Maari**	**2.29**	**220**	P	Pn	17 11 17.8	+0.5
ETVZ	**East Tongariro**	**2.30**	**219**	P	Pn	17 11 17.8	+0.5
OTVZ	**Oturere**	**2.34**	**219**	P	Pn	17 11 18.5	+0.5
SNVZ	**South Ngauruho**	**2.37**	**219**	P	Pn	17 11 18.9	+0.5
BHHZ	**Black Hill Sta**	**2.43**	**209**	P	Pn	17 11 18.8	-0.1
BHHZ				S	Sn	17 11 49.4	-0.7
HIZ	**Hauiti**	**2.44**	**241**	P	Pn	17 11 20.1	+1.2
HIZ	**Hauiti**	**2.44**	**241**	P	Pn	17 11 20.2	+1.3
FWVZ	**Far West T-bar**	**2.47**	**220**	P	Pn	17 11 20.0	+0.4
KAHZ	**Kahuranaki**	**2.49**	**193**	P	Pn	17 11 20.0	+0.4
MOVZ	**Moawhango**	**2.49**	**215**	P	Pn	17 11 19.3	-0.4
PXZ	**Pawanui**	**2.72**	**192**	P	Pn	17 11 22.4	0.0
PNHZ	**Pukenui**	**2.77**	**203**	P	Pn	17 11 22.3	-0.7
WPHZ	**Waipukurau**	**2.84**	**198**	P	Pn	17 11 23.4	-0.5
TSZ	**Takapari Road**	**2.97**	**205**	P	Pn	17 11 24.5	-1.1
PRHZ	**Porangahau**	**2.99**	**194**	P	Pn	17 11 25.2	-0.6
DVHZ	**Dannevirke**	**3.13**	**200**	P	Pn	17 11 26.4	-1.2
WAZ	**Wanganui**	**3.13**	**220**	P	Pn	17 11 27.4	-0.2
ANWZ	**Angora Road**	**3.21**	**195**	P	Pn	17 11 28.1	-0.4
POWZ	**Post Office Ro**	**3.34**	**204**	P	Pn	17 11 29.4	-0.8
PRWZ	**Pori Road**	**3.42**	**201**	P	Pn	17 11 30.5	-0.8
BFZ	**Birch Farm**	**3.47**	**197**	P	Pn	17 11 31.0	-0.9
BFZ	**Birch Farm**	**3.47**	**197**	P	Pn	17 11 30.9	-1.0
MRZ	**Mangatainoka R**	**3.64**	**205**	P	Pn	17 11 32.4	-1.7
TIWZ	**Tintock**	**3.65**	**201**	P	Pn	17 11 33.0	-1.3
CPWZ	**Castlepoint**	**3.70**	**196**	P	Pn	17 11 34.4	-0.4
HOWZ	**Holdsworth Sta**	**3.88**	**204**	P	Pn	17 11 35.1	-2.1
OGWZ	**Otaki Gorge**	**3.92**	**208**	P	Pn	17 11 36.0	-1.8
TMWZ	**Te Maipa**	**3.96**	**199**	P	Pn	17 11 36.6	-1.7
KIW	**Kapiti Island**	**4.06**	**210**	P	Pn	17 11 37.5	-2.1
MTW	**Mount Morrison**	**4.12**	**202**	P	Pn	17 11 37.9	-2.4
CAW	**Cannon Point**	**4.22**	**207**	P	Pn	17 11 39.3	-2.3
TRWZ	**Traveller**	**4.29**	**199**	P	Pn	17 11 40.6	-1.9
PAWZ	**Paruwai Farm**	**4.34**	**202**	P	Pn	17 11 40.7	-2.6
MSWZ	**Moikau Station**	**4.43**	**203**	P	Pn	17 11 42.0	-2.4
DUWZ	**D'Urville Isla**	**4.46**	**219**	P	Pn	17 11 42.3	-2.5
WEL	**Wellington**	**4.48**	**208**	P	Pn	17 11 43.0	-2.1
PLWZ	**Palliser**	**4.57**	**202**	P	Pn	17 11 43.3	-3.0
TCW	**Tory Channel**	**4.62**	**213**	P	Pn	17 11 44.2	-2.6
TUWZ	**Tuamarina**	**4.94**	**214**	P	Pn	17 11 48.2	-2.9
NNZ	**Nelson**	**5.04**	**219**	P	Pn	17 11 50.5	-1.9
BSWZ	**Blackbirch Sta**	**5.20**	**212**	P	Pn	17 11 52.1	-2.5
MRNZ	**Matariki Terra**	**5.49**	**221**	P	Pn	17 11 55.1	-3.3
THZ	**Tophouse**	**5.69**	**218**	P	Pn	17 11 58.3	-2.7
KHZ	**Kahutara**	**5.92**	**210**	P	Pn	17 12 00.7	-3.4
GVZ	**Greta Valley S**	**6.59**	**210**	P	Pn	17 12 09.3	-3.7
LTZ	**Lake Taylor**	**6.77**	**215**	P	Pn	17 12 11.5	-4.0
OKCZ	**Okains Bay**	**7.22**	**207**	P	Pn	17 12 17.7	-3.8
MQZ	**McQueen's Vall**	**7.36**	**209**	P	Pn	17 12 18.5	-4.8
ARCZ	**Arundel**	**8.18**	**214**	P	Pn	17 12 30.5	-3.7

MAN 24 17:12:42.6, 10°.34N×121°.94E, h9km, mb4.0, ML2.8, MS2.4, 4C-4D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.41**	**0**	⇓iP	Pb	17 12 52.0	-0.1
GUIM	**Jordan**	**0.70**	**66**	⇑eP	Pg	17 12 53.8	-2.3
GUIM				eS	Sg	17 13 02.5	-2.8
CNOP	**Candoni, Negro**	**0.85**	**126**	⇑eP	Pg	17 12 58.3	-0.8
CNOP				eS	Sg	17 13 10.1	-0.1
RCP	**Roxas**	**1.45**	**33**	⇑eP	Pn	17 13 08.3	-0.7
RCP				iS	Sb	17 13 28.6	+0.2
SNPH	**Sibulan**	**1.61**	**128**	⇓iP	Pn	17 13 11.3	-0.1
SNPH				iS	Sn	17 13 32.7	+0.4
LSIP	**Lazi, Siquijor**	**2.05**	**126**	⇓eP	Pn	17 13 17.3	0.0
LSIP				eS	Sb	17 13 44.6	-1.1
TABP	**Talibon, Bohol**	**2.36**	**96**	⇓eP	Pn	17 13 21.2	-0.4
TABP				eS	Sn	17 13 51.8	+1.0
BUSP	**Coron**	**2.38**	**314**	⇑eP	Pn	17 13 22.2	+0.3
BUSP				eS	Sn	17 13 52.3	+1.0

DJA 24 17:33:03.8±0.5, 9°.S±6°×12°.1E±°, h183km±7km, M3.6/8, mb3.8/2, MLv3.5/8, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.99**	**94**	P	Pn	17 33 32.8	+1.1
MMRI				S	Sn	17 33 54.4	+1.1
BATI	**Baumata**	**2.90**	**125**	P	Pn	17 33 53.2	+1.8
SOEI	**Soe**	**3.22**	**112**	P	Pn	17 33 56.7	+1.3
BKSI	**Bulukumba**	**3.40**	**341**	P	Pn	17 33 57.2	-0.4
PLAI	**Plampang**	**3.44**	**265**	P	Pn	17 33 59.3	+1.4
PLAI				S	Sn	17 34 39.5	-0.7
BNSI	**Bone**	**4.28**	**345**	P	Pn	17 34 09.5	+0.8
TWSI	**Taliwang, Sumb**	**4.31**	**267**	P	Pn	17 34 09.9	+0.9
TWSI				S	Sn	17 34 59.5	-0.6
KLNI	**Mataram**	**5.09**	**271**	P	Pn	17 34 19.4	+0.4
	0.1nm16nm,0.5s						
JAGI	**Jajag, Banyuwa**	**7.01**	**270**	P	Pn	17 34 42.5	-1.7

*DNK **24** 17:35:38.5±2.1, 80°.69N×2°.64W, h36km±19km, ML1.6*
BER 24 17:35:39.2±1.9, 80°.65N×3°.17W, h30km±38km, ML1.8, Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.30**	**301**	e	Pn	17 36 12.4	-2.6
	baz=98,slow=18						
NOR				iP	Pb	17 36 13.2	-6.7
NOR				iS	Sn	17 36 39.5	-2.8
NOR				IAML		17 36 42.1	
	comp=Z,5.1nm,0.3s						
KBS	**Kingsbay**	**3.19**	**115**	eP	Pn	17 36 24.9	-2.3
KBS				eS	Sn	17 36 57.9	-6.3
KBS	**Kingsbay**	**3.19**	**115**	iP	Pn	17 36 24.7	-2.5
KBS				iS	Sn	17 36 57.7	-6.5
BRBB	**Barentsburg B**	**4.10**	**120**	eP	Pn	17 36 38.5	-1.2
BRBB				e		17 37 21.1	
BRBA	**Barentsburg A**	**4.12**	**120**	eP	Pn	17 36 39.6	-0.4
BRBA				e		17 37 22.0	
BRBA				IAML		17 37 25.6	
	comp=Z,4.4nm,0.2s						
SPA0	**Spitsbergen Ar**	**4.35**	**115**	eP	Pn	17 36 41.8	-1.4
DAG	**Danmarks Havn**	**4.92**	**226**	eP	Pn	17 36 48.8	-2.2
DAG				eS	Sn	17 37 41.5	-5.3
DAG	**Danmarks Havn**	**4.92**	**226**	iP	Pn	17 36 48.6	-2.3
DAG				iS	Sn	17 37 40.3	-6.4
DAG				IAML		17 37 46.1	
	comp=Z,2.6nm,0.3s						
HSPB	**Hornsund (broa**	**5.13**	**126**	eP	Pn	17 36 53.0	-0.8
HOPEN	**Hopen**	**6.88**	**112**	eP	Pn	17 37 15.8	-1.9
DBG	**Daneborg**	**7.32**	**219**	iP	Pn	17 37 21.9	-2.0
DBG				eS	Sn	17 38 37.3	-8.5
DBG				IAML		17 38 54.0	
	comp=Z,1.2nm,0.4s						
NEEM	**North Greenlan**	**9.38**	**275**	eP	Pn	17 37 49.7	-2.6
NEEM				IAML		17 39 33.0	
	comp=Z,1.9nm,0.3s						

MAN 24 17:46:48.7, 6°.23N×125°.47E, h71km, mb4.3, ML3.1, MS2.9, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.27**	**118**	⇑eP	Pn	17 47 01.4	+1.6
DDMP				eS	Sn	17 47 11.1	+3.1
KCP	**Kidapawan**	**0.86**	**334**	⇑eP	Pn	17 47 07.2	+1.6
KCP				eS	Sn	17 47 23.4	+5.3
SKMP	**Bagumbayan, Su**	**0.96**	**287**	⇑eP	Pn	17 47 08.0	+1.1
SKMP				eS	Sn	17 47 21.7	+1.4
MATI	**Mati**	**1.05**	**48**	⇓eP	Pn	17 47 08.9	+0.9
MATI				eS	Sn	17 47 23.5	+1.2
CTBH	**Cotabato--PC H**	**1.56**	**309**	⇑iP	Pn	17 47 15.3	+0.7
CTBH				iS	Sn	17 47 35.4	+1.3
GLSP	**General Luna,**	**3.59**	**10**	⇓eP	Pn	17 47 44.9	+2.9
TABP	**Talibon, Bohol**	**4.00**	**344**	⇑eP	Pn	17 47 49.6	+2.1

MAN 24 17:47:37.0, 9°.33N×122°.51E, h16km, mb4.0, ML2.7, MS2.3, 4C-7D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.51**	**15**	⇓iP	Pg	17 47 47.2	+0.1
CNOP				iS	Sb	17 47 55.4	+0.7
SNPH	**Sibulan**	**0.72**	**89**	⇓iP	Pb	17 47 51.1	0.0
SNPH				iS	Sb	17 48 01.8	+1.0
LSIP	**Lazi, Siquijor**	**1.13**	**100**	⇓eP	Pb	17 47 57.1	-0.9
LSIP				eS	Sn	17 48 12.9	-0.3
GUIM	**Jordan**	**1.29**	**4**	⇓eP	Pn	17 47 58.4	-1.9
GUIM				eS	Sb	17 48 15.2	-2.0
TBP	**Tagbilaran**	**1.38**	**75**	eP	Pn	17 48 01.2	-0.4
TBP				iS	Sb	17 48 19.9	+0.1
JAP	**San Jose, Anti**	**1.51**	**339**	⇓eP	Pn	17 48 02.3	-1.1
LLP	**Lapu-Lapu**	**1.74**	**56**	⇑iP	Pn	17 48 06.0	-0.5
LLP				iS	Sn	17 48 28.2	-0.2
GHBP	**Garcia Hernand**	**1.81**	**80**	⇑iP	Pn	17 48 07.8	+0.2
GHBP				eS	Sn	17 48 30.0	-0.2
TABP	**Talibon, Bohol**	**1.95**	**67**	⇑eP	Pn	17 48 08.7	-0.7
TABP				eS	Sn	17 48 28.5	-5.1
RCP	**Roxas**	**2.23**	**6**	⇑eP	Pn	17 48 13.9	+0.7
RCP				eS	Sb	17 48 42.3	-1.9
CGP	**Cagayan de Oro**	**2.33**	**112**	⇓eP	Pn	17 48 05.1	-10
CGP				eS	Sn	17 48 43.8	+0.8
MSLP	**Maasin**	**2.45**	**71**	⇓eP	Pn	17 48 17.6	+1.2
MSLP				eS	Sn	17 48 48.0	+2.1

**MAN 24 17:49:04.1, 9°.50N×122°.67E,

SMPP			*e*S	Sn	18 18 27.9	-2.7
PCPH	**Palayan**	**3.00 175**	⇓*e*P	Pb	18 18 14.7	-0.6

IDC 24 18:23:56.5±7.4, 6°.40S×149°.46E, h62km±58km, mb3.1/1, mbtmp3.7/3, ML1.4/1, Error ellipse: s-maj=111.5km s-min=48.2km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.76**	**217**	P	Pn	18 24 53.9	+1.8
	2.1nm,0.3s,baz=36,slow=8.2,SNR=14						
PMG				S	Sn	18 25 35.4	+0.3
	65nm,0.6s,baz=158,slow=22,SNR=13						
	9.6nm,0.4s						
WRA	**Warramunga Arr**	**19.92**	**226**	P	P	18 28 22.8	-0.6
	4.1nm,0.7s,baz=51,slow=11,SNR=38						
ASAR	**Alice Springs**	**22.77**	**219**	P	P	18 28 53.7	-0.3
	0.7nm,0.6s,baz=58,slow=9.1,SNR=32						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.55**	**284**	PKPbc	PKPbc	18 43 34.7	-0.2
	0.2nm,0.5s,baz=90,slow=3.5,SNR=1.7						

*HEL **24** 18:24:23.5±0.6, 67°.41N×34°.48E, h0km, ML1.8, Explosion*
*IDC **24** 18:24:24.9±2.4, 67°.26N×33°.06E, h0km, mbtmp3.2/2, ML2.2/2, Error ellipse: s-maj=25.6km s-min=9.7km az=82.0*
*BER **24** 18:24:25.7±1.5, 67°.63N×34°.06E, h0km, ML1.8, Suspected explosion*

ISC 24 18:24:24.4±1.1, 67°.56N±0°.04×34°.09E±0°.06, h0km, n25, σ2°.39/34, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.40**	**32**	PG	**Pg**	**18 24 32.4**	**+0.4**
LVZ				SG	**Sg**	**18 24 39.0**	**+1.8**
OLKF	**Oulanka, Finla**	**2.23**	**238**	PG	**Pn**	**18 25 03.6**	**+1.1**
OLKF				SG	**Sb**	**18 25 33.3**	**-0.3**
KU6	**Riekki**	**2.27**	**229**	PG	**Pb**	**18 25 04.8**	**-1.4**
	baz=51						
KU6				MSG		18 25 31.4	
	comp=Z,3.8nm,0.2s						
KU6				SG	**Sb**	**18 25 34.5**	**-0.2**
MSF	**Maaselka**	**2.60**	**233**	PB	**Pb**	**18 25 09.7**	**-2.1**
	baz=55						
MSF				SG	**Sb**	**18 25 44.9**	**+0.6**
SGF	**Sodankyl**	**2.91**	**271**	PN	**Pn**	**18 25 14.0**	**+2.1**
SGF				SN	**Sn**	**18 25 50.1**	**+2.6**
RNF	**Rovaniemi**	**3.30**	**257**	PN	**Pn**	**18 25 16.7**	**-0.5**
KEV	**Kevo**	**3.40**	**314**	*e*P	**Pn**	**18 25 17.7**	**-0.9**
KEV				*e*S	**Sn**	**18 25 56.1**	**-3.4**
KEV	**Kevo**	**3.40**	**314**	SN	**Sn**	**18 26 03.2**	**+3.7**
ARA0	**ARCESS Array S**	**3.72**	**306**	*e*P	**Pn**	**18 25 21.5**	**-1.5**
ARA0				*e*S	**Sn**	**18 26 03.5**	**-4.0**
ARA0				IAML		18 26 23.8	
	comp=Z,5.5nm,0.5s						
ARA0	**ARCESS Array S**	**3.72**	**306**	PN	**Pn**	**18 25 23.8**	**+0.7**
	baz=120						
ARCES	**ARCESS Array B**	**3.72**	**306**	Pn	**Pn**	**18 25 21.0**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=122,slow=14,SNR=119						
ARCES				Pg	**Pb**	**18 25 29.6**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=122,slow=15,SNR=9.6						
ARCES				Sn	Sn	18 26 01.9	-5.6
	comp=Z,0.4nm,0.3s,baz=124,slow=24,SNR=3.1						
ARCES				Lg	Lg	18 26 17.7	
	comp=Z,1.2nm,0.3s,baz=121,slow=26,SNR=14						
	comp=Z,2.2nm,0.2s						
RMF	**Romuvaara**	**3.77**	**209**	PB	**Pn**	**18 25 24.6**	**+0.9**
KLF	**Kolari**	**3.92**	**270**	PB	**Pb**	**18 25 33.5**	**-0.9**
KLF				SB	**Sb**	**18 26 22.5**	**+0.2**
HEF	**Hetta**	**4.02**	**287**	*e*	**Pn**	**18 25 26.2**	**-0.9**
HEF				*e*S	**Sn**	**18 26 11.9**	**-2.9**
HEF	**Hetta**	**4.02**	**287**	PB	**Pb**	**18 25 35.2**	**-0.8**
	baz=95						
HEF				SB	**Sb**	**18 26 25.7**	**+0.7**
OUL	**Oulu**	**4.13**	**237**	SG	**Sb**	**18 26 29.6**	**+1.3**
TOF	**Tornio**	**4.14**	**253**	PB	**Pb**	**18 25 36.0**	**-1.9**
TOF				SB	**Sb**	**18 26 31.2**	**+2.8**
KTK1	**Kautokeino**	**4.28**	**295**	*e*S	**Sn**	**18 26 17.1**	**-4.3**
KTK1	**Kautokeino**	**4.28**	**295**	SB	**Sb**	**18 26 37.6**	**+4.9**
PAJU	**Pajala**	**4.29**	**268**	PB	**Pb**	**18 25 39.5**	**-1.1**
PAJU				SG	**Sb**	**18 26 37.5**	**+4.6**
KALU	**Kalix**	**4.59**	**253**	SB	**Sb**	**18 26 45.0**	**+3.6**
HAMF	**Hammerfest**	**4.84**	**314**	*e*S	Sn	18 26 29.1	-5.8
KIF	**Kilpisjarvi**	**5.14**	**292**	*e*S	Sn	18 26 35.8	-6.6
FINES	**FINESS Array B**	**7.04**	**213**	Pn	Pn	18 26 01.2	-7.4
	comp=Z,0.1nm,0.3s,baz=24,slow=15,SNR=1.6						
FINES				Sn	Sn	18 27 12.7	-17
	comp=Z,0.1nm,0.3s,baz=21,slow=24,SNR=1.2						
FINES				Lg	Lg	18 27 52.3	
	comp=Z,0.1nm,0.3s,baz=19,slow=26,SNR=2.3						
	comp=Z,2.3nm,1.0s						
NOA	**NORSAR Array B**	**11.82**	**247**	Pg	Pn	18 27 51.5	+37
	baz=38,slow=24,SNR=3.6						
NOA				Lg	Lg	18 30 22.3	
	baz=50,slow=24,SNR=1.3						

IDC 24 18:32:42.4±10.0, 5°.85S×154°.04E, h198km±66km, mb2.8/3, mbtmp3.5/4, Error ellipse: s-maj=96.0km s-min=43.7km az=88.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.68**	**242**	P	Pn	18 34 31.4	-0.1
	7.5nm,0.3s,baz=67,slow=9.2,SNR=13						
PMG				S	Sn	18 35 59.4	+1.1
	9.8nm,0.8s,baz=215,slow=16,SNR=1.6						
WRA	**Warramunga Arr**	**23.72**	**232**	P	P	18 37 36.8	+0.2
	0.2nm,0.4s,baz=57,slow=10,SNR=4.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**26.25**	**226**	P	P	18 37 59.0	-0.5
	0.2nm,0.4s,baz=58,slow=9.7,SNR=1.3						
	0.2nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.22**	**27**	T	T	19 06 15.9	
	baz=206						
H11S2	**WAKE ISLAND Hy**	**27.22**	**27**	T	T	19 06 14.8	
	baz=206						
H11S1	**WAKE ISLAND Hy**	**27.24**	**27**	T	T	19 06 14.4	
	baz=206						
CMAR	**Chiang Mai Arr**	**59.44**	**295**	P	P	18 42 24.9	+0.1
	0.4nm,0.6s,baz=111,slow=5.0,SNR=4.2						
	0.4nm,0.6s						

IDC 24 18:39:42.3±1.3, 16°.36S×177°.88E, h0km, mb3.5/4, mbtmp3.5/4, MS3.6/3, Error ellipse: s-maj=33.0km s-min=22.4km az=88.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.38**	**173**	Pn	Pg	18 40 08.7	0.0
	22nm,0.3s,baz=270,slow=12,SNR=43						
MSVF				LR	LR	18 40 24.0	
	comp=Z,50nm,19.1s,baz=328,slow=30						
MSVF				Sn	Sn	18 40 29.4	+1.5
	102nm,0.3s,baz=102,slow=22,SNR=4.7						
HNR	**Honiara**	**18.78**	**289**	LR	LR	18 51 04.9	
	comp=Z,652nm,18.5s,baz=297,slow=36						
RAR	**Rarotonga**	**21.70**	**106**	LR	LR	18 51 02.7	
	comp=Z,40nm,21.2s,baz=266,slow=31						
WRA	**Warramunga Arr**	**41.44**	**258**	P	P	18 47 31.2	+0.1
	0.5nm,0.9s,baz=103,slow=7.2,SNR=2.3						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**41.83**	**253**	P	P	18 47 34.1	-0.1
	0.6nm,0.9s,baz=85,slow=7.7,SNR=5.6						
	0.6nm,0.9s						
GUMO	**Guam**	**44.16**	**310**	LR	LR	19 03 29.5	
	comp=Z,116nm,21.2s,baz=5.0,slow=32						
ILAR	**Eielson Array**	**85.23**	**14**	P	P	18 52 19.0	-1.3
	0.5nm,0.8s,baz=226,slow=6.2,SNR=4.9						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**88.20**	**59**	P	P	18 52 37.3	+1.5
	0.2nm,0.7s,baz=230,slow=7.9,SNR=3.0						
	0.2nm,0.7s						

*LDG **24** 18:41:17.9±0.1, 43°.38N×12°.57E, h8km, Md3.0/1, Ml2.7/20, Error ellipse: s-maj=3.2km s-min=2.2km az=24.0*
*ROM **24** 18:41:18.4±0.1, 43°.379N±0°.003×12°.546E±0°.004, h8km, ML3.0/44, Error ellipse: s-maj=0.3km s-min=0.2km az=1.0*
*PDG **24** 18:41:19.1±0.4, 43°.38N×12°.55E, h8km, ML3.6/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*PRU **24** 18:41:21.2±0.0, 43°.78N×11°.59E, h0km*

ISC 24 18:41:19.1±0.8, 43°.36N±0°.02×12°.50E±0°.02, h9km±4km, n133, σ2°.09/202, 20C-30D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**83**	P	**Pg**	**18 41 19.6**	**-1.4**
ATFO				S	**Sg**	**18 41 20.5**	**-2.0**
ATVO	**AVT- Monte Val**	**0.07**	**288**	⇑P	**Pg**	**18 41 21.1**	**-0.1**
ATVO				S	**Sg**	**18 41 22.9**	**+0.2**
ATVO				AML	AML		
	comp=E,24850μm,0.6s						
ATVO				AML	AML		
	comp=N,25450μm,0.5s						
MURB	**Monte Urbino**	**0.10**	**170**	P	**Pg**	**18 41 21.6**	**+0.1**
MURB				AML	AML		
	comp=E,60450μm,0.3s						
MURB				AML	AML		
	comp=E,62400μm,0.4s						
MURB				AML	AML		
	comp=N,46550μm,0.3s						
MURB				AML	AML		
	comp=E,60400μm,0.3s						
MURB				AML	AML		
	comp=N,50350μm,0.3s						
MURB				AML	AML		
	comp=E,60400μm,1.7s						
MURB				AML	AML		
	comp=E,62400μm,1.6s						
ATPI	**Pietralunga -**	**0.12**	**321**	⇑P	**Pg**	**18 41 21.6**	**-0.2**
ATPI				S	**Sg**	**18 41 24.1**	**+0.3**
ATPI				AML	AML		
	comp=E,10105μm,0.2s						
ATPI				AML	AML		
	comp=N,18750μm,0.7s						
ATPI				AML	AML		
	comp=E,10115μm,0.2s						
ATMI	**Monte Miggiano**	**0.17**	**261**	P	**Pg**	**18 41 23.1**	**+0.4**
ATMI				S	**Sg**	**18 41 26.8**	**+1.6**
ATMI				AML	AML		
	comp=E,9335μm,0.3s						
ATMI				AML	AML		
	comp=N,10280μm,0.4s						
PIEI	**Pieia**	**0.18**	**8**	⇓P	**Pg**	**18 41 22.3**	**-0.6**
PIEI				S	**Sg**	**18 41 25.3**	**-0.1**
PIEI				AML	AML		
	comp=E,51300μm,0.4s						
PIEI				AML	AML		
	comp=N,31900μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.20**	**214**	⇑P	**Pg**	**18 41 23.5**	**+0.4**
ATTE				S	**Sg**	**18 41 27.7**	**+1.8**
ATTE				AML	AML		
	comp=E,6775μm,0.4s						
ATTE				AML	AML		
	comp=N,8625μm,1.0s						
ATTE				AML	AML		
	comp=E,6775μm,1.6s						
FOSV	**Fossato di Vic**	**0.20**	**109**	⇓P	**Pg**	**18 41 22.7**	**-0.6**
FOSV				S	**Sg**	**18 41 26.2**	**+0.2**
FOSV				AML	AML		
	comp=E,5295μm,0.4s						
FOSV				AML	AML		
	comp=N,6245μm,0.9s						
ATCC	**AVT- Casa Cast**	**0.20**	**150**	⇑P	**Pg**	**18 41 23.4**	**+0.2**
ATCC				S	**Sg**	**18 41 27.7**	**+1.6**
ATCC				AML	AML		
	comp=N,13300μm,0.8s						
ATCC				AML	AML		
	comp=N,13250μm,0.8s						
ATCC				AML	AML		
	comp=E,22850μm,0.6s						
FRON	**Frontone**	**0.23**	**46**	⇑P	**Pg**	**18 41 22.9**	**-0.8**
FRON				S	**Sg**	**18 41 26.4**	**-0.5**
FRON				AML	AML		
	comp=E,9480μm,0.3s						
FRON				AML	AML		
	comp=N,15850μm,0.3s						
BADI	**Badiali**	**0.24**	**309**	P	**Pg**	**18 41 24.3**	**+0.3**
BADI				S	**Sg**	**18 41 28.8**	**+1.6**
BADI				AML	AML		
	comp=E,1182μm,0.2s						
BADI				AML	AML		
	comp=N,23500μm,0.3s						
BADI				AML	AML		
	comp=N,23550μm,0.3s						
BADI				AML	AML		
	comp=E,1178μm,0.2s						
MPAG	**Monte Paganucc**	**0.33**	**35**	⇓P	**Pg**	**18 41 24.9**	**-0.8**
MPAG				S	**Sg**	**18 41 30.0**	**0.0**
MPAG				AML	AML		
	comp=E,4435μm,0.4s						
MPAG				AML	AML		
	comp=N,5365μm,0.5s						
MPAG				AML	AML		
	comp=E,4625μm,0.6s						
MPAG				AML	AML		
	comp=N,5335μm,1.0s						
PE3	**Peglio**	**0.34**	**359**	P	**Pg**	**18 41 25.5**	**-0.3**
PE3				S	**Sg**	**18 41 31.6**	**+1.4**
SNTG	**Esanatoglia**	**0.34**	**108**	⇓P	**Pg**	**18 41 25.2**	**-0.6**
SNTG				S	**Sg**	**18 41 30.6**	**+0.4**
SNTG				AML	AML		
	comp=N,8440μm,0.3s						
SNTG				AML	AML		
	comp=E,3800μm,0.2s						
SNTG				AML	AML		
	comp=N,8365μm,0.3s						
SNTG				AML	AML		
	comp=E,4535μm,0.2s						
SNTG				AML	AML		
	comp=E,3800μm,1.8s						
SNTG				AML	AML		
	comp=N,8365μm,1.7s						
SNTG				AML	AML		
	comp=N,8440μm,1.7s						
SNTG				AML	AML		
	comp=E,4535μm,1.8s						
SSP9	**Sansepolcro**	**0.34**	**309**	⇓P	**Pg**	**18 41 26.1**	**+0.3**
SSP9				AML	AML		
	comp=E,2570μm,1.3s						
SSP9				AML	AML		
	comp=N,2230μm,1.1s						
SSP9				AML	AML		
	comp=E,2560μm,1.3s						
SSP9				AML	AML		
	comp=E,2560μm,0.7s						
SSP9				AML	AML		
	comp=N,2220μm,1.1s						
ARVD	**Arcevia**	**0.35**	**67**	⇓P	**Pg**	**18 41 25.2**	**-0.7**
ARVD				S	**Sg**	**18 41 30.7**	**+0.1**
ARVD				AML	AML		
	comp=E,4590μm,0.8s						
ARVD				AML	AML		
	comp=N,3170μm,0.8s						
ARVD				AML	AML		
	comp=E,4590μm,1.2s						
ARVD				AML	AML		
	comp=N,3170μm,1.2s						
MMUR	**Monte Murano**	**0.37**	**77**	P	**Pg**	**18 41 25.6**	**-0.8**
MMUR				S	**Sg**	**18 41 31.5**	**+0.2**
MMUR				AML	AML		
	comp=E,13035μm,0.9s						
MMUR				AML	AML		
	comp=N,9505μm,0.3s						
MMUR				AML	AML		
	comp=E,13050μm,0.9s						
MMUR				AML	AML		
	comp=N,9465μm,0.3s						
MMUR				AML	AML		
	comp=N,9465μm,1.7s						
MMUR				AML	AML		
	comp=E,13050μm,1.1s						
FSSB	**Fossombrone**	**0.39**	**31**	⇓P	**Pg**	**18 41 26.0**	**-0.7**
FSSB				S	**Sg**	**18 41 32.1**	**+0.3**
FSSB				AML	AML		
	comp=E,8390μm,0.4s						
FSSB				AML	AML		
	comp=N,10605μm,0.3s						
FSSB				AML	AML		
	comp=N,10605μm,1.7s						
FSSB				AML	AML		
	comp=E,8390μm,1.6s						
SEF1	**Sefro**	**0.39**	**123**	P	**Pg**	**18 41 26.3**	**-0.5**
SEF1				S	**Sg**	**18 41 32.7**	**+0.9**
SEF1				AML	AML		
	comp=E,5205μm,0.2s						
SEF1				AML	AML		
	comp=N,5070μm,1.3s						
SEF1				AML	AML		
	comp=N,5075μm,1.3s						
SEF1				AML	AML		
	comp=E,5210μm,0.2s						
SEF1				AML	AML		
	comp=N,5075μm,0.7s						
GAG1	**Gagliole**	**0.43**	**106**	⇓P	**Pg**	**18 41 27.2**	**-0.3**
EL6	**Elcito**	**0.44**	**94**	⇓P	**Pg**	**18 41 26.9**	**-0.7**
EL6				AML	AML		
	comp=N,7175μm,0.9s						
EL6				AML	AML		
	comp=N,7170μm,0.9s						
EL6				AML	AML		
	comp=E,4970μm,0.3s						
EL6				AML	AML		
	comp=N,7170μm,1.1s						
EL6				AML	AML		
	comp=E,4970μm,1.7s						
CESI	**CESI - Serrava**	**0.46**	**140**	⇑P	**Pg**	**18 41 27.8**	**-0.3**
CESI				AML	AML		
	comp=E,1785μm,1.0s						
CESI				AML	AML		
	comp=N,1940μm,0.4s						
CRE	**Caprese Michel**	**0.48**	**303**	⇓P	**Pg**	**18 41 28.4**	**0.0**
CRE				S	**Sb**	**18 41 37.0**	**0.0**
CRE				AML	AML		
	comp=E,2845μm,1.5s						
CRE				AML	AML		
	comp=N,3460μm,1.2s						
CRE				AML	AML		
	comp=N,3460μm,0.8s						
CRE				AML	AML		
	comp=E,2845μm,0.5s						
CING	**Cingoli**	**0.51**	**88**	⇓P	**Pg**	**18 41 28.2**	**-0.8**
CING				AML	AML		
	comp=N,2765μm,0.6s						
CING				AML	AML		
	comp=E,1875μm,0.7s						
CING				AML	AML		
	comp=N,2765μm,1.4s						
CING				AML	AML		
	comp=E,1875μm,1.3s						
MGAB	**Montegabbione**	**0.53**	**213**	⇑P	**Pb**	**18 41 29.7**	**-0.9**
MGAB				AML	AML		
	comp=N,3830μm,0.5s						
MGAB				AML	AML		
	comp=N,4295μm,0.5s						
MGAB				AML	AML		
	comp=N,3835μm,0.5s						
MGAB				AML	AML		
	comp=E,4430μm,0.5s						
MGAB				AML	AML		
	comp=E,4330μm,0.5s						
FDMO	**Fiordimonte**	**0.54**	**127**	⇓P	**Pg**	**18 41 28.8**	**-0.7**
FDMO				S	**Sg**	**18 41 38.0**	**+1.5**
FDMO				AML	AML		
	comp=E,1042μm,1.6s						
FDMO				AML	AML		
	comp=N,1365μm,0.1s						
FDMO				AML	AML		
	comp=E,1042μm,0.4s						
T1216	**Preci, Frazion**	**0.60**	**141**	P	**Pg**	**18 41 30.1**	**-0.7**
T1216				S	**Sb**	**18 41 41.0**	**+0.5**
T1216				AML	AML		
	comp=E,2220μm,1.2s						
T1216				AML	AML		
	comp=N,2210μm,1.1s						
T1216				AML	AML		
	comp=E,2235μm,1.2s						
T1216				AML	AML		
	comp=N,2210μm,1.1s						
T1216				AML	AML		
	comp=N,2216μm,1.1s						
T1216				AML	AML		
	comp=E,2215μm,1.2s						
T1216				AML	AML		
	comp=N,2216μm,0.9s						
T1216				AML	AML		
	comp=E,2215μm,0.8s						
T1215	**Vallo di Nera,**	**0.62**	**154**	⇑P	**Pg**	**18 41 30.6**	**-0.4**
T1215				AML	AML		
	comp=E,710μm,0.4s						
T1215				AML	AML		
	comp=N,714μm,1.4s						
T1215				AML	AML		
	comp=N,700μm,1.4s						
T1215				AML	AML		
	comp=E,734μm,0.3s						
T1215				AML	AML		
	comp=E,710μm,0.3s						
T1215				AML	AML		
	comp=N,700μm,0.6s						
T1215				AML	AML		
	comp=N,714μm,0.6s						
PESA	**Pesaro**	**0.63**	**23**	P	**Pg**	**18 41 28.6**	**-2.7**
SACS	**San Casciano d**	**0.67**	**220**	P	**Pg**	**18 41 32.2**	**+0.2**
SACS				AML	AML		
	comp=N,1675μm,0.6s						
SACS				AML	AML		
	comp=N,1820μm,0.6s						
SACS				AML	AML		
	comp=E,1485μm,0.7s						
SACS				AML	AML		
	comp=E,1370μm,0.9s						
MC2	**Monte Cornacci**	**0.67**	**131**	⇑P	**Pg**	**18 41 31.6**	**-0.6**
ASQU	**Asqua**	**0.68**	**310**	P	**Pg**	**18 41 32.0**	**-0.2**
ASQU				AML	AML		
	comp=E,938μm,1.1s						
ASQU				AML	AML		
	comp=N,1330μm,0.9s						
NRCA	**Norcia**	**0.69**	**139**	⇓P	**Pg**	**18 41 31.7**	**-0.8**
NRCA				AML	AML		
	comp=E,1425μm,0.4s						
NRCA				AML	AML		
	comp=N,1940μm,0.1s						
T1245	**Castelsantange**	**0.71**	**135**	⇓P	**Pg**	**18 41 32.0**	**-0.8**
T1245				S	**Sb**	**18 41 45.0**	**+1.3**
T1245				AML	AML		
	comp=E,1635μm,0.7s						
T1245				AML	AML		
	comp=N,1910μm,0.6s						
T1245				AML	AML		
	comp=E,1370μm,0.7s						
T1245				AML	AML		
	comp=E,1630μm,0.7s						
T1245				AML	AML		
	comp=N,1710μm,0.6s						
T1245				AML	AML		
	comp=E,1630μm,1.3s						
T1217	**Poggiodomo (PG**	**0.72**	**154**	⇑P	**Pg**	**18 41 32.7**	**-0.3**
T1217				S	**Sb**	**18 41 45.0**	**+1.1**
SFI	**Santa Sofia**	**0.72**	**319**	P	**Pg**	**18 41 32.7**	**-0.3**
SFI				AML	AML		
	comp=E,513μm,1.4s						
SFI				AML	AML		
	comp=N,590μm,0.6s						
SFI				AML	AML		
	comp=E,546μm,1.5s						
SFI				AML	AML		
	comp=N,594μm,0.6s						
SFI				AML	AML		
	comp=E,513μm,0.6s						
SFI				AML	AML		
	comp=E,546μm,0.5s						
AM05	**Amandola Campo**	**0.73**	**121**	P	**Pg**	**18 41 33.0**	**-0.1**
AM05				AML	AML		
	comp=E,1020μm,0.6s						
AM05				AML	AML		
	comp=N,30500μm,1.6s						
AM05				AML	AML		
	comp=E,1020μm,1.4s						
AM05				AML	AML		
	comp=N,30500μm,0.4s						
CESX	**Cesi**	**0.75**	**176**	⇓P	**Pg**	**18 41 33.4**	**-0.1**
CESX				S	**Sn**	**18 41 47.0**	**-0.5**
CESX				AML	AML		
	comp=E,1205μm,0.7s						
CESX				AML	AML		
	comp=N,1760μm,0.4s						
CESX				AML	AML		
	comp=N,1760μm,1.6s						
MMO1	**Montemonaco**	**0.76**	**127**	⇓P	**Pg**	**18 41 32.8**	**-1.0**
ARRO	**Arrone**	**0.80**	**166**	⇓P	**Pg**	**18 41 34.8**	**+0.2**
ARRO				AML	AML		
	comp=E,763μm,1.1s						
ARRO				AML	AML		

comp=N,646µm,0.9s
SF04 Casetta 0.81 230 ⇑P **Pg 18 41 34.7 0.0**
AOI Ancona 0.82 76 S **Sb 18 41 48.0 +1.1**
T1241 Roccafluvione, 0.85 126 ⇓P **Pg 18 41 34.5 -0.8**
T1241 AML AML
comp=E,1009µm,0.5s
T1241 AML AML
comp=E,1006µm,0.5s
T1241 AML AML
comp=N,693µm,0.8s
T1241 AML AML
comp=E,1006µm,1.5s
T1241 AML AML
comp=N,693µm,1.2s
LNSS Leonessa 0.85 152 ⇑P **Pg 18 41 34.9 -0.6**
LNSS S **Sb 18 41 49.0 +1.2**
LNSS AML AML
comp=E,1200µm,0.4s
LNSS AML AML
comp=N,1680µm,0.2s
RUFI Rufina 0.86 304 ⇑P **Pg 18 41 35.6 -0.1**
T1211 Morro Reatino 0.87 162 ⇑P **Pg 18 41 35.7 -0.1**
T1211 AML AML
comp=N,969µm,0.3s
T1211 AML AML
comp=E,760µm,0.3s
T1211 AML AML
comp=N,969µm,1.7s
LATE Laterza 0.91 215 ⇑P **Pn 18 41 37.8 -0.3**
LMD Lutirano 0.92 322 ⇓P **Pg 18 41 36.4 -0.4**
LMD AML AML
comp=N,396µm,0.7s
LMD AML AML
comp=E,428µm,0.6s
LMD AML AML
comp=E,428µm,1.4s
SMA1 SAN MARTINO 0.95 140 ⇓P **Pg 18 41 36.6 -0.7**
SMA1 AML AML
comp=E,826µm,1.4s
SMA1 AML AML
comp=N,927µm,1.2s
SMA1 AML AML
comp=N,927µm,0.8s
T1243 Rocca Santa Ma 0.96 133 ⇓P **Pg 18 41 36.5 -1.1**
OFFI Offida 0.97 116 ⇓P **Pg 18 41 38.2 +0.6**
OFFI AML AML
comp=E,1780µm,0.4s
OFFI AML AML
comp=N,2515µm,0.7s
RM33 Pellescritta (1.00 148 P **Pg 18 41 37.3 -1.0**
RM33 AML AML
comp=E,832µm,0.4s
RM33 AML AML
comp=N,600µm,0.4s
RM33 AML AML
comp=E,824µm,0.4s
RM33 AML AML
comp=N,556µm,0.4s
CAMP Campotosto 1.06 141 ⇑P **Pg 18 41 38.3 -1.1**
CAMP AML AML
comp=E,506µm,1.0s
CAMP AML AML
comp=N,406µm,0.7s
TERO Teramo 1.09 132 ⇑P **Pg 18 41 38.7 -1.4**
TERO AML AML
comp=E,687µm,0.5s
TERO AML AML
comp=N,418µm,1.5s
TERO AML AML
comp=E,687µm,1.5s
TOLF Tolfa 1.35 196 ⇓P **Pg 18 41 44.3 -0.6**
TOLF AML AML
comp=N,146µm,0.6s
TOLF AML AML
comp=E,206µm,0.7s
TOLF AML AML
comp=E,206µm,1.3s
CERT Cerreto 1.45 166 ⇓P **Pn 18 41 45.3 -0.3**
CERT AML AML
comp=E,352µm,1.6s
CERT AML AML
comp=N,265µm,0.8s
CERT AML AML
comp=E,352µm,0.4s
T0110 Collepietro 1.47 140 ⇓P **Pg 18 41 47.4 +0.1**
CARD Cardoso 1.61 295 P **Pn 18 41 47.4 -0.4**
CARD AML AML
comp=E,144µm,0.4s
CARD AML AML
comp=N,155µm,0.7s
CARD AML AML
comp=N,155µm,1.3s
SKDS Skadanscina 2.44 26 *e*Pn **Pn 18 41 57.7 -1.5**
TREM Isole Tremiti 2.54 118 S **Sn 18 42 33.0 +1.5**
CGRP Cima Grappa 2.57 349 ⇓P **Pn 18 42 01.8 +0.8**
PGF Pioggiola 2.70 254 *e*P **Pn 18 42 03.1 +0.4**
PGF *e*Sn **Sn 18 42 32.3 -3.3**
comp=N,1.6nm,0.3s
CEY Cerknica 2.75 29 *e*Pn **Pn 18 42 02.6 -0.8**
STAL STALIGIAL 2.90 3 ⇓P **Pn 18 42 05.5 -0.1**
BOJS Bojanci 2.91 42 *e*Pn **Pn 18 42 06.0 +0.4**
BOJS Bojanci 2.91 42 S **Sn 18 42 42.0 +1.3**
MABI Malga Bissina 3.04 333 ⇑P **Pn 18 42 09.6 +2.0**
MYKA Terra Mystica 3.37 14 *e*Pn **Pn 18 42 13.0 +1.1**
comp=N,1.7nm,0.3s
ABTA Abfaltersbach 3.39 0 *i* Pn **Pn 18 42 13.1 +0.9**
comp=N,8.6nm,0.6s
ABTA *e*Sn **Sn 18 42 55.1 +2.5**
comp=N,8.9nm,0.6s
SRKY Kupres RS 3.46 77 *e*Pn **Pn 18 42 14.0 +0.8**
OBKA Obir 3.47 24 *e*Pn **Pn 18 42 13.7 +0.3**
OBKA Obir 3.47 24 *i* Pn **Pn 18 42 13.9 +0.5**
comp=N,2.1nm,0.3s
OBKA *e*Sg **Sg 18 43 10.0 -0.4**
comp=N,18nm,0.4s
MGRS Mrkonjic Grad 3.48 71 *e*Pn **Pb 18 42 19.9 -0.9**
A051A Mrakovica 3.57 61 *e*Pn **Pn 18 42 14.9 +0.1**
RISI Rein 3.60 355 ⇓P **Pn 18 42 17.2 +1.9**
BLY Banja Luka 3.65 66 *e*Pn **Pb 18 42 24.1 +0.3**
PZUN Potenza 3.66 137 S **Sn 18 42 56.0 -3.3**
PZUN S **Sb 18 43 10.0 +1.5**
SBF Sospel 3.71 280 *e*P **Pn 18 42 17.9 +1.2**
SBF *e*Sn **Sn 18 42 56.6 -4.0**
comp=N,12nm,0.6s
KBA Koelnbreinsper 3.77 9 *e*Pn **Pn 18 42 18.1 +0.6**
comp=N,6.6nm,0.5s,SNR=5.4
KBA *i* Sn **Sn 18 43 03.5 +1.5**
comp=N,4.4nm,0.3s
SOKA Soboth 3.77 28 *e*Pn **Pn 18 42 17.9 +0.3**
comp=N,4.1nm,0.5s
SOKA Pg **Pb 18 42 28.8 +2.9**
comp=N,4.1nm,0.5s
SOKA *e*Sg **Sg 18 43 20.8 +0.6**
comp=N,10nm,0.7s
STON Ston 3.84 96 *e*Pn **Pn 18 42 17.0 -1.3**
FETA Feichten 3.87 342 *e*Pn **Pn 18 42 20.9 +2.0**
comp=N,6.7nm,0.5s,SNR=12
FETA *i* Sn **Sn 18 43 06.4 +1.8**
comp=N,2.2nm,0.4s
WTTA Wattenberg 3.95 351 *i* Pn **Pn 18 42 22.4 +2.3**
comp=N,3.8nm,0.2s,SNR=5.0
WTTA *i* Sn **Sn 18 43 08.3 +1.6**
comp=N,8.2nm,0.4s
SQTA Sankt Quirin 3.97 347 *i* Pn **Pn 18 42 23.0 +2.7**
comp=N,14nm,0.4s,SNR=12
SQTA *e*Sn **Sn 18 43 08.3 +1.3**
comp=N,8.4nm,0.5s
WATA Walderalm 4.03 351 *i* Pn **Pn 18 42 24.0 +2.9**
comp=N,9.6nm,0.2s,SNR=14
WATA *e*Sn **Sn 18 43 10.5 +2.0**
comp=N,7.1nm,0.3s
MOTA Moosalm 4.11 347 *e*Pn **Pn 18 42 25.3 +3.1**
comp=N,4.7nm,0.4s,SNR=5.6
MOTA *e*Sn **Sn 18 43 13.3 +2.9**
comp=N,5.4nm,0.5s
RETA Reutte 4.30 344 *i* Pn **Pn 18 42 27.4 +2.6**
comp=N,4.6nm,0.4s,SNR=6.6
RETA *i* Sn **Sn 18 43 17.2 +2.0**
comp=N,1.7nm,0.3s
DAVA Damuels 4.34 336 *i* Pn **Pn 18 42 28.5 +3.1**
comp=N,11nm,0.4s,SNR=13
DAVA *e*Sn **Sn 18 43 18.6 +2.4**
comp=N,10nm,0.7s
MBDF Montbardon 4.35 290 *e*P **Pn 18 42 25.8 +0.3**
MBDF *e*Sn **Sn 18 43 11.5 -5.0**
comp=N,1.7nm,0.5s
LMR La Mourre 4.37 272 *e*P **Pn 18 42 26.4 +0.8**
LMR *e*Sn **Sn 18 43 12.0 -4.7**
comp=N,1.4nm,0.4s
BIOA Bad Ischl, Aus 4.40 10 *e*Pn **Pn 18 42 26.9 +0.8**
comp=N,4.0nm,0.3s
BIOA *e*Sn **Sn 18 43 18.5 +0.9**
comp=N,9.8nm,0.5s
ARSA Arzberg 4.44 28 *e*Pn **Pn 18 42 25.7 -0.8**
comp=N,1.1nm,0.2s
ARSA *i* Sn **Sn 18 43 17.2 -1.1**
comp=N,2.5nm,0.4s
BRY Bratogost 4.44 94 *e*Pn **Pn 18 42 27.2 +0.4**
BRY Bratogost 4.44 94 ⇓*i*Pn **Pn 18 42 27.9 +1.1**
BRY *i* Sn **Sn 18 43 19.9 +1.2**
HCY Herceg Novi 4.50 100 *e*Pn **Pn 18 42 26.3 -1.1**
HCY Herceg Novi 4.50 100 *e*Pn **Pn 18 42 28.7 +1.3**
HCY *i* Sn **Sn 18 43 21.3 +1.5**
LPG La Plagne 4.64 299 *e*P **Pn 18 42 31.3 +1.7**
LPG *e*Sn **Sn 18 43 18.5 -5.2**
comp=N,2.7nm,0.5s
MOA Molln 4.66 15 *e*Pn **Pn 18 42 30.4 +0.7**
comp=N,8.7nm,0.4s,SNR=5.5
MOA *e*Sn **Sn 18 43 25.2 +1.4**
comp=N,7.3nm,0.5s
LPL La Plagne 4.66 300 *e*Pn **Pn 18 42 28.6 -1.2**
UPM Unac-Piva 4.68 90 *e*Pn **Pn 18 42 28.4 -1.7**
UPM Unac-Piva 4.68 90 *e*Pn **Pn 18 42 31.2 +1.1**
UPM *i* Sn **Sn 18 43 25.5 +0.9**
HAPS Han Pijesak,Bl 4.73 79 *e*Pn **Pn 18 42 31.7 +1.0**
NKME Niksic 4.76 95 *e*Pn **Pn 18 42 32.3 +1.2**
NKME *i* Sn **Sn 18 43 27.6 +1.1**
CEME Cevo 4.78 98 ⇓*i*Pn **Pn 18 42 32.6 +1.3**
CEME *i* Sn **Sn 18 43 28.0 +1.1**
BUM Brajici-Budva 4.82 101 *e*Pn **Pn 18 42 33.0 +1.1**
BUM *i* Sn **Sn 18 43 29.0 +1.1**
RUDO Rudo 5.00 85 *e*Pn **Pn 18 42 33.8 -0.6**
ORIF Oris-en-Rattie 5.01 290 *e*P **Pn 18 42 36.9 +2.3**
ORIF *e*Sn **Sn 18 43 27.5 -5.2**
comp=N,8.6nm,0.8s
BBLS Lazići 5.04 82 *e*Pn **Pn 18 42 34.3 -0.6**
DRME Dracevica, Mon 5.06 101 *e*Pn **Pn 18 42 36.0 +0.9**
DRME Dracevica, Mon 5.06 101 *e*Pn **Pn 18 42 36.1 +0.9**
DRME *i* Sn **Sn 18 43 34.8 +1.2**
SMRF Simiane la Rot 5.06 279 *e*P **Pn 18 42 36.8 +1.6**
SMRF *e*Sn **Sn 18 43 28.5 -5.3**
comp=N,5.9nm,0.7s
CONA Conrad Observa 5.14 26 *e*Pn **Pn 18 42 35.9 -0.4**
comp=N,0.7nm,0.3s
CONA *e*Sn **Sn 18 43 34.2 -1.6**
comp=N,2.9nm,0.7s
KOME Kolasin 5.16 93 ⇑*i*Pn **Pn 18 42 37.9 +1.3**
KOME *i* Sn **Sn 18 43 37.1 +0.8**
ULC Ulcinj 5.17 103 *e*Pn **Pn 18 42 37.4 +0.8**
ULC *i* Sn **Sn 18 43 37.3 +1.0**
IVA Berane 5.43 93 ⇑*i*Pn **Pn 18 42 41.6 +1.3**
IVA *i* Sn **Sn 18 43 43.6 +0.6**
PVY Plav 5.52 95 *e*Pn **Pn 18 42 42.9 +1.3**
PVY *i* Sn **Sn 18 43 45.8 +0.5**
CABF La Chapelle 5.59 308 *e*P **Pn 18 42 44.3 +1.8**
CABF *e*Sn **Sn 18 43 40.9 -6.0**
comp=N,2.3nm,0.4s
CKRC Cesky Krumlov 5.60 12 *e*PN **Pn 18 42 43.1 +0.5**
CKRC *e*SN **Sn 18 43 45.4 -1.7**
KHC Kasperske Hory 5.82 7 *e*PN **Pn 18 42 44.8 -0.8**
KHC *e*SN **Sn 18 43 49.2 -3.3**
VIVF Saint-Julien-l 5.83 288 *e*P **Pn 18 42 47.9 +2.1**
VIVF *e*Sn **Sn 18 43 46.8 -6.0**
comp=N,1.9nm,0.6s
HINF Hinteralfeld 5.96 320 *e*P **Pn 18 42 47.7 +0.1**
HINF *e*Sn **Sn 18 43 49.5 -6.5**
comp=N,4.1nm,0.5s
CDF Champ du Feu 6.23 326 *e*P **Pn 18 42 52.0 +0.7**
CDF *e*Sn **Sn 18 43 55.9 -6.7**
comp=N,1.6nm,0.3s
LASF Ste Croix 6.30 279 *e*P **Pn 18 42 54.6 +2.3**
LASF *e*Sn **Sn 18 43 58.2 -6.2**
comp=N,1.6nm,0.5s
HAU Haudompre 6.34 319 *e*P **Pn 18 42 53.6 +0.9**
HAU *e*Sn **Sn 18 43 58.2 -7.0**
comp=N,4.8nm,0.4s
SMF Signal de Mont 6.96 301 *e*P **Pn 18 43 03.4 +2.2**
SMF *e*Sn **Sn 18 44 13.5 -7.0**
comp=N,0.9nm,0.4s
PAGF Fort de Pagny 7.02 320 *e*Pn **Pn 18 42 59.3 -2.7**
LOR Lormes 7.24 306 *e*P **Pn 18 43 05.9 +0.9**
baz=124
LOR *e*Sn **Sn 18 44 20.1 -7.2**
comp=N,1.3nm,0.4s
MEZF Maizieres J'vi 7.31 317 *e*Pn **Pn 18 43 03.2 -2.7**
baz=136
AVF Avril sur Loir 7.33 301 *e*P **Pn 18 43 07.6 +1.4**
SSF Saint Saulge 7.35 303 *e*Pn **Pn 18 43 03.2 -3.4**
MTLF Montolieu 7.50 273 *e*P **Pn 18 43 10.4 +1.8**
MTLF *e*Sn **Sn 18 44 26.7 -7.0**
comp=N,0.5nm,0.3s
BGF Bois d'Agland 7.56 298 *e*P **Pn 18 43 11.5 +2.1**
CLL Collm 7.96 2 *e*Sg Sg 18 45 25.0 -9.3

IDC 24 18:45:02.4±27.0, 23°.44N×142°.59E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=654.7km s-min=40.4km az=50.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**22.89**	**95**	T	T	19 14 18.7	
	baz=283,slow=74,SNR=107						
H11N2	**WAKE ISLAND Hy**	**22.89**	**95**	T	T	19 14 18.9	
	baz=283,slow=74,SNR=124						
H11N3	**WAKE ISLAND Hy**	**22.91**	**95**	T	T	19 14 20.0	
	baz=283,slow=74,SNR=124						
H11S3	**WAKE ISLAND Hy**	**23.02**	**98**	T	T	19 14 25.7	
	baz=286,slow=75,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**23.03**	**98**	T	T	19 14 25.5	
	baz=286,slow=75,SNR=8.3						
H11S2	**WAKE ISLAND Hy**	**23.04**	**98**	T	T	19 14 28.0	
	baz=286,slow=75,SNR=8.6						
CMAR	**Chiang Mai Arr**	**40.95**	**272**	P	P	18 52 47.0	-0.1
	0.5nm,0.6s,baz=62,slow=7.4,SNR=6.7						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.87**	**191**	P	P	18 53 10.6	-0.1
	0.6nm,0.7s,baz=12,slow=8.5,SNR=8.4						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**47.58**	**191**	P	P	18 53 39.9	-0.2
	0.4nm,0.8s,baz=15,slow=12,SNR=5.4						
	0.4nm,0.8s						

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*IDC **24** 18:54:46.0±1.3, 16°.38S×177°.89E, h0km, mb3.8/5, mbtmp3.8/5, MS3.0/5, Error ellipse: s-maj=30.1km s-min=22.0km az=90.0*

ISC 24 18:54:49.4±1.1, 16°.38S±0°.10×177°.8E±0°.2, h21km, n11, σ1§16/7, mb3.9/5, MS2.9/3, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.37**	**171**	Pn	**Pn**	**18 55 12.3**	**-1.0**
	26nm,0.3s,baz=337,slow=4.7,SNR=85						
MSVF				Sn	**Sb**	**18 55 31.9**	**+0.5**
	117nm,0.3s,baz=153,slow=30,SNR=12						
MSVF				LR	LR	18 55 34.1	
	comp=Z,61nm,20.3s,baz=145,slow=35						
AFI	**Afiamalu**	**10.32**	**78**	LR	LR	19 00 21.6	
	comp=Z,116nm,21.1s,baz=206,slow=33						
DZM	**Mont Dzumac**	**12.16**	**240**	LR	LR	19 01 35.8	
	comp=Z,91nm,19.9s,baz=42,slow=34						
RAR	**Rarotonga**	**21.73**	**106**	LR	LR	19 06 17.9	
	comp=Z,34nm,20.0s,baz=303,slow=32						
PPT	**Papeete**	**31.17**	**97**	LR	LR	19 11 46.0	
	comp=Z,26nm,19.0s,baz=102,slow=33						
STKA	**Stephens Creek**	**36.30**	**238**	P	**P**	**19 01 52.0**	**+0.4**
	1.9nm,0.7s,baz=54,slow=9.5,SNR=1.9						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**41.40**	**258**	P	**P**	**19 02 34.1**	**-0.5**
	0.6nm,0.9s,baz=94,slow=8.4,SNR=2.4						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**41.78**	**253**	P	**P**	**19 02 38.4**	**+0.7**
	1.4nm,1.0s,baz=90,slow=8.3,SNR=7.7						
	1.4nm,1.0s						
KSRS	**Korea Array**	**71.20**	**320**	LR	LR	19 36 30.4	
	comp=Z,11nm,18.1s,baz=155,slow=35						
ILAR	**Eielson Array**	**85.25**	**14**	P	**P**	**19 07 22.9**	**-1.2**
	0.7nm,0.8s,baz=232,slow=5.5,SNR=4.7						
	0.7nm,0.8s						
TXAR	**Lajitas Array**	**88.25**	**59**	P	**P**	**19 07 41.0**	**+1.4**
	0.7nm,1.1s,baz=224,slow=6.3,SNR=2.9						
	0.7nm,1.1s						

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*IDC **24** 18:55:13.7±0.6, 23°.29N×141°.93E, h0km, mb4.1/16, mbtmp4.0/19, ML3.5/3, MS3.6/48, Error ellipse: s-maj=28.7km s-min=12.9km az=90.0*
*NEIC **24** 18:55:15.2±1.8, 23°.4N±0°.1×142°.3E±0°.1, h10km±2km, mb4.6/8, Error ellipse: s-maj=22.7km s-min=17.3km az=94.0*

ISC 24 18:55:18.8±0.6, 23°.32N±0°.06×142°.1E±0°.1, h35km, n76, σ1§39/40, mb4.2/21, MS3.7/43, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.77**	**2**	Pn	**Pn**	**18 56 13.6**	**-0.8**
	13nm,0.3s,baz=275,slow=23,SNR=1.3						
JCJ				LR	LR	18 56 51.0	
	comp=Z,465nm,20.1s,baz=72,slow=26						
JCJ				Sn	**Sn**	**18 57 01.4**	**+3.9**
	26nm,0.3s,baz=71,slow=26,SNR=3.3						
	51nm,0.4s						
JCJ	**Chichijima**	**3.77**	**2**		**Pn**	**18 56 10.9**	**-3.5**
JHJ	**Hachijo jima 2**	**9.97**	**349**	LR	LR	19 01 40.2	
	comp=Z,199nm,18.3s,baz=292,slow=39						
JMZ	**Minamidaito 2**	**10.18**	**286**	Pn	**Pn**	**18 57 42.4**	**-0.1**
JMN	**Monobe**	**12.62**	**327**	Pn	**Pn**	**18 58 13.6**	**-2.3**
JGF	**Kuroka**	**12.91**	**343**	Pn	**Pn**	**18 58 18.2**	**-1.6**
JOW	**Kunigami**	**12.97**	**288**	LR	LR	19 02 50.8	
	comp=Z,151nm,18.6s,baz=350,slow=36						
MJAR	**Matsushiro Arr**	**13.60**	**347**	Pn	**Pn**	**18 58 28.8**	**-0.4**
	0.1nm,0.3s,baz=156,slow=9.3,SNR=1.6						
MJAR				Sn	**Sn**	**19 01 00.4**	**+1.3**
	baz=156,slow=31,SNR=1.6						
MJAR				LR	LR	19 03 45.9	
	comp=Z,443nm,18.5s,baz=160,slow=38						
	0.8nm,0.6s						
MAJO	**Matsushiro**	**13.60**	**347**	Pn	**Pn**	**18 58 27.5**	**-1.7**
JMM	**Marumori**	**14.54**	**356**	Pn	**Pn**	**18 58 39.5**	**-2.6**
KSRS	**Korea Array**	**18.60**	**322**	P	**P**	**18 59 32.2**	**-0.9**
	0.1nm,0.3s,baz=139,slow=11,SNR=2.9						
KSRS				LR	LR	19 06 35.4	
	comp=Z,183nm,18.7s,baz=115,slow=37						
	0.9nm,0.7s						
DAV	**Davao City (W)**	**22.63**	**227**	LR	LR	19 07 09.6	
	comp=Z,249nm,21.3s,baz=67,slow=32						
H11N1	**WAKE ISLAND Hy**	**23.37**	**94**	T	T	19 24 27.0	
	baz=283,slow=75,SNR=1528						
H11N2	**WAKE ISLAND Hy**	**23.37**	**94**	T	T	19 24 29.5	
	baz=283,slow=75,SNR=1801						
H11N3	**WAKE ISLAND Hy**	**23.38**	**94**	T	T	19 24 30.6	
	baz=283,slow=75,SNR=1730						
H11S3	**WAKE ISLAND Hy**	**23.49**	**97**	T	T	19 24 38.4	
	baz=286,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	**23.50**	**97**	T	T	19 24 39.1	
	baz=286,slow=75,SNR=34						
H11S2	**WAKE ISLAND Hy**	**23.50**	**97**	T	T	19 24 39.0	
	baz=286,slow=75,SNR=24						
SIJI	**Sorong**	**26.23**	**205**	LR	LR	19 08 38.7	
	comp=Z,196nm,20.1s,baz=50,slow=31						
KLR	**Kul'dur**	**27.11**	**345**	P	**P**	**19 00 59.0**	**+0.6**
	1.2nm,0.7s,baz=100,slow=23,SNR=1.7						
KLR				LR	LR	19 10 52.7	
	comp=Z,156nm,20.6s,baz=156,slow=35						
	1.2nm,0.7s						
PMG	**Port Moresby**	**32.90**	**171**	LR	LR	19 14 36.3	
	comp=Z,49nm,19.6s,baz=40,slow=35						
KAPI	**Kappang**	**35.60**	**221**	LR	LR	19 14 56.9	
	comp=Z,34nm,20.5s,baz=28,slow=33						
MA2	**Magadan**	**36.75**	**7**	LR	LR	19 16 00.6	
	comp=Z,38nm,21.7s,baz=110,slow=34						
HNR	**Honiara**	**36.95**	**150**	LR	LR	19 16 36.7	
	comp=Z,911nm,20.1s,baz=317,slow=35						
SONM	**Songino Array**	**37.44**	**320**	LR	LR	19 18 37.4	
	comp=Z,136nm,18.0s,baz=81,slow=38						
YAK	**Yakutsk**	**39.61**	**351**	LR	LR	19 21 17.6	
	comp=Z,17nm,18.6s,baz=98,slow=40						
SEY	**Seymchan**	**40.21**	**7**	P	**P**	**19 02 52.9**	**+1.2**
	1.6nm,0.8s,baz=216,slow=19,SNR=1.4						
	1.6nm,0.8s						
CHTO	**Chiang Mai**	**40.38**	**272**		**P**	**19 02 55.6**	**+1.9**
CHTO				IAmb	IAmb	19 02 56.9	
	comp=Z,5.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.47**	**271**	P	**P**	**19 02 56.2**	**+1.8**
	comp=Z,2.9nm,0.7s,baz=58,slow=7.5,SNR=20						
CMAR				LR	LR	19 18 15.7	
	comp=Z,41nm,20.7s,baz=90,slow=34						
CMAR	**Chiang Mai Arr**	**40.47**	**271**	P	**P**	**19 02 55.7**	**+1.3**
CTA	**Charters Tower**	**43.33**	**174**	P	**P**	**19 03 17.2**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=352,slow=8.3,SNR=3.3						
	comp=Z,4.8nm,0.9s						
WB0	**Warramunga Arr**	**43.47**	**191**	P	**P**	**19 03 18.8**	**0.0**
WB0				IAmb	IAmb	19 03 26.4	
	comp=Z,24nm,1.1s						
WRAB	**Tennant Creek**	**43.64**	**191**	P	**P**	**19 03 19.9**	**-0.3**
WB2	**Warramunga Arr**	**43.65**	**191**	P	**P**	**19 03 20.1**	**-0.1**
WRA	**Warramunga Arr**	**43.65**	**191**	P	**P**	**19 03 20.1**	**-0.2**
	comp=Z,7.8nm,0.9s,baz=11,slow=8.4,SNR=20						
WRA				LR	LR	19 20 00.4	
	comp=Z,100nm,21.6s,baz=16,slow=34						
	comp=Z,7.8nm,0.9s						
WRA	**Warramunga Arr**	**43.65**	**191**	P	**P**	**19 03 20.2**	**0.0**
LEM	**Lembang**	**45.06**	**233**	LR	LR	19 21 50.4	
	comp=Z,21nm,21.6s,baz=4.0,slow=36						
AS31	**Alice Springs**	**47.37**	**190**	P	**P**	**19 03 50.2**	**+0.6**
AS31				IAmb	IAmb	19 03 57.8	
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**47.37**	**190**	P	**P**	**19 03 49.7**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=13,slow=8.3,SNR=25						
ASAR				LR	LR	19 22 05.7	
	comp=Z,125nm,21.7s,baz=24,slow=34						
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	**47.37**	**190**	P	**P**	**19 03 50.8**	**+1.1**
TIXI	**Tiksi**	**48.95**	**354**	P	**P**	**19 04 01.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=2.0						
TIXI				LR	LR	19 26 33.5	
	comp=Z,52nm,18.1s,baz=5.5,slow=38						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**52.30**	**321**	LR	LR	19 27 33.5	
	comp=Z,70nm,18.5s,baz=42,slow=37						
MKAR	**Makanchi Array**	**52.85**	**312**	P	**P**	**19 04 30.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=84,slow=9.5,SNR=5.2						
MKAR				LR	LR	19 27 31.3	
	comp=Z,32nm,19.6s,baz=85,slow=37						
	comp=Z,0.3nm,0.5s						
STKA	**Stephens Creek**	**54.88**	**180**	P	**P**	**19 04 45.4**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=340,slow=10,SNR=5.4						
STKA				LR	LR	19 27 30.8	
	comp=Z,31nm,21.1s,baz=25,slow=35						
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**54.88**	**180**	P	**P**	**19 04 45.7**	**-0.2**
BBOO	**Buckleboo**	**56.10**	**186**	P	**P**	**19 04 55.8**	**+1.1**
BBOO				IAmb	IAmb	19 05 36.8	
	comp=Z,33nm,1.4s						
KDAK	**Kodiak Island**	**57.48**	**35**	P	**P**	**19 05 03.8**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=274,slow=6.4,SNR=5.8						
KDAK				LR	LR	19 26 31.3	
	comp=Z,87nm,21.8s,baz=266,slow=33						
	comp=Z,2.4nm,0.5s						
BVAR	**Borovoye Array**	**60.77**	**319**	LR	LR	19 31 06.0	
	comp=Z,35nm,21.1s,baz=55,slow=36						
ILAR	**Eielson Array**	**61.09**	**28**	P	**P**	**19 05 29.1**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=260,slow=5.4,SNR=6.1						
ILAR				LR	LR	19 31 40.8	
	comp=Z,25nm,19.4s,baz=272,slow=36						
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**66.51**	**24**	P	**P**	**19 06 05.8**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=273,slow=4.6,SNR=5.2						
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**67.35**	**323**	LR	LR	19 37 06.0	
	comp=Z,61nm,19.1s,baz=346,slow=37						
AKTO	**Aktyubinsk**	**68.68**	**317**	LR	LR	19 39 00.2	
	comp=Z,35nm,18.3s,baz=68,slow=38						
DLBC	**Dease Lake**	**69.37**	**34**	LR	LR	19 33 07.7	
	comp=Z,61nm,21.8s,baz=281,slow=33						
URZ	**Urewera**	**69.53**	**151**	LR	LR	19 33 45.0	
	comp=Z,29nm,19.2s,baz=45,slow=33						
KIRV	**Kirov**	**71.76**	**327**	LR	LR	19 41 10.3	
	comp=Z,103nm,18.1s,baz=35,slow=38						
SPITS	**Spitsbergen Ar**	**74.07**	**350**	LR	LR	19 39 51.8	
	comp=Z,52nm,20.8s,baz=356,slow=36						
BELG	**Belogornoye**	**74.49**	**321**	LR	LR	19 41 57.1	
	comp=Z,56nm,18.2s,baz=145,slow=38						
YKA	**Yellowknife Ar**	**75.52**	**28**	P	**P**	**19 07 00.3**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=290,slow=6.2,SNR=2.9						
YKA				LR	LR	19 39 50.8	
	comp=Z,26nm,20.3s,baz=282,slow=35						
	comp=Z,0.7nm,0.5s						
RES	**Resolute Bay**	**75.75**	**13**	LR	LR	19 46 00.2	

comp=Z,12nm,18.0s,baz=350,slow=40
ARCES ARCESS Array B 77.06 341 LR LR 19 47 10.5
comp=Z,55nm,18.6s,baz=132,slow=40
OBN Obninsk 79.57 326 LR LR 19 45 21.1
comp=Z,19nm,18.7s,baz=221,slow=38
KBZ Khabaz 80.50 313 P **P** **19 07 28.1 +0.7**
comp=Z,3.0nm,0.9s,baz=75,slow=1.1,SNR=3.6
KBZ LR LR 19 45 54.7
comp=Z,42nm,19.3s,baz=155,slow=38
comp=Z,3.0nm,0.9s
FINES FINESS Array B 81.28 334 P **P** **19 07 31.2 0.0**
comp=Z,1.4nm,0.7s,baz=53,slow=5.4,SNR=4.2
FINES LR LR 19 44 40.6
comp=Z,47nm,18.2s,baz=23,slow=36
comp=Z,1.4nm,0.7s
ELK Elko 84.13 48 LR LR 19 39 29.1
comp=Z,22nm,19.2s,baz=24,slow=32
AKASG Malin Array Be 85.59 324 P **P** **19 07 52.6 -1.0**
comp=Z,0.2nm,0.3s,baz=51,slow=4.2,SNR=1.6
AKASG LR LR 19 49 36.9
comp=Z,57nm,18.8s,baz=72,slow=38
comp=Z,0.2nm,0.3s
PFO Pinyon Flats O 86.32 55 LR LR 19 37 41.3
comp=Z,40nm,21.9s,baz=180,slow=30
HFS Hagfors 86.84 337 LR LR 19 49 46.4
comp=Z,84nm,19.2s,baz=16,slow=38
NOA NORSAR Array B 87.07 338 LR LR 19 50 11.5
comp=Z,43nm,19.6s,baz=215,slow=38
BRTR Keskin Array B 88.48 313 P **P** **19 08 06.3 -1.8**
comp=Z,0.9nm,0.8s,baz=78,slow=7.5,SNR=3.8
comp=Z,0.9nm,0.8s
VRAC Vranov 92.96 328 LR LR 19 53 39.3
comp=Z,108nm,18.1s,baz=47,slow=38
ANMO Albuquerque 92.99 50 LR LR 19 46 25.2
comp=Z,28nm,19.6s,baz=350,slow=33
GERES GERESS Array B 94.67 329 LR LR 19 53 29.0
comp=Z,69nm,18.4s,baz=37,slow=37
EKA Eskdalemuir Ar 96.23 341 LR LR 19 57 05.8
comp=Z,53nm,18.2s,baz=176,slow=39
DAVOX Davos/Dischmat 97.95 329 LR LR 19 54 38.6
comp=Z,63nm,21.6s,baz=264,slow=36
PLCA Paso Flores 147.59 130 PKPbc **PKPbc** **19 14 59.6 -0.1**
comp=Z,0.7nm,0.7s,baz=249,slow=7.5,SNR=2.2
LPAZ La Paz 150.79 82 PKPbc **PKiKP** **19 15 10.6 +0.9**
comp=Z,1.5nm,0.6s,baz=292,slow=5.4,SNR=3.6

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*NEIC **24** 20:05:31.9±1.2, 18°.4S±0°.1×178°.0W±0°.1, h615km±9km, mb4.1/15, Error ellipse: s-maj=25.9km s-min=9.3km az=225.0*
*IDC **24** 20:05:33.0±1.4, 17°.88S×178°.22W, h637km±11km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=42.1km s-min=12.5km az=151.0*
ISC 24 20:05:33.4±0.7, 18°.0S±0°.2×178°.2W±0°.1, h650km, n56, σ0°.79/59, mb3.9/18, 3C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.56 273**		P	**P**	**20 06 58.2**	**-1.7**
	41nm,0.6s,baz=122,slow=11,SNR=37						
MSVF				S	**S**	**20 08 08.6**	**-1.8**
	3.2nm,0.6s,baz=162,slow=20,SNR=1.0						
MSVF	**Nonsavu**	**3.56 273**		P	**P**	**20 06 57.4**	**-2.5**
MARNC	**Mare, Loyalty**	**13.41 253**		P	**P**	**20 08 24.6**	**-0.5**
DZM	**Mont Dzumac**	**14.97 252**		P	**P**	**20 08 40.3**	**+0.7**
	1.1nm,0.4s,baz=99,slow=20,SNR=1.4						
COEN	**Coen**	**37.28 270**		P	**P**	**20 11 54.1**	**+0.7**
BBOO	**Buckleboo**	**43.53 241**		P	**P**	**20 12 42.9**	**+0.4**
WR0	**Warramunga Arr**	**44.61 260**		P	**P**	**20 12 51.6**	**+0.8**
WR0				IAmb	IAmb	20 12 59.5	
	comp=Z,5.5nm,1.2s						
WB0	**Warramunga Arr**	**44.76 260**		P	**P**	**20 12 52.5**	**+0.4**
WB0				IAmb	IAmb	20 13 29.5	
	comp=Z,9.6nm,1.5s						
WB2	**Warramunga Arr**	**44.78 260**		P	**P**	**20 12 52.7**	**+0.5**
WB2				IAmb	IAmb	20 13 30.9	
	comp=Z,7.8nm,1.2s						
WRA	**Warramunga Arr**	**44.80 260**		P	**P**	**20 12 52.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=96,slow=6.9,SNR=17						
WRA				PcP	**PcP**	**20 14 20.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=90,slow=3.7,SNR=10						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**44.80 260**		P	**P**	**20 12 51.7**	**-0.6**
AS31	**Alice Springs**	**44.94 254**		P	**P**	**20 12 54.0**	**+0.5**
ASAR	**Alice Springs**	**44.95 254**		P	**P**	**20 12 54.0**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=90,slow=8.4,SNR=34						
ASAR				PcP	**PcP**	**20 14 20.6**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=104,slow=4.0,SNR=17						
ASAR				S	**S**	**20 18 48.0**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=90,slow=15,SNR=9.6						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**44.95 254**		P	**P**	**20 12 53.4**	**0.0**
MTN	**Manton Dam**	**48.98 268**		P	**P**	**20 13 23.6**	**0.0**
MTN				IAmb	IAmb	20 13 34.3	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**50.66 264**		P	**P**	**20 13 37.0**	**+1.3**
KNRA				IAmb	IAmb	20 14 06.8	
	comp=Z,18nm,1.4s						
MBWA	**Marble Bar**	**58.23 256**		P	**P**	**20 14 28.7**	**+0.4**
MBWA				IAmb	IAmb	20 14 30.2	
	comp=Z,17nm,1.4s						
MJAR	**Matsushiro Arr**	**68.07 323**		P	**P**	**20 15 30.7**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=164,slow=5.9,SNR=4.5						
	comp=Z,1.1nm,0.5s						
QSPA	**South Pole Qui**	**72.08 180**		P	**P**	**20 15 52.7**	**-1.1**
PETK	**Petropavlovsk-**	**73.79 345**		P	**P**	**20 16 03.9**	**+0.4**
	comp=Z,6.0nm,1.0s,baz=156,slow=11,SNR=3.0						
	comp=Z,6.0nm,1.0s						
YBH	**Yreka Blue Hor**	**78.47 39**		P	**P**	**20 16 30.1**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=135,slow=1.4,SNR=2.7						
	comp=Z,1.1nm,0.4s						
NVAR	**Mina Array Bea**	**79.35 44**		P	**P**	**20 16 34.5**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=224,slow=7.6,SNR=5.0						
	comp=Z,0.5nm,0.5s						
CAST	**Castle Rocks**	**83.66 12**		P	**P**	**20 16 53.6**	**-1.6**
CAST				IAmb	IAmb	20 16 55.2	
	comp=Z,4.8nm,0.7s						
TRF	**Thorofare Moun**	**84.04 12**		P	**P**	**20 16 56.3**	**-1.0**
TX31	**Lajitas Ar. Si**	**85.88 58**		P	**P**	**20 17 07.7**	**+0.8**
TX31				IAmb	IAmb	20 17 49.9	
	comp=Z,9.8nm,1.5s						
TX32	**Lajitas Array**	**85.88 58**		P	**P**	**20 17 07.8**	**+0.9**
TX32				IAmb	IAmb	20 17 08.7	
	comp=Z,1.5nm,0.8s						
TXAR	**Lajitas Array**	**85.88 58**		P	**P**	**20 17 07.8**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=218,slow=6.6,SNR=13						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**85.92 13**		P	**P**	**20 17 05.0**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=219,slow=4.9,SNR=25						
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**87.28 43**		P	**P**	**20 17 12.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=230,slow=4.0,SNR=6.8						
	comp=Z,0.7nm,0.6s						
BVAR	**Borovoye Array**	**117.01 321**		PKP	**PKPdf**	**20 23 05.7**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=48,slow=2.1,SNR=5.3						
ARU	**Arti**	**123.01 326**		PKP	**PKPdf**	**20 23 17.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=45,slow=5.7,SNR=3.4						
ARCES	**ARCESS Array B**	**126.42 350**		PKP	**PKPdf**	**20 23 23.5**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=0.0,slow=1.2,SNR=4.4						
FINES	**FINESS Array B**	**133.30 344**		PKP	**PKPdf**	**20 23 36.2**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=108,slow=4.5,SNR=4.3						
EKA	**Eskdalemuir Ar**	**142.52 5**		PKhKP	PKPpre	20 23 50.0	
	comp=Z,0.4nm,0.4s,baz=328,slow=2.4,SNR=3.5						
BUR08	**Bucovina Ar. S**	**144.74 332**			**PKPab**	**20 24 00.3**	**+0.5**
BURAR	**Bucovina Array**	**144.76 332**		⇓P	**PKPab**	**20 23 59.9**	**+0.1**
BIZ	**Bicaz**	**144.86 331**		⇓P	**PKPab**	**20 24 00.4**	**+0.2**
BR131	**Keskin Array S**	**144.96 315**			**PKPbc**	**20 24 00.2**	**+0.5**
BRTR	**Keskin Array B**	**144.96 315**		PKP	**PKPbc**	**20 23 59.9**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=129,slow=3.7,SNR=11						
BRTR	**Keskin Array B**	**144.96 315**			**PKPbc**	**20 23 59.6**	**-0.1**
TPGR	**Topolog**	**145.16 326**		⇑P	**PKPbc**	**20 24 00.6**	**+0.6**
ASF	**Jabal al Asfar**	**145.37 301**		PKPbc	**PKPbc**	**20 24 01.9**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=94,slow=5.9,SNR=4.3						
TRPA	**Tarpa**	**145.49 335**		⇓P	**PKPbc**	**20 24 01.5**	**+0.8**
CLL	**Collm**	**145.57 348**			**PKPbc**	**20 24 01.1**	**+0.1**
CLL	**Collm**	**145.57 348**		*i* PKPbc	**PKPbc**	**20 24 01.3**	**+0.4**
	comp=Z,8.0nm,0.7s						
MORC	**Moravsky Berou**	**145.83 342**		*e*PKP	**PKPbc**	**20 24 02.2**	**+0.4**
MLR	**Muntele Rosu**	**145.98 329**		⇑P	**PKPdf**	**20 24 00.5**	**+0.2**
MLR	**Muntele Rosu**	**145.98 329**		PKPbc	**PKPbc**	**20 24 02.3**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=54,slow=1.9,SNR=7.0						
MMAI	**Mount Meron Ar**	**146.33 303**		PKPbc	**PKPbc**	**20 24 04.9**	**+1.2**
	comp=Z,2.6nm,0.4s,baz=74,slow=7.0,SNR=18						
DRGR		**146.48 334**		⇓P	**PKPbc**	**20 24 03.5**	**-0.2**
ARR	**Arges**	**146.71 330**		⇑P	**PKiKP**	**20 24 05.9**	**-0.3**
KHC	**Kasperske Hory**	**147.49 346**		*e*PKP	**PKPbc**	**20 24 07.0**	**+0.8**
GERES	**GERESS Array B**	**147.72 345**		PKPbc	**PKPbc**	**20 24 07.3**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=37,slow=3.3,SNR=11						
DIVS	**Divibare**	**149.78 333**			**PKiKP**	**20 24 12.9**	**+0.3**
DAVOX	**Davos/Dischmat**	**150.51 349**		PKPbc	**PKPbc**	**20 24 13.9**	**+0.2**
	comp=Z,3.8nm,0.5s,baz=212,slow=9.5,SNR=13						
FUORN	**Ofenpass-Fuorn**	**150.59 348**			**PKiKP**	**20 24 14.3**	**-0.1**

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*SOME **24** 20:23:31.0, 39°.00N×72°.52E, h10km*
*IDC **24** 20:23:38.3±4.9, 38°.13N×72°.04E, h135km±35km, mb3.4/4, mbtmp3.7/9, Error ellipse: s-maj=55.1km s-min=22.5km az=150.0*
*NNC **24** 20:23:49.4±3.4, 39°.82N×72°.76E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=34.3km s-min=21.3km az=168.0*
ISC 24 20:23:33.8±1.3, 38°.2N±0°.1×72°.57E±0°.07, h119km, n25, σ2°.52/30, mb3.7/4, 6C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.00**	**12**	P	**Pn**	**20 24 32.8**	**-0.8**
	SNR=122						
UCH	**Uchtor**	**4.27**	**20**	P	**Pn**	**20 24 36.2**	**-1.0**
	SNR=42						
IUG	**Iuzhnay**	**4.38**	**334**	*e*P	**Pn**	**20 24 39.4**	**+1.0**
IUG	76nm,0.1s						
	22nm,0.3s			*e*S	**Sn**	**20 25 28.5**	**0.0**
EKS2	**Erkin-Say**	**4.53**	**11**	P	**Pn**	**20 24 40.3**	**-0.1**
	SNR=7.4						
MRKS	**Merke**	**4.55**	**6**	*e*P	**Pn**	**20 24 40.6**	**-0.1**
	28nm,0.3s						
MRKS				*e*S	**Sn**	**20 25 30.5**	**-2.1**
	37nm,0.3s						
AAK	**Ala-Archa**	**4.65**	**18**	P	**Pn**	**20 24 41.9**	**-0.2**
	SNR=16						
CHM	**Chimkent**	**4.68**	**332**	*e*P	**Pn**	**20 24 44.5**	**+2.2**
	4.7nm,0.5s						
CHM				*e*S	**Sn**	**20 25 37.1**	**+1.4**
	109nm,0.3s						
KBK	**Karagaybulak**	**4.79**	**22**	P	**Pn**	**20 24 44.7**	**+0.7**
	SNR=6.4						
ULHL	**Ulahol**	**4.91**	**34**	P	**Pn**	**20 24 43.2**	**-2.4**
	SNR=14						
CHMS	**Chumysh**	**5.05**	**19**	P	**Pn**	**20 24 46.8**	**-0.6**
	SNR=6.9						
CHMS	**Chumysh**	**5.05**	**19**	⇑Pn	**Pn**	**20 24 46.4**	**-1.0**
	4.1nm,0.4s						
CHMS				⇑Lg	Lg	20 25 41.0	
	8.6nm,0.7s						
KK31	**Karatay Array**	**5.12**	**343**	⇑Pn	**Pn**	**20 24 48.7**	**+0.5**
	1.7nm,0.2s,baz=154,slow=12,SNR=83						
KK31				⇑Lg	Lg	20 25 45.2	
	16nm,0.3s,baz=148,slow=21,SNR=26						
TKM2	**Tokmak 2**	**5.23**	**25**	⇑Pn	**Pn**	**20 24 47.3**	**-2.7**
	3.2nm,0.6s						
TKM2				⇑Lg	Lg	20 25 48.8	
	8.1nm,0.9s						
USP	**Ospenovka**	**5.25**	**16**	P	**Pn**	**20 24 49.9**	**-0.2**
	SNR=17						
MKAR	**Makanchi Array**	**11.17**	**37**	P	**P**	**20 26 17.9**	**-1.4**
	0.4nm,0.8s,baz=221,slow=12,SNR=2.5						
GEYT	**Alibeck**	**11.39**	**273**	P	**Pn**	**20 26 11.2**	**-1.8**
	1.6nm,0.3s,baz=105,slow=9.4,SNR=7.0						
GEYT				S	**Sn**	**20 28 14.0**	**-4.3**
	2.1nm,0.6s,baz=63,slow=44,SNR=4.9						
AB31	**Akbulak array**	**14.29**	**325**	Pn	**P**	**20 26 54.6**	**+0.5**
	0.8nm,0.4s,baz=133,slow=13,SNR=34						
BVAR	**Borovoye Array**	**14.88**	**355**	P	**P**	**20 27 01.6**	**+1.0**
	0.3nm,0.4s,baz=156,slow=10,SNR=7.1						
AKTO	**Aktyubinsk**	**16.01**	**324**	P	**P**	**20 27 14.9**	**+1.8**
	1.5nm,0.3s,baz=116,slow=13,SNR=6.8						
AKTO				S	**Sn**	**20 30 03.0**	**-6.5**
	1.5nm,0.5s,baz=13,slow=15,SNR=2.8						
AKTO	**Aktyubinsk**	**16.01**	**324**	⇓Pn	**P**	**20 27 18.7**	**+5.6**
	2.5nm,0.9s						
ZALV	**Zalesovo Beam**	**17.84**	**24**	P	**Pn**	**20 27 40.2**	**+6.1**
	0.4nm,0.3s,baz=214,slow=15,SNR=1.7						
FINES	**FINESS Array B**	**36.78**	**324**	P	**P**	**20 30 30.9**	**+1.4**
	1.7nm,0.8s,baz=122,slow=10.0,SNR=5.3						
	1.7nm,0.8s						
HFS	**Hagfors**	**42.51**	**321**	P	**P**	**20 31 18.2**	**+1.2**
	3.4nm,0.9s,baz=99,slow=8.9,SNR=8.5						
	3.4nm,0.9s						
NOA	**NORSAR Array B**	**43.78**	**322**	P	**P**	**20 31 28.2**	**+0.9**
	0.4nm,0.4s,baz=93,slow=7.7,SNR=1.8						
	0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.00**	**269**	P	**P**	**20 34 14.4**	**+0.3**
	0.4nm,0.6s,baz=45,slow=6.0,SNR=4.3						
	0.4nm,0.6s						

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*NAO **24** 20:29:30.2±8.2, 75°.63N×6°.87E, h9km±68km, ML3.4*
*DNK **24** 20:29:32.7±1.2, 75°.51N×7°.24E, h36km±23km, ML1.8*
*BER **24** 20:29:33.7±1.9, 75°.61N×8°.01E, h10km, ML2.1, Confirmed Earthquake*
*IEPN **24** 20:29:33.0, 75°.50N×7°.39E, h10km*
*IDC **24** 20:29:33.3±1.2, 75°.68N×8°.14E, h0km, mb3.6/11, mbtmp3.7/15, ML2.8/3, MS3.2/18, Error ellipse: s-maj=22.9km s-min=11.7km az=98.0*
ISC 24 20:29:32.9±0.6, 75°.75N±0°.05×7°.93E±0°.06, h10km, n57, σ2°.28/64, mb3.5/10, MS3.2/13, 1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.19**	**51**	Pn	**Pn**	**20 30 09.0**	**-0.3**
HSPB				Sn	**Sn**	**20 30 35.2**	**-1.2**
HSPB	**Hornsund (broa**	**2.19**	**51**	*e*P	**Pn**	**20 30 09.0**	**-0.3**
HSPB				*e*S	**Sn**	**20 30 35.8**	**-0.6**
HSPB				IAML		20 30 39.6	
	comp=Z,12nm,0.2s						
HSPB	**Hornsund (broa**	**2.19**	**51**	*e*P	**Pn**	**20 30 08.8**	**-0.5**
HSPB				*e*S	**Sn**	**20 30 35.1**	**-1.3**
BRBA	**Barentsburg A**	**2.72**	**29**	Pn	**Pn**	**20 30 16.8**	**+0.2**
BRBB	**Barentsburg B**	**2.75**	**28**	Pn	**Pn**	**20 30 17.3**	**+0.4**
BRBB				Sn	**Sn**	**20 30 51.7**	**+1.6**
SPA0	**Spitsbergen Ar**	**3.09**	**34**	Pn	**Pn**	**20 30 22.7**	**+1.0**
	baz=219,slow=16						
SPA0				Sn	**Sn**	**20 30 59.9**	**+1.2**
	baz=240,slow=28						
SPA0	**Spitsbergen Ar**	**3.09**	**34**	*e*P	**Pn**	**20 30 22.6**	**+0.9**
SPA0				*e*S	**Sn**	**20 30 59.9**	**+1.2**
SPA0				IAML		20 31 04.4	
	comp=Z,21nm,0.3s						
SPA0	**Spitsbergen Ar**	**3.09**	**34**	⇓*i*P	**Pn**	**20 30 22.7**	**+1.0**
SPA0				*i* S	**Sn**	**20 30 59.6**	**+0.9**
SPITS	**Spitsbergen Ar**	**3.09**	**34**	Pn	**Pn**	**20 30 22.7**	**+1.0**
	comp=Z,18nm,0.3s,baz=206,slow=17,SNR=218						
SPITS				Sn	**Sn**	**20 30 59.6**	**+0.9**
	baz=236,slow=23						
BJO1	**Bjornoya**	**3.12**	**108**	Pn	**Pn**	**20 30 21.5**	**-0.6**
BJO1	**Bjornoya**	**3.12**	**108**	*e*P	**Pn**	**20 30 21.6**	**-0.4**
BJO1				*e*S	**Sn**	**20 30 53.6**	**-5.6**
BJO1				IAML		20 30 57.8	
	comp=Z,16nm,0.2s						
BJO1	**Bjornoya**	**3.12**	**108**	P	**Pn**	**20 30 20.8**	**-1.2**
BJO1				*e*S	**Sn**	**20 30 52.5**	**-6.7**
KBS	**Kingsbay**	**3.31**	**14**	Pn	**Pn**	**20 30 24.9**	**+0.2**
KBS				Sn	**Sn**	**20 31 02.6**	**-1.3**
KBS	**Kingsbay**	**3.31**	**14**	*e*P	**Pn**	**20 30 24.8**	**+0.2**
KBS				*e*S	**Sn**	**20 31 03.1**	**-0.9**
KBS				IAML		20 31 10.3	
	comp=Z,10.0nm,0.5s						
KBS	**Kingsbay**	**3.31**	**14**	*e*P	**Pn**	**20 30 24.5**	**-0.2**
KBS				*i*		20 30 25.2	
KBS				*e*S	**Sn**	**20 31 02.5**	**-1.5**
KBS	**Kingsbay**	**3.31**	**14**	*e*P	**Pn**	**20 30 24.4**	**-0.2**
KBS				*e*S	**Sn**	**20 31 02.7**	**-1.3**
HOPEN	**Hopen**	**4.17**	**71**	Pn	**Pn**	**20 30 36.3**	**-0.2**
HOPEN				Sn	**Sn**	**20 31 21.5**	**-3.8**
HOPEN	**Hopen**	**4.17**	**71**	*e*P	**Pn**	**20 30 36.1**	**-0.5**
HOPEN				*e*S	**Sn**	**20 31 21.8**	**-3.5**
HOPEN				IAML		20 31 26.7	
	comp=Z,19nm,0.2s						
HOPEN	**Hopen**	**4.17**	**71**	*e*P	**Pn**	**20 30 36.0**	**-0.5**
HOPEN				*e*S	**Sn**	**20 31 21.4**	**-3.8**
DAG	**Danmarks Havn**	**6.38**	**292**	*e*	Pn	20 31 00.7	-6.1
	baz=93,slow=16						
DAG				*i* P	Pb	20 31 01.2	-23
DAG				*e*		20 32 06.1	
DAG				IAML		20 32 10.1	
	comp=Z,15nm,0.4s						
JMIC	**Jan Mayen**	**6.69**	**233**	LR	LR	20 32 46.0	
	comp=Z,56nm,20.5s,baz=246,slow=29						
HAMF	**Hammerfest**	**6.84**	**131**	Pn	**Pn**	**20 31 12.0**	**-1.1**
DBG	**Daneborg**	**7.38**	**273**	Pn	Pn	20 31 13.6	-7.0
DBG				Sn	Sn	20 32 27.9	-16
DBG	**Daneborg**	**7.38**	**273**	*e*P	Pn	20 31 13.1	-7.5
DBG				*i* S	Sn	20 32 27.9	-16
DBG				IAML		20 32 33.2	
	comp=Z,2.9nm,0.4s						
NOR	**Nord**	**7.51**	**332**	Pn	**Pn**	**20 31 19.4**	**-2.8**
NOR				Sn	**Sn**	**20 32 41.7**	**-5.5**
NOR	**Nord**	**7.51**	**332**	*i* P	**Pn**	**20 31 19.6**	**-2.6**
NOR				*e*		20 32 43.2	
NOR				IAML		20 32 44.8	
	comp=Z,0.8nm,0.5s						
KIF	**Kilpisjarvi**	**7.80**	**144**	Pn	**Pn**	**20 31 24.0**	**-2.2**
ARA0	**ARCESS Array S**	**8.12**	**131**	Pn	**Pn**	**20 31 29.2**	**-1.4**
	baz=326,slow=10						
ARA0				Sn	Sn	20 32 50.5	-12
	baz=332,slow=18						
ARCES	**ARCESS Array B**	**8.12**	**131**	Pn	**Pn**	**20 31 28.7**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=328,slow=9.7,SNR=16						
ARCES				Sn	Sn	20 32 49.5	-13
	comp=Z,0.1nm,0.3s,baz=327,slow=18,SNR=1.2						
ARCES				LR	LR	20 34 50.4	
	comp=Z,51nm,18.5s,baz=308,slow=40						
	comp=Z,4.0nm,0.7s						
ZFI	**Zemlya Franca-**	**9.29**	**40**	*e*P	**Pn**	**20 31 47.5**	**+0.8**
ZFI				*e*S	**Sn**	**20 33 26.8**	**-4.2**
ZFI2	**Zemlya Franca-**	**9.29**	**40**	*e*P	**Pn**	**20 31 46.8**	**+0.1**
ZFI2				*e*S	**Sn**	**20 33 25.3**	**-5.7**
OMEGA	**Omega**	**9.30**	**40**	*e*P	**Pn**	**20 31 47.5**	**+0.8**
OMEGA				*e*S	**Sn**	**20 33 26.9**	**-4.3**
APA0	**Apatity Array**	**11.23**	**124**	Pn	**Pn**	**20 32 11.3**	**-1.8**
SUMG	**Summit**	**12.76**	**279**	*i* P	**Pn**	**20 32 31.0**	**-3.4**
BORG	**Borgarnes**	**14.56**	**236**	LR	LR	20 36 37.1	
	comp=Z,60nm,18.1s,baz=11,slow=29						
FINES	**FINESS Array B**	**15.69**	**146**	Pn	**Pn**	**20 33 13.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=345,slow=10,SNR=4.5						
FINES				LR	LR	20 38 28.0	
	comp=Z,63nm,20.4s,baz=39,slow=34						
	comp=Z,2.1nm,0.8s						
HFS	**Hagfors**	**15.83**	**169**	Pn	**P**	**20 33 17.3**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=349,slow=15,SNR=2.8						
	comp=Z,2.9nm,0.8s						
SFJD	**Kangerlussuaq**	**19.67**	**275**	LR	LR	20 40 30.6	
	comp=Z,58nm,19.4s,baz=116,slow=33						
EKA	**Eskdalemuir Ar**	**20.94**	**198**	P	**P**	**20 34 15.3**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=12,slow=12,SNR=2.4						
	comp=Z,1.1nm,0.7s						
KIRV	**Kirov**	**22.71**	**116**	LR	LR	20 43 34.5	
	comp=Z,84nm,18.6s,baz=329,slow=37						
AKASG	**Malin Array Be**	**26.56**	**149**	P	**P**	**20 35 10.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=349,slow=9.9,SNR=1.3						
AKASG				LR	LR	20 44 17.3	
	comp=Z,20nm,20.9s,baz=251,slow=33						
	comp=Z,0.2nm,0.4s						
FRB	**Frobisher Bay**	**26.68**	**286**	LR	LR	20 44 35.1	
	comp=Z,63nm,19.1s,baz=22,slow=34						
ARU	**Arti**	**26.77**	**108**	P	**P**	**20 35 12.8**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=336,slow=18,SNR=1.7						
ARU				LR	LR	20 45 29.4	
	comp=Z,27nm,21.8s,baz=346,slow=36						
	comp=Z,0.7nm,0.4s						
VRAC	**Vranov**	**26.78**	**167**	P	**P**	**20 35 14.2**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=1.6,slow=9.5,SNR=3.2						
	comp=Z,0.8nm,0.3s						
GERES	**GERESS Array B**	**27.11**	**172**	P	**P**	**20 35 16.7**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=339,slow=5.2,SNR=2.4						
	comp=Z,0.7nm,0.8s						
BELG	**Belogornoye**	**28.07**	**124**	LR	LR	20 46 18.1	
	comp=Z,58nm,18.5s,baz=122,slow=36						
AKTO	**Aktyubinsk**	**32.17**	**113**	P	**P**	**20 36 02.9**	**+2.5**
	comp=Z,1.6nm,0.7s,baz=320,slow=8.4,SNR=4.2						
AKTO				LR	LR	20 49 02.6	
	comp=Z,44nm,18.5s,baz=353,slow=36						
	comp=Z,1.6nm,0.7s						
BVAR	**Borovoye Array**	**32.72**	**98**	P	**P**	**20 36 05.5**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=318,slow=1.9,SNR=2.3						
BVAR				LR	LR	20 51 46.1	
	comp=Z,32nm,19.8s,baz=323,slow=41						
	comp=Z,0.4nm,0.9s						
SCHQ	**Schefferville**	**34.12**	**276**	LR	LR	20 48 36.8	
	comp=Z,72nm,19.8s,baz=96,slow=34						
KBZ	**Khabaz**	**35.46**	**134**	LR	LR	20 51 03.4	
	comp=Z,36nm,19.7s,baz=58,slow=36						
ILAR	**Eielson Array**	**38.80**	**343**	P	**P**	**20 36 58.2**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=2.5,slow=6.3,SNR=2.9						
	comp=Z,0.4nm,0.9s						
MKAR	**Makanchi Array**	**41.42**	**90**	P	**P**	**20 37 19.9**	**+0.8**
	comp

ESL	Shilin	0.61	242⇓iP	Pn	20 45 30.6	0.0
	baz=233					
LATG	Datong	0.62	314⇓iP	Pn	20 45 31.1	+0.2
	baz=314					
NNSB	Datong	0.67	299⇓iP	Pn	20 45 31.6	+0.2
	baz=298					
NNSB			S	Sn	20 45 41.2	+0.2
	baz=298					
ENTT	Nioudou	0.68	322 eP	Pn	20 45 30.8	-0.7
	baz=315					
NNS	Nan Shan	0.68	300 eP	Pn	20 45 30.8	-0.9
	baz=299					
NNS			eS	Sn	20 45 40.5	-0.8
	baz=299					
NDT	Datong Townshi	0.68	317 eP	Pn	20 45 30.0	-1.5
	baz=322					
NDT			eS	Sn	20 45 40.6	-0.5
	baz=322					
WHF	Hehuan Shan	0.69	274⇓iP	Pn	20 45 32.1	+0.1
	baz=263					
WHF			S	Sn	20 45 41.8	-0.2
	baz=263					
EGFH	Guangfu	0.69	232 ⇓P	Pn	20 45 31.8	+0.2
	baz=239					
EGFH			eS	Sn	20 45 42.3	+0.9
	baz=239					
TWE	Neicheng	0.69	333⇓iP	Pn	20 45 32.3	+0.6
	baz=334					
TWE			eS	Sn	20 45 41.5	0.0
	baz=334					
ILA	Ilan	0.70	339 eP	Pn	20 45 33.4	+1.5
	baz=341					
ILA			S	Sn	20 45 43.0	+1.3
	baz=341					
EGS		0.74	354⇓iP	Pn	20 45 33.3	+0.9
	baz=356					
EGS			eS	Sn	20 45 43.5	+0.9
	baz=356					
FUSB	Fushanzhiwuyua	0.76	329 eP	Pn	20 45 33.1	+0.5
	baz=322					
CHGB	Renai	0.77	267⇓iP	Pn	20 45 33.3	+0.3
	baz=258					
CHGB			S	Sn	20 45 43.9	+0.2
	baz=258					
OWD	Renai	0.79	259⇓iP	Pn	20 45 33.4	+0.3
	baz=263					
OWD			eS	Sn	20 45 43.5	-0.3
	baz=263					
TWT	Tachien	0.79	281⇓iP	Pn	20 45 33.8	+0.7
	baz=272					
TWT			S	Sn	20 45 44.5	+0.6
	baz=272					
TDCB	Techi	0.80	281⇓iP	Pn	20 45 33.9	+0.6
	baz=272					
TDCB			i S	Sn	20 45 44.6	+0.4
	baz=272					
YHNB	Yeheng	0.81	314 P	Pn	20 45 33.7	+0.3
YHNB	Yeheng	0.81	314⇓iP	Pn	20 45 33.8	+0.3
	baz=305					
YHNB			S	Sn	20 45 44.4	-0.1
	baz=305					
HGSD	Ruisui	0.82	222⇓iP	Pn	20 45 33.6	+0.3
	baz=220					
HGSD			eS	Sn	20 45 44.8	+0.4
	baz=220					
NSK	Sanguang	0.83	314⇓eP	Pn	20 45 32.9	-0.7
	baz=314					
WUSB	Renai	0.83	263⇓iP	Pn	20 45 34.2	+0.5
	baz=261					
WUSB			S	Sn	20 45 45.3	+0.4
	baz=261					
EHY	Hungye	0.87	227 i P	Pn	20 45 34.0	-0.1
	baz=234					
VWDT	VWDT	0.88	247⇓iP	Pn	20 45 34.9	+0.8
	baz=236					
VWDT			S	Sn	20 45 46.3	+0.6
	baz=236					
TIPB	Shuangxi	0.88	349⇓iP	Pn	20 45 35.1	+0.9
	baz=356					
TIPB			S	Sn	20 45 46.8	+0.7
	baz=356					
TWB1	Santiao Chiao	0.90	358⇓iP	Pn	20 45 34.8	+0.3
TWB1			S	Sn	20 45 46.5	+0.1
JYNG	Yonagunijimaku	0.91	67 i P	Pn	20 45 35.5	+0.9
JYNG			S	Sn	20 45 47.8	+1.1
ECBN	Changbin	0.94	214⇓iP	Pn	20 45 34.3	-0.7
	baz=204					
ECBN			eS	Sn	20 45 47.0	-0.4
	baz=204					
TWA	Mucha	0.96	336 P	Pn	20 45 36.2	+1.0
	baz=348					
TWA			i S	Sn	20 45 48.9	+1.0
	baz=348					
NHDH	Xindian Distri	0.97	332 eP	Pn	20 45 36.2	+0.8
	baz=323					
NHDH			S	Sn	20 45 49.3	+1.3
	baz=323					
YULB	Yu-li	0.97	223 P	Pn	20 45 35.3	-0.1
YULB	Yu-li	0.97	223⇓iP	Pn	20 45 35.2	-0.1
	baz=232					
YOJ	Yonaguni jima	0.97	68 P	Pn	20 45 36.3	+0.8
YOJ	Yonaguni jima	0.97	68 ⇓P	Pn	20 45 36.2	+0.8
	baz=70					
YOJ			S	Sn	20 45 48.7	+0.6
	baz=70					
YOJ	Yonaguni jima	0.97	68 P	Pn	20 45 36.1	+0.7
YOJ			S	Sn	20 45 49.0	+0.9
WPL	Puli Township	0.98	265⇓iP	Pn	20 45 36.2	+0.7
	baz=260					
WPL			eS	Sn	20 45 49.5	+1.3
	baz=260					
NFF	Wufeng Townshi	0.98	303 eP	Pn	20 45 35.5	-0.1
	baz=302					
NFF			eS	Sn	20 45 47.7	-0.6
	baz=302					
EYUL	Yuli	0.99	221⇓iP	Pn	20 45 35.9	+0.3
	baz=230					
EYUL			eS	Sn	20 45 50.0	+1.5
	baz=230					
NWF	Wu-fen Shan	0.99	347⇓iP	Pn	20 45 36.5	+0.8
	baz=349					
NWF			eS	Sn	20 45 49.2	+0.5
	baz=349					
WFSB	Wu-fen Shan	0.99	347⇓iP	Pn	20 45 36.5	+0.9
	baz=349					
WFSB			S	Sn	20 45 49.2	+0.7
	baz=349					
TATO	Taipei	0.99	331 P	Pn	20 45 36.8	+1.1
TATO	Taipei	0.99	331 ⇑P	Pn	20 45 36.4	+0.6
	baz=323					
TATO			eS	Sn	20 45 49.5	+0.9
	baz=323					
SXI1	Grass Mountain	1.00	352⇓iP	Pn	20 45 36.3	+0.5
	baz=7.0					
SXI1			S	Sn	20 45 48.9	+0.1
	baz=7.0					
WHP	Taichung City	1.00	280⇓iP	Pn	20 45 36.9	+1.0
	baz=274					
WHP			S	Sn	20 45 49.8	+1.0
	baz=274					
TWF1	Yuli	1.00	222⇓iP	Pn	20 45 35.7	0.0
	baz=229					
DPDB	Guoxing	1.00	266⇓iP	Pn	20 45 36.7	+0.8
	baz=265					
WCS	Beigang Elemen	1.01	268 ⇓P	Pn	20 45 35.9	-0.1
	baz=263					
WCS			eS	Sn	20 45 50.6	+1.5
	baz=263					
NHY	Taipei	1.02	336 eP	Pn	20 45 38.2	+2.1
	baz=338					
SSLB	Suanglung	1.02	252 P	Pn	20 45 36.6	+0.5
SSLB	Suanglung	1.02	252⇓iP	Pn	20 45 36.7	+0.5
	baz=256					
SSLB			eS	Sn	20 45 50.5	+1.1
	baz=256					
BACT	New Taipei Cit	1.03	330 eP	Pn	20 45 37.4	+1.1
	baz=330					
TAP1	Taipei	1.04	334 eP	Pn	20 45 37.5	+1.2
	baz=323					
TAP1			eS	Sn	20 45 50.5	+0.9
	baz=323					
TAP	Taipei	1.04	333 eP	Pn	20 45 36.9	+0.5
	baz=335					
SMLT	Sun Moon Lake	1.05	258⇓iP	Pn	20 45 37.2	+0.7
	baz=251					
SMLT			eS	Sn	20 45 51.2	+1.1
	baz=251					
NJD	Zhudong	1.06	307 eP	Pn	20 45 38.0	+1.4
	baz=306					
NJD			eS	Sn	20 45 52.2	+2.0
	baz=306					
LIOB	Emei	1.06	301 ⇑P	Pn	20 45 37.9	+1.2
	baz=300					
LIOB			eS	Sn	20 45 51.5	+1.1
	baz=300					
TNOU	National Taiwa	1.07	348 eP	Pn	20 45 37.0	+0.3
	baz=349					
TNOU			eS	Sn	20 45 50.5	+0.1
	baz=349					
NSTT	Nanjuang	1.07	300⇑iP	Pn	20 45 37.8	+1.1
	baz=299					
NSTT			eS	Sn	20 45 51.1	+0.6
	baz=299					
TYC	Yuchr	1.08	260⇓iP	Pn	20 45 37.6	+0.7
	baz=253					
TYC			eS	Sn	20 45 51.4	+0.6
	baz=253					
NTY	Taoyuan	1.11	324 eP	Pn	20 45 38.0	+0.7
	baz=335					
YM01	YM01	1.12	339 ⇑P	Pn	20 45 37.9	+0.5
	baz=339					
YM01			eS	Sn	20 45 52.2	+0.4
	baz=339					
FULB	Fuli	1.12	217⇓iP	Pn	20 45 37.5	+0.1
	baz=206					
HSN1	Hsinchu	1.13	307 P	Pn	20 45 38.5	+0.9
	baz=306					
HSN1			eS	Sn	20 45 53.8	+1.7
	baz=306					
TWS1	Kuangyinshan	1.14	331 eP	Pn	20 45 38.3	+0.6
	baz=332					
WHYT	Xinyi Township	1.14	250 ⇓P	Pn	20 45 39.0	+1.2
	baz=243					
NCUH	Zhongli	1.15	319 eP	Pn	20 45 38.2	+0.3
	baz=319					
NCU	National Centr	1.15	319 eP	Pn	20 45 38.4	+0.6
	baz=319					
NCU			eS	Sn	20 45 52.9	+0.4
	baz=319					
YM08	YM08	1.15	340 eP	Pn	20 45 38.1	+0.2
	baz=341					
YM08			S	Sn	20 45 52.2	-0.3
	baz=341					
YUS	Yu-Shan	1.15	238⇓iP	Pn	20 45 39.0	+0.7
	baz=236					
TWQ1	Liyutan	1.16	282 ⇓P	Pn	20 45 39.4	+1.3
	baz=281					
TWQ1			S	Sn	20 45 54.6	+1.8
	baz=281					
CHKT	Chengkung	1.17	211⇓eP	Pn	20 45 37.0	-1.0
	baz=199					
SBCB	Hsinchu	1.17	306 eP	Pn	20 45 39.0	+1.0
	baz=306					
SBCB			eS	Sn	20 45 54.1	+1.2
	baz=306					
ANP	Anpu	1.17	337 eP	Pn	20 45 38.3	+0.1
	baz=339					
NTST	Danshui	1.18	334 eP	Pn	20 45 39.0	+0.7
	baz=346					
NTST			eS	Sn	20 45 54.1	+0.9
	baz=346					
HSN	Hsinchu	1.18	306 eP	Pn	20 45 39.0	+0.7
	baz=308					
HSN			eS	Sn	20 45 53.9	+0.6
	baz=308					
NSY	Sanyi	1.19	285 eP	Pn	20 45 39.9	+1.5
	baz=284					
NSY			eS	Sn	20 45 54.3	+0.8
	baz=284					
NJN	Zhunan	1.20	299 eP	Pn	20 45 39.4	+0.9
	baz=310					
NMLH	Miaoli	1.20	291 eP	Pn	20 45 39.7	+1.1
	baz=291					
EHD	Haiduan	1.21	218 eP	Pn	20 45 37.2	-1.5
	baz=225					
WWF	Wufeng	1.21	267 eP	Pn	20 45 39.4	+0.8
	baz=266					
WJS	Zhushan	1.21	257⇓eP	Pn	20 45 40.4	+1.7
	baz=252					
WJS			eS	Sn	20 45 56.9	+2.9
	baz=252					
TCU	Taichung	1.23	272 eP	Pn	20 45 40.2	+1.3
	baz=271					
TWY	Chenhua	1.23	342 eP	Pn	20 45 39.8	+0.9
	baz=343					
WNT1	Nantou City	1.24	261 P	Pn	20 45 41.0	+1.9
	baz=260					
WNT1			eS	Sn	20 45 57.5	+2.8
	baz=260					
ECS	Chishang	1.24	216 P	Pn	20 45 39.3	+0.2
	baz=214					
WNT	Mingjian	1.24	260⇓iP	Pn	20 45 41.0	+1.9
	baz=258					
WNT			eS	Sn	20 45 57.1	+2.4
	baz=258					
ALS	Alishan	1.26	242⇓iP	Pn	20 45 40.7	+1.1
	baz=234					
ALS			eS	Sn	20 45 57.3	+1.8
	baz=234					
NHW	Xinwu Township	1.26	316 P	Pn	20 45 40.0	+0.6
	baz=327					
NHW			S	Sn	20 45 55.6	+0.4
	baz=327					
WDJ	Dajia District	1.28	281 eP	Pn	20 45 40.8	+1.2
	baz=280					
WDJ			eS	Sn	20 45 56.9	+1.2
	baz=280					
ELDTW	Lidau	1.29	226⇓iP	Pn	20 45 39.8	-0.1
	baz=223					
EDH	Donghe	1.30	210 ⇓P	Pn	20 45 39.7	-0.2
	baz=202					
EDH			eS	Sn	20 45 55.5	-0.7
	baz=202					
WYL	Yuanlin Townsh	1.32	264 eP	Pn	20 45 41.9	+1.7
	baz=263					
CHN5	Tsauling	1.33	248 eP	Pn	20 45 40.8	+0.4
	baz=246					
WCHH	Zhanghua	1.34	269 eP	Pn	20 45 42.4	+2.0
	baz=280					
WGK	Gukeng	1.40	253 P	Pn	20 45 43.0	+1.8
	baz=241					
WGK			eS	Sn	20 46 01.4	+3.0
	baz=241					
WDLH	Douliu	1.42	253 ⇓P	Pn	20 45 43.5	+2.0
	baz=242					
LONT	Longtian	1.44	215 eP	Pn	20 45 41.6	-0.3
	baz=213					
WCKO	Fanlu	1.46	243 eP	Pn	20 45 42.8	+0.8
	baz=242					
WCKO			eS	Sn	20 46 02.2	+2.2
	baz=242					
STYH	Taoyuan	1.47	231 ⇓P	Pn	20 45 42.4	+0.2
	baz=221					
STYT	Tauyuan	1.49	231⇓iP	Pn	20 45 43.7	+1.2
	baz=221					
TPUB	Ta-pu	1.50	238 P	Pn	20 45 44.7	+2.0
TPUB	Ta-pu	1.50	238 ⇓P	Pn	20 45 44.1	+1.4
	baz=238					
TPUB			eS	Sn	20 46 03.2	+2.0
	baz=238					
CHN4	Tsaushan	1.51	241⇓eP	Pn	20 45 43.3	+0.5
	baz=231					
CHN4			eS	Sn	20 46 03.2	+2.0
	baz=231					
LDUT	Ludao	1.51	200 eP	Pn	20 45 42.0	-0.7
	baz=199					
LDUT			eS	Sn	20 45 59.5	-1.7
	baz=199					
WRL	Guolierlin Hig	1.52	263 eP	Pn	20 45 43.2	+0.4
	baz=261					
WRL			eS	Sn	20 46 02.5	+1.1
	baz=261					
PCYT	Pengchaiyu	1.52	2 eP	Pn	20 45 43.1	+0.2
	baz=4.0					
CHN2	Minshiung	1.52	248 eP	Pn	20 45 45.2	+2.2
	baz=248					
CHN2			eS	Sn	20 46 05.0	+3.4
	baz=248					
TWGBT	Beinan	1.54	214 P	Pn	20 45 43.0	-0.2
TWGBT	Beinan	1.54	214⇓iP	Pn	20 45 42.6	-0.6
	baz=214					
TWGBT			eS	Sn	20 46 02.0	-0.1
	baz=214					
TWG	Pinlang	1.54	214⇓iP	Pn	20 45 42.6	-0.6
	baz=214					
TWG			eS	Sn	20 46 01.4	-0.7
	baz=214					
WTP	Ta-pu	1.54	237⇓iP	Pn	20 45 44.8	+1.5
	baz=235					
WTK	Tuku	1.55	255 eP	Pn	20 45 45.1	+1.8
	baz=253					
TTN	Taitung	1.56	211 eP	Pn	20 45 43.2	-0.3
	baz=221					
TTN			eS	Sn	20 46 02.2	-0.4
	baz=221					
IRIF	Iriomote-Funau	1.58	81 P	Pn	20 45 44.4	+0.7
IRIF			S	Sn	20 46 03.9	+1.0
CHY	Chiayi	1.58	248 eP	Pn	20 45 45.3	+1.5
	baz=246					
WTCT	Ta-ch'eng	1.61	262 eP	Pn	20 45 45.6	+1.5
	baz=260					
WTCT			eS	Sn	20 46 05.5	+1.8
	baz=260					
HATJ	Hateruma jima	1.63	91 P	Pn	20 45 45.9	+1.5
HATJ			eS	Sn	20 46 05.8	+1.6
TWK	Hsinying	1.63	240⇓iP	Pn	20 45 45.9	+1.4
	baz=239					
TWK			S	Sn	20 46 06.8	+2.4
	baz=239					
CHN1	Nanshi	1.65	237⇓iP	Pn	20 45 46.1	+1.5
	baz=236					
CHN1			eS	Sn	20 46 07.1	+2.5
	baz=236					
SNST	Tainan City	1.65	238 eP	Pn	20 45 48.1	+3.5
	baz=237					
SGST	Jiashian	1.66	233⇓iP	Pn	20 45 45.9	+1.0
	baz=232					
SGST			eS	Sn	20 46 07.0	+1.9
	baz=232					
WMLT	Mailiao	1.67	260 eP	Pn	20 45 46.4	+1.5
	baz=259					
SLGT	Liugui	1.68	229 ⇓P	Pn	20 45 46.7	+1.7
	baz=228					
WSF	Szhu	1.71	255 eP	Pn	20 45 47.0	+1.5
	baz=265					
WSF			eS	Sn	20 46 09.1	+3.0
	baz=265					
WSL	Shuilin Townsh	1.74	251 eP	Pn	20 45 46.6	+0.7
	baz=250					
WSL			eS	Sn	20 46 09.1	+2.2
	baz=250					
ICHU	Yijhu	1.76	246 eP	Pn	20 45 47.8	+1.6
	baz=244					
ECL	Taimali	1.79	213 eP	Pn	20 45 45.9	-0.7
	baz=214					
ECL			eS	Sn	20 46 06.9	-1.3
	baz=214					
CHN8	Yiju	1.82	246 ⇓P	Pn	20 45 48.4	+1.4
	baz=244					
JKRS	Kuro-shima	1.82	85 P	Pn	20 45 48.3	+1.3
JKRS			S	Sn	20 46 10.7	+1.8
CHN3	Shinhua	1.83	236 eP	Pn	20 45 49.2	+2.0
	baz=247					
SCST	Cishan	1.85	229⇓eP	Pn	20 45 49.7	+2.3
	baz=228					
SSD	Sandimen	1.86	224 eP	Pn	20 45 48.6	+1.1
	baz=222					
SSHA	Shanhua	1.86	239 eP	Pn	20 45 48.9	+1.4
	baz=238					
SHHT	Tainan City	1.87	235 eP	Pn	20 45 49.2	+1.5
	baz=246					
TSMG	Majia	1.88	223 eP	Pn	20 45 48.9	+1.0
	baz=221					
SCLT	Jiali	1.91	242 eP	Pn	20 45 50.0	+1.8
	baz=240					
TWM1	Shoushan	1.94	229 eP	Pn	20 45 51.6	+2.9
	baz=228					
JIJ	Ishigaki jima	1.96	82 P	Pn	20 45 49.4	+0.5
JIJ			S	Sn	20 46 12.1	-0.1
MASBT	Mashibuluo	1.96	221⇓eP	Pn	20 45 49.7	+0.9
	baz=220					
SGLT	Jiouru	1.96	226 eP	Pn	20 45 51.0	+2.1
	baz=215					
TSPT	Pingtung City	1.99	225 eP	Pn	20 45 52.6	+3.2
	baz=215					
TSCK	Chigu Township	2.01	242 eP	Pn	20 45 50.1	+0.5
	baz=241					
EAST	Anshuo	2.02	212 eP	Pn	20 45 49.5	-0.3
	baz=203					
TAWH	Dawu Township	2.04	211 eP	Pn	20 45 49.0	-1.0
	baz=202					
LAY	Lan-yu	2.10	192 eP	Pn	20 45 50.6	-0.3
	baz=183					
LYUB	Lan-yu	2.13	191 eP	Pn	20 45 50.0	-1.3
	baz=183					
JISG	Ishigakijimahi	2.15	77 P	Pn	20 45 51.9	+0.4
JISG			eS	Sn	20 46 16.2	-0.6
SCZT	Fangliau	2.15	217 eP	Pn	20 45 53.0	+1.4
	baz=207					
WSSB	Gushan	2.17	228 eP	Pn	20 45 54.0	+2.1
	baz=227					
SLIU	Shizi	2.19	211 eP	Pn	20 45 52.1	0.0
	baz=213					
PHUB	P'eng-hu	2.32	256 eP	Pn	20 45 53.9	+0.1
	baz=267					
PHUB			eS	Sn	20 46 20.7	-0.4
	baz=267					
PNG	Penghu	2.32	257 eP	Pn	20 45 53.9	0.0
	baz=255					
PNG			eS	Sn	20 46 20.2	-0.9
	baz=255					
TWP	Hsiaoliuchiu	2.32	221 eP	Pn	20 45 56.9	+3.0
	baz=220					
WDGT	Dungji	2.32	249 P	Pn	20 45 54.6	+0.7
	baz=248					
WDGT			eS	Sn	20 46 20.4	-0.8
	baz=248					
SMST	Manzhou Townsh	2.34	208 eP	Pn	20 45 54.6	+0.4
	baz=199					
HEN	Hengchun	2.40	210 eP	Pn	20 45 56.4	+1.4
	baz=200					
TSEB	Hengchuen, Pin	2.42	205 eP	Pn	20 45 55.8	+0.5
	baz=199					
TWKBT	Hengchun	2.42	208 eP	Pn	20 45 55.9	+0.6
	baz=202					
TWKBT			eS	Sn	20 46 23.6	0.0
	baz=202					
TWK1	Hengchun	2.42	208 eP	Pn	20 45 55.9	+0.6
	baz=199					
VWUC	VWUC	2.50	291 eP	Pn	20 45 55.7	-0.6
	baz=290					
JTJ	Tarama	2.50	77 P	Pn	20 45 57.3	+0.9
JTJ			eS	Sn	20 46 25.7	0.0
VCHM	Qimei	2.54	250 eP	Pn	20 45 57.5	+0.7
	baz=239					
VCHM			eS	Sn	20 46 26.8	+0.3
	baz=239					
MATB	Ma-tsu	2.77	318 eP	Pn	20 45 59.3	-0.8
	baz=318					
PTMZ	Houxiangcun	2.80	290⇑eP	Pn	20 45 60.0	-0.5
	baz=289					
MSUT	Lienchiang	2.80	318 eP	Pn	20 45 59.8	-0.7
	baz=319					
JIRB	Irabujima	2.96	75 P	Pn	20 46 03.3	+0.6
JIRB			S	Sn	20 46 37.5	+0.5
JIKM	Ikemajima	3.05	74 P	Pn	20 46 04.8	+0.9
JIKM			S	Sn	20 46 40.0	+0.8
JMJ	Miyako jima 2	3.07	76 eP	Pn	20 46 05.3	+1.2
	baz=85					
JMJ			eS	Sn	20 46 40.8	+1.2
	baz=85					
JMJ2	Miyako jima3	3.08	77 P	Pn	20 46 05.5	+1.2
JMJ2			eS	Sn	20 46 40.8	+0.9
JOGS	Gusukube	3.16	77 P	Pn	20 46 06.7	+1.4
JOGS			eS	Sn	20 46 43.1	+1.4
LYJJ	Jianjiangzhen	3.18	320 eP	Pn	20 46 04.9	-0.8
	baz=322					
XPSS	Dashiqiu	3.27	330⇑eP	Pn	20 46 06.1	-0.7
	baz=331					
KNM	Kinmen	3.29	276 eP	Pn	20 46 08.4	+1.3
	baz=274					
KNMB	Chin-men Tao	3.33	277 eP	Pn	20 46 07.2	-0.5
	baz=275					
MHZQ	Yeshan	3.36	307 eP	Pn	20 46 07.4	-0.7
	baz=308					
AXDP	Jialang	3.77	283 eP	Pn	20 46 13.3	-0.5
	baz=271					
ZPLA	Ao Xicun	3.91	268 eP	Pn	20 46 14.9	-0.7
	baz=266					
DSXP	Dongshan	4.22	266 eP	Pn	20 46 19.8	-0.2
	baz=263					
JOW	Kunigami	6.27	63 LR	LR	20 49 29.0	
	comp=Z,51nm,21.8s,baz=90,slow=38					

JOW	Kunigami	6.27	63	*e*P	Pn	20 46 47.5	-0.6
	baz=62						
KSRS	Korea Array	14.24	19	P	P	20 48 43.1	-0.2
	0.9nm,0.4s,baz=194,slow=12,SNR=4.7						
JHJ	Hachijo jima 2	17.98	56	P	P	20 49 27.6	+2.8
	125nm,0.5s,baz=240,slow=20,SNR=2.3						
CMAR	Chiang Mai Arr	22.21	260	P	P	20 50 11.5	+0.7
	0.3nm,0.7s,baz=67,slow=8.0,SNR=1.9						
	0.3nm,0.7s						
SONM	Songino Array	26.75	336	P	P	20 50 52.1	-1.4
	0.7nm,0.7s,baz=153,slow=7.6,SNR=5.1						
	0.7nm,0.7s						
MKAR	Makanchi Array	38.93	316	P	P	20 52 38.7	-0.8
	0.6nm,0.5s,baz=104,slow=10,SNR=14						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	40.73	327	P	P	20 52 52.6	-1.7
	0.6nm,0.4s,baz=104,slow=11,SNR=3.8						
	0.6nm,0.4s						
H11N1	WAKE ISLAND Hy	41.73	87	T	T	21 38 21.1	
	baz=282						
H11N2	WAKE ISLAND Hy	41.73	87	T	T	21 38 21.7	
	baz=282						
H11N3	WAKE ISLAND Hy	41.74	87	T	T	21 38 21.7	
	baz=282						
H11S3	WAKE ISLAND Hy	41.86	89	T	T	21 38 28.2	
	baz=284,slow=75,SNR=4.6						
H11S1	WAKE ISLAND Hy	41.87	89	T	T	21 38 28.2	
	baz=284,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	41.88	89	T	T	21 38 28.7	
	baz=284,slow=75,SNR=5.3						
WRA	Warramunga Arr	45.39	164	P	P	20 53 31.1	-1.3
	0.2nm,0.6s,baz=342,slow=8.5,SNR=2.2						
	0.2nm,0.6s						
BVAR	Borovoye Array	48.22	321	P	P	20 53 53.2	-0.9
	0.5nm,0.5s,baz=90,slow=10,SNR=5.3						
	0.5nm,0.5s						

JMA 24 20:51:48.8±0.2, 37°.4N±0°.5×14°.2E±°, h43km±2km, MV2.0/34, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.67	269	P	Pn	20 52 01.9	0.0
JFK				S	Sn	20 52 10.8	-0.6
JMST	Minamisoumatoc	0.74	298	P	Pn	20 52 02.8	-0.1
JMST				S	Sn	20 52 12.6	-0.4
JMM	Marumori	0.88	304	P	Pn	20 52 04.9	+0.2
JMM				*e*S	Sn	20 52 16.4	+0.1
JIKH	Ishinomakikobu	0.95	348	P	Pn	20 52 05.7	0.0
JIKH				S	Sn	20 52 17.4	-0.6
JFFD	Fukushimafurud	0.96	253	P	Pn	20 52 05.9	0.0
JFFD				S	Sn	20 52 18.2	-0.3
JIO	Ouri	1.11	345	P	Pn	20 52 08.1	+0.2
JIO				S	Sn	20 52 21.7	-0.3
JOTO	OTAMA OYAMA	1.11	280	P	Pn	20 52 09.2	+1.3
JOTO				S	Sn	20 52 23.7	+1.6
JHO	Hitachi	1.20	230	P	Pn	20 52 09.0	-0.1
JOU	Okura	1.29	320	S	Sn	20 52 27.7	+1.3
JYS	Shiratake	1.55	303	S	Sn	20 52 35.5	+2.6
JFY	Yanaizu	1.60	272	*e*P	Pn	20 52 15.9	+1.3
JFY				*e*S	Sn	20 52 35.6	+1.5

*IDC **24** 20:52:15.4±0.6, 40°.23N×143°.89E, h0km, mb4.2/31, mbtmp4.2/34, ML3.1/3, MS4.0/69, Error ellipse: s-maj=14.8km s-min=14.3km az=134.0*
*MOS **24** 20:52:15.4±1.0, 40°.23N×143°.85E, h14km, mb4.9/44, MS4.8/8, Error ellipse: s-maj=8.4km s-min=4.8km az=111.2*
*NIED **24** 20:52:16.6, 40°.25N×143°.78E, h14km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; M_{rr}1.23; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.58000×10^16^ NP1: ϕ_s181.00000°, δ37.00000°, λ68.00000°. NP2: ϕ_s28.00000°, δ56.00000°, λ106.00000°.*
*JMA **24** 20:52:16.6±0.3, 40°.3N±0°.7×14°.4E±°, h14km±4km, MD4.7/32, MW4.8/32, FAR E OFF SANRIKU*
*BJI **24** 20:52:17.6±0.0, 40°.24N×143°.28E, h5km, mb4.5/63, mB5.0/45, Ms4.7/60, Ms7 4.5/56*
*NEIC **24** 20:52:17.1±1.6, 40°.22N±0°.04×143°.9E±0°.1, h10km±1km, mb4.8/64, Mww4.7, Error ellipse: s-maj=14.7km s-min=3.5km az=111.0*
*NEIC **24** 20:52:21, 40°.10N×143°.85E, h12km, Moment Tensor Solution. Duration: 9s4 Moment tensor: Scale 10^16^Nm; M_{rr}1.06; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-1.11; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.32; $M_{\phi r}$0.74; Fault plane solution: $M_0$1.48000×10^16^ NP1: ϕ_s178.00000°, δ28.00000°, λ61.00000°. NP2: ϕ_s30.00000°, δ65.00000°, λ104.00000°. Principal axes: T 1.4612, Plg66.0000°, Azm326.0000°; N 0.0382, Plg13.0000°, Azm204.0000°; P -1.4993, Plg19.0000°, Azm109.0000°;*
*GCMT **24** 20:52:22.1±0.4, 40°.32N±0°.03×144°.07E±0°.04, h21km±1km, MW4.9/82, Moment Tensor Solution. s15,c16; s82,c111; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}1.82±.17; $M_{\theta\theta}$-0.01±.10; $M_{\phi\phi}$-1.81±.11; $M_{r\theta}$0.16±.18; $M_{\theta\phi}$-0.51±.06; $M_{\phi r}$1.71±.17; Best double couple: $M_0$2.54800×10^16^ NP1: ϕ_s8.00000°, δ66.00000°, λ85.00000°. NP2: ϕ_s202.00000°, δ24.00000°, λ102.00000°. Principal axes: T 2.4990, Plg68.0000°, Azm268.0000°; N 0.0970, Plg5.0000°, Azm10.0000°; P -2.5970, Plg21.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 20:52:17.5±0.4, 40°.23N±0°.04×143°.90E±0°.04, h16km, n369, σ1§47/297, mb4.7/105, MS4.2/104, 14C-9D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.59	260	P	Pn	20 52 43.4	-1.6
JTH				*e*S	Sn	20 53 02.4	-2.7
JTH	Tanohata	1.59	260	A	A	20 52 43.4	
	comp=E,7.0nm,2.4s,comp=E,11nm,3.2s						
JKEN	Kujiedanarisaw	1.68	270	P	Pn	20 52 44.3	-1.8
JKEN				*e*S	Sn	20 53 05.0	-2.3
JKEN	Kujiedanarisaw	1.68	270	A	A	20 52 44.3	
	comp=E,14nm,3.0s,comp=E,10.0nm,6.4s						
MIYJ	Miyakonagasawa	1.73	249	P	Pn	20 52 45.8	-1.1
JANG	Nango	1.83	275	P	Pn	20 52 47.1	-1.2
JANG	Nango	1.83	275	A	A	20 52 47.1	
	comp=E,5.0nm,7.8s,comp=E,7.0nm,3.9s						
ERM	Erimo	1.87	343		Pn	20 52 48.0	-0.9
ERM	Erimo	1.87	343	⇓*e*P	Pn	20 52 47.7	-1.1
ERM				pmax	pmax		
	comp=Z,211nm,1.7s						
ERM	Erimo	1.87	343	P	Pn	20 52 49.5	+0.7
JEM	Erimo	1.87	343	P	Pn	20 52 49.5	+0.7
JEM	Erimo	1.87	343	*e*P	Pn	20 52 48.1	-0.7
JEM	Erimo	1.87	343	A	A	20 52 48.1	
	comp=Z,9.0nm,4.4s,comp=Z,6.0nm,4.2s						
OFUJ	Ofunato	2.07	237	A	A	20 52 50.8	
	comp=Z,5.0nm,4.7s,comp=Z,7.0nm,7.5s						
JARK	Aomorirokkasho	2.08	293	A	A	20 52 50.5	
	comp=Z,9.0nm,7.8s,comp=Z,8.0nm,7.1s						
JTHR	Tokachihiroo	2.11	348	A	A	20 52 51.7	
	comp=Z,7.0nm,3.2s,comp=Z,6.0nm,3.3s						
JOM	Ohasama	2.15	250	P	Pn	20 52 52.2	-0.3
JOM	Ohasama	2.15	250	A	A	20 52 52.2	
	comp=Z,6.0nm,4.5s,comp=Z,7.0nm,5.3s						
JAHD	Aomorihigashid	2.21	299	A	A	20 52 52.4	
	comp=Z,7.0nm,4.4s,comp=Z,10.0nm,6.2s						
JNBK	Urakawa-nobuka	2.23	337	P	Pn	20 52 53.5	-0.2
JNBK	Urakawa-nobuka	2.23	337	A	A	20 52 53.5	
	comp=Z,10.0nm,5.3s,comp=Z,11nm,3.2s						
JTM	Tenmabayashi	2.23	285	Pn	Pn	20 52 52.8	-1.0
JTM	Tenmabayashi	2.23	285	A	A	20 52 52.7	
	comp=Z,7.0nm,3.0s,comp=Z,6.0nm,8.9s						
JSZI	Iwateshizukuis	2.32	259	A	A	20 52 54.0	
	comp=Z,22nm,2.1s,comp=Z,28nm,3.1s						
JKMT	Kesennumamotoy	2.35	234	A	A	20 52 54.9	
	comp=Z,7.0nm,6.0s,comp=Z,6.0nm,6.0s						
JCH	Churui	2.42	351	*e*P	Pn	20 52 55.9	-0.4
JCH				*e*S	Sn	20 53 25.3	-0.3
JCH	Churui	2.42	351	A	A	20 52 55.9	
	comp=Z,6.0nm,8.3s,comp=Z,5.0nm,4.3s						
JMK	Ichinoseki	2.43	239	P	Pn	20 52 55.9	-0.6
JMK	Ichinoseki	2.43	239	A	A	20 52 55.9	
	comp=Z,6.0nm,6.5s,comp=Z,8.0nm,3.5s						
JSHD	Hidakashinhida	2.43	334	A	A	20 52 56.1	
	comp=Z,17nm,2.8s,comp=Z,15nm,7.0s						
JOT	Ohata	2.45	299	P	Pn	20 52 56.3	-0.5
JOT	Ohata	2.45	299	A	A	20 52 56.3	
	comp=Z,6.0nm,4.8s,comp=Z,5.0nm,4.6s						
JAH	Hinai	2.50	270	A	A	20 52 56.6	
	comp=Z,7.0nm,1.5s,comp=Z,8.0nm,2.1s						
JRG	Rokugo	2.65	253	A	A	20 52 58.9	
	comp=Z,12nm,4.2s,comp=Z,10.0nm,2.1s						
JOB	Onbets	2.67	359	A	A	20 53 00.1	
	comp=Z,8.0nm,4.6s,comp=Z,7.0nm,3.8s						
JHHS	Hirosakihyakuz	2.74	280	A	A	20 52 59.9	
	comp=Z,18nm,2.3s,comp=Z,19nm,3.0s						
JSI2	Shiura 2	2.78	288	A	A	20 53 00.6	
	comp=Z,7.0nm,8.3s,comp=Z,7.0nm,2.7s						
JBT2	Biratori 2	2.80	336	A	A	20 53 01.4	
	comp=Z,7.0nm,3.5s,comp=Z,5.0nm,5.8s						
JIAM	Iburiatsuma	2.82	329	A	A	20 53 01.5	
	comp=Z,13nm,4.1s,comp=Z,23nm,5.3s						
JOFO	Osakifurukawao	2.83	236	A	A	20 53 01.7	
	comp=Z,53nm,3.4s,comp=Z,35nm,1.7s						
JAK	Akkeshi	2.83	12	*e*P	Pn	20 53 01.4	-0.5
JAK				*e*S	Sn	20 53 33.6	-2.1
JAK	Akkeshi	2.83	12	A	A	20 53 01.4	
	comp=Z,7.0nm,6.3s,comp=Z,4.0nm,3.3s						
JNTW	Noshirotokiwa	2.86	272	A	A	20 53 01.8	
	comp=Z,40nm,2.0s,comp=Z,39nm,2.1s						
JYW	Yuwa	2.92	258	A	A	20 53 02.8	
	comp=Z,15nm,6.4s,comp=Z,17nm,3.0s						
JSR	Shiriuchi	2.94	297	A	A	20 53 03.0	
	comp=Z,4.0nm,8.6s,comp=Z,4.0nm,6.3s						
JIW	Iwasaki	3.00	278	A	A	20 53 03.7	
	comp=Z,6.0nm,6.9s,comp=Z,6.0nm,4.6s						
JYK	Kaneyama	3.03	246	P	Pn	20 53 04.8	0.0
JYK	Kaneyama	3.03	246	A	A	20 53 04.8	
	comp=Z,7.0nm,4.5s,comp=Z,11nm,3.7s						
JAR	Ashorobuto	3.07	358	A	A	20 53 05.7	
	comp=Z,3.0nm,0.7s,comp=Z,4.0nm,0.5s						
JOU	Okura	3.12	235	A	A	20 53 06.0	
	comp=Z,7.0nm,6.1s,comp=Z,10.0nm,5.3s						
JEW	Eniwo	3.19	326	Pn	Pn	20 53 06.0	-1.0
JEW	Eniwo	3.19	326	P	Pn	20 53 08.1	+0.5
JEW	Eniwo	3.19	326	*e*P	Pn	20 53 08.0	+1.0
JEW				*e*S	Sn	20 53 45.6	+0.8
JEW	Eniwo	3.19	326	A	A	20 53 08.0	
	comp=Z,11nm,2.9s,comp=Z,9.0nm,4.9s						
JYYZ	Yamagatayuza	3.30	250	A	A	20 53 08.2	
	comp=Z,14nm,3.8s,comp=Z,20nm,2.4s						
JMM	Marumori	3.38	227		Pn	20 53 07.7	-1.9
JMM	Marumori	3.38	227	P	Pn	20 53 08.1	-1.4
NEM2	Nemuro 2	3.42	23	P	Pn	20 53 09.4	-0.8
NEM2				S	Sn	20 53 47.4	-2.9
NMR	Nemuro--Hokkai	3.42	23	*e*P	Pn	20 53 09.3	-0.8
NMR				*e*S	Sn	20 53 46.2	-4.2
JAB	Ashibetsu	3.51	340	A	A	20 53 11.6	
	comp=Z,6.0nm,3.0s,comp=Z,5.0nm,3.4s						
JISS	Ishikarishitsu	3.57	329	A	A	20 53 12.2	
	comp=Z,10.0nm,3.1s,comp=Z,11nm,3.4s						
JYS	Shiratake	3.59	237	A	A	20 53 12.5	
	comp=Z,8.0nm,7.5s,comp=Z,8.0nm,6.9s						
JYA	Atsumi	3.63	245	A	A	20 53 13.0	
	comp=Z,10.0nm,1.8s,comp=Z,9.0nm,4.8s						
JOG3	Oga3	3.71	267	A	A	20 53 06.0	
	comp=Z,11nm,2.9s,comp=Z,7.0nm,3.6s						
RUSJ	Misakicho	4.00	14	*e*P	Pn	20 53 18.7	+0.6
RUSJ				*e*S	Sn	20 54 01.9	-2.7
YUK	Yuzh-Kuril'sk	4.07	20	*e*P	Pn	20 53 18.4	-0.7
YUK				*e*S	Sn	20 54 02.5	-3.9
YUK				pmax	pmax		
	comp=Z,467nm,0.3s						
YUK				pmax	pmax		
	comp=E,149nm,0.1s						
YUK				pmax	pmax		
	comp=N,72nm,0.2s						
YUK				smax	smax		
	comp=N,791nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.3s						
YUK				MLR	MLR		
	comp=Z,2μm,8.0s						
JSD	Sado	4.90	245	Pn	Pn	20 53 30.2	-0.3
JSD	Sado	4.90	245	P	Pn	20 53 30.7	+0.2
JYT	Yasato	4.95	217	Pn	Pn	20 53 28.1	-3.0
MJAR	Matsushiro Arr	5.79	232	Pn	Pn	20 53 43.2	+0.5
	comp=Z,0.5nm,0.3s,baz=43,slow=11,SNR=38						
	comp=Z,17nm,0.7s						
MJB9	Matsu-Tunnel	5.79	232		Pn	20 53 44.1	+1.3
MAJO	Matsushiro	5.79	232	Pn	Pn	20 53 42.8	+0.1
MAJO	Matsushiro	5.79	232	*c i*P	Pn	20 53 43.3	+0.6
MAJO	Matsushiro	5.79	232	P	Pn	20 53 43.5	+0.8
KUR	Kuril'sk	5.79	29	*e*P	Pn	20 53 43.6	+0.9
KUR				*e*S	Sn	20 54 46.3	-2.4
KUR				pmax	pmax		
	comp=E,100nm,0.5s						
KUR				pmax	pmax		
	comp=Z,207nm,0.5s						
KUR				pmax	pmax		
	comp=N,57nm,0.3s						
KUR				smax	smax		
	comp=E,393nm,0.3s						
KUR				smax	smax		
	comp=N,110nm,0.2s						
YSS	Yuzh-Sakhalins	6.78	353	*e*P	Pn	20 53 58.3	+2.1
YSS				*e*S	Sn	20 55 10.0	-2.9
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,3μm,13.0s						
JGF	Kuroka	6.93	230	Pn	Pn	20 53 58.6	+0.1
TEY	Ternei	7.21	314	*e*P	Pn	20 54 03.5	+1.3
TEY				MLR	MLR		
	comp=E,100nm,13.0s						
TEY				MLR	MLR		
	comp=N,100nm,15.0s						
TEY				MLR	MLR		
	comp=Z,100nm,16.0s						
INU	Inuyama	7.31	230	Pn	Pn	20 54 03.8	+0.3
JHJ	Hachijo jima 2	7.83	206	Sn	Sn	20 55 30.3	-8.6
	comp=Z,13nm,0.3s,baz=295,slow=14,SNR=2.3						
USA0B	Ussuriysk Arra	9.69	298		Pn	20 54 37.8	+1.7
USA0B	Ussuriysk Arra	9.69	298	P	Pn	20 54 37.8	+1.7
USRK	Ussuriysk Ar.	9.69	298	Pn	Pn	20 54 37.8	+1.7
	comp=Z,1.5nm,0.3s,baz=98,slow=15,SNR=21						
	comp=Z,21nm,0.8s						
USRK	Ussuriysk Ar.	9.69	298	Pn	Pn	20 54 37.5	+1.4
JHS	Saijyo	10.02	242		Pn	20 54 42.4	+1.6
MDJ	Mudanjiang	11.45	297	Pn	Pn	20 54 58.7	-1.5
KLR	Kul'dur	12.46	320	Pn	Pn	20 55 14.3	+0.2
	comp=Z,0.2nm,0.3s,baz=123,slow=13,SNR=11						
KLR				LR	LR	21 00 33.2	
	comp=Z,605nm,20.7s,baz=128,slow=40						
	comp=Z,13nm,1.2s						
KLR	Kul'dur	12.46	320	⇓*i*P	Pn	20 55 14.4	+0.3
KLR				pmax	pmax		
	comp=Z,24nm,1.3s						
KSRS	Korea Array	12.76	263	Pn	Pn	20 55 21.9	+3.8
	comp=Z,0.3nm,0.3s,baz=75,slow=13,SNR=5.9						
KSRS				LR	LR	21 00 08.7	
	comp=Z,849nm,18.2s,baz=70,slow=37						
KSRS	Korea Array	12.76	263	P	Pn	20 55 22.0	+3.8
BNX	BinXian	13.27	300	⇓P	Pn	20 55 25.3	+0.2
BNX				sP	P	20 55 34.8	0.0
BNX				PP	PnPn	20 55 36.1	+3.3
BNX				S	Sn	20 57 53.1	+0.9
BNX				pmax	pmax		
	comp=Z,15nm,1.4s						
BNX				pmax	pmax		
	comp=Z,250nm,6.5s						
BNX				LR	LR		
	comp=Z,1μm,11.5s						
BNX				LR	LR		
	comp=Z,2μm,13.3s						
BNX				LR	LR		
	comp=Z,2μm,12.6s						
CN2	Changchun	14.17	291	P	P	20 55 42.6	-2.3
PETK	Petropavlovsk-	15.95	32	LR	LR	21 01 55.4	
	comp=Z,538nm,19.1s,baz=218,slow=36						
DL2	Dalian	17.22	273	P	Pn	20 56 17.5	+0.2
DL2				pmax	pmax		
	comp=Z,68nm,1.6s						
DL2				pmax	pmax		
	comp=Z,400nm,7.7s						
DL2				LR	LR		
	comp=Z,920nm,10.7s						
DL2				LR	LR		
	comp=Z,470nm,10.7s						
DL2				LR	LR		
	comp=Z,660nm,13.5s						
ZEA	Zeya	17.59	326	*e*P	Pn	20 56 19.6	-2.2
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
ZEA				MLR	MLR		
	comp=E,800nm,13.0s						
ZEA				MLR	MLR		
	comp=N,500nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,14.0s						
HIA	Hailar	19.32	306		P	20 56 41.8	-0.1
HIA	Hailar	19.32	306	P	P	20 56 41.8	-0.1
HIA				pmax	pmax		
	comp=Z,33nm,1.6s						
MA2	Magadan	19.85	10	LR	LR	21 05 20.2	
	comp=Z,599nm,18.3s,baz=193,slow=40						
SSE	Sheshan	20.54	251	P	P	20 56 53.4	-1.8
SSE				S	S	21 00 43.3	-1.0
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,4.4s						
SSE				LR	LR		
	comp=Z,390nm,14.4s						
SSE				LR	LR		
	comp=Z,490nm,13.1s						
XLT	XiLinHaoTe	20.94	289	*e*P	P	20 56 57.9	-1.6
XLT				pP	pP	20 57 03.3	+0.1
XLT				sP	pwP	20 57 07.0	-0.3
XLT				pmax	pmax		
	comp=Z,10.0nm,1.5s						
XLT				pmax	pmax		
	comp=Z,240nm,4.4s						
XLT				LR	LR		
	comp=Z,880nm,13.6s						
XLT				LR	LR		
	comp=Z,870nm,13.6s						
BJI	Beijing	21.17	279	P	P	20 57 00.3	-1.6
BJI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BJI				pmax	pmax		
	comp=Z,180nm,4.5s						
BJI				LR	LR		
	comp=Z,160nm,14.7s						
BJI				LR	LR		
	comp=Z,320nm,11.9s						
BJI				LR	LR		
	comp=Z,1μm,13.1s						
BJT	Baijiatuau	21.18	278	P	P	20 57 00.3	-1.8
BJT				IAmb	IAmb	20 57 15.9	
	comp=Z,54nm,1.7s						
BJT	Baijiatuau	21.18	278	P	P	20 57 00.3	-1.8
BJT				pmax	pmax		
	comp=Z,54nm,1.7s						
NJ2	Nanjing	21.76	256	*e*P	P	20 57 06.5	-1.8
NJ2				sP	pP	20 57 11.8	-0.2
NJ2				S	S	21 01 04.9	-3.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,240nm,4.9s						
NJ2				LR	LR		
	comp=Z,920nm,14.1s						
NJ2				LR	LR		
	comp=Z,870nm,16.4s						
NJ2				LR	LR		
	comp=Z,1μm,16.3s						
HNS	HongShan	22.88	272	⇑P	P	20 57 10.9	-9.3
HNS				S	S	21 01 26.6	-2.6
HNS				SS	SnSn	21 02 21.1	+21
SEY	Seymchan	23.30	10	P	P	20 57 23.4	-0.9
	comp=Z,12nm,0.9s,baz=175,slow=11,SNR=10.0						
	comp=Z,12nm,0.9s						
SEY	Seymchan	23.30	10	⇑*e*P	P	20 57 24.3	0.0
SEY				pmax	pmax		
	comp=Z,25nm,1.1s						
YAK	Yakutsk	23.48	343	P	P	20 57 24.4	-1.7
	comp=Z,8.1nm,0.6s,baz=179,slow=1.1,SNR=6.8						
YAK				LR	LR	21 06 50.7	
	comp=Z,198nm,20.0s,baz=92,slow=37						
	comp=Z,8.1nm,0.6s						
YAK	Yakutsk	23.48	343	P	P	20 57 23.8	-2.3
YAK				IAmb	IAmb	20 57 38.0	
	comp=Z,20nm,0.9s						
YAK	Yakutsk	23.48	343	*e*P	P	20 57 24.1	-2.0
YAK				*e*		20 57 52.5	
YAK				*e*S	S	21 01 38.5	-0.3
YAK				*e*SS	SnSn	21 02 18.7	+3.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,59nm,1.3s						
YAK				pmax	pmax		
	comp=E,21nm,1.8s						
YAK				pmax	pmax		
	comp=N,92nm,2.2s						
YAK				smax	smax		
	comp=E,346nm,3.0s						
YAK				smax	smax		
	comp=N,436nm,3.2s						
YAK				MLR	MLR		
	comp=Z,770nm,16.0s						
YAK				MLR	MLR		
	comp=E,424nm,16.0s						
YAK				MLR	MLR		
	comp=N,571nm,15.0s						
CIT	Chita	23.93	310	*e*P	P	20 57 29.2	-1.4
CIT				*e*		20 57 35.6	
SHEM	Shemya Is, Ala	24.07	49	LR	LR	21 07 14.7	
	comp=N,40nm,20.8s,baz=10.0,slow=37						
LYN	LuoYang	25.53	267	⇑P	P	20 57 45.6	+0.3
LYN				PP	PnPn	20 58 25.1	+4.2
LYN				pmax	pmax		
	comp=N,10.0nm,1.5s						
LYN				pmax	pmax		
	comp=N,260nm,6.8s						
LYN				LR	LR		
	comp=N,440nm,12.6s						
LYN				LR	LR		
	comp=N,2μm,13.4s						
LYN				LR	LR		
	comp=N,2μm,13.3s						
BTO	Baotou	25.71	282	*e*P	P	20 57 47.9	+0.9
BTO				LR	LR		
	comp=N,3μm,14.9s						
BTO				LR	LR		
	comp=N,2μm,13.5s						
WHN	Wuhan	25.86	257	⇓P	P	20 57 48.6	+0.3
WHN				sP	pwP	20 57 57.3	+0.9
WHN				S	S	21 02 18.8	+1.4
WHN				pmax	pmax		
	comp=N,120nm,1.6s						
WHN				LR	LR		
	comp=N,4μm,15.0s						
WHN				LR	LR		
	comp=N,2μm,14.2s						
WHN				LR	LR		
	comp=N,3μm,15.8s						
BOD	Bodaibo	26.02	323	*e*P	P	20 57 49.8	+0.3
BOD				pmax	pmax		
	comp=Z,38nm,1.6s						
GUMO	Guam	26.55	178	LR	LR	21 08 50.7	
	comp=Z,241nm,18.8s,baz=357,slow=38						
ULN	Ulaanbaatar	27.36	299	P	P	20 58 02.0	+0.1
ULN	Ulaanbaatar	27.36	299	⇑*e*P	P	20 58 02.1	+0.1
ULN				pmax	pmax		
	comp=Z,19nm,1.8s						
SONM	Songino Array	27.80	298	P	P	20 58 06.4	+0.6
	comp=Z,2.8nm,0.5s,baz=96,slow=8.0,SNR=19						
SONM				LR	LR	21 09 17.0	
	comp=Z,191nm,20.1s,baz=95,slow=37						
	comp=Z,2.8nm,0.5s						
SONM	Songino Array	27.80	298	P	P	20 58 05.9	+0.1
SONM				IAmb	IAmb	20 58 16.5	
	comp=Z,40nm,1.8s						
SONM	Songino

XAN pP pwP 20 58 19.3 -0.4
XAN pmax pmax
comp=Z,11nm,1.3s
XAN pmax pmax
comp=Z,210nm,6.1s
XAN LR LR
comp=Z,730nm,11.8s
XAN LR LR
comp=Z,950nm,14.2s
XAN LR LR
comp=Z,2μm,12.7s
H11S1 WAKE ISLAND Hy 29.22 131 T T 21 28 51.7
baz=324
H11S3 WAKE ISLAND Hy 29.23 131 T T 21 28 57.8
baz=324,slow=74
H11S2 WAKE ISLAND Hy 29.24 131 T T 21 28 54.9
baz=324,slow=74
ENH Enshi 29.65 261 P **P** **20 58 21.7 -0.6**
ZAK Zakamensk 29.98 303 *e*P **P** **20 58 24.0 -1.1**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
BILL Bilibino 30.42 16⇓*e*P **P** **20 58 29.1 +0.4**
BILL *e* 20 59 27.1
BILL *e* 21 01 27.8
BILL pmax pmax
comp=Z,25nm,1.2s
BILL MLR MLR
comp=Z,176nm,17.0s
LZH Lanzhou 31.58 275 *e*P **P** **20 58 36.9 -2.6**
LZH pP pP 20 58 41.8 -1.6
LZH sP sP 20 58 45.0 0.0
LZH sS sS 21 03 57.3 +3.1
LZH pmax pmax
comp=Z,18nm,1.2s
LZH LR LR
comp=Z,760nm,15.5s
LZH LR LR
comp=Z,790nm,16.0s
LZH LR LR
comp=Z,720nm,18.2s
TIXI Tiksi 32.40 351 P **P** **20 58 45.9 -0.1**
comp=Z,2.3nm,0.8s,baz=271,slow=22,SNR=9.5
TIXI LR LR 21 14 11.8
comp=Z,606nm,18.7s,baz=271,slow=41
comp=Z,2.3nm,0.8s
TIXI Tiksi 32.40 351 P **P** **20 58 45.5 -0.5**
TIXI IAmb IAmb 20 58 56.4
comp=Z,21nm,1.7s
TIXI Tiksi 32.40 351⇓*i*P **P** **20 58 46.1 +0.1**
TIXI pmax pmax
comp=Z,20nm,2.7s
GTA Gaotai 33.61 283 ⇑P **P** **20 58 57.8 +0.6**
GTA pP pP 20 59 01.9 +0.8
GTA sP pwP 20 59 04.8 -0.6
GTA S **S** **21 04 22.8 +3.6**
GTA pmax pmax
comp=Z,16nm,1.3s
GTA pmax pmax
comp=Z,120nm,6.6s
GTA LR LR
comp=Z,310nm,12.4s
GTA LR LR
comp=Z,660nm,14.2s
GTA LR LR
comp=Z,840nm,13.8s
CD2 Chengdu 33.71 267 P **P** **20 58 57.3 -0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
GYA Guiyang 33.75 258 ⇑P **P** **20 58 57.9 -0.6**
GYA sP pwP 20 59 06.6 0.0
GYA S **S** **21 04 20.3 -1.2**
GYA pmax pmax
comp=Z,16nm,1.6s
GYA pmax pmax
comp=Z,220nm,4.3s
GYA LR LR
comp=Z,900nm,12.3s
GYA LR LR
comp=Z,880nm,14.4s
GYA LR LR
comp=Z,850nm,15.9s
QIZ Qiongzhong 36.05 244 P **P** **20 59 19.0 +0.8**
QIZ S **S** **21 04 57.4 +0.7**
QIZ LR LR
comp=Z,650nm,15.7s
QIZ LR LR
comp=Z,500nm,14.9s
QIZ LR LR
comp=Z,630nm,12.2s
DAV Davao City (W) 36.87 211 LR LR 21 14 53.8
comp=Z,267nm,19.0s,baz=50,slow=37
KMI Kunming 37.43 259 ⇑P **P** **20 59 30.6 +0.4**
KMI pP pP 20 59 33.9 -0.3
KMI sP sP 20 59 35.8 0.0
KMI S **S** **21 05 20.4 +2.2**
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,160nm,8.3s
KMI LR LR
comp=Z,940nm,14.2s
KMI LR LR
comp=Z,430nm,13.3s
KMI LR LR
comp=Z,680nm,16.7s
PZH PanZhiHua 37.43 262 P **P** **20 59 31.9 +1.8**
PZH sP **pwP** **20 59 39.4 +1.1**
PZH S **S** **21 05 18.3 +0.3**
PZH ScS **ScS** **21 09 42.4 -1.1**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,150nm,6.7s
PZH LR LR
comp=Z,410nm,13.3s
PZH LR LR
comp=Z,710nm,13.3s
PZH LR LR
comp=Z,790nm,13.7s
GOMU GeErMu 38.39 280 P **P** **20 59 38.6 +0.2**
GOMU sS sS 21 05 43.8 +4.3
GOMU pmax pmax
comp=Z,14nm,1.5s
GOMU pmax pmax
comp=Z,110nm,4.4s
GOMU LR LR
comp=Z,220nm,15.0s
GOMU LR LR
comp=Z,280nm,13.4s
GOMU LR LR
comp=Z,200nm,14.8s
DGZ Jazzator, Alta 40.20 303*c i*P **P** **20 59 54.5 +1.4**
DGZ pmax pmax
comp=Z,16nm,0.8s
WMQ Urumqi 41.23 294 *e*P **P** **21 00 04.3 +2.7**
WMQ sP pwP 21 00 13.6 +4.0
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ pmax pmax
comp=Z,200nm,4.1s
WMQ LR LR
comp=Z,580nm,13.5s
WMQ LR LR
comp=Z,520nm,15.7s
WMQ LR LR
comp=Z,330nm,18.7s
NRIK Noril'sk 41.24 333 P **P** **21 00 02.7 +1.5**
comp=Z,2.1nm,0.4s,baz=106,slow=12,SNR=2.0
NRIK LR LR 21 18 38.2
comp=Z,533nm,18.9s,baz=98,slow=38
comp=Z,2.1nm,0.4s
NRIK Noril'sk 41.24 333⇓*e*P **P** **21 00 03.3 +2.1**
NRIK pmax pmax
comp=Z,16nm,1.6s
ZAA0 Zalesovo Array 41.29 310 P **P** **21 00 01.4 -0.4**
ZALV Zalesovo Beam 41.29 310 P **P** **21 00 02.5 +0.7**
comp=Z,4.5nm,0.5s,baz=82,slow=7.9,SNR=17
ZALV PcP **PcP** **21 02 00.6 +0.4**
comp=Z,0.7nm,0.4s,baz=86,slow=2.7,SNR=1.7
ZALV LR LR 21 19 55.0
comp=Z,148nm,18.9s,baz=87,slow=40
comp=Z,4.5nm,0.5s
ZALV Zalesovo Beam 41.29 310 P **P** **21 00 01.4 -0.4**
MYLDM Lahad Datu 41.71 220 P **P** **21 00 05.4 -0.2**
MYLDM IAmb IAmb 21 00 19.4
comp=Z,30nm,1.3s

SIJI Sorong 42.50 199 LR LR 21 15 46.0
comp=Z,322nm,19.7s,baz=56,slow=33
PHRA Phrae 43.25 253 P **P** **21 00 18.1 -0.1**
KDAK Kodiak Island 43.44 44 P **P** **21 00 19.3 +0.1**
comp=Z,4.2nm,0.8s,baz=274,slow=1.7,SNR=1.8
comp=Z,4.2nm,0.8s
LSA Lhasa 43.92 273 P **P** **21 00 24.0 -0.1**
LSA IAmb IAmb 21 00 38.9
comp=Z,31nm,1.6s
LSA Lhasa 43.92 273 P **P** **21 00 24.6 +0.5**
LSA pmax pmax
comp=Z,5.0nm,2.1s
LSA Lhasa 43.92 273 P **P** **21 00 24.0 -0.1**
LSA pmax pmax
comp=Z,31nm,1.6s
CHTO Chiang Mai 43.99 254 P **P** **21 00 23.1 -1.1**
CHTO Chiang Mai 43.99 254 P **P** **21 00 23.1 -1.1**
MK31 Makanchi Array 44.15 300 P **P** **21 00 25.3 +0.1**
MK31 Makanchi Array 44.15 300 P **P** **21 00 25.3 +0.1**
MK31 pmax pmax
comp=Z,8.0nm,1.0s
MKAR Makanchi Array 44.15 300 P **P** **21 00 25.4 +0.2**
comp=Z,3.7nm,0.9s,baz=82,slow=8.9,SNR=20
MKAR LR LR 21 17 57.8
comp=Z,94nm,20.1s,baz=125,slow=35
comp=Z,3.7nm,0.9s
MKAR Makanchi Array 44.15 300 P **P** **21 00 25.1 -0.1**
MKAR Makanchi Array 44.15 300 *i* P **P** **21 00 25.7 +0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 44.22 254 P **P** **21 00 26.6 +0.6**
comp=Z,0.8nm,0.4s,baz=38,slow=7.2,SNR=4.1
CMAR LR LR 21 19 35.5
comp=Z,188nm,18.0s,baz=65,slow=37
comp=Z,0.8nm,0.4s
CMAR Chiang Mai Arr 44.22 254 *i* P **P** **21 00 29.2 +3.2**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
MAKZ Makanchi 44.35 300 P **P** **21 00 27.1 +0.2**
MAKZ IAmb IAmb 21 00 28.5
comp=Z,14nm,1.1s
MAKZ Makanchi 44.35 300 P **P** **21 00 27.1 +0.2**
MAKZ pmax pmax
comp=Z,14nm,1.2s
H23K Yukon River 44.63 33 P **P** **21 00 31.9 +3.1**
H23K IAmb IAmb 21 00 48.8
comp=Z,35nm,1.8s
MDM Murphy Dome 45.18 34 P **P** **21 00 35.5 +2.3**
MDM IAmb IAmb 21 00 40.7
comp=Z,20nm,1.8s
POKR Poker Plat Res 45.52 34 P **P** **21 00 33.5 -2.3**
POKR IAmb IAmb 21 00 50.4
comp=Z,8.9nm,0.8s
KURK Kurchatov 45.56 306 P **P** **21 00 36.2 -0.2**
KURK Kurchatov 45.56 306 P **P** **21 00 36.2 -0.2**
KURK pmax pmax
comp=Z,94nm,1.9s
HDA Harding Lake 45.75 35 P **P** **21 00 39.0 +1.3**
IL31 45.76 34 P **P** **21 00 39.1 +1.4**
ILAR Eielson Array 45.76 34 P **P** **21 00 38.4 +0.7**
comp=Z,1.2nm,0.8s,baz=263,slow=6.5,SNR=12
ILAR LR LR 21 19 53.3
comp=Z,128nm,21.4s,baz=272,slow=36
comp=Z,1.2nm,0.8s
ILAR Eielson Array 45.76 34 P **P** **21 00 39.1 +1.3**
ILAR Eielson Array 45.76 34 P **P** **21 00 39.1 +1.3**
PRP Porcupine Dome 46.30 33 P **P** **21 00 43.7 +1.6**
KLU Klutina 46.45 39 P **P** **21 00 44.8 +1.5**
KLU IAmb IAmb 21 01 19.0
comp=Z,9.6nm,1.2s
BMAR Burnt Mountain 46.60 30 P **P** **21 00 45.2 +0.9**
SCRK Sand Creek 47.07 35 P **P** **21 00 49.1 +0.9**
SCRK IAmb IAmb 21 01 31.6
comp=Z,20nm,1.8s
BRDH Bariadhala 47.20 265 LR LR 21 22 41.8
comp=Z,222nm,18.2s,baz=80,slow=39
L26K Log Cabin Wild 47.47 36 P **P** **21 00 53.3 +2.1**
L26K IAmb IAmb 21 01 05.8
comp=Z,6.5nm,1.0s
K27K Chicken 47.91 35 P **P** **21 00 56.2 +1.7**
K27K IAmb IAmb 21 01 20.7
comp=Z,9.7nm,1.2s
L27K Beaver Creek, 48.15 36 P **P** **21 00 59.0 +2.5**
L27K IAmb IAmb 21 01 27.7
comp=Z,8.3nm,1.1s
BCAR Beaver Creek A 48.17 36 P **P** **21 00 58.0 +1.4**
JIRN Jiri 48.71 274 *e*P **P** **21 01 02.1 +0.4**
RAMN Ramite 48.76 273 *e*P **P** **21 01 02.2 +0.3**
comp=Z,49nm,1.3s
GUN Gumba 48.82 274 *e*P **P** **21 01 03.1 +0.6**
comp=Z,28nm,0.5s
I29M Ogilvie Camp, 49.31 33 P **P** **21 01 07.7 +2.3**
PKI Pulchoki 49.35 274 *e*P **P** **21 01 06.0 -0.6**
comp=Z,7.0nm,0.6s
PKIN Phulchoki 49.36 274 *e*P **P** **21 01 06.4 -0.1**
GKN Gorkha 49.73 275 *e*P **P** **21 01 10.1 +0.9**
BVAR Borovoye Array 49.91 311 P **P** **21 01 10.8 +0.7**
comp=Z,1.9nm,0.6s,baz=72,slow=9.5,SNR=14
BVAR LR LR 21 25 38.6
comp=Z,121nm,21.0s,baz=68,slow=40
comp=Z,1.9nm,0.6s
BRVK Borovoye 49.97 311 P **P** **21 01 11.3 +0.9**
BRVK Borovoye 49.97 311 P **P** **21 01 11.4 +0.9**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
KAPI Kappang 50.20 212 LR LR 21 24 49.6
comp=Z,62nm,18.0s,baz=24,slow=39
DANN Dangsing 50.22 276 *e*P **P** **21 01 13.6 +0.5**
comp=Z,46nm,0.5s
INK Inuvik 50.66 28 P **P** **21 01 16.3 +0.9**
comp=Z,1.1nm,0.6s,baz=266,slow=4.6,SNR=2.4
comp=Z,1.1nm,0.6s
INK Inuvik 50.66 28 P **P** **21 01 14.6 -0.8**
INK IAmb IAmb 21 01 39.0
comp=Z,16nm,1.5s
INK Inuvik 50.66 28 P **P** **21 01 14.6 -0.8**
INK pmax pmax
comp=Z,16nm,1.5s
AAK Ala-Archa 50.74 297 P **P** **21 01 17.2 +0.5**
comp=Z,1.0nm,0.5s,baz=129,slow=1.2,SNR=2.4
AAK LR LR 21 24 55.5
comp=Z,272nm,18.4s,baz=72,slow=39
comp=Z,1.0nm,0.5s
AAK Ala-Archa 50.74 297⇓*e*P **P** **21 01 17.0 +0.3**
AAK pmax pmax
comp=Z,13nm,1.7s
KSH Kashi 50.93 293 P **P** **21 01 21.8 +3.7**
KSH pmax pmax
comp=Z,6.0nm,1.5s
KSH LR LR
comp=Z,890nm,16.8s
KSH LR LR
comp=Z,730nm,14.3s
KSH LR LR
comp=Z,1μm,14.6s
KK31 Karatay Array 53.25 299 P **P** **21 01 35.0 -0.2**
KK31 IAmb IAmb 21 01 47.2
comp=Z,25nm,1.8s
KK31 Karatay Array 53.25 299 P **P** **21 01 35.0 -0.2**
KK31 pmax pmax
comp=Z,25nm,1.8s
KKAR Karatay Array 53.25 299 P **P** **21 01 35.0 -0.2**
KKAR IAmb IAmb 21 01 47.2
comp=Z,25nm,1.8s
KKAR Karatay Array 53.25 299 P **P** **21 01 35.0 -0.2**
SVE Sverdlovsk 54.08 318 *e*P **P** **21 01 42.5 +1.5**
SVE pmax pmax
comp=Z,32nm,1.5s
SVE MLR MLR
comp=Z,1μm,14.0s
BTK Batken 54.31 295 P **P** **21 01 42.8 -0.3**
BTK IAmb IAmb 21 01 53.2
comp=Z,23nm,1.6s
BTK Batken 54.31 295 P **P** **21 01 42.8 -0.3**
BTK pmax pmax
comp=Z,23nm,1.7s
DLBC Dease Lake 54.92 40 LR LR 21 25 19.5
comp=Z,42nm,20.3s,baz=282,slow=36
GAR Garm 55.12 294 P **P** **21 01 49.1 0.0**
GAR IAmb IAmb 21 01 59.2
comp=Z,8.7nm,0.8s
ARU Arti 55.29 318 P **P** **21 01 50.0 +0.2**
comp=Z,2.2nm,0.5s,baz=75,slow=3.1,SNR=8.6
ARU LR LR 21 28 16.9
comp=Z,484nm,18.7s,baz=65,slow=39
comp=Z,2.2nm,0.5s

ARU Arti 55.29 318 P **P** **21 01 49.7 -0.1**
ARU Arti 55.29 318*c i*P **P** **21 01 50.2 +0.4**
ARU 21 02 49.4
ARU 21 03 54.6
ARU S **S** **21 09 35.7 +2.9**
ARU SS **SS** **21 13 18.0 +1.5**
ARU pmax pmax
comp=Z,20nm,1.5s
ARU MLR MLR
comp=Z,975nm,14.0s
NIL Nilore 55.50 287 P **P** **21 01 52.0 +0.4**
NIL Nilore 55.50 287 P **P** **21 01 52.1 +0.4**
NIL pmax pmax
comp=Z,40nm,1.4s
CHGR Chuyangaron 56.09 294 P **P** **21 01 56.0 0.0**
CHGR Chuyangaron 56.09 294 P **P** **21 01 56.0 0.0**
CHGR pmax pmax
comp=Z,84nm,1.6s
ABKAR Akbulak array 57.40 309 P **P** **21 02 05.1 +0.1**
ABKAR Akbulak array 57.40 309 P **P** **21 02 05.2 +0.3**
ABKAR IAmb IAmb 21 02 15.6
comp=Z,36nm,1.6s
LEM Lembang 57.53 224 LR LR 21 28 21.1
comp=Z,95nm,19.3s,baz=2.5,slow=38
SPITS Spitsbergen Ar 57.77 349 LR LR 21 30 25.7
comp=Z,311nm,18.5s,baz=358,slow=40
AKTO Aktyubinsk 58.02 311 P **P** **21 02 09.3 +0.1**
comp=Z,3.0nm,0.7s,baz=59,slow=12,SNR=10
AKTO LR LR 21 27 18.3
comp=Z,81nm,18.4s,baz=60,slow=36
comp=Z,3.0nm,0.7s
KBL Kabul 58.12 290 P **P** **21 02 10.1 -0.4**
KBL IAmb IAmb 21 02 20.0
comp=Z,12nm,1.2s
KBL Kabul 58.12 290 P **P** **21 02 10.1 -0.4**
KBL pmax pmax
comp=Z,12nm,1.2s
BBB Bella Bella 58.44 46 LR LR 21 24 12.3
comp=Z,36nm,21.9s,baz=317,slow=33
KIRV Kirov 58.89 322 LR LR 21 30 27.1
comp=Z,171nm,19.4s,baz=44,slow=39
KIRV Kirov 58.89 322*c e*P **P** **21 02 15.9 +0.7**
RES Resolute Bay 59.02 15 LR LR 21 30 32.8
comp=Z,132nm,20.2s,baz=336,slow=39
RES Resolute Bay 59.02 15 P **P** **21 02 15.5 -0.4**
RES Resolute Bay 59.02 15 P **P** **21 02 15.5 -0.4**
RES pmax pmax
comp=Z,16nm,1.2s
PRGR Permogore 59.16 327 *e*P **P** **21 02 16.6 -0.5**
PRGR *e* 21 04 24.4
PRGR pmax pmax
comp=Z,10.0nm,1.2s
WB0 Warramunga Arr 60.34 190 P **P** **21 02 25.6 0.0**
WRAB Tennant Creek 60.51 190⇑*i*P **P** **21 02 26.9 +0.2**
WRAB pmax pmax
comp=Z,15nm,1.8s
WRA Warramunga Arr 60.52 190 P **P** **21 02 26.4 -0.4**
comp=Z,1.6nm,0.5s,baz=8.1,slow=6.9,SNR=46
comp=Z,1.6nm,0.5s
WRA Warramunga Arr 60.52 190 P **P** **21 02 27.0 +0.2**
WRA Warramunga Arr 60.52 190 *i* P **P** **21 02 27.0 +0.2**
WRA pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 61.70 339 P **P** **21 02 34.6 +0.3**
comp=Z,2.3nm,0.8s,baz=54,slow=9.1,SNR=3.9
ARCES LR LR 21 34 59.4
comp=Z,266nm,18.8s,baz=350,slow=42
comp=Z,2.3nm,0.8s
KLMR Klimovskoe 62.11 328 *e*P **P** **21 02 36.0 -1.1**
KLMR *e* 21 04 51.5
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 62.11 328 *e*P **P** **21 02 36.0 -1.1**
KLMR AMP 21 02 48.4
comp=Z,22nm,1.5s
KLMR *e*PP **PP** **21 04 51.5 -1.9**
BELG Belogornoye 62.80 317 P **P** **21 02 42.5 +0.6**
comp=Z,9.4nm,0.9s,baz=50,slow=2.9,SNR=6.1
BELG LR LR 21 31 38.1
comp=Z,116nm,18.2s,baz=20,slow=38
comp=Z,9.4nm,0.9s
BELG Belogornoye 62.80 317*c i*P **P** **21 02 42.2 +0.3**
BELG pmax pmax
comp=Z,5.0nm,1.2s
HRA Herat 63.03 293 P **P** **21 02 43.7 -0.3**
HRA IAmb IAmb 21 02 54.8
comp=Z,16nm,1.6s
GEYT Alibeck 64.01 299 P **P** **21 02 50.3 0.0**
comp=Z,2.3nm,0.8s,baz=29,slow=3.3,SNR=5.6
GEYT LR LR 21 32 14.9
comp=Z,114nm,20.0s,baz=118,slow=38
comp=Z,2.3nm,0.8s
GEYT Alibeck 64.01 299 P **P** **21 02 50.1 -0.1**
GEYT IAmb IAmb 21 03 00.6
comp=Z,11nm,1.4s
ASAR Alice Springs 64.24 190 P **P** **21 02 52.4 +0.7**
comp=Z,0.7nm,0.8s,baz=14,slow=6.2,SNR=8.4
ASAR LR LR 21 29 34.4
comp=Z,31nm,21.4s,baz=1.5,slow=35
comp=Z,0.7nm,0.8s
PALK Pallekele 64.95 258 LR LR 21 32 01.2
comp=Z,124nm,21.0s,baz=152,slow=37
DZM Mont Dzumac 65.44 157 *e*LR LR 21 22 36.4
comp=Z,130nm,22.7s
MOS Moscow 65.85 323 *e*P **P** **21 03 00.9 -0.9**
MSVF Nonsavu 65.85 144 LR LR 21 25 24.6
comp=Z,80nm,21.4s,baz=203,slow=30
VRH Novokhopyorsk 66.52 318 *e*P **P** **21 03 05.4 -0.8**
VRH pmax pmax
comp=Z,5.0nm,0.6s
VRH MLR MLR
comp=Z,630nm,14.0s
OBN Obninsk 66.70 323 *e*P **P** **21 03 05.9 -1.4**
OBN *e* 21 03 34.7
OBN *e* 21 05 31.1
OBN pmax pmax
comp=Z,5.0nm,1.1s
OBN MLR MLR
comp=Z,407nm,16.0s
YBH Yreka Blue Hor 66.88 54 LR LR 21 25 19.0
comp=Z,48nm,21.8s,baz=319,slow=30
FINES FINESS Array B 66.89 332 P **P** **21 03 08.6 +0.2**
comp=Z,3.4nm,0.8s,baz=72,slow=6.2,SNR=16
FINES LR LR 21 35 20.2
comp=Z,284nm,20.5s,baz=38,slow=39
comp=Z,3.4nm,0.8s
FINES FINESS Array B 66.89 332 *i* P **P** **21 03 08.8 +0.4**
FINES pmax pmax
comp=Z,3.0nm,0.8s
LPSR Galich'ya Gora 67.10 320 *e*P **P** **21 03 08.7 -1.2**
LPSR pmax pmax
comp=Z,8.0nm,0.8s
LPSR MLR MLR
comp=Z,410nm,13.0s
JMIC Jan Mayen 67.33 351 LR LR 21 32 24.5
comp=Z,34nm,20.9s,baz=192,slow=36
VORR Voronezh 67.52 319 *e*P **P** **21 03 15.6 +3.1**
VORR pmax pmax
comp=Z,10.0nm,0.4s
AFI Afiamalu 67.78 133 LR LR 21 32 40.8
comp=Z,57nm,18.5s,baz=360,slow=36
VSR Storozhevoye 67.81 319 *e*P P 21 03 22.8 +8.4
VSR pmax pmax
comp=Z,10.0nm,1.5s
VSR MLR MLR
comp=Z,430nm,13.0s
MAK Makhachkala 68.02 308 *e*P P 21 03 11.2 -4.7
MAK *e*PPP PPP 21 07 20.3
MAK *e*S **S** **21 12 06.9 -7.6**
MAK *e*SS **SS** **21 16 33.2 -2.8**
MAK MLR MLR
comp=Z,705nm,15.0s
NCK Nalchik 70.03 310⇓*e*P **P** **21 03 29.8 +1.4**
NCK pmax pmax
comp=Z,26nm,1.6s
ZEI Tsey 70.27 310 *e*P **P** **21 03 29.4 -0.8**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 70.28 311 P **P** **21 03 30.8 +0.8**
KIV Kislovodsk 70.28 311 *e*P **P** **21 03 31.7 +1.7**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KBZ Khabaz 70.30 311 P **P** **21 03 30.9 +0.9**
comp=Z,4.3nm,1.0s,baz=131,slow=12,SNR=4.8
KBZ LR LR 21 35 21.5
comp=Z,88nm,18.7s,baz=26,slow=37

comp=Z,4.3nm,1.0s
KBZ Khabaz 70.30 311 *ce*P **P 21 03 31.1 +1.1**
KBZ pmax pmax
comp=Z,13nm,1.3s
ONI Oni 70.66 310 P **P 21 03 32.0 -0.3**
ONI Oni 70.66 310 P **P 21 03 32.0 -0.3**
ONI pmax pmax
comp=Z,20nm,1.4s
NACGM Naroch 71.12 327 *e*P P 21 03 45.5 +11
baz=47
RYN Ryan 71.28 55 P **P 21 03 36.8 +0.5**
RYN IAmb IAmb 21 03 40.1
comp=Z,9.8nm,0.8s
GNI Garni 71.35 307 LR LR 21 38 03.3
comp=Z,90nm,18.9s,baz=32,slow=38
NVAR Mina Array Bea 71.54 55 P **P 21 03 38.8 +0.8**
comp=Z,0.2nm,0.3s,baz=294,slow=7.5,SNR=2.6
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 71.54 55 P **P 21 03 37.5 -0.4**
OMMB Old Mammoth Mi 71.59 56 P **P 21 03 36.6 -1.8**
STKA Stephens Creek 71.77 182 LR LR 21 35 08.0
comp=Z,49nm,20.5s,baz=20,slow=36
WSAR Wadi Sarin 71.91 285 LR LR 21 41 29.8
comp=Z,81nm,18.8s,baz=82,slow=41
HFS Hagfors 71.97 336 LR LR 21 37 39.2
comp=Z,117nm,19.3s,baz=38,slow=38
NB2 NORSAR Subarra 71.98 338 P **P 21 03 40.2 +0.2**
comp=Z,5.7nm,1.2s,baz=30,slow=6.5
NOA NORSAR Array B 71.98 338 P **P 21 03 40.4 +0.5**
comp=Z,3.9nm,1.0s,baz=36,slow=6.0,SNR=5.7
NOA LR LR 21 39 18.3
comp=Z,156nm,19.4s,baz=20,slow=39
comp=Z,3.9nm,1.0s
ELK Elko 72.02 52 LR LR 21 34 25.7
comp=Z,44nm,19.5s,baz=274,slow=35
SOC Sochi 72.21 312 *e*P **P 21 03 39.3 -2.2**
SOC *e*PPP PPP 21 08 03.8
SOC *e*S **S 21 13 01.5 -1.9**
SOC *e*SSS SSS 21 20 51.6
SFJD Kangerlussuaq 72.53 6 LR LR 21 37 53.4
comp=Z,112nm,19.4s,baz=350,slow=38
ANN Anapa 72.71 314 *e*P **P 21 03 41.1 -3.4**
ANN *e**PP **pP 21 03 45.0 -3.6**
ANN *e* 21 06 23.1
ANN *e*S **S 21 13 04.9 -4.2**
ANN pmax pmax
comp=Z,63nm,1.2s
AKASG Malin Array Be 72.95 323 P **P 21 03 45.8 -0.1**
comp=Z,2.1nm,0.7s,baz=45,slow=6.4,SNR=16
AKASG LR LR 21 38 42.3
comp=Z,145nm,18.0s,baz=62,slow=38
comp=Z,2.1nm,0.7s
AKASG Malin Array Be 72.95 323 *i* P **P 21 03 46.2 +0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 72.95 323 P **P 21 03 46.1 +0.3**
AKBB IAmb IAmb 21 03 46.8
comp=Z,7.6nm,0.8s
AKBB Malin Array Si 72.95 323 P **P 21 03 46.1 +0.3**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
FRB Frobisher Bay 73.21 14 LR LR 21 40 40.7
comp=Z,165nm,18.1s,baz=18,slow=40
GURO Guroymak-BITLI 73.99 307 P **P 21 03 53.2 +0.8**
TCUT Toone Canyon 74.06 49 P **P 21 03 53.7 +0.8**
PDAR Pinedale Array 74.06 47 P **P 21 03 54.1 +1.3**
comp=Z,0.6nm,0.5s,baz=253,slow=0.9,SNR=9.6
comp=Z,0.6nm,0.5s
PDAR Pinedale Array 74.06 47 P **P 21 03 53.3 +0.5**
BORG Borgarnes 74.72 353 LR LR 21 36 31.1
comp=Z,49nm,20.2s,baz=11,slow=36
MARD Mardin 75.54 307 P **P 21 04 02.8 +1.4**
BUR08 Bucovina Ar. S 76.98 322 P **P 21 04 09.5 +0.1**
BURAR Bucovina Array 76.99 322 P **P 21 04 09.6 +0.2**
RAO Raoul Island 77.69 146 LR LR 21 35 05.0
comp=Z,88nm,20.3s,baz=259,slow=33
BRTR Keskin Array B 78.17 312 P **P 21 04 16.9 +0.8**
comp=Z,0.5nm,0.6s,baz=75,slow=7.8,SNR=2.7
BRTR LR LR 21 46 09.1
comp=Z,184nm,18.2s,baz=14,slow=41
comp=Z,0.5nm,0.6s
BRTR Keskin Array B 78.17 312 P **P 21 04 17.0 +0.8**
MLR Muntele Rosu 78.18 321 LR LR 21 42 15.3
comp=Z,237nm,19.0s,baz=19,slow=38
OKC Ostrava-Krasne 78.43 328 AMS AMS 21 43 00.0
comp=Z,400nm,11.0s
OSTC Ostas 78.64 329 AMS AMS 21 42 20.0
comp=Z,300nm,13.1s
CHVC Chvalec 78.68 329 AMS AMS 21 43 00.0
comp=Z,300nm,15.4s
MORC Moravsky Berou 78.72 328 *e*P **P 21 04 20.5 +1.6**
DPC Dobruska-Polom 78.77 329 *e*P **P 21 04 20.8 +1.7**
DPC MLR MLR
comp=Z,300nm,8.9s
DPC Dobruska-Polom 78.77 329 *e*P **P 21 04 20.8 +1.7**
DPC AMS AMS 21 43 00.0
comp=Z,300nm,8.9s
KRLC Kraliky 78.80 328 AMS AMS 21 44 00.0
comp=Z,300nm,17.6s
MAUC Maruska 78.93 327 AMS AMS 21 43 20.0
comp=Z,900nm,13.0s
Q24A Divide 79.08 48 P **P 21 04 20.4 -1.1**
Q24A IAmb IAmb 21 04 22.4
comp=Z,5.9nm,0.8s
VYHS Vyhne 79.18 326 *e*P **P 21 04 22.7 +1.3**
VYHS pmax pmax
comp=Z,7.0nm,1.3s
CLL Collm 79.27 331 *e*P **P 21 04 21.0 -0.8**
CLL MLR MLR
comp=Z,300nm,19.4s
CLL Collm 79.27 331 *e*P **P 21 04 21.0 -0.8**
CLL LmH 21 37 00.0
comp=N,300nm,20.2s
CLL LmH 21 37 00.0
comp=E,500nm,21.3s
CLL LmV 21 42 00.0
comp=Z,300nm,19.4s
PVCC Panska Ves 79.31 330 AMS AMS 21 43 40.0
comp=Z,500nm,10.7s
VRAC Vranov 79.48 328 P **P 21 04 23.6 +0.6**
comp=Z,2.6nm,0.6s,baz=139,slow=3.0,SNR=4.3
VRAC LR LR 21 41 20.3
comp=Z,181nm,20.6s,baz=13,slow=37
comp=Z,2.6nm,0.6s
VRAC Vranov 79.48 328 *e*P **P 21 04 24.1 +1.1**
GOPC GO Pecny, Ondr 79.72 329 AMS AMS 21 43 40.0
comp=Z,400nm,17.4s
KRUC Moravsky 79.75 328 *e*P **P 21 04 25.4 +0.9**
PRU Pruhonice 79.75 330 AMS AMS 21 43 20.0
comp=Z,400nm,12.0s
TREC Trest 79.93 329 AMS AMS 21 44 50.0
comp=Z,300nm,10.8s
NKC Novy Kostel 80.35 331 AMS AMS 21 45 00.0
comp=Z,400nm,9.3s
RAR Rarotonga 80.52 128 LR LR 21 34 07.3
comp=Z,75nm,22.0s,baz=310,slow=31
EKA Eskdalemuir Ar 80.75 342 LR LR 21 46 06.1
comp=Z,188nm,18.2s,baz=22,slow=40
CKRC Cesky Krumlov 80.78 329 *e*P P 21 04 35.2 +5.1
CKRC AMS AMS 21 43 40.0
comp=Z,400nm,7.5s
KHC Kasperske Hory 80.81 330 P **P 21 04 30.2 0.0**
KHC IAmb IAmb 21 04 32.8
comp=Z,16nm,1.6s
KHC Kasperske Hory 80.81 330 P **P 21 04 30.3 0.0**
KHC pmax pmax
comp=Z,16nm,1.6s
KHC Kasperske Hory 80.81 330 *e*P **P 21 04 31.7 +1.4**
KHC AMS AMS 21 44 30.0
comp=Z,600nm,20.2s
CONA Conrad Observa 80.86 328 *e*P **P 21 04 32.2 +1.6**
comp=Z,5.3nm,1.4s
RONA Rosalia, Austr 80.86 327 *e*P **P 21 04 32.3 +1.7**
comp=Z,4.1nm,0.9s
GERES GERESS Array B 81.00 329 P **P 21 04 31.9 +0.6**
comp=Z,0.5nm,0.6s,baz=59,slow=4.7,SNR=4.0
comp=Z,0.5nm,0.6s
ANMO Albuquerque 81.06 52 LR LR 21 39 29.5
comp=Z,30nm,19.9s,baz=346,slow=35
RAYN Ar Rayn 81.22 293 P **P 21 04 31.4 -1.4**
RAYN Ar Rayn 81.22 293 P **P 21 04 31.5 -1.4**
RAYN pmax pmax
comp=Z,5.0nm,1.1s
MMAI Mount Meron Ar 81.68 306 P **P 21 04 35.9 +0.7**
comp=Z,1.8nm,0.9s,baz=40,slow=9.8,SNR=3.6
MMAI LR LR 21 44 55.9
comp=Z,97nm,19.2s,baz=273,slow=39

comp=Z,1.8nm,0.9s
SCHQ Schefferville 81.72 17 LR LR 21 46 18.4
comp=Z,130nm,18.1s,baz=164,slow=40
BIOA Bad Ischl, Aus 81.95 329 *e*P **P 21 04 36.6 +0.3**
comp=Z,5.5nm,1.1s
SOKA Soboth 82.20 327 *e*P **P 21 04 38.4 +0.7**
comp=Z,8.1nm,1.2s
KBA Koelnbreinsper 82.57 328 *e*P **P 21 04 40.4 +0.7**
comp=Z,6.9nm,1.3s
WATA Walderalm 83.05 330 *e*P **P 21 04 42.7 +0.5**
comp=Z,5.0nm,1.0s
ABTA Abfaltersbach 83.17 329 *e*P **P 21 04 42.2 -0.6**
comp=Z,6.2nm,1.3s
MOTA Moosalm 83.23 330 *e*P **P 21 04 43.9 +0.8**
comp=Z,8.5nm,1.2s
SQTA Sankt Quirin 83.29 330 *e*P **P 21 04 43.1 -0.3**
comp=Z,9.5nm,1.3s
PDG Podgorica 83.67 322 P **P 21 04 44.9 -0.4**
PDG IAmb IAmb 21 04 57.9
comp=Z,9.6nm,1.0s
FUORN Ofenpass-Fuorn 84.15 330 P **P 21 04 49.0 +1.0**
FUORN IAmb IAmb 21 05 07.9
comp=Z,6.8nm,1.1s
DAVOX Davos/Dischmat 84.17 330 LR LR 21 46 09.3
comp=Z,268nm,20.1s,baz=83,slow=38
EIL Elat 84.24 304 LR LR 21 46 45.8
comp=Z,104nm,18.0s,baz=62,slow=39
PPT Papeete 84.38 118 LR LR 21 39 13.0
comp=Z,115nm,19.8s,baz=344,slow=33
PPT2 Papeete2 84.39 118 *e*LR LR 21 31 23.6
comp=Z,214nm,23.8s
PPT2 *e*LR LR 21 31 24.3
comp=Z,201nm,21.8s
TAOE Nuku Hiva Isla 85.11 106 *e*LR LR 21 31 44.7
comp=Z,356nm,23.8s
LPIG La Paz 85.94 62 LR LR 21 38 09.7
comp=Z,42nm,19.0s,baz=43,slow=32
IDI Anoyia 86.20 314 LR LR 21 48 53.3
comp=Z,82nm,18.2s,baz=298,slow=39
TXAR Lajitas Array 86.65 54 P **P 21 05 02.1 +1.6**
comp=Z,0.6nm,0.8s,baz=300,slow=3.5,SNR=6.9
TXAR LR LR 21 37 31.4
comp=Z,33nm,20.9s,baz=340,slow=31
comp=Z,0.6nm,0.8s
SADO Sadowa 86.97 29 LR LR 21 47 55.3
comp=Z,60nm,18.3s,baz=346,slow=38
RPZ Rata Peaks 87.08 161 LR LR 21 39 14.4
comp=Z,56nm,21.7s,baz=310,slow=32
TBI Tubuai 88.54 122 *e*LR LR 21 33 18.5
comp=Z,111nm,27.5s
ATD Arta Tunnel 90.92 286 LR LR 21 49 08.1
comp=Z,31nm,20.9s,baz=5.0,slow=38
S54A Dingess, Beckl 91.98 34 P **P 21 05 25.1 -0.5**
TKL Tuckaleechee C 92.66 37 LR LR 21 48 41.2
comp=Z,71nm,19.6s,baz=342,slow=36
ESDC Sonseca Array 95.24 336 LR LR 21 54 32.7
comp=Z,155nm,18.5s,baz=24,slow=39
PNIG Pinotepa 99.45 59 P **Pdif 21 06 00.9 +1.1**
TORD Torodi Ar. Bea 116.36 318 PKP **PKPdf 21 11 01.4 +0.7**
comp=Z,0.2nm,0.4s,baz=48,slow=2.8,SNR=4.8
TROLL Troll, Antarti 142.87 199 PKPdif **PKPdf 21 11 48.3 -0.9**
SNAA Sanae 144.37 197 PKPdif PKPbc 21 11 51.7 +1.5
VNA3 Neumayer Olymp 146.15 195 PKPdif **PKPdf 21 11 55.8 +1.1**
VNA3 x x 21 11 57.0
PLCA Paso Flores 153.88 102 PKPbc **PKPbc 21 12 16.0 +0.2**
comp=Z,0.6nm,0.6s,baz=272,slow=3.1,SNR=4.2

*IDC **24** 21:02:09.7±4.0, 6°.35S×146°.25E, h133km±42km, mb3.0/3, mbtmp3.5/5, Error ellipse: s-maj=59.5km s-min=35.2km az=95.0*
ISC 24 21:02:09.0±1.7, **6°.3S**±0°.2×**146°.1E**±0°.3, **h122**km, **n6**, σ0**66/7, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.28**	**161**	P	**Pn**	**21 02 59.6**	**+0.7**
	33nm,0.2s,baz=294,slow=6.6,SNR=29						
PMG				S	**Sn**	**21 03 36.6**	**-1.0**
	41nm,0.3s,baz=152,slow=20,SNR=20						
WRA	**Warramunga Arr**	**17.71**	**219**	P	**P**	**21 06 07.1**	**-0.1**
	0.7nm,0.7s,baz=47,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**20.86**	**213**	P	**P**	**21 06 41.4**	**0.0**
	0.4nm,0.6s,baz=42,slow=9.2,SNR=3.7						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**25.79**	**189**	P	**P**	**21 07 29.1**	**+0.4**
	0.6nm,0.4s,baz=21,slow=10,SNR=3.7						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**77.13**	**321**	P	**P**	**21 13 49.0**	**-0.2**
	0.2nm,0.5s,baz=101,slow=6.0,SNR=2.1						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**144.26**	**284**	PKP	**PKPdf**	**21 21 31.2**	**-0.4**
	0.7nm,0.9s,baz=86,slow=2.0,SNR=3.6						

*DDA **24** 21:04:47.6±0.0, 39°.80N×28°.66E, h7km±3km, MW3.9*
*NEIC **24** 21:04:47.8±1.4, 39°.80N±0°.05×28°.71E±0°.04, h10km±9km, Error ellipse: s-maj=8.2km s-min=2.1km az=151.0*
*ISK **24** 21:04:47.0, 39°.80N×28°.67E, h8km, ML4.1/30*
*IDC **24** 21:04:47.0±1.1, 39°.81N×28°.66E, h0km, mb3.3/3, mbtmp3.3/8, ML3.4/5, MS2.7/2, Error ellipse: s-maj=16.7km s-min=12.5km az=30.0*
*CFUSG **24** 21:04:55.2, 40°.17N×29°.38E, h4km, mb3.2/3, Western Turkey Magtype MSH 3.3 from 3 stations*
ISC 24 21:04:47.9±0.8, **39°.80N**±0°.02×**28°.69E**±0°.02, **h13**km±6km, **n116**, σ1**33**/134, **mb3.2**/3, **16C-12D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.20**	**195**	PG	**Pg**	**21 04 51.6**	**-0.8**
DST				SG	**Sg**	**21 04 54.9**	**-0.6**
ORLT	**Orhaneli**	**0.30**	**33**	PG	**Pg**	**21 04 53.6**	**-0.5**
ORLT				SG	**Sg**	**21 04 58.7**	**+0.5**
ULDT	**Uludag**	**0.49**	**45**	P	**Pg**	**21 04 57.6**	**0.0**
ULDT				S	**Sg**	**21 05 04.4**	**+0.3**
ULDT				*i* AML	AML	21 05 06.0	
	comp=N,6μm,0.6s						
ULDT				*i* AML	AML	21 05 06.0	
	comp=E,7μm,0.2s						
MDNY	**Mudanya-Bursa**	**0.59**	**15**	PG	**Pg**	**21 04 58.9**	**-0.6**
IGD	**Bursa**	**0.61**	**40**	P	**Pg**	**21 04 59.7**	**-0.2**
IGD				S	**Sg**	**21 05 08.3**	**+0.3**
IGD				*i* AML	AML	21 05 09.0	
	comp=N,2μm,0.3s						
IGD				*i* AML	AML	21 05 13.0	
	comp=E,2μm,0.2s						
TVSB	**Tavsanli**	**0.69**	**120**	PG	**Pg**	**21 05 00.3**	**-1.1**
SMAA	**Simav-Kutahya**	**0.73**	**162**	PG	**Pg**	**21 05 01.8**	**-0.4**
ARMT	**Armutlu**	**0.78**	**10**	PG	**Pg**	**21 05 02.6**	**-0.5**
GONE	**Gonen-Balikesi**	**0.81**	**288**	PG	**Pg**	**21 05 02.8**	**-0.8**
EDC	**Edincik**	**0.84**	**311**	PG	**Pg**	**21 05 03.4**	**-0.7**
STEP	**BALIKESIR_Sava**	**0.86**	**241**	P	**Pb**	**21 05 04.3**	**-0.5**
STEP				*i* AML	AML	21 05 16.0	
	comp=E,6μm,0.4s						
STEP				S	**S**	**21 05 16.0**	**+0.2**
STEP				*i* AML	AML	21 05 19.0	
	comp=N,4μm,0.6s						
YLV	**Yalova**	**0.93**	**34**	PG	**Pg**	**21 05 05.5**	**-0.4**
GDZ	**Gediz**	**0.94**	**139**	P	**Pg**	**21 05 05.4**	**-0.7**
GDZ				S	**Sg**	**21 05 17.5**	**-0.8**
GDZ				*i* AML	AML	21 05 21.0	
	comp=E,3μm,0.3s						
GEDZ	**Gediz**	**0.94**	**143**	PG	**Pg**	**21 05 05.6**	**-0.5**
CAVI	**Cavuskoy**	**0.98**	**65**	PG	**Pg**	**21 05 06.4**	**-0.4**
ANDZ	**Kutahya, Merke**	**0.98**	**107**	P	**Pg**	**21 05 06.4**	**-0.5**
ANDZ				S	**Sb**	**21 05 21.1**	**+1.4**
ANDZ				*i* AML	AML	21 05 23.0	
	comp=N,3μm,0.4s						
ANDZ				*i* AML	AML	21 05 24.0	
	comp=E,1μm,0.2s						
BILE	**Bilecik/Merkez**	**0.98**	**68**	P	**Pb**	**21 05 07.2**	**+0.3**
BILE				S	**Sb**	**21 05 20.3**	**+0.5**
BILE				*i* AML	AML	21 05 23.0	
	comp=N,5μm,0.4s						
BILE				*i* AML	AML	21 05 23.0	
	comp=E,5μm,0.4s						
KNL	**Balıkesir**	**1.01**	**298**	P	**Pb**	**21 05 06.9**	**-0.3**
KNL				S	**Sb**	**21 05 21.3**	**+0.8**
KNL				*i* AML	AML	21 05 22.0	
	comp=N,5μm,0.5s						
KNL				*i* AML	AML	21 05 22.0	
	comp=E,6μm,0.6s						
ADVT	**Abdulvahap**	**1.03**	**51**	PG	**Pg**	**21 05 07.4**	**-0.3**
USAK	**Uak-Merkez**	**1.11**	**167**	P	**Pb**	**21 05 09.2**	**+0.1**
USAK				S	**Sb**	**21 05 24.1**	**+0.6**

USAK *i* AML AML 21 05 27.0
comp=E,2μm,0.5s
AKS Akhisar 1.14 217 PN **Pg 21 05 09.2 -0.7**
MRMT Marmara Adasi 1.16 314 PN **Pg 21 05 09.6 -0.7**
AVCI Avcilar-stanb 1.20 1 PN **Pn 21 05 10.9 +0.5**
GOMA Golmarmara-Man 1.24 209 PN **Pb 21 05 10.9 -0.3**
HRT Hereke 1.27 36 PN **Pn 21 05 10.9 -0.5**
BUHA Balikesir, Bur 1.28 257 P **Pb 21 05 11.7 -0.2**
BUHA S **Sn 21 05 29.5 +1.0**
BUHA *i* AML AML 21 05 30.0
comp=N,4μm,0.5s
BUHA *i* AML AML 21 05 31.0
comp=E,6μm,0.4s
KAVV Kandilli-Istan 1.30 13 PN **Pn 21 05 11.5 -0.3**
ISK Istanbul-Kandi 1.30 13 PN **Pn 21 05 11.5 -0.3**
GPA Golpazari 1.34 68 PN **Pn 21 05 12.7 +0.3**
BORA Eskisehir 1.36 86 PN **Pn 21 05 12.7 -0.1**
BORA Eskisehir 1.36 86 Pn **Pn 21 05 12.7 -0.1**
CTKS Kestanelik-??a 1.44 355 PN **Pn 21 05 13.7 -0.1**
RKY Sarkoy-Tekirda 1.46 308 PN **Pn 21 05 13.9 -0.1**
SLVT Silivri 1.48 346 PN **Pb 21 05 15.1 -0.2**
KLYT Kilyos 1.48 10 PN **Pn 21 05 14.2 -0.1**
CRLT Corlu 1.52 332 PN **Pn 21 05 14.9 +0.1**
SILT Sile 1.54 28 PN **Pn 21 05 15.3 +0.2**
GULT Gulveren 1.54 65 PN **Pn 21 05 16.0 +0.8**
DKL Dikili 1.56 243 PN **Pn 21 05 15.4 +0.1**
SAUV Serdivan-Sakar 1.57 53 PN **Pn 21 05 16.3 +0.8**
KHL Karahalli 1.61 156 PN **Pn 21 05 16.4 +0.2**
SGAZ Eskisehir, Sey 1.68 98 P **Pn 21 05 18.2 +1.0**
SGAZ S **Sg 21 05 43.8 +1.7**
SGAZ *i* AML AML 21 05 46.0
comp=E,898nm,0.3s
SGAZ *i* AML AML 21 05 47.0
comp=N,807nm,0.4s
ESKT Eskisehir 1.69 99 PN **Pn 21 05 18.5 +1.2**
KAYN Sakarya, Kayna 1.72 47 P **Pn 21 05 17.8 +0.3**
KAYN S **Sg 21 05 43.1 -0.2**
EZN Ezine 1.82 272 PN **Pn 21 05 18.9 0.0**
BLCB Balcova 1.90 223 PN **Pn 21 05 20.0 -0.1**
AYDB Zeytinkoy-Aydi 1.95 199 PN **Pn 21 05 20.6 -0.3**
MDUB Mudurnu 2.04 70 Pn **Pn 21 05 21.9 -0.2**
ISP Isparta 2.44 143 Pn **Pn 21 05 26.8 -0.8**
KDZE Karadeniz Ereo 2.59 53 ⇑P **Pg 21 05 38.0 +0.5**
RDO Rodhopi 2.75 300 Pn **Pn 21 05 31.9 +0.1**
ANTO Ankara 3.16 87 ⇓P **Pg 21 05 47.1 -1.4**
ELL Elmali 3.19 162 Pn **Pn 21 05 38.4 +0.4**
ARG Arkhangelos 3.60 187 Pn **Pn 21 05 43.5 0.0**
AKAS Kas 3.63 168 Pn **Pn 21 05 43.9 -0.1**
APE Apeiranthos 3.68 223 ⇑P **Pb 21 05 52.6 -0.3**
BR131 Keskin Array S 3.82 90 Pn **Pn 21 05 47.1 +0.6**
BRTR Keskin Array B 3.82 90 Pn **Pn 21 05 47.6 +1.0**
0.7nm,0.3s,baz=263,slow=12,SNR=23
BRTR Pg **Pg 21 05 59.1 -2.0**
2.6nm,0.3s,baz=268,slow=16,SNR=44
BRTR Sn **Sn 21 06 30.6 -0.8**
2.2nm,0.3s,baz=277,slow=14,SNR=5.3
BRTR Lg Lg 21 06 52.0
2.7nm,0.3s,baz=276,slow=24,SNR=6.9
2.0nm,0.5s
BRTR Keskin Array B 3.82 90 Pn **Pn 21 05 46.9 +0.3**
RAZG Razgrad 4.10 337 ⇓P **Pn 21 05 50.8 +0.4**
ICOR Ion Corvin 4.37 352 ⇓P **Pn 21 05 55.0 +1.1**
KARP Karpathos 4.41 196 Pn **Pn 21 05 54.2 -0.4**
TIRR Tirgusor 4.66 358 ⇓P **Pn 21 05 58.6 +0.6**
TIRR Tirgusor 4.66 358 Pn **Pn 21 05 58.1 +0.1**
TLBR Topalu 4.77 354 ⇑P **Pn 21 06 00.1 +0.7**
LIT Litokhoron 4.77 276 Pn **Pn 21 05 59.2 -0.4**
VAY Valandovo 4.90 290 *i* Pn **Pn 21 06 02.7 +1.4**
HARR Harsova 4.92 354 ⇑P **Pn 21 06 02.9 +1.3**
VTS Vitosha 4.98 306 Pn **Pn 21 06 02.8 +0.2**
TPGR Topolog 5.06 358 ⇑P **Pn 21 06 04.5 +1.0**
STIP Stip 5.29 293 *i* Pn **Pn 21 06 05.1 -1.5**
TLCR 5.39 1 ⇓P **Pn 21 06 08.5 +0.5**
IDI Anoyia 5.42 215 Pn **Pn 21 06 11.0 +2.5**
0.3nm,0.3s,baz=33,slow=17,SNR=1.1
IDI Sn **Sn 21 07 08.3 -2.5**
0.7nm,0.3s,baz=260,slow=20,SNR=3.6
IDI LR LR 21 08 46.8
comp=Z,42nm,19.5s,baz=257,slow=44
10.0nm,1.0s
IDI Anoyia 5.42 215 Pn **Pn 21 06 07.6 -0.9**
SCTR Scanteiesti 5.90 355 ⇑P **Pn 21 06 16.4 +1.5**
BLKB Belogradchik 5.90 312 ⇑P **Pn 21 06 15.0 -0.1**
ITM Ithomi 5.91 246 Pn **Pn 21 06 15.8 +0.6**
SEV Sevastopol' 6.02 36 *e*P **Pn 21 06 16.4 -0.2**
SEV Pm 21 06 20.9
comp=Z,4.0nm,0.3s
SEV *e*S **Sn 21 07 21.2 -4.1**
SEV Sm 21 07 23.8
comp=N,9.0nm,0.3s
SEV Sm 21 07 23.8
comp=E,5.0nm,0.3s
MLR Muntele Rosu 6.04 341 ⇓P **Pn 21 06 18.7 +1.6**
MLR Muntele Rosu 6.04 341 Pn **Pn 21 06 18.4 +1.4**
comp=E,0.6nm,0.3s,baz=131,slow=9.3,SNR=16
MLR Lg Lg 21 07 55.9
comp=E,0.3nm,0.3s,baz=169,slow=6.8,SNR=2.2
comp=E,7.1nm,1.0s
MLR Muntele Rosu 6.04 341 Pn **Pn 21 06 17.7 +0.6**
CSS Mathiatis 6.08 141 Pn **Pn 21 06 16.3 -1.3**
YAL Yalta 6.20 39 *e*S **Sn 21 07 21.9 -8.0**
YAL Sm 21 07 23.6
comp=N,19nm,0.2s
YAL Sm 21 07 23.6
comp=E,18nm,0.2s
PLOR Plostina 6.23 347 ⇓P **Pn 21 06 22.0 +2.4**
VRI Vrincioaia 6.23 347 ⇑P **Pn 21 06 21.1 +1.5**
VOIR 6.24 336 ⇓P **Pn 21 06 21.0 +1.2**
COVR Voineasa-Covas 6.31 344 ⇓P **Pn 21 06 22.6 +1.8**
ARR Arges 6.32 333 ⇑P **Pn 21 06 20.8 -0.1**
ALU Alushta 6.47 39 *e*S **Sn 21 07 32.7 -3.7**
ALU Sm 21 07 35.5
comp=N,44nm,0.3s
ALU Sm 21 07 35.5
comp=E,17nm,0.4s
BOVS Bovan 6.48 309 ⇑P **Pn 21 06 23.2 +0.2**
SIM Simferopol' 6.53 36 *e*P **Pn 21 06 24.4 +0.7**
SIM Pm 21 06 27.8
comp=Z,23nm,0.3s
SIM *e*S **Sn 21 07 34.3 -3.7**
SIM Sm 21 07 40.2
comp=N,29nm,0.4s
SIM Sm 21 07 40.2
comp=E,13nm,0.5s
DOPR Dopca 6.62 340 ⇑P **Pn 21 06 26.1 +1.1**
OZUR 6.64 342 ⇓P **Pn 21 06 25.6 +0.4**
LOT Lotru 6.71 329 ⇓P **Pn 21 06 26.8 +0.6**
HERR Herculane 6.88 320 ⇓P **Pn 21 06 27.8 -0.7**
SUDU Sudak 6.91 41 *e*P **Pn 21 06 29.6 +0.7**
SUDU Pm 21 06 34.1
comp=Z,7.0nm,0.4s
SUDU *e*S **Sn 21 07 42.8 -4.5**
SUDU Sm 21 07 48.4
comp=N,25nm,0.4s
SUDU Sm 21 07 48.4
comp=E,15nm,0.3s
GZR Gura Zlata 7.09 324 ⇑P **Pn 21 06 31.7 +0.2**
BIZ Bicaz 7.38 346 ⇑P **Pn 21 06 36.9 +1.5**
DIVS Divibare 7.77 306 Pn **Pn 21 06 40.1 -0.7**
BZS Buzias 7.80 320 ⇑P **Pn 21 06 41.6 +0.5**
SCTE Santa Cesarea 7.86 275 Pn **Pn 21 06 42.8 +0.9**
BURAR Bucovina Array 8.21 343 ⇑P **Pn 21 06 48.1 +1.4**
BURAR Bucovina Array 8.21 343 Pn **Pn 21 06 46.5 -0.3**
BUR08 Bucovina Ar. S 8.24 343 Pn **Pn 21 06 45.7 -1.5**
MMAI Mount Meron Ar 8.66 139 Pn **Pn 21 06 54.2 +1.1**
comp=E,1.3nm,0.3s,baz=321,slow=11,SNR=14
comp=E,1.1nm,0.4s
TIP Timpagrande 9.24 270 Pn **Pn 21 07 02.1 +1.1**
MORH Mrgy, Hungar 9.76 314 ⇑P **Pn 21 07 07.9 +0.1**
AKASG Malin Array Be 10.91 2 Pn **Pn 21 07 23.5 -0.2**
comp=E,0.6nm,0.3s,baz=181,slow=12,SNR=2.7
comp=E,0.2nm,0.4s
NOA NORSAR Array B 23.85 339 LR LR 21 19 54.8
comp=E,24nm,18.4s,baz=235,slow=38
ESDC Sonseca Array 25.04 280 P **P 21 10 12.3 +0.5**
comp=E,0.2nm,0.6s,baz=83,slow=10,SNR=1.5
comp=E,0.2nm,0.6s
TORD Torodi Ar. Bea 35.63 229 P **P 21 11 46.1 +0.6**
comp=E,0.2nm,0.5s,baz=24,slow=8.1,SNR=1.4
comp=E,0.2nm,0.5s
MKAR Makanchi Array 38.98 62 P **P 21 12 15.0 +1.1**
comp=E,0.4nm,0.7s,baz=272,slow=9.0,SNR=4.4
comp=E,0.4nm,0.7s
MKAR Makanchi Array 38.98 62 P **P 21 12 13.4 -0.4**

WMQ	**Urumqi**	**43.36**	**65**	*eP*	**P**	**21 12 51.8**	**+1.9**
GTA	**Gaotai**	**53.40**	**66**	*eP*	**P**	**21 14 10.3**	**+2.8**
GTA				pP	sP	21 14 16.3	+2.8
GTA				sP	pP	21 14 19.8	+8.0
PZH	**PanZhiHua**	**61.04**	**78**	P	**P**	**21 15 02.4**	**+0.7**

*DJA **24** 21:43:11.5±0.2,0°S±2°×12°5E±°, h54km±4km, M4.5/24, mb4.6/20, mB4.9/7, MLv4.6/24, Mw(mB)4.2/7*
*IDC **24** 21:43:11.6±1.9,0°.01S×125°.15E, h63km±17km, mb3.8/15, mbtmp4.1/18, MS3.2/8, Error ellipse: s-maj=18.4km s-min=11.4km az=65.0*
*NEIC **24** 21:43:12.5±2.8,0°.01N±0°.08×125°.22E±0°.06, h71km±7km, mb4.3/25, Error ellipse: s-maj=11.0km s-min=8.6km az=186.0*

ISC 24 21:43:10.8±0.4,0°.08S±0°.05×125°.17E±0°.05, h53km, n109, σ1§54/110, mb4.2/24, MS3.2/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**2.12**	**157**	P	**Pn**	**21 43 43.3**	**-0.6**
SANI				S	**Sn**	**21 44 08.9**	**-0.2**
SANI	**Sanana**	**2.12**	**157**	P	**Pn**	**21 43 43.3**	**-0.6**
TNTI	**Ternate**	**2.36**	**69**		**Pn**	**21 43 47.3**	**+0.2**
TNTI	**Ternate**	**2.36**	**69**	P	**Pn**	**21 43 47.5**	**+0.5**
TNTI				S	**Sn**	**21 44 16.0**	**+1.2**
TNTI	**Ternate**	**2.36**	**69**	P	**Pn**	**21 43 48.3**	**+1.3**
LBMI	**Labuha**	**2.40**	**103**	P	**Pn**	**21 43 48.5**	**+0.8**
LBMI				S	**Sn**	**21 44 16.3**	**+0.4**
LUWI	**Luwuk**	**2.58**	**248**	Pn	**Pn**	**21 43 53.1**	**+3.0**
LUWI	**Luwuk**	**2.58**	**248**	P	**Pn**	**21 43 53.2**	**+3.1**
GAMI	**Galela, Maluku**	**3.24**	**54**	P	**Pn**	**21 44 00.5**	**+1.3**
MRSI	**Marisa**	**3.27**	**280**	P	**Pn**	**21 43 58.5**	**-1.1**
APSI	**Ampana**	**3.61**	**257**	P	**Pn**	**21 44 04.5**	**+0.2**
NLAI	**Namlea**	**3.69**	**148**	P	**Pn**	**21 44 05.5**	**+0.2**
SGSI	**Sangihe**	**3.75**	**6**	P	**Pn**	**21 44 07.5**	**+1.3**
TOLI2	**Tolitoli**	**4.54**	**285**	Pn	**Pn**	**21 44 18.0**	**+1.0**
KRAI	**Karang Ratu**	**4.56**	**135**	P	**Pn**	**21 44 18.7**	**+1.4**
AAI	**Ambon**	**4.69**	**140**	P	**Pn**	**21 44 20.3**	**+1.2**
MSAI	**Masohi**	**4.97**	**131**	P	**Pn**	**21 44 24.5**	**+1.6**
MPSI	**Mapaga** 0.6nm2μm72nm,0.6s	**5.28**	**274**	P	**Pn**	**21 44 28.7**	**+1.5**
KKSI	**Kolaka, Sulawe**	**5.37**	**221**	P	**Pn**	**21 44 28.9**	**+0.4**
PCI	**Palu**	**5.39**	**261**	P	Pn	21 44 35.2	+6.5
BBSI	**Bau Bau** 0.1nm1μm31nm,0.9s	**5.97**	**206**	P	**Pn**	**21 44 37.8**	**+1.2**
SWI	**Sorong** 0.2nm36nm,0.6s	**6.14**	**97**	P	**Pn**	**21 44 40.5**	**+1.5**
SIJI	**Sorong** 23nm,0.4s,baz=275,slow=13,SNR=8.5	**6.15**	**97**	P	**Pn**	**21 44 41.2**	**+2.1**
SIJI				S	**Sn**	**21 45 49.3**	**+1.1**
SIJI	**Sorong** 4.7nm,0.4s,baz=108,slow=23,SNR=0.9	**6.15**	**97**	P	**Pn**	**21 44 40.9**	**+1.8**
BNDI	**Bandanaira** 0.3nm25nm,0.5s	**6.47**	**133**	P	**Pn**	**21 44 44.2**	**+0.7**
BNSI	**Bone** 0.1nm398nm38nm,0.8s	**6.63**	**230**	P	**Pn**	**21 44 47.5**	**+1.8**
SPSI	**Sidrap Palu** 0.3nm1μm75nm,0.6s	**6.63**	**234**	P	**Pn**	**21 44 47.2**	**+1.5**
DAV	**Davao City (W)** comp=Z,208nm,21.7s,baz=190,slow=39	**7.11**	**3**	LR	LR	21 47 43.2	
PMSI	**Majene** 0.3nm91nm,0.8s	**7.11**	**241**	P	**Pn**	**21 44 53.3**	**+1.0**
BKSI	**Bulukumba** 0.2nm40nm,0.7s	**7.25**	**224**	P	**Pn**	**21 44 57.6**	**+3.5**
KAPI	**Kappang** 8.6nm,0.3s,baz=74,slow=7.4,SNR=11	**7.30**	**228**	P	**Pn**	**21 44 56.9**	**+2.0**
KAPI				S	**Sn**	**21 46 15.5**	**-0.9**
KAPI	10nm,0.5s,baz=220,slow=22,SNR=1.3			LR	LR	21 48 25.0	
KAPI	**Kappang** comp=Z,140nm,21.8s,baz=19,slow=43	**7.30**	**228**	Pn	**Pn**	**21 44 56.1**	**+1.2**
KAPI	**Kappang** 0.1nm32nm,0.8s	**7.30**	**228**	P	**Pn**	**21 44 56.1**	**+1.2**
KAPI	**Kappang**	**7.30**	**228**	P	**Pn**	**21 44 57.1**	**+2.2**
BSSI	**Bau Bau, Buton** 0.3nm56nm,1.0s	**7.62**	**218**	P	**Pn**	**21 44 59.1**	**-0.2**
FAKI	**Fak Fak**	**7.62**	**112**	Pn	**Pn**	**21 44 58.1**	**-1.2**
FAKI	**Fak Fak** 0.1nm29nm,0.8s	**7.62**	**112**	P	**Pn**	**21 44 59.2**	**-0.1**
FAKI	**Fak Fak**	**7.62**	**112**	P	**Pn**	**21 44 58.6**	**-0.7**
MYLDM	**Lahad Datu**	**8.46**	**308**	Pn	**Pn**	**21 45 13.4**	**+2.6**
MYLDM	**Lahad Datu** 39nm,0.8s	**8.46**	**308**	P	**Pn**	**21 45 12.8**	**+2.0**
MWPI	**Manokwari, Pap**	**8.91**	**95**	P	Pn	21 45 22.0	+5.0
MMRI	**Maumere**	**8.99**	**199**	Pn	**Pn**	**21 45 19.3**	**+1.3**
SOEI	**Soe** 31nm,0.7s	**9.66**	**185**	P	**Pn**	**21 45 28.1**	**+0.8**
BATI	**Baumata** 27nm,0.7s,baz=281,slow=18,SNR=2.7	**10.17**	**188**	P	**Pn**	**21 45 37.8**	**+3.5**
BATI				LR	LR	21 49 41.1	
KKM	**Kota Kinabalu** comp=Z,149nm,21.6s,baz=322,slow=38	**10.81**	**304**	Pn	**Pn**	**21 45 45.4**	**+2.4**
MTN	**Manton Dam**	**14.00**	**155**	Pn	**Pn**	**21 46 27.9**	**+1.5**
KSM	**Kuching**	**14.94**	**276**		**P**	**21 46 43.0**	**-0.3**
KNRA	**Kununurra**	**15.90**	**167**		**Pn**	**21 46 51.9**	**+0.6**
KNRA	comp=Z,28nm,0.8s			IAmb	IAmb	21 46 52.4	
KNRA	**Kununurra**	**15.90**	**167**	P	**Pn**	**21 46 51.8**	**+0.6**
LEM	**Lembang** comp=Z,86nm,18.7s,baz=56,slow=39	**18.75**	**249**	LR	LR	21 55 23.8	
CNJI	**Cibinong** comp=Z,13nm,1.3s	**19.37**	**248**	P	**Pn**	**21 47 34.6**	**+0.8**
WB0	**Warramunga Arr**	**21.56**	**156**	P	**P**	**21 47 54.8**	**-1.2**
WB0	comp=Z,8.2nm,0.8s			IAmb	IAmb	21 48 01.2	
MBWA	**Marble Bar**	**21.62**	**194**	P	**P**	**21 47 56.3**	**-0.2**
MBWA	comp=Z,10nm,1.0s			IAmb	IAmb	21 48 18.1	
WRAB	**Tennant Creek**	**21.69**	**156**	P	**P**	**21 47 56.5**	**-0.8**
WRA	**Warramunga Arr** comp=Z,3.7nm,0.6s,baz=337,slow=9.4,SNR=43	**21.69**	**156**	P	**P**	**21 47 56.5**	**-0.9**
WRA				PcP	**PcP**	**21 51 56.5**	**-0.6**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.8s,baz=348,slow=1.8,SNR=3.7 comp=Z,3.7nm,0.6s	**21.69**	**156**	P	**P**	**21 47 54.8**	**-2.6**
WB2	**Warramunga Arr**	**21.70**	**156**	P	**P**	**21 47 55.7**	**-1.8**
WR0	**Warramunga Arr**	**21.79**	**156**	P	**P**	**21 47 56.6**	**-1.8**
PSA00	**Pilbara Seismi**	**21.99**	**193**	P	**P**	**21 47 58.6**	**-2.0**
PSA00	comp=Z,13nm,1.1s			IAmb	IAmb	21 48 29.5	
PSA00	**Pilbara Seismi**	**21.99**	**193**	P	**P**	**21 48 01.7**	**+1.2**
COEN	**Coen**	**22.54**	**128**	P	**P**	**21 48 05.5**	**-1.1**
COEN	**Coen**	**22.54**	**128**	P	**P**	**21 48 05.8**	**-0.8**
TPUB	**Ta-pu**	**23.65**	**350**	P	**P**	**21 48 15.5**	**-2.0**
TPUB	comp=Z,20nm,1.0s			IAmb	IAmb	21 48 41.5	
TPUB	**Ta-pu** comp=Z,36nm,1.9s	**23.65**	**350**	P	**P**	**21 48 22.3**	**+4.8**
QIS	**Mount Isa**	**24.78**	**146**	P	**P**	**21 48 28.7**	**+0.9**
AS31	**Alice Springs**	**24.94**	**161**	P	**P**	**21 48 29.6**	**+0.3**
ASAR	**Alice Springs** comp=Z,2.2nm,0.6s,baz=338,slow=6.9,SNR=67	**24.94**	**161**	P	**P**	**21 48 29.6**	**+0.4**
ASAR				PcP	**PcP**	**21 52 04.2**	**+0.3**
ASAR	**Alice Springs** comp=Z,1.4nm,0.7s,baz=349,slow=2.0,SNR=11	**24.94**	**161**	P	**P**	**21 48 29.4**	**+0.1**
ASAR				ScP	**ScP**	**21 55 38.1**	**-0.5**
ASAR	**Alice Springs** comp=Z,0.1nm,0.3s,baz=345,slow=2.3,SNR=4.3 comp=Z,2.2nm,0.6s	**24.94**	**161**	P	**P**	**21 48 29.4**	**+0.1**
AS01	**Alice Springs**	**24.95**	**161**	P	**P**	**21 48 30.0**	**+0.6**
WRKA	**Warakurna**	**25.00**	**173**	P	**P**	**21 48 30.8**	**+1.0**
KULM	**Kulim**	**25.05**	**283**	P	**P**	**21 48 30.2**	**-0.3**
KULM	comp=Z,12nm,1.1s			IAmb	IAmb	21 48 35.3	
JOW	**Kunigami** comp=Z,31nm,21.8s,baz=52,slow=35	**26.92**	**6**	LR	LR	21 58 42.0	
CTA	**Charters Tower** comp=Z,1.1nm,0.2s,baz=304,slow=12,SNR=1.3 comp=Z,1.1nm,0.2s	**28.67**	**135**	P	**P**	**21 49 04.2**	**+1.4**
MORW	**Morawa**	**30.12**	**196**	P	**P**	**21 49 15.3**	**-0.3**
MORW	comp=Z,18nm,1.3s			IAmb	IAmb	21 49 31.7	
PHRA	**Phrae**	**30.67**	**308**	P	**P**	**21 49 21.2**	**+0.6**
CMAR	**Chiang Mai Arr** comp=Z,0.3nm,0.4s,baz=130,slow=7.4,SNR=1.7 comp=Z,0.3nm,0.4s	**31.67**	**307**	P	**P**	**21 49 28.9**	**-0.5**
BBOO	**Buckleboo**	**34.14**	**164**	P	**P**	**21 49 51.3**	**+0.5**
STKA	**Stephens Creek** comp=Z,5.6nm,0.5s,baz=334,slow=8.2,SNR=21 comp=Z,5.6nm,0.5s	**35.24**	**155**	P	**P**	**21 50 01.1**	**+0.8**
STKA	**Stephens Creek**	**35.24**	**155**	P	**P**	**21 50 01.2**	**+0.8**
STKA	comp=Z,1.6nm,0.6s			IAmb	IAmb	21 50 02.0	
KSRS	**Korea Array**	**37.43**	**4**	P	**P**	**21 50 18.3**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=181,slow=9.4,SNR=4.9 comp=Z,0.8nm,0.4s						
ARMA	**Armidale**	**39.29**	**143**	P	**P**	**21 50 33.8**	**-1.0**
BRDH	**Bariadhala** comp=Z,32nm,18.1s,baz=82,slow=38	**39.69**	**307**	LR	LR	22 08 37.2	
USRK	**Ussuriysk Ar.** comp=Z,2.2nm,0.4s,baz=194,slow=7.1,SNR=10.0 comp=Z,2.2nm,0.4s	**44.50**	**7**	P	**P**	**21 51 17.0**	**0.0**
USRK	**Ussuriysk Ar.**	**44.50**	**7**	P	**P**	**21 51 16.4**	**-0.5**
PALK	**Pallekele** comp=Z,34nm,18.7s,baz=144,slow=37	**44.94**	**280**	LR	LR	22 10 34.9	
GTA	**Gaotai**	**45.63**	**332**	*eP*	**P**	**21 51 27.6**	**+1.4**
GTA				pP	pP	21 51 30.8	-8.6
GTA				sP	pwP	21 51 33.8	-9.3
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=162,slow=9.3,SNR=5.1 comp=Z,0.6nm,0.6s	**50.44**	**344**	P	**P**	**21 52 02.2**	**-1.0**
SONM	**Songino Array**	**50.44**	**344**	P	**P**	**21 52 02.7**	**-0.5**
LBZ	**Lake Benmore**	**59.49**	**144**	P	**P**	**21 53 09.3**	**+0.8**
KSH	**Kashi**	**59.69**	**317**	P	**P**	21 53 19.8	+10
KSH				PcP	**PcP**	**21 54 02.5**	**+5.8**
MK31	**Makanchi Array**	**59.83**	**327**	P	**P**	**21 53 08.8**	**-2.0**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.3s,baz=128,slow=7.6,SNR=24	**59.83**	**327**	P	**P**	**21 53 08.8**	**-2.1**
MKAR				PcP	**PcP**	**21 53 56.3**	**-0.7**
BKZ	**Black Stump Fm** comp=Z,0.7nm,0.5s,baz=120,slow=6.0,SNR=4.0 comp=Z,0.8nm,0.3s	**60.88**	**136**	P	**P**	**21 53 18.2**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,baz=142,slow=5.1,SNR=2.5 comp=Z,0.5nm,0.3s	**63.29**	**335**	P	**P**	**21 53 33.2**	**-0.8**
KURK	**Kurchatov**	**64.14**	**329**	P	**P**	**21 53 37.6**	**-2.0**
KURK	comp=Z,2.6nm,0.8s			IAmb	IAmb	21 54 10.7	
KKAR	**Karatay Array**	**64.99**	**319**	P	**P**	**21 53 44.8**	**-0.6**
BRVK	**Borovoye**	**69.75**	**328**	P	**P**	**21 54 12.9**	**-2.4**
BRVK	comp=Z,2.5nm,0.9s			IAmb	IAmb	21 54 17.6	
TIXI	**Tiksi**	**71.65**	**1**	P	**P**	**21 54 25.6**	**-0.8**
TIXI	comp=Z,9.6nm,1.5s			IAmb	IAmb	21 54 43.1	
GEYT	**Alibeck** comp=Z,0.9nm,0.5s,baz=130,slow=6.6,SNR=2.6 comp=Z,0.9nm,0.5s	**72.09**	**310**	P	**P**	**21 54 29.8**	**0.0**
NRIK	**Noril'sk** comp=Z,2.0nm,0.5s,baz=90,slow=9.1,SNR=2.5 comp=Z,2.0nm,0.5s	**73.75**	**347**	P	**P**	**21 54 38.1**	**-0.8**
ABKAR	**Akbulak array**	**74.12**	**322**	P	**P**	**21 54 39.2**	**-2.3**
VNDA	**Vanda** comp=Z,0.9nm,0.7s,baz=314,slow=4.8,SNR=5.6 comp=Z,0.9nm,0.7s	**79.88**	**172**	P	**P**	**21 55 13.4**	**+0.1**
VNDA	**Vanda**	**79.88**	**172**	P	**P**	**21 55 13.4**	**+0.1**
VNDA	comp=Z,4.7nm,1.5s			IAmb	IAmb	21 55 31.3	
ILAR	**Eielson Array** comp=Z,0.2nm,0.6s,baz=245,slow=5.2,SNR=2.1 comp=Z,0.2nm,0.6s	**89.19**	**25**	P	**P**	**21 55 59.0**	**-1.6**
ARCES	**ARCESS Array B** comp=Z,0.7nm,0.6s,baz=60,slow=5.5,SNR=3.6 comp=Z,0.7nm,0.6s	**93.45**	**340**	P	**P**	**21 56 21.1**	**+0.9**
IDI	**Anoyia** comp=Z,12nm,18.0s,baz=299,slow=42	**98.44**	**306**	LR	LR	22 51 26.8	
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.8s,baz=81,slow=0.6,SNR=3.7	**122.52**	**285**	PKP	**PKPdf**	**22 02 00.2**	**-1.2**
CPUP	**Villa Florida** comp=Z,2.1nm,0.7s,baz=211,slow=5.9,SNR=3.7	**153.64**	**175**	PKPab	**PKPab**	**22 03 14.3**	**-2.7**
LPAZ	**La Paz** comp=Z,0.7nm,0.5s,baz=221,slow=8.1,SNR=3.7	**159.11**	**142**	PKPab	**PKPab**	**22 03 42.1**	**+0.6**

JMA 24 21:56:57.4±0.2, 24°.2N±0°.4×123°.8E±0°.5, h16km±2km, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.12**	**322**	P	Pg	21 57 00.9	-0.1
IRIF				*eS*	Sb	21 57 04.0	+0.1
JKRS	**Kuro-shima**	**0.18**	**92**	P	Pg	21 57 01.9	0.0
JKRS				S	Sg	21 57 05.0	+0.2
HATJ	**Hateruma jima**	**0.19**	**181**	P	Pg	21 57 01.8	-0.1
HATJ				*eS*	Sg	21 57 05.1	+0.2
JIJ	**Ishigaki jima**	**0.33**	**68**	P	Pg	21 57 04.1	-0.2
JIJ				*eS*	Sg	21 57 08.4	-0.5
JISG	**Ishigakijimahi**	**0.57**	**53**	*eP*	Pg	21 57 08.9	+0.1

TAP 24 21:57:49.7, 24°.90N×122°.37E, h44km±1km, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=288	**0.36**	**288**	*eP*	Pn	21 57 58.7	-0.3
SXI1	**Grass Mountain** baz=294	**0.49**	**294**	*eP*	Pn	21 58 02.2	+1.6
SXI1				*eS*	Sn	21 58 09.1	+0.8
TIPB	**Shuangxi** baz=279	**0.50**	**279**	*eP*	Pn	21 58 00.8	+0.2
TIPB				*eS*	Sn	21 58 09.1	+0.7
TWC	**Suao** baz=231	**0.55**	**239**	*eP*	Pn	21 58 01.2	-0.1
TWC				*eS*	Sn	21 58 09.0	-0.5
ILA	**Ilan** baz=248	**0.58**	**257**	*eP*	Pn	21 58 02.1	+0.4
TWE	**Neicheng** baz=248	**0.66**	**255**	*eP*	Pn	21 58 03.0	+0.2
TWE				*eS*	Sn	21 58 12.2	+0.1
FUSB	**Fushanzhiwuyua** baz=259	**0.72**	**259**	*eP*	Pn	21 58 04.5	+0.9
FUSB				*eS*	Sn	21 58 13.8	+0.1
YM01	**YM01** baz=289	**0.77**	**289**	*eP*	Pn	21 58 04.9	+0.7
ENTT	**Nioudou** baz=240	**0.77**	**251**	*eP*	Pn	21 58 03.9	-0.4
NDT	**Datong Townshi** baz=241	**0.83**	**249**	*eP*	Pn	21 58 04.8	-0.2
NDT				*eS*	Sn	21 58 16.3	+0.1
LATG	**Datong** baz=237	**0.84**	**245**	*eP*	Pn	21 58 05.8	+0.4
LATG				*eS*	Sn	21 58 16.8	+0.1
YHNB	**Yeheng** baz=268	**0.93**	**256**	*eP*	Pn	21 58 08.4	+2.0
NSK	**Sanguang** baz=269	**0.94**	**257**	*eP*	Pn	21 58 07.2	+0.6
NACB	**Ninganchiao** baz=225	**1.01**	**224**	*eP*	Pn	21 58 07.6	+0.2

*IDC **24** 22:03:06.7±1.1, 55°.86S×27°.48W, h0km, mb4.0/3, mbtmp4.0/3, MS3.2/1, Error ellipse: s-maj=47.7km s-min=31.6km az=95.0*
*NEIC **24** 22:03:20.5±0.8, 56°.0S±0°.1×27°.7W±0°.2, h112km±7km, mb4.2/13, Error ellipse: s-maj=16.3km s-min=15.0km az=149.0*

ISC 24 22:03:20.2±0.7, 56°.0S±0°.1×27°.6W±0°.1, h112km, n32, σ0§59/31, mb4.2/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.36**	**285**	Pn	**Pn**	**22 04 37.8**	**0.0**
VNA1	**Neumayer--Stat**	**16.97**	**158**	P	**P**	**22 07 10.9**	**+0.4**
VNA3	**Neumayer Olymp**	**17.16**	**160**	P	**P**	**22 07 12.3**	**-0.3**
VNA2	**Neumayer--Watz** baz=313,slow=12	**17.37**	**158**	P	**Pn**	**22 07 15.2**	**-0.1**
SNAA	**Sanae**	**18.93**	**156**	P	**P**	**22 07 31.8**	**-0.1**
SNAA	**Sanae**	**18.93**	**156**	P	**P**	**22 07 31.9**	**-0.1**
SNAA	comp=Z,5.1nm,0.4s			IAmb	IAmb	22 07 32.5	
PMSA	**Palmer Station**	**19.78**	**229**		**Pn**	**22 07 45.0**	**+1.2**
TROLL	**Troll, Antarti**	**20.44**	**153**	P	**P**	**22 07 48.1**	**-0.3**
BELA	**Belgrano 2**	**22.15**	**184**	P	**P**	**22 08 05.3**	**-1.1**
PLCA	**Paso Flores**	**31.75**	**280**	P	**P**	**22 09 33.5**	**0.0**
PLCA	comp=Z,6.0nm,1.2s			IAmb	IAmb	22 09 47.2	
QSPA	**South Pole Qui**	**34.30**	**180**	P	**P**	**22 09 55.3**	**-0.2**
LVC	**Limon Verde** comp=Z,29nm,21.5s,baz=350,slow=34	**45.05**	**300**	LR	LR	22 28 21.1	
LVC	**Limon Verde**	**45.05**	**300**	P	**P**	**22 11 24.7**	**-0.4**
BOSA	**Boshof**	**46.18**	**76**	P	**P**	**22 11 33.7**	**0.0**
BOSA	comp=Z,4.9nm,1.1s			IAmb	IAmb	22 12 10.4	
VNDA	**Vanda** comp=Z,0.6nm,0.6s,baz=181,slow=8.6,SNR=7.2 comp=Z,0.6nm,0.6s	**46.66**	**183**	P	**P**	**22 11 37.2**	**+0.5**
VNDA	**Vanda**	**46.66**	**183**	P	**P**	**22 11 37.2**	**+0.5**
PB01	**IPOC Station P**	**46.66**	**301**	P	**P**	**22 11 37.3**	**-0.1**
PB08	**IPOC Station P**	**47.27**	**302**	P	**P**	**22 11 42.0**	**-0.5**
PB08	comp=Z,4.2nm,0.6s			IAmb	IAmb	22 12 19.5	
GO01	**Chusmiza**	**47.69**	**302**	P	**P**	**22 11 45.3**	**-0.7**
GO01	comp=Z,7.4nm,1.4s			IAmb	IAmb	22 11 50.5	
LPAZ	**La Paz** comp=Z,0.8nm,0.4s,baz=153,slow=4.5,SNR=2.8 comp=Z,0.8nm,0.4s	**50.13**	**306**	P	**P**	**22 12 05.2**	**+0.5**
LPAZ	**La Paz**	**50.13**	**306**	P	**P**	**22 12 04.1**	**-0.6**
LPAZ	comp=Z,3.3nm,1.2s			IAmb	IAmb	22 12 19.4	
TOA0	**Torodi Ar. Sit**	**73.09**	**30**	P	**P**	**22 14 39.1**	**+1.1**
TOA0	comp=Z,1.7nm,0.5s			IAmb	IAmb	22 14 39.6	
TORD	**Torodi Ar. Bea** comp=Z,1.5nm,0.5s,baz=197,slow=6.5,SNR=19 comp=Z,1.5nm,0.5s	**73.09**	**30**	P	**P**	**22 14 38.2**	**+0.2**
INK	**Inuvik**	**145.58**	**321**	PKPdf	**PKPbc**	**22 22 43.8**	**-0.2**
DAWY	**Dawson**	**146.55**	**312**	PKPdf	**PKPbc**	**22 22 46.4**	**-0.7**
I26K	**Coal Creek Min**	**148.45**	**314**		**PKPbc**	**22 22 51.8**	**-0.3**
BMAR	**Burnt Mountain**	**149.45**	**317**	PKPbc	**PKPbc**	**22 22 54.4**	**-0.2**
ILAR	**Eielson Array** comp=Z,0.7nm,0.6s,baz=123,slow=3.3,SNR=9.2	**149.88**	**312**	PKPbc	**PKPbc**	**22 22 55.3**	**-0.4**
ILAR	**Eielson Array**	**149.88**	**312**		**PKPbc**	**22 22 54.4**	**-1.3**
SONM	**Songino Array** comp=Z,0.2nm,0.4s,baz=210,slow=4.4,SNR=2.1	**150.96**	**87**	PKPbc	**PKiKP**	**22 22 59.8**	**+0.3**
SKT	**Skwentna**	**151.29**	**305**	PKPbc	**PKPbc**	**22 22 58.7**	**-0.4**
IMAR	**Indian Mountai**	**152.90**	**313**	PKPbc	**PKPbc**	**22 23 01.9**	**-0.7**

*IDC **24** 22:09:54.4±1.0, 38°.97N×22°.00E, h0km, mb3.7/9, mbtmp3.6/15, ML3.3/5, Error ellipse: s-maj=16.5km s-min=14.6km az=87.0*
*PDG **24** 22:09:55.7±0.6, 38°.95N×22°.01E, h11km, ML3.6/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*ATH **24** 22:09:55.9, 38°.91N×21°.94E, h15km±1km, ML3.6/12, Error ellipse: s-maj=1.6km s-min=1.0km az=36.0*
*NEIC **24** 22:09:56.6±1.3, 38°.92N±0°.04×22°.11E±0°.08, h10km±1km, mb4.2/4, ML3.6(ATH), ML3.6(THE), Error ellipse: s-maj=10.0km s-min=7.0km az=98.0*
*TIR **24** 22:09:56.4, 38°.74N×22°.09E, h45km±60km, Md3.9, Ml3.8*
*THE **24** 22:09:56.0, 38°.91N×21°.94E, h13km±1km, ML3.6/12, Error ellipse: s-maj=1.1km s-min=0.4km az=54.0*
*BEO **24** 22:09:57.5±0.6, 39°.06N×22°.07E, h0km, ML3.3/14*
*ISK **24** 22:09:57.7, 38°.96N×22°.15E, h24km, ML3.4/10*

ISC 24 22:09:56.1±0.7, 38°.91N±0°.02×21°.99E±0°.02, h12km±4km, n190, σ1§14/255, mb3.9/10, 16C-24D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.14**	**274**	P	**Pg**	**22 09 58.9**	**-0.8**
EVR	47μm,0.3s			S	**Sg**	**22 10 01.0**	**-1.3**
EVR	**Evrytania**	**0.14**	**274**	P	**Pg**	**22 09 58.9**	**-0.8**
EVR				S	**Sg**	**22 10 01.0**	**-1.3**
EVR				AML	AML	22 10 01.5	
EVR	comp=E,85897μm,0.4s			AML	AML	22 10 04.1	
MAKR	**Makrakomi, Fth**	**0.15**	**45**	P	**Pg**	**22 10 00.6**	**+0.8**
MAKR	comp=E,69μm,0.2s			S	**Sb**	**22 10 03.8**	**+1.4**
MAKR	**Makrakomi, Fth**	**0.15**	**45**	P	**Pg**	**22 10 00.5**	**+0.8**
MAKR				S	**Sb**	**22 10 03.8**	**+1.4**
MAKR				AML	AML	22 10 04.4	
MAKR	comp=E,99944μm,0.2s			AML	AML	22 10 04.4	
AGG	**Agios Georgios**	**0.29**	**66**	PG	**Pb**	**22 10 03.0**	**-0.2**
AGG	**Agios Georgios**	**0.29**	**66**	P	**Pb**	**22 10 02.9**	**-0.3**
PVO	**Paravola**	**0.47**	**232**	P	**Pg**	**22 10 04.5**	**-0.8**
PVO	comp=E,5μm,0.4s			S	**Sg**	**22 10 11.2**	**-0.3**
PVO	**Paravola**	**0.47**	**232**	P	**Pg**	**22 10 04.5**	**-0.8**
EFP	**Efpalio**	**0.48**	**188**	P	**Pg**	**22 10 05.3**	**-0.3**
EFP	comp=E,17μm,0.3s			S	**Sg**	**22 10 12.0**	**-0.1**
EFP	**Efpalio**	**0.48**	**188**	P	**Pg**	**22 10 05.3**	**-0.3**
EFP				S	**Sg**	**22 10 12.0**	**-0.1**
EFP				AML	AML	22 10 15.0	
EFP	comp=E,35300μm,0.3s			AML	AML	22 10 15.8	
SERG	**Sergoula**	**0.49**	**174**	P	**Pg**	**22 10 05.4**	**-0.4**
SERG	comp=N,13μm,0.2s			S	**Sb**	**22 10 13.2**	**-0.7**
SERG	**Sergoula**	**0.49**	**174**	P	**Pg**	**22 10 05.4**	**-0.4**
SERG				S	**Sb**	**22 10 13.3**	**-0.7**
SERG				AML	AML	22 10 14.3	
SERG	comp=N,31707μm,0.2s			AML	AML	22 10 15.7	
AXAR	**Agios Charalam**	**0.54**	**105**	P	**Pg**	**22 10 06.5**	**-0.1**
AXAR	comp=E,11μm,0.4s			S	**Sb**	**22 10 15.4**	**+0.3**
AXAR	**Agios Charalam**	**0.54**	**105**	P	**Pg**	**22 10 06.5**	**-0.1**
AXAR				S	**Sb**	**22 10 15.5**	**+0.3**
AXAR				AML	AML	22 10 19.9	
AXAR	comp=E,21173μm,0.5s			AML	AML	22 10 21.2	
DLFA	**Delphi**	**0.58**	**137**	P	**Pg**	**22 10 06.9**	**-0.5**
DLFA				S	**Sb**	**22 10 16.0**	**-0.4**
DLFA				AML	AML	22 10 17.7	
DLFA	comp=E,12819μm,0.3s			AML	AML	22 10 17.8	
ALIK	**Aliki, Aigiali**	**0.65**	**172**	P	**Pg**	**22 10 08.6**	**-0.2**
ALIK				S	**Sb**	**22 10 18.7**	**+0.3**
THL	**Klokotos Trika**	**0.66**	**1**	P	**Pg**	**22 10 08.1**	**-0.8**
THL	comp=N,4μm,0.4s			S	**Sg**	**22 10 18.6**	**+1.0**
THL	**Klokotos Trika**	**0.66**	**1**	P	**Pg**	**22 10 08.1**	**-0.8**
THL				AML	AML	22 10 19.8	
THL	comp=E,9448μm,0.5s			AML	AML	22 10 20.0	
LAKA	**Lakka**

baz=273
LKD2 Lefkada island 1.05 264 P Pb 22 10 14.9 -1.3
LKD2 AML AML 22 10 35.0
comp=N,2282μm,0.5s
LKD2 AML AML 22 10 38.8
comp=E,3287μm,0.6s
JAN Janina 1.16 311 P Pn 22 10 15.7 -2.5
JAN S Sb 22 10 32.8 -0.3
comp=E,3μm,0.3s
JAN Janina 1.16 311 P Pn 22 10 15.6 -2.5
LIT Litokhoron 1.25 18 Pn 22 10 18.9 -0.5
IGT Igoumenitsa 1.43 296 *e*Pg **Pn 22 10 21.5 -0.4**
IGT *e*Sg **Sg 22 10 43.4 +1.1**
IGT Igoumenitsa 1.43 296 P Pn 22 10 21.2 -0.6
baz=301
IGT S Sn 22 10 41.6 +1.0
baz=301
LSK Leskovik 1.65 319 P Pn 22 10 25.5 +0.6
baz=322
LSK S Sb 22 10 48.1 +1.0
baz=322
LSK AMP
comp=N,6.9nm,0.7s,baz=322
ITM Ithomi 1.73 182 PN **Pb 22 10 27.9 +0.2**
ITM Ithomi 1.73 182 Pn **Pb 22 10 27.4 -0.3**
SRN Sarande 1.82 303 P Pn 22 10 28.9 +1.7
baz=306
SRN S Sn 22 10 50.0 -0.2
baz=306
SRN AMP
comp=N,2.5nm,0.7s,baz=306
THE Thessaloniki 1.88 23 P Pn 22 10 27.4 -0.6
baz=19
THE S Sn 22 10 51.8 +0.2
baz=19
KEK Kerkira 1.88 296 Pn **Pn 22 10 29.9 +1.9**
HORT Hortiatis 1.89 26 PN **Pn 22 10 27.9 -0.4**
HORT SN **Sn 22 10 50.0 -2.1**
KBN Korca 1.95 332 Pn **Pn 22 10 30.6 +1.6**
KBN Korca 1.95 332 P Pn 22 10 30.9 +1.9
baz=333
KBN S Sn 22 10 54.5 +1.0
baz=333
KBN AMP
comp=E,1.6nm,0.6s,baz=333
GRG Griva 2.07 9 PN **Pn 22 10 31.0 +0.3**
OUR Ouranopolis 2.10 46 PN **Pn 22 10 30.5 -0.5**
KNT Kendrikon 2.36 17 PN **Pn 22 10 34.8 +0.2**
OHR Ohrid 2.39 338 *e*Pn **Pn 22 10 37.0 +2.0**
OHR *e*Sn **Sn 22 11 04.0 -0.2**
OHR Ohrid 2.39 338 *i* Pn **Pn 22 10 37.2 +2.2**
VAY Valandovo 2.45 10 *e*Pn **Pn 22 10 36.2 +0.3**
VAY *e*Sn **Sn 22 11 05.6 -0.1**
VAY Valandovo 2.45 10 *i* Pn **Pn 22 10 36.6 +0.8**
VLO Vlora 2.48 310 Pn **Pn 22 10 38.4 +2.1**
VLO Vlora 2.48 310 P Pn 22 10 38.8 +2.6
baz=312
SRS Serrai 2.53 29 *e*Pn **Pn 22 10 36.7 -0.2**
SRS *e*Sn **Sn 22 11 05.8 -1.8**
KTHA Kythira Island 2.78 162 PN **Pn 22 10 42.1 +1.7**
STIP Stip 2.79 3 *i* Pn **Pn 22 10 41.9 +1.4**
TIR Tirane 2.93 327 ⇑P **Pn 22 10 44.6 +2.1**
TIR Tirane 2.93 327 Pn **Pn 22 10 44.5 +2.0**
TIR Tirane 2.93 327 P Pn 22 10 45.5 +3.0
baz=328
TIR S **Sn 22 11 17.7 +0.1**
baz=328
TIR AMP
comp=N,0.5nm,0.7s,baz=328
SCTE Santa Cesarea 2.97 294 Pn **Pn 22 10 43.6 +0.7**
PHP Peshkopia 3.02 337 P Pn 22 10 44.9 +1.2
baz=338
PHP AMP
comp=N,0.5nm,0.5s,baz=338
SIGR SIGRI 3.02 83 PN **Pn 22 10 43.7 0.0**
SKO Skopje 3.09 352 *e*Pn **Pn 22 10 45.5 +0.9**
SKO Skopje 3.09 352 *i* Pn **Pn 22 10 45.6 +0.9**
BOZC Bozcaada 3.28 72 PN **Pn 22 10 47.4 +0.1**
APE Apeiranthos 3.34 122 ⇓P **Pn 22 10 49.4 +1.2**
APE ⇑S **Sn 22 11 28.6 +0.8**
APE Apeiranthos 3.34 122 PN **Pn 22 10 49.1 +0.9**
RDO Rodhopi 3.52 49 Pn **Pn 22 10 50.5 -0.1**
RDO Rodhopi 3.52 49 Pn **Pn 22 10 49.6 -0.9**
ULC Ulcinj 3.71 326 ⇑*i*Pn **Pn 22 10 53.8 +0.7**
ULC *i* Sn **Sn 22 11 38.0 +1.3**
GELI Tayfur-Gelibol 3.77 65 PN **Pn 22 10 54.2 +0.3**
KDZ Kurdzhali 3.79 43 PN **Pn 22 10 53.8 -0.5**
PLD Plovdiv 3.80 32 PN **Pn 22 10 55.2 +0.7**
VTS Vitosha 3.83 14 ⇑P **Pn 22 10 55.0 +0.2**
VTS ⇓S **Sn 22 11 38.1 -1.8**
VTS Vitosha 3.83 14 Pn **Pn 22 10 54.4 -0.5**
VTS Vitosha 3.83 14 *e*Pn **Pn 22 10 55.1 +0.2**
VTS *e*Sn **Sn 22 11 37.7 -2.2**
DKL Dikili 3.83 86 PN **Pn 22 10 55.4 +0.6**
BARS Barje 3.91 358 *e*Pn **Pn 22 10 56.3 +0.4**
BARS *e*Sn **Sn 22 11 40.7 -1.0**
DRME Dracevica, Mon 3.91 328 *e*Pn **Pn 22 10 57.4 +1.4**
DRME Dracevica, Mon 3.91 328 *e*Pn **Pn 22 10 56.7 +0.7**
DRME *i* Sn **Sn 22 11 43.2 +1.4**
PVY Plav 4.00 338 *e*Pn **Pn 22 10 57.7 +0.5**
PVY *i* Sn **Sn 22 11 45.0 +1.0**
TIP Timpagrande 4.09 275 ⇑P **Pn 22 10 59.5 +1.1**
TIP ⇓S **Sn 22 11 48.2 +2.0**
TIP Timpagrande 4.09 275 Pn **Pn 22 10 59.5 +1.1**
PDG Podgorica 4.09 330 ⇑P **Pn 22 10 59.9 +1.5**
PDG ⇓S **Sn 22 11 48.1 +2.0**
PDG Podgorica 4.09 330 Pn **Pn 22 10 59.5 +1.1**
TTG Podgorica 4.09 330 *e*Pn **Pn 22 10 59.2 +0.8**
TTG *i* Sn **Sn 22 11 47.3 +1.2**
BUM Brajici-Budva 4.13 326 ⇓*i*Pn **Pn 22 10 59.7 +0.7**
BUM *i* Sn **Sn 22 11 48.5 +1.2**
IVA Berane 4.27 339 ⇑*i*Pn **Pn 22 11 01.6 +0.7**
IVA *i* Sn **Sn 22 11 51.7 +1.0**
IDI Anoyia 4.29 146 ⇓P **Pn 22 11 02.7 +1.5**
IDI ⇓S **Sn 22 11 53.6 +2.4**
IDI Anoyia 4.29 146 Pn **Pn 22 11 02.1 +0.9**
comp=N,1.4nm,0.3s,baz=269,slow=7.2,SNR=19
IDI Sn **Sn 22 11 51.9 +0.7**
comp=N,3.1nm,0.3s,baz=307,slow=18,SNR=2.2
comp=N,4.0nm,0.3s
IDI Anoyia 4.29 146 Pn **Pn 22 11 01.1 -0.1**
CEME Cevo 4.32 328 ⇓*i*Pn **Pn 22 11 02.4 +0.7**
CEME *i* Sn **Sn 22 11 53.1 +1.1**
SELS Selova 4.36 352 *e*Pn **Pn 22 11 01.9 -0.2**
SELS *e*Sn **Sn 22 11 50.7 -2.1**
KOME Kolasin 4.37 335 ⇓*i*Pn **Pn 22 11 02.9 +0.6**
KOME *i* Sn **Sn 22 11 54.0 +0.9**
ZAPS Zavoj 4.39 6 *e*Pn **Pn 22 11 04.0 +1.4**
ZAPS *e*Sn **Sn 22 11 52.7 -0.9**
HCY Herceg Novi 4.43 324 *e*Pn **Pn 22 11 03.1 +0.1**
HCY Herceg Novi 4.43 324 ⇓*i*Pn **Pn 22 11 03.8 +0.8**
HCY *i* Sn **Sn 22 11 55.6 +1.1**
NKME Niksic 4.49 330 ⇑*i*Pn **Pn 22 11 04.7 +0.7**
NKME *i* Sn **Sn 22 11 57.2 +1.0**
SJES Sjenica 4.61 341 *e*Pn **Pn 22 11 07.0 +1.3**
SJES *e*Sn **Sn 22 11 57.8 -1.4**
BOVS Bovan 4.73 357 ⇑P **Pn 22 11 06.8 -0.3**
BOVS Bovan 4.73 357 *e*Pn **Pn 22 11 06.7 -0.5**
BLKB Belogradchik 4.74 6 ⇓P **Pn 22 11 08.0 +0.6**
BLKB ⇑S **Sn 22 12 00.7 -1.5**
BRY Bratogost 4.77 328 *e*Pn **Pn 22 11 09.0 +1.1**
BRY Bratogost 4.77 328 ⇑*i*Pn **Pn 22 11 08.6 +0.7**
BRY *i* Sn **Sn 22 12 04.0 +0.8**
CEL Celeste 4.82 264 Pn **Pn 22 11 09.7 +1.1**
IVAS Ivanjica 4.87 344 *e*Pn **Pn 22 11 09.1 0.0**
IVAS *e*Sn **Sn 22 12 02.6 -2.8**
UPM Unac-Piva 4.89 332 *e*Pn **Pn 22 11 11.5 +2.0**
UPM Unac-Piva 4.89 332 ⇓*i*Pn **Pn 22 11 10.2 +0.7**
UPM *i* Sn **Sn 22 12 06.8 +0.7**
CUC Castrocucco 4.90 285 Pn **Pn 22 11 11.2 +1.5**
ZAGS Zajecar 4.91 2 *e*Pn **Pn 22 11 09.6 0.0**
GRUS Gruza 5.07 349 *e*Pn **Pn 22 11 12.2 +0.3**
GRUS *e*Sn **Sn 22 12 07.8 -2.5**
RUDO Rudo 5.11 338 *e*Pn **Pn 22 11 12.3 -0.1**
STON Ston 5.13 322 *e*Pn **Pn 22 11 11.0 -1.6**
BBLS Lazići 5.32 339 *e*Pn **Pn 22 11 16.3 +0.9**
BBLS Lazići 5.32 339 *e*Pn **Pn 22 11 16.6 +1.2**
BBLS *e*Sn **Sn 22 12 16.4 -0.3**
DIVS Divibare 5.40 344 Pn **Pn 22 11 17.1 +0.6**
DIVS Divibare 5.40 344 *e*Pn **Pn 22 11 17.1 +0.6**
DIVS Divibare 5.40 344 *e*Pn **Pn 22 11 16.9 +0.4**
TRUS Trudelj 5.44 348 *e*Pn **Pn 22 11 17.4 +0.4**

SGRT San Giovanni R 5.56 303 Pn **Pn 22 11 18.7 +0.1**
HAPS Han Pijesak,Bl 5.66 337 *e*Pn **Pn 22 11 21.1 +1.1**
TEKS Tekeris 5.93 343 *e*Pn **Pn 22 11 23.0 -0.7**
HERR Herculane 5.98 3 ⇓P **Pn 22 11 24.5 +0.2**
HERR ⇓S **Sn 22 12 31.2 -1.5**
PAOL Paolisi 6.09 293 Pn **Pn 22 11 27.2 +1.3**
VAE Valguarnera 6.14 259 Pn **Pn 22 11 30.6 +4.0**
comp=N,0.6nm,0.3s,baz=117,slow=4.5,SNR=2.2
VAE Sn **Sn 22 12 37.8 +1.0**
comp=N,0.3nm,0.3s,baz=3.4,slow=17,SNR=2.0
SRKY Kupres RS 6.30 326 *e*Pn **Pn 22 11 30.5 +1.6**
FRGS Fruska Gora 6.46 346 ⇑P **Pn 22 11 31.4 +0.6**
FRGS ⇓S **Sn 22 12 45.7 +1.2**
FRGS Fruska Gora 6.46 346 *e*Pn **Pn 22 11 31.1 +0.2**
FRGS Fruska Gora 6.46 346 *e*Pn **Pn 22 11 31.3 +0.4**
GZR Gura Zlata 6.51 5 ⇓P **Pn 22 11 31.5 -0.2**
MGRS Mrkonjic Grad 6.62 328 *e*Pn **Pn 22 11 34.6 +1.4**
LOT Lotru 6.67 11 ⇑P **Pn 22 11 34.6 +0.7**
BZS Buzias 6.71 358 ⇓P **Pn 22 11 35.1 +0.7**
BZS ⇓S **Sn 22 12 50.5 -0.2**
ARR Arges 6.75 16 ⇓P **Pn 22 11 34.9 0.0**
BLY Banja Luka 6.85 330 *e*Pn **Pn 22 11 37.2 +0.9**
INTR Introdacqua 6.90 299 Pn **Pn 22 11 38.7 +1.6**
VOIR 6.91 18 ⇓P **Pn 22 11 37.8 +0.7**
A052A Srbac 7.03 333 *e*Pn **Pn 22 11 38.7 -0.1**
A051A Mrakovica 7.18 330 *e*Pn **Pn 22 11 41.2 +0.3**
MLR Muntele Rosu 7.20 23 ⇑P **Pn 22 11 42.6 +1.4**
MLR Muntele Rosu 7.20 23 Pn **Pn 22 11 42.6 +1.4**
comp=N,2.8nm,0.4s,baz=192,slow=14
MLR Sn **Sn 22 13 00.4 -2.6**
baz=151,slow=19
MLR Muntele Rosu 7.20 23 Pn **Pn 22 11 42.5 +1.2**
AQU L'Aquila 7.39 301 Pn **Pn 22 11 45.2 +1.5**
CAMP Campotosto 7.46 302 Pn **Pn 22 11 46.3 +1.5**
DOPR Dopca 7.49 18 ⇓P **Pn 22 11 45.0 -0.1**
COVR Voineasa-Covas 7.60 23 ⇓P **Pn 22 11 46.9 +0.3**
MORH Mrgy, Hungar 7.71 342 ⇑P **Pn 22 11 48.9 +0.8**
PLOR Plostina 7.75 25 ⇑P **Pn 22 11 49.2 +0.6**
VRI Vrincioaia 7.79 25 ⇓P **Pn 22 11 49.8 +0.7**
NRCA Norcia 7.79 303 Pn **Pn 22 11 51.0 +1.7**
FDMO Fiordimonte 7.90 304 Pn **Pn 22 11 51.7 +0.9**
BOJS Bojanci 8.27 325 *e*Pn **Pn 22 11 57.1 +1.3**
MURB Monte Urbino 8.37 304 Pn **Pn 22 11 58.6 +1.4**
CEY Cerknica 8.83 323 *e*Pn **Pn 22 12 02.9 -0.6**
SKDS Skadanscina 8.89 321 *e*Pn **Pn 22 12 03.0 -1.3**
BURAR Bucovina Array 9.02 14 Pn **Pn 22 12 06.5 +0.4**
BUR08 Bucovina Ar. S 9.04 14 Pn **Pn 22 12 07.1 +0.7**
BRTR Keskin Array B 9.06 81 Pn **Pn 22 12 08.8 +1.9**
comp=N,0.2nm,0.3s,baz=262,slow=13,SNR=10
comp=N,0.7nm,0.4s
PSZ Piszkesteto 9.14 351 ⇓P **Pn 22 12 08.5 +0.8**
PSZ Piszkesteto 9.14 351 Pn **Pn 22 12 07.8 +0.1**
OBKA Obir 9.36 327 *e*Pn **Pn 22 12 09.3 -1.6**
OBKA Obir 9.36 327 *i* Pn **Pn 22 12 12.0 +1.1**
comp=N,0.4nm,0.1s
CTI Castel Tesino 10.45 316 **Pn 22 12 24.7 -1.0**
ABTA Abfaltersbach 10.48 321 *e*Pn **Pn 22 12 27.3 +1.2**
comp=N,0.9nm,0.3s
WTTA Wattenberg 11.27 321 *i* Pn **Pn 22 12 38.4 +1.5**
comp=N,1.0nm,0.2s
WATA Walderalm 11.35 321 *e*Pn **Pn 22 12 39.3 +1.3**
comp=N,1.5nm,0.4s
SQTA Sankt Quirin 11.45 320 *e*Pn **Pn 22 12 41.3 +1.9**
comp=N,1.5nm,0.4s
MOTA Moosalm 11.59 320 *i* Pn **Pn 22 12 41.5 +0.2**
comp=N,0.9nm,0.4s
GERES GERESS Array B 11.59 332 Pn **Pn 22 12 41.4 0.0**
comp=N,0.1nm,0.3s,baz=153,slow=15,SNR=2.6
comp=N,0.2nm,0.3s
DAVOX Davos/Dischmat 11.86 315 Pn **Pn 22 12 45.4 +0.2**
comp=N,0.2nm,0.3s,baz=144,slow=19,SNR=1.9
DAVOX Sn **Sn 22 14 53.4 -4.1**
comp=N,0.1nm,0.3s,baz=319,slow=19,SNR=1.6
comp=N,0.8nm,0.5s
MMAI Mount Meron Ar 12.35 114 Pn **Pn 22 12 52.7 +1.0**
comp=N,0.2nm,0.3s,baz=301,slow=12,SNR=2.5
comp=N,0.2nm,0.3s
SENIN Lac Senin/Sane 13.12 309 Pn **Pn 22 13 03.8 +1.4**
ESDC Sonseca Array 20.09 280 P **P 22 14 29.6 +0.1**
comp=N,1.2nm,0.8s,baz=80,slow=11,SNR=8.0
comp=N,1.2nm,0.8s
HFS Hagfors 21.89 349 P **P 22 14 48.6 0.0**
comp=N,2.6nm,0.6s,baz=164,slow=12,SNR=7.7
comp=N,2.6nm,0.6s
FINES FINESS Array B 22.70 5 P **P 22 14 56.4 -0.9**
comp=N,2.0nm,0.7s,baz=172,slow=15,SNR=5.7
comp=N,2.0nm,0.7s
FINES FINESS Array B 22.70 5 P **P 22 14 55.8 -1.5**
NOA NORSAR Array B 23.16 347 P **P 22 15 00.7 -1.4**
comp=N,0.5nm,0.5s,baz=163,slow=11,SNR=2.2
comp=N,0.5nm,0.5s
NC303 NORSAR Array S 23.30 347 P **P 22 15 04.3 +0.7**
EKA Eskdalemuir Ar 23.53 323 P **P 22 15 04.5 -1.3**
comp=N,0.6nm,0.5s,baz=122,slow=9.2,SNR=2.0
comp=N,0.6nm,0.5s
ARCES ARCESS Array B 30.75 2 P **P 22 16 10.3 -0.5**
comp=N,1.9nm,0.8s,baz=196,slow=9.2,SNR=3.9
comp=N,1.9nm,0.8s
TOA0 Torodi Ar. Sit 31.33 221 P **P 22 16 17.6 +1.3**
TOA0 IAmb IAmb 22 16 23.8
comp=Z,4.8nm,1.4s
TORD Torodi Ar. Bea 31.33 221 P **P 22 16 16.9 +0.5**
comp=Z,1.2nm,0.8s,baz=32,slow=8.7,SNR=3.2
comp=Z,1.2nm,0.8s
MK31 Makanchi Array 43.94 59 P **P 22 18 02.4 -0.3**
MKAR Makanchi Array 43.94 59 P **P 22 18 02.2 -0.5**
comp=Z,0.9nm,0.6s,baz=277,slow=7.6,SNR=20
comp=Z,0.9nm,0.6s
MKAR Makanchi Array 43.94 59 P **P 22 18 02.5 -0.3**
ZAA0 Zalesovo Array 44.34 49 P **P 22 18 05.5 -0.4**
ZAA0 IAmb IAmb 22 18 07.2
comp=Z,3.9nm,1.1s
ZALV Zalesovo Beam 44.34 49 P **P 22 18 05.5 -0.3**
comp=Z,2.1nm,0.5s,baz=273,slow=8.7,SNR=8.6
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 44.34 49 P **P 22 18 05.7 -0.1**
IMAR Indian Mountai 75.39 358 P **P 22 21 39.2 +0.1**

NEIC ***24*** *22:32:58.5±1.4, 56°.4S±0°.1×27°.4W±0°.2, h99km±6km, mb4.5/12, Error ellipse: s-maj=17.8km s-min=16.4km az=132.0*
IDC ***24*** *22:32:59.1±7.4, 56°.31S×27°.37W, h105km±67km, mb3.8/7, mbtmp4.2/8, ML4.2/1, Error ellipse: s-maj=24.4km s-min=20.1km az=109.0*
ISC 24 22:32:59.6±0.6, 56°.35S±0°.09×27°.4W±0°.1, h112km, n38, σ0°54/36, mb4.2/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.57**	**288**	Pn	**Pn**	**22 34 20.1**	**+0.2**
ESPZ	**Base Esperanza**	**16.30**	**232**	Pn	**Pn**	**22 36 40.1**	**-1.5**
VNA3	**Neumayer Olymp**	**16.75**	**160**	P	**Pn**	**22 36 47.3**	**+0.2**
SNAA	**Sanae**	**18.52**	**156**	P	**P**	**22 37 06.7**	**-0.2**
SNAA	**Sanae**	**18.52**	**156**	P	**P**	**22 37 06.9**	**-0.1**
0.8nm,0.3s,baz=299,slow=11,SNR=40							
4.4nm,0.6s							
SNAA	**Sanae**	**18.52**	**156**	P	**P**	**22 37 06.7**	**-0.2**
TROLL	**Troll, Antarti**	**20.04**	**153**	P	**P**	**22 37 22.8**	**-0.6**
BELA	**Belgrano 2**	**21.76**	**184**	P	**P**	**22 37 41.2**	**-0.5**
QSPA	**South Pole Qui**	**33.90**	**180**	P	**P**	**22 39 32.0**	**+0.6**
1.3nm,0.5s,baz=229,slow=1.4,SNR=17							
1.3nm,0.5s							
QSPA	**South Pole Qui**	**33.90**	**180**	P	**P**	**22 39 32.0**	**+0.6**
QSPA				IAmb	IAmb	22 39 34.1	
comp=Z,6.0nm,1.4s							
BOSA	**Boshof**	**46.18**	**76**	P	**P**	**22 41 12.6**	**-0.5**
comp=Z,3.6nm,1.1s,baz=207,slow=9.7,SNR=2.6							
comp=Z,3.6nm,1.1s							
BOSA	**Boshof**	**46.18**	**76**	P	**P**	**22 41 12.2**	**-0.8**
BOSA				IAmb	IAmb	22 41 16.6	
comp=Z,18nm,1.4s							
VNDA	**Vanda**	**46.26**	**183**	P	**P**	**22 41 13.9**	**+0.9**
comp=Z,1.0nm,0.8s,baz=195,slow=6.1,SNR=9.3							
comp=Z,1.0nm,0.8s							
VNDA	**Vanda**	**46.26**	**183**	P	**P**	**22 41 14.1**	**+1.1**
LBTB	**Lobatse**	**49.23**	**73**	P	**P**	**22 41 36.4**	**-0.2**
comp=Z,2.1nm,0.6s,baz=216,slow=7.2,SNR=4.3							
comp=Z,2.1nm,0.6s							
LBTB	**Lobatse**	**49.23**	**73**	P	**P**	**22 41 36.3**	**-0.3**
H10N1	**ASCENSION HYDR**	**49.45**	**17**	T	T	23 35 23.4	
baz=192,slow=72,SNR=11							
H10N3	**ASCENSION HYDR**	**49.45**	**17**	T	T	23 35 54.0	
baz=192,slow=72,SNR=6.3							
H10N2	**ASCENSION HYDR**	**49.47**	**17**	T	T	23 35 22.5	
baz=192,slow=72,SNR=7.4							
TSUM	**Tsumeb**	**49.95**	**61**	P	**P**	**22 41 42.1**	**-0.1**
TSUM				IAmb	IAmb	22 42 13.2	
comp=Z,12nm,1.5s							
LPAZ	**La Paz**	**50.44**	**306**	P	**P**	**22 41 46.5**	**0.0**
comp=Z,1.9nm,0.4s,baz=128,slow=5.0,SNR=12							
comp=Z,1.9nm,0.4s							
LPAZ	**La Paz**	**50.44**	**306**	P	**P**	**22 41 46.6**	**+0.2**
LPAZ				IAmb	IAmb	22 41 47.4	
comp=Z,2.6nm,0.5s							
DBIC	**Dimbokro**	**65.50**	**25**	P	**P**	**22 43 30.6**	**-0.1**
comp=Z,1.6nm,0.6s,baz=152,slow=7.7,SNR=2.1							
comp=Z,1.6nm,0.6s							
DBIC	**Dimbokro**	**65.50**	**25**	P	**P**	**22 43 31.0**	**+0.3**
DBIC				IAmb	IAmb	22 43 33.3	
comp=Z,9.1nm,1.2s							
TOA0	**Torodi Ar. Sit**	**73.39**	**30**	P	**P**	**22 44 19.2**	**0.0**
TOA0				IAmb	IAmb	22 44 20.5	
comp=Z,4.3nm,1.1s							
TORD	**Torodi Ar. Bea**	**73.39**	**30**	P	**P**	**22 44 19.6**	**+0.4**
comp=Z,1.5nm,0.4s,baz=199,slow=6.5,SNR=39							
comp=Z,1.5nm,0.4s							
FINES	**FINESS Array B**	**124.72**	**28**	PKP	**PKPdf**	**22 51 43.9**	**-0.6**
comp=Z,3.4nm,0.9s,baz=207,slow=2.8,SNR=5.9							
INK	**Inuvik**	**145.95**	**320**	PKPdf	**PKPdf**	**22 52 24.0**	**+0.6**
EPYK	**Eagle Plains**	**146.55**	**316**	PKPdf	**PKPbc**	**22 52 26.0**	**-0.4**
I26K	**Coal Creek Min**	**148.80**	**313**	PKPbc	**PKPbc**	**22 52 32.2**	**-0.2**
ILAR	**Eielson Array**	**150.21**	**311**	PKPbc	**PKPbc**	**22 52 35.9**	**0.0**
comp=Z,2.1nm,1.0s,baz=113,slow=0.8,SNR=14							
SONM	**Songino Array**	**150.88**	**87**	PKPbc	**PKPbc**	**22 52 37.9**	**-0.2**
comp=Z,0.8nm,0.7s,baz=219,slow=4.3,SNR=5.3							
SKT	**Skwentna**	**151.60**	**305**	PKPdf	**PKPdf**	**22 52 33.5**	**+0.7**
SKT				PKPbc	**PKPbc**	**22 52 38.7**	**-0.4**
KTH	**Kantishna Hill**	**151.68**	**308**	PKPbc	**PKPbc**	**22 52 39.0**	**-0.4**
TOLK	**Toolik Lake Re**	**151.82**	**319**	PKPbc	**PKPbc**	**22 52 39.4**	**-0.1**
PPLA	**Purkeypile**	**152.10**	**306**	PKPbc	**PKPbc**	**22 52 39.8**	**-0.7**
M20K	**Styx River**	**152.31**	**304**	PKPbc	**PKPbc**	**22 52 40.3**	**-0.6**
H21K	**Melozitna Rive**	**152.82**	**312**	PKPbc	**PKPbc**	**22 52 41.7**	**-0.1**

IDC ***24*** *22:47:43.7±1.0, 38°.97N×21°.93E, h0km, mb3.7/10, mbtmp3.6/16, ML3.1/5, Error ellipse: s-maj=16.9km s-min=13.8km az=135.0*
ATH ***24*** *22:47:45.3, 38°.91N×21°.95E, h17km±1km, ML3.5/13, Error ellipse: s-maj=1.4km s-min=1.0km az=289.0*
PDG ***24*** *22:47:45.6±0.6, 38°.94N×22°.01E, h12km, ML3.6/12, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
THE ***24*** *22:47:45.4, 38°.90N×21°.94E, h15km, ML3.5/9, Error ellipse: s-maj=0.8km s-min=0.4km az=281.0*
ISC 24 22:47:45.8±0.7, 38°.92N±0°.02×21°.95E±0°.02, h14km±4km, n104, σ1°65/149, mb3.8/9, 22C-13D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.11**	**271**	P	**Pg**	**22 47 48.6**	**-0.6**
EVR				S	**Sg**	**22 47 50.7**	**-0.8**
36μm,0.2s							
EVR	**Evrytania**	**0.11**	**271**	P	**Pg**	**22 47 48.6**	**-0.6**
EVR				S	**Sg**	**22 47 50.7**	**-0.8**
MAKR	**Makrakomi, Fth**	**0.17**	**55**	P	**Pg**	**22 47 50.1**	**+0.1**
MAKR				S	**Sg**	**22 47 53.3**	**+0.5**
MAKR	**Makrakomi, Fth**	**0.17**	**55**	P	**Pg**	**22 47 50.1**	**+0.1**
MAKR				S	**Sg**	**22 47 53.3**	**+0.5**
MAKR				AML	AML	22 47 54.0	
MAKR				AML	AML	22 47 54.0	
AGG	**Agios Georgios**	**0.32**	**70**	P	**Pb**	**22 47 52.5**	**-0.7**
PVO	**Paravola**	**0.45**	**228**	P	**Pg**	**22 47 54.0**	**-0.7**
PVO				S	**Sg**	**22 48 01.1**	**+0.4**
4μm,0.4s							
PVO	**Paravola**	**0.45**	**228**	P	**Pg**	**22 47 54.0**	**-0.7**
EFP	**Efpalio**	**0.49**	**184**	P	**Pg**	**22 47 54.9**	**-0.6**
EFP				S	**Sg**	**22 48 01.9**	**-0.1**
12μm,0.3s							
EFP	**Efpalio**	**0.49**	**184**	P	**Pg**	**22 47 54.9**	**-0.6**
EFP				S	**Sg**	**22 48 01.9**	**-0.1**
EFP				AML	AML	22 48 04.7	
comp=E,20820μm,0.2s							
EFP				AML	AML	22 48 05.3	
comp=N,24933μm,0.4s							
SERG	**Sergoula**	**0.51**	**170**	P	**Pg**	**22 47 55.1**	**-0.7**
SERG				S	**Sg**	**22 48 02.2**	**-0.4**
comp=N,9μm,0.2s							
SERG	**Sergoula**	**0.51**	**170**	P	**Pg**	**22 47 55.1**	**-0.7**
SERG				S	**Sg**	**22 48 02.2**	**-0.4**
SERG				AML	AML	22 48 05.5	
comp=N,21076μm,0.2s							
SERG				AML	AML	22 48 06.5	
comp=E,24016μm,0.2s							
AXAR	**Agios Charalam**	**0.57**	**105**	P	**Pg**	**22 47 56.1**	**-1.0**
AXAR				S	**Sg**	**22 48 04.1**	**-0.7**
AXAR				AML	AML	22 48 09.9	
comp=E,19084μm,0.3s							
AXAR				AML	AML	22 48 10.8	
comp=N,18213μm,0.4s							
DLFA	**Delphi**	**0.61**	**135**	P	**Pg**	**22 47 56.6**	**-1.2**
DLFA				S	**Sg**	**22 48 04.9**	**-1.0**
DLFA				AML	AML	22 48 06.9	
comp=N,10913μm,0.5s							
DLFA				AML	AML	22 48 07.3	
comp=E,10617μm,0.2s							
THL	**Klokotos Trika**	**0.65**	**4**	P	**Pg**	**22 47 57.8**	**-0.8**
THL				S	**Sb**	**22 48 08.0**	**+0.2**
comp=E,4μm,0.4s							
THL	**Klokotos Trika**	**0.65**	**4**	P	**Pg**	**22 47 57.8**	**-0.8**
THL				S	**Sg**	**22 48 05.9**	**-1.2**
THL				AML	AML	22 48 09.4	
comp=E,9019μm,0.5s							
THL				AML	AML	22 48 09.7	
comp=N,7261μm,0.3s							
LAKA	**Lakka**	**0.67**	**178**	P	**Pg**	**22 47 58.0**	**-1.0**
LAKA				AML	AML	22 48 16.1	
comp=E,11969μm,0.6s							
LAKA				AML	AML	22 48 16.3	
comp=N,12104μm,0.6s							
LRSO	**Larissa Observ**	**0.83**	**24**	P	**Pg**	**22 48 00.8**	**-1.1**
LRSO				S	**Sb**	**22 48 13.6**	**+0.6**
comp=N,6μm,0.5s							
LRSO	**Larissa Observ**	**0.83**	**24**	P	**Pg**	**22 48 00.8**	**-1.1**
LRSO				AML	AML	22 48 17.8	
comp=N,12411μm,0.5s							
LRSO				AML	AML	22 48 18.0	
comp=E,11917μm,0.5s							
KLV	**Kalavryta, Ach**	**0.88**	**170**	P	**Pg**	**22 48 01.6**	**-1.4**
KLV				S	**Sg**	**22 48 14.5**	**0.0**
comp=E,2μm,0.5s							
KLV	**Kalavryta, Ach**	**0.88**	**170**	P	**Pg**	**22 48 01.5**	**-1.4**
KLV				S	**Sg**	**22 48 13.3**	**-1.2**
KLV				AML	AML	22 48 16.6	
comp=E,3156μm,0.5s							
KLV				AML	AML	22 48 18.6	
comp=N,3790μm,0.5s							
TSLK	**Tsoukalades, L**	**1.01**	**265**	P	**Pg**	**22 48 04.0**	**-1.4**
TSLK	**Tsoukalades, L**	**1.01**	**265**	P	**Pg**	**22 48 04.0**	**-1.4**
TSLK				AML	AML	22 48 34.3	
comp=N,1977μm,0.7s							
TSLK				AML	AML	22 48 35.1	
comp=E,1974μm,0.5s							
LKD2	**Lefkada island**	**1.02**	**263**	P	**Pg**	**22 48 04.4**	**-1.0**
LKD2	**Lefkada island**	**1.02**	**263**	P	**Pg**	**22 48 04.4**	**-1.0**
LKD2				AML	AML	22 48 26.3	
comp=N,2168μm,0.5s							
LKD

APE	Apeiranthos	3.38	122	⇓P		Pn	22 48 38.6 +0.5
APE				⇑S		Sn	22 49 18.4 +0.4
ULC	Ulcinj	3.68	327	⇓*i*P		Pn	22 48 43.7 +1.5
ULC				*i* Sn		Sn	22 49 28.1 +2.7
VTS	Vitosha	3.83	14	⇓P		Pn	22 48 45.1 +0.8
VTS				⇑S		Sn	22 49 29.3 +0.1
DRME	Dracevica, Mon	3.89	328	*e*Pn		Pn	22 48 47.4 +2.3
DRME	Dracevica, Mon	3.89	328	*e*Pn		Pn	22 48 46.6 +1.5
DRME				*i* Sn		Sn	22 49 33.1 +2.6
PVY	Plav	3.97	338	*e*Pn		Pn	22 48 47.7 +1.3
PVY				*i* Sn		Sn	22 49 35.0 +2.2
TIP	Timpagrande	4.05	275	⇓P		Pn	22 48 49.5 +2.1
PDG	Podgorica	4.07	331	⇑P		Pn	22 48 49.8 +2.3
PDG				⇓S		Sn	22 49 38.1 +3.3
TTG	Podgorica	4.07	331	⇑*i*Pn		Pn	22 48 49.1 +1.6
TTG				*i* Sn		Sn	22 49 37.3 +2.5
BUM	Brajici-Budva	4.10	326	⇑*i*Pn		Pn	22 48 49.6 +1.5
BUM				*i* Sn		Sn	22 49 38.4 +2.5
IVA	Berane	4.25	339	⇓*i*Pn		Pn	22 48 51.5 +1.4
IVA				*i* Sn		Sn	22 49 41.6 +2.1
CEME	Cevo	4.30	329	⇑*i*Pn		Pn	22 48 52.3 +1.5
CEME				*i* Sn		Sn	22 49 43.0 +2.3
IDI	Anoyia	4.32	146	⇑P		Pn	22 48 53.0 +2.0
IDI				⇓S		Sn	22 49 44.5 +3.3
IDI	Anoyia	4.32	146	Pn		Pn	22 48 51.9 +0.9
	comp=N,1.8nm,0.3s,baz=174,slow=8.6,SNR=6.9						
IDI				Sn		Sn	22 49 40.9 -0.3
	comp=N,1.9nm,0.3s,baz=56,slow=15,SNR=1.7						
	comp=N,3.1nm,0.3s						
KOME	Kolasin	4.34	336	⇑*i*Pn		Pn	22 48 52.9 +1.5
KOME				*i* Sn		Sn	22 49 44.0 +2.1
MATE	Matera	4.40	295	⇓P		Pn	22 48 53.8 +1.8
HCY	Herceg Novi	4.40	324	*e*Pn		Pn	22 48 52.8 +0.7
HCY	Herceg Novi	4.40	324	⇑*i*Pn		Pn	22 48 53.8 +1.7
HCY				*i* Sn		Sn	22 49 45.6 +2.5
NKME	Niksic	4.47	330	*e*Pn		Pn	22 48 54.7 +1.6
NKME				*i* Sn		Sn	22 49 47.2 +2.3
BOVS	Bovan	4.72	358	⇑P		Pn	22 48 56.5 0.0
BLKB	Belogradchik	4.74	6	⇑P		Pn	22 48 57.9 +1.1
BLKB				⇓S		Sn	22 49 51.9 +0.4
BRY	Bratogost	4.75	328	*e*Pn		Pn	22 48 58.6 +1.5
BRY	Bratogost	4.75	328	*e*Pn		Pn	22 48 58.5 +1.5
BRY				*i* Sn		Sn	22 49 53.9 +2.0
UPM	Unac-Piva	4.86	333	*e*Pn		Pn	22 49 01.1 +2.5
UPM	Unac-Piva	4.86	333	*e*Pn		Pn	22 49 00.1 +1.5
UPM				*i* Sn		Sn	22 49 56.6 +1.8
RUDO	Rudo	5.08	338	*e*Pn		Pn	22 49 01.9 +0.4
STON	Ston	5.10	322	*e*Pn		Pn	22 49 00.8 -0.9
BBLS	Lazići	5.30	340	*e*Pn		Pn	22 49 06.0 +1.4
DIVS	Divibare	5.38	345	*e*Pn		Pn	22 49 06.6 +0.9
HAPS	Han Pijesak,Bl	5.63	337	*e*Pn		Pn	22 49 10.9 +1.7
HERR	Herculane	5.97	3	⇓P		Pn	22 49 14.5 +0.8
VAE	Valguarnera	6.11	259	Pn		Pn	22 49 16.7 +1.1
	comp=N,0.3nm,0.3s,baz=56,slow=7.3,SNR=1.3						
VAE				Sn		Sn	22 50 27.4 +2.1
	comp=N,0.4nm,0.3s,baz=8.7,slow=13,SNR=1.5						
	comp=N,4.4nm,0.9s						
SRKY	Kupres RS	6.28	327	*e*Pn		Pn	22 49 19.5 +1.5
FRGS	Fruska Gora	6.44	346	⇑P		Pn	22 49 20.8 +0.7
FRGS				⇑S		Sn	22 50 35.3 +2.0
FRGS	Fruska Gora	6.44	346	*e*Pn		Pn	22 49 20.7 +0.6
GZR	Gura Zlata	6.50	5	⇑P		Pn	22 49 21.9 +0.8
MGRS	Mrkonjic Grad	6.59	328	*e*Pn		Pn	22 49 24.1 +1.8
BZS	Buzias	6.70	358	⇑P		Pn	22 49 25.3 +1.6
BZS				⇑S		Sn	22 50 40.5 +0.6
ARR	Arges	6.75	16	⇓P		Pn	22 49 24.6 +0.2
BLY	Banja Luka	6.83	330	*e*Pn		Pn	22 49 27.2 +1.7
VOIR		6.91	18	⇑P		Pn	22 49 27.7 +1.0
A051A	Mrakovica	7.16	330	*e*Pn		Pn	22 49 31.3 +1.3
MLR	Muntele Rosu	7.21	23	⇓P		Pn	22 49 32.4 +1.6
MLR	Muntele Rosu	7.21	23	Pn		Pn	22 49 32.5 +1.6
	comp=N,4.9nm,0.5s,baz=220,slow=7.9						
MLR				Sn		Sn	22 50 51.3 -1.2
	baz=264,slow=19						
COVR	Voineasa-Covas	7.61	23	⇑P		Pn	22 49 37.1 +1.0
MORH	Mrgy, Hungar	7.69	343	⇑P		Pn	22 49 37.9 +0.6
PLOR	Plostina	7.75	25	⇑P		Pn	22 49 39.5 +1.3
VRI	Vrincioaia	7.79	25	⇓P		Pn	22 49 40.5 +1.8
BOJS	Bojanci	8.25	325	*e*Pn		Pn	22 49 45.5 +0.6
CEY	Cerknica	8.80	323	*e*Pn		Pn	22 49 53.2 +0.6
SKDS	Skadanscina	8.86	321	*e*Pn		Pn	22 49 54.1 +0.8
BURAR	Bucovina Array	9.02	14	⇑P		Pn	22 49 57.6 +2.0
BRTR	Keskin Array B	9.10	81	Pn		Pn	22 49 59.0 +2.2
	comp=N,0.2nm,0.3s,baz=264,slow=12,SNR=8.6						
	comp=N,0.7nm,0.5s						
OBKA	Obir	9.34	327	*e*Pn		Pn	22 49 59.5 -0.5
OBKA	Obir	9.34	327	*e*Pn		Pn	22 50 02.9 +2.9
	comp=N,0.7nm,0.2s						
OBKA				*i* Sn		Sn	22 51 44.3 -0.4
	comp=N,4.7nm,0.5s						
ABTA	Abfaltersbach	10.45	322	*e*Pn		Pn	22 50 16.8 +1.7
	comp=N,0.9nm,0.3s						
ABTA				*e*Sn		Sn	22 52 06.2 -5.7
	comp=N,6.1nm,0.9s						
SQTA	Sankt Quirin	11.42	320	*e*Pn		Pn	22 50 29.8 +1.3
	comp=N,1.6nm,0.3s						
SQTA				*i* Sn		Sn	22 52 28.4 -7.4
	comp=N,1.4nm,0.5s						
MOTA	Moosalm	11.56	320	*i* Pn		Pn	22 50 34.8 +4.4
	comp=N,0.9nm,0.4s						
MOTA				*e*Sn		Sn	22 52 36.9 -2.3
	comp=N,7.5nm,0.9s						
GERES	GERESS Array B	11.56	332	Pn		Pn	22 50 30.6 +0.1
	comp=N,0.1nm,0.3s,baz=162,slow=13,SNR=2.3						
	comp=N,0.2nm,0.4s						
DAVOX	Davos/Dischmat	11.83	316	Pn		Pn	22 50 33.9 -0.3
	comp=N,0.1nm,0.3s,baz=131,slow=19,SNR=1.6						
DAVOX				Sn		Sn	22 52 43.0 -3.1
	comp=N,0.2nm,0.3s,baz=325,slow=18,SNR=2.3						
	comp=N,0.7nm,0.6s						
ESDC	Sonseca Array	20.05	280	P		P	22 52 18.4 -0.1
	comp=N,1.2nm,0.8s,baz=77,slow=9.9,SNR=7.7						
	comp=N,1.2nm,0.8s						
HFS	Hagfors	21.87	349	P		P	22 52 36.9 -1.0
	comp=N,1.5nm,0.5s,baz=149,slow=12,SNR=8.6						
	comp=N,1.5nm,0.5s						
FINES	FINESS Array B	22.70	5	P		P	22 52 45.4 -1.3
	comp=N,3.4nm,0.9s,baz=172,slow=11,SNR=4.1						
	comp=N,3.4nm,0.9s						
NB2	NORSAR Subarra	23.14	347	P		P	22 52 51.4 +0.1
	comp=Z,4.9nm,1.4s,baz=162,slow=10						
NOA	NORSAR Array B	23.14	347	P		P	22 52 49.9 -1.4
	comp=Z,1.7nm,0.9s,baz=156,slow=10,SNR=2.5						
	comp=Z,1.7nm,0.9s						
EKA	Eskdalemuir Ar	23.50	323	P		P	22 52 54.0 -0.9
	comp=Z,1.2nm,0.7s,baz=118,slow=9.0,SNR=2.6						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	30.74	2	P		P	22 53 59.5 -0.6
	comp=Z,2.6nm,0.9s,baz=191,slow=9.2,SNR=2.0						
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	31.31	220	P		P	22 54 06.2 +0.5
	comp=Z,1.0nm,0.7s,baz=28,slow=8.2,SNR=7.2						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	43.96	59	P		P	22 55 51.8 -0.5
	comp=Z,1.0nm,0.6s,baz=276,slow=7.6,SNR=18						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	44.37	49	P		P	22 55 54.8 -0.6
	comp=Z,2.3nm,0.6s,baz=271,slow=8.8,SNR=8.7						
	comp=Z,2.3nm,0.6s						
SONM	Songino Array	59.12	51	P		P	22 57 46.0 +0.2
	comp=Z,0.2nm,0.5s,baz=304,slow=8.0,SNR=1.4						
	comp=Z,0.2nm,0.5s						

EAF ***24*** *23:29:49.0±9.1, 3.°29S×28.°76E, h0km±999km, MD4.3*
IDC ***24*** *23:29:57.9±0.6, 2.°57S×28.°90E, h0km, mb4.3/16, mbtmp4.3/20, ML2.1/1, MS3.4/15, Error ellipse: s-maj=17.8km s-min=11.6km az=104.0*
NEIC ***24*** *23:30:00.7±1.7, 2.°61S±0.°10×29.°0E±0.°1, h10km±1km, mb4.7/41, Error ellipse: s-maj=19.7km s-min=15.4km az=293.0*
AAE ***24*** *23:32:42.1±208.0, 0.°63S×30.°74E, h0km±999km*
ISC 24 23:29:59.5±0.4, 2.°61S±0.°04×28.°98E±0.°06, h12km, n157, σ1§54/156, mb4.6/48, MS3.5/12, 9C-15D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	Mbarara	2.66	42	Pn	Pn	23 30 42.3	0.0
	88nm,0.3s,baz=41,slow=20,SNR=129						
MBAR				Pg	Pb	23 30 46.5	-0.7
	881nm,0.3s,baz=221,slow=19,SNR=103						
MBAR				LR	LR	23 31 17.4	
	comp=Z,270nm,18.0s,baz=162,slow=30						
MBAR				Lg	Lg	23 31 17.7	
	2μm,0.3s,baz=298,slow=22,SNR=20						
MBAR	Mbarara	2.66	42	Pn	Pn	23 30 42.1	-0.2
MBAR	Mbarara	2.66	42	*e*P	Pn	23 30 42.3	0.0
MBAR				*e*S	Sn	23 31 13.4	-1.1
MBAR	Mbarara	2.66	42	*e*P	Pg	23 30 50.7	+0.2
MBAR				*e*S	Sb	23 31 18.6	-1.3
MBAR	Mbarara	2.66	42	*e*P	Pg	23 30 50.7	+0.2
MBAR				*e*S	Sb	23 31 18.6	-1.3
MBAR	Mbarara	2.66	42	*e*P	Pg	23 30 50.7	+0.2
MBAR				*e*S	Sb	23 31 18.6	-1.3
KIL	Kilembe	2.97	20	*e*P	Pn	23 30 45.9	-0.8
KIL				*e*S	Sb	23 31 28.6	-0.3
ENT	Entebbe	4.39	53	*e*P	Pn	23 31 05.8	-0.3
ENT				*e*S	Sn	23 31 58.6	+1.4
I32KE	NAIROBI INFRAS	7.96	80	*i*		00 18 40.0	
	baz=261,slow=342,SNR=1.0						
KMBO	Kilima Mbogo	8.40	80	Pn	Pn	23 32 01.6	+0.2
	7.6nm,0.3s,baz=232,slow=18,SNR=53						
KMBO				Sn	Sn	23 33 39.3	+2.9
	3.4nm,0.3s,baz=356,slow=19,SNR=6.0						
KMBO				Lg		23 34 19.6	
	8.4nm,0.3s,baz=165,slow=23,SNR=12						
KMBO	Kilima Mbogo	8.40	80	Pn	Pn	23 32 01.2	-0.2
KMBO	Kilima Mbogo	8.40	80	*e*P	Pn	23 32 01.5	+0.2
KMBO	Kilima Mbogo	8.40	80	*e*P	Sn	23 33 34.7	-1.7
KMBO				*e*S	Sg	23 34 18.8	-11
KMBO	Kilima Mbogo	8.40	80	*e*P	Sn	23 33 34.7	-1.7
KMBO				*e*S	Sg	23 34 18.8	-11
LODK	Lodwar	8.75	47	Pn	Pn	23 32 03.5	-2.6
LODK	Lodwar	8.75	47	*e*S	Sg	23 34 25.4	-15
KIBK	Kibwezi	9.07	89	Pn	Pn	23 32 09.0	-1.4
LSZ	Lusaka	12.62	183	Pn	Pn	23 32 59.0	0.0
	3.3nm,0.7s,baz=8.1,slow=13,SNR=14						
LSZ				Sn	Sn	23 35 17.4	-2.2
	0.7nm,0.3s,baz=108,slow=20,SNR=2.4						
LSZ				Lg	Lg	23 36 34.1	
	3.0nm,0.3s,baz=123,slow=19,SNR=9.1						
LSZ				LR	LR	23 36 54.8	
	comp=Z,40nm,21.3s,baz=12,slow=33						
MATP	Matopo	17.72	181	P	Pn	23 34 06.2	-0.1
	3.0nm,0.6s,baz=359,slow=14,SNR=8.3						
MATP				S	Sn	23 37 21.9	-2.0
	3.8nm,0.6s,baz=287,slow=18,SNR=1.4						
MATP				Lg	Lg	23 39 15.5	
	0.4nm,0.3s,baz=83,slow=23,SNR=4.0						
MUSN	Musina, Limpop	19.58	178	*e*P	Pn	23 34 29.2	+0.3
MUSN				*e*S	Sn	23 38 19.9	+11
ATD	Arta Tunnel	19.69	44	LR	LR	23 41 39.1	
	comp=Z,136nm,19.7s,baz=20,slow=36						
TSUM	Tsumeb	19.91	213	P	P	23 34 31.6	+0.4
	0.3nm,0.3s,baz=47,slow=9.2,SNR=5.0						
TSUM				S	S	23 38 14.2	-1.2
	3.5nm,0.7s,baz=307,slow=20,SNR=1.5						
TSUM				Lg	Lg	23 40 25.6	
	0.3nm,0.3s,baz=329,slow=11,SNR=3.4						
	2.5nm,0.5s						
TSUM	Tsumeb	19.91	213		Pn	23 34 33.9	+1.0
MOPA	Mopani	20.92	174	*e*P	Pn	23 34 43.9	-0.7
MOPA				IAmb	IAmb	23 34 49.9	
	comp=Z,1.1nm,0.9s						
LEPH	Lephalale, Lim	21.16	183	*e*P	P	23 34 45.2	+0.4
LEPH				IAmb	IAmb	23 34 48.7	
	comp=Z,409nm,3.0s						
LBTB	Lobatse	22.52	188	P	P	23 35 01.4	+2.1
	comp=Z,15nm,0.9s,baz=8.4,slow=10,SNR=12						
LBTB				Lg	Lg	23 41 50.2	
	comp=Z,0.1nm,0.3s,baz=62,slow=2.9,SNR=3.8						
LBTB				LR	LR	23 44 18.8	
	comp=Z,97nm,18.5s,baz=359,slow=38						
	comp=Z,15nm,0.9s						
LBTB	Lobatse	22.52	188	P	P	23 35 00.9	+1.6
LBTB				IAmb	IAmb	23 35 03.7	
	comp=Z,29nm,1.1s						
LBTB	Lobatse	22.52	188	*e*P	P	23 35 02.8	+3.4
LBTB				IAmb	IAmb	23 35 03.4	
	comp=Z,28nm,1.1s						
OPO	Ambohidratompo	23.88	133	LR	LR	23 43 04.4	
	comp=Z,183nm,21.1s,baz=188,slow=33						
PRYS	Parys	24.23	184	*e*P	P	23 35 17.6	+1.1
PRYS				IAmb	IAmb	23 35 20.7	
	comp=Z,31nm,1.3s						
BOSA	Boshof	26.11	187	P	P	23 35 33.5	0.0
	comp=Z,3.0nm,0.5s,baz=8.0,slow=6.6,SNR=14						
BOSA				Lg	Lg	23 43 44.8	
	comp=Z,0.1nm,0.3s,baz=90,slow=16,SNR=2.8						
BOSA				LR	LR	23 46 08.3	
	comp=Z,184nm,20.3s,baz=7.0,slow=37						
	comp=Z,3.0nm,0.5s						
BOSA	Boshof	26.11	187	P	P	23 35 34.3	+0.8
KEIM	Keimoes	27.05	196	*e*P	P	23 35 42.9	+1.0
KEIM				IAmb	IAmb	23 35 44.5	
	comp=Z,19nm,1.3s						
TOA0	Torodi Ar. Sit	31.27	301	P	P	23 36 18.6	-1.0
TORD	Torodi Ar. Bea	31.27	301	P	P	23 36 18.4	-1.2
	comp=Z,3.2nm,0.9s,baz=111,slow=8.1,SNR=19						
TORD				Lg	Lg	23 46 28.7	
	baz=130,slow=25,SNR=3.9						
	comp=Z,3.2nm,0.9s						
EIL	Elat	32.60	10	LR	LR	23 48 51.5	
	comp=Z,58nm,20.8s,baz=112,slow=35						
DBIC	Dimbokro	35.01	285	P	P	23 36 51.1	-1.1
	comp=Z,1.3nm,0.5s,baz=90,slow=11,SNR=2.1						
	comp=Z,1.3nm,0.5s						
MMAI	Mount Meron Ar	35.95	9	LR	LR	23 52 18.1	
	comp=Z,45nm,20.6s,baz=159,slow=37						
WSAR	Wadi Sarin	38.67	47	LR	LR	23 53 14.7	
	comp=Z,43nm,21.2s,baz=272,slow=36						
ITM	Ithomi	40.12	351	P	P	23 37 36.6	+1.4
ITM				IAmb	IAmb	23 38 04.1	
	comp=Z,14nm,1.1s						
BR131	Keskin Array S	42.34	5	P	P	23 37 54.0	+0.4
BR131				IAmb	IAmb	23 37 58.2	
	comp=Z,16nm,1.5s						
BRTR	Keskin Array B	42.34	5	P	P	23 37 53.9	+0.3
	comp=Z,2.3nm,0.7s,baz=186,slow=9.5,SNR=15						
	comp=Z,2.3nm,0.7s						
BRTR	Keskin Array B	42.34	5	P	P	23 37 54.6	+1.0
LIT	Litokhoron	42.91	353	P	P	23 37 59.1	+1.0
MDUB	Mudurnu	42.92	2	P	P	23 37 58.3	+0.1
KBN	Korca	43.67	351	P	P	23 38 05.2	+1.0
KBN				IAmb	IAmb	23 38 09.1	
	comp=Z,17nm,1.0s						
TIR	Tirane	44.53	350	⇓P	P	23 38 12.2	+1.2
TIR	Tirane	44.53	350	P	P	23 38 11.7	+0.7
VTS	Vitosha	45.31	354	⇑P	P	23 38 18.8	+1.3
VTS	Vitosha	45.31	354	P	P	23 38 19.5	+2.0
PDG	Podgorica	45.68	350	⇑P	P	23 38 20.9	+0.7
PDG	Podgorica	45.68	350	P	P	23 38 20.5	+0.3
PDG				IAmb	IAmb	23 38 24.2	
	comp=Z,8.4nm,0.9s						
PLVB	Pleven	45.95	356	⇑P	P	23 38 24.3	+2.0
RAZG	Razgrad	46.02	358	⇓P	P	23 38 24.6	+1.8
INTR	Introdacqua	46.47	344	P	P	23 38 27.3	+0.8
INTR				IAmb	IAmb	23 38 38.6	
	comp=Z,12nm,1.4s						
BOVS	Bovan	46.49	353	⇓P	P	23 38 26.4	-0.1
DIVS	Divibare	47.19	351	P	P	23 38 32.7	+0.6
DIVS				IAmb	IAmb	23 38 36.8	
	comp=Z,7.9nm,1.0s						
ARR	Arges	47.92	356	⇓P	P	23 38 37.5	-0.3
VOIR		47.96	356	⇓P	P	23 38 40.3	+2.2
MLR	Muntele Rosu	47.96	357	⇑P	P	23 38 38.4	+0.2
MLR	Muntele Rosu	47.96	357	P	P	23 38 38.1	-0.1
	comp=Z,7.1nm,0.9s,baz=196,slow=11,SNR=8.7						
	comp=Z,7.1nm,0.9s						
MLR	Muntele Rosu	47.96	357	P	P	23 38 39.0	+0.8
MLR				IAmb	IAmb	23 38 43.1	
	comp=Z,8.2nm,0.9s						
LOT	Lotru	48.07	355	⇓P	P	23 38 39.4	+0.4
GZR	Gura Zlata	48.11	354	⇓P	P	23 38 40.0	+0.8
BBTS	Babate	48.22	292	LR	LR	00 02 05.9	
	comp=Z,145nm,19.1s,baz=70,slow=40						
FRGS	Fruska Gora	48.25	351	⇓P	P	23 38 42.1	+1.8
PLOR	Plostina	48.29	358	⇑P	P	23 38 43.2	+2.6
VRI	Vrincioaia	48.30	358	⇑P	P	23 38 42.7	+2.0
COVR	Voineasa-Covas	48.30	357	⇓P	P	23 38 43.8	+3.1
BZS	Buzias	48.46	353	⇑P	P	23 38 43.2	+1.3
GHRR		48.48	359	⇑P	P	23 38 45.8	+3.9
OZUR		48.57	357	⇓P	P	23 38 41.0	-1.7
KOVH	Kovagotottos	49.43	350	P	P	23 38 48.9	-0.4
MORH	Mrgy, Hungar	49.46	351	⇑P	P	23 38 50.0	+0.5
MORH	Mrgy, Hungar	49.46	351	P	P	23 38 48.9	-0.6
DRGR		49.50	354	⇓P	P	23 38 50.4	+0.6
BURAR	Bucovina Array	50.12	357	⇓P	P	23 38 56.8	+2.2
BURAR	Bucovina Array	50.12	357	P	P	23 38 55.6	+1.0
BURAR				IAmb	IAmb	23 38 59.5	
	comp=Z,7.1nm,1.1s						
BUR08	Bucovina Ar. S	50.15	357	P	P	23 38 55.6	+0.7
BUR08				IAmb	IAmb	23 38 59.3	
	comp=Z,9.1nm,1.1s						
TEOL	Teolo	50.18	344	P	P	23 38 56.1	+1.1
TEOL				IAmb	IAmb	23 38 58.6	
	comp=Z,11nm,0.9s						
MPLH	Magyarpolny	50.58	350	P	P	23 38 57.8	-0.1
CTI	Castel Tesino	50.82	344	P	P	23 39 01.5	+1.5
CTI				IAmb	IAmb	23 39 04.4	
	comp=Z,7.4nm,0.8s						
TRPA	Tarpa	50.84	354	⇓P	P	23 39 00.6	+0.7
TRPA	Tarpa	50.84	354	P	P	23 38 59.7	-0.2
CLUD	Cludinico	50.88	346	P	P	23 39 02.1	+1.7
CLUD				IAmb	IAmb	23 39 03.9	
	comp=Z,6.1nm,0.9s						
PSZ	Piszkesteto	50.94	352	P	P	23 39 01.0	+0.2
PSZ				IAmb	IAmb	23 39 04.3	
	comp=Z,6.3nm,0.8s						
PSZ	Piszkesteto	50.94	352	P	P	23 39 03.1	+2.3
ARSA	Arzberg	51.04	348	*i* P	P	23 39 03.9	+2.4
	comp=Z,7.3nm,0.9s						
ABAH	Abaujker	51.14	353	P	P	23 39 02.8	+0.6
ABTA	Abfaltersbach	51.24	346	*e*P	P	23 39 05.3	+2.1
	comp=Z,5.3nm,0.9s						
RONA	Rosalia, Austr	51.31	349	*i* P	P	23 39 06.2	+2.6
	comp=Z,5.5nm,1.0s						
KBA	Koelnbreinsper	51.35	346	*e*P	P	23 39 05.5	+1.5
	comp=Z,7.4nm,1.2s						
CONA	Conrad Observa	51.62	349	*i* P	P	23 39 08.5	+2.6
	comp=Z,4.5nm,0.9s						
FUORN	Ofenpass-Fuorn	51.72	344	P	P	23 39 08.9	+1.9
ESDC	Sonseca Array	51.80	328	P	P	23 39 06.7	-0.7
	comp=Z,2.7nm,1.0s,baz=118,slow=4.9,SNR=6.6						
	comp=Z,2.7nm,1.0s						
ESDC	Sonseca Array	51.80	328	P	P	23 39 08.6	+1.2
BIOA	Bad Ischl, Aus	51.86	347	*i* P	P	23 39 10.0	+2.3
	comp=Z,3.7nm,0.9s						
MOA	Molln	51.87	347	*e*P	P	23 39 10.0	+2.3
	comp=Z,11nm,0.8s						
WTTA	Wattenberg	51.95	345	*e*P	P	23 39 11.0	+2.5
	comp=Z,13nm,1.1s						
FETA	Feichten	51.96	344	*e*P	P	23 39 10.4	+1.8
	comp=Z,5.1nm,1.1s						
SQTA	Sankt Quirin	52.02	345	*e*P	P	23 39 11.5	+2.6
	comp=Z,9.3nm,0.9s,SNR=4.4						
WATA	Walderalm	52.03	345	*i* P	P	23 39 11.7	+2.7
	comp=Z,7.8nm,0.9s						
MOTA	Moosalm	52.16	345	*e*P	P	23 39 11.8	+1.7
	comp=Z,10nm,1.2s,SNR=4.9						
RETA	Reutte	52.38	344	*e*P	P	23 39 13.0	+1.4
	comp=Z,11nm,1.2s,SNR=5.1						
DAVA	Damuels	52.44	344	*e*P	P	23 39 14.0	+1.9
	comp=Z,11nm,0.8s,SNR=7.7						
KRUC	Moravsky	52.61	350	*e*P	P	23 39 14.8	+1.7
MAUC	Maruska	52.66	351	*e*P	P	23 39 16.9	+3.4
CKRC	Cesky Krumlov	52.78	348	*e*P	P	23 39 15.1	+0.6
CKRC				*e*pP	pP	23 39 17.2	-1.6
VRAC	Vranov	52.81	350	⇓P	P	23 39 13.8	-0.9
VRAC	Vranov	52.81	350	*e*P	P	23 39 16.6	+2.0
GEC2	GERESS Array S	52.94	347	P	P	23 39 15.6	-0.1
GEC2				IAmb	IAmb	23 39 18.7	
	comp=Z,4.9nm,0.8s						
GERES	GERESS Array B	52.94	347	P	P	23 39 15.2	-0.5
	comp=Z,2.9nm,0.7s,baz=161,slow=8.5,SNR=25						
	comp=Z,2.9nm,0.7s						
GERES	GERESS Array B	52.94	347	P	P	23 39 15.5	-0.2
TREC	Trest	53.00	349	*e*P	P	23 39 18.1	+2.0
OKC	Ostrava-Krasne	53.07	351	*e*P	P	23 39 18.9	+2.4
AKASG	Malin Array Be	53.10	0	P	P	23 39 16.2	-0.6
	comp=Z,3.4nm,0.8s,baz=182,slow=6.7,SNR=14						
	comp=Z,3.4nm,0.8s						
MORC	Moravsky Berou	53.10	351	⇓P	P	23 39 17.0	+0.2
MORC	Moravsky Berou	53.10	351	P	P	23 39 18.4	+1.6
MORC				IAmb	IAmb	23 39 20.1	
	comp

H10N3 ASCENSION HYDR 6.27 173 T T 23 42 21.1
baz=350,slow=73
H10N1 ASCENSION HYDR 6.28 173 T T 23 42 22.3
baz=350,slow=73
ASCN Ascension 6.38 172 Pn **Pn 23 35 39.0 -1.3**
LIC Lamto 12.81 53⇓*e*P Pn 23 37 13.8 +5.3
TIC Toumodi 13.07 51 ⇑/*i*P **Pn 23 37 12.0 0.0**
4.2nm,0.3s
KIC Kosan Boka 13.12 53⇓*e*P **Pn 23 37 14.4 +1.7**
6.8nm,0.6s
DBIC Dimbokro 13.21 52 Pn **Pn 23 37 15.6 +1.6**
0.5nm,0.3s,baz=222,slow=13,SNR=4.6
DBIC LR LR 23 41 25.9
comp=Z,485nm,19.4s,baz=202,slow=33
4.8nm,0.5s
DBIC Dimbokro 13.21 52 Pn **Pn 23 37 12.1 -1.9**
MBO M'Bour 15.95 354 Pn **Pn 23 37 49.5 -1.3**
MBO IAmb IAmb 23 38 07.4
comp=Z,78nm,1.3s
BBTS Babate 16.18 356 LR LR 23 43 10.9
comp=Z,412nm,21.1s,baz=210,slow=34
TOA0 Torodi Ar. Sit 22.28 48 P **P 23 39 06.3 +2.6**
TORD Torodi Ar. Bea 22.28 48 P **P 23 39 06.2 +2.5**
comp=Z,10nm,0.7s,baz=227,slow=10,SNR=23
TORD LR LR 23 46 51.5
comp=Z,344nm,20.0s,baz=196,slow=34
comp=Z,10nm,0.7s
MDT Midelt 35.65 15 LR LR 23 55 36.7
comp=Z,186nm,18.7s,baz=163,slow=36
TSUM Tsumeb 36.61 121 LR LR 23 53 29.3
comp=Z,105nm,18.3s,baz=331,slow=32
MDP Montagnes des 37.94 280 LR LR 23 53 19.2
comp=Z,73nm,19.2s,baz=112,slow=30
PESTR Estremoz 40.85 9 P **P 23 41 47.2 -1.0**
PESTR IAmb IAmb 23 41 50.8
comp=Z,24nm,1.4s
CART Cartagena 41.14 17 P **P 23 41 48.5 -2.1**
CART IAmb IAmb 23 41 49.6
comp=Z,20nm,0.9s
ESDC Sonseca Array 42.33 13 P **P 23 42 00.7 +0.3**
comp=Z,0.3nm,0.6s,baz=187,slow=9.1,SNR=2.6
comp=Z,0.3nm,0.6s
KEST Kesra 43.64 29 LR LR 00 00 50.9
comp=Z,228nm,20.1s,baz=224,slow=37
LSZ Lusaka 44.95 110 LR LR 23 58 02.7
comp=Z,91nm,19.7s,baz=296,slow=32
SUR Sutherland 45.71 136 LR LR 23 58 43.1
comp=Z,93nm,18.4s,baz=318,slow=32
LBTB Lobatse 45.77 124 LR LR 23 58 07.0
comp=Z,82nm,20.5s,baz=286,slow=31
WDD Wied Dalam 46.44 34 P **P 23 42 33.7 +0.5**
CLTB Caltabellotta 47.02 31 P **P 23 42 38.0 0.0**
BOSA Boshof 47.05 129 P **P 23 42 40.3 +1.9**
comp=Z,6.0nm,0.8s,baz=10,slow=3.6,SNR=4.5
BOSA LR LR 23 59 16.8
comp=Z,82nm,19.0s,baz=348,slow=32
comp=Z,6.0nm,0.8s
CPUP Villa Florida 47.33 235 LR LR 00 00 23.1
comp=Z,64nm,19.5s,baz=48,slow=33
SIV San Ignacio 47.36 250 P **P 23 42 40.8 -0.1**
comp=Z,1.3nm,0.9s,baz=96,slow=7.0,SNR=5.1
SIV LR LR 00 01 36.3
comp=Z,82nm,18.7s,baz=102,slow=35
comp=Z,1.3nm,0.9s
CASP Castiglione de 50.04 25 P **P 23 42 58.0 -3.0**
PCRV Puerto La Cruz 50.52 284 LR LR 00 00 43.1
comp=Z,67nm,20.8s,slow=32
INTR Introdacqua 50.77 28 P **P 23 43 07.7 +1.0**
CAMP Campotosto 50.95 27 P **P 23 43 08.2 +0.1**
NRCA Norcia 51.05 27 P **P 23 43 07.1 -1.7**
NRCA IAmb IAmb 23 43 07.8
comp=Z,22nm,1.5s
CLF Chambon-Foret 51.70 15 P **P 23 43 13.9 +0.5**
CLF IAmb IAmb 23 43 18.1
comp=Z,33nm,1.4s
POGA Pongola 51.73 124 P **P 23 43 11.9 -2.2**
KMBO Kilima Mbogo 52.48 90 P **P 23 43 18.6 -1.6**
STVI Saint Thomas 52.74 294 P **P 23 43 21.5 -0.2**
STVI IAmb IAmb 23 43 26.1
comp=Z,15nm,1.1s
DAVOX Davos/Dischmat 52.97 21 LR LR 00 05 28.8
comp=Z,87nm,18.2s,baz=86,slow=36
CTI Castel Tesino 53.03 23 P **P 23 43 24.9 +1.4**
ECH Echery 53.28 19 P **P 23 43 25.7 +0.4**
BAUV El Baul 53.63 282 P **P 23 43 28.7 +0.4**
BAUV IAmb IAmb 23 43 39.8
comp=Z,18nm,1.0s
SJG San Juan 53.77 294 LR LR 00 00 58.7
comp=Z,62nm,21.6s,baz=96,slow=30
CLUD Cludinico 53.86 24 P **P 23 43 30.7 +1.2**
CLUD IAmb IAmb 23 43 35.5
comp=Z,8.6nm,1.2s
LIT Litokhoron 53.92 36 P **P 23 43 29.5 -0.5**
LPAZ La Paz 54.07 251 P **P 23 43 31.6 -0.6**
comp=Z,0.5nm,0.5s,baz=125,slow=2.7,SNR=3.7
LPAZ LR LR 00 05 19.1
comp=Z,78nm,20.4s,baz=102,slow=35
comp=Z,0.5nm,0.5s
LPAZ La Paz 54.07 251 P **P 23 43 31.1 -1.2**
ARG Arkhangelos 55.14 43 P **P 23 43 39.6 +0.7**
LVC Limon Verde 56.10 244 LR LR 00 09 14.7
comp=Z,16nm,18.5s,baz=74,slow=38
GERES GERESS Array B 56.12 23 P **P 23 43 45.9 0.0**
comp=Z,0.9nm,0.7s,baz=206,slow=5.5,SNR=6.9
comp=Z,0.9nm,0.7s
GERES GERESS Array B 56.12 23 P **P 23 43 47.3 +1.4**
SDV Santo Domingo 56.16 282 LR LR 00 06 29.9
comp=Z,25nm,18.3s,baz=92,slow=35
PB15 IPOC Station P 56.75 243 P **P 23 43 52.1 +1.1**
PB15 IAmb IAmb 23 43 54.9
comp=Z,24nm,1.3s
EIL Elat 57.08 53 LR LR 00 08 10.5
comp=Z,114nm,20.3s,baz=292,slow=36
PB04 IPOC Station P 57.15 244 P **P 23 43 53.8 -0.1**
GO02 Mina Guanaco 57.35 241 P **P 23 43 56.5 +1.1**
GO02 IAmb IAmb 23 44 02.9
comp=Z,22nm,1.3s
AC02 Maricunga 57.41 239 P **P 23 43 56.5 +0.5**
AC02 IAmb IAmb 23 43 58.9
comp=Z,11nm,1.0s
VRAC Vranov 57.64 24 LR LR 00 09 18.5
comp=Z,32nm,18.2s,baz=236,slow=37
MLR Muntele Rosu 59.35 33 P **P 23 44 09.7 +0.9**
comp=Z,4.0nm,1.2s,baz=153,slow=18
MLR LR LR 00 11 33.9
comp=Z,93nm,19.8s,baz=225,slow=38
comp=Z,4.0nm,1.2s
MLR Muntele Rosu 59.35 33 P **P 23 44 09.6 +0.9**
MLR IAmb IAmb 23 44 22.8
comp=Z,12nm,1.5s
LCO Las Campanas 59.36 237 P **P 23 44 10.9 +1.6**
TIRR Tirgusor 60.07 35 P **P 23 44 13.0 -0.5**
VA03 San Esteban 60.39 233 P **P 23 44 15.7 -0.4**
LMEL Las Melosas 60.48 232 P **P 23 44 16.2 -0.6**
LMEL IAmb IAmb 23 44 32.8
comp=Z,8.5nm,1.2s
BRTR Keskin Array B 60.68 42 P **P 23 44 19.2 +1.2**
comp=Z,1.5nm,0.9s,baz=251,slow=7.5,SNR=6.6
BRTR LR LR 00 12 36.2
comp=Z,32nm,19.0s,baz=192,slow=38
comp=Z,1.5nm,0.9s
BNN Bunyan 61.76 44 P **P 23 44 26.2 +0.9**
BOSC San Juan Bosco 63.21 267 P **P 23 44 35.9 +0.4**
BOSC IAmb IAmb 23 44 45.5
comp=Z,5.5nm,0.7s
PLCA Paso Flores 63.25 224 LR LR 00 07 58.1
comp=Z,59nm,21.1s,baz=77,slow=32
COHC Cochancay 63.97 268 P **P 23 44 41.6 +1.2**
AKASG Malin Array Be 64.37 30 P **P 23 44 43.4 +1.2**
comp=Z,0.2nm,0.4s,baz=227,slow=4.9,SNR=2.3
AKASG LR LR 00 14 24.4
comp=Z,97nm,18.9s,baz=242,slow=38
comp=Z,0.2nm,0.4s
AKBB Malin Array Si 64.37 30 P **P 23 44 43.5 +1.3**
AKBB IAmb IAmb 23 44 46.5
comp=Z,13nm,1.5s
HFS Hagfors 65.53 15 LR LR 00 12 53.6
comp=Z,57nm,21.4s,baz=229,slow=36
NOA NORSAR Array B 65.69 14 P **P 23 44 50.0 -0.7**
comp=Z,1.5nm,1.0s,baz=206,slow=6.9,SNR=2.0
NOA LR LR 00 15 08.9
comp=Z,41nm,18.4s,baz=215,slow=38
comp=Z,1.5nm,1.0s
NC204 NORSAR Array S 65.79 13 P **P 23 44 52.4 +1.0**
COYC Coyhaique 66.20 220 P **P 23 44 55.3 +1.0**
COYC IAmb IAmb 23 44 59.2
comp=Z,7.2nm,1.1s
PAL Palisades 67.94 316 P **P 23 45 05.1 -0.2**
M57A Sunshine Farm, 70.32 315 P **P 23 45 21.0 +0.8**
M57A IAmb IAmb 23 45 28.8
comp=Z,4.8nm,0.9s
SNAA Sanae 70.44 176 P **P 23 45 21.6 +1.2**
PMSA Palmer Station 72.14 200 LR LR 00 10 06.5
comp=Z,77nm,19.6s,baz=63,slow=30
SADO Sadowa 72.89 318 LR LR 00 10 31.7
comp=Z,56nm,19.5s,baz=172,slow=30
TKL Tuckaleechee C 73.61 308 LR LR 00 13 15.8
comp=Z,27nm,19.2s,baz=98,slow=32
Q51A Peebles 74.14 311 P **P 23 45 43.6 +0.5**
Q51A IAmb IAmb 23 45 49.2
comp=Z,9.0nm,1.0s
ILULI Ilulissat 74.71 347 P **P 23 45 45.7 0.0**
MTO3 Montecristo 75.03 285 P **P 23 45 47.8 -1.1**
MTO3 IAmb IAmb 23 45 57.5
comp=Z,11nm,1.4s
R49A Shelbyville 75.34 310 P **P 23 45 51.4 +1.4**
ARCES ARCESS Array B 76.06 14 LR LR 00 20 38.2
comp=Z,57nm,19.4s,baz=232,slow=37
KEV Kevo 76.58 14 P **P 23 45 56.7 +0.2**
PLAL Pickwick Lake 76.90 306 P **P 23 45 59.5 +0.5**
BELA Belgrano 2 76.94 184 P **P 23 45 58.6 +0.2**
GEYT Alibeck 77.90 51 LR LR 00 24 23.4
comp=Z,37nm,18.4s,baz=172,slow=39
GEYT Alibeck 77.90 51 P **P 23 46 04.8 +0.2**
GYA0B ALIBECK ARRAY 77.90 51 P **P 23 46 04.6 0.0**
KIRV Kirov 78.41 29 LR LR 00 22 55.6
comp=Z,58nm,19.7s,baz=250,slow=37
I42A Draeger Farm, 79.38 315 P **P 23 46 13.2 +0.6**
I42A IAmb IAmb 23 46 15.4
comp=Z,29nm,1.5s
ARU Arti 82.40 33 LR LR 00 24 51.2
comp=Z,48nm,20.0s,baz=230,slow=37
OK051 E0350 and S346 84.17 307 P **P 23 46 39.6 +1.6**
OK051 IAmb IAmb 23 46 49.8
comp=Z,17nm,1.5s
OK048 Pawnee Station 84.25 307 P **P 23 46 39.3 +0.9**
OK048 IAmb IAmb 23 46 46.4
comp=Z,7.3nm,1.2s
MNCI Minicoy 88.54 82 P **P 23 46 59.6 -0.4**
BRVK Borovoye 88.55 37 P **P 23 46 57.8 -1.3**
BVAR Borovoye Array 88.61 37 LR LR 00 30 21.3
comp=Z,58nm,19.5s,baz=249,slow=38
TXAR Lajitas Array 89.39 299 P **P 23 47 05.4 +1.6**
comp=Z,0.2nm,0.6s,baz=134,slow=5.2,SNR=2.1
comp=Z,0.2nm,0.6s
T25A Trinidad 90.27 307 P **P 23 47 07.0 -0.9**
T25A IAmb IAmb 23 47 33.6
comp=Z,6.7nm,1.5s
ANMO Albuquerque 91.89 305 LR LR 00 22 58.6
comp=Z,45nm,19.4s,baz=80,slow=32
PV07 Paradox Valley 93.64 308 P **P 23 47 22.7 -0.8**
PV07 IAmb IAmb 23 47 24.7
comp=Z,9.5nm,1.4s
PDAR Pinedale Array 94.23 313 LR LR 00 22 16.8
comp=Z,36nm,20.2s,baz=63,slow=31
RDMU Red Mountain 94.31 310 P **P 23 47 25.7 -0.8**
RDMU IAmb IAmb 23 47 29.5
comp=Z,6.5nm,0.8s
P18A Preston Nutter 94.86 309 P **P 23 47 29.8 +0.6**
P18A IAmb IAmb 23 47 50.3
comp=Z,7.4nm,1.5s
SLBS Sierra La Lagu 94.93 294 P **P 23 47 28.9 -0.7**
SRU San Rafael Swe 95.09 309 P **P 23 47 30.0 -0.1**
SRU IAmb IAmb 23 47 43.7
comp=Z,2.4nm,0.6s
TPAW Teton Pass 95.22 313 P **P 23 47 31.3 +0.6**
TPAW IAmb IAmb 23 47 44.9
comp=Z,7.0nm,1.3s
MAKZ Makanchi 96.09 43 P **P 23 47 34.0 -0.3**
MAKZ IAmb IAmb 23 47 37.2
comp=Z,6.0nm,1.4s
MKAR Makanchi Array 96.31 43 LR LR 00 34 50.3
comp=Z,22nm,21.0s,baz=285,slow=38
SZCU Shurtz Canyon 97.18 308 P Pdif 23 47 41.9 +2.2
SZCU IAmb IAmb 23 47 49.1
comp=Z,6.5nm,1.4s
HLID Hailey 97.73 314 P **P 23 47 39.7 -2.3**
HLID IAmb IAmb 23 48 00.0
comp=Z,6.3nm,1.5s
113A Mohawk Valley, 98.02 303 P **P 23 47 40.7 -2.5**
113A IAmb IAmb 23 48 04.1
comp=Z,2.0nm,1.2s
ELK Elko 98.60 311 LR LR 00 24 47.5
comp=Z,66nm,19.4s,baz=64,slow=31
NEW Newport 99.08 319 LR LR 00 26 04.0
comp=Z,48nm,21.7s,baz=69,slow=32
ASAR Alice Springs 140.89 132 PKhKP PKPpre 23 53 34.0
comp=Z,0.2nm,0.4s,baz=218,slow=2.5,SNR=2.0
ASAR PKP pPKPdf 23 53 39.8 +0.1
comp=Z,0.6nm,0.6s,baz=223,slow=2.8,SNR=5.7
WRA Warramunga Arr 143.30 127 PKP **PKPdf 23 53 42.2 +0.4**
comp=Z,0.4nm,0.7s,baz=239,slow=3.1,SNR=1.9

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*UPP **24** 23:42:31.2±0.0, 67°.83N×20°.21E, h0km, ML2.2, Explosion*
HEL 24 23:42:31.9±0.1, 67°.83N×20°.18E, h0km, ML1.7, ML2.2(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.22**	**269**	P	Pg	23 42 35.8	-0.3
RATU				S	Sg	23 42 39.1	+0.1
RATU	**Laukkuluspa**	**0.22**	**269**	*i* P	Pg	23 42 35.8	-0.3
RATU				*i* S	Sg	23 42 39.1	+0.1
KOVU	**Salmi**	**0.40**	**359**	P	Pg	23 42 38.7	-0.7
KOVU				S	Sg	23 42 43.9	-0.7
KOVU	**Salmi**	**0.40**	**359**	*i* P	Pg	23 42 38.7	-0.7
KOVU				*i* S	Sg	23 42 43.9	-0.7
NIKU	**Nikkaluokta**	**0.43**	**275**	P	Pg	23 42 39.7	-0.5
NIKU	**Nikkaluokta**	**0.43**	**275**	*i* P	Pg	23 42 39.7	-0.5
LANU	**Lannavaara**	**0.72**	**71**	P	Pg	23 42 44.5	-1.1
LANU	**Lannavaara**	**0.72**	**71**	*e*S	Sg	23 42 54.2	-0.8
DUNU	**Dundret**	**0.73**	**168**	P	Pg	23 42 44.7	-1.1
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg	23 42 44.7	-1.1
SALU	**Saltoluokta**	**0.78**	**236**	P	Pg	23 42 46.0	-0.8
SALU	**Saltoluokta**	**0.78**	**236**	*i* P	Pg	23 42 46.0	-0.8
MASU	**Masugnsbyn**	**0.79**	**117**	P	Pg	23 42 46.1	-0.9
MASU	**Masugnsbyn**	**0.79**	**117**	*i* P	Pg	23 42 46.1	-0.9
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*P	Pg	23 42 54.5	-0.5
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*PB	Pg	23 42 54.5	-0.4
KIF				MSG		23 43 09.9	
	comp=Z,8.8nm,0.2s						
KIF				*e*S	Sg	23 43 10.2	-0.3
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 42 56.5	-2.1
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 42 56.5	-2.0
PAJU				*e*SB	Sg	23 43 15.2	-1.4
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	23 42 57.4	-1.7
HEF	**Hetta**	**1.43**	**64**	MSG		23 43 14.8	
	comp=Z,5.5nm,0.2s						
HEF				*e*SN	Sn	23 43 20.3	+1.8
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 42 58.7	-1.4
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	Pn	23 42 58.7	-1.4
KLF	**Kolari**	**1.57**	**111**	*e*SN	Sg	23 43 22.6	+0.2
KTK1	**Kautokeino**	**1.64**	**42**	*e*SN	Sb	23 43 24.1	-0.1
HARU	**Harads**	**1.70**	**169**	P	Pn	23 43 02.1	-0.7
HARU	**Harads**	**1.70**	**169**	*e*P	Pn	23 43 02.1	-0.7
TRO	**Tromso**	**1.87**	**346**	*e*SG	Sb	23 43 30.1	-0.6
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	23 43 12.0	+0.4
KALU				*e*SB	Sb	23 43 42.9	-1.5
TOF	**Tornio**	**2.40**	**135**	MSG		23 43 42.3	
	comp=Z,3.0nm,0.2s						
TOF				*e*SB	Sb	23 43 44.1	-1.8
SGF	**Sodankyl**	**2.46**	**96**	*e*SG	Sb	23 43 48.2	+0.5
RNF	**Rovaniemi**	**2.58**	**116**	*e*SB	Sb	23 43 49.9	-1.3
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pn	23 43 16.3	+1.2
	baz=228						
ARA0				*e*SB	Sn	23 43 48.8	+1.6
OLKF	**Oulanka, Finla**	**3.91**	**108**	*e*P	Pn	23 43 34.4	+1.3

IDC 24 23:43:08.4±14.0, 29°.87N×142°.17E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=528.1km s-min=32.2km az=69.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**32.76**	**313**	P	P	23 49 43.0	-0.2
	0.3nm,0.5s,baz=100,slow=8.0,SNR=3.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**48.74**	**308**	P	P	23 51 54.8	0.0
	0.5nm,0.5s,baz=85,slow=9.0,SNR=8.2						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**50.09**	**190**	P	P	23 52 05.2	-0.1
	0.3nm,0.4s,baz=7.7,slow=7.8,SNR=5.6						
	0.3nm,0.4s						

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*IDC **25** 00:01:57.3±0.8, 8°.24N×58°.63E, h0km, mb3.7/10, mbtmp3.7/10, MS3.4/20, Error ellipse: s-maj=26.5km s-min=20.4km az=153.0*
ISC 25 00:01:59.0±0.9, 8°.3N±0°.2×58°.6E±0°.2, h10km, n29, σ0°93/11, mb3.8/10, MS3.4/18, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**14.89**	**0**	LR	LR	00 10 17.6	
	comp=Z,111nm,18.6s,baz=214,slow=34						
ATD	**Arta Tunnel**	**15.86**	**283**	LR	LR	00 11 12.0	
	comp=Z,64nm,18.9s,baz=40,slow=35						
PALK	**Pallekele**	**21.91**	**91**	LR	LR	00 13 38.1	
	comp=Z,110nm,19.4s,baz=24,slow=32						
KMBO	**Kilima Mbogo**	**23.25**	**247**	P	**P**	**00 07 08.6**	**+1.6**
	2.0nm,0.8s,baz=54,slow=12,SNR=4.5						
KMBO				LR	LR	00 15 14.9	
	comp=Z,83nm,21.5s,baz=96,slow=34						
	2.0nm,0.8s						
OPO	**Ambohidratompo**	**28.95**	**203**	LR	LR	00 16 59.7	
	comp=Z,89nm,19.1s,baz=144,slow=31						
MBAR	**Mbarara**	**29.14**	**254**	LR	LR	00 19 01.3	
	comp=Z,98nm,19.4s,baz=60,slow=35						
MMAI	**Mount Meron Ar**	**32.67**	**322**	LR	LR	00 22 02.3	
	comp=Z,40nm,18.1s,baz=160,slow=37						
BRDH	**Bariadhala**	**34.80**	**62**	LR	LR	00 23 05.9	
	comp=Z,94nm,18.0s,baz=268,slow=36						
KBZ	**Khabaz**	**37.90**	**341**	LR	LR	00 25 41.5	
	comp=Z,40nm,18.8s,baz=214,slow=38						
LSZ	**Lusaka**	**38.16**	**232**	LR	LR	00 22 24.9	
	comp=Z,66nm,19.6s,baz=18,slow=32						
CMAR	**Chiang Mai Arr**	**40.44**	**71**	LR	LR	00 24 37.0	
	comp=Z,27nm,21.8s,baz=245,slow=34						
MATP	**Matopo**	**41.11**	**226**	P	**P**	**00 09 42.9**	**-0.7**
	2.3nm,0.9s,baz=10,slow=11,SNR=2.4						
	2.3nm,0.9s						
MKAR	**Makanchi Array**	**43.41**	**24**	P	**P**	**00 10 02.6**	**+0.8**
	0.6nm,0.7s,baz=214,slow=7.7,SNR=5.3						
	0.6nm,0.7s						
LBTB	**Lobatse**	**46.13**	**223**	LR	LR	00 26 52.8	
	comp=Z,52nm,18.8s,baz=48,slow=32						
TSUM	**Tsumeb**	**48.78**	**236**	LR	LR	00 29 05.9	
	comp=Z,59nm,21.8s,baz=300,slow=33						
BOSA	**Boshof**	**48.79**	**220**	LR	LR	00 28 57.7	
	comp=Z,70nm,19.4s,baz=4.0,slow=33						
ZALV	**Zalesovo Beam**	**50.20**	**20**	P	**P**	**00 10 54.5**	**-0.4**
	2.6nm,0.8s,baz=230,slow=6.9,SNR=8.4						
ZALV				LR	LR	00 33 09.4	
	comp=Z,46nm,20.2s,baz=342,slow=37						
	2.6nm,0.8s						
SUR	**Sutherland**	**54.15**	**220**	LR	LR	00 32 31.6	
	comp=Z,60nm,19.6s,baz=14,slow=34						
GERES	**GERESS Array B**	**55.23**	**325**	P	**P**	**00 11 31.2**	**-1.1**
	0.1nm,0.5s,baz=139,slow=6.5,SNR=1.9						
	0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**56.04**	**280**	P	**P**	**00 11 39.0**	**+0.4**
	1.0nm,1.0s,baz=90,slow=6.0,SNR=5.8						
	1.0nm,1.0s						
SONM	**Songino Array**	**56.39**	**37**	P	**P**	**00 11 41.6**	**+0.9**
	0.7nm,0.7s,baz=258,slow=7.1,SNR=4.0						
	0.7nm,0.7s						
HFS	**Hagfors**	**61.68**	**336**	LR	LR	00 40 54.6	
	comp=Z,24nm,20.8s,baz=226,slow=38						
KAPI	**Kappang**	**62.39**	**100**	LR	LR	00 36 55.3	
	comp=Z,27nm,19.5s,baz=256,slow=34						
ESDC	**Sonseca Array**	**63.73**	**310**	P	**P**	**00 12 30.6**	**-0.5**
	1.3nm,0.9s,baz=104,slow=5.7,SNR=5.6						
	1.3nm,0.9s						
KSRS	**Korea Array**	**68.61**	**53**	LR	LR	00 43 44.8	
	comp=Z,24nm,21.3s,baz=0.0,slow=37						
WRA	**Warramunga Arr**	**79.57**	**112**	P	**P**	**00 14 06.3**	**-0.6**
	0.9nm,1.0s,baz=296,slow=4.2,SNR=4.5						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**80.02**	**116**	P	**P**	**00 14 09.0**	**-0.3**
	0.6nm,0.8s,baz=298,slow=6.1,SNR=5.9						
	0.6nm,0.8s						
STKA	**Stephens Creek**	**88.41**	**122**	LR	LR	00 50 52.2	
	comp=Z,24nm,19.9s,baz=20,slow=33						
TXAR	**Lajitas Array**	**138.90**	**336**	PKP	**PKPdf**	**00 21 26.9**	**+0.3**
	0.4nm,1.0s,baz=29,slow=2.1,SNR=3.5						

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*NEIC **25** 00:12:37.9±2.4, 26°.9S±0°.1×176°.4W±0°.1, h35km±11km, mb4.2/7, Error ellipse: s-maj=21.5km s-min=11.5km az=128.0*
*IDC **25** 00:12:42.5±6.2, 27°.13S×176°.72W, h48km±50km, mb3.7/4, mbtmp4.0/4, ML4.6/1, MS3.4/9, Error ellipse: s-maj=51.3km s-min=36.4km az=54.0*
ISC 25 00:12:38.5±0.8, 27°.1S±0°.1×176°.3W±0°.2, h35km, n24, σ1°70/19, mb4.1/9, MS3.5/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.62**	**213**	P	**Pn**	**00 13 18.6**	**+0.3**
	160nm,0.3s,baz=86,slow=16,SNR=15						
RAO				S	**Sn**	**00 13 47.5**	**-1.4**
	1μm,0.3s,baz=137,slow=22,SNR=7.6						
RAO	**Raoul Island**	**2.62**	**213**	Pn	**Pn**	**00 13 18.6**	**+0.3**
RAO				Sn	**Sn**	**00 13 48.0**	**-0.9**
NIUE	**Niue**	**9.86**	**38**	Pn	**Pn**	**00 14 56.0**	**-1.9**
MSVF	**Nonsavu**	**10.67**	**329**	LR	LR	00 18 31.9	
	comp=Z,193nm,19.0s,baz=145,slow=33						
RAR	**Rarotonga**	**16.14**	**72**	LR	LR	00 21 31.9	
	comp=Z,66nm,21.8s,baz=280,slow=32						
DZM	**Mont Dzumac**	**16.49**	**284**	LR	LR	00 21 35.9	
	comp=Z,156nm,18.5s,baz=116,slow=33						
PPT	**Papeete**	**26.39**	**75**	LR	LR	00 26 06.3	
	comp=Z,37nm,18.9s,baz=10,slow=30						
CTA	**Charters Tower**	**34.95**	**273**	P	**P**	**00 19 28.2**	**+0.8**
	4.0nm,0.6s,baz=100,slow=11,SNR=4.1						
CTA				LR	LR	00 32 51.6	
	comp=Z,78nm,18.3s,baz=82,slow=35						
	4.0nm,0.6s						
STKA	**Stephens Creek**	**36.83**	**252**	LR	LR	00 32 54.9	
	comp=Z,69nm,19.2s,baz=32,slow=33						
ASAR	**Alice Springs**	**44.92**	**263**	P	**P**	**00 20 48.5**	**-1.7**
	0.4nm,0.5s,baz=94,slow=7.2,SNR=5.9						
ASAR				PcP	**PcP**	**00 22 32.1**	**+0.7**
	0.6nm,0.8s,baz=100,slow=3.9,SNR=2.7						
	0.4nm,0.5s						
WR0	**Warramunga Arr**	**45.43**	**268**	P	P	00 20 49.3	-4.9
WR0				IAmb	IAmb	00 20 52.7	
	comp=Z,2.4nm,0.9s						
WB2	**Warramunga Arr**	**45.60**	**268**	P	**P**	**00 20 53.5**	**-2.2**
WB2				IAmb	IAmb	00 21 07.6	
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**45.61**	**268**	P	**P**	**00 20 54.2**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=103,slow=8.5,SNR=21						
WRA				PcP	**PcP**	**00 22 34.2**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=112,slow=3.7,SNR=3.3						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**45.61**	**268**	P	**P**	**00 20 54.3**	**-1.5**
WB0	**Warramunga Arr**	**45.62**	**268**	P	**P**	**00 20 53.8**	**-2.0**
WB0				IAmb	IAmb	00 21 05.9	
	comp=Z,4.7nm,1.1s						
KNRA	**Kununurra**	**52.08**	**271**	P	**P**	**00 21 42.2**	**-3.1**
BATI	**Baumata**	**58.82**	**274**	LR	LR	00 47 21.5	
	comp=Z,86nm,18.7s,baz=139,slow=36						
QSPA	**South Pole Qui**	**63.03**	**180**	P	**P**	**00 23 03.2**	**+1.3**
QSPA				IAmb	IAmb	00 23 04.9	
	comp=Z,3.3nm,0.9s						
SNAA	**Sanae**	**81.43**	**178**	P	**P**	**00 24 50.5**	**-1.1**
SNAA				IAmb	IAmb	00 25 04.8	
	comp=Z,1.6nm,1.0s						
KSRS	**Korea Array**	**82.83**	**318**	P	**P**	**00 25 02.1**	**+2.9**
	comp=Z,0.6nm,0.4s,baz=144,slow=4.9,SNR=1.3						
	comp=Z,0.6nm,0.4s						
PSI	**Prapat**	**86.64**	**275**	LR	LR	01 04 43.8	
	comp=Z,12nm,18.7s,baz=267,slow=36						
ANMO	**Albuquerque**	**90.30**	**50**	LR	LR	01 05 56.5	
	comp=Z,14nm,18.2s,baz=54,slow=35						
BRTR	**Keskin Array B**	**152.16**	**305**	PKPab	**PKPab**	**00 32 40.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=89,slow=4.6,SNR=6.5						
TORD	**Torodi Ar. Bea**	**166.02**	**172**	PKPab	**PKPab**	**00 33 42.0**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=195,slow=4.0,SNR=4.4						

**THE 25 00:17:36.0, 38°.74N×20°.66E, h9km±1km, ML0.2/3, Error ellipse: s-maj=2.0km s-min=0.4km az=86.0, Greece

NYDR				S	Sg	00 17 39.0	+0.1
	22nm,0.1s						
LKD2	**Lefkada island**	**0.05 357**		P	Pg	00 17 37.8	-0.1
LKD2				S	Sg	00 17 39.3	-0.1
	20nm,0.1s						
EVGI	**Lefkada island**	**0.12 182**		P	Pg	00 17 38.9	+0.2
EVGI				S	Sg	00 17 40.7	+0.1
	40nm,0.2s						
FSK	**Fiskardo**	**0.29 196**		P	Pg	00 17 41.5	-0.2
FSK				S	Sg	00 17 46.0	+0.4

ATH 25 00:18:18.6, 37°.34N×20°.34E, h7^{km}±4^{km}, ML1.8/1, Error ellipse: s-maj=5.6km s-min=1.8km az=10.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.54**	**47**	P	Pg	00 18 28.7	-0.4
LTHK				S	Sg	00 18 36.7	+0.5
LTHK				AML	AML	00 18 38.0	
	comp=N,258μm,0.1s						
LTHK				AML	AML	00 18 41.4	
	comp=E,295μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.80**	**14**	P	Pg	00 18 33.7	-0.2
VLS	**Valsamata**	**0.86**	**14**	P	Pg	00 18 34.9	-0.2
KEF3	**Kipouria, Keph**	**0.86**	**1**	P	Pg	00 18 35.2	+0.1
KEF4	**Livadi, Kephal**	**0.92**	**4**	P	Pg	00 18 36.0	-0.3
KEF4				S	Sg	00 18 47.9	-0.3
FSK	**Fiskardo**	**1.13**	**9**	P	Pg	00 18 39.6	-0.8
ITM	**Ithomi**	**1.28**	**97**	P	Pn	00 18 42.4	-0.6
PVO	**Paravola**	**1.58**	**36**	P	Pn	00 18 47.6	+0.5
KLV	**Kalavryta, Ach**	**1.60**	**64**	P	Pn	00 18 47.6	+0.2
SERG	**Sergoula**	**1.73**	**51**	P	Pn	00 18 49.7	+0.5

*TIF **25** 00:25:30.5, 43°.33N×46°.08E, h47^{km}±2^{km}*
*MOS **25** 00:25:31.5±0.0, 43°.06N×45°.93E, h91^{km}±1^{km}, MPVA3.1*
*DRS **25** 00:25:31.8±0.0, 43°.61N×45°.51E, h28^{km}*
*NORS **25** 00:25:32.0±0.0, 43°.00N×46°.01E, h94^{km}±1^{km}, MPVA3.6*
ISC 25 00:25:32.6±1.5, 43°.14N±0°.05×45°.97E±0°.03, h91^{km}±9^{km}, n34, σ0°85/68, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.14**	**297**	*i* Pg	**Pn**	**00 25 45.8**	**+0.3**
GROC				*e*Sg	**Sn**	**00 25 55.8**	**+0.6**
DVE	**Vedeno**	**0.22**	**147**	*i* Pg	**Pn**	**00 25 45.4**	**-0.5**
DVE				*i* Sg	**Sn**	**00 25 55.6**	**-0.1**
BTLR	**Botlikh**	**0.51**	**158**	*e*Pg	**Pn**	**00 25 47.5**	**-0.1**
BTLR				*e*Sg	**Sn**	**00 25 57.9**	**-1.0**
DBC	**Dubki**	**0.65**	**100**	*e*Pg	**Pn**	**00 25 48.7**	**-0.1**
DBC				*e*Sg	**Sn**	**00 26 01.1**	**+0.2**
UNCR	**Uncukul**	**0.74**	**125**	*e*Pg	**Pn**	**00 25 49.6**	**-0.1**
UNCR				*e*Sg	**Sn**	**00 26 01.7**	**-0.8**
KRNR	**Karanay**	**0.76**	**114**	*e*Pg	**Pn**	**00 25 49.8**	**-0.1**
KRNR				*e*Sg	**Sn**	**00 26 02.2**	**-0.7**
SHTL	**Shatili**	**0.77**	**231**	P	**Pn**	**00 25 49.5**	**-0.6**
SHTL				S	**Sn**	**00 26 02.4**	**-0.7**
XNZR	**Khunzakh**	**0.81**	**137**	*e*Pg	**Pn**	**00 25 50.1**	**-0.4**
XNZR				*e*Sg	**Sn**	**00 26 03.8**	**0.0**
KMGR	**Komgaron**	**0.81**	**265**	*e*Pg	**Pn**	**00 25 50.8**	**+0.4**
KMGR				*e*Sg	**Sn**	**00 26 03.6**	**0.0**
BUJR	**Buynaksk**	**0.90**	**110**	*e*Pg	**Pn**	**00 25 51.0**	**-0.2**
BUJR				*e*Sg	**Sn**	**00 26 05.3**	**+0.1**
ARKR	**Arakani**	**0.93**	**125**	*e*Pg	**Pn**	**00 25 52.2**	**+0.6**
ARKR				*e*Sg	**Sn**	**00 26 05.9**	**0.0**
VLKR	**Vladikavkaz**	**0.95**	**265**	*e*Pg	**Pn**	**00 25 52.0**	**+0.1**
VLKR				*e*Sg	**Sn**	**00 26 06.2**	**-0.1**
GNBR	**Gunib**	**1.05**	**135**	*e*Pg	**Pn**	**00 25 53.0**	**0.0**
GNBR				*e*Sg	**Sn**	**00 26 09.0**	**+0.7**
BTKR	**Batakoyurt**	**1.06**	**283**	*e*Pg	**Pn**	**00 25 53.1**	**0.0**
BTKR				*e*Sg	**Sn**	**00 26 09.7**	**+1.1**
TRKR	**Terskaya**	**1.07**	**303**	*e*Pg	**Pn**	**00 25 53.6**	**+0.5**
TRKR				*e*Sg	**Sn**	**00 26 09.7**	**+1.0**
PNSH	**Pansheti**	**1.11**	**244**	P	**Pn**	**00 25 53.4**	**-0.5**
PNSH				S	**Sn**	**00 26 08.4**	**-1.5**
ARNR	**Ardon**	**1.23**	**272**	*e*Pg	**Pn**	**00 25 55.7**	**+0.6**
ARNR				*e*Sg	**Sn**	**00 26 12.3**	**+0.3**
LACR	**Lac**	**1.26**	**256**	*e*Pg	**Pn**	**00 25 55.0**	**-0.7**
LACR				*e*Sg	**Sn**	**00 26 11.5**	**-1.4**
GUDG	**Gudauri**	**1.29**	**239**	P	**Pn**	**00 25 56.0**	**0.0**
GUDG				S	**Sn**	**00 26 15.7**	**+2.1**
KMKR	**Kumukh**	**1.31**	**140**	*e*Pg	**Pn**	**00 25 57.7**	**+1.4**
KMKR				*e*Sg	**Sn**	**00 26 14.8**	**+0.8**
LGD	**Lagodekhi**	**1.32**	**171**	P	**Pn**	**00 25 56.9**	**+0.6**
LGD				S	**Sn**	**00 26 15.8**	**+1.8**
PRTR	**Priterechnaya**	**1.37**	**297**	*e*Pg	**Pn**	**00 25 57.8**	**+1.0**
PRTR				*e*Sg	**Sn**	**00 26 15.9**	**+0.9**
KORR	**Kora**	**1.39**	**268**	*e*Pg	**Pn**	**00 25 57.4**	**+0.3**
KORR				*e*Sg	**Sn**	**00 26 15.9**	**+0.3**
STDR	**Stavd-Durt**	**1.41**	**280**	*e*Pg	**Pn**	**00 25 57.9**	**+0.6**
STDR				*e*Sg	**Sn**	**00 26 16.3**	**+0.4**
ZEI	**Tsey**	**1.56**	**258**	*e*Pg	**Pn**	**00 25 58.4**	**-0.9**
ZEI				*e*Sg	**Sn**	**00 26 18.1**	**-1.4**
LSNR	**Lesken**	**1.57**	**276**	*e*Pg	**Pn**	**00 25 59.7**	**+0.3**
LSNR				*e*Sg	**Sn**	**00 26 19.7**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.77**	**263**	*e*Pg	**Pn**	**00 26 01.3**	**-0.7**
DIGR				*e*Sg	**Sn**	**00 26 23.6**	**-0.7**
AKT	**Akhty**	**2.11**	**141**	*e*Pg	**Pn**	**00 26 05.8**	**-0.7**
AKT				*e*Sg	**Sn**	**00 26 30.8**	**-1.4**
DMNI	**Dmanisi**	**2.24**	**217**	P	**Pn**	**00 26 07.9**	**-0.2**
DMNI				S	**Sn**	**00 26 34.3**	**-1.0**
BKRG	**Bakuriani**	**2.27**	**234**	P	**Pn**	**00 26 10.0**	**+1.3**
BKRG				S	**Sn**	**00 26 38.9**	**+2.7**
KBZ	**Khabaz**	**2.31**	**286**	*e*Pn	**Pn**	**00 26 08.2**	**-0.7**
KBZ				*e*Sn	**Sn**	**00 26 36.3**	**-0.4**
NEY	**Neytrino**	**2.37**	**274**	*e*Pn	**Pn**	**00 26 09.7**	**-0.3**
NEY				*e*Sn	**Sn**	**00 26 38.3**	**-0.2**
SHA1	**Shidzhatmaz**	**2.48**	**285**	*e*Pn	**Pn**	**00 26 11.1**	**-0.3**
SHA1				*e*Sn	**Sn**	**00 26 39.8**	**-1.4**
KIV	**Kislovodsk**	**2.52**	**290**	*e*Pn	**Pn**	**00 26 11.1**	**-0.7**
KIV				*e*Sn	**Sn**	**00 26 41.4**	**-0.5**

*IDC **25** 00:33:14.6±1.4, 39°.76N×20°.75E, h0^{km}, mb3.6/6, mbtmp3.5/8, ML3.3/2, Error ellipse: s-maj=25.1km s-min=17.4km az=51.0*
*ATH **25** 00:33:18.1, 39°.76N×20°.64E, h9^{km}±2^{km}, ML3.1/11, Error ellipse: s-maj=2.2km s-min=0.9km az=309.0*
*PDG **25** 00:33:18.4±0.5, 39°.78N×20°.64E, h12^{km}, ML3.2/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*BEO **25** 00:33:18.8±0.4, 39°.68N×20°.64E, h14^{km}±5^{km}, ML3.0/16*
*THE **25** 00:33:18.1, 39°.74N×20°.65E, h8^{km}, ML3.2/13, Error ellipse: s-maj=0.8km s-min=0.3km az=329.0*
ISC 25 00:33:17.8±0.8, 39°.74N±0°.02×20°.66E±0°.02, h15^{km}±5^{km}, n120, σ1°34/165, mb3.7/6, 9C-8D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**120**	P	**Pg**	**00 33 21.6**	**-0.4**
JAN				S	**Sg**	**00 33 25.1**	**+0.3**
	70μm,0.3s						
JAN	**Janina**	**0.17**	**120**	P	**Pg**	**00 33 21.6**	**-0.4**
JAN				S	**Sg**	**00 33 24.8**	**0.0**
JAN				AML	AML	00 33 25.6	
JAN				AML	AML	00 33 25.9	
	comp=N,70948μm,0.2s						
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pg**	**00 33 24.5**	**-0.1**
IGT				S	**Sg**	**00 33 29.6**	**+0.4**
	comp=N,6μm,0.5s						
IGT	**Igoumenitsa**	**0.33**	**230**	*e*Pg	**Pg**	**00 33 24.5**	**-0.1**
IGT				*e*Sg	**Sb**	**00 33 31.5**	**+1.0**
IGT	**Igoumenitsa**	**0.33**	**230**	P	**Pg**	**00 33 24.5**	**-0.1**
IGT				S	**Sg**	**00 33 29.6**	**+0.4**
IGT				AML	AML	00 33 34.1	
	comp=E,11008μm,0.5s						
IGT				AML	AML	00 33 34.4	
	comp=N,11520μm,0.5s						
LSK	**Leskovik**	**0.41**	**354**	P	**Pg**	**00 33 26.3**	**+0.2**
LSK				S	**Sb**	**00 33 32.5**	**-0.5**
	comp=N,8μm,0.8s						
SRN	**Sarande**	**0.53**	**285**	P	**Pg**	**00 33 28.0**	**-0.2**
SRN				S	**Sb**	**00 33 36.2**	**0.0**
	comp=N,3μm,0.4s						
KASA	**Kassiopi**	**0.56**	**271**	P	**Pg**	**00 33 28.5**	**-0.3**
KASA				S	**Sg**	**00 33 36.1**	**-0.1**
KASA				AML	AML	00 33 37.9	
	comp=E,3888μm,0.3s						
KASA				AML	AML	00 33 39.2	
	comp=N,6309μm,0.6s						
KPRO	**Kipourio**	**0.58**	**68**	P	**Pg**	**00 33 29.1**	**-0.2**
KPRO				S	**Sb**	**00 33 38.2**	**+0.2**
	comp=N,4μm,0.3s						
KPRO	**Kipourio**	**0.58**	**68**	P	**Pg**	**00 33 29.2**	**-0.2**
KPRO				S	**Sb**	**00 33 38.2**	**+0.2**
KPRO				AML	AML	00 33 40.8	
	comp=N,8034μm,0.3s						
KPRO				AML	AML	00 33 41.0	
	comp=E,7443μm,0.2s						
KEK	**Kerkira**	**0.66**	**268**	P	**Pg**	**00 33 30.1**	**-0.7**
KEK				S	**Sg**	**00 33 40.0**	**+0.4**
	comp=E,2μm,0.2s						
KEK	**Kerkira**	**0.66**	**268**	P	**Pg**	**00 33 29.9**	**-0.9**
KEK				S	**Sg**	**00 33 39.2**	**-0.4**
KEK				AML	AML	00 33 46.7	
	comp=N,2471μm,0.5s						
KEK				AML	AML	00 33 46.7	
	comp=E,3818μm,0.2s						
NEST	**Nestorio**	**0.73**	**24**	P	**Pg**	**00 33 32.2**	**0.0**
NEST	**Nestorio**	**0.73**	**24**	P	**Pg**	**00 33 32.0**	**-0.2**
NEST				S	**Sb**	**00 33 42.5**	**+0.1**
NEST				AML	AML	00 33 45.4	
	comp=N,2476μm,0.3s						
NEST				AML	AML	00 33 47.3	
	comp=E,3251μm,0.4s						
KBN	**Korca**	**0.89**	**6**	P	**Pg**	**00 33 34.2**	**-0.8**
KBN				S	**Sb**	**00 33 48.2**	**+1.5**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pg**	**00 33 35.1**	**-0.5**
TSLK	**Tsoukalades, L**	**0.92**	**180**	P	**Pg**	**00 33 35.0**	**-0.5**
TSLK				S	**Sb**	**00 33 48.7**	**+1.2**
TSLK				AML	AML	00 33 54.0	
	comp=E,2636μm,0.3s						
TSLK				AML	AML	00 33 54.1	
	comp=N,3139μm,0.3s						
LKD2	**Lefkada island**	**0.95**	**180**	P	**Pg**	**00 33 35.8**	**-0.5**
LKD2				S	**Sb**	**00 33 49.7**	**+1.2**
	comp=N,2μm,0.2s						
LKD2	**Lefkada island**	**0.95**	**180**	P	**Pg**	**00 33 36.4**	**+0.1**
LKD2				S	**Sb**	**00 33 50.0**	**+1.5**
LKD2				AML	AML	00 33 53.1	
	comp=E,3820μm,0.2s						
LKD2				AML	AML	00 33 56.4	
	comp=N,2329μm,0.3s						
KZN	**Kozani**	**1.02**	**56**	P	**Pg**	**00 33 36.8**	**-0.8**
KZN				S	**Sn**	**00 33 52.5**	**+0.5**
	comp=N,848nm,0.5s						
KZN	**Kozani**	**1.02**	**56**	P	**Pg**	**00 33 36.6**	**-1.0**
KZN				AML	AML	00 33 54.9	
	comp=N,1356μm,0.5s						
KZN				AML	AML	00 33 55.6	
	comp=E,2039μm,0.6s						
NYDR	**Nydri-Lefkada**	**1.03**	**178**	P	**Pg**	**00 33 36.9**	**-0.8**
NYDR				S	**Sb**	**00 33 52.5**	**+1.8**
	comp=E,1μm,0.4s						
DRAG	**Dragano-Lefkad**	**1.06**	**184**	P	**Pg**	**00 33 38.0**	**-0.3**
DRAG				S	**Sb**	**00 33 53.2**	**+1.6**
THL	**Klokotos Trika**	**1.06**	**99**	P	**Pg**	**00 33 37.2**	**-1.1**
THL				S	**Sn**	**00 33 54.0**	**+1.3**
	comp=E,552nm,0.5s						
THL	**Klokotos Trika**	**1.06**	**99**	P	**Pg**	**00 33 37.8**	**-0.5**
THL				S	**Sg**	**00 33 52.3**	**+0.1**
THL				AML	AML	00 33 56.0	
	comp=N,1227μm,0.6s						
THL				AML	AML	00 34 01.6	
	comp=E,978μm,0.4s						
EVGI	**Lefkada island**	**1.12**	**180**	P	**Pb**	**00 33 38.8**	**-0.1**
EVR	**Evrytania**	**1.22**	**132**	P	**Pn**	**00 33 40.6**	**+0.2**
EVR	**Evrytania**	**1.22**	**132**	P	**Pn**	**00 33 40.6**	**+0.2**
EVR				AML	AML	00 34 05.7	
	comp=E,1397μm,0.5s						
EVR				AML	AML	00 34 05.8	
	comp=N,1575μm,0.4s						
FSK	**Fiskardo**	**1.28**	**183**	P	**Pn**	**00 33 41.8**	**+0.5**
FSK				S	**Sb**	**00 33 59.3**	**+1.3**
	comp=N,1μm,0.3s						
FSK	**Fiskardo**	**1.28**	**183**	P	**Pn**	**00 33 41.7**	**+0.5**
KTI	**Kastanea**	**1.29**	**59**	P	**Pn**	**00 33 41.7**	**+0.1**
LRSO	**Larissa Observ**	**1.34**	**93**	P	**Pn**	**00 33 42.3**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.35**	**122**	P	**Pn**	**00 33 43.0**	**+0.7**
MAKR				S	**Sb**	**00 34 01.6**	**+1.5**
	comp=N,2μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.35**	**122**	P	**Pn**	**00 33 43.1**	**+0.8**
OHR	**Ohrid**	**1.37**	**4**	*e*Pg	**Pg**	**00 33 44.4**	**+0.2**
OHR				*e*Sn	**Sg**	**00 34 04.0**	**+1.9**
OHR	**Ohrid**	**1.37**	**4**	*i* Pn	**Pg**	**00 33 44.1**	**-0.2**
LIT	**Litokhoron**	**1.45**	**75**	P	**Pn**	**00 33 44.1**	**+0.5**
KEF4	**Livadi, Kephal**	**1.49**	**187**	P	**Pn**	**00 33 44.5**	**+0.4**
KEF4				S	**Sn**	**00 34 04.7**	**+1.3**
DMLN	**Damoulianata-K**	**1.52**	**189**	P	**Pn**	**00 33 44.8**	**+0.3**
DMLN				S	**Sn**	**00 34 05.1**	**+1.0**
	comp=N,1μm,0.4s						
KEF3	**Kipouria, Keph**	**1.56**	**189**	P	**Pn**	**00 33 45.0**	**0.0**
VLS	**Valsamata**	**1.56**	**182**	P	**Pn**	**00 33 45.6**	**+0.5**
PSDA	**Pessada-Kefalo**	**1.63**	**182**	P	**Pn**	**00 33 46.4**	**+0.4**
TIR	**Tirane**	**1.71**	**340**	⇓P	**Pb**	**00 33 49.4**	**+0.3**
TIR	**Tirane**	**1.71**	**340**	*e*Pn	**Pb**	**00 33 49.4**	**+0.3**
TIR				*e*Sn	**Sg**	**00 34 12.0**	**-1.0**
GRG	**Griva**	**1.80**	**47**	P	**Pn**	**00 33 49.1**	**+0.7**
HORT	**Hortiatis**	**2.06**	**65**	P	**Pn**	**00 33 52.7**	**+0.7**
VAY	**Valandovo**	**2.15**	**42**	*e*Pn	**Pn**	**00 33 54.0**	**+0.9**
VAY				*e*Sn	**Sb**	**00 34 22.6**	**-0.3**
VAY	**Valandovo**	**2.15**	**42**	*i* Pn	**Pn**	**00 33 54.2**	**+1.1**
KNT	**Kendrikon**	**2.22**	**50**	P	**Pn**	**00 33 54.6**	**+0.4**
STIP	**Stip**	**2.27**	**30**	*i* Pn	**Pb**	**00 33 58.5**	**-0.1**
SKO	**Skopje**	**2.31**	**15**	*e*Pn	**Pn**	**00 33 57.0**	**+1.7**
SKO	**Skopje**	**2.31**	**15**	*i* Pn	**Pb**	**00 33 57.8**	**-1.3**
ULC	**Ulcinj**	**2.46**	**335**	*e*Pn	**Pn**	**00 33 58.9**	**+1.3**
ULC				*i* Sn	**Sn**	**00 34 30.2**	**+2.8**
SRS	**Serrai**	**2.63**	**58**	*e*Pn	**Pn**	**00 34 00.9**	**+1.1**
SRS				*e*Sn	**Sn**	**00 34 33.0**	**+1.6**
DRME	**Dracevica, Mon**	**2.69**	**336**	*e*Pn	**Pn**	**00 34 01.3**	**+0.7**
DRME	**Dracevica, Mon**	**2.69**	**336**	⇓*i*Pn	**Pn**	**00 34 02.0**	**+1.4**
DRME				*i* Sn	**Sn**	**00 34 35.4**	**+2.6**
BUM	**Brajici-Budva**	**2.88**	**333**	*e*Pn	**Pn**	**00 34 04.7**	**+1.4**
BUM				*i* Sn	**Sn**	**00 34 40.3**	**+2.5**
PDG	**Podgorica**	**2.89**	**339**	⇓P	**Pn**	**00 34 04.5**	**+1.2**
TTG	**Podgorica**	**2.89**	**339**	*e*Pn	**Pn**	**00 34 04.8**	**+1.5**
TTG				*i* Sn	**Sn**	**00 34 40.4**	**+2.6**
PVY	**Plav**	**2.90**	**350**	*e*Pn	**Pn**	**00 34 04.9**	**+1.3**
PVY				*i* Sn	**Sn**	**00 34 40.7**	**+2.4**
TIP	**Timpagrande**	**3.07**	**261**	⇓P	**Pn**	**00 34 05.6**	**-0.4**
CEME	**Cevo**	**3.09**	**335**	*e*Pn	**Pn**	**00 34 07.0**	**+0.8**
CEME				*i* Sn	**Sn**	**00 34 45.4**	**+2.4**
HCY	**Herceg Novi**	**3.16**	**330**	*e*Pn	**Pn**	**00 34 06.7**	**-0.4**
HCY	**Herceg Novi**	**3.16**	**330**	*e*Pn	**Pn**	**00 34 08.6**	**+1.5**
MATE	**Matera**	**3.16**	**288**	⇑P	**Pb**	**00 34 15.4**	**+1.7**
IVA	**Berane**	**3.18**	**350**	*e*Pn	**Pn**	**00 34 08.8**	**+1.4**
IVA				*i* Sn	**Sn**	**00 34 47.6**	**+2.5**
BARS	**Barje**	**3.19**	**15**	*e*Pn	**Pn**	**00 34 09.3**	**+1.8**
BARS				*e*Sn	**Sn**	**00 34 48.7**	**+3.3**
KOME	**Kolasin**	**3.22**	**345**	*e*Pn	**Pn**	**00 34 09.4**	**+1.4**
KOME				*i* Sn	**Sn**	**00 34 48.5**	**+2.3**
NKME	**Niksic**	**3.28**	**338**	*e*Pn	**Pn**	**00 34 10.3**	**+1.5**
NKME				*i* Sn	**Sn**	**00 34 50.0**	**+2.3**
VTS	**Vitosha**	**3.47**	**33**	⇑P	**Pn**	**00 34 12.8**	**+1.3**
VTS	**Vitosha**	**3.47**	**33**	*e*Pn	**Pn**	**00 34 13.3**	**+1.8**
VTS				*e*Sn	**Sn**	**00 34 54.4**	**+2.0**
SELS	**Selova**	**3.49**	**6**	*e*Pn	**Pn**	**00 34 12.8**	**+1.1**
BRY	**Bratogost**	**3.54**	**334**	*e*Pn	**Pn**	**00 34 12.1**	**-0.3**
BRY	**Bratogost**	**3.54**	**334**	*e*Pn	**Pn**	**00 34 13.8**	**+1.4**
BRY				*i* Sn	**Sn**	**00 34 56.2**	**+2.2**
SJES	**Sjenica**	**3.55**	**352**	*e*Pn	**Pn**	**00 34 14.7**	**+2.1**
SJES				*e*Sn	**Sn**	**00 34 57.0**	**+2.6**
UPM	**Unac-Piva**	**3.70**	**340**	*e*Pn	**Pn**	**00 34 15.5**	**+0.8**
UPM	**Unac-Piva**	**3.70**	**340**	*e*Pn	**Pn**	**00 34 16.1**	**+1.4**
UPM				*i* Sn	**Sn**	**00 35 00.2**	**+2.1**
ZAPS	**Zavoj**	**3.83**	**22**	*e*Pn	**Pn**	**00 34 18.7**	**+2.4**
STON	**Ston**	**3.84**	**325**	*e*Pn	**Pn**	**00 34 14.4**	**-2.0**
IVAS	**Ivanjica**	**3.85**	**355**	*e*Pn	**Pn**	**00 34 17.3**	**+0.7**
PLD	**Plovdiv**	**3.87**	**51**	*e*Pn	**Pn**	**00 34 19.4**	**+2.6**
PLD				*e*Sn	**Sn**	**00 35 04.2**	**+2.2**
BOVS	**Bovan**	**3.97**	**11**	⇑P	**Pn**	**00 34 19.2**	**+1.0**
BOVS	**Bovan**	**3.97**	**11**	*e*Pn	**Pn**	**00 34 18.9**	**+0.7**
BOVS				*e*Sn	**Sn**	**00 35 06.1**	**+1.7**
RUDO	**Rudo**	**3.99**	**346**	*e*Pn	**Pn**	**00 34 18.2**	**-0.3**
GRUS	**Gruza**	**4.14**	**1**	*e*Pn	**Pn**	**00 34 21.6**	**+1.0**
BLKB	**Belogradchik**	**4.16**	**21**	⇑P	**Pn**	**00 34 22.9**	**+2.1**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**00 34 19.6**	**-2.2**
BBLS	**Lazići**	**4.22**	**348**	*e*Pn	**Pn**	**00 34 23.0**	**+1.2**
BBLS				*e*Sn	**Sn**	**00 35 11.5**	**+0.6**
ZAGS	**Zajecar**	**4.23**	**16**	*e*Pn	**Pn**	**00 34 23.0**	**+1.2**
ZAGS				*e*Sn	**Sn**	**00 35 12.6**	**+1.6**
DIVS	**Divibare**	**4.38**	**354**	*e*Pn	**Pn**	**00 34 22.4**	**-1.5**
DIVS	**Divibare**	**4.38**	**354**	*e*Pn	**Pn**	**00 34 25.0**	**+1.1**
DIVS				*e*Sn	**Sn**	**00 35 14.4**	**-0.4**
HAPS	**Han Pijesak,BI**	**4.52**	**344**	*e*Pn	**Pn**	**00 34 25.6**	**-0.3**
TEKS	**Tekeris**	**4.88**	**350**	*e*Pn	**Pn**	**00 34 29.6**	**-1.1**
SRKY	**Kupres RS**	**5.05**	**330**	*e*Pn	**Pn**	**00 34 33.9**	**+0.8**
MGRS	**Mrkonjic Grad**	**5.37**	**332**	*e*Pn	**Pn**	**00 34 35.7**	**-1.8**
FRGS	**Fruska Gora**	**5.45**	**354**	*e*Pn	**Pn**	**00 34 39.1**	**+0.6**
BLY	**Banja Luka**	**5.63**	**334**	*e*Pn	Pn	00 34 36.5	-4.5
GZR	**Gura Zlata**	**5.86**	**15**	⇓P	**Pn**	**00 34 45.7**	**+1.5**
BZS	**Buzias**	**5.91**	**7**	⇑P	**Pn**	**00 34 46.0**	**+1.1**
A051A	**Mrakovica**	**5.95**	**333**	*e*Pn	**Pn**	**00 34 45.0**	**-0.5**
LOT	**Lotru**	**6.15**	**21**	⇑P	Pn	00 34 55.1	+6.9
ARR	**Arges**	**6.34**	**26**	⇓P	**Pn**	**00 34 54.3**	**+3.5**
VOIR		**6.55**	**28**	⇑P	Pn	00 34 59.8	+6.1
MORH	**Mrgy, Hungar**	**6.63**	**348**	⇑P	**Pn**	**00 34 54.7**	**-0.1**
MLR	**Muntele Rosu**	**6.94**	**32**	⇓P	Pn	00 35 05.8	+6.7
BOJS	**Bojanci**	**7.00**	**327**	*e*Pn	**Pn**	**00 34 59.1**	**-0.7**
PLOR	**Plostina**	**7.53**	**34**	⇓P	**Pn**	**00 35 10.7**	**+3.6**
CEY	**Cerknica**	**7.54**	**325**	*e*Pn	**Pn**	**00 35 06.6**	**-0.7**
VRI	**Vrincioaia**	**7.57**	**34**	⇑P	**Pn**	**00 35 11.4**	**+3.8**
SKDS	**Skadanscina**	**7.59**	**322**	*e*Pn	Pn	00 35 03.4	-4.5
OBKA	**Obir**	**8.10**	**329**	*e*Pn	**Pn**	**00 35 14.5**	**-0.5**
ABTA	**Abfaltersbach**	**9.18**	**322**	Pg	**Pn**	**00 35 29.9**	**+0.1**
	comp=N,0.5nm,0.3s						
ABTA				*i* Sn	Sn	00 37 04.1	-8.8
	comp=N,0.9nm,0.3s						
BRTR	**Keskin Array B**	**10.00**	**86**	Pn	**Pn**	**00 35 40.1**	**-1.0**
	comp=N,0.1nm,0.3s,baz=332,slow=13,SNR=6.9						
	comp=N,0.2nm,0.3s						
GERES	**GERESS Array B**	**10.37**	**334**	Pn	**Pn**	**00 35 45.7**	**-0.4**
	comp=N,0.2nm,0.3s,baz=152,slow=15,SNR=2.0						
GERES				Sn	**Sn**	**00 37 40.6**	**-1.5**
	comp=N,0.1nm,0.3s,baz=150,slow=26,SNR=2.0						
	comp=N,0.1nm,0.3s						
FINES	**FINESS Array B**	**21.98**	**7**	P	**P**	**00 38 09.7**	**-1.4**
	comp=N,0.6nm,0.3s,baz=183,slow=11,SNR=8.4						
	comp=N,0.6nm,0.3s						
NOA	**NORSAR Array B**	**22.11**	**348**	P	**P**	**00 38 11.5**	**-1.0**
	comp=N,0.6nm,0.6s,baz=163,slow=11,SNR=1.9						
	comp=N,0.6nm,0.6s						
ARCES	**ARCESS Array B**	**29.97**	**3**	P	**P**	**00 39 23.6**	**-1.6**
	comp=N,2.0nm,0.8s,baz=184,slow=9.7,SNR=1.5						
	comp=N,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.32**	**218**	P	**P**	**00 39 37.1**	**-0.6**
	comp=N,0.2nm,0.6s,baz=33,slow=8.8,SNR=5.0						
	comp=N,0.2nm,0.6s						
MKAR	**Makanchi Array**	**44.41**	**60**	P	**P**	**00 41 27.0**	**-0.9**
	comp=N,1.8nm,0.6s,baz=275,slow=7.6,SNR=24						
	comp=N,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**44.58**	**49**	P	**P**	**00 41 26.7**	**-2.4**
	comp=N,0.6nm,0.4s,baz=293,slow=8.8,SNR=2.7						
	comp=N,0.6nm,0.4s						

*HVO **25** 00:38:06.3±0.7, 19°.38N±0°.07×155°.24W±0°.04, h28^{km}±7^{km}, ML2.6/14, ML1.7/38(NEIC), Error ellipse: s-maj=10.1km s-min=5.2km az=198.0*
**NEIC 25 00:38:04.7±0.7, 19°.40N±0°.08×155°.26W±0°.05

WRA	**Warramunga Arr**	**21.33 157**	P	P	01 18 18.4	+0.8
	0.1nm,0.5s,baz=336,slow=11,SNR=1.3					
	0.1nm,0.5s					
ASAR	**Alice Springs**	**24.62 162**	P	P	01 18 50.5	-0.6
	0.2nm,0.4s,baz=341,slow=6.7,SNR=4.6					
ASAR			LR	LR	01 29 53.9	
	comp=Z,30nm,18.3s,baz=344,slow=40					
	0.2nm,0.4s					
JCJ	**Chichijima**	**31.39 29**	LR	LR	01 32 01.2	
	comp=Z,154nm,20.1s,baz=101,slow=35					
ILAR	**Eielson Array**	**89.03 25**	P	P	01 26 25.6	+0.1
	0.2nm,0.5s,baz=248,slow=6.2,SNR=7.2					
	0.2nm,0.5s					

NIED ***25*** *01:24:13.2, 34°.23N×141°.76E, h41km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.96; $M_{\theta\theta}$-1.35; $M_{\phi\phi}$-0.61; $M_{r\theta}$-0.74; $M_{\phi\theta}$0.60; $M_{\phi r}$0.54; Fault plane solution: $M_0$2.04000×10^{15} NP1: ϕ_s117.00000°, δ32.00000°, λ86.00000°. NP2: ϕ_s302.00000°, δ58.00000°, λ92.00000°.*
JMA ***25*** *01:24:13.2±0.3, 34°.2N±1°.0×14°.2E±°, h41km±2km, MV3.7/32, FAR SE OFF BOSO PEN*
NEIC ***25*** *01:24:15.5±1.6, 34°.34N±0°.07×141°.8E±0°.1, h31km±6km, mb4.6/12, Error ellipse: s-maj=15.8km s-min=9.1km az=113.0*
IDC ***25*** *01:24:17.7±0.7, 34°.25N×141°.53E, h39km±5km, mb3.8/15, mbtmp4.0/17, ML3.1/2, MS3.4/21, Error ellipse: s-maj=16.3km s-min=13.8km az=144.0*

ISC 25 01:24:14.9±0.8, 34°.27N±0°.05×141°.70E±0°.06, h24km±4km, n85, σ1°.35/76, mb4.1/22, MS3.5/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.71**	**303**	*eP*	**Pb**	**01 24 27.7**	**-0.6**
BSO3	**Boso 3**	**1.12**	**299**	*eP*	**Pn**	**01 24 33.9**	**-0.9**
BSO3				*eS*	**Sn**	**01 24 48.3**	**-1.0**
BSO4	**Boso 4**	**1.33**	**303**	*eP*	**Pn**	**01 24 37.8**	**-0.2**
JKUC	**kamogawauchiur**	**1.52**	**306**	*eP*	**Pn**	**01 24 40.0**	**-0.6**
JKUC				*eS*	**Sn**	**01 24 59.9**	**+0.2**
CHOJ	**Chosi**	**1.59**	**334**	*eP*	**Pn**	**01 24 40.4**	**-1.2**
CHOJ				*eS*	**Sn**	**01 24 59.7**	**-1.6**
JMKN	**Mikurajimanish**	**1.79**	**258**	*eP*	**Pn**	**01 24 43.1**	**-1.2**
JMKN				*eS*	**Sn**	**01 25 05.2**	**-1.2**
JMYK	**Miyake Tsubota**	**1.80**	**264**	*eS*	**Sn**	**01 25 05.2**	**-1.3**
JIM2	**Oshima 3**	**1.93**	**284**	*eP*	**Pn**	**01 24 45.0**	**-1.2**
JIM2				*eS*	**Sn**	**01 25 08.6**	**-1.1**
JHJ2	**Mitsune**	**1.95**	**234**	Pn	**Pn**	**01 24 47.5**	**+1.0**
JHJ	**Hachijo jima 2**	**1.97**	**235**	Pn	**Pn**	**01 24 47.0**	**+0.3**
	39nm,0.3s,baz=34,slow=15,SNR=2.2						
JHJ				Sn	**Sn**	**01 25 10.6**	**-0.1**
	89nm,0.3s,baz=224,slow=21,SNR=4.1						
JYT	**Yasato**	**2.31**	**328**	Pn	**Pn**	**01 24 50.8**	**-0.7**
JOD2	**Odawara 2**	**2.37**	**295**	*eP*	**Pn**	**01 24 51.4**	**-0.9**
JIZS	**Izushimoda**	**2.38**	**282**	*eP*	**Pn**	**01 24 51.5**	**-0.8**
MJAR	**Matsushiro Arr**	**3.64**	**309**	Pn	**Pn**	**01 25 10.0**	**+0.2**
	1.3nm,0.3s,baz=112,slow=15,SNR=35						
MJAR				Sn	**Sn**	**01 25 55.1**	**+3.1**
	1.2nm,0.3s,baz=147,slow=23,SNR=7.4						
	18nm,0.6s						
MAJO	**Matsushiro**	**3.65**	**309**	Pn	**Pn**	**01 25 10.5**	**+0.6**
MJB9	**Matsu-Tunnel**	**3.65**	**309**		**Pn**	**01 25 11.2**	**+1.3**
JMM	**Marumori**	**3.66**	**349**		**Pn**	**01 25 08.5**	**-1.6**
JGF	**Kuroka**	**3.81**	**292**	Pn	**Pn**	**01 25 13.7**	**+1.6**
INU	**Inuyama**	**4.00**	**287**	Pn	**Pn**	**01 25 16.5**	**+1.8**
JSD	**Sado**	**4.68**	**324**	Pn	**Pn**	**01 25 24.4**	**+0.4**
JTM	**Tenmabayashi**	**6.53**	**356**	Pn	**Pn**	**01 25 48.2**	**-1.1**
ERM	**Erimo**	**7.82**	**8**	Pn	**Pn**	**01 26 05.7**	**-1.3**
KSRS	**Korea Array**	**11.62**	**290**	Pn	**Pn**	**01 27 01.1**	**+1.9**
	0.1nm,0.3s,baz=106,slow=12,SNR=4.2						
	2.1nm,0.8s						
JOW	**Kunigami**	**13.73**	**241**	LR	LR	01 33 02.9	
	comp=Z,124nm,19.1s,baz=66,slow=39						
KLR	**Kul'dur**	**16.67**	**337**	LR	LR	01 35 05.9	
	comp=Z,136nm,18.8s,baz=148,slow=39						
PETK	**Petropavlovsk-**	**22.01**	**26**	LR	LR	01 41 10.1	
	comp=Z,46nm,18.2s,baz=155,slow=46						
MA2	**Magadan**	**26.01**	**11**	LR	LR	01 42 22.4	
	comp=Z,79nm,18.1s,baz=78,slow=42						
H11N2	**WAKE ISLAND Hy**	**26.62**	**116**	T	T	01 57 51.1	
	baz=309,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**26.62**	**117**	T	T	01 57 49.1	
	baz=309,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**26.64**	**116**	T	T	01 57 49.1	
	baz=309,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**27.24**	**119**	T	T	01 58 51.2	
	baz=314,slow=75,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**27.24**	**119**	T	T	01 58 46.3	
	baz=314,slow=75,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**27.26**	**119**	T	T	01 58 49.5	
	baz=314,slow=75,SNR=5.3						
YAK	**Yakutsk**	**28.82**	**348**	LR	LR	01 42 04.1	
	comp=Z,129nm,18.8s,baz=89,slow=37						
SONM	**Songino Array**	**29.60**	**308**	P	**P**	**01 30 19.2**	**+1.0**
	2.2nm,0.7s,baz=106,slow=8.8,SNR=11						
	2.2nm,0.7s						
DAV	**Davao City (W)**	**30.89**	**212**	LR	LR	01 41 19.6	
	comp=Z,39nm,20.5s,baz=319,slow=33						
CMAR	**Chiang Mai Arr**	**41.10**	**259**	P	**P**	**01 31 55.5**	**-1.6**
	1.0nm,0.3s,baz=50,slow=6.9,SNR=5.9						
	1.0nm,0.3s						
PMG	**Port Moresby**	**43.74**	**172**	LR	LR	01 50 17.5	
	comp=Z,27nm,19.1s,baz=74,slow=36						
ZALV	**Zalesovo Beam**	**43.98**	**315**	P	**P**	**01 32 20.3**	**+0.2**
	1.8nm,0.6s,baz=92,slow=6.4,SNR=8.5						
	1.8nm,0.6s						
KAPI	**Kappang**	**44.23**	**212**	LR	LR	01 54 40.5	
	comp=Z,14nm,18.0s,baz=14,slow=41						
MK31	**Makanchi Array**	**45.83**	**304**	P	**P**	**01 32 33.9**	**-1.0**
MKAR	**Makanchi Array**	**45.83**	**304**	P	**P**	**01 32 35.1**	**+0.2**
	1.3nm,0.6s,baz=90,slow=9.0,SNR=12						
MKAR				LR	LR	01 53 12.5	
	comp=Z,69nm,18.0s,baz=125,slow=38						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**45.83**	**304**	P	**P**	**01 32 33.8**	**-1.1**
RAMN	**Ramite**	**47.50**	**277**	*eP*	**P**	**01 32 48.0**	**-0.5**
	14nm,0.7s						
JIRN	**Jiri**	**47.56**	**278**	*eP*	**P**	**01 32 49.2**	**0.0**
GUN	**Gumba**	**47.73**	**278**	*eP*	**P**	**01 32 50.3**	**-0.1**
	23nm,0.8s						
KURK	**Kurchatov**	**47.85**	**310**	P	**P**	**01 32 50.7**	**+0.1**
PKI	**Pulchoki**	**48.24**	**278**	*eP*	**P**	**01 32 53.4**	**-0.9**
	21nm,1.0s						
PKIN	**Phulchoki**	**48.25**	**278**	*eP*	**P**	**01 32 53.3**	**-1.0**
GKN	**Gorkha**	**48.71**	**279**	*eP*	**P**	**01 32 57.2**	**-0.5**
KDAK	**Kodiak Island**	**49.02**	**40**	LR	LR	01 55 08.2	
	comp=Z,23nm,18.6s,baz=284,slow=38						
DANN	**Dangsing**	**49.29**	**280**	*eP*	**P**	**01 33 02.1**	**-0.3**
	57nm,0.8s						
ILAR	**Eielson Array**	**51.72**	**31**	P	**P**	**01 33 21.0**	**+1.2**
	1.2nm,0.7s,baz=266,slow=6.2,SNR=13						
ILAR				pP	**pwP**	**01 33 32.1**	**-2.9**
	1.6nm,0.7s,baz=266,slow=6.3,SNR=9.4						
	1.2nm,0.7s						
K27K	**Chicken**	**53.84**	**32**	P	**P**	**01 33 36.6**	**+1.2**
WB0	**Warramunga Arr**	**54.19**	**188**	P	**P**	**01 33 38.4**	**-0.1**
WB0				IAmb	IAmb	01 33 39.5	
	comp=Z,6.3nm,1.0s						
WR0	**Warramunga Arr**	**54.36**	**188**	P	**P**	**01 33 39.7**	**0.0**
WB2	**Warramunga Arr**	**54.36**	**189**	P	**P**	**01 33 38.3**	**-1.4**
WB2				IAmb	IAmb	01 34 00.9	
	comp=Z,8.1nm,1.1s						
WRA	**Warramunga Arr**	**54.37**	**189**	P	**P**	**01 33 39.9**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=1.8,slow=7.5,SNR=14						
WRA				LR	LR	01 56 23.3	
	comp=Z,36nm,18.2s,baz=18,slow=36						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**54.37**	**189**	P	**P**	**01 33 39.6**	**-0.1**
KK31	**Karatay Array**	**54.75**	**302**	P	**P**	**01 33 42.6**	**+0.1**
KK31				IAmb	IAmb	01 33 56.2	
	comp=Z,6.4nm,1.1s						
KKAR	**Karatay Array**	**54.75**	**302**	P	**P**	**01 33 42.0**	**-0.5**
NIL	**Nilore**	**55.75**	**290**	P	**P**	**01 33 48.6**	**-1.3**
NIL				IAmb	IAmb	01 33 52.3	
	comp=Z,6.3nm,0.7s						
INK	**Inuvik**	**56.74**	**26**	P	**P**	**01 33 57.4**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=229,slow=11,SNR=3.9						
INK				LR	LR	02 00 31.2	
	comp=Z,20nm,19.2s,baz=140,slow=38						
	comp=Z,1.7nm,0.8s						
CHGR	**Chuyangaron**	**57.10**	**297**	P	**P**	**01 33 58.1**	**-1.4**
ASAR	**Alice Springs**	**58.09**	**188**	P	**P**	**01 34 06.8**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=8.5,slow=7.6,SNR=12						
ASAR				LR	LR	01 57 26.1	
	comp=Z,26nm,20.4s,baz=338,slow=34						
	comp=Z,1.3nm,0.8s						
KIRV	**Kirov**	**62.60**	**324**	LR	LR	02 05 19.8	
	comp=Z,51nm,19.1s,baz=31,slow=39						
GEYT	**Alibeck**	**65.40**	**300**	LR	LR	02 07 17.8	
	comp=Z,65nm,20.8s,baz=82,slow=40						
ARCES	**ARCESS Array B**	**66.66**	**340**	LR	LR	02 08 06.8	
	comp=Z,35nm,18.0s,baz=298,slow=40						
YBH	**Yreka Blue Hor**	**71.86**	**52**	LR	LR	02 01 38.4	
	comp=Z,31nm,20.4s,baz=338,slow=31						
KBZ	**Khabaz**	**72.89**	**311**	P	**P**	**01 35 42.6**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=34,slow=10.0,SNR=4.1						
	comp=Z,3.8nm,0.9s						
NVAR	**Mina Array Bea**	**76.46**	**53**	P	**P**	**01 36 04.8**	**+1.8**
	comp=Z,0.9nm,0.7s,baz=287,slow=5.8,SNR=7.2						
NVAR				pP	**PcP**	**01 36 17.1**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=287,slow=4.8,SNR=6.2						
NVAR				LR	LR	02 04 44.7	
	comp=Z,26nm,21.3s,baz=287,slow=32						
	comp=Z,0.9nm,0.7s						
AKASG	**Malin Array Be**	**76.63**	**323**	P	**P**	**01 36 03.9**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=47,slow=4.8,SNR=6.4						
AKASG				pP	**PcP**	**01 36 15.3**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=48,slow=6.6,SNR=4.2						
	comp=Z,1.2nm,0.7s						
HFS	**Hagfors**	**76.70**	**336**	LR	LR	02 12 24.4	
	comp=Z,57nm,18.5s,baz=304,slow=38						
NB2	**NORSAR Subarra**	**76.82**	**338**	P	**P**	**01 36 04.9**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=40,slow=5.6						
NOA	**NORSAR Array B**	**76.82**	**338**	P	**P**	**01 36 04.7**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=40,slow=5.7,SNR=4.1						
NOA				LR	LR	02 14 33.2	
	comp=Z,32nm,18.1s,baz=250,slow=39						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**79.44**	**45**	P	**P**	**01 36 21.2**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=248,slow=1.6,SNR=4.8						
PDAR				pP	**pwP**	**01 36 32.4**	**-3.5**
	comp=Z,0.9nm,0.7s,baz=254,slow=2.7,SNR=4.5						
	comp=Z,0.6nm,0.7s						
SZCU	**Shurtz Canyon**	**80.33**	**51**	P	**P**	**01 36 22.8**	**-1.6**
SZCU				IAmb	IAmb	01 36 31.4	
	comp=Z,6.1nm,0.7s						
PFO	**Pinyon Flats O**	**80.38**	**56**	LR	LR	02 08 08.2	
	comp=Z,57nm,19.9s,baz=219,slow=33						
BRTR	**Keskin Array B**	**80.86**	**312**	P	**P**	**01 36 25.9**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=98,slow=3.2,SNR=6.6						
	comp=Z,1.1nm,0.7s						
RAYN	**Ar Rayn**	**81.93**	**293**	P	**P**	**01 36 31.4**	**-1.6**
RAYN				IAmb	IAmb	01 36 35.2	
	comp=Z,6.7nm,1.4s						
CLL	**Collm**	**83.61**	**330**	*eP*	**P**	**01 36 42.0**	**+0.9**
CLL				*es*P	**sP**	**01 36 53.0**	**+4.9**
GERES	**GERESS Array B**	**85.18**	**329**	P	**P**	**01 36 49.3**	**0.0**
	comp=Z,0.5nm,0.7s,baz=45,slow=5.8,SNR=4.3						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**91.61**	**53**	P	**P**	**01 37 21.8**	**+1.5**
	comp=Z,8.6nm,0.4s,baz=333,slow=5.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**119.43**	**314**	PKP	**PKPdf**	**01 43 02.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=42,slow=3.0,SNR=2.2						
LPAZ	**La Paz**	**147.80**	**64**	PKPbc	**PKiKP**	**01 44 00.5**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=315,slow=2.7,SNR=6.9						

JMA ***25*** *02:00:13.2±0.6, 34°N±2°×14°2E±°, h35km±3km, MV3.4/31, FAR SE OFF BOSO PEN*
IDC ***25*** *02:00:13.3±1.7, 34°.23N×141°.77E, h0km, mb3.6/5, mbtmp3.6/6, ML2.9/1, MS3.1/3, Error ellipse: s-maj=38.4km s-min=20.1km az=69.0*

ISC 25 02:00:18.3±1.3, 34°.33N±0°.05×141°.49E±0°.09, h27km, n27, σ1°.37/24, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.53**	**308**	*eP*	**Pn**	**02 00 29.4**	**-0.2**
BSO3	**Boso 3**	**0.93**	**301**	*eP*	**Pb**	**02 00 36.0**	**+0.3**
BSO4	**Boso 4**	**1.15**	**305**	*eP*	**Pb**	**02 00 39.4**	**-0.1**
JKUC	**kamogawauchiur**	**1.34**	**308**	*eP*	**Pb**	**02 00 41.9**	**-1.0**
JKUC				*eS*	**Sb**	**02 01 02.1**	**+2.5**
CHOJ	**Chosi**	**1.46**	**340**	*eP*	**Pn**	**02 00 42.4**	**-0.6**
JMKN	**Mikurajimanish**	**1.63**	**255**	*eS*	**Sb**	**02 01 07.2**	**-0.6**
JIM2	**Oshima 3**	**1.74**	**283**	*eP*	**Pn**	**02 00 46.4**	**-0.3**
JHJ	**Hachijo jima 2**	**1.86**	**230**	Pn	**Pn**	**02 00 48.1**	**-0.4**
	34nm,0.3s,baz=49,slow=20,SNR=2.1						
JHJ				Sn	**Sb**	**02 01 15.2**	**+0.7**
	46nm,0.3s,baz=221,slow=19,SNR=2.6						
JHJ				LR	LR	02 01 47.4	
	comp=Z,183nm,19.9s,baz=330,slow=48						
JOD2	**Odawara 2**	**2.18**	**296**	*eP*	**Pn**	**02 00 52.8**	**-0.1**
JOD2				*eS*	**Sb**	**02 01 23.2**	**-0.5**
JIZS	**Izushimoda**	**2.19**	**281**	*eP*	**Pn**	**02 00 53.2**	**+0.3**
JAG	**Ashikaga**	**2.67**	**322**	*eP*	**Pn**	**02 01 00.1**	**+0.5**
JYN	**Shimob**	**2.68**	**297**	*eS*	**Sb**	**02 01 36.6**	**-1.6**
JRY	**Ryogami san**	**2.70**	**309**	*eP*	**Pn**	**02 01 01.4**	**+1.3**
JRY				*eS*	**Sb**	**02 01 36.7**	**-2.1**
MJAR	**Matsushiro Arr**	**3.47**	**310**	Pn	**Pn**	**02 01 11.5**	**+1.0**
	1.0nm,0.3s,baz=140,slow=10,SNR=19						
MJAR				Sn	**Sb**	**02 01 57.5**	**-3.3**
	0.7nm,0.3s,baz=223,slow=30,SNR=5.0						
	4.2nm,0.4s						
USRK	**Ussuriysk Ar.**	**12.29**	**326**	LR	LR	02 08 54.3	
	comp=Z,71nm,18.1s,baz=56,slow=42						
KLR	**Kul'dur**	**16.54**	**337**	LR	LR	02 10 48.1	
	comp=Z,64nm,18.7s,baz=160,slow=38						
H11N2	**WAKE ISLAND Hy**	**26.81**	**116**	T	T	02 33 59.9	
	baz=309						
H11N1	**WAKE ISLAND Hy**	**26.81**	**116**	T	T	02 33 52.2	
	baz=309,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**26.82**	**116**	T	T	02 34 02.1	
	baz=309						
H11S3	**WAKE ISLAND Hy**	**27.43**	**119**	T	T	02 34 44.1	
	baz=313						
H11S1	**WAKE ISLAND Hy**	**27.43**	**119**	T	T	02 34 41.8	
	baz=313						
H11S2	**WAKE ISLAND Hy**	**27.44**	**119**	T	T	02 34 42.4	
	baz=313						
SONM	**Songino Array**	**29.42**	**308**	P	**P**	**02 06 21.9**	**+2.3**
	0.6nm,0.7s,baz=99,slow=8.9,SNR=2.8						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**45.65**	**304**	P	**P**	**02 08 37.1**	**+0.7**
	0.5nm,0.7s,baz=90,slow=9.2,SNR=6.0						
MKAR				LR	LR	02 29 17.3	
	comp=Z,28nm,18.3s,baz=291,slow=38						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**47.74**	**310**	P	**P**	**02 08 53.0**	**+0.2**
	0.9nm,0.5s,baz=84,slow=7.5,SNR=9.0						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**54.40**	**188**	P	**P**	**02 09 41.7**	**-1.3**
	0.5nm,0.4s,baz=1.7,slow=7.5,SNR=21						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**58.12**	**188**	P	**P**	**02 10 08.0**	**-1.6**
	0.2nm,0.4s,baz=19,slow=12,SNR=2.3						
	0.2nm,0.4s						

FUNV ***25*** *02:15:44.2, 8°.81N×70°.89W, h5km, MW3.0*

ISC 25 02:15:42.4±1.3, 8°.83N±0°.04×70°.93W±0°.05, h7km±11km, n12, σ1°13/24, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.55**	**173**	*i*P	**Pb**	**02 15 54.3**	**-0.1**
SOCV				*eS*	**Sb**	**02 16 02.8**	**+0.3**
CURV	**Curarigua**	**1.51**	**39**	*eP*	**Pg**	**02 16 11.9**	**+0.6**
CURV				*eS*	**Sg**	**02 16 32.0**	**+1.0**
CAPV	**Capacho**	**1.68**	**235**	*eP*	**Pg**	**02 16 13.9**	**-0.7**
CAPV				*eS*	**Sg**	**02 16 36.4**	**+0.2**
DABV	**Dabajuro**	**2.10**	**8**	*eP*	**Pn**	**02 16 18.8**	**+0.8**
DABV				*eS*	**Sn**	**02 16 45.5**	**+1.1**
SIQV	**Siquisique**	**2.12**	**31**	*eP*	**Pb**	**02 16 19.7**	**-1.4**
SIQV				*eS*	**Sb**	**02 16 46.6**	**-1.1**
PAMC	**Pamplona, Colo**	**2.30**	**230**	*eP*	**Pg**	**02 16 25.4**	**-1.1**
PAMC				*eS*	**Sg**	**02 16 56.2**	**0.0**
PAMC				*i*		02 17 00.1	
	comp=Z,6.4nm,0.3s						
TAMC	**Tame, Arauca**	**2.53**	**200**	*eP*	**Pb**	**02 16 28.0**	**-0.2**
TAMC				*eS*	**Sb**	**02 17 00.5**	**+0.9**
TAMC				*i*		02 17 06.0	
	comp=Z,11nm,0.5s						
MAPV	**Macapo**	**2.63**	**68**	*eP*	**Pn**	**02 16 26.7**	**+1.4**
MAPV				*eS*	**Sn**	**02 16 57.1**	**-0.5**
BAUV	**El Baul**	**2.85**	**88**	*eP*	**Pn**	**02 16 29.1**	**+0.7**
BAUV				*eS*	**Sn**	**02 17 01.9**	**-1.2**
BENV	**Beln**	**3.47**	**71**	*eP*	**Pn**	**02 16 37.5**	**+0.6**
BENV				*eS*	**Sn**	**02 17 17.2**	**-1.3**
RUSC	**La Rusia**	**3.62**	**216**	*eP*	**Pn**	**02 16 41.2**	**+1.8**
RUSC				*eS*	**Sn**	**02 17 20.2**	**-2.4**
RUSC				*i*		02 17 29.0	
	comp=Z,1.2nm,0.3s						
PTBC	**PUERTO BERRIO,**	**4.17**	**237**	*eP*	**Pn**	**02 16 46.9**	**+0.3**
PTBC				*eS*	**Sn**	**02 17 36.9**	**+1.3**
PTBC				*i*		02 17 59.7	
	comp=Z,1.7nm,0.3s						

ATH 25 02:25:56.3, 37°.64N×20°.45E, h22km±2km, ML1.8/1, Error ellipse: s-maj=4.4km s-min=1.4km az=47.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.32**	**76**	P	Pb	02 26 03.1	-0.2
LTHK				AML	AML	02 26 07.6	
	comp=E,683μm,0.4s						
LTHK				AML	AML	02 26 08.0	
	comp=N,334μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.49**	**13**	P	Pb	02 26 06.4	+0.2
PSDA				S	Sb	02 26 13.5	+0.6
VLS	**Valsamata**	**0.55**	**12**	P	Pb	02 26 07.4	+0.1
VLS				S	Sb	02 26 15.5	+0.6
KEF3	**Kipouria, Keph**	**0.57**	**352**	P	Pb	02 26 08.1	+0.4
KEF3				S	Sb	02 26 16.3	+0.9
KEF4	**Livadi, Kephal**	**0.62**	**358**	P	Pb	02 26 08.7	+0.2
KEF4				S	Sb	02 26 17.2	+0.3
FSK	**Fiskardo**	**0.83**	**6**	P	Pb	02 26 12.2	+0.2
RLS	**Riolos of Patr**	**0.91**	**62**	P	Pn	02 26 13.9	+0.2
KLV	**Kalavryta, Ach**	**1.41**	**73**	P	Pb	02 26 22.6	+0.8

THE 25 02:26:12.2, 38°.73N×20°.64E, h7km±1km, ML0.2/4, Error ellipse: s-maj=1.6km s-min=0.5km az=86.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.05**	**110**	P	Pg	02 26 13.5	-0.3
NYDR				S	Sg	02 26 14.8	-0.1
	32nm,0.0s						
LKD2	**Lefkada island**	**0.06**	**15**	P	Pg	02 26 13.7	-0.3
LKD2				S	Sg	02 26 15.2	-0.1
	20nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.07**	**227**	P	Pg	02 26 13.8	-0.3
DRAG				S	Sg	02 26 15.3	-0.1
TSLK	**Tsoukalades, L**	**0.10**	**8**	P	Pg	02 26 14.3	-0.1
TSLK				S	Sg	02 26 16.4	+0.4
	18nm,0.2s						
EVGI	**Lefkada island**	**0.11**	**173**	P	Pg	02 26 14.7	0.0
EVGI				S	Sg	02 26 16.8	+0.4
	38nm,0.1s						

ATH 25 02:46:39.5, 38°.21N×21°.67E, h31km±4km, ML1.1/1, Error ellipse: s-maj=4.6km s-min=1.7km az=40.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.22**	**226**	P	Pb	02 46 46.4	+0.3
RLS				AML	AML	02 46 52.4	
	comp=E,107μm,0.1s						
RLS				AML	AML	02 46 52.7	
	comp=N,75μm,0.1s						
LAKA	**Lakka**	**0.24**	**84**	P	Pb	02 46 46.6	+0.2
LAKA				S	Sb	02 46 51.2	+0.1
EFP	**Efpalio**	**0.28**	**41**	P	Pb	02 46 46.9	+0.1
EFP				S	Sn	02 46 52.7	0.0
TRIZ	**Trizonia**	**0.35**	**64**	P	Pn	02 46 48.1	-0.3
SERG	**Sergoula**	**0.36**	**57**	P	Pb	02 46 48.0	0.0
SERG				S	Sn	02 46 54.8	+0.1
KLV	**Kalavryta, Ach**	**0.41**	**114**	P	Pb	02 46 48.7	0.0
PVO	**Paravola**	**0.42**	**344**	P	Pb	02 46 48.7	0.0
PVO				S	Sn	02 46 55.7	-0.3

THE 25 02:47:01.7, 38°.73N×20°.64E, h8km±1km, ML0.7/4, Error ellipse: s-maj=1.2km s-min=0.4km az=84.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.05**	**111**	P	Pg	02 47 03.1	-0.2
NYDR				S	Sg	02 47 04.5	0.0
	110nm,0.1s						
LKD2	**Lefkada island**	**0.06**	**17**	P	Pg	02 47 03.2	-0.3
LKD2				S	Sg	02 47 04.8	0.0
	75nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.07**	**225**	P	Pg	02 47 03.4	-0.2
DRAG				S	Sg	02 47 04.9	0.0
TSLK	**Tsoukalades, L**	**0.09**	**9**	P	Pg	02 47 03.9	0.0
TSLK				S	Sg	02 47 05.7	+0.2

comp=Z,1.3nm,0.5s,baz=46,slow=4.6
NB2 **NORSAR Subarra 83.17 338** P **P** 02 59 44.1 -0.6
baz=46,slow=4.6
NOA **NORSAR Array B 83.17 338** P **P** 02 59 44.4 -0.3
comp=Z,0.8nm,0.3s,baz=45,slow=4.8,SNR=4.4
comp=Z,0.8nm,0.3s
PLCA **Paso Flores 150.94 126** PKPbc **PKPbc** 03 07 09.1 +0.8
comp=Z,1.0nm,0.8s,baz=266,slow=5.8,SNR=6.7
LPAZ **La Paz 151.38 74** PKPbc **PKPbc** 03 07 11.8 +1.1
comp=Z,0.9nm,0.5s,baz=4.1,slow=3.4,SNR=4.6

*IDC **25** 02:54:08.2±1.3,5°.73N×126°.05E,h0km,mb3.3/4,*
mbtmp3.3/4,Error ellipse: s-maj=78.7km s-min=26.1km
az=73.0
*MAN **25** 02:54:20.1,5°.44N×126°.08E,h56km,mb4.4,ML3.3,MS3.1*
ISC 25 02:54:19.4±2.1,5°.3N±0°.1×126°.1E±0°.1,h59km±29km,n11,
σ1§55/15,mb3.2/4,1C-6D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.89**	**336**	⇓*eP*	**Pn**	**02 54 36.3**	**+0.2**
DDMP				*eS*	**Sn**	**02 54 48.2**	**-0.1**
SKMP	**Bagumbayan, Su**	**1.96**	**309**	⇓*eP*	**Pn**	**02 54 50.8**	**+0.5**
SKMP				*eS*	**Sn**	**02 55 13.5**	**-0.2**
KCP	**Kidapawan**	**1.97**	**330**	⇓*eP*	**Pn**	**02 54 50.6**	**0.0**
KCP				*i* S	**Sn**	**02 55 12.0**	**-2.3**
BUKP	**Musuan**	**2.77**	**339**	⇓*iP*	**Pn**	**02 55 00.5**	**-0.9**
BUKP				*i* S	**Sn**	**02 55 37.5**	**+3.8**
BIPH	**Bislig**	**2.90**	**6**	⇓*eP*	**Pn**	**02 55 03.9**	**+0.7**
BIPH				*eS*	**Sn**	**02 55 34.8**	**-2.1**
GLSP	**General Luna,**	**4.47**	**1**	⇓*eP*	**Pn**	**02 55 25.4**	**+0.6**
GLSP				*eS*	**Sn**	**02 56 15.8**	**+0.2**
GHBP	**Garcia Hernand**	**4.66**	**338**	⇑*eP*	**Pn**	**02 55 26.9**	**-0.3**
WRA	**Warramunga Arr**	**26.35**	**162**	P	**P**	**02 59 49.8**	**-0.4**
0.2nm,0.8s,baz=342,slow=9.8,SNR=1.4
0.2nm,0.8s
ASAR **Alice Springs** **29.77** **165** P **P** **03 00 20.8** **+0.1**
0.1nm,0.3s,baz=342,slow=7.2,SNR=4.1
0.1nm,0.3s
MKAR **Makanchi Array** **55.91** **325** P P 03 03 45.3 -6.2
0.2nm,0.4s,baz=108,slow=9.3,SNR=5.4
0.2nm,0.4s
ILAR **Eielson Array** **84.00** **25** P P 03 06 38.2 -5.0
0.3nm,0.9s,baz=258,slow=5.9,SNR=5.5
0.3nm,0.9s

*NEIC **25** 03:29:49.8±0.9,9°.9S±0°.2×161°.8E±0°.1,h77km±15km,*
mb4.4/13,Error ellipse: s-maj=29.5km s-min=10.7km
az=208.0
*IDC **25** 03:29:55.4±2.2,10°.35S×161°.17E,h82km±18km,mb4.0/10,*
mbtmp4.4/12,MS3.3/16,Error ellipse: s-maj=22.9km
s-min=15.1km az=95.0
ISC 25 03:29:54.3±0.7,10°.38S±0°.08×161°.32E±0°.10,h77km,n43,
σ1§06/35,mb4.2/15,Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.65**	**305**	P	**Pn**	**03 30 22.4**	**+0.9**
40μm,0.4s,baz=129,slow=4.4,SNR=54
HNR S **Sn** **03 30 40.0** **-2.1**
64μm,0.3s,baz=209,slow=23,SNR=9.8
HNR **Honiara** **1.65** **305** **Pn** **03 30 20.1** **-1.4**
HNR Sn **Sn** **03 30 42.1** **+0.1**
KOUNC **Koumac, New Ca** **10.51** **165** Pn **Pn** **03 32 21.9** **-0.3**
LIFNC **LIFOU** **11.80** **152** Pn **Pn** **03 32 37.3** **-2.5**
DZM **Mont Dzumac** **12.62** **158** P **Pn** **03 32 51.4** **+0.4**
19nm,0.5s,baz=41,slow=6.7,SNR=118
DZM LR LR 03 37 19.1
comp=Z,168nm,18.2s,baz=22,slow=35
DZM **Mont Dzumac** **12.62** **158** Pn **Pn** **03 32 51.2** **+0.2**
MARNC **Mare, Loyalty** **12.78** **151** **Pn** **03 32 51.9** **-1.2**
ONTNC **Ouen Toro** **12.84** **158** Pn **Pn** **03 32 53.0** **-0.9**
OUENC **Ouen Island, N** **13.09** **157** Pn **Pn** **03 32 57.4** **+0.2**
PMG **Port Moresby** **13.99** **273** LR LR 03 38 24.2
comp=Z,82nm,19.5s,baz=92,slow=37
CTA **Charters Tower** **17.44** **235** P **P** **03 33 54.0** **+1.2**
4.6nm,0.6s,baz=51,slow=12,SNR=5.3
CTA LR LR 03 40 07.3
comp=Z,46nm,18.4s,baz=78,slow=35
EIDS **Eidsvold** **17.80** **212** P **Pn** **03 33 58.5** **+1.5**
COEN **Coen** **18.09** **257** P **Pn** **03 34 00.5** **-0.2**
COEN IAmb IAmb 03 34 26.2
comp=Z,41nm,1.4s
ARMA **Armidale** **21.89** **203** P **P** **03 34 41.6** **+0.4**
ARMA IAmb IAmb 03 34 44.0
comp=Z,7.9nm,0.8s
WR0 **Warramunga Arr** **27.51** **247** P **P** **03 35 33.5** **-0.4**
WB0 **Warramunga Arr** **27.59** **247** P **P** **03 35 34.4** **-0.2**
WB0 IAmb IAmb 03 35 35.0
comp=Z,11nm,0.6s
WRAB **Tennant Creek** **27.67** **247** P **P** **03 35 35.4** **0.0**
WRAB IAmb IAmb 03 35 35.7
comp=Z,7.1nm,0.8s
WB2 **Warramunga Arr** **27.68** **247** P **P** **03 35 35.0** **-0.4**
WB2 IAmb IAmb 03 35 35.8
comp=Z,7.1nm,0.8s
WRA **Warramunga Arr** **27.69** **247** P **P** **03 35 35.0** **-0.4**
comp=Z,7.5nm,0.7s,baz=76,slow=9.1,SNR=62
WRA LR LR 03 46 13.3
comp=Z,43nm,19.2s,baz=18,slow=36
comp=Z,7.5nm,0.7s
WRA **Warramunga Arr** **27.69** **247** P **P** **03 35 33.8** **-1.7**
STKA **Stephens Creek** **28.12** **218** P **P** **03 35 40.0** **+0.9**
comp=Z,2.2nm,0.8s,baz=17,slow=10,SNR=3.5
STKA LR LR 03 46 51.7
comp=Z,113nm,18.1s,baz=27,slow=36
comp=Z,2.2nm,0.8s
ASAR **Alice Springs** **29.29** **240** P **P** **03 35 48.4** **-1.3**
comp=Z,2.3nm,0.6s,baz=71,slow=9.1,SNR=27
ASAR LR LR 03 46 56.0
comp=Z,118nm,19.7s,baz=98,slow=35
comp=Z,2.3nm,0.6s
TOO **Toolangi** **30.60** **205** P **P** **03 36 01.8** **+0.7**
TOO IAmb IAmb 03 36 02.4
comp=Z,8.5nm,0.8s
URZ **Urewera** **31.17** **156** LR LR 03 47 18.7
comp=Z,62nm,18.6s,baz=87,slow=33
KNRA **Kununurra** **32.13** **257** P **P** **03 36 14.2** **-0.6**
BBOO **Buckleboo** **32.24** **222** P **P** **03 36 15.7** **+0.1**
RPZ **Rata Peaks** **34.27** **167** LR LR 03 48 35.4
comp=Z,26nm,19.7s,baz=231,slow=33
DCZ **Deep Cove** **35.32** **173** P **P** **03 36 40.7** **-1.4**
MJAR **Matsushiro Arr** **51.49** **336** LR LR 04 00 23.3
comp=Z,11nm,19.6s,baz=94,slow=36
KSRS **Korea Array** **56.95** **328** LR LR 04 02 31.1
comp=Z,18nm,20.0s,baz=140,slow=34
KLR **Kul'dur** **64.80** **339** LR LR 04 05 32.3
comp=Z,18nm,21.9s,baz=128,slow=33
VNDA **Vanda** **67.13** **180** P **P** **03 40 39.8** **+0.4**
comp=Z,2.1nm,0.7s,baz=343,slow=6.3,SNR=16
comp=Z,2.1nm,0.7s
VNDA **Vanda** **67.13** **180** P **P** **03 40 37.6** **-1.8**
VNDA IAmb IAmb 03 40 40.4
comp=Z,2.5nm,0.8s
MA2 **Magadan** **70.23** **354** LR LR 04 06 26.8
comp=Z,18nm,21.4s,baz=28,slow=31
SONM **Songino Array** **75.60** **325** P **P** **03 41 31.5** **+0.5**
comp=Z,1.2nm,0.7s,baz=135,slow=7.2,SNR=7.1
comp=Z,1.2nm,0.7s
YAK **Yakutsk** **76.29** **345** LR LR 04 11 42.1
comp=Z,28nm,22.0s,baz=93,slow=33
KDAK **Kodiak Island** **77.62** **23** P **P** **03 41 42.7** **+0.7**
comp=Z,4.7nm,0.7s,baz=271,slow=7.0,SNR=4.3
comp=Z,4.7nm,0.7s
MAW **Mawson** **83.69** **202** P **P** **03 42 15.2** **+0.8**
comp=Z,2.7nm,0.7s,baz=276,slow=2.3,SNR=5.5
comp=Z,2.7nm,0.7s
ILAR **Eielson Array** **84.31** **20** P **P** **03 42 17.6** **+0.2**
comp=Z,3.0nm,1.2s,baz=249,slow=4.9,SNR=11
ILAR LR LR 04 15 17.9
comp=Z,27nm,19.9s,baz=50,slow=32
comp=Z,3.0nm,1.2s
NVAR **Mina Array Bea** **88.94** **51** P **P** **03 42 42.4** **+1.5**
comp=Z,1.1nm,0.8s,baz=238,slow=7.4,SNR=6.1
comp=Z,1.1nm,0.8s
PFO **Pinyon Flats O** **89.28** **56** LR LR 04 13 21.5
comp=Z,18nm,20.1s,baz=65,slow=29
MKAR **Makanchi Array** **90.08** **318** P **P** **03 42 45.1** **-0.7**
comp=Z,0.4nm,0.5s,baz=117,slow=5.5,SNR=4.5
comp=Z,0.4nm,0.5s
YKA **Yellowknife Ar** **96.39** **28** LR LR 04 19 00.8
comp=Z,15nm,20.6s,baz=320,slow=30

IDC 25 03:49:25.0±2.2,6°.62S×129°.75E,h0km,mb3.5/1,
mbtmp3.7/3,ML4.1/2,Error ellipse: s-maj=146.4km
s-min=31.0km az=69.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.97**	**162**	Pn	Pn	03 52 43.5	-0.9
1.1nm,0.3s,baz=344,slow=14,SNR=41
WRA Sn Sn 03 55 06.8 -14
2.1nm,0.3s,baz=320,slow=14,SNR=9.5
1.4nm,0.4s
ASAR **Alice Springs** **17.41** **167** P Pn 03 53 30.2 +0.7
0.6nm,0.3s,baz=349,slow=8.6,SNR=17
ASAR S Sn 03 56 32.5 -12
1.0nm,0.6s,baz=355,slow=28,SNR=5.4
0.8nm,0.4s
MKAR **Makanchi Array** **67.78** **327** P P 04 00 24.7 0.0
0.3nm,0.6s,baz=138,slow=7.0,SNR=3.5
0.3nm,0.6s

DJA 25 04:07:50.4±0.5,10°S±6°×12°5E±°,h27km±6km,M3.9/7,
mb4.2/3,MLv3.7/7,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.40**	**307**	P	Pn	04 08 00.5	0.0
SOEI S Sn 04 08 07.7 +0.4
BATI **Baumata** **0.94** **257** P Pn 04 08 07.9 +0.1
BATI S Sn 04 08 21.4 +1.0
MMRI **Maumere** **2.69** **300** P Pn 04 08 31.6 -0.3
PLAI **Plampang** **6.82** **279** P Pn 04 09 28.0 -0.8
0.1nm20nm,0.5s

*IDC **25** 04:16:35.7±3.6,36°.07N×70°.99E,h82km±31km,mb4.0/19,*
mbtmp4.4/23,Error ellipse: s-maj=18.5km s-min=16.0km
az=150.0
*MOS **25** 04:16:37.8±1.2,36°.33N×71°.07E,h108km,mb4.5/23,Error*
ellipse: s-maj=7.3km s-min=3.9km az=89.4
*BJI **25** 04:16:38.5±0.0,36°.46N×71°.00E,h99km,mb4.3/14,*
mB4.2/8
*NEIC **25** 04:16:39.7±1.9,36°.30N±0°.06×70°.86E±0°.08,h114km±8km,*
mb4.5/15,Error ellipse: s-maj=10.0km s-min=8.3km
az=107.0
*NNC **25** 04:16:44.0±2.4,37°.00N×71°.02E,h0km,mb5.0,mpv4.8,*
Error ellipse: s-maj=19.0km s-min=18.2km az=95.0
*SOME **25** 04:16:46.1,38°.30N×72°.47E,h30km,MS3.6*
ISC 25 04:16:38.2±0.3,36°.25N±0°.03×70°.96E±0°.04,h100km,n229,
σ2§15/256,mb4.5/42,12C-11D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.31**	**223**	Pn	**Pn**	**04 17 18.0**	**+2.9**
KBL **Kabul** **2.31** **223** PN **Pn** **04 17 18.0** **+2.9**
KBL **Kabul** **2.31** **223** P **Pn** **04 17 18.1** **+3.0**
SNR=36
KBL S **Sn** **04 17 46.9** **+3.7**
CEP **Cherat** **2.54** **162** P **Pn** **04 17 22.0** **+4.0**
CEP S **Sn** **04 17 54.0** **+5.5**
GAR **Garm** **2.79** **350** **Pn** **04 17 22.5** **+1.2**
CHGR **Chuyangaron** **2.80** **330** **Pn** **04 17 21.9** **+0.6**
CHGR **Chuyangaron** **2.80** **330** PN **Pn** **04 17 21.9** **+0.6**
CHCP **Chirah Chowk** **3.20** **143** P **Pn** **04 17 29.4** **+2.8**
NIL **Nilore** **3.20** **143** Pn **Pn** **04 17 29.6** **+2.9**
NIL **Nilore** **3.20** **143** PN **Pn** **04 17 29.6** **+2.9**
NIL **Nilore** **3.20** **143** P **Pn** **04 17 29.6** **+2.9**
THW **Thamme Wali** **3.50** **169** P **Pn** **04 17 33.2** **+2.5**
BTK **Batken** **3.81** **358** Pn **Pn** **04 17 37.0** **+2.2**
BTK **Batken** **3.81** **358** PN **Pn** **04 17 37.0** **+2.2**
SARP **Sargodha** **4.54** **161** P **Pn** **04 17 45.7** **+1.0**
JMU **Jammu** **4.79** **136** *eP* **Pn** **04 17 49.6** **+1.6**
JMU *eS* **Sn** **04 18 41.9** **-0.5**
KSH **Kashi** **5.13** **49** P **Pn** **04 17 50.6** **-2.2**
KSH sP 04 18 09.9
KSH S Sn 04 18 40.1 -11
KSH smax smax
comp=N,1μm,0.6s
KSH smax smax
comp=E,1μm,0.7s
TAS **Tashkent** **5.23** **346** **Pn** **04 17 54.6** **+0.6**
TAS **Tashkent** **5.23** **346** PN **Pn** **04 17 54.6** **+0.6**
THN **Thein Dam** **5.47** **133** *eP* **Pn** **04 17 58.0** **+0.8**
THN *eP* 04 17 58.8
THN *eS* **Sn** **04 18 57.5** **-1.4**
THN *eS* 04 18 58.1
IUG **Iuzhnay** **5.94** **353** *e*PN **Pn** **04 18 02.9** **-0.7**
IUG **Iuzhnay** **5.94** **353** *eP* **Pn** **04 18 03.9** **+0.2**
2μm,0.3s
IUG *eS* **Sn** **04 19 06.1** **-4.2**
391nm,0.4s
IUG **Iuzhnay** **5.94** **353** *eP* **Pn** **04 18 02.9** **-0.7**
baz=351
IUG *eS* **Sn** **04 19 05.6** **-4.7**
baz=351
CHM **Chimkent** **6.15** **351** *eP* **Pn** **04 18 07.2** **+0.7**
5.2nm,0.3s
CHM *eS* **Sn** **04 19 12.0** **-3.5**
799nm,0.2s
AML **Almayashu** **6.25** **19** P **Pn** **04 18 08.7** **+0.6**
SNR=184
UCH **Uchtor** **6.58** **24** P **Pn** **04 18 13.2** **+0.6**
SNR=25
BHK **Bhakra** **6.62** **135** *eP* **Pn** **04 18 13.3** **+0.4**
DZA **Taraz** **6.64** **2** *e*PN **Pn** **04 18 13.1** **0.0**
DZA **Taraz** **6.64** **2** *eP* **Pn** **04 18 13.9** **+0.8**
487nm,0.2s
DZA *eS* **Sn** **04 19 24.5** **-2.8**
585nm,0.3s
DZA **Taraz** **6.64** **2** *eP* **Pn** **04 18 13.1** **0.0**
baz=0.9
DZA *eS* **Sn** **04 19 23.3** **-4.0**
baz=0.9
MRKS **Merke** **6.72** **14** *eP* **Pn** **04 18 14.6** **+0.3**
105nm,0.2s
MRKS *eS* **Sn** **04 19 25.5** **-3.9**
483nm,0.4s
EKS2 **Erkin-Say** **6.76** **18** P **Pn** **04 18 15.6** **+0.7**
SNR=22
KK31 **Karatay Array** **6.86** **357** Pn **Pn** **04 18 16.2** **+0.2**
KK31 **Karatay Array** **6.86** **357** *e*PN **Pn** **04 18 16.0** **0.0**
KK31 **Karatay Array** **6.86** **357** ⇓P **Pn** **04 18 16.1** **0.0**
64nm,0.3s,baz=177,slow=12,SNR=1998
KK31 ⇓S **Sn** **04 19 27.2** **-5.3**
67nm,0.6s,baz=187,slow=23,SNR=6.6
KKAR **Karatay Array** **6.86** **357** Pn **Pn** **04 18 16.1** **+0.1**
KKAR **Karatay Array** **6.86** **357** PN **Pn** **04 18 16.1** **+0.1**
AAK **Ala-Archa** **6.94** **22** P **Pn** **04 18 18.2** **+0.9**
SNR=33
KBK **Karagaybulak** **7.10** **24** P **Pn** **04 18 20.9** **+1.4**
SNR=9.1
ULHL **Ulahol** **7.25** **33** P **Pn** **04 18 22.1** **+0.4**
SNR=13
SMLA **Simla** **7.26** **133** *eP* **Pn** **04 18 21.6** **-0.1**
SMLA *eS* **Sn** **04 19 39.2** **-3.3**
SMLA IAML 04 19 49.9
comp=E,200nm,0.3s
SMLA IAML 04 19 49.9
comp=N,266nm,0.4s
BOOM **Boomskoye usch** **7.33** **30** **Pn** **04 18 23.1** **+0.5**
BOOM **Boomskoye usch** **7.33** **30** PN **Pn** **04 18 23.1** **+0.5**
CHMS **Chumysh** **7.35** **22** P **Pn** **04 18 23.2** **+0.5**
SNR=12
CHMS **Chumysh** **7.35** **22** PN **Pn** **04 18 22.8** **0.0**
CHMS **Chumysh** **7.35** **22** ⇑P **Pn** **04 18 22.8** **0.0**
comp=N,21nm,0.5s
CHMS ⇑S **Sn** **04 19 40.8** **-3.7**
comp=N,124nm,0.5s
HRA **Herat** **7.36** **258** **Pn** **04 18 24.2** **+1.1**
USP **Ospenovka** **7.52** **20** P **Pn** **04 18 25.8** **+0.7**
SNR=26
TKM2 **Tokmak 2** **7.56** **27** P **Pn** **04 18 26.4** **+0.5**
SNR=11
TKM2 **Tokmak 2** **7.56** **27** PN **Pn** **04 18 26.0** **+0.2**
TKM2 **Tokmak 2** **7.56** **27** ⇑P **Pn** **04 18 26.0** **+0.2**
comp=N,28nm,0.6s
TKM2 ⇑S **Sn** **04 19 46.6** **-3.5**
comp=N,97nm,0.8s
SGDS **Sogindy** **7.73** **20** *e*PN **Pn** **04 18 27.0** **-0.9**
SGDS **Sogindy** **7.73** **20** *eP* **Pn** **04 18 27.3** **-0.6**
comp=N,11nm,0.4s
SGDS *eS* **Sn** **04 19 47.4** **-6.4**
comp=N,57nm,0.5s

SGDS **Sogindy** **7.73** **20** *eP* **Pn** **04 18 27.0** **-0.9**
baz=20
KST **Kastek** **7.80** **28** *eP* **Pn** **04 18 30.6** **+1.6**
comp=N,9.7nm,0.3s
KST *eS* **Sn** **04 19 54.2** **-1.5**
comp=N,80nm,0.3s
DGS **Degeres** **7.91** **26** *eP* **Pn** **04 18 31.7** **+1.3**
comp=N,17nm,0.5s
DGS *eS* **Sn** **04 19 56.9** **-1.3**
comp=N,18nm,0.5s
TNSS **Tian-Shan** **8.20** **32** *e*PN **Pn** **04 18 32.1** **-2.5**
TNSS **Tian-Shan** **8.20** **32** *eP* **Pn** **04 18 36.0** **+1.3**
comp=N,12nm,0.3s
TNSS *eS* **Sn** **04 20 03.9** **-1.9**
comp=N,15nm,0.5s
TNSS **Tian-Shan** **8.20** **32** *eP* **Pn** **04 18 32.2** **-2.5**
baz=33
KRBS **Karabastau** **8.27** **24** *eP* **Pn** **04 18 34.0** **-1.3**
comp=N,8.5nm,0.3s
KRBS *eS* **Sn** **04 20 00.4** **-6.6**
comp=N,16nm,0.4s
DDI **Dehra Dun** **8.38** **133** *eP* **Pn** **04 18 37.0** **+0.2**
DDI IAML 04 20 09.8
comp=E,210nm,0.1s
DDI IAML 04 20 10.8
comp=N,271nm,0.3s
KOTS **Kotyrbulak** **8.43** **32** *eP* **Pn** **04 18 39.6** **+2.0**
comp=N,16nm,0.5s
KOTS *eS* **Sn** **04 20 10.1** **-0.9**
comp=N,51nm,0.4s
KUU **Kurty** **8.68** **27** *e*PN **Pn** **04 18 39.3** **-1.4**
KUU **Kurty** **8.68** **27** *eP* **Pn** **04 18 40.9** **+0.1**
comp=N,5.4nm,0.4s
KUU *eS* **Sn** **04 20 12.5** **-4.3**
comp=N,13nm,0.3s
KUU **Kurty** **8.68** **27** *eP* **Pn** **04 18 39.3** **-1.4**
baz=27
CHKK **Chushkaly** **8.89** **29** *e*PN **Pn** **04 18 42.6** **-1.0**
CHKK **Chushkaly** **8.89** **29** *eP* **Pn** **04 18 43.7** **0.0**
comp=N,7.2nm,0.4s
CHKK *eS* **Sn** **04 20 17.5** **-4.5**
comp=N,9.7nm,0.2s
CHKK **Chushkaly** **8.89** **29** *eP* **Pn** **04 18 42.7** **-1.0**
baz=30
SATY **Saty** **8.90** **38** *eP* **Pn** **04 18 47.0** **+3.1**
comp=N,38nm,0.9s
ZHN **Zhinishke** **8.99** **38** *eP* **Pn** **04 18 49.4** **+4.3**
comp=N,22nm,0.1s
BTLS **Baital** **9.09** **14** *eP* **Pn** **04 18 45.3** **-1.0**
BTLS **Baital** **9.09** **14** *eP* Pn 04 18 54.3 +7.9
comp=N,5.3nm,0.2s
BTLS **Baital** **9.09** **14** *eP* **Pn** **04 18 45.4** **-1.0**
baz=14
BTLS **Baital** **9.09** **14** *eS* Sn 04 20 37.1 +10
comp=N,24nm,0.2s
KHET **Khetri** **9.12** **152** *eP* **Pn** **04 18 45.6** **-1.3**
NDI **New Delhi** **9.21** **143** *eP* **Pn** **04 18 48.0** **-0.1**
NDI *eS* **Sn** **04 20 26.0** **-3.9**
UZB **Uzynbulak** **9.27** **40** *eP* **Pn** **04 18 48.1** **-0.9**
UZB **Uzynbulak** **9.27** **40** *eP* Pn 04 18 54.8 +5.8
comp=N,4.1nm,0.3s
UZB **Uzynbulak** **9.27** **40** *eP* **Pn** **04 18 48.1** **-0.9**
baz=40
KPKS **Kokpek** **9.34** **37** *eP* **Pn** **04 18 48.2** **-1.6**
KPKS **Kokpek** **9.34** **37** *eP* Pn 04 18 55.2 +5.4
comp=N,10nm,0.5s
KPKS **Kokpek** **9.34** **37** *eP* **Pn** **04 18 48.3** **-1.6**
baz=38
SHLS **Shalkode** **9.51** **41** *eP* Pn 04 19 06.6 +14
comp=N,5.2nm,0.3s
ARXS **Arharly** **9.53** **31** *eP* Pn 04 18 57.7 +5.3
comp=N,9.3nm,0.6s
PDGK **Podgornoye** **9.64** **40** P **Pn** **04 18 53.2** **-0.8**
PDGK S **Sn** **04 20 48.5** **+8.0**
PDGK **Podgornoye** **9.64** **40** ⇓P **Pn** **04 18 53.2** **-0.8**
comp=N,22nm,1.1s
PDGK ⇓S **Sn** **04 20 48.5** **+8.0**
comp=N,21nm,0.7s
BLB **Baldybastay** **9.72** **34** *eP* Pn 04 19 04.7 +10
comp=N,8.1nm,0.3s
LGTI **Lohaghat** **10.34** **128** *eP* Pn 04 19 00.8 -2.6
GEYT **Alibeck** **10.40** **283** P **Pn** **04 19 02.0** **-2.2**
comp=N,11nm,0.4s,baz=101,slow=8.9,SNR=23
GEYT S **Sn** **04 20 52.9** **-5.9**
comp=N,28nm,0.3s,baz=338,slow=24,SNR=15
GEYT **Alibeck** **10.40** **283** Pn **Pn** **04 19 01.8** **-2.5**
GYA0B **ALIBECK ARRAY** **10.40** **283** Pn **Pn** **04 19 01.7** **-2.6**
DJR **Jarkent** **10.51** **37** *eP* Pn 04 19 15.6 +10
comp=N,4.4nm,0.6s
OTUK **Ortayu** **12.03** **4** P **Pn** **04 19 23.8** **-2.3**
OTUK S **Sn** **04 21 44.5** **+6.2**
JHNI **Jhansi** **12.56** **147** *eP* Pn 04 19 31.1 -2.1
DANN **Dangsing** **13.38** **122** *eP* Pn 04 19 41.1 -3.2
comp=N,100nm,0.3s
DANN *eS* Sn 04 22 01.6 -10
MAKZ **Makanchi** **13.38** **35** Pn **Pn** **04 19 42.8** **-1.1**
MAKZ **Makanchi** **13.38** **35** P **Pn** **04 19 42.8** **-1.1**
MK31 **Makanchi Array** **13.51** **35** Pn **Pn** **04 19 44.9** **-0.8**
MK31 **Makanchi Array** **13.51** **35** ⇓*eP* **Pn** **04 19 45.1** **-0.6**
MKAR **Makanchi Array** **13.51** **35** P **Pn** **04 19 45.0** **-0.7**
comp=N,1.5nm,0.7s,baz=222,slow=14,SNR=11
MKAR **Makanchi Array** **13.51** **35** P **Pn** **04 19 45.0** **-0.7**
BHPL **Bhopal** **14.12** **155** *eP* Pn 04 19 50.0 -3.6
GKN **Gorkha** **14.20** **122** *eP* Pn 04 19 51.1 -3.7
DMN **Daman** **14.77** **122** *eP* Pn 04 19 59.3 -2.9
KKN **Kakani** **14.77** **121** *eP* Pn 04 19 59.3 -2.9
KKN *eS* Sn 04 22 34.6 -11
comp=N,10nm,0.8s
PKIN **Phulchoki** **14.99** **121** *eP* **Pn** **04 20 02.3** **-2.7**
comp=N,75nm,0.4s
PKI **Pulchoki** **15.00** **121** *eP* **Pn** **04 20 02.5** **-2.7**
comp=N,43nm,0.4s
GUN **Gumba** **15.12** **119** *eP* **Pn** **04 20 03.2** **-3.5**
comp=N,80nm,0.5s
AB31 **Akbulak array** **15.29** **332** *eP* **Pn** **04 20 06.7** **-1.7**
ABKAR **Akbulak array** **15.29** **332** **Pn** **04 20 06.3** **-2.0**
KURBB **Kurchatov Arra** **15.37** **18** P **Pn** **04 20 06.2** **-3.1**
comp=N,7.3nm,0.5s,baz=209,slow=10,SNR=15
KURK **Kurchatov** **15.48** **19** Pn **Pn** **04 20 10.6** **-0.1**
KURK **Kurchatov** **15.48** **19** ⇑*eP* **Pn** **04 20 09.8** **-0.9**
JIRN **Jiri** **15.49** **119** *eP* **Pn** **04 20 08.0** **-3.4**
comp=N,116nm,0.3s
RAMN **Ramite** **16.21** **120** *eP* **Pn** **04 20 18.0** **-2.3**
comp=N,55nm,0.4s
RAMN *eS* Sn 04 23 07.2 -13
comp=N,48nm,0.5s
BANOM **Banah** **16.22** **235** P **Pn** **04 20 19.3** **-0.8**
SNR=5.7
SHME **Shamm** **16.24** **235** P **P** **04 20 22.5** **+0.9**
SNR=6.4
BVAR **Borovoye Array** **16.78** **359** P **Pn** **04 20 25.7** **-1.2**
comp=N,4.0nm,0.5s,baz=159,slow=13,SNR=26
BRVK **Borovoye** **16.82** **359** P **Pn** **04 20 24.5** **-2.7**
BRVK **Borovoye** **16.82** **359** P **Pn** **04 20 24.5** **-2.7**
BRVK pmax pmax
comp=Z,10.0nm,0.8s
BRVK **Borovoye** **16.82** **359** P **Pn** **04 20 26.5** **-0.8**
ODAN **Odare** **16.82** **119** *eP* **Pn** **04 20 25.1** **-2.7**
AKTO **Aktyubinsk** **16.98** **331** P **Pn** **04 20 29.7** **+0.3**
comp=Z,49nm,0.6s,baz=139,slow=15,SNR=73
AKTO S Sn 04 23 25.0 -13
comp=Z,4.1nm,0.7s,baz=163,slow=19,SNR=2.1
ASHO **Ashiyiah** **17.23** **232** P **P** **04 20 35.0** **+2.3**
SNR=12
ARQ **Araqi** **17.93** **228** P **P** **04 20 41.9** **+1.5**
DGZ **Jazzator, Alta** **18.00** **37** ⇑*eP* **P** **04 20 41.8** **+0.8**
LSA **Lhasa** **18.14** **105** P **P** **04 20 43.2** **+0.2**
LSA IAmb IAmb 04 20 46.2
comp=Z,14nm,0.8s
LSA **Lhasa** **18.14** **105** P **P** **04 20 43.2** **+0.2**
LSA pmax pmax
comp=Z,14nm,0.8s
AKT **Akhty** **18.81** **293** *eP* **Pn** **04 20 53.4** **+1.9**
AKT *eS* **S** **04 24 17.5** **-1.1**
AKT pmax pmax
comp=Z,12nm,0.5s
AKT smax smax
comp=N,23nm,0.6s
AKT smax smax
comp=E,17nm,0.6s
JRN **Qarnain Island** **19.20** **239** P **P** **04 20 54.2** **0.0**
GOMU **GeErMu** **19.24** **83** P **P** **04 20 57.0** **+2.1**
GOMU pmax pmax
comp=E,6.0nm,0.9s
GOMU pmax pmax
comp=E,44nm,3.7s

MAK Makhachkala 19.24 298 *e*P **P 04 20 55.1 +0.6**
MAK *e*S **S 04 24 25.7 -1.3**
MAK pmax pmax
comp=Z,418nm,1.1s
GNBR Gunib 19.52 296⇓*e*P **Pn 04 21 01.9 +2.1**
SHMA Al-Shehemyia 19.98 244 P **P 04 21 02.4 -0.2**
ZAA0 Zalesovo Array 20.16 24 P **P 04 21 03.7 -0.6**
ZAA0 IAmb IAmb 04 21 16.1
comp=Z,8.6nm,0.5s
ZALV Zalesovo Beam 20.16 24 P **P 04 21 04.3 +0.1**
comp=Z,9.2nm,0.5s,baz=212,slow=10,SNR=31
comp=Z,9.2nm,0.5s
ZALV Zalesovo Beam 20.16 24 P **P 04 21 03.7 -0.6**
SAKB Bahrain 20.23 245 P **P 04 21 05.9 +0.7**
SHL Shillong 20.83 115 P **P 04 21 11.4 -0.6**
SHL IAmb IAmb 04 21 15.9
comp=Z,30nm,0.8s
SHL Shillong 20.83 115 P **P 04 21 11.4 -0.6**
SHL pmax pmax
comp=Z,30nm,0.8s
SHL Shillong 20.83 115 P **P 04 21 10.5 -1.4**
SNR=7.7
GNI Garni 20.94 289 P Pn 04 21 16.1 -0.4
comp=Z,33nm,0.8s,baz=47,slow=1.2,SNR=14
GNI Garni 20.94 289 **P 04 21 11.4 -1.7**
GNI Garni 20.94 289 P **P 04 21 11.4 -1.7**
GNI pmax pmax
comp=Z,40nm,0.8s
SVE Sverdlovsk 21.73 345 *e*P **P 04 21 23.0 +1.9**
ZEI Tsey 21.82 296 *e*P **P 04 21 26.5 +4.1**
ZEI pmax pmax
comp=Z,6.0nm,0.8s
ARU Arti 21.86 341 P **P 04 21 23.9 +1.4**
comp=Z,6.7nm,0.4s,baz=175,slow=8.8,SNR=13
comp=Z,6.7nm,0.4s
ARU Arti 21.86 341 P **P 04 21 20.9 -1.6**
ARU IAmb IAmb 04 21 26.9
comp=Z,16nm,0.6s
ARU Arti 21.86 341⇓*i*P **P 04 21 24.1 +1.6**
ARU pmax pmax
comp=Z,32nm,1.3s
NCK Nalchik 22.15 297⇑*e*P **P 04 21 29.7 +4.0**
NCK pmax pmax
comp=Z,15nm,0.5s
KBZ Khabaz 22.69 298 P **P 04 21 32.4 +1.1**
comp=Z,3.6nm,0.9s,baz=221,slow=11,SNR=5.0
comp=Z,3.6nm,0.9s
KBZ Khabaz 22.69 298 *i* P **P 04 21 32.9 +1.7**
KBZ pmax pmax
comp=Z,9.0nm,0.8s
KIV Kislovodsk 22.88 298 *e*P **P 04 21 37.4 +4.2**
KIV *e*S **S 04 25 38.7 +3.5**
KIV pmax pmax
comp=Z,11nm,1.1s
DOK Doka 22.99 225 P **P 04 21 35.2 +0.8**
SNR=7.8
BELG Belogornoye 23.07 322 P **P 04 21 36.3 +1.5**
comp=Z,19nm,0.5s,baz=253,slow=12,SNR=5.2
comp=Z,19nm,0.5s
BELG Belogornoye 23.07 322*de*P **P 04 21 36.5 +1.7**
BELG pmax pmax
comp=Z,6.0nm,0.9s
WHFO Wadi Hawf 23.75 224 P **P 04 21 42.2 +0.7**
SNR=9.5
ABTO Aybut 24.48 224 P **P 04 21 47.9 -0.1**
SNR=12
RAYN Ar Rayn 25.37 247 P **P 04 21 56.1 0.0**
RAYN Ar Rayn 25.37 247 P **P 04 21 56.1 0.0**
RAYN pmax pmax
comp=Z,4.0nm,0.6s
RAYN Ar Rayn 25.37 247 P **P 04 21 56.3 +0.2**
VRH Novokhopyorsk 25.66 315 *e*P **P 04 21 59.0 +0.6**
VRH pmax pmax
comp=Z,9.0nm,0.3s
KIRV Kirov 26.45 334*ce*P **P 04 22 06.6 +1.2**
VSR Storozhevoye 27.15 313 *e*P **P 04 22 13.5 +1.7**
VSR pmax pmax
comp=Z,7.0nm,0.5s
VORR Voronezh 27.30 314 *e*P **P 04 22 17.1 +4.0**
LPSR Galich'ya Gora 27.81 316 *e*P **P 04 22 18.9 +1.2**
LPSR pmax pmax
comp=Z,9.0nm,0.7s
BR131 Keskin Array S 29.48 288 P **P 04 22 32.5 -0.4**
BR131 IAmb IAmb 04 22 37.1
comp=Z,6.6nm,0.8s
BR131 Keskin Array S 29.48 288 P **P 04 22 32.5 -0.4**
BR131 pmax pmax
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 29.48 288 P **P 04 22 35.7 +2.8**
comp=Z,3.0nm,0.7s,baz=96,slow=8.4,SNR=16
PRGR Permogore 29.99 336 *e*P **P 04 22 35.8 -1.0**
PRGR *e* 04 23 35.2
PRGR pmax pmax
comp=Z,5.0nm,0.4s
OBN Obninsk 30.11 320⇓*e*P **P 04 22 41.1 +3.1**
OBN *e**PP **pP 04 23 05.6 +4.6**
OBN *e* 04 23 42.5
OBN *e*S **S 04 27 27.8 -1.4**
OBN pmax pmax
comp=Z,25nm,2.0s
CMAR Chiang Mai Arr 30.36 118 *i* P P 04 22 47.2 +6.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KLMR Klimovskoe 31.69 331 *e*P **P 04 22 48.2 -3.6**
KLMR pmax pmax
comp=Z,18nm,1.5s
KLMR Klimovskoe 31.69 331 *e*P **P 04 22 48.2 -3.6**
KLMR AMP 04 22 54.5
comp=Z,18nm,1.5s
ELL Elmali 32.83 283 P **P 04 23 01.4 -0.9**
ELL Elmali 32.83 283 P **P 04 23 01.4 -0.9**
ELL pmax pmax
comp=Z,46nm,0.6s
AKASG Malin Array Be 33.08 309 P **P 04 23 04.8 +0.7**
comp=Z,1.1nm,0.5s,baz=82,slow=7.1,SNR=8.6
comp=Z,1.1nm,0.5s
AKBB Malin Array Si 33.08 309⇑*e*P **P 04 23 04.7 +0.6**
AKBB pmax pmax
comp=Z,3.0nm,0.7s
NRIK Noril'sk 34.38 10 P **P 04 23 17.3 +2.2**
comp=Z,3.2nm,0.5s,baz=222,slow=10,SNR=2.6
comp=Z,3.2nm,0.5s
NRIK Noril'sk 34.38 10⇓*e*P **P 04 23 17.2 +2.0**
NRIK pmax pmax
comp=Z,5.0nm,1.1s
MNK Minsk 34.66 316 *i* P **P 04 23 17.2 -0.5**
MNK *i* *PP **pP 04 23 41.8 +0.6**
MNK *i* 04 24 35.9
MNK *i* 04 25 52.4
MNK *i* S **S 04 28 37.7 -2.1**
MNK *i* *SS **sS 04 29 21.1 -0.4**
MNK *i* SS **SnSn 04 31 01.2 -1.5**
MNK *i* 04 33 27.9
MNK pmax pmax
comp=Z,8.0nm,0.6s
MNK pmax pmax
comp=E,2.0nm,0.7s
MNK pmax pmax
comp=N,22nm,0.7s
MNK MLR MLR
comp=Z,67nm,18.0s
MNK MLR MLR
comp=N,748nm,17.0s
MNK MLR MLR
comp=E,33nm,14.0s
MNK Minsk 34.66 316 *i* P **P 04 23 17.2 -0.5**
comp=E,2.0nm,0.7s
MNK *i* P **P 04 23 17.2 -0.5**
comp=N,22nm,0.7s
MNK *i* P **P 04 23 17.2 -0.5**
comp=Z,8.0nm,0.7s,baz=283
MNK *i* pP **pP 04 23 41.8 +0.6**
MNK *i* PP **PnPn 04 24 36.0 -0.8**
MNK *i* PcP **PcP 04 25 52.5 +2.9**
MNK *i* S **S 04 28 37.8 -2.1**
MNK *i* sS **sS 04 29 21.1 -0.4**
MNK *i* SS **SnSn 04 31 01.2 -1.5**
MNK *i* LRM MLR 04 38 48.4
comp=Z,67nm,18.1s
MNK *i* LRM MLR 04 38 54.0
comp=N,748nm,17.4s
MNK *i* LRM MLR 04 38 55.2
comp=E,33nm,14.2s
VSU Vasula 36.36 322⇑*e*P **P 04 23 33.5 +1.3**
FINES FINESS Array B 37.68 326 P **P 04 23 44.4 +1.1**
comp=E,4.0nm,0.5s,baz=116,slow=9.3,SNR=22
comp=E,4.0nm,0.5s
NJ2 Nanjing 39.54 82 *e*P **P 04 23 59.4 +0.1**
NJ2 pmax pmax
comp=E,16nm,0.5s
VYHS Vyhne 39.67 305 *e*P **P 04 24 01.1 +0.8**
ARA0 ARCESS Array S 41.37 338 *e*P **P 04 24 15.3 +1.4**
ARA0 IAmb IAmb 04 24 17.0
comp=Z,21nm,1.1s
ARCES ARCESS Array B 41.37 338 P **P 04 24 15.0 +1.1**
comp=Z,3.0nm,0.4s,baz=114,slow=8.1,SNR=44
comp=Z,3.0nm,0.4s
BLEU Blekinge 41.73 317 *e*P **P 04 24 17.6 +0.5**
KTK1 Kautokeino 41.84 336 *e*P **P 04 24 19.0 +1.3**
KTK1 IAmb IAmb 04 24 20.3
comp=Z,19nm,1.2s
BSD Bornholm Skovb 42.16 315 *e*P **P 04 24 22.4 +1.9**
ZEA Zeya 42.26 47 *e*P **P 04 24 21.4 0.0**
HAMF Hammerfest 42.45 339 *e*P **P 04 24 24.3 +1.6**
HAMF IAmb IAmb 04 24 25.8
comp=Z,38nm,1.1s
DEL Delary 42.82 317 *e*P **P 04 24 25.9 +0.1**
HFS Hagfors 43.25 322 P **P 04 24 29.9 +0.7**
comp=Z,4.7nm,0.5s,baz=108,slow=9.7,SNR=26
comp=Z,4.7nm,0.5s
FABU Falkenberg 43.49 317 *e*P **P 04 24 29.5 -1.7**
BORU Boraas 43.49 318 *e*P **P 04 24 30.7 -0.5**
MOR8 Moi Rana 44.02 331 *e*P **P 04 24 36.0 +0.7**
MOR8 IAmb IAmb 04 24 36.2
comp=Z,13nm,0.6s
STEI Steigen 44.19 333 *e*P **P 04 24 37.8 +1.2**
NC602 NORSAR Array S 44.37 323 *e*P **P 04 24 38.9 +0.6**
STRU Stroemstad 44.42 320 *e*P **P 04 24 38.6 +0.1**
NC303 NORSAR Array S 44.51 323 P **P 04 24 39.8 +0.5**
NC303 IAmb IAmb 04 24 54.5
comp=Z,12nm,1.1s
NB2 NORSAR Subarra 44.56 323 P **P 04 24 39.9 +0.1**
comp=Z,3.0nm,0.5s,baz=97,slow=7.9
NB2 NORSAR Subarra 44.56 323 P **P 04 24 39.9 +0.1**
baz=97,slow=7.9
NOA NORSAR Array B 44.56 323 P **P 04 24 39.8 0.0**
comp=Z,2.4nm,0.5s,baz=98,slow=7.7,SNR=9.9
comp=Z,2.4nm,0.5s
NC204 NORSAR Array S 44.80 323 P **P 04 24 41.5 -0.3**
KONO Kongsberg 45.26 321 *e*P **P 04 24 46.1 +0.8**
SNART Snartemo 46.47 319 *e*P **P 04 24 57.6 +2.8**
DAG Danmarks Havn 54.96 344 *e*P **P 04 25 59.3 +1.0**
ESDC Sonseca Array 57.55 298 P **P 04 26 17.1 -0.2**
comp=Z,0.4nm,0.6s,baz=58,slow=6.6,SNR=2.2
comp=Z,0.4nm,0.6s
NEEM North Greenlan 61.27 348 *e*P **P 04 26 44.8 +2.2**
SUMG Summit 61.29 341 *e*P **P 04 26 46.1 +3.2**
TOA0 Torodi Ar. Sit 65.68 269 P **P 04 27 10.9 -1.3**
TOA0 IAmb IAmb 04 27 11.4
comp=Z,7.9nm,0.7s
TORD Torodi Ar. Bea 65.68 269 P **P 04 27 10.7 -1.5**
comp=Z,9.7nm,0.6s,baz=50,slow=6.2,SNR=83
comp=Z,9.7nm,0.6s
INK Inuvik 74.16 9 P **P 04 28 03.9 +0.6**
comp=Z,3.3nm,0.5s,baz=344,slow=7.2,SNR=7.6
comp=Z,3.3nm,0.5s
INK Inuvik 74.16 9 P **P 04 28 04.1 +0.9**
INK IAmb IAmb 04 28 06.3
comp=Z,3.4nm,0.6s
INK Inuvik 74.16 9 P **P 04 28 04.1 +0.9**
INK pmax pmax
comp=Z,3.0nm,0.6s
DBIC Dimbokro 74.65 267 P **P 04 28 05.7 -1.3**
comp=Z,2.9nm,0.5s,baz=21,slow=4.9,SNR=6.5
comp=Z,2.9nm,0.5s
KIC Kosan Boka 74.74 267⇑*e*P **P 04 28 06.3 -1.2**
comp=Z,6.1nm,0.4s
TIC Toumodi 74.80 267⇑*e*P **P 04 28 04.3 -3.6**
comp=Z,4.4nm,0.2s
ILAR Eielson Array 75.03 16 P **P 04 28 08.0 -0.4**
comp=Z,0.8nm,0.8s,baz=315,slow=5.9,SNR=8.0
comp=Z,0.8nm,0.8s
ILAR Eielson Array 75.03 16 P **P 04 28 08.0 -0.4**
LIC Lamto 75.05 267⇓*i*P **P 04 28 08.3 -1.0**
comp=Z,14nm,0.5s
BOSA Boshof 77.53 220 P **P 04 28 23.2 +0.1**
comp=Z,4.9nm,0.7s,baz=34,slow=4.8,SNR=10
comp=Z,4.9nm,0.7s
YKA Yellowknife Ar 81.50 3 P **P 04 28 43.9 -0.1**
comp=Z,1.9nm,0.7s,baz=349,slow=5.3,SNR=7.0
comp=Z,1.9nm,0.7s
YKA Yellowknife Ar 81.50 3 *i* P **P 04 28 44.2 +0.2**
YKA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 81.88 122 P **P 04 28 46.1 -0.6**
comp=Z,0.5nm,0.6s,baz=325,slow=4.8,SNR=7.5
comp=Z,0.5nm,0.6s
ASAR Alice Springs 84.14 125 P **P 04 28 57.3 -0.9**
comp=Z,0.4nm,0.5s,baz=312,slow=5.1,SNR=5.2
comp=Z,0.4nm,0.5s
PLCA Paso Flores 149.71 250 PKPbc **PKPdf 04 36 15.1 +3.7**
comp=Z,1.0nm,0.9s,baz=135,slow=4.3,SNR=1.8

SOME ***25*** *04:20:19.9, 42°.98N×78°.27E, h10km*
KRNET ***25*** *04:20:19.6±0.1, 42°.96N×78°.27E, h17km, mb3.5*
ISC 25 04:20:20.6±0.8, 42°.99N±0°.03×78°.23E±0°.02, h10km, n39,
σ1§54/70, 6C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.15**	**60**	*e*P	**Pg**	**04 20 22.9**	**-1.2**
	baz=46						
SATY				*e*S	**Sg**	**04 20 25.3**	**-1.2**
	baz=46						
SATY	**Saty**	**0.15**	**60**	*e*P	**Pg**	**04 20 22.9**	**-1.2**
	134nm,0.1s						
SATY				*e*S	**Sg**	**04 20 25.4**	**-1.2**
	765nm,0.1s						
SATY	**Saty**	**0.15**	**60**	*e*S	**Pg**	**04 20 23.0**	**-1.2**
	787nm,0.1s						
ZHN	**Zhinishke**	**0.24**	**40**	*e*P	**Pg**	**04 20 24.6**	**-1.0**
	baz=30						
ZHN				*e*S	**Sg**	**04 20 27.9**	**-1.1**
	baz=30						
ZHN	**Zhinishke**	**0.24**	**40**	*e*P	**Pg**	**04 20 24.6**	**-1.0**
	80nm,0.1s						
ZHN				*e*S	**Sg**	**04 20 27.9**	**-1.1**
	384nm,0.1s						
ZHN	**Zhinishke**	**0.24**	**40**	*e*S	**Sg**	**04 20 27.8**	**-1.1**
	399nm,0.1s						
KURS	**Kuram**	**0.51**	**355**	*e*P	**Pg**	**04 20 29.9**	**-0.6**
	baz=52						
KURS				*e*S	**Sg**	**04 20 37.1**	**-0.1**
	baz=52						
KURS	**Kuram**	**0.51**	**355**	*e*P	**Pg**	**04 20 29.9**	**-0.6**
	14nm,0.1s						
KURS				*e*S	**Sg**	**04 20 37.0**	**-0.1**
	19nm,0.2s						
KPKS	**Kokpek**	**0.59**	**35**	*e*P	**Pg**	**04 20 30.8**	**-1.2**
	baz=31						
KPKS				*e*S	**Sg**	**04 20 38.7**	**-1.0**
	baz=31						
KPKS	**Kokpek**	**0.59**	**35**	*e*P	**Pg**	**04 20 30.8**	**-1.2**
	16nm,0.1s						
KPKS				*e*S	**Sg**	**04 20 38.7**	**-1.0**
	128nm,0.3s						
KPKS	**Kokpek**	**0.59**	**35**	*e*S	**Sg**	**04 20 38.7**	**-1.0**
	112nm,0.1s						
UZB	**Uzynbulak**	**0.60**	**74**	*e*P	**Pg**	**04 20 30.8**	**-1.6**
	baz=71						
UZB				*e*S	**Sg**	**04 20 38.6**	**-1.8**
	baz=71						
UZB	**Uzynbulak**	**0.60**	**74**	*e*P	**Pg**	**04 20 30.8**	**-1.6**
	48nm,0.1s						
UZB				*e*S	**Sg**	**04 20 38.6**	**-1.8**
	62nm,0.1s						
UZB	**Uzynbulak**	**0.60**	**74**	*e*S	**Sg**	**04 20 38.8**	**-1.6**
	62nm,0.1s						
KOTS	**Kotyrbulak**	**0.85**	**287**	*e*P	**Pg**	**04 20 36.7**	**-0.4**
	baz=88						
KOTS				*e*S	**Sb**	**04 20 48.9**	**-0.3**
	baz=88						
KOTS	**Kotyrbulak**	**0.85**	**287**	*e*P	**Pg**	**04 20 36.7**	**-0.4**
	29nm,0.2s						
KOTS				*e*S	**Sb**	**04 20 49.0**	**-0.3**
	82nm,0.2s						
MDOK	**Medeo**	**0.88**	**282**	*e*P	**Pg**	**04 20 37.1**	**-0.6**
	baz=83						
MDOK				*e*S	**Sg**	**04 20 49.3**	**+0.1**
	baz=83						
MDOK	**Medeo**	**0.88**	**282**	*e*P	**Pg**	**04 20 37.1**	**-0.6**
	22nm,0.1s						
MDOK				*e*S	**Sg**	**04 20 49.3**	**+0.1**
	26nm,0.2s						
SHLS	**Shalkode**	**0.92**	**79**	*e*P	**Pn**	**04 20 42.3**	**+2.5**
	baz=80						
SHLS				*e*S	**Sn**	**04 20 58.2**	**+5.1**
	baz=80						
SHLS	**Shalkode**	**0.92**	**79**	*e*P	**Pn**	**04 20 42.3**	**+2.5**
	12nm,0.1s						
SHLS				*e*S	**Sn**	**04 20 58.2**	**+5.1**
	18nm,0.1s						
SHLS	**Shalkode**	**0.92**	**79**	*e*S	**Sn**	**04 20 59.0**	**+5.9**
	15nm,0.2s						
BLB	**Baldybastay**	**1.13**	**9**	*e*P	**Pb**	**04 20 41.1**	**-1.2**
	20nm,0.1s						
BLB				*e*S	**Sg**	**04 20 56.0**	**-0.9**
	203nm,0.1s						
BLB	**Baldybastay**	**1.13**	**9**	*e*S	**Sg**	**04 20 55.5**	**-1.5**
	203nm,0.1s						
CHKK	**Chushkaly**	**1.25**	**314**	*e*P	**Pb**	**04 20 43.9**	**-0.5**
	baz=14						
CHKK				*e*S	**Sn**	**04 21 01.0**	**-0.2**
	baz=14						
CHKK	**Chushkaly**	**1.25**	**314**	*e*P	**Pb**	**04 20 43.9**	**-0.5**
	9.5nm,0.2s						
CHKK				*e*S	**Sn**	**04 21 01.0**	**-0.2**
	52nm,0.3s						
ARXS	**Arharly**	**1.26**	**347**	*e*P	**Pn**	**04 20 43.6**	**-0.8**
	3.8nm,0.1s						
ARXS				*e*S	**Sb**	**04 21 00.6**	**-0.3**
	11nm,0.2s						
ARXS	**Arharly**	**1.26**	**347**	*e*S	**Pn**	**04 20 43.4**	**-1.0**
	9.2nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.29**	**194**⇑*i*P		**Pn**	**04 20 43.1**	**-2.0**
	baz=96						
TARG				⇑*i*S	**Sb**	**04 21 00.6**	**-1.5**
	baz=96						
ULHL	**Ulahol**	**1.64**	**244**⇑*i*P		**Pb**	**04 20 50.4**	**-0.7**
	baz=45						
ULHL				⇑*i*S	**Sg**	**04 21 12.3**	**-1.1**
	baz=45						
KUU	**Kurty**	**1.65**	**304**	*e*P	**Pb**	**04 20 50.7**	**-0.4**
	baz=4.0						
KUU				*e*S	**Sb**	**04 21 12.8**	**+0.8**
	baz=4.0						
KUU	**Kurty**	**1.65**	**304**	*e*P	**Pb**	**04 20 50.7**	**-0.4**
	9.0nm,0.2s						
KUU				*e*S	**Sb**	**04 21 12.8**	**+0.8**
	34nm,0.2s						
BOOM	**Boomskoye usch**	**1.76**	**254**⇑*i*P		**Pb**	**04 20 52.7**	**-0.3**
	baz=55						
BOOM				⇑*i*S	**Sb**	**04 21 15.7**	**+0.5**
	baz=55						
DJR	**Jarkent**	**1.76**	**40**	*e*P	**Pb**	**04 20 52.1**	**-0.9**
	11nm,0.2s						
DJR				*e*S	**Sg**	**04 21 15.1**	**-2.1**
	26nm,0.3s						
DJR	**Jarkent**	**1.76**	**40**	*e*S	**Sb**	**04 21 14.9**	**-0.3**
	7.2nm,0.2s						
DGS	**Degeres**	**1.82**	**279**	*e*P	**Pb**	**04 20 54.3**	**+0.3**
	baz=79						
DGS				*e*S	**Sg**	**04 21 18.9**	**-0.1**
	baz=79						
DGS	**Degeres**	**1.82**	**279**	*e*P	**Pb**	**04 20 54.3**	**+0.3**
	11nm,0.2s						
DGS				*e*S	**Sg**	**04 21 18.9**	**-0.1**
	15nm,0.3s						
TKM2	**Tokmak 2**	**1.93**	**269**⇓*i*P		**Pb**	**04 20 55.1**	**-1.0**
	baz=70						
TKM2				⇓*i*S	**Sb**	**04 21 20.9**	**+0.6**
	baz=70						
KRBS	**Karabastau**	**1.99**	**292**	*e*P	**Pb**	**04 20 56.7**	**-0.3**
	baz=92						
KRBS				*e*S	**Sb**	**04 21 22.9**	**+1.0**
	baz=92						
KRBS	**Karabastau**	**1.99**	**292**	*e*P	**Pb**	**04 20 56.7**	**-0.3**
	8.8nm,0.2s						
KRBS				*e*S	**Sb**	**04 21 23.0**	**+1.0**
	23nm,0.3s						

MOS ***25*** *04:27:13.6±1.9, 35°.20N×57°.33E, h10km, mb4.7/20, Error ellipse: s-maj=5.5km s-min=4.7km az=123.6*
NEIC ***25*** *04:27:14.6±1.9, 35°.10N±0°.07×57°.37E±0°.06, h10km±1km, mb4.5/35, mb_Lg4.9(TEH), Error ellipse: s-maj=12.7km s-min=8.7km az=194.0*
TEH ***25*** *04:27:14.5, 35°.24N×57°.18E, h9km, ML4.9*
IDC ***25*** *04:27:15.0±0.8, 35°.15N×57°.12E, h0km, mb4.1/16, mbtmp4.2/22, ML4.0/5, MS3.7/26, Error ellipse: s-maj=18.7km s-min=12.6km az=179.0*
THR ***25*** *04:27:15.7±1.1, 35°.24N×57°.13E, h17km±8km, ML4.9*
ISC 25 04:27:15.6±0.4, 35°.25N±0°.03×57°.19E±0°.03, h10km, n312,
σ1§93/292, mb4.3/53, MS3.6/23, 15C-19D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHRO	**Shahrood**	**1.21**	**308**	*e*Pg	**Pb**	**04 27 37.6**	**-1.1**
SHRO	**Shahrood**	**1.21**	**308**	*e*Pg	**Pb**	**04 27 37.6**	**-1.1**
SHRO				IAML		04 28 02.6	
	comp=E,11μm,0.4s						
TNSJ	**Nastanj**	**1.37**	**201**	*e*Pg	**Pg**	**04 27 40.8**	**-1.1**
TNSJ				*e*		04 28 08.3	
	comp=Z,58μm,0.4s						
TABS	**Tabas**	**1.60**	**182**	*e*Pn	**Pg**	**04 27 45.2**	**-1.1**
TABS	**Tabas**	**1.60**	**182**	*e*Pg	**Pg**	**04 27 45.2**	**-1.1**
TABS				IAML		04 28 15.1	
	comp=N,25μm,0.6s						
TABS				IAML		04 28 16.8	
	comp=E,13μm,0.6s						
TKDS	**Koohdasht(Taba**	**1.64**	**182**	*e*Pn	**Pg**	**04 27 45.2**	**-1.8**
TKDS				*e*		04 28 21.9	
	comp=Z,99μm,0.5s						
TBHD	**Torbat heydari**	**1.68**	**84**	*e*Pn	**Pb**	**04 27 45.2**	**-1.5**
TBHD				*e*		04 28 29.2	
	comp=Z,10μm,0.7s						
IAKL	**Akhelmad**	**1.85**	**43**	*e*Pn	**Pb**	**04 27 48.3**	**-1.4**
IAKL				*e*		04 27 55.2	
	comp=Z,39μm,0.5s						
IPAY	**Payeh**	**1.89**	**50**	*e*Pn	**Pb**	**04 27 49.3**	**-1.1**
IPAY				*e*		04 27 53.9	
	comp=Z,4μm,0.8s						
IMOG	**Moghan**	**1.95**	**63**	*e*Pn	**Pb**	**04 27 49.9**	**-1.4**
IMOG				*e*		04 28 26.0	
	comp=Z,42μm,0.6s						
TPRV	**Parvadeh(Tabas**	**2.26**	**191**	*e*Pn	**Pb**	**04 27 53.7**	**-2.8**
TPRV				*e*		04 28 36.1	
	comp=Z,97μm,0.6s						
AFRZ	**Afriz**	**2.37**	**140**	*e*Pn	**Pb**	**04 27 55.9**	**-2.5**
AFRZ				*e*		04 28 32.7	
	comp=Z,54μm,0.9s						
IKRD	**Kardeh**	**2.42**	**50**	*e*Pn	**Pb**	**04 27 57.7**	**-1.7**
IKRD				*e*		04 28 40.7	
	comp=Z,49μm,0.8s						
BJRD	**Bojnurd**	**2.45**	**4**	*e*Pn	**Pb**	**04 27 57.8**	**-2.0**
BJRD	**Bojnurd**	**2.45**	**4**	*e*Pn	**Pb**	**04 27 57.8**	**-2.0**
IEMG	**Emamgholi**	**2.46**	**28**	*e*Pn	**Pb**	**04 27 57.3**	**-2.8**
IEMG				*e*		04 28 45.3	
	comp=Z,30μm,1.0s						
IMND	**Minoodasht**	**2.47**	**325**	*e*Pn	**Pb**	**04 27 57.2**	**-2.8**
MRVT	**Maraveh tapeh**	**2.56**	**340**	*e*Pn	**Pb**	**04 27 58.7**	**-3.0**
MRVT				*e*		04 28 37.3	
	comp=Z,99nm,0.6s						
MRVT	**Maraveh tapeh**	**2.56**	**340**	*e*Pn	**Pn**	**04 27 58.4**	**+1.1**
TBJM	**Torbat-e-JAM**	**2.57**	**89**	*e*Pn	**Pn**	**04 27 58.2**	**+0.8**
TBJM				*e*		04 28 47.6	
	comp=Z,65μm,0.4s						
IMYA	**Miami**	**2.60**	**64**	*e*Pn	**Pb**	**04 27 59.8**	**-2.7**
JRKH	**Jarkhoshk**	**2.66**	**75**	*e*Pn	**Pb**	**04 28 00.1**	**-3.2**
ITEG	**Tejag**	**2.68**	**151**	*e*Pn	**Pb**	**04 28 00.5**	**-3.3**
ITEG				*e*		04 28 46.7	
	comp=Z,47μm,0.5s						
IANJ	**Anjilo**	**2.69**	**276**	*e*Pn	**Pn**	**04 27 59.8**	**+0.7**
IANJ				*e*		04 28 45.1	
	comp=Z,20μm,0.5s						
GEYT	**Alibeck**	**2.77**	**15**	Pn	**Pb**	**04 28 02.4**	**-2.9**
	comp=Z,52nm,0.3s,baz=195,slow=15,SNR=400						
GEYT				Sn	**Sb**	**04 28 40.6**	**+1.3**
	comp=Z,112nm,0.3s,baz=204,slow=14,SNR=8.0						
	comp=Z,412nm,0.6s						
GEYT	**Alibeck**	**2.77**	**15**	Pn	**Pb**	**04 28 02.2**	**-3.1**
GEYT				Sn	**Sn**	**04 28 35.3**	**+1.6**
GYA0B	**ALIBECK ARRAY**	**2.77**	**15**		**Pb**	**04 28 02.3**	**-3.0**
IMON	**Monand**	**2.90**	**134**	*e*Pn	**Pn**	**04 28 03.3**	**+1.2**
BAGH	**Bagheran - Bir**	**2.98**	**145**	*e*Pn	**Pn**	**04 28 04.3**	**+1.1**
IGLO	**Ghaloghah**	**3.00**	**296**	*e*Pn	**Pb**	**04 28 05.3**	**-3.9**

IGLO e 04 29 05.3
comp=Z,32μm,0.8s
SHRT Shahrakht 3.02 121 *e*Pn **Pn 04 28 04.7 +1.1**
SHRT Shahrakht 3.02 121 *e*Pn **Pn 04 28 04.7 +1.1**
IKOO Kooshah 3.20 151 *e*Pn **Pn 04 28 07.2 +1.0**
IKOO e 04 29 04.6
comp=Z,49μm,1.0s
ISHM Shahmirzad 3.23 281 *e*Pn **Pn 04 28 07.7 +1.1**
ISHM e 04 29 10.1
comp=Z,34μm,0.5s
IDAH Dahanechah 3.35 138 *e*Pn **Pn 04 28 08.9 +0.6**
ILAS Lasjerd 3.46 273 *e*Pn **Pn 04 28 10.9 +1.1**
ILAS e 04 29 20.6
comp=Z,21μm,0.6s
ANAR Anarak 3.53 235 *e*Pn **Pn 04 28 11.1 +0.5**
YZKH Yazd 3.58 218 *e*Pn **Pn 04 28 12.2 +0.9**
YZKH Yazd 3.58 218 *e*Pn **Pn 04 28 12.2 +0.9**
YZKH IAML 04 29 15.3
comp=E,1μm,0.7s
YZKH IAML 04 29 22.7
comp=N,1μm,0.8s
IFIR Firoozkooh 3.64 277 *e*Pn **Pn 04 28 13.3 +1.0**
IFIR e 04 29 25.1
comp=Z,10μm,0.8s
BSRN Basiran 3.65 153 *e*Pn **Pn 04 28 13.8 +1.5**
BSRN Basiran 3.65 153 *e*Pn **Pn 04 28 13.8 +1.5**
ICHK Chekchek 3.79 218 *e*Pn **Pn 04 28 14.9 +0.6**
ICHK e 04 29 22.0
comp=Z,24μm,0.8s
IBAF Bafgh 3.90 201 *e*Pn **Pn 04 28 17.0 +1.3**
IBAF e 04 29 28.0
comp=Z,12μm,0.5s
IPRN Peran 4.07 285 *e*Pn **Pn 04 28 19.0 +1.0**
IPRN e 04 29 33.6
comp=Z,17μm,0.8s
ISFB Sefidab 4.17 259 *e*Pn **Pn 04 28 20.1 +0.7**
IDMV Damavand 4.22 276 *e*Pn **Pn 04 28 21.3 +1.0**
IDMV e 04 29 59.8
comp=Z,7μm,0.9s
HRA Herat 4.25 100 Pn **Pn 04 28 16.5 -4.0**
DAMV Damavand 4.28 277 *e*Pn **Pn 04 28 21.8 +0.8**
DAMV Damavand 4.28 277 *e*Pn **Pn 04 28 21.8 +0.8**
KRSH Karshahi 4.36 254 *e*Pn **Pn 04 28 22.9 +0.8**
KRSH e 04 29 48.0
comp=Z,21μm,0.7s
NASN Na'in 4.38 237 *e*Pn **Pn 04 28 22.1 -0.4**
NASN Na'in 4.38 237 *e*Pn **Pn 04 28 22.1 -0.4**
IMEH Mehriz 4.41 210 *e*Pn **Pn 04 28 23.7 +0.8**
IMEH e 04 29 52.3
comp=Z,11μm,1.2s
ISAD Sadrabad 4.43 222 *e*Pn **Pn 04 28 23.4 +0.3**
IVRN Varamin 4.49 268 *e*Pn **Pn 04 28 24.2 +0.5**
NHDN Nehbandan 4.53 147 *e*Pn **Pn 04 28 25.5 +1.1**
IZEF Zefreh 4.67 241 *e*Pn **Pn 04 28 27.5 +1.1**
TEHA Amirabad Tehra 4.76 278 *e*Pn **Pn 04 28 27.9 +0.4**
TEH Tehran 4.76 278 *e*Pn **Pn 04 28 28.0 +0.4**
KHGB Koh Gabri 4.90 187 *e*Pn **Pn 04 28 31.0 +1.5**
GHVR GHOM 4.91 263 *e*Pn **Pn 04 28 31.2 +1.7**
GHVR GHOM 4.91 263 *e*Pn **Pn 04 28 31.2 +1.7**
GHVR IAML 04 30 23.7
comp=E,595nm,0.5s
GHVR IAML 04 30 37.3
comp=N,366nm,0.5s
CHTH Charan 4.99 279 *e*Pn **Pn 04 28 31.8 +1.1**
CHTH Charan 4.99 279 *e*Pn **Pn 04 28 31.8 +1.1**
QAMS Qamsar 5.02 254 *e*Pn **Pn 04 28 31.9 +0.7**
IKLH Kolahrood 5.03 249 *e*Pn **Pn 04 28 32.1 +0.8**
KLST Kelardasht - M 5.14 286 *e*Pn **Pn 04 28 34.2 +1.4**
IGAR Gharneh 5.14 238 *e*Pn **Pn 04 28 33.4 +0.6**
TVBK TV Kerman 5.26 184 *e*Pn **Pn 04 28 36.4 +1.8**
KRBR Kerman 5.27 184 *e*Pn **Pn 04 28 36.9 +2.3**
KRBR Kerman 5.27 184 *e*Pn **Pn 04 28 36.9 +2.3**
KRBR IAML 04 30 13.1
comp=N,729nm,0.7s
KRBR IAML 04 30 22.6
comp=E,581nm,0.5s
IRAM Ramesheh 5.28 231 *e*Pn **Pn 04 28 35.0 +0.2**
IMHD Mahdasht 5.34 277 *e*Pn **Pn 04 28 36.9 +1.4**
CHMN Cheshme madani 5.38 177 *e*Pn **Pn 04 28 37.5 +1.2**
CHMN e 04 30 15.7
comp=Z,7μm,0.7s
QALM Alamut, Qazvin 5.45 284 *e*Pn **Pn 04 28 38.4 +1.4**
NGRK Negar Kerman 5.61 184 *e*Pn **Pn 04 28 40.8 +1.4**
IPIR Pirpir 5.83 246 *e*Pn **Pn 04 28 43.5 +1.2**
ASAO Ashtian 5.93 265 *e*Pn **Pn 04 28 44.6 +0.9**
ASAO Ashtian 5.93 265 *e*Pn **Pn 04 28 44.6 +0.9**
IRAZ Razeghan 5.94 274 *e*Pn **Pn 04 28 45.2 +1.4**
IBRJ Brojen 5.97 238 *e*Pn **Pn 04 28 45.2 +1.0**
SHK1 Shahrekord 6.00 243 *e*Pn **Pn 04 28 45.5 +0.8**
GIDE GILAN DEYLAMAN 6.13 288 *e*Pn **Pn 04 28 47.4 +1.1**
GIDE GILAN DEYLAMAN 6.13 288 *e*Pn **Pn 04 28 47.4 +1.1**
KHMZ Khomeyn 6.16 258 *e*Pn **Pn 04 28 47.6 +0.8**
KHMZ Khomeyn 6.16 258 *e*Pn **Pn 04 28 47.6 +0.8**
KBAM BAM 6.19 170 *e*Pn **Pn 04 28 49.0 +1.8**
QABG Abgarm-Qazvin 6.22 276 *e*Pn **Pn 04 28 48.5 +0.8**
KLNJ Kolanjah 6.32 230 *e*Pn **Pn 04 28 50.4 +1.2**
ZHSF Zahedan 6.39 151 *e*Pn **Pn 04 28 52.5 +2.6**
ZHSF Zahedan 6.39 151 *e*Pn **Pn 04 28 52.5 +2.6**
ZHDN Zahedan 6.59 151 *e*Pn **Pn 04 28 54.7 +2.0**
HAGD Aghdareh 6.62 269 *e*Pn **Pn 04 28 54.2 +1.1**
ZNJK Zanjan 7.04 284 *e*Pn **Pn 04 29 00.3 +1.4**
ZNJK Zanjan 7.04 284 *e*Pn **Pn 04 29 00.3 +1.4**
HSAM Samen 7.15 264 *e*Pn **Pn 04 29 02.4 +2.0**
IKMR Kamar-syah 7.49 259 *e*Pn **Pn 04 29 06.0 +1.2**
AMIS Naft Sefid 7.51 244 *e*Pn **Pn 04 29 07.9 +2.7**
IDOB Doab 7.58 261 *e*Pn **Pn 04 29 07.3 +1.0**
IBZA Bozab 7.71 267 *e*Pn **Pn 04 29 09.8 +1.7**
GENO Geno 7.88 187 *e*Pn **Pn 04 29 11.8 +1.4**
IKFM Kafar-mosalman 7.91 260 *e*Pn **Pn 04 29 13.1 +2.4**
IKOM Komasi 8.04 265 *e*Pn **Pn 04 29 14.4 +1.8**
SNGE Sanandaj 8.06 272 *e*Pn **Pn 04 29 15.4 +2.5**
SNGE Sanandaj 8.06 272 *e*Pn **Pn 04 29 15.4 +2.5**
ISRB Sarab 8.08 291 *e*Pn **Pn 04 29 14.6 +1.4**
AHBU AHRAM 8.10 220 *e*Pn **Pn 04 29 14.6 +1.4**
GRMI Germi 8.24 298 *e*Pn **Pn 04 29 15.7 +0.5**
GRMI Germi 8.24 298 *e*Pn **Pn 04 29 15.8 +0.5**
ILIN Lien 8.39 271 *e*Pn **Pn 04 29 19.1 +1.6**
IBST Bostanabad 8.65 289 *e*Pn **Pn 04 29 22.3 +1.3**
IHRS Heris 8.70 294 *e*Pn **Pn 04 29 23.5 +1.8**
IGHG Ghaleghazi 8.79 267 *e*Pn **Pn 04 29 24.4 +1.5**
IDHR Dehrash 8.88 270 *e*Pn **Pn 04 29 26.0 +1.8**
IAZR Azarshahr 9.35 288 *e*Pn Pn 04 29 35.5 +4.9
AKT Akhty 9.68 313 *e*P **Pn 04 29 34.6 -0.5**
AKT *e*S **Sn 04 31 22.7 -1.2**
AKT pmax pmax
comp=Z,23nm,0.6s
AKT smax smax
comp=E,34nm,0.6s
AKT smax smax
comp=N,28nm,0.6s
KBL Kabul 9.76 91 Pn **Pn 04 29 32.9 -3.3**
KBL Kabul 9.76 91 P **Pn 04 29 32.9 -3.3**
ISHB Shabestar 9.77 291 *e*Pn **Pn 04 29 37.8 +1.5**
IMRD Marand 9.82 294 *e*Pn **Pn 04 29 38.4 +1.4**
CHGR Chuyangaron 10.16 67 Pn **Pn 04 29 38.4 -3.2**
CHGR Chuyangaron 10.16 67 P **Pn 04 29 38.4 -3.2**
MAK Makhachkala 10.76 319 *e*P **Pn 04 29 46.1 -3.5**
MAK *e*S **Sn 04 31 45.8 -4.3**
MAK pmax pmax
comp=Z,718nm,1.4s
MAK MLR MLR
comp=Z,124nm,11.0s
GNI Garni 11.01 300 Pn **Pn** 04 29 57.9 +4.7
comp=Z,24nm,0.8s,baz=16,slow=3.9,SNR=7.7
GNI Garni 11.01 300 Pn **Pn 04 29 55.0 +1.8**
GAR Garm 11.13 66 Pn **Pn 04 29 52.7 -2.1**
GEVA Gevas 11.74 289 Pn **Pn 04 30 05.2 +2.0**
BTK Batken 11.82 62 Pn **Pn 04 30 01.6 -2.6**
BTK Batken 11.82 62 P **Pn 04 30 01.6 -2.6**
GROC Groznyy 11.87 315 *e*P **Pn 04 30 06.4 +1.6**
GROC *e*S **Sn 04 32 19.8 +2.5**
GROC pmax pmax
comp=Z,29nm,0.4s
WSAR Wadi Sarin 12.04 174 LR LR 04 36 02.6
comp=Z,267nm,20.7s,baz=295,slow=44
KARS Kars 12.36 300 Pn **Pn 04 30 11.2 -0.5**
KARS Kars 12.36 300 P **Pn 04 30 11.2 -0.5**
GURO Guroymak-BITLI 12.57 290 Pn **Pn 04 30 17.6 +2.9**
ZEI Tsey 12.77 310 *e*P **Pn 04 30 19.9 +2.5**
ZEI pmax pmax
comp=Z,8.0nm,0.7s
KK31 Karatay Array 12.96 49 Pn **Pn 04 30 17.4 -2.4**
KK31 Karatay Array 12.96 49 P **Pn 04 30 17.4 -2.4**
KKAR Karatay Array 12.96 49 Pn **Pn 04 30 18.4 -1.4**
KKAR Karatay Array 12.96 49 P **Pn 04 30 18.4 -1.4**
ARK Arkit 13.28 56 P **Pn 04 30 24.2 0.0**
NCK Nalchik 13.34 312 *i* P **Pn 04 30 25.5 +0.5**
NIL Nilore 13.35 92 Pn **Pn 04 30 23.1 -2.1**
NIL Nilore 13.35 92 P **Pn 04 30 23.1 -2.1**
OHH Osh 13.39 62 P **Pn 04 30 24.1 -1.6**
MARD Mardin 13.40 284 Pn **Pn 04 30 27.1 +1.2**
NEY Neytrino 13.75 310⇓*e*P **Pn 04 30 33.1 +2.4**
KBZ Khabaz 13.89 312 Pn **Pn 04 30 31.0 -1.5**
comp=Z,0.1nm,0.3s,baz=111,slow=11,SNR=3.7
KBZ LR LR 04 38 27.9
comp=Z,83nm,19.9s,baz=128,slow=48
KBZ Khabaz 13.89 312⇑*e*P **Pn 04 30 32.3 -0.2**
AB31 Akbulak array 14.14 7 P Pn 04 30 29.4 -6.4
ABKAR Akbulak array 14.14 7 Pn **Pn 04 30 32.8 -3.1**
KIV Kislovodsk 14.15 312 Pn **Pn 04 30 35.4 -0.7**
KIV Kislovodsk 14.15 312 *e*P **Pn 04 30 38.4 +2.4**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,38nm,13.0s
ARLS Aral 14.93 59 P **P 04 30 49.2 -3.3**
AKTO Aktyubinsk 15.19 2 Pn **Pn 04 30 47.1 -2.9**
comp=Z,0.6nm,0.3s,baz=181,slow=14,SNR=14
AKTO Sn **Sn 04 33 32.1 -6.1**
comp=Z,0.3nm,0.3s,baz=84,slow=19,SNR=1.7
AKTO LR LR 04 38 11.5
comp=Z,200nm,18.8s,baz=171,slow=43
RAYN Ar Rayn 15.49 224 Pn **Pn 04 30 50.9 -3.3**
RAYN Ar Rayn 15.49 224 P **Pn 04 30 50.9 -3.3**
RAYN pmax pmax
comp=Z,7.0nm,0.9s
KSH Kashi 15.52 69 Pn **Pn 04 30 47.8 -6.8**
KSH sP P 04 30 55.5 -3.5
KSH S Sn 04 33 34.3 -12
SOC Sochi 15.84 307 *e*P **Pn 04 30 58.9 +0.3**
SOC *e* 04 33 56.9
SOC MLR MLR
comp=Z,79nm,16.0s
TKM2 Tokmak 2 16.19 56 P **Pn 04 31 01.7 -1.7**
GAZ Gaziantep 16.24 283 Pn **P 04 31 05.1 -1.9**
BOOM Boomskoye usch 16.27 58 Pn **Pn 04 31 02.1 -2.2**
BOOM IAmb IAmb 04 31 08.2
comp=Z,12nm,0.6s
BOOM Boomskoye usch 16.27 58 P **Pn 04 31 02.2 -2.2**
BOOM pmax pmax
comp=Z,12nm,0.6s
ASF Jabal al Asfar 17.16 265 P **P 04 31 15.6 -1.7**
comp=Z,0.3nm,0.3s,baz=257,slow=2.4,SNR=2.0
comp=Z,1.8nm,0.8s
OTUK Ortayu 17.17 36 P **Pn 04 31 13.8 -1.7**
MMAI Mount Meron Ar 18.17 269 LR LR 04 38 37.0
comp=Z,105nm,18.7s,baz=312,slow=38
BELG Belogornoye 18.44 341 P **Pn 04 31 31.6 +0.5**
comp=Z,1.6nm,0.3s,baz=110,slow=4.6,SNR=3.6
comp=Z,17nm,0.6s
BELG Belogornoye 18.44 341*c e*P **Pn 04 31 32.8 +1.7**
BELG pmax pmax
comp=Z,4.0nm,0.6s
PDGK Podgornoye 19.01 58 *i* P **P 04 31 35.7 -1.9**
PDGK pmax pmax
comp=Z,3.0nm,1.1s
BR131 Keskin Array S 19.20 290 P **P 04 31 38.6 -1.1**
BR131 Keskin Array S 19.20 290 P **P 04 31 38.6 -1.1**
BR131 pmax pmax
comp=Z,7.0nm,1.0s
BRTR Keskin Array B 19.20 290 P **Pn 04 31 41.6 +1.1**
comp=Z,0.1nm,0.3s,baz=105,slow=9.2,SNR=9.7
BRTR LR LR 04 40 06.0
comp=Z,178nm,19.4s,baz=110,slow=40
comp=Z,2.5nm,0.8s
BRTR Keskin Array B 19.20 290 P **Pn 04 31 42.2 +1.6**
BRTR Keskin Array B 19.20 290 *e*P **Pn 04 31 44.1 +3.5**
EIL Elat 19.56 260 P **Pn 04 31 44.0 -0.8**
comp=Z,0.3nm,0.3s,baz=193,slow=14,SNR=2.9
EIL LR LR 04 40 59.2
comp=Z,160nm,18.2s,baz=104,slow=42
comp=Z,4.1nm,0.7s
BRVK Borovoye 20.07 23 P Pn 04 31 49.0 -1.8
BRVK IAmb IAmb 04 31 53.4
comp=Z,21nm,0.9s
BRVK Borovoye 20.07 23*d i* P Pn 04 31 50.3 -0.4
BRVK pmax pmax
comp=Z,22nm,0.9s
SIM Simferopol' 20.07 306 *e*P Pn 04 31 49.9 -0.9
SIM 04 32 10.0
SIM pmax pmax
comp=Z,37nm,1.1s
BVAR Borovoye Array 20.08 24 P Pn 04 31 50.8 0.0
comp=Z,16nm,0.8s,baz=202,slow=11,SNR=52
BVAR LR LR 04 40 39.2
comp=Z,436nm,18.4s,baz=215,slow=40
comp=Z,16nm,0.8s
VSR Storozhevoye 20.58 326 *e*P **P 04 31 54.0 -0.4**
VSR pmax pmax
comp=Z,20nm,1.4s
VORR Voronezh 20.88 327 *e*P **P 04 31 57.8 +0.1**
VORR pmax pmax
comp=Z,82nm,0.4s
ARU Arti 21.20 2 P **P 04 32 02.4 +1.2**
comp=Z,20nm,0.7s,baz=195,slow=7.6,SNR=21
ARU LR LR 04 40 40.7
comp=Z,156nm,19.1s,baz=184,slow=38
comp=Z,20nm,0.7s
ARU Arti 21.20 2 P **P 04 32 01.3 +0.2**
ARU IAmb IAmb 04 32 06.1
comp=Z,20nm,0.8s
ARU Arti 21.20 2⇑*e*P **P 04 32 03.0 +1.9**
ARU pmax pmax
comp=Z,22nm,0.8s
LPSR Galich'ya Gora 21.66 329 *e*P **P 04 32 05.7 -0.4**
LPSR pmax pmax
comp=Z,30nm,0.7s
SVE Sverdlovsk 21.71 5 *e*P **P 04 32 10.8 +4.3**
SVE pmax pmax
comp=Z,16nm,0.8s
SVE MLR MLR
comp=Z,272nm,12.0s
KURBB Kurchatov Arra 21.79 39 P **P 04 32 09.4 +1.8**
comp=Z,3.4nm,0.9s,baz=238,slow=12,SNR=17
comp=Z,3.4nm,0.9s
MAKZ Makanchi 21.88 51 P **P 04 32 06.1 -2.5**
MAKZ IAmb IAmb 04 32 21.0
comp=Z,8.7nm,0.8s
MAKZ Makanchi 21.88 51 P **P 04 32 06.1 -2.5**
MAKZ pmax pmax
comp=Z,9.0nm,0.8s
KURK Kurchatov 21.90 39 P **P 04 32 08.6 0.0**
KURK IAmb IAmb 04 32 17.3
comp=Z,23nm,1.1s
KURK Kurchatov 21.90 39⇓*e*P **P 04 32 10.2 +1.6**
KURK pmax pmax
comp=Z,26nm,1.0s
MK31 Makanchi Array 22.07 51 P **P 04 32 09.2 -1.4**
MK31 Makanchi Array 22.07 51 P **P 04 32 09.2 -1.4**
MK31 pmax pmax
comp=Z,8.0nm,1.0s
MKAR Makanchi Array 22.07 51 P **P 04 32 11.4 +0.8**
comp=Z,4.7nm,0.7s,baz=242,slow=10,SNR=18
MKAR LR LR 04 42 03.0
comp=Z,358nm,18.1s,baz=286,slow=40
comp=Z,4.7nm,0.7s
MKAR Makanchi Array 22.07 51 P **P 04 32 09.4 -1.2**
MKAR Makanchi Array 22.07 51 P **P 04 32 09.4 -1.2**
ELL Elmali 22.10 282 P **P 04 32 13.7 +2.6**
ELL Elmali 22.10 282 P **P 04 32 13.7 +2.6**
ELL pmax pmax
comp=Z,124nm,0.8s
AKAS Kas 22.39 281 P **P 04 32 12.2 -2.0**
DANN Dangsing 23.56 100 *e*P **P 04 32 26.8 +0.2**
comp=Z,59nm,1.0s
KIRV Kirov 23.91 350 LR LR 04 43 45.6
comp=Z,102nm,18.0s,baz=172,slow=41
KIRV Kirov 23.91 350⇓*e*P **P 04 32 32.4 +3.1**
TPGR Topolog 23.91 302 ⇓P P 04 32 21.0 -8.6
TLBR Topalu 24.10 301 ⇓P **P 04 32 25.9 -5.4**
GKN Gorkha 24.41 100 *e*P **P 04 32 36.3 +1.8**
comp=Z,43nm,0.6s
OBN Obninsk 24.44 331 P **P 04 32 32.6 -1.6**
OBN Obninsk 24.44 331⇓*e*P **P 04 32 35.3 +1.0**
OBN *e* 04 33 08.2
OBN pmax pmax
comp=Z,40nm,1.8s
OBN MLR MLR
comp=Z,86nm,16.0s
MOS Moscow 24.49 333 *e*P **P 04 32 40.3 +5.6**
MOS *e* 04 33 09.5
DMN Daman 24.95 100 *e*P **P 04 32 41.4 +1.9**
comp=Z,29nm,0.5s
PKIN Phulchoki 25.20 100 *e*P **P 04 32 44.5 +2.8**
comp=Z,53nm,0.7s
PKI Pulchoki 25.21 100 *e*P **P 04 32 44.5 +2.6**
comp=Z,49nm,0.8s
ISR Istrita 25.27 302 ⇑P **P 04 32 44.3 +2.3**
ISR Istrita 25.27 302 ⇑P **P 04 32 44.3 +2.3**
VRI Vrincioaia 25.31 304 ⇓P P 04 32 50.7 +8.4
VRI Vrincioaia 25.31 304 ⇓P P 04 32 50.7 +8.4
PLOR Plostina 25.36 304 ⇑P **P 04 32 44.1 +1.3**
PLOR Plostina 25.36 304 ⇑P **P 04 32 44.1 +1.3**
AK05 Malin Array Si 25.40 316 P **P 04 32 42.6 -0.4**
AK05 IAmb IAmb 04 32 49.2
comp=Z,13nm,0.8s
AKASG Malin Array Be 25.43 316 P **P 04 32 44.1 +0.9**
comp=Z,7.6nm,0.6s,baz=115,slow=8.5,SNR=25
comp=Z,7.6nm,0.6s
AKASG Malin Array Be 25.43 316 P **P 04 32 42.1 -1.1**
AKASG Malin Array Be 25.43 316 *e*P **P 04 32 43.9 +0.6**
AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKBB Malin Array Si 25.43 316 P **P 04 32 43.8 +0.6**
AKBB Malin Array Si 25.43 316 P **P 04 32 43.8 +0.6**
AKBB pmax pmax
comp=Z,25nm,0.8s
GUN Gumba 25.45 99 *e*P **P 04 32 47.0 +2.9**
comp=Z,47nm,0.5s
RDO Rodhopi 25.47 293 P **P 04 32 44.1 +0.4**
RDO IAmb IAmb 04 32 50.9
comp=Z,19nm,0.9s
TESR Tescani 25.53 305 ⇑P **P 04 32 46.8 +2.6**
COVR Voineasa-Covas 25.66 304 ⇓P **P 04 32 47.1 +1.5**
MLR Muntele Rosu 25.76 303 ⇓P **P 04 32 49.9 +3.4**
MLR Muntele Rosu 25.76 303 P **P 04 32 47.6 +1.1**
comp=Z,10nm,0.8s,baz=351,slow=2.9,SNR=12
MLR LR LR 04 46 10.7
comp=Z,124nm,19.2s,baz=88,slow=44
comp=Z,10nm,0.8s
MLR Muntele Rosu 25.76 303 P **P 04 32 47.6 +1.1**
MLR IAmb IAmb 04 32 53.9
comp=Z,24nm,1.1s
MLR Muntele Rosu 25.76 303 ⇓P **P 04 32 49.9 +3.4**
JIRN Jiri 25.81 99 *e*P **P 04 32 50.5 +3.1**
comp=Z,42nm,0.7s
BIZ Bicaz 26.00 306 ⇓P **P 04 32 50.2 +1.6**
COPA Copaceanca 26.02 300 ⇓P **P 04 32 50.2 +1.5**
DOPR Dopca 26.25 304 ⇓P **P 04 32 52.2 +1.4**
DGZ Jazzator, Alta 26.35 47⇓*e*P **P 04 32 53.0 +1.1**
DGZ pmax pmax
comp=Z,6.0nm,0.9s
VOIR 26.37 303 ⇑P **P 04 32 52.7 +0.7**
VOIR 26.37 303 ⇑P **P 04 32 52.7 +0.7**
RAMN Ramite 26.43 100 *e*P **P 04 32 56.9 +4.0**
comp=Z,59nm,0.6s
BURAR Bucovina Array 26.77 307 ⇓P **P 04 32 57.3 +1.7**
BURAR Bucovina Array 26.77 307 P **P 04 32 56.3 +0.7**
BURAR IAmb IAmb 04 33 21.5
comp=Z,7.3nm,0.9s
BURAR Bucovina Array 26.77 307 ⇓P **P 04 32 57.3 +1.7**
BUR08 Bucovina Ar. S 26.79 307 P **P 04 32 55.0 -0.7**
BUR08 IAmb IAmb 04 33 20.8
comp=Z,7.5nm,1.0s
ZAA0 Zalesovo Array 26.86 37 P **P 04 32 53.6 -2.6**
ZALV Zalesovo Beam 26.86 37 P **P 04 32 58.8 +2.6**
comp=Z,0.7nm,0.5s,baz=260,slow=8.6,SNR=2.3
ZALV LR LR 04 45 06.4
comp=Z,182nm,21.3s,baz=253,slow=40
comp=Z,0.7nm,0.5s
LOT Lotru 27.25 302 ⇓P **P 04 33 01.2 +1.2**
VTS Vitosha 27.28 296 ⇑P **P 04 32 57.3 -3.0**
VTS Vitosha 27.28 296 P **P 04 33 00.1 -0.2**
VTS IAmb IAmb 04 33 07.4
comp=Z,5.4nm,0.8s
VTS Vitosha 27.28 296 P **P 04 33 00.1 -0.2**
VTS pmax pmax
comp=Z,5.0nm,0.8s
BLKB Belogradchik 27.78 298 ⇑P **P 04 33 05.9 +1.3**
KLMR Klimovskoe 28.02 342 *e*P P 04 33 00.6 -5.9
KLMR pmax pmax
comp=Z,18nm,1.8s
KLMR MLR MLR
comp=Z,178nm,14.0s
KLMR Klimovskoe 28.02 342 *e*P P 04 33 00.7 -5.8
KLMR AMP 04 33 07.1
comp=Z,18nm,1.8s
KLMR LQ LQ 04 43 16.9
KLMR LQ LQ 04 43 16.9
KLMR LR LR 04 44 04.9
KLMR AMP 04 46 50.1
comp=Z,178nm,13.6s
ITM Ithomi 28.42 284 P **P 04 33 10.4 0.0**
ITM IAmb IAmb 04 33 31.5
comp=Z,13nm,1.1s
BOVS Bovan 28.48 298 ⇑P **P 04 33 11.6 +0.8**
KOLS Kolonicke sedl 29.01 309 *e*P **P 04 33 17.6 +2.1**
DIVS Divibare 29.75 299 P **P 04 33 22.4 +0.1**
DIVS IAmb IAmb 04 33 24.7
comp=Z,4.9nm,1.1s
KEK Kerkira 29.86 290 P **P 04 33 24.1 +1.0**
KEK IAmb IAmb 04 34 05.7
comp=Z,5.4nm,0.9s
VALR Valaam 31.02 336⇑*e*P **P 04 33 35.6 +2.5**
VYHS Vyhne 31.13 307 *e*P **P 04 33 37.9 +3.6**
FINES FINESS Array B 32.80 333 P **P 04 33 51.1 +2.4**
comp=Z,1.1nm,0.7s,baz=132,slow=8.0,SNR=4.4
FINES LR LR 04 48 54.2
comp=Z,93nm,19.9s,baz=120,slow=40
comp=Z,1.1nm,0.7s
CONA Conrad Observa 33.01 305 *e*P **P 04 33 52.2 +1.3**
comp=Z,4.4nm,1.2s
ARSA Arzberg 33.16 304 *e*P **P 04 33 53.9 +1.8**
comp=Z,3.9nm,0.7s
GTA Gaotai 33.91 70 *e*P **P 04 34 02.1 +3.2**
GTA pP sP 04 34 06.8 +3.0
GTA sP pP 04 34 10.3 +7.9
MOA Molln 34.07 305 *e*P **P 04 34 01.1 +1.1**
comp=Z,3.9nm,1.1s
GERES GERESS Array B 34.55 307 P **P 04 34 05.4 +1.2**
comp=Z,0.4nm,0.3s,baz=90,slow=11,SNR=5.7
comp=Z,0.4nm,0.3s
GERES GERESS Array B 34.55 307 *e*P **P 04 34 05.8 +1.5**
KBA Koelnbreinsper 34.63 304 *e*P **P 04 34 06.2 +1.2**
comp=Z,8.4nm,1.7s
LVZ Lovozero 35.12 345 P **P 04 34 09.7 +0.8**
LVZ Lovozero 35.12 345 P **P 04 34 09.7 +0.8**
LVZ pmax pmax
comp=Z,67nm,1.5s
WTTA Wattenberg 35.80 304 *i* P **P 04 34 15.4 +0.3**
comp=Z,6.2nm,0.8s
WATA Walderalm 35.85 304 *e*P **P 04 34 16.3 +0.8**
comp=Z,3.0nm,0.5s
SQTA Sankt Quirin 36.09 304 *e*P **P 04 34 17.2 -0.4**
comp=Z,4.9nm,1.0s
MOTA Moosalm 36.17 304 *i* P **P 04 34 18.5 +0.3**
comp=Z,5.2nm,1.2s
FETA Feichten 36.41 303 *e*P **P 04 34 21.2 +0.9**
comp=Z,3.7nm,0.9s
FUORN Ofenpass-Fuorn 36.72 303 P **P 04 34 23.3 +0.1**
DAVOX Davos/Dischmat 36.99 303 P **P 04 34 25.2 -0.1**
comp=Z,2.2nm,0.7s,baz=135,slow=13,SNR=4.1
DAVOX LR LR 04 53 16.3
comp=Z,46nm,19.1s,baz=83,slow=42
comp=Z,2.2nm,0.7s
DAVA Damuels 37.00 304 *i* P **P 04 34 25.8 +0.5**
comp=Z,6.9nm,0.8s
HFS Hagfors 37.38 325 LR LR 04 51 07.6
comp=Z,99nm,18.8s,baz=98,slow=38
NRIK Noril'sk 38.02 17 LR LR 04 53 02.1
comp=Z,227nm,18.0s,baz=226,slow=41
KEV Kevo 38.29 344 P **P 04 34 35.6 -0.2**
KEV Kevo 38.29 344 P **P 04 34 35.6 -0.2**
KEV pmax pmax
comp=Z,36nm,1.5s
ARCES ARCESS Array B 38.48 343 LR LR 04 51 30.7
comp=Z,138nm,18.2s,baz=136,slow=38
ARCES ARCESS Array B 38.48 343 P **P 04 34 40.0 +2.6**
ARCES IAmb IAmb 04 35 03.0
comp=Z,20nm,1.4s
ARCES ARCESS Array B 38.48 343 P **P 04 34 40.0 +2.6**
ARCES pmax pmax

comp=Z,20nm,1.4s
ULN Ulaanbaatar 38.73 55⇑ eP P 04 34 39.2 -0.8
ULN pmax pmax
comp=Z,6.0nm,1.8s
SENIN Lac Senin/Sane 38.77 302 P P 04 34 41.0 +0.6
SENIN IAmb IAmb 04 34 44.6
comp=Z,7.1nm,0.8s
NB2 NORSAR Subarra 38.85 326 P P 04 34 43.7 +3.0
comp=Z,5.4nm,1.4s,baz=111,slow=7.9
NOA NORSAR Array B 38.85 326 LR LR 04 52 13.7
comp=Z,89nm,19.1s,baz=115,slow=38
BNI Bardonecchia 39.27 300 P P 04 34 44.0 -0.5
BNI pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 40.50 103 P P 04 34 55.8 +0.9
comp=Z,1.7nm,0.3s,baz=303,slow=9.4,SNR=11
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 40.50 103 *i* P **P 04 34 55.4 +0.5**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
KMBO Kilima Mbogo 40.71 212 LR LR 04 53 33.5
comp=Z,246nm,19.8s,baz=80,slow=39
SSB Saint Sauveur 40.76 301 P P 04 34 57.3 +0.6
SSB IAmb IAmb 04 35 07.0
comp=Z,17nm,1.5s
SSB Saint Sauveur 40.76 301 P P 04 34 57.3 +0.6
SSB pmax pmax
comp=Z,17nm,1.5s
MBAR Mbarara 43.39 220 LR LR 04 56 25.6
comp=Z,103nm,20.6s,baz=12,slow=40
ESK Eskdalemuir 45.37 316 P P 04 35 33.1 -0.7
ESK Eskdalemuir 45.37 316 P P 04 35 33.2 -0.7
ESK pmax pmax
comp=Z,27nm,1.5s
ESDC Sonseca Array 47.92 294 P P 04 35 54.6 +0.4
comp=Z,1.2nm,0.8s,baz=72,slow=8.2,SNR=8.1
comp=Z,1.2nm,0.8s
NJ2 Nanjing 50.70 75 *eP* **P 04 36 13.6 -1.9**
ZEA Zeya 51.09 46 *i P* **P 04 36 17.9 -0.2**
CN2 Changchun 51.99 59 *eP* **P 04 36 26.1 +1.2**
BORG Borgarnes 53.92 329 LR LR 05 02 18.2
comp=Z,36nm,18.9s,baz=84,slow=39
TOA0 Torodi Ar. Sit 54.44 261 P P 04 36 42.7 -0.6
TOA0 IAmb IAmb 04 36 52.4
comp=Z,6.3nm,1.2s
TORD Torodi Ar. Bea 54.44 261 P P 04 36 43.5 +0.1
comp=Z,1.7nm,0.9s,baz=36,slow=4.9,SNR=10
TORD LR LR 05 04 21.9
comp=Z,55nm,18.6s,baz=212,slow=41
comp=Z,1.7nm,0.9s
KSRS Korea Array 55.75 65 P P 04 36 56.0 +3.5
comp=Z,2.5nm,0.8s,baz=278,slow=7.0,SNR=6.2
comp=Z,2.5nm,0.8s
KSRS Korea Array 55.75 65 P P 04 36 56.0 +3.5
LSZ Lusaka 57.29 214 LR LR 05 03 18.3
comp=Z,115nm,19.8s,baz=64,slow=38
SFJD Kangerlussuaq 64.54 336 LR LR 05 05 03.3
comp=Z,34nm,20.1s,baz=65,slow=35
BOSA Boshof 70.31 210 LR LR 05 12 24.9
comp=Z,64nm,18.1s,baz=11,slow=39
SUR Sutherland 75.44 211 LR LR 05 12 13.2
comp=Z,73nm,18.6s,baz=20,slow=36
WRA Warramunga Arr 91.35 113 P P 04 40 22.7 +0.8
comp=Z,0.2nm,0.5s,baz=322,slow=3.9,SNR=8.3
comp=Z,0.2nm,0.5s
ASAR Alice Springs 93.26 117 P P 04 40 31.6 +0.9
comp=Z,0.4nm,0.7s,baz=308,slow=4.8,SNR=5.2
comp=Z,0.4nm,0.7s

NEIC ***25*** *04:42:12.8±0.7, 19°.61N±0°.09×64°.73W±0°.10, h39km±56km, Error ellipse: s-maj=15.7km s-min=10.4km az=221.0*
RSPR ***25*** *04:42:14.3, 19°.60N×64°.75W, h25km±23km, MD3.6/10*
ISC 25 04:42:12.1±2.3, 19°.7N±0°.1×64°.73W±0°.05, h35km, n57, σ0s88/66, 16C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.25**	**175**	⇑*eP*		**Pn**	**04 42 33.1**	**+0.1**
TBVI	**Tortola**	**1.25**	**175**	*eS*		**Sn**	**04 42 48.2**	**-0.3**
TBVI	**Tortola**	**1.25**	**175**			**Pn**	**04 42 33.1**	**+0.1**
TBVI						**Sn**	**04 42 48.2**	**-0.3**
STVI	**Saint Thomas**	**1.32**	**189**	⇑*eP*		**Pn**	**04 42 33.8**	**-0.2**
STVI	**Saint Thomas**	**1.32**	**189**	*eS*		**Sn**	**04 42 49.6**	**-0.8**
STVI	**Saint Thomas**	**1.32**	**189**			**Pn**	**04 42 33.8**	**-0.2**
STVI						**Sn**	**04 42 49.6**	**-0.8**
STVI	**Saint Thomas**	**1.32**	**189**	IAML			04 42 52.6	
	comp=E,120nm,0.3s							
SJVI	**Gifft Hill Sch**	**1.33**	**182**	⇑*eP*		**Pn**	**04 42 33.9**	**-0.2**
SJVI	**Gifft Hill Sch**	**1.33**	**182**	*eS*		**Sn**	**04 42 49.6**	**-0.9**
SJVI	**Gifft Hill Sch**	**1.33**	**182**			**Pn**	**04 42 33.9**	**-0.2**
SJVI						**Sn**	**04 42 49.6**	**-0.9**
CUPR	**Culebra, Puert**	**1.45**	**201**	⇑*eP*		**Pn**	**04 42 35.6**	**-0.1**
CUPR	**Culebra, Puert**	**1.45**	**201**	*eS*		**Sn**	**04 42 52.7**	**-0.9**
CUPR	**Culebra, Puert**	**1.45**	**201**			**Pn**	**04 42 35.6**	**-0.1**
CUPR						**Sn**	**04 42 52.7**	**-0.9**
MTP	**Monte Pirata**	**1.74**	**207**	⇓*eP*		**Pn**	**04 42 40.4**	**+0.5**
MTP	**Monte Pirata**	**1.74**	**207**	*eS*		**Sn**	**04 43 00.0**	**-0.8**
MTP	**Monte Pirata**	**1.74**	**207**			**Pn**	**04 42 40.4**	**+0.5**
MTP						**Sn**	**04 43 00.0**	**-0.8**
CBYP	**Canovanas**	**1.75**	**218**	⇑*eP*		**Pn**	**04 42 39.9**	**-0.1**
CBYP	**Canovanas**	**1.75**	**218**	*eS*		**Sn**	**04 43 00.7**	**-0.4**
CBYP	**Canovanas**	**1.75**	**218**			**Pn**	**04 42 39.9**	**-0.1**
CBYP						**Sn**	**04 43 00.7**	**-0.4**
HUMP	**Col San Antoni**	**1.85**	**215**	⇑*eP*		**Pn**	**04 42 41.4**	**0.0**
HUMP	**Col San Antoni**	**1.85**	**215**	*eS*		**Sn**	**04 43 02.6**	**-0.9**
HUMP	**Col San Antoni**	**1.85**	**215**			**Pn**	**04 42 41.4**	**0.0**
HUMP						**Sn**	**04 43 02.6**	**-0.9**
HUMP	**Col San Antoni**	**1.85**	**215**	IAML			04 43 06.6	
	comp=E,59nm,0.2s							
HUMP				IAML			04 43 10.0	
	comp=N,71nm,0.4s							
GCPR	**Guaynabo City**	**1.86**	**224**	⇑*eP*		**Pn**	**04 42 41.5**	**0.0**
GCPR	**Guaynabo City**	**1.86**	**224**	*eS*		**Sn**	**04 43 03.2**	**-0.6**
GCPR	**Guaynabo City**	**1.86**	**224**			**Pn**	**04 42 41.5**	**0.0**
GCPR						**Sn**	**04 43 03.2**	**-0.6**
CDVI	**St. Croix**	**1.90**	**181**	⇑*eP*		**Pn**	**04 42 44.0**	**+1.9**
CDVI	**St. Croix**	**1.90**	**181**			**Pn**	**04 42 44.0**	**+1.9**
CDVI						**Sn**	**04 43 06.5**	**+1.6**
CDVI	**St. Croix**	**1.90**	**181**	*eP*		**Pn**	**04 42 43.7**	**+1.7**
CDVI				*eS*		**Sn**	**04 43 06.4**	**+1.6**
SJG	**San Juan**	**2.05**	**221**			**Pn**	**04 42 43.9**	**-0.2**
SJG				IAML			04 43 13.5	
	comp=N,37nm,0.7s							
SJG	**San Juan**	**2.05**	**221**	*eP*		**Pn**	**04 42 44.5**	**+0.5**
EMPR	**Esperanza - Ma**	**2.07**	**236**	⇑*eP*		**Pn**	**04 42 45.1**	**+0.7**
EMPR	**Esperanza - Ma**	**2.07**	**236**	*eS*		**Sn**	**04 43 08.3**	**-0.7**
EMPR	**Esperanza - Ma**	**2.07**	**236**			**Pn**	**04 42 45.1**	**+0.7**
EMPR						**Sn**	**04 43 08.3**	**-0.7**
EMPR	**Esperanza - Ma**	**2.07**	**236**	IAML			04 43 30.0	
	comp=N,74nm,1.2s							
IGPR	**InterUniversit**	**2.14**	**218**	⇑*eP*		**Pn**	**04 42 46.1**	**+0.8**
IGPR	**InterUniversit**	**2.14**	**218**	*eS*		**Sn**	**04 43 10.5**	**0.0**
IGPR	**InterUniversit**	**2.14**	**218**			**Sn**	**04 43 10.5**	**0.0**
AOPR	**Arecibo Observ**	**2.32**	**236**	⇑*eP*		**Pn**	**04 42 48.6**	**+0.7**
AOPR	**Arecibo Observ**	**2.32**	**236**			**Pn**	**04 42 48.6**	**+0.7**
AOPR	**Arecibo Observ**	**2.32**	**236**	IAML			04 43 35.0	
	comp=N,66nm,0.6s							
AOPR	**Arecibo Observ**	**2.32**	**236**	*eP*		**Pn**	**04 42 48.6**	**+0.7**
AOPR				*eS*		**Sn**	**04 43 13.7**	**-1.5**
UUPR	**Utuado, UPR, P**	**2.35**	**234**	⇑*eP*		**Pn**	**04 42 48.7**	**+0.5**
UUPR	**Utuado, UPR, P**	**2.35**	**234**			**Pn**	**04 42 48.7**	**+0.5**
CELP	**Cerrillos**	**2.36**	**228**	⇓*eP*		**Pn**	**04 42 49.1**	**+0.7**
CELP	**Cerrillos**	**2.36**	**228**	*eS*		**Sn**	**04 43 14.9**	**-1.2**
CELP	**Cerrillos**	**2.36**	**228**			**Pn**	**04 42 49.1**	**+0.7**
CELP						**Sn**	**04 43 14.9**	**-1.2**
CELP	**Cerrillos**	**2.36**	**228**	IAML			04 43 23.8	
	comp=E,29nm,0.8s							
GBPR	**Guanica, Bosqu**	**2.64**	**231**	⇑*eP*		**Pn**	**04 42 53.7**	**+1.5**
LSP	**Las Mesas**	**2.68**	**237**	⇑*eP*		**Pn**	**04 42 54.2**	**+1.4**
MLPR	**Magueyes Islan**	**2.77**	**233**	⇑*eP*		**Pn**	**04 42 54.9**	**+0.9**
MLPR	**Magueyes Islan**	**2.77**	**233**	*eS*		**Sn**	**04 43 25.7**	**-0.4**
MLPR	**Magueyes Islan**	**2.77**	**233**			**Pn**	**04 42 54.9**	**+0.9**
MLPR						**Sn**	**04 43 25.7**	**-0.4**
MLPR	**Magueyes Islan**	**2.77**	**233**	IAML			04 43 37.3	
	comp=N,20nm,2.9s							
MLPR				IAML			04 43 45.1	
	comp=E,18nm,2.2s							
CRPR	**Cabo Rojo, PR**	**2.79**	**234**	⇑*eP*		**Pn**	**04 42 55.3**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.79**	**234**			**Pn**	**04 42 55.3**	**+1.0**
ANBD	**Bethesda, Anti**	**3.83**	**132**	*eP*		**Pn**	**04 43 09.0**	**+0.4**
ANBD				*eS*		**Sn**	**04 43 50.3**	**-2.1**

MOS ***25*** *04:45:49.2±1.0, 22°.50N×121°.38E, h16km, mb5.3/59, MS4.6/13, Error ellipse: s-maj=8.2km s-min=4.6km az=118.7*
NEIC ***25*** *04:45:50.3, 22°.61N×121°.48E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.67; $M_{\theta\theta}$0.50; $M_{\phi\phi}$-2.16; $M_{r\theta}$-0.87; $M_{r\phi}$-0.10; $M_{\theta r}$-1.85; Fault plane solution: $M_0$2.84000×10^{16} NP1:ϕ_s340.03000°, δ26.06000°, λ52.65000°. NP2:ϕ_s200.38000°, δ69.56000°, λ106.52000°. Principal axes: T 2.6889, Plg62.0000°, Azm136.0000°; N 0.2741, Plg15.0000°, Azm14.0000°; P -2.9630, Plg23.0000°, Azm278.0000°;*
NEIC ***25*** *04:45:50.2±2.1, 22°.60N±0°.05×121°.47E±0°.06, h9km±4km, mb5.1/160, Mwr4.9/24, ML5.2(TAP) Error ellipse: s-maj=8.7km s-min=5.3km az=55.0*
BJI ***25*** *04:45:51.1±0.0, 22°.75N×121°.33E, h10km, mb4.6/66, mB4.9/52, ML5.0/7, Ms4.8/77, Ms7 4.8/71*
ASIES ***25*** *04:45:51.7, 22°.61N×121°.40E, h23km, MW4.9*
NIED ***25*** *04:45:52.5, 22°.89N×121°.56E, h0km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.80; $M_{\theta\theta}$1.16; $M_{\phi\phi}$-1.96; $M_{r\theta}$0.00; $M_{\theta\phi}$-0.99; $M_{\phi r}$-0.17; Fault plane solution: $M_0$1.86000×10^{16} NP1:ϕ_s61.00000°, δ85.00000°, λ179.00000°. NP2:ϕ_s151.00000°, δ89.00000°, λ5.00000°.*
TAP ***25*** *04:45:52.4, 22°.65N×121°.35E, h24km, ML5.3, B*
JMA ***25*** *04:45:52.5±0.3, 23°N±1°×12°2E±°, h0km, MD4.8/15, MV5.2/15, TAIWAN REGION*
GCMT ***25*** *04:45:53.2±0.2, 22°.58N±0°.02×121°.33E±0°.02, h24km, MW5.0/102, Moment Tensor Solution. s43, c53; s102, c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.88±.19; $M_{\theta\theta}$0.59±.11; $M_{\phi\phi}$-3.47±.12; $M_{r\theta}$-1.61±.16; $M_{\theta\phi}$-1.71±.08; $M_{\phi r}$-1.12±.15; Best double couple: $M_0$4.08700×10^{16} NP1:ϕ_s221.00000°, δ61.00000°, λ116.00000°. NP2:ϕ_s356.00000°, δ38.00000°, λ51.00000°. Principal axes: T 3.7180, Plg64.0000°, Azm176.0000°; N 0.7400, Plg23.0000°, Azm28.0000°; P -4.4560, Plg13.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***25*** *04:45:54.6±1.5, 22°.62N×121°.60E, h43km±13km, mb4.7/28, mbtmp4.9/30, ML4.4/2, MS4.4/51 Error ellipse: s-maj=13.0km s-min=8.9km az=75.0*
ISC 25 04:45:52.7±0.5, 22°.61N±0°.02×121°.41E±0°.02, h26km±3km, n836, σ1s52/882, mb5.1/192, MS4.5/77, 51C-78D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.09**	**44**	⇓*iP*		**Pb**	**04 45 57.2**	**-0.2**
	baz=71							
LDUT				*i* S		**Sb**	**04 46 00.5**	**0.0**
	baz=71							
TWGBT	**Beinan**	**0.36**	**304**	P		**Pb**	**04 45 59.9**	**-0.8**
TWGBT	**Beinan**	**0.36**	**304**	⇑*iP*		**Pb**	**04 45 59.5**	**-1.2**
TWGBT				*i* S		**Sb**	**04 46 05.2**	**-1.1**
	baz=303							
EDH	**Donghe**	**0.37**	**345**	⇑*iP*		**Pb**	**04 45 59.7**	**-1.2**
	baz=358							
EDH				*eS*		**Sb**	**04 46 05.2**	**-1.3**
	baz=358							
TWG	**Pinlang**	**0.37**	**304**			**Pb**	**04 45 58.9**	**-2.0**
TWG					Sg	**Sb**	**04 46 04.9**	**-1.5**
TWG	**Pinlang**	**0.37**	**304**	⇑*iP*		**Pb**	**04 45 59.5**	**-1.4**
	baz=303							
TWG				*i* S		**Sb**	**04 46 05.0**	**-1.5**
	baz=303							
LONT	**Longtian**	**0.39**	**319**	P		**Pb**	**04 45 59.7**	**-1.4**
	baz=325							
LONT				*eS*		**Sb**	**04 46 06.9**	**0.0**
	baz=325							
ECL	**Taimali**	**0.42**	**268**	⇓*iP*		**Pb**	**04 46 00.2**	**-1.4**
	baz=261							
ECL				*i* S		**Sb**	**04 46 05.8**	**-1.9**
	baz=261							
ECS	**Chishang**	**0.51**	**340**	*eP*		**Pb**	**04 46 02.5**	**-0.6**
	baz=328							
ECS				*eS*		**Sb**	**04 46 10.8**	**+0.6**
	baz=328							
TAWH	**Dawu Township**	**0.55**	**241**	⇓*iP*		**Pb**	**04 46 01.7**	**-2.0**
	baz=234							
TAWH				S		**Sb**	**04 46 09.3**	**-2.0**
	baz=234							
EAST	**Anshuo**	**0.56**	**246**	⇓*iP*		**Pb**	**04 46 02.8**	**-1.2**
	baz=239							
EAST				*i* S		**Sb**	**04 46 10.0**	**-1.7**
	baz=239							
EHD	**Haiduan**	**0.56**	**341**	⇓*iP*		**Pb**	**04 46 01.6**	**-2.5**
	baz=331							
EHD				S		**Sb**	**04 46 10.8**	**-1.0**
	baz=331							
LAY	**Lan-yu**	**0.59**	**167**	⇓*iP*		**Pb**	**04 46 04.0**	**-0.4**
	baz=154							
LAY				S		**Sb**	**04 46 12.7**	**+0.3**
	baz=154							
FULB	**Fuli**	**0.59**	**350**	⇑*iP*		**Pb**	**04 46 03.0**	**-1.5**
	baz=339							
FULB				S		**Sb**	**04 46 11.6**	**-1.0**
	baz=339							
LYUB	**Lan-yu**	**0.63**	**165**	⇓*iP*		**Pb**	**04 46 03.5**	**-1.6**
	baz=153							
LYUB				S		**Sb**	**04 46 11.6**	**-1.9**
	baz=153							
ELDTW	**Lidau**	**0.68**	**328**	⇓*iP*		**Pb**	**04 46 03.9**	**-2.1**
	baz=330							
ELDTW				S		**Sb**	**04 46 11.6**	**-3.5**
	baz=330							
SLIU	**Shizi**	**0.69**	**235**	P		**Pb**	**04 46 04.7**	**-1.3**
	baz=229							
SLIU				*eS*		**Sb**	**04 46 12.8**	**-2.3**
	baz=229							
ECBN	**Changbin**	**0.70**	**3**	*eP*		**Pb**	**04 46 04.6**	**-1.8**
	baz=16							
ECBN				*eS*		**Sb**	**04 46 13.5**	**-2.1**
	baz=16							
TSMG	**Majia**	**0.71**	**278**	⇓*iP*		**Pb**	**04 46 04.7**	**-1.7**
	baz=272							
TSMG				*eS*		**Sb**	**04 46 12.9**	**-2.9**
	baz=272							
MASBT	**Mashibuluo**	**0.71**	**270**	⇓*iP*		**Pb**	**04 46 05.0**	**-1.5**
	baz=264							
MASBT				S		**Sb**	**04 46 12.6**	**-3.3**
	baz=264							
SSD	**Sandimen**	**0.73**	**281**	⇓*iP*		**Pb**	**04 46 04.9**	**-1.8**
	baz=275							
SSD				*eS*		**Sb**	**04 46 13.4**	**-2.9**
	baz=275							
EYUL	**Yuli**	**0.74**	**354**	P		**Pb**	**04 46 05.9**	**-1.0**
	baz=344							
EYUL				S		**Sb**	**04 46 16.8**	**+0.2**
	baz=344							
TWF1	**Yuli**	**0.74**	**352**	⇓*iP*		**Pb**	**04 46 05.0**	**-2.0**
	baz=343							
TWF1				S		**Sb**	**04 46 16.2**	**-0.6**
	baz=343							
SCZT	**Fangliau**	**0.76**	**252**	⇓*iP*		**Pb**	**04 46 06.0**	**-1.3**
	baz=240							
YULB	**Yu-li**	**0.78**	**353**	Pg		**Pb**	**04 46 05.5**	**-2.2**
YULB				Sg		**Sb**	**04 46 15.6**	**-2.4**
YULB	**Yu-li**	**0.78**	**353**	P		**Pb**	**04 46 06.7**	**-1.0**
YULB	**Yu-li**	**0.78**	**353**	⇓*iP*		**Pb**	**04 46 05.5**	**-2.2**
	baz=343							
YULB				S		**Sb**	**04 46 16.0**	**-2.0**
	baz=343							
SMST	**Manzhou Townsh**	**0.79**	**222**	*eP*		**Pb**	**04 46 06.7**	**-1.0**
	baz=216							
STYH	**Taoyuan**	**0.80**	**314**	⇓*iP*		**Pb**	**04 46 05.5**	**-2.5**
	baz=314							
STYH				S		**Sb**	**04 46 15.2**	**-3.3**
	baz=314							
TSPT	**Pingtung City**	**0.84**	**275**	*eP*		**Pb**	**04 46 08.2**	**-0.4**
	baz=267							
TSEB	**Hengchuen, Pin**	**0.85**	**214**	⇑*iP*		**Pb**	**04 46 08.2**	**-0.6**
	baz=211							
TSEB				S		**Sb**	**04 46 19.6**	**-0.2**
	baz=211							
HEN	**Hengchun**	**0.86**	**226**	*eP*		**Pb**	**04 46 08.3**	**-0.7**
	baz=220							
TWKBT	**Hengchun**	**0.86**	**220**	⇑*iP*		**Pb**	**04 46 07.9**	**-1.2**
	baz=206							
TWK1	**Hengchun**	**0.87**	**220**	⇑*iP*		**Pb**	**04 46 07.9**	**-1.1**
	baz=215							
TWK1				*eS*		**Sb**	**04 46 18.9**	**-1.4**
	baz=215							
HGSD	**Ruisui**	**0.88**	**1**	⇑P		**Pb**	**04 46 07.1**	**-2.2**
	baz=19							
HGSD				*eS*		**Sn**	**04 46 21.4**	**+0.2**
	baz=19							
SCST	**Cishan**	**0.88**	**288**	P		**Pb**	**04 46 08.7**	**-0.7**
	baz=284							
SGST	**Jiashian**	**0.89**	**302**	⇓*iP*		**Pb**	**04 46 07.7**	**-1.8**
	baz=301							
SGST				S		**Sb**	**04 46 19.8**	**-1.2**
	baz=301							
EHY	**Hungye**	**0.89**	**355**	*eP*		**Pb**	**04 46 07.5**	**-2.0**
	baz=345							
EHY				*eS*		**Sb**	**04 46 21.1**	**0.0**
	baz=345							
TWM1	**Shoushan**	**0.93**	**283**	⇓*iP*		**Pb**	**04 46 10.1**	**-0.1**
	baz=281							
WTP	**Ta-pu**	**0.96**	**311**	⇓*iP*		**Pn**	**04 46 09.9**	**-0.6**
	baz=317							
WTP				S		**Sn**	**04 46 24.4**	**+0.9**
	baz=317							
YUS	**Yu-Shan**	**0.97**	**335**	⇓*iP*		**Pn**	**04 46 09.1**	**-1.9**
	baz=336							
YUS				S		**Sb**	**04 46 21.3**	**-2.4**
	baz=336							
CHN1	**Nanshi**	**0.99**	**305**	⇓*iP*		**Pn**	**04 46 10.8**	**-0.1**
	baz=311							
CHN1				*i* S		**Sn**	**04 46 24.0**	**0.0**
	baz=311							
TPUB	**Ta-pu**	**0.99**	**314**	Pg		**Pn**	**04 46 10.0**	**-0.9**
TPUB	**Ta-pu**	**0.99**	**314**	P		**Pn**	**04 46 10.5**	**-0.4**
TPUB	**Ta-pu**	**0.99**	**314**	⇓*iP*		**Pn**	**04 46 10.2**	**-0.7**
	baz=313							
TPUB				S		**Sb**	**04 46 22.2**	**-1.6**
	baz=313							
SNJT	**Kaohsiung City**	**1.00**	**278**	*eP*		**Pn**	**04 46 10.5**	**-0.5**
	baz=275							
SNJT				*eS*		**Sn**	**04 46 25.8**	**+1.6**
	baz=275							
KAU	**Kaohsiung**	**1.01**	**268**	⇓*iP*		**Pb**	**04 46 12.8**	**+1.2**
	baz=264							
ALS	**Alishan**	**1.05**	**328**	⇓*iP*		**Pn**	**04 46 11.0**	**-1.0**
	baz=329							
ALS				S		**Sn**	**04 46 26.6**	**+0.6**
	baz=329							
EGFH	**Guangfu**	**1.05**	**1**	*eP*		**Pn**	**04 46 10.8**	**-0.9**
	baz=350							
EGFH				*eS*		**Sb**	**04 46 26.1**	**+0.5**
	baz=350							
SHHT	**Tainan City**	**1.06**	**293**	P		**Pb**	**04 46 12.1**	**-0.2**
	baz=290							
SHHT				*eS*		**Sb**	**04 46 28.9**	**+3.2**
	baz=290							
WSSB	**Gushan**	**1.06**	**272**	*eP*		**Pb**	**04 46 13.1**	**+0.7**
	baz=268							
WSSB				*eS*		**Sb**	**04 46 28.1**	**+2.4**
	baz=268							
CHN3	**Shinhua**	**1.06**	**296**	⇓P		**Pb**	**04 46 13.1**	**+0.6**
	baz=293							
CHN3				S		**Sb**	**04 46 29.7**	**+3.7**
	baz=293							
WCKO	**Fanlu**	**1.10**	**318**	P		**Pn**	**04 46 11.2**	**-1.3**
	baz=317							
WCKO				S		**Sn**	**04 46 26.2**	**-0.6**
	baz=317							
SSHA	**Shanhua**	**1.16**	**297**	*eP*		**Pb**	**04 46 14.2**	**+0.2**
	baz=294							
SSHA				*eS*		**Sb**	**04 46 31.4**	**+2.9**
	baz=294							
VWDT	**VWDT**	**1.16**	**348**	⇓*iP*		**Pn**	**04 46 12.1**	**-1.1**
	baz=359							
TAI1	**Yung-k'ang**	**1.17**	**292**	*eP*		**Pb**	**04 46 13.7**	**-0.4**
	baz=288							
TAI1				*eS*		**Sb**	**04 46 30.4**	**+1.5**
	baz=288							
CHN5	**Tsauling**	**1.19**	**326**	*eP*		**Pn**	**04 46 13.2**	**-0.5**
	baz=325							
CHN5				*eS*		**Sb**	**04 46 29.6**	**0.0**
	baz=325							
WHYT	**Xinyi Township**	**1.19**	**335**	P		**Pn**	**04 46 13.7**	**0.0**
	baz=342							
WHYT				*eS*		**Sn**	**04 46 29.0**	**-0.1**
	baz=342							
ESL	**Shilin**	**1.20**	**1**	P		**Pn**	**04 46 12.7**	**-1.1**
	baz=5.0							
ESL				*eS*		**Sn**	**04 46 27.9**	**-1.3**
	baz=5.0							
SSLB	**Suanglung**	**1.24**	**341**			**Pn**	**04 46 13.6**	**-0.8**
SSLB	**Suanglung**	**1.24**	**341**	P		**Pb**	**04 46 15.0**	**-0.5**
SSLB	**Suanglung**	**1.24**	**341**	⇓*iP*		**Pn**	**04 46 13.6**	**-0.8**
	baz=350							
SSLB				*eS*		**Sn**	**04 46 28.7**	**-1.6**
	baz=350							
SCLT	**Jiali**	**1.25**	**297**	P		**Pn**	**04 46 14.7**	**+0.3**
	baz=294							
SCLT				S		**Sb**	**04 46 32.3**	**+1.1**
	baz=294							
CHN2	**Minshiung**	**1.25**	**317**	⇓*iP*		**Pb**	**04 46 15.4**	**-0.3**
	baz=315							
CHN2				S		**Sb**	**04 46 32.5**	**+1.1**
	baz=315							
CHY	**Chiayi**	**1.26**	**314**	P		**Pb**	**04 46 15.2**	**-0.6**
	baz=312							
CHY				S		**Sb**	**04 46 32.1**	**+0.4**
	baz=312							
ICHU	**Yijhu**	**1.28**	**306**	P		**Pn**	**04 46 15.2**	**+0.4**
	baz=303							
ICHU				S		**Sb**	**04 46 33.0**	**+0.9**
	baz=303							
CHN8	**Yiju**	**1.32**	**304**	⇓*iP*		**Pn**	**04 46 15.8**	**+0.3**
	baz=301							
CHN8				*i* S		**Sb**	**04 46 34.1**	**+0.8**
	baz=301							
TSCK	**Chigu Township**	**1.33**	**294**	P		**Pn**	**04 46 14.9**	**-0.6**
	baz=290							
TSCK				*eS*		**Sb**	**04 46 33.3**	**-0.2**
	baz=290							
WDLH	**Douliu**	**1.34**	**324**	P		**Pb**	**04 46 16.6**	**-0.5**
	baz=321							
WDLH				S		**Sb**	**04 46 33.7**	**-0.1**
	baz=321							
SMLT	**Sun Moon Lake**	**1.35**	**340**	⇓*iP*		**Pn**	**04 46 15.8**	**-0.1**
	baz=340							
SMLT				S		**Sn**	**04 46 33.0**	**-0.1**
	baz=340							
OWD	**Renai**	**1.35**	**351**	*eP*		**Pn**	**04 46 15.4**	**-0.6**
	baz=4.0							
WJS	**Zhushan**	**1.36**	**333**	P		**Pb**	**04 46 16.7**	**-0.7**
	baz=331							
WJ

WHF				eS	Sn	04 46 38.8	+0.7
	baz=12							
ETL	Fush Village	1.55	7	eP	Pn	04 46 18.2	-0.5
	baz=357							
NACB	Ninganchiao	1.56	6		Pn	04 46 17.0	-1.8
NACB	Ninganchiao	1.56	6	P	Pn	04 46 18.9	+0.1
NACB	Ninganchiao	1.56	6	eP	Pn	04 46 16.9	-1.8
	baz=355							
NACB				eS	Sn	04 46 38.4	+0.2
	baz=355							
ETLH	Xiulin Townshi	1.59	3	eP	Pn	04 46 18.1	-1.1
	baz=7.0							
WRL	Guolierlin Hig	1.59	324	eP	Pn	04 46 18.6	-0.6
	baz=321							
WRL				eS	Sn	04 46 39.2	+0.3
	baz=321							
WTCT	Ta-ch'eng	1.62	321	eP	Pn	04 46 19.6	0.0
	baz=318							
WTCT				eS	Sb	04 46 41.0	-0.9
	baz=318							
FUSS	Fushou	1.64	355	eP	Pn	04 46 19.3	-0.6
	baz=10.0							
FUSS				eS	Sn	04 46 38.9	-1.5
	baz=10.0							
TWT	Tachien	1.65	353	eP	Pn	04 46 19.9	-0.2
	baz=353							
TDCB	Techi	1.65	352	P	Pn	04 46 19.9	-0.2
	baz=8.0							
WCHH	Zhanghua	1.66	332	P	Pb	04 46 21.8	-0.7
	baz=330							
WCHH				S	Sb	04 46 43.4	+0.4
	baz=330							
TCU	Taichung	1.67	336	⇓iP	Pb	04 46 21.5	-1.2
	baz=335							
TCU				S	Sn	04 46 41.5	+0.7
	baz=335							
WHP	Taichung City	1.71	346	P	Pb	04 46 22.4	-1.2
	baz=357							
WHP				eS	Sb	04 46 44.6	0.0
	baz=357							
WDGT	Dungji	1.73	292	⇓iP	Pn	04 46 20.7	-0.4
	baz=288							
WDGT				iS	Sn	04 46 40.7	-1.7
	baz=288							
NNSB	Datong	1.81	359	eP	Pn	04 46 22.0	-0.3
	baz=17							
NNS	Nan Shan	1.82	359	eP	Pn	04 46 21.4	-1.0
	baz=18							
TWQ1	Liyutan	1.82	342	⇓iP	Pn	04 46 23.5	+1.1
	baz=340							
TWQ1				iS	Sb	04 46 47.4	-0.4
	baz=340							
WDJ	Dajia District	1.86	338	eP	Pn	04 46 24.3	+1.4
	baz=336							
WDJ				eS	Sb	04 46 48.1	-0.8
	baz=336							
PHUB	P'eng-hu	1.91	298	eP	Pn	04 46 23.0	-0.5
	baz=294							
PHUB				eS	Sn	04 46 45.2	-1.6
	baz=294							
VCHM	Qimei	1.92	288	P	Pn	04 46 22.8	-0.8
	baz=285							
VCHM				S	Sn	04 46 45.8	-1.1
	baz=285							
LATG	Datong	1.92	3	P	Pn	04 46 23.2	-0.5
	baz=7.0							
PNG	Penghu	1.95	300	⇓iP	Pn	04 46 23.6	-0.5
	baz=295							
PNG				iS	Sn	04 46 46.8	-0.9
	baz=295							
NDT	Datong Townshi	1.98	3	eP	Pn	04 46 23.4	-1.2
	baz=6.0							
NMLH	Miaoli	2.00	344	eP	Pn	04 46 25.8	+1.0
	baz=342							
NMLH				eS	Sb	04 46 52.1	-0.7
	baz=342							
ENTT	Nioudou	2.02	4	eP	Pn	04 46 24.1	-1.1
	baz=8.0							
NFF	Wufeng Townshi	2.03	353	eP	Pn	04 46 25.6	+0.4
	baz=4.0							
NFF				eS	Sn	04 46 50.3	+0.5
	baz=4.0							
TWC	Suao	2.03	11	P	Pn	04 46 25.2	+0.1
	baz=1.0							
TWC				eS	Sn	04 46 50.4	+0.7
	baz=1.0							
NSTT	Nanjuang	2.04	350	eP	Pn	04 46 26.5	+1.1
	baz=348							
NSTT				eS	Sb	04 46 52.5	-1.7
	baz=348							
YHNB	Yeheng	2.05	359		Pn	04 46 25.6	0.0
YHNB	Yeheng	2.05	359	P	Pb	04 46 27.4	-1.9
YHNB	Yeheng	2.05	359	eP	Pn	04 46 25.2	-0.3
	baz=15							
NSK	Sanguang	2.06	359	⇑P	Pn	04 46 24.7	-0.9
	baz=14							
NSK				eS	Sn	04 46 49.9	-0.6
	baz=14							
LIOB	Emei	2.06	350	eP	Pn	04 46 26.5	+0.9
	baz=348							
TWE	Neicheng	2.11	6	eP	Pn	04 46 27.3	+1.0
	baz=11							
FUSB	Fushanzhiwuyua	2.15	4	P	Pn	04 46 27.1	+0.3
	baz=8.0							
SBCB	Hsinchu	2.21	350	eP	Pn	04 46 28.9	+1.4
	baz=348							
HSN	Hsinchu	2.22	350	eP	Pb	04 46 31.5	-0.5
	baz=349							
EGS		2.27	12	eP	Pb	04 46 31.0	-2.0
	baz=2.0							
JYNG	Yonagunijimaku	2.31	37	P	Pn	04 46 28.6	-0.5
JYNG				eS	Sn	04 46 54.9	-1.8
JYNG	Yonagunijimaku	2.31	37	A	A	04 46 28.6	
	comp=E,16nm,3.7s,comp=E,17nm,2.1s							
NHDH	Xindian Distri	2.34	3	eP	Pn	04 46 30.8	+1.3
	baz=20							
NCUH	Zhongli	2.35	355	eP	Pb	04 46 33.0	-1.4
	baz=337							
TATO	Taipei	2.35	2		Pn	04 46 30.1	+0.5
TATO	Taipei	2.35	2	P	Pn	04 46 31.3	+1.7
YOJ	Yonaguni jima	2.36	38	Pn	Pn	04 46 29.9	+0.2
YOJ	Yonaguni jima	2.36	38	P	Pn	04 46 29.9	+0.2
YOJ	Yonaguni jima	2.36	38	P	Pn	04 46 30.6	+0.9
YOJ	Yonaguni jima	2.36	38	eP	Pn	04 46 29.6	-0.1
	baz=53							
YOJ				eS	Sn	04 46 55.8	-2.0
	baz=53							
YOJ	Yonaguni jima	2.36	38	P	Pn	04 46 29.9	+0.2
YOJ				S	Sn	04 46 56.2	-1.6
YOJ	Yonaguni jima	2.36	38	A	A	04 46 29.9	
	comp=E,12nm,2.5s,comp=E,15nm,2.1s							
TWA	Mucha	2.36	4	eP	Pn	04 46 31.7	+1.9
	baz=6.0							
TWA				eS	Sn	04 47 00.3	+2.3
	baz=6.0							
TIPB	Shuangxi	2.38	9	eP	Pn	04 46 31.6	+1.5
TWB1	Santiao Chiao	2.44	13	eP	Pn	04 46 32.3	+1.4
	baz=29							
TWB1				eS	Sn	04 47 01.1	+1.1
	baz=29							
NWF	Wu-fen Shan	2.47	8	P	Pn	04 46 32.8	+1.4
	baz=11							
NWF				eS	Sn	04 47 02.7	+1.9
	baz=11							
TWS1	Kuangyinshan	2.48	0	eP	Pb	04 46 34.2	-2.3
	baz=16							
TWS1				eS	Sb	04 47 04.7	-1.9
	baz=16							
SXI1	Grass Mountain	2.51	10	eP	Pn	04 46 33.0	+1.2
SXI1				eS	Sn	04 47 02.9	+1.3
YM01	YM01	2.53	3	eP	Pn	04 46 33.9	+1.9
	baz=4.0							
HATJ	Hateruma jima	2.63	56	P	Pn	04 46 33.4	-0.1
HATJ				eS	Sn	04 47 02.9	-1.6
HATJ	Hateruma jima	2.63	56	A	A	04 46 33.4	
	comp=E,14nm,2.1s,comp=E,11nm,2.5s							
TWY	Chenhua	2.66	4	eP	Pb	04 46 36.8	-2.7
	baz=5.0							
IRIF	Iriomote-Funau	2.74	51	P	Pn	04 46 35.1	+0.2
IRIF				S	Sn	04 47 06.0	-1.2
IRIF	Iriomote-Funau	2.74	51	A	A	04 46 35.1	
	comp=E,9.0nm,1.2s,comp=E,17nm,2.0s							
JKRS	Kuro-shima	2.89	55	iP	Pn	04 46 37.2	+0.3
JKRS				eS	Sn	04 47 10.0	-0.8
JKRS	Kuro-shima	2.89	55	A	A	04 46 37.2	
	comp=E,16nm,2.1s,comp=E,14nm,3.1s							
VWUC	VWUC	2.97	323	eP	Pn	04 46 37.4	-0.7
	baz=318							
JIJ	Ishigaki jima	3.06	55	iP	Pn	04 46 39.0	-0.3
JIJ				S	Sn	04 47 14.1	-1.0
JIJ	Ishigaki jima	3.06	55	A	A	04 46 39.0	
	comp=E,5.0nm,1.6s,comp=E,6.0nm,1.8s							
PCYT	Pengchaiyu	3.06	11	eP	Pn	04 46 40.8	+1.3
	baz=357							
PTMZ	Houxiangcun	3.20	320	eP	Pn	04 46 40.5	-0.7
	baz=314							
KNM	Kinmen	3.27	304	P	Pn	04 46 43.0	+0.8
	baz=297							
KNM				S	Sn	04 47 20.0	-0.2
	baz=297							
JISG	Ishigakijimahi	3.31	53	P	Pn	04 46 42.9	+0.1
JISG				eS	Sn	04 47 20.8	-0.6
JISG	Ishigakijimahi	3.31	53	A	A	04 46 42.9	
	comp=E,9.0nm,0.5s,comp=E,8.0nm,0.5s							
KNMB	Chin-men Tao	3.33	304	Pn	Pn	04 46 42.4	-0.6
KNMB	Chin-men Tao	3.33	304	eP	Pn	04 46 42.5	-0.5
	baz=300							
CICP	Calayan Island	3.33	179	⇑iP	Pn	04 46 44.6	+1.6
CICP				iS	Sn	04 47 26.0	+4.2
QZH	Quanzhou	3.47	313	⇓iPn	Pn	04 46 44.4	-0.5
QZH				Sn	Sn	04 47 22.3	-2.9
QZH				smax	smax		
	comp=N,1μm,0.6s						
QZH				smax	smax		
	comp=E,1μm,0.5s						
QZH				LR	LR		
	comp=N,6μm,15.9s						
QZH				LR	LR		
	comp=E,6μm,15.2s						
QZH				LR	LR		
	comp=Z,8μm,15.2s						
ZPLA	Ao Xicun	3.61	292	eP	Pn	04 46 45.9	-1.0
	baz=287						
ZPLA				eS	Sn	04 47 25.5	-3.1
	baz=287						
JTJ	Tarama	3.64	56	P	Pn	04 46 47.2	0.0
JTJ				S	Sn	04 47 28.5	-0.8
JTJ	Tarama	3.64	56	A	A	04 46 47.2	
	comp=E,8.0nm,4.1s,comp=E,8.0nm,1.6s							
MATB	Ma-tsu	3.77	340	eP	Pn	04 46 48.1	-0.9
	baz=331							
DSXP	Dongshan	3.82	287	eP	Pn	04 46 49.4	-0.4
	baz=283							
DSXP				eS	Sn	04 47 30.8	-3.2
	baz=283							
AXDP	Jialang	3.88	307	eP	Pn	04 46 50.0	-0.7
	baz=301							
AXDP				eS	Sn	04 47 32.7	-2.7
	baz=301							
MHZQ	Yeshan	4.09	329	eP	Pn	04 46 51.7	-1.8
	baz=323							
JIRB	Irabujima	4.10	57	P	Pn	04 46 53.5	-0.1
JIRB				S	Sn	04 47 38.8	-2.0
JIRB	Irabujima	4.10	57	A	A	04 46 53.5	
	comp=E,4.0nm,2.1s,comp=E,6.0nm,4.0s							
PACPP	Pamplona Cagay	4.13	181	⇑iP	Pn	04 46 53.5	-0.6
PACPP				iS	Sn	04 47 30.7	-11
JMJ2	Miyako jima3	4.17	59	iP	Pn	04 46 54.8	+0.2
JMJ2				S	Sn	04 47 41.8	-0.8
JMJ2	Miyako jima3	4.17	59	A	A	04 46 54.8	
	comp=E,6.0nm,4.4s,comp=E,6.0nm,1.1s							
JMJ	Miyako jima 2	4.18	58	P	Pn	04 46 55.2	+0.4
LYJJ	Jianjiangzhen	4.20	339	eP	Pn	04 46 53.1	-1.8
	baz=332							
JIKM	Ikemajima	4.21	56	P	Pn	04 46 55.2	+0.1
JIKM				S	Sn	04 47 42.7	-0.7
JIKM	Ikemajima	4.21	56	A	A	04 46 55.2	
	comp=E,6.0nm,5.6s,comp=E,5.0nm,5.4s							
JOGS	Gusukube	4.25	59	eP	Pn	04 46 56.6	+1.0
JOGS				eS	Sn	04 47 44.3	0.0
JOGS	Gusukube	4.25	59	A	A	04 46 56.6	
	comp=E,6.0nm,2.1s,comp=E,7.0nm,2.9s							
XPSS	Dashiqiu	4.44	346	eP	Pn	04 46 57.8	-0.5
	baz=338							
APYP	Conner	4.73	182	⇓iP	Pb	04 47 13.1	-1.7
APYP				iS	Sn	04 47 49.6	-6.7
SXFK	Yanhouchang	5.09	319	eP	Pn	04 47 06.6	-0.7
	baz=316							
HKPS	Hong Kong Po S	6.73	269		Pn	04 47 30.6	+0.8
HKPS	Hong Kong Po S	6.73	269	P	Pn	04 47 31.0	+1.2
PCPH	Palayan	7.02	182	⇑eP	Pn	04 47 38.8	+5.0
MCO	Taipa Grande	7.28	268	P	Pn	04 47 38.0	+0.6
JOW	Kunigami	7.53	55	P	Pn	04 47 38.6	-2.1
	17nm,0.3s,baz=179,slow=12,SNR=41							
JOW				S	Sn	04 49 01.3	-3.9
	21nm,0.3s,baz=131,slow=19,SNR=2.4							
	44nm,0.3s							
JOW	Kunigami	7.53	55	P	Pn	04 47 38.8	-1.9
JCNP	Jose Panganiba	8.37	171	⇓eP	Pn	04 47 53.4	+1.0
JCNP				iS	Sn	04 49 25.6	-0.4
SSE	Sheshan	8.45	359	P	Pn	04 47 58.9	+5.5
SSE				S	Sn	04 49 37.5	+10
SSE				pmax	pmax		
	comp=Z,39nm,0.8s						
SSE				pmax	pmax		
	comp=Z,140nm,3.8s						
SSE				LR	LR		
	comp=N,1μm,16.5s						
SSE				LR	LR		
	comp=E,1μm,16.8s						
LQP	Lukban	8.46	179	⇓eP	Pn	04 47 58.3	+4.6
LUBP	Lubang	8.90	187	⇑eP	Pn	04 48 03.5	+3.9
CNSH	ChangSha	9.46	308	⇓P	Pn	04 48 04.6	-2.6
CNSH				S	Sn	04 49 45.8	-6.9
CNSH				smax	smax		
	comp=N,680nm,1.0s						
CNSH				smax	smax		
	comp=E,690nm,1.2s						
NJ2	Nanjing	9.67	347	⇓P	Pn	04 48 10.0	-0.1
NJ2				sP		04 48 14.8	
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
NJ2				LR	LR		
	comp=N,2μm,8.0s						
NJ2				LR	LR		
	comp=E,2μm,6.2s						
NJ2				LR	LR		
	comp=Z,6μm,12.8s						
WHN	Wuhan	10.11	323	⇑P	Pn	04 48 15.5	-0.6
WHN				S	Sn	04 50 01.5	-7.2
WHN				pmax	pmax		
	comp=Z,100nm,0.9s						
WHN				LR	LR		
	comp=N,6μm,9.0s						
WHN				LR	LR		
	comp=E,6μm,13.8s						
WHN				LR	LR		
	comp=Z,9μm,12.4s						
GULI	GuiLin	10.44	287	⇑P	Pn	04 48 17.8	-2.9
GULI				LR	LR		
	comp=N,2μm,16.8s						
GULI				LR	LR		
	comp=E,2μm,14.6s						
GULI				LR	LR		
	comp=Z,2μm,13.0s						
RCP	Roxas	11.06	173	⇑eP	Pn	04 48 34.0	+4.7
QIZ	Qiongzhong	11.38	254		Pn	04 48 34.2	+0.5
QIZ	Qiongzhong	11.38	254	P	Pn	04 48 35.1	+1.4
QIZ				S	Sn	04 50 45.8	+5.7
QIZ				pmax	pmax		
	comp=Z,12nm,0.9s						
QIZ				LR	LR		
	comp=N,4μm,14.6s						
QIZ				LR	LR		
	comp=E,3μm,13.6s						
QIZ				LR	LR		
	comp=Z,5μm,11.2s						
JSU	Suzuyama	11.97	40	Pn	Pn	04 48 40.4	-1.3
TABP	Talibon, Bohol	12.76	167	⇓eP	P	04 49 04.9	+1.6
TBP	Tagbilaran	13.06	169	eP	Pn	04 48 57.2	+0.6
ENH	Enshi	13.12	308	Pn	Pn	04 48 57.7	+0.4
ENH	Enshi	13.12	308	P	Pn	04 48 59.0	+1.7
GHBP	Garcia Hernand	13.21	167	⇓eP	P	04 49 07.2	-1.1
GYA	Guiyang	13.95	289	⇑iP	Pn	04 49 09.8	+1.0
GYA				S	Sn	04 51 48.1	+5.1
GYA				pmax	pmax		
	comp=Z,70nm,1.2s						
GYA				pmax	pmax		
	comp=Z,170nm,3.5s						
GYA				LR	LR		
	comp=N,3μm,16.8s						
GYA				LR	LR		
	comp=E,3μm,13.2s						
GYA				LR	LR		
	comp=Z,5μm,17.1s						
LYN	LuoYang	14.24	329	⇓P	Pn	04 49 13.3	+0.6
LYN				sP	P	04 49 20.8	+1.1
LYN				PP	PnPn	04 49 23.3	+2.6
LYN				S	Sn	04 51 56.8	+7.0
LYN				SS	S	04 52 06.8	-3.1
LYN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LYN				pmax	pmax		
	comp=Z,230nm,7.0s						
LYN				LR	LR		
	comp=N,2μm,11.9s						
LYN				LR	LR		
	comp=E,2μm,13.0s						
LYN				LR	LR		
	comp=Z,4μm,13.3s						
TJN	Taejon	14.66	19	⇓eP	Pn	04 49 20.9	+2.6
CTBH	Cotabato--PC H	15.54	169	⇑iP	P	04 49 36.3	+2.0
XAN	Xi'an	15.81	319	P	Pn	04 49 34.3	+0.8
XAN				pP	P	04 49 39.6	+2.4
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
XAN				pmax	pmax		
	comp=Z,460nm,4.9s						
XAN				LR	LR		
	comp=N,3μm,13.1s						
XAN				LR	LR		
	comp=E,3μm,13.8s						
XAN				LR	LR		
	comp=Z,5μm,16.5s						
KSRS	Korea Array	15.82	19	P	Pn	04 49 34.9	+1.3
	1.3nm,0.3s,baz=198,slow=14,SNR=18							
KSRS				PcP	PcP	04 54 31.1	-0.9
	0.8nm,0.5s,baz=256,slow=0.7,SNR=6.8							
KSRS				LR	LR	04 56 36.1	
	comp=Z,646nm,19.0s,baz=205,slow=41							
	13nm,0.8s							
HNS	HongShan	15.83	340	⇑P	P	04 49 37.4	+0.1
HNS				pmax	pmax		
	comp=Z,74nm,1.2s						
HNS				pmax	pmax		
	comp=Z,390nm,3.9s						
HNS				LR	LR		
	comp=N,5μm,13.9s						
HNS				LR	LR		
	comp=E,3μm,13.5s						
HNS				LR	LR		
	comp=Z,5μm,13.7s						
KS19	Wonju Array Si	15.85	19	Pn	Pn	04 49 33.0	-1.0
DAV	Davao City (W)	15.97	165	LR	LR	04 55 37.6	
	comp=Z,2μm,21.7s,baz=347,slow=37							
TIY	Taiyuan	16.92	335	⇑P	P	04 49 49.4	-0.1
TIY				S	S	04 53 00.1	-4.6
TIY				pmax	pmax		
	comp=Z,300nm,5.1s						
TIY				LR	LR		
	comp=N,6μm,11.6s						
TIY				LR	LR		
	comp=E,4μm,11.6s						
TIY				LR	LR		
	comp=Z,7μm,11.6s						
KKM	Kota Kinabalu	17.22	198	P	Pn	04 49 51.4	-0.1
KMI	Kunming	17.25	282	⇑P	P	04 49 53.8	+0.3
KMI				S	S	04 53 11.5	-0.6
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,5.3s						
KMI				LR	LR		
	comp=N,740nm,16.7s						
KMI				LR	LR		
	comp=E,2μm,15.5s						
KMI				LR	LR		
	comp=Z,3μm,15.0s						
MYLDM	Lahad Datu	17.56	190	P	P	04 49 56.2	-0.4
CD2	Chengdu	17.78	301	P	P	04 49 59.1	+0.1
CD2				S	S	04 53 19.5	-2.9
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,180nm,4.9s						
CD2				LR	LR		
	comp=N,2μm,9.4s						
CD2				LR	LR		
	comp=E,3μm,13.3s						
CD2				LR	LR		
	comp=Z,4μm,13.7s						
BJT	Baijiatuau	17.91	347	P	P	04 50 01.4	+1.0
BJT	Baijiatuau	17.91	347	P	P	04 50 01.4	+1.0
BJT				pmax	pmax		
	comp=Z,39nm,1.1s						
BJT	Baijiatuau	17.91	347	P	P	04 50 01.5	+1.1
BJI	Beijing	17.93	347	P	P	04 50 01.5	+0.9
BJI				S	S	04 53 25.3	+0.1
BJI				pmax	pmax		
	comp=Z,33nm,1.1s						
BJI				pmax	pmax		
	comp=Z,410nm,5.1s						
BJI				LR	LR		
	comp=Z,520nm,12.6s						
BJI				LR	LR		
	comp=Z,860nm,13.5s						
BJI				LR	LR		
	comp=Z,3μm,13.9s						
PZH	PanZhiHua	18.30	286	P	Pn	04 50 10.8	+5.9
PZH				S	S	04 53 35.1	+2.2
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,320nm,4.1s						
PZH				LR	LR		
	comp=Z,1μm,16.1s						
PZH				LR	LR		
	comp=Z,2μm,15.3s						
PZH				LR	LR		
	comp=Z,3μm,14.5s						
INU	Inuyama	18.61	44		Pn	04 50 09.1	+0.6
INU	Inuyama	18.61	44	P	Pn	04 50 09.6	+1.1
JGF	Kuroka	18.99	44		Pn	04 50 13.2	+0.1
JGF	Kuroka	18.99	44	P	Pn	04 50 15.5	+2.4
SGSI	Sangihe	19.23	167	P	P	04 50 15.2	+0.2
	comp=Z,134nm,0.6s						
JCJ	Chichijima	19.37	72	LR	LR	04 57 45.4	
	comp=Z,306nm,18.1s,baz=126,slow=37							
HHC	Hu-ho-hao-te	19.99	338	eP	Pn	04 50 27.3	+2.2
HHC				pP	sP	04 50 32.4	-1.0
HHC				S	Sn	04 54 11.6	+2.4
HHC				pmax	pmax		
	comp=Z,110nm,1.2s						
HHC				pmax	pmax		
	comp=Z,680nm,6.4s						
HHC				LR	LR		
	comp=Z,6μm,14.3s						
HHC				LR	LR		
	comp=Z,2μm,12.2s						
HHC				LR	LR		
	comp=Z,6μm,15.8s						
MAJO	Matsushiro	20.11	43		P	04 50 25.3	+0.8
MAJO	Matsushiro	20.11	43	P	P	04 50 25.3	+0.8
MAJO				pmax	pmax		
	comp=Z,59nm,1.1s						
MAJO	Matsushiro	20.11	43	P	Pn	04 50 26.4	-0.1
MJAR	Matsushiro Arr	20.11	43	P	P	04 50 25.3	+0.8
	comp=Z,10nm,0.7s,baz=231,slow=6.7,SNR=20							
MJAR				ScP	ScP	04 58 12.0	-1.9
	comp=Z,2.4nm,0.8s,baz=269,slow=2.5,SNR=5.0							
MJAR				LR	LR	04 59 10.7	
	comp=Z,415nm,20.5s,baz=222,slow=40							
	comp=Z,10nm,0.7s							
MJB9	Matsu-Tunnel	20.11	43	P	P	04 50 24.2	-0.4
PHRA	Phrae	20.24	262		P	04 50 26.9	+0.9
LZH	Lanzhou	20.32	315	eP	Pn	04 50 29.6	+0.5
LZH				pP	sP	04 50 35.5	-1.5
LZH				sP	pP	04 50 39.8	+6.1
LZH				S	Sn	04 54 16.4	-0.9
LZH				pmax	pmax		
	comp=Z,46nm,1.5s						
LZH				pmax	pmax		
	comp=Z,290nm,4.1s						
LZH				LR	LR		
	comp=Z,2μm,15.5s						
LZH				LR	LR		
	comp=Z,3μm,16.1s						
LZH				LR	LR		

comp=Z,3μm,15.8s
BTO Baotou 20.36 334 *e*P Pn 04 50 34.3 +4.9
BTO LR LR
comp=Z,7μm,14.8s
BTO LR LR
comp=Z,10μm,16.0s
NAYO Nakonayok 20.74 250 P Pn 04 50 33.9 -0.1
JSD Sado 21.11 39 **P** **04 50 36.4 +1.0**
JSD Sado 21.11 39 P **P** **04 50 36.6 +1.3**
CHTO Chiang Mai 21.34 264 P **P** **04 50 39.2 +1.2**
CHTO Chiang Mai 21.34 264 P **P** **04 50 39.2 +1.2**
CHTO pmax pmax
comp=Z,36nm,1.0s
TOLI2 Tolitoli 21.38 182 P **P** **04 50 38.6 +0.3**
TOLI2 IAmb IAmb 04 50 45.6
comp=Z,114nm,1.1s
TOLI2 Tolitoli 21.38 182 P **P** **04 50 38.9 +0.6**
CN2 Changchun 21.40 8 *e*P **P** **04 50 39.1 +0.8**
CN2 pP pP 04 50 43.0 -2.2
CN2 S **S** **04 54 30.8 -3.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,2μm,15.0s
CN2 LR LR
comp=Z,900nm,15.0s
CN2 LR LR
comp=Z,2μm,14.0s
CM31 Chiang Mai Arr 21.43 263 P **P** **04 50 40.1 +1.2**
CMAR Chiang Mai Arr 21.43 263 P **P** **04 50 41.6 +2.7**
comp=Z,14nm,1.0s,baz=69,slow=8.9,SNR=58
CMAR PcP **PcP** **04 54 42.9 +1.0**
comp=Z,4.4nm,0.6s,baz=45,slow=0.8,SNR=16
CMAR LR LR 05 00 07.5
comp=Z,2μm,19.2s,baz=75,slow=40
comp=Z,14nm,1.0s
CMAR Chiang Mai Arr 21.43 263 P **P** **04 50 39.8 +0.8**
CMAR Chiang Mai Arr 21.43 263 *ce*P **P** **04 50 41.7 +2.7**
CMAR pmax pmax
comp=Z,16nm,0.9s
MSHR Mys Shultsa 21.51 20‖ *e*P **P** **04 50 40.8 +1.3**
GAMI Galela, Maluku 21.56 162 P **P** **04 50 39.5 -0.8**
comp=Z,5μm comp=Z,643nm,1.1s
XLT XiLinHaoTe 21.68 350⇑ *i*P **P** **04 50 47.9 +6.4**
XLT S **S** **04 54 43.8 +3.5**
XLT pmax pmax
comp=Z,29nm,1.1s
XLT pmax pmax
comp=Z,130nm,3.5s
XLT LR LR
comp=Z,190nm,13.7s
XLT LR LR
comp=Z,1μm,18.4s
XLT LR LR
comp=Z,2μm,14.2s
GTOI Gorontalo 21.90 176 P **P** **04 50 42.9 -1.0**
comp=Z,1μm comp=Z,115nm,0.7s
SBUM Sibu 21.93 205 P **P** **04 50 43.7 -0.6**
SBUM IAmb IAmb 04 50 47.9
comp=Z,77nm,1.3s
SBUM Sibu 21.93 205 P **P** **04 50 45.0 +0.7**
comp=Z,594nm comp=Z,46nm,1.0s
MRSI Marisa 22.01 179 P **P** **04 50 46.2 +1.1**
comp=Z,3μm comp=Z,313nm,1.2s
TNTI Ternate 22.47 164 P **P** **04 50 47.6 -2.5**
TNTI Ternate 22.47 164 P **P** **04 50 48.9 -1.1**
comp=Z,2μm comp=Z,190nm,0.9s
TNTI Ternate 22.47 164 P **P** **04 50 49.1 -0.9**
JMM Marumori 22.55 43 P **P** **04 50 47.8 -3.0**
JMM IAmb IAmb 04 50 56.6
comp=Z,55nm,0.7s
JMM Marumori 22.55 43 P **P** **04 50 50.0 -0.8**
SRDT SRDT 22.65 253 P **P** **04 50 53.7 +1.7**
comp=Z,2μm comp=Z,41nm,1.7s
SRDT SRDT 22.65 253 P **P** **04 50 53.2 +1.2**
MDJ Mudanjiang 22.96 15 P **P** **04 50 54.7 -0.2**
MDJ Mudanjiang 22.96 15 P **P** **04 50 56.4 +1.4**
USRK Ussuriysk Ar. 23.23 20 P **P** **04 50 58.8 +1.0**
comp=Z,7.7nm,0.8s,baz=207,slow=8.4,SNR=10
USRK LR LR 05 01 58.9
comp=Z,465nm,18.2s,baz=191,slow=42
comp=Z,7.7nm,0.8s
USRK Ussuriysk Ar. 23.23 20 P **P** **04 50 58.3 +0.5**
USRK Ussuriysk Ar. 23.23 20 P **P** **04 50 58.3 +0.5**
APSI Ampana 23.38 179 P **P** **04 51 00.1 +0.7**
comp=Z,5μm comp=Z,459nm,1.4s
MND Mandalay 23.40 273 P **P** **04 51 01.7 +2.1**
LUWI Luwuk 23.55 177 P **P** **04 51 00.1 -0.9**
LUWI Luwuk 23.55 177 P **P** **04 51 00.3 -0.8**
comp=Z,263nm,0.9s
LUWI Luwuk 23.55 177 P **P** **04 51 00.6 -0.5**
KSM Kuching 23.62 209 P **P** **04 51 00.3 -1.5**
KSM IAmb IAmb 04 51 07.2
comp=Z,33nm,0.9s
KSM Kuching 23.62 209 P **P** **04 51 01.9 +0.1**
LBMI Labuha 23.86 165 P **P** **04 51 03.3 -0.8**
comp=Z,3μm comp=Z,382nm,1.1s
GUMO Guam 24.01 108 P **P** **04 51 06.7 +1.2**
comp=Z,270nm,0.8s,baz=199,slow=7.1,SNR=12
GUMO Guam 24.01 108 P **P** **04 51 05.4 -0.1**
GUMO Guam 24.01 108 P **P** **04 51 05.4 -0.1**
GUMO pmax pmax
comp=Z,204nm,0.7s
GUMO Guam 24.01 108 P **P** **04 51 07.6 +2.1**
BKB Balikpapan 24.13 191 P **P** **04 51 04.2 -2.4**
BKB Balikpapan 24.13 191 P **P** **04 51 06.3 -0.3**
comp=Z,4μm comp=Z,439nm,1.0s
MTKI Muara Teweh, K 24.25 196 P **P** **04 51 08.6 +0.8**
comp=Z,179nm,0.8s
JTM Tenmabayashi 24.57 38 P **P** **04 51 10.2 -0.2**
JTM Tenmabayashi 24.57 38 P **P** **04 51 11.7 +1.3**
SURA Surathani 24.80 241 P **P** **04 51 14.3 +1.6**
GTA Gaotai 24.86 317 *e*P **P** **04 51 14.5 +1.3**
GTA pP pP 04 51 21.0 +0.4
GTA sP sP 04 51 23.8 +0.1
GTA PcP **PcP** **04 54 49.4 +0.5**
GTA S **S** **04 55 39.1 +4.4**
GTA ScP **ScP** **04 58 25.0 -1.2**
GTA pmax pmax
comp=Z,11nm,1.1s
GTA pmax pmax
comp=Z,180nm,4.8s
GTA LR LR
comp=Z,810nm,13.1s
GTA LR LR
comp=Z,2μm,15.6s
GTA LR LR
comp=Z,2μm,15.6s
SANI Sanana 24.92 169 P **P** **04 51 10.8 -2.9**
comp=Z,1μm comp=Z,138nm,1.1s
SANI Sanana 24.92 169 P **P** **04 51 11.2 -2.5**
SKLT Songkhla 25.23 236 P **P** **04 51 17.8 +1.2**
comp=Z,27nm,1.1s
SKLT Songkhla 25.23 236 P **P** **04 51 18.1 +1.5**
SIJI Sorong 25.24 156 P **P** **04 51 15.9 -0.9**
comp=Z,25nm,0.4s,baz=345,slow=7.6,SNR=12
comp=Z,25nm,0.4s
SIJI Sorong 25.24 156 P **P** **04 51 15.8 -0.9**
comp=Z,454nm comp=Z,35nm,0.9s
TTSI Tana Toraja 25.55 184 P **P** **04 51 19.7 +0.3**
comp=Z,1μm comp=Z,82nm,1.0s
PMSI Majene 26.07 186 P **P** **04 51 25.7 +1.5**
comp=Z,2μm comp=Z,184nm,1.5s
NLAI Namlea 26.29 167 P **P** **04 51 26.7 +0.5**
comp=Z,282nm,0.9s
SPSI Sidrap Palu 26.46 184 P **P** **04 51 27.8 +0.1**
comp=Z,757nm comp=Z,59nm,1.0s
KRAI Karang Ratu 26.66 164 P **P** **04 51 29.4 -0.2**
BBKI Banjar Baru 26.70 195 P **P** **04 51 30.8 +0.9**
comp=Z,7μm comp=Z,101nm,1.0s
GOMU GeErMu 26.73 306 P **P** **04 51 33.5 +3.0**
GOMU pP pP 04 51 36.8 -1.0
GOMU S **S** **04 56 03.4 -1.5**
GOMU sS pS 04 56 14.9 +1.1
GOMU pmax pmax
comp=Z,11nm,1.2s
GOMU pmax pmax
comp=Z,47nm,3.7s
GOMU LR LR
comp=Z,1μm,13.9s
GOMU LR LR
comp=Z,2μm,15.6s
GOMU LR LR
comp=Z,2μm,15.0s

MYKOM Kota Tinggi 26.82 222 P **P** **04 51 32.5 +1.5**
comp=Z,88nm,0.9s
BNSI Bone 26.88 183 P **P** **04 51 32.1 +0.6**
comp=Z,517nm comp=Z,33nm,1.3s
SHL Shillong 27.09 282 P **P** **04 51 32.8 -0.8**
SHL IAmb IAmb 04 51 46.7
comp=Z,73nm,0.9s
SHL Shillong 27.09 282 P **P** **04 51 32.8 -0.8**
SHL pmax pmax
comp=Z,73nm,0.9s
BRDH Bariadhala 27.45 276 LR LR 05 04 28.4
comp=Z,745nm,18.4s,baz=132,slow=40
FAKI Fak Fak 27.50 156 P **P** **04 51 35.0 -2.1**
FAKI IAmb IAmb 04 51 39.3
comp=Z,38nm,0.7s
FAKI Fak Fak 27.50 156 P **P** **04 51 35.4 -1.7**
comp=Z,52nm,0.7s
FAKI Fak Fak 27.50 156 P **P** **04 51 37.8 +0.7**
KAPI Kappang 27.50 184 P **P** **04 51 37.3 +0.2**
comp=Z,12nm,0.5s,baz=354,slow=5.3,SNR=12
KAPI LR LR 05 02 56.0
comp=Z,540nm,21.2s,baz=28,slow=37
comp=Z,12nm,0.5s
KAPI Kappang 27.50 184 P **P** **04 51 36.2 -0.9**
KAPI Kappang 27.50 184 P **P** **04 51 36.2 -0.9**
KAPI pmax pmax
comp=Z,218nm,2.0s
KAPI Kappang 27.50 184 P **P** **04 51 37.0 -0.1**
comp=Z,692nm comp=Z,44nm,1.7s
KAPI Kappang 27.50 184 P **P** **04 51 37.8 +0.7**
ULN Ulaanbaatar 27.70 339 P **P** **04 51 37.6 -1.2**
ULN Ulaanbaatar 27.70 339‖ *e*P **P** **04 51 38.6 -0.2**
ULN pmax pmax
comp=Z,15nm,1.3s
ULN Ulaanbaatar 27.70 339 P **P** **04 51 38.3 -0.5**
comp=Z,58nm,0.9s
KLR Kul'dur 27.80 15 P **P** **04 51 41.6 +2.1**
comp=Z,2.9nm,0.5s,baz=233,slow=6.9,SNR=9.8
KLR PcP **PcP** **04 54 54.8 -0.6**
comp=Z,2.7nm,0.6s,baz=278,slow=7.1,SNR=3.8
KLR Kul'dur 27.80 15‖ *e*P **P** **04 51 41.4 +1.9**
KLR pmax pmax
comp=Z,22nm,2.5s
SONM Songino Array 27.89 338 P **P** **04 51 40.6 +0.1**
comp=Z,5.8nm,0.6s,baz=158,slow=9.8,SNR=20
SONM PcP **PcP** **04 54 55.3 -0.4**
comp=Z,1.4nm,0.6s,baz=160,slow=4.9,SNR=4.0
SONM ScP **ScP** **04 58 33.1 -1.9**
comp=Z,1.3nm,0.8s,baz=160,slow=2.8,SNR=4.9
SONM LR LR 05 04 22.4
comp=Z,2μm,19.1s,baz=152,slow=40
comp=Z,5.8nm,0.6s
SONM Songino Array 27.89 338 P **P** **04 51 40.1 -0.4**
SONM Songino Array 27.89 338 P **P** **04 51 40.1 -0.4**
SONM pmax pmax
comp=Z,13nm,0.7s
LSA Lhasa 28.00 291 P **P** **04 51 41.7 -0.4**
LSA IAmb IAmb 04 51 52.1
comp=Z,29nm,0.7s
LSA Lhasa 28.00 291⇑ P **P** **04 51 44.3 +2.2**
LSA pP **sP** **04 51 51.3 -1.2**
LSA pmax pmax
comp=Z,15nm,1.3s
LSA LR LR
comp=Z,430nm,14.2s
LSA LR LR
comp=Z,1μm,19.9s
LSA LR LR
comp=Z,2μm,15.7s
LSA Lhasa 28.00 291 P **P** **04 51 41.7 -0.4**
LSA pmax pmax
comp=Z,29nm,0.7s
PSI Prapat 29.38 231 P **P** **04 51 54.8 +0.7**
comp=Z,21nm,1.0s,baz=69,slow=4.3,SNR=8.1
PSI PcP **PcP** **04 55 02.3 +2.3**
comp=Z,7.9nm,0.6s,baz=27,slow=4.5,SNR=5.8
PSI LR LR 05 03 27.1
comp=Z,384nm,20.1s,baz=28,slow=36
comp=Z,21nm,1.0s
PSI Prapat 29.38 231 P **P** **04 51 55.1 +1.1**
comp=Z,363nm comp=Z,15nm,1.0s
RPSI Rantau Prapat 29.45 231 P **P** **04 51 54.8 +0.2**
YSS Yuzh-Sakhalins 29.77 30 *e*P **P** **04 51 59.7 +2.7**
YSS pmax pmax
comp=Z,60nm,1.2s
YSS MLR MLR
comp=Z,600nm,16.0s
YSS Yuzh-Sakhalins 29.77 30 P **P** **04 51 59.3 +2.3**
SDSI Sungai Dareh 30.44 222 P **P** **04 52 04.3 +1.0**
comp=Z,2μm comp=Z,20nm,1.0s
MMRI Maumere 31.07 178 P **P** **04 52 07.9 -0.8**
MMRI Maumere 31.07 178 P **P** **04 52 09.3 +0.6**
comp=Z,5μm comp=Z,4μm comp=Z,160nm,1.3s
MMRI Maumere 31.07 178 P **P** **04 52 09.3 +0.6**
ZAK Zakamensk 31.14 337 *e*P **P** **04 52 09.3 +0.1**
ZAK pmax pmax
comp=Z,6.0nm,1.0s
ZEA Zeya 31.39 7 *e*P **P** **04 52 12.1 +0.8**
ZEA *e* 04 57 12.1
ZEA *e* 05 02 39.8
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=N,700nm,13.0s
ZEA MLR MLR
comp=Z,600nm,13.0s
PLAI Plampang 31.45 187 P **P** **04 52 11.8 -0.3**
comp=Z,618nm comp=Z,72nm,0.8s
PLAI Plampang 31.45 187 P **P** **04 52 12.3 +0.2**
TWSI Taliwang, Sumb 31.47 189 P **P** **04 52 12.6 +0.3**
comp=Z,55nm,0.8s
GMJI Gumukmas 31.67 195 P **P** **04 52 14.1 +0.1**
IGBI Denpasar 31.83 192 P **P** **04 52 16.6 +1.1**
comp=Z,66nm,0.7s
KSI Kapahiang 31.93 217 P **P** **04 52 17.8 +1.4**
comp=Z,8μm comp=Z,112nm,0.6s
TNG Tangerang 32.05 209 P **P** **04 52 14.4 -3.0**
JIRN Jiri 32.20 286 *e*P **P** **04 52 20.6 +1.4**
LWLI Liwa 32.28 214 P **P** **04 52 20.5 +0.9**
comp=Z,176nm,0.6s
SOEI Soe 32.29 175 P **P** **04 52 16.1 -3.5**
SOEI Soe 32.29 175 P **P** **04 52 17.5 -2.1**
comp=Z,91nm,0.9s
SOEI Soe 32.29 175 P **P** **04 52 17.9 -1.7**
GUN Gumba 32.48 287 *e*P **P** **04 52 23.2 +1.6**
KASI Kota Agung 32.49 213 P **P** **04 52 22.4 +1.1**
comp=Z,63nm,1.0s
BATI Baumata 32.69 176 P **P** **04 52 21.1 -1.9**
comp=Z,133nm,1.0s
PKI Pulchoki 32.90 286 *e*P **P** **04 52 28.9 +3.7**
PKIN Phulchoki 32.91 286 *e*P **P** **04 52 28.9 +3.7**
DMN Daman 33.16 286 *e*P **P** **04 52 30.7 +3.2**
GKN Gorkha 33.58 287 *e*P **P** **04 52 33.2 +2.2**
DANN Dangsing 34.36 287 *e*P **P** **04 52 39.8 +1.9**
WMQ Urumqi 34.90 315 *e*P **P** **04 52 44.9 +2.8**
WMQ pP pP 04 52 48.9 -0.7
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ LR LR
comp=Z,830nm,18.1s
WMQ LR LR
comp=Z,740nm,19.5s
WMQ LR LR
comp=Z,480nm,20.7s
MTN Manton Dam 36.50 164 P **P** **04 52 53.1 -2.8**
MTN IAmb IAmb 04 52 55.0
comp=Z,29nm,0.7s
MTN Manton Dam 36.50 164 P **P** **04 52 53.7 -2.3**
KDU Kakadu 36.72 162 P **P** **04 52 55.1 -2.7**
DGZ Jazzator, Alta 37.97 324‖ *e*P **P** **04 53 09.6 +1.2**
DGZ pmax pmax
comp=Z,7.0nm,0.7s
KNRA Kununurra 38.73 169 P **P** **04 53 12.7 -2.1**
KNRA Kununurra 38.73 169 P **P** **04 53 13.1 -1.7**
MK31 Makanchi Array 39.61 317 P **P** **04 53 23.0 +1.0**
MK31 Makanchi Array 39.61 317 P **P** **04 53 23.0 +1.0**
MK31 pmax pmax
comp=Z,16nm,0.9s
MKAR Makanchi Array 39.61 317 P **P** **04 53 23.8 +1.8**
comp=Z,16nm,0.7s,baz=111,slow=9.9,SNR=70
MKAR PcP **PcP** **04 55 28.7 -0.1**
comp=Z,5.6nm,1.0s,baz=96,slow=6.2,SNR=3.5
MKAR ScP **ScP** **04 59 14.3 -1.6**
comp=Z,1.1nm,0.7s,baz=101,slow=6.4,SNR=7.0
MKAR LR LR 05 10 58.2
comp=Z,649nm,19.6s,baz=116,slow=38

comp=Z,16nm,0.7s
MKAR Makanchi Array 39.61 317 P **P** **04 53 21.8 -0.2**
MKAR Makanchi Array 39.61 317 P **P** **04 53 21.8 -0.2**
YAK Yakutsk 39.80 6 LR LR 05 11 33.3
comp=Z,600nm,18.8s,baz=263,slow=39
MAKZ Makanchi 39.82 317 P **P** **04 53 23.9 +0.2**
MAKZ IAmb IAmb 04 53 27.8
comp=Z,24nm,0.8s
MAKZ Makanchi 39.82 317 P **P** **04 53 23.9 +0.2**
MAKZ pmax pmax
comp=Z,24nm,0.8s
SHLS Shalkode 40.23 311 *e*P **P** **04 53 26.7 -0.6**
SHLS pmax pmax
comp=Z,19nm,1.6s
PDGK Podgornoye 40.26 311 *i*P **P** **04 53 29.6 +2.1**
PDGK pmax pmax
comp=Z,36nm,1.3s
PMG Port Moresby 40.61 139 P **P** **04 53 31.4 +0.8**
comp=Z,52nm,0.8s,baz=300,slow=16,SNR=3.2
PMG LR LR 05 08 01.2
comp=Z,230nm,20.8s,baz=302,slow=33
comp=Z,52nm,0.8s
PMG Port Moresby 40.61 139 *ce*P **P** **04 53 30.6 +0.1**
PMG pmax pmax
comp=Z,31nm,1.0s
KPKS Kokpek 40.86 311 *e*P **P** **04 53 33.4 +0.9**
KPKS pmax pmax
comp=Z,25nm,1.7s
ZAA0 Zalesovo Array 41.67 328 P **P** **04 53 38.1 -0.8**
ZAA0 IAmb IAmb 04 53 46.5
comp=Z,31nm,0.8s
ZALV Zalesovo Beam 41.67 328 P **P** **04 53 38.8 -0.1**
comp=Z,23nm,0.6s,baz=116,slow=8.0,SNR=52
ZALV PcP **PcP** **04 55 34.3 -1.0**
comp=Z,3.3nm,0.7s,baz=116,slow=2.4,SNR=2.6
ZALV LR LR 05 12 02.6
comp=Z,535nm,18.9s,baz=128,slow=38
comp=Z,23nm,0.6s
ZALV Zalesovo Beam 41.67 328 P **P** **04 53 38.6 -0.3**
ZALV Zalesovo Beam 41.67 328 *i*P **P** **04 53 39.0 +0.1**
ZALV pmax pmax
comp=Z,24nm,0.6s
KSH Kashi 41.94 304 P P 04 53 46.3 +4.9
KSH pmax pmax
comp=Z,9.0nm,1.7s
KSH pmax pmax
comp=Z,210nm,5.7s
KSH LR LR
comp=Z,640nm,15.2s
KSH LR LR
comp=Z,500nm,15.3s
KSH LR LR
comp=Z,940nm,15.1s
PALK Pallekele 42.01 255 LR LR 05 13 08.6
comp=Z,659nm,18.7s,baz=164,slow=39
COEN Coen 42.14 148 P **P** **04 53 42.7 -0.4**
COEN Coen 42.14 148 P **P** **04 53 43.0 -0.1**
H11N1 WAKE ISLAND Hy 42.40 85 T T 05 39 01.1
baz=282,slow=75,SNR=241
H11N2 WAKE ISLAND Hy 42.40 85 T T 05 39 02.2
baz=282,slow=75,SNR=429
H11N3 WAKE ISLAND Hy 42.41 85 T T 05 39 01.8
baz=282,slow=75,SNR=350
H11S3 WAKE ISLAND Hy 42.48 87 T T 05 39 07.8
baz=284,slow=75,SNR=532
H11S1 WAKE ISLAND Hy 42.49 87 T T 05 39 08.8
baz=284,slow=75,SNR=445
H11S2 WAKE ISLAND Hy 42.49 87 T T 05 39 09.2
baz=284,slow=75,SNR=488
TKM2 Tokmak 2 42.90 309 P **P** **04 53 51.1 +1.8**
KURK Kurchatov 43.43 321 P **P** **04 53 54.0 +0.8**
KURK IAmb IAmb 04 54 00.7
comp=Z,23nm,0.8s
KURK Kurchatov 43.43 321⇑ *i*P **P** **04 53 53.7 +0.5**
KURK pmax pmax
comp=Z,42nm,1.3s
NIL Nilore 43.52 296 P **P** **04 53 51.9 -2.4**
NIL IAmb IAmb 04 53 59.3
comp=Z,20nm,0.8s
NIL Nilore 43.52 296 P **P** **04 53 51.9 -2.4**
NIL pmax pmax
comp=Z,20nm,0.8s
WB0 Warramunga Arr 43.99 162 P **P** **04 53 55.2 -2.8**
WB0 IAmb IAmb 04 53 57.3
comp=Z,44nm,0.9s
WRAB Tennant Creek 44.13 162 P **P** **04 53 56.6 -2.5**
WRAB IAmb IAmb 04 53 58.6
comp=Z,53nm,0.9s
WRAB Tennant Creek 44.13 162 *c i*P **P** **04 53 57.3 -1.8**
WRAB pmax pmax
comp=Z,58nm,0.9s
WRAB Tennant Creek 44.13 162 P **P** **04 53 57.5 -1.6**
WRA Warramunga Arr 44.14 162 P **P** **04 53 57.4 -1.8**
comp=Z,38nm,0.8s,baz=344,slow=8.8,SNR=174
comp=Z,38nm,0.8s
WRA Warramunga Arr 44.14 162 P **P** **04 53 56.4 -2.8**
WRA Warramunga Arr 44.14 162 *i*P **P** **04 53 57.4 -1.8**
WRA pmax pmax
comp=Z,40nm,0.8s
WB2 Warramunga Arr 44.14 162 P **P** **04 53 56.7 -2.5**
WR0 Warramunga Arr 44.21 162 P **P** **04 53 57.1 -2.7**
BTLS Baital 44.49 312 *e*P **P** **04 54 02.4 +0.6**
BTLS pmax pmax
comp=Z,10.0nm,1.3s
POO Poona 44.57 274 *e*P **P** **04 53 59.0 -3.8**
GIRL Giralia 45.52 189 P **P** **04 54 09.7 -0.4**
GIRL Giralia 45.52 189 P **P** **04 54 11.2 +1.1**
BTK Batken 45.95 304 P **P** **04 54 12.4 -1.2**
BTK IAmb IAmb 04 54 25.8
comp=Z,46nm,1.6s
BTK Batken 45.95 304 P **P** **04 54 12.4 -1.2**
BTK pmax pmax
comp=Z,46nm,1.6s
GAR Garm 46.22 303 P **P** **04 54 14.0 -1.8**
GAR IAmb IAmb 04 54 20.6
comp=Z,35nm,1.0s
MTSU Mount Surprise 46.28 149 P **P** **04 54 17.2 +1.0**
OTUK Ortayu 46.45 316 P **P** **04 54 18.6 +1.3**
KK31 Karatay Array 46.59 309 P **P** **04 54 18.4 -0.1**
KK31 IAmb IAmb 04 54 30.2
comp=Z,16nm,1.1s
KK31 Karatay Array 46.59 309 P **P** **04 54 18.4 -0.1**
KK31 pmax pmax
comp=Z,16nm,1.1s
KKAR Karatay Array 46.59 309 P **P** **04 54 18.8 +0.3**
KKAR Karatay Array 46.59 309 P **P** **04 54 18.8 +0.3**
BRZS Berezniki 46.73 318 *e*P **P** **04 54 18.8 -0.7**
BRZS pmax pmax
comp=Z,9.0nm,1.2s
IUG Iuzhnay 46.80 307 *e*P **P** **04 54 20.2 -0.1**
KBL Kabul 47.03 297 P **P** **04 54 21.4 -0.9**
KBL IAmb IAmb 04 54 44.0
comp=Z,19nm,1.1s
KBL Kabul 47.03 297 P **P** **04 54 21.4 -0.9**
KBL pmax pmax
comp=Z,19nm,1.1s
CHGR Chuyangaron 47.10 302 P **P** **04 54 22.4 -0.2**
CHGR IAmb IAmb 04 54 27.6
comp=Z,23nm,0.8s
CHGR Chuyangaron 47.10 302 P **P** **04 54 22.4 -0.2**
CHGR pmax pmax
comp=Z,23nm,0.8s
AS31 Alice Springs 47.58 164 IAmb IAmb 04 54 32.6
comp=Z,8.8nm,0.5s
ASAR Alice Springs 47.58 164 P **P** **04 54 25.4 -0.9**
comp=Z,13nm,0.7s,baz=341,slow=6.3,SNR=125
ASAR ScP **ScP** **04 59 44.1 -4.4**
comp=Z,1.3nm,0.7s,baz=351,slow=4.0,SNR=3.5
comp=Z,13nm,0.7s
WRKA Warakurna 47.84 172 P **P** **04 54 27.5 -0.8**
TV1H Townsville Har 48.45 147 P **P** **04 54 33.8 +0.7**
CTA Charters Tower 48.88 148 P **P** **04 54 36.3 -0.1**
comp=Z,51nm,0.7s,baz=331,slow=9.6,SNR=29
CTA LR LR 05 13 17.0
comp=Z,330nm,21.9s,baz=332,slow=34
comp=Z,51nm,0.7s
CTA Charters Tower 48.88 148 P **P** **04 54 37.1 +0.7**
CTAO Charters Tower 48.88 148 P **P** **04 54 36.0 -0.4**
CTAO Charters Tower 48.88 148 P **P** **04 54 36.0 -0.4**
CTAO pmax pmax
comp=Z,55nm,0.8s
CTAO Charters Tower 48.88 148 P **P** **04 54 37.1 +0.7**
BVAR Borovoye Array 49.02 322 LR LR 05 18 28.0
comp=Z,165nm,21.1s,baz=103,slow=40
MEEK Meekatharra 49.03 183 P **P** **04 54 36.3 -1.2**
BRVK Borovoye 49.09 322 P **P** **04 54 37.7 0.0**

BRVK IAmb IAmb 04 54 43.1
comp=Z,24nm,0.9s
BRVK Borovoye 49.09 322 *c iP* **P 04 54 38.5 +0.8**
BRVK pmax pmax
comp=Z,30nm,1.0s
TIXI Tiksi 49.25 3 LR LR 05 17 11.9
comp=Z,433nm,19.4s,baz=181,slow=38
TIXI Tiksi 49.25 3 P **P 04 54 38.2 -0.4**
TIXI IAmb IAmb 04 55 07.3
comp=Z,20nm,1.5s
TIXI Tiksi 49.25 3⇓ *iP* **P 04 54 38.9 +0.4**
TIXI pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 50.97 345 P **P 04 54 51.8 +0.1**
comp=Z,5.3nm,0.6s,baz=132,slow=5.5,SNR=5.6
NRIK PcP **PcP 04 56 07.0 -0.5**
comp=Z,9.8nm,0.6s,baz=87,slow=3.9,SNR=5.5
NRIK LR LR 05 18 17.0
comp=Z,575nm,18.9s,baz=146,slow=38
comp=Z,5.3nm,0.6s
NRIK Noril'sk 50.97 345 IAmb IAmb 04 54 59.1
comp=Z,20nm,1.1s
NRIK Noril'sk 50.97 345⇓ *iP* **P 04 54 53.2 +1.6**
NRIK pmax pmax
comp=Z,21nm,1.0s
MORW Morawa 51.64 186 P **P 04 54 56.0 -1.2**
MORW Morawa 51.64 186 P **P 04 54 56.6 -0.5**
OOD Oodnadatta 51.98 164 P **P 04 54 59.2 -0.4**
BILL Bilibino 53.09 19⇑ *eP* **P 04 55 08.6 +1.1**
BILL *e* 04 57 08.6
BILL pmax pmax
comp=Z,19nm,1.6s
BILL MLR MLR
comp=Z,316nm,17.0s
BLDU Ballidu 53.11 185 P **P 04 55 07.3 -0.7**
FORT Forrest 53.47 173 P **P 04 55 09.3 -1.4**
FORT Forrest 53.47 173 P **P 04 55 10.3 -0.3**
MULG Mulgathing 53.98 166 P **P 04 55 13.8 -0.6**
KLBR Kellerberrin 54.01 184 P **P 04 55 13.6 -1.0**
AUMOU Moura State Hi 54.50 148 P **P 04 55 19.4 +1.1**
MUN Mundaring 54.51 185 P **P 04 55 17.7 -0.5**
AB31 Akbulak array 54.69 315 *i P* **P 04 55 20.2 +0.8**
ABKAR Akbulak array 54.69 315 P **P 04 55 19.6 +0.1**
ABKAR PcP **PcP 04 56 20.4 -1.6**
LCRK Leigh Creek 55.17 162 P **P 04 55 22.9 -0.2**
NWAO Narrogin (SRO) 55.37 184 P **P 04 55 24.0 -0.4**
comp=Z,34nm,0.7s,baz=222,slow=5.8,SNR=14
comp=Z,34nm,0.7s
NWAO Narrogin (SRO) 55.37 184 P **P 04 55 23.4 -1.1**
NWAO Narrogin (SRO) 55.37 184 P **P 04 55 23.4 -1.1**
NWAO pmax pmax
comp=Z,83nm,1.2s
NWAO Narrogin (SRO) 55.37 184 P **P 04 55 24.1 -0.4**
SVE Sverdlovsk 55.43 324 *eP* **P 04 55 25.7 +1.0**
SVE pmax pmax
comp=Z,47nm,1.1s
SVE MLR MLR
comp=Z,545nm,17.0s
RMQ Roma 55.53 150 P **P 04 55 26.1 +0.4**
GEYT Alibeck 55.77 301 P **P 04 55 29.4 +1.9**
comp=Z,19nm,0.8s,baz=57,slow=4.1,SNR=15
GEYT LR LR 05 22 18.6
comp=Z,409nm,18.9s,baz=95,slow=39
comp=Z,19nm,0.8s
GEYT Alibeck 55.77 301 IAmb IAmb 04 55 34.1
comp=Z,22nm,0.9s
GYA0 ALIBECK ARRAY 55.77 301 P **P 04 55 29.4 +1.8**
GYA0B ALIBECK ARRAY 55.77 301 IAmb IAmb 04 55 34.1
comp=Z,21nm,0.9s
AKTO Aktyubinsk 56.04 316 LR LR 05 21 18.8
comp=Z,606nm,18.2s,baz=102,slow=38
ARU Arti 56.48 324 LR LR 05 22 03.0
comp=Z,353nm,18.6s,baz=94,slow=38
ARU Arti 56.48 324 P **P 04 55 32.2 -0.1**
ARU Arti 56.48 324⇓ *iP* **P 04 55 32.6 +0.4**
ARU pmax pmax
comp=Z,46nm,1.0s
BBOO Buckleboo 56.86 165 P **P 04 55 34.3 -0.9**
BBOO Buckleboo 56.86 165 P **P 04 55 34.7 -0.4**
WSAR Wadi Sarin 57.40 284 LR LR 05 24 38.2
comp=Z,188nm,18.5s,baz=101,slow=40
WHYH Whyalla 57.45 164 P **P 04 55 38.8 -0.4**
STKA Stephens Creek 57.52 160 P **P 04 55 39.5 -0.3**
comp=Z,16nm,0.9s,baz=356,slow=11,SNR=4.9
comp=Z,16nm,0.9s
STKA Stephens Creek 57.52 160 *c iP* **P 04 55 39.0 -0.8**
STKA Stephens Creek 57.52 160 P **P 04 55 39.5 -0.3**
comp=Z,6.2nm,1.1s
HTT Hallett 58.18 163 P **P 04 55 44.4 -0.1**
CMSA Cobar Meteorol 58.66 156 P **P 04 55 48.6 +0.9**
KOUNC Koumac, New Ca 59.92 133 P **P 04 55 57.5 +0.8**
ARMA Armidale 60.19 150 P **P 04 55 59.1 +0.6**
AUPHS Peel High Scho 60.43 151 P **P 04 56 01.1 +1.1**
KIRV Kirov 61.62 326 LR LR 05 25 10.0
comp=Z,671nm,18.6s,baz=94,slow=38
KIRV Kirov 61.62 326 *c iP* **P 04 56 07.1 -0.7**
ARPS Mount Arapiles 62.13 162 P **P 04 56 11.3 -0.1**
DZM Mont Dzumac 62.43 132 LR LR 05 19 49.9
comp=Z,244nm,20.4s,baz=2.5,slow=33
BELG Belogornoye 62.60 318 LR LR 05 25 41.8
comp=Z,224nm,19.6s,baz=118,slow=38
BELG Belogornoye 62.60 318 *eP* **P 04 56 14.7 +0.3**
BELG pmax pmax
comp=Z,9.0nm,0.9s
CAN Canberra 63.28 155 P **P 04 56 18.4 -0.8**
CAN IAmb IAmb 04 56 21.0
comp=Z,25nm,0.9s
CAN Canberra 63.28 155 P **P 04 56 18.4 -0.8**
CAN pmax pmax
comp=Z,25nm,0.9s
MAK Makhachkala 63.40 308 *eP* P 04 56 15.1 -4.9
MAK *e* 04 58 35.3
MAK *eS* **S 05 04 44.6 -6.5**
CNB Canberra Magne 63.42 155 P **P 04 56 20.7 +0.6**
AKT Akhty 63.42 306 *eP* **P 04 56 22.4 +2.1**
AKT *e* 04 56 57.2
AKT pmax pmax
comp=Z,32nm,1.0s
BRAT Ballarat 63.49 160 P **P 04 56 21.4 +1.0**
PRGR Permogore 63.62 329 *eP* **P 04 56 19.5 -1.6**
PRGR pmax pmax
comp=Z,22nm,0.9s
TOO Toolangi 64.01 159 P **P 04 56 23.4 -0.6**
TOO Toolangi 64.01 159 P **P 04 56 23.4 -0.6**
TOO pmax pmax
comp=Z,34nm,0.9s
TOO Toolangi 64.01 159 P **P 04 56 24.9 +1.0**
N16K Nishlik Lake 65.61 32 P **P 04 56 35.1 +0.9**
baz=273
GNI Garni 65.86 305 LR LR 05 30 17.1
comp=Z,111nm,18.5s,baz=82,slow=40
GNI Garni 65.86 305 *deP* **P 04 56 38.5 +2.2**
GNI pmax pmax
comp=Z,37nm,1.3s
ZEI Tsey 66.05 308 *eP* **P 04 56 36.4 -1.2**
ZEI pmax pmax
comp=Z,24nm,1.0s
VRH Novokhopyorsk 66.34 317 *eP* **P 04 56 38.1 -0.9**
VRH pmax pmax
comp=Z,40nm,0.7s
KLMR Klimovskoe 66.60 328 *eP* **P 04 56 38.0 -2.4**
KLMR pmax pmax
comp=Z,45nm,1.6s
KLMR Klimovskoe 66.60 328 *eP* **P 04 56 38.1 -2.4**
KLMR AMP 04 56 50.6
comp=Z,45nm,1.6s
KLMR *e*PP **PP 04 59 01.2 -5.7**
KBZ Khabaz 66.62 309 P **P 04 56 42.1 +1.2**
comp=Z,18nm,0.9s,baz=69,slow=3.5,SNR=12
KBZ LR LR 05 30 02.2
comp=Z,166nm,18.1s,baz=70,slow=40
comp=Z,18nm,0.9s
KBZ Khabaz 66.62 309⇓ *eP* **P 04 56 41.1 +0.2**
KIV Kislovodsk 66.74 310 P **P 04 56 42.1 +0.3**
KIV Kislovodsk 66.74 310 *eP* **P 04 56 43.0 +1.2**
KIV pmax pmax
comp=Z,38nm,1.1s
KIV MLR MLR
comp=Z,151nm,17.0s
TTA Tatalina 66.77 30 IAmb IAmb 04 57 00.7
comp=Z,22nm,1.6s
TTA Tatalina 66.77 30 P **P 04 56 41.2 -0.4**
baz=274
L19K White Mountain 67.36 30 P **P 04 56 46.5 +1.1**
baz=276

O18K Koktuh Hills 67.44 33 IAmb IAmb 04 57 14.7
comp=Z,10nm,0.8s
GEVA Gevas 67.49 303 IAmb IAmb 04 56 54.8
comp=Z,14nm,0.9s
J20K Nowinta River 67.49 28 P **P 04 56 46.8 +0.7**
J20K IAmb IAmb 04 57 55.9
comp=Z,34nm,1.8s
J20K Nowinta River 67.49 28 P **P 04 56 47.1 +1.0**
F21K Alatna River 67.49 25 P **P 04 56 46.9 +0.8**
baz=275
K20K Telida 67.61 29 P **P 04 56 47.6 +0.8**
baz=276
M19K Big River Lodg 67.61 31 P **P 04 56 48.1 +1.2**
baz=276
Q18K Katmai Hardscr 67.68 34 P **P 04 56 48.2 +0.7**
baz=277
VORR Voronezh 67.84 318 *eP* **P 04 56 48.7 +0.2**
VORR pmax pmax
comp=Z,70nm,0.4s
O19K Port Alsworth 67.84 32 IAmb IAmb 04 56 49.7
comp=Z,13nm,1.1s
O19K Port Alsworth 67.84 32 P **P 04 56 48.4 +0.1**
baz=277
LPSR Galich'ya Gora 67.87 319 *eP* **P 04 56 48.1 -0.5**
LPSR pmax pmax
comp=Z,30nm,0.7s
H21K Melozitna Rive 67.91 26 IAmb IAmb 04 56 51.0
comp=Z,8.3nm,0.8s
H21K Melozitna Rive 67.91 26 P **P 04 56 49.4 +0.6**
baz=276,SNR=7.1
VSR Storozhevoye 67.93 318 *eP* **P 04 56 48.3 -0.8**
VSR pmax pmax
comp=Z,20nm,1.0s
F22K John River 67.97 24 P **P 04 56 50.1 +1.0**
baz=276
E22K Anaktuvuk Pass 68.05 24 P **P 04 56 50.1 +0.5**
baz=276
MOS Moscow 68.17 323 *eP* P 04 56 45.4 -5.0
M20K Styx River 68.20 31 IAmb IAmb 04 58 25.8
comp=Z,46nm,2.0s
M20K Styx River 68.20 31 P **P 04 56 51.8 +1.1**
baz=277
C23K Itkillik River 68.29 22 P **P 04 56 52.3 +1.3**
baz=276
G22K Bettles 68.30 25 P **P 04 56 52.0 +0.9**
baz=277
I21K Tanana 68.31 27 IAmb IAmb 04 57 24.8
comp=Z,8.9nm,0.9s
D23K Nanushuk River 68.37 23 P **P 04 56 53.0 +1.5**
baz=276
MSVF Nonsavu 68.38 121 LR LR 05 21 40.4
comp=Z,194nm,21.8s,baz=334,slow=31
MSVF Nonsavu 68.38 121 P **P 04 56 54.5 +2.1**
MSVF pmax pmax
comp=Z,51nm,1.2s
MSVF Nonsavu 68.38 121 P **P 04 56 53.7 +1.3**
H22K Ishtalitna Cre 68.47 26 P **P 04 56 53.9 +1.6**
baz=277,SNR=9.4
CAST Castle Rocks 68.49 29 P **P 04 56 52.7 +0.3**
CAST Castle Rocks 68.49 29 P **P 04 56 53.2 +0.8**
baz=278,SNR=5.3
APA Apatity 68.57 336⇓ *iP* **P 04 56 51.9 -0.9**
APA pmax pmax
comp=Z,13nm,0.9s
APA MLR MLR
comp=Z,600nm,16.0s
N20K Mount Spurr 68.73 31 P **P 04 56 55.0 +0.9**
baz=278
TOLK Toolik Lake Re 68.81 23 P **P 04 56 55.4 +1.1**
baz=278
MLY Manley 68.85 27 IAmb IAmb 04 57 03.2
comp=Z,11nm,1.0s
MLY Manley 68.85 27 P **P 04 56 55.9 +1.3**
baz=278,SNR=7.0
OBN Obninsk 68.86 322⇑ *eP* **P 04 56 54.2 -0.6**
OBN *e* 04 57 20.2
OBN *e* 04 59 30.4
OBN *i S* 05 06 30.2
OBN pmax pmax
comp=Z,57nm,2.5s
OBN MLR MLR
comp=Z,255nm,17.0s
E23K Chandalar 68.87 24 P **P 04 56 56.3 +1.5**
baz=278
BPAW Bear Paw Mtn. 68.88 28 P **P 04 56 55.5 +0.7**
baz=278
G23K Bananza Creek 68.90 25 P **P 04 56 55.8 +0.9**
baz=278
SKT Skwentna 68.94 30 P **P 04 56 54.9 -0.3**
baz=278
C24K Franklin Bluff 68.97 22 P **P 04 56 56.2 +1.0**
baz=278
RAYN Ar Rayn 69.00 288 P **P 04 56 56.5 +0.2**
RAYN IAmb IAmb 04 57 01.2
comp=Z,22nm,1.1s
RAYN Ar Rayn 69.00 288 P **P 04 56 56.5 +0.2**
RAYN pmax pmax
comp=Z,22nm,1.1s
D24K Happy Valley 69.01 23 P **P 04 56 56.7 +1.2**
baz=278
KDAK Kodiak Island 69.07 35 P **P 04 56 56.3 +0.3**
baz=279
H23K Yukon River 69.23 26 IAmb IAmb 04 57 05.9
comp=Z,13nm,0.8s
H23K Yukon River 69.23 26 P **P 04 56 58.6 +1.7**
baz=279
TRF Thorofare Moun 69.28 29 IAmb IAmb 04 57 12.8
comp=Z,25nm,1.6s
TRF Thorofare Moun 69.28 29 P **P 04 56 58.8 +1.3**
baz=279
E24K Your Creek 69.29 24 P **P 04 56 58.5 +1.2**
baz=279,SNR=7.8
SUA Susitna One 69.39 31 IAmb IAmb 04 57 09.5
comp=Z,28nm,1.2s
SUA Susitna One 69.39 31 P **P 04 56 58.8 +0.6**
baz=279
I23K Minto, Yukon-K 69.41 27 IAmb IAmb 04 57 58.9
comp=Z,30nm,1.8s
MARD Mardin 69.47 303 P **P 04 56 59.2 +0.1**
F24K Squaw Lake 69.61 24 P **P 04 56 59.9 +0.6**
baz=280,SNR=10
NEA2 Nenana 69.62 27 IAmb IAmb 04 57 07.1
comp=Z,9.9nm,1.0s
NEA2 Nenana 69.62 27 P **P 04 56 60.0 +0.6**
baz=280
M22K Willow 69.64 30 IAmb IAmb 04 57 10.6
comp=Z,26nm,0.9s
M22K Willow 69.64 30 P **P 04 56 59.4 -0.1**
baz=280
MCK McKinley 69.83 28 P **P 04 57 00.1 -0.6**
MCK IAmb IAmb 04 57 09.6
comp=Z,11nm,1.0s
MCK McKinley 69.83 28 P **P 04 57 00.1 -0.6**
MCK pmax pmax
comp=Z,11nm,1.0s
H24K Noodor Dome 69.90 26 P **P 04 57 02.5 +1.3**
baz=280
G24K Hadweenzic Riv 69.91 25 P **P 04 57 02.3 +1.2**
baz=280,SNR=6.2
MDM Murphy Dome 69.91 27 IAmb IAmb 04 57 05.2
comp=Z,34nm,1.5s
RND Reindeer 69.92 29 IAmb IAmb 04 57 12.1
comp=Z,11nm,1.0s
COLA College 70.09 27⇓ *eP* **P 04 57 03.2 +1.0**
COLA pmax pmax
comp=Z,23nm,2.6s
PMR Palmer 70.13 31 P **P 04 57 02.3 -0.2**
baz=281
G25K Bearman Lake 70.43 25 P **P 04 57 05.8 +1.6**
baz=282
F25K Christian Rive 70.44 24 P **P 04 57 05.8 +1.4**
baz=282,SNR=8.9
KNK Knik Glacier 70.48 31 IAmb IAmb 04 57 29.7
comp=Z,16nm,1.0s
KNK Knik Glacier 70.48 31 P **P 04 57 04.7 0.0**
baz=281
ILAR Eielson Array 70.51 27 P **P 04 57 04.0 -0.9**
comp=Z,1.3nm,0.7s,baz=293,slow=7.4,SNR=15
ILAR LR LR 05 30 14.9
comp=Z,37nm,18.4s,baz=268,slow=38
comp=Z,1.3nm,0.7s
WAT6 Susitna Watana 70.58 29 P **P 04 57 05.7 +0.2**
baz=282,SNR=5.8
C27K Jago River 70.70 22 P **P 04 57 07.1 +1.2**
baz=283
M23K Glacier View 70.75 30 P **P 04 57 06.5 +0.1**
baz=282

PRP Porcupine Dome 70.92 26 P **P 04 57 07.2 -0.3**
baz=282
SCM Sheep Creek Mo 70.92 30 IAmb IAmb 04 57 37.0
comp=Z,17nm,0.9s
SCM Sheep Creek Mo 70.92 30 P **P 04 57 07.6 +0.1**
baz=282
F26K Sheenjek River 70.98 24 P **P 04 57 09.1 +1.5**
baz=283,SNR=6.7
SPB2 Spitsbergen Ar 71.05 348 IAmb IAmb 04 57 40.8
comp=Z,38nm,1.2s
SPITS Spitsbergen Ar 71.06 348 LR LR 05 33 18.5
comp=Z,245nm,19.1s,baz=38,slow=40
ARA0 ARCESS Array S 71.07 338 *eP* **P 04 57 09.2 +1.1**
ARCES ARCESS Array B 71.07 338 P **P 04 57 08.0 -0.2**
comp=Z,5.6nm,0.7s,baz=70,slow=6.8,SNR=11
ARCES LR LR 05 32 55.3
comp=Z,319nm,18.5s,baz=70,slow=40
comp=Z,5.6nm,0.7s
K24K Donnelly Dome 71.19 28 P **P 04 57 09.3 +0.3**
baz=283
G26K Porcupine Rive 71.28 24 P **P 04 57 11.0 +1.6**
baz=284,SNR=8.4
M24K Tolsona, Glenn 71.40 30 IAmb IAmb 04 57 13.2
comp=Z,28nm,1.1s
M24K Tolsona, Glenn 71.40 30 P **P 04 57 11.2 +0.9**
baz=283
KLU Klutina 71.65 30 P **P 04 57 12.1 +0.2**
baz=283
E27K Coleen River 71.79 23 P **P 04 57 13.7 +1.1**
baz=285
SCRK Sand Creek 71.92 28 P **P 04 57 13.4 -0.2**
SCRK Sand Creek 71.92 28 P **P 04 57 14.0 +0.4**
baz=284
I26K Coal Creek Min 71.93 26 P **P 04 57 13.5 0.0**
baz=285
J26L Joseph Creek 71.97 27 P **P 04 57 12.6 -1.2**
baz=284
KTK1 Kautokeino 71.98 338 *eP* **P 04 57 13.7 0.0**
KTK1 IAmb IAmb 04 57 25.5
comp=Z,78nm,2.0s
G27K Doyon Strip 72.13 24 P **P 04 57 15.6 +0.9**
baz=285
H27K Steamboat Moun 72.34 25 P **P 04 57 18.2 +2.3**
baz=286
L26K Log Cabin Wild 72.44 28 P **P 04 57 17.1 +0.6**
baz=285
I27K Kandik River 72.48 26 P **P 04 57 17.9 +1.2**
baz=286
SIM Simferopol' 72.53 312 *eP* **P 04 57 18.1 +0.7**
SIM 04 57 36.0
SIM pmax pmax
comp=Z,29nm,0.8s
K27K Chicken 72.72 27 P **P 04 57 19.2 +1.1**
baz=286
M26K Nabesna, AK 72.76 29 IAmb IAmb 04 57 46.1
comp=Z,10.0nm,0.9s
M26K Nabesna, AK 72.76 29 P **P 04 57 19.3 +0.8**
baz=286
JETT Jettan, Norway 72.78 339 *eP* **P 04 57 19.4 +1.0**
FIA1 FINESS Array S 72.90 330 P **P 04 57 19.1 -0.1**
FIA1 IAmb IAmb 04 57 20.7
comp=Z,18nm,0.8s
FINES FINESS Array B 72.90 330 P **P 04 57 18.7 -0.5**
comp=Z,19nm,0.8s,baz=51,slow=5.9,SNR=40
FINES LR LR 05 32 02.6
comp=Z,373nm,19.1s,baz=72,slow=38
comp=Z,19nm,0.8s
FINES FINESS Array B 72.90 330 P **P 04 57 19.2 0.0**
FINES FINESS Array B 72.90 330 *i P* **P 04 57 19.2 0.0**
FINES pmax pmax
comp=Z,19nm,0.8s
MCARA McCarthy VSAT 73.03 30 IAmb IAmb 04 58 02.6
comp=Z,14nm,1.1s
L27K Beaver Creek, 73.10 28 P **P 04 57 21.7 +1.2**
baz=286
M27K Edge Creek, AK 73.28 29 IAmb IAmb 04 57 50.1
comp=Z,29nm,1.9s
M27K Edge Creek, AK 73.28 29 P **P 04 57 22.4 +0.8**
baz=287
VSU Vasula 73.40 327 *eP* **P 04 57 22.6 +0.4**
VSU Vasula 73.40 327 *ceP* **P 04 57 22.0 -0.2**
VSU pmax pmax
comp=Z,160nm,1.2s
MNK Minsk 73.89 323 *i P* **P 04 57 25.1 -0.1**
MNK *i* 04 57 38.9
MNK *i* 05 00 12.2
MNK *i* PPP PPP 05 01 57.8
MNK *i S* **S 05 07 02.6 +7.3**
MNK *i* 05 07 36.9
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=N,30nm,0.8s
MNK MLR MLR
comp=E,337nm,22.0s
MNK MLR MLR
comp=N,2μm,22.0s
MNK MLR MLR
comp=Z,275nm,18.0s
MNK Minsk 73.89 323 *i P* **P 04 57 25.2 -0.1**
comp=E,4.0nm,0.9s
MNK *i P* **P 04 57 25.2 -0.1**
comp=N,30nm,0.8s
MNK *i P* **P 04 57 25.2 -0.1**
comp=Z,10.0nm,0.7s,baz=254
MNK *i* PcP **PcP 04 57 38.9 -1.6**
MNK *i* PP **PP 05 00 12.2 +2.3**
MNK *i* PPP PPP 05 01 57.8
MNK *i S* **S 05 07 02.7 +7.3**
MNK *i* SS SS 05 11 51.4 +12
MNK *i* SSS SSS 05 15 13.6
MNK *i* LR LR 05 31 03.4
MNK *i* LRM MLR 05 32 39.3
comp=E,337nm,22.4s
MNK *i* LRM MLR 05 32 47.3
comp=N,2μm,22.4s
MNK *i* LRM MLR 05 32 54.3
comp=Z,275nm,17.9s
NOR Nord 73.92 354 *eP* **P 04 57 24.2 -0.8**
NOR IAmb IAmb 04 57 25.9
comp=Z,4.9nm,0.7s
CTG Chitna Glacier 73.93 30 P **P 04 57 26.6 +1.1**
baz=287
CTGM Chitina Glacie 73.94 30 IAmb IAmb 04 57 31.0
comp=Z,11nm,0.8s
MEF Metsahovi 74.04 329 *eP* **P 04 57 26.4 +0.5**
G30M tAoh Zraii Nji 74.12 24 P **P 04 57 26.3 -0.1**
baz=290
EPYK Eagle Plains 74.14 24 P **P 04 57 26.3 -0.2**
baz=290
AKASG Malin Array Be 74.18 319 P **P 04 57 26.2 -0.7**
comp=Z,8.1nm,0.8s,baz=60,slow=6.5,SNR=18
AKASG LR LR 05 32 12.6
comp=Z,228nm,20.4s,baz=64,slow=37
comp=Z,8.1nm,0.8s
AKASG Malin Array Be 74.18 319 *i P* **P 04 57 26.2 -0.7**
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 74.18 319 IAmb IAmb 04 57 30.8
comp=Z,9.8nm,0.7s
AKBB Malin Array Si 74.18 319⇓ *eP* **P 04 57 26.3 -0.6**
AKBB pmax pmax
comp=Z,11nm,0.8s
BR131 Keskin Array S 74.27 307 IAmb IAmb 04 57 38.6
comp=Z,58nm,1.8s
BR131 Keskin Array S 74.27 307 *d iP* **P 04 57 28.2 +0.3**
BRTR Keskin Array B 74.27 307 P **P 04 57 28.4 +0.4**
comp=Z,6.3nm,1.0s,baz=101,slow=6.4,SNR=18
comp=Z,6.3nm,1.0s
NACGM Naroch 74.39 323⇑ *eP* **P 04 57 26.6 -1.5**
baz=73
INK Inuvik 74.60 22 LR LR 05 33 58.4
comp=Z,174nm,19.0s,baz=282,slow=39
INK Inuvik 74.60 22 P **P 04 57 29.1 +0.1**
baz=292
L29M L29M 74.68 28 P **P 04 57 30.8 +1.0**
baz=290
M29M Somme Creek 74.76 28 P **P 04 57 31.7 +1.4**
baz=289
MTSE Matsula 74.79 328 *eP* **P 04 57 30.8 +0.5**
AFI Afiamalu 74.82 112 LR LR 05 27 30.6
comp=Z,88nm,18.7s,baz=302,slow=33
MMAI Mount Meron Ar 74.84 300 LR LR 05 36 48.4
comp=Z,213nm,18.0s,baz=256,slow=41

F31M	Tsiigehtchic	74.85	23	P		P	04 57 30.4	-0.1
	baz=292							
RAF	Rauma	75.02	330	*eP*		P	04 57 31.3	-0.3
STEI	Steigen	75.12	338	*eP*		P	04 57 31.8	-0.3
STEI				IAmb		IAmb	04 57 32.6	
	comp=Z,24nm,0.9s							
ATD	Arta Tunnel	75.19	276	LR		LR	05 31 30.4	
	comp=Z,112nm,19.2s,baz=67,slow=36							
FAUS	Fauske	75.33	337	*eP*		P	04 57 33.0	-0.2
FAUS				IAmb		IAmb	04 57 40.7	
	comp=Z,20nm,0.9s							
M30M	Minto, Yukon	75.44	28	IAmb		IAmb	04 57 36.4	
	comp=Z,42nm,2.0s							
M30M	Minto, Yukon	75.44	28	P		P	04 57 35.0	+0.8
	baz=291							
PABE	Paberze	75.74	324	P		P	04 57 36.3	+0.4
PABE	Paberze	75.74	324	*eP*		P	04 57 36.3	+0.4
HYT	Haines Junctio	75.75	30	P		P	04 57 37.3	+1.3
	baz=291							
CSS	Mathiatis	75.90	302	IAmb		IAmb	04 57 44.1	
	comp=Z,22nm,0.7s							
P29M	Windy Craggy	76.06	31	P		P	04 57 39.1	+1.4
	baz=291							
TLCR		76.07	313	⇑P		P	04 57 38.7	+0.8
TLCR		76.07	313	⇑P		P	04 57 38.7	+0.8
EIL	Elat	76.23	297	LR		LR	05 37 05.9	
	comp=Z,228nm,18.9s,baz=122,slow=40							
TPGR	Topolog	76.44	313	⇓P		P	04 57 40.6	+0.5
CFR	Carcaliu	76.53	313	⇓P		P	04 57 42.4	+1.9
CFR	Carcaliu	76.53	313	⇓P		P	04 57 42.4	+1.9
STOK	Stokkvaagen	76.58	337	*eP*		P	04 57 40.8	+0.4
PLBC	Pleasant Camp	76.78	31	P		P	04 57 43.9	+2.2
	baz=292							
HARR	Harsova	76.82	313	⇑P		P	04 57 43.0	+0.8
HARR	Harsova	76.82	313	⇑P		P	04 57 43.0	+0.8
PANC	Panciu	76.96	314	⇑P		P	04 57 45.4	+2.4
WHY	Whitehorse	77.01	29	P		P	04 57 44.0	+0.9
	baz=293							
FARO	Faro, Yukon	77.06	28	IAmb		IAmb	04 58 16.5	
	comp=Z,34nm,2.0s							
FARO	Faro, Yukon	77.06	28	P		P	04 57 43.9	+0.6
	baz=294							
TESR	Tescani	77.08	315	⇑P		P	04 57 44.3	+0.6
VRI	Vrincioaia	77.24	314	⇓P		P	04 57 45.3	+0.7
VRI	Vrincioaia	77.24	314	⇓P		P	04 57 45.3	+0.7
BIZ	Bicaz	77.30	316	⇑P		P	04 57 45.2	+0.3
PLOR	Plostina	77.30	314	⇓P		P	04 57 46.8	+1.8
PLOR	Plostina	77.30	314	⇓P		P	04 57 46.8	+1.8
UPP	Uppsala	77.35	330	*eP*		P	04 57 44.6	-0.3
COVR	Voineasa-Covas	77.59	315	⇓P		P	04 57 46.7	+0.1
BUR01	Bucovina Ar. S	77.64	316	⇓P		P	04 57 47.4	+0.5
NSS	Namsos	77.78	335	*eP*		P	04 57 46.2	-1.0
NSS				IAmb		IAmb	04 57 47.8	
	comp=Z,11nm,0.8s							
MLR	Muntele Rosu	77.89	314	⇑P		P	04 57 49.5	+1.1
MLR	Muntele Rosu	77.89	314	IAmb		IAmb	04 57 53.8	
	comp=Z,12nm,0.9s							
MLR	Muntele Rosu	77.89	314	⇑P		P	04 57 49.5	+1.1
DAG	Danmarks Havn	77.94	351	*i P*		P	04 57 46.0	-1.9
DAG				IAmb		IAmb	04 57 47.8	
	comp=Z,14nm,1.2s							
VIKU	Vikbolandet	78.33	329	*eP*		P	04 57 50.3	-0.1
VOIR		78.50	314	⇓P		P	04 58 05.4	+14
KOLS	Kolonicke sedl	79.01	318	*eP*		P	04 57 54.7	+0.3
KOLS				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HFS	Hagfors	79.03	331	LR		LR	05 36 21.4	
	comp=Z,883nm,18.0s,baz=64,slow=38							
TRPA	Tarpa	79.14	318	⇑P		P	04 57 55.4	+0.4
TRPA	Tarpa	79.14	318	P		P	04 57 54.8	-0.2
CRVS	Cervenica-Dubn	79.52	319	*eP*		P	04 58 00.9	+3.8
CRVS				pmax		pmax		
	comp=Z,35nm,1.6s							
DRGR		79.53	316	⇓P		P	04 57 44.4	-13
NC303	NORSAR Array S	79.55	332	IAmb		IAmb	04 57 57.2	
	comp=Z,18nm,1.0s							
NB201	NORSAR Array S	79.67	332	IAmb		IAmb	04 57 58.8	
	comp=Z,30nm,0.9s							
NB2	NORSAR Subarra	79.70	332	P		P	04 57 57.0	-0.9
	comp=Z,2.9nm,0.5s,baz=55,slow=5.9							
NB2	NORSAR Subarra	79.70	332	P		P	04 57 57.0	-0.9
	baz=55,slow=5.9							
NOA	NORSAR Array B	79.70	332	P		P	04 57 57.3	-0.6
	comp=Z,8.2nm,0.7s,baz=62,slow=5.2,SNR=16							
NOA				LR		LR	05 36 33.7	
	comp=Z,453nm,20.6s,baz=55,slow=38							
	comp=Z,8.2nm,0.7s							
NC602	NORSAR Array S	79.71	332	*eP*		P	04 57 57.4	-0.5
NC204	NORSAR Array S	79.78	333	IAmb		IAmb	04 58 00.1	
	comp=Z,55nm,1.4s							
ABAH	Abaujker	79.88	318	P		P	04 57 59.4	+0.3
URZ	Urewera	79.97	139	LR		LR	05 27 13.3	
	comp=Z,98nm,21.4s,baz=48,slow=31							
OJC	Ojcow	80.01	320	*eP*		P	04 57 57.9	-1.9
NEEM	North Greenlan	80.06	358	*eP*		P	04 58 00.1	+0.2
NEEM				IAmb		IAmb	04 58 01.1	
	comp=Z,551nm,2.6s							
DOMB	Dombas	80.12	334	*eP*		P	04 58 00.2	+0.1
DOMB				IAmb		IAmb	04 58 01.3	
	comp=Z,13nm,0.8s							
DBG	Daneborg	80.17	350	*eP*		P	04 58 00.1	0.0
RPZ	Rata Peaks	80.18	146	P		P	04 58 00.6	0.0
DLBC	Dease Lake	80.19	30	LR		LR	05 38 13.4	
	comp=Z,121nm,18.2s,baz=288,slow=39							
LBZ	Lake Benmore	80.21	147	IAmb		IAmb	04 58 04.6	
	comp=Z,24nm,0.8s							
JMIC	Jan Mayen	80.39	345	LR		LR	05 36 30.3	
	comp=Z,173nm,21.6s,baz=76,slow=38							
BLKB	Belogradchik	80.74	313	⇓P		P	04 58 04.2	+0.3
VTS	Vitosha	80.74	312	⇓P		P	04 58 05.1	+1.1
VTS	Vitosha	80.74	312	IAmb		IAmb	04 58 09.9	
	comp=Z,31nm,1.0s							
VTS	Vitosha	80.74	312	⇓P		P	04 58 05.1	+1.1
T35M	Bob Quinn	80.75	32	P		P	04 58 04.2	+0.6
	baz=297							
AKN	Aaknes	80.88	334	*eP*		P	04 58 04.1	-0.1
AKN				IAmb		IAmb	04 58 07.8	
	comp=Z,9.8nm,0.8s							
MDVR	Moldovita	80.93	315	⇓P		P	04 57 52.2	-13
OKC	Ostrava-Krasne	81.13	320	AMS		AMS	05 39 40.0	
	comp=Z,300nm,11.1s							
VYHS	Vyhne	81.28	319	*eP*		P	04 58 07.1	+0.5
VYHS				pmax		pmax		
	comp=Z,11nm,0.9s							
BOVS	Bovan	81.38	314	⇑P		P	04 58 07.4	+0.1
MORC	Moravsky Berou	81.52	320	⇓P		P	04 58 08.4	+0.6
MORC	Moravsky Berou	81.52	320	⇓P		P	04 58 08.5	+0.6
MORC	Moravsky Berou	81.52	320	*eP*		P	04 58 07.8	-0.1
VAY	Valandovo	81.69	311	*i P*		P	04 58 07.5	-1.4
KSP	Ksiaz	81.78	322	*eP*		P	04 58 09.6	+0.4
STIP	Stip	81.81	312	*i P*		P	04 58 08.5	-1.1
JAVC	Velka Javorina	81.83	320	*eP*		P	04 58 11.1	+1.5
KRLC	Kraliky	81.83	321	*eP*		P	04 58 09.5	-0.1
KRLC				MLR		MLR		
	comp=Z,300nm,11.2s							
KRLC	Kraliky	81.83	321	*eP*		P	04 58 09.5	-0.1
KRLC				AMS		AMS	05 37 00.0	
	comp=Z,300nm,11.2s							
OSTC	Ostas	81.95	322	AMS		AMS	05 39 10.0	
	comp=Z,500nm,18.4s							
DPC	Dobruska-Polom	81.98	321	*eP*		P	04 58 10.5	+0.2
DPC				MLR		MLR		
	comp=Z,400nm,21.5s							
DPC	Dobruska-Polom	81.98	321	*eP*		P	04 58 10.5	+0.2
DPC				AMS		AMS	05 38 40.0	
	comp=Z,400nm,21.5s							
FRGS	Fruska Gora	82.03	316	⇓P		P	04 58 09.4	-1.2
CHVC	Chvalec	82.03	322	*eP*		P	04 58 11.9	+1.3
CHVC				AMS		AMS	05 39 10.0	
	comp=Z,500nm,19.9s							
UPC	Upice	82.09	322	*eP*		P	04 58 11.6	+0.7
UPC				MLR		MLR		
	comp=Z,500nm,21.2s							
UPC	Upice	82.09	322	*eP*		P	04 58 11.6	+0.7
UPC				AMS		AMS	05 39 20.0	
	comp=Z,500nm,21.2s							
VRAC	Vranov	82.28	320	⇓P		P	04 58 11.5	-0.4
VRAC	Vranov	82.28	320	LR		LR	05 38 16.9	
	comp=Z,225nm,19.9s,baz=62,slow=38							
VRAC	Vranov	82.28	320	⇓P		P	04 58 11.5	-0.4
VRAC	Vranov	82.28	320	*eP*		P	04 58 11.6	-0.2
MORH	Mrgy, Hungar	82.34	317	⇑P		P	04 58 12.3	+0.2
MORH	Mrgy, Hungar	82.34	317	P		P	04 58 12.9	+0.7
KRUC	Moravsky	82.50	320	*eP*		P	04 58 14.8	+1.8
ASK	Askoy	82.53	333	*eP*		P	04 58 13.1	+0.2
BLS5	Blasjo	82.57	332	*eP*		P	04 58 13.6	+0.4
MPLH	Magyarpolny	82.62	318	P		P	04 58 14.0	+0.3
KOVH	Kovagotottos	82.73	317	P		P	04 58 14.3	0.0
PVCC	Panska Ves	82.91	322	AMS		AMS	05 40 00.0	
	comp=Z,400nm,14.5s							
TREC	Trest	82.93	321	AMS		AMS	05 39 50.0	
	comp=Z,300nm,20.7s							
GOPC	GO Pecny, Ondr	83.06	321	AMS		AMS	05 39 00.0	
	comp=Z,300nm,18.0s							
PRU	Pruhonice	83.17	322	*eP*		P	04 58 17.0	+0.6
PRU				MLR		MLR		
	comp=Z,300nm,15.8s							
PRU	Pruhonice	83.17	322	*eP*		P	04 58 17.0	+0.6
PRU				AMS		AMS	05 38 40.0	
	comp=Z,300nm,15.8s							
KBN	Korca	83.20	311	IAmb		IAmb	04 58 21.1	
	comp=Z,17nm,0.8s							
CONA	Conrad Observa	83.32	319	*eP*		P	04 58 17.3	-0.1
	comp=Z,15nm,1.3s							
ABPO	Ambohimpanom	83.42	246	P		P	04 58 18.5	+0.1
ABPO				IAmb		IAmb	04 58 24.6	
	comp=Z,14nm,0.8s							
ABPO	Ambohimpanom	83.42	246	P		P	04 58 18.5	+0.1
ABPO				pmax		pmax		
	comp=Z,14nm,0.9s							
CLL	Collm	83.43	323	IAmb		IAmb	04 58 26.6	
	comp=Z,9.2nm,1.0s							
CLL	Collm	83.43	323	*i* P		P	04 58 17.5	-0.2
CLL				*i*			04 58 25.3	
CLL				pmax		pmax		
	comp=Z,6.0nm,0.9s							
CLL	Collm	83.43	323	*i* P		P	04 58 17.5	-0.2
	comp=Z,6.0nm,0.9s							
CLL				*i* (PcP)		pP	04 58 25.3	-0.5
CLL				*e*PP		PP	05 01 32.0	+2.6
CKRC	Cesky Krumlov	83.84	321	*eP*		P	04 58 20.4	+0.4
SUMG	Summit	84.08	354	*i P*		P	04 58 19.0	-2.2
SUMG				IAmb		IAmb	04 58 22.2	
	comp=Z,28nm,1.1s							
KHC	Kasperske Hory	84.12	321	IAmb		IAmb	04 58 29.6	
	comp=Z,12nm,1.4s							
KHC	Kasperske Hory	84.12	321	*eP*		P	04 58 20.3	-1.1
KHC				MLR		MLR		
	comp=Z,300nm,19.4s							
KHC	Kasperske Hory	84.12	321	*eP*		P	04 58 20.3	-1.1
KHC				AMS		AMS	05 40 00.0	
	comp=Z,300nm,19.4s							
GERES	GERESS Array B	84.18	321	P		P	04 58 22.0	+0.2
	comp=Z,3.9nm,0.8s,baz=69,slow=4.4,SNR=20							
	comp=Z,3.9nm,0.8s							
NKC	Novy Kostel	84.25	322	AMS		AMS	05 40 50.0	
	comp=Z,400nm,17.8s							
KEK	Kerkira	84.27	311	IAmb		IAmb	04 58 26.5	
	comp=Z,15nm,0.9s							
MOA	Molln	84.31	320	*eP*		P	04 58 22.9	+0.5
	comp=Z,11nm,0.8s							
YKA	Yellowknife Ar	84.33	23	P		P	04 58 22.1	-0.1
	comp=Z,3.5nm,0.7s,baz=312,slow=5.3,SNR=5.0							
YKA				LR		LR	05 39 06.5	
	comp=Z,104nm,18.4s,baz=325,slow=38							
	comp=Z,3.5nm,0.7s							
SOKA	Soboth	84.38	318	*eP*		P	04 58 23.5	+0.6
	comp=Z,8.2nm,0.8s							
OBKA	Obir	84.76	318	*eP*		P	04 58 25.3	+0.5
	comp=Z,5.2nm,0.8s							
KIBK	Kibwezi	84.76	265	P		P	04 58 25.7	+0.3
KIBK				IAmb		IAmb	04 58 33.2	
	comp=Z,9.5nm,1.0s							
KMBO	Kilima Mbogo	85.03	267	P		P	04 58 27.6	+0.7
	comp=Z,7.7nm,0.9s,baz=49,slow=7.5,SNR=12							
KMBO				LR		LR	05 37 14.0	
	comp=Z,108nm,19.1s,baz=91,slow=36							
	comp=Z,7.7nm,0.9s							
KMBO	Kilima Mbogo	85.03	267	P		P	04 58 27.4	+0.5
KMBO				IAmb		IAmb	04 58 34.9	
	comp=Z,7.8nm,0.9s							
KMBO	Kilima Mbogo	85.03	267	P		P	04 58 27.4	+0.5
KMBO				pmax		pmax		
	comp=Z,8.0nm,0.9s							
GBRS	Gornja Briga	85.04	317	*i P*		P	04 58 26.6	+0.4
CRNS	Crni Vrh	85.13	318	*i P*		P	04 58 26.1	-0.5
KBA	Koelnbreinsper	85.22	319	*eP*		P	04 58 26.4	-0.8
	comp=Z,5.9nm,0.7s							
CLUD	Cludinico	85.80	319	IAmb		IAmb	04 58 34.3	
	comp=Z,8.3nm,0.8s							
WTTA	Wattenberg	86.16	320	*eP*		P	04 58 31.4	-0.5
	comp=Z,11nm,0.9s							
SQTA	Sankt Quirin	86.43	320	*eP*		P	04 58 32.4	-0.7
	comp=Z,4.8nm,0.7s							
TIP	Timpagrande	86.62	311	⇑P		P	04 58 29.4	-4.7
TIP	Timpagrande	86.62	311	IAmb		IAmb	04 58 43.0	
	comp=Z,24nm,1.4s							
FETA	Feichten	86.81	320	*eP*		P	04 58 35.5	+0.5
	comp=Z,7.7nm,1.0s							
DAVA	Damuels	87.18	321	*eP*		P	04 58 37.3	+0.5
	comp=Z,7.4nm,1.1s							
FUORN	Ofenpass-Fuorn	87.29	320	IAmb		IAmb	04 58 43.1	
	comp=Z,14nm,1.4s							
DAVOX	Davos/Dischmat	87.44	320	LR		LR	05 42 55.1	
	comp=Z,259nm,18.9s,baz=81,slow=39							
BORG	Borgarnes	88.29	345	LR		LR	05 41 18.7	
	comp=Z,270nm,19.7s,baz=27,slow=38							
EKA	Eskdalemuir Ar	89.19	332	LR		LR	05 43 04.1	
	comp=Z,700nm,18.9s,baz=45,slow=38							
EKA	Eskdalemuir Ar	89.19	332	P		P	04 58 46.0	0.0
DY2G	Dye2	90.70	355	*eP*		P	04 58 52.0	-1.1
DY2G				IAmb		IAmb	04 58 54.5	
	comp=Z,24nm,0.7s							
B08A	Colville Reser	90.94	36	IAmb		IAmb	04 58 56.8	
	comp=Z,9.0nm,1.1s							
KEST	Kesra	93.44	311	P		P	04 59 05.6	-0.7
	comp=Z,4.5nm,0.7s,baz=301,slow=5.9,SNR=5.1							
	comp=Z,4.5nm,0.7s							
PPT	Papeete	95.72	107	LR		LR	05 33 27.7	
	comp=Z,94nm,20.4s,baz=310,slow=30							
HLID	Hailey	96.59	37	P		P	04 59 22.0	+1.4
	baz=310							
VNDA	Vanda	102.72	172	PP		PP	05 03 57.4	-3.5
	comp=Z,1.9nm,0.8s,baz=330,slow=8.0,SNR=6.5							
VNDA				PKKPbc		PKKPbc	05 15 45.8	-2.8
	comp=Z,0.4nm,0.8s,baz=3.1,slow=0.8,SNR=5.9							
TORD	Torodi Ar. Bea	111.08	295	PKiKP		PKiKP	05 04 24.2	-0.4
	comp=Z,1.1nm,0.8s,baz=73,slow=1.7,SNR=11							
TORD				PP		PP	05 05 02.5	-0.8
	comp=Z,1.1nm,0.9s,baz=49,slow=5.1,SNR=3.9							
TORD				PKKPbc		PKKPbc	05 15 20.4	-0.3
	comp=Z,0.4nm,0.5s,baz=222,slow=1.7,SNR=7.0							
TORD				PKKPab		PKKPab	05 15 31.2	-1.1
	comp=Z,2.1nm,0.8s,baz=261,slow=4.3,SNR=10							
TXAR	Lajitas Array	112.55	42	PKiKP		PKiKP	05 04 24.9	-2.4
	comp=Z,1.1nm,0.8s,baz=204,slow=0.6,SNR=9.9							
WVT	Waverly	115.36	26	P		PKiKP	05 04 31.2	-1.2
	baz=330							
OXF	Oxford	116.09	28	P		PKiKP	05 04 32.7	-1.1
	baz=328							
DBIC	Dimbokro	119.92	292	PKP		PKPdf	05 04 40.9	-0.8
	comp=Z,2.9nm,0.7s,baz=342,slow=1.6,SNR=5.6							
BRAL	Brewton	119.97	28	P		PKPdf	05 04 41.0	-0.3
	baz=330							
KIC	Kosan Boka	119.98	292	⇑*eP*		PKPdf	05 04 40.8	-1.0
	comp=Z,4.2nm,0.4s							
TIC	Toumodi	120.07	293	⇓*iP*		PKPdf	05 04 39.8	-2.2
	comp=Z,2.3nm,0.2s							
TROLL	Troll, Antarti	120.13	198	P		PKPdf	05 04 40.0	-0.6
LIC	Lamto	120.29	292	⇑*iP*		PKPdf	05 04 42.2	-0.2
	comp=Z,16nm,0.5s							
SNAA	Sanae	121.81	198	P		PKPdf	05 04 43.0	-0.7
VNA2	Neumayer--Watz	123.46	198	P		PKPdf	05 04 46.4	-0.3
	baz=103,slow=2.0							
VNA1	Neumayer--Stat	123.85	198	P		PKiKP	05 04 48.6	+0.8
VNA3	Neumayer Olymp	123.93	197	P		PKPdf	05 04 47.0	-0.7
SDV	Santo Domingo	146.55	22	PKPbc		PKPdf	05 05 31.0	-0.4
	comp=Z,38nm,0.6s,baz=160,slow=2.4,SNR=30							
PCRV	Puerto La Cruz	146.88	11	PKPbc		PKPdf	05 05 31.3	-0.4
	comp=Z,9.5nm,0.5s,baz=358,slow=6.0,SNR=10							
BRRC	Barranca, Sant	146.96	28	*eP*		PKPdf	05 05 31.7	-0.2
CBOC	Ciudad Bolivar	146.96	33	*eP*		PKPdf	05 05 31.7	-0.4
PTBC	PUERTO BERRIO	147.13	30	*eP*		PKPdf	05 05 30.7	-1.4
PAMC	Pamplona, Colo	147.19	26	*eP*		PKPbc	05 05 34.6	-0.4
PLMC	San Jos del P	147.64	34	*eP*		PKPdf	05 05 31.7	-1.4
NORC	Norcasia	147.79	32	*eP*		PKPdf	05 05 34.6	+1.3
GUY2C	Guyana, Caldas	147.84	33	*eP*		PKPdf	05 05 32.7	-1.3
SPBC	San Pablo de B	148.09	30	*eP*		PKPdf	05 05 33.6	-0.2
RUSC	La Rusia	148.32	28	*eP*		PKPbc	05 05 37.5	-0.6
YOTC	Yotoco, Valle	148.38	35	*eP*		PKPdf	05 05 34.6	+0.2
ROSC	El Rosal	148.68	31	PKPbc		PKPdf	05 05 35.8	+0.5
	comp=Z,7.0nm,0.3s,baz=62,slow=5.8,SNR=7.6							
ORTC	Ortega, Tolima	149.02	34	*eP*		PKPdf	05 05 34.6	-0.7
CHIC	Chingaza	149.14	30	*eP*		PKPdf	05 05 35.5	-0.5
PRAC	Prado	149.37	33	*eP*		PKPdf	05 05 35.5	-0.3
GCUF	Volcan Galeras	150.07	40	*eP*		PKPdf	05 05 37.5	-0.1
GARC	Garzon, Huila	150.34	36	*eP*		PKPbc	05 05 42.3	-0.6
FLOC	Florencia	150.76	37	*eP*		PKPdf	05 05 37.5	-0.6
GUVC	San Jose del G	151.49	30	*eP*		PKPbc	05 05 43.3	-2.0
PTLC	Puerto Leguiza	152.40	37	*eP*		PKPbc	05 05 47.1	-0.2
PLCA	Paso Flores	159.30	154	PKPab		PKPab	05 06 24.9	-1.3
	comp=Z,1.7nm,0.8s,baz=272,slow=7.6,SNR=5.4							
BDFB	Brasilia	167.84	303	PKP		PKPdf	05 05 56.7	-0.9
	comp=Z,3.7nm,0.9s,baz=128,slow=3.8,SNR=4.8							
BDFB				PKPab		PKPab	05 07 04.6	+0.1
	comp=Z,6.0nm,1.0s,baz=45,slow=5.7,SNR=5.0							
LPAZ	La Paz	169.03	57	PKP		PKPdf	05 05 58.8	-0.2
	comp=Z,5.2nm,1.1s,baz=351,slow=3.1,SNR=11							
CPUP	Villa Florida	176.12	197	PKP		PKPdf	05 06 00.8	-0.2
	comp=Z,3.3nm,1.1s,baz=98,slow=6.7,SNR=3.3							
CPUP				PKPab		PKPab	05 07 39.7	-0.9
	comp=Z,1.4nm,0.7s,baz=157,slow=6.5,SNR=3.9							

*IDC **25** 04:49:21.7±0.9, 3°.64S×152°.21E, h0km, mb4.4/11, mbtmp4.4/12, ML4.0/1, MS3.3/2, Error ellipse: s-maj=32.8km s-min=21.1km az=105.0*
*NEIC **25** 04:49:22.3±1.0, 3°.80S±0°.05×152°.3E±0°.1, h10km±1km, mb4.8/22, Error ellipse: s-maj=21.3km s-min=6.6km az=107.0*
ISC 25 04:49:23.4±0.6, **3°.82S**±0°.07×**152°.2E**±0°.1, **h10**km, **n55**, σ1**9**75/**48**, **mb4.7**/24, **MS4.0**/4, **2C**, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.37	190			Pg	04 49 30.3	-0.5
MANU	Manus Island	5.17	290	Pn		Pn	04 50 40.6	-0.2
PMG	Port Moresby	7.49	222	Pn		Pn	04 51 18.8	+6.1
	1.9nm,0.3s,baz=60,slow=14,SNR=5.0							
PMG				LR		LR	04 53 15.1	
	comp=Z,224nm,21.1s,baz=42,slow=31							
PMG	Port Moresby	7.49	222			Pn	04 51 12.6	-0.2
CTA	Charters Tower	17.18	199	P		P	04 53 25.8	+0.5
	0.4nm,0.3s,baz=9.9,slow=7.8,SNR=2.8							
	5.7nm,1.1s							
FAKI	Fak Fak	19.96	272			P	04 53 55.4	-0.6
SIJI	Sorong	21.15	277	P		P	04 54 07.9	-0.9
	6.0nm,0.4s,baz=189,slow=19,SNR=1.8							
	6.0nm,0.4s							
DZM	Mont Dzumac	22.79	144	*eP*		P	04 54 26.8	+0.4
DZM				*e*LR		LR	04 59 53.6	
	comp=Z,2μm,27.4s							
WB2	Warramunga Arr	23.68	226	P		P	04 54 35.3	-0.1
WB2				IAmb		IAmb	04 54 42.4	
	comp=Z,23nm,1.1s							
WRA	Warramunga Arr	23.68	226	P		P	04 54 34.5	-1.0
	comp=Z,14nm,0.9s,baz=49,slow=9.7,SNR=4.9							
	comp=Z,14nm,0.9s							
KNRA	Kununurra	25.91	241	P		P	04 54 53.7	-2.2
KNRA				IAmb		IAmb	04 55 03.0	
	comp=Z,61nm,1.9s							
ASAR	Alice Springs	26.50	220	P		P	04 55 01.8	+0.5
	comp=Z,3.8nm,0.8s,baz=52,slow=7.6,SNR=3.3							
	comp=Z,3.8nm,0.8s							
KSRS	Korea Array	46.88	333	P		P	04 57 56.2	+2.4
	comp=Z,4.9nm,0.9s,baz=152,slow=9.1,SNR=8.1							
NJ2	Nanjing	47.73	321	*eP*		P	04 58 03.6	+3.0
SNY	Shenyang	52.38	333	⇑P		P	04 58 40.0	+4.2
SNY				S		S	05 06 10.3	+8.7
HNS	HongShan	53.83	323	⇑P		P	04 58 50.5	+4.0
HNS				S		**S**	**05 06 26.5**	**+5.0**
CMAR	Chiang Mai Arr	56.95	295	P		P	04 59 08.9	-0.5
	comp=Z,1.4nm,0.7s,baz=116,slow=6.1,SNR=2.9							
CMAR				LR		LR	05 24 13.8	
	comp=Z,31nm,18.1s,baz=120,slow=37							
	comp=Z,1.4nm,0.7s							
TBI	Tubuai	59.48	115	*e*LR		LR	05 16 54.0	
	comp=Z,87nm,29.5s							
GTA	Gaotai	64.56	317	*eP*		P	05 00 05.8	+4.7
GTA				pP		pwP	05 00

σ1$53/53, mb4.6/29, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.26	219	Pn	Pn	04 51 53.2	+1.8
	2.5nm,0.3s,baz=90,slow=2.0,SNR=4.4						
CTA	Charters Tower	17.13	198	P	P	04 54 01.6	+0.2
	10nm,1.0s,baz=39,slow=6.5,SNR=5.4						
FAKI	Fak Fak	19.47	272	P	P	04 54 27.1	0.0
SIJI	Sorong	20.64	277	P	P	04 54 39.8	0.0
	16nm,0.7s,baz=59,slow=11,SNR=3.6						
	16nm,0.7s						
WB2	Warramunga Arr	23.40	225	P	P	04 55 06.0	-2.2
WB2				IAmb	IAmb	04 55 24.7	
	comp=Z,36nm,1.1s						
WRA	Warramunga Arr	23.41	225	P	P	04 55 08.2	-0.1
	comp=Z,20nm,0.9s,baz=49,slow=9.9,SNR=6.2						
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	23.41	225	P	P	04 55 07.0	-1.2
ASAR	Alice Springs	26.27	219	P	P	04 55 33.5	-0.7
	comp=Z,5.7nm,1.0s,baz=52,slow=11,SNR=4.6						
	comp=Z,5.7nm,1.0s						
SOEI	Soe	27.92	256	P	P	04 55 48.2	-0.9
KSRS	Korea Array	46.56	334	P	P	04 58 26.1	+0.4
	comp=Z,7.0nm,1.0s,baz=156,slow=9.1,SNR=7.1						
CMAR	Chiang Mai Arr	56.46	295	P	P	04 59 40.8	+0.9
	comp=Z,2.5nm,0.7s,baz=112,slow=5.6,SNR=4.5						
	comp=Z,2.5nm,0.7s						
LZH	Lanzhou	59.71	316	eP	P	05 00 09.3	+6.8
LZH				sP	pP	05 00 19.1	-7.3
SONM	Songino Array	64.84	328	P	P	05 00 36.0	-0.5
	comp=Z,2.6nm,1.0s,baz=158,slow=4.2,SNR=2.3						
	comp=Z,2.6nm,1.0s						
VNDA	Vanda	73.95	178	P	P	05 01 32.0	+0.1
	comp=Z,4.1nm,1.2s,baz=326,slow=7.3,SNR=4.6						
	comp=Z,4.1nm,1.2s						
SBA	Scott Base	74.52	177	P	P	05 01 33.7	-1.5
SBA				IAmb	IAmb	05 01 42.1	
	comp=Z,18nm,1.4s						
TTA	Tatalina	77.16	22		P	05 01 51.2	+0.7
TTA				IAmb	IAmb	05 01 53.8	
	comp=Z,12nm,1.1s						
CNPM	China Poot	77.20	26		P	05 01 51.1	+0.3
K20K	Telida	78.12	22	P	P	05 01 57.7	+1.9
K20K				IAmb	IAmb	05 01 59.9	
	comp=Z,14nm,1.1s						
SUA	Susitna One	78.41	24	P	P	05 01 58.1	+0.6
SUA				IAmb	IAmb	05 01 59.6	
	comp=Z,8.6nm,1.0s						
J20K	Nowinta River	78.56	21		P	05 02 00.8	+2.7
MKAR	Makanchi Array	78.81	319	P	P	05 01 59.4	-0.6
	comp=Z,2.5nm,0.8s,baz=97,slow=7.9,SNR=8.3						
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	78.81	319		P	05 01 59.2	-0.8
CAST	Castle Rocks	78.90	22		P	05 02 00.7	+0.6
CAST				IAmb	IAmb	05 02 02.5	
	comp=Z,8.5nm,0.9s						
PMR	Palmer	79.14	25	P	P	05 02 02.9	+1.6
KTH	Kantishna Hill	79.42	23	P	P	05 02 01.6	-1.4
ZALV	Zalesovo Beam	79.66	326	P	P	05 02 02.5	-1.8
	comp=Z,1.3nm,0.6s,baz=86,slow=4.5,SNR=2.1						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	79.66	326		P	05 02 07.0	+2.6
IMAR	Indian Mountai	79.72	20		P	05 02 06.2	+1.7
H21K	Melozitna Rive	79.86	20	P	P	05 02 08.0	+2.7
H21K				IAmb	IAmb	05 02 08.7	
	comp=Z,8.9nm,1.0s						
I21K	Tanana	79.89	21	P	P	05 02 07.3	+2.0
SCM	Sheep Creek Mo	80.01	25	P	P	05 02 07.5	+1.3
SCM				IAmb	IAmb	05 02 10.0	
	comp=Z,11nm,0.9s						
RND	Reindeer	80.15	23	P	P	05 02 07.7	+0.8
RND				IAmb	IAmb	05 02 09.3	
	comp=Z,11nm,1.0s						
MLY	Manley	80.26	21		P	05 02 09.7	+2.2
MCK	McKinley	80.28	23		P	05 02 08.8	+1.3
KLU	Klutina	80.45	26	P	P	05 02 09.8	+1.2
KLU				IAmb	IAmb	05 02 12.1	
	comp=Z,10nm,0.8s						
DHY	Denali Highway	80.57	24	P	P	05 02 11.5	+2.2
DHY				IAmb	IAmb	05 02 12.4	
	comp=Z,7.3nm,0.8s						
I23K	Minto, Yukon-K	80.82	22	P	P	05 02 12.3	+2.0
I23K				IAmb	IAmb	05 02 16.8	
	comp=Z,13nm,1.4s						
WRH	Wood River Hil	80.96	22	P	P	05 02 12.4	+1.3
WRH				IAmb	IAmb	05 02 13.5	
	comp=Z,13nm,1.0s						
MDM	Murphy Dome	81.14	22	P	P	05 02 13.7	+1.5
MDM				IAmb	IAmb	05 02 14.6	
	comp=Z,10nm,1.2s						
ILAR	Eielson Array	81.56	22	P	P	05 02 11.3	-3.0
	comp=Z,7.9nm,0.8s,baz=250,slow=5.3,SNR=17						
	comp=Z,7.9nm,0.8s						
COLD	Coldfoot	81.59	20		P	05 02 16.4	+2.0
L26K	Log Cabin Wild	82.20	25	P	P	05 02 19.9	+2.2
CTGM	Chitina Glacie	82.26	27	P	P	05 02 19.9	+1.6
CTGM				IAmb	IAmb	05 02 21.3	
	comp=Z,11nm,0.9s						
KURBB	Kurchatov Arra	82.29	322	P	P	05 02 17.3	-1.1
	comp=Z,0.8nm,0.3s,baz=104,slow=4.0,SNR=2.2						
	comp=Z,0.8nm,0.3s						
SCRK	Sand Creek	82.34	24		P	05 02 20.1	+1.6
M27K	Edge Creek, AK	82.56	26	P	P	05 02 22.1	+2.4
J26L	Joseph Creek	82.72	23	P	P	05 02 21.8	+1.3
L27K	Beaver Creek,	82.85	25	P	P	05 02 22.8	+1.7
L27K				IAmb	IAmb	05 02 24.7	
	comp=Z,8.7nm,1.1s						
I26K	Coal Creek Min	83.22	23	P	P	05 02 23.1	+0.2
EGAK	Eagle	83.79	23	P	P	05 02 26.7	+0.9
EGAK				IAmb	IAmb	05 02 29.5	
	comp=Z,9.3nm,0.9s						
HYT	Haines Junctio	83.97	28		P	05 02 27.1	+0.1
HYT				IAmb	IAmb	05 02 30.9	
	comp=Z,11nm,0.9s						
NRIK	Noril'sk	84.60	341	P	P	05 02 28.3	-1.5
	comp=Z,5.5nm,0.7s,baz=57,slow=7.0,SNR=1.6						
	comp=Z,5.5nm,0.7s						
TORD	Torodi Ar. Bea	148.95	289	PKPbc	PKPbc	05 09 45.4	+0.1
	comp=Z,5.4nm,0.9s,baz=72,slow=2.5,SNR=12						
BDFB	Brasilia	152.58	135	PKPbc	PKPbc	05 09 53.6	-0.4
	comp=Z,7.7nm,0.9s,baz=55,slow=4.1,SNR=5.4						

TEH 25 05:03:32.1, 35°.23N×57°.18E, h5km, ML3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHRO	Shahrood	1.22	309	ePg	Pb	05 03 55.7	-0.1
TNSJ	Nastanj	1.35	201	ePg	Pg	05 03 58.9	+1.0
TABS	Tabas	1.58	182	ePn	Pg	05 04 03.7	+1.4
TKDS	Koohdasht(Taba	1.61	182	ePg	Pg	05 04 03.6	+0.6
TBHD	Torbat heydari	1.69	83	ePn	Pb	05 04 04.0	+0.2
TBHD				e		05 04 42.8	
	comp=Z,8μm,0.8s						
IAKL	Akhelmad	1.87	42	e		05 04 10.3	
	comp=Z,3μm,0.5s						
IAKL				ePn	Pb	05 04 06.8	-0.2
IPAY	Payeh	1.91	50	e		05 04 11.7	
	comp=Z,4μm,0.6s						
IPAY				ePn	Pb	05 04 07.4	-0.2
IMOG	Moghan	1.96	63	e		05 04 44.0	
	comp=Z,3μm,0.7s						
IMOG				ePn	Pb	05 04 08.4	-0.1
TPRV	Parvadeh(Tabas	2.23	191	ePn	Pb	05 04 11.9	-1.1
AFRZ	Afriz	2.35	139	ePn	Pb	05 04 14.4	-0.7
AFRZ				e		05 04 50.9	
	comp=Z,2μm,0.9s						
IKRD	Kardeh	2.44	50	ePn	Pb	05 04 16.1	-0.6
IKRD				e		05 04 58.2	
	comp=Z,2μm,0.7s						
BJRD	Bojnurd	2.47	4	ePn	Pb	05 04 16.4	-0.7
IMND	Minoodasht	2.48	325	ePn	Pb	05 04 15.5	-1.7
IMND				e		05 04 23.7	
	comp=Z,2μm,0.3s						
IEMG	Emamgholi	2.48	28	ePn	Pb	05 04 15.9	-1.5
TBJM	Torbat-e-JAM	2.57	88	ePn	Pn	05 04 16.4	+1.7
TBJM				e		05 05 03.1	
	comp=Z,4μm,0.3s						
MRVT	Maraveh tapeh	2.58	340	ePn	Pb	05 04 17.0	-2.0
IMYA	Miami	2.62	64	ePn	Pb	05 04 18.0	-1.7
ITEG	Tejag	2.66	150	ePn	Pb	05 04 18.6	-1.8
ITEG				e		05 05 04.7	
	comp=Z,4μm,0.5s						
JRKH	Jarkhoshk	2.67	74	ePn	Pb	05 04 18.3	-2.1
IANJ	Anjilo	2.68	276	ePn	Pb	05 04 18.8	-2.0
IANJ				e		05 05 03.1	
	comp=Z,2μm,0.5s						
BAGH	Bagheran - Bir	2.96	145	ePn	Pn	05 04 22.5	+2.4
IGLO	Ghaloghah	3.01	296	ePn	Pb	05 04 23.7	-2.6
IGLO				e		05 05 15.1	
	comp=Z,2μm,0.8s						
SHRT	Shahrakht	3.01	121	ePn	Pn	05 04 22.8	+2.2
IKOO	Kooshah	3.18	151	ePn	Pn	05 04 25.3	+2.2
IKOO				e		05 05 22.3	
	comp=Z,2μm,0.4s						
ISHM	Shahmirzad	3.23	281	ePn	Pn	05 04 26.8	+3.1
IDAH	Dahanechah	3.34	137	ePn	Pn	05 04 27.2	+2.0
ILAS	Lasjerd	3.46	274	ePn	Pn	05 04 28.9	+2.0
ILAS				e		05 05 38.6	
	comp=Z,2μm,0.7s						
ANAR	Anarak	3.51	236	ePn	Pn	05 04 28.8	+1.3
YZKH	Yazd	3.56	218	ePn	Pb	05 04 32.0	-3.6
BSRN	Basiran	3.63	153	ePn	Pn	05 04 32.4	+3.2
ICHK	Chekchek	3.77	219	ePn	Pn	05 04 33.6	+2.5
IBAF	Bafgh	3.87	201	ePn	Pn	05 04 35.7	+3.2
ISFB	Sefidab	4.16	259	ePn	Pn	05 04 39.6	+3.2
DAMV	Damavand	4.28	277	ePn	Pn	05 04 41.3	+3.2
KRSH	Karshahi	4.35	255	ePn	Pn	05 04 40.9	+1.8
NASN	Na'in	4.37	238	ePn	Pn	05 04 43.3	+3.9
IMEH	Mehriz	4.39	210	ePn	Pn	05 04 42.6	+2.9
IMEH				e		05 06 06.5	
	comp=Z,553nm,0.6s						
ISAD	Sadrabad	4.41	222	ePn	Pn	05 04 43.2	+3.2
ISAD				e		05 06 01.6	
	comp=Z,1μm,0.6s						
IVRN	Varamin	4.48	269	ePn	Pn	05 04 43.0	+2.3
NHDN	Nehbandan	4.51	147	ePn	Pn	05 04 43.6	+2.3
IZEF	Zefreh	4.65	241	ePn	Pn	05 04 45.6	+2.3
IZEF				e		05 06 09.5	
	comp=Z,461nm,0.4s						
GHVR	GHOM	4.90	263	ePn	Pn	05 04 50.4	+3.9
CHTH	Charan	4.98	280	ePn	Pn	05 04 51.5	+3.6
QAMS	Qamsar	5.01	254	ePn	Pn	05 04 50.7	+2.5
QAMS				e		05 06 27.1	
	comp=Z,741nm,0.4s						
IKLH	Kolahrood	5.02	249	ePn	Pn	05 04 50.0	+1.7
IQOM	Qom	5.03	267	ePn	Pn	05 04 50.2	+1.7
KRBR	Kerman	5.24	184	ePn	Pn	05 04 55.5	+4.0
IRAM	Ramesheh	5.26	231	ePn	Pn	05 04 53.6	+1.9
IRAM				e		05 06 34.4	
	comp=Z,260nm,0.5s						
IPIR	Pirpir	5.81	246	ePn	Pn	05 05 03.0	+3.7
ASAO	Ashtian	5.92	265	ePn	Pn	05 05 04.3	+3.6
KHMZ	Khomeyn	6.15	258	ePn	Pn	05 05 07.3	+3.5

*IDC **25** 05:12:47.8±1.4, 21°.86S×66°.99W, h183km±22km, mb3.7/1, mbtmp3.7/3, Error ellipse: s-maj=39.3km s-min=15.1km az=112.0*
*GUC **25** 05:12:49.7±0.7, 21°.85S×67°.35W, h216km±9km, ML3.9*
*SCB **25** 05:12:53.2±1.1, 21°.79S×67°.22W, h165km±5km, ML3.0/4, MW2.8, Error ellipse: s-maj=7.4km s-min=5.5km az=0.0*

ISC 25 05:12:48.0±1.1, 21°.83S±0°.04×67°.17W±0°.05, h196km±10km, n34, σ1$60/52, **3C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.46	220	P	Pn	05 13 23.1	+1.8
MOCB	Mochara	1.54	68	P	Pn	05 13 22.9	+0.7
MOCB				S	Sn	05 13 45.6	-3.1
MOCB				IAML		05 13 49.5	
	196nm,0.4s						
LVC	Limon Verde	1.79	244	P	Pn	05 13 25.8	+1.2
	45nm,0.5s,baz=54,slow=7.3,SNR=68						
LVC				S	Sn	05 13 53.2	+0.4
	15nm,0.2s,baz=246,slow=17,SNR=23						
LVC	Limon Verde	1.79	244	⇓iP	Pn	05 13 25.8	+1.2
LVC	Limon Verde	1.79	244	P	Pn	05 13 25.6	+1.1
PB09	IPOC Station P	1.93	271	iP	Pn	05 13 27.1	+1.4
PB09				iS	Sn	05 13 55.9	+1.0
PB09				IAML		05 14 02.3	
	comp=N,84nm,0.2s						
PB01	IPOC Station P	2.30	289	iP	Pn	05 13 30.1	+0.5
PB01				iS	Sn	05 14 01.9	+0.1
PB01				IAML		05 14 02.8	
	comp=N,507nm,0.3s						
PB06	IPOC Station P	2.39	248	iP	Pn	05 13 31.3	+0.6
PB06				iS	Sn	05 14 03.6	-0.2
PB06				IAML		05 14 05.3	
	comp=E,133nm,0.2s						
PB06	IPOC Station P	2.39	248	P	Pn	05 13 31.6	+1.0
PB03	IPOC Station P	2.41	264	eP	Pn	05 13 31.9	+1.1
PB03				eS	Sn	05 14 03.4	-0.7
PB03				IAML		05 14 04.1	
	comp=N,343nm,0.1s						
PB08	IPOC Station P	2.50	312	⇓iP	Pn	05 13 33.9	+1.7
PB08				iS	Sn	05 14 06.8	+0.3
PB08				IAML		05 14 11.3	
	comp=E,114nm,0.2s						
PB07	IPOC Station P	2.53	272	iP	Pn	05 13 32.9	+0.7
PB07				iS	Sn	05 14 05.4	-1.1
PB07				IAML		05 14 07.3	
	comp=N,368nm,0.1s						
PB15	IPOC Station P	2.53	237	iP	Pn	05 13 33.2	+1.0
PB15				iS	Sn	05 14 07.0	+0.2
PB15				IAML		05 14 11.1	
	comp=N,540nm,0.3s						
PB15				IAML		05 14 13.4	
	comp=E,516nm,0.4s						
PB15	IPOC Station P	2.53	237	P	Pn	05 13 33.3	+1.0
PB04	IPOC Station P	2.81	259	iS	Sn	05 14 10.5	-1.9
PB04				IAML		05 14 14.9	
	comp=N,133nm,0.3s						
PB04	IPOC Station P	2.81	259	P	Pn	05 13 36.5	+1.1
PB04				S	Sn	05 14 08.3	-4.1
PB04				IAML		05 14 14.9	
	comp=N,115nm,0.5s						
GO01	Chusmiza	2.87	318	⇑iP	Pn	05 13 37.7	+1.3
GO01				iS	Sn	05 14 14.6	+0.4
GO01				IAML		05 14 21.6	
	comp=E,289nm,0.1s						
PATCX	Punta Patache	2.96	289	iP	Pn	05 13 37.5	+0.5
PATCX				iS	Sn	05 14 13.8	-1.6
PATCX				IAML		05 14 14.8	
	comp=E,305nm,0.2s						
TA01	Diego Aracena	3.08	294	iP	Pn	05 13 38.5	+0.1
TA01				iS	Sn	05 14 15.5	-2.3
TA01				IAML		05 14 17.1	
	comp=N,155nm,0.4s						
TA01	Diego Aracena	3.08	294	P	Pn	05 13 38.8	+0.4
PB11	IPOC Station P	3.11	311	⇑iP	Pn	05 13 39.4	+0.5
PB11				iS	Sn	05 14 17.0	-1.7
PB11				IAML		05 14 19.5	
	comp=E,406nm,0.2s						
TA02	Huaiquique	3.17	299	iP	Pn	05 13 40.0	+0.4
TA02	Huaiquique	3.17	299	P	Pn	05 13 40.7	+1.1
PB10	IPOC Station P	3.55	241	iP	Pn	05 13 44.4	+0.3
PB10				iS	Sn	05 14 24.7	-3.3
GO02	Mina Guanaco	3.99	213	⇓iP	Pn	05 13 50.7	+0.8
GO02				iS	Sn	05 14 37.0	-1.5
PB16	IPOC Station P	4.11	327	⇑iP	Pn	05 13 53.3	+1.5
PB16				iS	Sn	05 14 40.9	-0.7
PB12	IPOC Station P	4.36	317	iP	Pn	05 13 53.4	-1.0
PB12				iS	Sn	05 14 42.1	-4.4
BBOE	La Paz, Chanca	5.05	351	P	Pn	05 14 05.9	+2.3
BBOE				IAML		05 15 30.4	
	comp=E,2.8nm,1.4s						
BBOD	La Paz, Gloria	5.34	345	P	Pn	05 14 09.4	+2.1
BBOD				IAML		05 15 41.0	
	comp=E,3.8nm,2.4s						
LPAZ	La Paz	5.59	350	P	Pn	05 14 11.8	+1.3
	comp=E,1.2nm,0.5s,baz=154,slow=5.1,SNR=11						
LPAZ				S	Sn	05 15 16.4	+0.8
	comp=E,1.0nm,0.8s,baz=90,slow=16,SNR=1.5						
LPAZ	La Paz	5.59	350	P	Pn	05 14 12.6	+2.0
SIV	San Ignacio	8.19	46	P	Pn	05 14 42.1	-1.8
	comp=E,1.5nm,0.3s,baz=236,slow=9.5,SNR=19						
SIV				S	Sn	05 16 08.3	-7.6
	comp=E,1.0nm,0.2s,baz=314,slow=22,SNR=7.1						
TORD	Torodi Ar. Bea	75.95	69	P	P	05 24 14.1	+0.3
	comp=E,0.9nm,0.4s,baz=256,slow=5.7,SNR=23						
	comp=E,0.9nm,0.4s						
MKAR	Makanchi Array	144.93	37	PKP	PKPbc	05 32 02.7	+1.3
	comp=E,0.6nm,0.6s,baz=323,slow=3.8,SNR=3.9						

*NEIC **25** 05:16:54.2±1.7, 12°.961S±0°.009×166°.9E±0°.1, h123km±8km, mb4.6/20, Error ellipse: s-maj=19.1km s-min=1.3km az=91.0*
*IDC **25** 05:16:54.1±3.2, 12°.94S×166°.75E, h117km±26km, mb4.2/16, mbtmp4.5/17, MS3.4/3, Error ellipse: s-maj=25.3km s-min=14.5km az=97.0*
*NOU **25** 05:17:04.9, 13°.64S×167°.01E, h207km, mb4.6/15, Vanuatu Islands*

ISC 25 05:16:59.9±0.5, 13°.22S±0°.06×166°.89E±0°.10, h180km, n83, σ1$37/83, **mb4.5/26, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	4.65	165	P	Pn	05 18 09.9	+0.6
RTV	Rentapao	4.78	162	P	Pn	05 18 10.3	-0.7
LIFNC	LIFOU	7.52	178	Pn	Pn	05 18 43.3	-3.6
LIFNC	LIFOU	7.52	178	P	Pn	05 18 44.4	-2.5
KOUNC	Koumac, New Ca	7.71	199	Pn	Pn	05 18 48.0	-1.3
KOUNC	Koumac, New Ca	7.71	199	P	Pn	05 18 49.8	+0.5
HNR	Honiara	7.78	298	P	Pn	05 18 40.3	-10
	2μm,0.3s,baz=220,slow=8.1,SNR=5.1						
HNR	Honiara	7.78	298	Pn	Pn	05 18 41.8	-8.6
MARNC	Mare, Loyalty	8.29	173		Pn	05 18 54.5	-2.4
YATNC	Mamie plateau,	8.79	180	P	Pn	05 19 01.7	-1.9
DZM	Mont Dzumac	8.81	183	ePn	Pn	05 19 01.3	-2.7
	111nm,1.1s						
DZM				eSn	Sn	05 20 33.3	-9.3
	45nm,0.8s						
DZM	Mont Dzumac	8.81	183	P	Pn	05 19 03.2	-0.8
	36nm,0.7s,baz=22,slow=2.9,SNR=169						
DZM				S	Sn	05 20 39.0	-3.6
	21nm,0.5s,baz=154,slow=22,SNR=5.8						
DZM	Mont Dzumac	8.81	183	Pn	Pn	05 19 02.6	-1.4
DZM	Mont Dzumac	8.81	183	P	Pn	05 19 04.0	0.0
NOUC	Port Laguerre	8.85	184	P	Pn	05 19 05.0	+0.6
ONTNC	Ouen Toro	9.05	183	Pn	Pn	05 19 06.2	-0.8
ONTNC					Sn	05 20 46.9	-1.1
ONTNC	Ouen Toro	9.05	183	P	Pn	05 19 06.9	-0.1
OUENC	Ouen Island, N	9.15	180	Pn	Pn	05 19 07.5	-0.8
OUENC					Sn	05 20 50.9	+0.5
OUENC	Ouen Island, N	9.15	180	P	Pn	05 19 08.2	-0.1
EIDS	Eidsvold	19.18	229	P	P	05 21 09.9	0.0
EIDS	Eidsvold	19.18	229	P	Pn	05 21 11.6	-1.3
TV1H	Townsville Har	20.20	250	P	Pn	05 21 24.1	-1.1
CTA	Charters Tower	20.91	248	P	P	05 21 28.3	-0.2
	25nm,0.8s,baz=68,slow=10,SNR=14						
CTA				LR	LR	05 28 57.1	
	comp=Z,87nm,18.8s,baz=83,slow=35						
	25nm,0.8s						
CTAO	Charters Tower	20.91	248	P	P	05 21 27.2	-1.3
CTAO	Charters Tower	20.91	248	P	P	05 21 30.4	+1.9
RAO	Raoul Island	21.29	141	P	P	05 21 31.4	-1.0
	222nm,0.8s						
RMQ	Roma	21.53	229	P	P	05 21 35.8	+0.8
	28nm,0.9s						
ARMA	Armidale	22.18	217	P	P	05 21 42.0	+0.4
COEN	Coen	23.07	265	P	P	05 21 49.4	-0.4
STKA	Stephens Creek	29.72	227	P	P	05 22 50.5	+1.2
	5.4nm,0.7s,baz=49,slow=8.5,SNR=11						
STKA				PcP	PcP	05 25 50.5	+1.7
	0.6nm,0.3s,baz=144,slow=4.0,SNR=3.6						
	5.4nm,0.7s						
WR0	Warramunga Arr	31.68	253	P	P	05 23 03.7	-3.0
WR0				IAmb	IAmb	05 23 05.8	
	comp=Z,6.1nm,0.7s						
WB0	Warramunga Arr	31.80	254	P	P	05 23 05.5	-2.2
WB2	Warramunga Arr	31.86	253	P	P	05 23 06.0	-2.2
WB2				IAmb	IAmb	05 23 07.8	
	comp=Z,8.8nm,0.7s						
WRAB	Tennant Creek	31.86	254	P	P	05 23 06.9	-1.3
WRAB				IAmb	IAmb	05 23 07.7	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	31.87	253	P	P	05 23 07.0	-1.3
	comp=Z,7.7nm,0.6s,baz=85,slow=9.3,SNR=119						
	comp=Z,7.7nm,0.6s						
WRA	Warramunga Arr	31.87	253	P	P	05 23 06.1	-2.2
AS31	Alice Springs	32.90	247	P	P	05 23 16.4	-0.9
AS31				IAmb	IAmb	05 23 17.7	
	comp=Z,7.1nm,0.6s						
ASAR	Alice Springs	32.90	247	P	P	05 23 16.6	-0.7
	comp=Z,19nm,0.7s,baz=69,slow=9.9,SNR=199						
ASAR				PcP	PcP	05 25 58.3	+0.7
	comp=Z,0.8nm,0.6s,baz=103,slow=2.0,SNR=4.6						
ASAR				LR	LR	05 35 21.6	
	comp=Z,88nm,18.8s,baz=355,slow=34						
	comp=Z,19nm,0.7s						
ASAR	Alice Springs	32.90	247	P	P	05 23 16.5	-0.8
GUMO	Guam	34.44	320	LR	LR	05 38 13.5	
	comp=Z,44nm,18.1s,baz=128,slow=38						
MTN	Manton Dam	34.82	266	P	P	05 23 32.0	-1.9
KNRA	Kununurra	36.97	261	P	P	05 23 51.6	-0.6
FORT	Forrest	39.77	238	P	P	05 24 16.1	+0.7
PSA00	Pilbara Seismi	45.52	253	P	P	05 25 02.1	+0.3
PSA00				IAmb	IAmb	05 25 03.3	
	comp=Z,20nm,1.0s						
MBWA	Marble Bar	45.61	253	P	P	05 25 03.1	+0.6
MORW	Morawa	49.61	243	P	P	05 25 33.1	-0.1
KKM	Kota Kinabalu	53.85	288	P	P	05 26 04.5	-0.4
KKM	Kota Kinabalu	53.85	288	P	P	05 26 05.0	+0.1
	comp=Z,35nm,1.4s						
MJAR	Matsushiro Arr	56.41	332	P	P	05 26 20.4	-2.3
	comp=Z,2.7nm,0.6s,baz=168,slow=8.7,SNR=8.7						
	comp=Z,2.7nm,0.6s						
KSRS	Korea Array	62.29	326	P	P	05 27 01.5	-1.5
	comp=Z,2.4nm,0.6s,baz=150,slow=7.4,SNR=7.0						
	comp=Z,2.4nm,0.6s						
VNDA	Vanda	64.35	181	P	P	05 27 18.4	+2.4
	comp=Z,0.5nm,0.7s,baz=360,slow=11,SNR=2.2						
	comp=Z,0.5nm,0.7s						
USRK	Ussuriysk Ar.	65.38	333	P	P	05 27 23.0	0.0
	comp=Z,4.7nm,0.7s,baz=120,slow=5.1,SNR=7.0						
	comp=Z,4.7nm,0.7s						
USRK	Ussuriys

MKAR	Makanchi Array	95.86	317	P	P	05 30 05.6	-0.4
ZALV	Zalesovo Beam	95.96	324	P	P	05 30 04.7	-1.5
	comp=Z,1.5nm,0.6s,baz=123,slow=5.5,SNR=7.0						
	comp=Z,1.5nm,0.6s						
KSH	Kashi	98.98	308	P	Pdif	05 30 26.8	+6.5
ARCES	ARCESS Array B	118.71	346	PKP	PKiKP	05 35 26.3	+0.3
	comp=Z,1.6nm,0.7s,baz=54,slow=2.1,SNR=5.1						
ESDC	Sonseca Array	152.44	345	PKPab	PKPab	05 36 46.4	+0.6
	comp=Z,1.7nm,0.6s,baz=13,slow=3.9,SNR=16						
TORD	Torodi Ar. Bea	165.59	271	PKPab	PKPab	05 37 44.0	+0.4
	comp=Z,1.4nm,0.8s,baz=87,slow=5.3,SNR=7.7						

ASRS 25 05:26:36.1±0.2, 52°N±1°×9°6E±°, h9km, MLh3.5/12, Error ellipse: s-maj=3.0km s-min=2.3km az=7.1, confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.93	259	Pg	Pn	05 26 59.8	+4.6
KZLR				Sg	Sn	05 27 11.8	+3.1
ARDR	Aradan	1.67	295	Pg	Pg	05 27 13.0	+4.8
ARDR				Sg	Sg	05 27 35.7	+5.9
ERNS	Erzin	1.70	197	Pg	Pg	05 27 11.6	+2.9
ERNS				Sg	Sg	05 27 33.5	+2.8
DJOS	Djoyskaya Sosn	2.91	290	Sg	Sg	05 28 14.5	+5.0
CERR	Cheremushki	2.92	291	Pg	Pg	05 27 33.9	+1.9
CERR				Sg	Sg	05 28 14.2	+4.4
DJO	Djoy, Khakassi	3.01	289	Pg	Pg	05 27 36.5	+2.7
DJO				Sg	Sg	05 28 15.8	+3.0
MOY	Mondy	3.17	92	Pg	Pg	05 27 37.7	+1.0
MOY				Sg	Sg	05 28 19.0	+1.3
MINR	Mina	3.18	342	Pg	Pg	05 27 42.7	+5.7
MINR				Sg	Sg	05 28 25.0	+6.9
SHTK	Zheleznogorsk-	4.65	344	Pg	Pg	05 28 05.3	+0.2
SHTK				Sg	Sg	05 29 04.4	-0.9
GZLN	Zheleznogorsk	4.67	345	Pg	Pg	05 28 07.2	+1.8
GZLN				Sg	Sg	05 29 06.7	+0.9
ZAK	Zakamensk	4.88	105	Pg	Pg	05 28 08.8	-0.7
ZAK				Sg	Sg	05 29 13.9	+1.2
TASR	Tashtagol	5.00	283	Pg	Pg	05 28 12.0	+0.2
TASR				Sg	Sg	05 29 18.0	+1.4
CUR	Chagan-Uzun	5.10	252	Pg	Pg	05 28 16.3	+2.6
CUR				Sg	Sg	05 29 18.7	-1.1
ULGR	Ulagan, Altay	5.15	259	Pg	Pg	05 28 15.4	+0.7
ULGR				Sg	Sg	05 29 21.5	0.0
ARTR	Artybash	5.35	272	Sg	Sg	05 29 29.9	+2.1
CHBI	Chibit, Altay	5.53	257	Sg	Sg	05 29 36.8	+3.4
DGZ	Jazzator, Alta	5.81	251	Pg	Pg	05 28 30.4	+3.1
DGZ				Sg	Sg	05 29 43.4	+1.0
BRCR	Berchikul'	5.86	313	Pg	Pg	05 28 28.9	+0.7
BRCR				Sg	Sg	05 29 49.9	+5.9
ELT	Eltsovka	6.05	287	Pg	Pg	05 28 31.1	-0.8
ELT				Sg	Sg	05 29 52.8	+2.5

IDC 25 05:44:56.5±379.0, 67°44N×39°05E, h0km, Error ellipse: s-maj=153.2km s-min=35.8km az=111.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	I37NO	7.75	292	I		06 33 30.0	
	baz=92,slow=329,SNR=2.9						
I31KZ	AKTYUBINSK INF	19.53	142	I		07 46 10.0	
	baz=339,slow=331,SNR=1.8						
I46RU	ZALESOVO INFRA	25.41	99	I		08 22 50.0	
	baz=319,slow=329,SNR=1.7						

*GUC **25** 05:58:29.4±0.6, 19°.98S×71°.04W, h38km±3km, ML3.8*
*IDC **25** 05:58:36.4±4.2, 20°.15S×70°.41W, h68km±28km, mb3.5/2, mbtmp3.7/5, ML3.4/3, MS2.2/1, Error ellipse: s-maj=70.2km s-min=23.4km az=104.0*

ISC 25 05:58:26.5±3.5, 20°.03S±0°.04×71°.10W±0°.08, h14km±22km, n27, σ0°92/32, 14C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.94	105	⇑iP	Pb	05 58 44.8	+0.1
TA02				i S	Sb	05 58 56.7	-0.4
TA02				IAML		05 58 58.5	
	comp=N,13μm,0.2s						
TA01	Diego Aracena	1.02	122	⇑iP	Pb	05 58 46.1	+0.2
TA01				i S	Sb	05 58 58.9	-0.3
TA01				IAML		05 59 01.6	
	comp=N,3μm,0.3s						
PATCX	Punta Patache	1.19	132	⇑iP	Pn	05 58 48.8	-0.1
PATCX				IAML		05 59 13.4	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.39	79	⇑iP	Pn	05 58 51.4	-0.2
PB11				i S	Sn	05 59 08.7	-1.1
PB11				IAML		05 59 14.8	
	comp=E,4μm,0.4s						
PB12	IPOC Station P	1.58	28	⇑iP	Pn	05 58 54.1	-0.1
PB12				i S	Sn	05 59 13.1	-1.4
PB12				IAML		05 59 21.7	
	comp=N,1μm,0.5s						
AP01	Chacalluta	1.79	24	eP	Pn	05 58 58.4	+1.3
AP01				IAML		05 59 29.7	
	comp=N,2μm,0.4s						
PB01	IPOC Station P	1.82	124	⇑iP	Pn	05 58 58.0	+0.5
PB01				i S	Sn	05 59 20.0	-0.5
PB01				IAML		05 59 30.4	
	comp=E,2μm,0.4s						
GO01	Chusmiza	1.83	79	⇑iP	Pn	05 58 58.3	+0.3
GO01				i S	Sn	05 59 20.8	-0.4
GO01				IAML		05 59 27.1	
	comp=N,3μm,0.4s						
PB08	IPOC Station P	1.84	94	⇑iP	Pn	05 58 58.2	+0.2
PB08				i S	Sn	05 59 20.9	-0.3
PB08				IAML		05 59 26.1	
	comp=E,1μm,0.3s						
PB07	IPOC Station P	2.04	146	⇑iP	Pn	05 59 00.8	+0.2
PB07				IAML		05 59 43.1	
	comp=E,2μm,0.9s						
PB16	IPOC Station P	2.26	42	⇑iP	Pn	05 59 04.4	+0.5
PB16				i S	Sn	05 59 33.5	+1.6
PB16				IAML		05 59 44.3	
	comp=E,843nm,0.7s						
PB03	IPOC Station P	2.38	148	⇑iP	Pn	05 59 05.4	+0.2
PB03				IAML		05 59 57.5	
	comp=N,430nm,0.5s						
PB04	IPOC Station P	2.46	159	i P	Pn	05 59 06.3	-0.1
PB09	IPOC Station P	2.48	136	⇑iP	Pn	05 59 08.1	+1.5
PB09				i S	Sn	05 59 37.8	+1.0
PB09				IAML		05 59 54.0	
	comp=N,948nm,0.5s						
PB06	IPOC Station P	3.02	152	⇑iP	Pn	05 59 14.1	0.0
PB06				IAML		06 00 12.7	
	comp=E,346nm,0.6s						
LVC	Limon Verde	3.29	142	P	Pn	05 59 19.9	+2.0
	comp=E,6.4nm,0.3s,baz=311,slow=9.8,SNR=58						
LVC				S	Sn	05 59 57.5	+0.5
	comp=E,82nm,0.4s,baz=110,slow=17,SNR=9.2						
LVC				LR	LR	06 00 17.4	
	comp=E,46nm,21.2s,baz=302,slow=36						
	comp=E,28nm,0.5s						
LVC	Limon Verde	3.29	142	⇑iP	Pn	05 59 19.6	+1.7
PB10	IPOC Station P	3.51	172	i P	Pn	05 59 20.0	-0.7
PB15	IPOC Station P	3.51	155	i P	Pn	05 59 20.7	-0.2
LPAZ	La Paz	4.67	38	P	Pn	05 59 42.5	+5.3
	comp=E,0.9nm,0.3s,baz=230,slow=8.6,SNR=23						
	comp=E,1.9nm,0.3s						
SIV	San Ignacio	10.35	69	P	Pn	06 00 52.8	-1.9
	comp=E,0.1nm,0.3s,baz=271,slow=7.9,SNR=17						
	comp=E,2.0nm,0.5s						
H03N1	Juan Fernandez	15.06	206	T	T	06 17 45.7	
	baz=33,slow=72,SNR=86						
H03N2	Juan Fernandez	15.07	206	T	T	06 17 44.2	
	baz=33,slow=72,SNR=28						
H03N3	Juan Fernandez	15.08	206	T	T	06 17 44.2	
	baz=33,slow=72,SNR=36						
PLCA	Paso Flores	20.65	179	P	Pn	06 03 09.2	+1.1
	comp=E,1.0nm,0.7s,baz=344,slow=11,SNR=3.9						
	comp=E,1.0nm,0.7s						
TORD	Torodi Ar. Bea	78.82	72	P	P	06 10 29.4	-0.1
	comp=E,3.0nm,0.9s,baz=252,slow=5.8,SNR=13						
	comp=E,3.0nm,0.9s						
MKAR	Makanchi Array	145.58	33	PKPbc	PKPab	06 18 05.6	+0.7
	comp=E,1.3nm,0.9s,baz=340,slow=2.6,SNR=7.9						

*IDC **25** 06:35:51.2±2.0, 34°.25N×141°.78E, h0km, mb3.4/3, mbtmp3.4/4, ML2.6/1, Error ellipse: s-maj=36.7km s-min=24.4km az=63.0*
*JMA **25** 06:35:52.1±0.6, 34°N-2°×14°2E±°, h31km±3km, MV3.1/29, FAR SE OFF BOSO PEN*

ISC 25 06:35:55.6±1.5, 34°.27N±0°.06×141°.8E±0°.1, h35km, n13, σ1°34/17, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.77	300	P	Pn	06 36 07.6	-1.9
BSO3	Boso 3	1.18	297	P	Pn	06 36 14.4	-1.0
BSO4	Boso 4	1.40	302	P	Pn	06 36 18.3	-0.2
JKUC	kamogawauchiur	1.58	305	P	Pn	06 36 20.4	-0.8
CHOJ	Chosi	1.62	332	eP	Pn	06 36 20.5	-1.2
CHOJ				eS	Sn	06 36 40.6	-0.8
JMKN	Mikurajimanish	1.86	259	eP	Pn	06 36 23.0	-2.0
JIM2	Oshima 3	2.00	284	eP	Pn	06 36 24.9	-2.0
JHJ	Hachijo jima 2	2.02	236	Pn	Pn	06 36 26.9	-0.4
	17nm,0.3s,baz=308,slow=18,SNR=5.8						
JHJ				Sn	Sn	06 36 51.9	+0.6
	39nm,0.3s,baz=87,slow=21,SNR=4.2						
JOD2	Odawara 2	2.43	295	P	Pn	06 36 31.9	-1.1
JOD2				eS	Sn	06 37 02.3	+0.8
MJAR	Matsushiro Arr	3.70	309	Pn	Pn	06 36 50.7	+0.4
	0.5nm,0.3s,baz=136,slow=14,SNR=6.6						
MJAR				Sn	Sn	06 37 35.3	+2.6
	0.5nm,0.3s,baz=126,slow=27,SNR=6.8						
	3.1nm,0.4s						
MKAR	Makanchi Array	45.89	304	P	P	06 44 14.5	-0.1
	0.2nm,0.5s,baz=88,slow=12,SNR=1.7						
	0.2nm,0.5s						
WRA	Warramunga Arr	54.37	189	P	P	06 45 19.7	+0.6
	0.3nm,0.4s,baz=1.6,slow=7.5,SNR=12						
	0.3nm,0.4s						
ASAR	Alice Springs	58.10	189	P	P	06 45 46.1	+0.5
	0.2nm,0.4s,baz=8.0,slow=6.5,SNR=2.3						
	0.2nm,0.4s						

IDC 25 06:42:29.6±2.2, 4°.46N×127°.68E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=156.6km s-min=28.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.11	165	P	P	06 47 57.1	+0.7
	0.9nm,1.0s,baz=344,slow=10.0,SNR=6.5						
	0.9nm,1.0s						
ASAR	Alice Springs	28.60	168	P	P	06 48 28.5	+0.7
	0.3nm,0.6s,baz=354,slow=8.4,SNR=4.4						
	0.3nm,0.6s						
STKA	Stephens Creek	38.48	161	P	P	06 49 51.8	-1.8
	1.3nm,0.5s,baz=322,slow=14,SNR=2.0						
	1.3nm,0.5s						
MKAR	Makanchi Array	57.51	325	P	P	06 52 20.8	0.0
	0.3nm,0.7s,baz=134,slow=6.2,SNR=2.3						
	0.3nm,0.7s						

*SJA **25** 07:18:14.6±0.6, 26°.68S×71°.51W, h8km±6km, ML4.9, MW4.6*
*NEIC **25** 07:18:18.6, 26°.71S×71°.01W, h31km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.03; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-2.04; $M_{r\theta}$0.65; $M_{\phi\theta}$0.19; $M_{\phi r}$-2.44; Fault plane solution: $M_0$3.25000×10^{16} NP1:ϕ_s167.27000°, δ70.60000°, λ85.03000°. NP2:ϕ_s1.94000°, δ20.01000°, λ103.82000°. Principal axes: T 3.2542, Plg64.0000°, Azm69.0000°; N -0.0052, Plg5.0000°, Azm169.0000°; P -3.2490, Plg25.0000°, Azm261.0000°;*
*MOS **25** 07:18:20.7±1.1, 26°.58S×70°.85W, h23km, mb5.4/28 Error ellipse: s-maj=14.6km s-min=8.1km az=99.8*
*NEIC **25** 07:18:20.1±2.7, 26°.70S±0°.05×71°.07W±0°.06, h10km±1km, mb5.3/92, Mwr4.9/54, Mww5.0, Mwr5.0(GUC), Error ellipse: s-maj=8.6km s-min=7.7km az=97.0*
*GUC **25** 07:18:22.1±0.8, 26°.73S×70°.88W, h27km±3km, ML4.8*
*NEIC **25** 07:18:23, 26°.74S×71°.06W, h24km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.27; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-2.36; $M_{r\theta}$0.69; $M_{\phi\theta}$0.79; $M_{\phi r}$-3.17; Fault plane solution: $M_0$4.06000×10^{16} NP1: ϕ_s339.00000°, δ19.00000°, λ82.00000°. NP2: ϕ_s167.00000°, δ72.00000°, λ92.00000°. Principal axes: T 3.8947, Plg63.0000°, Azm81.0000°; N 0.3183, Plg2.0000°, Azm346.0000°; P -4.2129, Plg27.0000°, Azm255.0000°;*
*IDC **25** 07:18:23.8±3.0, 26°.67S×70°.68W, h36km±23km, mb4.7/18, mbtmp4.8/24, ML4.0/6, MS4.3/51 Error ellipse: s-maj=17.8km s-min=12.3km az=70.0*
*BJI **25** 07:18:24.0±0.0, 26°.70S×70°.90W, h15km, mB5.0/4, Ms5.1/6, Ms7 4.8/9*
*GCMT **25** 07:18:27.1±0.2, 26°.76S±0°.02×71°.26W±0°.02, h30km, MW5.1/102, Moment Tensor Solution. s68,c87; s102,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.90±.17; $M_{\theta\theta}$-0.02±.10; $M_{\phi\phi}$-4.88±.12; $M_{r\theta}$1.13±.13; $M_{\phi\theta}$1.17±.07; $M_{\phi r}$-3.84±.19; Best double couple: $M_0$6.42300×10^{16} NP1:ϕ_s165.00000°, δ64.00000°, λ88.00000°. NP2:ϕ_s350.00000°, δ26.00000°, λ94.00000°. Principal axes: T 6.3040, Plg71.0000°, Azm70.0000°; N 0.2420, Plg2.0000°, Azm166.0000°; P -6.5430, Plg19.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 07:18:20.4±0.8, 26°.74S±0°.02×70°.97W±0°.04, h17km±4km, n613, σ1°25/625, mb5.2/79, MS4.4/54, 14C-9D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.68	29	Pg	Pg	07 18 34.1	+0.3
AC01	Pan de Azucar	0.68	29	eP	Pg	07 18 34.5	+0.7
AC01				eS	Sg	07 18 43.2	+0.5
AC01				IAML		07 18 45.6	
	comp=N,54μm,0.3s						
AC06	Mina Casimiro	0.82	139	Pg	Pb	07 18 36.4	+0.1
AC06	Mina Casimiro	0.82	139	eP	Pg	07 18 36.8	+0.3
AC06				eS	Sg	07 18 47.4	0.0
AC06				IAML		07 18 50.5	
	comp=N,62μm,0.2s						
GO03	Copiap	1.07	143		Pn	07 18 40.9	+0.1
GO03	Copiap	1.07	143	⇓iP	Pn	07 18 40.8	+0.1
GO03				eS	Sb	07 18 54.5	+0.1
GO03				IAML		07 18 57.8	
	comp=N,49μm,0.3s						
AC04	Llanos de Chal	1.46	184	⇓iP	Pn	07 18 45.4	-0.7
AC04				eS	Sn	07 19 02.6	-2.2
AC04				IAML		07 19 07.1	
	comp=E,13μm,0.7s						
AC04	Llanos de Chal	1.46	184	eP	Pg	07 18 58.3	+10
AC04				IAML		07 19 36.1	
	comp=Z,4μm,0.7s						
AC02	Maricunga	1.65	94	Pn	Pb	07 18 50.8	+0.1
AC02	Maricunga	1.65	94	⇓iP	Pb	07 18 50.7	+0.1
AC02				eS	Sb	07 19 11.4	+0.1
AC02				IAML		07 19 15.6	
	comp=E,25μm,0.3s						
GO02	Mina Guanaco	2.00	39	Pn	Pn	07 18 54.9	+1.2
GO02	Mina Guanaco	2.00	39	⇑iP	Pn	07 18 54.9	+1.2
GO02				eS	Sb	07 19 21.3	0.0
GO02				IAML		07 19 33.4	
	comp=E,30μm,0.6s						
PB14	IPOC Station P	2.17	14	Pn	Pn	07 18 55.3	-0.6
PB14	IPOC Station P	2.17	14	eP	Pn	07 18 55.4	-0.6
PB14				eS	Sb	07 19 25.2	-0.8
PB14				IAML		07 19 33.7	
	comp=E,5μm,0.5s						
PB14	IPOC Station P	2.17	14	eP	Pn	07 18 55.1	-0.9
PB14				eS	Sb	07 19 25.4	-0.6
PB14				IAML		07 19 33.0	
	comp=Z,11μm,1.2s						
AC05	El Transito	2.18	164	eP	Pn	07 18 57.9	+1.9
AC05				eS	Sb	07 19 25.6	-0.7
AC05	El Transito	2.18	164	eP	Pn	07 18 57.6	+1.6
AC05				eS	Sb	07 19 28.0	+1.7
AC05				IAML		07 19 39.8	
	comp=Z,18μm,0.8s						
LCO	Las Campanas	2.28	174		Pn	07 18 58.3	+0.8
LCO	Las Campanas	2.28	174	P	Pn	07 18 58.3	+0.8
CO05	La Serena	3.18	184	Pn	Pn	07 19 09.4	-0.2
PB10	IPOC Station P	3.23	7	Pn	Pn	07 19 08.8	-1.7
PB10	IPOC Station P	3.23	7	eP	Pn	07 19 08.7	-1.7
PB10				eS	Sn	07 19 49.4	+0.9
PB10				IAML		07 20 21.0	
	comp=Z,3μm,1.4s						
CO01	Juntas del Tor	3.32	167	eP	Pn	07 19 13.9	+2.1
CO01				eS	Sn	07 19 54.6	+3.6
CO01				IAML		07 20 11.5	
	comp=E,4μm,0.8s						
AROD	Rodeo	3.66	159	eP	Pn	07 19 19.2	+2.6
AROD				eS	Sb	07 20 06.4	-2.7
PB15	IPOC Station P	3.77	21	eP	Pn	07 19 18.4	+0.4
PB15				eS	Sn	07 20 05.8	+3.7
LVC	Limon Verde	4.52	25	Pn	Pn	07 19 28.5	+0.1
	comp=E,19nm,0.3s,baz=168,slow=9.1,SNR=130						
LVC				Sn	Sb	07 20 32.7	-1.1
	comp=E,293nm,0.3s,baz=344,slow=23,SNR=14						
LVC				LR	LR	07 21 28.4	
	comp=E,6μm,21.6s,baz=232,slow=42						
	comp=E,52nm,0.4s						
PB09	IPOC Station P	5.17	18		Pn	07 19 36.8	-0.3
PATCX	Punta Patache	5.94	7		Pn	07 19 44.8	-2.9
MT02	Curacav	6.50	181		Pn	07 19 54.8	-0.5
BO02	Sierra Bellavi	8.03	179		Pn	07 20 16.1	-0.3
AP01	Chacalluta	8.35	4	Pn	Pn	07 20 17.8	-2.9
ML02	Panimavida	9.00	182		Pn	07 20 28.0	-1.7
H03N1	Juan Fernandez	9.59	224	T	T	07 30 28.9	
	baz=51,slow=71,SNR=2662						
H03N2	Juan Fernandez	9.60	224	T	T	07 30 24.3	
	baz=51,slow=71,SNR=3935						
H03N3	Juan Fernandez	9.60	224	T	T	07 30 22.1	
	baz=51,slow=71,SNR=3699						
VA04	Juan Fernndez	9.67	223		Pn	07 20 34.4	-4.4
LPAZ	La Paz	10.73	15	Pn	Pn	07 20 53.5	-0.4
	comp=E,2.0nm,0.3s,baz=196,slow=7.1,SNR=107						
LPAZ				Sn	Sn	07 22 58.5	+4.5
	baz=174,slow=10						
LPAZ				LR	LR	07 25 28.5	
	comp=E,3μm,19.2s,baz=186,slow=40						
	comp=E,11nm,0.5s						
LPAZ	La Paz	10.73	15	Pn	Pn	07 20 53.1	-0.8
LPAZ	La Paz	10.73	15	eP	Pn	07 20 53.2	-0.7
CPUP	Villa Florida	12.22	91	Pn	Pn	07 21 11.3	-2.4
	baz=270,slow=12,SNR=3.7						
CPUP				Sn	Sn	07 23 32.2	+2.7
	comp=E,0.3nm,0.3s,baz=229,slow=13,SNR=1.8						
CPUP				LR	LR	07 26 20.1	
	comp=E,2μm,19.9s,baz=268,slow=40						
	comp=E,5.7nm,1.1s						
CPUP	Villa Florida	12.22	91		Pn	07 21 13.7	0.0
CPUP	Villa Florida	12.22	91	P	Pn	07 21 13.7	0.0
GO06	Curarrehue	12.82	182	Pn	Pn	07 21 25.4	+3.4
ITQB	Itaqui	12.98	106	Pn	Pn	07 21 25.9	+1.7
LPA	La Plata	13.84	129	deP	Pn	07 21 35.7	-0.1
LPA				PPP	PPP	07 22 28.4	
LPA				S	Sn	07 24 08.0	-1.0
LPA				SSS	SSS	07 24 40.7	
LPA				SS	SbSb	07 26 00.3	+54
PLCA	Paso Flores	13.96	179	Pn	Pn	07 21 38.9	+1.3
	comp=E,0.1nm,0.3s,baz=1.9,slow=12,SNR=5.1						
PLCA				Sn	Sn	07 24 22.7	+11
	baz=18,slow=9.6,SNR=2.0						
PLCA				LR	LR	07 27 23.0	
	comp=E,4μm,19.1s,baz=353,slow=38						
	comp=E,1.6nm,0.9s						
PLCA	Paso Flores	13.96	179		Pn	07 21 34.4	-3.2
PLCA	Paso Flores	13.96	179	P	Pn	07 21 34.4	-3.2
SIV	San Ignacio	14.11	43	Pn	Pn	07 21 36.0	-3.6
	comp=E,0.1nm,0.3s,baz=242,slow=7.9,SNR=27						
SIV				Sn	Sn	07 24 10.7	-5.2
	baz=227,slow=18,SNR=1.0						
SIV				LR	LR	07 27 55.3	
	comp=E,2μm,20.6s,baz=232,slow=41						
	comp=E,3.8nm,0.4s						
LL04	Puerto Octay	14.19	184		Pn	07 21 36.8	-3.7
AQDB	Aquidauana	15.31	69	Pn	Pn	07 21 54.2	-1.6
NNA	Nana	15.68	338	Pn	Pn	07 22 02.7	+2.0
	comp=E,0.8nm,0.3s,baz=189,slow=7.1,SNR=3.6						
NNA				LR	LR	07 26 49.1	
	comp=E,906nm,21.2s,baz=167,slow=32						
	comp=E,8.8nm,0.7s						
NNA	Nana	15.68	338	ceP	Pn	07 21 58.7	-2.0
NNA				pmax	pmax		
	comp=Z,40nm,1.7s						
ITAB	Concordia	16.80	96	P	Pn	07 22 15.1	+0.2
TRCB	Terra Rica	17.11	81	P	Pn	07 22 17.5	-1.3
ATAH	Atahualpa	20.74	339	P	Pn	07 23 02.9	-0.2
	comp=Z,16nm,0.9s,baz=167,slow=10,SNR=9.5						
ATAH				LR	LR	07 29 48.6	
	comp=Z,534nm,19.7s,baz=161,slow=33						
	comp=Z,16nm,0.9s						
BDFB	Brasilia	24.04	67	P	P	07 23 32.8	-2.1
	comp=Z,64nm,1.1s,baz=249,slow=9.0,SNR=38						
	comp=Z,64nm,1.1s						
BDFB	Brasilia	24.04	67	P	P	07 23 32.9	-2.0
BDFB				IAmb	IAmb	07 23 46.7	
	comp=Z,92nm,0.9s						
BDFB	Brasilia	24.04	67	P	P	07 23 32.9	-2.0
BDFB				pmax	pmax		
	comp=Z,92nm,0.9s						
ARNL	Arenillas	24.65	338	P	P	07 23 41.5	+1.2
COHC	Cochancay	25.41	340	P	P	07 23 48.7	+1.4
COHC	Cochancay	25.41	340	eP	P	07 23 48.6	+1.4
PTLC	Puerto Leguiza	27.01	352	eP	P	07 23 58.3	-3.4
IMBA	Imbabura, San	27.75	344	P	P	07 24 12.1	+3.3
IMBA				IAmb	IAmb	07 24 40.5	
	comp=Z,60nm,1.0s						
TULM	Tulcn-Chalpat	28.08	345	P	P	07 24 13.7	+2.0
BBAC	Balboa, Cauca	29.23	347	eP	P	07 24 23.5	+1.8
PRAC	Prado	30.51	352	eP	P	07 24 34.1	+1.3
ORTC	Ortega, Tolima	30.75	352	eP	P	07 24 36.1	+1.1
PTGC	Puerto Gaitan,	30.78	358	eP	P	07 24 36.1	+0.9
YOTC	Yotoco, Valle	30.98	350	eP	P	07 24 38.0	+0.9
CHIC	Chingaza	31.30	355	eP	P	07 24 40.9	+0.7
ROSC	El Rosal	31.56	354	P	P	07 24 44.1	+1.6
	comp=Z,26nm,0.9s,baz=151,slow=14,SNR=12						
ROSC				LR	LR	07 38 31.1	
	comp=Z,613nm,18.8s,baz=207,slow=38						
	comp=Z,26nm,0.9s						
ROSC	El Rosal	31.56	354	P	P	07 24 44.6	+2.1
ROSC				IAmb	IAmb	07 24 48.0	
	comp=Z,33nm,0.9s						
ROSC	El Rosal	31.56	354	P	P	07 24 44.6	+2.1
ROSC				pmax	pmax		
	comp=Z,33nm,1.0s						
GUY2C	Guyana, Caldas	32.06	352	eP	P	07 24 47.7	+0.7
NORC	Norcasia	32.33	353	eP	P	07 24 50.6	+1.7
SPBC	San Pablo de B	32.34	354	eP	P	07 24 50.6	+1.

COVE	Coope Vega, Sa	39.45 339	P	P	07 25 51.1	+1.2
COVE			IAmb	IAmb	07 25 53.0	
comp=Z,82nm,0.9s						
ORTG	Ortega, Santa	39.47 337	P	P	07 25 51.7	+1.5
GRGR	Grenville	39.68 14	P	P	07 25 50.7	-1.1
GRGR			IAmb	IAmb	07 25 51.4	
comp=Z,94nm,0.9s						
ACON	Acoyapa	40.88 338	P	P	07 26 01.4	-0.3
MLPR	Magueyes Islan	44.60 5	P	P	07 26 30.6	-1.2
MLPR			IAmb	IAmb	07 26 47.4	
comp=Z,30nm,1.2s						
MTO3	Montecristo	44.63 334	P	P	07 26 33.1	+0.8
CELP	Cerrillos	44.75 6	P	P	07 26 32.2	-0.9
CELP			IAmb	IAmb	07 26 49.7	
comp=Z,39nm,1.3s						
SJG	San Juan	44.83 7	LR	LR	07 46 52.1	
comp=Z,249nm,20.6s,baz=184,slow=38						
CMIG	Matias Romero	49.37 329	LR	LR	07 43 35.9	
comp=Z,135nm,21.3s,baz=176,slow=31						
BELA	Belgrano 2	53.87 171	P	P	07 27 42.8	+0.7
BELA			IAmb	IAmb	07 27 44.1	
comp=Z,22nm,1.2s						
VNA3	Neumayer Olymp	55.78 160	P	P	07 27 56.4	+0.3
VNA1	Neumayer--Stat	56.04 159	P	P	07 27 58.3	+0.5
VNA2	Neumayer--Watz	56.39 159	P	P	07 28 00.7	+0.2
VNA2	Neumayer--Watz	56.39 159	PKiKP	PKiKP	07 35 18.8	-7.1
RKT	Rikitea	57.62 258	*e*T	T	08 30 23.8	
comp=Z,4.5nm,0.2s						
SNAA	Sanae	58.00 160	P	P	07 28 12.0	+0.1
SNAA	Sanae	58.00 160	LR	LR	07 52 41.1	
comp=Z,319nm,20.1s,baz=5.5,slow=36						
SNAA	Sanae	58.00 160	P	P	07 28 11.8	+0.1
SNAA			IAmb	IAmb	07 28 13.2	
comp=Z,44nm,1.1s						
SNAA	Sanae	58.00 160	*i*P	P	07 28 12.0	+0.1
SNAA	Sanae	58.00 160	P	P	07 28 11.9	+0.1
SNAA			pmax	pmax		
comp=Z,44nm,1.1s						
TIGA	Tifton	59.09 347	P	P	07 28 19.6	-0.1
TIGA			IAmb	IAmb	07 28 20.3	
comp=Z,32nm,0.8s						
TIGA	Tifton	59.09 347	P	P	07 28 19.7	-0.1
baz=167						
255A	Hazlehurst	59.36 349	P	P	07 28 21.4	-0.2
baz=168						
352A	Blakely	59.41 346	P	P	07 28 21.6	-0.3
352A	Blakely	59.41 346	P	P	07 28 21.6	-0.3
baz=166,SNR=11						
BRAL	Brewton	59.60 344	P	P	07 28 22.9	-0.4
BRAL	Brewton	59.60 344	P	P	07 28 23.1	-0.2
baz=164						
TROLL	Troll, Antarti	59.72 160	P	P	07 28 24.1	+0.3
154A	Montrose	60.15 348	P	P	07 28 26.7	-0.3
154A	Montrose	60.15 348	P	P	07 28 26.6	-0.4
baz=168,SNR=8.5						
NHSC	New Hope	60.16 351	P	P	07 28 27.4	+0.3
NHSC	New Hope	60.16 351	P	P	07 28 27.0	0.0
baz=171,SNR=5.4						
NHSC	New Hope	60.16 351	P	P	07 28 27.3	+0.3
baz=171,SNR=5.4						
250A	Grady	60.19 345	P	P	07 28 26.3	-1.1
baz=164,SNR=5.0						
152A	Waverly Hall	60.51 347	P	P	07 28 28.7	-0.9
152A			IAmb	IAmb	07 28 29.7	
comp=Z,22nm,0.9s						
152A	Waverly Hall	60.51 347	P	P	07 28 28.6	-0.9
baz=166,SNR=11						
HAW	Hawthorne Fire	60.62 350	P	P	07 28 29.7	-0.5
baz=169,SNR=8.4						
344A	Westbrook Farm	60.87 341	P	P	07 28 33.1	+1.2
344A	Westbrook Farm	60.87 341	P	P	07 28 33.2	+1.2
baz=160,SNR=9.9						
735A	Kenedy	60.98 333	P	P	07 28 34.5	+1.7
baz=153						
GOGA	Godfrey	60.99 348	P	P	07 28 32.3	-0.5
baz=167,SNR=5.0						
GOGA	Godfrey	60.99 348	P	P	07 28 32.2	-0.6
baz=167,SNR=5.0						
Y57A	Sumter	61.08 351	P	P	07 28 33.5	+0.1
Y57A			IAmb	IAmb	07 28 34.2	
comp=Z,35nm,0.9s						
Y57A	Sumter	61.08 351	P	P	07 28 33.4	+0.1
baz=170						
Y57A			P	P	07 28 33.4	+0.1
baz=170						
833A	Chaparral WMA,	61.18 331	P	P	07 28 35.4	+1.2
baz=151,SNR=6.6						
833A	Chaparral WMA,	61.18 331	P	P	07 28 35.3	+1.2
baz=151,SNR=6.6						
HKT	Hockley	61.19 335	*c i*P	P	07 28 35.1	+1.0
HKT			pmax	pmax		
comp=Z,18nm,1.1s						
HKT	Hockley	61.19 335	P	P	07 28 35.2	+1.1
baz=155						
LRAL	Lakeview Retre	61.37 345	P	P	07 28 34.1	-1.3
baz=164,SNR=5.3						
LRAL	Lakeview Retre	61.37 345	P	P	07 28 34.5	-0.8
baz=164,SNR=5.3						
JSC	Jenkinsville	61.47 350	P	P	07 28 35.9	-0.1
JSC			IAmb	IAmb	07 28 36.6	
comp=Z,16nm,0.9s						
JSC	Jenkinsville	61.47 350	P	P	07 28 35.9	-0.1
JSC			pmax	pmax		
comp=Z,16nm,0.9s						
JSC	Jenkinsville	61.47 350	P	P	07 28 35.6	-0.4
baz=170,SNR=5.6						
146A	Union	61.51 343	P	P	07 28 36.4	+0.1
baz=162						
VBMS	Vicksburg	61.52 341	P	P	07 28 37.6	+1.2
baz=160						
Y52A	Lilburn	61.54 348	P	P	07 28 36.0	-0.5
baz=167						
Y52A			P	P	07 28 36.0	-0.5
baz=167						
HODGE	Hodges	61.58 349	P	P	07 28 35.7	-1.1
baz=169						
BIRD	Birdtown, Kers	61.71 351	P	P	07 28 37.8	+0.2
BIRD			IAmb	IAmb	07 28 38.4	
comp=Z,20nm,1.0s						
BIRD	Birdtown, Kers	61.71 351	P	P	07 28 37.6	0.0
baz=170,SNR=5.6						
Z47A	Carrollton	61.79 344	P	P	07 28 37.2	-0.9
baz=163,SNR=6.0						
Y49A	Blount Mountai	62.02 345	P	P	07 28 38.7	-1.1
baz=164						
PAULI	Pauline	62.08 350	P	P	07 28 39.6	-0.5
baz=169						
W57A	Gilead	62.15 352	P	P	07 28 40.4	-0.1
baz=171						
W57A			P	P	07 28 40.4	-0.1
baz=171						
143A	Socs Landing,	62.23 341	P	P	07 28 41.7	+0.5
baz=160,SNR=7.7						
KMSC	Kings Mountain	62.32 350	P	P	07 28 41.4	-0.3
baz=170,SNR=5.2						
KMSC	Kings Mountain	62.32 350	P	P	07 28 41.7	-0.1
baz=170,SNR=5.2						
X51A	Calhoun	62.38 347	P	P	07 28 41.5	-0.6
X51A	Calhoun	62.38 347	P	P	07 28 41.8	-0.3
baz=166,SNR=9.9						
X51A			P	P	07 28 41.8	-0.3
baz=166,SNR=9.9						
NATX	Nacogdoches	62.41 337	P	P	07 28 43.6	+1.2
baz=156,SNR=5.3						
NATX	Nacogdoches	62.41 337	P	P	07 28 43.4	+1.0
baz=156,SNR=5.3						
CASEE	Lake Jocassee	62.43 349	P	P	07 28 42.5	0.0
baz=168						
FPAL	Fort Paine	62.51 346	P	P	07 28 42.5	-0.5
FPAL			IAmb	IAmb	07 28 43.8	
comp=Z,16nm,0.9s						
435B	Jarrell	62.60 334	P	P	07 28 45.0	+1.3
435B			IAmb	IAmb	07 28 45.5	
comp=Z,14nm,0.8s						
435B	Jarrell	62.60 334	P	P	07 28 45.1	+1.4
baz=153						
NVL	N'lazarevskaya	62.65 158	*e*P	P	07 28 42.8	-0.8
NVL			pmax	pmax		
comp=Z,48nm,1.0s						
NVL			MLR	MLR		
comp=Z,307nm,17.0s						
V58A	Windy Hill, Pi	62.67 353	P	P	07 28 43.5	-0.6
baz=172						
V58A			P	P	07 28 43.5	-0.6
baz=172						
W52A	Murphy	62.71 348	P	P	07 28 44.1	-0.3
baz=167,SNR=8.5						
X48A	Hartselle	62.74 345	P	P	07 28 44.0	-0.5
X48A			IAmb	IAmb	07 28 45.0	
comp=Z,28nm,0.9s						
X48A	Hartselle	62.74 345	P	P	07 28 44.1	-0.5
baz=164,SNR=13						
Y45A	Yeager Farm, C	62.80 343	P	P	07 28 45.2	+0.2
baz=162,SNR=6.0						
V55A	Taylorsville	63.00 351	P	P	07 28 46.3	0.0
baz=170,SNR=7.1						
V55A			P	P	07 28 46.3	0.0
baz=170,SNR=7.1						
V53A	Saluda	63.07 349	P	P	07 28 46.2	-0.6
baz=168,SNR=5.1						
V53A			P	P	07 28 46.2	-0.6
baz=168,SNR=5.1						
W50A	Signal Mountai	63.08 347	P	P	07 28 46.4	-0.5
W50A			IAmb	IAmb	07 28 47.4	
comp=Z,30nm,0.8s						
W50A	Signal Mountai	63.08 347	P	P	07 28 46.2	-0.6
baz=166,SNR=14						
U59A	Littleton	63.08 354	P	P	07 28 46.9	+0.1
baz=173,SNR=5.1						
U59A			P	P	07 28 46.9	+0.1
baz=173,SNR=5.1						
CPCT	Cooper Cave	63.17 348	P	P	07 28 47.2	-0.2
CPCT			IAmb	IAmb	07 28 47.9	
comp=Z,26nm,0.9s						
SWET	Sewanee	63.23 346	P	P	07 28 47.2	-0.6
JCT	Junction City	63.23 332	P	P	07 28 48.6	+0.7
JCT	Junction City	63.23 332	P	P	07 28 48.6	+0.7
JCT			pmax	pmax		
comp=Z,40nm,0.8s						
JCT	Junction City	63.23 332	P	P	07 28 48.9	+1.0
baz=151,SNR=27						
JCT	Junction City	63.23 332	P	P	07 28 48.9	+1.0
baz=151,SNR=27						
TKL	Tuckaleechee C	63.23 348	P	P	07 28 47.0	-0.8
TKL			IAmb	IAmb	07 28 48.0	
comp=Z,27nm,0.9s						
TKL	Tuckaleechee C	63.23 348	P	P	07 28 47.0	-0.8
TKL			pmax	pmax		
comp=Z,27nm,1.0s						
TKL	Tuckaleechee C	63.23 348	P	P	07 28 47.1	-0.7
baz=167,SNR=9.8						
LPIG	La Paz	63.24 320	LR	LR	07 50 50.6	
comp=Z,63nm,20.5s,baz=144,slow=31						
U56A	King	63.37 352	P	P	07 28 49.2	+0.4
baz=171,SNR=6.1						
U56A			P	P	07 28 49.2	+0.4
baz=171,SNR=6.1						
OXF	Oxford	63.38 343	P	P	07 28 48.2	-0.5
OXF	Oxford	63.38 343	P	P	07 28 48.2	-0.5
OXF			pmax	pmax		
comp=Z,43nm,0.9s						
OXF	Oxford	63.38 343	P	P	07 28 48.1	-0.7
baz=162,SNR=10						
OXF	Oxford	63.38 343	P	P	07 28 47.8	-0.9
baz=162,SNR=10						
V52A	Sevierville	63.38 349	P	P	07 28 47.9	-0.8
baz=168,SNR=11						
QSPA	South Pole Qui	63.47 180	LR	LR	07 57 39.4	
comp=Z,178nm,19.1s,baz=172,slow=37						
QSPA	South Pole Qui	63.47 180	P	P	07 28 50.2	+0.9
V51A	Loudon	63.48 348	P	P	07 28 49.1	-0.3
baz=167,SNR=5.6						
PLAL	Pickwick Lake	63.49 344	P	P	07 28 48.5	-1.0
PLAL			IAmb	IAmb	07 28 49.6	
comp=Z,16nm,0.9s						
WHTX	Lake Whitney,	63.63 335	P	P	07 28 51.5	+1.0
baz=154						
WLAR	White Oak Lake	63.67 339	P	P	07 28 52.3	+1.6
T59A	Double "B" Far	63.67 354	P	P	07 28 50.4	-0.3
baz=174,SNR=5.7						
T59A			P	P	07 28 50.4	-0.3
baz=174,SNR=5.7						
U54A	Nelsons Funny	63.75 350	P	P	07 28 50.9	-0.4
baz=169,SNR=6.7						
U54A			P	P	07 28 50.9	-0.4
baz=169,SNR=6.7						
T57A	Hurt	63.88 353	P	P	07 28 52.0	0.0
baz=172						
T57A			P	P	07 28 52.0	0.0
baz=172						
V48A	Smith Brothers	63.92 346	P	P	07 28 51.8	-0.5
V48A			IAmb	IAmb	07 28 52.8	
comp=Z,18nm,0.9s						
V48A	Smith Brothers	63.92 346	P	P	07 28 51.4	-1.0
baz=164,SNR=8.0						
TX31	Lajitas Ar. Si	63.96 328	P	P	07 28 54.0	+1.1
TX31			IAmb	IAmb	07 28 55.1	
comp=Z,28nm,0.9s						
TX31	Lajitas Ar. Si	63.96 328	P	P	07 28 54.0	+1.1
baz=148,SNR=21						
TX32	Lajitas Array	63.96 328	P	P	07 28 54.0	+1.1
TXAR	Lajitas Array	63.96 328	P	P	07 28 54.3	+1.4
comp=Z,6.8nm,0.8s,baz=148,slow=8.0,SNR=82						
comp=Z,6.8nm,0.8s						
TXAR	Lajitas Array	63.96 328	P	P	07 28 54.1	+1.2
TXAR	Lajitas Array	63.96 328	P	P	07 28 54.1	+1.2
U49A	Red Boiling Sp	64.44 347	P	P	07 28 55.0	-0.7
baz=166,SNR=6.7						
WVT	Waverly	64.52 345	P	P	07 28 55.4	-0.8
baz=164,SNR=14						
WVT	Waverly	64.52 345	P	P	07 28 55.7	-0.6
baz=164						
S57A	Dark Hollow, R	64.60 353	P	P	07 28 57.0	+0.2
baz=172,SNR=7.4						
S57A			P	P	07 28 57.0	+0.2
baz=172,SNR=7.4						
MIAR	Mount Ida	64.61 339	P	P	07 28 57.4	+0.5
MIAR			IAmb	IAmb	07 28 58.2	
comp=Z,27nm,1.0s						
MIAR	Mount Ida	64.61 339	P	P	07 28 57.4	+0.5
MIAR			pmax	pmax		
comp=Z,27nm,1.0s						
MIAR	Mount Ida	64.61 339	P	P	07 28 57.1	+0.2
baz=158,SNR=13						
MIAR	Mount Ida	64.61 339	P	P	07 28 57.5	+0.6
baz=158,SNR=13						
R58B	Mineral	64.69 354	P	P	07 28 58.0	+0.7
baz=173,SNR=10						
R58B			P	P	07 28 58.0	+0.7
baz=173,SNR=10						
T50A	Nancy	64.75 348	P	P	07 28 56.6	-1.1
baz=166						
T50A			P	P	07 28 56.6	-1.1
baz=166						
Z35A	Perchaven, San	64.75 336	P	P	07 28 58.1	+0.3
Z35A	Perchaven, San	64.75 336	P	P	07 28 58.6	+0.7
baz=154,SNR=9.5						
WHAR	Wooly Hollow	64.91 341	P	P	07 28 58.5	-0.3
WHAR			IAmb	IAmb	07 28 59.9	
comp=Z,24nm,0.9s						
S54A	Dingess, Beckl	64.93 351	P	P	07 28 58.4	-0.6
baz=170,SNR=5.6						
S54A			P	P	07 28 58.4	-0.6
baz=170,SNR=5.6						
ABTX	Abilene, Hawle	65.04 333	P	P	07 29 00.6	+0.8
ABTX	Abilene, Hawle	65.04 333	P	P	07 29 00.7	+0.9
baz=152,SNR=16						
ABTX	Abilene, Hawle	65.04 333	P	P	07 29 00.5	+0.8
baz=152,SNR=16						
T47A	Sharon Grove	65.18 346	P	P	07 29 00.0	-0.5
baz=164,SNR=15						
X37A	Clayton	65.23 338	P	P	07 29 01.2	+0.3
baz=156,SNR=10.0						
LCAR	Lake Charles	65.31 342	P	P	07 29 01.5	+0.1
LCAR			IAmb	IAmb	07 29 02.2	
comp=Z,33nm,0.9s						
FCAR	Ozark Folk Cen	65.42 341	P	P	07 29 01.8	-0.3
FCAR			IAmb	IAmb	07 29 03.0	
comp=Z,23nm,1.2s						
R50A	Paris	65.88 349	P	P	07 29 04.1	-0.9
baz=167,SNR=5.5						
R50A			P	P	07 29 04.1	-0.9
baz=167,SNR=5.5						
Q56A	Snyder Ridge,	65.89 353	P	P	07 29 05.8	+0.7
baz=172						
Q56A			P	P	07 29 05.8	+0.7
baz=172						
R49A	Shelbyville	66.05 348	P	P	07 29 05.1	-1.0
baz=166						
R49A			P	P	07 29 05.1	-1.0
baz=166						
WCI	Wyandotte Cave	66.20 347	P	P	07 29 06.1	-1.0
baz=165,SNR=6.7						
WCI	Wyandotte Cave	66.20 347	P	P	07 29 06.2	-1.0
baz=165						
P57A	Homestead Farm	66.21 354	P	P	07 29 07.8	+0.7
P57A			IAmb	IAmb	07 29 09.0	
comp=Z,31nm,0.9s						
P57A	Homestead Farm	66.21 354	P	P	07 29 08.0	+0.9
baz=173,SNR=8.0						
P57A			P	P	07 29 08.0	+0.9
baz=173,SNR=8.0						
HHAR	Hobbs	66.32 340	P	P	07 29 07.7	-0.3
HHAR			IAmb	IAmb	07 29 09.1	
comp=Z,16nm,0.9s						
HHAR	Hobbs	66.32 340	P	P	07 29 07.9	0.0
baz=158						
S44A	Carbondale	66.35 344	P	P	07 29 07.9	-0.2
baz=162,SNR=5.7						
MCWV	Mont Chateau	66.57 353	P	P	07 29 10.0	+0.5
baz=172						
TUL1	Leonard	66.57 338	P	P	07 29 09.4	-0.2
baz=156,SNR=19						
TUL1	Leonard	66.57 338	P	P	07 29 09.6	+0.1
baz=156,SNR=19						
WMOK	Wichita Mounta	66.58 335	P	P	07 29 09.7	+0.1
baz=153,SNR=6.8						
WMOK	Wichita Mounta	66.58 335	P	P	07 29 09.4	-0.2
baz=153,SNR=6.8						
U38A	Gravette	66.61 340	P	P	07 29 09.7	-0.1
baz=157,SNR=6.1						
CLN7	Carlsbad 7	66.62 330	P	P	07 29 11.5	+1.4
P52A	Corning	66.85 351	P	P	07 29 10.2	-1.0
baz=169						
BBTS	Babate	66.99 59	LR	LR	07 58 54.7	
comp=Z,342nm,18.6s,baz=234,slow=36						
O54A	Avella	67.15 352	P	P	07 29 13.1	-0.1
baz=171						
O54A			P	P	07 29 13.1	-0.1
baz=171						
P49A	Miami Univ. Ec	67.17 348	P	P	07 29 11.9	-1.3
baz=167						
P49A	Miami Univ. Ec	67.17 348	P	P	07 29 12.5	-0.8
baz=167						
CCM	Cathedral Cave	67.20 343	P	P	07 29 13.4	-0.1
CCM	Cathedral Cave	67.20 343	P	P	07 29 13.4	-0.1
CCM			pmax	pmax		
comp=Z,38nm,1.0s						
CCM	Cathedral Cave	67.20 343	P	P	07 29 13.5	-0.1
baz=160,SNR=19						
CCM	Cathedral Cave	67.20 343	P	P	07 29 13.4	-0.1
baz=160						
OK044	Pawnee Station	67.33 338		P	07 29 14.3	-0.1
SSPA	Standing Stone	67.34 354	P	P	07 29 14.8	+0.5
baz=173						
UPAO	U. Pittsburgh	67.41 353	P	P	07 29 14.8	0.0
baz=171						
S39A	Bolivar	67.44 341	P	P	07 29 15.2	+0.2
baz=159,SNR=15						
MSTX	Muleshoe	67.50 332	P	P	07 29 16.4	+0.7
baz=150,SNR=32						
MSTX	Muleshoe	67.50 332	P	P	07 29 16.3	+0.6
baz=150,SNR=32						
TAOE	Nuku Hiva Isla	67.51 271	*e*S	S	07 38 12.4	+0.1
comp=Z,173nm,24.5s						
TAOE	Nuku Hiva Isla	67.51 271	*e*LR	LR	07 49 38.2	
comp=Z,596nm,24.9s						
ACSO	Alum Creek Sta	67.56 350	P	P	07 29 14.6	-1.1
ACSO			IAmb	IAmb	07 29 16.4	
comp=Z,33nm,0.9s						
ACSO	Alum Creek Sta	67.56 350	P	P	07 29 14.5	-1.2
baz=168,SNR=6.9						
ACSO	Alum Creek Sta	67.56 350	P	P	07 29 14.9	-0.8
baz=168,SNR=6.9						
R40A	Maddies Statio	67.70 342	P	P	07 29 16.3	-0.4
R40A	Maddies Statio	67.70 342	P	P	07 29 16.7	+0.1
baz=160,SNR=34						
T35B	Sooner Cattle	67.73 338	P	P	07 29 17.1	+0.2
baz=156,SNR=8.2						
O48B	Farmland	67.95 348	P	P	07 29 17.3	-0.9
baz=166						
M55A	Ridgway	68.25 354	P	P	07 29 20.2	+0.1
baz=173,SNR=7.9						
M55A			P	P	07 29 20.2	+0.1
baz=173,SNR=7.9						
N49A	Columbus Grove	68.43 349	P	P	07 29 20.1	-1.0
baz=167,SNR=8.5						
N49A			P	P	07 29 20.1	-1.0
baz=167,SNR=8.5						
121A	Cookes Peak, D	68.58 327	P	P	07 29 24.4	+1.8
baz=145,SNR=7.8						
121A	Cookes Peak, D	68.58 327	P	P	07 29 24.4	+1.8
baz=145,SNR=7.8						
L59A	Walton	68.69 357	P	P	07 29 23.7	+0.9
baz=176,SNR=6.4						
L59A			P	P	07 29 23.7	+0.9
baz=176,SNR=6.4						
P40A	Paris	68.80 343	P	P	07 29 23.7	+0.2
baz=160,SNR=18						
L56A	Greenwood	68.80 355	P	P	07 29 23.6	+0.1
baz=174						
L56A			P	P	07 29 23.6	+0.1
baz=174						
L61B	Northampton	68.86 359	P	P	07 29 24.7	+0.8
baz=178,SNR=5.0						
L61B	Northampton	68.86 359	P	P	07 29 24.5	+0.7
baz=178,SNR=5.0						
HDIL	Hopedale	69.09 345	P	P	07 29 24.5	-0.7
baz=163						
HDIL	Hopedale	69.09 345	P	P	07 29 24.8	-0.5
baz=163						
WVNY	West Valley, N	69.16 354	P	P	07 29 26.2	+0.5
baz=173,SNR=5.3						
HCNY	Howe Caverns	69.16 357	P	P	07 29 26.5	+0.8
baz=177						
CRNM	Carthage	69.25 329	P	P	07 29 27.8	+1.1
Y22A	Socorro	69.34 329	P	P	07 29 28.9	+1.7
baz=146,SNR=11						
LENM	Lemitar	69.53 329	P	P	07 29 30.5	+2.1
N41A	Harden Midland	69.60 344	P	P	07 29 27.8	-0.7
baz=161,SNR=8.7						
KSU1	Kansas State U	69.75 339	P	P	07 29 29.2	-0.2
baz=156						
KSU1	Kansas State U	69.75 339	P	P	07 29 29.2	-0.2
baz=156						
J61A	Chester	69.75 359	P	P	07 29 30.3	+0.9
baz=179,SNR=5.5						
J61A			P	P	07 29 30.3	+0.9
baz=179,SNR=5.5						
R32A	Long Quarter,	69.84 337	P	P	07 29 30.6	+0.6
baz=154,SNR=12						
TUC	Tucson	69.90 325	P	P	07 29 32.2	+1.6
ANMO	Albuquerque	69.94 329	P	P	07 29 31.4	+0.5
ANMO	Albuquerque	69.94 329	*c i*P	P	07 29 32.5	+1.5
ANMO			pmax	pmax		
comp=Z,23nm,2.0s						
ANMO	Albuquerque	69.94 329	P	P	07 29 32.3	+1.3
baz=147,SNR=13						
ANMO	Albuquerque	69.94 329	P	P	07 29 32.9	+1.9
baz=147						
TBI	Tubuai	70.10 253	*e*S	S	07 38 42.9	+0.2
comp=Z,121nm,24.8s						
TBI			*e*SS	SS	07 43 13.6	+1.3
comp=Z,81nm,35.8s						
TBI			*e*LR	LR	07 50 49.5	
comp=Z,194nm,26.8s						
TBI	Tubuai	70.10 253	*e*T	T	08 46 04.6	
comp=Z,4.6nm,0.3s						
N38A	Joes South For	70.30 342	P	P	07 29 32.8	0.0
baz=159,SNR=5.3						
CBKS	Cedar Bluff	70.55 336	P	P	07 29 35.5	+1.1
baz=153						
LBNH	Lisbon	70.64 359	P	P	07 29 36.5	+1.7
baz=179						
214A	Organ Pipe Nat	70.69 323	P	P	07 29 37.2	+1.8
baz=141,SNR=7.8						
T25A	Trinidad	70.90 332	P	P	07 29 38.4	+1.6
baz=149,SNR=10						
MEH	Mehetia	70.93 259	*e*T	T	08 47 16.6	
comp=Z,9.5nm,0.2s						
L40A	Anamosa	70.97 344	P	P	07 29 36.3	-0.5
baz=161,SNR=12						
N35A	Tabor	71.05 340	P	P	07 29 37.3	-0.1
baz=157,SNR=12						
LONY	Lake Ozonia	71.09 357	P	P	07 29 37.8	+0.3
baz=177						
BMNY	Brushton-Moira	71.31 357	P	P	07 29 39.2	+0.4
baz=177,SNR=5.8						
SCIA	State Center	71.33 343	P	P	07 29 39.1	+0.1
baz=159						
VNDA	Vanda	71.38 191	P	P	07 29 40.9	+1.9

comp=Z,3.0nm,0.9s,baz=135,slow=4.8,SNR=21
VNDA LR LR 07 56 54.4
comp=Z,112nm,20.4s,baz=146,slow=32
comp=Z,3.0nm,0.9s
VNDA Vanda 71.38 191 P **P** **07 29 40.4 +1.4**
VNDA Vanda 71.38 191 P **P** **07 29 40.4 +1.4**
VNDA pmax pmax
comp=Z,9.0nm,1.1s
N33A J Bar K, Exete 71.50 339 P **P** **07 29 40.9 +0.8**
JFWS Jewell Farm 71.55 345 P **P** **07 29 40.1 -0.2**
baz=162
SADO Sadowa 71.55 354 LR LR 08 04 05.7
comp=Z,118nm,19.2s,baz=176,slow=38
G62A West of Eustis 71.61 0 P **P** **07 29 41.0 +0.3**
G62A IAmb IAmb 07 29 42.7
comp=Z,30nm,0.8s
G62A West of Eustis 71.61 0 P **P** **07 29 41.3 +0.7**
baz=180
G62A P **P** **07 29 41.3 +0.7**
baz=180
PKME Peaks-Kenny Pk 71.67 1 P **P** **07 29 42.4 +1.4**
baz=182
LIC Lamto 71.68 73⇑ *i*P **P** **07 29 41.0 -0.8**
comp=Z,16nm,0.4s
KSCO Kaye Shedlock' 71.79 335 P **P** **07 29 43.0 +0.9**
KSCO IAmb IAmb 07 29 44.5
comp=Z,42nm,0.9s
KSCO Kaye Shedlock' 71.79 335 P **P** **07 29 43.6 +1.6**
baz=151,SNR=9.1
KSCO Kaye Shedlock' 71.79 335 P **P** **07 29 43.1 +1.1**
baz=151,SNR=9.1
SDCO Great Sand Dun 71.87 332 P **P** **07 29 44.1 +1.4**
baz=148,SNR=18
SDCO Great Sand Dun 71.87 332 P **P** **07 29 44.3 +1.5**
baz=148,SNR=18
TIC Toumodi 71.90 73⇑ *i*P **P** **07 29 42.7 -0.4**
comp=Z,5.4nm,0.2s
KIC Kosan Boka 72.00 73⇑ *i*P **P** **07 29 43.0 -0.7**
comp=Z,8.6nm,0.5s
DBIC Dimbokro 72.06 73 P **P** **07 29 43.5 -0.5**
comp=Z,21nm,0.8s,baz=210,slow=6.2,SNR=21
DBIC LR LR 07 59 27.5
comp=Z,601nm,19.9s,baz=212,slow=34
comp=Z,21nm,0.8s
DBIC Dimbokro 72.06 73 P **P** **07 29 43.9 -0.1**
DBIC IAmb IAmb 07 29 44.6
comp=Z,34nm,1.0s
DBIC Dimbokro 72.06 73 *e*P **P** **07 29 44.8 +0.8**
DBIC Dimbokro 72.06 73 P **P** **07 29 43.9 -0.1**
DBIC pmax pmax
comp=Z,34nm,1.0s
TIAR Tiarei 72.18 259 *e*T T 08 48 40.1
comp=Z,0.7nm,0.3s
L34A Svendsen Farm, 72.29 340 P **P** **07 29 45.0 +0.3**
baz=156,SNR=6.0
BGNE Belgrade 72.33 339 P **P** **07 29 45.5 +0.4**
baz=155
PPT2 Papeete2 72.37 259 *e*S **S** **07 39 08.8 -0.4**
comp=Z,334nm,27.0s
PPT2 Papeete2 72.37 259 *e*LR LR 07 51 53.1
comp=Z,287nm,29.5s
PPT Papeete 72.38 259 LR LR 07 54 30.5
comp=Z,139nm,21.5s,baz=146,slow=30
S22A 4UR Ranch, Cre 72.44 331 P **P** **07 29 47.5 +1.4**
baz=147,SNR=7.9
MVCO Mesa Verde 72.74 329 P **P** **07 29 49.9 +2.0**
baz=145,SNR=13
WUAZ Wupatki 72.74 326 P **P** **07 29 50.2 +2.3**
baz=143,SNR=7.9
Q24A Divide 72.75 333 P **P** **07 29 49.4 +1.4**
baz=148,SNR=16
I37B Waseca 73.35 343 P **P** **07 29 50.9 -0.1**
baz=159,SNR=5.6
MONP2 Monument Peak 73.39 321 P **P** **07 29 53.9 +2.1**
baz=138
BC3 Big Chuckawall 73.42 322 P **P** **07 29 53.4 +1.6**
baz=139,SNR=7.6
D62A Allapoint, All 73.50 1 P **P** **07 29 52.5 +0.7**
baz=182,SNR=6.4
D62A P **P** **07 29 52.5 +0.7**
baz=182,SNR=6.4
K31A O'Neill 73.62 339 P **P** **07 29 51.6 -1.1**
K31A O'Neill 73.62 339 P **P** **07 29 53.8 +1.1**
baz=154,SNR=6.6
IRM Iron Mountain 73.64 323 P **P** **07 29 54.6 +1.6**
baz=140,SNR=6.3
SMCO Snowmass 73.70 332 P **P** **07 29 54.7 +1.0**
SMCO IAmb IAmb 07 29 56.7
comp=Z,24nm,0.8s
TPFO Pinon Flats 73.94 322 P **P** **07 29 56.9 +2.0**
baz=139,SNR=5.0
PFO Pinyon Flats O 73.94 322 LR LR 07 55 47.8
comp=Z,108nm,20.7s,baz=166,slow=30
PFO Pinyon Flats O 73.94 322 *e*P **P** **07 29 55.6 +0.7**
PFO pmax pmax
comp=Z,9.0nm,0.9s
PFO Pinyon Flats O 73.94 322 P **P** **07 29 56.9 +2.0**
baz=139,SNR=5.1
ECSD EROS Data Cent 73.97 341 P **P** **07 29 55.0 +0.2**
baz=156,SNR=25
ECSD EROS Data Cent 73.97 341 P **P** **07 29 54.9 +0.2**
baz=156,SNR=25
BELC Belle Mtn. Jos 73.98 322 P **P** **07 29 57.0 +1.8**
baz=139,SNR=6.5
SPMN Marine on St. 74.33 344 P **P** **07 29 56.5 -0.2**
baz=160,SNR=8.7
SPMN Marine on St. 74.33 344 P **P** **07 29 56.4 -0.4**
baz=160,SNR=8.7
MURC Murrieta 74.34 321 P **P** **07 29 59.2 +2.1**
baz=138,SNR=6.4
COWI Conover 74.35 347 P **P** **07 29 57.0 +0.1**
baz=163
GMRC Granite Mounta 74.39 323 P **P** **07 29 59.4 +1.9**
baz=139,SNR=10
BBRC Big Bear Solar 74.68 322 P **P** **07 30 01.8 +2.4**
baz=138
N23A Red Feather La 74.71 333 P **P** **07 30 00.8 +1.4**
baz=148
HEC Hector,Ludlow 74.79 323 P **P** **07 30 01.8 +2.0**
baz=139
TUQ Turquoise Moun 75.02 323 P **P** **07 30 03.3 +2.1**
baz=139
O20A White River Ci 75.03 331 P **P** **07 30 02.8 +1.6**
baz=146,SNR=32
BFSC Mount Baldy Ra 75.08 321 P **P** **07 30 03.6 +2.1**
baz=138,SNR=7.3
F36A Milaca 75.11 344 P **P** **07 30 00.9 -0.3**
F36A IAmb IAmb 07 30 02.4
comp=Z,25nm,0.8s
F36A Milaca 75.11 344 P **P** **07 30 01.0 -0.2**
baz=159,SNR=22
D41A Chassel 75.16 348 P **P** **07 30 02.1 +0.6**
baz=164
E38A The Farm, Brul 75.34 345 P **P** **07 30 02.3 -0.3**
baz=161
GSC Goldstone, Bar 75.39 323 P **P** **07 30 05.1 +1.8**
baz=139,SNR=8.6
EDW2 Edwards Air Fo 75.73 322 P **P** **07 30 06.5 +1.3**
baz=138,SNR=9.1
F33A 5 Mile Ranch, 75.81 342 P **P** **07 30 05.3 0.0**
baz=157
SCZ2 Santa Cruz Isl 76.02 320 P **P** **07 30 09.1 +2.4**
baz=136
CER Ceres 76.02 120 *e*P **P** **07 30 07.5 +0.5**
CER IAmb IAmb 07 30 08.7
comp=Z,20nm,0.9s
FURC Furnace Creek, 76.30 323 P **P** **07 30 10.2 +2.0**
baz=139,SNR=11
MPMC Manual Prospec 76.33 323 P **P** **07 30 10.3 +1.6**
baz=138,SNR=5.7
TPNV Topopah Spring 76.34 324 P **P** **07 30 10.7 +2.0**
baz=139,SNR=9.0
K22A Casper 76.43 334 P **P** **07 30 10.6 +1.4**
baz=148,SNR=6.4
K22A Casper 76.43 334 P **P** **07 30 10.5 +1.4**
baz=148,SNR=6.4
ISA Isabella, Lake 76.58 322 P **P** **07 30 12.1 +2.2**
baz=138,SNR=11
EYMN Ely 76.60 346 P **P** **07 30 09.6 -0.1**
baz=161
EYMN Ely 76.60 346 P **P** **07 30 09.7 -0.1**
baz=161
RSSD Black Hills 76.75 336 P **P** **07 30 11.9 +1.0**
RSSD IAmb IAmb 07 30 13.0
comp=Z,16nm,0.9s
RSSD Black Hills 76.75 336 P **P** **07 30 11.9 +1.0**
RSSD pmax pmax
comp=Z,16nm,0.9s
RSSD Black Hills 76.75 336 P **P** **07 30 12.1 +1.2**
baz=150,SNR=11
RSSD Black Hills 76.75 336 P **P** **07 30 11.8 +0.9**
baz=150
PKM Mcpherson Peak 76.76 321 P **P** **07 30 13.1 +1.9**
baz=136,SNR=13
CWC Cottonwood Cre 76.93 323 P **P** **07 30 13.8 +1.7**
baz=138
GRAC Grapevine Rang 76.96 323 P **P** **07 30 14.0 +1.9**
baz=138
R11A Troy Canyon, C 77.06 325 P **P** **07 30 14.7 +1.9**
baz=140,SNR=7.4
DUG Dugway, Tooele 77.14 328 P **P** **07 30 14.8 +1.7**
baz=142,SNR=20
SMMC Simmler 77.17 321 P **P** **07 30 15.5 +2.2**
baz=136,SNR=6.8
TIN Tinemaha, Big 77.47 323 P **P** **07 30 17.2 +2.1**
baz=138,SNR=6.9
B35A Bob, Littlefor 77.50 345 P **P** **07 30 14.7 -0.1**
baz=159,SNR=7.0
SUR Sutherland 77.58 120 LR LR 08 01 51.3
comp=Z,390nm,18.7s,baz=237,slow=34
BW06 Boulder Array 77.76 332 P **P** **07 30 17.4 +0.7**
BW06 Boulder Array 77.76 332 P **P** **07 30 17.3 +0.7**
baz=145,SNR=7.6
PD31 Pinedale Array 77.76 332 P **P** **07 30 17.5 +0.8**
PDAR Pinedale Array 77.76 332 P **P** **07 30 17.2 +0.6**
comp=Z,3.2nm,0.8s,baz=129,slow=7.2,SNR=20
PDAR LR LR 08 00 50.5
comp=Z,66nm,21.8s,baz=160,slow=33
comp=Z,3.2nm,0.8s
E28A Huff 77.78 340 P **P** **07 30 17.3 +0.9**
baz=153,SNR=5.2
AGMN Agassiz Nation 77.96 343 P **P** **07 30 17.5 +0.1**
baz=158,SNR=8.2
AGMN Agassiz Nation 77.96 343 P **P** **07 30 17.4 0.0**
baz=158,SNR=8.2
FRAZ Fraserburg 78.23 120 *e*P **P** **07 30 18.5 -1.1**
NVAR Mina Array Bea 78.52 324 P **P** **07 30 22.2 +1.3**
comp=Z,4.6nm,0.8s,baz=156,slow=6.5,SNR=39
NVAR LR LR 08 00 30.8
comp=Z,95nm,20.3s,baz=108,slow=32
comp=Z,4.6nm,0.8s
MDND Maddock 78.58 341 P **P** **07 30 21.6 +0.8**
baz=154,SNR=6.2
MDND Maddock 78.58 341 P **P** **07 30 21.5 +0.7**
baz=154,SNR=6.2
GRAN Grantham 78.67 120 *e*P **P** **07 30 21.7 -0.3**
GRAN IAmb IAmb 07 30 23.1
comp=Z,7.7nm,0.8s
ELK Elko 78.72 327 LR LR 08 01 11.8
comp=Z,182nm,21.8s,baz=143,slow=33
ELK Elko 78.72 327 P **P** **07 30 23.1 +1.1**
ELK Elko 78.72 327 P **P** **07 30 23.2 +1.1**
ELK pmax pmax
comp=Z,11nm,0.9s
ECR Eagle Creek 78.77 331 P **P** **07 30 23.6 +1.3**
KEIM Keimoes 79.20 117 *e*P **P** **07 30 23.9 -1.1**
KEIM IAmb IAmb 07 30 25.5
comp=Z,28nm,1.2s
H17A Grant Village 79.52 332 P **P** **07 30 28.6 +2.2**
baz=145,SNR=7.8
RLMT Red Lodge 79.58 334 P **P** **07 30 28.2 +1.6**
baz=146,SNR=14
RAR Rarotonga 79.72 251 LR LR 07 56 54.4
comp=Z,272nm,21.8s,baz=113,slow=29
LAO LASA Array 79.74 336 P **P** **07 30 28.4 +1.1**
baz=148,SNR=22
LAO LASA Array 79.74 336 P **P** **07 30 28.2 +1.0**
baz=148,SNR=22
ULM Lac du Bonnet 79.77 344 P **P** **07 30 26.9 -0.3**
comp=Z,15nm,0.9s,baz=142,slow=7.0,SNR=10
ULM LR LR 08 07 54.2
comp=Z,42nm,21.5s,baz=176,slow=37
comp=Z,15nm,0.9s
ULM Lac du Bonnet 79.77 344 *d i*P **P** **07 30 26.1 -1.1**
MAW Mawson 79.86 164 P **P** **07 30 28.4 +0.7**
comp=Z,27nm,0.9s,baz=213,slow=6.3,SNR=41
MAW LR LR 08 04 49.3
comp=Z,278nm,21.8s,baz=229,slow=35
comp=Z,27nm,0.9s
MAW Mawson 79.86 164 P **P** **07 30 28.7 +1.0**
MAW Mawson 79.86 164 P **P** **07 30 28.7 +1.0**
MAW pmax pmax
comp=Z,9.0nm,1.1s
YMR Madison River 79.90 332 P **P** **07 30 30.2 +1.8**
TSUM Tsumeb 80.35 107 LR LR 08 01 47.5
comp=Z,443nm,20.9s,baz=307,slow=32
TSUM Tsumeb 80.35 107 *e*P **P** **07 30 30.8 -0.6**
TSUM IAmb IAmb 07 30 32.4
comp=Z,19nm,1.0s
GRAF Camdeboo Natio 80.46 121 *e*P **P** **07 30 34.1 +2.4**
GRAF IAmb IAmb 07 31 04.8
comp=Z,401nm,2.9s
HLID Hailey 80.52 330 P **P** **07 30 33.4 +1.7**
baz=142,SNR=37
DGMT Dagmar 80.57 338 P **P** **07 30 32.9 +1.2**
baz=150,SNR=13
DGMT Dagmar 80.57 338 P **P** **07 30 32.8 +1.2**
baz=150,SNR=13
MCMT McKenzie Canyo 80.83 331 P **P** **07 30 35.2 +1.8**
TOA0 Torodi Ar. Sit 80.88 70 P **P** **07 30 33.5 -0.6**
TORD Torodi Ar. Bea 80.88 70 P **P** **07 30 33.4 -0.7**
comp=Z,41nm,0.8s,baz=253,slow=4.7,SNR=216
TORD LR LR 08 06 32.5
comp=Z,635nm,18.5s,baz=219,slow=36
comp=Z,41nm,0.8s
BOZ Bozeman (W) 80.93 332 P **P** **07 30 34.1 +0.4**
BOZ Bozeman (W) 80.93 332 P **P** **07 30 34.2 +0.4**
BOZ pmax pmax
comp=Z,9.0nm,0.9s
BOZ Bozeman (W) 80.93 332 P **P** **07 30 34.8 +0.9**
baz=144,SNR=10
SOE Somerset East 81.08 122 *e*P **P** **07 30 34.5 -0.5**
SOE IAmb IAmb 07 30 36.1
comp=Z,31nm,1.0s
DLMT Dillon 81.15 332 P **P** **07 30 35.3 +0.4**
DLMT IAmb IAmb 07 30 37.5
comp=Z,25nm,0.9s
SCHQ Schefferville 81.31 2 P **P** **07 30 34.4 -1.1**
comp=Z,7.8nm,0.8s,baz=219,slow=3.1,SNR=3.7
SCHQ LR LR 08 08 23.8
comp=Z,75nm,18.5s,baz=218,slow=37
comp=Z,7.8nm,0.8s
LRM Limekiln Ridge 81.45 332 P **P** **07 30 37.0 +0.2**
HVD Gariep Dam 81.96 120 *e*P **P** **07 30 40.4 +0.6**
HVD IAmb IAmb 07 30 40.8
comp=Z,48nm,1.1s
EGMT Eagleton 82.17 335 P **P** **07 30 40.7 +0.5**
baz=146,SNR=8.3
PLID Pearl Lake 82.42 330 P **P** **07 30 41.9 +0.1**
PLID IAmb IAmb 07 30 43.9
comp=Z,22nm,0.8s
BOSA Boshof 82.65 118 P **P** **07 30 42.9 -0.5**
comp=Z,20nm,1.0s,baz=243,slow=5.0,SNR=19
BOSA LR LR 08 04 05.7
comp=Z,348nm,19.1s,baz=214,slow=33
comp=Z,20nm,1.0s
BOSA Boshof 82.65 118 *e*P **P** **07 30 42.6 -0.9**
BOSA IAmb IAmb 07 30 43.8
comp=Z,34nm,1.1s
MSO Missoula 82.88 332 P **P** **07 30 45.4 +1.4**
baz=142
YBH Yreka Blue Hor 83.24 324 LR LR 08 04 14.8
comp=Z,62nm,20.3s,baz=127,slow=33
SWZ Schweizer 83.34 117 *e*P **P** **07 30 45.8 -1.3**
SWZ IAmb IAmb 07 30 47.0
comp=Z,22nm,0.9s
LBTB Lobatse 84.52 115 LR LR 08 06 20.1
comp=Z,93nm,18.8s,baz=240,slow=34
LBTB Lobatse 84.52 115 *e*P **P** **07 30 52.2 -0.9**
LBTB IAmb IAmb 07 30 53.4
comp=Z,24nm,0.9s
WALA Waterton Lakes 84.63 333 P **P** **07 30 52.4 -0.6**
WALA IAmb IAmb 07 30 54.8
comp=Z,20nm,0.8s
PRYS Parys 85.07 118 *e*P **P** **07 30 54.5 -1.3**
PRYS IAmb IAmb 07 30 55.1
comp=Z,19nm,1.1s
NEW Newport 85.36 331 P **P** **07 30 56.3 -0.2**
comp=Z,4.4nm,0.8s,baz=104,slow=7.9
NEW LR LR 08 06 32.3
comp=Z,84nm,18.8s,baz=143,slow=34
comp=Z,4.4nm,0.8s
MDT Midelt 86.53 51 LR LR 08 10 34.0
comp=Z,222nm,18.9s,baz=170,slow=36
LEPH Lephalale, Lim 86.83 115 *e*P **P** **07 31 02.3 -2.3**
LEPH IAmb IAmb 07 31 05.6
comp=Z,64nm,1.8s
CASY Casey 87.27 181 P **P** **07 31 06.5 +0.7**
CASY IAmb IAmb 07 31 07.9
comp=Z,26nm,0.9s
EDM Edmonton 87.73 336 P **P** **07 31 07.0 -1.0**
EDM Edmonton 87.73 336 P **P** **07 31 07.0 -1.0**
EDM pmax pmax
comp=Z,67nm,0.9s
MUSN Musina, Limpop 89.25 115 *e*P **P** **07 31 16.4 +0.3**
MUSN IAmb IAmb 07 31 17.4
comp=Z,18nm,1.2s
URZ Urewera 89.25 227 LR LR 08 02 13.4
comp=Z,314nm,19.9s,baz=232,slow=29
RPZ Rata Peaks 89.77 220 LR LR 08 03 12.1
comp=Z,202nm,19.9s,baz=103,slow=30
RAO Raoul Island 90.59 237 LR LR 08 03 08.5
comp=Z,59nm,19.6s,baz=105,slow=30
ESDC Sonseca Array 90.86 45 P **P** **07 31 22.2 -0.8**
comp=Z,1.3nm,0.9s,baz=241,slow=5.1,SNR=5.4
ESDC LR LR 08 11 22.0
comp=Z,240nm,18.4s,baz=226,slow=35
comp=Z,1.3nm,0.9s
LSZ Lusaka 91.16 108 LR LR 08 07 51.1
comp=Z,331nm,21.9s,baz=249,slow=33
BBB Bella Bella 93.09 329 LR LR 08 10 25.5
comp=Z,42nm,19.3s,baz=82,slow=34
AFI Afiamalu 93.21 253 LR LR 08 06 26.5
comp=Z,110nm,18.1s,baz=106,slow=31
SFJD Kangerlussuaq 94.70 8 LR LR 08 16 08.0
comp=Z,66nm,19.3s,baz=171,slow=37
YKA Yellowknife Ar 95.50 341 P **P** **07 31 43.5 -0.3**
comp=Z,6.8nm,0.8s,baz=140,slow=4.6,SNR=9.7
comp=Z,6.8nm,0.8s
KEST Kesra 97.92 54 LR LR 08 19 28.8
comp=Z,469nm,18.4s,baz=200,slow=38
DLBC Dease Lake 97.98 333 P Pdif 07 31 55.7 +0.4
comp=Z,6.6nm,0.9s,baz=107,slow=5.5,SNR=7.6
comp=Z,6.6nm,0.9s
BORG Borgarnes 98.97 19 LR LR 08 16 24.7
comp=Z,49nm,18.2s,baz=199,slow=35
EKA Eskdalemuir Ar 100.04 32 LR LR 08 13 20.3
comp=Z,96nm,20.8s,baz=224,slow=33
DZM Mont Dzumac 106.24 234 *e*SS SS 07 51 59.0 +1.1
comp=Z,90nm,24.2s
DZM Mont Dzumac 106.24 234 *e*LR LR 08 07 35.1
comp=Z,181nm,26.2s
ILAR Eielson Array 108.12 334 PKKPbc PKKPbc 07 47 56.6 -4.0
comp=Z,0.4nm,0.8s,baz=280,slow=3.4,SNR=4.8
NACGM Naroch 115.78 39 *e*PKP **PKPdf** **07 37 00.7 -0.8**
baz=259
MNK Minsk 116.34 40 *i* PKIKP **PKPdf** **07 37 02.3 -0.2**
MNK *i* 07 38 08.1
MNK *i* PPP PPP 07 40 35.3
MNK *i* 07 44 14.4
MNK *i* SS SS 07 54 13.5 +0.9
MNK *i* SSS SSS 07 58 32.0
MNK pmax pmax
comp=E,5.0nm,0.8s
MNK pmax pmax
comp=N,15nm,0.7s
MNK pmax pmax
comp=Z,17nm,0.7s
MNK MLR MLR
comp=N,822nm,17.0s
MNK MLR MLR
comp=E,179nm,17.0s
MNK MLR MLR
comp=Z,186nm,20.0s
MNK Minsk 116.34 40 *i* PKP **PKPdf** **07 37 02.4 -0.2**
comp=E,5.0nm,0.8s
MNK *i* PKP **PKPdf** **07 37 02.4 -0.2**
comp=N,15nm,0.7s
MNK *i* PKP **PKPdf** **07 37 02.4 -0.2**
comp=Z,17nm,0.7s,baz=80
MNK *i* PP **PP** **07 38 08.1 -1.1**
MNK *i* PPP PPP 07 40 35.4
MNK *i* SKS **SKSdf** **07 44 14.5 +0.8**
MNK *i* PS **PKKPdf** **07 47 58.7 -0.5**
MNK *i* SS **SS** **07 54 13.6 +1.0**
MNK *i* SSS SSS 07 58 32.0
MNK *i* LR LR 08 21 05.0
MNK *i* LRM MLR 08 26 06.5
comp=N,822nm,16.6s
MNK *i* LRM MLR 08 26 11.6
comp=E,179nm,16.6s
MNK *i* LRM MLR 08 26 14.2
comp=Z,186nm,20.4s
AKASG Malin Array Be 116.49 44 PKP **PKPdf** **07 37 01.4 -1.6**
comp=Z,3.6nm,0.8s,baz=267,slow=2.8,SNR=18
AKASG Malin Array Be 116.49 44 **PKPdf** **07 37 02.0 -1.0**
AKASG Malin Array Be 116.49 44 PKIKP **PKPdf** **07 37 02.0 -1.0**
AKBB Malin Array Si 116.49 44 PKPdf **PKPdf** **07 37 01.6 -1.3**
AKBB Malin Array Si 116.49 44 *i* PKIKP **PKPdf** **07 37 02.0 -1.0**
BRTR Keskin Array B 117.31 57 PKP **PKPdf** **07 37 05.0 -0.1**
comp=Z,1.4nm,0.8s,baz=204,slow=2.7,SNR=5.4
APA Apatity 119.90 25⇓ *i*PKIKP **PKiKP** **07 37 16.4 +7.3**
APA pmax pmax
comp=Z,9.0nm,1.0s
OBN Obninsk 121.41 40⇑ *i*PKIKP **PKiKP** **07 37 12.6 +0.2**
OBN *e* 07 38 43.8
OBN *e*PPP PPP 07 41 20.1
OBN pmax pmax
comp=Z,13nm,0.4s
OBN MLR MLR
comp=Z,164nm,19.0s
LPSR Galich'ya Gora 122.70 43 *e*PKIKP **PKPdf** **07 37 14.1 -0.8**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 122.79 45 *e*PKIKP **PKPdf** **07 37 12.6 -2.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 122.92 33 *e*PKIKP **PKPdf** **07 37 13.1 -1.9**
KLMR pmax pmax
comp=Z,19nm,0.9s
KLMR Klimovskoe 122.92 33 *e*PKPdf **PKPdf** **07 37 13.1 -1.9**
KLMR AMP 07 37 15.9
comp=Z,19nm,0.9s
VRH Novokhopyorsk 124.39 45 *e*PKIKP **PKPdf** **07 37 17.7 -0.5**
VRH pmax pmax
comp=Z,20nm,0.5s
ASAR Alice Springs 124.42 208 PKP **PKPdf** **07 37 18.7 -0.6**
comp=Z,4.2nm,0.8s,baz=146,slow=2.1,SNR=41
ASAR Alice Springs 124.42 208 PKPdf **PKPdf** **07 37 18.5 -0.8**
ASAR Alice Springs 124.42 208 PKIKP **PKPdf** **07 37 18.5 -0.8**
AS31 Alice Springs 124.42 208 PKPdf **PKPdf** **07 37 18.9 -0.4**
KIV Kislovodsk 124.66 54 *i* PKIKP **PKiKP** **07 37 19.4 0.0**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KBZ Khabaz 124.79 54 PKP **PKPdf** **07 37 18.9 -0.2**
comp=Z,7.5nm,0.9s,baz=174,slow=1.4,SNR=8.6
KBZ Khabaz 124.79 54 *d i*PKIKP **PKPdf** **07 37 18.7 -0.4**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
PRGR Permogore 125.76 32 *e*PKIKP **PKPdf** **07 37 19.1 -1.3**
PRGR pmax pmax
comp=Z,17nm,0.6s
H11S2 WAKE ISLAND Hyl 26.51 274 T T 09 56 45.7
baz=107,slow=74,SNR=58
H11S1 WAKE ISLAND Hyl 26.52 274 T T 09 56 45.8
baz=107,slow=74,SNR=31
H11S3 WAKE ISLAND Hyl 26.52 274 T T 09 56 48.7
baz=107,slow=74,SNR=25
H11N3 WAKE ISLAND Hyl 26.73 275 T T 09 57 02.6
baz=112,slow=74,SNR=5.2
H11N1 WAKE ISLAND Hyl 26.75 275 T T 09 57 08.9
baz=112
H11N2 WAKE ISLAND Hyl 26.75 275 T T 09 57 04.2
baz=112,slow=74,SNR=5.6
WRA Warramunga Arr 127.50 210 PKP **PKPdf** **07 37 25.2 0.0**
comp=Z,6.8nm,0.8s,baz=154,slow=1.6,SNR=46
WRA Warramunga Arr 127.50 210 **PKPdf** **07 37 24.9 -0.3**
WRA Warramunga Arr 127.50 210 PKIKP **PKPdf** **07 37 24.9 -0.3**
WRAB Tennant Creek 127.51 210⇑ *i*PKIKP **PKPdf** **07 37 24.6 -0.6**
WRAB pmax pmax
comp=Z,3.0nm,0.8s
WB0 Warramunga Arr 127.63 211 PKPdf **PKPdf** **07 37 25.0 -0.5**
KIRV Kirov 128.18 35 *d i*PKIKP **PKiKP** **07 37 25.7 -0.1**
ARU Arti 133.50 36 PKPdf **PKPdf** **07 37 36.1 +0.7**
ARU Arti 133.50 36⇑ *i*PKIKP **PKPdf** **07 37 35.7 +0.4**
ARU pmax pmax
comp=Z,13nm,1.0s
SEY Seymchan 134.06 334 PKP **PKiKP** **07 37 37.4 -0.2**
comp=Z,4.6nm,0.7s,baz=133,slow=5.6,SNR=7.6
GEYT Alibeck 136.04 62 PKP **PKPdf** **07 37 41.2 +0.5**
comp=Z,3.2nm,0.7s,baz=234,slow=9.0,SNR=4.7

AB31	Akbulak array	136.20	46	*i* PKIKP	PKPdf	07 37 41.0	+0.4
ABKAR	Akbulak array	136.20	46	PKPdf	PKPdf	07 37 41.0	+0.4
BRVK	Borovoye	141.06	37	PKPdf	PKPdf	07 37 49.6	+0.2
BRVK	Borovoye	141.06	37	⇑*i* PKIKP	PKPdf	07 37 50.1	+0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PLAI	Plampang	143.64	195	PKP	PKiKP	07 37 57.8	-0.8
GUMO	Guam	144.04	256	PKP	PKPbc	07 37 54.0	+0.2
	comp=Z,38nm,0.7s,baz=175,slow=11,SNR=3.8						
OTUK	Ortayu	144.31	43	PKIKP	PKPbc	07 37 53.9	+0.2
AAI	Ambon	144.53	214	PKP	PKPab	07 37 54.9	-0.2
RTBI	Rangdo, Negare	144.54	190	PKP	PKPab	07 37 55.3	+0.1
KRAI	Karang Ratu	144.74	215	PKP	PKPab	07 37 55.7	-0.2
KK31	Karatay Array	144.80	52	PKPdf	PKPbc	07 37 56.0	+0.6
KK31	Karatay Array	144.80	52	PKIKP	PKPbc	07 37 56.0	+0.6
KKAR	Karatay Array	144.80	52	PKPdf	PKPab	07 37 54.7	-0.6
KKAR	Karatay Array	144.80	52	PKIKP	PKPab	07 37 54.7	-0.6
SRBI	Singaraja	144.87	191	PKP	PKPab	07 37 56.4	+0.1
KBL	Kabul	144.90	67		PKPab	07 37 55.1	-1.1
KBL	Kabul	144.90	67	PKIKP	PKPab	07 37 55.1	-1.1
SIJI	Sorong	145.18	221	PKPbc	PKPab	07 37 57.8	+0.2
	comp=Z,34nm,0.8s,baz=6.2,slow=1.4,SNR=14						
SIJI	Sorong	145.18	221	PKP	PKPdf	07 37 58.4	+0.4
SWI	Sorong	145.19	221	PKP	PKPdf	07 37 58.4	+0.5
PCJI	Pacitan	145.21	184	PKP	PKPab	07 37 57.8	+0.2
PCHI	Peechi	145.23	111	*eP*	PKPbc	07 37 57.3	-0.3
PCHI				*ex*	x	07 55 49.1	
BSSI	Bau Bau, Buton	145.48	200	PKP	PKPbc	07 37 57.0	-1.4
UGM	Wanagama	145.53	183		PKPdf	07 37 58.3	-0.3
UGM	Wanagama	145.53	183	PKP	PKPab	07 37 59.6	+0.8
BTK	Batken	145.71	57	PKPdf	PKPdf	07 37 58.0	-0.1
BTK	Batken	145.71	57	PKIKP	PKPdf	07 37 58.0	-0.1
KMMI	Kalianget	146.07	189	PKP	PKiKP	07 38 09.7	+6.1
CNJI	Cibinong	146.10	177	PKP	PKPbc	07 38 00.2	-0.1
BKSI	Bulukumba	146.37	200	PKP	PKPbc	07 38 00.7	-0.4
BKSI				PKP	PKPab	07 38 01.1	-0.8
LEM	Lembang	146.61	177	PKP	PKPab	07 38 02.7	-0.3
KURK	Kurchatov	146.69	36	PKPdf	PKPbc	07 38 00.5	-0.5
KURK	Kurchatov	146.69	36	*d i* PKP2	PKPdf	07 37 59.4	+0.1
KAPI	Kappang	146.77	200	PKPbc	PKPbc	07 38 02.1	-0.2
	comp=Z,28nm,0.8s,baz=173,slow=3.8,SNR=17						
KAPI	Kappang	146.77	200	PKP	PKPdf	07 38 00.9	+0.3
SANI	Sanana	147.03	212	PKP	PKPdf	07 38 02.2	+1.1
EKS2	Erkin-Say	147.23	52	P	PKPbc	07 38 02.5	-0.5
	SNR=13						
BNSI	Bone	147.24	201	PKP	PKPbc	07 38 04.3	+0.7
AML	Almayashu	147.32	53	P	PKPab	07 38 04.8	-0.6
	SNR=12						
ZALV	Zalesovo Beam	147.47	27	PKPbc	PKPdf	07 38 01.6	+1.1
	comp=Z,105nm,0.8s,baz=299,slow=2.9,SNR=53						
ZALV	Zalesovo Beam	147.47	27	PKPdf	PKPdf	07 38 00.9	+0.4
ZALV	Zalesovo Beam	147.47	27	PKIKP	PKPdf	07 38 00.9	+0.4
LBMI	Labuha	147.48	216	PKP	PKPdf	07 38 02.8	+1.0
USP	Ospenovka	147.54	50	P	PKPbc	07 38 02.5	-1.2
	SNR=10						
KASI	Kota Agung	147.63	172	PKP	PKPbc	07 38 04.4	-0.3
AAK	Ala-Archa	147.74	52	P	PKiKP	07 38 05.6	-0.8
	SNR=26						
SPSI	Sidrap Palu	147.76	200	PKP	PKPbc	07 38 04.9	-0.2
CHMS	Chumysh	147.80	51	P	PKPbc	07 38 05.2	+0.8
	SNR=14						
UCH	Uchtor	147.88	52	P	PKPdf	07 38 03.6	+1.4
	SNR=41						
KBK	Karagaybulak	148.05	51	P	PKPbc	07 38 06.3	+1.0
	SNR=12						
TKM2	Tokmak 2	148.41	51	P	PKPbc	07 38 06.9	+0.6
	SNR=18						
TKM2	Tokmak 2	148.41	51	PKIKP	PKPdf	07 38 03.0	+0.2
NIL	Nilore	148.43	69		PKPdf	07 38 03.8	+1.0
NIL	Nilore	148.43	69	PKIKP	PKPdf	07 38 03.8	+1.0
BOD	Bodaibo	148.74	355	*e*PKP2	PKPbc	07 38 05.5	-0.8
BOD				pmax	pmax		
	comp=Z,33nm,1.7s						
LUWI	Luwuk	149.37	208	PKP	PKPbc	07 38 10.0	+0.7
MASI	Maura Aman, Be	149.58	167	PKP	PKPbc	07 38 09.8	0.0
KSH	Kashi	149.70	57	PKPbc	PKPdf	07 38 05.8	+1.0
KSH				pPKP	PKPab	07 38 14.5	-0.3
KSH				SKKS		07 48 36.3	
KSH				LR	LR		
	comp=Z,290nm,16.8s						
KSH				LR	LR		
	comp=Z,240nm,15.8s						
ZEA	Zeya	149.84	338	*i* PKP2	PKPbc	07 38 09.1	-0.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
APSI	Ampana	149.94	206	PKP	PKPbc	07 38 09.6	-1.1
HYBB	Hyderabad (bro	150.34	102	*e*PKiKP	PKiKP	07 38 12.4	+0.1
HYBB				*eP*	PP	07 41 42.7	-4.5
MAKZ	Makanchi	150.72	40	PKPdf	PKPdf	07 38 06.7	+0.7
MAKZ				PKPbc	pPKPdf	07 38 12.0	+0.3
MAKZ				PKPab	sPKPbc	07 38 19.7	+0.5
MAKZ	Makanchi	150.72	40	PKIKP	PKPdf	07 38 06.7	+0.7
MAKZ						07 38 12.0	
MAKZ						07 38 19.7	
MK31	Makanchi Array	150.91	39	PKPdf	PKPdf	07 38 06.9	+0.6
MK31	Makanchi Array	150.91	39	*ce*PKIKP	PKPdf	07 38 06.3	-0.1
MK31				*i*		07 38 12.1	
MKAR	Makanchi Array	150.91	39	PKP	PKPdf	07 38 06.3	0.0
	comp=Z,1.6nm,0.9s,baz=270,slow=2.4,SNR=8.1						
MKAR				PKPbc	PKPbc	07 38 12.1	0.0
	comp=Z,81nm,0.8s,baz=320,slow=2.2,SNR=308						
KLR	Kul'dur	151.49	328	*ce*PKIKP	PKPdf	07 38 06.9	-0.2
KLR				*i*		07 38 13.1	
SDSI	Sungai Dareh	151.53	164	PKP	PKPbc	07 38 13.3	-1.1
MPSI	Mapaga	151.74	203	PKP	PKPbc	07 38 15.2	+0.3
MNSI	Mandailing Nat	152.65	159	PKP	PKPbc	07 38 14.8	-2.2
MJAR	Matsushiro Arr	153.40	299	PKPab	PKPab	07 38 31.3	+1.1
	comp=Z,1.8nm,0.5s,baz=87,slow=4.0,SNR=4.7						
WMQ	Urumqi	155.74	40	*e*PKP	PKPdf	07 38 13.3	-0.2
WMQ				LR	LR		
	comp=Z,110nm,22.1s						
ZAK	Zakamensk	155.98	9	*e*PKIKP	PKPdf	07 38 13.8	+0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	158.84	5	PKP	PKPdf	07 38 18.2	+0.9
	comp=Z,3.9nm,0.9s,baz=314,slow=1.1,SNR=18						
SONM				PKPab	PKPab	07 38 54.1	+0.9
	comp=Z,4.2nm,0.8s,baz=323,slow=3.6,SNR=11						
SONM				PP	PP	07 42 32.7	-0.4
	comp=Z,0.9nm,0.8s,baz=345,slow=6.0,SNR=5.7						
SONM	Songino Array	158.84	5	PKPdf	PKPdf	07 38 18.3	+1.0
SONM				PKPab	PKPab	07 38 54.2	+1.1
SONM	Songino Array	158.84	5	PKIKP	PKPdf	07 38 18.3	+1.0
ULN	Ulaanbaatar	158.85	4	PKPdf	PKPdf	07 38 18.4	+1.0
ULN				PKPab	PKPab	07 38 54.0	+0.8
ULN	Ulaanbaatar	158.85	4	PKIKP	PKPdf	07 38 18.4	+1.0
ULN						07 38 54.0	
KSRS	Korea Array	160.79	308	PKP	PKPdf	07 38 19.5	-0.1
	comp=Z,1.4nm,0.8s,baz=72,slow=1.5,SNR=4.9						
KSRS				PKPab	PKPab	07 39 03.8	+1.9
	comp=Z,1.7nm,0.8s,baz=41,slow=4.6,SNR=5.1						
GOMU	GeErMu	164.65	49	PKP	PKPdf	07 38 25.0	+1.0
GOMU				AMB	AMB		
	comp=Z,46nm,4.0s						
GTA	Gaotai	165.20	29	*e*PKP	PKPdf	07 38 25.0	+0.9
GTA				sPKP		07 38 33.3	
GTA				PKPab	PKPab	07 39 21.0	-0.3
GTA				LR	LR		
	comp=Z,130nm,22.5s						
GTA				LR	LR		
	comp=Z,120nm,21.8s						
GTA				LR	LR		
	comp=Z,120nm,21.4s						
HHC	Hu-ho-hao-te	165.77	352	*e*PKP	PKPdf	07 38 23.0	-1.5
CMAR	Chiang Mai Arr	167.57	129	PKP	PKPdf	07 38 25.9	-0.4
	comp=Z,2.1nm,0.8s,baz=260,slow=2.0,SNR=11						
CMAR				PKPab	PKPab	07 39 31.6	-0.5
	comp=Z,1.7nm,0.4s,baz=237,slow=4.5,SNR=7.1						
CMAR	Chiang Mai Arr	167.57	129		PKPdf	07 38 27.0	+0.7
CMAR					PKPab	07 39 31.2	-1.0
CMAR	Chiang Mai Arr	167.57	129	PKIKP	PKPdf	07 38 27.0	+0.7
CMAR						07 39 31.2	
CHTO	Chiang Mai	167.81	128	PKPdf	PKPdf	07 38 26.3	-0.2
CHTO				PKPab	PKPab	07 39 32.8	-0.4
CHTO	Chiang Mai	167.81	128	PKIKP	PKPdf	07 38 26.3	-0.2
CHTO						07 39 32.8	
LZH	Lanzhou	169.68	24	*e*PKP	PKPdf	07 38 25.5	-1.9
LZH				sPKP		07 38 34.5	
NJ2	Nanjing	169.93	304	*e*PKP	PKPdf	07 38 25.0	-2.5
PZH	PanZhiHua	173.47	90	PKP	PKPdf	07 38 28.3	-1.2

2016 OCT

SKO ***25*** *08:11:39.2, 41°.85N×22°.16E, h15km*
SOF ***25*** *08:11:39.5, 41°.90N×22°.05E, h7km, MD2.9*
BEO ***25*** *08:11:41.5±0.3, 41°.83N×22°.17E, h11km±2km, ML2.3/10*
THE ***25*** *08:11:44.3, 41°.70N×22°.27E, h6km, ML2.5/3, Error ellipse: s-maj=2.4km s-min=1.2km az=184.0*

ISC 25 08:11:41.5±0.9, 41°.85N±0°.02×22°.17E±0°.02, h14km±8km, n35, σ0°73/55, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	Stip	0.15	175	*i* Pg	Pg	08 11 45.7	+0.3
STIP				*i* Sg	Sb	08 11 49.4	+0.1
STIP				*e*Lg	Lg	08 11 49.8	
	comp=E,292nm,0.2s						
STIP				*e*Lg	Lg	08 11 50.6	
	comp=N,313nm,0.2s						
SKO	Skopje	0.56	283	*e*Pg	Pg	08 11 52.6	+0.1
SKO				*e*Sg	Sg	08 12 00.0	+0.1
SKO	Skopje	0.56	283	*i* Pg	Pb	08 11 53.9	+0.8
VAY	Valandovo	0.61	150	*e*Pg	Pg	08 11 53.0	-0.4
VAY				*e*Sg	Sg	08 12 01.1	-0.3
VAY	Valandovo	0.61	150	*i* Pg	Pg	08 11 53.1	-0.3
VAY				*i* Sg	Sg	08 12 01.8	+0.4
VAY				*e*Lg	Lg	08 12 02.3	
	comp=N,318nm,0.6s						
VAY				*e*Lg	Lg	08 12 02.7	
	comp=E,362nm,0.5s						
KKB	Krupnik	0.68	88	*i* P	Pb	08 11 55.8	+0.5
KNT	Kendrikon	0.88	141	P	Pg	08 11 57.6	-0.9
KNT				S	Sg	08 12 08.4	-1.6
	comp=E,348nm,0.3s						
KNT	Kendrikon	0.88	141	*i* Pg	Pg	08 11 57.6	-0.9
KNT				*i* Sg	Sg	08 12 09.6	-0.4
GRG	Griva	0.91	169	P	Pg	08 11 58.1	-1.0
GRG	Griva	0.91	169	*i* Pg	Pg	08 11 58.0	-1.0
BARS	Barje	1.00	345	*e*Pg	Pb	08 11 59.5	-1.2
BARS				*e*Sg	Sg	08 12 14.3	+0.3
BARS	Barje	1.00	345	*i* Pg	Pb	08 11 59.2	-1.5
BARS				*i* Sg	Sb	08 12 13.7	-0.2
VTS	Vitosha	1.10	45	*i* Pg	Pb	08 12 02.0	-0.6
VTS				*i* Sg	Sb	08 12 16.8	-0.1
VTS	Vitosha	1.10	45	*i* P	Pb	08 12 01.9	-0.6
MMB	Musomiste	1.20	102	*i* P	Pg	08 12 05.1	+0.6
OHR	Ohrid	1.27	235	*e*Pg	Pn	08 12 04.5	-0.4
OHR				*e*Sg	Sb	08 12 21.4	0.0
OHR	Ohrid	1.27	235	*i* Pg	Pn	08 12 04.5	-0.4
OHR				*i* Sg	Sn	08 12 22.0	+0.2
OHR				*e*Lg	Lg	08 12 22.1	
	comp=N,99nm,0.6s						
OHR				*e*Lg	Lg	08 12 22.7	
	comp=E,170nm,0.6s						
SRS	Serrai	1.29	124	P	Pb	08 12 05.9	+0.2
SRS	Serrai	1.29	124	*i* Pg	Pg	08 12 06.3	-0.2
SRS				*i* Sg	Sg	08 12 24.1	+0.8
THE	Thessaloniki	1.35	153	*i* Pg	Pg	08 12 07.4	-0.2
SOH	Sokhos	1.36	139	P	Pb	08 12 07.3	+0.5
SOH				S	Sn	08 12 24.1	+0.1
	comp=E,182nm,0.4s						
SOH	Sokhos	1.36	139	*i* Pg	Pb	08 12 07.3	+0.5
SOH				*i* Sg	Sg	08 12 25.4	+0.1
NVR	Nevrokopi	1.36	111	P	Pg	08 12 07.5	-0.3
NVR				S	Sb	08 12 24.9	+0.7
	comp=E,200nm,0.4s						
KTI	Kastanea	1.45	182	P	Pb	08 12 08.7	+0.2
ZAPS	Zavoj	1.47	13	*e*Pg	Pb	08 12 08.5	-0.1
ZAPS				*e*Sg	Sg	08 12 28.7	-0.1
SELS	Selova	1.58	331	*e*Pn	Pn	08 12 08.8	-0.3
SELS				*e*Sg	Sg	08 12 33.1	+0.8
PGB	Panagyurishte	1.64	64	*eP*	Pg	08 12 13.7	+0.6
NEST	Nestorio	1.66	211	P	Pb	08 12 11.7	-0.3
BOVS	Bovan	1.82	349	*e*Pn	Pn	08 12 12.2	-0.3
BOVS				*e*Sg	Sg	08 12 40.2	+0.2
RZN	Rozhen	1.91	94	*i* P	Pg	08 12 17.5	-0.7
ZAGS	Zajecar	1.96	1	*e*Pn	Pn	08 12 15.7	+1.2
ZAGS				*e*Sg	Sg	08 12 44.1	-0.6
IVAS	Ivanjica	2.28	320	*e*Pn	Pn	08 12 18.2	-0.6
GRUS	Gruza	2.30	333	*e*Pn	Pn	08 12 20.6	+1.5
PVL	Pavlikeni	2.71	59	*eP*	Pg	08 12 31.9	-1.6
DIVS	Divibare	2.76	325	*e*Pn	Pn	08 12 25.0	-0.5
DIVS				*e*Sn	Sn	08 13 00.4	+1.7

DJA ***25*** *08:24:34.8±0.6, 2°.N±3°×12°.7E±°, h147km±5km, M4.6/13, mb4.9/13, mB5.1/8, MLv4.7/13, Mw(mB)4.4/8*
NEIC ***25*** *08:24:34.5±1.6, 1°.62N±0°.10×127°.4E±0°.1, h163km±7km, mb4.7/32, Error ellipse: s-maj=21.4km s-min=5.2km az=50.0*
BJI ***25*** *08:24:36.3±0.0, 1°.85N×127°.20E, h156km, mb4.5/16, mB4.8/10*
IDC ***25*** *08:24:36.6±3.7, 1°.54N×127°.51E, h181km±35km, mb4.0/12, mbtmp4.5/13, Error ellipse: s-maj=29.7km s-min=11.8km az=68.0*

ISC 25 08:24:34.4±0.4, 1°.51N±0°.05×127°.42E±0°.07, h163km, n107, σ1°.07/114, mb4.6/32, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.49	48	P	Pn	08 24 56.7	-0.5
GAMI				S	Sn	08 25 13.6	-1.1
TNTI	Ternate	0.73	184	Pn	Pn	08 24 59.2	+0.7
TNTI	Ternate	0.73	184	P	Pn	08 24 59.0	+0.4
TNTI				S	Sn	08 25 17.0	-0.1
LBMI	Labuha	2.13	178	P	Pn	08 25 12.9	+1.0
LBMI				S	Sn	08 25 41.8	+0.8
SGSI	Sangihe	2.87	319	P	Pn	08 25 19.4	-1.3
SANI	Sanana	3.81	202	P	Pn	08 25 32.0	-0.6
SANI	Sanana	3.81	202	P	Pn	08 25 32.4	-0.2
GTOI	Gorontalo	4.49	259	P	Pn	08 25 42.6	+1.2
NLAI	Namlea	4.73	184	P	Pn	08 25 45.0	+0.5
KRAI	Karang Ratu	4.89	169	P	Pn	08 25 48.5	+1.8
AAI	Ambon	5.22	171	P	Pn	08 25 59.6	+8.6
LUWI	Luwuk	5.29	241		Pn	08 25 52.4	+0.5
LUWI	Luwuk	5.29	241	P	Pn	08 25 52.4	+0.5
	2.1nm13μm338nm,0.7s						
MRSI	Marisa	5.57	259	P	Pn	08 25 55.1	-0.5
	0.9nm2μm247nm,0.6s						
KCP	Kidapawan	5.94	337	⇓*eP*	Pn	08 26 00.0	-0.5
KCP				*eS*	Sn	08 27 09.1	+1.1
APSI	Ampana	6.25	247	P	Pn	08 26 03.7	-0.9
	1.6nm7μm339nm,0.5s						
TOLI2	Tolitoli	6.65	267	Pn	Pn	08 26 08.8	-1.0
MPSI	Mapaga	7.61	261	P	Pn	08 26 21.7	-0.9
	0.2nm61nm,1.0s						
KKSI	Kolaka, Sulawe	8.07	226	P	Pn	08 26 28.3	-0.4
	4μm106nm,0.5s						
BNSI	Bone	9.37	231	P	Pn	08 26 45.2	-0.8
	421nm55nm,0.9s						
SPSI	Sidrap Palu	9.38	235	P	Pn	08 26 46.3	+0.2
	2μm68nm,0.6s						
PMSI	Majene	9.85	240	P	Pn	08 26 53.5	+1.1
	81nm,0.9s						
BKSI	Bulukumba	9.96	227	P	Pn	08 26 55.2	+1.5
	520nm50nm,0.6s						
KAPI	Kappang	10.03	230	P	Pn	08 26 58.4	+3.6
	16nm,0.3s,baz=81,slow=3.8,SNR=18						
KAPI				S	Sn	08 28 44.9	-1.2
	12nm,0.5s,baz=157,slow=23,SNR=6.4						
KAPI	Kappang	10.03	230	Pn	Pn	08 26 58.1	+3.4
KAPI	Kappang	10.03	230	P	Pn	08 26 55.0	+0.3
	442nm39nm,1.2s						
BSSI	Bau Bau, Buton	10.28	222	P	Pn	08 26 57.8	-0.2
	36nm,0.7s						
PLAI	Plampang	14.06	223	P	Pn	08 27 46.1	-0.6
KNRA	Kununurra	17.13	176	P	P	08 28 23.7	+0.4
KNRA				IAmb	IAmb	08 28 26.7	
	comp=Z,14nm,0.6s						
COEN	Coen	21.91	135	P	P	08 29 15.8	+1.0
COEN				IAmb	IAmb	08 29 18.0	
	comp=Z,30nm,1.4s						
COEN	Coen	21.91	135	P	P	08 29 13.9	-1.0
WB0	Warramunga Arr	22.22	162	P	P	08 29 17.6	-0.4
WRAB	Tennant Creek	22.37	163	P	P	08 29 19.2	-0.1
WRAB				IAmb	IAmb	08 29 20.1	
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	22.37	163	P	P	08 29 19.3	0.0
WRA	Warramunga Arr	22.37	163	P	P	08 29 19.4	+0.1
	comp=Z,16nm,0.7s,baz=344,slow=9.2,SNR=93						
WRA				S	S	08 33 08.3	-4.9
	comp=Z,0.5nm,0.6s,baz=348,slow=16,SNR=2.6						
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	22.37	163	P	P	08 29 18.2	-1.2

WB2	Warramunga Arr	22.38	163	P	P	08 29 19.2	-0.1
WB2				IAmb	IAmb	08 29 20.1	
	comp=Z,32nm,1.0s						
WR0	Warramunga Arr	22.45	162	P	P	08 29 19.9	-0.2
WR0				IAmb	IAmb	08 29 20.9	
	comp=Z,19nm,0.8s						
MBWA	Marble Bar	23.75	198	P	P	08 29 32.3	+0.3
PSA00	Pilbara Seismi	24.11	197	P	P	08 29 35.7	+0.5
PSA00	Pilbara Seismi	24.11	197	P	P	08 29 36.0	+0.8
QIS	Mount Isa	24.97	152	P	P	08 29 43.7	+0.6
AS31	Alice Springs	25.81	166	P	P	08 29 50.5	-0.1
ASAR	Alice Springs	25.81	166	P	P	08 29 50.5	-0.1
	comp=Z,4.1nm,0.5s,baz=347,slow=7.2,SNR=83						
ASAR				PcP	PcP	08 33 15.8	-0.3
	comp=Z,0.6nm,0.3s,baz=349,slow=2.0,SNR=4.6						
	comp=Z,4.1nm,0.5s						
AS01	Alice Springs	25.82	166	P	P	08 29 50.8	+0.1
WRKA	Warakurna	26.40	178	P	P	08 29 56.1	+0.1
OOD	Oodnadatta	30.20	165	P	P	08 30 29.7	+0.1
INKA	Innaminka	31.78	157	P	P	08 30 44.3	+0.8
FORT	Forrest	32.12	179	P	P	08 30 45.8	-0.5
FORT	Forrest	32.12	179	P	P	08 30 46.8	+0.5
MULG	Mulgathing	32.24	169	P	P	08 30 47.9	+0.4
MORW	Morawa	32.30	199	P	P	08 30 47.4	-0.6
MORW				IAmb	IAmb	08 31 14.7	
	comp=Z,24nm,1.5s						
LCRK	Leigh Creek	33.40	163	P	P	08 30 58.2	+0.6
KMI	Kunming	33.44	317	⇑P	P	08 30 58.3	0.0
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
BLDU	Ballidu	33.54	197	P	P	08 30 58.6	-0.1
KLBR	Kellerberrin	34.17	195	P	P	08 31 03.9	-0.3
MUN	Mundaring	34.96	197	P	P	08 31 10.4	-0.6
PZH	PanZhiHua	35.02	317	P	P	08 31 14.0	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.4s						
BBOO	Buckleboo	35.10	167	P	P	08 31 12.3	+0.1
BBOO				IAmb	IAmb	08 31 26.5	
	comp=Z,30nm,1.4s						
BBOO	Buckleboo	35.10	167	P	P	08 31 12.5	+0.3
EIDS	Eidsvold	35.20	141	P	P	08 31 13.2	+0.1
EIDS				IAmb	IAmb	08 31 14.3	
	comp=Z,14nm,1.3s						
NWAO	Narrogin (SRO)	35.58	195	P	P	08 31 16.5	+0.3
NWAO	Narrogin (SRO)	35.58	195	P	P	08 31 16.1	-0.1
STKA	Stephens Creek	35.82	159	P	P	08 31 18.9	+0.5
	comp=Z,24nm,0.7s,baz=331,slow=8.4,SNR=54						
STKA				PcP	PcP	08 33 42.2	-0.2
	comp=Z,1.5nm,0.5s,baz=343,slow=5.2,SNR=3.2						
	comp=Z,24nm,0.7s						
STKA	Stephens Creek	35.82	159	P	P	08 31 18.9	+0.5
STKA	Stephens Creek	35.82	159	P	P	08 31 18.4	0.0
HTT	Hallett	36.41	164	P	P	08 31 25.1	+1.7
CMSA	Cobar Meteorol	37.16	154	P	P	08 31 30.1	+0.4
ARMA	Armidale	39.25	146	P	P	08 31 48.0	+0.7
ARMA				IAmb	IAmb	08 31 49.6	
	comp=Z,14nm,0.9s						
ARMA	Armidale	39.25	146	P	P	08 31 45.4	-1.9
ARPS	Mount Arapiles	40.38	162	P	P	08 31 56.2	-0.2
HHC	Hu-ho-hao-te	41.71	342	*eP*	P	08 32 09.0	+1.6
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.1s						
CAN	Canberra	41.83	153	P	P	08 32 10.2	+1.9
CAN				IAmb	IAmb	08 32 10.7	
	comp=Z,20nm,0.9s						
CAN	Canberra	41.83	153	P	P	08 32 08.2	-0.2
TOO	Toolangi	42.33	159	P	P	08 32 14.0	+1.6
TOO				IAmb	IAmb	08 32 16.1	
	comp=Z,26nm,1.4s						
GTA	Gaotai	45.35	330	*eP*	P	08 32 37.8	+1.3
GTA				pP	pwP	08 33 14.0	-1.0
GTA				sP	sP	08 33 30.5	+0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				LR	LR		
	comp=Z,120nm,20.0s						
GTA				LR	LR		
	comp=Z,110nm,19.3s						
GTA				LR	LR		
	comp=Z,120nm,18.9s						
SONM	Songino Array	49.61	341	P	P	08 33 09.4	+0.1
	comp=Z,0.8nm,0.5s,baz=162,slow=9.4,SNR=3.5						
SONM				PcP	PcP	08 34 28.0	-0.3
	comp=Z,1.0nm,0.8s,baz=145,slow=5.4,SNR=3.5						
	comp=Z,0.8nm,0.5s						
WMQ	Urumqi	54.93	326	*eP*	P	08 33 49.5	+1.0
PETK	Petropavlovsk-	57.23	21	P	P

0.6nm,0.9s

*JMA **25** 08:36:14.1±0.5,34°N±1°×14°2E±°, h32km±3km, MV3.4/36, FAR SE OFF BOSO PEN*
*IDC **25** 08:36:14.0±0.7,34.20N×141.69E, h0km, mb3.7/10, mbtmp3.7/11, ML3.1/1, MS3.2/3, Error ellipse: s-maj=19.3km s-min=16.5km az=126.0*
ISC 25 08:36:15.5±3.6,34.28N±0.05×141.66E±0.07, h10km±22km, n34, σ0=94/33, mb3.8/10, MS3.2/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.68**	**304**	P	**Pb**	**08 36 29.5**	**+0.3**
BSO3	**Boso 3**	**1.09**	**299**	P	**Pb**	**08 36 36.1**	**-0.2**
BSO4	**Boso 4**	**1.31**	**304**	P	**Pn**	**08 36 40.0**	**+0.3**
JKUC	**kamogawauchiur**	**1.50**	**307**	P	**Pn**	**08 36 41.9**	**-0.6**
JKUC				*e*S	**Sn**	**08 37 02.2**	**+0.1**
CHOJ	**Chosi**	**1.57**	**335**	*e*P	**Pn**	**08 36 42.2**	**-1.3**
CHOJ				*e*S	**Sn**	**08 37 01.4**	**-2.5**
JMKN	**Mikurajimanish**	**1.76**	**258**	*e*P	**Pn**	**08 36 45.1**	**-1.0**
JMKN				*e*S	**Sn**	**08 37 08.0**	**-0.6**
JMYK	**Miyake Tsubota**	**1.77**	**264**	*e*P	**Pn**	**08 36 45.5**	**-0.7**
JMYK				*e*S	**Sn**	**08 37 07.8**	**-0.9**
JIM2	**Oshima 3**	**1.90**	**284**	P	**Pn**	**08 36 46.8**	**-1.2**
JIM2				*e*S	**Sn**	**08 37 11.8**	**-0.2**
JHJ2	**Mitsune**	**1.93**	**234**	*e*S	**Sn**	**08 37 12.8**	**+0.1**
JHJ	**Hachijo jima 2**	**1.95**	**234**	Pn	**Pn**	**08 36 49.4**	**+0.8**
	45nm,0.3s,baz=312,slow=17,SNR=9.1						
JHJ				Sn	**Sn**	**08 37 12.3**	**-0.8**
	232nm,0.3s,baz=253,slow=22,SNR=14						
JOD2	**Odawara 2**	**2.34**	**296**	P	**Pn**	**08 36 53.6**	**-0.5**
JOD2				*e*S	**Sn**	**08 37 23.1**	**+0.2**
JIZS	**Izushimoda**	**2.34**	**282**	*e*P	**Pn**	**08 36 53.8**	**-0.3**
MJAR	**Matsushiro Arr**	**3.62**	**310**	Pn	**Pn**	**08 37 12.1**	**+0.4**
	1.4nm,0.3s,baz=161,slow=14,SNR=32						
MJAR				Sn	**Sn**	**08 37 57.0**	**+2.6**
	1.0nm,0.3s,baz=122,slow=27,SNR=6.7 7.7nm,0.4s						
PETK	**Petropavlovsk-**	**22.02**	**26**	LR	LR	08 51 05.0	
	comp=Z,36nm,20.3s,baz=74,slow=40						
H11N2	**WAKE ISLAND Hy**	**26.65**	**116**	T	T	09 09 54.4	
	baz=308,slow=75,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**26.66**	**116**	T	T	09 09 54.4	
	baz=308,slow=75,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**26.67**	**116**	T	T	09 09 52.3	
	baz=308,slow=75,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**27.27**	**119**	T	T	09 10 42.3	
	baz=309,slow=74,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**27.27**	**119**	T	T	09 10 43.0	
	baz=309,slow=74,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**27.29**	**119**	T	T	09 10 47.5	
	baz=309						
SONM	**Songino Array**	**29.57**	**308**	P	**P**	**08 42 21.4**	**+0.8**
	1.3nm,0.5s,baz=97,slow=7.6,SNR=8.2 1.3nm,0.5s						
PMG	**Port Moresby**	**43.75**	**172**	LR	LR	09 01 00.1	
	comp=Z,27nm,19.7s,baz=88,slow=34						
ZALV	**Zalesovo Beam**	**43.96**	**315**	P	**P**	**08 44 22.8**	**+0.2**
	1.1nm,0.6s,baz=97,slow=7.8,SNR=4.2 1.1nm,0.6s						
MKAR	**Makanchi Array**	**45.80**	**304**	P	**P**	**08 44 37.3**	**-0.2**
	0.6nm,0.5s,baz=85,slow=9.1,SNR=8.7 0.6nm,0.5s						
ILAR	**Eielson Array**	**51.73**	**31**	P	**P**	**08 45 22.9**	**+0.2**
	0.7nm,0.9s,baz=269,slow=7.1,SNR=4.7 0.7nm,0.9s						
WRA	**Warramunga Arr**	**54.37**	**188**	P	**P**	**08 45 41.6**	**-0.9**
	0.6nm,0.5s,baz=1.8,slow=7.5,SNR=26 0.6nm,0.5s						
INK	**Inuvik**	**56.75**	**26**	P	**P**	**08 45 59.8**	**+0.6**
	0.8nm,0.3s,baz=306,slow=14,SNR=8.1 0.8nm,0.3s						
ASAR	**Alice Springs**	**58.09**	**188**	P	**P**	**08 46 08.8**	**-0.4**
	0.6nm,0.8s,baz=2.1,slow=7.0,SNR=8.2 0.6nm,0.8s						
NVAR	**Mina Array Bea**	**76.49**	**53**	P	**P**	**08 48 06.8**	**+0.7**
	0.3nm,0.6s,baz=290,slow=5.5,SNR=2.4 0.3nm,0.6s						
PDAR	**Pinedale Array**	**79.46**	**45**	P	**P**	**08 48 22.9**	**+0.4**
	0.4nm,0.6s,baz=321,slow=1.9,SNR=4.2 0.4nm,0.6s						
MMAI	**Mount Meron Ar**	**83.73**	**306**	LR	LR	09 30 22.2	
	comp=Z,27nm,19.4s,baz=150,slow=39						
TXAR	**Lajitas Array**	**91.64**	**53**	P	**P**	**08 49 23.5**	**+0.2**
	0.2nm,0.7s,baz=340,slow=2.2,SNR=3.5 0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**119.40**	**314**	PKP	**PKPdf**	**08 55 04.7**	**-1.2**
	0.2nm,0.4s,baz=32,slow=3.1,SNR=1.9						
LPAZ	**La Paz**	**147.82**	**64**	PKPbc	**PKPbc**	**08 56 02.2**	**+0.2**
	0.9nm,0.5s,baz=241,slow=0.7,SNR=6.0						

*DDA **25** 08:37:40.3±0.0,35.03N×33.11E, h7km±2km, ML2.5*
*NIC **25** 08:37:43.5±0.0,35.02N×33.12E, h29km, Ml2.8/8*
*ISK **25** 08:37:45.5,35.32N×33.03E, h8km, ML2.6/15*
ISC 25 08:37:44.3±1.0,35.02N±0.04×33.11E±0.03, h32km±7km, n37, σ1=16/55, 3C-3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Mathiatis**	**0.19**	**108**	⇑*i*P	**Pb**	**08 37 49.7**	**-0.9**
CSS				S	**Sb**	**08 37 54.6**	**-0.4**
LEF	**Lefka**	**0.21**	**298**	PG	**Pb**	**08 37 50.8**	**-0.1**
LEF				SG	**Sb**	**08 37 55.4**	**+0.1**
ASGA	**Asgata**	**0.26**	**155**	⇑*i*P	**Pb**	**08 37 49.6**	**-1.8**
ASGA				S	**Sb**	**08 37 55.7**	**-0.5**
ASGA				AML	AML	08 37 57.9	
	4.1nm,0.4s						
ASGA				AML	AML	08 37 57.9	
	4.1nm,0.4s						
ASGA				AML	AML	08 37 58.0	
	2.5nm,0.2s						
ASGA				AML	AML	08 37 58.0	
	2.5nm,0.2s						
ATHAL	**Athalassa**	**0.26**	**62**	P	**Pb**	**08 37 51.7**	**+0.2**
ATHAL				AML	AML	08 37 59.8	
	3.1nm,0.4s						
ATHAL				AML	AML	08 38 01.5	
	3.2nm,0.4s						
SZAC	**Souni**	**0.33**	**216**	⇓*i*P	**Pb**	**08 37 51.0**	**-1.4**
SZAC				S	**Sb**	**08 37 57.7**	**0.0**
SZAC				AML	AML	08 37 58.0	
	15nm,0.3s						
SZAC				AML	AML	08 37 58.0	
	15nm,0.3s						
SZAC				AML	AML	08 37 58.1	
	5.9nm,0.3s						
SZAC				AML	AML	08 37 58.1	
	5.9nm,0.3s						
MVOU	**Mavrovouni**	**0.42**	**90**	⇑*i*P	**Pb**	**08 37 52.4**	**-1.2**
MVOU				S	**Sb**	**08 38 00.3**	**+0.2**
MVOU				AML	AML	08 38 01.4	
	2.4nm,0.4s						
MVOU				AML	AML	08 38 01.4	
	2.4nm,0.4s						
MVOU				AML	AML	08 38 02.5	
	1.8nm,0.4s						
MVOU				AML	AML	08 38 02.5	
	1.8nm,0.4s						
LFK	**Lefkose**	**0.43**	**53**	PG	**Pb**	**08 37 54.2**	**+0.4**
LFK				SG	**Sb**	**08 38 00.5**	**+0.2**
ALFC	**Alefka**	**0.44**	**288**	P	**Pb**	**08 37 53.2**	**-0.8**
ALFC				S	**Sb**	**08 38 01.0**	**+0.4**
ALFC				AML	AML	08 38 01.9	
	2.8nm,0.2s						
ALFC				AML	AML	08 38 01.9	
	2.8nm,0.2s						
ALFC				AML	AML	08 38 05.0	
	4.0nm,0.3s						
ALFC				AML	AML	08 38 05.0	
	4.0nm,0.3s						
NATA	**Nata**	**0.51**	**242**	⇓*e*P	**Pb**	**08 37 53.9**	**-1.1**
NATA				S	**Sb**	**08 38 03.2**	**+1.0**
NATA				AML	AML	08 38 04.5	
	5.9nm,0.5s						
NATA				AML	AML	08 38 04.5	
	5.9nm,0.5s						
NATA				AML	AML	08 38 05.3	
	4.1nm,0.2s						
NATA				AML	AML	08 38 05.3	
	4.1nm,0.2s						
AKMS	**Akamas**	**0.64**	**270**	⇓*e*P	**Pb**	**08 37 56.0**	**-1.1**
AKMS				S	**Sb**	**08 38 07.0**	**+1.1**
AKMS				AML	AML	08 38 08.4	
	2.1nm,0.6s						
AKMS				AML	AML	08 38 08.4	
	2.1nm,0.6s						
AKMS				AML	AML	08 38 08.7	
	1.9nm,0.3s						
AKMS				AML	AML	08 38 08.7	
	1.9nm,0.3s						
PARAL	**Paralimni**	**0.76**	**92**	P	**Pb**	**08 37 58.4**	**-0.7**
PARAL				S	**Sb**	**08 38 09.1**	**-0.1**
PARAL				AML	AML	08 38 11.9	
	1.5nm,0.5s						
PARAL				AML	AML	08 38 11.9	
	1.5nm,0.5s						
PARAL				AML	AML	08 38 12.3	
	1.5nm,0.4s						
PARAL				AML	AML	08 38 12.3	
	1.5nm,0.4s						
EREN	**Erenkoy**	**1.00**	**59**	PG	**Pn**	**08 38 03.4**	**+1.2**
TEKE	**Tekeli-Mersin**	**1.12**	**0**	PG	**Pn**	**08 38 02.3**	**-1.5**
YORU	**Yoruktepe-Mers**	**1.16**	**12**	PG	**Pn**	**08 38 02.9**	**-1.4**
AKK2	**Akkuyu-Mersin**	**1.17**	**18**	PG	**Pn**	**08 38 03.7**	**-0.8**
AKKU	**Akkuyu-Mersin**	**1.19**	**17**	PG	**Pn**	**08 38 04.2**	**-0.6**
GULN	**MERSIN_Gulnar**	**1.21**	**17**	P	**Pn**	**08 38 04.4**	**-0.7**
GULN				S	**Sb**	**08 38 21.5**	**-0.6**
TISA	**Tisan-Mersin**	**1.23**	**22**	PG	**Pn**	**08 38 05.2**	**-0.1**
YESI	**Yesilovacik-Me**	**1.25**	**20**	PG	**Pn**	**08 38 04.7**	**-0.9**
TEPK	**Tepekoy-MERSIN**	**1.25**	**16**	PG	**Pn**	**08 38 05.1**	**-0.6**
KARG	**Kargicak-Mersi**	**1.28**	**22**	PG	**Pn**	**08 38 05.8**	**-0.2**
IKL	**Isikli**	**1.30**	**21**	PG	**Pn**	**08 38 06.2**	**-0.1**
BERE	**Bereket-Mersin**	**1.33**	**4**	PG	**Pn**	**08 38 06.1**	**-0.7**
GAZI	**Gazipasa**	**1.38**	**332**	PN	**Pn**	**08 38 06.8**	**-0.6**
GAZI	**Gazipasa**	**1.38**	**332**	P	**Pn**	**08 38 06.7**	**-0.7**
GAZI				S	**Sn**	**08 38 25.6**	**+1.1**
GAZI				*i* AML	AML	08 38 27.0	
	comp=N,64nm,0.6s						
TEVE	**Tevekalti-Mers**	**1.44**	**11**	PN	**Pn**	**08 38 08.3**	**0.0**
SILI	**Silifke-Mersin**	**1.50**	**26**	PN	**Pn**	**08 38 09.9**	**+0.9**
KIZK	**Mersin**	**1.68**	**30**	PN	**Pn**	**08 38 12.8**	**+1.3**
KIZK	**Mersin**	**1.68**	**30**	P	**Pn**	**08 38 10.1**	**-1.4**
KIZK				S	**Sb**	**08 38 34.5**	**-0.9**
HDMB	**Hadim**	**2.01**	**345**	PN	**Pn**	**08 38 16.4**	**+0.2**
KRMN	**Karaman**	**2.15**	**3**	PN	**Pn**	**08 38 18.6**	**+0.5**
MERS	**Mersin**	**2.17**	**31**	PN	**Pn**	**08 38 19.9**	**+1.6**
KKBE	**Karaman, Kazim**	**2.20**	**356**	P	**Pn**	**08 38 20.4**	**+1.7**
KKBE				S	**Sb**	**08 38 49.4**	**-1.0**
DED	**Mersin**	**2.37**	**35**	P	**Pn**	**08 38 20.9**	**-0.1**
DED				S	**Sn**	**08 38 51.6**	**+2.5**
DED				*i* AML	AML	08 38 54.0	
	comp=E,23nm,0.6s						
KERG	**Konya-Eregli**	**2.53**	**19**	P	**Pn**	**08 38 25.7**	**+2.4**
KERG				S	**Sb**	**08 38 57.2**	**-2.6**
KERG				*i* AML	AML	08 38 59.0	
	comp=N,22nm,0.3s						
GULE	**Gulek**	**2.63**	**30**	P	**Pn**	**08 38 25.5**	**+0.7**
GULE				*i* AML	AML	08 38 58.0	
	comp=N,19nm,0.8s						
GULE				S	**Sb**	**08 39 00.3**	**-2.5**
GULE				*i* AML	AML	08 39 01.0	
	comp=E,31nm,0.4s						
SEDI	**Konya, Seydise**	**2.66**	**336**	P	**Pn**	**08 38 27.0**	**+1.9**
SEDI				S	**Sb**	**08 39 02.2**	**-1.6**

*IDC **25** 08:51:57.6±1.7,30.71N×130.72E, h70km±18km, mb3.4/9, mbtmp3.7/12, Error ellipse: s-maj=21.1km s-min=12.7km az=102.0*
*JMA **25** 08:51:57.4±0.1,30.7N±0.2×130.8E±0.3, h66km, MV3.4/39, NEAR TANEGASHIMA ISLAND*
JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .
ISC 25 08:51:57.3±0.8,30.72N±0.04×130.76E±0.05, h67km±6km, n33, σ0=64/46, mb3.7/9, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.20**	**108**	*i* P	**Pn**	**08 52 07.4**	**-0.2**
JTN				S	**Sn**	**08 52 15.2**	**0.0**
JMTN	**Minamitane**	**0.34**	**159**	*i* P	**Pn**	**08 52 08.6**	**+0.1**
JMTN				S	**Sn**	**08 52 17.2**	**+0.5**
JTSR	**Tashiro 2**	**0.47**	**17**	*i* P	**Pn**	**08 52 09.1**	**-0.5**
JTSR				S	**Sn**	**08 52 17.8**	**-0.9**
JYAK	**Yakushimahirau**	**0.53**	**204**	*i* P	**Pn**	**08 52 10.2**	**+0.1**
JYAK				S	**Sn**	**08 52 19.6**	**+0.1**
JKC	**Kuchinoerabu**	**0.55**	**242**	P	**Pn**	**08 52 10.6**	**+0.2**
JKC				S	**Sn**	**08 52 20.7**	**+0.7**
JSU	**Suzuyama**	**0.83**	**342**	P	**Pn**	**08 52 13.8**	**+0.2**
JSU	**Suzuyama**	**0.83**	**342**	*i* P	**Pn**	**08 52 13.5**	**-0.1**
JSU				S	**Sn**	**08 52 25.6**	**-0.1**
JNAR	**Kushima--Naru**	**0.92**	**28**	*i* P	**Pn**	**08 52 14.7**	**+0.1**
JNAR				S	**Sn**	**08 52 27.8**	**+0.3**
JNKG	**Nichinankitago**	**1.08**	**29**	*i* P	**Pn**	**08 52 17.0**	**+0.3**
JNKG				S	**Sn**	**08 52 31.9**	**+0.8**
JNN	**Nakanoshima**	**1.16**	**221**	*i* P	**Pn**	**08 52 18.2**	**+0.4**
JNN				S	**Sn**	**08 52 33.8**	**+0.8**
JTZ	**Takazaki**	**1.21**	**13**	*i* P	**Pn**	**08 52 18.3**	**-0.2**
JTZ				*e*S	**Sn**	**08 52 33.8**	**-0.4**
JSJ	**Shimokoshiki**	**1.31**	**317**	*i* P	**Pn**	**08 52 19.3**	**-0.5**
JSJ				S	**Sn**	**08 52 36.5**	**+0.1**
JZO	**Okuchi**	**1.43**	**354**	*i* P	**Pn**	**08 52 21.3**	**+0.1**
JZO				S	**Sn**	**08 52 39.8**	**+0.5**
JTU	**Tsushima**	**3.97**	**344**	P	**Pn**	**08 52 56.9**	**+1.2**
JMN	**Monobe**	**4.00**	**41**	P	**Pn**	**08 52 56.0**	**-0.2**
JOW	**Kunigami**	**4.44**	**210**	P	**Pn**	**08 53 02.6**	**+0.3**
	33nm,0.4s,baz=48,slow=9.4,SNR=31						
JOW				S	**Sn**	**08 53 52.1**	**-0.6**
	11nm,0.3s,baz=240,slow=20,SNR=3.2						
JHS	**Saijyo**	**4.71**	**24**	P	**Pn**	**08 53 05.6**	**-0.2**
INU	**Inuyama**	**6.99**	**47**	P	**Pn**	**08 53 38.1**	**+1.0**
KSRS	**Korea Array**	**7.12**	**341**	P	**Pn**	**08 53 39.7**	**+0.9**
	1.0nm,0.6s,baz=153,slow=14,SNR=2.8						
JGF	**Kuroka**	**7.37**	**47**	P	**Pn**	**08 53 42.3**	**+0.1**
JHJ	**Hachijo jima 2**	**8.04**	**70**	P	**Pn**	**08 53 52.4**	**+1.0**
	120nm,0.3s,baz=78,slow=23,SNR=14						
JHJ2	**Mitsune**	**8.06**	**70**	P	**Pn**	**08 53 52.2**	**+0.5**
MAJO	**Matsushiro**	**8.50**	**45**	P	**Pn**	**08 53 58.6**	**+0.9**
MJAR	**Matsushiro Arr**	**8.50**	**45**	P	**Pn**	**08 53 58.2**	**+0.5**
	2.9nm,0.5s,baz=244,slow=14,SNR=13						
SONM	**Songino Array**	**25.29**	**319**	P	**P**	**08 57 18.2**	**+0.7**
	0.7nm,0.7s,baz=134,slow=6.2,SNR=2.8 0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**40.19**	**319**	P	**P**	**08 59 27.5**	**+0.7**
	0.5nm,0.4s,baz=120,slow=8.7,SNR=2.3 0.5nm,0.4s						
MKAR	**Makanchi Array**	**40.39**	**307**	P	**P**	**08 59 29.2**	**+0.5**
	0.5nm,0.6s,baz=92,slow=10,SNR=4.0 0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**43.30**	**313**	P	**P**	**08 59 52.5**	**+0.3**
	0.6nm,0.5s,baz=112,slow=6.9,SNR=4.8 0.6nm,0.5s						
BVAR	**Borovoye Array**	**48.53**	**316**	P	**P**	**09 00 33.5**	**+0.1**
	0.8nm,0.5s,baz=90,slow=10,SNR=4.0 0.8nm,0.5s						
WRA	**Warramunga Arr**	**50.49**	**176**	P	**P**	**09 00 48.2**	**-0.4**
	0.4nm,0.8s,baz=353,slow=7.9,SNR=5.7 0.4nm,0.8s						
ASAR	**Alice Springs**	**54.16**	**176**	P	**P**	**09 01 16.9**	**+1.2**
	0.2nm,0.6s,baz=12,slow=13,SNR=6.4 0.2nm,0.6s						
FINES	**FINESS Array B**	**70.07**	**330**	P	**P**	**09 03 00.2**	**-1.6**
	3.6nm,1.1s,baz=132,slow=2.8,SNR=7.2 3.6nm,1.1s						
BRTR	**Keskin Array B**	**76.04**	**308**	P	**P**	**09 03 36.8**	**-1.0**
	1.1nm,0.8s,baz=132,slow=3.5,SNR=3.9 1.1nm,0.8s						

*SNET **25** 08:52:55.4±0.3, 18.91N×85.30W, h15km, ML4.4*
*IDC **25** 08:53:06.6±1.1, 17.08N×84.59W, h0km, mb4.0/6, mbtmp4.3/11, ML3.7/5, MS3.6/34, Error ellipse: s-maj=32.1km s-min=19.7km az=50.0*
*NEIC **25** 08:53:09.3±2.7, 17.19N±0.07×84.70W±0.07, h15km±6km, mb4.4/34, Error ellipse: s-maj=10.4km s-min=10.1km az=129.0*
*INET **25** 08:53:10.1±1.2, 17.23N×84.73W, h15km, MW4.8*
*GCMT **25** 08:53:12.3±0.4, 17.42N±0.02×84.75W±0.03, h33km±1km, MW4.9/80, Moment Tensor Solution. s27,c29; s80,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.18; $M_{\theta\theta}$-0.74±.14; $M_{\phi\phi}$0.73±.17; $M_{r\theta}$0.23±.15; $M_{\theta\phi}$2.56±.09; $M_{\phi r}$0.05±.16; Best double couple: $M_0$2.67500×10^{16} NP1:ϕ_s82.00000°, δ90.00000°, λ5.00000°. NP2: ϕ_s352.00000°, δ85.00000°, λ180.00000°. Principal axes: T 2.6730, Plg4.0000°, Azm307.0000°; N 0.0050, Plg85.0000°, Azm87.0000°; P -2.6780, Plg3.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*SSNC **25** 08:53:16.8±2.1, 17.61N×84.05W, h10km, MW4.1*
ISC 25 08:53:07.8±0.5, 17.11N±0.04×84.66W±0.04, h10km, n217, σ1=83/185, mb4.3/11, MS3.7/29, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**3.94**	**220**	Pn	**Pn**	**08 54 09.2**	**+0.7**
TGUH	**Tegucigalpa,Un**	**3.94**	**220**	*e*P	**Pn**	**08 54 09.0**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.94**	**220**	*e*P	**Pn**	**08 54 09.3**	**+0.8**
MATN	**Matagalpa**	**4.33**	**197**		**Pn**	**08 54 14.8**	**+0.9**
MATN	**Matagalpa**	**4.33**	**197**	*e*P	**Pn**	**08 54 14.7**	**+0.9**
TEIG	**Tepich**	**4.62**	**313**	Pn	**Pn**	**08 54 16.2**	**-1.4**
TEIG	**Tepich**	**4.62**	**313**	*e*P	**Pn**	**08 54 15.8**	**-1.9**
TEIG	**Tepich**	**4.62**	**313**	*e*P	**Pn**	**08 54 16.3**	**-1.4**
BOAB	**BOACO BROADBAN**	**4.74**	**192**	Pn	**Pn**	**08 54 20.1**	**+0.8**
PRVC	**Isla de Provid**	**4.89**	**139**	*e*P	**Pn**	**08 54 20.7**	**-0.8**
ESPN	**Las Esperanzas**	**4.90**	**176**		**Pn**	**08 54 23.3**	**+1.7**
ESPN	**Las Esperanzas**	**4.90**	**176**	*e*P	**Pn**	**08 54 22.8**	**+1.2**
CRIN	**San Cristobal**	**4.96**	**208**		**Pn**	**08 54 24.0**	**+1.6**
CRIN	**San Cristobal**	**4.96**	**208**	*e*P	**Pn**	**08 54 23.6**	**+1.2**
CRIN	**San Cristobal**	**4.96**	**208**	*e*P	**Pn**	**08 54 24.0**	**+1.6**
PETF	**Flores**	**4.98**	**269**		**Pn**	**08 54 21.7**	**-1.0**
PETF	**Flores**	**4.98**	**269**	*e*P	**Pn**	**08 54 21.7**	**-1.0**
PETF				*e*S	**Sn**	**08 55 15.3**	**-5.2**
CNGN	**Cerro Negro**	**4.99**	**204**		**Pn**	**08 54 24.4**	**+1.5**
CNGN	**Cerro Negro**	**4.99**	**204**	*e*P	**Pn**	**08 54 22.6**	**-0.2**
LCCY	**Blossom Villag**	**5.04**	**59**	Pn	**Pn**	**08 54 23.7**	**+0.3**
PQSS	**Presa 15 de Se**	**5.12**	**228**	*e*P	**Pn**	**08 54 25.7**	**+1.2**
PQSS	**Presa 15 de Se**	**5.12**	**228**	*e*P	**Pn**	**08 54 25.7**	**+1.2**
ACON	**Acoyapa**	**5.14**	**186**		**Pn**	**08 54 26.6**	**+1.8**
ACON	**Acoyapa**	**5.14**	**186**	*e*P	**Pn**	**08 54 25.5**	**+0.7**
ACON	**Acoyapa**	**5.14**	**186**	*e*P	**Pb**	**08 54 38.7**	**+0.9**
ACON	**Acoyapa**	**5.14**	**186**	*e*P	**Pn**	**08 54 26.3**	**+1.5**
ESQI	**Esquipulas**	**5.17**	**241**		**Pn**	**08 54 26.6**	**+1.2**
COEB	**Comit de Eme**	**5.18**	**227**	*e*S	**Sb**	**08 55 39.1**	**-1.9**
COEB	**Comit de Eme**	**5.18**	**227**	*e*S	**Sb**	**08 55 39.1**	**-1.9**
MTO3	**Montecristo**	**5.27**	**240**		**Pn**	**08 54 27.4**	**+0.6**
MTO3	**Montecristo**	**5.27**	**240**	*e*P	**Pn**	**08 54 27.2**	**+0.4**
PAVA	**Las Pavas**	**5.33**	**231**	IAML		08 56 22.1	
	comp=Z,81nm,0.6s						
PAVA	**Las Pavas**	**5.33**	**231**	IAML		08 56 22.1	
	comp=Z,81nm,0.6s						
COEG	**Centro de Oper**	**5.35**	**230**	IAML		08 56 29.0	
	comp=Z,79nm,0.5s						
COEG	**Centro de Oper**	**5.35**	**230**	IAML		08 56 29.0	
	comp=Z,79nm,0.5s						
SJTE	**Alcalda de S**	**5.45**	**231**	*e*S	**Sb**	**08 55 42.6**	**-6.0**
CONN	**Concepcion**	**5.59**	**190**	*e*P	**Pn**	**08 54 33.1**	**+2.0**
CEVE	**Cerro Verde**	**5.79**	**236**	IAML		08 56 38.0	
	comp=Z,128nm,0.5s						
CEVE	**Cerro Verde**	**5.79**	**236**	IAML		08 56 38.0	
	comp=Z,128nm,0.5s						
SOR	**Soroa**	**5.86**	**15**	Pn	**Pn**	**08 54 34.9**	**+0.2**
SOR	**Soroa**	**5.86**	**15**	*e*P	**Pn**	**08 54 35.5**	**+0.7**
SOR				*e*S	**Sn**	**08 55 39.1**	**-2.9**
VERA	**Finca Concepci**	**6.22**	**182**	*e*P	Pn	08 54 45.5	+5.7
BUAI	**Buenos Aires**	**6.23**	**186**	*e*P	**Pn**	**08 54 41.8**	**+1.9**
VMAR	**Armenia, Volca**	**6.28**	**184**	*e*P	**Pn**	**08 54 42.5**	**+1.9**
GB1A	**Borinquen Arri**	**6.30**	**187**	*e*P	**Pn**	**08 54 42.9**	**+2.0**
BUEV	**Buena Vista**	**6.32**	**187**	*e*P	**Pn**	**08 54 43.1**	**+2.0**
GPS1	**Guardaparques**	**6.33**	**186**	*e*P	**Pn**	**08 54 43.7**	**+2.3**
GBS3	**Finca Las Img**	**6.34**	**187**	*e*P	**Pn**	**08 54 43.4**	**+2.0**
LAPC	**Finca la Perla**	**6.35**	**187**	*e*P	**Pn**	**08 54 43.7**	**+2.1**
MESS	**Mesas**	**6.36**	**185**	*e*P	**Pn**	**08 54 43.6**	**+2.0**
GPS3	**Bodega del ICE**	**6.36**	**186**	*e*P	**Pn**	**08 54 44.0**	**+2.3**
GPS2	**Hotel Rincn d**	**6.36**	**186**	*e*P	**Pn**	**08 54 43.9**	**+2.2**
COVE	**Coope Vega, Sa**	**6.36**	**178**		**Pn**	**08 54 43.5**	**+1.9**
COVE	**Coope Vega, Sa**	**6.36**	**178**	*e*P	**Pn**	**08 54 43.2**	**+1.6**
PTEN	**Parque Tenorio**	**6.37**	**183**	*e*P	**Pn**	**08 54 44.2**	**+2.4**
HORNC	**Hornillas**	**6.38**	**185**	*e*P	**Pn**	**08 54 43.9**	**+1.8**
GUAB	**Guayabo de Bag**	**6.39**	**185**	*e*P	**Pn**	**08 54 44.2**	**+2.0**
COLC	**Colonia**	**6.43**	**185**	*e*P	**Pn**	**08 54 46.6**	**+4.0**
CUI	**Cuipilapa**	**6.43**	**184**	*e*P	**Pn**	**08 54 45.3**	**+2.6**
ACAL	**Aguas Claras**	**6.45**	**183**	*e*P	**Pn**	**08 54 45.3**	**+2.4**
CEDE	**Laguna Cedeo**	**6.59**	**180**	*e*P	**Pn**	**08 54 47.3**	**+2.5**
MGV	**Manicaragua**	**6.65**	**41**	*e*P	**Pn**	**08 54 43.4**	**-2.2**
MGV				*e*S	**Sn**	**08 55 53.0**	**-8.4**
MGV				IAML		08 55 54.9	
	comp=N,30nm,0.2s						
MGV				IAML		08 56 01.4	
	comp=E,94nm,0.3s						
MCJ	**Malvern**	**6.70**	**82**	*i* P	Pn	08 54 56.0	+10
MCJ				*i* S	**Sn**	**08 55 58.1**

baz=195
Y49A Blount Mountai 16.75 355 Pn 08 57 03.1 +0.5
NATX Nacogdoches 17.18 330 P **Pn 08 57 06.6 -1.3**
baz=146
HODGE Hodges 17.18 7 P **Pn 08 57 08.1 +0.1**
JSC Jenkinsville 17.37 9 P **Pn 08 57 10.2 -0.1**
FPAL Fort Paine 17.38 357 P **Pn 08 57 10.9 +0.4**
FPAL IAmb IAmb 08 57 12.8
comp=Z,27nm,1.0s
833A Chaparral WMA, 17.57 312 P **P 08 57 13.4 -0.5**
baz=126,SNR=71
SJG San Juan 17.68 84 LR LR 09 03 40.4
comp=Z,138nm,20.7s,baz=286,slow=36
W52A Murphy 17.92 2 P **P 08 57 18.8 +0.9**
W52A IAmb IAmb 08 57 20.4
comp=Z,15nm,0.6s
435B Jarrell 18.00 321 P **P 08 57 20.0 +1.3**
baz=136
SWET Sewanee 18.07 357 P **Pn 08 57 18.3 -0.7**
BAUV El Baul 18.10 115 Pn 08 57 18.3 -1.2
KMSC Kings Mountain 18.20 9 P **Pn 08 57 20.3 -0.3**
KMSC IAmb IAmb 08 57 21.9
comp=Z,34nm,1.2s
KMSC Kings Mountain 18.20 9 P **Pn 08 57 19.6 -1.0**
baz=190,SNR=6.8
CPCT Cooper Cave 18.27 0 P **P 08 57 21.5 -0.1**
CPCT IAmb IAmb 08 57 25.3
comp=Z,24nm,1.0s
W57A Gilead 18.45 12 P **Pn 08 57 22.3 -1.3**
W57A IAmb IAmb 08 57 27.1
comp=Z,29nm,0.9s
TKL Tuckaleechee C 18.49 2 P **Pn 08 57 24.7 +0.6**
comp=Z,1.0nm,0.3s,baz=174,slow=13,SNR=19
TKL S Sn 09 00 33.9 -17
comp=Z,30nm,0.8s,baz=59,slow=4.1,SNR=11
TKL LR LR 09 04 07.7
comp=Z,96nm,18.2s,baz=186,slow=36
comp=Z,25nm,1.0s
TKL Tuckaleechee C 18.49 2 P **Pn 08 57 25.2 +1.1**
TKL IAmb IAmb 08 57 27.8
comp=Z,29nm,1.0s
V53A Saluda 18.56 5 P **P 08 57 24.3 -0.5**
V53A IAmb IAmb 08 57 27.0
comp=Z,47nm,1.1s
WHTX Lake Whitney, 18.81 324 P **Pn 08 57 28.9 +0.8**
baz=139,SNR=25
MIAR Mount Ida 19.11 337 P **Pn 08 57 33.8 +2.1**
baz=153
WVT Waverly 19.15 352 Pn 08 57 33.6 +1.5
WVT Waverly 19.15 352 P **Pn 08 57 31.9 -0.2**
baz=171
JCT Junction City 19.18 317 P **Pn 08 57 33.1 +0.5**
baz=131
V58A Windy Hill, Pi 19.25 14 P **Pn 08 57 33.5 +0.2**
V58A IAmb IAmb 08 57 37.8
comp=Z,20nm,1.1s
U49A Red Boiling Sp 19.35 357 P **Pn 08 57 34.2 -0.4**
TZTN Tazewell 19.38 3 Pn 08 57 35.0 +0.1
TZTN IAmb IAmb 08 57 37.2
comp=Z,21nm,1.0s
TZTN Tazewell 19.38 3 P **Pn 08 57 34.9 0.0**
baz=183
U54A Nelsons Funny 19.50 7 P **P 08 57 35.5 +0.4**
U54A IAmb IAmb 08 57 37.5
comp=Z,30nm,0.9s
BLA Blacksburg 20.37 10 P **P 08 57 45.3 +0.6**
baz=192,SNR=9.7
ABTX Abilene, Hawle 20.54 322 P Pn 08 57 47.8 -0.9
baz=135
PCRV Puerto La Cruz 20.63 107 LR LR 09 06 28.0
comp=Z,329nm,20.0s,slow=39
WCI Wyandotte Cave 21.09 356 P **P 08 57 53.3 +1.0**
baz=176
S57A Dark Hollow, R 21.18 13 P **P 08 57 53.8 +0.5**
TUL1 Leonard 21.18 334 P **P 08 57 54.3 +0.9**
baz=149,SNR=6.0
TXAR Lajitas Array 21.25 308 P **P 08 57 55.1 +0.8**
comp=Z,14nm,0.9s,baz=126,slow=12,SNR=66
TXAR S S 09 01 37.8 -13
comp=Z,1.2nm,0.8s,baz=116,slow=25,SNR=2.2
comp=Z,14nm,0.9s
TXAR Lajitas Array 21.25 308 P **P 08 57 55.0 +0.7**
TX31 Lajitas Ar. Si 21.25 308 P **P 08 57 54.7 +0.4**
TX32 Lajitas Array 21.25 308 P **P 08 57 55.0 +0.7**
TX32 IAmb IAmb 08 57 59.1
comp=Z,28nm,1.1s
JSRW J. Sargeant Re 21.36 15 P **P 08 57 55.1 -0.1**
R55A Marlinton 21.46 10 P **P 08 57 57.6 +1.1**
WMOK Wichita Mounta 21.62 327 P 08 57 58.8 +0.6
WMOK IAmb IAmb 08 57 59.6
comp=Z,20nm,1.0s
WMOK Wichita Mounta 21.62 327 P **P 08 57 58.9 +0.8**
baz=141,SNR=16
CCM Cathedral Cave 21.65 346 P **P 08 58 01.0 +2.6**
CCM IAmb IAmb 08 58 02.6
comp=Z,16nm,0.8s
CCM Cathedral Cave 21.65 346 P **P 08 57 58.8 +0.4**
baz=163
HPIG 21.76 300 P **P 08 58 00.9 +1.0**
HPIG IAmb IAmb 08 58 02.9
comp=Z,29nm,0.9s
P49A Miami Univ. Ec 22.34 360 P **P 08 58 06.7 +0.8**
baz=180
P52A Corning 22.55 5 P **P 08 58 08.6 +0.6**
baz=186
O48B Farmland 23.07 359 P **P 08 58 13.9 +0.4**
baz=179
O53A New Philadelph 23.25 7 P **P 08 58 17.2 +1.9**
O53A New Philadelph 23.25 7 P **P 08 58 17.2 +1.9**
baz=188
SFIN Lafayette 23.28 355 P **P 08 58 16.4 +0.8**
baz=174
GDL2 Guadalupe Moun 23.31 314 P **P 08 58 15.9 -0.3**
AMTX Amarillo 23.33 323 P **P 08 58 16.3 -0.1**
AMTX Amarillo 23.33 323 P **P 08 58 17.0 +0.6**
baz=135
MSTX Muleshoe 23.36 319 P **P 08 58 16.2 -0.5**
baz=132,SNR=9.4
KSU1 Kansas State U 24.26 337 P **P 08 58 26.3 +1.1**
baz=151
M53A Wt Miller and 24.49 7 P **P 08 58 27.8 +0.6**
baz=189
M55A Ridgway 24.80 11 P **P 08 58 30.9 +0.9**
ATAH Atahualpa 24.88 165 LR LR 09 07 34.2
comp=Z,184nm,20.4s,baz=335,slow=35
LPIG La Paz 24.97 290 LR LR 09 09 35.2
comp=Z,108nm,18.3s,baz=104,slow=40
121A Cookes Peak, D 25.92 311 P **P 08 58 40.5 0.0**
baz=121
ANMO Albuquerque 26.34 317 P **P 08 58 44.8 +0.5**
comp=Z,4.2nm,1.0s,baz=136,slow=11,SNR=12
comp=Z,4.2nm,1.0s
ANMO Albuquerque 26.34 317 P **P 08 58 44.9 +0.7**
baz=127
T25A Trinidad 26.49 323 P **P 08 58 47.0 +1.5**
baz=134,SNR=5.2
SDCO Great Sand Dun 27.53 322 P **P 08 58 56.7 +1.6**
baz=133
SADO Sadowa 27.96 8 LR LR 09 10 25.2
comp=Z,154nm,18.1s,baz=192,slow=37
S22A 4UR Ranch, Cre 28.32 321 P **P 08 59 03.6 +1.5**
baz=131
BELC Belle Mtn. Jos 32.72 307 P **P 08 59 41.8 +1.0**
baz=113
TPFO Pinon Flats 32.92 306 P **P 08 59 44.2 +1.6**
baz=112
PFO Pinyon Flats O 32.92 306 P **P 08 59 44.1 +1.5**
baz=112
BW06 Boulder Array 33.22 326 P **P 08 59 45.7 +0.5**
baz=133
PDAR Pinedale Array 33.22 326 P **P 08 59 45.5 +0.2**
comp=Z,1.6nm,0.9s,baz=131,slow=8.1,SNR=9.3
PDAR LR LR 09 14 52.5
comp=Z,50nm,20.6s,baz=123,slow=39
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 33.22 326 P **P 08 59 44.9 -0.3**
HEC Hector,Ludlow 33.30 308 P **P 08 59 48.3 +2.4**
baz=114,SNR=5.1
MURC Murrieta 33.49 306 P **P 08 59 49.9 +2.4**
baz=111
MDP Montagnes des 33.54 107 LR LR 09 15 06.6
comp=Z,86nm,20.3s,baz=304,slow=39
ULM Lac du Bonnet 34.27 347 P **P 08 59 55.0 +1.1**
comp=Z,1.9nm,0.5s,baz=180,slow=11,SNR=2.1
ULM LR LR 09 14 13.5
comp=Z,55nm,18.3s,baz=161,slow=37
comp=Z,1.9nm,0.5s

EDW2 Edwards Air Fo 34.58 307 P **P 08 59 59.1 +2.1**
baz=112
ARVC Arvin 35.31 307 P **P 09 00 05.1 +1.9**
baz=112
BOZ Bozeman (W) 36.23 327 P **P 09 00 12.3 +1.2**
baz=133
NVAR Mina Array Bea 36.27 313 P **P 09 00 12.8 +1.2**
comp=Z,0.8nm,0.8s,baz=127,slow=7.5,SNR=4.4
comp=Z,0.8nm,0.8s
LPAZ La Paz 36.97 153 LR LR 09 15 45.6
comp=Z,101nm,22.0s,baz=300,slow=37
SCHQ Schefferville 40.07 16 LR LR 09 17 16.9
comp=Z,189nm,20.8s,baz=202,slow=36
SIV San Ignacio 40.29 143 LR LR 09 21 24.9
comp=Z,103nm,18.3s,baz=314,slow=42
YBH Yreka Blue Hor 40.75 315 LR LR 09 19 56.0
comp=Z,119nm,19.4s,baz=122,slow=39
NEW Newport 40.83 327 LR LR 09 19 29.5
comp=Z,50nm,18.3s,baz=111,slow=39
FRB Frobisher Bay 47.89 10 LR LR 09 21 37.7
comp=Z,126nm,20.2s,baz=125,slow=36
BDFB Brasilia 48.64 130 LR LR 09 25 12.0
comp=Z,103nm,18.2s,baz=280,slow=40
RPN Rapa Nui 50.07 209 LR LR 09 18 28.8
comp=Z,45nm,20.5s,baz=204,slow=30
CPUP Villa Florida 50.70 148 LR LR 09 25 21.9
comp=Z,53nm,18.1s,baz=298,slow=38
DLBC Dease Lake 52.98 332 LR LR 09 27 31.2
comp=Z,71nm,18.6s,baz=110,slow=39
RCBR Riachuelo 53.30 111 LR LR 09 25 33.5
comp=Z,126nm,20.8s,baz=98,slow=37
SFJD Kangerlussuaq 54.52 16 LR LR 09 25 27.8
comp=Z,169nm,20.3s,baz=218,slow=36
RES Resolute Bay 57.86 357 LR LR 09 27 27.3
comp=Z,72nm,19.2s,baz=302,slow=36
ILAR Eielson Array 62.92 335 P **P 09 03 36.4 +2.3**
comp=Z,1.5nm,0.9s,baz=94,slow=4.0,SNR=7.7
BORG Borgarnes 63.37 25 LR LR 09 31 11.9
comp=Z,28nm,18.2s,baz=223,slow=36
ESDC Sonseca Array 72.23 53 LR LR 09 30 31.6
comp=Z,57nm,18.4s,baz=294,slow=31
SPITS Spitsbergen Ar 75.62 12 LR LR 09 37 55.3
comp=Z,72nm,20.1s,baz=252,slow=36
NOA NORSAR Array B 78.01 30 LR LR 09 37 07.6
comp=Z,21nm,20.3s,baz=270,slow=34
ARCES ARCESS Array B 80.92 20 LR LR 09 42 18.7
comp=Z,23nm,18.3s,baz=284,slow=36
TORD Torodi Ar. Bea 82.80 78 P **P 09 05 31.7 -1.2**
comp=Z,0.3nm,0.6s,baz=316,slow=6.0,SNR=1.5
comp=Z,0.3nm,0.6s
VRAC Vranov 84.32 40 LR LR 09 38 01.6
comp=Z,33nm,20.4s,baz=306,slow=32
AKASG Malin Array Be 91.18 36 LR LR 09 46 32.3
comp=Z,29nm,18.3s,baz=102,slow=35
NRIK Noril'sk 93.60 3 LR LR 09 51 41.4
comp=Z,37nm,18.5s,baz=36,slow=38
KIRV Kirov 95.70 22 LR LR 09 50 34.4
comp=Z,18nm,18.0s,baz=339,slow=36
ASAR Alice Springs 143.35 253 PKP PKPbc 09 12 42.5 +2.1
comp=Z,0.7nm,0.8s,baz=102,slow=3.9,SNR=1.6

IDC 25 08:58:40.1±301.0, 51°.11N×59°.87E, h0km, Error ellipse: s-maj=108.0km s-min=29.2km az=59.0, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	1.36	240	i		09 06 50.0	
baz=58,slow=338,SNR=1.5							
I46RU	ZALESOVO INFRA	15.43	70	i		10 34 30.0	
baz=265,slow=319,SNR=0.7							
I34MN	SONGINO INFRAS	30.04	78	i		12 02 20.0	
baz=290,slow=321,SNR=0.8							

*UPA **25** 09:02:29.2±1.4, 9°.71N×78°.50W, h0km±6km, MW3.9*
ISC 25 09:02:31.4±2.3, 9°.73N±0°.09×78°.47W±0°.04, h28km±16km, n23, σ1°31/34, 2C-6D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNTA3	Canitas, Panam	0.66	220	⇓iP	Pn	09 02 42.4	-2.5
CNTA3				i S	Sb	09 02 51.9	-1.3
TOTI	Torti	0.81	169	⇓iP	Pn	09 02 45.6	-1.4
TOTI				i S	Sb	09 02 58.6	+1.1
CHPO	Chepo, Panama	0.85	229	⇓iP	Pn	09 02 46.0	-1.5
CHPO				i S	Sn	09 02 58.3	-0.7
UPA	Univ. de Panam	1.29	235	⇓iP	Pn	09 02 52.5	-1.1
UPA				i S	Sn	09 03 10.6	+0.7
SABA3	Sabanitas, Col	1.37	254	⇓iP	Pn	09 02 53.8	-0.9
SABA3				i S	Sb	09 03 15.5	+1.9
BCIP	Isla Barro Col	1.47	248	eP	Pn	09 02 55.4	-0.7
BCIP				eS	Sb	09 03 16.2	-0.1
BCIP				i		09 03 20.2	
comp=Z,246nm,0.7s							
BCIP	Isla Barro Col	1.47	248	i P	Pn	09 02 55.3	-0.7
BCIP				i S	Sb	09 03 15.6	-0.7
VTON	El Valle, Cocl	1.97	236	⇓eP	Pn	09 03 03.8	+0.8
VTON				i S	Sb	09 03 30.7	-0.2
PNME	Penonome	2.22	236	eP	Pn	09 03 07.0	+0.7
LCBC	Los crdobas,	2.24	113	eP	Pn	09 03 05.9	-0.9
LCBC	Los crdobas,	2.24	113	eP	Pn	09 03 07.1	+0.4
CHIT3	Chitre	2.61	228	eP	Pn	09 03 11.6	-0.2
AZU	Azuero	2.63	223	eP	Pn	09 03 11.4	-0.6
AZU				eS	Sn	09 03 43.1	+0.1
AZU	Azuero	2.63	223	⇑iP	Pn	09 03 11.2	-0.8
AZU				eS	Sn	09 03 43.9	+0.9
PTAC	Punta Ardita,	2.65	166	eP	Pn	09 03 11.8	-0.5
PTAC	Punta Ardita,	2.65	166	eP	Pn	09 03 12.0	-0.3
PTAC				i S	Sn	09 03 46.5	+3.0
TOSI3	Tonosi	3.02	220	eP	Pn	09 03 18.4	+0.9
MARI3	Mariato, Verag	3.24	231	eP	Pn	09 03 20.9	+0.5
BCO2	Palmira	4.14	256	eP	Pn	09 03 33.6	+0.7
CBOC	Ciudad Bolivar	4.54	148	eP	Pn	09 03 40.2	+1.7
HELC	Santa Helena	4.56	140	⇑eP	Pn	09 03 38.7	-0.2
PTBC	PUERTO BERRIO,	5.08	128	eP	Pn	09 03 46.2	+0.4
PTBC				eS	Sn	09 04 40.1	-3.5
GUY2C	Guyana, Caldas	5.43	145	eP	Pn	09 03 56.0	+5.0

UPA 25 09:03:52.6±1.9, 9°.70N×78°.46W, h6km±12km, MW3.8, 4D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNTA3	Canitas, Panam	0.64	221	⇓iP	Pg	09 04 04.9	0.0
CNTA3				i S	Sb	09 04 15.3	0.0
TOTI	Torti	0.78	169	⇓iP	Pb	09 04 08.2	-0.4
TOTI				i S	Sn	09 04 21.0	-1.2
CHPO	Chepo, Panama	0.83	231	eP	Pb	09 04 09.9	+0.4
CHPO				i S	Sb	09 04 21.0	0.0
CHPO				i S	Sg	09 04 21.0	+1.6
UPA	Univ. de Panam	1.28	236	⇓iP	Pn	09 04 15.5	-1.5
UPA				i S	Sg	09 04 33.0	-0.7
SABA3	Sabanitas, Col	1.37	255	⇓iP	Pn	09 04 16.1	-2.1
SABA3				i S	Sb	09 04 36.3	0.0
BCIP	Isla Barro Col	1.46	249	i P	Pn	09 04 17.8	-1.7
BCIP				i S	Sn	09 04 37.7	-1.2
VTON	El Valle, Cocl	1.96	237	eP	Pn	09 04 26.9	+0.5
VTON				i S	Sn	09 04 51.8	+0.4
PNME	Penonome	2.20	237	eP	Pn	09 04 29.7	0.0
PNME				eS	Sn	09 04 57.3	0.0
CHIT3	Chitre	2.60	228	eP	Pn	09 04 34.5	-0.7
CHIT3				eS	Sn	09 05 04.5	-2.6
AZU	Azuero	2.61	224	eP	Pn	09 04 33.5	-1.9
AZU				eS	Sn	09 05 03.4	-3.9
PTAC	Punta Ardita,	2.62	166	i P	Pn	09 04 34.0	-1.5
ACHO3	Achotines, Los	2.83	217	eP	Pn	09 04 38.1	-0.3
MARI3	Mariato, Verag	3.23	231	eP	Pn	09 04 44.5	+0.7
BCO2	Palmira	4.13	257	eP	Pn	09 04 56.7	+0.2

*IDC **25** 09:04:06.8±2.2, 19°.75S×177°.66W, h481km±27km, mb3.5/7, mbtmp4.4/9, Error ellipse: s-maj=32.5km s-min=13.6km az=145.0*
*NEIC **25** 09:04:10.2±0.8, 19°.6S±0°.2×177°.5W±0°.1, h537km±11km, mb4.4/18, Error ellipse: s-maj=24.6km s-min=16.8km az=159.0*
ISC 25 09:04:08.1±0.6, 19°.7S±0°.1×177°.60W±0°.08, h500km, n40, σ1°57/42, mb4.3/18, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.56	295	P	P	09 05 35.7	+4.4
50nm,0.8s,baz=286,slow=23,SNR=23							
NIUE	Niue	7.27	86	P	P	09 05 58.9	+1.9
AFI	Afiamalu	8.01	45	P	P	09 06 03.7	-1.1
38nm,0.4s,baz=40,slow=2.3,SNR=22							
AFI				S	S	09 07 36.1	-4.3
74nm,0.6s,baz=235,slow=20,SNR=13							
AFI	Afiamalu	8.01	45	P	P	09 06 04.4	-0.4
FUNA	Funafuti	11.53	344	P	P	09 06 43.4	+1.6
MARNC	Mare, Loyalty	13.58	260	P	P	09 07 04.0	+0.7
DZM	Mont Dzumac	15.10	258	P	P	09 07 22.1	+2.6
URZ	Urewera	19.06	193	P	P	09 07 56.1	-1.9
4.2nm,0.3s,baz=9.9,slow=3.3,SNR=14							
CTAO	Charters Tower	33.95	263	P	P	09 10 09.6	+0.2
CTAO				IAmb	IAmb	09 10 09.9	
comp=Z,7.2nm,0.6s							
COEN	Coen	37.92	272	P	P	09 10 42.1	-0.2
COEN				IAmb	IAmb	09 10 43.3	
comp=Z,9.7nm,0.8s							
STKA	Stephens Creek	38.48	243	P	P	09 10 47.0	+0.3
comp=Z,5.5nm,0.6s,baz=94,slow=11,SNR=12							
comp=Z,5.5nm,0.6s							
STKA	Stephens Creek	38.48	243	P	P	09 10 47.2	+0.4
BBOO	Buckleboo	43.25	243	P	P	09 11 24.3	-0.5
WR0	Warramunga Arr	44.90	261	P	P	09 11 37.1	-0.7
WR0				IAmb	IAmb	09 11 38.4	
comp=Z,4.3nm,0.6s							
WB0	Warramunga Arr	45.07	261	P	P	09 11 38.4	-0.7
WB0				IAmb	IAmb	09 11 39.0	
comp=Z,10nm,0.8s							
AS31	Alice Springs	45.07	256	P	P	09 11 38.9	-0.2
AS31				IAmb	IAmb	09 11 39.9	
comp=Z,9.9nm,1.1s							
ASAR	Alice Springs	45.08	256	P	P	09 11 38.6	-0.5
comp=Z,24nm,0.8s,baz=87,slow=8.6,SNR=178							
ASAR				S	S	09 17 37.8	-3.7
comp=Z,0.7nm,0.8s,baz=96,slow=14,SNR=7.1							
comp=Z,24nm,0.8s							
ASAR	Alice Springs	45.08	256	P	P	09 11 38.8	-0.3
WB2	Warramunga Arr	45.08	261	P	P	09 11 38.5	-0.7
WB2				IAmb	IAmb	09 11 39.2	
comp=Z,11nm,0.8s							
WRAB	Tennant Creek	45.08	261	P	P	09 11 38.5	-0.7
WRAB				IAmb	IAmb	09 11 39.1	
comp=Z,8.1nm,0.8s							
WRA	Warramunga Arr	45.09	261	P	P	09 11 38.2	-1.1
comp=Z,7.0nm,0.8s,baz=97,slow=7.6,SNR=77							
comp=Z,7.0nm,0.8s							
WRA	Warramunga Arr	45.09	261	P	P	09 11 38.0	-1.3
MTN	Manton Dam	49.54	270	P	P	09 12 12.1	-0.7
MTN				IAmb	IAmb	09 12 13.4	
comp=Z,13nm,0.8s							
FORT	Forrest	49.96	246	P	P	09 12 15.1	-0.7
KNRA	Kununurra	51.09	265	P	P	09 12 23.9	-0.3
KNRA				IAmb	IAmb	09 12 24.5	
comp=Z,8.6nm,0.7s							
SOEI	Soe	56.86	271	P	P	09 13 02.6	-2.6
MBWA	Marble Bar	58.40	257	P	P	09 13 14.0	-1.5
QSPA	South Pole Qui	70.37	180	P	P	09 14 31.8	+0.8
PETK	Petropavlovsk-	75.59	345	P	P	09 15 00.9	0.0
comp=Z,6.1nm,0.8s,baz=146,slow=6.1,SNR=2.8							
comp=Z,6.1nm,0.8s							
NVAR	Mina Array Bea	80.18	43	P	P	09 15 28.0	+1.7
comp=Z,0.6nm,0.7s,baz=228,slow=7.8,SNR=4.9							
comp=Z,0.6nm,0.7s							
MCK	McKinley	86.11	12	P	P	09 15 53.6	-1.5
MCK				IAmb	IAmb	09 15 55.7	
comp=Z,7.0nm,1.1s							
TXAR	Lajitas Array	86.31	57	P	P	09 15 58.6	+1.6
comp=Z,0.5nm,0.7s,baz=218,slow=6.7,SNR=8.9							
comp=Z,0.5nm,0.7s							
ILAR	Eielson Array	87.45	13	P	P	09 16 01.2	-0.2
comp=Z,0.8nm,0.5s,baz=229,slow=5.1,SNR=6.5							
PDAR	Pinedale Array	88.12	43	P	P	09 16 06.0	+0.6
comp=Z,0.5nm,0.6s,baz=199,slow=3.4,SNR=5.7							
comp=Z,0.5nm,0.6s							
HHC	Hu-ho-hao-te	89.06	314	eP	P	09 16 08.8	-0.8
KMI	Kunming	89.32	297	⇑P	P	09 16 12.0	+0.7
PZH	PanZhiHua	90.67	298	P	P	09 16 17.5	+0.1
BRTR	Keskin Array B	146.57	313	PKPbc	PKPbc	09 22 52.8	-0.7
comp=Z,0.5nm,0.5s,baz=147,slow=5.4,SNR=2.8							
CLL	Collm	147.36	348	⇑iPKPbc	PKPbc	09 22 54.9	-0.1
comp=Z,5.0nm,0.7s							
GERES	GERESS Array B	149.53	345	PKPbc	PKPbc	09 23 00.4	-0.2
comp=Z,0.9nm,0.6s,baz=333,slow=1.5,SNR=7.0							

*IDC **25** 09:25:35.5±0.8, 40°.18N×143°.66E, h0km, mb3.9/16, mbtmp4.0/18, ML3.6/2, MS3.2/8, Error ellipse: s-maj=21.5km s-min=18.9km az=53.0*
*NIED **25** 09:25:36.9, 40°.35N×143°.81E, h21km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.08; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-1.31; $M_{r\theta}$0.11; $M_{r\phi}$-0.46; $M_{\theta\phi}$0.38; Fault plane solution: $M_0$1.32000×10^{15} NP1: ϕ_s195.00000°, δ36.00000°, λ90.00000°. NP2:ϕ_s16.00000°, δ54.00000°, λ90.00000°.*
*JMA **25** 09:25:36.9±0.2, 40°.4N±0°.6×14°.4E±°, h21km, MD4.1/32, MV4.0/32, FAR E OFF SANRIKU*
*MOS **25** 09:25:36.2±0.9, 40°.30N×143°.95E, h25km, mb4.7/23, Error ellipse: s-maj=11.5km s-min=5.7km az=101.4*
*NEIC **25** 09:25:38.6±1.3, 40°.32N±0°.06×143°.8E±0°.1, h20km±5km, mb4.5/27, Error ellipse: s-maj=13.2km s-min=8.4km az=104.0*
*BJI **25** 09:25:39.0±0.0, 40°.43N×143°.78E, h29km, mb4.4/31, mB4.8/20, Ms3.8/6, Ms7 3.7/7*
ISC 25 09:25:39.5±1.9, 40°.29N±0°.05×143°.88E±0°.05, h32km±13km, n150, σ1°51/161, mb4.4/55, MS3.6/9, 9C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.58	258	P	Pn	09 26 03.7	-1.6
JTH				eS	Sn	09 26 23.6	-1.1
JKEN	Kujiedanarisaw	1.66	268	P	Pn	09 26 04.7	-1.6
MIYJ	Miyakonagasawa	1.74	246	P	Pn	09 26 06.6	-0.8
ERM	Erimo	1.81	343	Pn	Pn	09 26 06.9	-1.4
ERM	Erimo	1.81	343	P	Pn	09 26 06.9	-1.4
JEM	Erimo	1.81	343	P	Pn	09 26 06.7	-1.6
JANG	Nango	1.81	273	P	Pn	09 26 06.9	-1.5
JOM	Ohasama	2.15	248	P	Pn	09 26 12.7	-0.4
JOM	Ohasama	2.15	248	A	A	09 26 12.7	
comp=E,2.0nm,4.9s,comp=E,2.0nm,5.8s							
JNBK	Urakawa-nobuka	2.16	337	P	Pn	09 26 12.3	-0.9
JTM	Tenmabayashi	2.20	284	Pn	Pn	09 26 13.2	-0.5
JSZI	Iwateshizukuis	2.31	257	A	A	09 26 14.3	
comp=E,6.0nm,6.4s,comp=E,5.0nm,5.3s							
JCH	Churui	2.35	351	P	Pn	09 26 14.8	-1.1
JCH				S	Sn	09 26 41.7	-1.9
JOT	Ohata	2.41	298	P	Pn	09 26 15.7	-0.9
JOT				eS	Sn	09 26 43.7	-1.3
JMK	Ichinoseki	2.45	238	P	Pn	09 26 16.7	-0.5
JAH	Hinai	2.48	269	A	A	09 26 16.6	
comp=E,3.0nm,6.3s,comp=E,3.0nm,5.3s							
JRG	Rokugo	2.65	251	A	A	09 26 19.4	
comp=E,3.0nm,3.9s,comp=E,2.0nm,6.5s							
JSI2	Shiura 2	2.75	287	A	A	09 26 20.2	
comp=E,2.0nm,0.8s,comp=E,2.0nm,1.0s							
JAK	Akkeshi	2.77	13	P	Pn	09 26 20.0	-1.6
JAK				S	Sn	09 26 50.9	-3.1
JNTW	Noshirotokiwa	2.84	271	A	A	09 26 21.8	
comp=E,5.0nm,4.1s,comp=E,5.0nm,4.0s							
JAR	Ashorobuto	3.00	358	P	Pn	09 26 22.9	-2.0
JAR				eS	Sn	09 26 57.2	-2.5
JYK	Kaneyama	3.04	244	P	Pn	09 26 25.4	0.0
JEW	Eniwo	3.13	325	Pn	Pn	09 26 25.9	-0.7
JEW	Eniwo	3.13	325	eP	Pn	09 26 26.6	+0.1
JEW				eS	Sn	09 27 02.8	0.0
NEM2	Nemuro 2	3.37	24	P	Pn	09 26 28.3	-1.6
NEM2				eS	Sn	09 27 05.3	-3.4
NMR	Nemuro--Hokkai	3.37	24	eP	Pn	09 26 27.8	-2.1
NMR				eS	Sn	09 27 05.0	-3.7
JMM	Marumori	3.41	226		Pn	09 26 29.0	-1.4
JKK2	Kamakawa 2	3.68	347	eP	Pn	09 26 33.2	-0.9
JTKR	Abashiri--Toko	3.68	0	P	Pn	09 26 32.8	-1.3
JTKR				S	Sn	09 27 14.3	-1.9
RUSJ	Misakicho	3.94	15	eP	Pn	09 26 36.8	-0.9
RUSJ				eS	Sn	09 27 20.2	-2.6
YUK	Yuzh-Kuril'sk	4.02	21	c iP	Pn	09 26 37.1	-1.7
YUK				eS	Sn	09 27 21.2	-3.5
YUK				pmax	pmax		
comp=E,59nm,0.2s							
YUK				pmax	pmax		

comp=N,55nm,0.3s
YUK pmax pmax
comp=Z,139nm,0.4s
YUK smax smax
comp=N,466nm,0.6s
YUK smax smax
comp=E,546nm,0.5s
JSD Sado 4.91 245 Pn **Pn 09 26 50.5 -0.6**
JYT Yasato 4.99 217 Pn **Pn 09 26 49.8 -2.2**
KUR Kuril'sk 5.75 29 P **Pn 09 27 01.4 -1.0**
KUR *e*S **Sn 09 28 04.0 -3.2**
KUR smax smax
comp=N,117nm,0.5s
MAJO Matsushiro 5.82 232 Pn **Pn 09 27 03.4 -0.1**
MAJO Matsushiro 5.82 232*c i*P **Pn 09 27 04.1 +0.6**
MJAR Matsushiro Arr 5.82 232 Pn **Pn 09 27 04.2 +0.6**
comp=N,0.2nm,0.3s,baz=39,slow=11,SNR=23
MJAR LR LR 09 29 48.3
comp=N,103nm,18.3s,baz=109,slow=45
MJB9 Matsu-Tunnel 5.82 232 Pn 09 27 02.3 -1.2
YSS Yuzh-Sakhalins 6.71 353 *e*P **Pn 09 27 13.8 -1.9**
YSS MLR MLR
comp=Z,400nm,14.0s
JGF Kuroka 6.96 230 Pn **Pn 09 27 19.0 -0.2**
INU Inuyama 7.33 230 Pn **Pn 09 27 25.1 +0.8**
JHJ Hachijo jima 2 7.88 206 Pn **Pn 09 27 29.8 -1.9**
comp=Z,7.4nm,0.3s,baz=86,slow=19,SNR=1.8
JHJ Sn **Sn 09 28 53.0 -6.7**
comp=Z,5.9nm,0.3s,baz=59,slow=19,SNR=1.1
comp=Z,154nm,0.9s
USRK Ussuriysk Ar. 9.64 298 Pn **Pn 09 27 57.5 +1.6**
comp=Z,1.3nm,0.3s,baz=102,slow=15,SNR=14
USRK Ussuriysk Ar. 9.64 298 Pn **Pn 09 27 53.5 -2.4**
USRK Ussuriysk Ar. 9.64 298 P **Pn 09 27 53.5 -2.4**
JHS Saijyo 10.03 242 Pn **Pn 09 28 02.7 +1.3**
JMN Monobe 10.33 234 Pn **Pn 09 28 05.4 0.0**
KLR Kul'dur 12.40 320 Pn **Pn 09 28 33.9 +0.2**
comp=Z,0.2nm,0.3s,baz=121,slow=16,SNR=3.7
KLR LR LR 09 33 20.4
comp=Z,51nm,20.2s,baz=71,slow=38
comp=Z,2.0nm,0.8s
KLR Kul'dur 12.40 320*ce*P **Pn 09 28 33.8 +0.2**
KLR pmax pmax
comp=Z,7.0nm,1.7s
KSRS Korea Array 12.75 262 Pn Pn 09 28 43.5 +5.0
comp=Z,0.2nm,0.3s,baz=60,slow=16,SNR=3.4
KSRS LR LR 09 32 53.5
comp=Z,80nm,18.9s,baz=70,slow=35
ZEA Zeya 17.53 326 *e*P **Pn 09 29 38.7 -2.5**
ZEA pmax pmax
comp=Z,10.0nm,0.4s
ZEA MLR MLR
comp=Z,100nm,16.0s
HIA Hailar 19.27 306 *i* P **P 09 30 01.1 -0.2**
HIA pmax pmax
comp=Z,4.0nm,0.6s
NJ2 Nanjing 21.76 256 *e*P **P 09 30 25.5 -2.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
SEY Seymchan 23.24 10 P **P 09 30 42.7 -0.9**
comp=Z,3.0nm,0.7s,baz=186,slow=9.8,SNR=7.8
SEY Seymchan 23.24 10 *i* P **P 09 30 43.1 -0.5**
SEY pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 23.41 343 *i* P **P 09 30 45.4 +0.1**
YAK pmax pmax
comp=Z,9.0nm,0.8s
HHC Hu-ho-hao-te 24.48 282 *e*P **P 09 30 55.5 -0.2**
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.2s
LYN LuoYang 25.51 267 ⇑P **P 09 31 06.5 +1.5**
BOD Bodaibo 25.96 322 *e*P **P 09 31 09.7 +0.9**
BOD pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 27.31 298 *i* P **P 09 31 22.4 +1.1**
ULN pmax pmax
comp=Z,15nm,3.9s
SONM Songino Array 27.75 298 P **P 09 31 24.6 -0.6**
comp=Z,1.0nm,0.5s,baz=87,slow=5.9,SNR=3.9
comp=Z,1.0nm,0.5s
ENH Enshi 29.64 261 P **P 09 31 42.8 +0.8**
ENH IAmb IAmb 09 31 44.6
comp=Z,6.5nm,0.7s
BILL Bilibino 30.36 16*ce*P **P 09 31 47.3 -0.6**
BILL *e* 09 32 53.8
BILL pmax pmax
comp=Z,9.0nm,0.6s
BILL MLR MLR
comp=Z,87nm,18.0s
LZH Lanzhou 31.56 275 *e*P **P 09 31 57.3 -1.7**
LZH pP pwP 09 32 12.0 +0.5
LZH sP sP 09 32 18.5 +7.5
LZH pmax pmax
comp=Z,12nm,0.9s
LZH LR LR
comp=Z,260nm,14.5s
LZH LR LR
comp=Z,220nm,16.0s
LZH LR LR
comp=Z,260nm,14.5s
TIXI Tiksi 32.33 351 LR LR 09 47 55.0
comp=Z,50nm,19.3s,baz=352,slow=41
TIXI Tiksi 32.33 351*ce*P **P 09 32 04.5 -0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.5s
GTA Gaotai 33.58 283 *e*P **P 09 32 17.8 +1.1**
GTA pP pP 09 32 26.3 +1.1
GTA sP pwP 09 32 29.8 +0.7
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,52nm,5.0s
GTA LR LR
comp=Z,73nm,14.5s
GTA LR LR
comp=Z,87nm,16.0s
GTA LR LR
comp=Z,76nm,14.5s
AKUT Akutan 36.10 50 P **P 09 32 39.6 +1.6**
PZH PanZhiHua 37.42 262 P **P 09 32 52.3 +2.5**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,70nm,5.0s
KMI Kunming 37.42 259 ⇓P **P 09 32 51.5 +1.6**
KMI pmax pmax
comp=Z,15nm,0.9s
GOMU GeErMu 38.36 280 P **P 09 32 55.8 -2.1**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,71nm,4.7s
DGZ Jazzator, Alta 40.15 303 *i* P **P 09 33 13.3 +0.9**
DGZ pmax pmax
comp=Z,9.0nm,0.8s
NRIK Noril'sk 41.17 333 *i* P **P 09 33 20.8 +0.4**
NRIK pmax pmax
comp=Z,13nm,2.1s
WMQ Urumqi 41.19 294 *e*P **P 09 33 22.5 +1.5**
WMQ pP sP 09 33 32.8 -0.3
WMQ sP pwP 09 33 36.8 +3.3
WMQ pmax pmax
comp=Z,12nm,1.1s
ZAA0 Zalesovo Array 41.23 310 P **P 09 33 21.5 +0.4**
ZAA0 IAmb IAmb 09 33 29.4
comp=Z,4.8nm,0.7s
ZALV Zalesovo Beam 41.23 310 P **P 09 33 22.1 +1.0**
comp=Z,2.9nm,0.7s,baz=89,slow=7.3,SNR=8.8
comp=Z,2.9nm,0.7s
ZALV Zalesovo Beam 41.23 310 P **P 09 33 21.6 +0.4**
ZALV Zalesovo Beam 41.23 310 *i* P **P 09 33 21.7 +0.6**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
SIJI Sorong 42.55 199 LR LR 09 48 57.1
comp=Z,38nm,18.9s,baz=58,slow=33
IMAR Indian Mountai 42.87 32 P **P 09 33 36.0 +1.7**
H21K Melozitna Rive 43.23 33 P **P 09 33 38.1 +0.8**
H21K IAmb IAmb 09 33 49.9
comp=Z,9.9nm,1.4s
PPLA Purkeypile 43.40 37 P **P 09 33 39.1 +0.2**
MK31 Makanchi Array 44.10 300 P **P 09 33 44.5 -0.1**
MK31 Makanchi Array 44.10 300 P **P 09 33 44.5 -0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 44.10 300 P **P 09 33 45.1 +0.6**
comp=Z,3.5nm,0.9s,baz=79,slow=9.0,SNR=16
comp=Z,3.5nm,0.9s
MKAR Makanchi Array 44.10 300 P **P 09 33 44.4 -0.1**
BRLK Bradley Lake 44.13 41 P **P 09 33 46.0 +1.3**
BRLK IAmb IAmb 09 33 58.4
comp=Z,8.5nm,1.1s
MAKZ Makanchi 44.31 300 P **P 09 33 46.7 +0.5**
MAKZ IAmb IAmb 09 33 53.1
comp=Z,4.5nm,0.7s
MAKZ Makanchi 44.31 300 P **P 09 33 46.7 +0.5**
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
MDM Murphy Dome 45.14 34 P **P 09 33 54.2 +1.7**
KURK Kurchatov 45.51 306 P **P 09 33 56.1 +0.5**
KURK IAmb IAmb 09 33 56.9
comp=Z,9.8nm,1.1s
KURK Kurchatov 45.51 306 P **P 09 33 56.2 +0.5**
KURK pmax pmax
comp=Z,10.0nm,1.1s
KURBB Kurchatov Arra 45.59 306 P **P 09 33 56.5 +0.2**
comp=Z,5.3nm,0.6s,baz=78,slow=8.6,SNR=26
comp=Z,5.3nm,0.6s
IL31 45.72 34 P **P 09 33 56.9 -0.2**
IL31 IAmb IAmb 09 34 16.0
comp=Z,8.0nm,1.4s
ILAR Eielson Array 45.72 34 P **P 09 33 59.0 +1.9**
comp=Z,0.6nm,0.8s,baz=267,slow=6.7,SNR=4.8
comp=Z,0.6nm,0.8s
ILAR Eielson Array 45.72 34 P **P 09 33 57.3 +0.2**
ILAR Eielson Array 45.72 34 P **P 09 33 57.3 +0.2**
MCARA McCarthy VSAT 47.80 38 P **P 09 34 13.9 +0.4**
MCARA IAmb IAmb 09 34 34.3
comp=Z,13nm,1.5s
K27K Chicken 47.86 35 P **P 09 34 14.2 +0.3**
K27K IAmb IAmb 09 34 14.6
comp=Z,6.2nm,1.4s
PMG Port Moresby 49.54 176 P **P 09 34 26.3 -0.9**
PMG Port Moresby 49.54 176 P **P 09 34 26.3 -0.9**
PMG pmax pmax
comp=Z,24nm,1.2s
BCPM Bancas Point 49.72 40 P **P 09 34 29.4 +1.2**
BOOM Boomskoye usch 49.76 296 P **P 09 34 28.9 -0.1**
BOOM IAmb IAmb 09 34 40.1
comp=Z,14nm,1.1s
BOOM Boomskoye usch 49.76 296 P **P 09 34 28.9 -0.1**
BOOM pmax pmax
comp=Z,15nm,1.1s
BVAR Borovoye Array 49.86 311 P **P 09 34 30.0 +0.6**
comp=Z,0.4nm,0.4s,baz=82,slow=11,SNR=4.4
comp=Z,0.4nm,0.4s
BVAR Borovoye Array 49.86 311 P **P 09 34 30.0 +0.6**
BRVK Borovoye 49.91 311*ce*P **P 09 34 30.8 +1.1**
BRVK pmax pmax
comp=Z,4.0nm,1.5s
INK Inuvik 50.61 28 P **P 09 34 35.9 +1.2**
INK IAmb IAmb 09 34 41.6
comp=Z,5.8nm,1.3s
INK Inuvik 50.61 28 P **P 09 34 35.9 +1.2**
INK pmax pmax
comp=Z,6.0nm,1.3s
KSH Kashi 50.89 293 P P 09 34 43.5 +6.0
KSH pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 53.20 299 P **P 09 34 54.6 0.0**
KKAR Karatay Array 53.20 299 P **P 09 34 54.6 0.0**
ARU Arti 55.23 318 *i* P **P 09 35 08.8 -0.2**
ARU pmax pmax
comp=Z,2.0nm,1.0s
ABKAR Akbulak array 57.34 309 P **P 09 35 24.8 +0.5**
AKTO Aktyubinsk 57.96 311 P **P 09 35 28.8 +0.2**
comp=Z,1.6nm,0.6s,baz=72,slow=14,SNR=5.8
comp=Z,1.6nm,0.6s
KIRV Kirov 58.83 322 *i* P **P 09 35 35.4 +1.0**
WB0 Warramunga Arr 60.40 190 P **P 09 35 45.8 +0.2**
WB0 IAmb IAmb 09 36 10.5
comp=Z,4.1nm,1.1s
WR0 Warramunga Arr 60.57 190 P **P 09 35 47.4 +0.6**
WR0 IAmb IAmb 09 36 12.7
comp=Z,4.9nm,1.2s
WRAB Tennant Creek 60.57 190 P **P 09 35 47.9 +1.1**
WRAB IAmb IAmb 09 35 54.0
comp=Z,3.9nm,1.2s
WRAB Tennant Creek 60.57 190 P **P 09 35 47.9 +1.1**
WRAB pmax pmax
comp=Z,4.0nm,1.2s
WRA Warramunga Arr 60.58 190 P **P 09 35 46.7 -0.1**
comp=Z,0.3nm,0.5s,baz=8.9,slow=6.9,SNR=5.4
comp=Z,0.3nm,0.5s
WRA Warramunga Arr 60.58 190 P **P 09 35 46.8 -0.1**
KEV Kevo 61.08 339 P **P 09 35 49.8 +0.1**
KEV Kevo 61.08 339 P **P 09 35 49.8 +0.1**
KEV pmax pmax
comp=Z,16nm,1.1s
ASAR Alice Springs 64.30 190 P **P 09 36 11.2 -0.5**
comp=Z,0.3nm,0.8s,baz=24,slow=5.1,SNR=2.6
comp=Z,0.3nm,0.8s
OBN Obninsk 66.64 323⇑ *e*P **P 09 36 26.3 -0.2**
OBN *e* 09 36 56.3
OBN *e* 09 38 49.4
OBN *e*S **SKSac 09 46 16.6 -3.9**
OBN pmax pmax
comp=Z,5.0nm,0.7s
FIA1 FINESS Array S 66.83 332 P **P 09 36 28.6 +1.0**
FIA1 IAmb IAmb 09 36 55.2
comp=Z,15nm,1.1s
FINES FINESS Array B 66.83 332 P **P 09 36 28.4 +0.8**
comp=Z,3.9nm,0.7s,baz=46,slow=8.2,SNR=7.7
FINES LR LR 10 08 48.8
comp=Z,38nm,20.0s,baz=307,slow=39
comp=Z,3.9nm,0.7s
FINES FINESS Array B 66.83 332*ce*P **P 09 36 27.3 -0.3**
FINES pmax pmax
comp=Z,4.0nm,0.7s
KIV Kislovodsk 70.22 311 *e*P **P 09 36 47.2 -2.1**
KIV pmax pmax
comp=Z,11nm,1.1s
KBZ Khabaz 70.24 311 P **P 09 36 50.5 +1.2**
comp=Z,3.4nm,0.8s,baz=14,slow=4.2,SNR=4.4
comp=Z,3.4nm,0.8s
KBZ Khabaz 70.24 311 *i* P **P 09 36 50.3 +1.1**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
MNK Minsk 70.87 326 *i* P **P 09 36 50.8 -2.1**
MNK *i* 09 37 10.9
MNK *i* 09 39 27.9
MNK *i* PPP PPP 09 41 11.1
MNK *i* S **S 09 46 04.6 -1.0**
MNK *i* 09 46 51.9
MNK *i* SS **SS 09 50 38.6 +1.1**
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK pmax pmax
comp=N,32nm,0.8s
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK MLR MLR
comp=N,1μm,20.0s
MNK MLR MLR
comp=E,225nm,21.0s
MNK MLR MLR
comp=Z,71nm,14.0s
MNK Minsk 70.87 326 *i* P **P 09 36 50.8 -2.1**
comp=E,4.0nm,0.8s
MNK *i* P **P 09 36 50.8 -2.1**
comp=N,32nm,0.8s
MNK *i* P **P 09 36 50.8 -2.1**
comp=Z,9.0nm,0.7s,baz=226
MNK *i* PcP **PcP 09 37 10.9 -2.4**
MNK *i* PP **PP 09 39 28.0 -1.6**
MNK *i* PPP PPP 09 41 11.2
MNK *i* S **S 09 46 04.6 -1.0**
MNK *i* SS **SS 09 50 38.6 +1.1**
MNK *i* SSS SSS 09 53 58.0
MNK *i* LQ LQ 10 03 19.4
MNK *i* LR LR 10 08 43.0
MNK *i* LRM MLR 10 10 13.2
comp=N,1μm,20.0s
MNK *i* LRM MLR 10 10 55.1
comp=E,225nm,21.3s
MNK *i* LRM MLR 10 11 02.2
comp=Z,71nm,14.2s
NVAR Mina Array Bea 71.52 55 P **P 09 37 00.2 +2.8**
comp=Z,0.1nm,0.3s,baz=12,slow=9.2,SNR=1.8
comp=Z,0.1nm,0.3s
NC405 NORSAR Array S 71.71 338 P **P 09 36 59.0 +1.1**
NC303 NORSAR Array S 71.72 338 P **P 09 36 58.4 +0.5**
HFS Hagfors 71.90 336 LR LR 10 13 01.9
comp=Z,28nm,18.2s,baz=42,slow=40
NB2 NORSAR Subarra 71.92 338 P **P 09 36 59.9 +0.7**
comp=Z,0.5nm,0.6s,baz=36,slow=6.5
NOA NORSAR Array B 71.92 338 P **P 09 36 59.3 +0.1**
comp=Z,1.6nm,0.8s,baz=37,slow=6.0,SNR=3.9
NOA LR LR 10 14 18.1
comp=Z,17nm,18.0s,baz=205,slow=41
comp=Z,1.6nm,0.8s
AKASG Malin Array Be 72.89 323 P **P 09 37 05.6 +0.5**
comp=Z,2.4nm,0.7s,baz=44,slow=5.9,SNR=10
comp=Z,2.4nm,0.7s
PDAR Pinedale Array 74.03 47 P **P 09 37 14.2 +2.0**
comp=Z,0.1nm,0.4s,baz=219,slow=1.2,SNR=2.0
comp=Z,0.1nm,0.4s
PDAR Pinedale Array 74.03 47 P **P 09 37 13.2 +0.9**
MTPU Mount Pierson 75.53 52 P **P 09 37 21.8 +0.6**
BURAR Bucovina Array 76.93 322 P **P 09 37 29.0 +0.4**
CLL Collm 79.21 331 *i* P **P 09 37 39.8 -1.2**
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 79.21 331 *i* P **P 09 37 39.8 -1.2**
comp=Z,4.0nm,0.7s
TXAR Lajitas Array 86.63 54 P **P 09 38 23.7 +3.7**
comp=Z,0.5nm,1.0s,baz=225,slow=1.6,SNR=3.5
comp=Z,0.5nm,1.0s
VNA2 Neumayer–Watz 145.98 196 PKP **PKPab 09 45 15.5 +0.3**
baz=143,slow=3.1
VNA3 Neumayer Olymp 146.21 195 PKP **PKPab 09 45 16.5 +0.4**

*NOU **25** 09:26:03.5, 33°.63S×174°.96W, h0km, mb4.8/7, South of Kermadec Islands*
*WEL **25** 09:27:21.1±1.2, 37°.S±8°.×17°.9E±1°.0, h8km±7km, M3.4/13, ML3.6/13, MLv3.4/13, Error ellipse: s-maj=0.0km s-min=0.0km az=121.9*
ISC 25 09:27:19.8±2.7, 36°.87S±0°.09×179°.4E±0°.1, h10km, n53, σ19 24/73, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.13**	**232**	P		**Pb**		**09 27 40.4**	**-1.1**
MXZ				S		**Sg**		**09 27 55.2**	**-1.2**
MXZ	**Matakaoa Point**	**1.13**	**232**	P		**Pn**		**09 27 42.4**	**+0.6**
WMGZ	**Waiomatatini S**	**1.25**	**220**	P		**Pn**		**09 27 42.3**	**-1.1**
WMGZ				S		**Sn**		**09 28 01.2**	**+1.0**
PKGZ	**Pakihiroa**	**1.48**	**226**	P		**Pb**		**09 27 48.1**	**+0.6**
PKGZ				S		**Sn**		**09 28 06.5**	**+0.3**
PUZ	**Puketiti**	**1.52**	**217**	P		**Pb**		**09 27 48.7**	**+0.5**
PUZ				S		**Sg**		**09 28 08.9**	**+0.1**
HAZ	**Te Kaha**	**1.58**	**235**	P		**Pn**		**09 27 46.7**	**-1.3**
HAZ				S		**Sg**		**09 28 10.8**	**0.0**
TWGZ	**Tauwhareparae**	**1.74**	**221**	P		**Pb**		**09 27 52.0**	**+0.1**
TWGZ				S		**Sb**		**09 28 13.9**	**0.0**
RUGZ	**Raukumara Rang**	**1.77**	**231**	P		**Pn**		**09 27 51.3**	**+0.6**
CNGZ	**Carnagh Statio**	**1.88**	**211**	P		**Pn**		**09 27 54.0**	**+1.9**
CNGZ				S		**Sb**		**09 28 18.7**	**+0.8**
TKGZ	**Te Karaka**	**2.01**	**218**	P		**Pn**		**09 27 55.0**	**+1.2**
TKGZ				S		**Sn**		**09 28 19.4**	**+0.4**
MWZ	**Matawai**	**2.10**	**225**	P		**Pn**		**09 27 56.6**	**+1.4**
MWZ				S		**Sn**		**09 28 21.4**	**0.0**
RIGZ	**Rimuhau**	**2.26**	**215**	P		**Pn**		**09 27 58.3**	**+0.9**
RIGZ				S		**Sn**		**09 28 24.9**	**-0.4**
RAGZ	**Rawiri**	**2.28**	**224**	P		**Pn**		**09 27 59.1**	**+1.5**
URZ	**Urewera**	**2.31**	**232**	P		**Pn**		**09 27 58.4**	**+0.6**
URZ				S		**Sn**		**09 28 26.2**	**-0.1**
URZ	**Urewera**	**2.31**	**232**	P		**Pn**		**09 27 59.7**	**+1.8**
MARZ	**Manawahe**	**2.46**	**242**	P		**Pn**		**09 28 02.2**	**+2.2**
EDRZ	**Edgecumbe**	**2.47**	**239**	P		**Pn**		**09 28 02.3**	**+2.1**
SNGZ	**Shannon Statio**	**2.53**	**220**	P		**Pn**		**09 28 02.5**	**+1.5**
SNGZ				S		**Sn**		**09 28 33.2**	**+1.3**
KNZ	**Kokohu**	**2.56**	**212**	P		**Pn**		**09 28 01.5**	**+0.1**
KNZ				S		**Sn**		**09 28 31.8**	**-0.8**
MHGZ	**Mahia Peninsul**	**2.58**	**207**	P		**Pn**		**09 28 02.5**	**+0.8**
MUGZ	**Murupara**	**2.65**	**232**	P		**Pn**		**09 28 03.8**	**+1.2**
MUGZ				S		**Sn**		**09 28 34.1**	**-0.7**
TARZ	**Mount Tarawera**	**2.69**	**239**	P		**Pn**		**09 28 05.3**	**+2.0**
RRRZ	**Republican Roa**	**2.74**	**237**	P		**Pn**		**09 28 05.7**	**+1.8**
RAHZ	**Arahi**	**2.76**	**221**	P		**Pn**		**09 28 05.8**	**+1.6**
RAHZ				S		**Sn**		**09 28 37.2**	**-0.4**
KARZ	**Kaharoa**	**2.78**	**245**	P		**Pn**		**09 28 05.1**	**+0.6**
HLRZ	**Highlands Stat**	**2.81**	**240**	P		**Pn**		**09 28 06.6**	**+1.7**
MTHZ	**Maungataniwha**	**2.85**	**225**	P		**Pn**		**09 28 07.0**	**+1.6**
ALRZ	**Allen Road**	**2.98**	**234**	P		**Pn**		**09 28 08.1**	**+1.0**
KUZ	**Kuaotunu**	**2.98**	**271**	P		**Pn**		**09 28 07.9**	**+0.8**
KUZ	**Kuaotunu**	**2.98**	**271**	P		**Pn**		**09 28 05.7**	**-1.4**
NMHZ	**Naumai**	**3.04**	**222**	P		**Pn**		**09 28 09.8**	**+1.8**
ARHZ	**Aropaoanui**	**3.07**	**218**	P		**Pn**		**09 28 08.0**	**-0.4**
BKZ	**Black Stump Fm**	**3.26**	**224**	P		**Pn**		**09 28 12.8**	**+1.7**
BKZ				S		**Sn**		**09 28 48.8**	**-1.2**
BKZ	**Black Stump Fm**	**3.26**	**224**	P		**Pn**		**09 28 11.5**	**+0.4**
MCHZ	**McNeill Hill**	**3.35**	**219**	P		**Pn**		**09 28 13.4**	**+1.0**
MCHZ				S		**Sn**		**09 28 51.1**	**-1.1**
KWHZ	**Kaweka Forest**	**3.48**	**222**	P		**Pn**		**09 28 14.9**	**+0.7**
KAHZ	**Kahuranaki**	**3.54**	**214**	P		**Pn**		**09 28 14.5**	**-0.5**
KAHZ				S		**Sn**		**09 28 55.9**	**-1.1**
TMVZ	**Te Maari**	**3.70**	**232**	P		**Pn**		**09 28 18.3**	**+1.1**
TMVZ				S		**Sn**		**09 28 58.8**	**-2.1**
ETVZ	**East Tongariro**	**3.71**	**231**	P		**Pn**		**09 28 19.1**	**+1.8**
ETVZ				S		**Sn**		**09 28 59.2**	**-1.9**
BHHZ	**Black Hill Sta**	**3.73**	**224**	P		**Pn**		**09 28 18.0**	**+0.6**
BHHZ				S		**Sn**		**09 28 59.1**	**-2.3**
KRVZ	**Karewarewa**	**3.73**	**232**	P		**Pn**		**09 28 18.5**	**+1.0**
OTVZ	**Oturere**	**3.75**	**231**	P		**Pn**		**09 28 19.1**	**+1.1**
NNVZ	**North Ngauruho**	**3.77**	**232**	P		**Pn**		**09 28 18.9**	**+0.8**
MOVZ	**Moawhango**	**3.85**	**228**	P		**Pn**		**09 28 20.6**	**+1.4**
PNHZ	**Pukenui**	**3.96**	**219**	P		**Pn**		**09 28 20.6**	**-0.1**
HIZ	**Hauiti**	**3.98**	**244**	P		**Pn**		**09 28 23.1**	**+2.1**
HIZ	**Hauiti**	**3.98**	**244**	P		**Pn**		**09 28 22.8**	**+1.9**
TSZ	**Takapari Road**	**4.19**	**219**	P		**Pn**		**09 28 23.1**	**-0.7**
VRZ	**Vera Road**	**4.32**	**237**	P		**Pn**		**09 28 27.6**	**+2.0**
WAZ	**Wanganui**	**4.53**	**229**	P		**Pn**		**09 28 29.8**	**+1.3**
BFZ	**Birch Farm**	**4.55**	**212**	P		**Pn**		**09 28 28.4**	**-0.3**
OUZ	**Omahuta**	**5.00**	**287**	P		Pn		09 28 22.1	-13
KHZ	**Kahutara**	**7.17**	**218**	P		**Pn**		**09 29 04.0**	**-0.6**

THE 25 09:30:25.4, 38°.57N×21°.59E, h17km, ML2.1/7, Error ellipse: s-maj=0.8km s-min=0.4km az=119.0, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PVO	**Paravola**	**0.07**	**314**	P		Pg		09 30 28.8	+0.2
PVO				S		Sg		09 30 30.7	0.0
EFP	**Efpalio**	**0.29**	**120**	P		Pg		09 30 31.6	0.0
EFP				S		Sg		09 30 35.9	0.0
	420nm,0.4s								
EVR	**Evrytania**	**0.39**	**27**	P		Pg		09 30 33.1	-0.3
SERG	**Sergoula**	**0.40**	**113**	P		Pg		09 30 33.2	-0.4
SERG				S		Sg		09 30 39.2	0.0
	202nm,0.3s								
LAKA	**Lakka**	**0.45**	**137**	P		Pg		09 30 34.6	+0.1
LAKA				S		Sg		09 30 40.9	+0.2
	325nm,0.3s								
ALIK	**Aliki, Aigiali**	**0.52**	**127**	P		Pg		09 30 35.6	-0.1
RLS	**Riolos of Patr**	**0.52**	**191**	P		Pb		09 30 36.1	0.0
RLS				S		Sb		09 30 43.5	+0.2
	202nm,0.4s								
MAKR	**Makrakomi, Fth**	**0.61**	**44**	P		Pg		09 30 37.6	+0.1
MAKR				S		Sb		09 30 46.5	+0.4
	232nm,0.2s								
DRO	**Drossia**	**0.62**	**171**	P		Pg		09 30 37.5	-0.2
DRO				S		Sb		09 30 47.0	+0.6
	345nm,0.2s								
KLV	**Kalavryta, Ach**	**0.69**	**140**	P		Pg		09 30 38.4	-0.5
EVGI	**Lefkada island**	**0.73**	**274**	P		Pb		09 30 39.1	-0.6
EVGI				S		Sb		09 30 49.6	+0.1
LKD2	**Lefkada island**	**0.76**	**287**	P		Pb		09 30 39.4	-0.8
FSK	**Fiskardo**	**0.81**	**262**	P		Pb		09 30 40.7	-0.4
AXAR	**Agios Charalam**	**0.86**	**77**	P		Pb		09 30 41.5	-0.4
AXAR				S		Sg		09 30 53.6	+0.1
	368nm,0.4s								
VLS	**Valsamata**	**0.88**	**244**	P		Pb		09 30 41.1	-1.1

ATH 25 09:30:49.1, 39°.72N×20°.74E, h16km±4km, ML2.4/3, Error ellipse: s-maj=6.5km s-min=1.2km az=144.0, Greece-Albania border region

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

JAN	**Janina**	**0.11**	**124**	P	Pg	09 30 52.3	-0.3
JAN				S	Sg	09 30 54.8	-0.1
JAN				AML	AML	09 30 55.6	
	comp=N,7552μm,0.2s						
JAN				AML	AML	09 30 55.8	
	comp=E,10971μm,0.1s						
IGT	**Igoumenitsa**	**0.36**	**240**	P	Pg	09 30 56.6	+0.1
IGT				S	Sb	09 31 02.8	+0.1
IGT				AML	AML	09 31 04.7	
	comp=E,1273μm,0.2s						
IGT				AML	AML	09 31 06.1	
	comp=N,1019μm,0.4s						
KPRO	**Kipourio**	**0.54**	**64**	P	Pg	09 30 59.6	-0.2
KPRO				S	Sb	09 31 07.6	-0.2
PENT	**Pentalofos**	**0.57**	**33**	P	Pg	09 30 59.6	-0.8
PENT				S	Sg	09 31 08.4	+0.3
KEK	**Kerkira**	**0.72**	**270**	P	Pg	09 31 02.5	-0.8
KEK				S	Sb	09 31 13.1	0.0
KEK				AML	AML	09 31 18.4	
	comp=N,294μm,0.2s						
KEK				AML	AML	09 31 18.6	
	comp=E,574μm,0.2s						
NEST	**Nestorio**	**0.74**	**19**	P	Pg	09 31 03.5	0.0

ROM 25 09:35:38.9±0.1, 43°.390N±0°.007×12°.97E±0°.01, h0km, ML1.2/7, 1C, Error ellipse: s-maj=1.0km s-min=0.8km az=240.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMUR	**Monte Murano**	**0.06**	**22**	P	Pg	09 35 40.2	+0.2
ARVD	**Arcevia**	**0.11**	**350**	⇑P	Pg	09 35 41.5	+0.5
ARVD				AML	AML		
	comp=E,186μm,0.9s						
ARVD				AML	AML		
	comp=N,146μm,0.7s						
EL6	**Elcito**	**0.11**	**122**	P	Pg	09 35 41.5	+0.5
EL6				AML	AML		
	comp=E,685μm,0.4s						
EL6				AML	AML		
	comp=N,633μm,0.5s						
SNTG	**Esanatoglia**	**0.14**	**189**	P	Pg	09 35 42.6	+1.1
SNTG				AML	AML		
	comp=E,210μm,0.4s						
SNTG				AML	AML		
	comp=N,223μm,0.9s						
SNTG				AML	AML		
	comp=E,210μm,1.6s						
SNTG				AML	AML		
	comp=N,223μm,1.1s						
CING	**Cingoli**	**0.17**	**95**	P	Pg	09 35 42.5	+0.4
CING				AML	AML		
	comp=N,130μm,1.3s						
CING				AML	AML		
	comp=E,126μm,0.4s						
CING				AML	AML		
	comp=N,130μm,0.7s						
FRON	**Frontone**	**0.22**	**306**	P	Pg	09 35 44.0	+0.9
MPAG	**Monte Paganucc**	**0.28**	**328**	P	Pg	09 35 45.1	+0.8
ATCC	**AVT- Casa Cast**	**0.32**	**230**	P	Pb	09 35 46.2	-1.1
ATCC				AML	AML		
	comp=E,162μm,0.3s						
ATCC				AML	AML		
	comp=N,120μm,0.5s						
ATCC				AML	AML		
	comp=E,162μm,0.3s						
ATCC				AML	AML		
	comp=N,120μm,0.5s						
FSSB	**Fossombrone**	**0.33**	**335**	P	Pg	09 35 45.8	+0.6
FSSB				AML	AML		
	comp=E,95μm,0.6s						
FSSB				AML	AML		
	comp=N,94μm,0.2s						
FSSB				AML	AML		
	comp=E,95μm,0.6s						
FSSB				AML	AML		
	comp=N,94μm,0.2s						
PIEI	**Pieia**	**0.35**	**295**	P	Pg	09 35 46.3	+0.8
PIEI				AML	AML		
	comp=N,28μm,1.3s						
PIEI				AML	AML		
	comp=E,61μm,0.3s						
PIEI				AML	AML		
	comp=E,61μm,1.7s						
PIEI				AML	AML		
	comp=N,28μm,0.7s						
FDMO	**Fiordimonte**	**0.36**	**166**	P	Pg	09 35 46.4	+0.6
FDMO				AML	AML		
	comp=N,64μm,0.2s						
FDMO				AML	AML		
	comp=E,71μm,1.2s						
ATPI	**Pietralunga -**	**0.42**	**279**	P	Pg	09 35 47.9	+1.0
T1215	**Vallo di Nera,**	**0.59**	**187**	P	Pg	09 35 50.9	+0.7

*SOME **25** 09:39:21.1, 37°.65N×71°.22E, h0km*
*NNC **25** 09:39:29.8±7.4, 36°.99N×70°.96E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=97.7km s-min=37.5km az=59.0*
ISC 25 09:39:26.6±3.3, 36°.6N±0°.2×70°.5E±0°.1, h50km, n13, σ2§19/17, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.51**	**357**	*e*P	**Pn**	**09 40 48.9**	**+2.6**
	4.9nm,0.2s						
IUG				*e*S	**Sn**	**09 41 51.7**	**+3.3**
	83nm,0.4s						
AML	**Almayashu**	**6.04**	**24**	P	**Pn**	**09 40 54.9**	**+1.2**
	SNR=40						
UCH	**Uchtor**	**6.41**	**28**	P	**Pn**	**09 40 59.6**	**+0.8**
	SNR=5.8						
KK31	**Karatay Array**	**6.46**	**0**	P	**Pn**	**09 41 01.4**	**+2.2**
	2.2nm,0.3s,baz=172,slow=12,SNR=73						
KK31				S	**Sn**	**09 42 13.2**	**+1.7**
	1.7nm,0.3s,baz=203,slow=29,SNR=7.1						
MRKS	**Merke**	**6.47**	**18**	*e*P	**Pn**	**09 40 59.3**	**0.0**
	7.0nm,0.2s						
MRKS				*e*S	**Sn**	**09 42 10.7**	**-1.1**
	14nm,0.3s						
EKS2	**Erkin-Say**	**6.54**	**22**	P	Pn	09 41 02.1	+1.8
	SNR=9.5						
AAK	**Ala-Archa**	**6.76**	**26**	P	**Pn**	**09 41 04.4**	**+1.1**
	SNR=9.7						
CHMS	**Chumysh**	**7.16**	**26**	P	**Pn**	**09 41 09.8**	**+0.9**
	SNR=7.1						
CHMS	**Chumysh**	**7.16**	**26**	⇑P	**Pn**	**09 41 09.4**	**+0.6**
	8.2nm,0.3s						
USP	**Ospenovka**	**7.32**	**24**	P	**Pn**	**09 41 11.8**	**+0.9**
	SNR=9.9						
TKM2	**Tokmak 2**	**7.42**	**31**	⇓P	**Pn**	**09 41 12.1**	**-0.4**
	21nm,2.0s						
AB31	**Akbulak array**	**14.76**	**332**	⇓P	**Pn**	**09 42 49.9**	**-2.2**
	1.7nm,0.7s,baz=149,slow=12,SNR=3.6						
AB31				⇓S	**Sn**	**09 45 30.5**	**-3.8**
	1.8nm,0.7s,baz=151,slow=22,SNR=6.6						
AKTO	**Aktyubinsk**	**16.45**	**331**	⇓P	**Pn**	**09 43 16.5**	**+2.7**
	4.5nm,1.4s						
AKTO				⇑S	**Sn**	**09 46 12.3**	**-3.0**
	2.9nm,0.9s						

IDC 25 09:42:23.6±374.0, 67°.77N×40°.09E, h0km, Error ellipse: s-maj=154.8km s-min=15.1km az=109.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**8.01**	**289**	I		10 33 10.0	
	baz=89,slow=329						
I31KZ	**AKTYUBINSK INF**	**19.56**	**144**	I		11 42 40.0	
	baz=338,slow=331,SNR=2.5						
I46RU	**ZALESOVO INFRA**	**25.08**	**101**	I		12 15 20.0	
	baz=322,slow=327,SNR=1.4						
I34MN	**SONGINO INFRAS**	**38.18**	**87**	I		13 42 10.0	
	baz=325,slow=328,SNR=0.9						

*ARE **25** 09:47:24±3.9, 8°.61S±0°.08×74°.94W±0°.07, h142km±8km, Error ellipse: s-maj=0.0km s-min=0.0km az=91.0*
*NEIC **25** 09:47:24.7±1.9, 8°.71S±0°.07×74°.88W±0°.05, h136km±14km, mb4.5/11, ML4.8(ARE), Error ellipse: s-maj=11.6km s-min=4.5km az=208.0*
*IDC **25** 09:47:25.2±1.4, 8°.77S×74°.94W, h139km±18km, mb3.6/7, mbtmp4.1/12, MS2.9/2, Error ellipse: s-maj=19.1km s-min=11.5km az=54.0*
*VAO **25** 09:47:33.0±0.8, 8°.56S×74°.10W, h143km±5km, mbR4.2*
ISC 25 09:47:25.0±0.5, 8°.65S±0°.06×74°.88W±0°.06, h136km, n62, σ1§34/62, mb4.3/11, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**2.34**	**67**	*e*P	**Pn**	**09 48 04.1**	**+0.6**
ATAH	**Atahualpa**	**3.79**	**293**	P	**Pn**	**09 48 23.2**	**+0.6**
	29nm,0.3s,baz=83,slow=3.5,SNR=106						
ATAH				S	**Sn**	**09 49 06.9**	**-0.2**
	190nm,0.5s,baz=16,slow=18,SNR=9.0						
NNA	**Nana**	**3.84**	**210**	P	**Pn**	**09 48 22.6**	**-0.3**
	55nm,0.3s,baz=69,slow=7.6,SNR=38						
NNA				S	**Sn**	**09 49 05.1**	**-2.6**
	81nm,0.3s,baz=4.1,slow=17,SNR=5.2						
NNA	**Nana**	**3.84**	**210**	Pn	**Pn**	**09 48 22.4**	**-0.4**
BOSC	**San Juan Bosco**	**6.54**	**326**	Pn	**Pn**	**09 48 55.3**	**-3.8**
TBTG	**Tabatinga, AM**	**6.64**	**48**	*e*P	**Pn**	**09 48 60.0**	**-0.3**
ARNL	**Arenillas**	**7.23**	**314**	Pn	**Pn**	**09 49 07.2**	**-0.9**
COHC	**Cochancay**	**7.53**	**324**	Pn	**Pn**	**09 49 11.4**	**-0.8**
PORT	**Chimborazo Vol**	**8.12**	**331**	Pn	**Pn**	**09 49 21.2**	**+0.5**
ETMB	**Extrema**	**8.64**	**98**	*e*P	**Pn**	**09 49 24.5**	**-2.5**
SLOR	**San Lorenzo -**	**8.65**	**335**	Pn	**Pn**	**09 49 27.6**	**-0.1**
TULM	**Tulcn-Chalpat**	**9.74**	**343**	Pn	**Pn**	**09 49 42.2**	**-0.2**
LPAZ	**La Paz**	**10.05**	**140**	P	**Pn**	**09 49 46.9**	**+0.3**
	1.4nm,0.4s,baz=332,slow=6.3,SNR=11						
LPAZ				LR	LR	09 54 31.1	
	comp=Z,27nm,19.7s,baz=55,slow=43						
LPAZ	**La Paz**	**10.05**	**140**	Pn	**Pn**	**09 49 45.9**	**-0.7**
LPAZ	**La Paz**	**10.05**	**140**	*e*P	**Pn**	**09 49 46.9**	**+0.3**
PB16	**IPOC Station P**	**10.95**	**152**	Pn	**Pn**	**09 49 57.0**	**-1.5**
PB11	**IPOC Station P**	**12.15**	**156**	Pn	**Pn**	**09 50 11.1**	**-2.8**
PB03	**IPOC Station P**	**14.21**	**160**		**Pn**	**09 50 40.8**	**+0.4**
PB06	**IPOC Station P**	**14.88**	**161**	Pn	**Pn**	**09 50 47.2**	**-1.6**
VILB	**Vilhena**	**15.04**	**108**	*e*P	**Pn**	**09 50 50.1**	**-0.6**
MACA	**Manacapuru-AM**	**15.13**	**70**	*e*P	**Pn**	**09 50 49.3**	**-2.6**
SIV	**San Ignacio**	**15.33**	**120**	P	**Pn**	**09 50 54.9**	**+0.5**
	3.2nm,0.5s,baz=284,slow=9.0,SNR=19						
PTLB	**Pontes e Lacer**	**16.81**	**115**	*e*P	**Pn**	**09 51 13.0**	**+0.5**
SDV	**Santo Domingo**	**17.93**	**14**	P	**Pn**	**09 51 27.0**	**+0.9**
	4.7nm,0.3s,baz=346,slow=12,SNR=2.8						
SDV	**Santo Domingo**	**17.93**	**14**	*e*P	**Pn**	**09 51 28.6**	**+2.5**
BOAV	**Boa Vista**	**18.04**	**53**	*e*P	**Pn**	**09 51 26.4**	**-0.8**
PDRB	**Porto dos Gac**	**18.11**	**101**	*e*P	**P**	**09 51 25.9**	**-0.8**
BAUV	**El Baul**	**18.76**	**21**		**P**	**09 51 31.8**	**-1.9**
BAUV				IAmb	IAmb	09 51 35.3	
	comp=Z,13nm,0.4s						
CLDB	**Colider**	**18.94**	**98**	*e*P	**P**	**09 51 34.7**	**-1.0**
NPGB	**Novo Progresso**	**19.41**	**87**	*e*P	**P**	**09 51 39.8**	**-1.0**
ITTB	**Itaituba**	**19.49**	**79**	*e*P	**P**	**09 51 41.2**	**-0.4**
SRBA	**San Rafael, Bu**	**19.67**	**334**	P	**P**	**09 51 43.9**	**+0.2**
SRBA				IAmb	IAmb	09 51 47.0	
	comp=Z,7.1nm,0.8s						
SALV	**Santo Antonio**	**20.08**	**113**	*e*P	**P**	**09 51 48.2**	**+0.3**
HDC	**Heredia**	**20.68**	**333**	*e*P	Pn	09 52 05.1	+6.7
PCRV	**Puerto La Cruz**	**21.30**	**29**	P	**P**	**09 52 02.7**	**+1.6**
	comp=Z,7.7nm,0.5s,baz=83,slow=2.7,SNR=7.9						
	comp=Z,7.7nm,0.5s						
MALB	**Monte Alegre**	**21.60**	**73**	*e*P	**P**	**09 52 03.5**	**-0.9**
AQDB	**Aquidauana**	**21.95**	**124**	*e*P	**P**	**09 52 09.5**	**+1.6**
SNDB	**Serra Nova Dou**	**23.44**	**100**	*e*P	**P**	**09 52 21.7**	**-0.6**
MCPB	**Macapa, AP**	**24.18**	**71**	*e*P	**P**	**09 52 27.9**	**-1.1**
TOSP	**Speyside**	**24.42**	**36**	P	**P**	**09 52 31.3**	**+0.1**
GRGR	**Grenville**	**24.48**	**33**	P	**P**	**09 52 31.3**	**-0.4**
PRPB	**Parauapebas**	**24.98**	**86**	*e*P	**P**	**09 52 36.6**	**+0.4**
MDP	**Montagnes des**	**26.05**	**59**	P	**P**	**09 52 47.2**	**+1.3**
	comp=Z,8.7nm,1.0s,baz=226,slow=9.9,SNR=2.3						
	comp=Z,8.7nm,1.0s						
SMTB	**Santa Maria do**	**26.98**	**93**	*e*P	**P**	**09 52 56.2**	**+1.9**
BDFB	**Brasilia**	**27.15**	**107**	*e*P	**P**	**09 52 57.6**	**+1.7**
MTP	**Monte Pirata**	**28.13**	**19**	P	**P**	**09 53 04.0**	**-0.4**
MTP				IAmb	IAmb	09 53 14.5	
	comp=Z,8.5nm,0.9s						
CBYP	**Canovanas**	**28.19**	**18**	P	**P**	**09 53 05.2**	**+0.1**
CBYP				IAmb	IAmb	09 53 10.4	
	comp=Z,23nm,1.3s						
CUPR	**Culebra, Puert**	**28.41**	**19**	P	**P**	**09 53 06.7**	**-0.2**
CUPR				IAmb	IAmb	09 53 16.4	
	comp=Z,8.0nm,0.7s						
STVI	**Saint Thomas**	**28.56**	**20**	P	**P**	**09 53 08.2**	**-0.1**
STVI				IAmb	IAmb	09 53 36.3	
	comp=Z,15nm,1.0s						
SDBA	**SAO DESIDERIO**	**29.70**	**100**	*e*P	**P**	**09 53 20.0**	**+1.4**
JANB	**Januaria**	**30.57**	**105**	*e*P	**P**	**09 53 27.5**	**+1.3**
TER01	**Tubaro-SC**	**31.29**	**133**	*e*P	**P**	**09 53 35.6**	**+3.3**
SJMB	**Sao Joao De Ma**	**34.17**	**111**	*e*P	**P**	**09 53 59.8**	**+2.3**
GDU01	**Guandu, BA**	**34.98**	**102**	*e*P	**P**	**09 54 03.7**	**-0.8**
CMC01	**Camacan, BA**	**35.19**	**104**	*e*P	**P**	**09 54 06.6**	**+0.2**
TXAR	**Lajitas Array**	**46.85**	**325**	P	**P**	**09 55 42.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=152,slow=8.4,SNR=9.1						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**60.15**	**331**	P	**P**	**09 57 18.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=124,slow=7.9,SNR=4.2						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**61.86**	**322**	P	**P**	**09 57 31.6**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=148,slow=7.9,SNR=4.1						
	comp=Z,0.4nm,0.6s						
DBIC	**Dimbokro**	**71.44**	**80**	P	**P**	**09 58 30.7**	**-0.5**
	comp=Z,2.4nm,0.5s,baz=236,slow=5.1,SNR=6.0						
	comp=Z,2.4nm,0.5s						
TORD	**Tondi Ar. Bea**	**79.06**	**75**	P	**P**	**09 59 14.2**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=292,slow=5.9,SNR=6.4						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**88.41**	**190**	LR	LR	10 33 34.5	
	comp=Z,18nm,21.4s,baz=290,slow=31						
WRA	**Warramunga Arr**	**139.57**	**225**	PKP	**PKPdf**	**10 06 37.3**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=115,slow=2.2,SNR=2.8						

AUST 25 10:09:33.2±2.1, 32°.74S×116°.39E, h4km±11km, Error ellipse: s-maj=15.2km s-min=9.0km az=77.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**0.73**	**105**	P	Pg	10 09 47.5	+0.2
	baz=0.7						
NWAO				P	Pg	10 09 47.5	+0.2
	baz=0.7						
NWAO				S	Sg	10 09 57.8	+0.9
	baz=0.7						
MUN	**Mundaring**	**0.78**	**349**	P	Pg	10 09 47.6	-0.4
	baz=0.8						
KLBR	**Kellerberrin**	**1.63**	**46**	P	Pn	10 10 02.5	-0.1
	baz=1.6,SNR=8.6						
KLBR				S	Sb	10 10 24.6	-0.2
	baz=1.6						
KLBR				S	Sg	10 10 25.3	-0.2
	baz=1.6,SNR=6.0						
RKGY	**Rocky Gully**	**1.93**	**165**	P	Pn	10 10 07.6	+0.8
	baz=1.9						
RKGY				S	Sn	10 10 31.9	+0.4
	baz=1.9						
BLDU	**Ballidu**	**2.14**	**7**	P	Pn	10 10 10.0	+0.4
	baz=2.1						
BLDU				S	Sn	10 10 37.8	+1.1
	baz=2.1						
BLDU				S	Sb	10 10 38.4	-1.0
	baz=2.1,SNR=5.7						

*GUC **25** 10:18:47.6±0.7, 21°.36S×67°.41W, h220km±7km, ML3.0*
*SCB **25** 10:18:49.8±0.3, 21°.20S×67°.35W, h183km±5km, ML2.7/2, Error ellipse: s-maj=3.0km s-min=2.3km az=0.0*
ISC 25 10:18:47.0±2.8, 21°.33S±0°.06×67°.29W±0°.06, h199km±23km, n18, σ1§44/32, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.54**	**87**	P	**Pn**	**10 19 22.1**	**+0.6**
MOCB				S	**Sn**	**10 19 45.4**	**-2.7**
MOCB				IAML		10 19 49.9	
	44nm,0.3s						
PB09	**IPOC Station P**	**1.88**	**255**	⇑*i*P	**Pn**	**10 19 25.4**	**+1.0**
PB09				*e*S	**Sn**	**10 19 54.8**	**+1.3**
LVC	**Limon Verde**	**1.97**	**230**	*e*P	**Pn**	**10 19 26.1**	**+0.6**
LVC				*e*S	**Sn**	**10 19 56.2**	**+0.7**
LVC				IAML		10 20 05.3	
	29nm,0.2s						
LVC	**Limon Verde**	**1.97**	**230**	P	**Pn**	**10 19 26.2**	**+0.6**
PB01	**IPOC Station P**	**2.08**	**278**	⇑*i*P	**Pn**	**10 19 26.7**	**+0.4**
PB01				*i*S	**Sn**	**10 19 57.1**	**+0.2**
PB01				IAML		10 19 58.7	
	comp=E,47nm,0.2s						
PB08	**IPOC Station P**	**2.11**	**304**	⇑*i*P	**Pn**	**10 19 28.2**	**+1.1**
PB08				*i*S	**Sn**	**10 19 59.0**	**+0.9**
PB08				IAML		10 20 01.5	
	comp=E,33nm,0.2s						
PB03	**IPOC Station P**	**2.40**	**252**	⇓*i*P	**Pn**	**10 19 30.0**	**0.0**
PB03				*i*S	**Sn**	**10 20 02.4**	**-0.9**
PB03				IAML		10 20 03.4	
	comp=E,43nm,0.1s						
GO01	**Chusmiza**	**2.44**	**312**	*i*P	**Pn**	**10 19 31.7**	**+1.0**
GO01				*e*S	**Sn**	**10 20 05.2**	**+0.5**
GO01				IAML		10 20 11.3	
	comp=N,66nm,0.2s						
PB06	**IPOC Station P**	**2.52**	**237**	*e*P	**Pn**	**10 19 31.7**	**+0.4**
PB06				*e*S	**Sn**	**10 20 05.5**	**-0.3**
PB06				IAML		10 20 11.1	
	comp=E,17nm,0.3s						
PB06	**IPOC Station P**	**2.52**	**237**	P	**Pn**	**10 19 31.9**	**+0.6**
PB11	**IPOC Station P**	**2.72**	**305**	*i*P	**Pn**	**10 19 33.6**	**+0.1**
PB11				*i*S	**Sn**	**10 20 08.7**	**-1.0**
PB11				IAML		10 20 10.7	
	comp=E,73nm,0.1s						
PATCX	**Punta Patache**	**2.73**	**280**	*i*P	**Pn**	**10 19 33.5**	**0.0**
PATCX				*i*S	**Sn**	**10 20 08.4**	**-1.3**
PATCX				IAML		10 20 10.3	
	comp=E,60nm,0.3s						
PB15	**IPOC Station P**	**2.75**	**227**	*i*P	**Pn**	**10 19 34.4**	**+0.5**
PB15				*e*S	**Sn**	**10 20 10.5**	**-0.1**
PB15	**IPOC Station P**	**2.75**	**227**	P	**Pn**	**10 19 35.0**	**+1.1**
TA01	**Diego Aracena**	**2.81**	**285**	*i*P	**Pn**	**10 19 33.9**	**-0.5**
TA01				*i*S	**Sn**	**10 20 09.3**	**-2.0**
TA01				IAML		10 20 10.2	
	comp=E,33nm,0.2s						
TA01	**Diego Aracena**	**2.81**	**285**	P	**Pn**	**10 19 33.8**	**-0.6**
TA01				S	**Sn**	**10 20 05.9**	**-5.4**
TA01				IAML		10 20 11.2	
	comp=E,21nm,0.2s						
PB04	**IPOC Station P**	**2.84**	**249**	P	**Pn**	**10 19 35.1**	**+0.2**
PB16	**IPOC Station P**	**3.64**	**325**	*e*P	**Pn**	**10 19 46.4**	**+1.4**
PB16				*e*S	**Sn**	**10 20 31.1**	**+0.8**
PB16				IAML		10 20 33.0	
	comp=E,3.5nm,0.5s						

*NOU **25** 10:21:13.6, 26°.59S×173°.06W, h342km, mb4.9/9, South of Tonga Islands*
*NEIC **25** 10:21:17.6±1.8, 24°.64S±0°.10×178°.7W±0°.2, h320km±12km, mb4.3/23, Error ellipse: s-maj=21.7km s-min=13.7km az=78.0*
*IDC **25** 10:21:20.1±1.8, 24°.88S×178°.96W, h326km±15km, mb3.8/7, mbtmp4.6/11, Error ellipse: s-maj=31.2km s-min=15.0km az=54.0*
ISC 25 10:21:17.2±0.6, 24°.80S±0°.06×178°.92W±0°.09, h300km, n101, σ2§48/103, mb4.2/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.51**	**169**	P	**Pn**	**10 22 33.3**	**+4.3**
RIZ				S	**S**	**10 23 34.0**	**+7.3**
RAO	**Raoul Island**	**4.52**	**169**	P	**Pn**	**10 22 33.4**	**+4.3**
	294nm,0.3s,baz=102,slow=9.0,SNR=13						
RAO				S	**S**	**10 23 24.6**	**-2.3**
	150nm,0.3s,baz=86,slow=9.5,SNR=5.1						
RAO	**Raoul Island**	**4.52**	**169**		**Pn**	**10 22 33.2**	**+4.0**
RAO	**Raoul Island**	**4.52**	**169**	P	**Pn**	**10 22 33.6**	**+4.4**
GLKZ	**Green Lake**	**4.53**	**169**	P	**Pn**	**10 22 33.5**	**+4.2**
GLKZ				S	**S**	**10 23 36.1**	**+9.0**
MSVF	**Nonsavu**	**7.58**	**338**	P	**Pn**	**10 23 09.6**	**+3.8**
	149nm,0.9s,baz=139,slow=13,SNR=56						
NIUE	**Niue**	**10.10**	**57**		**Pn**	**10 23 35.6**	**-1.1**
MARNC	**Mare, Loyalty**	**12.45**	**283**		**Pn**	**10 24 05.8**	**+0.6**
AFI	**Afiamalu**	**12.76**	**33**	P	Pn	10 24 02.3	-6.8
	11nm,0.3s,baz=235,slow=2.4,SNR=11						
AFI				S	S	10 26 11.5	-19
	51nm,0.6s,baz=42,slow=21,SNR=10						
AFI	**Afiamalu**	**12.76**	**33**	P	**Pn**	**10 24 05.7**	**-3.4**
AFI	**Afiamalu**	**12.76**	**33**	P	Pn	10 24 02.9	-6.2
MXZ	**Matakaoa Point**	**12.94**	**190**	P	Pn	10 24 04.9	-6.1
WMGZ	**Waiomatatini S**	**13.17**	**189**	P	**Pn**	**10 24 13.9**	**+0.2**
WMGZ	**Waiomatatini S**	**13.17**	**189**	P	**Pn**	**10 24 12.0**	**-1.8**
HAZ	**Te Kaha**	**13.22**	**192**	P	**Pn**	**10 24 14.2**	**-0.1**
HAZ	**Te Kaha**	**13.22**	**192**	P	**Pn**	**10 24 13.5**	**-0.8**
HAZ				S	**S**	**10 26 36.6**	**-3.8**
PKGZ	**Pakihiroa**	**13.29**	**190**	P	**Pn**	**10 24 16.5**	**+1.2**
PKGZ	**Pakihiroa**	**13.29**	**190**	P	**Pn**	**10 24 15.2**	**-0.1**
PKGZ	**Pakihiroa**	**13.29**	**190**	S	**S**	**10 26 37.5**	**-4.7**
RUGZ	**Raukumara Rang**	**13.44**	**192**	P	**P**	**10 24 16.4**	**-0.7**
RUGZ	**Raukumara Rang**	**13.44**	**192**	P	**P**	**10 24 15.4**	**-1.7**
RUGZ	**Raukumara Rang**	**13.44**	**192**	S	**S**	**10 26 39.5**	**-6.0**
PUZ	**Puketiti**	**13.45**	**190**	P	**P**	**10 24 17.5**	**+0.4**
PUZ	**Puketiti**	**13.45**	**190**	P	**P**	**10 24 13.8**	**-3.2**
PUZ				S	S	10 26 38.0	-7.5
TWGZ	**Tauwhareparae**	**13.59**	**190**	P	**P**	**10 24 18.3**	**-0.4**
TWGZ	**Tauwhareparae**	**13.59**	**190**	S	**S**	**10 26 43.3**	**-5.5**
DZM	**Mont Dzumac**	**13.71**	**278**	P	**Pn**	**10 24 22.8**	**+2.3**
	6.3nm,0.6s,baz=130,slow=5.8,SNR=11						
TOZ	**Tahuroa Road**	**13.74**	**199**	P	**Pn**	**10 24 24.6**	**+4.1**
MWZ	**Matawai**	**13.82**	**192**	P	**P**	**10 24 20.4**	**-0.9**
MWZ	**Matawai**	**13.82**	**192**	P	**P**	**10 24 18.3**	**-2.9**
MWZ	**Matawai**	**13.82**	**192**	S	**S**	**10 26 48.3**	**-5.4**
URZ	**Urewera**	**13.83**	**193**	P	**P**	**10 24 20.3**	**-1.0**
	11nm,0.4s,baz=360,slow=3.3,SNR=32						
URZ				S	**S**	**10 26 49.1**	**-4.8**
	32nm,0.6s,baz=148,slow=24,SNR=12						
URZ	**Urewera**	**13.83**	**193**	P	**P**	**10 24 20.9**	**-0.5**
URZ	**Urewera**	**13.83**	**193**	P	**P**	**10 24 20.3**	**-1.0**
URZ	**Urewera**	**13.83**	**193**	P	**P**	**10 24 18.4**	**-2.9**
URZ	**Urewera**	**13.83**	**193**	P	**P**	**10 24 20.8**	**-0.5**
URZ	**Urewera**	**13.83**	**193**	S	**S**	**10 26 48.4**	**-5.5**
CNGZ	**Carnagh Statio**	**13.86**	**189**	P	**P**	**10 24 22.2**	**+0.7**
CNGZ	**Carnagh Statio**	**13.86**	**189**	P	**P**	**10 24 19.4**	**-2.2**
CNGZ	**Carnagh Statio**	**13.86**	**189**	S	**S**	**10 26 51.2**	**-3.2**
TKGZ	**Te Karaka**	**13.87**	**191**	P	**P

COEN			IAmb	IAmb	10 28 29.4	
	comp=Z,20nm,1.4s					
BBOO	**Buckleboo**	**40.01 248**	P	**P**	**10 28 23.8**	**+0.1**
BBOO			IAmb	IAmb	10 28 24.9	
	comp=Z,16nm,1.1s					
AS31	**Alice Springs**	**42.87 261**	P	**P**	**10 28 47.1**	**+0.2**
ASAR	**Alice Springs**	**42.87 261**	P	**P**	**10 28 46.8**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=88,slow=6.4,SNR=51					
	comp=Z,2.8nm,0.6s					
ASAR	**Alice Springs**	**42.87 261**	P	**P**	**10 28 46.3**	**-0.6**
WR0	**Warramunga Arr**	**43.15 267**	P	**P**	**10 28 48.7**	**-0.5**
WR0			IAmb	IAmb	10 28 49.9	
	comp=Z,8.6nm,0.5s					
WB2	**Warramunga Arr**	**43.32 267**	P	**P**	**10 28 50.2**	**-0.3**
WRAB	**Tennant Creek**	**43.33 267**	P	**P**	**10 28 50.1**	**-0.5**
WB0	**Warramunga Arr**	**43.33 267**	P	**P**	**10 28 50.0**	**-0.6**
WB0			IAmb	IAmb	10 28 51.7	
	comp=Z,12nm,0.6s					
WRA	**Warramunga Arr**	**43.33 267**	P	**P**	**10 28 50.0**	**-0.6**
	comp=Z,9.9nm,0.4s,baz=103,slow=7.9,SNR=160					
WRA			ScP	**ScP**	**10 33 53.5**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=97,slow=3.7,SNR=9.1					
WRA			S	S	10 34 48.1	-7.3
	comp=Z,0.8nm,1.0s,baz=100,slow=17,SNR=2.2					
	comp=Z,9.9nm,0.4s					
WRA	**Warramunga Arr**	**43.33 267**	P	**P**	**10 28 49.7**	**-1.0**
FORT	**Forrest**	**46.93 250**	P	**P**	**10 29 17.5**	**-1.0**
KNRA	**Kununurra**	**49.67 270**	P	**P**	**10 29 39.3**	**-0.2**
VNDA	**Vanda**	**53.57 185**	P	**P**	**10 30 08.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=1.7,slow=7.9,SNR=11					
	comp=Z,0.7nm,0.6s					
VNDA	**Vanda**	**53.57 185**	P	**P**	**10 30 08.2**	**+0.9**
MBWA	**Marble Bar**	**56.19 260**	P	**P**	**10 30 26.0**	**-0.8**
MBWA			IAmb	IAmb	10 30 52.0	
	comp=Z,13nm,1.2s					
MORW	**Morawa**	**57.49 250**	P	**P**	**10 30 35.1**	**-0.7**
MORW			IAmb	IAmb	10 30 52.8	
	comp=Z,24nm,1.5s					
CASY	**Casey**	**59.74 206**	P	**P**	**10 30 49.9**	**-0.6**
CASY			IAmb	IAmb	10 30 50.1	
	comp=Z,4.5nm,0.7s					
QSPA	**South Pole Qui**	**65.28 180**	P	**P**	**10 31 27.5**	**+0.2**
QSPA			IAmb	IAmb	10 31 29.9	
	comp=Z,4.1nm,1.1s					
MAW	**Mawson**	**77.25 200**	P	**P**	**10 32 38.0**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=134,slow=7.7,SNR=6.1					
	comp=Z,2.6nm,0.6s					
TROLL	**Troll, Antarti**	**83.44 180**	P	**P**	**10 33 10.0**	**-1.2**
SNAA	**Sanae**	**83.75 179**	P	**P**	**10 33 11.0**	**-1.6**
SNAA	**Sanae**	**83.75 179**	P	**P**	**10 33 11.3**	**-1.3**
SNAA			IAmb	IAmb	10 33 47.3	
	comp=Z,5.3nm,1.5s					
VNA3	**Neumayer Olymp**	**83.92 177**	P	**P**	**10 33 12.0**	**-1.4**
VNA2	**Neumayer--Watz**	**84.35 177**	P	**P**	**10 33 14.4**	**-1.2**
	baz=181,slow=4.4					
VNA1	**Neumayer--Stat**	**84.58 177**	P	**P**	**10 33 16.1**	**-0.5**
ARCES	**ARCESS Array B**	**132.97 349**	PKP	**PKPdf**	**10 39 54.2**	**-1.9**
	comp=Z,2.4nm,0.9s,baz=27,slow=8.2,SNR=3.7					
TORD	**Torodi Ar. Bea**	**168.39 183**	PKPab	**PKPab**	**10 41 57.6**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=130,slow=3.1,SNR=3.5					

IDC 25 10:21:18.9±9.4, 4°.69S×153°.70E, h228km±65km, mb2.9/2, mbtmp3.6/3, MS2.8/1, Error ellipse: s-maj=125.6km s-min=52.2km az=114.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.01**	**234**	P	Pn	10 23 12.3	0.0
	9.0nm,0.4s,baz=39,slow=12,SNR=7.2						
PMG				S	S	10 24 43.9	+0.7
	7.9nm,0.6s,baz=119,slow=19,SNR=1.7						
PMG				LR	LR	10 26 51.7	
	comp=Z,64nm,18.6s,baz=76,slow=42						
WRA	**Warramunga Arr**	**24.20**	**230**	P	P	10 26 15.8	+0.9
	0.3nm,0.3s,baz=53,slow=9.7,SNR=18						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.84**	**223**	P	P	10 26 37.7	-0.9
	0.2nm,0.3s,baz=57,slow=9.3,SNR=16						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**151.12**	**289**	PKPbc	PKPbc	10 40 45.8	-0.2
	0.4nm,0.8s,baz=82,slow=2.2,SNR=3.5						

JMA 25 10:23:37.7±0.3, 24°.3N±0°.6×123°.6E±0°.9, h13km±1km, MV1.1/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**61**	P	Pg	10 23 41.1	0.0
IRIF				*e*S	Sg	10 23 43.4	0.0
HATJ	**Hateruma jima**	**0.28**	**139**	*e*S	Sg	10 23 47.3	-0.1
JKRS	**Kuro-shima**	**0.37**	**95**	*e*S	Sg	10 23 50.4	+0.3
JISG	**Ishigakijimahi**	**0.72**	**64**	*e*P	Pg	10 23 51.1	-0.5
JISG				*i* S	Sg	10 23 60.0	-1.1
JTJ	**Tarama**	**1.07**	**70**	*e*S	Sg	10 24 12.2	+0.1

TAP 25 10:24:35.9, 23°.66N×121°.27E, h14km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.14**	**88**	*e*P	Pg	10 24 39.6	+0.1
	baz=87						
EGFH				*e*S	Sg	10 24 42.3	+0.3
	baz=87						
VWDT	**VWDT**	**0.15**	**307**	P	Pb	10 24 40.1	-0.4
	baz=307						
VWDT				S	Sg	10 24 42.3	+0.1
	baz=307						
EHY	**Hungye**	**0.16**	**164**	P	Pg	10 24 40.1	+0.3
	baz=163						
EHY				S	Sg	10 24 42.5	0.0
	baz=163						
ESL	**Shilin**	**0.21**	**44**	P	Pg	10 24 41.0	+0.4
	baz=45						
ESL				S	Sg	10 24 43.9	+0.1
	baz=45						
HGSD	**Ruisui**	**0.22**	**141**	*e*P	Pb	10 24 41.8	+0.1
	baz=141						
HGSD				S	Sb	10 24 45.2	-0.3
	baz=141						
YULB	**Yu-li**	**0.27**	**175**	P	Pg	10 24 41.9	+0.3
	baz=176						
YULB				S	Sg	10 24 45.5	0.0
	baz=176						
OWD	**Renai**	**0.30**	**343**	*e*P	Pg	10 24 42.1	-0.2
	baz=347						
OWD				*e*S	Sg	10 24 46.4	-0.2
	baz=347						
EYUL	**Yuli**	**0.32**	**172**	*e*P	Pg	10 24 42.5	0.0
	baz=178						
EYUL				*e*S	Sg	10 24 47.3	+0.5
	baz=178						
SSLB	**Suanglung**	**0.32**	**293**	*e*P	Pb	10 24 43.0	-0.5
	baz=302						
SSLB				*e*S	Sg	10 24 47.2	+0.3
	baz=302						
WUSB	**Renai**	**0.36**	**337**	P	Pb	10 24 43.8	-0.4
	baz=337						
WUSB				S	Sg	10 24 48.5	+0.4
	baz=337						
WHYT	**Xinyi Township**	**0.39**	**275**	*e*S	Sg	10 24 49.4	+0.5
	baz=271						
CHGB	**Renai**	**0.41**	**347**	P	Pb	10 24 44.6	-0.4
	baz=354						
CHGB				S	Sg	10 24 49.6	-0.1
	baz=354						
SMLT	**Sun Moon Lake**	**0.41**	**303**	*e*P	Pg	10 24 43.7	-0.4
	baz=304						
SMLT				*e*S	Sg	10 24 50.0	+0.3
	baz=304						
ALS	**Alishan**	**0.46**	**251**	*e*P	Pg	10 24 44.8	-0.3
	baz=250						
ALS				*e*S	Sg	10 24 51.7	+0.5
	baz=250						
FULB	**Fuli**	**0.46**	**178**	*e*P	Pg	10 24 45.3	+0.2
	baz=188						
FULB				*e*S	Sb	10 24 52.7	+0.1
	baz=188						
WHF	**Hehuan Shan**	**0.48**	**359**	*e*P	Pg	10 24 45.3	-0.3
	baz=7.0						
WHF				*e*S	Sg	10 24 52.5	+0.5
	baz=7.0						
TWD	**Chiawan**	**0.51**	**35**	*e*P	Pg	10 24 45.9	0.0
	baz=34						
TWD				*e*S	Sg	10 24 53.4	+0.6
	baz=34						
WCS	**Beigang Elemen**	**0.51**	**320**	*e*P	Pg	10 24 45.7	-0.3
	baz=326						
WCS				*e*S	Sg	10 24 52.6	-0.3
	baz=326						
EHD	**Haiduan**	**0.52**	**187**	*e*P	Pg	10 24 45.9	-0.2
	baz=197						
EHD				*e*S	Sb	10 24 53.6	-0.6
	baz=197						
FUSS	**Fushou**	**0.58**	**357**	*e*P	Pg	10 24 47.1	-0.4
	baz=356						
FUSS				*e*S	Sg	10 24 55.7	+0.5
	baz=356						

WEL 25 10:26:01.5, 39°.S±8°.×17°.8E±1°.1, h19km±14km, M2.2/8, ML2.3/9, MLv2.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=116.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.33**	**20**	P	Pb	10 26 08.9	+0.2
WHHZ	**Waihua**	**0.34**	**317**	P	Pb	10 26 09.6	+0.6
MHGZ	**Mahia Peninsul**	**0.34**	**59**	P	Pb	10 26 09.5	+0.4
ARHZ	**Aropaoanui**	**0.42**	**279**	P	Pb	10 26 10.6	+0.2
RAHZ	**Arahi**	**0.54**	**320**	P	Pb	10 26 12.8	+0.5
SNGZ	**Shannon Statio**	**0.56**	**345**	P	Pg	10 26 13.3	+0.5
NMHZ	**Naumai**	**0.61**	**292**	P	Pg	10 26 14.0	+0.4
MTHZ	**Maungataniwha**	**0.72**	**311**	P	Pb	10 26 15.3	-0.1
BKZ	**Black Stump Fm**	**0.82**	**281**	P	Pb	10 26 16.8	-0.4
KWHZ	**Kaweka Forest**	**0.86**	**263**	P	Pb	10 26 17.1	-0.8
MRHZ	**Matea Rd**	**1.00**	**299**	P	Pb	10 26 19.9	-0.3
HAZ	**Te Kaha**	**1.58**	**7**	P	Pg	10 26 37.4	+5.4
WMGZ	**Waiomatatini S**	**1.66**	**25**	P	Pg	10 26 34.5	+1.1
WMGZ	**Waiomatatini S**	**1.66**	**25**	S	Pg	10 26 34.3	+0.9

BJI ***25*** *10:45:18.6±0.0, 43°.97N×148°.42E, h44km, mb4.9/67, mB4.9/43, Ms4.4/51, Ms7 4.3/51*
SKHL ***25*** *10:45:19.9±0.5, 43°.90N×148°.30E, h49km±4km, mb5.6/6*
NIED ***25*** *10:45:19.1, 43°.77N×147°.95E, h0km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; M_{rr}0.75; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-0.53; $M_{r\theta}$0.78; $M_{\theta\phi}$-0.43; $M_{\phi r}$1.02; Fault plane solution: $M_0$1.51000×10^16^ NP1: ϕ_s212.00000°, δ16.00000°, λ85.00000°. NP2: ϕ_s37.00000°, δ74.00000°, λ91.00000°.*
JMA ***25*** *10:45:19.1±0.4, 44°.N±1°.×14°.8E±°, h0km, MD4.8/37, MV5.3/37, E OFF HOKKAIDO*
MOS ***25*** *10:45:20.0±0.9, 44°.01N×148°.10E, h42km, mb5.2/59, Error ellipse: s-maj=5.9km s-min=4.6km az=109.4*
IDC ***25*** *10:45:20.9±4.1, 44°.07N×148°.05E, h33km±31km, mb4.3/30, mbtmp4.5/35, ML3.5/4, MS3.9/56, Error ellipse: s-maj=13.4km s-min=10.1km az=141.0*
NEIC ***25*** *10:45:22.0±1.6, 43°.91N±0°.07×148°.14E±0°.09, h45km±6km, mb4.9/194, Error ellipse: s-maj=10.2km s-min=8.8km az=221.0*
GCMT ***25*** *10:45:23.0±0.4, 43°.92N±0°.03×148°.27E±0°.03, h45km±1km, MW4.9/56, Moment Tensor Solution. s25,c30; s56,c76; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}1.75±.19; $M_{\theta\theta}$0.14±.14; $M_{\phi\phi}$-1.89±.12; $M_{r\theta}$0.22±.11; $M_{\theta\phi}$-1.79±.08; $M_{\phi r}$1.09±.09; Best double couple: $M_0$2.63400×10^16^ NP1: ϕ_s13.00000°, δ60.00000°, λ67.00000°. NP2: ϕ_s233.00000°, δ37.00000°, λ124.00000°. Principal axes: T 2.1080, Plg66.0000°, Azm239.0000°; N 1.0510, Plg20.0000°, Azm25.0000°; P -3.1610, Plg12.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment rate function*

ISC 25 10:45:21.3±0.5, 44°.01N±0°.04×148°.16E±0°.04, h40km±3km, h40km:pP-P, n758, σ1$20/719, mb4.9/211, MS4.1/73, 49C-23D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.24**	**350**	*d i*PN	**Pn**	**10 45 41.7**	**-0.4**
KUR				*e*S	**Sn**	**10 45 57.6**	**-0.1**
KUR				pmax	pmax		
	comp=Z,2μm,0.4s						
KUR				pmax	pmax		
	comp=N,1μm,0.3s						
KUR				pmax	pmax		
	comp=Z,8μm,1.4s						
KUR				smax	smax		
	comp=N,33μm,2.6s						
KUR				smax	smax		
	comp=E,18μm,2.7s						
KUR				smax	smax		
	comp=N,5μm,0.7s						
KUR				smax	smax		
	comp=E,9μm,0.7s						
KUR	**Kuril'sk**	**1.24**	**350**	*i* P	**Pn**	**10 45 41.7**	**-0.4**
KUR				AMB	AMB	10 45 43.7	
	comp=E,2μm,0.4s						
KUR				AMB	AMB	10 45 46.8	
	comp=E,8μm,1.0s						
KUR				*e*S	**Sn**	**10 45 57.8**	**+0.1**
KUR				A	A	10 46 01.5	
	comp=E,33μm,3.0s						
KUR				A	A	10 46 01.5	
	comp=E,18μm,3.0s						
KUR				A	A	10 46 03.0	
	comp=E,7μm,0.6s						
KUR				A	A	10 46 03.0	
	comp=E,15μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**272**	*d i*PN	**Pn**	**10 45 47.1**	**-0.7**
YUK				*e*S	**Sn**	**10 46 07.1**	**-0.8**
YUK				pmax	pmax		
	comp=N,270nm,0.2s						
YUK				pmax	pmax		
	comp=E,751nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3μm,0.2s						
YUK				pmax	pmax		
	comp=Z,6μm,1.0s						
YUK				smax	smax		
	comp=E,9μm,0.2s						
YUK				smax	smax		
	comp=N,16μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**272**	*i* P	**Pn**	**10 45 47.2**	**-0.6**
YUK				AMB	AMB	10 45 48.5	
	comp=N,2μm,0.3s						
YUK				AMB	AMB	10 45 52.0	
	comp=N,6μm,1.0s						
YUK				*e*S	**Sn**	**10 46 07.5**	**-0.4**
YUK				A	A	10 46 14.6	
	comp=N,16μm,0.6s						
YUK				A	A	10 46 14.6	
	comp=N,9μm,0.6s						
NEM2	**Nemuro 2**	**1.87**	**251**	*e*P	**Pn**	**10 45 49.2**	**-1.5**
NEM2				*e*S	**Sn**	**10 46 11.6**	**-1.4**
NEM2	**Nemuro 2**	**1.87**	**251**	A	A	10 45 49.2	
	comp=N,6.0nm,3.2s,comp=N,6.0nm,1.0s						
NMR	**Nemuro--Hokkai**	**1.88**	**251**	*e*PN	**Pn**	**10 45 49.5**	**-1.3**
NMR				*e*S	**Sn**	**10 46 12.9**	**-0.3**
NMR	**Nemuro--Hokkai**	**1.88**	**251**	*e*P	**Pn**	**10 45 49.8**	**-1.0**
NMR				*e*S	**Sn**	**10 46 12.8**	**-0.5**
RUSJ	**Misakicho**	**2.10**	**274**	⇓*i*PN	**Pn**	**10 45 54.4**	**+0.5**
RUSJ				*e*S	**Sn**	**10 46 19.7**	**+0.9**
JRA	**Rausu**	**2.19**	**269**	*e*P	**Pn**	**10 45 55.4**	**+0.2**
JRA	**Rausu**	**2.19**	**269**	A	A	10 45 55.4	
	comp=N,11nm,1.4s,comp=N,12nm,1.7s						
JNSB	**Nemuroshibetsu**	**2.29**	**265**	*e*P	**Pn**	**10 45 56.8**	**+0.2**
JNSB	**Nemuroshibetsu**	**2.29**	**265**	A	A	10 45 56.8	
	comp=N,14nm,1.6s,comp=N,12nm,0.9s						
JKHN	**Kushirohamanak**	**2.37**	**248**	*e*P	**Pn**	**10 45 57.2**	**-0.4**
JKHN	**Kushirohamanak**	**2.37**	**248**	A	A	10 45 57.2	
	comp=N,10.0nm,3.6s,comp=N,12nm,3.3s						
JNK	**Nakash**	**2.53**	**262**	*e*P	**Pn**	**10 45 59.7**	**-0.1**
JNK				*e*S	**Sn**	**10 46 29.2**	**-0.1**
JNK	**Nakash**	**2.53**	**262**	A	A	10 45 59.7	
	comp=N,6.0nm,0.7s,comp=N,6.0nm,1.0s						
AKK	**Akkeshi**	**2.61**	**249**	*e*S	**Sn**	**10 46 30.6**	**-0.7**
JAK	**Akkeshi**	**2.71**	**249**	*e*P	**Pn**	**10 46 01.8**	**-0.6**
JAK				*e*S	**Sn**	**10 46 33.5**	**-0.4**
JAK	**Akkeshi**	**2.71**	**249**	A	A	10 46 01.8	
	comp=N,10.0nm,1.9s,comp=N,12nm,2.4s						
JTKR	**Abashiri--Toko**	**3.07**	**271**	*e*P	**Pn**	**10 46 08.2**	**+1.0**
JTKR	**Abashiri--Toko**	**3.07**	**271**	A	A	10 46 08.2	
	comp=N,2.0nm,2.9s,comp=N,3.0nm,3.5s						
JAR	**Ashorobuto**	**3.27**	**259**	*e*P	**Pn**	**10 46 10.7**	**+0.7**
JAR				*e*S	**Sn**	**10 46 48.9**	**+1.4**
JAR	**Ashorobuto**	**3.27**	**259**	A	A	10 46 10.7	
	comp=N,7.0nm,0.6s,comp=N,6.0nm,1.3s						
JOB	**Onbets**	**3.34**	**252**	*e*P	**Pn**	**10 46 10.9**	**0.0**
JOB	**Onbets**	**3.34**	**252**	A	A	10 46 10.9	
	comp=N,7.0nm,3.2s,comp=N,8.0nm,1.2s						
JMP	**Maruseppu**	**3.46**	**272**	*e*P	**Pn**	**10 46 13.8**	**+1.2**
JMP	**Maruseppu**	**3.46**	**272**	A	A	10 46 13.8	
	comp=N,2.0nm,4.8s,comp=N,2.0nm,1.0s						
JCH	**Churui**	**3.77**	**250**	*e*P	**Pn**	**10 46 17.0**	**+0.2**
JCH	**Churui**	**3.77**	**250**	A	A	10 46 17.0	
	comp=N,8.0nm,0.8s,comp=N,11nm,0.6s						
JKK2	**Kamakawa 2**	**3.91**	**270**	*e*P	**Pn**	**10 46 20.7**	**+1.9**
JTHR	**Tokachihiroo**	**3.95**	**246**	A	A	10 46 19.4	
	comp=N,6.0nm,3.4s,comp=N,4.0nm,1.3s						
JKA	**Kamikawa-asahi**	**4.01**	**273**	Pn	**Pn**	**10 46 20.7**	**+0.6**
ASAJ	**Asahikawa**	**4.01**	**273**	PN	**Pn**	**10 46 20.7**	**+0.5**
JSE	**Soyaes**	**4.10**	**285**	*e*P	**Pn**	**10 46 22.4**	**+1.1**
JFR	**Furan**	**4.13**	**260**	A	A	10 46 22.7	
	comp=N,3.0nm,3.8s,comp=N,5.0nm,1.0s						
ERM	**Erimo**	**4.17**	**243**	Pn	**Pn**	**10 46 23.5**	**+1.1**
ERM	**Erimo**	**4.17**	**243**	*ce*PN	**Pn**	**10 46 24.2**	**+1.8**
ERM				pmax	pmax		
	comp=Z,416nm,1.3s						
JEM	**Erimo**	**4.17**	**243**	Pn	**Pn**	**10 46 23.1**	**+0.7**
JEM	**Erimo**	**4.17**	**243**	A	A	10 46 22.5	
	comp=Z,6.0nm,3.8s,comp=Z,9.0nm,1.0s						
JNBK	**Urakawa-nobuka**	**4.32**	**248**	*e*P	**Pn**	**10 46 24.3**	**0.0**
JNBK	**Urakawa-nobuka**	**4.32**	**248**	A	A	10 46 24.3	
	comp=Z,19nm,0.8s,comp=Z,11nm,0.8s						
JBT2	**Biratori 2**	**4.40**	**256**	A	A	10 46 26.2	
	comp=Z,4.0nm,6.1s,comp=Z,4.0nm,10.6s						
JSHD	**Hidakashinhida**	**4.46**	**251**	A	A	10 46 26.8	
	comp=Z,17nm,1.0s,comp=Z,20nm,1.7s						
JSS	**Shosan**	**4.55**	**277**	*e*P	**Pn**	**10 46 30.3**	**+2.8**
JWK2	**Keihoku**	**4.65**	**288**	*e*P	Pn	10 46 32.8	+3.8
JIAM	**Iburiatsuma**	**4.76**	**255**	A	A	10 46 31.2	
	comp=Z,12nm,1.0s,comp=Z,16nm,1.5s						
YSS	**Yuzh-Sakhalins**	**4.81**	**310**	Pn	**Pn**	**10 46 31.8**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.81**	**310**	⇓*e*PN	**Pn**	**10 46 32.5**	**+1.4**
YSS				*e*S	**Sn**	**10 47 25.9**	**+0.4**
YSS				pmax	pmax		
	comp=Z,180nm,0.9s						
YSS				smax	smax		
	comp=N,170nm,1.0s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS	**Yuzh-Sakhalins**	**4.81**	**310**	*e*P	**Pn**	**10 46 32.5**	**+1.4**
YSS				AMB	AMB	10 46 37.4	
	comp=Z,80nm,0.4s						
YSS				*e*S	**Sn**	**10 47 26.1**	**+0.6**
YSS				A	A	10 47 36.0	
	comp=Z,100nm,0.6s						
YSS				A	A	10 47 36.0	
	comp=Z,120nm,0.6s						
YSS				AMS	AMS	10 48 24.0	
	comp=Z,1μm,16.0s						
YSS				AMS	AMS	10 48 24.0	
	comp=Z,2μm,16.0s						
JEW	**Eniwo**	**5.03**	**259**	Pn	**Pn**	**10 46 34.6**	**+0.5**
JEW	**Eniwo**	**5.03**	**259**	*e*P	**Pn**	**10 46 36.7**	**+2.6**
JEW	**Eniwo**	**5.03**	**259**	A	A	10 46 36.7	
	comp=Z,5.0nm,2.9s,comp=Z,6.0nm,1.0s						
JRBN	**Rebuntou**	**5.25**	**288**	*e*P	**Pn**	**10 46 40.4**	**+3.2**
JKB	**Kayabe**	**5.64**	**250**	A	A	10 46 43.4	
	comp=Z,17nm,1.0s,comp=Z,10.0nm,1.5s						
JAHD	**Aomorihigashid**	**5.73**	**244**	A	A	10 46 44.3	
	comp=Z,11nm,0.8s,comp=Z,10.0nm,1.0s						
JYM2	**Yakumo 2**	**6.01**	**254**	A	A	10 46 48.8	
	comp=Z,3.0nm,1.1s,comp=Z,4.0nm,1.3s						
JTM	**Tenmabayashi**	**6.16**	**241**	Pn	**Pn**	**10 46 48.7**	**-1.0**
JSR	**Shiriuchi**	**6.21**	**249**	A	A	10 46 51.3	
	comp=Z,2.0nm,3.0s,comp=Z,2.0nm,1.4s						
JSI2	**Shiura 2**	**6.44**	**245**	A	A	10 46 54.3	
	comp=Z,5.0nm,0.9s,comp=Z,3.0nm,1.0s						
UGL	**Uglegorsk**	**6.58**	**322**	*e*P	**Pn**	**10 46 58.2**	**+2.8**
UGL				AMB	AMB	10 47 09.0	
	comp=Z,60nm,0.8s						
TYV	**Tymovskoe**	**7.80**	**333**	*e*P	**Pn**	**10 47 12.7**	**+0.5**
TEY	**Ternei**	**8.32**	**281**	⇑*e*PN	Pn	10 47 25.4	+6.1
TEY				*e*		10 49 01.3	
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=E,40nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
TEY	**Ternei**	**8.32**	**281**	*e*P	Pn	10 47 22.8	+3.5
TEY				AMB	AMB	10 47 27.4	
SKR	**Severo-Kuril's**	**8.59**	**36**	*e*P	**Pn**	**10 47 22.8**	**-0.1**
SKR				AMB	AMB	10 47 24.5	
	comp=Z,40nm,0.7s						
PAU	**Pauzhetka**	**9.46**	**35**	*e*P	**Pn**	**10 47 35.3**	**+0.4**
PAU				AMB	AMB	10 47 38.5	
	comp=Z,30nm,0.5s						
JSD	**Sado**	**9.56**	**235**	Pn	**Pn**	**10 47 35.4**	**-0.9**
OKH	**Okha**	**10.15**	**342**	*de*PN	**Pn**	**10 47 45.4**	**+1.1**
OKH				MLR	MLR		
	comp=N,900nm,14.0s						
OKH				MLR	MLR		
	comp=E,800nm,13.0s						
OKH				MLR	MLR		
	comp=Z,700nm,14.0s						
OKH	**Okha**	**10.15**	**342**	*e*P	**Pn**	**10 47 45.4**	**+1.1**
OKH				AMB	AMB	10 47 51.0	
	comp=Z,120nm,0.7s						
GRNR	**Gornyy**	**10.44**	**315**	⇓*i*PN	Pn	10 47 52.9	+4.7
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				MLR	MLR		
	comp=N,180nm,15.0s						
GRNR	**Gornyy**	**10.44**	**315**	*e*P	**Pn**	**10 47 50.5**	**+2.3**
GRNR				AMB	AMB	10 47 54.1	
	comp=N,20nm,0.8s						
MAJO	**Matsushiro**	**10.64**	**229**	Pn	**Pn**	**10 47 50.0**	**-1.1**
MAJO	**Matsushiro**	**10.64**	**229**	*i* PN	**Pn**	**10 47 50.5**	**-0.7**
MJAR	**Matsushiro Arr**	**10.64**	**229**	Pn	**Pn**	**10 47 50.5**	**-0.7**
	comp=N,0.2nm,0.3s,baz=32,slow=13,SNR=11						
MJAR				LR	LR	10 52 22.5	
	comp=N,289nm,20.1s,baz=52,slow=40						
	comp=N,6.8nm,0.8s						
MJB9	**Matsu-Tunnel**	**10.64**	**229**		**Pn**	**10 47 50.9**	**-0.3**
PEA0B	**Petropavlovsk-**	**11.07**	**31**	Pn	**Pn**	**10 47 58.8**	**+1.9**
PEA0B	**Petropavlovsk-**	**11.07**	**31**	*i* PN	**Pn**	**10 47 57.3**	**+0.4**
PETK	**Pet

comp=Z,380nm,12.6s
BNX LR LR
comp=Z,690nm,17.7s
BNX LR LR
comp=Z,770nm,14.4s
MA2 Magadan 15.67 5 Pn **Pn 10 48 59.2 +0.2**
comp=Z,12nm,0.8s,baz=179,slow=14,SNR=3.5
MA2 LR LR 10 54 50.6
comp=Z,389nm,19.5s,baz=190,slow=36
CN2 Changchun 16.37 277 *e*P **P 10 49 08.0 -2.3**
CN2 *e*pP pP 10 49 17.0 -3.2
CN2 *e*S **Sn 10 52 05.8 -2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,400nm,15.0s
CN2 LR LR
comp=Z,600nm,15.0s
CN2 LR LR
comp=Z,800nm,17.0s
KSRS Korea Array 16.66 254 Pn **P 10 49 12.1 -1.5**
comp=Z,0.3nm,0.3s,baz=60,slow=12,SNR=27
KSRS LR LR 10 55 48.9
comp=Z,469nm,19.6s,baz=60,slow=38
comp=Z,15nm,0.8s
KS19 Wonju Array Si 16.67 254 Pn **Pn 10 49 10.2 -1.6**
KSAR Wonju Array Be 16.69 254 Pn **P 10 49 11.6 -2.3**
KSAR Wonju Array Be 16.69 254 P **P 10 49 11.6 -2.3**
ZEA Zeya 16.79 313 *e*P **P 10 49 15.6 +0.6**
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA pmax pmax
comp=Z,200nm,2.3s
ZEA MLR MLR
comp=E,200nm,15.0s
ZEA MLR MLR
comp=Z,300nm,17.0s
ZEA Zeya 16.79 313 *e*P **Pn 10 49 11.4 -1.8**
ZEA AMB AMB 10 49 17.2
comp=Z,80nm,0.9s
SEY Seymchan 19.12 6 P **P 10 49 39.9 -0.6**
comp=Z,0.4nm,0.3s,baz=185,slow=9.4,SNR=10
comp=Z,14nm,0.9s
SEY Seymchan 19.12 6 *i*P **P 10 49 40.5 0.0**
SEY pmax pmax
comp=Z,23nm,1.1s
SEY MLR MLR
comp=Z,379nm,15.0s
SHEM Shemya Is, Ala 19.23 54 LR LR 10 58 04.0
comp=Z,133nm,19.2s,baz=311,slow=40
DL2 Dalian 20.49 265 P Pn 10 50 00.3 +2.3
DL2 pmax pmax
comp=Z,50nm,1.0s
YAK Yakutsk 21.06 335 P **P 10 49 58.9 -2.6**
comp=Z,4.0nm,0.3s,baz=331,slow=3.2,SNR=7.5
YAK LR LR 10 58 30.7
comp=Z,529nm,20.0s,baz=95,slow=38
comp=Z,4.0nm,0.3s
YAK Yakutsk 21.06 335 P **P 10 49 59.2 -2.4**
YAK IAmb IAmb 10 50 08.1
comp=Z,37nm,0.8s
YAK Yakutsk 21.06 335 *e*P **P 10 49 59.1 -2.4**
YAK *e* 10 50 17.8
YAK *e*S **S 10 53 50.2 -3.2**
YAK *e**SS **sS 10 54 07.6 -1.7**
YAK *e*SS **SnSn 10 54 18.0 +1.7**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK smax smax
comp=E,204nm,2.8s
YAK smax smax
comp=N,198nm,2.7s
AMKA Amchitka 22.10 60 P **P 10 50 11.5 -1.2**
XLT XiLinHaoTe 23.02 281 ⇓*i*P **P 10 50 23.3 +0.6**
XLT pP pP 10 50 32.0 -0.9
XLT sP sP 10 50 41.0 +3.1
XLT PcP **PcP 10 54 13.5 +2.4**
XLT S **S 10 54 33.0 +2.5**
XLT sS sS 10 54 41.3 -7.0
XLT pmax pmax
comp=N,33nm,0.8s
XLT pmax pmax
comp=N,170nm,3.8s
XLT LR LR
comp=N,690nm,18.1s
XLT LR LR
comp=N,630nm,17.7s
JOW Kunigami 23.49 230 P **P 10 50 26.6 -0.8**
comp=N,26nm,1.0s,baz=29,slow=10,SNR=6.2
JOW LR LR 10 58 54.9
comp=N,128nm,21.1s,baz=38,slow=35
comp=N,26nm,1.0s
JOW Kunigami 23.49 230 P **P 10 50 24.2 -3.1**
JOW IAmb IAmb 10 50 29.8
comp=Z,48nm,1.2s
BJI Beijing 24.00 272 P **P 10 50 32.3 +0.2**
BJI pP **pP 10 50 42.3 -0.6**
BJI S **S 10 54 44.5 -1.7**
BJI pmax pmax
comp=Z,45nm,0.8s
BJI LR LR
comp=Z,59nm,17.5s
BJI LR LR
comp=Z,390nm,20.7s
BJI LR LR
comp=Z,650nm,18.6s
BJT Baijiatuau 24.02 272 P **P 10 50 30.2 -2.0**
BJT IAmb IAmb 10 50 34.1
comp=Z,35nm,0.8s
BJT Baijiatuau 24.02 272 P **P 10 50 30.2 -2.0**
BJT pmax pmax
comp=Z,35nm,0.8s
TIA Tai'an 24.87 262 ⇑P **P 10 50 40.3 +0.2**
TIA S S 10 55 09.5 +9.2
TIA pmax pmax
comp=Z,42nm,0.7s
TIA LR LR
comp=Z,130nm,12.8s
TIA LR LR
comp=Z,220nm,19.4s
TIA LR LR
comp=Z,260nm,21.1s
NJ2 Nanjing 25.85 252 ⇓P **P 10 50 48.8 -0.1**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 LR LR
comp=Z,440nm,18.6s
NJ2 LR LR
comp=Z,710nm,16.7s
NJ2 LR LR
comp=Z,850nm,17.7s
BILL Bilibino 25.91 16 ⇓*e*P **P 10 50 48.2 -0.9**
BILL *e* 10 51 33.8
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,320nm,20.0s
HNS HongShan 26.08 267 ⇑P **P 10 50 51.5 +0.5**
HNS S **S 10 55 26.8 +7.4**
HNS sS **sS 10 55 43.8 +6.4**
HNS pmax pmax
comp=Z,23nm,1.2s
HNS pmax pmax
comp=Z,210nm,5.3s
HNS LR LR
comp=Z,170nm,14.5s
HNS LR LR
comp=Z,330nm,15.3s
HNS LR LR
comp=Z,350nm,17.3s
HHC Hu-ho-hao-te 27.05 276 *e*P **P 10 51 00.5 +0.6**
HHC pP pP 10 51 10.3 -0.5
HHC S **S 10 55 40.3 +5.3**
HHC pmax pmax
comp=Z,24nm,0.8s
HHC pmax pmax
comp=Z,280nm,7.0s
HHC LR LR
comp=Z,410nm,14.3s
HHC LR LR
comp=Z,780nm,14.9s
HHC LR LR
comp=Z,1μm,16.7s
BTO Baotou 28.24 276 *e*P **P 10 51 11.8 +1.3**
BTO LR LR
comp=Z,1μm,16.7s
BTO LR LR
comp=Z,2μm,17.3s
ULN Ulaanbaatar 28.60 292 P **P 10 51 13.8 +0.1**
ULN Ulaanbaatar 28.60 292 *de*P **P 10 51 14.2 +0.5**
ULN pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 28.60 292 *e*P **P 10 51 14.2 +0.5**
H11N2 WAKE ISLAND Hy 28.83 141 T T 11 21 52.8
baz=332,slow=76,SNR=1112
H11N1 WAKE ISLAND Hy 28.84 141 T T 11 21 54.8
baz=332,slow=76,SNR=825
H11N3 WAKE ISLAND Hy 28.85 141 T T 11 22 00.9
baz=332,slow=76,SNR=1003
LYN LuoYang 29.00 263 ⇓*i*P **P 10 51 18.3 +1.1**
LYN pP sP 10 51 30.5 -2.3
LYN pmax pmax
comp=Z,20nm,0.8s
LYN pmax pmax
comp=Z,160nm,4.9s
LYN LR LR
comp=Z,230nm,20.0s
LYN LR LR
comp=Z,220nm,20.3s
SONM Songino Array 29.05 292 P **P 10 51 17.3 -0.3**
comp=Z,5.1nm,0.9s,baz=78,slow=7.3,SNR=20
SONM LR LR 11 03 37.9
comp=Z,513nm,20.8s,baz=91,slow=38
comp=Z,5.1nm,0.9s
SONM Songino Array 29.05 292 P **P 10 51 17.0 -0.6**
SONM Songino Array 29.05 292 P **P 10 51 17.0 -0.6**
SONM pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 29.26 348 P **P 10 51 18.2 -0.8**
comp=Z,0.6nm,0.3s,baz=91,slow=23,SNR=5.0
TIXI LR LR 11 03 57.0
comp=Z,110nm,18.7s,baz=56,slow=38
comp=Z,0.6nm,0.3s
TIXI Tiksi 29.26 348 *ce*P **P 10 51 15.7 -3.3**
TIXI pmax pmax
comp=Z,6.0nm,2.5s
TIXI MLR MLR
comp=Z,282nm,18.0s
H11S1 WAKE ISLAND Hy 29.82 143 T T 11 23 05.2
baz=333,slow=76,SNR=2691
H11S3 WAKE ISLAND Hy 29.82 143 T T 11 23 10.4
baz=333,slow=76,SNR=1620
H11S2 WAKE ISLAND Hy 29.84 143 T T 11 23 14.2
baz=333,slow=76,SNR=1407
WHN Wuhan 29.85 255 ⇑P **P 10 51 25.0 +0.3**
WHN pmax pmax
comp=Z,34nm,0.7s
WHN LR LR
comp=Z,1μm,19.3s
ZAK Zakamensk 30.77 298 *e*P **P 10 51 31.2 -1.6**
ZAK pmax pmax
comp=Z,4.0nm,1.7s
XAN Xi'an 31.80 265 P **P 10 51 42.0 0.0**
XAN pP pP 10 51 49.8 -3.1
XAN pmax pmax
comp=Z,11nm,1.3s
ENH Enshi 33.42 259 P **P 10 51 55.7 -0.5**
ENH IAmb IAmb 10 51 56.6
comp=Z,15nm,0.8s
ENH Enshi 33.42 259 P **P 10 51 55.5 -0.6**
ENH pP **pP 10 52 03.7 -3.5**
LZH Lanzhou 34.49 272 ⇑P **P 10 52 06.5 +1.0**
LZH pP sP 10 52 21.8 +0.4
LZH pmax pmax
comp=Z,61nm,1.2s
LZH pmax pmax
comp=Z,120nm,4.1s
LZH LR LR
comp=Z,440nm,16.1s
LZH LR LR
comp=Z,670nm,17.9s
LZH LR LR
comp=Z,790nm,18.0s
GTA Gaotai 35.97 280 ⇑P **P 10 52 19.0 +0.8**
GTA pP sP 10 52 31.0 -3.0
GTA sP pP 10 52 35.8 +6.5
GTA PcP **PcP 10 54 45.5 +1.3**
GTA pmax pmax
comp=Z,15nm,1.4s
GTA pmax pmax
comp=Z,43nm,4.8s
GTA LR LR
comp=Z,170nm,13.8s
GTA LR LR
comp=Z,220nm,14.2s
GTA LR LR
comp=Z,350nm,14.9s
O17K Koliganek Bris 36.11 45 P **P 10 52 20.6 +1.7**
baz=269
GCSA Galena City Sc 36.57 36 P **P 10 52 23.5 +0.7**
baz=263
N18K Kilae Creek 36.72 43 P **P 10 52 26.5 +2.3**
N18K IAmb IAmb 10 52 27.1
comp=Z,22nm,1.3s
N18K Kilae Creek 36.72 43 P **P 10 52 26.3 +2.0**
baz=269
P18K Big Mountain, 37.06 45 P **P 10 52 27.5 +0.4**
P18K IAmb IAmb 10 52 30.7
comp=Z,20nm,0.9s
CD2 Chengdu 37.16 265 P **P 10 52 28.5 +0.2**
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 LR LR
comp=Z,180nm,16.7s
CD2 LR LR
comp=Z,190nm,16.7s
CD2 LR LR
comp=Z,170nm,17.2s
Q18K Katmai Hardscr 37.20 46 P **P 10 52 29.2 +0.8**
baz=272
L19K White Mountain 37.26 41 P **P 10 52 30.8 +2.0**
baz=268
N19K Bonanza Creek 37.41 43 P **P 10 52 29.7 -0.5**
N19K IAmb IAmb 10 52 42.6
comp=Z,16nm,1.2s
M19K Big River Lodg 37.47 41 P **P 10 52 31.9 +1.3**
M19K IAmb IAmb 10 52 41.9
comp=Z,40nm,1.9s
K20K Telida 37.67 39 P **P 10 52 33.5 +1.3**
K20K IAmb IAmb 10 52 50.2
comp=Z,50nm,1.9s
K20K Telida 37.67 39 P **P 10 52 34.0 +1.7**
baz=267
J20K Nowinta River 37.69 37 P **P 10 52 33.8 +1.4**
J20K IAmb IAmb 10 52 34.8
comp=Z,15nm,0.9s
J20K Nowinta River 37.69 37 P **P 10 52 33.8 +1.4**
baz=266,SNR=8.2
IMAR Indian Mountai 38.02 34 P **P 10 52 35.9 +0.8**
M20K Styx River 38.07 41 P **P 10 52 36.0 +0.3**
M20K IAmb IAmb 10 53 04.3
comp=Z,30nm,1.6s
M20K Styx River 38.07 41 P **P 10 52 37.6 +1.9**
baz=270
G21K Allakaket 38.17 33 P **P 10 52 37.7 +1.2**
baz=264,SNR=10
OHAK Old Harbor 38.21 49 P **P 10 52 37.5 +0.7**
F21K Alatna River 38.27 32 P **P 10 52 38.3 +1.1**
baz=263,SNR=8.3
H21K Melozitna Rive 38.38 35 P **P 10 52 39.1 +1.0**
H21K IAmb IAmb 10 52 40.9
comp=Z,14nm,0.8s
H21K Melozitna Rive 38.38 35 P **P 10 52 39.3 +1.1**
baz=265,SNR=14
CHUM Lake Minchumin 38.48 38 P **P 10 52 40.7 +1.8**
baz=268,SNR=5.3
PPLA Purkeypile 38.52 39 P **P 10 52 40.4 +0.9**
KDAK Kodiak Island 38.53 48 P **P 10 52 39.6 +0.2**
comp=Z,16nm,1.0s,baz=299,slow=4.6,SNR=18
KDAK LR LR 11 10 40.3
comp=Z,107nm,19.9s,baz=256,slow=39
comp=Z,16nm,1.0s
KDAK Kodiak Island 38.53 48 P **P 10 52 39.7 +0.2**
KDAK Kodiak Island 38.53 48 P **P 10 52 39.7 +0.2**
KDAK pmax pmax
comp=Z,100nm,1.8s
KDAK Kodiak Island 38.53 48 P **P 10 52 40.1 +0.6**
baz=276
KDAK Kodiak Island 38.53 48 P **P 10 52 39.4 -0.1**
CAST Castle Rocks 38.57 39 P **P 10 52 41.4 +1.6**
CAST Castle Rocks 38.57 39 P **P 10 52 41.6 +1.8**
baz=269,SNR=6.0
I21K Tanana 38.69 36 P **P 10 52 41.8 +1.1**
I21K IAmb IAmb 10 52 43.3
comp=Z,19nm,1.1s
I21K Tanana 38.69 36 P **P 10 52 42.1 +1.4**
baz=267,SNR=5.7
F22K John River 38.80 32 P **P 10 52 43.0 +1.3**
baz=264
H22K Ishtalitna Cre 38.98 35 P **P 10 52 44.7 +1.5**
baz=266,SNR=10
G22K Bettles 39.01 33 P **P 10 52 44.1 +0.8**
baz=265
BPAW Bear Paw Mtn. 39.07 37 P **P 10 52 45.8 +1.8**
BPAW Bear Paw Mtn. 39.07 37 P **P 10 52 45.6 +1.6**
baz=269,SNR=6.8
KTH Kantishna Hill 39.09 38 P **P 10 52 45.2 +1.0**
KTH IAmb IAmb 10 52 46.9
comp=Z,27nm,1.1s
MLY Manley 39.20 36 P **P 10 52 45.7 +0.6**
MLY Manley 39.20 36 P **P 10 52 46.9 +1.8**
baz=268
NRIK Noril'sk 39.38 331 LR LR 11 09 52.5
comp=Z,209nm,21.0s,baz=108,slow=38
NRIK Noril'sk 39.38 331 *i*P **P 10 52 47.6 +1.2**
NRIK pmax pmax
comp=Z,8.0nm,2.0s
NRIK MLR MLR
comp=Z,260nm,18.0s
TRF Thorofare Moun 39.38 39 P **P 10 52 48.5 +1.8**
baz=270
D23K Nanushuk River 39.53 30 P **P 10 52 49.4 +1.7**
baz=263
COLD Coldfoot 39.54 33 P **P 10 52 48.9 +1.1**
COLD IAmb IAmb 10 52 51.5
comp=Z,10nm,0.8s
COLD Coldfoot 39.54 33 P **P 10 52 49.1 +1.3**
baz=266,SNR=8.9
G23K Bananza Creek 39.58 33 P **P 10 52 48.9 +0.7**
baz=267,SNR=8.8
C23K Itkillik River 39.66 28 P **P 10 52 50.3 +1.5**
baz=262
RC01 Rabbit Creek A 39.72 42 P **P 10 52 49.8 +0.4**
RC01 IAmb IAmb 10 53 01.0
comp=Z,15nm,1.2s
RC01 Rabbit Creek A 39.72 42 P **P 10 52 50.6 +1.2**
baz=274
H23K Yukon River 39.73 35 P **P 10 52 51.3 +1.8**
H23K IAmb IAmb 10 52 53.5
comp=Z,22nm,0.8s
H23K Yukon River 39.73 35 P **P 10 52 51.2 +1.8**
baz=268,SNR=16
BWN Browne 39.74 37 P **P 10 52 50.8 +1.2**
E23K Chandalar 39.83 31 P **P 10 52 51.4 +1.1**
baz=266
TOLK Toolik Lake Re 39.90 30 P **P 10 52 52.1 +1.3**
baz=265
NEA2 Nenana 39.91 37 P **P 10 52 52.0 +1.0**
NEA2 IAmb IAmb 10 52 54.5
comp=Z,16nm,0.7s
NEA2 Nenana 39.91 37 P **P 10 52 52.1 +1.2**
baz=270,SNR=7.3
SEW Seward 39.94 44 P **P 10 52 51.6 +0.5**
baz=275
MCK McKinley 39.98 38 P **P 10 52 51.9 +0.3**
MCK IAmb IAmb 10 52 57.7
comp=Z,15nm,1.0s
MCK McKinley 39.98 38 P **P 10 52 51.9 +0.3**
MCK pmax pmax
comp=Z,15nm,1.0s
MCK McKinley 39.98 38 P **P 10 52 52.5 +0.9**
baz=271
PMR Palmer 39.98 41 P **P 10 52 52.7 +1.2**
baz=274
RND Reindeer 40.02 39 P **P 10 52 52.2 +0.2**
RND Reindeer 40.02 39 P **P 10 52 52.2 +0.2**
RND pmax pmax
comp=Z,11nm,1.2s
WAT1 Susitna Watana 40.18 39 P **P 10 52 54.4 +1.1**
baz=273
D24K Happy Valley 40.21 30 P **P 10 52 54.2 +0.9**
baz=265
E24K Your Creek 40.25 31 P **P 10 52 55.1 +1.3**
baz=266,SNR=9.5
MDM Murphy Dome 40.27 36 P **P 10 52 55.2 +1.3**
MDM IAmb IAmb 10 52 56.2
comp=Z,18nm,0.9s
C24K Franklin Bluff 40.31 29 P **P 10 52 55.0 +0.9**
baz=264
KNK Knik Glacier 40.31 42 P **P 10 52 54.8 +0.5**
baz=274
WRH Wood River Hil 40.34 37 P **P 10 52 54.7 +0.2**
WRH IAmb IAmb 10 52 58.6
comp=Z,15nm,1.1s
SML Sawmill 40.35 41 P **P 10 52 54.7 +0.1**
SML IAmb IAmb 10 53 18.7
comp=Z,25nm,1.1s
SML Sawmill 40.35 41 P **P 10 52 55.2 +0.5**
baz=274
H24K Noodor Dome 40.42 35 P **P 10 52 56.7 +1.6**
H24K IAmb IAmb 10 52 57.9
comp=Z,15nm,0.9s
H24K Noodor Dome 40.42 35 P **P 10 52 57.1 +2.0**
baz=270,SNR=12
TCOL CIGO, UAF Yank 40.43 36 P **P 10 52 56.6 +1.4**
TCOL IAmb IAmb 10 52 57.6
comp=Z,26nm,0.9s
TCOL CIGO, UAF Yank 40.43 36 P **P 10 52 56.3 +1.1**
baz=271,SNR=9.4
COLA College 40.43 36 P **P 10 52 56.5 +1.3**
COLA IAmb IAmb 10 52 57.6
comp=Z,28nm,0.9s
COLA College 40.43 36 P **P 10 52 56.5 +1.3**
COLA pmax pmax
comp=Z,28nm,1.0s
COLA College 40.43 36 P **P 10 52 56.0 +0.8**
baz=271
COLA College 40.43 36 P **P 10 52 56.4 +1.3**
COLA pP **pP 10 53 05.2 -1.1**
COLA sP **sP 10 53 11.9 +0.7**
F24K Squaw Lake 40.45 32 P **P 10 52 56.6 +1.1**
baz=268
CCB Clear Creek Bu 40.46 37 P **P 10 52 56.6 +1.2**
QIZ Qiongzhong 40.54 244 P **P 10 52 56.8 +0.2**
QIZ S **S 10 59 03.0 -0.1**
QIZ LR LR
comp=Z,140nm,18.1s
QIZ LR LR
comp=Z,150nm,19.1s
QIZ LR LR
comp=Z,160nm,18.0s
WAT6 Susitna Watana 40.57 40 P **P 10 52 58.0 +1.4**
baz=274
G24K Hadweenzic Riv 40.59 33 P **P 10 52 58.2 +1.7**
baz=269,SNR=14
POKR Poker Plat Res 40.61 36 P **P 10 52 58.1 +1.4**
POKR Poker Plat Res 40.61 36 P **P 10 52 58.2 +1.5**
baz=271,SNR=15
DHY Denali Highway 40.71 39 P **P 10 52 58.5 +0.8**
DHY IAmb IAmb 10 53 21.4
comp=Z,39nm,1.7s
DHY Denali Highway 40.71 39 P **P 10 52 58.9 +1.2**
baz=273
HDA Harding Lake 40.83 37 P **P 10 52 58.8 +0.2**
HDA IAmb IAmb 10 53 00.5
comp=Z,11nm,0.8s
HDA Harding Lake 40.83 37 P **P 10 52 59.2 +0.7**
baz=272,SNR=10
IL31 40.85 36 P **P 10 52 59.2 +0.6**
ILAR Eielson Array 40.85 36 P **P 10 52 59.4 +0.7**
comp=Z,13nm,1.0s,baz=252,slow=6.7,SNR=37
ILAR LR LR 11 12 22.8
comp=Z,115nm,18.3s,baz=262,slow=40
comp=Z,13nm,1.0s
ILAR Eielson Array 40.85 36 P **P 10 52 59.2 +0.6**
DGZ Jazzator, Alta 40.92 300 *i*P **P 10 52 59.8 +0.1**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
GOMU GeErMu 40.93 278 P **P 10 53 00.0 -0.1**

GOMU S **S** **10 59 03.8 -5.5**
GOMU pmax pmax
comp=Z,16nm,0.9s
GOMU pmax pmax
comp=Z,72nm,4.8s
GOMU LR LR
comp=Z,380nm,20.1s
GOMU LR LR
comp=Z,410nm,20.2s
GOMU LR LR
comp=Z,570nm,21.0s
G25K Bearman Lake 41.13 33 P **P** **10 53 02.7 +1.8**
baz=270,SNR=7.7
PZH PanZhiHua 41.14 261 P **P** **10 53 02.0 +0.3**
PZH S **S** **10 59 10.0 -2.2**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.1s
PZH LR LR
comp=Z,450nm,20.6s
PZH LR LR
comp=Z,230nm,18.2s
PZH LR LR
comp=Z,310nm,17.7s
H25K Birch Creek 41.25 34 P **P** **10 53 03.9 +1.9**
baz=271,SNR=12
KMI Kunming 41.28 258 ⇑P **P** **10 53 03.5 +0.5**
KMI pP sP 10 53 18.5 -0.4
KMI pmax pmax
comp=Z,31nm,1.0s
KMI pmax pmax
comp=Z,160nm,3.8s
KMI LR LR
comp=Z,160nm,16.1s
KMI LR LR
comp=Z,160nm,15.2s
KMI LR LR
comp=Z,200nm,18.8s
F25K Christian Rive 41.31 32 P **P** **10 53 04.4 +1.8**
baz=270
E25K Arctic Village 41.35 31 P **P** **10 53 04.2 +1.4**
baz=269
K24K Donnelly Dome 41.38 38 P **P** **10 53 03.5 +0.4**
baz=274,SNR=11
PRP Porcupine Dome 41.40 35 P **P** **10 53 05.0 +1.7**
PRP IAmb IAmb 10 53 06.1
comp=Z,26nm,1.0s
PRP Porcupine Dome 41.40 35 P **P** **10 53 04.6 +1.3**
baz=272,SNR=22
ZAA0 Zalesovo Array 41.42 307 P **P** **10 53 02.0 -1.5**
ZAA0 PcP **PcP** **10 55 00.4 -0.4**
ZALV Zalesovo Beam 41.42 307 P **P** **10 53 02.5 -1.0**
comp=Z,1.3nm,0.6s,baz=72,slow=9.5,SNR=5.6
ZALV PcP **PcP** **10 55 01.4 +0.6**
comp=Z,8.0nm,0.8s,baz=75,slow=3.1,SNR=20
ZALV LR LR 11 11 19.9
comp=Z,197nm,19.8s,baz=64,slow=38
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 41.42 307 P **P** **10 53 02.9 -0.7**
ZALV PcP **PcP** **10 55 00.9 +0.1**
ZALV Zalesovo Beam 41.42 307 *i* P **P** **10 53 03.7 +0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
FYU Fort Yukon 41.48 34 P **P** **10 53 04.9 +1.1**
FYU IAmb IAmb 10 53 06.8
comp=Z,36nm,1.1s
J25K Salcha River, 41.51 37 P **P** **10 53 02.0 -2.2**
J25K Salcha River, 41.51 37 P **P** **10 53 03.9 -0.3**
baz=273,SNR=7.2
KLU Klutina 41.52 41 P **P** **10 53 03.8 -0.5**
KLU Klutina 41.52 41 P **P** **10 53 06.0 +1.7**
baz=276
BMAR Burnt Mountain 41.72 32 P **P** **10 53 07.5 +1.7**
HARP HAARP 41.78 40 P **P** **10 53 08.5 +2.1**
baz=276
F26K Sheenjek River 41.89 32 P **P** **10 53 09.3 +2.1**
baz=271,SNR=7.9
C27K Jago River 42.04 29 P **P** **10 53 09.6 +1.2**
baz=269,SNR=9.0
G26K Porcupine Rive 42.05 33 P **P** **10 53 10.3 +1.9**
baz=272,SNR=14
DOT Dot Lake 42.15 38 P **P** **10 53 09.3 -0.1**
SCRK Sand Creek 42.16 38 P **P** **10 53 09.9 +0.4**
SCRK Sand Creek 42.16 38 P **P** **10 53 10.3 +0.7**
baz=275,SNR=7.9
BMRM Bremner River 42.22 42 P **P** **10 53 11.6 +1.6**
BMRM IAmb IAmb 10 53 13.5
comp=Z,20nm,1.1s
J26L Joseph Creek 42.29 37 P **P** **10 53 09.5 -1.1**
J26L Joseph Creek 42.29 37 P **P** **10 53 09.3 -1.3**
baz=275
L26K Log Cabin Wild 42.54 39 P **P** **10 53 14.3 +1.7**
L26K IAmb IAmb 10 53 19.2
comp=Z,16nm,1.1s
L26K Log Cabin Wild 42.54 39 P **P** **10 53 14.4 +1.8**
baz=277,SNR=11
WMQ Urumqi 42.68 292 *e*P **P** **10 53 15.0 +1.0**
WMQ pP sP 10 53 27.5 -2.5
WMQ pmax pmax
comp=Z,29nm,1.3s
WMQ LR LR
comp=Z,480nm,14.7s
WMQ LR LR
comp=Z,740nm,15.7s
WMQ LR LR
comp=Z,490nm,18.3s
M26K Nabesna, AK 42.78 40 P **P** **10 53 16.6 +2.1**
M26K IAmb IAmb 10 53 40.8
comp=Z,20nm,1.2s
M26K Nabesna, AK 42.78 40 P **P** **10 53 16.8 +2.2**
baz=278
E27K Coleen River 42.83 31 P **P** **10 53 16.6 +1.7**
baz=273
G27K Doyon Strip 42.89 33 P **P** **10 53 17.4 +2.0**
baz=274,SNR=5.4
K27K Chicken 42.99 37 P **P** **10 53 17.1 +1.0**
K27K IAmb IAmb 10 53 18.7
comp=Z,30nm,1.0s
K27K Chicken 42.99 37 P **P** **10 53 17.5 +1.4**
baz=277
H27K Steamboat Moun 42.99 34 P **P** **10 53 18.2 +2.0**
baz=275,SNR=18
L27K Beaver Creek, 43.22 39 P **P** **10 53 20.1 +1.9**
L27K IAmb IAmb 10 53 23.6
comp=Z,12nm,0.8s
L27K Beaver Creek, 43.22 39 P **P** **10 53 19.9 +1.7**
baz=278,SNR=7.0
BCAR Beaver Creek A 43.24 39 P **P** **10 53 19.8 +1.5**
EGAK Eagle 43.29 36 P **P** **10 53 19.2 +0.6**
EGAK IAmb IAmb 10 53 20.2
comp=Z,21nm,1.0s
EGAK Eagle 43.29 36 P **P** **10 53 19.3 +0.7**
baz=277,SNR=8.6
M27K Edge Creek, AK 43.30 40 P **P** **10 53 19.6 +0.7**
M27K IAmb IAmb 10 53 26.2
comp=Z,16nm,1.1s
ISLE Juniper Island 43.37 42 P **P** **10 53 19.6 +0.2**
BARN Barnard Glacie 43.62 42 P **P** **10 53 21.1 -0.4**
BARN IAmb IAmb 10 53 24.1
comp=Z,13nm,0.9s
YAH Yahtse 43.71 43 P **P** **10 53 23.4 +1.1**
YAH IAmb IAmb 10 53 25.3
comp=Z,25nm,1.0s
CTG Chitna Glacier 43.79 42 P **P** **10 53 24.3 +1.5**
baz=281,SNR=6.6
CTGM Chitina Glacie 43.79 42 P **P** **10 53 23.4 +0.6**
CTGM IAmb IAmb 10 53 26.1
comp=Z,13nm,0.8s
TABL Table Mountain 43.99 42 P **P** **10 53 24.5 0.0**
TABL IAmb IAmb 10 53 26.6
comp=Z,16nm,0.9s
YUK3 Moose Creek 44.06 40 P **P** **10 53 26.1 +1.1**
baz=280
DAWY Dawson 44.15 37 P **P** **10 53 26.3 +0.8**
DAWY Dawson 44.15 37 P **P** **10 53 26.7 +1.2**
baz=279
O28M Mount Upton 44.38 42 P **P** **10 53 28.8 +1.0**
baz=282
I29M Ogilvie Camp, 44.41 35 P **P** **10 53 28.3 +0.7**
I29M IAmb IAmb 10 53 30.4
comp=Z,29nm,0.9s
I29M Ogilvie Camp, 44.41 35 P **P** **10 53 28.9 +1.3**
baz=279,SNR=25
L29M L29M 44.87 38 P **P** **10 53 33.6 +2.3**
baz=281

EPYK Eagle Plains 44.90 33 P **P** **10 53 33.0 +1.6**
EPYK Eagle Plains 44.90 33 P **P** **10 53 33.1 +1.6**
baz=279,SNR=21
K29M Barlow Dome 45.00 37 P **P** **10 53 34.0 +1.6**
baz=281,SNR=9.4
G30M tAoh Zraii Nji 45.01 33 P **P** **10 53 33.6 +1.3**
baz=279,SNR=14
MK31 Makanchi Array 45.11 298 P **P** **10 53 33.3 -0.1**
MK31 IAmb IAmb 10 53 37.4
comp=Z,12nm,0.8s
MK31 Makanchi Array 45.11 298 *i* P **P** **10 53 33.3 -0.1**
MKAR Makanchi Array 45.11 298 P **P** **10 53 33.7 +0.3**
comp=Z,11nm,0.7s,baz=77,slow=8.6,SNR=46
MKAR PcP **PcP** **10 55 13.4 0.0**
comp=Z,3.7nm,0.7s,baz=64,slow=5.5,SNR=6.0
MKAR LR LR 11 13 45.3
comp=Z,693nm,18.3s,baz=101,slow=38
comp=Z,11nm,0.7s
MKAR Makanchi Array 45.11 298 P **P** **10 53 33.1 -0.4**
MAKZ Makanchi 45.31 298 P **P** **10 53 34.9 -0.1**
MAKZ IAmb IAmb 10 53 39.0
comp=Z,11nm,0.7s
MAKZ Makanchi 45.31 298 P **P** **10 53 34.9 -0.1**
MAKZ Makanchi 45.31 298 P **P** **10 53 34.9 -0.1**
HYT Haines Junctio 45.65 41 P **P** **10 53 38.6 +1.0**
HYT IAmb IAmb 10 53 41.7
comp=Z,22nm,0.9s
HYT Haines Junctio 45.65 41 P **P** **10 53 39.8 +2.1**
baz=284,SNR=14
INK Inuvik 45.81 31 P **P** **10 53 39.4 +0.8**
comp=Z,6.5nm,0.5s,baz=288,slow=6.0,SNR=23
comp=Z,6.5nm,0.5s
INK Inuvik 45.81 31 P **P** **10 53 39.5 +0.9**
INK IAmb IAmb 10 53 40.7
comp=Z,13nm,0.9s
INK Inuvik 45.81 31 P **P** **10 53 39.5 +0.9**
INK pmax pmax
comp=Z,13nm,0.9s
INK Inuvik 45.81 31 P **P** **10 53 39.5 +0.9**
baz=280,SNR=8.9
P29M Windy Craggy 45.83 43 P **P** **10 53 40.9 +1.9**
P29M Windy Craggy 45.83 43 P **P** **10 53 41.0 +2.1**
baz=285,SNR=7.6
F31M Tsiigehtchic 45.88 32 P **P** **10 53 40.0 +0.9**
baz=280,SNR=11
KURK Kurchatov 45.99 304 P **P** **10 53 40.4 +0.1**
KURK IAmb IAmb 10 53 42.5
comp=Z,8.5nm,0.8s
KURK Kurchatov 45.99 304 *ce*P **P** **10 53 40.8 +0.6**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 45.99 304 P **P** **10 53 40.4 +0.1**
KURK P **P** **10 53 40.4 +0.1**
KURK Kurchatov 45.99 304 *e*P **P** **10 53 40.8 +0.6**
KURBB Kurchatov Arra 46.08 304 P **P** **10 53 40.7 -0.2**
comp=Z,4.8nm,0.7s,baz=75,slow=7.9,SNR=17
comp=Z,4.8nm,0.7s
P30M Million Dollar 46.09 42 P **P** **10 53 43.4 +2.4**
baz=285
UBPT Khong Chiam 46.12 245 P **P** **10 53 40.7 -0.9**
UBPT IAmb IAmb 10 53 43.3
comp=Z,14nm,1.0s
N31M Braeburn, Yuko 46.30 40 P **P** **10 53 44.2 +1.6**
N31M IAmb IAmb 10 54 02.0
comp=Z,25nm,1.3s
N31M Braeburn, Yuko 46.30 40 P **P** **10 53 44.9 +2.2**
baz=284
O30N Mendenhall 46.34 41 P **P** **10 53 45.0 +2.1**
baz=285
PLBC Pleasant Camp 46.55 43 P **P** **10 53 46.6 +2.1**
baz=286
M31M Drury Creek, Y 46.76 39 P **P** **10 53 46.6 +0.5**
M31M IAmb IAmb 10 54 02.1
comp=Z,13nm,1.3s
LSA Lhasa 46.91 272 IAmb IAmb 10 53 50.6
comp=Z,14nm,0.9s
LSA Lhasa 46.91 272 *e*P **P** **10 53 49.2 +0.9**
WHY Whitehorse 46.94 41 P **P** **10 53 49.5 +1.8**
baz=286
FARO Faro, Yukon 47.22 39 P **P** **10 53 51.4 +1.6**
FARO Faro, Yukon 47.22 39 P **P** **10 53 51.2 +1.4**
baz=286
PHRA Phrae 47.38 253 P **P** **10 53 52.8 +1.3**
A36M Sachs Harbour 47.83 25 P **P** **10 53 54.2 -0.1**
A36M IAmb IAmb 10 53 55.8
comp=Z,14nm,0.8s
P33M Teslin, Yukon 48.05 41 P **P** **10 53 58.0 +1.7**
P33M IAmb IAmb 10 54 00.6
comp=Z,11nm,0.9s
P33M Teslin, Yukon 48.05 41 P **P** **10 53 57.8 +1.5**
baz=288,SNR=6.0
CHTO Chiang Mai 48.06 255 P **P** **10 53 55.4 -1.4**
CHTO Chiang Mai 48.06 255 P **P** **10 53 55.4 -1.4**
CHTO pmax pmax
comp=Z,26nm,1.1s
CMAR Chiang Mai Arr 48.30 254 P **P** **10 53 59.5 +0.9**
comp=Z,4.6nm,0.8s,baz=41,slow=7.4,SNR=30
CMAR LR LR 11 16 35.8
comp=Z,207nm,18.2s,baz=55,slow=39
comp=Z,4.6nm,0.8s
CMAR Chiang Mai Arr 48.30 254 P **P** **10 53 58.7 0.0**
CMAR Chiang Mai Arr 48.30 254 *ce*P **P** **10 53 59.7 +1.1**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
SHLS Shalkode 48.42 294 *e*P **P** **10 53 55.8 -3.7**
SHLS pmax pmax
comp=Z,3.0nm,0.4s
SHL Shillong 48.78 267 P **P** **10 54 02.2 -0.3**
SHL pmax pmax
comp=Z,36nm,0.9s
SHL Shillong 48.78 267 P **P** **10 54 02.7 +0.2**
SNR=7.2
KPKS Kokpek 48.79 295 *e*P **P** **10 54 01.8 -0.5**
KPKS pmax pmax
comp=Z,7.0nm,0.8s
C36M Paulatuk 48.91 28 P **P** **10 54 04.1 +1.5**
C36M Paulatuk 48.91 28 P **P** **10 54 03.9 +1.3**
baz=287
BRZS Berezniki 49.79 305 *e*P **P** **10 54 08.7 -1.0**
BRZS pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 49.90 309 LR LR 11 16 52.5
comp=Z,196nm,20.9s,baz=73,slow=38
BRVK Borovoye 49.95 310 P **P** **10 54 11.8 +1.0**
BRVK Borovoye 49.95 310 P **P** **10 54 11.8 +1.0**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 49.95 310 *e*P **P** **10 54 11.5 +0.7**
DLBC Dease Lake 49.99 43 P **P** **10 54 13.4 +2.2**
comp=Z,4.1nm,0.8s,baz=273,slow=8.5,SNR=6.4
DLBC LR LR 11 18 52.3
comp=Z,43nm,18.3s,baz=108,slow=40
comp=Z,4.1nm,0.8s
OTUK Ortayu 50.72 303 P **P** **10 54 17.2 +0.4**
BRDH Bariadhala 50.72 264 LR LR 11 18 32.0
comp=Z,114nm,18.6s,baz=86,slow=39
TAPN Taplejung 50.73 272 *e*P **P** **10 54 18.0 +0.5**
TAPN Taplejung 50.73 272 *e*P **P** **10 54 18.0 +0.5**
BOOM Boomskoye usch 51.03 295 P **P** **10 54 20.1 +0.7**
BOOM Boomskoye usch 51.03 295 P **P** **10 54 20.1 +0.7**
BOOM pmax pmax
comp=Z,42nm,1.0s
TKM2 Tokmak 2 51.05 296 P **P** **10 54 20.2 +0.6**
SNR=12
TKM2 Tokmak 2 51.05 296 P **P** **10 54 20.2 +0.6**
BTLS Baital 51.08 299 *e*P **P** **10 54 17.9 -1.6**
BTLS pmax pmax
comp=Z,7.0nm,1.5s
KBK Karagaybulak 51.60 296 P **P** **10 54 24.4 +0.7**
SNR=16
USP Ospenovka 51.60 297 P **P** **10 54 24.1 +0.6**
SNR=14
JIRN Jiri 51.65 273 *e*P **P** **10 54 24.9 +0.5**
JIRN Jiri 51.65 273 *e*P **P** **10 54 24.8 +0.4**
comp=Z,61nm,0.9s
GUN Gumba 51.73 274 *e*P **P** **10 54 25.4 +0.4**
comp=Z,93nm,0.9s
GUN Gumba 51.73 274 *e*P **P** **10 54 25.1 +0.1**
comp=Z,93nm,0.9s
RAMN Ramite 51.77 272 *e*P **P** **10 54 25.3 +0.1**
comp=Z,118nm,0.8s
RAMN Ramite 51.77 272 *e*P **P** **10 54 25.4 +0.2**
comp=Z,118nm,0.8s
AAK Ala-Archa 51.90 296 P **P** **10 54 26.3 +0.4**
SNR=9.4
KKN Kakani 52.23 274 *e*P **P** **10 54 28.9 +0.4**

KKN Kakani 52.23 274 *e*P **P** **10 54 29.0 +0.4**
PKI Pulchoki 52.26 274 *e*P **P** **10 54 29.1 +0.1**
comp=Z,60nm,1.0s
PKI Pulchoki 52.26 274 *e*P **P** **10 54 29.1 +0.1**
comp=Z,60nm,1.0s
PKIN Phulchoki 52.27 274 *e*P **P** **10 54 29.0 0.0**
PKIN Phulchoki 52.27 274 *e*P **P** **10 54 28.9 0.0**
EKS2 Erkin-Say 52.35 296 P **P** **10 54 29.8 +0.6**
SNR=7.5
KSH Kashi 52.44 292 P **P** 10 54 34.5 +4.6
KSH pP sP 10 54 48.3 +2.3
KSH PcP **PcP** **10 55 43.5 +3.3**
KSH pmax pmax
comp=Z,17nm,0.9s
KSH pmax pmax
comp=Z,130nm,6.0s
KSH LR LR
comp=Z,380nm,20.6s
KSH LR LR
comp=Z,260nm,20.0s
KSH LR LR
comp=Z,500nm,18.8s
DMN Daman 52.46 274 *e*P **P** **10 54 30.8 +0.5**
DMN Daman 52.46 274 *e*P **P** **10 54 30.8 +0.5**
comp=Z,118nm,1.0s
GKN Gorkha 52.57 275 *e*P **P** **10 54 31.3 +0.3**
GKN Gorkha 52.57 275 *e*P **P** **10 54 31.3 +0.3**
comp=Z,88nm,0.9s
AML Almayashu 52.66 296 P **P** **10 54 32.8 +1.0**
SNR=8.4
DANN Dangsing 53.00 276 *e*P **P** **10 54 34.9 +0.6**
comp=Z,158nm,0.9s
DANN Dangsing 53.00 276 *e*P **P** **10 54 35.1 +0.8**
comp=Z,158nm,0.9s
KOLN Koldanda 53.45 275 *e*P **P** **10 54 38.1 +0.5**
comp=Z,5.4nm,0.8s
KOLN Koldanda 53.45 275 *e*P **P** **10 54 38.1 +0.5**
BBB Bella Bella 53.55 50 LR LR 11 18 40.3
comp=Z,49nm,19.2s,baz=303,slow=37
KK31 Karatay Array 54.24 298 P **P** **10 54 43.0 +0.1**
KK31 Karatay Array 54.24 298 P **P** **10 54 43.0 +0.1**
KK31 pmax pmax
comp=Z,18nm,0.8s
KKAR Karatay Array 54.24 298 P **P** **10 54 42.9 0.0**
KKAR Karatay Array 54.24 298 P **P** **10 54 42.9 0.0**
RES Resolute Bay 54.51 17 P **P** **10 54 43.9 -0.4**
comp=Z,9.6nm,0.8s,baz=319,slow=7.2,SNR=7.5
RES LR LR 11 21 15.2
comp=Z,142nm,19.9s,baz=308,slow=40
comp=Z,9.6nm,0.8s
RES Resolute Bay 54.51 17 P **P** **10 54 44.3 -0.1**
RES IAmb IAmb 10 54 45.6
comp=Z,13nm,0.9s
RES Resolute Bay 54.51 17 P **P** **10 54 44.3 -0.1**
RES pmax pmax
comp=Z,13nm,0.9s
ARU Arti 54.66 317 LR LR 11 20 30.0
comp=Z,209nm,19.5s,baz=47,slow=39
ARU Arti 54.66 317 *ce*P **P** **10 54 45.9 +0.2**
ARU pmax pmax
comp=Z,8.0nm,0.8s
ARU MLR MLR
comp=Z,329nm,19.0s
ARU Arti 54.66 317 *e*P **P** **10 54 45.9 +0.2**
SPITS Spitsbergen Ar 54.67 349 LR LR 11 21 08.1
comp=Z,81nm,18.2s,baz=12,slow=39
IUG Iuzhnay 55.02 297 *e*P **P** **10 54 48.3 -0.4**
YKA Yellowknife Ar 55.18 34 P **P** **10 54 47.8 -1.6**
comp=Z,6.6nm,0.9s,baz=226,slow=6.9,SNR=6.7
YKA LR LR 11 19 31.2
comp=Z,118nm,21.7s,baz=286,slow=37
comp=Z,6.6nm,0.9s
NIL Nilore 57.41 287 P **P** **10 55 05.2 -0.6**
NIL Nilore 57.41 287 P **P** **10 55 05.2 -0.6**
NIL pmax pmax
comp=Z,64nm,0.9s
NIL Nilore 57.41 287 P **P** **10 55 06.6 +0.9**
NIL Nilore 57.41 287 P **P** **10 55 06.4 +0.6**
NIL pP **pP** **10 55 16.2 -1.2**
AB31 Akbulak array 57.47 309 *i* P **P** **10 55 05.2 -0.7**
ABKAR Akbulak array 57.47 309 P **P** **10 55 05.8 -0.1**
PRGR Permogore 57.76 327 *e*P **P** **10 55 05.6 -2.1**
PRGR pmax pmax
comp=Z,13nm,0.9s
KIRV Kirov 57.84 322 LR LR 11 22 15.9
comp=Z,214nm,18.7s,baz=56,slow=38
KIRV Kirov 57.84 322 *ce*P **P** **10 55 08.7 +0.4**
AKTO Aktyubinsk 57.92 311 LR LR 11 21 51.5
comp=Z,128nm,20.8s,baz=59,slow=38
ARCES ARCESS Array B 59.26 340 P **P** **10 55 17.8 -0.3**
comp=Z,2.9nm,0.8s,baz=46,slow=7.6,SNR=8.4
ARCES LR LR 11 24 42.2
comp=Z,183nm,18.8s,baz=4.5,slow=40
comp=Z,2.9nm,0.8s
KBL Kabul 59.79 290 P **P** **10 55 21.9 -0.6**
KBL Kabul 59.79 290 P **P** **10 55 21.9 -0.6**
KBL pmax pmax
comp=Z,36nm,1.0s
KBL Kabul 59.79 290 P **P** **10 55 22.0 -0.6**
SNR=13
KLMR Klimovskoe 60.61 328 *e*P **P** **10 55 26.5 -0.9**
KLMR pmax pmax
comp=Z,16nm,1.0s
KLMR Klimovskoe 60.61 328 *e*P **P** **10 55 26.5 -0.9**
KLMR AMP 10 55 28.0
comp=Z,16nm,1.0s
NEW Newport 61.61 49 LR LR 11 19 47.0
comp=Z,53nm,21.5s,baz=299,slow=34
BELG Belogornoye 62.21 317 LR LR 11 25 10.6
comp=Z,164nm,18.2s,baz=200,slow=38
SUMG Summit 63.62 2 *i* P **P** **10 55 47.0 -1.0**
CTA Charters Tower 63.80 182 P **P** **10 55 50.9 +1.6**
comp=Z,2.3nm,0.6s,baz=45,slow=11,SNR=2.2
comp=Z,2.3nm,0.6s
WVOR Wild Horse Val 64.18 55 P **P** **10 55 52.6 +0.8**
WVOR Wild Horse Val 64.18 55 P **P** **10 55 52.6 +0.8**
WVOR pmax pmax
comp=Z,7.0nm,1.2s
HRA Herat 64.42 294 P **P** **10 55 53.5 -0.1**
HRA IAmb IAmb 10 55 55.3
comp=Z,18nm,1.1s
BEKR Beckworth 64.68 58 P **P** **10 55 56.7 +1.5**
WRAB Tennant Creek 64.88 194 *ce*P **P** **10 55 56.4 +0.1**
WRAB pmax pmax
comp=Z,12nm,2.5s
WRA Warramunga Arr 64.89 194 P **P** **10 55 56.2 -0.1**
comp=Z,1.7nm,0.9s,baz=10,slow=6.8,SNR=11
comp=Z,1.7nm,0.9s
WRA Warramunga Arr 64.89 194 P **P** **10 55 56.1 -0.2**
WRA Warramunga Arr 64.89 194 *ce*P **P** **10 55 54.9 -1.4**
WRA pmax pmax
comp=Z,2.0nm,0.9s
GEYT Alibeck 64.95 299 P **P** **10 55 57.3 +0.5**
comp=Z,20nm,0.8s,baz=5.4,slow=3.1,SNR=20
GEYT LR LR 11 26 19.5
comp=Z,186nm,19.7s,baz=66,slow=38
comp=Z,20nm,0.8s
GEYT Alibeck 64.95 299 P **P** **10 55 57.2 +0.4**
GYA0 ALIBECK ARRAY 64.95 299 P **P** **10 55 57.3 +0.5**
GYA0 pmax pmax
comp=Z,21nm,0.9s
GYA0B ALIBECK ARRAY 64.95 299 P **P** **10 55 57.3 +0.5**
FIA1 FINESS Array S 64.97 333 P **P** **10 55 56.1 -0.4**
FINES FINESS Array B 64.97 333 P **P** **10 55 55.2 -1.3**
comp=Z,15nm,0.8s,baz=41,slow=6.4,SNR=22
FINES LR LR 11 26 07.3
comp=Z,122nm,20.9s,baz=24,slow=38
comp=Z,15nm,0.8s
FINES FINESS Array B 64.97 333 P **P** **10 55 56.3 -0.1**
FINES FINESS Array B 64.97 333 *ce*P **P** **10 55 54.7 -1.7**
FINES pmax pmax
comp=Z,15nm,0.8s
FFC Flin Flon 65.06 37 P **P** **10 55 58.4 +1.3**
FFC Flin Flon 65.06 37 P **P** **10 55 58.4 +1.3**
FFC pmax pmax
comp=Z,43nm,1.9s
FFC Flin Flon 65.06 37 P **P** **10 55 57.9 +0.7**
FFC pP **pP** **10 56 09.1 +0.5**
FFC sP **sP** **10 56 13.2 +0.1**
OBN Obninsk 65.53 324 ⇑*e*P **P** **10 56 00.6 +0.4**
OBN *e* 10 56 31.5
OBN *e* 10 58 23.7
OBN *e*PPP PPP 11 00 02.3
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR

comp=Z,68nm,6.0s
LRM Limekiln Ridge 65.63 49 P P 10 56 01.9 +0.6
YERR Yerington 65.90 59 P P 10 56 03.6 +0.5
YERR IAmb IAmb 10 56 05.7
comp=Z,6.6nm,1.0s
BOZ Bozeman (W) 66.22 49 P P 10 56 05.3 +0.3
BOZ Bozeman (W) 66.22 49 P P 10 56 05.3 +0.3
BOZ pmax pmax
comp=Z,5.0nm,1.0s
BOZ Bozeman (W) 66.22 49 P P 10 56 05.9 +0.9
baz=309
BMN Battle Mountai 66.24 56 P P 10 56 05.0 -0.2
BMN Battle Mountai 66.24 56 P P 10 56 05.0 -0.2
BMN pmax pmax
comp=Z,4.0nm,0.9s
KVN Kaiserville 66.56 58 P P 10 56 08.5 +1.2
KVN IAmb IAmb 10 56 09.3
comp=Z,7.4nm,1.0s
KVN Kaiserville 66.56 58 P P 10 56 08.5 +1.2
KVN pmax pmax
comp=Z,7.0nm,1.0s
RYN Ryan 66.56 58 P P 10 56 08.6 +1.2
VORR Voronezh 66.68 320 *eP* **P 10 56 10.1 +2.5**
LHV Little Huntoon 66.81 59 P P 10 56 08.6 0.0
LHV IAmb IAmb 10 56 12.2
comp=Z,11nm,1.0s
NVAR Mina Array Bea 66.82 59 P P 10 56 10.4 +1.4
comp=Z,3.3nm,0.8s,baz=288,slow=6.8,SNR=22
NVAR LR LR 11 23 58.0
comp=Z,45nm,19.4s,baz=296,slow=35
comp=Z,3.3nm,0.8s
NVAR Mina Array Bea 66.82 59 P P 10 56 09.5 +0.5
ICESG Greenland Ices 67.07 3 *eP* **P 10 56 09.3 -0.9**
ELK Elko 67.22 55 LR LR 11 21 14.7
comp=Z,56nm,21.6s,baz=318,slow=32
TPH Tonopah 67.71 58 P P 10 56 16.0 +1.4
TPH Tonopah 67.71 58 P P 10 56 16.0 +1.4
TPH pmax pmax
comp=Z,22nm,0.9s
TPAW Teton Pass 67.94 50 P P 10 56 17.0 +0.9
TPAW IAmb IAmb 10 56 32.0
comp=Z,6.0nm,0.9s
HVU Hansel Valley 68.00 53 P P 10 56 16.9 +0.5
HVU Hansel Valley 68.00 53 P P 10 56 16.9 +0.5
HVU pmax pmax
comp=Z,10.0nm,1.5s
GRAC Grapevine Rang 68.30 59 IAmb IAmb 10 56 21.2
comp=Z,11nm,1.1s
GRAC Grapevine Rang 68.30 59 P P 10 56 19.6 +1.4
baz=309
LAO LASA Array 68.38 45 P P 10 56 20.0 +1.4
baz=312
SFJD Kangerlussuaq 68.40 8 LR LR 11 27 13.3
comp=Z,104nm,20.5s,baz=350,slow=37
R11A Troy Canyon, C 68.53 57 P P 10 56 20.9 +1.1
baz=310
ASAR Alice Springs 68.60 194 P P 10 56 20.7 +0.7
comp=Z,0.7nm,0.8s,baz=12,slow=6.6,SNR=8.4
ASAR PcP **PcP 10 56 42.9 -1.9**
comp=Z,1.0nm,0.7s,baz=360,slow=4.8,SNR=4.7
comp=Z,0.7nm,0.8s
FRB Frobisher Bay 68.72 17 LR LR 11 29 34.9
comp=Z,96nm,18.9s,baz=283,slow=39
MPMC Manual Prospec 68.82 60 P P 10 56 22.3 +0.7
baz=310
S11A Rachel 68.88 58 IAmb IAmb 10 56 24.8
comp=Z,8.0nm,0.9s
FURC Furnace Creek, 68.95 59 P P 10 56 23.7 +1.6
baz=310
AKT Akhty 68.98 308 *eP* **P 10 56 23.0 +0.6**
AKT *e* 10 56 47.3
AKT pmax pmax
comp=Z,53nm,0.9s
DUG Dugway, Tooele 69.00 54 P P 10 56 24.1 +1.5
baz=310
TPNV Topopah Spring 69.02 59 P P 10 56 24.0 +1.2
baz=310
BW06 Boulder Array 69.18 50 P P 10 56 25.2 +1.3
baz=311
PD31 Pinedale Array 69.18 50 P P 10 56 24.4 +0.7
PDAR Pinedale Array 69.18 50 P P 10 56 24.5 +0.7
comp=Z,1.5nm,0.7s,baz=277,slow=1.5,SNR=10
PDAR LR LR 11 27 55.5
comp=Z,39nm,19.4s,baz=324,slow=37
comp=Z,1.5nm,0.7s
GWY Greenwater Val 69.25 59 P P 10 56 24.7 +0.5
GWY IAmb IAmb 10 56 50.6
comp=Z,14nm,1.5s
EDW2 Edwards Air Fo 69.25 61 P P 10 56 25.9 +1.8
baz=310
SEKA Sheki 69.46 308 P P 10 56 24.4 -0.9
PRN Pahroc Range 69.46 58 P P 10 56 25.8 +0.3
PRN IAmb IAmb 10 57 53.3
comp=Z,21nm,1.8s
ZKTA Zakatala 69.51 308 P P 10 56 25.0 -0.6
NB201 NORSAR Array S 69.59 339 P P 10 56 25.1 -0.7
NACGM Naroch 69.62 328⇑*eP* **P 10 56 26.3 +0.3**
baz=41
NB2 NORSAR Subarra 69.62 339 P P 10 56 25.2 -0.8
comp=Z,3.4nm,0.7s,baz=32,slow=6.2
NOA NORSAR Array B 69.62 339 P P 10 56 24.9 -1.0
comp=Z,2.3nm,0.6s,baz=32,slow=6.1,SNR=7.9
NOA LR LR 11 30 01.0
comp=Z,113nm,21.4s,baz=25,slow=38
comp=Z,2.3nm,0.6s
SHOC Shoshone, Teco 69.67 60 P P 10 56 28.2 +1.5
baz=310
GSC Goldstone, Bar 69.73 60 P P 10 56 28.6 +1.5
baz=310
HFS Hagfors 69.73 338 LR LR 11 32 07.7
comp=Z,69nm,18.1s,baz=34,slow=40
MPU Maple Canyon 69.81 54 IAmb IAmb 10 56 51.3
comp=Z,17nm,1.8s
BFSC Mount Baldy Ra 69.87 62 P P 10 56 29.0 +0.9
baz=310
KIV Kislovodsk 70.13 312 ⇑P **P 10 56 30.2 +0.8**
KIV Kislovodsk 70.13 312 P P 10 56 30.9 +1.5
KIV Kislovodsk 70.13 312 *eP* **P 10 56 30.4 +0.9**
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,156nm,17.0s
KIV Kislovodsk 70.13 312 P P 10 56 30.0 +0.5
KIV Kislovodsk 70.13 312 P P 10 56 31.1 +1.7
KBZ Khabaz 70.17 312 P P 10 56 30.5 +0.9
comp=Z,36nm,0.8s,baz=47,slow=4.3,SNR=45
KBZ LR LR 11 31 37.9
comp=Z,251nm,20.0s,baz=40,slow=40
KBZ Khabaz 70.17 312*ceP* **P 10 56 30.2 +0.7**
KBZ pmax pmax
comp=Z,43nm,0.9s
KBZ Khabaz 70.17 312 *eP* **P 10 56 30.2 +0.7**
TUQ Turquoise Moun 70.19 60 P P 10 56 31.1 +1.0
baz=310
ZEI Tsey 70.26 311 *eP* **P 10 56 29.6 -0.8**
ZEI pmax pmax
comp=Z,32nm,1.0s
HEC Hector,Ludlow 70.33 60 P P 10 56 32.2 +1.4
baz=310
GANJ Ganja 70.33 308 P P 10 56 30.1 -0.5
RDMU Red Mountain 70.63 52 P P 10 56 32.9 +0.2
RDMU IAmb IAmb 10 56 35.1
comp=Z,9.0nm,0.9s
ONI Oni 70.64 311 P P 10 56 32.9 +0.4
ONI Oni 70.64 311 P P 10 56 32.9 +0.4
ONI pmax pmax
comp=Z,36nm,0.9s
ULM Lac du Bonnet 70.85 38 LR LR 11 31 14.4
comp=Z,88nm,18.1s,baz=26,slow=39
PFO Pinyon Flats O 71.03 61 P P 10 56 36.1 +1.0
comp=Z,2.3nm,0.9s,baz=277,slow=13,SNR=5.7
comp=Z,2.3nm,0.9s
PFO Pinyon Flats O 71.03 61 P P 10 56 36.8 +1.6
baz=311
PFO Pinyon Flats O 71.03 61 P P 10 56 36.1 +1.0
KNB Kanab 71.06 57 P P 10 56 35.4 0.0
KNB IAmb IAmb 10 56 56.0
comp=Z,13nm,1.6s
KNB Kanab 71.06 57 P P 10 56 35.4 0.0
KNB pmax pmax
comp=Z,13nm,1.6s
IRM Iron Mountain 71.51 60 P P 10 56 38.9 +1.0
baz=311
MONP2 Monument Peak 71.53 62 P P 10 56 39.1 +0.8
baz=311
GNI Garni 71.56 308 LR LR 11 31 24.4
comp=Z,119nm,19.0s,baz=84,slow=39
BC3 Big Chuckawall 71.64 61 P P 10 56 40.1 +1.3
baz=311
O20A White River Ci 71.67 52 IAmb IAmb 10 56 45.0
comp=Z,13nm,1.4s
O20A White River Ci 71.67 52 P P 10 56 40.5 +1.5
baz=312
AKASG Malin Array Be 71.80 324 P P 10 56 38.7 -0.6
comp=Z,26nm,0.9s,baz=39,slow=6.3,SNR=72
AKASG LR LR 11 29 17.6
comp=Z,46nm,21.6s,baz=68,slow=37
comp=Z,26nm,0.9s
AKASG Malin Array Be 71.80 324 IAmb IAmb 10 56 40.1
comp=Z,13nm,1.1s
AKBB Malin Array Si 71.80 324*ceP* **P 10 56 38.6 -0.7**
PDMCI Parker Dam,Lak 72.04 60 P P 10 56 42.2 +1.1
baz=311
PV13 Radium Mtn., P 72.67 54 P P 10 56 44.8 -0.3
WUAZ Wupatki 72.93 57 P P 10 56 46.1 -0.4
WUAZ IAmb IAmb 10 56 47.9
comp=Z,19nm,1.9s
BANOM Banah 73.74 290 P P 10 56 51.9 +0.5
SNR=5.7
SHME Shamm 73.77 291 P P 10 56 51.7 +0.3
SNR=5.2
SIM Simferopol' 73.82 318 *eP* **P 10 56 51.5 +0.1**
SIM pmax pmax
comp=Z,40nm,1.0s
SIM MLR MLR
comp=Z,185nm,22.0s
WSAR Wadi Sarin 73.91 287 LR LR 11 32 56.8
comp=Z,64nm,19.4s,baz=79,slow=39
BIDO Bidbid 74.08 287 P P 10 56 54.6 +1.4
WBK Wadi Bani Khal 74.09 286 P P 10 56 53.7 +0.3
S22A 4UR Ranch, Cre 74.10 53 P P 10 56 55.1 +1.5
baz=314
GURO Guroymak-BITLI 74.18 308 P P 10 56 55.4 +1.6
GURO IAmb IAmb 10 56 56.4
comp=Z,26nm,1.1s
MASF Masafi 74.20 290 P P 10 56 54.7 +0.7
Q24A Divide 74.21 51 P P 10 56 53.8 -0.4
BEL Belsk 74.26 329 *eP* **P 10 56 54.6 +0.7**
SMDO Samad 74.43 287 P P 10 56 56.4 +1.0
HMDM Hanimaadhoo 74.52 264 P P 10 56 57.6 +1.7
HOQ Hoqain 74.60 288 P P 10 56 57.1 +0.8
LVV L'vov 74.62 326 *eP* **P 10 56 56.5 +0.5**
ASHO Ashiyiah 74.72 290 P P 10 56 57.8 +0.7
SNR=6.8
SOHO SOHO 74.76 289 P P 10 56 57.9 +0.7
MILM Milestii Mici 74.83 322 ⇑P **P 10 56 56.7 -0.5**
MILM Milestii Mici 74.83 322 *eP* **P 10 56 57.0 -0.2**
comp=Z,44nm,0.6s
MILM *eL* L 11 30 25.0
MILM LRM MLR 11 32 35.0
comp=Z,200nm,13.0s
MILM Milestii Mici 74.83 322 *eP* **P 10 56 57.0 -0.2**
MILM MLR MLR
comp=Z,200nm,13.0s
BSY Bisya 75.23 287 P P 10 57 01.1 +1.1
ECSD EROS Data Cent 75.28 43 IAmb IAmb 10 57 13.1
comp=Z,30nm,1.8s
ECSD EROS Data Cent 75.28 43 P P 10 57 00.2 +0.2
baz=318
ARQ Araqi 75.30 288 P P 10 57 01.0 +0.7
ALNE Al Ain 75.35 289 P P 10 57 01.4 +0.7
SNR=5.1
BUR08 Bucovina Ar. S 75.84 324 P P 10 57 03.6 +0.4
BURAR Bucovina Array 75.86 324 ⇑P **P 10 57 03.4 +0.2**
BURAR Bucovina Array 75.86 324 P P 10 57 03.4 +0.2
BURAR Bucovina Array 75.86 324 P P 10 57 03.4 +0.2
BURAR pmax pmax
comp=Z,30nm,0.8s
MHTO MHTO 75.86 285 P P 10 57 04.8 +1.2
SNR=9.8
KOLS Kolonicke sedl 76.02 327 *eP* **P 10 57 04.3 +0.2**
KOLS pmax pmax
comp=Z,22nm,0.9s
STHS Stebnicka Huta 76.04 327 *eP* **P 10 57 04.6 +0.4**
STHS pmax pmax
comp=Z,22nm,1.0s
TESR Tescani 76.10 323 ⇑P **P 10 57 04.3 -0.2**
UZH Uzhgorod 76.25 326 *eP* **P 10 57 05.7 +0.4**
UZH *e* 10 57 15.5
ANMO Albuquerque 76.26 55 P P 10 57 04.0 -1.9
ANMO Albuquerque 76.26 55 P P 10 57 04.0 -1.9
ANMO pmax pmax
comp=Z,3.0nm,1.2s
CRVS Cervenica-Dubn 76.37 327 *eP* **P 10 57 06.4 +0.4**
CRVS pmax pmax
comp=Z,25nm,1.1s
PANC Panciu 76.37 322 ⇑P **P 10 57 07.0 +0.9**
CFR Carcaliu 76.46 321 ⇓P **P 10 57 06.9 +0.3**
TRPA Tarpa 76.56 326 ⇑P **P 10 57 08.0 +0.9**
TRPA Tarpa 76.56 326 P P 10 57 07.0 0.0
VRI Vrincioaia 76.56 322 ⇑P **P 10 57 07.8 +0.6**
VRI Vrincioaia 76.56 322 P P 10 57 06.9 -0.3
VRI pmax pmax
comp=Z,16nm,1.3s
TPGR Topolog 76.58 321 ⇑P **P 10 57 07.6 +0.3**
PLOR Plostina 76.61 322 ⇓P **P 10 57 08.3 +0.8**
PLOR Plostina 76.61 322 P P 10 57 08.3 +0.8
ARCR ARCALIA 76.64 324 ⇑P **P 10 57 06.9 -0.7**
KSP Ksiaz 76.70 331 *eP* **P 10 57 08.5 +0.7**
OZUR 76.80 323 ⇑P **P 10 57 09.2 +0.6**
HARR Harsova 76.93 321 ⇑P **P 10 57 09.5 +0.2**
ABAH Abaujker 76.94 327 P P 10 57 10.0 +0.8
OSTC Ostas 76.96 331 *eP* **P 10 57 09.1 -0.3**
CHVC Chvalec 76.99 331 *eP* **P 10 57 08.7 -0.9**
DOPR Dopca 77.07 323 ⇑P **P 10 57 10.5 +0.4**
UPC Upice 77.08 331 *eP* **P 10 57 10.3 +0.3**
UPC Upice 77.08 331 *eP* **P 10 57 10.3 +0.3**
DPC Dobruska-Polom 77.10 331 *eP* **P 10 57 09.9 -0.3**
DPC Dobruska-Polom 77.10 331 *eP* **P 10 57 09.9 -0.3**
SCHQ Schefferville 77.13 20 P P 10 57 10.3 +0.1
comp=Z,5.1nm,0.9s,baz=298,slow=6.4,SNR=5.8
SCHQ LR LR 11 36 11.5
comp=Z,92nm,18.3s,baz=16,slow=40
comp=Z,5.1nm,0.9s
MORC Moravsky Berou 77.14 330 ⇑P **P 10 57 10.1 -0.3**
MORC Moravsky Berou 77.14 330 P P 10 57 10.9 +0.5
MORC Moravsky Berou 77.14 330 P P 10 57 10.9 +0.5
MORC pmax pmax
comp=Z,32nm,1.0s
MORC Moravsky Berou 77.14 330 *eP* **P 10 57 10.8 +0.4**
KRLC Kraliky 77.16 330 *eP* **P 10 57 11.0 +0.5**
KRLC Kraliky 77.16 330 *eP* **P 10 57 11.0 +0.5**
MLR Muntele Rosu 77.20 322 LR LR 11 34 13.1
comp=Z,176nm,19.8s,baz=42,slow=38
MLR Muntele Rosu 77.20 322 P P 10 57 09.9 -1.0
MLR IAmb IAmb 10 57 13.1
comp=Z,15nm,0.9s
MLR Muntele Rosu 77.20 322 P P 10 57 09.9 -1.0
MLR pmax pmax
comp=Z,15nm,0.9s
ISR Istrita 77.22 322 ⇑P **P 10 57 11.5 +0.5**
MAUC Maruska 77.37 329 *eP* **P 10 57 11.4 -0.3**
CLL Collm 77.42 333 *i P* **P 10 57 11.5 -0.4**
CLL *i* *PP **sP 10 57 26.8 -1.7**
CLL pmax pmax
comp=Z,44nm,0.9s
CLL Collm 77.42 333 *i P* **P 10 57 11.5 -0.4**
comp=Z,44nm,0.9s
CLL *i* pP **sP 10 57 26.8 -1.7**
CLL Lm MLR 11 35 00.0
comp=Z,100nm,19.6s
DRGR 77.56 325 ⇑P **P 10 57 13.4 +0.5**
DRGR 77.56 325 P P 10 57 12.7 -0.1
DRGR pmax pmax
comp=Z,11nm,0.9s
PVCC Panska Ves 77.56 332 *eP* **P 10 57 13.0 +0.3**
PVCC Panska Ves 77.56 332 *eP* **P 10 57 13.0 +0.3**
MZR Muzera 77.60 290 P P 10 57 13.4 0.0
SNR=5.2
VOIR 77.64 323 ⇑P **P 10 57 13.7 +0.3**
VYHS Vyhne 77.71 328 *eP* **P 10 57 14.2 +0.6**
VYHS pmax pmax
comp=Z,17nm,1.0s
PSZ Piszkesteto 77.78 327 ⇑P **P 10 57 14.8 +0.7**
PSZ Piszkesteto 77.78 327 P P 10 57 14.4 +0.3
JAVC Velka Javorina 77.85 329 *eP* **P 10 57 15.9 +1.5**
ARR Arges 77.87 323 ⇑P **P 10 57 15.8 +1.1**
VRAC Vranov 77.87 330 LR LR 11 34 47.7
comp=Z,151nm,19.2s,baz=28,slow=38
VRAC Vranov 77.87 330 *eP* **P 10 57 15.0 +0.5**
BR131 Keskin Array S 77.89 314 P P 10 57 13.9 -1.0
BR131 IAmb IAmb 10 57 16.5
comp=Z,11nm,0.9s
BR131 Keskin Array S 77.89 314 P P 10 57 13.9 -1.0
BR131 pmax pmax
comp=Z,11nm,1.0s
BRTR Keskin Array B 77.89 314 P P 10 57 15.1 +0.2
comp=Z,5.0nm,0.8s,baz=77,slow=4.4,SNR=15
BRTR LR LR 11 37 43.8
comp=Z,118nm,19.1s,baz=80,slow=40
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 77.89 314 P P 10 57 14.6 -0.3
BRTR Keskin Array B 77.89 314*ceP* **P 10 57 15.6 +0.7**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
GOPC GO Pecny, Ondr 78.00 331 *eP* **P 10 57 15.6 +0.4**
GOPC GO Pecny, Ondr 78.00 331 *eP* **P 10 57 15.6 +0.4**
PRU Pruhonice 78.02 331 *eP* **P 10 57 15.6 +0.3**
PRU Pruhonice 78.02 331 *eP* **P 10 57 15.6 +0.3**
EKA Eskdalemuir Ar 78.08 344 LR LR 11 37 53.4
comp=Z,51nm,19.6s,baz=358,slow=40
EKA Eskdalemuir Ar 78.08 344 P P 10 57 14.9 -0.6
KRUC Moravsky 78.15 330 *eP* **P 10 57 16.5 +0.5**
ANTO Ankara 78.22 315 P P 10 57 17.7 +1.0
ANTO Ankara 78.22 315 P P 10 57 17.7 +1.0
ANTO pmax pmax
comp=Z,27nm,0.8s
ANTO Ankara 78.22 315 P P 10 57 17.6 +1.0
SMOL Smolenice 78.23 329 *eP* **P 10 57 17.6 +1.2**
SMOL pmax pmax
comp=Z,11nm,0.9s
MODS Modra-Piesok 78.40 329 *eP* **P 10 57 18.3 +0.9**
MODS pmax pmax
comp=Z,56nm,1.1s
MOX Moxa 78.44 333 P P 10 57 17.7 +0.1
MOX pmax pmax
comp=Z,19nm,1.1s
SRO Srobarova 78.47 328 *eP* **P 10 57 19.2 +1.4**
NKC Novy Kostel 78.52 333 *eP* **P 10 57 18.0 -0.1**
NKC Novy Kostel 78.52 333 *eP* **P 10 57 18.0 -0.1**
GZR Gura Zlata 78.64 324 ⇑P **P 10 57 18.4 -0.5**
BZS Buzias 78.95 325 ⇑P **P 10 57 20.1 -0.4**
KHC Kasperske Hory 79.08 332 *eP* **P 10 57 21.3 +0.1**
KHC Kasperske Hory 79.08 332 *eP* **P 10 57 21.3 +0.1**
CKRC Cesky Krumlov 79.09 331 *eP* **P 10 57 21.6 +0.4**
SOP Sopron 79.24 329 P P 10 57 22.8 +0.8
GEC2 GERESS Array S 79.28 331 P P 10 57 22.4 +0.1
GEC2 IAmb IAmb 10 57 23.4
comp=Z,8.0nm,0.9s
GERES GERESS Array B 79.28 331 P P 10 57 22.4 +0.1
comp=Z,5.2nm,0.8s,baz=39,slow=5.3,SNR=33
comp=Z,5.2nm,0.8s
GERES GERESS Array B 79.28 331 P P 10 57 22.3 -0.1
CONA Conrad Observa 79.29 330 *eP* **P 10 57 23.2 +0.8**
comp=Z,16nm,1.0s,SNR=8.8
MPLH Magyarpolny 79.30 328 P P 10 57 22.8 +0.4
RONA Rosalia, Austr 79.32 329 *eP* **P 10 57 23.6 +1.1**
comp=Z,18nm,0.9s,SNR=8.6
GRFO Grafenberg 79.39 333 P P 10 57 23.1 +0.3
GRFO Grafenberg 79.39 333 P P 10 57 23.1 +0.3
GRFO pmax pmax
comp=Z,42nm,1.0s
MORH Mrgy, Hungar 79.66 327 ⇓P **P 10 57 24.3 0.0**
MORH Mrgy, Hungar 79.66 327 P P 10 57 23.4 -0.9
MOA Molln 79.93 330 *i P* **P 10 57 26.3 +0.4**
comp=Z,7.3nm,0.8s
KOVH Kovagotottos 79.98 327 P P 10 57 25.6 -0.5
ARSA Arzberg 79.99 329 *i P* **P 10 57 26.3 +0.2**
comp=Z,4.7nm,0.8s
FRGS Fruska Gora 80.07 326 ⇑P **P 10 57 26.7 +0.1**
BLKB Belogradchik 80.11 323 ⇑P **P 10 57 26.2 -0.7**
DOK Doka 80.12 286 P P 10 57 27.7 +0.4
SNR=5.8
DMTO DMTO 80.16 285 P P 10 57 27.6 +0.2
BTNL Ternell 80.16 337 *dP* **P 10 57 26.4 -0.6**
comp=Z,10nm,1.0s
MEM Membach 80.18 337 *dP* **P 10 57 25.7 -1.3**
comp=Z,15nm,0.9s
BIOA Bad Ischl, Aus 80.29 331 *eP* **P 10 57 28.4 +0.6**
comp=Z,24nm,1.1s,SNR=5.9
BHOU Houvegnez 80.41 337 *dP* **P 10 57 27.4 -0.9**
BOVS Bovan 80.51 324 ⇑P **P 10 57 28.3 -0.6**
BCLA Clavier 80.55 337 *dP* **P 10 57 29.4 +0.3**
BGES Gesves 80.64 337 *dP* **P 10 57 29.4 -0.1**
comp=Z,14nm,0.9s
SOKA Soboth 80.65 329 *i P* **P 10 57 30.0 +0.3**
comp=Z,17nm,0.9s,SNR=11
GROS Grobnik 80.66 329 *i P* **P 10 57 29.8 -0.1**
VTS Vitosha 80.67 322 ⇑P **P 10 57 30.8 +0.7**
RDO Rodhopi 80.79 320 IAmb IAmb 10 57 32.2
comp=Z,22nm,0.9s
WMOK Wichita Mounta 80.80 50 P P 10 57 31.4 +0.7
baz=318
BMRD Maredsous 80.80 337 *dP* **P 10 57 30.6 +0.2**
comp=Z,17nm,0.9s
RCHB Rochefort 80.81 337 *dP* **P 10 57 30.6 +0.2**
comp=Z,8.6nm,1.0s
WHFO Wadi Hawf 80.84 286 P P 10 57 31.0 -0.2
SNR=5.2
DIVS Divibare 80.86 325 P P 10 57 30.4 -0.5
DIVS IAmb IAmb 10 57 31.8
comp=Z,14nm,0.9s
KBA Koelnbreinsper 80.92 331 *i P* **P 10 57 32.0 +0.7**
comp=Z,25nm,1.1s,SNR=8.3
OK025 Westminster Rd 80.96 49 IAmb IAmb 10 57 33.3
comp=Z,16nm,0.8s
OBKA Obir 80.97 330 *i P* **P 10 57 31.5 +0.1**
comp=Z,9.7nm,0.9s
DOU Dourbes 81.04 337 *dP* **P 10 57 30.9 -0.7**
GCIS Gornji Cirnik 81.11 329 *i P* **P 10 57 32.0 -0.1**
MYKA Terra Mystica 81.20 330 *i P* **P 10 57 32.1 -0.6**
comp=Z,8.9nm,0.9s
WATA Walderalm 81.31 332 *i P* **P 10 57 33.7 +0.3**
comp=Z,18nm,0.8s
WTTA Wattenberg 81.35 332 *eP* **P 10 57 34.3 +0.7**
comp=Z,20nm,0.9s,SNR=5.7
RETA Reutte 81.46 332 *i P* **P 10 57 34.3 +0.3**
comp=Z,22nm,1.0s,SNR=7.6
MOTA Moosalm 81.47 332 *i P* **P 10 57 34.6 +0.5**
comp=Z,33nm,1.0s,SNR=12
ABTA Abfaltersbach 81.50 331 *eP* **P 10 57 34.0 -0.3**
comp=Z,8.8nm,1.2s
BFO Black Forest 81.51 334 P P 10 57 34.1 -0.1
BFO IAmb IAmb 10 57 35.3
comp=Z,14nm,1.0s
BFO Black Forest 81.51 334 P P 10 57 34.1 -0.1
BFO pmax pmax
comp=Z,14nm,1.0s
SQTA Sankt Quirin 81.54 332 *i P* **P 10 57 35.1 +0.6**
comp=Z,17nm,0.8s
R40A Maddies Statio 81.55 44 IAmb IAmb 10 57 35.4
comp=Z,7.4nm,0.9s
ABTO Aybut 81.56 286 P P 10 57 36.0 +1.0
NWAO Narrogin (SRO) 81.60 206 LR LR 11 35 14.5
comp=Z,25nm,20.0s,baz=19,slow=37
CLUD Cludinico 81.61 331 IAmb IAmb 10 57 34.8
comp=Z,10nm,0.9s
GBRS Gornja Briga 81.70 329 *i P* **P 10 57 34.9 -0.4**
STAL STALIGIAL 81.84 331 P P 10 57 35.0 -1.1
STAL IAmb IAmb 10 57 35.8
comp=Z,12nm,0.9s
FETA Feichten 81.87 332 *i P* **P 10 57 36.7 +0.4**
comp=Z,15nm,1.1s,SNR=6.2
U38A Gravette 81.88 46 IAmb IAmb 10 58 19.0
comp=Z,21nm,1.8s
MMAI Mount Meron Ar 81.90 309 LR LR 11 38 42.7
comp=Z,126nm,19.1s,baz=270,slow=39
TX31 Lajitas Ar. Si 81.90 57 P P 10 57 37.4 +0.7
TX31 IAmb IAmb 10 57 39.2
comp=Z,21nm,1.1s
TX32 Lajitas Array 81.90 57 P P 10 57 37.5 +0.8
TXAR Lajitas Array 81.90 57 P P 10 57 37.6 +0.9
comp=Z,8.1nm,0.9s,baz=298,slow=4.1,SNR=63
TXAR PKKPbc **PKKPbc 11 16 07.5 +2.6**
comp=Z,0.3nm,0.8s,baz=107,slow=3.1,SNR=3.9
comp=Z,8.1nm,0.9s
TXAR Lajitas Array 81.90 57 P P 10 57 37.5 +0.8
DAVA Damuels 81.92 333 *i P* **P 10 57 36.9 +0.3**
comp=Z,19nm,0.8s,SNR=6.2
ECH Echery 81.97 335 P P 10 57 36.5 -0.2
ECH IAmb IAmb 10 57 37.6
comp=Z,14nm,1.0s
ECH Echery 81.97 335 P P 10 57 36.5 -0.2
ECH pmax pmax
comp=Z,14nm,1.0s

CCM	**Cathedral Cave**	**82.24**	**43**	P	**P**	**10 57 38.5**	**+0.3**
CCM				IAmb	IAmb	10 57 51.5	
	comp=Z,23nm,1.4s						
CCM	**Cathedral Cave**	**82.24**	**43**	P	**P**	**10 57 38.5**	**+0.3**
CCM				pmax	pmax		
	comp=Z,23nm,1.5s						
CCM	**Cathedral Cave**	**82.24**	**43**	P	**P**	**10 57 38.4**	**+0.3**
	baz=321						
DAVOX	**Davos/Dischmat**	**82.37**	**333**	LR	LR	11 38 53.1	
	comp=Z,84nm,18.3s,baz=26,slow=39						
FUORN	**Ofenpass-Fuorn**	**82.38**	**332**	IAmb	IAmb	10 57 41.2	
	comp=Z,16nm,1.0s						
CTI	**Castel Tesino**	**82.40**	**331**	IAmb	IAmb	10 57 39.0	
	comp=Z,11nm,0.9s						
PDG	**Podgorica**	**82.53**	**324**	⇑P	**P**	**10 57 39.5**	**-0.1**
RAYN	**Ar Rayn**	**82.55**	**295**	P	**P**	**10 57 40.5**	**+0.4**
RAYN				IAmb	IAmb	10 57 41.9	
	comp=Z,8.5nm,1.0s						
RAYN	**Ar Rayn**	**82.55**	**295**	P	**P**	**10 57 40.5**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RAYN	**Ar Rayn**	**82.55**	**295**	P	**P**	**10 57 40.8**	**+0.7**
JCT	**Junction City**	**83.36**	**54**	P	**P**	**10 57 44.5**	**+0.3**
JCT				IAmb	IAmb	10 57 46.0	
	comp=Z,7.4nm,1.1s						
JCT	**Junction City**	**83.36**	**54**	P	**P**	**10 57 44.5**	**+0.3**
JCT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
S44A	**Carbondale**	**83.50**	**42**	P	**P**	**10 57 45.4**	**+0.7**
S44A				IAmb	IAmb	10 57 46.5	
	comp=Z,12nm,0.8s						
PPT2	**Papeete2**	**83.55**	**122**	*e*T	T	12 30 11.8	
	comp=Z,6.0nm,0.3s						
SENIN	**Lac Senin/Sane**	**83.57**	**334**	P	**P**	**10 57 45.2**	**-0.1**
SENIN				IAmb	IAmb	10 57 46.4	
	comp=Z,9.4nm,0.8s						
TIAR	**Tiarei**	**83.67**	**122**	*e*T	T	12 30 14.2	
	comp=Z,1.2nm,0.3s						
MIAR	**Mount Ida**	**83.75**	**47**	P	**P**	**10 57 46.6**	**+0.5**
MIAR				IAmb	IAmb	10 57 48.0	
	comp=Z,6.3nm,0.8s						
MIAR	**Mount Ida**	**83.75**	**47**	P	**P**	**10 57 46.6**	**+0.5**
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MIAR	**Mount Ida**	**83.75**	**47**	P	**P**	**10 57 46.8**	**+0.7**
	baz=320						
LPG	**La Plagne**	**84.52**	**334**	*e*P	**P**	**10 57 50.2**	**0.0**
LPG				pmax	pmax		
	comp=Z,19nm,0.9s						
KEK	**Kerkira**	**84.54**	**323**	IAmb	IAmb	10 57 50.6	
	comp=Z,16nm,1.0s						
CAMP	**Campotosto**	**84.78**	**328**	P	**P**	**10 57 51.3**	**0.0**
SCTE	**Santa Cesarea**	**84.82**	**324**	P	**P**	**10 57 51.0**	**-0.4**
INTR	**Introdacqua**	**85.04**	**328**	P	**P**	**10 57 52.1**	**-0.6**
INTR				IAmb	IAmb	10 57 54.1	
	comp=Z,14nm,0.9s						
T47A	**Sharon Grove**	**85.09**	**41**	P	**P**	**10 57 52.6**	**-0.2**
T47A				IAmb	IAmb	10 57 54.3	
	comp=Z,9.4nm,0.9s						
Q51A	**Peebles**	**85.16**	**38**	P	**P**	**10 57 53.8**	**+0.6**
Q51A				IAmb	IAmb	10 57 56.3	
	comp=Z,17nm,1.1s						
SSB	**Saint Sauveur**	**85.40**	**335**	P	**P**	**10 57 53.8**	**-0.5**
SSB				IAmb	IAmb	10 57 56.0	
	comp=Z,8.5nm,0.9s						
SSB	**Saint Sauveur**	**85.40**	**335**	P	**P**	**10 57 53.8**	**-0.5**
SSB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WVT	**Waverly**	**85.43**	**42**	P	**P**	**10 57 55.0**	**+0.5**
	baz=323						
MFF	**Saint Martin d**	**85.52**	**339**	*e*P	**P**	**10 57 55.0**	**+0.2**
MFF				pmax	pmax		
	comp=Z,20nm,0.8s						
U49A	**Red Boiling Sp**	**86.10**	**41**	P	**P**	**10 57 57.8**	**-0.1**
T50A	**Nancy**	**86.13**	**40**	P	**P**	**10 57 57.4**	**-0.6**
TIP	**Timpagrande**	**86.29**	**324**	P	**P**	**10 57 58.5**	**-0.3**
LFF	**La Frestale**	**86.81**	**337**	*e*P	**P**	**10 58 01.2**	**0.0**
LFF				pmax	pmax		
	comp=Z,14nm,0.8s						
TKL	**Tuckaleechee C**	**87.74**	**40**	LR	LR	11 37 14.8	
	comp=Z,63nm,21.9s,baz=340,slow=36						
TBI	**Tubuai**	**88.02**	**125**	*e*LR	LR	11 26 09.2	
	comp=Z,153nm,23.2s						
TBI				*e*LR	LR	11 26 09.6	
	comp=Z,4μm,22.8s						
BG3	**Lake Jocassee**	**88.67**	**40**	P	**P**	**10 58 10.1**	**-0.2**
KEST	**Kesra**	**92.25**	**328**	LR	LR	11 45 45.6	
	comp=Z,118nm,18.2s,baz=247,slow=39						
ATD	**Arta Tunnel**	**92.82**	**289**	LR	LR	11 46 05.3	
	comp=Z,140nm,18.0s,baz=30,slow=39						
ESDC	**Sonseca Array**	**92.98**	**339**	P	**P**	**10 58 29.5**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=14,slow=3.8,SNR=10						
ESDC				LR	LR	11 47 38.6	
	comp=Z,70nm,18.1s,baz=340,slow=40						
	comp=Z,1.7nm,0.8s						
ESDC	**Sonseca Array**	**92.98**	**339**	P	**P**	**10 58 30.4**	**+0.1**
ESDC				IAmb	IAmb	11 00 04.5	
	comp=Z,12nm,1.9s						
TORD	**Torodi Ar. Bea**	**115.43**	**323**	PKP	**PKPdf**	**11 03 58.3**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=46,slow=4.2,SNR=2.8						
VNDA	**Vanda**	**121.55**	**177**	PKP	**PKiKP**	**11 04 09.7**	**+0.7**
	comp=Z,0.9nm,1.0s,baz=345,slow=2.3,SNR=4.0						
H03N2	**Juan Fernandez**	**142.23**	**90**	T	T	13 43 37.1	
	baz=305,slow=77,SNR=37						
H03N3	**Juan Fernandez**	**142.25**	**90**	T	T	13 43 40.5	
	baz=305,slow=77,SNR=42						
H03N1	**Juan Fernandez**	**142.25**	**90**	T	T	13 43 40.5	
	baz=305,slow=77,SNR=41						
TROLL	**Troll, Antarti**	**147.47**	**199**	PKPdf	**PKiKP**	**11 05 01.0**	**-0.8**
BDFB	**Brasilia**	**148.56**	**31**	PKPbc	**PKPbc**	**11 05 03.1**	**-1.0**
	comp=Z,4.8nm,0.9s,baz=250,slow=4.1,SNR=3.3						
SNAA	**Sanae**	**148.92**	**197**	PKPdf	**PKiKP**	**11 05 04.1**	**-0.6**
SNAA	**Sanae**	**148.92**	**197**	SKPdf	**SKPdf**	**11 08 30.3**	**+0.6**
SNAA	**Sanae**	**148.92**	**197**	*c i* PKiKP	**PKPbc**	**11 05 00.1**	**-3.3**
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNA2	**Neumayer--Watz**	**150.44**	**196**	PKPdf	**PKiKP**	**11 05 07.9**	**+0.1**
	baz=60,slow=1.6						
VNA3	**Neumayer Olymp**	**150.61**	**194**	PKPdf	**PKiKP**	**11 05 08.2**	**+0.1**
VNA1	**Neumayer--Stat**	**150.83**	**196**	PKPdf	**PKiKP**	**11 05 08.9**	**+0.4**
PLCA	**Paso Flores**	**151.39**	**97**	PKPbc	**PKiKP**	**11 05 11.0**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=260,slow=2.9,SNR=5.5						

KMA ***25*** *10:57:37.2±0.0, 35°.70N×129°.39E, h16km, Error ellipse: s-maj=1.1km s-min=0.9km az=256.0*
JMA ***25*** *10:57:37.2±0.5, 36°.N±2°×12°.9E±°, h9km, MV2.5/10, S KOREAN PENINSULA REG*

ISC 25 10:57:36.8±1.1, 35°.70N±0°.04×129°.35E±0°.06, h10km, n12, σ0°.27/14, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDAG	**Daegu**	**0.38**	**281**	P	**Pb**	**10 57 45.5**	**-0.1**
	SNR=261						
YOCB	**Yeongcheon**	**0.43**	**311**	P	**Pb**	**10 57 46.3**	**-0.2**
	SNR=17						
KSBUS	**Busan**	**0.49**	**204**	P	**Pb**	**10 57 47.2**	**-0.2**
	SNR=26						
KSPHA	**Pohang**	**0.50**	**2**	P	**Pb**	**10 57 47.3**	**-0.3**
	SNR=61						
KSDAU	**Deagu-acc**	**0.63**	**288**	P	**Pb**	**10 57 50.0**	**+0.1**
	SNR=22						
KSADO	**Andong**	**0.79**	**335**	P	**Pb**	**10 57 52.5**	**0.0**
	SNR=149						
YODB	**Yeongdeok**	**0.84**	**3**	P	**Pb**	**10 57 53.3**	**-0.1**
	SNR=38						
JTU	**Tsushima**	**1.17**	**178**	P	**Pg**	**10 57 59.1**	**-0.1**
JTU				*e*S	**Sg**	**10 58 14.5**	**+0.1**
JTSM	**Tsushimamitsus**	**1.35**	**179**	*e*P	**Pn**	**10 58 01.6**	**-0.1**
JTSM				*e*S	**Sn**	**10 58 19.6**	**-0.1**
JHGM	**Hagimishima**	**1.72**	**121**	*e*S	**Sb**	**10 58 30.7**	**+0.5**
JII	**Iki**	**1.92**	**171**	*e*P	**Pb**	**10 58 11.6**	**-0.3**
JTY	**Toyota**	**2.00**	**135**	*e*S	**Sb**	**10 58 38.8**	**+0.5**

NEIC ***25*** *11:04:58.9±1.9, 6°.56S±0°.08×154°.91E±0°.08, h90km±2km, mb4.7/81, Error ellipse: s-maj=13.6km s-min=10.0km az=45.0*
IDC ***25*** *11:04:59.1±2.0, 6°.57S×154°.94E, h91km±18km, mb4.1/19, mbtmp4.5/23, MS3.8/19, Error ellipse: s-maj=13.3km s-min=11.4km az=30.0*
DJA ***25*** *11:05:06.6±1.1, 7°.S±5°×15°.4E±1°.3, h44km±5km, M5.1/13, mB5.3/2, mb4.8/13, MLv5.3/2, Mw(mB)4.7/2*

ISC 25 11:04:57.5±0.9, 6°.56S±0°.06×154°.91E±0°.06, h81km±8km, n152, σ1°.66/145, mb4.7/63, 1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.60**	**311**	Pn	**Pn**	**11 05 52.5**	**+1.5**
HNR	**Honiara**	**5.75**	**120**	P	**Pn**	**11 06 21.5**	**+1.2**
	2μm,0.8s,baz=90,slow=1.0,SNR=2.4						
HNR				S	**Sn**	**11 07 28.1**	**+3.1**
	6μm,0.7s,baz=72,slow=20,SNR=3.3						
HNR				LR	LR	11 08 28.9	
	comp=Z,20μm,19.1s,baz=318,slow=37						
PMG	**Port Moresby**	**8.18**	**249**	P	**Pn**	**11 06 54.0**	**+0.5**
	40nm,0.5s,baz=83,slow=8.1,SNR=11						
PMG				S	**Sn**	**11 08 27.6**	**+3.2**
	108nm,1.0s,baz=76,slow=22,SNR=10.0						
PMG				LR	LR	11 09 56.9	
	comp=Z,798nm,21.1s,baz=47,slow=36						
PMG	**Port Moresby**	**8.18**	**249**		**Pn**	**11 06 56.7**	**+3.2**
MANU	**Manus Island**	**8.75**	**300**	Pn	**Pn**	**11 07 02.3**	**+1.0**
CTA	**Charters Tower**	**15.86**	**211**	P	**Pn**	**11 08 36.1**	**0.0**
	16nm,0.9s,baz=17,slow=14,SNR=4.7						
CTA				LR	LR	11 14 25.3	
	comp=Z,436nm,18.1s,baz=76,slow=36						
CTAO	**Charters Tower**	**15.86**	**211**	Pn	**Pn**	**11 08 35.4**	**-0.7**
DZM	**Mont Dzumac**	**19.03**	**145**	*e*Pn	**P**	**11 09 13.1**	**-0.2**
	70nm,1.1s						
DZM				*e*LR	LR	11 13 39.8	
	comp=Z,647nm,27.1s						
DZM	**Mont Dzumac**	**19.03**	**145**	P	**P**	**11 09 13.1**	**-0.2**
	9.6nm,0.8s,baz=322,slow=13,SNR=8.8						
DZM				LR	LR	11 15 27.5	
	comp=Z,280nm,21.9s,baz=313,slow=33						
DZM	**Mont Dzumac**	**19.03**	**145**	P	**P**	**11 09 11.5**	**-1.8**
DZM				IAmb	IAmb	11 09 27.9	
	comp=Z,38nm,1.1s						
EIDS	**Eidsvold**	**19.06**	**191**	P	**P**	**11 09 13.8**	**+0.3**
OUENC	**Queen Island, N**	**19.53**	**145**	P	**P**	**11 09 17.3**	**-1.3**
RKPI	**Ransiki, Papua**	**21.27**	**283**	P	**P**	**11 09 40.2**	**+2.7**
	comp=Z,43nm,1.0s						
GUMO	**Guam**	**22.36**	**334**	LR	LR	11 17 59.6	
	comp=Z,89nm,21.9s,baz=150,slow=35						
FAKI	**Fak Fak**	**22.86**	**278**	P	**P**	**11 09 54.1**	**-0.4**
FAKI	**Fak Fak**	**22.86**	**278**	P	**P**	**11 09 55.6**	**+1.1**
	comp=Z,3μmcomp=Z,21nm,0.8s						
SAUI	**Saumlaki**	**23.46**	**265**		**P**	**11 09 57.5**	**-2.6**
WR0	**Warramunga Arr**	**23.84**	**234**	P	**P**	**11 10 04.9**	**+1.4**
WR0				IAmb	IAmb	11 10 20.6	
	comp=Z,23nm,0.9s						
WB0	**Warramunga Arr**	**23.86**	**235**	P	**P**	**11 10 04.3**	**+0.6**
WB0				IAmb	IAmb	11 10 15.7	
	comp=Z,24nm,1.1s						
ARMA	**Armidale**	**23.94**	**187**	P	**P**	**11 10 04.6**	**+0.3**
ARMA				IAmb	IAmb	11 10 06.3	
	comp=Z,30nm,1.2s						
WRAB	**Tennant Creek**	**23.98**	**234**	P	**P**	**11 10 05.7**	**+0.9**
WRAB				IAmb	IAmb	11 10 17.6	
	comp=Z,60nm,1.5s						
WB2	**Warramunga Arr**	**23.99**	**234**	P	**P**	**11 10 05.8**	**+1.0**
WB2				IAmb	IAmb	11 10 22.1	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**24.00**	**234**	P	**P**	**11 10 06.4**	**+1.5**
	comp=Z,5.6nm,0.9s,baz=57,slow=9.7,SNR=78						
WRA				PcP	**PcP**	**11 13 46.2**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=58,slow=2.3,SNR=9.3						
WRA				LR	LR	11 19 34.8	
	comp=Z,236nm,18.5s,baz=28,slow=36						
	comp=Z,5.6nm,0.9s						
WRA	**Warramunga Arr**	**24.00**	**234**	P	**P**	**11 10 04.8**	**-0.1**
WRA					**PcP**	**11 13 46.4**	**+1.2**
MTN	**Manton Dam**	**24.24**	**253**	P	**P**	**11 10 05.3**	**-1.8**
MTN				IAmb	IAmb	11 10 20.9	
	comp=Z,25nm,1.1s						
SIJI	**Sorong**	**24.25**	**283**	P	**P**	**11 10 08.6**	**+1.4**
	comp=Z,25nm,0.8s,baz=43,slow=9.0,SNR=11						
	comp=Z,25nm,0.8s						
SIJI	**Sorong**	**24.25**	**283**	P	**P**	**11 10 08.9**	**+1.7**
	comp=Z,33nm,0.9s						
AS31	**Alice Springs**	**26.40**	**228**	P	**P**	**11 10 26.0**	**-0.7**
ASAR	**Alice Springs**	**26.40**	**228**	P	**P**	**11 10 27.4**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=56,slow=9.1,SNR=36						
ASAR				PcP	**PcP**	**11 13 51.8**	**+1.2**
	comp=Z,3.0nm,0.8s,baz=64,slow=2.9,SNR=9.9						
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**26.40**	**228**	P	**P**	**11 10 24.9**	**-1.8**
ASAR					**PcP**	**11 13 51.2**	**+0.7**
KNRA	**Kununurra**	**27.18**	**248**	P	**P**	**11 10 32.3**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**27.47**	**25**	T	T	11 38 57.7	
	baz=203,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**27.47**	**25**	T	T	11 38 59.8	
	baz=203,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**27.49**	**25**	T	T	11 38 58.8	
	baz=203,slow=76,SNR=28						
LBMI	**Labuha**	**27.96**	**281**	P	**P**	**11 10 43.3**	**+2.5**
	comp=Z,64nm,0.8s						
STKA	**Stephens Creek**	**28.09**	**205**	P	**P**	**11 10 41.3**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=36,slow=9.4,SNR=3.4						
STKA				PcP	**PcP**	**11 13 55.0**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=49,slow=2.6,SNR=3.6						
STKA				LR	LR	11 22 02.3	
	comp=Z,273nm,18.5s,baz=17,slow=36						
	comp=Z,0.6nm,0.3s						
BATI	**Baumata**	**31.11**	**261**	LR	LR	11 25 08.9	
	comp=Z,197nm,20.8s,baz=134,slow=39						
BBOO	**Buckleboo**	**31.46**	**211**	P	**P**	**11 11 10.4**	**-1.2**
BBOO				IAmb	IAmb	11 11 17.5	
	comp=Z,14nm,1.1s						
DAV	**Davao City (W)**	**32.24**	**294**	LR	LR	11 22 21.5	
	comp=Z,112nm,21.4s,baz=95,slow=32						
RAO	**Raoul Island**	**34.15**	**135**	LR	LR	11 23 30.9	
	comp=Z,74nm,20.3s,baz=320,slow=33						
BSSI	**Bau Bau, Buton**	**34.20**	**269**	P	**P**	**11 11 37.8**	**+2.1**
	comp=Z,76nm,1.1s						
BSSI				pP	**pP**	**11 11 47.7**	**-5.0**
	comp=Z,76nm,1.1s						
FORT	**Forrest**	**34.85**	**223**	P	**P**	**11 11 39.1**	**-1.9**
NIUE	**Niue**	**36.39**	**113**	P	**P**	**11 11 53.8**	**-0.6**
PLAI	**Plampang**	**36.86**	**264**	P	**P**	**11 11 58.2**	**-0.2**
	comp=Z,54nm,0.8s						
PSA00	**Pilbara Seismi**	**37.02**	**243**	P	**P**	**11 11 58.1**	**-1.6**
PSA00				IAmb	IAmb	11 12 10.7	
	comp=Z,18nm,1.2s						
URZ	**Urewera**	**37.43**	**151**	P	**P**	**11 12 02.6**	**-0.3**
	comp=Z,13nm,1.0s,baz=346,slow=3.5,SNR=2.6						
URZ				LR	LR	11 26 36.1	
	comp=Z,135nm,20.7s,baz=54,slow=35						
	comp=Z,13nm,1.0s						
BKZ	**Black Stump Fm**	**37.86**	**152**	P	**P**	**11 12 05.7**	**-0.9**
MYLDM	**Lahad Datu**	**38.16**	**287**	P	**P**	**11 12 07.9**	**-1.6**
MYLDM	**Lahad Datu**	**38.16**	**287**	P	**P**	**11 12 13.1**	**+3.6**
THZ	**Tophouse**	**38.54**	**158**	P	**P**	**11 12 10.6**	**-1.7**
TUWZ	**Tuamarina**	**38.65**	**157**	P	**P**	**11 12 12.3**	**-0.8**
MSWZ	**Moikau Station**	**39.16**	**156**	P	**P**	**11 12 16.4**	**-1.1**
LTZ	**Lake Taylor**	**39.21**	**160**	P	**P**	**11 12 16.0**	**-1.8**
KHZ	**Kahutara**	**39.34**	**158**	P	**P**	**11 12 17.9**	**-0.9**
RPZ	**Rata Peaks**	**39.64**	**162**	P	**P**	**11 12 20.9**	**-0.4**
	comp=Z,12nm,0.9s,baz=344,slow=7.4,SNR=3.8						
RPZ				LR	LR	11 28 12.9	
	comp=Z,204nm,18.8s,baz=322,slow=35						
	comp=Z,12nm,0.9s						
KKM	**Kota Kinabalu**	**40.59**	**287**	P	**P**	**11 12 27.6**	**-2.2**
TWG	**Pinlang**	**44.13**	**312**	P	**P**	**11 12 57.1**	**-1.2**
TWG				IAmb	IAmb	11 13 11.0	
	comp=Z,16nm,1.1s						
YULB	**Yu-li**	**44.32**	**313**	P	**P**	**11 12 58.0**	**-1.8**
YULB				IAmb	IAmb	11 13 22.7	
	comp=Z,7.6nm,0.7s						
TPUB	**Ta-pu**	**44.75**	**313**	P	**P**	**11 13 02.6**	**-0.7**
SSLB	**Suanglung**	**44.81**	**313**	P	**P**	**11 13 01.1**	**-2.6**
SSLB				IAmb	IAmb	11 13 15.5	
	comp=Z,8.5nm,0.7s						
JWT	**Wachi**	**45.49**	**337**	P	**P**	**11 13 07.0**	**-1.9**
MJAR	**Matsushiro Arr**	**45.64**	**341**	LR	LR	11 29 56.7	
	comp=Z,63nm,21.4s,baz=160,slow=33						
JMM	**Marumori**	**46.11**	**344**	P	**P**	**11 13 10.4**	**-3.3**
JSD	**Sado**	**47.00**	**342**	P	P	11 13 15.6	-5.0
KSRS	**Korea Array**	**50.51**	**332**	P	**P**	**11 13 48.1**	**+0.5**
	comp=Z,2.3nm,1.0s,baz=146,slow=9.9,SNR=5.6						
	comp=Z,2.3nm,1.0s						
NJ2	**Nanjing**	**51.52**	**320**	*e*P	**P**	**11 13 56.5**	**+1.2**
PPT2	**Papeete2**	**55.21**	**107**	*e*T	T	12 12 17.5	
	comp=Z,3.9nm,0.4s						
PAE	**Paea**	**55.21**	**107**	*e*T	T	12 12 10.2	
	comp=Z,4.2nm,0.3s						
TBI	**Tubuai**	**55.93**	**114**	*e*LR	LR	11 30 47.5	
	comp=Z,204nm,24.5s						

KLR	**Kul'dur**	**59.12**	**343**	P	**P**	**11 14 49.5**	**-0.1**
	comp=Z,2.5nm,1.0s,baz=103,slow=4.2,SNR=4.2						
KLR				LR	LR	11 38 38.9	
	comp=Z,34nm,21.4s,baz=120,slow=34						
	comp=Z,2.5nm,1.0s						
PETK	**Petropavlovsk-**	**59.48**	**2**	P	**P**	**11 14 52.9**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=176,slow=12,SNR=5.5						
PETK				LR	LR	11 36 36.0	
	comp=Z,59nm,21.8s,baz=150,slow=32						
	comp=Z,2.4nm,0.7s						
KMI	**Kunming**	**59.70**	**304**	⇓P	**P**	**11 14 57.5**	**+3.2**
KMI				pP	pP	11 15 07.0	-7.2
CMAR	**Chiang Mai Arr**	**60.52**	**295**	P	**P**	**11 15 02.1**	**+2.4**
	comp=Z,14nm,0.8s,baz=116,slow=5.0,SNR=86						
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.52**	**295**	P	**P**	**11 14 57.9**	**-1.9**
CHTO	**Chiang Mai**	**60.63**	**296**	P	**P**	**11 14 59.0**	**-1.5**
PZH	**PanZhiHua**	**61.09**	**305**	P	**P**	**11 15 06.0**	**+2.4**
HHC	**Hu-ho-hao-te**	**61.69**	**324**	*e*P	**P**	**11 15 10.5**	**+3.1**
MA2	**Magadan**	**66.00**	**358**	LR	LR	11 41 53.2	
	comp=Z,29nm,21.2s,baz=160,slow=34						
GTA	**Gaotai**	**68.36**	**317**	*e*P	**P**	**11 15 52.5**	**+1.8**
GTA				pP	pP	11 16 02.5	-9.0
GTA				sP	PcP	11 16 06.5	-9.2
AKUT	**Akutan**	**68.86**	**24**	P	**P**	**11 15 52.6**	**-0.6**
SONM	**Songino Array**	**68.92**	**327**	P	**P**	**11 15 55.0**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=142,slow=6.4,SNR=14						
	comp=Z,3.3nm,0.9s						
SONM	**Songino Array**	**68.92**	**327**	P	**P**	**11 15 54.0**	**0.0**
VNDA	**Vanda**	**71.02**	**178**	P	**P**	**11 16 06.9**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=323,slow=5.6,SNR=15						
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**71.02**	**178**	P	**P**	**11 16 05.8**	**-0.4**
SBA	**Scott Base**	**71.53**	**177**	P	**P**	**11 16 09.6**	**+0.3**
OHAK	**Old Harbor**	**76.17**	**26**	P	**P**	**11 16 37.1**	**+0.5**
OHAK				IAmb	IAmb	11 16 43.7	
	comp=Z,26nm,1.4s						
Q19K	**Cape Douglas,**	**77.05**	**25**	P	**P**	**11 16 42.2**	**+0.6**
N18K	**Kilae Creek**	**77.25**	**22**	P	**P**	**11 16 43.1**	**+0.4**
N18K				IAmb	IAmb	11 17 11.8	
	comp=Z,20nm,1.3s						
P19K	**Oil Pt**	**77.65**	**24**	P	**P**	**11 16 44.9**	**-0.1**
CNPM	**China Poot**	**78.40**	**25**	P	**P**	**11 16 49.7**	**+0.6**
WMQ	**Urumqi**	**78.45**	**317**	*e*P	**P**	**11 16 51.0**	**+1.2**
M19K	**Big River Lodg**	**78.58**	**22**	P	**P**	**11 16 50.8**	**+0.7**
M19K				IAmb	IAmb	11 17 06.3	
	comp=Z,10nm,0.9s						
L19K	**White Mountain**	**78.58**	**22**	P	**P**	**11 16 51.3**	**+1.2**
L19K				IAmb	IAmb	11 16 53.5	
	comp=Z,14nm,1.1s						
BRLK	**Bradley Lake**	**78.68**	**25**	P	**P**	**11 16 50.9**	**+0.2**
BRLK				IAmb	IAmb	11 16 54.4	
	comp=Z,10.0nm,1.0s						
SUA	**Susitna One**	**79.71**	**23**	P	**P**	**11 16 56.1**	**-0.3**
SUA				IAmb	IAmb	11 17 08.5	
	comp=Z,7.6nm,0.9s						
RC01	**Rabbit Creek A**	**79.90**	**24**	P	**P**	**11 16 58.2**	**+1.0**
RC01				IAmb	IAmb	11 16 58.6	
	comp=Z,15nm,1.2s						
PWL	**Port Wells**	**80.35**	**25**	P	**P**	**11 17 00.4**	**+0.7**
CAST	**Castle Rocks**	**80.35**	**21**	P	**P**	**11 17 00.4**	**+0.7**
PMR	**Palmer**	**80.42**	**24**	P	**P**	**11 17 00.9**	**+0.9**
PMR				IAmb	IAmb	11 17 01.3	
	comp=Z,5.9nm,0.9s						
KNK	**Knik Glacier**	**80.60**	**24**	P	**P**	**11 16 59.7**	**-1.4**
KNK				IAmb	IAmb	11 17 13.3	
	comp=Z,12nm,1.2s						
GHO	**Glory Hole Cre**	**80.61**	**24**	P	**P**	**11 17 01.6**	**+0.4**
GHO				IAmb	IAmb	11 17 02.6	
	comp=Z,8.9nm,0.9s						
SML	**Sawmill**	**80.86**	**24**	P	**P**	**11 17 01.7**	**-0.8**
SML				IAmb	IAmb	11 17 04.2	
	comp=Z,12nm,0.9s						
TRF	**Thorofare Moun**	**81.02**	**22**	P	**P**	**11 17 04.0**	**+0.6**
KLU	**Klutina**	**81.68**	**25**	P	**P**	**11 17 07.2**	**+0.3**
KLU				IAmb	IAmb	11 17 09.4	
	comp=Z,8.1nm,0.9s						
MCK	**McKinley**	**81.68**	**22**	P	**P**	**11 17 06.6**	**-0.2**
MCK				IAmb	IAmb	11 17 21.2	
	comp=Z,13nm,1.0s						
GLB	**Gilahina Butte**	**82.53**	**25**	P	**P**	**11 17 11.7**	**+0.4**
GLB				IAmb	IAmb	11 17 13.2	
	comp=Z,11nm,1.0s						
VRDI	**Verde Repeater**	**82.58**	**25**	P	**P**	**11 17 12.2**	**+0.5**
VRDI				IAmb	IAmb	11 17 13.6	
	comp=Z,5.9nm,0.9s						
CCB	**Cl

comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 95.99 28 P P 11 18 15.6 +0.2
PDAR Pinedale Array 98.47 48 P P 11 18 27.2 -0.2
comp=Z,0.7nm,0.9s,baz=291,slow=2.8,SNR=4.5
comp=Z,0.7nm,0.9s
VRAC Vranov 124.85 328 *e*PG Pdif 11 20 12.8 -11
CLL Collm 125.39 332 *e*PKPdf PKPdf 11 23 49.0 -0.2
GERES GERESS Array B 126.63 329 PKP PKPdf 11 23 51.0 -0.8
comp=Z,0.2nm,0.3s,baz=31,slow=3.1,SNR=4.2
LPAZ La Paz 131.74 119 PKP PKPdf 11 24 02.3 -0.7
comp=Z,1.4nm,0.8s,baz=220,slow=2.6,SNR=4.4
BDFB Brasilia 148.35 134 PKPbc PKPab 11 24 38.9 -0.2
comp=Z,9.4nm,0.8s,baz=147,slow=1.3,SNR=7.3
TORD Torodi Ar. Bea 152.82 286 PKPbc PKPbc 11 24 46.4 +0.1
comp=Z,3.5nm,0.7s,baz=57,slow=2.5,SNR=23
DBIC Dimbokro 159.90 271 PKPab PKPab 11 25 26.9 -1.2
comp=Z,6.3nm,0.9s,baz=68,slow=1.7,SNR=5.4

*IDC **25** 11:10:53.1±1.4,34.°07N×138.°53E,h0km,mb3.8/2,*
mbtmp3.7/3,ML2.6/1,MS3.9/4,Error ellipse: s-maj=43.2km
s-min=19.6km az=55.0
*JMA **25** 11:10:55.4±0.2,34.°7N±0.°7×140.°1E±0.°7,h61km±2km,*
MV2.8/34,SE OFF BOSO PENINSULA
*NEIC **25** 11:10:56.4±2.7,34.°79N±0.°05×140.°2E±0.°1,h64km±9km,*
mb4.2/7,Error ellipse: s-maj=12.7km s-min=7.3km
az=95.0
ISC 25 11:10:55.8±0.8,34.°70N±0.°04×140.°14E±0.°04,h63km±7km,
n40,σ0°95/47,mb4.1/7,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.32	72	*i* P	Pn	11 11 06.2	+0.1
BSO4	Boso 4	0.33	30	*i* P	Pn	11 11 06.5	+0.1
TATJ	Tateyama 2	0.39	328	*i* P	Pn	11 11 07.2	+0.3
TATJ				S	Sn	11 11 16.0	+1.0
JKUC	kamogawauchiur	0.46	6	*i* P	Pn	11 11 07.2	-0.5
JKUC				S	Sn	11 11 16.2	-0.1
JIM2	Oshima 3	0.58	272	*i* P	Pn	11 11 08.1	-0.8
JIM2				S	Sn	11 11 17.4	-1.2
BSO1	Boso 1	0.70	94	P	Pn	11 11 09.5	-0.1
BSO1				X		11 11 20.5	
JTHY	Toshimahigashi	0.72	256	P	Pn	11 11 10.2	-0.3
JTHY				S	Sn	11 11 21.0	-0.3
JMKN	Mikurajimanish	0.93	209	P	Pn	11 11 12.8	-0.2
JMKN				S	Sn	11 11 25.1	-0.6
JOD2	Odawara 2	1.03	303	*i* P	Pn	11 11 13.4	-1.0
JOD2				S	Sn	11 11 26.7	-1.4
JIZS	Izushimoda	1.04	271	*i* P	Pn	11 11 13.9	-0.6
JIZS				S	Sn	11 11 27.4	-0.8
JFNN	Fujinakano	1.29	293	P	Pn	11 11 17.4	-0.3
JYT	Yasato	1.52	2	Pn	Pn	11 11 20.3	-0.6
JYN	Shimob	1.53	302	P	Pn	11 11 20.8	-0.3
JYN				S	Sn	11 11 39.9	-0.1
JHJ	Hachijo jima 2	1.61	191	Pn	Pn	11 11 20.8	-1.2
JHJ	2.3nm,0.3s,baz=297,slow=11,SNR=2.5			Sn	Sn	11 11 40.9	-0.9
	19nm,0.3s,baz=294,slow=24,SNR=7.5						
JHJ2	Mitsune	1.61	190	Pn	Pn	11 11 25.2	+3.1
JHJ2				Sn	Sn	11 11 41.6	-0.3
MJAR	Matsushiro Arr	2.42	320	Pn	Pn	11 11 33.5	+0.5
	1.4nm,0.3s,baz=168,slow=15,SNR=106						
MJAR				Sn	Sn	11 12 02.6	+1.1
	1.1nm,0.3s,baz=200,slow=39,SNR=7.9						
	8.9nm,0.3s						
MAJO	Matsushiro	2.42	320		Pn	11 11 33.7	+0.7
MJB9	Matsu-Tunnel	2.42	320		Pn	11 11 34.2	+1.1
JGF	Kuroka	2.45	292	Pn	Pn	11 11 34.9	+1.5
INU	Inuyama	2.64	285	Pn	Pn	11 11 37.1	+1.1
JMM	Marumori	3.20	9	Pn	Pn	11 11 44.4	+0.7
JSD	Sado	3.66	336	Pn	Pn	11 11 48.6	-1.3
JMN	Monobe	5.27	261	Pn	Pn	11 12 14.2	+2.1
JTM	Tenmabayashi	6.12	7	Pn	Pn	11 12 22.4	-1.2
ERM	Erimo	7.68	17	Pn	Pn	11 12 44.3	-0.6
JCJ	Chichijima	7.78	166	Pn	Pn	11 12 47.0	+0.5
MKAR	Makanchi Array	44.52	304	P	P	11 19 01.4	+0.4
	0.7nm,0.7s,baz=91,slow=6.1,SNR=1.8						
	0.7nm,0.7s						
HNR	Honiara	47.74	153	LR	LR	11 37 02.3	
	comp=Z,517nm,21.9s,baz=297,slow=33						
KDAK	Kodiak Island	49.53	41	LR	LR	11 42 14.0	
	comp=Z,48nm,20.9s,baz=264,slow=37						
N25K	Chitina, Valde	53.28	35	P	P	11 20 09.0	+1.0
N25K				IAmb	IAmb	11 20 13.5	
	comp=Z,1.5nm,0.9s						
WB0	Warramunga Arr	54.44	187	P	P	11 20 16.3	-0.5
WB0				IAmb	IAmb	11 20 28.5	
	comp=Z,3.3nm,1.1s						
WRAB	Tennant Creek	54.61	187	P	P	11 20 17.5	-0.5
WRAB				IAmb	IAmb	11 20 32.7	
	comp=Z,4.3nm,1.1s						
WR0	Warramunga Arr	54.62	186	P	P	11 20 17.4	-0.6
WR0				IAmb	IAmb	11 20 18.0	
	comp=Z,2.7nm,1.0s						
WB2	Warramunga Arr	54.62	187	P	P	11 20 17.6	-0.4
WB2				IAmb	IAmb	11 20 33.9	
	comp=Z,2.2nm,1.1s						
WRA	Warramunga Arr	54.62	187	P	P	11 20 17.4	-0.6
	comp=Z,1.2nm,0.7s,baz=0.4,slow=7.5,SNR=17						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	54.62	187	P	P	11 20 17.5	-0.6
ABKAR	Akbulak array	58.66	311	P	P	11 20 46.6	+0.1
AKTO	Aktyubinsk	59.47	313	LR	LR	11 45 40.3	
	comp=Z,44nm,18.0s,baz=37,slow=35						
ARCES	ARCESS Array B	65.81	339	P	P	11 21 33.8	-0.2
ANMO	Albuquerque	86.89	49	LR	LR	11 57 08.0	
	comp=Z,74nm,20.4s,baz=284,slow=31						

*NIED **25** 11:12:20.7,34.°67N×140.°11E,h62km,MW4.6,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^16Nm;
Mrr-0.29; Mθθ-0.06; Mφφ0.35; Mrθ-0.01; Mφθ-0.41; Mφr0.87;
Fault plane solution: M0 1.01000×10^16 NP1:
φs291.00000°,δ25.00000°,λ-156.00000°. NP2:
φs179.00000°,δ80.00000°,λ-67.00000°.
*JMA **25** 11:12:20.7±0.2,34.°7N±0.°7×140.°1E±0.°7,h62km±2km,*
MD4.5/34,MW4.6/34,SE OFF BOSO PENINSULA
JMA Felt III J1 at SE OFF BOSO PENINSULA .
*NEIC **25** 11:12:21.9±2.1,34.°70N±0.°05×140.°10E±0.°09,h55km±7km,*
mb4.7/21,Mwr4.5/11,Error ellipse: s-maj=10.6km
s-min=6.8km az=94.0
*IDC **25** 11:12:21.2±0.4,34.°63N×140.°09E,h56km±4km,mb3.8/16,*
mbtmp4.1/18,MS3.5/11,Error ellipse: s-maj=12.0km
s-min=5.0km az=86.0
*NEIC **25** 11:12:22,34.°69N×140.°08E,h51km,Moment Tensor*
Solution. Moment tensor: Scale 10^15Nm; Mrr-2.08;
Mθθ-0.25; Mφφ2.33; Mrθ1.04; Mφθ-4.07; Mφr5.94; Fault
plane solution: M0 7.61000×10^15 NP1:φs286.21000°,
δ35.03000°,λ-163.11000°. NP2:φs182.24000°,
δ80.40000°,λ-56.15000°. Principal axes: T 7.5362,
Plg27.0000°, Azm246.0000°; N 0.1431, Plg33.0000°,
Azm356.0000°; P -7.6793, Plg44.0000°, Azm126.0000°;
ISC 25 11:12:21.3±0.5,34.°67N±0.°04×140.°11E±0.°04,h56km±4km,
n136,σ0°95/105,mb4.3/28,MS3.7/6,8D,Near east coast
of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.35	68	P	Pn	11 12 31.7	+0.5
BSO4	Boso 4	0.37	30	P	Pn	11 12 32.0	+0.5
TATJ	Tateyama 2	0.40	333	P	Pn	11 12 32.7	+0.8
TATJ				S	Sn	11 12 41.7	+2.1
TATJ	Tateyama 2	0.40	333	A	A	11 12 32.7	
	comp=E,1μm,0.7s,comp=E,549nm,0.5s						
JKUC	kamogawauchiur	0.49	8	*i* P	Pn	11 12 32.6	-0.2
JKUC				S	Sn	11 12 41.6	+0.4
JKUC	kamogawauchiur	0.49	8	A	A	11 12 32.6	
	comp=E,264nm,0.9s,comp=E,91nm,0.6s						
JIM2	Oshima 3	0.56	275	⇓*i* P	Pn	11 12 33.6	-0.1
JIM2				⇓S	Sn	11 12 42.8	+0.2
JIM2	Oshima 3	0.56	275	A	A	11 12 33.6	
	comp=E,85nm,0.6s,comp=E,99nm,1.8s						
JYO	Yokosk	0.66	326	A	A	11 12 34.8	
	comp=E,131nm,1.1s,comp=E,93nm,1.7s						
JTHY	Toshimahigashi	0.70	258	*i* P	Pn	11 12 35.7	+0.4
JTHY				S	Sn	11 12 46.8	+1.3
JTHY	Toshimahigashi	0.70	258	A	A	11 12 35.7	
	comp=E,51nm,1.0s,comp=E,91nm,2.0s						
BSO1	Boso 1	0.71	91	*i* P	Pn	11 12 35.0	+0.1
JCN	Nagara	0.75	6	A	A	11 12 35.8	
	comp=E,82nm,3.6s,comp=E,51nm,0.8s						
JNIO	Niijimaoohara	0.76	246	A	A	11 12 35.9	
	comp=E,56nm,2.4s,comp=E,61nm,1.7s						
JMYK	Miyake Tsubota	0.77	218	A	A	11 12 36.0	
	comp=E,27nm,0.7s,comp=E,24nm,1.0s						
JSKK	Shikinejimakit	0.82	246	A	A	11 12 36.6	
	comp=E,47nm,1.6s,comp=E,35nm,1.9s						
JMKN	Mikurajimanish	0.89	209	*i* P	Pn	11 12 38.3	+0.5
JMKN				S	Sn	11 12 50.7	+0.9
JMKN	Mikurajimanish	0.89	209	A	A	11 12 38.3	
	comp=E,16nm,1.7s,comp=E,11nm,1.7s						
JKO	Kozu shima	0.94	239	A	A	11 12 38.2	
	comp=E,57nm,4.2s,comp=E,43nm,2.2s						
JHTM	Izuhatsuma	0.95	288	A	A	11 12 38.4	
	comp=E,39nm,0.7s,comp=E,35nm,1.0s						
JSMT	Sammumatsuo	1.01	16	A	A	11 12 39.1	
	comp=E,58nm,0.7s,comp=E,58nm,0.9s						
JIZS	Izushimoda	1.02	273	⇓*i* P	Pn	11 12 39.2	-0.2
JIZS				⇓S	Sn	11 12 53.1	+0.3
JIZS	Izushimoda	1.02	273	A	A	11 12 39.2	
	comp=E,45nm,0.8s,comp=E,17nm,1.3s						
JOD2	Odawara 2	1.03	305	⇓*i* P	Pn	11 12 38.8	-0.7
JOD2				⇓S	Sn	11 12 52.3	-0.8
JOD2	Odawara 2	1.03	305	A	A	11 12 38.8	
	comp=E,15nm,1.4s,comp=E,12nm,2.0s						
TOK	Tokyo	1.05	344	A	A	11 12 39.8	
	comp=E,112nm,1.0s,comp=E,60nm,0.6s						
JSGW	Sagamiharawaka	1.19	322	A	A	11 12 41.6	
	comp=E,9.0nm,1.0s,comp=E,10.0nm,2.7s						
CHOJ	Chosi	1.20	31	A	A	11 12 41.7	
	comp=E,11nm,2.6s,comp=E,12nm,3.5s						
JFNN	Fujinakano	1.28	294	*i* P	Pn	11 12 42.9	0.0
JFNN				S	Sn	11 12 59.9	+0.7
JFNN	Fujinakano	1.28	294	A	A	11 12 42.9	
	comp=E,17nm,2.6s,comp=E,14nm,2.1s						
JIHU	Itakohorinouch	1.33	15	A	A	11 12 43.6	
	comp=E,51nm,1.3s,comp=E,41nm,2.8s						
JHU	Hanno	1.36	330	A	A	11 12 44.0	
	comp=E,9.0nm,1.7s,comp=E,9.0nm,1.6s						
JYN	Shimob	1.53	303	⇓*i* P	Pn	11 12 46.2	-0.1
JYN				⇓S	Sn	11 13 05.6	+0.4
JYN	Shimob	1.53	303	A	A	11 12 46.2	
	comp=E,9.0nm,0.9s,comp=E,8.0nm,1.0s						
JYT	Yasato	1.55	2	P	Pn	11 12 46.2	-0.4
JYT				Sn	Sn	11 13 04.5	-1.2
JYT	Yasato	1.55	2	A	A	11 12 46.7	
	comp=E,20nm,0.5s,comp=E,11nm,1.6s						
JHJ	Hachijo jima 2	1.57	190	P	Pn	11 12 47.7	+0.8
	303nm,0.3s,baz=73,slow=8.5,SNR=23						
JHJ				S	Sn	11 13 05.1	-1.1
	1μm,0.4s,baz=188,slow=2.1,SNR=23						
JHJ				LR	LR	11 13 28.8	
	comp=Z,465nm,21.9s,baz=291,slow=44						
JHJ2	Mitsune	1.58	189		Pn	11 12 47.7	+0.8
JSG	Sagara	1.59	271	A	A	11 12 47.1	
	comp=E,13nm,2.5s,comp=E,12nm,3.1s						
SHZ3	Shizuoka 3	1.61	285	A	A	11 12 47.5	
	comp=E,15nm,1.3s,comp=E,19nm,1.1s						
JRY	Ryogami san	1.67	324	A	A	11 12 48.3	
	comp=E,4.0nm,3.7s,comp=E,4.0nm,6.4s						
JHYU	Hitachinakayam	1.71	13	A	A	11 12 48.8	
	comp=E,9.0nm,3.4s,comp=E,9.0nm,6.5s						
JKKS	Kakegawashinom	1.75	273	A	A	11 12 49.4	
	comp=E,9.0nm,3.6s,comp=E,11nm,5.3s						
JAG	Ashikaga	1.83	343	A	A	11 12 50.6	
	comp=E,6.0nm,5.8s,comp=E,5.0nm,3.9s						
JNY	Yasuok	1.97	291	A	A	11 12 52.5	
	comp=E,5.0nm,0.8s,comp=E,5.0nm,1.4s						
HMMJ	Hamamatsu 2	1.98	276	A	A	11 12 52.6	
	comp=E,3.0nm,6.3s,comp=E,4.0nm,3.4s						
JGK	Kuni	2.23	328	A	A	11 12 56.2	
	comp=E,3.0nm,1.7s,comp=E,4.0nm,2.9s						
JSB	Shiboa	2.30	356	A	A	11 12 57.1	
	comp=E,13nm,1.4s,comp=E,13nm,2.2s						
JNG	Nsakai	2.38	317	A	A	11 12 58.3	
	comp=E,3.0nm,1.0s,comp=E,5.0nm,1.2s						
MJAR	Matsushiro Arr	2.42	321	P	Pn	11 12 58.9	+0.4
	287nm,0.6s,baz=146,slow=11,SNR=157						
MJAR				S	Sn	11 13 28.4	+1.4
	208nm,0.6s,baz=11,slow=35,SNR=6.3						
MJAR				LR	LR	11 13 37.0	
	comp=Z,357nm,20.3s,baz=152,slow=31						
MAJO	Matsushiro	2.43	321	Pn	Pn	11 12 59.2	+0.7
MJB9	Matsu-Tunnel	2.43	321	Pn	Pn	11 13 00.2	+1.6
JGF	Kuroka	2.44	293	Pn	Pn	11 12 60.0	+1.2
INU	Inuyama	2.63	286		Pn	11 13 02.2	+0.9
INU	Inuyama	2.63	286	P	P	11 13 02.5	-2.2
JFY	Yanaizu	2.75	353	A	A	11 13 03.5	
	comp=E,4.0nm,3.3s,comp=E,3.0nm,4.3s						
JOTO	OTAMA OYAMA	2.89	3	A	A	11 13 05.4	
	comp=E,11nm,3.9s,comp=E,11nm,1.4s						
JJN	Nakama	2.90	327	A	A	11 13 05.5	
	comp=E,3.0nm,2.4s,comp=E,3.0nm,2.0s						
JMM	Marumori	3.23	10		Pn	11 13 09.7	+0.2
JSD	Sado	3.67	337		Pn	11 13 14.5	-1.1
JMN	Monobe	5.25	261	Pn	Pn	11 13 37.6	+0.3
JHS	Saijyo	5.76	275	Pn	Pn	11 13 44.4	+0.2
JTM	Tenmabayashi	6.15	7		Pn	11 13 50.0	+0.5
ERM	Erimo	7.71	17	Pn	Pn	11 14 10.8	0.0
JCJ	Chichijima	7.76	166	P	Pn	11 14 10.6	-1.1
	72nm,0.6s,baz=270,slow=21,SNR=5.5						
JCJ				LR	LR	11 16 41.4	
	comp=Z,110nm,21.0s,baz=112,slow=34						
JCJ	Chichijima	7.76	166	Pn	Pn	11 14 11.4	-0.2
JNU	Nakatsue	7.83	261	Pn	Pn	11 14 12.2	-0.5
JEW	Eniwo	8.22	7	Pn	Pn	11 14 17.8	-0.1
KSRS	Korea Array	10.25	289	P	Pn	11 14 48.4	+2.7
	9.0nm,1.0s,baz=106,slow=14,SNR=12						
KSRS				LR	LR	11 18 37.5	
	comp=Z,362nm,20.1s,baz=95,slow=37						
KSAR	Wonju Array Be	10.28	289	Pn	Pn	11 14 44.9	-1.1
USA0B	Ussuriysk Arra	11.39	329	Pn	Pn	11 15 00.7	-0.5
USRK	Ussuriysk Ar.	11.39	329	Pn	Pn	11 15 01.8	+0.6
JOW	Kunimi	12.83	236	LR	LR	11 19 49.7	
	comp=Z,238nm,21.7s,baz=68,slow=35						
KLR	Kul'dur	15.80	340	LR	LR	11 21 31.9	
	comp=Z,62nm,18.7s,baz=120,slow=35						
H11N2	WAKE ISLAND Hy	27.98	115	T	T	11 47 55.8	
	baz=308,slow=75,SNR=298						
H11N1	WAKE ISLAND Hy	27.98	115	T	T	11 47 55.3	
	baz=308,slow=75,SNR=349						
H11N3	WAKE ISLAND Hy	27.99	115	T	T	11 47 57.1	
	baz=308,slow=75,SNR=345						
SONM	Songino Array	28.31	308	P	P	11 18 10.7	+1.0
	1.1nm,0.9s,baz=108,slow=9.3,SNR=3.3						
SONM				LR	LR	11 30 07.6	
	comp=Z,242nm,18.1s,baz=102,slow=38						
	1.1nm,0.9s						
H11S3	WAKE ISLAND Hy	28.59	117	T	T	11 48 38.3	
	baz=310,slow=76,SNR=88						
H11S1	WAKE ISLAND Hy	28.59	117	T	T	11 48 38.4	
	baz=310,slow=76,SNR=105						
H11S2	WAKE ISLAND Hy	28.60	117	T	T	11 48 39.8	
	baz=310,slow=76,SNR=76						
CMAR	Chiang Mai Arr	39.91	257	LR	LR	11 36 28.5	
	comp=Z,81nm,21.2s,baz=75,slow=36						
ZAA0	Zalesovo Array	42.76	314	P	P	11 20 12.6	-0.4
ZALV	Zalesovo Beam	42.76	314	P	P	11 20 12.7	-0.3
	4.5nm,0.8s,baz=91,slow=6.1,SNR=14						
ZALV				pP	pP	11 20 27.1	-0.3
	0.7nm,0.3s,baz=115,slow=6.8,SNR=3.1						
	4.5nm,0.8s						
ZALV	Zalesovo Beam	42.76	314	P	P	11 20 13.5	+0.5
BRDH	Bariadhala	43.80	267	LR	LR	11 42 01.2	
	comp=Z,129nm,18.7s,baz=92,slow=41						
MK31	Makanchi Array	44.52	304		P	11 20 26.5	-0.7
MKAR	Makanchi Array	44.52	304	P	P	11 20 26.8	-0.4
	3.6nm,0.8s,baz=89,slow=9.5,SNR=11						
	3.6nm,0.8s						
MKAR	Makanchi Array	44.52	304		P	11 20 26.4	-0.8
MAKZ	Makanchi	44.73	304	P	P	11 20 27.4	-1.5
KURK	Kurchatov	46.59	310		P	11 20 42.9	-0.6
KURBB	Kurchatov Arra	46.65	310	P	P	11 20 43.5	-0.5
	4.2nm,0.9s,baz=86,slow=8.1,SNR=16						
KURBB				pP	pP	11 20 57.1	-1.6
	6.1nm,1.0s,baz=87,slow=8.1,SNR=9.7						
	4.2nm,0.9s						
BATI	Baumata	47.28	202	LR	LR	11 38 44.7	
	comp=Z,36nm,21.4s,baz=78,slow=34						
MTN	Manton Dam	48.02	192	P	P	11 20 55.3	+0.5
COEN	Coen	48.45	176	P	P	11 20 59.5	+1.2
COEN				IAmb	IAmb	11 21 09.7	
	comp=Z,17nm,1.3s						
PSI	Prapat	49.68	240	LR	LR	11 40 43.5	
	comp=Z,42nm,21.9s,baz=46,slow=34						
TOLK	Toolik Lake Re	51.05	26	P	P	11 21 18.9	+1.4
TOLK				IAmb	IAmb	11 21 40.0	
	comp=Z,8.5nm,1.2s						
BVAR	Borovoye Array	51.40	314	P	P	11 21 18.9	-1.4
	comp=Z,1.2nm,0.7s,baz=88,slow=7.7,SNR=6.9						
	comp=Z,1.2nm,0.7s						
BRVK	Borovoye	51.46	314	P	P	11 21 19.9	-0.8
BRVK				IAmb	IAmb	11 21 40.7	
	comp=Z,4.5nm,1.0s						
MDM	Murphy Dome	51.48	31	P	P	11 21 21.8	+1.1
MDM				IAmb	IAmb	11 21 40.2	
	comp=Z,7.6nm,1.0s						
ILAR	Eielson Array	52.05	31	P	P	11 21 25.4	+0.4
	comp=Z,0.7nm,1.0s,baz=279,slow=9.1,SNR=4.9						
ILAR				pP	pP	11 21 39.5	+0.3
	comp=Z,2.4nm,1.0s,baz=261,slow=5.1,SNR=7.8						
	comp=Z,0.7nm,1.0s						
BMAR	Burnt Mountain	52.91	28	P	P	11 21 31.8	+0.5
KK31	Karatay Array	53.42	301	P	P	11 21 36.0	+0.6
KK31				IAmb	IAmb	11 21 37.4	
	comp=Z,9.7nm,1.1s						
KKAR	Karatay Array	53.42	301	P	P	11 21 34.2	-1.2
K27K	Chicken	54.19	32	P	P	11 21 41.3	+0.6
K27K				IAmb	IAmb	11 22 00.7	
	comp=Z,4.3nm,1.1s						
WB0	Warramunga Arr	54.41	187	P	P	11 21 41.6	-1.2
BCAR	Beaver Creek A	54.44	33	P	P	11 21 44.3	+1.7
WRAB	Tennant Creek	54.58	187	P	P	11 21 43.1	-0.9
WRAB				IAmb	IAmb	11 22 08.7	
	comp=Z,10nm,0.9s						
WR0	Warramunga Arr	54.59	186	P	P	11 21 42.8	-1.3
WR0				IAmb	IAmb	11 22 08.9	
	comp=Z,8.9nm,0.8s						
WB2	Warramunga Arr	54.59	187	P	P	11 21 43.0	-1.1
WRA	Warramunga Arr	54.59	187	P	P	11 21 42.6	-1.4
	comp=Z,1.8nm,0.3s,baz=1.9,slow=7.7,SNR=42						
WRA				pP	pP	11 21 57.6	-0.9
	comp=Z,1.5nm,0.5s,baz=3.2,slow=7.6,SNR=4.1						
	comp=Z,1.8nm,0.3s						
WRA	Warramunga Arr	54.59	187	P	P	11 21 42.9	-1.2
LOGN	Logan Glacier	55.14	36	P	P	11 21 49.0	+1.1
LOGN				IAmb	IAmb	11 21 57.9	
	comp=Z,18nm,1.5s						
EPYK	Eagle Plains	56.10	29	P	P	11 21 55.7	+1.2
INK	Inuvik	56.97	26	P	P	11 22 00.7	+0.2
	comp=Z,1.4nm,0.8s,baz=326,slow=3.6,SNR=2.2						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	58.32	187	P	P	11 22 10.4	-0.1
	comp=Z,1.8nm,0.9s,baz=13,slow=5.5,SNR=9.9						
ASAR				pP	pP	11 22 26.0	+0.9
	comp=Z,0.5nm,0.5s,baz=16,slow=12,SNR=2.9						
	comp=Z,1.8nm,0.9s						
ABKAR	Akbulak array	58.67	311	P	P	11 22 12.5	-0.2
FINES	FINESS Array B	70.41	332	P	P	11 23 30.2	+1.1
	comp=Z,2.3nm,0.9s,baz=72,slow=6.2,SNR=4.9						
FINES				pP	pP	11 23 45.9	+1.4
	comp=Z,5.3nm,0.9s,baz=114,slow=4.6,SNR=3.2						
	comp=Z,2.3nm,0.9s						
FINES	FINESS Array B	70.41	332	P	P	11 23 29.9	+0.8
KBZ	Khabaz	71.64	311	P	P	11 23 37.1	+0.2
	comp=Z,3.9nm,1.0s,baz=31,slow=5.9,SNR=2.8						
	comp=Z,3.9nm,1.0s						
AKASG	Malin Array Be	75.51	322	P	P	11 23 58.2	-1.3
	comp=Z,0.6nm,0.3s,baz=47,slow=6.5,SNR=5.5						
AKASG				pP	pP	11 24 14.6	+0.1
	comp=Z,1.5nm,0.6s,baz=49,slow=6.0,SNR=3.6						
	comp=Z,0.6nm,0.3s						
NB2	NORSAR Subarra	75.95	337	P	P	11 24 17.9	+16
	comp=Z,2.4nm,0.9s,baz=43,slow=5.3						
KVN	Kaiserville	77.04	51	P	P	11 24 09.5	+0.8
LHV	Little Huntoon	77.23	52	P	P	11 24 10.9	+1.5
LHV				IAmb	IAmb	11 24 12.7	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	77.26	52	P	P	11 24 11.0	+1.1
	comp=Z,2.2nm,1.0s,baz=282,slow=6.2,SNR=7.9						
NVAR				pP	pwP	11 24 26.9	-0.8
	comp=Z,0.8nm,0.8s,baz=293,slow=5.8,SNR=3.4						
	comp=Z,2.2nm,1.0s						
NVAR	Mina Array Bea	77.26	52	P	P	11 24 10.8	+0.9
BRTR	Keskin Array B	79.62	311	P	P	11 24 24.2	+1.4
	comp=Z,0.8nm,0.7s,baz=98,slow=3.2,SNR=3.0						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	80.08	45	P	P	11 24 25.4	0.0
	comp=Z,0.4nm,0.8s,baz=354,slow=3.0,SNR=3.8						
PDAR				pP	pwP	11 24 42.2	-1.0
	comp=Z,0.9nm,0.9s,baz=260,slow=3.6,SNR=2.4						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	80.08	45	P	P	11 24 25.7	+0.3
RAYN	Ar Rayn	80.56	292	P	P	11 24 27.2	-0.9
RAYN				IAmb	IAmb	11 24 46.2	
	comp=Z,4.3nm,1.1s						
TXAR	Lajitas Array	92.40	52	P	P	11 25 27.1	+0.8
	comp=Z,1.4nm,1.1s,baz=248,slow=1.3,SNR=6.0						
TXAR				pP	pwP	11 25 43.3	-0.8

1.6nm,0.6s,baz=298,slow=6.2,SNR=5.2
1.6nm,0.6s
ARCES ARCESS Array B 72.81 340 P **P 11 48 48.2 +0.4**
4.0nm,0.9s,baz=78,slow=11,SNR=4.1
4.0nm,0.9s
FINES FINESS Array B 77.05 333 P **P 11 49 11.5 -0.3**
2.0nm,0.7s,baz=54,slow=5.9,SNR=9.8
2.0nm,0.7s
NVAR Mina Array Bea 81.59 51 P **P 11 49 39.9 +3.1**
0.7nm,0.6s,baz=302,slow=5.9,SNR=9.4
0.7nm,0.6s
NOA NORSAR Array B 82.81 338 P **P 11 49 41.2 -1.2**
0.4nm,0.4s,baz=50,slow=5.1,SNR=2.8
0.4nm,0.4s
TXAR Lajitas Array 96.70 52 P **P 11 50 51.6 +3.2**
0.1nm,0.5s,baz=299,slow=4.0,SNR=2.0
0.1nm,0.5s

NOU ***25*** *11:44:35.0, 37°.16S×179°.66E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
WEL ***25*** *11:44:43.6±1.0, 37°.5±.5°×17°.9E±.°, h21km±6km, M2.9/14, ML3.2/18, MLv2.9/14, Error ellipse: s-maj=0.0km s-min=0.0km az=103.7*
ISC 25 11:44:41.2±2.8, 37°.17S±0°.07×179°.2E±0°.1, h25km±14km, n50, σ1§16/69, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.80**	**240**	P	**Pb**	**11 44 56.1**	**-0.4**
MXZ				S	**Sb**	**11 45 04.9**	**-2.1**
MXZ	**Matakaoa Point**	**0.80**	**240**	P	**Pb**	**11 44 56.3**	**-0.2**
WMGZ	**Waiomatatini S**	**0.89**	**223**	P	**Pn**	**11 44 59.3**	**+1.1**
WMGZ				S	**Sn**	**11 45 11.2**	**+0.8**
PKGZ	**Pakihiroa**	**1.14**	**230**	P	**Pb**	**11 45 02.5**	**+0.3**
PKGZ				S	**Sb**	**11 45 16.9**	**+0.3**
PUZ	**Puketiti**	**1.17**	**219**	P	**Pb**	**11 45 03.0**	**+0.3**
PUZ				S	**Sb**	**11 45 18.0**	**+0.6**
HAZ	**Te Kaha**	**1.26**	**242**	P	**Pn**	**11 45 03.1**	**-0.2**
HAZ				S	**Sb**	**11 45 20.4**	**+0.3**
TWGZ	**Tauwhareparae**	**1.39**	**223**	P	**Pb**	**11 45 06.6**	**+0.1**
TWGZ				S	**Sb**	**11 45 24.9**	**+1.1**
RUGZ	**Raukumara Rang**	**1.44**	**236**	P	**Pb**	**11 45 07.3**	**-0.1**
CNGZ	**Carnagh Statio**	**1.52**	**210**	P	**Pb**	**11 45 08.8**	**0.0**
TKGZ	**Te Karaka**	**1.65**	**219**	P	**Pn**	**11 45 09.4**	**+0.8**
TKGZ				S	**Sn**	**11 45 29.9**	**+0.8**
MWZ	**Matawai**	**1.76**	**228**	P	**Pn**	**11 45 11.0**	**+0.9**
MWZ				S	**Sn**	**11 45 31.5**	**-0.2**
RIGZ	**Rimuhau**	**1.90**	**216**	P	**Pn**	**11 45 13.2**	**+1.0**
RAGZ	**Rawiri**	**1.93**	**226**	P	**Pn**	**11 45 13.6**	**+1.1**
URZ	**Urewera**	**1.97**	**236**	P	**Pn**	**11 45 14.3**	**+1.3**
URZ				S	**Sn**	**11 45 36.4**	**-0.6**
URZ	**Urewera**	**1.97**	**236**	P	**Pn**	**11 45 14.4**	**+1.3**
SNGZ	**Shannon Statio**	**2.17**	**222**	P	**Pn**	**11 45 16.9**	**+1.1**
SNGZ				S	**Sn**	**11 45 43.5**	**+1.5**
KNZ	**Kokohu**	**2.20**	**212**	P	**Pn**	**11 45 16.2**	**0.0**
KNZ				S	**Sn**	**11 45 42.0**	**-0.6**
MHGZ	**Mahia Peninsul**	**2.22**	**207**	P	**Pn**	**11 45 17.2**	**+0.7**
RTZ	**Ruatahuna**	**2.27**	**230**	P	**Pn**	**11 45 18.2**	**+1.1**
MUGZ	**Murupara**	**2.32**	**235**	P	**Pn**	**11 45 18.5**	**+0.7**
MUGZ				S	**Sn**	**11 45 44.3**	**-1.2**
TARZ	**Mount Tarawera**	**2.38**	**243**	P	**Pn**	**11 45 20.4**	**+1.7**
RAHZ	**Arahi**	**2.41**	**223**	P	**Pn**	**11 45 20.1**	**+1.0**
RAHZ				S	**Sn**	**11 45 48.8**	**+1.0**
WHHZ	**Waihua**	**2.45**	**218**	P	**Pn**	**11 45 20.3**	**+0.7**
WHHZ				S	**Sn**	**11 45 49.3**	**+0.5**
MTHZ	**Maungataniwha**	**2.50**	**227**	P	**Pn**	**11 45 21.5**	**+1.1**
MTHZ				S	**Sn**	**11 45 50.3**	**+0.2**
ARHZ	**Aropaoanui**	**2.71**	**219**	P	**Pn**	**11 45 23.6**	**+0.4**
ARHZ				S	**Sn**	**11 45 55.7**	**+0.5**
KUZ	**Kuaotunu**	**2.81**	**278**	P	**Pn**	**11 45 25.4**	**+0.9**
KUZ				S	**Sn**	**11 45 52.9**	**-4.6**
KUZ	**Kuaotunu**	**2.81**	**278**	P	**Pn**	**11 45 25.6**	**+1.1**
BKZ	**Black Stump Fm**	**2.91**	**226**	P	**Pn**	**11 45 26.5**	**+0.5**
BKZ				S	**Sn**	**11 45 59.2**	**-1.1**
BKZ	**Black Stump Fm**	**2.91**	**226**	P	**Pn**	**11 45 26.5**	**+0.5**
KWHZ	**Kaweka Forest**	**3.13**	**223**	P	**Pn**	**11 45 28.8**	**-0.3**
KWHZ				S	**Sn**	**11 46 05.1**	**-0.5**
KAHZ	**Kahuranaki**	**3.19**	**214**	P	**Pn**	**11 45 29.4**	**-0.4**
MKAZ	**Moumakai**	**3.22**	**270**	P	**Pn**	**11 45 30.6**	**+0.5**
TMVZ	**Te Maari**	**3.36**	**234**	P	**Pn**	**11 45 32.5**	**+0.2**
TMVZ				S	**Sn**	**11 46 09.4**	**-2.1**
ETVZ	**East Tongariro**	**3.37**	**233**	P	**Pn**	**11 45 32.9**	**+0.5**
BHHZ	**Black Hill Sta**	**3.38**	**226**	P	**Pn**	**11 45 32.9**	**+0.5**
ETAZ	**East Tamaki Re**	**3.41**	**272**	P	**Pn**	**11 45 34.7**	**+1.9**
MOVZ	**Moawhango**	**3.51**	**229**	P	**Pn**	**11 45 34.5**	**+0.3**
WPHZ	**Waipukurau**	**3.60**	**216**	P	**Pn**	**11 45 34.6**	**-0.9**
PNHZ	**Pukenui**	**3.60**	**220**	P	**Pn**	**11 45 34.9**	**-0.7**
HIZ	**Hauiti**	**3.68**	**247**	P	**Pn**	**11 45 38.5**	**+2.0**
RVAZ	**Riverhead Bore**	**3.71**	**275**	P	**Pn**	**11 45 37.5**	**+0.6**
TSZ	**Takapari Road**	**3.83**	**220**	P	**Pn**	**11 45 37.6**	**-1.1**
WAZ	**Wanganui**	**4.19**	**231**	P	**Pn**	**11 45 44.3**	**+0.8**
BFZ	**Birch Farm**	**4.19**	**212**	P	**Pn**	**11 45 41.6**	**-1.9**
BFZ	**Birch Farm**	**4.19**	**212**	P	**Pn**	**11 45 42.6**	**-0.9**
TIWZ	**Tintock**	**4.43**	**215**	P	**Pn**	**11 45 45.3**	**-1.5**
MRZ	**Mangatainoka R**	**4.48**	**218**	P	**Pn**	**11 45 45.5**	**-2.1**
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	**11 45 54.7**	**+1.2**
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	**11 45 55.1**	**+1.5**
RIZ	**Raoul Island**	**8.26**	**18**	P	Pn	**11 46 44.4**	**+4.9**

MOS ***25*** *11:46:09.5±1.5, 16°.71S×174°.07W, h110km, mb4.9/28, Error ellipse: s-maj=9.3km s-min=7.3km az=65.3*
IDC ***25*** *11:46:09.8±2.0, 16°.72S×174°.10W, h104km±17km, mb4.4/19, mbtmp4.8/21, MS3.5/15, Error ellipse: s-maj=14.8km s-min=11.5km az=126.0*
NEIC ***25*** *11:46:10.4±1.9, 16°.68S±0°.07×174°.05W±0°.08, h110km±4km, mb4.9/255, Error ellipse: s-maj=10.7km s-min=10.2km az=68.0*
BJI ***25*** *11:46:11.8±0.0, 16°.54S×173°.47W, h148km, mb5.0/36, mB5.1/21*
NOU ***25*** *11:46:14.6, 16°.84S×173°.78W, h161km, mb5.1/76, Tonga Islands*
GCMT ***25*** *11:46:15.4±0.2, 16°.72S±0°.02×173°.69W±0°.02, h162km±2km, MW5.1/114, Moment Tensor Solution. s40, c52; s114, c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.38±.15; $M_{\theta\theta}$-2.16±.21; $M_{\phi\phi}$0.78±.19; $M_{r\theta}$3.40±.13; $M_{\theta\phi}$-1.23±.15; $M_{\phi r}$3.23±.11; Best double couple: $M_0$5.17300×10^{16} NP1:ϕ_p46.00000°, δ80.00000°, λ74.00000°. NP2:ϕ_p285.00000°, δ18.00000°, λ148.00000°. Principal axes: T 4.8370, Plg52.0000°, Azm298.0000°; N 0.6730, Plg15.0000°, Azm49.0000°; P -5.5080, Plg34.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 11:46:09.5±0.3, 16.79S±0°.04×173°.98W±0°.04, h109km±2km, h110km:pP-P, n995, σ1§21/991, mb5.0/233, 71C-26D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.57**	**37**	P	**Pn**	**11 47 04.6**	**+1.4**
	2μm,0.3s,baz=199,slow=2.4,SNR=1166						
AFI				S	**Sn**	**11 47 42.3**	**-2.3**
	4μm,0.3s,baz=52,slow=22,SNR=24						
AFI				LR	LR	11 47 53.3	
	comp=Z,145nm,18.4s,baz=152,slow=29						
AFI	**Afiamalu**	**3.57**	**37**	P	**Pn**	**11 47 05.4**	**+2.2**
NIUE	**Niue**	**4.47**	**121**	P	**Pn**	**11 47 18.2**	**+3.0**
	baz=4.5,SNR=321						
NIUE	**Niue**	**4.47**	**121**	Pn	**Pn**	**11 47 18.4**	**+3.1**
NIUE	**Niue**	**4.47**	**121**	P	**Pn**	**11 47 19.6**	**+4.3**
FUTU	**Fugatoga**	**4.70**	**301**	P	Pn	11 47 26.6	+8.3
MSVF	**Nonsavu**	**7.67**	**262**	P	Pn	11 48 07.3	+8.7
	195nm,0.8s,baz=108,slow=14,SNR=72						
MSVF	**Nonsavu**	**7.67**	**262**	*d*iP	Pn	11 48 05.6	+6.9
MSVF	**Nonsavu**	**7.67**	**262**	P	Pn	11 48 07.3	+8.6
FUNA	**Funafuti**	**10.57**	**320**	Pn	**Pn**	**11 48 38.8**	**+0.8**
FUNA	**Funafuti**	**10.57**	**320**	P	Pn	11 48 43.4	+5.4
RAO	**Raoul Island**	**12.92**	**196**	P	**Pn**	**11 49 08.7**	**-0.3**
	202nm,0.3s,baz=233,slow=8.0,SNR=5.4						
RAO				S	**Sn**	**11 51 22.7**	**-8.5**
	304nm,0.4s,baz=69,slow=23,SNR=5.7						
RAO	**Raoul Island**	**12.92**	**196**	Pn	**Pn**	**11 49 08.8**	**-0.2**
RAO	**Raoul Island**	**12.92**	**196**	P	**Pn**	**11 49 08.8**	**-0.2**
GLKZ	**Green Lake**	**12.93**	**196**	P	**Pn**	**11 49 07.7**	**-1.5**
RAR	**Rarotonga**	**14.13**	**110**	P	**Pn**	**11 49 26.0**	**+1.2**
	49nm,0.8s,baz=267,slow=7.8,SNR=12						
RAR				S	**Sn**	**11 51 59.2**	**-1.5**
	9.5nm,0.4s,baz=345,slow=20,SNR=1.4						
RAR				LR	LR	11 54 07.0	
	comp=Z,188nm,20.7s,baz=267,slow=33						
RAR	**Rarotonga**	**14.13**	**110**	Pn	**Pn**	**11 49 24.7**	**-0.2**
RAR	**Rarotonga**	**14.13**	**110**	P	**Pn**	**11 49 26.6**	**+1.7**
RTV	**Rentapao**	**16.84**	**264**	P	**P**	**11 50 03.4**	**+4.4**
DVP	**Devils Point**	**17.06**	**264**	P	**P**	**11 50 05.8**	**+4.3**
MARNC	**Mare, Loyalty**	**17.62**	**252**	P	**P**	**11 50 06.8**	**-0.8**
MARNC	**Mare, Loyalty**	**17.62**	**252**	P	**Pn**	**11 50 12.0**	**+3.8**
LIFNC	**LIFOU**	**18.22**	**255**	P	**P**	**11 50 14.2**	**0.0**
YATNC	**Mamie plateau,**	**18.78**	**251**	P	**Pn**	**11 50 24.6**	**+2.5**
OUENC	**Ouen Island, N**	**18.91**	**250**	P	**P**	**11 50 22.0**	**+0.2**
OUENC	**Ouen Island, N**	**18.91**	**250**	P	**Pn**	**11 50 25.4**	**+1.8**
DZM	**Mont Dzumac**	**19.19**	**251**	*e*Pn	**P**	**11 50 25.8**	**+0.9**
	209nm,1.1s						
DZM				*e*LR	LR	11 55 07.9	
	comp=Z,255nm,26.0s						
DZM	**Mont Dzumac**	**19.19**	**251**	P	**Pn**	**11 50 27.3**	**+0.3**
	57nm,0.9s,baz=96,slow=16,SNR=16						
DZM	**Mont Dzumac**	**19.19**	**251**	P	**P**	**11 50 24.4**	**-0.5**
DZM	**Mont Dzumac**	**19.19**	**251**	P	**Pn**	**11 50 28.7**	**+1.7**
ONTNC	**Ouen Toro**	**19.23**	**250**	P	**P**	**11 50 25.8**	**+0.5**
ONTNC	**Ouen Toro**	**19.23**	**250**	P	**Pn**	**11 50 29.4**	**+2.0**
KOUNC	**Koumac, New Ca**	**20.93**	**256**	P	**P**	**11 50 44.1**	**+0.6**
KOUNC	**Koumac, New Ca**	**20.93**	**256**	P	Pn	11 50 47.7	+0.5
KUZ	**Kuaotunu**	**21.87**	**203**	P	**P**	**11 50 56.4**	**+3.0**
KUZ	**Kuaotunu**	**21.87**	**203**	P	**P**	**11 50 56.0**	**+2.6**
WMGZ	**Waiomatatini S**	**21.99**	**196**	P	**P**	**11 50 57.8**	**+3.1**
WMGZ				S	**S**	**11 54 47.2**	**-3.4**
HAZ	**Te Kaha**	**22.11**	**198**	P	**P**	**11 50 57.6**	**+1.6**
HAZ				S	**S**	**11 54 52.3**	**-0.3**
PKGZ	**Pakihiroa**	**22.15**	**197**	P	**P**	**11 50 59.8**	**+3.4**
PKGZ				S	**S**	**11 54 46.5**	**-6.9**
TARA	**Tarawa**	**22.19**	**323**	P	**P**	**11 50 56.0**	**-0.9**
TARA	**Tarawa**	**22.19**	**323**	P	**P**	**11 50 58.0**	**+1.0**
PUZ	**Puketiti**	**22.27**	**196**	P	**P**	**11 50 59.1**	**+1.4**
PUZ				S	**S**	**11 54 51.1**	**-4.2**
RUGZ	**Raukumara Rang**	**22.33**	**198**	P	**P**	**11 51 00.6**	**+2.1**
RUGZ				S	**S**	**11 54 56.4**	**-0.2**
MKAZ	**Moumakai**	**22.39**	**203**	P	**P**	**11 51 01.6**	**+2.7**
TWGZ	**Tauwhareparae**	**22.44**	**197**	P	**P**	**11 51 02.3**	**+2.8**
TWGZ				S	**S**	**11 54 57.5**	**-0.7**
CNGZ	**Carnagh Statio**	**22.67**	**196**	P	**P**	**11 51 04.5**	**+2.8**
CNGZ				S	**S**	**11 55 05.6**	**+3.9**
MWZ	**Matawai**	**22.72**	**198**	P	**P**	**11 51 04.7**	**+2.5**
MWZ				S	**S**	**11 55 00.5**	**-2.1**
TKGZ	**Te Karaka**	**22.73**	**197**	P	**P**	**11 51 05.9**	**+3.7**
TKGZ				S	**S**	**11 55 00.7**	**-1.9**
URZ	**Urewera**	**22.77**	**198**	P	**P**	**11 51 02.7**	**0.0**
	23nm,0.3s,baz=357,slow=3.5,SNR=36						
URZ				S	**S**	**11 55 00.8**	**-2.5**
	11nm,0.9s,baz=45,slow=20,SNR=2.3						
	23nm,0.3s						
URZ	**Urewera**	**22.77**	**198**	P	**P**	**11 51 03.6**	**+0.9**
URZ	**Urewera**	**22.77**	**198**	P	**P**	**11 51 03.2**	**+0.5**
URZ				S	**S**	**11 55 03.3**	**0.0**
URZ	**Urewera**	**22.77**	**198**	P	**P**	**11 51 03.9**	**+1.2**
TOZ	**Tahuroa Road**	**22.82**	**202**	P	**P**	**11 51 05.7**	**+2.5**
RIGZ	**Rimuhau**	**23.00**	**197**	P	**P**	**11 51 08.4**	**+3.5**
RIGZ				S	**S**	**11 55 04.3**	**-2.8**
MUGZ	**Murupara**	**23.08**	**199**	P	**P**	**11 51 07.7**	**+2.0**
HRRZ	**Handcock Road**	**23.15**	**200**	P	**P**	**11 51 10.1**	**+3.7**
PAE	**Paea**	**23.32**	**96**	*e*P	**P**	**11 51 07.6**	**-0.5**
	14nm,1.2s						
KNZ	**Kokohu**	**23.32**	**197**	P	**P**	**11 51 10.9**	**+3.0**
KNZ				S	**S**	**11 55 12.6**	**+0.6**
PPT2	**Papeete2**	**23.32**	**96**	*e*T	T	12 15 01.0	
	8.7nm,0.4s						
PPT	**Papeete**	**23.32**	**95**	P	**P**	**11 51 09.8**	**+1.6**
	44nm,0.8s,baz=112,slow=19,SNR=6.0						
PPT				LR	LR	11 58 47.7	
	comp=Z,103nm,18.4s,baz=224,slow=32						
	44nm,0.8s						
PPTF	**Pamatai, Papee**	**23.33**	**96**	P	**P**	**11 51 08.9**	**+0.6**
RAHZ	**Arahi**	**23.39**	**198**	P	**P**	**11 51 10.4**	**+1.8**
RAHZ				S	**S**	**11 55 12.6**	**-0.6**
MTHZ	**Maungataniwha**	**23.40**	**198**	P	**P**	**11 51 11.6**	**+2.9**
MTHZ				S	**S**	**11 55 15.4**	**+1.9**
TIAR	**Tiarei**	**23.54**	**95**	*e*P	**P**	**11 51 09.3**	**-0.9**
	11nm,1.1s						
TIAR	**Tiarei**	**23.54**	**95**	*e*T	T	12 15 14.9	
	1.9nm,0.3s						
TVO	**Taravao**	**23.63**	**96**	*e*P	**P**	**11 51 10.7**	**-0.3**
	1.1nm,0.9s						
TVO	**Taravao**	**23.63**	**96**	*e*T	T	12 15 22.2	
	1.8nm,0.3s						
NMHZ	**Naumai**	**23.64**	**198**	P	**P**	**11 51 16.1**	**+5.2**
HIZ	**Hauiti**	**23.75**	**202**	P	**P**	**11 51 13.4**	**+1.6**
BKZ	**Black Stump Fm**	**23.79**	**199**	P	**P**	**11 51 12.0**	**-0.3**
BKZ	**Black Stump Fm**	**23.79**	**199**	P	**P**	**11 51 12.6**	**+0.3**
BKZ				S	**S**	**11 55 23.4**	**+3.5**
TBI	**Tubuai**	**23.91**	**110**	*e*LR	LR	11 57 14.2	
	comp=Z,339nm,36.0s						
TBI	**Tubuai**	**23.91**	**110**	*e*T	T	12 15 36.7	
	20nm,0.4s						
TMVZ	**Te Maari**	**24.00**	**200**	P	**P**	**11 51 14.4**	**+0.3**
KWHZ	**Kaweka Forest**	**24.05**	**198**	P	**P**	**11 51 15.3**	**+0.7**
KWHZ				S	**S**	**11 55 28.8**	**+4.7**
BFZ	**Birch Farm**	**25.26**	**198**	P	**P**	**11 51 26.4**	**+0.9**
BFZ				IAmb	IAmb	11 52 07.4	
	comp=Z,91nm,1.3s						
HNR	**Honiara**	**26.41**	**283**	LR	LR	11 59 36.6	
	comp=Z,3μm,21.7s,baz=121,slow=31						
TUWZ	**Tuamarina**	**26.66**	**201**	P	**P**	**11 51 36.4**	**-1.8**
KHZ	**Kahutara**	**27.68**	**200**	P	**P**	**11 51 49.6**	**+2.4**
OXZ	**Oxford**	**29.00**	**201**	P	**P**	**11 51 58.8**	**-0.1**
OXZ				IAmb	IAmb	11 52 22.7	
	comp=Z,69nm,1.4s						
EIDS	**Eidsvold**	**33.62**	**249**	P	**P**	**11 52 39.8**	**+0.1**
	baz=34,SNR=3.7						
TAOE	**Nuku Hiva Isla**	**33.87**	**81**	*e*T	T	12 27 52.3	
	comp=Z,70nm,0.2s						
ARMA	**Armidale**	**34.16**	**240**	P	**P**	**11 52 44.8**	**+0.3**
	baz=34,SNR=26						
ARMA	**Armidale**	**34.16**	**240**	P	**P**	**11 52 44.6**	**+0.1**
ARMA	**Armidale**	**34.16**	**240**	P	**P**	**11 52 45.0**	**+0.5**
AUPHS	**Peel High Scho**	**34.96**	**239**	P	**P**	**11 52 51.9**	**+0.6**
RABL	**Rabaul**	**35.49**	**287**	P	**P**	**11 52 54.7**	**-1.3**
RABL	**Rabaul**	**35.49**	**287**	P	**P**	**11 52 58.9**	**+2.9**
RMQ	**Roma**	**35.84**	**248**	P	**P**	**11 52 58.9**	**0.0**
	baz=36,SNR=6.6						
RMQ	**Roma**	**35.84**	**248**	P	**P**	**11 52 58.9**	**0.0**
AULRC	**Lightning Ridg**	**37.02**	**243**	P	**P**	**11 53 08.4**	**-0.4**
RKT	**Rikitea**	**37.12**	**106**	*e*T	T	12 32 12.6	
	comp=Z,14nm,0.3s						
CNB	**Canberra Magne**	**37.47**	**233**	P	**P**	**11 53 12.8**	**+0.1**
	baz=38,SNR=5.6						
CTAO	**Charters Tower**	**37.81**	**259**	P	**P**	**11 53 15.3**	**-0.3**
CTAO				IAmb	IAmb	11 53 15.7	
	comp=Z,21nm,1.1s						
CTAO	**Charters Tower**	**37.81**	**259**	P	**P**	**11 53 15.3**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,21nm,1.1s						
CTAO	**Charters Tower**	**37.81**	**259**	P	**P**	**11 53 15.0**	**-0.7**
PMG	**Port Moresby**	**38.50**	**276**	LR	LR	12 06 11.0	
	comp=Z,119nm,20.5s,baz=95,slow=31						
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**11 53 20.0**	**-1.5**
PMG	**Port Moresby**	**38.50**	**276**	*ce*P	**P**	**11 53 22.2**	**+0.7**
PMG				pmax	pmax		
	comp=Z,61nm,1.0s						
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**11 53 22.1**	**+0.6**
	comp=Z,84nm,1.1s						
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**11 53 23.1**	**+1.6**
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**11 53 22.0**	**+0.6**
PMG				pP	**pwP**	**11 53 48.3**	**-0.3**
CMSA	**Cobar Meteorol**	**39.38**	**241**	P	**P**	**11 53 28.3**	**-0.3**
	baz=40,SNR=66						
CMSA	**Cobar Meteorol**	**39.38**	**241**	P	**P**	**11 53 28.5**	**-0.1**
MTSU	**Mount Surprise**	**39.75**	**262**	P	**P**	**11 53 31.6**	**-0.2**
	baz=40,SNR=9.4						
MTSU	**Mount Surprise**	**39.75**	**262**	P	**P**	**11 53 32.1**	**+0.2**
QLP	**Quilpie**	**39.88**	**249**	P	**P**	**11 53 32.1**	**-0.8**
	baz=40,SNR=14						
QLP	**Quilpie**	**39.88**	**249**	P	**P**	**11 53 32.2**	**-0.6**
H11S2	**WAKE ISLAND Hy**	**39.88**	**331**	T	T	12 35 04.6	
	baz=146,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**39.90**	**331**	T	T	12 35 05.2	
	baz=146,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**39.90**	**331**	T	T	12 35 05.9	
	baz=146,slow=75,SNR=26						
WAKE	**Wake Island**	**40.59**	**331**	P	**P**	**11 53 37.4**	**-1.2**
WAKE	**Wake Island**	**40.59**	**331**	P	**P**	**11 53 39.0**	**+0.3**
WAKE				sP	**sP**	**11 54 15.4**	**+0.2**
MANU	**Manus Island**	**40.74**	**287**	P	**P**	**11 53 42.2**	**+2.2**
TOO	**Toolangi**	**41.16**	**232**	P	**P**	**11 53 43.2**	**-0.1**
	baz=41,SNR=6.5						
TOO	**Toolangi**	**41.16**	**232**	P	**P**	**11 53 43.0**	**-0.3**
TOO				IAmb	IAmb	11 53 44.1	
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**41.16**	**232**	P	**P**	**11 53 43.0**	**-0.3**
TOO				pmax	pmax		
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**41.16**	**232**	P	**P**	**11 53 43.4**	**+0.1**
COEN	**Coen**	**41.35**	**268**	P	**P**	**11 53 46.6**	**+1.5**
	baz=41,SNR=7.9						
COEN	**Coen**	**41.35**	**268**	P	**P**	**11 53 45.6**	**+0.6**
COEN				IAmb	IAmb	11 53 46.9	
	comp=Z,17nm,0.9s						
BRAT	**Ballarat**	**42.33**	**232**	P	**P**	**11 53 53.6**	**+0.9**
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**11 53 57.2**	**0.0**
	comp=Z,39nm,0.8s,baz=82,slow=9.8,SNR=80						
	comp=Z,39nm,0.8s						
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**11 53 57.4**	**+0.1**
	baz=43,SNR=28						
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**11 53 57.1**	**-0.1**
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**11 53 57.1**	**-0.1**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**11 53 57.3**	**+0.1**
INKA	**Innaminka**	**43.08**	**247**	P	**P**	**11 53 59.3**	**+0.4**
ARPS	**Mount Arapiles**	**43.72**	**234**	P	**P**	**11 54 04.3**	**+0.3**
HTT	**Hallett**	**45.35**	**239**	P	**P**	**11 54 17.2**	**+0.1**
	baz=45,SNR=15						
HTT	**Hallett**	**45.35**	**239**	P	**P**	**11 54 17.1**	**+0.1**
LCRK	**Leigh Creek**	**45.54**	**244**	P	**P**	**11 54 18.3**	**-0.2**
WHYH	**Whyalla**	**46.41**	**240**	P	**P**	**11 54 25.5**	**+0.2**
GENI	**Genyem**	**47.20**	**282**	P	**P**	**11 54 32.7**	**+1.0**
	comp=Z,2μmcomp=Z,76nm,0.4s						
GENI	**Genyem**	**47.20**	**282**	P	**P**	**11 54 34.3**	**+2.6**
	comp=Z,70nm,0.4s						
OOD	**Oodnadatta**	**47.56**	**248**	P	**P**	**11 54 34.3**	**0.0**
BBOO	**Buckleboo**	**47.64**	**241**	P	**P**	**11 54 33.0**	**-1.9**
	baz=48,SNR=6.3						
BBOO	**Buckleboo**	**47.64**	**241**	P	**P**	**11 54 34.3**	**-0.6**
BBOO				IAmb	IAmb	11 54 35.4	
	comp=Z,34nm,1.1s						
BBOO	**Buckleboo**	**47.64**	**241**	P	**P**	**11 54 34.6**	**-0.3**
SMPI	**Sarmi**	**48.78**	**282**	P	**P**	**11 54 44.4**	**+0.5**
	comp=Z,32nm,1.0s						
WR0	**Warramunga Arr**	**48.81**	**258**	P	**P**	**11 54 43.3**	**-0.7**
WR0				IAmb	IAmb	11 54 43.9	
	comp=Z,26nm,1.6s						
WB0	**Warramunga Arr**	**48.96**	**258**	P	**P**	**11 54 44.1**	**-1.2**
WB0				IAmb	IAmb	11 54 45.0	
	comp=Z,24nm,1.3s						
WB2	**Warramunga Arr**	**48.99**	**258**	P	**P**	**11 54 44.0**	**-1.4**
WB2				IAmb	IAmb	11 54 45.2	
	comp=Z,44nm,1.7s						
WRAB	**Tennant Creek**	**48.99**	**258**	P	**P**	**11 54 44.3**	**-1.2**
WRAB				IAmb	IAmb	11 54 45.1	
	comp=Z,34nm,1.6s						
WRAB	**Tennant Creek**	**48.99**	**258**	*de*P	**P**	**11 54 44.4**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WRAB	**Tennant Creek**	**48.99**	**258**	P	**P**	**11 54 44.8**	**-0.6**
WRAB	**Tennant Creek**	**48.99**	**258**	P	**P**	**11 54 44.0**	**-1.4**
WRAB				sP	**sP**	**11 55 22.5**	**0.0**
WRA	**Warramunga Arr**	**49.00**	**258**	P	**P**	**11 54 44.4**	**-1.1**
	comp=Z,3.6nm,0.5s,baz=95,slow=7.3,SNR=88						
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**49.00**	**258**	P	**P**	**11 54 43.5**	**-2.0**
WRA	**Warramunga Arr**	**49.00**	**258**	P	**P**	**11 54 43.5**	**-2.0**
MULG	**Mulgathing**	**49.11**	**244**	P	**P**	**11 54 45.3**	**-0.9**
AS01	**Alice Springs**	**49.12**	**253**	P	**P**	**11 54 45.7**	**-0.7**
AS31	**Alice Springs**	**49.16**	**

baz=63,SNR=8.8
MEEK Meekatharra 62.78 248 P P 11 56 23.0 -0.8
KLBR Kellerberrin 63.10 243 P P 11 56 25.5 -0.3
baz=63,SNR=15
KLBR Kellerberrin 63.10 243 P P 11 56 25.5 -0.3
BLDU Ballidu 64.07 244 P P 11 56 31.6 -0.6
baz=64,SNR=17
LUWI Luwuk 64.14 277 P P 11 56 31.8 -1.0
LUWI Luwuk 64.14 277 P P 11 56 33.0 +0.2
comp=Z,3µmcomp=Z,79nm,1.0s
MUN Mundaring 64.39 242 P P 11 56 34.4 +0.1
baz=64,SNR=6.2
MORW Morawa 64.80 245 P P 11 56 36.6 -0.3
baz=65,SNR=3.1
MORW Morawa 64.80 245 P P 11 56 36.5 -0.5
MORW IAmb IAmb 11 57 16.0
comp=Z,26nm,1.5s
BSSI Bau Bau, Buton 64.85 271 P P 11 56 37.0 -0.5
comp=Z,34nm,1.4s
APSI Ampana 65.24 277 P P 11 56 40.5 +0.5
comp=Z,1µmcomp=Z,106nm,1.1s
MRSI Marisa 65.40 278 P P 11 56 40.9 -0.1
comp=Z,20nm,1.0s
BKSI Bulukumba 65.42 272 P P 11 56 40.7 -0.5
comp=Z,12nm,0.9s
BNSI Bone 65.69 273 P P 11 56 43.2 +0.3
comp=Z,20nm,0.8s
KAPI Kappang 65.86 272 P P 11 56 43.8 -0.2
comp=Z,12nm,0.5s
SPSI Sidrap Palu 66.14 273 P P 11 56 45.2 -0.6
comp=Z,18nm,0.8s
PLAI Plampang 66.76 267 P P 11 56 49.5 -0.2
comp=Z,655nmcomp=Z,72nm,1.0s
PLAI Plampang 66.76 267 P P 11 56 50.0 +0.3
CCD Concordia, Ant 66.99 194 P P 11 56 51.6 +1.0
CCD sP **sP 11 57 27.8 -1.3**
PMSI Majene 67.08 273 P P 11 56 52.8 +0.9
comp=Z,57nm,0.7s
MPSI Mapaga 67.29 278 P P 11 56 53.0 -0.1
comp=Z,49nm,0.8s
TWSI Taliwang, Sumb 67.63 267 P P 11 56 54.8 -0.5
comp=Z,735nmcomp=Z,71nm,1.1s
CASY Casey 68.92 205 P P 11 57 03.3 +0.9
CASY Casey 68.92 205 P P 11 57 02.4 0.0
CASY pP **pP 11 57 29.2 +0.1**
CASY sP **sP 11 57 39.4 -1.4**
JMM Marumori 69.00 323 P P 11 57 03.5 +0.2
SRBI Singaraja 69.40 268 P P 11 57 05.5 -0.7
comp=Z,45nm,1.2s
RTBI Rangdo, Negare 69.56 267 P P 11 57 06.5 -0.8
comp=Z,31nm,0.5s
JGF Kuroka 69.56 319 P P 11 57 06.8 0.0
JGF IAmb IAmb 11 57 07.7
comp=Z,31nm,1.2s
MJAR Matsushiro Arr 69.65 320 P P 11 57 06.8 -0.5
comp=Z,8.1nm,0.8s,baz=158,slow=6.0,SNR=12
MJAR LR LR 12 23 22.8
comp=Z,18nm,20.0s,baz=133,slow=32
comp=Z,8.1nm,0.8s
MAJO Matsushiro 69.65 320 P P 11 57 07.4 +0.1
MAJO IAmb IAmb 11 57 08.2
comp=Z,11nm,0.7s
MAJO Matsushiro 69.65 320 P P 11 57 07.4 +0.1
MAJO pmax pmax
comp=Z,11nm,0.7s
MAJO Matsushiro 69.65 320 P P 11 57 06.5 -0.9
MJB9 Matsu-Tunnel 69.65 320 P P 11 57 08.4 +1.0
MJB9 IAmb IAmb 11 57 09.2
comp=Z,11nm,0.7s
MYLDM Lahad Datu 70.18 282 P P 11 57 13.2 +2.1
MYLDM Lahad Datu 70.18 282 P P 11 57 12.1 +1.0
comp=Z,41nm,1.1s
JAGI Jajag, Banyuwa 70.31 267 P P 11 57 10.6 -1.3
JAGI Jajag, Banyuwa 70.31 267 P P 11 57 10.7 -1.2
comp=Z,44nm,1.1s
JAGI Jajag, Banyuwa 70.31 267 P P 11 57 10.7 -1.2
ABJI Asem Bagus 70.41 268 P P 11 57 11.9 -0.5
comp=Z,27nm,0.6s
UNV Unalaska Valle 70.64 5 P P 11 57 12.6 -0.3
JMN Monobe 70.66 316 P P 11 57 14.9 +1.3
KMMI Kalianget 70.86 268 P P 11 57 13.9 -1.3
comp=Z,24nm,1.1s
BBKI Banjar Baru 70.99 272 P P 11 57 16.6 +0.6
JHS Saijyo 71.92 316 P P 11 57 22.0 +0.8
JHS Saijyo 71.92 316 P P 11 57 21.9 +0.8
CNBA Chernabura Isl 72.38 9 P P 11 57 22.9 -0.4
CHNA Chernabura Isl 72.39 9 P P 11 57 23.1 -0.3
baz=194
KKM Kota Kinabalu 72.61 282 P P 11 57 25.6 -0.2
comp=Z,31nm,1.1s
PWJI Pagerwojo 72.67 267 P P 11 57 25.9 -0.1
comp=Z,20nm,1.1s
SDPT Sand Point 72.77 8 P P 11 57 24.8 -0.8
SDPT Sand Point 72.77 8 P P 11 57 25.0 -0.6
baz=193
PCJI Pacitan 73.23 266 P P 11 57 29.4 +0.1
comp=Z,1µmcomp=Z,72nm,1.0s
QSPA South Pole Qui 73.26 180 P P 11 57 30.8 +2.1
QSPA IAmb IAmb 11 58 08.2
comp=Z,48nm,1.3s
ELS Elsinore Mount 73.62 47 P P 11 57 31.8 +0.5
VES Vestal, Richgr 73.73 44 P P 11 57 32.7 +0.9
baz=235
MURC Murrieta 73.75 47 P P 11 57 33.3 +1.3
baz=236
ESJX Sierra Juarez 73.77 49 P P 11 57 31.8 -0.5
BFSC Mount Baldy Ra 73.78 46 P P 11 57 33.2 +0.9
baz=236
PEA0B Petropavlovsk- 73.78 343 P P 11 57 31.9 +0.2
PEA0B Petropavlovsk- 73.78 343 P P 11 57 31.9 +0.2
PEA0B pmax pmax
comp=Z,254nm,1.8s
PETK Petropavlovsk- 73.78 343 P P 11 57 31.5 -0.2
comp=Z,29nm,0.9s,baz=158,slow=9.0,SNR=13
comp=Z,29nm,0.9s
PETK Petropavlovsk- 73.78 343 P P 11 57 31.6 -0.1
PETK Petropavlovsk- 73.78 343 P P 11 57 31.6 -0.1
MONP2 Monument Peak 73.91 48 P P 11 57 34.1 +0.9
baz=237
EDW2 Edwards Air Fo 73.91 45 P P 11 57 33.9 +0.9
baz=236,SNR=12
UGM Wanagama 73.93 266 P P 11 57 33.5 0.0
CHGN Chignik 73.98 9 P P 11 57 32.7 0.0
CHGN Chignik 73.98 9 P P 11 57 33.0 +0.3
baz=195,SNR=6.0
IKP In-Ko-Pah, Jac 74.00 48 P P 11 57 34.8 +1.2
baz=237
ISA Isabella, Lake 74.03 44 P P 11 57 34.2 +0.6
ISA Isabella, Lake 74.03 44 P P 11 57 34.2 +0.6
ISA pmax pmax
comp=Z,11nm,1.1s
ISA Isabella, Lake 74.03 44 P P 11 57 34.7 +1.0
baz=235,SNR=8.1
CCAC Calif City Air 74.05 45 P P 11 57 34.3 +0.6
CMB Columbia Colle 74.17 41 P P 11 57 32.6 -1.8
CMB Columbia Colle 74.17 41 P P 11 57 32.6 -1.8
CMB pmax pmax
comp=Z,9.0nm,1.1s
PBKI Pangkalan Bun 74.24 272 P P 11 57 36.1 +0.8
comp=Z,78nm,0.4s
PFO Pinyon Flats O 74.27 47 P P 11 57 34.7 -0.5
PFO Pinyon Flats O 74.27 47 P P 11 57 34.7 -0.5
PFO pmax pmax
comp=Z,6.0nm,1.2s
PFO Pinyon Flats O 74.27 47 P P 11 57 36.0 +0.8
baz=237
TPFO Pinon Flats 74.27 47 P P 11 57 35.9 +0.8
baz=237
AFDM Forest Hills D 74.36 40 P P 11 57 34.7 -0.7
YSS Yuzh-Sakhalins 74.42 331 P P 11 57 34.8 -0.7
YSS Yuzh-Sakhalins 74.42 331 *ce*P **P 11 57 36.1 +0.6**
YSS pmax pmax
comp=Z,49nm,1.0s
YSS Yuzh-Sakhalins 74.42 331 P P 11 57 35.9 +0.4
CWC Cottonwood Cre 74.74 44 P P 11 57 38.7 +0.9
baz=235
YULB Yu-li 74.79 301 P P 11 57 36.7 -1.5
YULB IAmb IAmb 11 58 14.2
comp=Z,49nm,1.9s
BELC Belle Mtn. Jos 74.81 47 P P 11 57 39.3 +1.1
baz=237,SNR=6.8
OMMB Old Mammoth Mi 74.81 42 P P 11 57 35.9 -2.6
NACB Ninganchiao 74.89 301 P P 11 57 36.7 -2.0
NACB Ninganchiao 74.89 301 P P 11 57 40.0 +1.3
comp=Z,34nm,1.3s
EMB Emerald Bay 74.91 41 P P 11 57 36.7 -2.1
EMB IAmb IAmb 11 58 42.7
comp=Z,20nm,0.8s
MPMC Manual Prospec 74.92 44 P P 11 57 40.4 +1.5
baz=236,SNR=19
MLAC Mammoth, Mammo 74.92 42 P P 11 57 40.4 +1.4
baz=234
SII Sitkinak Islan 74.94 11 P P 11 57 39.4 +1.1
baz=200
GSC Goldstone, Bar 74.96 45 P P 11 57 36.3 -2.7
GSC IAmb IAmb 11 57 40.9
comp=Z,13nm,1.1s
GSC Goldstone, Bar 74.96 45 P P 11 57 36.3 -2.7
GSC pmax pmax
comp=Z,13nm,1.1s
GSC Goldstone, Bar 74.96 45 P P 11 57 40.0 +0.9
baz=236,SNR=9.6
TIN Tinemaha, Big 74.99 43 P P 11 57 41.0 +1.8
baz=235
BC3 Big Chuckawall 75.00 47 P P 11 57 40.3 +1.0
baz=238
HEC Hector,Ludlow 75.02 46 P P 11 57 40.4 +1.0
baz=237,SNR=6.4
GLA Glamis 75.13 48 P P 11 57 39.5 -0.5
GLA Glamis 75.13 48 P P 11 57 39.5 -0.5
GLA pmax pmax
comp=Z,12nm,1.1s
STKI Sintang 75.23 275 P P 11 57 41.9 +0.9
SBUM Sibu 75.24 277 P P 11 57 39.7 -1.3
SBUM IAmb IAmb 11 57 42.9
comp=Z,19nm,1.3s
SBUM Sibu 75.24 277 P P 11 57 41.8 +0.8
comp=Z,12nm,1.3s
QSM Queen of Sheba 75.28 45 P P 11 57 41.9 +1.2
QSM IAmb IAmb 11 57 42.7
comp=Z,14nm,0.9s
YHNB Yeheng 75.29 302 P P 11 57 40.4 -0.7
YHNB IAmb IAmb 11 57 42.9
comp=Z,45nm,1.3s
YHNB Yeheng 75.29 302 P P 11 57 41.5 +0.4
BEKR Beckworth 75.29 40 P P 11 57 42.1 +1.1
BEKR IAmb IAmb 11 57 43.0
comp=Z,13nm,1.1s
TPUB Ta-pu 75.30 300 P P 11 57 39.4 -1.8
TPUB IAmb IAmb 11 57 41.8
comp=Z,39nm,1.1s
TPUB Ta-pu 75.30 300 P P 11 57 40.3 -0.8
DSP Deep Springs 75.34 43 P P 11 57 40.3 -0.7
VCNR Virginia City 75.39 41 P P 11 57 42.0 +0.5
CTJI Waduk Cacaban 75.44 267 P P 11 57 42.4 +0.2
comp=Z,964nmcomp=Z,29nm,1.4s
YERR Yerington 75.46 41 P P 11 57 41.3 -0.7
YERR IAmb IAmb 11 57 43.9
comp=Z,14nm,1.1s
GMRC Granite Mounta 75.46 46 P P 11 57 43.0 +1.0
baz=237
LCH Last Change Ra 75.47 43 P P 11 57 43.1 +1.1
IRM Iron Mountain 75.49 47 P P 11 57 43.4 +1.4
baz=238
LHV Little Huntoon 75.50 42 P P 11 57 40.5 -1.4
LHV IAmb IAmb 11 57 50.2
comp=Z,14nm,1.2s
GRAC Grapevine Rang 75.52 44 P P 11 57 41.6 -0.6
GRAC IAmb IAmb 11 58 21.9
comp=Z,13nm,0.9s
GRAC Grapevine Rang 75.52 44 P P 11 57 43.5 +1.4
baz=236,SNR=7.3
GWY Greenwater Val 75.54 45 P P 11 57 42.6 +0.2
FURC Furnace Creek, 75.56 44 P P 11 57 43.7 +1.4
baz=236
TUQ Turquoise Moun 75.63 46 P P 11 57 44.0 +1.0
baz=237,SNR=6.7
SHOC Shoshone, Teco 75.65 45 P P 11 57 43.6 +0.8
baz=237,SNR=6.9
RYN Ryan 75.70 42 P P 11 57 43.7 +0.4
BLYC Blythe 75.71 48 P P 11 57 42.1 -1.1
NVAR Mina Array Bea 75.73 42 P P 11 57 44.8 +1.3
comp=Z,8.6nm,0.8s,baz=226,slow=9.8,SNR=54
comp=Z,8.6nm,0.8s
NVAR Mina Array Bea 75.73 42 P P 11 57 44.4 +0.9
OHAK Old Harbor 75.73 11 P P 11 57 42.9 +0.1
OHAK IAmb IAmb 11 57 43.7
comp=Z,33nm,1.1s
OHAK Old Harbor 75.73 11 P P 11 57 43.4 +0.6
baz=200
GMN Gold Mountain 75.77 43 P P 11 57 44.3 +0.5
GMN IAmb IAmb 11 57 45.7
comp=Z,12nm,0.8s
PAHR Pah Rah Range 75.80 40 P P 11 57 44.5 +0.7
PAHR IAmb IAmb 11 57 46.0
comp=Z,16nm,1.2s
NV11 Mina Array Sit 75.83 42 P P 11 57 44.0 0.0
NV11 IAmb IAmb 11 57 46.1
comp=Z,13nm,1.0s
WCT Wildcat Mounta 75.90 44 P P 11 57 45.4 +1.0
KVN Kaiserville 76.22 42 P P 11 57 47.0 +0.7
KVN Kaiserville 76.22 42 P P 11 57 47.0 +0.7
KVN pmax pmax
comp=Z,9.0nm,1.0s
TPH Tonopah 76.23 43 P P 11 57 47.1 +0.8
TPH Tonopah 76.23 43 P P 11 57 47.2 +0.8
TPH pmax pmax
comp=Z,56nm,0.9s
TPNV Topopah Spring 76.24 44 P P 11 57 47.3 +0.9
TPNV Topopah Spring 76.24 44 P P 11 57 47.3 +0.9
TPNV pmax pmax
comp=Z,10.0nm,0.9s
TPNV Topopah Spring 76.24 44 P P 11 57 47.8 +1.4
baz=236,SNR=11
Q17K Contact Creek 76.26 10 P P 11 57 45.7 -0.3
baz=198,SNR=11
PDMCI Parker Dam,Lak 76.27 47 P P 11 57 48.0 +1.6
baz=238
KDAK Kodiak Island 76.39 12 P P 11 57 46.5 0.0
KDAK Kodiak Island 76.39 12 P P 11 57 46.5 0.0
KDAK pmax pmax
comp=Z,44nm,1.2s
KDAK Kodiak Island 76.39 12 P P 11 57 47.0 +0.4
baz=201
V12A Nelson 76.53 46 P P 11 57 48.9 +0.9
Q16K King Salmon 76.53 9 P P 11 57 47.2 -0.1
baz=197
MOD Modoc Plateau 76.56 38 P P 11 57 48.9 +0.8
MOD IAmb IAmb 11 57 50.0
comp=Z,16nm,1.0s
P16K Nushagak River 76.68 8 P P 11 57 48.2 +0.1
baz=196,SNR=6.2
SHPR Sheep Range 76.73 45 P P 11 57 50.4 +1.2
KSM Kuching 76.76 276 P P 11 57 50.3 +0.6
KSM Kuching 76.76 276 P P 11 57 50.1 +0.4
comp=Z,46nm,1.2s
KSM Kuching 76.76 276 P P 11 57 50.3 +0.6
KSRS Korea Array 76.77 316 P P 11 57 50.4 +1.3
comp=Z,9.4nm,1.0s,baz=131,slow=5.9,SNR=19
comp=Z,9.4nm,1.0s
Q18K Katmai Hardscr 76.77 10 P P 11 57 48.6 -0.2
baz=199,SNR=7.0
KSAR Wonju Array Be 76.78 316 P P 11 57 50.3 +1.1
KSAR Wonju Array Be 76.78 316 P P 11 57 50.3 +1.1
W13A Hualapai Mount 76.86 47 P P 11 57 51.1 +1.1
Y14A Wickenburg 76.89 48 P P 11 57 50.8 +0.8
P17K Kvichak River 77.06 9 P P 11 57 50.2 0.0
baz=197
O16K Kokwok River B 77.21 8 P P 11 57 50.9 -0.2
baz=196,SNR=6.0
PRN Pahroc Range 77.29 44 P P 11 57 53.6 +1.4
PRN IAmb IAmb 11 58 33.9
comp=Z,16nm,1.1s
PINE Pine Mountain 77.34 36 P P 11 57 53.5 +1.0
PINE IAmb IAmb 11 57 54.9
comp=Z,35nm,1.0s
P18K Big Mountain, 77.44 10 P P 11 57 51.9 -0.6
P18K Big Mountain, 77.44 10 P P 11 57 52.2 -0.2
baz=198,SNR=13
R11A Troy Canyon, C 77.45 43 P P 11 57 53.0 -0.2
R11A Troy Canyon, C 77.45 43 P P 11 57 54.1 +0.9
baz=237,SNR=8.7
O17K Koliganek Bris 77.52 9 P P 11 57 52.8 0.0
baz=196,SNR=9.5
BMN Battle Mountai 77.56 41 P P 11 57 54.3 +0.5
BMN IAmb IAmb 11 57 55.7
comp=Z,20nm,1.2s
BMN Battle Mountai 77.56 41 P P 11 57 54.3 +0.5
BMN pmax pmax
comp=Z,20nm,1.2s
CBJI Citeko 77.83 267 P P 11 57 54.8 -0.8
comp=Z,57nm,0.9s
WVOR Wild Horse Val 77.86 39 P P 11 57 56.0 +0.7
WVOR IAmb IAmb 11 57 57.3
comp=Z,16nm,1.1s
WVOR Wild Horse Val 77.86 39 P P 11 57 56.0 +0.7
WVOR pmax pmax
comp=Z,16nm,1.1s
O18K Koktuh Hills 77.89 10 P P 11 57 54.7 -0.2
O18K Koktuh Hills 77.89 10 P P 11 57 54.8 -0.1
baz=198
N16K Nishlik Lake 77.97 8 P P 11 57 55.8 +0.4
baz=195
P19K Oil Pt 78.03 11 P P 11 57 55.6 -0.1
baz=200
USRK Ussuriysk Ar. 78.16 324 P P 11 57 58.4 +1.7
comp=Z,4.3nm,0.8s,baz=104,slow=6.1,SNR=6.6
USRK LR LR 12 26 27.6
comp=Z,45nm,21.0s,baz=123,slow=31
comp=Z,4.3nm,0.8s
USRK Ussuriysk Ar. 78.16 324 P P 11 57 57.6 +0.8
LCMT Little Creek M 78.31 45 P P 11 57 58.8 +0.9
J08A Circle Bar Ran 78.51 38 P P 11 57 59.4 +0.6
J08A IAmb IAmb 11 58 00.8
comp=Z,13nm,1.0s
O20K Slope Mountain 78.54 11 P P 11 57 58.7 +0.2
baz=201
BRLK Bradley Lake 78.56 12 P P 11 57 58.9 +0.3
N18K Kilae Creek 78.57 9 P P 11 57 58.7 +0.1
N18K IAmb IAmb 11 57 59.7
comp=Z,14nm,0.8s
N18K Kilae Creek 78.57 9 P P 11 57 58.5 -0.2
baz=198,SNR=5.9
BRSE Bradley Lake S 78.57 12 P P 11 57 59.0 +0.4
baz=203
KNB Kanab 78.60 46 P P 11 58 00.1 +0.6
KNB Kanab 78.60 46 P P 11 58 00.1 +0.6
KNB pmax pmax
comp=Z,7.0nm,0.9s
U15A North Rim 78.66 46 P P 11 57 60.0 -0.1
PSUT Pine Spring 78.69 44 P P 11 58 00.8 +0.7
SZCU Shurtz Canyon 78.72 45 P P 11 58 01.7 +1.4
WUAZ Wupatki 78.84 48 P P 11 58 01.8 +0.9
WUAZ Wupatki 78.84 48 P P 11 58 02.8 +1.8
baz=240
RSO Redoubt South 78.87 11 P P 11 58 00.7 +0.2
N19K Bonanza Creek 78.91 10 P P 11 58 00.3 -0.3
N19K Bonanza Creek 78.91 10 P P 11 58 00.3 -0.3
baz=199,SNR=8.9
ELK Elko 78.99 41 P P 11 58 01.8 +0.1
ELK Elko 78.99 41 P P 11 58 01.8 +0.1
ELK pmax pmax
comp=Z,9.0nm,1.1s
G08A Pilot Rock 79.38 36 P P 11 58 04.1 +0.5
G08A IAmb IAmb 11 58 05.4
comp=Z,20nm,1.1s
O22K Cooper Landing 79.45 12 P P 11 58 03.9 +0.5
O22K IAmb IAmb 11 58 11.0
comp=Z,27nm,0.8s
MTPU Mount Pierson 79.56 45 P P 11 58 06.5 +1.5
N20K Mount Spurr 79.66 11 P P 11 58 03.7 -0.9
baz=201,SNR=6.0
SPCR Spurr Chakacha 79.66 11 P P 11 58 03.7 -0.9
baz=201,SNR=5.2
HAWA Hanford 79.73 35 P P 11 58 06.1 +0.8
HAWA IAmb IAmb 11 58 07.9
comp=Z,55nm,1.9s
MVU Marysvale 79.78 45 P P 11 58 07.4 +1.4
MDJ Mudanjiang 79.79 323 P P 11 58 06.3 +0.7
MDJ Mudanjiang 79.79 323 P P 11 58 08.3 +2.7
comp=Z,12nm,2.1s
MSU Marysvale 79.80 45 P P 11 58 07.8 +1.6
MSU Marysvale 79.80 45 P P 11 58 07.8 +1.6
M19K Big River Lodg 79.96 9 P P 11 58 05.7 -0.5
baz=199,SNR=5.5
RC01 Rabbit Creek A 80.01 12 P P 11 58 06.1 -0.4
RC01 IAmb IAmb 11 58 07.7
comp=Z,32nm,1.0s
RC01 Rabbit Creek A 80.01 12 P P 11 58 06.4 -0.1
baz=203,SNR=6.1
121A Cookes Peak, D 80.04 52 P P 11 58 09.0 +1.5
baz=243
E08A Dider Farm, El 80.05 35 IAmb IAmb 11 58 08.7
comp=Z,21nm,1.3s
PWL Port Wells 80.08 12 P P 11 58 06.6 -0.2
baz=205
MFID Camas Ranch 80.11 39 IAmb IAmb 11 58 09.3
comp=Z,14nm,1.1s
L19K White Mountain 80.16 9 P P 11 58 07.5 +0.2
baz=198
SUA Susitna One 80.17 11 IAmb IAmb 11 58 08.2
comp=Z,23nm,0.8s
SUA Susitna One 80.17 11 P P 11 58 07.2 -0.2
baz=202,SNR=12
DUG Dugway, Tooele 80.25 43 P P 11 58 09.3 +0.8
baz=238
KASI Kota Agung 80.33 267 P P 11 58 08.5 -0.8
comp=Z,57nm,1.0s
GLI Glacier Island 80.36 13 P P 11 58 08.2 -0.1
baz=206
EYAK Cordova Ski Ar 80.36 14 P P 11 58 07.8 -0.5
baz=207
D08A Wollman Farm, 80.47 35 P P 11 58 09.8 +0.6
D08A IAmb IAmb 11 58 11.1
comp=Z,22nm,1.0s
SKT Skwentna 80.50 11 IAmb IAmb 11 58 09.3
comp=Z,27nm,1.4s
SKT Skwentna 80.50 11 P P 11 58 08.5 -0.6
baz=202,SNR=5.5
M22K Willow 80.55 11 P P 11 58 08.9 -0.4
baz=203,SNR=8.8
KNK Knik Glacier 80.56 12 P P 11 58 09.4 0.0
KNK IAmb IAmb 11 58 10.6
comp=Z,28nm,1.0s
KNK Knik Glacier 80.56 12 P P 11 58 09.4 0.0
baz=205,SNR=8.4
NJ2 Nanjing 80.56 307 *e*P **P 11 58 08.5 -1.6**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
L20K Farewell, AK 80.59 9 P P 11 58 09.2 -0.4
baz=199,SNR=6.5
PMR Palmer 80.59 12 P P 11 58 09.3 -0.2
PMR IAmb IAmb 11 58 10.7
comp=Z,26nm,1.2s
PMR Palmer 80.59 12 P P 11 58 09.3 -0.2
PMR pmax pmax
comp=Z,26nm,1.2s
PMR Palmer 80.59 12 P P 11 58 09.2 -0.2
baz=204,SNR=7.8
TTA Tatalina 80.70 8 P P 11 58 10.3 +0.1
TTA IAmb IAmb 11 58 12.9
comp=Z,60nm,1.6s
TTA Tatalina 80.70 8 P P 11 58 10.3 +0.1
TTA pmax pmax
comp=Z,60nm,1.6s
TTA Tatalina 80.70 8 P P 11 58 10.4 +0.1
baz=197
GHO Glory Hole Cre 80.80 12 P P 11 58 09.4 -1.3
GHO IAmb IAmb 11 58 11.9
comp=Z,32nm,1.0s
TMUT Trail Mountain 80.85 44 IAmb IAmb 11 58 53.6
comp=Z,17nm,1.1s
DIV Divide 80.87 13 IAmb IAmb 11 58 12.3
comp=Z,37nm,1.0s
BMRM Bremner River 81.00 14 P P 11 58 10.8 -1.0
baz=208
B08A Colville Reser 81.04 33 P P 11 58 11.7 -0.6
B08A IAmb IAmb 11 58 13.2
comp=Z,10.0nm,0.8s
HLID Hailey 81.05 39 P P 11 58 13.6 +0.9
HLID Hailey 81.05 39 P P 11 58 13.5 +0.9
baz=237,SNR=14
HVU Hansel Valley 81.11 42 P P 11 58 13.6 +0.6
HVU Hansel Valley 81.11 42 P P 11 58 13.6 +0.6
HVU pmax pmax
comp=Z,7.0nm,1.0s
CUT Chulitna 81.12 11 P P 11 58 11.9 -0.4
CUT Chulitna 81.12 11 P P 11 58 12.0 -0.4
baz=203,SNR=5.6
LLLB Lillooet 81.16 31 IAmb IAmb 11 58 14.3
comp=Z,13nm,1.0s
KLU Klutina 81.17 13 IAmb IAmb 11 58 14.0
comp=Z,16nm,1.1s
KLU Klutina 81.17 13 P P 11 58 12.7 0.0
baz=207,SNR=5.1
SCM Sheep Creek Mo 81.17 12 P P 11 58 12.8 +0.1
SCM IAmb IAmb 11 58 13.9
comp=Z,32nm,0.9s

SCM	Sheep Creek Mo	81.17	12	P	P	11 58 12.8	+0.1
SCM	comp=Z,32nm,0.9s			pmax	pmax		
SCM	Sheep Creek Mo	81.17	12	P	P	11 58 12.8	+0.1
	baz=206,SNR=8.8						
SRU	San Rafael Swe	81.22	45	P	P	11 58 13.4	-0.3
SRU	San Rafael Swe	81.22	45	P	P	11 58 13.4	-0.3
SRU	comp=Z,9.0nm,1.1s			pmax	pmax		
TGL	Tana Glacier	81.23	15	P	P	11 58 13.7	+0.5
TGL	comp=Z,30nm,1.2s			IAmb	IAmb	11 58 14.6	
C09A	Chrisman Ranch	81.27	34	P	P	11 58 13.5	0.0
KLR	Kul'dur	81.38	327	P	P	11 58 14.2	+0.2
	comp=Z,2.5nm,0.7s,baz=129,slow=10						
	comp=Z,2.5nm,0.7s						
KLR	Kul'dur	81.38	327	*ce*P	P	11 58 13.0	-1.0
KLR	comp=Z,19nm,2.5s			pmax	pmax		
K20K	Telida	81.39	9	IAmb	IAmb	11 58 15.4	
	comp=Z,46nm,1.3s						
K20K	Telida	81.39	9	P	P	11 58 14.5	+0.7
	baz=199,SNR=10						
VRDI	Verde Repeater	81.50	14	P	P	11 58 14.7	+0.1
VRDI	comp=Z,13nm,1.0s			IAmb	IAmb	11 58 16.0	
N25K	Chitina, Valde	81.56	14	P	P	11 58 14.2	-0.6
N25K	comp=Z,18nm,0.8s			IAmb	IAmb	11 58 16.3	
N25K	Chitina, Valde	81.56	14	P	P	11 58 15.4	+0.6
	baz=208,SNR=12						
GLB	Gilahina Butte	81.60	14	P	P	11 58 15.0	+0.1
GLB	comp=Z,13nm,0.8s			IAmb	IAmb	11 58 16.3	
TCUT	Toone Canyon	81.65	43	IAmb	IAmb	11 58 17.9	
	comp=Z,63nm,1.8s						
P29M	Windy Craggy	81.65	18	P	P	11 58 16.3	+1.0
	baz=215						
M24K	Tolsona, Glenn	81.66	13	P	P	11 58 15.8	+0.5
M24K	comp=Z,35nm,0.9s			IAmb	IAmb	11 58 17.2	
M24K	Tolsona, Glenn	81.66	13	P	P	11 58 15.9	+0.6
	baz=207,SNR=7.7						
BNX	BinXian	81.70	323	⇓P	P	11 58 16.3	+0.5
BNX	comp=Z,15nm,1.0s			pmax	pmax		
BNX				pmax	pmax		
	comp=Z,150nm,4.1s						
MCARA	McCarthy VSAT	81.73	14	P	P	11 58 15.8	+0.1
MCARA	comp=Z,19nm,1.2s			IAmb	IAmb	11 58 17.1	
MCARA	McCarthy VSAT	81.73	14	P	P	11 58 16.5	+0.9
	baz=210						
LOGN	Logan Glacier	81.75	16	P	P	11 58 16.3	+0.3
LOGN	comp=Z,20nm,1.1s			IAmb	IAmb	11 58 17.5	
CAST	Castle Rocks	81.76	10	IAmb	IAmb	11 58 15.6	
	comp=Z,18nm,1.2s						
CAST	Castle Rocks	81.76	10	P	P	11 58 14.1	-1.6
	baz=201,SNR=9.7						
WAT6	Susitna Watana	81.77	12	P	P	11 58 15.8	-0.1
	baz=205,SNR=11						
BARN	Barnard Glacie	81.79	15	IAmb	IAmb	11 58 17.7	
	comp=Z,20nm,1.1s						
CTG	Chitna Glacier	81.79	15	P	P	11 58 16.8	+0.7
	baz=211						
CTGM	Chitina Glacie	81.79	15	P	P	11 58 16.2	+0.1
CTGM	comp=Z,11nm,0.9s			IAmb	IAmb	11 58 18.3	
HWUT	Hardware Ranch	81.80	42	P	P	11 58 16.5	-0.1
HWUT	comp=Z,19nm,1.6s			IAmb	IAmb	11 58 18.3	
WAT1	Susitna Watana	81.83	11	P	P	11 58 15.8	-0.4
	baz=204						
TX31	Lajitas Ar. Si	81.84	56	IAmb	IAmb	11 58 58.5	
	comp=Z,34nm,1.3s						
TX32	Lajitas Array	81.84	56	P	P	11 58 18.0	+0.9
TXAR	Lajitas Array	81.85	56	P	P	11 58 18.4	+1.3
	comp=Z,1.2nm,0.8s,baz=218,slow=9.7,SNR=13						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	81.85	56	P	P	11 58 18.0	+0.9
PV14	Lion Creek, Pa	81.88	46	P	P	11 58 17.8	+0.6
PV14	comp=Z,14nm,1.0s			IAmb	IAmb	11 58 58.4	
PLBC	Pleasant Camp	81.92	18	P	P	11 58 17.3	+0.8
	baz=216						
PV13	Radium Mtn., P	81.92	46	P	P	11 58 18.4	+1.0
PV13	comp=Z,16nm,1.3s			IAmb	IAmb	11 58 19.4	
O28M	Mount Upton	81.92	16	P	P	11 58 17.1	+0.1
	baz=212						
O29M	Mount Kennedy	81.97	17	P	P	11 58 17.8	+0.8
	baz=214						
BCYI	Bear Canyon	82.07	39	P	P	11 58 19.4	+1.3
KTH	Kantishna Hill	82.07	10	P	P	11 58 16.6	-0.8
KTH	comp=Z,22nm,1.0s			IAmb	IAmb	11 58 18.9	
TRF	Thorofare Moun	82.09	11	P	P	11 58 17.6	0.0
TRF	comp=Z,34nm,0.9s			IAmb	IAmb	11 58 19.5	
TRF	Thorofare Moun	82.09	11	P	P	11 58 17.6	0.0
	baz=203,SNR=13						
ANMO	Albuquerque	82.12	50	P	P	11 58 17.9	-0.6
ANMO	Albuquerque	82.12	50	P	P	11 58 17.9	-0.6
ANMO	comp=Z,8.0nm,1.2s			pmax	pmax		
ANMO	Albuquerque	82.12	50	P	P	11 58 19.8	+1.3
	baz=243						
J20K	Nowinta River	82.16	9	P	P	11 58 18.1	+0.4
J20K	Nowinta River	82.16	9	P	P	11 58 18.2	+0.5
	baz=199,SNR=13						
NEW	Newport	82.17	34	P	P	11 58 18.1	-0.1
	baz=234						
P30M	Million Dollar	82.28	18	P	P	11 58 19.7	+1.2
	baz=216						
DHY	Denali Highway	82.29	12	P	P	11 58 18.7	0.0
DHY	comp=Z,14nm,1.1s			IAmb	IAmb	11 58 19.1	
DHY	Denali Highway	82.29	12	P	P	11 58 18.4	-0.2
	baz=206,SNR=5.3						
RND	Reindeer	82.31	11	P	P	11 58 18.9	+0.2
RND	comp=Z,25nm,1.0s			IAmb	IAmb	11 58 19.9	
RND	Reindeer	82.31	11	P	P	11 58 18.9	+0.2
RND	comp=Z,25nm,1.0s			pmax	pmax		
S34M	Telegraph Cree	82.41	21	P	P	11 58 20.3	+1.1
	baz=221						
YUK8	Steele Glacier	82.47	16	P	P	11 58 20.1	+0.3
	baz=213						
BPAW	Bear Paw Mtn.	82.57	10	P	P	11 58 19.3	-0.6
BPAW	Bear Paw Mtn.	82.57	10	P	P	11 58 19.0	-0.9
	baz=202						
PAX	Paxson	82.58	13	P	P	11 58 19.8	-0.3
PAX	Paxson	82.58	13	P	P	11 58 19.8	-0.3
PAX	comp=Z,8.0nm,1.0s			pmax	pmax		
PAX	Paxson	82.58	13	P	P	11 58 19.7	-0.4
	baz=207						
RDMU	Red Mountain	82.58	44	P	P	11 58 21.4	+0.6
RDMU	comp=Z,21nm,1.7s			IAmb	IAmb	11 58 22.4	
MCK	McKinley	82.59	11	P	P	11 58 20.0	0.0
MCK	McKinley	82.59	11	P	P	11 58 20.0	0.0
MCK	comp=Z,46nm,0.9s			pmax	pmax		
MCK	McKinley	82.59	11	P	P	11 58 19.8	-0.2
	baz=204,SNR=22						
M26K	Nabesna, AK	82.63	14	P	P	11 58 20.6	+0.2
M26K	comp=Z,25nm,1.1s			IAmb	IAmb	11 58 21.9	
M26K	Nabesna, AK	82.63	14	P	P	11 58 21.0	+0.7
	baz=210,SNR=12						
MCMT	McKenzie Canyo	82.68	39	P	P	11 58 20.8	-0.5
AHID	Auburn Hatcher	82.69	41	IAmb	IAmb	11 58 23.1	
	comp=Z,21nm,1.3s						
HYT	Haines Junctio	82.70	17	P	P	11 58 21.6	+0.8
HYT	comp=Z,17nm,1.3s			IAmb	IAmb	11 58 22.8	
HYT	Haines Junctio	82.70	17	P	P	11 58 21.5	+0.6
	baz=215						
BELA	Belgrano 2	82.70	172	P	P	11 58 21.2	+0.6
YUK3	Moose Creek	82.70	15	P	P	11 58 21.1	+0.2
	baz=212						
Q32M	Nakina River	82.82	20	P	P	11 58 22.4	+0.8
	baz=220						
M27K	Edge Creek, AK	82.85	14	P	P	11 58 21.9	+0.3
M27K	comp=Z,32nm,1.1s			IAmb	IAmb	11 58 23.6	
M27K	Edge Creek, AK	82.85	14	P	P	11 58 22.1	+0.5
	baz=211,SNR=11						
BWN	Browne	82.90	11	P	P	11 58 21.6	0.0
MENT	Mentasta	82.93	13	IAmb	IAmb	11 59 11.2	
	comp=Z,15nm,0.5s						
O30N	Mendenhall	83.06	18	P	P	11 58 23.2	+0.7
	baz=216						
L26K	Log Cabin Wild	83.09	14	P	P	11 58 23.0	+0.3
L26K	comp=Z,14nm,1.1s			IAmb	IAmb	11 58 24.4	
L26K	Log Cabin Wild	83.09	14	P	P	11 58 23.0	+0.3
	baz=209,SNR=6.3						
S22A	4UR Ranch, Cre	83.12	47	IAmb	IAmb	11 59 07.5	
	comp=Z,13nm,1.0s						
S22A	4UR Ranch, Cre	83.12	47	P	P	11 58 25.4	+1.7
	baz=243						
DLMT	Dillon	83.12	39	IAmb	IAmb	11 58 25.3	
	comp=Z,21nm,1.1s						
MSO	Missoula	83.12	37	P	P	11 58 23.2	-0.2
MSO	comp=Z,21nm,1.4s			IAmb	IAmb	11 58 24.4	
MSO	Missoula	83.12	37	P	P	11 58 23.4	+0.1
	baz=237						
BVCY	Beaver Creek	83.15	15	P	P	11 58 23.4	+0.4
	baz=212						
REDW	Red Top Meadow	83.15	41	IAmb	IAmb	11 58 25.6	
	comp=Z,22nm,1.2s						
TPAW	Teton Pass	83.15	41	P	P	11 58 24.6	+0.8
TPAW	comp=Z,18nm,1.2s			IAmb	IAmb	11 58 25.7	
O20A	White River Ci	83.26	45	P	P	11 58 24.1	-0.2
O20A	comp=Z,14nm,1.2s			IAmb	IAmb	11 58 28.0	
O20A	White River Ci	83.26	45	P	P	11 58 24.9	+0.6
	baz=242						
SNOW	Snow King Moun	83.26	41	P	P	11 58 24.8	+0.5
SNOW	comp=Z,30nm,1.3s			IAmb	IAmb	11 58 26.2	
K24K	Donnelly Dome	83.26	12	P	P	11 58 23.9	+0.4
	baz=207,SNR=8.8						
WHY	Whitehorse	83.33	18	P	P	11 58 24.9	+0.9
	baz=217						
N30M	Aishikik Lake	83.33	17	P	P	11 58 24.2	+0.2
	baz=215						
NEA2	Nenana	83.35	11	P	P	11 58 24.1	+0.1
NEA2	comp=Z,14nm,0.9s			IAmb	IAmb	11 58 26.0	
NEA2	Nenana	83.35	11	P	P	11 58 23.3	-0.7
	baz=204						
IMW	Indian Meadow	83.36	40	P	P	11 58 25.3	+0.5
IMW	comp=Z,21nm,1.2s			IAmb	IAmb	11 58 26.8	
MOOW	Moose Ponds	83.41	41	P	P	11 58 25.5	+0.4
WRH	Wood River Hil	83.42	11	P	P	11 58 24.7	+0.4
I21K	Tanana	83.42	9	P	P	11 58 24.8	+0.6
I21K	comp=Z,23nm,1.2s			IAmb	IAmb	11 58 25.7	
I21K	Tanana	83.42	9	P	P	11 58 24.3	+0.1
	baz=201						
LOHW	Long Hollow	83.43	41	P	P	11 58 25.3	+0.2
LOHW	comp=Z,18nm,1.4s			IAmb	IAmb	11 58 26.9	
L27K	Beaver Creek,	83.47	14	P	P	11 58 24.5	-0.1
L27K	Beaver Creek,	83.47	14	P	P	11 58 25.3	+0.6
	baz=211						
MLY	Manley	83.48	10	P	P	11 58 24.5	-0.2
MLY	comp=Z,16nm,0.9s			IAmb	IAmb	11 58 25.9	
MLY	Manley	83.48	10	P	P	11 58 24.1	-0.6
	baz=202,SNR=7.6						
DOT	Dot Lake	83.48	13	P	P	11 58 24.1	-0.5
DOT	comp=Z,23nm,1.0s			IAmb	IAmb	11 58 26.0	
BCAR	Beaver Creek A	83.48	14	P	P	11 58 24.8	+0.1
HDA	Harding Lake	83.57	11	P	P	11 58 25.1	0.0
HDA	comp=Z,28nm,1.0s			IAmb	IAmb	11 58 26.2	
HDA	Harding Lake	83.57	11	P	P	11 58 24.8	-0.2
	baz=206,SNR=18						
R33M	Jennings River	83.59	21	P	P	11 58 26.3	+0.9
	baz=221						
FLWY	Flagg Ranch	83.61	40	P	P	11 58 26.2	+0.2
CCB	Clear Creek Bu	83.63	11	P	P	11 58 24.9	-0.5
YHB	Horse Butte	83.64	40	IAmb	IAmb	11 58 28.6	
	comp=Z,22nm,1.1s						
BW06	Boulder Array	83.67	42	P	P	11 58 26.6	+0.3
BW06	comp=Z,10nm,1.1s			IAmb	IAmb	11 58 27.6	
BW06	Boulder Array	83.67	42	P	P	11 58 26.7	+0.3
	baz=240,SNR=11						
PD31	Pinedale Array	83.67	42	P	P	11 58 26.4	0.0
PDAR	Pinedale Array	83.67	42	P	P	11 58 26.7	+0.3
	comp=Z,6.3nm,0.9s,baz=214,slow=3.6,SNR=37						
	comp=Z,6.3nm,0.9s						
PDAR	Pinedale Array	83.67	42	P	P	11 58 26.4	0.0
SMCO	Snowmass	83.67	46	IAmb	IAmb	11 58 30.6	
	comp=Z,9.3nm,0.9s						
YHL	Hebgen Lake	83.70	40	P	P	11 58 28.1	+1.5
YHL	comp=Z,34nm,1.2s			IAmb	IAmb	11 58 29.1	
SEY	Seymchan	83.72	345	*ce*P	P	11 58 26.0	+0.2
SEY	comp=Z,84nm,1.7s			pmax	pmax		
N31M	Braeburn, Yuko	83.73	17	P	P	11 58 27.1	+1.1
N31M	comp=Z,22nm,1.1s			IAmb	IAmb	11 58 27.8	
YMR	Madison River	83.74	40	P	P	11 58 27.6	+0.9
H21K	Melozitna Rive	83.75	9	P	P	11 58 26.4	+0.4
H21K	Melozitna Rive	83.75	9	P	P	11 58 26.4	+0.4
	baz=200,SNR=11						
M29M	Somme Creek	83.78	16	P	P	11 58 26.7	+0.4
	baz=214,SNR=7.2						
SCRK	Sand Creek	83.79	13	P	P	11 58 25.7	-0.6
SCRK	comp=Z,11nm,0.9s			IAmb	IAmb	11 58 27.8	
SCRK	Sand Creek	83.79	13	P	P	11 58 26.3	0.0
	baz=209,SNR=8.7						
I23K	Minto, Yukon-K	83.81	10	P	P	11 58 26.0	-0.2
I23K	comp=Z,25nm,1.1s			IAmb	IAmb	11 58 27.3	
I23K	Minto, Yukon-K	83.81	10	P	P	11 58 26.5	+0.2
	baz=204,SNR=7.1						
BOZ	Bozeman (W)	83.82	39	P	P	11 58 27.7	+0.7
	baz=238,SNR=12						
TCOL	CIGO, UAF Yank	83.83	11	P	P	11 58 26.2	-0.1
TCOL	CIGO, UAF Yank	83.83	11	P	P	11 58 26.1	-0.2
	baz=205,SNR=22						
COLA	College	83.83	11	P	P	11 58 26.1	-0.2
COLA	College	83.83	11	P	P	11 58 26.1	-0.2
COLA	comp=Z,61nm,0.9s			pmax	pmax		
COLA	College	83.83	11	P	P	11 58 26.2	-0.1
MDM	Murphy Dome	83.84	11	P	P	11 58 26.1	-0.3
H17A	Grant Village	83.84	40	P	P	11 58 29.4	+2.2
	baz=239,SNR=5.9						
YHH	Holmes Hill	83.88	40	IAmb	IAmb	11 58 30.8	
	comp=Z,16nm,1.2s						
IL31		83.91	11	P	P	11 58 26.4	-0.4
ILAR	Eielson Array	83.91	11	P	P	11 58 26.4	-0.4
	comp=Z,12nm,1.1s,baz=219,slow=5.8,SNR=47						
	comp=Z,12nm,1.1s						
SDCO	Great Sand Dun	84.06	48	P	P	11 58 29.2	+0.7
	baz=244						
J25K	Salcha River,	84.06	12	P	P	11 58 27.8	+0.1
J25K	comp=Z,29nm,1.1s			IAmb	IAmb	11 58 29.0	
J25K	Salcha River,	84.06	12	P	P	11 58 27.8	+0.1
	baz=207,SNR=14						
POKR	Poker Plat Res	84.12	11	P	P	11 58 27.9	0.0
POKR	Poker Plat Res	84.12	11	P	P	11 58 27.5	-0.4
	baz=205,SNR=13						
H22K	Ishtalitna Cre	84.18	9	P	P	11 58 28.4	+0.2
	baz=202,SNR=19						
K27K	Chicken	84.25	14	P	P	11 58 27.6	-0.9
K27K	comp=Z,23nm,1.2s			IAmb	IAmb	11 58 30.7	
K27K	Chicken	84.25	14	P	P	11 58 29.3	+0.8
	baz=210						
HRY	Holter Researc	84.28	38	P	P	11 58 29.8	+0.5
M30M	Minto, Yukon	84.33	16	P	P	11 58 29.5	+0.5
	baz=216,SNR=7.9						
J26L	Joseph Creek	84.33	13	P	P	11 58 29.5	+0.4
J26L	Joseph Creek	84.33	13	P	P	11 58 29.8	+0.7
	baz=209,SNR=24						
WALA	Waterton Lakes	84.37	35	P	P	11 58 29.1	-0.5
WALA	comp=Z,10nm,1.1s			IAmb	IAmb	11 58 30.8	
H23K	Yukon River	84.41	10	P	P	11 58 28.5	-0.9
H23K	comp=Z,29nm,1.5s			IAmb	IAmb	11 58 29.5	
H23K	Yukon River	84.41	10	P	P	11 58 29.2	-0.1
	baz=203,SNR=5.8						
L29M	L29M	84.42	16	P	P	11 58 30.2	+0.8
	baz=214,SNR=23						
MSTX	Muleshoe	84.45	52	P	P	11 58 30.3	-0.1
MSTX	comp=Z,24nm,1.4s			IAmb	IAmb	11 58 32.2	
MSTX	Muleshoe	84.45	52	P	P	11 58 31.1	+0.7
	baz=246						
G21K	Allakaket	84.46	8	P	P	11 58 30.2	+0.7
	baz=200,SNR=10						
M31M	Drury Creek, Y	84.70	17	P	P	11 58 30.8	0.0
M31M	comp=Z,16nm,1.2s			IAmb	IAmb	11 58 32.0	
H24K	Noodor Dome	84.70	10	P	P	11 58 30.3	-0.5
H24K	Noodor Dome	84.70	10	P	P	11 58 30.0	-0.9
	baz=205						
PRP	Porcupine Dome	84.84	11	P	P	11 58 31.9	+0.2
PRP	Porcupine Dome	84.84	11	P	P	11 58 31.8	+0.2
	baz=207,SNR=28						
CMIG	Matias Romero	84.87	71	LR	LR	12 31 28.0	
	comp=Z,22nm,19.0s,baz=248,slow=32						
H03S2	Juan Fernandez	84.90	124	T	T	13 32 08.4	
	baz=250,slow=75,SNR=16						
DAWY	Dawson	84.90	15	P	P	11 58 32.6	+0.6
DAWY	comp=Z,25nm,1.0s			IAmb	IAmb	11 58 33.6	
DAWY	Dawson	84.90	15	P	P	11 58 32.5	+0.6
	baz=213,SNR=23						
H03S1	Juan Fernandez	84.91	124	T	T	13 32 09.5	
	baz=250,slow=75,SNR=36						
H03S3	Juan Fernandez	84.91	124	T	T	13 32 08.2	
	baz=250,slow=75,SNR=36						
H03N2	Juan Fernandez	85.01	123	T	T	13 32 14.6	
	baz=257,slow=72,SNR=10						
H03N3	Juan Fernandez	85.01	123	T	T	13 32 08.8	
	baz=257,slow=72,SNR=3.1						
RLMT	Red Lodge	85.02	40	P	P	11 58 33.9	+0.8
RLMT	comp=Z,6.5nm,0.7s			IAmb	IAmb	11 59 15.3	
RLMT	Red Lodge	85.02	40	P	P	11 58 34.2	+1.1
	baz=240,SNR=5.2						
FARO	Faro, Yukon	85.02	18	P	P	11 58 32.8	+0.3
	baz=219						
H03N1	Juan Fernandez	85.02	123	T	T	13 32 08.7	
	baz=257,slow=72,SNR=5.3						
EGAK	Eagle	85.10	13	P	P	11 58 32.9	+0.1
EGAK	comp=Z,24nm,0.9s			IAmb	IAmb	11 58 34.3	
EGAK	Eagle	85.10	13	P	P	11 58 33.5	+0.8
	baz=211,SNR=9.1						
G22K	Bettles	85.12	9	P	P	11 58 33.6	+0.8
	baz=202						
I26K	Coal Creek Min	85.13	12	P	P	11 58 33.7	+0.8
I26K	comp=Z,22nm,0.9s			IAmb	IAmb	11 58 34.7	
I26K	Coal Creek Min	85.13	12	P	P	11 58 33.4	+0.5
	baz=209						
F21K	Alatna River	85.13	8	P	P	11 58 33.3	+0.4
	baz=200						
G23K	Bananza Creek	85.15	9	P	P	11 58 33.4	+0.4
	baz=203,SNR=11						
K29M	Barlow Dome	85.18	15	P	P	11 58 34.0	+0.6
	baz=215,SNR=9.2						
MAYO	Mayo, Yukon	85.40	16	P	P	11 58 34.2	-0.1
MAYO	Mayo, Yukon	85.40	16	P	P	11 58 35.4	+1.1
	baz=216						
H25K	Birch Creek	85.46	11	P	P	11 58 34.6	+0.1
	baz=207						
BRLDA	Berland Lookou	85.48	30	P	P	11 58 35.5	+0.5
J29M	Klondike Camp	85.51	15	P	P	11 58 36.5	+1.6
	baz=214						
F22K	John River	85.58	8	P	P	11 58 35.9	+0.7
	baz=201						
COLD	Coldfoot	85.60	9	P	P	11 58 36.2	+1.0
COLD	comp=Z,25nm,1.1s			IAmb	IAmb	11 58 37.4	
COLD	Coldfoot	85.60	9	P	P	11 58 35.9	+0.7
	baz=203						
I27K	Kandik River	85.71	13	P	P	11 58 35.9	+0.1
	baz=211,SNR=11						
BILL	Bilibino	85.81	353	P	P	11 58 36.3	0.0
BILL	Bilibino	85.81	353	*de*P	P	11 58 36.2	0.0
BILL				*e**PP	sP	11 59 16.3	+0.9
BILL				*e*		12 01 56.5	
BILL				*e*PPP	PPP	12 03 50.4	
BILL				*e*SS	SS	12 14 47.5	+7.8
BILL				*e*SSS	SSS	12 18 10.8	
BILL				pmax	pmax		
	comp=Z,37nm,0.8s						
G25K	Bearman Lake	85.85	11	P	P	11 58 36.4	0.0
	baz=207						
MMPY	Sheldon Lake,	85.94	18	P	P	11 58 37.9	+0.8
	baz=221,SNR=11						
HNS	HongShan	85.94	311	⇑P	P	11 58 39.0	+1.4
HNS	comp=Z,22nm,1.2s			pmax	pmax		
BJT	Baijiatuau	86.02	314	P	P	11 58 39.6	+1.7
	comp=Z,21nm,1.3s						
BJI	Beijing	86.02	314	P	P	11 58 39.3	+1.4
BJI	comp=Z,18nm,1.0s			pmax	pmax		
TGTN	Hyland Airport	86.07	20	P	P	11 58 38.4	+0.7
	baz=223						
F24K	Squaw Lake	86.23	10	P	P	11 58 39.0	+0.7
	baz=205						
I29M	Ogilvie Camp,	86.24	14	P	P	11 58 38.9	+0.4
I29M	comp=Z,19nm,1.0s			IAmb	IAmb	11 58 39.7	
I29M	Ogilvie Camp,	86.24	14	P	P	11 58 38.5	0.0
	baz=214,SNR=12						
H27K	Steamboat Moun	86.27	13	P	P	11 58 39.2	+0.6
	baz=211,SNR=14						
MAW	Mawson	86.30	199	P	P	11 58 40.1	+1.3
	comp=Z,2.2nm,0.6s,baz=104,slow=6.9,SNR=8.1						
	comp=Z,2.2nm,0.6s						
MAW	Mawson	86.30	199	P	P	11 58 39.7	+0.8
MAW	Mawson	86.30	199	P	P	11 58 39.7	+0.8
MAW	comp=Z,6.0nm,1.9s			pmax	pmax		
ABTX	Abilene, Hawle	86.32	55	P	P	11 58 37.8	-1.8
ABTX	comp=Z,19nm,1.0s			IAmb	IAmb	11 59 20.5	
ABTX	Abilene, Hawle	86.32	55	P	P	11 58 40.2	+0.6
	baz=248						
ZEA	Zeya	86.33	329	*e*P	P	11 58 39.8	+0.7
ZEA	comp=E,10.0nm,0.4s			pmax	pmax		
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
G26K	Porcupine Rive	86.44	11	P	P	11 58 40.2	+0.8
	baz=209,SNR=23						
E23K	Chandalar	86.45	9	P	P	11 58 40.0	+0.5
	baz=203						
LYN	LuoYang	86.46	308	⇑*i*P	P	11 58 41.0	+0.8
LYN	comp=Z,20nm,1.1s			pmax	pmax		
LYN				pmax	pmax		
	comp=Z,150nm,5.7s						
IPM	Ipoh	86.50	276	P	P	11 58 41.4	+0.5
IPM	comp=Z,18nm,0.9s			IAmb	IAmb	11 58 42.7	
IPM	Ipoh	86.50	276	P	P	11 58 41.0	+0.1
	comp=Z,25nm,1.0s						
KOTAN	Kotaneelee Air	86.56	23	P	P	11 58 40.7	+0.7
	baz=227						
E24K	Your Creek	86.64	9	P	P	11 58 41.5	+1.1
	baz=204						
F25K	Christian Rive	86.67	11	P	P	11 58 42.1	+1.6
	baz=207						
BMAR	Burnt Mountain	86.72	11	P	P	11 58 41.7	+1.0
G27K	Doyon Strip	86.74	12	P	P	11 58 41.5	+0.6
	baz=211,SNR=6.8						
EDM	Edmonton	86.96	32	P	P	11 58 41.5	-0.7
EDM	Edmonton	86.96	32	P	P	11 58 41.5	-0.7
EDM	comp=Z,54nm,1.4s			pmax	pmax		
TOLK	Toolik Lake Re	87.00	9	P	P	11 58 42.6	+0.5
TOLK	comp=Z,40nm,1.7s			IAmb	IAmb	12 00 45.5	

TOLK Toolik Lake Re 87.00 9 P P 11 58 42.8 +0.7
baz=203
F26K Sheenjek River 87.03 11 P P 11 58 42.7 +0.4
baz=208
KULM Kulim 87.10 276 P P 11 58 43.9 +0.1
comp=Z,22nm,1.6s
D23K Nanushuk River 87.14 8 P P 11 58 43.7 +1.0
baz=202
E25K Arctic Village 87.16 10 P P 11 58 43.8 +0.9
baz=207,SNR=6.7
ENH Enshi 87.20 303 P P 11 58 44.2 +0.3
EPYK Eagle Plains 87.45 14 P P 11 58 44.5 +0.2
EPYK IAmb IAmb 11 58 45.7
comp=Z,25nm,1.2s
EPYK Eagle Plains 87.45 14 P P 11 58 44.5 +0.2
baz=215,SNR=6.1
D24K Happy Valley 87.58 9 P P 11 58 45.7 +0.9
baz=204
LAO LASA Array 87.63 40 P P 11 58 46.8 +1.2
baz=242
SKLT Songkhla 87.67 278 P P 11 58 48.5 +1.9
comp=Z,29nm,1.1s
SKLT Songkhla 87.67 278 P P 11 58 48.4 +1.9
XLT XiLinHaoTe 87.76 317 ⇑*i*P **P 11 58 47.0 +0.6**
XLT sP sP 11 59 37.5 +12
XLT PP **PP 12 02 16.5 +2.7**
XLT SKS **SKSac 12 09 00.5 -4.1**
XLT sS sS 12 10 17.3 +10
XLT SS **SS 12 15 09.5 +0.1**
XLT pmax pmax
comp=Z,24nm,1.1s
XLT pmax pmax
comp=Z,190nm,3.8s
RSSD Black Hills 87.86 43 P P 11 58 45.8 -1.2
RSSD Black Hills 87.86 43 P P 11 58 45.8 -1.2
RSSD pmax pmax
comp=Z,5.0nm,1.0s
E27K Coleen River 87.94 12 P P 11 58 47.2 +0.7
baz=211
C23K Itkillik River 87.96 8 P P 11 58 47.2 +0.7
baz=202
HIA Hailar 87.97 323 P P 11 58 47.0 -0.1
HIA IAmb IAmb 11 58 48.7
comp=Z,17nm,1.0s
HIA Hailar 87.97 323 P P 11 58 47.1 -0.1
HIA pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 87.97 323 P P 11 58 48.0 +0.8
PSI Prapat 88.02 274 P P 11 58 48.1 -0.3
comp=Z,14nm,1.3s
G30M tAoh Zrail Nji 88.06 14 P P 11 58 47.3 +0.1
baz=216,SNR=10
C24K Franklin Bluff 88.12 9 P P 11 58 47.9 +0.6
baz=204
GYA Guiyang 88.20 298 ⇓*i*P **P 11 58 50.8 +1.9**
GYA pmax pmax
comp=Z,14nm,0.8s
C27K Jago River 88.81 10 P P 11 58 51.5 +0.9
baz=209
GSI Gunungsitoli 88.88 272 P P 11 58 52.6 +0.4
PLCA Paso Flores 88.99 132 P P 11 58 54.0 +1.6
comp=Z,1.0nm,0.8s,baz=217,slow=5.1,SNR=2.2
PLCA LR LR 12 31 17.6
comp=Z,73nm,18.4s,baz=244,slow=30
comp=Z,1.0nm,0.8s
PLCA Paso Flores 88.99 132 P P 11 58 54.0 +1.6
F31M Tsiigehtchic 89.01 14 P P 11 58 51.7 +0.1
baz=218,SNR=14
SRIT Nakonsritamara 89.05 279 P P 11 58 53.3 +0.3
SURA Surathani 89.19 280 P P 11 58 55.5 +1.8
HHC Hu-ho-hao-te 89.56 313 *e*P **P 11 58 55.8 +0.8**
HHC pmax pmax
comp=Z,55nm,0.9s
HHC pmax pmax
comp=Z,180nm,4.3s
INK Inuvik 89.75 14 P P 11 58 55.0 +0.1
INK IAmb IAmb 11 58 56.1
comp=Z,15nm,1.1s
INK Inuvik 89.75 14 P P 11 58 55.1 +0.1
INK pmax pmax
comp=Z,15nm,1.1s
INK Inuvik 89.75 14 P P 11 58 55.3 +0.4
baz=218,SNR=5.6
YAK Yakutsk 90.17 337 P P 11 58 55.9 -1.1
YAK Yakutsk 90.17 337 *ce*P **P 11 58 56.0 -1.1**
YAK pmax pmax
comp=Z,18nm,0.9s
BTO Baotou 90.56 312 *e*P **P 11 59 01.0 +1.4**
MT01 Popeta 90.94 126 P **P 11 58 59.8 -1.7**
KMI Kunming 91.13 296 ⇑P **P 11 59 04.5 +1.7**
KMI pmax pmax
comp=Z,21nm,1.0s
SRDT SRDT 91.18 285 P P 11 59 03.5 +0.6
comp=Z,16nm,1.0s
SRDT SRDT 91.18 285 P P 11 59 03.3 +0.4
TROLL Troll, Antarti 91.39 179 P P 11 59 03.7 +0.7
TROLL Troll, Antarti 91.39 179 pP pP 11 59 39.8 +8.6
VNA3 Neumayer Olymp 91.53 175 P P 11 59 02.3 -1.2
VNA3 Neumayer Olymp 91.53 175 pP pP 11 59 40.3 +8.5
SNAA Sanae 91.55 177 P P 11 59 04.1 +0.5
SNAA Sanae 91.55 177 pP pP 11 59 39.4 +7.4
VNA2 Neumayer--Watz 92.01 176 P P 11 59 07.5 +1.7
baz=190,slow=3.5
VNA2 Neumayer--Watz 92.01 176 pP pP 11 59 42.8 +8.9
baz=185,slow=4.1
VNA1 Neumayer--Stat 92.22 175 P P 11 59 08.6 +2.0
PZH PanZhiHua 92.40 297 P P 11 59 07.8 -0.7
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,5.8s
CM31 Chiang Mai Arr 92.52 288 P P 11 59 10.8 +1.7
CMAR Chiang Mai Arr 92.52 288 P P 11 59 10.8 +1.7
comp=Z,6.8nm,0.8s,baz=99,slow=2.4,SNR=56
comp=Z,6.8nm,0.8s
CMAR Chiang Mai Arr 92.52 288 P P 11 59 10.1 +1.0
CHTO Chiang Mai 92.62 289 P P 11 59 10.8 +1.3
CHTO Chiang Mai 92.62 289 P P 11 59 10.8 +1.3
CHTO pmax pmax
comp=Z,12nm,0.8s
ATAH Atahualpa 93.27 98 LR LR 12 32 58.0
comp=Z,44nm,20.3s,baz=192,slow=30
LZH Lanzhou 93.60 306 *e*P **P 11 59 15.3 +1.4**
LZH pmax pmax
comp=Z,21nm,1.6s
A36M Sachs Harbour 94.38 14 P P 11 59 16.6 +0.2
A36M Sachs Harbour 94.38 14 P P 11 59 16.9 +0.5
baz=226
ULN Ulaanbaatar 95.10 318 P P 11 59 19.6 -0.9
ULN IAmb IAmb 11 59 22.9
comp=Z,5.0nm,0.8s
ULN Ulaanbaatar 95.10 318 *ce*P **P 11 59 20.2 -0.2**
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 95.10 318 P P 11 59 20.6 +0.2
ULM Lac du Bonnet 95.36 39 LR LR 12 40 16.2
comp=Z,43nm,18.0s,baz=76,slow=34
SONM Songino Array 95.51 318 P P 11 59 22.0 -0.3
comp=Z,1.6nm,0.8s,baz=125,slow=4.7,SNR=9.7
SONM PP **PP 12 03 10.1 -4.7**
comp=Z,2.3nm,1.0s,baz=138,slow=7.4,SNR=6.6
comp=Z,1.6nm,0.8s
SONM Songino Array 95.51 318 P P 11 59 22.0 -0.3
TIXI Tiksi 96.19 344 P P 11 59 23.4 -1.3
TIXI Tiksi 96.19 344 *ce*P **P 11 59 24.3 -0.3**
TIXI pmax pmax
comp=Z,7.0nm,1.0s
LVC Limon Verde 96.91 116 LR LR 12 34 08.9
comp=Z,53nm,19.7s,baz=266,slow=30
GTA Gaotai 97.61 309 ⇓P Pdif 11 59 32.8 +0.7
GTA pP sP 12 00 13.3 +1.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
GOMU GeErMu 100.67 305 P PKiKP 12 04 05.5 -6.3
MKAR Makanchi Array 111.40 314 PKiKP **PKiKP 12 04 29.9 -1.0**
comp=Z,1.7nm,0.6s,baz=219,slow=1.2,SNR=6.3
KURK Kurchatov 113.81 318 *i* PKIKP **PKiKP 12 04 34.0 -1.3**
KURK pmax pmax
comp=Z,21nm,1.3s
KSH Kashi 115.85 306 PKP **PKPdf 12 04 37.5 -2.2**
BVAR Borovoye Array 118.63 322 PKP **PKPdf 12 04 43.9 -0.6**
comp=Z,4.2nm,0.8s,baz=54,slow=2.6,SNR=9.4
BRVK Borovoye 118.69 322 *i* PKIKP **PKPdf 12 04 44.3 -0.3**
BRVK pmax pmax
comp=Z,7.0nm,0.9s

ARU Arti 124.22 328 PKP **PKPdf 12 04 54.5 -0.6**
comp=Z,6.4nm,0.2s,baz=184,slow=21,SNR=4.0
ARU Arti 124.22 328 *i* PKIKP **PKPdf 12 04 54.2 -0.9**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARCES ARCESS Array B 125.90 352 PKP **PKPdf 12 04 57.9 -0.1**
comp=Z,5.5nm,0.9s,baz=319,slow=3.4,SNR=5.8
KLMR Klimovskoe 129.90 339 *e*PKIKP **PKPdf 12 05 02.0 -3.8**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 129.90 339 *e*PKPdf **PKPdf 12 05 02.1 -3.8**
KLMR AMP 12 05 17.8
comp=Z,22nm,1.5s
OBN Obninsk 135.15 336⇓*e*PKIKP **PKPdf 12 05 15.9 0.0**
OBN *e* 12 05 59.3
OBN *e* 12 07 51.0
OBN pmax pmax
comp=Z,9.0nm,0.9s
VSU Vasula 135.66 345 *i* PKIKP **PKPdf 12 05 17.1 +0.4**
VSU pmax pmax
comp=Z,27nm,0.9s
MAK Makhachkala 136.20 315 *e*P **Pdif 12 02 14.4 -9.0**
MAK *i* 12 05 15.1
MAK *e* 12 05 55.6
MAK pmax pmax
comp=Z,548nm,1.1s
MNK Minsk 138.74 341 *i* PKIKP **PKiKP 12 05 24.4 -0.3**
MNK *i* 12 05 59.3
MNK *i* 12 08 17.4
MNK *i* PPP PPP 12 11 20.0
MNK *i* 12 12 22.6
MNK *i* SS SS 12 26 23.0 +3.0
MNK *i* SSS SSS 12 31 34.3
MNK pmax pmax
comp=Z,13nm,0.7s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=N,25nm,0.8s
MNK MLR MLR
comp=N,1μm,20.0s
MNK MLR MLR
comp=E,223nm,19.0s
MNK MLR MLR
comp=Z,135nm,19.0s
MNK Minsk 138.74 341 *i* PKP **PKiKP 12 05 24.5 -0.3**
comp=E,4.0nm,0.9s
MNK *i* PKP **PKiKP 12 05 24.5 -0.3**
comp=N,25nm,0.8s
MNK *i* PKP **PKiKP 12 05 24.5 -0.3**
comp=Z,13nm,0.7s,baz=212
MNK *i* pPKP **sPKPdf 12 05 59.3 -3.6**
MNK *i* PP **PP 12 08 17.4 +3.1**
MNK *i* PPP PPP 12 11 20.1
MNK *i* SKS **SKSdf 12 12 22.6 -0.4**
MNK *i* SS **SS 12 26 23.0 +3.0**
MNK *i* SSS SSS 12 31 34.3
MNK *i* LRM MLR 13 06 01.4
comp=N,1μm,20.4s
MNK *i* LRM MLR 13 06 04.0
comp=E,223nm,18.5s
MNK *i* LRM MLR 13 06 06.5
comp=Z,135nm,19.1s
KIV Kislovodsk 138.90 319 *e*PKIKP **PKPdf 12 05 22.5 -0.8**
KIV pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 141.40 336 PKhKP PKPpre 12 05 21.2
comp=Z,3.2nm,0.8s,baz=38,slow=4.1,SNR=8.4
KIBK Kibwezi 143.11 242 PKPdf PKPbc 12 05 29.6 +0.7
LVV L'vov 143.98 340 *e*PKIKP PKPab 12 05 29.7 0.0
KMBO Kilima Mbogo 144.42 243 PKPdf PKPab 12 05 34.1 -0.2
comp=Z,0.9nm,0.9s,baz=66,slow=22,SNR=17
KMBO Kilima Mbogo 144.42 243 PKPdf **PKPab 12 05 32.7 0.0**
DIKM Dikmen 144.74 321 ⇑P **PKPdf 12 05 34.1 +0.4**
OJC Ojcow 144.85 345 *e*PKP **PKPab 12 05 31.3 -1.6**
OJC Ojcow 144.85 345 PKPdf **PKPab 12 05 31.3 -1.6**
OJC Ojcow 144.85 345 PKIKP **PKPab 12 05 31.3 -1.6**
KSP Ksiaz 145.05 349 *e*PKP **PKPdf 12 05 34.3 +0.3**
CLL Collm 145.12 352 PKPbc **PKPbc 12 05 32.1 -1.7**
CLL Collm 145.12 352⇑*i*PKIKP **PKPab 12 05 33.9 +0.1**
CLL *e* 12 06 12.0
CLL pmax pmax
comp=Z,56nm,1.0s
CLL Collm 145.12 352⇑*i*PKPbc **PKPab 12 05 33.9 +0.1**
comp=Z,56nm,1.0s
CLL *ex* x 12 06 12.0
CLL *es*PKPdf **sPKPdf 12 06 17.0 +2.5**
VASR Vaslui 145.19 333 ⇑P **PKPbc 12 05 33.9 -0.2**
STHS Stebnicka Huta 145.19 343 *e*PKIKP **PKPdf 12 05 34.3 0.0**
KOLS Kolonicke sedl 145.32 341 *e*PKIKP **PKPab 12 05 35.5 +0.8**
CHVC Chvalec 145.34 349 *e*PKP **PKPbc 12 05 34.6 +0.1**
OSTC Ostas 145.34 349 *e*PKP **PKPab 12 05 35.0 +0.3**
BURO8 Bucovina Ar. S 145.42 337 PKPab 12 05 35.4 +0.2
UPC Upice 145.42 349 *e*PKIKP **PKPab 12 05 35.1 +0.1**
UPC Upice 145.42 349 *e*PKP **PKPab 12 05 35.1 +0.1**
BURAR Bucovina Array 145.44 337 ⇑P **PKPab 12 05 36.0 +0.7**
BURAR Bucovina Array 145.44 337 PKPab 12 05 35.5 +0.1
BURAR Bucovina Array 145.44 337 ⇑PKIKP **PKPab 12 05 36.0 +0.7**
DPC Dobruska-Polom 145.51 348 *e*PKP2 **PKPab 12 05 35.7 +0.3**
DPC Dobruska-Polom 145.51 348 *e*PKP **PKPab 12 05 35.7 +0.3**
UZH Uzhgorod 145.58 341⇑*i*PKP2 **PKPab 12 05 35.7 +0.1**
CRVS Cervenica-Dubn 145.59 342 *e*PKP2 **PKPab 12 05 36.5 +0.8**
OKC Ostrava-Krasne 145.61 346 *e*PKP2 **PKPdf 12 05 35.1 +0.2**
OKC Ostrava-Krasne 145.61 346 *e*PKP **PKPdf 12 05 35.1 +0.2**
BIZ Bicaz 145.65 335 ⇑P **PKPab 12 05 36.0 0.0**
PVCC Panska Ves 145.65 350 *e*PKP2 **PKPab 12 05 36.0 +0.1**
PVCC Panska Ves 145.65 350 *e*PKP **PKPab 12 05 36.0 +0.1**
VLDR Vladesti 145.68 332 ⇑P **PKPab 12 05 36.6 +0.5**
KRLC Kraliky 145.68 348 *e*PKP2 **PKPdf 12 05 35.2 +0.1**
KRLC Kraliky 145.68 348 *e*PKP **PKPdf 12 05 35.2 +0.1**
TESR Tescani 145.77 334 ⇑P **PKPbc 12 05 35.9 -0.1**
MORC Moravsky Berou 145.80 347 ⇑P **PKPab 12 05 36.3 -0.2**
MORC Moravsky Berou 145.80 347 PKPbc **PKPdf 12 05 35.5 +0.1**
MORC Moravsky Berou 145.80 347 ⇑PKP2 **PKPab 12 05 36.3 -0.2**
MORC Moravsky Berou 145.80 347 *e*PKP **PKPab 12 05 36.3 -0.2**
GAZ Gaziantep 145.82 313 PKPbc **PKPdf 12 05 36.1 +0.3**
TLCR 145.85 331 ⇑P **PKPab 12 05 36.7 -0.1**
TLCR 145.85 331 ⇑PKP2 **PKPab 12 05 36.7 -0.1**
BNN Bunyan 145.92 316 PKPbc **PKPdf 12 05 35.9 -0.1**
TRPA Tarpa 145.94 340 ⇓P **PKPab 12 05 37.0 0.0**
TRPA Tarpa 145.94 340 PKP **PKPab 12 05 36.8 -0.2**
SLCR Slobozia Conac 146.02 332 ⇑P **PKPab 12 05 37.8 +0.4**
IZVR Izvoarele 146.05 332 ⇑P **PKPab 12 05 38.0 +0.5**
PANC Panciu 146.07 333 ⇑P **PKPbc 12 05 36.8 0.0**
BEBN Eben Emael 146.08 0 *d*PKPab **PKPbc 12 05 37.0 +0.3**
MAUC Maruska 146.13 346 *e*PKP **PKPbc 12 05 37.3 +0.3**
CFR Carcaliu 146.17 331 ⇑P **PKPab 12 05 37.6 -0.4**
CFR Carcaliu 146.17 331 ⇑PKP2 **PKPab 12 05 37.6 -0.4**
PRU Pruhonice 146.18 350 *e*PKP2 **PKPbc 12 05 37.1 0.0**
PRU Pruhonice 146.18 350 *e*PKP **PKPbc 12 05 37.1 0.0**
ABAH Abaujker 146.20 342 PKP **PKPab 12 05 37.8 -0.2**
ARCR ARCALIA 146.20 337 ⇓P **PKPab 12 05 37.7 -0.3**
GOPC GO Pecny, Ondr 146.21 350 *e*PKP2 **PKPbc 12 05 37.4 +0.2**
GOPC GO Pecny, Ondr 146.21 350 *e*PKP **PKPbc 12 05 37.4 +0.2**
NKC Novy Kostel 146.24 353 *e*PKP2 **PKPbc 12 05 37.5 +0.2**
NKC Novy Kostel 146.24 353 *e*PKP **PKPbc 12 05 37.5 +0.2**
VRI Vrincioaia 146.25 334 ⇓P **PKPbc 12 05 37.0 -0.4**
VRI Vrincioaia 146.25 334 ⇓PKP2 **PKPbc 12 05 37.0 -0.4**
MEM Membach 146.27 0 *d*PKPab **PKPbc 12 05 37.5 +0.2**
TPGR Topolog 146.28 331 ⇑P **PKPbc 12 05 37.9 +0.3**
BTNL Ternell 146.29 360 *d*PKPab **PKPbc 12 05 37.1 -0.3**
BSTI Sart Tilman 146.29 1 *d*PKPab **PKPbc 12 05 37.7 +0.3**
PLOR Plostina 146.30 334 ⇑P **PKPbc 12 05 37.6 0.0**
PLOR Plostina 146.30 334 ⇑PKP2 **PKPbc 12 05 37.6 0.0**
SNF Seneffe 146.34 2 *d*PKPab **PKPbc 12 05 37.8 +0.4**
VRAC Vranov 146.45 347 ⇓P **PKPab 12 05 38.8 -0.2**
VRAC Vranov 146.45 347 ⇓PKP2 **PKPab 12 05 38.8 -0.2**
VRAC Vranov 146.45 347 *e*PKP **PKPbc 12 05 38.3 +0.4**
BCLA Clavier 146.45 1 *d*PKPab **PKPbc 12 05 38.3 +0.5**
OZUR 146.46 335 ⇑P **PKPbc 12 05 38.5 +0.4**
COVR Voineasa-Covas 146.49 334 ⇑P **PKPbc 12 05 38.0 -0.2**
BHOU Houvegnez 146.52 0 *d*PKPab **PKPab 12 05 39.0 -0.2**
BMRD Maredsous 146.56 1 *d*PKPab **PKPbc 12 05 38.2 0.0**
TIRR Tirgusor 146.58 330 ⇑P **PKPbc 12 05 38.7 +0.3**
TIRR Tirgusor 146.58 330 ⇑PKP2 **PKPbc 12 05 38.7 +0.3**
HARR Harsova 146.63 331 ⇑P **PKPbc 12 05 38.6 +0.1**
HARR Harsova 146.63 331 ⇑PKP2 **PKPbc 12 05 38.6 +0.1**
JAVC Velka Javorina 146.64 346 *e*PKP **PKPab 12 05 40.0 +0.2**
TREC Trest 146.68 349 *e*PKP2 **PKPbc 12 05 39.2 +0.6**
TREC Trest 146.68 349 *e*PKP **PKPbc 12 05 39.2 +0.6**
VYHS Vyhne 146.69 344 *e*PKP2 **PKPbc 12 05 39.0 +0.4**
RCHB Rochefort 146.72 1 *d*PKPab **PKPbc 12 05 38.6 0.0**

KRUC Moravsky 146.72 348 *e*PKP **PKPbc 12 05 39.0 +0.3**
DOU Dourbes 146.76 2 *d*PKPab **PKPbc 12 05 39.4 +0.7**
BR131 Keskin Array S 146.86 319 PKPbc **PKPbc 12 05 39.4 -0.2**
BR131 Keskin Array S 146.86 319 PKP2 **PKPbc 12 05 39.4 -0.2**
BRTR Keskin Array B 146.86 319 PKPbc **PKPbc 12 05 39.5 -0.1**
comp=Z,32nm,0.8s,baz=132,slow=2.4,SNR=84
MLR Muntele Rosu 146.88 334 ⇑P **PKPbc 12 05 39.4 0.0**
MLR Muntele Rosu 146.88 334 PKPbc **PKPbc 12 05 39.3 -0.2**
comp=Z,37nm,1.1s,baz=26,slow=4.2,SNR=14
MLR Muntele Rosu 146.88 334 PKPbc **PKPbc 12 05 38.6 -0.8**
MLR Muntele Rosu 146.88 334 ⇑PKP2 **PKPbc 12 05 39.4 0.0**
ISR Istrita 146.92 333 ⇑P **PKPbc 12 05 40.0 +0.5**
ISR Istrita 146.92 333 ⇑PKP2 **PKPbc 12 05 40.0 +0.5**
PSZ Piszkesteto 146.93 343 ⇑P **PKPdf 12 05 37.0 -0.4**
PSZ Piszkesteto 146.93 343 PKPbc **PKPdf 12 05 37.7 +0.4**
PSZ Piszkesteto 146.93 343 PKIKP **PKPdf 12 05 37.7 +0.4**
PSZ Piszkesteto 146.93 343 PKP **PKPab 12 05 40.8 -0.1**
SMOL Smolenice 147.02 346 *e*PKP2 **PKPab 12 05 41.3 +0.1**
DRGR 147.04 339 ⇑P **PKPbc 12 05 39.7 0.0**
DRGR 147.04 339 ⇑PKP2 **PKPbc 12 05 39.7 0.0**
KHC Kasperske Hory 147.16 351 PKPbc **PKPbc 12 05 39.4 -0.6**
KHC Kasperske Hory 147.16 351 *e*PKP2 **PKPbc 12 05 40.0 0.0**
KHC Kasperske Hory 147.16 351 *e*PKP **PKPbc 12 05 40.0 0.0**
KHC *es*PKP 12 06 24.0
MODS Modra-Piesok 147.18 346 *e*PKP2 **PKPbc 12 05 40.9 +0.9**
WLF Walferdange 147.21 360 *d*PKPab **PKPab 12 05 41.0 -0.9**
VOIR 147.30 335 ⇑P **PKPbc 12 05 40.9 +0.4**
VOIR 147.30 335 ⇑PKP2 **PKPbc 12 05 40.9 +0.4**
ANTO Ankara 147.30 320 ⇑P **PKPbc 12 05 41.5 +0.8**
ANTO Ankara 147.30 320 ⇑PKP2 **PKPbc 12 05 41.5 +0.8**
CKRC Cesky Krumlov 147.35 350 *e*PKP **PKPbc 12 05 40.0 -0.5**
GEC2 GERESS Array S 147.42 351 PKPbc **PKPbc 12 05 40.8 +0.1**
GERES GERESS Array B 147.42 351 PKPbc **PKPbc 12 05 41.0 +0.2**
comp=Z,8.8nm,1.0s,baz=41,slow=2.6,SNR=28
GERES GERESS Array B 147.42 351 PKPbc **PKPbc 12 05 40.9 +0.1**
GERES GERESS Array B 147.42 351 PKP2 **PKPbc 12 05 41.0 +0.2**
ARR Arges 147.52 335 ⇑P **PKiKP 12 05 42.3 -0.9**
SIRR Siria 147.86 339 ⇑P **PKPbc 12 05 40.7 -1.2**
CSKK Cskako 147.88 344 PKP **PKPab 12 05 45.7 +1.1**
MDUB Mudurnu 147.89 322 PKPdf **PKPdf 12 05 37.6 -1.6**
MDUB PKPbc **PKPbc 12 05 41.0 -1.3**
MDUB PKPab **PKPab 12 05 44.8 -0.3**
CONA Conrad Observa 147.91 348 *i* P **PKPbc 12 05 42.7 +0.6**
comp=Z,44nm,1.6s,SNR=19
SOP Sopron 148.00 347 PKP **PKPab 12 05 45.6 +0.5**
RONA Rosalia, Austr 148.04 347 *i* P **PKPbc 12 05 42.9 +0.6**
comp=Z,32nm,1.0s,SNR=26
EGYH Egyhazaskeszo 148.07 345 PKP **PKPab 12 05 46.9 +1.5**
ASF Jabal al Asfar 148.15 304 PKPbc **PKPbc 12 05 43.9 +0.7**
comp=Z,20nm,1.0s,baz=73,slow=1.5,SNR=19
GZR Gura Zlata 148.22 337 ⇑P **PKPbc 12 05 42.9 -0.1**
GZR Gura Zlata 148.22 337 ⇑PKIKP **PKPbc 12 05 42.9 -0.1**
MPLH Magyarpolny 148.25 345 PKP **PKPbc 12 05 43.3 +0.5**
LODK Lodwar 148.27 248 PKPbc **PKPbc 12 05 43.3 -0.8**
MOA Molln 148.29 349 *i* P **PKPbc 12 05 43.2 +0.2**
comp=Z,17nm,1.0s,SNR=11
BZS Buzias 148.44 339 ⇑P **PKPbc 12 05 43.3 -0.1**
BZS Buzias 148.44 339 ⇑PKP2 **PKPbc 12 05 43.3 -0.1**
BFO Black Forest 148.49 357 PKPbc **PKPbc 12 05 42.3 -1.2**
BFO Black Forest 148.49 357 PKIKP **PKPbc 12 05 42.3 -1.2**
BIOA Bad Ischl, Aus 148.56 350 *i* P **PKPbc 12 05 43.7 0.0**
comp=Z,17nm,1.1s
ARSA Arzberg 148.63 348 *i* P **PKPbc 12 05 43.8 -0.1**
comp=Z,17nm,1.2s,SNR=6.5
ECH Echery 148.65 359 PKPbc **PKPbc 12 05 43.3 -0.6**
ECH Echery 148.65 359 PKP2 **PKPbc 12 05 43.3 -0.6**
CLF Chambon-Foret 148.70 5 PKPbc **PKPbc 12 05 44.0 0.0**
HERR Herculane 148.79 337 ⇓P **PKPbc 12 05 44.3 0.0**
MORH Mrgy, Hungar 148.84 343 ⇓P **PKPbc 12 05 43.9 -0.5**
MORH Mrgy, Hungar 148.84 343 PKP **PKPbc 12 05 44.3 -0.1**
PVL Pavlikeni 148.96 332 P **PKiKP 12 05 45.8 -0.3**
MMAI Mount Meron Ar 148.98 307 PKPbc **PKiKP 12 05 46.4 -0.2**
comp=Z,22nm,0.7s,baz=64,slow=3.8,SNR=25
KOVH Kovagotottos 149.10 344 PKP **PKPbc 12 05 45.2 +0.1**
MDVR Moldovita 149.13 338 ⇑P **PKPab 12 05 49.9 0.0**
RETA Reutte 149.14 354 *i* P **PKPbc 12 05 45.5 +0.2**
comp=Z,18nm,1.0s,SNR=5.6
KBA Koelnbreinsper 149.20 350 *i* P **PKPbc 12 05 44.9 -0.7**
comp=Z,15nm,1.0s,SNR=5.1
WATA Walderalm 149.20 353 *i* P **PKPbc 12 05 45.5 0.0**
comp=Z,17nm,1.0s,SNR=5.4
MOTA Moosalm 149.25 353 *i* P **PKPbc 12 05 45.6 0.0**
comp=Z,37nm,1.2s,SNR=9.7
WTTA Wattenberg 149.26 353 *i* P **PKPbc 12 05 45.8 +0.1**
comp=Z,24nm,0.8s,SNR=8.0
SOKA Soboth 149.28 348 *i* P **PKPbc 12 05 45.4 -0.2**
comp=Z,29nm,1.2s,SNR=13
SQTA Sankt Quirin 149.36 353 *e*P **PKPbc 12 05 46.1 +0.2**
comp=Z,32nm,1.2s,SNR=6.6
GROS Grobnik 149.39 347 *i* PKPbc **PKPbc 12 05 45.4 -0.5**
DAVA Damuels 149.43 355 *i* P **PKPbc 12 05 46.2 +0.1**
comp=Z,29nm,0.9s,SNR=7.5
FRGS Fruska Gora 149.44 341 ⇑P **PKPbc 12 05 45.8 -0.2**
FRGS Fruska Gora 149.44 341⇑*i*P **PKPbc 12 05 46.1 +0.1**
OBKA Obir 149.53 348 *e*P **PKPbc 12 05 45.2 -1.1**
MPEP Malo Peshtene 149.54 334 P **PKiKP 12 05 47.1 -0.2**
MPEP Malo Peshtene 149.54 334 *i* P PKPab 12 06 03.6 +12
MYKA Terra Mystica 149.58 350 *i* P **PKPbc 12 05 45.7 -0.7**
comp=Z,18nm,1.0s,SNR=5.6
FETA Feichten 149.61 354 *i* P **PKPbc 12 05 46.8 +0.3**
comp=Z,42nm,1.1s,SNR=9.0
CSS Mathiatis 149.64 312 **PKPbc 12 05 45.3 -1.5**
ABTA Abfaltersbach 149.65 351 *e*P **PKPbc 12 05 46.1 -0.4**
comp=Z,45nm,1.0s,SNR=14
BLKB Belogradchik 149.75 336 ⇑P **PKPbc 12 05 46.9 +0.1**
CLUD Cludinico 149.88 351 **PKPbc 12 05 45.3 -1.7**
ISP Isparta 149.95 319 PKPbc **PKPbc 12 05 47.6 0.0**
ISP Isparta 149.95 319 PKP2 **PKPbc 12 05 47.6 0.0**
LJU Ljubljana 149.99 348 *i* PKPbc **PKPbc 12 05 47.1 -0.1**
PGB Panagyurishte 150.01 333 *i* P **PKPbc 12 05 46.9 -0.6**
STAL STALIGIAL 150.10 351 PKPbc **PKPbc 12 05 47.1 -0.5**
MBAR Mbarara 150.12 237 PKPbc **PKiKP 12 05 49.5 -0.2**
comp=Z,2.3nm,0.2s,baz=138,slow=0.9,SNR=7.0
KDZ Kurdzhali 150.14 330 P **PKPbc 12 05 47.6 -0.2**
TUE Stuetta 150.28 355 **PKPbc 12 05 47.9 -0.3**
TUE PKPab **PKPab 12 05 54.5 -0.2**
CEY Cerknica 150.30 348⇑*i*P **PKPbc 12 05 47.3 -0.8**
DIVS Divibare 150.33 339 PKPbc **PKPbc 12 05 47.5 -0.8**
DIVS PKPab **PKPab 12 05 54.9 0.0**
DIVS Divibare 150.33 339⇑*i*P **PKPbc 12 05 48.4 +0.1**
BOJS Bojanci 150.35 347⇑*i*P **PKiKP 12 05 48.6 -0.3**
BOJS Bojanci 150.35 347 *i* PKPbc **PKiKP 12 05 48.5 -0.3**
VTS Vitosha 150.36 334 ⇑P **PKiKP 12 05 49.9 +0.7**
VTS Vitosha 150.36 334 PKPdf **PKPdf 12 05 39.5 -3.7**
VTS PKPbc **PKPbc 12 05 48.2 -0.2**
VTS PKPab **PKPab 12 05 54.9 -0.2**
VTS Vitosha 150.36 334 PKIKP **PKPdf 12 05 39.5 -3.7**
VTS 12 05 54.9
VTS Vitosha 150.36 334 P **PKPbc 12 05 48.1 -0.4**
VTS Vitosha 150.36 334 *i* P **PKPbc 12 05 58.6 +3.5**
A051A Mrakovica 150.42 344⇑*i*P **PKPbc 12 05 48.4 0.0**
RZN Rozhen 150.44 331 P **PKPbc 12 05 48.9 +0.1**
CTI Castel Tesino 150.46 352 PKPbc **PKPbc 12 05 48.1 -0.5**
CTI Castel Tesino 150.46 352 PKIKP **PKPbc 12 05 48.1 -0.5**
RDO Rodhopi 150.47 329 **PKPbc 12 05 48.5 0.0**
RDO PKPab **PKPab 12 05 55.7 +0.3**
SKDS Skadanscina 150.56 349⇑*i*P **PKPbc 12 05 48.2 -0.5**
EIL Elat 150.58 301 PKPbc **PKiKP 12 05 49.6 -0.3**
comp=Z,34nm,0.9s,baz=329,slow=3.1,SNR=16
BLY Banja Luka 150.59 344⇑*i*P **PKPbc 12 05 48.8 +0.1**
HAPS Han Pijesak,Bl 150.68 341⇑*i*P **PKiKP 12 05 49.6 -0.2**
MANT Manisa 150.72 322 PKPbc **PKiKP 12 05 50.1 -0.1**
BBLS Lazići 150.73 340⇑*i*P **PKPbc 12 05 49.3 +0.1**
MGRS Mrkonjic Grad 150.92 344 *e*P **PKPab 12 05 56.1 -1.1**
RUDO Rudo 150.96 340 *e*P **PKPab 12 05 48.8 -0.9**
MMB Musomiste 150.97 332 P **PKPbc 12 05 49.7 -0.1**
ELL Elmali 150.99 318 PKPdf **PKPdf 12 05 41.3 -3.0**
ELL PKPbc **PKPbc 12 05 49.8 -0.3**
ELL Elmali 150.99 318 PKIKP **PKPdf 12 05 41.3 -3.0**
SALO Salr 151.02 353 PKPbc **PKPbc 12 05 49.3 -0.4**
KKB Krupnik 151.03 333 P **PKPbc 12 05 49.1 -0.8**
TEOL Teolo 151.13 352 **PKPbc 12 05 50.0 0.0**
SRKY Kupres RS 151.22 343 *e*P **PKPbc 12 05 48.7 -1.7**
SSB Saint Sauveur 151.57 2 PKPdf **PKPdf 12 05 43.1 -1.7**
SSB **PKPbc 12 05 49.9 -1.2**
SSB Saint Sauveur 151.57 2 PKIKP **PKPdf 12 05 43.1 -1.7**
SSB 12 05 49.9
BRY Bratogost 151.87 340 *e*P **PKPbc 12 05 50.9 -1.1**
PDG Podgorica 152.05 339 ⇑P **PKPbc 12 05 49.4 -2.8**
PDG Podgorica 152.05 339 PKPdf **PKPdf 12 05 43.8 -1.7**
PDG **PKPbc 12 05 51.9 -0.3**
PDG PKPab **PKPab 12 06 01.5 -0.4**

ZCCA	Zocca	152.21	352	PKPdf	PKPdf	12 05 43.9	-1.9
DRME	Dracevica, Mon	152.29	339	*e*P	PKPbc	12 05 52.0	-0.8
HCY	Herceg Novi	152.29	340	*e*P	PKPbc	12 05 50.9	-1.9
ESDC	Sonseca Array	155.60	19	PKPab	PKPab	12 06 18.1	+1.0
comp=Z,3.3nm,1.0s,baz=328,slow=3.6,SNR=11							
TIP	Timpagrande	155.81	339	⇑P	PKPab	12 06 18.2	+0.1
TIP	Timpagrande	155.81	339	PKPdf	PKPdf	12 05 47.9	-3.2
TIP				PKPab	PKPab	12 06 16.9	-1.1
KEST	Kesra	160.91	352	PKPab	PKPab	12 06 40.0	-0.1
comp=Z,5.8nm,0.8s,baz=328,slow=6.5,SNR=5.7							
TAM	Tamanrasset	174.01	4	PKPab	PKPab	12 07 39.1	+0.7
TAM	Tamanrasset	174.01	4	PKP2	PKPab	12 07 39.1	+0.7
TOA0	Torodi Ar. Sit	174.47	130	PKPdf	PKPdf	12 06 05.0	-2.2
TOA0				PKPab	PKPab	12 07 37.3	-3.3
TORD	Torodi Ar. Bea	174.47	130	PKP	PKPdf	12 06 06.1	-1.2
comp=Z,3.6nm,1.0s,baz=355,slow=0.8,SNR=16							
TORD				PKPab	PKPab	12 07 41.8	+1.2
comp=Z,1.5nm,0.9s,baz=227,slow=3.4,SNR=4.3							

*ISK **25** 11:49:45.5, 40°.46N×30°.96E, h8km, ML2.1/14*
DDA 25 11:49:45.9±0.0, 40°.47N×30°.89E, h7km±5km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTAS	Taskesti	0.13	38	P	Pg	11 49 48.7	-0.1
BTAS				S	Sg	11 49 51.1	+0.4
BTAS				*i* AML	AML	11 49 53.0	
comp=N,266nm,0.2s							
BTAS				*i* AML	AML	11 49 53.0	
comp=E,306nm,0.3s							
MDUB	Mudurnu	0.23	89	PG	Pg	11 49 49.2	-1.4
MDUB				SG	Sg	11 49 53.3	-0.4
GULT	Gulveren	0.29	263	PG	Pb	11 49 52.6	-0.9
GULT				SG	Sb	11 49 58.5	0.0
SAHE	Sakarya_HENDEK	0.39	356	P	Pg	11 49 54.2	+0.7
SAHE				S	Sb	11 50 00.4	-0.8
GEYV	SAKARYA_Geyve	0.46	272	P	Pb	11 49 55.7	-0.5
GEYV				S	Sb	11 50 05.8	+2.6
GEYV				*i* AML	AML	11 50 10.0	
comp=N,41nm,0.8s							
SRCK	Saricakaya, Es	0.47	206	PG	Pg	11 49 54.9	-0.1
SRCK				SG	Sb	11 50 02.7	-1.0
GPA	Golpazari	0.48	248	PG	Pb	11 49 56.1	-0.6
SAUV	Serdivan-Sakar	0.51	303	PG	Pb	11 49 56.6	-0.6
YUVA	Yuva-Kibriscik	0.61	97	PG	Pg	11 49 57.1	-0.6
KAYN	Sakarya, Kayna	0.65	320	P	Pb	11 49 59.6	0.0
KAYN				S	Sg	11 50 07.1	+0.1
YIGI	Dzce	0.65	40	P	Pg	11 49 58.0	-0.5
YIGI				S	Sg	11 50 02.9	-4.0
YIGI				*i* AML	AML	11 50 07.0	
comp=N,29nm,0.6s							
YIGI				*i* AML	AML	11 50 07.0	
comp=E,33nm,0.9s							
BORA	Eskisehir	0.68	210	PG	Pg	11 49 58.8	-0.1
BORA	Eskisehir	0.68	210	P	Pg	11 49 58.6	-0.4
BORA				S	Sg	11 50 05.7	-2.1
BORA				*i* AML	AML	11 50 16.0	
comp=E,27nm,0.2s							
BORA				*i* AML	AML	11 50 17.0	
comp=N,21nm,0.2s							
KIBS	BOLU	0.73	93	P	Pg	11 49 59.9	-0.2
KIBS				S	Sg	11 50 10.0	+0.4
KIBS				*i* AML	AML	11 50 19.0	
comp=N,22nm,0.5s							
KIBS				*i* AML	AML	11 50 21.0	
comp=E,27nm,0.9s							
AUMIH	MIHALICIK	0.75	143	PG	Pg	11 49 59.9	-0.4
AUMIH	MIHALICIK	0.75	143	P	Pg	11 50 00.7	+0.4
AUMIH				S	Sb	11 50 11.7	-0.2
AUMIH				*i* AML	AML	11 50 15.0	
comp=N,25nm,0.3s							
AUMIH				*i* AML	AML	11 50 18.0	
comp=E,34nm,0.3s							
KAND	Kocaeli-Kandir	0.82	320	P	Pb	11 50 02.3	-0.1
KAND				S	Sg	11 50 11.7	-0.7
KAND				*i* AML	AML	11 50 27.0	
comp=N,39nm,1.7s							
KAND				*i* AML	AML	11 50 28.0	
comp=E,28nm,1.3s							
CAVI	Cavuskoy	0.84	252	PG	Pb	11 50 03.0	+0.1
KDZE	Karadeniz Ereo	0.94	26	PG	Pg	11 50 03.8	-0.2
SVRH	Sivrihisar-ESK	1.13	154	PN	Pg	11 50 07.4	-0.2
AUSIV	SIVRIHISAR	1.14	154	PN	Pg	11 50 07.6	-0.2
YLV	Yalova	1.16	275	PN	Pn	11 50 08.7	+0.1
TVSB	Tavsanli	1.50	228	PN	Pn	11 50 13.2	-0.1
ISK	Istanbul-Kandi	1.52	294	PN	Pb	11 50 14.0	-0.3
KIZT	Kizilcal	1.76	154	PN	Pn	11 50 17.1	+0.2

*IDC **25** 11:53:26.3±1.3, 24°.08S×175°.26W, h0km, mb4.2/8, mbtmp4.2/10, ML4.6/2, MS3.5/3, Error ellipse: s-maj=55.6km s-min=21.6km az=164.0*
*NEIC **25** 11:53:28.6±0.8, 24°.24S±0°.09×175°.4W±0°.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=16.1km s-min=14.4km az=104.0*
ISC 25 11:53:30.4±0.6, 24°2S±0°.1×175°.4W±0°.1, h28km, n44, σ0°83/38, mb4.5/18, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.49	204	Pn	Pn	11 54 50.1	-0.1
NIUE	Niue	7.23	46	Pn	Pn	11 55 13.8	-0.4
MSVF	Nonsavu	8.89	315	Pn	Pn	11 55 36.9	-0.3
0.8nm,0.3s,baz=123,slow=13,SNR=8.4							
MSVF				LR	LR	11 58 51.3	
comp=Z,524nm,18.3s,baz=146,slow=37							
25nm,0.9s							
MSVF	Nonsavu	8.89	315		Pn	11 55 37.4	+0.2
RAR	Rarotonga	14.73	81	Pn	Pn	11 56 48.6	-8.4
3.2nm,0.3s,baz=268,slow=12,SNR=9.4							
RAR				LR	LR	12 02 58.8	
comp=Z,124nm,18.6s,baz=267,slow=39							
DZM	Mont Dzumac	16.83	274	Pn	P	11 57 25.6	-0.6
0.3nm,0.3s,baz=162,slow=3.2,SNR=2.4							
6.1nm,0.9s							
PPT	Papeete	25.00	80	LR	LR	12 07 43.2	
comp=Z,97nm,18.7s,baz=212,slow=34							
BBOO	Buckleboo	43.19	247	P	P	12 01 29.2	+0.2
BBOO				IAmb	IAmb	12 02 00.0	
comp=Z,22nm,1.4s							
AS31	Alice Springs	46.12	260	P	P	12 01 52.3	-0.2
ASAR	Alice Springs	46.12	260	P	P	12 01 54.2	+1.6
comp=Z,1.5nm,0.8s,baz=90,slow=9.1,SNR=11							
comp=Z,1.5nm,0.8s							
ASAR	Alice Springs	46.12	260	P	P	12 01 52.9	+0.3
WR0	Warramunga Arr	46.38	265	P	P	12 01 54.2	-0.4
WR0				IAmb	IAmb	12 02 15.9	
comp=Z,7.8nm,1.2s							
WB2	Warramunga Arr	46.56	265	P	P	12 01 56.3	+0.3
WB2				IAmb	IAmb	12 02 09.3	
comp=Z,5.3nm,0.8s							
WRAB	Tennant Creek	46.56	265	P	P	12 01 56.0	-0.1
WRAB				IAmb	IAmb	12 02 09.2	
comp=Z,5.4nm,0.9s							
WB0	Warramunga Arr	46.56	265	P	P	12 01 55.8	-0.2
WB0				IAmb	IAmb	12 02 14.5	
comp=Z,8.8nm,1.1s							
WRA	Warramunga Arr	46.57	265	P	P	12 01 55.8	-0.3
comp=Z,2.4nm,0.8s,baz=89,slow=6.0,SNR=23							
comp=Z,2.4nm,0.8s							
WRA	Warramunga Arr	46.57	265	P	P	12 01 55.9	-0.2
KNRA	Kununurra	52.88	268	P	P	12 02 43.7	-0.5
KNRA				IAmb	IAmb	12 03 07.0	
comp=Z,8.3nm,1.1s							
QSPA	South Pole Qui	65.86	180	P	P	12 04 12.8	-0.5
QSPA				IAmb	IAmb	12 04 38.8	
comp=Z,5.2nm,1.1s							
NVAR	Mina Array Bea	82.13	42	P	P	12 05 48.2	-0.6
comp=Z,1.3nm,0.9s,baz=220,slow=8.2,SNR=7.1							
comp=Z,1.3nm,0.9s							
USRK	Ussuriysk Ar.	83.38	325	P	P	12 05 54.3	-0.5
comp=Z,5.7nm,0.9s,baz=142,slow=3.1,SNR=7.4							
comp=Z,5.7nm,0.9s							
TROLL	Troll, Antarti	84.01	179	P	P	12 06 03.2	+5.2
SNAA	Sanae	84.22	178	P	P	12 06 03.7	+4.7
VNA3	Neumayer Olymp	84.27	175	P	P	12 06 03.7	+4.6
CCUT	Cedar City	84.69	45	P	P	12 06 03.0	+0.9
CCUT				IAmb	IAmb	12 06 03.6	
comp=Z,3.9nm,1.0s							
VNA2	Neumayer--Watz	84.73	176	P	P	12 06 06.1	+4.6
baz=181,slow=3.2							
U15A	North Rim	84.74	46	P	P	12 06 02.5	+0.2
VNA1	Neumayer--Stat	84.95	176	P	P	12 06 08.1	+5.6
TMUT	Trail Mountain	87.08	44	P	P	12 06 14.5	+0.6
TMUT				IAmb	IAmb	12 06 14.9	
comp=Z,2.4nm,0.8s							
TX31	Lajitas Ar. Si	87.08	56	P	P	12 06 14.5	+0.6
TX32	Lajitas Array	87.08	56	P	P	12 06 14.7	+0.8
TXAR	Lajitas Array	87.08	56	P	P	12 06 14.4	+0.5
comp=Z,2.1nm,1.0s,baz=201,slow=6.7,SNR=12							
comp=Z,2.1nm,1.0s							
TXAR	Lajitas Array	87.08	56	P	P	12 06 14.5	+0.6
ANMO	Albuquerque	87.90	50	P	P	12 06 18.4	+0.6
ANMO				IAmb	IAmb	12 06 19.2	
comp=Z,3.2nm,1.1s							
SDCO	Great Sand Dun	90.00	48	P	P	12 06 28.2	+0.4
PDAR	Pinedale Array	90.06	42	P	P	12 06 25.7	-2.1
comp=Z,0.4nm,0.8s,baz=199,slow=3.1,SNR=4.3							
comp=Z,0.4nm,0.8s							
DOT	Dot Lake	90.99	13	P	P	12 06 33.3	+1.9
ILAR	Eielson Array	91.43	12	P	P	12 06 32.5	-0.8
comp=Z,0.8nm,1.0s,baz=224,slow=5.0,SNR=5.0							
comp=Z,0.8nm,1.0s							
J26L	Joseph Creek	91.84	13	P	P	12 06 35.1	-0.3
CMAR	Chiang Mai Arr	93.60	288	P	P	12 06 47.0	+2.5
comp=Z,3.3nm,0.9s,baz=135,slow=3.3,SNR=15							
comp=Z,3.3nm,0.9s							
CMAR	Chiang Mai Arr	93.60	288	P	P	12 06 44.3	-0.2
AKASG	Malin Array Be	147.42	331	PKPbc	PKPbc	12 13 11.2	-0.2
comp=Z,1.6nm,0.7s,baz=38,slow=4.0,SNR=6.9							
BRTR	Keskin Array B	151.08	309	PKPbc	PKiKP	12 13 21.3	-0.4
comp=Z,0.3nm,0.3s,baz=19,slow=4.6,SNR=1.8							
CLL	Collm	152.20	349	*i* PKPbc	PKiKP	12 13 23.9	+0.5
comp=Z,9.0nm,1.2s							
CLL				*i* PKPab	PKPab	12 13 32.9	+0.1
CLL				*i* x	x	12 13 36.5	

*IDC **25** 11:58:14.3±6.8, 22°.19N×143°.93E, h225km±59km, mb3.4/8, mbtmp3.9/8, MS2.5/1, Error ellipse: s-maj=83.8km s-min=16.9km az=80.0*
ISC 25 11:58:00.1±2.3, 22°2N±0°2×144°5E±0°6, h100km, n9, σ1°75/8, mb4.0/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.29	337	LR	LR	12 01 31.7	
comp=Z,48nm,19.1s,baz=116,slow=38							
KSRS	Korea Array	20.86	320	P	P	12 02 36.1	+2.1
1.1nm,0.6s,baz=146,slow=8.5,SNR=10							
1.1nm,0.6s							
KLR	Kul'dur	28.79	343	P	P	12 03 49.9	+1.4
1.7nm,0.5s,baz=154,slow=10,SNR=6.5							
1.7nm,0.5s							
SONM	Songino Array	39.73	319	P	P	12 05 22.3	-0.6
0.3nm,0.3s,baz=135,slow=6.5,SNR=2.2							
0.3nm,0.3s							
WRA	Warramunga Arr	43.06	194	P	P	12 05 50.9	+0.6
0.2nm,0.3s,baz=13,slow=8.2,SNR=12							
0.2nm,0.3s							
ZALV	Zalesovo Beam	54.57	321	P	P	12 07 15.5	-2.4
0.8nm,0.5s,baz=107,slow=9.8,SNR=2.7							
0.8nm,0.5s							
KURBB	Kurchatov Arra	57.98	317	P	P	12 07 41.0	-1.2
2.0nm,0.5s,baz=92,slow=7.9,SNR=9.6							
2.0nm,0.5s							
BVAR	Borovoye Array	63.07	319	P	P	12 08 15.8	-1.0
1.7nm,0.4s,baz=92,slow=7.0,SNR=13							
1.7nm,0.4s							
FINES	FINESS Array B	83.23	335	P	P	12 10 14.6	-0.6
1.7nm,0.8s,baz=116,slow=8.7,SNR=3.6							
1.7nm,0.8s							

*IDC **25** 11:58:14.5±1.3, 35°.47N×56°.93E, h0km, mb3.9/7, mbtmp3.9/12, ML3.6/5, MS3.4/24, Error ellipse: s-maj=20.5km s-min=17.1km az=158.0*
*TEH **25** 11:58:14.0, 35°.45N×56°.97E, h9km, ML4.4*
*NEIC **25** 11:58:15.0±2.5, 35°.48N±0°.05×56°.96E±0°.06, h10km±2km, mb4.1/5, mb_Lg4.4(TEH), Error ellipse: s-maj=8.3km s-min=7.8km az=47.0*
ISC 25 11:58:15.2±0.5, 35°49N±0°03×56°98E±0°04, h10km, n152, σ1°39/137, mb3.9/8, MS3.3/17, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHRO	Shahrood	0.93	303	*e*Pg	Pg	11 58 32.5	-0.6
TNSJ	Nastanj	1.55	191		Pn	11 58 42.8	-0.2
TNSJ	Nastanj	1.55	191	*e*Pg	Pn	11 58 42.9	-0.1
TNSJ				*e*Sg	Sg	11 59 04.9	-0.2
IAKL	Akhelmad	1.82	52	*e*Pn	Pb	11 58 47.9	-0.9
IAKL				*e*		11 59 19.9	
comp=Z,26μm,0.6s							
TABS	Tabas	1.84	176	*e*Pn	Pb	11 58 47.7	-1.3
TBHD	Torbat heydari	1.85	92	Pn	Pn	11 58 47.9	+0.8
TBHD	Torbat heydari	1.85	92	*e*Pn	Pn	11 58 47.7	+0.6
TKDS	Koohdasht(Taba	1.88	176	Pn	Pn	11 58 47.5	+0.1
TKDS	Koohdasht(Taba	1.88	176	*e*Pn	Pn	11 58 47.8	+0.4
TKDS				*e*		11 59 20.2	
comp=Z,55μm,0.5s							
IPAY	Payeh	1.90	59	Pn	Pn	11 58 48.6	+0.7
IPAY	Payeh	1.90	59	*e*Pn	Pn	11 58 48.9	+1.0
IPAY				*e*		11 59 18.9	
comp=Z,24μm,0.6s							
IMOG	Moghan	2.02	72	Pn	Pn	11 58 50.8	+1.2
IMOG	Moghan	2.02	72	*e*Pn	Pb	11 58 51.0	-1.2
IMOG				*e*		11 59 34.1	
comp=Z,12μm,0.8s							
IMND	Minoodasht	2.17	325	Pn	Pn	11 58 52.2	+0.8
IMND	Minoodasht	2.17	325	*e*Pn	Pn	11 58 52.5	+1.1
IMND				*e*		11 59 33.4	
comp=Z,13μm,0.9s							
BJRD	Bojnurd	2.23	9	*e*Pn	Pb	11 58 54.1	-1.6
MRVT	Maraveh tapeh	2.28	342	Pn	Pb	11 58 54.6	-1.9
MRVT	Maraveh tapeh	2.28	342	*e*Pn	Pb	11 58 54.6	-1.9
IEMG	Emamgholi	2.35	35	Pn	Pn	11 58 55.5	+1.4
IEMG	Emamgholi	2.35	35	*e*Pn	Pn	11 58 55.7	+1.6
IEMG				*e*		11 59 05.3	
comp=Z,11μm,0.5s							
IKRD	Kardeh	2.42	57	*e*Pn	Pn	11 58 56.9	+1.8
IKRD				*e*		11 59 39.6	
comp=Z,23μm,1.0s							
TPRV	Parvadeh(Tabas	2.47	186	Pn	Pn	11 58 55.7	+0.1
TPRV	Parvadeh(Tabas	2.47	186	*e*Pn	Pn	11 58 55.7	+0.1
IANJ	Anjilo	2.50	270	Pn	Pn	11 58 57.4	+1.3
IANJ	Anjilo	2.50	270	*e*Pn	Pn	11 58 57.3	+1.2
IANJ				*e*		11 59 49.3	
comp=Z,15μm,0.7s							
GEYT	Alibeck	2.60	20	Pn	Pn	11 58 59.6	+2.2
comp=Z,25nm,0.3s,baz=198,slow=15,SNR=185							
GEYT				Lg	Lg	11 59 36.8	
comp=Z,32nm,0.3s,baz=193,slow=20,SNR=16							
comp=Z,148nm,0.7s							
GEYT	Alibeck	2.60	20	Pn	Pn	11 58 57.2	-0.2
GYA0B	ALIBECK ARRAY	2.60	20	Pn	Pn	11 58 56.4	-1.0
AFRZ	Afriz	2.66	140	Pn	Pn	11 58 59.1	+0.8
AFRZ	Afriz	2.66	140	*e*Pn	Pn	11 58 59.1	+0.8
AFRZ				*e*		11 59 43.8	
comp=Z,11μm,0.6s							
IMYA	Miami	2.68	71	Pn	Pn	11 59 00.6	+2.1
IMYA	Miami	2.68	71	*e*Pn	Pn	11 59 00.8	+2.3
IGLO	Ghaloghah	2.74	293	*e*Pn	Pn	11 59 01.1	+1.6
IGLO				*e*		11 59 52.3	
comp=Z,23μm,0.8s							
TBJM	Torbat-e-JAM	2.75	94	Pn	Pn	11 59 00.3	+0.8
TBJM	Torbat-e-JAM	2.75	94	*e*Pn	Pn	11 59 00.3	+0.8
JRKH	Jarkhoshk	2.78	80	*e*Pn	Pn	11 59 00.7	+0.9
JRKH				*e*		11 59 51.7	
comp=Z,7μm,0.6s							
ITEG	Tejag	2.98	150	Pn	Pn	11 59 03.6	+1.0
ITEG	Tejag	2.98	150	*e*Pn	Pn	11 59 03.6	+1.0
ITEG				*e*		12 00 09.2	
comp=Z,21μm,0.8s							
ISHM	Shahmirzad	3.02	277	*e*Pn	Pn	11 59 03.6	+0.3
ISHM				*e*		12 00 07.2	
comp=Z,18μm,0.8s							
BAGH	Bagheran - Bir	3.27	145	*e*Pn	Pn	11 59 06.4	-0.4
ILAS	Lasjerd	3.28	269	Pn	Pn	11 59 07.8	+0.9
ILAS	Lasjerd	3.28	269	*e*Pn	Pn	11 59 08.2	+1.3
ILAS				*e*		12 00 15.8	
comp=Z,10μm,0.8s							
SHRT	Shahrakht	3.30	123	*e*Pn	Pn	11 59 07.3	+0.4
IFIR	Firoozkooh	3.44	274	*e*Pn	Pn	11 59 10.4	+1.2
IFIR				*e*		12 00 10.8	
comp=Z,11μm,1.0s							
IKOO	Kooshah	3.49	151	*e*Pn	Pn	11 59 10.3	+0.5
IKOO				*e*		12 00 13.2	
comp=Z,10μm,0.7s							
ANAR	Anarak	3.53	230	*e*Pn	Pn	11 59 09.8	-0.5
IDAH	Dahanechah	3.64	138	*e*Pn	Pn	11 59 11.6	-0.3
IDAH				*e*		12 00 25.5	
comp=Z,5μm,0.7s							
YZKH	Yazd	3.67	213	*e*Pn	Pn	11 59 12.4	+0.3
IPRN	Peran	3.84	283	*e*Pn	Pn	11 59 15.2	+0.7
IPRN				*e*		12 00 45.4	
comp=Z,6μm,0.8s							
ICHK	Chekchek	3.88	214	*e*Pn	Pn	11 59 15.8	+0.7
ICHK				*e*		12 00 29.4	
comp=Z,9μm,0.6s							
BSRN	Basiran	3.94	152	*e*Pn	Pn	11 59 16.7	+0.8
IDMV	Damavand	4.03	273	*e*Pn	Pn	11 59 18.7	+1.4
IDMV				*e*		12 00 27.7	
comp=Z,4μm,0.8s							
ISFB	Sefidab	4.05	255	Pn	Pn	11 59 17.0	-0.4
ISFB	Sefidab	4.05	255	*e*Pn	Pn	11 59 17.6	+0.2
ISFB				*e*		12 00 46.2	
comp=Z,4μm,0.7s							
IBAF	Bafgh	4.06	197	*e*Pn	Pn	11 59 18.5	+0.9
DAMV	Damavand	4.08	273	*e*Pn	Pn	11 59 19.0	+1.1
KRSH	Karshahi	4.26	251	*e*Pn	Pn	11 59 20.7	+0.3
IVRN	Varamin	4.32	265	*e*Pn	Pn	11 59 21.8	+0.7
IVRN				*e*		12 00 37.4	
comp=Z,4μm,0.7s							
NASN	Na'in	4.38	233	*e*Pn	Pn	11 59 21.3	-0.7
HRA	Herat	4.46	103	Pn	Pn	11 59 22.9	-0.2
ISAD	Sadrabad	4.50	218	*e*Pn	Pn	11 59 23.9	+0.2
ISAD				*e*		12 00 43.1	
comp=Z,7μm,0.6s							
IMEH	Mehriz	4.54	206	*e*Pn	Pn	11 59 25.3	+1.1
TEH	Tehran	4.56	275	*e*Pn	Pn	11 59 25.3	+0.9
IZEF	Zefreh	4.64	237	*e*Pn	Pn	11 59 26.1	+0.5
IZEF				*e*		12 01 02.8	
comp=Z,4μm,1.1s							
GHVR	GHOM	4.77	259	*e*Pn	Pn	11 59 28.6	+1.4
CHTH	Charan	4.78	277	*e*Pn	Pn	11 59 28.1	+0.6
NHDN	Nehbandan	4.83	147	*e*Pn	Pn	11 59 28.8	+0.8
IQOM	Qom	4.88	264	*e*Pn	Pn	11 59 29.9	+1.0
KLST	Kelardasht - M	4.91	284	*e*Pn	Pn	11 59 30.7	+1.4
QAMS	Qamsar	4.92	251	*e*Pn	Pn	11 59 29.8	+0.3
QAMS				*e*		11 59 56.2	
comp=Z,3μm,0.4s							
IKLH	Kolahrood	4.96	246	*e*Pn	Pn	11 59 30.8	+0.8
KHGB	Koh Gabri	5.12	185	*e*Pn	Pn	11 59 32.1	0.0
KHGB				*e*		12 01 10.3	
comp=Z,6μm,0.9s							
IGAR	Gharneh	5.13	235	*e*Pn	Pn	11 59 32.4	+0.1
IGAR				*e*		12 01 25.4	
comp=Z,2μm,0.8s							
IMHD	Mahdasht	5.14	274	*e*Pn	Pn	11 59 33.8	+1.4
QALM	Alamut, Qazvin	5.22	282	*e*Pn	Pn	11 59 35.8	+2.3
IRAM	Ramesheh	5.31	228	*e*Pn	Pn	11 59 35.0	+0.3
KRBR	Kerman	5.50	182	*e*Pn	Pn	11 59 38.9	+1.5
CHMN	Cheshme madani	5.63	175	*e*Pn	Pn	11 59 41.0	+1.7
IRAZ	Razeghan	5.75	271	*e*Pn	Pn	11 59 41.7	+0.9
IPIR	Pirpir	5.77	243	*e*Pn	Pn	11 59 42.8	+1.6
ASAO	Ashtian	5.78	263	*e*Pn	Pn	11 59 42.1	+0.8
NGRK	Negar Kerman	5.83	182	*e*Pn	Pn	11 59 42.3	+0.2
SHK1	Shahrekord	5.96	240	*e*Pn	Pn	11 59 44.2	+0.4
QABG	Abgarm-Qazvin	6.03	274	*e*Pn	Pn	11 59 46.0	+1.4
KHMZ	Khomeyn	6.04	255	*e*Pn	Pn	11 59 45.5	+0.7
KLNJ	Kolanjah	6.35	227	*e*Pn	Pn	11 59 50.2	+1.0
HAGD	Aghdareh	6.45	266	*e*Pn	Pn	11 59 51.7	+1.2
KBAM	BAM	6.46	168	*e*Pn	Pn	11 59 50.8	+0.4
ZHSF	Zahedan	6.68	150	*e*Pn	Pn	11 59 54.3	+0.7
ZNJK	Zanjan	6.82	282	*e*Pn	Pn	11 59 56.2	+0.7
HSAM	Samen	7.00	262	*e*Pn	Pn	12 00 00.2	+2.2
AMIS	Naft Sefid	7.46	241	*e*Pn	Pn	12 00 04.6	+0.4
KHNJ	Kahnooj	7.54	175	*e*Pn	Pn	12 00 07.0	+1.7
SNGE	Sanandaj	7.88	270	*e*Pn	Pn	12 00 10.2	+0.1
IKOM	Komasi	7.89	263	*e*Pn	Pn	12 00 11.3	+1.1
GRMI	Germi	7.97	297	*e*Pn	Pn	12 00 11.5	+0.3
GENO	Geno	8.09	185	*e*Pn	Pn	12 00 14.2	+1.2
AHBU	AHRAM	8.17	218	*e*Pn	Pn	12 00 14.5	+0.6
AHBU				*e*Pn	Pn	12 00 15.0	+1.1
IHRS	Heris	8.44	292	*e*Pn	Pn	12 00 19.0	+1.2
KBL	Kabul	9.94	92	Pn	Pn	12 00 36.4	-2.0
CHGR	Chuyangaron	10.23	68		Pn	12 00 41.3	-0.9
GAR	Garm	11.20	68		Pn	12 00 54.5	-0.8
TAS	Tashkent	11.28	55	Pn	Pn	12 00 57.1	+0.7
WSAR	Wadi Sarin	12.29	173	LR	LR	12 07 08.8	
comp=Z,155nm,21.0s,baz=280,slow=44							
ONI	Oni	12.67	308	Pn	Pn	12 01 13.7	-1.8
KK31	Karatay Array	12.94	50	Pn	Pn	12 01 17.5	-1.6
KKAR	Karatay Array	12.94	50	Pn	Pn	12 01 18.0	-1.1
KBZ	Khabaz	13.61	311	Pn	Pn	12 01 28.8	+0.7
comp=Z,0.1nm,0.3s,baz=98,slow=6.8,SNR=2.3							
KBZ				LR	LR	12 08 45.0	
comp=Z,58nm,20.9s,baz=124,slow=46							
comp=Z,1.

GTA	**Gaotai**	**34.00**	**70**	*e*P		**P**	**12 05 03.0 +3.8**
GTA				pP		sP	12 05 06.0 +1.9
GTA				sP		pP	12 05 09.0 +6.3
PALK	**Pallekele**	**35.53**	**137**	LR		LR	12 19 34.8
	comp=Z,62nm,20.3s,baz=67,slow=36						
HFS	**Hagfors**	**37.09**	**325**	LR		LR	12 20 47.2
	comp=Z,70nm,18.9s,baz=72,slow=36						
NRIK	**Noril'sk**	**37.84**	**17**	LR		LR	12 22 26.7
	comp=Z,49nm,18.4s,baz=26,slow=38						
ARCES	**ARCESS Array B**	**38.20**	**343**	LR		LR	12 22 45.8
	comp=Z,92nm,19.0s,baz=129,slow=38						
NOA	**NORSAR Array B**	**38.56**	**326**	LR		LR	12 23 16.9
	comp=Z,30nm,20.3s,baz=0.0,slow=39						
PZH	**PanZhiHua**	**39.13**	**90**	P		P	12 05 55.0 +12
CMAR	**Chiang Mai Arr**	**40.73**	**103**	P		**P**	**12 05 56.7 +0.4**
	comp=Z,1.7nm,0.7s,baz=300,slow=8.6,SNR=12						
CMAR				LR		LR	12 26 06.6
	comp=Z,31nm,21.9s,baz=285,slow=41						
	comp=Z,1.7nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.67**	**66**	*e*P		**P**	**12 06 16.5 +4.4**
MBAR	**Mbarara**	**43.46**	**220**	LR		LR	12 27 46.8
	comp=Z,62nm,18.2s,baz=24,slow=41						
ESDC	**Sonseca Array**	**47.67**	**294**	P		**P**	**12 06 52.1 +0.3**
	comp=Z,0.8nm,0.6s,baz=61,slow=10,SNR=5.8						
	comp=Z,0.8nm,0.6s						
NJ2	**Nanjing**	**50.81**	**75**	*e*P		**P**	**12 07 12.0 -3.9**
KLR	**Kul'dur**	**54.76**	**51**	LR		LR	12 33 58.2
	comp=Z,25nm,20.0s,baz=288,slow=39						
KSRS	**Korea Array**	**55.81**	**65**	LR		LR	12 35 30.5
	comp=Z,31nm,18.4s,baz=150,slow=40						
LSZ	**Lusaka**	**57.39**	**213**	LR		LR	12 34 07.7
	comp=Z,80nm,18.5s,baz=176,slow=38						
SADO	**Sadowa**	**90.76**	**330**	LR		LR	12 54 05.8
	comp=Z,49nm,18.7s,baz=355,slow=37						

*ANF **25** 12:05:39.8±0.6, 72°.37N×132°.22W, h30km, ML3.6/5, Error ellipse: s-maj=8.8km s-min=3.8km az=175.0*
*PGC **25** 12:05:40.4±0.9, 72°.50N×132°.16W, h35km, ML3.5/1, 241km west of Sachs Harbour, Nt Beaufort Sea*
ISC 25 12:05:40.0±1.5, 72°.22N±0°.09×132°.42W±0°.05, h35km, n60, σ2§38/85, Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
A36M	**Sachs Harbour**	**2.23**	**93**	Pn	**Pn**	**12 06 13.8**	**-0.6**
A36M				Sn	**Sn**	**12 06 39.0**	**-1.5**
A36M	**Sachs Harbour**	**2.23**	**93**	P	**Pn**	**12 06 13.8**	**-0.6**
	baz=287						
A36M				S	**Sn**	**12 06 38.6**	**-1.9**
	baz=287						
INK	**Inuvik**	**3.95**	**186**	Pn	**Pn**	**12 06 41.2**	**+3.3**
INK				Sn	**Sn**	**12 07 25.8**	**+2.9**
INK	**Inuvik**	**3.95**	**186**	P	**Pn**	**12 06 41.4**	**+3.4**
	baz=5.6						
INK				S	**Sn**	**12 07 26.4**	**+3.4**
	baz=5.6						
C36M	**Paulatuk**	**3.99**	**132**	Pn	**Pn**	**12 06 40.1**	**+1.5**
C36M				Sn	**Sn**	**12 07 23.4**	**-0.5**
C36M	**Paulatuk**	**3.99**	**132**	P	**Pn**	**12 06 40.7**	**+2.2**
	baz=324						
C27K	**Jago River**	**4.53**	**240**	S	**Sn**	**12 07 37.4**	**+0.2**
	baz=47						
C26K	**Camden Bay**	**4.67**	**246**	P	**Pn**	**12 06 49.9**	**+2.0**
	baz=52,SNR=74						
C26K				S	**Sn**	**12 07 42.0**	**+1.1**
	baz=52						
F31M	**Tsiigehtchic**	**4.82**	**186**	P	**Pn**	**12 06 52.4**	**+2.5**
	baz=5.4,SNR=24						
F31M				S	**Sn**	**12 07 47.0**	**+2.6**
	baz=5.4						
E27K	**Coleen River**	**5.11**	**222**	P	**Pn**	**12 06 55.9**	**+2.0**
	baz=32,SNR=27						
G30M	**tAoh Zraii Nji**	**5.43**	**196**	P	**Pn**	**12 07 01.6**	**+3.3**
	baz=12,SNR=43						
C24K	**Franklin Bluff**	**5.88**	**253**	P	**Pn**	**12 07 05.9**	**+1.4**
	baz=55,SNR=46						
F26K	**Sheenjek River**	**6.06**	**227**	P	**Pn**	**12 07 08.9**	**+1.9**
	baz=35,SNR=21						
E25K	**Arctic Village**	**6.07**	**234**	P	**Pn**	**12 07 09.2**	**+2.1**
	baz=40,SNR=22						
EPYK	**Eagle Plains**	**6.07**	**197**	Pn	**Pn**	**12 07 10.4**	**+3.3**
EPYK				Sn	**Sn**	**12 08 17.0**	**+1.7**
EPYK	**Eagle Plains**	**6.07**	**197**	P	**Pn**	**12 07 10.5**	**+3.3**
	baz=12						
D24K	**Happy Valley**	**6.24**	**248**	P	**Pn**	**12 07 10.9**	**+1.5**
	baz=51						
G27K	**Doyon Strip**	**6.32**	**215**	Pn	**Pn**	**12 07 12.4**	**+1.8**
G27K				Sn	**Sn**	**12 08 21.3**	**-0.1**
G27K	**Doyon Strip**	**6.32**	**215**	P	**Pn**	**12 07 12.7**	**+2.1**
	baz=26,SNR=16						
C23K	**Itkillik River**	**6.38**	**257**	P	**Pn**	**12 07 12.9**	**+1.5**
	baz=57,SNR=84						
G26K	**Porcupine Rive**	**6.61**	**222**	P	**Pn**	**12 07 16.0**	**+1.6**
	baz=31,SNR=67						
TOLK	**Toolik Lake Re**	**6.77**	**246**	P	**Pn**	**12 07 18.2**	**+1.5**
	baz=48,SNR=19						
H27K	**Steamboat Moun**	**6.82**	**213**	Pn	**Pn**	**12 07 19.6**	**+2.2**
H27K				Sn	**Sn**	**12 08 34.0**	**+0.2**
D23K	**Nanushuk River**	**6.89**	**251**	P	**Pn**	**12 07 20.0**	**+1.7**
	baz=51						
F24K	**Squaw Lake**	**7.10**	**236**	P	**Pn**	**12 07 22.9**	**+1.5**
	baz=40,SNR=17						
I29M	**Ogilvie Camp,**	**7.21**	**200**	Pn	**Pn**	**12 07 23.2**	**+0.5**
I29M				Sn	**Sn**	**12 08 44.4**	**+1.1**
I27K	**Kandik River**	**7.41**	**211**	Sn	**Sn**	**12 08 48.5**	**+0.2**
G24K	**Hadweenzic Riv**	**7.64**	**231**	P	**Pn**	**12 07 29.9**	**+1.3**
	baz=36,SNR=16						
COLD	**Coldfoot**	**7.92**	**240**	Pn	**Pn**	**12 07 34.8**	**+2.3**
COLD				Sn	**Sn**	**12 08 58.8**	**-1.9**
I26K	**Coal Creek Min**	**7.94**	**214**	P	**Pn**	**12 07 34.8**	**+2.1**
	baz=24						
F22K	**John River**	**8.26**	**245**	P	**Pn**	**12 07 38.8**	**+1.7**
	baz=45						
DAWY	**Dawson**	**8.58**	**201**	Pn	**Pn**	**12 07 43.0**	**+1.4**
DAWY				Sn	**Sn**	**12 09 15.4**	**-1.7**
K29M	**Barlow Dome**	**8.62**	**195**	Pn	**Pn**	**12 07 44.7**	**+2.6**
K29M				Sn	**Sn**	**12 09 16.9**	**-1.2**
K29M	**Barlow Dome**	**8.62**	**195**	P	**Pn**	**12 07 44.8**	**+2.6**
	baz=10,SNR=18						
K27K	**Chicken**	**8.96**	**208**	Pn	**Pn**	**12 07 49.5**	**+2.7**
K27K				Sn	**Sn**	**12 09 24.9**	**-1.3**
L29M	**L29M**	**9.40**	**196**	Pn	**Pn**	**12 07 55.5**	**+2.8**
L29M				Sn	**Sn**	**12 09 35.5**	**-1.5**
MMPY	**Sheldon Lake,**	**9.65**	**177**	Pn	**Pn**	**12 07 59.2**	**+2.9**
MMPY				Sn	**Sn**	**12 09 41.6**	**-1.7**
MMPY	**Sheldon Lake,**	**9.65**	**177**	P	**Pn**	**12 07 59.6**	**+3.3**
	baz=358,SNR=20						
M30M	**Minto, Yukon**	**9.83**	**192**	Pn	**Pn**	**12 08 00.6**	**+2.0**
M30M				Sn	**Sn**	**12 09 46.1**	**-1.5**
M30M	**Minto, Yukon**	**9.83**	**192**	P	**Pn**	**12 08 01.1**	**+2.5**
	baz=8.0,SNR=22						
L27K	**Beaver Creek,**	**9.85**	**206**	Pn	**Pn**	**12 08 01.5**	**+2.6**
FARO	**Faro, Yukon**	**10.04**	**182**	Pn	**Pn**	**12 08 04.1**	**+2.5**
FARO				Sn	**Sn**	**12 09 51.6**	**-1.1**
M29M	**Somme Creek**	**10.08**	**196**	Pn	**Pn**	**12 08 04.2**	**+2.0**
M29M				Sn	**Sn**	**12 09 53.0**	**-0.9**
M29M	**Somme Creek**	**10.08**	**196**	P	**Pn**	**12 08 04.5**	**+2.4**
	baz=11,SNR=6.9						
M31M	**Drury Creek, Y**	**10.09**	**185**	Pn	**Pn**	**12 08 04.9**	**+2.7**
BVCY	**Beaver Creek**	**10.36**	**202**	Pn	**Pn**	**12 08 07.7**	**+1.9**
BVCY				Sn	**Sn**	**12 09 58.9**	**-1.6**
M27K	**Edge Creek, AK**	**10.53**	**205**	Sn	**Sn**	**12 10 00.4**	**-4.7**
RES	**Resolute Bay**	**10.84**	**59**	Pn	Pn	12 08 07.7	-4.6
RES				Sn	Sn	12 09 57.3	-15
TGTN	**Hyland Airport**	**10.86**	**169**	Sn	**Sn**	**12 10 12.1**	**-0.7**
N31M	**Braeburn, Yuko**	**10.86**	**189**	Pn	**Pn**	**12 08 15.0**	**+2.2**
N31M				Sn	**Sn**	**12 10 10.8**	**-1.9**
YUK3	**Moose Creek**	**10.93**	**201**	Pn	**Pn**	**12 08 15.9**	**+2.0**
YUK3				Sn	**Sn**	**12 10 10.8**	**-4.1**
N30M	**Aishikik Lake**	**10.96**	**192**	Pn	**Pn**	**12 08 15.6**	**+1.5**
N30M				Sn	**Sn**	**12 10 13.4**	**-1.8**
YUK4	**Talbot Arm**	**11.18**	**196**	Pn	**Pn**	**12 08 17.6**	**+0.3**
YUK5	**Granite Creek**	**11.33**	**194**	Pn	**Pn**	**12 08 21.6**	**+2.2**
YUK6	**Outpost Mounta**	**11.56**	**195**	Pn	**Pn**	**12 08 24.2**	**+1.7**
EUNU	**Eureka**	**13.03**	**34**	Pn	Pn	12 08 35.6	-6.7
NBC2	**NorthernBC 2**	**13.10**	**157**	Pn	**Pn**	**12 08 44.9**	**+1.6**
NBC2				Sn	**Sn**	**12 11 01.2**	**-6.2**
FNBB	**Fort Nelson**	**13.91**	**159**	Pn	**Pn**	**12 08 54.8**	**+0.5**
FNBB				Sn	**Sn**	**12 11 21.6**	**-5.5**
NBC5	**NorthernBC 5**	**15.28**	**160**	Pn	**Pn**	**12 09 13.6**	**+0.7**
NBC5				Sn	**Sn**	**12 11 54.1**	**-6.7**
BDMTA	**Bald Mountain**	**18.39**	**155**	Pn	**Pn**	**12 09 53.5**	**+1.7**

IDC 25 12:31:39.7±2.2, 24°.30N×93°.37E, h0km, mb3.5/4, mbtmp3.5/4, MS3.5/2, Error ellipse: s-maj=213.1km s-min=23.5km az=57.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**24.14**	**341**	P	P	12 36 57.2	-0.1
	0.3nm,0.4s,baz=163,slow=9.1,SNR=6.4						
	0.3nm,0.4s						
GNI	**Garni**	**43.52**	**303**	LR	LR	13 01 24.5	
	comp=Z,22nm,18.4s,baz=126,slow=41						
FINES	**FINESS Array B**	**58.12**	**329**	P	P	12 41 34.9	0.0
	1.5nm,0.7s,baz=134,slow=9.9,SNR=4.4						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**59.38**	**134**	P	P	12 41 43.5	-0.7
	0.3nm,0.8s,baz=321,slow=7.4,SNR=5.2						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**61.81**	**137**	P	P	12 42 01.2	+0.5
	0.2nm,0.5s,baz=318,slow=6.5,SNR=7.2						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**79.88**	**22**	LR	LR	13 25 04.9	
	comp=Z,61nm,18.3s,baz=200,slow=40						

*IDC **25** 12:34:42.9±1.4, 38°.13N×20°.92E, h0km, mb3.7/5, mbtmp3.7/5, MS3.2/6, Error ellipse: s-maj=63.6km s-min=25.0km az=131.0*
*ATH **25** 12:34:45.7, 37°.95N×21°.04E, h17km±1km, ML3.7/18, Error ellipse: s-maj=1.5km s-min=0.7km az=343.0*
*THE **25** 12:34:45.8, 37°.90N×21°.05E, h0km±1km, ML3.7/32, Error ellipse: s-maj=1.2km s-min=0.3km az=205.0*
ISC 25 12:34:45.8±0.8, 37°.91N±0°.02×21°.04E±0°.02, h18km±5km, n89, σ1§06/123, mb3.7/5, MS3.9/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.25**	**218**	P	**Pg**	**12 34 51.5**	**0.0**
LTHK				S	**Sg**	**12 34 55.5**	**+0.1**
	79μm,0.4s						
LTHK	**Lithakia**	**0.25**	**218**	P	**Pg**	**12 34 51.6**	**0.0**
LTHK				S	**Sb**	**12 34 56.5**	**+0.5**
RLS	**Riolos of Patr**	**0.37**	**66**	P	**Pg**	**12 34 53.2**	**-0.3**
RLS				S	**Sg**	**12 34 58.6**	**-0.2**
	60μm,0.2s						
RLS	**Riolos of Patr**	**0.37**	**66**	P	**Pg**	**12 34 53.2**	**-0.3**
RLS				S	**Sg**	**12 34 58.6**	**-0.2**
RLS				AML	AML	12 35 00.1	
RLS				AML	AML	12 35 00.2	
PSDA	**Pessada-Kefalo**	**0.41**	**300**	P	**Pg**	**12 34 54.0**	**-0.2**
PSDA				S	**Sg**	**12 35 00.2**	**+0.2**
	14μm,0.4s						
PSDA	**Pessada-Kefalo**	**0.41**	**300**	P	**Pg**	**12 34 54.0**	**-0.2**
PSDA				S	**Sg**	**12 34 59.6**	**-0.3**
VLS	**Valsamata**	**0.44**	**307**	P	**Pg**	**12 34 54.3**	**-0.5**
VLS				S	**Sb**	**12 35 01.7**	**+0.2**
	6μm,0.4s						
VLS	**Valsamata**	**0.44**	**307**	P	**Pg**	**12 34 54.6**	**-0.3**
VLS				S	**Sg**	**12 35 00.7**	**-0.2**
VLS				AML	AML	12 35 02.3	
	comp=E,10146μm,0.1s						
VLS				AML	AML	12 35 04.8	
	comp=N,9369μm,0.4s						
DRO	**Drossia**	**0.54**	**85**	P	**Pg**	**12 34 55.9**	**-0.6**
DRO				S	**Sg**	**12 35 03.4**	**-0.3**
	comp=N,38μm,0.3s						
DRO	**Drossia**	**0.54**	**85**	P	**Pg**	**12 34 56.1**	**-0.4**
DRO				S	**Sg**	**12 35 03.9**	**+0.2**
DRO				AML	AML	12 35 06.8	
DRO				AML	AML	12 35 08.8	
	comp=N,44364μm,0.4s						
KEF4	**Livadi, Kephal**	**0.59**	**306**	P	**Pg**	**12 34 57.2**	**-0.4**
KEF4				S	**Sb**	**12 35 06.4**	**+0.6**
	comp=N,59μm,0.2s						
KEF4	**Livadi, Kephal**	**0.59**	**306**	P	**Pg**	**12 34 57.3**	**-0.4**
KEF3	**Kipouria, Keph**	**0.62**	**299**	P	**Pg**	**12 34 57.2**	**-0.8**
KEF3				S	**Sb**	**12 35 07.0**	**+0.5**
	comp=N,11μm,0.3s						
KEF3	**Kipouria, Keph**	**0.62**	**299**	P	**Pg**	**12 34 57.5**	**-0.5**
DMLN	**Damoulianata-K**	**0.62**	**302**	P	**Pg**	**12 34 57.8**	**-0.3**
DMLN				S	**Sb**	**12 35 07.5**	**+1.0**
	comp=N,8μm,0.4s						
FSK	**Fiskardo**	**0.66**	**326**	P	**Pg**	**12 34 57.8**	**-1.1**
FSK				S	**Sb**	**12 35 08.7**	**+0.9**
	comp=N,2μm,0.3s						
FSK	**Fiskardo**	**0.66**	**326**	P	**Pg**	**12 34 57.9**	**-1.0**
FSK				AML	AML	12 35 14.3	
	comp=N,4084μm,0.4s						
FSK				AML	AML	12 35 14.8	
	comp=E,4678μm,0.4s						
UPR	**University Cam**	**0.70**	**58**	P	**Pg**	**12 34 59.5**	**-0.1**
UPR				S	**Sb**	**12 35 09.3**	**+0.4**
EVGI	**Lefkada island**	**0.77**	**337**	P	**Pg**	**12 34 59.9**	**-1.0**
EVGI				S	**Sb**	**12 35 11.5**	**+0.6**
	comp=E,5μm,0.4s						
EVGI	**Lefkada island**	**0.77**	**337**	P	**Pg**	**12 34 60.0**	**-1.0**
PVO	**Paravola**	**0.81**	**28**	P	**Pg**	**12 35 01.1**	**-0.5**
PVO				S	**Sb**	**12 35 13.2**	**+1.3**
	comp=E,7μm,0.3s						
PVO	**Paravola**	**0.81**	**28**	P	**Pg**	**12 35 01.0**	**-0.6**
LAKA	**Lakka**	**0.81**	**66**	P	**Pg**	**12 35 00.6**	**-1.1**
LAKA				S	**Sg**	**12 35 12.4**	**-0.1**
	comp=E,15μm,0.3s						
LAKA	**Lakka**	**0.81**	**66**	P	**Pg**	**12 35 01.0**	**-0.7**
LAKA				AML	AML	12 35 15.0	
	comp=N,31562μm,0.3s						
LAKA				AML	AML	12 35 15.0	
	comp=E,26560μm,0.2s						
NYDR	**Nydri-Lefkada**	**0.85**	**342**	P	**Pg**	**12 35 01.1**	**-1.2**
NYDR				S	**Sn**	**12 35 14.7**	**-0.2**
	comp=E,3μm,0.5s						
DRAG	**Dragano-Lefkad**	**0.85**	**335**	P	**Pg**	**12 35 01.2**	**-1.3**
DRAG				S	**Sn**	**12 35 15.0**	**-0.1**
	comp=E,34μm,0.3s						
EFP	**Efpalio**	**0.86**	**53**	P	**Pg**	**12 35 01.3**	**-1.3**
EFP				S	**Sb**	**12 35 14.5**	**+1.1**
	comp=E,11μm,0.3s						
EFP	**Efpalio**	**0.86**	**53**	P	**Pg**	**12 35 01.4**	**-1.1**
EFP				AML	AML	12 35 16.8	
	comp=N,26502μm,0.5s						
EFP				AML	AML	12 35 18.6	
	comp=E,14234μm,0.2s						
KLV	**Kalavryta, Ach**	**0.89**	**81**	P	**Pb**	**12 35 01.7**	**-1.1**
KLV				S	**Sb**	**12 35 15.2**	**+0.8**
	comp=E,2μm,0.4s						
KLV	**Kalavryta, Ach**	**0.89**	**81**	P	**Pb**	**12 35 01.9**	**-1.0**
KLV				AML	AML	12 35 17.3	
	comp=N,4883μm,0.2s						
KLV				AML	AML	12 35 20.9	
	comp=E,4286μm,0.3s						
ALIK	**Aliki, Aigiali**	**0.92**	**67**	P	**Pb**	**12 35 02.5**	**-0.7**
ALIK				S	**Sg**	**12 35 16.5**	**+0.7**
LKD2	**Lefkada island**	**0.93**	**341**	P	**Pb**	**12 35 02.7**	**-0.8**
LKD2				S	**Sn**	**12 35 17.1**	**+0.1**
	comp=E,8μm,0.6s						
LKD2	**Lefkada island**	**0.93**	**341**	P	**Pb**	**12 35 02.6**	**-0.8**
LKD2				AML	AML	12 35 24.0	
	comp=N,14255μm,0.8s						
LKD2				AML	AML	12 35 24.4	
	comp=E,17386μm,0.4s						
TRIZ	**Trizonia**	**0.94**	**61**	P	**Pb**	**12 35 02.9**	**-0.6**
TRIZ				S	**Sn**	**12 35 17.2**	**+0.1**
TRIZ	**Trizonia**	**0.94**	**61**	P	**Pb**	**12 35 02.9**	**-0.6**
SERG	**Sergoula**	**0.95**	**58**	P	**Pb**	**12 35 02.8**	**-1.0**
SERG				S	**Sg**	**12 35 17.4**	**+0.6**
	comp=E,9μm,0.3s						
SERG	**Sergoula**	**0.95**	**58**	P	**Pb**	**12 35 02.9**	**-0.9**
SERG				AML	AML	12 35 19.1	
	comp=N,24922μm,0.3s						
SERG				AML	AML	12 35 19.2	
	comp=E,18766μm,0.3s						
TSLK	**Tsoukalades, L**	**0.96**	**342**	P	**Pb**	**12 35 03.5**	**-0.5**
TSLK				S	**Sn**	**12 35 18.8**	**+1.0**
	comp=E,3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.96**	**342**	P	**Pb**	**12 35 03.5**	**-0.5**
ITM	**Ithomi**	**1.02**	**136**	P	**Pb**	**12 35 04.2**	**-0.7**
ITM				S	**Sg**	**12 35 19.5**	**+0.6**
	comp=E,4μm,0.8s						
ITM	**Ithomi**	**1.02**	**136**	AML	AML	12 35 24.4	
	comp=N,9128μm,0.6s						
ITM				AML	AML	12 35 25.1	
	comp=E,7529μm,1.0s						
PYL	**PYLOS**	**1.16**	**151**	P	**Pn**	**12 35 06.0**	**-1.2**
PYL	**PYLOS**	**1.16**	**151**	AML	AML	12 35 24.3	
	comp=N,2821μm,0.3s						
PYL				AML	AML	12 35 27.6	
	comp=E,5830μm,0.4s						
EVR	**Evrytania**	**1.18**	**31**	P	**Pn**	**12 35 07.3**	**-0.2**
EVR				S	**Sg**	**12 35 25.8**	**+1.8**
	comp=E,2μm,0.7s						
EVR	**Evrytania**	**1.18**	**31**	P	**Pn**	**12 35 07.0**	**-0.5**
EVR				AML	AML	12 35 31.9	
	comp=N,3557μm,0.6s						
EVR				AML	AML	12 35 31.9	
	comp=E,4120μm,0.5s						
DLFA	**Delphi**	**1.28**	**63**	P	**Pn**	**12 35 08.4**	**-0.5**
THAL	**Thalero**	**1.29**	**84**	P	**Pn**	**12 35 08.9**	**-0.1**
THAL				S	**Sg**	**12 35 28.6**	**+1.0**
	comp=E,6μm,0.5s						
THAL	**Thalero**	**1.29**	**84**	P	**Pn**	**12 35 09.0**	**0.0**
THAL				AML	AML	12 35 34.0	
	comp=N,10347μm,0.4s						
THAL				AML	AML	12 35 34.2	
	comp=E,10249μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.40**	**38**	P	**Pb**	**12 35 11.8**	**+0.3**
MAKR				S	**Sg**	**12 35 32.2**	**+1.2**
	comp=E,4μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.40**	**38**	P	**Pb**	**12 35 11.8**	**+0.3**
MAKR				AML	AML	12 35 39.4	
	comp=N,7811μm,0.5s						
MAKR				AML	AML	12 35 39.8	
	comp=E,8108μm,0.6s						
LOUT	**Loutraki**	**1.53**	**86**	P	**Pb**	**12 35 13.7**	**-0.1**
LOUT	**Loutraki**	**1.53**	**86**	P	**Pb**	**12 35 14.6**	**+0.8**
AXAR	**Agios Charalam**	**1.54**	**56**	P	**Pn**	**12 35 13.1**	**+0.7**
AXAR				S	**Sg**	**12 35 35.1**	**-0.3**
	comp=E,4μm,0.6s						
AXAR	**Agios Charalam**	**1.54**	**56**	P	**Pn**	**12 35 13.4**	**+0.9**
AXAR				AML	AML	12 35 44.5	
	comp=E,8117μm,0.4s						
AXAR				AML	AML	12 35 45.4	
	comp=N,6846μm,0.8s						
EPID	**Epidavros**	**1.68**	**99**	P	**Pn**	**12 35 15.8**	**+1.5**
EPID				S	**Sg**	**12 35 39.0**	**-0.9**
	comp=N,1μm,0.6s						
EPID	**Epidavros**	**1.68**	**99**	P	**Pb**	**12 35 16.6**	**+0.4**
IGT	**Igoumenitsa**	**1.71**	**341**	P	**Pn**	**12 35 16.3**	**+1.5**
IGT				S	**Sg**	**12 35 40.3**	**-0.7**
IGT	**Igoumenitsa**	**1.71**	**341**	P	**Pn**	**12 35 15.9**	**+1.1**
JAN	**Janina**	**1.75**	**355**	P	**Pb**	**12 35 17.3**	**-0.2**
JAN				S	**Sg**	**12 35 41.0**	**-1.3**
	comp=N,688nm,1.0s						
KRND	**KRANIDI**	**1.76**	**107**	P	**Pb**	**12 35 17.4**	**-0.2**
KRND				S	**Sb**	**12 35 40.7**	**+1.4**
	comp=N,1μm,0.7s						
KRND	**KRANIDI**	**1.76**	**107**	P	**Pb**	**12 35 17.7**	**+0.2**
KRND				AML	AML	12 35 48.5	
	comp=E,2489μm,0.8s						
KRND				AML	AML	12 35 50.1	
	comp=N,2914μm,0.6s						
VIL2	**Platees**	**1.79**	**80**	P	**Pb**	**12 35 18.7**	**+0.7**
VIL2				AML	AML	12 35 49.4	
	comp=E,2671μm,0.6s						
VIL2				AML	AML	12 35 53.7	
	comp=N,1831μm,0.7s						
VILL	**Villia**	**1.81**	**81**	P	**Pb**	**12 35 18.1**	**-0.5**
VILL				S	**Sb**	**12 35 42.0**	**+1.0**
	comp=N,1μm,0.7s						
VLI	**Veliai**	**1.93**	**128**	P	**Pb**	**12 35 20.6**	**+0.2**
KEK	**Kerkira**	**2.04**	**332**	P	**Pb**	**12 35 21.7**	**-0.8**
KEK				S	**Sb**	**12 35 48.4**	**+0.8**
	comp=N,400nm,0.7s						
KEK	**Kerkira**	**2.04**	**332**	P	**Pn**	**12 35 21.1**	**+1.8**
KPRO	**Kipourio**	**2.06**	**7**	P	**Pb**	**12 35 21.9**	**-0.8**
KPRO				S	**Sb**	**12 35 48.3**	**+0.2**
	comp=N,635nm,0.7s						
ATH	**Athens Observa**	**2.12**	**87**	P	**Pn**	**12 35 22.5**	**+2.1**
ATH	**Athens Observa**	**2.12**	**87**	P	**Pb**	**12 35 23.1**	**-0.7**
ATHU	**Athens Univers**	**2.17**	**88**	P	**Pn**	**12 35 23.2**	**+2.0**
ATHU	**Athens Univers**	**2.17**	**88**	P	**Pn**	**12 35 23.2**	**+2.0**
VLY	**Voula,Athens**	**2.18**	**91**	P	**Pn**	**12 35 23.2**	**+1.9**
VLY				S	**Sb**	**12 35 51.6**	**0.0**
	comp=N,490nm,0.7s						
VLY	**Voula,Athens**	**2.18**	**91**	P	**Pn**	**12 35 23.1**	**+1.9**
VLY				AML	AML	12 36 00.4	
	comp=N,810μm,0.9s						
VLY				AML	AML	12 36 02.5	
	comp=E,1053μm,0.5s						
KTHR	**Kythira**	**2.28**	**136**	P	**Pb**	**12 35 25.8**	**-0.6**
DION	**Dionisos Attik**	**2.29**	**85**	P	**Pb**	**12 35 24.7**	**+1.9**
DION				S	**Sb**	**12 35 54.1**	**-0.7**
	comp=E,1μm,0.6s						
DION	**Dionisos Attik**	**2.29**	**85**	P	**Pn**	**12 35 25.2**	**+2.4**
OHR	**Ohrid**	**3.20**	**357**	*i* Pn	**Pn**	**12 35 39.2**	**+3.8**
VAY	**Valandovo**	**3.61**	**19**	*i* Pn	**Pn**	**12 35 43.4**	**+2.6**
STIP	**Stip**	**3.88**	**13**	*i* Pn	**Pn**	**12 35 48.4**	**+3.8**
IDI	**Anoyia**	**4.06**	**129**	LR	LR	12 37 23.6	
	comp=E,68nm,19.6s,baz=286,slow=38						
VRAC	**Vranov**	**11.84**	**346**	LR	LR	12 42 20.4	
	comp=E,19nm,18.8s,baz=184,slow=39						
FINES	**FINESS Array B**	**23.77**	**6**	P	**P**	**12 39 54.7**	**-2.4**
	comp=E,1.1nm,0.7s,baz=178,slow=14,SNR=3.8						
	comp=E,1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.08**	**220**	P	**P**	**12 40 55.0

JOW Kunigami 20.71 337 P Pn 12 46 27.4 +0.7
comp=Z,14nm,0.9s,baz=138,slow=18,SNR=3.8
JOW LR LR 12 52 53.6
comp=Z,253nm,19.6s,baz=137,slow=32
KKM Kota Kinabalu 20.91 266 P **P** **12 46 26.1 -0.2**
KKM IAmb IAmb 12 46 28.4
comp=Z,28nm,0.9s
KKM Kota Kinabalu 20.91 266 P **P** **12 46 23.6 -2.7**
comp=Z,34nm,0.9s
BNSI Bone 20.94 235 P **P** **12 46 26.8 +0.3**
comp=Z,30nm,0.9s
SPSI Sidrap Palu 20.97 237 P **P** **12 46 26.0 -0.9**
comp=Z,22nm,1.0s
YOJ Yonaguni jima 21.39 322 P **P** **12 46 32.1 +0.8**
MTN Manton Dam 21.41 196 P **P** **12 46 30.2 -1.3**
BKSI Bulukumba 21.47 233 P **P** **12 46 30.1 -2.1**
comp=Z,14nm,1.0s
KAPI Kappang 21.58 234 P **P** **12 46 36.0 +2.6**
comp=Z,18nm,0.3s,baz=51,slow=11,SNR=4.8
comp=Z,18nm,0.3s
SOEI Soe 21.71 217 P P 12 46 48.1 +13
YULB Yu-li 21.73 317 P **P** **12 46 34.5 -0.4**
YULB IAmb IAmb 12 46 41.8
comp=Z,33nm,0.9s
TPUB Ta-pu 22.13 316 P **P** **12 46 40.0 +0.7**
TPUB IAmb IAmb 12 47 00.0
comp=Z,51nm,1.2s
MMRI Maumere 22.14 223 P **P** **12 46 39.2 -0.1**
BKB Balikpapan 22.17 247 P **P** **12 46 40.1 +0.4**
SSLB Suanglung 22.23 317 P **P** **12 46 40.9 +0.5**
SSLB IAmb IAmb 12 47 09.5
comp=Z,22nm,1.0s
BATI Baumata 22.42 217 P **P** **12 46 42.7 +0.2**
comp=Z,29nm,0.6s,baz=113,slow=0.4,SNR=3.0
BATI LR LR 12 54 54.5
comp=Z,160nm,20.2s,baz=182,slow=35
comp=Z,29nm,0.6s
BATI Baumata 22.42 217 P **P** **12 46 37.8 -4.7**
comp=Z,69nm,1.1s
COEN Coen 22.45 165 P **P** **12 46 43.1 +0.5**
YHNB Yeheng 22.57 320 P **P** **12 46 44.8 +0.8**
YHNB IAmb IAmb 12 46 47.2
comp=Z,45nm,0.9s
KNRA Kununurra 24.81 200 P **P** **12 47 05.2 -0.1**
KNRA IAmb IAmb 12 47 10.9
comp=Z,18nm,0.8s
JMN Monobe 25.95 354 P **P** **12 47 15.9 +0.3**
JHS Saijyo 27.30 353 P **P** **12 47 28.2 +0.5**
JHS IAmb IAmb 12 47 28.8
comp=Z,27nm,0.8s
WB0 Warramunga Arr 27.57 186 P **P** **12 47 32.4 +2.2**
WRAB Tennant Creek 27.73 186 P **P** **12 47 32.4 +0.7**
WR0 Warramunga Arr 27.74 185 P **P** **12 47 32.3 +0.6**
WB2 Warramunga Arr 27.74 186 P **P** **12 47 31.8 0.0**
WRA Warramunga Arr 27.74 186 P **P** **12 47 31.4 -0.4**
comp=Z,2.0nm,0.6s,baz=5.8,slow=10,SNR=41
WRA LR LR 12 59 51.1
comp=Z,96nm,18.0s,baz=327,slow=39
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 27.74 186 P **P** **12 47 31.6 -0.2**
JAGI Jajag, Banyuwa 28.11 235 P **P** **12 47 33.5 -1.6**
JAGI IAmb IAmb 12 48 02.1
comp=Z,20nm,1.1s
JYT Yasato 28.40 5 P **P** **12 47 35.7 -1.7**
JYT IAmb IAmb 12 47 53.4
comp=Z,34nm,1.2s
HNR Honiara 28.42 127 LR LR 12 57 59.9
comp=Z,2μm,20.4s,baz=319,slow=35
MJAR Matsushiro Arr 28.59 2 P **P** **12 47 36.6 -2.7**
comp=Z,1.8nm,0.7s,baz=172,slow=9.8,SNR=4.3
MJAR LR LR 12 57 32.5
comp=Z,156nm,18.1s,baz=148,slow=33
comp=Z,1.8nm,0.7s
CTA Charters Tower 29.14 162 LR LR 12 59 18.1
comp=Z,144nm,18.4s,baz=316,slow=36
NJ2 Nanjing 29.53 327 *e*P **P** **12 47 49.0 +1.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
H11S3 WAKE ISLAND Hy 30.55 67 T T 13 19 54.1
baz=253,slow=75,SNR=208
H11S1 WAKE ISLAND Hy 30.57 67 T T 13 19 55.2
baz=253,slow=75,SNR=112
H11S2 WAKE ISLAND Hy 30.57 67 T T 13 19 55.3
baz=253,slow=75,SNR=235
KSRS Korea Array 30.67 345 LR LR 12 58 38.0
comp=Z,92nm,21.1s,baz=170,slow=33
AS31 Alice Springs 31.47 186 P **P** **12 48 05.0 +0.2**
ASAR Alice Springs 31.47 186 P **P** **12 48 04.8 0.0**
comp=Z,0.4nm,0.5s,baz=15,slow=13,SNR=14
ASAR PcP **PcP** **12 50 57.8 +0.5**
comp=Z,0.9nm,0.7s,baz=26,slow=2.8,SNR=6.3
comp=Z,0.4nm,0.5s
ASAR Alice Springs 31.47 186 P **P** **12 48 05.3 +0.4**
LYN LuoYang 34.99 323 ⇑*i*P **P** **12 48 36.3 +0.9**
LYN pP sP 12 48 54.5 +1.3
LYN pmax pmax
comp=Z,20nm,1.2s
LYN pmax pmax
comp=Z,80nm,3.9s
LYN LR LR
comp=Z,170nm,16.7s
LYN LR LR
comp=Z,160nm,14.6s
LYN LR LR
comp=Z,160nm,17.7s
HNS HongShan 35.81 329 ⇑P **P** **12 48 43.3 +0.9**
HNS pmax pmax
comp=Z,18nm,1.0s
HNS pmax pmax
comp=Z,140nm,6.3s
HNS LR LR
comp=Z,99nm,13.5s
HNS LR LR
comp=Z,150nm,17.5s
HNS LR LR
comp=Z,170nm,14.9s
USRK Ussuriysk Ar. 36.51 354 P **P** **12 48 47.1 -1.1**
comp=Z,5.8nm,0.7s,baz=157,slow=5.6,SNR=10
comp=Z,5.8nm,0.7s
KMI Kunming 37.09 302 ⇓P **P** **12 48 55.5 +1.8**
KMI pmax pmax
comp=Z,15nm,1.1s
KMI LR LR
comp=Z,100nm,8.7s
KMI LR LR
comp=Z,170nm,17.6s
KMI LR LR
comp=Z,200nm,21.1s
BJT Baijiatuau 37.16 333 P **P** **12 48 54.5 +0.6**
BJI Beijing 37.18 333 P **P** **12 48 55.0 +1.0**
BJI pmax pmax
comp=Z,17nm,0.9s
PZH PanZhiHua 38.44 303 P **P** **12 49 08.3 +3.3**
PZH S **S** **12 54 58.5 +1.5**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.0s
PZH LR LR
comp=Z,220nm,19.8s
PZH LR LR
comp=Z,310nm,17.3s
PZH LR LR
comp=Z,410nm,17.9s
CM31 Chiang Mai Arr 38.64 290 P **P** **12 49 06.8 +0.2**
CMAR Chiang Mai Arr 38.64 290 P **P** **12 49 07.2 +0.5**
comp=Z,1.9nm,0.6s,baz=104,slow=6.3,SNR=15
CMAR LR LR 13 03 55.7
comp=Z,59nm,21.4s,baz=105,slow=34
comp=Z,1.9nm,0.6s
CMAR Chiang Mai Arr 38.64 290 P **P** **12 49 06.5 -0.1**
STKA Stephens Creek 39.71 174 P **P** **12 49 14.6 -0.7**
comp=Z,1.3nm,0.6s,baz=345,slow=12,SNR=5.5
STKA LR LR 13 07 06.5
comp=Z,90nm,18.0s,baz=27,slow=38
comp=Z,1.3nm,0.6s
HHC Hu-ho-hao-te 40.02 329 *e*P **P** **12 49 19.5 +1.5**
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,140nm,4.9s
BBOO Buckleboo 40.43 181 P **P** **12 49 21.6 +0.3**
ARMA Armidale 40.48 161 P **P** **12 49 22.4 +0.6**
ARMA IAmb IAmb 12 49 37.4
comp=Z,18nm,1.2s
DZM Mont Dzumac 41.29 137 *e*LR LR 13 00 59.1
comp=Z,273nm,23.6s

DZM Mont Dzumac 41.29 137 LR LR 13 05 01.2
comp=Z,178nm,19.2s,baz=301,slow=34
LZH Lanzhou 41.43 318 *e*P **P** **12 49 31.3 +1.5**
LZH pmax pmax
comp=Z,18nm,1.2s
KLR Kul'dur 41.51 355 P **P** **12 49 31.3 +1.3**
comp=Z,11nm,0.8s,baz=184,slow=4.3,SNR=26
KLR LR LR 13 05 08.9
comp=Z,160nm,18.6s,baz=214,slow=34
comp=Z,11nm,0.8s
GTA Gaotai 45.93 319 *e*P **P** **12 50 06.3 +0.4**
GTA pP sP 12 50 28.5 +4.7
GTA sP pwP 12 50 38.5 +16
GTA pmax pmax
comp=Z,7.0nm,1.4s
GTA pmax pmax
comp=Z,34nm,4.3s
GTA LR LR
comp=Z,59nm,18.5s
GTA LR LR
comp=Z,85nm,16.0s
GTA LR LR
comp=Z,100nm,14.2s
SHL Shillong 46.58 298 P **P** **12 50 11.5 +0.3**
SHL IAmb IAmb 12 50 12.0
comp=Z,11nm,0.8s
ULN Ulaanbaatar 47.39 333 P **P** **12 50 18.4 +1.3**
ULN IAmb IAmb 12 50 19.5
comp=Z,9.6nm,0.9s
ULN Ulaanbaatar 47.39 333 P **P** **12 50 16.3 -0.9**
SONM Songino Array 47.67 332 P **P** **12 50 20.7 +1.3**
comp=Z,8.5nm,0.8s,baz=145,slow=7.7,SNR=35
SONM PcP **PcP** **12 51 49.0 +0.8**
comp=Z,1.4nm,1.0s,baz=145,slow=2.8,SNR=1.7
SONM LR LR 13 10 39.2
comp=Z,137nm,19.7s,baz=137,slow=36
comp=Z,8.5nm,0.8s
SONM Songino Array 47.67 332 P **P** **12 50 20.6 +1.3**
SONM IAmb IAmb 12 50 21.7
comp=Z,12nm,1.0s
MA2 Magadan 52.65 9 LR LR 13 11 37.2
comp=Z,29nm,21.0s,baz=171,slow=34
SHEM Shemya Is, Ala 53.89 27 LR LR 13 15 35.3
comp=Z,24nm,18.0s,baz=284,slow=38
AFI Afiamalu 55.05 113 LR LR 13 11 01.8
comp=Z,43nm,21.5s,baz=208,slow=32
PALK Pallekele 55.97 273 LR LR 13 18 05.1
comp=Z,17nm,18.0s,baz=193,slow=39
WMQ Urumqi 56.00 318 *e*P **P** **12 51 24.5 +3.1**
SEY Seymchan 56.09 8 P **P** **12 51 22.5 +0.9**
comp=Z,3.8nm,0.9s,baz=181,slow=8.6,SNR=4.8
comp=Z,3.8nm,0.9s
URZ Urewera 59.02 144 LR LR 13 14 37.5
comp=Z,111nm,19.7s,baz=36,slow=34
RPZ Rata Peaks 59.77 152 LR LR 13 14 02.3
comp=Z,54nm,21.5s,baz=281,slow=32
MK31 Makanchi Array 60.68 320 P **P** **12 51 54.5 +0.6**
MK31 IAmb IAmb 12 51 55.4
comp=Z,4.1nm,0.8s
MKAR Makanchi Array 60.68 320 P **P** **12 51 54.5 +0.5**
comp=Z,5.7nm,0.6s,baz=105,slow=8.7,SNR=55
MKAR LR LR 13 19 29.0
comp=Z,61nm,18.0s,baz=100,slow=37
comp=Z,5.7nm,0.6s
MKAR Makanchi Array 60.68 320 P **P** **12 51 54.6 +0.6**
MAKZ Makanchi 60.88 320 P **P** **12 51 55.3 0.0**
MAKZ IAmb IAmb 12 51 56.4
comp=Z,5.3nm,0.8s
ZAA0 Zalesovo Array 62.18 328 P **P** **12 52 02.7 -1.1**
ZAA0 IAmb IAmb 12 52 04.7
comp=Z,4.7nm,0.8s
ZALV Zalesovo Beam 62.18 328 P **P** **12 52 03.8 -0.1**
comp=Z,4.5nm,0.7s,baz=108,slow=5.9,SNR=22
ZALV LR LR 13 18 11.5
comp=Z,68nm,21.9s,baz=102,slow=35
comp=Z,4.5nm,0.7s
TIXI Tiksi 63.96 357 P **P** **12 52 15.5 +0.2**
NIL Nilore 64.05 304 P **P** **12 52 17.0 +0.3**
NIL IAmb IAmb 12 52 18.0
comp=Z,8.0nm,0.7s
KURK Kurchatov 64.35 323 P **P** **12 52 18.5 +0.2**
KURK IAmb IAmb 12 52 19.1
comp=Z,9.0nm,0.8s
GAR Garm 67.17 309 P **P** **12 52 36.3 -0.6**
GAR IAmb IAmb 12 52 37.9
comp=Z,8.1nm,0.9s
KK31 Karatay Array 67.71 313 P **P** **12 52 39.9 -0.2**
KKAR Karatay Array 67.71 313 P **P** **12 52 39.7 -0.3**
CHGR Chuyangaron 68.02 308 P **P** **12 52 41.7 -0.5**
CHGR IAmb IAmb 12 52 42.6
comp=Z,8.4nm,0.9s
NRIK Noril'sk 69.25 343 P **P** **12 52 50.0 +0.9**
comp=Z,2.1nm,0.7s,baz=82,slow=2.3,SNR=4.5
comp=Z,2.1nm,0.7s
NRIK Noril'sk 69.25 343 P **P** **12 52 49.9 +0.7**
NRIK IAmb IAmb 12 52 51.2
comp=Z,17nm,1.4s
BRVK Borovoye 69.98 324 P **P** **12 52 54.4 +0.5**
BRVK IAmb IAmb 12 52 55.2
comp=Z,5.8nm,0.8s
IMAR Indian Mountai 74.42 23 P **P** **12 53 21.4 +1.1**
PMR Palmer 75.40 28 P **P** **12 53 26.4 +0.5**
PMR IAmb IAmb 12 53 27.2
comp=Z,6.4nm,0.9s
PWL Port Wells 75.64 29 P **P** **12 53 27.8 +0.4**
ABKAR Akbulak array 75.79 319 P **P** **12 53 28.3 -0.2**
MCK McKinley 75.89 26 P **P** **12 53 29.1 +0.3**
SCM Sheep Creek Mo 76.28 28 P **P** **12 53 32.0 +0.9**
PPT Papeete 76.58 110 LR LR 13 21 52.6
comp=Z,33nm,20.1s,baz=290,slow=32
PAE Paea 76.59 110 *e*T T 14 17 32.2
comp=Z,0.7nm,0.3s
KLU Klutina 76.90 29 P **P** **12 53 36.0 +1.4**
KLU IAmb IAmb 12 53 36.9
comp=Z,11nm,1.0s
DIV Divide 76.92 29 P **P** **12 53 35.5 +0.8**
IL31 76.96 25 P **P** **12 53 34.1 -0.6**
ILAR Eielson Array 76.96 25 P **P** **12 53 33.5 -1.3**
comp=Z,1.4nm,0.8s,baz=240,slow=5.9,SNR=11
comp=Z,1.4nm,0.8s
ILAR Eielson Array 76.96 25 P **P** **12 53 34.2 -0.6**
ARU Arti 77.23 326 LR LR 13 30 23.8
comp=Z,42nm,18.6s,baz=88,slow=38
ARU Arti 77.23 326 P **P** **12 53 35.5 -0.9**
ARU IAmb IAmb 12 53 36.5
comp=Z,3.6nm,0.6s
TBI Tubuai 78.01 116 *e*LR LR 13 17 59.7
comp=Z,70nm,33.8s
BMAR Burnt Mountain 78.29 23 P **P** **12 53 43.5 +1.3**
M27K Edge Creek, AK 78.89 28 P **P** **12 53 45.2 -0.6**
M27K IAmb IAmb 12 53 54.8
comp=Z,16nm,1.2s
BCAR Beaver Creek A 78.99 27 P **P** **12 53 47.2 +1.1**
TABL Table Mountain 79.11 30 P **P** **12 53 48.5 +1.4**
LOGN Logan Glacier 79.21 30 P **P** **12 53 48.5 +1.0**
HYT Haines Junctio 80.92 30 P **P** **12 53 58.4 +1.7**
HYT IAmb IAmb 12 53 59.5
comp=Z,12nm,1.1s
KIRV Kirov 82.22 328 LR LR 13 31 26.5
comp=Z,99nm,21.5s,baz=95,slow=36
INK Inuvik 82.51 22 P **P** **12 54 04.2 -0.5**
comp=Z,1.7nm,0.8s,baz=292,slow=3.4,SNR=3.5
comp=Z,1.7nm,0.8s
A36M Sachs Harbour 84.94 18 P **P** **12 54 17.0 -0.1**
VNDA Vanda 86.34 175 P **P** **12 54 23.9 0.0**
comp=Z,0.7nm,0.8s,baz=312,slow=6.8,SNR=4.6
comp=Z,0.7nm,0.8s
VNDA Vanda 86.34 175 P **P** **12 54 24.8 +0.9**
KLMR Klimovskoe 86.95 331 *e*P **P** **12 54 24.7 -2.5**
KLMR AMP 12 54 33.0
comp=Z,12nm,1.5s
ARCES ARCESS Array B 90.12 341 P **P** **12 54 41.5 -0.6**
comp=Z,2.8nm,0.8s,baz=68,slow=9.8,SNR=3.7
ARCES LR LR 13 40 35.3
comp=Z,40nm,18.0s,baz=315,slow=39
comp=Z,2.8nm,0.8s
MAW Mawson 91.29 202 LR LR 13 33 59.6
comp=Z,14nm,20.1s,baz=6.0,slow=34
YKA Yellowknife Ar 91.36 26 LR LR 13 33 17.2
comp=Z,31nm,19.1s,baz=332,slow=34
MNK Minsk 94.66 326 *i* P **P** **12 55 00.0 -3.4**
comp=E,4.0nm,0.8s
MNK *i* P **P** **12 55 00.0 -3.4**
comp=N,30nm,0.8s
MNK *i* P **P** **12 55 00.0 -3.4**
comp=Z,15nm,0.9s,baz=70
MNK *i* pP **sP** **12 55 26.4 +3.6**

MNK *i* PP **PP** **12 58 49.3 -2.3**
MNK *i* PPP PPP 13 00 51.3
MNK *i* S **SKSac** **13 05 25.7 -8.9**
MNK *i* sS **ScS** **13 06 13.6 -0.1**
MNK *i* SS **SS** **13 12 31.7 -4.4**
MNK *i* SSS SSS 13 16 14.6
MNK *i* LR LR 13 35 43.9
MNK *i* LRM MLR 13 38 40.7
comp=E,85nm,17.7s
MNK *i* LRM MLR 13 38 40.7
comp=Z,85nm,16.4s
MNK *i* LRM MLR 13 39 17.1
comp=N,560nm,16.4s
AKASG Malin Array Be 95.16 323 LR LR 13 40 35.2
comp=N,36nm,19.7s,baz=217,slow=37
NVAR Mina Array Bea 96.37 50 P **P** **12 55 12.5 +0.6**
comp=N,0.6nm,0.8s,baz=283,slow=5.0,SNR=3.8
comp=N,0.6nm,0.8s
QSPA South Pole Qui 97.71 180 LR LR 13 39 40.3
comp=N,30nm,19.7s,baz=336,slow=36
MLR Muntele Rosu 99.00 318 LR LR 13 42 04.0
comp=N,38nm,21.8s,baz=61,slow=36
TORD Torodi Ar. Bea 131.14 295 PKP **PKiKP** **13 00 56.5 +0.4**
comp=N,0.3nm,0.8s,baz=31,slow=3.4,SNR=1.9

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*IDC **25** 12:44:11.8±0.7,29°.33S×61°.07E,h0km,mb4.1/10,*
mbtmp4.1/11,ML4.5/1,MS3.5/11,Error ellipse:
s-maj=23.9km s-min=19.4km az=65.0
*NEIC **25** 12:44:13.4±2.0,29°.17S±0°.09×60°.96E±0°.10,h10km±1km,*
mb4.7/18,Error ellipse: s-maj=20.5km s-min=3.9km
az=45.0
ISC 25 12:44:13.1±0.5,29°.20S±0°.09×61°.0E±0°.1,h10km,n52,
σ0.99/36,mb4.3/16,MS3.5/11,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.30**	**328**	Pn	**Pn**	**12 46 24.6**	**-2.8**
VOI	**Vohitsoka**	**14.71**	**296**		**Pn**	**12 47 41.6**	**+0.1**
ABPO	**Ambohimpanom**	**16.12**	**306**	Pn	**Pn**	**12 47 59.7**	**-0.4**
OPO	**Ambohidratompo**	**16.45**	**307**	Pn	**Pn**	**12 48 05.0**	**+0.7**
	0.2nm,0.3s,baz=120,slow=11,SNR=8.3						
OPO				Sn	Sn	12 50 52.3	-15
	0.1nm,0.3s,baz=109,slow=18,SNR=2.3						
	3.2nm,0.3s						
H08S1	**Diego Carcia H**	**24.02**	**29**	T	T	13 14 10.2	
	baz=204,slow=76,SNR=5.2						
H08S2	**Diego Garcia H**	**24.02**	**29**	T	T	13 14 10.7	
	baz=204,slow=76,SNR=5.4						
H08S3	**Diego Garcia H**	**24.04**	**29**	T	T	13 14 12.7	
	baz=204,slow=76,SNR=22						
DGAR	**Diego Garcia**	**24.22**	**29**	P	**P**	**12 49 29.7**	**-0.4**
SOE	**Somerset East**	**30.49**	**254**	P	**P**	**12 50 25.2**	**-1.3**
LSZ	**Lusaka**	**33.24**	**287**	LR	LR	13 03 20.7	
	comp=Z,32nm,21.5s,baz=88,slow=34						
MAW	**Mawson**	**38.45**	**179**	LR	LR	13 04 23.8	
	comp=Z,65nm,18.1s,baz=341,slow=32						
MAW	**Mawson**	**38.45**	**179**	P	**P**	**12 51 34.9**	**+0.2**
MBAR	**Mbarara**	**40.51**	**309**	LR	LR	13 06 58.5	
	comp=Z,66nm,19.2s,baz=46,slow=34						
ATD	**Arta Tunnel**	**44.12**	**334**	LR	LR	13 08 34.7	
	comp=Z,66nm,19.3s,baz=23,slow=33						
H01W2	**Cape Leeuwin H**	**44.97**	**111**	T	T	13 40 25.1	
	baz=262,slow=74,SNR=23						
H01W3	**Cape Leeuwin H**	**44.98**	**111**	T	T	13 40 25.4	
	baz=262,slow=74,SNR=19						
H01W1	**Cape Leeuwin H**	**44.99**	**111**	T	T	13 40 24.2	
	baz=262,slow=74,SNR=24						
WSAR	**Wadi Sarin**	**52.18**	**357**	LR	LR	13 11 41.5	
	comp=Z,35nm,19.7s,baz=153,slow=32						
SNAA	**Sanae**	**54.38**	**200**	P	**P**	**12 53 39.8**	**0.0**
	1.3nm,1.0s,baz=349,slow=10,SNR=3.5						
SNAA				LR	LR	13 11 49.5	
	comp=Z,45nm,20.5s,baz=16,slow=30						
	1.3nm,1.0s						
SNAA	**Sanae**	**54.38**	**200**	P	**P**	**12 53 40.1**	**+0.4**
RAYN	**Ar Rayn**	**54.49**	**342**	P	**P**	**12 53 41.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**59.89**	**42**	P	**P**	**12 54 20.4**	**+1.0**
	1.2nm,0.4s,baz=232,slow=6.7,SNR=6.4						
	1.2nm,0.4s						
QSPA	**South Pole Qui**	**60.96**	**180**	P	**P**	**12 54 25.2**	**-1.0**
	1.7nm,0.8s,baz=248,slow=1.6,SNR=6.6						
	1.7nm,0.8s						
QSPA	**South Pole Qui**	**60.96**	**180**	P	**P**	**12 54 26.4**	**+0.1**
QSPA				IAmb	IAmb	12 54 33.0	
	comp=Z,10nm,1.5s						
BBOO	**Buckleboo**	**63.17**	**114**	P	**P**	**12 54 40.5**	**-1.0**
EIL	**Elat**	**63.60**	**335**	LR	LR	13 18 09.6	
	comp=Z,43nm,21.2s,baz=278,slow=32						
VNDA	**Vanda**	**64.03**	**166**	P	**P**	**12 54 46.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=263,slow=6.9,SNR=6.0						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**64.03**	**166**	P	**P**	**12 54 46.2**	**-0.3**
VNDA				IAmb	IAmb	12 54 48.1	
	comp=Z,5.0nm,1.5s						
ASAR	**Alice Springs**	**64.58**	**104**	P	**P**	**12 54 50.2**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=246,slow=6.1,SNR=19						
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**64.58**	**104**	P	**P**	**12 54 51.0**	**0.0**
WRA	**Warramunga Arr**	**66.41**	**100**	P	**P**	**12 55 02.3**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=245,slow=5.8,SNR=16						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**66.41**	**100**	P	**P**	**12 55 01.6**	**-1.2**
WB2	**Warramunga Arr**	**66.42**	**100**	P	**P**	**12 55 02.6**	**-0.2**
WB2				IAmb	IAmb	12 55 03.9	
	comp=Z,13nm,1.5s						
MMAI	**Mount Meron Ar**	**66.46**	**337**	LR	LR	13 20 09.0	
	comp=Z,19nm,21.1s,baz=200,slow=32						
WB0	**Warramunga Arr**	**66.53**	**100**	P	**P**	**12 55 03.1**	**-0.5**
WB0				IAmb	IAmb	12 55 04.4	
	comp=Z,4.2nm,1.0s						
WR0	**Warramunga Arr**	**66.58**	**101**	P	**P**	**12 55 03.0**	**-0.9**
WR0				IAmb	IAmb	12 55 44.8	
	comp=Z,6.4nm,1.4s						
GYA0B	**ALIBECK ARRAY**	**66.83**	**358**	P	**P**	**12 55 03.7**	**-1.3**
GYA0B				IAmb	IAmb	12 55 45.5	
	comp=Z,3.6nm,0.8s						
GNI	**Garni**	**70.63**	**347**	LR	LR	13 24 29.4	
	comp=Z,43nm,20.6s,baz=142,slow=34						
TOA0	**Torodi Ar. Sit**	**71.02**	**298**	P	**P**	**12 55 31.6**	**+0.1**
TOA0				IAmb	IAmb	12 55 37.2	
	comp=Z,6.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**71.02**	**298**	P	**P**	**12 55 32.9**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=108,slow=5.5,SNR=12						
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**72.48**	**7**	P	**P**	**12 55 41.3**	**+1.6**
KK31				IAmb	IAmb	12 56 03.7	
	comp=Z,4.4nm,1.4s						
KKAR	**Karatay Array**	**72.48**	**7**	P	**P**	**12 55 40.9**	**+1.2**
BRTR	**Keskin Array B**	**73.14**	**338**	P	**P**	**12 55 43.6**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=160,slow=7.9,SNR=4.1						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**78.05**	**15**	P	**P**	**12 56 13.8**	**+2.1**
	comp=Z,1.0nm,0.6s,baz=181,slow=4.9,SNR=7.1						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**78.05**	**15**	P	**P**	**12 56 12.5**	**+0.8**
ABKAR	**Akbulak array**	**78.11**	**359**	P	**P**	**12 56 12.0**	**+0.1**
KEST	**Kesra**	**80.83**	**320**	LR	LR	13 35 18.8	
	comp=Z,44nm,18.1s,baz=304,slow=38						
ZALV	**Zalesovo Beam**	**85.34**	**14**	P	**P**	**12 56 50.8**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=193,slow=4.9,SNR=4.6						
	comp=Z,1.0nm,0.5s						
URZ	**Urewera**	**90.22**	**135**	LR	LR	13 27 37.9	
	comp=Z,42nm,18.6s,baz=21,slow=29						
PDAR	**Pinedale Array**	**164.46**	**333**	PKP	**PKPdf**	**13 04 17.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=90,slow=1.5,SNR=3.9						
TXAR	**Lajitas Array**	**166.60**	**274**	PKP	**PKPdf**	**13 04 20.1**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=124,slow=0.5,SNR=3.6						
NVAR	**Mina Array Bea**	**170.77**	**357**	PKP	**PKPdf**	**13 04 22.9**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=220,slow=2.1,SNR=2.3						

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*JMA **25** 13:23:10.5±0.1,23°.8N±0°.7×121°.8E±0°.5,h44km±1km,*
MV2.1/11,TAIWAN REGION
*TAP **25** 13:23:10.8,23°.87N×121°.79E,h50km,ML2.7,D*
ISC 25 13:23:11.7±1.2,23°.89N±0°.02×121°.80E±0°.02,h42km±5km,
n89,σ19/164,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.19**	**263**	P	**Pn**	**13 23 19.1**	**0.0**
	baz=279						
TEYL				S	**Sn**	**13 23 25.9**	**+1.7**
	baz=279						
HWA	**Hwalien**	**0.20**	**295**	P	**Pn**	**13 23 19.4**	**+0.2**
	baz=301						

HWA				*e*S		**Sn**	**13 23 25.9**	**+1.5**
	baz=301							
TWD	**Chiawan**	**0.27 315**		P		**Pn**	**13 23 19.5**	**-0.3**
	baz=320							
TWD				*i* S		**Sn**	**13 23 26.0**	**+0.6**
	baz=320							
ETM	**Tongmen**	**0.29 285**		*i* P		**Pn**	**13 23 19.8**	**-0.3**
	baz=280							
ETM				*i* S		**Sn**	**13 23 26.4**	**+0.5**
	baz=280							
TEGC	**Jichi Village**	**0.30 233**		*i* P		**Pn**	**13 23 19.9**	**-0.2**
	baz=233							
TEGC				*i* S		**Sn**	**13 23 26.9**	**+0.9**
	baz=233							
ETL	**Fush Village**	**0.31 328**		P		**Pn**	**13 23 19.9**	**-0.4**
	baz=331							
ETL				S		**Sn**	**13 23 26.7**	**+0.4**
	baz=331							
NACB	**Ninganchiao**	**0.34 326**		*i* P		**Pn**	**13 23 20.1**	**-0.4**
	baz=329							
NACB				S		**Sn**	**13 23 27.2**	**+0.5**
	baz=329							
ESL	**Shilin**	**0.35 257**		P		**Pn**	**13 23 20.2**	**-0.4**
	baz=268							
ESL				S		**Sn**	**13 23 26.6**	**-0.3**
	baz=268							
EGFH	**Guangfu**	**0.41 237**		P		**Pn**	**13 23 20.7**	**-0.6**
	baz=247							
EGFH				*e*S		**Sn**	**13 23 27.6**	**-0.6**
	baz=247							
ETLH	**Xiulin Townshi**	**0.43 317**		P		**Pn**	**13 23 21.3**	**-0.4**
	baz=311							
ETLH				*e*S		**Sn**	**13 23 28.6**	**-0.2**
	baz=311							
HGSD	**Ruisui**	**0.53 221**		*i* P		**Pn**	**13 23 22.4**	**-0.5**
	baz=221							
HGSD				S		**Sn**	**13 23 31.1**	**+0.3**
	baz=221							
EWUT	**Wuta**	**0.55 358**		*e*P		**Pn**	**13 23 21.9**	**-1.3**
	baz=354							
EWUT				*e*S		**Sn**	**13 23 30.7**	**-0.7**
	baz=354							
WHF	**Hehuan Shan**	**0.55 297**		P		**Pn**	**13 23 22.9**	**-0.7**
	baz=294							
WHF				S		**Sn**	**13 23 31.4**	**-0.6**
	baz=294							
OWD	**Renai**	**0.58 276**		P		**Pn**	**13 23 23.2**	**-0.4**
	baz=278							
OWD				S		**Sn**	**13 23 31.8**	**-0.4**
	baz=278							
EHY	**Hungye**	**0.58 229**		*i* P		**Pn**	**13 23 22.3**	**-1.3**
	baz=238							
CHGB	**Renai**	**0.60 286**		P		**Pn**	**13 23 23.7**	**-0.4**
	baz=288							
CHGB				*e*S		**Sn**	**13 23 32.7**	**-0.1**
	baz=288							
FUSS	**Fushou**	**0.62 305**		P		**Pn**	**13 23 24.1**	**-0.3**
	baz=311							
FUSS				S		**Sn**	**13 23 33.5**	**+0.1**
	baz=311							
VWDT	**VWDT**	**0.62 257**		P		**Pn**	**13 23 23.7**	**-0.4**
	baz=254							
VWDT				*e*S		**Sn**	**13 23 32.9**	**0.0**
	baz=254							
WUSB	**Renai**	**0.64 279**		P		**Pn**	**13 23 24.2**	**-0.3**
	baz=281							
WUSB				*e*S		**Sn**	**13 23 33.4**	**-0.1**
	baz=281							
ECBN	**Changbin**	**0.66 209**		*e*S		**Sn**	**13 23 32.7**	**-1.2**
	baz=199							
NNSB	**Datong**	**0.66 324**		P		**Pn**	**13 23 24.5**	**-0.3**
	baz=326							
NNSB				*e*S		**Sn**	**13 23 34.0**	**0.0**
	baz=326							
NNS	**Nan Shan**	**0.67 324**		*e*P		**Pn**	**13 23 23.6**	**-1.3**
	baz=326							
NNS				*e*S		**Sn**	**13 23 33.5**	**-1.0**
	baz=326							
TWT	**Tachien**	**0.68 302**		S		**Sn**	**13 23 34.7**	**+0.1**
	baz=303							
YULB	**Yu-li**	**0.68 223**		*e*P		**Pn**	**13 23 23.6**	**-1.3**
	baz=231							
YULB				*e*S		**Sn**	**13 23 32.9**	**-1.6**
	baz=231							
LATG	**Datong**	**0.69 339**		P		**Pn**	**13 23 24.8**	**-0.4**
	baz=340							
LATG				*e*S		**Sn**	**13 23 34.4**	**-0.4**
	baz=340							
TDCB	**Techi**	**0.69 302**		P		**Pn**	**13 23 25.0**	**-0.2**
	baz=303							
TDCB				*e*S		**Sn**	**13 23 34.5**	**-0.4**
	baz=303							
EYUL	**Yuli**	**0.70 219**		*e*P		**Pn**	**13 23 24.4**	**-0.8**
	baz=229							
TWC	**Suao**	**0.71 3**		P		**Pn**	**13 23 25.4**	**0.0**
	baz=5.0							
TWC				S		**Sn**	**13 23 36.0**	**+0.8**
	baz=5.0							
NDT	**Datong Townshi**	**0.76 340**		*e*P		**Pn**	**13 23 24.2**	**-1.8**
	baz=340							
NDT				*e*S		**Sn**	**13 23 34.6**	**-1.7**
	baz=340							
ENTT	**Nioudou**	**0.78 344**		*e*P		**Pn**	**13 23 25.2**	**-1.0**
	baz=345							
ENTT				*e*S		**Sn**	**13 23 36.3**	**-0.5**
	baz=345							
SSLB	**Suanglung**	**0.79 263**		P		**Pn**	**13 23 25.9**	**-0.4**
	baz=263							
SSLB				*e*S		**Sn**	**13 23 36.9**	**-0.1**
	baz=263							
SMLT	**Sun Moon Lake**	**0.83 270**		P		**Pn**	**13 23 26.8**	**-0.2**
	baz=270							
SMLT				*e*S		**Sn**	**13 23 38.0**	**-0.1**
	baz=270							
WCS	**Beigang Elemen**	**0.83 282**		*e*P		**Pn**	**13 23 26.0**	**-1.0**
	baz=280							
WCS				*e*S		**Sn**	**13 23 37.8**	**-0.3**
	baz=280							
FULB	**Fuli**	**0.83 214**		*e*P		**Pn**	**13 23 26.9**	**-0.2**
	baz=205							
FULB				*e*S		**Sn**	**13 23 38.9**	**+0.7**
	baz=205							
TWE	**Neicheng**	**0.83 351**		P		**Pn**	**13 23 27.3**	**+0.3**
	baz=344							
TWE				S		**Sn**	**13 23 39.1**	**+1.0**
	baz=344							
TYC	**Yuchr**	**0.87 271**		*e*P		**Pn**	**13 23 27.0**	**-0.4**
	baz=272							
YHNB	**Yeheng**	**0.87 333**		P		**Pn**	**13 23 27.5**	**0.0**
	baz=334							
YHNB				S		**Sn**	**13 23 38.9**	**-0.1**
	baz=334							
WHP	**Taichung City**	**0.87 296**		*e*P		**Pn**	**13 23 27.9**	**+0.2**
	baz=301							
WHP				*e*S		**Sn**	**13 23 39.8**	**+0.6**
	baz=301							
NSK	**Sanguang**	**0.88 333**		P		**Pn**	**13 23 26.7**	**-1.0**
	baz=334							
NSK				S		**Sn**	**13 23 38.0**	**-1.4**
	baz=334							
FUSB	**Fushanzhiwuyua**	**0.89 347**		*i* P		**Pn**	**13 23 27.8**	**0.0**
	baz=340							
FUSB				S		**Sn**	**13 23 39.8**	**+0.3**
	baz=340							
WHYT	**Xinyi Township**	**0.89 258**		*e*P		**Pn**	**13 23 28.0**	**+0.2**
	baz=256							
WHYT				*e*S		**Sn**	**13 23 39.8**	**+0.2**
	baz=256							
EHD	**Haiduan**	**0.92 217**		*e*P		**Pn**	**13 23 25.4**	**-2.8**
	baz=216							
EHD				*e*S		**Sn**	**13 23 37.0**	**-3.2**
	baz=216							
NFF	**Wufeng Townshi**	**0.97 320**		*e*P		**Pn**	**13 23 28.2**	**-0.7**
	baz=321							
NFF				*e*S		**Sn**	**13 23 41.2**	**-0.2**
	baz=321							
WJS	**Zhushan**	**0.99 266**		*e*P		**Pn**	**13 23 29.9**	**+0.8**
	baz=266							
WJS				*e*S		**Sn**	**13 23 43.7**	**+1.8**
	baz=266							
ALS	**Alishan**	**0.99 248**		P		**Pn**	**13 23 29.5**	**+0.1**
	baz=247							
ALS				S		**Sn**	**13 23 42.2**	**-0.2**
	baz=247							
ELDTW	**Lidau**	**1.00 226**		*e*P		**Pn**	**13 23 28.0**	**-1.5**
	baz=224							
ELDTW				*e*S		**Sn**	**13 23 41.3**	**-1.2**
	baz=224							
WWF	**Wufeng**	**1.02 279**		P		**Pn**	**13 23 29.7**	**+0.2**
	baz=279							
WWF				*e*S		**Sn**	**13 23 44.4**	**+1.7**
	baz=279							
EDH	**Donghe**	**1.02 207**		*e*P		**Pn**	**13 23 29.6**	**0.0**
	baz=200							
EDH				*e*S		**Sn**	**13 23 41.3**	**-1.5**
	baz=200							
WNT	**Mingjian**	**1.02 269**		*e*P		**Pn**	**13 23 29.6**	**0.0**
	baz=270							
WNT				*e*S		**Sn**	**13 23 44.6**	**+1.8**
	baz=270							
NSTT	**Nanjuang**	**1.04 315**		*e*P		**Pn**	**13 23 30.7**	**+0.9**
	baz=304							
NSTT				*e*S		**Sn**	**13 23 44.2**	**+1.0**
	baz=304							
LIOB	**Emei**	**1.04 316**		P		**Pn**	**13 23 31.0**	**+1.2**
	baz=317							
LIOB				*e*S		**Sn**	**13 23 45.9**	**+2.7**
	baz=317							
TWQ1	**Liyutan**	**1.04 296**		*e*P		**Pn**	**13 23 30.6**	**+0.7**
	baz=297							
TWQ1				*e*S		**Sn**	**13 23 45.0**	**+1.7**
	baz=297							
TIPB	**Shuangxi**	**1.07 1**		*i* P		**Pn**	**13 23 31.0**	**+0.6**
	baz=352							
TIPB				*e*S		**Sn**	**13 23 45.8**	**+1.7**
	baz=352							
TATO	**Taipei**	**1.12 345**		*e*S		**Sn**	**13 23 45.6**	**+0.6**
	baz=346							
WYL	**Yuanlin Townsh**	**1.12 274**		*e*P		**Pn**	**13 23 31.4**	**+0.5**
	baz=274							
WYL				*e*S		**Sn**	**13 23 47.6**	**+2.4**
	baz=274							
WCHH	**Zhanghua**	**1.15 280**		*e*S		**Sn**	**13 23 49.4**	**+3.4**
	baz=279							
WDLH	**Douliu**	**1.18 260**		*e*P		**Pn**	**13 23 33.3**	**+1.7**
	baz=260							
WDLH				*e*S		**Sn**	**13 23 50.7**	**+4.2**
	baz=260							
JYNG	**Yonagunijimaku**	**1.18 62**		P		**Pn**	**13 23 31.9**	**+0.2**
JYNG				S		**Sn**	**13 23 47.0**	**+0.4**
STYH	**Taoyuan**	**1.19 233**		*e*P		**Pn**	**13 23 31.0**	**-0.8**
	baz=227							
STYH				*e*S		**Sn**	**13 23 45.6**	**-1.2**
	baz=227							
WCKO	**Fanlu**	**1.19 248**		*e*P		**Pn**	**13 23 31.9**	**0.0**
	baz=239							
WCKO				*e*S		**Sn**	**13 23 47.8**	**+1.0**
	baz=239							
SXI1	**Grass Mountain**	**1.20 3**		*e*P		**Pn**	**13 23 32.4**	**+0.3**
	baz=3.0							
SXI1				*e*S		**Sn**	**13 23 50.3**	**+3.1**
	baz=3.0							
STYT	**Tauyuan**	**1.20 233**		P		**Pn**	**13 23 32.1**	**0.0**
	baz=227							
STYT				S		**Sn**	**13 23 48.1**	**+0.8**
	baz=227							
TPUB	**Ta-pu**	**1.23 242**		*e*P		**Pn**	**13 23 32.8**	**+0.4**
	baz=241							
TPUB				*e*S		**Sn**	**13 23 49.3**	**+1.5**
	baz=241							
CHN4	**Tsaushan**	**1.23 244**		*e*P		**Pn**	**13 23 31.8**	**-0.7**
	baz=244							
CHN4				*e*S		**Sn**	**13 23 49.1**	**+1.2**
	baz=244							
YOJ	**Yonaguni jima**	**1.24 63**		P		**Pn**	**13 23 32.5**	**-0.1**
YOJ				S		**Sn**	**13 23 48.4**	**+0.3**
WTP	**Ta-pu**	**1.27 240**		*e*P		**Pn**	**13 23 33.4**	**+0.4**
	baz=239							
WTP				*e*S		**Sn**	**13 23 50.1**	**+1.3**
	baz=239							
YM01	**YM01**	**1.27 350**		*e*P		**Pn**	**13 23 33.2**	**+0.3**
	baz=337							
WRL	**Guolierlin Hig**	**1.30 271**		*e*P		**Pn**	**13 23 33.1**	**-0.4**
	baz=281							
WRL				*e*S		**Sn**	**13 23 50.2**	**+0.5**
	baz=281							
TWK	**Hsinying**	**1.36 243**		*e*P		**Pn**	**13 23 34.7**	**+0.4**
	baz=242							
TWK				S		**Sn**	**13 23 52.8**	**+1.8**
	baz=242							
CHN1	**Nanshi**	**1.37 239**		*e*P		**Pn**	**13 23 34.9**	**+0.6**
	baz=239							
CHN1				*e*S		**Sn**	**13 23 52.9**	**+1.7**
	baz=239							
SGST	**Jiashian**	**1.38 235**		S		**Sn**	**13 23 52.7**	**+1.1**
	baz=234							
SSD	**Sandimen**	**1.57 224**		*e*P		**Pn**	**13 23 38.4**	**+1.3**
	baz=212							
SSD				*e*S		**Sn**	**13 23 58.2**	**+2.0**
	baz=212							
TSMG	**Majia**	**1.59 222**		P		**Pn**	**13 23 38.4**	**+1.0**
	baz=211							
TSMG				*e*S		**Sn**	**13 23 58.5**	**+1.8**
	baz=211							
MASBT	**Mashibuluo**	**1.67 220**		*e*P		**Pn**	**13 23 39.4**	**+0.9**
	baz=219							
MASBT				*e*S		**Sn**	**13 24 00.3**	**+1.7**
	baz=219							
EAST	**Anshuo**	**1.74 211**		*e*P		**Pn**	**13 23 40.7**	**+1.2**
	baz=212							
IRIF	**Iriomote-Funau**	**1.81 76**		P		**Pn**	**13 23 40.8**	**+0.3**
IRIF				S		**Sn**	**13 24 02.7**	**+0.5**
HATJ	**Hateruma jima**	**1.84 84**		P		**Pn**	**13 23 40.8**	**0.0**
HATJ				S		**Sn**	**13 24 03.1**	**+0.3**
JKRS	**Kuro-shima**	**2.05 80**		P		**Pn**	**13 23 44.2**	**+0.6**
JKRS				*e*S		**Sn**	**13 24 08.5**	**+0.6**
WDGT	**Dungji**	**2.06 253**		P		**Pn**	**13 23 43.6**	**-0.3**
	baz=243							
WDGT				*e*S		**Sn**	**13 24 07.8**	**-0.6**
	baz=243							
PHUB	**P'eng-hu**	**2.08 260**		P		**Pn**	**13 23 43.8**	**-0.2**
	baz=271							
PHUB				S		**Sn**	**13 24 08.1**	**-0.6**
	baz=271							
PNG	**Penghu**	**2.09 262**		*e*S		**Sn**	**13 24 08.7**	**-0.2**
	baz=260							
JIJ	**Ishigaki jima**	**2.19 77**		P		**Pn**	**13 23 45.4**	**-0.2**
JIJ				S		**Sn**	**13 24 10.5**	**-1.0**
VCHM	**Qimei**	**2.28 253**		*e*P		**Pn**	**13 23 45.2**	**-1.6**
	baz=253							
JISG	**Ishigakijimahi**	**2.39 73**		P		**Pn**	**13 23 48.3**	**-0.1**
JISG				S		**Sn**	**13 24 15.8**	**-0.6**
VWUC	**VWUC**	**2.41 298**		*e*P		**Pn**	**13 23 47.6**	**-1.0**
	baz=296							
VWUC				*e*S		**Sn**	**13 24 14.4**	**-2.4**
	baz=296							
PTMZ	**Houxiangcun**	**2.70 296**		*e*P		**Pn**	**13 23 51.6**	**-1.0**
	baz=294							
JTJ	**Tarama**	**2.75 74**		P		**Pn**	**13 23 52.9**	**-0.4**
JTJ				S		**Sn**	**13 24 24.9**	**-0.3**
MATB	**Ma-tsu**	**2.81 324**		*e*P		**Pn**	**13 23 53.7**	**-0.4**
	baz=334							
MATB				*e*S		**Sn**	**13 24 24.3**	**-2.5**
	baz=334							
ZPLA	**Ao Xicun**	**3.71 271**		*e*P		**Pn**	**13 24 05.2**	**-1.2**
	baz=270							

*IDC **25** 13:36:45.3±0.9, 8°.06N×137°.57E, h0km, mb3.6/6, mbtmp3.8/7, ML4.1/1, MS2.9/4, Error ellipse: s-maj=40.2km s-min=20.7km az=90.0*
*NEIC **25** 13:36:49.9±1.4, 8°.05N±0°.04×137°.6E±0°.1, h28km±6km, mb4.5/16, Error ellipse: s-maj=17.0km s-min=4.7km az=79.0*
ISC 25 13:36:49.8±0.6, 8°.05N±0°.09×137°.6E±0°.1, h30km, n36, σ1§00/29, mb4.3/14, MS2.8/3, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.99**	**52**	Pn	**Pn**	**13 38 57.8**	**+0.1**
	2.2nm,0.3s,baz=11,slow=19,SNR=2.5						
GUMO				LR	LR	13 42 18.9	
	comp=Z,53nm,18.3s,baz=248,slow=37						
	41nm,0.8s						
GUMO	**Guam**	**8.99**	**52**	Pn	**Pn**	**13 38 59.1**	**+1.4**
FAKI	**Fak Fak**	**12.15**	**206**	Pn	**Pn**	**13 39 42.6**	**+1.5**
KNRA	**Kununurra**	**25.16**	**200**	P	**P**	**13 42 11.7**	**-1.0**
KNRA				IAmb	IAmb	13 42 17.7	
	comp=Z,8.0nm,0.9s						
WB2	**Warramunga Arr**	**28.00**	**187**	P	**P**	**13 42 37.0**	**-1.4**
WRA	**Warramunga Arr**	**28.01**	**187**	P	**P**	**13 42 37.0**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=5.6,slow=8.5,SNR=1.8						
	comp=Z,0.4nm,0.8s						
CTA	**Charters Tower**	**29.22**	**163**	LR	LR	13 52 48.2	
	comp=Z,25nm,19.7s,baz=78,slow=33						
H11S3	**WAKE ISLAND Hy**	**30.08**	**67**	T	T	14 14 42.8	
	baz=253,slow=75,SNR=116						
H11S1	**WAKE ISLAND Hy**	**30.09**	**67**	T	T	14 14 45.2	
	baz=253,slow=75,SNR=97						
H11S2	**WAKE ISLAND Hy**	**30.09**	**67**	T	T	14 14 44.5	
	baz=253,slow=75,SNR=103						
KSRS	**Korea Array**	**30.57**	**345**	LR	LR	13 53 23.1	
	comp=Z,16nm,21.7s,baz=60,slow=33						
H11N1	**WAKE ISLAND Hy**	**30.62**	**65**	T	T	14 15 35.9	
	baz=258,slow=74,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**30.63**	**65**	T	T	14 15 39.2	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**30.64**	**65**	T	T	14 15 35.8	
	baz=258,slow=74,SNR=7.1						
ASAR	**Alice Springs**	**31.73**	**187**	P	**P**	**13 43 11.6**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=18,slow=12,SNR=9.7						
ASAR				PcP	**PcP**	**13 46 03.1**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=4.9,slow=2.9,SNR=5.1						
	comp=Z,0.2nm,0.6s						
DZM	**Mont Dzumac**	**41.16**	**137**	P	**P**	**13 44 29.8**	**-2.1**
DZM				IAmb	IAmb	13 44 47.2	
	comp=Z,16nm,1.3s						
SONM	**Songino Array**	**47.68**	**332**	P	**P**	**13 45 23.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=152,slow=11,SNR=5.4						
SONM				LR	LR	14 04 36.5	
	comp=Z,17nm,21.0s,baz=218,slow=35						
	comp=Z,1.1nm,0.8s						
MK31	**Makanchi Array**	**60.79**	**320**	P	**P**	**13 46 58.4**	**-0.8**
MKAR	**Makanchi Array**	**60.79**	**320**	P	**P**	**13 46 58.6**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=99,slow=8.5,SNR=8.6						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**60.79**	**320**	P	**P**	**13 46 58.2**	**-1.0**
KURK	**Kurchatov**	**64.44**	**323**	P	**P**	**13 47 22.0**	**-1.3**
KURK				IAmb	IAmb	13 47 23.1	
	comp=Z,3.6nm,0.6s						
BRVK	**Borovoye**	**70.06**	**324**	P	**P**	**13 47 58.0**	**-1.0**
BRVK				IAmb	IAmb	13 48 08.7	
	comp=Z,2.6nm,0.8s						
M20K	**Styx River**	**73.21**	**28**	P	**P**	**13 48 19.1**	**+1.2**
CNPM	**China Poot**	**73.56**	**30**	P	**P**	**13 48 20.2**	**+0.2**
BRLK	**Bradley Lake**	**73.79**	**30**	P	**P**	**13 48 21.2**	**0.0**
PWL	**Port Wells**	**75.25**	**29**	P	**P**	**13 48 29.9**	**+0.2**
KNK	**Knik Glacier**	**75.29**	**29**	P	**P**	**13 48 30.1**	**+0.1**
KNK				IAmb	IAmb	13 48 39.8	
	comp=Z,11nm,1.4s						
H23K	**Yukon River**	**75.69**	**24**	P	**P**	**13 48 32.9**	**+0.8**
H23K				IAmb	IAmb	13 49 09.7	
	comp=Z,7.9nm,1.4s						
ABKAR	**Akbulak array**	**75.91**	**319**	P	**P**	**13 48 33.0**	**-0.6**
TOLK	**Toolik Lake Re**	**76.30**	**21**	P	**P**	**13 48 36.9**	**+1.3**
TOLK				IAmb	IAmb	13 48 48.7	
	comp=Z,9.9nm,1.4s						
ILAR	**Eielson Array**	**76.58**	**25**	P	**P**	**13 48 36.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=246,slow=5.9,SNR=4.8						
	comp=Z,0.4nm,0.6s						
BMAR	**Burnt Mountain**	**77.92**	**23**	P	**P**	**13 48 46.0**	**+1.2**
M27K	**Edge Creek, AK**	**78.50**	**28**	P	**P**	**13 48 48.9**	**+0.7**
HYT	**Haines Junctio**	**80.52**	**30**	P	**P**	**13 48 59.5**	**+0.3**
HYT				IAmb	IAmb	13 49 00.9	
	comp=Z,7.8nm,1.2s						
VNDA	**Vanda**	**86.52**	**175**	P	**P**	**13 49 30.2**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=318,slow=6.1,SNR=2.0						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**86.52**	**175**	P	**P**	**13 49 30.4**	**+1.0**

RSNC 25 13:37:59.5±1.4, 3°.86N×71°.40W, h2km±7km, ML3.4, Mw3.5, 1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.81**	**295**	*e*P	Pg	13 38 13.6	-1.5
PTGC				*e*S	Sg	13 38 25.2	-0.4
PTGC				*i*		13 38 31.4	
	comp=Z,573nm,0.2s						
GUVC	**San Jose del G**	**1.79**	**223**	*e*P	Pn	13 38 29.6	-1.9
GUVC				*e*S	Sn	13 38 53.8	-1.1
GUVC				*i*		13 38 58.6	
	comp=Z,718nm,0.2s						
VILC	**Villavicencio,**	**2.31**	**276**	*e*P	Pn	13 38 39.0	+0.3
VILC				*e*S	Sn	13 39 08.5	+0.7
CHIC	**Chingaza**	**2.45**	**288**	*e*P	Pn	13 38 39.7	-1.3
CHIC				*e*S	Sn	13 39 10.8	-1.0
CHIC				*i*		13 39 21.4	
	comp=Z,135nm,0.4s						
TAMC	**Tame, Arauca**	**2.59**	**351**	*e*P	Pn	13 38 41.4	-1.1
TAMC				*e*S	Sn	13 39 14.0	-0.6
TAMC				*i*		13 39 27.0	
	comp=Z,157nm,0.3s						
RUSC	**La Rusia**	**2.63**	**320**	*e*P	Pn	13 38 42.8	-0.7
RUSC				*e*S	Sn	13 39 16.5	+0.4
RUSC				*i*		13 39 30.8	
	comp=Z,117nm,0.3s						
ROSC	**El Rosal**	**3.08**	**289**	*e*P	Pn	13 38 47.3	-2.1
ROSC				*e*S	Sn	13 39 28.4	+1.4
ROSC				*i*		13 39 46.5	
	comp=Z,84nm,0.5s						
SPBC	**San Pablo de B**	**3.21**	**304**	*e*P	Pb	13 38 56.6	-0.7
SPBC				*e*S	Sb	13 39 36.8	-0.1
SPBC				*i*		13 39 46.7	
	comp=Z,100nm,0.3s						
BARC	**Barichara**	**3.25**	**327**	*e*P	Pb	13 38 57.7	-0.4
BARC				*e*S	Sn	13 39 28.7	-2.3
BARC				*i*		13 39 51.3	
	comp=Z,153nm,0.4s						
PRAC	**Prado**	**3.49**	**268**	*e*P	Pn	13 38 55.1	+0.2
PAMC	**Pamplona, Colo**	**3.69**	**339**	*e*P	Pn	13 38 56.9	-1.1
ORTC	**Ortega, Tolima**	**3.84**	**271**	*e*P	Pn	13 38 58.8	-1.0
NORC	**Norcasia**	**3.85**	**296**	*e*P	Pn	13 38 59.6	-0.3
NORC				*i*		13 40 00.6	
	comp=Z,30nm,0.5s						
BRRC	**Barranca, Sant**	**3.96**	**325**	*e*P	Pn	13 39 00.1	-1.3
ANIL	**Santa Ana**	**4.05**	**279**	*e*P	Pn	13 39 01.8	-0.9
ANIL				*i*		13 40 22.1	
	comp=Z,136nm,0.4s						
PTBC	**PUERTO BERRIO,**	**4.05**	**311**	*e*P	Pn	13 39 00.0	-2.5
GUY2C	**Guyana, Caldas**	**4.18**	**289**	*e*P	Pn	13 39 04.3	-0.5
BETC	**Betania**	**4.21**	**254**	*e*P	Pn	13 39 04.6	-0.2
FLOC	**Florencia**	**4.82**	**242**	*e*P	Pn	13 39 10.4	-2.7
FLOC				*i*		13 40 32.1	
	comp=Z,67nm,0.4s						
YOTC	**Yotoco, Valle**	**4.94**	**272**	*e*P	Pn	13 39 13.4	-1.5
PTLC	**Puerto Leguiza**	**5.00**	**223**	*e*P	Pb	13 39 25.1	-2.7
PTLC				*e*S	Sg	13 40 39.2	-1.0
GCUF	**Volcan Galeras**	**6.49**	**246**	*e*S	Sb	13 41 18.7	+6.8
SJCC	**San Jacinto, C**	**7.08**	**328**	*e*P	Pn	13 39 39.1	-5.2
CRJC	**Cerrejon, Guaj**	**7.26**	**348**	*e*S	Sn	13 41 02.3	-7.8

*IDC **25** 13:41:30.8±0.7, 0°.60N×28°.45W, h0km, mb4.2/14, mbtmp4.2/15, ML4.3/1, MS3.5/28, Error ellipse: s-maj=36.5km s-min=13.4km az=143.0*
*NEIC **25** 13:41:32.5±1.1, 0°.9N±0°.1×28°.8W±0°.1, h10km±1km, mb4.6/23, Error ellipse: s-maj=27.1km s-min=13.0km az=143.0*
ISC 25 13:41:33.2±0.5, 1°.0N±0°.1×28°.81W±0°.10, h16km, n88, σ1§48/59, mb4.5/22, MS3.5/27, Central Mid-Atlantic Ridge

| Code | Station Name | Δ

NAN01 **Guarapari, ES** 21.81 210 *eP* P 13 46 29.8 +4.9
JANB **Januaria** 22.14 223 *eP* P 13 46 31.4 +2.8
PRPB **Parauapebas** 22.15 251 *eP* P 13 46 27.7 -1.0
MCPB **Macapa, AP** 23.28 267 *eP* P 13 46 40.1 -0.4
MDP **Montagnes des** 24.13 280 LR LR 13 54 19.9
comp=Z,86nm,21.2s,baz=316,slow=31
DBIC **Dimbokro** 24.54 76 P P 13 46 51.1 -1.4
10nm,0.8s,baz=246,slow=12,SNR=13
DBIC LR LR 13 54 46.4
comp=Z,218nm,18.5s,baz=240,slow=33
10nm,0.8s
DBIC **Dimbokro** 24.54 76 P P 13 46 51.8 -0.7
DBIC IAmb IAmb 13 46 53.6
comp=Z,14nm,0.8s
BDFB **Brasilia** 25.18 228 P P 13 46 58.3 -0.1
comp=Z,6.7nm,0.8s,baz=42,slow=7.6,SNR=7.8
comp=Z,6.7nm,0.8s
BDFB **Brasilia** 25.18 228 P P 13 46 56.6 -1.8
MALB **Monte Alegre** 25.61 264 *eP* P 13 47 02.0 -0.2
SNDB **Serra Nova Dou** 25.80 239 *eP* P 13 47 04.8 +1.0
VAS01 **Vassouras-RJ** 27.21 211 *eP* P 13 47 20.8 +4.3
ITTB **Itaituba** 27.43 259 *eP* P 13 47 18.3 -0.4
NPGB **Novo Progresso** 27.67 253 *eP* P 13 47 21.1 +0.2
PDRB **Porto dos Gac** 30.45 245 *eP* P 13 47 45.8 +0.3
PET01 **Itanhaem-SP** 30.89 214 *eP* P 13 47 53.9 +4.6
BOAV **Boa Vista** 31.72 273 *eP* P 13 47 56.4 -0.3
MACA **Manacapuru-AM** 32.13 262 *eP* P 13 47 58.1 -2.2
TOA0 **Torodi Ar. Sit** 32.53 67 P P 13 48 02.7 -1.1
TOA0 IAmb IAmb 13 48 04.5
comp=Z,5.2nm,0.9s
TORD **Torodi Ar. Bea** 32.53 67 P P 13 48 02.6 -1.1
comp=Z,4.5nm,1.0s,baz=254,slow=9.5,SNR=14
comp=Z,4.5nm,1.0s
SIV **San Ignacio** 36.07 241 P P 13 48 35.5 +1.0
comp=Z,1.2nm,0.5s,baz=79,slow=12,SNR=4.6
SIV LR LR 14 02 57.0
comp=Z,173nm,18.6s,baz=104,slow=36
comp=Z,1.2nm,0.5s
CPUP **Villa Florida** 38.69 223 LR LR 14 04 41.1
comp=Z,243nm,18.3s,baz=46,slow=36
ETMB **Extrema** 38.76 253 *eP* P 13 48 58.4 +1.1
MDT **Midelt** 38.97 33 P P 13 49 01.4 +2.4
comp=Z,1.9nm,0.8s,baz=201,slow=10,SNR=3.8
MDT LR LR 14 04 51.9
comp=Z,82nm,18.2s,baz=275,slow=36
comp=Z,1.9nm,0.8s
SJG **San Juan** 40.40 297 LR LR 14 04 03.3
comp=Z,48nm,20.9s,baz=56,slow=33
LPAZ **La Paz** 42.45 244 P P 13 49 29.6 +1.1
comp=Z,7.0nm,0.8s,baz=51,slow=3.6,SNR=16
LPAZ LR LR 14 06 53.7
comp=Z,136nm,18.9s,baz=55,slow=36
comp=Z,7.0nm,0.8s
LPAZ **La Paz** 42.45 244 P P 13 49 27.5 -1.0
LPAZ IAmb IAmb 13 49 30.5
comp=Z,8.9nm,0.9s
LPAZ **La Paz** 42.45 244 *eP* P 13 49 28.7 +0.2
CZSB **Cruzeiro do Su** 44.63 258 *eP* P 13 49 45.8 +0.4
ESDC **Sonseca Array** 44.64 27 P P 13 49 46.7 +1.5
comp=Z,1.3nm,0.9s,baz=224,slow=8.2,SNR=6.2
comp=Z,1.3nm,0.9s
LVC **Limon Verde** 45.58 236 LR LR 14 09 59.9
comp=Z,28nm,18.3s,baz=24,slow=37
ROSC **El Rosal** 45.59 276 LR LR 14 08 22.7
comp=Z,152nm,19.0s,baz=81,slow=35
PB06 **IPOC Station P** 46.17 237 P P 13 49 56.8 -0.9
PB04 **IPOC Station P** 46.50 237 P P 13 49 59.0 -1.3
GO02 **Mina Guanaco** 47.27 234 P P 13 50 06.7 +0.2
NNA **Nana** 49.41 253 LR LR 14 10 32.8
comp=Z,42nm,18.9s,baz=52,slow=35
KEST **Kesra** 49.46 41 P P 13 50 23.8 +0.8
comp=Z,2.7nm,0.5s,baz=138,slow=3.0,SNR=3.5
KEST LR LR 14 11 14.3
comp=Z,59nm,18.7s,baz=270,slow=36
comp=Z,2.7nm,0.5s
KEST **Kesra** 49.46 41 P P 13 50 23.3 +0.4
KEST IAmb IAmb 13 50 25.1
comp=Z,9.6nm,1.2s
TSUM **Tsumeb** 49.77 116 LR LR 14 06 36.9
comp=Z,32nm,21.0s,baz=328,slow=31
BOSC **San Juan Bosco** 49.84 265 P P 13 50 25.1 -1.2
ATAH **Atahualpa** 50.12 260 LR LR 14 11 47.9
comp=Z,117nm,19.9s,baz=57,slow=36
COHC **Cochancay** 50.55 266 P P 13 50 31.2 -0.3
OSSC **Osservatorio P** 55.33 35 P P 13 51 05.5 -0.9
OSSC IAmb IAmb 13 51 05.8
comp=Z,6.1nm,0.7s
GO06 **Curarrehue** 56.16 219 P P 13 51 12.0 -0.5
GO06 IAmb IAmb 13 51 13.7
comp=Z,5.5nm,0.8s
PLCA **Paso Flores** 56.26 217 LR LR 14 14 36.3
comp=Z,28nm,18.8s,baz=54,slow=35
SUR **Sutherland** 57.41 130 LR LR 14 10 25.0
comp=Z,33nm,21.9s,baz=316,slow=30
CLUD **Cludinico** 58.06 33 P P 13 51 25.8 0.0
CLUD IAmb IAmb 13 51 32.2
comp=Z,8.7nm,1.1s
LSZ **Lusaka** 58.61 109 LR LR 14 12 59.2
comp=Z,28nm,19.2s,baz=146,slow=32
LBTB **Lobatse** 58.64 120 LR LR 14 12 43.8
comp=Z,35nm,18.9s,baz=309,slow=32
BOSA **Boshof** 59.51 124 LR LR 14 11 37.3
comp=Z,43nm,21.9s,baz=4.5,slow=31
GEC2 **GERESS Array S** 59.99 31 P P 13 51 39.0 -0.2
GEC2 IAmb IAmb 13 51 40.6
comp=Z,4.8nm,0.9s
GERES **GERESS Array B** 59.99 31 P P 13 51 39.7 +0.6
comp=Z,1.5nm,0.6s,baz=230,slow=7.6,SNR=3.9
comp=Z,1.5nm,0.6s
GERES **GERESS Array B** 59.99 31 P P 13 51 38.9 -0.2
DIVS **Divibare** 60.87 38 P P 13 51 45.1 -0.1
DIVS IAmb IAmb 13 51 47.5
comp=Z,6.0nm,1.1s
TKL **Tuckaleechee C** 61.46 311 LR LR 14 13 00.9
comp=Z,37nm,19.4s,baz=110,slow=30
MORC **Moravsky Berou** 62.55 32 P P 13 51 56.6 +0.2
MORC IAmb IAmb 13 51 57.9
comp=Z,4.5nm,1.1s
PSZ **Piszkesteto** 62.81 35 P P 13 51 58.4 +0.2
MLR **Muntele Rosu** 65.26 39 LR LR 14 20 00.9
comp=Z,17nm,21.4s,baz=213,slow=35
MLR **Muntele Rosu** 65.26 39 P P 13 52 14.8 +0.3
MLR IAmb IAmb 13 52 16.2
comp=Z,7.3nm,1.1s
NOA **NORSAR Array B** 67.16 20 P P 13 52 27.4 +1.1
comp=Z,1.2nm,0.8s,baz=223,slow=6.5,SNR=3.9
NOA LR LR 14 16 55.3
comp=Z,12nm,21.8s,baz=235,slow=32
comp=Z,1.2nm,0.8s
BRTR **Keskin Array B** 68.41 47 P P 13 52 34.4 -0.3
comp=Z,0.9nm,0.7s,baz=263,slow=5.9,SNR=4.0
comp=Z,0.9nm,0.7s
AKASG **Malin Array Be** 69.50 35 P P 13 52 41.6 +0.6
comp=Z,4.1nm,0.8s,baz=244,slow=6.1,SNR=14
comp=Z,4.1nm,0.8s
FINES **FINESS Array B** 73.03 24 P P 13 53 03.4 +1.3
comp=Z,4.5nm,0.8s,baz=183,slow=3.8,SNR=6.4
comp=Z,4.5nm,0.8s
FINES **FINESS Array B** 73.03 24 P P 13 53 02.7 +0.6
RAYN **Ar Rayn** 75.22 66 P P 13 53 14.5 -1.3
TXAR **Lajitas Array** 76.30 300 P P 13 53 26.2 +4.2
comp=Z,0.4nm,0.5s,baz=123,slow=9.1,SNR=7.0
TXAR LR LR 14 30 21.9
comp=Z,8.6nm,18.7s,baz=26,slow=38
comp=Z,0.4nm,0.5s
ANMO **Albuquerque** 79.29 305 LR LR 14 25 36.3
comp=Z,33nm,18.3s,baz=58,slow=33
RPN **Rapa Nui** 82.03 243 LR LR 14 27 00.4
comp=Z,23nm,18.7s,baz=338,slow=33
PDAR **Pinedale Array** 82.50 313 LR LR 14 27 21.8
comp=Z,21nm,19.6s,baz=90,slow=33
HWUT **Hardware Ranch** 83.89 312 P P 13 54 01.7 -1.1
HWUT IAmb IAmb 13 54 41.3
comp=Z,6.0nm,1.4s
WSAR **Wadi Sarin** 87.25 67 LR LR 14 34 49.1
comp=Z,37nm,18.3s,baz=331,slow=37
PFO **Pinyon Flats O** 87.47 303 LR LR 14 30 42.6
comp=Z,26nm,21.7s,baz=16,slow=34
ABKAR **Akbulak array** 88.42 41 P P 13 54 24.6 -0.1
ASAR **Alice Springs** 151.94 145 PKPbc PKPbc 14 01 27.2 -1.3
comp=Z,0.8nm,0.8s,baz=174,slow=1.8,SNR=7.0

*IDC **25** 13:45:46.6±5.2, 33°.39S×179°.85E, h238km±50km, mb3.8/3, mbtmp4.4/5, Error ellipse: s-maj=51.9km s-min=32.2km az=121.0*

*WEL **25** 13:45:50.0±0.6, 33°.5±6°.×18°.0W±1°.3, h235km±11km, M4.2/17, mB4.5/6, ML5.1/11, MLv4.7/17, Mw(mB)3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*

ISC 25 13:45:48.1±0.8, **33°.24S**±0°.04×**179°.7E**±0°.1, **h250**km, **n59**, σ**2°72/81**, **mb3.9/3**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.45**	**194**	S	**S**	**13 47 53.8**	**+1.6**
GLKZ	**Green Lake**	**4.47**	**28**	P	**Pn**	**13 46 56.4**	**-1.1**
GLKZ				S	**S**	**13 47 46.2**	**-6.5**
WMGZ	**Waiomatatini S**	**4.68**	**192**	P	**Pn**	**13 47 03.0**	**+3.2**
WMGZ				S	**S**	**13 47 59.7**	**+2.6**
HAZ	**Te Kaha**	**4.76**	**198**	P	Pn	13 47 05.0	+4.2
HAZ				S	**S**	**13 47 58.4**	**-0.4**
KUZ	**Kuaotunu**	**4.76**	**222**	P	**Pn**	**13 47 05.7**	**+4.8**
PKGZ	**Pakihiroa**	**4.81**	**195**	P	**Pn**	**13 47 04.3**	**+2.8**
PKGZ				S	**S**	**13 48 01.7**	**+1.5**
PUZ	**Puketiti**	**4.96**	**193**	P	Pn	13 47 08.3	+5.1
PUZ				S	**S**	**13 48 03.0**	**-0.2**
RUGZ	**Raukumara Rang**	**4.99**	**198**	P	**Pn**	**13 47 06.3**	**+2.6**
RUGZ				S	**S**	**13 48 04.3**	**+0.3**
TWGZ	**Tauwhareparae**	**5.11**	**195**	P	**Pn**	**13 47 09.0**	**+3.8**
TWGZ				S	**S**	**13 48 08.3**	**+1.5**
MBAZ	**Motutapu North**	**5.26**	**227**	P	Pn	13 47 15.5	+8.6
MKAZ	**Moumakai**	**5.33**	**222**	P	**Pn**	**13 47 12.2**	**+4.4**
CNGZ	**Carnagh Statio**	**5.37**	**192**	P	**Pn**	**13 47 08.3**	**+0.1**
CNGZ				S	**S**	**13 48 14.2**	**+2.0**
ETAZ	**East Tamaki Re**	**5.37**	**225**	P	Pn	13 47 14.2	+6.0
MWZ	**Matawai**	**5.37**	**198**	P	**Pn**	**13 47 10.3**	**+1.9**
MWZ				S	**S**	**13 48 12.2**	**-0.2**
TKGZ	**Te Karaka**	**5.39**	**195**	P	**Pn**	**13 47 09.0**	**+0.4**
TKGZ				S	**S**	**13 48 13.5**	**+0.7**
URZ	**Urewera**	**5.42**	**202**	P	**Pn**	**13 47 12.1**	**+3.2**
	12nm,0.3s,baz=343,slow=4.0,SNR=40						
URZ				S	**S**	**13 48 12.7**	**-0.7**
	38nm,0.5s,baz=151,slow=23,SNR=16						
URZ	**Urewera**	**5.42**	**202**	P	**Pn**	**13 47 12.2**	**+3.4**
URZ				S	**S**	**13 48 12.2**	**-1.3**
MUGZ	**Murupara**	**5.73**	**203**	P	**Pn**	**13 47 16.9**	**+4.1**
MUGZ				S	**S**	**13 48 20.1**	**-0.3**
TLZ	**Tolley Road**	**6.08**	**212**	P	Pn	13 47 23.0	+5.8
RATZ	**Rangitukua**	**6.44**	**208**	P	**Pn**	**13 47 25.5**	**+3.9**
HIZ	**Hauiti**	**6.55**	**215**	P	Pn	13 47 28.2	+5.3
TMVZ	**Te Maari**	**6.68**	**207**	P	**Pn**	**13 47 27.8**	**+3.1**
TMVZ				S	**S**	**13 48 44.3**	**+2.1**
ETVZ	**East Tongariro**	**6.70**	**207**	P	**Pn**	**13 47 27.8**	**+2.9**
ETVZ				S	**S**	**13 48 44.0**	**+1.5**
MOVZ	**Moawhango**	**6.92**	**206**	P	**Pn**	**13 47 29.1**	**+1.5**
MOVZ				S	**S**	**13 48 45.6**	**-1.9**
PNHZ	**Pukenui**	**7.22**	**202**	P	**Pn**	**13 47 32.3**	**+0.9**
PNHZ				S	**S**	**13 48 49.8**	**-4.7**
WPHZ	**Waipukurau**	**7.29**	**200**	P	**Pn**	**13 47 33.7**	**+1.4**
WPHZ				S	**S**	**13 48 52.8**	**-3.2**
TSZ	**Takapari Road**	**7.43**	**203**	P	**Pn**	**13 47 34.7**	**+0.7**
TSZ				S	**S**	**13 48 53.7**	**-5.6**
DVHZ	**Dannevirke**	**7.58**	**201**	P	**Pn**	**13 47 37.1**	**+1.1**
DVHZ				S	**S**	**13 48 58.0**	**-4.8**
ANWZ	**Angora Road**	**7.64**	**199**	P	**Pn**	**13 47 38.6**	**+1.8**
ANWZ				S	**S**	**13 49 01.9**	**-2.2**
POWZ	**Post Office Ro**	**7.79**	**203**	P	**Pn**	**13 47 39.5**	**+0.9**
POWZ				S	**S**	**13 49 03.5**	**-4.0**
PRWZ	**Pori Road**	**7.88**	**201**	P	**Pn**	**13 47 40.8**	**+1.1**
PRWZ				S	**S**	**13 49 04.5**	**-5.1**
BFZ	**Birch Farm**	**7.91**	**199**	P	**Pn**	**13 47 41.1**	**+1.0**
BFZ				S	**S**	**13 49 05.5**	**-4.9**
MRZ	**Mangatainoka R**	**8.10**	**203**	P	**Pn**	**13 47 41.8**	**-0.6**
MRZ				S	**S**	**13 49 08.7**	**-5.9**
TIWZ	**Tintock**	**8.11**	**201**	P	**Pn**	**13 47 42.9**	**+0.3**
TIWZ				S	**S**	**13 49 10.1**	**-4.8**
HOWZ	**Holdsworth Sta**	**8.33**	**202**	P	**Pn**	**13 47 45.3**	**-0.1**
HOWZ				S	**S**	**13 49 14.0**	**-6.1**
THZ	**Tophouse**	**10.05**	**210**	P	**Pn**	**13 48 06.3**	**-1.0**
THZ				S	**S**	**13 49 54.2**	**-6.1**
KHZ	**Kahutara**	**10.36**	**206**	P	**Pn**	**13 48 09.1**	**-1.8**
KHZ				S	S	13 49 58.3	-8.8
GVZ	**Greta Valley S**	**11.02**	**206**	P	**Pn**	**13 48 18.5**	**-0.8**
GVZ				S	S	13 50 12.1	-11
LTZ	**Lake Taylor**	**11.16**	**209**	P	**Pn**	**13 48 19.8**	**-1.3**
AMCZ	**Amberley**	**11.35**	**207**	P	**Pn**	**13 48 22.9**	**-0.4**
INZ	**Inchbonnie**	**11.47**	**212**	P	**Pn**	**13 48 22.8**	**-2.1**
OKCZ	**Okains Bay**	**11.67**	**204**	P	**Pn**	**13 48 27.2**	**-0.2**
MQZ	**McQueen's Vall**	**11.80**	**206**	P	**Pn**	**13 48 27.0**	**-2.0**
AKCZ	**Akaroa Harbour**	**11.85**	**204**	P	**Pn**	**13 48 29.5**	**-0.1**
WVZ	**Waitaha Valley**	**12.06**	**213**	P	**Pn**	**13 48 30.9**	**-1.4**
RPZ	**Rata Peaks**	**12.44**	**210**	P	**Pn**	**13 48 34.9**	**-2.0**
	3.5nm,0.3s,baz=36,slow=1.0,SNR=9.7						
RPZ				S	S	13 50 37.3	-18
	6.1nm,0.8s,baz=229,slow=6.8,SNR=6.5						
RPZ	**Rata Peaks**	**12.44**	**210**	P	**Pn**	**13 48 35.1**	**-1.8**
GCSZ	**Gaunt Creek Bo**	**12.44**	**213**	P	**Pn**	**13 48 35.2**	**-1.8**
ARCZ	**Arundel**	**12.57**	**209**	P	**Pn**	**13 48 37.1**	**-1.5**
FOZ	**Fox Glacier**	**12.84**	**214**	P	**Pn**	**13 48 40.2**	**-1.7**
TMZ	**Timaru**	**13.00**	**209**	P	**Pn**	**13 48 42.6**	**-1.3**
ODZ	**Otahua Downs**	**13.70**	**208**	P	**Pn**	**13 48 52.1**	**-0.2**
JCZ	**Jackson Bay**	**13.74**	**215**	P	**Pn**	**13 48 51.8**	**-1.2**
MSVF	**Nonsavu**	**15.51**	**354**	P	**P**	**13 49 14.8**	**+1.2**
	7.4nm,0.5s,baz=209,slow=18,SNR=8.0						
WHZ	**Wether Hill Ro**	**15.51**	**212**	P	**P**	**13 49 13.7**	**+0.4**
CTA	**Charters Tower**	**32.45**	**285**	P	**P**	**13 51 57.1**	**+1.9**
	3.6nm,0.6s,baz=115,slow=10,SNR=7.4						
	3.6nm,0.6s						
ASAR	**Alice Springs**	**41.07**	**271**	P	**P**	**13 53 08.7**	**+0.9**
	2.6nm,0.5s,baz=110,slow=7.6,SNR=64						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**42.33**	**277**	P	**P**	**13 53 18.3**	**+0.5**
	2.2nm,0.5s,baz=115,slow=7.8,SNR=95						
	2.2nm,0.5s						
FINES	**FINESS Array B**	**147.05**	**337**	PKPbc	**PKPbc**	**14 05 00.3**	**-0.2**
	1.9nm,0.8s,baz=40,slow=4.5,SNR=1.6						

*DDA **25** 13:52:48.9±0.0, 39°.47N×28°.03E, h13km±2km, MW3.7*
*ISK **25** 13:52:49.1, 39°.47N×28°.01E, h5km, ML3.4/60*
*THE **25** 13:52:51.5, 39°.48N×28°.06E, h18km±2km, ML3.2/5, Error ellipse: s-maj=2.1km s-min=0.6km az=114.0*

ISC 25 13:52:49.3±1.0, **39°.45N**±0°.02×**28°.02E**±0°.02, **h14**km±9km, **n108**, σ**1°18/132**, **5C-5D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.49**	**72**	PG	**Pg**	**13 52 58.6**	**-0.5**
DST				SG	**Sg**	**13 53 05.7**	**0.0**
AKS	**Akhisar**	**0.59**	**195**	PG	**Pg**	**13 53 00.9**	**-0.1**
GONE	**Gonen-Balikesi**	**0.65**	**337**	PG	**Pg**	**13 53 01.9**	**-0.1**
GONE				SG	**Sg**	**13 53 10.5**	**-0.1**
BUHA	**Balikesir, Bur**	**0.73**	**274**	P	**Pb**	**13 53 03.4**	**-0.5**
BUHA				S	**Sn**	**13 53 15.9**	**-0.3**
BUHA				*i* AML	AML	13 53 18.0
	comp=N,1μm,0.5s					
BUHA				*i* AML	AML	13 53 18.0
	comp=E,1μm,0.5s					
GOMA	**Golmarmara-Man**	**0.75**	**186**	PG	**Pg**	**13 53 04.4**	**+0.6**
SMAA	**Simav-Kutahya**	**0.83**	**115**	PG	**Pn**	**13 53 05.9**	**-0.8**
ZEDA	**zmir-Bergama**	**0.88**	**237**	P	**Pn**	**13 53 06.8**	**-0.5**
ZEDA				S	**Sn**	**13 53 19.6**	**-0.1**
ZEDA				*i* AML	AML	13 53 21.0
	comp=E,848nm,0.5s					
ZEDA				*i* AML	AML	13 53 23.0
	comp=N,838nm,0.4s					
KNL	**Balıkesir**	**0.90**	**335**	P	**Pb**	**13 53 06.0**	**-0.8**
KNL				S	**Sg**	**13 53 18.6**	**-0.1**
KNL				*i* AML	AML	13 53 22.0
	comp=E,1μm,0.4s					
KNL				*i* AML	AML	13 53 23.0
	comp=N,951nm,0.3s					
EDC	**Edincik**	**0.90**	**353**	PG	**Pb**	**13 53 06.1**	**-0.7**
ORLT	**Orhaneli**	**0.90**	**48**	PG	**Pg**	**13 53 06.7**	**-0.1**
DKL	**Dikili**	**0.94**	**247**	PG	**Pn**	**13 53 08.4**	**+0.3**
USAK	**Uak-Merkez**	**1.07**	**133**	P	**Pg**	**13 53 10.2**	**+0.2**
USAK				S	**Sg**	**13 53 24.4**	**+0.4**
USAK				*i* AML	AML	13 53 26.0
	comp=E,298nm,0.4s					
USAK				*i* AML	AML	13 53 28.0
	comp=N,332nm,0.5s					
ULDT	**Uludag**	**1.11**	**51**	P	**Pn**	**13 53 10.1**	**-0.6**
ULDT				S	**Sg**	**13 53 26.6**	**+1.5**
ULDT				*i* AML	AML	13 53 31.0
	comp=N,590nm,0.3s					
ULDT				*i* AML	AML	13 53 31.0
	comp=E,570nm,0.4s					
TVSB	**Tavsanli**	**1.12**	**90**	PN	**Pg**	**13 53 10.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.14**	**36**	PN	**Pg**	**13 53 11.5**	**+0.3**
GEDZ	**Gediz**	**1.16**	**110**	PN	**Pg**	**13 53 12.1**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**1.17**	**285**	P	**Pn**	**13 53 10.9**	**-0.4**
BAYC				S	**Sg**	**13 53 27.9**	**+0.7**
BAYC				*i* AML	AML	13 53 29.0
	comp=N,511nm,0.4s					
BAYC				*i* AML	AML	13 53 29.0
	comp=E,790nm,0.3s					
GDZ	**Gediz**	**1.19**	**107**	P	**Pn**	**13 53 10.8**	**-1.0**
GDZ				S	**Sg**	**13 53 27.7**	**-0.2**
GDZ				*i* AML	AML	13 53 28.0
	comp=E,536nm,0.2s					
GDZ				*i* AML	AML	13 53 30.0
	comp=N,621nm,0.7s					
MRMT	**Marmara Adasi**	**1.20**	**344**	PN	**Pg**	**13 53 12.3**	**-0.1**
IGD	**Bursa**	**1.22**	**48**	P	**Pb**	**13 53 12.1**	**-0.1**
IGD				S	**Sg**	**13 53 29.5**	**+0.7**
IGD				*i* AML	AML	13 53 32.0
	comp=N,349nm,0.3s					
IGD				*i* AML	AML	13 53 35.0
	comp=E,270nm,0.4s					
FOCM	**Foa**	**1.24**	**234**	PN	**Pg**	**13 53 13.2**	**0.0**
ARMT	**Armutlu**	**1.29**	**30**	PN	**Pg**	**13 53 14.2**	**0.0**
BLCB	**Balcova**	**1.31**	**216**	PN	**Pg**	**13 53 14.4**	**-0.1**
BLCB	**Balcova**	**1.31**	**216**	P	**Pg**	**13 53 14.2**	**-0.3**
BLCB				S	**Sg**	**13 53 31.6**	**+0.1**
EZN	**Ezine**	**1.36**	**287**	PN	**Pb**	**13 53 14.6**	**+0.1**
EZN	**Ezine**	**1.36**	**287**	P	**Pb**	**13 53 14.6**	**+0.1**
EZN				S	**Sg**	**13 53 32.7**	**-0.4**
	478nm,0.5s						
PRK	**Paraskevi**	**1.37**	**262**	P	**Pg**	**13 53 15.1**	**-0.5**
PRK				S	**Sg**	**13 53 33.7**	**+0.3**
	3μm,0.7s						
RKY	**Sarkoy-Tekirda**	**1.39**	**333**	PN	**Pg**	**13 53 15.4**	**-0.7**
KOCA	**Canakkale, Ayv**	**1.45**	**273**	P	**Pb**	**13 53 16.2**	**0.0**
KOCA				S	**Sg**	**13 53 37.4**	**+1.2**
KOCA				*i* AML	AML	13 53 38.0
	comp=N,886nm,0.3s					
KOCA				*i* AML	AML	13 53 39.0
	comp=E,817nm,0.3s					
GPNR	**Gulpinar-Canak**	**1.46**	**271**	PN	**Pb**	**13 53 15.9**	**-0.3**
ANDZ	**Kutahya, Merke**	**1.46**	**87**	P	**Pb**	**13 53 16.6**	**+0.3**
ANDZ				S	**Sg**	**13 53 36.9**	**+0.5**
ANDZ				*i* AML	AML	13 53 39.0
	comp=N,406nm,0.3s					
ANDZ				*i* AML	AML	13 53 39.0
	comp=E,317nm,0.6s					
AYDB	**Zeytinkoy-Aydi**	**1.50**	**184**	PN	**Pb**	**13 53 17.4**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.52**	**309**	PN	**Pb**	**13 53 16.8**	**-0.5**
YLV	**Yalova**	**1.53**	**43**	PN	**Pb**	**13 53 17.6**	**+0.1**
ECEA	**Canakkale, Ece**	**1.54**	**293**	P	**Pb**	**13 53 17.0**	**-0.6**
ECEA				S	**Sg**	**13 53 38.5**	**-0.4**
ECEA				*i* AML	AML	13 53 43.0
	comp=N,349nm,1.0s					
ECEA				*i* AML	AML	13 53 47.0
	comp=E,435nm,0.7s					
BOZC	**Bozcaada**	**1.56**	**285**	PN	**Pb**	**13 53 17.7**	**-0.4**
CAVI	**Cavuskoy**	**1.59**	**61**	PN	**Pb**	**13 53 18.7**	**+0.1**
BILE	**Bilecik/Merkez**	**1.60**	**63**	P	**Pb**	**13 53 18.6**	**-0.1**
BILE				S	**Sg**	**13 53 41.9**	**+1.1**
BILE				*i* AML	AML	13 53 44.0
	comp=N,190nm,0.2s					
BILE				*i* AML	AML	13 53 44.0
	comp=E,221nm,0.2s					
AUBOZ	**BOZOYUK**	**1.62**	**73**	PN	**Pb**	**13 53 18.7**	**-0.4**
AVCI	**Avcilar-stanb**	**1.64**	**19**	PN	**Pb**	**13 53 19.2**	**-0.1**
ADVT	**Abdulvahap**	**1.65**	**53**	PN	**Pb**	**13 53 18.9**	**-0.6**
DGB	**zmir**	**1.65**	**213**	P	**Pb**	**13 53 19.0**	**-0.5**
DGB				S	**Sg**	**13 53 43.0**	**+0.4**
DGB				*i* AML	AML	13 53 43.0
	comp=N,328nm,0.5s					
DGB				*i* AML	AML	13 53 44.0
	comp=E,204nm,0.5s					
ZEYE	**Izmir, Urla-Ze**	**1.69**	**225**	P	**Pg**	**13 53 21.2**	**-0.6**
ZEYE				S	**Sg**	**13 53 46.9**	**+3.2**
ZEYE				*i* AML	AML	13 53 47.0
	comp=E,212nm,0.5s					
ZEYE				*i* AML	AML	13 53 50.0
	comp=N,319nm,0.3s					
SIGR	**SIGRI**	**1.69**	**263**	PN	**Pb**	**13 53 19.7**	**-0.5**
SIGR	**SIGRI**	**1.69**	**263**	P	**Pb**	**13 53 19.3**	**-0.9**
SIGR				S	**Sb**	**13 53 41.7**	**+0.3**
	1μm,0.5s						
GOKA	**anakkale-Gk**	**1.78**	**295**	P	**Pn**	**13 53 20.2**	**+0.5**
GOKA				S	**Sb**	**13 53 43.6**	**-0.4**
GOKA				*i* AML	AML	13 53 52.0
	comp=E,644nm,0.5s					
GOKA				*i* AML	AML	13 53 54.0
	comp=N,497nm,0.5s					
SLVT	**Silivri**	**1.78**	**5**	PN	**Pb**	**13 53 21.2**	**-0.6**
GADA	**Gvkgeada**	**1.79**	**295**	PN	**Pb**	**13 53 21.1**	**-0.8**
KAVV	**Kandilli-Istan**	**1.80**	**26**	PN	**Pb**	**13 53 21.2**	**-0.9**
ISK	**Istanbul-Kandi**	**1.80**	**26**	PN	**Pb**	**13 53 21.0**	**-1.1**
ISK	**Istanbul-Kandi**	**1.80**	**26**	P	**Pn**	**13 53 19.9**	**-0.1**
ISK				S	**Sn**	**13 53 42.2**	**-0.4**
	340nm,0.4s						
CTKS	**Kestanelik-??a**	**1.82**	**12**	PN	**Pb**	**13 53 21.8**	**-0.7**
GCAM	**G?zelcaml?**	**1.85**	**200**	PN	**Pb**	**13 53 21.7**	**-1.3**
HRT	**Hereke**	**1.87**	**42**	PN	**Pb**	**13 53 22.5**	**-0.8**
CAVK	**Edirne/Enez-Ca**	**1.88**	**312**	P	**Pn**	**13 53 20.8**	**-0.3**
CAVK				S	**Sb**	**13 53 46.9**	**0.0**
CAVK				*i* AML	AML	13 53 55.0
	comp=E,184nm,0.5s					
CAVK				*i* AML	AML	13 53 58.0
	comp=N,169nm,0.6s					
BORA	**Eskisehir**	**1.93**	**76**	PN	**Pb**	**13 53 23.2**	**-1.2**
KLYT	**Kilyos**	**1.96**	**23**	PN	**Pb**	**13 53 23.7**	**-1.2**
SMG	**Samos**	**1.97**	**208**	P	**Pb**	**13 53 23.8**	**-1.2**
UKOP	**Uzunkopru-Edir**	**1.98**	**328**	PN	**Pb**	**13 53 24.2**	**-1.0**
CTYL	**Yalikoy Yolu**	**2.03**	**6**	PN	**Pb**	**13 53 24.2**	**-1.9**
SRCK	**Saricakaya, Es**	**2.10**	**73**	PN	**Pb**	**13 53 25.6**	**-1.6**
SILT	**Sile**	**2.11**	**36**	PN	**Pb**	**13 53 25.6**	**-1.7**
GULT	**Gulveren**	**2.16**	**62**	PN	**Pb**	**13 53 26.3**	**-1.9**
SMTH	**Samothraki Isl**	**2.17**	**299**	P	**Pn**	**13 53 25.6**	**+0.6**
SMTH				S	**Sn**	**13 53 52.0**	**+0.3**
	262nm,0.5s						
SHUT	**Suhut-Afyon**	**2.17**	**114

MAN 25 14:05:04.6, 9°.25N×125°.28E, h59km, mb3.8, ML2.5, MS2.1, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.97**	**335**	⇓*e*P	Pn	14 05 23.3	+1.0
MSLP				*e*S	Sn	14 05 34.1	-1.2
GHBP	**Garcia Hernand**	**1.02**	**292**	⇑*i*P	Pn	14 05 23.5	+0.6
GHBP				*i*S	Sn	14 05 32.0	-4.5
TABP	**Talibon, Bohol**	**1.26**	**312**	⇓*i*P	Pn	14 05 24.2	-1.9
TABP				*i*S	Sn	14 05 31.3	-11
TBP	**Tagbilaran**	**1.47**	**288**	*e*P	Pn	14 05 30.5	+1.6
TBP				*i*S	Sn	14 05 43.6	-3.5
LSIP	**Lazi, Siquijor**	**1.64**	**266**	⇑*i*P	Pn	14 05 36.8	+5.7
LSIP				*i*S	Sn	14 05 55.2	+4.0
LLP	**Lapu-Lapu**	**1.68**	**309**	⇑*e*P	Pn	14 05 31.7	0.0
LLP				*i*S	Sn	14 05 46.2	-5.9
CNOP	**Candoni, Negro**	**2.67**	**283**	⇓*e*P	Pn	14 05 50.0	+4.8
CNOP				*e*S	Sn	14 06 17.0	+0.6

*IDC **25** 14:29:20.6±1.1, 32°.54N×104°.37E, h0km, mb3.6/5, mbtmp3.6/7, ML3.8/1, MS3.3/2, Error ellipse: s-maj=49.6km s-min=19.0km az=70.0*
*NEIC **25** 14:29:24.7±1.1, 32°.6N±0°.1×104°.07E±0°.06, h31km±6km, mb4.7/6, Error ellipse: s-maj=18.9km s-min=6.3km az=168.0*
ISC 25 14:29:22.2±0.8, 32°.55N±0°.09×104°.2E±0°.1, h10km, n18, σ0s92/16, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.04**	**115**		**Pn**	**14 30 39.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**14.82**	**200**	Pn	**Pn**	**14 32 52.2**	**+0.3**
	0.1nm,0.3s,baz=9.4,slow=9.9,SNR=5.4						
	0.4nm,0.4s						
SONM	**Songino Array**	**15.35**	**6**	Pn	**Pn**	**14 33 00.1**	**+1.0**
	0.3nm,0.6s,baz=184,slow=16,SNR=1.4						
MKAR	**Makanchi Array**	**21.97**	**317**	P	**P**	**14 34 17.2**	**+1.0**
	0.8nm,0.9s,baz=116,slow=13,SNR=3.6						
	0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**25.47**	**333**	P	**P**	**14 34 50.6**	**+0.3**
	1.0nm,0.5s,baz=136,slow=9.4,SNR=5.1						
	1.0nm,0.5s						
PSI	**Prapat**	**30.01**	**191**	LR	LR	14 47 55.0	
	comp=Z,42nm,18.3s,baz=226,slow=37						
TIXI	**Tiksi**	**41.32**	**12**	P	**P**	**14 37 07.0**	**-0.6**
	0.7nm,0.4s,baz=92,slow=21,SNR=7.3						
	0.7nm,0.4s						
TIXI	**Tiksi**	**41.32**	**12**	P	**P**	**14 37 07.2**	**-0.4**
TIXI				IAmb	IAmb	14 37 14.1	
	comp=Z,5.9nm,1.4s						
KNRA	**Kununurra**	**53.40**	**150**	P	**P**	**14 38 41.4**	**-0.8**
KNRA				IAmb	IAmb	14 39 30.4	
	comp=Z,9.3nm,1.1s						
WB0	**Warramunga Arr**	**59.50**	**147**	P	**P**	**14 39 25.0**	**-0.7**
WRA	**Warramunga Arr**	**59.62**	**147**	P	**P**	**14 39 26.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=340,slow=7.3,SNR=12						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**59.62**	**147**	P	**P**	**14 39 25.9**	**-0.7**
WB2	**Warramunga Arr**	**59.63**	**147**	P	**P**	**14 39 25.6**	**-1.0**
ASAR	**Alice Springs**	**62.68**	**149**	P	**P**	**14 39 46.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=338,slow=6.7,SNR=8.9						
	comp=Z,0.6nm,0.7s						
IMAR	**Indian Mountain**	**65.38**	**26**	P	**P**	**14 40 03.5**	**-1.0**
BMAR	**Burnt Mountain**	**67.91**	**23**	P	**P**	**14 40 21.0**	**+0.3**
IL31		**68.49**	**26**	P	**P**	**14 40 22.7**	**-1.5**
IL31				IAmb	IAmb	14 42 41.9	
	comp=Z,17nm,1.8s						
URZ	**Urewera**	**97.74**	**131**	LR	LR	15 28 54.6	
	comp=Z,14nm,19.4s,baz=28,slow=37						

*IDC **25** 14:31:43.1±1.8, 15°.50N×147°.74E, h0km, mb3.9/9, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=51.6km s-min=18.9km az=91.0*
*NEIC **25** 14:31:46.3±1.4, 15°.5N±0°.1×147°.75E±0°.03, h17km±5km, mb4.4/12, Error ellipse: s-maj=16.9km s-min=3.6km az=182.0*
ISC 25 14:31:46.6±0.7, 15°.36N±0°.09×147°.78E±0°.10, h29km, n29, σ1s08/30, mb4.3/15, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.32**	**238**	Pn	**Pn**	**14 32 35.2**	**-1.4**
	6.1nm,0.3s,baz=3.4,slow=19,SNR=5.3						
GUMO				Sn	**Sn**	**14 33 14.1**	**-1.1**
	13nm,0.3s,baz=146,slow=23,SNR=6.4						
	18nm,0.3s						
GUMO	**Guam**	**3.32**	**238**	Pn	**Pn**	**14 32 36.5**	**-0.1**
PATS	**Pohnpei**	**13.35**	**128**	Pn	**Pn**	**14 34 52.7**	**-1.6**
YHNB	**Yeheng**	**26.44**	**295**	P	**P**	**14 37 21.4**	**+0.2**
YHNB				IAmb	IAmb	14 37 23.8	
	comp=Z,10nm,0.9s						
KSRS	**Korea Array**	**28.18**	**325**	P	**P**	**14 37 34.9**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=149,slow=8.9,SNR=4.3						
	comp=Z,0.9nm,0.7s						
KLR	**Kul'dur**	**36.24**	**342**	P	**P**	**14 38 47.2**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=172,slow=6.0,SNR=6.3						
	comp=Z,2.4nm,0.7s						
WB0	**Warramunga Arr**	**37.30**	**201**	P	**P**	**14 38 57.5**	**+1.1**
WR0	**Warramunga Arr**	**37.43**	**201**	P	**P**	**14 38 58.7**	**+1.2**
WR0				IAmb	IAmb	14 39 40.1	
	comp=Z,6.9nm,1.3s						
WRAB	**Tennant Creek**	**37.47**	**201**	P	**P**	**14 38 59.1**	**+1.3**
WRAB				IAmb	IAmb	14 39 16.5	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**37.48**	**201**	P	**P**	**14 39 00.2**	**+2.3**
WB2				IAmb	IAmb	14 39 39.2	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**37.48**	**201**	P	**P**	**14 38 59.8**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=28,slow=9.1,SNR=8.4						
	comp=Z,0.8nm,0.8s						
AS31	**Alice Springs**	**41.09**	**200**	P	**P**	**14 39 28.7**	**+0.7**
ASAR	**Alice Springs**	**41.09**	**200**	P	**P**	**14 39 29.8**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=28,slow=6.8,SNR=7.0						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**41.09**	**200**	P	**P**	**14 39 28.9**	**+0.9**
CHTO	**Chiang Mai**	**46.70**	**282**	P	**P**	**14 40 13.1**	**-0.1**
CM31	**Chiang Mai Arr**	**46.72**	**281**	P	**P**	**14 40 14.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**46.72**	**281**	P	**P**	**14 40 14.5**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=84,slow=6.4,SNR=14						
	comp=Z,1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**46.72**	**281**	P	**P**	**14 40 14.1**	**+0.7**
SONM	**Songino Array**	**46.99**	**322**	P	**P**	**14 40 15.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=142,slow=10,SNR=2.1						
	comp=Z,0.5nm,0.7s						
YAK	**Yakutsk**	**48.36**	**349**	P	**P**	**14 40 26.0**	**+0.6**
BSWZ	**Blackbirch Sta**	**61.69**	**158**	P	**P**	**14 42 02.8**	**+0.8**
MK31	**Makanchi Array**	**62.21**	**315**	P	**P**	**14 42 06.1**	**+0.4**
MK31				IAmb	IAmb	14 42 15.4	
	comp=Z,4.4nm,1.3s						
MKAR	**Makanchi Array**	**62.21**	**315**	P	**P**	**14 42 06.2**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=93,slow=8.4,SNR=10.0						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**62.21**	**315**	P	**P**	**14 42 06.0**	**+0.4**
MAKZ	**Makanchi**	**62.43**	**315**	P	**P**	**14 42 07.8**	**+0.7**
MAKZ				IAmb	IAmb	14 42 08.4	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**65.13**	**319**	P	**P**	**14 42 24.9**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=97,slow=6.8,SNR=22						
	comp=Z,2.1nm,0.6s						
KKAR	**Karatay Array**	**70.44**	**311**	P	**P**	**14 42 58.9**	**+0.6**
ABKAR	**Akbulak array**	**77.14**	**318**	P	**P**	**14 43 37.1**	**-0.4**
FINES	**FINESS Array B**	**90.74**	**336**	P	**P**	**14 44 46.1**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=67,slow=5.6,SNR=12						
	comp=Z,1.2nm,0.5s						

IDC 25 14:39:42.1±3.7, 6°.27S×146°.74E, h0km, mb2.8/1, mbtmp3.0/3, ML1.1/1, Error ellipse: s-maj=75.8km s-min=52.1km az=88.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.15**	**172**	Pn	Pn	14 40 32.4	-0.5
	1.9nm,0.3s,baz=341,slow=6.4,SNR=8.5						
PMG				Sn	Sn	14 41 07.9	-3.3
	1.3nm,0.3s,baz=218,slow=19,SNR=3.1						
	3.6nm,0.3s						
WRA	**Warramunga Arr**	**18.16**	**220**	P	Pn	14 43 55.2	-0.7
	0.5nm,1.0s,baz=49,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**21.25**	**214**	P	P	14 44 30.8	+0.8
	0.3nm,0.6s,baz=35,slow=11,SNR=5.3						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**144.90**	**284**	PKP	PKPbc	14 59 21.6	+0.1
	0.4nm,0.8s,baz=109,slow=1.9,SNR=2.3						

*JMA **25** 14:43:12.5±0.1, 24°.7N±0°.3×121°.9E±0°.3, h87km±1km, MV3.3/15, TAIWAN REGION*
*TAP **25** 14:43:12.3, 24°.75N×121°.94E, h88km, ML3.8, B*
ISC 25 14:43:12.8±1.2, 24°.75N±0°.03×121°.93E±0°.02, h87km±5km, n129, σ0s67/202, 16C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.09**	**1**	*i*P	**Pn**	**14 43 24.8**	**-0.3**
EGS				*i*S	**Sn**	**14 43 34.5**	**+0.2**
NTC	**Toucheng**	**0.14**	**318**	*i*P	**Pn**	**14 43 25.7**	**+0.5**
NTC	baz=316			*i*S	**Sn**	**14 43 34.8**	**+0.4**
TWC	**Suao**	**0.16**	**208**	⇑*i*P	**Pn**	**14 43 25.4**	**+0.2**
TWC	baz=209			*i*S	**Sn**	**14 43 34.7**	**+0.2**
ILA	**Ilan**	**0.17**	**275**	*i*P	**Pn**	**14 43 25.6**	**+0.4**
ILA	baz=275			*i*S	**Sn**	**14 43 35.4**	**+0.9**
TIPB	**Shuangxi**	**0.24**	**337**	*i*P	**Pn**	**14 43 25.5**	**-0.1**
TIPB	baz=334			*i*S	**Sn**	**14 43 34.5**	**-0.6**
TWE	**Neicheng**	**0.24**	**263**	*i*P	**Pn**	**14 43 26.1**	**+0.5**
TWE	baz=263			*i*S	**Sn**	**14 43 36.1**	**+1.1**
TWB1	**Santiao Chiao**	**0.26**	**12**	⇑*i*P	**Pn**	**14 43 25.5**	**-0.2**
TWB1	baz=10.0			*i*S	**Sn**	**14 43 34.6**	**-0.6**
FUSB	**Fushanzhiwuyua**	**0.31**	**272**	⇑P	**Pn**	**14 43 26.4**	**+0.4**
FUSB	baz=272			S	**Sn**	**14 43 36.0**	**+0.1**
SXI1	**Grass Mountain**	**0.34**	**352**	⇑P	**Pn**	**14 43 25.8**	**-0.4**
SXI1	baz=349			S	**Sn**	**14 43 35.5**	**-0.6**
NWF	**Wu-fen Shan**	**0.35**	**337**	⇑*i*P	**Pn**	**14 43 26.2**	**0.0**
NWF	baz=335			*i*S	**Sn**	**14 43 35.8**	**-0.3**
WFSB	**Wu-fen Shan**	**0.35**	**337**	P	**Pn**	**14 43 26.2**	**+0.1**
WFSB	baz=335			S	**Sn**	**14 43 35.9**	**-0.1**
ENTT	**Nioudou**	**0.35**	**252**	⇑*i*P	**Pn**	**14 43 25.7**	**-0.4**
ENTT	baz=252			*i*S	**Sn**	**14 43 36.1**	**+0.1**
TWA	**Mucha**	**0.39**	**306**	⇑*i*P	**Pn**	**14 43 26.5**	**+0.1**
TWA	baz=305			*i*S	**Sn**	**14 43 36.5**	**0.0**
NDT	**Datong Townshi**	**0.41**	**249**	P	**Pn**	**14 43 25.1**	**-1.4**
NDT	baz=249			S	**Sn**	**14 43 35.6**	**-1.1**
NHDH	**Xindian Distri**	**0.42**	**300**	*i*P	**Pn**	**14 43 26.9**	**+0.3**
NHDH	baz=299			*i*S	**Sn**	**14 43 37.4**	**+0.5**
LATG	**Datong**	**0.43**	**240**	⇑P	**Pn**	**14 43 27.3**	**+0.5**
LATG	baz=241			S	**Sn**	**14 43 38.2**	**+1.0**
TATO	**Taipei**	**0.46**	**299**	P	**Pn**	**14 43 27.0**	**+0.1**
TAP	**Taipei**	**0.48**	**307**	*i*P	**Pn**	**14 43 27.3**	**+0.3**
TAP	baz=306			*i*S	**Sn**	**14 43 37.8**	**+0.2**
YHNB	**Yeheng**	**0.51**	**261**	P	**Pn**	**14 43 27.5**	**+0.1**
YHNB	**Yeheng**	**0.51**	**261**	⇑P	**Pn**	**14 43 27.2**	**-0.2**
YHNB	baz=261			S	**Sn**	**14 43 37.8**	**-0.4**
YM01	**YM01**	**0.51**	**320**	⇑P	**Pn**	**14 43 27.2**	**-0.1**
YM01	baz=319			S	**Sn**	**14 43 37.8**	**-0.4**
NSK	**Sanguang**	**0.53**	**262**	⇑*i*P	**Pn**	**14 43 26.4**	**-1.1**
NSK	baz=262			*i*S	**Sn**	**14 43 37.0**	**-1.4**
ANP	**Anpu**	**0.57**	**319**	P	**Pn**	**14 43 27.6**	**-0.3**
ANP	baz=319			S	**Sn**	**14 43 39.6**	**+0.5**
TWS1	**Kuangyinshan**	**0.58**	**307**	*i*P	**Pn**	**14 43 28.3**	**+0.4**
TWS1	baz=306			*i*S	**Sn**	**14 43 40.1**	**+1.0**
NNSB	**Datong**	**0.59**	**237**	P	**Pn**	**14 43 28.5**	**+0.4**
NNSB	baz=238			S	**Sn**	**14 43 39.7**	**+0.2**
NNS	**Nan Shan**	**0.59**	**239**	*i*P	**Pn**	**14 43 27.8**	**-0.4**
NNS	baz=238			*i*S	**Sn**	**14 43 38.9**	**-0.7**
NTST	**Danshui**	**0.60**	**313**	P	**Pn**	**14 43 28.5**	**+0.5**
NTST	baz=312			S	**Sn**	**14 43 40.5**	**+1.1**
TWY	**Chenhua**	**0.60**	**330**	*i*P	**Pn**	**14 43 28.2**	**+0.2**
TWY	baz=329			*i*S	**Sn**	**14 43 39.5**	**+0.1**
NACB	**Ninganchiao**	**0.65**	**208**	P	**Pn**	**14 43 28.2**	**-0.3**
NACB	**Ninganchiao**	**0.65**	**208**	⇑P	**Pn**	**14 43 28.1**	**-0.5**
NACB	baz=209			S	**Sn**	**14 43 39.9**	**-0.4**
ETL	**Fush Village**	**0.65**	**205**	*e*P	**Pn**	**14 43 28.4**	**-0.2**
ETL	baz=206			S	**Sn**	**14 43 40.5**	**+0.1**
ETLH	**Xiulin Townshi**	**0.68**	**217**	P	**Pn**	**14 43 28.8**	**-0.1**
ETLH	baz=218			S	**Sn**	**14 43 41.0**	**+0.1**
NCU	**National Centr**	**0.71**	**288**	*i*P	**Pn**	**14 43 29.4**	**+0.3**
NCU	baz=287			*i*S	**Sn**	**14 43 42.2**	**+1.0**
NCUH	**Zhongli**	**0.71**	**288**	*e*P	**Pn**	**14 43 29.3**	**+0.2**
NCUH	baz=287			*e*S	**Sn**	**14 43 41.7**	**+0.4**
TWD	**Chiawan**	**0.73**	**205**	*i*P	**Pn**	**14 43 28.8**	**-0.6**
TWD	baz=204			*i*S	**Sn**	**14 43 41.1**	**-0.6**
NFF	**Wufeng Townshi**	**0.75**	**261**	P	**Pn**	**14 43 28.6**	**-1.0**
NFF	baz=261			S	**Sn**	**14 43 41.0**	**-1.1**
HWA	**Hwalien**	**0.83**	**201**	*e*P	**Pn**	**14 43 30.5**	**+0.2**
HWA	baz=201			*e*S	**Sn**	**14 43 45.0**	**+1.6**
LIOB	**Emei**	**0.84**	**263**	*i*P	**Pn**	**14 43 30.6**	**+0.1**
LIOB	baz=263			*i*S	**Sn**	**14 43 43.6**	**0.0**
TWT	**Tachien**	**0.85**	**234**	*i*P	**Pn**	**14 43 31.6**	**+0.9**
TWT	baz=235			*i*S	**Sn**	**14 43 45.2**	**+1.1**
NSTT	**Nanjuang**	**0.85**	**262**	*i*P	**Pn**	**14 43 30.7**	**+0.1**
NSTT	baz=262			*i*S	**Sn**	**14 43 43.8**	**-0.1**
WHF	**Hehuan Shan**	**0.85**	**225**	*i*P	**Pn**	**14 43 31.1**	**0.0**
WHF	baz=225			*i*S	**Sn**	**14 43 45.1**	**+0.4**
SBCB	**Hsinchu**	**0.86**	**273**	P	**Pn**	**14 43 30.8**	**+0.1**
SBCB	baz=273			S	**Sn**	**14 43 44.2**	**+0.2**
TDCB	**Techi**	**0.86**	**235**	⇑P	**Pn**	**14 43 31.4**	**+0.6**
TDCB	baz=235			S	**Sn**	**14 43 44.5**	**+0.2**
HSN	**Hsinchu**	**0.88**	**274**	*i*P	**Pn**	**14 43 30.7**	**-0.1**
HSN	baz=275			*i*S	**Sn**	**14 43 43.9**	**-0.4**
PCYT	**Pengchaiyu**	**0.88**	**8**	P	**Pn**	**14 43 31.1**	**+0.2**
	baz=8.0						
JYNG	**Yonagunijimaku**	**0.97**	**108**	*i*P	**Pn**	**14 43 31.7**	**-0.2**
JYNG				*e*S	**Sn**	**14 43 45.9**	**-0.4**
CHGB	**Renai**	**0.97**	**225**	⇑P	**Pn**	**14 43 32.6**	**+0.4**
CHGB	baz=225			S	**Sn**	**14 43 47.1**	**+0.5**
WHP	**Taichung City**	**1.01**	**242**	*i*P	**Pn**	**14 43 33.3**	**+0.9**
WHP	baz=242			*i*S	**Sn**	**14 43 47.9**	**+0.7**
YOJ	**Yonaguni jima**	**1.02**	**106**	P	**Pn**	**14 43 32.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.02**	**106**	⇓P	**Pn**	**14 43 32.2**	**-0.2**
YOJ	baz=105			S	**Sn**	**14 43 47.2**	**-0.1**
YOJ	**Yonaguni jima**	**1.02**	**106**	P	**Pn**	**14 43 32.3**	**-0.2**
YOJ				S	**Sn**	**14 43 46.8**	**-0.5**
ESL	**Shilin**	**1.04**	**206**	*i*P	**Pn**	**14 43 31.4**	**-1.3**
ESL	baz=206			*i*S	**Sn**	**14 43 46.9**	**-0.7**
OWD	**Renai**	**1.05**	**221**	P	**Pn**	**14 43 33.4**	**+0.4**
OWD	baz=221			*i*S	**Sn**	**14 43 48.4**	**+0.3**
NMLH	**Miaoli**	**1.06**	**259**	*e*P	**Pn**	**14 43 33.1**	**+0.2**
NMLH	baz=258			*e*S	**Sn**	**14 43 48.0**	**-0.1**
WUSB	**Renai**	**1.06**	**225**	⇑P	**Pn**	**14 43 33.5**	**+0.4**
WUSB	baz=225			S	**Sn**	**14 43 48.9**	**+0.6**
NSY	**Sanyi**	**1.12**	**253**	*i*P	**Pn**	**14 43 34.1**	**+0.5**
NSY	baz=252			*i*S	**Sn**	**14 43 49.9**	**+0.6**
TWQ1	**Liyutan**	**1.13**	**249**	*i*P	**Pn**	**14 43 34.1**	**+0.4**
TWQ1	baz=249			*i*S	**Sn**	**14 43 49.6**	**+0.1**
WCS	**Beigang Elemen**	**1.16**	**234**	P	**Pn**	**14 43 33.8**	**-0.3**
WCS	baz=233			S	**Sn**	**14 43 50.0**	**-0.2**
EGFH	**Guangfu**	**1.17**	**203**	*e*P	**Pn**	**14 43 34.0**	**-0.3**
EGFH	baz=203			*e*S	**Sn**	**14 43 49.8**	**-0.7**
VWDT	**VWDT**	**1.23**	**216**	⇑P	**Pn**	**14 43 35.4**	**+0.5**
VWDT	baz=216			S	**Sn**	**14 43 51.8**	**+0.2**
WDJ	**Dajia District**	**1.24**	**251**	*i*P	**Pn**	**14 43 35.7**	**+0.6**
WDJ	baz=251			*i*S	**Sn**	**14 43 52.5**	**+0.6**
SMLT	**Sun Moon Lake**	**1.28**	**228**	*i*P	**Pn**	**14 43 36.3**	**+0.6**
	baz=227						
SSLB	**Suanglung**	**1.31**	**223**	P	**Pn**	**14 43 37.1**	**+1.1**
SSLB	**Suanglung**	**1.31**	**223**	P	**Pn**	**14 43 36.6**	**+0.6**
SSLB	baz=223			S	**Sn**	**14 43 54.9**	**+1.4**
HGSD	**Ruisui**	**1.34**	**200**	P	**Pn**	**14 43 36.1**	**-0.2**
HGSD	baz=200			S	**Sn**	**14 43 54.6**	**+0.6**
EHY	**Hungye**	**1.36**	**204**	P	**Pn**	**14 43 35.2**	**-1.4**
EHY	baz=204			S	**Sn**	**14 43 53.6**	**-0.9**
WCHH	**Zhanghua**	**1.42**	**242**	P	**Pn**	**14 43 38.4**	**+1.1**
WCHH	baz=242			S	**Sn**	**14 43 56.1**	**+0.3**
WNT	**Mingjian**	**1.43**	**233**	*e*P	**Pn**	**14 43 38.1**	**+0.6**
WNT	baz=232			S	**Sn**	**14 43 57.3**	**+1.1**
WJS	**Zhushan**	**1.44**	**230**	*e*P	**Pn**	**14 43 38.4**	**+0.8**
WJS	baz=230			*e*S	**Sn**	**14 43 57.0**	**+0.7**
WHYT	**Xinyi Township**	**1.44**	**223**	*e*P	**Pn**	**14 43 38.6**	**+0.9**
WHYT	baz=223			*e*S	**Sn**	**14 43 58.2**	**+1.8**
YULB	**Yu-li**	**1.47**	**203**	P	**Pn**	**14 43 37.4**	**-0.6**
YULB	**Yu-li**	**1.47**	**203**	P	**Pn**	**14 43 36.5**	**-1.5**
	baz=203						
EYUL	**Yuli**	**1.50**	**202**	*e*P	**Pn**	**14 43 39.1**	**+0.6**
	baz=202						
YUS	**Yu-Shan**	**1.54**	**216**	P	**Pn**	**14 43 39.9**	**+0.5**
	baz=215						
ALS	**Alishan**	**1.61**	**220**	P	**Pn**	**14 43 40.9**	**+0.9**
	baz=219						
WRL	**Guolierlin Hig**	**1.65**	**239**	P	**Pn**	**14 43 39.4**	**-0.9**
	baz=239						
FULB	**Fuli**	**1.65**	**201**	*e*P	**Pn**	**14 43 40.3**	**0.0**
	baz=201						
WDLH	**Douliu**	**1.65**	**231**	*e*P	**Pn**	**14 43 40.4**	**+0.1**
	baz=230						
IRIF	**Iriomote-Funau**	**1.69**	**104**	P	**Pn**	**14 43 40.3**	**-0.5**
IRIF				S	**Sn**	**14 44 01.8**	**-0.3**
ELDTW	**Lidau**	**1.77**	**208**	P	**Pn**	**14 43 41.5**	**-0.5**
	baz=208						
WCKO	**Fanlu**	**1.78**	**223**	*e*P	**Pn**	**14 43 42.0**	**0.0**
	baz=223						
CHN2	**Minshiung**	**1.80**	**228**	*e*P	**Pn**	**14 43 43.5**	**+1.2**
	baz=227						
HATJ	**Hateruma jima**	**1.84**	**112**	P	**Pn**	**14 43 43.0**	**+0.2**
HATJ				*e*S	**Sn**	**14 44 05.6**	**-0.1**
CHN4	**Tsaushan**	**1.85**	**222**	P	**Pn**	**14 43 42.9**	**-0.1**
	baz=221						
CHY	**Chiayi**	**1.86**	**228**	*e*P	**Pn**	**14 43 43.4**	**+0.4**
	baz=227						
EDH	**Donghe**	**1.86**	**198**	*e*P	**Pn**	**14 43 42.4**	**-0.7**
	baz=198						
TPUB	**Ta-pu**	**1.87**	**220**	P	**Pn**	**14 43 44.1**	**+0.9**
TPUB	**Ta-pu**	**1.87**	**220**	*e*P	**Pn**	**14 43 43.6**	**+0.4**
	baz=219						
STYH	**Taoyuan**	**1.90**	**214**	*e*P	**Pn**	**14 43 43.6**	**+0.1**
	baz=214						
WTP	**Ta-pu**	**1.92**	**219**	P	**Pn**	**14 43 44.6**	**+0.7**
	baz=218						
JKRS	**Kuro-shima**	**1.96**	**105**	P	**Pn**	**14 43 44.3**	**-0.1**
JKRS				S	**Sn**	**14 44 08.1**	**-0.3**
LONT	**Longtian**	**1.98**	**202**	*e*P	**Pn**	**14 43 44.0**	**-0.6**
	baz=202						
WSL	**Shuilin Townsh**	**1.98**	**232**	*e*P	**Pn**	**14 43 43.8**	**-0.7**
	baz=232						
TWK	**Hsinying**	**1.98**	**222**	*i*P	**Pn**	**14 43 45.2**	**+0.6**
	baz=221						
SNST	**Tainan City**	**2.01**	**221**	*e*P	**Pn**	**14 43 46.1**	**+1.1**
	baz=221						
CHN1	**Nanshi**	**2.02**	**220**	P	**Pn**	**14 43 45.3**	**+0.2**
	baz=219						
ICHU	**Yijhu**	**2.05**	**228**	*e*P	**Pn**	**14 43 45.7**	**+0.2**
	baz=227						
JIJ	**Ishigaki jima**	**2.05**	**100**	P	**Pn**	**14 43 45.2**	**-0.3**
JIJ				S	**Sn**	**14 44 10.5**	**0.0**
SGST	**Jiashian**	**2.07**	**217**	P	**Pn**	**14 43 45.7**	**-0.1**
	baz=216						
TWG	**Pinlang**	**2.08**	**202**	P	**Pn**	**14 43 44.9**	**-1.0**
	baz=202						
TWGBT	**Beinan**	**2.08**	**202**	P	**Pn**	**14 43 44.8**	**-1.1**
TWGBT	**Beinan**	**2.08**	**202**	*e*P	**Pn**	**14 43 44.9**	**-1.0**
	baz=202						
LDUT	**Ludao**	**2.11**	**192**	*e*P	**Pn**	**14 43 44.9**	**-1.4**
	baz=191						
JISG	**Ishigakijimahi**	**2.17**	**94**	P	**Pn**	**14 43 47.2**	**+0.1**
JISG				*e*S	**Sn**	**14 44 13.8**	**+0.4**
VWUC	**VWUC**	**2.27**	**277**	*e*P	**Pn**	**14 43 47.5**	**-0.9**
	baz=276						
MATB	**Ma-tsu**	**2.27**	**308**	*e*P	**Pn**	**14 43 47.5**	**-1.0**
	baz=307						

SCST	Cishan baz=215	2.28	216	eP	Pn	14 43 49.5 +0.9
TSCK	Chigu Township baz=226	2.32	227	eP	Pn	14 43 48.7 -0.5
ECL	Taimali baz=202	2.32	203	eP	Pn	14 43 48.1 -1.1
SSD	Sandimen baz=210	2.32	211	eP	Pn	14 43 50.2 +1.1
TSMG	Majia baz=210	2.35	210	eP	Pn	14 43 50.6 +1.1
MASBT	Mashibuluo baz=209	2.44	209	eP	Pn	14 43 51.8 +1.1
PNG	Penghu baz=241	2.47	242	eP	Pn	14 43 50.0 -1.0
PHUB	P'eng-hu baz=240	2.48	241	eP	Pn	14 43 50.0 -1.2
JTJ	Tarama	2.52	92	P	Pn	14 43 52.2 +0.4
JTJ				eS	Sn	14 44 22.3 +0.6
WDGT	Dungji baz=234	2.55	235	eP	Pn	14 43 52.0 -0.2
EAST	Anshuo baz=202	2.56	203	eP	Pn	14 43 51.4 -0.9
PTMZ	Houxiangcun baz=276	2.57	277	eP	Pn	14 43 51.8 -0.6
LYJJ	Jianjiangzhen baz=312	2.65	313	eP	Pn	14 43 52.6 -0.9
SCZT	Fangliau baz=207	2.66	207	eP	Pn	14 43 54.8 +1.2
XPSS	Dashiqiu baz=323	2.68	325	eP	Pn	14 43 52.8 -1.0
LAY	Lan-yu baz=187	2.72	187	eP	Pn	14 43 53.2 -1.3
SLIU	Shizi baz=202	2.73	203	eP	Pn	14 43 54.0 -0.6
VCHM	Qimei baz=236	2.75	237	eP	Pn	14 43 53.6 -1.3
JIRB	Irabujima	2.95	88	P	Pn	14 43 58.1 +0.6
JIRB				eS	Sn	14 44 32.5 +0.5
JIKM	Ikemajima	3.02	86	P	Pn	14 43 59.0 +0.6
JIKM				eS	Sn	14 44 34.3 +0.6
JMJ2	Miyako jima3	3.09	89	P	Pn	14 44 00.1 +0.7
JMJ2				eS	Sn	14 44 36.1 +0.7
JOGS	Gusukube	3.16	89	P	Pn	14 44 01.0 +0.6
JOGS				eS	Sn	14 44 37.9 +0.8
JOW	Kunigami	6.08	69	P	Pn	14 44 40.2 +0.1

IDC 25 14:47:10.7±8.2, 3°31S×127°86E, h197km±101km, mb2.8/2, mbtmp3.5/4, Error ellipse: s-maj=136.6km s-min=20.6km az=79.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.18	55	P	Pn	14 48 14.7	0.0
	4.5nm,0.3s,baz=154,slow=23,SNR=16						
WRA	Warramunga Arr	17.70	160	P	P	14 51 04.2	+0.6
	0.7nm,0.5s,baz=338,slow=12,SNR=18						
ASAR	Alice Springs	21.06	164	P	P	14 51 39.5	-0.3
	0.5nm,0.4s,baz=345,slow=11,SNR=21						
	0.5nm,0.4s						
MKAR	Makanchi Array	63.99	327	P	P	14 57 23.2	0.0
	0.2nm,0.4s,baz=113,slow=7.3,SNR=4.1						
	0.2nm,0.4s						

MAN 25 14:51:19.2, 10°23N×125°05E, h22km, mb4.0, ML2.8, MS2.4, 4C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.21	242	eP	Pb	14 51 25.8	+0.9
MSLP				eS	Sb	14 51 33.8	+4.9
SCPH	Surigao	0.62	136	eP	Pn	14 51 35.1	+2.4
SCPH				i S	Sn	14 51 43.7	+1.6
TABP	Talibon, Bohol	0.72	259	i P	Pb	14 51 33.3	+0.3
TABP				i S	Sn	14 51 44.9	+0.5
GLSP	General Luna,	1.15	113	eP	Pn	14 51 38.7	-1.3
GLSP				eS	Sn	14 51 57.0	+1.9
BESP	Borongan	1.41	16	eP	Pn	14 51 40.8	-2.9
BESP				eS	Sb	14 52 02.4	-0.2
CNP	Catarman	2.29	351	eP	Pn	14 51 57.2	+1.4
CNP				eS	Sb	14 52 26.3	-1.6

*IDC **25** 15:15:19.9±4.0, 7°55S×119°24E, h277km±40km, mb3.1/3, mbtmp3.9/6, Error ellipse: s-maj=67.1km s-min=17.9km az=60.0*
*DJA **25** 15:15:20.3±0.3, 8°S±4°×11°9E±°, h277km±6km, M4.0/12, mb4.2/6, mB4.8/2, MLv3.8/12, Mw(mB)4.0/2*
ISC 25 15:15:20.4±0.8, 7°62S±0°08×119°27E±0°06, h300km, n34, σ2°01/37, mb3.8/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	Bau Bau, Buton	1.90	40	P	Pn	15 16 03.9	-2.5
PLAI	Plampang	1.91	231	P	Pn	15 16 05.2	-1.2
PLAI				S	S	15 16 39.2	-3.9
PLAI	Plampang	1.91	231	P	Pn	15 16 05.4	-1.0
BKSI	Bulukumba	2.43	20	P	Pn	15 16 08.7	-2.1
TWSI	Taliwang, Sumb	2.62	245	P	Pn	15 16 11.1	-1.3
TWSI				S	S	15 16 49.5	-4.5
MMRI	Maumere	3.10	109	P	Pn	15 16 16.0	-1.1
MMRI	Maumere	3.10	109	P	Pn	15 16 16.0	-1.1
KLNI	Mataram	3.25	256	P	Pn	15 16 18.0	-0.6
BNSI	Bone	3.30	15	P	Pn	15 16 18.1	-1.1
SRBI	Singaraja	4.05	263	P	Pn	15 16 27.1	0.0
IGBI	Denpasar	4.26	253	P	Pn	15 16 29.2	-0.2
RTBI	Rangdo, Negare	4.37	259	P	Pn	15 16 30.2	-0.6
BATI	Baumata 31nm,0.3s,baz=275,slow=2.5,SNR=16	5.04	121	P	Pn	15 16 37.8	-0.6
BATI				S	S	15 17 34.8	-6.4
	51nm,0.3s,baz=67,slow=13,SNR=4.7						
BATI	Baumata 0.3nm58nm,0.6s	5.04	121	P	Pn	15 16 37.9	-0.5
JAGI	Jajag, Banyuwa	5.14	260	P	Pn	15 16 39.0	-0.6
JAGI	Jajag, Banyuwa	5.14	260	P	Pn	15 16 39.5	-0.1
SOEI	Soe 0.5nm2μm116nm,0.7s	5.37	114	P	Pn	15 16 41.5	-0.9
SOEI	Soe	5.37	114	P	Pn	15 16 41.9	-0.5
PCJI	Pacitan 48nm,1.3s	8.04	265	P	Pn	15 17 14.6	+0.1
UGM	Wanagama	8.68	268	P	Pn	15 17 23.1	+0.7
SANI	Sanana 8.8nm,0.9s	8.68	51	P	Pn	15 17 21.0	-1.4
PBKI	Pangkalan Bun 109nm,0.7s	9.01	302	P	Pn	15 17 26.0	-0.4
KNRA	Kununurra	12.26	132	P	P	15 18 06.5	-0.8
MTN	Manton Dam	12.77	115	P	P	15 18 13.6	+0.7
SIJI	Sorong 11nm,0.6s,baz=314,slow=8.4,SNR=7.6	13.71	61	P	Pn	15 18 23.9	+0.4
SIJI	Sorong	13.71	61	P	Pn	15 18 23.4	-0.2
KDU	Kakadu	13.93	112	P	Pn	15 18 28.2	+2.0
WRA	Warramunga Arr 0.8nm,0.6s,baz=304,slow=13,SNR=19	19.06	132	P	P	15 19 23.1	+1.6
WRKA	Warakurna	19.35	155	P	P	15 19 26.9	+2.4
ASAR	Alice Springs 0.3nm,0.4s,baz=317,slow=9.0,SNR=26 0.3nm,0.4s	21.25	140	P	P	15 19 46.0	+2.3
AS01	Alice Springs	21.28	140	P	P	15 19 46.5	+2.5
OOD	Oodnadatta	25.38	144	P	P	15 20 23.8	+2.8
MKAR	Makanchi Array 0.9nm,0.4s,baz=156,slow=4.6,SNR=17 0.9nm,0.4s	63.36	332	P	P	15 25 19.9	+1.7
ZALV	Zalesovo Beam 0.7nm,0.3s,baz=159,slow=4.5,SNR=2.8 0.7nm,0.3s	67.86	339	P	P	15 25 46.7	+0.2

IDC 25 15:18:49.3±457.0, 54°24N×2°74E, h0km, Error ellipse: s-maj=173.0km s-min=95.8km az=21.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	8.71	124	I		16 11 28.0	
	0.1nm,1.3s,baz=314,slow=327,SNR=6.5						
I37NO	I37NO	16.58	20	I		17 01 30.0	
	baz=214,slow=328,SNR=2.0						
I31KZ	AKTYUBINSK INF	33.28	73	I		18 43 20.0	
	baz=296,slow=338,SNR=0.9						
I46RU	ZALESOVO INFRA	45.51	55	I		19 58 10.0	
	baz=303,slow=330,SNR=2.0						

*ARE **25** 15:36:46±2.2, 5°05S±0°06×81°3W±0°1, h29km±5km, Error ellipse: s-maj=14.8km s-min=8.3km az=79.0*

*NEIC **25** 15:36:49.1±1.6, 4°87S±0°06×81°3W±0°1, h29km±6km, mb4.5/28, ML4.6(ARE), Error ellipse: s-maj=15.7km s-min=8.3km az=77.0*
*IDC **25** 15:36:55.1±2.5, 4°95S×80°95W, h70km±23km, mb3.8/12, mbtmp4.2/17, MS3.8/19, Error ellipse: s-maj=25.9km s-min=14.5km az=62.0*
ISC 25 15:36:49.8±0.5, 4°94S±0°05×81°34W±0°08, h35km, n83, σ1°76/69, mb4.4/21, MS3.7/14, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNL	Arenillas	1.87	43		Pn	15 37 18.0	-1.3
COHC	Cochancay	3.22	40		Pn	15 37 36.7	-1.1
BOSC	San Juan Bosco	3.34	58		Pn	15 37 38.7	-1.1
ATAH	Atahualpa 62nm,0.5s,baz=3.7,slow=7.3,SNR=64	3.65	127	P	Pn	15 37 45.1	+0.9
ATAH				S	Sn	15 38 29.1	+2.9
	482nm,0.8s,baz=133,slow=23,SNR=6.7						
SLOR	San Lorenzo -	5.05	34		Pn	15 38 02.5	-1.0
IMBA	Imbabura, San	6.05	31		Pn	15 38 15.7	-1.6
TULM	Tulcn-Chalpat	6.64	32		Pn	15 38 23.9	-1.5
BBAC	Balboa, Cauca	8.03	31	eP	Pn	15 38 46.4	+2.1
BBAC				eS	Sn	15 40 18.1	+4.1
PTLC	Puerto Leguiza	8.27	52	eP	Pn	15 38 56.3	+8.9
PTLC				eS	Sn	15 40 41.0	+21
NNA	Nana 6.8nm,0.4s,baz=270,slow=6.1,SNR=2.0	8.29	148	P	Pn	15 38 49.2	+1.5
NNA				S	Sn	15 40 22.3	+2.1
	6.9nm,0.4s,baz=267,slow=17,SNR=1.1						
NNA				LR	LR	15 42 24.9	
	comp=Z,206nm,19.4s,baz=308,slow=41						
NNA	Nana	8.29	148	Pn	Pn	15 38 47.8	+0.1
ROSC	El Rosal	11.98	36	LR	LR	15 44 38.5	
	comp=Z,1μm,19.0s,baz=244,slow=39						
CDITO	Canoas	13.51	353	Pn	Pn	15 39 57.6	-1.5
RUSC	La Rusia	13.55	38	eP	P	15 40 11.3	+2.5
JTS	Las Juntas de 3.8nm,0.6s,baz=1.8,slow=17,SNR=2.5	15.55	347	P	P	15 40 31.2	+0.7
JTS				LR	LR	15 45 22.8	
	comp=Z,254nm,19.7s,baz=248,slow=32						
LPAZ	La Paz 4.3nm,1.0s,baz=329,slow=11,SNR=8.6	17.18	132	P	Pn	15 40 47.5	-0.3
LPAZ				LR	LR	15 47 29.2	
	comp=Z,324nm,20.4s,baz=308,slow=38						
LPAZ	La Paz	17.18	132		Pn	15 40 46.7	-1.1
SDV	Santo Domingo 3.6nm,0.3s,baz=320,slow=21,SNR=5.6	17.39	38	P	P	15 40 51.0	-0.1
SDV				LR	LR	15 48 17.4	
	comp=Z,360nm,19.1s,baz=216,slow=40						
SDV	Santo Domingo	17.39	38		Pn	15 40 48.7	-1.4
PB16	IPOC Station P	17.63	140	P	Pn	15 40 52.6	-0.7
SAML	Samuel	18.45	103	P	P	15 41 00.3	-2.3
BAUV	El Baul	19.13	44		P	15 41 08.3	-1.7
PB07	IPOC Station P	20.04	147	P	P	15 41 19.9	-0.2
PB09	IPOC Station P	20.45	146	Pn	P	15 41 25.7	+1.1
PB09				IAmb	IAmb	15 41 42.5	
	comp=Z,19nm,1.1s						
LVC	Limon Verde	21.28	147	P	P	15 41 33.9	+0.1
	comp=Z,10nm,1.0s,baz=303,slow=12,SNR=5.6						
LVC				LR	LR	15 50 39.4	
	comp=Z,255nm,18.7s,baz=312,slow=39						
	comp=Z,10nm,1.0s						
LVC	Limon Verde	21.28	147	P	P	15 41 33.7	0.0
LVC				IAmb	IAmb	15 41 47.4	
	comp=Z,20nm,1.2s						
PCRV	Puerto La Cruz	22.41	48	P	P	15 41 46.6	+1.0
	comp=Z,8.9nm,0.7s,baz=170,slow=11,SNR=4.5						
PCRV				LR	LR	15 52 12.3	
	comp=Z,277nm,20.0s,slow=41						
	comp=Z,8.9nm,0.7s						
SIV	San Ignacio	22.72	120	P	P	15 41 47.4	-1.5
	comp=Z,2.6nm,0.7s,baz=300,slow=11,SNR=12						
SIV				LR	LR	15 51 11.4	
	comp=Z,836nm,19.4s,baz=292,slow=38						
	comp=Z,2.6nm,0.7s						
CMIG	Matias Romero	25.66	329	LR	LR	15 50 30.6	
	comp=Z,126nm,21.0s,baz=180,slow=32						
TOSP	Speyside	26.24	52	P	P	15 42 18.4	-3.4
SJG	San Juan	27.37	33	LR	LR	15 55 07.6	
	comp=Z,164nm,18.2s,baz=206,slow=40						
MDP	Montagnes des	30.34	71	LR	LR	15 55 31.6	
	comp=Z,426nm,21.7s,baz=284,slow=37						
CPUP	Villa Florida	31.29	135	LR	LR	15 58 18.5	
	comp=Z,221nm,18.1s,baz=318,slow=41						
RPN	Rapa Nui	34.63	227	LR	LR	15 54 05.3	
	comp=Z,169nm,18.5s,baz=44,slow=30						
GO06	Curarrehue	35.62	167	P	P	15 43 44.7	+0.2
GO06				IAmb	IAmb	15 43 46.2	
	comp=Z,6.9nm,1.1s						
PLCA	Paso Flores	36.93	166	P	P	15 43 56.4	+0.8
	comp=Z,1.3nm,0.8s,baz=312,slow=14,SNR=3.1						
	comp=Z,1.3nm,0.8s						
W57A	Gilead	39.90	2	P	P	15 44 20.3	-0.1
W57A				IAmb	IAmb	15 44 26.9	
	comp=Z,10nm,0.6s						
TXAR	Lajitas Array	40.27	329	P	P	15 44 27.7	+4.0
	comp=Z,0.1nm,0.5s,baz=166,slow=9.3,SNR=1.5						
TXAR				PcP	PcP	15 46 29.5	+2.4
	comp=Z,0.5nm,0.8s,baz=152,slow=5.5,SNR=4.1						
TXAR				LR	LR	15 59 47.6	
	comp=Z,66nm,19.3s,baz=147,slow=34						
LPIG	La Paz	40.38	317	LR	LR	15 56 59.8	
	comp=Z,38nm,19.4s,baz=108,slow=30						
V53A	Saluda	40.42	358	P	P	15 44 23.5	-1.3
TKL	Tuckaleechee C	40.45	357	LR	LR	16 00 36.4	
	comp=Z,159nm,20.8s,baz=186,slow=35						
TZTN	Tazewell	41.32	357	P	P	15 44 30.6	-1.6
S54A	Dingess, Beckl	42.52	0	P	P	15 44 40.6	-1.4
S54A				IAmb	IAmb	15 44 41.6	
	comp=Z,17nm,1.2s						
JSRW	J. Sargeant Re	42.54	4	P	P	15 44 40.1	-1.9
Q51A	Peebles	43.78	358	P	P	15 44 49.4	-2.8
R40A	Maddies Statio	44.19	348	P	P	15 44 54.5	-0.9
R40A				IAmb	IAmb	15 44 58.9	
	comp=Z,6.7nm,0.8s						
RCBR	Riachuelo	45.23	93	LR	LR	16 07 02.9	
	comp=Z,278nm,19.2s,baz=84,slow=40						
N47A	Urbana	45.77	355	P	P	15 45 05.1	-2.8
W18A	Petrified Fore	47.97	328	P	P	15 45 24.2	-1.3
W18A				IAmb	IAmb	15 45 28.5	
	comp=Z,2.5nm,0.7s						
SADO	Sadowa	49.52	2	LR	LR	16 07 18.7	
	comp=Z,75nm,18.6s,baz=354,slow=37						
PDAR	Pinedale Array	53.94	334	P	P	15 46 13.2	+2.9
	comp=Z,1.5nm,0.8s,baz=126,slow=8.1,SNR=12						
	comp=Z,1.5nm,0.8s						
PDAR	Pinedale Array	53.94	334	P	P	15 46 07.9	-2.5
B35A	Bob, Littlefor	54.18	350	P	P	15 46 10.7	-1.0
NVAR	Mina Array Bea	55.09	325	P	P	15 46 22.9	+4.1
	comp=Z,0.3nm,0.6s,baz=160,slow=8.2,SNR=2.4						
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	56.39	349	P	P	15 46 28.1	+0.6
	comp=Z,3.3nm,0.7s,baz=151,slow=7.5,SNR=3.8						
	comp=Z,3.3nm,0.7s						
BCYI	Bear Canyon	56.87	333	P	P	15 46 29.6	-1.7
MCMT	McKenzie Canyo	57.02	334	P	P	15 46 32.0	-0.5
DLMT	Dillon	57.33	334	P	P	15 46 34.0	-0.5
DLMT				IAmb	IAmb	15 46 41.2	
	comp=Z,3.5nm,0.7s						
SCHQ	Schefferville	60.77	10	LR	LR	16 13 54.3	
	comp=Z,30nm,19.9s,baz=224,slow=36						
DBIC	Dimbokro	77.20	82	P	P	15 48 39.2	-1.6
	comp=Z,3.0nm,0.8s,baz=191,slow=5.2,SNR=3.0						
	comp=Z,3.0nm,0.8s						
DBIC	Dimbokro	77.20	82	P	P	15 48 38.0	-2.8
DBIC				IAmb	IAmb	15 48 44.1	
	comp=Z,12nm,1.4s						
VNA3	Neumayer Olymp	79.50	162	P	P	15 48 53.1	+0.6
SNAA	Sanae	81.72	162	P	P	15 49 04.7	+0.3
ESDC	Sonseca Array	83.47	49	P	P	15 49 14.8	+0.6
	comp=Z,1.7nm,0.9s,baz=280,slow=4.5,SNR=8.4						
	comp=Z,1.7nm,0.9s						
ILAR	Eielson Array	84.29	337	P	P	15 49 19.4	+1.7
	comp=Z,0.5nm,0.8s,baz=146,slow=3.8,SNR=5.6						
	comp=Z,0.5nm,0.8s						
TORD	Torodi Ar. Bea	84.35	76	P	P	15 49 18.5	-0.6
	comp=Z,1.4nm,0.6s,baz=310,slow=6.1,SNR=11						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	85.14	180	P	P	15 49 22.5	+0.3
H23K	Yukon River	85.73	337	P	P	15 49 24.9	-0.1
H23K				IAmb	IAmb	15 49 46.6	
	comp=Z,7.9nm,1.4s						
CAST	Castle Rocks	85.91	335	P	P	15 49 25.8	-0.1
CAST				IAmb	IAmb	15 49 29.8	
	comp=Z,7.3nm,1.4s						
EKA	Eskdalemuir Ar	87.34	34	P	P	15 49 33.0	0.0
	comp=Z,4.7nm,0.8s,baz=246,slow=4.4,SNR=11						
	comp=Z,4.7nm,0.8s						
H11N3	WAKE ISLAND Hyl	12.12	289	T	T	17 57 03.7	
	baz=86,slow=74,SNR=8.3						
H11N2	WAKE ISLAND Hyl	12.13	289	T	T	17 57 05.8	
	baz=86,slow=74,SNR=14						
H11N1	WAKE ISLAND Hyl	12.14	289	T	T	17 57 06.9	
	baz=86,slow=74,SNR=11						
H11S2	WAKE ISLAND Hyl	12.37	288	T	T	17 57 21.7	
	baz=88,slow=74,SNR=33						
H11S1	WAKE ISLAND Hyl	12.37	288	T	T	17 57 18.8	
	baz=88,slow=74,SNR=30						
H11S3	WAKE ISLAND Hyl	12.38	288	T	T	17 57 25.7	
	baz=88,slow=74,SNR=26						
ZALV	Zalesovo Beam comp=Z,0.6nm,0.5s,baz=254,slow=2.8,SNR=4.4	129.85	11	PKP	PKiKP	15 55 56.3	0.0
KURBB	Kurchatov Arra	131.44	17	PKP	PKiKP	15 56 00.0	+0.4
	comp=Z,0.2nm,0.4s,baz=322,slow=2.6,SNR=4.1						
ASAR	Alice Springs	135.40	229	PKP	PKiKP	15 56 08.2	-0.3
	comp=Z,0.6nm,0.8s,baz=122,slow=1.9,SNR=6.2						
WRA	Warramunga Arr	137.09	234	PKP	PKiKP	15 56 11.2	-0.8
	comp=Z,0.8nm,0.8s,baz=120,slow=1.7,SNR=10						
GTA	Gaotai	145.67	358	ePKPbc	PKPab	15 56 26.5	+0.8
GTA				sPKP		15 56 42.5	
PZH	PanZhiHua	158.36	353	PKP	PKPdf	15 56 40.3	-4.1
CMAR	Chiang Mai Arr	166.56	359	PKPab	PKPab	15 57 55.0	+0.6
	comp=Z,0.6nm,0.8s,baz=350,slow=4.6,SNR=4.8						

*NOU **25** 16:00:51.6, 13°19S×165°68E, h18km, mb4.8/11, Vanuatu Islands*
*IDC **25** 16:00:55.4±0.7, 13°75S×165°76E, h0km, mb4.2/11, mbtmp4.2/13, ML3.8/2, MS4.2/1, Error ellipse: s-maj=24.5km s-min=18.5km az=88.0*
*NEIC **25** 16:01:00.3±2.0, 13°73S±0°07×165°9E±0°1, h31km±5km, mb5.1/46, Error ellipse: s-maj=15.2km s-min=10.6km az=84.0*
ISC 25 16:01:00.9±0.5, 13°74S±0°06×165°77E±0°09, h36km, n85, σ0°98/85, mb5.0/35, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	4.59	150	P	Pn	16 02 07.2	-0.6
KOUNC	Koumac, New Ca	6.92	192		Pn	16 02 39.5	-0.2
KOUNC	Koumac, New Ca	6.92	192	P	Pn	16 02 39.5	-0.2
HNR	Honiara	7.13	306	Pn	Pn	16 02 42.0	-0.7
	441nm,0.3s,baz=208,slow=6.3,SNR=9.5						
HNR				Sn	Sn	16 03 59.1	-3.5
	300nm,0.3s,baz=30,slow=20,SNR=1.6						
HNR				LR	LR	16 05 17.1	
	comp=Z,2μm,20.8s,baz=18,slow=37						
HNR	Honiara	7.13	306	Pn	Pn	16 02 41.9	-0.8
LIFNC	LIFOU	7.13	169	Pn	Pn	16 02 40.9	-1.8
MARNC	Mare, Loyalty	7.99	165	Pn	Pn	16 02 54.6	+0.1
DZM	Mont Dzumac 2.4nm,0.3s,baz=314,slow=12,SNR=43	8.31	176	Pn	Pn	16 02 58.2	-0.7
DZM				Sn	Sn	16 04 29.7	-1.9
	baz=163,slow=19						
DZM				LR	LR	16 05 46.8	
	comp=Z,156nm,18.0s,baz=28,slow=35 14nm,0.5s						
DZM	Mont Dzumac	8.31	176		Pn	16 02 58.1	-0.8
DZM	Mont Dzumac	8.31	176	P	Pn	16 02 58.3	-0.7
NOUC	Port Laguerre	8.33	177	P	Pn	16 02 59.5	+0.4
YATNC	Mamie plateau,	8.34	173	P	Pn	16 02 59.7	+0.4
ONTNC	Ouen Toro	8.54	176	Pn	Pn	16 03 01.5	-0.5
ONTNC	Ouen Toro	8.54	176	P	Pn	16 03 02.0	-0.1
OUENC	Ouen Island, N	8.69	173		Pn	16 03 03.6	-0.4
OUENC	Ouen Island, N	8.69	173	P	Pn	16 03 04.1	0.0
EIDS	Eidsvold	18.02	228		Pn	16 05 09.6	+1.0
LHI	Lord Howe Isla	18.73	198	P	P	16 05 16.8	+0.2
LHI				IAmb	IAmb	16 05 22.1	
	comp=Z,137nm,1.4s						
CTA	Charters Tower	19.70	249	P	P	16 05 28.4	+1.1
	comp=Z,0.1nm,0.3s,baz=69,slow=14,SNR=2.8						
	comp=Z,7.6nm,1.1s						
CTAO	Charters Tower	19.70	249	Pn	P	16 05 29.3	+2.0
CAN	Canberra	26.27	212	P	P	16 06 32.4	-0.6
CAN				IAmb	IAmb	16 06 55.7	
	comp=Z,77nm,1.8s						
STKA	Stephens Creek	28.56	227	P	P	16 06 57.1	+3.6
	comp=Z,0.9nm,0.4s,baz=33,slow=9.3,SNR=4.0						
WR0	Warramunga Arr	30.49	254	P	P	16 07 11.1	+0.4
WB0	Warramunga Arr	30.60	254	P	P	16 07 12.5	+0.7
WB2	Warramunga Arr	30.66	254	P	P	16 07 13.4	+1.2
WRA	Warramunga Arr comp=Z,1.1nm,0.7s,baz=86,slow=9.0,SNR=1.9	30.67	254	P	P	16 07 10.9	-1.5
WRA				PcP	PcP	16 10 10.1	+0.1
	comp=Z,1.1nm,1.0s,baz=66,slow=2.0,SNR=5.5						
	comp=Z,1.1nm,0.7s						
AS31	Alice Springs	31.69	247	P	P	16 07 20.4	-0.9
ASAR	Alice Springs comp=Z,0.6nm,0.6s,baz=74,slow=9.8,SNR=15	31.69	247	P	P	16 07 19.4	-1.9
ASAR				PcP	PcP	16 10 12.6	-0.1
	comp=Z,0.9nm,0.8s,baz=74,slow=3.2,SNR=6.3						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	31.69	247	P	P	16 07 20.6	-0.6
H11S2	WAKE ISLAND Hy	32.04	2	T	T	16 41 28.8	
	baz=184,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	32.05	2	T	T	16 41 28.9	
	baz=184,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	32.06	2	T	T	16 41 31.9	
	baz=184,slow=76,SNR=19						
BBOO	Buckleboo	33.06	230	P	P	16 07 33.9	+0.7
BBOO				IAmb	IAmb	16 07 39.0	
	comp=Z,31nm,1.5s						
KNRA	Kununurra	35.82	262	P	P	16 07 57.0	-0.2
VNDA	Vanda	63.81	181	P	P	16 11 29.1	+0.1
	comp=Z,1.0nm,0.7s,baz=348,slow=8.6,SNR=7.8						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	63.81	181	P	P	16 11 28.9	-0.1
CASY	Casey	63.89	202	P	P	16 11 29.3	-0.4
CASY				IAmb	IAmb	16 12 13.3	
	comp=Z,12nm,1.6s						
USRK	Ussuriysk Ar.	65.36	334	P	P	16 11 40.2	+0.7
	comp=Z,2.6nm,0.8s,baz=149,slow=5.8,SNR=6.7						
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	73.22	294	P	P	16 12 29.4	+0.7
	comp=Z,0.8nm,0.6s,baz=132,slow=5.4,SNR=6.4						
	comp=Z,0.8nm,0.6s						

comp=Z,16nm,0.8s
DHY Denali Highway 84.70 19 P **P 16 13 31.1 +0.2**
DHY IAmb IAmb 16 13 43.1
comp=Z,25nm,1.8s
GLB Gilahina Butte 84.81 22 P **P 16 13 32.0 +0.6**
GLB IAmb IAmb 16 16 17.3
comp=Z,16nm,1.5s
H21K Melozitna Rive 85.00 16 P **P 16 13 33.6 +1.5**
H21K IAmb IAmb 16 13 44.7
comp=Z,12nm,1.2s
IMAR Indian Mountai 85.00 15 P **P 16 13 33.0 +0.9**
CTGM Chitina Glacie 85.42 23 P **P 16 13 34.5 0.0**
CTGM IAmb IAmb 16 13 35.8
comp=Z,6.9nm,0.9s
LOGN Logan Glacier 85.45 23 P **P 16 13 34.6 -0.2**
CCB Clear Creek Bu 85.68 18 P **P 16 13 34.3 -1.2**
CCB IAmb IAmb 16 13 35.2
comp=Z,8.2nm,1.2s
MDM Murphy Dome 85.78 18 P **P 16 13 35.0 -1.0**
MDM IAmb IAmb 16 13 36.3
comp=Z,11nm,1.1s
HDA Harding Lake 85.78 19 P **P 16 13 35.8 -0.2**
HDA IAmb IAmb 16 13 36.7
comp=Z,10nm,0.8s
H23K Yukon River 86.02 17 P **P 16 13 37.5 +0.2**
H23K IAmb IAmb 16 13 45.5
comp=Z,29nm,1.8s
IL31 86.05 18 P **P 16 13 36.6 -0.7**
IL31 IAmb IAmb 16 13 44.9
comp=Z,30nm,1.9s
ILAR Eielson Array 86.05 18 P **P 16 13 37.0 -0.4**
comp=Z,3.5nm,0.6s,baz=246,slow=5.0,SNR=37
comp=Z,3.5nm,0.6s
ILAR Eielson Array 86.05 18 P **P 16 13 36.5 -0.9**
M27K Edge Creek, AK 86.10 22 P **P 16 13 38.5 +0.6**
M27K IAmb IAmb 16 16 33.1
comp=Z,28nm,1.9s
J25K Salcha River, 86.41 19 P **P 16 13 38.5 -0.7**
J25K IAmb IAmb 16 13 50.8
comp=Z,6.5nm,0.9s
K05A Summer Lake 87.38 45 P **P 16 13 45.1 +0.5**
NVAR Mina Array Bea 87.74 50 P **P 16 13 46.5 0.0**
comp=Z,1.3nm,0.9s,baz=229,slow=6.3,SNR=5.9
comp=Z,1.3nm,0.9s
BELA Belgrano 2 87.81 176 P **P 16 13 44.8 -1.1**
TOLK Toolik Lake Re 88.08 15 P **P 16 13 47.8 +0.6**
BMAR Burnt Mountain 88.56 17 P **P 16 13 50.3 +0.8**
I07A Izee 88.81 44 P **P 16 13 50.3 -1.0**
U15A North Rim 91.70 53 P **P 16 14 05.9 +0.7**
MKAR Makanchi Array 95.49 317 P **P 16 14 22.0 -0.1**
comp=Z,0.6nm,0.7s,baz=102,slow=6.9,SNR=5.7
comp=Z,0.6nm,0.7s
ZALV Zalesovo Beam 95.74 324 P **P 16 14 21.6 -1.3**
comp=Z,0.4nm,0.4s,baz=151,slow=3.4,SNR=3.7
comp=Z,0.4nm,0.4s
KEST Kesra 149.53 320 PKPbc **PKPbc 16 20 47.7 +0.7**
comp=Z,6.2nm,0.7s,baz=276,slow=3.1,SNR=6.2
ESDC Sonseca Array 152.63 343 PKPbc **PKPbc 16 20 54.3 +0.3**
comp=Z,1.4nm,1.1s,baz=338,slow=2.1,SNR=4.5

NEIC ***25*** *16:10:01.6, 15°.40S×174°.83W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$3.34; $M_{\phi\phi}$-3.38; $M_{r\theta}$-0.76; $M_{\theta\phi}$3.23; $M_{\phi r}$-2.45; Fault plane solution: $M_0$5.32000×10^{17} NP1:ϕ_s23.17000°, δ88.68000°,λ-151.33000°. NP2:ϕ_s292.45000°, δ61.34000°,λ-1.50000°. Principal axes: T 5.1893, Plg19.0000°, Azm154.0000°; N 0.2524, Plg61.0000°, Azm26.0000°; P -5.4417, Plg21.0000°, Azm252.0000°;*

NEIC ***25*** *16:10:01.7±2.2, 15°.39S±0°.09×174°.83W±0°.08, h10km±1km, mb5.2/65, Ms_20 5.6/396, Mwb5.8/56, Mww5.8 Error ellipse: s-maj=16.8km s-min=11.8km az=150.0*

IDC ***25*** *16:10:02.0±0.6, 15°.56S×175°.24W, h0km, mb4.7/17, mbtmp4.7/18, ML4.5/1, MS5.4/58, Error ellipse: s-maj=22.9km s-min=14.6km az=135.0*

MOS ***25*** *16:10:03.1±2.1, 15°.51S×175°.37W, h10km, mb5.2/35, MS5.5/16, Error ellipse: s-maj=10.9km s-min=9.2km az=66.2*

BJI ***25*** *16:10:03.2±0.0, 15°.17S×175°.02W, h11km, mb4.9/32, mB5.5/28, Ms5.6/39, Ms7 5.5/36*

NOU ***25*** *16:10:05.5, 15°.58S×174°.89W, h27km, mb5.1/52, Tonga Islands*

GCMT ***25*** *16:10:08.7±0.1, 15°.38S×175°.05W, h12km, MW5.8/172, Moment Tensor Solution. s150,c305; s172,c512; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.41±.04; $M_{\theta\theta}$5.06±.04; $M_{\phi\phi}$-4.66±.04; $M_{r\theta}$0.93±.11; $M_{\theta\phi}$4.98±.04; $M_{\phi r}$-1.02±.11; Best double couple: $M_0$7.10100×10^{17} NP1:ϕ_s292.00000°, δ85.00000°, λ-10.00000°. NP2:ϕ_s23.00000°, δ80.00000°, λ-175.00000°. Principal axes: T 7.1870, Plg4.0000°, Azm337.0000°; N -0.1770, Plg78.0000°, Azm85.0000°; P -7.0150, Plg11.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *16:10:09, 15°.39S×174°.72W, h12km, Moment Tensor Solution. Duration: 16s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.50; $M_{\theta\theta}$4.78; $M_{\phi\phi}$-4.27; $M_{r\theta}$-2.61; $M_{\theta\phi}$3.40; $M_{\phi r}$1.13; Fault plane solution: $M_0$6.35000×10^{17} NP1: ϕ_s207.00000°, δ63.00000°, λ-178.00000°. NP2: ϕ_s116.00000°, δ88.00000°, λ-26.00000°. Principal axes: T 6.5709, Plg17.0000°, Azm164.0000°; N -0.4740, Plg63.0000°, Azm292.0000°; P -6.0970, Plg20.0000°, Azm68.0000°;*

ISC 25 16:10:03.1±0.3, 15°.52S±0°.05×175°.06W±0°.05, h10km, n709, σ2s25/488, mb5.1/75, MS5.6/282, 42C-18D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.19**	**292**	P	**Pn**	**16 10 57.1**	**+3.7**
AFI	**Afiamalu**	**3.56**	**64**	Pn	Pn	16 10 54.4	-4.1
18nm,0.3s,baz=65,slow=15,SNR=32							
AFI				LR	LR	16 12 12.4	
comp=Z,81μm,21.4s,baz=223,slow=35							
AFI				T	T	16 14 40.5	
479nm,0.7s,baz=129,slow=21,SNR=3.6							
AFI	**Afiamalu**	**3.56**	**64**	Pn	Pn	16 10 53.5	-4.9
AFI	**Afiamalu**	**3.56**	**64**	P	**Pn**	**16 10 56.3**	**-2.1**
NIUE	**Niue**	**6.05**	**127**	P	**Pn**	**16 11 31.0**	**-1.7**
baz=6.0,SNR=8.3							
NIUE	**Niue**	**6.05**	**127**	Pn	**Pn**	**16 11 30.8**	**-1.9**
NIUE	**Niue**	**6.05**	**127**	P	**Pn**	**16 11 31.2**	**-1.4**
MSVF	**Nonsavu**	**6.96**	**251**	Pn	**Pn**	**16 11 46.7**	**+1.4**
1.4nm,0.3s,baz=66,slow=18,SNR=10							
MSVF				LR	LR	16 14 05.8	
comp=Z,112μm,19.3s,baz=72,slow=36							
MSVF	**Nonsavu**	**6.96**	**251**	Pn	**Pn**	**16 11 47.9**	**+2.6**
MSVF	**Nonsavu**	**6.96**	**251**	P	**Pn**	**16 11 47.9**	**+2.6**
MSVF	**Nonsavu**	**6.96**	**251**	P	**Pn**	**16 11 48.3**	**+3.0**
RAO	**Raoul Island**	**13.92**	**190**	LR	LR	16 17 53.1	
comp=Z,31μm,18.6s,baz=12,slow=34							
RAO	**Raoul Island**	**13.92**	**190**	P	**Pn**	**16 13 22.5**	**+2.0**
RAR	**Rarotonga**	**15.57**	**114**	Pn	**Pn**	**16 13 41.3**	**-1.5**
0.6nm,0.3s,baz=331,slow=19,SNR=3.5							
DVP	**Devils Point**	**16.20**	**260**	P	**P**	**16 13 54.2**	**0.0**
MARNC	**Mare, Loyalty**	**17.09**	**247**	P	**P**	**16 14 03.0**	**-1.0**
MARNC	**Mare, Loyalty**	**17.09**	**247**	P	**P**	**16 14 03.4**	**-0.6**
LIFNC	**LIFOU**	**17.61**	**250**	P	**Pn**	**16 14 07.8**	**-0.9**
LIFNC	**LIFOU**	**17.61**	**250**	P	**P**	**16 14 09.9**	**+0.2**
YATNC	**Mamie plateau,**	**18.28**	**246**	P	**P**	**16 14 19.4**	**+2.3**
OUENC	**Ouen Island, N**	**18.43**	**245**	P	**Pn**	**16 14 16.9**	**-2.0**
OUENC				IAmb	IAmb	16 14 25.0	
comp=Z,296nm,1.3s							
OUENC	**Ouen Island, N**	**18.43**	**245**	P	**P**	**16 14 20.1**	**+1.3**
DZM	**Mont Dzumac**	**18.68**	**247**	*e*Pn	**Pn**	**16 14 21.7**	**-0.2**
comp=Z,442nm,1.4s							
DZM				*e*LR	LR	16 18 43.9	
comp=Z,56μm,25.4s							
DZM	**Mont Dzumac**	**18.68**	**247**	P	**P**	**16 14 20.7**	**-0.9**
comp=Z,1.4nm,0.3s,baz=68,slow=18,SNR=30							
DZM				LR	LR	16 20 21.4	
comp=Z,26μm,20.7s,baz=73,slow=34							
comp=Z,44nm,0.7s							
DZM	**Mont Dzumac**	**18.68**	**247**	P	**P**	**16 14 20.3**	**-1.3**
DZM	**Mont Dzumac**	**18.68**	**247**	P	**Pn**	**16 14 22.6**	**+0.7**
ONTNC	**Ouen Toro**	**18.74**	**246**	P	**P**	**16 14 20.7**	**-1.4**
ONTNC				IAmb	IAmb	16 14 28.9	
comp=Z,284nm,1.2s							
ONTNC	**Ouen Toro**	**18.74**	**246**	P	**Pn**	**16 14 24.4**	**+1.8**
NOUC	**Port Laguerre**	**18.81**	**247**	P	**Pn**	**16 14 24.0**	**+0.6**
KOUNC	**Koumac, New Ca**	**20.26**	**253**	IAms_20	IAms_20	16 21 08.1	
comp=Z,36μm,20.0s							
KOUNC	**Koumac, New Ca**	**20.26**	**253**	P	Pn	16 14 41.9	+1.1
MXZ	**Matakaoa Point**	**22.73**	**194**	IAms_20	IAms_20	16 22 30.2	
comp=Z,27μm,21.0s							
URZ	**Urewera**	**23.68**	**195**	P	**P**	**16 15 14.5**	**-0.5**
comp=Z,23nm,0.9s,baz=98,slow=9.7,SNR=4.7							
comp=Z,23nm,0.9s							
URZ	**Urewera**	**23.68**	**195**	IAms_20	IAms_20	16 23 40.6	
comp=Z,24μm,21.0s							
PAE	**Paea**	**24.51**	**99**	*e*T	T	16 40 42.0	
comp=Z,8.1nm,0.3s							
PPT2	**Papeete2**	**24.51**	**98**	*e*T	T	16 40 42.8	
comp=Z,18nm,0.4s							
HIZ	**Hauiti**	**24.57**	**199**	IAms_20	IAms_20	16 23 37.3	
comp=Z,19μm,21.0s							
BKZ	**Black Stump Fm**	**24.70**	**196**	IAms_20	IAms_20	16 24 23.5	
comp=Z,17μm,20.0s							
TIAR	**Tiarei**	**24.73**	**98**	*e*T	T	16 40 51.5	
comp=Z,3.1nm,0.2s							
TVO	**Taravao**	**24.82**	**99**	*e*T	T	16 40 57.8	
comp=Z,1.7nm,0.2s							
TBI	**Tubuai**	**25.34**	**112**	*e*LR	LR	16 21 59.7	
TBI	comp=Z,87μm,23.0s						
				*e*LR	LR	16 21 59.8	
comp=Z,6μm,24.8s							
TBI	**Tubuai**	**25.34**	**112**	*e*T	T	16 41 39.7	
comp=Z,33nm,0.3s							
MEH	**Mehetia**	**25.95**	**99**	*e*T	T	16 42 38.3	
comp=Z,16nm,0.3s							
QRZ	**Quartz Range**	**27.43**	**201**	IAms_20	IAms_20	16 27 42.1	
comp=Z,13μm,19.0s							
NNZ	**Nelson**	**27.50**	**199**	IAms_20	IAms_20	16 27 15.9	
comp=Z,14μm,20.0s							
THZ	**Tophouse**	**28.14**	**199**	IAms_20	IAms_20	16 26 33.9	
comp=Z,15μm,20.0s							
KWAJ	**Kwajalein Atol**	**29.64**	**323**	IAms_20	IAms_20	16 25 02.2	
comp=Z,17μm,20.0s							
RPZ	**Rata Peaks**	**30.50**	**200**	LR	LR	16 28 32.7	
comp=Z,13μm,20.0s,baz=50,slow=36							
RPZ	**Rata Peaks**	**30.50**	**200**	IAms_20	IAms_20	16 28 12.2	
comp=Z,13μm,20.0s							
LBZ	**Lake Benmore**	**31.38**	**201**	IAms_20	IAms_20	16 28 49.7	
comp=Z,17μm,20.0s							
AUWSH	**Wavell State H**	**31.86**	**243**	P	**P**	**16 16 29.9**	**+1.4**
WKZ	**Wanaka**	**32.17**	**202**	IAms_20	IAms_20	16 28 28.7	
comp=Z,11μm,20.0s							
MLZ	**Mavora Lakes**	**32.96**	**202**	IAms_20	IAms_20	16 28 53.6	
comp=Z,9μm,18.0s							
EIDS	**Eidsvold**	**33.12**	**247**	P	**P**	**16 16 41.3**	**+1.7**
WHZ	**Wether Hill Ro**	**33.47**	**202**	IAms_20	IAms_20	16 29 19.1	
comp=Z,9μm,18.0s							
ARMA	**Armidale**	**33.91**	**238**	P	**P**	**16 16 46.9**	**+0.2**
baz=34,SNR=4.6							
PATS	**Pohnpei**	**34.48**	**308**	IAms_20	IAms_20	16 27 06.3	
comp=Z,15μm,20.0s							
TAOE	**Nuku Hiva Isla**	**34.73**	**83**	*e*S	**S**	**16 22 22.6**	**-1.7**
comp=Z,1μm,28.8s							
TAOE				*e*LR	LR	16 26 22.4	
comp=Z,17μm,21.9s							
TAOE	**Nuku Hiva Isla**	**34.73**	**83**	*e*T	T	16 53 21.5	
comp=Z,71nm,0.2s							
RMQ	**Roma**	**35.38**	**246**	P	**P**	**16 16 57.7**	**-1.5**
baz=36,SNR=9.8							
RMQ	**Roma**	**35.38**	**246**	P	**P**	**16 16 57.9**	**-1.4**
AULRC	**Lightning Ridg**	**36.68**	**241**	P	**P**	**16 17 12.1**	**+1.8**
AUDCS	**Dubbo College**	**36.92**	**237**	P	**P**	**16 17 13.9**	**+1.6**
CTA	**Charters Tower**	**37.05**	**257**	P	**P**	**16 17 14.7**	**+1.1**
comp=Z,14nm,1.1s,baz=92,slow=12,SNR=3.8							
CTA				LR	LR	16 30 46.6	
comp=Z,7μm,19.0s,baz=79,slow=34							
CTA	**Charters Tower**	**37.05**	**257**	P	**P**	**16 17 15.4**	**+1.8**
CTAO	**Charters Tower**	**37.05**	**257**	P	**P**	**16 17 11.4**	**-2.2**
CTAO	**Charters Tower**	**37.05**	**257**	P	**P**	**16 17 11.4**	**-2.2**
CTAO				pmax	pmax		
comp=Z,19nm,1.2s							
CTAO				MLR	MLR		
comp=Z,7μm,19.0s							
CTAO	**Charters Tower**	**37.05**	**257**	P	**P**	**16 17 15.3**	**+1.7**
PMG	**Port Moresby**	**37.35**	**275**	P	**P**	**16 17 16.6**	**+0.5**
comp=Z,49nm,1.1s,baz=109,slow=16,SNR=3.9							
PMG				LR	LR	16 28 47.1	
comp=Z,5μm,20.2s,baz=78,slow=30							
comp=Z,49nm,1.1s							
PMG	**Port Moresby**	**37.35**	**275**	P	**P**	**16 17 15.6**	**-0.5**
PMG				IAmb	IAmb	16 17 22.2	
comp=Z,65nm,1.1s							
PMG	**Port Moresby**	**37.35**	**275**	P	**P**	**16 17 15.6**	**-0.5**
PMG				pmax	pmax		
comp=Z,65nm,1.2s							
PMG				MLR	MLR		
comp=Z,6μm,21.0s							
PMG	**Port Moresby**	**37.35**	**275**	P	P	16 17 21.0	+4.9
PMG	**Port Moresby**	**37.35**	**275**	P	**P**	**16 17 16.3**	**+0.2**
PMG	**Port Moresby**	**37.35**	**275**	P	**P**	**16 17 16.1**	**0.0**
CAN	**Canberra**	**37.70**	**232**	IAms_20	IAms_20	16 33 36.8	
comp=Z,7μm,19.0s							
H11S2	**WAKE ISLAND Hy**	**38.27**	**331**	T	T	16 58 15.2	
baz=149,slow=76,SNR=132							
H11S3	**WAKE ISLAND Hy**	**38.28**	**331**	T	T	16 58 15.4	
baz=149,slow=76,SNR=102							
H11S1	**WAKE ISLAND Hy**	**38.28**	**331**	T	T	16 58 16.5	
baz=149,slow=76,SNR=155							
MTSU	**Mount Surprise**	**38.92**	**260**	P	**P**	**16 17 28.7**	**-0.7**
baz=39,SNR=8.1							
MTSU	**Mount Surprise**	**38.92**	**260**	P	**P**	**16 17 28.2**	**-1.2**
WAKE	**Wake Island**	**38.98**	**332**	IAms_20	IAms_20	16 30 01.8	
comp=Z,8μm,20.0s							
CMSA	**Cobar Meteorol**	**39.12**	**239**	P	**P**	**16 17 31.3**	**+0.4**
baz=39,SNR=11							
CMSA	**Cobar Meteorol**	**39.12**	**239**	P	**P**	**16 17 31.1**	**+0.2**
H11N3	**WAKE ISLAND Hy**	**39.25**	**333**	T	T	16 59 27.0	
baz=151,slow=76,SNR=198							
H11N1	**WAKE ISLAND Hy**	**39.25**	**333**	T	T	16 59 23.3	
baz=151,slow=76,SNR=275							
H11N2	**WAKE ISLAND Hy**	**39.26**	**333**	T	T	16 59 28.4	
baz=151,slow=76,SNR=220							
QLP	**Quilpie**	**39.40**	**247**	P	**P**	**16 17 31.9**	**-1.4**
COEN	**Coen**	**40.38**	**267**	P	**P**	**16 17 41.4**	**-0.1**
baz=40,SNR=6.2							
COEN	**Coen**	**40.38**	**267**	P	**P**	**16 17 40.8**	**-0.8**
COEN	**Coen**	**40.38**	**267**	P	**P**	**16 17 40.2**	**-1.4**
TOO	**Toolangi**	**41.16**	**230**	P	**P**	**16 17 49.7**	**+1.9**
baz=41,SNR=5.4							
TOO	**Toolangi**	**41.16**	**230**	P	**P**	**16 17 47.2**	**-0.6**
TOO	**Toolangi**	**41.16**	**230**	P	**P**	**16 17 47.2**	**-0.6**
TOO				pmax	pmax		
comp=Z,40nm,1.2s							
TOO	**Toolangi**	**41.16**	**230**	P	**P**	**16 17 49.6**	**+1.9**
TAU	**Tasmania Unive**	**42.15**	**222**	IAms_20	IAms_20	16 33 10.2	
comp=Z,8μm,19.0s							
BRAT	**Ballarat**	**42.31**	**231**	P	**P**	**16 17 59.2**	**+2.1**
STKA	**Stephens Creek**	**42.59**	**240**	P	**P**	**16 17 58.5**	**-1.1**
comp=Z,21nm,1.2s,baz=97,slow=8.7,SNR=12							
STKA				LR	LR	16 33 44.1	
comp=Z,7μm,21.0s,baz=78,slow=34							
comp=Z,21nm,1.2s							
STKA	**Stephens Creek**	**42.59**	**240**	P	**P**	**16 18 00.4**	**+0.8**
baz=43,SNR=9.0							
STKA	**Stephens Creek**	**42.59**	**240**	P	**P**	**16 17 58.2**	**-1.3**
STKA	**Stephens Creek**	**42.59**	**240**	P	**P**	**16 17 58.3**	**-1.3**
STKA				pmax	pmax		
comp=Z,9.0nm,1.2s							
STKA	**Stephens Creek**	**42.59**	**240**	P	**P**	**16 18 01.3**	**+1.7**
INKA	**Innaminka**	**42.63**	**246**	P	**P**	**16 17 59.5**	**-0.4**
QIS	**Mount Isa**	**43.29**	**256**	P	**P**	**16 18 07.7**	**+2.3**
baz=44,SNR=3.5							
QIS	**Mount Isa**	**43.29**	**256**	P	**P**	**16 18 08.0**	**+2.6**
MIDW	**Midway**	**43.53**	**357**	IAms_20	IAms_20	16 31 46.3	
comp=Z,8μm,21.0s							
HTT	**Hallett**	**45.12**	**238**	P	**P**	**16 18 21.6**	**+1.6**
baz=45,SNR=3.4							
HTT	**Hallett**	**45.12**	**238**	P	**P**	**16 18 21.5**	**+1.6**
LCRK	**Leigh Creek**	**45.19**	**242**	P	**P**	**16 18 22.6**	**+2.1**
WHYH	**Whyalla**	**46.15**	**239**	P	**P**	**16 18 29.2**	**+1.2**
OOD	**Oodnadatta**	**47.09**	**246**	P	**P**	**16 18 38.1**	**+2.6**
BBOO	**Buckleboo**	**47.37**	**240**	P	**P**	**16 18 36.7**	**-0.9**
BBOO				IAmb	IAmb	16 18 49.3	
comp=Z,37nm,1.1s							
BBOO	**Buckleboo**	**47.37**	**240**	P	**P**	**16 18 37.4**	**-0.2**
WR0	**Warramunga Arr**	**48.07**	**257**	P	**P**	**16 18 40.2**	**-3.0**
WR0				IAmb	IAmb	16 18 47.1	
comp=Z,19nm,1.1s							
WB0	**Warramunga Arr**	**48.22**	**257**	P	**P**	**16 18 41.1**	**-3.3**
WB2	**Warramunga Arr**	**48.25**	**257**	P	**P**	**16 18 41.0**	**-3.6**
WRAB	**Tennant Creek**	**48.25**	**257**	P	**P**	**16 18 41.2**	**-3.4**
WRAB				IAmb	IAmb	16 18 48.4	
comp=Z,32nm,1.1s							
WRAB	**Tennant Creek**	**48.25**	**257**	IAms_20	IAms_20	16 36 41.3	
comp=Z,6μm,22.0s							
WRAB	**Tennant Creek**	**48.25**	**257**	P	**P**	**16 18 41.2**	**-3.4**
WRAB				pmax	pmax		
comp=Z,32nm,1.1s							
WRAB				MLR	MLR		
comp=Z,6μm,22.0s							
WRA	**Warramunga Arr**	**48.26**	**257**	P	**P**	**16 18 41.8**	**-2.9**
comp=Z,13nm,0.9s,baz=88,slow=6.5,SNR=55							
WRA				LR	LR	16 37 02.9	
comp=Z,6μm,21.6s,baz=92,slow=34							
comp=Z,13nm,0.9s							
WRA	**Warramunga Arr**	**48.26**	**257**	P	**P**	**16 18 41.2**	**-3.4**
WRA	**Warramunga Arr**	**48.26**	**257**	*i* P	**P**	**16 18 42.0**	**-2.7**
WRA				pmax	pmax		
comp=Z,12nm,0.9s							
AS01	**Alice Springs**	**48.51**	**252**	P	**P**	**16 18 44.4**	**-2.2**
AS31	**Alice Springs**	**48.55**	**252**	P	**P**	**16 18 44.1**	**-2.9**
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**16 18 44.9**	**-2.1**
comp=Z,22nm,0.9s,baz=88,slow=8.0,SNR=62							
ASAR				LR	LR	16 37 12.7	
comp=Z,16μm,21.9s,baz=86,slow=34							
comp=Z,22nm,0.9s							
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**16 18 43.9**	**-3.1**
MULG	**Mulgathing**	**48.74**	**243**	P	**P**	**16 18 46.7**	**-1.5**
GUMO	**Guam**	**49.06**	**304**	LR	LR	16 36 34.2	
comp=Z,3μm,19.9s,baz=111,slow=32							
KDU	**Kakadu**	**50.86**	**266**	P	**P**	**16 19 04.2**	**-0.4**
baz=51,SNR=7.1							
KDU	**Kakadu**	**50.86**	**266**	P	**P**	**16 19 07.8**	**+3.2**
MTN	**Manton Dam**	**52.13**	**266**	P	**P**	**16 19 13.0**	**-1.1**
baz=52,SNR=4.5							
MTN	**Manton Dam**	**52.13**	**266**	P	**P**	**16 19 12.2**	**-1.8**
MTN				IAmb	IAmb	16 19 28.0	
comp=Z,68nm,1.8s							
WRKA	**Warakurna**	**53.65**	**250**	P	**P**	**16 19 23.2**	**-2.1**
baz=54,SNR=37							
WRKA	**Warakurna**	**53.65**	**250**	P	**P**	**16 19 23.2**	**-2.1**
KNRA	**Kununurra**	**53.96**	**262**	P	**P**	**16 19 25.1**	**-2.5**
baz=54,SNR=4.3							
KNRA	**Kununurra**	**53.96**	**262**	P	**P**	**16 19 24.5**	**-3.1**
KNRA	**Kununurra**	**53.96**	**262**	P	**P**	**16 19 25.4**	**-2.2**
SIJI	**Sorong**	**54.90**	**280**	P	**P**	**16 19 33.0**	**-1.5**
comp=Z,22nm,0.9s,baz=80,slow=9.1,SNR=8.6							
SIJI				LR	LR	16 41 48.0	
comp=Z,4μm,20.5s,baz=114,slow=35							
comp=Z,22nm,0.9s							
JCJ	**Chichijima**	**59.30**	**315**	LR	LR	16 41 25.6	
comp=Z,6μm,20.6s,baz=126,slow=32							
SOEI	**Soe**	**59.32**	**268**	P	**P**	**16 20 04.0**	**-2.0**
SOEI	**Soe**	**59.32**	**268**	P	**P**	**16 20 07.3**	**+1.4**
SANI	**Sanana**	**59.58**	**277**	P	**P**	**16 20 07.7**	**+0.1**
BATI	**Baumata**	**59.81**	**267**	LR	LR	16 44 28.2	
comp=Z,4μm,19.7s,baz=117,slow=35							
PSA00	**Pilbara Seismi**	**61.64**	**254**	P	**P**	**16 20 18.9**	**-2.7**
PSA00				IAmb	IAmb	16 20 36.8	
comp=Z,25nm,1.4s							
PSA00	**Pilbara Seismi**	**61.64**	**254**	P	**P**	**16 20 20.5**	**-1.0**
MBWA	**Marble Bar**	**61.79**	**254**	P	**P**	**16 20 20.4**	**-2.2**
KLBR	**Kellerberrin**	**62.77**	**242**	P	**P**	**16 20 30.0**	**+1.0**
DAV	**Davao City (W)**	**62.93**	**286**	LR	LR	16 44 53.4	
comp=Z,2μm,21.6s,baz=107,slow=33							
SBA	**Scott Base**	**63.01**	**184**	P	**P**	**16 20 29.2**	**-0.6**
SBA				IAmb	IAmb	16 20 33.4	
comp=Z,15nm,0.9s							
SBA	**Scott Base**	**63.01**	**184**	P	**P**	**16 20 29.2**	**-0.6**
SBA				pmax	pmax		
comp=Z,15nm,1.0s							
SBA				MLR	MLR		
comp=Z,2μm,19.0s							
VNDA	**Vanda**	**63.10**	**185**	P	**P**	**16 20 30.9**	**+0.5**
comp=Z,6.8nm,0.9s,baz=8.6,slow=6.0,SNR=33							
VNDA				LR	LR	16 44 56.4	
comp=Z,923nm,20.0s,baz=30,slow=33							
comp=Z,6.8nm,0.9s							
VNDA	**Vanda**	**63.10**	**185**	P	**P**	**16 20 30.0**	**-0.4**
VNDA	**Vanda**	**63.10**	**185**	P	**P**	**16 20 30.0**	**-0.4**
VNDA				pmax	pmax		
comp=Z,13nm,1.2s							
NWAO	**Narrogin (SRO)**	**63.17**	**241**	LR	LR	16 46 03.1	
comp=Z,8μm,21.8s,baz=306,slow=34							
KAPI	**Kappang**	**64.78**	**272**	P	**P**	**16 20 44.5**	**+2.0**
comp=Z,3.4nm,0.4s,baz=157,slow=1.6,SNR=5.1							
KAPI				LR	LR	16 46 56.8	
comp=Z,1μm,21.1s,baz=104,slow=34							
KAPI	**Kappang**	**64.78**	**272**	*i* P	**P**	**16 20 40.6**	**-1.9**
KAPI				pmax	pmax		
comp=Z,27nm,1.3s							
KAPI	**Kappang**	**64.78**	**272**	P	**P**	**16 20 38.3**	**-4.2**
comp=Z,12nm,1.1s							
KAPI	**Kappang**	**64.78**	**272**	P	**P**	**16 20 43.9**	**+1.4**
JHJ	**Hachijo jima 2**	**64.79**	**319**	LR	LR	16 49 13.9	
comp=Z,2μm,18.0s,baz=114,slow=36							
PLAI	**Plampang**	**65.78**	**267**	P	**P**	**16 20 51.4**	**+2.4**
MJAR	**Matsushiro Arr**	**68.00**	**321**	LR	LR	16 45 13.7	
comp=Z,3μm,21.8s,baz=126,slow=31							
MAJO	**Matsushiro**	**68.00**	**321**	IAms_20	IAms_20	16 44 39.0	
comp=Z,4μm,22.0s							
SHEM	**Shemya Is, Ala**	**68.61**	**353**	LR	LR	16 45 45.8	
comp=Z,5μm,20.0s,baz=141,slow=31							
MYLDM	**Lahad Datu**	**68.90**	**282**	P	**P**	**16 21 08.8**	**0.0**
ERM	**Erimo**	**69.00**	**328**	IAms_20	I

comp=Z,8.0nm,1.0s
LRMC Laurel Mtn Rad 74.30 46 P **P 16 21 44.4 +3.3**
baz=237
QSPA South Pole Qui 74.53 180 LR LR 16 49 05.1
comp=Z,2μm,21.4s,baz=40,slow=32
QSPA South Pole Qui 74.53 180 P **P 16 21 40.6 -1.2**
QSPA IAmb IAmb 16 21 44.7
comp=Z,28nm,1.1s
YBH Yreka Blue Hor 74.67 38 LR LR 16 48 25.4
comp=Z,2μm,20.4s,baz=236,slow=31
BELC Belle Mtn. Jos 74.71 48 P **P 16 21 44.6 +1.1**
baz=239
MPMC Manual Prospec 74.75 45 P **P 16 21 45.2 +1.5**
baz=237,SNR=16
GSC Goldstone, Bar 74.82 46 P **P 16 21 46.0 +2.0**
baz=238,SNR=7.3
HEC Hector,Ludlow 74.90 47 P **P 16 21 45.4 +1.0**
baz=238,SNR=8.6
BC3 Big Chuckawall 74.92 48 P **P 16 21 45.1 +0.5**
baz=239
KSRS Korea Array 75.13 316 P **P 16 21 46.9 +1.3**
comp=Z,1.6nm,1.0s,baz=108,slow=12,SNR=2.7
KSRS LR LR 16 52 10.2
comp=Z,2μm,19.4s,baz=120,slow=34
comp=Z,1.6nm,1.0s
KSAR Wonju Array Be 75.15 316 P P 16 21 40.9 -4.8
KSAR Wonju Array Be 75.15 316 P P 16 21 40.9 -4.8
GMRC Granite Mounta 75.35 47 P **P 16 21 48.2 +1.1**
baz=239,SNR=5.8
KDAK Kodiak Island 75.36 12 LR LR 16 49 09.4
comp=Z,3μm,20.0s,baz=226,slow=31
KDAK Kodiak Island 75.36 12 IAMs_20 IAMs_20 16 47 24.2
comp=Z,3μm,22.0s
KDAK Kodiak Island 75.36 12 *i* P **P 16 21 47.5 +1.0**
KDAK pmax pmax
comp=Z,26nm,1.0s
KDAK Kodiak Island 75.36 12 P **P 16 21 48.8 +2.4**
baz=202
IRM Iron Mountain 75.40 48 P **P 16 21 48.7 +1.4**
baz=239,SNR=7.0
RYN Ryan 75.46 42 P **P 16 21 45.1 -2.6**
NVAR Mina Array Bea 75.49 43 P **P 16 21 50.0 +2.0**
comp=Z,4.2nm,1.0s,baz=232,slow=9.5,SNR=18
NVAR LR LR 16 48 40.5
comp=Z,3μm,19.8s,baz=241,slow=31
comp=Z,4.2nm,1.0s
TUQ Turquoise Moun 75.50 46 P **P 16 21 49.3 +1.3**
baz=239,SNR=5.8
NV11 Mina Array Sit 75.59 43 P **P 16 21 44.9 -3.5**
NV11 IAmb IAmb 16 22 10.2
comp=Z,58nm,1.8s
KSM Kuching 75.60 276 P **P 16 21 46.1 -2.8**
KSM IAmb IAmb 16 22 04.7
comp=Z,26nm,1.1s
KSM Kuching 75.60 276 P P 16 21 43.6 -5.3
KSM Kuching 75.60 276 P **P 16 21 51.0 +2.1**
KVN Kaiserville 75.97 42 P **P 16 21 47.3 -3.4**
KVN IAmb IAmb 16 22 12.2
comp=Z,33nm,1.7s
KVN Kaiserville 75.97 42 P **P 16 21 47.3 -3.4**
KVN pmax pmax
comp=Z,33nm,1.7s
INCN Inchon 76.01 316 IAMs_20 IAMs_20 16 51 46.4
comp=Z,3μm,20.0s
LEM Lembang 76.03 267 LR LR 16 54 11.4
comp=Z,2μm,21.5s,baz=113,slow=35
TPNV Topopah Spring 76.06 45 IAMs_20 IAMs_20 16 49 30.5
comp=Z,4μm,20.0s
QZH Quanzhou 76.14 301⇑ *i* P **P 16 21 55.8 +4.2**
QZH S **S 16 31 39.3 +3.4**
QZH LR LR
comp=Z,900nm,17.5s
QZH LR LR
comp=Z,780nm,17.1s
QZH LR LR
comp=Z,2μm,30.3s
MOD Modoc Plateau 76.21 39 IAMs_20 IAMs_20 16 50 32.4
comp=Z,2μm,19.0s
Q19K Cape Douglas, 76.22 11 IAMs_20 IAMs_20 16 49 11.0
comp=Z,3μm,20.0s
P18K Big Mountain, 76.37 10 P **P 16 21 52.8 +0.5**
baz=199
USRK Ussuriysk Ar. 76.52 324 P **P 16 21 54.8 +1.4**
comp=Z,4.4nm,1.2s,baz=165,slow=7.4,SNR=2.8
USRK LR LR 16 49 16.0
comp=Z,8μm,21.9s,baz=119,slow=31
comp=Z,4.4nm,1.2s
SSE Sheshan 76.75 308 P **P 16 21 54.0 -1.0**
SSE S **S 16 31 35.5 -6.9**
SSE pmax pmax
comp=Z,120nm,1.9s
SSE pmax pmax
comp=Z,69nm,5.5s
SSE LR LR
comp=Z,410nm,22.8s
SSE LR LR
comp=Z,590nm,23.0s
O18K Koktuh Hills 76.81 10 P **P 16 21 57.0 +2.3**
baz=199
P19K Oil Pt 76.97 11 IAMs_20 IAMs_20 16 50 06.0
comp=Z,4μm,20.0s
CNPM China Poot 77.25 12 IAMs_20 IAMs_20 16 49 49.0
comp=Z,3μm,20.0s
R11A Troy Canyon, C 77.25 44 P **P 16 21 59.9 +2.0**
baz=238,SNR=6.5
HOM Homer 77.29 12 IAMs_20 IAMs_20 16 51 11.1
comp=Z,3μm,20.0s
N18K Kilae Creek 77.48 10 P **P 16 21 55.0 -3.4**
N18K IAmb IAmb 16 24 38.7
comp=Z,52nm,1.9s
BRLK Bradley Lake 77.54 12 IAMs_20 IAMs_20 16 50 27.3
comp=Z,3μm,20.0s
BRSE Bradley Lake S 77.55 12 P **P 16 22 01.2 +2.3**
baz=204
OZB Mount Ozzard 77.75 31 P P 16 21 56.0 -4.2
Q23K Middleton Isla 78.25 15 IAMs_20 IAMs_20 16 50 44.4
comp=Z,3μm,20.0s
O22K Cooper Landing 78.43 12 IAMs_20 IAMs_20 16 49 52.4
comp=Z,3μm,21.0s
GRNR Gornyy 78.46 331 *e* P P 16 21 57.8 -6.3
GRNR MLR MLR
comp=E,850nm,17.0s
GRNR MLR MLR
comp=N,760nm,16.0s
SPCR Spurr Chakacha 78.60 11 P **P 16 22 07.2 +2.4**
baz=202
BBB Bella Bella 78.71 27 LR LR 16 50 18.2
comp=N,1μm,19.8s,baz=234,slow=31
ELK Elko 78.73 42 LR LR 16 49 51.1
comp=N,2μm,21.0s,baz=246,slow=30
WUAZ Wupatki 78.76 48 IAMs_20 IAMs_20 16 51 53.0
comp=Z,3μm,18.0s
WUAZ Wupatki 78.76 48 P **P 16 22 08.0 +1.6**
baz=242
M19K Big River Lodg 78.88 10 IAMs_20 IAMs_20 16 54 59.5
comp=Z,2μm,18.0s
NJ2 Nanjing 78.96 308 *e* P **P 16 22 05.5 -1.8**
NJ2 SS SS 16 37 08.3 -3.8
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 LR LR
comp=Z,1μm,23.0s
NJ2 LR LR
comp=Z,2μm,22.6s
NJ2 LR LR
comp=Z,3μm,23.5s
RC01 Rabbit Creek A 78.98 12 P **P 16 22 04.6 -2.2**
RC01 Rabbit Creek A 78.98 12 P **P 16 22 08.8 +2.0**
baz=205
HIN Hinchinbrook I 79.07 14 IAMs_20 IAMs_20 16 49 41.1
comp=Z,4μm,21.0s
PWL Port Wells 79.07 13 P **P 16 22 05.8 -1.5**
PWL IAmb IAmb 16 22 13.8
comp=Z,18nm,0.9s
PWL IAMs_20 IAMs_20 16 52 06.2
comp=Z,3μm,19.0s
PWL Port Wells 79.07 13 P **P 16 22 09.2 +1.9**
baz=206
M20K Styx River 79.07 10 IAMs_20 IAMs_20 16 51 01.5
comp=Z,3μm,20.0s
GAMB Gambell 79.08 2 IAMs_20 IAMs_20 16 54 22.6
comp=Z,3μm,18.0s
SUA Susitna One 79.12 12 P **P 16 22 06.6 -1.1**
SUA IAmb IAmb 16 22 13.9
comp=Z,16nm,0.7s
SUA IAMs_20 IAMs_20 16 51 02.8
comp=Z,4μm,21.0s
SUA Susitna One 79.12 12 P **P 16 22 08.0 +0.3**
baz=204
KAIM Kayak Island 79.16 15 IAMs_20 IAMs_20 16 50 20.5
comp=Z,3μm,20.0s
HAWA Hanford 79.29 36 P **P 16 22 07.0 -1.8**
GLI Glacier Island 79.36 13 IAMs_20 IAMs_20 16 50 22.9
comp=Z,3μm,20.0s
FID Port Fidalgo 79.39 14 IAMs_20 IAMs_20 16 50 11.3
comp=Z,3μm,20.0s
SUCK Suckling Hills 79.45 15 IAMs_20 IAMs_20 16 51 39.1
comp=Z,4μm,19.0s
SKT Skwentna 79.45 11 IAMs_20 IAMs_20 16 52 14.4
comp=Z,3μm,20.0s
RAGM Ragged Mountai 79.50 15 IAMs_20 IAMs_20 16 49 42.4
comp=Z,4μm,20.0s
M22K Willow 79.51 12 P **P 16 22 08.0 -1.5**
M22K IAMs_20 IAMs_20 16 50 54.0
comp=Z,3μm,20.0s
M22K Willow 79.51 12 P **P 16 22 11.7 +2.1**
baz=204,SNR=6.3
KNK Knik Glacier 79.54 13 IAMs_20 IAMs_20 16 50 24.7
comp=Z,3μm,21.0s
HMT Hamilton 79.56 15 IAMs_20 IAMs_20 16 51 52.9
comp=Z,4μm,19.0s
PMR Palmer 79.56 12 P **P 16 22 12.4 +2.5**
baz=205
BERG Berg Lake 79.75 15 IAMs_20 IAMs_20 16 50 59.9
comp=Z,4μm,19.0s
KLR Kul'dur 79.75 328 LR LR 16 58 07.9
comp=Z,1μm,18.0s,baz=138,slow=36
KLR Kul'dur 79.75 328 *i* P **P 16 22 11.1 -0.1**
KLR pmax pmax
comp=Z,13nm,2.0s
GHO Glory Hole Cre 79.77 12 P **P 16 22 09.8 -1.4**
GHO IAMs_20 IAMs_20 17 03 19.7
comp=Z,2μm,18.0s
SNH Sunshine Point 79.78 16 IAMs_20 IAMs_20 16 51 18.9
comp=Z,3μm,19.0s
MA2 Magadan 79.80 343 LR LR 16 51 29.2
comp=Z,4μm,21.9s,baz=157,slow=31
MA2 Magadan 79.80 343 IAMs_20 IAMs_20 16 51 49.7
comp=Z,4μm,20.0s
DIV Divide 79.89 14 P **P 16 22 10.1 -1.6**
DIV IAmb IAmb 16 22 15.1
comp=Z,26nm,1.0s
WAX Waxell Ridge 80.01 16 IAMs_20 IAMs_20 16 51 47.9
comp=Z,4μm,20.0s
MESA MESA 80.02 16 IAMs_20 IAMs_20 16 51 28.1
comp=Z,3μm,20.0s
BMRM Bremner River 80.02 15 P **P 16 22 15.3 +2.8**
baz=210
DUG Dugway, Tooele 80.04 43 IAMs_20 IAMs_20 16 51 50.8
comp=Z,3μm,19.0s
DUG Dugway, Tooele 80.04 43 P **P 16 22 15.7 +2.5**
baz=240
121A Cookes Peak, D 80.08 52 P **P 16 22 15.0 +1.4**
baz=244
121A Cookes Peak, D 80.08 52 P **P 16 22 15.4 +1.8**
baz=244
CUT Chulitna 80.08 11 IAMs_20 IAMs_20 16 52 44.1
comp=Z,4μm,20.0s
CUT Chulitna 80.08 11 P **P 16 22 13.8 +1.1**
baz=204
CN2 Changchun 80.15 321 *e* P **P 16 22 15.5 +2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
SCM Sheep Creek Mo 80.16 13 P **P 16 22 11.2 -2.1**
SCM IAmb IAmb 16 22 22.4
comp=Z,22nm,0.9s
SCM IAMs_20 IAMs_20 16 50 00.0
comp=Z,2μm,20.0s
SCM Sheep Creek Mo 80.16 13 P **P 16 22 11.2 -2.1**
SCM pmax pmax
comp=Z,21nm,0.9s
SCM MLR MLR
comp=Z,2μm,20.0s
SCM Sheep Creek Mo 80.16 13 P **P 16 22 14.8 +1.6**
baz=207
KLU Klutina 80.17 14 IAMs_20 IAMs_20 16 51 10.3
comp=Z,3μm,21.0s
ANM Nome 80.18 4 IAMs_20 IAMs_20 16 51 00.2
comp=Z,3μm,22.0s
YAH Yahtse 80.23 16 P **P 16 22 12.7 -1.1**
YAH IAmb IAmb 16 22 36.7
comp=Z,52nm,1.3s
YAH IAMs_20 IAMs_20 16 51 35.5
comp=Z,3μm,20.0s
ISLE Juniper Island 80.28 16 P **P 16 22 11.9 -2.1**
ISLE IAmb IAmb 16 22 32.5
comp=Z,29nm,1.2s
ISLE IAMs_20 IAMs_20 16 51 56.9
comp=Z,3μm,20.0s
TGL Tana Glacier 80.28 15 P **P 16 22 12.1 -1.9**
TGL IAmb IAmb 16 22 29.7
comp=Z,30nm,1.3s
TGL IAMs_20 IAMs_20 16 51 56.0
comp=Z,3μm,20.0s
TABL Table Mountain 80.46 16 IAMs_20 IAMs_20 16 49 16.6
comp=Z,3μm,21.0s
BCPM Bancas Point 80.47 17 IAMs_20 IAMs_20 16 49 17.9
comp=Z,3μm,22.0s
VRDI Verde Repeater 80.53 15 IAMs_20 IAMs_20 16 51 45.6
comp=Z,2μm,21.0s
N25K Chitina, Valde 80.58 14 P **P 16 22 13.0 -2.5**
N25K IAMs_20 IAMs_20 16 49 57.0
comp=Z,3μm,21.0s
N25K Chitina, Valde 80.58 14 P **P 16 22 16.0 +0.5**
baz=210,SNR=5.1
GLB Gilahina Butte 80.62 15 P **P 16 22 12.8 -2.9**
GLB IAmb IAmb 16 22 38.0
comp=Z,74nm,1.9s
GLB IAMs_20 IAMs_20 16 51 59.2
comp=Z,2μm,19.0s
M24K Tolsona, Glenn 80.66 13 IAMs_20 IAMs_20 16 52 35.1
comp=Z,3μm,19.0s
TMUT Trail Mountain 80.68 45 P **P 16 22 13.4 -3.4**
CAST Castle Rocks 80.69 10 IAMs_20 IAMs_20 16 53 13.1
comp=Z,3μm,20.0s
CAST Castle Rocks 80.69 10 P **P 16 22 16.3 +0.4**
baz=202
HLID Hailey 80.74 40 P **P 16 22 18.6 +1.7**
baz=238,SNR=6.8
EPT El Paso 80.74 53 IAMs_20 IAMs_20 16 51 03.4
comp=Z,4μm,20.0s
WAT6 Susitna Watana 80.74 12 P **P 16 22 18.4 +1.9**
baz=206
JIS Juneau Island 80.76 20 P **P 16 22 13.7 -2.7**
JIS IAMs_20 IAMs_20 16 51 12.4
comp=Z,4μm,20.0s
P29M Windy Craggy 80.76 18 IAMs_20 IAMs_20 16 49 26.6
comp=Z,4μm,22.0s
P29M Windy Craggy 80.76 18 P **P 16 22 18.1 +1.6**
baz=216
LOGN Logan Glacier 80.82 16 IAMs_20 IAMs_20 16 49 28.2
comp=Z,3μm,21.0s
BARN Barnard Glacie 80.84 16 IAMs_20 IAMs_20 16 52 34.8
comp=Z,3μm,20.0s
CTG Chitna Glacier 80.84 16 P **P 16 22 18.1 +1.1**
baz=213
CTGM Chitina Glacie 80.85 16 P **P 16 22 15.4 -1.6**
CTGM IAmb IAmb 16 22 36.5
comp=Z,24nm,1.3s
CTGM IAMs_20 IAMs_20 16 49 39.9
comp=Z,3μm,21.0s
KTH Kantishna Hill 81.01 11 IAMs_20 IAMs_20 16 53 23.7
comp=Z,3μm,20.0s
TRF Thorofare Moun 81.03 11 P **P 16 22 15.6 -2.4**
TRF IAmb IAmb 16 22 39.6
comp=Z,25nm,1.2s
TRF IAMs_20 IAMs_20 16 52 36.3
comp=Z,4μm,20.0s
TRF Thorofare Moun 81.03 11 P **P 16 22 17.4 -0.7**
baz=204
J20K Nowinta River 81.06 9 P **P 16 22 20.6 +2.6**
baz=200
O29M Mount Kennedy 81.06 17 P **P 16 22 21.3 +3.1**
baz=215
Y22A Socorro 81.30 51 P **P 16 22 21.9 +1.8**
baz=245
Y22D IRIS PASSCAL I 81.39 51 IAMs_20 IAMs_20 16 50 34.6
comp=Z,3μm,21.0s
QIZ Qiongzhong 81.47 292 IAMs_20 IAMs_20 16 52 11.9
comp=Z,2μm,21.0s
QIZ Qiongzhong 81.47 292 P **P 16 22 24.5 +3.4**
QIZ S **S 16 32 31.5 -1.6**
QIZ LR LR
comp=Z,2μm,29.8s
QIZ LR LR
comp=Z,1μm,24.1s
QIZ LR LR
comp=Z,2μm,20.9s
YUK8 Steele Glacier 81.53 16 P **P 16 22 23.1 +2.3**
baz=214
MCK McKinley 81.54 11 P **P 16 22 19.6 -1.0**
MCK IAmb IAmb 16 22 38.6
comp=Z,20nm,1.1s
MCK IAMs_20 IAMs_20 16 52 18.7
comp=Z,4μm,20.0s
MCK McKinley 81.54 11 P **P 16 22 19.6 -1.0**
MCK pmax pmax
comp=Z,21nm,1.1s
MCK MLR MLR
comp=Z,4μm,20.0s
MCK McKinley 81.54 11 P **P 16 22 22.4 +1.8**
baz=205,SNR=9.9
HWUT Hardware Ranch 81.56 43 IAMs_20 IAMs_20 16 52 21.0
comp=Z,3μm,20.0s
MVCO Mesa Verde 81.60 48 IAMs_20 IAMs_20 16 50 33.1
comp=Z,4μm,21.0s
S34M Telegraph Cree 81.62 22 P **P 16 22 24.8 +3.7**
baz=222
M26K Nabesna, AK 81.65 14 P **P 16 22 20.9 -0.3**
M26K IAmb IAmb 16 22 25.5
comp=Z,21nm,1.1s
M26K IAMs_20 IAMs_20 16 51 05.3
comp=Z,3μm,21.0s
M26K Nabesna, AK 81.65 14 P **P 16 22 22.1 +1.0**
baz=211,SNR=17
NEW Newport 81.71 35 LR LR 16 52 54.7
comp=Z,1μm,19.6s,baz=232,slow=31
YUK3 Moose Creek 81.76 16 P **P 16 22 24.1 +2.2**
baz=213,SNR=7.1
HYT Haines Junctio 81.80 18 P **P 16 22 24.9 +2.8**
baz=216,SNR=6.0
WHN Wuhan 81.84 305⇑ P **P 16 22 22.8 0.0**
WHN S **S 16 32 41.8 +5.3**
WHN LR LR
comp=Z,5μm,21.7s
WHN LR LR
comp=Z,950nm,15.1s
WHN LR LR
comp=Z,7μm,36.1s
M27K Edge Creek, AK 81.89 15 IAMs_20 IAMs_20 16 52 29.5
comp=Z,3μm,21.0s
M27K Edge Creek, AK 81.89 15 P **P 16 22 23.8 +1.3**
baz=212,SNR=11
TX31 Lajitas Ar. Si 82.01 57 P **P 16 22 24.7 +0.8**
baz=247
TXAR Lajitas Array 82.01 57 P **P 16 22 24.3 +0.4**
comp=Z,5.5nm,1.1s,baz=226,slow=4.7,SNR=26
comp=Z,5.5nm,1.1s
L26K Log Cabin Wild 82.10 14 IAMs_20 IAMs_20 16 53 22.3
comp=Z,3μm,20.0s
L26K Log Cabin Wild 82.10 14 P **P 16 22 26.1 +2.5**
baz=211
ANMO Albuquerque 82.11 51 LR LR 16 52 20.1
comp=Z,4μm,19.3s,baz=237,slow=31
ANMO Albuquerque 82.11 51 IAMs_20 IAMs_20 16 51 50.5
comp=Z,4μm,20.0s
ANMO Albuquerque 82.11 51 *i* P **P 16 22 24.8 +0.4**
ANMO pmax pmax
comp=Z,7.0nm,1.1s
ANMO Albuquerque 82.11 51 P **P 16 22 25.5 +1.1**
baz=245
ANMO Albuquerque 82.11 51 P **P 16 22 26.5 +2.1**
baz=245
O30N Mendenhall 82.17 18 P **P 16 22 25.8 +1.8**
baz=218
SEY Seymchan 82.22 346 LR LR 16 54 25.8
comp=Z,3μm,20.7s,baz=152,slow=32
SEY Seymchan 82.22 346 *ce* P **P 16 22 25.7 +1.6**
SEY pmax pmax
comp=Z,32nm,1.4s
K24K Donnelly Dome 82.24 13 P **P 16 22 26.6 +2.4**
baz=208
MCMT McKenzie Canyo 82.36 39 P **P 16 22 22.1 -3.4**
WRH Wood River Hil 82.37 11 IAMs_20 IAMs_20 16 53 15.7
comp=Z,3μm,21.0s
RIDG Independent Ri 82.39 13 IAMs_20 IAMs_20 16 51 49.9
comp=Z,3μm,21.0s
DLBC Dease Lake 82.40 22 LR LR 16 51 16.1
comp=Z,2μm,21.6s,baz=243,slow=30
MLY Manley 82.41 10 P **P 16 22 26.6 +1.5**
baz=203
L27K Beaver Creek, 82.50 15 IAMs_20 IAMs_20 16 51 50.7
comp=Z,2μm,21.0s
HDA Harding Lake 82.54 12 P **P 16 22 26.2 +0.5**
baz=207
CCB Clear Creek Bu 82.59 11 P **P 16 22 24.2 -1.7**
CCB IAMs_20 IAMs_20 16 53 22.2
comp=Z,3μm,20.0s
H21K Melozitna Rive 82.65 9 IAMs_20 IAMs_20 16 56 27.2
comp=Z,2μm,19.0s
MSO Missoula 82.74 37 P **P 16 22 29.4 +2.1**
baz=238
I23K Minto, Yukon-K 82.75 11 IAMs_20 IAMs_20 16 54 37.7
comp=Z,3μm,20.0s
P33M Teslin, Yukon 82.76 20 IAMs_20 IAMs_20 16 52 06.4
comp=Z,3μm,20.0s
R33M Jennings River 82.77 21 P **P 16 22 30.0 +2.7**
baz=222
TCOL CIGO, UAF Yank 82.78 11 IAMs_20 IAMs_20 16 54 08.4
comp=Z,3μm,20.0s
COLA College 82.78 11 IAMs_20 IAMs_20 16 54 08.4
comp=Z,3μm,20.0s
COLA College 82.78 11 *i* P **P 16 22 27.9 +1.0**
COLA pmax pmax
comp=Z,15nm,0.9s
COLA College 82.78 11 P **P 16 22 28.9 +2.0**
SCRK Sand Creek 82.78 13 IAMs_20 IAMs_20 16 51 52.3
comp=Z,3μm,22.0s
MDM Murphy Dome 82.79 11 IAMs_20 IAMs_20 16 54 36.6
comp=Z,3μm,20.0s
N31M Braeburn, Yuko 82.83 18 IAMs_20 IAMs_20 16 50 55.3
comp=Z,3μm,21.0s
N31M Braeburn, Yuko 82.83 18 P **P 16 22 29.3 +1.9**
baz=218
M29M Somme Creek 82.84 16 P **P 16 22 29.7 +2.2**
baz=215
ILAR Eielson Array 82.88 12 P **P 16 22 27.6 +0.1**
comp=Z,4.3nm,1.0s,baz=221,slow=6.3,SNR=16
ILAR PP **PP 16 25 35.5 -2.7**
comp=Z,1.1nm,0.6s,baz=272,slow=8.7,SNR=11
ILAR LR LR 16 52 27.4
comp=Z,2μm,21.8s,baz=201,slow=31
comp=Z,4.3nm,1.0s
J25K Salcha River, 83.04 12 P **P 16 22 29.3 +0.9**
baz=208,SNR=6.5
POKR Poker Plat Res 83.08 11 P **P 16 22 25.9 -2.6**
POKR IAMs_20 IAMs_20 16 54 37.3
comp=Z,4μm,20.0s
POKR Poker Plat Res 83.08 11 P **P 16 22 30.6 +2.1**
baz=206,SNR=6.8
O20A White River Ci 83.09 45 P **P 16 22 31.6 +2.2**
baz=243
LRM Limekiln Ridge 83.10 39 P **P 16 22 26.7 -2.7**
K27K Chicken 83.26 14 IAMs_20 IAMs_20 16 54 06.9
comp=Z,2μm,20.0s
J26L Joseph Creek 83.33 13 IAMs_20 IAMs_20 16 53 42.8
comp=Z,3μm,20.0s
J26L Joseph Creek 83.33 13 P **P 16 22 32.2 +2.2**
baz=210,SNR=6.9
YHB Horse Butte 83.34 40 P **P 16 22 27.6 -3.0**
YHB IAmb IAmb 16 22 35.2
comp=Z,15nm,1.0s
G21K Allakaket 83.35 9 P **P 16 22 32.1 +2.2**
baz=201,SNR=5.6
M30M Minto, Yukon 83.41 17 P **P 16 22 28.6 -1.8**
M30M IAmb IAmb 16 22 39.3
comp=Z,28nm,1.7s
M30M IAMs_20 IAMs_20 16 51 02.6
comp=Z,4μm,22.0s
M30M Minto, Yukon 83.41 17 P **P 16 22 31.7 +1.4**
baz=217
BW06 Boulder Array 83.42 42 IAMs_20 IAMs_20 16 55 15.4
comp=Z,2μm,19.0s
BW06 Boulder Array 83.42 42 P **P 16 22 31.7 +0.6**
baz=242,SNR=7.1
PDAR Pinedale Array 83.42 42 P **P 16 22 31.2 +0.1**
comp=Z,3.6nm,1.0s,baz=215,slow=2.9,SNR=15
PDAR LR LR 16 55 17.2
comp=Z,2μm,18.7s,baz=243,slow=32
comp=Z,3.6nm,1.0s
L29M L29M 83.47 16 P **P 16 22 33.4 +2.8**
baz=215,SNR=9.4

BOZ	Bozeman (W)	83.49	39	P	P	16 22 33.9	+2.6	
	baz=240,SNR=6.8							
SMCO	Snowmass	83.55	47	IAMs_20	IAMs_20	16 55 44.6		
	comp=Z,3μm,18.0s							
M31M	Drury Creek, Y	83.80	18	IAMs_20	IAMs_20	16 51 03.0		
	comp=Z,4μm,22.0s							
RDOG	Red Dog Mine	83.81	5	IAMs_20	IAMs_20	17 01 16.1		
	comp=Z,3μm,22.0s							
PRP	Porcupine Dome	83.81	12	P	P	16 22 34.4	+1.9	
	baz=208							
DAWY	Dawson	83.94	15	P	P	16 22 30.9	-2.1	
DAWY				IAmb	IAmb	16 22 42.3		
	comp=Z,14nm,1.1s							
DAWY	Dawson	83.94	15	P	P	16 22 35.7	+2.7	
	baz=214,SNR=7.7							
SDCO	Great Sand Dun	83.98	48	P	P	16 22 31.7	-2.5	
SDCO				IAmb	IAmb	16 22 42.7		
	comp=Z,27nm,1.9s							
SDCO				IAMs_20	IAMs_20	16 52 31.1		
	comp=Z,3μm,21.0s							
SDCO	Great Sand Dun	83.98	48	P	P	16 22 34.6	+0.4	
	baz=245							
F21K	Alatna River	84.02	8	P	P	16 22 34.5	+1.1	
	baz=201,SNR=5.1							
G23K	Bananza Creek	84.07	10	P	P	16 22 36.2	+2.6	
	baz=204,SNR=6.0							
BELA	Belgrano 2	84.10	172	P	P	16 22 32.1	-1.7	
EGAK	Eagle	84.11	14	IAMs_20	IAMs_20	16 52 00.4		
	comp=Z,3μm,22.0s							
EGAK	Eagle	84.11	14	P	P	16 22 36.5	+2.7	
	baz=212							
I26K	Coal Creek Min	84.11	13	IAMs_20	IAMs_20	16 54 35.6		
	comp=Z,2μm,20.0s							
I26K	Coal Creek Min	84.11	13	P	P	16 22 36.5	+2.7	
	baz=211							
K29M	Barlow Dome	84.23	16	P	P	16 22 36.0	+1.4	
	baz=216,SNR=9.4							
HNS	HongShan	84.33	311	⇑P	P	16 22 38.0	+2.5	
HNS				S	S	16 33 00.5	-1.0	
HNS				SS	SS	16 38 33.5	+1.7	
HNS				pmax	pmax			
	comp=Z,13nm,1.0s							
HNS				LR	LR			
	comp=Z,590nm,20.9s							
HNS				LR	LR			
	comp=Z,3μm,19.8s							
HNS				LR	LR			
	comp=Z,3μm,19.6s							
BJI	Beijing	84.39	314	P	P	16 22 36.5	+0.7	
BJI				PP	PP	16 25 52.0	+0.9	
BJI				S	S	16 32 58.8	-3.2	
BJI				SS	SS	16 38 25.5	-7.2	
BJI				pmax	pmax			
	comp=Z,9.0nm,1.2s							
BJI				pmax	pmax			
	comp=Z,260nm,3.9s							
BJI				LR	LR			
	comp=Z,210nm,21.2s							
BJI				LR	LR			
	comp=Z,1μm,20.9s							
BJI				LR	LR			
	comp=Z,2μm,24.0s							
BILL	Bilibino	84.42	353	⇑eP	P	16 22 36.3	+1.0	
BILL				e		16 25 55.6		
BILL				pmax	pmax			
	comp=Z,15nm,1.1s							
MSTX	Muleshoe	84.50	53	P	P	16 22 37.5	+0.8	
	baz=247							
MSTX	Muleshoe	84.50	53	P	P	16 22 39.1	+2.4	
	baz=247							
COLD	Coldfoot	84.51	9	P	P	16 22 37.6	+1.8	
	baz=204,SNR=11							
J29M	Klondike Camp	84.55	15	IAMs_20	IAMs_20	16 52 53.9		
	comp=Z,2μm,21.0s							
I27K	Kandik River	84.70	13	P	P	16 22 39.4	+2.5	
	baz=212							
ZEA	Zeya	84.71	330	eP	P	16 22 41.5	+4.4	
ZEA				eS	S	16 33 07.7	+3.1	
ZEA				smax	smax			
	comp=N,300nm,10.4s							
ZEA				smax	smax			
	comp=Z,5μm,10.4s							
ZEA				smax	smax			
	comp=E,300nm,16.6s							
ZEA				smax	smax			
	comp=Z,5μm,16.6s							
PMSA	Palmer Station	84.72	156	LR	LR	16 51 51.0		
	comp=Z,3μm,21.4s,baz=237,slow=30							
LYN	LuoYang	84.86	308	⇑P	P	16 22 44.5	+6.2	
LYN	LuoYang	84.86	308	S	S	16 33 05.5	-1.5	
LYN	LuoYang	84.86	308	SS	SS	16 38 41.3	+1.4	
COCO	West Island	85.01	259	IAMs_20	IAMs_20	16 59 26.6		
	comp=Z,3μm,19.0s							
MMPY	Sheldon Lake,	85.07	19	P	P	16 22 41.1	+2.3	
	baz=222,SNR=5.9							
F24K	Squaw Lake	85.16	10	P	P	16 22 41.9	+2.8	
	baz=206							
TGTN	Hyland Airport	85.24	21	P	P	16 22 43.2	+3.6	
	baz=225							
H27K	Steamboat Moun	85.26	13	P	P	16 22 42.2	+2.5	
	baz=212,SNR=6.1							
I29M	Ogilvie Camp,	85.27	15	IAMs_20	IAMs_20	16 55 29.0		
	comp=Z,3μm,20.0s							
I29M	Ogilvie Camp,	85.27	15	P	P	16 22 41.6	+1.9	
	baz=215							
E23K	Chandalar	85.36	9	P	P	16 22 43.0	+2.8	
	baz=204,SNR=5.2							
G26K	Porcupine Rive	85.41	12	P	P	16 22 43.3	+3.0	
	baz=210,SNR=7.4							
CMIG	Matias Romero	85.43	71	LR	LR	16 52 16.4		
	comp=Z,3μm,19.9s,baz=237,slow=30							
PHWY	Pilot Hill	85.51	45	IAMs_20	IAMs_20	16 52 59.5		
	comp=Z,3μm,21.0s							
JCT	Junction City	85.55	57	IAMs_20	IAMs_20	16 53 46.8		
	comp=Z,2μm,20.0s							
F25K	Christian Rive	85.62	11	P	P	16 22 44.1	+2.6	
	baz=208							
ENH	Enshi	85.63	303	P	P	16 22 41.1	-1.3	
ENH				IAmb	IAmb	16 23 01.2		
	comp=Z,30nm,1.3s							
G27K	Doyon Strip	85.72	13	P	P	16 22 44.7	+2.8	
	baz=212							
EGMT	Eagleton	85.80	38	P	P	16 22 45.4	+2.6	
	baz=241							
TOLK	Toolik Lake Re	85.90	9	IAMs_20	IAMs_20	16 54 01.2		
	comp=Z,2μm,22.0s							
TOLK	Toolik Lake Re	85.90	9	P	P	16 22 45.7	+2.9	
	baz=204							
F26K	Sheenjek River	85.99	11	P	P	16 22 46.7	+3.4	
	baz=210,SNR=5.4							
D23K	Nanushuk River	86.04	9	P	P	16 22 46.4	+3.0	
	baz=203							
E25K	Arctic Village	86.10	11	P	P	16 22 46.5	+2.7	
	baz=208,SNR=5.2							
TIY	Taiyuan	86.11	311	P	P	16 22 56.5	+12	
TIY	Taiyuan	86.11	311	S	SKSac	16 33 05.8	-5.2	
TIY	Taiyuan	86.11	311	SS	SS	16 38 48.3	-10	
XLT	XiLinHaoTe	86.12	317	⇓iP	P	16 22 46.0	+1.5	
XLT				S	S	16 33 22.3	+3.1	
XLT				pmax	pmax			
	comp=Z,10.0nm,1.2s							
XLT				pmax	pmax			
	comp=Z,170nm,4.4s							
XLT				LR	LR			
	comp=Z,1μm,18.5s							
XLT				LR	LR			
	comp=Z,2μm,19.8s							
H03S2	Juan Fernandez	86.47	124	T	T	17 58 20.3		
	baz=251,slow=75,SNR=84							
EPYK	Eagle Plains	86.47	15	IAMs_20	IAMs_20	16 53 32.8		
	comp=Z,2μm,22.0s							
H03S1	Juan Fernandez	86.48	124	T	T	17 58 21.5		
	baz=251,slow=75,SNR=92							
H03S3	Juan Fernandez	86.49	124	T	T	17 58 26.8		
	baz=251,slow=75,SNR=73							
H03N2	Juan Fernandez	86.58	124	T	T	17 58 28.1		
	baz=257,slow=73,SNR=6.0							
H03N3	Juan Fernandez	86.58	124	T	T	17 58 33.8		
	baz=257,slow=73,SNR=6.3							
H03N1	Juan Fernandez	86.59	124	T	T	17 58 31.5		
	baz=257,slow=73,SNR=7.1							
GYA	Guiyang	86.69	298	⇑P	P	16 22 47.3	-0.4	
GYA				S	S	16 33 18.5	-7.0	
GYA				pmax	pmax			
	comp=Z,280nm,4.1s							
GYA				LR	LR			
	comp=Z,550nm,18.2s							
GYA				LR	LR			
	comp=Z,810nm,19.4s							
GYA				LR	LR			
	comp=Z,870nm,17.0s							
USHA	Ushuaia	86.72	146	LR	LR	16 52 29.6		
	comp=Z,2μm,21.6s,baz=247,slow=29							
C23K	Itkillik River	86.85	8	P	P	16 22 50.7	+3.3	
	baz=203							
PSI	Prapat	86.90	274	LR	LR	16 59 09.3		
	comp=Z,791nm,21.9s,baz=134,slow=34							
G30M	tAoh Zraii Nji	87.08	14	P	P	16 22 50.7	+2.1	
	baz=217,SNR=7.1							
MAW	Mawson	87.17	199	P	P	16 22 49.9	+0.8	
	comp=Z,5.0nm,1.1s,baz=110,slow=7.4,SNR=4.6							
MAW				LR	LR	17 01 27.4		
	comp=Z,2μm,18.2s,baz=117,slow=35							
	comp=Z,5.0nm,1.1s							
MAW	Mawson	87.17	199	P	P	16 22 47.2	-1.9	
MAW	Mawson	87.17	199	P	P	16 22 47.2	-1.9	
MAW				pmax	pmax			
	comp=Z,7.0nm,1.9s							
XAN	Xi'an	87.40	306	⇑iP	P	16 22 53.0	+2.0	
XAN				sS	sS	16 33 43.0	+6.5	
XAN				pmax	pmax			
	comp=Z,18nm,1.1s							
XAN				pmax	pmax			
	comp=Z,150nm,5.3s							
XAN				LR	LR			
	comp=Z,1μm,19.2s							
XAN				LR	LR			
	comp=Z,1μm,19.3s							
XAN				LR	LR			
	comp=Z,2μm,16.5s							
435B	Jarrell	87.45	57	IAMs_20	IAMs_20	16 56 53.0		
	comp=Z,2μm,19.0s							
A21K	Barrow	87.54	6	IAMs_20	IAMs_20	16 58 41.6		
	comp=Z,2μm,19.0s							
RSSD	Black Hills	87.63	43	IAMs_20	IAMs_20	16 58 03.7		
	comp=Z,2μm,19.0s							
OGNE	Ogallala	87.73	46	IAMs_20	IAMs_20	16 54 07.3		
	comp=Z,3μm,22.0s							
WMOK	Wichita Mounta	87.85	53	IAMs_20	IAMs_20	16 56 07.6		
	comp=Z,4μm,20.0s							
COYC	Coyhaique	87.87	137	IAMs_20	IAMs_20	16 53 31.7		
	comp=Z,3μm,21.0s							
HHC	Hu-ho-hao-te	87.94	313	eP	P	16 22 53.3	-0.1	
HHC				S	SKKSac	16 33 28.3	-3.8	
HHC				SS	SS	16 39 23.3	-1.7	
HHC				pmax	pmax			
	comp=Z,27nm,1.0s							
HHC				pmax	pmax			
	comp=Z,480nm,4.3s							
HHC				LR	LR			
	comp=Z,2μm,17.9s							
HHC				LR	LR			
	comp=Z,2μm,20.0s							
HHC				LR	LR			
	comp=Z,4μm,20.4s							
F31M	Tsiigehtchic	88.05	15	P	P	16 22 55.2	+2.1	
	baz=219,SNR=6.1							
CBKS	Cedar Bluff	88.58	49	IAMs_20	IAMs_20	16 56 15.7		
	comp=Z,2μm,20.0s							
YAK	Yakutsk	88.59	337	LR	LR	16 59 33.5		
	comp=Z,1μm,20.1s,baz=96,slow=34							
YAK	Yakutsk	88.59	337	P	P	16 22 54.3	-1.6	
YAK				IAmb	IAmb	16 25 43.9		
	comp=Z,23nm,1.5s							
YAK	Yakutsk	88.59	337	iP	P	16 22 55.9	+0.1	
YAK				pmax	pmax			
	comp=Z,8.0nm,1.0s							
HKT	Hockley	88.61	59	IAMs_20	IAMs_20	16 56 36.7		
	comp=Z,3μm,20.0s							
HKT	Hockley	88.61	59	iP	P	16 22 59.4	+2.8	
HKT				pmax	pmax			
	comp=Z,15nm,1.6s							
INK	Inuvik	88.77	14	LR	LR	16 56 09.5		
	comp=Z,1μm,21.0s,baz=212,slow=31							
INK	Inuvik	88.77	14	P	P	16 22 54.6	-1.9	
INK				IAmb	IAmb	16 23 05.1		
	comp=Z,37nm,1.9s							
INK	Inuvik	88.77	14	P	P	16 22 54.6	-1.9	
INK				pmax	pmax			
	comp=Z,37nm,2.0s							
BTO	Baotou	88.93	313	eP	P	16 23 00.8	+2.6	
BTO				LR	LR			
	comp=Z,4μm,21.2s							
BTO				LR	LR			
	comp=Z,4μm,21.4s							
DGMT	Dagmar	89.32	39	IAMs_20	IAMs_20	16 56 35.3		
	comp=Z,2μm,20.0s							
KMI	Kunming	89.64	296	⇑P	P	16 23 03.5	+1.5	
KMI				S	SKSac	16 33 40.5	+7.3	
KMI				pmax	pmax			
	comp=Z,13nm,0.9s							
KMI				pmax	pmax			
	comp=Z,130nm,4.4s							
KMI				LR	LR			
	comp=Z,810nm,20.6s							
KMI				LR	LR			
	comp=Z,1μm,23.5s							
KMI				LR	LR			
	comp=Z,2μm,23.5s							
NATX	Nacogdoches	90.13	57	IAMs_20	IAMs_20	16 58 21.1		
	comp=Z,2μm,19.0s							
TUL1	Leonard	90.55	53	IAMs_20	IAMs_20	16 56 47.0		
	comp=Z,3μm,20.0s							
YKA	Yellowknife Ar	90.84	24	P	P	16 23 08.9	+2.6	
	comp=Z,3.4nm,1.0s,baz=238,slow=4.0,SNR=5.2							
YKA				LR	LR	17 00 51.0		
	comp=Z,1μm,18.1s,baz=238,slow=34							
	comp=Z,3.4nm,1.0s							
YKA	Yellowknife Ar	90.84	24	P	P	16 23 09.0	+2.6	
PZH	PanZhiHua	90.90	297	P	P	16 23 04.8	-2.9	
PZH				PP	PP	16 26 48.0	+4.1	
PZH				S	S	16 34 03.5	-1.8	
PZH				SS	SS	16 40 08.0	-0.6	
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PZH				pmax	pmax			
	comp=Z,280nm,4.5s							
PZH				LR	LR			
	comp=Z,590nm,21.4s							
PZH				LR	LR			
	comp=Z,740nm,21.0s							
PZH				LR	LR			
	comp=Z,1μm,19.9s							
KSU1	Kansas State U	90.96	50	IAMs_20	IAMs_20	16 57 11.9		
	comp=Z,3μm,21.0s							
CMAR	Chiang Mai Arr	91.13	289	P	P	16 23 12.1	+3.3	
	comp=Z,1.4nm,0.9s,baz=90,slow=3.1,SNR=9.0							
CMAR				LR	LR	16 59 38.5		
	comp=Z,904nm,21.9s,baz=125,slow=33							
CMAR	Chiang Mai Arr	91.13	289	P	P	16 23 06.2	-2.6	
CMAR	Chiang Mai Arr	91.13	289	P	P	16 23 06.2	-2.6	
CHTO	Chiang Mai	91.23	289	P	P	16 23 06.2	-3.0	
CHTO	Chiang Mai	91.23	289	P	P	16 23 06.2	-3.0	
CHTO				pmax	pmax			
	comp=Z,39nm,2.0s							
CHTO				MLR	MLR			
	comp=Z,100nm,22.0s							
MIAR	Mount Ida	91.85	55	IAMs_20	IAMs_20	16 56 02.5		
	comp=Z,3μm,21.0s							
C36M	Paulatuk	91.91	16	IAMs_20	IAMs_20	17 05 02.3		
	comp=Z,2μm,18.0s							
LZH	Lanzhou	92.01	307	eP	P	16 23 15.3	+2.6	
LZH				SKS	SKSac	16 33 45.8	-0.4	
LZH				S	ScS	16 34 17.3	-0.2	
LZH				SS	SS	16 40 17.5	-6.8	
LZH				pmax	pmax			
	comp=Z,19nm,1.2s							
LZH				LR	LR			
	comp=Z,870nm,16.8s							
LZH				LR	LR			
	comp=Z,1μm,18.2s							
LZH				LR	LR			
	comp=Z,1μm,18.9s							
ECSD	EROS Data Cent	92.47	45	IAMs_20	IAMs_20	16 58 14.9		
	comp=Z,3μm,20.0s							
TROLL	Troll, Antarti	92.67	179	P	P	16 23 15.1	0.0	
JTS	Las Juntas de	92.81	80	LR	LR	16 55 38.1		
	comp=Z,4μm,20.3s,baz=314,slow=29							
SNAA	Sanae	92.87	178	LR	LR	16 59 42.0		
	comp=Z,4μm,21.8s,baz=190,slow=32							
VNA3	Neumayer Olymp	92.88	175	P	P	16 23 15.9	-0.1	
A36M	Sachs Harbour	93.39	14	P	P	16 23 16.0	-1.9	
ULN	Ulaanbaatar	93.46	319	iP	P	16 23 18.3	-0.8	
ULN				pmax	pmax			
	comp=Z,2.0nm,1.1s							
HDC	Heredia	93.53	81	IAMs_20	IAMs_20	16 54 36.1		
	comp=Z,3μm,22.0s							
EFI	East Falkland	93.70	146	IAMs_20	IAMs_20	16 56 21.2		
	comp=Z,2μm,22.0s							
NVL	N'lazarevskaya	93.80	182	eP	P	16 23 25.0	+4.9	
NVL				eS	SKSac	16 33 52.8	-1.9	
NVL				eSS	SS	16 40 55.1	+8.4	
NVL				pmax	pmax			
	comp=Z,7.0nm,1.1s							
NVL				MLR	MLR			
	comp=Z,981nm,17.0s							
SONM	Songino Array	93.87	319	P	P	16 23 20.6	-0.3	
	comp=Z,0.7nm,1.0s,baz=130,slow=4.5,SNR=2.9							
SONM				LR	LR	17 00 46.4		
	comp=Z,2μm,21.7s,baz=112,slow=32							
	comp=Z,0.7nm,1.0s							
SCIA	State Center	94.29	48	IAMs_20	IAMs_20	16 58 43.0		
	comp=Z,3μm,21.0s							
AGMN	Agassiz Nation	94.43	41	IAMs_20	IAMs_20	17 02 25.6		
	comp=Z,2μm,18.0s							
ATAH	Atahualpa	94.49	99	LR	LR	16 55 55.2		
	comp=Z,3μm,21.0s,baz=265,slow=29							
NNA	Nana	94.59	104	LR	LR	16 56 35.2		
	comp=Z,1μm,21.0s,baz=250,slow=30							
LCO	Las Campanas	94.66	122	IAMs_20	IAMs_20	16 55 23.9		
	comp=Z,2μm,21.0s							
TIXI	Tiksi	94.69	345	LR	LR	17 00 42.6		
	comp=Z,3μm,21.8s,baz=90,slow=32							
TIXI	Tiksi	94.69	345	IAMs_20	IAMs_20	16 59 02.8		
	comp=Z,3μm,22.0s							
TIXI	Tiksi	94.69	345	ceP	P	16 23 24.0	0.0	
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.0s							
GTA	Gaotai	96.00	309	eP	P	16 23 31.3	+0.4	
GTA				pP	pwP	16 23 37.3	+0.9	
GTA				sP	sP	16 23 40.3	+5.8	
GTA				sS	sS	16 34 58.8	+4.4	
GTA				SS	SS	16 41 20.0	-1.2	
GTA				pmax	pmax			
	comp=Z,4.0nm,2.0s							
GTA				pmax	pmax			
	comp=Z,72nm,5.2s							
GTA				LR	LR			
	comp=Z,820nm,19.3s							
GTA				LR	LR			
	comp=Z,2μm,24.7s							
GTA				LR	LR			
	comp=Z,4μm,24.7s							
LRAL	Lakeview Retre	96.71	58	IAMs_20	IAMs_20	17 02 01.4		
	comp=Z,2μm,21.0s							
HDIL	Hopedale	96.77	50	IAMs_20	IAMs_20	17 01 48.8		
	comp=Z,3μm,21.0s							
EYMN	Ely	97.13	42	IAMs_20	IAMs_20	17 00 40.0		
	comp=Z,2μm,22.0s							
TRQA	Tornquist	97.77	133	IAMs_20	IAMs_20	16 59 38.5		
	comp=Z,2μm,21.0s							
L44A	Lake County Fo	98.17	49	IAMs_20	IAMs_20	17 08 34.8		
	comp=Z,2μm,18.0s							
LVC	Limon Verde	98.41	116	LR	LR	16 57 13.1		
	comp=Z,1μm,21.5s,baz=252,slow=29							
WCI	Wyandotte Cave	98.48	53	IAMs_20	IAMs_20	17 01 43.0		
	comp=Z,3μm,21.0s							
BRDH	Bariadhala	98.81	291	LR	LR	17 05 18.6		
	comp=Z,427nm,21.6s,baz=126,slow=34							
GOGA	Godfrey	99.68	58	IAMs_20	IAMs_20	17 02 07.0		
	comp=Z,2μm,22.0s							
GLMI	Grayling	101.07	46	IAMs_20	IAMs_20	17 02 46.4		
	comp=Z,2μm,20.0s							
AAM	Ann Arbor	101.29	49	IAMs_20	IAMs_20	17 03 04.3		
	comp=Z,2μm,18.0s							
BLA	Blacksburg	102.85	55	IAMs_20	IAMs_20	17 04 49.7		
	comp=Z,3μm,20.0s							
ERPA	Erie	103.95	50	IAMs_20	IAMs_20	17 05 44.6		
	comp=Z,2μm,20.0s							
GTBY	Guantanamo Bay	104.29	73	IAMs_20	IAMs_20	17 04 12.7		
	comp=Z,2μm,20.0s							
CNNC	Cliffs of the	104.55	57	IAMs_20	IAMs_20	17 05 56.8		
	comp=Z,2μm,22.0s							
PALK	Pallekele	105.58	273	IAMs_20	IAMs_20	17 08 57.6		
	comp=Z,1μm,22.0s							
LONY	Lake Ozonia	108.14	48	IAMs_20	IAMs_20	17 09 20.4		
	comp=Z,2μm,20.0s							
GRTK	Grand Turk	108.24	72	IAMs_20	IAMs_20	17 04 50.4		
	comp=Z,1μm,22.0s							
VT1	Waterbury	109.43	48	IAMs_20	IAMs_20	17 08 26.5		
	comp=Z,2μm,21.0s							
HNH	Hanover	109.73	49	IAMs_20	IAMs_20	17 07 53.6		
	comp=Z,2μm,21.0s							
HYBB	Hyderabad (bro	109.80	283	ePKiKP	PKiKP	16 28 33.3	-2.1	
HYBB				ePP	PP	16 29 07.1	-0.4	
HYBB				eSKSac	SKSac	16 35 11.8	-1.5	
HYBB				eSP	SP	16 38 34.3	-0.7	
MAKZ	Makanchi	109.98	315	IAMs_20	IAMs_20	17 12 07.6		
	comp=Z,1μm,20.0s							
WVL	Waterville	111.65	48	IAMs_20	IAMs_20	17 11 53.3		
	comp=Z,2μm,20.0s							
KSH	Kashi	114.26	307	PKP	PKiKP	16 28 46.5	+3.1	
SEUS	St. Eustatius	115.17	78	IAMs_20	IAMs_20	17 08 36.2		
	comp=Z,2μm,22.0s							
TDBA	Terre de Bas,	116.17	80	IAMs_20	IAMs_20	17 10 48.9		
	comp=Z,2μm,21.0s							
CBE	Ff, Capester	116.23	80	IAMs_20	IAMs_20	17 10 46.5		
	comp=Z,2μm,21.0s							
ANWB	Willy Bob	116.32	78	IAMs_20	IAMs_20	17 10 36.8		
	comp=Z,1μm,21.0s							
ABD	La Joyeuse, An	116.41	79	IAMs_20	IAMs_20	17 07 41.3		
	comp=Z,1μm,22.0s							
KBS	Kingsbay	116.47	358	IAMs_20	IAMs_20	17 21 18.1		
	comp=Z,1μm,19.0s							
BIM	Bigot	116.48	81	IAMs_20	IAMs_20	17 09 32.2		
	comp=Z,1μm,21.0s							
MPOM	Morne Pois Mar	116.67	81	IAMs_20	IAMs_20	17 09 50.1		
	comp=Z,2μm,21.0s							
ILAM	Ilet Lapin Mar	116.71	81	IAMs_20	IAMs_20	17 10 58.2		
	comp=Z,1μm,20.0s							
BRVK	Borovoye	117.05	322	cipKIKP	PKPdf	16 28 46.3	-1.9	
BRVK				pmax	pmax			
	comp=Z,3.0nm,1.3s							
ARU	Arti	122.59	328	cipKIKP	PKPdf	16 28 58.9	+0.2	
ARU				pmax	pmax			
	comp=Z,10.0nm,2.5s							
VOI	Vohitsoka	124.62	229	IAMs_20	IAMs_20	17 17 22.4		
	comp=Z,2μm,20.0s							
PRGR	Permogore	125.64	337	ePKIKP	PKPdf	16 28 58.5	-5.9	
PRGR				pmax	pmax			
	comp=Z,6.0nm,1.1s							
GEYT	Alibeck	128.29	306	PKP	PKiKP	16 29 12.0	+1.1	
	comp=Z,2.2nm,0.9s,baz=211,slow=2.6,SNR=3.8							
KLMR	Klimovskoe	128.34	339	ePKIKP	PKPdf	16 29 08.7	-0.8	
KLMR				pmax	pmax			
	comp=Z,27nm,1.9s							
KLMR	Klimovskoe	128.34	339	ePKPdf	PKPdf	16 29 08.8	-0.8	
KLMR				AMP		16 29 20.0		
	comp=Z,27nm,1.9s							
KLMR				LR	LR	17 12 52.0		
KLMR				AMP		17 16 56.8		
	comp=Z,2μm,23.6s							
OBN	Obninsk	133.56	335	IAMs_20	IAMs_20	17 29 37.1		
	comp=Z,2μm,20.0s							
OBN	Obninsk	133.56	335	⇑ePKIKP	PKPdf	16 29 14.4	-5.2	
OBN				e		16 31 46.3		
OBN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,2μm,20.0s							
MAK	Makhachkala	134.56	316	eP	Pdif	16 26 20.8	-1.5	
MAK				i		16 29 21.2	

MNK MLR MLR
comp=N,2μm,20.0s
MNK MLR MLR
comp=Z,2μm,19.0s
MNK MLR MLR
comp=E,268nm,20.0s
MNK Minsk 137.20 340 *i* PKP **PKPdf 16 29 24.8 -1.6**
comp=E,3.0nm,0.8s
MNK *i* PKP **PKPdf 16 29 24.8 -1.6**
comp=N,37nm,0.8s
MNK *i* PKP **PKPdf 16 29 24.8 -1.6**
comp=Z,6.0nm,0.6s,baz=214
MNK *i* pPKP sPKPdf 16 29 47.4 +17
MNK *i* PP **PP 16 32 10.4 0.0**
MNK *i* PPP PPP 16 35 09.9
MNK *i* SKS **SKSdf 16 36 28.1 -9.1**
MNK *i* PS **PS 16 42 37.1 -0.5**
MNK *i* SS **SS 16 50 08.3 -7.7**
MNK *i* SSS SSS 16 55 23.9
MNK *i* LRM MLR 17 28 07.8
comp=N,2μm,20.4s
MNK *i* LRM MLR 17 28 57.0
comp=Z,2μm,19.1s
MNK *i* LRM MLR 17 29 05.3
comp=E,268nm,20.4s
NACGM Naroch 137.21 342‖ *e*PKP **PKiKP 16 29 29.3 +1.0**
baz=32
KBZ Khabaz 137.23 319 *i* PKIKP **PKPdf 16 29 24.3 -2.5**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 137.25 319 IAMs_20 IAMs_20 17 27 55.2
comp=Z,2μm,22.0s
KIV Kislovodsk 137.25 319 *i* PKIKP **PKPdf 16 29 25.8 -1.3**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,2μm,24.0s
SHA1 Shidzhatmaz 137.38 319 *i* PKIKP **PKPdf 16 29 26.7 -0.8**
GNI Garni 137.60 313 IAMs_20 IAMs_20 17 29 50.6
comp=Z,1μm,22.0s
AKASG Malin Array Be 139.81 336 PKP **PKPdf 16 29 32.1 +0.7**
comp=Z,0.8nm,0.6s,baz=36,slow=1.2,SNR=5.5
RGN Rugen 140.51 352 IAMs_20 IAMs_20 17 29 27.7
comp=Z,2μm,21.0s
RAYN Ar Rayn 141.05 288 IAMs_20 IAMs_20 17 34 13.9
comp=Z,1μm,20.0s
KIBK Kibwezi 142.76 244 IAMs_20 IAMs_20 17 30 18.0
comp=Z,1μm,19.0s
ATD Arta Tunnel 142.96 269 *e*P **PKiKP 16 29 47.5 +6.1**
ATD Arta Tunnel 142.96 269 *e*P **PKiKP 16 29 47.5 +6.1**
TSUM Tsumeb 143.32 200 IAMs_20 IAMs_20 17 29 58.3
comp=Z,2μm,20.0s
CLL Collm 143.71 351 *e*PKIKP **PKPdf 16 29 39.0 +0.7**
CLL *i* 16 29 45.9
CLL Collm 143.71 351 *e*PKiKP **PKPdf 16 29 39.0 +0.7**
CLL *i* sPKiKP **sPKiKP 16 29 45.9 +0.5**
CLL *i* x x 16 29 51.8
CLL *e*x x 16 32 30.0
CLL *e*x x 16 40 54.0
CLL *e*PSKS 16 43 06.0
CLL *e*PPS PPS 16 45 24.0
CLL *e*SS SS 16 51 24.0 -7.9
CLL *e*PSPS 16 52 54.0
CLL *e*SSS SSS 16 57 06.0
CLL *e*SSSS 17 00 36.0
OSTC Ostas 143.88 348 *e*SS SS 16 52 11.5 +38
OSTC AMS AMS 17 30 50.0
comp=Z,2μm,22.1s
CHVC Chvalec 143.88 348 AMS AMS 17 31 10.0
comp=Z,2μm,23.5s
UPC Upice 143.97 348 *e*SS SS 16 51 38.4 +3.5
UPC AMS AMS 17 31 20.0
comp=Z,2μm,24.3s
BRG Berggiesshubel 143.99 350 *e*PKHKP PKPpre 16 29 33.7
BRG *e* 16 51 43.0
BRG pmax pmax
comp=Z,2.0nm,0.7s
UZH Uzhgorod 144.03 340 *e*PKIKP **PKPdf 16 29 38.8 -0.2**
UZH *i* 16 29 44.3
KMBO Kilima Mbogo 144.03 246 IAMs_20 IAMs_20 17 29 36.2
comp=Z,1μm,20.0s
KMBO Kilima Mbogo 144.03 246*c i*PKIKP **PKiKP 16 29 44.6 +0.7**
KMBO Kilima Mbogo 144.03 246 *e*P PKPab 16 29 30.3 -7.4
KMBO Kilima Mbogo 144.03 246 *e*P PKPab 16 29 30.3 -7.4
DPC Dobruska-Polom 144.05 348 *e*PKIKP **PKPdf 16 29 38.5 -0.6**
DPC *e*SS SS 16 51 38.8 +2.8
DPC MLR MLR
comp=Z,3μm,23.0s
DPC Dobruska-Polom 144.05 348 *e*PKP **PKPdf 16 29 38.5 -0.6**
DPC *e*SS SS 16 51 38.8 +2.8
DPC AMS AMS 17 31 20.0
comp=Z,3μm,23.0s
CRVS Cervenica-Dubn 144.06 341 *e*PKIKP **PKPdf 16 29 41.2 +2.1**
BIZ Bicaz 144.06 335 ⇑P **PKPdf 16 29 40.8 +1.7**
OKC Ostrava-Krasne 144.12 345 AMS AMS 17 30 30.0
comp=Z,2μm,22.4s
KRLC Kraliky 144.21 347 AMS AMS 17 31 30.0
comp=Z,3μm,22.8s
PVCC Panska Ves 144.22 349 AMS AMS 17 29 20.0
comp=Z,3μm,25.6s
BNN Bunyan 144.28 317 PKPdf **PKPab 16 29 38.1 +0.3**
MORC Moravsky Berou 144.32 346 P **PKPdf 16 29 40.5 +0.9**
MORC Moravsky Berou 144.32 346 PKIKP **PKPdf 16 29 40.5 +0.9**
MORC Moravsky Berou 144.32 346 *e*PKP **PKPdf 16 29 39.3 -0.2**
TRPA Tarpa 144.38 340 PKP **PKPdf 16 29 40.8 +1.2**
MAUC Maruska 144.64 345 *e*PKP **PKPdf 16 29 41.2 +1.1**
MAUC AMS AMS 17 29 50.0
comp=Z,5μm,22.7s
ABAH Abaujker 144.66 341 PKP **PKPdf 16 29 41.7 +1.6**
TPGR Topolog 144.66 331 ⇑P **PKiKP 16 29 42.6 -1.4**
KECS Kecovo 144.72 342 *e*PKIKP **PKPdf 16 29 42.0 +1.8**
PRU Pruhonice 144.74 349 *e*PKIKP **PKPdf 16 29 41.6 +1.4**
PRU *e* 16 29 49.8
PRU *e*SS SS 16 51 42.4 -1.4
PRU MLR MLR
comp=Z,2μm,24.7s
PRU Pruhonice 144.74 349 *e*PKP **PKPdf 16 29 41.6 +1.4**
PRU *e*x x 16 29 49.8
PRU *e*SS SS 16 51 42.4 -1.4
PRU AMS AMS 17 29 30.0
comp=Z,2μm,24.7s
GOPC GO Pecny, Ondr 144.77 349 AMS AMS 17 33 30.0
comp=Z,2μm,20.2s
NKC Novy Kostel 144.84 352 *e*SS SS 16 51 47.6 +2.7
NKC AMS AMS 17 32 00.0
comp=Z,2μm,20.9s
OZUR 144.87 335 ⇑P **PKiKP 16 29 43.0 -1.3**
VRAC Vranov 144.98 347 ⇑P **PKPdf 16 29 42.9 +2.2**
VRAC Vranov 144.98 347 ⇑PKIKP **PKPdf 16 29 42.9 +2.2**
VRAC Vranov 144.98 347 *e*PKP **PKPdf 16 29 41.6 +0.9**
MEM Membach 144.99 359 *d*PKP **PKPdf 16 29 41.8 +1.3**
BTNL Ternell 145.01 359 *d*PKP **PKPab 16 29 40.8 +0.8**
BSTI Sart Tilman 145.02 359 *d*PKP **PKPdf 16 29 42.2 +1.6**
SNF Seneffe 145.09 1 *d*PKP **PKPdf 16 29 42.2 +1.5**
JAVC Velka Javorina 145.15 345 *e*PKP **PKiKP 16 29 43.4 -1.5**
VYHS Vyhne 145.18 344 *e*PKIKP **PKPdf 16 29 42.3 +1.3**
BCLA Clavier 145.19 360 *d*PKP **PKPdf 16 29 42.1 +1.2**
BGES Gesves 145.22 360 *d*PKP **PKPdf 16 29 42.5 +1.4**
BR131 Keskin Array S 145.22 320 *i* PKP2 **PKPbc 16 29 39.8 -1.4**
BRTR Keskin Array B 145.22 320 PKPbc **PKPbc 16 29 41.3 +0.1**
comp=Z,25nm,1.0s,baz=90,slow=2.5,SNR=43
TREC Trest 145.23 348 AMS AMS 17 32 20.0
comp=Z,2μm,21.9s
BHOU Houvegnez 145.24 359 *d*P **PKPbc 16 29 40.8 +0.1**
KRUC Moravsky 145.25 347 *e*PKP **PKPdf 16 29 42.4 +1.3**
MLR Muntele Rosu 145.28 334 ⇑P **PKPab 16 29 43.1 +1.8**
MLR Muntele Rosu 145.28 334 ⇑PKIKP **PKPab 16 29 43.1 +1.8**
BMRD Maredsous 145.30 0 *d*PKP **PKPab 16 29 42.3 +1.3**
ISR Istrita 145.32 333 ⇑P **PKPab 16 29 43.1 +1.8**
ISR Istrita 145.32 333 ⇑PKIKP **PKPab 16 29 43.1 +1.8**
PSZ Piszkesteto 145.41 342 ⇑P **PKiKP 16 29 44.1 -1.4**
PSZ Piszkesteto 145.41 342 ⇑PKIKP **PKiKP 16 29 44.1 -1.4**
MARR Marisel-Cluj 145.43 338 P **PKPdf 16 29 40.9 -0.8**
RCHB Rochefort 145.45 360 *d*PKP **PKPab 16 29 43.2 +1.7**
DRGR 145.48 338 ⇑P **PKPab 16 29 43.0 +1.1**
DRGR 145.48 338 ⇑PKIKP **PKPab 16 29 43.0 +1.1**
DOU Dourbes 145.51 0 *d*PKP **PKPdf 16 29 41.1 -0.4**
SMOL Smolenice 145.53 345 *e*PKIKP **PKPab 16 29 44.1 +2.2**
GRA1 Grafenberg Arr 145.53 353 IAMs_20 IAMs_20 17 38 45.6
comp=Z,1μm,20.0s
GRFO Grafenberg 145.53 353 IAMs_20 IAMs_20 17 38 45.6
comp=Z,1μm,20.0s
ANTO Ankara 145.66 320 ⇑P **PKPab 16 29 44.1 +1.3**
ANTO Ankara 145.66 320 ⇑PKIKP **PKPab 16 29 44.1 +1.3**
MODS Modra-Piesok 145.69 345 *e*PKIKP **PKPab 16 29 44.1 +1.6**
VOIR 145.70 335 ⇑P **PKiKP 16 29 45.5 -0.7**
VOIR 145.70 335 ⇑PKIKP **PKiKP 16 29 45.5 -0.7**
KHC Kasperske Hory 145.74 350 *e*PKP2 **PKPbc 16 29 43.0 +0.6**
KHC *e*SS SS 16 52 00.8 +5.6
KHC MLR MLR
comp=Z,2μm,23.0s
KHC Kasperske Hory 145.74 350 *e*PKP **PKPbc 16 29 43.0 +0.6**
KHC *e*x x 16 29 52.5
KHC *e*SS SS 16 52 00.8 +5.6
KHC AMS AMS 17 30 10.0
comp=Z,2μm,23.0s
CKRC Cesky Krumlov 145.91 349 *e*PKP **PKPab 16 29 44.7 +1.4**
CKRC *e*x x 16 29 52.9
CKRC *e*SS SS 16 51 55.3 -1.9
WLF Walferdange 145.93 359 *d*PKP **PKPab 16 29 45.2 +1.9**
ARR Arges 145.93 335 ⇑P **PKiKP 16 29 46.2 -0.5**
GERES GERESS Array B 145.99 350 PKPbc **PKPab 16 29 45.0 +1.2**
comp=Z,5.2nm,0.9s,baz=48,slow=2.0,SNR=28
GERES GERESS Array B 145.99 350 PKP2 **PKPab 16 29 45.0 +1.2**
DEV Deva 146.18 337 ⇑P **PKiKP 16 29 46.7 -0.3**
DEV Deva 146.18 337 ⇑PKP2 **PKiKP 16 29 46.7 -0.3**
LOT Lotru 146.21 336 ⇑P **PKPbc 16 29 44.4 +0.3**
SIRR Siria 146.30 339 P **PKPab 16 29 46.2 +1.3**
AAE Adis Abeba 146.35 263 *e*P **PKiKP 16 29 48.9 +0.2**
AAE Adis Abeba 146.35 263 *e*P **PKiKP 16 29 48.9 +0.2**
FURI Furi 146.41 263 *e*P **PKiKP 16 29 52.3 +3.5**
FURI Furi 146.41 263 *e*P **PKiKP 16 29 52.3 +3.5**
CONA Conrad Observa 146.44 347 *e*P **PKPbc 16 29 45.3 +0.7**
comp=Z,6.6nm,0.8s,SNR=12
SOP Sopron 146.51 346 PKP **PKiKP 16 29 49.5 +1.9**
RONA Rosalia, Austr 146.56 346 *e*P **PKPab 16 29 46.2 +0.3**
comp=Z,12nm,0.9s,SNR=14
GZR Gura Zlata 146.64 337 ⇑P **PKPab 16 29 46.9 +0.6**
GZR Gura Zlata 146.64 337 ⇑PKP2 **PKPab 16 29 46.9 +0.6**
STU Stuttgart 146.65 355 IAMs_20 IAMs_20 17 42 03.9
comp=Z,1μm,20.0s
MPLH Magyarpolny 146.75 344 PKP **PKiKP 16 29 48.2 +0.1**
MOA Molin 146.85 348 *e*P **PKPab 16 29 46.9 0.0**
comp=Z,12nm,1.2s
BZS Buzias 146.88 338 ‖P **PKPab 16 29 47.9 +0.8**
BZS Buzias 146.88 338 ‖PKP2 **PKPab 16 29 47.9 +0.8**
BIOA Bad Ischl, Aus 147.12 349 *e*P **PKPab 16 29 48.2 +0.2**
comp=Z,18nm,1.1s,SNR=5.9
ARSA Arzberg 147.16 347 *e*P **PKPbc 16 29 47.8 +1.2**
comp=Z,7.2nm,1.2s
BFO Black Forest 147.16 356 IAMs_20 IAMs_20 17 40 12.2
comp=Z,1μm,20.0s
HERR Herculane 147.21 337 ⇑P **PKPab 16 29 48.3 -0.2**
MORH Mrgy, Hungar 147.31 342 ⇑P **PKPab 16 29 48.7 -0.1**
MORH Mrgy, Hungar 147.31 342 PKP **PKPab 16 29 48.6 -0.1**
KOVH Kovagotottos 147.59 343 PKP **PKiKP 16 29 50.0 +0.1**
LODK Lodwar 147.74 251 IAMs_20 IAMs_20 17 30 55.7
comp=Z,1μm,20.0s
LODK Lodwar 147.74 251 *e*P **PKPab 16 29 52.3 +0.7**
LODK Lodwar 147.74 251 *e*P **PKPab 16 29 52.3 +0.7**
RETA Reutte 147.76 353 *e*P **PKiKP 16 29 50.1 -0.2**
comp=Z,12nm,1.2s
WATA Walderalm 147.80 352 *e*P **PKPbc 16 29 49.5 +1.0**
comp=Z,3.8nm,0.6s
SOKA Soboth 147.81 347 *e*P **PKiKP 16 29 50.0 -0.5**
comp=Z,14nm,1.1s
MOTA Moosalm 147.85 352 *e*P **PKPbc 16 29 49.1 +0.5**
comp=Z,13nm,1.5s
WTTA Wattenberg 147.86 351 *e*P **PKPbc 16 29 49.1 +0.4**
comp=Z,7.2nm,0.6s
FRGS Fruska Gora 147.90 340 ‖P **PKPbc 16 29 49.9 +1.2**
GHAJ Ghor Haditha 147.94 305 IAMs_20 IAMs_20 17 38 09.3
comp=Z,1μm,21.0s
SQTA Sankt Quirin 147.96 352 *e*P **PKPbc 16 29 50.1 +1.2**
comp=Z,9.8nm,1.2s
CSS Mathiatis 148.01 312 IAMs_20 IAMs_20 17 42 37.5
comp=Z,1μm,21.0s
DAVA Damuels 148.06 354 *e*P **PKPbc 16 29 50.1 +0.9**
comp=Z,15nm,1.3s
OBKA Obir 148.07 347 *e*P **PKPbc 16 29 50.1 +0.9**
comp=Z,14nm,1.6s
MYKA Terra Mystica 148.14 349 *e*P **PKPbc 16 29 50.3 +0.9**
comp=Z,8.7nm,1.0s
BLKB Belogradchik 148.16 335 ⇑P **PKPbc 16 29 49.8 +0.3**
FETA Feichten 148.22 352 *e*P **PKPbc 16 29 50.2 +0.5**
comp=Z,13nm,1.1s,SNR=5.7
ABTA Abfaltersbach 148.23 350 *e*P **PKPbc 16 29 50.9 +1.3**
comp=Z,14nm,1.0s
ISP Isparta 148.31 319 IAMs_20 IAMs_20 17 36 28.6
comp=Z,1μm,22.0s
LJU Ljubljana 148.52 347 *i* PKPbc **PKiKP 16 29 52.0 +0.2**
LJU *e* 16 30 24.8
BOVS Bovan 148.54 336 ⇑P **PKPbc 16 29 51.5 +1.1**
CRNS Crni Vrh 148.54 348 *e*PKPbc **PKPbc 16 29 51.6 +1.2**
STAL STALIGIAL 148.66 350 **PKPbc 16 29 51.1 +0.4**
FUORN Ofenpass-Fuorn 148.67 353 **PKPbc 16 29 50.7 -0.3**
FUORN IAMs_20 IAMs_20 17 36 24.6
comp=Z,1μm,22.0s
DIVS Divibare 148.77 339 **PKPbc 16 29 52.2 +1.1**
RDO Rodhopi 148.84 329 **PKPbc 16 29 52.2 +1.0**
TUE Stuetta 148.92 354 IAMs_20 IAMs_20 17 35 44.9
comp=Z,1μm,21.0s
TEOL Teolo 149.71 351 **PKiKP 16 29 54.9 +0.6**
MBAR Mbarara 149.90 240*c i*PKP2 **PKPab 16 29 58.5 -1.9**
MBAR pmax pmax
comp=Z,19nm,2.5s
SSB Saint Sauveur 150.33 1 PKPab **PKiKP 16 29 57.0 +1.3**
SSB Saint Sauveur 150.33 1 PKIKP **PKiKP 16 29 57.0 +1.3**
SSB MLR MLR
comp=Z,2μm,20.0s
PDG Podgorica 150.49 338 ‖P **PKPbc 16 29 54.5 -0.7**
KARP Karpathos 151.84 319 IAMs_20 IAMs_20 17 40 44.1
comp=Z,1μm,20.0s
SANT Santorini 152.33 322 IAMs_20 IAMs_20 17 42 14.4
comp=Z,763nm,19.0s
IDI Anoyia 153.41 321 IAMs_20 IAMs_20 17 49 46.1
comp=Z,1μm,19.0s
CART Cartagena 157.40 12 IAMs_20 IAMs_20 17 38 27.7
comp=Z,1μm,20.0s
DBIC Dimbokro 166.98 131 PKPab **PKPab 16 31 06.9 -6.8**
DBIC Dimbokro 166.98 131 PKP2 **PKPab 16 31 06.9 -6.8**

IDC 25 16:17:12.8±2.5, 4°36N×123°43E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=319.7km s-min=29.1km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.43**	**156**	P	P	16 22 51.7	+0.2
	0.2nm,0.3s,baz=336,slow=9.7,SNR=6.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**29.68**	**160**	P	P	16 23 20.3	-0.2
	0.2nm,0.7s,baz=335,slow=7.9,SNR=5.4						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**55.19**	**327**	P	P	16 26 47.3	-0.1
	0.1nm,0.4s,baz=108,slow=7.6,SNR=1.6						
	0.1nm,0.4s						

IDC 25 16:21:50.7±1.6, 4°20N×32°53W, h0km, mb3.5/3, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=48.5km s-min=33.0km az=146.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.51**	**199**	Pn	Pn	16 24 22.8	0.0
	0.6nm,0.3s,baz=162,slow=17,SNR=1.7						
	8.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**34.94**	**73**	P	P	16 28 44.5	-0.2
	0.8nm,0.7s,baz=262,slow=8.5,SNR=4.2						
	0.8nm,0.7s						
ESDC	**Sonseca Array**	**43.76**	**32**	P	P	16 29 58.2	0.0
	0.3nm,0.4s,baz=233,slow=9.9,SNR=1.8						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**71.52**	**299**	P	P	16 33 14.0	0.0
	0.2nm,0.7s,baz=98,slow=6.5,SNR=2.2						
	0.2nm,0.7s						

*IDC **25** 16:22:19.1±0.5, 4°23N×32°55W, h0km, mb4.3/18, mbtmp4.3/19, ML4.2/1, MS4.5/7, Error ellipse: s-maj=18.1km s-min=13.0km az=154.0*
*NEIC **25** 16:22:21.5±0.9, 4°19N±0°08×32°53W±0°10, h10km±1km, mb4.8/35, Error ellipse: s-maj=16.4km s-min=12.8km az=99.0*
*GCMT **25** 16:22:22.5±0.4, 4°19N±0°05×32°67W±0°02, h21km±1km, MW5.0/69, Moment Tensor Solution. s14,c17; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.98±.36; $M_{\theta\theta}$0.24±.20; $M_{\phi\phi}$3.74±.23; $M_{r\theta}$-1.21±.53; $M_{r\phi}$-0.05±.15; $M_{\theta\phi}$1.25±.37; Best double couple: M_0=4.21500×10^{16} NP1:ϕ_s165.00000°, δ56.00000°, λ-106.00000°. NP2: ϕ_s12.00000°, δ37.00000°, λ-68.00000°. Principal axes: T 3.9540, Plg10.0000°, Azm266.0000°; N 0.5250, Plg13.0000°, Azm174.0000°; P -4.4760, Plg74.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 16:22:21.8±0.5, 4°19N±0°08×32°51W±0°08, h19km, n71, σ0 75/61, mb4.7/33, MS4.5/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.51**	**199**	Pn	Pn	16 24 51.3	-0.3
	1.9nm,0.3s,baz=158,slow=16,SNR=7.6						
RCBR				Sn	Sn	16 26 39.5	-10
	1.2nm,0.3s,baz=52,slow=19,SNR=1.9						
RCBR				LR	LR	16 28 08.5	
	comp=Z,715nm,19.8s,baz=145,slow=33						
	6.8nm,0.4s						
RCBR	**Riachuelo**	**10.51**	**199**	Pn	Pn	16 24 49.9	-1.7
SACV	**Santiago Islan**	**13.84**	**39**	Pn	Pn	16 25 34.7	-2.4
MDP	**Montagnes des**	**20.09**	**273**	P	P	16 26 53.9	-0.6
	19nm,0.9s,baz=83,slow=14,SNR=4.7						
	19nm,0.9s						
H10N3	**ASCENSION HYDR**	**21.58**	**124**	T	T	16 49 36.7	
	baz=303,slow=75,SNR=684						
H10N2	**ASCENSION HYDR**	**21.58**	**124**	T	T	16 49 36.9	
	baz=303,slow=75,SNR=739						
H10N1	**ASCENSION HYDR**	**21.60**	**124**	T	T	16 49 38.2	
	baz=303,slow=75,SNR=814						
H10S3	**ASCENSION HYDR**	**22.07**	**126**	T	T	16 50 16.8	
	baz=302,slow=74,SNR=237						
H10S2	**ASCENSION HYDR**	**22.09**	**126**	T	T	16 50 18.1	
	baz=278,slow=74,SNR=88						
BDFB	**Brasilia**	**24.98**	**218**	P	P	16 27 43.3	-1.3
	2.6nm,0.5s,baz=51,slow=14,SNR=3.9						
	2.6nm,0.5s						
H05S1	**Guadeloupe/Mar**	**29.71**	**292**	T	T	16 59 21.5	
	SNR=39						
H05N1	**Guadeloupe/Mar**	**30.51**	**295**	T	T	17 00 20.7	
	SNR=5.2						
SAML	**Samuel**	**33.25**	**247**	P	P	16 28 57.2	-1.0
SAML				IAmb	IAmb	16 29 08.0	
	comp=Z,9.8nm,1.1s						
SIV	**San Ignacio**	**34.65**	**234**	P	P	16 29 11.8	+1.4
	comp=Z,3.3nm,0.9s,baz=87,slow=8.5,SNR=12						
SIV				LR	LR	16 42 57.6	
	comp=Z,916nm,19.3s,baz=79,slow=36						
	comp=Z,3.3nm,0.9s						
TOA0	**Torodi Ar. Sit**	**34.92**	**73**	P	P	16 29 12.4	-0.3
TOA0				IAmb	IAmb	16 29 14.1	
	comp=Z,32nm,2.0s						
TORD	**Torodi Ar. Bea**	**34.92**	**73**	P	P	16 29 12.8	0.0
	comp=Z,2.8nm,0.7s,baz=262,slow=8.2,SNR=13						
TORD				LR	LR	16 41 42.5	
	comp=Z,722nm,19.0s,baz=210,slow=33						
	comp=Z,2.8nm,0.7s						
MTP	**Monte Pirata**	**35.15**	**296**	P	P	16 29 14.8	+0.2
MTP				IAmb	IAmb	16 29 16.2	
	comp=Z,17nm,0.7s						
BAUV	**El Baul**	**35.60**	**279**	P	P	16 29 19.5	+1.0
BAUV				IAmb	IAmb	16 29 21.2	
	comp=Z,20nm,0.9s						
SJG	**San Juan**	**35.70**	**295**	P	P	16 29 18.8	-0.5
	comp=Z,5.7nm,0.3s,baz=54,slow=6.4,SNR=4.6						
	comp=Z,5.7nm,0.3s						
AOPR	**Arecibo Observ**	**36.31**	**296**	P	P	16 29 24.5	-0.2
SDV	**Santo Domingo**	**38.15**	**279**	P	P	16 29 40.3	-0.2
	comp=Z,12nm,0.7s,baz=8.7,slow=1.4,SNR=10.0						
	comp=Z,12nm,0.7s						
SDV	**Santo Domingo**	**38.15**	**279**	P	P	16 29 40.5	0.0
SDV				IAmb	IAmb	16 29 42.4	
	comp=Z,14nm,0.8s						
CPUP	**Villa Florida**	**38.71**	**217**	P	P	16 29 45.0	+0.2
	comp=Z,3.7nm,0.8s,baz=36,slow=8.8,SNR=5.3						
	comp=Z,3.7nm,0.8s						
CPUP	**Villa Florida**	**38.71**	**217**	P	P	16 29 44.9	+0.2
PAMC	**Pamplona, Colo**	**40.10**	**276**	*e*P	P	16 29 58.5	+1.3
RUSC	**La Rusia**	**40.45**	**274**	*e*P	P	16 30 00.6	+0.5
SDDR	**Presa de Saban**	**40.60**	**294**	P	P	16 30 01.3	+0.5
SDDR				IAmb	IAmb	16 30 08.6	
	comp=Z,20nm,1.1s						
LPAZ	**La Paz**	**40.68**	**239**	P	P	16 30 02.6	+0.6
	comp=Z,3.5nm,0.9s,baz=77,slow=6.0,SNR=6.6						
	comp=Z,3.5nm,0.9s						
LPAZ	**La Paz**	**40.68**	**239**	P	P	16 30 01.9	-0.2
GUY2C	**Guyana, Caldas**	**42.72**	**273**	*e*P	P	16 30 17.5	-1.2
PB16	**IPOC Station P**	**42.78**	**237**	P	P	16 30 18.1	-1.2
ESDC	**Sonseca Array**	**43.75**	**32**	P	P	16 30 26.4	+0.2
	comp=Z,2.9nm,1.1s,baz=243,slow=5.2,SNR=6.3						
	comp=Z,2.9nm,1.1s						
D62A	**Allapoint, All**	**53.09**	**329**	P	P	16 31 38.4	+0.5
TSUM	**Tsumeb**	**54.48**	**117**	P	P	16 31 49.1	+0.3
	comp=Z,6.8nm,1.0s,baz=248,slow=8.9,SNR=3.9						
TSUM				LR	LR	16 51 56.4	
	comp=Z,365nm,18.2s,baz=326,slow=33						
	comp=Z,6.8nm,1.0s						
TSUM	**Tsumeb**	**54.48**	**117**	P	P	16 31 49.2	+0.3
TSUM				IAmb	IAmb	16 31 51.8	
	comp=Z,12nm,1.2s						
GO06	**Curarrehue**	**56.41**	**216**	P	P	16 32 02.7	+0.4
GO06				IAmb	IAmb	16 32 16.4	
	comp=Z,7.2nm,1.1s						
GERES	**GERESS Array B**	**59.31**	**34**	P	P	16 32 22.9	+0.4
	comp=Z,1.3nm,0.8s,baz=235,slow=4.7,SNR=4.3						
	comp=Z,1.3nm,0.8s						
KHC	**Kasperske Hory**	**59.40**	**33**	P	P	16 32 23.3	+0.2
KHC				IAmb	IAmb	16 32 57.5	
	comp=Z,14nm,1.6s						
DIVS	**Divibare**	**60.80**	**41**	P	P	16 32 34.1	+1.2
DIVS				IAmb	IAmb	16 32 43.2	
	comp=Z,6.6nm,1.1s						
MORC	**Moravsky Berou**	**61.94**	**34**	P	P	16 32 41.2	+0.8
MORC				IAmb	IAmb	16 32 51.2	
	comp=Z,8.9nm,1.3s						
PSZ	**Piszkesteto**	**62.42**	**37**	P	P	16 32 44.7	+1.0
BOSA	**Boshof**	**64.33**	**124**	P	P	16 32 57.2	+0.5
	comp=Z,18nm,1.1s,baz=302,slow=6.5,SNR=14						
	comp=Z,18nm,1.1s						
BOSA	**Boshof**	**64.33**	**124**	P	P	16 32 57.0	+0.3
MLR	**Muntele Rosu**	**65.25**	**41**	P	P	16 33 02.5	0.0
NB2	**NORSAR Sudbarra**	**65.53**	**22**	P	P	16 33 03.9	0.0
	comp=Z,13nm,1.4s,baz=232,slow=6.5						
NOA	**NORSAR Array B**	**65.53**	**22**	P	P	16 33 03.2	-0.6
	comp=Z,1.5nm,0.8s,baz=48,slow=3.4,SNR=3.6						
	comp=Z,1.5nm,0.8s						
BURAR	**Bucovina Array**	**65.56**	**39**	P	P	16 33 04.8	+0.4
833A	**Chaparral WMÅ,**	**67.70**	**299**	P	P	16 33 18.4	0.0
833A				IAmb	IAmb	16 33 24.4	
	comp=Z,12nm,0.9s						
LODK	**Lodwar**	**67.71**	**88**	P	P	16 33 19.0	+0.3
LODK				IAmb	IAmb	16 33 45.1	
	comp=Z,12nm,1.7s						
BRTR	**Keskin Array B**	**69.07**	**49**	P	P	16 33 27.7	+0.8
	comp=Z,3.0nm,1.0s,baz=224,slow=6.9,SNR=4.5						
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**69.07**	**49**	P	P	16 33 27.3	+0.5
AKASG	**Malin Array Be**	**69.12**	**37**	P	P	16 33 28.0	+1.3
	comp=Z,1.1nm,0.8s,baz=247,slow=7.8,SNR=7.5						
	comp=Z,1.1nm,0.8s						
AKBB	**Malin Array Si**	**69.12**	**37**	P	P	16 33 27.0	+0.3
TXAR	**Lajitas Array**	**71.54**	**299**	P	P	16 33 41.6	-0.5
	comp=Z,0.8nm,0.8s,baz=116,slow=5.9,SNR=6.5						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**71.54**	**299**	P	P	16 33 41.1	-1.0
ANMO	**Albuquerque**	**74.46**	**305**	P	P	16 33 59.9	+0.4
ANMO				IAmb	IAmb	16 34 10.4	
	comp=Z,21nm,1.9s						
LENM	**Lemitar**	**74.81**	**304**	P	P	16 34 02.4	+0.9
O20A	**White River Ci**	**76.41**	**310**	P	P	16 34 10.6	+0.1
O20A				IAmb	IAmb	16 34 25.6	
	comp=Z,8.6nm,1.0s						
PV13	**Radium Mtn., P**	**76.66**	**308**	P	P	16 34 12.5	+0.4
PV13

CCUT	**Cedar City**	**80.21 307**	P	**P**		**16 34 32.0**	**+0.3**
PSUT	**Pine Spring**	**80.63 308**	P	**P**		**16 34 34.5**	**+0.6**
PSUT			IAmb	IAmb		16 35 45.2	
	comp=Z,12nm,1.1s						
ELK	**Elko**	**81.77 310**	LR	LR		17 07 40.9	
	comp=Z,207nm,21.5s,baz=226,slow=33						
NVAR	**Mina Array Bea**	**84.12 308**	P	**P**		**16 34 52.5**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=113,slow=4.6,SNR=4.4						
	comp=Z,0.8nm,0.7s						
MOD	**Modoc Plateau**	**85.59 312**	P	**P**		**16 34 60.0**	**+0.6**
MOD			IAmb	IAmb		16 35 15.0	
	comp=Z,10nm,1.1s						
YBH	**Yreka Blue Hor**	**87.39 311**	LR	LR		17 11 32.3	
	comp=Z,306nm,20.8s,baz=258,slow=34						
BVAR	**Borovoye Array**	**94.39 36**	LR	LR		17 16 35.5	
	comp=Z,3μm,20.4s,baz=80,slow=34						
ASAR	**Alice Springs**	**156.61 147**	PKP	**PKPdf**		**16 42 17.0**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=249,slow=2.4,SNR=4.2						
ASAR			PKPab	**PKPab**		**16 42 46.0**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=194,slow=3.6,SNR=5.9						

IDC 25 16:23:22.4±9.6, 14°.00S×166°.03E, H77km±99km, mb3.3/3, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=71.6km s-min=35.5km az=157.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.04**	**177**	P	Pn	16 25 16.2	-0.3
	1.0nm,0.3s,baz=301,slow=23,SNR=23						
DZM				S	Sn	16 26 47.5	+1.5
	1.2nm,0.3s,baz=180,slow=20,SNR=0.9						
	3.7nm,0.4s						
WRA	**Warramunga Arr**	**30.85**	**255**	P	P	16 29 32.6	+1.1
	0.5nm,0.8s,baz=88,slow=9.2,SNR=7.0						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**31.82**	**248**	P	P	16 29 38.4	-1.7
	0.4nm,0.8s,baz=77,slow=9.6,SNR=2.5						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**86.21**	**18**	P	P	16 35 54.9	0.0
	0.7nm,0.7s,baz=236,slow=4.8,SNR=6.0						
	0.7nm,0.7s						

IDC 25 16:26:51.6±2.3, 2°.46N×128°.48E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=175.2km s-min=23.2km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.00**	**166**	P	P	16 31 57.6	-0.6
	0.6nm,0.5s,baz=342,slow=9.1,SNR=17						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.50**	**169**	P	P	16 32 29.0	-2.0
	0.3nm,0.5s,baz=346,slow=7.5,SNR=16						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.59**	**325**	P	P	16 36 59.1	+1.8
	0.5nm,0.3s,baz=112,slow=7.8,SNR=10						
	0.5nm,0.3s						

IDC 25 16:34:06.7±2.6, 16°.32S×174°.62W, h0km, mb3.6/3, mbtmp3.7/4, ML3.6/1, MS4.1/1, Error ellipse: s-maj=179.0km s-min=25.3km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.65**	**49**	Pn	Pn	16 35 02.5	-2.0
	5.4nm,0.3s,baz=42,slow=20,SNR=9.1						
	41nm,0.5s						
MSVF	**Nonsavu**	**7.15**	**258**	LR	LR	16 38 22.3	
	comp=Z,1μm,19.6s,baz=76,slow=36						
WRA	**Warramunga Arr**	**48.49**	**258**	P	P	16 42 51.2	-0.5
	1.1nm,1.0s,baz=92,slow=6.5,SNR=7.0						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**48.71**	**253**	P	P	16 42 52.7	-0.7
	0.5nm,0.7s,baz=87,slow=8.2,SNR=12						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**75.80**	**42**	P	P	16 45 58.1	+3.1
	0.2nm,0.3s,baz=238,slow=8.4,SNR=2.9						
TXAR	**Lajitas Array**	**82.10**	**56**	P	P	16 46 30.1	+0.5
	0.3nm,0.8s,baz=226,slow=9.8,SNR=2.9						
	0.3nm,0.8s						
BRTR	**Keskin Array B**	**146.10**	**319**	PKPbc	PKPab	16 53 50.0	+0.1
	3.0nm,1.2s,baz=0.0,slow=2.5,SNR=4.3						

*IDC **25** 16:40:41.3±1.7, 6°.71S×155°.46E, h0km, mb3.6/4, mbtmp3.8/5, ML2.3/1, Error ellipse: s-maj=56.0km s-min=27.8km az=131.0*

*NEIC **25** 16:40:48.1±1.0, 6.7S±0°.1×155°.3E±0°.1, h35km±2km, mb4.0/7, Error ellipse: s-maj=25.7km s-min=20.6km az=123.0*

ISC 25 16:40:47.6±1.1, 6.7S±0°.1×155°.3E±0°.2, h35km, n18, σ0°981/16, mb3.9/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.97**	**308**	Pn	**Pn**	**16 41 45.9**	**-0.2**
PMG	**Port Moresby**	**8.49**	**251**	Pn	**Pn**	**16 42 49.0**	**+0.9**
	1.8nm,0.3s,baz=56,slow=4.9,SNR=7.9						
	9.3nm,0.6s						
PMG	**Port Moresby**	**8.49**	**251**	Pn	**Pn**	**16 42 48.2**	**+0.1**
WR0	**Warramunga Arr**	**24.08**	**235**	P	**P**	**16 45 59.4**	**-0.6**
WR0				IAmb	IAmb	16 46 25.2	
	comp=Z,3.5nm,1.1s						
WB0	**Warramunga Arr**	**24.10**	**235**	P	**P**	**16 45 59.6**	**-0.6**
WB0				IAmb	IAmb	16 46 39.8	
	comp=Z,4.6nm,1.1s						
WRAB	**Tennant Creek**	**24.22**	**235**	P	**P**	**16 46 00.4**	**-0.9**
WRAB				IAmb	IAmb	16 46 20.2	
	comp=Z,3.3nm,0.9s						
WB2	**Warramunga Arr**	**24.22**	**235**	P	**P**	**16 46 00.9**	**-0.4**
WRA	**Warramunga Arr**	**24.23**	**235**	P	**P**	**16 46 01.1**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=59,slow=9.1,SNR=15						
WRA				PcP	**PcP**	**16 49 41.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=63,slow=2.6,SNR=7.5						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**26.59**	**228**	P	**P**	**16 46 21.9**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=60,slow=9.4,SNR=12						
	comp=Z,0.7nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.43**	**24**	T	T	17 14 51.1	
	baz=203,slow=76,SNR=10						
H11S2	**WAKE ISLAND Hy**	**27.43**	**24**	T	T	17 14 55.5	
	baz=203,slow=76,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**27.45**	**24**	T	T	17 14 53.1	
	baz=203,slow=76,SNR=6.3						
CMAR	**Chiang Mai Arr**	**60.91**	**295**	P	**P**	**16 50 57.8**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=121,slow=5.6,SNR=14						
	comp=Z,1.2nm,0.7s						
L19K	**White Mountain**	**78.56**	**21**	P	**P**	**16 52 46.8**	**+1.5**
CAST	**Castle Rocks**	**80.33**	**21**	P	**P**	**16 52 54.8**	**-0.1**
CAST				IAmb	IAmb	16 53 19.2	
	comp=Z,5.1nm,1.4s						
IMAR	**Indian Mountai**	**81.34**	**19**	P	**P**	**16 53 01.1**	**+0.9**
ILAR	**Eielson Array**	**82.98**	**21**	P	**P**	**16 53 07.5**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.4,SNR=4.8						
	comp=Z,0.3nm,0.7s						
QSPA	**South Pole Qui**	**83.29**	**180**	P	**P**	**16 53 10.5**	**-0.1**
QSPA				IAmb	IAmb	16 53 10.8	
	comp=Z,2.1nm,1.1s						

*GCMT **25** 16:52:34.0±0.4, 15°.40S±0°.03×174°.90W±0°.02, h19km±2km, MW4.9/71, Moment Tensor Solution. s11,c13; s71,c90; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}-0.86±.18; $M_{\theta\theta}$1.72±.20; $M_{\phi\phi}$-0.85±.14; $M_{r\theta}$0.20±.30; $M_{\theta\phi}$2.69±.12; $M_{r\phi}$0.25±.30; Best double couple: $M_0$2.99600×10^16^ NP1:ϕ_s13.00000°, δ90.00000°, λ175.00000°. NP2: ϕ_s103.00000°, δ85.00000°, λ0.00000°. Principal axes: T 3.4360, Plg4.0000°, Azm328.0000°; N -0.8760, Plg85.0000°, Azm190.0000°; P -2.5570, Plg4.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 25 16:52:24.7±4.5, 16°.19S×174°.60W, h0km, mb3.8/3, mbtmp3.8/4, ML3.8/1, MS4.3/22 Error ellipse: s-maj=299.2km s-min=24.3km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.54**	**51**	Pn	Pn	16 53 19.0	-2.1
	7.6nm,0.3s,baz=84,slow=2.5,SNR=6.2						
AFI				T	T	16 56 53.5	
	57nm,0.6s,baz=102,slow=21,SNR=5.0						
	36nm,0.6s						

MSVF	**Nonsavu**	**7.20**	**257**	LR	LR	16 56 32.3	
	comp=Z,4μm,19.1s,baz=51,slow=34						
RAR	**Rarotonga**	**14.90**	**112**	LR	LR	17 00 41.6	
	comp=Z,478nm,20.1s,baz=288,slow=33						
DZM	**Mont Dzumac**	**18.84**	**249**	LR	LR	17 03 04.6	
	comp=Z,587nm,19.0s,baz=62,slow=34						
URZ	**Urewera**	**23.16**	**197**	LR	LR	17 04 04.0	
	comp=Z,442nm,19.8s,baz=102,slow=30						
PMG	**Port Moresby**	**37.85**	**275**	LR	LR	17 11 45.2	
	comp=Z,344nm,18.4s,baz=14,slow=31						
STKA	**Stephens Creek**	**42.65**	**240**	LR	LR	17 16 12.5	
	comp=Z,262nm,20.6s,baz=13,slow=34						
WRA	**Warramunga Arr**	**48.54**	**258**	P	P	17 01 09.1	-1.0
	1.6nm,1.1s,baz=89,slow=7.4,SNR=14						
WRA				LR	LR	17 19 25.1	
	comp=Z,383nm,18.1s,baz=65,slow=33						
	1.6nm,1.1s						
ASAR	**Alice Springs**	**48.77**	**253**	P	P	17 01 11.9	+0.1
	1.2nm,1.0s,baz=86,slow=8.1,SNR=12						
ASAR				LR	LR	17 19 49.8	
	comp=Z,569nm,20.4s,baz=72,slow=34						
	1.2nm,1.0s						
SIJI	**Sorong**	**55.46**	**280**	LR	LR	17 25 52.1	
	comp=Z,281nm,18.0s,baz=257,slow=36						
JCJ	**Chichijima**	**60.09**	**315**	LR	LR	17 23 33.2	
	comp=Z,264nm,21.3s,baz=88,slow=31						
NWAO	**Narrogin (SRO)**	**63.23**	**241**	LR	LR	17 28 29.8	
	comp=Z,234nm,20.4s,baz=292,slow=34						
MJAR	**Matsushiro Arr**	**68.81**	**321**	LR	LR	17 28 23.6	
	comp=Z,130nm,19.6s,baz=62,slow=31						
JOW	**Kunigami**	**70.03**	**307**	LR	LR	17 27 58.0	
	comp=Z,159nm,21.7s,baz=194,slow=30						
PFO	**Pinyon Flats O**	**74.30**	**47**	LR	LR	17 31 36.6	
	comp=Z,455nm,18.9s,baz=273,slow=32						
LPIG	**La Paz**	**74.43**	**59**	LR	LR	17 30 39.4	
	comp=Z,355nm,19.2s,baz=290,slow=31						
NVAR	**Mina Array Bea**	**75.69**	**42**	P	P	17 04 13.1	+0.7
	0.9nm,0.8s,baz=225,slow=10,SNR=3.9						
	0.9nm,0.8s						
KSRS	**Korea Array**	**75.92**	**316**	LR	LR	17 33 34.4	
	comp=Z,72nm,20.5s,baz=330,slow=32						
USRK	**Ussuriysk Ar.**	**77.33**	**324**	LR	LR	17 31 42.7	
	comp=Z,276nm,21.5s,baz=96,slow=30						
KLR	**Kul'dur**	**80.56**	**328**	LR	LR	17 33 35.6	
	comp=Z,142nm,22.0s,baz=289,slow=31						
TXAR	**Lajitas Array**	**82.01**	**56**	P	P	17 04 49.4	+2.1
	0.5nm,1.0s,baz=222,slow=1.2,SNR=3.3						
TXAR				LR	LR	17 35 21.9	
	comp=Z,342nm,18.4s,baz=285,slow=31						
ANMO	**Albuquerque**	**82.19**	**50**	LR	LR	17 35 10.3	
	comp=Z,431nm,18.3s,baz=313,slow=31						
CMIG	**Matias Romero**	**85.23**	**71**	LR	LR	17 37 21.7	
	comp=Z,190nm,18.7s,baz=352,slow=32						
CMAR	**Chiang Mai Arr**	**91.77**	**289**	LR	LR	17 41 33.9	
	comp=Z,61nm,21.7s,baz=295,slow=32						
BRTR	**Keskin Array B**	**146.02**	**319**	PKPbc	PKPab	17 12 07.5	-0.1
	1.2nm,0.8s,baz=355,slow=4.6,SNR=2.8						

*STR **25** 16:52:58.7±0.8, 43°N±4°×1°1E±°, h5km, MLv4.2/53, Error ellipse: s-maj=0.0km s-min=0.0km az=108.3, preliminary*

*LDG **25** 16:52:59.8±0.1, 43°.60N×11°.01E, h9km, Md3.8/2, Ml3.8/39, Error ellipse: s-maj=1.9km s-min=1.7km az=45.0*

*GEN **25** 16:53:00.5, 43°.60N×11°.03E, h10km, Ml0.0*

*ROM **25** 16:53:01.0±0.1, 43°.606N±0°.003×11°.001E±0°.004, h10km, ML3.9/28, Mw3.9, Error ellipse: s-maj=0.3km s-min=0.1km az=239.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; M_{rr}-0.08; $M_{\theta\theta}$2.68; $M_{\phi\phi}$-2.60; $M_{r\theta}$-3.06; $M_{\theta\phi}$-7.19; $M_{r\phi}$-0.28; Fault plane solution: $M_0$8.25050×10^14^ NP1:ϕ_s350.00000°, δ68.00000°, λ1.00000°. NP2:ϕ_s260.00000°, δ89.00000°, λ158.00000°.*

*NEIC **25** 16:53:00.8±1.9, 43°.60N±0°.02×11°.06E±0°.04, h10km±1km, mb4.2/6, ML3.9(ROM) Error ellipse: s-maj=5.1km s-min=2.8km az=63.0*

*BGR **25** 16:53:00.7±0.8, 43°.35N×11°.05E, h10km, ML4.2/7, Error ellipse: s-maj=17.8km s-min=13.3km az=73.0*

*IDC **25** 16:53:01.3±1.1, 43°.78N×10°.63E, h0km, mb4.0/5, mbtmp3.9/12, ML3.4/7, MS3.8/3, Error ellipse: s-maj=29.5km s-min=13.0km az=110.0*

*PRU **25** 16:53:02.3±0.0, 43°.79N×11°.08E, h0km, M4.2*

ISC 25 16:53:00.5±0.9, 43°.58N±0°.01×11°.00E±0°.01, h7km±6km, n508, σ2°912/606, mb4.1/7, 21C-55D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSC	**Osservatorio P**	**0.19**	**108**	Pg	**Pg**	**16 53 00.3**	**-4.0**
OSSC				Sg	**Sg**	**16 53 03.8**	**-3.0**
OSSC	**Osservatorio P**	**0.19**	**108**	⇓P	**Pg**	**16 53 00.3**	**-4.0**
OSSC				S	**Sg**	**16 53 03.6**	**-3.2**
CRMI	**Carmignano**	**0.21**	**353**	P	**Pg**	**16 53 05.4**	**+0.7**
CRMI				S	**Sg**	**16 53 08.6**	**+1.0**
CRMI	**Carmignano**	**0.21**	**353**	P	**Pg**	**16 53 05.4**	**+0.7**
CRMI				S	**Sg**	**16 53 08.6**	**+1.0**
CRMI	**Carmignano**	**0.21**	**353**	⇑P	**Pg**	**16 53 05.4**	**+0.7**
CRMI				S	**Sg**	**16 53 08.5**	**+1.0**
CRMI				AML	AML		
CRMI				AML	AML		
	comp=E,31450μm,0.7s						
CRMI				AML	AML		
CRMI				AML	AML		
	comp=N,14350μm,0.8s						
CRMI				AML	AML		
	comp=N,85100μm,0.9s						
CRMI				AML	AML		
	comp=N,85150μm,0.9s						
CSNT	**Castellina Chi**	**0.24**	**117**	P	**Pg**	**16 53 06.3**	**+1.1**
CSNT				S	**Sg**	**16 53 10.4**	**+2.0**
CSNT	**Castellina Chi**	**0.24**	**117**	P	**Pg**	**16 53 06.3**	**+1.1**
CSNT				S	**Sg**	**16 53 10.4**	**+2.0**
CSNT	**Castellina Chi**	**0.24**	**117**	⇓P	**Pg**	**16 53 06.3**	**+1.1**
CSNT				S	**Sg**	**16 53 10.4**	**+2.0**
CSNT				AML	AML		
	comp=N,39650μm,0.8s						
CSNT				AML	AML		
	comp=E,40350μm,0.7s						
FIR	**Firenze**	**0.27**	**43**	⇑P	**Pg**	**16 53 06.4**	**+0.7**
FIR				S	**Sg**	**16 53 10.6**	**+1.3**
PII	**Pisa**	**0.38**	**292**	P	**Pg**	**16 53 08.7**	**+0.9**
PII				S	**Sg**	**16 53 13.6**	**+0.8**
PII	**Pisa**	**0.38**	**292**	P	**Pg**	**16 53 08.7**	**+0.9**
PII				S	**Sg**	**16 53 13.6**	**+0.8**
PII	**Pisa**	**0.38**	**292**	⇓P	**Pg**	**16 53 08.7**	**+0.9**
PII				S	**Sg**	**16 53 13.5**	**+0.8**
PII				AML	AML		
	comp=E,72200μm,0.3s						
PII				AML	AML		
	comp=N,54650μm,0.7s						
MPPT	**Montemurlo**	**0.38**	**9**	⇑P	**Pg**	**16 53 08.3**	**+0.3**
MPPT				S	**Sg**	**16 53 13.8**	**+0.8**
MPPT				AML	AML		
	comp=E,32750μm,0.6s						
MPPT				AML	AML		
	comp=E,32700μm,0.6s						
MPPT				AML	AML		
	comp=N,31100μm,0.8s						
MPPT				AML	AML		
	comp=N,31050μm,0.8s						
FROS	**Frosini**	**0.39**	**163**	P	**Pb**	**16 53 09.4**	**-0.2**
FROS				S	**Sb**	**16 53 15.3**	**-0.5**
FROS	**Frosini**	**0.39**	**163**	P	**Pb**	**16 53 09.4**	**-0.2**
FROS				S	**Sb**	**16 53 15.3**	**-0.5**
FROS	**Frosini**	**0.39**	**163**	⇓P	**Pb**	**16 53 09.5**	**-0.2**
FROS				S	**Sg**	**16 53 15.1**	**+1.9**
FROS				AML	AML		
	comp=N,56800μm,0.5s						
FROS				AML	AML		
	comp=E,50300μm,0.4s						
MTCR	**Monte La Croce**	**0.45**	**360**	P	**Pg**	**16 53 09.4**	**+0.2**
MTCR				S	**Sg**	**16 53 15.7**	**+0.6**
MTCR	**Monte La Croce**	**0.45**	**360**	P	**Pg**	**16 53 09.4**	**+0.2**
MTCR				S	**Sg**	**16 53 15.7**	**+0.6**
MTCR	**Monte La Croce**	**0.45**	**360**	⇑P	**Pg**	**16 53 09.4**	**+0.2**
MTCR				S	**Sb**	**16 53 16.1**	**-1.6**
MTCR				AML	AML		
	comp=E,26550μm,0.7s						
MTCR				AML	AML		
	comp=N,28150μm,0.4s						
RUFI	**Rufina**	**0.45**	**55**	P	**Pb**	**16 53 09.8**	**-1.0**
RUFI				S	**Sb**	**16 53 16.3**	**-1.4**
RUFI	**Rufina**	**0.45**	**55**	P	**Pb**	**16 53 09.8**	**-1.0**
RUFI				S	**Sb**	**16 53 16.3**	**-1.4**
RUFI	**Rufina**	**0.45**	**55**	⇑P	**Pb**	**16 53 09.7**	**-1.0**

RUFI				S	**Sb**	**16 53 16.2**	**-1.4**
TRIF	**Trifonti**	**0.47**	**189**	⇑P	**Pg**	**16 53 11.0**	**+1.4**
TRIF				S	**Sg**	**16 53 17.9**	**+2.1**
TRIF				AML	AML		
	comp=E,18300μm,0.5s						
TRIF				AML	AML		
	comp=N,16350μm,0.5s						
TRIF				AML	AML		
	comp=N,16350μm,0.5s						
TRIF				AML	AML		
	comp=E,18300μm,0.6s						
POPM	**Popiglio**	**0.50**	**339**	P	**Pg**	**16 53 10.5**	**+0.4**
POPM				S	**Sb**	**16 53 19.2**	**+0.2**
POPM	**Popiglio**	**0.50**	**339**	P	**Pg**	**16 53 10.5**	**+0.4**
POPM				S	**Sb**	**16 53 19.2**	**+0.2**
POPM	**Popiglio**	**0.50**	**339**	⇓P	**Pg**	**16 53 10.5**	**+0.4**
MAIM	**Mastiano**	**0.50**	**312**	P	**Pg**	**16 53 10.7**	**+0.5**
MAIM				S	**Sg**	**16 53 17.1**	**+0.4**
MAIM	**Mastiano**	**0.50**	**312**	P	**Pg**	**16 53 10.7**	**+0.5**
MAIM				S	**Sg**	**16 53 17.1**	**+0.4**
MAIM	**Mastiano**	**0.50**	**312**	⇓P	**Pg**	**16 53 10.7**	**+0.5**
MAIM				S	**Sg**	**16 53 16.9**	**+0.2**
MAIM				AML	AML		
	comp=E,11100μm,0.7s						
MAIM				AML	AML		
	comp=N,13650μm,0.6s						
A318A	**Donoratico (LI**	**0.56**	**214**	⇑P	**Pg**	**16 53 12.7**	**+1.4**
A318A				S	**Sb**	**16 53 21.1**	**+0.4**
BDI	**Bagni Di Lucca**	**0.56**	**329**	⇓P	**Pg**	**16 53 11.7**	**+0.3**
BDI				S	**Sg**	**16 53 20.1**	**+1.3**
BDI				AML	AML		
	comp=N,15400μm,0.4s						
BDI				AML	AML		
	comp=E,17150μm,0.2s						
BDI				AML	AML		
	comp=E,7160μm,0.2s						
BDI				AML	AML		
	comp=N,5060μm,1.2s						
CARD	**Cardoso**	**0.58**	**320**	P	**Pg**	**16 53 12.0**	**+0.2**
CARD				S	**Sg**	**16 53 19.9**	**+0.5**
CARD	**Cardoso**	**0.58**	**320**	P	**Pg**	**16 53 12.0**	**+0.2**
CARD				S	**Sg**	**16 53 19.9**	**+0.5**
CARD	**Cardoso**	**0.58**	**320**	⇓P	**Pg**	**16 53 12.0**	**+0.2**
CARD				S	**Sb**	**16 53 21.0**	**-0.5**
CARD				AML	AML		
	comp=E,20700μm,0.7s						
CARD				AML	AML		
	comp=N,19250μm,1.5s						
FNVD	**Fontana Vidola**	**0.59**	**8**	⇑P	**Pg**	**16 53 12.3**	**+0.4**
ASQU	**Asqua**	**0.61**	**69**	P	**Pb**	**16 53 12.7**	**-0.8**
ASQU				S	**Sb**	**16 53 21.5**	**-0.9**
ASQU	**Asqua**	**0.61**	**69**	P	**Pb**	**16 53 12.7**	**-0.8**
ASQU				S	**Sb**	**16 53 21.5**	**-0.9**
ASQU	**Asqua**	**0.61**	**69**	AML	AML		
	comp=N,13500μm,0.8s						
ASQU				AML	AML		
	comp=E,14150μm,0.4s						
BRIS	**BRISIGHELLA**	**0.68**	**33**	⇑P	**Pn**	**16 53 17.2**	**+0.7**
BRIS				AML	AML		
	comp=E,10550μm,0.7s						
BRIS				AML	AML		
	comp=N,9985μm,0.7s						
BRIS				AML	AML		
	comp=E,10600μm,0.7s						
BRIS				AML	AML		
	comp=N,10020μm,0.7s						
BRIS				AML	AML		
	comp=N,9985μm,0.7s						
CRE	**Caprese Michel**	**0.69**	**86**	⇓P	**Pb**	**16 53 14.3**	**-0.6**
CRE				S	**Sb**	**16 53 24.0**	**-0.7**
CRE				AML	AML		
	comp=E,17300μm,0.5s						
CRE				AML	AML		
	comp=N,12400μm,1.0s						
SFI	**Santa Sofia**	**0.69**	**62**	⇑P	**Pb**	**16 53 14.1**	**-0.8**
SFI				S	**Sb**	**16 53 23.8**	**-0.9**
SFI				AML	AML		
	comp=E,19300μm,0.8s						
SFI				AML	AML		
	comp=E,19350μm,0.8s						
SFI				AML	AML		
	comp=E,19250μm,0.8s						
SFI				AML	AML		
	comp=N,18800μm,1.0s						
SFI				AML	AML		
	comp=E,19400μm,0.8s						
SFI				AML	AML		
	comp=N,19000μm,0.9s						
SFI				AML	AML		
	comp=N,18800μm,0.9s						
LMD	**Lutirano**	**0.71**	**46**	P	**Pb**	**16 53 14.3**	**-0.9**
LMD				S	**Sb**	**16 53 25.5**	**+0.3**
LMD	**Lutirano**	**0.71**	**46**	P	**Pb**	**16 53 14.3**	**-0.9**
LMD				S	**Sb**	**16 53 25.5**	**+0.3**
LMD	**Lutirano**	**0.71**	**46**	⇑P	**Pb**	**16 53 14.3**	**-0.9**
LMD				S	**Sb**	**16 53 25.4**	**+0.2**
LMD				AML	AML		
	comp=E,7285μm,0.3s						
LMD				AML	AML		
	comp=N,9085μm,0.8s						
VLC	**Villacollemand**	**0.73**	**323**		**Pg**	**16 53 14.5**	**0.0**
VLC				Sg	**Sb**	**16 53 25.3**	**-0.5**
VLC	**Villacollemand**	**0.73**	**323**	P	**Pg**	**16 53 14.8**	**+0.2**
VLC	**Villacollemand**	**0.73**	**323**	P	**Pg**	**16 53 14.8**	**+0.2**
VLC	**Villacollemand**	**0.73**	**323**	⇓P	**Pg**	**16 53 14.7**	**+0.2**
VLC				AML	AML		
	comp=E,6830μm,1.1s						
VLC				AML	AML		
	comp=N,9505μm,1.5s						
VLC				AML	AML		
	comp=E,6545μm,1.1s						
VLC				AML	AML		
	comp=N,9610μm,1.5s						
VLC				AML	AML		
	comp=N,9615μm,1.5s						
VLC				AML	AML		
	comp=E,6540μm,1.1s						
SARO	**Sassorosso**	**0.74**	**324**	P	**Pg**	**16 53 14.9**	**+0.1**
SARO	**Sassorosso**	**0.74**	**324**	P	**Pg**	**16 53 14.9**	**+0.1**
CAFI	**Castiglion Fio**	**0.74**	**109**	⇓P	**Pb**	**16 53 15.4**	**-0.4**
CAFI				S	**Sb**	**16 53 25.8**	**-0.3**
CAFI				AML	AML		
	comp=N,4845μm,0.9s						
CAFI				AML	AML		
	comp=N,5085μm,0.9s						
CAFI				AML	AML		
	comp=E,4035μm,1.1s						
CAFI				AML	AML		
	comp=E,4235μm,1.1s						
CAFI				AML	AML		
	comp=N,4840μm,0.9s						
ZCCA	**Zocca**	**0.77**	**359**		**Pb**	**16 53 16.5**	**+0.2**
ZCCA	**Zocca**	**0.77**	**359**	P	**Pn**	**16 53 16.9**	**-1.0**
ZCCA	**Zocca**	**0.77**	**359**	P	**Pn**	**16 53 16.9**	**-1.0**
ZCCA	**Zocca**	**0.77**	**359**	P	**Pb**	**16 53 16.2**	**0.0**
ZCCA				AML	AML		
	comp=N,10380μm,0.9s						
ZCCA				AML	AML		
	comp=N,10360μm,0.9s						
ZCCA				AML	AML		
	comp=N,10370μm,0.9s						
ZCCA				AML	AML		
	comp=E,11700μm,0.9s						
ZCCA				A

GROG	**Isola di Gorgo**	**0.82 260**	P	**Pg**	**16 53 17.2 +0.9**
GROG			S	**Sg**	**16 53 28.5 +1.4**
GROG	**Isola di Gorgo**	**0.82 260**	P	**Pg**	**16 53 17.2 +0.9**
GROG			S	**Sg**	**16 53 28.4 +1.4**
GROG			AML	AML	
	comp=E,10855µm,0.7s				
GROG			AML	AML	
	comp=N,9045µm,0.3s				
GSCL	**Gusciola**	**0.83 339**	P	**Pb**	**16 53 17.0 -0.2**
GSCL			S	**Sb**	**16 53 29.2 +0.6**
GSCL	**Gusciola**	**0.83 339**	P	**Pb**	**16 53 17.0 -0.2**
GSCL			S	**Sb**	**16 53 29.2 +0.6**
GSCL	**Gusciola**	**0.83 339**	⇓P	**Pg**	**16 53 16.9 +0.5**
GSCL			AML	AML	
	comp=E,15400µm,0.6s				
GSCL			AML	AML	
	comp=N,15200µm,0.8s				
EQUI	**Equi**	**0.85 314**	P	**Pg**	**16 53 16.7 -0.1**
EQUI			S	**Sg**	**16 53 28.2 +0.4**
EQUI	**Equi**	**0.85 314**	P	**Pg**	**16 53 16.7 -0.1**
EQUI			S	**Sg**	**16 53 28.2 +0.4**
EQUI	**Equi**	**0.85 314**	⇓P	**Pg**	**16 53 16.5 -0.3**
EQUI			AML	AML	
	comp=N,7645µm,0.6s				
EQUI			AML	AML	
	comp=E,6610µm,0.7s				
MTRZ	**Monterenzio**	**0.86 23**	⇑P	**Pg**	**16 53 16.6 -0.5**
MTRZ			AML	AML	
	comp=E,12370µm,1.6s				
MTRZ			AML	AML	
	comp=N,11930µm,1.2s				
MTRZ			AML	AML	
	comp=E,12900µm,1.6s				
MTRZ			AML	AML	
	comp=N,12100µm,1.3s				
SF11	**Podere del Sol**	**0.87 145**	⇓P	**Pg**	**16 53 17.7 +0.6**
SF01	**Poggio Pratacc**	**0.87 152**	⇓P	**Pb**	**16 53 18.0 0.0**
SF01			AML	AML	
	comp=E,8610µm,1.4s				
SF01			AML	AML	
	comp=N,8895µm,1.2s				
SF01			AML	AML	
	comp=E,8605µm,1.4s				
SF01			AML	AML	
	comp=N,8890µm,1.2s				
ATMC	**Monte Cedrone**	**0.88 98**	⇓P	**Pb**	**16 53 17.8 -0.2**
SF04	**Casetta**	**0.89 147**	⇑P	**Pb**	**16 53 18.6 +0.4**
SF04			AML	AML	
	comp=E,5195µm,0.2s				
SF04			AML	AML	
	comp=N,5060µm,1.1s				
SF04			AML	AML	
	comp=N,5055µm,1.1s				
CDCA	**Citt' di Caste**	**0.90 97**	P	**Pn**	**16 53 18.8 -0.8**
BADI	**Badiali**	**0.91 94**	⇓P	**Pb**	**16 53 18.6 +0.1**
FIVI	**Fivizzano**	**0.91 316**	P	**Pg**	**16 53 18.3 +0.3**
FIVI			AML	AML	
	comp=E,14500µm,0.9s				
FIVI			AML	AML	
	comp=N,13800µm,0.5s				
SF03	**Valle Cupa**	**0.92 147**	P	**Pb**	**16 53 19.1 +0.2**
SF14	**Selvena**	**0.94 151**	⇓P	**Pb**	**16 53 19.3 +0.2**
MCIV	**Monte Civitell**	**0.94 148**	⇓P	**Pb**	**16 53 19.3 +0.1**
MCIV			AML	AML	
	comp=N,2235µm,0.9s				
MCIV			AML	AML	
	comp=E,2115µm,0.7s				
IMOL	**Imola, Italy**	**0.94 34**	P	**Pn**	**16 53 20.7 +0.5**
IMOL	**Imola, Italy**	**0.94 34**	P	**Pn**	**16 53 20.7 +0.5**
IMOL	**Imola, Italy**	**0.94 34**	P	**Pn**	**16 53 20.5 +0.3**
IMOL			AML	AML	
	comp=E,6710µm,1.4s				
IMOL			AML	AML	
	comp=N,7895µm,0.9s				
ATMI	**Monte Miggiano**	**0.95 105**	P	**Pb**	**16 53 19.5 +0.1**
ATMI			AML	AML	
	comp=E,9190µm,0.9s				
ATMI			AML	AML	
	comp=N,13000µm,0.9s				
PLMA	**Palmaria, Port**	**0.96 300**	P	**Pg**	**16 53 19.1 +0.2**
PLMA			S	**Sb**	**16 53 32.7 +0.4**
PLMA	**Palmaria, Port**	**0.96 300**	P	**Pg**	**16 53 19.1 +0.2**
PLMA			S	**Sb**	**16 53 32.7 +0.4**
PLMA	**Palmaria, Port**	**0.96 300**	⇓P	**Pg**	**16 53 19.0 +0.2**
PLMA			AML	AML	
	comp=N,4555µm,0.7s				
PLMA			AML	AML	
	comp=E,5380µm,0.6s				
CPGN	**Carpegna, Ital**	**0.98 77**	P	**Pn**	**16 53 20.9 +0.1**
SACS	**San Casciano d**	**0.99 138**	AML	AML	
	comp=E,1905µm,0.8s				
SACS			AML	AML	
	comp=E,1915µm,0.8s				
SACS			AML	AML	
	comp=N,1935µm,0.6s				
SACS			AML	AML	
	comp=N,1910µm,0.9s				
A306A	**Viano (RE)**	**1.00 343**	⇓P	**Pn**	**16 53 21.4 +0.4**
CELB	**S.Piero in Cam**	**1.02 215**	P	**Pg**	**16 53 19.9 -0.1**
CELB			S	**Sg**	**16 53 34.6 +1.5**
CELB	**S.Piero in Cam**	**1.02 215**	P	**Pg**	**16 53 19.9 -0.1**
CELB			S	**Sg**	**16 53 34.6 +1.5**
CELB	**S.Piero in Cam**	**1.02 215**	⇑P	**Pg**	**16 53 19.9 -0.1**
CELB			S	**Sb**	**16 53 35.2 +1.3**
CELB			AML	AML	
	comp=E,3905µm,0.8s				
CELB			AML	AML	
	comp=N,3205µm,0.7s				
ATPI	**Pietralunga -**	**1.03 97**	⇓P	**Pb**	**16 53 20.5 -0.1**
ATPI			AML	AML	
	comp=E,3690µm,0.6s				
ATPI			AML	AML	
	comp=N,5890µm,0.9s				
TB03	**Pietralunga**	**1.04 99**	P	**Pn**	**16 53 20.8 -0.7**
ATVO	**AVT- Monte Val**	**1.04 101**	⇓P	**Pb**	**16 53 20.6 -0.3**
ATVO			AML	AML	
	comp=E,5460µm,0.8s				
ATVO			AML	AML	
	comp=N,6790µm,0.6s				
TB02	**Pietralunga**	**1.04 101**	⇓P	**Pb**	**16 53 20.8 -0.1**
BRSN	**Barisano**	**1.05 47**	P	**Pn**	**16 53 22.5 +0.9**
BRSN			AML	AML	
	comp=E,8955µm,1.5s				
BRSN			AML	AML	
	comp=N,17500µm,0.9s				
BRSN			AML	AML	
	comp=E,9795µm,1.5s				
BRSN			AML	AML	
	comp=N,18200µm,0.9s				
MGAB	**Montegabbione**	**1.05 129**	⇓P	**Pg**	**16 53 20.7 +0.1**
MGAB			AML	AML	
	comp=E,2810µm,0.8s				
MGAB			AML	AML	
	comp=N,2060µm,0.8s				
MGAB			AML	AML	
	comp=E,2700µm,0.6s				
MGAB			AML	AML	
	comp=N,2065µm,0.6s				
ATTE	**AVT- Monte Tez**	**1.06 111**	⇓P	**Pb**	**16 53 20.9 -0.3**
ATTE			AML	AML	
	comp=N,4170µm,1.1s				
ATTE			AML	AML	
	comp=E,4220µm,1.4s				
ATLO	**AVT- Montelove**	**1.06 104**	⇓P	**Pb**	**16 53 21.0 -0.1**
ATPC	**Poggio Castell**	**1.06 95**	⇓P	**Pb**	**16 53 21.0 -0.2**
TB01	**Gubbio**	**1.06 100**	⇓P	**Pb**	**16 53 21.0 -0.2**
PE3	**Peglio**	**1.09 83**	P	**Pn**	**16 53 22.4 +0.2**
RSM	**Repubblica di**	**1.10 71**	P	**Pn**	**16 53 23.0 +0.5**
PIEI	**Pieia**	**1.11 92**	P	**Pb**	**16 53 21.9 -0.2**
PIEI			AML	AML	
	comp=E,2650µm,1.1s				
PIEI			AML	AML	
	comp=N,1975µm,0.7s				
A307A	**Bentivoglio (B**	**1.12 16**	P	**Pn**	**16 53 24.8 +2.2**
ATBU	**Serra di Buran**	**1.13 95**	⇓P	**Pn**	**16 53 22.2 -0.6**
LATE	**Laterza**	**1.13 148**	Pn	**Pb**	**16 53 22.2 -0.2**
LATE	**Laterza**	**1.13 148**	P	**Pn**	**16 53 23.0 +0.3**
GRAM	**Graiana**	**1.13 324**	P	**Pn**	**16 53 22.9 0.0**
GRAM	**Graiana**	**1.13 324**	P	**Pn**	**16 53 22.9 0.0**
GRAM	**Graiana**	**1.13 324**	P	**Pb**	**16 53 22.2 -0.2**
GRAM			AML	AML	
	comp=E,13500µm,0.8s				
GRAM			AML	AML	
	comp=N,8870µm,0.8s				
MURB	**Monte Urbino**	**1.15 105**		**Pb**	**16 53 22.4 -0.4**
MURB	**Monte Urbino**	**1.15 105**	P	**Pn**	**16 53 22.6 -0.5**
MURB			AML	AML	
	comp=E,7345µm,0.9s				
MURB			AML	AML	
	comp=N,5900µm,0.4s				
MURB			AML	AML	
	comp=E,7535µm,0.9s				
MURB			AML	AML	
	comp=N,5860µm,0.4s				
MAON	**Monte Argentar**	**1.16 175**	P	**Pb**	**16 53 22.6 -0.2**
MAON	**Monte Argentar**	**1.16 175**	P	**Pb**	**16 53 22.6 -0.2**
MAON	**Monte Argentar**	**1.16 175**	AML	AML	
	comp=E,2475µm,0.5s				
MAON			AML	AML	
	comp=N,2020µm,0.7s				
ATFO	**Monte Foce - G**	**1.16 100**	⇓P	**Pb**	**16 53 22.4 -0.6**
ATFO			AML	AML	
	comp=E,3800µm,0.7s				
ATFO			AML	AML	
	comp=N,2200µm,0.4s				
A308A	**Longastrino (F**	**1.23 35**	P	**Pg**	**16 53 24.2 +0.1**
ATSC	**Scheggia e Pas**	**1.23 97**	P	**Pg**	**16 53 24.4 +0.2**
FRON	**Frontone**	**1.25 92**	P	**Pg**	**16 53 24.3 -0.3**
FRON			AML	AML	
	comp=E,2015µm,0.9s				
FRON			AML	AML	
	comp=N,2005µm,0.7s				
ATCC	**AVT- Casa Cast**	**1.26 108**	P	**Pn**	**16 53 24.1 -0.4**
ATCC			AML	AML	
	comp=E,6550µm,1.0s				
ATCC			AML	AML	
	comp=N,3880µm,1.1s				
MPAG	**Monte Paganucc**	**1.28 87**	P	**Pg**	**16 53 24.7 -0.3**
PRMA	**PARMA**	**1.28 337**		**Pg**	**16 53 26.7 +1.6**
PRMA	**PARMA**	**1.28 337**	P	**Pg**	**16 53 26.4 +1.3**
CAVE	**Cavezzo**	**1.28 360**	P	**Pg**	**16 53 27.6 +2.5**
CAVE	**Cavezzo**	**1.28 360**	P	**Pg**	**16 53 27.6 +2.5**
CAVE	**Cavezzo**	**1.28 360**	P	**Pg**	**16 53 26.0 +0.8**
CAVE			AML	AML	
	comp=E,9315µm,1.2s				
CAVE			AML	AML	
	comp=N,10870µm,0.8s				
FSSB	**Fossombrone**	**1.29 84**	P	**Pg**	**16 53 25.4 +0.1**
FSSB			AML	AML	
	comp=E,4480µm,0.3s				
FSSB			AML	AML	
	comp=N,6650µm,0.5s				
MSSA	**Maissana**	**1.30 305**	Pn	**Pn**	**16 53 24.4 -0.8**
MSSA			Sn	**Sg**	**16 53 43.5 +1.2**
MSSA	**Maissana**	**1.30 305**	P	**Pn**	**16 53 24.4 -0.8**
MSSA	**Maissana**	**1.30 305**	P	**Pn**	**16 53 24.4 -0.8**
MSSA	**Maissana**	**1.30 305**	P	**Pn**	**16 53 24.5 -0.6**
MSSA			AML	AML	
	comp=E,2625µm,0.3s				
MSSA			AML	AML	
	comp=N,3015µm,0.9s				
MORSI	**Morsiglia**	**1.35 243**	P	**Pn**	**16 53 24.4 -1.3**
MORSI			S	**Sb**	**16 53 42.8 -0.8**
ARVD	**Arcevia**	**1.41 93**	P	**Pg**	**16 53 27.3 -0.3**
ARVD			AML	AML	
	comp=E,1310µm,0.7s				
ARVD			AML	AML	
	comp=N,1665µm,0.7s				
SERM	**Sermide**	**1.44 8**	P	**Pg**	**16 53 28.7 +0.5**
SERM	**Sermide**	**1.44 8**	P	**Pg**	**16 53 28.7 +0.5**
SERM	**Sermide**	**1.44 8**	P	**Pg**	**16 53 28.8 +0.5**
SNTG	**Esanatoglia**	**1.45 102**	P	**Pn**	**16 53 26.9 -0.2**
SNTG			AML	AML	
	comp=E,1165µm,0.8s				
SNTG			AML	AML	
	comp=N,1275µm,1.1s				
SNTG			AML	AML	
	comp=E,1098µm,0.9s				
SNTG			AML	AML	
	comp=N,1310µm,0.9s				
SBPO	**S.Benedetto Po**	**1.47 358**	P	**Pg**	**16 53 29.5 +0.8**
SEF1	**Sefro**	**1.48 106**	P	**Pg**	**16 53 29.4 +0.4**
CESI	**CESI - Serrava**	**1.50 112**	P	**Pn**	**16 53 27.6 -0.3**
CESI			AML	AML	
	comp=E,1680µm,0.7s				
CESI			AML	AML	
	comp=N,1004µm,0.7s				
CESX	**Cesi**	**1.51 130**		**Pn**	**16 53 28.1 +0.2**
CESX	**Cesi**	**1.51 130**	⇓P	**Pn**	**16 53 27.9 0.0**
CESX			AML	AML	
	comp=E,1150µm,0.6s				
CESX			AML	AML	
	comp=N,1190µm,1.0s				
EL6	**Elcito**	**1.55 99**	P	**Pb**	**16 53 29.1 -0.5**
EL6			AML	AML	
	comp=E,2325µm,0.9s				
EL6			AML	AML	
	comp=N,2655µm,0.8s				
T1215	**Vallo di Nera,**	**1.57 119**	P	**Pb**	**16 53 29.4 -0.5**
GORR	**Gorreto**	**1.60 310**	P	**Pn**	**16 53 29.0 -0.3**
GORR			AML	AML	
	comp=E,2420µm,0.8s				
GORR			AML	AML	
	comp=N,2425µm,0.7s				
CING	**Cingoli**	**1.61 97**	P	**Pb**	**16 53 30.5 0.0**
CING			AML	AML	
	comp=E,1395µm,0.6s				
CING			AML	AML	
	comp=N,1235µm,0.7s				
FDMO	**Fiordimonte**	**1.62 109**		**Pn**	**16 53 29.2 -0.2**
FDMO	**Fiordimonte**	**1.62 109**	P	**Pn**	**16 53 29.6 +0.2**
FDMO			AML	AML	
	comp=E,694µm,0.7s				
FDMO			AML	AML	
	comp=N,854µm,1.5s				
FEMA	**Monte Fema**	**1.62 112**	P	**Pg**	**16 53 31.4 -0.1**
T1216	**Preci, Frazion**	**1.63 114**	P	**Pn**	**16 53 30.0 +0.4**
T1216			AML	AML	
	comp=E,1980µm,0.6s				
T1216			AML	AML	
	comp=N,1554µm,0.7s				
BOB	**Bobbio (Coli)**	**1.63 317**	P	**Pn**	**16 53 30.5 +0.8**
BOB			AML	AML	
	comp=E,3575µm,1.0s				
BOB			AML	AML	
	comp=N,3610µm,0.6s				
BOB			AML	AML	
	comp=E,3755µm,0.6s				
BOB			AML	AML	
	comp=N,3590µm,0.6s				
T1217	**Poggiodomo (PG**	**1.66 121**	P	**Pb**	**16 53 30.7 -0.6**
CSP1	**Cessapalombo**	**1.68 106**	P	**Pn**	**16 53 30.7 +0.3**
CSP1			AML	AML	
	comp=E,1570µm,1.6s				
CSP1			AML	AML	
	comp=N,1765µm,0.8s				
TOLF	**Tolfa**	**1.68 154**	P	**Pn**	**16 53 30.5 +0.2**
TOLF			AML	AML	
	comp=E,427µm,0.8s				
TOLF			AML	AML	
	comp=N,520µm,1.1s				
NRCA	**Norcia**	**1.71 115**		**Pn**	**16 53 30.8 0.0**
T1211	**Morro Reatino**	**1.71 127**	P	**Pn**	**16 53 31.2 +0.4**
T1211			AML	AML	
	comp=E,1139µm,0.9s				
T1211			AML	AML	
	comp=N,1770µm,0.6s				
A305A	**Porto Tolle (R**	**1.72 36**	P	**Pb**	**16 53 31.9 -0.5**
RNCA	**Ronca, Sant'Ol**	**1.73 302**	P	**Pn**	**16 53 30.6 -0.3**
RNCA			AML	AML	
	comp=E,710µm,0.9s				
RNCA			AML	AML	
	comp=N,1156µm,0.8s				
MC2	**Monte Cornacci**	**1.73 112**	P	**Pn**	**16 53 31.6 +0.4**
SRES	**S.Oreste - Sor**	**1.74 140**	P	**Pn**	**16 53 31.1 0.0**
A313A	**Volta Mantovan**	**1.75 352**	P	**Pb**	**16 53 33.0 +0.1**
T1245	**Castelsantange**	**1.75 114**	P	**Pn**	**16 53 31.4 -0.1**
T1245			AML	AML	
	comp=E,1100µm,0.5s				
T1245			AML	AML	
	comp=N,1725µm,0.8s				
T1245			AML	AML	
	comp=E,1065µm,0.6s				
T1245			AML	AML	
	comp=N,1735µm,0.8s				
LNSS	**Leonessa**	**1.78 123**	P	**Pn**	**16 53 31.9 +0.1**
LNSS			AML	AML	
	comp=E,1230µm,1.1s				
LNSS			AML	AML	
	comp=N,1680µm,1.2s				
PGF	**Pioggiola**	**1.79 236**	*e*P	**Pn**	**16 53 31.4 -0.6**
PGF			*e*Sn	**Sn**	**16 53 51.0 -4.0**
	comp=N,139nm,0.4s				
PGF	**Pioggiola**	**1.79 236**	⇑P	**Pn**	**16 53 31.3 -0.7**
PGF			AML	AML	
	comp=E,597µm,0.9s				
PGF			AML	AML	
	comp=N,466µm,0.7s				
PGF	**Pioggiola**	**1.79 236**	P	**Pn**	**16 53 31.3 -0.7**
MMO1	**Montemonaco**	**1.83 111**	P	**Pn**	**16 53 32.9 +0.5**
TEOL	**Teolo**	**1.84 15**		**Pn**	**16 53 32.0 -0.5**
TEOL	**Teolo**	**1.84 15**	P	**Pn**	**16 53 32.7 +0.2**
TEOL			AML	AML	
	comp=E,6780µm,0.8s				
TEOL			AML	AML	
	comp=N,5390µm,0.9s				
CORF	**Corte**	**1.87 227**	P	**Pn**	**16 53 32.3 -0.6**
CORF	**Corte**	**1.87 227**	P	**Pn**	**16 53 32.7 -0.2**
T1244	**Arquata del Tr**	**1.87 115**	P	**Pb**	**16 53 34.0 -1.0**
AOI	**Ancona**	**1.89 90**	P	**Pg**	**16 53 35.8 -0.9**
RM33	**Pellescritta (**	**1.94 123**	⇓P	**Pn**	**16 53 34.1 +0.1**
RM33			AML	AML	
	comp=E,1060µm,0.9s				
RM33			AML	AML	
	comp=N,959µm,1.2s				
RM33			AML	AML	
	comp=E,1047µm,0.9s				
RM33			AML	AML	
	comp=N,933µm,1.2s				
SMPL	**Sampolo**	**1.95 221**	P	**Pn**	**16 53 34.0 -0.1**
SMPL			AML	AML	
	comp=E,404µm,0.7s				
SMPL			AML	AML	
	comp=N,378µm,0.8s				
SMPL	**Sampolo**	**1.95 221**	P	**Pn**	**16 53 34.0 -0.1**
SMPL			S	**Sn**	**16 53 58.7 -0.1**
SMA1	**SAN MARTINO**	**1.95 118**	AML	AML	
	comp=E,1320µm,0.8s				
SMA1			AML	AML	
	comp=N,1480µm,0.7s				
SARZ	**Sarezzano**	**1.98 311**	P	**Pb**	**16 53 36.8 0.0**
T1243	**Rocca Santa Ma**	**2.00 115**	P	**Pn**	**16 53 35.5 +0.8**
PCP	**Piancastagn**	**2.02 299**	P	**Pn**	**16 53 34.4 -0.6**
PCP			AML	AML	
	comp=E,803µm,0.6s				
PCP			AML	AML	
	comp=N,667µm,0.6s				
MTCE	**Montecelio**	**2.02 140**	P	**Pn**	**16 53 34.1 -0.8**
T1247	**Pizzolo (AQ)**	**2.03 123**	P	**Pb**	**16 53 36.5 -1.3**
FIAM	**Fiamignano**	**2.03 129**	P	**Pn**	**16 53 36.0 +0.8**
CAMP	**Campotosto**	**2.05 120**		**Pn**	**16 53 35.8 +0.4**
CAMP	**Campotosto**	**2.05 120**	AML	AML	
	comp=N,514µm,0.9s				
CAMP			AML	AML	
	comp=E,614µm,1.3s				
QLNO	**Quiliano**	**2.06 292**	P	**Pn**	**16 53 34.8 -0.7**
QLNO			AML	AML	
	comp=E,702µm,0.8s				
QLNO			AML	AML	
	comp=N,924µm,0.9s				
OFFI	**Offida**	**2.06 107**	P	**Pb**	**16 53 38.7 +0.5**
SALO	**Salr**	**2.06 351**		**Pn**	**16 53 36.2 +0.6**
SALO	**Salr**	**2.06 351**	P	**Pn**	**16 53 36.6 +1.0**
SALO			AML	AML	
	comp=E,2930µm,0.9s				
SALO			AML	AML	
	comp=N,4655µm,0.8s				
SALO			AML	AML	
	comp=E,3045µm,0.9s				
SALO			AML	AML	
	comp=N,4630µm,0.8s				
ZEN8	**San Zeno di Mo**	**2.06 355**	P	**Pn**	**16 53 36.1 +0.4**
ROVR	**Rover Verones**	**2.07 1**	P	**Pn**	**16 53 35.7 0.0**
ROVR			AML	AML	
	comp=E,1675µm,0.4s				
ROVR			AML	AML	
	comp=N,3210µm,0.4s				
ROVR			AML	AML	
	comp=E,659µm,0.4s				
ROVR			AML	AML	
	comp=N,1299µm,0.4s				
T1246	**Crognaleto (TE**	**2.08 118**	P	**Pn**	**16 53 36.6 +0.8**
CANO	**Canova, Maglio**	**2.10 288**	P	**Pn**	**16 53 34.9 -1.2**
CANO			AML	AML	
	comp=E,2245µm,1.1s				
CANO			AML	AML	
	comp=N,1540µm,1.5s				
TERO	**Teramo**	**2.13 116**	P	**Pn**	**16 53 37.3 +0.8**
TERO			AML	AML	
	comp=E,647µm,0.6s				
TERO			AML	AML	
	comp=N,944µm,0.8s				
TERO			AML	AML	
	comp=E,662µm,0.6s				
TERO			AML	AML	
	comp=N,976µm,0.8s				
AQU	**L'Aquila**	**2.15 124**		**Pb**	**16 53 38.2 -1.5**
AQU	**L'Aquila**	**2.15 124**	P	**Pb**	**16 53 39.3 -0.4**
A302A	**Resana (TV)**	**2.17 18**	P	**Pn**	**16 53 37.9 +1.0**
CERT	**Cerreto**	**2.19 138**	P	**Pn**	**16 53 38.1 +0.8**
RORO	**Rocca Rossa**	**2.19 285**	P	**Pn**	**16 53 36.3 -1.0**
RORO			AML	AML	
	comp=E,396µm,0.6s				
RORO			AML	AML	
	comp=N,425µm,0.6s				
VARA	**Varagna**	**2.25 358**	P	**Pn**	**16 53 38.9 +0.7**
ZONE	**Zone**	**2.27 344**	P	**Pn**	**16 53 39.9 +1.4**
ZONE			AML	AML	
	comp=E,1510µm,1.1s				
ZONE			AML	AML	
	comp=N,1550µm,0.8s				
IMI	**Imperia**	**2.28 279**	P	**Pn**	**16 53 38.2 -0.3**
ROTM	**Rocchetta Tana**	**2.29 305**	P	**Pb**	**16 53 40.8 -1.3**
ROTM			AML	AML	
	comp=E,3160µm,0.9s				
ROTM			AML	AML	
	comp=N,4270µm,0.7s				
DOSS	**Dosso del Somm**	**2.30 3**	P	**Pn**	**16 53 39.0 -0.1**
DOSS			AML	AML	
	comp=E,2630µm,0.7s				
DOSS			AML	AML	
	comp=N,1690µm,0.8s				
DOSS			AML	AML	
	comp=E,1670µm,0.8s				
DOSS			AML	AML	
	comp=N,2670µm,0.6s				
FAGN	**Fagnano**	**2.31 124**	P	**Pb**	**16 53 40.6 -1.8**
ASOL	**Asolo**	**2.31 16**	P	**Pn**	**16 53 39.7 +0.8**
AJAC	**Base Areonaval**	**2.33 226**	⇑P	**Pn**	**16 53 39.3 0.0**
AJAC	**Base Areonaval**	**2.33 226**	P	**Pn**	**16 53 39.4 +0.2**
AJAC			S	**Sn**	**16 54 08.0 -0.2**
MGRO	**Montegrosso**	**2.36 282**	P	**Pn**	**16 53 39.0 -0.8**
MGRO			AML	AML	
	comp=E,524µm,0.7s				
MGRO			AML	AML	
	comp=N,508µm,1.2s				
CGRP	**Cima Grappa**	**2.37 14**	P	**Pn**	**16 53 39.7 -0.3**
CGRP			AML	AML	
	comp=E,1565µm,1.1s				
CGRP			AML	AML	
	comp=N,1640µm,0.4s				
CGRP			AML	AML	
	comp=E,1575µm,0.8s				
CGRP			AML	AML	
	comp=N,1685µm,0.4s				
BRJN	**Brijuni**	**2.38 55**	P	**Pn**	**16 53 39.7 -0.1**
LUSI	**Trento, Gardas**	**2.38 359**	P	**Pn**	**16 53 39.7 -0.3**
LUSI			AML	AML	
	comp=E,1980µm,0.4s				
LUSI			AML	AML	
	comp=N,2505µm,1.6s				
VCEL	**Villa Celiera**	**2.40 119**	P	**Pb**	**16 53 42.8 -1.2**
VCEL			AML	AML	
	comp=E,789µm,0.6s				
VCEL			AML	AML	
	comp=N,881µm,1.2s				
RONC	**Roncone**	**2.41 354**	P	**Pn**	**16 53 41.8 +1.2**
T0110	**Collepietro**	**2.45 123**	P	**Pb**	**16 53 42.8 -2.0**
GUAR	**Guarcino**	**2.47 136**	P	**Pn**	**16 53 42.7 +1.5**
MABI	**Malga Bissina**	**2.50 352**	P	**Pn**	**16 53 42.4 +0.6**
MABI			AML	AML	
	comp=E,481µm,0.7s				
MABI			AML	AML	
	comp=N,504µm,1.0s				
GAGG	**Gaggia**	**2.50 359**	P	**Pn**	**16 53 42.1 +0.3**

GAGG AML AML
comp=E,1720µm,1.0s
GAGG AML AML
comp=N,1705µm,0.9s
GAGG AML AML
comp=E,1780µm,0.9s
GAGG AML AML
comp=N,1755µm,1.0s
CTI Castel Tesino 2.51 10 Pn 16 53 42.1 +0.3
CTI Castel Tesino 2.51 10 P **Pn 16 53 42.0 +0.2**
CTI AML AML
comp=E,1965µm,0.5s
CTI AML AML
comp=N,1685µm,1.3s
SAOF Saorge 2.53 280 AML AML
comp=E,636µm,0.7s
SAOF AML AML
comp=N,656µm,0.7s
SAOF Saorge 2.53 280 P **Pn 16 53 42.2 +0.3**
VARN Col Varnada, M 2.54 18 P **Pn 16 53 42.1 0.0**
VARN AML AML
comp=E,1560µm,0.5s
VARN AML AML
comp=N,1315µm,0.7s
VARN AML AML
comp=E,1560µm,0.5s
VARN AML AML
comp=N,1315µm,0.7s
VVLD Villa Vallelon 2.58 131 P **Pb 16 53 45.0 -2.1**
VVLD AML AML
comp=E,322µm,0.9s
VVLD AML AML
comp=N,289µm,1.0s
SBF Sospel 2.60 277 *e*P **Pn 16 53 43.1 +0.1**
SBF *e*Sn **Sn 16 54 10.3 -4.6**
comp=N,614nm,0.6s
FRE8 Fregona 2.62 21 P **Pn 16 53 43.5 +0.4**
CAE Caneva 2.63 22 P **Pn 16 53 43.6 +0.2**
ESCA l'Escarene 2.64 277 P **Pn 16 53 44.5 +0.9**
TURF col de Turini 2.65 280 P **Pn 16 53 43.9 +0.2**
TURF S **Sn 16 54 16.2 +0.1**
INTR Introdacqua 2.65 125 Pn 16 53 44.9 +1.2
INTR Introdacqua 2.65 125 P **Pn 16 53 45.6 +1.9**
MONC Moncucco Torin 2.67 305 P **Pn 16 53 44.9 +1.0**
ENR Entracque 2.67 285 P **Pn 16 53 44.4 +0.4**
MUGIO Muggio 2.73 330 AML AML
comp=N,556µm,1.0s
MUGIO AML AML
comp=E,510µm,1.6s
STV Sant Anna di V 2.74 285 AML AML
comp=E,230µm,1.4s
STV AML AML
comp=N,238µm,0.6s
SPIF crte de Spivo 2.77 281 P **Pn 16 53 46.0 +0.7**
VARE Varese 2.79 326 AML AML
comp=E,824µm,0.8s
VARE AML AML
comp=N,964µm,0.9s
MVIF Mont Vial 2.81 278 P **Pn 16 53 46.7 +0.7**
EILF Villa Eilenroc 2.81 271 P **Pn 16 53 45.9 0.0**
KOSI Kohlern 2.89 5 AML AML
comp=N,986µm,0.4s
KOSI AML AML
comp=E,1270µm,1.5s
APPI Appiano 2.90 3 AML AML
comp=E,1910µm,1.5s
APPI AML AML
comp=N,1132µm,0.4s
CIMO Cimolais 2.91 20 AML AML
comp=N,238µm,0.6s
CIMO AML AML
comp=E,334µm,0.6s
CIMO AML AML
comp=E,332µm,1.6s
CIMO AML AML
comp=N,238µm,0.6s
SKDS Skadanscina 2.91 47 *e*Pn **Pn 16 53 46.0 -1.3**
BERNI Berninapass 2.92 347 AML AML
comp=E,619µm,1.2s
BERNI AML AML
comp=N,540µm,1.0s
BRMO Bormio 2.93 351 AML AML
comp=E,428µm,0.7s
BRMO AML AML
comp=N,384µm,1.6s
STAL STALIGIAL 2.94 24 Pn 16 53 47.5 -0.1
STAL STALIGIAL 2.94 24 AML AML
comp=N,964µm,1.3s
STAL AML AML
comp=E,1065µm,1.5s
STAL AML AML
comp=E,1285µm,0.3s
STAL AML AML
comp=N,830µm,0.3s
PZZ Stroppo 2.95 290 AML AML
comp=N,414µm,0.7s
PZZ AML AML
comp=E,418µm,0.6s
CALF Calern 2.97 275 P **Pn 16 53 48.3 +0.2**
MPRI Monte Prat 3.01 27 AML AML
comp=E,580µm,0.4s
MPRI AML AML
comp=N,844µm,1.0s
MPRI AML AML
comp=E,775µm,0.4s
MPRI AML AML
comp=N,1097µm,1.0s
TRAV Traversella 3.02 311 AML AML
comp=E,473µm,1.0s
TRAV AML AML
comp=N,358µm,0.6s
SABO M.te Sabotino 3.03 37 AML AML
comp=N,814µm,0.7s
SABO AML AML
comp=E,2990µm,0.6s
SABO AML AML
comp=N,3135µm,1.1s
SABO AML AML
comp=E,686µm,0.9s
MOSI Grossmontoni 3.05 354 AML AML
comp=N,2425µm,0.8s
MOSI AML AML
comp=E,1695µm,0.7s
FUORN Ofenpass-Fuorn 3.08 350 Pn 16 53 51.8 +1.9
TUE Stuetta 3.12 338 Pn 16 53 51.5 +1.3
TUE Stuetta 3.12 338 AML AML
comp=N,754µm,0.4s
TUE AML AML
comp=E,432µm,1.1s
TUE AML AML
comp=N,566µm,0.4s
TUE AML AML
comp=E,518µm,1.0s
SURF Saint Ours 3.15 288 P **Pn 16 53 50.7 0.0**
CLUD Cludinico 3.17 24 Pn 16 53 50.7 -0.1
CLUD Cludinico 3.17 24 AML AML
comp=E,450µm,1.0s
CLUD AML AML
comp=N,416µm,0.9s
CIRO Champorcher 3.18 311 AML AML
comp=E,288µm,0.9s
CIRO AML AML
comp=N,352µm,1.4s
JAUF Jausiers 3.18 287 P **Pn 16 53 51.3 +0.2**
MBDF Montbardon 3.25 292 *e*P **Pn 16 53 52.1 0.0**
MBDF *e*Sn **Sn 16 54 26.1 -5.0**
comp=N,218nm,0.6s
CEY Cerknica 3.26 47 *e*Pn **Pn 16 53 51.1 -0.9**
FVI Forni Avoltri 3.27 22 AML AML
comp=E,328µm,0.4s
FVI AML AML
comp=N,577µm,0.7s
LMR La Mourre 3.28 267 *e*P **Pn 16 53 51.7 -0.6**
LMR *e*Sn **Sn 16 54 26.6 -4.9**
comp=N,25nm,0.3s
MMK Mattmark 3.28 320 AML AML
comp=E,315µm,1.0s
MMK AML AML
comp=N,294µm,0.5s
ZOU Zoufplan 3.29 24 AML AML
comp=E,690µm,1.0s
ZOU AML AML
comp=E,702µm,1.0s
ZOU AML AML
comp=N,400µm,1.4s
ZOU AML AML
comp=N,409µm,0.8s

DAVOX Davos/Dischmat 3.30 346 Pn **Pn 16 53 54.8 +2.1**
comp=N,14nm,0.3s,baz=172,slow=2.2,SNR=85
DAVOX Sn **Sn 16 54 32.5 +0.3**
comp=N,11nm,0.3s,baz=0.0,slow=20,SNR=2.0
DAVOX Davos/Dischmat 3.30 346 AML AML
comp=E,344µm,0.8s
DAVOX AML AML
comp=N,453µm,1.3s
CREF Crivoux 3.30 289 P **Pn 16 53 53.2 +0.4**
FUSIO Fusio 3.32 331 AML AML
comp=E,556µm,0.8s
FUSIO AML AML
comp=N,478µm,0.7s
OGAG Argentiere 3.33 287 P **Pb 16 53 57.7 -2.3**
TRIGF Trigance 3.34 274 P **Pn 16 53 53.7 +0.5**
ABTA Abfaltersbach 3.34 18 *i* Pn **Pn 16 53 54.5 +1.2**
comp=N,44nm,0.6s,SNR=29
ABTA *e*Sn **Sn 16 54 32.3 -0.9**
comp=N,109nm,0.4s
ROSI Rosskopf 3.36 5 AML AML
comp=E,833µm,0.8s
ROSI AML AML
comp=N,1046µm,0.8s
PRED Cave del Predi 3.39 32 Pn 16 53 53.2 -0.7
OGDI Digne 3.44 280 P **Pn 16 53 56.8 +2.2**
FETA Feichten 3.45 357 *e*Pn **Pn 16 53 56.7 +2.0**
comp=N,63nm,0.4s,SNR=50
FETA *e*Sn **Sn 16 54 35.6 -0.2**
comp=N,110nm,0.8s
RISI Rein 3.45 12 AML AML
comp=E,2040µm,0.4s
RISI AML AML
comp=N,1920µm,0.4s
ACOM Acomizza, Ital 3.46 30 AML AML
comp=N,544µm,1.2s
ACOM AML AML
comp=E,680µm,1.1s
ACOM AML AML
comp=E,642µm,1.1s
ACOM AML AML
comp=N,514µm,1.2s
FLAF Flassans-sur-I 3.46 268 P **Pn 16 53 54.7 -0.1**
EMBD Embd, Matterta 3.47 321 P **Pn 16 53 56.5 +1.5**
OGMO Fort Saint-Gob 3.50 299 P **Pn 16 53 57.1 +1.8**
LJU Ljubljana 3.51 44 AML AML
comp=E,3530µm,0.7s
LJU AML AML
comp=N,4570µm,0.4s
DIX Grande Dixence 3.58 316 P **Pn 16 53 57.4 +0.8**
MYKA Terra Mystica 3.58 31 *e*Pn **Pn 16 53 56.9 +0.5**
comp=N,3.4nm,0.2s,SNR=6.0
MYKA *e*Sn **Sn 16 54 38.4 -0.5**
comp=N,17nm,0.4s
LPG La Plagne 3.59 304 *e*P **Pn 16 53 57.9 +1.1**
LPG *e*Sn **Sn 16 54 35.1 -4.6**
comp=N,82nm,0.6s
BOJS Bojanci 3.59 56 *e*Pn **Pn 16 53 56.4 -0.2**
BOJS Bojanci 3.59 56 AML AML
comp=N,856µm,1.2s
BOJS AML AML
comp=E,450µm,1.1s
BLAF les Blancs 3.61 278 P **Pn 16 53 58.0 +1.1**
LPL La Plagne 3.61 304 *e*P **Pn 16 53 58.2 +1.1**
LPL *e*Sn **Sn 16 54 35.4 -4.7**
comp=E,49nm,0.4s
ASEAF Site Antares, 3.62 259 P **Pn 16 53 56.5 -0.2**
SQTA Sankt Quirin 3.64 2 *i* Pn **Pn 16 53 59.7 +2.4**
comp=E,90nm,0.2s,SNR=77
SQTA *e*Sn **Sn 16 54 42.8 +2.1**
comp=E,229nm,0.5s
PLONS Plons/SG 3.65 342 AML AML
comp=N,335µm,1.2s
PLONS AML AML
comp=E,459µm,0.7s
PAOL Paolisi 3.67 133 Pn 16 53 58.1 +0.4
WTTA Wattenberg 3.71 7 *i* Pn **Pn 16 54 00.4 +2.1**
comp=E,14nm,0.2s,SNR=22
WTTA *e*Sn **Sn 16 54 41.6 -0.8**
comp=E,100nm,0.4s
WTTA Wattenberg 3.71 7 *e*Pn **Pn 16 54 00.4 +2.1**
WTTA Wattenberg 3.71 7 AML AML
comp=E,530µm,1.3s
WTTA AML AML
comp=N,610µm,1.1s
BNALP Bannalp 3.76 332 AML AML
comp=N,496µm,0.9s
BNALP AML AML
comp=E,448µm,0.6s
MOTA Moosalm 3.77 1 *i* Pn **Pn 16 54 01.5 +2.4**
comp=E,77nm,0.4s,SNR=51
MOTA *e*Sn **Sn 16 54 45.7 +2.0**
comp=E,322nm,0.8s
RSL Roselend 3.77 306 P **Pn 16 54 01.4 +2.2**
RSL S **Sn 16 54 47.8 +4.0**
WATA Walderalm 3.78 6 *i* Pn **Pn 16 54 01.5 +2.3**
comp=E,40nm,0.2s,SNR=31
WATA *e*Sn **Sn 16 54 45.7 +1.7**
comp=E,216nm,0.5s
ARTF Artigues 3.78 272 P **Pn 16 54 00.1 +1.0**
DAVA Damuels 3.79 348 *e*Pn **Pn 16 54 01.8 +2.4**
comp=E,21nm,0.2s,SNR=30
DAVA *e*Sn **Sn 16 54 45.6 +1.2**
comp=E,297nm,0.4s
DAVA Damuels 3.79 348 *e*Pn **Pn 16 54 02.0 +2.6**
MLYF Mely 3.81 278 P **Pn 16 54 00.9 +1.2**
SENIN Lac Senin/Sane 3.83 318 Pn **Pn 16 54 01.9 +1.9**
ZUGS Zugspitze, Sch 3.84 360 *e*Pn **Pn 16 54 02.9 +2.7**
ZUGS *e*Sn **Sn 16 54 47.6 +1.9**
OBKA Obir 3.86 39 *e*Pn **Pn 16 54 00.6 +0.3**
OBKA Obir 3.86 39 *i* Pn **Pn 16 54 00.8 +0.5**
comp=E,3.8nm,0.2s
OBER Oberstdorf 3.86 353 *e*Pn **Pn 16 54 02.6 +2.3**
GDM Grand'Maison 3.86 297 P **Pn 16 54 02.7 +2.3**
KBA Koelnbreinsper 3.87 24 *i* Pn **Pn 16 54 01.9 +1.4**
comp=E,9.6nm,0.2s,SNR=20
KBA *e*Sn **Sn 16 54 44.5 -1.8**
comp=E,36nm,0.3s
KBA Koelnbreinsper 3.87 24 *e*Pn **Pn 16 54 01.8 +1.3**
BSTF la Bastide-des 3.90 276 P **Pn 16 54 01.7 +0.9**
RETA Reutte 3.91 358 *i* Pn **Pn 16 54 03.0 +2.0**
comp=E,111nm,0.3s,SNR=82
RETA *e*Sn **Sn 16 54 49.1 +1.9**
comp=E,106nm,0.4s
OGSI Sixt 3.91 311 P **Pn 16 54 03.1 +2.1**
ORIF Oris-en-Rattie 3.92 292 *e*P **Pn 16 54 03.6 +2.5**
ORIF *e*Sn **Sn 16 54 41.9 -5.4**
comp=E,90nm,0.5s
ORIF Oris-en-Rattie 3.92 292 P **Pn 16 54 03.2 +2.1**
PART Garmisch-Parte 3.92 1 *e*Pn **Pn 16 54 03.6 +2.6**
PART *e*Sn **Sn 16 54 48.8 +1.5**
SGRT San Giovanni R 3.94 116 Pn 16 54 03.6 +2.1
SMRF Simiane la Rot 3.95 278 *e*P **Pn 16 54 02.6 +1.1**
SMRF *e*Sn **Sn 16 54 42.6 -5.5**
comp=E,44nm,0.5s
AIGLE Aigle 3.98 315 P **Pn 16 54 03.6 +1.6**
RUSF Rustrel 4.01 277 P **Pn 16 54 03.4 +1.0**
UBR Ueberruh 4.15 352 *e*Pn **Pn 16 54 05.9 +1.6**
UBR *e*Sn **Sn 16 54 53.9 +0.9**
SOKA Soboth 4.21 41 *e*Pn **Pn 16 54 06.9 +1.8**
comp=E,4.2nm,0.3s,SNR=10
SOKA *e*Sn **Sn 16 54 52.3 -2.3**
comp=E,20nm,0.7s
TORNY Torny/Romont 4.29 320 P **Pn 16 54 08.0 +1.8**
OGSM Saint Maurice 4.30 300 P **Pn 16 54 07.7 +1.4**
RJOB Jochberg 4.34 16 *e*Pn **Pn 16 54 09.4 +2.4**
RJOB *e*Sn **Sn 16 54 58.9 +1.1**
BALST Balsthal 4.42 329 P **Pn 16 54 09.0 +1.0**
SULZ Cheisacher 4.44 334 P **Pn 16 54 09.1 +0.9**
MGRS Mrkonjic Grad 4.47 77 *e*Pn **Pn 16 54 11.1 +2.5**
GIMEL St. Georges / 4.47 313 P **Pn 16 54 09.7 +0.9**
A051A Mrakovica 4.47 69 *e*Pn **Pn 16 54 10.2 +1.5**
SRKY Kupres RS 4.49 82 *e*Pn **Pn 16 54 12.9 +4.0**
BIOA Bad Ischl, Aus 4.51 23 *e*Pn **Pn 16 54 10.7 +1.6**
comp=E,7.6nm,0.2s,SNR=6.6
BIOA *e*Sn **Sn 16 55 02.9 +1.1**
comp=E,88nm,0.6s
SLE Schleitheim 4.54 338 P **Pn 16 54 09.9 +0.3**
OG35 Corcelles 4.58 304 P **Pn 16 54 11.2 +1.0**
OG35 S **Sn 16 55 04.0 +0.3**
FUR Furstenfeldbru 4.59 2 *e*Sn **Sn 16 55 02.9 -1.0**
BLY Banja Luka 4.60 73 *e*Pn **Pn 16 54 13.6 +3.2**
CABF La Chapelle 4.61 313 *e*P **Pn 16 54 11.7 +1.0**
CABF *e*Sn **Sn 16 54 59.3 -5.2**
comp=E,32nm,0.4s
BRANT Les Verrieres 4.64 318 P **Pn 16 54 12.1 +1.1**

BRANT Les Verrieres 4.64 318 S **Sn 16 55 04.1 -1.0**
BOURR Bourrignon 4.64 326 P **Pn 16 54 12.0 +1.0**
BOURR Bourrignon 4.64 326 S **Sn 16 55 03.4 -1.9**
GUT Gutenstein 4.68 344 P **Pn 16 54 11.4 -0.2**
VIVF Saint-Julien-I 4.72 288 *e*P **Pn 16 54 13.4 +1.2**
VIVF *e*Sn **Sn 16 55 01.6 -5.6**
comp=E,11nm,0.3s
CHMF Charmoille 4.78 322 P **Pn 16 54 13.8 +0.9**
CHMF S **Sn 16 55 06.3 -2.2**
FELD Feldberg im Sc 4.78 335 P **Pn 16 54 13.3 +0.3**
RIVEL MONT RIVEL 4.80 313 P **Pn 16 54 13.8 +0.7**
RIVEL S **Sn 16 55 08.5 -0.5**
MOA Molln 4.84 27 *e*Pn **Pn 16 54 15.0 +1.2**
comp=E,5.6nm,0.2s,SNR=20
MOA *e*Sn **Sn 16 55 09.6 -0.5**
comp=E,20nm,0.3s
MOA Molln 4.84 27 *e*Pn **Pn 16 54 14.9 +1.2**
ARSA Arzberg 4.86 39 *e*Pn **Pn 16 54 14.1 +0.1**
comp=E,6.7nm,0.2s,SNR=11
ARSA Sn **Sn 16 55 07.8 -2.6**
comp=E,11nm,0.6s
ARSA Arzberg 4.86 39 *e*Pn **Pn 16 54 13.4 -0.5**
KIZ Kirchzarten 4.88 335 P **Pn 16 54 14.5 +0.2**
SSB Saint Sauveur 4.93 292 Pn **Pn 16 54 15.3 +0.3**
SSB Saint Sauveur 4.93 292 P **Pn 16 54 15.1 +0.2**
STON Ston 4.95 96 *e*Pn **Pn 16 54 14.8 -0.3**
BEHE Becsehely 5.01 53 P **Pn 16 54 18.3 +2.3**
MOF Molkenrain 5.06 329 P **Pn 16 54 17.1 +0.3**
VOGT Vogtsburg - To 5.07 334 P **Pn 16 54 17.2 +0.3**
CUC Castrocucco 5.08 133 Pn 16 54 16.9 -0.1
BFO Black Forest 5.10 340 Pn **Pn 16 54 17.2 -0.1**
BFO Black Forest 5.10 340 *e*Pn **Pn 16 54 17.7 +0.3**
BFO *e*Sn **Sn 16 55 13.0 -3.5**
RONF Ronchamp 5.14 325 P **Pn 16 54 18.4 +0.6**
RONF S **Sn 16 55 15.8 -1.5**
HINF Hinteralfeld 5.14 327 *e*P **Pn 16 54 18.3 +0.5**
HINF *e*Sn **Sn 16 55 11.9 -5.4**
comp=E,113nm,0.4s
NORI Noerdlinger Ri 5.15 357 *e*Sn **Sn 16 55 14.8 -2.7**
MATE Matera 5.15 123 ⇑P **Pn 16 54 20.5 +2.5**
LASF Ste Croix 5.19 278 *e*P **Pn 16 54 19.1 +0.5**
LASF *e*Sn **Sn 16 55 12.6 -6.1**
comp=E,6.5nm,0.3s
STU Stuttgart 5.34 347 Pn **Pn 16 54 21.2 +0.6**
ECH Echery 5.36 331 P **Pn 16 54 21.1 +0.3**
TREB Trebinje 5.44 97 *e*Pn **Pn 16 54 23.1 +1.1**
WLS Welschbruch 5.46 334 P **Pn 16 54 22.6 +0.3**
CDF Champ du Feu 5.49 333 *e*P **Pn 16 54 23.1 +0.5**
CDF *e*Sn **Sn 16 55 20.2 -5.8**
comp=E,154nm,0.5s
HAU Haudompre 5.49 325 *e*P **Pn 16 54 23.2 +0.5**
HAU *e*Sn **Sn 16 55 20.3 -5.8**
comp=E,523nm,0.5s
CONA Conrad Observa 5.52 36 *e*Pn **Pn 16 54 23.3 +0.2**
comp=E,2.1nm,0.2s,SNR=6.4
CONA *e*Sn **Sn 16 55 24.2 -2.6**
comp=E,33nm,0.7s
RONA Rosalia, Austr 5.54 40 *e*Pn **Pn 16 54 24.0 +0.5**
comp=E,1.0nm,0.1s
BRY Bratogost 5.55 94 *e*Pn **Pn 16 54 24.9 +1.3**
PLYF Puligny Montra 5.56 310 P **Pn 16 54 24.2 +0.6**
PLYF S **Sn 16 55 27.0 -0.6**
GEC2 GERESS Array S 5.59 19 Pn **Pn 16 54 23.7 -0.4**
GEC2 GERESS Array S 5.59 19 *e*Pn **Pn 16 54 24.1 +0.1**
GEC2 *e*Sn **Sn 16 55 24.9 -3.6**
GERES GERESS Array B 5.59 19 Pn **Pn 16 54 24.1 0.0**
comp=E,2.0nm,0.3s,baz=195,slow=14,SNR=36
GERES Sn **Sn 16 55 26.1 -2.5**
comp=E,6.1nm,0.3s,baz=203,slow=23,SNR=8.9
comp=E,4.6nm,0.4s
GERES GERESS Array B 5.59 19 Pn 16 54 23.2 -0.9
HCY Herceg Novi 5.61 99 *e*Pn **Pn 16 54 23.3 -1.0**
KOVH Kovagotottos 5.63 61 P **Pn 16 54 25.6 +1.0**
KOVH S **Sn 16 55 24.6 -4.9**
SOP Sopron 5.66 42 P **Pn 16 54 26.2 +1.3**
SOP S **Sn 16 55 26.1 -3.9**
WET Wettzell 5.71 12 *e*Pn **Pn 16 54 25.7 -0.1**
WET *e*Sn **Sn 16 55 26.5 -5.1**
CKRC Cesky Krumlov 5.72 22 *e*PN **Pn 16 54 26.1 +0.3**
CKRC *e*SN **Sn 16 55 29.1 -2.6**
SUBF Surbourg 5.77 339 P **Pn 16 54 27.4 +1.0**
UPM Unac-Piva 5.77 91 *e*Pn **Pn 16 54 28.4 +1.7**
HAPS Han Pijesak,Bl 5.77 82 *e*Pn **Pn 16 54 28.2 +1.6**
SZBH soultz borehol 5.78 339 P **Pn 16 54 27.3 +0.7**
CIEL Dossenheim-sur 5.83 336 P **Pn 16 54 27.6 +0.3**
KHC Kasperske Hory 5.83 17 Pn **Pn 16 54 26.8 -0.5**
KHC Kasperske Hory 5.83 17 *e*PN **Pn 16 54 27.2 -0.1**
KHC *e*SN **Sn 16 55 30.4 -4.0**
SMF Signal de Mont 5.92 304 *e*P **Pn 16 54 29.8 +1.2**
SMF *e*Sn **Sn 16 55 30.4 -6.2**
comp=E,60nm,0.6s
MORH Mrgy, Hungar 6.03 61 P **Pn 16 54 30.9 +0.8**
RUDO Rudo 6.08 87 *e*Pn **Pn 16 54 32.7 +2.0**
BBLS Lazići 6.09 84 *e*Pn **Pn 16 54 31.9 +0.9**
PYM Petit Puy Mans 6.10 294 P **Pn 16 54 31.9 +0.8**
GRFO Grafenberg 6.11 1 Pn **Pn 16 54 30.7 -0.5**
GRA1 Grafenberg Arr 6.12 1 Pn 16 54 30.5 -0.7
GRF Grafenberg Arr 6.12 1 *e*Pn **Pn 16 54 30.4 -0.8**
PDG Podgorica 6.16 98 ⇑P **Pn 16 54 33.8 +2.0**
PDG Podgorica 6.16 98 Pn **Pn 16 54 31.0 -0.8**
DRME Dracevica, Mon 6.17 100 *e*Pn **Pn 16 54 32.9 +0.9**
TIP Timpagrande 6.17 134 ⇑P **Pn 16 54 36.4 +4.4**
PAGF Fort de Pagny 6.18 325 *e*P **Pn 16 54 33.1 +1.0**
PAGF *e*Sn **Sn 16 55 36.7 -6.3**
comp=E,75nm,0.5s
SFTF Sexfontaines 6.22 320 *e*P **Pn 16 54 33.9 +1.2**
SFTF *e*Sn **Sn 16 55 37.5 -6.5**
comp=E,89nm,0.8s
LOR Lormes 6.23 309 *e*P **Pn 16 54 33.5 +0.6**
baz=128
LOR *e*Sn **Sn 16 55 37.7 -6.6**
comp=E,27nm,0.3s
LOR Lormes 6.23 309 P Pn 16 54 33.0 +0.1
MAHO Mahon 6.24 236 Pn Pn 16 54 31.9 -1.1
ROTZ Rotzenmuhle 6.24 7 *e*Pn **Pn 16 54 32.1 -0.8**
FILF Fillols 6.27 264 P **Pn 16 54 34.6 +1.2**
AVF Avril sur Loir 6.29 303 *e*P **Pn 16 54 34.5 +0.9**
AVF *e*Sn **Sn 16 55 38.9 -6.7**
comp=E,56nm,0.9s
SSF Saint Saulge 6.33 306 *e*P **Pn 16 54 36.2 +2.1**
SSF *e*Sn **Sn 16 55 40.1 -6.5**
comp=E,26nm,0.5s
MTLF Montolieu 6.40 271 *e*P **Pn 16 54 35.6 +0.5**
MTLF *e*Sn **Sn 16 55 41.3 -7.1**
comp=E,12nm,0.6s
MTLF Montolieu 6.40 271 P Pn 16 54 35.0 -0.1
MEZF Maizieres J'vi 6.43 322 *e*P **Pn 16 54 37.1 +1.6**
MEZF *e*Sn **Sn 16 55 40.3 -8.8**
SAVF Savonnieres en 6.48 323 *e*P **Pn 16 54 37.4 +1.1**
SAVF *e*Sn **Sn 16 55 43.8 -6.6**
comp=E,76nm,0.8s
BGF Bois d'Agland 6.50 300 *e*P **Pn 16 54 37.6 +1.1**
BGF *e*Sn **Sn 16 55 44.5 -6.3**
comp=E,47nm,0.5s
FRGS Fruska Gora 6.51 73 *e*Pn **Pn 16 54 37.8 +1.2**
DIVS Divibare 6.52 82 Pn **Pn 16 54 34.1 -2.8**
DIVS Divibare 6.52 82 *e*Pn **Pn 16 54 35.9 -1.0**
FNEB Nbias 6.53 267 P **Pn 16 54 37.0 0.0**
CAF Calviac 6.56 285 *e*P **Pn 16 54 38.7 +1.4**
CAF *e*Sn **Sn 16 55 45.2 -7.2**
comp=E,13nm,0.6s
KRUC Moravsky 6.63 32 *e*PN **Pn 16 54 38.5 +0.2**
KRUC *e*SN **Sn 16 55 51.6 -2.5**
NKC Novy Kostel 6.73 8 *e*PN **Pn 16 54 38.9 -0.7**
NKC *e*SN **Sn 16 55 50.8 -5.7**
ABH Alteburg 6.73 341 P **Pn 16 54 40.2 +0.5**
GOPC GO Pecny, Ondr 6.85 21 *e*PN **Pn 16 54 41.6 +0.3**
GOPC *e*SN **Sn 16 55 55.4 -4.0**
PRU Pruhonice 6.85 20 *e*PN **Pn 16 54 42.2 +0.9**
PRU *e*SN **Sn 16 55 54.7 -4.8**
VRAC Vranov 6.91 32 *e*PN **Pn 16 54 44.0 +1.9**
WLF Walferdange 6.94 333 Pn **Pn 16 54 40.9 -1.6**
WLF Walferdange 6.94 333 *d*P **Pn 16 54 43.7 +1.1**
WLF *d*S **Sn 16 55 57.8 -3.8**
WLF Walferdange 6.94 333 P Pn 16 54 43.9 +1.4
HYF Humbligny 6.94 305 *e*P **Pn 16 54 44.7 +2.1**
HYF *e*Sn **Sn 16 55 54.8 -7.0**
RJF Les Rejaudoux 7.01 288 *e*P **Pn 16 54 45.7 +2.2**
RJF *e*Sn **Sn 16 55 56.0 -7.3**
comp=E,3.4nm,0.4s
JAVC Velka Javorina 7.02 39 *e*PN **Pn 16 54 41.8 -1.8**
MONQ Montcuq 7.12 280 P **Pn 16 54 46.7 +1.7**

MLS	Moulis	7.26	268	P	Pn	16 54 47.4	+0.5
LFF	La Frestale	7.49	284	eP	Pn	16 54 52.1	+2.0
LFF				eSn	Sn	16 56 07.6	-7.7
	comp=E,4.5nm,0.3s						
CLF	Chambon-Foret	7.55	309	Pn	Pn	16 54 48.8	-2.1
PSZ	Piszkesteto	7.58	52	Pn	Pn	16 54 48.7	-2.7
PSZ	Piszkesteto	7.58	52	P	Pn	16 54 57.0	+5.6
KRLC	Kraliky	7.61	29	ePN	Pn	16 54 51.7	0.0
KRLC				eSN	Sn	16 56 13.5	-4.7
KEK	Kerkira	7.63	117	Pn	Pn	16 54 52.5	+0.4
RCHB	Rochefort	7.67	331	dP	Pn	16 54 53.4	+0.8
RCHB				dS	Sn	16 56 13.3	-6.4
DPC	Dobruska-Polom	7.69	26	ePN	Pn	16 54 52.9	+0.1
DPC				eSN	Sn	16 56 14.3	-5.8
UPC	Upice	7.72	25	ePN	Pn	16 54 53.6	+0.3
BTNL	Ternell	7.75	336	dP	Pn	16 54 55.5	+1.7
BTNL				dS	Sn	16 56 17.4	-4.3
GIVF	Givet	7.78	329	eP	Pn	16 54 56.5	+2.5
GIVF				eSn	Sn	16 56 14.6	-7.6
	comp=E,58nm,0.9s						
EPF	Esparros	7.80	270	eP	Pn	16 54 56.2	+1.8
EPF				eSn	Sn	16 56 14.8	-8.1
	comp=E,2.8nm,0.5s						
CHVC	Chvalec	7.81	24	ePN	Pn	16 54 54.7	+0.2
MEM	Membach	7.81	336	dP	Pn	16 54 56.7	+2.2
MEM				dS	Sn	16 56 19.3	-3.8
OSTC	Ostas	7.83	25	ePN	Pn	16 54 54.4	-0.4
BZS	Buzias	7.84	71	⇓P	Pn	16 54 59.8	+4.9
CLL	Collm	7.85	9	Pn	Pn	16 54 53.8	-1.2
CLL	Collm	7.85	9	i Pn	Pn	16 54 54.7	-0.3
	comp=Z,10.0nm,0.7s						
CLL				eSn	Sn	16 56 17.0	-7.0
CLL				i x	x	16 56 31.6	
CLL				ex	x	16 56 50.0	
CLL				i x	x	16 56 53.5	
CLL				i x	x	16 56 57.8	
CLL				ex	x	16 57 04.0	
CLL				eSg	Sg	16 57 15.0	+2.8
	comp=Z,42nm,1.3s						
DOU	Dourbes	7.86	328	dP	Pn	16 54 55.1	+0.1
DOU				dS	Sn	16 56 19.5	-4.7
BCLA	Clavier	7.87	332	dP	Pn	16 54 56.6	+1.3
BCLA				dS	Sn	16 56 21.5	-3.0
BGES	Gesves	7.92	331	dP	Pn	16 54 57.7	+1.8
KEST	Kesra	7.94	190	Pn	Pn	16 55 01.4	+4.9
	comp=Z,1.4nm,0.3s,baz=326,slow=5.1,SNR=18						
	comp=Z,13nm,0.6s						
KEST	Kesra	7.94	190	Pn	Pn	16 54 57.1	+0.7
BMRD	Maredsous	7.96	330	dP	Pn	16 54 58.0	+1.5
BMRD				dS	Sn	16 56 22.6	-4.2
BAIF	Baives	7.98	327	eP	Pn	16 54 59.3	+2.5
BAIF				eSn	Sn	16 56 19.6	-7.6
	comp=Z,33nm,0.8s						
SNF	Seneffe	8.31	329	dP	Pn	16 55 03.4	+2.1
MFF	Saint Martin d	8.45	295	eP	Pn	16 55 05.2	+2.0
MFF				eSn	Sn	16 56 30.4	-8.3
	comp=Z,8.9nm,0.6s						
ETSF	Etsaut	8.47	269	eP	Pn	16 55 08.5	+4.9
ETSF				eSn	Sn	16 56 31.1	-8.4
	comp=Z,6.2nm,0.7s						
BLKB	Belogradchik	8.47	86	⇑P	Pn	16 55 06.8	+3.2
GZR	Gura Zlata	8.61	74	⇓P	Pn	16 55 10.2	+4.7
SJPF	Ste Jean	8.93	271	eP	Pn	16 55 11.4	+1.6
SJPF				eSn	Sn	16 56 41.8	-8.7
	comp=Z,1.3nm,0.4s						
VTS	Vitosha	9.00	92	Pn	Pn	16 55 10.7	-0.3
LDF	La Druitiere	9.21	307	ePn	Pn	16 55 11.0	-2.7
LDF				eSn	Sn	16 56 49.9	-7.6
FLN	La Foliniere	9.50	307	ePn	Pn	16 55 13.9	-3.7
GRR	Gorron	9.55	304	eP	Pn	16 55 19.4	+1.1
VOIR		10.21	75	⇓P	Pn	16 55 31.3	+4.0
SGMF	Saint Gilles	10.54	301	eP	Pn	16 55 34.4	+2.6
BUR08	Bucovina Ar. S	10.74	63	Pn	Pn	16 55 33.5	-1.3
BURAR	Bucovina Array	10.74	63	⇓P	Pn	16 55 41.6	+6.9
BURAR	Bucovina Array	10.74	63	Pn	Pn	16 55 30.2	-4.6
QUIF	Quistinic	10.81	299	eP	Pn	16 55 37.3	+1.8
QUIF				eSn	Sn	16 57 26.8	-10
	comp=Z,1.3nm,0.4s						
MLR	Muntele Rosu	10.84	75	LR	LR	16 59 51.4	
	comp=Z,372nm,19.6s,baz=260,slow=37						
ROSF	Rostrenen	11.01	301	eP	Pn	16 55 41.4	+3.1
ROSF				eSn	Sn	16 57 31.8	-10
	comp=Z,4.8nm,0.7s						
RDO	Rodhopi	11.03	98	Pn	Pn	16 55 37.7	-0.9
RGN	Rugen	11.08	7	Pn	Pn	16 55 38.1	-1.1
ESDC	Sonseca Array	11.86	256	Pn	Pn	16 55 50.4	+0.3
	comp=Z,0.1nm,0.3s,baz=61,slow=13,SNR=4.3						
	comp=Z,0.6nm,0.7s						
SANT	Santorini	13.21	118	Pn	Pn	16 56 05.2	-3.3
EKA	Eskdalemuir Ar	14.90	327	Pn	Pn	16 56 29.6	-1.7
	baz=139,slow=14						
	comp=Z,0.6nm,0.3s						
NAO01	NORSAR Array S	17.29	360	Pn	Pn	16 56 58.6	-3.5
NAO01				IAmb	IAmb	16 57 19.4	
	comp=Z,32nm,1.4s						
BR131	Keskin Array S	17.34	95	Pn	Pn	16 57 00.3	-2.7
BRTR	Keskin Array B	17.34	95	P	P	16 57 09.6	+5.2
	baz=277,slow=9.8,SNR=4.9						
	comp=Z,1.9nm,1.0s						
NOA	NORSAR Array B	17.49	0	P	P	16 57 05.8	-0.1
	baz=181,slow=11,SNR=4.5						
	comp=Z,1.1nm,0.8s						
NC405	NORSAR Array S	17.57	1	P	Pn	16 57 05.0	-0.6
NC405				IAmb	IAmb	16 57 06.0	
	comp=Z,19nm,1.2s						
FINES	FINESS Array B	20.01	21	P	Pn	16 57 35.0	-0.1
	comp=Z,0.1nm,0.3s,baz=176,slow=7.6,SNR=6.0						
	comp=Z,3.2nm,0.8s						
BELG	Belogornoye	25.81	57	P	P	16 58 36.8	+4.9
	comp=Z,8.8nm,0.6s,baz=22,slow=3.8,SNR=6.6						
	comp=Z,8.8nm,0.6s						
TORD	Torodi Ar. Bea	31.37	198	P	P	16 59 23.1	+1.2
	comp=Z,1.0nm,0.7s,baz=15,slow=9.4,SNR=8.0						
	comp=Z,1.0nm,0.7s						
ARU	Arti	32.47	50	P	P	16 59 30.4	-0.8
ABKAR	Akbulak array	33.73	63	P	P	16 59 41.9	-0.3
HRA	Herat	40.32	85	P	P	17 00 38.2	-0.5
HRA				IAmb	IAmb	17 00 43.9	
	comp=Z,2.6nm,0.6s						
WSAR	Wadi Sarin	43.95	102	LR	LR	17 24 28.9	
	comp=Z,978nm,21.6s,baz=129,slow=43						
ZALV	Zalesovo Beam	47.64	50	P	P	17 01 40.1	+3.2
	comp=Z,0.7nm,0.6s,baz=294,slow=11,SNR=1.9						
	comp=Z,0.7nm,0.6s						
MK31	Makanchi Array	48.75	60	P	P	17 01 45.7	0.0
MK31				IAmb	IAmb	17 01 50.8	
	comp=Z,2.5nm,1.1s						
MKAR	Makanchi Array	48.75	60	P	P	17 01 47.3	+1.6
	comp=Z,1.9nm,0.7s,baz=288,slow=6.8,SNR=9.9						
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	48.75	60	P	P	17 01 44.7	-1.0
KMBO	Kilima Mbogo	50.34	145	LR	LR	17 26 10.2	
	comp=Z,16nm,20.0s,baz=97,slow=39						
SONM	Songino Array	62.51	49	P	P	17 03 26.8	+2.2
	comp=Z,1.3nm,1.0s,baz=308,slow=7.2,SNR=6.7						
	comp=Z,1.3nm,1.0s						

NOU ***25*** *17:10:01.2, 36.°92S×179.°58E, h0km, MLv4.1/6, Off E. Coast of N. Island, N.Z.*
WEL ***25*** *17:10:04.0±1.3, 37.°S±6.°×17.°9E±1.°1, h20km, M3.5/12, ML3.7/12, MLv3.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=98.9*

ISC 25 17:10:03.5±2.8, 36.°91S±0.°09×179.°5E±0.°2, h22km±8km, n63, σ1°14/72, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.17	236	P	Pn	17 10 21.6	-2.9
MXZ				S	Sb	17 10 39.2	-0.6
MXZ	Matakaoa Point	1.17	236	P	Pn	17 10 23.4	-1.2
WMGZ	Waiomatatini S	1.27	224	P	Pb	17 10 26.9	+0.1
WMGZ				S	Sb	17 10 44.4	+1.8
PKGZ	Pakihiroa	1.51	229	P	Pb	17 10 30.6	-0.3
PKGZ				S	Sb	17 10 49.2	-0.5
PUZ	Puketiti	1.54	220	P	Pb	17 10 30.9	-0.4
PUZ				S	Sb	17 10 51.6	+1.2
HAZ	Te Kaha	1.63	238	P	Pn	17 10 28.7	-2.1
HAZ				S	Sb	17 10 52.6	-0.3
TWGZ	Tauwhareparae	1.77	224	P	Pb	17 10 34.7	-0.5
TWGZ				S	Sb	17 10 57.2	+0.3
RUGZ	Raukumara Rang	1.81	234	P	Pn	17 10 33.8	+0.3
CNGZ	Carnagh Statio	1.89	213	P	Pb	17 10 36.4	-0.9
WIZ	White Island	1.96	251	P	Pn	17 10 34.4	-1.1
MWZ	Matawai	2.13	227	P	Pn	17 10 38.7	+0.8
RIGZ	Rimuhau	2.27	217	P	Pn	17 10 40.3	+0.5
RAGZ	Rawiri	2.31	226	P	Pn	17 10 41.6	+1.3
URZ	Urewera	2.34	234	P	Pn	17 10 40.9	+0.2
URZ				S	Sn	17 11 07.6	-1.2
URZ	Urewera	2.34	234	P	Pn	17 10 42.0	+1.3
OPRZ	Ohinepanea	2.54	247	P	Pn	17 10 44.3	+0.9
SNGZ	Shannon Statio	2.55	222	P	Pn	17 10 44.7	+1.2
SNGZ				S	Sn	17 11 15.7	+1.8
KNZ	Kokohu	2.57	214	P	Pn	17 10 43.6	-0.2
KNZ				S	Sn	17 11 13.7	-0.7
MHGZ	Mahia Peninsul	2.58	209	P	Pn	17 10 44.7	+0.7
RTZ	Ruatahuna	2.64	229	P	Pn	17 10 46.9	+2.0
TGRZ	Tauranga	2.73	251	P	Pn	17 10 46.8	+0.9
TARZ	Mount Tarawera	2.74	240	P	Pn	17 10 47.4	+1.2
OMRZ	Omania	2.78	243	P	Pn	17 10 47.9	+1.2
RAHZ	Arahi	2.78	223	P	Pn	17 10 47.9	+1.1
RRRZ	Republican Roa	2.79	238	P	Pn	17 10 48.3	+1.5
WHHZ	Waihua	2.82	219	P	Pn	17 10 48.7	+1.4
KARZ	Kaharoa	2.84	246	P	Pn	17 10 47.6	+0.1
HLRZ	Highlands Stat	2.86	241	P	Pn	17 10 49.9	+2.1
MTHZ	Maungataniwha	2.88	227	P	Pn	17 10 49.1	+1.0
PRRZ	Plateau Road	2.95	236	P	Pn	17 10 48.3	-0.7
KMRZ	Kaimai	3.00	251	P	Pn	17 10 50.4	+0.6
ALRZ	Allen Road	3.02	236	P	Pn	17 10 50.6	+0.7
KUZ	Kuaotunu	3.06	272	P	Pn	17 10 50.4	-0.1
NMHZ	Naumai	3.06	224	P	Pn	17 10 52.8	+2.1
ARHZ	Aropaoanui	3.08	220	P	Pn	17 10 51.6	+0.8
MRHZ	Matea Rd	3.12	231	P	Pn	17 10 52.0	+0.5
BKZ	Black Stump Fm	3.29	226	P	Pn	17 10 54.7	+1.0
TOZ	Tahuroa Road	3.31	254	P	Pn	17 10 54.1	+0.1
MCHZ	McNeill Hill	3.38	220	P	Pn	17 10 54.7	-0.2
MKAZ	Moumakai	3.50	265	P	Pn	17 10 54.3	-2.2
KWHZ	Kaweka Forest	3.51	223	P	Pn	17 10 57.0	+0.2
KAHZ	Kahuranaki	3.56	215	P	Pn	17 10 56.8	-0.6
ETAZ	East Tamaki Re	3.68	268	P	Pn	17 10 60.0	+0.9
MBAZ	Motutapu North	3.71	271	P	Pn	17 11 00.5	+1.0
TMVZ	Te Maari	3.74	233	P	Pn	17 11 00.7	+0.7
ETVZ	East Tongariro	3.75	232	P	Pn	17 11 00.7	+0.6
BHHZ	Black Hill Sta	3.75	226	P	Pn	17 11 00.3	+0.2
PXZ	Pawanui	3.75	213	P	Pn	17 10 59.1	-1.0
KRVZ	Karewarewa	3.77	233	P	Pn	17 11 01.3	+1.0
SNVZ	South Ngauruho	3.82	232	P	Pn	17 11 01.7	+0.6
MOVZ	Moawhango	3.88	229	P	Pn	17 11 01.5	-0.4
TWVZ	Taurewa	3.88	235	P	Pn	17 11 03.5	+1.6
AWAZ	Awhitu Peninsu	3.91	266	P	Pn	17 11 01.5	-0.7
WTAZ	Waiatarua	3.97	268	P	Pn	17 11 01.7	-1.3
PNHZ	Pukenui	3.98	220	P	Pn	17 11 02.6	-0.6
HIZ	Hauiti	4.03	245	P	Pn	17 11 05.1	+1.2
HIZ	Hauiti	4.03	245	P	Pn	17 11 05.4	+1.5
TSZ	Takapari Road	4.21	221	P	Pn	17 11 05.2	-1.2
VRZ	Vera Road	4.37	238	P	Pn	17 11 10.0	+1.5
WAZ	Wanganui	4.56	230	P	Pn	17 11 12.6	+1.4
OUZ	Omahuta	5.09	288	P	Pn	17 11 19.7	+1.2
OUZ	Omahuta	5.09	288	P	Pn	17 11 19.6	+1.2
KHZ	Kahutara	7.18	218	P	Pn	17 11 47.0	-0.1

IDC ***25*** *17:15:28.8±1.3, 42.°63N×69.°44E, h0km, mb3.8/4, mbtmp3.9/11, ML3.5/7, Error ellipse: s-maj=16.9km s-min=10.4km az=172.0*
KRNET ***25*** *17:15:30.6±0.1, 42.°75N×69.°56E, h14km, mb4.1*
NNC ***25*** *17:15:31.2±0.9, 42.°96N×69.°46E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=9.9km s-min=4.0km az=8.0*
SOME ***25*** *17:15:32.2, 42.°75N×69.°67E, h10km*

ISC 25 17:15:30.4±0.6, 42.°84N±0.°03×69.°32E±0.°03, h10km, n66, σ2°56/107, mb3.8/4, 33C-20D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHM	Chimkent	0.56	158	eP	Pg	17 15 39.7	-1.5
CHM	19nm,0.2s			eS	Sg	17 15 45.8	-2.7
	21μm,0.2s						
IUG	Iuzhnay	0.86	142	eP	Pg	17 15 45.2	-1.9
IUG	9μm,0.3s			eS	Sg	17 15 55.1	-3.2
	5μm,0.3s						
KK31	Karatay Array	0.91	73	⇓P	Pg	17 15 46.5	-1.4
KK31	26nm,0.3s,baz=247,slow=20,SNR=3783			⇓S	Sg	17 15 57.3	-2.6
	502nm,0.4s,baz=247,slow=36,SNR=98						
KKAR	Karatay Array	0.91	73	⇑iP	Pg	17 15 45.5	-2.5
KKAR	baz=63			⇑iS	Sg	17 15 56.5	-3.4
	baz=63						
DZA	Taraz	1.48	87	eP	Pn	17 15 55.9	-1.2
DZA	229nm,0.2s			eS	Sn	17 16 13.6	-2.9
	3μm,0.3s						
TAS	Tashkent	1.51	181	⇓iP	Pn	17 15 57.5	0.0
TAS	baz=88			⇓eS	Sn	17 16 16.9	-0.4
	baz=88						
TRKS	Terek-Say	1.88	133	⇓iP	Pn	17 16 03.2	+0.5
TRKS	baz=36			⇓iS	Sn	17 16 27.1	+0.5
	baz=36						
ARK	Arkit	2.22	117	⇑iP	Pn	17 16 07.7	+0.4
ARK	baz=17			⇑iS	Sn	17 16 34.6	-0.2
	baz=17						
MRKS	Merke	2.88	90	eP	Pn	17 16 19.5	+3.2
MRKS	36nm,0.5s			eS	Sn	17 16 53.5	+2.4
	288nm,0.5s						
BTK	Batken	3.00	157	⇑iP	Pn	17 16 19.0	+1.0
BTK	baz=60			⇑iS	Sn	17 16 54.4	+0.4
	baz=60						
EKS2	Erkin-Say	3.29	92	P	Pn	17 16 23.0	+0.9
EKS2	SNR=14						
EKS2	Erkin-Say	3.29	92	⇓iP	Pn	17 16 22.9	+0.9
EKS2	baz=90			⇓iS	Sn	17 17 01.0	-0.2
	baz=90						
AML	Almayashu	3.31	101	P	Pn	17 16 23.9	+1.3
OHH	SNR=7.1						
OHH	Osh	3.47	131	⇓iP	Pn	17 16 25.1	+0.5
OHH	baz=32			⇓iS	Sn	17 17 05.1	-0.7
	baz=32						
AAK	Ala-Archa	3.81	91	P	Pn	17 16 30.4	+1.0
AAK	SNR=12						
AAK	Ala-Archa	3.81	91	⇑eP	Pn	17 16 30.2	+0.9
AAK	baz=90			⇑iS	Sn	17 17 13.8	-0.5
	baz=90						
USP	Ospenovka	3.82	82	P	Pn	17 16 29.7	+0.4
USP	SNR=21						
USP	Ospenovka	3.82	82	⇑eP	Pn	17 16 30.4	+1.1
USP	baz=80			⇑iS	Sn	17 17 14.0	-0.3
	baz=80						
ARLS	Aral	3.83	103	⇑eP	Pn	17 16 30.4	+0.8
ARLS	baz=3.0			⇑iS	Sn	17 17 14.0	-0.8
	baz=3.0						
DRK	Karamyk	3.84	150	⇑iP	Pn	17 16 30.9	+1.1
DRK	baz=52			⇑iS	Sn	17 17 14.7	-0.4
	baz=52						
UCH	Uchtor	3.88	97	P	Pb	17 16 38.9	-0.4
UCH	SNR=10						
UCH	Uchtor	3.88	97	⇑iP	Pn	17 16 31.4	+0.8
UCH	baz=96			⇑iS	Sn	17 17 15.4	-1.1
	baz=96						
GAR	Garm	3.91	169	⇑eP	Pn	17 16 32.4	+1.8
GAR	baz=71			⇑iS	Sn	17 17 17.4	+0.9
	baz=71						
SGDS	Sogindy	3.93	79	eP	Pb	17 16 38.3	-1.6
SGDS	21nm,0.2s			eS	Sb	17 17 25.5	-2.0
	75nm,0.3s						
CHMS	Chumysh	3.99	86	P	Pn	17 16 32.5	+0.8
CHMS	SNR=8.7						
CHMS	Chumysh	3.99	86	⇑iP	Pn	17 16 32.0	+0.4
CHMS	baz=85			⇑iS	Sn	17 17 17.7	-0.8
	baz=85						
CHMS	Chumysh	3.99	86	⇓Pn	Pn	17 16 31.6	-0.1
CHMS	7.8nm,0.4s						
CHMS				⇑Sn	Sn	17 17 19.0	+0.5
	67nm,0.8s						
CHMS				⇓Lg	Lg	17 17 30.0	
	31nm,0.4s						
BTLS	Baital	4.06	56	eP	Pb	17 16 44.7	+2.8
BTLS	13nm,0.3s						
	44nm,0.5s			eS	Sb	17 17 36.6	+5.5
CHGR	Chuyangaron	4.18	182	⇑eP	Pn	17 16 36.7	+2.4
CHGR	baz=84			⇑eS	Sn	17 17 24.5	+1.3
	baz=84						
TKM2	Tokmak 2	4.61	87	P	Pn	17 16 40.7	+0.4
TKM2	SNR=15						
TKM2	Tokmak 2	4.61	87	⇓Pn	Pn	17 16 40.5	+0.2
TKM2	6.3nm,0.3s						
	28nm,0.5s			⇑Sn	Sn	17 17 33.7	-0.4
TKM2				⇑Lg	Lg	17 17 49.1	
	78nm,0.8s						
KRBS	Karabastau	4.72	77	eP	Pb	17 16 54.4	+1.1
KRBS	12nm,0.3s						
	58nm,0.5s			eS	Sb	17 17 53.6	+3.5
DGS	Degeres	4.75	83	eP	Pb	17 16 56.1	+2.4
DGS	20nm,0.2s						
	164nm,0.3s			eS	Sb	17 17 55.9	+5.0
KST	Kastek	4.88	85	eP	Pb	17 16 57.1	+1.0
KST	12nm,0.7s						
	90nm,0.7s			eS	Sb	17 17 58.2	+3.4
MTBS	Maitube	5.22	84	eP	Pb	17 17 04.7	+2.9
MTBS	5.4nm,0.5s						
	65nm,0.8s			eS	Sb	17 18 10.9	+6.3
KUU	Kurty	5.22	76	eP	Pb	17 17 05.6	+3.8
KUU	10nm,0.6s						
	121nm,0.5s			eS	Sg	17 18 12.5	-5.5
KTBS	Karatobe	5.44	78	eP	Pb	17 17 08.3	+2.7
KTBS	7.2nm,0.6s						
	155nm,0.7s			eS	Sb	17 18 17.2	+6.3
TNSS	Tian-Shan	5.60	85	eP	Pb	17 17 11.4	+2.9
TNSS	13nm,0.6s						
	33nm,0.7s			eS	Sb	17 18 22.3	+6.5
KNDC	Almaty	5.62	84	⇑Lg	Lg	17 18 23.1	
MDOK	138nm,0.8s						
MDOK	Medeo	5.67	84	eP	Pb	17 17 11.1	+1.6
MDOK	16nm,0.6s						
	61nm,0.8s			eS	Sb	17 18 22.0	+4.3
MDOK	Medeo	5.67	84	⇓Pg	Pb	17 17 11.7	+2.1
MDOK	6.4nm,0.4s						
	68nm,0.6s			⇓Lg	Lg	17 18 22.1	
CHKK	Chushkaly	5.68	77	eP	Pg	17 17 15.9	-3.3
CHKK	5.6nm,0.2s						
	70nm,0.2s			eS	Sg	17 18 29.9	-2.8
KOTS	Kotyrbulak	5.72	83	eP	Pb	17 17 14.0	+3.6
KOTS	8.3nm,0.9s						
	106nm,0.8s			eS	Sg	17 18 27.4	-6.7
OTUK	Ortayu	5.81	20	⇑Pn	Pn	17 16 59.1	+2.5
OTUK	40nm,0.3s						
	22nm,0.5s			⇑Sn	Sn	17 18 03.9	+0.6
OTUK				⇑Lg	Lg	17 18 31.9	
	33nm,0.7s						
KSH	Kashi	6.01	121	P	Pn	17 17 00.0	+0.5
KSH				S	Sn	17 18 10.5	+2.0
PDGK	Podgornoye	7.46	83	⇑Lg	Lg	17 19 16.5	
	50nm,1.0s						
AB31	Akbulak array	9.15	318	⇓Pn	Pn	17 17 42.7	+0.3
	1.6nm,0.5s,baz=133,slow=12,SNR=54						
CEP	Cherat	9.22	166	P	Pn	17 17 41.0	-2.6
MAKZ	Makanchi	9.83	62	⇓Pn	Pn	17 17 50.2	-1.5
	1.9nm,0.4s						
MAKZ				⇓Sn	Sn	17 19 36.4	-5.7
	9.8nm,0.8s						
MAKZ				⇑Lg	Lg	17 20 39.4	
	12nm,0.8s						
GEYT	Alibeck	9.85	244	Pn	Pn	17 17 50.8	-1.3
	0.5nm,0.3s,baz=78,slow=7.5,SNR=3.4						
GEYT				Sn	Sn	17 19 36.0	-6.7
	0.1nm,0.3s,baz=40,slow=11,SNR=1.0						
	0.9nm,0.3s						
KURBB	Kurchatov Arra	10.02	36	Pn	Pn	17 17 55.5	+1.2
	0.5nm,0.3s,baz=228,slow=13,SNR=17						
KURBB				Lg	Lg	17 20 55.8	
	0.5nm,0.3s,baz=226,slow=32,SNR=5.1						
	4.0nm,0.2s						
MK31	Makanchi Array	10.03	62	Pn	Pn	17 17 53.5	-1.0
	3.0nm,0.4s,baz=243,slow=14,SNR=79						
MK31				Sn	Sn	17 19 43.5	-3.5
	9.5nm,0.8s,baz=244,slow=23,SNR=8.9						
MK31				⇑Lg	Lg	17 20 40.9	
MKAR	Makanchi Array	10.03	62	Pn	Pn	17 17 53.6	-0.8
	1.5nm,0.3s,baz=244,slow=16,SNR=92						
MKAR				Sn	Sn	17 19 42.9	-4.1
	1.0nm,0.3s,baz=247,slow=22,SNR=11						
MKAR				Lg	Lg	17 20 45.8	
	0.8nm,0.3s,baz=243,slow=32,SNR=2.1						
	2.9nm,0.5s						
THW	Thamme Wali	10.21	168	P	Pn	17 17 55.9	-1.0
BVA0	Borovoye Array	10.22	4	Pn	Pn	17 17 57.7	+0.7
	0.1nm,0.9s,baz=221,slow=6.9,SNR=21						
BVA0				⇑Sn	Sn	17 19 51.9	+0.3
	0.1nm,0.3s,baz=163,slow=23,SNR=4.5						
BVA0				⇓Lg	Lg	17 20 54.7	
	0.9nm,0.8s,baz=178,slow=27,SNR=3.9						
BVAR	Borovoye Array	10.22	4	Pn	Pn	17 17 57.9	+0.8
	1.1nm,0.3s,baz=163,slow=10,SNR=25						
BVAR				Sn	Sn	17 19 50.8	-0.8
	0.9nm,0.3s,baz=169,slow=24,SNR=3.2						
BVAR				Lg	Lg	17 20 58.6	
	0.5nm,0.3s,baz=185,slow=26,SNR=1.8						
	1.4nm,0.3s						
AKTO	Aktyubinsk	10.86	318	Pn	Pn	17 18 06.3	+0.5
	0.3nm,0.3s,baz=131,slow=7.1,SNR=12						
AKTO				Sn	Sn	17 20 04.9	-2.5
	0.3nm,0.3s,baz=343,slow=19,SNR=1.7						
AKTO				Lg	Lg	17 21 21.4	
	0.5nm,0.3s,baz=52,slow=12,SNR=1.9						
	1.3nm,0.5s						
AKTO	Aktyubinsk	10.86	318	⇓Pn	Pn	17 18 06.8	+1.0
	1.7nm,0.7s						
ZALV	Zalesovo Beam	15.11

mbtmp3.8/11, ML3.0/3, Error ellipse: s-maj=30.0km s-min=21.3km az=113.0

ISC 25 17:27:35.2±0.9, 39°36N±0°06×143°59E±0°08, h11km, n35, σ1°31/36, mb3.8/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.39**	**279**	P	**Pn**	**17 27 59.0**	**-1.5**
MIYJ				S	**Sn**	**17 28 18.0**	**-0.7**
JTH	**Tanohata**	**1.45**	**294**	P	**Pn**	**17 28 00.0**	**-1.3**
OFUJ	**Ofunato**	**1.52**	**260**	P	**Pn**	**17 28 00.9**	**-1.4**
JOM	**Ohasama**	**1.78**	**274**	*i* P	**Pn**	**17 28 05.1**	**-0.8**
JOM				S	**Sn**	**17 28 28.1**	**-0.5**
JMK	**Ichinoseki**	**1.89**	**258**	P	**Pn**	**17 28 06.5**	**-0.8**
JANG	**Nango**	**1.89**	**303**	*e*P	**Pn**	**17 28 05.7**	**-1.6**
JIO	**Ouri**	**1.97**	**243**	*e*P	**Pn**	**17 28 06.9**	**-1.5**
JTM	**Tenmabayashi**	**2.40**	**307**	P	**Pn**	**17 28 14.1**	**-0.3**
JYK	**Kaneyama**	**2.55**	**261**	P	**Pn**	**17 28 16.1**	**-0.4**
JMM	**Marumori**	**2.65**	**237**	P	**Pn**	**17 28 16.9**	**-0.9**
ERM	**Erimo**	**2.67**	**353**	P	**Pn**	**17 28 18.3**	**+0.2**
JEM	**Erimo**	**2.67**	**353**	P	**Pn**	**17 28 18.3**	**+0.2**
JOT	**Ohata**	**2.80**	**317**	P	**Pn**	**17 28 19.3**	**-0.6**
JNBK	**Urakawa-nobuka**	**2.98**	**348**	P	**Pn**	**17 28 22.1**	**-0.2**
JNBK				S	**Sn**	**17 28 58.1**	**0.0**
JOTO	**OTAMA OYAMA**	**3.13**	**236**	P	**Pn**	**17 28 23.8**	**-0.6**
JOTO				*e*S	**Sn**	**17 29 01.3**	**-0.5**
JCH	**Churui**	**3.25**	**357**	*e*P	**Pn**	**17 28 25.1**	**-1.0**
JCH				*e*S	**Sn**	**17 29 01.5**	**-3.3**
JEW	**Eniwo**	**3.83**	**336**	P	**Pn**	**17 28 36.1**	**+2.0**
JYT	**Yasato**	**4.13**	**222**	P	**Pn**	**17 28 38.0**	**-0.1**
MAJO	**Matsushiro**	**5.10**	**238**	P	**Pn**	**17 28 52.6**	**+1.1**
MJAR	**Matsushiro Arr**	**5.10**	**238**	P	**Pn**	**17 28 52.9**	**+1.3**
	0.9nm,0.3s,baz=57,slow=25,SNR=40						
	9.0nm,0.4s						
JGF	**Kuroka**	**6.22**	**235**	P	**Pn**	**17 29 09.0**	**+2.1**
JHJ	**Hachijo jima 2**	**6.95**	**207**	S	Sn	17 30 25.6	-10
	50nm,0.6s,baz=239,slow=19,SNR=3.6						
USRK	**Ussuriysk Ar.**	**9.92**	**303**	P	**Pn**	**17 29 59.8**	**+2.2**
	0.4nm,0.3s,baz=100,slow=10,SNR=5.0						
	3.3nm,0.6s						
KSRS	**Korea Array**	**12.44**	**266**	P	**Pn**	**17 30 35.3**	**+3.2**
	0.2nm,0.3s,baz=89,slow=14,SNR=5.0						
	1.1nm,0.8s						
SEY	**Seymchan**	**24.19**	**10**	P	**P**	**17 32 51.2**	**-0.1**
	4.2nm,0.8s,baz=202,slow=5.4,SNR=5.6						
	4.2nm,0.8s						
SONM	**Songino Array**	**28.01**	**300**	P	**P**	**17 33 26.4**	**+0.2**
	1.1nm,0.6s,baz=98,slow=8.9,SNR=6.7						
	1.1nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.03**	**128**	T	T	18 02 51.2	
	baz=320,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.04**	**128**	T	T	18 02 51.2	
	baz=320,slow=74,SNR=21						
H11N3	**WAKE ISLAND Hy**	**28.05**	**128**	T	T	18 02 47.8	
	baz=320,slow=74,SNR=17						
ZALV	**Zalesovo Beam**	**41.66**	**310**	P	**P**	**17 35 23.4**	**+0.1**
	2.1nm,0.5s,baz=94,slow=7.0,SNR=7.9						
	2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.76**	**255**	P	**P**	**17 35 41.0**	**+0.2**
	0.2nm,0.3s,baz=47,slow=6.6,SNR=2.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**44.38**	**300**	P	**P**	**17 35 45.0**	**-0.5**
	1.8nm,0.7s,baz=86,slow=9.1,SNR=7.9						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**46.61**	**34**	P	**P**	**17 36 03.1**	**+0.2**
	0.7nm,0.7s,baz=267,slow=6.8,SNR=5.5						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**59.63**	**190**	P	**P**	**17 37 37.6**	**-1.6**
	0.4nm,0.7s,baz=7.5,slow=7.0,SNR=4.9						
	0.4nm,0.7s						
NOA	**NORSAR Array B**	**72.69**	**338**	P	**P**	**17 39 02.9**	**+0.2**
	0.7nm,0.8s,baz=39,slow=5.9,SNR=3.5						
	0.7nm,0.8s						

MAN 25 17:28:58.1, 12°93N×123°28E, h2km, mb4.5, ML3.4, MS3.2, 7C-11D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.66**	**149**	⇓*i* P	Pg	17 29 11.1	+0.4
MMPH				*i* S	Sg	17 29 20.4	+1.2
PVCP	**Virac**	**1.08**	**52**	⇑*e*P	Pg	17 29 18.4	-0.5
PVCP				*e*S	Sn	17 29 36.2	+0.3
GQP	**Guinayangan**	**1.27**	**320**	⇓*e*P	Pg	17 29 21.3	-1.2
GQP				*e*S	Sn	17 29 41.5	+0.9
CNP	**Cataman**	**1.41**	**107**	⇓*e*P	Pn	17 29 24.4	-0.5
CNP				*e*S	Sn	17 29 44.7	+0.8
JCNP	**Jose Panganiba**	**1.47**	**337**	⇓*e*P	Pn	17 29 24.8	-0.9
JCNP				*e*S	Sb	17 29 45.4	0.0
BOAC	**Boac**	**1.50**	**291**	⇓*e*P	Pn	17 29 25.3	-0.8
BOAC				*e*S	Sg	17 29 48.4	+2.0
LQP	**Lukban**	**2.07**	**305**	⇑*e*P	Pn	17 29 34.5	+0.4
LQP				*e*S	Sg	17 30 06.3	+1.7
GUIM	**Jordan**	**2.38**	**197**	⇑*e*P	Pn	17 29 39.2	+0.9
GUIM				*e*S	Sb	17 30 12.1	+0.4
JAP	**San Jose, Anti**	**2.53**	**211**	⇑*e*P	Pb	17 29 42.5	-1.8
TGY	**Tagaytay City**	**2.56**	**297**	*e*P	Pg	17 29 46.2	-1.2
LLP	**Lapu-Lapu**	**2.68**	**165**	⇓*e*P	Pn	17 29 41.4	-0.9
LLP				*i* S	Sn	17 30 15.4	0.0
MACP	**Maragondon, Ca**	**2.83**	**298**	⇑*e*P	Pn	17 29 45.6	+1.3
MACP				*e*S	Sg	17 30 33.3	+4.3
TABP	**Talibon, Bohol**	**3.00**	**160**	⇑*i* P	Pn	17 29 45.2	-1.5
TABP				*i* S	Sn	17 30 21.4	-1.9
CUYO	**Cuyo Island**	**3.03**	**227**	⇓*e*P	Pn	17 29 46.8	-0.3
CNOP	**Candoni, Negro**	**3.14**	**192**	⇑*e*P	Pn	17 29 50.5	+1.8
CNOP				*e*S	Sb	17 30 31.7	-1.9
BUSP	**Coron**	**3.15**	**253**	⇓*e*P	Pn	17 29 49.0	+0.3
BUSP				*e*S	Sn	17 30 26.1	-0.9
MSLP	**Maasin**	**3.17**	**151**	⇓*e*P	Pn	17 29 51.2	+2.1
MSLP				*e*S	Sg	17 30 38.0	-2.3
TBP	**Tagbilaran**	**3.26**	**170**	*e*P	Pn	17 29 50.8	+0.4
PCPH	**Palayan**	**3.37**	**321**	⇓*e*P	Pn	17 29 53.2	+1.3
SAMP	**Sagada Mountai**	**4.73**	**331**	⇓*e*P	Pn	17 30 12.6	+2.1

*JMA **25** 17:35:48.4±0.2, 36°9N±0°5×14°1E±°, h48km±2km, MD4.1/38, MV4.2/38, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*BJI **25** 17:35:48.8±0.0, 36°87N×141°36E, h36km, mb4.4/30, mB4.7/10, Ms4.0/2, Ms7 3.9/2*
*NIED **25** 17:35:48.4, 36°90N×141°49E, h48km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.65; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$-0.36; $M_{r\theta}$-6.48; $M_{\theta\phi}$-1.13; $M_{\phi r}$-6.75; Fault plane solution: $M_0$9.55000×10^{14} NP1: ϕ_s73.00000°, δ6.00000°, λ119.00000°. NP2:ϕ_s224.00000°, δ85.00000°, λ87.00000°.*
*IDC **25** 17:35:49.5±1.0, 36°88N×141°52E, h28km±5km, mb3.8/17, mbtmp4.0/20, ML3.3/3, MS3.0/2 Error ellipse: s-maj=18.2km s-min=14.3km az=101.0*
*NEIC **25** 17:35:49.2±1.9, 36°86N±0°04×141°51E±0°09, h26km±5km, mb4.6/41, Error ellipse: s-maj=10.5km s-min=5.1km az=105.0*

ISC 25 17:35:49.2±0.9, 36°91N±0°03×141°51E±0°05, h28km±6km, n145, σ1°33/150, mb4.4/46, 1C-17D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.68**	**312**	⇓*i* P	**Pn**	**17 36 01.6**	**-1.4**
JFK				⇓*e*S	**Sb**	**17 36 10.7**	**-1.0**
JFK	**Kawauchi**	**0.68**	**312**	A	A	17 36 01.6	
	comp=E,4.0nm,0.8s,comp=E,4.0nm,0.6s						
JFFD	**Fukushimafurud**	**0.78**	**283**	⇓*i* P	**Pn**	**17 36 03.0**	**-1.4**
JFFD				⇓*e*S	**Sn**	**17 36 13.3**	**-1.8**
JHO	**Hitachi**	**0.81**	**248**	⇓*i* P	**Pn**	**17 36 03.1**	**-1.7**
JHO				⇓*e*S	**Sn**	**17 36 13.8**	**-2.2**
JHYU	**Hitachinakayam**	**0.94**	**233**	⇓*i* P	**Pn**	**17 36 04.8**	**-1.6**
JHYU				⇓*e*S	**Sn**	**17 36 16.9**	**-2.0**
JHYU	**Hitachinakayam**	**0.94**	**233**	A	A	17 36 04.8	
	comp=E,4.0nm,0.6s,comp=E,6.0nm,0.8s						
JMST	**Minamisoumatoc**	**0.95**	**329**	A	A	17 36 05.7	
	comp=E,7.0nm,0.5s,comp=E,12nm,0.6s						
JMM	**Marumori**	**1.11**	**329**		**Pn**	**17 36 07.9**	**-1.0**
JMM				Sn	**Sn**	**17 36 21.4**	**-1.8**
JMM	**Marumori**	**1.11**	**329**	P	**Pn**	**17 36 08.0**	**-0.8**
JMM	**Marumori**	**1.11**	**329**	⇓*i* P	**Pn**	**17 36 07.9**	**-1.0**
JMM				⇓*e*S	**Sn**	**17 36 21.4**	**-1.8**
JOTO	**OTAMA OYAMA**	**1.14**	**305**	*i* P	**Pn**	**17 36 09.4**	**+0.1**
JOTO				S	**Sn**	**17 36 23.9**	**-0.1**
JOTO	**OTAMA OYAMA**	**1.14**	**305**	A	A	17 36 09.4	
	comp=E,12nm,0.6s,comp=E,15nm,0.8s						
JYT	**Yasato**	**1.26**	**238**		**Pn**	**17 36 09.4**	**-1.5**
JYT				Sn	**Sn**	**17 36 24.0**	**-3.0**
JYT	**Yasato**	**1.26**	**238**	P	**Pn**	**17 36 11.8**	**+0.9**
JSB	**Shiboa**	**1.27**	**273**	A	A	17 36 10.1	
	comp=E,11nm,1.6s,comp=E,11nm,0.8s						
JYAR	**Yonezawaarcadi**	**1.48**	**313**	A	A	17 36 13.1	
	comp=E,20nm,0.3s,comp=E,20nm,0.8s						
JFY	**Yanaizu**	**1.52**	**289**	⇓*i* P	**Pn**	**17 36 14.8**	**+0.3**
JFY				⇓S	**Sn**	**17 36 34.6**	**+1.1**
JIO	**Ouri**	**1.54**	**355**	⇓*i* P	**Pn**	**17 36 13.7**	**-1.1**
JIO				⇓S	**Sn**	**17 36 31.4**	**-2.5**
JOU	**Okura**	**1.60**	**335**	*i* P	**Pn**	**17 36 15.5**	**-0.1**
JOU				S	**Sn**	**17 36 35.7**	**+0.4**
JOU	**Okura**	**1.60**	**335**	A	A	17 36 15.5	
	comp=E,7.0nm,1.1s,comp=E,6.0nm,0.4s						
JAG	**Ashikaga**	**1.72**	**254**	⇓P	**Pn**	**17 36 16.6**	**-0.7**
JAG				⇓S	**Sn**	**17 36 37.8**	**-0.6**
JYS	**Shiratake**	**1.74**	**319**	A	A	17 36 17.0	
	comp=E,7.0nm,3.6s,comp=E,6.0nm,1.5s						
MJAR	**Matsushiro Arr**	**2.68**	**263**	Pn	**Pn**	**17 36 31.1**	**+0.6**
	2.2nm,0.3s,baz=94,slow=18,SNR=67						
MJAR				Sn	**Sn**	**17 37 05.1**	**+3.1**
	2.6nm,0.3s,baz=87,slow=16,SNR=2.8						
MJAR				LR	LR	17 37 17.1	
	comp=Z,146nm,18.8s,baz=40,slow=33						
	26nm,0.5s						
MAJO	**Matsushiro**	**2.68**	**263**	Pn	**Pn**	**17 36 31.4**	**+1.0**
MAJO				Sn	**Sn**	**17 37 03.8**	**+1.8**
MAJO	**Matsushiro**	**2.68**	**263**	P	**Pn**	**17 36 31.9**	**+1.4**
MJB9	**Matsu-Tunnel**	**2.68**	**263**		**Pn**	**17 36 32.6**	**+2.2**
JSD	**Sado**	**2.82**	**294**	Pn	**Pn**	**17 36 32.2**	**-0.1**
JSD	**Sado**	**2.82**	**294**	P	**Pn**	**17 36 32.5**	**+0.2**
JGF	**Kuroka**	**3.60**	**250**		**Pn**	**17 36 44.7**	**+1.5**
JGF	**Kuroka**	**3.60**	**250**	P	**Pn**	**17 36 45.3**	**+2.1**
JTM	**Tenmabayashi**	**3.88**	**355**	Pn	**Pn**	**17 36 47.1**	**+0.2**
JTM	**Tenmabayashi**	**3.88**	**355**	P	**Pn**	**17 36 48.4**	**+1.4**
INU	**Inuyama**	**3.96**	**248**	Pn	**Pn**	**17 36 50.1**	**+2.0**
INU	**Inuyama**	**3.96**	**248**	P	**Pn**	**17 36 50.8**	**+2.8**
JHJ2	**Mitsune**	**4.04**	**201**	Pn	**Pn**	**17 36 48.8**	**-0.4**
JHJ2	**Mitsune**	**4.04**	**201**	P	**Pn**	**17 36 49.5**	**+0.4**
JHJ	**Hachijo jima 2**	**4.04**	**201**	Pn	**Pn**	**17 36 49.0**	**-0.1**
	26nm,0.3s,baz=127,slow=23,SNR=14						
JHJ				Sn	**Sn**	**17 37 34.0**	**-1.6**
	22nm,0.3s,baz=263,slow=23,SNR=5.8						
	75nm,0.4s						
ERM	**Erimo**	**5.25**	**14**	Pn	**Pn**	**17 37 04.8**	**-0.9**
ERM	**Erimo**	**5.25**	**14**	P	**Pn**	**17 37 05.9**	**+0.1**
JEM	**Erimo**	**5.25**	**14**	P	**Pn**	**17 37 05.9**	**+0.1**
JEW	**Eniwo**	**5.92**	**360**	Pn	**Pn**	**17 37 17.3**	**+2.4**
JMN	**Monobe**	**7.00**	**245**	Pn	**Pn**	**17 37 30.7**	**+0.8**
JHS	**Saijyo**	**7.07**	**257**	Pn	**Pn**	**17 37 31.6**	**+0.8**
USA0B	**Ussuriysk Arra**	**10.26**	**318**	Pn	**Pn**	**17 38 18.6**	**+4.1**
USRK	**Ussuriysk Ar.**	**10.26**	**318**	Pn	**Pn**	**17 38 18.7**	**+4.2**
	0.2nm,0.3s,baz=118,slow=15,SNR=2.7						
USRK	**Ussuriysk Ar.**	**10.26**	**318**	Pn	**Pn**	**17 38 15.1**	**+0.6**
KSRS	**Korea Array**	**10.86**	**277**	Pn	**Pn**	**17 38 24.2**	**+1.6**
	0.1nm,0.3s,baz=86,slow=16,SNR=2.2						
KSRS				LR	LR	17 42 31.0	
	comp=Z,111nm,18.8s,baz=320,slow=37						
	0.5nm,0.5s						
MDJ	**Mudanjiang**	**11.86**	**314**	Pn	**Pn**	**17 38 38.3**	**+2.0**
KLR	**Kul'dur**	**14.21**	**333**	Pn	**P**	**17 39 13.8**	**-1.6**
	0.2nm,0.3s,baz=118,slow=9.2,SNR=4.6						
NJ2	**Nanjing**	**19.28**	**262**	*e*P	**P**	**17 40 09.0**	**-2.7**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HNS	**HongShan**	**21.35**	**279**	⇓P	**P**	**17 40 32.5**	**-1.6**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TPUB	**Ta-pu**	**22.53**	**239**	P	**P**	**17 40 44.3**	**-2.6**
HHC	**Hu-ho-hao-te**	**23.58**	**289**	*e*P	**P**	**17 40 57.8**	**+0.2**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.3s						
YAK	**Yakutsk**	**26.20**	**347**	P	**P**	**17 41 21.0**	**-0.2**
	7.6nm,0.7s,baz=5.6,slow=4.2,SNR=9.0						
	7.6nm,0.7s						
YAK	**Yakutsk**	**26.20**	**347**	P	**P**	**17 41 20.8**	**-0.4**
YAK				IAmb	IAmb	17 41 23.2	
	comp=Z,18nm,0.8s						
ENH	**Enshi**	**27.40**	**265**	P	**P**	**17 41 31.1**	**-1.3**
ENH				IAmb	IAmb	17 41 33.1	
	comp=Z,10nm,0.8s						
ULN	**Ulaanbaatar**	**27.49**	**304**	P	**P**	**17 41 32.8**	**-0.3**
SONM	**Songino Array**	**27.92**	**304**	P	**P**	**17 41 36.6**	**-0.3**
	comp=Z,3.6nm,0.8s,baz=104,slow=8.8,SNR=16						
	3.6nm,0.8s						
SONM	**Songino Array**	**27.92**	**304**	P	**P**	**17 41 36.4**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.02**	**121**	T	T	18 10 55.6	
	baz=314,slow=76,SNR=181						
H11N1	**WAKE ISLAND Hy**	**28.03**	**121**	T	T	18 10 56.2	
	baz=314,slow=76,SNR=212						
H11N3	**WAKE ISLAND Hy**	**28.04**	**121**	T	T	18 10 56.9	
	baz=314,slow=76,SNR=176						
H11S1	**WAKE ISLAND Hy**	**28.73**	**123**	T	T	18 11 49.4	
	baz=316,slow=76,SNR=110						
H11S3	**WAKE ISLAND Hy**	**28.73**	**123**	T	T	18 11 45.8	
	baz=316,slow=76,SNR=94						
H11S2	**WAKE ISLAND Hy**	**28.75**	**123**	T	T	18 11 46.8	
	baz=316,slow=76,SNR=102						
GYA	**Guiyang**	**31.28**	**261**	⇑P	**P**	**17 42 06.8**	**-0.1**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GTA	**Gaotai**	**32.67**	**287**	*e*P	**P**	**17 42 19.0**	**0.0**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PZH	**PanZhiHua**	**35.17**	**264**	P	**P**	**17 42 40.8**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,40nm,4.2s						
GOMU	**GeErMu**	**37.22**	**283**	P	**P**	**17 42 57.3**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	**Urumqi**	**40.96**	**297**	*e*P	**P**	**17 43 29.3**	**-0.1**
WMQ				pP	pP	17 43 35.0	-2.8
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.54**	**256**	P	**P**	**17 43 34.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=44,slow=6.9,SNR=4.7						
	comp=Z,0.3nm,0.4s						
ZAA0	**Zalesovo Array**	**42.05**	**312**	P	**P**	**17 43 37.1**	**-1.1**
ZALV	**Zalesovo Beam**	**42.05**	**312**	P	**P**	**17 43 38.9**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=95,slow=7.4,SNR=9.4						
ZALV				pP	**pP**	**17 43 47.5**	**+1.1**
	comp=Z,4.4nm,0.6s,baz=93,slow=6.6,SNR=10						
	comp=Z,1.4nm,0.3s						
ZALV	**Zalesovo Beam**	**42.05**	**312**	P	**P**	**17 43 37.5**	**-0.6**
MK31	**Makanchi Array**	**44.25**	**302**	P	**P**	**17 43 56.1**	**+0.1**
MKAR	**Makanchi Array**	**44.25**	**302**	P	**P**	**17 43 56.4**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=83,slow=11,SNR=15						
MKAR				pP	**pP**	**17 44 05.0**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=90,slow=9.4,SNR=14						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**44.25**	**302**	P	**P**	**17 43 56.0**	**0.0**
MAKZ	**Makanchi**	**44.46**	**302**	P	**P**	**17 43 58.3**	**+0.6**
MAKZ				IAmb	IAmb	17 44 07.7	
	comp=Z,5.4nm,0.9s						
KURK	**Kurchatov**	**46.07**	**308**	P	**P**	**17 44 09.8**	**-0.5**
K20K	**Telida**	**46.38**	**34**	P	**P**	**17 44 12.6**	**-0.1**
K20K				IAmb	IAmb	17 44 16.4	
	comp=Z,13nm,1.5s						
IMAR	**Indian Mountai**	**46.72**	**31**	P	**P**	**17 44 14.8**	**-0.5**
H21K	**Melozitna Rive**	**47.08**	**31**	P	**P**	**17 44 18.9**	**+0.8**
H21K				IAmb	IAmb	17 44 45.8	
	comp=Z,10nm,1.4s						
RAMN	**Ramite**	**47.09**	**274**	*e*P	**P**	**17 44 19.5**	**+0.6**
	comp=Z,15nm,0.7s						
RAMN	**Ramite**	**47.09**	**274**	*e*P	**P**	**17 44 19.6**	**+0.6**
	comp=Z,15nm,0.7s						
JIRN	**Jiri**	**47.10**	**275**	*e*P	**P**	**17 44 20.5**	**+1.2**
JIRN	**Jiri**	**47.10**	**275**	*e*P	**P**	**17 44 20.5**	**+1.2**
	comp=Z,4.6nm,0.4s						
KDAK	**Kodiak Island**	**47.14**	**42**	P	**P**	**17 44 18.4**	**-0.2**
PPLA	**Purkeypile**	**47.22**	**35**	P	**P**	**17 44 21.9**	**+2.5**
PPLA				IAmb	IAmb	17 44 56.7	
	comp=Z,12nm,1.3s						
PPLA				PcP	**PcP**	**17 45 50.3**	**-0.1**
GUN	**Gumba**	**47.24**	**276**	*e*P	**P**	**17 44 21.4**	**+1.1**
GUN	**Gumba**	**47.24**	**276**	*e*P	**P**	**17 44 21.3**	**+1.0**
CAST	**Castle Rocks**	**47.28**	**34**	P	**P**	**17 44 21.9**	**+2.2**
PKI	**Pulchoki**	**47.77**	**276**	*e*P	**P**	**17 44 24.7**	**+0.3**
PKI	**Pulchoki**	**47.77**	**276**	*e*P	**P**	**17 44 24.6**	**+0.2**
PKIN	**Phulchoki**	**47.77**	**276**	*e*P	**P**	**17 44 24.6**	**+0.3**
PKIN	**Phulchoki**	**47.77**	**276**	*e*P	**P**	**17 44 24.7**	**+0.4**
GKN	**Gorkha**	**48.19**	**277**	*e*P	**P**	**17 44 28.1**	**+0.6**
	comp=Z,22nm,0.9s						
GKN	**Gorkha**	**48.19**	**277**	*e*P	**P**	**17 44 28.0**	**+0.6**
	comp=Z,21nm,0.8s						
H23K	**Yukon River**	**48.43**	**31**	P	**P**	**17 44 30.9**	**+2.3**
H23K				PcP	**PcP**	**17 45 57.6**	**+3.1**
BWN	**Browne**	**48.45**	**33**	P	**P**	**17 44 30.5**	**+1.8**
DANN	**Dangsing**	**48.74**	**277**	*e*P	**P**	**17 44 32.8**	**+1.0**
	comp=Z,43nm,0.8s						
DANN	**Dangsing**	**48.74**	**277**	*e*P	**P**	**17 44 32.8**	**+1.0**
	comp=Z,43nm,0.8s						
GHO	**Glory Hole Cre**	**48.76**	**36**	P	**P**	**17 44 31.7**	**+0.4**
MDM	**Murphy Dome**	**48.98**	**32**	P	**P**	**17 44 34.3**	**+1.5**
MDM				IAmb	IAmb	17 44 59.9	
	comp=Z,6.7nm,1.4s						
SML	**Sawmill**	**49.04**	**36**	P	**P**	**17 44 34.8**	**+1.4**
SML				IAmb	IAmb	17 44 47.6	
	comp=Z,9.6nm,1.2s						
H24K	**Noodor Dome**	**49.12**	**31**	P	**P**	**17 44 35.9**	**+2.0**
H24K				IAmb	IAmb	17 44 39.2	
	comp=Z,10.0nm,1.5s						
SCM	**Sheep Creek Mo**	**49.52**	**36**	P	**P**	**17 44 38.4**	**+1.4**
ILAR	**Eielson Array**	**49.55**	**32**	P	**P**	**17 44 38.1**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=270,slow=6.7,SNR=6.9						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**49.55**	**32**	P	**P**	**17 44 37.5**	**+0.3**
KLU	**Klutina**	**50.22**	**37**	P	**P**	**17 44 45.2**	**+2.9**
KLU				IAmb	IAmb	17 44 53.3	
	comp=Z,8.7nm,1.4s						
BMAR	**Burnt Mountain**	**50.40**	**29**	P	**P**	**17 44 44.0**	**+0.4**
MTN	**Manton Dam**	**50.45**	**193**	P	**P**	**17 44 44.1**	**-0.3**
MTN				IAmb	IAmb	17 44 54.9	
	comp=Z,16nm,1.4s						
KSH	**Kashi**	**50.52**	**294**	P	**P**	**17 44 48.8**	**+3.7**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**50.77**	**312**	P	**P**	**17 44 45.8**	**-0.7**
BRVK				IAmb	IAmb	17 44 47.8	
	comp=Z,5.3nm,1.1s						
KK31	**Karatay Array**	**53.25**	**300**	P	**P**	**17 45 05.0**	**-0.2**
KK31				IAmb	IAmb	17 45 10.2	
	comp=Z,6.5nm,1.4s						
KKAR	**Karatay Array**	**53.25**	**300**	P	**P**	**17 45 05.0**	**-0.2**
KKAR				IAmb	IAmb	17 45 10.2	
	comp=Z,6.5nm,1.4s						
EPYK	**Eagle Plains**	**53.59**	**30**	P	**P**	**17 45 09.2**	**+1.8**
EPYK				IAmb	IAmb	17 45 23.5	
	comp=Z,6.3nm,1.1s						
KNRA	**Kununurra**	**53.67**	**195**	P	**P**	**17 45 07.6**	**-0.8**
INK	**Inuvik**	**54.46**	**27**	P	**P**	**17 45 12.8**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=287,slow=5.1,SNR=4.3						
	comp=Z,0.8nm,0.5s						
NIL	**Nilore**	**54.73**	**288**	P	**P**	**17 45 16.2**	**+0.1**
NIL				IAmb	IAmb	17 45 18.3	
	comp=Z,7.1nm,0.7s						
GAR	**Garm**	**54.82**	**296**	P	**P**	**17 45 17.0**	**+0.2**
GAR				IAmb	IAmb	17 45 17.7	
	comp=Z,5.9nm,0.6s						
CHGR	**Chuyangaron**	**55.79**	**296**	P	**P**	**17 45 23.4**	**-0.4**
A36M	**Sachs Harbour**	**56.34**	**22**	P	**P**	**17 45 27.5**	**+0.4**
A36M				IAmb	IAmb	17 45 53.5	
	comp=Z,9.7nm,1.1s						
ARU	**Arti**	**56.50**	**319**	P	**P**	**17 45 28.3**	**-0.2**
ARU				IAmb	IAmb	17 45 29.7	
	comp=Z,7.4nm,1.3s						
WRAB	**Tennant Creek**	**56.94**	**188**	P	**P**	**17 45 31.2**	**-0.7**
WR0	**Warramunga Arr**	**56.95**	**188**	P	**P**	**17 45 31.4**	**-0.6**
WB2	**Warramunga Arr

MAN 25 18:11:27.3, 12°.90N×123°.27E, h15km, mb4.2, ML3.1, MS2.8, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.11**	**51**	⇓*eP*	Pb	18 11 46.3	-1.9
PVCP				*eS*	Sn	18 12 03.8	+0.5
GQP	**Guinayangan**	**1.28**	**322**	⇑*eP*	Pn	18 11 49.3	-1.4
GQP				*eS*	Sn	18 12 08.2	+0.6
CNP	**Catarman**	**1.41**	**106**	⇑*eP*	Pn	18 11 51.9	-0.6
CNP				*eS*	Sg	18 12 12.3	-0.7
BOAC	**Boac**	**1.50**	**292**	⇑*eP*	Pn	18 11 53.4	-0.2
BOAC				*eS*	Sg	18 12 15.4	-0.2
LQP	**Lukban**	**2.07**	**306**	⇓*eP*	Pn	18 12 02.1	+0.3
TABP	**Talibon, Bohol**	**2.98**	**159**	⇓*iP*	Pn	18 12 15.0	+1.0
TABP				*i* S	Sn	18 12 50.4	+0.9

MOS ***25*** *18:14:58.7±0.8, 4°.59S×152°.87E, h60km, mb5.1/26, Error ellipse: s-maj=10.5km s-min=6.7km az=99.0*
BJI ***25*** *18:14:59.6±0.0, 4°.60S×153°.21E, h79km, mb4.8/51, mB4.9/27, Ms4.7/8, Ms7 4.3/8*
NEIC ***25*** *18:15:00.9±1.8, 4°.67S±0°.06×152°.88E±0°.06, h61km±1km, mb5.0/110, Error ellipse: s-maj=10.3km s-min=7.9km az=46.0*
DJA ***25*** *18:15:00.5±0.7, 5°S±4°×15°3E±°, h79km±5km, M5.0/30, mB5.3/9, mb4.8/30, MLv5.5/3, Mw(mB)4.8/9*
GCMT ***25*** *18:15:01.9±0.3, 4°.74S±0°.02×152°.84E±0°.02, h55km±1km, MW5.0/87, Moment Tensor Solution. s37,c46; s87,c126; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.27±.23; Mθθ=0.71±.15; Mφφ=3.99±.13; Mrθ=1.54±.10; Mθφ=-0.70±.13; Mφr=-0.42±.11; Best double couple: M0=4.07200×10^16 NP1:φs=329.00000°, δ55.00000°, λ=-120.00000°. NP2: φs=195.00000°, δ45.00000°, λ=-54.00000°. Principal axes: T 4.1500, Plg5.0000°, Azm80.0000°; N -0.1500, Plg24.0000°, Azm348.0000°; P -3.9940, Plg65.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***25*** *18:15:01.9±1.4, 4°.68S×152°.84E, h72km±12km, mb4.4/25, mbtmp4.7/28, MS3.9/34 Error ellipse: s-maj=12.7km s-min=8.6km az=97.0*
ISC 25 18:14:59.9±0.3, 4°.68S±0°.04×152°.88E±0°.05, h55km, n346, σ1°**08**/339, **mb5.0**/106, **MS4.0**/36, **5C-5D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.86**	**304**		**Pn**	**18 15 17.2**	**+1.3**
RABL				Sn	**Sn**	**18 15 30.2**	**+2.5**
RABL	**Rabaul**	**0.86**	**304**	P	**Pn**	**18 15 17.6**	**+1.6**
MANU	**Manus Island**	**6.09**	**295**		**Pn**	**18 16 30.3**	**+2.9**
PMG	**Port Moresby**	**7.37**	**230**	P	**Pn**	**18 16 47.3**	**+2.5**
	31nm,0.5s,baz=54,slow=12,SNR=20						
PMG				S	**Sn**	**18 18 07.6**	**+0.4**
	209nm,0.6s,baz=72,slow=14,SNR=19						
PMG	**Port Moresby**	**7.37**	**230**	Pn	**Pn**	**18 16 47.0**	**+2.1**
PMG				Sn	**Sn**	**18 18 06.3**	**-0.9**
PMG	**Port Moresby**	**7.37**	**230**	P	**Pn**	**18 16 47.0**	**+2.1**
PMG						18 18 06.3	
PMG	**Port Moresby**	**7.37**	**230**	P	**Pn**	**18 16 48.9**	**+4.0**
	2.0nm106nm,0.8s						
PMG	**Port Moresby**	**7.37**	**230**	P	**Pn**	**18 16 47.0**	**+2.1**
PMG	**Port Moresby**	**7.37**	**230**	P	**Pn**	**18 16 46.9**	**+2.1**
HNR	**Honiara**	**8.46**	**124**	P	**Pn**	**18 17 00.3**	**+0.6**
	755nm,0.8s,baz=118,slow=6.0,SNR=2.6						
HNR	**Honiara**	**8.46**	**124**	Pn	**Pn**	**18 17 01.9**	**+2.1**
HNR	**Honiara**	**8.46**	**124**	P	**Pn**	**18 17 01.9**	**+2.1**
HNR	**Honiara**	**8.46**	**124**	P	**Pn**	**18 17 03.4**	**+3.6**
PATS	**Pohnpei**	**12.66**	**25**	Pn	**Pn**	**18 17 57.3**	**+0.1**
PATS	**Pohnpei**	**12.66**	**25**	P	**Pn**	**18 17 58.5**	**+1.3**
GENI	**Genyem**	**12.85**	**279**	P	**Pn**	**18 18 01.2**	**+1.3**
	1μm49nm,1.2s						
COEN	**Coen**	**13.29**	**225**		**Pn**	**18 18 06.3**	**+0.4**
COEN	**Coen**	**13.29**	**225**	P	**Pn**	**18 18 06.3**	**+0.4**
SMPI	**Sarmi**	**14.39**	**280**	P	**Pn**	**18 18 21.5**	**+0.7**
	65nm,1.5s						
MTSU	**Mount Surprise**	**15.78**	**211**	P	**Pn**	**18 18 39.5**	**+0.8**
CTA	**Charters Tower**	**16.62**	**202**	P	**Pn**	**18 18 50.2**	**+0.9**
	14nm,0.9s,baz=46,slow=9.2,SNR=6.6						
CTA				LR	LR	18 24 32.9	
	comp=Z,379nm,21.9s,baz=26,slow=34						
CTAO	**Charters Tower**	**16.62**	**202**	P	**P**	**18 18 50.6**	**-0.3**
CTAO	**Charters Tower**	**16.62**	**202**	P	**P**	**18 18 50.6**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,110nm,1.9s						
RKPI	**Ransiki, Papua**	**18.94**	**279**	P	**Pn**	**18 19 17.6**	**-0.1**
	comp=Z,50nm,1.1s						
KOUNC	**Koumac, New Ca**	**19.29**	**146**	P	**P**	**18 19 21.4**	**+1.1**
GUMO	**Guam**	**19.81**	**336**	LR	LR	18 27 34.9	
	comp=Z,81nm,18.8s,baz=150,slow=38						
GUMO	**Guam**	**19.81**	**336**		**P**	**18 19 25.8**	**-0.2**
GUMO	**Guam**	**19.81**	**336**	P	**P**	**18 19 25.8**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,199nm,1.3s						
QIS	**Mount Isa**	**20.39**	**218**	P	**P**	**18 19 33.5**	**+1.1**
EIDS	**Eidsvold**	**20.65**	**185**	P	**P**	**18 19 34.8**	**-0.2**
EIDS				IAmb	IAmb	18 19 39.7	
	comp=Z,105nm,1.7s						
FAKI	**Fak Fak**	**20.66**	**274**		**P**	**18 19 34.1**	**-1.2**
LIFNC	**LIFOU**	**21.23**	**140**	P	**P**	**18 19 41.5**	**+0.1**
LIFNC	**LIFOU**	**21.23**	**140**	P	**P**	**18 19 44.1**	**+2.7**
KDU	**Kakadu**	**21.67**	**247**	P	**P**	**18 19 45.9**	**-0.2**
SAUI	**Saumlaki**	**21.70**	**260**	P	**P**	**18 19 45.9**	**-0.5**
DZM	**Mont Dzumac**	**21.72**	**144**	*e*P	**P**	**18 19 47.0**	**+0.3**
	comp=Z,136nm,1.1s						
DZM				*e*LR	LR	18 25 05.4	
	comp=Z,1μm,27.1s						
DZM	**Mont Dzumac**	**21.72**	**144**	P	**P**	**18 19 46.9**	**+0.3**
	comp=Z,36nm,0.6s,baz=300,slow=8.5,SNR=32						
DZM				LR	LR	18 27 24.4	
	comp=Z,493nm,21.5s,baz=314,slow=34						
	comp=Z,36nm,0.6s						
DZM	**Mont Dzumac**	**21.72**	**144**	P	**P**	**18 19 46.9**	**+0.3**
DZM				IAmb	IAmb	18 19 50.0	
	comp=Z,76nm,1.1s						
DZM	**Mont Dzumac**	**21.72**	**144**	P	**P**	**18 19 47.6**	**+0.9**
ONTNC	**Ouen Toro**	**21.91**	**144**	P	**P**	**18 19 48.4**	**-0.2**
ONTNC				IAmb	IAmb	18 20 12.4	
	comp=Z,35nm,0.8s						
SIJI	**Sorong**	**21.91**	**279**	P	**P**	**18 19 49.4**	**+0.6**
	comp=Z,8.9nm,0.4s,baz=104,slow=6.7,SNR=19						
SIJI				LR	LR	18 27 11.1	
	comp=Z,563nm,21.7s,baz=90,slow=33						
	comp=Z,8.9nm,0.4s						
SIJI	**Sorong**	**21.91**	**279**	P	**P**	**18 19 48.5**	**-0.3**
	comp=Z,422nmcomp=Z,33nm,0.9s						
YATNC	**Mamie plateau,**	**21.97**	**143**	P	**P**	**18 19 51.4**	**+2.1**
RMQ	**Roma**	**22.04**	**190**	P	**P**	**18 19 49.5**	**-0.5**
OUENC	**Ouen Island, N**	**22.22**	**144**	P	**P**	**18 19 52.3**	**+0.4**
OUENC				IAmb	IAmb	18 19 54.8	
	comp=Z,30nm,0.7s						
OUENC	**Ouen Island, N**	**22.22**	**144**	P	**P**	**18 19 53.0**	**+1.1**
MARNC	**Mare, Loyalty**	**22.25**	**140**	P	**P**	**18 19 52.7**	**+0.4**
MTN	**Manton Dam**	**22.96**	**248**		**S**	**18 24 04.2**	**-1.9**
WB0	**Warramunga Arr**	**23.44**	**229**	P	**P**	**18 20 04.7**	**+0.2**
WB0				IAmb	IAmb	18 20 06.3	
	comp=Z,66nm,0.8s						
WR0	**Warramunga Arr**	**23.45**	**228**	P	**P**	**18 20 04.2**	**-0.3**
WR0					**S**	**18 24 10.6**	**-3.4**
WRAB	**Tennant Creek**	**23.57**	**228**	P	**P**	**18 20 05.7**	**0.0**
WRAB				IAmb	IAmb	18 20 06.8	
	comp=Z,59nm,0.7s						
WRAB					**S**	**18 24 12.6**	**-3.5**
WRAB	**Tennant Creek**	**23.57**	**228**	*de*P	**P**	**18 20 06.0**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,113nm,1.3s						
WRAB	**Tennant Creek**	**23.57**	**228**	P	**P**	**18 20 06.1**	**+0.3**
WB2	**Warramunga Arr**	**23.58**	**228**	P	**P**	**18 20 05.9**	**+0.1**
WRA	**Warramunga Arr**	**23.59**	**228**	P	**P**	**18 20 05.7**	**-0.2**
	comp=Z,40nm,0.6s,baz=54,slow=9.8,SNR=371						
WRA				PcP	**PcP**	**18 23 50.2**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=51,slow=1.5,SNR=6.2						
WRA				S	**S**	**18 24 15.2**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=38,slow=14,SNR=6.3						
WRA				LR	LR	18 29 11.1	
	comp=Z,376nm,21.9s,baz=38,slow=36						
	comp=Z,40nm,0.6s						
WRA	**Warramunga Arr**	**23.59**	**228**	P	**P**	**18 20 05.9**	**0.0**
WRA	**Warramunga Arr**	**23.59**	**228**	P	**P**	**18 20 05.9**	**0.0**
WRA				pmax	pmax		
	comp=Z,18nm,1.4s						
ARMA	**Armidale**	**25.63**	**182**	P	**P**	**18 20 25.2**	**+0.7**
ARMA	**Armidale**	**25.63**	**182**	P	**P**	**18 20 26.4**	**+1.9**
LBMI	**Labuha**	**25.66**	**278**	P	**P**	**18 20 22.1**	**-2.8**
	comp=Z,2μmcomp=Z,51nm,1.2s						
INKA	**Innaminka**	**25.68**	**205**	P	**P**	**18 20 25.5**	**+0.6**
KNRA	**Kununurra**	**26.10**	**243**	P	**P**	**18 20 28.2**	**-0.5**
KNRA				IAmb	IAmb	18 20 33.2	
	comp=Z,114nm,1.4s						
KNRA	**Kununurra**	**26.10**	**243**	P	**P**	**18 20 29.1**	**+0.4**
AS01	**Alice Springs**	**26.26**	**222**	P	**P**	**18 20 30.1**	**-0.1**
AS31	**Alice Springs**	**26.29**	**222**	P	**P**	**18 20 30.3**	**-0.2**
ASAR	**Alice Springs**	**26.29**	**222**	P	**P**	**18 20 30.3**	**-0.2**
	comp=Z,7.5nm,0.7s,baz=54,slow=9.0,SNR=203						
ASAR				PcP	**PcP**	**18 23 56.2**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=37,slow=2.8,SNR=4.2						
ASAR				S	**S**	**18 24 58.4**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=49,slow=13,SNR=3.6						
ASAR				LR	LR	18 32 11.2	
	comp=Z,200nm,18.2s,baz=46,slow=39						
	comp=Z,7.5nm,0.7s						
ASAR	**Alice Springs**	**26.29**	**222**	P	**P**	**18 20 30.1**	**-0.4**
FUNA	**Funafuti**	**26.41**	**100**	P	**P**	**18 20 29.8**	**-1.8**
FUNA				IAmb	IAmb	18 20 44.6	
	comp=Z,90nm,1.4s						
SANI	**Sanana**	**26.97**	**275**	P	**P**	**18 20 36.0**	**-0.7**
	comp=Z,16nm,0.8s						
MSVF	**Nonsavu**	**27.84**	**120**	LR	LR	18 30 57.3	
	comp=Z,363nm,21.5s,baz=258,slow=34						
OOD	**Oodnadatta**	**28.22**	**214**	P	**P**	**18 20 47.5**	**-0.2**
STKA	**Stephens Creek**	**29.06**	**200**	P	**P**	**18 20 54.5**	**-0.5**
	comp=Z,12nm,0.7s,baz=5.3,slow=8.4,SNR=28						
STKA				LR	LR	18 32 13.6	
	comp=Z,268nm,21.4s,baz=15,slow=36						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**29.06**	**200**	P	**P**	**18 20 54.5**	**-0.5**
STKA	**Stephens Creek**	**29.06**	**200**	P	**P**	**18 20 54.5**	**-0.5**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**29.06**	**200**	P	**P**	**18 20 54.7**	**-0.4**
LCRK	**Leigh Creek**	**29.13**	**207**	P	**P**	**18 20 55.9**	**+0.2**
BATI	**Baumata**	**29.47**	**258**	LR	LR	18 35 32.3	
	comp=Z,135nm,21.1s,baz=82,slow=42						
DAV	**Davao City (W)**	**29.64**	**293**	LR	LR	18 33 50.3	
	comp=Z,131nm,18.4s,baz=126,slow=38						
BBSI	**Bau Bau**	**30.20**	**267**	P	**P**	**18 21 05.2**	**-0.2**
	comp=Z,12nm,1.2s						
CAN	**Canberra**	**30.70**	**186**	P	**P**	**18 21 08.3**	**-1.4**
CAN				IAmb	IAmb	18 21 12.2	
	comp=Z,34nm,1.4s						
CAN	**Canberra**	**30.70**	**186**	P	**P**	**18 21 08.3**	**-1.4**
CAN				pmax	pmax		
	comp=Z,34nm,1.4s						
MULG	**Mulgathing**	**31.05**	**213**	P	**P**	**18 21 12.1**	**-0.6**
WRKA	**Warakurna**	**31.10**	**227**	P	**P**	**18 21 12.2**	**-1.1**
HTT	**Hallett**	**31.43**	**203**	P	**P**	**18 21 15.9**	**-0.2**
BBOO	**Buckleboo**	**32.10**	**207**	P	**P**	**18 21 20.5**	**-1.4**
BBOO	**Buckleboo**	**32.10**	**207**	P	**P**	**18 21 22.4**	**+0.5**
TOLI2	**Tolitoli**	**32.58**	**279**	P	**P**	**18 21 25.3**	**-1.1**
TOO	**Toolangi**	**33.43**	**191**	P	**P**	**18 21 33.7**	**+0.2**
TOO				IAmb	IAmb	18 21 34.5	
	comp=Z,34nm,1.4s						
TOO	**Toolangi**	**33.43**	**191**	P	**P**	**18 21 33.7**	**+0.2**
TOO				pmax	pmax		
	comp=Z,34nm,1.4s						
ARPS	**Mount Arapiles**	**33.51**	**196**	P	**P**	**18 21 34.5**	**+0.3**
FORT	**Forrest**	**34.93**	**219**	P	**P**	**18 21 45.9**	**-0.7**
FORT	**Forrest**	**34.93**	**219**	P	**P**	**18 21 46.1**	**-0.5**
PLAI	**Plampang**	**35.09**	**261**	P	P	18 21 43.2	-5.0
	comp=Z,20nm,0.7s						
PLAI	**Plampang**	**35.09**	**261**	P	**P**	**18 21 46.0**	**-2.2**
MYLDM	**Lahad Datu**	**35.71**	**286**	P	**P**	**18 21 55.4**	**+1.9**
MYLDM				IAmb	IAmb	18 22 18.7	
	comp=Z,16nm,1.1s						
OUZ	**Omahuta**	**35.92**	**150**	P	**P**	**18 21 56.6**	**+1.6**
OUZ				IAmb	IAmb	18 21 57.6	
	comp=Z,44nm,1.2s						
MBWA	**Marble Bar**	**36.10**	**240**	P	**P**	**18 21 55.3**	**-1.5**
MBWA				IAmb	IAmb	18 21 56.7	
	comp=Z,17nm,0.6s						
MBWA	**Marble Bar**	**36.10**	**240**	P	**P**	**18 21 56.4**	**-0.4**
MBWA	**Marble Bar**	**36.10**	**240**	P	**P**	**18 21 55.8**	**-1.0**
MBWA				sP	**sP**	**18 22 19.5**	**+3.2**
PSA00	**Pilbara Seismi**	**36.16**	**239**	P	**P**	**18 21 55.9**	**-1.4**
PSA00				IAmb	IAmb	18 21 57.2	
	comp=Z,20nm,0.7s						
PSA00	**Pilbara Seismi**	**36.16**	**239**	P	**P**	**18 21 56.0**	**-1.3**
PSA00				IAmb	IAmb	18 21 58.9	
	comp=Z,7.3nm,0.9s						
PSA00	**Pilbara Seismi**	**36.16**	**239**	P	**P**	**18 21 56.6**	**-0.7**
RAO	**Raoul Island**	**36.90**	**135**	LR	LR	18 34 35.9	
	comp=Z,228nm,21.4s,baz=306,slow=32						
KKM	**Kota Kinabalu**	**38.13**	**286**	P	**P**	**18 22 13.9**	**-0.3**
KKM				IAmb	IAmb	18 22 51.5	
	comp=Z,27nm,1.3s						
TAU	**Tasmania Unive**	**38.39**	**187**	P	**P**	**18 22 16.8**	**+1.0**
TAU	**Tasmania Unive**	**38.39**	**187**	P	**P**	**18 22 16.8**	**+1.0**
TAU				pmax	pmax		
	comp=Z,152nm,1.8s						
TAU	**Tasmania Unive**	**38.39**	**187**	P	**P**	**18 22 17.1**	**+1.3**
MEEK	**Meekatharra**	**39.34**	**233**	P	**P**	**18 22 23.5**	**-0.6**
JOW	**Kunigami**	**39.34**	**324**	LR	LR	18 37 09.1	
	comp=Z,137nm,18.9s,baz=300,slow=34						
JOW	**Kunigami**	**39.34**	**324**	P	**P**	**18 22 24.3**	**+0.2**
JOW				IAmb	IAmb	18 22 44.8	
	comp=Z,26nm,0.9s						
URZ	**Urewera**	**40.05**	**150**	P	**P**	**18 22 30.9**	**+1.1**
	comp=Z,13nm,0.7s,baz=169,slow=2.6,SNR=6.3						
URZ				LR	LR	18 38 11.0	
	comp=Z,156nm,18.7s,baz=51,slow=35						
	comp=Z,13nm,0.7s						
URZ	**Urewera**	**40.05**	**150**	P	**P**	**18 22 30.7**	**+1.0**
URZ				IAmb	IAmb	18 22 31.5	
	comp=Z,38nm,1.0s						
URZ	**Urewera**	**40.05**	**150**	P	**P**	**18 22 31.3**	**+1.5**
BKZ	**Black Stump Fm**	**40.45**	**151**	P	**P**	**18 22 33.5**	**+0.4**
BKZ				IAmb	IAmb	18 22 34.7	
	comp=Z,43nm,1.4s						
BKZ	**Black Stump Fm**	**40.45**	**151**	P	**P**	**18 22 34.4**	**+1.2**
NNZ	**Nelson**	**40.76**	**156**	P	**P**	**18 22 34.1**	**-1.4**
THZ	**Tophouse**	**41.03**	**157**	P	**P**	**18 22 38.5**	**+0.6**
TUWZ	**Tuamarina**	**41.16**	**156**	P	**P**	**18 22 39.1**	**+0.2**
BSWZ	**Blackbirch Sta**	**41.38**	**156**	P	**P**	**18 22 41.3**	**+0.7**
SNZO	**South Karori**	**41.38**	**155**	P	**P**	**18 22 41.8**	**+1.1**
GIRL	**Giralia**	**41.40**	**241**	P	**P**	**18 22 39.4**	**-1.7**
GIRL	**Giralia**	**41.40**	**241**	P	**P**	**18 22 41.7**	**+0.6**
BFZ	**Birch Farm**	**41.55**	**153**	P	**P**	**18 22 42.6**	**+0.5**
LTZ	**Lake Taylor**	**41.67**	**158**	P	**P**	**18 22 44.2**	**+1.1**
MSWZ	**Moikau Station**	**41.70**	**155**	P	**P**	**18 22 43.6**	**+0.2**
PLWZ	**Palliser**	**41.83**	**155**	P	**P**	**18 22 44.8**	**+0.4**
KHZ	**Kahutara**	**41.84**	**157**	P	**P**	**18 22 45.0**	**+0.7**
KHZ	**Kahutara**	**41.84**	**157**	P	**P**	**18 22 45.0**	**+0.7**
JSU	**Suzuyama**	**41.85**	**331**	P	**P**	**18 22 45.1**	**+0.4**
JSU				IAmb	IAmb	18 22 45.8	
	comp=Z,21nm,1.1s						
TPUB	**Ta-pu**	**42.00**	**313**	P	**P**	**18 22 44.4**	**-1.6**
TPUB				IAmb	IAmb	18 23 40.2	
	comp=Z,58nm,1.7s						
RPZ	**Rata Peaks**	**42.06**	**160**	P	**P**	**18 22 47.5**	**+1.3**
	comp=Z,9.5nm,0.5s,baz=283,slow=2.3,SNR=8.5						
RPZ				LR	LR	18 37 38.0	
	comp=Z,460nm,20.1s,baz=313,slow=32						
	comp=Z,9.5nm,0.5s						
RPZ	**Rata Peaks**	**42.06**	**160**	P	**P**	**18 22 47.2**	**+1.0**
RPZ	**Rata Peaks**	**42.06**	**160**	P	**P**	**18 22 47.5**	**+1.3**
SSLB	**Suanglung**	**42.06**	**314**	P	**P**	**18 22 47.2**	**+0.6**
LBZ	**Lake Benmore**	**42.38**	**162**	P	**P**	**18 22 49.5**	**+0.7**
KLBR	**Kellerberrin**	**42.45**	**227**	P	**P**	**18 22 48.3**	**-1.3**
MORW	**Morawa**	**42.48**	**231**	P	**P**	**18 22 49.1**	**-0.8**
MORW	**Morawa**	**42.48**	**231**	P	**P**	**18 22 49.3**	**-0.6**
MLZ	**Mavora Lakes**	**42.66**	**164**	P	**P**	**18 22 51.0**	**-0.1**
BLDU	**Ballidu**	**42.72**	**229**	P	**P**	**18 22 50.9**	**-0.9**
WHZ	**Wether Hill Ro**	**43.10**	**165**	P	**P**	**18 22 55.4**	**+0.8**
WHZ				IAmb	IAmb	18 24 12.7	
	comp=Z,88nm,1.8s						
ODZ	**Otahua Downs**	**43.11**	**162**	P	**P**	**18 22 54.7**	**0.0**
ODZ				IAmb	IAmb	18 23 43.0	
	comp=Z,58nm,1.7s						
MJAR	**Matsushiro Arr**	**43.24**	**343**	P	**P**	**18 22 54.3**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=173,slow=12,SNR=2.6						
MJAR				LR	LR	18 39 59.2	
	comp=Z,88nm,18.5s,baz=276,slow=35						
	comp=Z,1.4nm,0.7s						
MAJO	**Matsushiro**	**43.24**	**343**	P	**P**	**18 22 55.6**	**-0.3**
MAJO				IAmb	IAmb	18 23 27.9	
	comp=Z,68nm,2.0s						
MAJO	**Matsushiro**	**43.24**	**343**	P	**P**	**18 22 55.6**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,68nm,2.0s						
NWAO	**Narrogin (SRO)**	**43.53**	**225**	LR	LR	18 42 13.5	
	comp=Z,248nm,18.3s,baz=298,slow=38						
JTM	**Tenmabayashi**	**46.52**	**348**	P	**P**	**18 23 21.5**	**-0.3**
TJN	**Taejon**	**47.31**	**332**	*e*P	**P**	**18 23 28.8**	**+0.7**
BLSI	**Bandar Lampung**	**47.45**	**267**	P	P	18 23 46.3	+17
KSRS	**Korea Array**	**47.93**	**333**	P	**P**	**18 23 33.2**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=149,slow=8.3,SNR=20						
KSRS				LR	LR	18 43 59.4	
	comp=Z,34nm,18.3s,baz=335,slow=36						
	comp=Z,5.7nm,0.8s						
INCN	**Inchon**	**48.54**	**332**	P	**P**	**18 23 37.1**	**-0.6**
INCN	**Inchon**	**48.54**	**332**	P	**P**	**18 23 37.1**	**-0.6**
INCN				pmax	pmax		
	comp=Z,48nm,0.9s						
INCN	**Inchon**	**48.54**	**332**	P	**P**	**18 23 38.0**	**+0.3**
RAR	**Rarotonga**	**48.76**	**114**	LR	LR	18 41 47.8	
	comp=Z,33nm,21.2s,baz=293,slow=33						
NJ2	**Nanjing**	**48.80**	**321**	*e*P	**P**	**18 23 41.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**52.16**	**341**	P	**P**	**18 24 04.8**	**0.0**
USA0B	**Ussuriysk Arra**	**52.16**	**341**	P	**P**	**18 24 04.8**	**0.0**
USA0B				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**52.16**	**341**	P	**P**	**18 24 05.0**	**+0.2**
	comp=Z,6.5nm,0.8s,baz=182,slow=8.4,SNR=8.9						
	comp=Z,6.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.16**	**341**	P	**P**	**18 24 04.6**	**-0.2**
USRK	**Ussuriysk Ar.**	**52.16**	**341**	P	**P**	**18 24 04.6**	**-0.2**
TIA	**Tai'an**	**52.66**	**324**	⇓P	**P**	**18 24 08.5**	**-0.2**
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
ENH	**Enshi**	**54.13**	**313**	P	**P**	**18 24 19.8**	**+0.2**
ENH				IAmb	IAmb	18 24 20.9	
	comp=Z,12nm,0.9s						
CN2	**Changchun**	**54.22**	**336**	*e*P	**P**	**18 24 24.0**	**+4.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LYN	**LuoYang**	**54.50**	**319**	*e*P	P	18 24 35.8	+14
HNS	**HongShan**	**54.90**	**323**	⇓P	**P**	**18 24 25.3**	**+0.3**
HNS				pmax	pmax		
	comp=Z,17nm,0.8s						
BNX	**BinXian**	**55.09**	**338**	⇑P	**P**	**18 24 26.0**	**-0.2**
BNX				pmax	pmax		
	comp=Z,12nm,0.8s						
BNX				pmax	pmax		
	comp=Z,80nm,2.9s						
XAN	**Xi'an**	**56.59**	**316**	⇓*i*P	**P**	**18 24 37.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	**Xi'an**	**56.59**	**316**	P	**P**	**18 24 37.4**	**+0.1**
KLR	**Kul'dur**	**56.75**	**344**	P	**P**	**18 24 38.4**	**+0.3**
	comp=Z,8.6nm,0.8s,baz=164,slow=4.4,SNR=24						
	comp=Z,8.6nm,0.8s						
KLR	**Kul'dur**	**56.75**	**344**	*ce*P	**P**	**18 24 38.1**	**0.0**
KLR				pmax	pmax		
	comp=Z,17nm,1.3s						
PHRA	**Phrae**	**56.75**	**296**	P	**P**	**18 24 39.2**	**+0.5**
PEA0B	**Petropavlovsk-**	**57.71**	**3**	P	**P**	**18 24 43.9**	**-0.9**
PEA0B	**Petropavlovsk-**	**57.71**	**3**	P	**P**	**18 24 43.9**	**-0.9**
PEA0B				pmax	pmax		
	comp=Z,146nm,1.6s						
PETK	**Petropavlovsk-**	**57.71**	**3**	P	**P**	**18 24 45.3**	**+0.5**
	comp=Z,4.6nm,0.6s,baz=177,slow=8.4,SNR=9.3						
	comp=Z,4.6nm,0.6s						
PETK	**Petropavlovsk-**	**57.71**	**3**	P	**P**	**18 24 43.9**	**-0.9**
PETK	**Petropavlovsk-**	**57.71**	**3**	P	**P**	**18 24 43.9**	**-0.9**
CM31	**Chiang Mai Arr**	**57.90**	**295**	P	**P**	**18 24 47.3**	**+0.5**
CM31				IAmb	IAmb	18 24 48.8	
	comp=Z,9.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**57.90**	**295**	P	**P**	**18 24 48.0**	**+1.2**
	comp=Z,5.1nm,0.8s,baz=117,slow=5.3,SNR=53						
CMAR				LR	LR	18 47 24.0	
	comp=Z,44nm,21.3s,baz=110,slow=34						
	comp=Z,5.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**57.90**	**295**	P	**P**	**18 24 46.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**57.90**	**295**	*i* P

comp=Z,17nm,1.2s
GOMU GeErMu 67.74 312 P P 18 25 53.3 +0.9
GOMU pmax pmax
comp=Z,4.0nm,0.8s
GOMU pmax pmax
comp=Z,28nm,4.1s
CASY Casey 68.16 197 P P 18 25 53.9 0.0
CASY IAmb IAmb 18 25 54.9
comp=Z,19nm,1.1s
CASY Casey 68.16 197 P P 18 25 53.7 -0.3
CASY sP PcP 18 26 18.0 -1.5
LSA Lhasa 68.23 304 P P 18 25 55.8 0.0
LSA Lhasa 68.23 304 P P 18 25 55.8 0.0
LSA pmax pmax
comp=Z,4.0nm,0.6s
YAK Yakutsk 68.87 349 P P 18 25 58.2 -0.2
YAK IAmb IAmb 18 27 56.8
comp=Z,14nm,0.4s
YAK Yakutsk 68.87 349 *ce* **P P 18 25 59.0 +0.6**
YAK pmax pmax
comp=Z,16nm,1.7s
FALS False Pass 69.48 25 P P 18 26 02.3 0.0
RAMN Ramite 71.25 300 *eP* **P 18 26 14.3 +0.2**
JIRN Jiri 71.79 301 *eP* **P 18 26 17.4 -0.1**
JIRN Jiri 71.79 301 *eP* **P 18 26 17.7 +0.2**
GUN Gumba 72.13 301 *eP* **P 18 26 19.4 -0.1**
comp=Z,23nm,0.8s
GUN Gumba 72.13 301 *eP* **P 18 26 19.4 -0.1**
comp=Z,23nm,0.8s
PKI Pulchoki 72.44 301 *eP* **P 18 26 21.2 -0.1**
comp=Z,9.2nm,0.7s
PKI Pulchoki 72.44 301 *eP* **P 18 26 21.4 +0.1**
comp=Z,9.2nm,0.7s
PKIN Phulchoki 72.45 301 *eP* **P 18 26 21.4 +0.1**
PKIN Phulchoki 72.45 301 *eP* **P 18 26 21.4 +0.1**
DMN Daman 72.71 301 *eP* **P 18 26 22.8 0.0**
DMN Daman 72.71 301 *eP* **P 18 26 22.6 -0.2**
comp=Z,16nm,0.6s
VNDA Vanda 72.95 178 P P 18 26 23.5 +0.5
comp=Z,9.0nm,0.8s,baz=331,slow=6.5,SNR=65
comp=Z,9.0nm,0.8s
VNDA Vanda 72.95 178 P P 18 26 23.1 +0.1
VNDA IAmb IAmb 18 26 24.6
comp=Z,12nm,0.8s
VNDA Vanda 72.95 178 P P 18 26 23.1 +0.1
VNDA pmax pmax
comp=Z,12nm,0.9s
BILL Bilibino 73.16 5 P P 18 26 24.0 -0.3
GKN Gorkha 73.21 301 *eP* **P 18 26 25.3 -0.4**
comp=Z,16nm,0.9s
GKN Gorkha 73.21 301 *eP* **P 18 26 25.5 -0.2**
comp=Z,14nm,0.8s
SBA Scott Base 73.49 177 P P 18 26 27.4 +1.2
SBA Scott Base 73.49 177 P P 18 26 27.4 +1.2
SBA pmax pmax
comp=Z,13nm,1.1s
DANN Dangsing 74.05 301 *eP* **P 18 26 29.3 -1.5**
OHAK Old Harbor 75.41 27 P P 18 26 36.8 -0.7
WMQ Urumqi 75.71 317 *eP* **P 18 26 39.0 -0.7**
WMQ pmax pmax
comp=Z,11nm,0.9s
KDAK Kodiak Island 76.03 27 LR LR 18 53 39.7
comp=Z,202nm,21.1s,baz=291,slow=30
Q19K Cape Douglas, 76.21 25 P P 18 26 42.0 -0.2
HYBB Hyderabad (bro 76.53 289 *eP* **P 18 26 44.6 -0.3**
TIXI Tiksi 77.79 352 P P 18 26 51.1 +0.3
comp=Z,1.0nm,0.3s,baz=89,slow=23,SNR=6.1
comp=Z,1.0nm,0.3s
TIXI Tiksi 77.79 352 *i* **P P 18 26 50.9 +0.2**
TIXI pmax pmax
comp=Z,1.0nm,1.1s
DGZ Jazzator, Alta 78.03 323 *i* **P P 18 26 52.8 0.0**
DGZ pmax pmax
comp=Z,14nm,1.2s
M20K Styx River 78.09 23 P P 18 26 52.1 -0.7
M20K IAmb IAmb 18 27 24.8
comp=Z,40nm,1.8s
SUA Susitna One 78.81 24 P P 18 26 55.6 -1.2
SUA IAmb IAmb 18 28 45.9
comp=Z,20nm,1.4s
RC01 Rabbit Creek A 79.03 25 P P 18 26 57.7 -0.1
RC01 IAmb IAmb 18 27 25.2
comp=Z,43nm,1.9s
J20K Nowinta River 79.04 21 P P 18 26 58.3 +0.5
J20K IAmb IAmb 18 27 03.9
comp=Z,64nm,2.0s
CAST Castle Rocks 79.36 22 P P 18 26 59.1 -0.5
CAST IAmb IAmb 18 27 02.5
comp=Z,24nm,1.6s
PWL Port Wells 79.50 25 P P 18 26 59.7 -0.8
KTH Kantishna Hill 79.87 22 P P 18 27 01.4 -1.1
KTH IAmb IAmb 18 28 13.8
comp=Z,41nm,1.9s
SML Sawmill 79.98 24 P P 18 27 03.0 -0.1
SML IAmb IAmb 18 27 04.0
comp=Z,28nm,1.5s
TRF Thorofare Moun 80.06 22 P P 18 27 02.5 -1.1
TRF IAmb IAmb 18 28 10.8
comp=Z,31nm,1.6s
IMAR Indian Mountai 80.24 19 P P 18 27 04.0 -0.3
MK31 Makanchi Array 80.29 319 P P 18 27 05.4 +0.4
MK31 Makanchi Array 80.29 319 P P 18 27 05.4 +0.4
MK31 pmax pmax
comp=Z,7.0nm,1.1s
MKAR Makanchi Array 80.29 319 P P 18 27 05.5 +0.4
comp=Z,4.0nm,0.8s,baz=90,slow=9.3,SNR=30
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 80.29 319 P P 18 27 05.2 +0.1
MKAR Makanchi Array 80.29 319 *i* **P P 18 27 05.3 +0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
H21K Melozitna Rive 80.37 20 P P 18 27 04.7 -0.3
H21K IAmb IAmb 18 27 19.4
comp=Z,41nm,1.9s
MAKZ Makanchi 80.50 319 P P 18 27 06.0 -0.1
MAKZ Makanchi 80.50 319 P P 18 27 06.0 -0.1
MAKZ pmax pmax
comp=Z,10.0nm,0.9s
MCK McKinley 80.72 23 P P 18 27 05.9 -1.1
MCK McKinley 80.72 23 P P 18 27 05.9 -1.1
MCK pmax pmax
comp=Z,15nm,1.2s
DHY Denali Highway 81.00 23 P P 18 27 08.3 -0.3
M24K Tolsona, Glenn 81.02 25 P P 18 27 08.7 0.0
M24K IAmb IAmb 18 29 30.2
comp=Z,33nm,1.4s
HMT Hamilton 81.03 27 P P 18 27 08.4 -0.3
ZAA0 Zalesovo Array 81.10 326 P P 18 27 08.0 -1.1
ZALV Zalesovo Beam 81.10 326 P P 18 27 08.6 -0.5
comp=Z,3.8nm,0.6s,baz=113,slow=6.1,SNR=21
comp=Z,3.8nm,0.6s
ZALV Zalesovo Beam 81.10 326 P P 18 27 08.3 -0.8
ZALV Zalesovo Beam 81.10 326 P P 18 27 08.3 -0.8
I23K Minto, Yukon-K 81.30 21 P P 18 27 09.9 -0.1
I23K IAmb IAmb 18 30 09.9
comp=Z,41nm,2.0s
H23K Yukon River 81.59 21 P P 18 27 11.5 0.0
H23K IAmb IAmb 18 27 16.3
comp=Z,36nm,1.9s
IL31 82.02 22 P P 18 27 11.9 -1.8
IL31 IAmb IAmb 18 28 40.1
comp=Z,42nm,2.0s
ILAR Eielson Array 82.02 22 P P 18 27 12.3 -1.5
comp=Z,2.0nm,0.8s,baz=246,slow=5.5,SNR=17
ILAR LR LR 19 02 32.6
comp=Z,63nm,18.1s,baz=88,slow=35
comp=Z,2.0nm,0.8s
ILAR Eielson Array 82.02 22 P P 18 27 12.0 -1.8
ILAR Eielson Array 82.02 22 P P 18 27 12.0 -1.8
H24K Noodor Dome 82.18 21 P P 18 27 14.2 -0.5
H24K IAmb IAmb 18 27 42.7
comp=Z,38nm,1.9s
J25K Salcha River, 82.51 23 P P 18 27 15.6 -0.9
CTGM Chitina Glacie 82.61 27 P P 18 27 16.9 -0.2
CTGM IAmb IAmb 18 30 17.1
comp=Z,26nm,1.5s
PCA Pinnacle 82.75 28 P P 18 27 17.7 -0.1
KSH Kashi 82.92 311 P P 18 27 20.0 +0.8
KSH pP sP 18 27 38.8 -2.7
KSH pmax pmax
comp=Z,5.0nm,1.4s
M27K Edge Creek, AK 82.93 25 P P 18 27 18.8 0.0
BCAR Beaver Creek A 83.26 25 P P 18 27 20.9 +0.5
KURK Kurchatov 83.72 322 P P 18 27 22.3 -0.6
KURK IAmb IAmb 18 27 23.7
comp=Z,14nm,1.2s
KURK Kurchatov 83.72 322 P P 18 27 22.3 -0.6
KURK pmax pmax
comp=Z,14nm,1.3s
KURBB Kurchatov Arra 83.75 322 P P 18 27 23.1 0.0
comp=Z,2.6nm,0.2s,baz=103,slow=4.0,SNR=12
comp=Z,2.6nm,0.2s
TKM2 Tokmak 2 83.90 314 P P 18 27 25.0 +0.7
SNR=5.3
NIL Nilore 83.97 304 P P 18 27 24.4 -0.2
NIL IAmb IAmb 18 27 25.7
comp=Z,16nm,0.7s
NIL Nilore 83.97 304 P P 18 27 24.4 -0.2
NIL pmax pmax
comp=Z,16nm,0.7s
BMAR Burnt Mountain 84.11 20 P P 18 27 24.8 +0.3
HYT Haines Junctio 84.29 27 P P 18 27 26.4 +0.6
HYT IAmb IAmb 18 29 39.7
comp=Z,26nm,1.7s
CHMS Chumysh 84.53 314 P P 18 27 28.0 +0.7
SNR=6.3
UCH Uchtor 84.55 313 P P 18 27 27.6 -0.3
SNR=5.9
AAK Ala-Archa 84.64 313 P P 18 27 28.2 +0.2
SNR=5.8
USP Ospenovka 84.76 314 P P 18 27 28.8 +0.4
SNR=7.5
AML Almayashu 85.13 313 P P 18 27 32.1 +1.4
SNR=11
QSPA South Pole Qui 85.28 180 P P 18 27 30.5 -0.1
QSPA IAmb IAmb 18 27 31.8
comp=Z,16nm,0.9s
MAW Mawson 85.71 203 P P 18 27 33.1 +0.5
comp=Z,10nm,0.9s,baz=73,slow=5.3,SNR=16
MAW LR LR 19 02 21.9
comp=Z,122nm,21.1s,baz=68,slow=33
comp=Z,10nm,0.9s
MAW Mawson 85.71 203 P P 18 27 32.7 +0.1
MAW Mawson 85.71 203 P P 18 27 32.7 +0.1
MAW pmax pmax
comp=Z,5.0nm,1.2s
NRIK Noril'sk 85.87 341 P P 18 27 32.4 -0.9
comp=Z,3.8nm,0.5s,baz=109,slow=4.8,SNR=6.9
comp=Z,3.8nm,0.5s
NRIK Noril'sk 85.87 341 P P 18 27 32.4 -0.9
NRIK IAmb IAmb 18 27 34.0
comp=Z,5.2nm,0.6s
NRIK Noril'sk 85.87 341 *i* **P P 18 27 33.2 -0.1**
NRIK pmax pmax
comp=Z,15nm,1.5s
GAR Garm 87.15 309 P P 18 27 40.1 -0.3
GAR IAmb IAmb 18 27 42.3
comp=Z,20nm,1.4s
DLBC Dease Lake 87.24 31 LR LR 19 00 03.0
comp=Z,138nm,20.7s,baz=292,slow=31
KKAR Karatay Array 87.61 313 P P 18 27 42.1 -0.3
KKAR Karatay Array 87.61 313 P P 18 27 42.1 -0.3
CHGR Chuyangaron 88.00 309 P P 18 27 43.5 -1.0
CHGR IAmb IAmb 18 27 48.1
comp=Z,8.6nm,0.9s
CHGR Chuyangaron 88.00 309 P P 18 27 43.5 -1.0
CHGR pmax pmax
comp=Z,9.0nm,0.9s
YBH Yreka Blue Hor 88.91 48 LR LR 19 00 52.2
comp=Z,79nm,19.0s,baz=166,slow=31
BVAR Borovoye Array 89.19 323 P P 18 27 48.9 -0.7
comp=Z,12nm,0.8s,baz=104,slow=6.3,SNR=106
BVAR LR LR 19 08 00.2
comp=Z,22nm,21.5s,baz=101,slow=36
comp=Z,12nm,0.8s
BRVK Borovoye 89.26 323 P P 18 27 49.2 -0.7
BRVK IAmb IAmb 18 27 49.9
comp=Z,15nm,1.0s
BRVK Borovoye 89.26 323 P P 18 27 49.2 -0.7
BRVK pmax pmax
comp=Z,15nm,1.0s
PFO Pinyon Flats O 93.11 57 LR LR 19 02 17.2
comp=Z,82nm,20.5s,baz=358,slow=30
PFO Pinyon Flats O 93.11 57 *i* **P P 18 28 04.5 -3.9**
PFO pmax pmax
comp=Z,4.0nm,1.0s
ELK Elko 94.45 50 LR LR 19 04 55.2
comp=Z,93nm,20.2s,baz=100,slow=32
YKA Yellowknife Ar 95.28 28 LR LR 19 06 56.6
comp=Z,56nm,20.4s,baz=332,slow=33
ABKAR Akbulak array 95.43 319 P P 18 28 17.1 -1.5
ABKAR IAmb IAmb 18 28 18.1
comp=Z,4.0nm,1.1s
ARU Arti 96.26 326 P P 18 28 20.2 -1.9
comp=Z,2.4nm,0.4s,baz=257,slow=3.2,SNR=7.2
ARU LR LR 19 16 02.5
comp=Z,19nm,18.0s,baz=87,slow=38
comp=Z,2.4nm,0.4s
ARU Arti 96.26 326 P P 18 28 20.0 -2.2
ARU IAmb IAmb 18 28 21.0
comp=Z,10nm,1.2s
ARU Arti 96.26 326 *ce* **P P 18 28 20.2 -1.9**
ARU pmax pmax
comp=Z,10.0nm,1.2s
GEYT Alibeck 96.61 308 LR LR 19 13 38.7
comp=Z,44nm,21.1s,baz=146,slow=36
AKTO Aktyubinsk 96.68 320 P P 18 28 22.2 -2.0
comp=Z,1.3nm,0.6s,baz=59,slow=5.2,SNR=5.4
AKTO LR LR 19 14 29.6
comp=Z,28nm,18.5s,baz=68,slow=37
comp=Z,1.3nm,0.6s
PDAR Pinedale Array 98.71 48 LR LR 19 05 15.3
comp=Z,97nm,21.8s,baz=289,slow=30
TROLL Troll, Antarti 101.08 189 Pdiff Pdif 18 28 43.4 -0.3
FINES FINESS Array B 110.97 336 Pdiff Pdif 18 29 26.4 -1.3
comp=Z,4.2nm,1.0s,baz=60,slow=8.2,SNR=4.8
VSU Vasula 112.20 333 *i* PKIKP **PKiKP 18 33 30.0 +0.9**
VSU pmax pmax
comp=Z,28nm,1.1s
PLCA Paso Flores 119.83 143 PKP PKPdf 18 33 44.5 0.0
comp=Z,1.6nm,0.6s,baz=246,slow=1.9,SNR=12
VYHS Vyhne 121.43 326 *e*PKIKP **PKiKP 18 33 49.5 +2.1**
BRG Berggiesshubel 122.60 330 *e*PKIKP **PKiKP 18 33 51.9 +2.3**
BRG pmax pmax
comp=Z,4.0nm,1.1s
CLL Collm 122.78 331 *i* PKIKP **PKPdf 18 33 49.6 -0.1**
CLL *e* 18 34 09.0
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL Collm 122.78 331 *i* PKPdf **PKPdf 18 33 49.6 -0.1**
comp=Z,4.0nm,0.9s
CLL *e*pPKPdf **pPKPdf 18 34 09.0 +2.7**
RONA Rosalia, Austr 123.28 326 *eP* **PKPdf 18 33 50.3 -0.6**
comp=Z,3.3nm,1.0s
CONA Conrad Observa 123.39 327 *eP* **PKPdf 18 33 50.6 -0.5**
comp=Z,4.6nm,1.2s
GERES GERESS Array B 123.99 329 PKP PKPdf 18 33 51.7 -0.5
comp=Z,1.7nm,0.8s,baz=75,slow=1.5,SNR=12
ABTA Abfaltersbach 125.92 327 *eP* **PKPdf 18 33 55.3 -0.7**
comp=Z,6.0nm,1.2s
WATA Walderalm 126.05 328 *eP* **PKPdf 18 33 56.1 -0.2**
comp=Z,3.9nm,0.9s
WTTA Wattenberg 126.06 328 *eP* **PKPdf 18 33 56.4 0.0**
comp=Z,5.7nm,0.9s
MOTA Moosalm 126.29 329 *eP* **PKPdf 18 33 56.2 -0.6**
comp=Z,7.9nm,1.0s
SQTA Sankt Quirin 126.31 328 *eP* **PKPdf 18 33 56.5 -0.3**
comp=Z,4.3nm,1.0s
FETA Feichten 126.69 328 *eP* **PKPdf 18 33 57.3 -0.3**
comp=Z,3.5nm,1.0s
LPAZ La Paz 134.41 118 PKP PKPdf 18 34 14.4 +0.8
comp=Z,3.1nm,0.6s,baz=48,slow=0.8,SNR=11
LPAZ SKP 18 37 41.6
comp=Z,5.2nm,1.1s,baz=273,slow=1.8,SNR=11
LPAZ La Paz 134.41 118 PKPdf PKPdf 18 34 13.0 -0.6
LPAZ La Paz 134.41 118 PKIKP PKPdf 18 34 13.0 -0.6
SDV Santo Domingo 136.61 82 PKPdf PKPdf 18 34 16.9 -0.4
BAUV El Baul 139.16 82 PKPdf PKPdf 18 34 20.6 -1.1
TOA0 Torodi Ar. Sit 150.34 288 PKPbc 18 34 45.1 -1.1
TORD Torodi Ar. Bea 150.34 288 PKP PKPdf 18 34 39.9 -1.0
comp=Z,0.7nm,0.8s,baz=5.6,slow=1.6,SNR=4.3
TORD PKPbc **PKPbc 18 34 45.8 -0.3**
comp=Z,22nm,0.8s,baz=84,slow=2.7,SNR=109
BDFB Brasilia 151.09 135 PKPbc PKPbc 18 34 48.1 +0.1
comp=Z,16nm,0.8s,baz=188,slow=1.9,SNR=14
BDFB Brasilia 151.09 135 PKPbc 18 34 47.8 -0.3
BDFB Brasilia 151.09 135 PKIKP PKPbc 18 34 47.8 -0.3
DBIC Dimbokro 157.76 276 PKPab PKPab 18 35 23.6 -0.5
comp=Z,4.4nm,0.6s,baz=103,slow=2.3,SNR=9.0

*IDC **25** 18:34:45.9±10.0, 4°.83S×153°.23E, h64km±76km, mb3.4/5, mbtmp3.8/6, ML1.7/1, Error ellipse: s-maj=107.8km s-min=32.8km az=101.0*
ISC 25 18:34:43.3±2.4, 4°.9S±0°.3×153°.5E±0°.4, h50km, n7, σ0°.44/8, mb3.6/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.70**	**234**	P	**Pn**	**18 36 33.4**	**+0.5**
	0.7nm,0.3s,baz=249,slow=17,SNR=1.3						
PMG				S	**Sn**	**18 37 58.4**	**-0.5**
	30nm,1.1s,baz=238,slow=19,SNR=2.1						
	9.7nm,0.8s						
WRA	**Warramunga Arr**	**23.89**	**230**	P	**P**	**18 39 52.4**	**-0.2**
	1.1nm,0.6s,baz=50,slow=9.8,SNR=26						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**26.54**	**223**	P	**P**	**18 40 16.8**	**+0.1**
	0.7nm,0.5s,baz=56,slow=9.0,SNR=16						
	0.7nm,0.5s						
SONM	**Songino Array**	**66.73**	**328**	P	**P**	**18 45 29.8**	**+0.3**
	0.4nm,0.5s,baz=142,slow=5.4,SNR=4.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**80.81**	**319**	P	**P**	**18 46 51.9**	**0.0**
	0.5nm,0.6s,baz=100,slow=8.6,SNR=7.0						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**81.58**	**326**	P	**P**	**18 46 55.2**	**-0.5**
	0.4nm,0.5s,baz=110,slow=7.8,SNR=2.2						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.95**	**288**	PKPbc	**PKiKP**	**18 54 32.0**	**-0.3**
	1.5nm,0.8s,baz=61,slow=2.3,SNR=8.9						

IDC 25 18:41:07.3±880.0, 52°.20N×4°.38E, h0km, Error ellipse: s-maj=403.1km s-min=172.8km az=114.0, The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**6.83**	**116**	I		19 22 50.0	
	baz=305,slow=308,SNR=5.5						
I48TN	**KESRA INFRASON**	**16.77**	**166**	I		20 25 10.0	
	0.1nm,0.5s,baz=349,slow=316,SNR=1.5						
I46RU	**ZALESOVO INFRA**	**45.88**	**54**	I		23 23 30.0	
	baz=304,slow=327,SNR=1.5						

*IDC **25** 18:45:32.9±0.5, 16°.22N×61°.55W, h81km±4km, mb3.9/16, mbtmp4.2/19, MS3.0/3, Error ellipse: s-maj=10.0km s-min=7.2km az=76.0*
*TRN **25** 18:45:32.7, 16°.25N×61°.47W, h90km, MD4.1*
*NEIC **25** 18:45:34.1±1.1, 16°.24N±0°.06×61°.47W±0°.10, h91km±5km, mb4.6/52, Error ellipse: s-maj=14.5km s-min=7.1km az=64.0*
ISC 25 18:45:33.7±0.5, 16°.22N±0°.03×61°.55W±0°.04, h92km±4km, n174, σ0°.99/199, mb4.5/42, 3C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBE	**Ff, Capester**	**0.16**	**201**		**Pn**	**18 45 47.4**	**+0.4**
CBE				Sn	**Sn**	**18 45 56.9**	**+0.2**
CBE	**Ff, Capester**	**0.16**	**201**	*eP*	**Pn**	**18 45 47.4**	**+0.4**
CBE				*eS*	**Sn**	**18 45 57.8**	**+1.1**
GDHS	**Morne Mazeau,**	**0.21**	**285**		**Pn**	**18 45 47.0**	**-0.1**
GDHS				Sn	**Sn**	**18 45 57.6**	**+0.4**
ABD	**La Joyeuse, An**	**0.26**	**13**		**Pn**	**18 45 46.9**	**-0.4**
ABD				Sn	**Sn**	**18 45 57.1**	**-0.3**
ABD	**La Joyeuse, An**	**0.26**	**13**	*eP*	**Pn**	**18 45 47.4**	**+0.1**
ABD				*eS*	**Sn**	**18 45 57.4**	**0.0**
MAGL	**Barre de l'ile**	**0.37**	**136**		**Pn**	**18 45 47.4**	**-0.4**
MAGL				Sn	**Sn**	**18 45 58.0**	**-0.4**
MAGL	**Barre de l'ile**	**0.37**	**136**	*eP*	**Pn**	**18 45 47.9**	**+0.1**
MAGL				*eS*	**Sn**	**18 45 58.3**	**-0.1**
TBG	**Guadaloupe-3**	**0.37**	**194**	*eP*	**Pn**	**18 45 48.4**	**+0.5**
TDBA	**Terre de Bas,**	**0.38**	**193**		**Pn**	**18 45 48.0**	**+0.1**
TDBA				Sn	**Sn**	**18 45 58.9**	**+0.5**
TDBA	**Terre de Bas,**	**0.38**	**193**	*eP*	**Pn**	**18 45 48.3**	**+0.4**
TDBA				*eS*	**Sn**	**18 45 59.1**	**+0.7**
GDSD	**La Dsirade Is**	**0.47**	**78**	Pn	**Pn**	**18 45 47.5**	**-1.1**
GDSD				Sn	**Sn**	**18 45 58.1**	**-1.5**
H05N1	**Guadeloupe/Mar**	**0.48**	**78**	P	**Pn**	**18 45 48.2**	**-0.4**
H05N1				S	**Sn**	**18 45 58.5**	**-1.3**
MDCT	**Cottage Hill,**	**0.60**	**172**	*eP*	**Pn**	**18 45 50.1**	**+0.5**
MDCT				*eS*	**Sn**	**18 46 01.8**	**+0.4**
MDVC	**Dominica, Viel**	**0.61**	**167**	*eP*	**Pn**	**18 45 49.7**	**0.0**
MDVC				*eS*	**Sn**	**18 46 01.6**	**0.0**
DSLB	**Salisbury**	**0.78**	**171**	*eP*	**Pn**	**18 45 52.0**	**+0.6**
DSLB				*eS*	**Sn**	**18 46 05.2**	**+0.7**
MBFL	**Flemmings, Mon**	**0.83**	**310**	*eP*	**Pn**	**18 45 52.3**	**+0.5**
MBFL				*eS*	**Sn**	**18 46 06.0**	**+0.8**
ANBD	**Bethesda, Anti**	**0.85**	**346**	*eP*	**Pn**	**18 45 52.2**	**+0.1**
ANBD				*eS*	**Sn**	**18 46 05.1**	**-0.6**
MDN	**Morne-Daniel**	**0.91**	**170**	*eP*	**Pn**	**18 45 53.3**	**+0.7**
MDN				*eS*	**Sn**	**18 46 08.1**	**+1.4**
DLPL	**La Plaine**	**0.93**	**162**		**Pn**	**18 45 51.9**	**-0.9**
DLPL	**La Plaine**	**0.93**	**162**	*eP*	**Pn**	**18 45 53.0**	**+0.2**
DLPL				*eS*	**Sn**	**18 46 06.9**	**-0.2**
SVN	**Savane Anatole**	**1.42**	**165**		**Pn**	**18 45 58.2**	**-0.4**
SVN	**Savane Anatole**	**1.42**	**165**	*eP*	**Pn**	**18 45 59.0**	**+0.4**
PCM	**Pelee Case Pet**	**1.43**	**167**	*eP*	**Pn**	**18 45 59.2**	**+0.4**
PCM	**Pelee Case Pet**	**1.43**	**167**	*eP*	**Pn**	**18 45 59.7**	**+0.9**
CXM	**Morne La Croix**	**1.44**	**165**	*eP*	**Pn**	**18 45 58.8**	**-0.3**
BAMF	**Morne Balai**	**1.45**	**164**	*eP*	**Pn**	**18 45 59.3**	**+0.3**
GBMF	**Grand Be**	**1.46**	**165**	*eP*	**Pn**	**18 45 59.5**	**+0.3**
ANWB	**Willy Bob**	**1.46**	**351**		**Pn**	**18 45 59.0**	**-0.2**
ANWB	**Willy Bob**	**1.46**	**351**	*eP*	**Pn**	**18 45 58.9**	**-0.2**
ANWB				*eS*	**Sn**	**18 46 18.4**	**0.0**
PML	**Morne Lenard**	**1.47**	**166**	*eP*	**Pn**	**18 45 59.7**	**+0.4**
FDF	**Fort de France**	**1.52**	**165**		**Pn**	**18 46 00.0**	**0.0**
FDF	**Fort de France**	**1.52**	**165**	*eP*	**Pn**	**18 46 00.4**	**+0.4**
FDF				*eS*	**Sn**	**18 46 19.8**	**-0.1**
ILAM	**Ilet Lapin Mar**	**1.57**	**155**		**Pn**	**18 46 00.4**	**-0.2**
ILAM	**Ilet Lapin Mar**	**1.57**	**155**	*eP*	**Pn**	**18 46 00.5**	**0.0**
ILAM				*eS*	**Sn**	**18 46 20.2**	**-0.7**
ZAM	**Aeronautique**	**1.71**	**163**	*eP*	**Pn**	**18 46 02.4**	**+0.1**
LPMF	**Morne Lapointe**	**1.73**	**161**	*eP*	**Pn**	**18 46 02.4**	**-0.1**
TRMF	**Trois Ilets**	**1.74**	**164**	*eP*	**Pn**	**18 46 03.0**	**+0.3**
BIM	**Bigot**	**1.75**	**165**		**Pn**	**18 46 03.3**	**+0.4**
BIM	**Bigot**	**1.75**	**165**	*eP*	**Pn**	**18 46 03.5**	**+0.6**
BIM				*eS*	**Sn**	**18 46 25.9**	**+0.9**
MVM	**Montagne Vaucl**	**1.77**	**159**	*eP*	**Pn**	**18 46 03.3**	**+0.2**
SEUS	**St. Eustatius**	**1.87**	**313**		**Pn**	**18 46 05.2**	**+0.9**
SEUS	**St. Eustatius**	**1.87**	**313**	*eP*	**Pn**	**18 46 05.8**	**+1.5**
SEUS				*eS*	**Sn**	**18 46 29.4**	**+1.8**
MPOM	**Morne Pois Mar**	**1.88**	**159**	Pn	**Pn**	**18 46 04.7**	**+0.2**
MPOM	**Morne Pois Mar**	**1.88**	**159**	*eP*	**Pn**	**18 46 04.7**	**+0.2**
MPOM				*eS*	**Sn**	**18 46 28.2**	**+0.3**
H05S1	**Guadeloupe/Mar**	**1.91**	**159**	P	**Pn**	**18 46 05.4**	**+0.6**
H05S1				S	**Sn**	**18 46 28.1**	**-0.4**
SLBI	**Saint Lucia, B**	**2.25**	**166**	*eP*	**Pn**	**18 46 10.0**	**+0.7**
SLBI				*eS*	**Sn**	**18 46 36.5**	**-0.1**
SLCP	**Castries, St.**	**2.26**	**166**	*eS*	**Sn**	**18 46 38.4**	**+1.6**
SMRT	**St. Maarten**	**2.33**	**322**	Pn	**Pn**	**18 46 10.8**	**+0.4**
SMRT	**St. Maarten**	**2.33**	**322**	*eP*	**Pn**	**18 46 10.4**	**-0.1**
SMRT				*eS*	**Sn**	**18 46 39.1**	**+0.5**
SLB	**Belfond**	**2.42**	**168**	*eP*	**Pn**	**18 46 12.9**	**+1.2**
SLB				*eS*	**Sn**	**18 46 42.0**	**+1.2**
MCLT	**Moule a Chique**	**2.56**	**167**	Pn	**Pn**	**18 46 14.3**	**+0.8**
MCLT	**Moule a Chique**	**2.56**	**167**	*eP*	**Pn**	**18 46 14.3**	**+0.8**
MCLT				*eS*	**Sn**	**18 46 44.5**	**+0.5**
SSV	**Crater Summit**	**2.89**	**173**	*eP*	**Pn**	**18 46 17.2**	**-0.8**
SVB	**Belmont**	**2.94**	**174**		**Pn**	**18 46 19.3**	**+0.7**
SVB	**Belmont**	**2.94**	**174**	*eP*	**Pn**	**18 46 19.6**	**+1.0**
CDVI	**St. Croix**	**3.44**	**297**	Pn	**Pn**	**18 46 25.5**	**+0.4**
CDVI	**St. Croix**	**3.44**	**297**	*eP*	**Pn**	**18 46 26.1**	**+0.9**
BBGH	**Gun Hill**	**3.61**	**148**	Pn	**Pn**	**18 46 28.0**	**+0.4**
BBGH	**Gun Hill**	**3.61**	**148**	*eP*	**Pn**	**18 46 27.7**	**+0.1**
BBGH				*eS*	**Sn**	**18 47 09.3**	**0.0**
GCMP	**Grenada, Carri**	**3.71**	**178**	*eP*	**Pn**	**18 46 29.5**	**+0.6**
STVI	**Saint Thomas**	**3.88**	**304**		**Pn**	**18 46 32.3**	**+1.0**
GRGR	**Grenville**	**4.06**	**181**		**Pn**	**18 46 34.0**	**+0.3**
GRGR	**Grenville**	**4.06**	**181**	*eP*	**Pn**	**18 46 34.2**	**+0.5**
CUPR	**Culebra, Puert**	**4.13**	**301**	Pn	**Pn**	**18 46 35.9**	**+1.4**
MTP	**Monte Pirata**	**4.26**	**297**	Pn	**Pn**	**18 46 37.1**	**+0.8**
HUMP	**Col San Antoni**	**4.54**	**296**		**Pn**	**18 46 40.8**	**+0.8**
CBYP	**Canovanas**	**4.60**	**297**		**Pn**	**18 46 42.6**	**+1.7**
SJG	**San Juan**	**4.79**	**294**	P	**Pn**	**18 46 44.5**	**+1.0**
	30nm,0.3s,baz=115,slow=13,SNR=14						
SJG				S	**Sn**	**18 47 38.2**	**+0.4**
	23nm,0.4s,baz=96,slow=14,SNR=4.2						
SJG				LR	LR	18 48 26.5	
	comp=Z,131nm,20.4s,baz=110,slow=36						
GCPR	**Guaynabo City**	**4.81**	**296**		**Pn**	**18 46 45.1**	**+1.4**

TOSP	**Speyside**	**4.99 168**	Pn	**Pn**	**18 46 48.8**	**+2.6**
TOSP	**Speyside**	**4.99 168**	*e*P	**Pn**	**18 46 46.7**	**+0.4**
TOSP	**Speyside**	**4.99 168**	*e*S	**Sn**	**18 47 41.6**	**-1.0**
EMPR	**Esperanza - Ma**	**5.26 296**	Pn	**Pn**	**18 46 53.5**	**+3.5**
AOPR	**Arecibo Observ**	**5.41 294**		**Pn**	**18 46 54.3**	**+2.3**
AOPR	**Arecibo Observ**	**5.41 294**	*e*P	**Pn**	**18 46 53.7**	**+1.8**
MLPR	**Magueyes Islan**	**5.54 289**		**Pn**	**18 46 54.4**	**+0.7**
TRN	**Trinidad (W)**	**5.54 179**	*e*P	**Pn**	**18 46 54.4**	**+0.6**
TRN	**Trinidad (W)**	**5.54 179**	*e*S	**Sn**	**18 47 54.5**	**-1.6**
CRPR	**Cabo Rojo, PR**	**5.61 289**		**Pn**	**18 46 55.3**	**+0.6**
AGPR	**Aguadilla, PR**	**5.76 294**	Pn	**Pn**	**18 46 57.9**	**+1.1**
PCRV	**Puerto La Cruz**	**6.71 207**	P	**Pn**	**18 47 11.5**	**+1.6**
	3.6nm,0.3s,baz=356,slow=14,SNR=2.3					
BAUV	**El Baul**	**9.61 222**	Pn	**Pn**	**18 47 49.4**	**+0.2**
BAUV	**El Baul**	**9.61 222**	*e*P	**Pn**	**18 47 49.6**	**+0.4**
BAUV	**El Baul**	**9.61 222**	*e*S	**Sn**	**18 49 30.4**	**-5.1**
SDDR	**Presa de Saban**	**9.69 288**	Pn	**Pn**	**18 47 50.3**	**0.0**
SDDR	**Presa de Saban**	**9.69 288**	*e*P	**Pn**	**18 47 50.5**	**+0.2**
SDDR	**Presa de Saban**	**9.69 288**	*e*S	**Sn**	**18 49 32.5**	**-4.8**
SDV	**Santo Domingo**	**11.47 232**	P	**Pn**	**18 48 14.2**	**-0.6**
	6.0nm,0.7s,baz=58,slow=9.2,SNR=5.1					
SDV			LR	LR	18 51 50.7	
	comp=Z,86nm,21.3s,baz=267,slow=33					
SDV	**Santo Domingo**	**11.47 232**		**Pn**	**18 48 13.0**	**-1.7**
SOCV	**Socops**	**12.03 230**	*e*P	**Pn**	**18 48 21.6**	**-0.6**
PAMC	**Pamplona, Colo**	**14.03 232**	*e*P	Pn	18 48 41.2	-7.7
MDP	**Montagnes des**	**14.09 141**	P	**Pn**	**18 48 48.7**	**-0.5**
	3.1nm,0.5s,baz=327,slow=12,SNR=4.2					
MDP			LR	LR	18 54 59.1	
	comp=Z,55nm,20.4s,baz=144,slow=40					
SJCC	**San Jacinto, C**	**14.69 246**	*e*P	**Pn**	**18 48 56.0**	**-1.0**
RUSC	**La Rusia**	**15.27 229**	*e*P	**P**	**18 49 09.2**	**+1.6**
MTDJ	**Mount Denham**	**15.40 280**	P	**Pn**	**18 49 07.2**	**+1.2**
PTBC	**PUERTO BERRIO,**	**15.88 234**	*e*P	**Pn**	**18 49 12.1**	**0.0**
HELC	**Santa Helena**	**16.94 236**	*e*P	**Pn**	**18 49 24.2**	**-1.2**
GUY2C	**Guyana, Caldas**	**17.41 233**	*e*P	**Pn**	**18 49 31.5**	**+0.2**
061Z	**Ochoppi**	**20.44 301**	P	Pn	18 50 06.5	-0.2
SOR	**Soroa**	**21.25 291**	P	**P**	**18 50 12.2**	**-0.3**
SOR			IAmb	IAmb	18 50 26.0	
	comp=Z,47nm,1.3s					
SRBA	**San Rafael, Bu**	**22.37 255**	P	**P**	**18 50 25.5**	**+0.9**
BOAB	**BOACO BROADBA**	**23.66 264**	P	**P**	**18 50 37.9**	**+0.9**
ORTG	**Ortega, Santa**	**23.97 259**	P	**P**	**18 50 39.4**	**-0.5**
ORTG			IAmb	IAmb	18 50 42.2	
	comp=Z,16nm,1.0s					
PORT	**Chimborazo Vol**	**24.45 226**	P	**P**	**18 50 47.1**	**+2.3**
BOSC	**San Juan Bosco**	**25.52 223**	P	**P**	**18 50 52.1**	**-1.9**
BOSC			IAmb	IAmb	18 50 54.8	
	comp=Z,12nm,0.4s					
TEIG	**Tepich**	**25.69 283**	P	**P**	**18 50 54.9**	**-0.5**
TEIG			IAmb	IAmb	18 51 24.9	
	comp=Z,32nm,1.2s					
BLA	**Blacksburg**	**26.76 325**	P	**P**	**18 51 04.6**	**-0.3**
BLA			IAmb	IAmb	18 51 38.8	
	comp=Z,16nm,0.8s					
U54A	**Nelsons Funny**	**27.07 322**	P	**P**	**18 51 07.4**	**-0.3**
SIV	**San Ignacio**	**32.01 179**	P	**P**	**18 51 51.7**	**+0.2**
	comp=Z,10nm,0.6s,baz=3.5,slow=7.8,SNR=34					
	comp=Z,10nm,0.6s					
LPAZ	**La Paz**	**32.94 192**	P	**P**	**18 51 59.1**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=4.5,slow=7.9,SNR=6.8					
	comp=Z,1.2nm,0.5s					
LPAZ	**La Paz**	**32.94 192**	P	**P**	**18 51 58.5**	**-1.9**
FCAR	**Ozark Folk Cen**	**33.53 312**	P	**P**	**18 52 04.5**	**-0.2**
FCAR			IAmb	IAmb	18 52 05.7	
	comp=Z,7.5nm,1.0s					
CCM	**Cathedral Cave**	**33.99 316**	P	**P**	**18 52 07.5**	**-1.1**
CCM			IAmb	IAmb	18 52 09.5	
	comp=Z,7.1nm,0.7s					
HHAR	**Hobbs**	**35.01 311**	P	**P**	**18 52 17.3**	**-0.2**
T35A	**Sooner Cattle**	**37.16 311**	P	**P**	**18 52 35.5**	**-0.3**
JCT	**Junction City**	**37.69 299**	P	**P**	**18 52 39.4**	**-1.0**
WMOK	**Wichita Mounta**	**38.06 306**	P	**P**	**18 52 42.8**	**-0.6**
WMOK			IAmb	IAmb	18 52 46.2	
	comp=Z,5.3nm,0.8s					
ECSD	**EROS Data Cent**	**40.43 320**	P	**P**	**18 53 02.7**	**-0.3**
ECSD			IAmb	IAmb	18 53 03.9	
	comp=Z,5.3nm,0.7s					
TX32	**Lajitas Array**	**40.75 296**	P	**P**	**18 53 04.9**	**-1.1**
TXAR	**Lajitas Array**	**40.75 296**	P	**P**	**18 53 05.8**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=122,slow=7.5,SNR=37					
	comp=Z,0.7nm,0.4s					
TX31	**Lajitas Ar. Si**	**40.76 296**	P	**P**	**18 53 04.5**	**-1.5**
TX31			IAmb	IAmb	18 53 08.4	
	comp=Z,9.8nm,1.1s					
MSTX	**Muleshoe**	**40.98 303**	P	**P**	**18 53 07.2**	**-0.7**
CPUP	**Villa Florida**	**42.49 174**	P	**P**	**18 53 19.3**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=358,slow=8.9,SNR=7.8					
	comp=Z,2.1nm,0.4s					
BNM	**Barren Site**	**44.14 303**	P	**P**	**18 53 33.2**	**-0.4**
SDCO	**Great Sand Dun**	**44.16 308**	P	**P**	**18 53 33.7**	**0.0**
ANMO	**Albuquerque**	**44.17 304**	P	**P**	**18 53 34.0**	**+0.2**
SBM	**South Baldy**	**44.55 302**	P	**P**	**18 53 36.0**	**-1.0**
121A	**Cookes Peak, D**	**44.78 300**	P	**P**	**18 53 39.0**	**+0.4**
121A			IAmb	IAmb	18 53 40.7	
	comp=Z,6.0nm,0.8s					
319A	**Douglas**	**45.85 298**	P	**P**	**18 53 47.6**	**+0.5**
PV15	**Paradox Valley**	**46.58 308**	P	**P**	**18 53 52.7**	**-0.1**
X18A	**Snowflake**	**46.91 302**	P	**P**	**18 53 56.2**	**+0.9**
X18A			IAmb	IAmb	18 53 57.2	
	comp=Z,6.7nm,0.7s					
WUAZ	**Wupatki**	**48.23 303**	P	**P**	**18 54 06.5**	**+0.9**
P18A	**Preston Nutter**	**48.24 309**	P	**P**	**18 54 06.3**	**+0.6**
BW06	**Boulder Array**	**48.62 313**	P	**P**	**18 54 08.7**	**+0.2**
PD31	**Pinedale Array**	**48.62 313**	P	**P**	**18 54 08.7**	**+0.2**
PD31			IAmb	IAmb	18 54 09.2	
	comp=Z,5.6nm,0.6s					
PD31			PcP	**PcP**	**18 55 31.9**	**-0.9**
PDAR	**Pinedale Array**	**48.62 313**	P	**P**	**18 54 08.8**	**+0.4**
	comp=Z,5.3nm,0.5s,baz=120,slow=10.0,SNR=64					
	comp=Z,5.3nm,0.5s					
TMUT	**Trail Mountain**	**48.88 308**	P	**P**	**18 54 11.0**	**+0.4**
TMUT			IAmb	IAmb	18 54 12.2	
	comp=Z,3.9nm,0.7s					
U15A	**North Rim**	**49.13 304**	P	**P**	**18 54 13.0**	**+0.4**
U15A			IAmb	IAmb	18 54 14.6	
	comp=Z,3.5nm,0.8s					
RLMT	**Red Lodge**	**49.19 316**	P	**P**	**18 54 13.4**	**+0.7**
RLMT			IAmb	IAmb	18 54 14.8	
	comp=Z,12nm,1.2s					
MTPU	**Mount Pierson**	**49.35 306**	P	**P**	**18 54 15.3**	**+1.0**
MTPU			IAmb	IAmb	18 54 16.2	
	comp=Z,5.6nm,1.3s					
AHID	**Auburn Hatcher**	**49.70 313**	P	**P**	**18 54 16.9**	**+0.1**
AHID			IAmb	IAmb	18 54 17.9	
	comp=Z,6.3nm,1.0s					
TPAW	**Teton Pass**	**49.81 314**	P	**P**	**18 54 18.0**	**+0.4**
TPAW			IAmb	IAmb	18 54 19.0	
	comp=Z,4.7nm,0.7s					
IMW	**Indian Meadow**	**49.92 314**	P	**P**	**18 54 18.7**	**+0.2**
YHH	**Holmes Hill**	**50.14 315**	P	**P**	**18 54 21.1**	**+1.0**
YHL	**Hebgen Lake**	**50.38 315**	P	**P**	**18 54 23.4**	**+1.4**
YHL			IAmb	IAmb	18 54 24.5	
	comp=Z,5.9nm,0.8s					
BGU	**Big Grassy Mou**	**50.62 310**	P	**P**	**18 54 24.0**	**+0.4**
BGU			IAmb	IAmb	18 54 25.0	
	comp=Z,7.0nm,1.0s					
HVU	**Hansel Valley**	**50.64 311**	P	**P**	**18 54 24.1**	**+0.4**
HVU			IAmb	IAmb	18 54 24.7	
	comp=Z,3.1nm,0.7s					
PSUT	**Pine Spring**	**50.74 307**	P	**P**	**18 54 25.5**	**+0.9**
PSUT			IAmb	IAmb	18 54 26.4	
	comp=Z,3.8nm,0.7s					
H10N3	**ASCENSION HYDR**	**52.34 114**	T	T	19 50 43.6	
	baz=297,slow=75,SNR=237					
H10N2	**ASCENSION HYDR**	**52.35 114**	T	T	19 50 43.6	
	baz=297,slow=75,SNR=261					
TPNV	**Topopah Spring**	**52.35 304**	P	**P**	**18 54 37.9**	**+1.3**
TPNV			IAmb	IAmb	18 54 39.9	
	comp=Z,4.8nm,1.1s					
H10N1	**ASCENSION HYDR**	**52.36 114**	T	T	19 50 45.1	
	baz=297,slow=75,SNR=325					
H10S3	**ASCENSION HYDR**	**52.71 115**	T	T	19 51 10.7	
	baz=295,slow=74,SNR=88					
H10S2	**ASCENSION HYDR**	**52.73 115**	T	T	19 51 12.6	
	baz=285,slow=74,SNR=25					
NVAR	**Mina Array Bea**	**54.16 306**	P	**P**	**18 54 50.7**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=91,slow=7.5,SNR=14					
	comp=Z,2.0nm,0.7s					
ESDC	**Sonseca Array**	**54.98 53**	P	**P**	**18 54 57.2**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=271,slow=6.9,SNR=16					
	comp=Z,1.6nm,0.7s					
NEW	**Newport**	**55.29 318**	P	**P**	**18 54 57.9**	**+0.2**
TIC	**Toumodi**	**56.07 93⇑**	*i*P	**P**	**18 55 04.2**	**+0.5**
	comp=Z,2.7nm,0.3s					
LIC	**Lamto**	**56.17 93⇑**	*i*P	**P**	**18 55 05.1**	**+0.7**
	comp=Z,6.9nm,0.3s					
DBIC	**Dimbokro**	**56.22 93**	P	**P**	**18 55 05.6**	**+0.8**
	comp=Z,5.7nm,0.4s,baz=268,slow=7.4,SNR=16					
	comp=Z,5.7nm,0.4s					
KIC	**Kosan Boka**	**56.41 93⇑**	*e*P	**P**	**18 55 06.8**	**+0.6**
	comp=Z,7.6nm,0.4s					
PLCA	**Paso Flores**	**57.27 188**	P	**P**	**18 55 10.8**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=8.4,slow=7.8,SNR=7.4					
	comp=Z,1.0nm,0.5s					
YKA	**Yellowknife Ar**	**59.08 334**	P	**P**	**18 55 23.9**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=125,slow=8.8,SNR=4.1					
	comp=Z,1.5nm,0.7s					
TORD	**Torodi Ar. Bea**	**61.05 84**	P	**P**	**18 55 38.8**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=282,slow=4.8,SNR=9.4					
	comp=Z,2.3nm,0.7s					
KEST	**Kesra**	**65.34 58**	P	**P**	**18 56 06.6**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=185,slow=4.7,SNR=13					
	comp=Z,5.2nm,0.6s					
NB2	**NORSAR Subarra**	**67.60 30**	P	**P**	**18 56 21.7**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=260,slow=6.5					
NOA	**NORSAR Array B**	**67.60 30**	P	**P**	**18 56 21.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=260,slow=6.4,SNR=3.2					
	comp=Z,1.1nm,0.8s					
CLL	**Collm**	**67.87 41**	*e*P	**P**	**18 56 23.0**	**+0.8**
GERES	**GERESS Array B**	**68.29 43**	P	**P**	**18 56 25.4**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=258,slow=4.0,SNR=4.6					
	comp=Z,0.3nm,0.4s					
ILAR	**Eielson Array**	**73.49 334**	P	**P**	**18 56 56.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=89,slow=4.3,SNR=7.3					
	comp=Z,0.6nm,0.5s					
FINES	**FINESS Array B**	**74.78 30**	P	**P**	**18 57 04.1**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=260,slow=7.6,SNR=5.9					
	comp=Z,2.7nm,1.0s					
PZH	**PanZhiHua**	**134.54 21**	PKP	**PKPdf**	**19 04 40.5**	**-1.7**
ASAR	**Alice Springs**	**163.70 241**	PKPab	**PKPab**	**19 06 18.2**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=120,slow=4.3,SNR=6.0					
WRA	**Warramunga Arr**	**164.45 254**	PKPab	**PKPab**	**19 06 22.6**	**0.0**
	comp=Z,0.7nm,1.0s,baz=98,slow=4.4,SNR=5.4					

DNK ***25*** *19:03:45.6±0.4, 59°.87N×19°.38E, h0km, ML2.0(UPP), Explosion*
IDC ***25*** *19:03:45.3±3.0, 59°.73N×19°.31E, h0km, mbtmp2.9/3, ML1.3/2, Error ellipse: s-maj=48.9km s-min=14.6km az=176.0*
UPP ***25*** *19:03:45.2±0.1, 59°.86N×19°.37E, h0km, ML2.0, Explosion*
HEL ***25*** *19:03:46.0±0.1, 59°.88N×19°.37E, h0km, ML1.7, ML2.0(UPP), Explosion*

ISC 25 19:03:45.4±0.8, 59°.89N±0°.03×19°.33E±0°.03, h0km, n41, σ0°79/49, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRTU	**Norrtaelje**	**0.41**	**239**	P	**Pg**	**19 03 53.2**	**0.0**
NRTU				S	**Sg**	**19 03 59.2**	**+0.7**
NRTU	**Norrtaelje**	**0.41**	**239**	P	**Pg**	**19 03 53.2**	**0.0**
NRTU				S	**Sg**	**19 03 59.2**	**+0.7**
NRTU	**Norrtaelje**	**0.41**	**239**	*e*P	**Pg**	**19 03 53.2**	**0.0**
NRTU				*e*S	**Sg**	**19 03 59.0**	**+0.5**
AAL	**Aland**	**0.44**	**49**	P	**Pg**	**19 03 53.7**	**-0.1**
AAL	**Aland**	**0.44**	**49**	*e*P	**Pg**	**19 03 53.8**	**-0.1**
GRAU	**Graesoe**	**0.60**	**319**	P	**Pg**	**19 03 57.1**	**+0.3**
GRAU	**Graesoe**	**0.60**	**319**	P	**Pg**	**19 03 57.1**	**+0.3**
GRAU	**Graesoe**	**0.60**	**319**	*i* P	**Pg**	**19 03 57.1**	**+0.3**
FORU	**Forsmark**	**0.76**	**312**	P	**Pg**	**19 04 00.1**	**+0.1**
FORU	**Forsmark**	**0.76**	**312**	P	**Pg**	**19 04 00.1**	**+0.1**
FORU	**Forsmark**	**0.76**	**312**	*i* P	**Pg**	**19 04 00.1**	**+0.1**
FLYU	**Flymyra**	**0.76**	**289**	P	**Pg**	**19 04 00.3**	**+0.3**
FLYU	**Flymyra**	**0.76**	**289**	P	**Pg**	**19 04 00.3**	**+0.3**
FLYU	**Flymyra**	**0.76**	**289**	*i* P	**Pg**	**19 04 00.3**	**+0.3**
UPP	**Uppsala**	**0.86**	**269**	P	**Pg**	**19 04 02.0**	**+0.3**
UPP	**Uppsala**	**0.86**	**269**	*i* P	**Pg**	**19 04 02.0**	**+0.3**
FIBU	**Brunna**	**1.00**	**272**	P	**Pg**	**19 04 04.3**	**-0.1**
FIBU	**Brunna**	**1.00**	**272**	P	**Pg**	**19 04 04.3**	**-0.1**
FIBU	**Brunna**	**1.00**	**272**	*e*P	**Pg**	**19 04 04.3**	**-0.1**
NYNU	**Nynaeshamn**	**1.11**	**218**	P	**Pg**	**19 04 05.8**	**-0.8**
NYNU	**Nynaeshamn**	**1.11**	**218**	P	**Pg**	**19 04 05.8**	**-0.8**
NYNU	**Nynaeshamn**	**1.11**	**218**	*e*P	**Pg**	**19 04 05.8**	**-0.8**
OSTU	**Oestervaala**	**1.15**	**288**	P	**Pg**	**19 04 07.0**	**-0.4**
OSTU	**Oestervaala**	**1.15**	**288**	P	**Pg**	**19 04 07.0**	**-0.4**
OSTU	**Oestervaala**	**1.15**	**288**	*e*P	**Pg**	**19 04 07.0**	**-0.4**
IGGU	**Iggoen**	**1.41**	**316**	P	**Pn**	**19 04 11.6**	**-0.6**
IGGU	**Iggoen**	**1.41**	**316**	P	**Pn**	**19 04 11.6**	**-0.6**
IGGU	**Iggoen**	**1.41**	**316**	*e*P	**Pn**	**19 04 11.6**	**-0.6**
ESKU	**Eskilstuna**	**1.63**	**247**	P	**Pn**	**19 04 15.4**	**+0.2**
ESKU	**Eskilstuna**	**1.63**	**247**	P	**Pn**	**19 04 15.4**	**+0.2**
ESKU	**Eskilstuna**	**1.63**	**247**	*e*P	**Pn**	**19 04 15.4**	**+0.2**
RAF	**Rauma**	**1.66**	**46**	*e*P	**Pn**	**19 04 14.9**	**-0.8**
RAF				*e*S	**Sn**	**19 04 37.1**	**-0.5**
ARNU	**Arnoeviken**	**2.05**	**333**	*e*P	**Pn**	**19 04 22.4**	**+1.4**
GOTU	**Gotland**	**2.24**	**190**	*e*P	**Pn**	**19 04 24.7**	**+1.0**
GOTU				*e*S	**Sn**	**19 04 52.2**	**+0.2**
KPF	**Kankaanpaa**	**2.37**	**33**	*e*PB	**Pn**	**19 04 27.2**	**+1.8**
KPF				*e*SG	**Sb**	**19 04 58.3**	**-0.3**
KPF				MSG		19 04 59.4	
	comp=Z,4.0nm,0.2s						
MEF	**Metsahovi**	**2.56**	**80**	*e*PB	**Pn**	**19 04 29.6**	**+1.6**
MEF				MSG		19 05 04.1	
	comp=Z,3.0nm,0.2s						
MTSE	**Matsula**	**2.58**	**115**	*e*P	**Pn**	**19 04 29.1**	**+0.8**
MTSE				*e*SB	**Sb**	**19 05 03.1**	**-1.7**
NUR	**Nurmijrvi**	**2.73**	**75**	MSG		19 05 09.6	
	comp=Z,1.5nm,0.1s						
FINES	**FINESS Array B**	**3.67**	**62**	Pn	**Pn**	**19 04 43.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=243,slow=12,SNR=9.7						
FINES				Pg	**Pb**	**19 04 52.0**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=248,slow=15,SNR=14						
FINES				Sn	**Sb**	**19 05 34.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=243,slow=26,SNR=1.8						
	comp=Z,1.3nm,0.8s						
NOA	**NORSAR Array B**	**4.18**	**290**	Pn	**Pn**	**19 04 50.1**	**-0.2**
	baz=136,slow=26,SNR=1.8						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**10.03**	**13**	Pn	**Pn**	**19 06 07.8**	**-2.7**
	comp=Z,1.7nm,0.9s,baz=195,slow=13,SNR=5.6						

TAP 25 19:09:23.0, 23°.50N×121°.33E, h24km, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHY	**Hungye**	**0.00**	**317**	*e*P	Pb	19 09 26.6	-0.5
	baz=89						
EHY				*e*S	Sb	19 09 28.6	-1.2
	baz=89						
HGSD	**Ruisui**	**0.09**	**97**	P	Pb	19 09 27.6	+0.2
	baz=98						
HGSD				S	Sb	19 09 31.1	+0.8
	baz=98						
YULB	**Yu-li**	**0.11**	**193**	P	Pb	19 09 27.3	-0.3
	baz=192						
YULB				*e*S	Sb	19 09 30.4	-0.3
	baz=192						
TWF1	**Yuli**	**0.15**	**190**	P	Pb	19 09 27.8	-0.2
	baz=187						
EGFH	**Guangfu**	**0.19**	**30**	*e*P	Pb	19 09 27.7	-0.7
	baz=30						
EGFH				*e*S	Sb	19 09 30.8	-1.3
	baz=30						
VWDT	**VWDT**	**0.30**	**326**	P	Pb	19 09 30.2	+0.3
	baz=331						
VWDT				S	Sb	19 09 34.6	0.0
	baz=331						
ESL	**Shilin**	**0.33**	**18**	P	Pb	19 09 30.2	-0.1
	baz=24						
ESL				S	Sb	19 09 34.4	-0.9
	baz=24						
YUS	**Yu-Shan**	**0.34**	**268**	*e*P	Pb	19 09 31.2	+0.3
	baz=275						
YUS				*e*S	Sb	19 09 36.6	+0.3
	baz=275						
EHD	**Haiduan**	**0.37**	**197**	P	Pb	19 09 30.3	-0.7
	baz=189						
EHD				*e*S	Sb	19 09 36.4	0.0
	baz=189						
ELDTW	**Lidau**	**0.42**	**222**	*e*P	Pb	19 09 31.9	-0.1
	baz=216						
ALS	**Alishan**	**0.48**	**271**	P	Pb	19 09 33.7	+0.7
	baz=277						
ALS				S	Sb	19 09 40.7	+0.9
	baz=277						
WUSB	**Renai**	**0.52**	**339**	P	Pb	19 09 34.0	+0.3
	baz=333						
WUSB				*e*S	Sb	19 09 39.8	-1.1
	baz=333						

JMA 25 19:09:45.0±0.1, 24°.3N±0°.4×123°.7E±0°.3, h14km±1km, MV1.7/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.11**	**46**	P	Pg	19 09 48.0	-0.1
IRIF				S	Sg	19 09 50.7	+0.4
HATJ	**Hateruma jima**	**0.25**	**145**	P	Pg	19 09 50.2	-0.2
HATJ				S	Sg	19 09 54.1	+0.1
JKRS	**Kuro-shima**	**0.33**	**94**	P	Pg	19 09 51.9	+0.1
JKRS				S	Sb	19 09 57.5	-0.4
JIJ	**Ishigaki jima**	**0.46**	**77**	P	Pg	19 09 53.9	-0.3
JIJ				S	Sg	19 10 00.6	+0.2
YOJ	**Yonaguni jima**	**0.61**	**289**	P	Pg	19 09 56.9	-0.1
YOJ				*e*S	Sg	19 10 05.5	+0.3
JYNG	**Yonagunijimaku**	**0.67**	**287**	*e*P	Pg	19 09 58.0	-0.1
JYNG				*e*S	Sg	19 10 06.9	+0.1
JISG	**Ishigakijimahi**	**0.69**	**62**	P	Pg	19 09 57.9	-0.5
JISG				S	Sb	19 10 07.9	-0.2
JTJ	**Tarama**	**1.03**	**68**	P	Pb	19 10 04.5	-0.1
JTJ				S	Sg	19 10 18.8	+0.3

IDC ***25*** *19:16:07.6±2.1, 6°.52S×148°.78E, h50km±10km, mb2.9/1, mbtmp3.3/3, ML2.8/2, Error ellipse: s-maj=79.5km s-min=15.2km az=113.0*

ISC 25 19:16:07.9±4.1, 6°.5S±0°.4×148°.7E±1°.0, h50km, n4, σ1°65/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.31**	**207**	P	**Pn**	**19 16 57.6**	**+0.2**
	14nm,0.3s,baz=6.3,slow=5.5,SNR=35						
PMG				S	**Sn**	**19 17 35.2**	**-0.3**
	37nm,0.5s,baz=193,slow=16,SNR=9.2						
	23nm,0.3s						
WRA	**Warramunga Arr**	**19.36**	**225**	P	**P**	**19 20 28.0**	**-1.5**
	0.1nm,0.3s,baz=50,slow=11,SNR=12						
WRA				pP	**pP**	**19 20 42.0**	**+1.9**
	0.4nm,0.5s,baz=51,slow=11,SNR=3.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**22.26**	**218**	P	**P**	**19 20 59.5**	**-1.5**
	0.5nm,0.6s,baz=58,slow=9.0,SNR=9.6						
ASAR				pP	**pP**	**19 21 13.3**	**+1.6**
	1.0nm,0.6s,baz=53,slow=9.6,SNR=6.9						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**146.84**	**284**	PKPbc	**PKPbc**	**19 35 45.5**	**-0.3**
	0.4nm,0.4s,baz=57,slow=4.0,SNR=12						
TORD				pPKPbc	pPKPbc	19 35 59.3	+0.2
	0.5nm,0.5s,baz=80,slow=4.8,SNR=4.6						

IDC ***25*** *19:19:43.0±0.9, 2°.15S×138°.81E, h0km, mb3.8/9, mbtmp3.9/10, ML4.0/1, MS3.6/1, Error ellipse: s-maj=43.2km s-min=17.2km az=77.0*
DJA ***25*** *19:19:45.3±0.6, 2°.5±5°.×13°.9E±°, h25km±3km, M4.1/6, mb4.1/1, MLv4.1/6*

ISC 25 19:19:46.7±0.7, 2°.03S±0°.06×138°.90E±0°.05, h29km, n17, σ1°44/22, mb3.8/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.20**	**282**	P	**Pb**	**19 19 52.2**	**-0.5**
SMPI				S	**Sb**	**19 19 57.2**	**+0.3**
GENI	**Genyem**	**1.38**	**114**	P	**Pn**	**19 20 09.8**	**-0.3**
GENI				S	**Sb**	**19 20 27.6**	**-1.6**
WAMI	**Wamena**	**1.85**	**186**	P	**Pb**	**19 20 21.0**	**+1.1**
WAMI				S	**Sb**	**19 20 45.2**	**+2.5**
SRPI	**Serui, Papua**	**2.66**	**273**	P	**Pn**	**19 20 27.3**	**-0.4**
SRPI				S	**Sn**	**19 20 59.9**	**+0.8**
RKPI	**Ransiki, Papua**	**4.75**	**276**	P	**Pn**	**19 20 54.9**	**-1.5**
FAKI	**Fak Fak**	**6.70**	**262**	P	**Pn**	**19 21 21.5**	**-1.8**
WRA	**Warramunga Arr**	**18.35**	**194**	P	**P**	**19 23 56.9**	**-2.3**
	0.5nm,0.3s,baz=17,slow=12,SNR=23						
WRA				S	Sn	19 27 06.2	-17
	0.5nm,0.8s,baz=11,slow=23,SNR=2.4						
WRA				LR	LR	19 31 31.5	
	comp=Z,186nm,19.2s,baz=61,slow=39						
	2.5nm,0.5s						
ASAR	**Alice Springs**	**22.05**	**192**	P	**P**	**19 24 38.2**	**-1.0**
	1.7nm,0.7s,baz=24,slow=9.7,SNR=26						
ASAR				S	**S**	**19 28 38.2**	**-2.9**

JHJ Hachijo jima 2 11.40 342 P **Pn 20 07 05.6 +0.1**
36nm,0.3s,baz=89,slow=21,SNR=7.9
JHJ S Sn 20 08 59.8 -11
37nm,0.4s,baz=296,slow=22,SNR=1.3
JHJ LR LR 20 11 29.1
comp=Z,50nm,19.5s,baz=74,slow=37
JMKN Mikurajimanish 12.18 343 *e*P **Pn 20 07 17.5 +1.7**
JMYK Miyake Tsubota 12.35 343 P **Pn 20 07 20.1 +2.1**
BSO1 Boso 1 12.60 349 *e*P **Pn 20 07 22.1 +1.3**
BSO3 Boso 3 12.83 348 *e*P **Pn 20 07 26.0 +1.9**
JOD2 Odawara 2 13.61 343 *e*P **Pn 20 07 34.7 +0.2**
JHU Hanno 14.12 345 P **Pn 20 07 40.8 -0.2**
JHU S **Sn 20 10 10.5 -6.1**
JAO Obara 14.18 337 *e*P **Pn 20 07 40.8 -1.1**
JYT Yasato 14.28 348 Pn **Pn 20 07 43.5 +0.5**
JYT Yasato 14.28 348 P **P 20 07 45.7 -1.1**
INU Inuyama 14.34 337 Pn **Pn 20 07 43.5 -0.4**
JRY Ryogami san 14.37 344 P **Pn 20 07 43.2 -1.1**
JMN Monobe 14.41 325 Pn **Pn 20 07 44.7 -0.2**
JGF Kuroka 14.45 338 Pn **Pn 20 07 44.8 -0.5**
JAMN Amaminishikomi 14.54 297 P **P 20 07 52.5 +2.6**
JHO Hitachi 14.58 349 P **Pn 20 07 48.1 +1.1**
JAG Ashikaga 14.62 346 P **Pn 20 07 46.7 -0.7**
JAG *e*S **Sn 20 10 22.3 -6.5**
JOW Kunigami 14.88 291 P **Pn 20 07 50.5 -0.3**
5.9nm,0.7s,baz=106,slow=19,SNR=2.6
JOW LR LR 20 11 54.0
comp=Z,61nm,21.3s,baz=149,slow=30
JOW Kunigami 14.88 291 Pn **Pn 20 07 49.9 -0.9**
JOW Kunigami 14.88 291 P **P 20 07 56.4 +2.7**
MJAR Matsushiro Arr 15.05 342 P **Pn 20 07 51.6 -1.3**
2.8nm,0.5s,baz=164,slow=11,SNR=10
MJAR S **Sn 20 10 33.6 -5.6**
1.0nm,0.5s,baz=150,slow=30,SNR=1.7
MJAR LR LR 20 13 34.4
comp=Z,24nm,20.6s,baz=168,slow=36
MAJO Matsushiro 15.05 342 P **Pn 20 07 52.9 0.0**
MAJO IAmb IAmb 20 08 01.8
comp=Z,15nm,0.5s
MJB9 Matsu-Tunnel 15.05 342 P **Pn 20 07 53.9 +0.9**
MJB9 IAmb IAmb 20 08 02.8
comp=Z,15nm,0.5s
JSU Suzuyama 15.07 310 P **Pn 20 07 53.8 +0.6**
JMM Marumori 15.77 351 P **P 20 08 03.2 -0.2**
JHS Saijyo 15.79 326 P **P 20 08 06.1 +2.3**
JSD Sado 16.44 344 **Pn 20 08 08.3 -1.8**
KSRS Korea Array 20.45 321 P **P 20 08 55.0 +0.4**
comp=Z,0.9nm,0.4s,baz=143,slow=9.5,SNR=2.0
KSRS LR LR 20 17 10.2
comp=Z,29nm,18.6s,baz=130,slow=37
KSAR Wonju Array Be 20.46 321 P Pn 20 08 58.2 +0.3
KS19 Wonju Array Si 20.51 321 P **P 20 08 56.0 +0.7**
NACB Ninganchiao 20.54 280 P **P 20 08 56.3 +0.6**
JEW Eniwo 20.62 355 P **P 20 08 55.8 -0.6**
PATS Pohnpei 20.73 136 P **P 20 08 55.7 -2.2**
YHNB Yeheng 20.75 281 P **P 20 08 58.8 +0.7**
YHNB IAmb IAmb 20 09 08.5
comp=Z,32nm,1.4s
YULB Yu-li 20.81 277 P Pn 20 09 00.6 -1.7
SSLB Suanglung 21.12 279 P **P 20 09 04.3 +2.3**
SSLB IAmb IAmb 20 09 06.8
comp=Z,20nm,0.5s
TPUB Ta-pu 21.43 277 P **P 20 09 06.6 +1.2**
H11N1 WAKE ISLAND Hy 21.66 92 T T 20 32 23.0
baz=282,slow=74
H11N2 WAKE ISLAND Hy 21.66 92 T T 20 32 16.4
baz=282
H11N3 WAKE ISLAND Hy 21.68 92 T T 20 32 33.4
baz=282,slow=74
H11S3 WAKE ISLAND Hy 21.73 96 T T 20 32 54.1
baz=284,slow=75,SNR=58
H11S1 WAKE ISLAND Hy 21.74 96 T T 20 32 54.7
baz=284,slow=75,SNR=33
H11S2 WAKE ISLAND Hy 21.75 96 T T 20 32 53.3
baz=284,slow=75,SNR=30
DAV Davao City (W) 23.20 232 LR LR 20 17 24.0
comp=Z,28nm,20.9s,baz=21,slow=34
USRK Ussuriysk Ar. 23.97 339 P **P 20 09 31.3 +1.3**
comp=Z,2.5nm,0.8s,baz=151,slow=11,SNR=2.7
comp=Z,2.5nm,0.8s
FAKI Fak Fak 27.47 206 P **P 20 10 01.1 -0.8**
FAKI IAmb IAmb 20 10 14.3
comp=Z,39nm,1.4s
KLR Kul'dur 28.57 343 P **P 20 10 12.1 +0.7**
comp=Z,4.7nm,0.7s,baz=146,slow=9.4,SNR=12
KLR pP **pP 20 10 35.6 +1.1**
comp=Z,3.9nm,0.7s,baz=148,slow=11,SNR=3.9
KLR LR LR 20 20 42.3
comp=Z,31nm,21.4s,baz=138,slow=34
comp=Z,4.7nm,0.7s
TOLI2 Tolitoli 30.75 230 P **P 20 10 31.7 +0.7**
TOLI2 IAmb IAmb 20 10 50.8
comp=Z,10nm,0.9s
LUWI Luwuk 30.97 224 P **P 20 10 31.7 -1.2**
KKM Kota Kinabalu 31.17 243 P **P 20 10 33.4 -1.4**
KKM IAmb IAmb 20 10 44.5
comp=Z,12nm,1.0s
PMG Port Moresby 31.64 174 P **P 20 10 37.1 -1.6**
PMG IAmb IAmb 20 10 39.5
comp=Z,22nm,0.8s
ENH Enshi 31.73 292 P **P 20 10 39.3 -0.3**
HHC Hu-ho-hao-te 32.91 312 *e*P **P 20 10 53.0 +3.2**
HHC pmax pmax
comp=Z,29nm,1.0s
HHC pmax pmax
comp=Z,200nm,4.9s
COEN Coen 36.00 181 P **P 20 11 17.1 +0.6**
COEN IAmb IAmb 20 11 17.7
comp=Z,12nm,0.7s
SBUM Sibu 36.48 242 P **P 20 11 22.4 +1.7**
MTN Manton Dam 37.05 201 P **P 20 11 23.5 -1.9**
MTN IAmb IAmb 20 11 26.8
comp=Z,8.9nm,1.0s
PZH PanZhiHua 38.46 285 P **P 20 11 37.8 +0.4**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,50nm,4.6s
SONM Songino Array 39.30 320 P **P 20 11 44.7 +0.5**
comp=Z,0.9nm,0.5s,baz=134,slow=7.1,SNR=5.6
SONM pP **pP 20 12 10.1 +1.7**
comp=Z,2.4nm,0.5s,baz=134,slow=9.0,SNR=5.6
comp=Z,0.9nm,0.5s
SONM Songino Array 39.30 320 P **P 20 11 45.5 +1.4**
KNRA Kununurra 40.50 203 P **P 20 11 53.7 -0.4**
KNRA IAmb IAmb 20 11 54.0
comp=Z,8.3nm,0.7s
GTA Gaotai 41.05 305 *e*P **P 20 12 01.8 +3.1**
GTA pP pP 20 12 24.5 +0.8
GTA sP sP 20 12 36.0 -0.2
GTA pmax pmax
comp=Z,3.0nm,1.1s
SEY Seymchan 41.06 6 P **P 20 11 58.4 +0.1**
comp=Z,2.2nm,0.8s,baz=220,slow=23,SNR=1.5
comp=Z,2.2nm,0.8s
CTAO Charters Tower 42.16 177 P **P 20 12 08.0 +0.3**
WB0 Warramunga Arr 42.78 193 P **P 20 12 12.2 -0.6**
WB0 IAmb IAmb 20 12 14.8
comp=Z,5.3nm,0.4s
WR0 Warramunga Arr 42.94 193 P **P 20 12 13.4 -0.6**
WRAB Tennant Creek 42.95 193 P **P 20 12 14.1 0.0**
WRAB IAmb IAmb 20 12 15.8
comp=Z,9.2nm,0.7s
WB2 Warramunga Arr 42.96 193 P **P 20 12 13.8 -0.4**
WB2 IAmb IAmb 20 12 16.0
comp=Z,6.8nm,0.7s
WRA Warramunga Arr 42.96 193 P **P 20 12 13.8 -0.4**
comp=Z,3.6nm,0.3s,baz=15,slow=8.5,SNR=146
WRA PcP **PcP 20 14 02.3 -0.5**
comp=Z,1.7nm,0.6s,baz=9.4,slow=3.5,SNR=6.4
WRA ScP **ScP 20 17 41.8 -1.9**
comp=Z,1.5nm,0.9s,baz=9.9,slow=3.6,SNR=6.9
WRA S **S 20 18 25.7 -5.5**
comp=Z,0.3nm,0.9s,baz=5.5,slow=14,SNR=1.3
WRA LR LR 20 28 08.9
comp=Z,65nm,21.1s,baz=316,slow=33
comp=Z,3.6nm,0.3s
WRA Warramunga Arr 42.96 193 P **P 20 12 13.1 -1.1**
UGM Wanagama 44.34 231 P **P 20 12 25.5 +0.1**
GOMU GeErMu 44.54 299 P **P 20 12 29.8 +2.5**
GOMU pP pP 20 12 53.0 +0.7
GOMU pmax pmax
comp=Z,8.0nm,0.5s
GOMU pmax pmax
comp=Z,56nm,4.0s

KULM Kulim 45.01 255 P **P 20 12 31.4 +0.6**
KULM IAmb IAmb 20 13 04.3
comp=Z,24nm,1.4s
AS31 Alice Springs 46.66 193 P **P 20 12 43.4 -0.2**
ASAR Alice Springs 46.66 193 P **P 20 12 43.4 -0.2**
comp=Z,2.2nm,0.6s,baz=16,slow=8.1,SNR=53
ASAR pP **pP 20 13 08.7 -0.3**
comp=Z,0.7nm,0.6s,baz=13,slow=5.7,SNR=1.7
ASAR PcP **PcP 20 14 15.8 +0.2**
comp=Z,0.9nm,0.7s,baz=34,slow=3.4,SNR=5.4
ASAR ScP **ScP 20 17 56.9 -2.0**
comp=Z,0.3nm,0.7s,baz=8.6,slow=4.3,SNR=4.3
ASAR S S 20 19 12.9 -12
comp=Z,0.5nm,0.9s,baz=24,slow=14,SNR=2.0
ASAR LR LR 20 32 11.1
comp=Z,60nm,18.4s,baz=268,slow=36
comp=Z,2.2nm,0.6s
ASAR Alice Springs 46.66 193 P **P 20 12 43.1 -0.5**
ASAR PcP **PcP 20 14 15.4 -0.2**
EIDS Eidsvold 47.86 171 P **P 20 12 51.6 -1.2**
EIDS IAmb IAmb 20 12 52.8
comp=Z,6.7nm,0.6s
MBWA Marble Bar 49.15 210 P **P 20 13 02.0 -0.8**
MBWA IAmb IAmb 20 13 04.4
comp=Z,8.5nm,0.8s
DZM Mont Dzumac 49.26 152 P **P 20 13 03.5 -0.2**
DZM IAmb IAmb 20 13 06.1
comp=Z,14nm,0.8s
PSA00 Pilbara Seismi 49.46 210 P **P 20 13 05.5 +0.5**
PSA00 IAmb IAmb 20 13 06.7
comp=Z,5.6nm,0.9s
PSA00 Pilbara Seismi 49.46 210 P **P 20 13 05.7 +0.7**
PSA00 IAmb IAmb 20 13 06.7
comp=Z,13nm,0.9s
GSI Gunungsitoli 49.56 252 P **P 20 13 06.2 +0.1**
OUENC Ouen Island, N 49.74 152 P **P 20 13 09.6 +2.4**
TIXI Tiksi 50.16 354 P **P 20 13 09.8 +0.1**
comp=Z,0.5nm,0.5s,baz=270,slow=20,SNR=2.0
TIXI pP **pP 20 13 36.3 +1.3**
comp=Z,0.9nm,0.4s,baz=270,slow=23,SNR=3.5
comp=Z,0.5nm,0.5s
WMQ Urumqi 50.70 309 *e*P **P 20 13 17.3 +2.9**
MSVF Nonsavu 51.96 137 P **P 20 13 26.7 +2.6**
ARMA Armidale 52.91 172 P **P 20 13 30.8 0.0**
GIRL Giralia 53.14 215 P **P 20 13 34.2 +1.7**
STKA Stephens Creek 53.87 182 P **P 20 13 37.0 -0.7**
comp=Z,10nm,0.4s,baz=0.9,slow=7.8,SNR=46
comp=Z,10nm,0.4s
STKA Stephens Creek 53.87 182 P **P 20 13 36.5 -1.3**
STKA IAmb IAmb 20 13 38.5
comp=Z,2.8nm,0.5s
ZALV Zalesovo Beam 54.16 321 P **P 20 13 39.3 -0.3**
comp=Z,1.4nm,0.6s,baz=108,slow=7.7,SNR=6.9
ZALV pP **pP 20 14 04.0 -1.2**
comp=Z,2.2nm,0.4s,baz=102,slow=7.5,SNR=6.1
ZALV PcP **PcP 20 14 42.1 -0.6**
comp=Z,1.8nm,0.5s,baz=111,slow=5.0,SNR=4.0
ZALV pPcP 20 15 08.8
comp=Z,0.9nm,0.5s,baz=109,slow=3.4,SNR=1.7
comp=Z,1.4nm,0.6s
ZALV Zalesovo Beam 54.16 321 P **P 20 13 39.3 -0.3**
ZALV PcP **PcP 20 14 41.8 -1.0**
MK31 Makanchi Array 54.77 312 P **P 20 13 44.7 +0.5**
MK31 PcP **PcP 20 14 44.9 -0.5**
MKAR Makanchi Array 54.77 312 P **P 20 13 44.7 +0.4**
comp=Z,1.0nm,0.4s,baz=88,slow=8.2,SNR=17
MKAR pP **pP 20 14 08.2 -1.8**
comp=Z,4.4nm,0.9s,baz=90,slow=9.7,SNR=8.0
MKAR PcP **PcP 20 14 44.7 -0.7**
comp=Z,2.8nm,0.5s,baz=79,slow=3.8,SNR=12
MKAR pPcP 20 15 13.2
comp=Z,0.6nm,0.6s,baz=83,slow=5.9,SNR=0.9
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 54.77 312 P **P 20 13 45.1 +0.9**
FORT Forrest 54.87 197 P **P 20 13 44.6 -0.4**
FORT PcP **PcP 20 14 44.0 -1.8**
MAKZ Makanchi 54.99 312 P **P 20 13 46.4 +0.6**
MAKZ IAmb IAmb 20 14 18.3
comp=Z,6.0nm,0.8s
BBOO Buckleboo 55.26 188 P **P 20 13 47.2 -0.5**
BBOO IAmb IAmb 20 14 12.7
comp=Z,16nm,1.3s
KDAK Kodiak Island 57.39 35 P **P 20 14 02.8 +0.2**
comp=Z,1.8nm,0.5s,baz=240,slow=14,SNR=1.6
comp=Z,1.8nm,0.5s
KDAK Kodiak Island 57.39 35 P **P 20 14 04.2 +1.6**
CAN Canberra 57.47 175 P **P 20 14 03.7 +0.3**
KURK Kurchatov 57.48 317 P **P 20 14 03.7 +0.3**
KURK IAmb IAmb 20 14 31.2
comp=Z,9.3nm,1.2s
MORW Morawa 57.64 209 P **P 20 14 04.7 0.0**
NRIK Noril'sk 57.68 340 P **P 20 14 05.9 +1.4**
comp=Z,2.5nm,0.4s,baz=140,slow=6.1,SNR=1.9
comp=Z,2.5nm,0.4s
K20K Telida 57.88 28 P **P 20 14 06.9 +0.9**
K20K IAmb IAmb 20 14 41.5
comp=Z,13nm,1.4s
J20K Nowinta River 58.06 27 P **P 20 14 08.3 +1.1**
J20K IAmb IAmb 20 14 13.9
comp=Z,17nm,1.4s
BRLK Bradley Lake 58.60 33 P **P 20 14 11.3 +0.2**
CAPN Captain Cook N 58.65 31 P **P 20 14 12.2 +0.9**
SKT Skwentna 58.70 30 P **P 20 14 12.3 +0.6**
SKT IAmb IAmb 20 14 49.0
comp=Z,10nm,1.4s
IMAR Indian Mountai 58.72 25 P **P 20 14 13.1 +1.4**
CAST Castle Rocks 58.76 28 P **P 20 14 12.7 +0.6**
CAST IAmb IAmb 20 14 41.4
comp=Z,6.4nm,1.1s
H21K Melozitna Rive 59.00 26 P **P 20 14 15.3 +1.6**
H21K IAmb IAmb 20 14 42.7
comp=Z,9.3nm,1.2s
BPAW Bear Paw Mtn. 59.39 28 P **P 20 14 18.1 +1.6**
BPAW IAmb IAmb 20 14 52.3
comp=Z,3.2nm,0.6s
TOO Toolangi 59.53 178 P **P 20 14 17.1 -0.6**
TOO IAmb IAmb 20 14 53.2
comp=Z,12nm,1.2s
TRF Thorofare Moun 59.56 28 P **P 20 14 18.4 +0.7**
TRF IAmb IAmb 20 14 57.4
comp=Z,11nm,1.1s
PWL Port Wells 60.02 32 P **P 20 14 21.4 +0.6**
PWL IAmb IAmb 20 15 05.5
comp=Z,12nm,1.2s
I23K Minto, Yukon-K 60.29 27 P **P 20 14 24.9 +2.4**
NWAO Narrogin (SRO) 60.48 206 P **P 20 14 24.4 +0.2**
TOLK Toolik Lake Re 60.97 23 P **P 20 14 29.2 +2.1**
TOLK IAmb IAmb 20 15 03.0
comp=Z,9.5nm,1.2s
ILAR Eielson Array 61.26 27 P **P 20 14 29.1 -0.1**
comp=Z,0.5nm,0.6s,baz=256,slow=4.9,SNR=12
ILAR pP **pP 20 14 55.6 +0.1**
comp=Z,1.2nm,0.8s,baz=254,slow=5.7,SNR=5.4
comp=Z,0.5nm,0.6s
ILAR Eielson Array 61.26 27 P **P 20 14 28.9 -0.3**
GLB Gilahina Butte 62.27 31 P **P 20 14 36.9 +0.9**
GLB IAmb IAmb 20 15 14.8
comp=Z,9.9nm,1.5s
NIL Nilore 62.32 297 P **P 20 14 37.8 +0.9**
NIL IAmb IAmb 20 15 11.2
comp=Z,6.7nm,0.8s
BMAR Burnt Mountain 62.58 24 P **P 20 14 39.7 +1.7**
BRVK Borovoye 62.71 319 P **P 20 14 39.3 +0.3**
BRVK IAmb IAmb 20 15 11.8
comp=Z,11nm,0.7s
KKAR Karatay Array 63.19 308 P **P 20 14 42.8 +0.3**
KKAR IAmb IAmb 20 15 15.8
comp=Z,5.2nm,0.8s
BCAR Beaver Creek A 63.32 29 P **P 20 14 44.0 +1.1**
CHGR Chuyangaron 64.80 303 P **P 20 14 53.2 +0.1**
INK Inuvik 66.81 24 P **P 20 15 05.8 +0.5**
comp=Z,1.3nm,0.6s,baz=321,slow=4.3,SNR=5.0
INK pP **pP 20 15 32.6 +0.5**
comp=Z,2.0nm,0.8s,baz=244,slow=14,SNR=2.9
comp=Z,1.3nm,0.6s
INK Inuvik 66.81 24 P **P 20 15 06.1 +0.8**
URZ Urewera 67.82 152 P **P 20 15 11.4 -0.6**
NNZ Nelson 68.85 157 P **P 20 15 17.7 -0.7**
BFZ Birch Farm 69.50 154 P **P 20 15 21.8 -0.7**
ABKAR Akbulak array 69.57 316 P **P 20 15 22.9 0.0**
ABKAR IAmb IAmb 20 15 23.6
comp=Z,5.3nm,0.6s
ABKAR Akbulak array 69.57 316 P **P 20 15 22.8 -0.2**
MSWZ Moikau Station 69.73 155 P **P 20 15 22.7 -1.1**
PLWZ Palliser 69.86 155 P **P 20 15 23.5 -1.2**

DCZ Deep Cove 70.66 163 P **P 20 15 29.0 -0.4**
DCZ IAmb IAmb 20 15 57.4
comp=Z,25nm,1.4s
GEYT Alibeck 73.44 305 P **P 20 15 45.7 -0.7**
comp=Z,1.4nm,0.7s,baz=35,slow=5.3,SNR=3.9
comp=Z,1.4nm,0.7s
EUNU Eureka 74.46 8 P **P 20 15 52.4 +0.7**
EUNU IAmb IAmb 20 16 26.5
comp=Z,5.8nm,0.8s
YKA Yellowknife Ar 75.67 28 P **P 20 15 59.3 +0.5**
comp=Z,0.8nm,0.5s,baz=291,slow=5.9,SNR=2.7
comp=Z,0.8nm,0.5s
PINE Pine Mountain 78.53 47 P **P 20 16 17.8 +2.3**
PINE IAmb IAmb 20 16 18.4
comp=Z,9.7nm,0.8s
ARCES ARCESS Array B 78.58 342 P **P 20 16 14.8 -0.2**
comp=Z,3.7nm,0.8s,baz=68,slow=7.3,SNR=11
comp=Z,3.7nm,0.8s
ARCES ARCESS Array B 78.58 342 P **P 20 16 15.2 +0.2**
K05A Summer Lake 78.93 48 P **P 20 16 19.7 +2.0**
K05A IAmb IAmb 20 16 20.1
comp=Z,8.5nm,1.0s
NEW Newport 79.45 42 P **P 20 16 21.2 +1.0**
CMB Columbia Colle 80.93 53 P **P 20 16 29.5 +1.1**
PNTR Pine Nut 81.13 51 P **P 20 16 31.1 +1.5**
PNTR IAmb IAmb 20 16 31.5
comp=Z,19nm,1.4s
NVAR Mina Array Bea 82.31 52 P **P 20 16 37.0 +1.2**
comp=Z,2.9nm,0.7s,baz=275,slow=5.6,SNR=10
comp=Z,2.9nm,0.7s
KBZ Khabaz 82.42 314 P **P 20 16 36.1 +0.2**
comp=Z,5.8nm,0.8s,baz=119,slow=2.8,SNR=10
comp=Z,5.8nm,0.8s
FIA1 FINESS Array S 82.94 335 P **P 20 16 37.8 -0.5**
FIA1 IAmb IAmb 20 17 10.2
comp=Z,21nm,1.2s
FINES FINESS Array B 82.94 335 P **P 20 16 37.5 -0.7**
comp=Z,3.5nm,0.4s,baz=67,slow=5.1,SNR=40
FINES pP **pP 20 17 04.8 -1.1**
comp=Z,1.7nm,0.4s,baz=69,slow=4.8,SNR=1.7
comp=Z,3.5nm,0.4s
BCYI Bear Canyon 83.37 45 P **P 20 16 42.7 +1.5**
QSM Queen of Sheba 84.32 54 P **P 20 16 46.9 +1.0**
GWY Greenwater Val 84.38 53 P **P 20 16 47.0 +0.6**
IMW Indian Meadow 85.15 44 P **P 20 16 51.8 +1.5**
RLMT Red Lodge 85.67 43 P **P 20 16 53.7 +1.0**
RLMT IAmb IAmb 20 16 56.2
comp=Z,5.1nm,0.6s
HWUT Hardware Ranch 85.75 47 P **P 20 16 53.7 +0.6**
PDAR Pinedale Array 86.56 45 P **P 20 16 57.2 0.0**
comp=Z,0.2nm,0.4s,baz=242,slow=3.2,SNR=4.1
PDAR pP **pP 20 17 26.5 +1.4**
comp=Z,0.4nm,0.8s,baz=229,slow=5.5,SNR=1.9
comp=Z,0.2nm,0.4s
AKASG Malin Array Be 87.41 325 P **P 20 16 59.1 -1.6**
comp=Z,0.8nm,0.5s,baz=50,slow=5.2,SNR=6.6
comp=Z,0.8nm,0.5s
HFS Hagfors 88.45 337 P **P 20 17 03.8 -1.8**
comp=Z,0.9nm,0.4s,baz=90,slow=3.4,SNR=11
HFS pP **pP 20 17 31.9 -1.5**
comp=Z,2.2nm,0.5s,baz=87,slow=6.1,SNR=1.3
comp=Z,0.9nm,0.4s
NB2 NORSAR Subarra 88.64 339 P pP 20 17 37.5 +3.1
comp=Z,1.2nm,0.6s,baz=43,slow=5.1
NOA NORSAR Array B 88.64 339 P **P 20 17 04.5 -2.0**
comp=Z,0.7nm,0.6s,baz=45,slow=4.4,SNR=2.2
comp=Z,0.7nm,0.6s
BRTR Keskin Array B 90.40 314 P **P 20 17 14.2 -1.1**
comp=Z,1.4nm,0.7s,baz=84,slow=3.0,SNR=6.1
BRTR pP **pP 20 17 43.8 +0.3**
comp=Z,1.4nm,0.8s,baz=101,slow=2.7,SNR=4.2
comp=Z,1.4nm,0.7s
CLL Collm 95.00 332 *e*P **P 20 17 36.0 0.0**
CLL *e*PP **PP 20 21 26.0 +0.1**
TXAR Lajitas Array 97.23 54 P Pdif 20 17 47.2 +0.4
comp=Z,0.2nm,0.8s,baz=292,slow=5.5,SNR=2.4
comp=Z,0.2nm,0.8s
TORD Torodi Ar. Bea 128.86 310 PKP **PKPdf 20 23 21.1 -0.2**
comp=Z,0.6nm,0.4s,baz=45,slow=1.5,SNR=17
TORD pPKP **pPKPdf 20 23 50.8 +0.2**
comp=Z,0.8nm,0.9s,baz=0.3,slow=2.5,SNR=3.7
PLCA Paso Flores 145.66 130 PKPbc **PKPab 20 23 52.7 +0.2**
comp=Z,13nm,0.6s,baz=36,slow=6.8,SNR=3.2
LPAZ La Paz 149.28 85 PKP **PKPdf 20 23 58.4 -0.4**
comp=Z,1.3nm,0.4s,baz=270,slow=3.1,SNR=2.5
LPAZ PKPbc **PKPbc 20 24 03.3 0.0**
comp=Z,7.9nm,0.5s,baz=302,slow=1.7,SNR=4.4

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*VIE **25** 20:05:53.8±1.1,47°.89N×8°.56E,h11km,mb1.8/2,ml1.8/5, Error ellipse: s-maj=13.1km s-min=2.2km az=40.0 26 km NW of Hohentwiel*
*LDG **25** 20:05:54.2±0.0,48°.50N×9°.00E,h11km,Ml2.0/11,Error ellipse: s-maj=0.8km s-min=0.7km az=30.0*
STR 25 20:05:54.0±0.3,48°N±2°×±°,h12km±4km,MLv1.7/19, 1C-4D,Error ellipse: s-maj=0.0km s-min=0.0km az=167.5,preliminary,Germany

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUT	**Gutenstein**	**0.43**	**169**	Sg		Sg	20 06 08.6	+0.5
GUT	**Gutenstein**	**0.43**	**169**	↓Pg		Pg	20 06 02.7	+0.2
OPP	**Oppenau**	**0.54**	**271**	↑Pg		Pg	20 06 04.6	+0.1
OPP	**Oppenau**	**0.54**	**271**	Sg		Sg	20 06 11.7	+0.2
SLE	**Schleitheim**	**0.80**	**205**	Sg		Sg	20 06 19.7	-0.2
SLE	**Schleitheim**	**0.80**	**205**	↓Pg		Pg	20 06 09.4	-0.1
KIZ	**Kirchzarten**	**0.90**	**234**	Pg		Pg	20 06 10.6	-0.7
KIZ	**Kirchzarten**	**0.90**	**234**	Pn		Pg	20 06 11.2	0.0
KIZ	**Kirchzarten**	**0.90**	**234**	Sg		Sg	20 06 22.3	-0.6
FELD	**Feldberg im Sc**	**0.90**	**227**	Pg		Pg	20 06 10.6	-0.8
FELD	**Feldberg im Sc**	**0.90**	**227**	Pn		Pg	20 06 11.4	0.0
FELD	**Feldberg im Sc**	**0.90**	**227**	Sg		Sg	20 06 22.7	-0.5
WLS	**Welschbruch**	**1.09**	**267**	↓Pg		Pb	20 06 14.8	-0.1
WLS						Sg	20 06 29.4	+0.1
SULZ	**Cheisacher**	**1.13**	**212**	Pg		Pb	20 06 15.5	0.0
SULZ	**Cheisacher**	**1.13**	**212**	Sg		Sg	20 06 30.4	-0.1
CDF	**Champ du Feu**	**1.15**	**267**	*e*Pg		Pn	20 06 15.9	-0.1
CDF				*e*Sg		Sb	20 06 30.6	-0.1
	4.5nm,0.2s							
ECH	**Echery**	**1.25**	**258**	Pg		Pn	20 06 15.2	-2.2
MOF	**Molkenrain**	**1.40**	**243**	Pg		Pg	20 06 20.6	-0.2
RETA	**Reutte**	**1.56**	**130**	*e*Pn		Pn	20 06 21.6	0.0
	0.2nm,0.1s							
RETA				Sn		Sb	20 06 42.5	-0.1
	2.0nm,0.3s							
HINF	**Hinteralfeld**	**1.58**	**246**	*e*Pg		Pg	20 06 23.9	-0.5
HINF				*e*Sg		Sg	20 06 44.3	-0.6
	1.1nm,0.3s							
BOURR	**Bourrignon**	**1.61**	**228**	Pn		Pg	20 06 24.7	-0.2
BOURR	**Bourrignon**	**1.61**	**228**	Sn		Sb	20 06 45.0	+0.8
RONF	**Ronchamp**	**1.75**	**244**	↓Pn		Pg	20 06 27.2	-0.5
MOTA	**Moosalm**	**1.83**	**128**	Pn		Pn	20 06 24.7	-0.7
	0.2nm,0.2s							
MOTA				*e*Sg		Sg	20 06 52.5	-0.2
	0.9nm,0.1s							
HAU	**Haudompre**	**1.83**	**256**	*e*Pg		Pg	20 06 28.5	-0.6
HAU				*e*Sg		Sg	20 06 52.1	-0.8
	1.5nm,0.2s							
FETA	**Feichten**	**1.88**	**141**	Sg		Sb	20 06 51.3	-0.6
SQTA	**Sankt Quirin**	**1.96**	**130**	Sg		Sg	20 06 56.6	-0.4
	0.7nm,0.1s							
WATA	**Walderalm**	**2.09**	**123**	Sg		Sg	20 07 02.1	+1.1
	1.0nm,0.2s							
PAGF	**Fort de Pagny**	**2.17**	**273**	*e*Pg		Pg	20 06 34.6	-1.0
PAGF				*e*Sg		Sg	20 07 02.7	-1.1
	2.0nm,0.3s							
MEZF	**Maizieres J'vi**	**2.62**	**272**	*e*Pg		Pg	20 06 42.8	-1.4
MEZF				*e*Sg		Sg	20 07 16.6	-1.5
	1.3nm,0.2s							
SFTF	**Sexfontaines**	**2.65**	**265**	*e*Pn		Pn	20 06 35.4	-1.2
SFTF	**Sexfontaines**	**2.65**	**265**	*e*Pg		Pg	20 06 43.6	-1.2
SFTF				*e*Sn		Sn	20 07 05.4	-3.3
	1.5nm,0.2s							
SFTF				*e*Sg		Sg	20 07 17.8	-1.4
	1.1nm,0.2s							
CABF	**La Chapelle**	**2.72**	**227**	*e*Pn		Pn	20 06 36.2	-1.4
CABF	**La Chapelle**	**2.72**	**227**	*e*Pg		Pg	20 06 45.0	-1.1
CABF				*e*Sn		Sn	20 07 06.9	-3.6
	0.9nm,0.3s							
CABF				*e*Sg		Sg	20 07 20.0	-1.4
	1.0nm,0.3s							
LOR	**Lormes**	**3.66**	**252**	*e*Pg		Pg	20 07 02.2	-2.0
	baz=70							
LOR				*e*Sg		Sg	20 07 49.4	-2.2
	0.9nm,0.2s,baz=70							

MAN 25 20:14:54.9, 5°.77N×125°.73E, h127km, mb4.1, ML2.9, MS2.5, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.34**	**357**	⇓*e*P	Pn	20 15 13.7	+0.9
DDMP				*e*S	Sn	20 15 28.6	+2.2
GSPH	**General Santos**	**0.84**	**292**	*i* P	Pn	20 15 16.1	-0.1
GSPH				*i* S	Sn	20 15 32.6	+0.3
MATI	**Mati**	**1.28**	**24**	⇓*e*P	Pn	20 15 20.6	+0.2
MATI				*e*S	Sn	20 15 39.6	-0.3
KCP	**Kidapawan**	**1.39**	**333**	⇓*e*P	Pn	20 15 21.9	+0.2
KCP				*i* S	Sn	20 15 42.3	+0.4
SKMP	**Bagumbayan, Su**	**1.40**	**302**	⇑*e*P	Pn	20 15 22.1	+0.4
BIPH	**Bislig**	**2.48**	**15**	⇑*e*P	Pn	20 15 36.3	+1.6
BIPH				*e*S	Sn	20 16 05.8	+0.4

TAP ***25*** *20:30:32.0, 22°.71N×122°.30E, h60km, ML2.8, D*
JMA ***25*** *20:30:32.6±0.4, 23°.N±2°.×122°.7E±0°.8, h0km, MV2.3/12, FAR S OFF ISHIGAKIJIMA*

ISC 25 20:30:28.3±1.3, 22°.65N±0°.04×122°.39E±0°.03, h16km±10km, n86, σ1°.23/110, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.85**	**272**	*e*P	**Pn**	**20 30 46.1**	**+0.5**
LDUT	baz=275			*e*S	**Sb**	**20 30 55.9**	**0.0**
LAY	**Lan-yu**	**0.99**	**232**	*e*P	**Pn**	**20 30 48.6**	**+1.1**
LYUB	baz=231			*e*S	**Sg**	**20 31 00.2**	**-0.3**
EDH	**Donghe**	**1.05**	**288**	*i* P	**Pn**	**20 30 49.1**	**+0.8**
EDH	baz=229			*i* S	**Sb**	**20 31 01.7**	**0.0**
ECBN	**Changbin**	**1.09**	**307**	*e*P	**Pb**	**20 30 48.3**	**-0.5**
FULB	**Fuli**	**1.15**	**298**	*e*P	**Pb**	**20 30 50.0**	**+0.2**
FULB	baz=294			*e*S	**Sb**	**20 31 03.4**	**-1.1**
ECS	**Chishang**	**1.17**	**292**	*e*P	**Pg**	**20 30 51.1**	**+0.2**
ECS	baz=292			*e*S	**Sb**	**20 31 05.3**	**+0.3**
LONT	**Longtian**	**1.19**	**282**	*e*P	**Pg**	**20 30 52.2**	**+0.8**
LONT	baz=281			*e*S	**Sn**	**20 31 06.3**	**+0.2**
EHD	**Haiduan**	**1.20**	**294**	*e*P	**Pb**	**20 30 50.2**	**-0.5**
EYUL	**Yuli**	**1.21**	**305**	P	**Pn**	**20 30 51.1**	**+0.7**
HGSD	**Ruisui**	**1.22**	**313**	*e*P	**Pn**	**20 30 50.8**	**+0.1**
HGSD	baz=314			*e*S	**Sb**	**20 31 03.8**	**-2.7**
TWGBT	**Beinan**	**1.22**	**278**	*e*P	**Pg**	**20 30 52.4**	**+0.5**
TWGBT	baz=279			*e*S	**Sg**	**20 31 06.7**	**-1.3**
TWF1	**Yuli**	**1.23**	**305**	*e*P	**Pn**	**20 30 51.3**	**+0.6**
TWG	**Pinlang**	**1.23**	**278**	*e*P	**Pg**	**20 30 52.4**	**+0.3**
TWG	baz=279			*e*S	**Sb**	**20 31 06.6**	**-0.2**
YULB	**Yu-li**	**1.25**	**306**	*e*P	**Pn**	**20 30 51.8**	**+0.8**
EHY	**Hungye**	**1.30**	**311**	*e*P	**Pn**	**20 30 52.4**	**+0.6**
EHY	baz=317			S	**Sb**	**20 31 08.1**	**-0.8**
ECL	**Taimali**	**1.33**	**268**	*e*P	**Pg**	**20 30 53.6**	**-0.4**
ECL	baz=275			*e*S	**Sb**	**20 31 08.5**	**-1.2**
EGFH	**Guangfu**	**1.35**	**319**	*i* P	**Pn**	**20 30 53.3**	**+0.9**
ELDTW	**Lidau**	**1.38**	**293**	*i* P	**Pn**	**20 30 53.7**	**+0.8**
TAWH	**Dawu Township**	**1.43**	**258**	P	**Pg**	**20 30 55.5**	**-0.3**
EAST	**Anshuo**	**1.46**	**260**	*e*P	**Pg**	**20 30 55.9**	**-0.4**
EAST	baz=265			S	**Sb**	**20 31 12.8**	**-0.5**
ESL	**Shilin**	**1.46**	**323**	*e*P	**Pb**	**20 30 55.7**	**+0.7**
SLIU	**Shizi**	**1.54**	**254**	*i* P	**Pg**	**20 30 57.2**	**-0.7**
ETM	**Tongmen**	**1.55**	**328**	*e*P	**Pn**	**20 30 56.9**	**+1.7**
YUS	**Yu-Shan**	**1.57**	**302**	*i* P	**Pn**	**20 30 57.3**	**+1.4**
SMST	**Manzhou Townsh**	**1.57**	**247**	*e*P	**Pg**	**20 30 58.0**	**-0.6**
SMST	baz=237			*i* S	**Sn**	**20 31 15.5**	**0.0**
STYH	**Taoyuan**	**1.58**	**289**	P	**Pn**	**20 30 56.9**	**+1.3**
VWDT	**VWDT**	**1.59**	**314**	*e*P	**Pn**	**20 30 57.4**	**+1.7**
VWDT	baz=321			*e*S	**Sn**	**20 31 15.5**	**-0.4**
STYT	**Tauyuan**	**1.59**	**289**	*e*P	**Pb**	**20 30 57.9**	**+0.6**
STYT	baz=288			*e*S	**Sn**	**20 31 16.0**	**-0.1**
TSMG	**Majia**	**1.62**	**272**	*e*P	**Pb**	**20 30 58.3**	**+0.6**
TWKBT	**Hengchun**	**1.63**	**244**	*e*P	**Pg**	**20 30 59.8**	**+0.2**
MASBT	**Mashibuluo**	**1.63**	**269**	*e*P	**Pb**	**20 30 58.3**	**+0.4**
SSD	**Sandimen**	**1.63**	**274**	*e*P	**Pb**	**20 30 58.3**	**+0.4**
TWK1	**Hengchun**	**1.63**	**245**	*e*P	**Pg**	**20 30 59.9**	**+0.2**
TWK1	baz=241			*e*S	**Sb**	**20 31 18.1**	**-0.2**
HEN	**Hengchun**	**1.66**	**248**	*e*S	**Sb**	**20 31 18.6**	**-0.6**
SCZT	**Fangliau**	**1.66**	**261**	*e*P	**Pg**	**20 30 59.8**	**-0.5**
NACB	**Ninganchiao**	**1.68**	**334**	*e*P	**Pn**	**20 30 59.0**	**+2.0**
ALS	**Alishan**	**1.69**	**301**	*e*P	**Pb**	**20 30 59.8**	**+0.6**
OWD	**Renai**	**1.71**	**319**	*e*P	**Pn**	**20 30 59.2**	**+1.6**
SGST	**Jiashian**	**1.72**	**285**	P	**Pb**	**20 31 00.0**	**+0.4**
SSLB	**Suanglung**	**1.74**	**311**	*e*P	**Pn**	**20 30 59.3**	**+1.5**
WTP	**Ta-pu**	**1.74**	**290**	*e*P	**Pb**	**20 31 01.2**	**+1.2**
TPUB	**Ta-pu**	**1.75**	**292**	*e*P	**Pb**	**20 31 01.1**	**+1.1**
WHYT	**Xinyi Township**	**1.76**	**307**	*e*P	**Pb**	**20 31 00.2**	**+0.1**
ETLH	**Xiulin Townshi**	**1.76**	**332**	*e*P	**Pn**	**20 30 59.2**	**+1.1**
SCST	**Cishan**	**1.77**	**278**	*e*P	**Pb**	**20 31 01.2**	**+0.9**
WUSB	**Renai**	**1.78**	**319**	*e*P	**Pn**	**20 31 00.1**	**+1.7**
CHGB	**Renai**	**1.79**	**322**	*e*P	**Pn**	**20 31 00.4**	**+1.6**
CHGB	baz=323			*e*S	**Sn**	**20 31 20.4**	**-0.9**
CHN1	**Nanshi**	**1.80**	**287**	*e*P	**Pg**	**20 31 02.2**	**-0.7**
WHF	**Hehuan Shan**	**1.81**	**325**	P	**Pn**	**20 31 00.2**	**+1.1**
WCKO	**Fanlu**	**1.82**	**296**	*e*P	**Pb**	**20 31 01.7**	**+0.4**
SNST	**Tainan City**	**1.84**	**288**	*e*P	**Pg**	**20 31 04.5**	**+0.9**
SMLT	**Sun Moon Lake**	**1.84**	**312**	*e*P	**Pb**	**20 31 01.6**	**0.0**
JYNG	**Yonagunijimaku**	**1.86**	**16**	*e*P	**Pn**	**20 31 00.7**	**+1.2**
JYNG				*e*S	**Sn**	**20 31 21.4**	**-1.1**
TWK	**Hsinying**	**1.86**	**290**	*e*P	**Pb**	**20 31 02.8**	**+0.8**
TYC	**Yuchr**	**1.88**	**312**	*e*P	**Pb**	**20 31 02.1**	**-0.2**
YOJ	**Yonaguni jima**	**1.89**	**17**	*e*P	**Pn**	**20 31 01.4**	**+1.6**
HATJ	**Hateruma jima**	**1.91**	**43**	*e*S	**Sn**	**20 31 22.2**	**-1.5**
FUSS	**Fushou**	**1.91**	**327**	*e*P	**Pn**	**20 31 02.0**	**+1.7**
FUSS	baz=321			*e*S	**Sn**	**20 31 23.3**	**-0.8**
TWT	**Tachien**	**1.95**	**325**	*e*P	**Pn**	**20 31 02.5**	**+1.7**
TWT	baz=326			*e*S	**Sn**	**20 31 24.5**	**-0.5**
WCS	**Beigang Elemen**	**1.95**	**316**	*e*P	**Pn**	**20 31 02.9**	**+2.2**
TDCB	**Techi**	**1.96**	**325**	*e*P	**Pn**	**20 31 02.9**	**+2.0**
WGK	**Gukeng**	**1.98**	**302**	*e*P	**Pb**	**20 31 03.7**	**-0.1**
NNSB	**Datong**	**2.00**	**332**	*e*P	**Pn**	**20 31 03.1**	**+1.6**
TWC	**Suao**	**2.01**	**346**	*e*P	**Pn**	**20 31 03.5**	**+2.0**
NNS	**Nan Shan**	**2.01**	**332**	*e*P	**Pn**	**20 31 03.1**	**+1.4**
LATG	**Datong**	**2.04**	**337**	*e*P	**Pn**	**20 31 02.1**	**+0.2**
IRIF	**Iriomote-Funau**	**2.08**	**36**	P	**Pn**	**20 31 04.0**	**+1.6**
IRIF				*e*S	**Sn**	**20 31 27.1**	**-0.9**
NDT	**Datong Townshi**	**2.10**	**338**	*e*P	**Pn**	**20 31 03.0**	**+0.2**
ENTT	**Nioudou**	**2.12**	**339**	*e*P	**Pn**	**20 31 04.5**	**+1.5**
TWE	**Neicheng**	**2.16**	**342**	*e*P	**Pn**	**20 31 05.5**	**+1.8**
JKRS	**Kuro-shima**	**2.17**	**43**	*e*P	**Pn**	**20 31 05.4**	**+1.8**
JKRS				S	**Sn**	**20 31 29.0**	**-1.1**
YHNB	**Yeheng**	**2.21**	**335**	*e*P	**Pn**	**20 31 06.3**	**+1.9**
FUSB	**Fushanzhiwuyua**	**2.22**	**341**	*e*P	**Pn**	**20 31 06.5**	**+2.0**
NSK	**Sanguang**	**2.23**	**335**	*e*P	**Pn**	**20 31 06.6**	**+2.0**
JIJ	**Ishigaki jima**	**2.34**	**43**	P	**Pn**	**20 31 07.3**	**+1.2**
JIJ				*e*S	**Sn**	**20 31 32.8**	**-1.6**
LIOB	**Emei**	**2.35**	**328**	*e*P	**Pn**	**20 31 08.9**	**+2.6**
TIPB	**Shuangxi**	**2.37**	**347**	*e*P	**Pn**	**20 31 08.9**	**+2.4**
NWF	**Wu-fen Shan**	**2.47**	**347**	*e*P	**Pn**	**20 31 10.5**	**+2.5**
WFSB	**Wu-fen Shan**	**2.47**	**347**	*e*P	**Pn**	**20 31 10.5**	**+2.6**
SXI1	**Grass Mountain**	**2.48**	**349**	*e*P	**Pn**	**20 31 10.0**	**+2.0**
WDGT	**Dungji**	**2.59**	**284**	*e*P	**Pb**	**20 31 12.5**	**-1.8**
JISG	**Ishigakijimahi**	**2.61**	**42**	P	**Pn**	**20 31 11.4**	**+1.7**
JISG				S	**Sn**	**20 31 39.5**	**-1.6**
JTJ	**Tarama**	**2.90**	**46**	*e*S	**Sn**	**20 31 47.0**	**-1.2**
JIRB	**Irabujima**	**3.34**	**49**	*e*S	**Sn**	**20 31 59.0**	**-0.2**
JMJ2	**Miyako jima3**	**3.40**	**52**	*e*S	**Sn**	**20 31 59.3**	**-1.3**

IDC 25 21:07:48.2±6.3, 26°.97S×177°.53W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=290.1km s-min=41.9km az=153.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.81**	**263**	P	P	21 15 55.7	-0.4
	0.6nm,0.4s,baz=102,slow=7.7,SNR=12 0.6nm,0.4s						
WRA	**Warramunga Arr**	**44.49**	**268**	P	P	21 16 01.0	-0.6
	0.7nm,0.6s,baz=104,slow=7.7,SNR=14 0.7nm,0.6s						
NOA	**NORSAR Array B**	**145.43**	**353**	PKPbc	PKPbc	21 27 26.7	-0.8
	0.2nm,0.5s,baz=6.8,slow=4.0,SNR=2.0						
HFS	**Hagfors**	**145.96**	**350**	PKPbc	PKPbc	21 27 29.3	+0.1
	2.4nm,0.7s,baz=48,slow=2.1,SNR=7.8						

TRN ***25*** *21:16:56.4, 10°.09N×62°.12W, h5km, MD3.3*
FUNV ***25*** *21:16:57.8, 10°.10N×62°.04W, h5km, MW3.3*

ISC 25 21:16:57.3±1.6, 10°.09N±0°.08×62°.13W±0°.05, h11km±11km, n16, σ1°.26/26, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.91**	**52**	*e*P	**Pg**	**21 17 13.8**	**-1.0**
TRN				*e*S	**Sb**	**21 17 26.5**	**-0.6**
CRUV	**Carupano**	**1.23**	**298**	*e*P	**Pn**	**21 17 20.5**	**0.0**
CRUV				*e*S	**Sg**	**21 17 37.2**	**+0.1**
COAV	**Cumanacoa**	**1.67**	**273**	*e*P	**Pb**	**21 17 28.7**	**+0.5**
COAV				*e*S	**Sg**	**21 17 52.2**	**+1.1**
TOSP	**Speyside**	**1.98**	**52**	*e*P	**Pn**	**21 17 31.1**	**+0.4**
GRFF	**Grenada Fort F**	**1.99**	**11**	*e*P	**Pn**	**21 17 32.1**	**+1.3**
GRFF				*e*S	**Sn**	**21 17 56.7**	**+0.9**
GRGR	**Grenville**	**2.08**	**13**	*e*S	**Sn**	**21 17 59.0**	**+0.8**
PCRV	**Puerto La Cruz**	**2.47**	**272**	*e*P	**Pn**	**21 17 38.4**	**+0.9**
PCRV				*e*S	**Sn**	**21 18 09.1**	**+1.4**
GCMP	**Grenada, Carri**	**2.48**	**16**	*e*P	**Pn**	**21 17 37.9**	**+0.3**
GCMP				*e*S	**Sn**	**21 18 07.3**	**-0.6**
PRGV	**PARIAGUAN**	**2.81**	**242**	*e*P	**Pn**	**21 17 43.9**	**+1.7**
PRGV				*e*S	**Sn**	**21 18 17.1**	**+1.0**
TACV	**Tcata**	**4.82**	**271**	*e*P	**Pn**	**21 18 10.7**	**+0.8**
TACV				*e*S	**Sn**	**21 19 04.9**	**-0.9**
CACV	**CAICARA DEL OR**	**5.03**	**240**	*e*P	Pn	21 18 07.6	-5.1
CACV				*e*S	Sn	21 18 58.9	-12
BENV	**Beln**	**5.39**	**269**	*e*P	**Pn**	**21 18 18.0**	**+0.4**
BENV				*e*S	**Sn**	**21 19 18.2**	**-1.6**
BAUV	**El Baul**	**5.94**	**259**	*e*P	**Pn**	**21 18 25.7**	**+0.5**
BAUV	**El Baul**	**5.94**	**259**	*e*S	**Sn**	**21 19 32.2**	**-1.1**
BAUV	**El Baul**	**5.94**	**259**	*e*P	**Pn**	**21 18 25.0**	**-0.2**
BAUV				*e*S	**Sn**	**21 19 30.9**	**-2.4**
MAPV	**Macapo**	**6.24**	**268**	*e*P	**Pn**	**21 18 30.0**	**+0.6**
MAPV				*e*S	**Sn**	**21 19 37.6**	**-3.1**

TAP 25 21:18:02.1, 21°.84N×119°.72E, h55km±2km, ML2.5, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu**	**0.78**	**50**	*e*P	Pn	21 18 18.4	+1.3
HEN	**Hengchun**	**0.96**	**80**	*i* P	Pn	21 18 20.5	+1.1
HEN	baz=88			*i* S	Sn	21 18 34.2	+2.0
SNW	**Nanwan**	**0.96**	**83**	*e*P	Pn	21 18 20.2	+0.7
SCZT	**Fangliau**	**0.99**	**57**	P	Pn	21 18 21.0	+1.1
SCZT	baz=58			*e*S	Sn	21 18 35.4	+2.5
TWK1	**Hengchun**	**1.01**	**84**	*i* P	Pn	21 18 20.8	+0.6
TWK1	baz=94			S	Sn	21 18 35.0	+1.5
TWKBT	**Hengchun**	**1.02**	**84**	P	Pn	21 18 20.7	+0.5
TWKBT	baz=94			*e*S	Sn	21 18 34.4	+0.8
SMST	**Manzhou Townsh**	**1.05**	**80**	P	Pn	21 18 20.9	+0.2
SMST	baz=91			S	Sn	21 18 35.8	+1.4
SLIU	**Shizi**	**1.07**	**69**	*i* P	Pn	21 18 21.5	+0.6
TSEB	**Hengchuen, Pin**	**1.10**	**87**	*e*P	Pn	21 18 21.2	0.0
TAWH	**Dawu Township**	**1.19**	**65**	P	Pn	21 18 22.5	0.0

TAP 25 21:18:13.0, 22°.91N×120°.62E, h16km, ML2.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGT	**Liugui**	**0.09**	**16**	P	Pg	21 18 16.8	+0.5
SLGT	baz=16			S	Sg	21 18 19.8	+1.2
SCST	**Cishan**	**0.12**	**261**	*i* P	Pb	21 18 17.1	+0.3
SCST	baz=261			S	Sb	21 18 21.1	+1.6
SSD	**Sandimen**	**0.16**	**176**	*i* P	Pb	21 18 17.7	+0.1
SSD	baz=173			*i* S	Sb	21 18 20.9	+0.3
SGST	**Jiashian**	**0.18**	**349**	*i* P	Pg	21 18 17.3	-0.2
SGST	baz=352			*i* S	Sb	21 18 21.4	+0.1
TWM1	**Shoushan**	**0.20**	**246**	*i* P	Pb	21 18 19.0	+0.8
TWM1	baz=245			S	Sb	21 18 23.9	+2.1
TSMG	**Majia**	**0.20**	**173**	*i* P	Pb	21 18 18.2	-0.1
TSMG	baz=172			*i* S	Sb	21 18 21.6	-0.2
SGLT	**Jiouru**	**0.21**	**213**	P	Pb	21 18 20.0	+1.5
SGLT	baz=205			S	Sb	21 18 25.1	+2.9
TSPT	**Pingtung City**	**0.25**	**207**	*e*S	Sn	21 18 27.6	-0.1
SHHT	**Tainan City**	**0.28**	**295**	P	Pb	21 18 20.0	+0.5
SHHT	baz=300			S	Sn	21 18 27.4	-0.8
STYT	**Tauyuan**	**0.29**	**26**	*i* P	Pb	21 18 20.1	+0.3
STYT	baz=33			*i* S	Sb	21 18 25.3	+0.9
CHN3	**Shinhua**	**0.29**	**306**	*i* P	Pn	21 18 21.3	-1.2
CHN3	baz=316			S	Sn	21 18 26.7	-1.9
CHN1	**Nanshi**	**0.29**	**343**	*i* P	Pb	21 18 20.4	+0.5
CHN1	baz=349			*i* S	Sb	21 18 26.2	+1.7
MASBT	**Mashibuluo**	**0.29**	**177**	P	Pb	21 18 19.7	-0.1
MASBT	baz=172			S	Sb	21 18 24.4	-0.1
STYH	**Taoyuan**	**0.30**	**29**	P	Pg	21 18 19.6	+0.2
STYH	baz=33			S	Sb	21 18 24.6	-0.1
WTP	**Ta-pu**	**0.34**	**359**	*i* P	Pb	21 18 21.2	+0.5
WTP	baz=1.0			*i* S	Sb	21 18 27.3	+1.4
TWK	**Hsinying**	**0.38**	**342**	*i* P	Pb	21 18 21.8	+0.4
TWK	baz=357			*i* S	Sb	21 18 28.6	+1.5
SSHA	**Shanhua**	**0.38**	**307**	*e*P	Pn	21 18 23.2	-0.6
TPUB	**Ta-pu**	**0.39**	**1**	P	Pb	21 18 21.8	+0.1
TPUB	baz=2.0			S	Sb	21 18 29.1	+1.7
WSSB	**Gushan**	**0.42**	**232**	P	Pn	21 18 23.5	-0.9
WSSB	baz=231			*e*S	Sn	21 18 30.8	-1.1
TWG	**Pinlang**	**0.43**	**101**	*i* P	Pb	21 18 22.7	+0.5
TWG	baz=105			S	Sb	21 18 29.4	+1.0
TWGBT	**Beinan**	**0.43**	**101**	P	Pb	21 18 22.7	+0.4
TWGBT	baz=105			S	Sb	21 18 28.7	+0.1
ECL	**Taimali**	**0.43**	**135**	*i* P	Pb	21 18 22.4	+0.1
ECL	baz=140			*i* S	Sb	21 18 28.5	-0.1
CHN4	**Tsaushan**	**0.45**	**357**	P	Pg	21 18 21.9	-0.1
CHN4	baz=358			S	Sb	21 18 30.6	+1.7
ELDTW	**Lidau**	**0.46**	**52**	*i* P	Pb	21 18 23.6	+0.8
ELDTW	baz=44			*i* S	Sb	21 18 30.4	+0.9
LONT	**Longtian**	**0.47**	**90**	*i* P	Pb	21 18 23.6	+0.7
LONT	baz=79			*i* S	Sb	21 18 30.5	+0.8
SCLT	**Jiali**	**0.47**	**305**	P	Pn	21 18 24.3	-0.8
SCZT	**Fangliau**	**0.53**	**180**	*e*P	Pb	21 18 24.6	+0.6
SCZT	baz=173			S	Sb	21 18 31.9	+0.6
WCKO	**Fanlu**	**0.53**	**359**	P	Pb	21 18 24.1	+0.1
WCKO	baz=359			S	Sb	21 18 32.3	+0.9
TSCK	**Chigu Township**	**0.55**	**296**	P	Pg	21 18 23.9	+0.1
TSCK	baz=297			S	Sn	21 18 33.6	-1.3
ICHU	**Yijhu**	**0.55**	**325**	P	Pb	21 18 25.2	+0.9
ICHU	baz=340			S	Sn	21 18 34.5	-0.6
EAST	**Anshuo**	**0.56**	**158**	*i* P	Pg	21 18 23.5	-0.7
EAST	**Anshuo**	**0.56**	**158**	*i* P	Pg	21 18 23.5	-0.7
EAST	baz=152			S	Sb	21 18 33.2	+1.0
CHN8	**Yiju**	**0.58**	**320**	*i* P	Pn	21 18 25.7	-0.8
ECS	**Chishang**	**0.58**	**71**	P	Pb	21 18 24.9	+0.1
ECS	baz=71			S	Sn	21 18 35.9	0.0
EHD	**Haiduan**	**0.59**	**66**	P	Pg	21 18 24.6	-0.1
EHD	baz=66			S	Sb	21 18 33.2	+0.1
TAW	**Tawu**	**0.60**	**155**	P	Pg	21 18 23.5	-1.3
TAW	**Tawu**	**0.60**	**155**	P	Pg	21 18 23.8	-1.1
TWP	**Hsiaoliuchiu**	**0.60**	**203**	S	Sn	21 18 40.1	+3.7
CHY	**Chiayi**	**0.62**	**343**	P	Pb	21 18 26.2	+0.8
CHY	baz=344			S	Sn	21 18 36.0	-0.6
ALS	**Alishan**	**0.63**	**16**	*i* P	Pn	21 18 26.7	-0.8
ALS	baz=17			S	Sn	21 18 36.4	-1.0
EDH	**Donghe**	**0.64**	**84**	*i* P	Pn	21 18 26.8	-0.5
EDH	baz=75			*i* S	Sn	21 18 36.9	-0.2
YUS	**Yu-Shan**	**0.66**	**28**	*i* P	Pb	21 18 26.8	+0.4
YUS	baz=28			S	Sb	21 18 36.5	+1.0
FULB	**Fuli**	**0.69**	**65**	*i* P	Pn	21 18 27.8	-0.2
FULB	baz=65			*i* S	Sn	21 18 38.3	-0.1
CHN5	**Tsauling**	**0.69**	**4**	*i* P	Pn	21 18 27.7	-0.5
CHN5	baz=5.0			*i* S	Sn	21 18 38.0	-0.6
WSL	**Shuilin Townsh**	**0.71**	**330**	P	Pg	21 18 26.6	-0.4
WSL	baz=330			S	Sn	21 18 38.3	-0.7
TWF1	**Yuli**	**0.77**	**54**	*i* P	Pn	21 18 28.6	-0.5
TWF1	baz=63			*i* S	Sn	21 18 39.5	-0.9
EYUL	**Yuli**	**0.78**	**56**	*i* P	Pn	21 18 28.9	-0.4
EYUL	baz=63			*i* S	Sb	21 18 39.4	+0.8
WDLH	**Douliu**	**0.78**	**355**	P	Pn	21 18 28.9	-0.5

WDLH					S		Sn	21 18 42.4	+1.6
	baz=355								
YULB	**Yu-li**	**0.79**	**52**		P		Pg	21 18 28.7	+0.3
	baz=60								
YULB					S		Sg	21 18 39.5	+0.6
	baz=60								
WHYT	**Xinyi Township**	**0.82**	**15**		*i* P		Pn	21 18 29.8	-0.1
	baz=15								
WHYT					*i* S		Sn	21 18 41.6	-0.1
	baz=15								
WSF	**Szhu**	**0.82**	**333**		S		Sn	21 18 41.8	+0.3
	baz=335								
LDUT	**Ludao**	**0.82**	**106**		*i* P		Pg	21 18 29.1	+0.2
	baz=107								
LDUT					S		Sn	21 18 42.7	+1.1
	baz=107								
EHY	**Hungye**	**0.88**	**47**		*i* P		Pn	21 18 30.6	-0.2
	baz=54								
EHY					S		Sb	21 18 41.4	0.0
	baz=54								
WJS	**Zhushan**	**0.92**	**6**		S		Sn	21 18 45.0	+0.9
	baz=353								
SSLB	**Suanglung**	**0.93**	**19**		P		Pn	21 18 31.7	+0.2
	baz=19								
SSLB					S		Sn	21 18 45.5	+1.0
	baz=19								
HGSD	**Ruisui**	**0.94**	**52**		P		Pn	21 18 32.1	+0.5
	baz=46								
HGSD					S		Sn	21 18 45.3	+0.6
	baz=46								
WDGT	**Dungji**	**0.95**	**292**		*i* P		Pb	21 18 30.2	-0.9
	baz=293								
WDGT					*i* S		Sb	21 18 43.1	-0.3
	baz=293								
WNT	**Mingjian**	**0.97**	**4**		*i* P		Pn	21 18 32.7	+0.8
	baz=5.0								
WNT					*i* S		Sn	21 18 46.5	+1.1
	baz=5.0								
VWDT	**VWDT**	**0.97**	**30**		P		Pn	21 18 32.3	+0.3
	baz=28								
VWDT					S		Sn	21 18 45.9	+0.5
	baz=28								
SMLT	**Sun Moon Lake**	**1.01**	**15**		*i* P		Pn	21 18 33.4	+0.8
	baz=16								
SMLT					*i* S		Sn	21 18 49.1	+2.6
	baz=16								
WRL	**Guolierlin Hig**	**1.02**	**347**		S		Sb	21 18 45.6	+0.3
	baz=335								
TYC	**Yuchr**	**1.02**	**12**		*i* P		Pg	21 18 33.6	+0.9
	baz=13								
TYC					*i* S		Sn	21 18 48.5	+1.9
	baz=13								
VCHM	**Qimei**	**1.14**	**286**		P		Pn	21 18 33.1	-1.2
	baz=287								
PHUB	**P'eng-hu**	**1.14**	**302**		P		Pn	21 18 32.9	-1.3
	baz=316								
PHUB					S		Sb	21 18 47.9	-0.9
	baz=316								
OWD	**Renai**	**1.16**	**26**		P		Pg	21 18 36.3	+0.8
	baz=14								
OWD					S		Sg	21 18 53.3	+2.6
	baz=14								
ESL	**Shilin**	**1.17**	**39**		*i* P		Pg	21 18 35.6	-0.1
	baz=32								
ESL					*i* S		Sg	21 18 52.5	+1.4
	baz=32								
WUSB	**Renai**	**1.18**	**23**		P		Pg	21 18 35.9	+0.1
	baz=11								
WUSB					S		Sg	21 18 52.3	+1.2
	baz=11								
WCS	**Beigang Elemen**	**1.18**	**13**		P		Pb	21 18 35.0	0.0
	baz=14								
WCS					S		Sg	21 18 51.1	-0.1
	baz=14								
PNG	**Penghu**	**1.18**	**304**		P		Pn	21 18 33.8	-1.0
	baz=306								
CHGB	**Renai**	**1.26**	**24**		P		Pg	21 18 37.4	0.0
	baz=13								
CHGB					S		Sg	21 18 55.6	+1.8
	baz=13								
WHF	**Hehuan Shan**	**1.37**	**26**		P		Pg	21 18 39.9	+0.5
	baz=25								
WHP	**Taichung City**	**1.40**	**12**		P		Pb	21 18 39.1	+0.3
	baz=356								
TDCB	**Techi**	**1.43**	**20**		P		Pb	21 18 39.0	-0.4
	baz=20								
TDCB					S		Sg	21 18 59.4	+0.2
	baz=20								
TWT	**Tachien**	**1.44**	**21**		P		Pn	21 18 38.0	-0.5
	baz=20								
FUSS	**Fushou**	**1.45**	**23**		*i* P		Pg	21 18 40.9	-0.1
	baz=23								
NNSB	**Datong**	**1.67**	**25**		*e*S		Sb	21 19 05.3	+1.0
	baz=25								
NFF	**Wufeng Townshi**	**1.78**	**15**		P		Pb	21 18 44.7	-0.6
	baz=359								
NFF					S		Sb	21 19 07.9	+0.6
	baz=359								
LATG	**Datong**	**1.82**	**27**		P		Pg	21 18 47.6	-0.4
	baz=28								
LATG					S		Sg	21 19 11.2	-0.6
	baz=28								
NDT	**Datong Townshi**	**1.88**	**26**		P		Pn	21 18 45.0	+0.5
	baz=26								
NDT					S		Sb	21 19 11.2	+1.0
	baz=26								
YHNB	**Yeheng**	**1.89**	**21**		P		Pb	21 18 47.3	+0.1
	baz=22								
FUSB	**Fushanzhiwuyua**	**2.05**	**25**		P		Pb	21 18 51.0	+1.1
	baz=7.0								

*IDC **25** 21:25:00.4±1.9, 55°.07N×75°.12E, h0km, mb2.8/1, mbtmp2.8/5, ML2.5/4, Error ellipse: s-maj=21.8km s-min=9.8km az=9.0*

ISC 25 21:25:01.2±1.5, 55°.0N±0°.1×74°.88E±0°.05, h10km, n7, σ1$49/15, 3C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**3.29**	**236**	Pn	**Pg**	**21 26 04.3**	**+0.3**
	1.2nm,0.3s,baz=42,slow=14,SNR=12						
BVA0				⇑Sn	**Sn**	**21 26 30.9**	**-0.9**
	2.4nm,0.5s,baz=175,slow=27,SNR=2.8						
BVA0				Lg	Lg	21 26 50.8	
	1.8nm,0.3s,baz=212,slow=62,SNR=2.6						
BVAR	**Borovoye Array**	**3.29**	**236**	Pn	**Pn**	**21 25 53.6**	**+0.9**
	0.2nm,0.3s,baz=54,slow=13,SNR=11						
BVAR				Pg	**Pg**	**21 26 03.5**	**-0.5**
	0.8nm,0.3s,baz=52,slow=16,SNR=26						
BVAR				Sn	**Sn**	**21 26 30.5**	**-1.2**
	1.4nm,0.3s,baz=43,slow=22,SNR=6.4						
BVAR				Lg	Lg	21 26 43.9	
	1.7nm,0.3s,baz=50,slow=18,SNR=2.2						
	0.3nm,0.2s						
BRVK	**Borovoye**	**3.31**	**237**	⇓Pn	**Pg**	**21 26 04.5**	**-0.2**
	3.0nm,0.8s						
BRVK				⇑Sn	**Sn**	**21 26 29.9**	**-2.6**
	4.6nm,0.4s						
BRVK				⇑Lg	Lg	21 26 49.4	
	6.6nm,0.5s						
KURBB	**Kurchatov Arra**	**4.88**	**151**	Pn	**Pn**	**21 26 13.7**	**-0.9**
	0.1nm,0.3s,baz=336,slow=12,SNR=6.4						
KURBB				Pg	**Pb**	**21 26 29.4**	**+2.8**
	0.2nm,0.3s,baz=337,slow=17,SNR=11						
KURBB				Sn	**Sn**	**21 27 09.8**	**-1.3**
	0.2nm,0.3s,baz=343,slow=12,SNR=4.0						
KURBB				Lg	Lg	21 27 36.3	
	0.2nm,0.3s,baz=343,slow=31,SNR=1.5						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**5.89**	**96**	Pn	**Pn**	**21 26 29.0**	**+0.6**
	1.1nm,0.3s,baz=286,slow=14,SNR=15						
ZALV				Sn	**Sn**	**21 27 34.1**	**-1.8**
	0.7nm,0.3s,baz=287,slow=24,SNR=7.5						
ZALV				Lg	Lg	21 28 07.1	
	0.4nm,0.3s,baz=279,slow=28,SNR=2.0						
	3.0nm,0.3s						
MKAR	**Makanchi Array**	**9.42**	**147**	Pn	**Pn**	**21 27 16.6**	**-0.2**
	0.1nm,0.3s,baz=331,slow=12,SNR=8.2						
MKAR				Sn	**Sn**	**21 29 01.5**	**-1.3**
	2.7nm,0.3s,baz=336,slow=23,SNR=48						
	0.1nm,0.3s						
SONM	**Songino Array**	**20.79**	**97**	P	**P**	**21 29 41.1**	**-1.2**
	0.3nm,0.7s,baz=294,slow=11,SNR=2.0						
	0.3nm,0.7s						

*SNET **25** 21:30:29.5±1.7, 12°.99N×90°.38W, h74km, ML3.8*

*IDC **25** 21:30:29.9±2.4, 13°.23N×90°.15W, h0km, mb3.3/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=158.1km s-min=28.0km az=40.0*

*GCG **25** 21:30:32.5±0.7, 13°.01N×90°.50W, h31km±107km, MD3.7*

*INET **25** 21:30:33.4±0.5, 12°.78N×90°.09W, h15km±2km, MW3.9*

ISC 25 21:30:29.8±3.4, 12°.94N±0°.06×90°.31W±0°.05, h17km±22km, n29, σ1$02/39, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**1.08**	**28**	⇓*i*P	**Pb**	**21 30 49.5**	**-0.7**
CEVE	**Cerro Verde**	**1.10**	**37**	*e*P	**Pb**	**21 30 50.2**	**-0.3**
RTR	**El Retiro**	**1.15**	**34**	*i* P	**Pb**	**21 30 51.0**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.19**	**25**	*e*P	**Pb**	**21 30 51.2**	**-0.7**
SLOZ				*e*S	**Sb**	**21 31 06.8**	**-0.3**
BOQS	**Boqueron**	**1.27**	**52**	*e*P	**Pn**	**21 30 52.8**	**-0.2**
LFRS	**El Faro**	**1.39**	**61**	*e*P	**Pn**	**21 30 54.2**	**-0.3**
SJTE	**Alcalda de S**	**1.43**	**62**	*e*P	**Pn**	**21 30 54.9**	**-0.2**
SJTE				*e*S	**Sn**	**21 31 13.4**	**-0.1**
PCG	**Pacaya**	**1.47**	**348**	*e*P	**Pn**	**21 30 56.1**	**+0.3**
PAVA	**Las Pavas**	**1.54**	**60**	*e*P	**Pn**	**21 30 57.0**	**+0.5**
COEG	**Centro de Oper**	**1.54**	**64**	*e*P	**Pn**	**21 30 56.3**	**-0.3**
COEG				*e*S	**Sn**	**21 31 15.9**	**-0.4**
FUG	**Fuego 3**	**1.58**	**341**	*e*S	**Sn**	**21 31 16.3**	**-1.2**
NBG	**Las Nubes**	**1.64**	**359**	*e*P	**Pb**	**21 30 59.5**	**-0.2**
NBG				*e*S	**Sb**	**21 31 20.2**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.71**	**64**	*e*P	**Pn**	**21 30 59.0**	**+0.1**
SCLA				*e*S	**Sn**	**21 31 20.2**	**-0.2**
MTO3	**Montecristo**	**1.71**	**32**	*e*P	**Pn**	**21 30 59.1**	**0.0**
MTO3				*e*S	**Sn**	**21 31 21.3**	**+0.6**
P5NO	**Presa 5 de nov**	**1.83**	**55**	*e*P	**Pn**	**21 31 00.3**	**-0.1**
PACA	**Pacayal**	**2.00**	**75**	*e*P	**Pn**	**21 31 03.9**	**+1.0**
STG3	**Santiaguito 3,**	**2.15**	**325**	*e*P	**Pn**	**21 31 04.8**	**-0.2**
STG3				*e*S	**Sn**	**21 31 29.8**	**-1.5**
MRL	**Marmol**	**2.21**	**16**	*e*P	**Pb**	**21 31 09.1**	**-0.3**
CNCH	**Conchagua**	**2.43**	**82**	*e*P	**Pn**	**21 31 08.8**	**0.0**
CNCH				*e*S	**Sn**	**21 31 38.1**	**-0.2**
CRIN	**San Cristobal**	**3.18**	**94**	*e*P	**Pn**	**21 31 19.2**	**+0.1**
CRIN				*e*S	**Sn**	**21 31 54.6**	**-2.2**
TEL3	**Telica 3**	**3.40**	**96**	*e*P	**Pn**	**21 31 21.9**	**-0.1**
CNGN	**Cerro Negro**	**3.55**	**97**	*e*P	**Pn**	**21 31 22.5**	**-1.6**
MOMN	**Momotombo**	**3.71**	**98**	*e*P	**Pn**	**21 31 25.7**	**-0.7**
MATN	**Matagalpa**	**4.27**	**90**	*e*P	**Pn**	**21 31 33.8**	**-0.3**
JTS	**Las Juntas de**	**5.87**	**116**	Pn	**Pn**	**21 31 57.7**	**+1.7**
	8.0nm,0.3s,baz=17,slow=18,SNR=14						
JTS				Sn	**Sn**	**21 32 59.9**	**-3.1**
	baz=327,slow=21						
	13nm,0.3s						
CMIG	**Matias Romero**	**6.05**	**314**	Pn	**Pn**	**21 31 58.3**	**-0.2**
	0.3nm,0.3s,baz=130,slow=17,SNR=1.7						
CMIG				Sn	**Sn**	**21 33 05.7**	**-1.7**
	0.6nm,0.3s,baz=87,slow=21,SNR=1.7						
	0.8nm,0.3s						
TXAR	**Lajitas Array**	**20.49**	**325**	P	Pn	21 35 09.3	-0.1
	0.3nm,0.5s,baz=144,slow=11,SNR=5.1						
	0.3nm,0.5s						
NVAR	**Mina Array Bea**	**35.53**	**321**	P	**P**	**21 37 27.4**	**+1.2**
	0.8nm,0.7s,baz=143,slow=9.1,SNR=5.5						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**136.72**	**255**	PKP	**PKiKP**	**21 49 56.0**	**+2.0**
	0.2nm,0.6s,baz=89,slow=2.2,SNR=4.7						

MAN 25 21:32:09.7, 6°.22N×126°.17E, h22km, mb4.4, ML3.2, MS3.0, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.47**	**256**⇑	*e*P	Pn	21 32 20.4	-0.6
MATI	**Mati**	**0.73**	**7**⇑	*e*P	Pb	21 32 23.8	+0.1
MATI				*e*S	Sn	21 32 38.0	+2.8
GSPH	**General Santos**	**1.22**	**264**⇑	*i*P	Pn	21 32 28.6	-2.9
GSPH				*i* S	Sn	21 32 43.5	-3.9
KCP	**Kidapawan**	**1.33**	**306**⇑	*i*P	Pn	21 32 31.6	-1.3
KCP				*i* S	Sn	21 32 48.2	-1.8
SKMP	**Bagumbayan, Su**	**1.64**	**281**⇓	*e*P	Pn	21 32 37.0	-0.2
SKMP				*e*S	Sb	21 32 59.2	-0.3
BIPH	**Bislig**	**1.96**	**6**⇑	*e*P	Pn	21 32 41.8	+0.1
BIPH				*e*S	Sn	21 33 07.2	+1.5

*NOU **25** 21:34:04.7, 40°.77S×174°.39E, h14km, MLv3.5/7, Cook Strait, New Zealand*

*WEL **25** 21:34:05.0±0.2, 41°.5±3°.×17°.5E±°, h30km±3km, M3.3/41, ML3.6/42, MLv3.3/41, Error ellipse: s-maj=0.0km s-min=0.0km az=155.6*

ISC 25 21:34:04.1±3.0, 40°.84S±0°.03×174°.52E±0°.02, h15km±23km, n88, σ1$21/101, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.30**	**94**	P	**Pn**	**21 34 14.5**	**+0.6**
KIW				S	**Sn**	**21 34 21.3**	**+1.1**
TCW	**Tory Channel**	**0.41**	**206**	P	**Pn**	**21 34 15.6**	**+0.1**
TCW				S	**Sn**	**21 34 23.2**	**+0.2**
DUWZ	**D'Urville Isla**	**0.45**	**275**	P	**Pb**	**21 34 15.0**	**+1.2**
DUWZ				S	**Sn**	**21 34 22.9**	**-1.2**
SNZO	**South Karori**	**0.49**	**163**	P	**Pn**	**21 34 16.7**	**+0.1**
CAW	**Cannon Point**	**0.49**	**123**	P	**Pn**	**21 34 16.8**	**+0.2**
CAW				S	**Sn**	**21 34 26.1**	**+1.1**
OGWZ	**Otaki Gorge**	**0.50**	**87**	P	**Pn**	**21 34 16.9**	**+0.2**
OGWZ				S	**Sn**	**21 34 25.6**	**+0.6**
TUWZ	**Tuamarina**	**0.73**	**216**	P	**Pn**	**21 34 19.6**	**-0.3**
TUWZ				S	**Sn**	**21 34 30.2**	**-0.6**
HOWZ	**Holdsworth Sta**	**0.76**	**95**	P	**Pb**	**21 34 19.7**	**+0.7**
HOWZ				S	**Sn**	**21 34 31.1**	**-0.4**
MSWZ	**Moikau Station**	**0.80**	**136**	P	**Pb**	**21 34 20.1**	**+0.5**
MTW	**Mount Morrison**	**0.81**	**113**	P	**Pb**	**21 34 20.2**	**+0.3**
MRZ	**Mangatainoka R**	**0.83**	**78**	P	**Pb**	**21 34 20.5**	**+0.3**
MRZ				S	**Sn**	**21 34 33.3**	**+0.1**
PAWZ	**Paruwai Farm**	**0.87**	**128**	P	**Pb**	**21 34 21.0**	**0.0**
OHWZ	**Ohakea**	**0.88**	**44**	P	**Pn**	**21 34 21.9**	**0.0**
OHWZ				S	**Sn**	**21 34 34.7**	**+0.3**
PLWZ	**Palliser**	**0.92**	**143**	P	**Pb**	**21 34 21.5**	**-0.2**
CMWZ	**Cape Campbell**	**0.94**	**194**	P	**Pn**	**21 34 23.7**	**+0.9**
NNZ	**Nelson**	**0.94**	**246**	P	**Pb**	**21 34 21.8**	**-0.3**
NNZ				S	**Sb**	**21 34 34.7**	**+0.3**
BSWZ	**Blackbirch Sta**	**1.00**	**209**	P	**Pb**	**21 34 23.4**	**+0.3**
BSWZ				S	**Sn**	**21 34 38.1**	**+0.7**
TIWZ	**Tintock**	**1.04**	**87**	P	**Pb**	**21 34 23.4**	**-0.4**
TIWZ				S	**Sb**	**21 34 36.7**	**-0.6**
TRWZ	**Traveller**	**1.04**	**123**	P	**Pb**	**21 34 23.1**	**-0.8**
POWZ	**Post Office Ro**	**1.05**	**65**	P	**Pb**	**21 34 23.2**	**-0.8**
TMWZ	**Te Maipa**	**1.07**	**105**	P	**Pb**	**21 34 23.7**	**-0.7**
PRWZ	**Pori Road**	**1.14**	**76**	P	**Pn**	**21 34 24.5**	**-1.0**
PRWZ				S	**Sb**	**21 34 39.8**	**-0.4**
WAZ	**Wanganui**	**1.14**	**18**	P	**Pn**	**21 34 25.2**	**-0.4**
TKNZ	**Takaka Hill**	**1.20**	**260**	P	**Pn**	**21 34 25.4**	**-0.9**
CPWZ	**Castlepoint**	**1.28**	**94**	P	**Pb**	**21 34 29.1**	**+1.2**
BFZ	**Birch Farm**	**1.32**	**84**	P	**Pn**	**21 34 26.8**	**-1.2**
BFZ	**Birch Farm**	**1.32**	**84**	P	**Pb**	**21 34 30.3**	**+1.7**
TSZ	**Takapari Road**	**1.35**	**55**	P	**Pn**	**21 34 27.0**	**-1.4**
DVHZ	**Dannevirke**	**1.37**	**67**	P	**Pn**	**21 34 26.8**	**-1.9**
LREZ	**Lake Rotokare**	**1.38**	**356**	P	**Pn**	**21 34 28.2**	**-0.6**
NMEZ	**Namu Road**	**1.51**	**341**	P	**Pn**	**21 34 30.7**	**+0.1**
QRZ	**Quartz Range**	**1.51**	**270**	P	**Pn**	**21 34 29.2**	**-1.4**
QRZ	**Quartz Range**	**1.51**	**270**	P	**Pn**	**21 34 29.2**	**-1.4**
PREZ	**Palmer Road**	**1.52**	**349**	P	**Pn**	**21 34 30.7**	**-0.1**
THZ	**Tophouse**	**1.52**	**232**	P	**Pn**	**21 34 30.4**	**-0.5**
PNHZ	**Pukenui**	**1.58**	**55**	P	**Pn**	**21 34 29.8**	**-1.9**
KHEZ	**Kahui Hut**	**1.59**	**346**	P	**Pn**	**21 34 31.3**	**-0.6**
KHEZ	**Kahui Hut**	**1.59**	**346**	P	**Pn**	**21 34 31.8**	**0.0**
NEZ	**North Egmont**	**1.60**	**348**	P	**Pn**	**21 34 31.4**	**-0.6**
NBEZ	**Newall Road No**	**1.65**	**342**	P	**Pn**	**21 34 31.7**	**-0.9**
WPHZ	**Waipukurau**	**1.66**	**63**	P	**Pn**	**21 34 30.8**	**-1.9**
DREZ	**Durham Road**	**1.67**	**352**	P	**Pn**	**21 34 32.4**	**-0.4**
PKE	**Pukeiti**	**1.69**	**346**	P	**Pn**	**21 34 32.6**	**-0.6**
PRHZ	**Porangahau**	**1.71**	**71**	P	**Pn**	**21 34 31.6**	**-1.8**
MOVZ	**Moawhango**	**1.72**	**34**	P	**Pn**	**21 34 32.3**	**-1.2**
VRZ	**Vera Road**	**1.73**	**6**	P	**Pn**	**21 34 33.0**	**-0.6**
WNVZ	**Wahianoa**	**1.73**	**29**	P	**Pn**	**21 34 33.4**	**-0.3**
TRVZ	**Turoa**	**1.73**	**27**	P	**Pn**	**21 34 33.6**	**-0.3**
KHZ	**Kahutara**	**1.74**	**205**	P	**Pn**	**21 34 33.6**	**-0.1**
KHZ	**Kahutara**	**1.74**	**205**	P	**Pb**	**21 34 35.1**	**-0.6**
WHVZ	**Whangaehu Hut**	**1.76**	**28**	P	**Pn**	**21 34 33.8**	**-0.4**
FWVZ	**Far West T-bar**	**1.77**	**27**	P	**Pn**	**21 34 34.0**	**-0.5**
BHHZ	**Black Hill Sta**	**1.80**	**42**	P	**Pn**	**21 34 33.4**	**-1.2**
TUVZ	**Tukino**	**1.80**	**29**	P	**Pb**	**21 34 36.6**	**-0.2**
SNVZ	**South Ngauruho**	**1.86**	**28**	P	**Pn**	**21 34 35.7**	**+0.1**
OTVZ	**Oturere**	**1.89**	**28**	P	**Pn**	**21 34 35.5**	**-0.6**
NNVZ	**North Ngauruho**	**1.90**	**27**	P	**Pn**	**21 34 35.9**	**-0.3**
TWVZ	**Taurewa**	**1.91**	**22**	P	**Pn**	**21 34 36.3**	**+0.1**
WTVZ	**West Tongariro**	**1.91**	**26**	P	**Pn**	**21 34 35.7**	**-0.6**
ETVZ	**East Tongariro**	**1.93**	**29**	P	**Pn**	**21 34 35.9**	**-0.7**
KRVZ	**Karewarewa**	**1.95**	**27**	P	**Pn**	**21 34 36.3**	**-0.5**
TMVZ	**Te Maari**	**1.95**	**28**	P	**Pn**	**21 34 36.1**	**-0.7**
KWHZ	**Kaweka Forest**	**2.03**	**47**	P	**Pn**	**21 34 36.0**	**-1.8**
KATZ	**Kakaramea**	**2.07**	**26**	P	**Pn**	**21 34 39.4**	**+1.0**
KAHZ	**Kahuranaki**	**2.08**	**61**	P	**Pn**	**21 34 36.3**	**-2.3**
MCHZ	**McNeill Hill**	**2.18**	**51**	P	**Pb**	**21 34 45.0**	**+1.8**
RATZ	**Rangitukua**	**2.20**	**26**	P	**Pb**	**21 34 43.3**	**-0.2**
DSZ	**Denniston Nort**	**2.23**	**245**	P	**Pn**	**21 34 39.7**	**-0.9**
BKZ	**Black Stump Fm**	**2.26**	**43**	P	**Pn**	**21 34 38.0**	**-3.0**
HIZ	**Hauiti**	**2.34**	**7**	P	**Pn**	**21 34 41.4**	**-0.7**
HIZ	**Hauiti**	**2.34**	**7**	P	**Pn**	**21 34 41.9**	**-0.1**
GVZ	**Greta Valley S**	**2.40**	**207**	P	**Pn**	**21 34 41.1**	**-1.7**
MRHZ	**Matea Rd**	**2.48**	**37**	P	**Pn**	**21 34 45.0**	**+1.0**
LTZ	**Lake Taylor**	**2.56**	**220**	P	**Pn**	**21 34 43.5**	**-1.6**
INZ	**Inchbonnie**	**2.97**	**230**	P	**Pn**	**21 34 49.3**	**-1.4**
MQZ	**McQueen's Vall**	**3.18**	**205**	P	**Pn**	**21 34 50.6**	**-2.9**
TOZ	**Tahuroa Road**	**3.20**	**14**	P	**Pn**	**21 34 53.6**	**-0.2**
URZ	**Urewera**	**3.27**	**39**	P	**Pn**	**21 34 54.6**	**-0.1**
WVZ	**Waitaha Valley**	**3.59**	**230**	P	**Pn**	**21 35 00.6**	**+1.3**
MKAZ	**Moumakai**	**3.77**	**8**	P	**Pn**	**21 35 00.5**	**-1.1**
AWAZ	**Awhitu Peninsu**	**3.77**	**2**	P	**Pn**	**21 35 00.8**	**-0.9**
RPZ	**Rata Peaks**	**3.85**	**221**	P	**Pn**	**21 35 06.5**	**+3.7**
GCSZ	**Gaunt Creek Bo**	**3.98**	**230**	P	**Pn**	**21 35 08.2**	**+3.6**
FOZ	**Fox Glacier**	**4.41**	**231**	P	**Pn**	**21 35 09.7**	**-0.7**
ODZ	**Otahua Downs**	**5.07**	**213**	P	**Pn**	**21 35 17.1**	**-2.5**
JCZ	**Jackson Bay**	**5.33**	**231**	P	**Pn**	**21 35 23.4**	**+0.2**
MSZ	**Milford Sound**	**6.18**	**230**	P	**Pn**	**21 35 36.2**	**+1.4**
PYZ	**Puysegur Point**	**7.79**	**224**	P	**Pn**	**21 36 00.6**	**+3.7**

*DJA **25** 22:00:22.0±0.2, 7°.N±3°.×9°.2E±°, h10km, M4.6/21, mb4.7/21, mB5.0/6, MLv4.8/5, Mw(mB)4.4/6, MwMwp5.0/1, Mwp5.3/1*

*BJI **25** 22:00:23.2±0.0, 6°.88N×92°.44E, h15km, mb4.7/55, mB4.8/30, Ms4.2/15, Ms7 4.0/16*

*IDC **25** 22:00:23.7±0.4, 7°.06N×92°.45E, h0km, mb4.5/29, mbtmp4.5/32, ML4.4/3, MS3.4/25, Error ellipse: s-maj=16.5km s-min=11.3km az=58.0*

*NEIC **25** 22:00:26.0±1.2, 7°.07N±0°.06×92°.45E±0°.07, h10km±1km, mb4.9/88, Error ellipse: s-maj=13.2km s-min=8.9km az=232.0*

*NDI **25** 22:00:39.1±4.1, 7°.88N×91°.95E, h41km±58km, mb4.7, mb4.9(NEIC)*

ISC 25 22:00:27.1±0.7, 7°.00N±0°.05×92°.46E±0°.05, h24km±4km, h24km: pP-P, n271, σ1$07/259, mb4.7/93, MS3.5/30, 2C-5D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**4.63**	**3**	Pn	**Pn**	**22 01 33.5**	**-2.2**
PBA	**Port Blair**	**4.63**	**3**	*e*P	**Pn**	**22 01 33.6**	**-2.0**
PBA				*ex*	x	22 02 24.5	
MLSI	**Meulaboh, Aceh**	**4.77**	**124**	P	**Pn**	**22 01 36.9**	**-0.7**
LHMI	**Lhok Sumawe**	**4.79**	**111**	Pn	**Pn**	**22 01 37.9**	**0.0**
KCSI	**Kotacane, Aceh**	**6.32**	**123**	P	**Pn**	**22 01 57.8**	**-1.1**
	0.3nm1μm69nm,0.8s						
SRIT	**Nakonsritamara**	**7.25**	**77**	Pn	**Pn**	**22 02 11.7**	**+0.1**
GSI	**Gunungsitoli**	**7.62**	**138**	Pn	**Pn**	**22 02 14.8**	**-1.9**
PSI	**Prapat**	**7.67**	**123**	Pn	**Pn**	**22 02 17.7**	**+0.1**
	2.4nm,0.3s,baz=336,slow=13,SNR=11						
	9.6nm,0.4s						
PSI	**Prapat**	**7.67**	**123**	P	**Pn**	**22 02 17.5**	**-0.1**
	0.1nm16nm,0.7s,0.1nm,0.7s,26nm,0.7s						
PSI				P	**Pn**	**22 02 17.5**	**-0.1**
	0.1nm16nm,0.7s,0.1nm,0.7s,26nm,0.7s						
RPSI	**Rantau Prapat**	**7.73**	**123**	Pn	**Pn**	**22 02 17.8**	**-0.4**
RPSI	**Rantau Prapat**	**7.73**	**123**		**Pn**	**22 02 17.7**	**-0.6**
SKLT	**Songkhla**	**8.10**	**88**	P	**Pn**	**22 02 19.4**	**-3.9**
	580nm16nm,0.9s						
KULM	**Kulim**	**8.32**	**101**		**Pn**	**22 02 26.7**	**+0.4**
KULM	**Kulim**	**8.32**	**101**	P	**Pn**	**22 02 27.2**	**+0.9**
	20nm,1.0s						
IPM	**Ipoh**	**8.88**	**106**		**Pn**	**22 02 34.4**	**+0.3**
IPM	**Ipoh**	**8.88**	**106**	P	**Pn**	**22 02 33.3**	**-0.8**
	21nm,0.8s					

comp=Z,7.0nm,1.2s
QIZ LR LR
comp=Z,390nm,12.0s
QIZ LR LR
comp=Z,570nm,12.2s
QIZ LR LR
comp=Z,730nm,11.4s
TAPN Taplejung 20.73 348 *e*P **P 22 05 07.6 +1.2**
comp=Z,105nm,0.8s
PZH PanZhiHua 21.31 23 P **P 22 05 13.0 +0.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,60nm,6.0s
JIRN Jiri 21.39 345 *e*P **P 22 05 14.6 +1.0**
comp=Z,124nm,0.8s
JIRN Jiri 21.39 345 *e*P **P 22 05 14.9 +1.3**
comp=Z,124nm,0.8s
PKI Pulchoki 21.52 343 *e*P **P 22 05 15.8 +0.8**
comp=Z,57nm,1.0s
PKI Pulchoki 21.52 343 *e*P **P 22 05 16.1 +1.1**
comp=Z,67nm,1.0s
PKIN Phulchoki 21.53 343 *e*P **P 22 05 15.8 +0.8**
PKIN Phulchoki 21.53 343 *e*P **P 22 05 15.9 +0.9**
comp=Z,40nm,0.9s
DMN Daman 21.65 342 *e*P **P 22 05 16.6 +0.3**
DMN Daman 21.65 342 *e*P **P 22 05 17.7 +1.4**
comp=Z,55nm,0.8s
BHPL Bhopal 21.68 320 *e*P **P 22 05 16.2 -0.1**
BHPL IAmb IAmb 22 05 24.4
comp=Z,14nm,0.7s
GUN Gumba 21.71 344 *e*P **P 22 05 17.2 +0.2**
comp=Z,57nm,0.8s
GUN Gumba 21.71 344 *e*P **P 22 05 17.7 +0.7**
comp=Z,56nm,0.8s
KKN Kakani 21.77 343 *e*P **P 22 05 17.9 +0.4**
comp=Z,7.0nm,1.0s
GKN Gorkha 22.16 341 *e*P **P 22 05 22.0 +0.3**
comp=Z,102nm,0.8s
GKN Gorkha 22.16 341 *e*P **P 22 05 22.0 +0.3**
comp=Z,108nm,0.8s
KOLN Koldanda 22.30 339 *e*P **P 22 05 23.7 +0.5**
LSA Lhasa 22.61 357 P **P 22 05 27.5 +0.7**
LSA IAmb IAmb 22 05 29.5
comp=Z,18nm,0.6s
LSA Lhasa 22.61 357 Pn **P 22 05 29.0 +2.2**
LSA Pg **sP 22 05 34.5 -0.4**
DANN Dangsing 22.77 340 *e*P **P 22 05 27.9 -0.4**
comp=Z,66nm,0.9s
DANN Dangsing 22.77 340 *e*P **P 22 05 28.6 +0.3**
comp=Z,61nm,0.9s
GYA Guiyang 23.61 33⇑ *e*P **P 22 05 36.3 -0.3**
GYA sP pP 22 05 44.3 +1.8
GYA S **S 22 09 51.0 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,68nm,3.5s
GYA LR LR
comp=Z,160nm,10.5s
GYA LR LR
comp=Z,200nm,9.7s
GYA LR LR
comp=Z,270nm,11.1s
KKM Kota Kinabalu 23.62 91 P **P 22 05 37.8 +1.0**
KKM IAmb IAmb 22 05 48.2
comp=Z,43nm,1.3s
BWJI Bawean 23.86 122 P P 22 05 57.1 +18
BBKI Banjar Baru 24.64 114 P **P 22 05 46.5 +0.4**
comp=Z,3μmcomp=Z,40nm,0.5s
H08S3 Diego Garcia H 24.66 234 T T 22 31 56.2
baz=54,slow=75
H08S2 Diego Garcia H 24.66 234 T T 22 31 54.9
baz=54,slow=75,SNR=32
H08S1 Diego Carcia H 24.68 234 T T 22 31 55.5
baz=54,slow=75,SNR=32
LGTI Lohaghat 25.12 334 *e*P **P 22 05 51.3 +1.0**
PTH Pithoragarh 25.22 334 *e*P **P 22 05 53.3 +1.9**
MYLDM Lahad Datu 25.95 93 P **P 22 05 58.0 0.0**
MYLDM Lahad Datu 25.95 93 P **P 22 05 54.8 -3.3**
comp=Z,42nm,1.1s
CD2 Chengdu 26.03 23 P **P 22 05 58.5 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 LR LR
comp=Z,230nm,8.8s
CD2 LR LR
comp=Z,210nm,11.4s
CD2 LR LR
comp=Z,240nm,9.2s
SRBI Singaraja 27.19 123 P **P 22 06 09.8 +0.6**
comp=Z,61nm,0.8s
ENH Enshi 28.13 32 P **P 22 06 16.8 -0.8**
ENH IAmb IAmb 22 07 07.7
comp=Z,11nm,0.9s
TOLI2 Tolitoli 28.84 100 P **P 22 06 24.0 +0.1**
GOMU GeErMu 29.14 4 P **P 22 06 27.0 +0.2**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,48nm,4.4s
KAPI Kappang 29.74 113 LR LR 22 20 11.1
comp=Z,52nm,18.3s,baz=288,slow=40
KAPI Kappang 29.74 113 P **P 22 06 32.2 +0.3**
KAPI IAmb IAmb 22 06 41.0
comp=Z,16nm,1.3s
LZH Lanzhou 30.77 18 *e*P **P 22 06 41.5 +0.5**
LZH pP pP 22 06 48.5 +1.6
LZH sP pwP 22 06 53.3 +1.1
LZH pmax pmax
comp=Z,13nm,1.1s
XAN Xi'an 30.91 27⇓ *i*P **P 22 06 41.5 -0.6**
XAN pP pP 22 06 46.0 -2.3
XAN pmax pmax
comp=Z,12nm,0.7s
TWG Pinlang 31.71 57 P **P 22 06 49.3 0.0**
TWG IAmb IAmb 22 06 53.1
comp=Z,17nm,0.7s
NIL Nilore 31.93 329 P **P 22 06 50.9 -0.2**
NIL IAmb IAmb 22 07 39.2
comp=Z,9.2nm,0.6s
SSLB Suanglung 32.03 55 P **P 22 06 52.3 +0.1**
SSLB IAmb IAmb 22 07 05.7
comp=Z,17nm,1.0s
THW Thamme Wali 32.08 326 P **P 22 06 52.6 +0.1**
YULB Yu-li 32.14 56 P **P 22 06 53.5 +0.4**
YULB IAmb IAmb 22 06 56.5
comp=Z,14nm,0.8s
CEP Cherat 32.77 327 P **P 22 06 59.4 +0.8**
DAV Davao City (W) 32.86 88 LR LR 22 23 39.9
comp=Z,67nm,18.1s,baz=286,slow=42
GTA Gaotai 32.94 11 ⇑P **P 22 07 00.8 +0.8**
GTA pP pP 22 07 08.0 +2.0
GTA sP pwP 22 07 11.3 +0.2
GTA pmax pmax
comp=Z,13nm,1.1s
LYN LuoYang 33.05 31⇓ *i*P **P 22 07 02.3 +1.5**
LYN sP sP 22 07 09.3 -0.1
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN pmax pmax
comp=Z,60nm,3.8s
LYN LR LR
comp=Z,130nm,10.7s
LYN LR LR
comp=Z,130nm,10.2s
LYN LR LR
comp=Z,140nm,12.4s
KBL Kabul 34.89 325 P **P 22 07 17.1 -0.1**
NJ2 Nanjing 35.01 41 *e*P **P 22 07 19.0 +1.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
KSH Kashi 35.61 338 P **P 22 07 22.5 -0.7**
KSH pP pP 22 07 29.8 +0.5
KSH pmax pmax
comp=Z,7.0nm,0.6s
SOEI Soe 35.79 117 P **P 22 07 22.5 -2.5**
WSAR Wadi Sarin 36.30 300 LR LR 22 21 59.2
comp=Z,27nm,18.1s,baz=175,slow=36
HNS HongShan 36.40 31⇓ P **P 22 07 31.3 +1.6**
HNS *e*S **S 22 13 12.0 +2.1**
HNS pmax pmax
comp=Z,19nm,0.6s
HNS LR LR
comp=Z,170nm,17.1s
HNS LR LR
comp=Z,160nm,15.1s
TIA Tai'an 36.80 34 *e*P **P 22 07 33.0 -0.2**
TIA pmax pmax
comp=Z,7.0nm,1.0s
WMQ Urumqi 36.91 354 *e*P **P 22 07 35.5 +1.4**
WMQ pP pP 22 07 39.3 -0.9
WMQ sP sP 22 07 43.3 +0.6
WMQ pmax pmax
comp=Z,11nm,0.9s
NRN Naryn 37.28 339 P **P 22 07 37.5 -0.2**
GAR Garm 37.60 331 P **P 22 07 39.4 -0.7**
HHC Hu-ho-hao-te 37.77 24 *e*P **P 22 07 43.0 +1.5**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,160nm,4.9s
CHGR Chuyangaron 37.90 330 P **P 22 07 41.8 -0.8**
CHGR IAmb IAmb 22 07 43.1
comp=Z,13nm,1.0s
BTK Batken 38.21 333 P **P 22 07 46.5 +1.3**
BTK IAmb IAmb 22 07 48.0
comp=Z,46nm,1.3s
BOOM Boomskoye usch 38.24 340 P **P 22 07 46.0 +0.4**
BOOM IAmb IAmb 22 08 06.5
comp=Z,20nm,1.2s
UCH Uchtor 38.51 338 P **P 22 07 49.7 +1.5**
SNR=8.3
KBK Karagaybulak 38.73 339 P **P 22 07 51.5 +1.8**
SNR=18
AML Almayashu 38.73 338 P **P 22 07 51.4 +1.5**
SNR=28
TKM2 Tokmak 2 38.74 340 P **P 22 07 51.1 +1.3**
SNR=5.6
AAK Ala-Archa 38.88 339 P **P 22 07 53.3 +2.4**
SNR=6.9
EKS2 Erkin-Say 39.16 338 P **P 22 07 54.8 +1.6**
SNR=8.6
JOW Kunigami 39.32 56 LR LR 22 26 42.2
comp=Z,122nm,18.6s,baz=294,slow=40
USP Ospenovka 39.43 339 P **P 22 07 56.3 +1.0**
SNR=14
SIJI Sorong 39.50 100 LR LR 22 25 13.5
comp=Z,36nm,18.4s,baz=154,slow=38
TAS Tashkent 39.91 332 P **P 22 07 58.7 -0.7**
MK31 Makanchi Array 40.60 349 P **P 22 08 04.3 -0.7**
MKAR Makanchi Array 40.60 349 P **P 22 08 05.0 0.0**
comp=Z,8.9nm,0.5s,baz=166,slow=8.8,SNR=102
MKAR PcP **PcP 22 10 06.3 -0.5**
comp=Z,1.3nm,0.9s,baz=204,slow=3.2,SNR=2.1
comp=Z,8.9nm,0.5s
MKAR Makanchi Array 40.60 349 P **P 22 08 04.7 -0.3**
MAKZ Makanchi 40.67 349 P **P 22 08 05.2 -0.3**
KK31 Karatay Array 40.82 335 P **P 22 08 06.6 -0.3**
KKAR Karatay Array 40.82 335 P **P 22 08 06.8 -0.1**
XLT XiLinHaoTe 42.17 26 *e*P **P 22 08 18.3 +0.3**
XLT sP pP 22 08 26.0 +1.7
XLT pmax pmax
comp=Z,13nm,0.7s
XLT pmax pmax
comp=Z,83nm,5.3s
SONM Songino Array 42.39 14 P **P 22 08 20.0 +0.2**
comp=Z,4.0nm,0.9s,baz=195,slow=7.9,SNR=23
SONM PcP **PcP 22 10 13.0 +0.1**
comp=Z,2.1nm,0.6s,baz=202,slow=4.1,SNR=5.1
SONM LR LR 22 28 19.6
comp=Z,48nm,20.1s,baz=186,slow=40
comp=Z,4.0nm,0.9s
SONM Songino Array 42.39 14 P **P 22 08 19.5 -0.2**
KNRA Kununurra 42.43 122 P **P 22 08 20.1 -0.3**
KNRA IAmb IAmb 22 08 33.8
comp=Z,53nm,1.9s
MORW Morawa 42.45 149 P **P 22 08 21.4 +1.0**
MORW IAmb IAmb 22 08 44.3
comp=Z,37nm,1.6s
ULN Ulaanbaatar 42.58 15 P **P 22 08 21.2 -0.1**
ULN Ulaanbaatar 42.58 15 P **P 22 08 22.1 +0.8**
GEYT Alibeck 43.76 320 P **P 22 08 32.6 +1.6**
comp=Z,14nm,0.7s,baz=153,slow=8.3,SNR=36
GEYT LR LR 22 28 35.8
comp=Z,33nm,18.8s,baz=138,slow=39
comp=Z,14nm,0.7s
GEYT Alibeck 43.76 320 P **P 22 08 31.5 +0.5**
GEYT IAmb IAmb 22 08 33.5
comp=Z,15nm,0.7s
GYA0B ALIBECK ARRAY 43.76 320 P **P 22 08 31.2 +0.2**
GYA0B IAmb IAmb 22 08 33.4
comp=Z,16nm,0.7s
KSRS Korea Array 44.21 41 LR LR 22 27 30.4
comp=Z,38nm,20.2s,baz=235,slow=37
KURBB Kurchatov Arra 45.01 347 P **P 22 08 41.1 +0.5**
comp=Z,9.8nm,0.6s,baz=171,slow=7.1,SNR=40
KURBB PcP **PcP 22 10 22.3 +0.9**
comp=Z,1.4nm,0.2s,baz=167,slow=2.6,SNR=4.3
comp=Z,9.8nm,0.6s
KURK Kurchatov 45.07 348 P **P 22 08 41.0 -0.2**
KURK IAmb IAmb 22 08 42.5
comp=Z,24nm,1.2s
NWAO Narrogin (SRO) 46.17 151 P **P 22 08 50.9 +0.8**
H01W3 Cape Leeuwin H 46.41 155 T T 22 58 51.4
baz=331,slow=76,SNR=4.3
H01W2 Cape Leeuwin H 46.43 155 T T 22 58 51.9
baz=331,slow=76,SNR=4.3
H01W1 Cape Leeuwin H 46.43 155 T T 22 58 52.7
baz=331,slow=76,SNR=4.0
ZAA0 Zalesovo Array 47.22 354 P **P 22 08 57.9 0.0**
ZAA0 IAmb IAmb 22 08 59.4
comp=Z,16nm,1.3s
ZALV Zalesovo Beam 47.22 354 P **P 22 08 58.3 +0.3**
comp=Z,3.7nm,0.4s,baz=170,slow=8.0,SNR=16
ZALV LR LR 22 33 32.6
comp=Z,31nm,18.3s,baz=98,slow=42
comp=Z,3.7nm,0.4s
ZALV Zalesovo Beam 47.22 354 P **P 22 08 57.6 -0.3**
RAYN Ar Rayn 47.94 295 P **P 22 09 04.3 +0.1**
RAYN IAmb IAmb 22 09 06.5
comp=Z,6.0nm,0.9s
HIA Hailar 47.98 24 P **P 22 09 04.3 +0.3**
HIA IAmb IAmb 22 09 12.2
comp=Z,8.1nm,0.9s
WB0 Warramunga Arr 49.10 124 P **P 22 09 13.2 +0.1**
WB0 IAmb IAmb 22 09 27.9
comp=Z,8.9nm,0.9s
ATD Arta Tunnel 49.13 279 LR LR 22 27 03.9
comp=Z,13nm,19.9s,baz=340,slow=33
WRA Warramunga Arr 49.14 124 P **P 22 09 14.0 +0.6**
comp=Z,6.4nm,0.8s,baz=305,slow=8.8,SNR=63
WRA PcP **PcP 22 10 37.4 +0.7**
comp=Z,1.5nm,0.7s,baz=303,slow=3.1,SNR=1.1
comp=Z,6.4nm,0.8s
WRA Warramunga Arr 49.14 124 P **P 22 09 13.4 +0.1**
BVAR Borovoye Array 49.30 343 P **P 22 09 13.8 -0.2**
comp=Z,3.3nm,0.8s,baz=134,slow=8.5,SNR=13
BVAR PcP **PcP 22 10 37.0 +0.4**
comp=Z,1.1nm,0.9s,baz=102,slow=4.9,SNR=1.9
comp=Z,3.3nm,0.8s
BRVK Borovoye 49.36 343 P **P 22 09 13.4 -1.1**
BRVK IAmb IAmb 22 09 15.2
comp=Z,5.5nm,0.8s
ABKAR Akbulak array 50.22 333 P **P 22 09 21.4 +0.3**
ABKAR IAmb IAmb 22 09 22.6
comp=Z,15nm,1.1s
ABKAR Akbulak array 50.22 333 P **P 22 09 21.2 +0.1**
USRK Ussuriysk Ar. 50.59 36 LR LR 22 31 23.2
comp=Z,32nm,18.6s,baz=236,slow=37
AS31 Alice Springs 50.66 128 P **P 22 09 25.4 +0.4**
ASAR Alice Springs 50.66 128 P **P 22 09 25.8 +0.8**
comp=Z,6.7nm,0.8s,baz=309,slow=7.5,SNR=59
ASAR PcP **PcP 22 10 43.4 +1.2**
comp=Z,1.0nm,0.5s,baz=316,slow=5.2,SNR=1.5
comp=Z,6.7nm,0.8s
ASAR Alice Springs 50.66 128 P **P 22 09 25.6 +0.6**
FORT Forrest 50.73 140 P **P 22 09 26.7 +1.4**
MJAR Matsushiro Arr 50.98 48 P **P 22 09 25.4 -1.7**
comp=Z,1.3nm,0.6s,baz=237,slow=7.8,SNR=2.4
MJAR PcP **PcP 22 10 43.2 0.0**
comp=Z,2.2nm,0.8s,baz=245,slow=2.5,SNR=4.2
MJAR LR LR 22 32 33.7
comp=Z,48nm,20.3s,baz=235,slow=38
comp=Z,1.3nm,0.6s
AKTO Aktyubinsk 51.93 333 P **P 22 09 33.5 -0.5**
comp=Z,3.3nm,0.8s,baz=128,slow=6.3,SNR=6.1
comp=Z,3.3nm,0.8s
KLR Kul'dur 53.48 31 P **P 22 09 44.6 -0.9**
comp=Z,2.1nm,0.7s,baz=256,slow=7.7,SNR=6.5
KLR LR LR 22 33 06.7
comp=Z,40nm,18.8s,baz=260,slow=37
comp=Z,2.1nm,0.7s
GURO Guroymak-BITLI 55.18 313 P **P 22 09 57.9 -0.3**
GURO IAmb IAmb 22 11 52.1
comp=Z,5.4nm,0.7s
ONI Oni 55.77 318 P **P 22 10 02.3 -0.1**
ONI IAmb IAmb 22 10 21.1
comp=Z,32nm,1.6s
ARU Arti 56.05 338 P **P 22 10 03.8 -0.2**
comp=Z,4.6nm,0.6s,baz=157,slow=4.7,SNR=15
comp=Z,4.6nm,0.6s
ARU Arti 56.05 338 P **P 22 10 03.8 -0.2**
ARU IAmb IAmb 22 10 04.9
comp=Z,11nm,0.9s
KBZ Khabaz 56.62 319 P **P 22 10 08.1 -0.1**
comp=Z,4.8nm,0.8s,baz=158,slow=8.7,SNR=6.7
comp=Z,4.8nm,0.8s
BBOO Buckleboo 57.31 136 P **P 22 10 14.0 +0.6**
BBOO IAmb IAmb 22 11 35.8
comp=Z,33nm,1.6s
BELG Belogornoye 58.19 329 P **P 22 10 18.1 -1.1**
comp=Z,14nm,0.8s,baz=173,slow=6.2,SNR=4.4
comp=Z,14nm,0.8s
EIL Elat 58.42 300 LR LR 22 36 08.2
comp=Z,33nm,19.0s,baz=302,slow=37
STKA Stephens Creek 60.73 132 P **P 22 10 38.1 +1.1**
comp=Z,6.4nm,0.7s,baz=320,slow=6.4,SNR=15
comp=Z,6.4nm,0.7s
STKA Stephens Creek 60.73 132 P **P 22 10 38.2 +1.1**
BR131 Keskin Array S 61.74 311 P **P 22 10 43.1 -0.9**
BR131 IAmb IAmb 22 11 01.0
comp=Z,14nm,1.3s
BRTR Keskin Array B 61.74 311 P **P 22 10 43.5 -0.5**
comp=Z,1.9nm,0.5s,baz=133,slow=7.0,SNR=14
comp=Z,1.9nm,0.5s
BRTR Keskin Array B 61.74 311 P **P 22 10 43.3 -0.7**
MBAR Mbarara 62.03 266 LR LR 22 33 38.0
comp=Z,61nm,22.0s,baz=64,slow=32
NRIK Noril'sk 62.34 358 P **P 22 10 47.0 -0.2**
comp=Z,4.3nm,0.5s,baz=149,slow=7.2,SNR=5.1
comp=Z,4.3nm,0.5s
NRIK Noril'sk 62.34 358 P **P 22 10 47.6 +0.3**
NRIK IAmb IAmb 22 10 48.6
comp=Z,14nm,1.2s
ELL Elmali 63.92 307 P **P 22 10 58.5 -0.1**
OBN Obninsk 65.23 328 P **P 22 11 05.5 -1.0**
comp=Z,1.2nm,0.4s,baz=146,slow=7.3,SNR=3.0
comp=Z,1.2nm,0.4s
EIDS Eidsvold 65.42 122 P **P 22 11 09.4 +1.0**
KARP Karpathos 65.90 306 P **P 22 11 12.0 +0.6**
KLMR Klimovskoe 66.52 335 *e*P **P 22 11 11.7 -3.1**
LSZ Lusaka 67.41 250 LR LR 22 37 35.4
comp=Z,52nm,18.7s,baz=59,slow=33
IDI Anoyia 67.70 305 P **P 22 11 23.4 +0.5**
ARMA Armidale 67.76 127 P **P 22 11 25.6 +2.3**
CAN Canberra 67.80 133 P **P 22 11 24.8 +1.3**
AKASG Malin Array Be 67.81 322 P **P 22 11 21.8 -1.4**
comp=Z,0.2nm,0.3s,baz=85,slow=5.2,SNR=5.1
comp=Z,0.2nm,0.3s
POGA Pongola 67.91 237 P **P 22 11 24.9 +0.7**
POGA IAmb IAmb 22 12 18.7
comp=Z,15nm,1.2s
TIXI Tiksi 68.41 12 P **P 22 11 26.6 0.0**
comp=Z,16nm,0.7s,baz=90,slow=23,SNR=73
comp=Z,16nm,0.7s
TIXI Tiksi 68.41 12 P **P 22 11 26.5 0.0**
MLR Muntele Rosu 68.64 316 P **P 22 11 29.4 +0.7**
MLR IAmb IAmb 22 11 30.1
comp=Z,12nm,0.9s
BURAR Bucovina Array 69.58 318 P **P 22 11 34.3 -0.1**
BUR08 Bucovina Ar. S 69.59 318 P **P 22 11 34.5 0.0**
BUR08 IAmb IAmb 22 12 57.9
comp=Z,9.7nm,1.4s
PETK Petropavlovsk- 69.68 36 LR LR 22 43 17.8
comp=Z,14nm,20.1s,baz=56,slow=37
MNK Minsk 69.70 326 *i* P **P 22 11 33.0 -1.8**
comp=E,2.0nm,0.8s
MNK *i* P **P 22 11 33.0 -1.8**
comp=N,21nm,0.7s
MNK *i* P **P 22 11 33.0 -1.8**
comp=Z,8.0nm,0.7s,baz=107
MNK *i* PcP **PcP 22 11 55.8 -1.8**
MNK *i* PP **PP 22 14 06.7 -2.4**
MNK *i* PPP PPP 22 15 47.6
MNK *i* S **S 22 20 41.9 -0.4**
MNK *i* SS **SS 22 25 10.6 0.0**
MNK *i* SSS SSS 22 28 28.1
MNK *i* LQ LQ 22 37 14.3
MNK *i* LR LR 22 41 52.6
MNK *i* LRM MLR 22 44 18.9
comp=N,434nm,20.4s
MNK *i* LRM MLR 22 44 20.9
comp=E,62nm,19.2s
MNK *i* LRM MLR 22 44 33.6
comp=Z,39nm,17.9s
VTS Vitosha 70.03 313 P **P 22 11 37.2 -0.1**
VTS IAmb IAmb 22 11 38.2
comp=Z,5.3nm,0.9s
ITM Ithomi 70.30 307 P **P 22 11 38.5 -0.5**
PABE Paberze 72.14 326 P **P 22 11 49.0 -0.7**
LBTB Lobatse 72.37 241 LR LR 22 39 49.5
comp=Z,47nm,19.5s,baz=78,slow=33
LBTB Lobatse 72.37 241 P **P 22 11 52.3 +0.6**
FINES FINESS Array B 72.71 333 P **P 22 11 52.2 -0.8**
comp=Z,5.3nm,0.8s,baz=104,slow=6.7,SNR=16
comp=Z,5.3nm,0.8s
PDG Podgorica 72.92 312 P **P 22 11 54.0 -0.6**
PDG IAmb IAmb 22 11 54.8
comp=Z,6.8nm,1.1s
SCTE Santa Cesarea 73.28 310 P **P 22 11 56.3 -0.5**
BOSA Boshof 73.71 238 P **P 22 12 00.3 +0.6**
comp=Z,2.5nm,0.5s,baz=79,slow=4.5,SNR=15
BOSA LR LR 22 40 12.6
comp=Z,32nm,18.7s,baz=152,slow=32
comp=Z,2.5nm,0.5s
BOSA Boshof 73.71 238 P **P 22 12 00.5 +0.8**
BOSA IAmb IAmb 22 13 05.9
comp=Z,22nm,1.6s
CASY Casey 74.28 173 P **P 22 12 03.9 +1.9**
TIP Timpagrande 74.53 309 P **P 22 12 04.4 +0.1**
SOE Somerset East 74.74 233 P **P 22 12 05.9 +0.4**
KRLC Kraliky 75.47 320 *e*P **P 22 12 09.5 +0.1**
KRLC *ex* x 22 12 17.0
ARCES ARCESS Array B 75.52 340 P **P 22 12 09.2 -0.1**
comp=Z,2.6nm,0.7s,baz=88,slow=6.2,SNR=6.8
comp=Z,2.6nm,0.7s
ARCES ARCESS Array B 75.52 340 P **P 22 12 09.1 -0.1**
DPC Dobruska-Polom 75.80 320 *e*P **P 22 12 11.6 +0.3**
DPC *e*pP **pP 22 12 18.6 +0.9**
CONA Conrad Observa 75.86 318 *e*P **P 22 12 11.5 -0.2**
comp=Z,2.8nm,1.0s
OSTC Ostas 75.89 320 *e*P **P 22 12 11.9 +0.1**
OSTC *ex* x 22 12 19.7
CHVC Chvalec 76.00 320 *e*P **P 22 12 12.6 +0.2**
CHVC *e*pP **pP 22 12 20.0 +1.2**
ARSA Arzberg 76.03 317 *e*P **P 22 12 12.8 +0.2**
comp=Z,1.4nm,0.7s
SOKA Soboth 76.32 316 *e*P **P 22 12 15.0 +0.6**
comp=Z,4.3nm,0.9s,SNR=4.7
PRU Pruhonice 76.90 320 *e*P **P 22 12 17.8 +0.3**
MOA Molln 76.92 317 *e*P **P 22 12 17.3 -0.4**
comp=Z,1.4nm,0.8s
CKRC Cesky Krumlov 76.96 318 *e*P **P 22 12 17.8 -0.1**
MAW Mawson 77.36 191 P **P 22 12 18.8 -0.7**
comp=Z,3.1nm,0.9s,baz=348,slow=9.3,SNR=3.5
comp=Z,3.1nm,0.9s
GEC2 GERESS Array S 77.37 318 P **P 22 12 20.7 +0.4**
GEC2 IAmb IAmb 22 12 21.6
comp=Z,7.0nm,1.1s
GERES GERESS Array B 77.37 318 P **P 22 12 20.8 +0.6**
comp=Z,3.4nm,0.9s,baz=88,slow=6.8,SNR=22
comp=Z,3.4nm,0.9s
GERES GERESS Array B 77.37 318 P **P 22 12 20.5 +0.2**
KHC Kasperske Hory 77.47 319 *e*P **P 22 12 20.5 -0.2**
KHC *e*pP **pP 22 12 28.2 +1.0**
KHC *e*PCP **pwP 22 12 33.6 +1.3**
CLUD Cludinico 77.78 316 P **P 22 12 22.4 -0.1**
CLUD IAmb IAmb 22 12 23.4
comp=Z,13nm,0.9s
STAL STALIGIAL 77.89 316 P **P 22 12 23.1 0.0**
STAL IAmb IAmb 22 12 34.7
comp=Z,25nm,1.7s
ABTA Abfaltersbach 78.05 316 *e*P **P 22 12 23.4 -0.7**
comp=Z,3.0nm,0.9s
TSUM Tsumeb 78.16 249 LR LR 22 43 05.0
comp=Z,41nm,19.1s,baz=127,slow=33
SUR Sutherland 78.47 235 LR LR 22 42 47.7
comp=Z,28nm,20.8s,baz=16,slow=32

SUR	Sutherland	78.47	235	P	P	22 12 28.4	+1.6
WTTA	Wattenberg	78.67	317	*i* P	P	22 12 27.0	-0.7
	comp=Z,6.6nm,0.8s,SNR=6.5						
WATA	Walderalm	78.71	317	*e*P	P	22 12 27.0	-0.8
	comp=Z,2.8nm,0.8s						
SQTA	Sankt Quirin	78.96	317	*e*P	P	22 12 28.6	-0.6
	comp=Z,7.9nm,0.9s,SNR=5.5						
MOTA	Moosalm	79.03	317	*e*P	P	22 12 29.0	-0.6
	comp=Z,5.0nm,0.8s						
RETA	Reutte	79.27	317	*e*P	P	22 12 30.4	-0.4
	comp=Z,2.8nm,0.7s						
FETA	Feichten	79.28	316	*e*P	P	22 12 30.6	-0.4
	comp=Z,4.0nm,1.4s,SNR=5.5						
NB2	NORSAR Subarra	79.67	331	P	P	22 12 31.6	-1.0
	comp=Z,1.5nm,0.7s,baz=98,slow=5.1						
NOA	NORSAR Array B	79.67	331	P	P	22 12 32.0	-0.6
	comp=Z,1.4nm,0.7s,baz=99,slow=5.5,SNR=3.7						
	comp=Z,1.4nm,0.7s						
DAVOX	Davos/Dischmat	79.86	316	LR	LR	22 54 47.1	
	comp=Z,16nm,18.6s,baz=265,slow=41						
DAVA	Damuels	79.87	317	*e*P	P	22 12 34.0	-0.2
	comp=Z,3.1nm,0.9s						
SPB2	Spitsbergen Ar	80.34	348	P	P	22 12 36.0	+0.1
TAM	Tamanrasset	84.52	292	P	P	22 12 59.1	+0.1
ADK	Adak	85.08	38	P	P	22 13 01.4	+0.4
NOR	Nord	85.88	352	*e*P	P	22 13 04.0	-0.5
DAG	Danmarks Havn	87.97	348	*i* P	P	22 13 14.0	-0.7
TOA0	Torodi Ar. Sit	89.17	283	P	P	22 13 22.5	+0.8
TOA0				IAmb	IAmb	22 16 18.4	
	comp=Z,8.8nm,1.6s						
TORD	Torodi Ar. Bea	89.17	283	P	P	22 13 22.5	+0.9
	comp=Z,0.9nm,0.7s,baz=96,slow=5.9,SNR=7.5						
	comp=Z,0.9nm,0.7s						
ESDC	Sonseca Array	90.50	310	P	P	22 13 28.3	+0.9
	comp=Z,1.4nm,0.9s,baz=60,slow=3.9,SNR=8.5						
	comp=Z,1.4nm,0.9s						
NEEM	North Greenlan	93.24	353	*e*P	P	22 13 40.6	+1.0
ILAR	Eielson Array	96.17	22	P	P	22 13 52.4	-0.6
	comp=Z,0.6nm,0.9s,baz=294,slow=4.2,SNR=4.6						
	comp=Z,0.6nm,0.9s						
NVAR	Mina Array Bea	126.51	30	PKP	PKiKP	22 19 30.8	+1.3
	comp=Z,0.8nm,0.6s,baz=294,slow=2.2,SNR=6.3						
PDAR	Pinedale Array	126.56	20	PKP	PKiKP	22 19 29.4	-0.1
	comp=Z,0.9nm,0.7s,baz=34,slow=0.6,SNR=9.4						
TXAR	Lajitas Array	140.68	23	PKP	PKPdf	22 19 53.8	-1.9
	comp=Z,0.4nm,0.7s,baz=354,slow=1.5,SNR=4.8						
PLCA	Paso Flores	143.14	202	PKP	PKPbc	22 19 57.4	+0.8
	comp=Z,1.6nm,0.9s,baz=270,slow=1.0,SNR=3.4						
CPUP	Villa Florida	145.41	233	PKPbc	PKPbc	22 20 03.4	-0.4
	comp=Z,9.6nm,1.0s,baz=149,slow=3.0,SNR=11						
LPAZ	La Paz	158.89	242	PKPab	PKPab	22 21 01.9	+1.0
	comp=Z,2.6nm,0.9s,baz=111,slow=2.6,SNR=7.6						

HEL 25 22:03:32.9±0.0, 67°.17N×20°.62E, h0km, ML1.4, ML1.2(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.05	202	*i* P	Pg	22 03 33.7	-0.1
DUNU				*i* S	Sg	22 03 34.6	+0.2
MASU	Masugnsbyn	0.61	61	*i* P	Pg	22 03 43.7	-0.9
MASU				*i* S	Sg	22 03 51.8	-0.7
RATU	Laukkuluspa	0.77	330	*i* P	Pg	22 03 46.5	-1.1
SALU	Saltoluokta	0.85	286	*e*P	Pg	22 03 48.3	-0.8
SALU	Saltoluokta	0.85	286	*i* P	Pg	22 03 48.2	-0.8
ERTU	Ertsjaerv	0.88	134	*e*P	Pg	22 03 48.0	-1.6
	baz=313						
ERTU				*e*SB	Sg	22 04 01.7	+0.7
NIKU	Nikkaluokta	0.93	320	*e*P	Pg	22 03 49.5	-1.2
PAJU	Pajala	0.99	97	*e*P	Pg	22 03 50.6	-1.2
PAJU				*e*S	Sg	22 04 03.4	-1.2
HARU	Harads	1.02	172	*e*P	Pg	22 03 50.9	-1.5
LANU	Lannavaara	1.03	30	*e*P	Pg	22 03 51.3	-1.4
LANU				*e*SB	Sg	22 04 05.8	-0.2
KLF	Kolari	1.31	85	*e*P	Pg	22 03 55.9	-2.0
KLF				*e*SB	Sg	22 04 13.6	-1.2
HEF	Hetta	1.70	41	*e*P	Pn	22 04 02.9	-0.9
HEF	Hetta	1.70	41	*e*PG	Pn	22 04 03.2	-0.6
	baz=225						
HEF				MSG		22 04 23.6	
	comp=Z,2.4nm,0.2s						
HEF				*e*SG	Sn	22 04 25.4	-0.9
KALU	Kalix	1.71	139	*e*PG	Pn	22 04 03.4	-0.5
KALU				*e*SN	Sn	22 04 26.8	+0.3
SJUU	Sjulsmark	1.71	166	*e*P	Pn	22 04 03.1	-0.8
TOF	Tornio	1.84	125	*e*PN	Pn	22 04 05.5	-0.1
	baz=304						
TOF				MSG		22 04 27.2	
	comp=Z,2.1nm,0.2s						
TOF				*e*SN	Sn	22 04 30.2	+0.6
KIF	Kilpisjarvi	1.85	2	*e*PG	Pb	22 04 06.8	-0.7
KIF				MSG		22 04 29.0	
	comp=Z,2.5nm,0.2s						
KIF				*e*SG	Sb	22 04 31.2	+0.1
KTK1	Kautokeino	2.10	27	*e*SG	Sn	22 04 37.1	+1.0
RNF	Rovaniemi	2.20	102	*e*PB	Pn	22 04 11.4	+0.7
RNF				*e*SG	Sb	22 04 40.6	-0.7
SGF	Sodankyl	2.31	80	*e*PB	Pn	22 04 13.3	+1.1
SGF				*e*SG	Sb	22 04 43.6	-0.7

*IDC **25** 22:35:44.2±2.9, 10°.20N×83°.72W, h0km, mb3.6/4, mbtmp3.7/5, ML4.2/1, MS3.1/4, Error ellipse: s-maj=71.0km s-min=14.9km az=174.0*
*UCR **25** 22:35:47.8±2.2, 9°.42N×84°.10W, h44km±4km, MW4.3, mb4.3(NEIC)*
*NEIC **25** 22:35:47.5±1.1, 9°.40N±0°.04×84°.15W±0°.03, h32km±8km, mb4.3/7, ML4.6(UCR), Error ellipse: s-maj=6.3km s-min=4.2km az=207.0*
*UPA **25** 22:35:47.9±1.9, 9°.47N×84°.20W, h13km±9km, MW4.1*
*INET **25** 22:35:48.1±1.2, 9°.45N×84°.11W, h28km±7km, MW3.4*

ISC 25 22:35:47.8±0.8, 9°.47N±0°.03×84°.14W±0°.03, h40km±8km, n121, σ1°.38/133, mb3.9/7, MS3.0/3, 19C-13D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.31	27	‖ *e*P	Pn	22 35 56.4	-0.1
EDDO	Dominical	0.35	127	‖ *e*P	Pn	22 35 56.3	-0.3
CDM	Cerro de Muert	0.39	77	‖ *e*P	Pn	22 35 57.4	-0.2
CDM	Cerro de Muert	0.39	77	*e*P	Pn	22 35 57.3	-0.3
RIMA	Rio Macho	0.41	43		Pn	22 35 57.2	-0.3
RIMA				Sg	Sn	22 36 04.7	+0.3
RIMA	Rio Macho	0.41	43	‖ *e*P	Pn	22 35 57.3	-0.3
RIMA	Rio Macho	0.41	43	*e*P	Pn	22 35 57.2	-0.3
OCM	Ochomogo	0.46	23	‖ *e*P	Pn	22 35 58.2	-0.1
PEZE	Perez Zeledon,	0.47	100		Pn	22 35 58.0	-0.2
PEZE				Sg	Sn	22 36 05.9	+0.3
PEZE	Perez Zeledon,	0.47	100	*e*P	Pn	22 35 58.0	-0.2
PEZE	Perez Zeledon,	0.47	100	*i* P	Pn	22 35 58.0	-0.2
SJS	Escuela Geolog	0.48	11	‖ *e*P	Pn	22 35 58.7	+0.3
HDC	Heredia	0.53	3		Pn	22 35 59.1	-0.1
HDC					Sn	22 36 08.4	+1.2
HDC	Heredia	0.53	3	*e*P	Pn	22 35 59.5	+0.4
HDC	Heredia	0.53	3	*e*P	Pn	22 35 59.4	+0.2
HDC				*i* S	Sn	22 36 08.3	+1.1
HDC3	Heredia 3	0.53	3	‖ *e*P	Pn	22 35 59.6	+0.4
HDC3	Heredia 3	0.53	3	*e*P	Pn	22 35 59.6	+0.4
JACO	JACO, Garabito	0.54	291		Pn	22 35 59.5	+0.3
JACO	JACO, Garabito	0.54	291	‖ *e*P	Pn	22 35 59.5	+0.3
JACO	JACO, Garabito	0.54	291	*e*P	Pn	22 35 59.5	+0.3
JACO				*e*S	Sn	22 36 08.6	+1.4
HAYA	Volcan Irazu	0.59	30	‖ *e*P	Pn	22 36 00.3	0.0
VTRT	Volcan Turrial	0.64	33	*e*P	Pn	22 36 00.7	0.0
VTCV	VTCV, Calle Va	0.66	39	*e*P	Pn	22 36 00.9	0.0
CVTR	Volcan Turrial	0.67	35		Pn	22 36 01.2	0.0
CVTR					Sn	22 36 11.7	+0.9
CVTR	Volcan Turrial	0.67	35	‖ *e*P	Pn	22 36 01.3	0.0
VTUN	Crater Central	0.67	34	*e*P	Pn	22 36 01.4	+0.1
VTUC	Crater, Volcan	0.67	34	*e*P	Pn	22 36 01.3	0.0
CRPO	Crater poas	0.73	354	*e*P	Pn	22 36 02.5	+0.5
MRVA	Moravia de Chi	0.78	63	‖ *e*P	Pn	22 36 02.2	-0.3
SRBA	San Rafael, Bu	0.81	107		Pn	22 36 02.3	-0.5
EDPN	Palmar Norte	0.84	126	*e*P	Pn	22 36 02.8	-0.5
RIFO	Rio Frio, Sara	0.87	14	‖ *e*P	Pn	22 36 04.1	+0.4
EDBA	Buenos Aires	0.91	109	‖ *e*P	Pn	22 36 03.2	-1.0
BATAN	Batan	0.98	50		Pn	22 36 05.1	0.0
BATAN					Sn	22 36 19.6	+1.7
BATAN	Batan	0.98	50	*e*P	Pn	22 36 05.5	+0.3
BATAN	Batan	0.98	50	‖ *i*P	Pn	22 36 05.5	+0.3
BATAN				*i* S	Sn	22 36 20.1	+2.2
POTG	Potrero Grande	1.09	112	*e*P	Pn	22 36 06.1	-0.6
FORC	Fortuna	1.12	333	*e*P	Pn	22 36 08.4	+1.3
FORC				*e*S	Sn	22 36 24.7	+3.4
CASO	Castillo	1.12	329	*e*P	Pn	22 36 08.3	+1.2
VACR	Volcan Arenal	1.13	332	*e*P	Pn	22 36 08.5	+1.3
JTS	Las Juntas de	1.14	316	Pg	Pn	22 36 08.1	+0.7
	854nm,0.3s,baz=25,slow=20,SNR=1933						
JTS				LR	LR	22 36 13.3	
	comp=Z,20nm,21.7s,baz=225,slow=24						
JTS				Lg	Lg	22 36 23.5	
	869nm,0.3s,baz=142,slow=22,SNR=37						
JTS	Las Juntas de	1.14	316	‖ *e*P	Pn	22 36 08.1	+0.7
JTS	Las Juntas de	1.14	316	‖ *i*P	Pn	22 36 08.1	+0.7
JTS				*i* S	Sn	22 36 22.8	+0.9
CEDE	Laguna Cedeo	1.16	332	‖ *e*P	Pn	22 36 08.9	+1.3
CEDE				*e*S	Sn	22 36 26.1	+3.9
TRT1	Tortuguero	1.21	21	*e*P	Pn	22 36 11.9	+3.7
POPE	POPE, Guanacas	1.25	298	*e*P	Pn	22 36 08.8	0.0
COVE	Coope Vega, Sa	1.27	349		Pn	22 36 10.0	+0.8
COVE	Coope Vega, Sa	1.27	349	‖ *e*P	Pn	22 36 10.0	+0.8
INDI	Punta indio, G	1.40	287	*e*P	Pn	22 36 09.8	-1.0
NICO	Nicoya	1.45	297	*e*P	Pn	22 36 11.8	+0.3
ACAL	Aguas Claras	1.46	323	‖ *i*P	Pn	22 36 12.9	+1.2
DUNO	Dulce Nombre,	1.46	295	Pn	Pn	22 36 11.4	-0.4
DUNO	Dulce Nombre,	1.46	295	*e*P	Pn	22 36 11.5	-0.2
PLVR	Palo Verde	1.48	307	*e*P	Pn	22 36 11.3	-0.8
PTEN	Parque Tenorio	1.49	326	‖ *i*P	Pn	22 36 13.6	+1.3
CDITO	Canoas	1.54	125	Pn	Pn	22 36 11.9	-0.9
CUI	Cuipilapa	1.55	320	‖ *e*P	Pn	22 36 14.0	+1.0
VERA	Finca Concepci	1.55	333	*e*P	Pn	22 36 14.1	+1.1
ORTG	Ortega, Santa	1.57	305	Pn	Pn	22 36 13.4	0.0
ORTG	Ortega, Santa	1.57	305	*e*P	Pn	22 36 13.8	+0.5
ORTG	Ortega, Santa	1.57	305	*e*P	Pn	22 36 13.7	+0.3
BRU2	Volcan	1.58	115	Pn	Pn	22 36 13.2	-0.4
BRU2	Volcan	1.58	115	‖ *e*P	Pn	22 36 13.0	-0.6
COLC	Colonia	1.58	319	*e*P	Pn	22 36 14.3	+0.9
HORNC	Hornillas	1.60	321	‖ *e*P	Pn	22 36 14.5	+0.8
GUAB	Guayabo de Bag	1.63	319	*e*P	Pn	22 36 14.9	+0.8
MESS	Mesas	1.64	321	‖ *e*P	Pn	22 36 15.0	+0.8
MESS				*e*S	Sn	22 36 35.6	+1.5
LIM1	Limonal	1.64	318	*e*P	Pn	22 36 15.1	+0.9
BC3P	Paso Ancho	1.65	113	‖ *e*P	Pn	22 36 13.9	-0.6
BC3P				*e*S	Sn	22 36 35.4	+0.9
VMAR	Armenia, Volca	1.65	324	*e*P	Pn	22 36 15.4	+1.0
CNI2	El Empalme, Bo	1.65	91	*i* P	Pn	22 36 15.3	+1.0
SAJU	San Juanillo,	1.66	291	*e*P	Pn	22 36 15.5	+1.1
GPS2	Hotel Rincn d	1.75	317	*e*P	Pn	22 36 16.4	+0.7
GPS3	Bodega del ICE	1.76	317	*e*P	Pn	22 36 16.5	+0.6
BCO2	Palmira	1.76	115	‖ *e*P	Pn	22 36 15.4	-0.6
GPS1	Guardaparques	1.76	318	*e*P	Pn	22 36 16.8	+0.8
VRLE	La Escondida,	1.78	318	*e*P	Pn	22 36 16.9	+0.7
LAPC	Finca la Perla	1.81	316	‖ *e*P	Pn	22 36 17.1	+0.5
BUEV	Buena Vista	1.82	317	‖ *e*P	Pn	22 36 17.2	+0.5
GB1A	Borinquen Arri	1.82	318	*e*P	Pn	22 36 17.5	+0.7
GBS3	Finca Las Img	1.84	316	*e*P	Pn	22 36 17.5	+0.5
LIMO3	Limones	1.85	137	‖ *i*P	Pn	22 36 19.2	+2.1
LIMO3				*e*S	Sn	22 36 43.6	+4.3
DVD	David	1.96	121	‖ *e*P	Pn	22 36 19.5	+0.9
REME3	Remedios, Chir	2.59	118	*e*P	Pn	22 36 30.3	+3.0
ACON	Acoyapa	2.69	338	Pn	Pn	22 36 28.9	+0.3
ESPN	Las Esperanzas	2.72	357	Pn	Pn	22 36 29.6	+0.7
ESPN	Las Esperanzas	2.72	357	‖ *e*P	Pn	22 36 29.6	+0.7
ESPN	Las Esperanzas	2.72	357	*e*P	Pn	22 36 29.7	+0.7
RSUS3	Rio de Jesus,	3.30	116	*e*P	Pn	22 36 39.3	+2.3
RSUS3				*e*S	Sn	22 37 19.0	+4.1
BOAB	BOACO BROADBAN	3.32	333		Pn	22 36 37.6	+0.3
BOAB	BOACO BROADBAN	3.32	333	*e*P	Pn	22 36 38.0	+0.7
STIA3	Santiago, Vera	3.42	113	*e*P	Pn	22 36 43.3	+4.7
STIA3				*e*S	Sn	22 37 23.9	+6.0
MATN	Matagalpa	3.86	333		Pn	22 36 45.6	+0.8
CNGN	Cerro Negro	3.92	320	Pn	Pn	22 36 46.6	+1.0
CHIT3	Chitre	3.98	112	*e*P	Pn	22 36 48.3	+2.0
VTON	El Valle, Cocl	4.07	102	*e*P	Pn	22 36 49.8	+2.1
AZU	Azuero	4.17	113	*e*P	Pn	22 36 51.3	+2.3
AZU				*e*S	Sn	22 37 40.1	+3.5
BCIP	Isla Barro Col	4.26	94		Pn	22 36 49.9	-0.3
BCIP	Isla Barro Col	4.26	94	‖ *e*P	Pn	22 36 50.5	+0.3
CRIN	San Cristobal	4.30	319	Pn	Pn	22 36 51.7	+0.9
ACHO3	Achotines, Los	4.43	117	*e*P	Pn	22 36 55.0	+2.5
UPA	Univ. de Panam	4.58	96	*e*P	Pn	22 36 57.4	+2.8
TGUH	Tegucigalpa,Un	5.50	326	Pn	Pn	22 37 08.3	+1.0
MTO3	Montecristo	7.08	314	Pn	Pn	22 37 31.3	+2.1
CMIG	Matias Romero	12.91	307	Pn	Pn	22 38 48.6	-0.2
	1.4nm,0.3s,baz=153,slow=10,SNR=8.6						
	3.7nm,0.3s						
TLIG	Tlapa	16.16	301		P	22 39 35.4	+0.4
TLIG				IAmb	IAmb	22 39 42.0	
	comp=Z,13nm,1.0s						
ATAH	Atahualpa	17.46	161	LR	LR	22 45 46.9	
	comp=Z,54nm,19.0s,baz=22,slow=34						
344A	Westbrook Farm	22.72	345	P	P	22 40 46.3	0.0
344A				IAmb	IAmb	22 40 47.5	
	comp=Z,22nm,0.9s						
435B	Jarrell	24.63	331	P	P	22 41 04.7	0.0
TKL	Tuckaleechee C	26.07	1	LR	LR	22 50 40.3	
	comp=Z,49nm,20.6s,baz=170,slow=35						
MIAR	Mount Ida	26.42	342	P	P	22 41 20.5	-0.3
MIAR				IAmb	IAmb	22 41 23.1	
	comp=Z,3.8nm,1.0s						
TXAR	Lajitas Array	26.93	320	P	P	22 41 25.5	-0.1
	comp=Z,0.3nm,0.5s,baz=141,slow=11,SNR=7.2						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	26.93	320	P	P	22 41 26.5	+0.9
TX32	Lajitas Array	26.93	320	P	P	22 41 27.1	+1.5
LPAZ	La Paz	30.10	148	LR	LR	22 53 33.4	
	comp=Z,27nm,18.3s,baz=37,slow=35						
SADO	Sadowa	35.44	6	LR	LR	22 57 54.8	
	comp=Z,42nm,18.8s,baz=346,slow=38						
LCO	Las Campanas	40.39	162	P	P	22 43 20.9	-1.5
LCO				IAmb	IAmb	22 43 29.4	
	comp=Z,25nm,1.2s						
NVAR	Mina Array Bea	42.07	319	P	P	22 43 35.3	-0.9
	comp=Z,0.3nm,0.5s,baz=129,slow=9.4,SNR=1.8						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	57.35	344	P	P	22 45 29.4	-2.2
	comp=Z,0.7nm,0.7s,baz=140,slow=6.7,SNR=2.0						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	76.48	51	P	P	22 47 32.0	-1.9
	comp=Z,0.5nm,0.8s,baz=276,slow=5.8,SNR=4.4						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	141.44	250	PKP	PKiKP	22 55 17.6	-0.7
	comp=Z,0.1nm,0.7s,baz=86,slow=2.8,SNR=1.2						

*VIE **25** 22:35:58.3±1.1, 51°.62N×16°.47E, h0km, mb2.4/3, ml3.0/2, Error ellipse: s-maj=11.9km s-min=6.9km az=59.0 70 km NNW of Wroclaw Suspected Mining induced.*
*IPEC **25** 22:35:59.9±0.3, 51°.59N×16°.23E, h0km, ML2.3/4, Error ellipse: s-maj=3.7km s-min=1.9km az=83.0*
*DNK **25** 22:36:00.2±1.6, 51°.53N×16°.13E, h5km±60km, Mc2.8*
*PRU **25** 22:36:02.0±0.0, 51°.50N×16°.15E, h0km*

ISC 25 22:35:59.8±0.8, 51°.58N±0°.03×16°.17E±0°.03, h0km, n32, σ0°.89/62, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	174	*e*Pg	Pg	22 36 14.5	+0.6
KSP				*e*Sg	Sg	22 36 23.5	0.0
CHVC	Chvalec	0.99	184	*e*PG	Pg	22 36 18.9	+0.1
CHVC				*e*SG	Sg	22 36 31.8	+0.1
	comp=Z,27nm,0.5s						
OSTC	Ostas	1.02	178	*e*PG	Pg	22 36 19.7	+0.3
OSTC				*e*SG	Sg	22 36 32.6	0.0
	comp=Z,39nm,0.3s						
UPC	Upice	1.08	185	*e*PG	Pg	22 36 20.5	+0.1
UPC				*e*SG	Sg	22 36 34.1	-0.2
	comp=Z,66nm,0.2s						
DPC	Dobruska-Polom	1.23	176	*e*PG	Pg	22 36 23.2	-0.2
DPC				*e*SG	Sg	22 36 38.9	-0.5
	comp=Z,36nm,0.7s						
PVCC	Panska Ves	1.46	225	*e*PG	Pn	22 36 27.5	+0.1
PVCC				*e*SG	Sg	22 36 46.4	-0.2
	comp=Z,222nm,1.1s						
KRLC	Kraliky	1.56	165	*e*PG	Pn	22 36 28.6	-0.1
KRLC				*e*SG	Sg	22 36 48.6	-1.1
	comp=Z,41nm,0.8s						
GOPC	GO Pecny, Ondr	1.89	208	*e*PG	Pb	22 36 35.0	0.0
GOPC				*e*SG	Sb	22 36 58.9	-0.2
	comp=Z,9.8nm,0.3s						
PRU	Pruhonice	1.90	214	*e*PG	Pn	22 36 34.4	+1.0
PRU				*e*SG	Sb	22 36 59.8	+0.3
	comp=Z,35nm,0.3s						
CLL	Collm	2.00	263	*e*Pn	Pn	22 36 35.0	+0.2
CLL				*e*Pg	Pg	22 36 38.0	-0.1
CLL				*e*Sg	Sg	22 37 04.0	0.0
	comp=Z,31nm,0.9s						
MORC	Moravsky Berou	2.00	154	*e*PN	Pn	22 36 34.5	-0.4
MORC				*e*SG	Sb	22 37 02.5	-0.1
MORC	Moravsky Berou	2.00	154	*e*Pn	Pn	22 36 34.5	-0.4
	baz=336						
MORC				*e*Sg	Sb	22 37 02.5	-0.1
	comp=Z,22nm,0.4s,baz=336						
OKC	Ostrava-Krasne	2.15	143	*e*PG	Pb	22 36 40.1	+0.6
OKC				*e*SG	Sb	22 37 07.7	+1.0
	comp=Z,27nm,0.7s						
VRAC	Vranov	2.29	173	*e*PN	Pn	22 36 39.1	+0.3
VRAC				*e*SG	Sb	22 37 11.9	+1.1
VRAC	Vranov	2.29	173	*e*Pn	Pn	22 36 39.1	+0.3
	baz=354						
VRAC				*e*Sg	Sb	22 37 11.8	+1.0
	comp=Z,15nm,0.3s,baz=354						
TREC	Trest	2.33	191	*e*PG	Pb	22 36 42.8	+0.2
TREC				*e*SG	Sb	22 37 12.9	+1.0
	comp=Z,20nm,0.2s						
MAUC	Maruska	2.46	154	*e*PN	Pn	22 36 41.5	+0.4
MAUC				*e*SG	Sg	22 37 17.5	-1.1
	comp=Z,60nm,0.8s						
KRUC	Moravsky	2.52	177	*e*PN	Pn	22 36 42.2	+0.2
KRUC				*e*SG	Sb	22 37 18.9	+1.4
KRUC	Moravsky	2.52	177	*e*Pn	Pn	22 36 42.1	+0.1
	baz=358						
KRUC				*e*Sg	Sb	22 37 18.9	+1.4
	comp=Z,19nm,0.6s,baz=358						
OJC	Ojcow	2.67	119	*e*Pg	Pb	22 36 49.2	+0.8
OJC				*e*Sg	Sg	22 37 24.6	-0.9
NKC	Novy Kostel	2.72	242	*e*PN	Pn	22 36 45.2	+0.5
NKC				*e*PG	Pb	22 36 50.4	+1.2
NKC				*e*SG	Sg	22 37 27.0	0.0
	comp=Z,50nm,0.9s						
JAVC	Velka Javorina	2.89	160	*e*PN	Pn	22 36 47.4	+0.3
JAVC	Velka Javorina	2.89	160	*e*Pn	Pn	22 36 47.3	+0.2
	baz=342						
KHC	Kasperske Hory	2.96	215	*e*PN	Pn	22 36 48.1	+0.1
KHC				*e*PG	Pb	22 36 53.4	0.0
KHC				*e*SG	Sg	22 37 32.9	-1.9
	comp=Z,9.9nm,0.7s						
CKRC	Cesky Krumlov	3.01	204	*e*PN	Pn	22 36 49.2	+0.5
CKRC				*e*PG	Pb	22 36 55.2	+1.0
CKRC				*e*SG	Sg	22 37 34.5	-1.9
BSD	Bornholm Skovb	3.62	348	*e*P	Pn	22 36 57.8	+0.7
BSD				*e*S	Sn	22 37 39.0	-1.5
CONA	Conrad Observa	3.66	183	*e*Pn	Pn	22 36 57.6	-0.1
	comp=Z,0.3nm,0.1s						
MOA	Molln	3.93	199	*e*Pn	Pn	22 37 02.1	+0.7
LUNU	Lund	4.37	339	*e*P	Pn	22 37 08.4	+1.0
LUNU				*e*S	Sn	22 37 58.0	-0.9
BLEU	Blekinge	4.74	358	*e*P	Pn	22 37 13.8	+1.4
DEL	Delary	5.08	345	*e*P	Pn	22 37 17.3	+0.2
DEL				*e*S	Sn	22 38 15.9	-0.5
FABU	Falkenberg	5.80	341	*e*S	Sn	22 38 30.3	-3.7

IDC 25 22:37:05.7±10.0, 20°.97S×178°.80W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=438.0km s-min=42.3km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.68	257	P	P	22 45 12.6	-0.2
	1.0nm,0.7s,baz=93,slow=8.1,SNR=10						
	1.0nm,0.7s						
WRA	Warramunga Arr	43.79	263	P	P	22 45 13.5	-0.1
	0.3nm,0.3s,baz=98,slow=8.5,SNR=41						
	0.3nm,0.3s						
ILAR	Eielson Array	88.94	13	P	P	22 50 01.7	0.0
	0.2nm,0.6s,baz=212,slow=5.0,SNR=2.5						
	0

SUMG	**Summit**	**11.02**	**70**	*e*P	**Pn**	**23 03 29.3**	**+2.9**
SUMG				*e*S	**Sn**	**23 05 22.9**	**-5.6**

*IDC **25** 23:10:06.2±3.5, 60°.57S×28°.34W, h0km, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=95.3km s-min=82.3km az=32.0.*

ISC 25 23:10:07.8±3.0, 60°.4S±0°.2×28°.5W±0°.6, h10km, n6, σ0s87/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.14**	**150**	P	**Pn**	**23 13 14.4**	**+0.3**
VNA3	**Neumayer Olymp**	**13.21**	**153**	P	**Pn**	**23 13 14.6**	**-0.6**
SNAA	**Sanae**	**15.16**	**148**	P	**Pn**	**23 13 42.8**	**+1.1**
BOSA	**Boshof**	**47.82**	**73**	P	**P**	**23 18 45.0**	**-0.5**
	1.5nm,0.5s,baz=223,slow=7.7,SNR=7.5						
	1.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.22**	**30**	P	**P**	**23 22 02.2**	**+0.5**
	0.9nm,0.6s,baz=198,slow=6.2,SNR=13						
	0.9nm,0.6s						
SONM	**Songino Array**	**151.35**	**96**	PKPbc	**PKPbc**	**23 30 00.3**	**-0.4**
	0.4nm,0.5s,baz=208,slow=2.8,SNR=2.8						

IDC 26 00:00:57.5±2.6, 2°.29N×128°.79E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=186.0km s-min=26.7km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.75**	**166**	P	P	00 06 01.2	-0.3
	0.9nm,0.6s,baz=345,slow=9.8,SNR=9.2						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**26.27**	**169**	P	P	00 06 33.8	-1.0
	0.2nm,0.3s,baz=355,slow=9.7,SNR=2.2						
	0.2nm,0.3s						
H11N1	**WAKE ISLAND Hy**	**41.05**	**62**	T	T	00 53 11.4	
	baz=252						
H11N2	**WAKE ISLAND Hy**	**41.06**	**62**	T	T	00 53 37.8	
	baz=252						
H11N3	**WAKE ISLAND Hy**	**41.07**	**62**	T	T	00 53 25.5	
	baz=252						
MKAR	**Makanchi Array**	**59.91**	**325**	P	P	00 11 06.2	+0.8
	0.2nm,0.4s,baz=120,slow=7.4,SNR=5.1						
	0.2nm,0.4s						

ROM 26 00:16:31.6±0.1, 39°.218N±0°.004×16°.333E±0°.006, h19km, ML1.9/7, 2C, Error ellipse: s-maj=0.6km s-min=0.2km az=233.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPS2	**Spezzano della**	**0.08**	**3**	AML	AML		
	comp=E,805μm,0.2s						
SPS2				AML	AML		
	comp=E,7100μm,0.4s						
SPS2				AML	AML		
	comp=N,11600μm,0.3s						
SPS2				AML	AML		
	comp=N,1074μm,0.2s						
CAR1	**CAROLEI**	**0.10**	**291**	P	Pg	00 16 35.8	+0.2
CAR1				S	Sg	00 16 38.4	+0.2
CELI	**Celico**	**0.23**	**36**	⇑P	Pg	00 16 37.4	+0.2
CELI				S	Sg	00 16 41.8	+0.7
CELI				AML	AML		
	comp=N,7530μm,0.3s						
CELI				AML	AML		
	comp=E,7425μm,0.3s						
CELI				AML	AML		
	comp=N,18850μm,0.3s						
CELI				AML	AML		
	comp=E,2975μm,0.3s						
CELI				AML	AML		
	comp=N,7525μm,0.3s						
CELI				AML	AML		
	comp=N,1696μm,0.3s						
CELI				AML	AML		
	comp=E,769μm,0.3s						
CELI				AML	AML		
	comp=N,674μm,0.3s						
CELI				AML	AML		
	comp=E,303μm,0.3s						
SERS	**Sersale**	**0.33**	**123**	P	Pg	00 16 38.7	-0.1
SERS				S	Sb	00 16 43.9	0.0
SERS				AML	AML		
	comp=N,2470μm,0.9s						
SERS				AML	AML		
	comp=E,2725μm,0.3s						
SERS				AML	AML		
	comp=N,4395μm,0.4s						
SERS				AML	AML		
	comp=E,4295μm,0.4s						
SERS				AML	AML		
	comp=N,279μm,0.4s						
TIP	**Timpagrande**	**0.33**	**97**	⇑P	Pb	00 16 38.9	0.0
TIP				S	Sb	00 16 44.2	+0.3
TIP				AML	AML		
	comp=N,1540μm,0.6s						
TIP				AML	AML		
	comp=E,1445μm,0.4s						
TIP				AML	AML		
	comp=N,1545μm,0.6s						
TIP				AML	AML		
	comp=E,1715μm,0.4s						
TIP				AML	AML		
	comp=N,1965μm,0.6s						
TIP				AML	AML		
	comp=E,114μm,0.4s						
TIP				AML	AML		
	comp=E,127μm,0.3s						
CET2	**Cetraro**	**0.43**	**317**	P	Pg	00 16 40.4	0.0
CET2				S	Sb	00 16 47.1	+0.4
CET2				AML	AML		
	comp=E,4035μm,0.7s						
CET2				AML	AML		
	comp=N,3905μm,0.3s						
CET2				AML	AML		
	comp=E,277μm,0.2s						
TDS	**Terranova Siba**	**0.44**	**0**	P	Pg	00 16 40.4	-0.2
TDS				S	Sb	00 16 47.5	+0.5
TDS				AML	AML		
	comp=E,295μm,0.3s						
TDS				AML	AML		
	comp=N,364μm,0.8s						
TDS				AML	AML		
	comp=N,22μm,0.4s						
SALB	**San Lorenzo Be**	**0.66**	**1**	P	Pb	00 16 43.9	-0.6
JOPP	**Joppolo**	**0.70**	**210**	P	Pg	00 16 45.4	-0.1
JOPP				AML	AML		
	comp=E,546μm,0.7s						
JOPP				AML	AML		
	comp=N,750μm,1.6s						
JOPP				AML	AML		
	comp=E,546μm,0.7s						
JOPP				AML	AML		
	comp=N,749μm,1.6s						
PLAC	**Placanica**	**0.77**	**174**	P	Pb	00 16 46.3	0.0
PLAC				AML	AML		
	comp=E,541μm,0.7s						
PLAC				AML	AML		
	comp=N,627μm,0.3s						
PLAC				AML	AML		
	comp=E,650μm,0.3s						
PLAC				AML	AML		
	comp=N,549μm,1.3s						
PLAC				AML	AML		
	comp=E,31μm,0.3s						
CUC	**Castrocucco**	**0.87**	**333**	P	Pb	00 16 47.9	-0.2
CUC				AML	AML		
	comp=E,331μm,0.4s						
CUC				AML	AML		
	comp=N,245μm,0.4s						
CUC				AML	AML		
	comp=E,411μm,0.4s						
CUC				AML	AML		
	comp=N,308μm,0.4s						
SIRI	**Monte Sirino -**	**1.03**	**340**	P	Pb	00 16 50.3	-0.5
SIRI				AML	AML		
	comp=E,328μm,0.3s						
SIRI				AML	AML		
	comp=N,369μm,0.4s						
SIRI				AML	AML		
	comp=E,338μm,0.3s						
SIRI				AML	AML		
	comp=N,376μm,0.4s						
SOI	**Samo**	**1.16**	**191**	P	Pb	00 16 53.2	+0.1

ROM 26 00:16:48.9±0.1, 39°.205N±0°.005×16°.31E±0°.01, h20km±1km, ML2.7/21, 2C, Error ellipse: s-maj=0.8km s-min=0.5km az=280.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAR1	**CAROLEI**	**0.09**	**302**	P	Pg	00 16 53.3	+0.4
CAR1				S	Sg	00 16 56.0	+0.5
CAR1				AML	AML		
	comp=N,26850μm,1.5s						
CAR1				AML	AML		
	comp=E,30200μm,0.5s						
CAR1				AML	AML		
	comp=E,28500μm,0.5s						
CAR1				AML	AML		
	comp=N,26900μm,1.5s						
CAR1				AML	AML		
	comp=N,26900μm,1.5s						
CAR1				AML	AML		
	comp=E,30250μm,0.5s						
CAR1				AML	AML		
	comp=N,26900μm,0.5s						
CAR1				AML	AML		
	comp=N,26900μm,0.5s						
SPS2	**Spezzano della**	**0.09**	**13**	AML	AML		
	comp=N,11600μm,0.3s						
SPS2				AML	AML		
	comp=E,7100μm,0.4s						
CELI	**Celico**	**0.25**	**38**	P	Pg	00 16 55.0	+0.1
CELI				S	Sg	00 16 59.5	+0.4
CELI				AML	AML		
	comp=E,7425μm,0.3s						
CELI				AML	AML		
	comp=E,2975μm,0.3s						
CELI				AML	AML		
	comp=N,7525μm,0.3s						
CELI				AML	AML		
	comp=N,7530μm,0.3s						
CELI				AML	AML		
	comp=N,18850μm,0.3s						
SERS	**Sersale**	**0.34**	**120**	P	Pg	00 16 56.3	-0.1
SERS				S	Sb	00 17 01.4	0.0
SERS				AML	AML		
	comp=E,4295μm,0.4s						
SERS				AML	AML		
	comp=N,2470μm,0.9s						
SERS				AML	AML		
	comp=N,4395μm,0.4s						
SERS				AML	AML		
	comp=E,2725μm,0.3s						
SERS				AML	AML		
	comp=N,2465μm,0.9s						
SERS				AML	AML		
	comp=E,4295μm,1.6s						
SERS				AML	AML		
	comp=N,2465μm,1.1s						
TIP	**Timpagrande**	**0.35**	**94**	P	Pb	00 16 56.5	0.0
TIP				S	Sb	00 17 01.7	+0.1
TIP				AML	AML		
	comp=N,1540μm,0.6s						
TIP				AML	AML		
	comp=E,1445μm,0.4s						
TIP				AML	AML		
	comp=E,1715μm,0.4s						
TIP				AML	AML		
	comp=N,1965μm,0.6s						
TIP				AML	AML		
	comp=N,1545μm,0.6s						
CET2	**Cetraro**	**0.42**	**320**	⇑P	Pg	00 16 58.0	+0.2
CET2				S	Sb	00 17 04.8	+1.0
CET2				AML	AML		
	comp=E,4035μm,0.7s						
CET2				AML	AML		
	comp=N,3905μm,0.3s						
TDS	**Terranova Siba**	**0.45**	**3**	P	Pb	00 16 58.0	-0.2
TDS				S	Sb	00 17 04.8	+0.2
TDS				AML	AML		
	comp=N,364μm,0.8s						
TDS				AML	AML		
	comp=E,295μm,0.3s						
SALB	**San Lorenzo Be**	**0.67**	**2**	P	Pb	00 17 01.6	-0.4
SALB				AML	AML		
	comp=E,377μm,0.3s						
SALB				AML	AML		
	comp=N,222μm,0.9s						
SALB				AML	AML		
	comp=E,412μm,0.3s						
SALB				AML	AML		
	comp=N,210μm,0.3s						
SALB				AML	AML		
	comp=N,222μm,1.1s						
JOPP	**Joppolo**	**0.68**	**209**	P	Pg	00 17 02.6	+0.1
JOPP				S	Sg	00 17 12.5	+0.9
JOPP				AML	AML		
	comp=N,749μm,1.6s						
JOPP				AML	AML		
	comp=E,546μm,0.7s						
JOPP				AML	AML		
	comp=N,749μm,0.4s						
JOPP				AML	AML		
	comp=E,546μm,1.3s						
MMN	**Mormanno**	**0.73**	**340**	P	Pg	00 17 03.4	+0.1
MMN				AML	AML		
	comp=N,402μm,1.1s						
MMN				AML	AML		
	comp=E,214μm,0.3s						
PLAC	**Placanica**	**0.76**	**172**	⇑P	Pb	00 17 03.6	+0.2
PLAC				AML	AML		
	comp=N,627μm,0.3s						
PLAC				AML	AML		
	comp=E,541μm,0.7s						
PLAC				AML	AML		
	comp=E,650μm,0.3s						
PLAC				AML	AML		
	comp=N,549μm,1.3s						
PLAC				AML	AML		
	comp=E,542μm,0.7s						
PLAC				AML	AML		
	comp=N,549μm,0.7s						
ORI	**Oriolo Calabro**	**0.86**	**7**	P	Pb	00 17 05.5	+0.2
CUC	**Castrocucco**	**0.88**	**334**	P	Pb	00 17 05.4	-0.1
CUC				S	Sn	00 17 18.2	-0.2
CUC				AML	AML		
	comp=N,245μm,0.4s						
CUC				AML	AML		
	comp=N,308μm,0.4s						
CUC				AML	AML		
	comp=E,411μm,0.4s						
CUC				AML	AML		
	comp=N,246μm,0.4s						
CUC				AML	AML		
	comp=E,331μm,0.4s						
IST3	**Stromboli F**	**0.93**	**245**	P	Pb	00 17 06.3	-0.2
ISTR	**Stromboli Gino**	**0.97**	**245**	P	Pb	00 17 06.3	-0.6
ISTR				AML	AML		
	comp=E,1745μm,0.5s						
ISTR				AML	AML		
	comp=N,2605μm,0.5s						
CEL	**Celeste**	**1.00**	**199**	P	Pb	00 17 07.6	0.0
SCHR	**S. Chirico Rap**	**1.01**	**350**	P	Pb	00 17 07.9	+0.1
SCHR				AML	AML		
	comp=E,154μm,0.6s						
SCHR				AML	AML		
	comp=N,86μm,0.7s						
SCHR				AML	AML		
	comp=E,154μm,1.4s						
SIRI	**Monte Sirino -**	**1.03**	**341**	P	Pb	00 17 07.8	-0.4
SIRI				AML	AML		
	comp=N,369μm,0.4s						
SIRI				AML	AML		
	comp=E,338μm,0.3s						
SIRI				AML	AML		
	comp=N,376μm,0.4s						
SIRI				AML	AML		
	comp=E,328μm,0.3s						
SIRI				AML	AML		
	comp=N,370μm,0.4s						
MSCL	**Scilla**	**1.05**	**203**	AML	AML		
	comp=E,624μm,0.3s						
MSCL				AML	AML		
	comp=N,762μm,0.6s						
MGR	**Morigerati**	**1.10**	**328**	P	Pn	00 17 08.2	-1.0
MGR				AML	AML		
	comp=E,222μm,0.5s						
MGR				AML	AML		
	comp=N,263μm,0.4s						
MSRU	**Castanea**	**1.13**	**214**	P	Pn	00 17 08.8	-0.8
MSRU				AML	AML		
	comp=E,530μm,0.4s						
MSRU				AML	AML		
	comp=N,453μm,0.3s						
MSRU				AML	AML		
	comp=E,530μm,1.6s						
BULG	**Bulgheria - Ca**	**1.13**	**321**	P	Pn	00 17 08.9	-0.8
MTSN	**Montesano sull**	**1.14**	**338**	P	Pn	00 17 09.1	-0.8
MTSN				AML	AML		
	comp=N,220μm,0.8s						
MTSN				AML	AML		
	comp=E,230μm,0.9s						
SOI	**Samo**	**1.15**	**190**	P	Pb	00 17 10.4	+0.4
SOI				AML	AML		
	comp=E,172μm,0.4s						
SOI				AML	AML		
	comp=N,250μm,0.5s						
SOI				AML	AML		
	comp=E,172μm,1.6s						
SOI				AML	AML		
	comp=N,250μm,1.5s						
CRAC	**Craco**	**1.16**	**5**	P	Pg	00 17 11.7	+0.2
CRAC				AML	AML		
	comp=N,298μm,0.6s						
CRAC				AML	AML		
	comp=N,298μm,1.4s						
CRAC				AML	AML		
	comp=E,318μm,1.0s						
MCEL	**Monticello**	**1.19**	**341**	P	Pn	00 17 10.3	-0.2
MCEL				AML	AML		
	comp=E,184μm,0.6s						
MCEL				AML	AML		
	comp=N,198μm,0.8s						
MCEL				AML	AML		
	comp=E,164μm,0.6s						
MCEL				AML	AML		
	comp=N,192μm,0.7s						
MILZ	**Milazzo**	**1.26**	**222**	P	Pn	00 17 10.5	-0.9
MILZ				AML	AML		
	comp=E,507μm,0.6s						
MILZ				AML	AML		
	comp=N,327μm,0.9s						
MILZ				AML	AML		
	comp=N,327μm,1.1s						
MTTG	**Motta San Giov**	**1.29**	**202**	P	Pn	00 17 11.7	-0.2
LLI	**Lipari**	**1.31**	**235**	P	Pg	00 17 13.7	-0.5
VPL	**Vulcano Piano**	**1.32**	**232**	P	Pb	00 17 12.8	-0.3
PTRP	**Pietrapertosa**	**1.33**	**352**	P	Pb	00 17 13.6	+0.4
MIGL	**Miglionico**	**1.40**	**4**	P	Pb	00 17 15.1	+0.7
LTRZ	**Laterza**	**1.45**	**15**	P	Pb	00 17 15.5	+0.2
NOCI	**Noci**	**1.69**	**20**	P	Pb	00 17 18.4	-0.8
HLNI	**Lentini**	**2.17**	**212**	AML	AML		
	comp=N,36μm,1.1s						
HLNI				AML	AML		
	comp=E,30μm,1.3s						
HLNI				AML	AML		
	comp=E,30μm,0.7s						

*IDC **26** 00:45:14.1±0.8, 17°.35S×173°.87W, h0km, mb3.8/9, mbtmp3.8/10, ML3.7/1, MS3.5/10, Error ellipse: s-maj=43.3km s-min=19.1km az=137.0*

ISC 26 00:45:19.5±0.7, 17°.3S±0°.2×173°.9W±0°.2, h35km, n50, σ0s94/29, mb3.7/9, MS3.5/9, 3C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.93**	**31**	Pn	**Pn**	**00 46 16.7**	**-0.8**
	5.3nm,0.3s,baz=46,slow=17,SNR=1.3						
AFI				LR	LR	00 47 42.6	
	comp=Z,443nm,21.2s,baz=237,slow=38						
	19nm,0.3s						
MSVF	**Nonsavu**	**7.71**	**266**	LR	LR	00 49 27.9	
	comp=Z,884nm,18.3s,baz=51,slow=33						
DZM	**Mont Dzumac**	**19.12**	**252**	*e*LR	LR	00 54 24.0	
	comp=Z,404nm,25.8s						
DZM	**Mont Dzumac**	**19.12**	**252**	LR	LR	00 55 16.2	
	comp=Z,235nm,20.9s,baz=34,slow=32						
PPT2	**Papeete2**	**23.19**	**94**	*e*LR	LR	00 56 16.6	
	comp=Z,138nm,23.0s						
PPT2				*e*LR	LR	00 56 16.6	
	comp=Z,127nm,25.0s						
PPT	**Papeete**	**23.19**	**94**	LR	LR	00 58 09.0	
	comp=Z,58nm,18.9s,baz=236,slow=33						
TBI	**Tubuai**	**23.67**	**109**	*e*LR	LR	00 56 33.0	
	comp=Z,1μm,28.2s						
TBI				*e*LR	LR	00 56 34.1	
	comp=Z,3μm,24.8s						
TBI	**Tubuai**	**23.67**	**109**	*e*T	T	01 15 59.0	
	5.3nm,0.2s						
RPZ	**Rata Peaks**	**29.26**	**203**	LR	LR	01 00 34.9	
	comp=Z,21nm,21.0s,baz=30,slow=32						
CTA	**Charters Tower**	**37.80**	**259**	LR	LR	01 05 25.2	
	comp=Z,76nm,18.8s,baz=81,slow=32						
H11S2	**WAKE ISLAND Hy**	**40.36**	**331**	T	T	01 34 51.8	
	baz=150						
H11S3	**WAKE ISLAND Hy**	**40.38**	**331**	T	T	01 34 53.9	
	baz=150						
H11S1	**WAKE ISLAND Hy**	**40.38**	**331**	T	T	01 34 52.5	
	baz=150						
H11N3	**WAKE ISLAND Hy**	**41.34**	**332**	T	T	01 36 01.1	
	baz=152,slow=76,SNR=9.6						
H11N1	**WAKE ISLAND Hy**	**41.34**	**332**	T	T	01 36 01.6	
	baz=152,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**41.36**	**332**	T	T	01 36 02.5	
	baz=152,slow=76,SNR=8.9						
STKA	**Stephens Creek**	**42.71**	**242**	P	**P**	**00 53 13.1**	**-0.2**
	3.1nm,1.0s,baz=107,slow=5.5,SNR=3.5						
	3.1nm,1.0s						
WRA	**Warramunga Arr**	**48.98**	**258**	P	**P**	**00 54 02.5**	**-0.6**
	0.6nm,0.9s,baz=97,slow=7.8,SNR=2.6						
WRA				PcP	**PcP**	**00 55 27.3**	**+0.5**
	1.0nm,1.0s,baz=92,slow=4.1,SNR=5.5						
WRA				LR	LR	01 15 14.2	
	comp=Z,60nm,18.4s,baz=120,slow=37						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**49.10**	**253**	P	**P**	**00 54 03.0**	**-1.0**
	8.1nm,0.8s,baz=85,slow=8.4,SNR=54						
ASAR				PcP	**PcP**	**00 55 26.9**	**-0.4**
	0.9nm,0.8s,baz=102,slow=4.3,SNR=2.1						
ASAR				LR	LR	01 13 37.6	
	comp=Z,131nm,18.8s,baz=140,slow=35						
	8.1nm,0.8s						
VNDA	**Vanda**	**61.45**	**186**	P	**P**	**00 55 31.7**	**-0.3**
	0.3nm,0.8s,baz=274,slow=14,SNR=1.8						
	0.3nm,0.8s						
KAPI	**Kappang**	**65.97**	**272**	LR	LR	01 24 28.7	
	comp=Z,16nm,18.2s,baz=112,slow=36						
NVAR	**Mina Array Bea**	**76.04**	**42**	P	**P**	**00 57 03.8**	**+0.1**
	0.1nm,0.3s,baz=214,slow=7.6,SNR=1.8						
	0.1nm,0.3s						
USRK	**Ussuriysk Ar.**	**78.62**	**324**	LR	LR	01 25 51.3	
	comp=Z,29nm,21.9s,baz=99,slow=31						
TXAR	**Lajitas Array**	**82.05**	**56**	P	**P**	**00 57 36.3**	**-0.4**
	0.1nm,0.5s,baz=222,slow=4.9,SNR=1.2						
	0.1nm,0.5s						
PDAR	**Pinedale Array**	**83.98**	**42**	P	**P**	**00 57 46.6**	**+0.1**
	0.6nm,0.9s,baz=267,slow=3.0,SNR=3.6						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**84.39**	**11**	P	**P**	**00 57 47.1**	**-0.6**
	2.0nm,1.1s,baz=226,slow=6.6,SNR=7.8						
	2.0nm,1.1s						
H03S2	**Juan Fernandez**	**84.55**	**124**	T	T	02 32 24.1	
	baz=250,slow=75,SNR=11						
H03S1	**Juan Fernandez**	**84.56**	**124**	T	T	02 32 24.5	
	baz=250,slow=75,SNR=12						
H03S3	**Juan Fernandez**	**84.56**	**124**	T	T	02 32 22.5	
	baz=250,slow=75,SNR=8.3						
H03N2	**Juan Fernandez**	**84.66**	**123**	T	T	02 32 27.6	
	baz=257						
H03N3	**Juan Fernandez**	**84.66**	**123**	T	T	02 32 24.3	
	baz=257						
H03N1	**Juan Fernandez**	**84.67**	**123**	T	T	02 32 29.1	
	baz=257						
MAW	**Mawson**	**85.86**	**199**	P	**P**	**00 57 55.1**	**-0.1**
	0.7nm,0.5s,baz=255,slow=18,SNR=2.6						
	0.7nm,0.5s						
MORC	**Moravsky Berou**	**146.31**	**347**	⇑P	**PKPab**	**01 04 58.4**	**+1.1**
MORC	**Moravsky Berou**	**146.31**	**347**	*e*PKP	**PKPab**	**01 04 58.1**	**+0.8**
TRPA	**Tarpa**	**146.44**	**340**	⇑P	**PKPab**	**01 04 58.0**	**+0.3**
PLOR	**Plostina**	**146.78**	**333**	⇑P	**PKPab**	**01 04 59.3**	**0.0**
VRAC	**Vranov**	**146.96**	**347**	*e*PKP	**PKPab**	**01 05 00.1**	**+0.3**
KRUC	**Moravsky**	**147.23**	**347**	*e*PKP	**PKPab**	**01 05 00.8**	**0.0**
BRTR	**Keskin Array B**	**147.30**	**319**	PKPbc	**PKPbc**	**01 05 00.6**	**+0.8**
	1.9nm,0.9s,baz=29,slow=2.8,SNR=6.3						

GERES	GERESS Array B	147.93	351	PKPbc		PKPbc	01 05 01.9	+0.7
	1.2nm,0.9s,baz=50,slow=3.1,SNR=8.3							
CONA	Conrad Observa	148.42	347	eP		PKiKP	01 05 04.6	+0.6
	4.2nm,1.1s							
RONA	Rosalia, Austr	148.54	347	eP		PKiKP	01 05 05.2	+0.9
	2.2nm,0.6s							
RETA	Reutte	149.65	354	eP		PKiKP	01 05 08.4	+1.8
	3.6nm,1.5s							
WTTA	Wattenberg	149.77	353	eP		PKiKP	01 05 08.6	+1.6
	11nm,1.7s							
SOKA	Soboth	149.78	348	eP		PKiKP	01 05 08.0	+1.1
	4.7nm,1.2s							
DAVA	Damuels	149.93	355	eP		PKiKP	01 05 08.7	+1.4
	6.0nm,1.5s							
OBKA	Obir	150.04	348	eP		PKPab	01 05 11.4	-1.0
	6.8nm,1.4s							
FETA	Feichten	150.11	354	eP		PKiKP	01 05 09.7	+2.0
	7.2nm,1.2s							
ABTA	Abfaltersbach	150.16	351	eP		PKiKP	01 05 08.8	+1.1
	5.3nm,1.1s							

IDC 26 00:47:17.1±4.8, 7°.46S×156°.93E, h0km, mb4.2/6, mbtmp4.2/6, MS3.3/2, Error ellipse: s-maj=157.9km s-min=28.7km az=114.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.17	238	P	P	00 52 44.6	+0.2
	4.7nm,0.6s,baz=61,slow=9.4,SNR=56						
	4.7nm,0.6s						
ASAR	Alice Springs	27.34	231	P	P	00 53 04.0	-0.1
	0.6nm,0.5s,baz=60,slow=9.3,SNR=12						
	0.6nm,0.5s						
H11S3	WAKE ISLAND Hy	27.53	20	T	T	01 21 36.7	
	baz=202,slow=76,SNR=76						
H11S2	WAKE ISLAND Hy	27.53	20	T	T	01 21 34.4	
	baz=202,slow=76,SNR=90						
H11S1	WAKE ISLAND Hy	27.55	20	T	T	01 21 38.0	
	baz=202,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	28.73	20	T	T	01 23 15.3	
	baz=200						
H11N3	WAKE ISLAND Hy	28.74	20	T	T	01 23 20.7	
	baz=200						
H11N2	WAKE ISLAND Hy	28.75	20	T	T	01 23 19.3	
	baz=200						
AFI	Afiamalu	31.39	104	LR	LR	01 03 42.8	
	comp=Z,23nm,19.8s,baz=76,slow=31						
SONM	Songino Array	70.77	327	P	P	00 58 35.5	0.0
	0.5nm,0.6s,baz=134,slow=5.2,SNR=3.5						
	0.5nm,0.6s						
MKAR	Makanchi Array	85.02	318	P	P	00 59 55.3	+0.5
	1.1nm,0.5s,baz=97,slow=8.4,SNR=19						
	1.1nm,0.5s						
ZALV	Zalesovo Beam	85.64	326	P	P	00 59 57.3	-0.3
	0.8nm,0.4s,baz=107,slow=5.7,SNR=5.2						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	88.42	321	P	P	01 00 10.9	-0.3
	1.4nm,0.2s,baz=97,slow=4.3,SNR=1.3						
	1.4nm,0.2s						
YKA	Yellowknife Ar	95.85	28	LR	LR	01 36 05.7	
	comp=Z,33nm,20.8s,baz=291,slow=30						
TORD	Torodi Ar. Bea	155.00	285	PKPbc	PKPdf	01 07 21.5	+8.3
	0.4nm,0.7s,baz=71,slow=2.8,SNR=3.3						

*IDC **26** 00:48:15.5±2.4, 20°.49N×123°.15E, h0km, mb3.8/5, mbtmp3.8/5, MS3.0/2, Error ellipse: s-maj=211.9km s-min=22.2km az=64.0*
*MAN **26** 00:48:25.2, 18°.82N×119°.65E, h32km, mb4.5, ML3.4, MS3.2*
ISC 26 00:48:25.3±1.0, 18°.88N±0°.07×119°.60E±0°.10, h35km, n11, σ1§92/12, mb3.4/5, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CICP	Calayan Island	1.82	78	⇓iP	Pn	00 48 54.0	-0.1
CICP				i S	Sn	00 49 16.2	+0.2
SAMP	Sagada Mountai	2.18	145	⇑eP	Pn	00 48 58.7	-0.4
SAMP				eS	Sn	00 49 24.4	-0.6
SMPP	San Manuel, Pa	2.91	159	⇑eP	Pn	00 49 08.9	-0.2
SMPP				eS	Sn	00 49 41.9	-1.0
BALP	Baler	3.65	148	⇓eP	Pn	00 49 23.5	+4.2
BALP				eS	Sn	00 50 05.2	+4.0
WRA	Warramunga Arr	41.20	159	P	P	00 56 06.2	-0.6
	0.7nm,0.8s,baz=347,slow=8.5,SNR=6.7						
	0.7nm,0.8s						
MKAR	Makanchi Array	41.31	321	P	P	00 56 09.8	+2.3
	0.7nm,0.8s,baz=121,slow=8.9,SNR=4.6						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	44.01	331	LR	LR	01 14 54.2	
	comp=Z,14nm,19.9s,baz=96,slow=36						
ASAR	Alice Springs	44.53	161	P	P	00 56 33.2	-0.6
	0.3nm,0.5s,baz=342,slow=7.8,SNR=4.4						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	45.35	324	P	P	00 56 41.9	+1.9
	0.8nm,0.2s,baz=130,slow=8.6,SNR=1.8						
	0.8nm,0.2s						
FINES	FINESS Array B	75.27	330	P	P	01 00 02.0	-2.4
	1.2nm,0.9s,baz=54,slow=7.1,SNR=1.1						
	1.2nm,0.9s						
NOA	NORSAR Array B	82.20	332	LR	LR	01 40 35.5	
	comp=Z,12nm,21.0s,baz=315,slow=38						

*IDC **26** 01:04:55.2±1.3, 9°.32N×93°.09E, h0km, mb3.5/7, mbtmp3.5/7, MS3.0/1, Error ellipse: s-maj=51.7km s-min=22.8km az=56.0*
ISC 26 01:05:01.4±1.2, 9°.4N±0°.2×93°.1E±0°.3, h45km, n14, σ0§96/7, mb3.5/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	26.63	231	T	T	01 36 48.9	
	baz=48,slow=75,SNR=331						
H08S2	Diego Garcia H	26.63	231	T	T	01 37 07.4	
	baz=48,slow=75,SNR=129						
H08S1	Diego Garcia H	26.64	231	T	T	01 36 56.1	
	baz=48,slow=75,SNR=52						
MKAR	Makanchi Array	38.42	348	P	P	01 12 19.2	+0.6
	0.7nm,0.7s,baz=169,slow=8.1,SNR=5.3						
	0.7nm,0.7s						
SONM	Songino Array	39.93	14	P	P	01 12 30.3	-1.0
	0.2nm,0.4s,baz=201,slow=7.7,SNR=1.7						
	0.2nm,0.4s						
KSRS	Korea Array	42.01	43	LR	LR	01 32 50.3	
	comp=Z,19nm,18.7s,baz=240,slow=40						
GEYT	Alibeck	42.43	318	P	P	01 12 52.0	+0.1
	0.8nm,0.4s,baz=111,slow=6.3,SNR=2.8						
	0.8nm,0.4s						
ZALV	Zalesovo Beam	44.95	353	P	P	01 13 13.0	+1.1
	1.0nm,0.7s,baz=181,slow=7.4,SNR=5.4						
	1.0nm,0.7s						
H01W3	Cape Leeuwin H	48.30	157	T	T	02 05 59.0	
	baz=330						
H01W2	Cape Leeuwin H	48.31	157	T	T	02 06 10.2	
	baz=330						
H01W1	Cape Leeuwin H	48.31	157	T	T	02 06 08.9	
	baz=330						
WRA	Warramunga Arr	49.94	126	P	P	01 13 52.0	+0.8
	0.3nm,0.8s,baz=304,slow=8.5,SNR=4.6						
	0.3nm,0.8s						
ASAR	Alice Springs	51.63	130	P	P	01 14 03.4	-0.5
	0.1nm,0.4s,baz=312,slow=7.4,SNR=1.4						
	0.1nm,0.4s						
TORD	Torodi Ar. Bea	89.30	283	P	P	01 17 53.3	-0.4
	0.2nm,0.7s,baz=85,slow=4.8,SNR=1.8						
	0.2nm,0.7s						

*IDC **26** 01:10:59.4±0.9, 20°.75S×67°.15W, h192km±15km, mb3.4/1, mbtmp3.8/5, Error ellipse: s-maj=29.2km s-min=11.5km az=106.0*
*GUC **26** 01:11:01.6±0.6, 20°.70S×67°.53W, h216km±8km, ML3.6*
*SCB **26** 01:11:04.2±1.3, 20°.72S×67°.43W, h182km±2km, ML3.4/3, MW3.3, Error ellipse: s-maj=7.6km s-min=5.5km az=0.0*
ISC 26 01:10:59.8±0.9, 20°.71S±0°.04×67°.42W±0°.07, h207km±9km, n35, σ1§27/51, 10C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.72	289	⇑iP	Pn	01 11 37.8	+1.2
MOCB	Mochara	1.75	108	P	Pn	01 11 37.5	+0.6
MOCB				IAML		01 12 05.4	
	403nm,1.1s						
GO01	Chusmiza	1.96	301	⇑iP	Pn	01 11 40.0	+0.9
PB01	IPOC Station P	1.96	260	⇑iP	Pn	01 11 39.2	+0.6
PB01				i S	S	01 12 08.2	-0.1
PB01				IAML		01 12 10.2	
	comp=N,266nm,0.3s						
PB09	IPOC Station P	2.02	237	⇑iP	Pn	01 11 40.7	+1.4
PB09				i S	S	01 12 10.8	+1.3
PB09				IAML		01 12 12.1	
	comp=N,148nm,0.5s						
PB11	IPOC Station P	2.30	294	⇑iP	Pn	01 11 42.7	+0.5
PB11				i S	S	01 12 14.4	-0.3
PB11				IAML		01 12 16.4	
	comp=N,176nm,0.4s						
LVC	Limon Verde	2.35	216	P	Pn	01 11 43.7	+0.9
	comp=N,40nm,0.3s,baz=34,slow=8.9,SNR=84						
LVC				S	S	01 12 16.6	+0.6
	comp=N,20nm,0.3s,baz=93,slow=24,SNR=18						
LVC	Limon Verde	2.35	216	i P	Pn	01 11 44.0	+1.1
LVC	Limon Verde	2.35	216	P	Pn	01 11 44.2	+1.3
LVC				IAML		01 12 19.6	
	comp=N,23nm,0.4s						
HMBC	Humberstone	2.35	280	⇑iP	Pn	01 11 42.8	+0.1
HMBC				i S	S	01 12 15.0	-0.6
HMBC				IAML		01 12 18.9	
	comp=N,207nm,0.7s						
PB07	IPOC Station P	2.52	246	i P	Pn	01 11 45.3	+0.8
PB07				i S	S	01 12 18.5	-0.4
PB07				IAML		01 12 20.7	
	comp=E,284nm,0.4s						
PB03	IPOC Station P	2.56	238	⇑iP	Pn	01 11 45.7	+0.8
PB03				i S	S	01 12 19.4	-0.2
PB03				IAML		01 12 21.4	
	comp=N,226nm,0.4s						
PATCX	Punta Patache	2.56	267	i P	Pn	01 11 45.5	+0.5
PATCX				i S	S	01 12 18.5	-1.1
PATCX				IAML		01 12 21.5	
	comp=N,161nm,0.3s						
TA02	Huaiquique	2.58	279	i P	Pn	01 11 45.5	+0.4
TA02	Huaiquique	2.58	279	P	Pn	01 11 45.9	+0.9
TA01	Diego Aracena	2.59	273	⇑iP	Pn	01 11 45.4	+0.2
TA01				i S	S	01 12 18.7	-1.3
TA01				IAML		01 12 19.4	
	comp=E,96nm,0.1s						
TA01	Diego Aracena	2.59	273	P	Pn	01 11 45.5	+0.3
PB06	IPOC Station P	2.82	225	i P	Pn	01 11 49.2	+1.3
PB06				i S	S	01 12 25.6	+0.5
PB06				IAML		01 12 26.2	
	comp=E,212nm,0.2s						
PB06	IPOC Station P	2.82	225	P	Pn	01 11 49.5	+1.5
PB06				S	S	01 12 22.4	-2.7
PB06				IAML		01 12 27.0	
	comp=E,178nm,0.4s						
PB04	IPOC Station P	3.02	237	i P	Pn	01 11 51.0	+0.9
PB04				i S	S	01 12 28.2	-0.9
PB04				IAML		01 12 32.2	
	comp=E,106nm,0.2s						
PB04	IPOC Station P	3.02	237	P	Pn	01 11 51.2	+1.0
PB16	IPOC Station P	3.07	320	⇑iP	Pn	01 11 52.9	+1.5
PB16				eS	S	01 12 32.0	+1.1
PB16				IAML		01 12 35.3	
	comp=E,33nm,0.3s						
PB15	IPOC Station P	3.14	217	i P	Pn	01 11 52.8	+1.2
PB15				i S	S	01 12 32.3	+0.6
PB15	IPOC Station P	3.14	217	P	Pn	01 11 52.9	+1.2
PB12	IPOC Station P	3.44	307	⇑iP	Pn	01 11 54.6	-0.6
PB12				i S	S	01 12 35.9	-2.2
SOEJ	Jacaque	3.78	349	P	Pn	01 12 02.0	+2.2
BBOE	La Paz, Chanca	3.91	352	P	Pn	01 12 03.7	+2.3
BBOD	La Paz, Gloria	4.20	344	P	Pn	01 12 07.4	+2.5
LPAZ	La Paz	4.45	351	P	Pn	01 12 09.2	+1.1
	comp=E,5.8nm,0.4s,baz=158,slow=7.5,SNR=39						
LPAZ				S	S	01 13 02.3	+1.0
	comp=E,1.1nm,0.5s,baz=318,slow=21,SNR=1.2						
LPAZ	La Paz	4.45	351	P	Pn	01 12 09.4	+1.3
SIV	San Ignacio	7.63	53	P	Pn	01 12 45.5	-3.0
	comp=E,3.7nm,0.5s,baz=238,slow=8.8,SNR=32						
SIV				S	S	01 14 00.3	-15
	comp=E,0.6nm,0.4s,baz=238,slow=14,SNR=1.4						
BDFB	Brasilia	19.11	78	P	P	01 15 05.7	-1.8
	comp=E,2.8nm,0.9s,baz=242,slow=8.6,SNR=3.4						
TORD	Torodi Ar. Bea	75.78	70	P	P	01 22 23.3	-0.1
	comp=E,0.4nm,0.4s,baz=245,slow=5.9,SNR=15						
	comp=E,0.4nm,0.4s						
WRA	Warramunga Arr	134.33	209	PKP	PKiKP	01 29 55.5	+0.2
	comp=E,0.4nm,0.9s,baz=142,slow=1.8,SNR=2.7						
MKAR	Makanchi Array	144.17	36	PKP	PKPdf	01 30 11.2	+0.3
	comp=E,0.1nm,0.4s,baz=326,slow=1.5,SNR=2.0						

*ECX **26** 01:12:13.8±0.4, 28°.00N×112°.06W, h20km±10km, MD3.9, ML4.2, Fault plane solution: NP1:φ=0.00000°, δ=33.00000°, λ=-102.00000°.*
*MEX **26** 01:12:14.1±0.3, 27°.96N×112°.06W, h2km±6km, MD4.0*
*IDC **26** 01:12:17.2±1.1, 28°.05N×111°.66W, h0km, mb3.9/3, mbtmp3.5/10, ML3.4/7, MS3.4/19, Error ellipse: s-maj=16.4km s-min=11.2km az=30.0*
ISC 26 01:12:10.4±1.4, 27°.91N±0°.03×112°.13W±0°.03, h14km±11km, n45, σ1§76/33, mb4.0/3, MS3.5/14, 9C-7D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.60	190	eP	Pn	01 12 26.1	+1.6
SRIG				eS	Sn	01 12 35.8	+1.7
SRIG	Santa Rosalia	0.60	190	⇓iP	Pn	01 12 26.1	+1.6
SRIG				eS	Sn	01 12 35.7	+1.7
SRIG				⇑e		01 12 36.8	
SRIG				IAML		01 12 36.8	
	comp=E,13μm,0.6s						
SRIG				IAML		01 12 37.1	
	comp=N,14μm,1.0s						
SRIG				⇑e		01 12 37.1	
SFQB	San Francisqui	0.81	307	⇑iP	Pn	01 12 27.7	+0.3
SFQB				eS	Sn	01 12 39.5	+0.3
GUYB	Guaymas	1.11	91	eP	Pn	01 12 31.8	+0.3
GUYB				i S	Sb	01 12 45.9	+0.2
GUYB	Guaymas	1.11	91	⇑eP	Pn	01 12 31.9	+0.3
GUYB				eS	Sb	01 12 45.9	+0.2
GUYB				IAML		01 12 46.4	
	comp=N,8μm,0.4s						
GUYB				IAML		01 12 48.2	
	comp=E,7μm,0.4s						
GUYB				⇑e		01 12 48.2	
SNIRB	San Nicolas	1.46	159	⇓eP	Pg	01 12 38.9	+0.4
HSIG		1.51	43	⇓eP	Pn	01 12 37.4	+0.3
HSIG				eS	Sg	01 12 58.1	-1.1
HSIG				IAML		01 13 04.7	
	comp=N,2μm,0.5s						
HSIG				⇑e		01 13 04.8	
HSIG				IAML		01 13 04.8	
	comp=E,2μm,0.5s						
BAHB	Baha de los	1.63	309	eP	Pn	01 12 39.1	+0.5
BAHB				i S	Sb	01 13 00.9	+0.4
BAHB	Baha de los	1.63	309	eP	Pn	01 12 39.4	+0.8
NE77	Loreto B.C.S	2.01	160	⇓eP	Pb	01 12 47.4	+0.7
PLIB	Puerto Liberta	2.05	346	eP	Pn	01 12 45.7	+1.2
NOVRB	El Novillo Son	2.42	64	⇓eP	Pb	01 12 54.0	+0.3
NOVRB				IAML		01 13 35.9	
	comp=E,1μm,0.5s						
NOVRB				⇑e		01 13 35.9	
NOVRB				⇑e		01 13 37.7	
NOVRB				IAML		01 13 37.7	
	comp=N,1μm,0.7s						
LAPR	La Primavera	2.58	356	eP	Pn	01 12 53.7	+1.9
LAPR				eS	Sb	01 13 26.2	-1.9
LAPR	La Primavera	2.58	356	⇓eP	Pn	01 12 54.2	+2.4
LAPR				⇓e		01 13 50.4	
LAPR				IAML		01 13 50.4	
	comp=N,1μm,1.3s						
LAPR				IAML		01 14 03.3	
	comp=E,1μm,1.5s						
LAPR				e		01 14 03.3	
SLGB	San Luis Gonza	2.76	314	eP	Pg	01 13 04.3	+1.0
NE80	Navojoa	2.76	110	eP	Pn	01 12 55.9	+1.6
NZIG	Nacozari, Sono	3.33	42	⇓eP	Pn	01 13 03.8	+1.5
214A	Organ Pipe Nat	4.07	352	eP	Pn	01 13 15.0	+2.7
LPIG	La Paz	4.13	156	Pn	Pb	01 13 22.5	-0.4
	comp=E,6.7nm,0.3s,baz=67,slow=6.0,SNR=1.6						
LPIG				LR	LR	01 14 34.5	
	comp=E,96nm,19.2s,baz=276,slow=33						
	comp=E,16nm,0.3s						
SLBS	Sierra La Lagu	4.65	154	eP	Pb	01 13 27.6	-4.2
PFO	Pinyon Flats O	6.79	328	Pn	Pb	01 14 01.1	-7.2
	comp=E,0.1nm,0.3s,baz=104,slow=12,SNR=1.9						
PFO				Lg	Lg	01 15 52.4	
	baz=67,slow=10,SNR=1.4						
PFO				LR	LR	01 16 24.3	
	comp=E,308nm,20.0s,baz=143,slow=36						
	comp=E,1.5nm,0.7s						
TXAR	Lajitas Array	7.57	77	Pn	Pn	01 14 03.6	+3.1
	comp=E,1.0nm,0.3s,baz=245,slow=13,SNR=40						
TXAR				Sn	Sn	01 15 25.5	-0.6
	comp=E,0.3nm,0.3s,baz=251,slow=19,SNR=4.3						
TXAR				Lg	Lg	01 15 59.9	
	comp=E,0.5nm,0.3s,baz=239,slow=25,SNR=5.7						
	comp=E,1.3nm,0.3s						
ANMO	Albuquerque	8.52	33	Pn	Pn	01 14 17.1	+3.6
	comp=E,0.1nm,0.3s,baz=348,slow=20,SNR=1.9						
ANMO				Sn	Sn	01 15 48.0	-1.6
	comp=E,0.1nm,0.3s,baz=285,slow=7.4,SNR=1.7						
ANMO				Lg	Lg	01 16 37.3	
	comp=E,0.2nm,0.3s,baz=188,slow=20,SNR=2.1						
	comp=E,0.4nm,0.3s						
NVAR	Mina Array Bea	11.69	335	Pn	Pn	01 15 07.6	+11
	comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=1.5						
NVAR				LR	LR	01 19 17.5	
	comp=E,130nm,19.5s,baz=114,slow=36						
	comp=E,0.1nm,0.5s						
ELK	Elko	13.05	349	Pn	P	01 15 23.8	-2.2
	baz=179,slow=13,SNR=4.8						
ELK				Lg	Lg	01 19 07.7	
	baz=342,slow=5.5,SNR=1.6						
ELK				LR	LR	01 20 33.8	
	comp=E,180nm,20.5s,baz=176,slow=38						
	comp=E,1.3nm,0.8s						
PDAR	Pinedale Array	14.97	7	Pn	P	01 15 53.5	+6.3
	comp=E,0.1nm,0.3s,baz=180,slow=11,SNR=4.4						
PDAR				Lg	Lg	01 20 03.3	
	baz=176,slow=25,SNR=2.3						
PDAR				LR	LR	01 21 05.7	
	comp=E,140nm,19.3s,baz=192,slow=36						
	comp=E,0.4nm,0.6s						
NEW	Newport	20.68	351	LR	LR	01 24 54.6	
	comp=E,116nm,21.0s,baz=203,slow=37						
TKL	Tuckaleechee C	25.25	65	LR	LR	01 27 51.8	
	comp=E,94nm,20.7s,baz=254,slow=38						
BBB	Bella Bella	27.03	338	LR	LR	01 28 31.3	
	comp=E,82nm,19.0s,baz=190,slow=36						
SADO	Sadowa	31.18	49	LR	LR	01 32 20.7	
	comp=E,125nm,18.3s,baz=315,slow=39						
ILAR	Eielson Array	42.92	339	P	P	01 20 17.9	+10
	comp=E,0.9nm,1.1s,baz=150,slow=6.6,SNR=5.9						
ILAR				LR	LR	01 39 00.5	
	comp=E,52nm,19.3s,baz=194,slow=37						
	comp=E,0.9nm,1.1s						
SJG	San Juan	43.22	93	LR	LR	01 39 55.9	
	comp=E,38nm,22.0s,baz=274,slow=39						
SDV	Santo Domingo	43.41	108	LR	LR	01 42 13.8	
	comp=E,21nm,19.0s,baz=294,slow=42						
FRB	Frobisher Bay	45.40	26	LR	LR	01 39 58.3	
	comp=E,96nm,21.0s,baz=4.5,slow=37						
SFJD	Kangerlussuaq	53.55	25	LR	LR	01 43 43.7	
	comp=E,114nm,18.3s,baz=170,slow=35						
LPAZ	La Paz	61.21	130	P	P	01 22 32.5	+6.7
	comp=E,0.8nm,0.7s,baz=337,slow=10.0,SNR=1.9						
	comp=E,0.8nm,0.7s						
JMIC	Jan Mayen	68.18	20	LR	LR	01 54 41.6	
	comp=E,34nm,19.1s,baz=247,slow=38						
H03N2	Juan Fernandez	68.67	151	T	T	02 38 14.3	
	baz=324						
H03N1	Juan Fernandez	68.68	151	T	T	02 38 18.3	
	baz=324						
H03N3	Juan Fernandez	68.69	151	T	T	02 38 17.4	
	baz=324						
SPITS	Spitsbergen Ar	70.00	10	LR	LR	01 53 27.8	
	comp=E,26nm,19.3s,baz=236,slow=35						
ARCES	ARCESS Array B	78.11	14	LR	LR	02 00 14.0	
	comp=E,24nm,19.1s,baz=302,slow=37						
PLCA	Paso Flores	78.44	149	P	P	01 24 19.2	+8.5
	comp=E,2.4nm,1.0s,baz=346,slow=4.2,SNR=4.4						
	comp=E,2.4nm,1.0s						
MDT	Midelt	88.46	53	LR	LR	02 03 18.9	
	comp=E,32nm,18.6s,baz=296,slow=35						
AKASG	Malin Array Be	94.59	23	LR	LR	02 07 46.9	
	comp=E,22nm,18.1s,baz=263,slow=35						

*IDC **26** 01:27:34.3±1.6, 38°.17N×21°.96E, h0km, mb3.5/3, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=53.1km s-min=26.1km az=135.0*
*ATH **26** 01:27:39.0, 37°.45N×22°.61E, h5km±1km, ML3.3/21, Error ellipse: s-maj=1.9km s-min=0.7km az=153.0*
*THE **26** 01:27:39.0, 37°.44N×22°.62E, h1km±1km, ML3.2/15, Error ellipse: s-maj=1.9km s-min=0.5km az=226.0*
ISC 26 01:27:39.0±1.0, 37°.46N±0°.02×22°.61E±0°.02, h12km±8km, n56, σ0§92/83, mb3.5/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPID	Epidavros	0.43	69	P	Pg	01 27 47.4	-0.2
EPID				S	Sg	01 27 54.0	+0.7
	5μm,0.2s						
EPID	Epidavros	0.43	69	P	Pg	01 27 47.3	-0.2
EPID				S	Sg	01 27 53.6	+0.3
KRND	KRANIDI	0.43	100	P	Pg	01 27 47.4	-0.2
KRND				S	Sg	01 27 53.4	0.0
	3μm,0.2s						
KRND	KRANIDI	0.43	100	P	Pg	01 27 47.4	-0.2
KRND				S	Sg	01 27 53.9	+0.5
KRND				AML	AML	01 27 54.5	
	comp=E,4868μm,0.3s						
KRND				AML	AML	01 27 54.8	
	comp=N,6337μm,0.2s						
THAL	Thalero	0.58	4	P	Pg	01 27 50.4	0.0
THAL				AML	AML	01 28 00.9	
	comp=N,15635μm,0.3s						
THAL				AML	AML	01 28 03.8	
	comp=E,19097μm,0.2s						
KLMT	Kalamata	0.59	228	P	Pg	01 27 50.7	+0.1
KLMT				S	Sg	01 27 58.7	+0.3
	comp=E,3μm,0.3s						
LOUT	Loutraki	0.60	28	P	Pg	01 27 50.5	-0.3
LOUT				AML	AML	01 28 00.6	
	comp=E,953μm,0.3s						
LOUT				AML	AML	01 28 03.8	
	comp=N,1002μm,0.3s						
ITM	Ithomi	0.61	243	P	Pg	01 27 51.0	0.0
ITM				S	Sg	01 27 59.1	0.0
	comp=N,1μm,0.5s						
ITM	Ithomi	0.61	243	P	Pg	01 27 51.1	0.0
ITM				S	Sg	01 27 58.6	-0.5
ITM				AML	AML	01 27 59.1	
	comp=N,2212μm,0.5s						
ITM				AML	AML	01 27 59.2	
	comp=E,2602μm,0.2s						
KLV	Kalavryta, Ach	0.69	328	P	Pg	01 27 51.9	-0.6
KLV				S	Sg	01 28 02.0	+0.4
	comp=E,2μm,0.4s						
KLV	Kalavryta, Ach	0.69	328	P	Pg	01 27 52.0	-0.4
KLV				S	Sg	01 28 01.2	-0.4
KLV				AML	AML	01 28 04.7	
	comp=E,4379μm,0.4s						
KLV				AML	AML	01 28 05.1	
	comp=N,3716μm,0.3s						
VLI	Veliai	0.78	161	P	Pg	01 27 53.6	-0.6

PYL	**PYLOS**	**0.89**	**231**	P	**Pg**	**01 27 55.6**	**-0.7**
PYL				AML	AML	01 28 08.8	
	comp=E,3230μm,0.3s						
PYL				AML	AML	01 28 11.6	
	comp=N,1657μm,0.2s						
ALIK	**Aliki, Aigiali**	**0.90**	**334**	P	**Pg**	**01 27 55.9**	**-0.4**
ALIK				S	**Sb**	**01 28 09.6**	**+1.2**
VIL2	**Platees**	**0.91**	**34**	P	**Pg**	**01 27 56.0**	**-0.7**
VIL2				AML	AML	01 28 11.6	
	comp=E,4558μm,0.6s						
VIL2				AML	AML	01 28 13.8	
	comp=N,2961μm,0.4s						
LAKA	**Lakka**	**0.93**	**327**	P	**Pg**	**01 27 56.2**	**-0.8**
LAKA				S	**Sg**	**01 28 09.1**	**-0.1**
LAKA				AML	AML	01 28 12.9	
	comp=E,6937μm,0.4s						
LAKA				AML	AML	01 28 13.4	
	comp=N,10644μm,0.7s						
ATH	**Athens Observa**	**1.01**	**59**	P	**Pg**	**01 27 58.7**	**+0.1**
ATH				S	**Sb**	**01 28 13.2**	**+1.3**
	comp=N,1μm,0.3s						
ATH	**Athens Observa**	**1.01**	**59**	P	**Pg**	**01 27 58.2**	**-0.4**
ATH				AML	AML	01 28 14.9	
	comp=E,2590μm,0.4s						
ATH				AML	AML	01 28 17.2	
	comp=N,2198μm,0.4s						
VLY	**Voula,Athens**	**1.02**	**67**	P	**Pg**	**01 27 57.8**	**-0.8**
VLY				S	**Sg**	**01 28 12.2**	**+0.3**
	comp=N,2μm,0.3s						
VLY	**Voula,Athens**	**1.02**	**67**	P	**Pg**	**01 27 57.6**	**-1.0**
DLFA	**Delphi**	**1.02**	**355**	P	**Pg**	**01 27 58.0**	**-0.8**
DLFA				AML	AML	01 28 14.7	
	comp=E,3260μm,0.3s						
DLFA				AML	AML	01 28 17.4	
	comp=N,2277μm,0.4s						
SERG	**Sergoula**	**1.05**	**335**	P	**Pg**	**01 27 58.3**	**-1.0**
SERG				AML	AML	01 28 18.1	
	comp=E,2352μm,0.6s						
SERG				AML	AML	01 28 19.5	
	comp=N,2745μm,0.3s						
ATHU	**Athens Univers**	**1.06**	**61**	P	**Pg**	**01 27 59.1**	**-0.4**
ATHU				S	**Sb**	**01 28 13.9**	**+0.7**
	comp=N,348nm,0.4s						
ATHU	**Athens Univers**	**1.06**	**61**	P	**Pg**	**01 27 59.0**	**-0.4**
ATHU				S	**Sg**	**01 28 12.6**	**-0.6**
ATHU				AML	AML	01 28 16.4	
	comp=E,421μm,0.4s						
ATHU				AML	AML	01 28 16.7	
	comp=N,956μm,0.4s						
RLS	**Riolos of Patr**	**1.09**	**304**	P	**Pg**	**01 27 59.1**	**-0.9**
RLS				S	**Sb**	**01 28 15.5**	**+1.5**
	comp=N,1μm,0.6s						
RLS	**Riolos of Patr**	**1.09**	**304**	P	**Pg**	**01 27 59.1**	**-0.9**
EFP	**Efpalio**	**1.12**	**330**	P	**Pg**	**01 27 59.6**	**-1.0**
PTL	**Penteli**	**1.15**	**59**	P	**Pg**	**01 28 00.4**	**-0.9**
PTL				S	**Sg**	**01 28 16.3**	**0.0**
	comp=N,665nm,0.3s						
DION	**Dionisos Attik**	**1.22**	**59**	P	**Pg**	**01 28 01.1**	**-1.3**
DION				S	**Sg**	**01 28 17.6**	**-0.6**
	comp=N,2μm,0.5s						
DION	**Dionisos Attik**	**1.22**	**59**	P	**Pg**	**01 28 01.1**	**-1.3**
DION				AML	AML	01 28 18.8	
	comp=N,2026μm,0.4s						
DION				AML	AML	01 28 20.4	
	comp=E,2809μm,0.4s						
LKR	**Lokris**	**1.23**	**14**	P	**Pg**	**01 28 00.4**	**-2.3**
LKR				AML	AML	01 28 21.6	
	comp=E,1939μm,0.3s						
LKR				AML	AML	01 28 21.7	
	comp=N,1969μm,0.3s						
KTHR	**Kythira**	**1.23**	**165**	P	**Pg**	**01 28 01.9**	**-0.9**
KTHR				S	**Sb**	**01 28 19.7**	**+1.5**
	comp=N,2μm,0.3s						
KTHR	**Kythira**	**1.23**	**165**	P	**Pg**	**01 28 01.9**	**-0.9**
KTHR				AML	AML	01 28 21.5	
	comp=E,13507μm,0.3s						
KTHR				AML	AML	01 28 22.3	
	comp=N,10771μm,0.3s						
KTHA	**Kythira Island**	**1.25**	**163**	P	**Pg**	**01 28 02.2**	**-0.9**
KTHA				S	**Sg**	**01 28 19.3**	**-0.1**
KTHA	**Kythira Island**	**1.25**	**163**	P	**Pg**	**01 28 02.1**	**-1.0**
KTHA				AML	AML	01 28 21.2	
	comp=E,4666μm,0.4s						
KTHA				AML	AML	01 28 22.0	
	comp=N,2714μm,0.7s						
AXAR	**Agios Charalam**	**1.31**	**2**	P	**Pg**	**01 28 03.1**	**-1.1**
AXAR				AML	AML	01 28 27.5	
	comp=E,4581μm,0.4s						
AXAR				AML	AML	01 28 27.8	
	comp=N,3952μm,0.3s						
LTHK	**Lithakia**	**1.43**	**281**	P	**Pn**	**01 28 05.4**	**+0.6**
PVO	**Paravola**	**1.44**	**324**	P	**Pn**	**01 28 05.7**	**+0.7**
EVR	**Evrytania**	**1.59**	**337**	P	**Pn**	**01 28 08.2**	**+1.1**
EVR				S	**Sg**	**01 28 30.3**	**+0.1**
EVR	**Evrytania**	**1.59**	**337**	P	**Pn**	**01 28 08.0**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.60**	**346**	P	**Pn**	**01 28 07.7**	**+0.5**
MAKR				AML	AML	01 28 35.0	
	comp=N,1663μm,0.6s						
MAKR				AML	AML	01 28 41.8	
	comp=E,2089μm,0.8s						
MHLO	**Agia Marina, M**	**1.62**	**118**	P	**Pn**	**01 28 08.3**	**+0.8**
MHLO				S	**Sn**	**01 28 30.1**	**+1.8**
KYMI	**Kymi, Euboea I**	**1.66**	**45**	P	**Pn**	**01 28 07.5**	**-0.5**
NEO	**Neokhori**	**1.91**	**14**	P	**Pn**	**01 28 11.1**	**-0.4**
VAY	**Valandovo**	**3.86**	**360**	*i* Pn	**Pn**	**01 28 38.8**	**+0.6**
OHR	**Ohrid**	**3.91**	**339**	*i* Pn	**Pn**	**01 28 42.4**	**+3.4**
STIP	**Stip**	**4.24**	**356**	*i* Pn	**Pn**	**01 28 45.1**	**+1.6**
BRTR	**Keskin Array B**	**8.93**	**72**	Pn	**Pn**	**01 29 49.9**	**+2.0**
	comp=E,0.1nm,0.3s,baz=265,slow=14,SNR=2.3						
	comp=E,0.4nm,0.4s						
FINES	**FINESS Array B**	**24.11**	**4**	P	P	01 32 44.5	-10
	comp=E,1.8nm,0.8s,baz=195,slow=16,SNR=1.7						
	comp=E,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.57**	**223**	P	**P**	**01 33 51.3**	**-1.5**
	comp=E,0.5nm,0.6s,baz=29,slow=9.3,SNR=7.0						
	comp=E,0.5nm,0.6s						
MKAR	**Makanchi Array**	**44.27**	**58**	P	**P**	**01 35 47.0**	**-1.5**
	comp=E,0.2nm,0.5s,baz=262,slow=6.1,SNR=1.4						
	comp=E,0.2nm,0.5s						

*IDC **26** 01:34:04.9±1.3, 37°.26N×141°.86E, h0km, mb3.5/5, mbtmp3.6/7, ML3.1/2, MS2.9/3, Error ellipse: s-maj=27.9km s-min=22.4km az=96.0*
*JMA **26** 01:34:10.2±0.1, 37°.4N±0°.4×141°.7E±0°.8, h43km±2km, MV3.7/39, E OFF FUKUSHIMA PREF*
*NIED **26** 01:34:10.2, 37°.40N×141°.74E, h43km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.52; $M_{\theta\theta}$=0.93; $M_{\phi\phi}$=-0.41; $M_{r\theta}$=-0.83; $M_{\theta\phi}$=-0.72; $M_{\phi r}$=2.18; Fault plane solution: M_0=2.57000×10^{14} NP1: ϕ_s=258.00000°, δ=23.00000°, λ=-165.00000°. NP2: ϕ_s=155.00000°, δ=84.00000°, λ=-67.00000°.*

ISC 26 01:34:07.1±1.8, 37°.32N±0°.04×141°.88E±0°.06, h17km±10km, n27, σ1°.13/33, mb3.6/5, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.80**	**273**	⇓*i*P	**Pg**	**01 34 23.7**	**+0.9**
JFK				⇓S	**Sg**	**01 34 32.7**	**-0.6**
JMST	**Minamisoumatoc**	**0.89**	**297**	⇓*i*P	**Pb**	**01 34 24.4**	**+0.4**
JMST				⇓S	**Sg**	**01 34 34.3**	**-1.6**
JMM	**Marumori**	**1.02**	**302**	⇓*i*P	**Pb**	**01 34 26.4**	**+0.1**
JMM				⇓S	**Sb**	**01 34 37.0**	**-2.4**
JIKH	**Ishinomakikobu**	**1.04**	**342**	*i* P	**Pb**	**01 34 27.0**	**+0.4**
JIKH				S	**Sb**	**01 34 38.4**	**-1.6**
JFFD	**Fukushimafurud**	**1.08**	**258**	⇓*i*P	**Pb**	**01 34 27.8**	**+0.5**
JFFD				⇓S	**Sb**	**01 34 40.3**	**-0.8**
JIO	**Ouri**	**1.21**	**340**	*i* P	**Pn**	**01 34 29.4**	**+0.3**
JIO				S	**Sb**	**01 34 42.4**	**-2.3**
JOTO	**OTAMA OYAMA**	**1.25**	**281**	*i* P	**Pn**	**01 34 30.6**	**+0.7**
JOTO				S	**Sb**	**01 34 45.1**	**-1.1**
JHO	**Hitachi**	**1.27**	**236**	⇓P	**Pn**	**01 34 30.6**	**+0.6**
JHO				⇓S	**Sb**	**01 34 45.3**	**-1.2**
JOU	**Okura**	**1.42**	**318**	P	**Pn**	**01 34 32.8**	**+0.7**
JOU				S	**Sn**	**01 34 49.5**	**-0.9**
JYS	**Shirataka**	**1.69**	**303**	P	**Pn**	**01 34 36.9**	**+1.0**
JYS				*e*S	**Sn**	**01 34 56.9**	**-0.3**
JMK	**Ichinoseki**	**1.71**	**342**	P	**Pn**	**01 34 37.2**	**+1.2**
JMK				*e*S	**Sn**	**01 34 56.4**	**-1.1**
JFY	**Yanaizu**	**1.73**	**273**	P	**Pn**	**01 34 37.5**	**+1.0**
JFY				*e*S	**Sn**	**01 34 57.7**	**-0.5**
MJAR	**Matsushiro Arr**	**3.04**	**256**	Pn	**Pn**	**01 34 54.5**	**+0.1**
	0.7nm,0.3s,baz=75,slow=15,SNR=14						
MJAR				Sn	**Sn**	**01 35 32.2**	**+1.7**
	0.5nm,0.3s,baz=83,slow=15,SNR=5.9						
MJAR				LR	LR	01 36 24.8	
	comp=Z,64nm,21.2s,baz=54,slow=46						
	3.6nm,0.3s						
JHJ	**Hachijo jima 2**	**4.53**	**203**	Pn	**Pn**	**01 35 13.1**	**-1.8**
	9.2nm,0.3s,baz=73,slow=19,SNR=2.2						
JHJ				Sn	**Sn**	**01 36 06.2**	**-0.9**
	14nm,0.3s,baz=73,slow=19,SNR=1.9						
	42nm,0.3s						
SONM	**Songino Array**	**27.93**	**303**	P	**P**	**01 39 57.1**	**+0.6**
	0.3nm,0.4s,baz=103,slow=10,SNR=1.8						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.98**	**122**	T	T	02 09 30.6	
	baz=315,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**27.99**	**122**	T	T	02 09 28.7	
	baz=315,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**28.00**	**122**	T	T	02 09 30.4	
	baz=315,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	**28.71**	**124**	T	T	02 10 28.8	
	baz=316,slow=75,SNR=19						
H11S3	**WAKE ISLAND Hy**	**28.71**	**124**	T	T	02 10 30.1	
	baz=316,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**28.72**	**124**	T	T	02 10 29.1	
	baz=316,slow=75,SNR=20						
MKAR	**Makanchi Array**	**44.28**	**302**	P	**P**	**01 42 15.6**	**-0.2**
	0.6nm,0.7s,baz=88,slow=8.6,SNR=4.7						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**49.05**	**32**	P	**P**	**01 42 53.9**	**+1.1**
	0.3nm,0.7s,baz=253,slow=6.2,SNR=2.4						
	0.3nm,0.7s						
LEM	**Lembang**	**54.34**	**223**	LR	LR	02 06 50.4	
	comp=Z,22nm,19.3s,baz=356,slow=36						
CTA	**Charters Tower**	**57.25**	**175**	LR	LR	02 14 44.8	
	comp=Z,20nm,18.1s,baz=76,slow=43						
WRA	**Warramunga Arr**	**57.40**	**188**	P	**P**	**01 43 55.2**	**+0.5**
	0.3nm,0.4s,baz=5.9,slow=7.2,SNR=14						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**61.13**	**188**	P	**P**	**01 44 20.1**	**-0.3**
	0.4nm,0.8s,baz=17,slow=6.8,SNR=2.4						
	0.4nm,0.8s						

*IDC **26** 01:37:44.0±2.3, 22°.57S×114°.11W, h0km, mb3.7/3, mbtmp3.7/3, MS3.1/8, Error ellipse: s-maj=83.9km s-min=38.8km az=35.0*

ISC 26 01:37:44.3±2.5, 22°.8S±0°.6×114°.2W±0°.4, h10km, n23, σ0°.53/6, mb3.9/3, MS3.2/8, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**32.74**	**117**	T	T	02 19 07.6	
	baz=283,slow=75,SNR=22						
H03N3	**Juan Fernandez**	**32.75**	**117**	T	T	02 19 04.3	
	baz=283,slow=75,SNR=16						
H03N1	**Juan Fernandez**	**32.76**	**117**	T	T	02 19 06.1	
	baz=283,slow=75,SNR=18						
PPT	**Papeete**	**33.55**	**272**	LR	LR	01 54 41.9	
	comp=Z,44nm,21.1s,baz=346,slow=30						
NNA	**Nana**	**37.12**	**80**	LR	LR	01 56 19.7	
	comp=Z,46nm,18.1s,baz=258,slow=30						
ATAH	**Atahualpa**	**37.78**	**71**	LR	LR	01 55 29.8	
	comp=Z,18nm,20.9s,baz=227,slow=28						
PLCA	**Paso Flores**	**40.75**	**127**	LR	LR	01 58 07.3	
	comp=Z,54nm,18.8s,baz=326,slow=30						
LVC	**Limon Verde**	**41.66**	**99**	LR	LR	01 56 36.4	
	comp=Z,6.3nm,20.5s,baz=250,slow=27						
LPAZ	**La Paz**	**43.76**	**90**	P	**P**	**01 45 51.3**	**+0.2**
	3.5nm,1.1s,baz=270,slow=6.1,SNR=6.2						
	3.5nm,1.1s						
LPIG	**La Paz**	**46.73**	**5**	LR	LR	01 59 41.0	
	comp=Z,21nm,18.2s,baz=42,slow=28						
CPUP	**Villa Florida**	**51.51**	**106**	LR	LR	02 04 40.1	
	comp=Z,28nm,19.9s,baz=292,slow=31						
AFI	**Afiamalu**	**55.08**	**269**	LR	LR	02 04 40.9	
	comp=Z,33nm,21.2s,baz=38,slow=29						
NVAR	**Mina Array Bea**	**60.98**	**356**	P	**P**	**01 47 58.3**	**+0.3**
	0.7nm,0.8s,baz=181,slow=8.0,SNR=5.9						
	0.7nm,0.8s						
PDAR	**Pinedale Array**	**65.33**	**4**	P	**P**	**01 48 26.4**	**-0.4**
	0.2nm,0.5s,baz=174,slow=9.1,SNR=1.5						
	0.2nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**87.45**	**291**	T	T	03 26 33.2	
	baz=116,slow=75,SNR=96						
H11S1	**WAKE ISLAND Hy**	**87.46**	**291**	T	T	03 26 46.6	
	baz=116,slow=75,SNR=42						
H11S3	**WAKE ISLAND Hy**	**87.47**	**291**	T	T	03 26 34.4	
	baz=116,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**87.79**	**292**	T	T	03 27 01.8	
	baz=117,slow=75,SNR=9.5						
H11N1	**WAKE ISLAND Hy**	**87.80**	**292**	T	T	03 27 07.5	
	baz=117,slow=75,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**87.81**	**292**	T	T	03 27 03.0	
	baz=117,slow=75,SNR=22						
ZALV	**Zalesovo Beam**	**145.69**	**340**	PKPbc	**PKPab**	**01 57 23.8**	**+0.3**
	0.9nm,0.5s,baz=5.1,slow=4.9,SNR=3.9						
BRTR	**Keskin Array B**	**147.94**	**51**	PKPbc	**PKiKP**	**01 57 31.5**	**-0.7**
	0.5nm,0.8s,baz=270,slow=1.4,SNR=2.2						
MKAR	**Makanchi Array**	**152.57**	**335**	PKPbc	**PKPbc**	**01 57 41.2**	**+0.1**
	0.7nm,0.5s,baz=24,slow=1.3,SNR=6.2						

MAN 26 01:44:58.7, 9°.47N×125°.59E, h7km, mb4.1, ML2.9, MS2.5, 7C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.98**	**313**	*e*P	Pb	01 45 18.4	+0.4
MSLP				*e*S	Sn	01 45 33.9	+0.9
GHBP	**Garcia Hernand**	**1.26**	**278**	⇓*i*P	Pn	01 45 21.9	-0.9
GHBP				*i* S	Sn	01 46 16.5	+36
CGP	**Cagayan de Oro**	**1.34**	**222**	⇑*i*P	Pn	01 45 22.9	-1.0
CGP				*i* S	Sb	01 45 41.4	-0.2
TABP	**Talibon, Bohol**	**1.39**	**297**	⇓*i*P	Pn	01 45 23.5	-1.0
TABP				*i* S	Sg	01 45 43.4	0.0
BIPH	**Bislig**	**1.48**	**149**	⇓*e*P	Pn	01 45 25.1	-0.7
BIPH				*e*S	Sn	01 45 45.3	-0.2
BUKP	**Musuan**	**1.66**	**198**	⇑*e*P	Pn	01 45 28.7	+0.4
BUKP				*e*S	Sn	01 45 42.6	-7.3
TBP	**Tagbilaran**	**1.72**	**278**	⇓*e*P	Pn	01 45 28.6	-0.5
TBP				*i* S	Sn	01 45 48.9	-2.5
LLP	**Lapu-Lapu**	**1.81**	**298**	*e*P	Pn	01 45 30.1	-0.2
LLP				*e*S	Sg	01 45 56.9	-0.1
LSIP	**Lazi, Siquijor**	**1.96**	**260**	⇑*i*P	Pn	01 45 32.4	0.0
LSIP				*i* S	Sn	01 45 57.4	0.0
KCP	**Kidapawan**	**2.49**	**192**	⇑*e*P	Pn	01 45 40.9	+1.1
KCP				*i* S	Sn	01 46 10.9	+0.5
CTBH	**Cotabato--PC H**	**2.60**	**211**	⇑*i*P	Pb	01 45 44.4	-1.3
RCP	**Roxas**	**3.49**	**307**	⇑*e*P	Pn	01 45 55.7	+2.3

*IDC **26** 01:51:31.1±1.3, 28°.82S×71°.39W, h0km, mb3.6/2, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=51.1km s-min=35.6km az=111.0*
*GUC **26** 01:51:35.7±0.6, 28°.59S×71°.38W, h22km±4km, ML3.6*

ISC 26 01:51:32.7±1.4, 28°.63S±0°.04×71°.50W±0°.07, h12km±9km, n23, σ1°.72/33, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.56**	**41**	⇓*i*P	**Pb**	**01 51 45.0**	**+0.4**
AC04				*e*S	**Sg**	**01 51 51.5**	**+0.3**
AC04				IAML		01 51 52.0	
	comp=N,14μm,0.3s						
AC05	**El Transito**	**1.09**	**101**	*e*P	**Pn**	**01 51 53.9**	**-0.2**
AC05				*e*S	**Sn**	**01 52 07.2**	**-2.0**
CO05	**La Serena**	**1.30**	**170**	*e*P	**Pg**	**01 51 58.6**	**+0.8**
CO05				*e*S	**Sn**	**01 52 15.3**	**+1.1**
GO03	**Copiap**	**1.52**	**47**	*e*P	**Pn**	**01 52 00.3**	**+0.5**
GO03				*e*S	**Sn**	**01 52 18.6**	**-1.0**
GO03				IAML		01 52 22.5	
	comp=N,2μm,0.5s						
AC06	**Mina Casimiro**	**1.62**	**39**	*e*P	**Pn**	**01 52 02.1**	**+0.9**
AC06				*e*S	**Sn**	**01 52 21.7**	**-0.4**
AC06				IAML		01 52 25.3	
	comp=E,2μm,0.4s						
GO04	**Tololo Observa**	**1.65**	**159**	*e*P	**Pg**	**01 52 03.8**	**-0.6**
GO04				*e*S	**Sg**	**01 52 26.0**	**+0.1**
CO01	**Juntas del Tor**	**1.82**	**138**	*e*P	**Pg**	**01 52 06.7**	**-0.9**
CO01				*e*S	**Sg**	**01 52 29.6**	**-1.6**
CO01				IAML		01 52 39.5	
	comp=N,689nm,0.5s						
AC02	**Maricunga**	**2.76**	**50**	*e*P	**Pn**	**01 52 19.3**	**+2.0**
AC02				*e*S	**Sn**	**01 52 52.8**	**+2.0**
AC02				IAML		01 52 58.5	
	comp=E,361nm,0.3s						
CYA	**Choya**	**5.01**	**89**	*e*P	**Pn**	**01 52 50.4**	**+2.6**
CYA				*e*S	**Sn**	**01 53 46.3**	**+0.5**
LVC	**Limon Verde**	**6.43**	**22**	Pn	**Pn**	**01 53 07.1**	**-0.6**
	comp=E,0.3nm,0.3s,baz=315,slow=1.4,SNR=2.1						
LVC				Sn	**Sn**	**01 54 16.3**	**-5.1**
	comp=E,1.7nm,0.3s,baz=154,slow=24,SNR=2.4						
LVC				Lg	Lg	01 54 41.0	
	comp=E,2.9nm,0.3s,baz=90,slow=4.7,SNR=7.1						
	comp=E,2.4nm,0.7s						
H03N1	**Juan Fernandez**	**7.97**	**231**	Pn	**Pn**	**01 53 27.0**	**-1.1**
H03N1				T	T	02 02 07.6	
	baz=57,slow=72,SNR=268						
H03N2	**Juan Fernandez**	**7.98**	**231**	Pn	**Pn**	**01 53 28.3**	**0.0**
H03N2				T	T	02 02 06.4	
	baz=57,slow=72,SNR=249						
H03N3	**Juan Fernandez**	**7.98**	**231**	Pn	**Pn**	**01 53 27.2**	**-1.2**
H03N3				T	T	02 02 06.6	
	baz=57,slow=72,SNR=651						
H03S3	**Juan Fernandez**	**8.19**	**229**	Pn	**Pn**	**01 53 29.6**	**-1.6**
H03S1	**Juan Fernandez**	**8.20**	**229**	Pn	**Pn**	**01 53 29.3**	**-2.0**
H03S2	**Juan Fernandez**	**8.21**	**229**	Pn	**Pn**	**01 53 29.1**	**-2.4**
LPAZ	**La Paz**	**12.67**	**15**	Pn	**Pn**	**01 54 37.4**	**+3.9**
	comp=E,0.2nm,0.3s,baz=202,slow=7.9,SNR=7.2						
	comp=E,1.1nm,0.6s						
SIV	**San Ignacio**	**15.84**	**40**	Pn	**P**	**01 55 18.7**	**-0.8**
	baz=274,slow=12,SNR=2.2						
	comp=E,0.8nm,0.7s						
TXAR	**Lajitas Array**	**65.33**	**329**	P	**P**	**02 02 16.2**	**+1.2**
	comp=E,0.2nm,0.6s,baz=144,slow=6.3,SNR=1.5						
	comp=E,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.96**	**70**	P	**P**	**02 03 52.6**	**-0.3**
	comp=E,0.8nm,0.7s,baz=257,slow=5.2,SNR=6.9						
	comp=E,0.8nm,0.7s						
WRA	**Warramunga Arr**	**125.64**	**210**	PKP	**PKPdf**	**02 10 34.9**	**0.0**
	comp=E,0.3nm,1.0s,baz=164,slow=1.4,SNR=7.8						
ZALV	**Zalesovo Beam**	**149.36**	**28**	PKPbc	**PKiKP**	**02 11 21.9**	**-0.4**
	comp=E,1.6nm,0.6s,baz=295,slow=3.3,SNR=7.7						
MKAR	**Makanchi Array**	**152.65**	**41**	PKPbc	**PKiKP**	**02 11 29.6**	**+0.1**
	comp=E,0.5nm,0.7s,baz=315,slow=0.4,SNR=4.3						

IDC 26 01:56:45.2±3.3, 5°.92S×147°.15E, h0km, mb3.0/1, mbtmp3.3/3, ML3.4/1, MS3.3/1, Error ellipse: s-maj=79.2km s-min=35.3km az=88.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.46**	**180**	Pn	Pn	01 57 40.0	-0.4
	13nm,0.4s,baz=148,slow=21,SNR=2.0						
PMG				Sn	Sn	01 58 21.6	-0.6
	2.1nm,0.3s,baz=30,slow=22,SNR=7.3						
WRA	**Warramunga Arr**	**18.69**	**221**	P	Pn	02 01 05.6	0.0
	0.1nm,0.3s,baz=43,slow=11,SNR=7.4						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**21.77**	**215**	P	P	02 01 38.8	0.0
	0.4nm,0.6s,baz=40,slow=9.5,SNR=6.5						
	0.4nm,0.6s						
MSVF	**Nonsavu**	**32.38**	**114**	LR	LR	02 14 43.8	
	comp=Z,49nm,18.1s,baz=102,slow=33						
TORD	**Torodi Ar. Bea**	**145.22**	**284**	PKPbc	PKPbc	02 16 24.9	-0.7
	0.3nm,0.6s,baz=89,slow=2.8,SNR=4.7						

*BEO **26** 02:14:11.9±0.7, 43°.96N×16°.75E, h7km±4km, ML2.3/8*
*PDG **26** 02:14:14.9±0.3, 44°.00N×17°.12E, h7km, ML2.7/13, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*
*RHSSO **26** 02:14:14.9±0.2, 43°.94N×17°.12E, h3km±1km, ML2.5/16*

ISC 26 02:14:14.2±1.1, 43°.94N±0°.01×17°.10E±0°.02, h3km±9km, n80, σ1°.22/141, 6C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRKY	**Kupres RS**	**0.14**	**19**	⇑*i*Pg	**Pg**	**02 14 17.1**	**+0.1**
SRKY				*e*Sg	**Sg**	**02 14 19.3**	**+0.4**
RICI	**Ricice**	**0.44**	**177**	*i* Pg	**Pg**	**02 14 22.4**	**-0.3**
RICI				Sg	**Sg**	**02 14 29.9**	**+1.5**
MGRS	**Mrkonjic Grad**	**0.48**	**359**	⇓*i*Pg	**Pg**	**02 14 23.3**	**-0.2**
MGRS				*e*Sg	**Sg**	**02 14 30.3**	**+0.6**
MAKA	**Makarska**	**0.65**	**185**	*e*Pg	**Pg**	**02 14 26.1**	**-0.5**
MAKA				Sg	**Sb**	**02 14 36.7**	**-0.9**
BLY	**Banja Luka**	**0.82**	**4**	⇓*i*Pg	**Pg**	**02 14 29.7**	**-0.1**
BLY				*e*Sg	**Sg**	**02 14 40.7**	**+0.3**
BLY	**Banja Luka**	**0.82**	**4**	*e*Pg	**Pg**	**02 14 29.6**	**-0.2**
BLY				*e*Sg	**Sg**	**02 14 39.6**	**-0.8**
HVAR	**Hvar**	**0.89**	**212**	*e*Pg	**Pg**	**02 14 30.6**	**-0.7**
HVAR				Sg	**Sb**	**02 14 45.2**	**+0.6**
MORI	**Morici**	**1.01**	**267**	*e*Pg	**Pg**	**02 14 32.8**	**-0.7**
MORI				Sg	**Sn**	**02 14 49.0**	**-1.0**
DOB	**Doboj**	**1.07**	**42**	*e*Pg	**Pg**	**02 14 33.4**	**-1.4**
DOB				*e*Sg	**Sg**	**02 14 48.8**	**+0.1**
PRIJ	**Prijedor**	**1.08**	**345**	*e*Pg	**Pb**	**02 14 34.4**	**-1.1**
PRIJ				*e*Sg	**Sg**	**02 14 48.9**	**+0.1**
A051A	**Mrakov

TTG	**Podgorica**	**2.18 133**	⇑	*i*Pn	**Pb**	**02 14 53.3**	**-0.9**
TTG				*i* Sn	**Sg**	**02 15 22.9**	**-1.3**
SJES	**Sjenica**	**2.19 107**		*e*Pn	**Pn**	**02 14 52.4**	**+0.8**
SJES				*e*Sn	**Sn**	**02 15 19.9**	**+0.6**
SJES	**Sjenica**	**2.19 107**		*e*Pn	**Pn**	**02 14 52.4**	**+0.8**
SJES				*e*Sn	**Sb**	**02 15 22.6**	**+0.4**
KALN	**Kalnik**	**2.24 348**		*e*Pn	**Pn**	**02 14 52.1**	**-0.2**
FRGS	**Fruska Gora**	**2.29 57**		*e*Pn	**Pn**	**02 14 53.6**	**+0.7**
FRGS				*e*Sn	**Sn**	**02 15 21.4**	**-0.2**
FRGS	**Fruska Gora**	**2.29 57**		*e*Pn	**Pn**	**02 14 52.0**	**-0.9**
IVA	**Berane**	**2.30 117**		*e*Pn	**Pb**	**02 14 54.8**	**-1.5**
IVA				*i* Sn	**Sb**	**02 15 25.4**	**+0.3**
DRME	**Dracevica, Mon**	**2.32 138**		*e*Pn	**Pn**	**02 14 54.4**	**+1.1**
DRME				*e*Sn	**Sn**	**02 15 22.8**	**+0.5**
DRME	**Dracevica, Mon**	**2.32 138**	⇑	*i*Pn	**Pb**	**02 14 55.3**	**-1.4**
DRME				*i* Sn	**Sb**	**02 15 26.5**	**+0.8**
LOBO	**Lobor**	**2.34 342**		*e*Pn	**Pn**	**02 14 54.1**	**+0.6**
LOBO				Sn	**Sn**	**02 15 23.7**	**+1.0**
PVY	**Plav**	**2.48 122**	⇓	*i*Pn	**Pb**	**02 14 57.4**	**-2.1**
PVY				*i* Sn	**Sb**	**02 15 30.0**	**-0.4**
ULC	**Ulcinj**	**2.52 141**		*e*Pn	**Pb**	**02 14 58.2**	**-1.9**
ULC				*i* Sn	**Sb**	**02 15 31.3**	**-0.2**
MORH	**Mrgy, Hungar**	**2.53 25**		*e*Pn	**Pn**	**02 14 56.1**	**0.0**
MORH				*e*Sn	**Sn**	**02 15 27.7**	**+0.3**
BEHE	**Becsehely**	**2.54 355**		*e*Pn	**Pn**	**02 14 56.8**	**+0.4**
BEHE				*e*Sn	**Sn**	**02 15 28.9**	**+1.1**
GRUS	**Gruza**	**2.61 90**		*e*Pn	**Pn**	**02 14 57.5**	**+0.2**
GRUS				*e*Sn	**Sb**	**02 15 33.3**	**-0.8**
CEY	**Cerknica**	**2.62 314**		*e*Pn	**Pn**	**02 14 58.4**	**+1.0**
CEY				*e*Sn	**Sn**	**02 15 30.6**	**+0.8**
SKDS	**Skadanscina**	**2.73 307**		*e*Pn	**Pn**	**02 14 59.7**	**+0.8**
SKDS				*e*Sn	**Sn**	**02 15 32.5**	**+0.2**
SELS	**Selova**	**3.01 102**		*e*Pn	**Pn**	**02 15 02.7**	**0.0**
SOKA	**Soboth**	**3.11 333**		*e*Pn	**Pn**	**02 15 04.5**	**+0.4**
	1.1nm,0.3s						
SOKA				*e*Sn	**Sn**	**02 15 41.3**	**-0.5**
	2.5nm,0.4s						
OBKA	**Obir**	**3.14 326**		*e*Pn	**Pn**	**02 15 05.8**	**+1.1**
OBKA				*e*Sn	**Sn**	**02 15 43.3**	**+0.6**
OBKA	**Obir**	**3.14 326**		*e*Pn	**Pn**	**02 15 07.2**	**+2.6**
	1.0nm,0.5s						
OBKA				*e*Sn	**Sg**	**02 15 53.3**	**-1.9**
	5.3nm,0.5s						
ARSA	**Arzberg**	**3.50 342**		*e*Pn	**Pn**	**02 15 10.1**	**+0.7**
	8.9nm,0.4s						
ARSA				*e*Sn	**Sn**	**02 15 51.6**	**+0.3**
	0.5nm,0.2s						
RONA	**Rosalia, Austr**	**3.81 352**		*e*Pn	**Pn**	**02 15 14.8**	**+1.0**
	2.2nm,0.3s						
CONA	**Conrad Observa**	**4.09 348**		*e*Pn	**Pn**	**02 15 18.5**	**+0.9**
	2.0nm,0.3s						
CONA				*e*Sn	**Sn**	**02 16 07.1**	**+1.1**
	1.5nm,0.6s						
ABTA	**Abfaltersbach**	**4.29 313**		*e*Pn	**Pn**	**02 15 22.7**	**+2.3**
	1.2nm,0.3s						
MOA	**Molln**	**4.39 334**		*e*Pn	**Pn**	**02 15 23.2**	**+1.5**
	0.9nm,0.2s						
WTTA	**Wattenberg**	**5.08 313**		*e*Pn	**Pn**	**02 15 34.2**	**+2.9**
	2.8nm,0.4s						
WATA	**Walderalm**	**5.15 313**		*e*Pn	**Pn**	**02 15 35.3**	**+3.0**
	1.0nm,0.2s						
SQTA	**Sankt Quirin**	**5.28 311**		*e*Pn	**Pn**	**02 15 36.8**	**+2.7**
	0.7nm,0.2s						
MOTA	**Moosalm**	**5.41 311**		*e*Pn	**Pn**	**02 15 39.0**	**+3.1**
	1.0nm,0.3s						
FETA	**Feichten**	**5.44 307**		*e*Pn	**Pn**	**02 15 39.0**	**+2.7**
	0.4nm,0.4s						
RETA	**Reutte**	**5.68 311**		*e*Pn	**Pn**	**02 15 42.6**	**+3.0**
	0.5nm,0.3s						

MOS ***26*** *02:21:57.7±0.8, 22°.85N×94°.65E, h121km, mb4.8/53, Error ellipse: s-maj=9.6km s-min=3.6km az=123.1*
BJI ***26*** *02:21:57.0±0.0, 22°.86N×94°.50E, h112km, mb4.8/56, mB4.9/33*
NEIC ***26*** *02:21:58.7±1.6, 22°.90N±0°.05×94°.60E±0°.06, h108km±4km, mb4.9/119, Error ellipse: s-maj=7.9km s-min=7.8km az=98.0*
IDC ***26*** *02:21:58.1±0.5, 22°.82N×94°.60E, h108km±4km, mb4.4/30, mbtmp4.8/32, MS3.3/11, Error ellipse: s-maj=9.1km s-min=6.5km az=47.0*
NDI ***26*** *02:22:00.9±3.2, 22°.96N×94°.31E, h100km, ML4.8, mb4.9(NEIC)*
GCMT ***26*** *02:22:01.7±0.4, 22°.82N±0°.03×94°.71E±0°.03, h118km±6km, MW4.8/79, Moment Tensor Solution. s8,c9; s79,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.61±.10; $M_{\theta\theta}$-1.15±.11; $M_{\phi\phi}$0.53±.10; $M_{r\theta}$-1.05±.07; $M_{\theta\phi}$0.97±.12; $M_{r\phi}$-0.46±.06; Best double couple: $M_0$1.79800×10^{16} NP1:φs257.00000°, δ76.00000°, λ46.00000°. NP2: φs153.00000°, δ46.00000°, λ161.00000°. Principal axes: T 1.7400, Plg41.0000°, Azm126.0000°; N 0.1190, Plg43.0000°, Azm270.0000°; P -1.8560, Plg19.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 02:21:58.2±0.3, 22°.85N±0°.03×94°.48E±0°.03, h111km±2km, h111km:pP-P, n585, σ1955/665, mb4.9/185, 47C-6D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.43**	**256**	*e*Pg	**Pn**	**02 22 25.3**	**+0.9**
SAIH				*i* Sg	**Sn**	**02 22 44.0**	**-0.2**
SAIH				IAML		02 22 49.4	
	comp=E,13μm,0.3s						
MND	**Mandalay**	**1.73**	**118**	P	**Pn**	**02 22 27.3**	**-0.5**
IMP	**Imphal**	**2.03**	**346**	*e*Pg	**Pn**	**02 22 33.4**	**+1.7**
IMP				*i* Sg	**Sn**	**02 22 56.9**	**-0.5**
IMP				IAML		02 22 57.4	
	comp=E,3μm,0.5s						
BRDH	**Bariadhala**	**2.62**	**267**	P	**Pn**	**02 22 40.5**	**+1.2**
	comp=E,174nm,0.4s,baz=86,slow=11,SNR=14						
BRDH				S	**Sn**	**02 23 12.7**	**+1.8**
	comp=E,4μm,0.5s,baz=0.0,slow=20,SNR=21						
KOHI	**KOHIMA**	**2.88**	**353**	*e*Pg	**Pn**	**02 22 43.6**	**+0.9**
KOHI				*i* Sg	**Sn**	**02 23 15.5**	**-1.5**
KOHI				IAML		02 23 17.7	
	comp=N,4μm,0.7s						
KOHI				IAML		02 23 18.1	
	comp=E,6μm,0.5s						
MOKO	**MOKOCHONG**	**3.45**	**1**	*e*Pg	**Pn**	**02 22 49.1**	**-1.3**
MOKO				*i* Sg	**Sn**	**02 23 28.6**	**-2.2**
MOKO				IAML		02 23 30.0	
	comp=E,2μm,0.3s						
MOKO				IAML		02 23 31.2	
	comp=N,3μm,0.7s						
SHL	**Shillong**	**3.59**	**319**	Pn	**Pn**	**02 22 52.8**	**+0.4**
SHL	**Shillong**	**3.59**	**319**	P	**Pn**	**02 22 52.8**	**+0.4**
SHL	**Shillong**	**3.59**	**319**	*e*P	**Pn**	**02 22 52.8**	**+0.4**
SHL				*e*S	**Sn**	**02 23 30.6**	**-3.6**
TEZP	**TEZPUR**	**4.05**	**338**	*e*Pg	**Pn**	**02 22 58.2**	**0.0**
TEZP				*i* Sg	**Sn**	**02 23 39.2**	**-5.5**
ITAN	**ITANAGAR**	**4.33**	**351**	*e*P	**Pn**	**02 23 02.9**	**+0.9**
ITAN				*i* Sg	**Sn**	**02 23 48.4**	**-3.1**
ITAN				IAML		02 23 51.9	
	comp=N,8μm,0.0s						
ITAN				IAML		02 23 59.1	
	comp=E,5μm,0.3s						
LKP	**Lekhapani**	**4.63**	**15**	*e*P	**Pn**	**02 23 07.2**	**+1.2**
LKP				*e*S	**Sn**	**02 23 56.7**	**-2.1**
ZIRO	**ZIRO**	**4.69**	**353**	*e*Pg	**Pn**	**02 23 07.3**	**+0.2**
ZIRO				*i* Sg	**Sn**	**02 23 56.4**	**-4.2**
ZIRO				IAML		02 24 01.5	
	comp=N,12μm,0.8s						
ZIRO				IAML		02 24 02.0	
	comp=E,11μm,0.5s						
CHTO	**Chiang Mai**	**5.79**	**133**	Pn	**Pn**	**02 23 20.7**	**-1.2**
CHTO	**Chiang Mai**	**5.79**	**133**	P	**Pn**	**02 23 20.7**	**-1.2**
CM31	**Chiang Mai Arr**	**6.05**	**135**	Pn	**Pn**	**02 23 23.1**	**-2.2**
CMAR	**Chiang Mai Arr**	**6.05**	**135**	P	**Pn**	**02 23 24.4**	**-0.9**
	comp=E,13nm,0.8s,baz=313,slow=14,SNR=34						
CMAR				ScP	**ScP**	**02 33 37.6**	**-0.6**
	comp=E,1.3nm,0.4s,baz=298,slow=1.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**6.05**	**135**	Pn	**Pn**	**02 23 23.4**	**-1.9**
CMAR				ScP	**ScP**	**02 33 37.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**6.05**	**135**	P	**Pn**	**02 23 23.4**	**-1.9**
SLGI	**Shiliguri**	**6.71**	**306**	*e*P	**Pn**	**02 23 35.5**	**+1.3**
PHRA	**Phrae**	**6.91**	**128**	Pn	**Pn**	**02 23 36.2**	**-0.7**
GTK	**Tadong**	**6.94**	**311**	*ex*	x	02 23 39.0	
GTK				*ex*	x	02 24 50.8	
LSA	**Lhasa**	**7.45**	**337**	Pn	**Pn**	**02 23 45.6**	**+0.9**
LSA	**Lhasa**	**7.45**	**337**	P	**Pn**	**02 23 45.5**	**+0.9**
LSA				S	**Sn**	**02 25 02.0**	**-5.7**
LSA				pmax	pmax		
	comp=E,130nm,0.6s						
LSA				LR	LR		
	comp=E,240nm,9.3s						
LSA				LR	LR		
	comp=E,270nm,7.8s						
LSA	**Lhasa**	**7.45**	**337**	P	**Pn**	**02 23 45.6**	**+0.9**
PZH	**PanZhiHua**	**7.54**	**60**	P	**Pn**	**02 23 48.5**	**+2.9**
PZH				S	**Sn**	**02 25 13.3**	**+3.8**
PZH				pmax	pmax		
	comp=E,60nm,1.0s						
PZH				pmax	pmax		
	comp=E,220nm,3.9s						
PZH				LR	LR		
	comp=E,810nm,16.9s						
PZH				LR	LR		
	comp=E,470nm,17.1s						
PZH				LR	LR		
	comp=E,550nm,14.5s						
ODAN	**Odare**	**7.58**	**303**	*e*Pn	**Pn**	**02 23 46.0**	**-0.2**
ODAN				*e*Sn	**Sn**	**02 25 07.6**	**-3.0**
	comp=E,346nm,0.6s						
ODAN				*e*Sn	Sn	02 25 07.7	-2.9
	comp=E,267nm,0.7s						
TAPN	**Taplejung**	**7.60**	**308**	*e*Pn	**Pn**	**02 23 46.4**	**-0.1**
TAPN				*e*Sn	**Sn**	**02 25 08.3**	**-2.9**
	comp=E,2μm,0.8s						
KMI	**Kunming**	**7.88**	**72**	⇓P	**Pn**	**02 23 53.5**	**+3.1**
KMI				sP		02 24 21.8	
KMI				S	**Sn**	**02 25 21.5**	**+3.4**
KMI				pmax	pmax		
	comp=E,57nm,1.0s						
KMI				pmax	pmax		
	comp=E,90nm,3.5s						
KMI				LR	LR		
	comp=E,430nm,12.0s						
KMI				LR	LR		
	comp=E,240nm,8.9s						
KMI				LR	LR		
	comp=E,210nm,7.3s						
BOK	**Bokaro**	**7.96**	**278**	*e*P	**Pn**	**02 23 52.8**	**+1.7**
BOK				*e*S	**Sn**	**02 25 15.0**	**-4.5**
RAMN	**Ramite**	**8.23**	**301**	*e*Pn	**Pn**	**02 23 55.1**	**0.0**
RAMN				*e*Sn	**Sn**	**02 25 23.4**	**-3.2**
BWNR	**Bhubaneshwar**	**8.46**	**254**	*e*P	**Pn**	**02 23 59.3**	**+1.3**
BWNR				*e*S	**Sn**	**02 25 25.5**	**-6.3**
JIRN	**Jiri**	**8.90**	**304**	*e*Pn	**Pn**	**02 24 03.6**	**-0.7**
GUN	**Gumba**	**9.26**	**305**	*e*Pn	**Pn**	**02 24 08.2**	**-1.0**
GUN				*e*Sn	**Sn**	**02 25 47.7**	**-4.1**
	comp=E,860nm,0.6s						
PKI	**Pulchoki**	**9.46**	**302**	*e*Pn	**Pn**	**02 24 11.2**	**-0.6**
PKI				*e*Sn	**Sn**	**02 25 52.5**	**-4.0**
PKIN	**Phulchoki**	**9.47**	**302**	*e*Pn	**Pn**	**02 24 11.2**	**-0.7**
PKIN				*e*Sn	**Sn**	**02 25 53.1**	**-3.7**
	comp=E,172nm,0.3s						
SRDT	**SRDT**	**9.53**	**152**	P	**Pn**	**02 24 09.1**	**-3.4**
	comp=E,848nmcomp=E,19nm,1.1s						
SRDT	**SRDT**	**9.53**	**152**	P	**Pn**	**02 24 12.9**	**+0.4**
KKN	**Kakani**	**9.66**	**302**	*e*Pn	**Pn**	**02 24 13.6**	**-0.9**
KKN				*e*Sn	**Sn**	**02 25 57.3**	**-4.0**
DMN	**Daman**	**9.72**	**301**	*e*Pn	**Pn**	**02 24 14.3**	**-0.9**
DMN				*e*Sn	**Sn**	**02 25 57.6**	**-5.1**
GKN	**Gorkha**	**10.27**	**302**	*e*Pn	**Pn**	**02 24 21.7**	**-0.9**
GKN				*e*Sn	**Sn**	**02 26 10.5**	**-5.4**
	comp=E,175nm,0.3s						
VLK	**Valmikinagar**	**10.60**	**297**	*e*P	**Pn**	**02 24 26.8**	**-0.1**
KOLN	**Koldanda**	**10.99**	**299**	*e*Pn	**Pn**	**02 24 31.4**	**-1.0**
KOLN				*e*Sn	**Sn**	**02 26 26.8**	**-6.7**
DANN	**Dangsing**	**11.11**	**302**	*e*Pn	**Pn**	**02 24 32.3**	**-1.9**
DANN				*e*Sn	**Sn**	**02 26 31.3**	**-5.3**
PBA	**Port Blair**	**11.26**	**189**	Pn	**Pn**	**02 24 34.5**	**-1.3**
BLSP	**Bilaspur**	**11.44**	**269**	*e*P	**Pn**	**02 24 38.3**	**0.0**
CD2	**Chengdu**	**11.53**	**44**	P	**Pn**	**02 24 38.5**	**-0.9**
CD2				S	**Sn**	**02 26 45.5**	**-0.7**
CD2				pmax	pmax		
	comp=E,50nm,0.7s						
ALBI	**Allahabad**	**11.83**	**284**	*e*P	**Pn**	**02 24 42.5**	**-0.9**
UBPT	**Khong Chiam**	**12.83**	**124**	Pn	**Pn**	**02 24 55.7**	**-0.9**
UBPT	**Khong Chiam**	**12.83**	**124**	P	**Pn**	**02 24 54.4**	**-2.2**
	comp=E,948nmcomp=E,36nm,1.2s						
UBPT	**Khong Chiam**	**12.83**	**124**	P	**Pn**	**02 24 56.4**	**-0.2**
JBP	**Jabalpur**	**13.36**	**274**	*e*P	**Pn**	**02 25 04.8**	**+1.3**
JBP				*e*S	**Sn**	**02 27 22.9**	**-7.6**
LGTI	**Lohaghat**	**14.37**	**300**	*e*P	**Pn**	**02 25 16.5**	**+0.1**
NGP	**Nagpur**	**14.41**	**266**	*e*P	**Pn**	**02 25 15.9**	**-1.2**
PTH	**Pithoragarh**	**14.43**	**301**	*e*P	**Pn**	**02 25 16.7**	**-0.8**
PTH				*e*P	**P**	**02 25 17.9**	**-3.2**
PTH				*e*S	**Sn**	**02 27 49.3**	**-7.4**
JHNI	**Jhansi**	**14.78**	**283**	*e*P	**Pn**	**02 25 19.6**	**-2.1**
QIZ	**Qiongzhong**	**14.85**	**102**	Pn	**Pn**	**02 25 22.0**	**-0.6**
QIZ	**Qiongzhong**	**14.85**	**102**	⇑*i*P	**Pn**	**02 25 22.3**	**-0.3**
QIZ				sP	P	02 25 56.8	+31
QIZ				S	**Sn**	**02 28 07.3**	**+0.7**
QIZ				pmax	pmax		
	comp=E,15nm,1.2s						
QIZ				pmax	pmax		
	comp=E,120nm,3.3s						
QIZ				LR	LR		
	comp=E,150nm,12.4s						
QIZ				LR	LR		
	comp=E,130nm,10.2s						
QIZ				LR	LR		
	comp=E,110nm,20.0s						
SRIT	**Nakonsritamara**	**15.00**	**160**	P	**P**	**02 25 27.6**	**+0.3**
SRIT	**Nakonsritamara**	**15.00**	**160**	P	**Pn**	**02 25 24.8**	**+0.2**
ENH	**Enshi**	**15.32**	**58**		**Pn**	**02 25 27.1**	**-1.4**
ENH	**Enshi**	**15.32**	**58**	P	**Pn**	**02 25 27.4**	**-1.1**
LZH	**Lanzhou**	**15.49**	**30**	*e*P	**Pn**	**02 25 29.5**	**-1.3**
LZH				pmax	pmax		
	comp=E,36nm,1.2s						
LZH				pmax	pmax		
	comp=E,180nm,4.5s						
BHPL	**Bhopal**	**15.71**	**275**	*e*P	**Pn**	**02 25 32.8**	**-0.6**
HYBB	**Hyderabad (bro**	**15.90**	**253**	*e*P	**P**	**02 25 39.1**	**+1.8**
HYBB				*e*S	**S**	**02 28 42.3**	**+4.1**
SKLT	**Songkhla**	**16.67**	**158**	P	**Pn**	**02 25 44.5**	**-0.8**
	comp=E,34nm,0.7s						
XAN	**Xi'an**	**16.88**	**46**	P	**Pn**	**02 25 45.5**	**-2.2**
XAN				pP	pP	02 25 58.5	-10
XAN				pmax	pmax		
	comp=E,6.0nm,0.6s						
GTA	**Gaotai**	**17.12**	**14**	*e*P	**P**	**02 25 49.0**	**-1.7**
GTA				pP	pP	02 26 03.8	-7.2
GTA				ScP	**ScP**	**02 33 53.5**	**-0.2**
GTA				ScS	**ScS**	**02 37 32.3**	**-1.3**
CNSH	**ChangSha**	**17.47**	**69**	⇑P	**Pn**	**02 25 56.0**	**+1.0**
CNSH				S	**Sn**	**02 29 07.8**	**-2.0**
CNSH				pmax	pmax		
	comp=E,16nm,0.7s						
CNSH				LR	LR		
	comp=E,270nm,9.8s						
CNSH				LR	LR		
	comp=E,160nm,15.7s						
KULM	**Kulim**	**18.45**	**160**	P	**P**	**02 26 05.2**	**-0.1**
KULM	**Kulim**	**18.45**	**160**	P	**Pn**	**02 26 06.2**	**-0.5**
	comp=E,25nm,0.6s						
MLSI	**Meulaboh, Aceh**	**18.57**	**174**	P	**P**	**02 26 04.0**	**-2.6**
	comp=E,55nm,0.7s						
THN	**Thein Dam**	**19.14**	**304**	*e*P	**Pn**	**02 26 15.3**	**+0.4**
THN				*e*S	**S**	**02 29 43.1**	**-0.8**
WHN	**Wuhan**	**19.32**	**62**	⇑P	**Pn**	**02 26 17.3**	**+0.4**
WHN				pP	**pP**	**02 26 33.5**	**-1.8**
WHN				S	**S**	**02 29 49.3**	**+1.9**
WHN				pmax	pmax		
	comp=E,40nm,0.9s						
IPM	**Ipoh**	**19.33**	**160**	P	**P**	**02 26 14.5**	**-0.4**
IPM	**Ipoh**	**19.33**	**160**	P	**P**	**02 26 14.4**	**-0.6**
	comp=E,84nm,0.7s						
IPM	**Ipoh**	**19.33**	**160**	P	**P**	**02 26 15.5**	**+0.5**
KCSI	**Kotacane, Aceh**	**19.48**	**170**	P	**P**	**02 26 15.5**	**-1.1**
	comp=E,66nm,0.8s						
LYN	**LuoYang**	**19.58**	**50**	*e*P	**P**	**02 26 18.5**	**+1.0**
TSI	**Tuntungan**	**19.64**	**168**	P	**P**	**02 26 19.0**	**+0.7**
	comp=E,222nm,1.0s						
PALK	**Pallekele**	**20.39**	**223**	P	Pn	02 26 28.7	-0.8
	comp=E,5.9nm,0.5s,baz=139,slow=9.3,SNR=6.0						
PALK				S	**S**	**02 30 03.6**	**-5.3**
	comp=E,4.2nm,0.6s,baz=112,slow=19,SNR=1.6						
	comp=E,5.9nm,0.5s						
PALK	**Pallekele**	**20.39**	**223**		Pn	02 26 28.3	-1.2
PALK				ScP	**ScP**	**02 34 01.9**	**+0.6**
PSI	**Prapat**	**20.39**	**167**	P	**P**	**02 26 27.5**	**+0.9**
	comp=E,34nm,0.8s,baz=314,slow=8.1,SNR=28						
PSI				S	**S**	**02 30 08.4**	**-0.7**
	comp=E,3.1nm,0.4s,baz=38,slow=14,SNR=1.5						
PSI				ScP	**ScP**	**02 34 00.3**	**-1.1**
	comp=E,8.1nm,0.7s,baz=342,slow=5.6,SNR=7.9						
PSI				LR	LR	02 34 51.5	
	comp=E,59nm,18.6s,baz=352,slow=38						
	comp=E,34nm,0.8s						
PSI	**Prapat**	**20.39**	**167**	P	**P**	**02 26 26.6**	**+0.1**
	comp=E,28nm,0.8s,comp=E,47nm,0.8s						
PSI				P	**P**	**02 26 26.6**	**+0.1**
	comp=E,28nm,0.8s,comp=E,47nm,0.8s						
PSI	**Prapat**	**20.39**	**167**	P	Pn	02 26 29.2	-0.4
RPSI	**Rantau Prapat**	**20.50**	**167**	P	**P**	**02 26 26.6**	**-0.9**
RPSI				ScP	**ScP**	**02 34 00.9**	**-0.5**
RPSI	**Rantau Prapat**	**20.50**	**167**		**S**	**02 30 08.4**	**-2.5**
RPSI					**ScP**	**02 34 00.3**	**-1.1**
TIY	**Taiyuan**	**21.39**	**42**	*e*P	**P**	**02 26 40.5**	**+3.5**
TIY				S	**S**	**02 30 31.5**	**+3.4**
TIY				pmax	pmax		
	comp=E,52nm,0.7s						
NIL	**Nilore**	**21.53**	**305**	P	**P**	**02 26 39.0**	**+0.4**
NIL	**Nilore**	**21.53**	**305**	P	**P**	**02 26 39.0**	**+0.4**
GSI	**Gunungsitoli**	**21.63**	**172**	P	**P**	**02 26 40.5**	**+0.9**
WMQ	**Urumqi**	**21.65**	**347**	*e*P	**P**	**02 26 41.3**	**+1.5**
WMQ				pP	pP	02 27 02.8	+2.0
WMQ				sP	sP	02 27 16.8	+2.0
WMQ				pmax	pmax		
	comp=E,63nm,0.9s						
WMQ				pmax	pmax		
	comp=E,140nm,5.3s						
WMQ				LR	LR		
	comp=E,45nm,21.7s						
BTO	**Baotou**	**22.03**	**33**	*e*P	**P**	**02 26 42.0**	**-1.8**
MNSI	**Mandailing Nat**	**22.48**	**167**	P	**P**	**02 26 47.2**	**-1.3**
	comp=E,55nm,0.6s						
HNS	**HongShan**	**22.65**	**46**	⇑P	**P**	**02 26 50.0**	**-0.1**
HNS				S	**S**	**02 30 47.3**	**-2.6**
HNS				SS	**SnSn**	**02 31 39.5**	**+7.3**
HNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
HNS				LR	LR		
	comp=E,140nm,10.8s						
HNS				LR	LR		
	comp=E,85nm,11.4s						
MYKOM	**Kota Tinggi**	**22.83**	**155**	P	**P**	**02 26 52.0**	**0.0**
MYKOM	**Kota Tinggi**	**22.83**	**155**	P	**P**	**02 26 51.2**	**-0.8**
	comp=E,94nm,1.1s						
KSH	**Kashi**	**22.88**	**321**	P	**P**	**02 26 54.3**	**+1.9**
KSH				S	**S**	**02 30 53.0**	**-0.7**
KSH				pmax	pmax		
	comp=E,43nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.00**	**35**	*e*P	**P**	**02 26 54.8**	**+1.2**
HHC				pmax	pmax		
	comp=E,190nm,5.6s						
BKNI	**Bangkinang**	**23.28**	**163**	P	**P**	**02 26 56.7**	**+0.4**
NJ2	**Nanjing**	**23.45**	**62**	*e*P	**P**	**02 26 58.3**	**+0.6**
NJ2				pmax	pmax		
	comp=E,8.0nm,0.7s						
TIA	**Tai'an**	**23.71**	**51**	⇑P	**P**	**02 26 59.8**	**-0.2**
TIA				pmax	pmax		
	comp=E,11nm,0.7s						
SHLS	**Shalkode**	**23.78**	**332**	*e*P	**P**	**02 27 00.1**	**-0.6**
SHLS				pmax	pmax		
	comp=Z,19nm,0.8s						
SHLS	**Shalkode**	**23.78**	**332**	*e*P	**P**	**02 27 00.2**	**-0.6**
	comp=Z,19nm,0.8s,baz=332						
TPRI	**Tanjung Pinang**	**23.89**	**154**	P	**P**	**02 27 02.2**	**+0.4**
	comp=Z,127nm,0.8s						
PDGK	**Podgornoye**	**23.90**	**332**	*i* P	**P**	**02 27 03.9**	**+2.1**
PDGK				pmax	pmax		
	comp=Z,65nm,1.4s						
UZB	**Uzynbulak**	**23.96**	**331**	*e*P	**P**	**02 27 03.7**	**+1.3**
UZB	**Uzynbulak**	**23.96**	**331**	*e*P	**P**	**02 27 03.7**	**+1.3**
	baz=331						
NRN	**Naryn**	**24.16**	**324**	P	**P**	**02 27 05.7**	**+1.3**
NRN	**Naryn**	**24.16**	**324**	P	**P**	**02 27 05.7**	**+1.3**
SATY	**Saty**	**24.17**	**330**	*e*P	**P**	**02 27 06.2**	**+2.0**
SATY				pmax	pmax		
	comp=Z,61nm,0.9s						
SATY	**Saty**	**24.17**	**330**	*e*P	**P**	**02 27 06.2**	**+2.0**
	comp=Z,61nm,0.9s,baz=330						
SSLB	**Suanglung**	**24.32**	**83**	P	**P**	**02 27 05.4**	**-0.3**
KPKS	**Kokpek**	**24.36**	**331**	*e*P	**P**	**02 27 07.8**	**+1.9**
KPKS				pmax	pmax		
	comp=Z,27nm,0.6s						
KPKS	**Kokpek**	**24.36**	**331**	*e*P	**P**	**02 27 07.8**	**+1.9**
	comp=Z,27nm,0.6s,baz=331						
SDSI	**Sungai Dareh**	**24.59**	**163**	P	**P**	**02 27 06.9**	**-1.2**
	comp=Z,2μmcomp=Z,17nm,0.9s						
ULHL	**Ulahol**	**24.61**	**326**	P	**P**	**02 27 11.5**	**+3.1**
	SNR=6.9						
YULB	**Yu-li**	**24.66**	**83**	P	**P**	**02 27 09.7**	**+1.0**
MDOK	**Medeo**	**24.89**	**329**	*e*P	**P**	**02 27 10.9**	**+0.1**
MDOK	**Medeo**	**24.89**	**329**	*e*P	**P**	**02 27 10.9**	**+0.1**
	baz=328						
BOOM	**Boomskoye usch**	**24.94**	**326**	P	**P**	**02 27 11.2**	**-0.1**
BOOM	**Boomskoye usch**	**24.94**	**326**	P	**P**	**02 27 11.2**	**-0.1**
KBL	**Kabul**	**25.10**	**303**	P	**P**	**02 27

KSM Kuching 26.23 142 P **P** **02 27 24.5 +1.5**
USP Ospenovka 26.24 326 P **P** **02 27 25.1 +2.2**
SNR=8.9
SGDS Sogindy 26.30 326 *e*P **P** **02 27 24.7 +1.3**
SGDS Sogindy 26.30 326 *e*P **P** **02 27 24.8 +1.3**
baz=326
BTK Batken 26.36 316 P **P** **02 27 26.2 +2.1**
BTK IAmb IAmb 02 27 52.5
comp=Z,31nm,0.8s
BTK Batken 26.36 316 P **P** **02 27 26.2 +2.1**
BTK pmax pmax
comp=Z,31nm,0.8s
SBUM Sibu 26.60 137 P **P** **02 27 26.6 +0.3**
SBUM Sibu 26.60 137 P **P** **02 27 26.5 +0.2**
comp=Z,13nm,0.8s
SONM Songino Array 26.69 18 P **P** **02 27 26.5 -0.5**
comp=Z,3.1nm,0.7s,baz=188,slow=9.8,SNR=10.0
SONM pP **pP** **02 27 50.5 -0.9**
comp=Z,5.4nm,1.0s,baz=204,slow=13,SNR=5.1
SONM ScP **ScP** **02 34 16.3 -1.4**
comp=Z,4.8nm,0.8s,baz=194,slow=3.0,SNR=19
comp=Z,3.1nm,0.7s
SONM Songino Array 26.69 18 P **P** **02 27 26.5 -0.5**
SONM AP **pP** **02 27 50.0 -1.3**
CHGR Chuyangaron 26.74 312 P **P** **02 27 28.9 +1.4**
CHGR IAmb IAmb 02 27 56.2
comp=Z,23nm,0.7s
CHGR Chuyangaron 26.74 312 P **P** **02 27 28.9 +1.4**
CHGR pmax pmax
comp=Z,23nm,0.7s
ULN Ulaanbaatar 26.91 19 P **P** **02 27 28.0 -1.0**
ULN ScP **ScP** **02 34 15.6 -2.8**
ULN Ulaanbaatar 26.91 19*ce*P **P** **02 27 29.2 +0.2**
ULN pmax pmax
comp=Z,5.0nm,1.3s
PPBI Pangkal Pinang 27.34 154 P **P** **02 27 33.4 +0.5**
DGZ Jazzator, Alta 27.37 350 *i* P **P** **02 27 33.5 +0.5**
DGZ pmax pmax
comp=Z,24nm,0.7s
BTLS Baital 27.73 328*de*P **P** **02 27 37.7 +1.5**
IUG Iuzhnay 28.04 319 *e*P **P** **02 27 40.8 +1.7**
IUG Iuzhnay 28.04 319 *e*P **P** **02 27 40.8 +1.7**
baz=319
KK31 Karatay Array 28.33 321 P **P** **02 27 42.6 +1.1**
KK31 Karatay Array 28.33 321 P **P** **02 27 42.6 +1.1**
KK31 pmax pmax
comp=Z,6.0nm,1.1s
KKAR Karatay Array 28.33 321 P **P** **02 27 42.4 +0.9**
KKAR Karatay Array 28.33 321 P **P** **02 27 42.6 +1.1**
KKAR IAmb IAmb 02 28 36.7
comp=Z,6.4nm,1.1s
KKAR Karatay Array 28.33 321 P **P** **02 27 42.4 +0.9**
KURBB Kurchatov Arra 30.39 340 P **P** **02 28 00.9 +1.3**
comp=Z,56nm,0.8s,baz=152,slow=8.3,SNR=364
KURBB ScP **ScP** **02 34 28.2 -0.8**
comp=Z,5.3nm,0.7s,baz=154,slow=2.8,SNR=24
comp=Z,56nm,0.8s
KURK Kurchatov 30.44 340 P **P** **02 28 01.1 +1.1**
KURK ScP **ScP** **02 34 28.7 -0.5**
KURK Kurchatov 30.44 340 P **P** **02 28 01.1 +1.1**
KURK pmax pmax
comp=Z,62nm,0.7s
KURK Kurchatov 30.44 340 P **P** **02 28 01.3 +1.2**
KURK pP **pP** **02 28 26.0 +1.3**
KURK x x 02 28 30.3
KURK sP **sP** **02 28 38.4 +0.8**
KURK ScP **ScP** **02 34 28.7 -0.5**
JOW Kunigami 30.87 76 P **P** **02 28 03.3 -0.9**
OTUK Ortayu 30.87 331 P **P** **02 28 05.7 +1.7**
MTKI Muara Teweh, K 30.90 137 P P 02 28 13.9 +9.4
ZAA0 Zalesovo Array 31.90 349 P **P** **02 28 13.1 +0.2**
ZALV Zalesovo Beam 31.90 349 P **P** **02 28 13.9 +1.1**
comp=Z,41nm,0.7s,baz=170,slow=9.0,SNR=168
ZALV PcP **PcP** **02 30 59.8 -0.9**
comp=Z,0.6nm,0.3s,baz=177,slow=4.4,SNR=1.3
ZALV S **S** **02 33 16.3 +0.8**
comp=Z,4.1nm,1.0s,baz=174,slow=14,SNR=4.8
ZALV ScP **ScP** **02 34 32.3 -1.7**
comp=Z,1.0nm,0.5s,baz=153,slow=2.5,SNR=3.9
comp=Z,41nm,0.7s
ZALV Zalesovo Beam 31.90 349 P **P** **02 28 13.2 +0.4**
ZALV ScP **ScP** **02 34 32.3 -1.7**
ZALV Zalesovo Beam 31.90 349 *i* P **P** **02 28 13.8 +1.0**
ZALV pmax pmax
comp=Z,41nm,0.7s
BRZS Berezniki 32.03 333 *e*P **P** **02 28 14.4 +0.3**
BRZS pmax pmax
comp=Z,15nm,0.7s
BRZS Berezniki 32.03 333 *e*P **P** **02 28 14.4 +0.3**
comp=Z,15nm,0.7s,baz=333
BBKI Banjar Baru 32.85 140 P **P** **02 28 21.8 +0.2**
comp=Z,181nm,0.8s
WSAR Wadi Sarin 32.94 278 ScP **ScP** **02 34 38.8 +0.5**
comp=Z,4.1nm,0.8s,baz=29,slow=3.8,SNR=4.1
WSAR LR LR 02 43 12.6
comp=Z,44nm,19.6s,baz=106,slow=39
CTJI Waduk Cacaban 32.98 152 P **P** **02 28 24.8 +2.1**
comp=Z,117nm,0.9s
TOLI2 Tolitoli 33.46 127 P **P** **02 28 26.5 -0.5**
TOLI2 IAmb IAmb 02 28 29.2
comp=Z,23nm,1.0s
TOLI2 Tolitoli 33.46 127 P **P** **02 28 28.5 +1.5**
GEYT Alibeck 34.54 304 P **P** **02 28 38.3 +2.2**
comp=Z,8.0nm,1.1s,baz=116,slow=6.6,SNR=14
GEYT ScP **ScP** **02 34 43.4 -0.3**
comp=Z,2.1nm,0.8s,baz=125,slow=4.2,SNR=4.7
comp=Z,8.0nm,1.1s
GEYT Alibeck 34.54 304 P **P** **02 28 38.2 +2.2**
GYA0 ALIBECK ARRAY 34.54 304 P **P** **02 28 38.7 +2.6**
GYA0 pmax pmax
comp=Z,8.0nm,1.0s
GYA0B ALIBECK ARRAY 34.54 304 P **P** **02 28 37.7 +1.6**
BVA0 Borovoye Array 35.27 335 P **P** **02 28 43.2 +1.0**
BVAR Borovoye Array 35.27 335 P **P** **02 28 43.5 +1.4**
comp=Z,11nm,0.7s,baz=139,slow=9.8,SNR=67
BVAR PcP **PcP** **02 31 10.2 -0.2**
comp=Z,0.7nm,0.5s,baz=158,slow=1.6,SNR=2.1
BVAR LR LR 02 44 46.7
comp=Z,145nm,20.4s,baz=138,slow=39
comp=Z,11nm,0.7s
KMMI Kalianget 35.31 145 P **P** **02 28 43.9 +1.1**
comp=Z,137nm,0.8s
BRVK Borovoye 35.34 335 P **P** **02 28 43.8 +1.0**
BRVK IAmb IAmb 02 28 46.1
comp=Z,17nm,0.7s
BRVK Borovoye 35.34 335*ce*P **P** **02 28 44.1 +1.4**
BRVK pmax pmax
comp=Z,25nm,1.0s
BRVK Borovoye 35.34 335 P **P** **02 28 44.0 +1.2**
BRVK sP **sP** **02 29 19.9 -0.6**
BRVK ScP **ScP** **02 34 47.6 +1.4**
SPSI Sidrap Palu 36.34 134 P **P** **02 28 52.7 +1.1**
comp=Z,29nm,1.2s
LUWI Luwuk 36.38 127 P **P** **02 28 52.2 +0.3**
LUWI Luwuk 36.38 127 P **P** **02 28 52.1 +0.1**
comp=Z,6μmcomp=Z,78nm,1.1s
LUWI Luwuk 36.38 127 P **P** **02 28 52.4 +0.4**
JAGI Jajag, Banyuwa 36.61 146 P **P** **02 28 53.6 -0.3**
JAGI IAmb IAmb 02 28 55.7
comp=Z,24nm,0.8s
JAGI Jajag, Banyuwa 36.61 146 P **P** **02 28 53.2 -0.7**
comp=Z,36nm,0.8s
JAGI Jajag, Banyuwa 36.61 146 P **P** **02 28 53.8 -0.1**
SRBI Singaraja 36.84 144 P **P** **02 28 56.7 +0.8**
comp=Z,47nm,1.2s
BNSI Bone 36.88 134 P **P** **02 28 56.3 0.0**
comp=Z,13nm,1.1s
RTBI Rangdo, Negare 37.01 145 P **P** **02 28 57.4 +0.1**
comp=Z,95nm,0.8s
KAPI Kappang 37.11 135 P **P** **02 28 58.4 +0.2**
comp=Z,4.2nm,0.3s,baz=280,slow=8.1,SNR=6.6
KAPI LR LR 02 47 53.5
comp=Z,19nm,18.0s,baz=300,slow=42
comp=Z,4.2nm,0.3s
KAPI Kappang 37.11 135 P **P** **02 28 57.8 -0.3**
KAPI IAmb IAmb 02 29 00.5
comp=Z,17nm,1.1s
KAPI Kappang 37.11 135 *i* P **P** **02 28 58.2 0.0**
KAPI pmax pmax
comp=Z,19nm,1.2s
KAPI Kappang 37.11 135 P **P** **02 28 58.2 0.0**
comp=Z,12nm,1.1s
KAPI Kappang 37.11 135 P **P** **02 28 58.6 +0.4**
USRK Ussuriysk Ar. 37.38 46 P **P** **02 28 58.7 -1.5**
comp=Z,1.9nm,0.5s,baz=261,slow=9.6,SNR=6.2
comp=Z,1.9nm,0.5s

BKSI Bulukumba 37.58 135 P **P** **02 29 01.3 -0.9**
comp=Z,24nm,0.8s
AB31 Akbulak array 37.85 323 P **P** **02 29 05.8 +1.7**
ABKAR Akbulak array 37.85 323 P **P** **02 29 05.4 +1.3**
TWSI Taliwang, Sumb 38.30 143 P **P** **02 29 06.6 -1.6**
comp=Z,22nm,0.5s
PLAI Plampang 38.88 141 P **P** **02 29 11.7 -1.3**
comp=Z,3μmcomp=Z,64nm,0.7s
PLAI Plampang 38.88 141 P **P** **02 29 12.2 -0.8**
KLR Kul'dur 39.39 39 *i* P **P** **02 29 16.9 -0.1**
KLR pmax pmax
comp=Z,17nm,2.5s
ZEA Zeya 39.52 30 *i* P **P** **02 29 18.5 +0.6**
AKTO Aktyubinsk 39.53 323 P **P** **02 29 19.6 +1.5**
comp=Z,19nm,0.4s,baz=119,slow=8.6,SNR=94
comp=Z,19nm,0.4s
MJAR Matsushiro Arr 40.03 60 P **P** **02 29 21.2 -1.2**
comp=Z,1.2nm,0.3s,baz=270,slow=10,SNR=5.5
MJAR ScP **ScP** **02 35 01.8 -2.5**
comp=Z,1.0nm,0.4s,baz=255,slow=7.7,SNR=2.8
MJAR LR LR 02 47 19.6
comp=Z,26nm,19.7s,baz=244,slow=38
comp=Z,1.2nm,0.3s
MMRI Maumere 41.45 136 P **P** **02 29 33.5 -0.8**
SVE Sverdlovsk 41.95 333*c* *i* P **P** **02 29 39.7 +1.9**
SVE *e*S **S** **02 35 49.1 +1.2**
SVE pmax pmax
comp=Z,110nm,0.8s
KRAI Karang Ratu 42.09 124 P **P** **02 29 40.5 +0.9**
comp=Z,41nm,0.9s
ARU Arti 42.60 331 P **P** **02 29 44.6 +1.4**
comp=Z,25nm,0.3s,baz=124,slow=5.4,SNR=43
ARU LR LR 02 49 15.9
comp=Z,51nm,18.1s,baz=128,slow=38
comp=Z,25nm,0.3s
ARU Arti 42.60 331 P **P** **02 29 44.0 +0.8**
ARU IAmb IAmb 02 29 45.2
comp=Z,32nm,0.9s
ARU Arti 42.60 331*d* *i* P **P** **02 29 44.2 +1.1**
ARU *PP **pP** **02 30 09.2 +0.5**
ARU 02 31 26.0
ARU 02 31 32.3
ARU S **S** **02 36 01.4 +3.9**
ARU pmax pmax
comp=Z,20nm,0.5s
ARU Arti 42.60 331 P **P** **02 29 44.5 +1.4**
SWI Sorong 42.86 118 P **P** **02 29 43.6 -2.2**
comp=Z,49nm,1.0s
BATI Baumata 43.55 136 P **P** **02 29 50.4 -0.9**
comp=Z,130nm,0.5s,baz=359,slow=1.1,SNR=17
BATI Baumata 43.55 136 P **P** **02 29 49.7 -1.6**
comp=Z,2μmcomp=Z,155nm,0.6s
SOEI Soe 43.60 135 P **P** **02 29 50.6 -1.2**
SOEI Soe 43.60 135 P **P** **02 29 50.5 -1.3**
comp=Z,1μmcomp=Z,134nm,0.8s
SOEI Soe 43.60 135 P **P** **02 29 51.3 -0.5**
RAYN Ar Rayn 44.85 281 P **P** **02 30 02.4 +0.7**
RAYN ScP **ScP** **02 35 23.9 0.0**
RAYN Ar Rayn 44.85 281 P **P** **02 30 02.4 +0.7**
RAYN pmax pmax
comp=Z,4.0nm,1.1s
RAYN Ar Rayn 44.85 281 P **P** **02 30 03.5 +1.9**
RAYN pP **pP** **02 30 29.9 +2.1**
RAYN ScP **ScP** **02 35 23.9 0.0**
FAKI Fak Fak 44.87 120 P **P** **02 30 00.8 -1.0**
FAKI Fak Fak 44.87 120 P **P** **02 30 00.7 -1.2**
comp=Z,87nm,0.8s
FAKI Fak Fak 44.87 120 P **P** **02 30 02.0 +0.1**
GNI Garni 45.17 304 *i* P **P** **02 30 04.5 +0.3**
GNI pmax pmax
comp=Z,26nm,1.2s
ZEI Tsey 46.17 308 *e*P **P** **02 30 14.0 +2.0**
ZEI pmax pmax
comp=Z,45nm,0.9s
BELG Belogornoye 46.24 322 LR LR 02 51 14.3
comp=Z,30nm,20.0s,baz=111,slow=38
BELG Belogornoye 46.24 322 *i* P **P** **02 30 13.1 +1.0**
BELG pmax pmax
comp=Z,6.0nm,0.8s
ONI Oni 46.47 308 P **P** **02 30 17.0 +2.8**
ONI IAmb IAmb 02 30 21.7
comp=Z,13nm,0.7s
ONI Oni 46.47 308 P **P** **02 30 17.0 +2.8**
ONI pmax pmax
comp=Z,13nm,0.7s
KARS Kars 46.49 305 P **P** **02 30 16.6 +2.1**
KARS Kars 46.49 305 P **P** **02 30 16.6 +2.1**
KARS pmax pmax
comp=Z,102nm,0.8s
NCK Nalchik 46.50 309 *i* P **P** **02 30 15.8 +1.4**
NCK pmax pmax
comp=Z,21nm,0.6s
NRIK Noril'sk 46.69 357 P **P** **02 30 15.7 +0.3**
comp=Z,9.3nm,0.3s,baz=152,slow=5.7,SNR=13
comp=Z,9.3nm,0.3s
NRIK Noril'sk 46.69 357 P **P** **02 30 15.5 +0.1**
NRIK IAmb IAmb 02 30 16.7
comp=Z,14nm,0.8s
NRIK Noril'sk 46.69 357*ce*P **P** **02 30 16.0 +0.6**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 47.04 309 P **P** **02 30 20.5 +2.0**
comp=Z,6.4nm,0.8s,baz=216,slow=4.4,SNR=9.6
comp=Z,6.4nm,0.8s
KBZ Khabaz 47.04 309*ce*P **P** **02 30 19.4 +0.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
NEY Neytrino 47.09 308 *i* P **P** **02 30 21.3 +2.1**
NEY pmax pmax
comp=Z,6.0nm,0.8s
GURO Guroymak-BITLI 47.12 302 P **P** **02 30 19.6 +0.2**
SHA1 Shidzhatmaz 47.21 309 *i* P **P** **02 30 21.4 +1.2**
KIV Kislovodsk 47.23 309 ⇑P **P** **02 30 22.8 +2.7**
KIV Kislovodsk 47.23 309 P **P** **02 30 21.8 +1.7**
KIV IAmb IAmb 02 30 23.9
comp=Z,31nm,0.8s
KIV Kislovodsk 47.23 309 *e*P **P** **02 30 22.0 +1.9**
KIV pmax pmax
comp=Z,38nm,1.0s
KIV MLR MLR
comp=Z,29nm,16.0s
KIV Kislovodsk 47.23 309 P **P** **02 30 22.6 +2.5**
KIRV Kirov 47.92 330*ce*P **P** **02 30 26.2 +1.2**
VRH Novokhopyorsk 49.36 319 *e*P **P** **02 30 36.4 +0.2**
VRH pmax pmax
comp=Z,30nm,0.8s
MBWA Marble Bar 50.20 149 P **P** **02 30 42.9 0.0**
MBWA IAmb IAmb 02 30 44.2
comp=Z,28nm,1.1s
MBWA Marble Bar 50.20 149 P **P** **02 30 42.9 0.0**
MBWA Marble Bar 50.20 149 P **P** **02 30 43.1 +0.3**
PSA00 Pilbara Seismi 50.60 149 P **P** **02 30 45.3 -0.7**
PSA00 IAmb IAmb 02 30 47.0
comp=Z,20nm,1.1s
PSA00 Pilbara Seismi 50.60 149 P **P** **02 30 46.3 +0.4**
GAZ Gaziantep 50.90 300 P **P** **02 30 49.0 +0.8**
GAZ IAmb IAmb 02 30 51.5
comp=Z,12nm,0.7s
KNRA Kununurra 50.91 136 P **P** **02 30 48.2 -0.1**
KNRA Kununurra 50.91 136 P **P** **02 30 48.6 +0.3**
VSR Storozhevoye 50.92 318 *e*P **P** **02 30 47.4 -0.6**
VSR pmax pmax
comp=Z,30nm,1.7s
VORR Voronezh 51.00 319 *e*P **P** **02 30 48.7 +0.1**
VORR pmax pmax
comp=Z,50nm,0.4s
PRGR Permogore 51.02 332 *e*P **P** **02 30 48.4 -0.1**
PRGR *e*PP **pP** **02 31 17.4 +2.4**
PRGR *e*S **S** **02 37 55.8 -1.2**
PRGR pmax pmax
comp=Z,28nm,0.6s
GENI Genyem 51.22 114 P **P** **02 30 51.4 +0.7**
comp=Z,120nm,0.9s
GENI Genyem 51.22 114 P **P** **02 30 51.6 +0.9**
LPSR Galich'ya Gora 51.37 320 *e*P **P** **02 30 51.3 0.0**
LPSR pmax pmax
comp=Z,20nm,0.6s
TIXI Tiksi 52.60 13 *i* P **P** **02 30 57.6 -2.5**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 52.60 13 P **P** **02 30 58.5 -1.6**
TIXI pP **pP** **02 31 25.6 -1.1**
MOS Moscow 52.87 324 *e*P **P** **02 30 59.3 -3.0**
MOS pmax pmax
comp=Z,27nm,0.9s

OBN Obninsk 53.30 323⇓*e*P **P** **02 31 06.6 +1.1**
OBN *i* 02 32 13.5
OBN *i* 02 33 06.8
OBN *e*S **S** **02 38 30.3 +1.9**
OBN pmax pmax
comp=Z,13nm,1.1s
KLMR Klimovskoe 53.42 330 *e*P **P** **02 31 05.4 -0.9**
KLMR *e**PP **pP** **02 31 34.8 +1.9**
KLMR pmax pmax
comp=Z,45nm,1.2s
KLMR Klimovskoe 53.42 330 *e*P **P** **02 31 05.4 -0.9**
KLMR AMP 02 31 08.1
comp=Z,45nm,1.2s
KLMR *e*pP **pP** **02 31 34.8 +1.9**
BR131 Keskin Array S 53.67 303 P **P** **02 31 09.4 +0.7**
BR131 IAmb IAmb 02 31 38.5
comp=Z,29nm,1.8s
BR131 Keskin Array S 53.67 303 P **P** **02 31 09.4 +0.7**
BR131 pmax pmax
comp=Z,29nm,1.8s
BRTR Keskin Array B 53.67 303 P **P** **02 31 10.4 +1.7**
comp=Z,1.8nm,0.5s,baz=135,slow=12,SNR=18
BRTR ScP **ScP** **02 35 59.7 -1.7**
comp=Z,1.9nm,1.1s,baz=160,slow=4.6,SNR=4.8
comp=Z,1.8nm,0.5s
BRTR Keskin Array B 53.67 303 P **P** **02 31 09.4 +0.7**
BRTR Keskin Array B 53.67 303 P **P** **02 31 09.4 +0.7**
ANTO Ankara 54.32 303 P **P** **02 31 13.8 +0.5**
ANTO IAmb IAmb 02 32 57.1
comp=Z,44nm,1.8s
ANTO Ankara 54.32 303 P **P** **02 31 13.8 +0.5**
ANTO pmax pmax
comp=Z,44nm,1.8s
MORW Morawa 55.64 157 P **P** **02 31 23.2 +0.4**
PETK Petropavlovsk- 56.04 40 PKPPKP 03 01 15.6
comp=Z,11nm,1.1s,baz=33,slow=5.7,SNR=3.6
ELL Elmali 56.76 300 P **P** **02 31 31.6 +0.7**
ELL Elmali 56.76 300 P **P** **02 31 31.6 +0.7**
ELL pmax pmax
comp=Z,92nm,1.1s
AKASG Malin Array Be 57.08 317 P **P** **02 31 33.0 +0.3**
comp=Z,5.0nm,0.5s,baz=81,slow=6.5,SNR=40
AKASG pP **pP** **02 31 57.9 -1.7**
comp=Z,2.4nm,0.6s,baz=82,slow=6.3,SNR=2.7
AKASG LR LR 02 58 33.6
comp=Z,33nm,19.3s,baz=33,slow=38
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 57.08 317 P **P** **02 31 32.8 +0.1**
AKASG Malin Array Be 57.08 317 P **P** **02 31 32.8 +0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 57.08 317 P **P** **02 31 32.6 -0.1**
AKBB IAmb IAmb 02 31 33.7
comp=Z,18nm,0.9s
AKBB Malin Array Si 57.08 317 P **P** **02 31 32.7 -0.1**
AKBB pmax pmax
comp=Z,18nm,0.9s
TLCR 57.19 310 ⇑P **P** **02 31 35.0 +1.4**
MILM Milestii Mici 57.20 312 ⇑P **P** **02 31 34.4 +0.7**
BLDU Ballidu 57.28 157 P **P** **02 31 34.7 +0.3**
WB0 Warramunga Arr 57.55 134 P **P** **02 31 36.2 -0.3**
WRA Warramunga Arr 57.64 134 P **P** **02 31 37.2 +0.1**
comp=Z,26nm,0.7s,baz=322,slow=7.5,SNR=180
WRA pP **pP** **02 32 02.7 -1.3**
comp=Z,4.8nm,0.8s,baz=324,slow=7.3,SNR=3.0
comp=Z,26nm,0.7s
WRA Warramunga Arr 57.64 134 P **P** **02 31 36.5 -0.6**
WRA PcP **PcP** **02 32 28.1 -1.0**
WRA Warramunga Arr 57.64 134 P **P** **02 31 36.5 -0.6**
WRA 02 32 28.1
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRAB Tennant Creek 57.64 134*ce*P **P** **02 31 37.5 +0.4**
WRAB pmax pmax
comp=Z,33nm,0.7s
WRAB Tennant Creek 57.64 134 P **P** **02 31 37.5 +0.4**
WRAB Tennant Creek 57.64 134 P **P** **02 31 37.4 +0.3**
WRAB pP **pP** **02 32 02.6 -1.4**
WRAB sP **sP** **02 32 14.5 -1.8**
WB2 Warramunga Arr 57.65 134 P **P** **02 31 36.9 -0.3**
CFR Carcaliu 57.67 310 ⇑P **P** **02 31 38.3 +1.3**
VLDR Vladesti 57.70 311 ⇑P **P** **02 31 39.1 +1.9**
WR0 Warramunga Arr 57.79 134 P **P** **02 31 37.7 -0.4**
LVZ Lovozero 57.80 337 P **P** **02 31 38.1 +0.5**
LVZ Lovozero 57.80 337 P **P** **02 31 38.1 +0.5**
LVZ pmax pmax
comp=Z,167nm,2.0s
WRKA Warakurna 57.81 143 P **P** **02 31 39.1 +0.8**
MUN Mundaring 58.35 158 P **P** **02 31 42.3 +0.5**
PANC Panciu 58.36 311 ⇑P **P** **02 31 44.3 +2.6**
ODBI Odobesti 58.42 311 ⇑P **P** **02 31 45.1 +2.8**
KLBR Kellerberrin 58.55 157 P **P** **02 31 43.6 +0.4**
VRI Vrincioaia 58.65 311 ⇑P **P** **02 31 46.2 +2.4**
BISRR Bisoca 58.67 310 ⇑P **P** **02 31 47.0 +3.0**
TESR Tescani 58.69 312 ⇓P **P** **02 31 45.5 +1.4**
PLOR Plostina 58.70 311 ⇑P **P** **02 31 46.8 +2.5**
NACGM Naroch 58.84 321⇑*e*P **P** **02 31 45.5 +0.6**
baz=93
COVR Voineasa-Covas 59.02 311 ⇑P **P** **02 31 48.2 +1.8**
BIZ Bicaz 59.06 312 ⇑P **P** **02 31 48.5 +1.8**
VSU Vasula 59.20 326 *e*P **P** **02 31 47.9 +0.6**
MLR Muntele Rosu 59.21 310 ⇑P **P** **02 31 50.3 +2.4**
MLR Muntele Rosu 59.21 310 P **P** **02 31 49.1 +1.2**
MLR Muntele Rosu 59.21 310 P **P** **02 31 49.1 +1.2**
MLR pmax pmax
comp=Z,28nm,0.7s
OZUR 59.30 311 ⇑P **P** **02 31 50.2 +1.9**
NWAO Narrogin (SRO) 59.57 158 P **P** **02 31 49.8 -0.4**
NWAO Narrogin (SRO) 59.57 158 P **P** **02 31 49.8 -0.4**
NWAO pmax pmax
comp=Z,22nm,0.7s
NWAO Narrogin (SRO) 59.57 158 P **P** **02 31 50.2 +0.1**
DOPR Dopca 59.58 311 ⇑P **P** **02 31 52.2 +1.8**
BURAR Bucovina Array 59.65 313 ⇑P **P** **02 31 52.2 +1.4**
BURAR Bucovina Array 59.65 313 P **P** **02 31 51.3 +0.5**
BURAR IAmb IAmb 02 31 52.6
comp=Z,3.9nm,0.7s
BURAR ScP **ScP** **02 36 27.4 -0.1**
BURAR Bucovina Array 59.65 313 P **P** **02 31 51.0 +0.2**
BURAR pmax pmax
comp=Z,4.0nm,0.7s
BUR08 Bucovina Ar. S 59.66 313 P **P** **02 31 51.2 +0.3**
RDO Rodhopi 59.77 305 P **P** **02 31 51.8 +0.2**
RDO IAmb IAmb 02 32 26.1
comp=Z,22nm,1.5s
RDO ScP **ScP** **02 36 27.4 -0.6**
VOIR 59.84 310 ⇑P **P** **02 31 53.4 +1.2**
FIA1 FINESS Array S 59.88 329 P **P** **02 31 52.5 +0.5**
FINES FINESS Array B 59.88 329 P **P** **02 31 52.8 +0.8**
comp=Z,10nm,0.5s,baz=91,slow=5.7,SNR=82
comp=Z,10nm,0.5s
AS31 Alice Springs 60.05 138 P **P** **02 31 54.2 +0.4**
AS31 IAmb IAmb 02 31 55.4
comp=Z,6.5nm,0.7s
ASAR Alice Springs 60.05 138 P **P** **02 31 54.2 +0.5**
comp=Z,20nm,0.7s,baz=320,slow=6.8,SNR=226
ASAR pP **pP** **02 32 18.6 -2.3**
comp=Z,4.0nm,0.6s,baz=319,slow=6.7,SNR=3.3
comp=Z,20nm,0.7s
ASAR Alice Springs 60.05 138 P **P** **02 31 53.8 0.0**
ASAR Alice Springs 60.05 138 P **P** **02 31 53.8 0.0**
AS01 Alice Springs 60.08 138 P **P** **02 31 54.4 +0.4**
COEN Coen 60.09 123 P **P** **02 31 54.1 -0.1**
ARR Arges 60.14 310 ⇑P **P** **02 31 55.7 +1.5**
PABE Paberze 60.49 322 P **P** **02 31 57.0 +0.7**
PABE Paberze 60.49 322 *e*P **P** **02 31 57.0 +0.7**
MEF Metsahovi 60.56 327 *e*P **P** **02 31 57.4 +0.7**
LOT Lotru 60.74 310 ⇑P **P** **02 31 59.6 +1.2**
MTSE Matsula 60.74 326 *e*P **P** **02 31 57.4 -0.5**
CJR Cluj-Napoca 60.79 312 ⇑P **P** **02 32 00.1 +1.6**
KEV Kevo 60.99 338 P **P** **02 31 59.7 +0.3**
KEV IAmb IAmb 02 32 00.8
comp=Z,20nm,1.0s
KEV Kevo 60.99 338 P **P** **02 31 59.7 +0.3**
KEV pmax pmax
comp=Z,21nm,1.0s
MARR Marisel-Cluj 61.12 312 P **P** **02 32 02.6 +1.8**
DEV Deva 61.32 311 ⇑P **P** **02 32 04.1 +2.1**
VTS Vitosha 61.35 307 ⇑P **P** **02 32 04.2 +1.6**
VTS Vitosha 61.35 307 P **P** **02 32 03.6 +1.0**
VTS IAmb IAmb 02 32 04.9
comp=Z,6.9nm,0.8s
VTS Vitosha 61.35 307 P **P** **02 32 03.6 +1.0**
VTS pmax pmax

comp=Z,7.0nm,0.8s
DRGR 61.39 312 ⇑P P 02 32 04.5 +1.8
DRGR 61.39 312 P P 02 32 04.5 +1.8
TRPA Tarpa 61.43 314 ⇑P P 02 32 04.3 +1.5
TRPA Tarpa 61.43 314 P P 02 32 02.3 -0.5
GZR Gura Zlata 61.44 310 ⇑P P 02 32 04.3 +1.3
ARA0 ARCESS Array S 61.45 338 *eP* P 02 32 03.7 +1.1
ARA0 IAmb IAmb 02 32 04.7
comp=Z,7.5nm,0.7s
ARCES ARCESS Array B 61.45 338 P P 02 32 03.5 +0.9
comp=Z,5.1nm,0.5s,baz=101,slow=8.0,SNR=83
ARCES PP PP 02 34 20.2 +1.3
comp=Z,4.2nm,0.8s,baz=81,slow=7.5,SNR=3.9
comp=Z,5.1nm,0.5s
ARCES ARCESS Array B 61.45 338 P P 02 32 03.4 +0.8
ARCES ARCESS Array B 61.45 338 P P 02 32 03.4 +0.8
ARCES pmax pmax
comp=Z,67nm,1.9s
UZH Uzhgorod 61.57 314 *eP* P 02 32 09.9 +6.2
QIS Mount Isa 61.63 131 P P 02 32 05.0 +0.5
BLKB Belogradchik 61.66 308 ⇑P P 02 32 06.0 +1.5
HERR Herculane 61.74 310 ⇑P P 02 32 07.1 +2.2
RAF Rauma 61.92 328 *eP* P 02 32 06.5 +0.7
CRVS Cervenica-Dubn 62.10 314 *eP* P 02 32 08.7 +1.4
CRVS pmax pmax
comp=Z,8.0nm,0.9s
ABPO Ambohimpanom 62.14 232 P P 02 32 09.6 +1.5
ABPO IAmb IAmb 02 32 10.4
comp=Z,10nm,1.0s
ABPO Ambohimpanom 62.14 232 P P 02 32 09.6 +1.5
ABPO pmax pmax
comp=Z,10.0nm,1.0s
ABPO Ambohimpanom 62.14 232 P P 02 32 09.1 +1.0
ABPO pP pP 02 32 37.4 +2.0
SIRR Siria 62.15 311 ⇑P P 02 32 09.6 +1.9
KTK1 Kautokeino 62.16 337 *eP* P 02 32 08.2 +0.9
KTK1 IAmb IAmb 02 32 08.4
comp=Z,18nm,0.4s
LIT Litokhoron 62.19 304 P P 02 32 08.3 +0.2
LIT Litokhoron 62.19 304 P P 02 32 08.3 +0.2
BILL Bilibino 62.21 24 *i P* P 02 32 08.8 +1.1
BILL pmax pmax
comp=Z,8.0nm,1.1s
STIP Stip 62.23 306 *i P* P 02 32 07.5 -0.7
BZS Buzias 62.24 311 ⇑P P 02 32 08.8 +0.6
HAMF Hammerfest 62.28 339 IAmb IAmb 02 32 09.3
comp=Z,27nm,0.6s
HAMF *eP* P 02 32 09.5 +1.4
FORT Forrest 62.30 147 P P 02 32 08.9 +0.2
FORT Forrest 62.30 147 P P 02 32 09.6 +0.9
BOVS Bovan 62.36 308 ⇑P P 02 32 10.0 +0.9
SKO Skopje 62.75 307 *i P* P 02 32 12.5 +0.8
AAL Aland 62.76 327 *eP* P 02 32 11.4 0.0
ITM Ithomi 63.05 301 P P 02 32 13.6 -0.2
ITM IAmb IAmb 02 32 14.5
comp=Z,29nm,1.1s
JETT Jettan, Norway 63.23 338 *eP* P 02 32 15.6 +1.1
JETT IAmb IAmb 02 32 16.4
comp=Z,21nm,0.5s
OHR Ohrid 63.34 306 *i P* P 02 32 18.1 +2.4
MTSU Mount Surprise 63.49 126 P P 02 32 17.5 +0.6
DIVS Divibare 63.54 309 P P 02 32 17.9 +0.9
TRO Tromso 63.75 338 *eP* P 02 32 18.5 +0.7
TRO IAmb IAmb 02 32 18.5
comp=Z,19nm,0.5s
VYHS Vyhne 63.87 314 *eP* P 02 32 19.9 +0.9
VYHS pmax pmax
comp=Z,6.0nm,1.3s
TIR Tirane 64.00 306 ⇓P P 02 32 20.5 +0.5
OOD Oodnadatta 64.17 140 P P 02 32 21.8 +0.7
MORH Mrgy, Hungar 64.24 312 ⇑P P 02 32 22.5 +1.1
MORH Mrgy, Hungar 64.24 312 P P 02 32 21.6 +0.2
PDG Podgorica 64.30 307 ⇑P P 02 32 22.7 +0.9
PDG Podgorica 64.30 307 P P 02 32 22.0 +0.2
PDG IAmb IAmb 02 32 23.1
comp=Z,8.6nm,0.6s
MAUC Maruska 64.44 315 *eP* P 02 32 24.5 +1.7
VIKU Vikbolandet 64.46 325 *eP* P 02 32 22.7 +0.1
MORC Moravsky Berou 64.59 316 ⇑P P 02 32 25.1 +1.4
MORC Moravsky Berou 64.59 316 P P 02 32 24.1 +0.4
MORC Moravsky Berou 64.59 316 P P 02 32 24.1 +0.4
MORC pmax pmax
comp=Z,5.0nm,0.9s
MORC Moravsky Berou 64.59 316 *eP* P 02 32 25.1 +1.4
MODS Modra-Piesok 64.91 314 *eP* P 02 32 27.8 +2.0
FAUS Fauske 64.98 335 *eP* P 02 32 26.2 +0.4
FAUS IAmb IAmb 02 32 28.1
comp=Z,14nm,0.8s
STEI Steigen 65.00 336 *eP* P 02 32 26.5 +0.6
STEI IAmb IAmb 02 32 26.8
comp=Z,69nm,1.4s
KRLC Kraliky 65.04 316 *eP* P 02 32 27.8 +1.1
KRLC Kraliky 65.04 316 *eP* P 02 32 27.8 +1.1
MULG Mulgathing 65.08 143 P P 02 32 27.2 +0.2
SCTE Santa Cesarea 65.25 305 P P 02 32 27.8 -0.3
SCTE IAmb IAmb 02 32 28.7
comp=Z,19nm,0.7s
VRAC Vranov 65.25 315 LR LR 03 03 32.3
comp=Z,28nm,18.6s,baz=51,slow=38
VRAC Vranov 65.25 315 *eP* P 02 32 29.5 +1.5
DPC Dobruska-Polom 65.31 316 *eP* P 02 32 30.0 +1.6
DPC Dobruska-Polom 65.31 316 *eP* P 02 32 30.0 +1.6
MOR8 Moi Rana 65.31 334 *eP* P 02 32 27.9 -0.2
MOR8 IAmb IAmb 02 32 28.3
comp=Z,13nm,0.6s
SPB2 Spitsbergen Ar 65.35 347 P P 02 32 28.6 +0.5
SPA0 Spitsbergen Ar 65.35 347 *eP* P 02 32 29.1 +0.9
KRUC Moravsky 65.41 315 *eP* P 02 32 30.2 +1.2
CHVC Chvalec 65.45 317 *eP* P 02 32 30.5 +1.2
LOF Lofoten 65.64 336 *eP* P 02 32 30.1 0.0
LOF IAmb IAmb 02 32 38.9
comp=Z,51nm,1.1s
RONA Rosalia, Austr 65.65 313 *eP* P 02 32 31.4 +0.8
comp=Z,2.1nm,0.5s
CONA Conrad Observa 65.91 314 P P 02 32 33.9 +1.6
comp=Z,4.6nm,0.8s,SNR=4.2
DEL Delary 66.12 323 *eP* P 02 32 33.6 +0.2
CTA Charters Tower 66.13 126 P P 02 32 34.6 +0.5
CTAO Charters Tower 66.13 126 P P 02 32 34.0 +0.1
CTAO IAmb IAmb 02 32 35.4
comp=Z,16nm,0.7s
CTAO Charters Tower 66.13 126 P P 02 32 34.1 +0.1
CTAO pmax pmax
comp=Z,16nm,0.7s
CTAO Charters Tower 66.13 126 P P 02 32 34.5 +0.5
CTAO Charters Tower 66.13 126 P P 02 32 34.4 +0.4
ARSA Arzberg 66.23 313 *eP* P 02 32 35.2 +0.8
comp=Z,5.0nm,0.8s
KBS Kingsbay 66.30 348 *eP* P 02 32 33.7 -0.5
KBS Kingsbay 66.30 348 *eP* P 02 32 33.5 -0.6
GOPC GO Pecny, Ondr 66.34 316 *eP* P 02 32 36.5 +1.5
GOPC GO Pecny, Ondr 66.34 316 *eP* P 02 32 36.5 +1.5
NSS Namsos 66.41 332 *eP* P 02 32 34.9 -0.2
NSS IAmb IAmb 02 32 36.7
comp=Z,16nm,1.1s
PRU Pruhonice 66.49 316 *eP* P 02 32 37.0 +1.1
PRU Pruhonice 66.49 316 *eP* P 02 32 37.0 +1.1
PERS Pernice 66.60 312 *i P* P 02 32 37.5 +0.8
SOKA Soboth 66.65 313 *i P* P 02 32 38.2 +1.1
comp=Z,2.7nm,0.5s,SNR=5.2
TIP Timpagrande 66.71 304 ⇑P P 02 32 38.6 +1.0
TIP Timpagrande 66.71 304 P P 02 32 38.0 +0.4
BRG Berggiesshubel 66.75 317 *i P* P 02 32 40.4 +2.9
BRG pmax pmax
comp=Z,6.0nm,0.7s
NC405 NORSAR Array S 66.80 328 P P 02 32 37.8 +0.1
CKRC Cesky Krumlov 66.81 315 *eP* P 02 32 39.2 +1.2
NC602 NORSAR Array S 66.92 328 *eP* P 02 32 38.5 +0.1
NC602 IAmb IAmb 02 32 39.2
comp=Z,11nm,0.8s
VISS Visnje 66.92 312 *i P* P 02 32 39.8 +1.0
MOA Molln 66.98 314 *i P* P 02 32 39.9 +0.7
comp=Z,5.0nm,0.5s,SNR=9.0
OBKA Obir 67.01 312 *eP* P 02 32 40.0 +0.7
comp=Z,4.6nm,1.0s
NB2 NORSAR Subarra 67.05 328 P P 02 32 39.1 -0.2
comp=Z,7.7nm,0.6s,baz=84,slow=6.5
NB2 NORSAR Subarra 67.05 328 P P 02 32 39.1 -0.2
baz=84,slow=6.5
NOA NORSAR Array B 67.05 328 P P 02 32 39.4 +0.1
comp=Z,7.7nm,0.7s,baz=85,slow=6.3,SNR=20
comp=Z,7.7nm,0.7s
GEC2 GERESS Array S 67.20 315 P P 02 32 41.1 +0.5
GEC2 IAmb IAmb 02 32 42.5
comp=Z,8.4nm,0.9s
GERES GERESS Array B 67.20 315 P P 02 32 41.7 +1.1
comp=Z,4.8nm,0.6s,baz=78,slow=7.0,SNR=42
comp=Z,4.8nm,0.6s
GERES GERESS Array B 67.20 315 P P 02 32 41.4 +0.8
GERES GERESS Array B 67.20 315 P P 02 32 41.4 +0.8
CEY Cerknica 67.22 312 *i P* P 02 32 41.7 +1.1
KHC Kasperske Hory 67.23 315 *eP* P 02 32 41.4 +0.7
KHC Kasperske Hory 67.23 315 *eP* P 02 32 41.4 +0.7
CUC Castrocucco 67.27 305 P P 02 32 41.3 +0.2
CLL Collm 67.27 318 *i P* P 02 32 41.8 +1.0
CLL *e*PP PcP 02 33 04.0 -3.8
CLL pmax pmax
comp=Z,8.0nm,1.4s
CLL Collm 67.27 318 *i P* P 02 32 41.8 +1.0
comp=Z,8.0nm,1.4s
CLL *ex* x 02 33 04.0
OSL Oslo 67.41 327 *eP* P 02 32 42.7 +1.2
OSL IAmb IAmb 02 32 42.8
comp=Z,23nm,0.6s
LCRK Leigh Creek 67.61 140 P P 02 32 43.6 +0.4
NKC Novy Kostel 67.78 317 *eP* P 02 32 45.1 +1.0
NKC Novy Kostel 67.78 317 *eP* P 02 32 45.1 +1.0
DOMB Dombas 67.96 330 *eP* P 02 32 45.5 +0.5
DOMB IAmb IAmb 02 32 46.1
comp=Z,11nm,0.8s
KONO Kongsberg 68.01 327 *eP* P 02 32 45.9 +0.6
BBOO Buckleboo 68.11 143 P P 02 32 46.2 -0.1
BBOO IAmb IAmb 02 32 47.6
comp=Z,22nm,0.8s
BBOO Buckleboo 68.11 143 P P 02 32 46.5 +0.3
INTR Introdacqua 68.28 308 P P 02 32 47.6 +0.1
SKAR Skarslia 68.51 328 *eP* P 02 32 50.0 +1.5
SKAR IAmb IAmb 02 32 51.2
comp=Z,18nm,1.2s
CAMP Campotosto 68.54 308 P P 02 32 49.2 +0.2
CAMP IAmb IAmb 02 32 50.7
comp=Z,14nm,0.8s
MOL Molde 68.59 330 *eP* P 02 32 49.0 +0.2
GRA1 Grafenberg Arr 68.66 316 P P 02 32 50.8 +1.3
GRF Grafenberg Arr 68.66 316 P P 02 32 50.8 +1.3
GRF pmax pmax
comp=Z,7.0nm,0.9s
FDMO Fiordimonte 68.67 309 P P 02 32 50.2 +0.5
FDMO IAmb IAmb 02 32 52.1
comp=Z,19nm,1.0s
NRCA Norcia 68.69 309 P P 02 32 50.2 +0.2
NRCA IAmb IAmb 02 35 10.5
comp=Z,11nm,0.7s
WTTA Wattenberg 68.84 314 *i P* P 02 32 51.2 +0.2
comp=Z,4.8nm,0.5s,SNR=4.3
CTI Castel Tesino 69.07 312 P P 02 32 52.5 +0.2
CTI Castel Tesino 69.07 312 P P 02 32 52.5 +0.2
CTI pmax pmax
comp=Z,4.0nm,0.7s
SQTA Sankt Quirin 69.13 314 *i P* P 02 32 52.9 +0.3
comp=Z,5.6nm,0.5s,SNR=9.8
MOTA Moosalm 69.18 314 *i P* P 02 32 53.4 +0.4
comp=Z,5.0nm,0.6s,SNR=8.7
TEOL Teolo 69.19 312 P P 02 32 53.5 +0.6
RETA Reutte 69.38 314 *i P* P 02 32 54.6 +0.4
comp=Z,6.6nm,0.5s,SNR=12
ODD1 Odda 69.45 327 *eP* P 02 32 55.1 +0.8
ODD1 IAmb IAmb 02 32 58.5
comp=Z,18nm,1.1s
FETA Feichten 69.49 313 *i P* P 02 32 55.3 +0.4
comp=Z,3.5nm,0.6s,SNR=6.6
LATE Laterza 69.68 309 P P 02 32 56.0 0.0
LATE IAmb IAmb 02 32 57.0
comp=Z,12nm,0.7s
CLTB Caltabellotta 69.77 303 P P 02 32 56.7 0.0
CLTB IAmb IAmb 02 33 54.5
comp=Z,48nm,1.4s
FUORN Ofenpass-Fuorn 69.89 313 P P 02 32 57.5 0.0
DAVA Damuels 70.00 314 *i P* P 02 32 58.5 +0.4
comp=Z,7.9nm,0.8s,SNR=5.5
HTT Hallett 70.18 142 P P 02 32 59.6 +0.5
VLC Villacollemand 70.34 311 P P 02 33 00.0 0.0
VLC IAmb IAmb 02 34 03.0
comp=Z,52nm,1.7s
NOR Nord 70.55 352 IAmb IAmb 02 33 02.1
comp=Z,4.0nm,0.6s
NOR Nord 70.55 352 *eP* P 02 32 59.5 -1.2
STKA Stephens Creek 70.66 139 P P 02 33 02.3 +0.3
comp=Z,15nm,1.1s,baz=315,slow=6.8,SNR=12
comp=Z,15nm,1.1s
STKA Stephens Creek 70.66 139 P P 02 33 01.9 -0.1
STKA Stephens Creek 70.66 139 P P 02 33 01.9 -0.1
STKA pmax pmax
comp=Z,3.0nm,1.0s
STKA Stephens Creek 70.66 139 P P 02 33 02.2 +0.3
MSSA Maissana 70.92 311 P P 02 33 03.1 -0.4
RMQ Roma 71.86 130 P P 02 33 11.1 +1.8
WLF Walferdange 71.88 317 P P 02 33 10.7 +1.5
WLF IAmb IAmb 02 33 11.8
comp=Z,18nm,0.9s
WLF Walferdange 71.88 317 P P 02 33 10.7 +1.5
WLF pmax pmax
comp=Z,18nm,0.9s
LPL La Plagne 72.54 313 *eP* P 02 33 14.1 +0.6
LPL pmax pmax
comp=Z,9.0nm,0.4s
EIDS Eidsvold 72.85 128 P P 02 33 15.7 +0.5
EIDS IAmb IAmb 02 33 16.8
comp=Z,12nm,0.8s
EIDS Eidsvold 72.85 128 P P 02 33 15.9 +0.7
CMSA Cobar Meteorol 73.00 136 P P 02 33 16.7 +0.7
DAG Danmarks Havn 73.00 347 *i P* P 02 33 14.0 -1.3
KEST Kesra 73.25 302 P P 02 33 18.8 +1.1
comp=Z,6.5nm,0.8s,baz=29,slow=3.1,SNR=12
comp=Z,6.5nm,0.8s
KEST Kesra 73.25 302 P P 02 33 18.4 +0.7
SSB Saint Sauveur 74.09 313 P P 02 33 22.6 +0.2
SSB Saint Sauveur 74.09 313 P P 02 33 22.6 +0.2
SSB pmax pmax
comp=Z,7.0nm,1.1s
SSF Saint Saulge 74.27 315 *eP* P 02 33 23.5 +0.2
SSF pmax pmax
comp=Z,10.0nm,0.9s
CLF Chambon-Foret 74.80 316 P P 02 33 26.4 +0.1
CLF IAmb IAmb 02 33 28.1
comp=Z,10nm,0.8s
LSZ Lusaka 75.12 246 LR LR 03 07 56.4
comp=Z,20nm,18.7s,baz=108,slow=37
ARMA Armidale 76.25 132 P P 02 33 34.4 -0.5
ARMA IAmb IAmb 02 33 37.9
comp=Z,14nm,1.1s
MFF Saint Martin d 76.80 315 *eP* P 02 33 38.6 +0.9
MFF pmax pmax
comp=Z,38nm,2.2s
EUNU Eureka 77.30 0 P P 02 33 40.6 +0.6
EUNU IAmb IAmb 02 34 02.2
comp=Z,59nm,2.0s
IMAR Indian Mountai 77.74 23 P P 02 33 41.5 -1.2
TOLK Toolik Lake Re 77.79 20 P P 02 33 41.9 -1.0
TOLK IAmb IAmb 02 33 49.8
comp=Z,31nm,1.6s
NEEM North Greenlan 77.86 353 IAmb IAmb 02 33 45.0
comp=Z,27nm,0.9s
NEEM North Greenlan 77.86 353 *eP* P 02 33 43.3 -0.1
H21K Melozitna Rive 78.24 23 P P 02 33 45.1 -0.3
H21K IAmb IAmb 02 34 31.1
comp=Z,41nm,1.8s
J20K Nowinta River 78.47 25 P P 02 33 46.4 -0.3
J20K IAmb IAmb 02 36 32.6
comp=Z,40nm,1.9s
POGA Pongola 78.52 234 P P 02 33 49.0 +1.5
POGA IAmb IAmb 02 33 50.2
comp=Z,14nm,0.8s
K20K Telida 78.90 25 P P 02 33 48.4 -0.6
K20K IAmb IAmb 02 36 28.2
comp=Z,38nm,1.9s
L19K White Mountain 79.15 27 P P 02 33 49.7 -0.8
L19K IAmb IAmb 02 34 49.7
comp=Z,32nm,1.6s
CAST Castle Rocks 79.64 25 P P 02 33 51.9 -1.3
CAST IAmb IAmb 02 35 23.8
comp=Z,24nm,1.8s
SUMG Summit 79.69 347 IAmb IAmb 02 33 54.6
comp=Z,11nm,0.9s
SUMG Summit 79.69 347 *eP* P 02 33 53.3 -0.4
BPAW Bear Paw Mtn. 79.71 24 P P 02 33 51.4 -2.1
BPAW IAmb IAmb 02 36 29.6
comp=Z,36nm,1.9s
PPLA Purkeypile 79.87 25 P P 02 33 53.7 -0.8
M20K Styx River 80.00 26 P P 02 33 54.8 -0.4
M20K IAmb IAmb 02 36 02.3
comp=Z,39nm,1.9s
BMAR Burnt Mountain 80.03 20 P P 02 33 56.1 +0.9
MDM Murphy Dome 80.25 23 P P 02 33 56.1 -0.3
MDM IAmb IAmb 02 34 50.1
comp=Z,19nm,1.6s
SKT Skwentna 80.60 26 P P 02 33 56.2 -2.1
SKT IAmb IAmb 02 34 29.1
comp=Z,26nm,1.8s
MCK McKinley 80.67 24 P P 02 33 57.9 -0.7
MCK IAmb IAmb 02 36 08.2
comp=Z,22nm,1.6s
MCK McKinley 80.67 24 P P 02 33 57.9 -0.7
MCK pmax pmax
comp=Z,22nm,1.6s
IL31 80.83 22 P P 02 33 57.8 -1.5
ILAR Eielson Array 80.83 22 P P 02 33 58.0 -1.4
comp=Z,0.7nm,0.6s,baz=294,slow=5.1,SNR=7.1
comp=Z,0.7nm,0.6s
ILAR Eielson Array 80.83 22 P P 02 33 58.0 -1.4
J25K Salcha River, 81.45 22 P P 02 34 00.6 -2.2
A36M Sachs Harbour 81.59 12 P P 02 34 02.9 -0.4
A36M IAmb IAmb 02 34 35.1
comp=Z,12nm,0.8s
ESDC Sonseca Array 81.89 310 P P 02 34 06.0 +0.3
comp=Z,1.5nm,1.1s,baz=46,slow=3.9,SNR=5.9
comp=Z,1.5nm,1.1s
LBTB Lobatse 82.00 239 P P 02 34 07.5 +1.1
LBTB IAmb IAmb 02 34 08.7
comp=Z,13nm,0.8s
LBTB Lobatse 82.00 239 P P 02 34 07.5 +1.1
LBTB pmax pmax
comp=Z,13nm,0.9s
J26L Joseph Creek 82.14 22 P P 02 34 05.5 -1.0
INK Inuvik 82.59 16 P P 02 34 07.6 -0.9
INK IAmb IAmb 02 35 18.6
comp=Z,20nm,1.8s
INK Inuvik 82.59 16 P P 02 34 07.6 -0.9
INK pmax pmax
comp=Z,20nm,1.8s
BOSA Boshof 84.05 236 P P 02 34 18.1 +1.3
comp=Z,15nm,0.8s,baz=65,slow=3.8,SNR=39
comp=Z,15nm,0.8s
BOSA Boshof 84.05 236 P P 02 34 18.2 +1.3
BOSA IAmb IAmb 02 34 18.9
comp=Z,16nm,0.8s
BOSA Boshof 84.05 236 P P 02 34 18.2 +1.3
BOSA pmax pmax
comp=Z,16nm,0.8s
N31M Braeburn, Yuko 86.80 22 P P 02 34 28.4 -1.5
N31M IAmb IAmb 02 34 52.9
comp=Z,46nm,1.9s
TORD Torodi Ar. Bea 87.50 283 P P 02 34 35.1 +1.0
comp=Z,0.9nm,0.9s,baz=68,slow=3.8,SNR=5.4
TORD pP pP 02 35 03.5 +0.5
comp=Z,2.5nm,1.0s,baz=71,slow=4.8,SNR=8.0
comp=Z,0.9nm,0.9s
CASY Casey 89.69 174 P P 02 34 43.3 +0.2
MAW Mawson 93.19 192 P P 02 34 59.1 -0.2
comp=Z,2.5nm,0.9s,baz=330,slow=16,SNR=3.9
comp=Z,2.5nm,0.9s
BELA Belgrano 2 120.03 191 PKPdf PKPdf 02 40 34.5 -0.3
TXAR Lajitas Array 125.25 19 pPKP pPKPdf 02 41 17.9 +1.1
comp=Z,0.6nm,0.8s,baz=320,slow=2.4,SNR=3.0
BDFB Brasilia 143.95 275 PKP PKPbc 02 41 20.4 +0.7
comp=Z,3.4nm,0.9s,baz=121,slow=5.9,SNR=3.6
BDFB Brasilia 143.95 275 PKPdf PKPbc 02 41 20.0 +0.4
BDFB Brasilia 143.95 275 PKIKP PKPbc 02 41 20.0 +0.4
BAUV El Baul 144.06 330 PKPdf PKPbc 02 41 19.9 0.0
ESPN Las Esperanzas 145.15 358 PKPbc PKPbc 02 41 23.0 -0.2
SDV Santo Domingo 145.25 334 PKPbc PKPbc 02 41 23.5 -0.4
MG05 Puerto Natales 149.51 196 PKPbc PKiKP 02 41 34.8 -0.5
GO09 Cerro Castillo 149.84 197 PKPbc PKiKP 02 41 35.9 -0.1
ROSC El Rosal 150.38 337 PKPbc PKiKP 02 41 38.9 +0.1
comp=Z,15nm,1.0s,baz=25,slow=18,SNR=5.5
CPUP Villa Florida 154.16 257 PKPbc PKPbc 02 41 45.5 -0.1
comp=Z,1.8nm,0.7s,baz=64,slow=3.7,SNR=5.2
PLCA Paso Flores 158.15 212 PKPab PKPab 02 42 15.6 -1.0
comp=Z,1.6nm,0.9s,baz=153,slow=4.5,SNR=3.5
LPAZ La Paz 162.37 289 PKP PKPdf 02 41 49.0 +0.6
comp=Z,1.7nm,0.9s,baz=117,slow=2.3,SNR=3.7
LPAZ La Paz 162.37 289 PKIKP PKPdf 02 41 49.0 +0.6

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*THE **26** 03:24:44.2,38.°41N×21.°99E,h9km,ML3.0/14,Error ellipse: s-maj=0.7km s-min=0.5km az=214.0*

ATH 26 03:24:44.0,38.°40N×21.°97E,h9km±1km,ML3.2/16,Error ellipse: s-maj=1.0km s-min=0.7km az=74.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.06**	**293**	P	Pg	03 24 46.0	+0.1
EFP				S	Sg	03 24 47.9	+0.6
40μm,0.2s							
EFP	**Efpalio**	**0.06**	**293**	P	Pg	03 24 46.1	+0.2
EFP				S	Sg	03 24 47.6	+0.3
EFP				AML	AML	03 24 48.1	
EFP				AML	AML	03 24 48.1	
comp=E,49990μm,0.1s							
SERG	**Sergoula**	**0.07**	**82**	P	Pg	03 24 45.9	-0.1
SERG				S	Sg	03 24 47.5	0.0
comp=E,152μm,0.2s							
SERG	**Sergoula**	**0.07**	**82**	P	Pg	03 24 45.9	-0.1
SERG				S	Sg	03 24 47.4	-0.1
SERG				AML	AML	03 24 47.7	
SERG				AML	AML	03 24 48.3	
TRIZ	**Trizonia**	**0.09**	**116**	P	Pg	03 24 46.1	-0.1
TRIZ				S	Sg	03 24 47.9	0.0
TRIZ	**Trizonia**	**0.09**	**116**	P	Pg	03 24 46.1	-0.1
TRIZ				S	Sg	03 24 48.0	+0.1
LAKA	**Lakka**	**0.16**	**179**	P	Pg	03 24 47.6	+0.1
LAKA				S	Sg	03 24 50.4	+0.5
LAKA				AML	AML	03 24 50.5	
comp=E,78748μm,0.3s							
LAKA				AML	AML	03 24 52.4	
comp=N,43451μm,0.3s							
ALIK	**Aliki, Aigiali**	**0.18**	**143**	P	Pg	03 24 47.8	+0.1
ALIK				S	Sg	03 24 51.5	+1.2
UPR	**University Cam**	**0.19**	**231**	P	Pg	03 24 47.9	0.0
UPR				S	Sg	03 24 52.0	+1.4
KLV	**Kalavryta, Ach**	**0.39**	**159**	P	Pg	03 24 50.9	-0.7
KLV				S	Sg	03 24 57.5	+0.8
comp=N,2μm,0.3s							
KLV	**Kalavryta, Ach**	**0.39**	**159**	P	Pg	03 24 51.0	-0.6
KLV				S	Sg	03 24 57.1	+0.4
KLV				AML	AML	03 24 57.6	
comp=N,2875μm,0.4s							
KLV				AML	AML	03 24 58.1	
comp=E,3806μm,0.3s							
PVO	**Paravola**	**0.41**	**301**	P	Pg	03 24 52.1	+0.1
PVO				S	Sg	03 24 58.4	+1.0
comp=E,4μm,0.4s							
PVO	**Paravola**	**0.41**	**301**	P	Pg	03 24 52.1	+0.1
PVO				S	Sg	03 24 57.7	+0.3
DLFA	**Delphi**	**0.42**	**80**	P	Pg	03 24 51.3	-0.8
DLFA				S	Sg	03 24 57.9	+0.3
DLFA				AML	AML	03 24 58.2	
comp=N,5196μm,0.2s							
DLFA				AML	AML	03 25 00.2	
comp=E,5535μm,0.6s							
DRO	**Drossia**	**0.50**	**205**	P	Pg	03 24 53.4	-0.2
DRO				S	Sb	03 25 01.8	-0.4
comp=E,7μm,0.2s							
DRO	**Drossia**	**0.50**	**205**	P	Pg	03 24 53.4	-0.2
DRO				S	Sg	03 25 00.3	+0.2
DRO				AML	AML	03 25 02.2	
comp=N,15444μm,0.2s							
DRO				AML	AML	03 25 02.4	
comp=E,12133μm,0.2s							
EVR	**Evrytania**	**0.53**	**346**	P	Pg	03 24 54.0	-0.2
EVR				S	Sb	03 25 02.6	-0.7
comp=E,3μm,0.5s							
EVR	**Evrytania**	**0.53**	**346**	P	Pg	03 24 54.0	-0.2
EVR				S	Sg	03 25 01.9	+0.7
EVR				AML	AML	03 25 05.2	
comp=N,6628μm,0.3s							
EVR				AML	AML	03 25 05.6	
comp=E,7024μm,0.3s							
RLS	**Riolos of Patr**	**0.53**	**229**	P	Pg	03 24 54.2	0.0
RLS				S	Sb	03 25 03.3	+0.2
comp=E,2μm,0.3s							
RLS	**Riolos of Patr**	**0.53**	**229**	P	Pg	03 24 54.2	0.0
RLS				S	Sg	03 25 01.8	+0.7

RLS				AML	AML	03 25 03.9	
	comp=E,4164μm,0.4s						
RLS				AML	AML	03 25 03.9	
	comp=N,2840μm,0.2s						
MAKR	**Makrakomi, Fth**	**0.62**	**11**	P	Pg	03 24 55.6	-0.4
MAKR				S	Sg	03 25 04.5	+0.3
MAKR				AML	AML	03 25 07.0	
	comp=E,16663μm,0.2s						
MAKR				AML	AML	03 25 09.9	
	comp=N,10730μm,0.2s						
AXAR	**Agios Charalam**	**0.65**	**56**	P	Pg	03 24 55.5	-1.0
AXAR				S	Sg	03 25 05.2	+0.3
AXAR				AML	AML	03 25 08.5	
	comp=E,12884μm,0.4s						
AXAR				AML	AML	03 25 12.9	
	comp=N,13171μm,0.6s						
THAL	**Thalero**	**0.66**	**124**	P	Pg	03 24 56.1	-0.5
AGG	**Agios Georgios**	**0.68**	**24**	P	Pg	03 24 56.2	-0.9
LOUT	**Loutraki**	**0.89**	**117**	P	Pg	03 25 00.1	-1.0
VIL2	**Platees**	**1.04**	**100**	P	Pg	03 25 03.8	-0.1
NYDR	**Nydri-Lefkada**	**1.05**	**288**	P	Pg	03 25 03.6	-0.5
NYDR				S	Sn	03 25 19.7	+0.2
	comp=N,385nm,0.7s						
EVGI	**Lefkada island**	**1.06**	**282**	P	Pg	03 25 03.7	-0.5
EVGI	**Lefkada island**	**1.06**	**282**	P	Pg	03 25 03.7	-0.5
LKD2	**Lefkada island**	**1.10**	**291**	P	Pg	03 25 05.0	-0.1
LKD2				S	Sn	03 25 21.6	+0.7
	comp=N,772nm,0.5s						
LKD2	**Lefkada island**	**1.10**	**291**	P	Pg	03 25 04.7	-0.4
LKD2				AML	AML	03 25 29.8	
	comp=E,1562μm,0.5s						
LKD2				AML	AML	03 25 30.2	
	comp=N,1526μm,0.4s						
FSK	**Fiskardo**	**1.11**	**273**	P	Pg	03 25 04.1	-1.1
VLS	**Valsamata**	**1.11**	**259**	P	Pg	03 25 04.0	-1.3
VLS				S	Sn	03 25 22.9	+1.7
	comp=N,655nm,0.2s						
VLS	**Valsamata**	**1.11**	**259**	P	Pg	03 25 04.1	-1.2
VLS				AML	AML	03 25 23.7	
	comp=E,1054μm,0.2s						
VLS				AML	AML	03 25 23.9	
	comp=N,1451μm,0.2s						
TSLK	**Tsoukalades, L**	**1.11**	**293**	P	Pg	03 25 05.0	-0.4
TSLK	**Tsoukalades, L**	**1.11**	**293**	P	Pg	03 25 04.8	-0.6
PSDA	**Pessada-Kefalo**	**1.13**	**256**	P	Pb	03 25 04.4	-1.3
PSDA				S	Sn	03 25 22.2	+0.6
	comp=N,1μm,0.4s						
PSDA	**Pessada-Kefalo**	**1.13**	**256**	P	Pb	03 25 04.3	-1.4
DRAG	**Dragano-Lefkad**	**1.13**	**285**	P	Pg	03 25 04.8	-0.9
DRAG				S	Sn	03 25 22.8	+1.1
LTHK	**Lithakia**	**1.13**	**233**	P	Pb	03 25 04.6	-1.1
LTHK				AML	AML	03 25 33.5	
	comp=N,1692μm,0.4s						
LTHK				AML	AML	03 25 35.0	
	comp=E,2078μm,0.5s						
THL	**Klokotos Trika**	**1.16**	**2**	P	Pb	03 25 05.3	-0.9
THL				S	Sn	03 25 22.9	+0.6
	comp=E,632nm,0.4s						
THL	**Klokotos Trika**	**1.16**	**2**	P	Pb	03 25 05.1	-1.0
EPID	**Epidavros**	**1.20**	**131**	P	Pb	03 25 05.8	-1.1
EPID				S	Sg	03 25 22.9	+0.3
	comp=E,628nm,0.2s						
EPID	**Epidavros**	**1.20**	**131**	P	Pb	03 25 05.8	-1.1
ITM	**Ithomi**	**1.22**	**182**	P	Pn	03 25 06.1	-1.2
ITM				S	Sn	03 25 24.5	+0.6
	comp=E,458nm,0.4s						
ITM	**Ithomi**	**1.22**	**182**	P	Pn	03 25 05.8	-1.4
ITM				AML	AML	03 25 28.6	
	comp=N,761μm,0.3s						
ITM				AML	AML	03 25 29.5	
	comp=E,1070μm,0.5s						
KEF3	**Kipouria, Keph**	**1.29**	**262**	P	Pn	03 25 07.0	-1.2
NEO	**Neokhori**	**1.33**	**47**	P	Pn	03 25 08.1	-0.7
KLMT	**Kalamata**	**1.34**	**177**	P	Pn	03 25 08.4	-0.5
XOR	**Xorichti**	**1.35**	**44**	P	Pn	03 25 07.9	-1.2
KRND	**KRANIDI**	**1.38**	**137**	P	Pn	03 25 09.1	-0.3
KRND	**KRANIDI**	**1.38**	**137**	P	Pn	03 25 08.9	-0.4
KRND				AML	AML	03 25 32.2	
	comp=E,1374μm,0.6s						
KRND				AML	AML	03 25 33.2	
	comp=N,1109μm,0.6s						
ATHU	**Athens Univers**	**1.49**	**106**	P	Pn	03 25 11.3	+0.3
ATHU	**Athens Univers**	**1.49**	**106**	P	Pn	03 25 09.8	-1.2
PYL	**PYLOS**	**1.52**	**187**	P	Pn	03 25 11.2	-0.1
PYL	**PYLOS**	**1.52**	**187**	P	Pn	03 25 11.0	-0.2
JAN	**Janina**	**1.53**	**325**	P	Pn	03 25 11.5	+0.1
PTL	**Penteli**	**1.53**	**103**	P	Pn	03 25 11.8	+0.3
PTL	**Penteli**	**1.53**	**103**	P	Pn	03 25 11.4	-0.1
VLY	**Voula,Athens**	**1.54**	**110**	P	Pn	03 25 11.5	-0.1
VLY				AML	AML	03 25 36.4	
	comp=N,588μm,0.4s						
VLY				AML	AML	03 25 40.3	
	comp=E,552μm,0.4s						
DION	**Dionisos Attik**	**1.58**	**101**	P	Pn	03 25 12.4	+0.3
DION				S	Sn	03 25 32.1	-0.6
DION	**Dionisos Attik**	**1.58**	**101**	P	Pn	03 25 12.3	+0.2
KYMI	**Kymi, Euboea I**	**1.68**	**82**	P	Pn	03 25 13.3	-0.3
VLI	**Veliai**	**1.85**	**155**	P	Pn	03 25 15.8	0.0
VLI	**Veliai**	**1.85**	**155**	P	Pn	03 25 15.9	0.0
STIP	**Stip**	**3.29**	**3**	*i* Pn	Pn	03 25 37.8	+2.1

*JMA **26** 03:25:02.0±0.1,42°.0N±0°.2×144°.8E±0°.4,h34km,MD4.0/29, MV4.1/29,SE OFF TOKACHI*
*NIED **26** 03:25:02.0,42°.01N×144°.79E,h34km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}7.11; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$-6.00; $M_{r\theta}$0.56; $M_{\theta\phi}$-5.15; $M_{\phi r}$3.71; Fault plane solution: $M_0$9.06000×10¹⁴ NP1: ϕ_s227.00000°,δ35.00000°,λ113.00000°. NP2: ϕ_s20.00000°,δ58.00000°,λ74.00000°.*
*SKHL **26** 03:25:02.4±0.2,42°.00N×144°.80E,h63km±2km,mb4.1/3*
*NEIC **26** 03:25:02.8±1.8,41°.88N±0°.08×144°.9E±0°.1,h33km±8km, mb4.2/6,Error ellipse: s-maj=13.6km s-min=9.1km az=141.0*
*IDC **26** 03:25:03.8±3.5,41°.94N×144°.76E,h43km±33km,mb3.6/16, mbtmp3.8/18,ML2.5/2,MS3.1/8,Error ellipse: s-maj=21.4km s-min=18.4km az=112.0*

ISC 26 03:25:01.8±0.6,41°.97N±0°.06×144°.84E±0°.07,h27km,n72, σ0°75/57,mb4.0/21,MS3.4/4,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**1.03**	**354**	*e*P	**Pn**	**03 25 19.9**	**-0.6**
JAK	**Akkeshi**	**1.03**	**354**	A	A	03 25 19.9	
	comp=E,4.0nm,1.5s,comp=E,5.0nm,1.4s						
AKK	**Akkeshi**	**1.04**	**0**	*e*P	**Pn**	**03 25 20.3**	**-0.4**
AKK				*e*S	**Sn**	**03 25 33.7**	**-0.6**
JKHN	**Kushirohamanak**	**1.13**	**12**	*e*P	**Pn**	**03 25 22.1**	**+0.2**
JKHN	**Kushirohamanak**	**1.13**	**12**	A	A	03 25 22.1	
	comp=E,6.0nm,0.9s,comp=E,9.0nm,0.6s						
JTHR	**Tokachihiroo**	**1.19**	**286**	*e*P	**Pn**	**03 25 21.9**	**-0.8**
JTHR	**Tokachihiroo**	**1.19**	**286**	A	A	03 25 21.9	
	comp=E,5.0nm,0.8s,comp=E,3.0nm,1.2s						
JOB	**Onbets**	**1.19**	**322**	*e*P	**Pn**	**03 25 22.2**	**-0.5**
JOB	**Onbets**	**1.19**	**322**	A	A	03 25 22.2	
	comp=E,9.0nm,4.2s,comp=E,8.0nm,1.0s						
ERM	**Erimo**	**1.25**	**272**		**Pn**	**03 25 23.5**	**0.0**
ERM				Sn	**Sb**	**03 25 40.0**	**-0.5**
ERM	**Erimo**	**1.25**	**272**	P	**Pn**	**03 25 23.8**	**+0.3**
JEM	**Erimo**	**1.25**	**272**	P	**Pn**	**03 25 23.9**	**+0.4**
JEM	**Erimo**	**1.25**	**272**	*e*P	**Pn**	**03 25 23.5**	**0.0**
JCH	**Churui**	**1.27**	**301**	*e*P	**Pn**	**03 25 23.0**	**-0.8**
NMR	**Nemuro--Hokkai**	**1.54**	**25**	*e*P	**Pn**	**03 25 27.4**	**-0.1**
NMR				AMB	AMB	03 25 30.7	
	50nm,0.4s						
NMR				*e*S	**Sn**	**03 25 46.1**	**-0.5**
NMR				A	A	03 25 52.5	
	70nm,0.3s						
NMR				A	A	03 25 52.5	
	50nm,0.3s						
JNBK	**Urakawa-nobuka**	**1.58**	**282**	A	A	03 25 28.1	
	comp=E,4.0nm,1.0s,comp=E,5.0nm,1.6s						
JNSB	**Nemuroshibetsu**	**1.81**	**4**	A	A	03 25 31.3	
	comp=E,4.0nm,3.5s,comp=E,5.0nm,3.9s						
YUK	**Yuzh-Kuril'sk**	**2.19**	**20**	*e*P	**Pn**	**03 25 36.5**	**0.0**
YUK				AMB	AMB	03 25 37.7	
	40nm,0.4s						
YUK				*e*S	**Sn**	**03 26 02.0**	**-0.7**
YUK				A	A	03 26 08.6	
	80nm,0.3s						
YUK				A	A	03 26 08.6	
	90nm,0.3s						
JEW	**Eniwo**	**2.65**	**290**		**Pn**	**03 25 43.8**	**+1.0**
JEW	**Eniwo**	**2.65**	**290**	P	**Pn**	**03 25 44.7**	**+1.9**
JTM	**Tenmabayashi**	**3.07**	**249**		**Pn**	**03 25 48.0**	**-0.5**
JTM	**Tenmabayashi**	**3.07**	**249**	P	**Pn**	**03 25 48.1**	**-0.5**
KUR	**Kuril'sk**	**3.93**	**33**	*e*P	**Pn**	**03 26 00.8**	**+0.5**
KUR				AMB	AMB	03 26 02.8	
	20nm,0.3s						
KUR				*e*S	**Sn**	**03 26 44.8**	**-0.7**
KUR				A	A	03 26 52.4	
	30nm,0.4s						
KUR				A	A	03 26 52.4	
	20nm,0.4s						
JMM	**Marumori**	**5.15**	**218**	Pn	**Pn**	**03 26 15.7**	**-1.4**
JMM	**Marumori**	**5.15**	**218**	P	**Pn**	**03 26 17.7**	**+0.6**
JSD	**Sado**	**6.40**	**234**	Pn	**Pn**	**03 26 34.0**	**-0.3**
JSD	**Sado**	**6.40**	**234**	P	**Pn**	**03 26 34.0**	**-0.3**
MJAR	**Matsushiro Arr**	**7.47**	**226**	P	**Pn**	**03 26 48.6**	**-0.5**
	0.1nm,0.3s,baz=30,slow=14,SNR=5.4						
MJAR				LR	LR	03 30 04.0	
	comp=Z,50nm,20.2s,baz=114,slow=40						
	1.4nm,0.4s						
JGF	**Kuroka**	**8.63**	**225**	Pn	**Pn**	**03 27 05.7**	**+0.7**
JGF	**Kuroka**	**8.63**	**225**	P	**Pn**	**03 27 05.5**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.66**	**288**	P	**Pn**	**03 27 20.2**	**+1.3**
	0.3nm,0.3s,baz=95,slow=16,SNR=4.4						
	1.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**9.66**	**288**	Pn	**Pn**	**03 27 20.5**	**+1.5**
JHJ	**Hachijo jima 2**	**9.70**	**206**	LR	LR	03 31 39.6	
	comp=Z,40nm,18.1s,baz=2.5,slow=41						
KLR	**Kul'dur**	**11.68**	**313**	LR	LR	03 32 15.3	
	comp=Z,67nm,20.4s,baz=230,slow=37						
KSRS	**Korea Array**	**13.78**	**256**	LR	LR	03 33 21.8	
	comp=Z,40nm,18.1s,baz=65,slow=36						
ULN	**Ulaanbaatar**	**27.20**	**295**	P	**P**	**03 30 42.5**	**-0.8**
ULN				IAmb	IAmb	03 30 46.5	
	comp=Z,6.6nm,1.4s						
SONM	**Songino Array**	**27.64**	**295**	P	**P**	**03 30 47.6**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=86,slow=10,SNR=12						
	comp=Z,1.8nm,0.5s						
SONM	**Songino Array**	**27.64**	**295**	P	**P**	**03 30 47.3**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**29.00**	**133**	T	T	04 01 39.6	
	baz=325,slow=75,SNR=141						
H11N1	**WAKE ISLAND Hy**	**29.01**	**133**	T	T	04 01 41.7	
	baz=325,slow=75,SNR=104						
H11N3	**WAKE ISLAND Hy**	**29.02**	**133**	T	T	04 01 41.1	
	baz=325,slow=75,SNR=82						
H11S1	**WAKE ISLAND Hy**	**29.90**	**135**	T	T	04 02 48.0	
	baz=326						
H11S3	**WAKE ISLAND Hy**	**29.90**	**135**	T	T	04 02 48.3	
	baz=326,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.91**	**135**	T	T	04 02 46.2	
	baz=326,slow=74						
ZALV	**Zalesovo Beam**	**40.74**	**308**	P	**P**	**03 32 39.0**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=79,slow=8.5,SNR=4.5						
ZALV				PcP	**PcP**	**03 34 41.3**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=22,slow=0.8,SNR=2.3						
	comp=Z,0.9nm,0.4s						
J20K	**Nowinta River**	**40.78**	**36**	P	**P**	**03 32 40.1**	**-0.1**
J20K				IAmb	IAmb	03 32 57.6	
	comp=Z,15nm,1.5s						
IMAR	**Indian Mountai**	**41.06**	**33**	P	**P**	**03 32 43.7**	**+1.1**
CAST	**Castle Rocks**	**41.67**	**37**	P	**P**	**03 32 49.7**	**+2.0**
CAST				IAmb	IAmb	03 33 30.5	
	comp=Z,5.3nm,1.4s						
KDAK	**Kodiak Island**	**41.70**	**46**	P	**P**	**03 32 48.5**	**+0.6**
H23K	**Yukon River**	**42.78**	**34**	P	**P**	**03 32 56.8**	**+0.1**
H23K				IAmb	IAmb	03 33 28.5	
	comp=Z,9.0nm,1.4s						
MKAR	**Makanchi Array**	**43.92**	**298**	P	**P**	**03 33 05.4**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=78,slow=9.9,SNR=7.4						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	**43.92**	**35**	P	**P**	**03 33 05.7**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=270,slow=5.4,SNR=4.2						
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**45.39**	**253**	P	**P**	**03 33 19.1**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=44,slow=7.8,SNR=5.1						
	comp=Z,0.8nm,0.4s						
INK	**Inuvik**	**48.79**	**29**	P	**P**	**03 33 45.0**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=285,slow=5.4,SNR=19						
	comp=Z,1.5nm,0.5s						
ARU	**Arti**	**54.48**	**317**	LR	LR	03 59 46.8	
	comp=Z,30nm,18.6s,baz=8.0,slow=38						
ARCES	**ARCESS Array B**	**60.31**	**339**	P	**P**	**03 35 07.4**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=50,slow=9.9,SNR=2.0						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**62.36**	**191**	P	**P**	**03 35 21.4**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=8.2,slow=6.8,SNR=5.3						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**65.67**	**332**	P	**P**	**03 35 42.9**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=49,slow=7.4,SNR=37						
FINES				LR	LR	04 07 10.4	
	comp=Z,28nm,19.4s,baz=170,slow=38						
	comp=Z,3.5nm,0.5s						
ASAR	**Alice Springs**	**66.09**	**191**	P	**P**	**03 35 45.3**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=2.9,slow=7.4,SNR=1.4						
	comp=Z,0.1nm,0.5s						
NB2	**NORSAR Subarra**	**70.63**	**338**	P	**P**	**03 36 14.0**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**70.63**	**338**	P	**P**	**03 36 14.0**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=36,slow=6.2,SNR=3.8						
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**71.99**	**323**	P	**P**	**03 36 22.5**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=44,slow=6.2,SNR=4.1						
	comp=Z,1.2nm,0.5s						
PDAR	**Pinedale Array**	**72.36**	**48**	P	**P**	**03 36 26.4**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=308,slow=2.1,SNR=3.5						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**77.51**	**313**	P	**P**	**03 36 55.3**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=26,slow=7.0,SNR=1.7						
	comp=Z,0.5nm,0.8s						
CLL	**Collm**	**78.08**	**331**	*i* P	**P**	**03 36 58.1**	**+0.2**
	comp=Z,4.0nm,1.1s						
GERES	**GERESS Array B**	**79.85**	**330**	P	**P**	**03 37 07.9**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=38,slow=6.8,SNR=5.1						
	comp=Z,0.5nm,0.5s						
RAR	**Rarotonga**	**81.05**	**129**	LR	LR	04 12 44.6	
	comp=Z,11nm,19.0s,baz=250,slow=35						
TXAR	**Lajitas Array**	**85.06**	**55**	P	**P**	**03 37 35.8**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=322,slow=2.8,SNR=2.6						
	comp=Z,0.2nm,0.6s						
TKL	**Tuckaleechee C**	**90.85**	**38**	LR	LR	04 21 54.3	
	comp=Z,25nm,19.6s,baz=19,slow=38						
H03N2	**Juan Fernandez**	**144.66**	**91**	T	T	06 26 16.2	
	baz=302						
H03N3	**Juan Fernandez**	**144.67**	**91**	T	T	06 26 15.7	
	baz=302						
H03N1	**Juan Fernandez**	**144.67**	**91**	T	T	06 26 15.1	
	baz=302						

IDC 26 03:37:13.1±4.3,59°.66S×150°.62E,h0km,mb3.6/2, mbtmp3.6/3,ML3.2/1,MS3.4/11,Error ellipse: s-maj=389.5km s-min=31.8km az=75.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**18.33**	**172**	P	Pn	03 41 28.1	-0.2
	0.1nm,0.3s,baz=338,slow=12,SNR=9.4						
VNDA				LR	LR	03 47 59.6	
	comp=Z,167nm,18.3s,baz=349,slow=35						
	0.8nm,0.6s						
RPZ	**Rata Peaks**	**20.24**	**47**	LR	LR	03 48 13.1	
	comp=Z,116nm,20.7s,baz=218,slow=33						
URZ	**Urewera**	**27.26**	**50**	LR	LR	03 52 57.3	
	comp=Z,105nm,18.6s,baz=285,slow=35						
QSPA	**South Pole Qui**	**30.44**	**180**	LR	LR	03 56 36.3	
	comp=Z,99nm,18.1s,baz=14,slow=38						
H01W1	**Cape Leeuwin H**	**34.28**	**300**	T	T	04 20 10.9	
	baz=146,slow=75,SNR=69						
H01W2	**Cape Leeuwin H**	**34.29**	**300**	T	T	04 20 04.6	
	baz=146,slow=75,SNR=88						
H01W3	**Cape Leeuwin H**	**34.30**	**300**	T	T	04 20 08.4	
	baz=146,slow=75,SNR=58						
MAW	**Mawson**	**36.54**	**220**	LR	LR	03 59 13.8	
	comp=Z,37nm,18.1s,baz=160,slow=36						
ASAR	**Alice Springs**	**37.84**	**335**	P	P	03 44 31.8	+0.5
	0.6nm,0.8s,baz=169,slow=10,SNR=7.2						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**41.36**	**336**	P	P	03 44 59.9	-0.7
	1.1nm,1.1s,baz=166,slow=7.8,SNR=6.4						
	1.1nm,1.1s						
MSVF	**Nonsavu**	**46.35**	**37**	LR	LR	04 01 17.6	
	comp=Z,54nm,19.2s,baz=182,slow=31						
AFI	**Afiamalu**	**53.39**	**48**	LR	LR	04 06 47.1	
	comp=Z,21nm,18.4s,baz=250,slow=33						
KAPI	**Kappang**	**59.41**	**324**	LR	LR	04 14 27.8	
	comp=Z,60nm,18.3s,baz=118,slow=38						
H08S2	**Diego Garcia H**	**77.44**	**276**	T	T	05 14 03.1	
	baz=149,slow=76,SNR=13						
H08S1	**Diego Garcia H**	**77.45**	**276**	T	T	05 14 07.2	
	baz=149,slow=76,SNR=4.2						
H08S3	**Diego Garcia H**	**77.46**	**276**	T	T	05 14 04.4	
	baz=149,slow=76,SNR=16						
H03S2	**Juan Fernandez**	**78.27**	**140**	T	T	05 16 06.7	
	baz=201,slow=74,SNR=20						
H03S1	**Juan Fernandez**	**78.27**	**140**	T	T	05 16 07.9	
	baz=201,slow=74,SNR=22						
H03S3	**Juan Fernandez**	**78.28**	**140**	T	T	05 16 07.4	
	baz=201,slow=74,SNR=23						
BOSA	**Boshof**	**81.25**	**227**	LR	LR	04 22 44.3	
	comp=Z,14nm,19.4s,baz=196,slow=34						
LBTB	**Lobatse**	**84.38**	**228**	LR	LR	04 21 46.0	
	comp=Z,20nm,18.2s,baz=188,slow=32						
CMAR	**Chiang Mai Arr**	**88.41**	**312**	LR	LR	04 29 50.6	
	comp=Z,9.9nm,18.4s,baz=170,slow=36						

IDC 26 03:51:49.6±13.0,7°.12S×130°.27E,h270km±111km, mb3.2/1,mbtmp3.6/3,Error ellipse: s-maj=112.2km s-min=103.4km az=66.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.34**	**163**	P	Pn	03 54 48.5	-0.7
	0.3nm,0.3s,baz=347,slow=12,SNR=16						
WRA				S	S	03 57 16.9	-0.3
	0.3nm,0.8s,baz=339,slow=21,SNR=2.4						
ASAR	**Alice Springs**	**16.82**	**168**	P	Pn	03 55 29.6	-1.0
	1.1nm,0.6s,baz=342,slow=11,SNR=16						
STKA	**Stephens Creek**	**26.80**	**158**	P	P	03 57 05.0	-0.3
	0.6nm,0.4s,baz=315,slow=8.6,SNR=1.5						
	0.6nm,0.4s						

*BER **26** 03:57:25.2±1.4,69°.88N×30°.72E,h0km,ML0.8,Suspected explosion*

HEL 26 03:57:24.3±0.4,69°.38N×30°.56E,h0km,ML1.3, Explosion,Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.30**	**288**	*e*P	Pg	03 57 47.7	-1.5
KEV				*e*S	Sg	03 58 04.8	-1.3
KEV	**Kevo**	**1.30**	**288**	PG	Pg	03 57 47.9	-1.3
	baz=103						
KEV				MSG		03 58 03.7	
	comp=Z,1.6nm,0.2s						
KEV				SB	Sg	03 58 05.2	-0.9
VRF	**Varrio**	**1.68**	**192**	PG	Pn	03 57 54.7	-0.2
VRF				MSG		03 58 14.6	
	comp=Z,1.5nm,0.2s						
VRF				SN	Sn	03 58 16.5	-0.6
ARA0	**ARCESS Array S**	**1.79**	**277**	*e*P	Pn	03 57 56.8	+0.4
ARA0				*e*S	Sn	03 58 20.1	+0.3
ARA0				IAML		03 58 23.5	
	comp=Z,1.6nm,0.3s						
ARA0	**ARCESS Array S**	**1.79**	**277**	PG	Pn	03 57 56.4	0.0
	baz=95						
ARA0				SN	Sn	03 58 20.0	+0.1
SGF	**Sodankyl**	**2.46**	**219**	PG	Pb	03 58 07.6	-1.6
SGF				SG	Sb	03 58 40.4	+0.4
KTK1	**Kautokeino**	**2.64**	**265**	SG	Sb	03 58 45.8	+0.4
HEF	**Hetta**	**2.68**	**252**	*e*P	Pn	03 58 10.6	+1.9
HEF				*e*		03 58 45.8	
HEF	**Hetta**	**2.68**	**252**	MSG		03 58 43.3	
	comp=Z,1.0nm,0.2s						
HEF				SG	Sb	03 58 46.0	-0.5

*IDC **26** 04:18:04.1±1.3,51°.40N×177°.46W,h0km,mb3.4/6, mbtmp3.5/6,Error ellipse: s-maj=55.7km s-min=28.0km az=154.0*
*AEIC **26** 04:18:05±2.5,51°.5N±0°.1×177°.3W±0°.1,h5km±6km,Error ellipse: s-maj=19.1km s-min=5.0km az=142.0*
*NEIC **26** 04:18:05.7±1.2,51°.41N±0°.08×177°.2W±0°.1,h9km±8km, mb4.0/17,ML3.9(AEIC),Error ellipse: s-maj=14.9km s-min=5.3km az=133.0*

ISC 26 04:18:06.2±0.9,51°.4N±0°.1×177°.23W±0°.09,h10km,n41, σ0°91/32,mb3.7/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**0.42**	**6**		**Pg**	**04 18 14.3**	**0.0**
ADK	**Adak**	**0.56**	**37**		**Pg**	**04 18 17.2**	**+0.2**
ADK				Sg	**Sg**	**04 18 24.8**	**+0.4**
GSTR	**Great Sitkin T**	**0.98**	**47**	Pg	**Pg**	**04 18 24.8**	**-0.1**
AMKA	**Amchitka**	**2.18**	**270**		**Pn**	**04 18 42.5**	**+0.1**
NIKH	**Nikolski High**	**5.37**	**70**	Pn	**Pn**	**04 19 27.9**	**+1.6**
UNV	**Unalaska Valle**	**6.95**	**66**	Pn	**Pn**	**04 19 49.3**	**+1.3**
AKUT	**Akutan**	**7.45**	**64**	Pn	**Pn**	**04 19 54.0**	**-0.8**
CNPM	**China Poot**	**16.71**	**51**		**P**	**04 22 02.0**	**-0.5**
CNPM				IAmb	IAmb	04 22 02.7	
	comp=Z,19nm,1.3s						
BRLK	**Bradley Lake**	**16.96**	**50**	Pn	**Pn**	**04 22 03.3**	**+0.1**
BRLK				IAmb	IAmb	04 22 13.9	
	comp=Z,16nm,1.4s						
SKT	**Skwentna**	**17.48**	**43**		**P**	**04 22 12.7**	**+1.8**
SEW	**Seward**	**17.75**	**50**	Pn	**Pn**	**04 22 11.4**	**-1.7**
SEW				IAmb	IAmb	04 22 25.2	
	comp=Z,16nm,1.3s						
KTH	**Kantishna Hill**	**18.45**	**39**		**Pn**	**04 22 21.9**	**+0.1**
KTH

BOSA Boshof 151.65 315 PKPbc **PKPbc 04 37 59.2 -1.4**
comp=Z,1.7nm,0.5s,baz=6.3,slow=3.2,SNR=10

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*IDC **26** 04:50:36.1±6.8, 6°.82S×130°.10E, h76km±62km, mb3.4/2, mbtmp3.8/5, ML4.0/3, Error ellipse: s-maj=82.5km s-min=28.7km az=57.0*
ISC 26 04:50:38.8±1.0, 7°.24S±0°.09×129°.9E±0°.1, h104km, n7, σ3°.04/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.83**	**244**	P	**Pn**	**04 52 19.5**	**+3.0**
	11nm,0.3s,baz=81,slow=3.5,SNR=1.7						
BATI				S	**Sn**	**04 53 30.1**	**-2.7**
	25nm,0.5s,baz=31,slow=12,SNR=1.2						
	32nm,0.5s						
WRA	**Warramunga Arr**	**13.34**	**162**	P	**Pn**	**04 53 46.5**	**+2.4**
	0.6nm,0.3s,baz=334,slow=13,SNR=26						
WRA				S	**Sn**	**04 56 07.8**	**-3.1**
	2.5nm,0.4s,baz=331,slow=23,SNR=10						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**16.78**	**167**	P	**P**	**04 54 30.2**	**+2.2**
	0.3nm,0.3s,baz=342,slow=9.0,SNR=12						
ASAR				S	**Sn**	**04 57 29.4**	**-4.7**
	0.2nm,0.3s,baz=345,slow=28,SNR=2.4						
	0.3nm,0.3s						
SONM	**Songino Array**	**58.64**	**342**	P	**P**	**05 00 23.9**	**-1.4**
	0.2nm,0.4s,baz=147,slow=8.6,SNR=2.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.37**	**327**	P	**P**	**05 01 27.6**	**-1.7**
	0.6nm,0.4s,baz=122,slow=8.0,SNR=10						
	0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**128.76**	**281**	PKP	**PKiKP**	**05 09 35.4**	**-0.4**
	0.2nm,0.9s,baz=106,slow=0.5,SNR=1.6						
LPAZ	**La Paz**	**150.59**	**143**	PKPbc	**PKiKP**	**05 10 22.2**	**+1.1**
	0.4nm,0.4s,baz=198,slow=6.4,SNR=2.4						

IDC 26 05:03:41.4±3.9, 15°.62S×174°.82W, h0km, mb3.7/4, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=324.9km s-min=21.0km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.40**	**60**	Pn	Pn	05 04 33.7	-2.0
	1.6nm,0.3s,baz=216,slow=14,SNR=4.1						
AFI				Sn	Sn	05 05 16.1	-0.7
	2.4nm,0.3s,baz=42,slow=23,SNR=1.4						
	44nm,0.9s						
H11S2	**WAKE ISLAND Hy 38.48**		**331**	T	T	05 51 44.3	
	baz=150,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy 38.49**		**331**	T	T	05 51 49.5	
	baz=150,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy 38.49**		**331**	T	T	05 51 45.7	
	baz=150,slow=76,SNR=5.7						
H11N3	**WAKE ISLAND Hy 39.45**		**332**	T	T	05 52 50.1	
	baz=151,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy 39.46**		**332**	T	T	05 52 52.3	
	baz=151,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy 39.47**		**332**	T	T	05 52 58.2	
	baz=151,slow=76,SNR=14						
WRA	**Warramunga Arr**	**48.47**	**257**	P	P	05 12 25.4	-0.7
	0.9nm,0.8s,baz=91,slow=7.5,SNR=8.0						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**48.74**	**252**	P	P	05 12 28.1	-0.1
	0.7nm,0.8s,baz=83,slow=8.2,SNR=5.6						
	0.7nm,0.8s						
NVAR	**Mina Array Bea**	**75.41**	**43**	P	P	05 15 28.4	+0.9
	0.5nm,0.7s,baz=225,slow=8.9,SNR=5.0						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**83.34**	**42**	P	P	05 16 11.1	+0.4
	0.4nm,0.6s,baz=186,slow=4.5,SNR=2.1						
	0.4nm,0.6s						
H03S2	**Juan Fernandez**	**86.21**	**124**	T	T	06 51 57.1	
	baz=251						
H03S1	**Juan Fernandez**	**86.23**	**124**	T	T	06 51 58.5	
	baz=251						
H03S3	**Juan Fernandez**	**86.23**	**124**	T	T	06 51 50.2	
	baz=251						

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*IDC **26** 05:09:05.6±2.5, 16°.06S×174°.69W, h0km, mb3.7/5, mbtmp3.8/7, ML3.2/2, Error ellipse: s-maj=192.0km s-min=18.8km az=152.0*
ISC 26 05:09:10.4±1.9, 16°.05±0°.8×174°.7W±0°.5, h35km, n17, σ1°.72/9, mb3.7/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.51**	**54**	Pn	**Pn**	**05 09 59.9**	**-2.7**
	2.5nm,0.3s,baz=135,slow=4.6,SNR=3.8						
AFI				Sn	**Sn**	**05 10 43.6**	**+0.7**
	2.4nm,0.3s,baz=260,slow=21,SNR=1.4						
	60nm,1.0s						
DZM	**Mont Dzumac**	**18.81**	**248**	P	**P**	**05 13 25.2**	**-2.0**
	0.1nm,0.3s,baz=72,slow=19,SNR=2.0						
	6.4nm,0.9s						
H11S2	**WAKE ISLAND Hy 38.86**		**331**	T	T	05 57 09.9	
	baz=150,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy 38.87**		**331**	T	T	05 57 14.3	
	baz=150,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy 38.87**		**331**	T	T	05 57 16.4	
	baz=150,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy 39.83**		**332**	T	T	05 58 24.4	
	baz=151,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy 39.84**		**332**	T	T	05 58 24.2	
	baz=151,slow=76,SNR=23						
H11N2	**WAKE ISLAND Hy 39.85**		**332**	T	T	05 58 27.0	
	baz=151,slow=76,SNR=28						
WRA	**Warramunga Arr**	**48.49**	**257**	P	**P**	**05 17 50.4**	**+0.3**
	1.9nm,0.9s,baz=90,slow=7.8,SNR=12						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**48.73**	**252**	P	**P**	**05 17 52.3**	**+0.3**
	1.2nm,0.9s,baz=88,slow=7.8,SNR=8.1						
	1.2nm,0.9s						
NVAR	**Mina Array Bea**	**75.61**	**42**	P	**P**	**05 20 52.9**	**+0.7**
	0.6nm,0.9s,baz=232,slow=7.4,SNR=2.4						
	0.6nm,0.9s						
TXAR	**Lajitas Array**	**81.99**	**57**	P	**P**	**05 21 28.5**	**+1.3**
	0.4nm,1.0s,baz=245,slow=11,SNR=3.1						
	0.4nm,1.0s						
PDAR	**Pinedale Array**	**83.55**	**42**	P	**P**	**05 21 37.0**	**+1.8**
	0.7nm,1.0s,baz=226,slow=6.2,SNR=2.6						
	0.7nm,1.0s						
H03S2	**Juan Fernandez**	**85.91**	**124**	T	T	06 57 27.6	
	baz=251,slow=75,SNR=10						
H03S1	**Juan Fernandez**	**85.93**	**124**	T	T	06 57 25.0	
	baz=251,slow=75,SNR=9.8						
H03S3	**Juan Fernandez**	**85.93**	**124**	T	T	06 57 23.7	
	baz=251,slow=75,SNR=9.0						
BRTR	**Keskin Array B**	**145.81**	**319**	PKPbc	**PKPab**	**05 28 47.4**	**+0.5**
	1.3nm,0.8s,baz=29,slow=3.3,SNR=3.7						

IDC 26 05:12:16.6±5.7, 15°.84S×174°.79W, h0km, mb3.3/4, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=477.4km s-min=24.4km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.49**	**57**	Pn	Pn	05 13 11.4	-0.8
	3.9nm,0.3s,baz=147,slow=8.9,SNR=4.4						
	65nm,0.9s						
H11S2	**WAKE ISLAND Hy 38.68**		**331**	T	T	06 00 25.7	
	baz=149,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy 38.69**		**331**	T	T	06 00 30.1	
	baz=149,slow=76,SNR=3.2						
H11S1	**WAKE ISLAND Hy 38.69**		**331**	T	T	06 00 26.4	
	baz=149,slow=76,SNR=4.0						
H11N3	**WAKE ISLAND Hy 39.65**		**332**	T	T	06 01 36.9	
	baz=151,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy 39.66**		**332**	T	T	06 01 38.1	
	baz=151,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy 39.67**		**332**	T	T	06 01 33.8	
	baz=151,slow=76,SNR=19						
WRA	**Warramunga Arr**	**48.44**	**257**	P	P	05 21 01.1	-0.1
	0.3nm,0.8s,baz=87,slow=6.8,SNR=3.2						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**48.70**	**252**	P	P	05 21 02.9	-0.3
	0.6nm,0.6s,baz=84,slow=8.3,SNR=6.5						
	0.6nm,0.6s						
NVAR	**Mina Array Bea**	**75.55**	**43**	P	P	05 24 04.6	+1.1
	0.1nm,0.3s,baz=220,slow=12,SNR=2.9						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**83.48**	**42**	P	P	05 24 45.8	-0.8
	0.1nm,0.3s,baz=216,slow=4.5,SNR=2.7						
	0.1nm,0.3s						
H03S2	**Juan Fernandez**	**86.07**	**124**	T	T	07 00 37.3	
	baz=250						
H03S1	**Juan Fernandez**	**86.08**	**124**	T	T	07 00 39.6	
	baz=250						
H03S3	**Juan Fernandez**	**86.09**	**124**	T	T	07 00 37.7	
	baz=250						

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*IDC **26** 05:12:18.0±1.5, 32°.45N×47°.85E, h0km, mb3.8/10, mbtmp3.9/16, ML3.9/6, MS2.8/8, Error ellipse: s-maj=30.1km s-min=15.8km az=167.0*
*TEH **26** 05:12:19.7, 32°.45N×47°.89E, h8km, ML3.8*
*ISN **26** 05:12:21.1±0.8, 32°.56N×47°.96E, h18km±85km, ML3.8*
ISC 26 05:12:19.8±0.6, 32°.42N±0°.04×47°.88E±0°.03, h10km, n88, σ2°.17/89, mb3.7/11, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.57**	**297**	*e*Pg	**Pg**	**05 12 31.2**	**+0.3**
DHL1				*e*Sg	**Sb**	**05 12 40.0**	**-0.1**
IKFM	**Kafar-mosalman**	**1.10**	**358**	*e*Pg	**Pb**	**05 12 39.7**	**-1.2**
IKFM				*e*		05 13 00.1	
	comp=Z,42μm,0.5s						
IKMR	**Kamar-syah**	**1.17**	**21**	*e*Pg	**Pn**	**05 12 41.8**	**-0.4**
IKMR				*e*Sg	**Sb**	**05 12 59.0**	**+1.7**
IKMR				*e*		05 13 03.2	
	comp=Z,40μm,0.6s						
AHWZ	**Ahwaz**	**1.27**	**149**	*e*Pg	**Pn**	**05 12 43.8**	**+0.3**
IDOB	**Doab**	**1.38**	**10**	*e*Pg	**Pn**	**05 12 45.3**	**-0.1**
AMIS	**Naft Sefid**	**1.41**	**122**	*e*Pg	**Pb**	**05 12 47.6**	**+1.4**
AMIS				*e*		05 13 13.9	
	comp=Z,15μm,0.4s						
RAFI	**Al-Rafai**	**1.66**	**246**	*e*Pg	**Pg**	**05 12 53.0**	**+1.5**
RAFI				*e*Sg	**Sg**	**05 13 16.0**	**+3.0**
RAFI				AML	AML	05 13 23.4	
	comp=E,2μm,0.5s						
IKOM	**Komasi**	**1.78**	**350**	*e*Pg	**Pn**	**05 12 52.4**	**+1.7**
IKOM				*e*		05 13 28.4	
	comp=Z,16μm,0.6s						
IBDR	**Badra**	**1.78**	**293**	*e*Pn	**Pb**	**05 12 53.0**	**+0.5**
IBDR				*e*Sn	**Sb**	**05 13 16.0**	**+1.1**
IBDR				AML	AML	05 13 27.1	
	comp=N,932nm,0.6s						
IBDR				AML	AML	05 13 42.0	
	comp=E,1μm,0.6s						
HSAM	**Samen**	**1.88**	**18**	*e*Pn	**Pn**	**05 12 53.9**	**+1.6**
HSAM				*e*		05 13 28.0	
	comp=Z,6μm,0.7s						
KCHF	**Cheshme Sefid,**	**1.98**	**339**	*e*Pn	**Pn**	**05 12 55.0**	**+1.5**
KCHF				*e*		05 13 28.8	
	comp=Z,14μm,0.5s						
IBZA	**Bozab**	**2.04**	**360**	*e*Pn	**Pn**	**05 12 56.3**	**+1.8**
IBZA				*e*		05 13 32.2	
	comp=Z,11μm,1.0s						
KER	**Kermanshah**	**2.06**	**342**	*e*Pn	**Pn**	**05 12 56.6**	**+2.0**
KER				*e*		05 13 33.6	
	comp=Z,6μm,0.7s						
KHMZ	**Khomeyn**	**2.18**	**52**	*e*Pn	**Pn**	**05 12 59.1**	**+2.7**
IGHG	**Ghaleghazi**	**2.20**	**330**	*e*Pn	**Pn**	**05 12 58.2**	**+1.6**
IGHG				*e*		05 13 50.7	
	comp=Z,13μm,0.9s						
SHK1	**Shahrekord**	**2.54**	**91**	*e*Pn	**Pn**	**05 13 03.2**	**+1.9**
SHK1				*e*		05 13 55.7	
	comp=Z,2μm,0.6s						
IPIR	**Pirpir**	**2.56**	**83**	*e*Pn	**Pn**	**05 13 03.7**	**+2.1**
IPIR				*e*		05 13 48.7	
	comp=Z,3μm,0.5s						
IDHR	**Dehrash**	**2.59**	**332**	*e*Pn	**Pn**	**05 13 03.6**	**+1.6**
HAGD	**Aghdareh**	**2.61**	**23**	*e*Pn	**Pn**	**05 13 04.0**	**+1.7**
HAGD				*e*		05 13 55.0	
	comp=Z,3μm,0.8s						
SNGE	**Sanandaj**	**2.70**	**351**	*e*Pn	**Pn**	**05 13 06.0**	**+2.5**
ABEH	**Behbahan**	**2.72**	**131**	*e*Pn	**Pn**	**05 13 06.1**	**+2.5**
ASAO	**Ashtian**	**2.78**	**40**	*e*Pn	**Pn**	**05 13 07.1**	**+2.5**
IBRJ	**Brojen**	**2.91**	**99**	*e*Pn	**Pn**	**05 13 08.3**	**+1.9**
BHD	**Baghdad**	**3.07**	**287**	*e*Pn	**Pn**	**05 13 11.0**	**+2.7**
BHD				*e*Sn	**Sn**	**05 13 48.0**	**+3.0**
QAMS	**Qamsar**	**3.23**	**65**	*e*Pn	**Pn**	**05 13 13.2**	**+2.4**
QAMS				*e*		05 14 01.7	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**3.24**	**73**	*e*Pn	**Pn**	**05 13 13.1**	**+2.2**
IRAZ	**Razeghan**	**3.43**	**29**	*e*Pn	**Pn**	**05 13 15.9**	**+2.4**
KLNJ	**Kolanjah**	**3.46**	**113**	*e*Pn	**Pn**	**05 13 16.2**	**+2.1**
GHVR	**GHOM**	**3.52**	**53**	*e*Pn	**Pn**	**05 13 17.5**	**+2.9**
IGAR	**Gharneh**	**3.52**	**89**	*e*Pn	**Pn**	**05 13 16.7**	**+1.9**
IGAR				*e*		05 14 20.7	
	comp=Z,991nm,0.5s						
QABG	**Abgarm-Qazvin**	**3.57**	**23**	*e*Pn	**Pn**	**05 13 17.0**	**+1.5**
IQOM	**Qom**	**3.59**	**47**	*e*Pn	**Pn**	**05 13 17.5**	**+1.7**
IZEF	**Zefreh**	**3.78**	**82**	*e*Pn	**Pn**	**05 13 20.4**	**+2.0**
IRAM	**Ramesheh**	**3.87**	**98**	*e*Pn	**Pn**	**05 13 21.5**	**+2.0**
KRSH	**Karshahi**	**3.89**	**65**	*e*Pn	**Pn**	**05 13 21.8**	**+2.0**
IVRN	**Varamin**	**4.11**	**50**	*e*Pn	**Pn**	**05 13 24.8**	**+2.1**
ISFB	**Sefidab**	**4.12**	**61**	*e*Pn	**Pn**	**05 13 24.7**	**+1.8**
NASN	**Na'in**	**4.17**	**84**	*e*Pn	**Pn**	**05 13 26.1**	**+2.2**
QSDN	**Sirdan**	**4.21**	**14**	*e*Pn	**Pn**	**05 13 26.3**	**+2.0**
ZNJK	**Zanjan**	**4.29**	**9**	*e*Pn	**Pn**	**05 13 28.2**	**+2.8**
CHTH	**Charan**	**4.40**	**37**	*e*Pn	**Pn**	**05 13 29.5**	**+2.7**
JIR1	**Jirandeh**	**4.56**	**20**	*e*Pn	**Pn**	**05 13 30.8**	**+1.8**
AHBU	**AHRAM**	**4.61**	**139**	*e*Pn	**Pn**	**05 13 33.3**	**+3.8**
QALM	**Alamut, Qazvin**	**4.61**	**29**	*e*Pn	**Pn**	**05 13 31.7**	**+2.0**
DAMV	**Damavand**	**4.67**	**46**	*e*Pn	**Pn**	**05 13 32.5**	**+2.0**
IDMV	**Damavand**	**4.67**	**46**	*e*Pn	**Pn**	**05 13 32.3**	**+1.7**
KLST	**Kelardasht - M**	**4.86**	**32**	*e*Pn	**Pn**	**05 13 36.3**	**+3.1**
ISAD	**Sadrabad**	**4.95**	**94**	*e*Pn	**Pn**	**05 13 36.3**	**+1.8**
ANAR	**Anarak**	**4.98**	**80**	*e*Pn	**Pn**	**05 13 36.5**	**+1.7**
ILAS	**Lasjerd**	**5.15**	**54**	*e*Pn	**Pn**	**05 13 38.8**	**+1.6**
IFIR	**Firoozkooh**	**5.16**	**50**	*e*Pn	**Pn**	**05 13 38.7**	**+1.3**
IPRN	**Peran**	**5.30**	**43**	*e*Pn	**Pn**	**05 13 41.6**	**+2.4**
ISRB	**Sarab**	**5.39**	**358**	*e*Pn	**Pn**	**05 13 42.8**	**+2.3**
IAZR	**Azarshahr**	**5.47**	**344**	*e*Pn	**Pn**	**05 13 43.2**	**+1.6**
ISHM	**Shahmirzad**	**5.62**	**52**	*e*Pn	**Pn**	**05 13 45.7**	**+2.1**
YZKH	**Yazd**	**5.67**	**89**	*e*Pn	**Pn**	**05 13 47.3**	**+3.0**
IMEH	**Mehriz**	**5.82**	**98**	*e*Pn	**Pn**	**05 13 48.2**	**+1.9**
IANJ	**Anjilo**	**5.86**	**57**	*e*Pn	**Pn**	**05 13 47.8**	**+0.8**
IHRS	**Heris**	**5.92**	**354**	*e*Pn	**Pn**	**05 13 49.5**	**+1.7**
ISHB	**Shabestar**	**6.13**	**343**	*e*Pn	**Pn**	**05 13 52.9**	**+2.2**
TPRV	**Parvadeh(Tabas**	**7.44**	**83**	*e*Pn	**Pn**	**05 14 10.5**	**+1.9**
TNSJ	**Nastanj**	**7.47**	**76**	*e*Pn	**Pn**	**05 14 10.9**	**+1.9**
SHRO	**Shahrood**	**7.62**	**60**	*e*Pn	**Pn**	**05 14 13.0**	**+2.1**
TKDS	**Koohdasht(Taba**	**7.85**	**79**	*e*Pn	**Pn**	**05 14 15.8**	**+1.6**
TABS	**Tabas**	**7.85**	**79**	*e*Pn	**Pn**	**05 14 16.8**	**+2.6**
GNI	**Garni**	**8.12**	**343**	LR	LR	05 17 45.5	
	comp=Z,53nm,21.7s,baz=158,slow=40						
ASF	**Jabal al Asfar**	**9.30**	**271**	Pn	**Pn**	**05 14 32.9**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=90,slow=8.1,SNR=3.9						
ASF				Sn	**Sn**	**05 16 11.6**	**-7.2**
	comp=Z,0.6nm,0.3s,baz=228,slow=22,SNR=1.2						
ASF				Lg	Lg	05 17 14.1	
	comp=Z,0.8nm,0.3s,baz=271,slow=22,SNR=2.1						
	comp=Z,3.0nm,0.4s						
GEYT	**Alibeck**	**10.02**	**54**	LR	LR	05 19 06.8	
	comp=Z,105nm,18.4s,baz=304,slow=41						
MMAI	**Mount Meron Ar**	**10.53**	**277**	Lg	Lg	05 17 56.0	
	comp=Z,1.0nm,0.3s,baz=59,slow=32,SNR=3.7						
MMAI				LR	LR	05 19 08.8	
	comp=Z,17nm,20.3s,baz=136,slow=39						
EIL	**Elat**	**11.42**	**260**	Lg	Lg	05 18 25.2	
	comp=Z,0.6nm,0.3s,baz=134,slow=22,SNR=2.5						
KBZ	**Khabaz**	**11.95**	**342**	LR	LR	05 20 07.1	
	comp=Z,51nm,19.6s,baz=177,slow=39						
WSAR	**Wadi Sarin**	**13.19**	**131**	Pn	**Pn**	**05 15 26.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=305,slow=12,SNR=2.5						
WSAR				Sn	**Sn**	**05 17 46.5**	**-7.4**
	comp=Z,0.3nm,0.3s,baz=22,slow=23,SNR=1.9						
WSAR				LR	LR	05 21 21.1	
	comp=Z,70nm,19.5s,baz=312,slow=41						
	comp=Z,1.9nm,0.4s						
BRTR	**Keskin Array B**	**13.62**	**306**	Pn	**Pn**	**05 15 33.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=125,slow=12,SNR=3.0						
	comp=Z,0.8nm,0.8s						
IDI	**Anoyia**	**19.30**	**285**	P	**Pn**	**05 16 46.1**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=40,slow=18,SNR=1.4						
	comp=Z,15nm,0.8s						
AKTO	**Aktyubinsk**	**19.50**	**20**	P	**P**	**05 16 46.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=216,slow=11,SNR=3.7						
	comp=Z,1.4nm,0.6s						
BELG	**Belogornoye**	**19.96**	**360**	P	**P**	**05 16 52.8**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=42,slow=7.4,SNR=3.9						
BELG				LR	LR	05 27 19.1	
	comp=Z,16nm,19.5s,baz=193,slow=45						
	comp=Z,11nm,0.5s						
MLR	**Muntele Rosu**	**21.39**	**314**	P	**P**	**05 17 09.8**	**+2.1**
	comp=Z,6.3nm,0.5s,baz=187,slow=8.0,SNR=8.8						
AKASG	**Malin Array Be**	**22.88**	**328**	P	**P**	**05 17 21.9**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=138,slow=11,SNR=5.1						
	comp=Z,0.5nm,0.4s						
AAK	**Ala-Archa**	**23.35**	**57**	LR	LR	05 27 16.9	
	comp=Z,36nm,18.4s,baz=250,slow=38						
ARU	**Arti**	**25.13**	**14**	P	**P**	**05 17 44.5**	**-0.2**
	comp=Z,3.1nm,0.2s,baz=186,slow=12,SNR=4.3						
	comp=Z,3.1nm,0.2s						
BVAR	**Borovoye Array**	**26.21**	**32**	P	**P**	**05 17 53.7**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=224,slow=6.0,SNR=8.1						
BVAR				LR	LR	05 30 14.5	
	comp=Z,39nm,18.0s,baz=299,slow=41						
	comp=Z,1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**28.98**	**42**	P	**P**	**05 18 19.8**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=245,slow=9.4,SNR=5.1						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**29.88**	**51**	P	**P**	**05 18 27.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=249,slow=7.9,SNR=6.3						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**32.30**	**340**	P	**P**	**05 18 47.5**	**-1.1**
	comp=Z,2.7nm,0.8s,baz=148,slow=7.9,SNR=11						
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**33.90**	**40**	P	**P**	**05 19 02.1**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=230,slow=8.4,SNR=8.5						
	comp=Z,1.7nm,0.5s						
ARCES	**ARCESS Array B**	**39.24**	**348**	P	**P**	**05 19 47.3**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=148,slow=10,SNR=1.7						
	comp=Z,1.7nm,0.9s						
ESDC	**Sonseca Array**	**42.05**	**295**	P	**P**	**05 20 11.2**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=93,slow=9.3,SNR=4.8						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**46.29**	**257**	P	**P**	**05 20 45.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=54,slow=8.5,SNR=2.7						
	comp=Z,0.2nm,0.4s						

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*IDC **26** 05:17:23.0±0.8, 15°.38S×175°.35W, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=45.7km s-min=21.9km az=140.0*
ISC 26 05:17:28.4±0.9, 15°.4S±0°.3×175°.4W±0°.2, h35km, n18, σ0°.71/8, mb4.0/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.79**	**68**	Pn	Pn	05 18 15.5	-8.9
	6.7nm,0.3s,baz=288,slow=16,SNR=3.4						
H11S2	**WAKE ISLAND Hy 37.99**		**332**	T	T	06 05 25.8	
	baz=150						
H11S3	**WAKE ISLAND Hy 38.01**		**332**	T	T	06 05 28.3	
	baz=150						
H11S1	**WAKE ISLAND Hy 38.01**		**332**	T	T	06 05 29.4	
	baz=150						
H11N3	**WAKE ISLAND Hy 38.98**		**333**	T	T	06 06 39.0	
	baz=151,slow=76,SNR=18						
H11N1	**WAKE ISLAND Hy 38.98**		**333**	T	T	06 06 39.4	
	baz=151,slow=76,SNR=29						
H11N2	**WAKE ISLAND Hy 38.99**		**333**	T	T	06 06 40.3	
	baz=151,slow=76,SNR=21						
WRA	**Warramunga Arr**	**47.98**	**257**	P	**P**	**05 26 03.9**	**-0.3**
	1.4nm,0.9s,baz=98,slow=6.7,SNR=5.9						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**48.29**	**252**	P	**P**	**05 26 07.0**	**+0.3**
	0.8nm,0.6s,baz=87,slow=8.1,SNR=8.0						
	0.8nm,0.6s						
VNDA	**Vanda**	**63.21**	**185**	P	**P**	**05 27 52.9**	**+0.2**
	1.4nm,0.8s,baz=357,slow=6.5,SNR=6.8						
	1.4nm,0.8s						
NVAR	**Mina Array Bea**	**75.61**	**43**	P	**P**	**05 29 10.6**	**+0.5**
	1.5nm,0.9s,baz=229,slow=8.2,SNR=11						
	1.5nm,0.9s						
TXAR	**Lajitas Array**	**82.20**	**57**	P	**P**	**05 29 46.0**	**-0.4**
	0.5nm,0.9s,baz=230,slow=6.8,SNR=5.1						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**82.80**	**12**	P	**P**	**05 29 49.5**	**+0.9**
	0.7nm,1.1s,baz=212,slow=2.9,SNR=4.2						
	0.7nm,1.1s						
PDAR	**Pinedale Array**	**83.54**	**43**	P	**P**	**05 29 52.5**	**-0.8**
	0.6nm,0.7s,baz=183,slow=1.8,SNR=6.1						
	0.6nm,0.7s						
H03S2	**Juan Fernandez**	**86.81**	**124**	T	T	07 05 42.0	
	baz=251,slow=75,SNR=11						
H03S1	**Juan Fernandez**	**86.83**	**124**	T	T	07 05 42.5	
	baz=251,slow=75,SNR=8.3						
H03S3	**Juan Fernandez**	**86.83**	**124**	T	T	07 05 44.7	
	baz=251,slow=75,SNR=8.8						
BRTR	**Keskin Array B**	**144.91**	**319**	PKP	**PKPab**	**05 37 00.8**	**-0.7**
	1.4nm,1.0s,baz=

	baz=225						
CHGB	**Renai**	**0.58 312**	P	**Pn**	**05 17 50.9**	**-0.8**
	baz=313						
CHGB			S	**Sb**	**05 17 59.1**	**-0.6**
	baz=313						
WUSB	**Renai**	**0.58 303**	P	**Pn**	**05 17 50.8**	**-0.9**
	baz=304						
WHF	**Hehuan Shan**	**0.59 323**	*i* P	**Pn**	**05 17 50.6**	**-1.3**
	baz=318						
WHF			*i* S	**Sb**	**05 17 59.2**	**-0.9**
	baz=318						
SSLB	**Suanglung**	**0.65 280**	P	**Pn**	**05 17 51.7**	**-0.7**
SSLB	**Suanglung**	**0.65 280**	P	**Pn**	**05 17 51.6**	**-0.9**
	baz=280						
EHD	**Haiduan**	**0.66 218**	P	**Pn**	**05 17 50.1**	**-2.5**
	baz=226						
EHD			S	**Sn**	**05 17 59.6**	**-2.3**
	baz=226						
YUS	**Yu-Shan**	**0.67 254**	*i* P	**Pn**	**05 17 52.6**	**-0.5**
	baz=253						
YUS			*i* S	**Sn**	**05 18 01.4**	**-1.3**
	baz=253						
FUSS	**Fushou**	**0.68 327**	*i* P	**Pn**	**05 17 52.3**	**-0.8**
	baz=328						
FUSS			*i* S	**Sn**	**05 18 01.3**	**-1.5**
	baz=328						
ECS	**Chishang**	**0.70 215**	P	**Pn**	**05 17 52.3**	**-0.8**
	baz=213						
ECS			S	**Sn**	**05 18 03.2**	**+0.4**
	baz=213						
SMLT	**Sun Moon Lake**	**0.72 287**	*i* P	**Pn**	**05 17 52.9**	**-0.6**
	baz=287						
SMLT			*i* S	**Sn**	**05 18 02.7**	**-0.7**
	baz=287						
WPL	**Puli Township**	**0.72 298**	P	**Pn**	**05 17 52.9**	**-0.5**
	baz=303						
WPL			S	**Sn**	**05 18 02.0**	**-1.3**
	baz=303						
TWT	**Tachien**	**0.72 323**	*i* P	**Pn**	**05 17 53.3**	**-0.3**
	baz=319						
TWT			*i* S	**Sn**	**05 18 02.2**	**-1.5**
	baz=319						
WHYT	**Xinyi Township**	**0.73 272**	*i* P	**Pn**	**05 17 53.4**	**-0.2**
	baz=272						
WHYT			*i* S	**Sn**	**05 18 02.7**	**-1.0**
	baz=272						
TDCB	**Techi**	**0.73 322**	P	**Pn**	**05 17 53.3**	**-0.4**
	baz=328						
DPDB	**Guoxing**	**0.76 299**	P	**Pn**	**05 17 53.5**	**-0.4**
	baz=303						
ELDTW	**Lidau**	**0.76 231**	*i* P	**Pn**	**05 17 52.9**	**-1.0**
	baz=226						
ELDTW			*i* S	**Sn**	**05 18 02.2**	**-2.2**
	baz=226						
TYC	**Yuchr**	**0.76 288**	*i* P	**Pn**	**05 17 53.5**	**-0.5**
	baz=294						
TYC			*i* S	**Sn**	**05 18 03.5**	**-0.9**
	baz=294						
EDH	**Donghe**	**0.77 205**	*i* P	**Pn**	**05 17 53.5**	**-0.5**
	baz=194						
EDH			*i* S	**Sn**	**05 18 05.8**	**+1.3**
	baz=194						
WCS	**Beigang Elemen**	**0.78 300**	P	**Pn**	**05 17 52.7**	**-1.4**
	baz=304						
WCS			S	**Sn**	**05 18 02.7**	**-2.1**
	baz=304						
NNSB	**Datong**	**0.79 342**	P	**Pn**	**05 17 53.7**	**-0.8**
	baz=344						
NNSB			S	**Sn**	**05 18 03.3**	**-1.9**
	baz=344						
ALS	**Alishan**	**0.79 258**	*i* P	**Pn**	**05 17 54.8**	**+0.2**
	baz=265						
ALS			*i* S	**Sn**	**05 18 04.9**	**-0.6**
	baz=265						
NNS	**Nan Shan**	**0.81 342**	*i* P	**Pn**	**05 17 52.7**	**-2.0**
	baz=344						
NNS			*i* S	**Sn**	**05 18 03.6**	**-2.1**
	baz=344						
WJS	**Zhushan**	**0.86 280**	*i* P	**Pn**	**05 17 55.8**	**+0.5**
	baz=280						
WJS			*i* S	**Sn**	**05 18 07.3**	**+0.5**
	baz=280						
LATG	**Datong**	**0.87 352**	P	**Pn**	**05 17 54.8**	**-0.7**
	baz=346						
LATG			S	**Sn**	**05 18 05.7**	**-1.4**
	baz=346						
WHP	**Taichung City**	**0.88 313**	*i* P	**Pn**	**05 17 55.7**	**0.0**
	baz=312						
WHP			*i* S	**Sn**	**05 18 07.5**	**0.0**
	baz=312						
CHN5	**Tsauling**	**0.90 265**	*i* P	**Pn**	**05 17 55.3**	**-0.6**
	baz=265						
CHN5			*i* S	**Sn**	**05 18 07.8**	**0.0**
	baz=265						
LONT	**Longtian**	**0.90 212**	*i* P	**Pn**	**05 17 54.7**	**-1.2**
	baz=210						
LONT			S	**Sn**	**05 18 06.3**	**-1.4**
	baz=210						
WNT	**Mingjian**	**0.91 283**	*i* P	**Pn**	**05 17 56.7**	**+0.7**
	baz=283						
WNT			*i* S	**Sn**	**05 18 09.2**	**+1.2**
	baz=283						
NDT	**Datong Townshi**	**0.94 352**	P	**Pn**	**05 17 54.4**	**-2.0**
	baz=354						
NDT			S	**Sn**	**05 18 06.6**	**-2.0**
	baz=354						
STYH	**Taoyuan**	**0.95 238**	*i* P	**Pn**	**05 17 55.7**	**-0.8**
	baz=232						
STYH			*i* S	**Sn**	**05 18 08.1**	**-0.8**
	baz=232						
TWC	**Suao**	**0.95 11**	*i* P	**Pn**	**05 17 56.7**	**+0.2**
	baz=21						
TWC			*i* S	**Sn**	**05 18 10.8**	**+1.8**
	baz=21						
ENTT	**Nioudou**	**0.97 355**	*i* P	**Pn**	**05 17 55.4**	**-1.4**
	baz=357						
WCKO	**Fanlu**	**0.99 257**	P	**Pn**	**05 17 57.3**	**+0.2**
	baz=256						
WCKO			S	**Sn**	**05 18 10.1**	**+0.2**
	baz=256						
TWGBT	**Beinan**	**1.00 212**	P	**Pn**	**05 17 55.8**	**-1.4**
TWGBT	**Beinan**	**1.00 212**	P	**Pn**	**05 17 55.8**	**-1.4**
	baz=200						
TWG	**Pinlang**	**1.00 212**	*i* P	**Pn**	**05 17 55.7**	**-1.5**
	baz=210						
TWG			S	**Sn**	**05 18 08.3**	**-1.9**
	baz=210						
LDUT	**Ludao**	**1.01 190**	*i* P	**Pn**	**05 17 56.1**	**-1.3**
	baz=182						
LDUT			S	**Sn**	**05 18 10.1**	**-0.3**
	baz=182						
TPUB	**Ta-pu**	**1.01 249**	P	**Pn**	**05 17 58.2**	**+0.8**
TPUB	**Ta-pu**	**1.01 249**	P	**Pn**	**05 17 58.1**	**+0.7**
	baz=248						
TPUB			S	**Sn**	**05 18 11.2**	**+0.7**
	baz=248						
TCU	**Taichung**	**1.01 298**	*i* P	**Pn**	**05 17 58.3**	**+0.9**
	baz=298						
TCU			S	**Sn**	**05 18 12.7**	**+2.3**
	baz=298						
WDLH	**Douliu**	**1.02 271**	*i* P	**Pn**	**05 17 58.0**	**+0.6**
	baz=271						
WDLH			*i* S	**Sn**	**05 18 11.6**	**+0.8**
	baz=271						
YHNB	**Yeheng**	**1.02 346**	P	**Pn**	**05 17 57.5**	**-0.2**
YHNB	**Yeheng**	**1.02 346**	P	**Pn**	**05 17 57.5**	**-0.2**
	baz=356						
YHNB			S	**Sn**	**05 18 10.3**	**-0.7**
	baz=356						
NSK	**Sanguang**	**1.03 345**	*i* P	**Pn**	**05 17 56.6**	**-1.2**
	baz=357						
NSK			*i* S	**Sn**	**05 18 08.9**	**-2.3**
	baz=357						
WTP	**Ta-pu**	**1.04 246**	*i* P	**Pn**	**05 17 58.5**	**+0.6**
	baz=245						
WTP			*i* S	**Sn**	**05 18 12.7**	**+1.3**
	baz=245						
TWE	**Neicheng**	**1.04 1**	*i* P	**Pn**	**05 17 58.5**	**+0.7**
	baz=353						
TWQ1	**Liyutan**	**1.05 310**	*i* P	**Pn**	**05 17 58.7**	**+0.8**
	baz=310						
TWQ1			*i* S	**Sn**	**05 18 12.8**	**+1.3**
	baz=310						
NFF	**Wufeng Townshi**	**1.07 333**	P	**Pn**	**05 17 57.7**	**-0.6**
	baz=334						
NFF			S	**Sn**	**05 18 10.8**	**-1.3**
	baz=334						
WCHH	**Zhanghua**	**1.08 292**	*i* P	**Pn**	**05 17 59.3**	**+1.0**
	baz=291						
WCHH			S	**Sn**	**05 18 13.7**	**+1.5**
	baz=291						
FUSB	**Fushanzhiwuyua**	**1.08 357**	P	**Pn**	**05 17 58.0**	**-0.5**
	baz=350						
FUSB			S	**Sn**	**05 18 12.4**	**0.0**
	baz=350						
CHN2	**Minshiung**	**1.09 263**	P	**Pn**	**05 17 59.8**	**+1.4**
	baz=263						
CHN2			*i* S	**Sn**	**05 18 14.7**	**+2.3**
	baz=263						
NSY	**Sanyi**	**1.10 312**	*i* P	**Pn**	**05 17 59.6**	**+1.0**
	baz=312						
NSY			*i* S	**Sn**	**05 18 14.8**	**+2.0**
	baz=312						
NSTT	**Nanjuang**	**1.12 328**	*i* P	**Pn**	**05 17 59.8**	**+0.8**
	baz=329						
NSTT			*i* S	**Sn**	**05 18 13.7**	**+0.4**
	baz=329						
LIOB	**Emei**	**1.13 329**	*i* P	**Pn**	**05 18 00.0**	**+1.0**
	baz=330						
LIOB			*i* S	**Sn**	**05 18 15.1**	**+1.7**
	baz=330						
CHY	**Chiayi**	**1.14 261**	*i* P	**Pn**	**05 17 59.8**	**+0.7**
	baz=261						
CHY			*i* S	**Sn**	**05 18 15.8**	**+2.2**
	baz=261						
CHN1	**Nanshi**	**1.14 245**	*i* P	**Pn**	**05 18 00.4**	**+1.2**
	baz=244						
CHN1			*i* S	**Sn**	**05 18 16.3**	**+2.5**
	baz=244						
TWK	**Hsinying**	**1.14 250**	*i* P	**Pn**	**05 18 00.1**	**+0.9**
	baz=249						
TWK			*i* S	**Sn**	**05 18 15.5**	**+1.7**
	baz=249						
WDJ	**Dajia District**	**1.14 306**	*i* P	**Pn**	**05 18 00.3**	**+1.1**
	baz=306						
WDJ			S	**Sn**	**05 18 16.0**	**+2.2**
	baz=306						
SGST	**Jiashian**	**1.14 239**	*i* P	**Pn**	**05 17 59.0**	**-0.2**
	baz=238						
SGST			*i* S	**Sn**	**05 18 15.2**	**+1.4**
	baz=238						
SNST	**Tainan City**	**1.15 247**	S	**Sn**	**05 18 16.3**	**+2.4**
	baz=247						
NMLH	**Miaoli**	**1.17 318**	P	**Pn**	**05 18 00.5**	**+1.0**
	baz=317						
NMLH			*i* S	**Sn**	**05 18 15.7**	**+1.3**
	baz=317						
WRL	**Guolierlin Hig**	**1.19 281**	*i* P	**Pn**	**05 17 59.4**	**-0.4**
	baz=282						
WRL			*i* S	**Sn**	**05 18 14.7**	**-0.2**
	baz=282						
EGS		**1.20 12**	*i* P	**Pn**	**05 18 00.8**	**+0.9**
	baz=23						
EGS			S	**Sn**	**05 18 17.3**	**+2.3**
	baz=23						
ECL	**Taimali**	**1.25 211**	*i* P	**Pn**	**05 18 00.3**	**-0.4**
	baz=202						
WTCT	**Ta-ch'eng**	**1.27 279**	S	**Sn**	**05 18 19.1**	**+2.2**
	baz=279						
NHDH	**Xindian Distri**	**1.29 355**	S	**Sn**	**05 18 18.2**	**+0.8**
	baz=357						
ICHU	**Yijhu**	**1.30 256**	P	**Pn**	**05 18 01.8**	**+0.5**
	baz=256						
ICHU			*i* S	**Sn**	**05 18 18.5**	**+0.9**
	baz=256						
TIPB	**Shuangxi**	**1.30 7**	*i* P	**Pn**	**05 18 02.6**	**+1.1**
	baz=359						
TIPB			S	**Sn**	**05 18 19.0**	**+1.2**
	baz=359						
TWA	**Mucha**	**1.30 357**	*i* P	**Pn**	**05 18 03.0**	**+1.6**
	baz=359						
SSD	**Sandimen**	**1.31 226**	*i* P	**Pn**	**05 18 02.1**	**+0.6**
	baz=224						
SSD			*i* S	**Sn**	**05 18 19.6**	**+1.6**
	baz=224						
SCST	**Cishan**	**1.32 234**	*i* P	**Pn**	**05 18 03.5**	**+1.9**
	baz=246						
SCST			*i* S	**Sb**	**05 18 22.0**	**+1.7**
	baz=246						
CHN3	**Shinhua**	**1.32 244**	S	**Sb**	**05 18 22.5**	**+2.2**
	baz=243						
TSMG	**Majia**	**1.34 224**	*i* P	**Pn**	**05 18 03.0**	**+1.2**
	baz=223						
TSMG			*i* S	**Sn**	**05 18 20.8**	**+2.2**
	baz=223						
NCUH	**Zhongli**	**1.36 342**	S	**Sn**	**05 18 21.6**	**+2.5**
	baz=342						
CHN8	**Yiju**	**1.36 256**	*i* S	**Sn**	**05 18 21.3**	**+2.2**
	baz=256						
SHHT	**Tainan City**	**1.36 242**	P	**Pn**	**05 18 05.0**	**+2.8**
	baz=253						
SHHT			S	**Sb**	**05 18 23.1**	**+1.6**
	baz=253						
SSHA	**Shanhua**	**1.36 247**	S	**Sb**	**05 18 22.9**	**+1.5**
	baz=261						
TWB1	**Santiao Chiao**	**1.36 13**	*i* P	**Pn**	**05 18 04.5**	**+2.3**
	baz=32						
TWB1			S	**Sn**	**05 18 20.9**	**+1.6**
	baz=32						
NWF	**Wu-fen Shan**	**1.40 5**	*i* P	**Pn**	**05 18 04.0**	**+1.2**
	baz=354						
NWF			S	**Sn**	**05 18 21.6**	**+1.4**
	baz=354						
TWM1	**Shoushan**	**1.41 233**	*i* P	**Pn**	**05 18 05.6**	**+2.7**
	baz=245						
TWM1			*i* S	**Sb**	**05 18 24.8**	**+1.9**
	baz=245						
MASBT	**Mashibuluo**	**1.41 222**	P	**Pn**	**05 18 03.0**	**+0.1**
	baz=220						
MASBT			S	**Sn**	**05 18 22.6**	**+2.2**
	baz=220						
JYNG	**Yonagunijimaku**	**1.41 56**	P	**Pn**	**05 18 03.4**	**+0.5**
JYNG			S	**Sn**	**05 18 21.4**	**+0.9**
SCLT	**Jiali**	**1.43 250**	S	**Sn**	**05 18 23.5**	**+2.8**
	baz=250						
SXI1	**Grass Mountain**	**1.43 8**	P	**Pn**	**05 18 04.3**	**+1.1**
	baz=356						
SXI1			S	**Sn**	**05 18 23.2**	**+2.2**
	baz=356						
TWS1	**Kuangyinshan**	**1.44 352**	S	**Sb**	**05 18 24.7**	**+1.1**
	baz=4.0						
YOJ	**Yonaguni jima**	**1.47 57**	P	**Pn**	**05 18 04.3**	**+0.6**
YOJ	**Yonaguni jima**	**1.47 57**	P	**Pn**	**05 18 04.3**	**+0.6**
YOJ			*e*S	**Sn**	**05 18 22.8**	**+1.0**
HATJ	**Hateruma jima**	**2.01 79**	P	**Pn**	**05 18 11.6**	**+0.5**
HATJ			*e*S	**Sn**	**05 18 35.5**	**+0.4**
IRIF	**Iriomote-Funau**	**2.01 70**	P	**Pn**	**05 18 12.0**	**+0.9**
IRIF			*e*S	**Sn**	**05 18 36.3**	**+1.1**
JKRS	**Kuro-shima**	**2.23 75**	*e*P	**Pn**	**05 18 15.1**	**+1.0**
JKRS			S	**Sn**	**05 18 42.0**	**+1.4**
JIJ	**Ishigaki jima**	**2.38 73**	P	**Pn**	**05 18 16.7**	**+0.5**
JIJ			*e*S	**Sn**	**05 18 43.6**	**-0.7**
JISG	**Ishigakijimahi**	**2.59 69**	P	**Pn**	**05 18 19.4**	**+0.3**
JISG			*e*S	**Sn**	**05 18 48.9**	**-0.7**
JTJ	**Tarama**	**2.95 70**	*e*P	**Pn**	**05 18 24.9**	**+0.8**
JTJ			S	**Sn**	**05 18 58.0**	**-0.4**
JOW	**Kunigami**	**6.77 61**	P	**Pn**	**05 19 16.6**	**0.0**
	14nm,1.5s					

*IDC **26** 05:19:48.4±0.4, 15°.59S×175°.02W, h0km, mb4.8/25, mbtmp4.8/26, ML4.5/1, MS5.8/64, Error ellipse: s-maj=16.1km s-min=13.0km az=134.0*
*BJI **26** 05:19:48.7±0.0, 15°.28S×174°.77W, h9km, mb5.2/61, mB5.7/57, Ms6.0/75, Ms7 5.8/69*
*MOS **26** 05:19:49.2±1.4, 15°.51S×175°.09W, h10km, mb5.5/34, MS5.9/33, Error ellipse: s-maj=9.4km s-min=8.8km az=99.4*
*NEIC **26** 05:19:49.9±3.0, 15°.44S±0°.07×174°.86W±0°.07, h10km±1km, mb5.7/406, Ms_20 5.9/425, Mww6.1, Error ellipse: s-maj=12.4km s-min=10.8km az=168.0*
*NOU **26** 05:19:54.1, 15°.57S×174°.87W, h36km, ML5.7/104, Tonga Islands*
*GCMT **26** 05:19:55.9±0.0, 15°.45S×174°.95W, h12km, MW6.0/173, Moment Tensor Solution. s169,c381; s173,c611; Duration: 2s6 Moment tensor: Scale 10^18Nm; Mrr-0.17±.01; Mθθ1.32±.01; Mφφ-1.15±.01; Mrθ0.20±.02; Mθφ0.70±.01; Mφr-0.16±.02; Best double couple: M0 1.44400×10^18 NP1:φs300.00000°, δ87.00000°, λ-11.00000°. NP2:φs30.00000°, δ79.00000°, λ-177.00000°. Principal axes: T 1.5180, Plg5.0000°, Azm346.0000°; N -0.1430, Plg79.0000°, Azm103.0000°; P -1.3700, Plg10.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **26** 05:19:56, 15°.62S×174°.81W, h16km, Moment Tensor Solution. Duration: 3s2 Moment tensor: Scale 10^18Nm; Mrr0.39; Mθθ0.86; Mφφ-1.25; Mrθ0.48; Mθφ0.75; Mφr0.52; Fault plane solution: M0 1.51000×10^18 NP1: φs121.00000°, δ60.00000°, λ15.00000°. NP2:φs23.00000°, δ77.00000°, λ149.00000°. Principal axes: T 1.4660, Plg31.0000°, Azm338.0000°; N 0.0905, Plg57.0000°, Azm182.0000°; P -1.5565, Plg11.0000°, Azm75.0000°;*

ISC 26 05:19:50.7±0.6, **15°.54S**±0°.04×**174°.88W**±0°.04, **h14**km±3km, **n1359**, σ1°**58**/1010, **mb5.6**/296, **MS5.9**/317, **66C-55D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.37**	**291**	P	**Pn**	**05 20 42.9**	**-0.1**
AFI	**Afiamalu**	**3.41**	**62**	Pn	**Pn**	**05 20 40.7**	**-3.0**
	69nm,0.3s,baz=245,slow=1.4,SNR=60						
AFI				Sn	**Sn**	**05 21 24.1**	**+0.1**
	41nm,0.3s,baz=312,slow=22,SNR=0.9						
AFI				LR	LR	05 21 57.3	
	comp=Z,140μm,21.5s,baz=231,slow=36						
AFI	**Afiamalu**	**3.41**	**62**		**Pn**	**05 20 40.3**	**-3.3**
AFI	**Afiamalu**	**3.41**	**62**	P	**Pn**	**05 20 40.3**	**-3.3**
AFI	**Afiamalu**	**3.41**	**62**	P	**Pn**	**05 20 41.4**	**-2.3**
AFI	**Afiamalu**	**3.41**	**62**	⇑P	**Pn**	**05 20 40.4**	**-3.3**
NIUE	**Niue**	**5.89**	**127**	P	**Pn**	**05 21 15.9**	**-1.8**
	baz=5.9,SNR=4.3						
NIUE	**Niue**	**5.89**	**127**		**Pn**	**05 21 16.4**	**-1.3**
NIUE	**Niue**	**5.89**	**127**	P	**Pn**	**05 21 18.1**	**+0.4**
NIUE	**Niue**	**5.89**	**127**	⇓P	**Pn**	**05 21 21.6**	**+3.9**
MSVF	**Nonsavu**	**7.12**	**251**	Pn	**Pn**	**05 21 36.8**	**+2.1**
	2.2nm,0.3s,baz=93,slow=11,SNR=12						
MSVF				LR	LR	05 23 55.0	
	comp=Z,237μm,19.0s,baz=71,slow=35						
MSVF	**Nonsavu**	**7.12**	**251**	Pn	**Pn**	**05 21 35.0**	**+0.3**
MSVF	**Nonsavu**	**7.12**	**251**	P	**Pn**	**05 21 35.0**	**+0.3**
MSVF	**Nonsavu**	**7.12**	**251**	P	**Pn**	**05 21 36.0**	**+1.4**
MSVF	**Nonsavu**	**7.12**	**251**	⇓P	**Pn**	**05 21 34.4**	**-0.2**
FUNA	**Funafuti**	**9.07**	**320**		**Pn**	**05 21 57.6**	**-3.7**
FUNA	**Funafuti**	**9.07**	**320**	P	**Pn**	**05 22 02.6**	**+1.3**
FUNA	**Funafuti**	**9.07**	**320**	⇑P	**Pn**	**05 21 58.1**	**-3.2**
RAO	**Raoul Island**	**13.93**	**191**	LR	LR	05 27 38.7	
	comp=Z,86μm,19.3s,baz=13,slow=34						
RAR	**Rarotonga**	**15.40**	**114**	Pn	**Pn**	**05 23 25.6**	**-2.1**
	1.3nm,0.3s,baz=270,slow=15,SNR=3.7						
RAR				LR	LR	05 27 53.2	
	comp=Z,25μm,18.6s,baz=292,slow=31						
RAR	**Rarotonga**	**15.40**	**114**	Pn	**Pn**	**05 23 25.6**	**-2.1**
RAR	**Rarotonga**	**15.40**	**114**	P	**Pn**	**05 23 25.7**	**-2.1**
RAR				pmax	pmax		
	comp=Z,444nm,1.8s						
RAR	**Rarotonga**	**15.40**	**114**	P	**Pn**	**05 23 29.4**	**+1.6**
RTV	**Rentapao**	**16.15**	**260**	P	**P**	**05 23 39.7**	**-1.0**
DVP	**Devils Point**	**16.37**	**260**	P	**P**	**05 23 42.3**	**-0.9**
MARNC	**Mare, Loyalty**	**17.24**	**247**	P	**Pn**	**05 23 50.7**	**-0.6**
MARNC	**Mare, Loyalty**	**17.24**	**247**	P	**P**	**05 23 53.1**	**+0.3**
MARNC	**Mare, Loyalty**	**17.24**	**247**	⇑P	**Pn**	**05 23 51.0**	**-0.3**
LIFNC	**LIFOU**	**17.77**	**250**	P	**Pn**	**05 23 57.0**	**-0.8**
LIFNC				IAmb	IAmb	05 24 01.9	
	comp=Z,386nm,0.9s						
LIFNC	**LIFOU**	**17.77**	**250**	P	**P**	**05 23 59.8**	**+1.2**
YATNC	**Mamie plateau,**	**18.43**	**247**	P	**Pn**	**05 24 07.7**	**+1.7**
OUENC	**Ouen Island, N**	**18.58**	**246**	P	**P**	**05 24 06.8**	**-0.7**
OUENC				IAmb	IAmb	05 24 10.9	
	comp=Z,437nm,1.3s						
OUENC	**Ouen Island, N**	**18.58**	**246**	P	**Pn**	**05 24 09.2**	**+1.4**
DZM	**Mont Dzumac**	**18.83**	**247**	*e*Pn	**P**	**05 24 09.8**	**-0.6**
	comp=Z,642nm,1.4s						
DZM				*e*LR	LR	05 28 33.8	
	comp=Z,108μm,25.1s						
DZM	**Mont Dzumac**	**18.83**	**247**	P	**P**	**05 24 10.1**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=75,slow=14,SNR=36						
DZM				LR	LR	05 30 10.3	
	comp=Z,55μm,20.7s,baz=72,slow=33						
	comp=Z,162nm,1.0s						
DZM	**Mont Dzumac**	**18.83**	**247**	P	**P**	**05 24 10.2**	**-0.2**
DZM				IAmb	IAmb	05 24 13.1	
	comp=Z,524nm,1.5s						
DZM	**Mont Dzumac**	**18.83**	**247**	P	**Pn**	**05 24 11.3**	**+0.4**
DZM	**Mont Dzumac**	**18.83**	**247**	⇑P	**P**	**05 24 10.2**	**-0.1**
ONTNC	**Ouen Toro**	**18.89**	**246**	P	**P**	**05 24 10.8**	**-0.1**
ONTNC				IAmb	IAmb	05 24 15.8	
	comp=Z,507nm,1.2s						
ONTNC	**Ouen Toro**	**18.89**	**246**	P	**Pn**	**05 24 12.2**	**+0.7**
ONTNC	**Ouen Toro**	**18.89**	**246**	⇓P	**P**	**05 24 11.6**	**+0.7**
NOUC	**Port Laguerre**	**18.96**	**247**	P	**Pn**	**05 24 13.1**	**+0.7**
KOUNC	**Koumac, New Ca**	**20.42**	**253**	IAMs_20	IAMs_20	05 30 58.1	
	comp=Z,74μm,19.0s						
KOUNC	**Koumac, New Ca**	**20.42**	**253**	P	Pn	05 24 29.6	-0.2
KOUNC	**Koumac, New Ca**	**20.42**	**253**	⇓P	**P**	**05 24 27.8**	**+0.1**
TARA	**Tarawa**	**20.67**	**323**	P	**P**	**05 24 27.6**	**-2.8**
TARA				IAmb	IAmb	05 24 34.9	
	comp=Z,495nm,1.3s						
TARA	**Tarawa**	**20.67**	**323**	P	Pn	05 24 34.0	+1.2
NFK	**Norfolk Island**	**20.78**	**227**	P	**P**	**05 24 33.1**	**+1.6**
OUZ	**Omahuta**	**22.15**	**206**	IAMs_20	IAMs_20	05 32 41.1	
	comp=Z,41μm,19.0s						
KUZ	**Kuaotunu**	**22.71**	**200**	P	**P**	**05 24 55.6**	**+3.4**
	comp=Z,144nm,1.7s						
MXZ	**Matakaoa Point**	**22.75**	**194**	IAMs_20	IAMs_20	05 32 06.0	
	comp=Z,53μm,20.0s						
URZ	**Urewera**	**23.70**	**196**	P	**P**	**05 24 59.6**	**-2.6**
	comp=Z,19nm,0.6s,baz=80,slow=8.4,SNR=12						
URZ				LR	LR	05 33 47.1	
	comp=Z,57μm,18.6s,baz=103,slow=36						
	comp=Z,19nm,0.6s						
URZ	**Urewera**	**23.70**	**196**	P	**P**	**05 25 00.4**	**-1.9**
URZ				IAMs_20	IAMs_20	05 33 27.3	
	comp=Z,53μm,20.0s						
URZ	**Urewera**	**23.70**	**196**	⇑P	**P**	**05 25 01.7**	**-0.5**
PAE	**Paea**	**24.33**	**99**	*e*P	**P**	**05 25 09.7**	**+1.4**
	comp=Z,56nm,1.4s						
PAE	**Paea**	**24.33**	**99**	*e*T	T	05 50 23.0	
	comp=Z,13nm,0.3s						
PPT	**Papeete**	**24.33**	**98**	P	**P**	**05 25 09.4**	**+1.0**
	comp=Z,66nm,0.9s,baz=302,slow=11,SNR=6.3						
PPT				LR	LR	05 32 09.8	
	comp=Z,17μm,20.1s,baz=268,slow=30						
	comp=Z,66nm,0.9s						
PPT2	**Papeete2**	**24.33**	**98**	*e*P	**P**	**05 25 08.4**	**-0.1**
	comp=Z,200nm,1.5s						
PPT2				*e*LR	LR	05 31 06.4	
	comp=Z,53μm,26.0s						
PPT2				*e*LR	LR	05 31 06.5	
	comp=Z,35μm,25.5s						
PPT2	**Papeete2**	**24.33**	**98**	*e*T	T	05 50 18.7	
	comp=Z,12nm,0.3s						
PPTF	**Pamatai, Papee**	**24.34**	**98**	P	**P**	**05 25 10.1**	**+1.5**
TIAR	**Tiarei**	**24.55**	**98**	*e*P	**P**	**05 25 11.8**	**+1.4**
	comp=Z,23nm,1.2s						
TIAR	**Tiarei**	**24.55**	**98**	*e*T	T	05 50 36.0	
	comp=Z,5.5nm,0.3s						
HIZ	**Hauiti**	**24.60**	**200**	IAMs_20	IAMs_20	05 33 32.0	
	comp=Z,36μm,21.0s						
TVO	**Taravao**	**24.65**	**99**	*e*P	**P**	**05 25 11.7**	**+0.4**
	comp=Z,3.5nm,1.2s						
TVO	**Taravao**	**24.65**	**99**	*e*T	T	05 50 39.0	
	comp=Z,4.0nm,0.2s						
BKZ	**Black Stump Fm**	**24.72**	**196**	P	**P**	**05 25 09.7**	**-2.1**
BKZ				IAMs_

THZ	Tophouse	28.18	200	IAMs_20	IAMs_20	05 37 41.6	
	comp=Z,38μm,21.0s						
LTZ	Lake Taylor	29.30	200	IAMs_20	IAMs_20	05 38 15.3	
	comp=Z,26μm,21.0s						
KWAJ	Kwajalein Atol	29.77	323	IAMs_20	IAMs_20	05 34 50.6	
	comp=Z,34μm,20.0s						
RPZ	Rata Peaks	30.53	200	P	P	05 26 03.4	-0.3
	comp=Z,6.8nm,0.7s,baz=270,slow=20,SNR=2.4						
RPZ				LR	LR	05 38 17.7	
	comp=Z,36μm,18.8s,baz=34,slow=36						
	comp=Z,6.8nm,0.7s						
RPZ	Rata Peaks	30.53	200	IAMs_20	IAMs_20	05 38 05.9	
	comp=Z,34μm,19.0s						
FOZ	Fox Glacier	30.80	202	IAMs_20	IAMs_20	05 38 05.1	
	comp=Z,38μm,19.0s						
WKZ	Wanaka	32.21	202	IAMs_20	IAMs_20	05 40 46.3	
	comp=Z,27μm,20.0s						
JOHN	Johnston Islan	32.50	10	IAMs_20	IAMs_20	05 37 11.5	
	comp=Z,22μm,20.0s						
MLZ	Mavora Lakes	33.00	202	P	P	05 26 23.3	-2.1
EIDS	Eidsvold	33.27	247	P	P	05 26 27.4	-0.7
	baz=33,SNR=5.5						
EIDS	Eidsvold	33.27	247	P	P	05 26 27.3	-0.7
EIDS	Eidsvold	33.27	247	P	P	05 26 27.5	-0.5
EIDS	Eidsvold	33.27	247	⇓P	P	05 26 25.9	-2.2
DCZ	Deep Cove	33.44	203	P	P	05 26 29.7	+0.5
DCZ				IAMs_20	IAMs_20	05 40 57.9	
	comp=Z,19μm,20.0s						
WHZ	Wether Hill Ro	33.51	202	P	P	05 26 28.7	-1.1
ARMA	Armidale	34.05	238	P	P	05 26 34.3	-0.5
	baz=34,SNR=7.2						
ARMA	Armidale	34.05	238	P	P	05 26 33.9	-0.9
ARMA	Armidale	34.05	238	P	P	05 26 34.2	-0.7
ARMA	Armidale	34.05	238	⇑P	P	05 26 34.4	-0.5
PYZ	Puysegur Point	34.21	203	IAMs_20	IAMs_20	05 40 39.2	
	comp=Z,21μm,21.0s						
TAOE	Nuku Hiva Isla	34.56	83	*e*S	S	05 32 08.8	+0.4
	comp=Z,3μm,28.3s						
TAOE				*e*LR	LR	05 35 50.6	
	comp=Z,45μm,24.6s						
TAOE	Nuku Hiva Isla	34.56	83	*e*T	T	06 03 03.7	
	comp=Z,144nm,0.3s						
AUPHS	Peel High Scho	34.87	238	P	P	05 26 41.0	-0.8
RMQ	Roma	35.53	246	P	P	05 26 47.3	-0.3
	baz=36,SNR=9.9						
RMQ	Roma	35.53	246	P	P	05 26 47.3	-0.3
TV1H	Townsville Har	36.71	259	P	P	05 26 57.7	0.0
AULRC	Lightning Ridg	36.82	241	P	P	05 26 58.8	+0.2
	comp=Z,56nm,1.4s						
AUDCS	Dubbo College	37.05	237	P	P	05 26 59.9	-0.6
CTA	Charters Tower	37.22	257	LR	LR	05 39 39.4	
	comp=Z,16μm,20.1s,baz=76,slow=32						
CTA	Charters Tower	37.22	257	P	P	05 27 00.9	-1.2
CTAO	Charters Tower	37.22	257	P	P	05 26 59.9	-2.2
CTAO	Charters Tower	37.22	257	IAMs_20	IAMs_20	05 39 17.1	
	comp=Z,18μm,22.0s						
CTAO	Charters Tower	37.22	257	P	P	05 26 59.9	-2.2
CTAO				pmax	pmax		
	comp=Z,48nm,1.1s						
CTAO	Charters Tower	37.22	257	P	P	05 27 00.8	-1.3
CTAO	Charters Tower	37.22	257	⇑P	P	05 27 02.1	-0.1
PMG	Port Moresby	37.52	275	LR	LR	05 40 21.8	
	comp=Z,10μm,20.2s,baz=84,slow=33						
PMG	Port Moresby	37.52	275	P	P	05 27 04.1	-0.6
PMG	Port Moresby	37.52	275	P	P	05 27 04.1	-0.6
PMG				pmax	pmax		
	comp=Z,235nm,1.1s						
PMG	Port Moresby	37.52	275	P	P	05 27 04.3	-0.4
	comp=Z,6μmcomp=Z,3μmcomp=Z,225nm,1.1s						
PMG	Port Moresby	37.52	275	P	P	05 27 05.2	+0.5
PMG	Port Moresby	37.52	275	P	P	05 27 05.1	+0.4
CNB	Canberra Magne	37.54	232	P	P	05 27 03.4	-1.3
CAN	Canberra	37.82	232	P	P	05 27 03.0	-4.0
CAN				pmax	pmax		
	comp=Z,42nm,1.6s						
CAN	Canberra	37.82	232	P	P	05 27 07.9	+0.9
H11S2	WAKE ISLAND Hy	38.38	331	T	T	06 07 57.6	
	baz=149,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	38.39	331	T	T	06 07 58.6	
	baz=149,slow=76,SNR=48						
H11S1	WAKE ISLAND Hy	38.40	331	T	T	06 07 49.3	
	baz=149,slow=76,SNR=92						
AUSMG	Snowy Mountain	38.53	230	P	P	05 27 12.1	-1.0
MTSU	Mount Surprise	39.09	260	P	P	05 27 16.7	-1.3
	baz=39,SNR=25						
MTSU	Mount Surprise	39.09	260	P	P	05 27 16.6	-1.3
WAKE	Wake Island	39.09	332	P	P	05 27 13.9	-3.8
WAKE	Wake Island	39.09	332	IAMs_20	IAMs_20	05 40 09.6	
	comp=Z,16μm,20.0s						
WAKE	Wake Island	39.09	332	P	P	05 27 19.6	+1.9
CMSA	Cobar Meteorol	39.26	239	P	P	05 27 17.5	-1.6
	baz=39,SNR=26						
CMSA	Cobar Meteorol	39.26	239	P	P	05 27 17.4	-1.7
H11N3	WAKE ISLAND Hy	39.35	332	T	T	06 09 11.0	
	baz=151,slow=76,SNR=30						
H11N1	WAKE ISLAND Hy	39.36	332	T	T	06 09 12.5	
	baz=151,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	39.37	332	T	T	06 09 13.5	
	baz=151,slow=76,SNR=32						
QLP	Quilpie	39.55	247	P	P	05 27 20.7	-0.9
	baz=40,SNR=5.8						
QLP	Quilpie	39.55	247	P	P	05 27 21.1	-0.5
QLP	Quilpie	39.55	247	⇑P	P	05 27 20.4	-1.2
MANU	Manus Island	39.55	286	P	P	05 27 22.0	+0.2
HMH	Humu'ula Sheep	39.80	29	P	P	05 27 23.4	-0.6
KIP	Kipapa	40.29	25	⇑*i*P	P	05 27 28.0	+0.3
KIP				pmax	pmax		
	comp=Z,250nm,1.7s						
KIP				MLR	MLR		
	comp=Z,4μm,16.0s						
KIP	Kipapa	40.29	25	P	P	05 27 30.0	+2.3
KIP	Kipapa	40.29	25	P	P	05 27 29.5	+1.8
COEN	Coen	40.55	267	P	P	05 27 29.6	-0.5
	baz=41,SNR=10						
COEN	Coen	40.55	267	P	P	05 27 29.2	-0.9
COEN	Coen	40.55	267	P	P	05 27 29.2	-0.9
COEN	Coen	40.55	267	⇓P	P	05 27 29.7	-0.4
TOO	Toolangi	41.27	230	P	P	05 27 34.5	-1.3
	baz=41,SNR=9.9						
TOO	Toolangi	41.27	230	P	P	05 27 34.8	-1.0
TOO				IAmb	IAmb	05 27 43.2	
	comp=Z,155nm,1.3s						
TOO	Toolangi	41.27	230	P	P	05 27 34.8	-1.0
TOO				pmax	pmax		
	comp=Z,155nm,1.3s						
TOO	Toolangi	41.27	230	P	P	05 27 34.6	-1.3
TOO	Toolangi	41.27	230	⇑P	P	05 27 34.2	-1.6
AULHS	Lilydale High	41.55	224	P	P	05 27 39.4	+1.5
CORO	Coronation Par	41.69	224	P	P	05 27 39.5	+0.4
TAU	Tasmania Unive	42.25	222	IAMs_20	IAMs_20	05 43 15.1	
	comp=Z,14μm,18.0s						
GEXS	Deakin Univers	42.39	230	P	P	05 27 47.2	+2.4
	comp=Z,67nm,1.3s						
BRAT	Ballarat	42.43	231	P	P	05 27 45.1	-0.1
STKA	Stephens Creek	42.73	240	P	P	05 27 46.5	-1.3
	comp=Z,19nm,0.9s,baz=66,slow=7.6,SNR=20						
STKA				LR	LR	05 43 33.0	
	comp=Z,14μm,21.3s,baz=77,slow=33						
	comp=Z,19nm,0.9s						
STKA	Stephens Creek	42.73	240	P	P	05 27 47.0	-0.7
	baz=43,SNR=8.2						
STKA	Stephens Creek	42.73	240	P	P	05 27 46.5	-1.3
STKA	Stephens Creek	42.73	240	P	P	05 27 46.5	-1.3
STKA				pmax	pmax		
	comp=Z,35nm,1.6s						
STKA	Stephens Creek	42.73	240	P	P	05 27 46.8	-1.0
INKA	Innaminka	42.78	246	P	P	05 27 48.4	+0.2
QIS	Mount Isa	43.46	256	P	P	05 27 52.1	-1.7
	baz=44,SNR=5.1						
QIS	Mount Isa	43.46	256	P	P	05 27 54.2	+0.4
MIDW	Midway	43.57	357	IAMs_20	IAMs_20	05 41 21.8	
	comp=Z,19μm,22.0s						
ARPS	Mount Arapiles	43.77	233	P	P	05 27 54.2	-1.9
	baz=44,SNR=10						
ARPS	Mount Arapiles	43.77	233	P	P	05 27 55.2	-0.9
HTT	Hallett	45.26	238	P	P	05 28 06.9	-1.2
	baz=45,SNR=11						
HTT	Hallett	45.26	238	P	P	05 28 07.1	-1.0
HTT	Hallett	45.26	238	⇓P	P	05 28 06.4	-1.7
LCRK	Leigh Creek	45.33	242	P	P	05 28 09.6	+0.9
GENI	Genyem	46.10	282	P	P	05 28 11.3	-3.6
	comp=Z,4μmcomp=Z,105nm,1.7s						
GENI	Genyem	46.10	282	P	P	05 28 17.5	+2.6
WHYH	Whyalla	46.29	239	P	P	05 28 17.6	+1.4
	comp=Z,28nm,1.0s						
OOD	Oodnadatta	47.24	246	P	P	05 28 23.7	-0.1
BBOO	Buckleboo	47.51	240	P	P	05 28 24.4	-1.4
	baz=48,SNR=8.6						
BBOO	Buckleboo	47.51	240	P	P	05 28 24.5	-1.3
BBOO				IAmb	IAmb	05 28 34.6	
	comp=Z,94nm,1.3s						
BBOO	Buckleboo	47.51	240	P	P	05 28 24.6	-1.2
WR0	Warramunga Arr	48.23	257	P	P	05 28 29.1	-2.5
WR0				IAmb	IAmb	05 28 36.0	
	comp=Z,58nm,1.1s						
WB0	Warramunga Arr	48.38	257	P	P	05 28 30.0	-2.7
WB2	Warramunga Arr	48.41	257	IAmb	IAmb	05 28 37.4	
	comp=Z,78nm,0.9s						
WRAB	Tennant Creek	48.41	257	P	P	05 28 30.4	-2.5
WRAB				IAmb	IAmb	05 28 40.1	
	comp=Z,93nm,1.1s						
WRAB	Tennant Creek	48.41	257	IAMs_20	IAMs_20	05 46 19.2	
	comp=Z,15μm,22.0s						
WRAB	Tennant Creek	48.41	257	*ce*P	P	05 28 31.1	-1.8
WRAB				pmax	pmax		
	comp=Z,72nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,8μm,16.0s						
WRAB	Tennant Creek	48.41	257	P	P	05 28 30.8	-2.2
WRAB	Tennant Creek	48.41	257	⇓P	P	05 28 30.7	-2.2
WRA	Warramunga Arr	48.42	257	P	P	05 28 30.6	-2.4
	comp=Z,37nm,1.0s,baz=90,slow=7.6,SNR=71						
WRA				PcP	PcP	05 29 58.9	-0.5
	comp=Z,4.2nm,0.8s,baz=96,slow=2.9,SNR=3.0						
WRA				LR	LR	05 46 41.4	
	comp=Z,14μm,21.9s,baz=93,slow=33						
	comp=Z,37nm,1.0s						
AS01	Alice Springs	48.67	252	P	P	05 28 33.5	-1.4
ASAR	Alice Springs	48.71	252	P	P	05 28 33.2	-2.0
	comp=Z,22nm,0.9s,baz=85,slow=8.2,SNR=60						
ASAR				PcP	PcP	05 29 59.5	-0.9
	comp=Z,5.4nm,1.0s,baz=77,slow=5.9,SNR=1.1						
ASAR				LR	LR	05 47 12.4	
	comp=Z,36μm,20.9s,baz=90,slow=34						
	comp=Z,22nm,0.9s						
MULG	Mulgathing	48.88	243	P	P	05 28 35.0	-1.4
GUMO	Guam	49.22	304	LR	LR	05 46 14.2	
	comp=Z,6μm,20.6s,baz=112,slow=32						
KDU	Kakadu	51.04	266	P	P	05 28 51.9	-1.0
	baz=51,SNR=11						
KDU	Kakadu	51.04	266	P	P	05 28 51.9	-1.0
KDU	Kakadu	51.04	266	⇑P	P	05 28 52.0	-1.0
MTN	Manton Dam	52.30	266	P	P	05 29 01.0	-1.4
	baz=52,SNR=16						
MTN	Manton Dam	52.30	266	P	P	05 29 00.6	-1.8
MTN	Manton Dam	52.30	266	⇑P	P	05 29 01.1	-1.4
FAKI	Fak Fak	53.52	278	P	P	05 29 10.1	-1.4
	comp=Z,3μmcomp=Z,61nm,1.0s						
FAKI	Fak Fak	53.52	278	P	P	05 29 11.4	-0.1
WRKA	Warakurna	53.80	250	P	P	05 29 11.6	-1.9
	baz=54,SNR=45						
WRKA	Warakurna	53.80	250	P	P	05 29 11.6	-1.9
WRKA	Warakurna	53.80	250	⇓P	P	05 29 11.0	-2.5
FORT	Forrest	54.08	243	P	P	05 29 14.0	-1.4
FORT	Forrest	54.08	243	P	P	05 29 15.9	+0.6
FORT	Forrest	54.08	243	⇓P	P	05 29 15.2	-0.2
KNRA	Kununurra	54.13	262	P	P	05 29 14.1	-1.8
	baz=54,SNR=12						
KNRA	Kununurra	54.13	262	IAmb	IAmb	05 29 20.1	
	comp=Z,53nm,0.9s						
KNRA	Kununurra	54.13	262	P	P	05 29 14.4	-1.5
BNDI	Bandanaira	55.32	275	P	P	05 29 22.5	-2.0
	comp=Z,12μmcomp=Z,231nm,1.6s						
BNDI	Bandanaira	55.32	275	P	P	05 29 24.3	-0.2
KRAI	Karang Ratu	57.09	276	P	P	05 29 36.8	-0.5
	comp=Z,3μmcomp=Z,100nm,2.0s						
NLAI	Namlea	58.36	276	P	P	05 29 45.3	-0.8
	comp=Z,7μmcomp=Z,48nm,1.5s						
LBMI	Labuha	58.73	279	P	P	05 29 49.3	+0.6
	comp=Z,4μmcomp=Z,172nm,1.1s						
TNTI	Ternate	59.29	280	P	P	05 29 52.1	-0.5
	comp=Z,2μmcomp=Z,101nm,1.8s						
TNTI	Ternate	59.29	280	P	P	05 29 53.1	+0.5
JCJ	Chichijima	59.44	315	LR	LR	05 51 25.6	
	comp=Z,11μm,20.4s,baz=130,slow=32						
SOEI	Soe	59.50	268	P	P	05 29 54.7	+0.5
	comp=Z,5μmcomp=Z,235nm,1.3s						
SOEI	Soe	59.50	268	P	P	05 29 54.5	+0.3
SANI	Sanana	59.76	277	P	P	05 29 56.0	+0.2
	comp=Z,2μmcomp=Z,78nm,1.1s						
SANI	Sanana	59.76	277	P	P	05 29 56.4	+0.6
BATI	Baumata	59.98	267	LR	LR	05 54 18.0	
	comp=Z,9μm,19.7s,baz=113,slow=35						
RPN	Rapa Nui	61.55	113	LR	LR	05 49 36.4	
	comp=Z,7μm,21.9s,baz=268,slow=29						
PSA00	Pilbara Seismi	61.80	254	P	P	05 30 08.9	-0.7
PSA00				IAmb	IAmb	05 30 15.7	
	comp=Z,35nm,1.0s						
PSA00	Pilbara Seismi	61.80	254	P	P	05 30 10.3	+0.6
MBWA	Marble Bar	61.95	254	P	P	05 30 10.0	-0.7
MBWA	Marble Bar	61.95	254	P	P	05 30 08.9	-1.8
MBWA				P	P	05 30 08.9	-1.8
MBWA	Marble Bar	61.95	254	P	P	05 30 10.9	+0.2
MBWA	Marble Bar	61.95	254	⇓P	P	05 30 10.7	0.0
BBSI	Bau Bau	62.12	272	P	P	05 30 14.9	+3.0
	comp=Z,1μmcomp=Z,1μmcomp=Z,47nm,1.3s						
KLBR	Kellerberrin	62.91	242	P	P	05 30 18.6	+1.6
SBA	Scott Base	63.00	184	P	P	05 30 17.8	+1.1
SBA	Scott Base	63.00	184	P	P	05 30 17.8	+1.1
SBA				pmax	pmax		
	comp=Z,205nm,1.7s						
VNDA	Vanda	63.09	186	P	P	05 30 18.4	+1.0
	comp=Z,22nm,1.0s,baz=8.7,slow=6.5,SNR=53						
VNDA				LR	LR	05 52 09.0	
	comp=Z,3μm,21.7s,baz=20,slow=31						
	comp=Z,22nm,1.0s						
VNDA	Vanda	63.09	186	P	P	05 30 17.6	+0.2
VNDA				IAmb	IAmb	05 30 27.6	
	comp=Z,75nm,1.2s						
VNDA	Vanda	63.09	186	P	P	05 30 17.6	+0.2
VNDA				pmax	pmax		
	comp=Z,75nm,1.3s						
DAV	Davao City (W)	63.10	286	LR	LR	05 54 43.5	
	comp=Z,4μm,21.0s,baz=108,slow=33						
DAV	Davao City (W)	63.10	286	P	P	05 30 20.8	+2.3
LUWI	Luwuk	63.12	277	P	P	05 30 18.3	-0.3
	comp=Z,2μmcomp=Z,6μmcomp=Z,170nm,2.2s						
LUWI	Luwuk	63.12	277	P	P	05 30 18.7	+0.1
NWAO	Narrogin (SRO)	63.31	241	LR	LR	05 55 51.9	
	comp=Z,15μm,21.5s,baz=310,slow=34						
BSSI	Bau Bau, Buton	63.96	271	P	P	05 30 22.8	-1.4
	comp=Z,1μmcomp=Z,59nm,1.5s						
APSI	Ampana	64.24	277	P	P	05 30 26.4	+0.4
	comp=Z,3μmcomp=Z,244nm,1.2s						
MRSI	Marisa	64.36	278	P	P	05 30 25.5	-1.3
	comp=Z,1μmcomp=Z,51nm,1.0s						
MORW	Morawa	64.53	245	P	P	05 30 28.9	+1.2
JHJ	Hachijo jima 2	64.93	319	LR	LR	05 59 12.3	
	comp=Z,4μm,18.1s,baz=120,slow=36						
KAPI	Kappang	64.96	272	LR	LR	05 56 46.5	
	comp=Z,2μm,19.7s,baz=102,slow=34						
KAPI	Kappang	64.96	272	P	P	05 30 28.4	-2.3
KAPI				IAmb	IAmb	05 30 35.9	
	comp=Z,48nm,1.1s						
KAPI	Kappang	64.96	272	*d i*P	P	05 30 29.8	-0.9
KAPI				pmax	pmax		
	comp=Z,54nm,1.1s						
KAPI				MLR	MLR		
	comp=Z,1μm,19.0s						
KAPI	Kappang	64.96	272	P	P	05 30 28.3	-2.3
KAPI	Kappang	64.96	272	P	P	05 30 30.8	+0.1
	comp=Z,915nmcomp=Z,47nm,1.2s						
KAPI	Kappang	64.96	272	P	P	05 30 31.4	+0.7
PLAI	Plampang	65.95	267	P	P	05 30 36.4	-0.7
	comp=Z,2μmcomp=Z,2μmcomp=Z,112nm,1.5s						
PLAI	Plampang	65.95	267	P	P	05 30 36.5	-0.7
MPSI	Mapaga	66.27	277	P	P	05 30 38.4	-0.8
	comp=Z,1μmcomp=Z,60nm,1.1s						
TWSI	Taliwang, Sumb	66.83	267	P	P	05 30 41.4	-1.4
	comp=Z,2μmcomp=Z,164nm,1.0s						
KLNI	Mataram	67.66	267	P	P	05 30 51.0	+3.0
	comp=Z,57nm,1.5s						
MJAR	Matsushiro Arr	68.14	321	P	P	05 30 48.9	-1.6
	comp=Z,0.9nm,0.3s,baz=168,slow=4.5,SNR=5.9						
MJAR				LR	LR	05 55 03.7	
	comp=Z,8μm,22.0s,baz=124,slow=31						
	comp=Z,0.9nm,0.3s						
MAJO	Matsushiro	68.14	321	IAMs_20	IAMs_20	05 54 29.1	
	comp=Z,9μm,22.0s						
MAJO	Matsushiro	68.14	321	*i* P	P	05 30 48.1	-2.5
MAJO				pmax	pmax		
	comp=Z,17nm,1.7s						
MAJO				MLR	MLR		
	comp=Z,3μm,18.0s						
NIKH	Nikolski High	68.43	4	P	P	05 30 52.6	+0.6
	baz=186						
IGBI	Denpasar	68.48	267	P	P	05 30 53.7	+0.5
	comp=Z,2μmcomp=Z,78nm,1.4s						
SRBI	Singaraja	68.59	267	P	P	05 30 53.1	-0.8
	comp=Z,2μmcomp=Z,88nm,1.5s						
SHEM	Shemya Is, Ala	68.66	353	LR	LR	05 55 04.1	
	comp=Z,11μm,20.4s,baz=136,slow=31						
RTBI	Rangdo, Negare	68.76	267	P	P	05 30 54.0	-1.0
	comp=Z,2μmcomp=Z,68nm,1.1s						
MYLDM	Lahad Datu	69.08	282	IAmb	IAmb	05 31 17.4	
	comp=Z,78nm,1.1s						
MYLDM	Lahad Datu	69.08	282	P	P	05 30 56.8	-0.1
	comp=Z,2μmcomp=Z,71nm,1.6s						
ERM	Erimo	69.11	328	*i* P	P	05 30 57.4	+0.9
ERM				pmax	pmax		
	comp=Z,27nm,1.3s						
ERM				MLR	MLR		
	comp=Z,6μm,17.0s						
YUK	Yuzh-Kuril'sk	69.28	331	*e*P	P	05 30 58.3	+0.8
YUK				*e*S	S	05 40 07.6	+4.1
YUK				MLR	MLR		
	comp=Z,7μm,20.0s						
YUK				MLR	MLR		
	comp=N,5μm,19.0s						
YUK				MLR	MLR		
	comp=E,5μm,18.0s						
KUR	Kuril'sk	69.29	333	*e*P	P	05 30 56.4	-1.1
KUR				SS	SS	05 44 34.3	+3.5
KUR				pmax	pmax		
	comp=Z,2μm,6.0s						
KUR				MLR	MLR		
	comp=Z,3μm,17.0s						
JOW	Kunigami	69.42	307	P	P	05 30 58.2	-0.5
	comp=Z,12nm,1.0s,baz=145,slow=5.8,SNR=4.5						
JOW				LR	LR	05 55 53.3	
	comp=Z,7μm,21.5s,baz=126,slow=31						
	comp=Z,12nm,1.0s						
JOW	Kunigami	69.42	307	P	P	05 30 58.5	-0.2
JOW	Kunigami	69.42	307	P	P	05 30 59.3	+0.5
UNV	Unalaska Valle	69.48	5	P	P	05 30 59.6	+1.1
	baz=189						
JAGI	Jajag, Banyuwa	69.52	267	P	P	05 30 58.5	-1.2
	comp=Z,2μmcomp=Z,66nm,1.1s						
JAGI	Jajag, Banyuwa	69.52	267	P	P	05 31 00.1	+0.4
CASY	Casey	69.68	205	P	P	05 30 58.0	-1.7
CASY	Casey	69.68	205	⇓P	P	05 30 58.7	-1.0
BBKI	Banjar Baru	70.08	272	P	P	05 31 02.9	-0.3
JHS	Saijyo	70.42	317	IAmb	IAmb	05 31 06.0	
	comp=Z,61nm,1.4s						
JHS	Saijyo	70.42	317	P	P	05 31 05.8	+1.0
FALS	False Pass	70.80	7	P	P	05 31 08.3	+1.7
	baz=192						
CNBA	Chernabura Isl	71.28	9	IAMs_20	IAMs_20	05 55 33.4	
	comp=Z,11μm,21.0s						
CHNA	Chernabura Isl	71.29	9	P	P	05 31 11.0	+1.4
	baz=196						
KKM	Kota Kinabalu	71.51	282	P	P	05 31 14.7	+2.8
	comp=Z,1μmcomp=Z,43nm,2.0s						
SDPT	Sand Point	71.66	9	P	P	05 31 13.8	+2.1
	baz=195						
SNCC	San Nicolas Is	71.71	47	IAmb	IAmb	05 31 23.5	
	comp=Z,103nm,1.2s						
SNCC	San Nicolas Is	71.71	47	P	P	05 31 13.9	+1.3
	baz=236						
PET	Petropavlovsk	72.00	344	IAMs_20	IAMs_20	05 58 22.9	
	comp=Z,8μm,20.0s						
PET	Petropavlovsk	72.00	344	*e*P	P	05 31 16.5	+2.6
PET				*e*		05 33 55.7	
PET				*e*S	S	05 40 35.8	+1.0
PET				*e*PS	PnS	05 41 09.0	+3.8
PET				*e*PPS	PPS	05 41 24.5	
PET				*e*SS	SS	05 45 09.2	-3.1
PET				pmax	pmax		
	comp=Z,700nm,10.7s						
PET				pmax	pmax		
	comp=Z,900nm,12.2s						
PET				smax	smax		
	comp=N,1μm,10.8s						
PET				smax	smax		
	comp=E,1μm,10.1s						
SCZ2	Santa Cruz Isl	72.04	46	P	P	05 31 15.7	+1.1
	baz=236,SNR=5.4						
SBC	Santa Barbara	72.24	45	P	P	05 31 16.0	+0.3
	baz=236						
SCI2	San Clemente I	72.25	47	P	P	05 31 16.5	+0.7
	baz=237						
MCCM	Marconi Confer	72.30	41	IAMs_20	IAMs_20	05 58 15.0	
	comp=Z,5μm,18.0s						
PEA0B	Petropavlovsk-	72.34	343	*i* P	P	05 31 15.0	-0.9
PETK	Petropavlovsk-	72.34	343	P	P	05 31 15.6	-0.3
	comp=Z,22nm,0.9s,baz=155,slow=7.9,SNR=11						
PETK				LR	LR	05 57 05.5	
	comp=Z,9μm,21.7s,baz=151,slow=31						
	comp=Z,22nm,0.9s						
PETK	Petropavlovsk-	72.34	343	P	P	05 31 15.8	-0.2
PETK	Petropavlovsk-	72.34	343	P	P	05 31 15.8	-0.2
SAO	San Andreas Ge	72.40	43	IAmb	IAmb	05 31 27.5	
	comp=Z,98nm,1.1s						
SAO				IAMs_20	IAMs_20	05 57 11.7	
	comp=Z,6μm,19.0s						
SAO	San Andreas Ge	72.40	43	⇑p	P	05 31 18.7	+2.1
PKM	Mcpherson Peak	72.42	45	P	P	05 31 17.3	+0.2
	baz=236,SNR=13						
PCJI	Pacitan	72.45	266	P	P	05 31 17.2	-0.2
	comp=Z,2μmcomp=Z,170nm,1.5s						
SMMC	Simmler	72.53	45	P	P	05 31 18.5	+1.0
	baz=236,SNR=8.9						
SP

BFSC	Mount Baldy Ra	73.55	47	P	P	05 31 25.0 +1.3
	baz=238,SNR=15					
EDW2	Edwards Air Fo	73.66	46	P	P	05 31 25.7 +1.4
	baz=237,SNR=43					
MONP2	Monument Peak	73.72	48	P	P	05 31 26.5 +1.7
	baz=239,SNR=19					
ISA	Isabella, Lake	73.76	45	IAmb	IAmb	05 31 28.1
	comp=Z,157nm,1.6s					
ISA	Isabella, Lake	73.76	45	P	P	05 31 26.6 +1.8
	baz=237,SNR=32					
CCAC	Calif City Air	73.79	46	IAmb	IAmb	05 31 28.3
	comp=Z,74nm,1.2s					
IKP	In-Ko-Pah, Jac	73.82	49	P	P	05 31 26.9 +1.6
	baz=239,SNR=16					
SSLB	Suanglung	73.86	301	P	P	05 31 25.1 -0.5
SII	Sitkinak Islan	73.89	12	P	P	05 31 26.9 +1.9
	baz=201					
SII	Sitkinak Islan	73.89	12	P	P	05 31 25.9 +0.9
YHNB	Yeheng	73.90	302	P	P	05 31 25.0 -0.9
TPUB	Ta-pu	73.93	300	P	P	05 31 23.8 -2.2
TPUB	Ta-pu	73.93	300	P	P	05 31 24.9 -1.1
PFO	Pinyon Flats O	74.07	48	LR	LR	05 57 16.6
	comp=Z,5μm,19.3s,baz=240,slow=30					
PFO	Pinyon Flats O	74.07	48	P	P	05 31 27.1 +0.4
PFO				IAmb	IAmb	05 31 29.8
	comp=Z,106nm,1.7s					
PFO	Pinyon Flats O	74.07	48	IAMs_20	IAMs_20	05 56 23.3
	comp=Z,6μm,20.0s					
PFO	Pinyon Flats O	74.07	48	*d iP*	P	05 31 27.6 +0.8
PFO				pmax	pmax	
	comp=Z,34nm,1.1s					
PFO				MLR	MLR	
	comp=Z,4μm,16.0s					
PFO	Pinyon Flats O	74.07	48	P	P	05 31 28.2 +1.4
	baz=238,SNR=14					
TPFO	Pinon Flats	74.07	48	P	P	05 31 28.2 +1.5
	baz=238,SNR=16					
BBRC	Big Bear Solar	74.08	47	P	P	05 31 28.2 +1.3
	baz=238					
SWSC	Sam W. Stewart	74.20	49	P	P	05 31 28.5 +1.1
	baz=239,SNR=17					
LRMC	Laurel Mtn Rad	74.20	45	P	P	05 31 28.9 +1.4
	baz=237,SNR=14					
SBUM	Sibu	74.23	277	P	P	05 31 30.7 +2.8
	comp=Z,509nmcomp=Z,14nm,1.5s					
R16K	Pilot Point	74.24	10	P	P	05 31 28.5 +1.5
	baz=197					
LPIG	La Paz	74.33	59	LR	LR	05 55 15.3
	comp=Z,4μm,22.0s,baz=242,slow=29					
RRX	Edison Barstow	74.35	46	P	P	05 31 29.7 +1.4
	baz=238					
MDPB	Devils Postpil	74.44	43	IAmb	IAmb	05 31 39.4
	comp=Z,74nm,1.3s					
CWC	Cottonwood Cre	74.45	44	P	P	05 31 30.4 +1.4
	baz=237					
SLBS	Sierra La Lagu	74.46	60	P	P	05 31 26.0 -3.2
QSPA	South Pole Qui	74.50	180	LR	LR	05 58 50.6
	comp=Z,6μm,21.8s,baz=41,slow=32					
QSPA	South Pole Qui	74.50	180	P	P	05 31 28.9 +0.1
QSPA				IAmb	IAmb	05 31 37.8
	comp=Z,106nm,1.4s					
QSPA	South Pole Qui	74.50	180	IAMs_20	IAMs_20	05 59 01.3
	comp=Z,5μm,21.0s					
SCJI	Gunung Srandil	74.50	266	P	P	05 31 29.6 +0.1
	comp=Z,1μmcomp=Z,65nm,1.1s					
YBH	Yreka Blue Hor	74.58	38	LR	LR	05 58 22.1
	comp=Z,4μm,19.6s,baz=236,slow=31					
YBH	Yreka Blue Hor	74.58	38	IAMs_20	IAMs_20	05 58 19.8
	comp=Z,5μm,19.0s					
BELC	Belle Mtn. Jos	74.60	48	P	P	05 31 31.5 +1.6
	baz=239,SNR=27					
MLAC	Mammoth, Mammo	74.60	43	P	P	05 31 31.8 +1.9
	baz=236,SNR=10					
TEY	Ternei	74.64	327	*e*P	P	05 31 26.5 -3.1
TEY				*e*		05 41 08.2
MPMC	Manual Prospec	74.64	45	P	P	05 31 31.9 +1.7
	baz=237,SNR=66					
CTJI	Waduk Cacaban	74.65	267	P	P	05 31 29.8 -0.6
	comp=Z,2μmcomp=Z,60nm,1.2s					
TIN	Tinemaha, Big	74.68	44	P	P	05 31 32.3 +2.1
	baz=236,SNR=22					
OHAK	Old Harbor	74.69	12	P	P	05 31 29.9 +0.3
OHAK	Old Harbor	74.69	12	P	P	05 31 32.8 +3.2
	baz=202					
GSC	Goldstone, Bar	74.71	46	IAmb	IAmb	05 31 40.7
	comp=Z,102nm,1.3s					
GSC	Goldstone, Bar	74.71	46	P	P	05 31 32.0 +1.6
	baz=238,SNR=39					
MPK	Martis Peak	74.77	41	IAmb	IAmb	05 31 38.9
	comp=Z,114nm,1.2s					
HEC	Hector,Ludlow	74.79	47	P	P	05 31 31.9 +1.0
	baz=238,SNR=51					
BC3	Big Chuckawall	74.81	48	P	P	05 31 32.8 +1.8
	baz=239,SNR=26					
BEKR	Beckworth	74.90	40	IAmb	IAmb	05 31 41.9
	comp=Z,58nm,1.1s					
PNTR	Pine Nut	74.93	41	IAmb	IAmb	05 31 39.2
	comp=Z,75nm,1.0s					
GLA	Glamis	74.96	49	IAmb	IAmb	05 31 35.2
	comp=Z,94nm,1.4s					
GLA	Glamis	74.96	49	P	P	05 31 33.9 +2.0
	baz=240,SNR=7.6					
HUMO	Hull Mountain	74.97	37	IAmb	IAmb	05 32 05.3
	comp=Z,131nm,1.8s					
HUMO	Hull Mountain	74.97	37	⇑p	P	05 31 34.1 +2.5
VCNR	Virginia City	75.02	41	IAmb	IAmb	05 31 42.8
	comp=Z,66nm,1.2s					
QSM	Queen of Sheba	75.02	45	IAmb	IAmb	05 31 39.2
	comp=Z,54nm,1.0s					
YERR	Yerington	75.10	42	IAmb	IAmb	05 31 43.1
	comp=Z,66nm,1.1s					
LHV	Little Huntoon	75.17	43	IAmb	IAmb	05 31 40.5
	comp=Z,121nm,1.2s					
LCH	Last Change Ra	75.17	44	IAmb	IAmb	05 31 36.2
	comp=Z,108nm,1.8s					
Q17K	Contact Creek	75.19	10	P	P	05 31 35.6 +2.9
	baz=199					
GRAC	Grapevine Rang	75.23	44	P	P	05 31 35.4 +2.1
	baz=237,SNR=36					
GMRC	Granite Mounta	75.24	47	P	P	05 31 35.0 +1.5
	baz=239,SNR=42					
KSRS	Korea Array	75.27	316	P	P	05 31 34.0 +0.6
	comp=Z,1.6nm,0.8s,baz=128,slow=5.5,SNR=6.5					
KSRS				LR	LR	06 02 19.3
	comp=Z,3μm,19.2s,baz=110,slow=34					
	comp=Z,1.6nm,0.8s					
IRM	Iron Mountain	75.28	48	P	P	05 31 35.5 +1.8
	baz=239,SNR=48					
FURC	Furnace Creek,	75.29	45	P	P	05 31 35.3 +1.7
	baz=238,SNR=23					
KSAR	Wonju Array Be	75.29	316	P	P	05 31 33.0 -0.6
KSAR	Wonju Array Be	75.29	316	P	P	05 31 33.0 -0.6
KDAK	Kodiak Island	75.35	12	LR	LR	05 58 46.9
	comp=Z,8μm,20.2s,baz=228,slow=31					
KDAK	Kodiak Island	75.35	12	P	P	05 31 33.0 -0.4
KDAK				IAmb	IAmb	05 31 44.0
	comp=Z,101nm,1.4s					
KDAK	Kodiak Island	75.35	12	IAMs_20	IAMs_20	05 56 25.8
	comp=Z,10μm,22.0s					
KDAK	Kodiak Island	75.35	12	P	P	05 31 33.0 -0.4
KDAK				pmax	pmax	
	comp=Z,101nm,1.4s					
KDAK	Kodiak Island	75.35	12	P	P	05 31 35.1 +1.7
	baz=202					
KDAK	Kodiak Island	75.35	12	⇑P	P	05 31 34.5 +1.1
KDAK				⇑P	P	05 31 34.6 +1.1
KDAK				⇓P	pwP	05 31 38.7 -1.5
RYN	Ryan	75.36	42	IAmb	IAmb	05 31 44.6
	comp=Z,71nm,1.1s					
SHOC	Shoshone, Teco	75.39	46	P	P	05 31 35.4 +1.2
	baz=238,SNR=31					
TUQ	Turquoise Moun	75.39	46	P	P	05 31 36.0 +1.6
	baz=238,SNR=31					
NVAR	Mina Array Bea	75.39	43	P	P	05 31 36.0 +1.5
	comp=Z,23nm,0.9s,baz=227,slow=9.2,SNR=103					
NVAR				LR	LR	05 58 27.3
	comp=Z,5μm,19.6s,baz=236,slow=31					
	comp=Z,23nm,0.9s					
PAHR	Pah Rah Range	75.42	41	IAmb	IAmb	05 31 45.1
	comp=Z,62nm,1.2s					
Q16K	King Salmon	75.45	10	P	P	05 31 35.2 +1.2
	baz=198					
GMN	Gold Mountain	75.47	44	IAmb	IAmb	05 31 45.3
	comp=Z,52nm,1.0s					
NV11	Mina Array Sit	75.49	43	IAmb	IAmb	05 31 38.1
	comp=Z,121nm,1.4s					
BLYC	Blythe	75.53	48	IAmb	IAmb	05 31 38.2
	comp=Z,147nm,1.8s					
P16K	Nushagak River	75.58	9	P	P	05 31 35.8 +1.1
	baz=197					
113A	Mohawk Valley,	75.59	50	IAmb	IAmb	05 31 38.6
	comp=Z,100nm,1.6s					
WCT	Wildcat Mounta	75.62	45	IAmb	IAmb	05 31 46.2
	comp=Z,62nm,1.3s					
Q18K	Katmai Hardscr	75.70	11	P	P	05 31 36.1 +0.5
	baz=200					
KSM	Kuching	75.78	276	IAmb	IAmb	05 31 43.6
	comp=Z,78nm,1.1s					
KSM	Kuching	75.78	276	P	P	05 31 38.2 +1.3
	comp=Z,1μmcomp=Z,76nm,1.1s					
KSM	Kuching	75.78	276	P	P	05 31 37.9 +1.0
TYV	Tymovskoe	75.84	334	*e*P	P	05 31 35.2 -1.2
TYV				*e*S	S	05 41 18.7 +0.5
TYV				pmax	pmax	
	comp=Z,25nm,1.8s					
TYV				pmax	pmax	
	comp=Z,500nm,3.7s					
TYV				smax	smax	
	comp=N,600nm,5.4s					
KVN	Kaiserville	75.87	42	IAmb	IAmb	05 31 40.1
	comp=Z,95nm,1.5s					
214A	Organ Pipe Nat	75.90	51	IAmb	IAmb	05 31 57.9
	comp=Z,129nm,1.9s					
214A	Organ Pipe Nat	75.90	51	P	P	05 31 39.0 +1.7
	baz=241,SNR=18					
TPNV	Topopah Spring	75.96	45	IAMs_20	IAMs_20	06 00 13.2
	comp=Z,7μm,19.0s					
TPNV	Topopah Spring	75.96	45	P	P	05 31 39.1 +1.4
	baz=238,SNR=39					
TPNV	Topopah Spring	75.96	45	⇓p	P	05 31 39.2 +1.6
NEE2	Needles Airpor	75.97	47	P	P	05 31 39.4 +1.8
	baz=240					
P17K	Kvichak River	75.98	10	P	P	05 31 38.4 +1.4
	baz=198					
PDMCI	Parker Dam,Lak	76.08	48	P	P	05 31 39.9 +1.7
	baz=240,SNR=17					
O16K	Kokwok River B	76.11	9	P	P	05 31 38.6 +0.9
	baz=197					
MOD	Modoc Plateau	76.12	39	IAMs_20	IAMs_20	05 59 58.7
	comp=Z,4μm,18.0s					
INCN	Inchon	76.15	316	IAMs_20	IAMs_20	06 02 24.4
	comp=Z,5μm,19.0s					
MSHR	Mys Shultsa	76.16	322	⇑*iP*	P	05 31 38.4 0.0
MSHR				pmax	pmax	
	comp=Z,51nm,1.5s					
MSHR				MLR	MLR	
	comp=Z,1μm,17.0s					
Q20K	Shuyak Island	76.16	12	P	P	05 31 39.5 +1.5
	baz=202					
LEM	Lembang	76.20	267	LR	LR	06 04 00.9
	comp=Z,5μm,21.1s,baz=106,slow=35					
Q19K	Cape Douglas,	76.22	11	P	P	05 31 39.7 +1.2
	baz=201					
K05A	Sumner Lake	76.26	38	IAmb	IAmb	05 31 49.5
	comp=Z,64nm,1.0s					
V12A	Nelson	76.29	47	IAmb	IAmb	05 31 42.7
	comp=Z,89nm,1.5s					
QZH	Quanzhou	76.30	301	⇑*iP*	P	05 31 38.8 -0.8
QZH				S	S	05 41 22.3 -2.0
QZH				SS	SS	05 46 21.5 +2.6
QZH				pmax	pmax	
	comp=Z,200nm,5.2s					
QZH				LR	LR	
	comp=Z,2μm,16.6s					
QZH				LR	LR	
	comp=Z,1μm,15.6s					
QZH				LR	LR	
	comp=Z,3μm,22.3s					
Q09A	Carvers	76.35	43	IAmb	IAmb	05 31 50.3
	comp=Z,62nm,0.9s					
P18K	Big Mountain,	76.37	10	IAmb	IAmb	05 31 48.1
	comp=Z,74nm,0.9s					
P18K				IAMs_20	IAMs_20	06 00 12.6
	comp=Z,6μm,20.0s					
P18K	Big Mountain,	76.37	10	P	P	05 31 40.2 +0.9
	baz=199					
O17K	Koliganek Bris	76.43	9	P	P	05 31 40.7 +1.1
	baz=198					
USRK	Ussuriysk Ar.	76.65	324	P	P	05 31 41.7 +0.5
	comp=Z,1.4nm,0.6s,baz=117,slow=8.8,SNR=5.0					
USRK				LR	LR	05 59 05.4
	comp=Z,17μm,21.9s,baz=118,slow=31					
	comp=Z,1.4nm,0.6s					
USRK	Ussuriysk Ar.	76.65	324	P	P	05 31 39.6 -1.6
W13A	Hualapai Mount	76.66	47	IAmb	IAmb	05 31 45.0
	comp=Z,130nm,1.8s					
S11A	Rachel	76.67	44	IAmb	IAmb	05 32 22.1
	comp=Z,103nm,1.4s					
H04A	Detroit Lake	76.70	36	IAmb	IAmb	05 31 51.6
	comp=Z,73nm,1.3s					
N16K	Nishlik Lake	76.86	8	P	P	05 31 43.4 +1.4
	baz=196					
PINE	Pine Mountain	76.86	37	IAmb	IAmb	05 31 53.5
	comp=Z,64nm,1.0s					
SSE	Sheshan	76.91	308	P	P	05 31 44.0 +1.1
SSE				S	S	05 41 32.5 +1.7
SSE				pmax	pmax	
	comp=Z,13nm,0.9s					
SSE				pmax	pmax	
	comp=Z,78nm,6.4s					
SSE				LR	LR	
	comp=Z,650nm,23.8s					
SSE				LR	LR	
	comp=Z,1μm,24.0s					
P19K	Oil Pt	76.97	11	IAMs_20	IAMs_20	05 59 32.5
	comp=Z,9μm,20.0s					
P19K	Oil Pt	76.97	11	P	P	05 31 43.8 +1.1
	baz=201					
PRN	Pahroc Range	77.02	45	IAmb	IAmb	05 31 47.1
	comp=Z,129nm,1.5s					
PRN	Pahroc Range	77.02	45	⇓P	P	05 31 45.5 +1.9
R11A	Troy Canyon, C	77.15	44	P	P	05 31 45.6 +1.2
	baz=238,SNR=34					
BMN	Battle Mountai	77.20	41	IAmb	IAmb	05 31 55.0
	comp=Z,70nm,1.3s					
CNPM	China Poot	77.24	12	IAmb	IAmb	05 31 50.9
	comp=Z,64nm,1.0s					
HOM	Homer	77.28	12	IAMs_20	IAMs_20	06 00 57.6
	comp=Z,7μm,20.0s					
HOM	Homer	77.28	12	P	P	05 31 45.8 +1.5
	baz=203					
O19K	Port Alsworth	77.28	10	IAMs_20	IAMs_20	06 01 00.8
	comp=Z,6μm,19.0s					
O19K	Port Alsworth	77.28	10	P	P	05 31 45.5 +1.2
	baz=200,SNR=18					
WVOR	Wild Horse Val	77.44	39	⇓p	P	05 31 47.4 +1.6
N18K	Kilae Creek	77.48	9	IAmb	IAmb	05 32 25.1
	comp=Z,117nm,1.8s					
N18K				IAMs_20	IAMs_20	05 59 49.0
	comp=Z,5μm,20.0s					
N18K	Kilae Creek	77.48	9	P	P	05 31 46.7 +1.2
	baz=199					
O20K	Slope Mountain	77.48	11	P	P	05 31 46.4 +0.8
	baz=202					
BRLK	Bradley Lake	77.53	12	IAMs_20	IAMs_20	06 00 24.9
	comp=Z,8μm,20.0s					
BRSE	Bradley Lake S	77.54	12	P	P	05 31 47.5 +1.6
	baz=204					
TUC	Tucson	77.59	51	IAMs_20	IAMs_20	05 58 32.7
	comp=Z,7μm,20.0s					
TUC	Tucson	77.59	51	⇑P	P	05 31 48.8 +1.9
N19K	Bonanza Creek	77.84	10	IAmb	IAmb	05 32 14.0
	comp=Z,105nm,1.4s					
N19K				IAMs_20	IAMs_20	06 01 09.4
	comp=Z,6μm,20.0s					
N19K	Bonanza Creek	77.84	10	P	P	05 31 48.7 +1.1
	baz=200					
J08A	Circle Bar Ran	78.06	38	IAmb	IAmb	05 31 59.7
	comp=Z,52nm,1.2s					
SEW	Seward	78.14	13	P	P	05 31 50.9 +1.8
	baz=205					
LON	Longmire	78.18	34	IAmb	IAmb	05 31 59.8
	comp=Z,111nm,1.7s					
Q23K	Middleton Isla	78.23	14	IAMs_20	IAMs_20	06 00 29.0
	comp=Z,8μm,20.0s					
Q23K	Middleton Isla	78.23	14	P	P	05 31 51.2 +1.5
	baz=208					
319A	Douglas	78.31	53	IAmb	IAmb	05 31 58.5
	comp=Z,49nm,1.0s					
CAPN	Captain Cook N	78.40	12	P	P	05 31 51.3 +0.8
	baz=203					
O22K	Cooper Landing	78.42	12	IAMs_20	IAMs_20	05 59 28.9
	comp=Z,7μm,21.0s					
O22K	Cooper Landing	78.42	12	P	P	05 31 51.7 +1.0
	baz=205					
U15A	North Rim	78.44	47	IAmb	IAmb	05 32 00.0
	comp=Z,86nm,1.1s					
SZCU	Shurtz Canyon	78.46	46	IAmb	IAmb	05 31 55.1
	comp=Z,113nm,1.7s					
P23K	Montague Islan	78.49	14	P	P	05 31 52.3 +1.2
	baz=207					
N20K	Mount Spurr	78.60	11	P	P	05 31 52.4 +0.6
	baz=202					
SPCR	Spurr Chakacha	78.60	11	P	P	05 31 52.0 +0.2
	baz=202					
ELK	Elko	78.64	42	LR	LR	06 00 46.1
	comp=Z,3μm,18.9s,baz=250,slow=31					
WUAZ	Wupatki	78.65	48	IAmb	IAmb	05 31 56.3
	comp=Z,140nm,1.5s					
WUAZ	Wupatki	78.65	48	P	P	05 31 54.3 +1.5
	baz=242,SNR=37					
WUAZ	Wupatki	78.65	48	⇓P	P	05 31 54.7 +1.9
BBB	Bella Bella	78.66	27	LR	LR	05 59 46.3
	comp=Z,3μm,20.4s,baz=233,slow=30					
PPBI	Pangkal Pinang	78.81	271	P	P	05 31 51.5 -2.5
	comp=Z,19μmcomp=Z,52nm,1.6s					
M19K	Big River Lodg	78.88	10	IAMs_20	IAMs_20	06 04 29.0
	comp=Z,5μm,19.0s					
M19K	Big River Lodg	78.88	10	P	P	05 31 53.8 +0.6
	baz=200					
G08A	Pilot Rock	78.89	37	IAmb	IAmb	05 32 04.2
	comp=Z,69nm,1.3s					
FIS	Fire Island	78.93	12	IAMs_20	IAMs_20	06 02 10.3
	comp=Z,6μm,19.0s					
RC01	Rabbit Creek A	78.97	12	IAMs_20	IAMs_20	06 03 52.5
	comp=Z,5μm,19.0s					
RC01	Rabbit Creek A	78.97	12	P	P	05 31 54.5 +0.7
	baz=205					
CRAG	Craig	79.02	23	P	P	05 31 54.8 +0.8
	baz=221					
HIN	Hinchinbrook I	79.05	14	IAMs_20	IAMs_20	06 01 38.6
	comp=Z,9μm,20.0s					
PWL	Port Wells	79.06	13	IAmb	IAmb	05 32 22.7
	comp=Z,145nm,1.4s					
PWL				IAMs_20	IAMs_20	06 02 02.7
	comp=Z,8μm,20.0s					
PWL	Port Wells	79.06	13	P	P	05 31 54.7 +0.5
	baz=206,SNR=17					
L19K	White Mountain	79.07	9	P	P	05 31 54.9 +0.6
	baz=200					
M20K	Styx River	79.07	10	IAmb	IAmb	05 32 28.0
	comp=Z,147nm,1.9s					
M20K				IAMs_20	IAMs_20	06 00 50.0
	comp=Z,8μm,20.0s					
M20K	Styx River	79.07	10	P	P	05 31 54.7 +0.3
	baz=201					
LTY	Liberty	79.11	34	IAmb	IAmb	05 32 05.9
	comp=Z,177nm,1.9s					
GAMB	Gambell	79.11	1	IAMs_20	IAMs_20	05 59 27.9
	comp=Z,7μm,22.0s					
GAMB	Gambell	79.11	1	P	P	05 31 53.9 -0.5
	baz=183					
SUA	Susitna One	79.12	12	IAmb	IAmb	05 32 03.0
	comp=Z,56nm,0.9s					
SUA	Susitna One	79.12	12	P	P	05 31 55.1 +0.4
	baz=204					
NJ2	Nanjing	79.12	308	*e*P	P	05 31 55.5 +0.3
NJ2				PcP	PcP	05 32 06.0 +2.4
NJ2				S	S	05 41 58.0 +3.4
NJ2				sS	sS	05 42 02.0 +1.1
NJ2				SS	SS	05 46 56.5 -4.6
NJ2				pmax	pmax	
	comp=Z,21nm,0.6s					
NJ2				pmax	pmax	
	comp=Z,940nm,5.4s					
NJ2				LR	LR	
	comp=Z,2μm,20.8s					
NJ2				LR	LR	
	comp=Z,3μm,20.8s					
NJ2				LR	LR	
	comp=Z,6μm,24.5s					
KAIM	Kayak Island	79.14	15	P	P	05 31 55.1 +0.4
	baz=210					
HAWA	Hanford	79.22	35	IAmb	IAmb	05 32 05.7
	comp=Z,199nm,1.9s					
HAWA	Hanford	79.22	35	⇑P	P	05 31 57.1 +1.7
X18A	Snowflake	79.22	50	IAmb	IAmb	05 32 06.7
	comp=Z,66nm,1.2s					
MTPU	Mount Pierson	79.30	46	IAmb	IAmb	05 32 00.6
	comp=Z,86nm,1.5s					
HPIG		79.32	58	IAmb	IAmb	05 32 06.6
	comp=Z,126nm,1.9s					
GLI	Glacier Island	79.35	13	IAmb	IAmb	05 32 04.1
	comp=Z,70nm,1.0s					
GLI				IAMs_20	IAMs_20	06 00 11.4
	comp=Z,8μm,20.0s					
GLI	Glacier Island	79.35	13	P	P	05 31 56.0 +0.2
	baz=207,SNR=12					
EYAK	Cordova Ski Ar	79.36	14	IAmb	IAmb	05 32 23.6
	comp=Z,96nm,1.6s					
EYAK	Cordova Ski Ar	79.36	14	P	P	05 31 56.1 +0.2
	baz=208					
FID	Port Fidalgo	79.37	14	IAmb	IAmb	05 32 17.9
	comp=Z,135nm,1.7s					
TCRU	Three Creeks R	79.40	45	IAmb	IAmb	05 32 00.7
	comp=Z,113nm,1.7s					
SUCK	Suckling Hills	79.43	15	IAMs_20	IAMs_20	05 58 42.6
	comp=Z,9μm,20.0s					
SKT	Skwentna	79.45	11	IAmb	IAmb	05 32 24.0
	comp=Z,83nm,1.4s					
SKT				IAMs_20	IAMs_20	06 02 11.0
	comp=Z,8μm,20.0s					
SKT	Skwentna	79.45	11	P	P	05 31 56.5 +0.2
	baz=203					
SIT	Sitka	79.45	21	P	P	05 31 57.2 +0.8
	baz=219					
V35K	Ketchikan	79.48	23	P	P	05 31 57.5 +0.8
	baz=222					
L20K	Farewell, AK	79.50	10	P	P	05 31 57.3 +0.6
	baz=200,SNR=6.3					
U33K	Whale Pass	79.51	22	P	P	05 31 57.4 +0.7
	baz=221					
KASI	Kota Agung	79.53	267	P	P	05 31 58.6 +0.7
	comp=Z,1μmcomp=Z,53nm,1.2s					
KNK	Knik Glacier	79.53	13	IAmb	IAmb	05 32 24.8
	comp=Z,186nm,1.7s					
KNK				IAMs_20	IAMs_20	06 00 12.3
	comp=Z,7μm,22.0s					
KNK	Knik Glacier	79.53	13	P	P	05 31 57.4 +0.5
	baz=206,SNR=9.8					
E08A	Dider Farm, El	79.54	36	IAmb	IAmb	05 32 07.5
	comp=Z,87nm,1.4s					
PMR	Palmer	79.56	12	IAmb	IAmb	05 32 06.1
	comp=Z,96nm,1.3s					
PMR	Palmer	79.56	12	P	P	05 31 58.2 +1.3
	baz=205,SNR=20					
BMO	Blue Mountains	79.60	38	IAmb	IAmb	05 32 21.8
	comp=Z,100nm,1.8s					
W18A	Petrified Fore	79.65	49	P	P	05 31 59.7 +1.4
	baz=243					
GHO	Glory Hole Cre	79.76	12	IAmb	IAmb	05 32 06.7
	comp=Z,66nm,1.1s					
GHO				IAMs_20	IAMs_20	06 07 58.3
	comp=Z,5μm,19.0s					
SNH	Sunshine Point	79.77	16	IAmb	IAmb	05 32 07.6
	comp=Z,112nm,1.0s					
S31K	Pelican	79.87	20	P	P	05 32 00.5 +1.8
	baz=218					
DIV	Divide	79.87	14	IAmb	IAmb	05 32 07.9
	comp=Z,93nm,1.2s					
KLR	Kul'dur	79.87	328	P	P	05 31 58.8 -0.2
	comp=Z,3.2nm,0.9s,baz=134,slow=5.2,SNR=4.2					
KLR				LR	LR	06 00 57.8
	comp=Z,3μm,21.6s,baz=138,slow=31					
	comp=Z,3.2nm,0.9s					
KLR	Kul'dur	79.87	328	⇑*iP*	P	05 31 58.9 0.0
KLR				pmax	pmax	
	comp=Z,19nm,1.6s					
KLR				MLR	MLR	
	comp=Z,3μm,18.0s					
MA2	Magadan	79.88	343	LR	LR	06 01 18.4
	comp=Z,9μm,22.0s,baz=155,slow=31					
MA2	Magadan	79.88	343	⇓*iP*	P	05 31 59.0 +0.3
MA2				pmax	pmax	
	comp=Z,82nm,2.5s					
MA2				MLR	MLR	
	comp=Z,4μm,18.0s					
SML	Sawmill	79.91	12	IAmb	IAmb

DUG	Dugway, Tooele	79.94	43	P	P	05 32 00.5 +0.8
	baz=240,SNR=23					
D08A	Wollman Farm,	79.95	35	IAmb	IAmb	05 32 09.7
	comp=Z,76nm,1.3s					
121A	Cookes Peak, D	79.96	52	P	P	05 32 01.9 +1.9
	baz=244					
121A	Cookes Peak, D	79.96	52	P	P	05 32 00.6 +0.5
	baz=244					
GZH	Guangzhou	80.00	297	eP	P	05 31 59.3 -0.9
GZH				S	S	05 41 58.3 -5.9
GZH				LR	LR	
	comp=Z,1μm,16.9s					
GZH				LR	LR	
	comp=Z,1μm,17.8s					
MESA	MESA	80.00	16	P	P	05 32 00.7 +1.1
	baz=212,SNR=12					
BMRM	Bremner River	80.00	14	P	P	05 32 00.2 +0.8
	baz=210,SNR=24					
WRAK	Wrangell Islan	80.02	22	IAMs_20	IAMs_20	05 58 21.5
	comp=Z,6μm,22.0s					
WRAK	Wrangell Islan	80.02	22	P	P	05 32 00.6 +1.1
	baz=221					
M23K	Glacier View	80.03	13	P	P	05 32 00.3 +0.7
	baz=206					
S32K	Killisnoo	80.03	21	P	P	05 32 01.2 +1.7
	baz=219					
E09A	Wood Farm, Sta	80.06	36	IAmb	IAmb	05 32 11.8
	comp=Z,122nm,1.9s					
CUT	Chulitna	80.07	11	P	P	05 32 00.6 +0.9
	baz=204					
T33K	Petersburg	80.10	22	P	P	05 32 01.6 +1.7
	baz=221					
SCM	Sheep Creek Mo	80.15	13	IAmb	IAmb	05 32 11.7
	comp=Z,58nm,1.0s					
SCM				IAMs_20	IAMs_20	06 00 08.6
	comp=Z,6μm,21.0s					
SCM	Sheep Creek Mo	80.15	13	P	P	05 32 00.7 +0.4
	baz=207,SNR=15					
KLU	Klutina	80.16	14	IAMs_20	IAMs_20	06 01 07.8
	comp=Z,8μm,20.0s					
KLU	Klutina	80.16	14	P	P	05 32 00.7 +0.4
	baz=208,SNR=22					
PPLA	Purkeypile	80.18	10	P	P	05 31 59.6 -0.8
	baz=202					
BNX	BinXian	80.19	323	⇑P	P	05 31 59.3 -1.4
BNX				PP	PP	05 35 05.5 +2.1
BNX				S	S	05 42 10.0 +4.7
BNX				sS	SKSac	05 42 16.0 -1.9
BNX				pmax	pmax	
	comp=Z,17nm,1.9s					
BNX				pmax	pmax	
	comp=Z,240nm,5.4s					
BNX				LR	LR	
	comp=Z,4μm,23.9s					
BNX				LR	LR	
	comp=Z,8μm,23.3s					
BNX				LR	LR	
	comp=Z,10μm,23.0s					
ANM	Nome	80.19	4	IAMs_20	IAMs_20	06 04 00.6
	comp=Z,6μm,20.0s					
ANM	Nome	80.19	4	P	P	05 32 01.1 +0.8
	baz=189					
ISLE	Juniper Island	80.26	16	IAmb	IAmb	05 32 23.6
	comp=Z,173nm,1.4s					
TGL	Tana Glacier	80.26	15	IAmb	IAmb	05 32 23.6
	comp=Z,157nm,1.4s					
TGL				IAMs_20	IAMs_20	05 59 31.6
	comp=Z,9μm,21.0s					
DL2	Dalian	80.27	315	eP	P	05 32 02.8 +1.5
DL2				S	S	05 42 09.3 +2.9
DL2				pmax	pmax	
	comp=Z,650nm,6.0s					
DL2				LR	LR	
	comp=Z,4μm,17.4s					
DL2				LR	LR	
	comp=Z,2μm,15.3s					
DL2				LR	LR	
	comp=Z,4μm,21.4s					
PNL	Peninsula	80.28	17	P	P	05 32 01.0 +0.1
	baz=214					
CN2	Changchun	80.29	321	eP	P	05 32 05.0 +3.7
K20K	Telida	80.30	9	P	P	05 32 01.4 +0.5
	baz=200					
R31K	City Hall, Gus	80.38	20	P	P	05 32 02.2 +0.8
	baz=218					
PCA	Pinnacle	80.39	17	IAmb	IAmb	05 32 29.9
	comp=Z,142nm,1.7s					
PINM	Pinnacle	80.39	17	P	P	05 32 02.1 +0.5
	baz=214					
Q16A	Castle Valley	80.42	45	IAmb	IAmb	05 32 28.0
	comp=Z,95nm,1.5s					
SNY	Shenyang	80.43	318	⇓P	P	05 32 02.8 +0.7
SNY				pmax	pmax	
	comp=Z,42nm,1.9s					
SNY				pmax	pmax	
	comp=Z,460nm,3.8s					
SNY				LR	LR	
	comp=Z,2μm,15.7s					
SNY				LR	LR	
	comp=Z,3μm,19.0s					
SNY				LR	LR	
	comp=Z,5μm,19.1s					
B08A	Colville Reser	80.49	34	IAmb	IAmb	05 32 11.8
	comp=Z,86nm,1.4s					
PLID	Pearl Lake	80.51	38	IAMs_20	IAMs_20	06 02 42.6
	comp=Z,5μm,20.0s					
VRDI	Verde Repeater	80.51	15	IAmb	IAmb	05 32 11.7
	comp=Z,124nm,1.4s					
VRDI				IAMs_20	IAMs_20	06 02 22.2
	comp=Z,6μm,19.0s					
LLLB	Lillooet	80.54	31	IAmb	IAmb	05 32 12.5
	comp=Z,122nm,1.5s					
N25K	Chitina, Valde	80.56	14	IAMs_20	IAMs_20	06 00 27.6
	comp=Z,7μm,21.0s					
N25K	Chitina, Valde	80.56	14	P	P	05 32 03.0 +0.5
	baz=210,SNR=25					
GLB	Gilahina Butte	80.61	15	IAmb	IAmb	05 32 29.7
	comp=Z,129nm,1.5s					
GLB				IAMs_20	IAMs_20	06 01 36.8
	comp=Z,5μm,20.0s					
KIDD	KIDD Seismic O	80.62	53	P	P	05 32 05.5 +2.0
	baz=245					
EPT	El Paso	80.62	53	IAMs_20	IAMs_20	06 00 30.0
	comp=Z,5μm,20.0s					
M24K	Tolsona, Glenn	80.64	13	IAMs_20	IAMs_20	06 02 22.7
	comp=Z,6μm,20.0s					
M24K	Tolsona, Glenn	80.64	13	P	P	05 32 03.5 +0.6
	baz=208,SNR=16					
HLID	Hailey	80.65	40	P	P	05 32 04.1 +0.6
	baz=238,SNR=36					
R32K	Eaglecrest	80.68	20	P	P	05 32 03.7 +0.6
	baz=219					
CAST	Castle Rocks	80.68	10	IAMs_20	IAMs_20	06 02 59.6
	comp=Z,8μm,20.0s					
CAST	Castle Rocks	80.68	10	P	P	05 32 03.7 +0.7
	baz=202					
P29M	Windy Craggy	80.73	18	IAmb	IAmb	05 32 13.7
	comp=Z,178nm,1.8s					
P29M	Windy Craggy	80.73	18	P	P	05 32 03.4 0.0
	baz=216					
WAT6	Susitna Watana	80.73	12	P	P	05 32 04.4 +0.9
	baz=206,SNR=22					
C09A	Chrisman Ranch	80.74	35	IAmb	IAmb	05 32 13.5
	comp=Z,79nm,1.4s					
MCARA	McCarthy VSAT	80.75	15	IAmb	IAmb	05 32 26.8
	comp=Z,96nm,1.4s					
MCARA				IAMs_20	IAMs_20	05 59 26.6
	comp=Z,6μm,21.0s					
MCARA	McCarthy VSAT	80.75	15	P	P	05 32 04.8 +1.4
	baz=211					
DSRI	Dabo	80.76	272	P	P	05 32 06.5 +2.0
	comp=Z,2μmcomp=Z,46nm,1.3s					
HVU	Hansel Valley	80.76	42	IAmb	IAmb	05 32 13.7
	comp=Z,75nm,1.5s					
WAT1	Susitna Watana	80.79	12	P	P	05 32 03.2 -0.4
	baz=206					
LOGN	Logan Glacier	80.80	16	IAmb	IAmb	05 32 32.9
	comp=Z,122nm,1.5s					
LOGN				IAMs_20	IAMs_20	05 59 15.7
	comp=Z,8μm,21.0s					
BARN	Barnard Glacie	80.82	16	IAMs_20	IAMs_20	05 59 38.4
	comp=Z,7μm,21.0s					
CTG	Chitna Glacier	80.83	16	P	P	05 32 03.5 -0.5
	baz=213,SNR=12					
CTGM	Chitina Glacie	80.83	16	IAmb	IAmb	05 32 33.1
	comp=Z,128nm,1.5s					
CTGM				IAMs_20	IAMs_20	05 59 50.5
	comp=Z,7μm,21.0s					
PNT	Penticton	80.91	33	⇓P	P	05 32 05.6 +1.1
PNT				⇓P	P	05 32 05.7 +1.1
PNT				⇓P	PcP	05 32 10.0 -1.0
O28M	Mount Upton	80.97	16	P	P	05 32 05.7 +0.8
	baz=214,SNR=13					
P17A	Butcher Ranch,	80.98	45	IAmb	IAmb	05 32 08.7
	comp=Z,155nm,2.0s					
KTH	Kantishna Hill	81.01	11	IAmb	IAmb	05 32 15.1
	comp=Z,126nm,1.4s					
PLBC	Pleasant Camp	81.01	19	P	P	05 32 05.0 +0.2
	baz=217,SNR=16					
TRF	Thorofare Moun	81.03	11	IAmb	IAmb	05 32 26.3
	comp=Z,154nm,1.5s					
TRF	Thorofare Moun	81.03	11	P	P	05 32 04.5 -0.6
	baz=204,SNR=13					
TNA	Tin City	81.03	3	P	P	05 32 04.5 -0.3
	baz=187					
O29M	Mount Kennedy	81.03	17	P	P	05 32 04.6 -0.5
	baz=215					
J20K	Nowinta River	81.06	9	IAmb	IAmb	05 32 40.4
	comp=Z,109nm,1.5s					
J20K				IAMs_20	IAMs_20	06 03 01.6
	comp=Z,5μm,20.0s					
J20K	Nowinta River	81.06	9	P	P	05 32 04.5 -0.4
	baz=200					
CHUM	Lake Minchumin	81.08	10	P	P	05 32 04.6 -0.4
	baz=202					
HARP	HAARP	81.13	14	P	P	05 32 04.4 -1.1
	baz=209					
Y22A	Socorro	81.18	51	P	P	05 32 08.3 +1.7
	baz=245					
T35M	Bob Quinn	81.22	23	P	P	05 32 05.1 -0.9
	baz=223					
GCSA	Galena City Sc	81.22	8	P	P	05 32 05.3 -0.4
	baz=198					
DHY	Denali Highway	81.25	12	IAmb	IAmb	05 32 33.9
	comp=Z,94nm,1.6s					
DHY	Denali Highway	81.25	12	P	P	05 32 05.7 -0.6
	baz=207					
RND	Reindeer	81.26	12	IAmb	IAmb	05 32 40.2
	comp=Z,90nm,1.4s					
RND				IAMs_20	IAMs_20	06 03 07.8
	comp=Z,7μm,20.0s					
Y22D	IRIS PASSCAL I	81.27	51	IAMs_20	IAMs_20	06 00 53.2
	comp=Z,4μm,20.0s					
Y22D	IRIS PASSCAL I	81.27	51	P	P	05 32 06.3 -0.7
	baz=245					
Y22F	Passcal Instru	81.27	51	P	P	05 32 06.0 -1.0
	baz=245					
SKAG	Skagway	81.34	19	IAmb	IAmb	05 32 18.2
	comp=Z,141nm,1.5s					
SKAG	Skagway	81.34	19	P	P	05 32 06.6 +0.1
	baz=218					
SKAG	Skagway	81.34	19	⇑P	P	05 32 10.3 +3.7
P30M	Million Dollar	81.36	18	P	P	05 32 06.1 -0.6
	baz=217					
HWUT	Hardware Ranch	81.46	43	IAMs_20	IAMs_20	06 01 57.7
	comp=Z,5μm,20.0s					
MVCO	Mesa Verde	81.49	48	IAMs_20	IAMs_20	06 00 51.8
	comp=Z,5μm,20.0s					
MVCO	Mesa Verde	81.49	48	P	P	05 32 07.0 -1.2
	baz=243,SNR=8.4					
BPAW	Bear Paw Mtn.	81.50	10	IAMs_20	IAMs_20	06 03 25.3
	comp=Z,5μm,20.0s					
BPAW	Bear Paw Mtn.	81.50	10	P	P	05 32 06.5 -0.9
	baz=203					
YUK8	Steele Glacier	81.51	16	P	P	05 32 07.1 -0.7
	baz=214,SNR=16					
MCK	McKinley	81.54	11	IAmb	IAmb	05 32 16.0
	comp=Z,83nm,1.1s					
MCK	McKinley	81.54	11	P	P	05 32 06.7 -0.9
	baz=205,SNR=15					
PAX	Paxson	81.56	13	IAmb	IAmb	05 32 35.3
	comp=Z,94nm,1.6s					
PAX	Paxson	81.56	13	P	P	05 32 07.9 +0.1
	baz=209,SNR=12					
S34M	Telegraph Cree	81.58	22	P	P	05 32 08.1 +0.2
	baz=222					
YUK6	Outpost Mounta	81.62	17	P	P	05 32 09.1 +0.8
	baz=215					
M26K	Nabesna, AK	81.63	14	IAMs_20	IAMs_20	06 00 52.9
	comp=Z,7μm,21.0s					
M26K	Nabesna, AK	81.63	14	P	P	05 32 08.9 +0.7
	baz=211,SNR=36					
NEW	Newport	81.64	35	P	P	05 32 08.8 +0.3
	baz=235,SNR=9.1					
QIZ	Qiongzhong	81.64	292	P	P	05 32 09.5 +0.4
QIZ				S	S	05 42 26.5 +4.9
QIZ				SS	SS	05 47 41.5 +2.2
QIZ				pmax	pmax	
	comp=Z,260nm,3.9s					
QIZ				LR	LR	
	comp=Z,4μm,30.4s					
QIZ				LR	LR	
	comp=Z,3μm,21.8s					
QIZ				LR	LR	
	comp=Z,4μm,21.4s					
PV13	Radium Mtn., P	81.69	47	IAmb	IAmb	05 32 19.7
	comp=Z,79nm,1.4s					
PV23	Carpenter Ridg	81.69	46	IAmb	IAmb	05 32 30.4
	comp=Z,83nm,1.5s					
PV11	David Mesa, Pa	81.72	47	IAmb	IAmb	05 32 19.7
	comp=Z,98nm,1.5s					
YUK3	Moose Creek	81.74	16	P	P	05 32 09.7 +0.8
	baz=213,SNR=16					
HYT	Haines Junctio	81.77	17	IAmb	IAmb	05 32 19.2
	comp=Z,127nm,1.6s					
HYT	Haines Junctio	81.77	17	P	P	05 32 10.0 +1.0
	baz=216,SNR=11					
M27K	Edge Creek, AK	81.87	15	IAMs_20	IAMs_20	06 07 15.1
	comp=Z,7μm,18.0s					
M27K	Edge Creek, AK	81.87	15	P	P	05 32 11.6 +2.1
	baz=212,SNR=39					
YUK4	Talbot Arm	81.87	17	P	P	05 32 10.5 +0.9
	baz=215					
TX31	Lajitas Ar. Si	81.88	57	P	P	05 32 11.5 +1.3
	baz=247					
TX32	Lajitas Array	81.88	57	IAmb	IAmb	05 32 21.0
	comp=Z,94nm,1.5s					
TXAR	Lajitas Array	81.88	57	P	P	05 32 11.8 +1.5
	comp=Z,15nm,1.1s,baz=229,slow=4.8,SNR=74					
TXAR				LR	LR	06 02 53.0
	comp=Z,3μm,18.3s,baz=238,slow=32					
	comp=Z,15nm,1.1s					
MENT	Mentasta	81.93	14	IAmb	IAmb	05 32 44.4
	comp=Z,115nm,1.6s					
PV07	Paradox Valley	81.94	47	IAmb	IAmb	05 32 35.4
	comp=Z,117nm,1.9s					
P32M	Atlin	81.96	20	P	P	05 32 12.1 +2.2
	baz=220,SNR=5.9					
Q32M	Nakina River	81.96	21	P	P	05 32 10.8 +0.7
	baz=221					
ANMO	Albuquerque	81.99	50	LR	LR	06 01 57.1
	comp=Z,6μm,19.6s,baz=242,slow=31					
ANMO	Albuquerque	81.99	50	P	P	05 32 11.1 +0.3
ANMO				IAmb	IAmb	05 32 21.5
	comp=Z,64nm,1.2s					
ANMO	Albuquerque	81.99	50	IAMs_20	IAMs_20	06 01 36.2
	comp=Z,6μm,20.0s					
ANMO	Albuquerque	81.99	50	P	P	05 32 11.1 +0.3
ANMO				pmax	pmax	
	comp=Z,64nm,1.2s					
ANMO	Albuquerque	81.99	50	P	P	05 32 12.2 +1.4
	baz=245					
ANMO	Albuquerque	81.99	50	P	P	05 32 11.3 +0.5
	baz=245					
ANMO	Albuquerque	81.99	50	⇓P	P	05 32 12.4 +1.5
WHN	Wuhan	82.00	305	⇓P	P	05 32 11.0 +0.3
WHN				sP	PcP	05 32 17.8 +1.6
WHN				S	S	05 42 28.8 +4.0
WHN				LR	LR	
	comp=Z,4μm,14.2s					
WHN				LR	LR	
	comp=Z,4μm,18.1s					
WHN				LR	LR	
	comp=Z,8μm,22.7s					
L26K	Log Cabin Wild	82.09	14	P	P	05 32 11.9 +1.4
	baz=211					
O30N	Mendenhall	82.14	18	P	P	05 32 12.2 +1.3
	baz=218,SNR=19					
BVCY	Beaver Creek	82.17	15	P	P	05 32 11.7 +0.8
	baz=213					
TIA	Tai'an	82.22	311	⇑P	P	05 32 11.3 -0.5
TIA				S	S	05 42 33.3 +6.4
TIA				SS	SS	05 47 49.0 +1.6
TIA				pmax	pmax	
	comp=Z,13nm,1.1s					
TIA				pmax	pmax	
	comp=Z,210nm,3.9s					
TIA				LR	LR	
	comp=Z,3μm,17.1s					
TIA				LR	LR	
	comp=Z,3μm,17.7s					
TIA				LR	LR	
	comp=Z,5μm,18.3s					
K24K	Donnelly Dome	82.23	13	P	P	05 32 11.9 +0.7
	baz=208,SNR=12					
CNSH	ChangSha	82.23	302	⇑P	P	05 32 12.0 0.0
CNSH				S	S	05 42 26.3 -1.0
CNSH				pmax	pmax	
	comp=Z,17nm,1.2s					
CNSH				LR	LR	
	comp=Z,2μm,18.8s					
CNSH				LR	LR	
	comp=Z,2μm,18.4s					
CNSH				LR	LR	
	comp=Z,3μm,19.7s					
NEA2	Nenana	82.29	11	P	P	05 32 12.2 +0.7
	baz=205					
SEY	Seymchan	82.30	346	LR	LR	06 04 23.8
	comp=Z,7μm,19.9s,baz=152,slow=32					
SEY	Seymchan	82.30	346	⇓iP	P	05 32 12.0 +0.5
SEY				pmax	pmax	
	comp=Z,58nm,1.4s					
SEY				MLR	MLR	
	comp=Z,4μm,18.0s					
I21K	Tanana	82.34	10	IAmb	IAmb	05 32 39.7
	comp=Z,154nm,1.8s					
I21K				IAMs_20	IAMs_20	06 03 22.3
	comp=Z,5μm,20.0s					
I21K	Tanana	82.34	10	P	P	05 32 12.3 +0.6
	baz=202					
DLBC	Dease Lake	82.36	22	LR	LR	06 01 03.0
	comp=Z,7μm,21.5s,baz=236,slow=30					
DLBC	Dease Lake	82.36	22	P	P	05 32 11.6 -0.5
	baz=223					
RIDG	Independent Ri	82.38	13	P	P	05 32 12.0 -0.1
	baz=209					
N30M	Aishikik Lake	82.40	17	P	P	05 32 11.0 -1.2
	baz=216					
MLY	Manley	82.40	10	P	P	05 32 11.6 -0.5
	baz=203					
WHY	Whitehorse	82.42	19	P	P	05 32 12.0 -0.4
	baz=219					
WHY	Whitehorse	82.42	19	⇑P	P	05 32 13.9 +1.5
WHY				⇑P	pwP	05 32 20.8 +1.7
L27K	Beaver Creek,	82.48	15	IAmb	IAmb	05 32 23.3
	comp=Z,104nm,1.7s					
L27K				IAMs_20	IAMs_20	06 01 17.2
	comp=Z,6μm,21.0s					
L27K	Beaver Creek,	82.48	15	P	P	05 32 11.8 -0.8
	baz=212,SNR=18					
HDA	Harding Lake	82.53	12	IAmb	IAmb	05 32 21.2
	comp=Z,55nm,1.1s					
HDA				IAMs_20	IAMs_20	06 01 08.6
	comp=Z,5μm,22.0s					
HDA	Harding Lake	82.53	12	P	P	05 32 12.1 -0.6
	baz=207					
H21K	Melozitna Rive	82.65	9	IAmb	IAmb	05 32 23.5
	comp=Z,58nm,1.4s					
H21K				IAMs_20	IAMs_20	06 06 15.7
	comp=Z,5μm,19.0s					
H21K	Melozitna Rive	82.65	9	P	P	05 32 14.3 +1.0
	baz=201,SNR=9.1					
MSO	Missoula	82.65	37	IAmb	IAmb	05 32 23.4
	comp=Z,96nm,1.4s					
MSO	Missoula	82.65	37	P	P	05 32 14.2 +0.3
	baz=238,SNR=24					
DLMT	Dillon	82.69	39	IAmb	IAmb	05 32 24.6
	comp=Z,91nm,1.2s					
P33M	Teslin, Yukon	82.73	20	P	P	05 32 12.9 -1.0
	baz=221					
R33M	Jennings River	82.73	21	P	P	05 32 12.8 -1.2
	baz=222					
I23K	Minto, Yukon-K	82.75	11	P	P	05 32 13.3 -0.5
	baz=205,SNR=11					
SCRK	Sand Creek	82.77	13	IAmb	IAmb	05 32 23.0
	comp=Z,44nm,1.1s					
SCRK				IAMs_20	IAMs_20	06 01 39.8
	comp=Z,8μm,22.0s					
SCRK	Sand Creek	82.77	13	P	P	05 32 13.8 -0.4
	baz=210					
TCOL	CIGO, UAF Yank	82.77	11	P	P	05 32 13.5 -0.4
	baz=206					
COLA	College	82.78	11	P	P	05 32 13.3 -0.7
COLA	College	82.78	11	⇑iP	P	05 32 14.5 +0.6
COLA				pmax	pmax	
	comp=Z,85nm,2.5s					
COLA				MLR	MLR	
	comp=Z,6μm,18.0s					
COLA	College	82.78	11	P	P	05 32 13.8 -0.1
	baz=206					
COLA	College	82.78	11	P	P	05 32 14.5 +0.6
COLA	College	82.78	11	⇑P	P	05 32 14.5 +0.6
N31M	Braeburn, Yuko	82.80	18	P	P	05 32 13.5 -0.8
	baz=218					
M29M	Somme Creek	82.82	16	P	P	05 32 14.2 -0.3
	baz=215,SNR=17					
ILAR	Eielson Array	82.87	12	P	P	05 32 14.4 -0.1
	comp=Z,7.7nm,1.1s,baz=219,slow=5.1,SNR=24					
ILAR				LR	LR	06 02 04.6
	comp=Z,5μm,21.9s,baz=201,slow=31					
	comp=Z,7.7nm,1.1s					
S22A	4UR Ranch, Cre	82.92	48	IAmb	IAmb	05 32 23.8
	comp=Z,90nm,1.2s					
S22A	4UR Ranch, Cre	82.92	48	P	P	05 32 15.8 0.0
	baz=244,SNR=68					
IMW	Indian Meadow	82.99	41	IAmb	IAmb	05 32 26.4
	comp=Z,63nm,1.1s					
O20A	White River Ci	82.99	45	P	P	05 32 15.2 -0.7
	baz=243,SNR=20					
J25K	Salcha River,	83.03	12	IAMs_20	IAMs_20	06 07 59.8
	comp=Z,5μm,19.0s					
J25K	Salcha River,	83.03	12	P	P	05 32 15.5 +0.1
	baz=208					
MOOW	Moose Ponds	83.04	41	IAmb	IAmb	05 32 26.4
	comp=Z,93nm,1.7s					
LOHW	Long Hollow	83.06	41	IAmb	IAmb	05 32 26.5
	comp=Z,66nm,1.4s					
POKR	Poker Flat Res	83.07	11	P	P	05 32 15.8 +0.3
	baz=207					
H22K	Ishtalitna Cre	83.09	9	P	P	05 32 15.0 -0.6
	baz=203					
FLWY	Flagg Ranch	83.23	41	IAmb	IAmb	05 32 27.8
	comp=Z,47nm,1.2s					
J26L	Joseph Creek	83.32	13	IAMs_20	IAMs_20	06 02 07.4
	comp=Z,8μm,21.0s					
J26L	Joseph Creek	83.32	13	P	P	05 32 17.1 +0.2
	baz=210,SNR=40					
BW06	Boulder Array	83.33	42	IAmb	IAmb	05 32 27.3
	comp=Z,44nm,1.1s					
BW06				IAMs_20	IAMs_20	06 05 02.1
	comp=Z,5μm,19.0s					
BW06	Boulder Array	83.33	42	P	P	05 32 18.0 +0.4
	baz=242,SNR=43					
PD31	Pinedale Array	83.33	42	IAmb	IAmb	05 32 27.3
	comp=Z,43nm,1.1s					
PDAR	Pinedale Array	83.33	42	P	P	05 32 18.3 +0.6
	comp=Z,12nm,0.8s,baz=214,slow=3.1,SNR=89					
PDAR				LR	LR	06 04 54.2
	comp=Z,4μm,18.6s,baz=248,slow=32					
	comp=Z,12nm,0.8s					
H23K	Yukon River	83.33	10	IAmb	IAmb	05 33 11.0
	comp=Z,66nm,1.6s					
H23K				IAMs_20	IAMs_20	06 02 43.7
	comp=Z,5μm,21.0s					
H23K	Yukon River	83.33	10	P	P	05 32 17.1 +0.2
	baz=204					
G21K	Allakaket	83.36	8	P	P	05 32 16.8 -0.2
	baz=201					
N32M	Quiet Lake	83.36	19	P	P	05 32 17.5 +0.4
	baz=220					
M30M	Minto, Yukon	83.38	17	P	P	05 32 17.4 +0.1
	baz=217,SNR=13					
BOZ	Bozeman (W)	83.40	39	P	P	05 32 18.2 +0.3
	baz=240,SNR=28					
SMCO	Snowmass	83.44	46	IAmb	IAmb	05 32 41.5
	comp=Z,61nm,1.2s					
SMCO	Snowmass	83.44	46	⇓P	P	05 32 19.9 +1.4
SMCO				⇓P	P	05 32 19.9 +1.4
L29M	L29M	83.45	16	P	P	05 32 18.1 +0.5
	baz=215,SNR=38					
H17A	Grant Village	83.46	41	IAmb	IAmb	05 32 29.8
	comp=Z,53nm,1.2s					
H17A	Grant Village	83.46	41	P	P	05 32 19.0 +0.7
	baz=241,SNR=15					

YHH	**Holmes Hill**	83.48	40	IAmb	IAmb	05 32 30.4
	comp=Z,72nm,1.3s					
H24K	**Noodor Dome**	83.64	11	P	P	05 32 19.5 +1.0
	baz=206					
SDSI	**Sungai Dareh**	83.67	271	P	P	05 32 18.6 -1.2
	comp=Z,2μmcomp=Z,15nm,1.2s					
M31M	**Drury Creek, Y**	83.78	18	IAmb	IAmb	05 32 29.4
	comp=Z,86nm,1.6s					
M31M	**Drury Creek, Y**	83.78	18	P	P	05 32 20.1 +0.8
	baz=219					
PRP	**Porcupine Dome**	83.80	12	IAMs_20	IAMs_20	06 01 49.1
	comp=Z,5μm,22.0s					
PRP	**Porcupine Dome**	83.80	12	P	P	05 32 19.6 +0.2
	baz=208,SNR=15					
RDOG	**Red Dog Mine**	83.82	4	IAMs_20	IAMs_20	06 10 42.5
	comp=Z,8μm,22.0s					
RDOG	**Red Dog Mine**	83.82	4	P	P	05 32 20.1 +0.8
	baz=192					
WALA	**Waterton Lakes**	83.85	35	IAmb	IAmb	05 32 51.8
	comp=Z,106nm,1.9s					
SDCO	**Great Sand Dun**	83.87	48	IAMs_20	IAMs_20	06 03 07.8
	comp=Z,4μm,20.0s					
SDCO	**Great Sand Dun**	83.87	48	P	P	05 32 21.3 +0.7
	baz=245					
SDCO	**Great Sand Dun**	83.87	48	P	P	05 32 19.5 -1.1
	baz=245					
DAWY	**Dawson**	83.92	15	P	P	05 32 20.4 +0.4
	baz=214,SNR=34					
WTLY	**Watson Lake, Y**	84.01	21	IAmb	IAmb	05 32 30.5
	comp=Z,55nm,1.4s					
WTLY	**Watson Lake, Y**	84.01	21	P	P	05 32 21.4 +0.9
	baz=224					
F21K	**Alatna River**	84.02	8	P	P	05 32 20.8 +0.4
	baz=201					
G22K	**Bettles**	84.03	9	P	P	05 32 21.4 +1.1
	baz=203					
G23K	**Bananza Creek**	84.06	10	P	P	05 32 21.0 +0.4
	baz=204					
EGAK	**Eagle**	84.09	14	P	P	05 32 21.3 +0.5
	baz=212,SNR=14					
I26K	**Coal Creek Min**	84.10	13	IAMs_20	IAMs_20	06 04 33.1
	comp=Z,6μm,20.0s					
I26K	**Coal Creek Min**	84.10	13	P	P	05 32 20.9 +0.1
	baz=211					
FARO	**Faro, Yukon**	84.11	18	IAmb	IAmb	05 32 48.2
	comp=Z,69nm,1.8s					
FARO	**Faro, Yukon**	84.11	18	P	P	05 32 21.3 +0.3
	baz=220					
K29M	**Barlow Dome**	84.21	16	P	P	05 32 21.9 +0.3
	baz=216,SNR=20					
MSTX	**Muleshoe**	84.38	53	P	P	05 32 23.8 +0.7
	baz=247					
MSTX				S	S	05 42 54.1 +5.0
	baz=247					
MSTX	**Muleshoe**	84.38	53	P	P	05 32 23.0 -0.1
	baz=247					
RWWY	**Rawlins**	84.39	44	IAmb	IAmb	05 32 32.8
	comp=Z,77nm,1.2s					
H25K	**Birch Creek**	84.41	11	P	P	05 32 23.3 +1.0
	baz=208					
T25A	**Trinidad**	84.41	49	P	P	05 32 23.4 +0.1
	baz=246					
MAYO	**Mayo, Yukon**	84.45	16	P	P	05 32 22.8 +0.2
	baz=218					
BILL	**Bilibino**	84.47	353	P	P	05 32 21.9 -0.8
BILL	**Bilibino**	84.47	353 *i*	P	P	05 32 23.5 +0.9
BILL				pmax	pmax	
	comp=Z,46nm,1.1s					
BILL				MLR	MLR	
	comp=Z,2μm,18.0s					
F22K	**John River**	84.47	9	P	P	05 32 23.1 +0.4
	baz=202					
HNS	**HongShan**	84.48	311 ⇓	P	P	05 32 24.5 +1.2
HNS				S	S	05 42 49.8 +0.2
HNS				SS	SS	05 48 24.0 +3.3
HNS				pmax	pmax	
	comp=Z,31nm,1.2s					
HNS				LR	LR	
	comp=Z,970nm,20.8s					
HNS				LR	LR	
	comp=Z,5μm,19.5s					
HNS				LR	LR	
	comp=Z,5μm,19.9s					
LIRD	**Liard River Hi**	84.49	23	P	P	05 32 23.7 +0.8
	baz=227					
COLD	**Coldfoot**	84.51	9	P	P	05 32 23.9 +1.0
	baz=204,SNR=27					
J29M	**Klondike Camp**	84.53	15	IAMs_20	IAMs_20	06 06 59.5
	comp=Z,6μm,19.0s					
J29M	**Klondike Camp**	84.53	15	P	P	05 32 23.9 +0.8
	baz=215					
BJT	**Baijiatuau**	84.53	314	P	P	05 32 24.1 +0.5
BJI	**Beijing**	84.54	314	P	P	05 32 23.5 -0.1
BJI				SKS	S	05 42 47.3 -2.9
BJI				SS	SS	05 48 20.0 -1.5
BJI				pmax	pmax	
	comp=Z,31nm,1.1s					
BJI				LR	LR	
	comp=Z,390nm,21.1s					
BJI				LR	LR	
	comp=Z,2μm,21.4s					
BJI				LR	LR	
	comp=Z,5μm,22.7s					
PMSA	**Palmer Station**	84.62	156	LR	LR	06 01 45.1
	comp=Z,5μm,21.0s,baz=242,slow=30					
PMSA	**Palmer Station**	84.62	156	IAMs_20	IAMs_20	06 01 45.3
	comp=Z,5μm,21.0s					
RLMT	**Red Lodge**	84.62	40	IAmb	IAmb	05 32 34.6
	comp=Z,49nm,1.2s					
RLMT	**Red Lodge**	84.62	40	P	P	05 32 24.9 +0.7
	baz=242,SNR=15					
Q24A	**Divide**	84.63	47	P	P	05 32 24.7 +0.2
	baz=245					
ISCO	**Idaho Springs**	84.66	46	S	S	05 42 59.1 +7.0
	baz=245					
I27K	**Kandik River**	84.69	13	P	P	05 32 24.5 +0.6
	baz=212,SNR=13					
FYU	**Fort Yukon**	84.78	11	IAMs_20	IAMs_20	06 05 36.0
	comp=Z,6μm,20.0s					
G25K	**Bearman Lake**	84.80	11	P	P	05 32 26.0 +1.7
	baz=208					
ZEA	**Zeya**	84.82	330	*e*P	P	05 32 25.4 +0.7
ZEA				*e*S	S	05 42 56.4 +4.0
ZEA				pmax	pmax	
	comp=E,100nm,4.0s					
ZEA				pmax	pmax	
	comp=Z,200nm,4.0s					
ZEA				pmax	pmax	
	comp=N,300nm,4.3s					
ZEA				pmax	pmax	
	comp=Z,20nm,1.5s					
ZEA				smax	smax	
	comp=E,800nm,12.9s					
N23A	**Red Feather La**	84.90	45	IAmb	IAmb	05 32 36.0
	comp=Z,59nm,1.1s					
N23A	**Red Feather La**	84.90	45	P	P	05 32 26.3 +0.5
	baz=244					
833A	**Chaparral WMA,**	84.99	59	P	P	05 32 26.9 +0.8
	baz=249					
833A				S	S	05 42 56.1 +0.9
	baz=249					
833A	**Chaparral WMA,**	84.99	59	P	P	05 32 26.0 -0.2
	baz=249					
LYN	**LuoYang**	85.02	308 ⇓ *i*	P	P	05 32 27.0 +0.9
LYN				S	S	05 42 54.8 -0.4
LYN				SS	SS	05 48 32.5 +3.6
LYN				pmax	pmax	
	comp=Z,20nm,1.9s					
LYN				pmax	pmax	
	comp=Z,250nm,3.8s					
LYN				LR	LR	
	comp=Z,2μm,18.2s					
LYN				LR	LR	
	comp=Z,3μm,20.6s					
LYN				LR	LR	
	comp=Z,4μm,23.7s					
MMPY	**Sheldon Lake,**	85.04	19	P	P	05 32 26.5 +0.8
	baz=222,SNR=22					
F24K	**Squaw Lake**	85.15	10	P	P	05 32 27.6 +1.5
	baz=206,SNR=14					
COCO	**West Island**	85.18	259	IAMs_20	IAMs_20	06 09 07.6
	comp=Z,5μm,20.0s					
TGTN	**Hyland Airport**	85.20	20	P	P	05 32 26.5 0.0
	baz=225					
H27K	**Steamboat Moun**	85.25	13	P	P	05 32 28.0 +1.3
	baz=212,SNR=19					
I29M	**Ogilvie Camp,**	85.25	15	IAMs_20	IAMs_20	06 05 15.6
	comp=Z,6μm,20.0s					
I29M	**Ogilvie Camp,**	85.25	15	P	P	05 32 27.6 +0.9
	baz=215,SNR=37					
K22A	**Casper**	85.27	43	IAmb	IAmb	05 32 37.3
	comp=Z,63nm,1.4s					
K22A	**Casper**	85.27	43	P	P	05 32 28.0 +0.6
	baz=244					
K22A	**Casper**	85.27	43	P	P	05 32 28.2 +0.8
	baz=244,SNR=10					
CMIG	**Matias Romero**	85.28	71	P	P	05 32 28.0 +0.2
	comp=Z,14nm,1.1s,baz=266,slow=5.1,SNR=7.2					
CMIG				LR	LR	06 01 51.7
	comp=Z,6μm,20.4s,baz=244,slow=30					
	comp=Z,14nm,1.1s					
E23K	**Chandalar**	85.36	9	P	P	05 32 28.1 +0.8
	baz=204					
G26K	**Porcupine Rive**	85.40	12	P	P	05 32 27.7 +0.4
	baz=210,SNR=50					
PHWY	**Pilot Hill**	85.40	45	IAmb	IAmb	05 32 56.3
	comp=Z,87nm,1.9s					
PHWY				IAMs_20	IAMs_20	06 02 36.2
	comp=Z,5μm,22.0s					
JCT	**Junction City**	85.42	57	P	P	05 32 29.0 +0.7
	baz=249					
JCT				S	S	05 42 58.3 -1.2
	baz=249					
JCT	**Junction City**	85.42	57	P	P	05 32 28.5 +0.2
	baz=249					
IPM	**Ipoh**	85.52	276	P	P	05 32 28.9 -0.2
	comp=Z,994nmcomp=Z,38nm,1.4s					
IPM	**Ipoh**	85.52	276	P	P	05 32 29.5 +0.4
AMTX	**Amarillo**	85.56	52	IAmb	IAmb	05 32 38.5
	comp=Z,63nm,1.3s					
AMTX				IAMs_20	IAMs_20	06 03 38.8
	comp=Z,5μm,20.0s					
AMTX	**Amarillo**	85.56	52	P	P	05 32 29.5 +0.4
	baz=248					
AMTX	**Amarillo**	85.56	52	P	P	05 32 29.4 +0.4
	baz=248					
E24K	**Your Creek**	85.56	10	P	P	05 32 28.6 +0.5
	baz=205					
F25K	**Christian Rive**	85.61	11	P	P	05 32 29.2 +0.7
	baz=208,SNR=14					
EGMT	**Eagleton**	85.71	38	IAmb	IAmb	05 32 38.6
	comp=Z,112nm,1.6s					
EGMT	**Eagleton**	85.71	38	P	P	05 32 30.5 +1.1
	baz=241,SNR=8.2					
G27K	**Doyon Strip**	85.71	13	P	P	05 32 30.0 +1.1
	baz=212,SNR=12					
KOTAN	**Kotaneelee Air**	85.74	23	P	P	05 32 30.3 +1.1
	baz=228					
ENH	**Enshi**	85.80	303	IAmb	IAmb	05 32 54.8
	comp=Z,113nm,1.6s					
ENH	**Enshi**	85.80	303	P	P	05 32 30.1 -0.1
TOLK	**Toolik Lake Re**	85.91	9	IAMs_20	IAMs_20	06 03 48.6
	comp=Z,6μm,22.0s					
TOLK	**Toolik Lake Re**	85.91	9	P	P	05 32 30.8 +0.9
	baz=204,SNR=5.5					
F26K	**Sheenjek River**	85.98	11	P	P	05 32 31.2 +1.0
	baz=210,SNR=17					
D23K	**Nanushuk River**	86.04	9	P	P	05 32 31.0 +0.5
	baz=203					
E25K	**Arctic Village**	86.09	11	P	P	05 32 31.7 +0.9
	baz=208					
KULM	**Kulim**	86.10	277	P	P	05 32 35.4 +3.4
	comp=Z,937nmcomp=Z,34nm,1.6s					
TIY	**Taiyuan**	86.26	311	*e*P	P	05 32 32.8 +0.4
TIY				S	S	05 42 58.3 -9.2
TIY				SS	SS	05 48 47.0 -0.2
TIY				pmax	pmax	
	comp=Z,350nm,6.0s					
TIY				LR	LR	
	comp=Z,2μm,16.7s					
TIY				LR	LR	
	comp=Z,3μm,23.1s					
TIY				LR	LR	
	comp=Z,4μm,25.1s					
XLT	**XiLinHaoTe**	86.26	317	*e*P	P	05 32 32.8 +0.6
XLT				pP	pwP	05 32 37.5 -1.5
XLT				sP	sP	05 32 39.5 +2.1
XLT				SKS	SKSac	05 42 51.3 -7.0
XLT				S	ScS	05 43 14.0 -1.9
XLT				sS	sS	05 43 16.0 +2.5
XLT				SS	SS	05 48 47.5 +0.5
XLT				pmax	pmax	
	comp=Z,22nm,1.5s					
XLT				pmax	pmax	
	comp=Z,800nm,4.6s					
XLT				LR	LR	
	comp=Z,2μm,19.8s					
XLT				LR	LR	
	comp=Z,4μm,23.2s					
H03S2	**Juan Fernandez**	86.31	124	T	T	07 08 07.4
	baz=251,slow=75,SNR=52					
ABTX	**Abilene, Hawle**	86.31	55	P	P	05 32 33.7 +1.0
	baz=249					
ABTX	**Abilene, Hawle**	86.31	55	P	P	05 32 33.4 +0.8
	baz=249					
H03S1	**Juan Fernandez**	86.32	124	T	T	07 08 13.4
	baz=251,slow=75,SNR=57					
H03S3	**Juan Fernandez**	86.32	124	T	T	07 08 09.9
	baz=251,slow=75,SNR=47					
H03N2	**Juan Fernandez**	86.41	124	T	T	07 08 06.8
	baz=257,slow=73,SNR=8.5					
H03N3	**Juan Fernandez**	86.42	124	T	T	07 08 08.1
	baz=257,slow=73,SNR=8.2					
H03N1	**Juan Fernandez**	86.43	124	T	T	07 08 08.6
	baz=257,slow=73,SNR=10					
KSCO	**Kaye Shedlock'**	86.45	48	IAmb	IAmb	05 33 01.3
	comp=Z,88nm,1.9s					
KSCO	**Kaye Shedlock'**	86.45	48	P	P	05 32 34.4 +1.0
	baz=247					
KSCO	**Kaye Shedlock'**	86.45	48	P	P	05 32 33.4 +0.1
	baz=247					
EPYK	**Eagle Plains**	86.46	14	IAMs_20	IAMs_20	06 03 22.4
	comp=Z,6μm,22.0s					
EPYK	**Eagle Plains**	86.46	14	P	P	05 32 32.3 -0.3
	baz=217					
735A	**Kenedy**	86.48	59	IAmb	IAmb	05 32 41.1
	comp=Z,53nm,0.9s					
735A	**Kenedy**	86.48	59	P	P	05 32 35.4 +1.9
	baz=250					
D24K	**Happy Valley**	86.49	9	P	P	05 32 32.8 +0.2
	baz=205					
USHA	**Ushuaia**	86.60	146	LR	LR	06 01 40.8
	comp=Z,5μm,21.8s,baz=246,slow=29					
SKLT	**Songkhla**	86.64	278	P	P	05 32 35.3 +0.7
	comp=Z,1μmcomp=Z,40nm,1.5s					
SKLT	**Songkhla**	86.64	278	P	P	05 32 35.4 +0.8
C23K	**Itkillik River**	86.85	8	P	P	05 32 34.4 -0.1
	baz=203					
GYA	**Guiyang**	86.85	298 ⇓	P	P	05 32 36.3 +0.7
GYA				S	S	05 43 08.0 -5.8
GYA				pmax	pmax	
	comp=Z,23nm,1.6s					
GYA				pmax	pmax	
	comp=Z,400nm,3.5s					
GYA				LR	LR	
	comp=Z,1μm,14.4s					
GYA				LR	LR	
	comp=Z,1μm,23.0s					
GYA				LR	LR	
	comp=Z,2μm,21.0s					
E27K	**Coleen River**	86.90	12	P	P	05 32 35.5 +0.8
	baz=212					
C24K	**Franklin Bluff**	87.02	9	P	P	05 32 36.1 +0.9
	baz=205					
D25K	**Kavik River**	87.02	10	P	P	05 32 36.4 +1.1
	baz=207					
RPSI	**Rantau Prapat**	87.05	274	IAmb	IAmb	05 32 53.0
	comp=Z,56nm,1.4s					
G30M	**tAoh Zraii Nji**	87.07	14	P	P	05 32 37.3 +1.7
	baz=217,SNR=9.3					
PSI	**Prapat**	87.08	274	LR	LR	06 11 41.2
	comp=Z,2μm,20.9s,baz=128,slow=36					
PSI	**Prapat**	87.08	274	P	P	05 32 35.6 -1.4
	comp=Z,905nmcomp=Z,30nm,1.5s,comp=Z,574nm,1.5s,					
	comp=Z,18nm,1.5s					
PSI				P	PcP	05 32 35.7 -3.5
	comp=Z,905nmcomp=Z,30nm,1.5s,comp=Z,574nm,1.5s,					
	comp=Z,18nm,1.5s					
PSI	**Prapat**	87.08	274	P	P	05 32 36.4 -0.6
MAW	**Mawson**	87.20	199	P	P	05 32 36.3 0.0
	comp=Z,11nm,1.1s,baz=100,slow=6.3,SNR=14					
MAW				LR	LR	06 09 12.5
	comp=Z,3μm,20.9s,baz=117,slow=34					
	comp=Z,11nm,1.1s					
MAW	**Mawson**	87.20	199	P	P	05 32 36.6 +0.3
	baz=87,SNR=11					
MAW	**Mawson**	87.20	199	P	P	05 32 35.9 -0.4
MAW	**Mawson**	87.20	199	P	P	05 32 35.9 -0.4
MAW				pmax	pmax	
	comp=Z,7.0nm,1.2s					
LAO	**LASA Array**	87.23	40	IAmb	IAmb	05 32 47.5
	comp=Z,78nm,1.2s					
LAO	**LASA Array**	87.23	40	P	P	05 32 38.0 +1.2
	baz=244					
LAO	**LASA Array**	87.23	40	P	P	05 32 37.6 +0.7
	baz=244,SNR=19					
435B	**Jarrell**	87.31	57	IAmb	IAmb	05 32 44.4
	comp=Z,42nm,1.1s					
435B	**Jarrell**	87.31	57	P	P	05 32 36.9 -0.7
	baz=250					
RSSD	**Black Hills**	87.53	43	P	P	05 32 38.6 0.0
RSSD				IAmb	IAmb	05 33 02.5
	comp=Z,63nm,1.8s					
RSSD	**Black Hills**	87.53	43	P	P	05 32 38.6 0.0
RSSD				pmax	pmax	
	comp=Z,63nm,1.8s					
RSSD	**Black Hills**	87.53	43	P	P	05 32 38.7 +0.1
	baz=246					
RSSD	**Black Hills**	87.53	43	P	P	05 32 37.5 -1.1
	baz=246					
A21K	**Barrow**	87.55	6	IAMs_20	IAMs_20	06 08 30.0
	comp=Z,5μm,20.0s					
CCIG	**Comitan**	87.55	72	IAmb	IAmb	05 32 57.0
	comp=Z,69nm,1.3s					
XAN	**Xi'an**	87.56	306	P	P	05 32 39.0 +0.2
XAN				pP	pwP	05 32 45.5 0.0
XAN				PP	PP	05 36 09.3 +5.2
XAN				S	S	05 43 24.8 +4.6
XAN				SS	SS	05 49 05.0 -1.4
XAN				pmax	pmax	
	comp=Z,35nm,1.2s					
XAN				pmax	pmax	
	comp=Z,270nm,4.0s					
XAN				LR	LR	
	comp=Z,2μm,15.6s					
XAN				LR	LR	
	comp=Z,3μm,19.5s					
XAN				LR	LR	
	comp=Z,4μm,22.9s					
OGNE	**Ogallala**	87.62	46	P	P	05 32 37.8 -1.1
	baz=247					
WMOK	**Wichita Mounta**	87.73	53	IAMs_20	IAMs_20	06 05 55.3
	comp=Z,5μm,19.0s					
COYC	**Coyhaique**	87.73	137	IAMs_20	IAMs_20	06 03 05.6
	comp=Z,5μm,22.0s					
C27K	**Jago River**	87.74	10	P	P	05 32 39.4 +0.6
	baz=210					
C26K	**Camden Bay**	87.79	10	P	P	05 32 39.4 +0.4
	baz=209					
WHTX	**Lake Whitney,**	87.83	56	P	P	05 32 40.3 +0.3
	baz=250					
SRIT	**Nakonsritamara**	88.00	279	P	P	05 32 42.6 +1.4
F31M	**Tsiigehtchic**	88.03	15	P	P	05 32 41.9 +1.8
	baz=219,SNR=15					
HHC	**Hu-ho-hao-te**	88.08	313	*e*P	P	05 32 41.8 +0.6
HHC				PP	PP	05 36 11.3 +3.1
HHC				S	S	05 43 23.8 -1.2
HHC				pmax	pmax	
	comp=Z,8.0nm,0.5s					
HHC				pmax	pmax	
	comp=Z,560nm,6.0s					
HHC				LR	LR	
	comp=Z,4μm,18.1s					
HHC				LR	LR	
	comp=Z,5μm,18.2s					
HHC				LR	LR	
	comp=Z,7μm,18.6s					
U32A	**Winter Ranch,**	88.14	52	IAmb	IAmb	05 32 48.0
	comp=Z,32nm,1.0s					
OK038	**West end E0370**	88.37	52	IAMs_20	IAMs_20	06 05 20.1
	comp=Z,5μm,20.0s					
KCSI	**Kotacane, Aceh**	88.38	274	P	P	05 32 42.8 -0.3
	comp=Z,1μmcomp=Z,38nm,1.6s					
CBKS	**Cedar Bluff**	88.46	49	IAmb	IAmb	05 32 52.6
	comp=Z,34nm,1.3s					
CBKS				IAMs_20	IAMs_20	06 06 03.4
	comp=Z,4μm,20.0s					
CBKS	**Cedar Bluff**	88.46	49	P	P	05 32 43.5 +0.6
	baz=249					
CBKS	**Cedar Bluff**	88.46	49	P	P	05 32 43.0 0.0
	baz=249					
HKT	**Hockley**	88.47	58	P	P	05 32 43.8 +0.8
HKT	**Hockley**	88.47	58	IAMs_20	IAMs_20	06 06 33.4
	comp=Z,5μm,20.0s					
HKT	**Hockley**	88.47	58	P	P	05 32 43.8 +0.8
HKT				pmax	pmax	
	comp=Z,109nm,1.8s					
HKT	**Hockley**	88.47	58	P	P	05 32 44.7 +1.6
	baz=251					
OK035	**E0210 Rd and N**	88.47	51	IAMs_20	IAMs_20	06 06 02.9
	comp=Z,5μm,20.0s					
YAK	**Yakutsk**	88.69	337	LR	LR	06 09 02.2
	comp=Z,3μm,20.0s,baz=101,slow=33					
YAK	**Yakutsk**	88.69	337 *ce*P	P	P	05 32 41.8 -1.5
YAK				pmax	pmax	
	comp=Z,21nm,1.0s					
YAK				MLR	MLR	
	comp=Z,2μm,17.0s					
LL02	**Futaleuf**	88.70	135	P	P	05 32 43.4 -0.7
LL02				IAmb	IAmb	05 32 55.8
	comp=Z,56nm,1.4s					
INK	**Inuvik**	88.75	14	LR	LR	06 05 46.9
	comp=Z,4μm,21.1s,baz=216,slow=31					
INK	**Inuvik**	88.75	14	IAmb	IAmb	05 32 52.8
	comp=Z,64nm,1.5s					
INK	**Inuvik**	88.75	14	P	P	05 32 44.3 +0.8
	baz=220					
OK032	**Salt Plains WL**	88.88	51		P	05 32 43.7 -1.2
OK032				IAMs_20	IAMs_20	06 05 36.7
	comp=Z,6μm,20.0s					
FNO	**Franklin**	88.97	53		P	05 32 44.3 -1.1
FNO				IAmb	IAmb	05 32 53.2
	comp=Z,43nm,1.2s					
R32A	**Long Quarter,**	89.07	50	IAmb	IAmb	05 32 53.6
	comp=Z,39nm,1.2s					
BTO	**Baotou**	89.08	313	*e*P	P	05 32 47.5 +1.6
BTO				LR	LR	
	comp=Z,6μm,16.7s					
BTO				LR	LR	
	comp=Z,9μm,21.4s					
LL04	**Puerto Octay**	89.08	132	P	P	05 32 46.6 +0.7
LL04				IAmb	IAmb	05 32 57.4
	comp=Z,73nm,1.8s					
OK029	**Liberty Lake**	89.11	53	IAMs_20	IAMs_20	06 06 30.9
	comp=Z,5μm,20.0s					
OK025	**Westminster Rd**	89.13	53	IAMs_20	IAMs_20	06 05 21.3
	comp=Z,4μm,20.0s					
DGMT	**Dagmar**	89.23	39	IAMs_20	IAMs_20	06 07 11.5
	comp=Z,5μm,20.0s					
DGMT	**Dagmar**	89.23	39	P	P	05 32 47.6 +1.3
	baz=245					
DGMT	**Dagmar**	89.23	39	P	P	05 32 47.7 +1.3
	baz=245					
OK049	**E0420 Rd and N**	89.43	52	IAMs_20	IAMs_20	06 06 51.3
	comp=Z,6μm,20.0s					
OK033	**Mehan**	89.59	52	IAMs_20	IAMs_20	06 07 23.5
	comp=Z,6μm,20.0s					
MTO3	**Montecristo**	89.59	75	IAmb	IAmb	05 32 59.4
	comp=Z,74nm,1.7s					
OK031	**S. Brethren Rd**	89.63	53	IAMs_20	IAMs_20	06 05 57.7
	comp=Z,5μm,20.0s					
OK050	**Pawnee Station**	89.67	52	IAMs_20	IAMs_20	06 07 27.7
	comp=Z,6μm,20.0s					
OK048	**Pawnee Station**	89.71	52	IAMs_20	IAMs_20	06 06 49.7
	comp=Z,6μm,20.0s					
OK046	**Pawnee Station**	89.73	52	IAMs_20	IAMs_20	06 07 38.2
	comp=Z,6μm,19.0s					
OK045	**Pawnee Station**	89.73	52	IAMs_20	IAMs_20	06 07 29.3
	comp=Z,6μm,19.0s					
OK034	**N. Norfolk Rd.**	89.75	53	IAMs_20	IAMs_20	06 07 28.8
	comp=Z,5μm,20.0s					
OK044	**Pawnee Station**	89.81	52	IAMs_20	IAMs_20	06 07 31.2
	comp=Z,6μm,19.0s					
KMI	**Kunming**	89.81	296 ⇓	P	P	05 32 51.3 +1.5
KMI				pP	pwP	05 32 56.0 -0.5
KMI				SKS	SKSac	05 43 22.3 +1.5
KMI				S	ScS	05 43 48.5 +2.1
KMI				pmax	pmax	
	comp=Z,24nm,1.8s					
KMI				pmax	pmax	
	comp=Z,280nm,4.4s					
KMI				LR	LR	
	comp=Z,2μm,20.4s					

KMI					LR	LR			
	comp=Z,3μm,24.0s								
KMI					LR	LR			
	comp=Z,4μm,24.0s								
OK051	**E0350 and S346**	**89.82**	**52**		IAMs_20	IAMs_20	06 07 12.6		
	comp=Z,6μm,20.0s								
NATX	**Nacogdoches**	**90.00**	**57**		P	**P**	**05 32 50.4**	**+0.2**	
	baz=252								
SRDT	**SRDT**	**90.02**	**285**		P	**P**	**05 32 50.0**	**-0.7**	
	comp=Z,15nm,1.8s								
SRDT	**SRDT**	**90.02**	**285**		P	**P**	**05 32 51.3**	**+0.6**	
TUL1	**Leonard**	**90.42**	**53**		IAMs_20	IAMs_20	06 06 32.6		
	comp=Z,4μm,20.0s								
TUL1	**Leonard**	**90.42**	**53**		P	**P**	**05 32 52.1**	**-0.1**	
	baz=251								
PLCA	**Paso Flores**	**90.47**	**133**		P	**P**	**05 32 52.0**	**-0.5**	
	comp=Z,1.0nm,0.9s,baz=268,slow=9.5,SNR=2.7								
PLCA					LR	LR	06 05 22.9		
	comp=Z,5μm,21.2s,baz=242,slow=30								
	comp=Z,1.0nm,0.9s								
BGNE	**Belgrade**	**90.52**	**47**		IAmb	IAmb	05 33 23.1		
	comp=Z,27nm,0.9s								
BGNE	**Belgrade**	**90.52**	**47**		P	**P**	**05 32 52.4**	**-0.1**	
	baz=250								
K31A	**O'Neill**	**90.52**	**46**		IAmb	IAmb	05 33 08.0		
	comp=Z,33nm,1.1s								
K31A	**O'Neill**	**90.52**	**46**		P	**P**	**05 32 53.6**	**+1.1**	
	baz=249								
CD2	**Chengdu**	**90.67**	**302**		P	**P**	**05 32 53.3**	**-0.2**	
CD2					S	**S**	**05 43 50.0**	**+0.5**	
CD2					SS	**SS**	**05 49 50.5**	**-1.2**	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CD2					pmax	pmax			
	comp=Z,190nm,5.7s								
CD2					LR	LR			
	comp=Z,2μm,20.6s								
CD2					LR	LR			
	comp=Z,3μm,21.6s								
CD2					LR	LR			
	comp=Z,4μm,18.6s								
YKA	**Yellowknife Ar**	**90.80**	**24**		P	**P**	**05 32 54.1**	**+0.9**	
	comp=Z,2.7nm,0.9s,baz=242,slow=4.0,SNR=6.5								
YKA					LR	LR	06 10 30.1		
	comp=Z,5μm,18.3s,baz=237,slow=33								
	comp=Z,2.7nm,0.9s								
KSU1	**Kansas State U**	**90.85**	**50**		IAMs_20	IAMs_20	06 06 47.6		
	comp=Z,5μm,20.0s								
PZH	**PanZhiHua**	**91.07**	**297**		P	**P**	**05 32 55.3**	**-0.2**	
PZH					SKS	**SKSac**	**05 43 28.5**	**+0.7**	
PZH					S	**S**	**05 43 54.5**	**+1.0**	
PZH					SS	**SS**	**05 50 02.0**	**+4.3**	
PZH					pmax	pmax			
	comp=Z,10.0nm,1.1s								
PZH					pmax	pmax			
	comp=Z,680nm,5.5s								
PZH					LR	LR			
	comp=Z,1μm,21.2s								
PZH					LR	LR			
	comp=Z,1μm,18.6s								
PZH					LR	LR			
	comp=Z,2μm,22.9s								
CM31	**Chiang Mai Arr**	**91.31**	**289**		P	**P**	**05 32 58.2**	**+1.6**	
CMAR	**Chiang Mai Arr**	**91.31**	**289**		P	**P**	**05 32 56.9**	**+0.3**	
	comp=Z,0.8nm,0.3s,baz=99,slow=2.5,SNR=7.8								
CMAR					LR	LR	06 12 26.7		
	comp=Z,993nm,19.5s,baz=125,slow=35								
	comp=Z,0.8nm,0.3s								
CMAR	**Chiang Mai Arr**	**91.31**	**289**	*i*	P	**P**	**05 32 57.5**	**+0.9**	
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
TGUH	**Tegucigalpa,Un**	**91.44**	**76**		IAMs_20	IAMs_20	06 04 23.8		
	comp=Z,6μm,21.0s								
U38A	**Gravette**	**91.67**	**53**		IAmb	IAmb	05 33 06.3		
	comp=Z,56nm,1.8s								
U38A	**Gravette**	**91.67**	**53**		P	**P**	**05 32 58.4**	**+0.4**	
	baz=252								
MIAR	**Mount Ida**	**91.72**	**55**		IAmb	IAmb	05 33 08.0		
	comp=Z,47nm,1.6s								
MIAR	**Mount Ida**	**91.72**	**55**		P	**P**	**05 32 58.2**	**0.0**	
	baz=252								
MDND	**Maddock**	**91.82**	**41**		P	**P**	**05 32 58.4**	**0.0**	
	baz=249								
WLAR	**White Oak Lake**	**91.83**	**56**		IAmb	IAmb	05 33 06.3		
	comp=Z,52nm,1.1s								
C36M	**Paulatuk**	**91.89**	**16**		P	**P**	**05 32 59.2**	**+1.1**	
	baz=228								
HHAR	**Hobbs**	**91.96**	**53**		P	**P**	**05 32 59.9**	**+0.6**	
	baz=252								
LZH	**Lanzhou**	**92.17**	**307**	⇓	P	**P**	**05 33 01.5**	**+1.1**	
LZH					pP	pwP	05 33 11.5	+4.3	
LZH					SKS	**SKSac**	**05 43 34.0**	**+0.3**	
LZH					S	**ScS**	**05 44 05.0**	**-0.5**	
LZH					pmax	pmax			
	comp=Z,27nm,1.0s								
LZH					LR	LR			
	comp=Z,2μm,17.9s								
LZH					LR	LR			
	comp=Z,3μm,17.5s								
LZH					LR	LR			
	comp=Z,3μm,18.2s								
MT01	**Popeta**	**92.36**	**126**		P	**P**	**05 33 00.9**	**-0.4**	
ECSD	**EROS Data Cent**	**92.37**	**45**		IAmb	IAmb	05 33 10.8		
	comp=Z,37nm,1.4s								
ECSD	**EROS Data Cent**	**92.37**	**45**		IAMs_20	IAMs_20	06 07 07.6		
	comp=Z,5μm,22.0s								
ECSD	**EROS Data Cent**	**92.37**	**45**		P	**P**	**05 33 01.1**	**+0.1**	
	baz=251								
MATN	**Matagalpa**	**92.41**	**77**		P	**P**	**05 33 02.3**	**+0.4**	
JTS	**Las Juntas de**	**92.64**	**80**		P	**P**	**05 33 02.4**	**-0.5**	
	comp=Z,9.0nm,0.9s,baz=270,slow=3.1,SNR=4.0								
JTS					LR	LR	06 05 22.6		
	comp=Z,6μm,20.4s,baz=313,slow=30								
	comp=Z,9.0nm,0.9s								
JTS	**Las Juntas de**	**92.64**	**80**		P	**P**	**05 33 02.5**	**-0.4**	
JTS	**Las Juntas de**	**92.64**	**80**		IAMs_20	IAMs_20	06 05 09.5		
	comp=Z,6μm,20.0s								
JTS	**Las Juntas de**	**92.64**	**80**	*e*	P	**P**	**05 33 02.8**	**-0.1**	
JTS					pmax	pmax			
	comp=Z,32nm,1.6s								
JTS					MLR	MLR			
	comp=Z,2μm,16.0s								
TROLL	**Troll, Antarti**	**92.64**	**179**		P	**P**	**05 33 02.2**	**+0.2**	
SNAA	**Sanae**	**92.83**	**177**		P	**P**	**05 33 02.8**	**0.0**	
SNAA	**Sanae**	**92.83**	**177**		LR	LR	06 09 38.2		
	comp=Z,7μm,21.8s,baz=195,slow=32								
SNAA	**Sanae**	**92.83**	**177**		P	**P**	**05 33 01.9**	**-0.9**	
SNAA					IAmb	IAmb	05 33 09.4		
	comp=Z,35nm,1.6s								
SNAA	**Sanae**	**92.83**	**177**	⇑ *e*	P	**P**	**05 33 03.0**	**+0.2**	
SNAA					pmax	pmax			
	comp=Z,24nm,1.6s								
SNAA					MLR	MLR			
	comp=Z,2μm,18.0s								
VNA3	**Neumayer Olymp**	**92.84**	**175**		P	**P**	**05 33 02.1**	**-0.6**	
S39A	**Bolivar**	**92.86**	**52**		IAmb	IAmb	05 33 14.3		
	comp=Z,64nm,2.0s								
S39A	**Bolivar**	**92.86**	**52**		P	**P**	**05 33 03.9**	**+0.5**	
	baz=253								
344A	**Westbrook Farm**	**93.11**	**58**		IAmb	IAmb	05 33 15.6		
	comp=Z,49nm,1.2s								
F33A	**5 Mile Ranch,**	**93.27**	**43**		IAmb	IAmb	05 33 13.8		
	comp=Z,43nm,1.4s								
F33A	**5 Mile Ranch,**	**93.27**	**43**		P	**P**	**05 33 05.4**	**+0.3**	
	baz=251								
VNA2	**Neumayer--Watz**	**93.32**	**176**		P	**P**	**05 33 02.8**	**-2.1**	
	baz=184,slow=2.1								
HDC	**Heredia**	**93.36**	**81**		IAMs_20	IAMs_20	06 04 20.7		
	comp=Z,5μm,22.0s								
A36M	**Sachs Harbour**	**93.38**	**14**		IAMs_20	IAMs_20	06 09 56.2		
	comp=Z,4μm,20.0s								
A36M	**Sachs Harbour**	**93.38**	**14**		P	**P**	**05 33 05.6**	**+0.7**	
	baz=227								
VBMS	**Vicksburg**	**93.50**	**58**		P	**P**	**05 33 06.1**	**-0.3**	
	baz=254								
MGMO	**Mountain Grove**	**93.50**	**53**		IAmb	IAmb	05 33 13.1		
	comp=Z,48nm,1.1s								
VNA1	**Neumayer--Stat**	**93.52**	**176**		P	**P**	**05 33 06.6**	**+0.7**	
ULN	**Ulaanbaatar**	**93.60**	**319**		P	**P**	**05 33 07.1**	**+0.3**	
ULN	**Ulaanbaatar**	**93.60**	**319**	*ce*	P	**P**	**05 33 07.3**	**+0.5**	
ULN					pmax	pmax			
	comp=Z,7.0nm,1.3s								
ULN	**Ulaanbaatar**	**93.60**	**319**		P	**P**	**05 33 06.9**	**+0.2**	
ULN	**Ulaanbaatar**	**93.60**	**319**		P	**P**	**05 33 06.8**	**0.0**	
NVL	**N'lazarevskaya**	**93.78**	**182**	*e*	P	**P**	**05 33 06.1**	**-1.0**	
NVL				*e*	S	**SKSac**	**05 43 41.8**	**+0.6**	
NVL				*e*	SSS	SSS	05 54 24.8		
NVL					pmax	pmax			
	comp=Z,14nm,1.1s								
NVL					MLR	MLR			
	comp=Z,2μm,18.0s								
R40A	**Maddies Statio**	**93.83**	**51**		IAmb	IAmb	05 33 14.3		
	comp=Z,37nm,1.1s								
R40A	**Maddies Statio**	**93.83**	**51**		P	**P**	**05 33 08.2**	**+0.3**	
	baz=253								
N38A	**Joes South For**	**93.84**	**49**		IAmb	IAmb	05 33 14.3		
	comp=Z,45nm,1.1s								
SONM	**Songino Array**	**94.00**	**319**		P	**P**	**05 33 06.9**	**-1.7**	
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=5.8								
SONM					LR	LR	06 10 35.6		
	comp=Z,3μm,21.6s,baz=107,slow=32								
	comp=Z,0.5nm,0.5s								
LCAR	**Lake Charles**	**94.06**	**54**		IAmb	IAmb	05 33 18.0		
	comp=Z,62nm,1.8s								
SCIA	**State Center**	**94.18**	**48**		IAMs_20	IAMs_20	06 08 49.7		
	comp=Z,4μm,20.0s								
SCIA	**State Center**	**94.18**	**48**		P	**P**	**05 33 09.3**	**-0.1**	
	baz=253								
ATAH	**Atahualpa**	**94.31**	**99**		LR	LR	06 05 59.8		
	comp=Z,8μm,21.4s,baz=258,slow=29								
AGMN	**Agassiz Nation**	**94.34**	**41**		IAmb	IAmb	05 33 18.3		
	comp=Z,44nm,1.4s								
AGMN					IAMs_20	IAMs_20	06 11 55.3		
	comp=Z,5μm,19.0s								
AGMN	**Agassiz Nation**	**94.34**	**41**		P	**P**	**05 33 09.7**	**-0.2**	
	baz=252								
AGMN	**Agassiz Nation**	**94.34**	**41**		P	**P**	**05 33 09.8**	**-0.2**	
	baz=252								
P40A	**Paris**	**94.35**	**50**		IAmb	IAmb	05 33 16.3		
	comp=Z,31nm,1.1s								
P40A	**Paris**	**94.35**	**50**		P	**P**	**05 33 09.4**	**-0.8**	
	baz=254								
NNA	**Nana**	**94.41**	**104**		LR	LR	06 06 18.8		
	comp=Z,2μm,21.1s,baz=250,slow=30								
LCO	**Las Campanas**	**94.49**	**122**		IAMs_20	IAMs_20	06 04 56.4		
	comp=Z,4μm,22.0s								
CCM	**Cathedral Cave**	**94.54**	**52**		P	**P**	**05 33 10.7**	**-0.4**	
CCM	**Cathedral Cave**	**94.54**	**52**		IAMs_20	IAMs_20	06 10 27.5		
	comp=Z,5μm,19.0s								
CCM	**Cathedral Cave**	**94.54**	**52**		P	**P**	**05 33 10.7**	**-0.4**	
CCM					pmax	pmax			
	comp=Z,15nm,1.1s								
CCM	**Cathedral Cave**	**94.54**	**52**		P	**P**	**05 33 10.4**	**-0.7**	
	baz=254								
CCM	**Cathedral Cave**	**94.54**	**52**		P	**P**	**05 33 10.5**	**-0.6**	
	baz=254								
TIXI	**Tiksi**	**94.76**	**345**		LR	LR	06 10 31.2		
	comp=Z,6μm,21.8s,baz=90,slow=32								
TIXI	**Tiksi**	**94.76**	**345**		P	**P**	**05 33 09.6**	**-1.7**	
TIXI					IAmb	IAmb	05 33 23.5		
	comp=Z,46nm,1.7s								
TIXI	**Tiksi**	**94.76**	**345**	*ce*	P	**P**	**05 33 11.5**	**+0.2**	
TIXI					pmax	pmax			
	comp=Z,26nm,2.8s								
TIXI					MLR	MLR			
	comp=Z,2μm,19.0s								
ULM	**Lac du Bonnet**	**94.94**	**39**		P	**P**	**05 33 11.8**	**-0.9**	
	comp=Z,2.9nm,0.7s,baz=241,slow=5.3,SNR=2.0								
ULM					LR	LR	06 11 15.7		
	comp=Z,4μm,18.8s,baz=258,slow=32								
	comp=Z,2.9nm,0.7s								
ULM	**Lac du Bonnet**	**94.94**	**39**		IAmb	IAmb	05 33 21.2		
	comp=Z,61nm,1.6s								
OXF	**Oxford**	**95.01**	**56**		IAMs_20	IAMs_20	06 11 25.3		
	comp=Z,5μm,19.0s								
OXF	**Oxford**	**95.01**	**56**		P	**P**	**05 33 13.0**	**-0.4**	
	baz=255								
F36A	**Milaca**	**95.12**	**44**		IAmb	IAmb	05 33 22.7		
	comp=Z,33nm,1.1s								
F36A	**Milaca**	**95.12**	**44**		P	**P**	**05 33 13.8**	**+0.2**	
	baz=253								
W45A	**Hickory Valley**	**95.36**	**55**		P	**P**	**05 33 16.0**	**+1.1**	
	baz=255								
SPMN	**Marine on St.**	**95.42**	**45**		IAmb	IAmb	05 33 24.0		
	comp=Z,40nm,1.3s								
SPMN	**Marine on St.**	**95.42**	**45**		P	**P**	**05 33 15.5**	**+0.5**	
	baz=254								
SPMN	**Marine on St.**	**95.42**	**45**		P	**P**	**05 33 14.2**	**-0.8**	
	baz=254								
L40A	**Anamosa**	**95.65**	**48**		IAmb	IAmb	05 33 22.4		
	comp=Z,34nm,1.1s								
L40A	**Anamosa**	**95.65**	**48**		P	**P**	**05 33 16.5**	**+0.4**	
	baz=254								
GTA	**Gaotai**	**96.16**	**309**	⇓	P	**P**	**05 33 18.8**	**+0.1**	
GTA					pP	pwP	05 33 23.5	-1.9	
GTA					sP	sP	05 33 26.0	+2.1	
GTA					PP	**PP**	**05 37 13.5**	**+1.6**	
GTA					S	**S**	**05 44 39.3**	**+1.4**	
GTA					sS	sS	05 44 46.5	+2.2	
GTA					SS	**SS**	**05 51 10.0**	**-0.1**	
GTA					pmax	pmax			
	comp=Z,8.0nm,1.3s								
GTA					pmax	pmax			
	comp=Z,77nm,5.1s								
GTA					LR	LR			
	comp=Z,2μm,18.5s								
GTA					LR	LR			
	comp=Z,4μm,24.0s								
GTA					LR	LR			
	comp=Z,6μm,24.0s								
I40A	**Norwalk**	**96.56**	**46**		IAmb	IAmb	05 33 21.3		
	comp=Z,28nm,1.1s								
I40A	**Norwalk**	**96.56**	**46**		P	**P**	**05 33 20.3**	**+0.1**	
	baz=255								
JFWS	**Jewell Farm**	**96.57**	**47**		IAmb	IAmb	05 37 14.3		
	comp=Z,39nm,1.4s								
JFWS	**Jewell Farm**	**96.57**	**47**		IAMs_20	IAMs_20	06 10 33.9		
	comp=Z,5μm,20.0s								
JFWS	**Jewell Farm**	**96.57**	**47**		P	**P**	**05 33 19.8**	**-0.5**	
	baz=255								
LRAL	**Lakeview Retre**	**96.58**	**58**		P	**P**	**05 33 19.5**	**-1.0**	
	baz=256								
HDIL	**Hopedale**	**96.66**	**50**		IAMs_20	IAMs_20	06 10 59.5		
	comp=Z,5μm,20.0s								
HDIL	**Hopedale**	**96.66**	**50**		P	**P**	**05 33 20.5**	**-0.2**	
	baz=255								
WVT	**Waverly**	**96.67**	**54**		IAMs_20	IAMs_20	06 10 56.2		
	comp=Z,5μm,20.0s								
WVT	**Waverly**	**96.67**	**54**		P	**P**	**05 33 20.7**	**-0.1**	
	baz=256								
EYMN	**Ely**	**97.03**	**42**		IAMs_20	IAMs_20	06 13 52.8		
	comp=Z,3μm,19.0s								
L44A	**Lake County Fo**	**98.06**	**49**		IAMs_20	IAMs_20	06 16 58.5		
	comp=Z,3μm,18.0s								
COWI	**Conover**	**98.13**	**45**		IAMs_20	IAMs_20	06 12 54.0		
	comp=Z,5μm,19.0s								
LVC	**Limon Verde**	**98.23**	**116**		LR	LR	06 09 00.5		
	comp=Z,2μm,21.0s,baz=251,slow=30								
WCI	**Wyandotte Cave**	**98.36**	**53**		IAMs_20	IAMs_20	06 11 29.7		
	comp=Z,4μm,20.0s								
GOGA	**Godfrey**	**99.55**	**58**		P	**Pdif**	**05 33 33.7**	**-0.2**	
	baz=258								
O48B	**Farmland**	**99.66**	**51**		P	**Pdif**	**05 33 33.8**	**-0.4**	
	baz=258								
TKL	**Tuckaleechee C**	**99.77**	**56**		LR	LR	06 14 51.2		
	comp=Z,2μm,18.1s,baz=254,slow=33								
P49A	**Miami Univ. Ec**	**99.84**	**52**		IAMs_20	IAMs_20	06 13 59.9		
	comp=Z,4μm,19.0s								
TZTN	**Tazewell**	**100.13**	**55**		IAMs_20	IAMs_20	06 12 54.8		
	comp=Z,4μm,20.0s								
GLMI	**Grayling**	**100.97**	**46**		IAMs_20	IAMs_20	06 16 56.1		
	comp=Z,4μm,19.0s								
AAM	**Ann Arbor**	**101.18**	**49**		IAMs_20	IAMs_20	06 18 20.0		
	comp=Z,3μm,19.0s								
ACSO	**Alum Creek Sta**	**101.29**	**51**		IAMs_20	IAMs_20	06 13 21.1		
	comp=Z,6μm,20.0s								
P52A	**Corning**	**101.82**	**52**		IAMs_20	IAMs_20	06 13 19.3		
	comp=Z,5μm,21.0s								
HOPE	**Hope Point**	**101.94**	**157**		IAMs_20	IAMs_20	06 12 15.1		
	comp=Z,6μm,21.0s								
O53A	**New Philadelph**	**102.62**	**52**		IAMs_20	IAMs_20	06 14 02.5		
	comp=Z,4μm,19.0s								
BLA	**Blacksburg**	**102.72**	**55**		IAMs_20	IAMs_20	06 14 35.4		
	comp=Z,4μm,21.0s								
MCWV	**Mont Chateau**	**103.57**	**52**		IAMs_20	IAMs_20	06 14 03.5		
	comp=Z,4μm,20.0s								
ERPA	**Erie**	**103.83**	**50**		IAMs_20	IAMs_20	06 15 20.3		
	comp=Z,4μm,21.0s								
CNNC	**Cliffs of the**	**104.42**	**57**		IAMs_20	IAMs_20	06 20 31.5		
	comp=Z,3μm,19.0s								
SSPA	**Standing Stone**	**105.19**	**52**		IAMs_20	IAMs_20	06 16 04.5		
	comp=Z,5μm,19.0s								
CBN	**Corbin Frederi**	**105.26**	**54**		IAMs_20	IAMs_20	06 16 15.6		
	comp=Z,5μm,20.0s								
PALK	**Pallekele**	**105.76**	**273**		IAMs_20	IAMs_20	06 25 58.9		
	comp=Z,3μm,20.0s								
WMQ	**Urumqi**	**105.90**	**312**		Pdif	**Pdif**	**05 34 02.8**	**+0.8**	
WMQ					PP	**PP**	**05 38 25.8**	**+0.4**	
WMQ					S		05 46 03.8		
WMQ					AMB	AMB			
	comp=Z,200nm,4.5s								
WMQ					LR	LR			
	comp=Z,2μm,20.9s								
WMQ					LR	LR			
	comp=Z,2μm,20.9s								
WMQ					LR	LR			
	comp=Z,2μm,22.1s								
BINY	**Binghamton**	**106.80**	**50**		IAMs_20	IAMs_20	06 17 21.7		
	comp=Z,5μm,20.0s								
LONY	**Lake Ozonia**	**108.03**	**48**		IAMs_20	IAMs_20	06 17 32.1		
	comp=Z,3μm,20.0s								
PAL	**Palisades**	**108.23**	**51**		IAMs_20	IAMs_20	06 18 07.0		
	comp=Z,5μm,20.0s								
TRY	**Troy**	**108.55**	**50**		IAMs_20	IAMs_20	06 18 16.2		
	comp=Z,4μm,20.0s								
TULEG	**Thule**	**108.75**	**14**		IAMs_20	IAMs_20	06 22 33.3		
	comp=Z,5μm,20.0s								
YLE	**Yale**	**108.99**	**51**		IAMs_20	IAMs_20	06 20 55.2		
	comp=Z,4μm,19.0s								
VT1	**Waterbury**	**109.31**	**48**		IAMs_20	IAMs_20	06 18 02.2		
	comp=Z,3μm,20.0s								
HNH	**Hanover**	**109.62**	**49**		IAMs_20	IAMs_20	06 17 18.3		
	comp=Z,4μm,22.0s								
LBNH	**Lisbon**	**109.90**	**48**		IAMs_20	IAMs_20	06 18 29.8		
	comp=Z,4μm,21.0s								
MKAR	**Makanchi Array**	**109.91**	**315**		PKiKP	**PKiKP**	**05 38 20.6**	**-1.2**	
	comp=Z,0.8nm,0.7s,baz=70,slow=1.4,SNR=5.4								
HYBB	**Hyderabad (bro**	**109.98**	**283**	*e*	PKiKP	**PKiKP**	**05 38 22.2**	**-0.5**	
HYBB				*e*	PP	**PP**	**05 38 54.5**	**-1.3**	
HYBB				*e*	SKPdf	**SKiKP**	**05 41 56.7**	**-1.3**	
HYBB				*e*	SKSac	**SKSac**	**05 44 57.9**	**-2.7**	
HYBB				*e*	SKKSdf	**SKKSdf**	**05 56 50.1**	**-3.3**	
FFD	**Franklin Falls**	**110.07**	**49**		IAMs_20	IAMs_20	06 20 22.2		
	comp=Z,4μm,19.0s								
HRV	**Adam Dziewonsk**	**110.09**	**50**		IAMs_20	IAMs_20	06 19 48.9		
	comp=Z,4μm,19.0s								
KAAM	**Kaadhehdhoo**	**111.43**	**264**		IAMs_20	IAMs_20	06 22 06.5		
	comp=Z,4μm,21.0s								
WVL	**Waterville**	**111.54**	**48**		IAMs_20	IAMs_20	06 21 15.0		
	comp=Z,4μm,19.0s								
PKME	**Peaks-Kenny Pk**	**111.81**	**47**		IAMs_20	IAMs_20	06 21 18.0		
	comp=Z,4μm,20.0s								
KURK	**Kurchatov**	**112.31**	**319**	*i*	PKiKP	**PKiKP**	**05 38 24.9**	**-1.3**	
KURBB	**Kurchatov Arra**	**112.37**	**319**		PKiKP	**PKiKP**	**05 38 24.9**	**-1.4**	
	comp=Z,1.6nm,0.8s,baz=100,slow=1.7,SNR=6.4								
ROCAM	**Rodrigues Isla**	**112.85**	**240**		IAMs_20	IAMs_20	06 23 32.5		
	comp=Z,4μm,19.0s								
EMMW	**East Machias**	**113.11**	**48**		IAMs_20	IAMs_20	06 23 05.6		
	comp=Z,4μm,20.0s								
KSH	**Kashi**	**114.42**	**307**		PKP	**PKiKP**	**05 38 36.0**	**+5.3**	
KSH					PP	PP	05 39 42.8	+16	
KSH	**Kashi**	**114.42**	**307**		SS	SS	05 55 22.3	+2.6	
AAK	**Ala-Archa**	**115.49**	**310**		IAMs_20	IAMs_20	06 23 39.4		
	comp=Z,4μm,21.0s								
TDBA	**Terre de Bas,**	**116.00**	**80**		IAMs_20	IAMs_20	06 20 21.6		
	comp=Z,4μm,21.0s								
CBE	**Ff, Capester**	**116.06**	**79**		IAMs_20	IAMs_20	06 20 42.1		
	comp=Z,3μm,20.0s								
BIM	**Bigot**	**116.31**	**81**		IAMs_20	IAMs_20	06 19 17.8		
	comp=Z,3μm,21.0s								
MAGL	**Barre de l'ile**	**116.35**	**80**		IAMs_20	IAMs_20	06 20 40.9		
	comp=Z,3μm,21.0s								
MPOM	**Morne Pois Mar**	**116.50**	**81**		IAMs_20	IAMs_20	06 19 33.7		
	comp=Z,3μm,21.0s								
KBS	**Kingsbay**	**116.51**	**359**		IAMs_20	IAMs_20	06 21 28.4		
	comp=Z,3μm,22.0s								
ILAM	**Ilet Lapin Mar**	**116.54**	**81**		IAMs_20	IAMs_20	06 20 21.8		
	comp=Z,2μm,20.0s								
BRVK	**Borovoye**	**117.18**	**322**		PKPdf	**PKiKP**	**05 38 35.8**	**+0.3**	
BRVK	**Borovoye**	**117.18**	**322**		PKiKP	**PKiKP**	**05 38 35.8**	**+0.3**	
BRVK					MLR	MLR			
	comp=Z,6μm,20.0s								
BRVK	**Borovoye**	**117.18**	**322**		P	**PKiKP**	**05 38 40.8**	**+5.4**	
KBL	**Kabul**	**120.01**	**301**		P	**PKPdf**	**05 38 40.0**	**-1.8**	
	SNR=8.1								
ARU	**Arti**	**122.71**	**328**	*i*	PKiKP	**PKiKP**	**05 38 46.9**	**+0.7**	
ARU							05 40 31.0		
ARU					PPP	PPP	05 43 03.5		
ARU							05 45 58.4		
ARU					SSS	SSS	06 01 41.0		
ARU					MLR	MLR			
	comp=Z,7μm,21.0s								
ABKAR	**Akbulak array**	**124.41**	**320**			**PKiKP**	**05 38 50.2**	**+0.5**	
ABKAR	**Akbulak array**	**124.41**	**320**		PKPdf	**PKiKP**	**05 38 49.7**	**-0.1**	
ARCES	**ARCESS Array B**	**124.55**	**351**		PKP	**PKPdf**	**05 38

KONO	**Kongsberg**	**135.84 357**	IAMs_20	IAMs_20	06 42 03.1		
	comp=Z,2μm,20.0s						
MNK	**Minsk**	**137.28 341**	*i* PKIKP	**PKPdf**	**05 39 10.9**	**-2.7**	
MNK			*i* PPP	PPP	05 44 54.6		
MNK			*i* SP	SP	05 52 20.3	-1.7	
MNK			*i* PS	**PS**	**05 52 21.6**	**-3.7**	
MNK			*i* SS	**SS**	**06 00 03.3**	**-0.4**	
MNK			pmax	pmax			
	comp=Z,5.0nm,0.9s						
MNK			pmax	pmax			
	comp=E,1.0nm,1.1s						
MNK			pmax	pmax			
	comp=N,33nm,1.0s						
MNK			MLR	MLR			
	comp=Z,6μm,19.0s						
MNK			MLR	MLR			
	comp=N,4μm,19.0s						
MNK	**Minsk**	**137.28 341**	*i* PKP	**PKPdf**	**05 39 10.9**	**-2.7**	
	comp=E,1.0nm,1.1s						
MNK			*i* PKP	**PKPdf**	**05 39 10.9**	**-2.7**	
	comp=N,33nm,1.1s						
MNK			*i* PKP	**PKPdf**	**05 39 10.9**	**-2.7**	
	comp=Z,5.0nm,0.9s,baz=34						
MNK			*i* PP	PP	05 41 40.5	-17	
MNK			*i* PPP	PPP	05 44 54.7		
MNK			*i* SKS	SKSdf	05 45 56.0	-28	
MNK			*i* SKKS	SKSac	05 47 12.0	+44	
MNK			*i* PS	**PS**	**05 52 21.7**	**-3.7**	
MNK			*i* SS	**SS**	**06 00 03.3**	**-0.4**	
MNK			*i* SSS	SSS	06 04 40.9		
MNK			*i* LR	LR	06 31 59.2		
MNK			*i* LRM	MLR	06 35 33.7		
	comp=E,663nm,19.6s						
MNK			*i* LRM	MLR	06 36 51.5		
	comp=Z,6μm,19.0s						
MNK			*i* LRM	MLR	06 36 59.0		
	comp=N,4μm,19.0s						
NACGM	**Naroch**	**137.29 342**	⇑*e*PKP	**PKiKP**	**05 39 15.9**	**+0.4**	
	comp=Z,16nm,1.2s,baz=33						
KIV	**Kislovodsk**	**137.39 319**	IAMs_20	IAMs_20	06 37 44.3		
	comp=Z,4μm,22.0s						
KIV	**Kislovodsk**	**137.39 319**	*i* PKIKP	**PKPdf**	**05 39 13.7**	**-0.6**	
KIV			*e*PS	**PS**	**05 52 22.9**	**-4.3**	
KIV			*e*SS	SS	06 00 03.3	-3.2	
KIV			*e*SSS	SSS	06 05 10.0		
KIV			pmax	pmax			
	comp=Z,7.0nm,1.1s						
KIV			MLR	MLR			
	comp=Z,3μm,24.0s						
GNI	**Garni**	**137.74 313**	IAMs_20	IAMs_20	06 44 23.4		
	comp=Z,2μm,20.0s						
SOC	**Sochi**	**139.42 321**	*i* PKIKP	**PKPdf**	**05 39 18.3**	**+0.4**	
SOC			*e*		05 42 09.6		
SOC			*e*SS	SS	06 00 23.9	-6.3	
SOC			*e*SSS	SSS	06 05 36.2		
SOC			MLR	MLR			
	comp=Z,4μm,20.0s						
AKASG	**Malin Array Be**	**139.91 336**	PKP	**PKPdf**	**05 39 18.2**	**-0.3**	
	comp=Z,1.8nm,0.8s,baz=47,slow=2.1,SNR=7.4						
ANN	**Anapa**	**140.08 324**	*e*P	**Pdif**	**05 36 37.2**	**+3.4**	
ANN			pmax	pmax			
	comp=Z,97nm,1.2s						
ANN			MLR	MLR			
	comp=N,6μm,21.0s						
ANN			MLR	MLR			
	comp=Z,5μm,21.0s						
ANN			MLR	MLR			
	comp=E,928nm,21.0s						
RAYN	**Ar Rayn**	**141.23 288**	IAMs_20	IAMs_20	06 45 54.5		
	comp=Z,2μm,20.0s						
RAYN	**Ar Rayn**	**141.23 288**	P	**PKPdf**	**05 39 19.5**	**-2.4**	
SIM	**Simferopol'**	**141.83 326**	PKHKP	PKPpre	05 39 14.0		
SIM			pmax	pmax			
	comp=Z,38nm,0.9s						
LVV	**L'vov**	**142.52 340**	*e*PKIKP	**PKiKP**	**05 39 26.5**	**+0.1**	
LVV			MLR	MLR			
	comp=Z,4μm,21.0s						
KIBK	**Kibwezi**	**142.90 244**	IAMs_20	IAMs_20	06 37 59.2		
	comp=Z,2μm,20.0s						
KIS	**Kishinev**	**142.97 333**	LRM	MLR	06 39 21.0		
	comp=Z,2μm,24.0s						
KIS	**Kishinev**	**142.97 333**	*e*L	L	06 31 32.0		
MILM	**Milestii Mici**	**143.03 333**	*e*PKP	**PKPdf**	**05 39 24.0**	**-0.3**	
MILM			*e*L	L	06 26 56.0		
MILM			LQM		06 35 20.0		
	comp=Z,2μm,23.0s						
MILM			LRM	MLR	06 37 33.0		
	comp=Z,3μm,25.0s						
MILM	**Milestii Mici**	**143.03 333**	*e*PKIKP	**PKPdf**	**05 39 24.0**	**-0.3**	
ATD	**Arta Tunnel**	**143.14 269**	IAMs_20	IAMs_20	06 40 18.1		
	comp=Z,2μm,21.0s						
OJC	**Ojcow**	**143.43 344**	*e*PKP	**PKPdf**	**05 39 23.2**	**-1.7**	
KSP	**Ksiaz**	**143.66 348**	*e*PKP	**PKiKP**	**05 39 28.7**	**0.0**	
CLL	**Collm**	**143.77 352**	*i* PKIKP	**PKPdf**	**05 39 25.8**	**+0.3**	
CLL			pmax	pmax			
	comp=Z,32nm,1.8s						
CLL	**Collm**	**143.77 352**	*i* PKPdf	**PKPdf**	**05 39 25.8**	**+0.3**	
	comp=Z,32nm,1.8s						
CLL			*i* x	x	05 39 37.6		
CLL			*e*PP	**PP**	**05 42 35.0**	**-2.4**	
CLL			*e*SKKSac	SKKSac	05 49 36.0	+5.4	
CLL			*e*PPS	PPS	05 55 06.0		
CLL			*e*SS	**SS**	**06 01 18.0**	**-1.2**	
CLL			*e*SSS	SSS	06 06 48.0		
CLL			*e*SSSS		06 10 30.0		
OSTC	**Ostas**	**143.94 348**	*e*PKP	**PKPdf**	**05 39 25.1**	**-0.7**	
OSTC			AMS	AMS	06 40 50.0		
	comp=Z,5μm,22.6s						
CHVC	**Chvalec**	**143.95 348**	AMS	AMS	06 42 50.0		
	comp=Z,4μm,21.2s						
BURAR	**Bucovina Array**	**143.96 337**	⇑P	**PKPdf**	**05 39 25.3**	**-0.8**	
BURAR	**Bucovina Array**	**143.96 337**	⇑PKIKP	**PKPdf**	**05 39 25.3**	**-0.8**	
UPC	**Upice**	**144.03 348**	*e*PKIKP	PKPbc	05 39 23.3	-0.5	
UPC			MLR	MLR			
	comp=Z,5μm,22.8s						
UPC	**Upice**	**144.03 348**	*e*PKP	PKPbc	05 39 23.3	-0.5	
UPC			AMS	AMS	06 41 00.0		
	comp=Z,5μm,22.8s						
BRG	**Berggiesshubel**	**144.05 350**	*e*PKIKP	**PKiKP**	**05 39 29.0**	**-0.5**	
BRG			*e*		06 01 29.0		
BRG			pmax	pmax			
	comp=Z,30nm,1.6s						
UZH	**Uzhgorod**	**144.12 340**	*i* PKIKP	PKPbc	05 39 23.5	-0.6	
UZH			*e*		05 39 28.7		
DPC	**Dobruska-Polom**	**144.12 348**	*e*PKHKP	PKPpre	05 39 17.6		
DPC			MLR	MLR			
	comp=Z,6μm,22.0s						
DPC	**Dobruska-Polom**	**144.12 348**	*e*PKP	**PKPab**	**05 39 17.6**	**-6.1**	
DPC			AMS	AMS	06 41 40.0		
	comp=Z,6μm,22.0s						
CRVS	**Cervenica-Dubn**	**144.14 342**	*e*PKIKP	**PKPdf**	**05 39 27.6**	**+1.4**	
BIZ	**Bicaz**	**144.16 335**	⇑P	**PKPdf**	**05 39 26.3**	**0.0**	
KMBO	**Kilima Mbogo**	**144.18 245**	PKP	**PKPab**	**05 39 25.5**	**+0.1**	
	comp=Z,0.4nm,0.9s,baz=121,slow=19,SNR=6.3						
KMBO	**Kilima Mbogo**	**144.18 245**	PKPdf	**PKPab**	**05 39 25.1**	**-0.3**	
KMBO	**Kilima Mbogo**	**144.18 245**	IAMs_20	IAMs_20	06 39 25.4		
	comp=Z,3μm,20.0s						
KMBO	**Kilima Mbogo**	**144.18 245**	PKIKP	**PKPab**	**05 39 25.1**	**-0.3**	
KMBO	**Kilima Mbogo**	**144.18 245**	P	**PKPdf**	**05 39 26.8**	**-0.9**	
KMBO	**Kilima Mbogo**	**144.18 245**	*e*P	**PKPab**	**05 39 25.4**	**+0.1**	
KMBO	**Kilima Mbogo**	**144.18 245**	*e*P	**PKPab**	**05 39 25.4**	**+0.1**	
OKC	**Ostrava-Krasne**	**144.19 346**	AMS	AMS	06 40 10.0		
	comp=Z,6μm,22.0s						
TESR	**Tescani**	**144.28 334**	⇑P	**PKPdf**	**05 39 25.8**	**-0.7**	
PVCC	**Panska Ves**	**144.28 350**	AMS	AMS	06 39 00.0		
	comp=Z,5μm,23.2s						
KRLC	**Kraliky**	**144.28 347**	*e*PKIKP	**PKPdf**	**05 39 25.6**	**-0.9**	
KRLC			MLR	MLR			
	comp=Z,6μm,21.6s						
KRLC	**Kraliky**	**144.28 347**	*e*PKP	**PKPdf**	**05 39 25.6**	**-0.9**	
KRLC			AMS	AMS	06 41 20.0		
	comp=Z,6μm,21.6s						
GAZ	**Gaziantep**	**144.34 313**	PKPdf	PKPbc	05 39 24.9	-0.5	
MORC	**Moravsky Berou**	**144.39 346**	⇑P	**PKPdf**	**05 39 26.3**	**-0.4**	
MORC	**Moravsky Berou**	**144.39 346**	⇑PKIKP	**PKPdf**	**05 39 26.3**	**-0.4**	
MORC	**Moravsky Berou**	**144.39 346**	*e*PKP	PKPbc	05 39 25.3	+0.2	
BNN	**Bunyan**	**144.43 317**	PKPdf	PKPbc	05 39 25.8	+0.1	
TRPA	**Tarpa**	**144.47 340**	⇑P	**PKPdf**	**05 39 25.7**	**-1.1**	
MAUC	**Maruska**	**144.71 346**	*e*PKP	**PKPdf**	**05 39 26.3**	**-0.9**	
MAUC			AMS	AMS	06 39 40.0		
	comp=Z,10μm,21.9s						
VRI	**Vrincioaia**	**144.76 334**	⇑P	**PKPdf**	**05 39 26.7**	**-0.7**	
VRI	**Vrincioaia**	**144.76 334**	⇑PKIKP	**PKPdf**	**05 39 26.7**	**-0.7**	
TPGR	**Topolog**	**144.77 331**	⇑P	**PKPdf**	**05 39 27.0**	**-0.4**	
PLOR	**Plostina**	**144.80 334**	⇑P	**PKPab**	**05 39 24.4**	**-2.0**	
PLOR	**Plostina**	**144.80 334**	⇑PKIKP	**PKPab**	**05 39 24.4**	**-2.0**	
PRU	**Pruhonice**	**144.80 349**	*e*PKIKP	**PKPdf**	**05 39 27.1**	**-0.2**	
PRU			MLR	MLR			
	comp=Z,5μm,22.6s						
PRU	**Pruhonice**	**144.80 349**	*e*PKP	**PKPdf**	**05 39 27.1**	**-0.2**	
PRU			AMS	AMS	06 43 00.0		
	comp=Z,5μm,22.6s						
GOPC	**GO Pecny, Ondr**	**144.83 349**	*e*PKIKP	**PKPab**	**05 39 24.7**	**-1.7**	
GOPC			MLR	MLR			
	comp=Z,5μm,21.7s						
GOPC	**GO Pecny, Ondr**	**144.83 349**	*e*PKP	**PKPab**	**05 39 24.7**	**-1.7**	
GOPC			AMS	AMS	06 43 10.0		
	comp=Z,5μm,21.7s						
NKC	**Novy Kostel**	**144.90 352**	AMS	AMS	06 41 50.0		
	comp=Z,4μm,21.3s						
OZUR		**144.97 335**	⇑P	**PKPdf**	**05 39 28.2**	**+0.4**	
MEM	**Membach**	**145.02 359**	*d*PKP	**PKPdf**	**05 39 27.7**	**0.0**	
BTNL	**Ternell**	**145.04 359**	*d*PKP	**PKPdf**	**05 39 27.9**	**+0.2**	
VRAC	**Vranov**	**145.05 347**	⇑P	**PKiKP**	**05 39 32.7**	**+1.1**	
VRAC	**Vranov**	**145.05 347**	⇑PKIKP	**PKiKP**	**05 39 32.7**	**+1.1**	
VRAC	**Vranov**	**145.05 347**	*e*PKP	**PKPdf**	**05 39 27.4**	**-0.4**	
BSTI	**Sart Tilman**	**145.05 360**	*d*PKP	**PKPdf**	**05 39 28.1**	**+0.4**	
TIRR	**Tirgusor**	**145.07 330**	⇓P	**PKPdf**	**05 39 28.6**	**+0.7**	
TIRR	**Tirgusor**	**145.07 330**	⇓PKIKP	**PKPdf**	**05 39 28.6**	**+0.7**	
SNF	**Seneffe**	**145.12 1**	*d*PKP	**PKPdf**	**05 39 28.3**	**+0.5**	
BCLA	**Clavier**	**145.22 360**	*d*PKP	**PKPdf**	**05 39 27.8**	**-0.2**	
JAVC	**Velka Javorina**	**145.22 345**	*e*PKP	**PKPdf**	**05 39 29.1**	**+0.9**	
DOPR	**Dopca**	**145.24 335**	⇑P	**PKPdf**	**05 39 28.9**	**+0.7**	
BGES	**Gesves**	**145.25 0**	*d*PKP	**PKPdf**	**05 39 28.4**	**+0.4**	
VYHS	**Vyhne**	**145.26 344**	*e*PKIKP	**PKPdf**	**05 39 28.5**	**+0.3**	
BHOU	**Houvegnez**	**145.27 359**	*d*PKP	**PKPdf**	**05 39 28.1**	**-0.1**	
NEHR	**Nehoiu**	**145.29 333**	⇑P	**PKiKP**	**05 39 34.1**	**+1.8**	
TREC	**Trest**	**145.29 348**	*e*PKIKP	**PKPdf**	**05 39 29.6**	**+1.4**	
TREC			MLR	MLR			
	comp=Z,5μm,22.1s						
TREC	**Trest**	**145.29 348**	*e*PKP	**PKPdf**	**05 39 29.6**	**+1.4**	
TREC			AMS	AMS	06 42 00.0		
	comp=Z,5μm,22.1s						
KRUC	**Moravsky**	**145.32 347**	*e*PKP	**PKPdf**	**05 39 28.0**	**-0.3**	
BMRD	**Maredsous**	**145.33 0**	*d*PKP	**PKPab**	**05 39 27.7**	**-0.4**	
BR131	**Keskin Array S**	**145.36 320**	P	**PKPdf**	**05 39 28.6**	**-0.2**	
	SNR=37						
BRTR	**Keskin Array B**	**145.36 320**	PKPbc	**PKPdf**	**05 39 28.8**	**0.0**	
	comp=Z,26nm,0.9s,baz=97,slow=2.4,SNR=71						
BRTR	**Keskin Array B**	**145.36 320**		**PKPbc**	**05 39 27.1**	**-1.6**	
MLR	**Muntele Rosu**	**145.39 334**	⇓P	**PKPdf**	**05 39 28.7**	**0.0**	
MLR	**Muntele Rosu**	**145.39 334**	⇓PKIKP	**PKPdf**	**05 39 28.7**	**0.0**	
ISR	**Istrita**	**145.42 333**	⇑P	**PKPdf**	**05 39 29.6**	**+1.0**	
ISR	**Istrita**	**145.42 333**	⇑PKIKP	**PKPdf**	**05 39 29.6**	**+1.0**	
RCHB	**Rochefort**	**145.48 360**	*d*PKP	**PKPdf**	**05 39 29.4**	**+1.0**	
DOU	**Dourbes**	**145.54 1**	*d*PKP	**PKPab**	**05 39 28.4**	**-0.4**	
GRA1	**Grafenberg Arr**	**145.58 353**	IAMs_20	IAMs_20	06 40 32.3		
	comp=Z,3μm,22.0s						
GRFO	**Grafenberg**	**145.58 353**	IAMs_20	IAMs_20	06 40 43.4		
	comp=Z,3μm,22.0s						
SMOL	**Smolenice**	**145.60 345**	*e*PKIKP	**PKiKP**	**05 39 30.6**	**-2.2**	
MODS	**Modra-Piesok**	**145.77 346**	*e*PKP2	**PKiKP**	**05 39 31.2**	**-1.9**	
ANTO	**Ankara**	**145.79 321**	⇑P	**PKPab**	**05 39 29.8**	**-0.5**	
ANTO	**Ankara**	**145.79 321**	IAMs_20	IAMs_20	06 46 56.5		
	comp=Z,2μm,20.0s						
ANTO	**Ankara**	**145.79 321**	⇑PKIKP	**PKPab**	**05 39 29.8**	**-0.5**	
ANTO	**Ankara**	**145.79 321**	P	**PKPab**	**05 39 30.7**	**+0.4**	
KHC	**Kasperske Hory**	**145.80 350**	*e*PKP2	**PKPab**	**05 39 29.7**	**-0.3**	
KHC			*e*		05 42 56.0		
KHC			MLR	MLR			
	comp=Z,5μm,21.8s						
KHC	**Kasperske Hory**	**145.80 350**	*e*PKP	**PKPab**	**05 39 29.7**	**-0.3**	
KHC			*e*PP	**PP**	**05 42 56.0**	**+6.4**	
KHC			AMS	AMS	06 41 00.0		
	comp=Z,5μm,21.8s						
VOIR		**145.81 335**	⇑P	**PKPab**	**05 39 30.8**	**+0.6**	
VOIR		**145.81 335**	⇑PKP2	**PKPab**	**05 39 30.8**	**+0.6**	
SULR		**145.90 333**	⇑P	**PKiKP**	**05 39 35.3**	**+1.8**	
WLF	**Walferdange**	**145.96 359**	*d*PKP	**PKPab**	**05 39 30.9**	**+0.4**	
CKRC	**Cesky Krumlov**	**145.97 349**	*e*PKP	**PKPab**	**05 39 31.2**	**+0.6**	
CKRC			AMS	AMS	06 44 10.0		
	comp=Z,4μm,20.6s						
ZST	**Bratislava**	**145.97 346**	*e*PKP2	**PKiKP**	**05 39 35.2**	**+1.7**	
ARR	**Arges**	**146.03 335**	⇓P	**PKPab**	**05 39 31.8**	**+0.8**	
GERES	**GERESS Array B**	**146.05 350**	PKPbc	**PKPab**	**05 39 30.4**	**-0.6**	
	comp=Z,5.4nm,0.9s,baz=349,slow=1.4,SNR=19						
SIRR	**Siria**	**146.39 339**	⇑P	**PKPbc**	**05 39 30.9**	**-0.5**	
PRD	**Provadia**	**146.50 330**	P	**PKPdf**	**05 39 24.0**	**-6.4**	
CONA	**Conrad Observa**	**146.51 347**	*i* P	**PKPab**	**05 39 32.4**	**-0.4**	
	comp=Z,35nm,0.9s,SNR=27						
AAE	**Adis Abeba**	**146.53 263**	*e*P	**PKPdf**	**05 39 32.3**	**+0.6**	
AAE	**Adis Abeba**	**146.53 263**	*e*P	**PKPdf**	**05 39 32.3**	**+0.6**	
FURI	**Furi**	**146.58 263**	*e*P	**PKPdf**	**05 39 30.7**	**-1.1**	
FURI	**Furi**	**146.58 263**	*e*P	**PKPdf**	**05 39 30.7**	**-1.1**	
SOP	**Sopron**	**146.58 346**	PKP	**PKiKP**	**05 39 39.1**	**+4.3**	
RONA	**Rosalia, Austr**	**146.63 346**	*i* P	**PKiKP**	**05 39 33.8**	**-1.2**	
	comp=Z,48nm,1.1s,SNR=21						
EGYH	**Egyhazaskeszo**	**146.64 345**	PKP	**PKiKP**	**05 39 38.5**	**+3.5**	
STU	**Stuttgart**	**146.70 355**	IAMs_20	IAMs_20	06 45 49.7		
	comp=Z,3μm,20.0s						
GZR	**Gura Zlata**	**146.74 337**	⇑P	**PKPab**	**05 39 32.7**	**-1.0**	
GZR	**Gura Zlata**	**146.74 337**	⇑PKP2	**PKPab**	**05 39 32.7**	**-1.0**	
MPLH	**Magyarpolny**	**146.82 344**	PKP	**PKiKP**	**05 39 34.9**	**-0.4**	
MOA	**Molln**	**146.91 349**	*i* P	**PKPbc**	**05 39 33.0**	**+0.1**	
	comp=Z,46nm,1.4s,SNR=14						
BIOA	**Bad Ischl, Aus**	**147.18 349**	*i* P	**PKiKP**	**05 39 35.6**	**-0.5**	
	comp=Z,74nm,1.6s,SNR=14						
BFO	**Black Forest**	**147.20 356**		**PKPbc**	**05 39 33.2**	**-0.5**	
BFO			IAMs_20	IAMs_20	06 42 23.5		
	comp=Z,3μm,22.0s						
BFO	**Black Forest**	**147.20 356**	PKP2	**PKPbc**	**05 39 33.2**	**-0.5**	
BFO			MLR	MLR			
	comp=Z,3μm,22.0s						
ARSA	**Arzberg**	**147.23 347**	*i* P	**PKPab**	**05 39 35.0**	**-0.5**	
	comp=Z,45nm,1.8s,SNR=16						
HERR	**Herculane**	**147.31 337**	⇑P	**PKPbc**	**05 39 34.0**	**0.0**	
MORH	**Mrgy, Hungar**	**147.39 342**	PKP	**PKiKP**	**05 39 36.5**	**0.0**	
CLF	**Chambon-Foret**	**147.53 4**		**PKPbc**	**05 39 34.7**	**+0.2**	
MDVR	**Moldovita**	**147.65 338**	⇑P	**PKiKP**	**05 39 37.1**	**-0.1**	
KOVH	**Kovagotottos**	**147.66 343**	PKP	**PKPab**	**05 39 35.7**	**-1.5**	
RETA	**Reutte**	**147.81 353**	*i* P	**PKPbc**	**05 39 35.2**	**-0.3**	
	comp=Z,26nm,1.1s,SNR=16						
KBA	**Koelnbreinsper**	**147.82 349**	*i* P	**PKPab**	**05 39 38.8**	**+0.8**	
	comp=Z,21nm,1.1s,SNR=8.0						
WATA	**Walderalm**	**147.85 352**	*e*P	**PKiKP**	**05 39 36.3**	**-1.4**	
	comp=Z,33nm,1.2s						
SOKA	**Soboth**	**147.88 347**	*i* P	**PKiKP**	**05 39 37.2**	**-0.5**	
	comp=Z,28nm,1.1s,SNR=6.1						
LODK	**Lodwar**	**147.89 251**	PKPab	**PKPdf**	**05 39 35.1**	**+1.4**	
LODK			IAMs_20	IAMs_20	06 40 05.2		
	comp=Z,3μm,21.0s						
LODK	**Lodwar**	**147.89 251**	P	**PKPbc**	**05 39 36.0**	**-0.7**	
	SNR=10						
LODK	**Lodwar**	**147.89 251**	*e*P	**PKPbc**	**05 39 36.0**	**-0.7**	
LODK	**Lodwar**	**147.89 251**	*e*P	**PKPbc**	**05 39 36.0**	**-0.7**	
MOTA	**Moosalm**	**147.91 352**	*i* P	**PKPab**	**05 39 38.2**	**-0.1**	
	comp=Z,38nm,1.6s,SNR=12						
WTTA	**Wattenberg**	**147.91 352**	*i* P	**PKiKP**	**05 39 36.7**	**-1.2**	
	comp=Z,31nm,0.9s,SNR=5.2						
FRGS	**Fruska Gora**	**147.98 340**	⇑P	**PKiKP**	**05 39 37.0**	**-0.8**	
SQTA	**Sankt Quirin**	**148.01 352**	*i* P	**PKPab**	**05 39 38.0**	**-0.7**	
	comp=Z,37nm,1.1s,SNR=16						
GHAJ	**Ghor Haditha**	**148.10 305**	IAMs_20	IAMs_20	06 53 28.3		
	comp=Z,2μm,20.0s						
DAVA	**Damuels**	**148.10 354**	*i* P	**PKiKP**	**05 39 36.9**	**-1.2**	
	comp=Z,53nm,1.2s,SNR=22						
OBKA	**Obir**	**148.14 348**	*e*P	**PKiKP**	**05 39 37.7**	**-0.4**	
	comp=Z,21nm,1.1s						
CSS	**Mathiatis**	**148.16 313**	PKPab	**PKPbc**	**05 39 37.0**	**+0.2**	
CSS			IAMs_20	IAMs_20	06 56 18.3		
	comp=Z,2μm,20.0s						
MYKA	**Terra Mystica**	**148.20 349**	*i* P	**PKiKP**	**05 39 38.3**	**0.0**	
	comp=Z,40nm,1.6s,SNR=7.1						
FETA	**Feichten**	**148.27 353**	*i* P	**PKPab**	**05 39 39.3**	**-0.5**	
	comp=Z,32nm,1.3s,SNR=13						
ABTA	**Abfaltersbach**	**148.28 350**	*i* P	**PKPbc**	**05 39 35.5**	**-1.3**	
	comp=Z,50nm,1.5s,SNR=15						
ISP	**Isparta**	**148.44 320**	IAMs_20	IAMs_20	06 46 17.7		
	comp=Z,3μm,22.0s						
PGB	**Panagyurishte**	**148.51 333**	P	**PKPbc**	**05 39 36.3**	**-1.2**	
BOVS	**Bovan**	**148.63 337**	⇓P	**PKPbc**	**05 39 37.3**	**-0.3**	
FUORN	**Ofenpass-Fuorn**	**148.72 353**	IAMs_20	IAMs_20	06 45 12.4		
	comp=Z,2μm,22.0s						
RZN	**Rozhen**	**148.94 331**	P	**PKPdf**	**05 39 35.5**	**+0.7**	
RDO	**Rodhopi**	**148.96 329**	P	**PKPab**	**05 39 42.7**	**+0.2**	
MMB	**Musomiste**	**149.47 332**	P	**PKPbc**	**05 39 38.5**	**-1.4**	
EZN	**Ezine**	**149.53 327**	P	**PKPab**	**05 39 46.7**	**+1.8**	
NVR	**Nevrokopi**	**149.60 331**	P	**PKPbc**	**05 39 38.7**	**-1.5**	
SALO	**Salr**	**149.68 352**		**PKiKP**	**05 39 40.9**	**-0.4**	
SRS	**Serrai**	**149.91 331**	P	**PKPab**	**05 39 44.7**	**-1.8**	
PRK	**Paraskevi**	**149.98 326**	P	**PKPab**	**05 39 47.0**	**+0.2**	
MBAR	**Mbarara**	**150.03 240**	P	**PKPdf**	**05 39 35.1**	**-2.3**	
MBAR	**Mbarara**	**150.03 240**	*e*P	**PKPdf**	**05 39 37.9**	**+0.5**	
MBAR	**Mbarara**	**150.03 240**	*e*P	**PKPdf**	**05 39 37.9**	**+0.5**	
KSL	**Kastellorizon**	**150.06 318**	P	**PKPab**	**05 39 47.8**	**+0.6**	
STIP	**Stip**	**150.06 334**	*i* P	**PKPbc**	**05 39 41.0**	**-0.3**	
SKO	**Skopje**	**150.14 335**	*i* P	**PKiKP**	**05 39 43.7**	**+1.3**	
VAY	**Valandovo**	**150.20 333**	*i* P	**PKPbc**	**05 39 39.1**	**-2.5**	
YER	**Yerkesik**	**150.26 321**	P	**PKPab**	**05 39 47.4**	**-0.7**	
PDG	**Podgorica**	**150.58 338**	⇓P	**PKiKP**	**05 39 42.8**	**-0.3**	
OHR	**Ohrid**	**151.12 335**	*i* P	**PKiKP**	**05 39 44.0**	**-0.4**	
LIT	**Litokhoron**	**151.22 332**	P	**PKPbc**	**05 39 42.2**	**-1.9**	
PGAV	**Gavieira, Arco**	**151.25 21**	*e*PKPab	**PKPab**	**05 39 52.6**	**+0.5**	
PGAV	**Gavieira, Arco**	**151.25 21**	*e*SS	SS	06 02 57.2	+13	
PGAV	**Gavieira, Arco**	**151.25 21**	*e*LR	LR	06 31 16.6		
	comp=Z,3μm,18.0s						
KZN	**Kozani**	**151.38 333**	P	**PKPab**	**05 39 48.6**	**-4.0**	
PCAB	**Cabril**	**151.56 21**	*e*PKPbc	**PKiKP**	**05 39 44.8**	**-0.5**	
NEST	**Nestorio**	**151.60 334**	P	**PKPab**	**05 39 51.2**	**-2.4**	
THL	**Klokotos Trika**	**151.87 332**	P	**PKiKP**	**05 39 49.4**	**+3.4**	
PBRG	**Braganca**	**151.90 19**	*e*PKPbc	**PKiKP**	**05 39 45.9**	**-0.1**	
PBRG	**Braganca**	**151.90 19**	*e*SS	SS	06 03 02.3	+11	
POLO	**Lamas de Olo**	**151.94 21**	*e*PKPbc	**PKiKP**	**05 39 46.7**	**+0.5**	
POLO	**Lamas de Olo**	**151.94 21**	*e*SS	SS	06 03 00.6	+8.7	
MVO	**Moncorvo**	**152.38 20**	*e*PKPbc	**PKPbc**	**05 39 46.4**	**-0.4**	
MVO	**Moncorvo**	**152.38 20**	*e*SS	SS	06 03 06.9	+10	
MVO	**Moncorvo**	**152.38 20**	*e*LR	LR	06 32 57.7		
	comp=Z,3μm,20.0s						
PVIS	**Viseu**	**152.49 22**	*e*PKPbc	**PKiKP**	**05 39 47.8**	**+0.5**	
PVIS	**Viseu**	**152.49 22**	*e*PKPab	**PKPab**	**05 39 58.6**	**+1.4**	
EVR	**Evrytania**	**152.49 331**	P	**PKPab**	**05 39 52.9**	**-4.4**	
KEK	**Kerkira**	**152.71 335**	P	**PKiKP**	**05 39 50.7**	**+3.0**	
PCAS	**Casmilo, Conde**	**152.84 23**	*e*SS	SS	06 03 13.0	+11	
MTE	**Manteigas**	**152.89 22**	*e*PKPbc	**PKiKP**	**05 39 48.7**	**+0.6**	
MTE	**Manteigas**	**152.89 22**	*e*SS	SS	06 03 16.9	+15	
MTE	**Manteigas**	**152.89 22**	*e*LR	LR	06 32 33.1		
	comp=Z,2μm,20.0s						
MTE	**Manteigas**	**152.89 22**	IAMs_20	IAMs_20	06 42 46.9		
	comp=Z,2μm,21.0s						
SCTE	**Santa Cesarea**	**152.93 337**		**PKPbc**	**05 39 44.5**	**-3.4**	
NYDR	**Nydri-Lefkada**	**153.16 332**	P	**PKPbc**	**05 39 48.0**	**-0.5**	
PSBE	**So Bento**	**153.19 24**	*e*SS	SS	06 03 15.2	+10	
EVGI	**Lefkada island**	**153.25 332**	P	**PKiKP**	**05 39 51.2**	**+2.

JAM	**Amami Oshima**	**2.36**	**71**	P	**Pn**	**05 32 44.4**	**+0.5**
JAM				S	**Sn**	**05 33 15.2**	**-0.3**
JTAJ	**Takarajima**	**2.39**	**51**	P	**Pn**	**05 32 45.0**	**+0.8**
JTAJ				*e*S	**Sn**	**05 33 16.5**	**+0.3**
JZK	**Kikaishima**	**2.65**	**75**	S	**Sn**	**05 33 21.9**	**+0.3**
JMZ	**Minamidaito 2**	**4.15**	**116**	P	**Pn**	**05 33 06.3**	**+0.5**
JMZ				*e*S	**Sn**	**05 33 52.4**	**-2.7**
JKDJ	**Kitadaitoujima**	**4.15**	**113**	P	**Pn**	**05 33 07.5**	**+1.6**
JKDJ				S	**Sn**	**05 33 53.6**	**-1.6**
KSRS	**Korea Array**	**9.78**	**4**	P	**Pn**	**05 34 20.0**	**+0.4**
	1.7nm,0.7s,baz=183,slow=12,SNR=6.6						
SONM	**Songino Array**	**25.78**	**327**	P	**P**	**05 37 19.1**	**+1.5**
	3.6nm,0.4s,baz=141,slow=11,SNR=18						
	3.6nm,0.4s						
MKAR	**Makanchi Array**	**39.80**	**311**	P	**P**	**05 39 17.8**	**-1.0**
	1.9nm,0.6s,baz=99,slow=10,SNR=14						
	1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**40.47**	**322**	P	**P**	**05 39 22.9**	**-1.2**
	0.6nm,0.3s,baz=117,slow=8.3,SNR=1.6						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**43.09**	**316**	P	**P**	**05 39 44.3**	**-1.1**
	1.1nm,0.9s,baz=106,slow=9.6,SNR=4.3						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**47.86**	**171**	P	**P**	**05 40 23.2**	**+0.1**
	1.9nm,0.7s,baz=352,slow=8.4,SNR=20						
	1.9nm,0.7s						
CTA	**Charters Tower**	**50.99**	**157**	P	**P**	**05 40 47.6**	**+0.8**
	1.5nm,0.4s,baz=349,slow=5.2,SNR=1.9						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**51.47**	**172**	P	**P**	**05 40 51.6**	**+1.1**
	1.6nm,1.0s,baz=360,slow=13,SNR=11						
	1.6nm,1.0s						
STKA	**Stephens Creek**	**60.82**	**166**	P	**P**	**05 41 56.5**	**+0.1**
	1.2nm,0.4s,baz=337,slow=10,SNR=5.0						
	1.2nm,0.4s						
ILAR	**Eielson Array**	**63.66**	**28**	P	**P**	**05 42 14.6**	**-0.5**
	0.3nm,0.5s,baz=263,slow=4.5,SNR=5.4						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**71.10**	**330**	P	**P**	**05 43 00.8**	**-0.9**
	4.6nm,1.0s,baz=101,slow=7.2,SNR=3.7						
	4.6nm,1.0s						
YKA	**Yellowknife Ar**	**77.65**	**25**	P	**P**	**05 43 39.5**	**0.0**
	1.1nm,0.6s,baz=302,slow=5.5,SNR=5.0						
	1.1nm,0.6s						

*IDC **26** 05:32:27.9±0.7, 6°.72N×72°.89W, h168km±9km, mb2.9/3, mbtmp3.8/7, Error ellipse: s-maj=28.7km s-min=7.4km az=134.0*
*RSNC **26** 05:32:29.3±0.9, 6°.81N×73°.15W, h148km±4km, ML3.7, Mw3.9, Fault plane solution: NP1:φs30.00000°, δ40.00000°, λ138.00000°.*

ISC 26 05:32:27.8±0.8, 6°.86N±0°.03×73°.06W±0°.04, h154km±6km, n45, σ1§31/75, mb3.2/3, 11C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**205**	⇑*i*P	**Pn**	**05 32 49.2**	**+0.1**
BARC				*e*S	**Sn**	**05 33 04.6**	**-0.8**
BARC				*i*		05 33 07.1	
	comp=Z,1μm,0.5s						
PAMC	**Pamplona, Colo**	**0.60**	**37**	⇓*i*P	**Pn**	**05 32 52.1**	**+1.3**
PAMC				*e*S	**Sn**	**05 33 09.4**	**+1.2**
PAMC				*i*		05 33 11.5	
	comp=Z,2μm,0.5s						
BRRC	**Barranca, Sant**	**0.69**	**291**	⇑*i*P	**Pn**	**05 32 51.0**	**+0.3**
BRRC				*i*		05 33 11.9	
	comp=Z,1μm,0.5s						
RUSC	**La Rusia**	**0.96**	**181**	⇑*i*P	**Pn**	**05 32 53.1**	**-0.1**
RUSC				*e*S	**Sn**	**05 33 12.0**	**-0.7**
RUSC				*i*		05 33 13.1	
	comp=Z,917nm,0.4s						
TAMC	**Tame, Arauca**	**1.33**	**108**	⇓*i*P	**Pn**	**05 32 57.7**	**+1.6**
TAMC				*e*S	**Sn**	**05 33 19.4**	**+1.8**
OCAC	**Ocana**	**1.40**	**349**	⇑*e*P	**Pn**	**05 32 57.3**	**+0.4**
OCAC				*e*S	**Sn**	**05 33 19.3**	**+0.1**
OCAC				*i*		05 33 27.8	
	comp=Z,1μm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.42**	**257**	⇑*i*P	**Pn**	**05 32 55.5**	**-1.4**
PTBC				*e*S	**Sn**	**05 33 17.1**	**-2.1**
PTBC				*i*		05 33 20.6	
	comp=Z,610nm,0.2s						
SPBC	**San Pablo de B**	**1.56**	**220**	⇑*e*P	**Pn**	**05 32 57.9**	**-0.6**
SPBC				*e*S	**Sn**	**05 33 20.4**	**-1.6**
SPBC				*i*		05 33 22.8	
	comp=Z,1μm,0.3s						
NORC	**Norcasia**	**2.21**	**235**	*e*P	**Pn**	**05 33 04.7**	**-1.0**
NORC				*e*S	**Sn**	**05 33 33.6**	**-1.3**
NORC				*i*		05 33 41.1	
	comp=Z,486nm,0.1s						
CHIC	**Chingaza**	**2.31**	**197**	⇑*i*P	**Pn**	**05 33 07.1**	**-0.2**
CHIC				*e*S	**Sn**	**05 33 36.9**	**-0.8**
CHIC				*i*		05 33 42.7	
	comp=Z,266nm,0.7s						
ROSC	**El Rosal**	**2.36**	**212**	P	**Pn**	**05 33 08.8**	**+0.9**
	comp=Z,370nm,0.3s,baz=311,slow=21,SNR=677						
ROSC				S	**Sn**	**05 33 40.2**	**+1.5**
	comp=Z,296nm,0.3s,baz=28,slow=23,SNR=8.0						
ROSC	**El Rosal**	**2.36**	**212**	⇑*i*P	**Pn**	**05 33 08.7**	**+0.9**
ROSC				*e*S	**Sn**	**05 33 38.2**	**-0.5**
ROSC				*i*		05 33 47.4	
	comp=Z,538nm,0.3s						
HELC	**Santa Helena**	**2.54**	**255**	*e*P	**Pn**	**05 33 09.1**	**-1.0**
HELC				*e*S	**Sn**	**05 33 41.2**	**-1.3**
HELC				*i*		05 33 49.4	
	comp=Z,282nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.71**	**350**	*e*P	**Pn**	**05 33 13.8**	**+2.0**
LL1C				*e*S	**Sn**	**05 33 48.8**	**+3.0**
PTGC	**Puerto Gaitan,**	**2.80**	**161**	⇑*e*P	**Pn**	**05 33 12.4**	**-0.5**
PTGC				*e*S	**Sn**	**05 33 45.7**	**-2.0**
PTGC				*i*		05 33 50.7	
	comp=Z,503nm,0.3s						
VILC	**Villavicencio,**	**2.80**	**193**	*e*P	**Pn**	**05 33 12.9**	**-0.1**
VILC				*e*S	**Sn**	**05 33 47.2**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.81**	**235**	*e*P	**Pn**	**05 33 13.0**	**-0.4**
GUY2C				*e*S	**Sn**	**05 33 51.0**	**+2.4**
GUY2C				*i*		05 33 55.4	
	comp=Z,337nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.09**	**252**	*e*P	**Pn**	**05 33 16.9**	**+0.1**
CBOC				*e*S	**Sn**	**05 33 54.3**	**-0.2**
CBOC				*i*		05 34 10.0	
	comp=Z,108nm,0.7s						
DBBC	**Dabeiba**	**3.13**	**273**	*e*P	**Pn**	**05 33 17.0**	**-0.1**
SDV	**Santo Domingo**	**3.14**	**50**	P	**Pn**	**05 33 18.5**	**+1.2**
	comp=Z,35nm,0.3s,baz=226,slow=3.9,SNR=35						
SDV				S	**Sn**	**05 33 55.8**	**+0.1**
	comp=Z,194nm,0.4s,baz=51,slow=21,SNR=43						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**05 33 19.4**	**+1.4**
ARGC				*e*S	**Sn**	**05 33 58.0**	**+1.0**
ARGC				*i*		05 34 09.5	
	comp=Z,128nm,0.2s						
ANIL	**Santa Ana**	**3.31**	**225**	*e*P	**Pn**	**05 33 19.9**	**+0.3**
ANIL				*e*S	**Sn**	**05 34 00.1**	**+0.5**
PRAC	**Prado**	**3.61**	**210**	*e*P	**Pn**	**05 33 22.1**	**-1.1**
PRAC				*e*S	**Sn**	**05 34 05.8**	**-0.5**
PRAC				*i*		05 34 11.5	
	comp=Z,230nm,0.5s						
ORTC	**Ortega, Tolima**	**3.65**	**217**	*e*P	**Pn**	**05 33 23.2**	**-0.5**
ORTC				*e*S	**Sn**	**05 34 07.2**	**+0.1**
ORTC				*i*		05 34 13.1	
	comp=Z,174nm,0.3s						
SJCC	**San Jacinto, C**	**3.68**	**325**	*e*P	**Pn**	**05 33 23.5**	**-0.6**
SJCC				*e*S	**Sn**	**05 34 04.7**	**-3.2**
SJCC				*i*		05 34 12.1	
	comp=Z,85nm,0.3s						
PLMC	**San Jos del P**	**3.74**	**239**	*e*P	**Pn**	**05 33 24.7**	**-0.3**
PLMC				*e*S	**Sn**	**05 34 07.5**	**-1.9**
PLMC				*i*		05 34 13.2	
	comp=Z,114nm,0.7s						
LCBC	**Los crdobas,**	**3.83**	**301**	*e*P	**Pn**	**05 33 25.1**	**-1.0**
LCBC				*e*S	**Sn**	**05 34 11.7**	**+0.4**
LCBC				*i*		05 34 20.1	
	comp=Z,73nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.14**	**2**	⇑*e*P	**Pn**	**05 33 29.4**	**-0.8**
CRJC				*e*S	**Sn**	**05 34 18.5**	**-0.2**
CRJC				*i*		05 34 20.5	
	comp=Z,126nm,0.2s						
GUVC	**San Jose del G**	**4.30**	**174**	*e*P	**Pn**	**05 33 30.9**	**-1.4**
GUVC				*e*S	**Sn**	**05 34 20.8**	**-1.6**
GUVC				*i*		05 34 25.1	
	comp=Z,82nm,0.1s						
YOTC	**Yotoco, Valle**	**4.34**	**229**	⇓*e*P	**Pn**	**05 33 31.7**	**-1.1**
YOTC				*e*S	**Sn**	**05 34 27.9**	**+4.5**
YOTC				*i*		05 34 33.9	
	comp=Z,66nm,0.9s						
BETC	**Betania**	**4.78**	**210**	*e*P	**Pn**	**05 33 37.5**	**-1.0**
URIC	**Uribia, Colomb**	**4.93**	**12**	⇑*e*P	**Pn**	**05 33 39.5**	**-0.9**
URIC				*e*S	**Sn**	**05 34 36.3**	**-0.8**
URIC				*i*		05 34 43.9	
	comp=Z,20nm,0.5s						
MALC	**Bahia Malaga**	**5.11**	**237**	*e*P	**Pn**	**05 33 44.3**	**+1.5**
GARC	**Garzon, Huila**	**5.23**	**208**	*e*P	**Pn**	**05 33 43.3**	**-1.4**
GARC				*i*		05 34 45.6	
	comp=Z,74nm,0.2s						
FLOC	**Florencia**	**5.84**	**206**	⇓*e*P	**Pn**	**05 33 51.6**	**-0.9**
BBAC	**Balboa, Cauca**	**6.36**	**221**	*e*P	**Pn**	**05 33 58.7**	**-0.9**
BBAC				*i*		05 35 14.8	
	comp=Z,9.1nm,0.3s						
CRUC	**La Cruz**	**6.53**	**217**	*e*P	**Pn**	**05 34 04.1**	**+2.1**
GCUF	**Volcan Galeras**	**7.04**	**218**	*e*P	**Pn**	**05 34 09.3**	**+0.4**
PCRV	**Puerto La Cruz**	**8.96**	**68**	P	**Pn**	**05 34 35.0**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=269,slow=5.1,SNR=7.2						
PCRV				S	**Sn**	**05 36 12.0**	**-1.8**
	comp=Z,4.6nm,0.6s,baz=8.4,slow=23,SNR=1.4						
SJG	**San Juan**	**13.06**	**30**	P	**Pn**	**05 35 27.1**	**-0.7**
	comp=Z,3.5nm,0.5s,baz=200,slow=18,SNR=2.0						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**05 39 18.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=128,slow=8.4,SNR=6.4						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**51.50**	**315**	P	**P**	**05 41 18.8**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=111,slow=8.9,SNR=2.1						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**05 42 39.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=137,slow=6.6,SNR=2.1						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKPdf**	**05 51 55.5**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=109,slow=4.2,SNR=4.9						
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc	**PKPbc**	**05 52 00.8**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=107,slow=2.6,SNR=18						

*ANF **26** 06:19:02.9±0.7, 36°.32N×97°.52W, h4km±5km, ML3.8/12, Error ellipse: s-maj=4.6km s-min=3.2km az=164.0*
*TUL **26** 06:19:03.5±0.8, 36°.332N±0°.010×97°.520W±0°.009, h8km±5km, ML3.5, mb_Lg3.1/33(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=164.0*
*NEIC **26** 06:19:03.6±0.9, 36°.324N±0°.009×97°.52W±0°.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=1.7km az=18.0*

ISC 26 06:19:03.4±1.1, 36°.31N±0°.02×97°.55W±0°.02, h6km±9km, n60, σ0§69/55, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	**E0420 Rd and N**	**0.22**	**64**	Pg	**Pg**	**06 19 07.8**	**+0.1**
OK049				Sg	**Sg**	**06 19 10.8**	**+0.2**
OK050	**Pawnee Station**	**0.46**	**80**		**Pg**	**06 19 12.2**	**-0.1**
OK050				Sg	**Sg**	**06 19 18.4**	**0.0**
OK048	**Pawnee Station**	**0.50**	**78**	Pg	**Pg**	**06 19 12.9**	**-0.1**
OK048				Sg	**Sg**	**06 19 19.4**	**0.0**
OK045	**Pawnee Station**	**0.52**	**75**		**Pg**	**06 19 13.3**	**-0.1**
OK045				Sg	**Sg**	**06 19 20.1**	**0.0**
OK029	**Liberty Lake**	**0.52**	**172**	Pg	**Pg**	**06 19 13.9**	**+0.5**
OK029				Sg	**Sg**	**06 19 21.3**	**+1.1**
OK046	**Pawnee Station**	**0.52**	**80**		**Pg**	**06 19 13.4**	**0.0**
OK046				Sg	**Sg**	**06 19 20.2**	**0.0**
OK033	**Mehan**	**0.56**	**118**	Pg	**Pg**	**06 19 14.3**	**+0.1**
OK051	**E0350 and S346**	**0.60**	**71**	Pg	**Pg**	**06 19 14.8**	**-0.2**
OK044	**Pawnee Station**	**0.61**	**84**	Pg	**Pg**	**06 19 14.9**	**-0.2**
OK031	**S. Brethren Rd**	**0.67**	**122**	Pg	**Pg**	**06 19 16.3**	**0.0**
KAN13	**South Haven SW**	**0.70**	**4**	Pg	**Pg**	**06 19 16.7**	**-0.2**
KAN14	**Manchester OK**	**0.73**	**332**		**Pg**	**06 19 17.2**	**-0.1**
OK032	**Salt Plains WL**	**0.73**	**313**	Pg	**Pg**	**06 19 17.3**	**0.0**
OK034	**N. Norfolk Rd.**	**0.74**	**114**	Pg	**Pg**	**06 19 17.4**	**-0.1**
OK025	**Westminster Rd**	**0.75**	**167**	Pg	**Pg**	**06 19 14.8**	**-2.9**
KAN17	**Caldwell West**	**0.75**	**346**	Pg	**Pg**	**06 19 17.9**	**+0.1**
KAN09	**Caldwell North**	**0.82**	**356**		**Pg**	**06 19 19.0**	**-0.2**
KAN01	**Argonia South**	**0.86**	**348**	Pg	**Pg**	**06 19 19.6**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.91**	**175**	Pg	**Pg**	**06 19 20.8**	**0.0**
KS20	**Mayfield South**	**0.92**	**360**	Pg	**Pg**	**06 19 20.6**	**-0.3**
KAN06	**Argonia West S**	**0.97**	**345**	Pg	**Pg**	**06 19 21.7**	**-0.3**
KAN08	**Anthony NE Sta**	**0.97**	**340**		**Pg**	**06 19 21.7**	**-0.4**
KS21	**Milan North St**	**0.98**	**354**	Pg	**Pg**	**06 19 21.8**	**-0.4**
OK038	**West end E0370**	**0.98**	**280**	Pg	**Pg**	**06 19 21.2**	**-1.0**
KAN16	**Harper SW Stat**	**1.00**	**336**	Pg	**Pg**	**06 19 22.3**	**-0.3**
OK035	**E0210 Rd and N**	**1.02**	**293**	Pg	**Pg**	**06 19 22.6**	**-0.3**
T35A	**Sooner Cattle**	**1.03**	**54**	Pg	**Pg**	**06 19 22.4**	**-0.7**
T35B	**Sooner Cattle**	**1.03**	**54**	P	**Pg**	**06 19 22.4**	**-0.7**
	baz=234						
T35B				S	**Sg**	**06 19 35.6**	**-0.8**
	baz=234						
KAN12	**Harper NE Stat**	**1.05**	**340**	Pg	**Pg**	**06 19 23.1**	**-0.5**
FNO	**Franklin**	**1.06**	**174**	Pg	**Pg**	**06 19 23.5**	**-0.2**
U32A	**Winter Ranch,**	**1.18**	**274**		**Pg**	**06 19 25.5**	**-0.5**
U32A	**Winter Ranch,**	**1.18**	**274**	P	**Pg**	**06 19 25.5**	**-0.5**
	baz=92,SNR=41						
U32A				S	**Sb**	**06 19 42.1**	**+0.4**
	baz=92						
TUL1	**Leonard**	**1.48**	**105**	Pn	**Pn**	**06 19 29.8**	**-0.7**
TUL1	**Leonard**	**1.48**	**105**	P	**Pn**	**06 19 29.8**	**-0.7**
	baz=287,SNR=285						
TUL1				S	**Sn**	**06 19 49.9**	**-0.2**
	baz=287						
WMOK	**Wichita Mounta**	**1.87**	**213**	IAmb_Lg		06 20 02.6	
	comp=Z,77nm,1.2s						
WMOK	**Wichita Mounta**	**1.87**	**213**	P	**Pn**	**06 19 36.6**	**+0.7**
	baz=32,SNR=260						
WMOK				S	**Sg**	**06 20 02.8**	**-0.6**
	baz=32						
R32A	**Long Quarter,**	**2.30**	**337**	S	**Sn**	**06 20 11.3**	**+0.7**
	baz=155						
X37A	**Clayton**	**2.47**	**133**	IAmb_Lg		06 20 24.1	
	comp=Z,54nm,0.8s						
X37A	**Clayton**	**2.47**	**133**	P	**Pn**	**06 19 44.9**	**+0.7**
	baz=315,SNR=149						
KSU1	**Kansas State U**	**2.88**	**15**	IAmb_Lg		06 20 38.0	
	comp=Z,70nm,0.9s						
Z35A	**Perchaen, San**	**2.98**	**175**	S	**Sn**	**06 20 29.4**	**+2.0**
	baz=356						
CBKS	**Cedar Bluff**	**3.04**	**326**	IAmb_Lg		06 20 45.4	
	comp=Z,37nm,0.7s						
CBKS	**Cedar Bluff**	**3.04**	**326**	P	**Pn**	**06 19 52.3**	**+0.2**
	baz=144,SNR=6.5						
MIAR	**Mount Ida**	**3.69**	**117**	P	**Pn**	**06 20 01.5**	**+0.6**
	baz=300,SNR=39						
Z38A	**Mt. Pleasant**	**3.70**	**145**	IAmb_Lg		06 21 07.1	
	comp=Z,49nm,0.8s						
WHTX	**Lake Whitney,**	**4.31**	**179**	P	**Pn**	**06 20 09.9**	**+0.4**
	baz=359,SNR=14						
WHTX				S	**Sn**	**06 20 59.9**	**-0.1**
	baz=359						
MGMO	**Mountain Grove**	**4.32**	**77**	IAmb_Lg		06 21 24.4	
	comp=Z,62nm,0.7s						
WHAR	**Wooly Hollow**	**4.39**	**102**	IAmb_Lg		06 21 30.4	
	comp=Z,47nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.41**	**94**	IAmb_Lg		06 21 24.6	
	comp=Z,60nm,0.9s						
WLAR	**White Oak Lake**	**4.48**	**124**	IAmb_Lg		06 21 34.3	
	comp=Z,29nm,0.8s						
UALR	**University of**	**4.51**	**108**	IAmb_Lg		06 21 29.5	
	comp=Z,36nm,0.8s						
237A	**Washetta, Mont**	**4.54**	**161**	IAmb_Lg		06 21 36.8	
	comp=Z,36nm,0.9s						
237A	**Washetta, Mont**	**4.54**	**161**	S	**Sn**	**06 21 05.0**	**-0.6**
	baz=342						
R40A	**Maddies Statio**	**4.65**	**63**	P	**Pn**	**06 20 14.0**	**-0.1**
	baz=246,SNR=18						
KSCO	**Kaye Shedlock'**	**4.85**	**305**	IAmb_Lg		06 21 45.3	
	comp=Z,26nm,0.9s						
NATX	**Nacogdoches**	**5.13**	**151**	IAmb_Lg		06 21 55.3	
	comp=Z,43nm,0.8s						
P40A	**Paris**	**5.40**	**52**	IAmb_Lg		06 21 58.3	
	comp=Z,52nm,1.0s						
435B	**Jarrell**	**5.51**	**180**	IAmb_Lg		06 22 09.6	
	comp=Z,42nm,0.7s						
435B	**Jarrell**	**5.51**	**180**	S	**Sn**	**06 21 28.5**	**-1.3**
	baz=0.5						
OGNE	**Ogallala**	**5.81**	**324**	IAmb_Lg		06 22 15.5	
	comp=Z,33nm,0.8s						

*BJI **26** 06:29:06.8±0.0, 23°.13N×92°.80E, h41km, mb4.7/50, mB5.0/12, ML4.4/3, Ms4.5/8, Ms7 4.3/8*
*NDI **26** 06:29:07.3±2.7, 23°.23N×92°.78E, h12km±8km, mb5.0, ML4.6, mb4.7(NEIC)*
*IDC **26** 06:29:09.5±0.4, 23°.21N×92°.99E, h45km±3km, mb4.1/26, mbtmp4.3/28, Error ellipse: s-maj=8.6km s-min=5.4km az=153.0*
*NEIC **26** 06:29:09.9±1.2, 23°.13N±0°.05×92°.87E±0°.05, h50km±8km, mb4.7/32, Error ellipse: s-maj=8.2km s-min=6.5km az=197.0*

ISC 26 06:29:08.9±0.4, 23°.15N±0°.03×92°.82E±0°.04, h43km±4km, h43km:pP-P, n139, σ1§51/161, mb4.5/49, 2C-4D, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**0.67**	**167**	*i* Pg	**Pn**	**06 29 22.5**	**+0.3**
SAIH				*i* Sg	**Sn**	**06 29 32.2**	**+0.5**
SAIH				IAML		06 29 34.3	
	comp=E,51μm,0.6s						
SAIH				IAML		06 29 36.4	
	comp=N,23μm,0.5s						
BRDH	**Bariadhala**	**1.18**	**247**	P	**Pn**	**06 29 31.2**	**+2.3**
	comp=N,5μm,0.3s,baz=94,slow=18,SNR=561						
BRDH				S	**Sn**	**06 29 49.0**	**+5.2**
	comp=N,37μm,0.3s,baz=171,slow=23,SNR=38						
SILR	**SILCHAR**	**1.63**	**360**	*i* Pg	**Pn**	**06 29 37.0**	**+1.9**
SILR				*i* Sg	**Sn**	**06 29 59.1**	**+4.3**
IMP	**Imphal**	**1.97**	**31**	*e*P	**Pn**	**06 29 41.0**	**+1.1**
SHL	**Shillong**	**2.56**	**341**	Pn	**Pn**	**06 29 47.5**	**-0.5**
SHL	**Shillong**	**2.56**	**341**	*e*P	**Pn**	**06 29 48.1**	**+0.1**
SHL				*e*S	**Sn**	**06 30 18.2**	**+0.3**
KOHI	**KOHIMA**	**2.82**	**24**	*e*P	**Pn**	**06 29 52.3**	**+0.7**
KOHI				*i* x	x	06 30 04.1	
TEZP	**TEZPUR**	**3.45**	**360**	*e*P	**Pn**	**06 29 59.5**	**-0.7**
TEZP				*e*S	**Sn**	**06 30 37.2**	**-2.6**
MOKO	**MOKOCHONG**	**3.52**	**26**	*e*P	**Pn**	**06 30 01.6**	**+0.4**
MOKO				*e*S	**Sn**	**06 30 41.1**	**-0.5**
MOKO				IAML		06 30 42.3	
	comp=E,2μm,0.3s						
DHUB	**DHUBRI**	**3.84**	**319**	*e*P	**Pn**	**06 30 06.2**	**+0.6**
DHUB				*e*S	**Sn**	**06 30 47.1**	**-2.4**
ZIRO	**ZIRO**	**4.46**	**12**	*e*P	**Pn**	**06 30 13.6**	**-0.6**
ZIRO				*e*S	**Sn**	**06 31 01.6**	**-3.3**
TAPN	**Taplejung**	**6.24**	**313**	*e*Pn	**Pn**	**06 30 40.0**	**+1.3**
TAPN				*e*Sn	**Sn**	**06 31 49.6**	**+0.7**
	comp=E,1μm,0.4s						
BOK	**Bokaro**	**6.40**	**277**	*e*P	**Pn**	**06 30 41.9**	**+1.3**
BOK				*i* x	x	06 30 51.2	
BOK				*i* S	**Sn**	**06 31 45.0**	**-7.4**
LSA	**Lhasa**	**6.70**	**347**	Pn	**Pn**	**06 30 46.1**	**+0.9**
LSA	**Lhasa**	**6.70**	**347**	P	**Pn**	**06 30 46.0**	**+0.9**
LSA				S	**Sn**	**06 32 04.0**	**+3.6**
LSA				LR	LR		
	comp=E,670nm,19.6s						
RAMN	**Ramite**	**6.79**	**305**	*e*Pn	**Pn**	**06 30 47.0**	**+0.7**
RAMN				*e*Sn	**Sn**	**06 32 02.4**	**0.0**
	comp=E,740nm,0.3s						
BWNR	**Bhubaneshwar**	**7.11**	**248**	*e*P	**Pn**	**06 30 51.7**	**+1.3**
CHTO	**Chiang Mai**	**7.17**	**126**	Pn	**Pn**	**06 30 50.7**	**-0.5**
CM31	**Chiang Mai Arr**	**7.39**	**128**		**Pn**	**06 30 54.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**7.39**	**128**	P	**Pn**	**06 30 53.9**	**-0.4**
	comp=E,20nm,0.6s,baz=311,slow=13,SNR=74						
CMAR				S	**Sn**	**06 32 20.0**	**+3.1**
	comp=E,13nm,0.9s,baz=320,slow=18,SNR=2.0						
CMAR	**Chiang Mai Arr**	**7.39**	**128**	Pn	**Pn**	**06 30 54.0**	**-0.3**
JIRN	**Jiri**	**7.49**	**308**	*e*Pn	**Pn**	**06 30 56.9**	**+0.9**
JIRN				*e*Sn	**Sn**	**06 32 18.4**	**-1.4**
	comp=E,650nm,0.4s						
GUN	**Gumba**	**7.86**	**309**	*e*Pn	**Pn**	**06 31 01.9**	**+0.9**
GUN				*e*Sn	**Sn**	**06 32 27.8**	**-1.0**
	comp=E,1μm,0.6s						
PKI	**Pulchoki**	**8.02**	**305**	*e*Pn	**Pn**	**06 31 03.9**	**+0.7**
PKI				*e*Sn	**Sn**	**06 32 31.0**	**-1.7**
PKIN	**Phulchoki**	**8.03**	**305**	*e*Pn	**Pn**	**06 31 04.0**	**+0.7**
KKN	**Kakani**	**8.23**	**306**	*e*Pn	**Pn**	**06 31 06.3**	**+0.3**
KKN	**Kakani**	**8.23**	**306**	*e*Pn	**Pn**	**06 31 06.4**	**+0.4**
KKN	**Kakani**	**8.23**	**306**	*e*Pn	**Pn**	**06 31 06.7**	**+0.7**
DMN	**Daman**	**8.27**	**304**	*e*Pn	**Pn**	**06 31 06.9**	**+0.4**
PHRA	**Phrae**	**8.33**	**122**	Pn	**Pn**	**06 31 06.7**	**-0.5**
JHSG	**JHARSUGUGA**	**8.48**	**262**	*e*P	**Pn**	**06 31 11.0**	**+1.8**
PZH	**PanZhiHua**	**8.77**	**66**	P	**Pn**	**06 31 15.5**	**+2.2**
PZH				pmax	pmax		
	comp=E,20nm,1.0s						
GKN	**Gorkha**	**8.83**	**305**	*e*Pn	**Pn**	**06 31 14.2**	**+0.1**
VLK	**Valmikinagar**	**9.10**	**299**	*e*P	**Pn**	**06 31 18.5**	**+0.8**
KMI	**Kunming**	**9.27**	**76**

HHC pmax pmax
comp=Z,24nm,0.6s
HHC pmax pmax
comp=Z,410nm,6.7s
NJ2 Nanjing 24.67 63 *eP* **P 06 34 24.0 -1.8**
NJ2 pmax pmax
comp=Z,15nm,0.9s
AAK Ala-Archa 24.69 326 P **P 06 34 28.0 +1.9**
comp=Z,9.8nm,0.9s,baz=148,slow=5.0,SNR=18
comp=Z,9.8nm,0.9s
AAK Ala-Archa 24.69 326 P **P 06 34 26.1 +0.1**
TIA Tai'an 24.73 53 ⇓P **P 06 34 25.5 -0.8**
TIA pmax pmax
comp=Z,10.0nm,1.1s
GAR Garm 24.82 315 P **P 06 34 27.6 +0.3**
MK31 Makanchi Array 25.07 343 P **P 06 34 29.2 0.0**
MK31 IAmb IAmb 06 34 31.5
comp=Z,11nm,0.7s
MKAR Makanchi Array 25.07 343 P **P 06 34 30.4 +1.1**
comp=Z,14nm,0.6s,baz=158,slow=8.9,SNR=93
comp=Z,14nm,0.6s
MKAR Makanchi Array 25.07 343 P **P 06 34 30.0 +0.7**
BTK Batken 25.10 317 P **P 06 34 29.7 0.0**
BTK IAmb IAmb 06 34 44.7
comp=Z,35nm,0.9s
MAKZ Makanchi 25.17 342 P **P 06 34 30.4 +0.2**
MAKZ IAmb IAmb 06 34 32.9
comp=Z,15nm,1.1s
CHGR Chuyangaron 25.41 313 P **P 06 34 32.9 +0.4**
CHGR IAmb IAmb 06 35 00.9
comp=Z,18nm,0.8s
YULB Yu-li 26.15 84 P **P 06 34 38.9 -0.4**
YULB IAmb IAmb 06 34 41.1
comp=Z,21nm,0.9s
SONM Songino Array 26.92 20 P **P 06 34 46.3 +0.2**
comp=Z,3.4nm,0.6s,baz=204,slow=8.7,SNR=20
comp=Z,3.4nm,0.6s
SONM Songino Array 26.92 20 P **P 06 34 45.7 -0.4**
ULN Ulaanbaatar 27.16 21 P **P 06 34 47.9 -0.4**
ULN Ulaanbaatar 27.16 21 P **P 06 34 49.5 +1.2**
comp=Z,40nm,1.1s
KURBB Kurchatov Arra 29.60 341 P **P 06 35 10.3 +0.6**
comp=Z,3.7nm,0.6s,baz=155,slow=8.2,SNR=12
comp=Z,3.7nm,0.6s
KURK Kurchatov 29.66 342 P **P 06 35 10.6 +0.3**
ZAA0 Zalesovo Array 31.34 351 P **P 06 35 25.9 +0.7**
ZALV Zalesovo Beam 31.34 351 P **P 06 35 25.9 +0.7**
comp=Z,9.0nm,0.6s,baz=169,slow=8.1,SNR=41
comp=Z,9.0nm,0.6s
ZALV Zalesovo Beam 31.34 351 P **P 06 35 25.7 +0.6**
GEYT Alibeck 33.11 304 pP pP 06 35 54.5 +1.8
comp=Z,1.5nm,0.4s,baz=52,slow=9.7,SNR=2.5
GEYT Alibeck 33.11 304 P **P 06 35 40.5 -0.4**
GEYT IAmb IAmb 06 35 55.9
comp=Z,20nm,1.5s
KSRS Korea Array 33.28 57 P **P 06 35 41.4 -0.9**
comp=Z,0.7nm,0.3s,baz=254,slow=9.8,SNR=2.5
comp=Z,0.7nm,0.3s
BVAR Borovoye Array 34.37 336 P **P 06 35 52.3 +0.7**
comp=Z,1.3nm,0.4s,baz=135,slow=9.4,SNR=10
BVAR pP **pP 06 36 03.4 -0.1**
comp=Z,1.0nm,0.4s,baz=137,slow=8.4,SNR=4.9
comp=Z,1.3nm,0.4s
JNU Nakatsue 34.84 65 P **P 06 35 57.5 +1.5**
ABKAR Akbulak array 36.70 323 P **P 06 36 12.4 +0.8**
ABKAR IAmb IAmb 06 36 13.9
comp=Z,4.9nm,0.7s
USRK Ussuriysk Ar. 38.30 47 P **P 06 36 24.1 -1.2**
comp=Z,1.9nm,0.5s,baz=254,slow=7.9,SNR=5.1
comp=Z,1.9nm,0.5s
AKTO Aktyubinsk 38.39 324 P **P 06 36 26.5 +0.6**
comp=Z,4.2nm,0.9s,baz=135,slow=7.5,SNR=12
AKTO pP **pP 06 36 40.2 +2.3**
comp=Z,4.5nm,0.8s,baz=110,slow=8.4,SNR=5.0
comp=Z,4.2nm,0.9s
KLR Kul'dur 40.13 40 P **P 06 36 39.5 -1.0**
comp=Z,1.5nm,0.6s,baz=211,slow=8.0,SNR=4.8
comp=Z,1.5nm,0.6s
MJB9 Matsu-Tunnel 41.21 60 P **P 06 36 49.1 -0.5**
MJB9 IAmb IAmb 06 36 50.7
comp=Z,11nm,0.8s
MAJO Matsushiro 41.21 60 P **P 06 36 47.9 -1.7**
MAJO IAmb IAmb 06 36 49.7
comp=Z,11nm,0.8s
MJAR Matsushiro Arr 41.21 60 P **P 06 36 48.0 -1.6**
comp=Z,4.7nm,0.8s,baz=276,slow=8.8,SNR=10
MJAR pP **pP 06 37 02.5 +0.7**
comp=Z,3.5nm,0.7s,baz=274,slow=9.5,SNR=3.6
comp=Z,4.7nm,0.8s
ARU Arti 41.61 332 P **P 06 36 53.2 +0.6**
comp=Z,6.8nm,0.4s,baz=98,slow=5.7,SNR=8.8
comp=Z,6.8nm,0.4s
NRIK Noril'sk 46.31 357 P **P 06 37 30.5 +0.4**
comp=Z,5.9nm,0.6s,baz=153,slow=6.4,SNR=11
NRIK pP **pP 06 37 42.5 +0.1**
comp=Z,2.8nm,0.5s,baz=134,slow=5.0,SNR=2.4
comp=Z,5.9nm,0.6s
KNRA Kununurra 52.20 134 P **P 06 38 14.6 -1.1**
KLMR Klimovskoe 52.40 330 *eP* **P 06 38 15.5 -1.1**
KLMR AMP 06 38 30.6
comp=Z,15nm,1.6s
TIXI Tiksi 52.66 14 P **P 06 38 18.1 -0.3**
AKASG Malin Array Be 55.81 316 P **P 06 38 41.5 -0.2**
comp=Z,0.9nm,0.6s,baz=80,slow=6.8,SNR=5.8
AKASG pP **pP 06 38 53.3 -0.8**
comp=Z,2.8nm,0.6s,baz=80,slow=6.6,SNR=5.8
comp=Z,0.9nm,0.6s
MLR Muntele Rosu 57.85 310 P **P 06 38 56.6 +0.2**
FINES FINESS Array B 58.84 329 P **P 06 39 03.0 +0.2**
comp=Z,3.1nm,0.8s,baz=97,slow=7.7,SNR=6.5
FINES pP **pP 06 39 15.4 0.0**
comp=Z,2.8nm,0.7s,baz=100,slow=8.1,SNR=3.2
comp=Z,3.1nm,0.8s
WB0 Warramunga Arr 58.86 133 P **P 06 39 02.1 -1.4**
WB0 IAmb IAmb 06 39 28.6
comp=Z,6.3nm,0.8s
WRA Warramunga Arr 58.95 133 P **P 06 39 03.3 -0.9**
comp=Z,3.2nm,0.7s,baz=321,slow=7.4,SNR=46
WRA pP **pP 06 39 17.9 +1.1**
comp=Z,3.4nm,0.6s,baz=322,slow=7.5,SNR=6.4
comp=Z,3.2nm,0.7s
WRA Warramunga Arr 58.95 133 P **P 06 39 03.9 -0.3**
ARCES ARCESS Array B 60.61 338 P **P 06 39 15.5 +0.6**
comp=Z,1.8nm,0.6s,baz=93,slow=6.8,SNR=9.5
ARCES pP **pP 06 39 29.8 +2.3**
comp=Z,1.2nm,0.5s,baz=90,slow=7.3,SNR=2.2
comp=Z,1.8nm,0.6s
AS31 Alice Springs 61.31 137 P **P 06 39 19.4 -0.9**
ASAR Alice Springs 61.31 137 P **P 06 39 20.1 -0.3**
comp=Z,4.9nm,0.6s,baz=319,slow=6.6,SNR=48
ASAR pP **pP 06 39 33.6 +0.6**
comp=Z,5.9nm,0.6s,baz=319,slow=6.8,SNR=12
comp=Z,4.9nm,0.6s
ASAR Alice Springs 61.31 137 P **P 06 39 19.6 -0.7**
MOA Molln 65.67 314 *eP* P 06 40 01.3 +12
comp=Z,5.7nm,0.9s
GERES GERESS Array B 65.91 315 P **P 06 39 51.1 +0.7**
comp=Z,1.3nm,0.7s,baz=91,slow=5.6,SNR=10
GERES pP **pP 06 40 03.3 +0.1**
comp=Z,2.8nm,0.7s,baz=76,slow=7.0,SNR=8.1
comp=Z,1.3nm,0.7s
GERES GERESS Array B 65.91 315 P **P 06 39 49.9 -0.6**
NB2 NORSAR Subarra 65.99 328 P **P 06 39 50.6 -0.1**
comp=Z,1.3nm,0.6s,baz=85,slow=6.5
NOA NORSAR Array B 65.99 328 P **P 06 39 50.2 -0.5**
comp=Z,2.5nm,0.6s,baz=86,slow=6.4,SNR=6.5
NOA pP **pP 06 40 02.8 -0.7**
comp=Z,1.2nm,0.6s,baz=86,slow=6.4,SNR=3.1
comp=Z,2.5nm,0.6s
RETA Reutte 68.07 314 *eP* pP 06 40 18.1 +1.1
comp=Z,5.1nm,0.8s
DAVA Damuels 68.69 314 *eP* pP 06 40 20.2 -0.8
comp=Z,7.6nm,1.3s
KEST Kesra 71.80 302 pP pP 06 40 40.4 +0.2
comp=Z,3.0nm,0.7s,baz=321,slow=3.0,SNR=3.5
STKA Stephens Creek 71.90 138 P **P 06 40 26.9 -0.9**
comp=Z,1.0nm,0.5s,baz=342,slow=13,SNR=3.2
comp=Z,1.0nm,0.5s
CAST Castle Rocks 80.01 24 P **P 06 41 14.5 +0.9**
CAST IAmb IAmb 06 41 15.2
comp=Z,5.2nm,0.9s
BMAR Burnt Mountain 80.26 19 P **P 06 41 16.8 +1.9**
ESDC Sonseca Array 80.52 309 P **P 06 41 17.5 +0.7**
comp=Z,0.4nm,0.7s,baz=17,slow=6.7,SNR=2.0
comp=Z,0.4nm,0.7s
ILAR Eielson Array 81.13 22 P **P 06 41 19.0 -0.5**
comp=Z,1.0nm,0.7s,baz=294,slow=5.0,SNR=9.9
ILAR pP **pP 06 41 33.0 +0.3**

comp=Z,1.0nm,0.6s,baz=298,slow=4.4,SNR=4.6
comp=Z,1.0nm,0.7s
BOSA Boshof 82.95 235 P **P 06 41 30.0 +0.3**
comp=Z,1.3nm,0.5s,baz=24,slow=3.1,SNR=4.4
comp=Z,1.3nm,0.5s
TORD Torodi Ar. Bea 85.94 282 P **P 06 41 45.7 +0.6**
comp=Z,0.3nm,0.6s,baz=77,slow=6.3,SNR=2.8
TORD pP **pP 06 41 58.2 -0.1**
comp=Z,1.4nm,0.9s,baz=68,slow=4.2,SNR=8.0
comp=Z,0.3nm,0.6s
TXAR Lajitas Array 125.46 18 PKP **PKiKP 06 48 06.8 +0.5**
comp=Z,0.2nm,0.5s,baz=71,slow=1.2,SNR=8.0
TXAR pPKP **pPKPdf 06 48 20.1 +0.4**
comp=Z,0.2nm,0.6s,baz=30,slow=1.5,SNR=3.1
CPUP Villa Florida 152.73 257 PKPab **PKPab 06 49 13.2 +0.7**
comp=Z,1.3nm,0.6s,baz=117,slow=4.5,SNR=4.5

IDC 26 06:41:56.2±10.0, 1°.68N×126°.54E, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=166.1km s-min=162.3km az=144.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.81**	**161**	P		P		06 47 01.2	+0.4
	3.1nm,0.4s,baz=338,slow=11,SNR=75								
	3.1nm,0.4s								
ASAR	**Alice Springs**	**26.19**	**165**	P		P		06 47 32.9	+0.1
	1.5nm,0.5s,baz=350,slow=7.5,SNR=29								
	1.5nm,0.5s								
STKA	**Stephens Creek**	**36.30**	**158**	P		P		06 49 01.1	-0.6
	1.8nm,0.5s,baz=354,slow=9.1,SNR=4.2								
	1.8nm,0.5s								

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*JMA **26** 06:51:50.3±0.0, 35°.4N±0°.1×133°.86E±0°.09, h14km, MV2.7/20, EASTERN TOTTORI PREF*
ISC 26 06:51:49.4±1.8, 35°.40N±0°.09×133°.86E±0°.06, h17km±8km, n6, σ0°59/8, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.04**	**233**	P		P	**g**	**06 51 52.7**	**+0.2**
JKR				S			**g**	**06 51 54.3**	**-0.3**
JAD	**Aida**	**0.53**	**152**	P		P	**g**	**06 51 60.0**	**+0.1**
JAD				S			**g**	**06 52 06.8**	**-0.2**
JHS	**Saijyo**	**0.73**	**237**	P		P	**g**	**06 52 03.8**	**0.0**
JMN	**Monobe**	**1.67**	**180**	P		P	**b**	**06 52 19.8**	**+0.1**
INU	**Inuyama**	**2.58**	**90**	P		P	**g**	**06 52 39.7**	**+0.9**
JGF	**Kuroka**	**2.86**	**85**	P		P	**g**	**06 52 43.5**	**-0.7**

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*JMA **26** 07:07:15.1±0.3, 23°.N±1°.×12°.1E±°., h0km, MV3.5/11, TAIWAN REGION*
*TAP **26** 07:07:15.3, 23°.54N×120°.62E, h5km, ML3.7, C*
ISC 26 07:07:15.6±0.8, 23°.54N±0°.01×120°.62E±0°.01, h13km±4km, n142, σ0°89/260, 27C-27D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHN5	**Tsauling**	**0.08**	**47**	⇑*iP*			**Pg**	**07 07 17.3**	**-1.2**
	baz=40								
CHN5				*i* S			**Sg**	**07 07 19.4**	**-1.2**
	baz=40								
WCKO	**Fanlu**	**0.10**	**186**	⇑P			**Pg**	**07 07 17.7**	**-1.1**
	baz=189								
WCKO				S			**Sg**	**07 07 19.9**	**-1.0**
	baz=189								
CHN2	**Minshiung**	**0.13**	**265**	⇓*iP*			**Pb**	**07 07 19.6**	**-0.4**
	baz=268								
CHN2				*i* S			**Sg**	**07 07 22.7**	**+1.3**
	baz=268								
WGK	**Gukeng**	**0.15**	**341**	⇓*iP*			**Pb**	**07 07 19.9**	**-0.4**
	baz=342								
WGK				*i* S			**Sg**	**07 07 23.4**	**+1.5**
	baz=342								
WDLH	**Douliu**	**0.16**	**334**	⇓*iP*			**Pg**	**07 07 20.1**	**+0.5**
	baz=333								
WDLH				*i* S			**Sg**	**07 07 23.5**	**+1.3**
	baz=333								
ALS	**Alishan**	**0.18**	**101**	⇓*iP*			**Pb**	**07 07 20.5**	**-0.4**
	baz=99								
ALS				S			**Sg**	**07 07 24.4**	**+1.4**
	baz=99								
CHY	**Chiayi**	**0.18**	**255**	⇓*iP*			**Pg**	**07 07 20.2**	**+0.4**
	baz=257								
CHY				*i* S			**Sg**	**07 07 23.7**	**+1.0**
	baz=257								
CHN4	**Tsaushan**	**0.19**	**186**	⇑*iP*			**Pg**	**07 07 19.5**	**-0.5**
	baz=188								
CHN4				S			**Sg**	**07 07 24.2**	**+1.2**
	baz=188								
TPUB	**Ta-pu**	**0.24**	**177**	P			**Pb**	**07 07 21.5**	**-0.4**
TPUB	**Ta-pu**	**0.24**	**177**	⇓*iP*			**Pb**	**07 07 21.4**	**-0.4**
	baz=178								
TPUB				*e*S			**Sg**	**07 07 25.7**	**+1.3**
	baz=178								
WTK	**Tuku**	**0.25**	**305**	⇓*eP*			**Pb**	**07 07 21.9**	**-0.2**
	baz=305								
WTK				*e*S			**Sb**	**07 07 26.4**	**0.0**
	baz=305								
WHYT	**Xinyi Township**	**0.27**	**55**	⇓*iP*			**Pb**	**07 07 21.8**	**-0.5**
	baz=53								
WHYT				*i* S			**Sb**	**07 07 26.3**	**-0.4**
	baz=53								
WJS	**Zhushan**	**0.29**	**20**	⇑*iP*			**Pb**	**07 07 22.7**	**-0.1**
	baz=19								
WJS				*e*S			**Sb**	**07 07 27.8**	**+0.2**
	baz=19								
WTP	**Ta-pu**	**0.30**	**180**	⇓*iP*			**Pb**	**07 07 22.4**	**-0.4**
	baz=180								
WTP				*e*S			**Sb**	**07 07 27.5**	**-0.1**
	baz=180								
TWK	**Hsinying**	**0.30**	**203**	⇑*iP*			**Pb**	**07 07 22.6**	**-0.3**
	baz=202								
TWK				*e*S			**Sb**	**07 07 27.7**	**0.0**
	baz=202								
YUS	**Yu-Shan**	**0.31**	**100**	⇓*iP*			**Pb**	**07 07 23.2**	**-0.2**
	baz=99								
YUS				S			**Sb**	**07 07 29.0**	**+0.4**
	baz=99								
WNT	**Mingjian**	**0.34**	**11**	⇑*iP*			**Pb**	**07 07 23.6**	**+0.1**
	baz=11								
WNT				*e*S			**Sb**	**07 07 29.5**	**+0.7**
	baz=11								
SNST	**Tainan City**	**0.34**	**199**	*eP*			**Pn**	**07 07 25.4**	**-0.9**
	baz=200								
ICHU	**Yijhu**	**0.36**	**240**	⇓*iP*			**Pb**	**07 07 23.6**	**-0.2**
	baz=241								
ICHU				S			**Sb**	**07 07 29.7**	**+0.3**
	baz=241								
CHN1	**Nanshi**	**0.37**	**193**	P			**Pb**	**07 07 23.6**	**-0.4**
	baz=194								
CHN1				*e*S			**Sb**	**07 07 30.0**	**+0.4**
	baz=194								
WNT1	**Nantou City**	**0.37**	**9**	*eP*			**Pb**	**07 07 24.2**	**+0.2**
	baz=8.0								
WNT1				*e*S			**Sb**	**07 07 30.3**	**+0.7**
	baz=8.0								
WSF	**Szhu**	**0.37**	**285**	⇓*iP*			**Pg**	**07 07 23.7**	**+0.6**
	baz=285								
WSF				*e*S			**Sb**	**07 07 30.3**	**+0.5**
	baz=285								
SSLB	**Suanglung**	**0.39**	**52**	P			**Pb**	**07 07 24.3**	**-0.2**
SSLB	**Suanglung**	**0.39**	**52**	⇓*iP*			**Pb**	**07 07 24.2**	**-0.2**
	baz=51								
SSLB				*e*S			**Sb**	**07 07 30.4**	**0.0**
	baz=51								
STYH	**Taoyuan**	**0.40**	**158**	⇓*eP*			**Pg**	**07 07 23.2**	**-0.5**
	baz=158								
STYH				*e*S			**Sb**	**07 07 29.3**	**-1.3**
	baz=158								
STYT	**Tauyuan**	**0.40**	**161**	⇓*iP*			**Pb**	**07 07 24.4**	**-0.2**
	baz=161								
STYT				S			**Sb**	**07 07 31.1**	**+0.4**
	baz=161								
WYL	**Yuanlin Townsh**	**0.42**	**355**	*eP*			**Pb**	**07 07 25.1**	**+0.2**
	baz=355								
WYL				*e*S			**Sb**	**07 07 31.9**	**+0.8**
	baz=355								
WRL	**Guolierlin Hig**	**0.42**	**328**	⇓*eP*			**Pg**	**07 07 23.6**	**-0.4**
	baz=329								
WRL				*e*S			**Sg**	**07 07 29.9**	**+0.3**
	baz=329								
CHN8	**Yiju**	**0.42**	**242**	P			**Pb**	**07 07 24.9**	**0.0**
	baz=243								
CHN8				*e*S			**Sb**	**07 07 32.2**	**+1.1**
	baz=243								
TYC	**Yuchr**	**0.42**	**32**	⇑*iP*			**Pb**	**07 07 25.1**	**+0.2**
	baz=32								
TYC				*e*S			**Sb**	**07 07 32.1**	**+0.9**
	baz=32								
SMLT	**Sun Moon Lake**	**0.43**	**38**	⇑P			**Pb**	**07 07 25.2**	**+0.1**
	baz=37								
SMLT				*e*S			**Sb**	**07 07 32.5**	**+1.0**
	baz=37								
WTCT	**Ta-ch'eng**	**0.44**	**316**	⇓*iP*			**Pb**	**07 07 25.0**	**-0.2**
	baz=317								
WTCT				*e*S			**Sb**	**07 07 32.2**	**+0.4**
	baz=317								
WMLT	**Mailiao**	**0.44**	**306**	*eP*			**Pb**	**07 07 25.1**	**-0.2**
	baz=306								
WMLT				*e*S			**Sb**	**07 07 32.5**	**+0.7**
	baz=306								
SGST	**Jiashian**	**0.46**	**184**	*eP*			**Pg**	**07 07 24.7**	**-0.1**
	baz=184								
SGST				*e*S			**Sb**	**07 07 32.4**	**+0.1**
	baz=184								
WWF	**Wufeng**	**0.50**	**9**	*eP*			**Pg**	**07 07 25.8**	**+0.3**
	baz=8.0								
WWF				*e*S			**Sb**	**07 07 33.6**	**+0.1**
	baz=8.0								
SSHA	**Shanhua**	**0.51**	**217**	*eP*			**Pb**	**07 07 27.1**	**+0.8**
	baz=218								
SSHA				*e*S			**Sn**	**07 07 36.3**	**-0.7**
	baz=218								
ELDTW	**Lidau**	**0.51**	**134**	⇓*iP*			**Pb**	**07 07 26.5**	**0.0**
	baz=133								
ELDTW				*e*S			**Sb**	**07 07 34.3**	**+0.5**
	baz=133								
CHN3	**Shinhua**	**0.52**	**206**	*eP*			**Pb**	**07 07 26.7**	**+0.1**
	baz=207								
VWDT	**VWDT**	**0.53**	**66**	⇓P			**Pb**	**07 07 27.1**	**+0.4**
	baz=66								
VWDT				*e*S			**Sb**	**07 07 34.9**	**+0.7**
	baz=66								
SCLT	**Jiali**	**0.53**	**227**	*eP*			**Pb**	**07 07 26.9**	**+0.1**
	baz=227								
SCLT				*e*S			**Sn**	**07 07 36.7**	**-1.0**
	baz=227								
WCHH	**Zhanghua**	**0.54**	**354**	P			**Pb**	**07 07 27.1**	**+0.2**
	baz=354								
WCHH				*e*S			**Sb**	**07 07 35.5**	**+1.0**
	baz=354								
SLGT	**Liugui**	**0.55**	**177**	*eP*			**Pb**	**07 07 27.6**	**+0.5**
	baz=178								
WPL	**Puli Township**	**0.56**	**34**	*eP*			**Pb**	**07 07 27.4**	**0.0**
	baz=33								
WPL				*e*S			**Sb**	**07 07 35.4**	**+0.1**
	baz=33								
DPDB	**Guoxing**	**0.56**	**30**	⇑*iP*			**Pb**	**07 07 27.6**	**+0.1**
	baz=29								
DPDB				*e*S			**Sb**	**07 07 36.1**	**+0.7**
	baz=29								
SHHT	**Tainan City**	**0.58**	**205**	*eP*			**Pb**	**07 07 28.0**	**+0.5**
	baz=206								
SHHT				*e*S			**Sn**	**07 07 38.4**	**-0.4**
	baz=206								
WCS	**Beigang Elemen**	**0.58**	**28**	⇑*eP*			**Pg**	**07 07 26.7**	**-0.3**
	baz=27								
WCS				*e*S			**Sb**	**07 07 35.3**	**-0.5**
	baz=27								
TCU	**Taichung**	**0.60**	**5**	⇑P			**Pb**	**07 07 28.4**	**+0.4**
	baz=5.0								
TCU				*e*S			**Sb**	**07 07 37.3**	**+0.9**
	baz=5.0								
TAI1	**Yung-k'ang**	**0.62**	**215**	*eP*			**Pb**	**07 07 28.5**	**+0.3**
	baz=216								
TAI1				*e*S			**Sn**	**07 07 40.3**	**+0.6**
	baz=216								
TSCK	**Chigu Township**	**0.63**	**231**	*eP*			**Pg**	**07 07 27.7**	**-0.2**
	baz=232								
TSCK				*e*S			**Sb**	**07 07 37.6**	**+0.6**
	baz=232								
WUSB	**Renai**	**0.64**	**46**	⇑*iP*			**Pb**	**07 07 28.7**	**0.0**
	baz=45								
WUSB				*e*S			**Sb**	**07 07 37.5**	**-0.1**
	baz=45								
YULB	**Yu-li**	**0.64**	**103**	P			**Pb**	**07 07 28.9**	**+0.2**
YULB	**Yu-li**	**0.64**	**103**	⇓*iP*			**Pb**	**07 07 28.9**	**+0.2**
	baz=103								
YULB				*e*S			**Sb**	**07 07 38.1**	**+0.5**
	baz=103								
EHY	**Hungye**	**0.65**	**93**	*eP*			**Pn**	**07 07 29.6**	**-0.9**
	baz=93								
EHY				*e*S			**Sn**	**07 07 39.0**	**-1.6**
	baz=93								
TWF1	**Yuli**	**0.65**	**107**	⇓*iP*			**Pb**	**07 07 29.3**	**+0.4**
	baz=106								
TWF1				*e*S			**Sn**	**07 07 39.0**	**-1.7**
	baz=106								
OWD	**Renai**	**0.66**	**51**	P			**Pb**	**07 07 29.3**	**+0.2**
	baz=51								
OWD				*e*S			**Sb**	**07 07 38.4**	**+0.3**
	baz=51								
SCST	**Cishan**	**0.67**	**190**	*eP*			**Pn**	**07 07 30.1**	**-0.7**
	baz=190								
SCST				*e*S			**Sn**	**07 07 40.8**	**-0.2**
	baz=190								
EHD	**Haiduan**	**0.67**	**126**	⇓*eP*			**Pg**	**07 07 28.3**	**-0.4**
	baz=126								
EHD				*e*S			**Sb**	**07 07 37.9**	**-0.4**
	baz=126								
EYUL	**Yuli**	**0.68**	**107**	⇓P			**Pb**	**07 07 29.6**	**+0.3**
	baz=106								
EYUL				*e*S			**Sb**	**07 07 39.1**	**+0.6**
	baz=106								
FULB	**Fuli**	**0.71**	**119**	⇓*eP*			**Pn**	**07 07 30.9**	**-0.5**
	baz=119								
FULB				*e*S			**Sn**	**07 07 42.0**	**-0.2**
	baz=119								
ECS	**Chishang**	**0.71**	**129**	*eP*			**Pb**	**07 07 30.2**	**+0.3**
	baz=129								
CHGB	**Renai**	**0.72**	**45**	⇑P			**Pb**	**07 07 30.3**	**+0.1**
	baz=44								
CHGB				*e*S			**Sb**	**07 07 40.1**	**0.0**
	baz=44								
TWM1	**Shoushan**	**0.74**	**194**	*eP*			**Pn**	**07 07 32.5**	**+0.8**
	baz=194								
HGSD	**Ruisui**	**0.74**	**94**	⇓*eP*			**Pn**	**07 07 31.4**	**-0.4**
	baz=93								
HGSD				*e*S			**Sn**	**07 07 42.5**	**-0.5**
	baz=93								
EGFH	**Guangfu**	**0.76**	**80**	*eP*			**Pn**	**07 07 31.0**	**-1.0**
	baz=80								
EGFH				*e*S			**Sb**	**07 07 41.4**	**+0.6**
	baz=80								
WHP	**Taichung City**	**0.79**	**22**	⇑P			**Pb**	**07 07 31.7**	**+0.4**
	baz=22								
WHP				*e*S			**Sb**	**07 07 43.1**	**+1.2**
	baz=22								
LONT	**Longtian**	**0.79**	**143**	*eP*			**Pn**	**07 07 31.6**	**-0.9**
	baz=143								
LONT				*e*S			**Sn**	**07 07 43.1**	**-1.0**
	baz=143								
SSD	**Sandimen**	**0.79**	**179**	*eP*			**Pn**	**07 07 32.0**	**-0.5**
	baz=179								
SSD				*e*S			**Sn**	**07 07 44.0**	**-0.2**
	baz=179								
ESL	**Shilin**	**0.80**	**70**	*eP*			**Pn**	**07 07 31.9**	**-0.7**
	baz=70								
ESL				*e*S			**Sb**	**07 07 42.2**	**+0.3**
	baz=70								
ECBN	**Changbin**	**0.80**	**106**	*eP*			**Pn**	**07 07 32.4**	**-0.2**
	baz=106								
ECBN				*e*S			**Sn**	**07 07 45.9**	**+1.6**
	baz=106								
WDJ	**Dajia District**	**0.80**	**2**	*eP*			**Pn**	**07 07 32.4**	**-0.2**
	baz=1.0								
WDJ				*e*S			**Sn**	**07 07 44.4**	**0.0**
	baz=1.0								
TWQ1	**Liyutan**	**0.81**	**10**	⇑P			**Pb**	**07 07 32.2**	**+0.6**
	baz=10.0								
TWQ1				*e*S			**Sn**	**07 07 44.4**	**-0.3**
	baz=10.0								
CHKT	**Chengkung**	**0.82**	**123**	*eP*			**Pn**	**07 07 32.4**	**-0.5**
	baz=122								
CHKT				*e*S			**Sn**	**07 07 45.5**	**+0.7**
	baz=122								
TWG	**Pinlang**	**0.83**	**150**	*eP*			**Pn**	**07 07 32.5**	**-0.6**
	baz=149								
TWG				*e*S			**Sn**	**07 07 44.0**	**-1.1**
	baz=149								
TSMG	**Majia**	**0.83**	**178**	*eP*			**Pn**	**07 07 32.3**	**-0.8**
	baz=179								
TSMG				*e*S			**Sn**	**07 07 44.5**	**-0.7**

	baz=179								
TWGBT	Beinan	0.84	149		P	Pn	07 07 32.5	-0.6
TWGBT	Beinan	0.84	149		eP	Pn	07 07 32.4	-0.7
TWGBT	baz=149				eS	Sn	07 07 44.4	-0.9
WHF	Hehuan Shan	0.84	45	⇑	eP	Pb	07 07 32.7	+0.3
WHF	baz=45				eS	Sb	07 07 44.1	+0.4
EDH	Donghe	0.85	132		eP	Pn	07 07 33.1	-0.2
EDH	baz=132				eS	Sn	07 07 46.2	+0.6
TDCB	Techi	0.86	35	⇑	eP	Pb	07 07 32.4	-0.2
TDCB	baz=35				eS	Sb	07 07 44.5	+0.4
TEGC	Jichi Village	0.86	79		eP	Pn	07 07 34.0	+0.6
TWT	Tachien	0.87	36		eP	Pb	07 07 32.5	-0.2
TWT	baz=35				eS	Sb	07 07 44.5	+0.1
NSY	Sanyi	0.88	9		eP	Pn	07 07 33.6	-0.1
NSY	baz=9.0				eS	Sn	07 07 46.4	+0.1
ETM	Tongmen	0.91	62		eP	Pn	07 07 33.8	-0.3
FUSS	Fushou	0.91	39	⇑	eP	Pb	07 07 33.1	-0.3
FUSS	baz=39				eS	Sn	07 07 46.4	-0.9
WDGT	Dungji	0.92	252	⇓	eP	Pg	07 07 32.9	-0.6
WDGT	baz=252				eS	Sg	07 07 45.7	+0.2
MASBT	Mashibuluo	0.93	179		eP	Pn	07 07 34.1	-0.2
MASBT	baz=179				eS	Sn	07 07 48.0	+0.6
TEYL	Yanliau Villag	0.96	70		eP	Pn	07 07 35.7	+1.0
TEYL	baz=68				eS	Sn	07 07 48.4	+0.2
PHUB	P'eng-hu	0.96	268	⇓	eP	Pg	07 07 33.2	-1.0
PHUB	baz=269				eS	Sb	07 07 47.9	+1.2
PNG	Penghu	0.97	272		eP	Pb	07 07 33.5	-0.8
PNG	baz=272				eS	Sg	07 07 46.7	-0.5
ECL	Taimali	0.99	162		eP	Pn	07 07 35.6	+0.4
ECL	baz=161				eS	Sn	07 07 49.6	+0.6
NMLH	Miaoli	1.00	9	⇑	eP	Pn	07 07 35.4	+0.1
NMLH	baz=9.0				eS	Sn	07 07 49.4	+0.1
HWA	Hwalien	1.00	64		eP	Pn	07 07 35.9	+0.5
HWA	baz=64				eS	Sn	07 07 49.9	+0.6
ETLH	Xiulin Townshi	1.03	50	⇑	eP	Pg	07 07 35.3	-0.3
ETLH	baz=50				eS	Sn	07 07 49.6	-0.6
TWD	Chiawan	1.04	59		eP	Pn	07 07 35.8	-0.1
TWD	baz=59				eS	Sn	07 07 49.9	-0.4
NACB	Ninganchiao	1.09	55		P	Pn	07 07 36.7	+0.1
NACB	Ninganchiao	1.09	55		eP	Pn	07 07 36.5	-0.2
NACB	baz=55				eS	Sn	07 07 51.0	-0.6
NNSB	Datong	1.13	38	⇑	eP	Pb	07 07 37.0	-0.1
NNSB	baz=38				eS	Sb	07 07 51.6	0.0
NNS	Nan Shan	1.13	38		eP	Pb	07 07 36.2	-0.9
NNS	baz=38				eS	Sg	07 07 52.0	-0.2
NSTT	Nanjuang	1.14	18	⇑	eP	Pg	07 07 37.4	-0.2
NSTT	baz=18				eS	Sn	07 07 53.4	+0.7
VCHM	Qimei	1.14	253		eP	Pb	07 07 36.2	-0.9
VCHM	baz=253				eS	Sb	07 07 51.5	-0.4
LIOB	Emei	1.16	18	⇑	eP	Pg	07 07 37.7	-0.2
LIOB	baz=18				eS	Sn	07 07 54.1	+0.9
SCZT	Fangliau	1.17	180		eP	Pg	07 07 38.2	+0.1
LDUT	Ludao	1.17	138		eP	Pg	07 07 38.1	-0.1
LDUT	baz=138				eS	Sn	07 07 55.5	+2.1
EAST	Anshuo	1.18	169	⇑	eP	Pg	07 07 38.8	+0.5
EAST	baz=169				eS	Sn	07 07 55.3	+1.7
NFF	Wufeng Townshi	1.18	23	⇑	eP	Pb	07 07 36.9	-0.9
NFF	baz=23				eS	Sb	07 07 52.5	-0.5
TAW	Tawu	1.21	168		eP	Pg	07 07 39.2	+0.3
TAW	baz=168				eS	Sn	07 07 56.8	+2.4
TAWH	Dawu Township	1.23	168		eP	Pn	07 07 38.0	-0.4
TAWH	baz=168				eS	Sn	07 07 55.5	+0.7
NJD	Zhudong	1.26	20		eP	Pg	07 07 39.6	-0.3
NJD	baz=20				eS	Sg	07 07 57.6	+1.2
SBCB	Hsinchu	1.29	15		eP	Pg	07 07 40.1	-0.3
SBCB	baz=15				eS	Sg	07 07 58.0	+0.8
LATG	Datong	1.29	40	⇑	eP	Pb	07 07 39.6	-0.2
LATG	baz=40				eS	Sg	07 07 57.7	+0.3
NSK	Sanguang	1.31	31		eP	Pn	07 07 39.5	-0.3
NSK	baz=31				eS	Sb	07 07 56.9	-0.1
YHNB	Yeheng	1.32	32		P	Pg	07 07 40.5	-0.5
YHNB	Yeheng	1.32	32	⇑	eP	Pb	07 07 40.3	0.0
YHNB	baz=31				eS	Sg	07 07 58.0	-0.2
SLIU	Shizi	1.33	173		eP	Pg	07 07 40.4	-0.8
SLIU	baz=173				eS	Sg	07 07 59.1	+0.4
NDT	Datong Townshi	1.33	38		eP	Pn	07 07 38.6	-1.3
NDT	baz=38				eS	Sb	07 07 55.7	-1.9
EWUT	Wuta	1.39	50		eP	Pn	07 07 40.2	-0.5
EWUT	baz=49				eS	Sb	07 07 59.1	0.0
ENTT	Nioudou	1.39	38		eP	Pn	07 07 40.7	-0.1
ENTT	baz=38				eS	Sg	07 07 59.8	-0.8
NDS	Dongshan	1.48	43		eP	Pn	07 07 39.4	-2.6
NDS	baz=42				eS	Sn	07 07 59.5	-1.7
FUSB	Fushanzhiwuyua	1.50	36		eP	Pb	07 07 43.5	+0.1
FUSB	baz=36				eS	Sg	07 08 03.2	-0.8
TWE	Neicheng	1.52	39		eP	Pg	07 07 44.3	-0.5
	baz=40							
SMST	Manzhou Townsh	1.53	172		eP	Pb	07 07 43.4	-0.5
	baz=172							
TWC	Suao	1.55	46		eP	Pg	07 07 44.5	-0.8
TWC	baz=47				eS	Sg	07 08 05.4	-0.1
TWKBT	Hengchun	1.61	173		eP	Pb	07 07 44.5	-0.6
	baz=174							
TATO	Taipei	1.63	29		P	Pg	07 07 46.3	-0.7
EGS		1.77	43		eP	Pg	07 07 48.9	-0.6
	baz=43							
VWUC	VWUC	1.79	324		eP	Pn	07 07 45.5	-0.8
VWUC	baz=324				eS	Sn	07 08 10.0	+1.2
TIPB	Shuangxi	1.80	38		eP	Pb	07 07 47.7	-0.8
TIPB	baz=38				eS	Sg	07 08 13.2	-0.4
YM01	YM01	1.82	28		eP	Pn	07 07 47.4	+0.8
	baz=28							
TWB1	Santiao Chiao	1.92	40		eP	Pb	07 07 49.8	-0.7
	baz=41							
SXI1	Grass Mountain	1.92	36		eP	Pn	07 07 49.0	+0.9
SXI1	baz=36				eS	Sg	07 08 17.1	-0.4
JYNG	Yonagunijimaku	2.31	67		eP	Pb	07 07 55.7	-1.5
JYNG					eS	Sb	07 08 26.9	+1.3
YOJ	Yonaguni jima	2.37	67		P	Pb	07 07 56.6	-1.6
YOJ	Yonaguni jima	2.37	67		eP	Pb	07 07 56.6	-1.6
YOJ					eS	Sb	07 08 27.9	+0.5
ZPLA	Ao Xicun	2.65	279		eP	Pn	07 07 57.3	-0.8
ZPLA	baz=279				eS	Sn	07 08 28.7	-1.4
MATB	Ma-tsu	2.67	347		eP	Pn	07 07 57.5	-0.7
MATB	baz=346				eS	Sn	07 08 28.9	-1.5
AXDP	Jialang	2.77	300		eP	Pn	07 07 58.9	-0.7
	baz=299							
IRIF	Iriomote-Funau	2.96	74		eP	Pb	07 08 05.3	-2.9
IRIF					eS	Sb	07 08 41.1	-3.1
HATJ	Hateruma jima	2.96	79		P	Pn	07 08 04.7	+2.3
HATJ					eS	Sn	07 08 40.5	+2.7
JKRS	Kuro-shima	3.18	77		eP	Pn	07 08 08.3	+2.9
JKRS					S	Sn	07 08 46.3	+3.2
JIJ	Ishigaki jima	3.33	75		eP	Pn	07 08 09.5	+2.1
JIJ					eS	Sn	07 08 49.3	+2.5
JISG	Ishigakijimahi	3.53	72		P	Pn	07 08 12.2	+2.0
JISG					eS	Sn	07 08 54.2	+2.4
JTJ	Tarama	3.89	73		eS	Sn	07 09 02.8	+2.2

*NNC **26** 07:15:36.2±1.4, 54°.46N×83°.50E, h0km, mpv1.8, Error ellipse: s-maj=7.4km s-min=5.0km az=131.0*
*IDC **26** 07:15:36.5±2.2, 54°.47N×83°.52E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=18.5km s-min=9.6km az=168.0*

ISC 26 07:15:38.0±3.8, 54°.6N±0°.2×83°.68E±0°.08, h35km, n8, σ1§21/7, 5C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.92	133	I		07 20 59.6	
	baz=306, slow=331, SNR=5.6						
ZAA0	Zalesovo Array	0.92	133	⇑P		Pn	07 15 54.0	-0.5
	0.5nm, 0.3s, baz=305, slow=18						
ZAA0				⇑S		Sn	07 16 07.0	+0.5
	3.8nm, 0.9s, baz=303, slow=29						
ZALV	Zalesovo Beam	0.92	133	Pg		Pn	07 15 54.2	-0.3
	4.3nm, 0.3s, baz=308, slow=14, SNR=24						
ZALV				Lg		Lg	07 16 07.2	
	1.8nm, 0.3s, baz=314, slow=20, SNR=16						
KURK	Kurchatov	4.95	221	⇑Lg		Lg	07 18 11.4	
	3.2nm, 0.7s						
KURBB	Kurchatov Arra	5.06	220	Pn		Pn	07 16 52.2	+0.9
	0.1nm, 0.3s, baz=37, slow=16, SNR=2.1						
KURBB				Pg			07 17 02.2	
	baz=25, slow=33, SNR=0.8						
KURBB				Sn		Sn	07 17 46.6	-1.9
	baz=44, slow=50, SNR=1.5						
KURBB				Lg		Lg	07 18 13.0	
	baz=87, slow=16, SNR=2.2						
	0.3nm, 0.3s						
KURBB	Kurchatov Arra	5.06	220	⇑Lg		Lg	07 18 12.3	
	4.2nm, 0.7s						
MK31	Makanchi Array	7.85	187	⇑Lg		Lg	07 19 40.5	
	3.8nm, 1.2s						
MKAR	Makanchi Array	7.85	187	Pn		Pn	07 17 30.6	+0.9
	0.1nm, 0.3s, baz=7.1, slow=19, SNR=2.3						
MKAR				Sn		Sn	07 18 57.1	-0.2
	0.1nm, 0.3s, baz=346, slow=34, SNR=1.9						
MKAR				Lg		Lg	07 19 41.9	
	0.1nm, 0.3s, baz=70, slow=12, SNR=1.6						
	0.2nm, 0.3s						

TRN 26 07:17:39.2, 10°.41N×62°.36W, h3km, MD3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.97	75	eP		Pg	07 17 57.0	-0.8
TRN				eS		Sb	07 18 12.1	+0.3
GRFF	Grenada Fort F	1.74	20	eP		Pb	07 18 11.4	-0.5
GRFF				eS		Sn	07 18 33.5	+0.3
GRGR	Grenville	1.85	22	eP		Pn	07 18 12.1	+0.2
GRGR				eS		Sb	07 18 36.8	-0.5
TOSP	Speyside	2.00	63	eP		Pb	07 18 15.2	-1.1
GCMP	Grenada, Carri	2.26	24	eP		Pn	07 18 17.9	+0.4
GCMP				eS		Sb	07 18 47.9	-1.2
SVB	Belmont	3.05	21	eP		Pn	07 18 29.4	+1.0
SVB				eS		Sn	07 19 05.4	0.0
SSV	Crater Summit	3.12	21	e		Pb	07 18 32.6	-2.8
MCLT	Moule a Chique	3.56	23	eP		Pn	07 18 36.6	+1.1
MCLT				eS		Sn	07 19 17.7	-0.4
SLBI	Saint Lucia, B	3.84	20	eP		Pn	07 18 39.4	+0.1
SLBI				eS		Sn	07 19 24.3	-0.7
MPOM	Morne Pois Mar	4.27	20	eP		Pn	07 18 46.2	+1.0
MPOM	Morne Pois Mar	4.27	20	eS		Sn	07 19 35.6	0.0
BIM	Bigot	4.28	17	eP		Pn	07 18 46.2	+0.9
BIM	Bigot	4.28	17	eS		Sn	07 19 34.3	-1.4
FDF	Fort de France	4.46	15	eP		Pn	07 18 48.8	+0.9
FDF	Fort de France	4.46	15	eS		Sn	07 19 38.4	-1.9
BAUV	El Baul	5.79	256	eP		Pn	07 19 06.4	+0.3
BAUV	El Baul	5.79	256	eS		Sn	07 20 12.1	-1.0

*SNET **26** 07:36:01.1±0.9, 13°.46N×90°.38W, h31km±5km, ML3.0*
*GCG **26** 07:36:01.0±0.4, 13°.48N×90°.63W, h26km±2km, MD3.1*

ISC 26 07:35:56.3±2.2, 13°.3N±0°.1×90°.55W±0°.06, h16km±13km, n22, σ0§47/27, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.97	50	eP		Pb	07 36 15.2	+0.4
NUBE				IAML			07 36 27.7	
	comp=Z, 81nm, 0.3s							
LOAL	Lomas de Alarc	1.03	46	eP		Pn	07 36 16.3	+0.1
LOAL				IAML			07 36 17.5	
	comp=Z, 1224μm, 0.1s							
SLOZ	Alcaldia de Sa	1.05	45	eP		Pn	07 36 16.4	0.0
SLOZ				IAML			07 36 32.1	
	comp=Z, 86nm, 0.3s							
CEVE	Cerro Verde	1.05	59	eP		Pg	07 36 16.9	+0.2
CEVE				IAML			07 36 34.5	
	comp=Z, 611nm, 0.2s							
SBLS	San Blas	1.06	58	eP		Pn	07 36 16.9	+0.2
SBLS				eS		Sb	07 36 29.4	-0.7
RTR	El Retiro	1.07	55	eP		Pg	07 36 17.2	+0.2
RTR				eS		Sb	07 36 30.5	+0.1
JAYA	Jayaque - finc	1.13	71	eP		Pg	07 36 18.2	-0.1
JAYA				IAML			07 36 33.2	
	comp=Z, 583nm, 0.2s							
UNIC	Universidad Ca	1.20	54	eP		Pn	07 36 18.6	+0.2
FUG	Fuego 3	1.20	346	eP		Pg	07 36 19.4	-0.1
FUG				eS		Sb	07 36 33.5	-0.5
PMON	Piamonte	1.27	70	eP		Pb	07 36 20.1	+0.1
NBG	Las Nubes	1.31	8	eP		Pg	07 36 21.8	0.0
NBG				eS		Sn	07 36 38.3	+0.7
SNET	Serv Nac Est T	1.34	72	eP		Pb	07 36 21.3	+0.1
SNET				IAML			07 36 39.3	
	comp=Z, 159nm, 0.2s							
UEES	Universidad Ev	1.34	71	eP		Pb	07 36 21.4	+0.1
UEES				IAML			07 36 40.2	
	comp=Z, 208nm, 0.2s							
LFRS	El Faro	1.48	77	eP		Pb	07 36 24.0	+0.4
SJTE	Alcalda de S	1.54	77	eP		Pb	07 36 24.2	-0.3
SJTE				IAML			07 36 45.4	
	comp=Z, 36nm, 0.3s							
MTO3	Montecristo	1.60	46	eP		Pn	07 36 24.1	-0.1
COEG	Centro de Oper	1.66	78	eP		Pb	07 36 26.0	-0.5
COEG				IAML			07 36 47.9	
	comp=Z, 40nm, 0.3s							
ESQI	Esquipulas	1.73	42	eP		Pn	07 36 26.2	+0.4
STG3	Santiaguito 3,	1.74	325	eP		Pb	07 36 28.2	+0.2
STG3				eS		Sn	07 36 47.4	-0.5
SCLA	Alcaldia de Sa	1.82	76	eP		Pb	07 36 28.0	-1.3
P5NO	Presa 5 de nov	1.88	68	⇓	eP	Pn	07 36 27.6	-0.2
COEB	Comit de Eme	1.98	83	eP		Pn	07 36 30.3	+1.0

*NNC **26** 07:52:36.8±1.4, 42°.79N×69°.57E, h0km, mb3.6, mpv2.8, Error ellipse: s-maj=7.4km s-min=5.5km az=58.0*
*KRNET **26** 07:52:37.9±0.1, 42°.73N×69°.65E, h14km, mb2.8*

ISC 26 07:52:39.2±2.2, 42°.87N±0°.06×69°.6E±0°.1, h12km, n8, σ1§29/13, 12C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	0.72	70	⇓P		Pg	07 52 51.9	-1.3
	0.9nm, 0.2s, baz=244, slow=18, SNR=186						
KK31				⇑S		Sg	07 53 02.3	-0.2
	17nm, 0.3s, baz=246, slow=27, SNR=48						
KKAR	Karatay Array	0.72	70	⇑eP		Pg	07 52 52.0	-1.1
	baz=59							
KKAR				⇑eS		Sg	07 53 02.5	-0.1
	baz=59							
TRKS	Terek-Say	1.76	139	⇑eP		Pn	07 53 09.7	-0.1
	baz=38							
TRKS				⇑eS		Sn	07 53 32.6	+0.4
	baz=38							
ARK	Arkit	2.06	120	⇑eP		Pn	07 53 14.1	+0.3
	baz=17							
ARK				⇑eS		Sn	07 53 40.6	+1.2
	baz=17							
EKS2	Erkin-Say	3.09	92	⇑eP		Pn	07 53 29.7	+1.7
	baz=90							
EKS2				⇑eS		Sn	07 54 07.1	+2.2
	baz=90							
CHMS	Chumysh	3.79	86	⇓Lg		Lg	07 54 35.4	
	1.7nm, 0.2s							
TKM2	Tokmak 2	4.41	87	⇓Pn		Pn	07 53 44.4	-1.8
	2.4nm, 1.2s							
TKM2				⇑Lg		Lg	07 54 58.3	
	13nm, 1.2s							
OTUK	Ortayu	5.71	19	⇑Pn		Pn	07 54 04.3	+0.4
	1.8nm, 0.3s							
OTUK				⇑Sn		Sn	07 55 10.3	+1.0
	1.0nm, 0.4s							
OTUK				⇓Lg		Lg	07 55 40.3	
	1.4nm, 0.6s							

*IDC **26** 08:08:01.3±1.8, 33°.22N×133°.20E, h0km, mb3.6/2, mbtmp3.9/4, ML3.2/2, Error ellipse: s-maj=72.4km s-min=27.0km az=104.0*
*JMA **26** 08:08:22.4±0.1, 35°.N±2°.×13°.6E±°, h404km, MV3.2/18, MID KYOTO PREF*

ISC 26 08:08:23.1±1.8, 35°.1N±0°.2×135°.7E±0°.2, h400km, n12, σ0§25/9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.26	308	eP		Pn	08 09 12.4	-0.1
JYTA	Yamagatataniai	1.00	62	eP		Pn	08 09 14.1	0.0
JIE	Ise	1.14	130	eP		Pn	08 09 14.8	+0.1
JKG	Kaga	1.28	26	eP		Pn	08 09 15.1	-0.1
JTNC	Tanabenakahech	1.30	181	eP		Pn	08 09 15.5	0.0
JYN	Shimob	2.40	80	eP		Pn	08 09 21.7	0.0
MJAR	Matsushiro Arr	2.52	55	Pn		Pn	08 09 22.3	-0.2
	0.8nm, 0.3s, baz=227, slow=7.2, SNR=50							
	4.2nm, 0.5s							
JRY	Ryogami san	2.80	70	eP		Pn	08 09 25.2	+0.5
BSO1	Boso 1	4.41	95	eP		Pn	08 09 38.2	-0.2
USRK	Ussuriysk Ar.	9.49	344	Pn		Pn	08 10 39.5	+4.4
	1.4nm, 0.3s, baz=165, slow=19, SNR=17							
	13nm, 0.7s							
WRA	Warramunga Arr	54.77	182	P		P	08 17 19.2	+5.9
	0.5nm, 0.4s, baz=359, slow=7.5, SNR=14							
	0.5nm, 0.4s							
ASAR	Alice Springs	58.49	182	P		P	08 17 45.4	+6.3
	0.4nm, 0.6s, baz=12, slow=13, SNR=5.2							
	0.4nm, 0.6s							

*MDD **26** 08:17:30.4±0.3, 35°.41N×3°.77W, h0km, mb_Lg2.9/24, Error ellipse: s-maj=2.5km s-min=1.9km az=163.0*
*CNRM **26** 08:17:31.6, 35°.51N×3°.79W, h9km, ml2.9*
*INMG **26** 08:17:32.1±1.2, 35°.37N×3°.73W, h18km±4km, ML2.5, Error ellipse: s-maj=3.7km s-min=2.9km az=161.0*

ISC 26 08:17:31.2±0.9, 35°.44N±0°.02×3°.75W±0°.02, h17km±7km, n49, σ1§11/90, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	Palemas	0.27	214	P		Pg	08 17 37.2	-0.1
PALE	Palemas	0.27	214	P		Pg	08 17 37.4	+0.1
PALE				S		Sg	08 17 41.0	-0.3
EMEL	Melilla	0.66	102	Pg		Pg	08 17 43.6	-0.7
EMEL				Sg		Sg	08 17 52.7	-0.5
EALB	Alboran	0.77	49	Pg		Pb	08 17 46.7	+0.7
EALB				Sg		Sb	08 17 56.4	+0.2
EALB				i Vmb_Lg			08 17 58.5	
AKLM	AKL	0.94	186	P		Pn	08 17 50.0	+0.4
TAF	Taforalt	1.26	119	P		Pg	08 17 56.1	+0.5
TAF	Taforalt	1.26	119	P		Pn	08 17 54.0	-0.1
TAF				S		Sb	08 18 11.1	+0.6
CHEFC	Chefchaouen	1.34	256	P		Pb	08 17 55.9	0.0
CHEFC				S		Sn	08 18 11.4	-1.3
EMIJ	Mijas	1.39	324	Pn		Pn	08 17 56.2	+0.3
EMIJ				Sg		Sn	08 18 13.8	-0.1
EMIJ				i Vmb_Lg			08 18 19.9	
ECEU	Ceuta	1.40	289	Pg		Pn	08 17 54.8	-1.2
ECEU				Sg		Sn	08 18 11.8	-2.2
ECEU				i Vmb_Lg			08 18 15.6	
ELGU	Los Guajares,	1.43	4	Pg		Pn	08 17 56.0	-0.4
ELGU				Sg		Sn	08 18 14.7	-0.1
ELGU				i Vmb_Lg			08 18 19.1	
JBK	JBK	1.47	138	P		Pb	08 17 59.0	+0.7
JBK	JBK	1.47	138	P		Pn	08 17 57.1	0.0
JBK				S		Sn	08 18 14.2	-1.9
EBER	Berja	1.61	25	Pn		Pn	08 17 59.1	0.0
EBER				Sn		Sn	08 18 20.3	+0.8
EBER				i Vmb_Lg			08 18 23.2	
EGOR	Sierra Gorda,	1.69	350	Pn		Pn	08 18 00.5	+0.4
EGOR				Sn		Sn	08 18 22.5	+1.1
EGOR				i Vmb_Lg			08 18 27.2	
EQUE	Quentar	1.78	8	Pn		Pn	08 18 02.6	+1.4
EQUE				Sn		Sn	08 18 24.8	+1.4
EQUE				i Vmb_Lg			08 18 35.9	
ENIJ	Nijar	1.97	39	Pn		Pn	08 18 04.1	+0.3
ENIJ				Sn		Sn	08 18 26.8	-1.3
ENIJ				i Vmb_Lg			08 18 30.8	
LCRM	LCR	1.98	208	P		Pb	08 18 07.5	+0.7
LCRM				S		Sb	08 18 30.7	-0.5
ESPR	Espera	2.22	310	Pn		Pn	08 18 06.5	-0.7
ESPR				Pg		Pb	08 18 09.9	-0.9
ESPR				Sn		Sn	08 18 34.8	+0.5
ESPR				i Vmb_Lg			08 18 44.3	
EQES	Quesada	2.42	13	Pg		Pb	08 18 13.1	-1.2
EQES				Sg		Sb	08 18 43.5	-0.3
EQES				i Vmb_Lg			08 18 46.5	
MD31	MD31	2.70	198	P		Pn	08 18 15.9	+1.9
MD31				S		Sn	08 18 46.6	+0.4
MDT	Midelt	2.72	195	P		Pn	08 18 16.0	+1.8
MDT				S		Sn	08 18 46.2	-0.4
EADA	Adamuz	2.80	347	Pn		Pn	08 18 17.7	+2.4
EADA				Sn		Sn	08 18 49.8	+1.2
EADA				Sg		Sb	08 18 55.1	+0.3
EADA				i Vmb_Lg			08 18 58.7	
EZAR	Zarzadilla de	2.94	34	Pn		Pn	08 18 17.2	+0.1
EZAR				Sn		Sn	08 18 51.5	-0.6
EZAR				i Vmb_Lg			08 18 54.5	
ECAB	El Cabril	2.95	333	Pn		Pn	08 18 20.0	+2.7

ECAB				Sn	Sn	08 18 52.3	0.0
ECAB				*i* Vmb_Lg		08 19 03.6	
CART	**Cartagena**	**3.08**	**45**	P	**Pn**	**08 18 18.6**	**-0.5**
CART				S	**Sn**	**08 18 53.0**	**-2.4**
EMUR	**La Murta**	**3.13**	**39**	Pn	**Pn**	**08 18 19.7**	**-0.1**
EMUR				Sn	**Sn**	**08 18 55.5**	**-1.3**
EMUR				*i* Vmb_Lg		08 18 59.9	
EMIN	**Mina Concepcio**	**3.30**	**315**	Pn	**Pn**	**08 18 22.9**	**+0.8**
EMIN				Sn	**Sn**	**08 19 00.8**	**-0.1**
EMIN				*i* Vmb_Lg		08 19 11.2	
ETOB	**Tobarra**	**3.65**	**28**	Pn	**Pn**	**08 18 29.1**	**+2.1**
ETOB				Sn	**Sn**	**08 19 10.0**	**+0.3**
ETOB				*i* Vmb_Lg		08 19 13.6	
EGRO	**El Granado**	**3.66**	**306**	Pn	**Pn**	**08 18 27.9**	**+0.9**
EGRO				Sn	**Sn**	**08 19 08.8**	**-0.9**
EGRO				*i* Vmb_Lg		08 19 14.0	
PVAQ	**Vaqueiros**	**3.75**	**303**	*e*Pn	**Pn**	**08 18 29.3**	**+1.0**
PVAQ				*e*Sn	**Sn**	**08 19 10.7**	**-1.3**
PVAQ				A	A	08 19 12.4	
	11nm,0.4s						
PVAQ	**Vaqueiros**	**3.75**	**303**	P	**Pn**	**08 18 28.7**	**+0.5**
PVAQ	**Vaqueiros**	**3.75**	**303**	P	**Pn**	**08 18 28.7**	**+0.5**
PVAQ				S	**Sn**	**08 19 10.9**	**-1.1**
PBAR	**Barrancos**	**3.79**	**317**	*e*Pn	**Pn**	**08 18 30.3**	**+1.4**
PBAR				*e*Sn	**Sn**	**08 19 12.6**	**-0.5**
PBAR				A	A	08 19 17.4	
	6.4nm,0.4s						
FIGM	**Figuig**	**3.90**	**147**	P	**Pn**	**08 18 31.8**	**+1.4**
FIGM				S	**Sn**	**08 19 16.1**	**+0.3**
PAB	**San Pablo**	**4.12**	**354**	Pn	**Pn**	**08 18 34.8**	**+1.4**
PAB				Sn	**Sn**	**08 19 22.2**	**+0.9**
PAB				*i* Vmb_Lg		08 19 49.0	
EBAD	**Badajoz**	**4.21**	**323**	Pn	**Pn**	**08 18 35.4**	**+0.8**
EBAD				Sn	**Sn**	**08 19 22.7**	**-0.7**
EBAD				*i* Vmb_Lg		08 19 26.1	
MORF	**Marmelete**	**4.37**	**297**	*e*Sn	**Sn**	**08 19 26.5**	**-0.8**
MORF				A	A	08 19 29.1	
	5.4nm,0.2s						
PFVI	**Vila Bisbo**	**4.43**	**294**	*e*Sn	**Sn**	**08 19 28.1**	**-0.8**
PFVI				A	A	08 19 29.3	
	6.0nm,1.0s						
PFVI	**Vila Bisbo**	**4.43**	**294**	P	**Pn**	**08 18 37.4**	**-0.2**
PFVI				S	**Sn**	**08 19 26.7**	**-2.1**
PTEO	**Sao Teotonio**	**4.52**	**299**	*e*Pn	**Pn**	**08 18 40.4**	**+1.5**
PTEO				*e*Sn	**Sn**	**08 19 29.8**	**-1.2**
PTEO				A	A	08 19 35.4	
	5.4nm,0.4s						
PESTR	**Estremoz**	**4.59**	**319**	*e*Sn	**Sn**	**08 19 33.6**	**+0.8**
PESTR				A	A	08 19 41.3	
	3.9nm,0.5s						
PESTR	**Estremoz**	**4.59**	**319**	S	**Sn**	**08 19 32.1**	**-0.7**
PNCL	**Nicolau / Gran**	**4.67**	**306**	*e*Pn	**Pn**	**08 18 42.2**	**+1.3**
PNCL				*e*Sn	**Sn**	**08 19 34.2**	**-0.5**
PNCL				A	A	08 19 36.0	
	3.4nm,0.5s						
PMTG	**Montargil**	**5.08**	**317**	*e*Pn	**Pn**	**08 18 48.5**	**+1.9**
PMTG				*e*Sn	**Sn**	**08 19 44.2**	**-0.6**
EIBI	**Ibiza**	**5.41**	**47**	Pn	**Pn**	**08 18 51.8**	**+0.7**
EIBI				Sn	**Sn**	**08 19 50.5**	**-2.5**
EIBI				*i* Vmb_Lg		08 19 50.6	
ETOR	**Torete**	**5.53**	**13**	Pn	**Pn**	**08 18 54.1**	**+1.3**
ETOR				Sn	**Sn**	**08 19 54.5**	**-1.5**
ETOR				*i* Vmb_Lg		08 20 21.0	
ETOS	**Mallorca**	**6.77**	**48**	Pn	**Pn**	**08 19 10.2**	**+0.5**
ETOS				Sn	**Sn**	**08 20 25.0**	**-1.4**
ECAL	**Calabor**	**6.90**	**341**	Sn	**Sn**	**08 20 29.0**	**-0.6**

*IDC **26** 08:19:47.7±4.3, 52°.09N×98°.49E, h0km, mbtmp2.9/1, ML3.0/1, Error ellipse: s-maj=67.2km s-min=19.2km az=20.0*
*ASRS **26** 08:19:49.8±0.3, 52°.N±2°×9°.9E±°, h5km, MLh4.5/8, Error ellipse: s-maj=4.0km s-min=2.6km az=17.6, confirmed*
*MOS **26** 08:19:58.1±3.0, 51°.82N×98°.85E, h11km, mb3.8/1, Error ellipse: s-maj=10.1km s-min=8.1km az=6.9*
ISC 26 08:19:54.8±0.6,**52°.05N**±0°.03×**98°.33E**±0°.03,**h10**km,**n55,** σ2$29/77,**7C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.03**	**61⇑**	*i*PG	**Pb**	**08 20 13.0**	**-1.9**
ORL				*e*SG	**Sg**	**08 20 24.7**	**-3.5**
MOY	**Mondy**	**1.70**	**102**	*e*PG	**Pn**	**08 20 23.7**	**-0.9**
MOY				*e*		08 20 43.7	
KZLR	**Kyzyl**	**2.42**	**263**	PN	**Pg**	**08 20 41.6**	**+0.3**
KZLR						08 21 15.7	
KZLR	**Kyzyl**	**2.42**	**263**	Pg	**Pg**	**08 20 42.7**	**+1.4**
KZLR				Sg	**Sg**	**08 21 15.5**	**+2.9**
ARS	**Arshan**	**2.54**	**91**	*e*PN	**Pn**	**08 20 36.9**	**+0.8**
ARS				*e*PG	**Pb**	**08 20 38.7**	**-1.8**
ERNS	**Erzin**	**2.68**	**229**	Pg	**Pg**	**08 20 45.1**	**-1.1**
ERNS				Sg	**Sg**	**08 21 22.2**	**+1.4**
HVS	**Khovu-Aksy**	**3.02**	**254**	PN	**Pg**	**08 20 52.5**	**-0.3**
HVS						08 21 33.8	
ARDR	**Aradan**	**3.05**	**282**	Pg	**Pg**	**08 20 51.2**	**-2.0**
ARDR				Sg	**Sg**	**08 21 34.3**	**+1.5**
TLY	**Talaya**	**3.32**	**94**	*e*PN	**Pb**	**08 20 51.2**	**-2.6**
TLY				*e*SG	**Sb**	**08 21 32.6**	**-1.6**
ORY	**Orie**	**3.53**	**328**	PN	**Pg**	**08 20 59.5**	**-2.9**
ORY						08 21 46.8	
ZAK	**Zakamensk**	**3.54**	**116**	*e*PN	**Pn**	**08 20 51.6**	**+1.7**
ZAK				*e*PG	**Pb**	**08 20 56.5**	**-1.0**
ZAK				*e*SG	**Sb**	**08 21 41.9**	**+1.4**
ZAK	**Zakamensk**	**3.54**	**116**	Pg	**Pb**	**08 20 54.9**	**-2.6**
ZAK				Sg	**Sb**	**08 21 42.7**	**+2.2**
IRK	**Irkutsk**	**3.67**	**85**	PN	**Pb**	**08 20 56.3**	**-3.4**
IRK						08 21 42.7	
IRK	**Irkutsk**	**3.67**	**85**	Pg	**Pb**	**08 20 58.4**	**-1.3**
IRK				Sg	**Sb**	**08 21 42.4**	**-1.8**
MINR	**Mina**	**3.77**	**321**	PN	**Pg**	**08 21 07.7**	**+0.7**
MINR						08 21 58.9	
MINR	**Mina**	**3.77**	**321**	Pg	**Pg**	**08 21 08.4**	**+1.4**
MINR				Sg	**Sg**	**08 21 59.5**	**+3.6**
CERR	**Cheremushki**	**4.30**	**284**	PN	**Pg**	**08 21 16.6**	**-0.7**
CERR						08 22 13.7	
CERR	**Cheremushki**	**4.30**	**284**	Pg	**Pg**	**08 21 16.5**	**-0.7**
CERR				Sg	**Sg**	**08 22 13.4**	**+0.5**
DJOS	**Djoyskaya Sosn**	**4.30**	**283**	Pg	**Pg**	**08 21 18.9**	**+1.6**
DJOS				Sg	**Sg**	**08 22 13.9**	**+0.9**
DJO	**Djoy, Khakassi**	**4.41**	**282**	PN	**Pg**	**08 21 17.2**	**-2.1**
DJO						08 22 19.8	
DJO	**Djoy, Khakassi**	**4.41**	**282**	Pg	**Pg**	**08 21 17.4**	**-1.9**
DJO				Sg	**Sg**	**08 22 15.3**	**-1.1**
TBTR	**Tabat**	**4.73**	**284**	PN	**Pb**	**08 21 14.5**	**-3.3**
TBTR						08 22 17.7	
TRG	**Tyrgan**	**4.96**	**79**	*e*PN	**Pn**	**08 21 09.4**	**0.0**
TRG				*e*PG	**Pb**	**08 21 22.4**	**+0.6**
TRG				*e*S	**Sn**	**08 22 05.1**	**-1.8**
TRG				*e*SG	**Sb**	**08 22 24.5**	**+3.0**
GZL	**Zheleznogorsk**	**5.07**	**328**	Sg	**Sg**	**08 22 40.0**	**+2.4**
GZLN	**Zheleznogorsk**	**5.10**	**330**	Pg	**Pg**	**08 21 28.3**	**-4.1**
GZLN				Sg	**Sg**	**08 22 39.9**	**+1.6**
SHTK	**Zheleznogorsk-**	**5.11**	**329**	PN	Pg	08 21 27.2	-5.4
SHTK						08 22 37.3	
SHTK	**Zheleznogorsk-**	**5.11**	**329**	Pg	Pg	08 21 27.2	-5.4
SHTK				Sg	**Sg**	**08 22 36.8**	**-1.9**
LUZB	**Luzhba, Kemero**	**5.93**	**289**	Pn	Pb	08 21 31.8	-6.4
LUZB				Pg	**Pg**	**08 21 49.3**	**+0.9**
LUZB				Sg	**Sg**	**08 23 02.6**	**-2.6**
TASR	**Tashtagol**	**6.43**	**280**	PN	Pb	08 21 50.8	+4.0
TASR						08 23 17.6	
TASR	**Tashtagol**	**6.43**	**280**	Pn	**Pb**	**08 21 44.5**	**-2.3**
TASR				Pg	**Pg**	**08 21 59.1**	**+1.1**
TASR				Sg	**Sg**	**08 23 19.8**	**-1.4**
CUR	**Chagan-Uzun**	**6.58**	**257**	Pg	**Pg**	**08 21 59.2**	**-1.6**
CUR				Sg	**Sg**	**08 23 21.9**	**-4.1**
ULGR	**Ulagan, Altay**	**6.65**	**262**	P*	**Pg**	**08 22 04.6**	**+2.5**
ULGR	**Ulagan, Altay**	**6.65**	**262**	Pg	**Pg**	**08 22 01.0**	**-1.1**
ULGR				Sg	**Sg**	**08 23 33.0**	**+4.8**
SONM	**Songino Array**	**6.70**	**126**	Pg	**Pb**	**08 21 50.3**	**-1.2**
	2.3nm,0.3s,baz=310,slow=17,SNR=22						
SONM				Lg	Lg	08 23 17.4	
	4.7nm,0.3s,baz=314,slow=26,SNR=4.4						
ARTR	**Artybash**	**6.84**	**272**	Pg	**Pg**	**08 22 01.8**	**-3.8**
ARTR				Sg	**Sg**	**08 23 33.6**	**-0.5**
BRCR	**Berchikul'**	**6.92**	**305**	Pg	Pg	08 22 00.2	-7.1
BRCR				Sg	**Sg**	**08 23 34.9**	**-2.0**
ULN	**Ulaanbaatar**	**7.01**	**123⇑**	*e*PN	**Pn**	**08 21 39.2**	**+1.5**
CHBI	**Chibit, Altay**	**7.02**	**260**	Pg	**Pg**	**08 22 09.1**	**-0.1**
CHBI				Sg	**Sg**	**08 23 44.5**	**+4.4**
SYVR	**Suvo**	**7.25**	**73**	*e*PN	**Pn**	**08 21 41.5**	**+0.7**
SYVR				*e*PG	**Pb**	**08 22 01.7**	**+1.0**
SYVR				*e*SG	**Sb**	**08 23 34.3**	**+7.1**
DGZ	**Jazzator, Alta**	**7.28**	**255⇓**	*e*P	Pn	08 21 48.7	+7.3
DGZ	**Jazzator, Alta**	**7.28**	**255**	Pg	**Pg**	**08 22 16.1**	**+1.9**
DGZ				Sg	**Sg**	**08 23 46.5**	**-2.0**
ELT	**Eltsovka**	**7.45**	**284**	Sg	**Sg**	**08 23 56.0**	**+2.2**
SALR	**Pechorkino, Sa**	**7.94**	**292**	Sg	**Sg**	**08 24 06.5**	**-2.9**
ZALV	**Zalesovo Beam**	**8.37**	**288**	Pg	**Pb**	**08 22 20.4**	**+0.7**
	0.6nm,0.3s,baz=99,slow=15,SNR=4.9						
ZALV				Lg	Lg	08 24 16.5	
	0.9nm,0.3s,baz=103,slow=24,SNR=11						
UKR	**Ust'-Kan**	**8.53**	**268**	Pn	**Pn**	**08 22 01.1**	**+2.7**
UKR				Pg	**Pg**	**08 22 36.3**	**-1.8**
UKR				Sg	**Sg**	**08 24 26.8**	**-1.7**
NVSII	**Novosibirsk**	**9.43**	**293**	Sg	Sg	08 25 00.6	
MK31	**Makanchi Array**	**11.68**	**250⇑**	*e*P	Pn	08 22 47.4	+5.9
MKAR	**Makanchi Array**	**11.68**	**250**	Pn	**Pn**	**08 22 37.3**	**-4.3**
	0.1nm,0.3s,baz=61,slow=19,SNR=2.1						
MKAR				Lg	Lg	08 26 02.9	
	0.1nm,0.3s,baz=50,slow=23,SNR=1.7						
	0.2nm,0.6s						
KURK	**Kurchatov**	**12.38**	**272⇑**	*e*P	Pn	08 22 58.1	+7.1
HIA	**Hailar**	**13.86**	**93⇑**	*e*P	**Pn**	**08 23 10.6**	**-0.6**
HIA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	**Ala-Archa**	**18.62**	**249⇑**	*e*P	Pn	08 24 19.4	+6.7
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YAK	**Yakutsk**	**19.57**	**47⇓**	*e*P	**Pn**	**08 24 24.0**	**+0.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLR	**Kul'dur**	**21.28**	**84⇑**	*e*P	**P**	**08 24 41.3**	**+0.1**
TIXI	**Tiksi**	**23.86**	**23⇓**	*e*P	**P**	**08 25 08.4**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIRV	**Kirov**	**28.04**	**303⇓**	*e*P	P	08 25 49.5	+3.7

*IDC **26** 08:23:42.7±2.2, 6°.70S×129°.84E, h154km±23km, mb3.5/4, mbtmp4.2/8, Error ellipse: s-maj=35.9km s-min=17.4km az=80.0*
*DJA **26** 08:23:43.8±0.4, 7°.S±3°×13°.0E±°, h198km±11km, M4.5/12, mb4.4/6, mB5.0/6, MLv4.7/12, Mw(mB)4.3/6*
ISC 26 08:23:44.7±0.8,**6.73S**±0°.06×**129°.94E**±0°.09,**h200**km,**n28,** σ2$86/30,**mb3.8/4, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.84**	**133**	P	**Pn**	**08 24 21.4**	**-0.2**
SAUI	**Saumlaki**	**1.84**	**133**	P	**Pn**	**08 24 21.3**	**-0.3**
BNDI	**Bandanaira**	**2.19**	**359**	P	**Pn**	**08 24 23.8**	**-1.4**
BNDI	**Bandanaira**	**2.19**	**359**	P	**Pn**	**08 24 24.5**	**-0.7**
MSAI	**Masohi**	**3.51**	**343**	P	**Pn**	**08 24 40.7**	**+0.3**
KRAI	**Karang Ratu**	**3.72**	**336**	P	**Pn**	**08 24 43.2**	**+0.1**
FAKI	**Fak Fak**	**4.43**	**31**	P	**Pn**	**08 24 50.8**	**-1.1**
FAKI	**Fak Fak**	**4.43**	**31**	P	**Pn**	**08 24 50.8**	**-1.1**
SIJI	**Sorong**	**5.97**	**13**	P	**Pn**	**08 25 09.2**	**-2.5**
	30nm,0.2s,baz=231,slow=23,SNR=90						
SIJI				S	**Sn**	**08 26 14.3**	**-6.2**
	34nm,0.2s,baz=120,slow=22,SNR=7.2						
SWI	**Sorong**	**5.98**	**13**	P	**Pn**	**08 25 10.3**	**-1.4**
MTN	**Manton Dam**	**6.19**	**169**	P	**Pn**	**08 25 13.0**	**-1.4**
KDU	**Kakadu**	**6.42**	**157**	P	**Pn**	**08 25 17.3**	**-0.2**
LBMI	**Labuha**	**6.52**	**338**	P	**Pn**	**08 25 18.1**	**-0.6**
	0.3nm85nm,1.0s						
RKPI	**Ransiki, Papua**	**6.69**	**39**	P	**Pn**	**08 25 22.8**	**+1.8**
MWPI	**Manokwari, Pap**	**7.07**	**36**	P	**Pn**	**08 25 27.2**	**+1.4**
	0.4nm94nm,0.7s						
BATI	**Baumata**	**7.10**	**240**	P	**Pn**	**08 25 23.5**	**-2.8**
	43nm,0.5s,baz=117,slow=2.3,SNR=1.7						
BATI				S	Sn	08 26 35.9	-11
	70nm,0.4s,baz=35,slow=21,SNR=7.9						
BATI	**Baumata**	**7.10**	**240**	P	**Pn**	**08 25 25.7**	**-0.6**
	0.4nm60nm,1.0s						
KNRA	**Kununurra**	**8.96**	**187**	P	**Pn**	**08 25 47.9**	**-2.6**
WRAB	**Tennant Creek**	**13.81**	**162**	P	**Pn**	**08 26 51.0**	**-1.3**
WRA	**Warramunga Arr**	**13.81**	**162**	P	**Pn**	**08 26 51.0**	**-1.3**
	2.4nm,0.6s,baz=338,slow=10,SNR=66						
WRA				S	S	08 29 11.2	-15
	1.6nm,0.4s,baz=334,slow=22,SNR=2.5						
ASAR	**Alice Springs**	**17.27**	**168**	P	**Pn**	**08 27 35.5**	**+1.4**
	8.6nm,0.7s,baz=340,slow=9.1,SNR=97						
ASAR				S	**S**	**08 30 31.9**	**-10**
	0.9nm,0.6s,baz=346,slow=16,SNR=4.0						
AS01	**Alice Springs**	**17.27**	**168**	P	**Pn**	**08 27 36.3**	**+2.0**
WRKA	**Warakurna**	**18.27**	**185**	P	**Pn**	**08 27 46.3**	**+0.3**
OOD	**Oodnadatta**	**21.65**	**166**	P	**P**	**08 28 22.2**	**+2.8**
STKA	**Stephens Creek**	**27.29**	**158**	P	**P**	**08 29 13.8**	**+3.1**
	0.8nm,0.4s,baz=293,slow=19,SNR=2.5						
	0.8nm,0.4s						
SONM	**Songino Array**	**58.17**	**342**	P	**P**	**08 33 20.8**	**+3.1**
	0.3nm,0.4s,baz=146,slow=5.5,SNR=1.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**08 34 24.6**	**+2.5**
	0.6nm,0.3s,baz=117,slow=7.8,SNR=13						
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**71.31**	**334**	P	**P**	**08 34 44.1**	**+1.8**
	1.1nm,0.5s,baz=122,slow=6.7,SNR=2.2						
	1.1nm,0.5s						

*INET **26** 08:56:14.9±0.2, 12°.68N×88°.59W, h6km, MW3.1*
*SNET **26** 08:56:16.0±0.4, 12°.79N×88°.74W, h25km±7km, ML2.9*
ISC 26 08:56:15.5±2.2,**12°.7N**±0°.1×**88°.70W**±0°.09,**h35**km,**n8,** σ0$41/11,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.80**	**12**	*e*P	**Pn**	**08 56 29.9**	**-0.5**
COEB				*e*S	**Sn**	**08 56 41.3**	**+0.1**
COEB				IAML		08 56 42.8	
	comp=Z,373nm,0.1s						
PQSS	**Presa 15 de Se**	**0.92**	**9**	*e*P	**Pn**	**08 56 31.7**	**-0.3**
COEG	**Centro de Oper**	**0.92**	**349**	*e*P	**Pn**	**08 56 31.6**	**-0.5**
COEG				IAML		08 56 47.5	
	comp=Z,544nm,0.2s						
SCLA	**Alcaldia de Sa**	**0.99**	**358**	*e*P	**Pn**	**08 56 32.9**	**-0.1**
SCLA				*e*S	**Sn**	**08 56 46.3**	**+0.6**
PAVA	**Las Pavas**	**1.02**	**347**	*e*P	**Pn**	**08 56 33.6**	**+0.1**
JAYA	**Jayaque - finc**	**1.19**	**322**	*e*P	**Pn**	**08 56 35.6**	**-0.2**
NUBE	**Las Nubes**	**1.58**	**319**	*e*P	**Pn**	**08 56 41.1**	**-0.2**
CRIN	**San Cristobal**	**1.61**	**90**	*e*P	**Pn**	**08 56 41.3**	**-0.3**
CRIN				*e*S	**Sn**	**08 57 01.7**	**+0.5**

*SKHL **26** 09:16:51.7±0.2, 44°.50N×149°.30E, h54km±3km, mb4.7/2*
*JMA **26** 09:16:51.2±1.0, 45°.N±4°×14°.9E±°, h30km, MV3.9/13, SE OFF ETOROFU*
*MOS **26** 09:16:51.1±0.7, 44°.52N×149°.13E, h52km, mb4.2/1, Error ellipse: s-maj=17.7km s-min=13.4km az=59.0*
*IDC **26** 09:16:53.7±5.2, 44°.51N×149°.16E, h58km±46km, mb3.4/12, mbtmp3.7/13, ML2.4/1, MS3.0/3, Error ellipse: s-maj=25.6km s-min=18.8km az=121.0*
ISC 26 09:16:51.7±1.6,**44°.44N**±0°.06×**149°.19E**±0°.09,**h42**km±15km, **n44,** σ1$41/47,**mb3.8/12,1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.23**	**310**	*d* iPN	**Pn**	**09 17 11.3**	**-1.1**
KUR				*i* S	**Sn**	**09 17 26.0**	**-1.7**
KUR				pmax	pmax		
	comp=Z,437nm,0.4s						
KUR				pmax	pmax		
	comp=N,132nm,0.3s						
KUR				pmax	pmax		
	comp=E,133nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.4s						
KUR				smax	smax		
	comp=E,715nm,0.2s						
KUR	**Kuril'sk**	**1.23**	**310**	*i* P	**Pn**	**09 17 11.3**	**-1.1**
KUR				AMB	AMB	09 17 12.8	
	comp=E,240nm,0.4s						
KUR				*i* S	**Sn**	**09 17 26.1**	**-1.7**
KUR				A	A	09 17 29.9	
	comp=E,2μm,0.5s						
KUR				A	A	09 17 29.9	
	comp=E,720nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.43**	**261**	*e*PN	**Pn**	**09 17 29.6**	**+0.8**
YUK				*e*S	**Sn**	**09 17 57.8**	**+0.6**
YUK				pmax	pmax		
	comp=E,52nm,0.2s						
YUK				pmax	pmax		
	comp=Z,182nm,0.2s						
YUK				pmax	pmax		
	comp=N,44nm,0.1s						
YUK				smax	smax		
	comp=E,274nm,0.2s						
YUK				smax	smax		
	comp=N,481nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.43**	**261**	*e*P	**Pn**	**09 17 29.4**	**+0.6**
YUK				AMB	AMB	09 17 30.7	
	comp=N,100nm,0.3s						
YUK				*e*S	**Sn**	**09 17 57.8**	**+0.6**
YUK				A	A	09 18 03.5	
	comp=N,480nm,0.5s						
YUK				A	A	09 18 03.5	
	comp=N,270nm,0.5s						
NEM2	**Nemuro 2**	**2.71**	**248**	*e*P	**Pn**	**09 17 31.8**	**-0.9**
NEM2				*e*S	**Sn**	**09 18 02.4**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.72**	**248**	*e*PN	**Pn**	**09 17 32.8**	**-0.1**
NMR				*e*S	**Sn**	**09 18 03.0**	**-1.5**
NMR	**Nemuro--Hokkai**	**2.72**	**248**	*e*P	**Pn**	**09 17 33.2**	**+0.3**
NMR				AMB	AMB	09 17 36.8	
	comp=N,20nm,0.3s						
NMR				*e*S	**Sn**	**09 18 03.9**	**-0.6**
NMR				A	A	09 18 13.8	
	comp=N,140nm,0.3s						
NMR				A	A	09 18 13.8	
	comp=N,110nm,0.3s						
RUSJ	**Misakicho**	**2.85**	**265**	*e*PN	**Pn**	**09 17 35.5**	**+0.9**
RUSJ				*e*S	**Sn**	**09 18 08.2**	**+0.5**
JRA	**Rausu**	**2.97**	**262**	*e*P	**Pn**	**09 17 36.8**	**+0.5**
JRA				*e*S	**Sn**	**09 18 11.5**	**+0.9**
JNK	**Nakash**	**3.34**	**257**	*e*P	**Pn**	**09 17 42.2**	**+0.9**
AKK	**Akkeshi**	**3.46**	**247**	*e*P	**Pn**	**09 17 44.3**	**+1.3**
JAK	**Akkeshi**	**3.56**	**248**	*e*P	**Pn**	**09 17 44.4**	**0.0**
JAK				*e*S	**Sn**	**09 18 24.7**	**-0.6**
JTKR	**Abashiri--Toko**	**3.83**	**265**	*e*P	**Pn**	**09 17 50.3**	**+2.2**
JAR	**Ashorobuto**	**4.08**	**256**	*e*P	**Pn**	**09 17 53.2**	**+1.6**
JAR				*e*S	**Sn**	**09 18 38.7**	**+0.6**
JOB	**Onbets**	**4.18**	**250**	*e*S	**Sn**	**09 18 40.1**	**-0.3**
JCH	**Churui**	**4.61**	**249**	*e*P	**Pn**	**09 17 59.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**5.16**	**301**	*e*S	**Sn**	**09 19 04.3**	**-0.2**
YSS				A	A	09 19 08.4	
	comp=N,20nm,0.6s						
YSS				A	A	09 19 08.4	
	comp=N,10.0nm,0.6s						
JNBK	**Urakawa-nobuka**	**5.17**	**248**	*e*P	**Pn**	**09 18 06.8**	**+0.4**
JANG	**Nango**	**6.98**	**237**	*e*S	**Sn**	**09 19 42.8**	**-6.7**
PETK	**Petropavlovsk-**	**10.32**	**30**	P	**Pn**	**09 19 18.4**	**+1.3**
	comp=N,0.1nm,0.3s,baz=270,slow=32,SNR=2.3						
PETK				LR	LR	09 23 37.7	
	comp=N,50nm,19.4s,baz=164,slow=39						
	comp=N,11nm,1.0s						
MA2	**Magadan**	**15.19**	**3**	LR	LR	09 25 41.4	
	comp=N,46nm,19.2s,baz=135,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.72**	**143**	T	T	09 53 33.5	
	baz=334,slow=76,SNR=84						
H11N1	**WAKE ISLAND Hy**	**28.73**	**143**	T	T	09 53 41.0	
	baz=334,slow=76,SNR=75						
H11N3	**WAKE ISLAND Hy**	**28.74**	**143**	T	T	09 53 37.6	
	baz=334,slow=76,SNR=105						
H11S1	**WAKE ISLAND Hy**	**29.73**	**145**	T	T	09 54 55.5	
	baz=334,slow=76,SNR=88						
H11S3	**WAKE ISLAND Hy**	**29.73**	**145**	T	T	09 54 48.0	
	baz=334,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	**29.75**	**145**	T	T	09 54 57.1	
	baz=334,slow=76,SNR=58						
ILAR	**Eielson Array**	**40.06**	**37**	P	**P**	**09 24 21.7**	**-0.7**
	comp=N,0.4nm,0.5s,baz=263,slow=8.7,SNR=4.9						
	comp=N,0.4nm,0.5s						
INK	**Inuvik**	**45.06**	**31**	P	**P**	**09 25 03.2**	**+0.4**
	comp=N,0.7nm,0.5s,baz=286,slow=7.8,SNR=7.4						
	comp=N,0.7nm,0.5s						
MKAR	**Makanchi Array**	**45.56**	**298**	PcP	**PcP**	**09 26 45.2**	**0.0**
	comp=N,0.5nm,0.7s,baz=44,slow=4.8,SNR=2.6						
KURK	**Kurchatov**	**46.36**	**304**	P	**P**	**09 25 13.6**	**+0.2**
KURK	**Kurchatov**	**46.36**	**304**	*e*P	**P**	**09 25 13.6**	**+0.2**
KURBB	**Kurchatov Arra**	**46.45**	**304**	P	**P**	**09 25 13.6**	**-0.4**
	comp=N,0.3nm,0.4s,baz=73,slow=8.5,SNR=4.2						
	comp=N,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**54.40**	**35**	P	**P**	**09 26 14.4**	**+0.4**
	comp=N,0.6nm,0.6s,baz=294,slow=7.2,SNR=2.3						
	comp=N,0.6nm,0.6s						
FINES	**FINESS Array B**	**64.92**	**334**	P	**P**	**09 27 26.6**	**+0.4**
	comp=N,1.7nm,0.9s,baz=8.9,slow=9.8,SNR=3.7						
	comp=N,1.7nm,0.9s

ASAR	Alice Springs	26.89	225	P	P	09 53 29.2	-1.0
	comp=Z,0.8nm,0.5s,baz=56,slow=9.3,SNR=26						
ASAR				PcP	PcP	09 56 40.2	-0.4
	comp=Z,0.5nm,0.5s,baz=57,slow=2.9,SNR=6.1						
ASAR				S	S	09 57 33.4	-4.0
	comp=Z,0.5nm,0.6s,baz=55,slow=15,SNR=4.8						
ASAR				ScP	ScP	09 59 43.3	+1.1
	comp=Z,0.4nm,1.0s,baz=42,slow=2.9,SNR=2.2						
	comp=Z,0.8nm,0.5s						
LCRK	Leigh Creek	29.35	209	P	P	09 53 51.5	-0.3
HTT	Hallett	31.55	205	P	P	09 54 10.8	-0.2
WRKA	Warakurna	31.79	229	P	P	09 54 12.1	-1.0
BBOO	Buckleboo	32.34	209	P	P	09 54 17.1	-0.6
BBOO				IAmb	IAmb	09 54 38.5	
	comp=Z,16nm,1.4s						
FORT	Forrest	35.45	221	P	P	09 54 44.0	-0.1
FORT				IAmb	IAmb	09 54 49.6	
	comp=Z,9.6nm,1.0s						
BKZ	Black Stump Fm	39.43	152	P	P	09 55 17.8	+0.7
MJAR	Matsushiro Arr	44.08	341	P	P	09 55 52.8	-1.3
	comp=Z,1.7nm,0.5s,baz=107,slow=13,SNR=6.1						
	comp=Z,1.7nm,0.5s						
MAJO	Matsushiro	44.08	341	P	P	09 55 53.6	-0.6
MAJO				IAmb	IAmb	09 55 53.8	
	comp=Z,6.1nm,0.6s						
KSRS	Korea Array	48.94	332	P	P	09 56 31.1	-0.2
	comp=Z,2.4nm,0.8s,baz=149,slow=9.1,SNR=6.5						
	comp=Z,2.4nm,0.8s						
PETK	Petropavlovsk-	58.09	2	P	P	09 57 36.3	-0.4
	comp=Z,5.9nm,0.8s,baz=189,slow=8.2,SNR=8.2						
	comp=Z,5.9nm,0.8s						
CMAR	Chiang Mai Arr	59.30	295	P	P	09 57 46.2	+0.6
	comp=Z,0.9nm,0.4s,baz=117,slow=4.6,SNR=5.1						
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	67.36	327	P	P	09 58 38.3	+0.9
	comp=Z,2.3nm,0.6s,baz=141,slow=5.9,SNR=11						
	comp=Z,2.3nm,0.6s						
CASY	Casey	68.12	198	P	P	09 58 41.9	+0.3
CASY				IAmb	IAmb	09 59 02.1	
	comp=Z,5.4nm,1.4s						
VNDA	Vanda	72.46	178	P	P	09 59 07.5	+0.2
	comp=Z,1.1nm,0.8s,baz=330,slow=6.7,SNR=10						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	72.46	178	P	P	09 59 08.2	+0.9
PWL	Port Wells	79.35	25	P	P	09 59 46.2	+0.1
CUT	Chulitna	79.39	23	P	P	09 59 45.1	-1.1
PMR	Palmer	79.41	24	P	P	09 59 46.0	-0.4
PMR				IAmb	IAmb	09 59 58.7	
	comp=Z,4.1nm,1.2s						
SML	Sawmill	79.84	24	P	P	09 59 48.8	+0.1
SML				IAmb	IAmb	09 59 49.0	
	comp=Z,5.2nm,0.8s						
HIN	Hinchinbrook I	79.89	26	P	P	09 59 49.2	+0.2
IMAR	Indian Mountai	80.22	19	P	P	09 59 50.8	+0.1
H21K	Melozitna Rive	80.34	20	P	P	09 59 51.6	+0.4
H21K				IAmb	IAmb	09 59 52.3	
	comp=Z,5.3nm,1.1s						
MK31	Makanchi Array	81.50	319	P	P	09 59 58.1	+0.3
MK31				IAmb	IAmb	09 59 59.3	
	comp=Z,3.3nm,0.8s						
MKAR	Makanchi Array	81.50	319	P	P	09 59 58.0	+0.2
	comp=Z,3.4nm,0.6s,baz=96,slow=6.2,SNR=24						
	comp=Z,3.4nm,0.6s						
MKAR	Makanchi Array	81.50	319	P	P	09 59 58.2	+0.4
CCB	Clear Creek Bu	81.53	22	P	P	09 59 56.2	-1.3
CCB				IAmb	IAmb	09 59 56.4	
	comp=Z,2.1nm,0.7s						
H23K	Yukon River	81.55	20	P	P	09 59 57.8	+0.2
H23K				IAmb	IAmb	09 59 58.4	
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	81.94	22	P	P	09 59 58.0	-1.6
	comp=Z,1.8nm,0.6s,baz=246,slow=5.3,SNR=27						
	comp=Z,1.8nm,0.6s						
ILAR	Eielson Array	81.94	22	P	P	09 59 58.3	-1.3
H24K	Noodor Dome	82.13	21	P	P	10 00 00.5	-0.1
H24K				IAmb	IAmb	10 00 16.6	
	comp=Z,4.8nm,1.4s						
ZAA0	Zalesovo Array	82.21	326	P	P	10 00 01.4	+0.2
ZALV	Zalesovo Beam	82.21	326	P	P	10 00 00.2	-1.0
	comp=Z,1.7nm,0.6s,baz=108,slow=5.0,SNR=6.9						
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	82.21	326	P	P	10 00 01.2	0.0
J25K	Salcha River,	82.42	22	P	P	10 00 01.7	-0.4
J25K				IAmb	IAmb	10 00 02.1	
	comp=Z,4.2nm,0.7s						
M27K	Edge Creek, AK	82.77	25	P	P	10 00 04.7	+0.6
M27K				IAmb	IAmb	10 00 05.4	
	comp=Z,4.9nm,0.8s						
TOLK	Toolik Lake Re	83.09	18	P	P	10 00 05.8	+0.4
TOLK				IAmb	IAmb	10 00 29.7	
	comp=Z,5.5nm,1.1s						
BMAR	Burnt Mountain	84.07	20	P	P	10 00 11.1	+0.8
HYT	Haines Junctio	84.08	27	P	P	10 00 11.7	+1.0
HYT				IAmb	IAmb	10 00 12.2	
	comp=Z,2.8nm,0.7s						
DAWY	Dawson	84.51	24	P	P	10 00 13.8	+1.2
QSPA	South Pole Qui	84.83	180	P	P	10 00 14.7	+0.3
KURK	Kurchatov	84.90	322	P	P	10 00 14.1	-0.7
KURK				IAmb	IAmb	10 00 14.5	
	comp=Z,5.2nm,1.3s						
MAW	Mawson	85.81	203	P	P	10 00 19.2	+0.3
	comp=Z,1.9nm,0.6s,baz=111,slow=5.5,SNR=9.8						
	comp=Z,1.9nm,0.6s						
MAW	Mawson	85.81	203	P	P	10 00 19.4	+0.6
EPYK	Eagle Plains	86.43	22	P	P	10 00 22.6	+0.6
PINE	Pine Mountain	89.79	46	P	P	10 00 39.1	+0.7
NVAR	Mina Array Bea	91.18	52	P	P	10 00 45.4	+0.4
	comp=Z,0.4nm,0.7s,baz=285,slow=7.2,SNR=3.6						
	comp=Z,0.4nm,0.7s						
PLCA	Paso Flores	118.66	142	PKP	PKPdf	10 06 24.3	-1.1
	comp=Z,0.4nm,0.5s,baz=262,slow=7.1,SNR=4.1						
GERES	GERESS Array B	125.07	329	PKP	PKPdf	10 06 36.9	-0.6
	comp=Z,0.8nm,0.5s,baz=106,slow=4.3,SNR=6.0						
LPAZ	La Paz	133.02	118	PKP	PKPdf	10 06 53.9	-0.3
	comp=Z,0.6nm,0.6s,baz=310,slow=2.4,SNR=4.5						
MDT	Midelt	146.10	327	PKPbc	PKPbc	10 07 18.3	-0.1
	comp=Z,2.6nm,0.7s,baz=93,slow=2.3,SNR=5.5						
BDFB	Brasilia	149.82	134	PKPbc	PKPbc	10 07 28.1	-0.3
	comp=Z,2.4nm,0.5s,baz=180,slow=3.0,SNR=4.3						
TORD	Torodi Ar. Bea	151.75	288	PKPbc	PKPbc	10 07 31.3	-1.4
	comp=Z,0.9nm,0.7s,baz=46,slow=2.6,SNR=6.0						
TORD				PKPab	PKPab	10 07 42.3	-1.1
	comp=Z,1.1nm,0.8s,baz=71,slow=3.6,SNR=4.7						

NEIC ***26*** *09:57:48.2±0.8, 18°.1N±0°.2×68°.45W±0°.02, h56km±16km, Error ellipse: s-maj=24.6km s-min=1.7km az=185.0*
RSPR ***26*** *09:57:49.2, 18°.08N×68°.47W, h49km±5km, MD3.4/11*
ISC 26 09:57:48.6±1.4, 18°.2N±0°.2×68°.42W±0°.04, h62km±14km, n42, σ0°91/48, 11C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.33	7	↑eP	Pn	09 57 58.8	-0.4
PCDR	Punta Cana, DR	0.33	7	eS	Sn	09 58 07.0	+0.1
PCDR	Punta Cana, DR	0.33	7		Pn	09 57 58.7	-0.5
PCDR					Sn	09 58 07.2	+0.3
IDE	Isla Desecheo	0.92	77	↑eP	Pn	09 58 05.4	-0.3
IDE	Isla Desecheo	0.92	77	eS	Sn	09 58 18.3	-0.2
CRPR	Cabo Rojo, PR	1.26	98	↑eP	Pn	09 58 09.8	-0.3
CRPR	Cabo Rojo, PR	1.26	98	eS	Sn	09 58 29.0	+2.8
CRPR	Cabo Rojo, PR	1.26	98		Pn	09 58 09.8	-0.3
LSP	Las Mesas	1.27	90	↑eP	Pn	09 58 10.8	+0.5
LSP	Las Mesas	1.27	90	eS	Sn	09 58 26.5	0.0
AGPR	Aguadilla, PR	1.28	77	↑eP	Pn	09 58 10.9	+0.5
AGPR	Aguadilla, PR	1.28	77		Pn	09 58 10.9	+0.5
AGPR				IAML		09 58 29.9	
	comp=E,150nm,0.4s						
AGPR				IAML		09 58 35.7	
	comp=N,130nm,1.1s						
MLPR	Magueyes Islan	1.33	99	↑eP	Pn	09 58 10.7	-0.4
MLPR	Magueyes Islan	1.33	99	eS	Sn	09 58 27.9	+0.1
MLPR	Magueyes Islan	1.33	99		Pn	09 58 10.6	-0.4
MLPR					Sn	09 58 27.8	-0.1
SDD	Santo Domingo	1.44	281	Pn	Pn	09 58 13.8	+1.2
SDD				IAML		09 58 35.2	
	comp=N,91nm,0.6s						
AOPR	Arecibo Observ	1.59	84	↑eP	Pn	09 58 15.0	+0.4
AOPR	Arecibo Observ	1.59	84	eS	Sn	09 58 35.3	+1.0
AOPR	Arecibo Observ	1.59	84		Pn	09 58 14.5	-0.1
AOPR					Sn	09 58 35.5	+1.2
AOPR				IAML		09 58 40.2	
	comp=N,260nm,0.2s						
CELP	Cerrillos	1.76	93	↑eP	Pn	09 58 16.7	-0.2
CELP	Cerrillos	1.76	93	eS	Sn	09 58 38.3	+0.1
CELP	Cerrillos	1.76	93		Pn	09 58 16.6	-0.2
CELP					Sn	09 58 37.8	-0.4
CELP				IAML		09 58 38.7	
	comp=E,54nm,0.4s						
CELP				IAML		09 58 49.1	
	comp=N,59nm,0.3s						
EMPR	Esperanza - Ma	1.82	80	Pn	Pn	09 58 18.6	+1.0
BANI	BANI	1.85	277	Pn	Pn	09 58 18.6	+0.4
SJG	San Juan	2.16	92	Pn	Pn	09 58 21.8	-0.5
SJG				IAML		09 58 53.2	
	comp=N,84nm,0.2s						
SJG				IAML		09 58 54.5	
	comp=N,66nm,0.3s						
GCPR	Guaynabo City	2.23	86	Pn	Pn	09 58 23.4	+0.2
GCPR				IAML		09 58 52.8	
	comp=E,41nm,0.7s						
GCPR				IAML		09 58 53.3	
	comp=N,38nm,0.5s						
CBYP	Canovanas	2.44	88	↑eP	Pn	09 58 26.2	0.0
CBYP	Canovanas	2.44	88	eS	Sn	09 58 54.6	-0.3
CBYP	Canovanas	2.44	88		Pn	09 58 26.0	-0.2
CBYP					Sn	09 58 54.8	-0.1
HUMP	Col San Antoni	2.45	91	Pn	Pn	09 58 25.5	-0.7
MTP	Monte Pirata	2.73	91	↓iP	Pn	09 58 29.9	-0.2
MTP	Monte Pirata	2.73	91	eS	Sn	09 59 05.1	+3.2
MTP	Monte Pirata	2.73	91		Pn	09 58 29.6	-0.5
MTP				IAML		09 59 07.9	
	comp=E,32nm,0.9s						
MTP				IAML		09 59 11.5	
	comp=N,30nm,0.3s						
SDDR	Presa de Saban	2.83	287		Pn	09 58 30.0	-1.5
SDDR				IAML		09 59 08.1	
	comp=N,26nm,3.0s						
SDDR				IAML		09 59 15.6	
	comp=N,27nm,1.0s						
CUPR	Culebra, Puert	2.99	87	↑eP	Pn	09 58 33.6	+0.1
CUPR	Culebra, Puert	2.99	87	eS	Sn	09 59 07.4	-0.7
CUPR	Culebra, Puert	2.99	87		Pn	09 58 33.6	+0.1
CUPR				IAML		09 59 12.4	
	comp=N,16nm,0.5s						
STVI	Saint Thomas	3.30	87	Pn	Pn	09 58 37.7	-0.1
STVI				IAML		09 59 17.3	
	comp=N,34nm,1.5s						
SJVI	Gifft Hill Sch	3.47	87	↑eP	Pn	09 58 40.5	+0.4
SJVI	Gifft Hill Sch	3.47	87	eS	Sn	09 59 18.6	-1.5
SJVI	Gifft Hill Sch	3.47	87		Pn	09 58 40.5	+0.4
SJVI					Sn	09 59 18.6	-1.5
CDVI	St. Croix	3.51	96	Pn	Pn	09 58 39.0	-1.6

NOU ***26*** *10:07:55.8, 37°.06S×179°.62W, h0km, MLv5.3/15, East of North Island, N.Z.*
NEIC ***26*** *10:08:08.2±1.2, 37°.34S±0°.04×179°.23E±0°.06, h10km±1km, mb4.5/14, ML4.7(WEL), Error ellipse: s-maj=8.5km s-min=7.6km az=84.0*
WEL ***26*** *10:08:11.4±1.5, 37°.S±5°×17°9E±°, h14km±6km, M4.8/63, ML5.1/62, MLv4.8/63, Error ellipse: s-maj=0.0km s-min=0.0km az=79.2*
IDC ***26*** *10:08:13.4±3.4, 36°.97S×179°.00E, h36km±22km, mb4.2/8, mbtmp4.4/8, MS3.9/36, Error ellipse: s-maj=33.8km s-min=20.1km az=39.0*
ISC 26 10:08:10.6±1.2, 37°.23S±0°.05×179°.08E±0°.05, h19km±4km, n222, σ1°61/195, mb4.5/15, MS3.9/36, 1C-2D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.70	241	Pn	Pb	10 08 24.6	+0.5
MXZ				Sg	Sg	10 08 32.3	-1.4
MXZ	Matakaoa Point	0.70	241	P	Pb	10 08 24.7	+0.5
MXZ				S	Sg	10 08 32.1	-1.5
MXZ	Matakaoa Point	0.70	241	P	Pn	10 08 24.9	-0.6
WMGZ	Waiomatatini S	0.79	222	P	Pn	10 08 28.7	+1.9
WMGZ				S	Sn	10 08 39.8	+1.7
PKGZ	Pakihiroa	1.03	230	P	Pn	10 08 31.0	+0.8
PKGZ				S	Sn	10 08 44.9	+0.7
PUZ	Puketiti	1.06	217	P	Pg	10 08 32.6	+1.3
PUZ				S	Sn	10 08 46.5	+1.6
HAZ	Te Kaha	1.16	243	P	Pn	10 08 31.5	-0.3
TWGZ	Tauwhareparae	1.28	222	P	Pg	10 08 35.9	+0.4
TWGZ				S	Sg	10 08 52.7	+0.5
RUGZ	Raukumara Rang	1.33	236	P	Pg	10 08 35.6	-0.7
RUGZ				S	Sb	10 08 52.6	+0.7
WIZ	White Island	1.53	258	P	Pn	10 08 36.1	-0.8
WSRZ	White Island S	1.54	259	P	Pn	10 08 37.3	+0.2
TKGZ	Te Karaka	1.55	218	P	Pb	10 08 39.3	+0.6
MWZ	Matawai	1.65	228	P	Pb	10 08 40.4	-0.1
WHRZ	Whale Island	1.78	249	P	Pb	10 08 42.1	-0.6
RIGZ	Rimuhau	1.80	215	P	Pb	10 08 42.6	-0.5
RAGZ	Rawiri	1.82	226	P	Pb	10 08 42.9	-0.5
URZ	Urewera	1.87	236	Pn	Pb	10 08 43.3	-0.8
	428nm,0.3s,baz=63,slow=0.5,SNR=1498						
URZ				Sn	Sn	10 09 05.1	+0.5
	1μm,0.3s,baz=333,slow=22,SNR=54						
URZ				LR	LR	10 09 53.3	
	comp=Z,4μm,18.1s,baz=92,slow=50						
URZ	Urewera	1.87	236	P	Pb	10 08 43.0	-1.1
URZ	Urewera	1.87	236	P	Pb	10 08 43.4	-0.7
EDRZ	Edgecumbe	2.05	244	P	Pn	10 08 45.6	+1.4
MARZ	Manawahe	2.05	248	P	Pn	10 08 45.3	+1.2
SNGZ	Shannon Statio	2.07	221	P	Pn	10 08 45.9	+1.4
OPRZ	Ohinepanea	2.10	252	P	Pn	10 08 45.4	+0.7
KNZ	Kokohu	2.10	211	P	Pn	10 08 45.6	+0.7
MHGZ	Mahia Peninsul	2.13	205	P	Pn	10 08 47.1	+1.8
RTZ	Ruatahuna	2.16	230	P	Pn	10 08 47.2	+1.5
MUGZ	Murupara	2.21	235	P	Pn	10 08 47.5	+1.2
MKRZ	Makatiti	2.26	246	P	Pb	10 08 51.2	+0.3
MYRZ	Mayor Island	2.26	268	P	Pn	10 08 47.3	+0.2
TARZ	Mount Tarawera	2.27	243	P	Pb	10 08 49.3	-1.8
LIRZ	Lichensteins R	2.27	249	P	Pn	10 08 48.9	+1.7
TGRZ	Tauranga	2.29	257	P	Pn	10 08 48.2	+0.7
RAHZ	Arahi	2.30	222	P	Pn	10 08 49.1	+1.4
RRRZ	Republican Roa	2.31	241	P	Pn	10 08 49.4	+1.6
OMRZ	Omania	2.32	247	P	Pn	10 08 49.6	+1.7
WHHZ	Waihua	2.35	218	P	Pn	10 08 49.7	+1.5
KARZ	Kaharoa	2.38	250	P	Pn	10 08 49.8	+1.1
HLRZ	Highlands Stat	2.39	244	P	Pb	10 08 51.0	-2.0
MTHZ	Maungataniwha	2.40	227	P	Pn	10 08 50.6	+1.7
NGRZ	Ngongotaha	2.45	248	P	Pn	10 08 51.8	+2.0
PRRZ	Plateau Road	2.47	238	P	Pn	10 08 51.2	+1.2
UTU	Utuhina	2.47	247	P	Pb	10 08 53.2	-1.3
HSRZ	Hossack Road	2.49	243	P	Pb	10 08 52.6	-2.2
HRRZ	Handcock Road	2.50	242	P	Pn	10 08 51.9	+1.5
ALRZ	Allen Road	2.54	238	P	Pn	10 08 52.1	+1.2
KMRZ	Kaimai	2.57	255	P	Pn	10 08 51.9	+0.7
NMHZ	Naumai	2.58	223	P	Pn	10 08 53.1	+1.6
GRRZ	Galatos Road	2.60	244	P	Pn	10 08 54.0	+2.3
ARHZ	Aropaoanui	2.61	218	P	Pn	10 08 53.0	+1.2
MRHZ	Matea Rd	2.64	232	P	Pn	10 08 53.7	+1.4
WPRZ	Whakapapatarin	2.64	240	P	Pn	10 08 54.2	+1.9
KUZ	Kuaotunu	2.73	279	P	Pn	10 08 52.3	-1.2
KUZ	Kuaotunu	2.73	279	P	Pn	10 08 52.6	-0.9
BKZ	Black Stump Fm	2.81	226		Pn	10 08 55.1	+0.5
BKZ				Sn	Sn	10 09 26.5	-1.5
BKZ	Black Stump Fm	2.81	226	P	Pn	10 08 55.6	+1.0
BKZ	Black Stump Fm	2.81	226	P	Pn	10 08 56.6	+2.0
WHTZ	Whakaora	2.85	239	P	Pb	10 08 59.5	-1.5
TOZ	Tahuroa Road	2.89	259	P	Pn	10 08 55.4	-0.2
CKHZ	Cape Kidnapper	2.89	212	P	Pn	10 08 56.0	+0.4
MCHZ	McNeill Hill	2.90	220	P	Pn	10 08 56.8	+1.0
TLZ	Tolley Road	3.01	248	P	Pn	10 08 59.1	+1.7
KWHZ	Kaweka Forest	3.02	223	P	Pn	10 08 58.2	+0.6
GRZ	Great Barrier	3.07	288	P	Pn	10 08 57.8	-0.3
RATZ	Rangitukua	3.08	237	P	Pn	10 09 00.1	+1.8
RITZ	Rihia Road	3.08	235	P	Pn	10 08 59.9	+1.6
KAHZ	Kahuranaki	3.09	213	P	Pn	10 08 58.6	+0.2
MKAZ	Moumakai	3.13	271	P	Pn	10 08 58.5	-0.4
KATZ	Kakaramea	3.19	236	P	Pn	10 09 02.3	+2.4
WIAZ	Waiheke Island	3.19	277	P	Pn	10 08 59.4	-0.3
TMVZ	Te Maari	3.26	234	P	Pn	10 09 01.6	+0.8
ETVZ	East Tongariro	3.26	233	P	Pn	10 09 01.8	+0.9
BHHZ	Black Hill Sta	3.27	225	P	Pn	10 09 02.0	+1.1
KRVZ	Karewarewa	3.29	234	P	Pn	10 09 02.3	+1.1
PXZ	Pawanui	3.29	211	P	Pn	10 09 00.8	-0.4
OTVZ	Oturere	3.31	233	P	Pn	10 09 02.5	+0.9
NNVZ	North Ngauruho	3.32	234	P	Pn	10 09 03.2	+1.4
ETAZ	East Tamaki Re	3.33	274	P	Pn	10 09 01.7	+0.1
WTVZ	West Tongariro	3.33	235	P	Pn	10 09 03.3	+1.5
SNVZ	South Ngauruho	3.34	233	P	Pn	10 09 03.3	+1.3
NGZ	Ngauruhoe	3.36	234	P	Pn	10 09 03.2	+1.0
TUVZ	Tukino	3.38	232	P	Pn	10 09 03.4	+0.9
MBAZ	Motutapu North	3.38	277	P	Pn	10 09 02.6	+0.3
MOVZ	Moawhango	3.40	229	P	Pn	10 09 03.3	+0.5
TWVZ	Taurewa	3.41	236	P	Pn	10 09 04.4	+1.6
WHVZ	Whangaehu Hut	3.42	232	P	Pn	10 09 04.9	+1.7
FWVZ	Far West T-bar	3.43	233	P	Pn	10 09 05.0	+1.7
WNVZ	Wahianoa	3.45	232	P	Pn	10 09 04.2	+0.7
ABAZ	Army Bay	3.46	279	P	Pn	10 09 03.8	+0.4
TRVZ	Turoa	3.46	232	P	Pn	10 09 05.2	+1.5
HBAZ	Herne Bay Bore	3.50	275	P	Pn	10 09 06.9	+2.9
PNHZ	Pukenui	3.50	219	P	Pn	10 09 03.6	-0.5
WPHZ	Waipukurau	3.50	215	P	Pn	10 09 03.9	-0.2
AWAZ	Awhitu Peninsu	3.55	271	P	Pn	10 09 05.0	+0.4
MTVZ	Mangateitei	3.56	232	P	Pn	10 09 06.8	+1.9
HIZ	Hauiti	3.58	248	Pn	Pn	10 09 06.7	+1.6
HIZ	Hauiti	3.58	248	P	Pn	10 09 07.1	+2.0
HIZ	Hauiti	3.58	248	P	Pn	10 09 07.8	+2.7
PRHZ	Porangahau	3.58	211	P	Pn	10 09 04.5	-0.7
PKVZ	Pokaka	3.58	234	P	Pn	10 09 07.0	+1.7
WTAZ	Waiatarua	3.61	273	P	Pn	10 09 06.0	+0.4
RVAZ	Riverhead Bore	3.63	276	P	Pn	10 09 06.2	+0.4
TSZ	Takapari Road	3.73	220	P	Pn	10 09 06.4	-0.9
VRZ	Vera Road	3.89	240	P	Pn	10 09 11.2	+1.8
WCZ	Waipu Caves	4.02	287	P	Pn	10 09 11.5	+0.3
POWZ	Post Office Ro	4.08	218	P	Pn	10 09 11.1	-0.9
WAZ	Wanganui	4.08	231	P	Pn	10 09 13.2	+1.1
BFZ	Birch Farm	4.09	212		Pn	10 09 10.4	-1.8
BFZ	Birch Farm	4.09	212	P	Pn	10 09 10.9	-1.3
PRWZ	Pori Road	4.11	215	P	Pn	10 09 12.2	-0.2
MHEZ	Mangahewa	4.17	242	P	Pn	10 09 17.5	+4.2
OHWZ	Ohakea	4.18	224	P	Pn	10 09 14.2	+0.8
LREZ	Lake Rotokare	4.30	237	P	Pn	10 09 17.1	+2.1
DREZ	Durham Road	4.31	242	P	Pn	10 09 18.2	+3.0
PREZ	Palmer Road	4.41	240	P	Pn	10 09 19.8	+3.3
NEZ	North Egmont	4.42	241	P	Pn	10 09 19.5	+2.7
PKE	Pukeiti	4.46	242	P	Pn	10 09 20.9	+3.6
KHEZ	Kahui Hut	4.49	241	P	Pn	10 09 20.8	+3.2
KHEZ	Kahui Hut	4.49	241	P	Pn	10 09 20.9	+3.2
NBEZ	Newall Road No	4.58	242	P	Pn	10 09 22.4	+3.5
NMEZ	Namu Road	4.63	240	P	Pn	10 09 24.0	+4.4
OUZ	Omahuta	4.86	293	Pn	Pn	10 09 23.8	+1.0
OUZ	Omahuta	4.86	293	P	Pn	10 09 23.6	+0.8
OUZ	Omahuta	4.86	293	P	Pn	10 09 23.6	+0.8
MSWZ	Moikau Station	5.12	214		Pn	10 09 24.2	-2.2
PLWZ	Palliser	5.25	213	Pn	Pn	10 09 26.0	-2.1
SNZO	South Karori	5.30	218		Pn	10 09 26.0	-2.8
SNZO	South Karori	5.30	218	P	Pn	10 09 26.3	-2.5
TUWZ	Tuamarina	5.78	222		Pn	10 09 33.0	-2.3
CMWZ	Cape Campbell	5.87	218		Pn	10 09 39.5	+2.9
CMWZ	Cape Campbell	5.87	218	P	Pn	10 09 37.2	+0.5
NNZ	Nelson	5.95	226	Pn	Pn	10 09 35.9	-1.8
BSWZ	Blackbirch Sta	6.02	220		Pn	10 09 37.0	-1.7
TKNZ	Takaka Hill	6.08	229	P	Pn	10 09 38.8	-0.8
QRZ	Quartz Range	6.23	233	P	Pn	10 09 40.5	-1.1
THZ	Tophouse	6.58	225	Pn	Pn	10 09 45.2	-1.2
KHZ	Kahutara	6.71	218		Pn	10 09 47.3	-0.8
KHZ	Kahutara	6.71	218	P	Pn	10 09 45.6	-2.5
CTZ	Chatham Island	7.28	155	P	Pn	10 09 58.8	+2.9
LTZ	Lake Taylor	7.62	221	Pn	Pn	10 09 58.4	-2.2
MQZ	McQueen's Vall	8.11	215	Pn	Pn	10 10 05.0	-2.3
OXZ	Oxford	8.12	219		Pn	10 10 05.8	-1.7
RPZ	Rata Peaks	8.90	221	Pn	Pn	10 10 15.5	-2.7
	2.7nm,0.3s,baz=253,slow=2.6,SNR=23						
RPZ				Sn	Sn	10 11 46.0	-12
	40nm,0.3s,baz=140,slow=20,SNR=27						
RPZ				LR	LR	10 14 38.5	
	comp=Z,2μm,20.0s,baz=46,slow=42						
RPZ	Rata Peaks	8.90	221	Pn	Pn	10 10 16.0	-2.2
RPZ	Rata Peaks	8.90	221	P	Pn	10 10 16.2	-2.1
LBZ	Lake Benmore	9.82	221	Pn	Pn	10 10 27.6	-3.2
ODZ	Otah

comp=Z,67nm,21.8s,baz=226,slow=30
KAPI Kappang 62.74 285 LR LR 10 47 09.3
comp=Z,110nm,18.4s,baz=130,slow=37
MAW Mawson 65.08 202 P **P** **10 18 51.0 +1.6**
comp=Z,2.9nm,1.0s,baz=92,slow=8.7,SNR=4.3
MAW LR LR 10 48 20.0
comp=Z,124nm,18.3s,baz=98,slow=37
comp=Z,2.9nm,1.0s
PMSA Palmer Station 67.06 155 LR LR 10 40 49.5
comp=Z,121nm,20.7s,baz=235,slow=29
LEM Lembang 71.14 276 LR LR 10 52 40.4
comp=Z,98nm,19.5s,baz=127,slow=38
H03S2 Juan Fernandez 78.71 124 T T 11 46 41.9
baz=230,slow=74,SNR=6.6
H03S1 Juan Fernandez 78.72 124 T T 11 46 58.9
baz=230,slow=74,SNR=6.7
H03S3 Juan Fernandez 78.73 124 T T 11 46 46.8
baz=230,slow=74,SNR=7.2
H03N3 Juan Fernandez 78.94 124 T T 11 46 51.8
baz=234,slow=72,SNR=30
H03N2 Juan Fernandez 78.94 124 T T 11 46 49.1
baz=234,slow=72,SNR=31
H03N1 Juan Fernandez 78.96 124 T T 11 46 46.6
baz=234,slow=72,SNR=41
PLCA Paso Flores 79.61 134 P **P** **10 20 16.9 +0.2**
comp=Z,2.8nm,0.9s,baz=219,slow=10,SNR=6.1
PLCA LR LR 10 47 15.1
comp=Z,48nm,21.0s,baz=218,slow=29
comp=Z,2.8nm,0.9s
JOW Kunigami 79.61 315 LR LR 10 50 13.9
comp=Z,27nm,20.3s,baz=121,slow=32
PSI Prapat 83.85 278 LR LR 11 01 11.8
comp=Z,96nm,18.8s,baz=114,slow=38
KSRS Korea Array 88.07 322 P **P** **10 20 58.0 -1.6**
comp=Z,0.7nm,0.5s,baz=128,slow=4.9,SNR=4.9
comp=Z,0.7nm,0.5s
NJ2 Nanjing 88.94 313 *e*P **P** **10 21 05.0 +1.1**
LPIG La Paz 90.15 60 LR LR 10 53 37.2
comp=Z,34nm,20.6s,baz=234,slow=30
PETK Petropavlovsk- 91.86 347 LR LR 10 57 37.8
comp=Z,33nm,19.1s,baz=140,slow=32
LVC Limon Verde 92.65 121 LR LR 10 54 16.7
comp=Z,71nm,20.1s,baz=238,slow=30
CMAR Chiang Mai Arr 93.43 290 P **P** **10 21 24.9 -0.1**
comp=Z,0.7nm,0.3s,baz=142,slow=4.6,SNR=1.7
CMAR LR LR 11 06 09.3
comp=Z,22nm,20.3s,baz=150,slow=37
comp=Z,0.7nm,0.3s
NNA Nana 93.77 108 LR LR 10 55 34.6
comp=Z,65nm,19.9s,baz=225,slow=30
YBH Yreka Blue Hor 94.87 40 LR LR 10 56 44.8
comp=Z,33nm,20.7s,baz=248,slow=31
ATAH Atahualpa 95.59 103 LR LR 10 55 58.4
comp=Z,85nm,18.9s,baz=257,slow=30
PZH PanZhiHua 96.35 298 P **P** **10 21 41.0 +2.6**
CMIG Matias Romero 97.08 74 LR LR 10 55 05.9
comp=Z,29nm,21.5s,baz=226,slow=29
LPAZ La Paz 97.41 117 LR LR 10 56 25.6
comp=Z,42nm,20.8s,baz=32,slow=30
CPUP Villa Florida 97.50 131 LR LR 10 58 47.9
comp=Z,99nm,19.6s,baz=224,slow=31
KDAK Kodiak Island 97.61 15 LR LR 10 59 35.3
comp=Z,41nm,20.4s,baz=201,slow=32
TXAR Lajitas Array 98.04 59 LR LR 10 57 04.8
comp=Z,32nm,21.0s,baz=282,slow=30
ELK Elko 98.16 44 LR LR 10 59 55.6
comp=Z,37nm,19.4s,baz=236,slow=32
XLT XiLinHaoTe 98.88 319 *e*P Pdif 10 21 51.3 +2.0
XLT pP pwP 10 21 55.8 -1.3
XLT sP sP 10 21 58.0 +0.8
HHC Hu-ho-hao-te 99.26 315 *e*P **Pdif** **10 21 53.0 +1.8**
WMQ Urumqi 115.44 307 *e*P **PKiKP** **10 26 50.8 -0.1**
KLMR Klimovskoe 145.35 326 *e* **PKPbc** **10 27 44.4 -1.8**
KLMR AMP 10 27 47.2
comp=Z,24nm,1.5s
LIC Lamto 148.91 172⇓ *e*PKP2 **PKiKP** **10 27 59.4 +0.3**
comp=Z,1.1nm,0.2s
KIC Kosan Boka 149.08 173⇓ *i*PKP2 **PKiKP** **10 28 00.0 +0.5**
comp=Z,0.9nm,0.3s
TIC Toumodi 149.33 172⇑ *i*PKP2 **PKiKP** **10 28 01.0 +1.0**
comp=Z,3.4nm,0.2s
DBIC Dimbokro 149.37 172 PKPbc **PKPbc** **10 27 58.7 -0.2**
comp=Z,4.4nm,0.8s,baz=122,slow=5.5,SNR=5.3
FINES FINESS Array B 150.47 334 PKPbc **PKiKP** **10 28 00.4 -0.4**
comp=Z,5.6nm,0.8s,baz=108,slow=4.2,SNR=9.1
BRTR Keskin Array B 152.93 286 PKPbc **PKPbc** **10 28 06.3 -0.4**
comp=Z,0.7nm,0.7s,baz=101,slow=6.0,SNR=2.6
TORD Torodi Ar. Bea 155.90 186 PKP **PKPdf** **10 28 05.3 +1.2**
comp=Z,1.3nm,1.0s,baz=193,slow=4.6,SNR=4.8
TORD PKPab **PKPab** **10 28 32.0 +1.3**
comp=Z,2.4nm,0.8s,baz=176,slow=2.6,SNR=11

MOS ***26*** *10:12:30.9±1.4, 35°.75N×140°.39E, h50km, mb4.6/23, Error ellipse: s-maj=9.9km s-min=6.2km az=111.2*
NEIC ***26*** *10:12:34.5±1.2, 35°.71N±0°.05×140°.14E±0°.08, h59km±5km, mb4.5/36, Mwr4.2/16, Error ellipse: s-maj=10.0km s-min=7.0km az=109.0*
NEIC ***26*** *10:12:34.7, 35°.71N×140°.14E, h57km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr1.23; Mθθ-0.03; Mφφ-1.20; Mrθ-0.89; Mφθ-0.45; Mφr2.42; Fault plane solution: M0 2.89000×10^15^ NP1:φs218.09000°, δ18.35000°, λ140.82000°. NP2:φs345.81000°, δ78.53000°, λ75.58000°. Principal axes: T 3.0454, Plg54.0000°, Azm238.0000°; N -0.3455, Plg14.0000°, Azm349.0000°; P -2.6998, Plg32.0000°, Azm88.0000°;*
NIED ***26*** *10:12:35.0, 35°.81N×140°.11E, h64km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr3.18; Mθθ0.42; Mφφ-3.60; Mrθ0.33; Mφθ-0.23; Mφr1.97; Fault plane solution: M0 3.94000×10^15^ NP1: φs179.00000°, δ30.00000°, λ83.00000°. NP2:φs7.00000°, δ60.00000°, λ94.00000°.*
IDC ***26*** *10:12:35.3±0.5, 35°.68N×140°.08E, h72km±5km, mb3.7/21, mbtmp4.1/25, MS3.1/15 Error ellipse: s-maj=13.3km s-min=11.0km az=65.0*
JMA ***26*** *10:12:35.0±0.2, 35°.8N±0°.5×140°.1E±0°.7, h64km±1km, MD4.1/40, MV4.0/40, NORTHERN CHIBA PREF*
JMA Felt II J1 at NORTHERN CHIBA PREF .
ISC 26 10:12:35.0±0.6, 35°.76N±0°.04×140°.13E±0°.04, h67km±5km**, n194,** σ1$33/159**, mb4.3**/47**, 7C-19D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.29**	**114**	*i* P	**Pn**	**10 12 46.2**	**+0.5**
JSMT	**Sammumatsuo**	**0.29**	**114**	A	A	10 12 46.2	
comp=E,48nm,0.6s,comp=E,42nm,1.6s							
TOK	**Tokyo**	**0.31**	**256**	*i* P	**Pn**	**10 12 46.8**	**+1.0**
TOK	**Tokyo**	**0.31**	**256**	A	A	10 12 46.8	
comp=Z,39nm,0.5s,comp=Z,199nm,0.8s,comp=Z,198nm,0.6s							
JCN	**Nagara**	**0.35**	**170**	*i* P	**Pn**	**10 12 46.9**	**+0.7**
JCN				S	**Sn**	**10 12 56.5**	**+2.2**
JCN	**Nagara**	**0.35**	**170**	A	A	10 12 46.9	
comp=Z,28nm,0.5s,comp=Z,92nm,0.4s,comp=Z,37nm,0.5s							
JIHU	**Itakohorinouch**	**0.38**	**58**	*i* P	**Pn**	**10 12 46.4**	**-0.1**
JIHU				S	**Sn**	**10 12 55.4**	**+0.6**
JIHU	**Itakohorinouch**	**0.38**	**58**	A	A	10 12 46.4	
comp=E,96nm,1.2s,comp=E,36nm,1.1s							
JYT	**Yasato**	**0.47**	**7**		**Pn**	**10 12 46.5**	**-0.8**
JYT				Sn	**Sn**	**10 12 55.2**	**-0.9**
JYT	**Yasato**	**0.47**	**7**	P	**Pn**	**10 12 46.6**	**-0.7**
JYT	**Yasato**	**0.47**	**7**	A	A	10 12 46.5	
comp=Z,10.0nm,0.2s,comp=Z,51nm,1.2s,comp=Z,24nm,0.4s							
I30JP	**ISUMI INFRASON**	**0.48**	**161**	P	**Pn**	**10 12 47.6**	**+0.3**
baz=343,slow=5.3							
I30JP				S	**Sn**	**10 12 59.0**	**+2.7**
baz=326,slow=3.8							
CHOJ	**Chosi**	**0.60**	**95**	A	A	10 12 48.5	
comp=Z,7.0nm,3.2s,comp=Z,20nm,3.0s,comp=Z,10.0nm,1.3s							
JKUC	**kamogawauchiur**	**0.60**	**174**	A	A	10 12 49.0	
comp=E,25nm,1.4s,comp=E,17nm,0.7s							
JYO	**Yokosk**	**0.65**	**215**	A	A	10 12 49.4	
comp=Z,24nm,0.7s,comp=Z,45nm,0.7s,comp=Z,58nm,0.6s							
JHYU	**Hitachinakayam**	**0.69**	**33**	A	A	10 12 49.0	
comp=E,13nm,2.5s,comp=E,12nm,1.8s							
JHU	**Hanno**	**0.69**	**278**	A	A	10 12 49.4	
comp=Z,7.0nm,2.0s,comp=Z,17nm,2.0s,comp=Z,13nm,1.4s							
TATJ	**Tateyama 2**	**0.75**	**195**	A	A	10 12 50.7	
comp=Z,17nm,1.5s,comp=Z,27nm,1.1s,comp=Z,21nm,1.7s							
JSGW	**Sagamiharawaka**	**0.76**	**258**	A	A	10 12 50.4	
comp=E,8.0nm,0.4s,comp=E,9.0nm,1.6s							
JAG	**Ashikaga**	**0.86**	**321**	⇓ *i*P	**Pn**	**10 12 51.4**	**-0.2**
JAG	**Ashikaga**	**0.86**	**321**	A	A	10 12 51.4	
comp=Z,4.0nm,2.6s,comp=Z,10.0nm,1.8s,comp=Z,10.0nm,1.1s							
JHO	**Hitachi**	**0.92**	**23**	A	A	10 12 51.8	
comp=E,5.0nm,3.2s,comp=E,6.0nm,0.9s							
JOD2	**Odawara 2**	**0.98**	**240**	⇓ *i*P	**Pn**	**10 12 52.8**	**-0.4**
JOD2				⇓S	**Sn**	**10 13 05.8**	**-0.8**
JOD2	**Odawara 2**	**0.98**	**240**	A	A	10 12 52.8	
comp=Z,5.0nm,2.9s,comp=Z,13nm,0.6s,comp=Z,13nm,0.4s							
BSO3	**Boso 3**	**1.01**	**162**	*i* P	**Pn**	**10 12 52.9**	**-0.3**
JRY	**Ryogami san**	**1.03**	**285**	⇓ *i*P	**Pn**	**10 12 54.2**	**+0.5**
JRY	**Ryogami san**	**1.03**	**285**	A	A	10 12 54.2	
comp=E,5.0nm,1.9s,comp=E,4.0nm,0.9s							
JIM2	**Oshima 3**	**1.19**	**209**	*i* P	**Pn**	**10 12 54.7**	**-1.1**
JIM2	**Oshima 3**	**1.19**	**209**	A	A	10 12 54.7	
comp=Z,9.0nm,0.3s,comp=Z,22nm,0.4s,comp=Z,18nm,1.0s							
JHTM	**Izuhatsuma**	**1.21**	**229**	A	A	10 12 56.6	
comp=E,34nm,0.6s,comp=E,34nm,0.6s							
JSB	**Shiboa**	**1.22**	**352**	A	A	10 12 55.8	
comp=Z,9.0nm,2.5s,comp=Z,13nm,0.9s,comp=Z,10.0nm,1.2s							
JKT	**Katashina**	**1.23**	**325**	*i* P	**Pn**	**10 12 56.1**	**-0.3**
JKT				S	**Sn**	**10 13 12.7**	**+0.4**
JFNN	**Fujinakano**	**1.30**	**245**	*i* P	**Pn**	**10 12 57.2**	**-0.1**
JFNN				S	**Sn**	**10 13 13.8**	**-0.2**
BSO1	**Boso 1**	**1.31**	**147**	*i* P	**Pn**	**10 12 56.4**	**-0.5**
JYN	**Shimob**	**1.31**	**259**	⇓ *i*P	**Pn**	**10 12 57.5**	**0.0**
JFFD	**Fukushimafurud**	**1.37**	**15**	A	A	10 12 57.8	
comp=E,6.0nm,0.9s,comp=E,4.0nm,0.9s							
JTHY	**Toshimahigashi**	**1.41**	**209**	A	A	10 12 59.5	
comp=E,7.0nm,1.7s,comp=E,10.0nm,1.4s							
JGK	**Kuni**	**1.44**	**304**	A	A	10 12 59.0	
comp=E,3.0nm,1.1s,comp=E,3.0nm,1.3s							
JIZS	**Izushimoda**	**1.46**	**225**	⇓ *i*P	**Pn**	**10 12 58.9**	**-0.5**
JIZS				⇓S	**Sn**	**10 13 16.4**	**-1.2**
JIZS	**Izushimoda**	**1.46**	**225**	A	A	10 12 58.9	
comp=E,7.0nm,1.0s,comp=E,4.0nm,0.6s							
JFY	**Yanaizu**	**1.68**	**348**	A	A	10 13 02.0	
comp=E,5.0nm,0.9s,comp=E,2.0nm,1.2s							
SHZ3	**Shizuoka 3**	**1.71**	**247**	A	A	10 13 03.3	
comp=E,5.0nm,1.2s,comp=E,12nm,1.0s							
MJAR	**Matsushiro Arr**	**1.73**	**297**	P	**Pn**	**10 13 03.2**	**+0.1**
183nm,0.4s,baz=98,slow=13,SNR=454							
MJAR				S	**Sn**	**10 13 21.0**	**-3.3**
189nm,0.6s,baz=144,slow=15,SNR=6.9							
MJAR				LR	LR	10 13 46.4	
comp=Z,444nm,20.6s,baz=68,slow=41							
MAJO	**Matsushiro**	**1.74**	**297**	Pn	**Pn**	**10 13 03.7**	**+0.6**
MAJO	**Matsushiro**	**1.74**	**297**	P	**Pn**	**10 13 03.7**	**+0.6**
MAJO	**Matsushiro**	**1.74**	**297**	P	**Pn**	**10 13 04.0**	**+0.9**
MJB9	**Matsu-Tunnel**	**1.74**	**297**		**Pn**	**10 13 04.8**	**+1.6**
JMYK	**Miyake Tsubota**	**1.76**	**196**	A	A	10 13 04.4	
comp=E,7.0nm,0.5s,comp=E,5.0nm,0.4s							
JNG	**Nsakai**	**1.76**	**292**	A	A	10 13 03.5	
comp=E,1.0nm,1.9s,comp=E,2.0nm,3.6s							
JNY	**Yasuok**	**1.89**	**258**	A	A	10 13 05.7	
comp=E,4.0nm,1.4s,comp=E,4.0nm,0.6s							
JSG	**Sagara**	**1.92**	**236**	A	A	10 13 06.3	
comp=E,6.0nm,0.9s,comp=E,5.0nm,0.8s							
JMST	**Minamisoumatoc**	**2.05**	**17**	A	A	10 13 07.3	
comp=E,3.0nm,3.0s,comp=E,2.0nm,1.0s							
JJN	**Nakama**	**2.07**	**311**	A	A	10 13 07.8	
comp=E,4.0nm,2.3s,comp=E,3.0nm,1.6s							
JIZZ	**Izumozaki**	**2.10**	**328**	A	A	10 13 08.1	
comp=E,7.0nm,3.5s,comp=E,6.0nm,1.2s							
JMM	**Marumori**	**2.17**	**14**		**Pn**	**10 13 09.6**	**+0.7**
JMM				Sn	**Sn**	**10 13 35.1**	**+0.4**
JMM	**Marumori**	**2.17**	**14**	P	**Pn**	**10 13 10.1**	**+1.2**
JGF	**Kuroka**	**2.26**	**267**	Pn	**Pn**	**10 13 11.3**	**+1.2**
JGF	**Kuroka**	**2.26**	**267**	P	**Pn**	**10 13 11.7**	**+1.5**
JYS	**Shiratake**	**2.46**	**359**	A	A	10 13 13.1	
comp=E,5.0nm,1.2s,comp=E,3.0nm,3.7s							
INU	**Inuyama**	**2.57**	**262**	Pn	**Pn**	**10 13 15.0**	**+0.7**
JHJ	**Hachijo jima 2**	**2.65**	**186**	P	**Pn**	**10 13 15.0**	**-0.4**
377nm,0.3s,baz=336,slow=21,SNR=76							
JHJ				S	**Sn**	**10 13 44.6**	**-1.9**
719nm,0.4s,baz=323,slow=23,SNR=14							
JHJ				LR	LR	10 14 04.6	
comp=Z,182nm,20.7s,baz=334,slow=35							
JHJ2	**Mitsune**	**2.66**	**186**	Pn	**Pn**	**10 13 15.0**	**-0.5**
JHJ2	**Mitsune**	**2.66**	**186**	P	**Pn**	**10 13 16.8**	**+1.3**
JSD	**Sado**	**2.72**	**327**	Pn	**Pn**	**10 13 16.2**	**-0.1**
JSD	**Sado**	**2.72**	**327**	P	**Pn**	**10 13 16.7**	**+0.3**
JTM	**Tenmabayashi**	**5.07**	**8**	Pn	**Pn**	**10 13 48.9**	**+0.4**
JMN	**Monobe**	**5.53**	**250**	Pn	**Pn**	**10 13 55.4**	**+0.6**
JHS	**Saijyo**	**5.78**	**264**	Pn	**Pn**	**10 13 59.1**	**+0.9**
ERM	**Erimo**	**6.68**	**20**⇑ *e*P	Pn	10 14 04.6	-5.8	
JEW	**Eniwo**	**7.14**	**8**	Pn	**Pn**	**10 14 15.4**	**-1.4**
NMR	**Nemuro--Hokkai**	**8.74**	**28**	⇓ *i*P	**Pn**	**10 14 35.3**	**-3.3**
NMR				*i* S	Sn	10 16 05.3	-10
JCJ	**Chichijima**	**8.82**	**168**	P	**Pn**	**10 14 35.6**	**-4.1**
78nm,0.3s,baz=291,slow=23,SNR=18							
JCJ				S	Sn	10 16 06.6	-11
64nm,0.4s,baz=274,slow=22,SNR=5.7							
JCJ	**Chichijima**	**8.82**	**168**	Pn	**Pn**	**10 14 35.9**	**-3.9**
YUK	**Yuzh-Kuril'sk**	**9.36**	**26**	*e*P	**Pn**	**10 14 44.8**	**-2.3**
YUK				*e*S	**Sn**	**10 16 24.7**	**-6.0**
YUK				pmax	pmax		
comp=N,46nm,0.2s							
YUK				pmax	pmax		
comp=Z,65nm,0.2s							
KSRS	**Korea Array**	**9.96**	**283**	P	**Pn**	**10 14 57.5**	**+2.3**
comp=Z,3.4nm,0.7s,baz=99,slow=14,SNR=11							
KSRS				LR	LR	10 18 39.4	
comp=Z,149nm,20.1s,baz=90,slow=36							
TJN	**Taejon**	**10.35**	**277**⇑ *e*P	Pn	**10 15 03.2**	**+2.6**
USRK	**Ussuriysk Ar.**	**10.48**	**326**	P	**Pn**	**10 15 04.7**	**+2.3**
comp=Z,5.3nm,0.9s,baz=131,slow=14,SNR=4.0							
USRK				LR	LR	10 19 16.6	
comp=Z,48nm,18.7s,baz=145,slow=38							
KUR	**Kuril'sk**	**11.14**	**30**⇑ *e*P	Pn	10 15 04.6	-6.8	
KUR				pmax	pmax		
comp=Z,173nm,0.9s							
YSS	**Yuzh-Sakhalins**	**11.36**	**9**⇓ *e*P	Pn	10 15 07.1	-7.2	
YSS				pmax	pmax		
comp=Z,29nm,1.4s							
JOW	**Kunigami**	**13.48**	**232**	P	**Pn**	**10 15 44.2**	**+0.9**
comp=Z,1.9nm,0.4s,baz=49,slow=12,SNR=1.8							
JOW				LR	LR	10 20 37.4	
comp=Z,26nm,21.3s,baz=343,slow=36							
BNX	**BinXian**	**13.85**	**320**	⇓P	**Pn**	**10 15 49.0**	**+0.9**
KLR	**Kul'dur**	**14.79**	**338**	LR	LR	10 22 28.4	
comp=Z,26nm,19.3s,baz=240,slow=40							
KLR	**Kul'dur**	**14.79**	**338**⇑ *e*P	**Pn**	**10 15 57.2**	**-3.2**	
KLR				pmax	pmax		
comp=Z,18nm,2.3s							
NJ2	**Nanjing**	**18.04**	**264**	*e*P	**P**	**10 16 40.5**	**-0.2**
ZEA	**Zeya**	**20.11**	**337**	*e*P	**P**	**10 17 03.9**	**+0.7**
XLT	**XiLinHaoTe**	**20.13**	**301**	*e*P	Pn	10 17 06.0	0.0
XLT				pP	pP	10 17 19.8	+2.2
XLT				sP	sP	10 17 23.8	-2.2
TPUB	**Ta-pu**	**20.98**	**239**	P	**P**	**10 17 10.8**	**-2.0**
TPUB				IAmb	IAmb	10 17 11.9	
comp=Z,12nm,0.6s							
PETK	**Petropavlovsk-**	**21.31**	**30**	LR	LR	10 26 27.1	
comp=Z,26nm,18.8s,baz=227,slow=39							
HHC	**Hu-ho-hao-te**	**22.93**	**291**	*e*P	**P**	**10 17 34.3**	**+0.7**
MA2	**Magadan**	**24.82**	**13**	P	**P**	**10 17 51.7**	**+1.0**
comp=Z,6.3nm,0.6s,baz=185,slow=17,SNR=1.5							
comp=Z,6.3nm,0.6s							
MA2	**Magadan**	**24.82**	**13**	P	**P**	**10 17 51.5**	**+0.8**
MA2				IAmb	IAmb	10 18 10.4	
comp=Z,22nm,1.0s							
MA2	**Magadan**	**24.82**	**13**	P	**P**	**10 17 51.5**	**+0.8**
MA2				pmax	pmax		
comp=Z,22nm,1.0s							
ENH	**Enshi**	**26.20**	**267**	P	**P**	**10 18 02.4**	**-1.2**
ENH				IAmb	IAmb	10 18 03.5	
comp=Z,14nm,0.7s							
YAK	**Yakutsk**	**27.10**	**349**	P	**P**	**10 18 12.3**	**+1.0**
YAK	**Yakutsk**	**27.10**	**349** *de*P	**P**	**10 18 12.4**	**+1.2**	
YAK				pmax	pmax		
comp=Z,16nm,0.6s							
ULN	**Ulaanbaatar**	**27.24**	**307**⇓ *e*P	**P**	**10 18 15.0**	**+2.1**	
ULN				pmax	pmax		
comp=Z,3.0nm,1.3s							
SONM	**Songino Array**	**27.67**	**306**	P	**P**	**10 18 15.8**	**-0.9**
comp=Z,0.6nm,0.5s,baz=119,slow=9.7,SNR=4.5							
SONM				LR	LR	10 28 52.9	
comp=Z,43nm,18.7s,baz=81,slow=35							
comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**27.67**	**306**	P	**P**	**10 18 16.4**	**-0.3**
SONM	**Songino Array**	**27.67**	**306**	P	**P**	**10 18 16.4**	**-0.3**
SONM				pmax	pmax		
comp=Z,1.0nm,0.9s							
SEY	**Seymchan**	**28.24**	**12**⇓ *e*P	**P**	**10 18 19.0**	**-2.4**	
SEY				pmax	pmax		
comp=Z,5.0nm,1.6s							
H11N2	**WAKE ISLAND Hy**	**28.44**	**117**	T	T	10 48 17.3	
baz=308							
H11N1	**WAKE ISLAND Hy**	**28.45**	**117**	T	T	10 48 24.9	
baz=308,slow=74							
H11N3	**WAKE ISLAND Hy**	**28.46**	**117**	T	T	10 48 25.7	
baz=308,slow=74							
H11S1	**WAKE ISLAND Hy**	**29.09**	**119**	T	T	10 49 15.7	
baz=312,slow=74							
H11S3	**WAKE ISLAND Hy**	**29.09**	**119**	T	T	10 49 12.4	
baz=312							
H11S2	**WAKE ISLAND Hy**	**29.11**	**119**	T	T	10 49 12.0	
baz=312,slow=74							
SHEM	**Shemya Is, Ala**	**29.30**	**44**	P	**P**	**10 18 32.0**	**+1.0**
comp=Z,100nm,0.9s,baz=270,slow=11,SNR=2.1							
PZH	**PanZhiHua**	**33.95**	**265**	P	**P**	**10 19 12.8**	**+0.6**
BILL	**Bilibino**	**35.54**	**17**	*i* P	**P**	**10 19 24.1**	**-1.2**
BILL				pmax	pmax		
comp=Z,10.0nm,1.4s							
TIXI	**Tiksi**	**36.44**	**354**	P	**P**	**10 19 32.2**	**-0.7**
comp=Z,1.5nm,0.4s,baz=269,slow=22,SNR=4.3							
comp=Z,1.5nm,0.4s							
TIXI	**Tiksi**	**36.44**	**354**	P	**P**	**10 19 33.4**	**+0.6**
TIXI	**Tiksi**	**36.44**	**354**	P	**P**	**10 19 33.4**	**+0.6**
TIXI				pmax	pmax		
comp=Z,2.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**40.17**	**256**	P	**P**	**10 20 04.1**	**-0.8**
comp=Z,0.4nm,0.3s,baz=50,slow=7.2,SNR=4.8							
CMAR				LR	LR	10 38 39.8	
comp=Z,24nm,18.2s,baz=80,slow=39							
comp=Z,0.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**40.17**	**256** *ce*P	**P**	**10 20 07.4**	**+2.5**	
DGZ	**Jazzator, Alta**	**40.31**	**307** *de*P	**P**	**10 20 07.0**	**+1.1**	
DGZ				pmax	pmax		
comp=Z,5.0nm,0.6s							
WMQ	**Urumqi**	**40.50**	**298** *e*P	**P**	**10 20 09.5**	**+2.1**	
ZAA0	**Zalesovo Array**	**42.02**	**313**	P	**P**	**10 20 19.5**	**-0.1**
ZALV	**Zalesovo Beam**	**42.02**	**313**	P	**P**	**10 20 19.4**	**-0.3**
comp=Z,3.6nm,0.6s,baz=89,slow=6.2,SNR=15							
ZALV				PcP	**PcP**	**10 22 12.9**	**-0.5**
comp=Z,1.0nm,0.5s,baz=116,slow=3.4,SNR=2.5							
comp=Z,3.6nm,0.6s							
MK31	**Makanchi Array**	**43.93**	**303**	P	**P**	**10 20 35.3**	**+0.1**
MK31				IAmb	IAmb	10 20 36.2	
comp=Z,5.5nm,1.1s							
MK31	**Makanchi Array**	**43.93**	**303**	P	**P**	**10 20 35.3**	**+0.1**
MK31				pmax	pmax		
comp=Z,6.0nm,1.1s							
MKAR	**Makanchi Array**	**43.93**	**303**	P	**P**	**10 20 35.1**	**-0.1**
comp=Z,5.2nm,1.0s,baz=90,slow=9.7,SNR=17							
MKAR				PcP	**PcP**	**10 22 20.1**	**0.0**
comp=Z,0.2nm,0.3s,baz=73,slow=4.4,SNR=1.8							
MKAR				LR	LR	10 39 32.8	
comp=Z,41nm,18.4s,baz=140,slow=37							
comp=Z,5.2nm,1.0s							
MKAR	**Makanchi Array**	**43.93**	**303**	P	**P**	**10 20 34.9**	**-0.3**
MKAR	**Makanchi Array**	**43.93**	**303** *i* P	**P**	**10 20 35.0**	**-0.2**	
MKAR				pmax	pmax		
comp=Z,5.0nm,1.0s							
NRIK	**Noril'sk**	**44.00**	**336**	P	**P**	**10 20 35.6**	**+0.3**
comp=Z,1.4nm,0.3s,baz=103,slow=5.6,SNR=3.9							
comp=Z,1.4nm,0.3s							
NRIK	**Noril'sk**	**44.00**	**336**	P	**P**	**10 20 35.4**	**0.0**
NRIK				IAmb	IAmb	10 20 36.8	
comp=Z,5.7nm,1.1s							
NRIK	**Noril'sk**	**44.00**	**336** *de*P	**P**	**10 20 35.3**	**0.0**	
NRIK				pmax	pmax		
comp=Z,5.0nm,1.0s							
MAKZ	**Makanchi**	**44.14**	**303**	P	**P**	**10 20 37.1**	**+0.2**
MAKZ				IAmb	IAmb	10 20 38.7	
comp=Z,4.7nm,0.9s							
MAKZ	**Makanchi**	**44.14**	**303**	P	**P**	**10 20 37.1**	**+0.2**
MAKZ				pmax	pmax		
comp=Z,5.0nm,1.0s							
KURK	**Kurchatov**	**45.91**	**309**	P	**P**	**10 20 51.2**	**+0.4**
KURK	**Kurchatov**	**45.91**	**309**	P	**P**	**10 20 51.2**	**+0.4**
KURK				pmax	pmax		
comp=Z,12nm,0.8s							
KDAK	**Kodiak Island**	**48.74**	**41**	P	**P**	**10 21 13.2**	**+0.5**
comp=Z,2.8nm,0.6s,baz=262,slow=4.4,SNR=16							
comp=Z,2.8nm,0.6s							
KDAK	**Kodiak Island**	**48.74**	**41**	P	**P**	**10 21 13.4**	**+0.7**
KDAK				IAmb	IAmb	10 21 17.7	
comp=Z,5.1nm,0.8s							
KDAK	**Kodiak Island**	**48.74**	**41**	P	**P**	**10 21 13.4**	**+0.7**
KDAK				pmax	pmax		
comp=Z,5.0nm,0.9s							
CAST	**Castle Rocks**	**48.86**	**34**	P	**P**	**10 21 13.9**	**+0.3**
MTN	**Manton Dam**	**49.08**	**192**	P	**P**	**10 21 14.7**	**-1.0**
COEN	**Coen**	**49.53**	**176**	P	**P**	**10 21 17.9**	**-1.2**
COEN				IAmb	IAmb	10 21 28.1	
comp=Z,6.8nm,1.1s							
AAK	**Ala-Archa**	**50.19**	**299**	LR	LR	10 43 32.8	
comp=Z,38nm,18.9s,baz=58,slow=37							
AAK	**Ala-Archa**	**50.19**	**299**⇓ *e*P	**P**	**10 21 23.9**	**-0.3**	
AAK				pmax	pmax		
comp=

EUNU	**Eureka**	**61.59**	**8**	P	**P**	**10 22 45.7**	**+0.8**
EUNU				IAmb	IAmb	10 22 56.2	
comp=Z,4.2nm,1.1s							
DZM	**Mont Dzumac**	**62.69**	**152**	LR	LR	10 53 22.3	
comp=Z,32nm,18.0s,baz=4.0,slow=39							
BELG	**Belogornoye**	**64.02**	**317**	⇓*e*P	**P**	**10 23 02.1**	**+0.7**
BELG				pmax	pmax		
comp=Z,2.0nm,1.0s							
ARCES	**ARCESS Array B**	**64.82**	**339**	P	**P**	**10 23 06.8**	**+0.4**
comp=Z,1.2nm,0.6s,baz=56,slow=7.9,SNR=8.2							
comp=Z,1.2nm,0.6s							
ARCES	**ARCESS Array B**	**64.82**	**339**	P	**P**	**10 23 06.6**	**+0.2**
ARCES	**ARCESS Array B**	**64.82**	**339**	P	**P**	**10 23 06.6**	**+0.2**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.8s							
FORT	**Forrest**	**67.15**	**191**	P	**P**	**10 23 21.6**	**-0.1**
STKA	**Stephens Creek**	**67.30**	**179**	P	**P**	**10 23 21.6**	**-1.0**
comp=Z,1.6nm,0.8s,baz=324,slow=9.6,SNR=3.0							
comp=Z,1.6nm,0.8s							
FIA1	**FINESS Array S**	**69.45**	**332**	P	**P**	**10 23 36.3**	**+0.5**
FIA1				IAmb	IAmb	10 23 44.2	
comp=Z,4.1nm,1.1s							
FINES	**FINESS Array B**	**69.45**	**332**	P	**P**	**10 23 35.6**	**-0.1**
comp=Z,0.9nm,0.3s,baz=76,slow=5.8,SNR=11							
FINES				LR	LR	10 54 21.7	
comp=Z,15nm,21.9s,baz=204,slow=36							
comp=Z,0.9nm,0.3s							
FINES	**FINESS Array B**	**69.45**	**332**	P	**P**	**10 23 35.9**	**+0.1**
FINES	**FINESS Array B**	**69.45**	**332**	P	**P**	**10 23 35.9**	**+0.1**
AKASG	**Malin Array Be**	**74.66**	**322**	P	**P**	**10 24 06.7**	**-0.4**
comp=Z,0.9nm,0.3s,baz=48,slow=6.2,SNR=12							
comp=Z,0.9nm,0.3s							
NOA	**NORSAR Array B**	**74.95**	**337**	P	**P**	**10 24 07.8**	**-0.9**
comp=Z,0.7nm,0.6s,baz=39,slow=6.2,SNR=2.8							
NOA				LR	LR	11 00 00.4	
comp=Z,11nm,19.7s,baz=290,slow=38							
comp=Z,0.7nm,0.6s							
NVAR	**Mina Array Bea**	**76.58**	**52**	P	**P**	**10 24 18.5**	**-0.2**
comp=Z,0.4nm,0.6s,baz=318,slow=6.6,SNR=4.1							
comp=Z,0.4nm,0.6s							
BRTR	**Keskin Array B**	**78.91**	**311**	P	**P**	**10 24 30.7**	**-0.8**
comp=Z,0.8nm,0.8s,baz=114,slow=4.6,SNR=3.7							
comp=Z,0.8nm,0.8s							
BRTR	**Keskin Array B**	**78.91**	**311**	*ce*P	**P**	**10 24 33.2**	**+1.7**
PDAR	**Pinedale Array**	**79.30**	**45**	P	**P**	**10 24 33.9**	**+0.2**
comp=Z,0.4nm,0.6s,baz=327,slow=1.8,SNR=5.1							
comp=Z,0.4nm,0.6s							
PDAR	**Pinedale Array**	**79.30**	**45**	P	**P**	**10 24 34.4**	**+0.8**
CLL	**Collm**	**81.67**	**330**	*i* P	**P**	**10 24 45.9**	**0.0**
CLL				pmax	pmax		
comp=Z,7.0nm,1.2s							
CLL	**Collm**	**81.67**	**330**	*i* P	**P**	**10 24 45.9**	**0.0**
comp=Z,7.0nm,1.2s							
TXAR	**Lajitas Array**	**91.72**	**52**	P	**P**	**10 25 36.3**	**+0.7**
comp=Z,0.2nm,0.6s,baz=336,slow=2.0,SNR=3.2							
comp=Z,0.2nm,0.6s							
TKL	**Tuckaleechee C**	**98.02**	**35**	LR	LR	11 14 17.1	
comp=Z,15nm,19.1s,baz=268,slow=38							
TORD	**Torodi Ar. Bea**	**117.47**	**313**	PKP	**PKPdf**	**10 31 12.2**	**-1.5**
comp=Z,0.2nm,0.4s,baz=48,slow=2.3,SNR=2.1							

IDC 26 10:49:08.1±3.7, 26°.94S×177°.55W, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=265.2km s-min=31.0km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.80**	**263**	P	P	10 57 16.0	0.0
0.3nm,0.7s,baz=110,slow=8.1,SNR=2.8							
0.3nm,0.7s							
WRA	**Warramunga Arr**	**44.48**	**268**	P	P	10 57 21.2	-0.2
0.2nm,0.4s,baz=107,slow=8.5,SNR=6.6							
0.2nm,0.4s							
NVAR	**Mina Array Bea**	**85.43**	**43**	P	P	11 01 47.4	-0.5
0.1nm,0.4s,baz=228,slow=8.0,SNR=3.6							
0.1nm,0.4s							
TXAR	**Lajitas Array**	**90.18**	**57**	P	P	11 02 11.1	+0.4
0.6nm,1.1s,baz=216,slow=4.5,SNR=3.2							
0.6nm,1.1s							

*IDC **26** 10:58:43.1±2.4, 52°.31N×106°.09E, h0km, mb3.6/3, mbtmp3.6/4, ML3.2/1, MS3.0/3, Error ellipse: s-maj=95.6km s-min=20.6km az=95.0*
*MOS **26** 10:58:44.9±1.3, 52°.31N×106°.67E, h12km, mb3.8/1, Error ellipse: s-maj=13.0km s-min=9.1km az=67.6*
MOS Felt (III) at Kuytun.
*BYKL **26** 10:58:46.8±0.1, 52°.27N×106°.47E, h21km±2km, FELT I=III MSK at Kuitun*

ISC 26 10:58:46.7±0.8, 52°.34N±0°.02×106°.46E±0°.02, h17km±6km, n52, σ2s22/102, mb3.6/3, MS3.3/3, 11C-6D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STDB	**Stepnoy Dvoret**	**0.18**	**200**	⇓*i*Pg	**Pg**	**10 58 51.3**	**0.0**
STDB				*e*		10 58 53.6	
STDB				*e*Sg	**Sg**	**10 58 55.5**	**+1.1**
KAB	**Kabansk**	**0.31**	**158**	⇑*i*PG	**Pg**	**10 58 52.3**	**-1.1**
KAB				*e*		10 58 56.7	
KAB				pmax	pmax		
comp=Z,4μm,0.2s							
KAB				smax	smax		
comp=N,34μm,0.7s							
KAB	**Kabansk**	**0.31**	**158**	⇑*i*Pg	**Pg**	**10 58 52.3**	**-1.1**
KAB				Pmax		10 58 52.4	
comp=N,4μm,0.3s							
KAB				*e*Sg	**Sg**	**10 58 56.9**	**-1.0**
KAB				Smax		10 58 57.1	
comp=N,34μm,0.7s							
FFNB	**Fofonovo**	**0.34**	**147**	⇑*i*Pg	**Pg**	**10 58 52.7**	**-1.2**
FFNB				*e*Sg	**Sg**	**10 58 57.1**	**-1.8**
TRG	**Tyrgan**	**0.43**	**351**	⇓*i*PG	**Pb**	**10 58 56.0**	**+0.1**
TRG				*e*		10 59 03.1	
TRG				pmax	pmax		
comp=Z,667nm,0.1s							
TRG				smax	smax		
comp=N,11μm,0.1s							
TRG	**Tyrgan**	**0.43**	**351**	⇓*i*Pg	**Pb**	**10 58 56.0**	**+0.1**
TRG				Pmax		10 58 57.4	
comp=N,723nm,0.1s							
TRG				*e*Sg	**Sb**	**10 59 03.2**	**+1.1**
TRG				Smax		10 59 03.8	
comp=N,12μm,0.1s							
ZRHB	**Zarechye**	**0.47**	**62**	⇑*i*Pg	**Pb**	**10 58 56.5**	**-0.1**
ZRHB				Pmax		10 58 56.7	
comp=N,3μm,0.4s							
ZRHB				*e*Sg	**Sb**	**10 59 03.9**	**+0.6**
ZRHB				Smax		10 59 06.7	
comp=N,30μm,0.7s							
BGT	**Bolshoye Golou**	**0.71**	**246**	⇓*i*Pg	**Pg**	**10 58 59.8**	**-0.9**
comp=N,201nm,0.5s							
BGT				⇓*i*Pg	**Pg**	**10 58 59.8**	**-0.9**
comp=N,513nm,0.5s							
BGT				⇑*i*Pg	**Pg**	**10 58 59.8**	**-0.9**
comp=N,1μm,0.5s							
BGT				Pmax		10 59 00.0	
comp=N,1μm,0.4s							
BGT				*e*Sg	**Sb**	**10 59 09.7**	**-0.4**
BGT				*e*Sb	**Sn**	**10 59 12.1**	**-0.4**
BGT				max		10 59 12.3	
comp=N,4μm,0.4s							
UUDB	**Ulan-Yde**	**0.88**	**122**	⇓*i*Pg	**Pg**	**10 59 02.0**	**-1.8**
comp=N,375nm,0.5s							
UUDB				⇑*i*Pg	**Pg**	**10 59 02.0**	**-1.8**
comp=N,650nm,0.5s							
UUDB				⇑*i*Pg	**Pg**	**10 59 02.0**	**-1.8**
comp=N,2μm,0.5s							
UUDB				Pmax		10 59 02.5	
comp=N,2μm,0.6s							
UUDB				*e*Sg	**Sg**	**10 59 13.3**	**-2.0**
UUDB				Smax		10 59 13.7	
comp=N,3μm,0.4s							
KELR	**Kotokel**	**1.07**	**66**	⇑*i*Pg	**Pg**	**10 59 06.1**	**-1.4**
KELR				*e*Sg	**Sb**	**10 59 20.8**	**+0.3**
LSTR	**Listvyanka**	**1.11**	**246**	⇑*i*PG	**Pg**	**10 59 06.4**	**-1.8**
LSTR				*e*		10 59 20.9	
LSTR				pmax	pmax		
comp=Z,325nm,0.1s							
LSTR				smax	smax		
comp=N,2μm,0.3s							
LSTR	**Listvyanka**	**1.11**	**246**	⇑*i*Pg	**Pg**	**10 59 06.4**	**-1.8**
LSTR				*e*Pb	**Pb**	**10 59 07.2**	**-0.2**
LSTR				max		10 59 07.3	
comp=N,443nm,0.5s							
LSTR				*e*Sg	**Sg**	**10 59 20.8**	**-1.9**
LSTR				*e*Sb	**Sb**	**10 59 22.0**	**+0.4**
LSTR				max		10 59 22.2	
comp=N,2μm,0.2s							
IRK	**Irkutsk**	**1.35**	**267**	*e*PG	**Pb**	**10 59 11.3**	**-0.2**
IRK				*e*		10 59 29.3	
IRK				pmax	pmax		
comp=Z,2μm,0.2s							
IRK				smax	smax		
comp=N,8μm,0.5s							
IRK	**Irkutsk**	**1.35**	**267**	⇑*i*Pg	**Pg**	**10 59 11.4**	**-1.3**
IRK				Pmax		10 59 11.5	
comp=N,2μm,0.4s							
IRK				*e*Sg	**Sn**	**10 59 29.2**	**+1.0**
IRK				Smax		10 59 30.7	
comp=N,8μm,0.5s							
IVK	**Ivanovka**	**1.37**	**248**	*e*Pg	**Pn**	**10 59 10.7**	**-0.4**
IVK				*e*Pb	**Pb**	**10 59 11.2**	**-0.7**
IVK				max		10 59 11.3	
comp=N,338nm,0.3s							
IVK				*e*Sg	**Sb**	**10 59 28.3**	**-0.8**
IVK				*e*Sb	**Sg**	**10 59 29.2**	**-1.9**
IVK				max		10 59 30.0	
comp=N,2μm,0.4s							
OGRR	**Ongureny**	**1.48**	**27**	*e*Pg	**Pg**	**10 59 15.5**	**+0.4**
OGRR				Pmax		10 59 17.9	
comp=N,60nm,0.2s							
OGRR				*e*Sg	**Sg**	**10 59 36.2**	**+1.8**
OGRR				Smax		10 59 37.8	
comp=N,754nm,0.4s							
MXMB	**Maximikha**	**1.67**	**55**	*e*Pn	**Pb**	**10 59 17.0**	**+0.1**
MXMB				*e*Pg	**Pg**	**10 59 17.9**	**-0.9**
MXMB				*e*Sg	**Sg**	**10 59 40.5**	**+0.1**
TLY	**Talaya**	**1.86**	**250**	*e*PN	**Pn**	**10 59 19.0**	**+1.2**
TLY				*e*		10 59 43.8	
TLY				pmax	pmax		
comp=Z,253nm,0.3s							
TLY				smax	smax		
comp=E,1μm,0.3s							
TLY	**Talaya**	**1.86**	**250**	*e*Pn	**Pn**	**10 59 18.3**	**+0.5**
TLY				*e*Pg	**Pb**	**10 59 19.4**	**-0.8**
TLY				Pmax		10 59 19.5	
comp=E,253nm,0.5s							
TLY				*e*Sg	**Sb**	**10 59 43.6**	**+0.4**
TLY				Smax		10 59 45.3	
comp=E,1μm,0.3s							
SYVR	**Suvo**	**2.51**	**57**	*e*PN	**Pn**	**10 59 27.0**	**+0.3**
SYVR				*e*		10 59 31.9	
SYVR				*e*		11 00 06.8	
SYVR				pmax	pmax		
comp=Z,112nm,0.3s							
SYVR				smax	smax		
comp=N,378nm,0.4s							
SYVR	**Suvo**	**2.51**	**57**	*e*Pn	**Pn**	**10 59 27.2**	**+0.5**
SYVR				*e*Pg	**Pb**	**10 59 32.0**	**+0.7**
SYVR				*e*		10 59 34.9	
SYVR				max		10 59 35.0	
comp=N,109nm,0.3s							
SYVR				*e*Sg	**Sg**	**11 00 06.9**	**-0.5**
SYVR				Smax		11 00 09.0	
comp=N,363nm,0.5s							
ARS	**Arshan**	**2.52**	**262**	*e*PN	**Pn**	**10 59 27.9**	**+1.0**
ARS				*e*		10 59 30.8	
ARS				*e*		11 00 03.2	
ARS				pmax	pmax		
comp=Z,270nm,0.4s							
ARS				smax	smax		
comp=E,2μm,0.7s							
ARS	**Arshan**	**2.52**	**262**	*e*Pn	**Pn**	**10 59 28.9**	**+2.0**
ARS				*e*Pg	**Pb**	**10 59 32.5**	**+0.9**
ARS				Pmax		10 59 33.0	
comp=E,303nm,0.6s							
ARS				*e*Sg	**Sb**	**11 00 04.2**	**+1.9**
ARS				*e*SgSg	**SnSn**	**11 00 13.7**	**+5.8**
ARS				max		11 00 15.4	
comp=E,2μm,0.8s							
ZAK	**Zakamensk**	**2.79**	**227**	*e*PN	**Pb**	**10 59 35.7**	**-0.5**
ZAK				*e*S	**Sn**	**11 00 03.5**	**-0.5**
ZAK				*e*		11 00 11.8	
ZAK				pmax	pmax		
comp=Z,40nm,0.3s							
ZAK				smax	smax		
comp=N,325nm,0.3s							
MOY	**Mondy**	**3.45**	**261**	*e*PN	**Pn**	**10 59 42.4**	**+2.8**
MOY				*e*		10 59 47.2	
MOY				*e*		11 00 31.0	
MOY				pmax	pmax		
comp=Z,225nm,0.3s							
MOY				smax	smax		
comp=N,703nm,1.0s							
MOY	**Mondy**	**3.45**	**261**	*e*Pn	**Pn**	**10 59 40.8**	**+1.2**
MOY				*e*Pg	**Pb**	**10 59 49.2**	**+1.9**
MOY				*e*		10 59 50.4	
MOY				max		10 59 50.7	
comp=N,221nm,0.8s							
MOY				*e*Sg	**Sg**	**11 00 33.0**	**-4.4**
MOY				Smax		11 00 38.5	
comp=N,701nm,1.0s							
YLYR	**Ulyunkhan**	**3.78**	**46**	*e*PN	**Pn**	**10 59 44.8**	**+0.7**
YLYR				*e*		10 59 53.3	
YLYR				*e*		11 00 43.4	
YLYR				pmax	pmax		
comp=Z,24nm,0.3s							
YLYR				smax	smax		
comp=N,131nm,0.2s							
YLYR	**Ulyunkhan**	**3.78**	**46**	*e*Pn	**Pn**	**10 59 45.0**	**+0.9**
YLYR				*e*Pg	**Pb**	**10 59 55.3**	**+2.4**
YLYR				*e*		10 59 58.5	
YLYR				max		10 59 58.8	
comp=N,24nm,0.8s							
YLYR				*e*Sg	**Sg**	**11 00 45.3**	**-2.8**
YLYR				Smax		11 00 50.1	
comp=N,130nm,0.7s							
NIZ	**Nizh Angarsk**	**3.89**	**27**	*e*Pn	**Pn**	**10 59 47.1**	**+1.4**
NIZ				*e*Pg	**Pb**	**10 59 56.9**	**+2.1**
NIZ				Pmax		11 00 05.9	
comp=N,37nm,0.5s							
NIZ				*e*Sg	**Sg**	**11 00 48.1**	**-3.5**
NIZ				Smax		11 01 04.0	
comp=N,283nm,0.9s							
ORL	**Orlik**	**4.08**	**275**	*e*PN	**Pn**	**10 59 49.8**	**+1.5**
ORL				*e*S	**Sg**	**11 00 52.2**	**-5.3**
ORL				smax	smax		
comp=N,170nm,1.0s							
ORL	**Orlik**	**4.08**	**275**	*e*Pn	**Pn**	**10 59 49.6**	**+1.3**
ORL				*e*Pg	**Pb**	**11 00 00.4**	**+2.4**
ORL				Pmax		11 00 01.4	
comp=N,75nm,0.5s							
ORL				*e*Sg	**Sg**	**11 00 53.8**	**-3.7**
ORL				Smax		11 00 56.9	
comp=N,162nm,1.1s							
CIT	**Chita**	**4.37**	**91**	*e*Pg	**Pb**	**11 00 05.9**	**+2.9**
CIT				Pmax		11 00 09.1	
comp=N,109nm,0.6s							
CIT				*e*Sg	**Sg**	**11 01 02.0**	**-5.0**
CIT				Smax		11 01 08.9	
comp=N,353nm,1.0s							
ULN	**Ulaanbaatar**	**4.49**	**175**	*e*Pn	**Pn**	**10 59 54.7**	**+0.7**
ULN				*e*Pg	**Pb**	**11 00 07.0**	**+1.9**
ULN				*e*Sn	**Sn**	**11 00 43.7**	**-2.2**
ULN				*e*Sg	**Sb**	**11 01 03.9**	**+4.9**
SONM	**Songino Array**	**4.51**	**181**	Pn	**Pn**	**10 59 54.0**	**-0.2**
comp=N,1.3nm,0.3s,baz=355,slow=14,SNR=46							
SONM				Pg	**Pb**	**11 00 06.0**	**+0.6**
comp=N,8.9nm,0.3s,baz=354,slow=14,SNR=9.1							
SONM				Lg	Lg	11 01 03.9	
comp=N,35nm,0.3s,baz=358,slow=31,SNR=27							
comp=N,3.8nm,0.4s							
KMO	**Kumora**	**4.52**	**36**	*e*Pn	**Pn**	**10 59 55.9**	**+1.7**
KMO				*e*Pg	**Pg**	**11 00 09.8**	**-3.4**
KMO				Pmax		11 00 15.9	
comp=N,25nm,0.6s							
KMO				*e*Sg	**Sg**	**11 01 08.4**	**-3.2**
KMO				Smax		11 01 18.1	
comp=N,177nm,1.2s							
KPC	**Khapcheranga**	**4.57**	**123**	*e*PN	**Pn**	**10 59 53.6**	**-1.4**
KPC				*e*PG	**Pb**	**11 00 06.2**	**-0.2**
KPC				*e*SG	**Sb**	**11 01 05.3**	**+4.2**
KPC	**Khapcheranga**	**4.57**	**123**	*e*Pn	**Pn**	**10 59 53.6**	**-1.4**
KPC				*e*Pg	**Pb**	**11 00 08.0**	**+1.6**
KPC				*e*		11 00 10.7	
KPC				max		11 00 11.3	
comp=N,25nm,0.6s							
KPC				*e*Sg	**Sb**	**11 01 06.2**	**+5.1**
KPC				Smax		11 01 18.3	
comp=N,332nm,1.4s							
YOA	**Uoyan**	**4.90**	**37**	*e*Pg	**Pg**	**11 00 16.8**	**-3.6**
YOA				Pmax		11 00 20.5	
comp=N,47nm,0.6s							
YOA				*e*Sg	**Sg**	**11 01 21.2**	**-2.6**
YOA				Smax		11 01 50.5	
comp=N,683nm,1.8s							
UKT	**Uakit**	**5.28**	**50**	*e*Pn	**Pn**	**11 00 06.2**	**+1.4**
UKT				*e*Pg	**Pb**	**11 00 22.6**	**+4.1**
UKT				*e*		11 00 25.4	
UKT				max		11 00 27.3	
comp=N,15nm,1.0s							
UKT				*e*Sg	**Sg**	**11 01 31.7**	**-4.4**
UKT				Smax		11 01 45.0	
comp=N,104nm,1.3s							
NLYR	**Nelyaty**	**6.81**	**49**	*e*Pn	**Pn**	**11 00 28.2**	**+2.5**
NLYR				*e*Pg	Pb	11 00 50.1	+5.6
NLYR				*e*		11 00 53.7	
NLYR				max		11 00 54.1	
comp=N,9.0nm,1.0s							
NLYR				*e*Sg	**Sg**	**11 02 20.3**	**-4.7**
NLYR				Smax		11 02 38.9	
comp=N,135nm,1.4s							
BOD	**Bodaibo**	**6.99**	**35**	*e*Sg	**Sg**	**11 02 24.7**	**-6.1**
BOD				Smax		11 02 48.8	
comp=N,49nm,1.8s							
CRS	**Chara**	**8.23**	**52**	*e*Pg	Pb	11 01 16.0	+7.3
CRS				Pmax		11 01 19.6	
comp=N,4.0nm,0.6s							
CRS				*e*Sg		11 03 03.2	
CRS				Smax		11 03 13.0	
comp=N,162nm,1.8s							
TUP	**Tupik**	**8.33**	**70**	*e*PN	**Pn**	**11 00 46.1**	**-0.5**
TUP				*e*		11 01 13.3	
TUP				*e*S	**Sn**	**11 02 18.7**	**-1.5**
TUP				pmax	pmax		
comp=Z,1.0nm,0.3s							
TUP				smax	smax		
comp=N,238nm,1.4s							
TUP	**Tupik**	**8.33**	**70**	*e*Pn	**Pn**	**11 00 46.6**	**0.0**
TUP				*e*Pg	Pb	11 01 16.3	+5.9
TUP				Pmax		11 01 25.3	
comp=N,5.0nm,0.8s							
TUP				*e*Sg		11 03 04.8	
TUP				Smax		11 03 12.6	
comp=N,237nm,1.4s							
ZALV	**Zalesovo Beam**	**13.09**	**286**	Lg	Lg	11 05 30.3	
comp=N,0.1nm,0.3s,baz=98,slow=28,SNR=1.6							
KLR	**Kul'dur**	**16.26**	**91**	Lg	Lg	11 07 23.3	
comp=N,0.1nm,0.3s,baz=195,slow=20,SNR=2.5							
KSRS	**Korea Array**	**21.16**	**126**	LR	LR	11 13 11.8	
comp=N,5.6nm,18.2s,baz=130,slow=41							
TIXI	**Tiksi**	**21.77**	**19**	P	**P**	**11 03 36.9**	**-0.2**
comp=N,0.8nm,0.3s,baz=270,slow=24,SNR=2.3							
comp=N,0.8nm,0.3s							
BRTR	**Keskin Array B**	**50.03**	**286**	LR	LR	11 32 57.2	
comp=N,31nm,18.4s,baz=148,slow=41							
WRA	**Warramunga Arr**	**75.96**	**153**	P	**P**	**11 10 31.9**	**-0.5**
comp=N,0.4nm,0.5s,baz=345,slow=6.0,SNR=5.4							
comp=N,0.4nm,0.5s							
ASAR	**Alice Springs**	**79.39**	**155**	P	**P**	**11 10 51.1**	**-0.3**
comp=N,0.3nm,0.6s,baz=344,slow=5.5,SNR=6.9							
comp=N,0.3nm,0.6s							
CTA	**Charters Tower**	**80.01**	**142**	LR	LR	11 46 21.8	
comp=N,27nm,21.1s,baz=77,slow=36							

IDC 26 11:32:11.9±2.6, 53°.85N×35°.34W, h0km, mb3.4/3, mbtmp3.4/3, MS3.2/14, Error ellipse: s-maj=90.9km s-min=45.4km az=170.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.31**	**286**	LR	LR	11 41 59.2	
comp=Z,92nm,19.8s,baz=281,slow=32							
JMIC	**Jan Mayen**	**20.87**	**25**	LR	LR	11 43 07.1	
comp=Z,50nm,18.1s,baz=228,slow=31							
ESDC	**Sonseca Array**	**25.49**	**111**	LR	LR	11 45 53.8	
comp=Z,81nm,18.5s,baz=287,slow=32							
NOA	**NORSAR Array B**	**25.57**	**55**	LR	LR	11 45 30.9	
comp=Z,22nm,21.7s,baz=305,slow=31							
HFS	**Hagfors**	**26.89**	**57**	LR	LR	11 46 23.2	
comp=Z,29nm,21.1s,baz=270,slow=32							
DAVOX	**Davos/Dischmat**	**29.31**	**85**	LR	LR	11 47 55.8	
comp=Z,75nm,18.3s,baz=273,slow=32							
SADO	**Sadowa**	**29.54**	**270**	LR	LR	11 48 54.9	
comp=Z,41nm,20.6s,baz=3.5,slow=34							
TKL	**Tuckaleechee C**	**38.03**	**261**	LR	LR	11 54 36.4	
comp=Z,40nm,18.1s,baz=28,slow=35							
MLR	**Muntele Rosu**	**39.39**	**76**	LR	LR	11 54 56.0	
comp=Z,37nm,20.4s,baz=270,slow=35							
BRTR	**Keskin Array B**	**47.41**	**78**	LR	LR	12 02 42.7	
comp=Z,32nm,18.6s,baz=316,slow=39							
PDAR	**Pinedale Array**	**48.41**	**289**	P	P	11 40 55.4	-0.5
0.4nm,0.7s,baz=66,slow=7.9,SNR=4.2							
0.4nm,0.7s							
KBZ	**Khabaz**	**50.02**	**68**	LR	LR	12 03 45.3	
comp=Z,14nm,20.3s,baz=260,slow=38							
ILAR	**Eielson Array**	**50.61**	**329**	P	P	11 41 11.9	-0.1
0.4nm,0.8s,baz=50,slow=6.0,SNR=1.8							
0.4nm,0.8s							
AKTO	**Aktyubinsk**	**53.33**	**53**	LR	LR	12 03 07.3	
comp=Z,18nm,20.4s,baz=299,slow=35							
TXAR	**Lajitas Array**	**54.29**	**272**	P	P	11 41 40.1	+0.3
0.5nm,1.0s,baz=74,slow=6.7,SNR=3.4							
0.5nm,1.0s							
NVAR	**Mina Array Bea**	**56.24**	**290**	LR	LR	12 04 18.9	
comp=Z,38nm,18.9s,baz=78,slow=34							
CMIG	**Matias Romero**	**58.50**	**255**	LR	LR	12 07 58.8	
comp=Z,25nm,19.0s,baz=312,slow=37							
WRA	**Warramunga Arr**	**145.23**	**17**	PKPbc	PKPbc	11 51 50.8	-0.2
0.4nm,0.7s,baz=334,slow=3.6,SNR=2.9							
ASAR	**Alice Springs**	**148.78**	**19**	PKPbc	PKPbc	11 52 00.1	-1.1
0.6nm,0.7s,baz=351,slow=2.7,SNR=5.9							

IDC 26 11:33:18.5±4.6, 23°.67S×179°.69E, h505km±37km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=100.3km s-min=26.4km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.10**	**345**	P	P	11 34 56.9	+0.7
9.0nm,1.0s,baz=144,slow=19,SNR=2.3							
ASAR	**Alice Springs**	**41.79**	**260**	P	P	11 40 23.2	-0.3
0.5nm,0.4s,baz=95,slow=7.3,SNR=20							
0.5nm,0.4s							
WRA	**Warramunga Arr**	**42.14**	**266**	P	P	11 40 26.1	-0.2
1.4nm,0.3s,baz=98,slow=8.1,SNR=110							
WRA				ScP	ScP	11 45 12.1	+0.6
0.5nm,0.8s,baz=101,slow=4.3,SNR=4.0							
1.4nm,0.3s							
TXAR	**Lajitas Array**	**90.55**	**58**	P	P	11 45 26.3	-0.4
0.4nm,0.8s,baz=235,slow=7.6,SNR=3.9							
0.4nm,0.8s							

*IDC **26** 11:41:29.3±1.3, 41°.32S×91°.23W, h0km, mb3.8/6, mbtmp3.8/7, ML3.4/1, MS3.6/21, Error ellipse: s-maj=38.8km s-min=30.4km az=123.0*

**ISC 26 11:41:30.7±1.1, 41°.4S±0°.2×91

comp=Z,138nm,19.4s,baz=217,slow=31
1.8nm,0.5s
PMSA Palmer Station 28.12 156 LR LR 11 55 46.1
comp=Z,108nm,21.2s,baz=321,slow=30
CPUP Villa Florida 31.58 72 LR LR 11 59 28.1
comp=Z,66nm,18.9s,baz=248,slow=34
NNA Nana 31.82 27 LR LR 11 57 16.4
comp=Z,83nm,20.8s,baz=202,slow=30
LPAZ La Paz 31.89 45 P **P 11 47 57.9 +0.9**
0.9nm,0.6s,baz=234,slow=11,SNR=3.9
LPAZ LR LR 11 58 04.6
comp=Z,81nm,19.9s,baz=215,slow=31
0.9nm,0.6s
ATAH Atahualpa 35.91 22 LR LR 11 59 33.7
comp=Z,118nm,21.2s,baz=212,slow=30
SIV San Ignacio 36.20 55 LR LR 12 02 34.1
comp=Z,103nm,18.7s,baz=286,slow=35
JTS Las Juntas de 51.70 8 LR LR 12 07 23.6
comp=Z,52nm,19.9s,baz=282,slow=30
SDV Santo Domingo 53.43 26 LR LR 12 11 21.6
comp=Z,41nm,19.7s,baz=135,slow=34
VNDA Vanda 53.52 195 P **P 11 50 51.3 +0.4**
0.8nm,0.9s,baz=102,slow=10,SNR=3.5
VNDA LR LR 12 08 20.9
comp=Z,31nm,21.7s,baz=105,slow=30
0.8nm,0.9s
MDP Montagnes des 58.07 47 LR LR 12 14 08.7
comp=Z,50nm,20.9s,baz=114,slow=34
RCBR Riachuelo 60.42 70 LR LR 12 17 13.3
comp=Z,101nm,18.0s,baz=126,slow=35
RAR Rarotonga 60.50 267 LR LR 12 09 44.5
comp=Z,36nm,22.0s,baz=245,slow=28
SJG San Juan 63.53 27 LR LR 12 18 56.1
comp=Z,50nm,18.5s,baz=150,slow=35
URZ Urewera 67.20 239 LR LR 12 14 18.1
comp=Z,99nm,18.3s,baz=230,slow=29
RPZ Rata Peaks 67.73 231 LR LR 12 14 02.0
comp=Z,81nm,20.0s,baz=204,slow=29
RAO Raoul Island 69.10 249 LR LR 12 14 52.0
comp=Z,56nm,19.6s,baz=109,slow=29
TXAR Lajitas Array 71.29 348 P **P 11 52 50.5 +0.2**
0.4nm,0.7s,baz=182,slow=7.5,SNR=5.0
0.4nm,0.7s
ANMO Albuquerque 77.23 347 LR LR 12 20 58.8
comp=Z,40nm,20.6s,baz=54,slow=31
NVAR Mina Array Bea 83.19 339 P **P 11 53 55.3 -1.8**
0.1nm,0.3s,baz=172,slow=7.3,SNR=1.2
0.1nm,0.3s
PDAR Pinedale Array 85.38 346 P **P 11 54 08.6 +0.5**
0.8nm,0.6s,baz=153,slow=6.1,SNR=7.9
0.8nm,0.6s
LBTB Lobatse 91.73 126 LR LR 12 32 03.8
comp=Z,7.7nm,18.2s,baz=184,slow=33

NEIC ***26*** *11:43:26.9±1.4, 18°.6S±0°.1×170°.15E±0°.05, h253km±10km, mb4.1/17, Error ellipse: s-maj=18.3km s-min=3.0km az=157.0*
IDC ***26*** *11:43:32.5±2.4, 18°.79S×169°.58E, h272km±21km, mb3.8/10, mbtmp4.4/11, Error ellipse: s-maj=32.8km s-min=18.9km az=164.0*
NOU ***26*** *11:43:37.4, 18°.88S×169°.26E, h232km, MLv4.0/12, Vanuatu Islands*
ISC 26 11:43:29.3±0.7, 18°.66S±0°.09×169°.74E±0°.10, h250km, n46, σ1°**58/47, mb4.1/18, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.52**	**304**	P	Pn	11 44 13.3	+5.6
DVP	**Devils Point**	**1.75**	**302**	P	Pn	11 44 14.5	+5.0
LIFNC	**LIFOU**	**3.16**	**228**		**Pn**	**11 44 24.9**	**+1.5**
LIFNC				Sn	**S**	**11 45 07.3**	**+0.9**
LIFNC	**LIFOU**	**3.16**	**228**	P	**Pn**	**11 44 25.2**	**+1.8**
MARNC	**Mare, Loyalty**	**3.23**	**210**	Pn	**Pn**	**11 44 26.1**	**+1.9**
MARNC				Sn	**S**	**11 45 06.5**	**-1.3**
MARNC	**Mare, Loyalty**	**3.23**	**210**	P	**Pn**	**11 44 26.3**	**+2.1**
YATNC	**Mamie plateau,**	**4.31**	**218**	P	**Pn**	**11 44 37.7**	**+1.0**
DZM	**Mont Dzumac**	**4.59**	**222**	P	**Pn**	**11 44 42.5**	**+2.3**
29nm,0.6s,baz=54,slow=17,SNR=26							
DZM	**Mont Dzumac**	**4.59**	**222**		**Pn**	**11 44 42.1**	**+2.0**
DZM	**Mont Dzumac**	**4.59**	**222**	P	**Pn**	**11 44 42.6**	**+2.5**
OUENC	**Ouen Island, N**	**4.62**	**216**		**Pn**	**11 44 41.7**	**+1.3**
OUENC	**Ouen Island, N**	**4.62**	**216**	P	**Pn**	**11 44 42.9**	**+2.5**
NOUC	**Port Laguerre**	**4.70**	**223**	P	**Pn**	**11 44 43.9**	**+2.5**
ONTNC	**Ouen Toro**	**4.76**	**220**		**Pn**	**11 44 43.8**	**+1.7**
ONTNC	**Ouen Toro**	**4.76**	**220**	P	**Pn**	**11 44 44.6**	**+2.5**
KOUNC	**Koumac, New Ca**	**5.47**	**249**	Pn	**Pn**	**11 44 53.5**	**+2.7**
MSVF	**Nonsavu**	**7.95**	**85**	Pn	Pn	11 45 14.6	-7.5
HNR	**Honiara**	**13.20**	**313**		**P**	**11 46 27.4**	**-1.9**
EIDS	**Eidsvold**	**18.53**	**246**	P	**P**	**11 47 28.4**	**+0.8**
EIDS				IAmb	IAmb	11 47 31.7
comp=Z,6.5nm,1.1s							
CTA	**Charters Tower**	**22.20**	**262**	P	**P**	**11 48 06.0**	**+0.8**
comp=Z,2.7nm,0.5s,baz=92,slow=11,SNR=6.4							
comp=Z,2.7nm,0.5s							
CTAO	**Charters Tower**	**22.20**	**262**	P	**P**	**11 48 04.4**	**-0.9**
PMG	**Port Moresby**	**23.73**	**290**	P	**P**	**11 48 20.8**	**+1.6**
comp=Z,12nm,0.6s,baz=113,slow=10,SNR=3.8							
comp=Z,12nm,0.6s							
STKA	**Stephens Creek**	**28.55**	**237**	P	**P**	**11 49 01.9**	**-0.3**
comp=Z,2.8nm,0.6s,baz=82,slow=8.5,SNR=6.5							
comp=Z,2.8nm,0.6s							
STKA	**Stephens Creek**	**28.55**	**237**	P	**P**	**11 49 02.8**	**+0.6**
WR0	**Warramunga Arr**	**33.21**	**262**	P	**P**	**11 49 42.5**	**-0.6**
WR0				IAmb	IAmb	11 49 49.4
comp=Z,5.2nm,1.3s							
BBOO	**Buckleboo**	**33.29**	**238**	P	**P**	**11 49 43.7**	**+0.1**
WB0	**Warramunga Arr**	**33.36**	**262**	P	**P**	**11 49 43.4**	**-1.0**
WB0				IAmb	IAmb	11 49 44.2
comp=Z,4.8nm,0.7s							
WB2	**Warramunga Arr**	**33.39**	**262**	P	**P**	**11 49 43.6**	**-1.0**
WB2				IAmb	IAmb	11 49 44.4
comp=Z,5.8nm,1.1s							
WRAB	**Tennant Creek**	**33.39**	**262**	P	**P**	**11 49 43.4**	**-1.2**
WRAB				IAmb	IAmb	11 49 44.4
comp=Z,4.3nm,1.1s							
WRA	**Warramunga Arr**	**33.40**	**262**	P	**P**	**11 49 43.7**	**-1.1**
comp=Z,2.1nm,0.5s,baz=81,slow=6.0,SNR=83							
comp=Z,2.1nm,0.5s							
WRA	**Warramunga Arr**	**33.40**	**262**	P	**P**	**11 49 42.8**	**-2.0**
AS31	**Alice Springs**	**33.73**	**255**	P	**P**	**11 49 47.3**	**-0.2**
ASAR	**Alice Springs**	**33.73**	**255**	P	**P**	**11 49 47.1**	**-0.5**
comp=Z,13nm,0.5s,baz=82,slow=8.9,SNR=293							
ASAR				pP	**pwP**	**11 50 42.5**	**-0.7**
comp=Z,1.1nm,0.5s,baz=80,slow=9.1,SNR=2.9							
ASAR				ScP	**ScP**	**11 55 40.2**	**-1.6**
comp=Z,0.3nm,0.9s,baz=68,slow=5.4,SNR=2.8							
comp=Z,13nm,0.5s							
ASAR	**Alice Springs**	**33.73**	**255**	P	**P**	**11 49 47.3**	**-0.3**
MTN	**Manton Dam**	**37.55**	**273**	P	**P**	**11 50 20.3**	**+0.3**
MTN				IAmb	IAmb	11 50 20.7
comp=Z,8.0nm,0.7s							
KNRA	**Kununurra**	**39.20**	**268**	P	**P**	**11 50 33.5**	**-0.2**
KNRA				IAmb	IAmb	11 50 39.6
comp=Z,13nm,1.2s							
PSA00	**Pilbara Seismi**	**46.78**	**258**	P	**P**	**11 51 34.1**	**-0.1**
PSA00				IAmb	IAmb	11 51 35.0
comp=Z,12nm,1.2s							
MBWA	**Marble Bar**	**46.93**	**258**	P	**P**	**11 51 35.7**	**+0.3**
MBWA				IAmb	IAmb	11 51 36.5
comp=Z,15nm,1.3s							
VNDA	**Vanda**	**59.02**	**182**	P	**P**	**11 53 00.6**	**-1.9**
JNU	**Nakatsue**	**63.48**	**324**	P	**P**	**11 53 30.9**	**-2.1**
QSPA	**South Pole Qui**	**71.39**	**180**	P	**P**	**11 54 19.3**	**-2.7**
CMAR	**Chiang Mai Arr**	**78.70**	**294**	P	**P**	**11 55 05.6**	**+1.1**
comp=Z,0.9nm,0.3s,baz=124,slow=4.5,SNR=1.8							
comp=Z,0.9nm,0.3s							
PMSA	**Palmer Station**	**87.28**	**160**	P	**P**	**11 55 48.2**	**+0.8**
comp=Z,27nm,1.1s,baz=238,slow=9.5,SNR=2.9							
comp=Z,27nm,1.1s							
NVAR	**Mina Array Bea**	**88.07**	**48**	P	**P**	**11 55 54.4**	**+2.5**
comp=Z,0.6nm,0.6s,baz=230,slow=8.2,SNR=5.4							
comp=Z,0.6nm,0.6s							
ILAR	**Eielson Array**	**89.54**	**17**	P	**P**	**11 55 58.0**	**+0.2**
comp=Z,0.3nm,0.5s,baz=228,slow=4.7,SNR=5.0							
comp=Z,0.3nm,0.5s							
TXAR	**Lajitas Array**	**96.08**	**61**	P	**P**	**11 56 30.2**	**+1.4**
comp=Z,0.3nm,0.7s,baz=217,slow=5.6,SNR=4.4							
comp=Z,0.3nm,0.7s							

MDD ***26*** *11:52:45.6±0.3, 35°.41N×3°.80W, h0km, mb_Lg3.4/23, Error ellipse: s-maj=2.6km s-min=1.8km az=0.0*
IDC ***26*** *11:52:47.3±1.5, 35°.53N×3°.79W, h0km, mb3.4/2, mbtmp3.3/4, ML3.2/2, MS2.7/4, Error ellipse: s-maj=43.0km s-min=15.3km az=96.0*
INMG ***26*** *11:52:47.3±1.2, 35°.25N×3°.71W, h31km, ML3.1, Error ellipse: s-maj=4.4km s-min=2.8km az=177.0*
LDG ***26*** *11:52:47.1±0.4, 35°.34N×3°.74W, h10km, Ml3.1/4, Error ellipse: s-maj=7.5km s-min=4.1km az=7.0*
CNRM ***26*** *11:52:49.0, 35°.50N×3°.62W, h6km, ml3.4*
ISC 26 11:52:46.6±1.0, 35°.47N±0°.02×3°.74W±0°.02, h11km±8km, n79, σ1°**91/146, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.30**	**213**	P	**Pg**	**11 52 52.2**	**-0.4**
PALE				S	**Sg**	**11 52 56.5**	**-0.2**
GOG	**Mont Gurugu**	**0.66**	**112**	P	**Pg**	**11 52 59.4**	**+0.1**
GOG				S	**Sg**	**11 53 08.2**	**+0.2**
EMEL	**Melilla**	**0.66**	**104**	⇑Pg	**Pb**	**11 52 59.8**	**-0.4**
EMEL				Sg	**Sb**	**11 53 08.9**	**-0.4**
EALB	**Alboran**	**0.74**	**50**	⇑Pg	**Pb**	**11 53 01.7**	**+0.2**
EALB				Sg	**Sb**	**11 53 12.5**	**+0.8**
EALB				*i* Vmb_Lg		11 53 13.5
AKLM	**AKL**	**0.96**	**186**	P	**Pb**	**11 53 05.2**	**-0.1**
AKLM				S	**Sb**	**11 53 17.9**	**-0.1**
TAF	**Taforalt**	**1.27**	**121**	P	**Pg**	**11 53 12.0**	**+1.1**
TAF	**Taforalt**	**1.27**	**121**	P	**Pn**	**11 53 09.1**	**-1.2**
TAF				S	**Sb**	**11 53 24.7**	**-2.1**
CHEFC	**Chefchaouen**	**1.36**	**255**	P	**Pn**	**11 53 11.3**	**-0.2**
CHEFC				S	**Sg**	**11 53 29.7**	**-0.7**
EMIJ	**Mijas**	**1.38**	**323**	Pg	**Pn**	**11 53 10.4**	**-1.3**
EMIJ				Sg	**Sn**	**11 53 29.5**	**-0.4**
EMIJ				*i* Vmb_Lg		11 53 34.5
ECEU	**Ceuta**	**1.40**	**288**	Pg	**Pn**	**11 53 09.6**	**-2.4**
ECEU				Sg	**Sn**	**11 53 26.7**	**-3.8**
ECEU				*i* Vmb_Lg		11 53 29.9
ELGU	**Los Guajares,**	**1.40**	**4**	Pg	**Pn**	**11 53 11.0**	**-1.1**
ELGU				Sg	**Sb**	**11 53 31.4**	**+0.8**
ELGU				*i* Vmb_Lg		11 53 32.0
JBK	**JBK**	**1.49**	**139**	P	**Pg**	**11 53 16.0**	**+0.8**
JBK	**JBK**	**1.49**	**139**	P	**Pn**	**11 53 12.8**	**-0.5**
JBK				S	**Sn**	**11 53 29.9**	**-2.9**
EBER	**Berja**	**1.58**	**25**	Pn	**Pn**	**11 53 13.8**	**-1.0**
EBER				Sn	**Sn**	**11 53 34.9**	**-0.4**
EBER				*i* Vmb_Lg		11 53 39.7
EGOR	**Sierra Gorda,**	**1.67**	**350**	Pn	**Pn**	**11 53 15.5**	**-0.4**
EGOR				Sn	**Sb**	**11 53 38.7**	**+0.3**
EGOR				*i* Vmb_Lg		11 53 44.0
EQUE	**Quentar**	**1.75**	**8**	Pn	**Pn**	**11 53 17.7**	**+0.8**
EQUE				Sn	**Sb**	**11 53 40.3**	**-0.5**
EQUE				*i* Vmb_Lg		11 53 50.8
ENIJ	**Nijar**	**1.95**	**39**	Pn	**Pn**	**11 53 18.8**	**-0.7**
ENIJ				Sn	**Sn**	**11 53 40.7**	**-3.3**
ENIJ				*i* Vmb_Lg		11 53 48.6
LCRM	**LCR**	**2.00**	**208**	P	**Pg**	**11 53 26.0**	**+0.9**
LCRM	**LCR**	**2.00**	**208**	P	**Pb**	**11 53 22.9**	**-0.2**
LCRM				S	**Sb**	**11 53 46.7**	**-1.4**
ESPR	**Espera**	**2.21**	**310**	Pn	**Pn**	**11 53 22.3**	**-0.8**
ESPR				Pg	**Pb**	**11 53 24.7**	**-1.9**
ESPR				Sn	**Sn**	**11 53 50.7**	**+0.2**
ESPR				Sg	**Sb**	**11 53 54.8**	**+0.9**
ESPR				*i* Vmb_Lg		11 54 00.9
EQES	**Quesada**	**2.39**	**13**	Pg	**Pb**	**11 53 27.9**	**-1.8**
EQES				Sn	**Sn**	**11 53 56.2**	**+1.1**
EQES				*i* Vmb_Lg		11 54 00.7
MDT	**Midelt**	**2.74**	**195**	Pn	**Pn**	**11 53 31.4**	**+0.8**
1.7nm,0.3s,baz=350,slow=19,SNR=14							
MDT				Pg	**Pg**	**11 53 38.3**	**-0.9**
10nm,0.3s,baz=15,slow=16,SNR=28							
MDT				Sn	**Sn**	**11 54 03.6**	**-0.2**
11nm,0.3s,baz=60,slow=22,SNR=8.3							
MDT				Lg	Lg	11 54 11.3
21nm,0.3s,baz=342,slow=8.2,SNR=7.4							
4.8nm,0.3s							
MDT	**Midelt**	**2.74**	**195**	P	**Pb**	**11 53 34.8**	**-0.9**
MDT	**Midelt**	**2.74**	**195**	P	**Pn**	**11 53 30.9**	**+0.3**
MDT				S	**Sn**	**11 54 03.0**	**-0.8**
EADA	**Adamuz**	**2.78**	**346**	Pn	**Pn**	**11 53 31.9**	**+0.9**
EADA				Pg	**Pb**	**11 53 36.0**	**-0.2**
EADA				Sn	**Sn**	**11 54 03.4**	**-1.1**
EADA				Sg	**Sb**	**11 54 10.4**	**+0.2**
EADA				*i* Vmb_Lg		11 54 15.9
EZAR	**Zarzadilla de**	**2.91**	**34**	Pn	**Pn**	**11 53 32.0**	**-0.9**
EZAR				Sn	**Sn**	**11 54 06.2**	**-1.6**
EZAR				*i* Vmb_Lg		11 54 09.1
ECAB	**El Cabril**	**2.93**	**333**	Pn	**Pn**	**11 53 33.7**	**+0.6**
ECAB				Pg	**Pb**	**11 53 37.8**	**-1.1**
ECAB				Sn	**Sn**	**11 54 09.4**	**+1.1**
ECAB				Sg	**Sb**	**11 54 16.6**	**+2.0**
ECAB				*i* Vmb_Lg		11 54 20.1
CART	**Cartagena**	**3.06**	**45**	P	**Pn**	**11 53 32.6**	**-2.2**
CART				S	**Sn**	**11 54 06.1**	**-5.2**
EMUR	**La Murta**	**3.11**	**40**	Pn	**Pn**	**11 53 35.6**	**+0.1**
EMUR				Sn	**Sn**	**11 54 10.6**	**-2.0**
EMUR				*i* Vmb_Lg		11 54 15.1
EMIN	**Mina Concepcio**	**3.29**	**315**	Pn	**Pn**	**11 53 38.0**	**0.0**
EMIN				Pg	**Pb**	**11 53 42.6**	**-2.3**
EMIN				Sn	**Sn**	**11 54 15.3**	**-1.8**
EMIN				*i* Vmb_Lg		11 54 19.0
ETOB	**Tobarra**	**3.62**	**28**	Pn	**Pn**	**11 53 44.2**	**+1.6**
ETOB				Sn	**Sn**	**11 54 27.2**	**+1.7**
ETOB				*i* Vmb_Lg		11 54 29.4
EGRO	**El Granado**	**3.65**	**305**	Pn	**Pn**	**11 53 42.8**	**-0.2**
EGRO				Sn	**Sn**	**11 54 24.2**	**-1.8**
EGRO				*i* Vmb_Lg		11 54 28.1
PVAQ	**Vaqueiros**	**3.74**	**302**	*e*Pn	**Pn**	**11 53 44.1**	**-0.1**
PVAQ				*e*Sn	**Sn**	**11 54 26.4**	**-1.9**
PVAQ				A	A	11 54 27.6
60nm,0.5s							
PVAQ	**Vaqueiros**	**3.74**	**302**	P	**Pn**	**11 53 44.1**	**-0.1**
PVAQ				S	**Sn**	**11 54 27.1**	**-1.2**
PBAR	**Barrancos**	**3.78**	**317**	*e*Pn	**Pn**	**11 53 45.3**	**+0.5**
PBAR				*e*Sn	**Sn**	**11 54 28.0**	**-1.2**
PBAR				A	A	11 54 32.6
30nm,0.4s							
FIGM	**Figuig**	**3.91**	**147**	P	**Pn**	**11 53 45.8**	**-0.9**
FIGM				S	**Sn**	**11 54 30.4**	**-2.3**
PCVE	**Castro Verde**	**4.08**	**303**	*e*Pn	**Pn**	**11 53 48.8**	**-0.1**
PCVE				*e*Sn	**Sn**	**11 54 34.6**	**-2.0**
PCVE				A	A	11 54 39.4
18nm,0.4s							
AFON	**Font Roja**	**4.09**	**38**	Pn	**Pn**	**11 53 48.8**	**-0.3**
AFON				Sn	**Sn**	**11 54 37.6**	**+0.6**
AFON				*i* Vmb_Lg		11 54 45.3
PAB	**San Pablo**	**4.10**	**353**	Pn	**Pn**	**11 53 49.8**	**+0.6**
PAB				Sn	**Sn**	**11 54 38.3**	**+1.1**
PAB				*i* Vmb_Lg		11 55 05.9
PAB	**San Pablo**	**4.10**	**353**	P	**Pn**	**11 53 51.4**	**+2.2**
PAB	**San Pablo**	**4.10**	**353**	P	**Pn**	**11 53 51.4**	**+2.2**
PBEJ	**Beja**	**4.18**	**309**	*e*Pn	**Pn**	**11 53 50.6**	**+0.3**
PBEJ				*e*Sn	**Sn**	**11 54 36.9**	**-2.2**
PBEJ				A	A	11 54 42.3
15nm,0.4s							
EBAD	**Badajoz**	**4.20**	**322**	Pn	**Pn**	**11 53 50.1**	**-0.4**
EBAD				Sn	**Sn**	**11 54 37.9**	**-1.5**
EBAD				*i* Vmb_Lg		11 54 44.7
ESDC	**Sonseca Array**	**4.20**	**358**	Pn	**Pn**	**11 53 52.3**	**+1.7**
1.2nm,0.3s,baz=180,slow=12,SNR=19							
ESDC				Sn	**Sn**	**11 54 40.2**	**+0.5**
1.0nm,0.3s,baz=180,slow=16,SNR=5.1							
ESDC				Lg	Lg	11 54 58.4
1.7nm,0.3s,baz=174,slow=26,SNR=4.7							
ESDC				LR	LR	11 55 36.1
comp=Z,30nm,20.2s,baz=192,slow=41							
2.6nm,0.3s							
MORF	**Marmelete**	**4.37**	**296**	*e*P	**Pn**	**11 53 52.2**	**-0.6**
MORF				*e*S	**Sn**	**11 54 40.2**	**-3.5**
MORF				IAML		11 54 44.5
comp=N,51nm,0.4s							
MORF	**Marmelete**	**4.37**	**296**	*e*Pn	**Pn**	**11 53 53.3**	**+0.5**
MORF				*e*Sn	**Sn**	**11 54 41.8**	**-1.9**
MORF				A	A	11 54 43.7
comp=N,19nm,0.3s							
PFVI	**Vila Bisbo**	**4.43**	**293**	*e*Pn	**Pn**	**11 53 53.8**	**+0.1**
PFVI				*e*Sn	**Sn**	**11 54 42.7**	**-2.5**
PFVI				A	A	11 54 46.6
comp=N,18nm,0.8s							
PFVI	**Vila Bisbo**	**4.43**	**293**	P	**Pn**	**11 53 54.0**	**+0.3**
PFVI				S	**Sn**	**11 54 42.3**	**-2.9**
PTEO	**Sao Teotonio**	**4.52**	**299**	*e*Pn	**Pn**	**11 53 55.0**	**+0.1**
PTEO				*e*Sn	**Sn**	**11 54 44.9**	**-2.5**
PTEO				A	A	11 54 50.9
comp=N,22nm,0.4s							
PESTR	**Estremoz**	**4.58**	**319**	*e*Pn	**Pn**	**11 53 56.5**	**+0.8**
PESTR				*e*Sn	**Sn**	**11 54 47.1**	**-1.8**
PESTR	**Estremoz**	**4.58**	**319**	P	**Pn**	**11 53 56.0**	**+0.2**
PESTR				S	**Sn**	**11 54 46.8**	**-2.1**
EVO	**Evora**	**4.59**	**313**	*e*Pn	**Pn**	**11 53 56.4**	**+0.6**
EVO				*e*Sn	**Sn**	**11 54 46.8**	**-2.3**
PNCL	**Nicolau / Gran**	**4.66**	**306**	*e*Pn	**Pn**	**11 53 56.8**	**0.0**
PNCL				*e*Sn	**Sn**	**11 54 47.9**	**-3.0**
PNCL				A	A	11 54 53.4
comp=N,12nm,0.7s							
PMRV	**Marv??o**	**4.91**	**325**	*e*Pn	**Pn**	**11 54 01.3**	**+1.1**
PMRV				*e*Sn	**Sn**	**11 54 55.5**	**-1.5**
PMTG	**Montargil**	**5.07**	**316**	*e*Pn	**Pn**	**11 54 03.0**	**+0.5**
PMTG				*e*Sn	**Sn**	**11 54 59.3**	**-1.7**
PMTG				A	A	11 54 59.8
comp=N,14nm,0.5s							
PACT	**Alcochete**	**5.24**	**310**	*e*Pn	**Pn**	**11 54 05.9**	**+1.2**
PACT				*e*Sn	**Sn**	**11 55 04.2**	**-0.8**
PCBR	**Castelo Branco**	**5.28**	**327**	*e*Pn	**Pn**	**11 54 06.7**	**+1.4**
PCBR				*e*Sn	**Sn**	**11 55 05.9**	**-0.1**
EIBI	**Ibiza**	**5.39**	**47**	Pn	**Pn**	**11 54 07.4**	**+0.5**
EIBI				Sn	**Sn**	**11 55 05.3**	**-3.6**
EIBI				*i* Vmb_Lg		11 55 10.5
PMAFR	**Mafra**	**5.63**	**310**	*e*Pn	**Pn**	**11 54 13.2**	**+3.0**
PMAFR				*e*Sn	**Sn**	**11 55 13.3**	**-1.5**
PSBE	**So Bento**	**5.70**	**317**	*e*Pn	**Pn**	**11 54 12.2**	**+1.1**
MTE	**Manteigas**	**5.77**	**330**	*e*Sn	**Sn**	**11 55 17.6**	**-0.7**
PCAS	**Casmilo, Conde**	**5.93**	**322**	*e*Sn	**Sn**	**11 55 19.5**	**-2.7**
PVIS	**Viseu**	**6.18**	**329**	*e*Pn	**Pn**	**11 54 20.3**	**+2.6**
PVIS				*e*Sn	**Sn**	**11 55 26.5**	**-1.9**
MVO	**Moncorvo**	**6.25**	**337**	*e*Pn	**Pn**	**11 54 20.0**	**+1.3**
MVO				*e*Sn	**Sn**	**11 55 29.0**	**-1.1**
PVRL	**Vila Real**	**6.58**	**333**	*e*Pn	**Pn**	**11 54 24.5**	**+1.2**
PVRL				*e*Sn	**Sn**	**11 55 36.5**	**-1.9**
POLO	**Lamas de Olo**	**6.70**	**333**	*e*Pn	**Pn**	**11 54 25.9**	**+1.0**
POLO				*e*Sn	**Sn**	**11 55 38.6**	**-2.7**
POLO				A	A	11 55 39.9
comp=N,4.3nm,0.8s							
ETOS	**Mallorca**	**6.74**	**49**	Pn	**Pn**	**11 54 25.7**	**+0.2**
ETOS				Sn	**Sn**	**11 55 39.7**	**-2.5**
PBRG	**Braganca**	**6.75**	**341**	*e*Pn	**Pn**	**11 54 27.2**	**+1.6**
PCAB	**Cabril**	**7.08**	**333**	*e*Sn	**Sn**	**11 55 47.1**	**-3.4**
PGAV	**Gavieira, Arco**	**7.39**	**333**	*e*Sn	**Sn**	**11 55 54.6**	**-3.6**
ETSF	**Etsaut**	**7.82**	**17**	*e*Pn	**Pn**	**11 54 40.0**	**-0.3**
ETSF				*e*Sn	**Sn**	**11 56 03.0**	**-5.8**
comp=N,2.9nm,0.7s							
SJPF	**Ste Jean**	**7.88**	**14**	*e*Pn	**Pn**	**11 54 40.8**	**-0.3**
SJPF				*e*Sn	**Sn**	**11 56 04.2**	**-6.0**
comp=N,1.2nm,0.3s							
EPF	**Esparros**	**8.19**	**21**	*e*Pn	**Pn**	**11 54 44.9**	**-0.4**
EPF				*e*Sn	**Sn**	**11 56 11.4**	**-6.4**
comp=N,3.8nm,0.6s							
MTLF	**Montolieu**	**9.11**	**29**	*e*Pn	**Pn**	**11 54 57.4**	**-0.5**
MTLF				*e*Sn	**Sn**	**11 56 34.0**	**-6.4**
comp=N,0.6nm,0.2s							
KEST	**Kesra**	**10.66**	**85**	LR	LR	11 59 25.5
comp=N,54nm,21.8s,baz=316,slow=37							
VAE	**Valguarnera**	**14.74**	**77**	LR	LR	12 02 07.9
comp=N,76nm,18.6s,baz=354,slow=38							
TORD	**Torodi Ar. Bea**	**22.76**	**166**	P	**P**	**11 57 53.2**	**+4.3**
comp=N,0.6nm,0.7s,baz=342,slow=12,SNR=3.7							
comp=N,0.6nm,0.7s							
AAK	**Ala-Archa**	**59.16**	**57**	LR	LR	12 28 58.2
comp=N,7.9nm,18.3s,baz=336,slow=37							
MKAR	**Makanchi Array**	**62.71**	**50**	P	**P**	**12 03 13.9**	**+2.5**
comp=N,0.6nm,0.8s,baz=284,slow=5.8,SNR=2.2							
comp=N,0.6nm,0.8s							

CNRM ***26*** *11:57:55.5, 35°.45N×3°.76W, h21km, ml2.5*
MDD ***26*** *11:57:56.0±0.7, 35°.36N×3°.74W, h12km±4km, mb_Lg2.5/13, Error ellipse: s-maj=3.7km s-min=2.5km az=0.0*
INMG ***26*** *11:57:56.0±1.3, 35°.33N×3°.71W, h17km±7km, ML1.9, Error ellipse: s-maj=5.6km s-min=3.3km az=143.0*
ISC 26 11:57:55.1±1.4, 35°.37N±0°.03×3°.75W±0°.03, h16km±11km, n28, σ1°**45/50, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.22**	**225**	P	**Pb**	**11 58 01.6**	**+0.9**
PALE				S	**Sb**	**11 58 05.3**	**+0.8**
GOG	**Mont Gurugu**	**0.63**	**103**	P	**Pb**	**11 58 08.6**	**+0.8**
GOG				S	**Sn**	**11 58 18.9**	**-0.4**
EMEL	**Melilla**	**0.65**	**96**	Pg	**Pg**	**11 58 07.4**	**-0.5**
EMEL				Sg	**Sg**	**11 58 15.8**	**-0.7**
EALB	**Alboran**	**0.81**	**45**	Pg	**Pb**	**11 58 10.9**	**+0.1**
EALB				Sg	**Sb**	**11 58 21.8**	**+0.3**
EALB				*i* Vmb_Lg		11 58 22.6
TAF	**Taforalt**	**1.23**	**117**	P	**Pn**	**11 58 18.3**	**+0.6**
TAF				S	**Sb**	**11 58 33.8**	**+0.3**
JBK	**JBK**	**1.42**	**136**	P	**Pb**	**11 58 21.8**	**+0.5**
JBK				S	**Sn**	**11 58 38.2**	**-0.7**

0.6nm,0.3s,baz=241,slow=17,SNR=37
ASAR Sn **Sn** 12 13 53.5 0.0
2.4nm,0.3s,baz=247,slow=23,SNR=2.8
ASAR Lg Lg 12 14 06.1
4.2nm,0.3s,baz=246,slow=25,SNR=13
3.6nm,0.4s
AS01 Alice Springs 4.21 63 P **Pn** 12 13 06.7 +1.5
FORT Forrest 5.37 197 P **Pn** 12 13 25.0 +4.1
OOD Oodnadatta 5.65 114 P **Pn** 12 13 26.8 +2.0
MULG Mulgathing 5.94 142 P **Pn** 12 13 31.4 +2.5
WRA Warramunga Arr 7.01 37 Pn **Pn** 12 13 43.5 -0.1
0.9nm,0.3s,baz=219,slow=14,SNR=81
WRA Pg **Pb** 12 14 04.2 +1.4
0.4nm,0.3s,baz=219,slow=12,SNR=5.4
WRA Sn **Sn** 12 15 01.2 -2.3
1.0nm,0.3s,baz=217,slow=22,SNR=9.2
WRA Lg Lg 12 15 36.7
1.9nm,0.3s,baz=212,slow=27,SNR=12
2.1nm,0.4s
WRAB Tennant Creek 7.03 37 P **Pn** 12 13 44.3 +0.5
LCRK Leigh Creek 8.81 125 P **Pn** 12 14 09.5 +1.3
BBOO Buckleboo 8.98 144 P **Pn** 12 14 11.4 +0.9
KNRA Kununurra 9.96 354 P **Pn** 12 14 24.3 +0.3
INKA Innaminka 9.97 105 P **Pn** 12 14 25.2 +1.1
STKA Stephens Creek 12.03 124 Pn **Pn** 12 14 51.5 -0.9
0.3nm,0.3s,baz=301,slow=13,SNR=5.5
STKA Sn **Sn** 12 17 01.4 -5.3
0.2nm,0.3s,baz=224,slow=12,SNR=3.3
1.9nm,0.9s

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*SJA **26** 12:18:02.8±0.7, 27°.69S×70°.19W, h87km±3km, ML4.3, MW4.2*
*NEIC **26** 12:18:03.0±2.3, 27°.69S±0°.05×70°.24W±0°.09, h90km±8km, mb4.2/10, Mwr4.4(GUC), Error ellipse: s-maj=11.8km s-min=6.8km az=92.0*
*GUC **26** 12:18:03.8±0.7, 27°.73S×70°.16W, h87km±4km, ML4.2*
*IDC **26** 12:18:03.4±0.7, 27°.78S×70°.06W, h80km±4km, mb3.3/4, mbtmp3.7/9, MS2.7/2, Error ellipse: s-maj=27.0km s-min=20.0km az=90.0*

ISC 26 12:18:02.8±0.5, 27°.69S±0°.03×70°.22W±0°.04, h84km±4km, n98, σ1°58/137, mb3.7/5, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.09**	**351**		**Pn**	**12 18 15.9**	**+1.0**
GO03	**Copiap**	**0.09**	**351**	*eP*	**Pn**	**12 18 15.8**	**+1.0**
GO03				*i*S	**Sn**	**12 18 24.9**	**+1.1**
GO03				IAML		12 18 26.9	
comp=E,13μm,0.2s							
GO03	**Copiap**	**0.09**	**351**	*eP*	**Pn**	**12 18 15.8**	**+0.9**
GO03				*eS*	**Sn**	**12 18 25.4**	**+1.6**
AC06	**Mina Casimiro**	**0.35**	**340**		**Pn**	**12 18 17.3**	**+1.4**
AC06				Sn	**Sn**	**12 18 27.1**	**+1.5**
AC06	**Mina Casimiro**	**0.35**	**340**	*eP*	**Pn**	**12 18 17.2**	**+1.3**
AC06				*i*S	**Sn**	**12 18 27.2**	**+1.6**
AC06				IAML		12 18 28.5	
comp=E,19μm,0.2s							
AC04	**Llanos de Chal**	**0.92**	**235**		**Pn**	**12 18 22.6**	**+1.5**
AC04				Sn	**Sn**	**12 18 36.8**	**+1.9**
AC04	**Llanos de Chal**	**0.92**	**235**	*eP*	**Pn**	**12 18 22.6**	**+1.5**
AC04				*eS*	**Sn**	**12 18 36.8**	**+1.9**
AC04				IAML		12 18 38.1	
comp=N,11μm,0.6s							
AC04	**Llanos de Chal**	**0.92**	**235**	*eP*	**Pn**	**12 18 22.7**	**+1.5**
AC04				*eS*	**Sn**	**12 18 38.8**	**+4.0**
AC04				IAML		12 18 41.9	
comp=Z,4μm,0.6s							
AC05	**El Transito**	**1.15**	**182**		**Pn**	**12 18 25.1**	**+1.1**
AC05				Sn	**Sn**	**12 18 41.2**	**+1.3**
AC05	**El Transito**	**1.15**	**182**	*eP*	**Pn**	**12 18 24.8**	**+0.8**
AC05				*eS*	**Sn**	**12 18 40.2**	**+0.3**
AC05				IAML		12 18 42.5	
comp=E,8μm,0.2s							
AC05	**El Transito**	**1.15**	**182**	*eP*	**Pn**	**12 18 25.1**	**+1.1**
AC05				*eS*	**Sn**	**12 18 42.0**	**+2.0**
AC05				IAML		12 18 44.2	
comp=Z,5μm,0.3s							
AC02	**Maricunga**	**1.29**	**49**		**Pn**	**12 18 27.1**	**+1.0**
AC02	**Maricunga**	**1.29**	**49**	*eP*	**Pn**	**12 18 27.3**	**+1.3**
AC02				*i*S	**Sn**	**12 18 44.6**	**+1.1**
AC02				IAML		12 18 45.9	
comp=N,7μm,0.1s							
AC02	**Maricunga**	**1.29**	**49**	*eP*	**Pn**	**12 18 27.4**	**+1.3**
AC02				*eS*	**Sn**	**12 18 45.5**	**+2.0**
AC02				IAML		12 18 46.0	
comp=Z,2μm,0.2s							
LCO	**Las Campanas**	**1.39**	**198**	Pn	**Pn**	**12 18 28.1**	**+1.0**
AC01	**Pan de Azucar**	**1.57**	**347**		**Pn**	**12 18 30.9**	**+1.7**
AC01	**Pan de Azucar**	**1.57**	**347**	*eP*	**Pn**	**12 18 30.9**	**+1.7**
AC01				*eS*	**Sn**	**12 18 49.2**	**+0.1**
AC01				IAML		12 18 52.0	
comp=E,5μm,0.8s							
AC01	**Pan de Azucar**	**1.57**	**347**	*eP*	**Pn**	**12 18 30.9**	**+1.7**
AC01				*eS*	**Sn**	**12 18 51.7**	**+2.5**
CO01	**Juntas del Tor**	**2.29**	**177**	*eP*	**Pn**	**12 18 40.3**	**+1.4**
CO01				*eS*	**Sn**	**12 19 07.2**	**+0.9**
CO01				IAML		12 19 11.5	
comp=E,854nm,0.5s							
CO01	**Juntas del Tor**	**2.29**	**177**	*eP*	**Pn**	**12 18 40.2**	**+1.4**
CO01				*eS*	**Sn**	**12 19 09.2**	**+2.8**
CO01				IAML		12 19 11.1	
comp=Z,687nm,0.7s							
CO05	**La Serena**	**2.40**	**202**	Pn	**Pn**	**12 18 40.0**	**-0.1**
GO04	**Tololo Observa**	**2.53**	**191**	Pn	**Pn**	**12 18 42.5**	**+0.4**
GO04	**Tololo Observa**	**2.53**	**191**	*eP*	**Pn**	**12 18 42.4**	**+0.4**
GO04				*eS*	**Sn**	**12 19 12.8**	**+0.6**
GO04	**Tololo Observa**	**2.53**	**191**	*eP*	Pn	12 18 36.9	-5.2
GO04				*eP*	**Pn**	**12 18 42.6**	**+0.4**
GO04				*eS*	**Sn**	**12 19 14.2**	**+1.9**
GO02	**Mina Guanaco**	**2.58**	**13**	Pn	**Pn**	**12 18 44.1**	**+1.4**
GO02	**Mina Guanaco**	**2.58**	**13**	*eP*	**Pn**	**12 18 44.2**	**+1.4**
GO02				*eS*	**Sn**	**12 19 17.9**	**+4.5**
PB14	**IPOC Station P**	**3.05**	**357**	Pn	**Pn**	**12 18 49.5**	**+0.2**
PB14	**IPOC Station P**	**3.05**	**357**	*eP*	**Pn**	**12 18 49.4**	**+0.2**
PB14				*eS*	**Sn**	**12 19 24.9**	**0.0**
PB14				IAML		12 19 50.8	
comp=Z,855nm,0.5s							
CO03	**El Pedregal**	**3.17**	**187**		**Pn**	**12 18 50.9**	**+0.3**
CO03	**El Pedregal**	**3.17**	**187**	*eP*	**Pn**	**12 18 51.1**	**+0.5**
CO03				*eS*	**Sn**	**12 19 30.3**	**+2.9**
CO03				IAML		12 19 49.5	
comp=Z,712nm,0.6s							
CO06	**Fray Jorge**	**3.23**	**202**	Pn	**Pn**	**12 18 50.3**	**-0.9**
ACLC	**CERRO LA CRUZ**	**3.36**	**122**	*eP*	**Pn**	**12 18 54.5**	**+1.3**
ACLC				*eS*	Sn	12 19 17.9	-14
CO02	**Combarbal**	**3.57**	**191**		**Pn**	**12 18 55.6**	**-0.4**
RTLL	**Cerro Villicun**	**3.94**	**158**	*eP*	**Pn**	**12 19 02.3**	**+1.4**
RTLL				*eS*	**Sn**	**12 19 46.8**	**+0.8**
PB10	**IPOC Station P**	**4.17**	**356**	Pn	**Pn**	**12 19 03.1**	**-0.9**
PB10	**IPOC Station P**	**4.17**	**356**	*eP*	**Pn**	**12 19 03.4**	**-0.6**
PB10				*eS*	**Sn**	**12 19 50.4**	**-1.1**
PB10				IAML		12 20 23.0	
comp=Z,225nm,0.5s							
APLL	**PUNTA DE LOS L**	**4.21**	**131**	*eP*	**Pn**	**12 19 05.0**	**+0.3**
APLL				*eS*	**Sn**	**12 19 51.9**	**-0.8**
RTCV	**Cerro Valdivia**	**4.41**	**161**	*eP*	**Pn**	**12 19 09.3**	**+1.9**
RTCV				*eS*	**Sn**	**12 19 59.1**	**+1.6**
PB15	**IPOC Station P**	**4.51**	**9**		**Pn**	**12 19 09.1**	**+0.2**
PB15	**IPOC Station P**	**4.51**	**9**	*eP*	**Pn**	**12 19 09.3**	**+0.4**
PB15				*eP*	**Pn**	**12 19 09.4**	**+0.5**
PB15				*eS*	Sn	12 19 44.5	-16
PB15				IAML		12 20 22.8	
comp=Z,639nm,0.3s							
VA06	**Catapilco**	**4.95**	**191**	Pn	**Pn**	**12 19 13.4**	**-1.2**
PB06	**IPOC Station P**	**4.99**	**7**	Pn	**Pn**	**12 19 14.5**	**-0.9**
PB06	**IPOC Station P**	**4.99**	**7**	*eP*	**Pn**	**12 19 15.0**	**-0.5**
PB06				*eS*	**Sn**	**12 20 10.9**	**-1.1**
PB06				IAML		12 20 48.1	
comp=Z,276nm,0.6s							
ASAL	**Salagasta**	**5.03**	**167**	*eP*	**Pn**	**12 19 17.2**	**+1.3**
ASAL				*eS*	**Sn**	**12 20 09.4**	**-3.4**
VA03	**San Esteban**	**5.07**	**183**		**Pn**	**12 19 16.3**	**-0.1**
VA03	**San Esteban**	**5.07**	**183**	*eP*	**Pn**	**12 19 16.5**	**+0.1**
VA03				*eS*	Sn	12 20 27.4	+14
VA03				IAML		12 20 39.2	
comp=Z,306nm,0.9s							
LVC	**Limon Verde**	**5.19**	**13**	P	**Pn**	**12 19 18.5**	**+0.2**
comp=Z,14nm,0.2s,baz=158,slow=9.7,SNR=111							
LVC				S	**Sn**	**12 20 16.4**	**-0.7**
comp=Z,128nm,0.8s,baz=186,slow=19,SNR=5.5							
LVC				LR	LR	12 22 00.6	
comp=Z,57nm,20.5s,baz=210,slow=45							
LVC	**Limon Verde**	**5.19**	**13**	Pn	**Pn**	**12 19 18.3**	**0.0**
LVC	**Limon Verde**	**5.19**	**13**	*eP*	**Pn**	**12 19 18.2**	**-0.2**
LVC				*eS*	**Sn**	**12 20 18.4**	**+1.3**
LVC				*eS*	Sn	12 20 33.9	+17
LVC				IAML		12 20 57.1	
comp=Z,212nm,0.6s							
ARCO	**CERRO ARCO**	**5.26**	**168**	*eP*	**Pn**	**12 19 21.3**	**+2.3**
ARCO				*eS*	**Sn**	**12 20 21.5**	**+3.1**
ARCO				IAML		12 20 54.4	
comp=Z,165nm,0.8s							
ROC1	**El Roble**	**5.32**	**187**		**Pn**	**12 19 19.1**	**-0.8**
ROC1	**El Roble**	**5.32**	**187**	*eP*	**Pn**	**12 19 18.4**	**-1.5**
ROC1				*eS*	Sn	12 20 36.9	+17
PB04	**IPOC Station P**	**5.33**	**1**	Pn	**Pn**	**12 19 18.4**	**-1.7**
PB04	**IPOC Station P**	**5.33**	**1**	*eP*	**Pn**	**12 19 18.4**	**-1.7**
PB04				*eP*	**Pn**	**12 19 18.7**	**-1.3**
PB04				*eS*	**Sn**	**12 20 17.5**	**-2.7**
PB04				IAML		12 21 02.3	
comp=Z,240nm,0.5s							
MT02	**Curacav**	**5.61**	**188**	Pn	**Pn**	**12 19 21.9**	**-1.8**
PB03	**IPOC Station P**	**5.63**	**4**		**Pn**	**12 19 22.7**	**-1.4**
MT05	**Renca**	**5.71**	**184**	Pn	**Pn**	**12 19 24.7**	**-0.3**
MT03	**Universidad Ad**	**5.79**	**182**	Pn	**Pn**	**12 19 25.8**	**-0.5**
PB09	**IPOC Station P**	**5.93**	**9**		**Pn**	**12 19 29.1**	**+0.8**
MT09	**Talagante**	**6.11**	**186**		**Pn**	**12 19 28.9**	**-1.7**
LMEL	**Las Melosas**	**6.14**	**180**		**Pn**	**12 19 31.1**	**0.0**
MT01	**Popeta**	**6.22**	**188**		**Pn**	**12 19 29.8**	**-2.2**
BO04	**La Punta**	**6.29**	**183**	Pn	**Pn**	**12 19 32.3**	**-0.7**
PB01	**IPOC Station P**	**6.65**	**6**		**Pn**	**12 19 36.0**	**-1.9**
BO01	**Tunca**	**6.73**	**186**	Pn	**Pn**	**12 19 36.2**	**-2.6**
BO02	**Sierra Bellavi**	**7.10**	**184**	Pn	**Pn**	**12 19 41.8**	**-2.3**
GO05	**Huala**	**7.45**	**191**	Pn	**Pn**	**12 19 44.9**	**-3.8**
PB08	**IPOC Station P**	**7.57**	**8**	Pn	**Pn**	**12 19 49.1**	**-1.8**
PB11	**IPOC Station P**	**7.91**	**4**	Pn	**Pn**	**12 19 53.0**	**-2.2**
GO01	**Chusmiza**	**8.04**	**7**	Pn	**Pn**	**12 19 55.0**	**-2.3**
PB12	**IPOC Station P**	**9.03**	**359**	Pn	**Pn**	**12 20 07.8**	**-2.7**
PB16	**IPOC Station P**	**9.33**	**4**	Pn	**Pn**	**12 20 14.4**	**-0.6**
LPAZ	**La Paz**	**11.51**	**10**	P	**Pn**	**12 20 44.9**	**+0.2**
comp=Z,2.2nm,0.7s,baz=148,slow=3.3,SNR=7.9							
LPAZ	**La Paz**	**11.51**	**10**	Pn	**Pn**	**12 20 44.6**	**-0.1**
CPUP	**Villa Florida**	**11.57**	**86**	P	**Pn**	**12 20 42.9**	**-2.1**
comp=Z,1.8nm,0.7s,baz=261,slow=11,SNR=3.7							
CPUP				LR	LR	12 25 57.4	
comp=Z,45nm,18.2s,baz=298,slow=41							
CPUP	**Villa Florida**	**11.57**	**86**	Pn	**Pn**	**12 20 44.4**	**-0.6**
GO06	**Curarrehue**	**11.91**	**185**	Pn	**Pn**	**12 20 49.7**	**+0.1**
ITQB	**Itaqui**	**12.10**	**103**	Pn	**Pn**	**12 20 50.2**	**-1.9**
TRQA	**Tornquist**	**12.44**	**148**	Pn	**Pn**	**12 20 53.7**	**-3.0**
PLCA	**Paso Flores**	**13.02**	**181**	P	**Pn**	**12 21 03.5**	**-1.0**
comp=Z,1.3nm,0.8s,baz=343,slow=14,SNR=1.8							
PLCA	**Paso Flores**	**13.02**	**181**	Pn	**Pn**	**12 21 04.4**	**-0.1**
SIV	**San Ignacio**	**14.40**	**38**	P	**Pn**	**12 21 24.0**	**+1.5**
comp=Z,0.9nm,0.6s,baz=247,slow=8.7,SNR=3.6							
PLTB	**Pedras Altas**	**14.99**	**110**	Pn	**Pn**	**12 21 25.9**	**-4.2**
PLTB				IAmb	IAmb	12 21 48.8	
comp=Z,20nm,1.0s							
COYC	**Coyhaique**	**17.91**	**184**	P	**P**	**12 22 05.1**	**-0.6**
COYC				IAmb	IAmb	12 22 20.7	
comp=Z,23nm,1.4s							
COHC	**Cochancay**	**26.52**	**339**	P	**P**	**12 23 33.8**	**+1.1**
PAYG	**Puerto Ayora**	**33.04**	**321**	P	**P**	**12 24 28.1**	**-2.3**
HUEH	**Huehuetenango**	**47.47**	**332**		pP	12 26 50.0	-0.2
SNAA	**Sanae**	**56.88**	**160**	P	**P**	**12 27 38.5**	**-0.1**
SNAA				IAmb	IAmb	12 27 40.2	
comp=Z,1.9nm,0.7s							
QSPA	**South Pole Qui**	**62.53**	**180**	P	**P**	**12 28 18.8**	**+1.3**
TXAR	**Lajitas Array**	**65.11**	**328**	P	**P**	**12 28 37.0**	**+2.2**
comp=Z,0.4nm,0.8s,baz=162,slow=5.3,SNR=4.2							
TXAR				pP	**pP**	**12 28 58.4**	**+1.9**
comp=Z,0.2nm,0.5s,baz=157,slow=8.8,SNR=2.8							
comp=Z,0.4nm,0.8s							
MAW	**Mawson**	**78.77**	**163**	P	**P**	**12 29 56.7**	**+0.9**
comp=Z,0.8nm,0.7s,baz=210,slow=8.1,SNR=1.7							
comp=Z,0.8nm,0.7s							
PDAR	**Pinedale Array**	**78.91**	**332**	P	**P**	**12 29 58.6**	**+1.5**
comp=Z,0.2nm,0.6s,baz=184,slow=3.6,SNR=1.7							
comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**80.58**	**70**	P	**P**	**12 30 06.7**	**+0.3**
comp=Z,0.5nm,0.6s,baz=259,slow=4.9,SNR=4.9							
TORD				pP	**pP**	**12 30 29.0**	**-0.5**
comp=Z,1.0nm,0.8s,baz=259,slow=4.1,SNR=5.5							
comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**123.89**	**207**	PKP	**PKPdf**	**12 36 51.7**	**-0.1**
comp=Z,0.8nm,1.0s,baz=152,slow=1.9,SNR=5.8							
ASAR				pPKP	**pPKPdf**	**12 37 13.2**	**-2.6**
comp=Z,0.1nm,0.3s,baz=146,slow=2.1,SNR=2.2							
WRA	**Warramunga Arr**	**127.02**	**209**	PKP	**PKiKP**	**12 36 58.4**	**+0.1**
comp=Z,0.6nm,0.7s,baz=171,slow=1.6,SNR=13							
WRA				pPKP	**pPKPdf**	**12 37 21.7**	**-0.2**
comp=Z,0.4nm,0.6s,baz=160,slow=1.8,SNR=2.7							
KURBB	**Kurchatov Arra**	**147.05**	**37**	PKPbc	**PKPab**	**12 37 37.1**	**-0.2**
comp=Z,0.6nm,0.5s,baz=313,slow=3.0,SNR=4.3							
KURBB				pPKPbc	**pPKPdf**	**12 37 58.1**	**+0.5**
comp=Z,1.0nm,0.3s,baz=323,slow=3.8,SNR=5.4							
ZALV	**Zalesovo Beam**	**148.00**	**28**	PKPbc	**PKiKP**	**12 37 39.3**	**-0.6**
comp=Z,1.5nm,0.5s,baz=306,slow=3.1,SNR=8.1							
ZALV				pPKPbc	**pPKPbc**	**12 38 00.8**	**-1.1**
comp=Z,4.6nm,0.8s,baz=312,slow=3.7,SNR=9.0							
MKAR	**Makanchi Array**	**151.20**	**41**	PKPbc	**PKiKP**	**12 37 46.9**	**+0.2**
comp=Z,0.8nm,0.8s,baz=243,slow=0.8,SNR=4.0							
MKAR				pPKPbc	**pPKPbc**	**12 38 09.2**	**-1.1**
comp=Z,1.2nm,0.7s,baz=344,slow=2.3,SNR=7.6							

IDC 26 12:24:00.9±12.0, 15°.01S×164°.69E, h0km, mb3.7/3, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=217.8km s-min=35.5km az=50.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.22**	**167**	Pn	Pn	12 25 47.8	0.0
0.3nm,0.3s,baz=72,slow=20,SNR=2.0							
DZM				Sn	Sn	12 27 11.7	+1.0
0.1nm,0.3s,baz=80,slow=22,SNR=1.5							
5.9nm,0.9s							
STKA	**Stephens Creek**	**26.94**	**227**	P	P	12 29 43.7	-0.4
0.7nm,0.4s,baz=55,slow=9.6,SNR=3.2							
0.7nm,0.4s							
WRA	**Warramunga Arr**	**29.34**	**256**	P	P	12 30 05.8	+0.2
0.3nm,0.5s,baz=85,slow=9.4,SNR=7.3							
0.3nm,0.5s							
ASAR	**Alice Springs**	**30.25**	**249**	P	P	12 30 13.8	+0.1
0.3nm,0.4s,baz=77,slow=9.4,SNR=9.4							
0.3nm,0.4s							

HEL 26 12:43:00.4±0.6, 67°.92N×20°.04E, h0km, ML1.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.74**	**79**	PB	Pg	12 43 14.9	+0.3
baz=261							
LANU				SB	Sg	12 43 24.3	0.0
KIF	**Kilpisjarvi**	**1.13**	**14**	MSG		12 43 35.9	
comp=Z,2.3nm,0.2s							
KIF				SN	Sn	12 43 40.3	+0.7
HEF	**Hetta**	**1.44**	**68**	MSG		12 43 43.7	
comp=Z,2.7nm,0.2s							
HEF				SN	Sn	12 43 50.8	+3.5
PAJU	**Pajala**	**1.48**	**126**	PG	Pn	12 43 27.3	-1.1
PAJU				SG	Sg	12 43 45.8	-2.2
ERTU	**Ertsjaerv**	**1.60**	**148**	PN	Pn	12 43 30.3	+0.3
baz=333							
ERTU				SN	Sn	12 43 50.3	-1.0
KTK1	**Kautokeino**	**1.61**	**45**	SN	Sg	12 43 55.0	+2.9
KLF	**Kolari**	**1.65**	**113**	SN	Sg	12 43 53.2	-0.2
KALU	**Kalix**	**2.44**	**146**	SG	Sb	12 44 14.1	-1.6
TOF	**Tornio**	**2.50**	**136**	MSG		12 44 14.2	
comp=Z,1.7nm,0.2s							
TOF				SG	Sb	12 44 16.2	-1.1
ARA0	**ARCESS Array S**	**2.57**	**48**	PG	Pb	12 43 46.9	-0.4
ARA0				SG	Sb	12 44 18.7	-0.8
RNF	**Rovaniemi**	**2.67**	**117**	SN	Sn	12 44 15.5	-2.0

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*BER **26** 12:43:45.8±0.3, 67°.89N×33°.22E, h0km, ML1.1, Suspected explosion*

HEL 26 12:43:45.2±0.3, 68°.11N×33°.05E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.64**	**109**	SG	Sg	12 44 05.4	-0.3
VRF	**Varrio**	**1.35**	**256**	PN	Pg	12 44 10.8	-0.3
baz=76							
VRF				MSG		12 44 25.9	
comp=Z,5.9nm,0.2s							
VRF				SN	Sn	12 44 30.5	+0.6
OLKF	**Oulanka, Finla**	**2.29**	**220**	SB	Sb	12 44 55.8	-0.5
OLKF	**Oulanka, Finla**	**2.29**	**220**	PG	Pn	12 44 25.8	+1.5
OLKF				SG	Sb	12 44 55.8	-0.5
KU6	**Riekki**	**2.44**	**212**	PG	Pn	12 44 27.8	+1.7
KU6				MSG		12 44 57.2	
comp=Z,0.7nm,0.2s							
KU6				SG	Sb	12 44 59.9	-0.4
SGF	**Sodankyl**	**2.57**	**258**	PB	Pn	12 44 28.6	+0.6
SGF				SG	Sb	12 45 04.2	0.0
MSF	**Maaselka**	**2.71**	**217**	SG	Sb	12 45 08.5	+0.1
KEV	**Kevo**	**2.74**	**310**	*eP*	Pn	12 44 31.7	+1.4
KEV				*eS*	Sn	12 45 05.7	+1.7
KEV	**Kevo**	**2.74**	**310**	MSG		12 44 32.4	
comp=Z,0.8nm,0.2s							
KEV				SB	Pn	12 44 32.0	+1.7
KEV	**Kevo**	**2.74**	**310**	PB	Pn	12 44 32.0	+1.7
baz=124							
KEV				MSG		12 45 05.8	
comp=Z,1.7nm,0.2s							
KEV				SG	Sb	12 45 09.5	+0.6
ARA0	**ARCESS Array S**	**3.09**	**301**	*eP*	Pn	12 44 36.4	+1.3
ARA0				IAML		12 45 23.8	
comp=Z,1.5nm,0.4s							
HEF	**Hetta**	**3.51**	**279**	*e*	Sn	12 45 21.0	-2.1
HEF	**Hetta**	**3.51**	**279**	PN	Pn	12 44 41.8	+0.9
HEF				SG	Sb	12 45 33.7	+2.6
KLF	**Kolari**	**3.58**	**260**	PN	Pn	12 44 42.2	+0.3
KTK1	**Kautokeino**	**3.71**	**289**	*eP*	Pn	12 44 44.4	+0.6
PAJU	**Pajala**	**3.96**	**259**	PN	Pn	12 44 47.4	+0.2
PAJU				SN	Sn	12 45 32.7	-1.6
RMF	**Romuvaara**	**4.11**	**199**	PN	Pn	12 44 49.0	-0.2
ERTU	**Ertsjaerv**	**4.49**	**255**	PN	Pn	12 44 54.4	+0.1

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*IDC **26** 13:08:26.1±2.0, 15°.47S×167°.42E, h91km±18km, mb3.7/15, mbtmp4.0/16, MS3.5/3, Error ellipse: s-maj=18.3km s-min=15.0km az=82.0*
*NEIC **26** 13:08:29.0±1.7, 15°.64S±0°.08×167°.22E±0°.07, h99km±9km, mb4.3/13, Error ellipse: s-maj=14.5km s-min=2.6km az=217.0*

ISC 26 13:08:29.6±0.5, 15°.60S±0°.07×167°.30E±0°.07, h124km, n51, σ1°53/51, mb4.1/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**5.15**	**181**		**Pn**	**13 09 41.7**	**-2.9**
KOUNC	**Koumac, New Ca**	**5.69**	**210**	Pn	**Pn**	**13 09 51.7**	**-0.3**
MARNC	**Mare, Loyalty**	**5.89**	**173**		Pn	13 09 49.6	-5.0
DZM	**Mont Dzumac**	**6.49**	**187**	P	**Pn**	**13 10 01.0**	**-1.8**
170nm,0.4s,baz=33,slow=18,SNR=150							
DZM				S	**Sn**	**13 11 13.8**	**-1.6**
63nm,0.4s,baz=345,slow=20,SNR=5.9							
DZM	**Mont Dzumac**	**6.49**	**187**		**Pn**	**13 10 01.3**	**-1.5**
ONTNC	**Ouen Toro**	**6.72**	**187**		**Pn**	**13 10 04.0**	**-1.8**
OUENC	**Ouen Island, N**	**6.79**	**184**		**Pn**	**13 10 05.9**	**-0.9**
HNR	**Honiara**	**9.44**	**310**	P	**Pn**	**13 10 39.7**	**-2.9**
336nm,0.3s,baz=173,slow=8.1,SNR=1.6							
HNR				LR	LR	13 14 12.3	
comp=Z,2μm,20.1s,baz=126,slow=37							
HNR	**Honiara**	**9.44**	**310**	Pn	**Pn**	**13 10 40.1**	**-2.4**
MSVF	**Nonsavu**	**10.52**	**103**	P	**Pn**	**13 10 54.2**	**-3.0**
4.3nm,1.0s,baz=106,slow=21,SNR=2.4							
MSVF	**Nonsavu**	**10.52**	**103**	Pn	**Pn**	**13 10 58.0**	**+0.8**
FUNA	**Funafuti**	**13.59**	**60**	Pn	**Pn**	**13 11 38.7**	**+1.3**
OUZ	**Omahuta**	**20.34**	**165**	P	**P**	**13 12 57.1**	**+1.0**
OUZ				IAmb	IAmb	13 12 59.4	
comp=Z,24nm,1.2s							
CTA	**Charters Tower**	**20.52**	**254**	P	**P**	**13 12 57.4**	**-0.9**
comp=Z,3.8nm,1.0s,baz=85,slow=12,SNR=1.5							
CTA				LR	LR	13 20 35.1	
comp=Z,70nm,18.5s,baz=274,slow=35							
comp=Z,3.8nm,1.0s							
CTAO	**Charters Tower**	**20.52**	**254**	P	**P**	**13 12 56.8**	**-1.4**
CTAO				IAmb	IAmb	13 13 17.4	
comp=Z,14nm,1.2s							
URZ	**Urewera**	**24.17**	**161**	P	**P**	**13 13 35.5**	**+1.2**
comp=Z,10nm,0.8s,baz=343,slow=6.0,SNR=1.9							
comp=Z,10nm,0.8s							
URZ	**Urewera**	**24.17**	**161**	P	**P**	**13 13 36.5**	**+2.1**
BKZ	**Black Stump Fm**	**24.82**	**163**	P	**P**	**13 13 40.2**	**-0.2**
BKZ				IAmb	IAmb	13 13 51.0	
comp=Z,24nm,1.5s							
RPZ	**Rata Peaks**	**28.20**	**174**	P	**P**	**13 14 12.2**	**+

IDC 26 13:13:09.0±5.7, 23°.67S×178°.93W, h597km±105km, mb3.1/5, mbtmp4.1/6, Error ellipse: s-maj=195.3km s-min=33.4km az=66.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.55**	**334**	P	P	13 14 54.9	-0.1
	5.8nm,0.5s,baz=162,slow=16,SNR=13						
RPZ	**Rata Peaks**	**21.63**	**200**	P	P	13 17 17.3	0.0
	8.9nm,0.9s,baz=9.7,slow=9.2,SNR=2.9						
	8.9nm,0.9s						
CTA	**Charters Tower**	**32.46**	**269**	P	P	13 18 52.3	+0.3
	4.6nm,0.4s,baz=86,slow=7.3,SNR=8.9						
	4.6nm,0.4s						
STKA	**Stephens Creek**	**35.72**	**248**	P	P	13 19 18.1	-0.9
	1.1nm,0.6s,baz=84,slow=8.3,SNR=3.4						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**43.04**	**260**	P	P	13 20 17.7	-0.1
	0.7nm,0.5s,baz=94,slow=6.9,SNR=22						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.41**	**266**	P	P	13 20 20.4	-0.1
	1.7nm,0.5s,baz=97,slow=8.3,SNR=74						
	1.7nm,0.5s						

MAN 26 13:16:39.2, 8°.28N×125°.91E, h11km, mb3.9, ML2.7, MS2.2, 1C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.45**	**102**	⇓*iP*	Pg	13 16 48.4	+0.3
BIPH				*i*S	Sb	13 16 55.6	-0.4
BUTP	**Butuan**	**0.74**	**337**	⇓*eP*	Pg	13 16 53.6	0.0
BUTP				*e*S	Sb	13 17 05.4	+1.0
CGP	**Cagayan de Oro**	**1.22**	**278**	⇓*eP*	Pn	13 17 02.1	-0.2
CGP				*e*S	Sb	13 17 18.2	+0.2
KCP	**Kidapawan**	**1.50**	**213**	⇑*iP*	Pb	13 17 07.1	-0.1
GLSP	**General Luna,**	**1.51**	**8**	⇓*eP*	Pn	13 17 06.1	-0.1
GLSP				*e*S	Sn	13 17 26.0	+0.1
DDMP	**Don Marcelino,**	**2.17**	**185**	⇓*eP*	Pn	13 17 15.7	+0.4

*DJA **26** 13:36:46.4±0.3, 3°.N±3°.×12°.8E±°, h150km±3km, M4.6/18, mB5.1/9, mb4.8/18, MLv4.7/13, Mw(mB)4.5/9*
*NEIC **26** 13:36:47.0±1.2, 2°.59N±0°.08×128°.32E±0°.08, h161km±7km, mb4.5/39, Error ellipse: s-maj=13.0km s-min=10.5km az=225.0*
*IDC **26** 13:36:47.9±1.1, 2°.60N×128°.43E, h174km±9km, mb4.0/21, mbtmp4.5/24, Error ellipse: s-maj=16.3km s-min=6.4km az=73.0*

ISC 26 13:36:46.6±0.7, 2°.59N±0°.04×128°.28E±0°.06, h160km±6km, n121, σ1°.09/134, mb4.5/37, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.90**	**214**	P	**Pn**	**13 37 10.8**	**-0.8**
GAMI				S	**Sn**	**13 37 29.4**	**-1.3**
TNTI	**Ternate**	**2.02**	**207**	Pn	**Pn**	**13 37 22.9**	**+0.3**
TNTI	**Ternate**	**2.02**	**207**	P	**Pn**	**13 37 22.8**	**+0.1**
TNTI				S	**Sn**	**13 37 51.0**	**+0.5**
SGSI	**Sangihe**	**2.96**	**292**	P	**Pn**	**13 37 33.1**	**-0.8**
SGSI				S	**Sn**	**13 38 08.8**	**-1.7**
LBMI	**Labuha**	**3.30**	**194**	P	**Pn**	**13 37 38.3**	**+0.1**
LBMI				S	**Sn**	**13 38 18.6**	**+0.3**
SIJI	**Sorong**	**4.55**	**139**	P	**Pn**	**13 37 55.5**	**+1.2**
	18nm,0.2s,baz=348,slow=18,SNR=22						
SIJI				S	**Sn**	**13 38 47.8**	**+0.6**
	33nm,0.5s,baz=122,slow=21,SNR=9.3						
SIJI	**Sorong**	**4.55**	**139**	P	**Pn**	**13 37 55.5**	**+1.2**
SANI	**Sanana**	**5.15**	**206**	P	**Pn**	**13 38 00.7**	**-1.5**
	0.3nm854nm28nm,0.6s						
DAV	**Davao City (W)**	**5.20**	**329**	P	**Pn**	**13 38 04.1**	**+1.2**
	125nm,0.4s,baz=105,slow=19,SNR=1.3						
DAV				S	Sn	13 39 12.2	+10
	163nm,0.4s,baz=98,slow=11,SNR=1.9						
KCP	**Kidapawan**	**5.42**	**324**	⇑*eP*	**Pn**	**13 38 05.2**	**-0.7**
KRAI	**Karang Ratu**	**5.87**	**179**	P	Pn	13 38 20.0	+8.2
NLAI	**Namlea**	**5.91**	**192**	P	**Pn**	**13 38 13.0**	**+0.7**
	0.1nm7μm14nm,0.5s						
LUWI	**Luwuk**	**6.59**	**237**		**Pn**	**13 38 21.4**	**+0.2**
LUWI	**Luwuk**	**6.59**	**237**	P	**Pn**	**13 38 21.1**	**-0.1**
	1.5nm2μm172nm,0.6s						
MRSI	**Marisa**	**6.68**	**252**	P	**Pn**	**13 38 23.5**	**+1.0**
	1.4nm4μm350nm,0.5s						
FAKI	**Fak Fak**	**6.76**	**144**	Pn	**Pn**	**13 38 24.8**	**+1.2**
FAKI	**Fak Fak**	**6.76**	**144**	P	**Pn**	**13 38 25.4**	**+1.9**
	0.3nm1μm108nm,1.0s						
APSI	**Ampana**	**7.49**	**242**	P	**Pn**	**13 38 32.5**	**-0.8**
	0.7nm1μm127nm,0.5s						
TOLI2	**Tolitoli**	**7.64**	**259**	Pn	**Pn**	**13 38 34.5**	**-0.8**
MPSI	**Mapaga**	**8.68**	**255**	P	**Pn**	**13 38 49.5**	**+0.5**
	16nm,0.8s						
MYLDM	**Lahad Datu**	**10.09**	**285**	Pn	**Pn**	**13 39 11.6**	**+3.8**
MYLDM	**Lahad Datu**	**10.09**	**285**	P	Pn	13 39 13.2	+5.4
SPSI	**Sidrap Palu**	**10.71**	**233**	P	**Pn**	**13 39 15.9**	**-0.1**
	48nm,0.8s						
BNSI	**Bone**	**10.72**	**230**	P	**Pn**	**13 39 17.0**	**+0.9**
	20nm,0.5s						
BKSI	**Bulukumba**	**11.32**	**226**	P	**Pn**	**13 39 24.7**	**+0.8**
	27nm,0.7s						
KAPI	**Kappang**	**11.39**	**228**	P	**Pn**	**13 39 25.5**	**+0.7**
	17nm,0.5s,baz=48,slow=3.8,SNR=12						
KAPI				S	**Sn**	**13 41 27.5**	**-3.5**
	6.1nm,0.3s,baz=75,slow=20,SNR=1.4						
KAPI	**Kappang**	**11.39**	**228**	Pn	**Pn**	**13 39 24.0**	**-0.8**
KAPI	**Kappang**	**11.39**	**228**	P	**Pn**	**13 39 26.2**	**+1.4**
	22nm,0.6s						
BSSI	**Bau Bau, Buton**	**11.65**	**222**	P	**Pn**	**13 39 30.0**	**+1.8**
	28nm,0.6s						
KKM	**Kota Kinabalu**	**12.51**	**286**	Pn	**Pn**	**13 39 39.5**	**+0.1**
MTN	**Manton Dam**	**15.59**	**170**	P	**Pn**	**13 40 16.9**	**-1.1**
MTN				IAmb	IAmb	13 40 21.3	
	comp=Z,9.7nm,0.7s						
SBUM	**Sibu**	**16.05**	**270**	Pn	**P**	**13 40 26.5**	**+2.6**
KLNI	**Mataram**	**16.35**	**228**	P	**Pn**	**13 40 28.5**	**+1.2**
	comp=Z,1μmcomp=Z,93nm,0.6s						
JAGI	**Jajag, Banyuwa**	**17.87**	**232**	P	**Pn**	**13 40 45.7**	**+0.2**
JAGI				IAmb	IAmb	13 40 49.0	
	comp=Z,16nm,0.8s						
KNRA	**Kununurra**	**18.16**	**179**		**P**	**13 40 46.2**	**-0.7**
KNRA				IAmb	IAmb	13 40 48.8	
	comp=Z,10nm,0.6s						
PCJI	**Pacitan**	**20.14**	**238**	P	**P**	**13 41 09.7**	**+1.1**
	comp=Z,32nm,0.7s						
UGM	**Wanagama**	**20.56**	**239**	P	**P**	**13 41 15.1**	**+2.0**
YULB	**Yu-li**	**21.76**	**342**	P	**P**	**13 41 24.0**	**-1.7**
TPUB	**Ta-pu**	**21.88**	**341**	P	**P**	**13 41 24.9**	**-2.1**
TPUB				IAmb	IAmb	13 41 29.2	
	comp=Z,32nm,1.3s						
SSLB	**Suanglung**	**22.23**	**342**	P	**P**	**13 41 30.7**	**+0.2**
SSLB				IAmb	IAmb	13 41 31.6	
	comp=Z,11nm,0.8s						
YHNB	**Yeheng**	**22.94**	**344**	P	**P**	**13 41 36.6**	**-0.6**
YHNB				IAmb	IAmb	13 41 37.8	
	comp=Z,29nm,1.3s						
WRA	**Warramunga Arr**	**23.17**	**165**	P	**P**	**13 41 38.5**	**-0.7**
	comp=Z,9.4nm,0.6s,baz=339,slow=10,SNR=145						
WRA				PcP	**PcP**	**13 45 22.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=345,slow=2.3,SNR=3.0						
WRA				S	**S**	**13 45 38.1**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=340,slow=19,SNR=7.9						
WRA				ScP	**ScP**	**13 48 44.4**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=347,slow=2.9,SNR=4.8						
	comp=Z,9.4nm,0.6s						
WRA	**Warramunga Arr**	**23.17**	**165**	P	**P**	**13 41 37.6**	**-1.6**
WB2	**Warramunga Arr**	**23.17**	**165**	P	**P**	**13 41 38.3**	**-0.9**
WB2				IAmb	IAmb	13 41 40.1	
	comp=Z,15nm,0.7s						
JOW	**Kunigami**	**24.11**	**360**	P	**P**	**13 41 47.1**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=169,slow=10,SNR=6.0						
	comp=Z,8.0nm,0.8s						
JOW	**Kunigami**	**24.11**	**360**	P	**P**	**13 41 47.9**	**+0.3**
JOW				IAmb	IAmb	13 41 49.2	
	comp=Z,10nm,0.9s						
PSA00	**Pilbara Seismi**	**25.39**	**199**	P	**P**	**13 41 59.8**	**+0.4**
PSA00				IAmb	IAmb	13 42 00.6	
	comp=Z,6.3nm,0.7s						
AS31	**Alice Springs**	**26.66**	**168**	P	**P**	**13 42 10.2**	**-0.6**
ASAR	**Alice Springs**	**26.66**	**168**	P	**P**	**13 42 10.4**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=351,slow=7.7,SNR=64						
ASAR				PcP	**PcP**	**13 45 30.4**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=355,slow=2.1,SNR=23						
ASAR				S	**S**	**13 46 30.0**	**-4.3**
	comp=Z,1.0nm,1.0s,baz=201,slow=31,SNR=6.2						
ASAR				ScP	**ScP**	**13 48 54.5**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=355,slow=2.5,SNR=6.5						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**26.66**	**168**	P	**P**	**13 42 10.1**	**-0.7**
NJ2	**Nanjing**	**30.62**	**344**	*e*P	**P**	**13 42 47.5**	**+1.8**
CMAR	**Chiang Mai Arr**	**32.78**	**301**	P	**P**	**13 43 07.0**	**+2.0**
	comp=Z,2.1nm,0.7s,baz=114,slow=7.2,SNR=18						
CMAR				PcP	**PcP**	**13 45 46.9**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=126,slow=1.6,SNR=6.0						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**32.78**	**301**	P	**P**	**13 43 06.5**	**+1.6**
CHTO	**Chiang Mai**	**32.94**	**301**	P	**P**	**13 43 05.8**	**-0.4**
INU	**Inuyama**	**33.59**	**13**	P	**P**	**13 43 11.3**	**-0.4**
JGF	**Kuroka**	**33.91**	**13**	P	**P**	**13 43 12.7**	**-1.7**
JGF				IAmb	IAmb	13 43 14.7	
	comp=Z,7.4nm,0.9s						
KSRS	**Korea Array**	**34.70**	**359**	P	**P**	**13 43 21.1**	**0.0**
	comp=Z,2.8nm,0.5s,baz=176,slow=9.6,SNR=14						
	comp=Z,2.8nm,0.5s						
MJAR	**Matsushiro Arr**	**35.01**	**14**	P	**P**	**13 43 22.1**	**-1.7**
	comp=Z,5.0nm,0.5s,baz=186,slow=9.0,SNR=20						
	comp=Z,5.0nm,0.5s						
MAJO	**Matsushiro**	**35.01**	**14**	P	**P**	**13 43 22.2**	**-1.7**
MAJO				IAmb	IAmb	13 43 24.0	
	comp=Z,10nm,0.8s						
MJB9	**Matsu-Tunnel**	**35.01**	**14**	P	**P**	**13 43 22.9**	**-1.0**
MJB9				IAmb	IAmb	13 43 25.0	
	comp=Z,10nm,0.8s						
BBOO	**Buckleboo**	**35.97**	**169**	P	**P**	**13 43 31.7**	**-0.4**
BBOO				IAmb	IAmb	13 43 32.5	
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**36.13**	**332**	P	**P**	**13 43 33.5**	**-0.1**
STKA	**Stephens Creek**	**36.53**	**161**	P	**P**	**13 43 37.0**	**+0.1**
	comp=Z,5.4nm,0.3s,baz=343,slow=7.6,SNR=38						
STKA				PcP	**PcP**	**13 45 56.7**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=339,slow=3.3,SNR=3.7						
	comp=Z,5.4nm,0.3s						
STKA	**Stephens Creek**	**36.53**	**161**	P	**P**	**13 43 36.6**	**-0.3**
JMM	**Marumori**	**36.94**	**17**	P	**P**	**13 43 39.5**	**-0.7**
LZH	**Lanzhou**	**40.27**	**329**	*e*P	**P**	**13 44 10.0**	**+1.7**
LZH				pP	pP	13 44 14.0	-28
H11S3	**WAKE ISLAND Hy**	**40.79**	**64**	T	T	14 28 02.6	
	baz=252,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**40.81**	**64**	T	T	14 28 02.8	
	baz=252,slow=75,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**40.81**	**64**	T	T	14 28 04.6	
	baz=252,slow=75,SNR=2.0						
USRK	**Ussuriysk Ar.**	**41.57**	**4**	P	**P**	**13 44 17.9**	**-0.6**
	comp=Z,2.4nm,0.5s,baz=170,slow=7.0,SNR=6.1						
	comp=Z,2.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**41.57**	**4**	P	**P**	**13 44 18.6**	**+0.1**
SHL	**Shillong**	**41.80**	**306**	P	**P**	**13 44 21.7**	**+0.8**
GTA	**Gaotai**	**44.87**	**328**	*e*P	**P**	**13 44 46.0**	**+0.7**
GTA				sP	pwP	13 45 26.3	+3.2
GTA				PcP	**PcP**	**13 46 25.5**	**+1.3**
KLR	**Kul'dur**	**46.56**	**3**	P	**P**	**13 44 57.8**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=220,slow=8.3,SNR=6.2						
	comp=Z,1.8nm,0.5s						
RAMN	**Ramite**	**46.67**	**305**	*e*P	**P**	**13 45 00.9**	**+1.1**
	comp=Z,39nm,0.5s						
JIRN	**Jiri**	**47.29**	**306**	*e*P	**P**	**13 45 05.7**	**+1.0**
	comp=Z,27nm,0.3s						
GUN	**Gumba**	**47.65**	**306**	*e*P	**P**	**13 45 08.5**	**+1.1**
	comp=Z,54nm,0.5s						
PKI	**Pulchoki**	**47.89**	**305**	*e*P	**P**	**13 45 09.7**	**+0.4**
	comp=Z,11nm,0.4s						
PKIN	**Phulchoki**	**47.90**	**305**	*e*P	**P**	**13 45 09.8**	**+0.5**
	comp=Z,8.6nm,0.3s						
DMN	**Daman**	**48.15**	**305**	*e*P	**P**	**13 45 11.5**	**+0.3**
	comp=Z,18nm,0.6s						
ULN	**Ulaanbaatar**	**48.69**	**341**	P	**P**	**13 45 15.7**	**+0.9**
ULN				IAmb	IAmb	13 45 16.1	
	comp=Z,11nm,0.7s						
ULN	**Ulaanbaatar**	**48.69**	**341**	P	**P**	**13 45 15.1**	**+0.3**
GKN	**Gorkha**	**48.69**	**306**	*e*P	**P**	**13 45 15.6**	**+0.4**
	comp=Z,10nm,0.5s						
SONM	**Songino Array**	**48.88**	**341**	P	**P**	**13 45 16.4**	**+0.2**
	comp=Z,5.0nm,0.6s,baz=153,slow=8.5,SNR=27						
SONM				PcP	**PcP**	**13 46 37.8**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=163,slow=4.1,SNR=5.0						
	comp=Z,5.0nm,0.6s						
SONM	**Songino Array**	**48.88**	**341**	P	**P**	**13 45 16.7**	**+0.5**
SONM				IAmb	IAmb	13 45 17.4	
	comp=Z,4.7nm,0.7s						
DANN	**Dangsing**	**49.54**	**306**	*e*P	**P**	**13 45 22.5**	**+0.7**
	comp=Z,65nm,0.6s						
PYUN	**Piuthan**	**50.07**	**305**	*e*P	**P**	**13 45 26.9**	**+1.2**
	comp=Z,29nm,0.4s						
PETK	**Petropavlovsk-**	**55.91**	**21**	P	**P**	**13 46 08.0**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=184,slow=5.8,SNR=7.5						
	comp=Z,5.9nm,0.9s						
PETK	**Petropavlovsk-**	**55.91**	**21**	P	**P**	**13 46 08.1**	**+0.2**
YAK	**Yakutsk**	**59.31**	**1**	P	**P**	**13 46 30.9**	**-0.4**
MK31	**Makanchi Array**	**59.37**	**325**	P	**P**	**13 46 31.9**	**-0.3**
MKAR	**Makanchi Array**	**59.37**	**325**	P	**P**	**13 46 32.4**	**+0.3**
	comp=Z,7.8nm,0.4s,baz=116,slow=8.3,SNR=103						
MKAR				PcP	**PcP**	**13 47 18.1**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=105,slow=5.7,SNR=5.8						
	comp=Z,7.8nm,0.4s						
MKAR	**Makanchi Array**	**59.37**	**325**	P	**P**	**13 46 32.3**	**+0.2**
MAKZ	**Makanchi**	**59.56**	**325**	P	**P**	**13 46 33.4**	**0.0**
ZALV	**Zalesovo Beam**	**62.30**	**333**	P	**P**	**13 46 50.7**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=131,slow=5.9,SNR=8.6						
ZALV				PcP	**pP**	**13 47 28.0**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=126,slow=3.7,SNR=4.1						
	comp=Z,1.3nm,0.4s						
KURK	**Kurchatov**	**63.53**	**327**	P	**P**	**13 47 00.0**	**+0.1**
KK31	**Karatay Array**	**65.12**	**317**	P	**P**	**13 47 10.4**	**0.0**
KK31				IAmb	IAmb	13 47 11.3	
	comp=Z,8.1nm,1.1s						
KKAR	**Karatay Array**	**65.12**	**317**	P	**P**	**13 47 10.1**	**-0.3**
KKAR				IAmb	IAmb	13 47 11.3	
	comp=Z,8.1nm,1.1s						
KKAR	**Karatay Array**	**65.12**	**317**	P	**P**	**13 47 10.4**	**0.0**
TIXI	**Tiksi**	**68.96**	**0**	P	**P**	**13 47 33.3**	**-0.8**
TIXI				IAmb	IAmb	13 47 34.3	
	comp=Z,7.3nm,0.7s						
BRVK	**Borovoye**	**69.19**	**327**	P	**P**	**13 47 35.1**	**-0.7**
BRVK				IAmb	IAmb	13 47 36.5	
	comp=Z,11nm,1.1s						
CASY	**Casey**	**69.89**	**188**	P	**P**	**13 47 39.9**	**+0.1**
NRIK	**Noril'sk**	**71.90**	**346**	P	**P**	**13 47 51.9**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=128,slow=8.4,SNR=1.7						
	comp=Z,3.1nm,0.5s						
GEYT	**Alibeck**	**72.81**	**309**	P	**P**	**13 47 58.8**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=110,slow=3.4,SNR=7.7						
	comp=Z,3.8nm,0.7s						
ABKAR	**Akbulak array**	**74.01**	**321**	P	**P**	**13 48 03.8**	**-0.9**
VNDA	**Vanda**	**82.11**	**173**	P	**P**	**13 48 48.9**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=319,slow=7.0,SNR=22						
	comp=Z,1.3nm,0.4s						
VNDA	**Vanda**	**82.11**	**173**	P	**P**	**13 48 48.8**	**0.0**
CAST	**Castle Rocks**	**83.05**	**26**	P	**P**	**13 48 55.3**	**+1.3**
CAST				IAmb	IAmb	13 48 56.2	
	comp=Z,3.6nm,0.7s						
MAW	**Mawson**	**83.23**	**201**	P	**P**	**13 48 55.3**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=74,slow=6.2,SNR=13						
	comp=Z,2.8nm,0.6s						
PPT	**Papeete**	**83.29**	**108**	P	**P**	**13 48 54.8**	**-1.3**
	comp=Z,9.4nm,0.5s,baz=346,slow=3.4,SNR=1.5						
	comp=Z,9.4nm,0.5s						
KNK	**Knik Glacier**	**84.51**	**29**	P	**P**	**13 49 01.7**	**+0.3**
KNK				IAmb	IAmb	13 49 02.8	
	comp=Z,10nm,0.8s						
SML	**Sawmill**	**84.60**	**28**	P	**P**	**13 49 02.2**	**+0.3**
ILAR	**Eielson Array**	**85.46**	**25**	P	**P**	**13 49 04.7**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=252,slow=5.9,SNR=7.1						
	comp=Z,0.4nm,0.7s						
J26L	**Joseph Creek**	**86.88**	**26**	P	**P**	**13 49 12.9**	**-0.3**
ARCES	**ARCESS Array B**	**92.05**	**340**	P	**P**	**13 49 35.9**	**-1.3**
	comp=Z,5.1nm,0.9s,baz=76,slow=6.4,SNR=8.3						
	comp=Z,5.1nm,0.9s						
FINES	**FINESS Array B**	**93.56**	**332**	P	**P**	**13 49 43.0**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=84,slow=7.9,SNR=3.9						
	comp=Z,1.7nm,0.9s						
TXAR	**Lajitas Array**	**121.05**	**53**	PKP	**PKPdf**	**13 55 21.2**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=204,slow=2.0,SNR=4.7						
SCHQ	**Schefferville**	**121.42**	**10**	PKP	**PKPdf**	**13 55 20.9**	**0.0**
	comp=Z,2.5nm,0.8s,baz=324,slow=4.7,SNR=1.5						
TORD	**Torodi Ar. Bea**	**124.74**	**288**	PKP	**PKPdf**	**13 55 28.1**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=72,slow=1.9,SNR=9.3						
PLCA	**Paso Flores**	**138.39**	**158**	PKP	**PKPdf**	**13 55 53.8**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=253,slow=15,SNR=3.7						
LPAZ	**La Paz**	**158.88**	**131**	PKPab	**PKPab**	**13 57 03.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=202,slow=5.0,SNR=3.6						

*IDC **26** 13:47:27.6±1.8, 28°.90N×139°.33E, h380km±32km, mb3.0/4, mbtmp3.8/5, Error ellipse: s-maj=79.2km s-min=19.0km az=76.0*
*JMA **26** 13:47:31.0±0.3, 29°.N±2°.×14°.0E±°, h380km, NEAR TORISHIMA IS*

ISC 26 13:47:28.7±0.8, 28°.9N±0°.1×139°.6E±0°.2, h400km, n9, σ0°.82/12, mb3.2/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.87**	**128**	P	**Pn**	**13 48 31.5**	**+0.6**
CBIJ				*e*S	**S**	**13 49 19.5**	**-1.7**
JCJ	**Chichijima**	**2.87**	**128**	P	**Pn**	**13 48 31.1**	**+0.2**
	31nm,0.3s,baz=300,slow=20,SNR=88						
JCJ				S	**S**	**13 49 20.6**	**-0.6**
	51nm,0.3s,baz=294,slow=20,SNR=14						
JHH2	**Haha-jima-NKT2**	**3.17**	**134**	*e*P	**Pn**	**13 48 34.6**	**+1.2**
JAG	**Ashikaga**	**7.52**	**359**	*e*P	**P**	**13 49 18.9**	**+0.2**
JHO	**Hitachi**	**7.75**	**6**	*e*P	**Pn**	**13 49 20.9**	**+0.3**
MKAR	**Makanchi Array**	**47.61**	**308**	P	**P**	**13 55 25.5**	**-0.7**
	0.2nm,0.5s,baz=99,slow=8.9,SNR=1.9						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**48.81**	**187**	P	**P**	**13 55 35.6**	**+0.1**
	0.7nm,0.3s,baz=2.0,slow=7.7,SNR=60						
WRA				PcP	**pP**	**13 56 54.0**	**-0.2**
	0.1nm,0.6s,baz=0.0,slow=4.2,SNR=1.1						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**52.54**	**187**	P	**P**	**13 56 03.5**	**+0.6**
	0.3nm,0.4s,baz=3.2,slow=6.7,SNR=23						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**75.35**	**333**	P	**P**	**13 58 28.8**	**-0.2**
	2.0nm,0.8s,baz=62,slow=4.5,SNR=5.3						
	2.0nm,0.8s						

KRSC 26 13:55:12.4±0.8, 53°.48N×168°.69E, h40km±61km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**5.31**	**293**	P	Pn	13 56 33.6	+4.4
KII	**Karymskiy**	**5.51**	**280**	P	Pn	13 56 36.5	+4.5
SRDR	**Sredinnyy**	**5.91**	**302**	P	Pn	13 56 41.7	+4.4
AVH	**Avacha**	**5.96**	**272**	P	Pn	13 56 43.0	+4.9
AVH				S	Sn	13 57 50.2	+5.0
DALK	**Dalny**	**5.98**	**270**	P	Pn	13 56 43.1	+4.8
DALK				S	Sn	13 57 50.5	+5.0
KRX	**Arik**	**6.01**	**273**	P	Pn	13 56 43.4	+4.6
KRX				S	Sn	13 57 50.9	+4.6
KOK	**Koryaka**	**6.02**	**272**	P	Pn	13 56 43.4	+4.4
PET	**Petropavlovsk**	**6.04**	**270**	P	Pn	13 56 44.2	+5.0
RUS	**Russkaya**	**6.24**	**264**	P	Pn	13 56 46.4	+4.5
RUS				S	Sn	13 57 56.6	+4.7
KRMR	**Karymshinskiy**	**6.39**	**268**	P	Pn	13 56 48.5	+4.6
KRMR				S	Sn	13 57 59.8	+4.3
GNL	**Ganaly**	**6.41**	**276**	P	Pn	13 56 49.8	+5.5
MTVR	**Mutnovka**	**6.43**	**265**	P	Pn	13 56 49.5	+4.9
MTVR				S	Sn	13 58 01.2	+4.6
GRL	**Gorelyy**	**6.48**	**266**	P	Pn	13 56 50.5	+5.3
ASAK	**Asacha**	**6.62**	**265**	P	Pn	13 56 52.2	+5.1

*CNRM **26** 13:55:13.6, 36°.66N×2°.85W, h0km, ml2.2*
*MDD **26** 13:55:16.8±1.0, 36°.46N×3°.19W, h11km±1km, mb_Lg2.8/7, Error ellipse: s-maj=7.3km s-min=4.3km az=160.0*

ISC 26 13:55:14.6±1.1, 36°.40N±0°.03×3°.13W±0°.04, h17km±11km, n14, σ1°.58/22, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBER	**Berja**	**0.53**	**21**	Pg	**Pg**	**13 55 25.4**	**0.0**
EBER				Sg	**Sg**	**13 55 31.7**	**-0.8**
EBER				*i* Vmb_Lg		13 55 34.0	
ELGU	**Los Guajares,**	**0.61**	**320**	Pg	**Pb**	**13 55 27.5**	**+0.5**
ELGU				Sg	**Sg**	**13 55 33.8**	**-1.2**
EQUE	**Quentar**	**0.84**	**343**	Pg	**Pb**	**13 55 31.2**	**+0.3**
EQUE				Sg	**Sb**	**13 55 40.2**	**-1.8**
EQUE				*i* Vmb_Lg		13 55 40.8	
ENIJ	**Nijar**	**0.94**	**52**	Pg	**Pg**

Error ellipse: s-maj=8.5km s-min=7.6km az=65.0
*IDC **26** 14:08:09.2±1.4,9.27S±75.37W,h49km±14km,mb4.5/24, mbtmp4.7/28,ML4.0/5,MS3.7/10,Error ellipse: s-maj=13.2km s-min=10.0km az=88.0*
ISC 26 14:08:06.6±0.5,9.34S±0.04×75.49W±0.07,h30km±3km, n583,σ0°83/607,mb5.0/118,MS3.8/10,1C-5D,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.95**	**207**	P	**Pn**	**14 08 53.7**	**+2.1**
	260nm,0.3s,baz=17,slow=10,SNR=110						
NNA				S	**Sb**	**14 09 32.6**	**-1.8**
	4μm,0.3s,baz=299,slow=20,SNR=23						
NNA				LR	LR	14 10 20.2	
	comp=Z,3μm,20.7s,baz=302,slow=43						
ATAH	**Atahualpa**	**3.62**	**307**	P	**Pn**	**14 09 02.9**	**+1.9**
	11nm,0.3s,baz=34,slow=7.9,SNR=23						
ATAH				LR	LR	14 10 22.1	
	comp=Z,589nm,19.3s,baz=120,slow=36						
	7.9nm,0.3s						
BOSC	**San Juan Bosco**	**6.83**	**334**	Pn	**Pn**	**14 09 42.6**	**-2.5**
ARNL	**Arenillas**	**7.33**	**321**		**Pn**	**14 09 49.5**	**-2.3**
COHC	**Cochancay**	**7.79**	**331**		**Pn**	**14 09 56.5**	**-1.5**
PORT	**Chimborazo Vol**	**8.48**	**337**		**Pn**	**14 10 08.6**	**+0.6**
SLOR	**San Lorenzo -**	**9.06**	**341**		**Pn**	**14 10 16.2**	**+0.3**
PULU	**Pululahua**	**9.77**	**342**		**Pn**	**14 10 25.5**	**-0.1**
IMBA	**Imbabura, San**	**9.92**	**344**		**Pn**	**14 10 29.4**	**+1.7**
LPAZ	**La Paz**	**9.96**	**135**	P	**Pn**	**14 10 29.3**	**+1.0**
	1.6nm,0.3s,baz=312,slow=9.8,SNR=19						
	5.5nm,0.5s						
LPAZ	**La Paz**	**9.96**	**135**	Pn	**Pn**	**14 10 28.9**	**+0.6**
PAC1	**Pacto, Paraso**	**10.09**	**341**	*eP*	**Pn**	**14 10 31.7**	**+1.9**
TULM	**Tulcn-Chalpat**	**10.24**	**347**		**Pn**	**14 10 32.0**	**-0.2**
CMBC	**Cumbal**	**10.47**	**347**	*eP*	**Pn**	**14 10 35.9**	**+0.7**
PB12	**IPOC Station P**	**10.49**	**152**		**Pn**	**14 10 34.9**	**-0.3**
GCUF	**Volcan Galeras**	**10.65**	**350**	*eP*	**Pn**	**14 10 38.0**	**+0.3**
PB16	**IPOC Station P**	**10.66**	**148**		**Pn**	**14 10 38.3**	**+0.4**
FLOC	**Florencia**	**10.85**	**359**	*eP*	**Pn**	**14 10 38.7**	**-1.3**
BBAC	**Balboa, Cauca**	**11.42**	**351**	*eP*	Pn	14 10 57.1	+9.1
GARC	**Garzon, Huila**	**11.45**	**360**	*eP*	**Pn**	**14 10 49.4**	**+1.0**
PB11	**IPOC Station P**	**11.80**	**152**	Pn	**Pn**	**14 10 52.8**	**-0.4**
BETC	**Betania**	**11.94**	**0**	*eP*	**Pn**	**14 10 56.1**	**+1.2**
GO01	**Chusmiza**	**11.94**	**150**		**Pn**	**14 10 56.8**	**+1.4**
GUVC	**San Jose del G**	**12.14**	**14**	*eP*	**Pn**	**14 10 60.0**	**+2.3**
PB08	**IPOC Station P**	**12.36**	**151**	Pn	**Pn**	**14 11 00.9**	**-0.1**
PB01	**IPOC Station P**	**13.00**	**154**	Pn	**Pn**	**14 11 06.6**	**-2.8**
ORTC	**Ortega, Tolima**	**13.16**	**1**	*eP*	**Pn**	**14 11 10.6**	**-1.1**
VILC	**Villavicencio,**	**13.48**	**8**	*eP*	**Pn**	**14 11 16.4**	**+0.3**
ANIL	**Santa Ana**	**13.73**	**0**	*eP*	**P**	**14 11 24.1**	**-4.0**
CHIC	**Chingaza**	**13.98**	**7**	*eP*	**Pn**	**14 11 24.1**	**+0.8**
ROSC	**El Rosal**	**14.13**	**5**	P	**Pn**	**14 11 27.2**	**+2.0**
	2.8nm,0.3s,baz=127,slow=14,SNR=8.6						
	22nm,0.5s						
ROSC	**El Rosal**	**14.13**	**5**	*eP*	**P**	**14 11 32.7**	**+0.2**
GUY2C	**Guyana, Caldas**	**14.46**	**0**	*eP*	**Pn**	**14 11 31.8**	**+1.9**
LVC	**Limon Verde**	**14.63**	**155**	P	**P**	**14 11 38.4**	**+0.4**
	7.2nm,0.5s,baz=353,slow=5.9,SNR=5.8						
LVC				LR	LR	14 17 48.4	
	comp=Z,465nm,20.6s,baz=327,slow=40						
LVC	**Limon Verde**	**14.63**	**155**		**Pn**	**14 11 31.9**	**-0.1**
NORC	**Norcasia**	**14.81**	**2**	*eP*	**Pn**	**14 11 35.6**	**+1.4**
CBOC	**Ciudad Bolivar**	**15.11**	**358**	*eP*	**P**	**14 11 43.3**	**+0.2**
RUSC	**La Rusia**	**15.32**	**9**	*eP*	**Pn**	**14 11 42.4**	**+1.1**
SIV	**San Ignacio**	**15.54**	**117**	P	**Pn**	**14 11 41.6**	**-2.1**
	22nm,0.4s,baz=283,slow=11,SNR=112						
SIV				LR	LR	14 17 18.9	
	comp=Z,141nm,21.5s,baz=289,slow=36						
PTBC	**PUERTO BERRIO,**	**15.80**	**4**	*eP*	**Pn**	**14 11 47.2**	**0.0**
PAMC	**Pamplona, Colo**	**16.80**	**10**	*eP*	**Pn**	**14 11 59.7**	**-0.5**
SDV	**Santo Domingo**	**18.74**	**15**	P	**P**	**14 12 22.9**	**-0.4**
	2.3nm,0.3s,baz=189,slow=9.9,SNR=12						
	19nm,0.8s						
SDV	**Santo Domingo**	**18.74**	**15**	P	**P**	**14 12 23.1**	**-0.2**
SJCC	**San Jacinto, C**	**19.11**	**1**	*eP*	**P**	**14 12 27.6**	**+0.4**
BAUV	**El Baul**	**19.61**	**22**	P	**P**	**14 12 32.1**	**-0.6**
BAUV				IAmb	IAmb	14 12 35.4	
	comp=Z,73nm,0.8s						
RIMA	**Rio Macho**	**20.73**	**336**	P	**P**	**14 12 45.5**	**+0.4**
JTS	**Las Juntas de**	**21.65**	**334**	P	**P**	**14 12 55.4**	**+0.5**
	comp=Z,10nm,0.9s,baz=240,slow=10,SNR=4.1						
JTS				LR	LR	14 20 52.6	
	comp=Z,150nm,20.1s,baz=199,slow=35						
	comp=Z,10nm,0.9s						
CO03	**El Pedregal**	**21.86**	**169**	P	**P**	**14 12 56.3**	**-0.7**
AQDB	**Aquidauana**	**22.07**	**122**	P	**P**	**14 12 57.8**	**-1.5**
AQDB				IAmb	IAmb	14 13 01.1	
	comp=Z,32nm,0.7s						
PCRV	**Puerto La Cruz**	**22.19**	**29**	P	**P**	**14 13 00.8**	**+0.1**
	comp=Z,22nm,0.6s,baz=175,slow=5.1,SNR=12						
	comp=Z,22nm,0.6s						
ZON	**Zonda**	**22.99**	**165**	P	**P**	**14 13 08.2**	**-0.8**
ROC1	**El Roble**	**23.89**	**171**	P	**P**	**14 13 18.1**	**+0.1**
CPUP	**Villa Florida**	**24.12**	**137**	P	**P**	**14 13 19.1**	**-0.9**
	comp=Z,6.4nm,0.8s,baz=322,slow=10,SNR=15						
CPUP				LR	LR	14 25 09.1	
	comp=Z,192nm,19.9s,baz=318,slow=42						
	comp=Z,6.4nm,0.8s						
CPUP	**Villa Florida**	**24.12**	**137**	P	**P**	**14 13 19.7**	**-0.3**
MT09	**Talagante**	**24.67**	**171**	P	**P**	**14 13 25.2**	**+0.1**
MT09				IAmb	IAmb	14 13 28.9	
	comp=Z,46nm,1.2s						
LMEL	**Las Melosas**	**24.88**	**170**	P	**P**	**14 13 27.6**	**+0.6**
LMEL				IAmb	IAmb	14 13 34.3	
	comp=Z,42nm,1.0s						
GRGR	**Grenville**	**25.38**	**33**	P	**P**	**14 13 29.5**	**-2.0**
TRCB	**Terra Rica**	**25.66**	**124**	P	**P**	**14 13 33.6**	**-0.5**
TRCB				IAmb	IAmb	14 13 34.4	
	comp=Z,32nm,0.6s						
ITQB	**Itaqui**	**26.85**	**141**	P	**P**	**14 13 43.3**	**-1.4**
ITQB				IAmb	IAmb	14 13 47.4	
	comp=Z,47nm,1.2s						
MDP	**Montagnes des**	**26.91**	**59**	P	**P**	**14 13 45.3**	**-0.1**
	comp=Z,3.4nm,0.5s,baz=216,slow=6.7,SNR=1.8						
	comp=Z,3.4nm,0.5s						
BDFB	**Brasilia**	**27.53**	**106**	P	**P**	**14 13 49.9**	**-1.1**
	comp=Z,11nm,0.6s,baz=277,slow=9.7,SNR=14						
BDFB				LR	LR	14 26 21.9	
	comp=Z,136nm,21.7s,baz=324,slow=40						
	comp=Z,11nm,0.6s						
BDFB	**Brasilia**	**27.53**	**106**	P	**P**	**14 13 49.9**	**-1.1**
CELP	**Cerrillos**	**28.62**	**18**	P	**P**	**14 14 00.0**	**-0.6**
CELP				IAmb	IAmb	14 14 24.7	
	comp=Z,38nm,1.0s						
SJG	**San Juan**	**28.79**	**19**	P	**P**	**14 14 01.9**	**-0.2**
	comp=Z,57nm,1.0s,baz=216,slow=4.0,SNR=12						
	comp=Z,57nm,1.0s						
SJG	**San Juan**	**28.79**	**19**	P	**P**	**14 14 01.9**	**-0.2**
AOPR	**Arecibo Observ**	**28.82**	**17**	P	**P**	**14 14 02.3**	**-0.1**
HUMP	**Col San Antoni**	**28.91**	**19**	P	**P**	**14 14 02.4**	**-0.8**
HUMP				IAmb	IAmb	14 14 11.9	
	comp=Z,29nm,0.9s						
CDVI	**St. Croix**	**28.92**	**22**	P	**P**	**14 14 01.9**	**-1.4**
MTP	**Monte Pirata**	**28.97**	**20**	P	**P**	**14 14 03.6**	**-0.1**
MTP				IAmb	IAmb	14 14 12.0	
	comp=Z,35nm,0.9s						
GCPR	**Guaynabo City**	**28.99**	**19**	P	**P**	**14 14 03.1**	**-0.8**
GCPR				IAmb	IAmb	14 14 14.1	
	comp=Z,34nm,0.8s						
CBYP	**Canovanas**	**29.03**	**19**	P	**P**	**14 14 03.5**	**-0.8**
CBYP				IAmb	IAmb	14 14 14.8	
	comp=Z,24nm,0.8s						
CUPR	**Culebra, Puert**	**29.26**	**20**	P	**P**	**14 14 05.6**	**-0.6**
CUPR				IAmb	IAmb	14 14 10.9	
	comp=Z,24nm,0.8s						
STVI	**Saint Thomas**	**29.41**	**21**	P	**P**	**14 14 07.1**	**-0.5**
GO06	**Curarrehue**	**30.33**	**174**	P	**P**	**14 14 14.8**	**-0.9**
GO06				IAmb	IAmb	14 14 22.4	
	comp=Z,50nm,1.9s						
PLCA	**Paso Flores**	**31.57**	**173**	P	**P**	**14 14 25.9**	**-0.7**
	comp=Z,13nm,1.1s,baz=350,slow=12,SNR=13						
PLCA				PcP	**PcP**	**14 17 19.6**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=332,slow=2.3,SNR=4.8						
PLCA				LR	LR	14 25 22.5	
	comp=Z,112nm,21.2s,baz=352,slow=33						
	comp=Z,13nm,1.1s						
PLCA	**Paso Flores**	**31.57**	**173**	P	**P**	**14 14 26.2**	**-0.4**
PLCA				IAmb	IAmb	14 14 33.5	
	comp=Z,24nm,1.3s						
PLCA	**Paso Flores**	**31.57**	**173**	P	**P**	**14 14 26.2**	**-0.4**
PLCA				pP	**pP**	**14 14 36.0**	**+0.5**
PLCA				sP	**sP**	**14 14 39.4**	**+0.1**
TEIG	**Tepich**	**31.96**	**337**	P	**P**	**14 14 30.1**	**0.0**
TEIG				x	x	14 14 34.1	
TEIG				pP	**pP**	**14 14 39.0**	**-0.1**
CMIG	**Matias Romero**	**32.52**	**324**	LR	LR	14 26 50.6	
	comp=Z,88nm,20.1s,baz=156,slow=34						
RPN	**Rapa Nui**	**36.52**	**237**	LR	LR	14 26 04.5	
	comp=Z,215nm,19.1s,baz=102,slow=29						
GOGA	**Godfrey**	**43.18**	**350**	P	**P**	**14 16 03.7**	**-1.1**
	baz=168						
LRAL	**Lakeview Retre**	**43.54**	**346**	P	**P**	**14 16 06.5**	**-1.2**
	baz=163						
833A	**Chaparral WMA,**	**44.00**	**329**	P	**P**	**14 16 10.3**	**-1.2**
	baz=145						
W57A	**Gilead**	**44.45**	**355**	P	**P**	**14 16 14.8**	**-0.2**
W57A				IAmb	IAmb	14 16 20.3	
	comp=Z,17nm,0.9s						
KMSC	**Kings Mountain**	**44.58**	**353**	P	**P**	**14 16 15.9**	**-0.2**
	baz=172						
FPAL	**Fort Paine**	**44.68**	**348**	P	**P**	**14 16 16.0**	**-0.9**
FPAL				IAmb	IAmb	14 16 17.5	
	comp=Z,48nm,1.6s						
NATX	**Nacogdoches**	**44.79**	**337**	P	**P**	**14 16 17.0**	**-0.8**
	baz=153						
V58A	**Windy Hill, Pi**	**45.02**	**356**	P	**P**	**14 16 18.6**	**-0.9**
V58A				IAmb	IAmb	14 16 20.8	
	comp=Z,25nm,1.2s						
W50A	**Signal Mountai**	**45.26**	**349**	P	**P**	**14 16 20.3**	**-1.2**
CPCT	**Cooper Cave**	**45.35**	**350**	P	**P**	**14 16 21.3**	**-0.9**
SWET	**Sewanee**	**45.40**	**348**	P	**P**	**14 16 21.4**	**-1.2**
TKL	**Tuckaleechee C**	**45.43**	**351**	P	**P**	**14 16 21.6**	**-1.2**
TKL				IAmb	IAmb	14 16 23.3	
	comp=Z,21nm,1.4s						
237A	**Washetta, Mont**	**45.47**	**336**	P	**P**	**14 16 22.9**	**-0.2**
237A	**Washetta, Mont**	**45.47**	**336**	P	**P**	**14 16 24.4**	**+1.2**
	baz=151						
U59A	**Littleton**	**45.49**	**357**	P	**P**	**14 16 23.2**	**-0.1**
OXF	**Oxford**	**45.56**	**344**	P	**P**	**14 16 23.1**	**-0.8**
	baz=161						
V52A	**Sevierville**	**45.58**	**351**	P	**P**	**14 16 22.7**	**-1.3**
V52A	**Sevierville**	**45.58**	**351**	P	**P**	**14 16 23.7**	**-0.3**
	baz=169						
PLAL	**Pickwick Lake**	**45.66**	**346**	P	**P**	**14 16 23.0**	**-1.6**
PLAL				IAmb	IAmb	14 16 24.3	
	comp=Z,16nm,1.1s						
JCT	**Junction City**	**45.97**	**330**	P	**P**	**14 16 26.6**	**-0.6**
	baz=146						
V48A	**Smith Brothers**	**46.09**	**347**	P	**P**	**14 16 26.9**	**-1.1**
V48A				IAmb	IAmb	14 16 28.0	
	comp=Z,21nm,0.8s						
V48A	**Smith Brothers**	**46.09**	**347**	P	**P**	**14 16 27.0**	**-1.0**
	baz=164,SNR=6.3						
T59A	**Double "B" Far**	**46.10**	**358**	P	**P**	**14 16 28.2**	**+0.1**
T59A	**Double "B" Far**	**46.10**	**358**	P	**P**	**14 16 28.1**	**+0.1**
	baz=177,SNR=5.3						
T59A				P	**P**	**14 16 28.1**	**+0.1**
	baz=177,SNR=5.3						
WHTX	**Lake Whitney,**	**46.15**	**334**	P	**P**	**14 16 28.8**	**+0.2**
WHTX				IAmb	IAmb	14 16 30.9	
	comp=Z,42nm,1.4s						
WHTX				PcP	**PcP**	**14 18 01.2**	**-3.1**
WHTX	**Lake Whitney,**	**46.15**	**334**	P	**P**	**14 16 29.5**	**+0.9**
	baz=149						
WHTX	**Lake Whitney,**	**46.15**	**334**	P	**P**	**14 16 28.3**	**-0.3**
	baz=149						
T57A	**Hurt**	**46.22**	**356**	P	**P**	**14 16 28.7**	**-0.4**
T57A				IAmb	IAmb	14 16 30.4	
	comp=Z,39nm,1.1s						
T57A	**Hurt**	**46.22**	**356**	P	**P**	**14 16 29.5**	**+0.5**
	baz=175,SNR=9.3						
T57A				P	**P**	**14 16 29.5**	**+0.5**
	baz=175,SNR=9.3						
TZTN	**Tazewell**	**46.26**	**351**	P	**P**	**14 16 28.6**	**-0.8**
	baz=169						
BLA	**Blacksburg**	**46.53**	**355**	P	**P**	**14 16 29.8**	**-1.7**
	baz=173						
UALR	**University of**	**46.68**	**341**	P	**P**	**14 16 31.9**	**-0.8**
UALR				IAmb	IAmb	14 16 33.2	
	comp=Z,25nm,0.9s						
WVT	**Waverly**	**46.69**	**346**	P	**P**	**14 16 30.4**	**-2.3**
WVT				IAmb	IAmb	14 16 32.1	
	comp=Z,31nm,1.6s						
WVT				PcP	**PcP**	**14 18 03.2**	**-2.9**
WVT	**Waverly**	**46.69**	**346**	P	**P**	**14 16 31.2**	**-1.6**
	baz=163						
WVT	**Waverly**	**46.69**	**346**	P	**P**	**14 16 30.7**	**-2.0**
WVT				pP	**pP**	**14 16 40.9**	**-1.1**
WVT				sP	**sP**	**14 16 44.7**	**-1.0**
MIAR	**Mount Ida**	**46.89**	**339**	P	**P**	**14 16 33.6**	**-0.7**
MIAR	**Mount Ida**	**46.89**	**339**	P	**P**	**14 16 34.4**	**+0.1**
	baz=155						
MIAR	**Mount Ida**	**46.89**	**339**	P	**P**	**14 16 34.4**	**+0.1**
	baz=155						
S57A	**Dark Hollow, R**	**46.96**	**356**	P	**P**	**14 16 34.9**	**+0.1**
S57A				IAmb	IAmb	14 16 36.0	
	comp=Z,21nm,0.8s						
S57A	**Dark Hollow, R**	**46.96**	**356**	P	**P**	**14 16 35.5**	**+0.7**
	baz=175,SNR=8.7						
S57A				P	**P**	**14 16 35.5**	**+0.7**
	baz=175,SNR=8.7						
TXAR	**Lajitas Array**	**47.07**	**326**	P	**P**	**14 16 36.3**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=149,slow=8.6,SNR=27						
TXAR				PcP	**PcP**	**14 18 08.4**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=152,slow=7.4,SNR=9.9						
	comp=Z,2.2nm,0.6s						
TXAR	**Lajitas Array**	**47.07**	**326**	P	**P**	**14 16 36.1**	**+0.1**
TXAR				PcP	**PcP**	**14 18 08.0**	**+0.2**
TX31	**Lajitas Ar. Si**	**47.07**	**326**	P	**P**	**14 16 36.1**	**+0.1**
TX31				IAmb	IAmb	14 16 37.5	
	comp=Z,26nm,1.2s						
TX31				PcP	**PcP**	**14 18 08.0**	**+0.2**
TX31	**Lajitas Ar. Si**	**47.07**	**326**	P	**P**	**14 16 36.5**	**+0.5**
	baz=140,SNR=7.0						
TX32	**Lajitas Array**	**47.07**	**326**	P	**P**	**14 16 36.1**	**+0.1**
TX32				PcP	**PcP**	**14 18 08.4**	**+0.7**
R58B	**Mineral**	**47.10**	**357**	P	**P**	**14 16 36.0**	**+0.1**
R58B				IAmb	IAmb	14 16 38.1	
	comp=Z,29nm,1.4s						
WHAR	**Wooly Hollow**	**47.14**	**341**	P	**P**	**14 16 35.5**	**-0.7**
WHAR				IAmb	IAmb	14 16 36.7	
	comp=Z,22nm,0.8s						
R55A	**Marlinton**	**47.57**	**355**	P	**P**	**14 16 40.1**	**+0.5**
R55A				IAmb	IAmb	14 16 40.9	
	comp=Z,14nm,0.8s						
R55A	**Marlinton**	**47.57**	**355**	P	**P**	**14 16 40.7**	**+1.0**
	baz=174						
R55A				P	**P**	**14 16 40.7**	**+1.0**
	baz=174						
X37A	**Clayton**	**47.58**	**338**		**P**	**14 16 39.9**	**+0.3**
X37A				IAmb	IAmb	14 16 40.9	
	comp=Z,13nm,0.8s						
X37A	**Clayton**	**47.58**	**338**	P	**P**	**14 16 40.5**	**+0.8**
	baz=153,SNR=6.5						
FCAR	**Ozark Folk Cen**	**47.64**	**342**	P	**P**	**14 16 39.0**	**-1.1**
FCAR				IAmb	IAmb	14 16 40.1	
	comp=Z,16nm,0.7s						
ABTX	**Abilene, Hawle**	**47.67**	**332**	P	**P**	**14 16 39.9**	**-0.5**
ABTX	**Abilene, Hawle**	**47.67**	**332**	P	**P**	**14 16 41.0**	**+0.5**
	baz=147,SNR=6.5						
ABTX	**Abilene, Hawle**	**47.67**	**332**	P	**P**	**14 16 40.0**	**-0.5**
	baz=147,SNR=6.5						
Q56A	**Snyder Ridge,**	**48.25**	**356**	P	**P**	**14 16 45.4**	**+0.6**
Q56A				IAmb	IAmb	14 16 46.4	
	comp=Z,16nm,0.8s						
Q56A				PcP	**PcP**	**14 18 12.1**	**+0.5**
Q56A	**Snyder Ridge,**	**48.25**	**356**	P	**P**	**14 16 45.8**	**+1.0**
	baz=175,SNR=5.3						
Q56A				P	**P**	**14 16 45.8**	**+1.0**
	baz=175,SNR=5.3						
Q54A	**Coxs Mills**	**48.33**	**354**	P	**P**	**14 16 44.4**	**-1.1**
Q54A				IAmb	IAmb	14 16 46.1	
	comp=Z,18nm,0.9s						
Q54A	**Coxs Mills**	**48.33**	**354**	P	**P**	**14 16 45.3**	**-0.1**
	baz=173						
Q54A				P	**P**	**14 16 45.3**	**-0.1**
	baz=173						
S44A	**Carbondale**	**48.53**	**345**	P	**P**	**14 16 45.8**	**-1.1**
	baz=162						
X34A	**Smith Ranch, M**	**48.56**	**335**		**P**	**14 16 47.0**	**-0.3**
HHAR	**Hobbs**	**48.59**	**340**	P	**P**	**14 16 46.6**	**-0.9**
HHAR	**Hobbs**	**48.59**	**340**	P	**P**	**14 16 47.2**	**-0.3**
	baz=155						
MGMO	**Mountain Grove**	**48.85**	**342**	P	**P**	**14 16 48.6**	**-0.9**
U38A	**Gravette**	**48.88**	**340**	P	**P**	**14 16 49.6**	**-0.1**
	baz=155						
P53A	**Whipple**	**48.88**	**354**	P	**P**	**14 16 49.9**	**+0.2**
	baz=172						
P53A				P	**P**	**14 16 49.9**	**+0.2**
	baz=172						
TUL1	**Leonard**	**48.91**	**338**	P	**P**	**14 16 50.1**	**+0.2**
	baz=153						
TUL1	**Leonard**	**48.91**	**338**	P	**P**	**14 16 50.3**	**+0.4**
	baz=153						
WMOK	**Wichita Mounta**	**49.07**	**334**		**P**	**14 16 50.2**	**-1.0**
WMOK				PcP	**PcP**	**14 18 14.7**	**0.0**
WMOK	**Wichita Mounta**	**49.07**	**334**	P	**P**	**14 16 51.0**	**-0.2**
	baz=149						
WMOK	**Wichita Mounta**	**49.07**	**334**	P	**P**	**14 16 51.3**	**0.0**
	baz=149						
CCM	**Cathedral Cave**	**49.39**	**344**	P	**P**	**14 16 52.1**	**-1.5**
CCM				PcP	**PcP**	**14 18 15.6**	**-0.1**
CCM				IAmb	IAmb	14 18 17.1	
	comp=Z,18nm,1.0s						
CCM	**Cathedral Cave**	**49.39**	**344**	P	**P**	**14 16 52.6**	**-1.0**
	baz=159,SNR=7.7						
CCM	**Cathedral Cave**	**49.39**	**344**	P	**P**	**14 16 52.3**	**-1.3**
	baz=159						
CCM	**Cathedral Cave**	**49.39**	**344**	P	**P**	**14 16 52.3**	**-1.3**
CCM				x	x	14 16 58.3	
CCM				pP	**pP**	**14 17 01.9**	**-1.0**
CLN7	**Carlsbad 7**	**49.54**	**328**	P	**P**	**14 16 55.2**	**+0.2**
O52A	**Adamsville**	**49.55**	**354**	P	**P**	**14 16 54.5**	**-0.3**
	baz=172						
O52A				P	**P**	**14 16 54.5**	**-0.3**
	baz=172						
O53A	**New Philadelph**	**49.62**	**354**	P	**P**	**14 16 54.2**	**-1.1**
	baz=172						
GDL2	**Guadalupe Moun**	**49.67**	**328**	P	**P**	**14 16 55.7**	**-0.3**
S39A	**Bolivar**	**49.67**	**341**	P	**P**	**14 16 54.9**	**-0.9**
S39A				IAmb	IAmb	14 16 56.1	
	comp=Z,33nm,1.6s						
S39A	**Bolivar**	**49.67**	**341**	P	**P**	**14 16 55.0**	**-0.8**
	baz=157,SNR=5.5						
OK044	**Pawnee Station**	**49.69**	**337**		**P**	**14 16 55.3**	**-0.6**
OK044				IAmb	IAmb	14 16 57.0	
	comp=Z,17nm,0.7s						
SSPA	**Standing Stone**	**49.77**	**358**	P	**P**	**14 16 57.0**	**+0.6**
ACSO	**Alum Creek Sta**	**49.80**	**352**	P	**P**	**14 16 56.2**	**-0.5**
	baz=170						
OK051	**E0350 and S346**	**49.82**	**337**		**P**	**14 16 56.4**	**-0.5**
OK051				IAmb	IAmb	14 16 57.6	
	comp=Z,22nm,0.7s						
R40A	**Maddies Statio**	**49.90**	**343**	P	**P**	**14 16 56.5**	**-1.0**
	baz=158,SNR=6.1						
CPRX	**Cap Rock**	**50.06**	**329**	P	**P**	**14 16 59.3**	**+0.4**
PAL	**Palisades**	**50.11**	**2**	P	**P**	**14 16 57.1**	**-1.9**
	baz=182						
O48B	**Farmland**	**50.15**	**350**	P	**P**	**14 16 57.7**	**-1.6**
	baz=168						
MSTX	**Muleshoe**	**50.26**	**330**	P	**P**	**14 17 00.3**	**-0.1**
	baz=144						
MSTX	**Muleshoe**	**50.26**	**330**	P	**P**	**14 16 58.6**	**-1.8**
	baz=144						
PSDB	**Penn State Uni**	**50.30**	**357**	P	**P**	**14 17 01.1**	**+0.6**
	baz=176						
AMTX	**Amarillo**	**50.48**	**332**	P	**P**	**14 17 00.9**	**-1.2**
	baz=146						
SFIN	**Lafayette**	**50.62**	**349**	P	**P**	**14 17 01.3**	**-1.6**
	baz=165						
SFIN	**Lafayette**	**50.62**	**349**	P	**P**	**14 17 00.7**	**-2.1**
	baz=165						
M53A	**WI Miller and**	**50.75**	**355**	P	**P**	**14 17 02.6**	**-1.2**
	baz=173						
N47A	**Urbana**	**50.84**	**350**	P	**P**	**14 17 03.2**	**-1.4**
N47A	**Urbana**	**50.84**	**350**	P	**P**	**14 17 03.3**	**-1.2**
	baz=167						
N47A				P	**P**	**14 17 03.3**	**-1.2**
	baz=167						
P40A	**Paris**	**50.99**	**344**	P	**P**	**14 17 04.7**	**-1.0**
	baz=159						
HDIL	**Hopedale**	**51.26**	**347**	P	**P**	**14 17 06.5**	**-1.1**
HDIL	**Hopedale**	**51.26**	**347**	P	**P**	**14 17 06.8**	**-0.8**
	baz=162,SNR=6.2						
HDIL	**Hopedale**	**51.26**	**347**	P	**P**	**14 17 06.8**	**-0.8**
	baz=162,SNR=6.2						
L59A	**Walton**	**51.27**	**0**	P	**P**	**14 17 08.4**	**+0.6**
L59A				IAmb	IAmb	14 17 09.8	
	comp=Z,36nm,1.1s						
BINY	**Binghamton**	**51.28**	**360**	P	**P**	**14 17 08.5**	**+0.6**
BINY	**Binghamton**	**51.28**	**360**	P	**P**	**14 17 07.7**	**-0.2**
	baz=179						
ERPA	**Erie**	**51.37**	**356**	P	**P**	**14 17 08.9**	**+0.4**
	baz=174						
L61B	**Northampton**	**51.60**	**3**	P	**P**	**14 17 10.4**	**+0.3**
	baz=183						
N41A	**Harden Midland**	**51.78**	**345**	P	**P**	**14 17 10.1**	**-1.5**
N41A	**Harden Midland**	**51.78**	**345**	P	**P**	**14 17 10.4**	**-1.1**
	baz=160,SNR=8.2						
121A	**Cookes Peak, D**	**51.80**	**325**	P	**P**	**14 17 12.4**	**+0.3**
121A	**Cookes Peak, D**	**51.80**	**325**	P	**P**	**14 17 12.7**	**+0.6**
	baz=138,SNR=5.6						
121A	**Cookes Peak, D**	**51.80**	**325**	P	**P**	**14 17 12.3**	**+0.3**

S22A	4UR Ranch, Cre	55.25 330	P	P	14 17 37.9 +0.4
	baz=141,SNR=5.5				
Q24A	Divide	55.41 332	P	P	14 17 39.1 +0.5
	baz=144				
113A	Mohawk Valley,	55.53 321	P	P	14 17 39.8 +0.5
MVCO	Mesa Verde	55.69 328	P	P	14 17 40.4 -0.2
MVCO			IAmb	IAmb	14 17 42.1
	comp=Z,23nm,1.8s				
MVCO	Mesa Verde	55.69 328	P	P	14 17 41.0 +0.4
	baz=139				
K31A	O'Neill	55.91 339	P	P	14 17 41.7 -0.1
E62A	Clayton Lake	55.96 5	P	P	14 17 42.5 +0.5
WUAZ	Wupatki	56.01 325	P	P	14 17 43.1 +0.3
WUAZ			IAmb	IAmb	14 17 44.8
	comp=Z,14nm,0.9s				
WUAZ	Wupatki	56.01 325	P	P	14 17 43.2 +0.3
	baz=136,SNR=8.7				
ECSD	EROS Data Cent	56.20 342	P	P	14 17 42.7 -1.1
ECSD			IAmb	IAmb	14 17 44.0
	comp=Z,14nm,0.8s				
ECSD	EROS Data Cent	56.20 342	P	P	14 17 43.1 -0.7
	baz=155,SNR=9.7				
ECSD	EROS Data Cent	56.20 342	P	P	14 17 43.1 -0.7
	baz=155,SNR=9.7				
GLA	Glamis	56.39 320	P	P	14 17 45.7 +0.2
	baz=131				
SMCO	Snowmass	56.44 331	P	P	14 17 46.2 0.0
D62A	Allapoint, All	56.46 5	P	P	14 17 45.6 +0.1
D62A			IAmb	IAmb	14 17 47.4
	comp=Z,23nm,1.0s				
SPMN	Marine on St.	56.51 345	P	P	14 17 44.4 -1.6
SPMN			IAmb	IAmb	14 17 45.9
	comp=Z,24nm,1.0s				
SPMN	Marine on St.	56.51 345	P	P	14 17 45.1 -0.8
	baz=159				
SPMN	Marine on St.	56.51 345	P	P	14 17 45.7 -0.2
	baz=159				
COWI	Conover	56.52 349	P	P	14 17 45.7 -0.5
	baz=164				
PV15	Paradox Valley	56.54 329	P	P	14 17 47.0 +0.3
PV15			IAmb	IAmb	14 17 48.4
	comp=Z,24nm,1.0s				
PV13	Radium Mtn., P	56.57 329	P	P	14 17 47.2 +0.3
PV13			IAmb	IAmb	14 17 48.2
	comp=Z,22nm,0.8s				
BLYC	Blythe	56.66 321	P	P	14 17 47.9 +0.6
PV07	Paradox Valley	56.70 329	P	P	14 17 47.2 -0.6
PV07			IAmb	IAmb	14 17 49.3
	comp=Z,15nm,1.3s				
PV11	David Mesa, Pa	56.71 329	P	P	14 17 47.2 -0.6
PV11			IAmb	IAmb	14 17 49.2
	comp=Z,37nm,1.6s				
PDMCI	Parker Dam,Lak	56.80 322	P	P	14 17 48.4 +0.1
	baz=133				
IKP	In-Ko-Pah, Jac	56.95 319	P	P	14 17 49.8 +0.4
	baz=130				
U15A	North Rim	57.18 325	P	P	14 17 51.2 -0.1
U15A			IAmb	IAmb	14 17 53.2
	comp=Z,11nm,1.0s				
BC3	Big Chuckawall	57.18 320	P	P	14 17 51.4 +0.2
	baz=131,SNR=5.3				
W13A	Hualapai Mount	57.18 323	P	P	14 17 51.6 +0.3
F36A	Milaca	57.28 345	P	P	14 17 49.9 -1.6
F36A			IAmb	IAmb	14 17 51.6
	comp=Z,14nm,0.8s				
F36A	Milaca	57.28 345	P	P	14 17 50.3 -1.2
	baz=159,SNR=6.3				
IRM	Iron Mountain	57.32 321	P	P	14 17 51.9 -0.1
	baz=132,SNR=16				
SUSD	Miller	57.59 340	P	P	14 17 52.6 -1.0
SUSD	Miller	57.59 340	P	P	14 17 53.3 -0.4
	baz=152				
SUSD	Miller	57.59 340	P	P	14 17 52.9 -0.8
	baz=152				
BELC	Belle Mtn. Jos	57.75 320	P	P	14 17 55.3 +0.1
	baz=131,SNR=6.2				
TPFO	Pinon Flats	57.78 320	P	P	14 17 55.8 +0.4
	baz=130				
PFO	Pinyon Flats O	57.79 320	P	P	14 17 55.8 +0.4
PFO	Pinyon Flats O	57.79 320	P	P	14 17 56.3 +0.9
	baz=130				
O20A	White River Ci	57.80 331	P	P	14 17 55.0 -0.4
O20A	White River Ci	57.80 331	P	P	14 17 55.6 +0.1
	baz=141,SNR=5.6				
KNB	Kanab	57.90 325	P	P	14 17 55.6 -0.6
KNB			IAmb	IAmb	14 17 58.3
	comp=Z,18nm,0.9s				
F33A	5 Mile Ranch,	58.02 343	P	P	14 17 55.5 -1.1
F33A			IAmb	IAmb	14 17 56.7
	comp=Z,17nm,1.1s				
F33A	5 Mile Ranch,	58.02 343	P	P	14 17 55.5 -1.1
	baz=156,SNR=7.0				
GMRC	Granite Mounta	58.05 321	P	P	14 17 57.4 +0.1
	baz=131,SNR=7.4				
LCMT	Little Creek M	58.13 325	P	P	14 17 58.1 +0.3
LCMT			IAmb	IAmb	14 17 59.6
	comp=Z,10nm,1.0s				
SRU	San Rafael Swe	58.17 328	P	P	14 17 58.0 -0.1
V12A	Nelson	58.19 323	P	P	14 17 58.1 0.0
MURC	Murrieta	58.25 319	P	P	14 17 59.8 +1.2
	baz=130				
MTPU	Mount Pierson	58.27 326	P	P	14 17 59.2 +0.2
Q16A	Castle Valley	58.36 328	P	P	14 17 59.3 -0.2
P18A	Preston Nutter	58.41 329	P	P	14 18 00.0 +0.1
SZCU	Shurtz Canyon	58.45 325	P	P	14 18 00.6 +0.5
HEC	Hector,Ludlow	58.50 321	P	P	14 18 01.2 +0.9
	baz=131				
BBRC	Big Bear Solar	58.50 320	P	P	14 18 01.2 +0.6
	baz=130				
P17A	Butcher Ranch,	58.55 328	P	P	14 18 00.7 -0.1
P17A			IAmb	IAmb	14 18 02.0
	comp=Z,21nm,1.2s				
CCUT	Cedar City	58.58 325	P	P	14 18 01.3 +0.3
MVU	Marysvale	58.62 327	P	P	14 18 01.3 0.0
TUQ	Turquoise Moun	58.64 322	P	P	14 18 02.4 +1.0
	baz=132,SNR=6.0				
TMUT	Trail Mountain	58.66 328	P	P	14 18 01.1 -0.6
RDMU	Red Mountain	58.78 330	P	P	14 18 01.7 -0.7
RDMU			IAmb	IAmb	14 18 03.4
	comp=Z,13nm,0.9s				
SHPR	Sheep Range	58.90 323	P	P	14 18 03.5 +0.4
BFSC	Mount Baldy Ra	58.95 320	P	P	14 18 04.6 +1.0
	baz=129				
K22A	Casper	59.00 334	P	P	14 18 03.7 0.0
K22A			IAmb	IAmb	14 18 04.9
	comp=Z,9.4nm,0.9s				
K22A	Casper	59.00 334	P	P	14 18 04.2 +0.4
	baz=144				
K22A	Casper	59.00 334	P	P	14 18 04.2 +0.4
	baz=144				
GSC	Goldstone, Bar	59.10 321	P	P	14 18 04.6 +0.1
GSC			IAmb	IAmb	14 19 34.8
	comp=Z,22nm,1.7s				
GSC	Goldstone, Bar	59.10 321	P	P	14 18 04.9 +0.4
	baz=131				
RSSD	Black Hills	59.17 336	P	P	14 18 04.9 -0.1
RSSD			IAmb	IAmb	14 18 06.4
	comp=Z,14nm,1.2s				
RSSD	Black Hills	59.17 336	P	P	14 18 06.1 +1.2
	baz=147				
RSSD	Black Hills	59.17 336	P	P	14 18 06.2 +1.2
	baz=147				
RSSD	Black Hills	59.17 336	P	P	14 18 04.8 -0.1
RSSD			pP	pP	14 18 15.1 +0.7
RSSD			sP	sP	14 18 20.6 +2.5
PRN	Pahroc Range	59.45 324	P	P	14 18 07.0 +0.1
PSUT	Pine Spring	59.54 326	P	P	14 18 08.1 +0.4
PSUT			IAmb	IAmb	14 18 09.4
	comp=Z,8.4nm,0.8s				
EDW2	Edwards Air Fo	59.58 320	P	P	14 18 08.2 +0.4
	baz=129				
GWY	Greenwater Val	59.59 322	P	P	14 18 08.0 0.0
NLU	North Lily Min	59.60 328	P	P	14 18 08.2 +0.1
B35A	Bob, Littlefor	59.66 346	P	P	14 18 07.1 -0.9
	baz=159				
JLU	Jordanelle	59.75 329	P	P	14 18 09.1 0.0
JLU			IAmb	IAmb	14 18 10.5
	comp=Z,9.2nm,1.0s				
LRMC	Laurel Mtn Rad	59.76 321	P	P	14 18 09.3 +0.2
	baz=130				
TPNV	Topopah Spring	59.84 323	P	P	14 18 09.8 +0.1
TPNV	Topopah Spring	59.84 323	P	P	14 18 09.9 +0.2
	baz=132,SNR=8.2				
FURC	Furnace Creek,	59.89 322	P	P	14 18 10.5 +0.7
	baz=131				
MPMC	Manual Prospec	60.01 321	P	P	14 18 11.0 0.0
	baz=130				
S11A	Rachel	60.01 324	P	P	14 18 10.9 +0.1
S11A			IAmb	IAmb	14 18 12.6
	comp=Z,9.8nm,0.8s				
E28A	Huff	60.05 340	P	P	14 18 10.9 +0.2
E28A	Huff	60.05 340	P	P	14 18 11.3 +0.6
	baz=151				
TCUT	Toone Canyon	60.11 329	P	P	14 18 11.7 +0.1
AGMN	Agassiz Nation	60.14 344	P	P	14 18 10.4 -0.9
AGMN	Agassiz Nation	60.14 344	P	P	14 18 10.8 -0.5
	baz=157,SNR=10				
AGMN	Agassiz Nation	60.14 344	P	P	14 18 11.1 -0.2
	baz=157,SNR=10				
DUG	Dugway, Tooele	60.16 328	P	P	14 18 11.4 -0.4
DUG			IAmb	IAmb	14 18 13.6
	comp=Z,17nm,0.9s				
DUG	Dugway, Tooele	60.16 328	P	P	14 18 12.3 +0.5
	baz=136,SNR=19				
ARVC	Arvin	60.26 320	P	P	14 18 12.1 -0.3
	baz=129				
ISA	Isabella, Lake	60.37 320	P	P	14 18 14.0 +0.7
	baz=129				
R11A	Troy Canyon, C	60.40 324	P	P	14 18 14.0 +0.5
R11A	Troy Canyon, C	60.40 324	P	P	14 18 14.0 +0.5
	baz=133,SNR=11				
BW06	Boulder Array	60.46 332	P	P	14 18 13.8 -0.2
	baz=141,SNR=5.9				
PDAR	Pinedale Array	60.46 332	P	P	14 18 13.3 -0.6
	comp=Z,1.3nm,0.6s,baz=146,slow=8.4,SNR=15				
PDAR			PcP	PcP	14 18 58.3 -0.3
	comp=Z,1.4nm,0.7s,baz=126,slow=6.5,SNR=4.5				
	comp=Z,1.3nm,0.6s				
GRAC	Grapevine Rang	60.55 322	P	P	14 18 15.5 +1.2
	baz=131				
HWUT	Hardware Ranch	60.56 330	P	P	14 18 13.5 -1.0
HWUT			IAmb	IAmb	14 18 15.4
	comp=Z,16nm,0.8s				
CWC	Cottonwood Cre	60.62 321	P	P	14 18 15.8 +0.8
	baz=130				
PKM	Mcpherson Peak	60.75 319	P	P	14 18 15.8 -0.2
	baz=128				
MDND	Maddock	60.81 342	P	P	14 18 16.8 +0.8
	baz=152,SNR=5.4				
MDND	Maddock	60.81 342	P	P	14 18 16.2 +0.2
	baz=152,SNR=5.4				
HVU	Hansel Valley	61.30 329	P	P	14 18 19.2 -0.3
OMMB	Old Mammoth Mi	61.94 322	P	P	14 18 24.6 +0.4
OMMB			IAmb	IAmb	14 18 25.7
	comp=Z,8.8nm,0.9s				
ULM	Lac du Bonnet	61.94 345	P	P	14 18 22.6 -0.8
	comp=Z,23nm,0.6s,baz=157,slow=7.1,SNR=16				
	comp=Z,23nm,0.6s				
ULM	Lac du Bonnet	61.94 345	P	P	14 18 22.6 -0.8
NVAR	Mina Array Bea	62.04 323	P	P	14 18 25.3 +0.6
	comp=Z,2.3nm,0.8s,baz=144,slow=8.2,SNR=14				
	comp=Z,2.3nm,0.8s				
LAO	LASA Array	62.16 337	P	P	14 18 25.9 +0.9
	baz=145				
RLMT	Red Lodge	62.16 334	P	P	14 18 25.5 +0.1
	baz=142				
H17A	Grant Village	62.19 332	P	P	14 18 26.3 +0.7
	baz=140				
YHH	Holmes Hill	62.62 332	P	P	14 18 29.0 +0.5
YHH			IAmb	IAmb	14 18 30.4
	comp=Z,9.1nm,0.9s				
GCMT	Greycliff	62.86 334	P	P	14 18 29.9 0.0
DGMT	Dagmar	62.88 339	P	P	14 18 30.4 +0.5
	baz=148				
HLID	Hailey	63.42 329	P	P	14 18 33.3 -0.4
HLID	Hailey	63.42 329	P	P	14 18 34.0 +0.3
	baz=136,SNR=10.0				
PAHR	Pah Rah Range	63.51 323	P	P	14 18 34.9 +0.6
PAHR			IAmb	IAmb	14 18 36.3
	comp=Z,9.7nm,1.0s				
MCMT	McKenzie Canyo	63.58 331	P	P	14 18 34.7 -0.2
BOZ	Bozeman (W)	63.59 332	P	P	14 18 35.2 +0.4
	baz=140,SNR=6.8				
MFID	Camas Ranch	64.04 328	P	P	14 18 38.1 +0.4
MFID			IAmb	IAmb	14 18 39.5
	comp=Z,20nm,0.8s				
SCHQ	Schefferville	64.34 6	P	P	14 18 39.3 0.0
	comp=Z,5.9nm,0.7s,baz=213,slow=8.1,SNR=4.9				
SCHQ			PcP	PcP	14 19 14.2 +0.5
	comp=Z,5.7nm,0.8s,baz=207,slow=4.5,SNR=2.3				
	comp=Z,5.9nm,0.7s				
EGMT	Eagleton	64.66 335	P	P	14 18 42.1 +0.4
	baz=142,SNR=5.7				
ORV	Oroville	64.68 322	P	P	14 18 42.3 +0.5
ORV			IAmb	IAmb	14 18 44.0
	comp=Z,19nm,1.1s				
MSO	Missoula	65.58 332	P	P	14 18 47.7 0.0
MSO			IAmb	IAmb	14 18 49.3
	comp=Z,19nm,1.0s				
MSO	Missoula	65.58 332	P	P	14 18 48.0 +0.3
	baz=138,SNR=9.6				
FFC	Flin Flon	67.60 344	P	P	14 19 00.1 -0.2
FFC			pP	pP	14 19 08.8 -1.1
NEW	Newport	68.10 331	P	P	14 19 03.9 +0.2
	baz=135				
BELA	Belgrano 2	71.62 172	P	P	14 19 25.3 +0.4
BELA			IAmb	IAmb	14 19 32.2
	comp=Z,11nm,0.9s				
LIC	Lamto	71.89 80⇑	*i*P	P	14 19 27.0 -0.6
	comp=Z,7.3nm,0.3s				
TIC	Toumodi	71.98 80⇓	*i*P	P	14 19 31.7 +3.5
	comp=Z,8.8nm,0.3s				
DBIC	Dimbokro	72.15 80	P	P	14 19 28.8 -0.3
	comp=Z,8.0nm,0.6s,baz=232,slow=5.5,SNR=22				
	comp=Z,8.0nm,0.6s				
DBIC	Dimbokro	72.15 80	P	P	14 19 28.7 -0.3
KIC	Kosan Boka	72.20 80⇓	*i*P	P	14 19 29.2 -0.2
	comp=Z,9.2nm,0.4s				
VNA3	Neumayer Olymp	73.54 162	P	P	14 19 36.7 +0.3
VNA1	Neumayer--Stat	73.78 161	P	P	14 19 38.5 +0.8
VNA2	Neumayer--Watz	74.14 162	P	P	14 19 40.0 +0.1
	baz=276,slow=5.3				
VNA2	Neumayer--Watz	74.14 162	PP	PP	14 22 25.5 +0.1
SNAA	Sanae	75.76 162	P	P	14 19 49.7 +0.5
SNAA	Sanae	75.76 162	PP	PP	14 22 37.9 -1.3
SNAA	Sanae	75.76 162	P	P	14 19 49.4 +0.1
SNAA			IAmb	IAmb	14 19 50.8
	comp=Z,23nm,1.3s				
TROLL	Troll, Antarti	77.47 162	P	P	14 19 59.7 +0.6
PFVI	Vila Bisbo	77.55 49	*e*P	P	14 20 01.6 +1.7
	comp=Z,84nm,1.6s				
YKA	Yellowknife Ar	77.72 343	P	P	14 20 00.0 -0.2
	comp=Z,4.4nm,0.6s,baz=143,slow=5.9,SNR=27				
	comp=Z,4.4nm,0.6s				
MORF	Marmelete	77.74 49	*e*P	P	14 20 02.8 +1.8
	comp=Z,30nm,1.2s				
PNCL	Nicolau / Gran	78.13 48	*e*P	P	14 20 04.6 +1.5
PCVE	Castro Verde	78.31 48	*e*P	P	14 20 05.9 +1.8
	comp=Z,34nm,1.6s				
PMTG	Montargil	78.71 47	*e*P	P	14 20 07.4 +1.1
KOTAN	Kotaneelee Air	79.20 338	P	P	14 20 09.2 +0.7
	baz=131,SNR=8.2				
PBAR	Barrancos	79.25 48	*e*P	P	14 20 10.1 +0.8
LIRD	Liard River Hi	79.53 336	P	P	14 20 10.9 +0.6
	baz=129,SNR=5.1				
PCBR	Castelo Branco	79.53 47	*e*P	P	14 20 11.4 +0.6
	comp=Z,18nm,1.9s				
MTE	Manteigas	79.69 46	*e*P	P	14 20 15.2 +3.5
T35M	Bob Quinn	79.81 333	P	P	14 20 13.3 +1.4
	baz=125				
TOA0	Torodi Ar. Sit	79.81 75	P	P	14 20 12.0 -0.8
TOA0			IAmb	IAmb	14 20 13.4
	comp=Z,34nm,1.1s				
TORD	Torodi Ar. Bea	79.81 75	P	P	14 20 12.5 -0.3
	comp=Z,21nm,0.9s,baz=284,slow=5.4,SNR=83				
	comp=Z,21nm,0.9s				
POLO	Lamas de Olo	79.87 45	*e*P	P	14 20 12.6 -0.1
MVO	Moncorvo	80.33 45	*e*P	P	14 20 15.9 +0.7
	comp=Z,20nm,2.0s				
WRAK	Wrangell Islan	80.45 332	P	P	14 20 16.1 +0.7
	baz=123				
DLBC	Dease Lake	80.56 334	P	P	14 20 17.2 +1.2
	baz=125				
S34M	Telegraph Cree	80.73 333	P	P	14 20 17.9 +1.1
	baz=124				
PBRG	Braganca	80.77 45	*e*P	P	14 20 18.1 +0.6
	comp=Z,16nm,1.8s				
QSPA	South Pole Qui	80.78 180	P	P	14 20 17.5 +0.3
QSPA			IAmb	IAmb	14 20 19.1
	comp=Z,21nm,1.2s				
WTLY	Watson Lake, Y	81.04 336	P	P	14 20 19.2 +0.7
	baz=127				
WRGLY	Wrigley	81.05 340	P	P	14 20 19.3 +0.9
	baz=132				
R33M	Jennings River	81.51 335	P	P	14 20 22.3 +1.2
	baz=125				
TGTN	Hyland Airport	81.69 337	P	P	14 20 23.5 +1.6
	baz=127,SNR=7.7				
PAB	San Pablo	81.69 48	P	P	14 20 23.4 +1.0
Q32M	Nakina River	81.82 334	P	P	14 20 23.9 +1.1
	baz=124				
ESDC	Sonseca Array	82.01 48	P	P	14 20 25.2 +1.1
	comp=Z,5.1nm,0.8s,baz=258,slow=5.2,SNR=31				
	comp=Z,5.1nm,0.8s				
S32K	Killisnoo	82.05 332	P	P	14 20 25.1 +1.4
	baz=121				
R32K	Eaglecrest	82.44 333	P	P	14 20 26.8 +1.0
	baz=121				
P33M	Teslin, Yukon	82.74 335	P	P	14 20 28.0 +0.5
	baz=123,SNR=7.3				
P32M	Atlin	82.78 334	P	P	14 20 27.9 +0.2
	baz=122				
S31K	Pelican	83.06 332	P	P	14 20 30.0 +1.0
	baz=120				
N32M	Quiet Lake	83.36 336	P	P	14 20 31.4 +0.8
	baz=123				
SKAG	Skagway	83.42 334	P	P	14 20 31.6 +0.8
	baz=121				
MMPY	Sheldon Lake,	83.47 337	P	P	14 20 32.3 +1.1
	baz=125,SNR=10				
WHY	Whitehorse	83.85 335	P	P	14 20 34.0 +0.8
	baz=121,SNR=5.7				
PLBC	Pleasant Camp	83.87 333	P	P	14 20 34.3 +1.0
	baz=120				
FARO	Faro, Yukon	84.06 336	P	P	14 20 35.0 +0.8
FARO			IAmb	IAmb	14 20 35.9
	comp=Z,17nm,0.9s				
FARO	Faro, Yukon	84.06 336	P	P	14 20 34.6 +0.5
	baz=123,SNR=20				
O30N	Mendenhall	84.41 335	P	P	14 20 36.6 +0.6
	baz=120,SNR=7.2				
M31M	Drury Creek, Y	84.46 336	P	P	14 20 36.4 +0.2
	baz=122,SNR=8.2				
P30M	Million Dollar	84.46 334	P	P	14 20 37.1 +0.8
	baz=119				
P29M	Windy Craggy	84.57 333	P	P	14 20 37.8 +0.9
	baz=119				
N31M	Braeburn, Yuko	84.65 335	P	P	14 20 37.8 +0.6
N31M	Braeburn, Yuko	84.65 335	P	P	14 20 37.8 +0.6
	baz=120,SNR=9.0				
RES	Resolute Bay	84.72 355	P	P	14 20 37.0 -0.2
	comp=Z,6.1nm,0.9s,baz=141,slow=9.9,SNR=5.3				
	comp=Z,6.1nm,0.9s				
HYT	Haines Junctio	85.04 334	P	P	14 20 39.8 +0.5
	baz=119				
N30M	Aishikik Lake	85.18 335	P	P	14 20 41.1 +1.3
	baz=119,SNR=14				
O29M	Mount Kennedy	85.26 334	P	P	14 20 41.0 +0.6
	baz=118				
PNL	Peninsula	85.33 333	P	P	14 20 41.8 +1.2
	baz=117				
TAM	Tamanrasset	85.40 66	P	P	14 20 42.4 +0.4
YUK6	Outpost Mounta	85.47 334	P	P	14 20 42.4 +0.8
	baz=118,SNR=6.9				
M30M	Minto, Yukon	85.61 336	P	P	14 20 42.5 +0.6
	baz=120,SNR=11				
MAYO	Mayo, Yukon	85.77 337	P	P	14 20 43.4 +0.7
	baz=121				
YUK4	Talbot Arm	85.78 334	P	P	14 20 43.7 +0.6
	baz=118,SNR=11				
PINM	Pinnacle	85.91 333	P	P	14 20 44.2 +0.6
	baz=116				
O28M	Mount Upton	86.18 334	P	P	14 20 45.6 +0.5
	baz=116				
M29M	Somme Creek	86.22 335	P	P	14 20 45.6 +0.5
	baz=118,SNR=20				
YUK8	Steele Glacier	86.23 334	P	P	14 20 46.0 +0.6
	baz=117,SNR=10.0				
L29M	L29M	86.41 336	P	P	14 20 46.5 +0.6
	baz=118,SNR=39				
K29M	Barlow Dome	86.52 337	P	P	14 20 47.3 +0.7
	baz=119				
YUK3	Moose Creek	86.75 334	P	P	14 20 48.2 +0.3
	baz=116,SNR=15				
CTG	Chitna Glacier	86.77 334	P	P	14 20 48.3 +0.4
	baz=116,SNR=6.1				
F31M	Tsiigehtchic	87.04 341	P	P	14 20 49.3 +0.5
	baz=123,SNR=6.1				
ISLE	Juniper Island	87.06 333	P	P	14 20 49.4 +0.1
ISLE			IAMs_20	IAMs_20	15 06 09.8
	comp=Z,1μm,20.0s				
BVCY	Beaver Creek	87.20 335	P	P	14 20 50.2 +0.4
	baz=116,SNR=15				
WAX	Waxell Ridge	87.23 333	IAMs_20	IAMs_20	15 06 13.2
	comp=Z,2μm,20.0s				
TGL	Tana Glacier	87.35 333	IAMs_20	IAMs_20	15 05 13.2
	comp=Z,1μm,20.0s				
DAWY	Dawson	87.36 337	P	P	14 20 50.4 -0.1
DAWY			IAmb	IAmb	14 20 51.6
	comp=Z,22nm,1.2s				
DAWY	Dawson	87.36 337	P	P	14 20 50.7 +0.2
	baz=117				
A36M	Sachs Harbour	87.41 346	P	P	14 20 50.4 -0.1
	baz=131				
INK	Inuvik	87.44 342	P	P	14 20 51.0 +0.2
	comp=Z,23nm,0.9s,baz=111,slow=4.5,SNR=29				
	comp=Z,23nm,0.9s				
INK	Inuvik	87.44 342	P	P	14 20 50.8 +0.1
	baz=123,SNR=12				
EPYK	Eagle Plains	87.48 339	P	P	14 20 51.2 +0.1
	baz=120,SNR=9.7				
I29M	Ogilvie Camp,	87.55 338	P	P	14 20 51.2 -0.2
I29M	Ogilvie Camp,	87.55 338	P	P	14 20 51.5 +0.1
	baz=118				
M27K	Edge Creek, AK	87.61 335	P	P	14 20 52.4 +0.5
M27K	Edge Creek, AK	87.61 335	P	P	14 20 52.4 +0.5
	baz=115,SNR=22				
G30M	tAoh Zraii Nji	87.62 340	P	P	14 20 52.5 +0.8
	baz=120				
VNDA	Vanda	87.62 191	P	P	14 20 51.5 -0.1
	comp=Z,1.3nm,1.0s,baz=128,slow=4.7,SNR=5.8				
	comp=Z,1.3nm,1.0s				
MCARA	McCarthy VSAT	87.69 334	P	P	14 20 52.5 +0.4
	baz=114,SNR=13				
KAIM	Kayak Island	87.74 332	P	P	14 20 53.0 +0.6
	baz=113				
EKA	Eskdalemuir Ar	87.77 33	P	P	14 20 52.7 +0.1
	comp=Z,6.3nm,0.8s,baz=247,slow=5.3,SNR=9.0				
	comp=Z,6.3nm,0.8s				
BCAR	Beaver Creek A	87.87 335	P	P	14 20 53.4 +0.4
L27K	Beaver Creek,	87.89 335	P	P	14 20 53.4 +0.3
L27K	Beaver Creek,	87.89 335	P	P	14 20 53.5 +0.4
	baz=115,SNR=34				
M26K	Nabesna, AK	88.10 334	P	P	14 20 54.2 +0.1
	baz=114,SNR=8.2				
BMRM	Bremner River	88.23 333	P	P	14 20 54.8 +0.1
	baz=113				
EGAK	Eagle	88.36 337	P	P	14 20 55.3 +0.1
EGAK	Eagle	88.36 337	P	P	14 20 55.6 +0.4
	baz=116,SNR=16				
N25K	Chitina, Valde	88.47 333	P	P	14 20 56.1 +0.1
	baz=113				
L26K	Log Cabin Wild	88.50 335	P	P	14 20 56.7 +0.7
	baz=114				
EYAK	Cordova Ski Ar	88.59 332	P	P	14 20 57.1 +0.7
	baz=112				
I27K	Kandik River	88.89 338	P	P	14 20 57.8 0.0
	baz=116,SNR=10				
KLU	Klutina	89.02 333	P	P	14 20 58.4 -0.1
KLU	Klutina	89.02 333	P	P	14 20 58.5 0.0
	baz=112,SNR=22				
HARP	HAARP	89.02 334	P	P	14 20 58.5 +0.1
	baz=112				
H27K	Steamboat Moun	89.13 338	P	P	14 20 59.4 +0.4
	baz=116,SNR=9.6				
SCRK	Sand Creek	89.14 336	P	P	14 20 59.5 +0.4
	baz=113,SNR=15				
P23K	Montague Islan	89.16 331	P	P	14 20 59.4 +0.3
	baz=110				
J26L	Joseph Creek	89.19 336	P	P	14 20 59.4 +0.1
J26L	Joseph Creek	89.19 336	P	P	14 20 59.5 +0.3
	baz=114,SNR=40				
GLI	Glacier Island	89.33 332	P	P	14 20 59.6 -0.3
	baz=110				
I26K	Coal Creek Min	89.35 337	P	P	14 21 00.2 +0.3
	baz=114				
M24K	Tolsona, Glenn	89.36 334	P	P	14 21 00.1 0.0
	baz=111,SNR=12				
PAX	Paxson	89.37 335	P	P	14 20 59.9 -0.2
	baz=112,SNR=14				
RIDG	Independent Ri	89.40 335	P	P	14 21 00.5 +0.3

baz=112
G27K Doyon Strip 89.43 339 P **P** 14 21 00.1 -0.2
baz=115,SNR=12
SCM Sheep Creek Mo 89.77 333 P **P** 14 21 02.2 +0.2
baz=110
K24K Donnelly Dome 89.81 335 P **P** 14 21 02.6 +0.4
baz=112
PWL Port Wells 89.89 332 P **P** 14 21 02.5 -0.1
baz=109
M23K Glacier View 89.93 333 P **P** 14 21 02.9 +0.2
baz=110
J25K Salcha River, 89.95 336 P **P** 14 21 02.5 -0.3
J25K Salcha River, 89.95 336 P **P** 14 21 03.3 +0.5
baz=112
E27K Coleen River 90.00 340 P **P** 14 21 03.1 +0.2
baz=116,SNR=6.7
KNK Knik Glacier 90.13 333 P **P** 14 21 03.6 -0.1
baz=109
SEW Seward 90.17 331 P **P** 14 21 03.4 -0.4
baz=108
SML Sawmill 90.20 333 P **P** 14 21 03.7 -0.3
SML Sawmill 90.20 333 P **P** 14 21 03.7 -0.3
baz=109,SNR=15
WAT6 Susitna Watana 90.21 334 P **P** 14 21 03.8 -0.3
baz=110,SNR=16
DHY Denali Highway 90.22 334 P **P** 14 21 03.9 -0.3
baz=110
G26K Porcupine Rive 90.25 339 P **P** 14 21 04.0 0.0
baz=114
PRP Porcupine Dome 90.35 337 P **P** 14 21 04.8 0.0
PRP IAmb IAmb 14 21 06.1
comp=Z,15nm,0.9s
PRP Porcupine Dome 90.35 337 P **P** 14 21 04.7 0.0
baz=112,SNR=11
PMR Palmer 90.50 333 P **P** 14 21 05.5 +0.2
baz=109
HDA Harding Lake 90.51 336 P **P** 14 21 05.1 -0.2
HDA IAmb IAmb 14 21 05.6
comp=Z,12nm,1.2s
HDA Harding Lake 90.51 336 P **P** 14 21 05.5 +0.2
baz=111,SNR=5.6
RC01 Rabbit Creek A 90.61 332 P **P** 14 21 05.9 +0.1
baz=108
ILAR Eielson Array 90.61 336 P **P** 14 21 05.5 -0.2
comp=Z,2.9nm,0.8s,baz=118,slow=4.1,SNR=24
comp=Z,2.9nm,0.8s
WAT1 Susitna Watana 90.64 334 P **P** 14 21 06.3 +0.3
baz=109
BRSE Bradley Lake S 90.67 331 P **P** 14 21 06.5 +0.3
baz=107
F26K Sheenjek River 90.68 339 P **P** 14 21 06.5 +0.4
baz=113,SNR=6.9
H25K Birch Creek 90.74 338 P **P** 14 21 06.9 +0.5
baz=112,SNR=12
DOU Dourbes 90.79 39 *d*PcP **P** 14 21 07.4 +0.5
BMRD Maredsous 90.95 39 *d*PcP **PcP** 14 21 08.2 -0.4
POKR Poker Plat Res 90.95 336 P **P** 14 21 07.5 +0.1
baz=110,SNR=5.1
M22K Willow 90.99 333 P **P** 14 21 08.0 +0.4
baz=108
G25K Bearman Lake 91.03 338 P **P** 14 21 08.4 +0.8
baz=111,SNR=7.1
COLA College 91.04 336 P **P** 14 21 07.9 +0.2
COLA College 91.04 336 P **P** 14 21 07.5 -0.2
baz=110
TCOL CIGO, UAF Yank 91.04 336 P **P** 14 21 07.8 0.0
baz=110,SNR=5.0
MCK McKinley 91.10 335 P **P** 14 21 08.6 +0.5
baz=109
F25K Christian Rive 91.17 339 P **P** 14 21 09.1 +0.6
baz=112
SUA Susitna One 91.19 332 P **P** 14 21 09.4 +0.7
baz=107
KEST Kesra 91.22 54 P **P** 14 21 09.7 +0.2
comp=Z,8.1nm,0.8s,baz=256,slow=4.4,SNR=8.6
comp=Z,8.1nm,0.8s
OHAK Old Harbor 91.25 328 P **P** 14 21 09.5 +0.7
baz=105
CUT Chulitna 91.26 333 P **P** 14 21 09.0 +0.2
baz=108,SNR=6.0
C27K Jago River 91.30 341 P **P** 14 21 09.4 +0.5
baz=114
BCLA Clavier 91.31 39 *d*PcP **PcP** 14 21 10.1 -0.2
E25K Arctic Village 91.34 339 P **P** 14 21 09.6 +0.5
baz=112
H24K Noodor Dome 91.37 337 P **P** 14 21 09.3 -0.1
baz=110,SNR=9.0
NEA2 Nenana 91.44 336 P **P** 14 21 09.6 0.0
baz=109,SNR=6.0
G24K Hadweenzic Riv 91.52 338 P **P** 14 21 10.5 +0.6
baz=110,SNR=6.1
TRF Thorofare Moun 91.59 334 P **P** 14 21 10.3 -0.3
baz=108
SKT Skwentna 91.70 333 P **P** 14 21 10.5 -0.4
SKT Skwentna 91.70 333 P **P** 14 21 10.8 -0.1
baz=107,SNR=9.4
I23K Minto, Yukon-K 91.73 336 P **P** 14 21 10.7 -0.2
baz=108,SNR=7.0
N20K Mount Spurr 91.79 332 P **P** 14 21 11.8 +0.4
baz=106
SPCR Spurr Chakacha 91.79 332 P **P** 14 21 11.3 -0.1
baz=106
C26K Camden Bay 91.80 341 P **P** 14 21 11.7 +0.5
baz=112
P19K Oil Pt 91.86 330 IAMs_20 IAMs_20 15 04 47.8
comp=Z,2μm,21.0s
F24K Squaw Lake 91.95 338 P **P** 14 21 12.6 +0.6
baz=110
H23K Yukon River 92.02 337 P **P** 14 21 12.7 +0.4
baz=108
D25K Kavik River 92.06 340 P **P** 14 21 12.8 +0.3
baz=111
BPAW Bear Paw Mtn. 92.08 335 P **P** 14 21 12.6 -0.1
baz=107,SNR=8.9
CHIR Chirikof Islan 92.16 326 P **P** 14 21 12.5 -0.7
baz=103
MLY Manley 92.25 336 P **P** 14 21 13.6 +0.1
baz=107,SNR=5.6
PPLA Purkeypile 92.25 334 P **P** 14 21 13.1 -0.5
baz=106
E24K Your Creek 92.35 339 P **P** 14 21 14.2 +0.4
baz=109
CAST Castle Rocks 92.35 334 P **P** 14 21 13.7 -0.2
baz=106,SNR=12
M20K Styx River 92.40 332 P **P** 14 21 13.9 -0.4
baz=105
G23K Bananza Creek 92.48 337 P **P** 14 21 14.7 +0.3
baz=108
O19K Port Alsworth 92.53 331 P **P** 14 21 14.4 -0.3
baz=104
CHUM Lake Minchumin 92.58 334 P **P** 14 21 14.2 -0.7
baz=106
COLD Coldfoot 92.70 338 P **P** 14 21 14.8 -0.6
baz=108
E23K Chandalar 92.75 339 P **P** 14 21 15.3 -0.5
baz=108
H22K Ishtalitna Cre 92.76 336 P **P** 14 21 15.1 -0.7
baz=107
N19K Bonanza Creek 92.76 331 P **P** 14 21 15.2 -0.7
baz=104
I21K Tanana 92.80 336 P **P** 14 21 15.3 -0.6
baz=106
L20K Farewell, AK 92.89 333 P **P** 14 21 15.7 -0.7
baz=104
TOLK Toolik Lake Re 92.91 339 P **P** 14 21 15.8 -0.6
baz=108
C24K Franklin Bluff 92.96 340 P **P** 14 21 17.0 +0.4
baz=109
M19K Big River Lodg 92.98 332 P **P** 14 21 15.9 -1.0
baz=104
G22K Bettles 93.10 337 P **P** 14 21 16.8 -0.5
baz=106
K20K Telida 93.20 334 P **P** 14 21 16.9 -0.9
baz=104
H21K Melozitna Rive 93.26 336 P **P** 14 21 17.9 -0.1
baz=105
L19K White Mountain 93.26 332 P **P** 14 21 17.6 -0.5
baz=104
Q16K King Salmon 93.34 329 P **P** 14 21 18.1 -0.4
baz=102
D23K Nanushuk River 93.40 340 P **P** 14 21 18.7 +0.1
baz=107
N18K Kilae Creek 93.40 331 P **P** 14 21 18.7 -0.1
baz=103
J20K Nowinta River 93.43 335 P **P** 14 21 18.3 -0.6
baz=104
E22K Anaktuvuk Pass 93.56 339 P **P** 14 21 19.4 0.0
baz=106

DAVOX Davos/Dischmat 93.57 43 P **P** 14 21 19.8 -0.4
comp=Z,2.4nm,0.7s,baz=205,slow=5.9,SNR=5.8
comp=Z,2.4nm,0.7s
C23K Itkillik River 93.63 340 P **P** 14 21 19.4 -0.2
baz=107
G21K Allakaket 93.76 337 P **P** 14 21 19.8 -0.6
baz=105
O17K Koliganek Bris 93.79 330 P **P** 14 21 19.9 -0.6
baz=102
F21K Alatna River 93.93 338 P **P** 14 21 21.1 0.0
baz=105
TTA Tatalina 93.95 333 P **P** 14 21 21.1 -0.3
baz=103
CLUD Cludinico 95.57 44 P **P** 14 21 28.9 -0.2
NOA NORSAR Array B 96.50 29 P **P** 14 21 33.9 +0.9
comp=Z,1.5nm,0.8s,baz=269,slow=4.9,SNR=3.1
comp=Z,1.5nm,0.8s
LODK Lodwar 111.11 90 *e*P **Pdif** 14 22 41.9 +2.6
LODK Lodwar 111.11 90 *e*P **Pdif** 14 22 41.9 +2.6
STKA Stephens Creek 125.81 219 PKP **PKPdf** 14 27 06.1 0.0
comp=Z,4.2nm,0.6s,baz=69,slow=2.3,SNR=12
ASAR Alice Springs 136.40 221 PKhKP PKPpre 14 27 17.2
comp=Z,0.2nm,0.5s,baz=131,slow=2.8,SNR=5.7
ASAR PKP **PKPdf** 14 27 26.7 +0.2
comp=Z,8.0nm,0.9s,baz=122,slow=2.0,SNR=41
WRA Warramunga Arr 138.66 225 PKhKP PKPpre 14 27 21.5
comp=Z,0.6nm,0.8s,baz=142,slow=2.0,SNR=6.7
WRA PKP **PKPdf** 14 27 30.4 -0.3
comp=Z,5.9nm,0.6s,baz=124,slow=1.9,SNR=84
WMQ Urumqi 142.66 20 *e*P **PKPdf** 14 27 36.5 -0.7
KSRS Korea Array 144.92 327 PKP **PKPab** 14 27 40.3 -0.1
comp=Z,16nm,0.7s,baz=62,slow=3.6,SNR=17
BJI Beijing 147.71 343 PKPbc **PKPbc** 14 27 48.3 -0.4
HHC Hu-ho-hao-te 148.00 350 *e*P **PKPdf** 14 27 46.5 0.0
GTA Gaotai 149.76 7 *e*PKPbc **PKPbc** 14 27 54.5 +0.3
GTA pPKP sPKPbc 14 28 07.0 -0.8
GTA sPKP 14 28 13.0
HYBB Hyderabad (bro 153.52 70 *e*PKiKP **PKPbc** 14 28 02.5 -0.8
PZH PanZhiHua 162.72 8 PKP **PKPdf** 14 28 04.8 -1.9

NNC ***26*** *14:15:33.7±0.7, 40°.12N×53°.83E, h0km, mb5.9, Error ellipse: s-maj=6.6km s-min=4.2km az=79.0*
MOS ***26*** *14:15:36.3±1.3, 39°.58N×54°.57E, h10km, mb6.0/66, MS5.1/58, Error ellipse: s-maj=3.6km s-min=2.6km az=28.1*
BJI ***26*** *14:15:36.3±0.0, 39°.53N×54°.46E, h11km, mb5.6/91, mB5.3/60, Ms5.5/98, Ms7 5.4/89*
IDC ***26*** *14:15:37.8±3.0, 39°.41N×54°.44E, h11km±18km, mb5.4/52, mbtmp5.5/65, ML4.9/11, MS5.0/76, Error ellipse: s-maj=8.4km s-min=6.1km az=168.0*
TEH ***26*** *14:15:38.8, 39°.41N×54°.47E, h20km, ML5.4*
GCMT ***26*** *14:15:39.6±0.1, 39°.42N±0°.01×54°.53E±0°.01, h27km, MW5.5/137, Moment Tensor Solution. s128,c211; s137,c284; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.18±.02; $M_{\theta\theta}$-1.32±.02; $M_{\phi\phi}$0.14±.01; $M_{r\theta}$1.26±.04; $M_{\theta\phi}$0.67±.01; $M_{\phi r}$0.66±.03; Best double couple: $M_0$2.00500×10^{17} NP1:ϕ_n81.00000°, δ70.00000°, λ61.00000°. NP2:ϕ_s318.00000°, δ35.00000°, λ142.00000°. Principal axes: T 2.0930, Plg56.0000°, Azm313.0000°; N -0.1760, Plg27.0000°, Azm91.0000°; P -1.9170, Plg20.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***26*** *14:15:39.4, 39°.50N×54°.54E, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.86; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$0.04; $M_{r\theta}$0.58; $M_{\theta\phi}$0.37; $M_{\phi r}$0.06; Fault plane solution: $M_0$1.12000×10^{17} NP1:ϕ_s305.20000°, δ32.40000°, λ116.30000°. NP2:ϕ_s94.86000°, δ61.29000°, λ74.30000°. Principal axes: T 1.0640, Plg70.0000°, Azm332.0000°; N 0.1075, Plg14.0000°, Azm103.0000°; P -1.1716, Plg15.0000°, Azm196.0000°;*
GII ***26*** *14:15:40.8±0.0, 39°.49N×54°.54E, h20km*
NEIC ***26*** *14:15:40.6±1.5, 39°.49N±0°.07×54°.51E±0°.07, h26km±1km, mb5.8/203, Ms_20 5.3/260, Mwb5.3/57, Mww5.4, Error ellipse: s-maj=12.0km s-min=9.4km az=193.0*
AZER ***26*** *14:15:43.3±0.7, 39°.36N×54°.11E, h10km, Error ellipse: s-maj=11.1km s-min=5.0km az=178.0*
NEIC ***26*** *14:15:43, 39°.70N×54°.75E, h20km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.86; $M_{\theta\phi}$0.40; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.38000×10^{17} NP1: ϕ_s314.00000°, δ32.00000°, λ129.00000°. NP2: ϕ_s90.00000°, δ65.00000°, λ69.00000°. Principal axes: T 1.4997, Plg63.0000°, Azm325.0000°; N -0.2694, Plg19.0000°, Azm99.0000°; P -1.2302, Plg18.0000°, Azm196.0000°;*

ISC 26 14:15:39.5±0.2, 39°.53N±0°.03×54°.45E±0°.02, h20km±2km, h21km:pP-P, n2023, σ1972/2218, mb5.8/402, MS5.2/233, 245C-98D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**2.27**	**145**	*e*Pn	**Pn**	**14 16 15.5**	**-0.3**
IMND	**Minoodasht**	**2.39**	**161**	*e*Pn	**Pn**	**14 16 17.2**	**-0.2**
IMND				*e*		14 17 13.2	
comp=Z,82μm,0.7s							
IGLO	**Ghaloghah**	**3.06**	**189**	*e*Pn	**Pn**	**14 16 25.9**	**-1.0**
IGLO				*e*		14 17 23.0	
comp=Z,55μm,0.7s							
GEYT	**Alibeck**	**3.29**	**118**	Pn	**Pn**	**14 16 28.5**	**-1.2**
comp=Z,169nm,0.3s,baz=307,slow=15,SNR=747							
GEYT				Sn	**Sn**	**14 17 04.7**	**-3.6**
comp=Z,650nm,0.3s,baz=311,slow=19,SNR=2.4							
GEYT				LR	LR	14 18 17.8	
comp=Z,24μm,19.6s,baz=319,slow=49							
comp=Z,388nm,0.4s							
GEYT	**Alibeck**	**3.29**	**118**	*e*Pn	**Pn**	**14 16 28.6**	**-1.2**
GYA0	**ALIBECK ARRAY**	**3.29**	**118**	P	**Pn**	**14 16 28.6**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**3.29**	**118**		**Pn**	**14 16 28.6**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**3.29**	**118**	||P	**Pb**	**14 16 36.2**	**-0.9**
GYA0B				||S	**Sb**	**14 17 25.0**	**+8.4**
GALA	**Gala**	**3.41**	**286**	*e*Pn	**Pb**	**14 16 36.0**	**-3.2**
GALA	**Gala**	**3.41**	**286**	P	**Pb**	**14 16 36.8**	**-2.4**
SNR=7.4							
GALA				S	**Sb**	**14 17 16.3**	**-3.9**
NDR	**Nardaran**	**3.58**	**288**	*e*Pn	**Pn**	**14 16 37.4**	**+3.6**
NDR	**Nardaran**	**3.58**	**288**	P	**Pn**	**14 16 37.5**	**+3.8**
SNR=40							
NDR				S	**Sn**	**14 17 18.1**	**+2.6**
IPRN	**Peran**	**3.68**	**208**	*e*Pn	**Pn**	**14 16 34.5**	**-0.8**
GOBA	**Gobu**	**3.73**	**285**	*e*Pn	**Pn**	**14 16 39.7**	**+3.9**
GOBA	**Gobu**	**3.73**	**285**	P	**Pb**	**14 16 40.2**	**-4.3**
SNR=38							
GOBA				S	**Sb**	**14 17 24.1**	**-5.1**
ISHM	**Shahmirzad**	**3.83**	**194**	*e*Pn	**Pn**	**14 16 37.4**	**-0.1**
IEMG	**Emamgholi**	**3.92**	**121**	*e*Pn	**Pn**	**14 16 38.0**	**-0.7**
IANJ	**Anjilo**	**4.08**	**186**	*e*Pn	**Pn**	**14 16 41.9**	**+1.1**
IANJ				*e*		14 17 30.6	
comp=Z,63μm,0.6s							
IFIR	**Firoozkooh**	**4.11**	**200**	*e*Pn	**Pn**	**14 16 42.3**	**+1.0**
LHJ2	**Lahijan - Gila**	**4.18**	**237**	*e*Pn	**Pn**	**14 16 40.5**	**-1.5**
LHJ2				*e*Pn	Pb	14 16 42.2	-10
ALIB	**Äli-Bayra**	**4.21**	**278**	*e*Pn	**Pn**	**14 16 45.6**	**+3.1**
ALIB	**Äli-Bayra**	**4.21**	**278**	P	**Pn**	**14 16 46.7**	**+4.2**
SNR=100							
ALIB				S	**Sn**	**14 17 32.8**	**+1.7**
ILAS	**Lasjerd**	**4.30**	**196**	*e*Pn	**Pn**	**14 16 44.8**	**+0.8**
QALM	**Alamut, Qazvin**	**4.31**	**225**	*e*Pn	**Pn**	**14 16 42.1**	**-1.9**
GBS	**Qobustan**	**4.34**	**285**	*e*Pn	**Pn**	**14 16 47.9**	**+3.6**
GBS	**Qobustan**	**4.34**	**285**	P	**Pn**	**14 16 47.6**	**+3.3**
SNR=193							
GBS				S	**Sn**	**14 17 37.8**	**+3.4**
IDMV	**Damavand**	**4.38**	**207**	*e*Pn	**Pn**	**14 16 45.6**	**+0.4**
ATGJ	**Altiaghaj**	**4.42**	**289**	*e*Pn	**Pn**	**14 16 48.1**	**+2.6**
ATGJ	**Altiaghaj**	**4.42**	**289**	P	**Pn**	**14 16 47.8**	**+2.3**
SNR=54							
ATGJ				S	**Sn**	**14 17 40.7**	**+4.3**
IAKL	**Akhelmad**	**4.48**	**129**	*e*Pn	**Pn**	**14 16 46.4**	**-0.1**
TEHA	**Amirabad Tehra**	**4.49**	**214**	*e*Pn	**Pn**	**14 16 47.1**	**+0.7**
TEH	**Tehran**	**4.50**	**214**	*e*Pn	**Pn**	**14 16 47.1**	**+0.5**
ASTR	**Astara**	**4.51**	**259**	*e*Pn	**Pn**	**14 16 46.9**	**+0.4**
ASTR	**Astara**	**4.51**	**259**	P	**Pn**	**14 16 46.1**	**-0.4**
SNR=28							
ASTR				S	**Sn**	**14 17 35.4**	**-2.9**
SIZA	**Siyzn**	**4.51**	**292**	*e*Pn	**Pn**	**14 16 49.2**	**+2.5**
SIZA	**Siyzn**	**4.51**	**292**	P	**Pn**	**14 16 49.8**	**+3.1**
SNR=511							
SIZA				S	**Sn**	**14 17 43.9**	**+5.3**
GAS1	**Astara - Iran**	**4.52**	**257**	*e*Pn	**Pn**	**14 16 46.1**	**-0.5**
IGZV	**Ghazvin**	**4.58**	**228**	*e*Pn	**Pn**	**14 16 48.2**	**+0.4**
IGZV				*e*		14 17 43.2	
comp=Z,63μm,0.4s							
JIR1	**Jirandeh**	**4.62**	**234**	*e*Pn	**Pn**	**14 16 48.0**	**-0.2**
CSN1	**Caspian**	**4.63**	**247**	*e*Pn	**Pn**	**14 16 49.1**	**+0.9**
PQL	**Pirkuli**	**4.66**	**288**	*e*Pn	**Pn**	**14 16 50.9**	**+2.2**
PQL	**Pirkuli**	**4.66**	**288**	P	**Pn**	**14 16 51.0**	**+2.2**
SNR=218							
PQL				S	**Sn**	**14 17 43.5**	**+1.3**
SAAT	**Saatly**	**4.66**	**276**	*e*Pn	**Pn**	**14 16 51.9**	**+3.4**
SAAT	**Saatly**	**4.66**	**276**	P	**Pn**	**14 16 52.0**	**+3.4**
SNR=31							
SAAT				S	**Sn**	**14 17 44.6**	**+2.6**
GLBA	**Clilabad**	**4.70**	**268**	*e*Pn	**Pn**	**14 16 50.2**	**+1.0**
GLBA	**Clilabad**	**4.70**	**268**	P	**Pn**	**14 16 50.3**	**+1.1**
SNR=234							
GLBA				S	**Sn**	**14 17 42.7**	**-0.3**
IPAY	**Payeh**	**4.73**	**129**	*e*Pn	**Pn**	**14 16 49.8**	**0.0**
QCNT	**Qazvin**	**4.77**	**229**	*e*Pn	**Pb**	**14 17 02.4**	**0.0**
IHSB	**Hasanabad**	**4.80**	**213**	*e*Pn	**Pn**	**14 16 51.3**	**+0.6**
IKRD	**Kardeh**	**4.85**	**123**	*e*Pn	**Pn**	**14 16 51.3**	**-0.2**
YRD	**Yardimli**	**4.86**	**265**	*e*Pn	**Pn**	**14 16 52.2**	**+0.7**
YRD	**Yardimli**	**4.86**	**265**	P	**Pn**	**14 16 52.3**	**+0.7**
SNR=403							
YRD				S	**Sn**	**14 17 43.8**	**-3.4**
IMHD	**Mahdasht**	**4.87**	**219**	*e*Pn	**Pn**	**14 16 52.3**	**+0.7**
IMHD				*e*		14 17 56.5	
comp=Z,28μm,0.9s							
KDMR	**Kurdemir**	**4.89**	**282**	*e*Pn	**Pn**	**14 16 53.9**	**+2.2**
KDMR	**Kurdemir**	**4.89**	**282**	P	**Pn**	**14 16 54.0**	**+2.2**
SNR=107							
KDMR				S	**Sn**	**14 17 47.7**	**0.0**
QUBA	**Quba, Azerbaij**	**4.89**	**294**	P	**Pn**	**14 16 54.6**	**+2.7**
SNR=88							
QUBA				S	**Sn**	**14 17 51.1**	**+3.2**
QUB	**Quba**	**5.00**	**294**	*e*Pn	**Pn**	**14 16 54.7**	**+1.3**
IVRN	**Varamin**	**5.02**	**206**	*e*Pn	**Pn**	**14 16 54.5**	**+0.9**
IVRN				*e*		14 17 04.3	
comp=Z,29μm,0.6s							
XNQ	**Khinaliq**	**5.09**	**291**	*e*Pn	**Pn**	**14 16 56.9**	**+2.2**
XNQ	**Khinaliq**	**5.09**	**291**	P	**Pn**	**14 16 56.9**	**+2.2**
SNR=190							
XNQ				S	**Sn**	**14 17 55.3**	**+2.3**
QSAR	**Qusar**	**5.11**	**295**	*e*Pn	**Pn**	**14 16 57.5**	**+2.7**
QSAR	**Qusar**	**5.11**	**295**	P	**Pn**	**14 16 57.6**	**+2.7**
SNR=76							
QSAR				S	**Sn**	**14 17 56.6**	**+3.3**
IMOG	**Moghan**	**5.16**	**130**	*e*Pn	**Pn**	**14 16 55.5**	**-0.3**
QBL	**Gabala**	**5.25**	**288**	*e*Pn	**Pn**	**14 16 58.3**	**+1.5**
QBL	**Gabala**	**5.25**	**288**	P	**Pn**	**14 16 58.3**	**+1.5**
SNR=66							
QBL				P	**Pn**	**14 16 58.3**	**+1.5**
SNR=66							
QBL				S	**Sn**	**14 17 57.8**	**+1.0**
QBL				S	**Sn**	**14 17 57.8**	**+1.0**
ZRD	**Zardab**	**5.25**	**280**	*e*Pn	**Pn**	**14 16 58.4**	**+1.7**
ZRD	**Zardab**	**5.25**	**280**	P	**Pn**	**14 16 58.4**	**+1.7**
SNR=455							
ZRD				P	**Pn**	**14 16 58.4**	**+1.7**
SNR=455							
ZRD				S	**Sn**	**14 17 58.8**	**+2.1**
ZRD				S	**Sn**	**14 17 58.8**	**+2.1**
BLQ	**Beylaqan**	**5.32**	**274**	*e*Pn	**Pn**	**14 16 58.1**	**+0.4**
BLQ	**Beylaqan**	**5.32**	**274**	P	**Pn**	**14 16 58.2**	**+0.4**
SNR=50							
BLQ				S	**Sn**	**14 17 56.1**	**-2.3**
IQOM	**Qom**	**5.40**	**211**	*e*Pn	**Pn**	**14 16 59.7**	**+0.7**
QABG	**Abgarm-Qazvin**	**5.42**	**227**	*e*Pn	**Pn**	**14 16 58.0**	**-1.4**
ISFB	**Sefidab**	**5.46**	**200**	*e*Pn	**Pn**	**14 17 00.3**	**+0.6**
IRAZ	**Razeghan**	**5.46**	**223**	*e*Pn	**Pn**	**14 17 00.3**	**+0.4**
IRAZ				*e*		14 18 04.8	
comp=Z,27μm,1.1s							
AKT	**Akhty**	**5.48**	**293**	*e*P	**Pn**	**14 17 00.8**	**+0.8**
AKT				*e*S	**Sn**	**14 18 04.6**	**+2.2**
AKT				pmax	pmax		
comp=Z,3μm,0.5s							
AKT				smax	smax		
comp=N,11μm,0.4s							
AKT				smax	smax		
comp=E,9μm,0.5s							
IMYA	**Miami**	**5.49**	**124**	*e*Pn	**Pn**	**14 16 59.3**	**-0.9**
QRD	**Qoradiz**	**5.51**	**272**	*e*Pn	**Pn**	**14 17 01.9**	**+1.5**
QRD	**Qoradiz**	**5.51**	**272**	P	**Pn**	**14 17 01.8**	**+1.4**
SNR=27							
QRD				S	**Sn**	**14 18 01.0**	**-2.1**
ISRB	**Sarab**	**5.57**	**254**	*e*Pn	**Pn**	**14 17 01.8**	**+0.4**
TBHD	**Torbat heydari**	**5.60**	**136**	*e*Pn	**Pn**	**14 17 02.3**	**+0.5**
BRDA	**Brd**	**5.64**	**280**	*e*Pn	**Pn**	**14 17 04.3**	**+2.3**
BRDA	**Brd**	**5.64**	**280**	P	**Pn**	**14 17 03.7**	**+1.7**
SNR=23							
BRDA				S	**Sn**	**14 18 07.5**	**+1.4**
AGDM	**Agdam**	**5.68**	**278**	P	**Pn**	**14 17 03.7**	**+1.1**
SNR=139							
AGDM				P	**Pn**	**14 17 03.7**	**+1.1**
SNR=139							
AGDM				S	**Sn**	**14 18 06.6**	**-0.6**
AGDM				S	**Sn**	**14 18 06.6**	**-0.6**
MNGR	**Mingechevir, A**	**5.78**	**285**	*e*Pn	**Pn**	**14 17 05.9**	**+2.0**
MNGR	**Mingechevir, A**	**5.78**	**285**	P	**Pn**	**14 17 05.9**	**+2.0**
MNGR	**Mingechevir, A**	**5.78**	**285**	P	**Pn**	**14 17 06.0**	**+2.0**
SNR=86							
MNGR				S	**Sn**	**14 18 10.9**	**+1.4**
SEKA	**Sheki**	**5.78**	**289**	*e*Pn	**Pn**	**14 17 04.9**	**+0.8**
SEKA	**Sheki**	**5.78**	**289**	P	**Pn**	**14 17 04.9**	**+0.8**
SEKA	**Sheki**	**5.78**	**289**	P	**Pn**	**14 17 05.8**	**+1.6**
SNR=432							
SEKA				P	**Pn**	**14 17 05.8**	**+1.6**
SNR=432							
SEKA				S	**Sn**	**14 18 12.3**	**+2.4**
SEKA				S	**Sn**	**14 18 12.3**	**+2.4**
TNSJ	**Nastanj**	**5.82**	**162**	*e*Pn	**Pn**	**14 17 04.6**	**-0.1**
KRSH	**Karshahi**	**5.85**	**199**	*e*Pn	**Pn**	**14 17 05.0**	**-0.2**
JRKH	**Jarkhoshk**	**5.91**	**126**	*e*Pn	**Pn**	**14 17 05.1**	**-0.9**
IHSH	**Hashtrud**	**6.06**	**251**	*e*Pn	**Pn**	**14 17 08.9**	**+0.7**
TVRZ	**Varzaqan**	**6.14**	**263**	*e*Pn	**Pn**	**14 17 11.2**	**+2.0**
IBST	**Bostanabad**	**6.19**	**255**	*e*Pn	**Pn**	**14 17 09.3**	**-0.6**
IBST				*e*		14 18 23.6	
comp=Z,24μm,0.6s							
MAK	**Makhachkala**	**6.25**	**305**	*c i*P	**Pn**	**14 17 10.0**	**-0.5**
MAK				*e*S	**Sn**	**14 18 23.9**	**+2.6**
MAK				pmax	pmax		
comp=Z,3μm,0.6s							
MAK				MLR	MLR		
comp=Z,11μm,13.0s							
QAMS	**Qamsar**	**6.28**	**204**	*e*Pn	**Pn**	**14 17 11.4**	**+0.3**
TKDS	**Koohdasht(Taba**	**6.28**	**159**	*e*Pn	**Pn**	**14 17 11.4**	**+0.3**
ZKTA	**Zakatala**	**6.32**	**292**	P	**Pn**	**14 17 12.9**	**+1.5**
ZKTA	**Zakatala**	**6.32**	**292**	P	**Pn**	**14 17 13.0**	**+1.6**
SNR=77							
ZKTA				P	**Pn**	**14 17 13.0**	**+1.6**
SNR=77							
ZKTA				S	**Sn**	**14 18 24.5**	**+1.5**
ZKTA				S	**Sn**	**14 18 24.5**	**+1.5**
HAGD	**Aghdareh**	**6.32**	**224**	*e*Pn	**Pn**	**14 17 11.9**	**+0.2**
TBJM	**Torbat-e-JAM**	**6.33**	**130**	*e*Pn	**Pn**	**14 17 11.1**	**-0.6**
GANJ	**Ganja**	**6.33**	**283**	*e*Pn	**Pn**	**14 17 11.9**	**+0.3**
GANJ	**Ganja**	**6.33**	**283**	P	**Pn**	**14 17 11.9**	**+0.3**
GANJ	**Ganja**	**6.33**	**283**	P	**Pn**	**14 17 11.9**	**+0.3**
SNR=34							
GANJ				S	**Sn**	**14 18 20.3**	**-3.0**
GNBR	**Gunib**	**6.34**	**299**	*de*P	**Pn**	**14 17 14.6**	**+2.8**
ANAR	**Anarak**	**6.35**	**185**	*e*Pn	**Pn**	**14 17 12.0**	**0.0**
TAB1	**Tabriz**	**6.51**	**259**	*e*Pn	**Pn**	**14 17 16.3**	**+2.1**
ORD	**Ordubad**	**6.59**	**267**	*e*Pn	**Pn**	**14 17 16.2**	**+1.0**
ORD	**Ordubad**	**6.59**	**267**	P	**Pn**	**14 17 16.2**	**+1.0**
SNR=392							
ORD				S	**Sn**	**14 18 28.9**	**-0.9**
IKLH	**Kolahrood**	**6.61**	**201**	*e*Pn	**Pn**	**14 17 16.0**	**+0.3**
DBC	**Dubki**	**6.71**	**304**	*c i*P	**Pn**	**14 17 18.8**	**+1

SNR=309
SBZ S Sn 14 18 36.8 -0.2
NAX Nakhchivan 6.95 270 *e*Pn Pn 14 17 21.7 +1.6
NAX Nakhchivan 6.95 270 P Pn 14 17 21.7 +1.6
NAX Nakhchivan 6.95 270 P Pn 14 17 22.1 +1.9
SNR=59
NAX P Pn 14 17 22.1 +1.9
SNR=59
NAX S Sn 14 18 38.7 +0.2
NAX S Sn 14 18 38.7 +0.2
BTLR Botlikh 6.96 299 *de*P Pn 14 17 22.7 +2.5
ISHB Shabestar 7.00 263 *e*Pn Pn 14 17 22.9 +1.9
HSAM Samen 7.08 223 *e*Pn Pn 14 17 22.9 +0.8
QZX Qazax, Azerbai 7.10 285 *e*Pn Pn 14 17 22.9 +0.7
QZX Qazax, Azerbai 7.10 285 P Pn 14 17 22.9 +0.7
SNR=365
QZX P Pn 14 17 22.9 +0.7
SNR=365
QZX S Sn 14 18 44.0 +1.7
QZX S Sn 14 18 44.0 +1.7
AFRZ Afriz 7.12 147 *e*Pn Pn 14 17 22.5 0.0
DVE Vedeno 7.14 301⇑*e*P Pn 14 17 24.6 +1.8
ICHK Chekchek 7.27 180 *e*Pn Pn 14 17 23.7 -1.0
IGAR Gharneh 7.37 196 *e*Pn Pn 14 17 27.0 +0.9
HYR Heyderabad 7.41 275 *e*Pn Pn 14 17 28.5 +2.0
HYR Heyderabad 7.41 275 P Pn 14 17 28.4 +1.9
SNR=39
HYR P Pn 14 17 28.4 +1.9
SNR=39
HYR S Sn 14 18 51.1 +1.2
HYR S Sn 14 18 51.1 +1.2
IPIR Pirpir 7.41 204 *e*Pn Pn 14 17 29.5 +2.8
MAHB Mahabad 7.42 251 *e*Pn Pn 14 17 29.1 +2.4
GROC Groznyy 7.47 302 *e*P Pn 14 17 30.0 +2.8
GROC *e*S Sn 14 18 52.5 +1.3
GROC pmax pmax
comp=Z,3μm,0.6s
GROC smax smax
comp=E,2μm,0.6s
GROC smax smax
comp=N,3μm,0.5s
GROC smax smax
comp=N,3μm,0.5s
ITEG Tejag 7.47 151 *e*Pn Pn 14 17 28.0 +0.5
GNI Garni 7.49 278 Pn Pn 14 17 29.7 +2.0
comp=N,327nm,0.5s,baz=70,slow=1.9,SNR=184
GNI Sn Sn 14 18 55.0 +2.8
comp=N,49nm,0.3s,baz=349,slow=21,SNR=3.7
GNI Garni 7.49 278 Pn Pn 14 17 29.1 +1.4
GNI Garni 7.49 278 *e*Pn Pn 14 17 29.1 +1.4
GNI Garni 7.49 278 P Pn 14 17 30.1 +2.4
GNI P Pn 14 17 30.1 +2.4
GNI P Pn 14 17 30.1 +2.4
GNI S Sn 14 18 52.6 +0.5
GNI S Sn 14 18 52.6 +0.5
GNI S Sn 14 18 52.6 +0.5
GNI Garni 7.49 278 Pn Pn 14 17 29.6 +1.9
MAKU Maku 7.56 272 *e*Pn Pn 14 17 30.2 +1.6
IMON Monand 7.60 145 *e*Pn Pn 14 17 30.3 +1.1
ISAD Sadrabad 7.62 185 *e*Pn Pn 14 17 29.8 +0.2
IDOB Doab 7.63 223 *e*Pn Pn 14 17 30.6 +1.0
IKOM Komasi 7.71 228 *e*Pn Pn 14 17 31.7 +1.0
IKMR Kamar-syah 7.73 221 *e*Pn Pn 14 17 32.2 +1.4
SHK1 Shahrekord 7.74 203 *e*Pn Pn 14 17 33.0 +1.8
BAGH Bagheran - Bir 7.75 149 *e*Pn Pn 14 17 30.7 -0.7
KER Kermanshah 7.79 231 *e*Pn Pn 14 17 32.1 +0.4
IRAM Ramesheh 7.88 193 *e*Pn Pn 14 17 34.1 +1.0
KCHF Cheshme Sefid, 7.92 231 *e*Pn Pn 14 17 33.7 +0.2
IBAF Bafgh 7.97 173 *e*Pn Pn 14 17 34.3 0.0
IKOO Kooshah 7.99 151 *e*Pn Pn 14 17 34.4 -0.3
IBRJ Brojen 8.03 200 *e*Pn Pn 14 17 36.3 +1.1
IDHR Dehrash 8.04 236 *e*Pn Pn 14 17 36.2 +0.9
IDAH Dahanechah 8.07 145 *e*Pn Pn 14 17 35.5 -0.2
HRA Herat 8.08 127 Pn Pn 14 17 34.0 -1.8
IMEH Mehriz 8.12 179 *e*Pn Pn 14 17 36.6 +0.2
IGHG Ghaleghazi 8.16 233 *e*Pn Pn 14 17 37.8 +0.8
CLDR Caldiran 8.17 271 *e*P Pn 14 17 38.3 +1.3
AKH Akhalkalaki 8.56 286 P Pn 14 17 44.6 +2.3
ZEI Tsey 8.59 296 *e*P Pn 14 17 41.1 -1.7
ZEI pmax pmax
comp=Z,335nm,0.6s
KLNJ Kolanjah 8.81 196 *e*Pn Pn 14 17 46.7 +0.7
AGRB Hanur-Agry 8.85 274 *e*P Pn 14 17 49.4 +3.1
ONI Oni 8.85 294 Pn Pn 14 17 47.1 +0.9
ONI Oni 8.85 294 P Pn 14 17 47.1 +0.9
AMIS Naft Sefid 8.90 210 *e*Pn Pn 14 17 48.6 +1.7
NCK Nalchik 9.05 299 *d i*P Pn 14 17 50.2 +1.3
KHGB Koh Gabri 9.28 169 *e*Pn Pn 14 17 52.0 -0.3
NHDN Nehbandan 9.31 149 *e*Pn Pn 14 17 52.2 -0.5
SENK Senkaya-Erzuru 9.34 280 *e*P Pn 14 17 56.3 +3.3
NEY Neytrino 9.56 297⇑*e*P Pn 14 17 56.9 +0.8
NEY pmax pmax
comp=Z,39nm,0.6s
KBZ Khabaz 9.61 300 Pn Pn 14 17 56.1 -0.4
comp=Z,55nm,0.3s,baz=127,slow=4.3,SNR=426
KBZ Sn Sn 14 19 37.5 -6.3
comp=Z,9.0nm,0.3s,baz=202,slow=10,SNR=1.4
KBZ LR LR 14 23 00.1
comp=Z,4μm,20.8s,baz=114,slow=46
comp=Z,173nm,0.4s
KBZ Khabaz 9.61 300 *de*P Pn 14 17 56.3 -0.2
TVBK TV Kerman 9.71 168 *e*Pn Pn 14 17 57.9 -0.4
SHA1 Shidzhatmaz 9.78 299 *d i*P Pn 14 17 58.9 -0.1
KVAR Kislovodsk Arr 9.83 301 Sn Sn 14 19 43.6 -5.9
KIV Kislovodsk 9.84 301 Pn Pn 14 17 58.8 -0.9
KIV Kislovodsk 9.84 301 *e*P Pn 14 17 58.8 -0.9
KIV *e*S Sn 14 19 50.9 +1.3
KIV pmax pmax
comp=Z,821nm,0.9s
KIV Kislovodsk 9.84 301 P Pn 14 17 59.6 -0.2
KIV P Pn 14 17 59.6 -0.2
KIV Kislovodsk 9.84 301 *i* Pn Pn 14 17 59.8 0.0
SNR=124
CHMN Cheshme madani 9.97 164 *e*Pn Pn 14 18 01.9 0.0
SHI Shiraz 9.99 190 *e*Pn Pn 14 18 01.9 -0.1
NGRK Negar Kerman 10.04 169 *e*Pn Pn 14 18 02.8 0.0
GOF Gofitskoye 10.09 307⇑*e*P Pn 14 18 03.4 +0.3
GOF *e*S Sn 14 19 51.9 -3.7
GOF pmax pmax
comp=Z,437nm,0.5s
GOF smax smax
comp=N,766nm,0.3s
GOF smax smax
comp=E,3μm,0.7s
KAZ1 Kazerun 10.15 194 *e*Pn Pn 14 18 04.6 +0.6
AB31 Akbulak array 10.49 20 P Pn 14 18 08.9 +0.4
AB31 S Sn 14 19 59.0 -6.3
AB31 Akbulak array 10.49 20 ⇑P Pn 14 18 00.5 -8.0
comp=E,102nm,0.3s
AB31 ⇑S Sn 14 19 55.8 -9.5
comp=E,1μm,0.5s
ARXR Arkhyz 10.66 296 *de*P Pn 14 18 15.1 +4.0
BNGB Bingl 10.69 271 *e*P Pn 14 18 15.4 +3.9
KBAM BAM 10.88 161 *e*Pn Pn 14 18 14.3 +0.2
AHBU AHRAM 10.95 195 *e*Pn Pn 14 18 14.8 -0.2
AKTO Aktyubinsk 11.19 12 Pn Pn 14 18 17.0 -1.2
comp=E,40nm,0.3s,baz=205,slow=9.5,SNR=292
AKTO Sn Sn 14 20 16.2 -6.4
comp=E,335nm,0.3s,baz=58,slow=22,SNR=14
AKTO LR LR 14 23 48.6
comp=E,25μm,18.3s,baz=187,slow=43
comp=E,101nm,0.3s
AKTO Aktyubinsk 11.19 12 P Pn 14 18 18.2 0.0
AKTO S Sn 14 20 17.6 -5.0
AKTO Aktyubinsk 11.19 12 ⇓P Pn 14 18 09.2 -9.0
comp=E,728nm,1.1s
AKTO ⇓S Sn 14 20 11.9 -11
comp=E,4μm,0.9s
TAS Tashkent 11.46 76 Pn Pn 14 18 19.4 -2.5
TAS Tashkent 11.46 76 P Pn 14 18 19.4 -2.5
CHGR Chuyangaron 11.47 90 Pn Pn 14 18 19.5 -2.6
CHGR Chuyangaron 11.47 90 P Pn 14 18 19.5 -2.6
VSLR Vesyoloye 11.50 295 *ce*P Pn 14 18 24.7 +2.3
GUZR Guzeripl' 11.59 297 *d i*P Pn 14 18 25.7 +2.0
PTK Pertek 11.70 272 *e*P Pn 14 18 28.3 +2.9
SOC Sochi 11.75 295 *e*P Pn 14 18 26.6 +0.7
SOC *e* 14 20 40.8
SOC pmax pmax
comp=Z,138nm,1.0s
SOC MLR MLR
comp=Z,2μm,19.0s
IUG Iuzhnay 12.09 73 *c i*P Pn 14 18 27.3 -3.3
IUG *e*S Sn 14 20 37.1 -7.8
IUG Iuzhnay 12.09 73⇑*i*P Pn 14 18 27.4 -3.3
baz=75
IUG *e*S Sn 14 20 37.1 -7.8
baz=75
GAR Garm 12.32 87 Pn 14 18 31.1 -2.6
KK31 Karatay Array 12.60 68 Pn 14 18 34.4 -3.0
KK31 Karatay Array 12.60 68 P Pn 14 18 36.5 -0.9
KK31 S Sn 14 21 01.8 +4.8
KK31 Karatay Array 12.60 68 ⇑P Pn 14 18 36.5 -0.9
comp=Z,532nm,0.9s
KK31 ⇓S Sn 14 21 01.8 +4.8
comp=Z,2μm,1.1s
KKAR Karatay Array 12.60 68 Pn 14 18 34.5 -2.9
KKAR Karatay Array 12.60 68 P Pn 14 18 34.5 -2.9
BTK Batken 12.61 82 Pn 14 18 34.7 -3.0
BTK Batken 12.61 82 P Pn 14 18 34.7 -3.0
KBL Kabul 12.68 109 Pn 14 18 37.4 -1.4
KBL Kabul 12.68 109 P Pn 14 18 37.4 -1.4
KBL Kabul 12.68 109 P Pn 14 18 38.3 -0.5
SNR=43
KBL P Pn 14 18 38.3 -0.5
SNR=43
DZA Taraz 13.15 70 *e*P Pn 14 18 42.2 -2.8
DZA Taraz 13.15 70 *e*P Pn 14 18 42.2 -2.8
baz=72
DZA *e*S Sn 14 20 59.4 -11
baz=72
DRK Karamyk 13.41 85 Pn 14 18 46.1 -2.6
SVSK Karacayir 13.44 277 *e*P Pn 14 18 51.6 +2.7
SHME Shamm 13.52 173 P Pn 14 18 49.4 -0.7
SNR=18
SHME P Pn 14 18 49.4 -0.7
SNR=18
SHME P Pn 14 18 49.4 -0.7
SNR=18
SHME Shamm 13.52 173 *i* Pn Pn 14 18 48.7 -1.4
SNR=27
BANOM Banah 13.66 173 P Pn 14 18 52.1 +0.1
SNR=43
BANOM P Pn 14 18 52.1 +0.1
SNR=43
BANOM Banah 13.66 173 *i* Pn Pn 14 18 50.7 -1.2
SNR=26
ANN Anapa 13.67 298 *e*P Pn 14 18 54.5 +2.5
ANN *e*S Sn 14 21 32.3 +9.2
ANN pmax pmax
comp=Z,109nm,0.7s
ANN MLR MLR
comp=Z,2μm,7.0s
ANN MLR MLR
comp=N,429nm,4.0s
ANN MLR MLR
comp=E,1μm,8.0s
BELG Belogornoye 13.70 342 Pn Pn 14 18 50.4 -2.0
comp=E,117nm,0.3s,baz=329,slow=23,SNR=118
BELG Sn Sn 14 21 13.2 -11
comp=E,80nm,0.3s,baz=78,slow=23,SNR=13
BELG LR LR 14 26 02.1
comp=E,10μm,18.4s,baz=152,slow=45
BELG Belogornoye 13.70 342 *c i*P Pn 14 18 49.7 -2.7
GAZ Gaziantep 13.73 266 Pn 14 18 53.1 +0.1
SAKB Bahrain 13.90 195 P Pn 14 18 54.9 -0.4
JASK Jask - Hormozg 13.92 167 P Pn 14 18 54.5 -1.1
SNR=18
SHMA Al-Shehemyia 13.94 193 P Pn 14 18 55.4 -0.4
UMQ Umm Al-Quwin 14.00 175 P Pn 14 18 58.6 +1.9
SNR=9.1
UMQ Umm Al-Quwin 14.00 175 *i* Pn Pn 14 18 56.8 +0.2
SNR=12
OHH Osh 14.09 80 P Pn 14 18 54.0 -3.9
KVT Kavak 14.13 282 *e*P Pn 14 18 59.8 +1.4
MASF Masafi 14.19 174 P Pn 14 18 58.7 -0.6
SNR=109
MASF P Pn 14 18 58.7 -0.6
SNR=109
MSFE Esma-Masafi 14.20 174 *i* Pn Pn 14 18 58.5 -0.9
SNR=54
BNN Bunyan 14.45 273 *e*P Pn 14 19 03.5 +0.7
BNN Bunyan 14.45 273 Pn 14 19 03.4 +0.6
NAZ Nazwa, Dubai 14.53 176 *i* Pn Pn 14 19 02.7 -1.3
SNR=12
VRH Novokhopyorsk 14.68 327 *e*P Pn 14 19 03.6 -2.2
VRH pmax pmax
comp=Z,150nm,0.6s
VRH MLR MLR
comp=Z,4μm,9.0s
HATD Hatta, Dubai 14.73 174 *i* Pn Pn 14 19 04.7 -1.9
SNR=57
DIKM Dikmen 14.73 284 ⇑P Pn 14 19 08.7 +2.1
YOZ Yozgat 14.75 277 *e*P Pn 14 19 08.9 +1.9
FAQ Al Faqa, Dubai 14.77 176 *i* Pn Pn 14 19 05.4 -1.8
SNR=9.6
AML Almayashu 14.80 74 P Pn 14 19 05.1 -2.8
SNR=59
ASHO Ashiyiah 14.86 174 P Pn 14 19 07.0 -1.5
SNR=82
ASHO P Pn 14 19 07.0 -1.5
SNR=82
ASHO P Pn 14 19 07.0 -1.5
SNR=82
ASHO Ashiyiah 14.86 174 *i* Pn Pn 14 19 07.0 -1.5
SNR=62
ASUD Al Ashush, Dub 14.88 177 *i* Pn Pn 14 19 07.4 -1.2
SNR=8.5
EKS2 Erkin-Say 14.91 72 P Pn 14 19 06.6 -2.5
SNR=40
AJN Ajban 14.93 178 P Pn 14 19 08.3 -1.0
SNR=15
AJN P Pn 14 19 08.3 -1.0
SNR=15
AJN P Pn 14 19 08.3 -1.0
SNR=15
AJN Ajban 14.93 178 *i* Pn Pn 14 19 07.9 -1.4
SNR=26
SMRA Abu-Samra 15.05 193 P Pn 14 19 10.9 0.0
CEP Cherat 15.12 107 P Pn 14 19 11.3 -0.6
NGCH Negor - Chabah 15.21 156 P Pn 14 19 10.6 -2.4
SNR=5.9
CORM Corum 15.24 279 *e*P Pn 14 19 14.5 +1.0
KARA Karaisali 15.37 268 *e*P Pn 14 19 16.4 +1.2
UCH Uchtor 15.42 73 P Pn 14 19 13.1 -3.0
SNR=48
AAK Ala-Archa 15.43 72 P Pn 14 19 13.3 -2.7
SNR=98
AAK Ala-Archa 15.43 72 Pn Pn 14 19 13.7 -2.3
comp=Z,8.9nm,0.3s,baz=237,slow=9.9,SNR=132
AAK Sn Sn 14 21 56.9 -10
comp=Z,10nm,0.3s,baz=19,slow=23,SNR=2.3
AAK LR LR 14 25 54.9
comp=Z,9μm,19.0s,baz=277,slow=40
comp=Z,150nm,0.7s
AAK Ala-Archa 15.43 72 Pn 14 19 13.3 -2.7
AAK Ala-Archa 15.43 72 P Pn 14 19 14.1 -2.0
AAK P Pn 14 19 14.1 -2.0
AAK P Pn 14 19 14.1 -2.0
AAK S Sn 14 22 04.6 -1.8
AAK S Sn 14 22 04.6 -1.8
AAK S Sn 14 22 04.6 -1.8
AAK Ala-Archa 15.43 72 *i* Pn Pn 14 19 13.5 -2.5
SNR=113
ALNE Al Ain 15.47 176 P Pn 14 19 14.7 -1.8
SNR=42
ALNE P Pn 14 19 14.7 -1.8
SNR=42
ALNE P Pn 14 19 14.7 -1.8
SNR=42
ALNE Al Ain 15.47 176 *i* Pn Pn 14 19 14.1 -2.3
SNR=27
THW Thamme Wali 15.49 110 P Pn 14 19 16.3 -0.4
USP Ospenovka 15.50 70 P Pn 14 19 14.0 -2.8
SNR=52
BTLS Baital 15.51 63 *c i*P Pn 14 19 12.6 -4.2
BTLS *e*S Sn 14 21 56.5 -11
BTLS Baital 15.51 63⇑*i*P Pn 14 19 12.7 -4.2
baz=65
BTLS *e*S Sn 14 21 56.6 -11
baz=65
OTUK Ortayu 15.54 50 P Pn 14 19 13.4 -3.8
OTUK Ortayu 15.54 50 ⇑P Pn 14 19 13.3 -4.0
comp=Z,661nm,1.1s
OTUK ⇓S Sn 14 22 08.9 +0.1
comp=Z,2μm,0.7s
GHWR Ruwais 15.57 185 P Pn 14 19 16.5 -1.3
GHWR P Pn 14 19 16.5 -1.3
GHWR P Pn 14 19 16.5 -1.3
SLWR Sila 15.59 189 P Pn 14 19 16.5 -1.4
SLWR P Pn 14 19 16.5 -1.4
SLWR P Pn 14 19 16.5 -1.4
SGDS Sogindy 15.62 69 *ce*P Pn 14 19 15.1 -3.2
SGDS *e*S Sn 14 22 06.4 -4.4
SGDS Sogindy 15.62 69⇑*e*P Pn 14 19 15.2 -3.2
baz=71
SGDS *e*S Sn 14 22 06.5 -4.4
baz=71
CHMS Chumysh 15.65 71 P Pn 14 19 16.0 -2.8
SNR=56
CHMS Chumysh 15.65 71 P Pn 14 19 19.0 +0.2
CHMS S Sn 14 22 17.3 +5.7
CHMS Chumysh 15.65 71 ⇑P Pn 14 19 19.0 +0.2
comp=Z,781nm,1.1s
CHMS ⇑S Sn 14 22 17.0 +5.4
comp=Z,544nm,1.1s
BZK Bozkurt 15.68 285 ⇓P Pn 14 19 18.5 -0.6
BZK Bozkurt 15.68 285 Pn Pn 14 19 18.8 -0.3
HWQ Hawqa 15.69 256 *e*P P 14 19 25.6 +2.2
MZWR Madinat Zayed 15.73 182 P Pn 14 19 18.9 -0.9
MZWR P Pn 14 19 18.9 -0.9
MZWR P Pn 14 19 18.9 -0.9
KBK Karagaybulak 15.77 72 P Pn 14 19 18.2 -2.2
SNR=118
VSR Storozhevoye 15.83 323 *e*P Pn 14 19 18.8 -2.2
VSR *e*S Sn 14 22 11.4 -4.3
VSR pmax pmax
comp=Z,580nm,0.6s
VSR MLR MLR
comp=Z,4μm,11.0s
MERS Mersin 15.89 267 *e*P P 14 19 24.0 -1.4
SIM Simferopol' 15.99 296 *c i*P Pn 14 19 23.5 +0.5
SIM *e*S Sn 14 22 19.0 -0.6
SIM pmax pmax
comp=Z,623nm,0.6s
ASF Jabal al Asfar 16.00 248 Pn Pn 14 19 22.6 -0.7
comp=Z,2.8nm,0.3s,baz=77,slow=4.3,SNR=7.5
ASF Sn S 14 22 33.1 -0.6
comp=Z,0.5nm,0.3s,baz=155,slow=16,SNR=1.5
comp=Z,28nm,0.8s
KAMT Kaman 16.02 276 *e*P Pn 14 19 24.6 +1.0
BR131 Keskin Array S 16.04 277 Pn Pn 14 19 24.2 +0.4
BR131 Keskin Array S 16.04 277 P Pn 14 19 24.2 +0.4
BR131 pmax pmax
comp=Z,94nm,0.8s
BR131 Keskin Array S 16.04 277 P Pn 14 19 25.4 +1.6
SNR=42
BR131 P Pn 14 19 25.4 +1.6
SNR=42
BRTR Keskin Array B 16.04 277 Pn Pn 14 19 24.9 +1.0
comp=Z,4.3nm,0.3s,baz=93,slow=12,SNR=112
comp=Z,30nm,0.7s
BRTR Keskin Array B 16.04 277 *e*P Pn 14 19 23.1 -0.7
BRTR Keskin Array B 16.04 277 *ce*P P 14 19 25.5 -1.7
BHL Bhannes 16.07 255 *e*P P 14 19 26.2 -1.4
HOQ Hoqain 16.08 170 P Pn 14 19 22.0 -2.4
SNR=19
HOQ P Pn 14 19 22.0 -2.4
SNR=19
HOQ P Pn 14 19 22.0 -2.4
SNR=19
VORR Voronezh 16.12 324 *e*P Pn 14 19 22.3 -2.4
VORR *i* S Sn 14 22 17.9 -4.8
VORR pmax pmax
comp=Z,1μm,0.7s
VORR smax smax
comp=N,4μm,1.3s
VORR smax smax
comp=E,3μm,1.3s
SERE Sereflikochisa 16.19 275 *e*P Pn 14 19 26.7 +0.9
NIL Nilore 16.19 105 Pn Pn 14 19 24.0 -1.8
NIL Nilore 16.19 105 P Pn 14 19 24.0 -1.8
NIL pmax pmax
comp=Z,161nm,0.9s
CHCP Chirah Chowk 16.20 105 P Pn 14 19 25.6 -0.3
QRWL Qaraoun 16.21 254 *e*P P 14 19 28.2 -0.9
ARQ Araqi 16.24 173 P Pn 14 19 25.0 -1.4
SNR=65
ARQ P Pn 14 19 25.0 -1.4
SNR=65
ARQ P Pn 14 19 25.0 -1.4
SNR=65
BIDO Bidbid 16.26 168 P Pn 14 19 27.0 +0.3
SNR=16
TKM2 Tokmak 2 16.27 71 P Pn 14 19 24.5 -2.3
SNR=70
TKM2 Tokmak 2 16.27 71 P Pn 14 19 26.3 -0.5
TKM2 S Sn 14 22 32.4 +5.7
TKM2 Tokmak 2 16.27 71 ⇑P Pn 14 19 26.3 -0.5
comp=Z,427nm,1.4s
TKM2 ⇑S Sn 14 22 32.4 +5.7
comp=Z,815nm,1.0s
NATI Neve Ativ 16.30 253 Pn P 14 19 28.8 -1.1
SULT Sultanhani-AKS 16.36 272 *e*P P 14 19 29.6 -1.1
KSHT Keshet 16.38 252 Pn P 14 19 30.5 -0.4
GEM Giv'at Ha'Em 16.38 253 Pn P 14 19 30.8 0.0
BOOM Boomskoye usch 16.49 73 Pn 14 19 28.1 -1.5
BOOM Boomskoye usch 16.49 73 P Pn 14 19 28.1 -1.5
BOOM pmax pmax
comp=Z,161nm,0.9s
MZR Muzera 16.50 183 P Pn 14 19 28.3 -1.3
SNR=98
MZR Muzera 16.50 183 *i* Pn Pn 14 19 27.3 -2.4
SNR=88
AFSR Afar-Bala (An 16.50 277 *e*P Pn 14 19 29.8 0.0
BRZS Berezniki 16.60 45 *c i*P Pn 14 19 27.3 -3.5
BRZS *e*S Sn 14 22 23.4 -11
BRZS Berezniki 16.60 45⇑*i*P Pn 14 19 27.4 -3.5
baz=46
BRZS *e*S Sn 14 22 23.4 -11
baz=46
KULU Kulu 16.61 275 *e*P P 14 19 32.6 -0.9
KSH Kashi 16.61 83 P Pn 14 19 25.3 -5.9
KSH pP P 14 19 32.0 -1.5
KSH S Sn 14 22 21.3 -14
KSH pmax pmax
comp=Z,110nm,1.0s
KSH LR LR
comp=Z,4μm,10.7s
KSH LR LR
comp=Z,16μm,13.7s
KSH LR LR
comp=Z,14μm,13.4s
WSAR Wadi Sarin 16.62 166 Pn Pn 14 19 28.2 -3.1
comp=Z,0.6nm,0.3s,baz=6.6,slow=13,SNR=27
WSAR Sn Sn 14 22 36.9 +1.6
comp=Z,0.3nm,0.3s,baz=65,slow=5.5,SNR=1.5
WSAR LR LR 14 27 50.4
comp=Z,4μm,18.6s,baz=17,slow=44
comp=Z,43nm,0.9s
WSAR Wadi Sarin 16.62 166 P Pn 14 19 29.8 -1.5
SNR=32
KEBE Keben-Mersin 16.63 266 *e*P P 14 19 32.8 -0.9
MMA0B Mount Meron ar 16.66 253 Pn P 14 19 34.4 +0.3
MMAI Mount Meron Ar 16.66 253 Pn Pn 14 19 31.3 -0.5
comp=Z,2.1nm,0.3s,baz=68,slow=13,SNR=12
MMAI Sn Sn 14 22 37.2 +0.9
comp=Z,0.4nm,0.3s,baz=263,slow=40,SNR=2.0
MMAI LR LR 14 26 40.2
comp=Z,2μm,20.7s,baz=294,slow=40
comp=Z,20nm,0.9s
MMC7 Mount Meron ar 16.67 253 Pn P 14 19 34.1 0.0
ANTO Ankara 16.67 278 ⇑P P 14 19 33.2 -0.9
ANTO Ankara 16.67 278 *e*P P 14 19 33.1 -1.0
ANTO Ankara 16.67 278 Pn Pn 14 19 32.5 +0.7
ANTO Ankara 16.67 278 P Pn 14 19 32.5 +0.7
ANTO pmax pmax
comp=Z,140nm,0.9s
ANTO Ankara 16.67 278 P P 14 19 33.7 -0.4
ANTO P P 14 19 33.7 -0.4
ANTO P P 14 19 33.7 -0.4
BR231 Keskin MP Arra 16.68 278 Pn 14 19 33.1 +1.1
LOD Lodumlu 16.69 278 *e*P Pn 14 19 32.2 +0.1
ULHL Ulahol 16.70 74 P Pn 14 19 32.8 +0.4
SNR=7.6
SMDO Samad 16.70 168 P Pn 14 19 31.0 -1.4
SNR=38
SMDO P Pn 14 19 31.0 -1.4
SNR=38
CHBY Cihanbeyli 16.77 274 *e*P Pn 14 19 33.9 +0.8
UMZA Um Al Zommool 16.77 178 P Pn 14 19 30.5 -2.6
UMZA P Pn 14 19 30.5 -2.6
UMZA P Pn 14 19 30.5 -2.6
LPSR Galich'ya Gora 16.89 326 *e*P Pn 14 19 33.3 -1.1
LPSR *e*S Sn 14 22 34.3 -7.0

LPSR pmax pmax
comp=Z,610nm,0.7s
LPSR MLR MLR
comp=Z,7μm,17.0s
BSY Bisya 16.89 171 P **Pn 14 19 35.0 +0.2**
SNR=33
BSY P **Pn 14 19 35.0 +0.2**
SNR=33
BSY P **Pn 14 19 35.0 +0.2**
SNR=33
KUU Kurty 16.91 68 *c*eP **Pn 14 19 31.6 -3.1**
KUU Kurty 16.91 68 ⇑*e*P **Pn 14 19 31.7 -3.1**
baz=70
MMLI Mount Malkishu 16.93 251 Pn **P 14 19 36.9 -0.1**
HMDT Nahal Hemdat 16.95 250 Pn **P 14 19 37.9 +0.8**
BLGI Bet Lehem HaGe 16.95 252 Pn **P 14 19 38.3 +1.1**
BERE Bereket-Mersin 17.04 266 *e*P **P 14 19 37.7 -0.6**
ARU Arti 17.13 8 Pn **Pn 14 19 34.4 -3.1**
comp=Z,0.3nm,0.3s,baz=190,slow=8.0,SNR=88
ARU Sn Sn 14 22 33.2 -14
comp=Z,0.5nm,0.3s,baz=12,slow=23,SNR=8.5
ARU LR LR 14 27 39.4
comp=Z,19μm,19.5s,baz=188,slow=42
comp=Z,69nm,0.4s
ARU Arti 17.13 8 *d i*P **Pn 14 19 34.3 -3.1**
ARU S **Sn 14 22 45.4 -1.7**
ARU pmax pmax
comp=Z,70nm,0.9s
ARU MLR MLR
comp=Z,16μm,19.0s
OFRI `Ofer 17.16 252 Pn **P 14 19 40.2 +0.7**
TEKE Tekeli-Mersin 17.18 265 *e*P **P 14 19 39.3 -0.4**
LADK Ladik-KONYA 17.25 273 *e*P **Pn 14 19 39.6 +0.5**
AAA Alma-Ata 17.25 70 *e*P **Pn 14 19 36.6 -2.5**
AAA *e*S **Sn 14 22 48.3 -2.1**
AAA MLR MLR
comp=Z,10μm,12.0s
AAA Alma-Ata 17.25 70 *e*P **Pn 14 19 36.6 -2.5**
baz=72
AAA *e*S **Sn 14 22 48.3 -2.1**
baz=72
AAA *e*LR LR 14 26 45.4
comp=Z,10μm,11.8s,baz=72
TNSS Tian-Shan 17.26 71 *e*P **Pn 14 19 37.6 -2.0**
TNSS Tian-Shan 17.26 71 *e*P **Pn 14 19 37.6 -2.0**
baz=73
KNDC Almaty 17.29 70 P **Pn 14 19 39.3 -0.3**
KNDC Almaty 17.29 70 ⇑P **Pn 14 19 39.3 -0.3**
comp=Z,562nm,1.9s
KNDC ⇓S **S 14 22 58.6 -1.4**
comp=Z,1μm,1.1s
WBK Wadi Bani Khal 17.30 166 P **Pn 14 19 40.0 +0.2**
SNR=30
WBK P **Pn 14 19 40.0 +0.2**
SNR=30
KONT Konya--Tatoy 17.30 272 *e*P **P 14 19 41.8 +0.7**
SLTI Sal'it 17.31 251 Pn **P 14 19 41.5 +0.4**
MDOK Medeo 17.34 71 *e*P **Pn 14 19 37.4 -2.9**
baz=73
MDOK *e*S **Sn 14 22 51.3 -1.6**
baz=73
MDOK *e*LR LR 14 26 40.4
comp=Z,9μm,12.7s,baz=73
BRVK Borovoye 17.35 34 **Pn 14 19 38.4 -1.8**
BRVK Borovoye 17.35 34 P **Pn 14 19 34.7 -5.4**
BRVK S **Sn 14 22 46.3 -6.2**
BRVK Borovoye 17.35 34 P **Pn 14 19 38.8 -1.3**
BRVK P **Pn 14 19 38.8 -1.3**
BRVK Borovoye 17.35 34 ⇑P **Pn 14 19 34.7 -5.4**
comp=Z,662nm,1.2s
BRVK ⇓S **Sn 14 22 46.3 -6.2**
comp=Z,1μm,0.9s
CHKK Chushkaly 17.37 68 *e*P **Pn 14 19 37.8 -2.7**
CHKK Chushkaly 17.37 68 *e*P **Pn 14 19 37.9 -2.7**
baz=70
BVA0 Borovoye Array 17.37 34 *i*P **Pn 14 19 38.8 -1.7**
BVA0 *i*S Sn 14 22 41.6 -11
BVA0 Borovoye Array 17.37 34 ⇑P **Pn 14 19 34.7 -5.7**
comp=Z,642nm,1.1s,baz=216,slow=12,SNR=1106
BVA0 ⇓S **Sn 14 22 46.9 -6.2**
comp=Z,1μm,0.9s,baz=228,slow=24,SNR=12
BVAR Borovoye Array 17.37 34 Pn **Pn 14 19 38.3 -2.2**
comp=Z,6.5nm,0.3s,baz=219,slow=12,SNR=98
BVAR Sn **Sn 14 22 42.9 -10**
comp=Z,56nm,0.3s,baz=225,slow=25,SNR=14
BVAR LR LR 14 27 37.0
comp=Z,14μm,18.1s,baz=224,slow=41
comp=Z,86nm,0.7s
JMDO Jabal Madar 17.39 169 P **Pn 14 19 41.0 +0.2**
SNR=44
JMDO P **Pn 14 19 41.0 +0.2**
SNR=44
JMDO P **Pn 14 19 41.0 +0.2**
SNR=44
CSS Mathiatis 17.41 261 P **P 14 19 42.9 +0.7**
GHAJ Ghor Haditha 17.42 248 P **P 14 19 42.4 +0.1**
YUVA Yuva-Kibriscik 17.47 280 *e*P **P 14 19 42.9 -0.1**
KIZT Kizilcal 17.50 275 *e*P **P 14 19 43.3 -0.1**
KDZE Karadeniz Ereo 17.60 283 ⇓P **P 14 19 45.6 +1.3**
RAYN Ar Rayn 17.67 208 P **Pn 14 19 42.3 -2.1**
RAYN Ar Rayn 17.67 208 P **Pn 14 19 42.3 -2.1**
RAYN pmax pmax
comp=Z,341nm,1.1s
RAYN Ar Rayn 17.67 208 P **Pn 14 19 42.8 -1.6**
RAYN Ar Rayn 17.67 208 *i*Pn **Pn 14 19 42.0 -2.4**
SNR=291
AUMIH MIHALICIK 17.67 278 *e*P **P 14 19 45.2 -0.1**
AUSIV SIVRIHISAR 17.68 277 *e*P **P 14 19 44.9 -0.4**
SVRH Sivrihisar-ESK 17.69 277 *e*P **P 14 19 45.2 -0.2**
AMAZ Amatzia 17.76 249 Pn **P 14 19 47.8 +1.6**
GAZI Gazipasa 17.77 266 *e*P **P 14 19 45.9 -0.3**
SVE Sverdlovsk 17.78 11 *c*eP **Pn 14 19 45.2 -0.3**
SVE *e*S Sn 14 22 51.9 -11
SVE pmax pmax
comp=Z,677nm,1.3s
SVE MLR MLR
comp=Z,6μm,13.0s
SEYD Seydisehir-KON 17.83 270 *e*P **P 14 19 48.4 +1.4**
MDUB Mudurnu 17.83 280 *e*P **Pn 14 19 46.3 -0.1**
JMU Jammu 17.85 106 *e*P **Pn 14 19 44.6 -1.9**
ARXS Arharly 18.01 67 *e*P **Pn 14 19 46.0 -2.5**
ZFRI Zfri 18.11 246 Pn **P 14 19 52.2 +2.2**
SRCK Saricakaya, Es 18.31 279 *e*P **P 14 19 53.0 +0.9**
SATY Saty 18.33 71 *e*P **Pn 14 19 51.4 -1.1**
SATY Saty 18.33 71 *e*P **Pn 14 19 51.4 -1.1**
baz=73
SATY *e*S **S 14 23 21.7 +0.5**
baz=73
PRNI Paran 18.35 246 Pn **Pn 14 19 54.3 +1.6**
GULT Gulveren 18.35 280 *e*P **Pn 14 19 53.7 +0.9**
BORA Eskisehir 18.46 279 *e*P **Pn 14 19 54.8 +0.8**
SAUV Serdivan-Sakar 18.47 282 *e*P **Pn 14 19 55.0 +0.9**
KZIT Kziot 18.47 248 Pn **Pn 14 19 55.9 +1.7**
HRFI Mount Harif 18.51 245 Pn **Pn 14 19 56.1 +1.4**
TDK Taldyqorghan 18.53 65 *e*P **P 14 19 51.5 -3.0**
TDK *e*S **Sn 14 23 16.1 -5.1**
TDK MLR MLR
comp=Z,8μm,12.0s
TDK Taldyqorghan 18.53 65 *e*P **P 14 19 51.6 -3.0**
baz=67
TDK *e*S **Sn 14 23 16.1 -5.1**
baz=67
TDK *e*LR LR 14 27 18.1
comp=Z,8μm,11.9s,baz=67
KPKS Kokpek 18.56 70 *e*P **P 14 19 52.8 -2.2**
KPKS *e*S **Sn 14 23 20.3 -1.7**
KPKS Kokpek 18.56 70 *e*P **P 14 19 52.8 -2.2**
baz=72
KPKS *e*S **Sn 14 23 20.4 -1.7**
baz=72
SHUT Suhut-Afyon 18.58 275 *e*P **Pn 14 19 56.6 +1.0**
THN Thein Dam 18.59 106 *e*P **P 14 19 53.5 -1.7**
THN *i*x x 14 23 28.1
JASL Jaisalmer 18.61 128 *ex* x 14 20 04.0
KRMI Paran Flat 18.68 246 Pn **Pn 14 19 58.3 +1.5**
MHTO MHTO 18.73 170 P **P 14 19 56.0 -0.8**
SNR=58
MHTO P **P 14 19 56.0 -0.8**
SNR=58
MHTO P **P 14 19 56.0 -0.8**
SNR=58
MBRI Mt Berech 18.74 245 Pn **Pn 14 19 58.9 +1.4**
ISP Isparta 18.75 272 *e*P **Pn 14 19 58.7 +1.1**
ISP Isparta 18.75 272 P **P 14 19 57.2 +0.1**
ISP Isparta 18.75 272 *c i*P **Pn 14 19 58.0 +0.4**

ISP pmax pmax
comp=Z,37nm,0.9s
UZB Uzynbulak 18.79 71 *e*P **P 14 19 57.1 -0.4**
UZB *e*S **S 14 23 29.3 -1.1**
UZB Uzynbulak 18.79 71 *e*P **P 14 19 57.2 -0.4**
baz=73
UZB *e*S **S 14 23 29.4 -1.1**
baz=73
EIL Elat 18.79 244 Pn **Pn 14 19 59.4 +1.4**
comp=Z,3.2nm,0.3s,baz=24,slow=6.7,SNR=50
EIL S **S 14 23 29.3 -1.0**
comp=Z,8.3nm,0.8s,baz=7.6,slow=8.9,SNR=1.1
EIL Elat 18.79 244 Pn **Pn 14 19 59.3 +1.3**
CAVI Cavuskoy 18.89 280 *e*P **Pn 14 19 59.6 +0.4**
ADVT Abdulvahap 18.95 281 *e*P **Pn 14 20 00.4 +0.6**
HRT Hereke 18.97 282 *e*P **Pn 14 20 00.0 -0.1**
KORT Korkueli 19.08 270 *e*P **P 14 20 00.7 0.0**
SHLS Shalkode 19.11 71 *e*P **Pn 14 20 04.5 +2.6**
SHLS *e*S **S 14 23 45.1 +8.3**
SHLS Shalkode 19.11 71 *e*P **Pn 14 20 04.5 +2.6**
baz=73
SHLS *e*S **S 14 23 45.2 +8.3**
baz=73
PDGK Podgornoye 19.14 70 P **P 14 20 00.8 -0.6**
PDGK Podgornoye 19.14 70 ⇓P **P 14 20 00.8 -0.6**
comp=Z,109nm,1.0s
PDGK ⇑S **S 14 23 42.1 +4.6**
comp=Z,348nm,0.9s
YLV Yalova 19.21 281 *e*P **Pn 14 20 03.1 0.0**
TVSB Tavsanli 19.27 278 *e*P **P 14 20 02.6 -0.2**
KIRV Kirov 19.35 352 P **Pn 14 20 04.3 -0.2**
comp=Z,218nm,0.4s,baz=16,slow=0.6,SNR=61
KIRV S Sn 14 23 28.2 -12
comp=Z,213nm,0.7s,baz=323,slow=24,SNR=5.8
KIRV LR LR 14 29 29.7
comp=Z,14μm,18.7s,baz=167,slow=43
KIRV Kirov 19.35 352 *c i*P **P 14 20 02.4 -0.9**
ISK Istanbul-Kandi 19.41 283 *e*P **P 14 20 04.5 +0.3**
ISK Istanbul-Kandi 19.41 283 P **P 14 20 03.1 -1.1**
ISK Istanbul-Kandi 19.41 283 P **P 14 20 03.1 -1.1**
KAVV Kandilli-Istan 19.41 283 *e*P **P 14 20 04.5 +0.3**
KLYT Kilyos 19.41 283 *e*P **Pn 14 20 07.2 +1.8**
ELL Elmali 19.48 270 *e*P **Pn 14 20 07.4 +0.9**
ELL Elmali 19.48 270 **Pn 14 20 07.0 +0.5**
ELL Elmali 19.48 270 P **Pn 14 20 07.0 +0.5**
ELL pmax pmax
comp=Z,903nm,0.8s
ARMT Armutlu 19.60 281 *e*P **Pn 14 20 07.0 -0.7**
MDNY Mudanya-Bursa 19.60 281 *e*P **Pn 14 20 07.5 -0.2**
BHK Bhakra 19.61 108 *ex* x 14 20 07.6
BHK *i*x x 14 23 48.0
JURR Jurilovca 19.63 294 ⇑P **Pn 14 20 07.4 -0.6**
OBN Obninsk 19.65 328 ⇓P **P 14 20 07.1 +0.4**
OBN Obninsk 19.65 328 P **P 14 20 06.7 0.0**
comp=Z,11nm,0.3s,baz=136,slow=3.0,SNR=36
OBN S **S 14 23 39.4 -7.9**
comp=Z,36nm,0.5s,baz=307,slow=23,SNR=2.9
OBN LR LR 14 29 00.6
comp=Z,1μm,18.8s,baz=135,slow=41
comp=Z,102nm,0.5s
OBN Obninsk 19.65 328 P **P 14 20 07.2 +0.4**
OBN IAmb IAmb 14 20 12.1
comp=Z,488nm,0.6s
OBN Obninsk 19.65 328 *c i*P **P 14 20 06.6 -0.1**
OBN *e*S **S 14 23 47.3 -0.1**
OBN pmax pmax
comp=Z,282nm,0.8s
OBN MLR MLR
comp=Z,7μm,15.0s
MOS Moscow 19.70 331 *e*P **P 14 20 05.8 -1.4**
MOS *e*S **S 14 23 38.3 -10**
MOS pmax pmax
comp=Z,842nm,1.1s
MOS pmax pmax
comp=N,1μm,1.7s
MOS pmax pmax
comp=E,1μm,1.7s
MOS pmax pmax
comp=Z,2μm,1.7s
MOS pmax pmax
comp=N,645nm,1.1s
MOS pmax pmax
comp=E,449nm,1.1s
MOS MLR MLR
comp=N,4μm,13.0s
MOS MLR MLR
comp=Z,6μm,13.0s
MOS MLR MLR
comp=E,3μm,12.0s
DQM DQM 19.71 171 P **P 14 20 08.0 +0.3**
SNR=29
TSCT Constanta Port 19.73 292 ⇓P **Pn 14 20 09.1 -0.1**
EFOR EFORIE 19.74 292 P **Pn 14 20 09.1 -0.2**
TSMN Mangalia Port- 19.75 291 P **Pn 14 20 09.7 +0.3**
MANR Mangalia 19.75 291 P **Pn 14 20 09.3 -0.2**
CTKS Kestanelik-??a 19.81 283 *e*P **Pn 14 20 10.6 +0.4**
CAME Cameli-Denizli 19.90 271 *e*P **Pn 14 20 10.9 -0.6**
KSL Kastellorizon 19.91 268 P **P 14 20 09.7 +0.1**
KSL Kastellorizon 19.91 268 P **P 14 20 09.7 +0.1**
TIRR Tirgusor 19.93 293 ⇑P **P 14 20 10.5 +0.7**
TIRR Tirgusor 19.93 293 ⇑P **P 14 20 10.5 +0.7**
TIRR Tirgusor 19.93 293 P **P 14 20 10.1 +0.2**
TIRR IAmb IAmb 14 20 17.3
comp=Z,400nm,0.6s
TIRR Tirgusor 19.93 293 P **P 14 20 10.1 +0.2**
TIRR pmax pmax
comp=Z,400nm,0.6s
CTYL Yalikoy Yolu 19.96 284 *e*P **Pn 14 20 11.7 -0.3**
TPGR Topolog 19.96 294 ⇑P **P 14 20 10.8 +0.5**
MILM Milestii Mici 20.03 300 ⇑P **P 14 20 11.2 +0.4**
MILM Milestii Mici 20.03 300 ⇑*i*P **P 14 20 10.0 -0.9**
comp=Z,2μm,0.5s
MILM *e*S **S 14 23 47.0 -8.0**
MILM *e*L L 14 29 25.0
MILM LRM MLR 14 29 43.0
comp=Z,5μm,15.0s
MILM Milestii Mici 20.03 300 *c i*P **P 14 20 10.0 -0.9**
MILM *e*S **S 14 23 47.0 -8.0**
MILM *e* 14 23 53.0
MILM pmax pmax
comp=Z,4μm,2.4s
MILM MLR MLR
comp=Z,5μm,15.0s
SLVT Silivri 20.04 283 *e*P Pn 14 20 13.1 +0.2
PSN Preselentsi 20.04 290 P Pn 14 20 12.4 -0.5
KIS Kishinev 20.04 300 ⇑P **P 14 20 11.4 +0.4**
KIS Kishinev 20.04 300 ⇑*i*P **P 14 20 11.0 0.0**
comp=Z,1μm,0.6s
KIS *i*S **S 14 23 53.0 -2.3**
KIS *e*L L 14 26 53.0
KIS LRM MLR 14 29 44.0
comp=Z,2μm,15.0s
KIS Kishinev 20.04 300 *c i*P **P 14 20 11.0 0.0**
KIS *i*S **S 14 23 53.0 -2.3**
KIS *e* 14 23 56.0
KIS pmax pmax
comp=Z,2μm,2.3s
KIS MLR MLR
comp=E,2μm,15.0s
KIS MLR MLR
comp=Z,3μm,15.0s
FETY Fethiye 20.15 270 *e*P **P 14 20 11.9 -0.5**
CVDA Cernavoda 20.19 292 ⇑P **P 14 20 13.6 +0.9**
GIUM Giurgiulesti 20.19 296 ⇓P Pn 14 20 13.7 -0.9
TLBR Topalu 20.20 293 ⇓P Pn 14 20 13.9 -0.8
CFR Carcaliu 20.20 295 ⇑P **P 14 20 12.9 +0.1**
CFR Carcaliu 20.20 295 ⇑P **P 14 20 12.9 +0.1**
KURBB Kurchatov Arra 20.21 49 P Pn 14 20 13.9 -1.0
comp=Z,162nm,1.0s,baz=252,slow=12,SNR=236
KURBB S S 14 23 42.6 -16
comp=Z,51nm,0.7s,baz=246,slow=16,SNR=4.3
comp=Z,162nm,1.0s
KURBB Kurchatov Arra 20.21 49 P **P 14 20 10.3 -2.6**
KURBB S **S 14 23 57.6 -1.0**
KURBB Kurchatov Arra 20.21 49 ⇓P **P 14 20 10.3 -2.6**
comp=Z,263nm,1.1s
KURBB ⇑S **S 14 23 57.6 -1.0**
comp=Z,1μm,0.9s
HARR Harsova 20.29 293 ⇑P **P 14 20 14.7 +0.9**
HARR Harsova 20.29 293 ⇑P **P 14 20 14.7 +0.9**
KURK Kurchatov 20.30 49 P Pn 14 20 14.9 -1.0
KURK IAmb IAmb 14 20 17.2
comp=Z,471nm,1.1s
KURK Kurchatov 20.30 49 IAMs_20 IAMs_20 14 29 01.6

comp=Z,11μm,18.0s
KURK Kurchatov 20.30 49 P **P 14 20 14.6 +0.8**
KURK S S 14 23 46.7 -14
KURK Kurchatov 20.30 49 P Pn 14 20 15.2 -0.7
KURK P Pn 14 20 15.2 -0.7
KURK Kurchatov 20.30 49 ⇓P **P 14 20 10.7 -3.1**
comp=Z,488nm,1.1s
KURK ⇑S **S 14 23 59.7 -0.7**
comp=Z,587nm,0.9s
TATR Tatarca 20.32 296 ⇑P **P 14 20 14.7 +0.7**
LEOM Leova 20.32 299 ⇓P **P 14 20 14.9 +0.8**
LEOM Leova 20.32 299 ⇓P **P 14 20 14.9 +0.8**
VLDR Vladesti 20.33 297 ⇑P **P 14 20 14.9 +0.7**
ICOR Ion Corvin 20.34 292 ⇑P Pn 14 20 15.9 -0.5
SCTR Scanteiesti 20.36 296 ⇓P **P 14 20 15.3 +0.7**
EDC Edincik 20.38 281 *e*P Pn 14 20 16.5 -0.4
DALY Dalyan (Mula) 20.44 271 *e*P **P 14 20 15.9 +0.5**
SCHL Schela 20.46 296 ⇑P **P 14 20 16.5 +0.9**
VARL Varlezi 20.50 297 ⇑P **P 14 20 16.9 +0.9**
IZVR Izvoarele 20.51 296 ⇑P **P 14 20 16.9 +0.8**
SLCR Slobozia Conac 20.51 296 ⇓P **P 14 20 17.2 +1.0**
MRMT Marmara Adasi 20.55 282 *e*P Pn 14 20 18.4 -0.6
TUDR 20.58 296 ⇓P **P 14 20 17.8 +0.9**
VASR Vaslui 20.66 299 ⇑P **P 14 20 18.5 +0.7**
BIR Birlad 20.71 298 ⇓P **P 14 20 19.3 +1.0**
BIR Birlad 20.71 298 ⇓P **P 14 20 19.3 +1.0**
AMRR Amara 20.71 293 ⇑P **P 14 20 19.5 +1.2**
AMRR Amara 20.71 293 ⇑P **P 14 20 19.5 +1.2**
BHUJ Bhuj 20.73 137 *e*P **P 14 20 18.2 -0.4**
BHUJ IAmb IAmb 14 20 21.0
comp=Z,257nm,1.1s
AYDB Zeytinkoy-Aydi 20.75 274 *e*P Pn 14 20 20.5 -0.9
TURN Turunc 20.77 271 *e*P **P 14 20 19.6 +0.6**
RASA Rasa 20.82 292 ⇓P Pn 14 20 20.8 -1.1
GHRR 20.83 297 ⇑P Pn 14 20 21.1 -0.9
DOK Doka 20.84 181 P **P 14 20 19.2 -0.7**
SNR=122
DOK P **P 14 20 19.2 -0.7**
SNR=122
DOK P **P 14 20 19.2 -0.7**
SNR=122
AKASG Malin Array Be 20.91 311 P **P 14 20 20.6 +0.2**
comp=Z,678nm,0.5s,baz=106,slow=9.4,SNR=3177
AKASG S **S 14 24 11.0 -1.4**
comp=Z,15nm,0.5s,baz=75,slow=34,SNR=3.8
AKASG LR LR 14 30 11.0
comp=Z,8μm,18.5s,baz=110,slow=42
comp=Z,678nm,0.5s
AKASG Malin Array Be 20.91 311 P **P 14 20 20.6 +0.2**
AKBB Malin Array Si 20.91 311 *c i*P **P 14 20 20.4 0.0**
IAS Iasi 20.93 300 ⇑P **P 14 20 20.8 +0.1**
IAS Iasi 20.93 300 ⇑P **P 14 20 20.8 +0.1**
PANC Panciu 20.98 297 ⇓P Pn 14 20 22.6 -1.3
PGOR Pogoanele 20.98 294 ⇓P Pn 14 20 23.3 -0.6
ARG Arkhangelos 21.01 269 P **P 14 20 21.8 +0.1**
ARG IAmb IAmb 14 20 23.1
comp=Z,271nm,0.6s
ARG Arkhangelos 21.01 269 P **P 14 20 21.5 -0.2**
ARG Arkhangelos 21.01 269 P **P 14 20 21.5 -0.2**
ARG Arkhangelos 21.01 269 P **P 14 20 21.8 +0.1**
ARG pmax pmax
comp=Z,271nm,0.6s
ODBI Odobesti 21.03 296 ⇑P **P 14 20 23.8 +2.1**
GRER 21.04 295 ⇓P **P 14 20 24.3 +2.4**
LEHL Lehliu 21.07 293 ⇓P **P 14 20 23.6 +1.4**
EDRB Edirne 21.10 285 *e*P **P 14 20 23.8 +1.2**
EDRB Edirne 21.10 285 P **P 14 20 22.6 0.0**
EDRB Edirne 21.10 285 P **P 14 20 22.6 0.0**
JMB Yambol 21.20 287 P **P 14 20 21.7 -1.9**
RAZG Razgrad 21.25 290 ⇑P **P 14 20 25.5 +1.3**
VRI Vrincioaia 21.27 296 ⇑P **P 14 20 25.5 +1.1**
VRI Vrincioaia 21.27 296 ⇑P **P 14 20 25.5 +1.1**
MAKZ Makanchi 21.29 61 IAMs_20 IAMs_20 14 29 33.5
comp=Z,8μm,18.0s
MAKZ Makanchi 21.29 61 P **P 14 20 24.5 0.0**
MAKZ S **S 14 24 12.0 -8.0**
MAKZ Makanchi 21.29 61 ⇑P **P 14 20 22.8 -1.7**
comp=Z,696nm,1.6s
MAKZ ⇓S **S 14 24 22.7 +2.7**
comp=Z,332nm,1.1s
AJM Ajmer 21.30 122 ⇓*i*P **P 14 20 25.0 +0.1**
AJM *e*P **pP 14 20 25.4 -5.3**
AJM *i*x x 14 24 15.9
BLCB Balcova 21.32 276 *e*P **P 14 20 26.2 +1.3**
BLCB Balcova 21.32 276 P **P 14 20 24.4 -0.5**
BLCB Balcova 21.32 276 P **P 14 20 24.4 -0.5**
GCAM G?zelcaml? 21.32 274 *e*P **P 14 20 26.0 +1.1**
ISR Istrita 21.32 294 ⇓P **P 14 20 27.1 +2.2**
ISR Istrita 21.32 294 ⇓P **P 14 20 27.1 +2.2**
PLOR Plostina 21.32 296 ⇓P **P 14 20 26.3 +1.3**
PLOR Plostina 21.32 296 ⇓P **P 14 20 26.3 +1.3**
DDI Dehra Dun 21.38 108 *e*P **P 14 20 26.5 +0.8**
DDI IAmb IAmb 14 20 27.1
comp=Z,477nm,1.2s
DDI *i*x x 14 24 22.6
TESR Tescani 21.42 298 ⇑P **P 14 20 26.4 +0.5**
GELI Tayfur-Gelibol 21.43 281 *e*P **P 14 20 27.3 +1.2**
BHGR Bahadurgarh 21.48 113 *i*x x 14 24 19.9
SULR 21.48 293 ⇑P **P 14 20 28.6 +2.0**
MK31 Makanchi Array 21.49 61 P **P 14 20 27.3 +0.5**
MK31 Makanchi Array 21.49 61 P **P 14 20 25.9 -0.9**
MK31 S **S 14 24 26.3 +2.1**
MK31 Makanchi Array 21.49 61 P **P 14 20 25.9 -0.9**
comp=Z,245nm,0.9s,baz=250,slow=9.7,SNR=673
MK31 ⇑S **S 14 24 26.3 +2.1**
comp=Z,341nm,0.9s,baz=261,slow=27,SNR=5.2
MKAR Makanchi Array 21.49 61 P **P 14 20 25.7 -1.1**
comp=Z,133nm,0.9s,baz=251,slow=11,SNR=360
MKAR S **S 14 24 24.1 0.0**
comp=Z,91nm,0.9s,baz=266,slow=24,SNR=5.8
MKAR LR LR 14 29 42.1
comp=Z,9μm,18.8s,baz=263,slow=39
comp=Z,133nm,0.9s
MKAR Makanchi Array 21.49 61 P **P 14 20 27.3 +0.5**
NEHR Nehoiu 21.52 295 ⇓P **P 14 20 28.7 +1.6**
WHFO Wadi Hawf 21.54 182 P **P 14 20 26.6 -0.9**
SNR=176
WHFO P **P 14 20 26.6 -0.9**
SNR=176
WHFO P **P 14 20 26.6 -0.9**
SNR=176
EZN Ezine 21.61 280 *e*P **P 14 20 29.7 +1.6**
EZN Ezine 21.61 280 P **P 14 20 28.5 +0.4**
EZN Ezine 21.61 280 P **P 14 20 28.5 +0.4**
SMG Samos 21.62 274 P **P 14 20 28.4 +0.2**
SMG Samos 21.62 274 P **P 14 20 28.4 +0.2**
BUC1 Bucharest 21.63 292 ⇑P **P 14 20 31.1 +2.9**
BUC1 Bucharest 21.63 292 ⇑P **P 14 20 31.1 +2.9**
COVR Voineasa-Covas 21.63 296 ⇑P **P 14 20 30.1 +1.9**
SGRR Singureni 21.66 292 ⇑P **P 14 20 29.7 +1.2**
PLAR PLOIESTI 21.66 294 ⇓P **P 14 20 30.9 +2.3**
URLA Izmir 21.66 276 *e*P **P 14 20 28.8 +0.1**
SZH Strazhica 21.66 289 P **P 14 20 29.8 +1.2**
NDI New Delhi 21.68 113 *e*P **P 14 20 32.0 +3.1**
DMTO DMTO 21.74 179 P **P 14 20 28.2 -1.3**
SNR=69
DMTO P **P 14 20 28.2 -1.3**
SNR=69
PRK Paraskevi 21.75 278 P **P 14 20 30.8 +1.3**
PRK Paraskevi 21.75 278 P **P 14 20 30.8 +1.3**
DRBR Darabani 21.77 303 ⇓P **P 14 20 29.5 -0.2**
MLR Muntele Rosu 21.77 295 ⇑P **P 14 20 31.7 +1.8**
MLR Muntele Rosu 21.77 295 P **P 14 20 31.3 +1.4**
comp=Z,189nm,0.5s,baz=38,slow=1.8,SNR=394
MLR S **S 14 24 25.4 -4.4**
comp=Z,21nm,0.9s,baz=31,slow=19,SNR=1.0
MLR LR LR 14 31 25.7
comp=Z,3μm,18.7s,baz=76,slow=43
comp=Z,189nm,0.5s
MLR Muntele Rosu 21.77 295 P **P 14 20 31.4 +1.5**
MLR Muntele Rosu 21.77 295 P **P 14 20 31.4 +1.5**
BOZC Bozcaada 21.82 280 *e*P **P 14 20 31.8 +1.5**
SONA Sohna 21.84 114 *e*P **P 14 20 29.9 -0.7**
BIZ Bicaz 21.86 299 ⇑P **P 14 20 31.2 +0.5**
GADA Gvkgeada 21.89 281 *e*P **P 14 20 32.7 +1.7**
RBK Rabkut 21.95 181 P **P 14 20 30.8 -1.0**
SNR=81
RBK P **P 14 20 30.8 -1.0**
SNR=81
RBK P **P 14 20 30.8 -1.0**
SNR=81
OZUR 21.95 297 ⇑P **P 14 20 32.4 +0.7**
KARP Karpathos 21.96 268 P **P 14 20 32.3 +0.3**

KARP Karpathos 21.96 268 P **P** **14 20 31.3 -0.6**
KARP Karpathos 21.96 268 P **P** **14 20 31.3 -0.6**
DIM Dimitrovgrad 21.99 286 P **P** **14 20 33.0 +0.9**
RDO Rodhopi 22.05 284 P **P** **14 20 33.9 +1.1**
RDO IAmb IAmb 14 20 51.1
comp=Z,349nm,1.1s
RDO Rodhopi 22.05 284 P **P** **14 20 33.9 +1.1**
RDO Rodhopi 22.05 284 P **P** **14 20 33.9 +1.1**
SIGR SIGRI 22.07 278 P **P** **14 20 33.5 +0.5**
SIGR SIGRI 22.07 278 P **P** **14 20 33.5 +0.5**
ZIMR 22.08 290 ⇓P **P** **14 20 34.5 +1.4**
ZIMR 22.08 290 ⇓P **P** **14 20 34.5 +1.4**
KDZ Kurdzhali 22.10 285 P **P** **14 20 35.3 +1.9**
ABTO Aybut 22.12 183 P **P** **14 20 32.4 -1.2**
SNR=89
SMTH Samothraki Isl 22.13 282 P **P** **14 20 33.9 +0.2**
SMTH Samothraki Isl 22.13 282 P **P** **14 20 33.9 +0.2**
COPA Copaceanca 22.20 291 ⇑P **P** **14 20 35.6 +1.3**
DOPR Dopca 22.21 296 ⇓P **P** **14 20 35.4 +0.9**
MTUR Matau 22.37 294 ⇓P **P** **14 20 37.9 +1.6**
MTUR Matau 22.37 294 ⇓P **P** **14 20 37.9 +1.6**
HUMR Humele 22.39 292 ⇓P **P** **14 20 37.7 +1.4**
VOIR 22.39 295 ⇑P **P** **14 20 37.5 +1.0**
VOIR 22.39 295 ⇑P **P** **14 20 37.5 +1.0**
STFAR Stefanesti-Arg 22.42 293 ⇑P **P** **14 20 38.7 +2.0**
BURAR Bucovina Array 22.57 301 ⇓P **P** **14 20 39.0 +0.6**
BURAR Bucovina Array 22.57 301 ⇓P **P** **14 20 39.0 +0.6**
BUR08 Bucovina Ar. S 22.58 301 P **P** **14 20 38.1 -0.4**
BUR08 IAmb IAmb 14 20 42.9
comp=Z,191nm,0.8s
PLD Plovdiv 22.61 286 P **P** **14 20 38.7 0.0**
ARR Arges 22.68 295 ⇓P **P** **14 20 41.0 +1.5**
THAS Thassos island 22.73 282 P **P** **14 20 34.7 -5.3**
THAS Thassos island 22.73 282 P **P** **14 20 34.7 -5.3**
VLAD Vladila 22.78 291 ⇑P **P** **14 20 41.5 +1.0**
APE Apeiranthos 22.79 273 ⇑P **P** **14 20 43.1 +2.4**
APE Apeiranthos 22.79 273 P **P** **14 20 40.0 -0.7**
APE Apeiranthos 22.79 273 P **P** **14 20 40.0 -0.7**
APE Apeiranthos 22.79 273 *d* iP **P** **14 20 43.2 +2.5**
APE pmax pmax
comp=Z,318nm,1.1s
PRGR Permogore 22.79 349 *e*P **P** **14 20 39.9 -0.5**
PRGR *e*S **S** **14 24 47.4 -0.8**
PRGR pmax pmax
comp=Z,717nm,1.5s
ZKR Zakros 22.83 268 P **P** **14 20 40.6 -0.6**
ZKR Zakros 22.83 268 P **P** **14 20 40.6 -0.6**
KAVA Kavala 22.84 283 P **P** **14 20 41.4 +0.2**
KAVA Kavala 22.84 283 P **P** **14 20 41.4 +0.2**
TGMR Targu Mures 22.87 298 ⇓P **P** **14 20 43.4 +1.9**
RMVG GOVORA 22.91 294 ⇓P **P** **14 20 45.6 +3.7**
MDB Medias 22.93 297 ⇑P **P** **14 20 42.9 +0.8**
MDB Medias 22.93 297 ⇑P **P** **14 20 42.9 +0.8**
ARCR ARCALIA 23.06 299 ⇑P **P** **14 20 44.7 +1.3**
KOKK Kokkinochori, 23.25 283 P **P** **14 20 46.0 +0.6**
KOKK Kokkinochori, 23.25 283 P **P** **14 20 46.0 +0.6**
KLMR Klimovskoe 23.28 341 *c* iP **P** **14 20 44.6 -0.9**
KLMR S **S** **14 24 56.2 -0.2**
KLMR pmax pmax
comp=Z,682nm,0.7s
KLMR MLR MLR
comp=Z,10μm,15.0s
KLMR Klimovskoe 23.28 341 ⇑*i*P **P** **14 20 44.6 -0.9**
KLMR ⇑*i*P **P** **14 20 44.6 -0.9**
KLMR *e*P **P** **14 20 44.6 -0.9**
KLMR AMP 14 20 57.6
comp=Z,682nm,0.7s
KLMR S **S** **14 24 56.3 -0.2**
KLMR S **S** **14 24 56.3 -0.2**
KLMR LQ LQ 14 28 54.8
KLMR LQ LQ 14 28 54.8
KLMR LR LR 14 29 56.9
KLMR AMP 14 32 03.6
comp=Z,10μm,14.7s
NVR Nevrokopi 23.29 284 P **P** **14 20 46.9 +1.0**
NVR Nevrokopi 23.29 284 P **P** **14 20 46.9 +1.0**
LOT Lotru 23.29 295 ⇓P **P** **14 20 46.9 +1.0**
MNK Minsk 23.31 319 *c* iP **P** **14 20 45.0 -0.8**
MNK Minsk 23.31 319 *i* P **P** **14 20 45.0 -0.8**
comp=E,26nm,0.9s
MNK *i* P **P** **14 20 45.0 -0.8**
comp=N,161nm,0.9s
MNK *i* P **P** **14 20 45.0 -0.8**
comp=Z,277nm,0.9s,baz=119
MNK *i* PP **PnPn** **14 21 13.2 +1.4**
MNK *i* S **S** **14 24 57.4 +0.3**
MNK *i* SS **SnSn** **14 25 36.5 +4.6**
MNK *i* LQ LQ 14 27 41.1
MNK *i* LR LR 14 28 30.9
MNK *i* LRM MLR 14 30 50.2
comp=Z,5μm,15.7s
MNK *i* LRM MLR 14 30 54.6
comp=N,2μm,15.7s
MNK *i* LRM MLR 14 30 54.9
comp=E,561nm,15.7s
OUR Ouranopolis 23.32 282 P **P** **14 20 46.1 0.0**
OUR Ouranopolis 23.32 282 P **P** **14 20 46.1 0.0**
ZSN Zaisan 23.34 60 *e*P **P** **14 20 45.4 -0.8**
ZSN *e*S **S** **14 25 00.0 +2.3**
ZSN Zaisan 23.34 60 *e*P **P** **14 20 45.4 -0.8**
baz=61
ZSN *e*S **S** **14 25 00.1 +2.3**
baz=61
MMB Musomiste 23.37 285 P **P** **14 20 47.1 +0.5**
PTH Pithoragarh 23.38 107 *e*P **P** **14 20 46.0 -1.0**
PTH *e*P **pP** **14 20 46.9 -6.0**
PTH *i* x x 14 24 59.8
LGTI Lohaghat 23.45 107 *e*P **P** **14 20 46.6 -0.8**
SRS Serrai 23.52 284 P **P** **14 20 48.7 +0.6**
SRS Serrai 23.52 284 P **P** **14 20 48.7 +0.6**
CJR Cluj-Napoca 23.53 298 ⇓P **P** **14 20 50.6 +2.4**
CJR Cluj-Napoca 23.53 298 ⇓P **P** **14 20 50.6 +2.4**
BAIL Bailesti 23.55 291 ⇓P **P** **14 20 50.4 +2.1**
CBBR Cluj-Babes-Bol 23.57 298 ⇓P **P** **14 20 50.3 +1.8**
PAIG Paliouri 23.61 281 P **P** **14 20 49.7 +0.7**
PAIG Paliouri 23.61 281 P **P** **14 20 49.7 +0.7**
SRE Strehaia 23.66 293 ⇑P **P** **14 20 50.4 +1.0**
SRE Strehaia 23.66 293 ⇑P **P** **14 20 50.4 +1.0**
KSTL Kastelli Herak 23.66 269 P **P** **14 20 49.7 +0.3**
KSTL Kastelli Herak 23.66 269 P **P** **14 20 49.7 +0.3**
VTS Vitosha 23.66 288 ⇑P **P** **14 20 51.2 +1.6**
VTS Vitosha 23.66 288 P **P** **14 20 50.7 +1.1**
VTS IAmb IAmb 14 20 54.1
comp=Z,737nm,1.8s
VTS Vitosha 23.66 288 P **P** **14 20 50.7 +1.1**
VTS pmax pmax
comp=Z,737nm,1.8s
VTS Vitosha 23.66 288 P **P** **14 20 51.1 +1.5**
BMR Baia Mare 23.72 300 ⇑P **P** **14 20 52.2 +2.2**
BMR Baia Mare 23.72 300 ⇑P **P** **14 20 52.2 +2.2**
SOH Sokhos 23.73 283 P **P** **14 20 51.2 +1.0**
SOH Sokhos 23.73 283 P **P** **14 20 51.2 +1.0**
DION Dionisos Attik 23.77 276 P **P** **14 20 51.5 +0.9**
DION Dionisos Attik 23.77 276 P **P** **14 20 51.5 +0.9**
LVV L'vov 23.80 306 *d* iP **P** **14 20 51.2 +0.5**
LVV *e*S **S** **14 25 04.5 -0.6**
LVV MLR MLR
comp=Z,2μm,14.0s
IDI Anoyia 23.80 269 ⇓P **P** **14 20 51.9 +1.0**
IDI Anoyia 23.80 269 P **P** **14 20 51.0 +0.1**
comp=Z,117nm,0.5s,baz=48,slow=12,SNR=93
IDI S **S** **14 25 01.9 -3.6**
comp=Z,25nm,1.0s,baz=357,slow=20,SNR=1.5
IDI LR LR 14 31 40.4
comp=Z,801nm,20.1s,baz=74,slow=40
comp=Z,117nm,0.5s
IDI Anoyia 23.80 269 P **P** **14 20 51.0 +0.1**
IDI IAmb IAmb 14 21 08.9
comp=Z,181nm,0.6s
IDI Anoyia 23.80 269 P **P** **14 20 51.6 +0.7**
IDI Anoyia 23.80 269 P **P** **14 20 51.6 +0.7**
KKB Krupnik 23.83 286 P **P** **14 20 51.4 +0.3**
PTL Penteli 23.83 276 P **P** **14 20 52.0 +0.9**
PTL Penteli 23.83 276 P **P** **14 20 52.0 +0.9**
PUNG Punghina 23.84 292 ⇓P **P** **14 20 52.8 +1.6**
ATHU Athens Univers 23.91 276 P **P** **14 20 53.0 +1.1**
ATHU Athens Univers 23.91 276 P **P** **14 20 53.0 +1.1**
DEV Deva 23.93 296 ⇑P **P** **14 20 53.4 +1.4**
DEV Deva 23.93 296 ⇑P **P** **14 20 53.4 +1.4**
VLY Voula,Athens 23.93 276 P **P** **14 20 53.1 +1.1**
VLY Voula,Athens 23.93 276 P **P** **14 20 53.1 +1.1**
HORT Hortiatis 23.95 283 P **P** **14 20 53.5 +1.2**

HORT Hortiatis 23.95 283 P **P** **14 20 53.5 +1.2**
ATH Athens Observa 23.96 276 P **P** **14 20 53.6 +1.3**
ATH Athens Observa 23.96 276 P **P** **14 20 53.6 +1.3**
GZR Gura Zlata 23.99 295 ⇑P **P** **14 20 52.9 +0.3**
MESR Meseseni 24.02 299 ⇓P **P** **14 20 54.3 +1.5**
RMGR Halanga-Turnu 24.02 293 ⇑P **P** **14 20 53.3 +0.5**
BLKB Belogradchik 24.04 290 ⇑P **P** **14 20 54.5 +1.5**
KNT Kendrikon 24.04 284 P **P** **14 20 53.6 +0.6**
KNT Kendrikon 24.04 284 P **P** **14 20 53.6 +0.6**
THE Thessaloniki 24.05 283 P **P** **14 20 53.8 +0.7**
THE Thessaloniki 24.05 283 P **P** **14 20 53.8 +0.7**
NACGM Naroch 24.06 319 ⇓*e*P **P** **14 20 53.6 +0.5**
baz=119
NEO Neokhori 24.07 280 P **P** **14 20 53.9 +0.6**
NEO Neokhori 24.07 280 P **P** **14 20 53.9 +0.6**
DRGR 24.14 298 ⇑P **P** **14 20 55.6 +1.6**
DRGR 24.14 298 ⇑P **P** **14 20 55.6 +1.6**
DJES Djerdap 24.15 293 ⇓P **P** **14 20 54.5 +0.5**
HERR Herculane 24.23 293 ⇑P **P** **14 20 54.7 0.0**
VILL Villia 24.23 277 P **P** **14 20 55.4 +0.5**
VILL Villia 24.23 277 P **P** **14 20 55.4 +0.5**
VAY Valandovo 24.26 285 *i* P **P** **14 20 56.6 +1.5**
LKR Lokris 24.36 278 P **P** **14 20 55.3 -0.7**
LKR Lokris 24.36 278 P **P** **14 20 55.3 -0.7**
TRPA Tarpa 24.43 301 ⇑P **P** **14 20 57.5 +1.0**
TRPA Tarpa 24.43 301 P **P** **14 20 58.3 +1.8**
GRG Griva 24.43 284 P **P** **14 20 56.2 -0.5**
IMMV Iera Moni Meta 24.45 270 P **P** **14 20 56.1 -0.8**
IMMV Iera Moni Meta 24.45 270 P **P** **14 20 56.1 -0.8**
LIT Litokhoron 24.49 282 P **P** **14 20 57.9 +0.7**
LIT Litokhoron 24.49 282 P **P** **14 20 57.4 +0.2**
LIT Litokhoron 24.49 282 P **P** **14 20 57.4 +0.2**
LIT Litokhoron 24.49 282 P **P** **14 20 57.9 +0.7**
EPID Epidavros 24.51 276 P **P** **14 20 57.2 -0.2**
EPID Epidavros 24.51 276 P **P** **14 20 57.2 -0.2**
STIP Stip 24.51 286 *i* P **P** **14 20 57.6 +0.3**
LOUT Loutraki 24.53 276 P **P** **14 20 57.7 +0.1**
LOUT Loutraki 24.53 276 P **P** **14 20 57.7 +0.1**
KRND KRANIDI 24.54 275 P **P** **14 20 55.7 -2.0**
KRND KRANIDI 24.54 275 P **P** **14 20 55.7 -2.0**
GVD Gavdhos 24.57 269 P **P** **14 20 57.2 -0.8**
JHNI Jhansi 24.59 118 *e*P **P** **14 20 58.3 +0.1**
AXAR Agios Charalam 24.60 278 P **P** **14 20 59.2 +1.0**
AXAR Agios Charalam 24.60 278 P **P** **14 20 59.2 +1.0**
UZH Uzhgorod 24.67 302 *e*P **P** **14 20 58.1 -0.6**
UZH *e* 14 21 02.1
UZH *e* 14 21 05.7
UZH *e* 14 24 41.3
UZH *e*S **S** **14 25 18.1 -1.0**
ISAL Salakas 24.71 320 *e*P **P** **14 20 60.0 +1.0**
MDVR Moldovita 24.72 293 ⇓P **P** **14 21 00.9 +1.6**
KTI Kastanea 24.73 282 P **P** **14 21 00.5 +1.0**
KOLS Kolonicke sedl 24.74 303 *e*P **P** **14 21 01.2 +1.9**
KOLS pmax pmax
comp=Z,192nm,0.6s
BOVS Bovan 24.74 290 ⇑P **P** **14 21 01.0 +1.6**
LTVH Ltavrtes, Hu 24.76 299 ⇓P **P** **14 21 02.4 +2.9**
LTVH Ltavrtes, Hu 24.76 299 P **P** **14 21 00.9 +1.4**
BORR Bors 24.80 298 ⇑P **P** **14 21 02.8 +2.9**
BZS Buzias 24.81 295 ⇓P **P** **14 21 01.8 +1.8**
BZS Buzias 24.81 295 ⇓P **P** **14 21 01.8 +1.8**
SIRR Siria 24.82 297 ⇑P **P** **14 21 02.6 +2.5**
SKO Skopje 25.04 286 *i* P **P** **14 21 03.9 +1.7**
ZAA0 Zalesovo Array 25.08 45 P **P** **14 21 02.5 +0.2**
ZAA0 IAmb IAmb 14 21 04.2
comp=Z,209nm,0.8s
ZALV Zalesovo Beam 25.08 45 P **P** **14 21 03.0 +0.7**
comp=Z,162nm,0.7s,baz=256,slow=9.6,SNR=616
ZALV S S 14 25 36.6 +11
comp=Z,20nm,0.6s,baz=235,slow=17,SNR=1.7
ZALV LR LR 14 32 09.2
comp=Z,9μm,19.2s,baz=242,slow=39
comp=Z,162nm,0.7s
ZALV Zalesovo Beam 25.08 45 P **P** **14 21 02.3 -0.1**
TIM Timisoara 25.10 295 ⇓P **P** **14 21 06.3 +3.7**
WMQ Urumqi 25.10 69 ⇑P **P** **14 21 04.0 +1.2**
WMQ pP pP 14 21 09.3 +0.2
WMQ PP **PnPn** **14 21 41.5 +5.0**
WMQ S **S** **14 25 25.8 -0.5**
WMQ sS sS 14 25 36.0 -0.6
WMQ pmax pmax
comp=Z,360nm,0.9s
WMQ pmax pmax
comp=Z,740nm,3.9s
WMQ LR LR
comp=Z,5μm,13.5s
WMQ LR LR
comp=Z,7μm,17.1s
WMQ LR LR
comp=Z,5μm,17.9s
BANR Banloc 25.14 294 ⇑P **P** **14 21 05.4 +2.4**
CRVS Cervenica-Dubn 25.26 303 *e*P **P** **14 21 05.7 +1.6**
CRVS pmax pmax
comp=Z,705nm,1.5s
ABAH Abaujker 25.31 301 P **P** **14 21 05.5 +1.0**
PUL Pulkovo 25.32 331 *de*P **P** **14 21 05.2 +0.8**
PUL pmax pmax
comp=Z,769nm,1.5s
PUL MLR MLR
comp=Z,5μm,15.0s
BHPL Bhopal 25.36 123 *e*P **P** **14 21 04.8 -0.4**
BHPL *ex* x 14 25 26.8
DGZ Jazzator, Alta 25.40 56 *c* iP **P** **14 21 06.5 +1.0**
DGZ pmax pmax
comp=Z,196nm,1.1s
DGZ MLR MLR
comp=Z,9μm,16.0s
AMBH Ambrzfalva 25.47 297 ⇑P **P** **14 21 09.0 +3.1**
STHS Stebnicka Huta 25.49 304 *e*P **P** **14 21 05.9 -0.2**
ITM Ithomi 25.54 275 P **P** **14 21 06.0 -0.6**
OHR Ohrid 25.62 284 *i* P **P** **14 21 08.6 +1.2**
PABE Paberze 25.77 318 P **P** **14 21 09.2 +0.6**
PABE Paberze 25.77 318 *e*P **P** **14 21 09.7 +1.1**
KECS Kecovo 25.84 301 *e*P **P** **14 21 10.8 +1.5**
KECS pmax pmax
comp=Z,242nm,0.7s
BSZH Besenyszg 25.85 299 P **P** **14 21 11.9 +2.5**
VSU Vasula 25.95 326 *e*P **P** **14 21 11.3 +1.1**
VSU Vasula 25.95 326 *c* iP **P** **14 21 10.2 0.0**
VSU pmax pmax
comp=Z,635nm,1.0s
VSU MLR MLR
comp=Z,15μm,16.0s
DIVS Divibare 25.96 291 P **P** **14 21 12.7 +2.1**
DIVS Divibare 25.96 291 ⇑*i*P **P** **14 21 12.3 +1.7**
VSVD Vaisvydziai 26.00 319 *e*P **P** **14 21 13.1 +2.4**
FRGS Fruska Gora 26.08 294 ⇑P **P** **14 21 13.6 +2.1**
FRGS Fruska Gora 26.08 294 ⇑*i*P **P** **14 21 13.4 +1.9**
PVY Plav 26.08 288 *e*P **P** **14 21 12.9 +1.2**
IVA Berane 26.10 289 *e*P **P** **14 21 13.1 +1.2**
PYUN Piuthan 26.20 107 *e*P **P** **14 21 13.3 +0.2**
comp=Z,124nm,1.0s
PYUN Piuthan 26.20 107 *e*P **P** **14 21 13.3 +0.2**
VALR Valaam 26.23 334 *c* iP **P** **14 21 13.2 +0.6**
VALR pmax pmax
comp=Z,407nm,1.1s
VALR MLR MLR
comp=Z,4μm,15.0s
TEKS Tekeris 26.28 292 ⇑*i*P **P** **14 21 14.5 +1.1**
TIR Tirane 26.28 285 ⇑P **P** **14 21 13.8 +0.4**
TIR Tirane 26.28 285 P **P** **14 21 13.1 -0.3**
TIR IAmb IAmb 14 21 25.5
comp=Z,116nm,0.8s
TIR Tirane 26.28 285 P **P** **14 21 13.1 -0.3**
TIR pmax pmax
comp=Z,116nm,0.8s
BEL Belsk 26.29 309 *e*P **P** **14 21 14.5 +1.2**
KOME Kolasin 26.38 289 *e*P **P** **14 21 15.1 +0.7**
BBLS Lazići 26.39 291 ⇑*i*P **P** **14 21 16.2 +1.7**
RUDO Rudo 26.43 290 ⇑*i*P **P** **14 21 15.7 +0.9**
PLE Pljevlja 26.44 290 *e*P **P** **14 21 16.2 +1.3**
BLJ Bijeljina 26.46 293 ⇑*i*P **P** **14 21 16.9 +1.9**
OJC Ojcow 26.55 305 *e*P **P** **14 21 15.1 -0.6**
OJC Ojcow 26.55 305 P **P** **14 21 14.8 -1.0**
OJC IAmb IAmb 14 21 18.1
comp=Z,534nm,1.4s
OJC Ojcow 26.55 305 P **P** **14 21 14.8 -1.0**
OJC pmax pmax
comp=Z,534nm,1.4s
KEK Kerkira 26.59 282 P **P** **14 21 16.0 -0.2**
KEK IAmb IAmb 14 21 30.8
comp=Z,231nm,0.7s

PDG Podgorica 26.61 288 ⇓P **P** **14 21 17.3 +0.9**
PDG Podgorica 26.61 288 P **P** **14 21 16.3 0.0**
PDG IAmb IAmb 14 21 35.4
comp=Z,149nm,0.8s
TTG Podgorica 26.61 288 *e*P **P** **14 21 17.8 +1.5**
DANN Dangsing 26.64 106 *e*P **P** **14 21 17.8 +0.7**
comp=Z,113nm,0.7s
DANN Dangsing 26.64 106 *e*P **P** **14 21 17.8 +0.7**
comp=Z,113nm,0.7s
ULC Ulcinj 26.67 287 *e*P **P** **14 21 17.2 +0.3**
DRME Dracevica, Mon 26.69 287 ⇑*i*P **P** **14 21 17.7 +0.6**
DRME Dracevica, Mon 26.69 287 *e*P **P** **14 21 18.3 +1.2**
VLO Vlora 26.69 283 P **P** **14 21 17.6 +0.5**
VLO Vlora 26.69 283 P **P** **14 21 17.6 +0.5**
VLO pmax pmax
comp=Z,305nm,0.6s
BUD Budapest 26.71 299 P **P** **14 21 18.3 +1.1**
HAPS Han Pijesak,Bl 26.71 291 ⇑*i*P **P** **14 21 19.0 +1.6**
UPM Unac-Piva 26.80 289 ⇑*i*P **P** **14 21 20.3 +2.0**
UPM Unac-Piva 26.80 289 *e*P **P** **14 21 19.1 +0.8**
NKME Niksic 26.80 289 *e*P **P** **14 21 19.3 +1.2**
POO Poona 26.83 136 *e*P **P** **14 21 15.0 -3.5**
KOLN Koldanda 26.84 107 *e*P **P** **14 21 18.4 -0.4**
KOLN Koldanda 26.84 107 *e*P **P** **14 21 18.3 -0.5**
CEME Cevo 26.85 288 *e*P **P** **14 21 19.3 +0.7**
BUM Brajici-Budva 26.89 287 *e*P **P** **14 21 19.6 +0.6**
MORH Mrgy, Hungar 26.91 296 ⇑P **P** **14 21 20.1 +1.1**
MORH Mrgy, Hungar 26.91 296 P **P** **14 21 20.6 +1.6**
VYHS Vyhne 26.93 301 *e*P **P** **14 21 20.9 +1.7**
VYHS pmax pmax
comp=Z,216nm,1.4s
AKL Akola 26.95 128 *e*P **P** **14 21 22.3 +2.7**
PBUR Paburge 27.04 318 *e*P **P** **14 21 21.6 +1.6**
BRY Bratogost 27.09 289 ⇑*i*P **P** **14 21 21.8 +0.9**
BRY Bratogost 27.09 289 *e*P **P** **14 21 21.8 +0.9**
HCY Herceg Novi 27.17 288 ⇑*i*P **P** **14 21 21.5 +0.1**
HCY Herceg Novi 27.17 288 *e*P **P** **14 21 22.6 +1.2**
SRO Srobarova 27.21 300 *e*P **P** **14 21 24.1 +2.4**
SRO pmax pmax
comp=Z,211nm,0.8s
CSKK Cskako 27.22 299 P **P** **14 21 23.8 +2.0**
TREB Trebinje 27.25 288 ⇑*i*P **P** **14 21 22.7 +0.6**
KOVH Kovagotottos 27.28 296 P **P** **14 21 23.1 +0.8**
VLK Valmikinagar 27.28 108 *e*P **P** **14 21 22.5 0.0**
MTSE Matsula 27.37 325 *e*P **P** **14 21 24.1 +1.2**
KLNR Kaliningrad 27.43 315 *d* iP **P** **14 21 24.6 +1.1**
KLNR pmax pmax
comp=Z,304nm,1.2s
KLNR MLR MLR
comp=Z,5μm,17.0s
TIH Tihany 27.45 298 P **P** **14 21 25.5 +1.6**
GKN Gorkha 27.48 105 *e*P **P** **14 21 24.7 +0.3**
comp=Z,88nm,0.8s
GKN Gorkha 27.48 105 *e*P **P** **14 21 24.8 +0.3**
SCTE Santa Cesarea 27.53 283 P **P** **14 21 24.1 -0.6**
SCTE IAmb IAmb 14 21 39.3
comp=Z,112nm,0.7s
OKC Ostrava-Krasne 27.54 304 ⇑*i*P **P** **14 21 26.0 +1.4**
OKC MLR MLR
comp=Z,3μm,13.9s
OKC Ostrava-Krasne 27.54 304 ⇑*i*P **P** **14 21 26.0 +1.4**
OKC AMS AMS 14 34 20.0
comp=Z,3μm,13.9s
SLIT Slitere, Latvi 27.55 322 *e*P **P** **14 21 25.2 +0.6**
MAUC Maruska 27.69 303 ⇑*i*P **P** **14 21 27.8 +1.8**
MAUC AMS AMS 14 34 00.0
comp=Z,6μm,20.3s
MPLH Magyarpolny 27.70 298 P **P** **14 21 26.7 +0.6**
A052A Srbac 27.70 294 *e*P **P** **14 21 27.6 +1.5**
STON Ston 27.71 289 ⇑*i*P **P** **14 21 25.5 -0.7**
JAVC Velka Javorina 27.73 302 *e*P **P** **14 21 28.5 +2.1**
EGYH Egyhazaskeszo 27.85 299 P **P** **14 21 28.7 +1.2**
SMOL Smolenice 27.86 301 *e*P **P** **14 21 29.3 +1.8**
SMOL pmax pmax
comp=Z,70nm,1.3s
MORC Moravsky Berou 27.92 304 ⇑P **P** **14 21 29.4 +1.3**
MORC Moravsky Berou 27.92 304 P **P** **14 21 29.0 +0.9**
MORC IAmb IAmb 14 21 34.5
comp=Z,108nm,0.9s
MORC Moravsky Berou 27.92 304 P **P** **14 21 29.0 +0.9**
MORC pmax pmax
comp=Z,108nm,0.9s
MORC Moravsky Berou 27.92 304 *e*P **P** **14 21 29.3 +1.2**
MEF Metsahovi 27.93 328 *e*P **P** **14 21 29.5 +1.5**
BLY Banja Luka 27.95 293 ⇑*i*P **P** **14 21 30.1 +1.8**
MODS Modra-Piesok 27.95 301 *e*P **P** **14 21 30.0 +1.7**
MODS pmax pmax
comp=Z,568nm,1.3s
SRKY Kupres RS 28.00 292 ⇑*i*P **P** **14 21 30.6 +1.7**
FIA1 FINESS Array S 28.00 331 P **P** **14 21 28.7 +0.1**
FIA1 IAmb IAmb 14 22 16.2
comp=Z,193nm,0.7s
FINES FINESS Array B 28.00 331 P **P** **14 21 29.2 +0.7**
comp=Z,32nm,0.5s,baz=137,slow=10,SNR=236
FINES S S 14 26 25.6 +14
comp=Z,22nm,0.7s,baz=128,slow=18,SNR=2.5
FINES LR LR 14 34 13.3
comp=Z,5μm,18.6s,baz=130,slow=40
comp=Z,32nm,0.5s
FINES FINESS Array B 28.00 331 P **P** **14 21 28.7 +0.1**
KAD Karad 28.01 137 *e*P **P** **14 21 32.1 +3.0**
MGRS Mrkonjic Grad 28.04 292 ⇑*i*P **P** **14 21 31.0 +1.8**
DMN Daman 28.04 106 *e*P **P** **14 21 29.9 +0.3**
DMN Daman 28.04 106 *e*P **P** **14 21 29.8 +0.2**
KKN Kakani 28.07 105 *e*P **P** **14 21 30.0 +0.1**
KKN Kakani 28.07 105 *e*P **P** **14 21 29.9 +0.1**
A051A Mrakovica 28.14 294 ⇑*i*P **P** **14 21 31.5 +1.4**
BEHE Becsehely 28.21 297 P **P** **14 21 32.0 +1.4**
PKIN Phulchoki 28.27 105 *e*P **P** **14 21 31.9 +0.2**
PKIN Phulchoki 28.27 105 *e*P **P** **14 21 31.9 +0.2**
PKI Pulchoki 28.29 105 *e*P **P** **14 21 31.9 0.0**
PKI Pulchoki 28.29 105 *e*P **P** **14 21 31.9 0.0**
SOP Sopron 28.39 299 P **P** **14 21 33.5 +1.3**
KRLC Kraliky 28.45 304 *e*P **P** **14 21 34.2 +1.4**
KRLC MLR MLR
comp=Z,3μm,14.9s
KRLC Kraliky 28.45 304 ⇑*e*P **P** **14 21 34.2 +1.4**
KRLC AMS AMS 14 35 00.0
comp=Z,3μm,14.9s
GUN Gumba 28.46 104 *e*P **P** **14 21 33.8 +0.3**
GUN Gumba 28.46 104 *e*P **P** **14 21 33.7 +0.3**
VRAC Vranov 28.48 303 ⇑P **P** **14 21 34.6 +1.5**
VRAC Vranov 28.48 303 P **P** **14 21 34.6 +1.5**
comp=Z,34nm,0.5s,baz=94,slow=9.0,SNR=44
VRAC LR LR 14 35 05.6
comp=Z,3μm,20.8s,baz=86,slow=41
comp=Z,34nm,0.5s
VRAC Vranov 28.48 303 *e*P **P** **14 21 34.5 +1.4**
RONA Rosalia, Austr 28.57 299 *i* P **P** **14 21 35.2 +1.3**
comp=Z,21nm,0.6s,SNR=33
KOGS Kog 28.57 297 *i* P **P** **14 21 35.4 +1.6**
KRUC Moravsky 28.59 302 *e*P **P** **14 21 35.4 +1.4**
GKP Gorka Klasztor 28.74 311 *e*P **P** **14 21 36.4 +1.1**
MATE Matera 28.75 285 ⇓P **P** **14 21 35.1 -0.4**
DPC Dobruska-Polom 28.77 305 *e*P **P** **14 21 37.6 +1.9**
DPC MLR MLR
comp=Z,4μm,14.4s
DPC Dobruska-Polom 28.77 305 *e*P **P** **14 21 37.6 +1.9**
DPC AMS AMS 14 35 10.0
comp=Z,4μm,14.4s
JIRN Jiri 28.82 105 *e*P **P** **14 21 37.1 +0.3**
comp=Z,39nm,0.7s
JIRN Jiri 28.82 105 *e*P **P** **14 21 37.0 +0.3**
KSP Ksiaz 28.86 306 *e*P **P** **14 21 38.0 +1.6**
OSTC Ostas 28.87 305 ⇑*i*P **P** **14 21 38.2 +1.7**
OSTC AMS AMS 14 35 20.0
comp=Z,4μm,14.4s
CONA Conrad Observa 28.87 300 *i* P **P** **14 21 37.7 +1.1**
comp=Z,63nm,1.1s,SNR=50
CHVC Chvalec 28.97 305 *e*P **P** **14 21 39.2 +1.8**
UPC Upice 28.99 305 *e*P **P** **14 21 39.4 +1.8**
UPC MLR MLR
comp=Z,4μm,14.3s
UPC Upice 28.99 305 ⇑*e*P **P** **14 21 39.4 +1.8**
UPC AMS AMS 14 35 20.0
comp=Z,4μm,14.3s
TIP Timpagrande 29.01 282 ⇑P **P** **14 21 37.8 -0.1**
TIP Timpagrande 29.01 282 P **P** **14 21 37.5 -0.4**
ARSA Arzberg 29.08 298 *i* P **P** **14 21 39.9 +1.5**
comp=Z,72nm,0.5s,SNR=66
TREC Trest 29.20 302 *e*P **P** **14 21 40.8 +1.3**
TREC MLR MLR
comp=Z,3μm,18.9s

TREC	**Trest**	**29.20 302⇑**	*e*P	**P**	**14 21 40.8 +1.3**	
TREC			AMS	AMS	14 34 50.0	
	comp=Z,3μm,18.9s					
BOJS	**Bojanci**	**29.28 295⇑**	*i*P	**P**	**14 21 41.3 +1.1**	
SGRT	**San Giovanni R**	**29.29 287**	P	**P**	**14 21 40.6 +0.3**	
SGRT			IAmb	IAmb	14 21 42.2	
	comp=Z,440nm,1.9s					
PERS	**Pernice**	**29.35 297**	*i* P	**P**	**14 21 42.4 +1.5**	
SOKA	**Soboth**	**29.41 297**	*i* P	**P**	**14 21 43.1 +1.7**	
	comp=Z,56nm,0.5s,SNR=71					
RAF	**Rauma**	**29.46 328**	*e*P	**P**	**14 21 42.7 +1.1**	
RAMN	**Ramite**	**29.51 105**	*e*P	**P**	**14 21 42.5 -0.2**	
	comp=Z,68nm,0.9s					
RAMN	**Ramite**	**29.51 105**	*e*P	**P**	**14 21 42.5 -0.2**	
CUC	**Castrocucco**	**29.55 283**	P	**P**	**14 21 43.4 +0.7**	
GOPC	**GO Pecny, Ondr**	**29.71 304**	*e*P	**P**	**14 21 45.2 +1.2**	
GOPC			MLR	MLR		
	comp=Z,4μm,15.4s					
GOPC	**GO Pecny, Ondr**	**29.71 304**	*e*P	**P**	**14 21 45.2 +1.2**	
GOPC			AMS	AMS	14 35 50.0	
	comp=Z,4μm,15.4s					
ATD	**Arta Tunnel**	**29.73 203**	P	**P**	**14 21 44.2 -0.2**	
	comp=Z,21nm,0.7s,baz=6.7,slow=9.1,SNR=6.5					
ATD			LR	LR	14 35 43.5	
	comp=Z,2μm,20.3s,baz=18,slow=41					
	comp=Z,21nm,0.7s					
ATD	**Arta Tunnel**	**29.73 203**	P	**P**	**14 21 45.9 +1.5**	
ATD	**Arta Tunnel**	**29.73 203**	*e*P	**P**	**14 21 42.7 -1.7**	
ATD	**Arta Tunnel**	**29.73 203**	*e*P	**P**	**14 21 42.7 -1.7**	
OBKA	**Obir**	**29.75 297⇑**	*i*P	**P**	**14 21 45.8 +1.4**	
OBKA	**Obir**	**29.75 297**	*i* P	**P**	**14 21 46.1 +1.7**	
	comp=Z,25nm,0.6s,SNR=20					
LJU	**Ljubljana**	**29.77 296**	*i* P	**P**	**14 21 46.3 +1.7**	
AAL	**Aland**	**29.80 325**	*e*P	**P**	**14 21 45.0 +0.5**	
CEY	**Cerknica**	**29.85 295⇑**	*i*P	**P**	**14 21 46.8 +1.5**	
PRU	**Pruhonice**	**29.87 304⇑**	*i*P	**P**	**14 21 46.8 +1.4**	
PRU			MLR	MLR		
	comp=Z,4μm,14.9s					
PRU	**Pruhonice**	**29.87 304⇑**	*i*P	**P**	**14 21 46.8 +1.4**	
PRU			AMS	AMS	14 35 50.0	
	comp=Z,4μm,14.9s					
CEL	**Celeste**	**29.88 280**	P	**P**	**14 21 45.5 -0.2**	
PVCC	**Panska Ves**	**29.91 305**	*e*P	**P**	**14 21 47.4 +1.7**	
PVCC			MLR	MLR		
	comp=Z,3μm,15.1s					
PVCC	**Panska Ves**	**29.91 305⇑**	*e*P	**P**	**14 21 47.4 +1.7**	
PVCC			AMS	AMS	14 35 40.0	
	comp=Z,3μm,15.1s					
MOA	**Molln**	**29.94 299**	*i* P	**P**	**14 21 47.3 +1.2**	
	comp=Z,37nm,0.5s,SNR=16					
CKRC	**Cesky Krumlov**	**29.94 301**	*e*P	**P**	**14 21 47.5 +1.4**	
CKRC			AMS	AMS	14 35 30.0	
	comp=Z,3μm,19.4s					
SKDS	**Skadanscina**	**30.15 295⇑**	*i*P	**P**	**14 21 48.8 +0.9**	
SKDS	**Skadanscina**	**30.15 295**	*i* P	**P**	**14 21 48.9 +0.9**	
SKDS			*e*S	**S**	**14 26 45.7 0.0**	
ODAN	**Odare**	**30.15 105**	*e*Pg	**P**	**14 21 48.5 +0.1**	
ODAN	**Odare**	**30.15 105**	*e*P	**P**	**14 21 48.9 +0.5**	
PAOL	**Paolisi**	**30.28 286**	P	**P**	**14 21 50.4 +1.3**	
PAOL			IAmb	IAmb	14 21 53.0	
	comp=Z,283nm,1.6s					
BLEU	**Blekinge**	**30.34 316**	*i* P	**P**	**14 21 49.7 +0.3**	
BRG	**Berggiesshubel**	**30.34 305**	*i* P	**P**	**14 21 53.2 +3.7**	
BRG					14 22 59.1	
BRG			S	**S**	**14 26 54.0 +5.5**	
BRG			pmax	pmax		
	comp=Z,86nm,0.8s					
BRG			smax	smax		
	comp=N,4μm,13.8s					
BRG			MLR	MLR		
	comp=E,3μm,13.8s					
GEC2	**GERESS Array S**	**30.35 301**	P	**P**	**14 21 50.5 +0.8**	
GEC2			IAmb	IAmb	14 21 51.4	
	comp=Z,63nm,0.5s					
GERES	**GERESS Array B**	**30.35 301**	P	**P**	**14 21 49.0 -0.7**	
	comp=Z,44nm,0.4s,baz=243,slow=5.8,SNR=262					
GERES			LR	LR	14 36 13.2	
	comp=Z,3μm,19.6s,baz=76,slow=41					
	comp=Z,44nm,0.4s					
GERES	**GERESS Array B**	**30.35 301**	P	**P**	**14 21 50.3 +0.6**	
GERES	**GERESS Array B**	**30.35 301**	P	**P**	**14 21 50.3 +0.6**	
BIOA	**Bad Ischl, Aus**	**30.36 299**	*i* P	**P**	**14 21 50.9 +1.1**	
	comp=Z,25nm,0.6s,SNR=12					
MYKA	**Terra Mystica**	**30.37 297**	*i* P	**P**	**14 21 51.4 +1.5**	
	comp=Z,16nm,0.5s,SNR=9.9					
HYBB	**Hyderabad (bro**	**30.39 130**	*e*P	**P**	**14 21 49.6 -0.6**	
HYBB			*e*pP	**pP**	**14 21 57.7 +1.2**	
HYBB			*e*S	**S**	**14 26 49.2 -0.7**	
HYB	**Hyderabad**	**30.39 130**	*e*P	**P**	**14 21 49.9 -0.4**	
APA	**Apatity**	**30.41 344⇓**	*i*P	**P**	**14 21 50.4 +0.5**	
APA			pmax	pmax		
	comp=Z,75nm,0.9s					
APA			MLR	MLR		
	comp=Z,6μm,12.0s					
LVZ	**Lovozero**	**30.44 345**	P	**P**	**14 21 51.2 +0.9**	
LVZ			IAMs_20	IAMs_20	14 34 15.3	
	comp=Z,5μm,21.0s					
LVZ	**Lovozero**	**30.44 345**	P	**P**	**14 21 51.2 +0.9**	
LVZ			pmax	pmax		
	comp=Z,575nm,1.4s					
LVZ			MLR	MLR		
	comp=Z,5μm,21.0s					
KHC	**Kasperske Hory**	**30.44 302**	P	**P**	**14 21 51.0 +0.5**	
KHC			IAmb	IAmb	14 21 52.7	
	comp=Z,125nm,1.4s					
KHC	**Kasperske Hory**	**30.44 302⇑**	*i*P	**P**	**14 21 51.5 +1.0**	
KHC			MLR	MLR		
	comp=Z,3μm,17.8s					
KHC	**Kasperske Hory**	**30.44 302⇑**	*i*P	**P**	**14 21 51.5 +1.0**	
KHC			*ex*	x	14 27 06.3	
KHC			AMS	AMS	14 35 50.0	
	comp=Z,3μm,17.8s					
BSD	**Bornholm Skovb**	**30.51 314**	*e*P	**P**	**14 21 50.1 -0.8**	
BSD	**Bornholm Skovb**	**30.51 314⇑**	*i*P	**P**	**14 21 50.5 -0.4**	
BSD			IAmb	IAmb	14 21 50.8	
	comp=Z,136nm,1.0s					
KBA	**Koelnbreinsper**	**30.56 298**	*i* P	**P**	**14 21 53.3 +1.6**	
	comp=Z,96nm,0.5s,SNR=43					
INTR	**Introdacqua**	**30.61 288**	P	**P**	**14 21 52.1 +0.1**	
VIKU	**Vikbolandet**	**30.62 321**	*e*P	**P**	**14 21 52.7 +0.9**	
RUE	**Ruedersdorf**	**30.65 309**	*e*P	**P**	**14 21 53.5 +1.3**	
UPP	**Uppsala**	**30.71 324**	*e*P	**P**	**14 21 53.5 +0.8**	
GTK	**Tadong**	**30.82 103**	*ex*	x	14 21 49.2	
CAMP	**Campotosto**	**30.89 289**	P	**P**	**14 21 54.9 +0.3**	
CAMP			IAmb	IAmb	14 22 07.8	
	comp=Z,73nm,0.8s					
AQU	**L'Aquila**	**30.92 289**	P	**P**	**14 21 56.5 +1.7**	
AQU			IAmb	IAmb	14 22 23.9	
	comp=Z,101nm,0.8s					
AQU	**L'Aquila**	**30.92 289**	P	**P**	**14 21 56.5 +1.7**	
AQU			pmax	pmax		
	comp=Z,101nm,0.8s					
CLL	**Collm**	**30.98 306**	*i* P	**P**	**14 21 56.4 +1.3**	
CLL			*i* *PP	**pP**	**14 21 58.4 -3.2**	
CLL			*e*S	**S**	**14 27 00.0 +1.5**	
CLL			pmax	pmax		
	comp=Z,40nm,0.8s					
CLL	**Collm**	**30.98 306**	*i* P	**P**	**14 21 56.4 +1.3**	
	comp=Z,40nm,0.8s					
CLL			*i* x	x	14 21 58.4	
	comp=Z,48nm,0.6s					
CLL			*ex*	x	14 22 44.0	
CLL			*e*PP	**PP**	**14 23 03.0 -2.0**	
CLL			*e*S	**S**	**14 27 00.0 +1.5**	
CLL			Lmax		14 36 00.0	
NRCA	**Norcia**	**31.06 290**	P	**P**	**14 21 56.1 0.0**	
NRCA			IAmb	IAmb	14 21 59.9	
	comp=Z,106nm,0.9s					
ABTA	**Abfaltersbach**	**31.14 297**	*i* P	**P**	**14 21 57.8 +1.1**	
	comp=Z,35nm,0.6s,SNR=30					
NKC	**Novy Kostel**	**31.24 304**	*e*P	**P**	**14 21 59.1 +1.7**	
NKC			MLR	MLR		
	comp=Z,5μm,15.1s					
NKC	**Novy Kostel**	**31.24 304⇑**	*e*P	**P**	**14 21 59.1 +1.7**	
NKC			*ex*	x	14 26 53.4	
NKC			AMS	AMS	14 36 50.0	
	comp=Z,5μm,15.1s					
RGN	**Rugen**	**31.28 312**	IAMs_20	IAMs_20	14 36 09.2	
	comp=Z,5μm,20.0s					
DEL	**Delary**	**31.42 316**	*e*P	**P**	**14 21 59.6 +0.7**	
DEL	**Delary**	**31.42 316**	*i* P	**P**	**14 21 59.1 +0.2**	
MURB	**Monte Urbino**	**31.43 291**	P	**P**	**14 22 00.9 +1.6**	
LUNU	**Lund**	**31.45 315**	*i* P	**P**	**14 21 59.6 +0.4**	
CESX	**Cesi**	**31.48 289**	P	**P**	**14 22 00.3 +0.6**	
CESX			IAmb	IAmb	14 22 01.7	
	comp=Z,61nm,0.7s					
LSA	**Lhasa**	**31.57 97**	P	**P**	**14 22 02.0 +0.9**	
LSA			pmax	pmax		
	comp=Z,34nm,0.8s					
WTTA	**Wattenberg**	**31.72 298**	*i* P	**P**	**14 22 02.8 +0.8**	
	comp=Z,134nm,0.5s,SNR=86					
WATA	**Walderalm**	**31.76 298**	*i* P	**P**	**14 22 02.8 +0.5**	
	comp=Z,64nm,0.4s,SNR=73					
BJUU	**Bjuv**	**31.78 315**	*i* P	**P**	**14 22 02.7 +0.6**	
MOX	**Moxa**	**31.79 305**	P	**P**	**14 22 04.3 +2.0**	
MOX			pmax	pmax		
	comp=Z,217nm,1.4s					
TEOL	**Teolo**	**31.81 295**	P	**P**	**14 22 02.6 +0.1**	
TEOL			IAmb	IAmb	14 22 04.6	
	comp=Z,192nm,0.9s					
GOMU	**GeErMu**	**31.86 83**	P	**P**	**14 22 04.5 +1.0**	
GOMU			pP	pP	14 22 10.0 +0.1	
GOMU			sP	sP	14 22 12.0 -0.4	
GOMU			S	**S**	**14 27 13.3 0.0**	
GOMU			sS	sS	14 27 22.5 -1.1	
GOMU			pmax	pmax		
	comp=Z,47nm,1.2s					
GOMU			LR	LR		
	comp=Z,2μm,18.1s					
GOMU			LR	LR		
	comp=Z,3μm,17.7s					
GOMU			LR	LR		
	comp=Z,4μm,16.8s					
GRFO	**Grafenberg**	**32.00 303**	P	**P**	**14 22 05.3 +1.1**	
GRFO	**Grafenberg**	**32.00 303**	P	**P**	**14 22 05.3 +1.1**	
GRFO			pmax	pmax		
	comp=Z,41nm,0.6s					
GRFO			MLR	MLR		
	comp=Z,2μm,19.0s					
COP	**Copenhagen**	**32.02 314⇑**	*i*P	**P**	**14 22 05.6 +1.4**	
COP			IAmb	IAmb	14 22 06.2	
	comp=Z,162nm,0.7s					
SQTA	**Sankt Quirin**	**32.02 298**	*i* P	**P**	**14 22 05.0 +0.5**	
	comp=Z,32nm,0.5s,SNR=46					
MOTA	**Moosalm**	**32.08 299**	*i* P	**P**	**14 22 05.3 +0.2**	
	comp=Z,90nm,0.6s,SNR=40					
FABU	**Falkenberg**	**32.17 317**	*i* P	**P**	**14 22 06.2 +0.7**	
RETA	**Reutte**	**32.31 299**	*i* P	**P**	**14 22 07.3 +0.3**	
	comp=Z,34nm,0.5s,SNR=30					
FETA	**Feichten**	**32.35 298**	*i* P	**P**	**14 22 07.8 +0.4**	
	comp=Z,46nm,0.5s,SNR=37					
ZCCA	**Zocca**	**32.40 293**	P	**P**	**14 22 09.8 +2.0**	
DHUB	**DHUBRI**	**32.56 104**	*e*P	**P**	**14 22 08.9 -0.4**	
HFS	**Hagfors**	**32.64 323**	P	**P**	**14 22 10.4 +0.7**	
	comp=Z,137nm,0.4s,baz=109,slow=9.1,SNR=702					
HFS			LR	LR	14 36 42.8	
	comp=Z,5μm,19.3s,baz=110,slow=39					
	comp=Z,137nm,0.4s					
DAVA	**Damuels**	**32.92 298**	*i* P	**P**	**14 22 12.8 +0.4**	
	comp=Z,61nm,0.5s,SNR=47					
DAVOX	**Davos/Dischmat**	**32.95 298**	P	**P**	**14 22 12.8 +0.1**	
	comp=Z,62nm,0.5s,baz=110,slow=4.9,SNR=80					
DAVOX			LR	LR	14 38 13.1	
	comp=Z,2μm,19.6s,baz=76,slow=41					
	comp=Z,62nm,0.5s					
TJOU	**Tjoern**	**33.01 318**	*i* P	**P**	**14 22 13.0 +0.1**	
TAWA	**Tawang**	**33.15 100**	*e*P	**P**	**14 22 15.9 +1.0**	
TUE	**Stuetta**	**33.34 297**	P	**P**	**14 22 16.1 0.0**	
TUE			IAmb	IAmb	14 22 18.0	
	comp=Z,78nm,1.0s					
AAE	**Adis Abeba**	**33.45 209**	*e*P	**P**	**14 22 14.2 -3.2**	
AAE	**Adis Abeba**	**33.45 209**	*e*P	**P**	**14 22 14.2 -3.2**	
STRU	**Stroemstad**	**33.51 320**	*e*P	**P**	**14 22 17.0 -0.2**	
KEV	**Kevo**	**33.57 343**	P	**P**	**14 22 18.5 +0.9**	
KEV	**Kevo**	**33.57 343**	P	**P**	**14 22 18.5 +0.9**	
KEV			pmax	pmax		
	comp=Z,912nm,1.6s					
KEV			MLR	MLR		
	comp=Z,4μm,20.0s					
FURI	**Furi**	**33.61 209**	*e*P	**P**	**14 22 20.6 +1.8**	
FURI	**Furi**	**33.61 209**	*e*P	**P**	**14 22 20.6 +1.8**	
ARA0	**ARCESS Array S**	**33.75 342**	*e*P	**P**	**14 22 20.9 +1.6**	
ARA0			IAmb	IAmb	14 22 21.8	
	comp=Z,344nm,1.4s					
ARCES	**ARCESS Array B**	**33.75 342**	P	**P**	**14 22 20.7 +1.5**	
	comp=Z,30nm,0.4s,baz=138,slow=8.0,SNR=743					
ARCES			LR	LR	14 37 53.5	
	comp=Z,4μm,18.8s,baz=126,slow=40					
	comp=Z,30nm,0.4s					
ARCES	**ARCESS Array B**	**33.75 342**	P	**P**	**14 22 20.1 +0.9**	
ARCES			IAmb	IAmb	14 22 22.1	
	comp=Z,267nm,1.4s					
ARCES	**ARCESS Array B**	**33.75 342**	P	**P**	**14 22 20.1 +0.9**	
NC602	**NORSAR Array S**	**33.85 323**	*e*P	**P**	**14 22 20.8 +0.6**	
NC602			IAmb	IAmb	14 22 21.8	
	comp=Z,160nm,0.8s					
NC405	**NORSAR Array S**	**33.90 324**	P	**P**	**14 22 20.9 +0.3**	
BFO	**Black Forest**	**33.91 300**	P	**P**	**14 22 20.7 -0.2**	
BFO	**Black Forest**	**33.91 300**	P	**P**	**14 22 20.7 -0.2**	
BFO			pmax	pmax		
	comp=Z,29nm,0.6s					
BFO			MLR	MLR		
	comp=Z,2μm,19.0s					
KTK1	**Kautokeino**	**33.94 340**	*e*P	**P**	**14 22 22.3 +1.4**	
KTK1			IAmb	IAmb	14 22 23.1	
	comp=Z,325nm,1.3s					
MUD	**Monsted U'grnd**	**33.96 315⇑**	*i*P	**P**	**14 22 22.7 +1.6**	
MUD			IAmb	IAmb	14 22 23.9	
	comp=Z,119nm,0.7s					
OSL	**Oslo**	**33.99 322**	*e*P	**P**	**14 22 22.1 +0.8**	
OSL			IAmb	IAmb	14 22 23.4	
	comp=Z,638nm,1.5s					
GOET	**G??ttrup**	**34.04 316**	*e*	**P**	**14 22 23.4 +1.6**	
GOET			IAmb	IAmb	14 22 24.9	
	comp=Z,288nm,0.6s					
NB201	**NORSAR Array S**	**34.07 324**	P	**P**	**14 22 22.3 +0.1**	
NB2	**NORSAR Subarra**	**34.10 324**	P	**P**	**14 22 22.6 +0.2**	
	comp=Z,210nm,0.8s,baz=109,slow=9.3					
NB2	**NORSAR Subarra**	**34.10 324**	P	**P**	**14 22 22.6 +0.2**	
	baz=109,slow=9.3					
NOA	**NORSAR Array B**	**34.10 324**	P	**P**	**14 22 22.4 0.0**	
	comp=Z,119nm,0.6s,baz=119,slow=8.2,SNR=373					
NOA			LR	LR	14 37 37.6	
	comp=Z,6μm,18.9s,baz=105,slow=39					
	comp=Z,119nm,0.6s					
MOY	**Mondy**	**34.18 54**	*e*P	**P**	**14 22 25.6 +2.3**	
MOY			pmax	pmax		
	comp=Z,175nm,1.7s					
NAO01	**NORSAR Array S**	**34.19 323**	P	**P**	**14 22 23.2 0.0**	
SHL	**Shillong**	**34.23 103**	P	**P**	**14 22 23.1 -1.0**	
SHL	**Shillong**	**34.23 103**	P	**P**	**14 22 23.1 -1.0**	
SHL			pmax	pmax		
	comp=Z,50nm,0.9s					
SHL	**Shillong**	**34.23 103**	P	**P**	**14 22 23.0 -1.0**	
	SNR=14					
SHL	**Shillong**	**34.23 103**	*e*P	**P**	**14 22 23.6 -0.5**	
NBO00	**NORSAR Array S**	**34.30 323**	P	**P**	**14 22 23.9 -0.3**	
TEZP	**TEZPUR**	**34.37 100**	*e*P	**P**	**14 22 24.9 -0.1**	
TEZP			IAmb	IAmb	14 22 28.6	
	comp=Z,33nm,0.9s					
KONO	**Kongsberg**	**34.46 321**	P	**P**	**14 22 25.3 -0.2**	
KONO			IAmb	IAmb	14 22 27.6	
	comp=Z,116nm,0.8s					
KONO	**Kongsberg**	**34.46 321**	IAMs_20	IAMs_20	14 37 36.0	
	comp=Z,5μm,21.0s					
KONO	**Kongsberg**	**34.46 321***c*	*i*P	**P**	**14 22 25.7 +0.3**	
KONO			pmax	pmax		
	comp=Z,115nm,1.0s					
KONO			MLR	MLR		
	comp=Z,4μm,18.0s					
KONO	**Kongsberg**	**34.46 321**	*e*P	**P**	**14 22 25.7 +0.3**	
KONO			IAmb	IAmb	14 22 27.4	
	comp=Z,102nm,0.8s					
NRIK	**Noril'sk**	**34.66 20**	P	**P**	**14 22 28.2 +1.2**	
	comp=Z,30nm,1.0s,baz=223,slow=6.8,SNR=39					
NRIK			LR	LR	14 39 29.9	
	comp=Z,6μm,18.5s,baz=234,slow=41					
	comp=Z,30nm,1.0s					
NRIK	**Noril'sk**	**34.66 20**	P	**P**	**14 22 27.6 +0.6**	
NRIK			IAmb	IAmb	14 22 30.1	
	comp=Z,109nm,1.3s					
NRIK	**Noril'sk**	**34.66 20***c*	*i*P	**P**	**14 22 28.5 +1.5**	
NRIK			pmax	pmax		
	comp=Z,53nm,1.1s					
HOMB	**Homborsund**	**34.67 318**	*e*P	**P**	**14 22 28.1 +0.8**	
HOMB			IAmb	IAmb	14 22 28.3	
	comp=Z,95nm,0.7s					
HOMB	**Homborsund**	**34.67 318⇑**	*i*P	**P**	**14 22 27.8 +0.5**	
HOMB			IAmb	IAmb	14 22 28.4	
	comp=Z,95nm,0.7s					
ECH	**Echery**	**34.70 300**	P	**P**	**14 22 27.8 +0.1**	
ECH	**Echery**	**34.70 300**	P	**P**	**14 22 27.8 +0.1**	
ECH			pmax	pmax		
	comp=Z,421nm,1.7s					
ECH			MLR	MLR		
	comp=Z,1μm,21.0s					
ZIRO	**ZIRO**	**34.70 98**	*e*P	**P**	**14 22 28.4 +0.3**	
GTA	**Gaotai**	**34.74 75⇑**	P	**P**	**14 22 29.5 +1.2**	
GTA			pP	pP	14 22 35.5 +0.8	
GTA			sP	sP	14 22 38.5 +1.4	
GTA			S	**S**	**14 28 00.8 +3.3**	
GTA			pmax	pmax		
	comp=Z,59nm,1.5s					
GTA			pmax	pmax		
	comp=Z,270nm,4.6s					
GTA			LR	LR		
	comp=Z,3μm,17.1s					
GTA			LR	LR		
	comp=Z,3μm,15.3s					
GTA			LR	LR		
	comp=Z,4μm,13.8s					
ITAN	**ITANAGAR**	**34.80 99**	*e*P	**P**	**14 22 29.6 +0.9**	
ITAN			IAmb	IAmb	14 22 30.6	
	comp=Z,79nm,0.7s					
PCHI	**Peechi**	**34.84 140**	*e*P	**P**	**14 22 30.9 +1.8**	
PCHI			*e*S	S	14 27 49.3 -10	
MOR8	**Moi Rana**	**34.92 333**	*e*P	**P**	**14 22 30.0 +0.6**	
MOR8			IAmb	IAmb	14 22 30.9	
	comp=Z,150nm,1.0s					
HAMF	**Hammerfest**	**34.99 343**	*e*P	**P**	**14 22 31.7 +1.8**	
HAMF			IAmb	IAmb	14 22 33.1	
	comp=Z,326nm,1.0s					
JETT	**Jettan, Norway**	**35.05 340**	*e*P	**P**	**14 22 32.1 +1.6**	
JETT			IAmb	IAmb	14 22 32.3	
	comp=Z,136nm,0.7s					
NSS	**Namsos**	**35.09 329**	*e*P	**P**	**14 22 31.9 +1.0**	
NSS			IAmb	IAmb	14 22 32.9	
	comp=Z,213nm,0.6s					
LPL	**La Plagne**	**35.25 296**	*e*P	**P**	**14 22 32.3 -0.4**	
LPL			pmax	pmax		
	comp=Z,65nm,0.5s					
FAUS	**Fauske**	**35.26 335**	*e*P	**P**	**14 22 33.5 +1.2**	
FAUS			IAmb	IAmb	14 22 35.0	
	comp=Z,462nm,1.1s					
BTNL	**Ternell**	**35.28 304**	*d*P	**P**	**14 22 34.9 +2.1**	
TBLU	**Trondheim**	**35.29 327**	*e*P	**P**	**14 22 32.6 +0.1**	
TBLU			IAmb	IAmb	14 22 34.5	
	comp=Z,194nm,0.6s					
WLF	**Walferdange**	**35.29 303**	P	**P**	**14 22 33.9 +1.1**	
WLF	**Walferdange**	**35.29 303**	P	**P**	**14 22 33.9 +1.1**	
WLF			pmax	pmax		
	comp=Z,517nm,1.8s					
WLF			MLR	MLR		
	comp=Z,2μm,18.0s					
WLF	**Walferdange**	**35.29 303**	*d*P	**P**	**14 22 35.0 +2.2**	
	comp=Z,64nm,1.1s					
SKAR	**Skarslia**	**35.36 322**	*e*P	**P**	**14 22 34.8 +1.5**	
SKAR			IAmb	IAmb	14 22 36.1	
	comp=Z,142nm,0.7s					
SNART	**Snartemo**	**35.36 318**	*e*P	**P**	**14 22 34.6 +1.4**	
SNART			IAmb	IAmb	14 22 35.3	
	comp=Z,2μm,1.8s					
SNART	**Snartemo**	**35.36 318**	*i* P	**P**	**14 22 34.5 +1.4**	
MEM	**Membach**	**35.36 305**	*d*P	**P**	**14 22 35.4 +2.0**	
BHOU	**Houvegnez**	**35.37 304**	*d*P	**P**	**14 22 35.6 +2.2**	
BHOU			*d*PP	**PP**	**14 23 55.2 +1.5**	
DOMB	**Dombas**	**35.40 325**	*e*P	**P**	**14 22 34.5 +0.9**	
DOMB			IAmb	IAmb	14 22 34.9	
	comp=Z,193nm,0.6s					
TRO	**Tromso**	**35.49 339**	*e*P	**P**	**14 22 35.6 +1.4**	
TRO			IAmb	IAmb	14 22 36.5	
	comp=Z,561nm,1.4s					
STOK	**Stokkvaagen**	**35.51 333**	*e*P	**P**	**14 22 35.6 +1.3**	
KONS	**Konsvik**	**35.55 333**	*e*P	**P**	**14 22 36.1 +1.3**	
KONS			IAmb	IAmb	14 22 36.7	
	comp=Z,408nm,1.2s					
BEBN	**Eben Emael**	**35.57 305**	*d*P	**P**	**14 22 36.9 +1.8**	
STEI	**Steigen**	**35.57 336**	*e*P	**P**	**14 22 36.1 +1.2**	
STEI			IAmb	IAmb	14 22 36.5	
	comp=Z,207nm,0.7s					
ZAK	**Zakamensk**	**35.62 56**	*e*P	**P**	**14 22 37.3 +1.6**	
ZAK			*e*		14 23 56.1	
ZAK			*e*		14 25 03.7	
ZAK			pmax	pmax		
	comp=Z,79nm,1.0s					
KEST	**Kesra**	**35.64 278**	P	**P**	**14 22 36.9 +0.9**	
	comp=Z,38nm,0.8s,baz=300,slow=1.5,SNR=30					
	comp=Z,38nm,0.8s					
KEST	**Kesra**	**35.64 278**	P	**P**	**14 22 38.2 +2.2**	
	SNR=22					
BSTI	**Sart Tilman**	**35.64 305**	*d*P	**P**	**14 22 37.8 +2.0**	
BRDH	**Bariadhala**	**35.71 107**	LR	LR	14 40 24.5	
	comp=Z,1μm,19.2s,baz=312,slow=42					
BCLA	**Clavier**	**35.82 304**	*d*P	**P**	**14 22 39.1 +1.9**	
MOKO	**MOKOCHONG**	**35.83 99**	*e*P	**P**	**14 22 38.2 +0.4**	
MOKO			IAmb	IAmb	14 22 40.0	
	comp=Z,165nm,1.3s					
KOHI	**KOHIMA**	**35.84 100**	*e*P	**P**	**14 22 38.6 +0.7**	
RCHB	**Rochefort**	**35.87 304**	*d*P	**P**	**14 22 39.6 +1.9**	
	comp=Z,38nm,1.2s					
RCHB			*d*PP	**PP**	**14 24 01.6 +2.3**	
BGES	**Gesves**	**35.96 304**	*d*P	**P**	**14 22 40.0 +1.5**	
BLS5	**Blasjo**	**35.96 320**	*e*P	**P**	**14 22 40.2 +1.8**	
BLS5			IAmb	IAmb	14 22 40.5	
	comp=Z,164nm,0.6s					
ODD1	**Odda**	**35.98 321**	*e*P	**P**	**14 22 40.5 +1.9**	
ODD1			IAmb	IAmb	14 22 40.9	
	comp=Z,238nm,0.6s					
BMRD	**Maredsous**	**36.16 304**	*d*P	**P**	**14 22 41.9 +1.7**	
BMRD			*d*PP	PP	14 24 15.2 +13	
LOF	**Lofoten**	**36.22 335**	*e*P	**P**	**14 22 40.8 +0.3**	
LOF			IAmb	IAmb	14 22 41.0	
	comp=Z,74nm,0.5s					
IRK	**Irkutsk**	**36.23 53**	*e*P	**P**	**14 22 40.8 0.0**	
IRK			pmax	pmax		
	comp=Z,364nm,1.4s					
MOL	**Molde**	**36.24 325**	*e*P	**P**	**14 22 41.2 +0.5**	
MOL			IAmb	IAmb	14 22 41.4	
	comp=Z,187nm,0.6s					
LKP	**Lekhapani**	**36.33 97**	*e*P	**P**	**14 22 42.7 +0.8**	
AKN	**Aaknes**	**36.37 324**	*e*P	**P**	**14 22 43.2 +1.3**	
AKN			IAmb	IAmb	14 22 43.9	
	comp=Z,260nm,0.6s					
SNF	**Seneffe**	**36.47 304**	*d*P	**P**	**14 22 44.4 +1.6**	
HYA	**Hoyanger**	**36.48 323**	*e*P	**P**	**14 22 44.3

ULN	**Ulaanbaatar**	**38.29 60**	P	**P**	**14 22 59.6 +1.1**
	comp=Z,10μmcomp=Z,1μm,1.1s				
ELSH	**Elham, Standar**	**38.43 306⇑**	*e*P	**P**	**14 23 00.8 +1.4**
ELSH			IAmb	IAmb	14 23 01.6
	comp=Z,315nm,0.6s				
ELMS	**Elmsett, Ipswi**	**38.46 307⇑**	*e*P	**P**	**14 23 00.8 +1.1**
ELMS			IAmb	IAmb	14 23 01.7
	comp=Z,697nm,1.7s				
CAF	**Calviac**	**38.60 296**	*e*P	**P**	**14 23 01.3 +0.3**
CAF			pmax	pmax	
	comp=Z,258nm,1.3s				
BJO1	**Bjornoya**	**38.74 346**	*e*P	**P**	**14 23 03.4 +1.6**
BJO1			IAmb	IAmb	14 23 04.0
	comp=Z,454nm,1.3s				
LZH	**Lanzhou**	**38.79 79**	⇑P	**P**	**14 23 04.5 +1.6**
LZH			pP	pP	14 23 09.5 +0.1
LZH			sP	sP	14 23 13.0 +1.2
LZH			S	**S**	**14 29 01.5 +2.1**
LZH			sS	sS	14 29 12.5 +2.7
LZH			SS	**SnSn**	**14 31 42.0 -7.0**
LZH			pmax	pmax	
	comp=Z,81nm,1.2s				
LZH			pmax	pmax	
	comp=Z,210nm,4.4s				
LZH			LR	LR	
	comp=Z,4μm,18.0s				
LZH			LR	LR	
	comp=Z,4μm,15.8s				
LZH			LR	LR	
	comp=Z,6μm,18.2s				
HMNX	**Herstmonceux**	**38.95 305**	*e*P	**P**	**14 23 04.0 +0.2**
HOPEN	**Hopen**	**39.26 349**	*e*P	**P**	**14 23 08.8 +2.7**
HOPEN			IAmb	IAmb	14 23 09.5
	comp=Z,713nm,1.2s				
MND	**Mandalay**	**39.43 104**	P	**P**	**14 23 07.5 -0.6**
GDLE	**Glaisdale, N Y**	**39.47 311⇑**	*e*P	**P**	**14 23 08.9 +0.8**
GDLE			IAmb	IAmb	14 23 09.9
	comp=Z,892nm,1.6s				
MFF	**Saint Martin d**	**39.82 299**	*e*P	**P**	**14 23 10.5 -0.6**
MFF			pmax	pmax	
	comp=Z,169nm,1.2s				
PALK	**Pallekele**	**39.84 137**	P	**P**	**14 23 11.6 -0.1**
	comp=Z,15nm,0.9s,baz=72,slow=9.5,SNR=4.7				
PALK			LR	LR	14 42 03.1
	comp=Z,3μm,18.2s,baz=67,slow=40				
	comp=Z,15nm,0.9s				
PALK	**Pallekele**	**39.84 137**	P	**P**	**14 23 11.5 -0.1**
PALK	**Pallekele**	**39.84 137**	IAMs_20	IAMs_20	14 41 52.6
	comp=Z,3μm,18.0s				
PALK	**Pallekele**	**39.84 137⇑**	*e*P	**P**	**14 23 13.5 +1.9**
PALK			pmax	pmax	
	comp=Z,38nm,1.3s				
PALK			MLR	MLR	
	comp=Z,3μm,18.0s				
PALK	**Pallekele**	**39.84 137**	P	**P**	**14 23 13.1 +1.5**
PALK	**Pallekele**	**39.84 137**	P	**P**	**14 23 12.0 +0.4**
	comp=Z,26nm,1.0s				
LRW	**Lerwick**	**39.88 320⇑**	*e*P	**P**	**14 23 12.2 +0.8**
LRW			IAmb	IAmb	14 23 12.6
	comp=Z,174nm,0.7s				
LODK	**Lodwar**	**39.90 211**	P	**P**	**14 23 11.7 -0.4**
LODK	**Lodwar**	**39.90 211**	P	**P**	**14 23 13.6 +1.5**
	SNR=9.3				
HPK	**Haverah Park**	**39.96 310⇑**	*e*P	**P**	**14 23 13.1 +0.9**
HPK			IAmb	IAmb	14 23 15.4
	comp=Z,740nm,1.4s				
EDMD	**Edmundbyers**	**40.13 312⇑**	*e*P	**P**	**14 23 14.4 +0.9**
EDMD			IAmb	IAmb	14 23 15.0
	comp=Z,373nm,0.6s				
SWN1	**Swindon**	**40.23 306⇑**	*e*P	**P**	**14 23 15.6 +1.1**
SWN1			IAmb	IAmb	14 23 16.5
	comp=Z,2μm,1.8s				
STRD	**Stroud**	**40.43 307**	*e*P	**P**	**14 23 16.3 +0.2**
ESY	**Stoneypath**	**40.48 313⇑**	*e*P	**P**	**14 23 17.3 +0.8**
JOE	**Queens East**	**40.66 303⇑**	*e*P	**P**	**14 23 18.5 +0.5**
EDU	**Dundee**	**40.69 314⇑**	*e*P	**P**	**14 23 18.9 +0.6**
EBL	**Broad Law**	**40.72 313⇑**	*e*P	**P**	**14 23 19.5 +1.0**
JSA	**Saint Aubin**	**40.75 303⇑**	*e*P	**P**	**14 23 19.2 +0.5**
JSA			IAmb	IAmb	14 23 20.6
	comp=Z,76nm,0.7s				
CD2	**Chengdu**	**40.77 86**	P	**P**	**14 23 20.3 +1.1**
CD2			S	**S**	**14 29 29.3 +0.4**
CD2			pmax	pmax	
	comp=Z,170nm,1.0s				
CD2			pmax	pmax	
	comp=Z,190nm,4.5s				
CD2			LR	LR	
	comp=Z,2μm,16.9s				
CD2			LR	LR	
	comp=Z,3μm,16.5s				
CD2			LR	LR	
	comp=Z,4μm,20.4s				
JVM	**Valle D.L. Mar**	**40.77 303⇑**	*e*P	**P**	**14 23 19.2 +0.3**
EDI	**Edinburgh**	**40.80 313⇑**	*e*P	**P**	**14 23 19.7 +0.6**
EDI			IAmb	IAmb	14 23 20.9
	comp=Z,451nm,1.5s				
KESW	**Keswick, Cumbr**	**40.80 311⇑**	*e*P	**P**	**14 23 19.8 +0.7**
KESW			IAmb	IAmb	14 23 21.2
	comp=Z,1μm,1.5s				
EKA	**Eskdalemuir Ar**	**40.80 312**	P	**P**	**14 23 19.5 +0.4**
	comp=Z,187nm,0.5s,baz=102,slow=9.0,SNR=905				
EKA			LR	LR	14 44 01.1
	comp=Z,2μm,19.5s,baz=87,slow=42				
	comp=Z,187nm,0.5s				
HLM1	**Long Mynd**	**40.81 308⇑**	*e*P	**P**	**14 23 19.7 +0.4**
HLM1			IAmb	IAmb	14 23 21.1
	comp=Z,187nm,1.2s				
MONM	**Monmouth**	**40.82 307**	*e*P	**P**	**14 23 19.5 +0.1**
MONM			IAmb	IAmb	14 23 20.9
	comp=Z,251nm,1.4s				
MCD	**Coleburn Disti**	**40.83 316⇑**	*e*P	**P**	**14 23 20.1 +0.8**
ESK	**Eskdalemuir**	**40.83 312⇑**	*e*P	**P**	**14 23 20.0 +0.6**
ESK			IAmb	IAmb	14 23 20.5
	comp=Z,216nm,0.6s				
ESK	**Eskdalemuir**	**40.83 312**	P	**P**	**14 23 19.9 +0.6**
ESK			IAmb	IAmb	14 23 20.7
	comp=Z,205nm,0.6s				
ESK	**Eskdalemuir**	**40.83 312**	P	**P**	**14 23 19.9 +0.6**
ESK			pmax	pmax	
	comp=Z,205nm,0.6s				
ESK			MLR	MLR	
	comp=Z,2μm,18.0s				
MLA1	**Latheron**	**40.90 317⇑**	*e*P	**P**	**14 23 20.4 +0.5**
FOEL	**Foel Wylfa**	**40.97 309⇑**	*e*P	**P**	**14 23 20.9 +0.3**
FOEL			IAmb	IAmb	14 23 22.3
	comp=Z,236nm,1.1s				
HSPB	**Hornsund (broa**	**41.09 348**	*e*P	**P**	**14 23 23.3 +2.1**
BIGH	**Upper Bighouse**	**41.19 317⇑**	*e*P	**P**	**14 23 23.0 +0.7**
BIGH			IAmb	IAmb	14 23 23.8
	comp=Z,94nm,0.9s				
LLW	**Llanuwychllyn**	**41.25 309⇑**	*e*P	**P**	**14 23 23.9 +1.0**
PZH	**PanZhiHua**	**41.29 94**	⇑P	**P**	**14 23 24.0 +0.4**
PZH			pP	**pP**	**14 23 29.3 -1.0**
PZH			PcP	**PcP**	**14 25 19.0 -3.1**
PZH			PcS	**PcS**	**14 29 12.0 -1.5**
PZH			S	**S**	**14 29 37.5 +0.6**
PZH			sS	**sS**	**14 29 47.0 -0.4**
PZH			ScS	**ScS**	**14 33 24.5 -2.4**
PZH			pmax	pmax	
	comp=Z,40nm,1.0s				
PZH			pmax	pmax	
	comp=Z,90nm,3.7s				
PZH			LR	LR	
	comp=Z,1μm,16.1s				
PZH			LR	LR	
	comp=Z,1μm,16.3s				
PZH			LR	LR	
	comp=Z,1μm,18.8s				
NEWG	**New Galloway**	**41.42 312⇑**	*e*P	**P**	**14 23 25.1 +0.9**
NEWG			IAmb	IAmb	14 23 26.2
	comp=Z,763nm,1.6s				
YLL	**Llanberis**	**41.53 309**	*e*P	**P**	**14 23 25.8 +0.7**
PGBU	**Glenifferbraes**	**41.53 313⇑**	*e*P	**P**	**14 23 26.1 +0.9**
PGBU			IAmb	IAmb	14 23 27.1
	comp=Z,258nm,0.9s				
LPW	**Lampeter**	**41.57 308⇑**	*e*P	**P**	**14 23 26.3 +0.8**
WME	**Myndd Eilian**	**41.59 310⇑**	*e*P	**P**	**14 23 26.4 +0.8**
ROSF	**Rostrenen**	**41.60 302⇑**	*e*P	**P**	**14 23 26.9 +1.1**
WLF1	**Llynfaes**	**41.65 309⇑**	*e*P	**P**	**14 23 27.0 +0.9**
WLF1			IAmb	IAmb	14 23 27.4
	comp=Z,194nm,0.6s				
DYA	**Yadsworthy**	**41.70 305⇑**	*e*P	**P**	**14 23 27.2 +0.6**
DYA			IAmb	IAmb	14 23 27.6
	comp=Z,121nm,0.8s				
WPS	**Cemaes, Angles**	**41.70 310**	*e*P	**P**	**14 23 27.4 +0.9**
WPS			IAmb	IAmb	14 23 28.4
	comp=Z,358nm,1.5s				
GAL1	**Galloway**	**41.71 312⇑**	*e*P	**P**	**14 23 27.3 +0.7**
GAL1			IAmb	IAmb	14 23 28.3
	comp=Z,568nm,1.7s				
WIM	**Isle of Man**	**41.74 311⇑**	*e*P	**P**	**14 23 27.8 +0.9**
YRC	**Rhoscolyn**	**41.76 309⇑**	*e*P	**P**	**14 23 27.8 +0.8**
SPB2	**Spitsbergen Ar**	**41.77 349**	P	**P**	**14 23 28.4 +1.6**
SPB2			IAmb	IAmb	14 23 30.1
	comp=Z,351nm,1.0s				
SPA0	**Spitsbergen Ar**	**41.77 349**	*e*P	**P**	**14 23 29.0 +2.2**
SPA0			IAmb	IAmb	14 23 29.9
	comp=Z,568nm,1.1s				
SPITS	**Spitsbergen Ar**	**41.77 349**	P	**P**	**14 23 28.4 +1.6**
	comp=Z,222nm,0.9s,baz=125,slow=11,SNR=58				
SPITS			LR	LR	14 44 08.1
	comp=Z,6μm,18.5s,baz=112,slow=41				
	comp=Z,222nm,0.9s				
BOD	**Bodaibo**	**41.82 44**	*e*P	**P**	**14 23 28.0 +0.5**
BOD			pmax	pmax	
	comp=Z,325nm,1.0s				
KAC	**Achnashellach**	**41.93 316⇑**	*e*P	**P**	**14 23 29.0 +0.7**
BTO	**Baotou**	**41.94 70**	*e*P	**P**	**14 23 29.0 +0.2**
BTO			S	**S**	**14 29 46.8 +0.6**
BTO			LR	LR	
	comp=Z,8μm,17.5s				
BTO			LR	LR	
	comp=Z,8μm,16.9s				
CIT	**Chita**	**41.95 52**	*e*P	**P**	**14 23 29.6 +1.0**
CIT			*e*		14 25 37.2
HTL	**Hartland**	**41.97 306**	*e*P	**P**	**14 23 29.1 +0.4**
RSBS	**Rosebush, Pemb**	**42.01 307⇑**	*e*P	**P**	**14 23 29.6 +0.6**
RSBS			IAmb	IAmb	14 23 30.7
	comp=Z,205nm,1.2s				
LAWE	**Loch Awe, Argy**	**42.03 314⇑**	*e*P	**P**	**14 23 29.9 +0.8**
LAWE			IAmb	IAmb	14 23 30.9
	comp=Z,514nm,1.7s				
KPL	**Plockton**	**42.12 316⇑**	*e*P	**P**	**14 23 30.5 +0.6**
KPL			IAmb	IAmb	14 23 31.1
	comp=Z,123nm,0.9s				
KAAM	**Kaadhehdhoo**	**42.39 152**	P	**P**	**14 23 28.8 -3.7**
	comp=Z,71nm,2.3s				
GMM	**Mts of Mourne**	**42.48 311⇑**	*e*P	**P**	**14 23 33.6 +0.7**
CLGH	**Cloghs, Cushen**	**42.50 312⇑**	*e*P	**P**	**14 23 33.8 +0.8**
CLGH			IAmb	IAmb	14 23 34.7
	comp=Z,348nm,1.5s				
CCA1	**Carnmenellis**	**42.56 305⇑**	*e*P	**P**	**14 23 34.3 +0.8**
CCA1			IAmb	IAmb	14 23 34.8
	comp=Z,146nm,0.6s				
ILTH	**Belurgan, Co L**	**42.73 311⇑**	*e*P	**P**	**14 23 35.4 +0.5**
KMI	**Kunming**	**42.77 95**	⇑P	**P**	**14 23 36.5 +0.6**
KMI			pP	sP	14 23 44.0 -1.0
KMI			PcP	**PcP**	**14 25 27.3 +0.2**
KMI			S	**S**	**14 29 59.0 0.0**
KMI			SS	**SS**	**14 33 08.8 -1.1**
KMI			ScS	**ScS**	**14 33 30.5 -5.7**
KMI			pmax	pmax	
	comp=Z,190nm,1.0s				
KMI			pmax	pmax	
	comp=Z,260nm,3.5s				
KMI			LR	LR	
	comp=Z,780nm,15.2s				
KMI			LR	LR	
	comp=Z,1μm,17.7s				
KMI			LR	LR	
	comp=Z,2μm,23.6s				
CART	**Cartagena**	**42.82 286**	P	**P**	**14 23 36.3 +0.4**
DSB	**Dublin**	**42.84 309**	P	**P**	**14 23 35.8 0.0**
DSB			IAmb	IAmb	14 23 38.2
	comp=Z,198nm,1.4s				
KBS	**Kingsbay**	**42.93 349**	P	**P**	**14 23 37.4 +1.2**
KBS			IAmb	IAmb	14 23 39.0
	comp=Z,258nm,1.1s				
KBS	**Kingsbay**	**42.93 349**	P	**P**	**14 23 37.4 +1.2**
KBS			pmax	pmax	
	comp=Z,259nm,1.1s				
KBS			MLR	MLR	
	comp=Z,5μm,19.0s				
KBS	**Kingsbay**	**42.93 349**	*e*P	**P**	**14 23 37.9 +1.7**
KBS			IAmb	IAmb	14 23 38.8
	comp=Z,258nm,1.1s				
KBS	**Kingsbay**	**42.93 349**	⇑*i*P	**P**	**14 23 37.7 +1.5**
HHC	**Hu-ho-hao-te**	**42.98 69**	*e*P	**P**	**14 23 37.3 0.0**
HHC			PP	**PP**	**14 25 19.5 +2.5**
HHC			S	**S**	**14 30 00.3 -1.3**
HHC			SS	**SS**	**14 33 05.0 -8.4**
HHC			pmax	pmax	
	comp=Z,20nm,0.6s				
HHC			pmax	pmax	
	comp=Z,750nm,5.4s				
HHC			LR	LR	
	comp=Z,4μm,14.2s				
HHC			LR	LR	
	comp=Z,2μm,14.1s				
HHC			LR	LR	
	comp=Z,5μm,15.5s				
IWEX	**Carrickbyrne,**	**43.19 308⇑**	*e*P	**P**	**14 23 39.5 +0.8**
IWEX			IAmb	IAmb	14 23 40.2
	comp=Z,348nm,1.6s				
IDGL	**Inch Island, C**	**43.30 312⇑**	*e*P	**P**	**14 23 40.5 +0.9**
IDGL			IAmb	IAmb	14 23 41.4
	comp=Z,409nm,1.4s				
XAN	**Xi'an**	**43.42 80**	P	**P**	**14 23 41.5 +0.7**
XAN			pP	sP	14 23 50.8 +1.0
XAN			S	**S**	**14 30 09.5 +1.5**
XAN			pmax	pmax	
	comp=Z,130nm,1.1s				
XAN			pmax	pmax	
	comp=Z,550nm,3.5s				
XAN			LR	LR	
	comp=Z,2μm,15.5s				
XAN			LR	LR	
	comp=Z,3μm,18.3s				
XAN			LR	LR	
	comp=Z,5μm,18.6s				
KMBO	**Kilima Mbogo**	**43.42 205**	P	**P**	**14 23 41.6 +0.4**
KMBO	**Kilima Mbogo**	**43.42 205**	P	**P**	**14 23 41.6 +0.4**
KMBO	**Kilima Mbogo**	**43.42 205**	*e*P	P	14 23 33.8 -7.4
KMBO	**Kilima Mbogo**	**43.42 205**	*e*P	P	14 23 33.8 -7.4
CHTO	**Chiang Mai**	**43.47 105**	P	**P**	**14 23 40.9 -0.4**
CHTO	**Chiang Mai**	**43.47 105**	P	**P**	**14 23 40.9 -0.4**
CHTO			MLR	MLR	
	comp=Z,300nm,20.0s				
CM31	**Chiang Mai Arr**	**43.69 106**	P	**P**	**14 23 42.2 -0.9**
CM31	**Chiang Mai Arr**	**43.69 106**	P	**P**	**14 23 43.2 +0.2**
	SNR=22				
CMAR	**Chiang Mai Arr**	**43.69 106**	P	**P**	**14 23 42.9 -0.2**
	comp=Z,24nm,0.8s,baz=301,slow=8.3,SNR=187				
CMAR			PcP	**PcP**	**14 25 29.6 -0.4**
	comp=Z,11nm,1.0s,baz=288,slow=3.9,SNR=7.5				
CMAR			LR	LR	14 47 23.5
	comp=Z,495nm,18.6s,baz=300,slow=44				
	comp=Z,24nm,0.8s				
PBA	**Port Blair**	**43.79 119**	P	**P**	**14 23 44.2 +0.3**
PBA			IAmb	IAmb	14 23 45.3
	comp=Z,118nm,0.8s				
PBA	**Port Blair**	**43.79 119**	P	**P**	**14 23 44.6 +0.7**
PBA	**Port Blair**	**43.79 119**	*e*P	**P**	**14 23 44.6 +0.7**
MSEY	**Mahe Island**	**43.99 179**	P	**P**	**14 23 45.2 -0.3**
MSEY	**Mahe Island**	**43.99 179**	P	**P**	**14 23 45.2 -0.3**
MSEY			pmax	pmax	
	comp=Z,39nm,1.1s				
MSEY			MLR	MLR	
	comp=Z,2μm,19.0s				
MSEY	**Mahe Island**	**43.99 179**	P	**P**	**14 23 46.6 +1.1**
MSEY	**Mahe Island**	**43.99 179**	P	**P**	**14 23 45.8 +0.3**
ESBB	**Sonseca Array**	**44.29 290**	P	**P**	**14 23 47.7 -0.1**
ESBB			IAmb	IAmb	14 24 00.2
	comp=Z,75nm,0.7s				
ESDC	**Sonseca Array**	**44.29 290**	P	**P**	**14 23 48.2 +0.4**
	comp=Z,46nm,0.7s,baz=60,slow=8.1,SNR=269				
ESDC			LR	LR	14 46 49.3
	comp=Z,472nm,19.0s,baz=70,slow=42				
	comp=Z,46nm,0.7s				
KIBK	**Kibwezi**	**44.31 204**	P	**P**	**14 23 47.9 -0.2**
KIBK	**Kibwezi**	**44.31 204**	P	**P**	**14 23 49.1 +1.0**
JMIC	**Jan Mayen**	**44.42 335**	LR	LR	14 43 34.3
	comp=Z,3μm,18.8s,baz=86,slow=38				
TAM	**Tamanrasset**	**44.51 263**	P	**P**	**14 23 50.1 +0.3**
TAM	**Tamanrasset**	**44.51 263**	P	**P**	**14 23 50.1 +0.3**
TAM			pmax	pmax	
	comp=Z,65nm,1.5s				
PAB	**San Pablo**	**44.62 290**	P	**P**	**14 23 50.9 +0.5**
PHRA	**Phrae**	**44.62 104**	P	**P**	**14 23 49.6 -0.9**
TIY	**Taiyuan**	**44.66 73**	*e*P	**P**	**14 23 52.3 +1.5**
TIY			S	**S**	**14 30 30.8 +4.7**
TIY			LR	LR	
	comp=Z,2μm,13.7s				
TIY			LR	LR	
	comp=Z,2μm,19.0s				
TIY			LR	LR	
	comp=Z,2μm,14.7s				
TAF	**Taforalt**	**44.91 283**	P	**P**	**14 23 55.0 +2.1**
GYA	**Guiyang**	**45.12 90⇑**	*i*P	**P**	**14 23 54.5 -0.1**
GYA			PcP	**PcP**	**14 25 36.0 +1.0**
GYA			S	**S**	**14 30 32.0 -1.0**
GYA			sS	sS	14 30 47.5 +4.0
GYA			SS	**ScS**	**14 33 45.8 -5.0**
GYA			pmax	pmax	
	comp=Z,77nm,1.0s				
GYA			pmax	pmax	
	comp=Z,270nm,3.5s				
GYA			LR	LR	
	comp=Z,2μm,15.8s				
GYA			LR	LR	
	comp=Z,1μm,19.1s				
GYA			LR	LR	
	comp=Z,3μm,16.8s				
FIGM	**Figuig**	**45.15 279**	P	**P**	**14 23 56.0 +1.2**
JBK	**JBK**	**45.22 282**	P	**P**	**14 23 57.0 +1.5**
XLT	**XiLinHaoTe**	**45.28 64**	*e*P	**P**	**14 23 56.8 +1.1**
XLT			pP	pP	14 24 02.5 +0.3
XLT			sP	sP	14 24 06.5 +1.4
XLT			PcP	**PcP**	**14 25 33.5 -1.7**
XLT			ScP	**ScP**	**14 29 30.5 +3.8**
XLT			S	**S**	**14 30 38.5 +3.6**
XLT			sS	pS	14 30 42.5 -0.2
XLT			ScS	**ScS**	**14 33 52.0 +0.7**
XLT			pmax	pmax	
	comp=Z,64nm,1.2s				
XLT			pmax	pmax	
	comp=Z,250nm,4.1s				
XLT			LR	LR	
	comp=Z,4μm,14.7s				
XLT			LR	LR	
	comp=Z,4μm,20.2s				
MBAR	**Mbarara**	**45.45 214**	*ce*P	**P**	**14 23 59.7 +2.4**
MBAR	**Mbarara**	**45.45 214**	P	**P**	**14 23 57.4 +0.1**
ENH	**Enshi**	**45.47 84**	P	**P**	**14 23 57.0 -0.2**
ENH			IAmb	IAmb	14 23 58.9
	comp=Z,106nm,0.9s				
ENH	**Enshi**	**45.47 84**	P	**P**	**14 23 57.9 +0.7**
PBRG	**Braganca**	**45.60 294**	*e*P	**P**	**14 23 59.0 +0.8**
	comp=Z,79nm,1.5s				
PBRG			*es*P	**sP**	**14 24 10.0 +2.9**
LYN	**LuoYang**	**45.90 77⇑**	*i*P	**P**	**14 24 02.0 +1.5**
LYN			S	**S**	**14 30 46.8 +3.0**
LYN			pmax	pmax	
	comp=Z,80nm,0.8s				
LYN			LR	LR	
	comp=Z,3μm,17.9s				
LYN			LR	LR	
	comp=Z,2μm,16.4s				
LYN			LR	LR	
	comp=Z,4μm,17.5s				
PALE	**Palemas**	**45.90 284**	P	**P**	**14 24 02.0 +1.4**
MVO	**Moncorvo**	**46.01 293**	*e*P	**P**	**14 24 02.3 +0.9**
	comp=Z,77nm,0.9s				
MVO			*es*P	**sP**	**14 24 12.7 +2.3**
HIA	**Hailar**	**46.31 55**	P	**P**	**14 24 04.1 +0.4**
HIA			IAmb	IAmb	14 24 06.4
	comp=Z,140nm,1.3s				
HIA	**Hailar**	**46.31 55**	*c i*P	**P**	**14 24 04.7 +1.0**
HIA	**Hailar**	**46.31 55**	P	**P**	**14 24 04.9 +1.2**
SRDT	**SRDT**	**46.44 110**	P	**P**	**14 24 03.8 -1.1**
	comp=Z,94nm,1.2s				
SRDT	**SRDT**	**46.44 110**	P	**P**	**14 24 04.2 -0.7**
HNS	**HongShan**	**46.46 73**	⇑P	**P**	**14 24 06.3 +1.4**
HNS			S	**S**	**14 30 53.0 +1.3**
HNS			sS	**sS**	**14 31 02.5 +0.2**
HNS			ScS	**ScS**	**14 33 58.5 -0.3**
HNS			SS	**SS**	**14 34 10.5 -6.9**
HNS			pmax	pmax	
	comp=Z,79nm,1.1s				
HNS			pmax	pmax	
	comp=Z,350nm,4.5s				
HNS			LR	LR	
	comp=Z,1μm,15.2s				
HNS			LR	LR	
	comp=Z,3μm,17.1s				
HNS			LR	LR	
	comp=Z,4μm,16.2s				
PVRL	**Vila Real**	**46.46 293**	*e*P	**P**	**14 24 05.2 +0.2**
	comp=Z,93nm,1.1s				
PVRL			*es*P	**sP**	**14 24 16.3 +2.4**
POLO	**Lamas de Olo**	**46.49 293**	*e*P	**P**	**14 24 06.0 +0.8**
	comp=Z,47nm,1.2s				
PCAB	**Cabril**	**46.54 294**	*e*P	**P**	**14 24 07.0 +1.4**
	comp=Z,126nm,1.0s				
PCAB			*es*P	**sP**	**14 24 17.4 +2.9**
BJI	**Beijing**	**46.57 69**	P	**P**	**14 24 06.8 +1.1**
BJI			PcP	**PcP**	**14 25 40.5 +0.8**
BJI			S	**S**	**14 30 56.0 +2.6**
BJI			sS	**sS**	**14 31 06.8 +2.9**
BJI			ScS	**ScS**	**14 34 01.5 +2.0**
BJI			pmax	pmax	
	comp=Z,34nm,0.8s				
BJI			LR	LR	
	comp=Z,350nm,13.8s				
BJI			LR	LR	
	comp=Z,2μm,15.2s				
BJI			LR	LR	
	comp=Z,3μm,15.7s				
BJT	**Baijiatuau**	**46.58 69**	P	**P**	**14 24 06.1 +0.3**
BJT	**Baijiatuau**	**46.58 69**	IAMs_20	IAMs_20	14 44 56.7
	comp=Z,2μm,18.0s				
BJT	**Baijiatuau**	**46.58 69**	P	**P**	**14 24 06.1 +0.3**
BJT	**Baijiatuau**	**46.58 69**	P	**P**	**14 24 07.4 +1.6**
PGAV	**Gavieira, Arco**	**46.63 294**	*e*P	**P**	**14 24 06.9 +0.6**
	comp=Z,245nm,1.1s				
PGAV			*es*P	**sP**	**14 24 18.5 +3.2**
MTE	**Manteigas**	**46.64 292**	*e*P	**P**	**14 24 07.5 +1.1**
	comp=Z,192nm,1.6s				
MTE			*es*P	**sP**	**14 24 18.2 +2.9**
PVIS	**Viseu**	**46.78 292**	*e*P	**P**	**14 24 08.5 +1.0**
	comp=Z,118nm,1.6s				
PVIS			*es*P	**sP**	**14 24 20.0 +3.6**
PCBR	**Castelo Branco**	**46.78 291**	*e*P	**P**	**14 24 07.8 +0.4**
	comp=Z,148nm,1.8s				
SMIR	**Smir Dam**	**46.80 285**	P	**P**	**14 24 08.0 +0.4**
PMRV	**Marv??o**	**46.87 291**	*e*P	**P**	**14 24 08.7 +0.6**
	comp=Z,145nm,1.7s				
PMRV			*es*P	**sP**	**14 24 20.5 +3.4**
CHEFC	**Chefchaouen**	**47.00 284**	P	**P**	**14 24 09.2 0.0**
PBAR	**Barrancos**	**47.06 289**	*e*P	**P**	**14 24 10.1 +0.5**
	comp=Z,133nm,2.0s				
PBAR			*es*P	**sP**	**14 24 21.5 +2.9**
NONG	**Nongkai**	**47.08 103**	P	**P**	**14 24 09.7 -0.3**
PESTR	**Estremoz**	**47.21 290**	*e*P	**P**	**14 24 11.4 +0.6**
	comp=Z,181nm,1.1s				
PESTR			*ep*P	**sP**	**14 24 21.9 +2.1**
PESTR	**Estremoz**	**47.21 290**	P	**P**	**14 24 11.4 +0.6**
PESTR			IAmb	IAmb	14 24 23.6
	comp=Z,65nm,0.8s				
PESTR	**Estremoz**	**47.21 290**	P	**P**	**14 24 11.4 +0.6**
LCRM	**LCR**	**47.22 282**	P	**P**	**14 24 12.3 +1.1**
MDT	**Midelt**	**47.41 281**	P	**P**	**14 24 12.8 +0.3**
	comp=Z,27nm,0.9s				
	comp=Z,27nm,0.9s				
MDT	**Midelt**	**47.41 281**	P	**P**	**14 24 13.7 +1.2**
PCAS	**Casmilo, Conde**	**47.44 292**	*e*P	**P**	**14 24 13.2 +0.6**
	comp=Z,109nm,1.8s				
PMTG	**Montargil**	**47.60 291**	*e*P	**P**	**14 24 14.3 +0.5**
	comp=Z,114nm,1.7s				
EVO	**Evora**	**47.64 290**	*e*P	**P**	**14 24 15.1 +1.0**
	comp=Z,80nm,1.5s				
PBEJ	**Beja**	**47.73 289**	*e*P	**P**	**14 24 15.4 +0.6**
	comp=Z,100nm,1.7s				
PSBE	**So Bento**	**47.85 291**	*e*P	**P**	**14 24 17.2 +1.4**
	comp=Z,159nm,1.9s				
PSBE			*es*P	**sP**	**14 24 28.0 +3.3**
PVAQ	**Vaqueiros**	**47.85 288**	*e*P	**P**	**14 24 16.2 +0.4**
	comp=Z,124nm,1.3s				
PVAQ			*es*P	**sP**	**14 24 27.1 +2.4**
PVAQ	**Vaqueiros**	**47.85 288**	P	**P**	**14 24 15.9 +0.1**
PVAQ	**Vaqueiros**	**47.85 288**	P	**P**	**14 24 16.2 +0.4**
PCVE	**Castro Verde**	**48.00 289**	*e*P	**P**	**14 24 17.3 +0.4**
	comp=Z,80nm,1.7s				
PCVE			*es*P	**sP**	**14 24 28.0 +2.1**
DAG	**Danmarks Havn**	**48.04 343⇑**	*

DAG IVmB_BB 14 24 18.4
comp=Z,2μm,1.5s
DAG IAmb IAmb 14 24 18.9
comp=Z,217nm,1.2s
NAYO Nakonayok 48.07 108 P P 14 24 17.9 +0.2
PACT Alcochete 48.15 290 *e*P **P 14 24 19.8 +1.8**
comp=Z,259nm,2.0s
PACT *es*P **sP 14 24 30.4 +3.4**
TIXI Tiksi 48.16 24 P **P 14 24 18.4 +0.7**
comp=Z,41nm,0.4s,baz=90,slow=23,SNR=138
TIXI LR LR 14 47 39.9
comp=Z,7μm,18.9s,baz=270,slow=40
comp=Z,41nm,0.4s
TIXI Tiksi 48.16 24 P **P 14 24 18.0 +0.4**
TIXI IAmb IAmb 14 24 20.6
comp=Z,143nm,1.0s
TIXI Tiksi 48.16 24*c i*P **P 14 24 18.3 +0.7**
TIXI pmax pmax
comp=Z,162nm,1.1s
TIXI MLR MLR
comp=Z,8μm,17.0s
PNCL Nicolau / Gran 48.18 289 *e*P **P 14 24 18.7 +0.4**
comp=Z,74nm,1.9s
DBG Daneborg 48.27 339⇑*i*P **P 14 24 20.4 +2.0**
DBG IAmb IAmb 14 24 21.7
comp=Z,95nm,1.2s
PMAFR Mafra 48.41 291 *e*P **P 14 24 20.4 +0.3**
comp=Z,139nm,1.3s
NOR Nord 48.41 349 *i*P **P 14 24 20.8 +1.3**
NOR IAmb IAmb 14 24 21.9
comp=Z,470nm,2.0s
PMST Lisbon--Monsan 48.42 290 *e*P **P 14 24 21.2 +1.1**
comp=Z,172nm,1.7s
PTEO Sao Teotonio 48.54 289 *e*P **P 14 24 21.1 0.0**
comp=Z,118nm,2.2s
PTEO *es*P **sP 14 24 33.3 +3.3**
GULI GuiLin 48.57 89 P **P 14 24 18.0 -3.5**
GULI S **S 14 31 14.3 -7.9**
GULI pmax pmax
comp=Z,640nm,1.7s
GULI LR LR
comp=Z,1μm,14.7s
GULI LR LR
comp=Z,1μm,19.2s
GULI LR LR
comp=Z,20μm,2.9s
MORF Marmelete 48.58 289 *e*P **P 14 24 22.3 +0.8**
MORF IAmb IAmb 14 24 23.2
comp=Z,12nm,0.7s
MORF Marmelete 48.58 289 *e*P **P 14 24 22.6 +1.1**
MORF Marmelete 48.58 289 *e*P **P 14 24 22.3 +0.8**
TIA Tai'an 48.70 73⇑P **P 14 24 23.5 +1.1**
TIA S **S 14 31 25.5 +1.7**
TIA pmax pmax
comp=Z,68nm,0.9s
TIA pmax pmax
comp=Z,300nm,3.8s
TIA LR LR
comp=Z,1μm,16.0s
TIA LR LR
comp=Z,2μm,18.3s
TIA LR LR
comp=Z,4μm,17.8s
PFVI Vila Bisbo 48.77 288 *e*P **P 14 24 22.8 -0.1**
comp=Z,166nm,1.7s
PFVI *es*P **sP 14 24 33.9 +2.0**
PFVI Vila Bisbo 48.77 288 P **P 14 24 24.0 +1.1**
WHN Wuhan 49.07 81⇑*i*P **P 14 24 26.3 +1.1**
WHN pP **sP 14 24 34.3 0.0**
WHN S **S 14 31 28.5 -0.5**
WHN sS **sS 14 31 46.0 +6.4**
WHN pmax pmax
comp=Z,260nm,0.8s
WHN LR LR
comp=Z,2μm,11.5s
WHN LR LR
comp=Z,3μm,13.3s
WHN LR LR
comp=Z,8μm,21.0s
CNSH ChangSha 49.10 85⇑P **P 14 24 25.5 0.0**
CNSH S **S 14 31 29.8 +0.3**
CNSH pmax pmax
comp=Z,77nm,0.9s
CNSH LR LR
comp=Z,1μm,17.5s
CNSH LR LR
comp=Z,2μm,16.1s
CNSH LR LR
comp=Z,2μm,16.2s
BORG Borgarnes 49.14 327 LR LR 14 47 01.4
comp=Z,1μm,18.4s,baz=102,slow=38
YAK Yakutsk 49.31 37 P **P 14 24 27.1 +0.5**
comp=Z,49nm,0.7s,baz=279,slow=3.0,SNR=48
YAK LR LR 14 47 14.7
comp=Z,4μm,20.1s,baz=274,slow=38
comp=Z,49nm,0.7s
YAK Yakutsk 49.31 37*c i*P **P 14 24 26.6 0.0**
YAK *e**PP **pP 14 24 30.8 -2.7**
YAK *e* 14 25 49.5
YAK *e* 14 26 21.0
YAK *e*PPP PPP 14 27 11.3
YAK *e*S **S 14 31 32.6 +1.1**
YAK *e**SS **sS 14 31 42.6 +0.4**
YAK *e* 14 34 13.8
YAK *e*SSS SSS 14 36 21.0
YAK pmax pmax
comp=Z,61nm,1.0s
YAK pmax pmax
comp=E,56nm,1.1s
YAK pmax pmax
comp=N,30nm,1.1s
YAK pmax pmax
comp=Z,417nm,4.6s
YAK pmax pmax
comp=N,125nm,3.5s
YAK pmax pmax
comp=E,228nm,3.5s
YAK smax smax
comp=E,286nm,4.1s
YAK smax smax
comp=N,109nm,2.5s
YAK MLR MLR
comp=Z,4μm,18.0s
YAK MLR MLR
comp=N,810nm,15.0s
YAK MLR MLR
comp=E,2μm,15.0s
AVE Averroes 49.32 283 P **P 14 24 27.2 +0.1**
AVE IAmb IAmb 14 24 29.1
comp=Z,111nm,0.7s
AVE Averroes 49.32 283 P **P 14 24 27.8 +0.7**
ZEA Zeya 49.78 48*ce*P **P 14 24 32.4 +2.1**
ZEA *e* 14 26 30.3
ZEA *e*S **S 14 31 42.5 +4.1**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,70nm,1.3s
ZEA pmax pmax
comp=E,30nm,1.5s
ZEA pmax pmax
comp=E,100nm,4.3s
ZEA pmax pmax
comp=N,200nm,5.0s
ZEA pmax pmax
comp=Z,200nm,5.2s
ZEA pmax pmax
comp=Z,100nm,6.0s
ZEA smax smax
comp=E,200nm,6.2s
ZEA MLR MLR
comp=E,2μm,14.0s
ZEA MLR MLR
comp=Z,2μm,14.0s
SURA Surathani 50.31 114 P **P 14 24 34.8 0.0**
UBPT Khong Chiam 50.54 104 P **P 14 24 34.9 -1.7**
comp=Z,33nm,1.0s
UBPT Khong Chiam 50.54 104 P **P 14 24 36.0 -0.6**
OUK Oukaimeden 50.60 281 P **P 14 24 38.4 +1.1**
SRIT Nakonsritamara 50.69 115 P **P 14 24 37.7 0.0**
DL2 Dalian 50.91 68 P **P 14 24 39.0 -0.1**
DL2 S **S 14 31 57.0 +2.5**
DL2 pmax pmax
comp=Z,100nm,0.7s
DL2 pmax pmax
comp=Z,210nm,3.8s
DL2 LR LR
comp=Z,1μm,17.0s
DL2 LR LR
comp=Z,1μm,15.4s
DL2 LR LR
comp=Z,2μm,13.9s
SNY Shenyang 51.16 64⇑P **P 14 24 41.0 0.0**
SNY S **S 14 31 57.8 -0.1**
SNY pmax pmax
comp=Z,78nm,0.7s
SNY pmax pmax
comp=Z,380nm,5.5s
SNY LR LR
comp=Z,2μm,14.1s
SNY LR LR
comp=Z,4μm,17.3s
SNY LR LR
comp=Z,5μm,17.7s
LHMI Lhok Sumawe 51.30 120 P **P 14 24 40.5 -1.8**
comp=Z,187nm,1.1s
TTIG Tnine Tigouga, 51.34 280 P **P 14 24 44.0 +1.3**
QIZ Qiongzhong 51.62 97 P **P 14 24 44.7 +0.1**
QIZ Qiongzhong 51.62 97⇓*i*P **P 14 24 45.0 +0.4**
QIZ ScP **ScP 14 29 52.8 -0.9**
QIZ S **S 14 32 04.0 -0.7**
QIZ ScS **ScS 14 34 35.3 +1.3**
QIZ pmax pmax
comp=Z,43nm,1.4s
QIZ pmax pmax
comp=Z,340nm,2.9s
QIZ LR LR
comp=Z,620nm,17.0s
QIZ LR LR
comp=Z,840nm,21.0s
QIZ LR LR
comp=Z,870nm,16.1s
EAH EAH 51.70 282 P **P 14 24 46.6 +1.5**
CN2 Changchun 51.72 61 *e*P **P 14 24 44.8 -0.3**
CN2 *e*PP **PP 14 26 42.0 -0.6**
CN2 *e*S **S 14 32 02.0 -3.5**
CN2 pmax pmax
comp=Z,110nm,0.8s
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,4μm,17.0s
CN2 LR LR
comp=Z,4μm,18.0s
NJ2 Nanjing 51.80 77⇑*i*P **P 14 24 46.5 +0.7**
NJ2 pP **pP 14 24 51.0 -1.5**
NJ2 S **S 14 32 07.0 +0.1**
NJ2 sS **sS 14 32 23.5 +6.0**
NJ2 SS **SS 14 35 42.8 -0.5**
NJ2 pmax pmax
comp=Z,82nm,0.7s
NJ2 pmax pmax
comp=Z,220nm,3.6s
NJ2 LR LR
comp=Z,2μm,12.8s
NJ2 LR LR
comp=Z,2μm,15.6s
NJ2 LR LR
comp=Z,3μm,18.9s
GZH Guangzhou 52.04 90 P **P 14 24 45.8 -2.0**
GZH S **S 14 32 06.0 -4.5**
GZH ScS **ScS 14 34 34.8 -2.1**
GZH LR LR
comp=Z,990nm,17.3s
GZH LR LR
comp=Z,1μm,16.7s
BNX BinXian 52.32 58⇑P **P 14 24 50.3 +0.7**
BNX pP **pP 14 24 54.5 -1.6**
BNX sP **sP 14 24 55.5 -3.5**
BNX S **S 14 32 14.8 +1.0**
BNX sS **pS 14 32 21.0 -0.8**
BNX pmax pmax
comp=Z,100nm,1.0s
BNX pmax pmax
comp=Z,540nm,3.5s
BNX LR LR
comp=Z,3μm,15.7s
BNX LR LR
comp=Z,5μm,16.9s
BNX LR LR
comp=Z,7μm,16.8s
SKLT Songkhla 52.41 115 P **P 14 24 50.1 -0.4**
comp=Z,781nmcomp=Z,78nm,0.8s
SKLT Songkhla 52.41 115 P **P 14 24 50.4 -0.1**
SBV Sambava 52.88 186 P **P 14 24 55.7 +1.9**
HKPS Hong Kong Po S 53.10 90 P **P 14 24 56.1 +0.4**
KCSI Kotacane, Aceh 53.11 121 P **P 14 24 52.3 -3.5**
comp=Z,47nm,0.9s
TOA0 Torodi Ar. Sit 53.18 256 P **P 14 24 55.2 -1.1**
TORD Torodi Ar. Bea 53.18 256 P **P 14 24 55.7 -0.6**
comp=Z,35nm,1.1s,baz=49,slow=6.7,SNR=73
TORD PcP **PcP 14 26 04.2 -0.1**
comp=Z,12nm,0.8s,baz=42,slow=4.6,SNR=4.1
TORD LR LR 14 50 01.0
comp=Z,148nm,18.6s,baz=14,slow=39
comp=Z,35nm,1.1s
SUMG Summit 53.65 338 *i*P **P 14 25 01.3 +1.8**
SUMG IAmb IAmb 14 25 02.4
comp=Z,1μm,2.5s
TSI Tuntungan 53.65 120 P **P 14 24 58.7 -1.0**
comp=Z,62nm,0.5s
KULM Kulim 53.77 117 P **P 14 24 59.8 -0.8**
comp=Z,606nmcomp=Z,43nm,1.3s
KLR Kul'dur 53.83 52 P **P 14 25 01.7 +1.1**
comp=Z,74nm,1.0s,baz=294,slow=7.7,SNR=91
KLR PcP **PcP 14 26 06.2 0.0**
comp=Z,30nm,0.9s,baz=270,slow=5.1,SNR=4.3
KLR LR LR 14 49 55.5
comp=Z,3μm,18.3s,baz=292,slow=38
comp=Z,74nm,1.0s
KLR Kul'dur 53.83 52*c i*P **P 14 25 01.6 +0.9**
KLR pmax pmax
comp=Z,110nm,0.9s
KLR MLR MLR
comp=Z,2μm,18.0s
SSE Sheshan 54.00 77 P **P 14 25 01.5 -0.6**
SSE S **S 14 32 37.0 0.0**
SSE pmax pmax
comp=Z,91nm,1.2s
SSE pmax pmax
comp=Z,230nm,4.1s
SSE LR LR
comp=Z,610nm,19.0s
SSE LR LR
comp=Z,550nm,18.8s
MDJ Mudanjiang 54.17 58 P **P 14 25 03.3 +0.1**
MDJ pmax pmax
comp=Z,19nm,1.6s
MDJ pmax pmax
comp=Z,320nm,3.6s
MDJ Mudanjiang 54.17 58 P **P 14 25 03.7 +0.5**
PSI Prapat 54.41 121 P **P 14 25 03.5 -1.9**
comp=Z,58nm,0.7s,baz=311,slow=7.4,SNR=62
PSI LR LR 14 50 21.6
comp=Z,2μm,21.5s,baz=300,slow=38
comp=Z,58nm,0.7s
PSI Prapat 54.41 121 P **P 14 25 03.5 -1.9**
PSI pmax pmax
comp=Z,66nm,0.7s
PSI MLR MLR
comp=Z,2μm,22.0s
PSI Prapat 54.41 121 P **P 14 25 03.6 -1.9**
comp=Z,586nmcomp=Z,71nm,1.2s,comp=Z,978nm,1.2s,
comp=Z,117nm,1.2s
PSI P pP 14 25 03.7 -8.2
comp=Z,586nmcomp=Z,71nm,1.2s,comp=Z,978nm,1.2s,
comp=Z,117nm,1.2s
PSI Prapat 54.41 121 P **P 14 25 03.9 -1.5**
RPSI Rantau Prapat 54.49 121 P **P 14 25 03.5 -2.3**
RPSI IAmb IAmb 14 25 04.8
comp=Z,66nm,0.7s
RPSI Rantau Prapat 54.49 121 P **P 14 25 03.5 -2.3**
IPM Ipoh 54.61 117 P **P 14 25 05.2 -1.5**
IPM IAmb IAmb 14 25 06.7
comp=Z,252nm,1.8s
IPM Ipoh 54.61 117 P **P 14 25 05.5 -1.2**
comp=Z,926nmcomp=Z,71nm,1.7s
IPM Ipoh 54.61 117 P **P 14 25 05.7 -1.0**
GSI Gunungsitoli 54.65 123 P **P 14 25 05.7 -1.3**
GSI Gunungsitoli 54.65 123 P **P 14 25 05.7 -1.3**
comp=Z,70nm,1.1s
GSI Gunungsitoli 54.65 123 P **P 14 25 06.4 -0.6**
NEEM North Greenlan 55.02 345 *i*P **P 14 25 10.2 +1.0**
NEEM IAmb IAmb 14 25 11.4
comp=Z,169nm,1.0s
INCN Inchon 55.09 67 P **P 14 25 09.7 -0.3**
INCN IAmb IAmb 14 25 11.4
comp=Z,94nm,1.0s
INCN Inchon 55.09 67 P **P 14 25 09.7 -0.3**
INCN pmax pmax
comp=Z,94nm,1.0s
INCN MLR MLR
comp=Z,1μm,18.0s
INCN Inchon 55.09 67 P **P 14 25 11.3 +1.3**
INCN Inchon 55.09 67 P **P 14 25 10.4 +0.4**
QZH Quanzhou 55.11 85 *e*P **P 14 25 11.3 +1.1**
QZH S **S 14 32 52.5 +0.5**
QZH LR LR
comp=Z,870nm,15.6s
QZH LR LR
comp=Z,710nm,14.2s
QZH LR LR
comp=Z,860nm,15.6s
ICESG Greenland Ices 55.12 334 *i*P **P 14 25 11.5 +1.3**
ICESG IAmb IAmb 14 25 12.5
comp=Z,198nm,1.1s
USRK Ussuriysk Ar. 55.92 58 P **P 14 25 16.1 +0.3**
comp=Z,88nm,0.8s,baz=285,slow=6.4,SNR=115
USRK LR LR 14 51 05.8
comp=Z,6μm,18.5s,baz=291,slow=38
comp=Z,88nm,0.8s
USRK Ussuriysk Ar. 55.92 58 P **P 14 25 15.7 -0.1**
KS19 Wonju Array Si 55.96 67 P **P 14 25 16.3 +0.1**
KS19 IAmb IAmb 14 25 18.2
comp=Z,143nm,0.8s
KSAR Wonju Array Be 56.00 67 P **P 14 25 16.8 +0.3**
KSAR Wonju Array Be 56.00 67 P **P 14 25 16.8 +0.3**
KSRS Korea Array 56.02 67 P **P 14 25 17.1 +0.4**
comp=Z,101nm,0.8s,baz=284,slow=6.3,SNR=306
KSRS PcP **PcP 14 26 14.7 -0.1**
comp=Z,18nm,0.9s,baz=288,slow=5.4,SNR=4.2
KSRS LR LR 14 51 49.3
comp=Z,1μm,18.9s,baz=285,slow=39
comp=Z,101nm,0.8s
MSHR Mys Shultsa 56.04 60*c i*P **P 14 25 17.3 +0.6**
MSHR pmax pmax
comp=Z,75nm,0.9s
MSHR MLR MLR
comp=Z,1μm,15.0s
GRNR Gornyy 56.06 49⇑*i*P **P 14 25 18.1 +1.3**
GRNR *es*S **S 14 33 10.9 +6.7**
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=N,9.0nm,1.0s
GRNR pmax pmax
comp=Z,50nm,1.0s
GRNR smax smax
comp=N,5.0nm,1.0s
GRNR MLR MLR
comp=E,1μm,13.0s
GRNR MLR MLR
comp=Z,2μm,13.0s
GRNR MLR MLR
comp=N,880nm,15.0s
TJN Taejon 56.10 68 P **P 14 25 16.4 -0.8**
TJN Taejon 56.10 68 P **P 14 25 16.4 -0.8**
TJN pmax pmax
comp=Z,405nm,0.9s
TJN Taejon 56.10 68 P **P 14 25 17.0 -0.2**
PBSI Pulau Batu 56.13 123 P **P 14 25 16.7 -0.9**
comp=Z,204nm,1.2s
MNSI Mandailing Nat 56.34 122 P **P 14 25 17.8 -1.3**
comp=Z,42nm,0.9s
TATO Taipei 57.32 83 P **P 14 25 25.7 -0.3**
TATO Taipei 57.32 83 IAMs_20 IAMs_20 14 53 07.9
comp=Z,2μm,18.0s
TATO Taipei 57.32 83 P **P 14 25 27.3 +1.3**
TATO Taipei 57.32 83 P **P 14 25 27.9 +1.9**
YHNB Yeheng 57.40 84 P **P 14 25 26.7 +0.1**
YHNB IAMs_20 IAMs_20 14 53 11.7
comp=Z,2μm,18.0s
YHNB Yeheng 57.40 84 P **P 14 25 28.2 +1.5**
SSLB Suanglung 57.54 85 P **P 14 25 28.7 +1.0**
SSLB IAmb IAmb 14 25 30.4
comp=Z,178nm,1.0s
SSLB Suanglung 57.54 85 P **P 14 25 29.3 +1.6**
TPUB Ta-pu 57.56 85 P **P 14 25 27.9 +0.1**
TPUB IAmb IAmb 14 25 30.3
comp=Z,157nm,1.1s
TPUB IAMs_20 IAMs_20 14 53 26.1
comp=Z,2μm,19.0s
TPUB Ta-pu 57.56 85 P **P 14 25 29.1 +1.3**
SISI Saibi 57.62 124 P **P 14 25 27.2 -1.0**
BKNI Bangkinang 57.65 121 P **P 14 25 26.1 -2.4**
BKNI IAmb IAmb 14 25 27.4
comp=Z,120nm,0.8s
BKNI Bangkinang 57.65 121 P **P 14 25 24.8 -3.7**
comp=Z,167nm,0.9s
BKNI Bangkinang 57.65 121 P **P 14 25 26.8 -1.7**
NACB Ninganchiao 57.83 84 P **P 14 25 28.3 -1.4**
NACB IAmb IAmb 14 25 48.7
comp=Z,70nm,1.0s
NACB IAMs_20 IAMs_20 14 53 36.2
comp=Z,2μm,20.0s
NACB Ninganchiao 57.83 84 P **P 14 25 31.7 +2.1**
YULB Yu-li 58.02 85 P **P 14 25 31.7 +0.7**
YULB IAmb IAmb 14 25 33.8
comp=Z,101nm,1.0s
YULB Yu-li 58.02 85 P **P 14 25 32.5 +1.5**
TWG Pinlang 58.16 86 P **P 14 25 32.9 +0.9**
TWG IAmb IAmb 14 25 35.1
comp=Z,128nm,1.1s
TWG IAMs_20 IAMs_20 14 53 46.2
comp=Z,2μm,20.0s
TWGBT Beinan 58.17 86 P **P 14 25 34.4 +2.4**
OPO Ambohidratompo 58.19 188 LR LR 14 50 34.9
comp=Z,1μm,20.7s,baz=177,slow=36
JTU Tsushima 58.44 69 P **P 14 25 33.7 -0.1**
JTU Tsushima 58.44 69 P **P 14 25 34.3 +0.5**
DY2G Dye2 58.47 332 *i*P **P 14 25 35.1 +1.3**
DY2G IAmb IAmb 14 25 36.1
comp=Z,457nm,1.4s
MYKOM Kota Tinggi 58.49 117 P **P 14 25 32.5 -1.8**
MYKOM Kota Tinggi 58.49 117 P **P 14 25 33.5 -0.8**
comp=Z,63nm,1.1s
TEY Ternei 58.54 55⇑*i*P **P 14 25 33.9 -0.4**
TEY pmax pmax
comp=Z,100nm,4.8s
TEY pmax pmax
comp=N,20nm,1.0s
TEY pmax pmax
comp=E,20nm,1.0s
TEY pmax pmax
comp=Z,60nm,1.0s
ABPO Ambohimpanom 58.63 188 IAMs_20 IAMs_20 14 51 35.8
comp=Z,2μm,20.0s
BTDF Bukit Timah Da 58.74 118 P **P 14 25 33.7 -2.4**
comp=Z,354nmcomp=Z,32nm,1.1s
SDSI Sungai Dareh 58.85 121 P **P 14 25 33.7 -3.1**
comp=Z,3μmcomp=Z,19nm,0.8s
TULEG Thule 58.88 347 P **P 14 25 36.8 +0.6**
TULEG IAMs_20 IAMs_20 14 53 38.2
comp=Z,3μm,20.0s
TULEG Thule 58.88 347 *e*P **P 14 25 36.7 +0.6**
TULEG IAmb IAmb 14 25 37.8
comp=Z,234nm,1.2s
SEY Seymchan 59.01 32 P **P 14 25 37.3 0.0**
comp=Z,78nm,0.9s,baz=287,slow=9.3,SNR=69
comp=Z,78nm,0.9s
SEY Seymchan 59.01 32*ce*P **P 14 25 39.0 +1.7**
SEY pmax pmax
comp=Z,223nm,1.7s
SEY MLR MLR
comp=Z,6μm,18.0s
PPSI Pulau Pagai 59.30 124 P **P 14 25 38.9 -1.0**
comp=Z,165nm,1.6s
TPRI Tanjung Pinang 59.58 117 P **P 14 25 40.5 -1.4**
comp=Z,55nm,1.1s
TYV Tymovskoe 59.62 47 *e*P **P 14 25 43.2 +1.5**
TYV *es*S **S 14 33 55.7 +5.0**
TYV pmax pmax
comp=Z,150nm,1.2s
TYV pmax pmax
comp=Z,1μm,3.1s
TYV smax smax

comp=N,800nm,4.0s
TYV smax smax
comp=E,1µm,4.0s
SFJD Kangerlussuaq 59.74 334 P **P** **14 25 42.6 +0.4**
comp=E,30nm,0.8s,baz=55,slow=7.3,SNR=8.0
comp=E,30nm,0.8s
SFJD Kangerlussuaq 59.74 334 P **P** **14 25 42.1 -0.2**
SFJD IAmb IAmb 14 25 43.9
comp=Z,180nm,1.6s
SFJD Kangerlussuaq 59.74 334 P **P** **14 25 42.1 -0.2**
SFJD pmax pmax
comp=Z,180nm,1.6s
SFJD Kangerlussuaq 59.74 334 *e*P **P** **14 25 42.7 +0.4**
SFJD IAmb IAmb 14 25 43.6
comp=Z,216nm,1.6s
LSZ Lusaka 59.77 210 LR LR 14 54 41.4
comp=Z,1µm,19.5s,baz=36,slow=39
MA2 Magadan 59.85 36 P **P** **14 25 43.9 +0.7**
comp=Z,189nm,1.1s,baz=301,slow=6.6,SNR=26
MA2 LR LR 14 56 03.7
comp=Z,1µm,18.7s,baz=306,slow=40
comp=Z,189nm,1.1s
MA2 Magadan 59.85 36 P **P** **14 25 43.8 +0.7**
MA2 IAMs_20 IAMs_20 14 56 09.6
comp=Z,2µm,21.0s
MA2 Magadan 59.85 36*ce*P **P** **14 25 44.2 +1.1**
MA2 pmax pmax
comp=Z,249nm,1.0s
MA2 MLR MLR
comp=Z,4µm,16.0s
MA2 Magadan 59.85 36 P **P** **14 25 44.6 +1.5**
JMJ Miyako jima 2 60.32 81 P **P** **14 25 47.8 +0.9**
DSRI Dabo 60.63 118 P **P** **14 25 47.3 -1.8**
comp=Z,55nm,1.2s
NRS Narsarsuaq 60.65 327 P **P** **14 25 48.9 +0.3**
NRS Narsarsuaq 60.65 327 P **P** **14 25 48.9 +0.3**
NRS pmax pmax
comp=Z,170nm,1.0s
NRS Narsarsuaq 60.65 327 IAmb IAmb 14 25 49.8
comp=Z,190nm,1.1s
NRS *e*P **P** **14 25 50.2 +1.7**
JSU Suzuyama 60.70 72 P **P** **14 25 49.6 +0.1**
JSU IAmb IAmb 14 25 51.8
comp=Z,181nm,1.3s
JSU Suzuyama 60.70 72 P **P** **14 25 49.9 +0.4**
JHS Saijyo 60.88 67 P **P** **14 25 50.0 -0.6**
MASI Maura Aman, Be 61.03 122 P **P** **14 25 50.6 -1.3**
comp=Z,79nm,1.1s
BILL Bilibino 61.37 23 P **P** **14 25 54.0 +0.6**
BILL Bilibino 61.37 23*d i*P **P** **14 25 54.6 +1.2**
BILL *i* 14 26 03.1
BILL pmax pmax
comp=Z,149nm,1.1s
BILL MLR MLR
comp=Z,3µm,17.0s
YSS Yuzh-Sakhalins 61.48 51⇑*i*P **P** **14 25 55.1 +0.6**
YSS pmax pmax
comp=Z,194nm,1.1s
YSS MLR MLR
comp=Z,2µm,16.0s
YSS Yuzh-Sakhalins 61.48 51 P **P** **14 25 55.8 +1.3**
JOW Kunigami 61.51 78 LR LR 14 56 22.9
comp=Z,3µm,18.7s,baz=296,slow=40
JOW Kunigami 61.51 78 P **P** **14 25 54.4 -0.6**
JOW IAmb IAmb 14 25 55.6
comp=Z,104nm,0.9s
JOW Kunigami 61.51 78 P **P** **14 25 54.8 -0.2**
UBSI University, Be 61.52 123 P **P** **14 25 53.1 -2.0**
comp=Z,414nm,1.3s
VOI Vohitsoka 61.53 188 P **P** **14 25 55.4 +0.3**
VOI IAMs_20 IAMs_20 14 51 59.1
comp=Z,2µm,21.0s
VOI Vohitsoka 61.53 188 P **P** **14 25 55.4 +0.3**
VOI Vohitsoka 61.53 188 P P 14 26 07.7 +13
NUUK Nuuk 61.60 331 *e*P **P** **14 25 56.2 +1.2**
NUUK IAmb IAmb 14 25 56.5
comp=Z,219nm,1.5s
KSI Kapahiang 61.65 122 P **P** **14 25 54.8 -1.2**
comp=Z,169nm,0.9s
IVI Ivigtut 61.78 328 P **P** **14 25 56.7 +0.5**
IVI IAmb IAmb 14 26 02.4
comp=Z,156nm,1.3s
IVI Ivigtut 61.78 328 *e*P **P** **14 25 58.2 +2.0**
JMN Monobe 62.06 68 P **P** **14 25 59.1 +0.4**
JMN IAmb IAmb 14 26 00.3
comp=Z,76nm,0.9s
JMN Monobe 62.06 68 P **P** **14 25 59.3 +0.7**
DBIC Dimbokro 62.27 255 P **P** **14 25 59.5 -0.6**
comp=Z,18nm,1.0s,baz=35,slow=7.3,SNR=11
DBIC LR LR 14 57 25.3
comp=Z,290nm,18.7s,baz=23,slow=40
comp=Z,18nm,1.0s
DBIC Dimbokro 62.27 255 P **P** **14 25 59.6 -0.6**
DBIC Dimbokro 62.27 255 P **P** **14 25 59.6 -0.6**
KIC Kosan Boka 62.38 254⇑*i*P **P** **14 26 00.7 -0.3**
comp=Z,12nm,0.5s
TIC Toumodi 62.41 255⇑*i*P **P** **14 26 00.7 -0.4**
comp=Z,6.0nm,0.2s
JEW Eniwo 62.66 56 P **P** **14 26 02.9 +0.4**
JEW Eniwo 62.66 56 P **P** **14 26 02.9 +0.4**
LIC Lamto 62.69 255⇑*i*P **P** **14 26 02.7 -0.3**
comp=Z,63nm,0.5s
PPBI Pangkal Pinang 62.91 118 P **P** **14 26 02.4 -2.1**
comp=Z,4µmcomp=Z,81nm,1.0s
JSD Sado 62.95 62 P **P** **14 26 04.3 -0.2**
KSM Kuching 63.25 112 P **P** **14 26 05.8 -0.9**
KSM Kuching 63.25 112 P **P** **14 26 06.1 -0.6**
comp=Z,490nmcomp=Z,42nm,1.1s
KSM Kuching 63.25 112 P **P** **14 26 06.6 -0.1**
JTM Tenmabayashi 63.44 58 P **P** **14 26 07.2 -0.5**
JTM Tenmabayashi 63.44 58 P **P** **14 26 07.8 +0.1**
INU Inuyama 63.46 65 P **P** **14 26 08.0 +0.1**
JGF Kuroka 63.57 65 P **P** **14 26 08.8 +0.1**
LWLI Liwa 63.63 122 P **P** **14 26 06.6 -2.7**
comp=Z,6µmcomp=Z,504nm,0.8s
MAJO Matsushiro 63.67 63 P **P** **14 26 08.3 -1.0**
MAJO IAmb IAmb 14 26 10.1
comp=Z,83nm,0.9s
MAJO Matsushiro 63.67 63 IAMs_20 IAMs_20 14 55 26.1
comp=Z,2µm,18.0s
MAJO Matsushiro 63.67 63*c i*P **P** **14 26 08.8 -0.5**
MAJO pmax pmax
comp=Z,74nm,1.0s
MAJO MLR MLR
comp=Z,2µm,18.0s
MAJO Matsushiro 63.67 63 P **P** **14 26 09.2 -0.1**
MJAR Matsushiro Arr 63.67 63 P **P** **14 26 08.7 -0.6**
comp=Z,51nm,1.0s,baz=307,slow=7.7,SNR=62
MJAR LR LR 14 55 38.3
comp=Z,2µm,18.6s,baz=320,slow=38
comp=Z,51nm,1.0s
SBUM Sibu 63.96 110 P **P** **14 26 11.1 -0.4**
SBUM IAmb IAmb 14 26 13.1
comp=Z,45nm,1.0s
SBUM Sibu 63.96 110 P **P** **14 26 11.7 +0.3**
comp=Z,477nmcomp=Z,50nm,1.1s
ERM Erimo 64.17 56 P **P** **14 26 12.1 -0.3**
ERM Erimo 64.17 56*de*P **P** **14 26 12.9 +0.5**
ERM pmax pmax
comp=Z,167nm,1.1s
ERM MLR MLR
comp=Z,4µm,18.0s
ERM Erimo 64.17 56 P **P** **14 26 13.3 +0.9**
JEM Erimo 64.17 56 P **P** **14 26 13.2 +0.8**
RES Resolute Bay 64.26 351 LR LR 14 58 48.4
comp=Z,1µm,18.0s,baz=16,slow=40
KASI Kota Agung 64.30 122 P **P** **14 26 10.7 -2.9**
comp=Z,168nm,0.8s
MATP Matopo 64.39 207 LR LR 14 56 58.4
comp=Z,2µm,20.2s,baz=53,slow=39
KKM Kota Kinabalu 64.52 104 P **P** **14 26 14.3 -0.9**
KKM IAmb IAmb 14 26 16.9
comp=Z,133nm,1.3s
KKM Kota Kinabalu 64.52 104 P **P** **14 26 15.2 0.0**
comp=Z,1µmcomp=Z,92nm,1.4s
KKM Kota Kinabalu 64.52 104 P **P** **14 26 16.0 +0.8**
JMM Marumori 64.76 61 P **P** **14 26 15.4 -1.0**
JMM IAmb IAmb 14 26 17.3
comp=Z,141nm,1.0s
JMM Marumori 64.76 61 P **P** **14 26 16.4 +0.1**
STKI Sintang 65.06 112 P **P** **14 26 18.5 -0.1**
comp=Z,98nm,0.8s
JYT Yasato 65.20 63 P **P** **14 26 18.5 -0.8**
SBJI Serang 65.82 121 P **P** **14 26 23.7 +0.3**
comp=Z,98nm,0.5s
TNG Tangerang 66.20 121 P P 14 26 40.5 +15

BBTS Babate 66.21 270 P **P** **14 26 25.7 -0.3**
comp=Z,131nm,0.8s,baz=50,slow=1.7,SNR=14
BBTS LR LR 14 59 43.6
comp=Z,517nm,19.8s,baz=58,slow=40
comp=Z,131nm,0.8s
PEA0B Petropavlovsk- 66.49 40⇓*e*P **P** **14 26 27.1 -0.2**
PETK Petropavlovsk- 66.49 40 P **P** **14 26 26.2 -1.1**
comp=Z,49nm,1.1s,baz=0.0,slow=3.0,SNR=19
PETK PP **PP** **14 28 52.9 -0.5**
comp=Z,9.8nm,0.8s,baz=264,slow=5.2,SNR=3.8
PETK LR LR 14 58 26.7
comp=Z,2µm,18.0s,baz=302,slow=39
comp=Z,49nm,1.1s
JHJ Hachijo jima 2 66.58 66 LR LR 14 59 55.5
comp=Z,791nm,18.3s,baz=80,slow=40
MBO M'Bour 66.70 270 P **P** **14 26 29.3 +0.1**
MBO IAmb IAmb 14 26 31.3
comp=Z,113nm,1.0s
MYLDM Lahad Datu 66.81 103 P **P** **14 26 30.2 +0.4**
comp=Z,819nmcomp=Z,37nm,1.1s
PET Petropavlovsk 67.01 40 IAMs_20 IAMs_20 14 58 01.1
comp=Z,2µm,19.0s
PET Petropavlovsk 67.01 40 *e*P **P** **14 26 31.3 +0.7**
PET *e*S **S** **14 35 20.2 -2.6**
PET *e*PPS PPS 14 35 50.7
PET pmax pmax
comp=Z,100nm,13.7s
PET MLR MLR
comp=Z,4µm,15.0s
PET MLR MLR
comp=Z,4µm,14.0s
SKR Severo-Kuril's 67.07 43⇑*e*P **P** **14 26 29.5 -1.5**
A21K Barrow 67.25 10 IAMs_20 IAMs_20 14 59 18.7
comp=Z,2µm,21.0s
LEM Lembang 67.33 121 LR LR 14 58 57.8
comp=Z,746nm,20.3s,baz=314,slow=39
LEM Lembang 67.33 121 P **P** **14 26 32.0 -1.3**
comp=Z,19nm,0.8s
CNJI Cibinong 67.36 121 P **P** **14 26 32.8 -0.5**
comp=Z,21nm,0.9s
BBJI Bungbulang 67.82 121 P **P** **14 26 33.8 -2.5**
TSUM Tsumeb 67.82 218 P **P** **14 26 36.1 -0.1**
comp=Z,6.1nm,0.7s,baz=72,slow=2.2,SNR=2.3
comp=Z,6.1nm,0.7s
MTKI Muara Teweh, K 68.22 111 P **P** **14 26 38.4 -0.4**
A36M Sachs Harbour 68.79 360 P **P** **14 26 42.5 +1.1**
baz=0,2,SNR=14
C23K Itkillik River 69.41 9 P **P** **14 26 47.5 +2.2**
baz=340,SNR=25
C24K Franklin Bluff 69.75 8 P **P** **14 26 49.5 +2.1**
baz=341
BKB Balikpapan 69.89 109 P **P** **14 26 49.3 +0.1**
comp=Z,150nm,1.0s
BKB Balikpapan 69.89 109 P **P** **14 26 49.4 +0.2**
BBKI Banjar Baru 69.92 112 P **P** **14 26 49.0 -0.3**
comp=Z,14µmcomp=Z,95nm,1.0s
C26K Camden Bay 69.95 7 P **P** **14 26 50.8 +2.1**
baz=344,SNR=5.1
BWJI Bawean 70.06 116 P **P** **14 26 49.6 -0.5**
comp=Z,390nm,1.0s
UGM Wanagama 70.07 119 P **P** **14 26 48.3 -2.0**
comp=Z,58nm,1.6s
TNA Tin City 70.20 17 P **P** **14 26 51.4 +1.1**
baz=326
D23K Nanushuk River 70.22 9 P **P** **14 26 52.5 +2.0**
baz=340,SNR=28
D24K Happy Valley 70.27 9 P **P** **14 26 52.6 +1.9**
baz=341
NGJI Ngawi 70.31 118 P **P** **14 26 51.8 +0.1**
comp=Z,54nm,1.3s
C27K Jago River 70.34 7 P **P** **14 26 53.2 +2.0**
baz=345,SNR=73
D25K Kavik River 70.38 8 P **P** **14 26 53.3 +1.9**
baz=343,SNR=38
TOLK Toolik Lake Re 70.67 9 P **P** **14 26 55.0 +1.8**
baz=340,SNR=72
PCJI Pacitan 70.72 119 P **P** **14 26 54.2 0.0**
comp=Z,42nm,1.0s
E22K Anaktuvuk Pass 70.86 10 P **P** **14 26 56.0 +1.7**
baz=339
DAV Davao City (W) 70.99 97 LR LR 15 01 37.1
comp=Z,621nm,20.9s,baz=353,slow=39
MPSI Mapaga 71.03 106 P **P** **14 26 56.6 +0.5**
comp=Z,1µmcomp=Z,104nm,1.0s
TOLI2 Tolitoli 71.18 105 P **P** **14 26 56.9 -0.2**
E23K Chandalar 71.21 9 P **P** **14 26 58.4 +1.8**
baz=340,SNR=51
E24K Your Creek 71.34 9 P **P** **14 26 59.1 +1.9**
baz=341,SNR=56
F22K John River 71.39 10 P **P** **14 26 59.5 +1.9**
baz=338,SNR=67
C36M Paulatuk 71.44 359 P **P** **14 26 57.9 +0.2**
baz=1.2,SNR=18
F21K Alatna River 71.47 11 P **P** **14 26 59.7 +1.7**
baz=338,SNR=42
E25K Arctic Village 71.62 8 P **P** **14 27 00.4 +1.5**
baz=344,SNR=26
ANM Nome 71.63 17 IAMs_20 IAMs_20 15 01 56.2
comp=Z,2µm,21.0s
ANM Nome 71.63 17 P **P** **14 27 00.7 +1.7**
baz=328
JCJ Chichijima 71.67 70 LR LR 15 00 22.9
comp=Z,647nm,21.1s,baz=296,slow=37
KMMI Kalianget 71.82 116 P **P** **14 26 58.5 -2.3**
comp=Z,31nm,1.0s
COLD Coldfoot 71.92 10 P **P** **14 27 02.4 +1.7**
baz=340,SNR=79
E27K Coleen River 71.93 6 P **P** **14 27 02.5 +1.7**
baz=347,SNR=82
F24K Squaw Lake 71.94 9 P **P** **14 27 02.8 +1.9**
baz=342,SNR=32
G22K Bettles 72.03 10 P **P** **14 27 03.0 +1.6**
baz=339,SNR=36
F25K Christian Rive 72.12 8 P **P** **14 27 04.0 +2.0**
baz=344,SNR=80
G21K Allakaket 72.12 11 P **P** **14 27 03.0 +1.0**
baz=338,SNR=28
F26K Sheenjek River 72.18 7 P **P** **14 27 04.0 +1.7**
baz=345,SNR=33
INK Inuvik 72.32 3 P **P** **14 27 03.6 +0.6**
comp=Z,62nm,1.0s,baz=3.1,slow=8.4,SNR=46
comp=Z,62nm,1.0s
INK Inuvik 72.32 3 P **P** **14 27 03.6 +0.6**
baz=354,SNR=42
G23K Bananza Creek 72.44 10 P **P** **14 27 05.6 +1.7**
baz=340,SNR=42
MRSI Marisa 72.47 104 P **P** **14 27 04.3 -0.5**
comp=Z,1µmcomp=Z,145nm,1.4s
G24K Hadweenzic Riv 72.77 9 P **P** **14 27 08.0 +2.2**
baz=342,SNR=131
G25K Bearman Lake 72.87 8 P **P** **14 27 08.6 +2.3**
baz=344,SNR=23
PMSI Majene 72.89 110 P **P** **14 27 06.0 -1.3**
comp=Z,664nmcomp=Z,44nm,0.9s
G26K Porcupine Rive 72.94 7 P **P** **14 27 08.9 +2.2**
baz=345,SNR=56
JAGI Jajag, Banyuwa 72.95 117 P **P** **14 27 04.7 -2.9**
comp=Z,41nm,0.9s
JAGI Jajag, Banyuwa 72.95 117 P **P** **14 27 05.0 -2.6**
H22K Ishtalitna Cre 73.02 11 P **P** **14 27 09.5 +2.2**
baz=339,SNR=65
H21K Melozitna Rive 73.03 11 P **P** **14 27 09.1 +1.7**
baz=338,SNR=69
BOSA Boshof 73.05 207 P **P** **14 27 07.7 -0.3**
comp=Z,9.4nm,0.8s,baz=34,slow=4.9,SNR=14
comp=Z,9.4nm,0.8s
APSI Ampana 73.17 106 P **P** **14 27 08.0 -0.9**
comp=Z,676nmcomp=Z,47nm,1.0s
F31M Tsiigehtchic 73.17 3 P **P** **14 27 09.1 +1.0**
baz=353,SNR=131
GCSA Galena City Sc 73.19 13 P **P** **14 27 09.6 +1.3**
baz=335,SNR=20
G27K Doyon Strip 73.27 7 P **P** **14 27 10.9 +2.1**
baz=347,SNR=100
H23K Yukon River 73.34 10 IAMs_20 IAMs_20 15 01 30.6
comp=Z,2µm,21.0s
H23K Yukon River 73.34 10 P **P** **14 27 11.6 +2.4**
baz=341,SNR=102
H25K Birch Creek 73.38 8 P **P** **14 27 11.5 +2.1**
baz=344,SNR=52
SRBI Singaraja 73.42 116 P **P** **14 27 08.2 -2.1**
comp=Z,50nm,0.9s
SCHQ Schefferville 73.46 329 P **P** **14 27 10.6 +0.5**
comp=Z,43nm,0.9s,baz=49,slow=7.1,SNR=18
SCHQ LR LR 14 59 21.3
comp=Z,866nm,21.8s,baz=40,slow=36
comp=Z,43nm,0.9s
G30M tAoh Zrali Nji 73.50 4 P **P** **14 27 11.0 +0.8**

baz=351,SNR=101
H24K Noodor Dome 73.55 9 P **P** **14 27 12.6 +2.1**
baz=342,SNR=59
I21K Tanana 73.60 11 P **P** **14 27 12.6 +1.9**
baz=339,SNR=38
SPSI Sidrap Palu 73.82 109 P **P** **14 27 11.1 -1.7**
comp=Z,62nm,1.0s
H27K Steamboat Moun 73.85 7 P **P** **14 27 14.2 +2.0**
baz=347,SNR=126
MLY Manley 73.92 11 IAMs_20 IAMs_20 15 02 05.1
comp=Z,2µm,21.0s
MLY Manley 73.92 11 P **P** **14 27 14.4 +1.7**
baz=340,SNR=101
I23K Minto, Yukon-K 74.01 10 IAMs_20 IAMs_20 15 01 52.3
comp=Z,2µm,22.0s
I23K Minto, Yukon-K 74.01 10 P **P** **14 27 15.0 +1.9**
baz=341,SNR=68
EPYK Eagle Plains 74.08 5 P **P** **14 27 14.2 +0.7**
baz=351,SNR=41
LUWI Luwuk 74.09 105 P **P** **14 27 12.9 -1.4**
comp=Z,2µmcomp=Z,52nm,1.1s
LUWI Luwuk 74.09 105 P **P** **14 27 14.1 -0.2**
PRP Porcupine Dome 74.14 9 P **P** **14 27 15.7 +1.6**
baz=344,SNR=28
J20K Nowinta River 74.19 13 IAMs_20 IAMs_20 15 04 33.0
comp=Z,2µm,19.0s
J20K Nowinta River 74.19 13 P **P** **14 27 15.7 +1.5**
baz=337,SNR=27
POKR Poker Plat Res 74.29 9 P **P** **14 27 16.9 +2.0**
baz=342,SNR=50
SHEM Shemya Is, Ala 74.31 33 LR LR 15 02 50.4
comp=Z,1µm,20.3s,baz=305,slow=38
BNSI Bone 74.36 109 P **P** **14 27 14.3 -1.6**
comp=Z,17nm,1.3s
I27K Kandik River 74.46 7 P **P** **14 27 17.4 +1.6**
baz=347,SNR=41
TCOL CIGO, UAF Yank 74.47 10 P **P** **14 27 17.5 +1.7**
baz=342,SNR=35
COLA College 74.47 10 P **P** **14 27 16.7 +0.9**
COLA College 74.47 10*c i*P **P** **14 27 17.2 +1.4**
COLA pmax pmax
comp=Z,217nm,1.0s
COLA MLR MLR
comp=Z,2µm,22.0s
COLA College 74.47 10 P **P** **14 27 17.4 +1.6**
baz=342
COLA College 74.47 10 P **P** **14 27 17.2 +1.4**
KAPI Kappang 74.52 110 LR LR 15 05 51.5
comp=Z,270nm,21.2s,baz=298,slow=40
KAPI Kappang 74.52 110*c i*P **P** **14 27 15.5 -1.3**
KAPI pmax pmax
comp=Z,76nm,1.1s
KAPI Kappang 74.52 110 P **P** **14 27 17.4 +0.5**
KAPI Kappang 74.52 110 P **P** **14 27 14.9 -1.9**
comp=Z,794nmcomp=Z,75nm,1.3s
KAPI Kappang 74.52 110 P **P** **14 27 16.8 0.0**
NEA2 Nenana 74.58 10 P **P** **14 27 17.7 +1.2**
baz=341,SNR=122
I26K Coal Creek Min 74.60 8 IAMs_20 IAMs_20 15 02 38.9
comp=Z,2µm,21.0s
I26K Coal Creek Min 74.60 8 P **P** **14 27 18.0 +1.4**
baz=346
ILAR Eielson Array 74.69 9 P **P** **14 27 17.9 +0.7**
comp=Z,49nm,0.9s,baz=335,slow=4.5,SNR=239
ILAR PP **PP** **14 30 05.8 +2.4**
comp=Z,4.0nm,1.0s,baz=339,slow=8.0,SNR=4.6
comp=Z,49nm,0.9s
CHUM Lake Minchumin 74.76 12 P **P** **14 27 19.2 +1.7**
baz=339,SNR=59
BPAW Bear Paw Mtn. 74.77 11 P **P** **14 27 18.7 +1.1**
baz=340,SNR=87
K20K Telida 74.96 13 P **P** **14 27 20.1 +1.4**
baz=338,SNR=44
I29M Ogilvie Camp, 74.97 5 P **P** **14 27 19.5 +0.8**
baz=350,SNR=86
BKSI Bulukumba 75.00 110 P **P** **14 27 18.5 -1.1**
comp=Z,689nmcomp=Z,58nm,0.8s
TTA Tatalina 75.01 14 P **P** **14 27 20.4 +1.3**
baz=336,SNR=17
J25K Salcha River, 75.03 9 IAMs_20 IAMs_20 15 03 26.3
comp=Z,1µm,21.0s
J25K Salcha River, 75.03 9 P **P** **14 27 20.3 +1.2**
baz=344
HDA Harding Lake 75.03 9 P **P** **14 27 19.5 +0.4**
baz=343,SNR=54
CAST Castle Rocks 75.23 12 IAMs_20 IAMs_20 15 03 04.7
comp=Z,2µm,22.0s
CAST Castle Rocks 75.23 12 P **P** **14 27 21.7 +1.4**
baz=339,SNR=227
EGAK Eagle 75.31 7 P **P** **14 27 21.8 +1.1**
baz=348,SNR=80
J26L Joseph Creek 75.34 8 IAMs_20 IAMs_20 15 03 00.5
comp=Z,2µm,21.0s
J26L Joseph Creek 75.34 8 P **P** **14 27 22.1 +1.1**
baz=346,SNR=72
KKSI Kolaka, Sulawe 75.34 108 P **P** **14 27 21.2 -0.4**
comp=Z,1µmcomp=Z,47nm,1.4s
MCK McKinley 75.41 11 P **P** **14 27 22.4 +1.1**
MCK IAmb IAmb 14 27 24.1
comp=Z,153nm,1.2s
MCK IAMs_20 IAMs_20 15 02 25.5
comp=Z,2µm,22.0s
MCK McKinley 75.41 11 P **P** **14 27 22.4 +1.1**
MCK pmax pmax
comp=Z,153nm,1.2s
MCK MLR MLR
comp=Z,2µm,22.0s
MCK McKinley 75.41 11 P **P** **14 27 22.3 +1.0**
baz=342,SNR=68
TRF Thorofare Moun 75.48 11 P **P** **14 27 22.4 +0.5**
baz=340,SNR=37
PPLA Purkeypile 75.71 12 P **P** **14 27 24.0 +0.8**
baz=339,SNR=16
RND Reindeer 75.74 11 P **P** **14 27 23.3 +0.1**
RND IAmb IAmb 14 27 24.8
comp=Z,174nm,1.0s
RND Reindeer 75.74 11 P **P** **14 27 23.3 +0.1**
RND pmax pmax
comp=Z,174nm,1.0s
RND MLR MLR
comp=Z,2µm,22.0s
K24K Donnelly Dome 75.76 9 P **P** **14 27 24.3 +1.0**
baz=344,SNR=164
SCRK Sand Creek 75.80 8 P **P** **14 27 24.7 +1.0**
SCRK Sand Creek 75.80 8 P **P** **14 27 25.2 +1.6**
baz=345,SNR=137
L20K Farewell, AK 75.81 13 P **P** **14 27 25.0 +1.4**
baz=338,SNR=28
BSSI Bau Bau, Buton 75.83 110 P **P** **14 27 23.0 -1.4**
comp=Z,765nmcomp=Z,95nm,1.0s
J29M Klondike Camp 75.88 6 P **P** **14 27 25.5 +1.5**
baz=350
L19K White Mountain 75.91 14 P **P** **14 27 25.6 +1.4**
baz=337,SNR=21
RIDG Independent Ri 75.94 9 P **P** **14 27 24.9 +0.5**
RIDG IAmb IAmb 14 27 26.6
comp=Z,250nm,1.4s
RIDG Independent Ri 75.94 9 P **P** **14 27 25.4 +1.0**
baz=345,SNR=21
GAMI Galela, Maluku 76.01 99 P **P** **14 27 24.5 -1.0**
DAWY Dawson 76.17 6 P **P** **14 27 26.8 +1.2**
baz=349,SNR=142
M19K Big River Lodg 76.25 14 IAMs_20 IAMs_20 15 07 10.6
comp=Z,2µm,19.0s
M19K Big River Lodg 76.25 14 P **P** **14 27 27.7 +1.5**
baz=337
DHY Denali Highway 76.26 10 P **P** **14 27 26.9 +0.6**
baz=343,SNR=47
WAT1 Susitna Watana 76.33 11 P **P** **14 27 26.6 0.0**
baz=342
TNTI Ternate 76.37 100 P **P** **14 27 26.3 -1.2**
TNTI IAmb IAmb 14 27 30.8
comp=Z,118nm,1.0s
TNTI Ternate 76.37 100 P **P** **14 27 27.3 -0.2**
comp=Z,1µmcomp=Z,130nm,1.2s
TNTI Ternate 76.37 100 P **P** **14 27 27.5 0.0**
CUT Chulitna 76.48 12 P **P** **14 27 27.7 +0.4**
baz=341,SNR=36
M20K Styx River 76.50 13 IAMs_20 IAMs_20 15 05 02.0
comp=Z,2µm,20.0s
M20K Styx River 76.50 13 P **P** **14 27 28.1 +0.5**
baz=338
K29M Barlow Dome 76.53 5 P **P** **14 27 29.2 +1.4**
baz=350,SNR=79
PAX Paxson 76.61 9 P **P** **14 27 28.8 +0.6**
PAX IAmb IAmb 14 27 30.2
comp=Z,102nm,1.1s
PAX Paxson 76.61 9 P **P** **14 27 28.8 +0.6**

PAX pmax pmax
comp=Z,102nm,1.1s
PAX Paxson 76.61 9 P P 14 27 29.0 +0.8
baz=344,SNR=62
SKT Skwentna 76.68 12 IAMs_20 IAMs_20 15 04 12.8
comp=Z,2µm,22.0s
SKT Skwentna 76.68 12 P P 14 27 29.1 +0.5
baz=340,SNR=73
WAT6 Susitna Watana 76.68 10 P P 14 27 29.1 +0.4
baz=342,SNR=53
N16K Nishlik Lake 76.69 16 P P 14 27 30.9 +2.2
baz=334,SNR=23
L26K Log Cabin Wild 76.80 8 P P 14 27 30.3 +1.1
L26K IAmb IAmb 14 27 32.2
comp=Z,140nm,0.9s
L26K Log Cabin Wild 76.80 8 P P 14 27 31.1 +1.8
baz=346,SNR=101
MAYO Mayo, Yukon 76.89 5 P P 14 27 31.0 +1.3
baz=352,SNR=19
BBSI Bau Bau 76.90 108 P P 14 27 30.1 -0.4
comp=Z,830nmcomp=Z,57nm,1.1s
BCAR Beaver Creek A 76.93 8 P P 14 27 31.5 +1.5
L27K Beaver Creek, 76.93 8 P P 14 27 31.2 +1.2
L27K IAmb IAmb 14 27 33.0
comp=Z,193nm,1.1s
L27K IAMs_20 IAMs_20 15 04 11.4
comp=Z,1µm,20.0s
L27K Beaver Creek, 76.93 8 P P 14 27 31.9 +1.9
baz=347,SNR=116
N18K Kilae Creek 77.10 15 IAMs_20 IAMs_20 15 06 33.9
comp=Z,2µm,20.0s
N18K Kilae Creek 77.10 15 P P 14 27 32.6 +1.7
baz=336,SNR=24
M22K Willow 77.12 12 P P 14 27 31.4 +0.5
M22K Willow 77.12 12 P P 14 27 31.7 +0.8
baz=341,SNR=27
SANI Sanana 77.16 104 P P 14 27 30.2 -1.8
comp=Z,895nmcomp=Z,78nm,1.2s
SANI Sanana 77.16 104 P P 14 27 31.0 -1.0
HARP HAARP 77.20 9 P P 14 27 32.4 +0.9
baz=344,SNR=51
L29M L29M 77.21 6 P P 14 27 33.0 +1.4
baz=350,SNR=47
N19K Bonanza Creek 77.25 14 P P 14 27 33.0 +1.1
N19K IAmb IAmb 14 27 35.7
comp=Z,72nm,1.1s
N19K Bonanza Creek 77.25 14 P P 14 27 33.4 +1.6
baz=337,SNR=19
GHO Glory Hole Cre 77.28 11 IAMs_20 IAMs_20 15 03 36.9
comp=Z,1µm,21.0s
SUA Susitna One 77.29 12 P P 14 27 33.1 +0.9
baz=340,SNR=38
SPCR Spurr Chakacha 77.30 13 P P 14 27 32.5 +0.4
baz=339,SNR=7.0
N20K Mount Spurr 77.30 13 P P 14 27 32.7 +0.6
baz=339,SNR=9.8
SML Sawmill 77.34 11 P P 14 27 33.3 +1.0
baz=342,SNR=61
M24K Tolsona, Glenn 77.35 10 P P 14 27 33.3 +0.9
M24K Tolsona, Glenn 77.35 10 P P 14 27 34.3 +2.0
baz=344,SNR=50
LBMI Labuha 77.39 101 P P 14 27 32.2 -1.0
comp=Z,2µmcomp=Z,114nm,1.0s
PMR Palmer 77.42 11 P P 14 27 33.8 +1.1
baz=342,SNR=116
M23K Glacier View 77.44 11 P P 14 27 33.8 +1.0
baz=343,SNR=49
M26K Nabesna, AK 77.45 8 P P 14 27 34.6 +1.7
baz=346,SNR=56
SCM Sheep Creek Mo 77.45 10 IAMs_20 IAMs_20 15 04 11.4
comp=Z,1µm,22.0s
SCM Sheep Creek Mo 77.45 10 P P 14 27 34.2 +1.2
baz=343,SNR=33
WRGLY Wrigley 77.57 359 P P 14 27 35.0 +1.5
baz=1.6,SNR=36
M27K Edge Creek, AK 77.61 8 P P 14 27 35.6 +1.7
M27K IAMs_20 IAMs_20 15 04 50.5
comp=Z,1µm,20.0s
M27K Edge Creek, AK 77.61 8 P P 14 27 35.9 +1.9
baz=347,SNR=167
O16K Kokwok River B 77.64 16 P P 14 27 35.6 +1.8
baz=335,SNR=20
BVCY Beaver Creek 77.66 7 P P 14 27 36.0 +1.9
baz=348,SNR=29
O17K Koliganek Bris 77.68 16 P P 14 27 35.9 +1.8
baz=336,SNR=16
KNK Knik Glacier 77.69 11 P P 14 27 35.7 +1.5
baz=342,SNR=80
RC01 Rabbit Creek A 77.81 12 P P 14 27 35.9 +1.1
baz=341,SNR=28
M30M Minto, Yukon 77.84 5 P P 14 27 36.1 +1.1
baz=351,SNR=36
M29M Somme Creek 77.84 6 P P 14 27 36.9 +1.7
baz=350,SNR=46
O19K Port Alsworth 77.85 14 P P 14 27 36.3 +1.3
baz=338,SNR=11
YKA Yellowknife Ar 77.94 355 P P 14 27 35.9 +0.3
comp=Z,34nm,0.8s,baz=3.8,slow=6.0,SNR=89
YKA LR LR 15 07 43.6
comp=Z,831nm,18.2s,baz=7.0,slow=40
comp=Z,34nm,0.8s
YKA Yellowknife Ar 77.94 355 P P 14 27 35.7 +0.1
KLU Klutina 77.97 10 P P 14 27 37.3 +1.4
KLU IAMs_20 IAMs_20 15 04 26.1
comp=Z,1µm,21.0s
KLU Klutina 77.97 10 P P 14 27 37.7 +1.8
baz=344,SNR=105
O18K Koktuh Hills 77.99 15 IAMs_20 IAMs_20 15 06 48.6
comp=Z,2µm,20.0s
O18K Koktuh Hills 77.99 15 P P 14 27 37.4 +1.5
baz=337
N25K Chitina, Valde 78.03 9 P P 14 27 37.2 +1.0
N25K IAmb IAmb 14 27 38.7
comp=Z,102nm,1.4s
N25K Chitina, Valde 78.03 9 P P 14 27 37.5 +1.2
baz=345,SNR=24
SUR Sutherland 78.05 209 LR LR 15 06 35.6
comp=Z,1µm,18.1s,baz=28,slow=39
MMPY Sheldon Lake, 78.09 3 P P 14 27 38.3 +1.8
baz=355,SNR=49
P16K Nushagak River 78.17 16 P P 14 27 38.6 +1.7
baz=335,SNR=7.8
PWL Port Wells 78.24 11 P P 14 27 38.4 +1.1
baz=342,SNR=29
O20K Slope Mountain 78.27 13 P P 14 27 37.8 +0.3
baz=339
YUK3 Moose Creek 78.32 7 P P 14 27 39.7 +1.7
baz=348,SNR=89
P17K Kvichak River 78.35 16 P P 14 27 39.9 +2.0
baz=336,SNR=17
M31M Drury Creek, Y 78.37 4 P P 14 27 39.1 +1.1
baz=353,SNR=50
O22K Cooper Landing 78.39 12 P P 14 27 38.6 +0.6
O22K IAmb IAmb 14 27 40.2
comp=Z,189nm,1.1s
O22K Cooper Landing 78.39 12 P P 14 27 39.0 +1.0
baz=341,SNR=13
FARO Faro, Yukon 78.39 4 P P 14 27 39.5 +1.4
baz=354,SNR=64
GLI Glacier Island 78.40 11 P P 14 27 38.6 +0.4
GLI IAmb IAmb 14 27 40.4
comp=Z,123nm,1.1s
GLI Glacier Island 78.40 11 P P 14 27 39.2 +1.0
baz=343,SNR=19
P18K Big Mountain, 78.42 15 IAMs_20 IAMs_20 15 07 21.8
comp=Z,1µm,20.0s
P18K Big Mountain, 78.42 15 P P 14 27 39.2 +0.8
baz=337,SNR=6.1
MCARA McCarthy VSAT 78.44 8 P P 14 27 39.2 +0.8
MCARA IAmb IAmb 14 27 40.9
comp=Z,75nm,1.2s
MCARA IAMs_20 IAMs_20 15 05 33.4
comp=Z,1µm,21.0s
MCARA McCarthy VSAT 78.44 8 P P 14 27 39.5 +1.2
baz=346,SNR=16
VRDI Verde Repeater 78.54 9 IAMs_20 IAMs_20 15 05 37.1
comp=Z,1µm,20.0s
P19K Oil Pt 78.56 14 P P 14 27 40.5 +1.4
baz=338
BMRM Bremner River 78.65 9 P P 14 27 40.7 +1.1
baz=345,SNR=25
NLAI Namlea 78.78 104 P P 14 27 40.4 -0.5
comp=Z,20nm,1.1s
Q16K King Salmon 78.78 16 P P 14 27 41.6 +1.4
baz=336,SNR=13
MMRI Maumere 78.78 111 P P 14 27 38.3 -2.6
comp=Z,66nm,1.2s
MMRI Maumere 78.78 111 P P 14 27 38.7 -2.2

SEW Seward 78.79 12 P P 14 27 40.7 +0.4
SEW Seward 78.79 12 P P 14 27 41.4 +1.2
baz=341,SNR=50
HOM Homer 78.84 13 P P 14 27 43.4 +2.8
baz=340
YUK8 Steele Glacier 78.87 7 P P 14 27 42.3 +1.2
baz=349,SNR=15
BRLK Bradley Lake 78.87 13 P P 14 27 41.3 +0.5
BRLK IAmb IAmb 14 27 42.4
comp=Z,181nm,1.0s
BARN Barnard Glacie 78.90 8 IAMs_20 IAMs_20 15 05 43.7
comp=Z,1µm,20.0s
EYAK Cordova Ski Ar 78.91 10 P P 14 27 42.7 +1.8
baz=344,SNR=24
EYAK Cordova Ski Ar 78.91 10 P P 14 27 42.6 +1.7
YUK4 Talbot Arm 78.91 6 P P 14 27 42.5 +1.3
baz=350,SNR=60
BRSE Bradley Lake S 78.92 13 P P 14 27 41.6 +0.5
baz=340,SNR=9.2
N30M Aishikik Lake 78.92 6 P P 14 27 42.4 +1.3
baz=351,SNR=27
N31M Braeburn, Yuko 78.99 5 IAMs_20 IAMs_20 15 03 52.1
comp=Z,1µm,22.0s
N31M Braeburn, Yuko 78.99 5 P P 14 27 42.1 +0.6
baz=352,SNR=19
CTG Chitna Glacier 79.03 8 P P 14 27 43.5 +1.7
baz=348,SNR=68
Q18K Katmai Hardscr 79.15 15 P P 14 27 43.2 +0.8
baz=337
LOGN Logan Glacier 79.20 8 P P 14 27 44.1 +1.3
LOGN IAMs_20 IAMs_20 15 04 00.6
comp=Z,1µm,21.0s
P23K Montague Islan 79.20 11 P P 14 27 44.0 +1.4
baz=343
TGTN Hyland Airport 79.27 1 P P 14 27 45.2 +2.2
baz=358,SNR=63
HMT Hamilton 79.31 9 P P 14 27 44.2 +1.1
HMT IAmb IAmb 14 27 46.0
comp=Z,182nm,1.1s
Q17K Contact Creek 79.32 16 P P 14 27 43.2 -0.2
baz=337,SNR=7.4
YUK6 Outpost Mounta 79.33 6 P P 14 27 45.1 +1.6
baz=350,SNR=22
O28M Mount Upton 79.34 7 P P 14 27 45.1 +1.4
baz=348,SNR=28
N32M Quiet Lake 79.48 4 P P 14 27 44.7 +0.5
baz=354
HYT Haines Junctio 79.52 6 P P 14 27 45.6 +1.1
HYT Haines Junctio 79.52 6 P P 14 27 46.2 +1.8
baz=351,SNR=118
TABL Table Mountain 79.56 8 IAMs_20 IAMs_20 15 05 45.2
comp=Z,1µm,21.0s
YAH Yahtse 79.58 8 P P 14 27 46.1 +1.3
YAH IAmb IAmb 14 27 47.7
comp=Z,119nm,1.0s
O30N Mendenhall 79.68 5 P P 14 27 46.1 +0.9
baz=352,SNR=39
KAIM Kayak Island 79.69 10 P P 14 27 47.2 +2.0
baz=345,SNR=9.6
Q20K Shuyak Island 79.69 14 P P 14 27 45.7 +0.4
baz=339,SNR=6.2
MESA MESA 79.73 8 P P 14 27 46.4 +0.7
MESA IAmb IAmb 14 27 48.6
comp=Z,147nm,1.1s
MESA MESA 79.73 8 P P 14 27 47.3 +1.6
baz=347,SNR=12
KRAI Karang Ratu 79.80 103 P P 14 27 46.1 -0.4
comp=Z,43nm,1.3s
WHY Whitehorse 79.87 5 P P 14 27 46.2 -0.2
WHY Whitehorse 79.87 5 P P 14 27 46.4 0.0
baz=353,SNR=25
AAI Ambon 79.89 103 P P 14 27 46.0 -1.0
comp=Z,1µmcomp=Z,58nm,1.1s
O29M Mount Kennedy 79.95 7 P P 14 27 48.0 +1.2
baz=350,SNR=36
PINM Pinnacle 79.99 7 P P 14 27 48.7 +1.8
baz=348,SNR=16
D62A Allapoint, All 80.15 325 P P 14 27 49.4 +1.5
baz=41
D62A P P 14 27 49.4 +1.5
baz=41
P30M Million Dollar 80.26 6 P P 14 27 49.8 +1.4
baz=351
E63A Oxbow 80.36 324 P P 14 27 50.4 +1.3
baz=41
E63A P P 14 27 50.4 +1.3
baz=41
SIJI Sorong 80.40 99 LR LR 15 07 33.9
comp=Z,197nm,22.0s,baz=351,slow=39
SIJI Sorong 80.40 99 P P 14 27 49.4 -0.4
comp=Z,1µmcomp=Z,114nm,1.2s
KDAK Kodiak Island 80.43 14 P P 14 27 50.4 +1.1
comp=Z,144nm,1.0s,baz=16,slow=4.8,SNR=48
comp=Z,144nm,1.0s
KDAK Kodiak Island 80.43 14 P P 14 27 49.9 +0.7
KDAK Kodiak Island 80.43 14 *c i* **P P 14 27 50.2 +1.0**
KDAK pmax pmax
comp=Z,284nm,1.1s
KDAK MLR MLR
comp=Z,1µm,19.0s
KDAK Kodiak Island 80.43 14 P P 14 27 50.4 +1.1
baz=339
P33M Teslin, Yukon 80.44 4 P P 14 27 49.7 +0.3
P33M IAmb IAmb 14 27 51.0
comp=Z,64nm,1.1s
P33M Teslin, Yukon 80.44 4 P P 14 27 49.8 +0.5
baz=354,SNR=33
PNL Peninsula 80.50 7 P P 14 27 51.2 +1.6
baz=349,SNR=11
PNL Peninsula 80.50 7 P P 14 27 51.5 +1.9
CHGN Chignik 80.55 18 P P 14 27 49.7 -0.1
baz=335
FLDN Fort Liard 80.57 359 P P 14 27 52.0 +2.0
baz=1.6,SNR=6.5
WTLY Watson Lake, Y 80.68 2 P P 14 27 51.5 +0.9
WTLY IAmb IAmb 14 27 53.0
comp=Z,79nm,1.1s
WTLY Watson Lake, Y 80.68 2 P P 14 27 51.9 +1.3
baz=357,SNR=27
P29M Windy Craggy 80.69 6 P P 14 27 51.9 +1.2
baz=350,SNR=24
KOTAN Kotaneelee Air 80.69 359 P P 14 27 52.1 +1.5
baz=1.1,SNR=27
E62A Clayton Lake 80.71 325 P P 14 27 52.2 +1.2
baz=40
E62A P P 14 27 52.2 +1.2
baz=40
F64A Sherman 80.75 323 P P 14 27 52.4 +1.2
baz=41
F64A P P 14 27 52.4 +1.2
baz=41
OHAK Old Harbor 80.82 15 P P 14 27 51.9 +0.6
OHAK IAmb IAmb 14 27 53.7
comp=Z,188nm,1.1s
OHAK Old Harbor 80.82 15 P P 14 27 52.7 +1.4
baz=339,SNR=20
BATI Baumata 80.88 111 LR LR 15 08 43.2
comp=Z,439nm,21.8s,baz=310,slow=39
BATI Baumata 80.88 111 P P 14 27 51.1 -1.2
comp=Z,95nm,1.1s
SDPT Sand Point 80.90 19 P P 14 27 53.1 +1.3
baz=333
PLBC Pleasant Camp 80.97 6 P P 14 27 53.7 +1.6
baz=352,SNR=54
P32M Atlin 81.01 4 P P 14 27 52.9 +0.5
baz=354,SNR=17
SOEI Soe 81.01 110 P P 14 27 51.7 -1.4
comp=Z,92nm,1.2s
SOEI Soe 81.01 110 P P 14 27 51.7 -1.4
SKAG Skagway 81.04 5 P P 14 27 53.1 +0.7
SKAG IAmb IAmb 14 27 54.9
comp=Z,57nm,1.0s
SKAG Skagway 81.04 5 P P 14 27 53.6 +1.2
baz=352,SNR=18
EMMW East Machias 81.20 322 IAMs_20 IAMs_20 15 03 44.5
comp=Z,1µm,20.0s
F63A Nahmakanta, Br 81.22 324 P P 14 27 55.4 +1.6
baz=41
F63A P P 14 27 55.4 +1.6
baz=41
SII Sitkinak Islan 81.25 16 P P 14 27 54.9 +1.2
baz=338
SII Sitkinak Islan 81.25 16 P P 14 27 55.5 +1.8
R33M Jennings River 81.33 3 P P 14 27 55.5 +1.2
baz=356,SNR=35
LIRD Liard River Hi 81.42 0 P P 14 27 56.1 +1.5
baz=360,SNR=29

F62A Pittston Farm, 81.46 324 P P 14 27 56.6 +1.6
baz=40
F62A P P 14 27 56.6 +1.6
baz=40
CHNA Chernabura Isl 81.59 19 P P 14 27 56.0 +0.6
baz=334
CHIR Chirikof Islan 81.63 17 P P 14 27 55.5 -0.1
baz=337
PKME Peaks-Kenny Pk 81.64 324 P P 14 27 57.5 +1.6
baz=40
Q32M Nakina River 81.71 4 P P 14 27 57.3 +0.9
baz=355,SNR=17
BNDI Bandanaira 81.72 103 P P 14 27 55.6 -1.2
comp=Z,311nm,0.9s
GUMO Guam 81.81 79 LR LR 15 08 15.7
comp=Z,405nm,18.3s,baz=312,slow=39
R31K City Hall, Gus 82.05 5 P P 14 27 59.1 +1.3
baz=352
G62A West of Eustis 82.24 324 P P 14 28 00.6 +1.5
baz=40
G62A P P 14 28 00.6 +1.5
baz=40
R32K Eaglecrest 82.27 5 P P 14 28 01.0 +2.0
baz=353,SNR=23
JIS Juneau Island 82.28 5 P P 14 28 00.8 +1.8
DLBC Dease Lake 82.32 2 P P 14 28 00.3 +1.0
comp=Z,40nm,1.0s,baz=343,slow=5.2,SNR=46
DLBC LR LR 15 07 57.8
comp=Z,2µm,21.9s,baz=357,slow=38
comp=Z,40nm,1.0s
DLBC Dease Lake 82.32 2 P P 14 28 00.8 +1.4
DLBC IAmb IAmb 14 28 02.2
comp=Z,69nm,1.1s
DLBC Dease Lake 82.32 2 P P 14 28 01.0 +1.6
baz=356,SNR=30
S31K Pelican 82.46 6 P P 14 28 01.6 +1.6
baz=352,SNR=7.1
FAKI Fak Fak 82.47 100 P P 14 28 01.1 +0.4
comp=Z,931nmcomp=Z,92nm,1.1s
FAKI Fak Fak 82.47 100 P P 14 28 01.1 +0.4
S34M Telegraph Cree 82.81 3 P P 14 28 03.4 +1.6
baz=356,SNR=16
H62A Milan 83.02 324 P P 14 28 04.7 +1.5
baz=39
H62A P P 14 28 04.7 +1.5
baz=39
S32K Killisnoo 83.07 5 P P 14 28 04.9 +1.8
baz=353,SNR=9.7
TRQ Mont Tremblant 83.21 327 P P 14 28 05.5 +1.2
TRQ IAmb IAmb 14 28 06.7
comp=Z,76nm,1.1s
GIRL Giralia 83.29 126 P P 14 28 04.7 0.0
SIT Sitka 83.43 5 P P 14 28 06.7 +1.7
baz=352,SNR=9.2
LBNH Lisbon 83.62 324 P P 14 28 08.0 +1.6
baz=39
LBNH Lisbon 83.62 324 P P 14 28 07.9 +1.6
baz=39
I62A Tamworth 83.64 324 P P 14 28 07.9 +1.5
baz=39
I62A P P 14 28 07.9 +1.5
baz=39
T35M Bob Quinn 83.77 3 P P 14 28 08.8 +1.9
baz=356,SNR=12
T33K Petersburg 83.82 4 P P 14 28 08.8 +1.9
baz=354
FFC Flin Flon 83.96 347 P P 14 28 07.7 -0.1
FFC IAmb IAmb 14 28 09.2
comp=Z,117nm,1.4s
FFC Flin Flon 83.96 347 P P 14 28 07.7 -0.1
FFC pmax pmax
comp=Z,117nm,1.4s
FFC MLR MLR
comp=Z,2µm,18.0s
HNH Hanover 84.20 324 P P 14 28 10.7 +1.5
baz=38
WRAK Wrangell Islan 84.25 4 P P 14 28 10.7 +1.5
WRAK IAmb IAmb 14 28 12.1
comp=Z,110nm,1.1s
WRAK Wrangell Islan 84.25 4 P P 14 28 10.9 +1.7
baz=355,SNR=12
BMNY Brushton-Moira 84.29 326 P P 14 28 10.6 +1.0
baz=37
LONY Lake Ozonia 84.49 326 P P 14 28 11.7 +1.0
LONY IAmb IAmb 14 28 13.1
comp=Z,67nm,1.1s
LONY IAMs_20 IAMs_20 15 09 13.6
comp=Z,908nm,18.0s
LONY Lake Ozonia 84.49 326 P P 14 28 11.9 +1.1
baz=37
U33K Whale Pass 84.51 4 P P 14 28 12.2 +1.7
baz=354
CRAG Craig 85.15 4 P P 14 28 15.0 +1.3
baz=354
QUA2 Belchertown 85.35 323 IAMs_20 IAMs_20 15 07 07.2
comp=Z,1µm,19.0s
L61B Northampton 85.37 324 IAMs_20 IAMs_20 15 06 50.6
comp=Z,1µm,20.0s
L61B Northampton 85.37 324 P P 14 28 15.9 +0.8
baz=38
V35K Ketchikan 85.37 3 P P 14 28 15.9 +1.0
baz=355
TRY Troy 85.59 324 IAMs_20 IAMs_20 15 06 33.5
comp=Z,2µm,20.0s
J57A Williamstown 86.07 326 P P 14 28 19.1 +0.4
J57A IAmb IAmb 14 28 20.7
comp=Z,55nm,1.4s
PSA00 Pilbara Seismi 86.10 122 P P 14 28 18.0 -1.0
PSA00 IAmb IAmb 14 28 19.1
comp=Z,67nm,1.8s
SADO Sadowa 86.27 329 P P 14 28 20.5 +0.9
comp=Z,5.8nm,0.7s,baz=68,slow=3.0,SNR=4.3
SADO LR LR 15 06 43.1
comp=Z,1µm,21.2s,baz=18,slow=36
comp=Z,5.8nm,0.7s
E46A Sault Ste Mari 86.87 333 P P 14 28 23.7 +1.3
baz=31
ULM Lac du Bonnet 86.87 341 P P 14 28 22.1 -0.3
comp=Z,42nm,1.0s,baz=12,slow=5.1,SNR=19
ULM LR LR 15 08 52.0
comp=Z,2µm,19.2s,baz=8.0,slow=37
comp=Z,42nm,1.0s
BINY Binghamton 87.05 326 IAMs_20 IAMs_20 15 07 10.9
comp=Z,956nm,18.0s
BINY Binghamton 87.05 326 P P 14 28 24.0 +0.5
baz=36
PAL Palisades 87.07 324 P P 14 28 24.1 +0.6
baz=37
EYMN Ely 87.79 338 IAMs_20 IAMs_20 15 08 27.1
comp=Z,1µm,20.0s
EYMN Ely 87.79 338 P P 14 28 27.1 +0.2
baz=26
B35A Bob, Littlefor 88.05 339 P P 14 28 28.3 +0.1
B35A IAmb IAmb 14 28 29.3
comp=Z,66nm,1.3s
B35A Bob, Littlefor 88.05 339 P P 14 28 28.5 +0.4
baz=24
KNRA Kununurra 88.22 112 P P 14 28 28.6 -0.7
KNRA Kununurra 88.22 112 P P 14 28 29.0 -0.3
M57A Sunshine Farm, 88.24 326 P P 14 28 29.4 +0.2
baz=35
M57A P P 14 28 29.4 +0.2
baz=35
GLMI Grayling 88.31 332 P P 14 28 29.9 +0.5
baz=30
GENI Genyem 88.33 95 P P 14 28 30.2 +0.2
comp=Z,100nm,1.4s
GENI Genyem 88.33 95 P P 14 28 30.4 +0.4
BBB Bella Bella 88.64 2 LR LR 15 12 31.2
comp=Z,689nm,22.0s,baz=352,slow=38
AGMN Agassiz Nation 88.67 341 P P 14 28 30.6 -0.4
AGMN IAmb IAmb 14 28 32.4
comp=Z,68nm,1.1s
AGMN IAMs_20 IAMs_20 15 09 24.0
comp=Z,1µm,21.0s
AGMN Agassiz Nation 88.67 341 P P 14 28 31.2 +0.1
baz=22
AGMN Agassiz Nation 88.67 341 P P 14 28 31.0 0.0
baz=22
F42A Maple Grove Fa 88.70 335 P P 14 28 32.1 +0.8
baz=28
ERPA Erie 88.81 328 IAMs_20 IAMs_20 15 10 33.8
comp=Z,1µm,19.0s
ERPA Erie 88.81 328 P P 14 28 32.4 +0.5
baz=33
M55A Ridgway 88.84 327 P P 14 28 32.4 +0.4
baz=34
M55A P P 14 28 32.4 +0.4

	baz=34						
MEEK	Meekatharra	88.91 126	P	P	14 28 31.3	-1.1	
KDU	Kakadu	88.95 107	P	P	14 28 32.8	0.0	
MORW	Morawa	89.10 130	P	P	14 28 31.7	-1.5	
MORW	Morawa	89.10 130	P	P	14 28 32.5	-0.7	
PSDB	Penn State Uni	89.12 327	P	P	14 28 34.0	+0.6	
	baz=34						
SSPA	Standing Stone	89.15 326	P	P	14 28 33.3	-0.2	
SSPA	Standing Stone	89.15 326	IAms_20	IAms_20	15 08 56.5		
	comp=Z,1μm,20.0s						
SSPA	Standing Stone	89.15 326	P	P	14 28 33.7	+0.2	
	baz=35						
M53A	WI Miller and	89.66 328	IAms_20	IAms_20	15 10 06.2		
	comp=Z,1μm,20.0s						
M53A	WI Miller and	89.66 328	P	P	14 28 36.1	+0.3	
	baz=33						
G40A	Rib Lake	89.81 336	P	P	14 28 36.4	-0.1	
	baz=26						
MDND	Maddock	89.99 343	P	P	14 28 37.7	+0.4	
	baz=20						
MDND	Maddock	89.99 343	P	P	14 28 37.6	+0.3	
	baz=20						
AAM	Ann Arbor	90.11 330	IAms_20	IAms_20	15 17 09.0		
	comp=Z,949nm,19.0s						
F36A	Milaca	90.27 338	P	P	14 28 38.1	-0.5	
	baz=24						
DGMT	Dagmar	90.36 346	P	P	14 28 39.6	+0.6	
DGMT	Dagmar	90.36 346	IAms_20	IAms_20	15 12 38.3		
	comp=Z,1μm,20.0s						
DGMT	Dagmar	90.36 346	P	P	14 28 40.0	+1.0	
	baz=16						
DGMT	Dagmar	90.36 346	P	P	14 28 40.1	+1.0	
	baz=16						
O54A	Avella	90.59 327	P	P	14 28 40.7	+0.5	
	baz=33						
O54A			P	P	14 28 40.7	+0.5	
	baz=33						
SPMN	Marine on St.	90.64 338	P	P	14 28 40.7	+0.4	
	baz=25						
SPMN	Marine on St.	90.64 338	P	P	14 28 40.5	+0.2	
	baz=25						
MCWV	Mont Chateau	90.80 326	P	P	14 28 41.7	+0.5	
	baz=34						
O53A	New Philadelph	90.88 328	P	P	14 28 41.9	+0.3	
O53A			IAmb	IAmb	14 28 43.3		
	comp=Z,94nm,1.2s						
O53A			IAms_20	IAms_20	15 09 10.5		
	comp=Z,1μm,22.0s						
O53A	New Philadelph	90.88 328	P	P	14 28 42.1	+0.5	
	baz=33,SNR=8.4						
CBN	Corbin Frederi	90.91 324	IAms_20	IAms_20	15 11 52.3		
	comp=Z,1μm,18.0s						
F33A	5 Mile Ranch,	91.05 340	P	P	14 28 42.4	+0.2	
	baz=22						
I40A	Norwalk	91.17 336	P	P	14 28 43.0	+0.2	
I40A			IAmb	IAmb	14 28 44.7		
	comp=Z,37nm,1.1s						
I40A	Norwalk	91.17 336	P	P	14 28 43.3	+0.4	
	baz=26						
O52A	Adamsville	91.25 328	P	P	14 28 43.7	+0.4	
	baz=32						
O52A			P	P	14 28 43.7	+0.4	
	baz=32						
E28A	Huff	91.44 343	P	P	14 28 44.4	+0.3	
P53A	Whipple	91.59 327	P	P	14 28 45.8	+0.9	
	baz=32						
P53A			P	P	14 28 45.8	+0.9	
	baz=32						
ACSO	Alum Creek Sta	91.62 329	IAms_20	IAms_20	15 09 12.9		
	comp=Z,1μm,20.0s						
ACSO	Alum Creek Sta	91.62 329	P	P	14 28 44.9	-0.1	
	baz=31						
EGMT	Eagleton	91.70 349	IAms_20	IAms_20	15 12 13.8		
	comp=Z,1μm,22.0s						
EGMT	Eagleton	91.70 349	P	P	14 28 45.6	+0.2	
	baz=12,SNR=11						
P52A	Corning	91.78 328	P	P	14 28 45.8	0.0	
P52A			IAms_20	IAms_20	15 09 27.3		
	comp=Z,975nm,20.0s						
P52A	Corning	91.78 328	P	P	14 28 45.4	-0.4	
	baz=32,SNR=5.9						
I37B	Waseca	91.92 337	P	P	14 28 47.1	+0.8	
	baz=24						
JFWS	Jewell Farm	91.93 335	P	P	14 28 46.1	-0.3	
	baz=26						
O49A	Covington	92.19 330	P	P	14 28 47.1	-0.5	
	baz=30						
O49A			P	P	14 28 47.1	-0.5	
	baz=30						
NEW	Newport	92.27 354	P	P	14 28 48.7	+0.8	
	comp=Z,44nm,0.9s,baz=351,slow=4.4,SNR=42						
NEW			PP	PP	14 32 27.2	0.0	
	comp=Z,3.7nm,0.7s,baz=3.3,slow=2.3,SNR=3.4						
	comp=Z,44nm,0.9s						
NEW	Newport	92.27 354	P	P	14 28 49.2	+1.3	
	baz=6.5,SNR=32						
LAO	LASA Array	92.44 347	IAms_20	IAms_20	15 14 51.5		
	comp=Z,1μm,18.0s						
LAO	LASA Array	92.44 347	P	P	14 28 50.4	+1.7	
	baz=15						
LAO	LASA Array	92.44 347	P	P	14 28 50.3	+1.5	
	baz=15,SNR=18						
O48B	Farmland	92.45 330	P	P	14 28 49.4	+0.6	
	baz=30						
O48B	Farmland	92.45 330	P	P	14 28 47.9	-0.9	
	baz=30,SNR=5.9						
NWAO	Narrogin (SRO)	92.61 132	LR	LR	15 07 00.0		
	comp=Z,475nm,21.7s,baz=195,slow=33						
Q51A	Peebles	92.79 328	P	P	14 28 50.1	-0.4	
	baz=31						
Q51A			P	P	14 28 50.1	-0.4	
	baz=31						
R53A	Hurricane	92.81 327	P	P	14 28 51.0	+0.5	
	baz=32						
R53A			P	P	14 28 51.0	+0.5	
	baz=32						
P49A	Miami Univ. Ec	92.90 330	IAms_20	IAms_20	15 10 16.8		
	comp=Z,1μm,21.0s						
P49A	Miami Univ. Ec	92.90 330	P	P	14 28 49.6	-1.3	
	baz=30						
SUSD	Miller	93.04 341	P	P	14 28 51.9	+0.4	
SUSD	Miller	93.04 341	P	P	14 28 52.2	+0.7	
	baz=20						
SUSD	Miller	93.04 341	P	P	14 28 51.4	-0.1	
	baz=20,SNR=8.2						
SFIN	Lafayette	93.07 332	P	P	14 28 51.5	-0.2	
	baz=29						
BLA	Blacksburg	93.09 325	P	P	14 28 51.8	-0.1	
	baz=33						
ECSD	EROS Data Cent	93.09 339	IAms_20	IAms_20	15 13 34.1		
	comp=Z,1μm,20.0s						
ECSD	EROS Data Cent	93.09 339	P	P	14 28 51.7	0.0	
	baz=22						
ECSD	EROS Data Cent	93.09 339	P	P	14 28 51.9	+0.1	
	baz=22,SNR=21						
HRY	Holter Researc	93.27 351	P	P	14 28 53.2	+0.6	
MSO	Missoula	93.40 352	P	P	14 28 53.6	+0.4	
	baz=8.9,SNR=11						
CNNC	Cliffs of the	93.57 323	IAms_20	IAms_20	15 14 51.8		
	comp=Z,947nm,18.0s						
D08A	Wollman Farm,	93.59 355	P	P	14 28 55.1	+1.1	
D08A			IAmb	IAmb	14 28 56.3		
	comp=Z,47nm,1.1s						
V58A	Windy Hill, Pi	93.68 324	P	P	14 28 53.9	-0.7	
	baz=34						
V58A			P	P	14 28 53.9	-0.7	
	baz=34						
HDIL	Hopedale	93.70 333	P	P	14 28 54.5	-0.1	
	baz=27						
SCIA	State Center	93.78 336	P	P	14 28 54.9	0.0	
	baz=24						
R50A	Paris	93.82 329	P	P	14 28 55.1	0.0	
	baz=31						
R50A			P	P	14 28 55.1	0.0	
	baz=31						
GCMT	Greycliff	93.87 349	P	P	14 28 56.0	+0.5	
RCBR	Riachuelo	93.93 266	LR	LR	15 13 15.8		
	comp=Z,154nm,20.5s,baz=194,slow=37						
S51A	Beattyville	94.08 328	P	P	14 28 56.6	+0.3	
	baz=31						
S51A			P	P	14 28 56.6	+0.3	
	baz=31						
N41A	Harden Midland	94.10 334	P	P	14 28 55.8	-0.6	
	baz=26						
WRKA	Warakurna	94.11 119	P	P	14 28 55.9	-0.7	
HAWA	Hanford	94.29 356	IAms_20	IAms_20	15 14 01.0		
	comp=Z,1μm,21.0s						
BOZ	Bozeman (W)	94.34 350	IAms_20	IAms_20	15 15 50.5		
	comp=Z,1μm,19.0s						
BOZ	Bozeman (W)	94.34 350	P	P	14 28 58.2	+0.5	
	baz=11,SNR=6.4						
RLMT	Red Lodge	94.47 349	P	P	14 28 59.3	+1.0	
	baz=12,SNR=20						
RSSD	Black Hills	94.50 345	P	P	14 28 59.2	+0.8	
	baz=16						
RSSD	Black Hills	94.50 345	P	P	14 28 59.3	+0.8	
	baz=16						
WCI	Wyandotte Cave	94.64 330	IAms_20	IAms_20	15 18 10.9		
	comp=Z,1μm,20.0s						
WCI	Wyandotte Cave	94.64 330	P	P	14 28 58.7	-0.3	
	baz=29						
DLMT	Dillon	94.69 351	IAms_20	IAms_20	15 14 55.8		
	comp=Z,1μm,20.0s						
TZTN	Tazewell	94.99 327	P	P	14 29 01.2	+0.7	
TZTN	Tazewell	94.99 327	P	P	14 29 01.3	+0.7	
	baz=31						
TZTN	Tazewell	94.99 327	P	P	14 29 00.8	+0.2	
	baz=31						
WRA	Warramunga Arr	95.01 112	P	P	14 28 59.4	-1.4	
	comp=Z,16nm,0.8s,baz=319,slow=4.3,SNR=68						
WRA			PP	PP	14 32 48.5	-2.0	
	comp=Z,5.5nm,1.2s,baz=315,slow=8.4,SNR=4.7						
WRA			PKKP	PKKPdf	14 45 56.1	+0.8	
	comp=Z,1.2nm,0.9s,baz=125,slow=2.5,SNR=6.5						
WRA			LR	LR	15 18 23.0		
	comp=Z,197nm,19.8s,baz=298,slow=40						
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	95.01 112	P	P	14 28 59.7	-1.1	
WRA	Warramunga Arr	95.01 112	P	P	14 28 59.7	-1.1	
WRAB	Tennant Creek	95.01 112	d iP	P	14 28 59.6	-1.2	
WRAB			pmax	pmax			
	comp=Z,21nm,0.9s						
WRAB	Tennant Creek	95.01 112	P	P	14 28 59.8	-1.0	
YHL	Hebgen Lake	95.01 350	P	P	14 29 01.6	+0.7	
YHL			IAmb	IAmb	14 29 03.3		
	comp=Z,39nm,1.4s						
T50A	Nancy	95.11 328	P	P	14 29 01.1	-0.1	
	baz=30						
T50A			P	P	14 29 01.1	-0.1	
	baz=30						
KMSC	Kings Mountain	95.22 325	P	P	14 29 02.5	+0.8	
	baz=33						
KMSC	Kings Mountain	95.22 325	P	P	14 29 02.1	+0.4	
	baz=33						
MCMT	McKenzie Canyo	95.25 351	P	P	14 29 02.6	+0.6	
PLID	Pearl Lake	95.33 353	IAms_20	IAms_20	15 17 46.5		
	comp=Z,924nm,20.0s						
YFT	Old Faithful	95.36 349	P	P	14 29 04.5	+2.1	
YFT			IAmb	IAmb	14 29 06.3		
	comp=Z,38nm,1.1s						
H17A	Grant Village	95.37 349	P	P	14 29 04.4	+1.9	
H17A			IAmb	IAmb	14 29 06.3		
	comp=Z,40nm,1.4s						
H17A	Grant Village	95.37 349	P	P	14 29 04.3	+1.8	
	baz=12,SNR=12						
P40A	Paris	95.56 335	P	P	14 29 03.2	+0.1	
	baz=25						
FLWY	Flagg Ranch	95.70 349	IAms_20	IAms_20	15 14 08.5		
	comp=Z,1μm,22.0s						
TKL	Tuckaleechee C	95.84 327	P	P	14 29 02.8	-1.7	
	comp=Z,6.8nm,1.0s,baz=114,slow=6.2,SNR=4.3						
TKL			LR	LR	15 12 52.9		
	comp=Z,1μm,20.5s,baz=32,slow=36						
	comp=Z,6.8nm,1.0s						
IMW	Indian Meadow	95.91 349	IAms_20	IAms_20	15 14 49.3		
	comp=Z,951nm,20.0s						
LOHW	Long Hollow	96.14 349	IAms_20	IAms_20	15 16 45.3		
	comp=Z,986nm,18.0s						
FXWY	Fox Creek	96.18 349	IAms_20	IAms_20	15 14 36.2		
	comp=Z,1μm,21.0s						
SNOW	Snow King Moun	96.31 349	IAms_20	IAms_20	15 16 41.8		
	comp=Z,1μm,21.0s						
NHSC	New Hope	96.39 323	IAms_20	IAms_20	15 13 39.6		
	comp=Z,1μm,20.0s						
HODGE	Hodges	96.40 325	P	P	14 29 07.6	+0.6	
	baz=32						
K22A	Casper	96.40 346	P	P	14 29 07.1	0.0	
	baz=15						
K22A	Casper	96.40 346	P	P	14 29 06.3	-0.8	
	baz=15						
REDW	Red Top Meadow	96.42 349	P	P	14 29 07.9	+0.6	
REDW			IAmb	IAmb	14 29 10.0		
	comp=Z,44nm,1.4s						
CCM	Cathedral Cave	96.61 333	P	P	14 29 07.7	-0.2	
CCM	Cathedral Cave	96.61 333	P	P	14 29 07.7	-0.2	
CCM	Cathedral Cave	96.61 333	P	P	14 29 07.9	0.0	
	baz=26						
CCM	Cathedral Cave	96.61 333	P	P	14 29 07.3	-0.6	
	baz=26						
HLID	Hailey	96.68 352	P	P	14 29 08.7	+0.3	
HLID	Hailey	96.68 352	P	P	14 29 07.8	-0.6	
	baz=8.6						
R40A	Maddies Statio	96.75 334	P	P	14 29 09.1	+0.5	
	baz=25						
BW06	Boulder Array	96.81 348	IAms_20	IAms_20	15 16 05.0		
	comp=Z,1μm,20.0s						
BW06	Boulder Array	96.81 348	P	P	14 29 08.6	-0.5	
	baz=12						
PDAR	Pinedale Array	96.81 348	P	P	14 29 08.7	-0.4	
	comp=Z,1.3nm,0.9s,baz=336,slow=3.3,SNR=7.3						
PDAR			PP	PP	14 33 03.1	+0.1	
	comp=Z,2.8nm,1.1s,baz=44,slow=5.4,SNR=5.2						
PDAR			PKKP	PKKPdf	14 45 49.1	-1.0	
	comp=Z,0.9nm,0.7s,baz=175,slow=4.2,SNR=6.2						
PDAR			LR	LR	15 16 26.1		
	comp=Z,1μm,20.1s,baz=12,slow=38						
	comp=Z,1.3nm,0.9s						
PINE	Pine Mountain	96.96 357	P	P	14 29 10.7	+1.1	
PINE			IAmb	IAmb	14 29 12.8		
	comp=Z,38nm,1.1s						
MFID	Camas Ranch	96.97 353	P	P	14 29 10.8	+1.2	
MFID			IAmb	IAmb	14 29 12.2		
	comp=Z,49nm,1.1s						
ASAR	Alice Springs	97.08 115	P	P	14 29 08.5	-1.7	
	comp=Z,4.1nm,0.8s,baz=314,slow=4.5,SNR=21						
ASAR			PP	PP	14 33 07.6	+1.0	
	comp=Z,1.3nm,0.9s,baz=314,slow=4.7,SNR=3.2						
ASAR			PKKP	PKKPdf	14 45 50.8	-1.0	
	comp=Z,1.6nm,0.9s,baz=128,slow=2.9,SNR=9.7						
ASAR			LR	LR	15 20 13.8		
	comp=Z,227nm,18.2s,baz=310,slow=40						
	comp=Z,4.1nm,0.8s						
OGNE	Ogallala	97.09 342	IAms_20	IAms_20	15 14 38.6		
	comp=Z,1μm,21.0s						
AS01	Alice Springs	97.11 115	P	P	14 29 09.2	-1.1	
GOGA	Godfrey	97.62 326	IAms_20	IAms_20	15 13 54.9		
	comp=Z,1μm,20.0s						
GOGA	Godfrey	97.62 326	P	P	14 29 11.7	-0.9	
	baz=31						
N23A	Red Feather La	97.98 345	P	Pdif	14 29 14.5	0.0	
	baz=15						
PMG	Port Moresby	97.99 96	i eP	Pdif	14 29 16.6	+2.1	
PLAL	Pickwick Lake	98.17 330	IAms_20	IAms_20	15 14 41.4		
	comp=Z,1μm,20.0s						
GDSD	La Dsirade Is	98.22 299	IAms_20	IAms_20	15 10 27.8		
	comp=Z,751nm,22.0s						
HVU	Hansel Valley	98.24 350	P	Pdif	14 29 16.3	+0.8	
HVU	Hansel Valley	98.24 350	P	Pdif	14 29 16.3	+0.8	
HVU			pmax	pmax			
	comp=Z,13nm,1.1s						
HWUT	Hardware Ranch	98.25 349	P	Pdif	14 29 16.3	+0.8	
HWUT			IAmb	IAmb	14 29 17.8		
	comp=Z,29nm,1.2s						
SMRT	St. Maarten	98.32 301	IAms_20	IAms_20	15 11 23.8		
	comp=Z,658nm,19.0s						
CBKS	Cedar Bluff	98.52 340	P	P	14 29 16.0	-0.6	
	baz=20						
YBH	Yreka Blue Hor	99.08 358	LR	LR	15 18 03.0		
	comp=Z,1μm,22.0s,baz=360,slow=38						
OXF	Oxford	99.10 330	IAms_20	IAms_20	15 16 06.9		
	comp=Z,1μm,20.0s						
O20A	White River Ci	99.15 347	P	Pdif	14 29 18.7	-0.9	
	baz=13						
ELK	Elko	99.55 352	LR	LR	15 19 21.4		
	comp=Z,1μm,19.5s,baz=10,slow=38						
Q24A	Divide	99.68 344	P	Pdif	14 29 21.0	-1.1	
	baz=16						
DUG	Dugway, Tooele	99.81 350	IAms_20	IAms_20	15 17 28.2		
	comp=Z,1μm,21.0s						
DUG	Dugway, Tooele	99.81 350	P	Pdif	14 29 22.0	-0.5	
	baz=9.9						
MDP	Montagnes des	99.81 285	LR	LR	15 17 46.5		
	comp=Z,104nm,18.2s,baz=61,slow=37						
TUL1	Leonard	100.07 336	P	Pdif	14 29 23.2	-0.3	
	baz=23						
OK035	E0210 Rd and N	100.21 338	IAms_20	IAms_20	15 21 41.6		
	comp=Z,1μm,20.0s						
MIAR	Mount Ida	100.58 334	P	Pdif	14 29 25.7	-0.1	
	baz=24						
SDCO	Great Sand Dun	100.92 344	P	Pdif	14 29 26.8	-0.8	
	baz=16						
DWPF	Disney Wildern	101.15 321	IAms_20	IAms_20	15 18 34.6		
	comp=Z,1μm,20.0s						
S22A	4UR Ranch, Cre	101.20 345	P	Pdif	14 29 27.9	-1.0	
	baz=15						
VBMS	Vicksburg	101.56 330	IAms_20	IAms_20	15 17 42.0		
	comp=Z,1μm,20.0s						
R11A	Troy Canyon, C	101.96 352	P	Pdif	14 29 30.9	-1.2	
	baz=7.8						
WMOK	Wichita Mounta	102.07 338	P	Pdif	14 29 31.9	-0.5	
	baz=21						
NVAR	Mina Array Bea	102.13 354	P	Pdif	14 29 34.5	+1.6	
	comp=Z,2.0nm,0.8s,baz=32,slow=4.3,SNR=12						
NVAR			PP	PP	14 33 47.0	+3.5	
	comp=Z,1.0nm,0.9s,baz=32,slow=3.5,SNR=3.9						
NVAR			PKKPbc	PKKPbc	14 45 34.4	-0.9	
	comp=Z,0.5nm,0.7s,baz=202,slow=6.1,SNR=4.1						
SDDR	Presa de Saban	102.85 308	IAms_20	IAms_20	15 12 22.2		
	comp=Z,745nm,22.0s						
TPNV	Topopah Spring	103.42 352	P	Pdif	14 29 37.1	-1.5	
	baz=7.3						
ANMO	Albuquerque	103.82 344	P	Pdif	14 29 38.6	-1.9	
	baz=15						
MSTX	Muleshoe	103.89 341	P	Pdif	14 29 38.7	-2.0	
	baz=18						
WUAZ	Wupatki	104.19 348	IAms_20	IAms_20	15 20 20.2		
	comp=Z,938nm,21.0s						
WUAZ	Wupatki	104.19 348	P	Pdif	14 29 40.4	-1.6	
	baz=11						
WHTX	Lake Whitney,	104.21 336	P	Pdif	14 29 40.6	-1.4	
	baz=22						
ABTX	Abilene, Hawle	104.30 338	P	Pdif	14 29 40.7	-1.7	
	baz=20						
W18A	Petrified Fore	104.30 347	P	Pdif	14 29 40.5	-2.1	
	baz=12						
TUQ	Turquoise Moun	104.88 352	P	Pdif	14 29 43.1	-2.0	
	baz=7.6						
ISA	Isabella, Lake	104.89 354	P	Pdif	14 29 43.0	-2.1	
	baz=5.6						
LRMC	Laurel Mtn Rad	105.01 353	P	Pdif	14 29 44.4	-1.3	
	baz=6.2						
GSC	Goldstone, Bar	105.10 353	P	Pdif	14 29 44.3	-1.7	
	baz=6.9						
EDW2	Edwards Air Fo	105.63 354	P	PKiKP	14 34 01.0	-0.4	
	baz=6.0						
PKM	Mcpherson Peak	105.76 355	P	PKiKP	14 34 00.6	-1.2	
	baz=4.5						
PDMCI	Parker Dam,Lak	105.78 350	P	PKiKP	14 34 00.0	-1.6	
	baz=9.1						
IRM	Iron Mountain	106.05 351	P	PKiKP	14 34 00.2	-1.9	
	baz=8.3						
BFSC	Mount Baldy Ra	106.24 353	P	PKiKP	14 34 01.5	-1.1	
	baz=6.3						
BELC	Belle Mtn. Jos	106.31 352	P	PKiKP	14 34 01.9	-0.9	
	baz=7.6						
BC3	Big Chuckawall	106.58 351	P	PKiKP	14 34 02.6	-0.6	
	baz=8.1						
MAW	Mawson	107.00 177	PKKP		14 45 36.4		
	comp=Z,4.2nm,1.0s,baz=177,slow=8.3,SNR=5.2						
MONP2	Monument Peak	107.45 352	P	PKiKP	14 34 04.5	-0.5	
	baz=7.3						
STKA	Stephens Creek	107.48 117	PKiKP	PKiKP	14 34 04.3	-0.3	
	comp=Z,2.9nm,1.0s,baz=316,slow=3.3,SNR=3.8						
833A	Chaparral WMA,	108.23 336	P	PKiKP	14 34 05.5	-0.7	
	baz=21						
TXAR	Lajitas Array	108.52 340	Pdiff	Pdif	14 30 01.7	+0.4	
	comp=Z,0.1nm,0.6s,baz=22,slow=4.6,SNR=2.0						
TXAR			PP	PP	14 34 32.0	+1.2	
	comp=Z,5.7nm,1.1s,baz=23,slow=4.9,SNR=8.2						
TXAR			PKKP	PKKPdf	14 45 28.3	-0.5	
	comp=Z,0.8nm,0.8s,baz=190,slow=6.4,SNR=6.4						
BDFB	Brasilia	109.31 265	PP	PP	14 34 37.2	-1.0	
	comp=Z,2.3nm,0.4s,baz=31,slow=12,SNR=3.1						
TROLL	Troll, Antarti	117.02 196	PKPdf	PKPdf	14 34 21.0	-0.7	
SNET	Serv Nac Est T	117.17 320	IAms_20	IAms_20	15 30 42.3		
	comp=Z,589nm,20.0s						
SNAA	Sanae	117.98 198	PKPdf	PKPdf	14 34 21.7	-1.8	
SNAA	Sanae	117.98 198	PKP	PKPdf	14 34 22.0	-1.4	
	comp=Z,4.0nm,1.0s,baz=11,slow=6.9,SNR=5.7						
SNAA	Sanae	117.98 198	PKIKP	PKPdf	14 34 22.0	-1.4	
VNA2	Neumayer--Watz	118.60 199	PKPdf	PKPdf	14 34 22.8	-1.7	
	baz=1.0,slow=3.0						
VNA1	Neumayer--Stat	118.65 200	PKPdf	PKPdf	14 34 24.2	-0.5	
VNA3	Neumayer Olymp	119.38 200	PKPdf	PKPdf	14 34 25.0	-1.0	
SIV	San Ignacio	119.60 273	PKP	PKPdf	14 34 27.2	-0.9	
	comp=Z,3.7nm,1.0s,baz=112,slow=9.0,SNR=4.0						
CPUP	Villa Florida	122.49 261	PKP	PKPdf	14 34 31.4	-2.0	
	comp=Z,6.1nm,0.9s,baz=50,slow=5.3,SNR=8.8						
CPUP			PP	PP	14 36 10.1	-0.5	
	comp=Z,5.7nm,1.0s,baz=57,slow=6.6,SNR=4.2						
LPAZ	La Paz	125.21 278	PKP	PKPdf	14 34 37.8	-1.9	
	comp=Z,3.1nm,0.8s,baz=21,slow=3.0,SNR=7.1						
LPAZ			PP	PP	14 36 31.1	+1.6	
	comp=Z,4.2nm,1.2s,baz=39,slow=6.0,SNR=4.1						
ATAH	Atahualpa	126.88 295	PKP	PKPdf	14 34 42.6	-0.1	
	comp=Z,3.9nm,0.8s,baz=174,slow=10.0,SNR=4.3						
QSPA	South Pole Qui	129.34 180	IAms_20	IAms_20	15 30 09.8		
	comp=Z,535nm,18.0s						
LVC	Limon Verde	129.44 272	PKP	PKPdf	14 34 47.4	+0.1	
	comp=Z,9.4nm,1.0s,baz=76,slow=1.5,SNR=6.7						
VNDA	Vanda	132.00 164	PKhKP	PKPpre	14 34 44.1		
	comp=Z,1.1nm,0.9s,baz=324,slow=4.3,SNR=5.4						
VNDA			PKP	PKPdf	14 34 50.3	+0.2	
	comp=Z,1.7nm,0.9s,baz=281,slow=2.9,SNR=8.5						
PLCA	Paso Flores	138.51 250	PKP	PKPdf	14 35 03.7	+0.3	
	comp=Z,10nm,1.0s,baz=120,slow=3.9,SNR=10.0						
RAR	Rarotonga	145.56 68	PKPbc	PKPab	14 35 17.0	+0.2	
	comp=Z,56nm,0.9s,baz=234,slow=5.3,SNR=7.5						
PPT	Papeete	149.78 50	PKPbc	PKiKP	14 35 30.0	+0.8	
	comp=Z,122nm,0.9s,baz=313,slow=3.5,SNR=9.0						
PPT	Papeete	149.78 50	PKP2	PKiKP	14 35 30.0	+0.8	

*IDC **26** 14:17:05.8±0.8, 2°.66N×79°.88W, h0km, mb4.0/6, mbtmp4.3/9, ML3.6/3, MS3.5/7, Error ellipse: s-maj=25.0km s-min=20.7km az=23.0*

*RSNC **26** 14:17:07.1±0.9, 2°.63N×79°.92W, h32km±10km, ML3.8, Mw3.7*

*NEIC **26** 14:17:07.8±1.4, 2°.79N±0°.07×79°.43W±0°.09, h10km±1km, mb4.6/27, Error ellipse: s-maj=16.4km s-min=10.6km az=66.0*

ISC 26 14:17:08.7±0.5, 2°.62N±0°.05×79°.73W±0°.06, h21km, n67, σ1972/68, mb4.5/20, MS3.4/5, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMC	Tumaco	1.28	128	eP	Pn	14 17 30.4	-0.9
TUMC				eS	Sn	14 17 48.0	+0.2
TUMC				i		14 17 57.0	
	comp=Z,909nm,0.7s						
GR1C	Gorgona, Isla	1.61	76	eP	Pn	14 17 34.1	-1.7
GR1C				eS	Sn	14 17 53.4	-2.5
PT

comp=Z,66nm,0.2s
PORT Chimborazo Vol 4.17 167 Pn **Pn 14 18 13.1 +1.5**
COHC Cochancay 5.07 175 Pn **Pn 14 18 26.5 +2.9**
ROSC El Rosal 5.83 68 Pn **Pn 14 18 37.5 +3.2**
comp=Z,10nm,0.3s,baz=10.0,slow=11,SNR=5.5
ROSC Sn **Sn 14 19 47.3 +6.5**
comp=Z,7.4nm,0.3s,baz=245,slow=23,SNR=2.1
ROSC LR LR 14 20 26.9
comp=Z,688nm,18.9s,baz=242,slow=34
comp=Z,50nm,0.5s
ROSC El Rosal 5.83 68 Pn Pn 14 18 29.9 -4.5
BOSC San Juan Bosco 5.86 168 Pn 14 18 35.7 +1.1
RIMA Rio Macho 8.20 330 Pn 14 19 06.0 -0.8
ORTG Ortega, Santa 9.57 324 Pn **Pn 14 19 24.7 -0.7**
ATAH Atahualpa 9.78 172 LR LR 14 24 13.4
comp=Z,122nm,18.6s,baz=352,slow=44
SDV Santo Domingo 10.98 55 Pn **Pn 14 19 47.2 +2.4**
comp=Z,3.2nm,0.3s,baz=86,slow=5.0,SNR=6.3
comp=Z,36nm,0.9s
MTO3 Montecristo 15.08 321 Pn **Pn 14 20 41.6 +0.7**
MTO3 IAmb IAmb 14 20 49.9
comp=Z,27nm,0.6s
PCRV Puerto La Cruz 16.76 63 Pn **P 14 21 05.9 +1.3**
comp=Z,1.1nm,0.3s,baz=105,slow=23,SNR=1.2
comp=Z,32nm,1.0s
CCIG Comitan 18.26 319 P **Pn 14 21 20.9 -0.2**
SJG San Juan 20.36 40 LR LR 14 29 12.7
comp=Z,161nm,18.6s,baz=229,slow=36
HUMP Col San Antoni 20.57 40 P **P 14 21 42.6 -3.6**
HUMP IAmb IAmb 14 21 58.3
comp=Z,29nm,0.8s
SVB Belmont 21.12 59 P **P 14 21 48.8 -3.5**
MCLT Moule a Chique 21.59 58 P **P 14 21 57.4 0.0**
FDF Fort de France 21.93 56 P **P 14 21 56.3 -4.7**
LPAZ La Paz 22.01 149 LR LR 14 31 40.0
comp=Z,79nm,19.0s,baz=44,slow=40
PB16 IPOC Station P 23.13 155 P **P 14 22 15.0 +0.8**
PB16 IAmb IAmb 14 22 24.9
comp=Z,13nm,0.8s
PB11 IPOC Station P 24.34 156 P **P 14 22 26.8 +1.3**
PB11 IAmb IAmb 14 22 30.3
comp=Z,30nm,1.2s
PB01 IPOC Station P 25.57 157 P **P 14 22 37.2 +0.7**
WHAR Wooly Hollow 34.54 342 P **P 14 23 54.5 -1.2**
WHAR IAmb IAmb 14 24 03.6
comp=Z,13nm,1.0s
TXAR Lajitas Array 34.98 322 P **P 14 23 59.6 -0.1**
comp=Z,0.5nm,0.8s,baz=133,slow=8.8,SNR=5.5
TXAR PcP **PcP 14 26 32.3 +0.3**
comp=Z,2.1nm,0.8s,baz=152,slow=6.1,SNR=17
comp=Z,0.5nm,0.8s
CPUP Villa Florida 36.02 144 LR LR 14 40 35.8
comp=Z,65nm,19.9s,baz=10,slow=39
BDFB Brasilia 36.24 121 LR LR 14 38 43.2
comp=Z,92nm,20.3s,baz=161,slow=36
CCM Cathedral Cave 36.81 345 P **P 14 24 13.8 -1.4**
CCM IAmb IAmb 14 24 14.6
comp=Z,11nm,0.8s
MSTX Muleshoe 37.89 328 P **P 14 24 24.4 -0.2**
MSTX IAmb IAmb 14 24 25.5
comp=Z,5.4nm,0.8s
RPN Rapa Nui 41.10 222 LR LR 14 36 55.5
comp=Z,110nm,21.8s,baz=237,slow=29
T25A Trinidad 41.18 330 P **P 14 24 53.4 +1.3**
T25A IAmb IAmb 14 24 54.5
comp=Z,8.5nm,0.9s
SDCO Great Sand Dun 42.20 329 P **P 14 25 00.7 +0.2**
S22A 4UR Ranch, Cre 42.89 328 P **P 14 25 06.8 +0.7**
WUAZ Wupatki 43.94 322 P **P 14 25 15.6 +1.1**
WUAZ IAmb IAmb 14 25 16.6
comp=Z,8.5nm,0.8s
PLCA Paso Flores 43.95 170 P **P 14 25 15.8 +1.5**
comp=Z,5.9nm,0.7s,baz=346,slow=8.7,SNR=14
comp=Z,5.9nm,0.7s
PV15 Paradox Valley 44.22 327 P **P 14 25 17.5 +0.7**
PV15 IAmb IAmb 14 25 18.9
comp=Z,9.4nm,1.1s
PV13 Radium Mtn., P 44.27 327 P **P 14 25 17.8 +0.6**
PV13 IAmb IAmb 14 25 18.8
comp=Z,10nm,0.8s
RDMU Red Mountain 46.41 328 P **P 14 25 34.5 +0.4**
RDMU IAmb IAmb 14 25 35.2
comp=Z,4.0nm,0.8s
MVU Marysvale 46.42 324 P **P 14 25 35.1 +0.8**
RSSD Black Hills 46.59 336 P **P 14 25 35.9 +0.4**
RSSD IAmb IAmb 14 25 37.0
comp=Z,9.7nm,0.8s
TCUT Toone Canyon 47.77 328 P **P 14 25 44.9 +0.1**
PDAR Pinedale Array 48.02 330 P **P 14 25 45.4 -1.3**
comp=Z,1.4nm,0.9s,baz=124,slow=8.4,SNR=8.5
PDAR PcP **PcP 14 27 13.8 -0.7**
comp=Z,0.6nm,0.6s,baz=160,slow=5.8,SNR=4.4
comp=Z,1.4nm,0.9s
HVU Hansel Valley 48.97 327 P **P 14 25 54.1 +0.2**
NVAR Mina Array Bea 50.10 320 P **P 14 26 02.7 +0.1**
comp=Z,1.8nm,0.7s,baz=132,slow=7.2,SNR=9.8
NVAR PcP **PcP 14 27 22.4 +0.2**
comp=Z,2.2nm,0.8s,baz=121,slow=4.7,SNR=9.8
comp=Z,1.8nm,0.7s
YHL Hebgen Lake 50.35 331 P **P 14 26 05.5 +1.0**
YHL IAmb IAmb 14 26 06.4
comp=Z,5.8nm,0.8s
HLID Hailey 51.07 328 P **P 14 26 10.1 +0.2**
BOZ Bozeman (W) 51.11 332 P **P 14 26 10.3 +0.2**
MFID Camas Ranch 51.74 327 P **P 14 26 15.2 +0.4**
MFID IAmb IAmb 14 26 16.1
comp=Z,7.1nm,1.1s
ESDC Sonseca Array 77.38 50 P **P 14 29 02.0 -0.4**
comp=Z,0.9nm,0.6s,baz=272,slow=5.2,SNR=4.2
comp=Z,0.9nm,0.6s
TORD Torodi Ar. Bea 81.06 77 P **P 14 29 22.6 -0.3**
comp=Z,1.6nm,0.8s,baz=357,slow=3.5,SNR=1.4
comp=Z,1.6nm,0.8s
SPITS Spitsbergen Ar 88.71 12 P **P 14 30 02.0 +1.8**
comp=Z,18nm,1.1s,baz=119,slow=13,SNR=1.9
QSPA South Pole Qui 92.65 180 P **P 14 30 19.8 +1.0**
ASAR Alice Springs 141.33 234 PKhKP PKPpre 14 36 31.3
comp=Z,0.7nm,0.9s,baz=119,slow=3.6,SNR=2.5
ASAR PKP **PKPdf 14 36 38.4 -0.5**
comp=Z,0.7nm,0.6s,baz=105,slow=2.6,SNR=5.9
WRA Warramunga Arr 142.55 240 PKhKP PKPpre 14 36 34.9
comp=Z,1.1nm,0.7s,baz=113,slow=2.5,SNR=6.4
WRA PKP **PKPdf 14 36 40.5 -0.7**
comp=Z,1.1nm,0.7s,baz=116,slow=1.9,SNR=5.6
CMAR Chiang Mai Arr 159.01 4 PKP **PKPdf 14 37 06.2 0.0**
comp=Z,0.3nm,0.3s,baz=294,slow=3.1,SNR=4.2
CMAR PKPab **PKPab 14 37 41.6 -0.8**
comp=Z,0.4nm,0.6s,baz=321,slow=4.0,SNR=4.6

MAN 26 14:18:12.2, 9.73N×125.94E, h71km, mb4.1, ML2.9, MS2.6, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.20**	**74⇑**	*e*P	Pn	14 18 24.4	+1.5
GLSP				*e*S	Sn	14 18 33.4	+2.6
MSLP	**Maasin**	**1.13**	**291⇑**	*i*P	Pn	14 18 32.8	+0.3
MSLP				*i*S	Sn	14 18 48.5	+0.9
TABP	**Talibon, Bohol**	**1.62**	**283⇑**	*i*P	Pn	14 18 39.9	+1.1
TABP				*i*S	Sn	14 19 00.9	+2.0
BESP	**Borongan**	**1.92**	**345⇑**	*e*P	Pn	14 18 37.6	-5.3
BESP				*e*S	Sn	14 18 58.3	-7.9
KCP	**Kidapawan**	**2.83**	**197⇑**	*i*P	Pn	14 18 55.9	+0.6
KCP				*i*S	Sn	14 19 03.0	-25

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*GUC **26** 14:21:03.1±0.7, 24.10S×67.52W, h215km±9km, ML3.8*
*IDC **26** 14:21:04.9±6.1, 23.94S×67.38W, h195km±55km, mbtmp3.8/1, Error ellipse: s-maj=108.9km s-min=49.1km az=119.0*
ISC 26 14:21:02.4±1.7, 24.11S±0.05×67.4W±0.2, h201km±15km, n19, σ1§12/34, 6C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.07**	**316**	P	**Pn**	**14 21 42.5**	**+0.3**
	33nm,0.3s,baz=134,slow=8.6,SNR=180						
LVC				S	**S**	**14 22 12.3**	**-0.1**
	71nm,0.4s,baz=108,slow=20,SNR=34						
LVC	**Limon Verde**	**2.07**	**316**	*e*P	**Pn**	**14 21 42.2**	**+0.1**
LVC				*i*S	**S**	**14 22 12.3**	**-0.1**
PB15	**IPOC Station P**	**2.14**	**294⇑**	*i*P	**Pn**	**14 21 43.4**	**+0.7**
PB15				*i*S	**S**	**14 22 13.5**	**+0.1**
GO02	**Mina Guanaco**	**2.29**	**242⇑**	*i*P	**Pn**	**14 21 44.8**	**+0.3**
GO02				*i*S	**S**	**14 22 17.1**	**+0.6**
GO02				IAML		14 22 18.4	
	comp=N,467nm,0.1s						
PB06	**IPOC Station P**	**2.47**	**304⇑**	*i*P	**Pn**	**14 21 46.9**	**+0.6**
PB06				*i*S	**S**	**14 22 19.6**	**-0.2**
PB06				IAML		14 22 22.3	
	comp=E,285nm,0.2s						
PB14	**IPOC Station P**	**2.83**	**259**	*e*P	**Pn**	**14 21 50.7**	**+0.2**
PB14				*i*S	**S**	**14 22 26.5**	**-0.7**
PB09	**IPOC Station P**	**2.88**	**323⇑**	*i*P	**Pn**	**14 21 51.8**	**+0.8**
PB09				*i*S	**S**	**14 22 28.4**	**+0.1**
PB09				IAML		14 22 32.2	
	comp=N,69nm,0.1s						
PB10	**IPOC Station P**	**2.99**	**281⇑**	*i*P	**Pn**	**14 21 52.9**	**+0.8**
PB10				*i*S	**S**	**14 22 30.6**	**+0.5**
PB10				IAML		14 22 34.8	
	comp=E,99nm,0.6s						
PB03	**IPOC Station P**	**3.01**	**312⇑**	*i*P	**Pn**	**14 21 52.8**	**+0.2**
PB03				*i*S	**S**	**14 22 29.7**	**-1.2**
PB03				IAML		14 22 35.2	
	comp=E,133nm,0.2s						
PB04	**IPOC Station P**	**3.12**	**304**	*e*P	**Pn**	**14 21 54.1**	**+0.4**
PB04				*i*S	**S**	**14 22 32.3**	**-0.9**
PB04				IAML		14 22 38.0	
	comp=N,110nm,0.4s						
PB07	**IPOC Station P**	**3.33**	**315⇓**	*e*P	**Pn**	**14 21 56.4**	**+0.1**
PB07				*i*S	**S**	**14 22 36.3**	**-1.4**
PB07				IAML		14 22 40.8	
	comp=E,133nm,0.4s						
AC01	**Pan de Azucar**	**3.58**	**235⇓**	*e*P	**Pn**	**14 21 58.2**	**-0.8**
AC01				*i*S	**S**	**14 22 40.9**	**-1.9**
AC01				IAML		14 22 42.4	
	comp=E,80nm,0.4s						
PB01	**IPOC Station P**	**3.63**	**327**	*e*P	**Pn**	**14 21 59.3**	**-0.6**
PB01				*i*S	**S**	**14 22 42.6**	**-1.6**
PB01				IAML		14 22 47.9	
	comp=E,79nm,0.2s						
PB08	**IPOC Station P**	**4.29**	**337**	*e*P	**Pn**	**14 22 08.5**	**+0.2**
PB08				IAML		14 23 01.4	
	comp=E,28nm,0.5s						
GO03	**Copiap**	**4.33**	**216**	*e*P	**Pn**	**14 22 06.9**	**-1.6**
GO03				*i*S	**S**	**14 22 57.6**	**-2.3**
GO03				IAML		14 23 00.6	
	comp=E,31nm,0.2s						
PB11	**IPOC Station P**	**4.83**	**333**	*e*P	**Pn**	**14 22 13.4**	**-1.5**
PB11				*i*S	**S**	**14 23 08.5**	**-2.9**
LPAZ	**La Paz**	**7.81**	**354**	P	**Pn**	**14 22 53.9**	**0.0**
	comp=E,2.3nm,0.4s,baz=149,slow=5.9,SNR=11						
WRA	**Warramunga Arr**	**131.38**	**208**	PKP	**PKiKP**	**14 39 54.5**	**+1.9**
	comp=E,0.2nm,0.6s,baz=153,slow=1.9,SNR=4.9						
MKAR	**Makanchi Array**	**146.81**	**39**	PKPbc	**PKPab**	**14 40 23.0**	**+0.5**
	comp=E,0.7nm,0.9s,baz=295,slow=1.4,SNR=3.9						

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*PGC **26** 14:35:41.6±4.5, 57.44N×132.94W, h1km, ML2.5/5, 130km Ese of Juneau, Ak Southeastern Alaska*
*NEIC **26** 14:35:41.6±1.0, 57.45N±0.02×132.86W±0.08, h5km±1km, Error ellipse: s-maj=7.6km s-min=3.3km az=63.0*
ISC 26 14:35:40.7±0.9, 57.46N±0.03×132.82W±0.03, h10km, n19, σ1§27/30, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S34M	**Telegraph Cree**	**1.01**	**63**	P	**Pn**	**14 36 01.1**	**+0.1**
S34M				S	**Sn**	**14 36 15.7**	**+0.4**
WRAK	**Wrangell Islan**	**1.08**	**166**		**Pn**	**14 36 01.8**	**0.0**
WRAK				Sg	**Sn**	**14 36 16.9**	**+0.1**
WRAK				IAML		14 36 17.0	
	23nm,3.2s						
JIS	**Juneau Island**	**1.17**	**315**	Pg	**Pg**	**14 36 03.0**	**-0.1**
JIS				Sg	**Sn**	**14 36 19.1**	**+0.1**
JIS				IAML		14 36 29.8	
	comp=E,23nm,1.7s						
SIT	**Sitka**	**1.42**	**254**		**Pg**	**14 36 07.3**	**-0.6**
SIT				Sn	**Sg**	**14 36 26.4**	**+0.1**
SIT				IAML		14 36 28.0	
	comp=E,21nm,3.4s						
SIT				IAML		14 36 45.7	
	comp=N,18nm,2.5s						
T35M	**Bob Quinn**	**1.48**	**108**	Pn	**Pb**	**14 36 08.9**	**+0.6**
BESE	**Bessie Mountai**	**1.56**	**317**	Pn	**Pg**	**14 36 10.0**	**-0.5**
BESE	**Bessie Mountai**	**1.56**	**317**	Pg	**Pg**	**14 36 10.7**	**+0.2**
BESE				Sg	**Sg**	**14 36 30.7**	**0.0**
DLBC	**Dease Lake**	**1.78**	**56**		**Pb**	**14 36 13.3**	**-0.2**
DLBC				IAML		14 36 43.2	
	comp=N,14nm,3.0s						
DLBC				IAML		14 36 55.8	
	comp=E,14nm,4.3s						
DLBC	**Dease Lake**	**1.78**	**56**	Pn	**Pb**	**14 36 13.3**	**-0.2**
DLBC				Sg	**Sg**	**14 36 38.7**	**+0.8**
R33M	**Jennings River**	**2.17**	**26**	Pg	**Pg**	**14 36 21.4**	**-0.8**
R33M				Sg	**Sg**	**14 36 50.0**	**-0.3**
P32M	**Atlin**	**2.18**	**348**	Pg	**Pb**	**14 36 21.1**	**+0.8**
P32M				Sg	**Sg**	**14 36 49.9**	**-0.8**
PLBC	**Pleasant Camp**	**2.73**	**319**	Pg	**Pb**	**14 36 29.3**	**-0.3**
PLBC				Sg	**Sg**	**14 37 06.5**	**-1.8**
P33M	**Teslin, Yukon**	**2.75**	**0**	Pn	**Pn**	**14 36 27.3**	**+2.3**
P33M	**Teslin, Yukon**	**2.75**	**0**	Pg	**Pb**	**14 36 31.5**	**+1.4**
P33M				Sg	**Sg**	**14 37 05.7**	**-1.6**
WHY	**Whitehorse**	**3.38**	**343**	Pg	**Pb**	**14 36 41.8**	**+1.1**
WHY				Sg	**Sg**	**14 37 26.6**	**-2.5**
P30M	**Million Dollar**	**3.43**	**323**	Pg	**Pb**	**14 36 41.8**	**+0.3**
YUK7	**Dusty Glacier**	**4.12**	**320**	Pg	**Pg**	**14 36 56.5**	**-3.1**
HYT	**Haines Junctio**	**4.14**	**326**	Pg	**Pg**	**14 36 58.6**	**-1.4**
YUK5	**Granite Creek**	**4.49**	**327**	Pg	**Pb**	**14 37 02.3**	**+2.7**

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*AEIC **26** 14:49:54±1.9, 54.6N±0.1×164.4W±0.1, h5km±4km, Error ellipse: s-maj=21.7km s-min=6.3km az=152.0*
NEIC 26 14:49:55.0±1.7, 54.49N±0.08×164.4W±0.1, h7km±10km, ML3.5/10, ML3.1(AEIC), Error ellipse: s-maj=14.2km s-min=6.0km az=140.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.70**	**58**		Pg	14 50 07.5	-0.9
AKUT	**Akutan**	**0.86**	**246**		Pb	14 50 12.0	-0.1
UNV	**Unalaska Valle**	**1.37**	**243**		Pb	14 50 21.0	+0.1
SDPT	**Sand Point**	**2.45**	**68**		Pn	14 50 35.5	+0.3
SDPT				IAML		14 51 10.5	
	comp=E,343nm,0.7s						
SDPT				IAML		14 51 13.3	
	comp=N,421nm,1.1s						
CNBA	**Chernabura Isl**	**2.84**	**81**	Pn	Pn	14 50 39.9	-0.7
CNBA				IAML		14 51 25.6	
	comp=N,94nm,2.8s						
CNBA				IAML		14 51 39.7	
	comp=E,79nm,2.0s						
NIKH	**Nikolski High**	**3.03**	**242**	Pn	Pn	14 50 44.0	+0.7
CHGN	**Chignik**	**3.89**	**60**		Pn	14 50 55.4	+0.3
CHGN				IAML		14 52 02.5	
	comp=E,63nm,0.5s						
CHGN				IAML		14 52 06.8	
	comp=N,63nm,0.9s						
CHIR	**Chirikof Islan**	**5.23**	**72**	Pn	Pn	14 51 13.2	-0.3
OHAK	**Old Harbor**	**6.85**	**62**	Pn	Pn	14 51 33.9	-1.9
KDAK	**Kodiak Island**	**7.40**	**59**	Pn	Pn	14 51 42.9	-0.3
N19K	**Bonanza Creek**	**8.28**	**36**	Pn	Pn	14 51 55.4	0.0
L19K	**White Mountain**	**9.21**	**29**	Pn	Pn	14 52 07.3	-0.7
HIN	**Hinchinbrook I**	**11.31**	**51**	Pn	Pn	14 52 37.5	+0.7
KLU	**Klutina**	**12.04**	**47**	Pn	Pn	14 52 46.6	-0.3

MAN 26 15:07:35.8, 7.01N×125.57E, h23km, mb4.0, ML2.7, MS2.3, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.47**	**270⇓**	*e*P	Pb	15 07 45.7	+0.1
KCP				*i*S	Sn	15 07 53.7	-1.2
MATI	**Mati**	**0.69**	**95⇑**	*e*P	Pb	15 07 48.9	-0.3
MATI				*e*S	Sn	15 07 59.4	-0.7
DDMP	**Don Marcelino,**	**0.91**	**171⇑**	*e*P	Pb	15 07 52.2	-0.7
DDMP				*e*S	Sn	15 08 06.6	+1.1
BUKP	**Musuan**	**1.00**	**330⇑**	*e*P	Pn	15 07 54.2	-0.3
BUKP				*e*S	Sb	15 08 07.5	+0.2
GSPH	**General Santos**	**1.10**	**214**	*e*P	Pb	15 07 57.7	+1.4
CTBH	**Cotabato--PC H**	**1.33**	**279⇑**	*i*P	Pn	15 07 58.0	-1.0
BIPH	**Bislig**	**1.41**	**34⇓**	*e*P	Pn	15 07 59.3	-0.7
BIPH				*e*S	Sn	15 08 17.8	-0.2
CGP	**Cagayan de Oro**	**1.68**	**329⇑**	*e*P	Pn	15 08 00.3	-3.5
CGP				*e*S	Sn	15 08 22.6	-2.0

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*JMA **26** 15:50:14.1±0.1, 36.3N±0.5×139.5E±0.7, h128km±1km, MV2.9/33, SE GUNMA PREF*
ISC 26 15:50:13.6±1.8, 36.23N±0.05×139.47E±0.07, h131km±11km, n15, σ0§43/22, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.20**	**357**	P	**Pn**	**15 50 31.7**	**+0.1**
JAG				S	**Sn**	**15 50 44.9**	**-0.3**
JRY	**Ryogami san**	**0.51**	**245**	P	**Pn**	**15 50 33.3**	**+0.5**
JRY				*e*S	**Sn**	**15 50 47.7**	**+0.3**
JKT	**Katashina**	**0.57**	**342**	P	**Pn**	**15 50 33.3**	**0.0**
JKT				S	**Sn**	**15 50 48.0**	**-0.3**
JYT	**Yasato**	**0.59**	**90**	P	**Pn**	**15 50 33.5**	**+0.2**
JOD2	**Odawara 2**	**1.01**	**198**	P	**Pn**	**15 50 36.7**	**0.0**
JOD2				S	**Sn**	**15 50 53.9**	**-0.3**
JYN	**Shimob**	**1.05**	**226**	P	**Pn**	**15 50 37.3**	**+0.2**
JYN				*e*S	**Sn**	**15 50 55.0**	**+0.1**
MAJO	**Matsushiro**	**1.06**	**288**	P	**Pn**	**15 50 37.5**	**+0.3**
MAT	**Matsushiro**	**1.06**	**288**	P	**Pn**	**15 50 37.0**	**-0.2**
MAT				S	**Sn**	**15 50 54.4**	**-0.8**
JOTO	**OTAMA OYAMA**	**1.50**	**27**	P	**Pn**	**15 50 42.1**	**+0.4**
JOTO				S	**Sn**	**15 51 03.5**	**+0.2**
JNS	**Sasagawa**	**1.59**	**356**	P	**Pn**	**15 50 42.6**	**-0.2**
JGF	**Kuroka**	**1.82**	**251**	P	**Pn**	**15 50 46.4**	**+0.9**
JMM	**Marumori**	**1.95**	**33**	P	**Pn**	**15 50 46.8**	**-0.1**
JSD	**Sado**	**2.05**	**332**	P	**Pn**	**15 50 47.6**	**-0.6**
JHJ2	**Mitsune**	**3.12**	**175**	P	**Pn**	**15 51 01.4**	**-0.4**
JTM	**Tenmabayashi**	**4.72**	**15**	P	**Pn**	**15 51 23.5**	**+0.6**

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*IDC **26** 16:04:13.1±1.9, 1.17N×96.83E, h0km, mb3.5/5, mbtmp3.4/7, ML3.4/2, MS2.3/1, Error ellipse: s-maj=52.1km s-min=22.4km az=59.0*
ISC 26 16:04:16.9±1.4, 1.2N±0.1×96.9E±0.1, h25km, n13, σ0§74/8, mb3.7/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.57**	**52**	Pn	**Pn**	**16 04 56.2**	**-0.9**
	1.5nm,0.3s,baz=267,slow=2.8,SNR=6.2						
PSI				Sn	**Sb**	**16 05 34.3**	**+0.7**
	3.0nm,0.3s,baz=104,slow=5.5,SNR=3.6						
	5.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**17.26**	**7**	P	**Pn**	**16 08 16.1**	**-0.3**
	0.2nm,0.3s,baz=204,slow=11,SNR=2.5						
CMAR				LR	LR	16 15 22.7	
	comp=Z,11nm,20.1s,baz=185,slow=39						
	0.5nm,0.4s						
H08S2	**Diego Garcia H**	**25.89**	**250**	T	T	16 36 46.0	
	baz=70,slow=75,SNR=145						
H08S3	**Diego Garcia H**	**25.89**	**250**	T	T	16 36 46.2	
	baz=70,slow=75,SNR=412						
H08S1	**Diego Carcia H**	**25.90**	**250**	T	T	16 36 50.4	
	baz=70,slow=75,SNR=64						
H01W3	**Cape Leeuwin H**	**39.37**	**157**	T	T	16 53 34.0	
	baz=333						
H01W2	**Cape Leeuwin H**	**39.38**	**157**	T	T	16 53 32.9	
	baz=333						
H01W1	**Cape Leeuwin H**	**39.38**	**157**	T	T	16 53 28.6	
	baz=333						
WRA	**Warramunga Arr**	**42.29**	**122**	P	**P**	**16 12 08.5**	**-0.5**
	0.2nm,0.6s,baz=302,slow=9.2,SNR=5.4						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**43.64**	**127**	P	**P**	**16 12 20.4**	**+0.6**
	0.2nm,0.7s,baz=296,slow=8.2,SNR=4.3						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**47.16**	**346**	P	**P**	**16 12 46.9**	**-0.5**
	0.4nm,0.4s,baz=160,slow=8.8,SNR=8.8						
	0.4nm,0.4s						
SONM	**Songino Array**	**47.17**	**9**	P	**P**	**16 12 48.1**	**+0.6**
	0.4nm,0.5s,baz=167,slow=9.1,SNR=3.7						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**53.50**	**351**	P	**P**	**16 13 35.7**	**+0.5**
	0.8nm,0.5s,baz=181,slow=6.8,SNR=5.3						
	0.8nm,0.5s						

AUST 26 16:18:08.7±3.1, 25.11S×151.46E, h6km±20km, Error ellipse: s-maj=18.7km s-min=11.5km az=48.0, Near east coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**0.43**	**233**	P	Pg	16 18 16.7	-0.2
	baz=0.4						
EIDS				S	Sg	16 18 23.1	+0.5
	baz=0.4						
AUMOU	**Moura State Hi**	**1.44**	**291**	P	Pn	16 18 35.0	-0.4
	baz=1.4						
AUMOU				S	Sn	16 18 54.8	+0.1
	baz=1.4						
AUNRC	**North Rockhamp**	**1.95**	**334**	P	Pn	16 18 42.0	-0.4
	baz=1.9						
AUNRC				S	Sn	16 19 07.2	+0.1
	baz=1.9						
AUTOO	**Toowoomba Stat**	**2.47**	**169**	P	Pn	16 18 49.3	-0.4
	baz=2.5						
AUTOO				S	Sb	16 19 25.9	+1.5
	baz=2.5						
AUWSH	**Wavell State H**	**2.69**	**148**	P	Pn	16 18 52.5	0.0
	baz=2.7						
RMQ	**Roma**	**2.79**	**240**	P	Pn	16 18 53.2	-0.8
	baz=2.8,SNR=39						
RMQ				S	Sb	16 19 34.6	+1.0
	baz=2.8						
ARMA	**Armidale**	**5.29**	**178**	P	Pn	16 19 28.4	0.0
	baz=5.3						
ARMA				S	Sn	16 20 31.7	+1.8
	baz=5.3						
AULRC	**Lightning Ridg**	**5.30**	**215**	P	Pn	16 19 25.4	-3.1
	baz=5.3						
AUAYR	**Ayr State High**	**6.66**	**325**	P	Pn	16 19 45.9	-1.2
	baz=6.7						
QLP	**Quilpie**	**6.67**	**256**	P	Pn	16 19 47.7	+0.3
	baz=6.7						
QLP				S	Sn	16 20 59.8	-4.0
	baz=6.7						
CTA	**Charters Tower**	**6.93**	**315**	P	Pn	16 19 52.1	+1.1
	baz=6.9						
CMSA	**Cobar Meteorol**	**8.17**	**217**	P	Pn	16 20 06.2	-1.7
	baz=8.2						
CMSA				S	Sn	16 21 35.5	-5.2
	baz=8.2						

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*IDC **26** 16:28:42.4±3.4, 4.30S×154.23E, h410km±38km, mb3.0/6, mbtmp3.9/8, Error ellipse: s-maj=29.3km s-min=21.1km az=114.0*
ISC 26 16:28:45.5±0.9, 4.4S±0.1×154.2E±0.2, h450km, n9, σ1§19/10, mb3.2/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.54**	**234**	P	**P**	**16 30 45.6**	**-1.2**
	5.7nm,0.6s,baz=205,slow=20,SNR=1.6						
PMG				S	S	16 32 36.0	+10
	7.8nm,0.8s,baz=353,slow=22,SNR=1.3						
CTA	**Charters Tower**	**17.38**	**206**	P	**P**	**16 32 22.3**	**+0.4**
	7.3nm,0.7s,baz=27,slow=13,SNR=12						
DZM	**Mont Dzumac**	**21.20**	**147**	P	**P**	**16 32 57.8**	**-0.2**
	3.6nm,0.6s,baz=237,slow=23,SNR=1.8						
	3.6nm,0.6s						
WRA	**Warramunga Arr**	**24.72**	**230**	P	**P**	**16 33 29.6**	**-0.1**
	0.7nm,0.8s,baz=55,slow=8.1,SNR=19						
WRA				PcP	**PcP**	**16 36 54.4**	**+2.2**
	0.4nm,0.8s,baz=51,slow=2.3,SNR=3.0						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**27.36**	**224**	P	**P**	**16 33 52

mbtmp3.7/4, ML2.9/1, MS2.9/1, Error ellipse: s-maj=77.8km s-min=30.8km az=127.0

ISC 26 16:51:13.3±1.5, 19°62S±0°06×169°1E±0°2, h10km, n14, σ1§13/14, mb3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.91**	**342**	P	**Pb**	**16 51 47.5**	**-0.8**
DVP	**Devils Point**	**2.05**	**336**	P	**Pb**	**16 51 49.6**	**-1.1**
LIFNC	**LIFOU**	**2.05**	**235**	P	**Pg**	**16 51 53.7**	**+1.0**
MARNC	**Mare, Loyalty**	**2.08**	**207**	P	**Pg**	**16 51 53.0**	**-0.3**
YATNC	**Mamie plateau,**	**3.16**	**219**	P	**Pb**	**16 52 09.6**	**0.0**
DZM	**Mont Dzumac**	**3.45**	**224**	Pn	**Pb**	**16 52 13.2**	**-1.3**
	0.8nm,0.3s,baz=54,slow=19,SNR=33						
DZM				Sn	**Sg**	**16 53 02.0**	**-2.1**
	3.3nm,0.3s,baz=37,slow=20,SNR=5.7						
	4.6nm,0.6s						
DZM	**Mont Dzumac**	**3.45**	**224**	P	**Pb**	**16 52 14.8**	**+0.2**
OUENC	**Ouen Island, N**	**3.47**	**216**	P	**Pb**	**16 52 14.3**	**-0.5**
NOUC	**Port Laguerre**	**3.56**	**226**	P	**Pb**	**16 52 16.3**	**-0.2**
ONTNC	**Ouen Toro**	**3.61**	**222**	P	**Pb**	**16 52 16.4**	**-0.9**
MSVF	**Nonsavu**	**8.74**	**79**	LR	LR	16 55 43.8	
	comp=Z,82nm,19.5s,baz=22,slow=30						
WRA	**Warramunga Arr**	**32.63**	**263**	P	**P**	**16 57 46.5**	**+0.9**
	0.3nm,0.7s,baz=91,slow=8.4,SNR=1.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**32.86**	**257**	P	**P**	**16 57 49.4**	**+1.7**
	2.3nm,0.5s,baz=83,slow=8.7,SNR=109						
	2.3nm,0.5s						
ILAR	**Eielson Array**	**90.64**	**17**	P	**P**	**17 04 15.6**	**0.0**
	0.5nm,1.0s,baz=215,slow=6.2,SNR=2.4						
	0.5nm,1.0s						

IDC 26 17:08:40.6±10.0, 12°60S×89°47E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=269.9km s-min=32.7km az=61.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**17.42**	**285**	T	T	17 29 44.5	
	baz=105,slow=74						
H08S3	**Diego Garcia H**	**17.43**	**285**	T	T	17 29 42.1	
	baz=105						
H08S1	**Diego Garcia H**	**17.44**	**285**	T	T	17 29 41.4	
	baz=105,slow=74						
H01W3	**Cape Leeuwin H**	**31.49**	**139**	T	T	17 48 59.6	
	baz=310,slow=76,SNR=3.0						
H01W2	**Cape Leeuwin H**	**31.50**	**139**	T	T	17 49 08.2	
	baz=310,slow=76,SNR=4.4						
H01W1	**Cape Leeuwin H**	**31.51**	**139**	T	T	17 49 03.2	
	baz=310,slow=76,SNR=5.8						
CMAR	**Chiang Mai Arr**	**32.24**	**17**	P	P	17 15 11.1	+0.1
	0.3nm,0.8s,baz=190,slow=9.6,SNR=4.4						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**43.48**	**111**	P	P	17 16 46.2	+0.2
	0.2nm,0.7s,baz=278,slow=7.6,SNR=6.4						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**43.58**	**106**	P	P	17 16 46.4	-0.5
	0.3nm,0.9s,baz=274,slow=8.1,SNR=2.1						
	0.3nm,0.9s						
SONM	**Songino Array**	**62.03**	**13**	P	P	17 19 02.6	-0.3
	0.3nm,0.6s,baz=183,slow=5.8,SNR=3.0						
	0.3nm,0.6s						

LDG ***26*** *17:10:35.8±0.1, 42°.86N×13°.06E, h9km, Md5.1/6, Ml5.2/49, ms4.7/7, Error ellipse: s-maj=3.5km s-min=2.3km az=32.0*
IDC ***26*** *17:10:36.2±0.4, 42°.94N×13°.09E, h0km, mb5.3/35, mbtmp5.2/48, ML4.5/12, MS5.1/93, Error ellipse: s-maj=7.5km s-min=6.8km az=89.0*
BGR ***26*** *17:10:36.1±0.7, 42°.62N×13°.51E, h10km, ML5.8/5, Error ellipse: s-maj=14.5km s-min=12.2km az=85.0*
RHSSO ***26*** *17:10:36.0±0.4, 42°.89N×12°.96E, h2km, ML5.7/19*
ROM ***26*** *17:10:36.3±0.0, 42°.880N±0°.002×13°.128E±0°.003, h9km, ML5.4/161, Mw5.4, Error ellipse: s-maj=0.2km s-min=0.1km az=249.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.43; $M_{\theta\theta}$0.17; $M_{\phi\phi}$1.26; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.44; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.46220×10^{17} NP1:ϕ_s161.00000°, δ38.00000°, λ-90.00000°. NP2:ϕ_s341.00000°, δ52.00000°, λ-90.00000°.*
BJI ***26*** *17:10:36.0±0.0, 43°.06N×13°.03E, h7km, mb5.3/83, mB5.6/75, Ms5.8/92, Ms7 5.5/88*
MED_RC ***26*** *17:10:36.0±0.1, 42°.84N×13°.11E, h10km, MW5.5/35, Moment Tensor Solution. Body waves: s14,c19; Mantle waves: s35,c69; Duration: 1§9 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.00±.03; $M_{\theta\theta}$0.14±.03; $M_{\phi\phi}$1.86±.03; $M_{r\theta}$0.07±.12; $M_{\theta\phi}$-0.51±.03; $M_{\phi r}$-0.84±.11; Best double couple: $M_0$2.17000×10^{17} NP1:ϕ_s349.00000°, δ56.00000°, λ-86.00000°. NP2:ϕ_s161.00000°, δ34.00000°, λ-97.00000°. Principal axes: T 2.1600, Plg11.0000°, Azm76.0000°; N 0.0100, Plg4.0000°, Azm166.0000°; P -2.1800, Plg78.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
CRAAG ***26*** *17:10:36.2, 42°.88N×13°.13E, Mw5.5*
PDG ***26*** *17:10:36.9±0.5, 42°.99N×13°.20E, h7km±1km, MD5.7/13, ML5.5/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
PRU ***26*** *17:10:37.6±0.0, 42°.93N×13°.20E, h0km, M5.6*
NEIC ***26*** *17:10:37.2±1.8, 42°.86N±0°.04×13°.05E±0°.06, h6km±1km, mb5.6/488, Ms_20 5.2/240, Mwr5.4/115, Mww5.5, ML5.4(ROM), Mwr5.4(VIE), Error ellipse: s-maj=7.0km s-min=6.6km az=239.0*
MOS ***26*** *17:10:37.0±1.4, 42°.93N×13°.09E, h17km, mb5.7/115, MS5.2/80, Error ellipse: s-maj=3.5km s-min=2.6km az=69.5*
BGS ***26*** *17:10:37.3±2.4, 42°.86N×13°.05E, h10km, MW5.5(NEIC)*
NEIC ***26*** *17:10:37.9, 42°.86N×13°.02E, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.75; $M_{\theta\theta}$0.34; $M_{\phi\phi}$1.41; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.41; $M_{\phi r}$-0.13; Fault plane solution: $M_0$1.67000×10^{17} NP1:ϕ_s164.79000°, δ41.94000°, λ-84.35000°. NP2:ϕ_s337.21000°, δ48.31000°, λ-95.06000°. Principal axes: T 1.5587, Plg3.0000°, Azm71.0000°; N 0.2063, Plg4.0000°, Azm341.0000°; P -1.7650, Plg85.0000°, Azm201.0000°;*
STR ***26*** *17:10:38.9±0.2, 43°.N±4°.×1°.3E±°., h10km, mb5.6/32*
BEO ***26*** *17:10:38.0±0.8, 42°.94N×13°.17E, h0km, ML5.4/13*
TIR ***26*** *17:10:39.9, 42°.87N×13°.43E, h10km±3km, Md6.2, Ml5.7*
GCMT ***26*** *17:10:39.2±0.1, 42°.81N±0°.01×13°.13E±0°.01, h12km, MW5.5/166, Moment Tensor Solution. s119,c201; s166,c337; Duration: 1§4 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.19±.02; $M_{\theta\theta}$0.30±.02; $M_{\phi\phi}$1.88±.02; $M_{r\theta}$0.19±.07; $M_{\theta\phi}$-0.65±.02; $M_{\phi r}$-1.03±.06; Best double couple: $M_0$2.39300×10^{17} NP1:ϕ_s344.00000°, δ58.00000°, λ-86.00000°. NP2:ϕ_s156.00000°, δ32.00000°, λ-97.00000°. Principal axes: T 2.3500, Plg13.0000°, Azm71.0000°; N 0.0780, Plg4.0000°, Azm162.0000°; P -2.4360, Plg77.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BNS ***26*** *17:10:39.0±0.5, 42°.87N×13°.35E, h10km, ML5.4*
NEIC ***26*** *17:10:41, 42°.90N×13°.14E, h12km, Moment Tensor Solution. Duration: 6§0 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.37; $M_{\theta\theta}$0.31; $M_{\phi\phi}$2.05; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.75; $M_{\phi r}$-0.58; Fault plane solution: $M_0$2.43000×10^{17} NP1: ϕ_s160.00000°, δ38.00000°, λ-89.00000°. NP2: ϕ_s339.00000°, δ52.00000°, λ-90.00000°. Principal axes: T 2.4103, Plg7.0000°, Azm70.0000°; N 0.0379, Plg0.0000°, Azm340.0000°; P -2.4483, Plg83.0000°, Azm247.0000°;*
GEN ***26*** *17:10:52.4, 43°.45N×12°.02E, h27km±2km, Ml0.0*

ISC 26 17:10:37.2±0.3, 42°.88N±0°.01×13°.10E±0°.01, h9km±1km, h9km:pP-P, n2479, σ1§69/2646, mb5.5/385, MS5.3/267, 196C-119D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**167**	Pg	**Pg**	**17 10 37.7**	**-1.4**
NRCA	**Norcia**	**0.05**	**167**	⇑P	**Pg**	**17 10 38.5**	**-0.6**
T1216	**Preci, Frazion**	**0.06**	**278**	⇑P	**Pg**	**17 10 39.0**	**-0.2**
T1245	**Castelsantange**	**0.07**	**111**	⇓P	**Pg**	**17 10 38.5**	**-0.9**
T1245				S	**Sg**	**17 10 39.7**	**-1.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.07**	**65**	⇑P	**Pg**	**17 10 38.4**	**-1.1**
FEMA	**Monte Fema**	**0.09**	**336**	P	**Pg**	**17 10 39.3**	**-0.4**
FEMA				S	**Sg**	**17 10 41.2**	**-0.2**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FDMO	**Fiordimonte**	**0.15**	**357**	Pg	**Pg**	**17 10 40.1**	**-0.5**
FDMO	**Fiordimonte**	**0.15**	**357**	⇑P	**Pg**	**17 10 40.0**	**-0.5**
FDMO				S	**Sg**	**17 10 43.0**	**+0.1**
MMO1	**Montemonaco**	**0.17**	**84**	⇑P	**Pg**	**17 10 39.9**	**-0.9**
MMO1				S	**Sg**	**17 10 42.6**	**-0.7**
T1215	**Vallo di Nera,**	**0.19**	**245**	⇑P	**Pg**	**17 10 41.3**	**+0.2**
T1215				S	**Sg**	**17 10 45.1**	**+1.3**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
CESI	**CESI - Serrava**	**0.19**	**311**	⇑P	**Pg**	**17 10 41.1**	**-0.1**
T1244	**Arquata del Tr**	**0.19**	**130**	⇑P	**Pg**	**17 10 40.8**	**-0.5**
T1244				S	**Sg**	**17 10 44.4**	**+0.4**
AM05	**Amandola Campo**	**0.21**	**63**	⇑P	**Pg**	**17 10 40.8**	**-0.7**
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
T1217	**Poggiodomo (PG**	**0.21**	**216**	⇑P	**Pg**	**17 10 41.6**	**+0.1**
T1217				S	**Sg**	**17 10 45.6**	**+1.1**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1241	**Roccafluvione,**	**0.24**	**96**	AML	AML		
T1241				AML	AML		
GUMA	**Gualdo di Mace**	**0.25**	**44**	⇑P	**Pg**	**17 10 41.8**	**-0.5**
GUMA				S	**Sg**	**17 10 45.8**	**+0.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1201	**Domo (RI)**	**0.25**	**154**	⇑P	**Pg**	**17 10 42.1**	**-0.2**
T1201				S	**Sg**	**17 10 47.2**	**+1.5**
T1204	**Amatrice, Fraz**	**0.26**	**142**	P	**Pg**	**17 10 42.4**	**-0.1**
LNSS	**Leonessa**	**0.28**	**189**	⇑P	**Pg**	**17 10 42.6**	**-0.3**
LNSS				S	**Sb**	**17 10 47.6**	**-1.9**
SEF1	**Sefro**	**0.29**	**337**	P	**Pg**	**17 10 42.7**	**-0.3**
SEF1				S	**Sb**	**17 10 48.1**	**-1.5**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
SMA1	**SAN MARTINO**	**0.31**	**145**	P	**Pg**	**17 10 42.8**	**-0.6**
SMA1				S	**Sb**	**17 10 48.0**	**-2.1**
SMA1				AML	AML		
SMA1				AML	AML		
PIO1	**Pioraco**	**0.31**	**344**	P	**Pg**	**17 10 43.0**	**-0.4**
PIO1				S	**Sb**	**17 10 48.4**	**-1.8**
PIO1				AML	AML		
PIO1				AML	AML		
MDAR	**Monte D'Aria**	**0.31**	**6**	⇑P	**Pg**	**17 10 43.0**	**-0.4**
MDAR				S	**Sb**	**17 10 48.3**	**-2.1**
MDAR				AML	AML		
MDAR				AML	AML		
T1243	**Rocca Santa Ma**	**0.32**	**126**	⇑P	**Pg**	**17 10 42.6**	**-0.9**
T1243				S	**Sb**	**17 10 47.9**	**-2.6**
FIU1	**Fiuminata**	**0.33**	**338**	P	**Pg**	**17 10 43.6**	**-0.2**
FIU1				S	**Sb**	**17 10 49.8**	**-1.0**
FIU1				AML	AML		
FIU1				AML	AML		
SSM1	**San Severino M**	**0.35**	**9**	P	**Pg**	**17 10 43.6**	**-0.5**
SSM1				S	**Sb**	**17 10 49.7**	**-1.7**
GAG1	**Gagliole**	**0.36**	**356**	P	**Pg**	**17 10 43.9**	**-0.4**
MNTP	**Montappone**	**0.37**	**47**	P	**Pb**	**17 10 44.3**	**-1.8**
MNTP				AML	AML		
MNTP				AML	AML		
MTL1	**Matelica**	**0.38**	**350**	P	**Pg**	**17 10 44.3**	**-0.4**
RM33	**Pellescritta (**	**0.38**	**167**	⇓P	**Pg**	**17 10 44.4**	**-0.4**
RM33				S	**Sb**	**17 10 50.7**	**-1.6**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
SNTG	**Esanatoglia**	**0.39**	**343**	⇑P	**Pg**	**17 10 44.4**	**-0.6**
T1211	**Morro Reatino**	**0.39**	**207**	P	**Pg**	**17 10 44.8**	**-0.1**
T1211				S	**Sb**	**17 10 51.2**	**-1.4**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
CAMP	**Campotosto**	**0.41**	**146**		**Pg**	**17 10 44.4**	**-0.9**
CAMP	**Campotosto**	**0.41**	**146**	⇓P	**Pg**	**17 10 44.5**	**-0.9**
CAMP				S	**Sb**	**17 10 51.1**	**-2.2**
CAMP				AML	AML		
CAMP				AML	AML		
T1246	**Crognaleto (TE**	**0.42**	**136**	⇑P	**Pg**	**17 10 44.5**	**-0.9**
T1246				S	**Sb**	**17 10 51.3**	**-2.0**
OFFI	**Offida**	**0.43**	**83**	⇑P	**Pb**	**17 10 45.6**	**-1.5**
OFFI				AML	AML		
OFFI				AML	AML		
EL6	**Elcito**	**0.45**	**0**	⇓P	**Pg**	**17 10 45.5**	**-0.5**
EL6				S	**Sb**	**17 10 52.9**	**-1.4**
ATCC	**AVT- Casa Cast**	**0.45**	**312**	P	**Pg**	**17 10 46.0**	**-0.1**
ATCC				S	**Sb**	**17 10 53.8**	**-0.6**
ATCC				AML	AML		
ATCC				AML	AML		
ATCC				AML	AML		
TERO	**Teramo**	**0.45**	**125**	⇑P	**Pg**	**17 10 45.0**	**-1.0**
TERO				S	**Sb**	**17 10 52.0**	**-2.3**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TRE1	**Treia**	**0.46**	**20**	P	**Pb**	**17 10 46.0**	**-1.5**
TRE1				S	**Sb**	**17 10 54.6**	**+0.2**
TRE1				AML	AML		
TRE1				AML	AML		
T1247	**Pizzolo (AQ)**	**0.46**	**161**	⇓P	**Pg**	**17 10 45.6**	**-0.7**
T1247				S	**Sb**	**17 10 53.3**	**-1.4**
CESX	**Cesi**	**0.47**	**235**		**Pg**	**17 10 46.1**	**-0.3**
CESX	**Cesi**	**0.47**	**235**	⇑P	**Pg**	**17 10 46.1**	**-0.3**
CESX				AML	AML		
CESX				AML	AML		
CING	**Cingoli**	**0.50**	**8**	⇑P	**Pg**	**17 10 46.3**	**-0.6**
CING				S	**Sb**	**17 10 55.0**	**-0.7**
GIGS	**Gran Sasso**	**0.55**	**141**	⇓P	**Pg**	**17 10 47.1**	**-0.9**
GIGS				S	**Sb**	**17 10 55.2**	**-2.1**
GIGS				AML	AML		
GIGS				AML	AML		
MMUR	**Monte Murano**	**0.56**	**352**	P	**Pg**	**17 10 47.6**	**-0.6**
MMUR				AML	AML		
MMUR				AML	AML		
MMUR				AML	AML		
MURB	**Monte Urbino**	**0.57**	**312**		**Pg**	**17 10 47.7**	**-0.5**
MURB	**Monte Urbino**	**0.57**	**312**	⇑P	**Pg**	**17 10 48.0**	**-0.2**
MURB				S	**Sb**	**17 10 57.9**	**+0.2**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
AQU	**L'Aquila**	**0.57**	**157**		**Pg**	**17 10 47.1**	**-1.2**
AQU	**L'Aquila**	**0.57**	**157**	⇓Pg	**Pg**	**17 10 47.5**	**-0.8**
AQU				eSg	**Sg**	**17 10 55.4**	**-0.4**
AQU	**L'Aquila**	**0.57**	**157**	P	**Pg**	**17 10 47.1**	**-1.2**
AQU	**L'Aquila**	**0.57**	**157**	⇓P	**Pg**	**17 10 47.6**	**-0.7**
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
CADA	**Capodarco di F**	**0.58**	**57**	P	**Pb**	**17 10 48.9**	**-0.6**
CADA				AML	AML		
CADA				AML	AML		
CIMA	**Civitanova Mar**	**0.59**	**44**	P	**Pb**	**17 10 48.9**	**-0.9**
CIMA				AML	AML		
CIMA				AML	AML		
TRTR	**Tortoreto Alta**	**0.60**	**97**	⇑P	**Pb**	**17 10 49.0**	**-1.0**
FIAM	**Fiamignano**	**0.61**	**179**	⇑P	**Pg**	**17 10 48.2**	**-0.9**
FIAM				S	**Sb**	**17 10 57.4**	**-1.6**
FIAM				AML	AML		
FIAM				AML	AML		
ATFO	**Monte Foce - G**	**0.62**	**322**	⇑P	**Pg**	**17 10 48.7**	**-0.5**
ATFO				S	**Sb**	**17 10 59.3**	**+0.1**
ATFO				AML	AML		
ATFO				AML	AML		
PP3	**Marolino**	**0.62**	**37**	⇑P	**Pb**	**17 10 49.1**	**-1.2**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
ARVD	**Arcevia**	**0.63**	**349**	⇑P	**Pg**	**17 10 48.7**	**-0.6**
ARVD				S	**Sb**	**17 10 59.2**	**-0.1**
ARVD				AML	AML		
ARVD				AML	AML		
ATTE	**AVT- Monte Tez**	**0.63**	**300**	⇑P	**Pg**	**17 10 49.0**	**-0.4**
ATTE				AML	AML		
ATTE				AML	AML		
FRON	**Frontone**	**0.69**	**337**	⇑P	**Pg**	**17 10 49.8**	**-0.8**
FRON				S	**Sb**	**17 11 01.4**	**+0.2**
ATVO	**AVT- Monte Val**	**0.71**	**315**	⇑P	**Pg**	**17 10 50.4**	**-0.6**
ATVO				S	**Sb**	**17 11 01.9**	**+0.1**
ATVO				AML	AML		
ATVO				AML	AML		
FAGN	**Fagnano**	**0.71**	**150**	⇓P	**Pg**	**17 10 49.7**	**-1.3**
MGAB	**Montegabbione**	**0.73**	**273**	⇑P	**Pg**	**17 10 51.1**	**-0.2**
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
VCEL	**Villa Celiera**	**0.73**	**131**	P	**Pg**	**17 10 50.2**	**-1.1**
VCEL				S	**Sb**	**17 11 02.1**	**-0.3**
VCEL				AML	AML		
VCEL				AML	AML		
ATMI	**Monte Miggiano**	**0.76**	**307**	P	**Pg**	**17 10 51.6**	**-0.3**
AOI	**Ancona**	**0.76**	**29**	⇑P	**Pg**	**17 10 51.3**	**-0.7**
AOI				AML	AML		
AOI				AML	AML		
ATPI	**Pietralunga -**	**0.76**	**318**	⇑P	**Pg**	**17 10 51.5**	**-0.4**
ATPI				S	**Sb**	**17 11 03.7**	**+0.4**
ATPI				AML	AML		
ATPI				AML	AML		
ATPI				AML	AML		
ATPI				AML	AML		
PIEI	**Pieia**	**0.77**	**328**	P	**Pg**	**17 10 51.8**	**-0.4**
PIEI				AML	AML		
PIEI				AML	AML		
SRES	**S.Oreste - Sor**	**0.78**	**214**	⇑P	**Pg**	**17 10 51.7**	**-0.5**
SRES				AML	AML		
SRES				AML	AML		
MPAG	**Monte Paganucc**	**0.79**	**342**	⇑P	**Pg**	**17 10 51.9**	**-0.5**
MPAG				S	**Sb**	**17 11 04.6**	**+0.6**
MPAG				AML	AML		
MPAG				AML	AML		
MPAG				AML	AML		
MPAG				AML	AML		
PCRO	**Pietralacroce**	**0.79**	**23**	P	**Pb**	**17 10 52.4**	**-0.8**
PCRO				AML	AML		
PCRO				AML	AML		
NARO	**Abbazia di Nar**	**0.82**	**333**	P	**Pg**	**17 10 52.0**	**-1.1**
NARO				AML	AML		
NARO				AML	AML		
T0110	**Collepietro**	**0.83**	**142**	⇓P	**Pg**	**17 10 51.7**	**-1.4**
T0110				AML	AML		
T0110				AML	AML		
SENI	**Senigallia**	**0.83**	**7**	P	**Pb**	**17 10 53.4**	**-0.4**
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
APEC	**Apecchio**	**0.84**	**324**	P	**Pb**	**17 10 53.4**	**-0.6**
APEC				AML	AML		
	comp=E,71900μm,0.9s						
APEC				AML	AML		
FSSB	**Fossombrone**	**0.84**	**344**	⇑P	**Pg**	**17 10 52.8**	**-0.7**
FSSB				AML	AML		
FSSB				AML	AML		
SACS	**San Casciano d**	**0.88**	**268**	⇑P	**Pb**	**17 10 53.9**	**-0.8**
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
BADI	**Badiali**	**0.89**	**315**	⇑P	**Pg**	**17 10 53.6**	**-0.7**
BADI				AML	AML		
BADI				AML	AML		
	comp=E,19950μm,1.1s						
PTQR	**Pietraquaria**	**0.89**	**165**	⇓P	**Pg**	**17 10 53.0**	**-1.3**
PTQR				AML	AML		
PTQR				AML	AML		
MTCE	**Montecelio**	**0.90**	**197**	⇑P	**Pg**	**17 10 53.4**	**-1.1**
MTCE				AML	AML		
MTCE				AML	AML		
MTCE				AML	AML		
PE3	**Peglio**	**0.93**	**332**	P	**Pg**	**17 10 54.5**	**-0.5**
PE3				AML	AML		
	comp=E,1155μm,0.3s						
PE3				AML	AML		
	comp=N,1120μm,0.3s						
CERT	**Cerreto**	**0.94**	**185**	P	**Pg**	**17 10 54.0**	**-1.2**
CERT				AML	AML		
CERT				AML	AML		
CAFI	**Castiglion Fio**	**0.94**	**299**	⇑P	**Pb**	**17 10 55.2**	**-0.6**
CAFI				AML	AML		
CAFI				AML	AML		
CAFI				AML	AML		
CAFI				AML	AML		
CAFI				AML	AML		
SSP9	**Sansepolcro**	**0.99**	**315**	⇑P	**Pb**	**17 10 56.1**	**-0.5**
SSP9				AML	AML		
SSP9				AML	AML		
LATE	**Laterza**	**0.99**	**255**		**Pg**	**17 10 55.3**	**-1.0**
LATE	**Laterza**	**0.99**	**255**	⇑P	**Pg**	**17 10 55.7**	**-0.6**
RCAV	**Rocca di Cave**	**1.04**	**186**	P	**Pg**	**17 10 56.4**	**-0.9**
RCAV				AML	AML		
RCAV				AML	AML		
MCIV	**Monte Civitell**	**1.05**	**265**	⇑P	**Pg**	**17 10 57.0**	**-0.5**
MCIV				AML	AML		
MCIV				AML	AML		
INTR	**Introdacqua**	**1.05**	**145**	Pg	**Pg**	**17 10 55.7**	**-1.8**
INTR	**Introdacqua**	**1.05**	**145**	⇓P	**Pg**	**17 10 55.5**	**-2.0**
INTR				AML	AML		
	comp=E,319μm,0.9s						
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
	comp=E,318μm,0.9s						
INTR				AML	AML		
	comp=N,397μm,1.0s						
SF04	**Casetta**	**1.06**	**268**	⇑P	**Pb**	**17 10 57.2**	**-0.6**
SF04				AML	AML		
SF04				AML	AML		
	comp=E,83150μm,1.2s						
CPGN	**Carpegna, Ital**	**1.08**	**329**	P	**Pn**	**17 10 58.1**	**-0.7**
VVLD	**Villa Vallelon**	**1.08**	**159**	⇓P	**Pg**	**17 10 56.4**	**-1.6**
VVLD				AML	AML		
VVLD				AML	AML		
GUAR	**Guarcino**	**1.10**	**172**	P	**Pb**	**17 10 57.7**	**-0.8**
GUAR				AML	AML		
GUAR				AML	AML		
RMP	**Rome, Mte Porz**	**1.11**	**196**	P	**Pg**	**17 10 57.1**	**-1.5**
RMP				AML	AML		
RMP				AML	AML		
CRE	**Caprese Michel**	**1.12**	**312**	⇑P	**Pb**	**17 10 58.3**	**-0.6**
CRE				AML	AML		
CRE				AML	AML		
SF01	**Poggio Pratacc**	**1.13**	**267**	⇑P	**Pb**	**17 10 58.6**	**-0.5**
SF01				AML	AML		
SF01				AML	AML		

RSM	**Repubblica di**	**1.15 336**	⇑P		**Pn**	**17 10 59.5**	**-0.1**
RSM			AML		AML		
RSM			AML		AML		
TOLF	**Tolfa**	**1.15 225**	⇑P		**Pb**	**17 10 58.6**	**-0.7**
TOLF			AML		AML		
TOLF			AML		AML		
VIVA	**Pratoni del Vi**	**1.16 192**	AML		AML		
VIVA			AML		AML		
LPEL	**Lama dei Pelig**	**1.16 136**	P		**Pg**	**17 10 57.0**	**-2.5**
LPEL			AML		AML		
LPEL			AML		AML		
MA9	**Marino**	**1.16 197**	AML		AML		
MA9			AML		AML		
RDP	**Rocca di Papa**	**1.16 194**	P		**Pn**	**17 10 58.8**	**-1.0**
RDP			AML		AML		
RDP			AML		AML		
ARCI	**Arcidosso**	**1.19 269**	⇑P		**Pg**	**17 10 59.8**	**-0.4**
ARCI			AML		AML		
	comp=N,43600µm,0.9s						
ARCI			AML		AML		
	comp=E,68350µm,1.4s						
LAV9	**Lanuvio**	**1.24 194**	AML		AML		
LAV9			AML		AML		
LAV9			AML		AML		
LAV9			AML		AML		
POFI	**Posta Fibreno**	**1.25 158**	P		**Pn**	**17 10 59.4**	**-1.6**
POFI			AML		AML		
POFI			AML		AML		
LRP	**Arpino**	**1.29 164**	AML		AML		
LRP			AML		AML		
ASQU	**Asqua**	**1.32 314**	P		**Pn**	**17 11 01.4**	**-0.6**
GIUL	**Giuliano Di Ro**	**1.33 175**	⇑P		**Pn**	**17 11 01.1**	**-0.9**
GIUL			AML		AML		
GIUL			AML		AML		
BLLA	**Bellaria**	**1.34 340**	AML		AML		
BLLA			AML		AML		
SFI	**Santa Sofia**	**1.37 319**	⇑P		**Pg**	**17 11 03.1**	**-0.5**
SFI			AML		AML		
SFI			AML		AML		
SFI			AML		AML		
SFI			AML		AML		
LATB	**Latina**	**1.39 184**	P		**Pn**	**17 11 01.1**	**-1.7**
LATB			AML		AML		
	comp=E,71250µm,1.0s						
LATB			AML		AML		
	comp=N,69200µm,1.3s						
RNI2	**Rionero Sannit**	**1.41 146**	AML		AML		
RNI2			AML		AML		
RNI2			AML		AML		
RNI2			AML		AML		
LIK	**San Giovanni I**	**1.42 166**	P		**Pg**	**17 11 03.6**	**-0.8**
LIK			AML		AML		
LIK			AML		AML		
CSNT	**Castellina Chi**	**1.45 295**	P		**Pb**	**17 11 03.6**	**-0.8**
CSNT	**Castellina Chi**	**1.45 295**	⇑P		**Pb**	**17 11 03.9**	**-0.5**
CSNT			AML		AML		
	comp=N,54750µm,0.7s						
CSNT			AML		AML		
	comp=E,42100µm,1.1s						
CERA	**Filignano**	**1.45 152**	⇑P		**Pn**	**17 11 02.5**	**-1.3**
CERA			AML		AML		
CERA			AML		AML		
CERA			AML		AML		
CERA			AML		AML		
FROS	**Frosini**	**1.46 284**	⇑P		**Pn**	**17 11 03.0**	**-0.8**
FRES	**Fresagrandinar**	**1.48 127**	P		**Pb**	**17 11 03.3**	**-1.6**
FRES			AML		AML		
FRES			AML		AML		
	comp=N,88900µm,1.3s						
OSSC	**Osservatorio P**	**1.50 296**			**Pn**	**17 11 03.9**	**-0.5**
OSSC	**Osservatorio P**	**1.50 296**	P		**Pb**	**17 11 04.6**	**-0.7**
OSSC	**Osservatorio P**	**1.50 296**	⇑P		**Pb**	**17 11 05.1**	**-0.2**
OSSC			AML		AML		
	comp=E,78150µm,1.0s						
OSSC			AML		AML		
	comp=E,81200µm,1.1s						
OSSC			AML		AML		
	comp=N,80050µm,1.1s						
OSSC			AML		AML		
	comp=N,76400µm,1.0s						
RUFI	**Rufina**	**1.50 310**	P		**Pn**	**17 11 04.1**	**-0.3**
RUFI	**Rufina**	**1.50 310**	⇓P		**Pn**	**17 11 03.9**	**-0.5**
RUFI			AML		AML		
RUFI			AML		AML		
	comp=E,93850µm,0.9s						
MAON	**Monte Argentar**	**1.52 253**	⇑P		**Pn**	**17 11 04.1**	**-0.6**
MAON			AML		AML		
	comp=N,55150µm,1.6s						
MAON			AML		AML		
	comp=E,35300µm,1.2s						
LMD	**Lutirano**	**1.57 320**	P		**Pb**	**17 11 06.1**	**-0.4**
LMD	**Lutirano**	**1.57 320**	⇑P		**Pb**	**17 11 06.0**	**-0.4**
LMD			AML		AML		
	comp=N,76850µm,1.1s						
LMD			AML		AML		
	comp=E,65900µm,0.9s						
BRSN	**Barisano**	**1.59 332**	AML		AML		
BRSN			AML		AML		
BRSN			AML		AML		
BRSN			AML		AML		
TRIF	**Trifonti**	**1.63 279**	⇑P		**Pn**	**17 11 06.2**	**+0.1**
TRIF			AML		AML		
	comp=N,47300µm,0.7s						
TRIF			AML		AML		
	comp=E,43800µm,0.8s						
CASP	**Castiglione de**	**1.65 268**			**Pn**	**17 11 05.8**	**-0.6**
CASP	**Castiglione de**	**1.65 268**	⇑P		**Pn**	**17 11 06.1**	**-0.3**
CASP			AML		AML		
	comp=E,25950µm,1.3s						
CASP			AML		AML		
	comp=N,20000µm,1.4s						
VAGA	**Valle Agricola**	**1.69 150**	⇓P		**Pg**	**17 11 08.0**	**-1.6**
VAGA			AML		AML		
	comp=E,54000µm,0.7s						
VAGA			AML		AML		
	comp=N,74600µm,1.6s						
VAGA			AML		AML		
	comp=E,55800µm,0.7s						
VAGA			AML		AML		
	comp=N,76700µm,1.6s						
BRIS	**BRISIGHELLA**	**1.71 318**	P		**Pb**	**17 11 08.5**	**-0.5**
BRIS			AML		AML		
BRIS			AML		AML		
BRIS			AML		AML		
	comp=N,91750µm,0.8s						
BRIS			AML		AML		
	comp=N,93150µm,0.5s						
SEI	**Scarperia**	**1.73 313**	P		**Pb**	**17 11 08.0**	**-1.2**
BSSO	**Busso**	**1.74 140**	⇑P		**Pg**	**17 11 09.8**	**-0.8**
BSSO			AML		AML		
	comp=N,38550µm,1.5s						
BSSO			AML		AML		
	comp=E,94550µm,1.2s						
BSSO			AML		AML		
	comp=E,40650µm,1.2s						
BSSO			AML		AML		
IMOL	**Imola, Italy**	**1.77 327**	P		**Pg**	**17 11 11.9**	**+0.7**
CRMI	**Carmignano**	**1.80 301**	P		**Pn**	**17 11 08.8**	**+0.3**
CRMI	**Carmignano**	**1.80 301**	P		**Pn**	**17 11 08.8**	**+0.3**
CRMI			AML		AML		
	comp=E,38200µm,0.8s						
CRMI			AML		AML		
	comp=N,31100µm,1.2s						
CRMI			AML		AML		
	comp=E,5070µm,0.8s						
CRMI			AML		AML		
	comp=N,5995µm,1.1s						
DUGI	**Dugi Otok**	**1.81 51**	*e*Pn		**Pn**	**17 11 07.7**	**-0.9**
DUGI			Sn		**Sb**	**17 11 32.3**	**-1.0**
MPPT	**Montemurlo**	**1.82 307**	⇓P		**Pb**	**17 11 09.4**	**-1.3**
MPPT			AML		AML		
	comp=N,56800µm,0.8s						
MPPT			AML		AML		
	comp=E,51300µm,0.8s						
CIGN	**Sant'Elia a Pi**	**1.82 132**	⇑P		**Pg**	**17 11 10.2**	**-1.8**
CIGN			AML		AML		
CIGN			AML		AML		
	comp=N,64550µm,1.2s						
MODR	**Mondragone**	**1.83 161**	⇓P		**Pb**	**17 11 09.0**	**-1.9**
MODR			AML		AML		
	comp=N,61950µm,1.0s						
MODR			AML		AML		
	comp=E,39100µm,0.7s						
PTRJ	**Pietraroja**	**1.85 144**	AML		AML		
	comp=N,68750µm,1.6s						
PTRJ			AML		AML		
	comp=E,73950µm,1.5s						
PTRJ			AML		AML		
	comp=N,75150µm,1.6s						
PTRJ			AML		AML		
	comp=E,84000µm,1.5s						
PIGN	**Pignataro Magg**	**1.86 154**	⇓P		**Pb**	**17 11 09.9**	**-1.6**
PIGN			AML		AML		
	comp=E,41300µm,1.6s						
PIGN			AML		AML		
	comp=E,42300µm,1.6s						
PIGN			AML		AML		
	comp=N,56800µm,0.9s						
PIGN			AML		AML		
	comp=N,57700µm,0.9s						
SACR	**S. Croce Del S**	**1.91 141**	⇓P		**Pb**	**17 11 11.3**	**-0.9**
SACR			AML		AML		
	comp=E,67750µm,1.6s						
SACR			AML		AML		
	comp=N,50200µm,1.6s						
MTRZ	**Monterenzio**	**1.91 322**	P		**Pb**	**17 11 12.0**	**-0.3**
MELA	**Melanico ??? S**	**1.91 127**	⇓P		**Pb**	**17 11 10.9**	**-1.3**
MELA			AML		AML		
MELA			AML		AML		
MELA			AML		AML		
MELA			AML		AML		
MTCR	**Monte La Croce**	**1.91 308**	P		**Pn**	**17 11 10.0**	**-0.2**
MTCR	**Monte La Croce**	**1.91 308**	⇑P		**Pn**	**17 11 10.0**	**-0.2**
MTCR			AML		AML		
	comp=N,66300µm,0.9s						
MTCR			AML		AML		
	comp=E,36800µm,1.0s						
GATE	**Gambatesa**	**1.92 135**	AML		AML		
	comp=E,37400µm,1.5s						
GATE			AML		AML		
	comp=E,62000µm,1.5s						
GATE			AML		AML		
	comp=N,45650µm,1.1s						
GATE			AML		AML		
	comp=N,45950µm,1.1s						
FNVD	**Fontana Vidola**	**1.93 312**	⇑P		**Pb**	**17 11 11.3**	**-1.4**
FNVD			AML		AML		
	comp=N,81750µm,0.7s						
FNVD			AML		AML		
	comp=E,77900µm,0.9s						
VIRC	**Vir**	**2.00 45**	*e*Pn		**Pn**	**17 11 10.4**	**-0.9**
VIRC			Sn		**Sb**	**17 11 36.9**	**-1.9**
ZIRJ	**Zirje**	**2.01 67**	*i* Pn		**Pn**	**17 11 10.8**	**-0.6**
ZIRJ			Sn		**Sb**	**17 11 37.1**	**-2.1**
VITU	**Vitulano (BN)**	**2.04 146**	⇓P		**Pb**	**17 11 12.4**	**-2.2**
VITU			AML		AML		
	comp=N,41700µm,1.0s						
VITU			AML		AML		
	comp=N,40700µm,1.0s						
VITU			AML		AML		
	comp=E,40250µm,1.4s						
VITU			AML		AML		
	comp=E,19450µm,0.9s						
PII	**Pisa**	**2.06 295**	P		**Pn**	**17 11 12.5**	**+0.4**
PII	**Pisa**	**2.06 295**	⇑P		**Pn**	**17 11 12.4**	**+0.4**
PII			AML		AML		
	comp=E,28850µm,0.8s						
PII			AML		AML		
	comp=N,35400µm,0.9s						
POPM	**Popiglio**	**2.06 305**	P		**Pn**	**17 11 12.0**	**-0.2**
POPM	**Popiglio**	**2.06 305**	AML		AML		
	comp=E,12700µm,1.3s						
POPM			AML		AML		
	comp=N,11350µm,1.4s						
BRJN	**Brijuni**	**2.08 13**	⇑P		**Pn**	**17 11 11.7**	**-0.6**
VENT	**Ventnene**	**2.10 173**	AML		AML		
	comp=E,52350µm,0.9s						
VENT			AML		AML		
	comp=N,41600µm,1.0s						
NVLJ	**Novalja**	**2.12 37**	*e*Pn		**Pn**	**17 11 12.0**	**-0.8**
NVLJ			Sn		**Sn**	**17 11 39.1**	**-0.1**
ZCCA	**Zocca**	**2.13 314**			**Pn**	**17 11 13.7**	**+0.7**
ZCCA	**Zocca**	**2.13 314**	AML		AML		
	comp=E,49450µm,1.2s						
ZCCA			AML		AML		
	comp=N,39150µm,1.6s						
ZCCA			AML		AML		
	comp=E,45850µm,1.6s						
ZCCA			AML		AML		
	comp=N,46900µm,1.6s						
CELB	**S.Piero in Cam**	**2.13 267**	⇑P		**Pn**	**17 11 12.8**	**-0.3**
CELB			AML		AML		
	comp=N,9795µm,1.3s						
CELB			AML		AML		
	comp=E,12105µm,1.0s						
APRC	**Apricena**	**2.13 121**	⇑P		**Pb**	**17 11 13.7**	**-2.4**
APRC			AML		AML		
	comp=E,50900µm,1.1s						
APRC			AML		AML		
	comp=N,77050µm,1.0s						
MORI	**Morici**	**2.14 62**	*e*Pn		**Pn**	**17 11 12.7**	**-0.5**
MORI			Sn		**Sb**	**17 11 41.1**	**-1.8**
PAOL	**Paolisi**	**2.15 149**			**Pn**	**17 11 13.4**	**+0.1**
PAOL	**Paolisi**	**2.15 149**	⇓P		**Pb**	**17 11 13.8**	**-2.6**
PAOL			AML		AML		
	comp=E,17000µm,1.6s						
PAOL			AML		AML		
	comp=N,26350µm,1.6s						
PAOL			AML		AML		
	comp=E,16400µm,1.6s						
PAOL			AML		AML		
	comp=N,25600µm,1.6s						
MOCO	**Biccari - m.te**	**2.15 134**	⇓P		**Pb**	**17 11 15.0**	**-1.5**
MOCO			AML		AML		
	comp=E,40950µm,0.9s						
MOCO			AML		AML		
	comp=N,25500µm,1.6s						
MOCO			AML		AML		
	comp=N,25950µm,1.5s						
MOCO			AML		AML		
	comp=E,42000µm,0.9s						
MAIM	**Mastiano**	**2.16 299**	P		**Pn**	**17 11 13.3**	**-0.2**
MAIM	**Mastiano**	**2.16 299**	P		**Pn**	**17 11 13.3**	**-0.2**
MAIM			AML		AML		
	comp=E,23700µm,1.2s						
MAIM			AML		AML		
	comp=N,27750µm,1.0s						
BDI	**Bagni Di Lucca**	**2.17 304**	P		**Pn**	**17 11 13.3**	**-0.4**
BDI			AML		AML		
	comp=N,14250µm,1.0s						
BDI			AML		AML		
	comp=N,30600µm,1.0s						
BDI			AML		AML		
	comp=E,31550µm,1.0s						
BDI			AML		AML		
	comp=E,12700µm,0.6s						
CARD	**Cardoso**	**2.22 302**	P		**Pn**	**17 11 14.4**	**+0.1**
RABC	**Rab**	**2.23 33**	*i* Pn		**Pn**	**17 11 14.0**	**-0.4**
RABC			Sn		**Sb**	**17 11 42.8**	**-2.7**
MRB1	**Monte Rocchett**	**2.24 141**	⇑P		**Pb**	**17 11 17.1**	**-0.8**
MRB1			AML		AML		
	comp=E,64200µm,1.2s						
MRB1			AML		AML		
	comp=E,65650µm,1.2s						
MRB1			AML		AML		
	comp=N,90450µm,0.8s						
MRB1			AML		AML		
	comp=N,87650µm,0.8s						
SGRT	**San Giovanni R**	**2.26 119**	Pn		**Pn**	**17 11 14.9**	**0.0**
SGRT	**San Giovanni R**	**2.26 119**	P		**Pb**	**17 11 15.8**	**-2.5**
	baz=122						
SGRT	**San Giovanni R**	**2.26 119**	⇑P		**Pb**	**17 11 15.6**	**-2.7**
SGRT			AML		AML		
	comp=N,76850µm,0.6s						
SGRT			AML		AML		
	comp=E,71950µm,0.7s						
CRTO	**Cratere Ovest,**	**2.28 154**	⇓P		**Pn**	**17 11 15.7**	**+0.4**
CRTO			AML		AML		
CRTO			AML		AML		
SMRN	**Sveta Marina**	**2.28 19**	*i* Pn		**Pn**	**17 11 14.4**	**-0.8**
SMRN			Sn		**Sn**	**17 11 43.5**	**+0.2**
GSCL	**Gusciola**	**2.34 310**	P		**Pn**	**17 11 16.4**	**+0.4**
GSCL			AML		AML		
	comp=E,35450µm,0.9s						
GSCL			AML		AML		
	comp=N,47150µm,1.3s						
VLC	**Villacollemand**	**2.35 304**			**Pn**	**17 11 15.3**	**-0.8**
VLC	**Villacollemand**	**2.35 304**	⇑P		**Pn**	**17 11 16.1**	**-0.1**
VLC			AML		AML		
	comp=N,26750µm,1.2s						
VLC			AML		AML		
	comp=N,26550µm,1.2s						
VLC			AML		AML		
	comp=E,17100µm,1.6s						
VLC			AML		AML		
	comp=E,16650µm,1.6s						
GROG	**Isola di Gorgo**	**2.41 284**	P		**Pn**	**17 11 17.3**	**+0.5**
GROG			AML		AML		
	comp=N,6275µm,1.2s						
GROG			AML		AML		
	comp=E,7335µm,1.2s						
SGTA	**Sant Agata di**	**2.43 135**	P		**Pb**	**17 11 18.6**	**-2.5**
SGTA			AML		AML		
	comp=N,34150µm,1.6s						
SGTA			AML		AML		
	comp=E,36950µm,1.1s						
SGTA			AML		AML		
	comp=E,37950µm,1.1s						
SGTA			AML		AML		
	comp=N,34050µm,1.6s						
CAFE	**Carife**	**2.44 139**	P		**Pb**	**17 11 19.3**	**-2.2**
CAFE			AML		AML		
	comp=E,48950µm,1.5s						
CAFE			AML		AML		
	comp=N,37450µm,1.3s						
CAFE			AML		AML		
	comp=N,38550µm,1.3s						
CAFE			AML		AML		
	comp=E,49700µm,1.5s						
SERM	**Sermide**	**2.49 329**	P		**Pb**	**17 11 20.3**	**-1.9**
SERM			AML		AML		
	comp=N,24500µm,0.6s						
SERM			AML		AML		
	comp=E,27850µm,0.9s						
EQUI	**Equi**	**2.50 302**	P		**Pn**	**17 11 18.5**	**+0.4**
EQUI			AML		AML		
	comp=N,16650µm,1.2s						
EQUI			AML		AML		
	comp=E,13050µm,0.9s						
SNAL	**S. Angelo Dei**	**2.51 140**	⇓P		**Pb**	**17 11 19.4**	**-3.2**
SNAL			AML		AML		
	comp=N,62150µm,1.4s						
SNAL			AML		AML		
	comp=N,61250µm,1.4s						
SNAL			AML		AML		
	comp=E,57600µm,1.2s						
SNAL			AML		AML		
	comp=E,56200µm,1.2s						
UDBI	**Udbina**	**2.54 49**	*i* Pn		**Pn**	**17 11 19.3**	**+0.6**
MCRV	**Calabrutti - M**	**2.61 143**	AML		AML		
	comp=E,16850µm,0.8s						
MCRV			AML		AML		
	comp=N,17850µm,1.0s						
PLMA	**Palmaria, Port**	**2.64 297**	P		**Pn**	**17 11 20.1**	**+0.2**
PLMA			AML		AML		
	comp=E,7565µm,0.7s						
PLMA			AML		AML		
	comp=N,11250µm,0.8s						
RIY	**Rijeka**	**2.64 22**	*i* Pn		**Pn**	**17 11 19.7**	**-0.3**
TEOL	**Teolo**	**2.68 338**	Pn		**Pn**	**17 11 20.6**	**0.0**
TEOL	**Teolo**	**2.68 338**	⇑P		**Pn**	**17 11 21.4**	**+0.7**
TEOL			AML		AML		
TEOL			AML		AML		
VULT	**Monte Vulture**	**2.69 135**	⇓P		**Pn**	**17 11 21.9**	**+1.1**
VULT			AML		AML		
	comp=E,28900µm,1.5s						
VULT			AML		AML		
	comp=N,42250µm,0.8s						
VULT			AML		AML		
	comp=N,40850µm,0.9s						
VULT			AML		AML		
	comp=E,30400µm,1.5s						
GRAM	**Graiana**	**2.73 307**	P		**Pn**	**17 11 21.3**	**0.0**
GRAM			AML		AML		
	comp=N,35100µm,1.0s						
GRAM			AML		AML		
	comp=E,30750µm,1.3s						
SKDS	**Skadanscina**	**2.74 14**	⇑*i* Pn		**Pn**	**17 11 20.7**	**-0.8**
SKDS			*e*Sn		**Sn**	**17 11 55.2**	**+0.4**
SKDS	**Skadanscina**	**2.74 14**	*i* Pn		**Pn**	**17 11 20.7**	**-0.8**
SKDS			IAML			17 12 17.5	
	comp=Z,19µm,1.1s						
PRMA	**PARMA**	**2.76 314**			**Pn**	**17 11 23.4**	**+1.7**
MRLC	**Muro Lucano**	**2.77 139**	⇓P		**Pn**	**17 11 23.3**	**+1.3**
MRLC			AML		AML		
	comp=N,18200µm,0.9s						
MRLC			AML		AML		
	comp=E,13200µm,1.6s						
MRLC			AML		AML		
	comp=E,12100µm,1.6s						
MRLC			AML		AML		
	comp=N,16250µm,0.9s						
LSTV	**Lastovo**	**2.79 91**	*i* Pn		**Pn**	**17 11 22.1**	**-0.1**
LSTV			Sn		**Sb**	**17 11 57.7**	**-3.9**
OPPE	**Oppeano**	**2.79 331**	P		**Pb**	**17 11 24.1**	**-3.3**
OPPE			AML		AML		
	comp=N,63400µm,1.1s						
OPPE			AML		AML		
	comp=E,60100µm,0.8s						
PALZ	**Palazzo San Ge**	**2.88 131**	AML		AML		
	comp=E,63200µm,0.8s						
PALZ			AML		AML		
	comp=N,74950µm,1.0s						
MAKA	**Makarska**	**2.90 81**	*i* Pn		**Pn**	**17 11 23.7**	**+0.1**
MAKA			Sn		**Sn**	**17 11 60.0**	**+1.4**
CDRU	**Civita di Ruta**	**2.91 145**	⇓P		**Pn**	**17 11 24.1**	**+0.3**
CDRU			AML		AML		
	comp=N,8655µm,1.6s						
CDRU			AML		AML		
	comp=E,8690µm,1.0s						
GBRS	**Gornja Briga**	**2.92 24**	*i* Pn		**Pn**	**17 11 23.7**	**-0.2**
GBRS			*e*Sn		**Sn**	**17 11 59.8**	**+0.7**
MSSA	**Maissana**	**2.97 300**	Pn		**Pn**	**17 11 24.5**	**-0.1**
MSSA	**Maissana**	**2.97 300**	⇑P		**Pn**	**17 11 25.1**	**+0.5**
MSSA			AML		AML		
	comp=E,9505µm,0.6s						
MSSA			AML		AML		
	comp=N,12800µm,1.0s						
CORF	**Corte**	**2.97 260**	AML		AML		
	comp=N,2555µm,1.4s						
CORF			AML		AML		
	comp=E,3755µm,0.9s						
ACER	**Acerenza**	**2.98 134**	⇓P		**Pn**	**17 11 25.6**	**+0.8**
ACER			AML		AML		
	comp=N,27800µm,1.5s						
ACER			AML		AML		
	comp=E,44750µm,0.8s						
ACER			AML		AML		
	comp=E,46600µm,0.8s						
ACER			AML		AML		
	comp=N,28950µm,1.4s						
CEY	**Cerknica**	**3.01 18**	⇑*i* Pn		**Pn**	**17 11 25.2**	**0.0**
CEY			*e*Sn		**Sn**	**17 12 01.8**	**+0.4**
RICI	**Ricice**	**3.01 77**	*e*Pn		**Pn**	**17 11 25.4**	**+0.2**
RICI			Sn		**Sn**	**17 12 02.4**	**+1.0**
PGF	**Pioggiola**	**3.04 265**	*e*P		**Pn**	**17 11 26.1**	**+0.5**
PGF			*e*Sn		**Sn**	**17 11 57.2**	**-5.0**
	comp=N,3µm,0.8s						
PGF	**Pioggiola**	**3.04 265**	AML		AML		
	comp=N,2825µm,1.6s						
PGF			AML		AML		
	comp=E,3870µm,1.1s						
BOJS	**Bojanci**	**3.04 30**	⇑*i* Pn		**Pn**	**17 11 25.9**	**+0.3**
BOJS			*e*Sn		**Sn**	**17 12 02.8**	**+0.6**
BOJS	**Bojanci**	**3.04 30**	⇑*i* Pn		**Pn**	**17 11 25.4**	**-0.3**
BOJS	**Bojanci**	**3.04 30**	AML		AML		
	comp=E,38550µm,1.2s						
BOJS			AML		AML		
	comp=N,49650µm,1.4s						
SABO	**M.te Sabotino**	**3.12 6**	⇑P		**Pn**	**17 11 26.1**	**-0.5**
SABO			AML		AML		
	comp=N,54950µm,0.8s						
SABO			AML		AML		
SABO			AML		AML		
SABO			AML		AML		
	comp=E,36200µm,0.9s						
ROVR	**Rover Verones**	**3.12 333**	P		**Pn**	**17 11 27.9**	**+1.1**
ROVR			AML		AML		
	comp=N,8695µm,1.0s						
ROVR			AML		AML		
	comp=E,9015µm,0.8s						
ROVR			AML		AML		
	comp=N,21700µm,1.0s						
ROVR			AML		AML		
	comp=E,22450µm,0.8s						

CGRP Cima Grappa 3.14 343 ⇑P Pn 17 11 27.7 +0.6
CGRP AML AML
comp=N,35550µm,0.9s
CGRP AML AML
comp=N,35050µm,0.9s
CGRP AML AML
comp=E,39700µm,1.0s
CGRP AML AML
comp=E,40350µm,1.1s
SRKY Kupres RS 3.19 67 *e*Pn Pn 17 11 28.8 +1.1
SRKY *e*Sn **Sn 17 12 07.8 +1.9**
VARN Col Varnada, M 3.19 347 ⇑P Pn 17 11 27.7 0.0
VARN AML AML
comp=E,55600µm,0.9s
VARN AML AML
comp=N,34150µm,1.2s
VARN AML AML
comp=N,34500µm,1.2s
VARN AML AML
comp=E,55500µm,0.9s
PTRP Pietrapertosa 3.24 136 ⇑P Pn 17 11 29.7 +1.3
PTRP AML AML
comp=N,24900µm,1.0s
PTRP AML AML
comp=E,27850µm,1.0s
ZEN8 San Zeno di Mo 3.24 329 P Pn 17 11 29.3 +1.0
ZEN8 AML AML
comp=E,9845µm,0.6s
ZEN8 AML AML
comp=N,11140µm,1.4s
BOB Bobbio (Coli) 3.25 307 P Pn 17 11 30.6 +2.2
GORR Gorreto 3.25 303 AML AML
comp=N,12950µm,1.0s
GORR AML AML
comp=E,19450µm,0.8s
MCEL Monticello 3.26 141 ⇑P Pn 17 11 30.4 +1.7
MCEL AML AML
comp=N,10365µm,0.9s
MCEL AML AML
comp=N,10655µm,0.9s
MCEL AML AML
comp=E,9015µm,1.6s
MCEL AML AML
comp=E,9075µm,1.6s
MGRS Mrkonjic Grad 3.27 61 ⇑*i*Pn Pn 17 11 29.9 +1.1
MGRS *e*Sn **Sn 17 12 09.5 +1.6**
AMUR Altamura 3.28 126 ⇓P Pn 17 11 29.4 +0.6
AMUR AML AML
comp=N,15500µm,0.6s
AMUR AML AML
comp=E,14150µm,0.6s
MTSN Montesano sull 3.28 142 AML AML
comp=N,8290µm,0.8s
MTSN AML AML
comp=E,11450µm,0.9s
DOSS Dosso del Somm 3.30 336 P **Pn 17 11 30.3 +1.1**
DOSS AML AML
comp=E,25400µm,0.7s
DOSS AML AML
comp=E,22850µm,0.8s
DOSS AML AML
comp=N,22400µm,0.8s
DOSS AML AML
comp=N,25850µm,0.7s
SALO Salr 3.30 327 Pn **Pn 17 11 30.2 +1.0**
SALO Salr 3.30 327 P **Pn 17 11 30.0 +0.8**
SALO AML AML
comp=N,35650µm,1.2s
SALO AML AML
comp=E,23300µm,1.0s
SALO AML AML
comp=N,34750µm,1.2s
SALO AML AML
comp=E,24550µm,1.1s
MGR Morigerati 3.30 145 ⇓P Pn 17 11 30.0 +0.8
MGR AML AML
comp=E,5245µm,0.6s
MGR AML AML
comp=N,7850µm,1.5s
MGR AML AML
comp=N,7495µm,1.6s
MGR AML AML
comp=E,5395µm,1.5s
LJU Ljubljana 3.32 17 ⇑*i*Pn Pn 17 11 29.6 +0.1
LJU *i* Sn **Sn 17 12 09.8 +0.7**
LJU IAML 17 12 43.5
comp=Z,14µm,0.8s
LJU Ljubljana 3.32 17 AML AML
LJU AML AML
AG11 Viggiano (PZ) 3.33 139 AML AML
comp=N,13540µm,1.4s
AG11 AML AML
comp=E,15700µm,0.9s
CTI Castel Tesino 3.33 342 Pn **Pn 17 11 29.7 0.0**
CTI Castel Tesino 3.33 342 P **Pn 17 11 29.7 0.0**
CTI Castel Tesino 3.33 342 P **Pn 17 11 30.4 +0.8**
CTI AML AML
comp=E,21600µm,1.0s
CTI AML AML
comp=N,18950µm,1.2s
PRIJ Prijedor 3.35 50 *e*Pn Pn 17 11 30.7 +0.9
PRIJ *e*Sn **Sn 17 12 10.3 +0.7**
MPRI Monte Prat 3.36 359 P **Pn 17 11 30.2 +0.2**
MPRI AML AML
comp=N,33500µm,0.5s
MPRI AML AML
comp=E,24750µm,0.8s
MPRI AML AML
comp=N,44050µm,0.5s
MPRI AML AML
comp=E,32350µm,0.8s
CADS Cadrg 3.38 8 *i* Pn Pn 17 11 29.6 -0.6
MIGL Miglionico 3.38 131 ⇓P Pn 17 11 31.3 +1.0
MIGL AML AML
comp=N,74050µm,1.1s
MIGL AML AML
comp=E,66750µm,1.5s
STON Ston 3.38 89 *e*Sn **Sn 17 12 11.9 +1.5**
STON Ston 3.38 89 *e*Pn **Pn 17 11 29.4 -0.8**
STON Ston 3.38 89 AML AML
comp=E,7740µm,1.1s
STON AML AML
comp=N,9500µm,1.0s
STAL STALIGIAL 3.39 355 Pn 17 11 29.9 -0.5
STAL STALIGIAL 3.39 355 P **Pn 17 11 30.6 +0.2**
STAL AML AML
comp=N,21950µm,1.0s
STAL AML AML
comp=E,32000µm,0.6s
STAL AML AML
comp=N,24400µm,1.0s
STAL AML AML
comp=E,24650µm,0.7s
RNCA Ronca, Sant'Ol 3.40 299 AML AML
comp=N,4020µm,1.3s
RNCA AML AML
comp=E,2720µm,1.1s
SIRI Monte Sirino - 3.41 141 ⇓P Pn 17 11 31.4 +0.8
SIRI AML AML
comp=E,9445µm,1.1s
SIRI AML AML
comp=N,7935µm,1.0s
SIRI AML AML
comp=N,7790µm,1.0s
SIRI AML AML
comp=E,9360µm,1.2s
LUSI Trento, Gardas 3.44 334 AML AML
comp=E,22900µm,0.9s
LUSI AML AML
comp=N,24200µm,0.7s
CIMO Cimolais 3.46 352 AML AML
comp=N,9055µm,1.0s
CIMO AML AML
comp=E,10030µm,1.5s
CIMO AML AML
comp=E,10245µm,1.5s
CIMO AML AML
comp=N,9250µm,1.0s
A051A Mrakovica 3.48 51 ⇑*i*Pn Pn 17 11 31.7 +0.1
A051A *e*Sn **Sn 17 12 14.5 +1.5**
AGOR Agordo 3.48 348 AML AML
comp=N,14050µm,1.1s
AGOR AML AML
comp=E,15800µm,0.9s
AGOR AML AML
comp=E,12750µm,0.9s
AGOR AML AML
comp=N,18200µm,1.1s
SCHR S. Chirico Rap 3.49 139 P **Pn 17 11 33.0 +1.2**
SCHR AML AML
comp=E,4830µm,1.6s
SCHR AML AML
comp=N,7150µm,1.1s
BLY Banja Luka 3.50 56 ⇑*i*Pn Pn 17 11 32.2 +0.4
BLY *e*Sn **Sn 17 12 14.5 +1.2**
BLY Banja Luka 3.50 56 *e*Pn **Pn 17 11 33.0 +1.2**
BLY Banja Luka 3.50 56 AML AML
comp=E,28950µm,0.8s
BLY AML AML
comp=N,21100µm,0.9s
BLY AML AML
comp=N,21300µm,0.9s
BLY AML AML
comp=E,28300µm,0.8s
MATE Matera 3.50 128 ⇑P Pn 17 11 32.9 +1.0
MATE Matera 3.50 128 AML AML
comp=E,15750µm,0.7s
MATE AML AML
comp=N,14700µm,0.8s
PTCC Patocco-Chiusa 3.53 3 AML AML
comp=N,12300µm,1.4s
PTCC AML AML
comp=E,12800µm,1.1s
CUC Castrocucco 3.54 144 Pn **Pn 17 11 34.3 +1.9**
CUC Castrocucco 3.54 144 ⇓P Pn 17 11 32.9 +0.5
CRAC Craco 3.55 134 ⇓P Pn 17 11 33.5 +1.0
CRAC AML AML
comp=N,27400µm,1.1s
CRAC AML AML
comp=E,37950µm,1.2s
GAGG Gaggia 3.55 335 AML AML
comp=N,28750µm,1.0s
GAGG AML AML
comp=E,38150µm,1.0s
GAGG AML AML
comp=N,37350µm,1.0s
GAGG AML AML
comp=E,27850µm,1.0s
RONC Roncone 3.57 331 AML AML
comp=E,30300µm,1.0s
RONC AML AML
comp=N,24400µm,0.9s
PRED Cave del Predi 3.58 5 Pn 17 11 32.3 -0.7
CLUD Cludinico 3.58 358 Pn **Pn 17 11 32.7 -0.3**
ZONE Zone 3.59 324 AML AML
comp=E,3770µm,0.7s
ZONE AML AML
comp=N,19600µm,1.2s
ZONE AML AML
comp=N,5840µm,0.8s
ZONE AML AML
comp=E,15300µm,0.7s
LTRZ Laterza 3.60 128 AML AML
comp=N,12350µm,0.6s
LTRZ AML AML
comp=E,10800µm,0.7s
NOCI Noci 3.63 124 P **Pn 17 11 33.6 0.0**
baz=126
NOCI S **Sn 17 12 15.8 -0.8**
baz=126
NOCI Noci 3.63 124 AML AML
comp=N,20100µm,0.9s
NOCI AML AML
comp=E,11690µm,1.0s
DGI Dorgali Grotta 3.66 227 ⇑P Pn 17 11 34.5 +0.4
MABI Malga Bissina 3.67 331 AML AML
comp=E,8910µm,1.0s
MABI AML AML
comp=N,8310µm,0.7s
ZOU Zoufplan 3.67 359 AML AML
comp=E,30200µm,1.0s
ZOU AML AML
comp=N,19900µm,1.2s
ZOU AML AML
comp=N,19700µm,1.2s
ZOU AML AML
comp=E,29550µm,1.0s
PCP Piancastagn 3.69 298 AML AML
comp=N,3440µm,1.0s
PCP AML AML
comp=E,4135µm,1.3s
FVI Forni Avoltri 3.72 357 AML AML
comp=N,19800µm,1.5s
FVI AML AML
comp=E,15600µm,1.0s
MYKA Terra Mystica 3.77 6 *i* Pn **Pn 17 11 35.9 +0.3**
comp=E,738nm,0.4s,SNR=612
MYKA *e*Sn **Sn 17 12 22.3 +2.2**
comp=E,5µm,1.0s
OBKA Obir 3.77 15 ⇑*i*Pn Pn 17 11 35.3 -0.4
OBKA *e*Sn **Sn 17 12 19.3 -0.9**
OBKA Obir 3.77 15 *i* Pn **Pn 17 11 35.5 -0.1**
comp=E,63nm,0.2s,SNR=99
OBKA *e*Sn **Sn 17 12 22.5 +2.3**
comp=E,4µm,0.7s
OBKA Obir 3.77 15 *e*Pn **Pn 17 11 35.6 -0.1**
CANO Canova, Maglio 3.77 292 AML AML
comp=E,18200µm,1.0s
CANO AML AML
comp=N,5025µm,0.4s
ORI Oriolo Calabro 3.78 137 ⇓P Pn 17 11 37.7 +2.0
ORI AML AML
comp=N,13750µm,1.3s
ORI AML AML
comp=E,14850µm,0.6s
KOSI Kohlern 3.79 342 AML AML
comp=E,27750µm,1.2s
KOSI AML AML
comp=N,18850µm,1.0s
MOSL Moslavina 3.79 43 *e*Pn **Pn 17 11 34.9 -0.9**
BOSI Bolzano 3.83 341 AML AML
comp=N,71350µm,1.1s
BOSI AML AML
comp=E,82500µm,1.1s
APPI Appiano 3.84 340 AML AML
comp=N,12600µm,0.5s
APPI AML AML
comp=E,12600µm,1.3s
RORO Rocca Rossa 3.86 290 AML AML
comp=N,1718µm,1.6s
RORO AML AML
comp=E,2115µm,1.5s
TREB Trebinje 3.87 91 ⇑*i*Pn Pn 17 11 37.1 +0.2
TREB *e*Sn **Sn 17 12 23.5 +1.0**
TREB Trebinje 3.87 91 *e*Pn **Pn 17 11 37.6 +0.7**
SALB San Lorenzo Be 3.87 140 P **Pn 17 11 38.0 +0.9**
SALB AML AML
comp=N,4845µm,1.4s
SALB AML AML
comp=N,4755µm,1.4s
SALB AML AML
comp=E,4150µm,1.2s
SALB AML AML
comp=E,4290µm,1.2s
A052A Srbac 3.88 54 ⇑*i*Pn Pn 17 11 37.0 -0.1
A052A *e*Sn **Sn 17 12 23.5 +0.7**
ABTA Abfaltersbach 3.89 354 *i* Pn **Pn 17 11 38.1 +0.8**
comp=E,4µm,0.8s,SNR=3123
ABTA *e*Sn **Sn 17 12 26.2 +3.1**
comp=E,6µm,0.7s
TAR1 Taranto 3.92 126 AML AML
comp=N,13000µm,1.6s
TAR1 AML AML
comp=E,10860µm,0.7s
BRES Bressanone 3.94 346 AML AML
comp=E,19900µm,1.2s
BRES AML AML
comp=N,15640µm,1.4s
ROTM Rocchetta Tana 3.96 301 AML AML
comp=N,34300µm,0.9s
ROTM AML AML
comp=E,31150µm,1.5s
CET2 Cetraro 3.98 146 ⇓P Pn 17 11 38.8 +0.3
CET2 AML AML
comp=N,8315µm,0.8s
CET2 AML AML
comp=E,7845µm,1.0s
BRY Bratogost 4.00 88 ⇑*i*Pn Pn 17 11 39.4 +0.6
BRY *e*Sn **Sn 17 12 26.2 +0.3**
BRY Bratogost 4.00 88 ⇑*i*Pn Pn 17 11 38.8 0.0
BRY *i* Sn **Sn 17 12 26.0 +0.1**
HCY Herceg Novi 4.00 94 ⇑*i*Pn Pn 17 11 39.3 +0.5
HCY *e*Sn **Sn 17 12 27.5 +1.7**
HCY Herceg Novi 4.00 94 ⇓*i*Pn Pn 17 11 39.0 +0.2
HCY *i* Sn **Sn 17 12 26.5 +0.7**
MGRO Montegrosso 4.02 289 AML AML
comp=N,3255µm,1.1s
MGRO AML AML
comp=E,2880µm,1.0s
SOKA Soboth 4.04 19 *i* Pn **Pn 17 11 39.3 0.0**
comp=E,98nm,0.5s,SNR=216
SOKA *e*Sn **Sn 17 12 27.6 +0.8**
comp=E,1µm,0.7s
TDS Terranova Siba 4.04 142 ⇓P Pn 17 11 40.4 +1.1
DOB Doboj 4.07 61 *e*Pn **Pn 17 11 39.9 +0.3**
DOB *e*Sn **Sn 17 12 27.2 -0.1**
RISI Rein 4.13 350 AML AML
comp=E,36100µm,0.5s
RISI AML AML
comp=N,32150µm,1.3s
MOSI Grossmontoni 4.15 335 AML AML
comp=E,29100µm,0.8s
MOSI AML AML
comp=N,36550µm,0.8s
BERNI Berninapass 4.16 329 AML AML
comp=E,5825µm,1.0s
BERNI AML AML
comp=N,7440µm,0.8s
KBA Koelnbreinsper 4.20 2 *i* Pn **Pn 17 11 42.4 +0.8**
comp=N,619nm,0.7s,SNR=1499
KBA *e*Sn **Sn 17 12 31.2 +0.3**
comp=N,2µm,0.6s
KBA Koelnbreinsper 4.20 2 *e*Pn **Pn 17 11 42.5 +0.9**
KBA *e*Sn **Sn 17 12 31.0 0.0**
MUGIO Muggio 4.21 318 AML AML
comp=N,5540µm,1.4s
MUGIO AML AML
comp=E,5275µm,0.6s
ROSI Rosskopf 4.22 344 AML AML
comp=N,32100µm,1.0s
ROSI AML AML
comp=E,27200µm,0.7s
SBF Sospel 4.24 285 *e*P **Pn 17 11 42.4 +0.2**
SBF *e*Sn **Sn 17 12 25.8 -6.1**
comp=E,3µm,0.6s
FUORN Ofenpass-Fuorn 4.25 333 Pn **Pn 17 11 44.3 +1.9**
A252A Venje 4.26 52 *i* Pn **Pn 17 11 41.8 -0.6**
UPM Unac-Piva 4.27 84 *e*Pn **Pn 17 11 43.9 +1.3**
UPM *e*Sn **Sn 17 12 33.7 +1.1**
UPM Unac-Piva 4.27 84 ⇑*i*Pn Pn 17 11 42.4 -0.2
UPM *i* Sn **Sn 17 12 32.5 -0.1**
CEME Cevo 4.30 92 ⇑*i*Pn Pn 17 11 43.1 +0.2
CEME *i* Sn **Sn 17 12 33.5 +0.2**
VARE Varese 4.31 315 AML AML
comp=E,8665µm,0.7s
VARE AML AML
comp=N,8250µm,0.9s
NKME Niksic 4.31 90 ⇑*i*Pn Pn 17 11 43.1 +0.1
NKME *i* Sn **Sn 17 12 33.6 +0.2**
BUM Brajici-Budva 4.32 96 ⇑*i*Pn Pn 17 11 43.4 +0.2
BUM *i* Sn **Sn 17 12 34.2 +0.5**
CAR1 CAROLEI 4.32 146 ⇓P Pn 17 11 43.5 +0.3
ENR Entracque 4.34 290 AML AML
comp=E,2760µm,1.1s
ENR AML AML
comp=N,4030µm,1.1s
VSL Villasalto 4.40 221 ⇑P Pn 17 11 45.0 +0.8
HAPS Han Pijesak,Bl 4.42 72 ⇑*i*Pn Pn 17 11 45.6 +0.9
HAPS *e*Sn **Sn 17 12 36.9 +0.5**
BEHE Becsehely 4.44 35 ⇑*i*Pn Pn 17 11 44.3 -0.5
BEHE *e*Sn **Sn 17 12 36.5 -0.2**
BEHE Becsehely 4.44 35 P **Pn 17 11 46.1 +1.3**
FETA Feichten 4.47 339 *i* Pn **Pn 17 11 46.8 +1.5**
comp=N,2µm,0.9s,SNR=1104
FETA *e*Sn **Sb 17 12 43.1 -6.9**
comp=N,2µm,0.9s
TUE Stuetta 4.48 325 Pn **Pn 17 11 46.6 +1.1**
WTTA Wattenberg 4.50 347 *i* Pn **Pn 17 11 47.6 +1.8**
SNR=1038
WTTA *e*Sn **Sb 17 12 45.4 -5.6**
comp=N,2µm,0.5s
WTTA Wattenberg 4.50 347 *e*Pn **Pn 17 11 47.7 +1.8**
DAVOX Davos/Dischmat 4.52 331 Pn **Pn 17 11 48.0 +1.9**
comp=N,142nm,0.3s,baz=140,slow=12,SNR=777
DAVOX Sn **Sn 17 12 39.7 +0.9**
comp=N,123nm,0.3s,baz=117,slow=22,SNR=15
DAVOX LR LR 17 14 05.9
comp=N,24µm,21.3s,baz=142,slow=47
CGL Cagliari Serpe 4.54 221 ⇑P Pn 17 11 46.9 +0.6
SQTA Sankt Quirin 4.54 343 Pn 17 11 47.7 +1.4
SQTA **Sb 17 12 47.1 -5.0**
SQTA Sankt Quirin 4.54 343 P **Pn 17 11 47.7 +1.4**
SQTA 17 12 47.1
SQTA Sankt Quirin 4.54 343 *i* Pn **Pn 17 11 47.7 +1.4**
comp=N,1µm,0.6s,SNR=1224
SQTA *e*Sn **Sb 17 12 47.1 -5.0**
comp=N,1µm,0.3s
DRME Dracevica, Mon 4.55 97 ⇑*i*Pn Pn 17 11 47.4 +1.1
DRME *e*Sn **Sn 17 12 39.9 +0.6**
DRME Dracevica, Mon 4.55 97 ⇑*i*Pn Pn 17 11 46.7 +0.4
DRME *i* Sn **Sn 17 12 39.9 +0.6**
PDG Podgorica 4.56 94 ⇑P Pn 17 11 47.4 +1.0
PDG Podgorica 4.56 94 Pn **Pn 17 11 47.0 +0.6**
TTG Podgorica 4.56 94 ⇑*i*Pn Pn 17 11 46.8 +0.4
TTG *i* Sn **Sn 17 12 40.0 +0.4**
WATA Walderalm 4.58 347 Pn 17 11 48.7 +1.8
WATA **Sn 17 12 45.4 +5.1**
WATA Walderalm 4.58 347 P **Pn 17 11 48.7 +1.8**
WATA 17 12 45.4
WATA Walderalm 4.58 347 *i* Pn **Pn 17 11 48.7 +1.8**
comp=N,456nm,0.4s,SNR=946
WATA *e*Sn **Sn 17 12 45.4 +5.1**
comp=N,2µm,0.5s
TIP Timpagrande 4.62 142 ⇓P Pn 17 11 48.6 +1.2
TIP Timpagrande 4.62 142 Pn **Pn 17 11 48.2 +0.9**
TIP Timpagrande 4.62 142 P **Pn 17 11 50.1 +2.8**
PLE Pljevlja 4.63 82 ⇑*i*Pn Pn 17 11 47.4 -0.1
PLE *i* Sn **Sn 17 12 41.1 -0.3**
RUDO Rudo 4.64 79 *e*Pn **Pn 17 11 48.4 +0.9**
RUDO *e*Sn **Sn 17 12 42.4 +0.9**
ULC Ulcinj 4.64 99 ⇓*i*Pn Pn 17 11 48.1 +0.5
ULC *i* Sn **Sn 17 12 42.2 +0.6**
TRAV Traversella 4.66 306 AML AML
comp=E,3255µm,0.9s
TRAV AML AML
comp=N,2960µm,0.9s
MOTA Moosalm 4.68 343 Pn 17 11 50.3 +2.0
MOTA **Sb 17 12 48.8 -7.3**
MOTA Moosalm 4.68 343 *i* Pn **Pn 17 11 50.3 +2.0**
comp=N,15nm,0.3s,SNR=1163
MOTA *e*Sn **Sb 17 12 48.8 -7.3**
comp=N,1µm,0.7s
ARSA Arzberg 4.69 21 ⇑*i*Pn Pn 17 11 47.5 -0.8
ARSA *e*Sn **Sn 17 12 40.9 -2.0**
ARSA Arzberg 4.69 21 *i* Pn **Pn 17 11 47.6 -0.7**
comp=N,295nm,0.6s,SNR=468
ARSA *e*Sn **Sn 17 12 40.9 -2.0**
comp=N,1µm,0.5s
ARSA Arzberg 4.69 21 *e*Pn **Pn 17 11 48.1 -0.1**
BBLS Lazići 4.70 76 ⇑*i*Pn Pn 17 11 49.2 +0.8
BBLS *e*Sn **Sn 17 12 42.7 -0.4**
BBLS Lazići 4.70 76 *e*Pn **Pn 17 11 49.7 +1.3**
SERS Sersale 4.71 144 P **Pn 17 11 51.0 +2.4**
KOME Kolasin 4.72 88 ⇑*i*Pn Pn 17 11 48.8 +0.1
KOME *i* Sn **Sn 17 12 43.5 0.0**
ZUGS Zugspitze, Sch 4.78 342 *e*Pn **Pn 17 11 52.5 +2.8**
KOVH Kovagotottos 4.80 46 P **Pn 17 11 49.3 -0.5**
PART Garmisch-Parte 4.82 344 *e*Pn **Pn 17 11 52.9 +2.8**
BIOA Bad Ischl, Aus 4.83 4 Pn 17 11 50.4 +0.3
BIOA Bad Ischl, Aus 4.83 4 *i* Pn **Pn 17 11 50.4 +0.3**
comp=N,58nm,0.3s,SNR=1176
LMR La Mourre 4.85 278 *e*P **Pn 17 11 50.0 -0.4**
LMR *e*Sn **Sn 17 12 40.4 -6.2**
comp=N,1µm,1.1s
BLJ Bijeljina 4.85 65 *e*Pn **Pn 17 11 49.3 -1.1**
BLJ *e*Sn **Sn 17 12 45.7 -0.9**
RJOB Jochberg 4.86 358 *e*Pn **Pn 17 11 52.0 +1.4**
RETA Reutte 4.89 341 *i* Pn **Pn 17 11 53.3 +2.2**
comp=N,381nm,0.5s,SNR=689
RETA *e*Sn **Sn 17 12 53.1 +5.3**
comp=N,1µm,0.7s
SCTE Santa Cesarea 4.91 123 Pn **Pn 17 11 52.0 +0.8**
SCTE Santa Cesarea 4.91 123 P **Pn 17 11 49.6 -1.6**
baz=124
SCTE S **Sn 17 12 51.6 +3.3**
baz=124
MBDF Montbardon 4.94 294 *e*P **Pn 17 11 52.3 +0.5**

MBDF eSn Sn 17 12 43.0 -6.1
comp=N,2μm,0.7s
OBER Oberstdorf 4.94 337 ePn Pn 17 11 54.8 +3.1
TEKS Tekeris 4.95 68 ePn Pn 17 11 51.4 -0.4
TEKS Tekeris 4.95 68 ePn Pn 17 11 51.4 -0.4
DAVA Damuels 4.96 334 ePn Pn 17 11 54.3 +2.2
comp=N,60nm,0.4s,SNR=817
DAVA eSn Sn 17 12 55.9 +6.2
comp=N,3μm,0.9s
DAVA Damuels 4.96 334 ePn Pn 17 11 55.0 +3.0
IVA Berane 4.99 88 ePn Pn 17 11 52.7 +0.2
IVA i Sn Sn 17 12 50.2 -0.2
MOA Molln 5.04 9 ePn Pn 17 11 53.5 +0.6
MOA Molln 5.04 9 i Pn Pn 17 11 53.3 +0.3
comp=N,180nm,0.3s,SNR=268
MOA eSn Sn 17 12 51.2 -0.1
comp=N,2μm,0.6s
MOA Molln 5.04 9 ePn Pn 17 11 53.6 +0.6
SJES Sjenica 5.05 83 ePn Pn 17 11 54.1 +0.8
SJES eSn Sn 17 12 52.4 +0.6
SJES Sjenica 5.05 83 ePn Pn 17 11 54.7 +1.4
SJES eSn Sn 17 12 50.2 -1.6
PVY Plav 5.06 91 ePn Pn 17 11 53.7 +0.3
PVY i Sn Sn 17 12 51.9 -0.2
CEL Celeste 5.08 154 Pn Pn 17 11 55.1 +1.5
DIVS Divibare 5.16 74 Pn Pn 17 11 54.6 -0.1
DIVS Divibare 5.16 74⇑ i Pn Pn 17 11 54.8 0.0
DIVS eSn Sn 17 12 54.3 -0.2
DIVS Divibare 5.16 74 ePn Pn 17 11 55.3 +0.5
BCI Bajram Curri 5.17 93 P Pn 17 11 56.6 +1.8
baz=93
BCI S Sn 17 12 54.6 0.0
baz=93
MORH Mrgy, Hungar 5.18 48⇑ i Pn Pn 17 11 54.0 -0.9
MORH eSn Sn 17 12 53.7 -1.0
MORH Mrgy, Hungar 5.18 48 P Pn 17 11 55.0 +0.1
UBR Ueberruh 5.24 337 ePn Pn 17 11 58.3 +2.4
LPG La Plagne 5.26 302 eP Pn 17 11 57.2 +0.9
LPG eSn Sn 17 12 50.6 -6.6
comp=N,2μm,0.7s
TIR Tirane 5.26 105 ⇑P Pn 17 11 56.9 +0.9
TIR Tirane 5.26 105 Pn 17 11 56.7 +0.7
TIR Tirane 5.26 105 P Pn 17 11 56.8 +0.7
TIR Tirane 5.26 105 P Pn 17 11 56.7 +0.7
TIR Tirane 5.26 105 P Pn 17 11 57.5 +1.5
baz=105
TIR S Sg 17 13 56.5 +30
baz=105
TIH Tihany 5.27 39 P Pn 17 11 55.6 -0.5
LPL La Plagne 5.28 302 eP Pn 17 11 57.5 +1.0
LPL eSn Sn 17 12 51.0 -6.6
comp=N,2μm,0.9s
LPL La Plagne 5.28 302 P Pn 17 11 57.2 +0.7
CLTB Caltabellotta 5.30 179 Pn Pn 17 11 58.3 +1.6
MPLH Magyarpolny 5.32 35 P Pn 17 11 55.0 -1.9
RONA Rosalia, Austr 5.32 24 Pn 17 11 56.9 0.0
RONA Sn 17 12 59.6 +1.3
RONA Rosalia, Austr 5.32 24 i Pn Pn 17 11 56.9 0.0
comp=N,218nm,0.4s,SNR=351
RONA eSn Sn 17 12 59.6 +1.3
comp=N,1μm,0.6s
FRGS Fruska Gora 5.35 63⇑ i Pn Pn 17 11 57.1 -0.2
FRGS eSn Sn 17 12 58.0 -1.0
FRGS Fruska Gora 5.35 63 ePn Pn 17 11 57.1 -0.2
VLO Vlora 5.36 115 Pn 17 11 58.7 +1.3
VLO Vlora 5.36 115 P Pn 17 11 58.6 +1.2
VLO Vlora 5.36 115 P Pn 17 11 58.7 +1.3
VLO Vlora 5.36 115 P Pn 17 11 57.5 +0.1
baz=115
SOP Sopron 5.38 26 P Pn 17 11 58.2 +0.4
SOP S Sn 17 12 58.4 -1.5
CONA Conrad Observa 5.41 20 i Pn Pn 17 11 57.7 -0.5
comp=N,8.6nm,0.3s,SNR=577
CONA eSn Sn 17 12 59.7 -0.9
comp=N,1μm,0.6s
SENIN Lac Senin/Sane 5.41 312 Pn 17 11 59.1 +0.8
EGYH Egyhazaskeszo 5.43 32 P Pn 17 11 58.5 +0.1
FUR Furstenfeldbru 5.44 347 ePn Pn 17 12 00.7 +2.2
TRUS Trudelj 5.48 73 ePn Pn 17 11 59.8 +0.8
VAE Valguarnera 5.49 169 Pn Pn 17 12 02.0 +2.7
comp=N,61nm,0.8s,baz=151,slow=2.4,SNR=20
VAE Sn Sn 17 13 08.3 +5.8
baz=307,slow=17
PHP Peshkopia 5.58 100 P Pn 17 12 01.5 +1.1
PHP Peshkopia 5.58 100 P Pn 17 12 02.2 +1.7
baz=100
PHP S Sn 17 12 58.8 -5.9
baz=100
PHP AMP
comp=N,21nm,1.1s,baz=100
SMRF Simiane la Rot 5.59 284 eP Pn 17 12 02.2 +1.6
SMRF eSn Sn 17 12 57.9 -7.0
comp=N,1μm,1.0s
ORIF Oris-en-Rattie 5.60 294 eP Pn 17 12 03.1 +2.3
ORIF eSn Sn 17 12 58.4 -6.9
comp=N,1μm,0.7s
GRUS Gruza 5.64 77 ePn Pn 17 12 01.9 +0.6
GRUS eSn Sn 17 13 03.6 -2.6
CSKK Cskako 5.78 37 P Pn 17 12 03.7 +0.5
SELS Selova 5.89 84 ePn Pn 17 12 04.9 +0.2
SELS eSn Sn 17 13 09.8 -2.5
KEK Kerkira 5.96 120 Pn 17 12 06.5 +0.9
KEK Kerkira 5.96 120 P Pn 17 12 06.9 +1.3
GEC2 GERESS Array S 5.98 4 Pn 17 12 05.2 -0.8
GEC2 GERESS Array S 5.98 4 ePn Pn 17 12 05.6 -0.4
GERES GERESS Array B 5.98 4 Pn Pn 17 12 04.7 -1.3
comp=N,20nm,0.3s,baz=206,slow=24,SNR=259
GERES Sn Sn 17 13 11.7 -2.9
comp=N,171nm,0.3s,baz=183,slow=26,SNR=11
GERES Lg Lg 17 13 44.4
baz=182,slow=31
GERES LR LR 17 15 11.3
comp=N,14μm,18.1s,baz=190,slow=46
comp=N,89nm,0.4s
I26DE FREYUNG INFRAS 5.99 4 I 17 48 00.0
baz=177,slow=327,SNR=0.7
SRN Sarande 5.99 118 P Pn 17 12 07.1 +1.0
SRN Sarande 5.99 118 P Pn 17 12 07.8 +1.7
baz=119
SRN S Sb 17 13 27.0 -6.7
baz=119
SRN AMP
comp=N,6.4nm,0.9s,baz=119
CKRC Cesky Krumlov 6.00 8 ePN Pn 17 12 05.6 -0.6
CKRC eSN Sn 17 13 12.6 -2.4
OHR Ohrid 6.00 105 i Pn Pn 17 12 07.9 +1.6
NORI Noerdlinger Ri 6.09 344 ePn Pn 17 12 07.6 +0.1
NORI eSn Sn 17 13 17.6 +0.4
SRO Srobarova 6.15 35 eP Pn 17 12 09.0 +0.8
KBN Korca 6.18 109 Pn 17 12 09.6 +0.9
KBN Korca 6.18 109 P Pn 17 12 09.6 +0.9
KBN Korca 6.18 109 P Pn 17 12 09.6 +0.9
KBN Korca 6.18 109 P Pn 17 12 09.7 +0.9
baz=109
KBN S Sn 17 13 13.2 -6.3
baz=109
BUD Budapest 6.22 40 P Pn 17 12 09.7 +0.5
MODS Modra-Piesok 6.22 27 eP Pn 17 12 08.5 -0.8
MODS e 17 13 18.1
MODS MLR MLR
comp=Z,42μm,17.6s
CABF La Chapelle 6.23 309 eP Pn 17 12 09.9 +0.4
CABF eSn Sn 17 13 13.6 -7.2
comp=Z,3μm,1.0s
SKO Skopje 6.24 96 i Pn Pn 17 12 10.6 +1.1
LSK Leskovik 6.26 113 P Pn 17 12 10.8 +1.0
LSK Leskovik 6.26 113 P Pn 17 12 11.1 +1.2
baz=114
LSK S Sn 17 13 16.8 -4.7
baz=114
KHC Kasperske Hory 6.26 3 Pn 17 12 08.9 -0.9
KHC Kasperske Hory 6.26 3 eP Pn 17 12 09.4 -0.4
KHC Kasperske Hory 6.26 3 ePN Pn 17 12 09.4 -0.4
WET Wettzell 6.26 359 ePn Pn 17 12 09.4 -0.4
WET eSn Sn 17 13 18.8 -2.8
BANR Banloc 6.30 64 ⇑P Pn 17 12 11.9 +1.6
BOVS Bovan 6.33 80 ePn Pn 17 12 11.0 +0.3
BOVS eSn Sn 17 13 22.3 -0.8
BFO Black Forest 6.39 330 Pn 17 12 11.8 +0.2
BFO Black Forest 6.39 330 P Pn 17 12 11.8 +0.2
BFO Black Forest 6.39 330 ePn Pn 17 12 11.9 +0.2
BFO eSn Sn 17 13 23.0 -1.7
BFO Black Forest 6.39 330 P Pn 17 12 12.0 +0.4

SMOL Smolenice 6.39 27 eP Pn 17 12 10.9 -0.7
SMOL e 17 13 24.5
IGT Igoumenitsa 6.40 119 P Pn 17 12 12.8 +1.1
VIVF Saint-Julien-l 6.40 291 eP Pn 17 12 13.1 +1.3
VIVF eSn Sn 17 13 17.5 -7.5
comp=Z,625nm,1.0s
BARS Barje 6.41 88 ePn Pn 17 12 12.3 +0.5
KUBS Kucevo 6.41 73 ePn Pn 17 12 11.2 -0.6
NEST Nestorio 6.44 110 P Pn 17 12 14.3 +1.9
AMBH Ambrzfalva 6.45 55 ⇓P Pn 17 12 15.0 +2.7
TIM Timisoara 6.49 61 ⇑P Pn 17 12 14.8 +1.9
STU Stuttgart 6.49 337 Pn 17 12 13.5 +0.6
STU Stuttgart 6.49 337 P Pn 17 12 13.5 +0.6
STU Stuttgart 6.49 337 ePn Pn 17 12 14.1 +1.1
MDVR Moldovita 6.51 70 ⇓P Pn 17 12 13.9 +0.6
KRUC Moravsky 6.59 19 ePN Pn 17 12 13.6 -0.7
KRUC eSN Sn 17 13 26.6 -3.0
PENT Pentalofos 6.60 111 P Pn 17 12 15.9 +1.3
HINF Hinteralfeld 6.61 320 eP Pn 17 12 14.4 -0.2
HINF eSn Sn 17 13 22.3 -7.8
comp=Z,9μm,0.9s
SSB Saint Sauveur 6.61 294 Pn 17 12 14.8 +0.1
SSB Saint Sauveur 6.61 294 P Pn 17 12 14.8 +0.1
JAN Janina 6.67 116 P Pn 17 12 15.5 +0.1
ZAGS Zajecar 6.72 79 ePn Pn 17 12 15.8 -0.3
ZAGS eSn Sn 17 13 30.5 -2.3
BSZH Besenyszg 6.72 46 P Pn 17 12 20.9 +4.7
ECH Echery 6.77 324 Pn 17 12 16.7 -0.1
ECH Echery 6.77 324 P Pn 17 12 16.7 -0.1
JAVC Velka Javorina 6.78 26 ePN Pn 17 12 16.8 -0.1
LASF Ste Croix 6.83 283 eP Pn 17 12 18.1 +0.5
LASF eSn Sn 17 13 27.7 -7.8
comp=Z,441nm,1.0s
STIP Stip 6.84 97 i Pn Pn 17 12 20.4 +2.6
KPRO Kipourio 6.87 112 P Pn 17 12 19.8 +1.6
VRAC Vranov 6.87 19 Pn Pn 17 12 17.3 -0.8
comp=Z,9.1nm,0.3s,baz=208,slow=13,SNR=64
VRAC Sn Sn 17 13 31.8 -4.6
comp=Z,36nm,0.3s,baz=114,slow=22,SNR=9.3
VRAC Lg Lg 17 14 14.4
baz=138,slow=22
VRAC LR LR 17 15 04.3
comp=Z,9μm,18.6s,baz=208,slow=39
comp=Z,83nm,0.7s
VRAC Vranov 6.87 19 ePN Pn 17 12 17.0 -1.2
VRAC eSN Sn 17 13 32.7 -3.8
CDF Champ du Feu 6.87 326 eP Pn 17 12 18.8 +0.6
CDF eSn Sn 17 13 28.7 -7.9
comp=Z,3μm,0.8s
VYHS Vyhne 6.90 34 eP Pn 17 12 18.8 +0.2
VYHS MLR MLR
comp=Z,28μm,15.2s
ROTZ Rotzenmuhle 6.91 355 ePn Pn 17 12 17.4 -1.4
ROTZ eSn Sn 17 13 33.5 -4.1
GRFO Grafenberg 6.93 350 Pn 17 12 18.0 -1.0
GRFO Grafenberg 6.93 350 P Pn 17 12 18.0 -1.0
GRA1 Grafenberg Arr 6.94 350 Pn 17 12 18.1 -0.9
GRF Grafenberg Arr 6.94 350 P Pn 17 12 18.1 -0.9
GRF Grafenberg Arr 6.94 350 ePn Pn 17 12 18.5 -0.6
HAU Haudompre 6.98 320 eP Pn 17 12 19.9 +0.2
HAU eSn Sn 17 13 31.5 -7.8
comp=Z,9μm,0.9s
SIRR Siria 6.99 58 ⇑P Pn 17 12 21.8 +2.0
KZN Kozani 6.99 109 P Pn 17 12 20.1 +0.2
ZAPS Zavoj 6.99 84 ePn Pn 17 12 20.5 +0.6
ZAPS eSn Sn 17 13 37.0 -2.5
TSLK Tsoukalades, L 7.01 123 P Pn 17 12 21.1 +0.9
HERR Herculane 7.02 70 ⇑P Pn 17 12 21.4 +1.2
BLKB Belogradchik 7.03 81 ⇑P Pn 17 12 21.2 +0.8
LKD2 Lefkada island 7.04 123 P Pn 17 12 21.4 +0.9
DJES Djerdap 7.05 72 ⇑P Pn 17 12 21.7 +1.1
DRAG Dragano-Lefkad 7.05 124 P Pn 17 12 21.1 +0.4
NYDR Nydri-Lefkada 7.11 123 P Pn 17 12 21.6 +0.2
WDD Wied Dalam 7.12 171 Pn Pn 17 12 21.2 -0.4
GOPC GO Pecny, Ondr 7.13 9 eP Pn 17 12 20.8 -0.9
GOPC GO Pecny, Ondr 7.13 9 ePN Pn 17 12 20.8 -0.9
MANZ Manzenberg 7.14 355 ePn Pn 17 12 20.9 -1.0
MANZ eSn Sn 17 13 38.8 -4.3
EVGI Lefkada island 7.14 124 P Pn 17 12 22.6 +0.7
RMGR Halanga-Turnu 7.17 72 ⇑P Pn 17 12 24.0 +1.8
PRU Pruhonice 7.18 7 eP Pn 17 12 21.4 -1.0
PRU e 17 13 41.3
PRU Pruhonice 7.18 7 ePN Pn 17 12 21.4 -1.0
PRU eSN Sn 17 13 41.3 -2.7
FSK Fiskardo 7.19 125 P Pn 17 12 23.0 +0.5
KTI Kastanea 7.20 107 P Pn 17 12 22.4 -0.4
GRG Griva 7.20 102 P Pn 17 12 22.6 -0.1
VAY Valandovo 7.21 99 i Pn Pn 17 12 23.0 +0.1
DMLN Damoulianata-K 7.22 128 P Pn 17 12 23.8 +0.8
KEF3 Kipouria, Keph 7.23 128 P Pn 17 12 23.9 +0.8
KEF4 Livadi, Kephal 7.24 127 P Pn 17 12 23.9 +0.7
PUNG Punghina 7.28 76 ⇑P Pn 17 12 25.1 +1.4
MAHO Mahon 7.28 249 P Pn 17 12 24.8 +1.0
MAHO S Sb 17 14 01.7 -8.9
MAHO Mahon 7.28 249 Pn 17 12 23.9 +0.2
NKC Novy Kostel 7.37 357 eP Pn 17 12 24.6 -0.4
NKC Novy Kostel 7.37 357 ePN Pn 17 12 24.6 -0.4
VLS Valsamata 7.39 127 P Pn 17 12 25.8 +0.5
GZR Gura Zlata 7.40 67 ⇑P Pn 17 12 26.5 +1.0
PSDA Pessada-Kefalo 7.43 127 P Pn 17 12 26.6 +0.8
BORR Bors 7.46 53 ⇓P Pn 17 12 28.7 +2.5
VTS Vitosha 7.47 89 ⇑P Pn 17 12 27.8 +1.4
VTS Vitosha 7.47 89 Pn 17 12 26.4 -0.1
VTS Vitosha 7.47 89 P Pn 17 12 26.4 -0.1
THL Klokotos Trika 7.49 113 P Pn 17 12 26.7 0.0
KNT Kendrikon 7.50 100 P Pn 17 12 26.0 -0.8
SRE Strehaia 7.53 73 ⇑P Pn 17 12 28.5 +1.3
BAIL Bailesti 7.54 78 ⇓P Pn 17 12 29.4 +2.0
MORC Moravsky Berou 7.55 22 Pn Pn 17 12 26.4 -1.1
MORC Moravsky Berou 7.55 22 P Pn 17 12 26.4 -1.1
MORC Moravsky Berou 7.55 22 ePN Pn 17 12 26.9 -0.6
LIT Litokhoron 7.58 108 Pn Pn 17 12 27.3 -0.6
LIT Litokhoron 7.58 108 P Pn 17 12 27.7 -0.2
LIT Litokhoron 7.58 108 P Pn 17 12 27.3 -0.6
SMF Signal de Mont 7.59 303 eP Pn 17 12 27.8 -0.2
SMF eSn Sn 17 13 45.8 -8.3
comp=Z,980nm,0.7s
KECS Kecovo 7.62 40 eP Pn 17 12 29.8 +1.3
CMAH Djebel Manchou 7.63 217 P Pn 17 12 32.0 +3.4
KRLC Kraliky 7.63 18 eP Pn 17 12 28.4 -0.2
KRLC MLR MLR
comp=Z,16μm,9.0s
KRLC Kraliky 7.63 18 ePN Pn 17 12 28.4 -0.2
KRLC AMS AMS 17 15 50.0
comp=Z,16μm,9.0s
DEV Deva 7.64 64 ⇑P Pn 17 12 30.3 +1.6
PAGF Fort de Pagny 7.67 320 eP Pn 17 12 29.4 +0.3
baz=140
PAGF eSn Sn 17 13 47.7 -8.3
comp=Z,5μm,1.0s,baz=126
LTVH Ltavrtes, Hu 7.68 51 ⇓P Pn 17 12 31.5 +2.3
LTVH Ltavrtes, Hu 7.68 51 P Pn 17 12 31.6 +2.3
PVO Paravola 7.68 121 P Pn 17 12 30.7 +1.4
EVR Evrytania 7.69 118 P Pn 17 12 31.1 +1.5
KEST Kesra 7.71 203 Pn Pn 17 12 34.0 +4.2
comp=Z,16nm,0.3s,baz=314,slow=3.2,SNR=112
KEST Sn Sn 17 13 59.6 +2.4
baz=65,slow=19
KEST Kesra 7.71 203 Pn Pn 17 12 33.2 +3.5
KEST Kesra 7.71 203 P Pn 17 12 34.5 +4.7
SNR=192
KEST P Pn 17 12 34.5 +4.7
SNR=192
THE Thessaloniki 7.71 104 P Pn 17 12 28.8 -0.9
PVCC Panska Ves 7.71 7 eP Pn 17 12 28.4 -1.3
PVCC Panska Ves 7.71 7 ePN Pn 17 12 28.4 -1.3
SFTF Sexfontaines 7.77 316 eP Pn 17 12 30.4 0.0
baz=136
SFTF eSn Sn 17 13 49.9 -8.6
comp=Z,2μm,1.2s
OKC Ostrava-Krasne 7.78 25 eP Pn 17 12 30.7 +0.1
OKC Ostrava-Krasne 7.78 25 ePN Pn 17 12 30.7 +0.1
DPC Dobruska-Polom 7.79 15 AMS AMS 17 15 50.0
comp=Z,19μm,11.2s
HORT Hortiatis 7.82 104 P Pn 17 12 30.7 -0.6
MOX Moxa 7.83 353 P Pn 17 12 30.2 -1.1
MOX Moxa 7.83 353 ePn Pn 17 12 30.1 -1.2
LTHK Lithakia 7.85 129 P Pn 17 12 31.7 +0.1
MAKR Makrakomi, Fth 7.85 116 P Pn 17 12 33.0 +1.3
ABAH Abaujker 7.87 44 P Pn 17 12 31.9 +0.1
DRGR 7.87 57 ⇓P Pn 17 12 34.1 +2.2
DRGR 7.87 57 P Pn 17 12 33.5 +1.6

LOR Lormes 7.87 307 eP Pn 17 12 31.6 -0.3
baz=125
LOR eSn Sn 17 13 52.9 -8.2
comp=Z,667nm,0.6s
UPC Upice 7.89 14 eP Pn 17 12 31.0 -1.1
UPC Upice 7.89 14 ePN Pn 17 12 31.0 -1.1
SOH Sokhos 7.93 102 P Pn 17 12 32.4 -0.3
AVF Avril sur Loir 7.95 303 eP Pn 17 12 33.1 +0.1
AVF eSn Sn 17 13 54.6 -8.4
comp=Z,100nm,0.5s
MEZF Maizieres J'vi 7.96 318 eP Pn 17 12 33.3 +0.3
baz=138
MEZF eSn Sn 17 13 54.8 -8.3
comp=Z,1μm,0.8s
OSTC Ostas 7.97 14 ePN Pn 17 12 32.4 -0.8
CHVC Chvalec 7.97 14 ePN Pn 17 12 32.2 -1.1
MTLF Montolieu 7.98 277 eP Pn 17 12 33.4 +0.1
MTLF eSn Sn 17 13 55.0 -8.7
comp=Z,229nm,0.9s
SSF Saint Saulge 7.98 305 eP Pn 17 12 33.1 -0.3
SSF eSn Sn 17 13 55.2 -8.6
comp=Z,462nm,0.8s
RLS Riolos of Patr 7.99 124 P Pn 17 12 34.5 +1.0
SAVF Savonnieres en 8.00 319 eP Pn 17 12 34.7 +1.1
baz=129
SAVF eSn Sn 17 13 55.5 -8.6
comp=Z,2μm,0.9s,baz=154
TNS Taunus Mts 8.01 338 ePn Pn 17 12 34.7 +0.9
SRS Serrai 8.01 99 P Pn 17 12 33.6 -0.2
BRG Berggiesshubel 8.02 4 eP Pn 17 12 43.0 +9.2
BRG e 17 13 58.1
BRG pmax pmax
comp=Z,131nm,0.8s
BRG MLR MLR
comp=Z,14μm,16.2s
BRG MLR MLR
comp=N,11μm,14.7s
BRG MLR MLR
comp=E,15μm,13.9s
EFP Efpalio 8.04 121 P Pn 17 12 35.3 +1.1
UPR University Cam 8.05 122 P Pn 17 12 37.6 +3.3
LOT Lotru 8.09 68 ⇑P Pn 17 12 37.2 +2.3
SERG Sergoula 8.14 120 P Pn 17 12 37.0 +1.4
NVR Nevrokopi 8.15 97 P Pn 17 12 36.1 +0.4
NAST IGS Nastaetten 8.16 336 ePn Pn 17 12 37.6 +1.8
CEI Carei 8.16 51 ⇓P Pn 17 12 38.4 +2.6
BGF Bois d'Agland 8.17 300 eP Pn 17 12 36.1 +0.1
BGF eSn Sn 17 13 59.8 -8.7
comp=E,904nm,0.9s
MESR Meseseni 8.18 55 ⇓P Pn 17 12 38.6 +2.5
LAKA Lakka 8.19 121 P Pn 17 12 37.8 +1.4
DRO Drossia 8.21 124 P Pn 17 12 37.5 +1.0
CAF Calviac 8.23 288 eP Pn 17 12 38.2 +1.4
CAF eSn Sn 17 14 01.3 -8.6
comp=E,229nm,1.0s
CAF Calviac 8.23 288 P Pn 17 12 37.7 +0.9
KSP Ksiaz 8.26 14 eP Pn 17 12 36.4 -0.8
KSP eL L 17 16 04.1
comp=E,17μm,18.0s
VLAD Vladila 8.30 78 ⇓P Pn 17 12 39.3 +1.5
WLF Walferdange 8.31 327 Pn Pn 17 12 38.8 +0.9
WLF Walferdange 8.31 327 P Pn 17 12 38.8 +0.9
WLF Walferdange 8.31 327 dP Pn 17 12 39.7 +1.7
WLF Walferdange 8.31 327 ePn Pn 17 12 39.6 +1.7
BGG Burgeitz 8.33 334 ePn Pn 17 12 40.0 +1.9
AXAR Agios Charalam 8.33 116 P Pn 17 12 38.7 +0.5
CASM Ain Smara 8.35 220 P Pn 17 12 37.0 -1.5
CRVS Cervenica-Dubn 8.38 41 eP Pn 17 12 40.0 +1.2
CBBR Cluj-Babes-Bol 8.38 59 ⇓P Pn 17 12 40.3 +1.4
CJR Cluj-Napoca 8.39 59 ⇓P Pn 17 12 41.4 +2.4
KOKK Kokkinochori, 8.39 101 P Pn 17 12 38.6 -0.5
KOE Koeppel 8.40 336 ePn Pn 17 12 41.5 +2.4
KLV Kalavryta, Ach 8.42 122 P Pn 17 12 40.7 +1.2
DFRA Djebel Bou Aff 8.43 224 P Pn 17 12 41.0 +1.4
CLL Collm 8.43 360 Pn Pn 17 12 37.7 -1.8
CLL Collm 8.43 360 eP Pn 17 12 38.0 -1.5
CLL pmax pmax
comp=Z,192nm,0.9s
CLL MLR MLR
comp=Z,13μm,18.0s
CLL Collm 8.43 360 ePn Pn 17 12 38.0 -1.5
comp=Z,192nm,0.9s
CLL i x x 17 12 46.1
CLL ex x 17 13 18.0
CLL eSn Sn 17 14 00.0 -15
CLL ex x 17 14 13.0
CLL ex x 17 14 30.0
CLL eSg Sg 17 15 09.0 +1.4
comp=Z,1μm,1.1s
CLL LmV 17 16 00.0
comp=Z,13μm,18.0s
CLL Lmax 17 16 00.0
NEO Neokhori 8.44 112 P Pn 17 12 39.0 -0.7
TRPA Tarpa 8.45 48 ⇑P Pn 17 12 42.1 +2.3
TRPA Tarpa 8.45 48 P Pn 17 12 41.3 +1.5
PAIG Paliouri 8.48 107 P Pn 17 12 38.7 -1.6
TCF Toulx Ste Croi 8.48 297 eP Pn 17 12 40.7 +0.4
TCF eSn Sn 17 14 07.5 -8.7
comp=Z,254nm,0.7s
HYF Humbligny 8.60 304 eP Pn 17 12 43.9 +2.0
HYF eSn Sn 17 14 10.0 -9.0
LKR Lokris 8.62 116 P Pn 17 12 41.3 -0.8
UZH Uzhgorod 8.62 45 eP Pn 17 12 45.8 +3.7
UZH eS Sn 17 14 24.8 +5.4
UZH MLR MLR
comp=N,5μm,16.0s
UZH MLR MLR
comp=E,6μm,16.0s
HILG Hillesheim 8.63 331 ePn Pn 17 12 44.2 +2.0
STHS Stebnicka Huta 8.64 38 eP Pn 17 12 42.5 +0.1
ARR Arges 8.66 69 ⇑P Pn 17 12 44.7 +1.9
OJC Ojcow 8.67 30 eP Pn 17 12 42.3 -0.5
OJC eL L 17 16 41.6
comp=E,14μm,16.8s
OJC Ojcow 8.67 30 Pn Pn 17 12 41.9 -0.9
OJC Ojcow 8.67 30 P Pn 17 12 41.9 -0.9
RJF Les Rejaudoux 8.68 290 eP Pn 17 12 45.1 +2.1
RJF eSn Sn 17 14 12.0 -9.0
comp=E,252nm,1.0s
MDB Medias 8.70 64 ⇓P Pn 17 12 45.7 +2.5
KAVA Kavala 8.71 99 P Pn 17 12 43.3 -0.1
THAL Thalero 8.75 120 P Pn 17 12 45.0 +1.1
BMR Baia Mare 8.76 53 ⇑P Pn 17 12 46.7 +2.7
HUMR Humele 8.76 75 ⇑P Pn 17 12 45.5 +1.4
STFAR Stefanesti-Arg 8.79 73 ⇓P Pn 17 12 46.8 +2.2
KOLS Kolonicke sedl 8.80 43 eP Pn 17 12 49.7 +5.1
TRIP Tripoli 8.82 124 P Pn 17 12 39.1 -5.9
STB Steinbach 8.83 333 ePn Pn 17 12 47.7 +2.7
ITM Ithomi 8.84 127 Pn Pn 17 12 46.3 +1.0
ITM Ithomi 8.84 127 P Pn 17 12 46.0 +0.7
COPA Copaceanca 8.90 78 ⇓P Pn 17 12 47.9 +2.0
TGMR Targu Mures 8.91 62 ⇑P Pn 17 12 48.8 +2.6
BHOU Houvegnez 8.92 329 dP Pn 17 12 47.4 +1.1
BHOU dS Sn 17 14 21.5 -5.4
PYL PYLOS 8.93 129 P Pn 17 12 46.7 +0.2
VOIR 8.96 69 ⇓P Pn 17 12 49.0 +2.0
LOUT Loutraki 8.97 120 P Pn 17 12 47.6 +0.6
THAS Thassos island 8.98 101 P Pn 17 12 40.8 -6.3
HOBG Hohbusch 9.01 336 ePn Pn 17 12 49.1 +1.6
ARCR ARCALIA 9.01 58 ⇑P Pn 17 12 49.9 +2.3
BNS Bensberg 9.04 335 ePn Pn 17 12 49.8 +1.9
KLL Kalltalsperre 9.05 331 ePn Pn 17 12 49.6 +1.5
BTNL Ternell 9.07 331 dP Pn 17 12 50.1 +1.8
RCHB Rochefort 9.07 326 dP Pn 17 12 49.3 +1.0
RCHB dS Sn 17 14 26.1 -4.4
VILL Villia 9.09 118 P Pn 17 12 47.8 -0.9
DREG Dreilaegerbach 9.09 331 ePn Pn 17 12 51.0 +2.4
DREG eSn Sn 17 14 31.0 -0.1
comp=E,148nm,0.9s
MEM Membach 9.13 330 dP Pn 17 12 51.0 +1.9
LFF La Frestale 9.16 287 eP Pn 17 12 51.4 +1.9
LFF eSn Sn 17 14 23.1 -10
comp=E,178nm,0.8s
LFF La Frestale 9.16 287 P Pn 17 12 51.9 +2.4
CLF Chambon-Foret 9.19 308 Pn 17 12 49.3 -0.6
GIVF Givet 9.20 325 eP Pn 17 12 52.0 +1.9
GIVF eSn Sn 17 14 24.3 -9.4
comp=E,1μm,0.9s
BCLA Clavier 9.25 327 dP Pn 17 12 52.0 +1.2
BCLA dS Sn 17 14 29.9 -4.9
BSTI Sart Tilman 9.27 329 dP Pn 17 12 53.2 +2.1
EPID Epidavros 9.29 121 P Pn 17 12 51.3 -0.1

DOU	Dourbes	9.29	324	dP		Pn	17 12 52.4	+1.0
DOU				dS		Sn	17 14 31.1	-4.9
BGES	Gesves	9.31	327	dP		Pn	17 12 53.5	+2.0
BGES				dS		Sn	17 14 29.8	-6.5
DOPR	Dopca	9.32	66	⇓P		Pn	17 12 53.6	+1.9
EPF	Esparros	9.36	275	eP		Pn	17 12 54.3	+1.9
EPF				eSn		Sn	17 14 28.1	-10
comp=E,138nm,1.1s								
KYMI	Kymi, Euboea I	9.36	113	P		Pn	17 12 50.1	-2.3
BMRD	Maredsous	9.38	325	dP		Pn	17 12 53.5	+1.1
BEBN	Eben Emael	9.40	330	dP		Pn	17 12 54.9	+2.1
BEBN				dS		Sn	17 14 38.9	+0.2
RDO	Rodhopi	9.42	96			Pn	17 12 53.4	+0.3
RDO	Rodhopi	9.42	96	P		Pn	17 12 52.6	-0.5
BAIF	Baives	9.44	323	eP		Pn	17 12 54.3	+1.0
BAIF				eSn		Sn	17 14 30.2	-9.3
comp=E,516nm,0.8s								
SGRR	Singureni	9.45	77	⇓P		Pn	17 12 55.2	+1.7
LAUG	Laupendahl	9.45	336	ePn		Pn	17 12 55.6	+2.1
KRND	KRANIDI	9.45	122	P		Pn	17 12 54.0	+0.4
ATHU	Athens Univers	9.51	118	P		Pn	17 12 54.8	+0.4
VLY	Voula,Athens	9.58	118	P		Pn	17 12 55.5	+0.1
MLR	Muntele Rosu	9.59	70	⇑P		Pn	17 12 57.4	+1.8
MLR	Muntele Rosu	9.59	70	Pn		Pn	17 12 57.1	+1.6
comp=E,5.7nm,0.3s,baz=230,slow=6.3,SNR=86								
MLR				Sn		Sn	17 14 38.2	-5.3
comp=E,0.6nm,0.3s,baz=169,slow=19,SNR=0.9								
MLR				Lg		Lg	17 15 52.9	
comp=E,0.4nm,0.3s,baz=128,slow=22,SNR=0.9								
MLR				LR		LR	17 17 30.9	
comp=E,37μm,20.3s,baz=272,slow=43								
comp=E,84nm,0.8s								
MLR	Muntele Rosu	9.59	70			Pn	17 12 56.3	+0.7
MLR	Muntele Rosu	9.59	70	P		Pn	17 12 56.3	+0.7
SECR		9.60	73	⇑P		Pn	17 12 57.8	+2.2
SMTH	Samothraki Isl	9.61	100	P		Pn	17 12 53.8	-1.9
OZUR		9.62	66	⇑P		Pn	17 12 58.1	+2.2
SULR		9.69	75	⇑P		Pn	17 12 58.6	+1.9
SNF	Seneffe	9.73	325	dP		Pn	17 12 57.8	+0.4
VLI	Veliai	9.75	126	P		Pn	17 12 59.3	+1.6
BURAR	Bucovina Array	9.77	57	⇑P		Pn	17 13 00.5	+2.6
BURAR	Bucovina Array	9.77	57			Pn	17 12 59.6	+1.7
BUR08	Bucovina Ar. S	9.77	57	Pn		Pn	17 13 00.3	+2.3
RAZG	Razgrad	9.81	81	⇓P		Pn	17 12 59.3	+0.7
NEHR	Nehoiu	9.82	70	⇓P		Pn	17 13 01.2	+2.6
COVR	Voineasa-Covas	9.84	68	⇓P		Pn	17 13 01.4	+2.5
ISR	Istrita	9.94	72	⇓P		Pn	17 13 02.2	+1.8
ETSF	Etsaut	10.03	275	eP		Pn	17 13 03.7	+2.2
ETSF				eSn		Sn	17 14 44.3	-10
comp=E,93nm,1.0s								
LEHL	Lehliu	10.07	76	⇑P		Pn	17 13 03.2	+1.2
BIZ	Bicaz	10.08	62	⇑P		Pn	17 13 04.6	+2.5
KTHR	Kythira	10.10	128	P		Pn	17 13 04.5	+2.0
MFF	Saint Martin d	10.13	296	eP		Pn	17 13 04.1	+1.3
MFF				eSn		Sn	17 14 46.5	-10
comp=E,111nm,0.7s								
MFF	Saint Martin d	10.13	296	P		Pn	17 13 03.4	+0.6
KTHA	Kythira Island	10.14	127	P		Pn	17 13 04.6	+1.6
PLOR	Plostina	10.15	68	⇓P		Pn	17 13 04.7	+1.6
VRI	Vrincioaia	10.20	68	⇓P		Pn	17 13 05.4	+1.6
LVV	L'vov	10.25	44	eP		Pn	17 13 07.0	+2.5
LVV				eS		Sn	17 15 05.0	+5.5
LVV					MLR	MLR		
comp=Z,23μm,9.0s								
RASA	Rasa	10.29	78	⇑P		Pn	17 13 06.9	+1.9
TESR	Tescani	10.31	65	⇑P		Pn	17 13 07.4	+2.1
SIGR	SIGRI	10.31	107	P		Pn	17 13 03.5	-1.8
BEL	Belsk	10.36	27	eP		Pn	17 13 06.7	+0.7
BEL				eL		L	17 17 55.4	
comp=Z,17μm,13.9s								
ODBI	Odobesti	10.41	69	⇓P		Pn	17 13 08.7	+2.1
AMRR	Amara	10.45	76	⇓P		Pn	17 13 08.5	+1.4
SJPF	Ste Jean	10.50	276	eP		Pn	17 13 09.9	+2.0
SJPF				eSn		Sn	17 14 55.2	-10
comp=Z,61nm,0.9s								
ANKY	Antikythira Is	10.55	128	P		Pn	17 13 10.7	+2.1
PRK	Paraskevi	10.59	106	P		Pn	17 13 09.9	+0.8
GHRR		10.71	68	⇑P		Pn	17 13 12.8	+2.1
LDF	La Druitiere	10.86	306	eP		Pn	17 13 14.7	+1.9
LDF				eSn		Sn	17 15 04.2	-10
comp=Z,260nm,0.8s								
DRBR	Darabani	10.86	56	⇑P		Pn	17 13 15.7	+2.8
HARR	Harsova	10.88	75	⇓P		Pn	17 13 15.2	+2.2
CVDA	Cernavoda	10.93	77	⇑P		Pn	17 13 15.7	+1.9
TLBR	Topalu	10.95	76	⇓P		Pn	17 13 15.0	+0.9
VARL	Varlezi	10.98	69	⇓P		Pn	17 13 16.6	+2.2
SCTR	Scanteiesti	11.04	70	⇑P		Pn	17 13 17.2	+1.9
TATR	Tatarca	11.07	71	⇑P		Pn	17 13 17.6	+2.0
CFR	Carcaliu	11.07	73	⇑P		Pn	17 13 15.7	0.0
IAS	Iasi	11.10	62	⇓P		Pn	17 13 18.8	+2.8
VASR	Vaslui	11.10	65	⇓P		Pn	17 13 18.5	+2.3
FLN	La Foliniere	11.15	307	eP		Pn	17 13 18.6	+1.9
FLN				eSn		Sn	17 15 10.8	-11
comp=Z,517nm,1.1s								
APE	Apeiranthos	11.16	117	⇓P		Pn	17 13 18.0	+1.0
APE	Apeiranthos	11.16	117	deP		Pn	17 13 17.1	+0.1
TIRR	Tirgusor	11.21	77	⇑P		Pn	17 13 17.7	+0.2
TIRR	Tirgusor	11.21	77	⇑P		Pn	17 13 17.7	+0.2
TIRR	Tirgusor	11.21	77			Pn	17 13 17.4	-0.2
TIRR	Tirgusor	11.21	77	P		Pn	17 13 17.4	-0.2
GRR	Gorron	11.21	304	eP		Pn	17 13 17.2	-0.4
GRR				eSn		Sn	17 15 12.4	-11
comp=Z,296nm,1.0s								
IMMV	Iera Moni Meta	11.23	128	P		Pn	17 13 17.7	-0.2
TPGR	Topolog	11.24	75	⇑P		Pn	17 13 19.6	+1.6
MANR	Mangalia	11.32	80	⇓P		Pn	17 13 19.8	+0.6
EFOR	EFORIE	11.35	79	⇓P		Pn	17 13 21.6	+2.0
SANT	Santorini	11.53	120	⇑P		Pn	17 13 23.0	+0.9
SANT	Santorini	11.53	120			Pn	17 13 20.9	-1.2
JURR	Jurilovca	11.55	75	⇓P		Pn	17 13 24.2	+1.9
RGN	Rugen	11.68	1			Pn	17 13 23.1	-0.8
MILM	Milestii Mici	11.85	65	⇑P		Pn	17 13 27.9	+1.6
MILM	Milestii Mici	11.85	65	⇑iP		Pn	17 13 26.0	-0.3
comp=Z,360nm,1.6s								
MILM				eS		Sn	17 15 40.0	+1.4
MILM				eL		L	17 16 07.0	
MILM				LqM			17 17 54.0	
comp=Z,22μm,15.5s								
MILM				LRM		MLR	17 19 02.0	
comp=Z,32μm,11.0s								
MILM	Milestii Mici	11.85	65	c iP		Pn	17 13 26.0	-0.3
MILM				eS		Sn	17 15 40.0	+1.4
MILM				pmax		pmax		
comp=Z,21μm,7.6s								
MILM				MLR		MLR		
comp=E,28μm,11.0s								
MILM				MLR		MLR		
comp=Z,32μm,11.0s								
KIS	Kishinev	11.87	64	⇑P		Pn	17 13 28.9	+2.2
KIS	Kishinev	11.87	64	⇑iP		Pn	17 13 26.0	-0.7
KIS				eS		Sn	17 15 38.0	-1.2
KIS				eL		L	17 16 29.0	
KIS				LqM			17 17 51.0	
comp=Z,11μm,15.0s								
KIS				LRM		MLR	17 19 02.0	
comp=Z,18μm,12.0s								
KIS	Kishinev	11.87	64	c iP		Pn	17 13 26.0	-0.7
KIS				eS		Sn	17 15 38.0	-1.2
KIS				pmax		pmax		
comp=Z,650nm,3.1s								
KIS				MLR		MLR		
comp=Z,18μm,12.0s								
IDI	Anoyia	11.88	126	⇓P		Pn	17 13 28.4	+1.4
IDI	Anoyia	11.88	126	Pn		Pn	17 13 26.8	-0.2
comp=Z,5.0nm,0.3s,baz=302,slow=19,SNR=19								
IDI				Sn		Sn	17 15 28.5	-11
comp=Z,2.4nm,0.3s,baz=313,slow=14,SNR=2.3								
IDI				LR		LR	17 19 42.5	
comp=Z,3μm,18.9s,baz=306,slow=46								
comp=Z,25nm,0.7s								
IDI	Anoyia	11.88	126			Pn	17 13 28.8	+1.9
CART	Cartagena	12.00	249	P		Pn	17 13 29.8	+1.3
CART				S		Sn	17 16 10.2	+28
CART	Cartagena	12.00	249	Pn		Pn	17 13 27.2	-1.3
CART	Cartagena	12.00	249	P		Pn	17 13 34.0	+5.6
SGMF	Saint Gilles	12.21	301	ePn		Pn	17 13 31.6	+0.3
SGMF				eSn		Sn	17 15 36.3	-11
comp=Z,172nm,1.0s								
BSD	Bornholm Skovb	12.30	5	eP		Pn	17 13 30.6	-1.9
BSD	Bornholm Skovb	12.30	5	eP		Pn	17 13 29.1	-3.4
BSD				IAmb		IAmb	17 13 47.7	
comp=Z,40nm,0.8s								
QUIF	Quistinic	12.48	299	eP		Pn	17 13 34.1	-0.9
QUIF				eSn		Sn	17 15 42.8	-11
comp=Z,94nm,0.8s								
UCM	Universidad Co	12.50	264	P		Pn	17 13 34.0	-1.4
UCM				S		Sn	17 16 09.0	+14
KLNR	Kaliningrad	12.62	19	ceP		Pn	17 13 38.3	+1.4
ROSF	Rostrenen	12.69	301	eP		Pn	17 13 36.4	-1.4
ROSF				eSn		Sn	17 15 47.6	-12
comp=Z,288nm,1.2s								
COP	Copenhagen	12.82	358	eP		Pn	17 13 41.2	+1.6
COP				IAmb		IAmb	17 13 57.6	
comp=Z,172nm,1.0s								
KARP	Karpathos	13.12	119	Pn		Pn	17 13 45.2	+1.4
ESBB	Sonseca Array	13.23	262			Pn	17 13 43.0	-2.3
ESDC	Sonseca Array	13.23	262	Pn		Pn	17 13 43.3	-2.0
comp=Z,0.3nm,0.3s,baz=72,slow=12,SNR=48								
ESDC				Sn		S	17 16 27.9	-9.5
baz=74,slow=12								
ESDC				LR		LR	17 18 45.8	
comp=Z,13μm,19.8s,baz=60,slow=37								
comp=Z,19nm,0.8s								
ESDC	Sonseca Array	13.23	262			Pn	17 13 44.1	-1.1
ARG	Arkhangelos	13.36	115			Pn	17 13 46.1	-1.0
ARG	Arkhangelos	13.36	115	P		Pn	17 13 46.1	-1.0
AKASG	Malin Array Be	13.52	49	Pn		Pn	17 13 48.1	-1.0
comp=Z,0.7nm,0.3s,baz=242,slow=12,SNR=37								
AKASG				Sn		Sn	17 16 14.1	-5.3
baz=29,slow=12								
AKASG				Lg		Lg	17 17 45.4	
baz=340,slow=30								
AKASG				PcP		PcP	17 19 15.2	-0.5
comp=Z,2.2nm,0.7s,baz=269,slow=1.8,SNR=4.4								
AKASG				LR		LR	17 19 37.3	
comp=Z,8μm,19.1s,baz=239,slow=40								
comp=Z,47nm,1.1s								
AKASG	Malin Array Be	13.52	49	Pn		Pn	17 13 47.9	-1.1
AKBB	Malin Array Si	13.52	49			Pn	17 13 48.5	-0.5
AKBB	Malin Array Si	13.52	49	ceP		Pn	17 13 48.1	-1.0
PAB	San Pablo	13.55	262			Pn	17 13 48.2	-1.5
PAB	San Pablo	13.55	262	P		Pn	17 13 48.2	-1.5
DEL	Delary	13.61	2	eP		Pn	17 13 50.3	0.0
MDUB	Mudurnu	13.74	94			Pn	17 13 51.9	-0.4
MUD	Monsted U'grnd	13.82	351	i P		Pn	17 13 54.9	+1.7
ISP	Isparta	14.21	105			Pn	17 13 58.3	-0.4
ISP	Isparta	14.21	105	ceP		Pn	17 13 58.5	-0.2
ISP				pmax		pmax		
comp=Z,12nm,0.7s								
ELL	Elmali	14.29	110	Pn		Pn	17 13 58.1	-1.7
ELL	Elmali	14.29	110	P		Pn	17 13 58.1	-1.7
CHAS	Isla Isabel II	14.30	243	P		Pn	17 13 59.8	-0.1
CHAS				S		Sn	17 16 40.3	+1.8
PBUR	Paburge	14.33	20	eP		Pn	17 14 02.4	+2.2
PABE	Paberze	14.47	25			Pn	17 14 01.1	-0.9
PABE	Paberze	14.47	25	eP		Pn	17 14 03.0	+0.9
TAF	Taforalt	14.51	241	P		P	17 14 09.0	-0.6
WMELI	Melilla	14.56	244	P		Pn	17 14 04.9	+1.5
WMELI				S		Sn	17 16 54.0	+9.1
PBRG	Braganca	14.71	273	eP		Pn	17 14 05.4	-0.2
comp=Z,129nm,1.5s								
PBRG				eS		S	17 17 10.3	+2.6
EMAL	Malaga-Limoner	14.78	251	P		P	17 14 09.1	-3.4
EMAL				S		Sn	17 16 59.0	+8.7
VSVD	Vaisvydziai	14.86	24	eP		P	17 14 10.6	-2.6
NACGM	Naroch	14.99	32	⇑iP		Pn	17 14 07.9	-1.2
MVO	Moncorvo	15.06	270	eP		Pn	17 14 10.2	0.0
comp=Z,261nm,1.5s								
MVO				eS		S	17 17 19.2	+4.4
MVO				A		A	17 20 33.6	
comp=Z,9μm,18.0s								
BR231	Keskin MP Arra	15.08	95	Pn		Pn	17 14 09.4	-1.2
ANTO	Ankara	15.09	95			Pn	17 14 10.1	-0.5
ANTO	Ankara	15.09	95	P		Pn	17 14 10.1	-0.5
ANTO				pmax		pmax		
comp=Z,32nm,1.1s								
ANTO	Ankara	15.09	95	P		P	17 14 14.0	-2.0
MNK	Minsk	15.14	35	i P		Pn	17 14 10.5	-0.7
MNK				i S		Sn	17 16 58.8	-0.1
MNK				pmax		pmax		
comp=E,9.0nm,0.9s								
MNK				pmax		pmax		
comp=Z,47nm,0.9s								
MNK				pmax		pmax		
comp=N,68nm,0.9s								
MNK				MLR		MLR		
comp=N,5μm,15.0s								
MNK				MLR		MLR		
comp=Z,9μm,15.0s								
MNK	Minsk	15.14	35	i P		Pn	17 14 10.5	-0.7
comp=E,9.0nm,0.9s								
MNK				i P		Pn	17 14 10.5	-0.7
comp=N,68nm,0.9s								
MNK				i P		Pn	17 14 10.5	-0.7
comp=Z,47nm,0.9s,baz=225								
MNK				i PP		pP	17 14 18.5	-0.5
MNK				i S		Sn	17 16 58.9	-0.1
MNK				i SS		S	17 17 12.8	-3.4
MNK				i LR		LR	17 19 19.8	
MNK				i LRM		MLR	17 21 04.7	
comp=N,5μm,15.2s								
MNK				i LRM		MLR	17 21 05.7	
comp=E,796nm,15.2s								
MNK				i LRM		MLR	17 21 06.7	
comp=Z,9μm,15.2s								
ISAL	Salakas	15.25	29	eP		Pn	17 14 12.0	-0.6
PALE	Palemas	15.28	246	P		P	17 14 19.0	+1.0
SIM	Simferopol'	15.29	75	c iP		Pn	17 14 11.5	-1.6
SIM				eS		Sn	17 16 59.0	-3.5
SIM				pmax		pmax		
comp=Z,64nm,1.0s								
BZK	Bozkurt	15.47	86			Pn	17 14 13.6	-1.9
EDMD	Edmundbyers	15.49	326	eP		Pn	17 14 15.4	-0.4
EDMD				IAmb		IAmb	17 14 25.9	
comp=Z,397nm,0.9s								
EDMD				IAMs_20		IAMs_20	17 20 29.8	
comp=Z,7μm,18.5s								
PVRL	Vila Real	15.54	271	eP		Pn	17 14 16.7	+0.1
comp=Z,215nm,1.1s								
PVRL				epP		pP	17 14 23.4	-0.3
PVLZ	Peæn de	15.54	246	P		Pn	17 14 16.7	+0.2
PVLZ				S		S	17 17 22.0	-2.5
POLO	Lamas de Olo	15.57	272	eP		Pn	17 14 17.8	+0.7
comp=Z,93nm,1.4s								
POLO				eS		S	17 17 27.3	+1.9
MTE	Manteigas	15.63	268	eP		Pn	17 14 17.9	+0.1
comp=Z,246nm,1.1s								
MTE				eS		S	17 17 28.3	+1.8
MTE				A		A	17 20 58.6	
comp=Z,11μm,18.0s								
MTE	Manteigas	15.63	268			Pn	17 14 16.1	-1.6
PCAB	Cabril	15.68	273	eP		Pn	17 14 19.1	+0.8
comp=Z,203nm,2.0s								
WPS	Cemaes, Angles	15.72	318	eP		Pn	17 14 18.0	-0.8
WPS				IAMs_20		IAMs_20	17 21 23.6	
comp=Z,13μm,11.7s								
PCBR	Castelo Branco	15.74	266	eP		Pn	17 14 19.2	+0.1
comp=Z,183nm,1.4s								
BR131	Keskin Array S	15.75	95	Pn		Pn	17 14 18.2	-1.2
BR131	Keskin Array S	15.75	95	P		Pn	17 14 18.2	-1.2
BR131				pmax		pmax		
comp=Z,38nm,0.9s								
BR131	Keskin Array S	15.75	95	P		P	17 14 20.6	-2.8
SNR=42								
BRTR	Keskin Array B	15.75	95	Pn		Pn	17 14 20.2	+0.8
comp=Z,0.5nm,0.3s,baz=282,slow=12,SNR=18								
BRTR				Sn		Sn	17 17 16.2	+2.0
comp=Z,0.1nm,0.3s,baz=29,slow=1.3,SNR=1.4								
BRTR				Lg		Lg	17 18 55.4	
baz=148,slow=39,SNR=1.3								
BRTR				LR		LR	17 21 40.3	
comp=Z,13μm,19.5s,baz=295,slow=42								
comp=Z,8.7nm,0.8s								
BRTR	Keskin Array B	15.75	95	Pn		Pn	17 14 19.1	-0.3
VIKU	Vikbolandet	15.80	7	eP		Pn	17 14 19.3	-0.4
PVIS	Viseu	15.80	269	eP		Pn	17 14 20.2	+0.2
comp=Z,227nm,1.2s								
PGAV	Gavieira, Arco	15.81	274	eP		Pn	17 14 18.7	-1.4
comp=Z,198nm,1.2s								
PGAV				epP		pP	17 14 26.1	-0.6
PGAV				eS		S	17 17 32.2	+2.1
PGAV				A		A	17 20 47.7	
comp=Z,8μm,20.0s								
KESW	Keswick, Cumbr	15.81	323	eP		Pn	17 14 19.3	-0.7
KESW				IAmb		IAmb	17 14 31.1	
comp=Z,263nm,0.9s								
KESW				IAMs_20		IAMs_20	17 21 18.6	
comp=Z,7μm,15.4s								
PMRV	Marv??o	15.81	264	eP		Pn	17 14 19.2	-0.9
comp=Z,235nm,1.3s								
PMRV				eS		S	17 17 34.7	+4.6
PMRV				A		A	17 20 50.4	
comp=Z,9μm,18.0s								
SLIT	Slitere, Latvi	15.87	18	eP		P	17 14 24.1	-0.2
CEU	Ceuta	15.88	250	P		Pn	17 14 21.3	+0.4
CEU				S		Sn	17 17 23.4	+6.4
SNART	Snartemo	15.91	349	eP		P	17 14 24.2	-0.6
SNART				IAmb		IAmb	17 14 30.4	
comp=Z,267nm,1.0s								
SMIR	Smir Dam	16.00	249	P		P	17 14 29.0	+3.0
PBAR	Barrancos	16.01	260	eP		Pn	17 14 22.6	0.0
comp=Z,267nm,1.4s								
PBAR				eS		S	17 17 36.1	+2.0
PESTR	Estremoz	16.15	263	eP		Pn	17 14 25.1	+0.7
comp=Z,236nm,1.0s								
PESTR				eS		S	17 17 38.5	+1.5
PESTR	Estremoz	16.15	263	P		Pn	17 14 24.4	0.0
ARNO	Arenosillo	16.25	256	P		P	17 14 26.9	-1.8
ARNO				S		S	17 17 42.0	+3.1
IOMK	Kirk Michael	16.27	321	eP		Pn	17 14 26.2	+0.4
IOMK				IAmb		IAmb	17 14 33.1	
comp=Z,139nm,0.9s								
IOMK				IAMs_20		IAMs_20	17 21 27.0	
comp=Z,27μm,15.0s								
CHEFC	Chefchaouen	16.28	248	P		P	17 14 32.0	+2.7
COI	Coimbra	16.32	268			Pn	17 14 25.1	-1.5
COI	Coimbra	16.32	268	P		Pn	17 14 25.1	-1.5
COI				pmax		pmax		
comp=Z,183nm,1.1s								
EKA	Eskdalemuir Ar	16.33	325	Pn		Pn	17 14 25.8	-0.9
baz=130,slow=15								
EKA				Sn		Sn	17 17 25.6	-2.2
baz=130,slow=24								
EKA				LR		LR	17 21 13.6	
comp=Z,4μm,18.5s,baz=139,slow=39								
comp=Z,84nm,0.8s								
ESK	Eskdalemuir	16.34	325	eP		Pn	17 14 26.8	+0.1
ESK				IAmb		IAmb	17 14 31.5	
comp=Z,115nm,0.9s								
ESK				IAMs_20		IAMs_20	17 21 44.7	
comp=Z,7μm,14.7s								
ESK	Eskdalemuir	16.34	325	Pn		Pn	17 14 26.0	-0.8
ESK	Eskdalemuir	16.34	325	P		Pn	17 14 26.0	-0.8
ESK				pmax		pmax		
comp=Z,115nm,0.9s								
ESK	Eskdalemuir	16.34	325	P		P	17 14 27.8	-1.9
IWEX	Carrickbyrne,	16.37	312	eP		Pn	17 14 26.2	-0.9
IWEX				IAMs_20		IAMs_20	17 22 43.7	
comp=Z,9μm,10.2s								
PCAS	Casmilo, Conde	16.43	267	eP		Pn	17 14 27.9	-0.1
comp=Z,259nm,1.1s								
PCAS				epP		sP	17 14 33.5	-1.2
PCAS				eS		S	17 17 44.6	+1.9
PMTG	Montargil	16.54	264	eP		P	17 14 30.6	-1.4
comp=Z,287nm,1.2s								
PMTG				eS		S	17 17 47.6	+2.6
EVO	Evora	16.58	262	P		P	17 14 31.1	-1.3
EVO				S		S	17 17 49.4	+3.7
EVO	Evora	16.58	262	eP		P	17 14 30.7	-1.7
comp=Z,141nm,1.1s								
DSB	Dublin	16.59	315	eP		Pn	17 14 29.3	-0.6
DSB	Dublin	16.59	315	Pn		Pn	17 14 29.1	-0.8
NEWG	New Galloway	16.65	323	eP		P	17 14 31.6	-1.5
NEWG				IAmb		IAmb	17 14 39.4	
comp=Z,112nm,0.9s								
NEWG				IAMs_20		IAMs_20	17 21 52.0	
comp=Z,6μm,17.4s								
PBEJ	Beja	16.67	260	eP		P	17 14 33.1	-0.3
comp=Z,84nm,1.9s								
GAL1	Galloway	16.70	322	eP		Pn	17 14 31.2	-0.2
GAL1				IAmb		IAmb	17 14 32.9	
comp=Z,79nm,0.8s								
GAL1				IAMs_20		IAMs_20	17 21 56.2	
comp=Z,7μm,11.3s								
EDI	Edinburgh	16.75	327	eP		P	17 14 33.4	-0.8
EDI				IAmb		IAmb	17 14 41.4	
comp=Z,673nm,1.0s								
EDI				IAMs_20		IAMs_20	17 22 09.4	
comp=Z,6μm,13.1s								
LCRM	LCR	16.80	243	P		P	17 14 39.0	+3.9
PSBE	So Bento	16.81	266	eP		P	17 14 33.7	-1.3
comp=Z,381nm,1.1s								
PSBE				eS		S	17 17 53.9	+3.4
PVAQ	Vaqueiros	16.82	258	eP		P	17 14 33.8	-1.3
comp=Z,131nm,1.2s								
PVAQ				eS		S	17 17 54.7	+4.1
PVAQ				A		A	17 21 09.1	
comp=Z,4μm,20.0s								
PVAQ	Vaqueiros	16.82	258			Pn	17 14 31.5	-1.4
PVAQ	Vaqueiros	16.82	258	P		P	17 14 36.7	+1.7
KONO	Kongsberg	16.93	354	P		P	17 14 37.7	+1.6
KONO	Kongsberg	16.93	354	P		P	17 14 37.7	+1.6
KONO				pmax		pmax		
comp=Z,293nm,1.2s								
KONO	Kongsberg	16.93	354	eP		P	17 14 38.5	+2.3
KONO				IAmb		IAmb	17 14 40.8	
comp=Z,285nm,1.2s								
KONO	Kongsberg	16.93	354	P		P	17 14 38.8	+2.6
PCVE	Castro Verde	16.95	259	eP		Pn	17 14 34.5

ANN pmax pmax
comp=E,148nm,0.9s
ANN MLR MLR
comp=N,7μm,11.0s
ANN MLR MLR
comp=Z,6μm,10.0s
ANN MLR MLR
comp=E,3μm,11.0s
BNN Bunyan 17.66 95 P **P 17 14 45.2 +0.7**
PFVI Vila Bisbo 17.73 258 *e*P **P 17 14 45.2 0.0**
comp=E,202nm,1.7s
PFVI *e*S **S 17 18 16.9 +7.7**
PFVI Vila Bisbo 17.73 258 P **P 17 14 44.4 -0.8**
VSU Vasula 17.77 24 *e*P **Pn 17 14 43.9 -0.8**
VSU Vasula 17.77 24 *ce*P **Pn 17 14 43.0 -1.7**
VSU pmax pmax
comp=Z,724nm,1.0s
AAL Aland 17.83 11 *e*P **Pn 17 14 44.2 -1.1**
LAWE Loch Awe, Argy 17.90 325 *e*P **P 17 14 47.1 +0.3**
LAWE IAMs_20 IAMs_20 17 22 42.4
comp=Z,5μm,13.0s
NC602 NORSAR Array S 17.91 358 P **Pn 17 14 44.6 -1.7**
NC602 IAmb IAmb 17 14 51.0
comp=Z,428nm,1.2s
NC602 NORSAR Array S 17.91 358 *e*P **P 17 14 46.1 -0.8**
NC602 IAmb IAmb 17 14 51.3
comp=Z,284nm,1.4s
NAO01 NORSAR Array S 18.04 356 **Pn 17 14 46.7 -1.2**
NAO01 IAmb IAmb 17 14 56.7
comp=Z,431nm,1.1s
SKAR Skarslia 18.06 352 *e*P **P 17 14 47.8 -0.9**
SKAR IAmb IAmb 17 14 54.5
comp=Z,48nm,1.1s
IDGL Inch Island, C 18.13 319 *e*P **P 17 14 49.0 -0.5**
IDGL IAMs_20 IAMs_20 17 22 31.1
comp=Z,10μm,16.0s
NB2 NORSAR Subarra 18.22 357 P **Pn 17 14 49.0 -1.2**
comp=Z,120nm,1.1s,baz=176,slow=11
NB2 NORSAR Subarra 18.22 357 P **Pn 17 14 49.0 -1.2**
baz=176,slow=11
NOA NORSAR Array B 18.22 357 P **Pn 17 14 49.3 -0.9**
comp=Z,0.1nm,0.3s,baz=174,slow=11,SNR=39
NOA S **S 17 18 15.7 -3.3**
comp=Z,0.9nm,0.8s,baz=240,slow=22,SNR=0.8
NOA PcP **PcP 17 19 22.4 -0.2**
comp=Z,4.9nm,0.8s,baz=152,slow=1.5,SNR=4.0
NOA Lg Lg 17 20 14.5
baz=332,slow=20
NOA LR LR 17 22 40.6
comp=Z,6μm,18.1s,baz=175,slow=40
comp=Z,53nm,1.1s
NB201 NORSAR Array S 18.23 357 P **Pn 17 14 48.4 -2.0**
NB201 IAmb IAmb 17 14 59.5
comp=Z,318nm,1.1s
NBO00 NORSAR Array S 18.23 356 P **Pn 17 14 48.4 -2.0**
NC405 NORSAR Array S 18.28 358 P **Pn 17 14 48.7 -2.2**
NC303 NORSAR Array S 18.40 357 P **P 17 14 51.7 -0.7**
NC204 NORSAR Array S 18.48 356 P **P 17 14 51.3 -2.0**
NC204 IAmb IAmb 17 14 59.8
comp=Z,327nm,0.9s
MEF Metsahovi 18.68 18 *e*P **Pn 17 14 56.0 +0.3**
KPL Plockton 18.72 327 *e*P **Pn 17 14 56.8 +0.6**
KPL IAmb IAmb 17 15 12.2
comp=Z,127nm,0.8s
AVE Averroes 18.73 246 P **P 17 14 54.3 -2.0**
AVE S **Sn 17 18 26.2 +0.1**
AVE Averroes 18.73 246 P **P 17 14 54.2 -2.0**
AVE IAmb IAmb 17 15 01.2
comp=Z,244nm,0.8s
AVE Averroes 18.73 246 P **Pn 17 14 59.6 +3.1**
HYA Hoyanger 18.78 350 *e*P **Pn 17 14 59.9 +3.0**
BIGH Upper Bighouse 18.89 332 *e*P **Pn 17 14 57.6 -0.8**
BIGH IAmb IAmb 17 15 04.8
comp=Z,155nm,1.0s
BIGH IAMs_20 IAMs_20 17 24 56.0
comp=Z,7μm,10.5s
RAF Rauma 18.91 13 *e*P **Pn 17 14 59.1 +0.6**
GAZ Gaziantep 19.30 99 **Pn 17 15 03.6 +0.1**
DOMB Dombas 19.34 354 *e*P **Pn 17 15 06.0 +2.2**
DOMB IAmb IAmb 17 15 11.6
comp=Z,140nm,1.0s
SOC Sochi 19.38 79 *e*P **P 17 15 02.5 -0.8**
SOC *e* 17 18 37.4
SOC pmax pmax
comp=Z,96nm,0.7s
SOC MLR MLR
comp=Z,3μm,16.0s
VSR Storozhevoye 19.54 56 *e*P **P 17 15 03.9 -1.1**
VSR *e*S **Sn 17 18 38.5 -7.0**
VSR pmax pmax
comp=Z,240nm,1.0s
VSR smax smax
comp=N,860nm,7.4s
VSR MLR MLR
comp=Z,7μm,14.0s
OBN Obninsk 19.55 43 P **P 17 15 03.9 -1.1**
comp=Z,1.3nm,0.3s,baz=80,slow=1.3,SNR=32
OBN S Sn 17 18 33.5 -12
comp=Z,2.6nm,0.3s,baz=168,slow=23,SNR=2.0
OBN Lg Lg 17 21 05.3
comp=Z,0.8nm,0.3s,baz=204,slow=23,SNR=1.6
OBN LR LR 17 23 07.5
comp=Z,2μm,20.0s,baz=236,slow=38
comp=Z,63nm,0.8s
OBN Obninsk 19.55 43 P **P 17 15 04.0 -1.0**
OBN IAmb IAmb 17 15 09.3
comp=Z,246nm,0.8s
OBN Obninsk 19.55 43 *de*P **P 17 15 04.6 -0.4**
OBN *i* S **Sn 17 18 39.1 -6.6**
OBN pmax pmax
comp=Z,304nm,1.0s
OBN MLR MLR
comp=Z,7μm,19.0s
OBN Obninsk 19.55 43 P **P 17 15 04.6 -0.4**
GUZR Guzeripl' 19.62 77 *ce*P **Pn 17 15 06.6 -0.8**
VSLR Vesyoloye 19.63 79 *de*P **Pn 17 15 07.5 +0.2**
AKN Aaknes 19.66 351 *e*P **Pn 17 15 09.7 +2.1**
AKN IAmb IAmb 17 15 11.8
comp=Z,95nm,1.1s
VORR Voronezh 19.69 54 *e*P **P 17 15 05.3 -1.3**
VORR pmax pmax
comp=Z,290nm,0.7s
BHL Bhannes 19.77 109 *e*P **Pn 17 15 08.3 -1.0**
LPSR Galich'ya Gora 19.81 52 *e*P **P 17 15 07.2 -0.6**
LPSR *e*S **S 17 18 44.2 -6.7**
LPSR pmax pmax
comp=Z,200nm,0.8s
LPSR smax smax
comp=N,2μm,9.0s
LPSR MLR MLR
comp=Z,3μm,12.0s
DQRL Deir Qamar 19.83 110 *e*P **Pn 17 15 09.6 -0.2**
KTUT Trabzon 19.90 86 ⇑P **Pn 17 15 10.8 +0.1**
PUL Pulkovo 19.94 26 *de*P **Pn 17 15 12.4 +1.5**
PUL pmax pmax
comp=Z,252nm,1.0s
PUL MLR MLR
comp=Z,5μm,16.0s
MOL Molde 19.99 352 *e*P **Pn 17 15 13.0 +1.6**
QRWL Qaraoun 19.99 110 *e*P **Pn 17 15 11.2 -0.6**
MMAI Mount Meron Ar 20.11 112 P Pn 17 15 12.4 -0.8
comp=Z,127nm,0.8s,baz=316,slow=9.6,SNR=68
MMAI S **S 17 18 52.7 -4.7**
comp=Z,3.7nm,0.7s,baz=309,slow=20,SNR=1.2
MMAI LR LR 17 24 52.0
comp=Z,4μm,19.9s,baz=194,slow=42
comp=Z,127nm,0.8s
RCY Rachaya 20.13 110 *e*P Pn 17 15 13.1 -0.4
FIA0 FINESS Array S 20.15 18 P **P 17 15 11.1 -0.4**
FIA0 FINESS Array S 20.15 18 P **P 17 15 11.1 -0.4**
FINES FINESS Array B 20.15 18 P **P 17 15 11.1 -0.4**
comp=Z,107nm,0.9s,baz=193,slow=7.4,SNR=79
FINES S **S 17 18 47.2 -10**
comp=Z,6.7nm,0.9s,baz=183,slow=13,SNR=1.7
FINES Lg Lg 17 21 26.2
comp=Z,0.1nm,0.3s,baz=208,slow=20,SNR=1.8
FINES LR LR 17 22 44.3
comp=Z,2μm,21.1s,baz=208,slow=36
comp=Z,107nm,0.9s
FINES FINESS Array B 20.15 18 P **P 17 15 10.4 -1.1**
FIA1 FINESS Array S 20.15 18 P **P 17 15 10.9 -0.6**
FIA1 IAmb IAmb 17 15 19.1
comp=Z,269nm,0.8s
OUK Oukaimeden 20.33 242 P Pn 17 15 18.0 +1.9
MOS Moscow 20.39 42 *e*P **P 17 15 10.8 -3.3**
MOS *e*S **S 17 18 57.3 -5.0**
MOS *e* 17 19 23.1
MOS pmax pmax
comp=E,335nm,1.2s
MOS pmax pmax
comp=N,98nm,0.9s
MOS pmax pmax
comp=Z,700nm,1.1s
MOS pmax pmax
comp=Z,649nm,1.1s
MOS smax smax
comp=N,4μm,6.0s
MOS smax smax
comp=E,6μm,5.0s
MOS MLR MLR
comp=N,6μm,10.0s
MOS MLR MLR
comp=Z,12μm,10.0s
MOS MLR MLR
comp=E,8μm,9.0s
TBLU Trondheim 20.47 356 *e*P Pn 17 15 16.3 -0.9
TBLU IAmb IAmb 17 15 20.8
comp=Z,150nm,1.0s
ARXR Arkhyz 20.51 78 *ce*P Pn 17 15 17.9 0.0
DOMR Dombai 20.80 79 *de*P Pn 17 15 21.0 -0.3
TAM Tamanrasset 21.00 200 **P 17 15 21.9 +0.7**
TAM IAmb IAmb 17 15 30.1
comp=Z,336nm,1.7s
TAM IAMs_20 IAMs_20 17 24 25.5
comp=Z,11μm,18.0s
TAM Tamanrasset 21.00 200 P **P 17 15 21.9 +0.7**
TAM pmax pmax
comp=Z,336nm,1.7s
TAM MLR MLR
comp=Z,11μm,18.0s
VRH Novokhopyorsk 21.10 57 *e*P **P 17 15 21.4 -0.5**
VRH *e*S **S 17 19 12.7 -3.9**
VRH pmax pmax
comp=Z,500nm,0.9s
VRH smax smax
comp=N,5μm,15.4s
VRH MLR MLR
comp=Z,8μm,14.0s
TTIG Tnine Tigouga, 21.14 241 P **P 17 15 26.0 +3.4**
GHAJ Ghor Haditha 21.26 116 P **P 17 15 25.3 +1.6**
VALR Valaam 21.35 24 *c i*P **P 17 15 24.7 +0.2**
VALR pmax pmax
comp=Z,163nm,0.9s
VALR MLR MLR
comp=Z,1μm,11.0s
KIV Kislovodsk 21.47 77 P **P 17 15 26.9 +0.9**
KIV Kislovodsk 21.47 77 *e*P **P 17 15 27.0 +0.9**
KIV *e*S **S 17 19 25.5 +1.2**
KIV pmax pmax
comp=Z,565nm,1.1s
KIV MLR MLR
comp=Z,2μm,14.0s
KIV Kislovodsk 21.47 77 P **P 17 15 28.2 +2.1**
KIV P **P 17 15 28.2 +2.1**
KIV Kislovodsk 21.47 77 *i* P **P 17 15 26.6 +0.6**
SNR=21
KIV Kislovodsk 21.47 77 P **P 17 15 27.3 +1.3**
KVAR Kislovodsk Arr 21.48 77 P **P 17 15 26.9 +0.8**
comp=Z,23nm,0.8s,baz=155,slow=0.0
KVAR LR LR 17 24 55.8
comp=Z,3μm,21.7s,slow=40
comp=Z,23nm,0.8s
SHA1 Shidzhatmaz 21.48 78 *c i*P **P 17 15 27.6 +1.3**
NEY Neytrino 21.60 79 *de*P **P 17 15 29.9 +2.4**
NEY pmax pmax
comp=Z,23nm,0.8s
NEY MLR MLR
comp=Z,2μm,16.0s
GOF Gofitskoye 21.61 74⇑ *e*P **P 17 15 21.8 -5.6**
GOF pmax pmax
comp=Z,71nm,0.6s
ASF Jabal al Asfar 21.62 112 P **P 17 15 30.1 +2.4**
comp=Z,79nm,0.8s,baz=311,slow=6.4,SNR=45
ASF S **S 17 19 27.9 +0.6**
comp=Z,4.2nm,0.8s,baz=32,slow=21,SNR=1.9
ASF LR LR 17 25 40.1
comp=Z,3μm,19.0s,baz=322,slow=42
comp=Z,79nm,0.8s
KBZ Khabaz 21.65 78 P **P 17 15 29.1 +1.2**
comp=Z,191nm,0.9s,baz=284,slow=9.8,SNR=105
KBZ S **S 17 19 22.5 -5.1**
comp=Z,6.0nm,1.0s,baz=328,slow=11,SNR=1.4
KBZ LR LR 17 25 24.1
comp=Z,5μm,21.9s,baz=282,slow=41
comp=Z,191nm,0.9s
KBZ Khabaz 21.65 78 *c i*P **P 17 15 29.6 +1.7**
KBZ pmax pmax
comp=Z,228nm,0.9s
KBZ MLR MLR
comp=Z,5μm,21.0s
NSS Namsos 21.70 359 *e*P **P 17 15 29.5 +1.3**
NSS IAmb IAmb 17 15 32.3
comp=Z,110nm,0.9s
EIL Elat 21.93 120 P **P 17 15 31.9 +0.9**
comp=Z,30nm,1.0s,baz=313,slow=8.2,SNR=9.5
EIL S **S 17 19 28.9 -4.2**
comp=Z,14nm,0.7s,baz=282,slow=18,SNR=3.7
comp=Z,30nm,1.0s
NCK Nalchik 22.19 78⇓ *e*P **P 17 15 36.5 +2.8**
NCK pmax pmax
comp=Z,177nm,1.2s
NCK MLR MLR
comp=Z,4μm,21.0s
ONI Oni 22.24 80 P **P 17 15 35.5 +1.2**
ONI IAmb IAmb 17 15 43.5
comp=Z,183nm,0.9s
ONI Oni 22.24 80 P **P 17 15 35.5 +1.2**
ONI pmax pmax
comp=Z,183nm,0.9s
ZEI Tsey 22.53 80 *e*P **P 17 15 35.3 -2.3**
ZEI pmax pmax
comp=Z,84nm,0.8s
MOR8 Moi Rana 23.35 1 *e*P **P 17 15 47.7 +2.1**
MOR8 IAmb IAmb 17 15 52.2
comp=Z,157nm,1.1s
KONS Konsvik 23.67 0 *e*P **P 17 15 52.0 +3.2**
GNI Garni 23.78 86 P **P 17 15 51.7 +1.4**
comp=Z,67nm,0.8s,baz=307,slow=1.6,SNR=25
GNI S **S 17 20 07.9 +2.0**
comp=Z,2.6nm,0.5s,baz=86,slow=20,SNR=1.0
GNI LR LR 17 28 09.8
comp=Z,2μm,19.4s,baz=268,slow=44
comp=Z,67nm,0.8s
GNI Garni 23.78 86 P **P 17 15 51.1 +0.8**
GNI IAmb IAmb 17 16 15.5
comp=Z,198nm,1.2s
GNI Garni 23.78 86 P **P 17 15 52.3 +2.0**
GNI P **P 17 15 52.3 +2.0**
GNI Garni 23.78 86 P **P 17 15 51.6 +1.4**
GNI Garni 23.78 86 P **P 17 15 52.0 +1.7**
GROC Groznyy 23.82 78 *e*P **P 17 15 52.7 +2.2**
GROC *e* 17 16 22.6
GROC *e* 17 19 28.6
GROC pmax pmax
comp=Z,491nm,1.2s
GROC MLR MLR
comp=Z,2μm,10.0s
KLMR Klimovskoe 24.01 32 *e*P **P 17 15 51.9 -0.1**
KLMR S **S 17 20 07.0 -1.8**
KLMR pmax pmax
comp=Z,328nm,1.0s
KLMR MLR MLR
comp=Z,3μm,9.0s
KLMR Klimovskoe 24.01 32 *e*P **P 17 15 52.0 -0.1**
KLMR *e*P **P 17 15 52.0 -0.1**
KLMR *e*P **P 17 15 52.0 -0.1**
KLMR AMP 17 15 56.6
comp=Z,328nm,1.0s
KLMR S **S 17 20 07.1 -1.8**
KLMR S **S 17 20 07.1 -1.8**
KLMR LQ LQ 17 23 18.4
KLMR LQ LQ 17 23 18.4
KLMR LR LR 17 24 06.5
KLMR AMP 17 26 40.4
comp=Z,3μm,8.9s
DVE Vedeno 24.10 78 *d i*P **P 17 15 55.1 +1.9**
DVE pmax pmax
comp=Z,140nm,0.8s
FAUS Fauske 24.58 2 *e*P **P 17 15 58.4 +1.1**
FAUS IAmb IAmb 17 16 05.5
comp=Z,81nm,1.0s
DBC Dubki 24.60 78 *ce*P **P 17 15 59.8 +2.0**
NAX Nakhchivan 24.63 88 P **P 17 16 00.0 +1.9**
ZKTA Zakatala 24.75 81 P **P 17 15 59.6 +0.5**
GANJ Ganja 24.79 84 P **P 17 15 59.9 +0.4**
GNBR Gunib 24.83 79 *de*P **P 17 16 01.7 +1.9**
GNBR pmax pmax
comp=Z,218nm,0.9s
BELG Belogornoye 24.92 56 P **P 17 16 01.1 +0.7**
comp=Z,330nm,0.7s,baz=259,slow=1.0,SNR=76
BELG S **S 17 20 23.5 -0.1**
comp=Z,26nm,1.0s,baz=305,slow=7.4,SNR=1.9
BELG LR LR 17 26 43.2
comp=Z,7μm,19.0s,baz=267,slow=39
comp=Z,330nm,0.7s
PMPST Porto Santo, M 25.07 257 *e*P **P 17 16 03.4 +1.4**
comp=Z,398nm,1.6s
MAK Makhachkala 25.09 78 *e*P **P 17 16 00.6 -1.5**
MAK *e*S **S 17 20 25.3 -1.4**
MAK pmax pmax
comp=Z,988nm,0.9s
STEI Steigen 25.13 2 *e*P **P 17 16 04.0 +1.8**
STEI IAmb IAmb 17 16 07.7
comp=Z,144nm,1.1s
SEKA Sheki 25.28 82 P **P 17 16 04.7 +0.8**
MNGR Mingechevir, A 25.32 83 P **P 17 16 04.7 +0.6**
AKT Akhty 25.60 81 *e*P **P 17 16 08.0 +1.1**
AKT *e* 17 16 44.1
AKT *e*S **S 17 20 37.5 +2.5**
AKT *e*SS **SnSn 17 21 30.7 +2.5**
AKT pmax pmax
comp=Z,236nm,1.0s
PMAR Madeira 25.67 257 *e*P **P 17 16 09.6 +1.9**
comp=Z,555nm,1.4s
FUL Funchal 25.70 257 *e*P **P 17 16 10.1 +2.4**
comp=Z,395nm,2.4s
PMOZ Porto Moniz, M 25.82 257 *e*P **P 17 16 09.8 +0.9**
comp=Z,512nm,1.3s
PMOZ A A 17 25 00.8
comp=Z,2μm,22.0s
PMOZ Porto Moniz, M 25.82 257 P **P 17 16 09.0 0.0**
KTK1 Kautokeino 26.72 8 *e*P **P 17 16 18.2 +1.6**
KTK1 IAmb IAmb 17 16 30.7
comp=Z,52nm,1.0s
PRGR Permogore 26.92 35 *e*P **P 17 16 17.5 -0.9**
PRGR pmax pmax
comp=Z,108nm,0.7s
TRO Tromso 26.98 4 *e*P **P 17 16 18.5 -0.5**
TRO IAmb IAmb 17 16 24.0
comp=Z,49nm,0.7s
JETT Jettan, Norway 27.00 6 *e*P **P 17 16 19.7 +0.5**
JETT IAmb IAmb 17 16 27.8
comp=Z,73nm,0.9s
APA Apatity 27.04 17⇓ *i*P **P 17 16 19.1 -0.4**
APA *i* S **S 17 20 54.0 -3.0**
APA pmax pmax
comp=Z,23nm,0.7s
APA MLR MLR
comp=Z,10μm,14.0s
KIRV Kirov 27.40 42 P **P 17 16 22.8 0.0**
comp=Z,53nm,0.6s,baz=274,slow=0.5,SNR=25
KIRV S **S 17 20 58.6 -4.2**
comp=Z,5.4nm,0.5s,baz=197,slow=19,SNR=1.5
KIRV LR LR 17 28 24.1
comp=Z,5μm,18.0s,baz=246,slow=39
comp=Z,53nm,0.6s
ARA0 ARCESS Array S 27.48 9 *e*P **P 17 16 24.8 +1.4**
ARA0 IAmb IAmb 17 16 29.2
comp=Z,47nm,1.2s
ARCES ARCESS Array B 27.48 9 P **P 17 16 24.1 +0.7**
comp=Z,9.8nm,0.7s,baz=184,slow=7.4,SNR=28
ARCES PcP **PcP 17 19 41.0 -0.4**
comp=Z,16nm,1.0s,baz=197,slow=1.3,SNR=4.2
ARCES LR LR 17 28 20.2
comp=Z,3μm,19.0s,baz=202,slow=39
comp=Z,9.8nm,0.7s
ARCES ARCESS Array B 27.48 9 P **P 17 16 23.8 +0.4**
ARCES ARCESS Array B 27.48 9 P **P 17 16 23.8 +0.4**
ARCES pmax pmax
comp=Z,35nm,1.2s
LVZ Lovozero 27.59 17 P **P 17 16 25.5 +1.0**
LVZ Lovozero 27.59 17⇓ *e*P **P 17 16 25.8 +1.4**
LVZ pmax pmax
comp=Z,63nm,1.3s
LVZ MLR MLR
comp=Z,6μm,15.0s
LVZ Lovozero 27.59 17 P **P 17 16 27.6 +3.1**
KEV Kevo 27.87 10 P **P 17 16 25.0 -1.9**
KEV Kevo 27.87 10 P **P 17 16 25.0 -1.9**
KEV pmax pmax
comp=Z,46nm,1.1s
KEV MLR MLR
comp=Z,5μm,20.0s
KEV Kevo 27.87 10 P P 17 16 34.2 +7.3
BORG Borgarnes 29.24 330 LR LR 17 28 30.4
comp=Z,2μm,20.7s,baz=139,slow=37
CMLA Cha da Macela 29.70 273 IAMs_20 IAMs_20 17 26 40.2
comp=Z,8μm,21.0s
JMIC Jan Mayen 30.17 346 LR LR 17 30 17.6
comp=Z,1μm,18.3s,baz=142,slow=39
TOA0 Torodi Ar. Sit 31.23 202 P **P 17 16 56.8 -0.3**
TOA0 IAmb IAmb 17 17 05.0
comp=Z,70nm,1.0s
TORD Torodi Ar. Bea 31.23 202 P **P 17 16 57.5 +0.4**
comp=Z,40nm,0.8s,baz=18,slow=9.0,SNR=193
TORD PcP **PcP 17 19 51.5 -0.2**
comp=Z,5.8nm,0.8s,baz=353,slow=3.4,SNR=4.0
TORD LR LR 17 30 40.5
comp=Z,6μm,18.7s,baz=14,slow=38
TORD P3KPbc 17 48 35.5
comp=Z,0.8nm,0.9s,baz=179,slow=3.6,SNR=2.2
comp=Z,40nm,0.8s
TORD Torodi Ar. Bea 31.23 202 P **P 17 16 55.9 -1.3**
AKTO Aktyubinsk 31.34 60 LR LR 17 33 03.0
comp=Z,4μm,18.8s,baz=276,slow=43
ROSA Rosais 31.34 277 P **P 17 16 57.6 -0.5**
ROSA IAmb IAmb 17 17 06.1
comp=Z,103nm,0.9s
ARU Arti 31.77 49 LR LR 17 30 27.1
comp=Z,5μm,19.4s,baz=252,slow=38
ARU Arti 31.77 49 P **P 17 17 01.2 -0.3**
ARU IAMs_20 IAMs_20 17 30 13.8
comp=Z,6μm,19.0s
ARU Arti 31.77 49 *c i*P **P 17 17 01.5 -0.1**
ARU 17 18 05.0
ARU PPP PPP 17 18 17.8
ARU 17 19 52.0
ARU S **S 17 22 11.5 +0.1**
ARU SS **SnSn 17 23 55.3 -2.8**
ARU pmax pmax
comp=Z,414nm,0.9s
ARU MLR MLR
comp=Z,5μm,14.0s
BJO1 Bjornoya 31.83 3 *e*P **P 17 17 03.5 +1.7**
BJO1 IAmb IAmb 17 17 06.1
comp=Z,219nm,1.1s
AB31 Akbulak array 32.69 62 *i* P **P 17 17 10.0 +0.3**
ABKAR Akbulak array 32.69 62 P **P 17 17 09.1 -0.6**
ABKAR Akbulak array 32.69 62 P **P 17 17 09.3 -0.4**
SVE Sverdlovsk 32.95 48 *e*P **P 17 17 12.6 +0.7**
SVE *e*S **S 17 22 30.9 +1.1**
SVE pmax pmax
comp=Z,350nm,1.0s
RAYN Ar Rayn 33.00 115 P **P 17 17 11.7 -1.0**
RAYN Ar Rayn 33.00 115 P **P 17 17 11.7 -1.0**
RAYN pmax pmax
comp=Z,29nm,1.1s
RAYN MLR MLR
comp=Z,2μm,18.0s
RAYN Ar Rayn 33.00 115 P **P 17 17 14.4 +1.6**
RAYN Ar Rayn 33.00 115 *i* P **P 17 17 14.3 +1.6**
SNR=30
RAYN Ar Rayn 33.00 115 P **P 17 17 14.2 +1.5**
GEYT Alibeck 34.32 83 P **P 17 17 25.2 +1.1**
comp=Z,41nm,0.7s,baz=286,slow=7.6,SNR=73
GEYT LR LR 17 34 40.0
comp=Z,2μm,20.1s,baz=318,slow=42
comp=Z,41nm,0.7s
GEYT Alibeck 34.32 83 P **P 17 17 25.2 +1.1**
GEYT IAmb IAmb 17 17 27.4
comp=Z,52nm,0.8s
GYA0 ALIBECK ARRAY 34.32 83 P **P 17 17 25.8 +1.7**
GYA0B ALIBECK ARRAY 34.32 83 P **P 17 17 23.8 -0.3**
GYA0B IAmb IAmb 17 17 32.8
comp=Z,62nm,1.0s
SOEG Soedalen 34.43 332 *e*P **P 17 17 27.3 +2.7**
SOEG IAmb IAmb 17 17 31.6

comp=Z,110nm,1.2s
SAKB Bahrain 34.84 107 P **P 17 17 28.3 -0.3**
SHMA Al-Shehemyia 35.22 106 P **P 17 17 33.5 +1.6**
SPB2 Spitsbergen Ar 35.43 1 P **P 17 17 31.6 -1.6**
SPB2 IAmb IAmb 17 17 39.3
comp=Z,55nm,0.9s
SPA0 Spitsbergen Ar 35.44 1 *eP* **P 17 17 35.2 +2.0**
SPA0 IAmb IAmb 17 17 39.3
comp=Z,42nm,0.7s
SPITS Spitsbergen Ar 35.44 1 LR LR 17 31 46.8
comp=Z,2μm,21.7s,baz=152,slow=36
SPITS Spitsbergen Ar 35.44 1 P **P 17 17 31.8 -1.4**
SPITS pmax pmax
comp=Z,59nm,1.0s
SMRA Abu-Samra 35.82 108 P **P 17 17 38.7 +1.6**
KBS Kingsbay 36.17 360 *ceP* **P 17 17 42.3 +2.8**
KBS pmax pmax
comp=Z,79nm,1.0s
KBS MLR MLR
comp=Z,2μm,18.0s
KBS Kingsbay 36.17 360 *eP* **P 17 17 42.7 +3.2**
KBS Kingsbay 36.17 360 P P 17 17 44.6 +5.1
DAG Danmarks Havn 36.51 348 *i P* **P 17 17 44.0 +1.6**
SLWR Sila 36.86 108 P **P 17 17 48.1 +2.1**
SLWR P **P 17 17 48.1 +2.1**
ICESG Greenland Ices 37.58 332 *eP* **P 17 17 53.4 +1.4**
ICESG IAmb IAmb 17 17 55.1
comp=Z,112nm,1.0s
GHWR Ruwais 37.76 107 P **P 17 17 54.7 +1.1**
BBTS Babate 37.92 231 LR LR 17 33 16.1
comp=Z,4μm,20.1s,baz=48,slow=36
SUMG Summit 38.35 338 *eP* **P 17 18 01.0 +2.5**
SUMG IAmb IAmb 17 18 02.6
comp=Z,81nm,1.2s
MBO M'Bour 38.38 231 IAMs_20 IAMs_20 17 32 55.4
comp=Z,3μm,19.0s
MZWR Madinat Zayed 38.59 106 P **P 17 18 01.8 +1.2**
EKNA AfricaArray - 38.63 186⇓ *eP* **P 17 18 03.7 +2.7**
BRVK Borovoye 38.65 54 P **P 17 18 01.8 +1.0**
BRVK Borovoye 38.65 54 IAMs_20 IAMs_20 17 34 41.8
comp=Z,5μm,20.0s
BRVK Borovoye 38.65 54 *c i P* **P 17 18 02.0 +1.2**
BRVK pmax pmax
comp=Z,104nm,0.9s
BRVK MLR MLR
comp=Z,5μm,21.0s
BRVK Borovoye 38.65 54 P **P 17 18 02.7 +1.9**
BRVK Borovoye 38.65 54 P **P 17 18 02.0 +1.2**
BVAR Borovoye Array 38.71 54 LR LR 17 34 57.0
comp=Z,5μm,21.5s,baz=280,slow=38
BVA2 Borovoye Array 38.72 54 P **P 17 18 02.5 +1.1**
SHME Shamm 38.80 101 P P 17 18 06.5 +4.2
SNR=10
SHME Shamm 38.80 101 *i P* **P 17 18 01.8 -0.5**
SNR=12
MZR Muzera 38.80 108 P **P 17 18 06.1 +3.7**
SNR=10
MZR Muzera 38.80 108 *i P* **P 17 18 02.4 0.0**
SNR=16
NRS Narsarsuaq 38.82 319 P **P 17 18 01.8 -0.3**
NRS Narsarsuaq 38.82 319 P **P 17 18 01.8 -0.3**
NRS pmax pmax
comp=Z,51nm,0.8s
NRS Narsarsuaq 38.82 319 *eP* **P 17 18 02.3 +0.2**
NRS IAmb IAmb 17 18 06.0
comp=Z,48nm,0.8s
HRA Herat 38.85 86 P **P 17 18 02.6 -0.4**
AJN Ajban 38.87 104 P P 17 18 08.0 +5.0
SNR=6.1
AJN Ajban 38.87 104 *i P* **P 17 18 03.7 +0.8**
SNR=10
BANOM Banah 38.98 102 P **P 17 18 06.0 +2.0**
SNR=17
BANOM Banah 38.98 102 *i P* **P 17 18 03.7 -0.2**
SNR=21
ASUD Al Ashush, Dub 39.08 104 *i P* **P 17 18 05.1 +0.4**
SNR=11
NAZ Nazwa, Dubai 39.09 103 *i P* **P 17 18 06.0 +1.2**
SNR=14
FAQ Al Faqa, Dubai 39.19 104 *i P* **P 17 18 05.9 +0.3**
SNR=15
MASF Masafi 39.22 102 P **P 17 18 07.9 +2.0**
SNR=18
MSFE Esma-Masafi 39.22 102 *i P* **P 17 18 06.2 +0.2**
SNR=22
DBIC Dimbokro 39.39 209 P **P 17 18 08.4 +1.0**
comp=Z,734nm,0.4s,baz=291,slow=0.0,SNR=9.3
TIC Toumodi 39.48 209⇑ *eP* **P 17 18 08.8 +0.7**
comp=Z,4.0nm,0.2s
DY2G Dye2 39.52 327 *i P* **P 17 18 09.8 +1.6**
DY2G IAmb IAmb 17 18 14.5
comp=Z,110nm,0.8s
HATD Hatta, Dubai 39.53 103 *i P* **P 17 18 08.7 +0.2**
SNR=70
ASHO Ashiyiah 39.56 103 P **P 17 18 09.2 +0.4**
SNR=46
ASHO Ashiyiah 39.56 103 *i P* **P 17 18 08.9 +0.1**
SNR=10
KIC Kosan Boka 39.64 209⇓ *i P* **P 17 18 09.5 0.0**
comp=Z,13nm,0.4s
ALNE Al Ain 39.73 104 P **P 17 18 10.8 +0.6**
SNR=41
ALNE Al Ain 39.73 104 *i P* **P 17 18 10.7 +0.5**
SNR=28
LIC Lamto 39.87 209⇓ *i P* **P 17 18 11.4 +0.1**
comp=Z,81nm,0.5s
LIC Lamto 39.87 209 *eP* **P 17 18 11.3 0.0**
comp=Z,35nm,0.4s,baz=27
NOR Nord 40.14 353 *eP* **P 17 18 13.7 +0.8**
NOR IAmb IAmb 17 18 16.0
comp=Z,33nm,1.0s
JASK Jask - Hormozg 40.15 100 P **P 17 18 15.9 +2.3**
SNR=7.5
IVI Ivigtut 40.15 319 P **P 17 18 11.8 -1.5**
IVI IAmb IAmb 17 18 15.1
comp=Z,94nm,1.0s
IVI Ivigtut 40.15 319 *eP* **P 17 18 12.6 -0.7**
IVI IAmb IAmb 17 18 14.8
comp=Z,78nm,0.9s
UMZA Um Al Zommool 40.16 106 P **P 17 18 15.6 +1.9**
AAE Adis Abeba 40.52 139 *eP* P 17 18 08.5 -8.6
AAE Adis Abeba 40.52 139 *eP* **P 17 18 18.7 +1.6**
AAE Adis Abeba 40.52 139 *eP* **P 17 18 18.7 +1.6**
AAE Adis Abeba 40.52 139 *eP* P 17 18 08.5 -8.6
ATD Arta Tunnel 40.53 132 P **P 17 18 15.1 -1.8**
ATD Arta Tunnel 40.53 132 P **P 17 18 16.0 -0.9**
ATD Arta Tunnel 40.53 132 *eP* P 17 18 09.5 -7.4
ATD Arta Tunnel 40.53 132 *eP* **P 17 18 14.0 -2.9**
ATD Arta Tunnel 40.53 132 *eP* **P 17 18 14.0 -2.9**
ATD Arta Tunnel 40.53 132 *eP* P 17 18 09.5 -7.4
FURI Furi 40.60 139 P **P 17 18 20.3 +2.6**
FURI Furi 40.60 139 *eP* **P 17 18 19.3 +1.5**
FURI Furi 40.60 139 *eP* **P 17 18 19.7 +2.0**
FURI Furi 40.60 139 *eP* **P 17 18 19.7 +2.0**
FURI Furi 40.60 139 *eP* **P 17 18 19.3 +1.5**
FURI Furi 40.60 139 P P 17 18 27.6 +10
BRZS Berezniki 40.70 59 *c i P* **P 17 18 18.0 0.0**
BRZS *eS* **S 17 24 30.0 +1.9**
BRZS pmax pmax
comp=Z,33nm,1.2s
BRZS Berezniki 40.70 59⇑ *i P* **P 17 18 18.0 0.0**
comp=Z,33nm,1.2s,baz=59
BRZS *eS* **S 17 24 30.1 +1.9**
baz=59
ARQ Araqi 40.73 104 P **P 17 18 20.0 +1.5**
SNR=34
OTUK Ortayu 40.92 61 P **P 17 18 20.4 +0.6**
TAS Tashkent 41.06 72 P **P 17 18 19.8 -1.2**
TAS Tashkent 41.06 72 P **P 17 18 19.8 -1.2**
HOQ Hoqain 41.14 103 P **P 17 18 23.0 +1.1**
SNR=23
KK31 Karatay Array 41.27 69 P **P 17 18 23.0 +0.2**
KK31 IAmb IAmb 17 18 26.5
comp=Z,70nm,0.8s
KK31 Karatay Array 41.27 69 P **P 17 18 23.0 +0.2**
KK31 pmax pmax
comp=Z,70nm,0.9s
KKAR Karatay Array 41.27 69 P **P 17 18 23.7 +0.9**
KKAR Karatay Array 41.27 69 P **P 17 18 23.0 +0.2**
KKAR IAmb IAmb 17 18 26.5
comp=Z,70nm,0.8s
KKAR Karatay Array 41.27 69 P **P 17 18 23.0 +0.2**
KKAR pmax pmax
comp=Z,70nm,0.9s
IUG Iuzhnay 41.27 71 *eP* **P 17 18 22.8 -0.1**
IUG *eS* **S 17 24 39.5 +2.5**
IUG Iuzhnay 41.27 71 *eP* **P 17 18 22.9 -0.1**
baz=71
IUG *eS* **S 17 24 39.6 +2.5**
baz=71
SFJD Kangerlussuaq 41.29 328 LR LR 17 36 33.9
comp=Z,2μm,18.2s,baz=96,slow=38
SFJD Kangerlussuaq 41.29 328 P **P 17 18 22.9 +0.4**
SFJD IAmb IAmb 17 18 28.7
comp=Z,100nm,0.8s
SFJD Kangerlussuaq 41.29 328 P **P 17 18 22.9 +0.4**
SFJD pmax pmax
comp=Z,100nm,0.9s
SFJD Kangerlussuaq 41.29 328 *i P* **P 17 18 23.4 +0.9**
SFJD *eP* **P 17 18 23.4 +0.9**
SFJD IAmb IAmb 17 18 28.5
comp=Z,94nm,0.8s
SFJD Kangerlussuaq 41.29 328 P **P 17 18 23.6 +1.0**
BSY Bisya 41.59 105 P **P 17 18 28.0 +2.5**
SNR=11
BIDO Bidbid 41.76 103 P **P 17 18 28.0 +1.0**
SNR=16
DZA Taraz 41.91 69 *eP* **P 17 18 28.3 +0.3**
DZA Taraz 41.91 69 *eP* **P 17 18 28.4 +0.3**
baz=70
SMDO Samad 42.00 103 P **P 17 18 30.0 +1.0**
SNR=41
CHGR Chuyangaron 42.00 76 P **P 17 18 29.9 +1.0**
CHGR Chuyangaron 42.00 76 P **P 17 18 29.9 +1.0**
CHGR pmax pmax
comp=Z,191nm,0.9s
DOK Doka 42.18 112 P **P 17 18 32.0 +1.5**
SNR=32
WSAR Wadi Sarin 42.30 103 P **P 17 18 31.9 +0.6**
comp=Z,24nm,0.8s,baz=295,slow=8.6,SNR=18
WSAR LR LR 17 40 06.2
comp=Z,2μm,20.2s,baz=329,slow=42
comp=Z,24nm,0.8s
WSAR Wadi Sarin 42.30 103 P **P 17 18 32.3 +0.9**
SNR=14
WHFO Wadi Hawf 42.43 113 P **P 17 18 34.0 +1.5**
SNR=9.9
JMDO Jabal Madar 42.47 104 P **P 17 18 34.0 +1.2**
SNR=25
ABTO Aybut 42.51 114 P **P 17 18 36.0 +2.8**
SNR=15
BTK Batken 42.61 73 P **P 17 18 33.7 -0.2**
BTK Batken 42.61 73 P **P 17 18 33.7 -0.2**
BTK pmax pmax
comp=Z,57nm,0.9s
GAR Garm 42.69 75 P **P 17 18 35.7 +1.2**
NGCH Negor - Chabah 42.82 98 P **P 17 18 38.4 +2.8**
WBK Wadi Bani Khal 42.94 103 P **P 17 18 39.0 +2.4**
SNR=10
NEEM North Greenlan 42.97 343 *eP* **P 17 18 37.6 +1.1**
NEEM IAmb IAmb 17 18 39.7
comp=Z,101nm,1.0s
BTLS Baital 43.01 65 *eP* **P 17 18 36.7 -0.2**
BTLS *eS* **S 17 25 01.7 -0.6**
BTLS Baital 43.01 65 *eP* **P 17 18 36.7 -0.2**
baz=66
BTLS *eS* **S 17 25 01.8 -0.6**
baz=66
RBK Rabkut 43.01 113 P **P 17 18 39.0 +1.7**
SNR=26
MHTO MHTO 43.26 106 P **P 17 18 41.0 +1.8**
SNR=30
MHTO P **P 17 18 41.0 +1.8**
SNR=30
DMTO DMTO 43.37 112 P **P 17 18 42.1 +2.1**
SNR=18
DRK Karamyk 43.54 74 P **P 17 18 42.4 +0.8**
DRK IAmb IAmb 17 18 49.8
comp=Z,139nm,1.1s
DQM DQM 43.66 107 P **P 17 18 44.0 +1.6**
SNR=36
DQM P **P 17 18 44.0 +1.6**
SNR=36
EKS2 Erkin-Say 43.67 69 P **P 17 18 44.4 +2.0**
SNR=48
KBL Kabul 43.74 82 P **P 17 18 42.1 -1.1**
KBL Kabul 43.74 82 P **P 17 18 42.1 -1.1**
KBL pmax pmax
comp=Z,17nm,0.9s
KBL Kabul 43.74 82 P **P 17 18 44.7 +1.5**
SNR=12
KBL P **P 17 18 44.7 +1.5**
SNR=12
OHH Osh 43.81 72 P **P 17 18 45.6 +2.1**
AML Almayashu 43.81 69 P **P 17 18 46.5 +2.6**
SNR=16
USP Ospenovka 43.94 68 P **P 17 18 47.1 +2.6**
SNR=15
SGDS Sogindy 43.96 67 *eP* **P 17 18 46.1 +1.4**
LODK Lodwar 44.01 147 P **P 17 18 44.6 -0.7**
LODK Lodwar 44.01 147 P **P 17 18 46.5 +1.2**
SNR=9.0
LODK Lodwar 44.01 147 *eP* P 17 18 36.9 -8.4
LODK Lodwar 44.01 147 *eP* P 17 18 37.6 -7.6
LODK Lodwar 44.01 147 *eP* P 17 18 37.6 -7.6
LODK Lodwar 44.01 147 *eP* P 17 18 36.9 -8.4
KURBB Kurchatov Arra 44.16 56 LR LR 17 38 41.3
comp=Z,4μm,19.3s,baz=285,slow=38
KURBB Kurchatov Arra 44.16 56 P **P 17 18 46.3 +0.2**
AAK Ala-Archa 44.17 68 P **P 17 18 48.3 +1.8**
SNR=34
AAK Ala-Archa 44.17 68 LR LR 17 41 47.1
comp=Z,5μm,18.7s,baz=308,slow=42
AAK Ala-Archa 44.17 68 P **P 17 18 46.2 -0.2**
AAK IAmb IAmb 17 18 53.1
comp=Z,71nm,1.1s
AAK Ala-Archa 44.17 68 *ceP* **P 17 18 48.3 +1.8**
AAK pmax pmax
comp=Z,84nm,1.1s
AAK MLR MLR
comp=Z,4μm,19.0s
AAK Ala-Archa 44.17 68 P **P 17 18 49.6 +3.1**
AAK P **P 17 18 49.6 +3.1**
AAK Ala-Archa 44.17 68 *i P* **P 17 18 48.0 +1.5**
SNR=36
AAK Ala-Archa 44.17 68 P **P 17 18 48.8 +2.3**
KURK Kurchatov 44.19 56 P **P 17 18 46.2 -0.1**
KURK IAmb IAmb 17 18 50.8
comp=Z,77nm,0.9s
KURK Kurchatov 44.19 56 P **P 17 18 46.2 -0.1**
KURK pmax pmax
comp=Z,77nm,0.9s
KURK MLR MLR
comp=Z,4μm,18.0s
KURK Kurchatov 44.19 56 P **P 17 18 47.1 +0.8**
KURK Kurchatov 44.19 56 P **P 17 18 46.7 +0.4**
CHMS Chumysh 44.21 68 P **P 17 18 48.5 +1.8**
SNR=15
CHMS Chumysh 44.21 68 P **P 17 18 48.6 +2.0**
UCH Uchtor 44.34 69 P **P 17 18 50.6 +2.4**
SNR=20
ARLS Aral 44.35 69 P **P 17 18 49.8 +1.9**
KBK Karagaybulak 44.47 68 P P 17 18 53.1 +4.2
SNR=13
TKM2 Tokmak 2 44.81 68 P **P 17 18 53.6 +1.9**
KUU Kurty 44.95 66 *eP* **P 17 18 52.4 -0.1**
KUU *eS* **S 17 25 32.9 +2.2**
KUU pmax pmax
comp=Z,102nm,1.1s
KUU Kurty 44.95 66 *eP* **P 17 18 52.5 -0.1**
comp=Z,102nm,1.1s,baz=66
KUU *eS* **S 17 25 33.0 +2.2**
baz=66
BOOM Boomskoye usch 45.21 68 P **P 17 18 53.2 -1.6**
BOOM IAmb IAmb 17 19 01.4
comp=Z,161nm,1.8s
BOOM Boomskoye usch 45.21 68 P **P 17 18 53.2 -1.6**
BOOM pmax pmax
comp=Z,161nm,1.8s
NRIK Noril'sk 45.27 29 P **P 17 18 55.0 +0.3**
comp=Z,66nm,1.0s,baz=258,slow=5.9,SNR=56
NRIK LR LR 17 39 41.3
comp=Z,3μm,18.2s,baz=272,slow=39
comp=Z,66nm,1.0s
NRIK Noril'sk 45.27 29 P **P 17 18 55.9 +1.2**
NRIK IAmb IAmb 17 18 59.6
comp=Z,96nm,1.1s
NRIK Noril'sk 45.27 29 *d i P* **P 17 18 56.6 +2.0**
NRIK pmax pmax
comp=Z,87nm,1.1s
NRIK MLR MLR
comp=Z,3μm,18.0s
CHKK Chushkaly 45.40 66 *eP* **P 17 18 56.0 -0.1**
CHKK Chushkaly 45.40 66 *eP* **P 17 18 56.1 -0.1**
baz=66
AAA Alma-Ata 45.60 67 *eP* **P 17 18 58.3 +0.6**
AAA Alma-Ata 45.60 67 *eP* **P 17 18 58.4 +0.6**
baz=67
KNDC Almaty 45.63 67 P **P 17 19 00.0 +2.0**
NRN Naryn 45.67 69 P **P 17 18 57.4 -1.3**
NRN IAmb IAmb 17 19 14.4
comp=Z,80nm,1.4s
NRN Naryn 45.67 69 P **P 17 18 57.4 -1.3**
NRN pmax pmax
comp=Z,80nm,1.4s
MDOK Medeo 45.70 67 *eP* **P 17 18 59.5 +0.8**
MDOK *eS* **S 17 25 44.6 +2.7**
MDOK Medeo 45.70 67 *eP* **P 17 18 59.5 +0.8**
baz=67
MDOK *eS* **S 17 25 44.6 +2.7**
baz=67
ARXS Arharly 45.83 65 *eP* **P 17 19 00.8 +1.3**
TDK Taldyqorghan 45.92 64 *eP* **P 17 19 00.5 +0.4**
TDK *eS* **S 17 25 45.6 +1.0**
TDK MLR MLR
comp=Z,2μm,19.0s
TDK Taldyqorghan 45.92 64 *eP* **P 17 19 00.6 +0.4**
baz=64
TDK *eS* **S 17 25 45.7 +1.0**
baz=64
TDK *eLR* LR 17 40 31.8
comp=Z,2μm,19.1s,baz=64
MBAR Mbarara 46.10 155 P **P 17 19 01.9 -0.1**
MBAR Mbarara 46.10 155 P **P 17 19 01.9 -0.1**
MBAR pmax pmax
comp=Z,52nm,1.6s
MBAR MLR MLR
comp=Z,2μm,19.0s
MBAR Mbarara 46.10 155 P **P 17 19 02.7 +0.7**
MBAR Mbarara 46.10 155 *eP* P 17 18 53.0 -9.0
MBAR Mbarara 46.10 155 *eP* P 17 18 56.1 -5.9
MBAR Mbarara 46.10 155 *eP* P 17 18 56.1 -5.9
MBAR Mbarara 46.10 155 *eP* P 17 18 53.0 -9.0
MBAR Mbarara 46.10 155 P **P 17 19 02.7 +0.7**
KSH Kashi 46.45 72 P **P 17 19 05.8 +1.2**
KSH S **S 17 25 49.5 -3.2**
KSH SS **SS 17 29 08.0 -10**
KSH pmax pmax
comp=Z,260nm,0.9s
KSH pmax pmax
comp=Z,420nm,4.1s
KSH LR LR
comp=Z,2μm,20.6s
KSH LR LR
comp=Z,3μm,15.8s
KSH LR LR
comp=Z,3μm,15.1s
SATY Saty 46.66 66 *eP* **P 17 19 07.6 +1.5**
SATY Saty 46.66 66 *eP* **P 17 19 07.7 +1.5**
baz=66
KPKS Kokpek 46.69 66 *eP* **P 17 19 05.8 -0.5**
KPKS *eS* **S 17 25 57.3 +1.4**
KPKS pmax pmax
comp=Z,47nm,1.8s
KPKS Kokpek 46.69 66 *eP* **P 17 19 05.9 -0.4**
comp=Z,47nm,1.8s,baz=66
KPKS *eS* **S 17 25 57.3 +1.4**
baz=66
TULEG Thule 46.89 341 P **P 17 19 05.7 -1.6**
TULEG IAMs_20 IAMs_20 17 40 27.4
comp=Z,3μm,19.0s
TULEG Thule 46.89 341 *eP* **P 17 19 08.1 +0.8**
TULEG IAmb IAmb 17 19 12.3
comp=Z,124nm,1.2s
ZAA0 Zalesovo Array 46.91 50 P **P 17 19 07.7 -0.1**
ZAA0 IAmb IAmb 17 19 12.4
comp=Z,66nm,1.1s
ZALV Zalesovo Beam 46.91 50 P **P 17 19 08.1 +0.4**
comp=Z,38nm,0.8s,baz=288,slow=8.4,SNR=64
ZALV PP **PP 17 21 01.5 +3.7**
comp=Z,14nm,0.8s,baz=284,slow=9.7,SNR=4.0
ZALV LR LR 17 40 24.5
comp=Z,4μm,19.5s,baz=286,slow=38
comp=Z,38nm,0.8s
ZALV Zalesovo Beam 46.91 50 P **P 17 19 07.7 -0.1**
ZALV Zalesovo Beam 46.91 50 *i P* **P 17 19 08.3 +0.5**
ZALV pmax pmax
comp=Z,38nm,0.8s
UZB Uzynbulak 47.04 66 *eP* **P 17 19 09.4 +0.3**
UZB Uzynbulak 47.04 66 *eP* **P 17 19 09.5 +0.3**
baz=66
NIL Nilore 47.23 80 P **P 17 19 11.4 +0.8**
NIL Nilore 47.23 80 P **P 17 19 11.4 +0.8**
NIL pmax pmax
comp=Z,159nm,1.0s
NIL MLR MLR
comp=Z,2μm,20.0s
NIL Nilore 47.23 80 P **P 17 19 12.5 +1.9**
SHLS Shalkode 47.33 66 *eP* **P 17 19 14.3 +2.9**
SHLS *eS* **S 17 26 08.9 +3.8**
SHLS pmax pmax
comp=Z,23nm,0.7s
SHLS Shalkode 47.33 66 *eP* **P 17 19 14.3 +2.9**
comp=Z,23nm,0.7s,baz=66
SHLS *eS* **S 17 26 08.9 +3.8**
baz=66
MAKZ Makanchi 47.57 60 P **P 17 19 13.3 +0.2**
MAKZ IAmb IAmb 17 19 18.7
comp=Z,80nm,1.1s
MAKZ Makanchi 47.57 60 P **P 17 19 13.3 +0.2**
MAKZ pmax pmax
comp=Z,80nm,1.2s
MAKZ MLR MLR
comp=Z,4μm,19.0s
MAKZ Makanchi 47.57 60 P **P 17 19 14.4 +1.3**
DRLN Deer Lake 47.77 303 P **P 17 19 13.1 -1.4**
MK31 Makanchi Array 47.77 60 P **P 17 19 15.1 +0.4**
MK31 IAmb IAmb 17 19 19.5
comp=Z,56nm,0.9s
MK31 Makanchi Array 47.77 60 P **P 17 19 15.1 +0.4**
MK31 pmax pmax
comp=Z,56nm,0.9s
MKAR Makanchi Array 47.77 60 P **P 17 19 15.3 +0.6**
comp=Z,45nm,0.7s,baz=289,slow=5.5,SNR=147
MKAR LR LR 17 43 36.6
comp=Z,4μm,18.5s,baz=298,slow=42
comp=Z,45nm,0.7s
MKAR Makanchi Array 47.77 60 P **P 17 19 14.7 0.0**
MKAR Makanchi Array 47.77 60 P **P 17 19 14.7 0.0**
KMBO Kilima Mbogo 48.91 147 P **P 17 19 24.4 +0.4**
comp=Z,0.3nm,0.7s,baz=354,slow=23,SNR=9.0
KMBO LR LR 17 41 51.8
comp=Z,18nm,19.9s,baz=284,slow=38
KMBO Kilima Mbogo 48.91 147 P **P 17 19 24.2 +0.3**
KMBO Kilima Mbogo 48.91 147 P **P 17 19 24.2 +0.3**
KMBO pmax pmax
comp=Z,15nm,1.0s
KMBO Kilima Mbogo 48.91 147 P **P 17 19 25.0 +1.1**
KMBO Kilima Mbogo 48.91 147 *eP* P 17 19 17.2 -6.7
KMBO Kilima Mbogo 48.91 147 *eP* P 17 19 18.4 -5.5
KMBO Kilima Mbogo 48.91 147 *eP* P 17 19 18.4 -5.5
KMBO Kilima Mbogo 48.91 147 *eP* P 17 19 17.2 -6.7
KMBO Kilima Mbogo 48.91 147 *i P* **P 17 19 25.1 +1.2**
SNR=10
KMBO Kilima Mbogo 48.91 147 P **P 17 19 25.3 +1.3**
FRB Frobisher Bay 49.10 324 LR LR 17 41 09.7
comp=Z,3μm,18.0s,baz=84,slow=37
EUNU Eureka 49.72 347 P **P 17 19 29.4 +0.2**
EUNU IAmb IAmb 17 19 31.8
comp=Z,66nm,0.8s
DGZ Jazzator, Alta 49.87 55 *c i P* **P 17 19 32.1 +1.2**
DGZ pmax pmax
comp=Z,51nm,0.9s
DGZ MLR MLR
comp=Z,3μm,20.0s
KIBK Kibwezi 50.33 147 P **P 17 19 35.1 +0.6**
KIBK Kibwezi 50.33 147 P **P 17 19 35.7 +1.1**
SNR=5.8
SCHQ Schefferville 51.14 313 P **P 17 19 39.2 -1.1**
comp=Z,48nm,0.8s,baz=66,slow=6.4,SNR=37
SCHQ LR LR 17 39 06.8
comp=Z,2μm,21.3s,baz=62,slow=34
comp=Z,48nm,0.8s
SCHQ Schefferville 51.14 313 P **P 17 19 38.9 -1.4**
SCHQ IAmb IAmb 17 19 40.9
comp=Z,50nm,0.8s

GBN	**Guysborough**	**51.78**	**300**	P	**P**	**17 19 43.7**	**-1.5**
GBN				IAmb	IAmb	17 19 45.5	
	comp=Z,59nm,0.8s						
WMQ	**Urumqi**	**52.47**	**62**	*e*P	**P**	**17 19 52.3**	**+1.9**
WMQ				PcP	**PcP**	**17 21 06.0**	**+5.1**
WMQ				S	**S**	**17 27 19.5**	**+2.7**
WMQ				pmax	pmax		
	comp=Z,120nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,500nm,4.1s						
WMQ				LR	LR		
	comp=Z,5μm,16.9s						
WMQ				LR	LR		
	comp=Z,4μm,14.3s						
WMQ				LR	LR		
	comp=Z,2μm,22.1s						
HAL	**Halifax**	**53.45**	**300**	P	**P**	**17 19 56.0**	**-1.5**
HAL				IAmb	IAmb	17 19 57.5	
	comp=Z,62nm,0.7s						
HAL	**Halifax**	**53.45**	**300**	P	**P**	**17 19 56.0**	**-1.5**
HAL				pmax	pmax		
	comp=Z,62nm,0.7s						
RES	**Resolute Bay**	**53.61**	**342**	LR	LR	17 44 39.5	
	comp=Z,1μm,18.4s,baz=104,slow=38						
RES	**Resolute Bay**	**53.61**	**342**	P	**P**	**17 19 58.9**	**+0.7**
RES	**Resolute Bay**	**53.61**	**342**	P	**P**	**17 19 58.9**	**+0.7**
RES				pmax	pmax		
	comp=Z,25nm,1.0s						
BATG	**Bathurst New B**	**53.79**	**304**	P	**P**	**17 19 58.5**	**-1.5**
BATG				IAmb	IAmb	17 20 02.8	
	comp=Z,41nm,0.9s						
PTH	**Pithoragarh**	**54.43**	**81**	*e*P	**P**	**17 20 06.1**	**+1.0**
PQI	**Presque Isle**	**55.26**	**304**	P	**P**	**17 20 09.2**	**-1.4**
PQI				IAmb	IAmb	17 20 13.8	
	comp=Z,47nm,0.9s						
PQI				IAMs_20	IAMs_20	17 42 33.2	
	comp=Z,2μm,20.0s						
E63A	**Oxbow**	**55.63**	**304**	P	**P**	**17 20 12.6**	**-0.7**
	baz=62,SNR=7.9						
E63A				P	**P**	**17 20 12.6**	**-0.7**
	baz=62,SNR=7.9						
D62A	**Allapoint, All**	**55.70**	**305**	P	**P**	**17 20 13.2**	**-0.5**
	baz=62,SNR=13						
D62A				P	**P**	**17 20 13.2**	**-0.5**
	baz=62,SNR=13						
F64A	**Sherman**	**55.85**	**303**	P	**P**	**17 20 14.3**	**-0.6**
	baz=61						
F64A				P	**P**	**17 20 14.3**	**-0.6**
	baz=61						
EMMW	**East Machias**	**55.85**	**302**	P	**P**	**17 20 14.4**	**-0.5**
EMMW				IAmb	IAmb	17 20 18.0	
	comp=Z,50nm,1.0s						
EMMW				IAMs_20	IAMs_20	17 42 31.8	
	comp=Z,2μm,20.0s						
E62A	**Clayton Lake**	**56.20**	**305**	P	**P**	**17 20 16.4**	**-1.0**
	baz=61,SNR=6.9						
E62A				P	**P**	**17 20 16.4**	**-1.0**
	baz=61,SNR=6.9						
POO	**Poona**	**56.29**	**96**	*e*P	P	17 20 13.0	-5.5
PKME	**Peaks-Kenny Pk**	**56.72**	**303**	P	**P**	**17 20 20.1**	**-1.0**
PKME				IAmb	IAmb	17 20 24.7	
	comp=Z,65nm,1.1s						
PKME				IAMs_20	IAMs_20	17 43 27.7	
	comp=Z,2μm,19.0s						
PKME	**Peaks-Kenny Pk**	**56.72**	**303**	P	**P**	**17 20 20.5**	**-0.6**
	baz=61						
PKME	**Peaks-Kenny Pk**	**56.72**	**303**	P	**P**	**17 20 18.4**	**-2.7**
	baz=61						
MOY	**Mondy**	**56.82**	**48**	*e*P	**P**	**17 20 24.0**	**+2.1**
MOY				pmax	pmax		
	comp=Z,89nm,2.7s						
TIXI	**Tiksi**	**57.19**	**20**	LR	LR	17 47 58.4	
	comp=Z,2μm,18.4s,baz=270,slow=39						
TIXI	**Tiksi**	**57.19**	**20**	P	**P**	**17 20 25.4**	**+1.3**
TIXI				IAMs_20	IAMs_20	17 48 40.0	
	comp=Z,2μm,19.0s						
TIXI	**Tiksi**	**57.19**	**20**	*de*P	**P**	**17 20 25.7**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,28nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,3μm,16.0s						
TIXI	**Tiksi**	**57.19**	**20**	P	**P**	**17 20 25.8**	**+1.7**
PYUN	**Piuthan**	**57.25**	**81**	*e*P	**P**	**17 20 25.6**	**+0.2**
	comp=Z,446nm,0.9s						
PYUN	**Piuthan**	**57.25**	**81**	*e*P	**P**	**17 20 25.6**	**+0.2**
	comp=Z,446nm,0.9s						
WVL	**Waterville**	**57.29**	**303**	IAMs_20	IAMs_20	17 43 23.9	
	comp=Z,2μm,20.0s						
DANN	**Dangsing**	**57.67**	**80**	*e*P	**P**	**17 20 28.4**	**0.0**
	comp=Z,166nm,0.6s						
DANN	**Dangsing**	**57.67**	**80**	*e*P	**P**	**17 20 28.7**	**+0.3**
	comp=Z,166nm,0.6s						
KOLN	**Koldanda**	**57.88**	**80**	*e*P	**P**	**17 20 30.2**	**+0.4**
KOLN	**Koldanda**	**57.88**	**80**	*e*P	**P**	**17 20 29.8**	**0.0**
IRK	**Irkutsk**	**58.30**	**46**	*e*P	**P**	**17 20 34.4**	**+2.2**
IRK				*e*S	**S**	**17 28 37.3**	**+2.9**
IRK				pmax	pmax		
	comp=Z,143nm,2.4s						
GKN	**Gorkha**	**58.50**	**80**	*e*P	**P**	**17 20 33.8**	**-0.3**
	comp=Z,260nm,0.9s						
GKN	**Gorkha**	**58.50**	**80**	*e*P	**P**	**17 20 33.8**	**-0.3**
	comp=Z,260nm,0.9s						
ZAK	**Zakamensk**	**58.71**	**49**	*e*P	**P**	**17 20 36.8**	**+1.6**
ZAK				pmax	pmax		
	comp=Z,30nm,1.2s						
LBNH	**Lisbon**	**58.85**	**303**	P	**P**	**17 20 35.6**	**-0.6**
LBNH				IAmb	IAmb	17 20 39.9	
	comp=Z,37nm,0.9s						
LBNH	**Lisbon**	**58.85**	**303**	P	**P**	**17 20 35.6**	**-0.6**
LBNH				pmax	pmax		
	comp=Z,37nm,0.9s						
LBNH				MLR	MLR		
	comp=Z,3μm,19.0s						
LBNH	**Lisbon**	**58.85**	**303**	P	**P**	**17 20 36.1**	**0.0**
	baz=59						
LBNH	**Lisbon**	**58.85**	**303**	P	**P**	**17 20 34.8**	**-1.4**
	baz=59						
DMN	**Daman**	**59.06**	**80**	*e*P	**P**	**17 20 38.1**	**-0.1**
	comp=Z,186nm,1.0s						
DMN	**Daman**	**59.06**	**80**	*e*P	**P**	**17 20 38.2**	**0.0**
	comp=Z,229nm,0.7s						
FFD	**Franklin Falls**	**59.09**	**302**	P	**P**	**17 20 38.6**	**+0.8**
FFD				IAmb	IAmb	17 20 44.4	
	comp=Z,78nm,1.2s						
FFD				IAMs_20	IAMs_20	17 44 30.4	
	comp=Z,2μm,20.0s						
KKN	**Kakani**	**59.09**	**79**	*e*P	**P**	**17 20 38.1**	**-0.2**
KKN	**Kakani**	**59.09**	**79**	*e*P	**P**	**17 20 38.3**	**0.0**
KKN	**Kakani**	**59.09**	**79**	*e*P	**P**	**17 20 39.0**	**+0.7**
	comp=Z,18nm,0.8s						
PKIN	**Phulchoki**	**59.29**	**80**	*e*P	**P**	**17 20 39.3**	**-0.5**
PKIN	**Phulchoki**	**59.29**	**80**	*e*P	**P**	**17 20 39.7**	**-0.1**
	comp=Z,148nm,0.9s						
PKI	**Pulchoki**	**59.31**	**80**	*e*P	**P**	**17 20 39.5**	**-0.5**
PKI	**Pulchoki**	**59.31**	**80**	*e*P	**P**	**17 20 39.4**	**-0.5**
	comp=Z,185nm,0.9s						
VT1	**Waterbury**	**59.31**	**304**	IAMs_20	IAMs_20	17 45 07.5	
	comp=Z,3μm,20.0s						
HNH	**Hanover**	**59.35**	**303**	IAMs_20	IAMs_20	17 45 17.5	
	comp=Z,2μm,20.0s						
BCX	**Boston College**	**59.38**	**301**	IAMs_20	IAMs_20	17 45 16.2	
	comp=Z,2μm,20.0s						
TRQ	**Mont Tremblant**	**59.41**	**306**	P	**P**	**17 20 39.0**	**-1.1**
TRQ				IAmb	IAmb	17 20 43.4	
	comp=Z,28nm,0.8s						
WES	**Weston**	**59.45**	**301**	P	**P**	**17 20 40.6**	**+0.4**
WES				IAmb	IAmb	17 20 43.9	
	comp=Z,49nm,1.1s						
WES				IAMs_20	IAMs_20	17 44 59.0	
	comp=Z,2μm,20.0s						
WES	**Weston**	**59.45**	**301**	P	**P**	**17 20 40.6**	**+0.4**
WES				pmax	pmax		
	comp=Z,49nm,1.1s						
WES				MLR	MLR		
	comp=Z,2μm,20.0s						
GUN	**Gumba**	**59.45**	**79**	*e*P	**P**	**17 20 41.2**	**+0.3**
	comp=Z,465nm,0.8s						
GUN	**Gumba**	**59.45**	**79**	*e*P	**P**	**17 20 41.0**	**+0.1**
	comp=Z,465nm,0.8s						
LSZ	**Lusaka**	**59.51**	**163**	LR	LR	17 49 10.5	
	comp=Z,1μm,18.0s,baz=356,slow=39						
HRV	**Adam Dziewonsk**	**59.53**	**301**	P	**P**	**17 20 40.1**	**-0.8**
	baz=58						
JIRN	**Jiri**	**59.82**	**79**	*e*P	**P**	**17 20 43.4**	**-0.1**
JIRN	**Jiri**	**59.82**	**79**	*e*P	**P**	**17 20 43.5**	**-0.1**
	comp=Z,270nm,0.8s						
BRYW	**Bryant College**	**59.83**	**301**	P	**P**	**17 20 44.9**	**+1.9**
BRYW				IAmb	IAmb	17 20 48.2	
	comp=Z,59nm,1.1s						
BRYW				IAMs_20	IAMs_20	17 45 22.2	
	comp=Z,2μm,19.0s						
BOD	**Bodaibo**	**60.11**	**37**	*e*P	**P**	**17 20 45.9**	**+1.3**
BOD				pmax	pmax		
	comp=Z,52nm,1.4s						
QUA2	**Belchertown**	**60.15**	**301**	P	**P**	**17 20 43.9**	**-1.2**
QUA2				IAmb	IAmb	17 20 49.8	
	comp=Z,51nm,0.9s						
QUA2				IAMs_20	IAMs_20	17 45 29.6	
	comp=Z,2μm,19.0s						
L61B	**Northampton**	**60.27**	**302**	IAMs_20	IAMs_20	17 45 33.6	
	comp=Z,2μm,20.0s						
L61B	**Northampton**	**60.27**	**302**	P	**P**	**17 20 45.7**	**-0.2**
	baz=58						
LONY	**Lake Ozonia**	**60.27**	**305**	P	**P**	**17 20 45.3**	**-0.6**
LONY	**Lake Ozonia**	**60.27**	**305**	P	**P**	**17 20 45.0**	**-0.9**
	baz=58						
ACCN	**Adirondack Com**	**60.38**	**303**	P	**P**	**17 20 46.6**	**-0.1**
ACCN				IAmb	IAmb	17 20 51.4	
	comp=Z,40nm,1.1s						
HYBB	**Hyderabad (bro**	**60.44**	**93**	*e*P	**P**	**17 20 47.7**	**+0.3**
HYBB				*e*pP	**pP**	**17 20 49.9**	**-0.8**
HYBB				*e*PP	**PP**	**17 23 00.9**	**+0.3**
HYBB				IVMs_BB	IVMs_BB	17 54 54.2	
	comp=Z,170nm,14.5s						
RAMN	**Ramite**	**60.53**	**79**	*e*P	**P**	**17 20 47.7**	**-0.5**
	comp=Z,342nm,0.8s						
RAMN	**Ramite**	**60.53**	**79**	*e*P	**P**	**17 20 47.8**	**-0.5**
	comp=Z,342nm,0.8s						
TRY	**Troy**	**60.73**	**303**	IAMs_20	IAMs_20	17 45 29.8	
	comp=Z,2μm,21.0s						
MSEY	**Mahe Island**	**60.90**	**130**	P	**P**	**17 20 50.0**	**-0.6**
MSEY				IAmb	IAmb	17 20 52.3	
	comp=Z,112nm,1.6s						
MSEY	**Mahe Island**	**60.90**	**130**	P	**P**	**17 20 50.0**	**-0.6**
MSEY				pmax	pmax		
	comp=Z,112nm,1.6s						
MSEY	**Mahe Island**	**60.90**	**130**	P	**P**	**17 20 50.8**	**+0.2**
MSEY	**Mahe Island**	**60.90**	**130**	*i* P	**P**	**17 20 51.1**	**+0.5**
	SNR=8.8						
MSEY	**Mahe Island**	**60.90**	**130**	P	**P**	**17 20 51.7**	**+1.1**
GOMU	**GeErMu**	**61.03**	**66**	P	**P**	**17 20 54.0**	**+2.3**
GOMU				pP	sP	17 20 59.0	+3.0
GOMU				sP	pP	17 21 02.0	+7.2
GOMU				PP	**PP**	**17 23 06.0**	**+0.2**
GOMU				S	S	17 29 00.5	-10
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,1μm,16.5s						
GOMU				LR	LR		
	comp=Z,1μm,18.6s						
GOMU				LR	LR		
	comp=Z,1μm,20.6s						
ODAN	**Odare**	**61.15**	**79**	*e*P	**P**	**17 20 52.2**	**-0.3**
WCNY	**West Carthage**	**61.27**	**305**	P	**P**	**17 20 52.5**	**-0.2**
	baz=57						
BRNY	**Black Rk. Fore**	**61.66**	**301**	P	**P**	**17 20 55.3**	**-0.1**
	baz=56						
A36M	**Sachs Harbour**	**61.74**	**346**	P	**P**	**17 20 55.3**	**-0.1**
A36M	**Sachs Harbour**	**61.74**	**346**	P	**P**	**17 20 55.6**	**+0.2**
	baz=34,SNR=8.7						
J57A	**Williamstown**	**61.79**	**304**	P	**P**	**17 20 56.3**	**+0.1**
	baz=56						
J57A				P	**P**	**17 20 56.3**	**+0.1**
	baz=56						
SONM	**Songino Array**	**61.80**	**50**	P	**P**	**17 20 57.8**	**+1.4**
	comp=Z,92nm,1.0s,baz=294,slow=6.0,SNR=139						
SONM				LR	LR	17 49 57.5	
	comp=Z,4μm,18.9s,baz=302,slow=38						
	comp=Z,92nm,1.0s						
SONM	**Songino Array**	**61.80**	**50**	P	**P**	**17 20 57.4**	**+1.0**
SONM	**Songino Array**	**61.80**	**50**	P	**P**	**17 20 57.4**	**+1.0**
SONM				pmax	pmax		
	comp=Z,149nm,1.1s						
PAL	**Palisades**	**61.82**	**301**	P	**P**	**17 20 54.9**	**-1.6**
PAL				IAmb	IAmb	17 20 60.0	
	comp=Z,26nm,0.8s						
PAL				IAMs_20	IAMs_20	17 46 37.8	
	comp=Z,1μm,19.0s						
PAL	**Palisades**	**61.82**	**301**	P	**P**	**17 20 54.9**	**-1.6**
PAL				pmax	pmax		
	comp=Z,26nm,0.8s						
PAL				MLR	MLR		
	comp=Z,1μm,19.0s						
PAL	**Palisades**	**61.82**	**301**	P	**P**	**17 20 55.6**	**-0.8**
	baz=56						
TSUM	**Tsumeb**	**61.91**	**175**	LR	LR	17 48 52.2	
	comp=Z,986nm,20.3s,baz=332,slow=37						
TSUM	**Tsumeb**	**61.91**	**175**	P	**P**	**17 20 56.8**	**-0.5**
TSUM				IAmb	IAmb	17 20 58.7	
	comp=Z,96nm,1.6s						
TSUM	**Tsumeb**	**61.91**	**175**	P	**P**	**17 20 57.3**	**0.0**
CPNY	**Central Park**	**61.97**	**301**	P	**P**	**17 20 58.3**	**+0.8**
CPNY				IAmb	IAmb	17 21 01.3	
	comp=Z,54nm,1.1s						
DELO	**Deloro Mine**	**62.15**	**306**	P	**P**	**17 20 58.3**	**-0.3**
ULN	**Ulaanbaatar**	**62.15**	**49**	P	**P**	**17 20 59.9**	**+1.1**
ULN	**Ulaanbaatar**	**62.15**	**49**	IAMs_20	IAMs_20	17 49 36.3	
	comp=Z,2μm,19.0s						
ULN	**Ulaanbaatar**	**62.15**	**49**	*c i* P	**P**	**17 21 01.1**	**+2.3**
ULN				pmax	pmax		
	comp=Z,101nm,1.3s						
ULN				MLR	MLR		
	comp=Z,2μm,16.0s						
ULN	**Ulaanbaatar**	**62.15**	**49**	P	**P**	**17 21 01.0**	**+2.3**
ULN	**Ulaanbaatar**	**62.15**	**49**	P	**P**	**17 21 01.1**	**+2.3**
	comp=Z,4μmcomp=Z,303nm,1.2s						
ULN	**Ulaanbaatar**	**62.15**	**49**	P	**P**	**17 21 01.1**	**+2.3**
LSA	**Lhasa**	**62.18**	**74**	P	**P**	**17 21 00.1**	**+0.4**
LSA				IAMs_20	IAMs_20	17 52 34.9	
	comp=Z,1μm,21.0s						
LSA	**Lhasa**	**62.18**	**74**	P	**P**	**17 20 59.5**	**-0.2**
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	**Lhasa**	**62.18**	**74**	P	**P**	**17 21 00.1**	**+0.4**
LSA				pmax	pmax		
	comp=Z,59nm,0.8s						
LSA				MLR	MLR		
	comp=Z,1μm,21.0s						
LSA	**Lhasa**	**62.18**	**74**	P	**P**	**17 21 00.7**	**+1.0**
FCC	**Fort Churchill**	**62.26**	**326**	P	**P**	**17 20 59.1**	**0.0**
FCC				IAmb	IAmb	17 21 01.5	
	comp=Z,36nm,0.8s						
FCC	**Fort Churchill**	**62.26**	**326**	P	**P**	**17 20 59.1**	**0.0**
FCC				pmax	pmax		
	comp=Z,36nm,0.8s						
BINY	**Binghamton**	**62.45**	**303**	P	**P**	**17 21 00.6**	**-0.2**
BINY				IAMs_20	IAMs_20	17 46 23.5	
	comp=Z,2μm,21.0s						
BINY	**Binghamton**	**62.45**	**303**	P	**P**	**17 20 59.8**	**-0.9**
	baz=56						
GTA	**Gaotai**	**62.52**	**61**	⇑P	**P**	**17 21 02.5**	**+1.1**
GTA				pP	sP	17 21 05.8	0.0
GTA				sP	pP	17 21 08.8	+4.2
GTA				S	**S**	**17 29 30.8**	**+1.7**
GTA				sS	sS	17 29 42.5	+8.2
GTA				SS	**SS**	**17 33 36.0**	**+3.5**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,350nm,5.2s						
GTA				LR	LR		
	comp=Z,2μm,19.6s						
GTA				LR	LR		
	comp=Z,2μm,19.3s						
GTA				LR	LR		
	comp=Z,4μm,18.5s						
KSPA	**Keystone Colle**	**62.68**	**302**	P	**P**	**17 20 59.5**	**-2.7**
SADO	**Sadowa**	**62.91**	**307**	LR	LR	17 46 49.6	
	comp=Z,2μm,20.0s,baz=39,slow=35						
SADO	**Sadowa**	**62.91**	**307**	P	**P**	**17 21 02.2**	**-1.5**
SADO				IAmb	IAmb	17 21 08.5	
	comp=Z,59nm,1.3s						
LUPA	**Lehigh Univers**	**62.97**	**301**	P	**P**	**17 21 03.5**	**-0.7**
LUPA				IAmb	IAmb	17 21 12.9	
	comp=Z,36nm,1.3s						
TUPA	**Temple Univers**	**63.10**	**301**	P	**P**	**17 21 04.6**	**-0.5**
	baz=55						
CIT	**Chita**	**63.21**	**43**	*e*P	**P**	**17 21 07.0**	**+1.3**
CIT				*e*		17 21 46.2	
CIT				*e*		17 24 51.6	
CIT				*e*		17 30 00.8	
CIT				pmax	pmax		
	comp=Z,156nm,2.5s						
MMNY	**Mt. Morris Dam**	**63.33**	**304**	P	**P**	**17 21 05.9**	**-0.6**
PCHI	**Peechi**	**63.35**	**101**	*e*P	**P**	**17 21 06.7**	**-0.3**
PCHI				*e*S	**S**	**17 29 34.4**	**-5.3**
MEDO	**Medina**	**63.41**	**305**	P	**P**	**17 21 06.9**	**-0.1**
MEDO				IAmb	IAmb	17 21 08.6	
	comp=Z,28nm,0.8s						
WUPA	**West Chester U**	**63.50**	**301**	P	**P**	**17 21 06.5**	**-1.1**
M57A	**Sunshine Farm,**	**63.64**	**303**	P	**P**	**17 21 09.1**	**+0.4**
	baz=55						
M57A				P	**P**	**17 21 09.1**	**+0.4**
	baz=55						
N58A	**Sunbury**	**63.67**	**302**	P	**P**	**17 21 08.8**	**-0.1**
	baz=55						
N58A				P	**P**	**17 21 08.8**	**-0.1**
	baz=55						
YAK	**Yakutsk**	**63.71**	**28**	LR	LR	17 51 24.7	
	comp=Z,1μm,19.1s,baz=310,slow=38						
YAK	**Yakutsk**	**63.71**	**28**	P	**P**	**17 21 09.3**	**+0.6**
YAK				IAMs_20	IAMs_20	17 53 18.6	
	comp=Z,2μm,18.0s						
YAK	**Yakutsk**	**63.71**	**28**	*c i* P	**P**	**17 21 09.9**	**+1.2**
YAK				*e**PP	**sP**	**17 21 13.4**	**+0.3**
YAK				*e*		17 21 45.4	
YAK				*e*		17 23 30.0	
YAK				*e*PPP	PPP	17 24 57.1	
YAK				*e*S	**S**	**17 29 45.0**	**+2.1**
YAK				*e**SS	sS	17 30 03.0	+15
YAK				*e*		17 31 04.4	
YAK				*e*SS	**SS**	**17 33 53.1**	**+3.4**
YAK				pmax	pmax		
	comp=Z,108nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,0.7s						
YAK				pmax	pmax		
	comp=E,25nm,0.9s						
YAK				pmax	pmax		
	comp=Z,213nm,3.9s						
YAK				pmax	pmax		
	comp=N,78nm,2.3s						
YAK				pmax	pmax		
	comp=E,148nm,2.7s						
YAK				smax	smax		
	comp=E,189nm,3.9s						
YAK				smax	smax		
	comp=N,113nm,2.8s						
YAK				MLR	MLR		
	comp=Z,1μm,19.0s						
YAK				MLR	MLR		
	comp=N,492nm,18.0s						
YAK				MLR	MLR		
	comp=E,1μm,15.0s						
YAK	**Yakutsk**	**63.71**	**28**	P	**P**	**17 21 09.9**	**+1.2**
C36M	**Paulatuk**	**63.73**	**344**	P	**P**	**17 21 09.4**	**+0.7**
C36M				IAMs_20	IAMs_20	17 50 53.1	
	comp=Z,2μm,19.0s						
C36M	**Paulatuk**	**63.73**	**344**	P	**P**	**17 21 08.6**	**0.0**
	baz=34,SNR=11						
MVL	**Millersville**	**63.93**	**301**	P	**P**	**17 21 10.3**	**-0.2**
WVNY	**West Valley, N**	**63.94**	**304**	P	**P**	**17 21 10.4**	**-0.2**
WVNY				IAmb	IAmb	17 21 16.1	
	comp=Z,36nm,1.0s						
WVNY	**West Valley, N**	**63.94**	**304**	P	**P**	**17 21 10.4**	**-0.2**
	baz=55						
SSPA	**Standing Stone**	**64.52**	**303**	P	**P**	**17 21 13.5**	**-0.9**
SSPA				IAmb	IAmb	17 21 22.5	
	comp=Z,34nm,1.0s						
SSPA	**Standing Stone**	**64.52**	**303**	IAMs_20	IAMs_20	17 48 06.1	
	comp=Z,2μm,19.0s						
SSPA	**Standing Stone**	**64.52**	**303**	P	**P**	**17 21 14.1**	**-0.3**
	baz=54,SNR=7.3						
SSPA	**Standing Stone**	**64.52**	**303**	P	**P**	**17 21 14.6**	**+0.2**
	baz=54						
SSPA	**Standing Stone**	**64.52**	**303**	P	**P**	**17 21 15.5**	**+1.1**
M55A	**Ridgway**	**64.58**	**304**	P	**P**	**17 21 14.7**	**-0.1**
	baz=54						
M55A				P	**P**	**17 21 14.7**	**-0.1**
	baz=54						
ERPA	**Erie**	**64.94**	**305**	P	**P**	**17 21 17.0**	**-0.2**
ERPA				IAmb	IAmb	17 21 21.2	
	comp=Z,38nm,0.8s						
ERPA				IAMs_20	IAMs_20	17 48 30.2	
	comp=Z,2μm,21.0s						
ERPA	**Erie**	**64.94**	**305**	P	**P**	**17 21 16.5**	**-0.7**
	baz=54						
E46A	**Sault Ste Mari**	**64.94**	**311**	P	**P**	**17 21 17.2**	**+0.1**
	baz=54,SNR=7.8						
SHL	**Shillong**	**65.16**	**78**	P	**P**	**17 21 17.6**	**-1.4**
SHL	**Shillong**	**65.16**	**78**	P	**P**	**17 21 17.6**	**-1.4**
SHL				pmax	pmax		
	comp=Z,101nm,0.7s						
SHL	**Shillong**	**65.16**	**78**	P	**P**	**17 21 19.3**	**+0.3**
	SNR=19						
P57A	**Homestead Farm**	**65.27**	**302**	P	**P**	**17 21 19.4**	**+0.1**
	baz=54						
P57A				P	**P**	**17 21 19.4**	**+0.1**
	baz=54						
ALLY	**Alegheny Colle**	**65.31**	**305**	P	**P**	**17 21 19.6**	**+0.1**
ALLY				IAmb	IAmb	17 21 20.9	
	comp=Z,42nm,0.9s						
ALLY	**Alegheny Colle**	**65.31**	**305**	P	**P**	**17 21 19.8**	**+0.2**
	baz=54						
CBN	**Corbin Frederi**	**65.62**	**300**	IAMs_20	IAMs_20	17 48 41.3	
	comp=Z,1μm,20.0s						
CBN	**Corbin Frederi**	**65.62**	**300**	P	**P**	**17 21 21.1**	**-0.5**
	baz=54						
RCBR	**Riachuelo**	**65.71**	**235**	LR	LR	17 48 35.6	
	comp=Z,786nm,19.0s,baz=196,slow=35						
RCBR	**Riachuelo**	**65.71**	**235**	P	**P**	**17 21 21.6**	**-0.8**
RCBR				IAmb	IAmb	17 21 25.1	
	comp=Z,41nm,1.0s						
RCBR	**Riachuelo**	**65.71**	**235**	P	**P**	**17 21 21.7**	**-0.8**
RCBR				pmax	pmax		
	comp=Z,41nm,1.0s						
RCBR				MLR	MLR		
	comp=Z,800nm,20.0s						
RCBR	**Riachuelo**	**65.71**	**235**	P	**P**	**17 21 25.6**	**+3.2**
M53A	**WI Miller and**	**65.75**	**305**	P	**P**	**17 21 22.5**	**+0.1**
M53A				IAmb	IAmb	17 21 25.9	
	comp=Z,26nm,0.8s						
M53A				IAMs_20	IAMs_20	17 49 03.8	
	comp=Z,2μm,20.0s						
M53A	**WI Miller and**	**65.75**	**305**	P	**P**	**17 21 22.1**	**-0.3**
	baz=54						
UPAO	**U. Pittsburgh**	**65.92**	**303**	P	**P**	**17 21 23.8**	**+0.3**
	baz=54						
GLMI	**Grayling**	**66.04**	**309**	P	**P**	**17 21 23.9**	**-0.3**
GLMI				IAMs_20	IAMs_20	17 49 10.1	
	comp=Z,2μm,21.0s						
GLMI	**Grayling**	**66.04**	**309**	P	**P**	**17 21 23.8**	**-0.5**
	baz=53						
R58B	**Mineral**	**66.08**	**300**	P	**P**	**17 21 24.4**	**-0.2**
	baz=54,SNR=9.8						
R58B				P	**P**	**17 21 24.4**	**-0.2**
	baz=54,SNR=9.8						
M52A	**Chesterland**	**66.10**	**305**	P	**P**	**17 21 24.9**	**+0.2**
	baz=53,SNR=5.7						
M52A				P	**P**	**17 21 24.9**	**+0.2**
	baz=53,SNR=5.7						
N53A	**Lisbon**	**66.23**	**304**	P	**P**	**17 21 25.6**	**+0.1**
	baz=53,SNR=9.4						
N53A				P	**P**	**17 21 25.6**	**+0.1**
	baz

C26K	Camden Bay	66.37 352	P	P	17 21 27.6	+1.8
	baz=18,SNR=20					
C27K	Jago River	66.52 351	P	P	17 21 28.4	+1.5
	baz=18,SNR=73					
BRDH	Bariadhala	66.75 80	P	P	17 21 30.1	+1.0
	comp=Z,98nm,0.4s,baz=270,slow=19,SNR=4.5					
BRDH			LR	LR	17 58 38.9	
	comp=Z,2µm,18.2s,baz=328,slow=43					
O53A	New Philadelph	66.79 304	P	P	17 21 29.1	0.0
O53A	New Philadelph	66.79 304	P	P	17 21 29.3	+0.2
	baz=53,SNR=15					
C24K	Franklin Bluff	66.92 353	P	P	17 21 30.8	+1.4
	baz=14					
YKA	Yellowknife Ar	66.93 336	P	P	17 21 30.4	+0.9
	comp=Z,78nm,0.8s,baz=44,slow=6.3,SNR=178					
YKA			LR	LR	17 50 53.5	
	comp=Z,2µm,21.2s,baz=117,slow=36					
	comp=Z,78nm,0.8s					
YKA	Yellowknife Ar	66.93 336	P	P	17 21 29.5	-0.1
C23K	Itkillik River	66.96 354	P	P	17 21 31.9	+2.2
	baz=13,SNR=22					
AAM	Ann Arbor	67.01 307	P	P	17 21 30.1	-0.4
AAM			IAmb	IAmb	17 21 33.8	
	comp=Z,36nm,0.9s					
AAM	Ann Arbor	67.01 307	P	P	17 21 30.1	-0.4
AAM			pmax	pmax		
	comp=Z,36nm,1.0s					
AAM			MLR	MLR		
	comp=Z,2µm,18.0s					
LZH	Lanzhou	67.05 62	eP	P	17 21 33.5	+2.5
LZH			sP	sP	17 21 39.8	+4.4
LZH			S	S	17 30 28.5	+3.4
LZH			sS	sS	17 30 39.3	+9.0
LZH			SS	SS	17 34 43.5	+0.3
LZH			pmax	pmax		
	comp=Z,110nm,1.3s					
LZH			pmax	pmax		
	comp=Z,500nm,6.9s					
LZH			LR	LR		
	comp=Z,3µm,19.2s					
LZH			LR	LR		
	comp=Z,2µm,18.5s					
LZH			LR	LR		
	comp=Z,3µm,19.2s					
D25K	Kavik River	67.09 352	P	P	17 21 32.4	+1.8
	baz=16,SNR=26					
N51A	Ashland	67.09 305	P	P	17 21 30.7	-0.3
N51A			P	P	17 21 30.7	-0.3
	baz=52,SNR=6.5					
J47A	Sunmer	67.12 308	P	P	17 21 31.1	0.0
	baz=52,SNR=7.2					
J47A			P	P	17 21 31.1	0.0
	baz=52,SNR=7.2					
F31M	Tsiigehtchic	67.16 347	P	P	17 21 32.0	+1.1
	baz=26					
ANWB	Willy Bob	67.22 273	IAMs_20	IAMs_20	17 44 33.7	
	comp=Z,2µm,22.0s					
O52A	Adamsville	67.25 304	P	P	17 21 31.9	-0.1
	baz=52,SNR=9.4					
O52A			P	P	17 21 31.9	-0.1
	baz=52,SNR=9.4					
R55A	Marlinton	67.30 302	P	P	17 21 32.4	-0.1
	baz=53					
R55A			P	P	17 21 32.4	-0.1
	baz=53					
Q54A	Coxs Mills	67.32 303	P	P	17 21 32.5	0.0
	baz=53,SNR=11					
Q54A			P	P	17 21 32.5	0.0
	baz=53,SNR=11					
P53A	Whipple	67.36 303	P	P	17 21 33.0	+0.3
	baz=52,SNR=14					
P53A			P	P	17 21 33.0	+0.3
	baz=52,SNR=14					
D24K	Happy Valley	67.48 353	P	P	17 21 34.6	+1.6
	baz=14					
GDSD	La Dsirade Is	67.55 272	IAMs_20	IAMs_20	17 51 49.7	
	comp=Z,2µm,21.0s					
BILL	Bilibino	67.57 11	P	P	17 21 35.3	+1.7
BILL	Bilibino	67.57 11	dP	P	17 21 35.2	+1.6
BILL			i		17 21 45.1	
BILL			i		17 22 02.4	
BILL			pmax	pmax		
	comp=Z,64nm,1.0s					
E27K	Coleen River	67.63 350	P	P	17 21 35.7	+1.7
	baz=20,SNR=37					
L48A	N Adams	67.69 307	P	P	17 21 34.8	+0.1
	baz=52,SNR=9.4					
L48A			P	P	17 21 34.8	+0.1
	baz=52,SNR=9.4					
P52A	Corning	67.73 304	P	P	17 21 34.6	-0.4
P52A			IAmb	IAmb	17 21 39.0	
	comp=Z,51nm,0.9s					
P52A	Corning	67.73 304	P	P	17 21 34.3	-0.7
	baz=52,SNR=11					
COWI	Conover	67.75 313	P	P	17 21 34.8	-0.3
COWI			IAmb	IAmb	17 21 39.7	
	comp=Z,29nm,0.9s					
D23K	Nanushuk River	67.82 354	P	P	17 21 36.9	+1.7
	baz=13,SNR=26					
EYMN	Ely	67.83 315	P	P	17 21 35.0	-0.5
EYMN			IAmb	IAmb	17 21 39.6	
	comp=Z,40nm,0.9s					
EYMN	Ely	67.83 315	IAMs_20	IAMs_20	17 49 46.2	
	comp=Z,2µm,20.0s					
EYMN	Ely	67.83 315	P	P	17 21 34.5	-1.0
	baz=50					
ACSO	Alum Creek Sta	67.88 305	P	P	17 21 35.3	-0.6
ACSO			IAMs_20	IAMs_20	17 50 29.0	
	comp=Z,2µm,19.0s					
ACSO	Alum Creek Sta	67.88 305	P	P	17 21 35.6	-0.4
	baz=52,SNR=11					
ACSO	Alum Creek Sta	67.88 305	P	P	17 21 35.3	-0.6
	baz=52,SNR=11					
G30M	tAoh Zraii Nji	67.99 348	P	P	17 21 36.6	+0.3
	baz=24,SNR=27					
KAAM	Kaadhehdhoo	68.01 111	P	P	17 21 37.9	+0.8
	comp=Z,143nm,1.2s					
HIA	Hailar	68.01 43	P	P	17 21 37.7	+1.0
HIA			IAmb	IAmb	17 21 42.2	
	comp=Z,48nm,0.9s					
HIA	Hailar	68.01 43	P	P	17 21 37.7	+1.0
HIA			pmax	pmax		
	comp=Z,47nm,0.9s					
HIA			MLR	MLR		
	comp=Z,4µm,18.0s					
HIA	Hailar	68.01 43	P	P	17 21 39.2	+2.5
	comp=Z,59nm,1.0s					
TOLK	Toolik Lake Re	68.05 353	P	P	17 21 38.0	+1.4
TOLK	Toolik Lake Re	68.05 353	P	P	17 21 37.7	+1.1
	baz=14,SNR=26					
CBE	Ff, Capester	68.10 272	P	P	17 21 37.4	-0.3
BLA	Blacksburg	68.14 301	P	P	17 21 36.7	-1.1
BLA	Blacksburg	68.14 301	P	P	17 21 36.7	-1.1
BLA			pmax	pmax		
	comp=Z,14nm,0.6s					
BLA			MLR	MLR		
	comp=Z,900nm,20.0s					
BLA	Blacksburg	68.14 301	P	P	17 21 39.8	+2.1
	baz=52					
BTO	Baotou	68.15 55	eP	P	17 21 37.0	-0.8
BTO			S	S	17 30 34.5	-3.5
BTO			LR	LR		
	comp=Z,9µm,18.8s					
BTO			LR	LR		
	comp=Z,6µm,20.2s					
E25K	Arctic Village	68.16 352	P	P	17 21 38.7	+1.3
	baz=17,SNR=20					
N49A	Columbus Grove	68.17 306	P	P	17 21 37.5	-0.3
	baz=52,SNR=13					
N49A			P	P	17 21 37.5	-0.3
	baz=52,SNR=13					
FFC	Flin Flon	68.19 326	P	P	17 21 38.1	+0.4
FFC			IAmb	IAmb	17 21 40.2	
	comp=Z,35nm,0.8s					
FFC	Flin Flon	68.19 326	IAMs_20	IAMs_20	17 49 50.4	
	comp=Z,2µm,20.0s					
FFC	Flin Flon	68.19 326	P	P	17 21 38.1	+0.4
FFC			pmax	pmax		
	comp=Z,35nm,0.8s					
FFC			MLR	MLR		
	comp=Z,2µm,20.0s					
FFC	Flin Flon	68.19 326	P	P	17 21 39.1	+1.4
SEUS	St. Eustatius	68.20 274	IAMs_20	IAMs_20	17 45 38.9	
	comp=Z,2µm,21.0s					
Q52A	Bidwell	68.22 303	P	P	17 21 37.7	-0.4
	baz=52,SNR=13					
Q52A			P	P	17 21 37.7	-0.4
	baz=52,SNR=13					
F26K	Sheenjek River	68.41 351	P	P	17 21 40.7	+1.8
	baz=18,SNR=63					
R53A	Hurricane	68.42 303	P	P	17 21 39.0	-0.4
	baz=52,SNR=14					
R53A			P	P	17 21 39.0	-0.4
	baz=52,SNR=14					
ZEA	Zeya	68.48 36	eP	P	17 21 41.9	+2.4
ZEA			eS	S	17 30 46.7	+5.4
ZEA			pmax	pmax		
	comp=E,100nm,4.9s					
ZEA			pmax	pmax		
	comp=N,100nm,5.2s					
ZEA			pmax	pmax		
	comp=Z,200nm,4.1s					
ZEA			pmax	pmax		
	comp=N,10.0nm,1.0s					
ZEA			pmax	pmax		
	comp=Z,20nm,0.8s					
ZEA			smax	smax		
	comp=N,200nm,8.6s					
ZEA			MLR	MLR		
	comp=E,2µm,17.0s					
ZEA			MLR	MLR		
	comp=Z,2µm,17.0s					
ZEA			MLR	MLR		
	comp=N,900nm,15.0s					
E24K	Your Creek	68.50 353	P	P	17 21 40.6	+1.1
	baz=14,SNR=13					
ULM	Lac du Bonnet	68.50 319	P	P	17 21 39.6	-0.1
	comp=N,33nm,0.7s,baz=49,slow=6.7,SNR=20					
ULM			LR	LR	17 50 15.2	
	comp=N,2µm,20.4s,baz=58,slow=35					
	comp=N,33nm,0.7s					
ULM	Lac du Bonnet	68.50 319	P	P	17 21 39.3	-0.4
ULM			IAmb	IAmb	17 21 42.7	
	comp=Z,34nm,0.8s					
ULM	Lac du Bonnet	68.50 319	P	P	17 21 39.3	-0.4
ULM			pmax	pmax		
	comp=Z,34nm,0.8s					
LBTB	Lobatse	68.53 168	LR	LR	17 55 21.0	
	comp=Z,870nm,19.1s,baz=352,slow=39					
SVN	Savane Anatole	68.57 271	IAMs_20	IAMs_20	17 52 36.7	
	comp=Z,1µm,18.0s					
E23K	Chandalar	68.62 353	P	P	17 21 42.1	+1.8
	baz=14,SNR=29					
FDF	Fort de France	68.63 270	IAMs_20	IAMs_20	17 52 40.2	
	comp=Z,1µm,18.0s					
EPYK	Eagle Plains	68.63 347	P	P	17 21 40.7	+0.4
EPYK	Eagle Plains	68.63 347	IAMs_20	IAMs_20	17 54 26.8	
	comp=Z,1µm,18.0s					
EPYK	Eagle Plains	68.63 347	P	P	17 21 40.9	+0.6
	baz=23,SNR=34					
F25K	Christian Rive	68.68 351	P	P	17 21 42.3	+1.7
	baz=17,SNR=17					
B35A	Bob, Littlefor	68.70 317	P	P	17 21 40.3	-0.7
	baz=49					
PALK	Pallekele	68.71 100	P	P	17 21 41.0	-0.6
	comp=Z,26nm,0.8s,baz=50,slow=7.5,SNR=13					
PALK			LR	LR	17 56 46.4	
	comp=Z,626nm,18.7s,baz=71,slow=40					
	comp=Z,26nm,0.8s					
PALK	Pallekele	68.71 100	P	P	17 21 41.0	-0.6
PALK			IAmb	IAmb	17 21 43.3	
	comp=Z,29nm,0.8s					
PALK	Pallekele	68.71 100⇑	eP	P	17 21 41.9	+0.3
PALK			pmax	pmax		
	comp=Z,37nm,0.9s					
PALK			MLR	MLR		
	comp=Z,770nm,19.0s					
PALK	Pallekele	68.71 100	P	P	17 21 42.8	+1.2
	comp=Z,41nm,0.9s					
PALK	Pallekele	68.71 100	P	P	17 21 42.5	+0.9
BIM	Bigot	68.71 270	P	P	17 21 41.6	+0.1
BMAR	Burnt Mountain	68.72 351	P	P	17 21 42.6	+1.8
O49A	Covington	68.72 305	P	P	17 21 40.3	-1.0
	baz=51,SNR=16					
O49A			P	P	17 21 40.3	-1.0
	baz=51,SNR=16					
E38A	The Farm, Brul	68.72 314	P	P	17 21 40.2	-1.0
	baz=50					
WRGLY	Wrigley	68.72 340	P	P	17 21 42.2	+1.4
	baz=33,SNR=11					
E22K	Anaktuvuk Pass	68.73 354	P	P	17 21 42.3	+1.4
	baz=12					
Q51A	Peebles	68.84 304	P	P	17 21 41.3	-0.8
	baz=52,SNR=11					
Q51A			P	P	17 21 41.3	-0.8
	baz=52,SNR=11					
G40A	Rib Lake	68.86 313	P	P	17 21 41.9	-0.2
	baz=50,SNR=14					
HHC	Hu-ho-hao-te	68.92 54	eP	P	17 21 42.5	-0.1
HHC			PP	PP	17 24 16.8	+2.5
HHC			S	S	17 30 44.5	-2.6
HHC			pmax	pmax		
	comp=Z,760nm,5.1s					
HHC			LR	LR		
	comp=Z,3µm,15.2s					
HHC			LR	LR		
	comp=Z,4µm,15.6s					
HHC			LR	LR		
	comp=Z,5µm,15.9s					
G27K	Doyon Strip	68.94 350	P	P	17 21 43.9	+1.6
	baz=20,SNR=51					
F24K	Squaw Lake	68.98 352	P	P	17 21 44.4	+1.9
	baz=15,SNR=46					
G26K	Porcupine Rive	69.08 350	P	P	17 21 45.3	+2.3
	baz=18,SNR=72					
N47A	Urbana	69.09 307	P	P	17 21 42.6	-0.9
	baz=51,SNR=9.9					
N47A			P	P	17 21 42.6	-0.9
	baz=51,SNR=9.9					
STVI	Saint Thomas	69.10 276	P	P	17 21 43.2	-0.7
STVI			IAmb	IAmb	17 23 14.7	
	comp=Z,84nm,1.6s					
O48B	Farmland	69.17 306	P	P	17 21 43.1	-0.9
	baz=51					
O48B	Farmland	69.17 306	P	P	17 21 42.7	-1.3
	baz=51					
CDVI	St. Croix	69.35 275	P	P	17 21 45.9	+0.5
P49A	Miami Univ. Ec	69.36 305	P	P	17 21 43.9	-1.4
P49A			IAmb	IAmb	17 21 47.8	
	comp=Z,35nm,0.9s					
P49A			IAMs_20	IAMs_20	17 51 23.1	
	comp=Z,1µm,18.0s					
P49A	Miami Univ. Ec	69.36 305	P	P	17 21 43.9	-1.4
	baz=51					
P49A	Miami Univ. Ec	69.36 305	P	P	17 21 44.1	-1.1
	baz=51					
F22K	John River	69.37 354	P	P	17 21 47.1	+2.2
	baz=12					
U54A	Nelsons Funny	69.45 301	P	P	17 21 45.1	-0.9
	baz=51					
U54A			P	P	17 21 45.1	-0.9
	baz=51					
H27K	Steamboat Moun	69.47 349	P	P	17 21 47.2	+1.6
	baz=20,SNR=76					
COLD	Coldfoot	69.48 353	P	P	17 21 47.0	+1.4
COLD			IAmb	IAmb	17 21 49.0	
	comp=Z,52nm,0.9s					
COLD	Coldfoot	69.48 353	P	P	17 21 46.9	+1.4
	baz=13					
V55A	Taylorsville	69.48 300	P	P	17 21 45.9	-0.2
	baz=51					
V55A			P	P	17 21 45.9	-0.2
	baz=51					
G25K	Bearman Lake	69.53 351	P	P	17 21 48.3	+2.5
	baz=16,SNR=37					
L44A	Lake County Fo	69.56 309	IAMs_20	IAMs_20	17 51 39.3	
	comp=Z,1µm,20.0s					
L44A	Lake County Fo	69.56 309	P	P	17 21 45.3	-1.1
	baz=50					
XLT	XiLinHaoTe	69.56 49	eP	P	17 21 48.5	+2.0
XLT			pP	sP	17 21 53.5	+2.5
XLT			sP	pP	17 21 55.8	+6.0
XLT			PcS		17 26 17.5	
XLT			S	S	17 30 55.5	+0.9
XLT			sS	sS	17 31 01.8	+2.0
XLT			ScS	ScS	17 31 47.8	-0.5
XLT			pmax	pmax		
	comp=Z,62nm,1.0s					
XLT			pmax	pmax		
	comp=Z,230nm,4.1s					
XLT			LR	LR		
	comp=Z,480nm,15.6s					
XLT			LR	LR		
	comp=Z,4µm,16.4s					
XLT			LR	LR		
	comp=Z,4µm,19.0s					
SEY	Seymchan	69.63 19	LR	LR	17 56 07.7	
	comp=Z,946nm,19.5s,baz=328,slow=39					
SEY	Seymchan	69.63 19⇑	eP	P	17 21 48.9	+2.4
SEY			pmax	pmax		
	comp=Z,81nm,1.3s					
SEY			MLR	MLR		
	comp=Z,2µm,23.0s					
MTP	Monte Pirata	69.70 276	P	P	17 21 46.1	-1.5
MTP			IAmb	IAmb	17 21 59.5	
	comp=Z,35nm,1.2s					
G24K	Hadweenzic Riv	69.74 352	P	P	17 21 48.7	+1.6
	baz=15,SNR=17					
F21K	Alatna River	69.75 354	P	P	17 21 48.8	+1.6
	baz=10,SNR=43					
BIRD	Birdtown, Kers	69.75 299	P	P	17 21 46.8	-1.0
AGMN	Agassiz Nation	69.80 318	P	P	17 21 46.9	-0.9
AGMN			IAMs_20	IAMs_20	17 50 08.4	
	comp=Z,2µm,21.0s					
AGMN	Agassiz Nation	69.80 318	P	P	17 21 47.3	-0.6
	baz=48,SNR=9.7					
AGMN	Agassiz Nation	69.80 318	P	P	17 21 47.6	-0.2
	baz=48,SNR=9.7					
I29M	Ogilvie Camp,	69.82 348	P	P	17 21 47.8	+0.2
I29M	Ogilvie Camp,	69.82 348	P	P	17 21 47.9	+0.3
	baz=22,SNR=42					
P48A	Milroy	69.83 305	P	P	17 21 47.1	-1.0
	baz=51,SNR=8.7					
P48A			P	P	17 21 47.1	-1.0
	baz=51,SNR=8.7					
HUMP	Col San Antoni	69.89 276	P	P	17 21 47.8	-1.0
HUMP			IAmb	IAmb	17 21 52.6	
	comp=Z,29nm,0.9s					
G22K	Bettles	69.89 354	P	P	17 21 49.7	+1.6
	baz=12					
R50A	Paris	69.91 304	P	P	17 21 48.1	-0.5
	baz=51,SNR=7.4					
R50A			P	P	17 21 48.1	-0.5
	baz=51,SNR=7.4					
GCPR	Guaynabo City	69.95 277	P	P	17 21 48.6	-0.5
GCPR			IAmb	IAmb	17 21 52.2	
	comp=Z,39nm,1.0s					
G23K	Bananza Creek	69.97 353	P	P	17 21 50.5	+1.8
	baz=13,SNR=35					
H25K	Birch Creek	69.97 351	P	P	17 21 50.8	+2.3
	baz=16,SNR=30					
I40A	Norwalk	69.97 312	P	P	17 21 48.8	-0.2
	baz=49					
KMSC	Kings Mountain	70.00 300	P	P	17 21 48.5	-0.7
KMSC	Kings Mountain	70.00 300	P	P	17 21 49.1	-0.2
	baz=51					
KMSC	Kings Mountain	70.00 300	P	P	17 21 48.7	-0.6
	baz=51					
I27K	Kandik River	70.08 349	P	P	17 21 51.0	+1.7
	baz=20,SNR=51					
CD2	Chengdu	70.17 66	P	P	17 21 52.0	+1.6
CD2			pP	sP	17 21 54.8	0.0
CD2			S	S	17 31 00.8	-1.2
CD2			pmax	pmax		
	comp=Z,120nm,0.9s					
CD2			pmax	pmax		
	comp=Z,420nm,4.8s					
CD2			LR	LR		
	comp=Z,950nm,13.7s					
CD2			LR	LR		
	comp=Z,1µm,14.7s					
CD2			LR	LR		
	comp=Z,1µm,20.6s					
SFIN	Lafayette	70.24 307	P	P	17 21 49.8	-0.8
SFIN			IAmb	IAmb	17 21 53.5	
	comp=Z,38nm,0.9s					
SFIN	Lafayette	70.24 307	P	P	17 21 49.6	-1.0
	baz=50					
SFIN	Lafayette	70.24 307	P	P	17 21 50.0	-0.6
	baz=50					
F36A	Milaca	70.24 315	P	P	17 21 50.1	-0.4
	baz=48,SNR=14					
SPMN	Marine on St.	70.28 314	P	P	17 21 49.6	-1.2
SPMN	Marine on St.	70.28 314	P	P	17 21 50.4	-0.4
	baz=49					
MND	Mandalay	70.39 78	P	P	17 21 50.4	-1.4
	comp=Z,26nm,0.8s					
JFWS	Jewell Farm	70.41 311	P	P	17 21 49.6	-2.0
JFWS			IAmb	IAmb	17 21 52.1	
	comp=Z,28nm,0.7s					
JFWS	Jewell Farm	70.41 311	IAMs_20	IAMs_20	17 50 28.7	
	comp=Z,2µm,20.0s					
JFWS	Jewell Farm	70.41 311	P	P	17 21 49.6	-2.0
JFWS			pmax	pmax		
	comp=Z,28nm,0.7s					
JFWS			MLR	MLR		
	comp=Z,2µm,20.0s					
JFWS	Jewell Farm	70.41 311	P	P	17 21 50.6	-1.0
	baz=49					
R49A	Shelbyville	70.42 304	P	P	17 21 50.9	-0.8
	baz=50					
R49A			P	P	17 21 50.9	-0.8
	baz=50					
G21K	Allakaket	70.45 354	P	P	17 21 52.8	+1.3
	baz=10,SNR=44					
JSC	Jenkinsville	70.50 299	P	P	17 21 51.1	-1.2
JSC	Jenkinsville	70.50 299	P	P	17 21 51.1	-1.2
JSC			pmax	pmax		
	comp=Z,23nm,0.9s					
PAULI	Pauline	70.51 300	P	P	17 21 51.4	-1.0
PAULI	Pauline	70.51 300	P	P	17 21 51.5	-0.9
	baz=51					
TZTN	Tazewell	70.52 302	P	P	17 21 52.4	0.0
TZTN			IAMs_20	IAMs_20	17 50 26.1	
	comp=Z,2µm,22.0s					
TZTN	Tazewell	70.52 302	P	P	17 21 52.6	+0.2
	baz=51					
NHSC	New Hope	70.53 297	P	P	17 21 53.3	+0.9
	baz=51					
I26K	Coal Creek Min	70.57 350	P	P	17 21 53.6	+1.4
I26K			IAmb	IAmb	17 21 57.0	
	comp=Z,39nm,1.1s					
I26K	Coal Creek Min	70.57 350	P	P	17 21 54.2	+2.0
	baz=18					
H24K	Noodor Dome	70.62 352	P	P	17 21 53.7	+1.1
H24K			IAmb	IAmb	17 21 58.4	
	comp=Z,44nm,1.0s					
H24K	Noodor Dome	70.62 352	P	P	17 21 53.5	+0.9
	baz=15,SNR=28					
PRP	Porcupine Dome	70.66 351	P	P	17 21 54.0	+1.0
PRP			IAmb	IAmb	17 21 59.8	
	comp=Z,42nm,1.0s					
PRP	Porcupine Dome	70.66 351	P	P	17 21 54.7	+1.7
	baz=16,SNR=40					
BLO	Bloomington	70.67 306	P	P	17 21 52.1	-1.1
BLO			IAmb	IAmb	17 21 56.3	
	comp=Z,44nm,0.8s					
BLO	Bloomington	70.67 306	P	P	17 21 52.2	-1.1
BLO			pmax	pmax		
	comp=Z,44nm,0.9s					
L42A	Oliver, Polo	70.67 310	P	P	17 21 52.7	-0.5
	baz=49,SNR=6.7					
GRGR	Grenville	70.69 269	IAMs_20	IAMs_20	17 54 01.0	
	comp=Z,1µm,20.0s					
HILA	High Level	70.78 335	P	P	17 21 54.1	+0.5
EGAK	Eagle	70.80 349	P	P	17 21 53.4	-0.2
EGAK			IAmb	IAmb	17 21 59.6	
	comp=Z,46nm,1.1s					
EGAK	Eagle	70.80 349	P	P	17 21 54.3	+0.7
	baz=20,SNR=26					
H23K	Yukon River	70.80 353	P	P	17 21 55.0	+1.4
H23K			IAmb	IAmb	17 21 56.8	
	comp=Z,50nm,0.8s					
H23K	Yukon River	70.80 353	P	P	17 21 55.5	+1.9
	baz=14,SNR=34					
H22K	Ishtalitna Cre	70.89 353	P	P	17 21 56.2	+2.0
	baz=12,SNR=24					
CRPR	Cabo Rojo, PR	70.90 277	P	P	17 21 53.9	-1.0
CRPR			IAmb	IAmb	17 21 58.1	
	comp=Z,41nm,0.8s					
IMAR	Indian Mountai	70.99 354	P	P	17 21 56.2	+1.4
T50A	Nancy	71.02 303	P	P	17 21 54.7	-0.7
	baz=50					
T50A			P	P	17 21 54.7	-0.7
	baz=50					
MMPY	Sheldon Lake,	71.03 343	P	P	17 21 57.3	+2.1
	baz=27,SNR=33					
MAYO	Mayo, Yukon	71.05 346	P	P	17 21 56.2	+1.1
MAYO	Mayo, Yukon	71.05 346	P	P	17 21 56.6	+1.4
	baz=24,SNR=19					

K29M	**Barlow Dome**	71.10	347	P	**P**	17 21 56.7 +1.0
	baz=22,SNR=21					
BG3	**Lake Jocassee**	71.11	300	P	**P**	17 21 53.7 -2.4
WCI	**Wyandotte Cave**	71.13	305	P	**P**	17 21 55.0 -1.1
WCI	**Wyandotte Cave**	71.13	305	IAMs_20	IAMs_20	17 51 42.2
	comp=Z,2μm,20.0s					
WCI	**Wyandotte Cave**	71.13	305	P	**P**	17 21 55.0 -1.1
WCI				pmax	pmax	
	comp=Z,81nm,0.9s					
WCI				MLR	MLR	
	comp=Z,2μm,20.0s					
WCI	**Wyandotte Cave**	71.13	305	P	**P**	17 21 55.3 -0.8
	baz=50,SNR=18					
WCI	**Wyandotte Cave**	71.13	305	P	**P**	17 21 55.1 -1.1
	baz=50					
WCI	**Wyandotte Cave**	71.13	305	P	**P**	17 21 55.7 -0.4
HODGE	**Hodges**	71.17	299	P	**P**	17 21 55.4 -1.0
O44A	**Mansfield**	71.18	308	P	**P**	17 21 56.0 -0.4
	baz=50					
DAWY	**Dawson**	71.20	348	P	**P**	17 21 57.0 +0.8
DAWY	**Dawson**	71.20	348	P	**P**	17 21 57.2 +1.0
	baz=21,SNR=74					
TKL	**Tuckaleechee C**	71.22	301	LR	LR	17 52 57.5
	comp=Z,791nm,19.0s,baz=64,slow=36					
TKL	**Tuckaleechee C**	71.22	301	P	**P**	17 21 55.8 -1.0
TKL	**Tuckaleechee C**	71.22	301	P	**P**	17 21 55.8 -1.0
TKL				pmax	pmax	
	comp=Z,11nm,0.9s					
TKL	**Tuckaleechee C**	71.22	301	P	**P**	17 21 56.2 -0.6
	baz=50					
H21K	**Melozitna Rive**	71.24	354	P	**P**	17 21 58.0 +1.6
H21K	**Melozitna Rive**	71.24	354	P	**P**	17 21 59.0 +2.7
	baz=11,SNR=134					
FLDN	**Fort Liard**	71.26	339	P	**P**	17 21 58.2 +1.8
	baz=32					
POKR	**Poker Plat Res**	71.27	351	P	**P**	17 21 57.6 +1.1
POKR	**Poker Plat Res**	71.27	351	P	**P**	17 21 58.4 +1.9
	baz=15,SNR=26					
TGTN	**Hyland Airport**	71.34	342	P	**P**	17 21 59.4 +2.4
	baz=29,SNR=36					
J26L	**Joseph Creek**	71.39	350	P	**P**	17 21 58.3 +1.0
J26L	**Joseph Creek**	71.39	350	P	**P**	17 21 58.7 +1.3
	baz=18,SNR=86					
HDIL	**Hopedale**	71.40	308	P	**P**	17 21 56.6 -1.1
HDIL				IAmb	IAmb	17 21 58.1
	comp=Z,41nm,0.7s					
HDIL				IAMs_20	IAMs_20	17 52 57.1
	comp=Z,2μm,19.0s					
HDIL	**Hopedale**	71.40	308	P	**P**	17 21 56.5 -1.2
	baz=49,SNR=6.2					
HDIL	**Hopedale**	71.40	308	P	**P**	17 21 56.6 -1.1
	baz=49,SNR=6.2					
I37B	**Waseca**	71.41	313	P	**P**	17 21 57.5 -0.2
	baz=48,SNR=6.3					
TIY	**Taiyuan**	71.43	56	*e*P	**P**	17 21 59.3 +1.3
TIY				S	**S**	17 31 17.3 +0.8
TIY				pmax	pmax	
	comp=Z,380nm,3.6s					
TIY				LR	LR	
	comp=Z,4μm,16.9s					
TIY				LR	LR	
	comp=Z,3μm,16.9s					
TIY				LR	LR	
	comp=Z,2μm,18.4s					
I23K	**Minto, Yukon-K**	71.44	352	P	**P**	17 21 58.9 +1.4
I23K				IAmb	IAmb	17 22 03.4
	comp=Z,56nm,1.1s					
I23K	**Minto, Yukon-K**	71.44	352	P	**P**	17 21 59.1 +1.6
	baz=14,SNR=27					
V51A	**Loudon**	71.49	302	P	**P**	17 21 56.9 -1.5
	baz=50,SNR=6.5					
KOTAN	**Kotaneelee Air**	71.50	339	P	**P**	17 21 59.4 +1.4
	baz=32,SNR=23					
MDM	**Murphy Dome**	71.51	352	P	**P**	17 21 59.1 +1.1
L40A	**Anamosa**	71.51	310	P	**P**	17 21 57.8 -0.5
	baz=49,SNR=8.4					
J25K	**Salcha River,**	71.52	350	P	**P**	17 21 58.8 +0.7
J25K	**Salcha River,**	71.52	350	P	**P**	17 21 59.3 +1.2
	baz=17					
IL31		71.54	351	P	**P**	17 21 58.6 +0.5
IL31				IAmb	IAmb	17 22 03.5
	comp=Z,38nm,1.0s					
ILAR	**Eielson Array**	71.54	351	P	**P**	17 21 59.1 +1.0
	comp=Z,28nm,0.8s,baz=8.8,slow=5.6,SNR=198					
ILAR				LR	LR	17 53 53.5
	comp=Z,467nm,21.4s,baz=350,slow=36					
	comp=Z,28nm,0.8s					
ILAR	**Eielson Array**	71.54	351	P	**P**	17 21 58.8 +0.7
PZH	**PanZhiHua**	71.55	71	P	**P**	17 21 59.3 +0.3
PZH				pP	**sP**	17 22 02.3 -1.1
PZH				PcP	**PcP**	17 22 17.5 -0.8
PZH				PP	**PP**	17 24 39.3 +1.9
PZH				S	**S**	17 31 16.5 -1.8
PZH				SS	**SS**	17 35 59.3 +6.5
PZH				pmax	pmax	
	comp=Z,50nm,0.9s					
PZH				pmax	pmax	
	comp=Z,400nm,4.4s					
PZH				LR	LR	
	comp=Z,890nm,21.6s					
PZH				LR	LR	
	comp=Z,740nm,19.6s					
PZH				LR	LR	
	comp=Z,1μm,23.5s					
COLA	**College**	71.55	352		**P**	17 21 58.9 +0.7
COLA				IAmb	IAmb	17 22 03.7
	comp=Z,56nm,0.9s					
COLA	**College**	71.55	352	*d i*P	**P**	17 21 59.3 +1.2
COLA				pmax	pmax	
	comp=Z,41nm,0.9s					
COLA				MLR	MLR	
	comp=Z,363nm,17.0s					
COLA	**College**	71.55	352	P	**P**	17 21 59.1 +0.9
	baz=15					
COLA	**College**	71.55	352	P	**P**	17 21 59.9 +1.8
	comp=Z,70nm,1.0s					
COLA	**College**	71.55	352	P	**P**	17 21 60.0 +1.8
TCOL	**CIGO, UAF Yank**	71.55	352	P	**P**	17 21 59.3 +1.2
TCOL				IAmb	IAmb	17 22 03.7
	comp=Z,56nm,0.9s					
TCOL	**CIGO, UAF Yank**	71.55	352	P	**P**	17 21 59.3 +1.2
	baz=15,SNR=9.3					
VOI	**Vohitsoka**	71.55	147	P	**P**	17 21 57.8 -1.1
VOI				IAmb	IAmb	17 22 21.1
	comp=Z,92nm,1.8s					
VOI	**Vohitsoka**	71.55	147	P	P	17 22 03.9 +5.1
XAN	**Xi'an**	71.59	61	P	**P**	17 22 00.8 +1.8
XAN				pP	sP	17 22 03.3 -0.1
XAN				S	**S**	17 31 19.8 +1.4
XAN				pmax	pmax	
	comp=Z,42nm,0.9s					
XAN				pmax	pmax	
	comp=Z,740nm,4.6s					
XAN				LR	LR	
	comp=Z,3μm,17.4s					
XAN				LR	LR	
	comp=Z,1μm,20.2s					
XAN				LR	LR	
	comp=Z,3μm,19.9s					
I21K	**Tanana**	71.65	353	P	**P**	17 21 59.9 +1.2
I21K	**Tanana**	71.65	353	P	**P**	17 22 00.8 +2.0
	baz=12,SNR=57					
MLY	**Manley**	71.68	353	P	**P**	17 22 00.6 +1.6
MLY	**Manley**	71.68	353	P	**P**	17 22 00.7 +1.6
	baz=12,SNR=61					
F33A	**5 Mile Ranch,**	71.69	316	P	**P**	17 21 59.0 -0.3
	baz=47,SNR=19					
FARO	**Faro, Yukon**	71.81	344	P	**P**	17 22 01.1 +1.3
FARO				IAmb	IAmb	17 22 06.5
	comp=Z,68nm,1.1s					
FARO	**Faro, Yukon**	71.81	344	P	**P**	17 22 01.8 +1.9
	baz=25,SNR=49					
CPCT	**Cooper Cave**	71.83	302	P	**P**	17 21 58.7 -1.7
L29M	**L29M**	71.89	347	P	**P**	17 22 01.9 +1.6
	baz=22,SNR=27					
OLIL	**Olney**	71.89	306	P	**P**	17 21 59.3 -1.3
OLIL				IAmb	IAmb	17 22 04.0
	comp=Z,54nm,1.1s					
OLIL	**Olney**	71.89	306	P	**P**	17 21 59.5 -1.1
	baz=49					
TNA	**Tin City**	71.89	0	P	**P**	17 22 00.8 +0.6
	baz=359					
HDA	**Harding Lake**	71.90	351	P	**P**	17 22 01.0 +0.7
HDA	**Harding Lake**	71.90	351	P	**P**	17 22 01.4 +1.1
	baz=15,SNR=43					
U49A	**Red Boiling Sp**	71.92	303	P	**P**	17 22 00.2 -0.7
	baz=50,SNR=11					
MDND	**Maddock**	71.94	319	P	**P**	17 22 00.8 0.0
	baz=46					
SCRK	**Sand Creek**	71.95	350	P	**P**	17 22 02.5 +1.8
SCRK				IAmb	IAmb	17 22 03.7
	comp=Z,28nm,0.8s					
SCRK	**Sand Creek**	71.95	350	P	**P**	17 22 02.4 +1.6
	baz=18,SNR=47					
NEA2	**Nenana**	71.95	352	P	**P**	17 22 01.3 +0.7
NEA2				IAmb	IAmb	17 22 06.0
	comp=Z,57nm,1.0s					
NEA2	**Nenana**	71.95	352	P	**P**	17 22 01.1 +0.5
	baz=14,SNR=20					
POGA	**Pongola**	71.95	163	P	**P**	17 22 01.3 +0.3
WRH	**Wood River Hil**	71.97	352	P	**P**	17 22 00.9 +0.2
WRH				IAmb	IAmb	17 22 06.0
	comp=Z,46nm,0.9s					
BOSA	**Boshof**	72.02	169	P	**P**	17 22 01.2 -0.2
	comp=Z,24nm,0.7s,baz=353,slow=6.4,SNR=51					
BOSA				LR	LR	17 55 57.3
	comp=Z,783nm,18.7s,baz=354,slow=38					
	comp=Z,24nm,0.7s					
BOSA	**Boshof**	72.02	169	P	**P**	17 22 00.2 -1.2
BOSA	**Boshof**	72.02	169	P	**P**	17 22 00.2 -1.2
BOSA				pmax	pmax	
	comp=Z,155nm,1.6s					
M31M	**Drury Creek, Y**	72.04	345	P	**P**	17 22 02.5 +1.3
M31M				IAmb	IAmb	17 22 07.7
	comp=Z,49nm,1.0s					
M31M				IAMs_20	IAMs_20	17 56 54.0
	comp=Z,1μm,20.0s					
M31M	**Drury Creek, Y**	72.04	345	P	**P**	17 22 02.9 +1.7
	baz=25,SNR=32					
MA2	**Magadan**	72.11	21	LR	LR	17 57 39.8
	comp=Z,2μm,18.4s,baz=330,slow=39					
MA2	**Magadan**	72.11	21	P	**P**	17 22 03.3 +1.7
MA2	**Magadan**	72.11	21	*ce*P	**P**	17 22 04.1 +2.4
MA2				pmax	pmax	
	comp=Z,140nm,1.3s					
MA2				MLR	MLR	
	comp=Z,2μm,15.0s					
MA2	**Magadan**	72.11	21	P	**P**	17 22 05.3 +3.7
	comp=Z,117nm,1.4s					
MA2	**Magadan**	72.11	21	P	**P**	17 22 05.3 +3.7
USIN	**University of**	72.13	305	P	**P**	17 22 01.0 -1.1
BJI	**Beijing**	72.13	52	P	**P**	17 22 03.8 +1.7
BJI				S	**S**	17 31 25.5 +1.2
BJI				ScS	**SKSac**	17 32 04.0 -2.5
BJI				SS	**SS**	17 36 04.0 +3.2
BJI				pmax	pmax	
	comp=Z,64nm,0.8s					
BJI				pmax	pmax	
	comp=Z,440nm,3.5s					
BJI				LR	LR	
	comp=Z,430nm,15.8s					
BJI				LR	LR	
	comp=Z,2μm,15.3s					
BJI				LR	LR	
	comp=Z,3μm,18.1s					
BJT	**Baijiatuau**	72.14	52	P	**P**	17 22 02.6 +0.5
BJT				IAmb	IAmb	17 22 07.1
	comp=Z,50nm,0.8s					
BJT	**Baijiatuau**	72.14	52	P	**P**	17 22 02.6 +0.5
BJT				pmax	pmax	
	comp=Z,50nm,0.8s					
BJT				MLR	MLR	
	comp=Z,3μm,19.0s					
BJT	**Baijiatuau**	72.14	52	P	**P**	17 22 05.2 +3.0
	comp=Z,67nm,0.9s					
M30M	**Minto, Yukon**	72.15	346	P	**P**	17 22 03.0 +1.2
M30M				IAMs_20	IAMs_20	17 56 17.7
	comp=Z,1μm,19.0s					
M30M	**Minto, Yukon**	72.15	346	P	**P**	17 22 02.8 +0.9
	baz=23,SNR=7.5					
N41A	**Harden Midland**	72.20	309	P	**P**	17 22 01.7 -0.7
	baz=48,SNR=12					
RIDG	**Independent Ri**	72.29	350	P	**P**	17 22 03.5 +0.8
RIDG	**Independent Ri**	72.29	350	P	**P**	17 22 04.3 +1.6
	baz=17,SNR=39					
K24K	**Donnelly Dome**	72.35	350	P	**P**	17 22 03.9 +0.9
	baz=16,SNR=36					
GCSA	**Galena City Sc**	72.42	356	P	**P**	17 22 05.2 +1.8
	baz=7.8,SNR=12					
T47A	**Sharon Grove**	72.43	304	P	**P**	17 22 03.4 -0.5
	baz=49,SNR=47					
GOGA	**Godfrey**	72.46	299	P	**P**	17 22 03.7 -0.5
GOGA	**Godfrey**	72.46	299	IAMs_20	IAMs_20	17 51 53.6
	comp=Z,1μm,21.0s					
GOGA	**Godfrey**	72.46	299	P	**P**	17 22 03.7 -0.5
GOGA				pmax	pmax	
	comp=Z,19nm,1.1s					
GOGA				MLR	MLR	
	comp=Z,1μm,21.0s					
GOGA	**Godfrey**	72.46	299	P	**P**	17 22 04.2 0.0
	baz=50					
W50A	**Signal Mountai**	72.48	302	P	**P**	17 22 03.6 -0.8
	baz=50,SNR=8.4					
BCAR	**Beaver Creek A**	72.51	348	P	**P**	17 22 05.3 +1.3
L27K	**Beaver Creek,**	72.52	348	P	**P**	17 22 05.1 +1.0
L27K				IAmb	IAmb	17 22 09.9
	comp=Z,48nm,0.9s					
L27K	**Beaver Creek,**	72.52	348	P	**P**	17 22 05.5 +1.5
	baz=19,SNR=47					
CLTN	**Cedars of Leba**	72.54	303	P	**P**	17 22 03.4 -1.2
Y52A	**Lilburn**	72.55	300	P	**P**	17 22 04.1 -0.6
	baz=50					
Y52A				P	**P**	17 22 04.1 -0.6
	baz=50					
M29M	**Somme Creek**	72.56	347	P	**P**	17 22 05.5 +1.0
	baz=22,SNR=34					
LIRD	**Liard River Hi**	72.66	340	P	**P**	17 22 06.9 +2.0
	baz=30,SNR=26					
WTLY	**Watson Lake, Y**	72.71	341	P	**P**	17 22 06.5 +1.2
WTLY	**Watson Lake, Y**	72.71	341	P	**P**	17 22 06.8 +1.6
	baz=28,SNR=21					
SCIA	**State Center**	72.72	311	P	**P**	17 22 04.3 -1.3
SCIA				IAmb	IAmb	17 22 05.8
	comp=Z,27nm,0.6s					
SCIA	**State Center**	72.72	311	P	**P**	17 22 04.6 -0.9
	baz=48					
SCIA	**State Center**	72.72	311	P	**P**	17 22 04.9 -0.7
	baz=48					
N32M	**Quiet Lake**	72.73	344	P	**P**	17 22 07.4 +2.0
	baz=25					
L26K	**Log Cabin Wild**	72.77	349	P	**P**	17 22 07.3 +1.7
L26K	**Log Cabin Wild**	72.77	349	P	**P**	17 22 07.3 +1.7
	baz=18,SNR=33					
MCK	**McKinley**	72.78	352	P	**P**	17 22 06.4 +0.8
MCK	**McKinley**	72.78	352	P	**P**	17 22 06.4 +0.8
MCK				pmax	pmax	
	comp=Z,150nm,1.0s					
MCK	**McKinley**	72.78	352	P	**P**	17 22 06.8 +1.2
	baz=14,SNR=68					
J20K	**Nowinta River**	72.81	354	P	**P**	17 22 07.3 +1.6
J20K				IAmb	IAmb	17 22 11.3
	comp=Z,57nm,0.9s					
J20K	**Nowinta River**	72.81	354	P	**P**	17 22 07.0 +1.3
	baz=9.8,SNR=29					
SWET	**Sewanee**	72.86	302	P	**P**	17 22 05.1 -1.5
SWET				IAmb	IAmb	17 23 25.0
	comp=Z,25nm,0.7s					
MENT	**Mentasta**	72.91	349	P	**P**	17 22 07.4 +1.1
CHUM	**Lake Minchumin**	72.95	353	P	**P**	17 22 08.2 +1.7
	baz=11,SNR=76					
N31M	**Braeburn, Yuko**	72.97	345	P	**P**	17 22 07.3 +0.5
N31M				IAmb	IAmb	17 22 12.9
	comp=Z,69nm,1.0s					
N31M				IAMs_20	IAMs_20	17 56 06.4
	comp=Z,1μm,19.0s					
N31M	**Braeburn, Yuko**	72.97	345	P	**P**	17 22 07.5 +0.8
	baz=23,SNR=28					
BVCY	**Beaver Creek**	72.98	348	P	**P**	17 22 09.2 +2.4
	baz=20,SNR=33					
HNS	**HongShan**	73.00	55	⇑P	**P**	17 22 10.0 +2.7
HNS				S	**SKiKP**	17 31 36.5 -3.7
HNS				pmax	pmax	
	comp=Z,43nm,1.0s					
HNS				pmax	pmax	
	comp=Z,310nm,5.4s					
HNS				LR	LR	
	comp=Z,2μm,16.7s					
HNS				LR	LR	
	comp=Z,1μm,16.3s					
HNS				LR	LR	
	comp=Z,2μm,18.9s					
V48A	**Smith Brothers**	73.07	303	P	**P**	17 22 07.0 -0.8
	baz=49,SNR=11					
RND	**Reindeer**	73.09	352	P	**P**	17 22 08.1 +0.6
RND				IAmb	IAmb	17 22 12.1
	comp=Z,39nm,0.8s					
RND	**Reindeer**	73.09	352	P	**P**	17 22 08.1 +0.6
RND				pmax	pmax	
	comp=Z,39nm,0.8s					
RND				MLR	MLR	
	comp=Z,400nm,22.0s					
FPAL	**Fort Paine**	73.09	301	P	**P**	17 22 07.4 -0.6
PAX	**Paxson**	73.11	350	P	**P**	17 22 08.7 +1.0
PAX				IAmb	IAmb	17 22 13.8
	comp=Z,38nm,1.1s					
PAX	**Paxson**	73.11	350	P	**P**	17 22 08.7 +1.0
PAX				pmax	pmax	
	comp=Z,38nm,1.1s					
PAX	**Paxson**	73.11	350	P	**P**	17 22 08.9 +1.3
	baz=16,SNR=28					
KMI	**Kunming**	73.11	71	⇓P	**P**	17 22 08.8 +0.3
KMI				pP	sP	17 22 13.5 +0.6
KMI				PP	**PP**	17 24 49.3 -1.6
KMI				S	**S**	17 31 35.8 -0.7
KMI				SS	**SS**	17 36 17.5 +0.5
KMI				pmax	pmax	
	comp=Z,22nm,1.9s					
KMI				pmax	pmax	
	comp=Z,380nm,4.0s					
KMI				LR	LR	
	comp=Z,740nm,20.1s					
KMI				LR	LR	
	comp=Z,1μm,22.9s					
KMI				LR	LR	
	comp=Z,1μm,22.8s					
KTH	**Kantishna Hill**	73.15	353	P	**P**	17 22 08.2 +0.3
TRF	**Thorofare Moun**	73.19	352	P	**P**	17 22 08.9 +0.7
TRF	**Thorofare Moun**	73.19	352	P	**P**	17 22 08.9 +0.7
	baz=13,SNR=64					
M27K	**Edge Creek, AK**	73.19	348	P	**P**	17 22 09.1 +0.9
M27K				IAmb	IAmb	17 22 14.3
	comp=Z,49nm,0.9s					
M27K	**Edge Creek, AK**	73.19	348	P	**P**	17 22 10.4 +2.2
	baz=19,SNR=40					
SLM	**Saint Louis**	73.21	307	P	**P**	17 22 07.2 -1.3
SLM				IAmb	IAmb	17 22 12.8
	comp=Z,79nm,1.3s					
SLM	**Saint Louis**	73.21	307	P	**P**	17 22 07.2 -1.3
SLM				pmax	pmax	
	comp=Z,79nm,1.3s					
SIUC	**Southern Illin**	73.22	306	P	**P**	17 22 07.1 -1.5
SIUC				IAmb	IAmb	17 22 11.4
	comp=Z,55nm,0.9s					
N30M	**Aishikik Lake**	73.24	346	P	**P**	17 22 10.0 +1.7
	baz=22,SNR=8.4					
DHY	**Denali Highway**	73.24	351	P	**P**	17 22 09.4 +0.9
DHY	**Denali Highway**	73.24	351	P	**P**	17 22 09.7 +1.2
	baz=15,SNR=158					
S44A	**Carbondale**	73.26	306	P	**P**	17 22 08.0 -0.8
	baz=48,SNR=9.3					
ECSD	**EROS Data Cent**	73.30	315	P	**P**	17 22 08.4 -0.6
ECSD				IAmb	IAmb	17 22 12.7
	comp=Z,49nm,0.8s					
ECSD	**EROS Data Cent**	73.30	315	P	**P**	17 22 08.9 -0.1
	baz=46,SNR=36					
ECSD	**EROS Data Cent**	73.30	315	P	**P**	17 22 08.7 -0.4
	baz=46,SNR=36					
SDDR	**Presa de Saban**	73.31	281	P	**P**	17 22 09.8 +0.3
SDDR				IAmb	IAmb	17 22 14.5
	comp=Z,53nm,1.1s					
SDDR				IAMs_20	IAMs_20	17 57 04.8
	comp=Z,1μm,20.0s					
SDDR	**Presa de Saban**	73.31	281	*e*P	**P**	17 22 10.2 +0.8
M26K	**Nabesna, AK**	73.32	349	P	**P**	17 22 09.9 +1.0
M26K				IAmb	IAmb	17 22 15.1
	comp=Z,62nm,1.0s					
M26K	**Nabesna, AK**	73.32	349	P	**P**	17 22 10.3 +1.4
	baz=18,SNR=38					
E28A	**Huff**	73.36	319	P	**P**	17 22 10.0 +0.6
	baz=44,SNR=17					
CAST	**Castle Rocks**	73.39	353	P	**P**	17 22 09.4 +0.2
CAST				IAmb	IAmb	17 22 15.4
	comp=Z,90nm,1.2s					
CAST	**Castle Rocks**	73.39	353	P	**P**	17 22 10.1 +0.9
	baz=11,SNR=46					
WVT	**Waverly**	73.43	304	P	**P**	17 22 08.2 -1.7
WVT				IAmb	IAmb	17 23 22.3
	comp=Z,40nm,0.9s					
WVT	**Waverly**	73.43	304	P	**P**	17 22 08.2 -1.7
WVT				pmax	pmax	
	comp=Z,40nm,0.9s					
WVT				MLR	MLR	
	comp=Z,2μm,21.0s					
WVT	**Waverly**	73.43	304	P	**P**	17 22 08.6 -1.2
	baz=49,SNR=15					
WVT	**Waverly**	73.43	304	P	**P**	17 22 08.1 -1.7
	baz=49					
WVT	**Waverly**	73.43	304	P	**P**	17 22 08.7 -1.2
N38A	**Joes South For**	73.48	311	P	**P**	17 22 09.2 -0.9
	baz=47,SNR=10					
LYN	**LuoYang**	73.50	58	⇑*e*P	**P**	17 22 12.3 +2.0
LYN				S	**S**	17 31 39.5 -0.6
LYN				SKS	**SKSac**	17 32 14.0 -3.0
LYN				pmax	pmax	
	comp=Z,20nm,1.3s					
LYN				pmax	pmax	
	comp=Z,410nm,4.1s					
LYN				LR	LR	
	comp=Z,2μm,17.6s					
LYN				LR	LR	
	comp=Z,1μm,17.7s					
LYN				LR	LR	
	comp=Z,1μm,21.1s					
YUK3	**Moose Creek**	73.52	347	P	**P**	17 22 11.8 +1.6
	baz=20,SNR=51					
P33M	**Teslin, Yukon**	73.53	343	P	**P**	17 22 10.9 +0.7
P33M				IAmb	IAmb	17 22 13.0
	comp=Z,57nm,0.8s					
P33M	**Teslin, Yukon**	73.53	343	P	**P**	17 22 11.9 +1.7
	baz=26,SNR=51					
WHY	**Whitehorse**	73.55	344	P	**P**	17 22 10.3 0.0
WHY	**Whitehorse**	73.55	344	P	**P**	17 22 11.3 +1.0
	baz=24,SNR=18					
K20K	**Telida**	73.61	354	P	**P**	17 22 12.1 +1.6
K20K	**Telida**	73.61	354	P	**P**	17 22 11.8 +1.3
	baz=9.8,SNR=36					
WAT1	**Susitna Watana**	73.61	351	P	**P**	17 22 11.1 +0.6
	baz=14					
HARP	**HAARP**	73.62	350	P	**P**	17 22 11.6 +1.0
	baz=16,SNR=12					
YUK4	**Talbot Arm**	73.62	346	P	**P**	17 22 11.9 +1.1
	baz=21,SNR=19					
DGMT	**Dagmar**	73.64	322	P	**P**	17 22 10.9 0.0
DGMT				IAmb	IAmb	17 22 14.3
	comp=Z,62nm,1.1s					
DGMT	**Dagmar**	73.64	322	IAMs_20	IAMs_20	17 55 46.6
	comp=Z,1μm,19.0s					
DGMT	**Dagmar**	73.64	322	P	**P**	17 22 12.0 +1.1
	baz=43					
P40A	**Paris**	73.66	309	P	**P**	17 22 10.0 -1.2
	baz=48,SNR=15					
KLR	**Kul'dur**	73.68	37	LR	LR	17 58 35.9
	comp=Z,4μm,18.1s,baz=319,slow=39					
KLR	**Kul'dur**	73.68	37	*ce*P	**P**	17 22 13.3 +2.2
KLR				pmax	pmax	
	comp=Z,58nm,1.3s					
KLR				MLR	MLR	
	comp=Z,3μm,16.0s					
O30N	**Mendenhall**	73.69	345	P	**P**	17 22 12.0 +1.0
	baz=23,SNR=32					
152A	**Waverly Hall**	73.75	299	P	**P**	17 22 11.5 -0.3
	baz=49					
FVM	**French Village**	73.76	307	P	**P**	17 22 10.9 -0.9
FVM				IAmb	IAmb	17 22 14.8
	comp=Z,42nm,0.8s					
FVM	**French Village**	73.76	307	P	**P**	17 22 10.9 -0.9
FVM				pmax	pmax	
	comp=Z,42nm,0.9s					
FVM	**French Village**	73.76	307	P	**P**	17 22 11.3 -0.5
	baz=48,SNR=7.3					
WAT6	**Susitna Watana**	73.77	351	P	**P**	17 22 12.2 +0.6
	baz=15,SNR=53					
EDM	**Edmonton**	73.79	330	P	**P**	17 22 12.3 +0.6
EDM				IAmb	IAmb	17 22 13.9
	comp=Z,84nm,1.0s					
EDM	**Edmonton**	73.79	330	P	**P**	17 22 12.3 +0.6
EDM				pmax	pmax	
	comp=Z,84nm,1.0s					
TIGA	**Tifton**	73.81	298	P	**P**	17 22 11.2 -1.0

TIGA				IAmb	IAmb	17 22 16.8
	comp=Z,81nm,1.2s					
R33M	**Jennings River**	**73.86**	**342**	P	**P**	**17 22 14.2 +2.0**
	baz=27,SNR=56					
YUK8	**Steele Glacier**	**73.87**	**347**	P	**P**	**17 22 13.1 +0.7**
	baz=20,SNR=15					
HYT	**Haines Junctio**	**73.90**	**346**	P	**P**	**17 22 13.5 +1.1**
HYT				IAmb	IAmb	17 22 15.3
	comp=Z,49nm,0.8s					
HYT	**Haines Junctio**	**73.90**	**346**	P	**P**	**17 22 13.8 +1.5**
	baz=22,SNR=32					
PPLA	**Purkeypile**	**73.91**	**353**	P	**P**	**17 22 13.1 +0.6**
PPLA				IAmb	IAmb	17 22 14.6
	comp=Z,62nm,0.8s					
PPLA	**Purkeypile**	**73.91**	**353**	P	**P**	**17 22 12.7 +0.2**
	baz=11,SNR=18					
YUK6	**Outpost Mounta**	**73.95**	**346**	P	**P**	**17 22 14.4 +1.7**
	baz=22,SNR=39					
SUSD	**Miller**	**74.01**	**316**	P	**P**	**17 22 13.3 +0.1**
SUSD				IAmb	IAmb	17 22 17.5
	comp=Z,72nm,0.9s					
SUSD	**Miller**	**74.01**	**316**	P	**P**	**17 22 13.2 0.0**
	baz=45					
M24K	**Tolsona, Glenn**	**74.03**	**350**	P	**P**	**17 22 13.8 +0.8**
M24K				IAmb	IAmb	17 22 37.5
	comp=Z,68nm,0.9s					
M24K	**Tolsona, Glenn**	**74.03**	**350**	P	**P**	**17 22 13.9 +0.8**
	baz=16,SNR=13					
Y49A	**Blount Mountai**	**74.04**	**301**	P	**P**	**17 22 12.5 -1.1**
	baz=49					
X48A	**Hartselle**	**74.05**	**302**	P	**P**	**17 22 12.9 -0.6**
	baz=49,SNR=23					
TTA	**Tatalina**	**74.18**	**355**	P	**P**	**17 22 14.7 +0.8**
TTA				IAmb	IAmb	17 22 19.0
	comp=Z,64nm,1.1s					
TTA	**Tatalina**	**74.18**	**355**	P	**P**	**17 22 14.7 +0.8**
TTA				pmax	pmax	
	comp=Z,64nm,1.1s					
TTA	**Tatalina**	**74.18**	**355**	P	**P**	**17 22 15.2 +1.3**
	baz=8.3,SNR=22					
CCM	**Cathedral Cave**	**74.19**	**307**	P	**P**	**17 22 12.9 -1.4**
CCM				IAmb	IAmb	17 22 17.2
	comp=Z,59nm,0.9s					
CCM	**Cathedral Cave**	**74.19**	**307**	P	**P**	**17 22 12.9 -1.4**
CCM				pmax	pmax	
	comp=Z,59nm,1.0s					
CCM				MLR	MLR	
	comp=Z,2µm,18.0s					
CCM	**Cathedral Cave**	**74.19**	**307**	P	**P**	**17 22 13.5 -0.8**
	baz=48,SNR=30					
CCM	**Cathedral Cave**	**74.19**	**307**	P	**P**	**17 22 13.1 -1.2**
	baz=48					
CCM	**Cathedral Cave**	**74.19**	**307**	P	**P**	**17 22 13.3 -1.0**
BNX	**BinXian**	**74.21**	**42**	⇑P	**P**	**17 22 15.0 +0.7**
BNX				S	**S**	**17 31 49.5 +1.7**
BNX				sS	**sS**	**17 31 55.5 +2.4**
BNX				pmax	pmax	
	comp=Z,7.0nm,0.7s					
BNX				pmax	pmax	
	comp=Z,200nm,6.2s					
BNX				LR	LR	
	comp=Z,5µm,19.5s					
BNX				LR	LR	
	comp=Z,6µm,19.5s					
BNX				LR	LR	
	comp=Z,5µm,17.8s					
CUT	**Chulitna**	**74.21**	**352**	P	**P**	**17 22 14.2 +0.2**
CUT				IAmb	IAmb	17 22 18.3
	comp=Z,71nm,1.0s					
CUT	**Chulitna**	**74.21**	**352**	P	**P**	**17 22 13.5 -0.5**
	baz=13,SNR=9.5					
WAPA	**Wapiti River**	**74.25**	**334**	P	**P**	**17 22 15.2 +0.8**
P32M	**Atlin**	**74.29**	**343**	P	**P**	**17 22 15.7 +1.1**
	baz=25,SNR=13					
MCARA	**McCarthy VSAT**	**74.29**	**348**	P	**P**	**17 22 15.8 +1.3**
MCARA				IAmb	IAmb	17 22 22.1
	comp=Z,81nm,1.0s					
MCARA	**McCarthy VSAT**	**74.29**	**348**	P	**P**	**17 22 15.6 +1.1**
	baz=18,SNR=29					
N25K	**Chitina, Valde**	**74.31**	**349**	P	**P**	**17 22 15.4 +0.7**
N25K				IAmb	IAmb	17 22 20.4
	comp=Z,51nm,1.0s					
N25K	**Chitina, Valde**	**74.31**	**349**	P	**P**	**17 22 15.4 +0.7**
	baz=17,SNR=33					
PLAL	**Pickwick Lake**	**74.33**	**303**	P	**P**	**17 22 13.7 -1.5**
PLAL				IAmb	IAmb	17 22 18.3
	comp=Z,53nm,0.9s					
GLB	**Gilahina Butte**	**74.35**	**349**	P	**P**	**17 22 15.4 +0.5**
GLB				IAmb	IAmb	17 22 21.2
	comp=Z,50nm,1.0s					
ENH	**Enshi**	**74.38**	**63**	P	**P**	**17 22 16.0 +0.5**
ENH	**Enshi**	**74.38**	**63**	P	**P**	**17 22 16.3 +0.7**
	comp=Z,120nm,0.8s					
L34A	**Svendsen Farm,**	**74.40**	**313**	P	**P**	**17 22 14.6 -0.9**
	baz=46,SNR=5.2					
O28M	**Mount Upton**	**74.42**	**347**	P	**P**	**17 22 16.9 +1.3**
	baz=20,SNR=25					
P38A	**Dawn**	**74.44**	**310**	P	**P**	**17 22 15.0 -0.7**
	baz=47					
SCM	**Sheep Creek Mo**	**74.44**	**351**	P	**P**	**17 22 16.9 +1.4**
SCM	**Sheep Creek Mo**	**74.44**	**351**	P	**P**	**17 22 16.9 +1.4**
SCM				pmax	pmax	
	comp=Z,182nm,1.0s					
SCM	**Sheep Creek Mo**	**74.44**	**351**	P	**P**	**17 22 16.9 +1.4**
	baz=15,SNR=50					
P30M	**Million Dollar**	**74.45**	**345**	P	**P**	**17 22 17.1 +1.5**
	baz=22,SNR=15					
CHTO	**Chiang Mai**	**74.47**	**79**	P	**P**	**17 22 15.6 -0.6**
CHTO				IAmb	IAmb	17 22 20.4
	comp=Z,66nm,0.8s					
CHTO	**Chiang Mai**	**74.47**	**79**	P	**P**	**17 22 15.6 -0.6**
CHTO				pmax	pmax	
	comp=Z,66nm,0.9s					
CHTO				MLR	MLR	
	comp=Z,800nm,22.0s					
L20K	**Farewell, AK**	**74.47**	**354**	P	**P**	**17 22 15.7 +0.1**
	baz=9.9,SNR=22					
DLBC	**Dease Lake**	**74.49**	**341**	LR	LR	17 57 32.5
	comp=Z,2µm,20.1s,baz=34,slow=38					
DLBC	**Dease Lake**	**74.49**	**341**	P	**P**	**17 22 17.6 +1.8**
DLBC				IAmb	IAmb	17 22 23.1
	comp=Z,46nm,1.1s					
DLBC	**Dease Lake**	**74.49**	**341**	P	**P**	**17 22 17.3 +1.5**
	baz=27,SNR=11					
GRNR	**Gornyy**	**74.49**	**33**	⇑*i*P	**P**	**17 22 17.9 +2.0**
GRNR				pmax	pmax	
	comp=E,10.0nm,1.2s					
GRNR				pmax	pmax	
	comp=Z,20nm,1.2s					
GRNR				MLR	MLR	
	comp=E,970nm,10.0s					
GRNR				MLR	MLR	
	comp=N,520nm,11.0s					
GRNR				MLR	MLR	
	comp=Z,1µm,11.0s					
VRDI	**Verde Repeater**	**74.50**	**348**	P	**P**	**17 22 17.0 +1.0**
LOGN	**Logan Glacier**	**74.51**	**347**	P	**P**	**17 22 17.0 +1.1**
LOGN				IAmb	IAmb	17 22 19.0
	comp=Z,82nm,0.9s					
M23K	**Glacier View**	**74.53**	**351**	P	**P**	**17 22 16.9 +1.0**
	baz=15,SNR=44					
BRLDA	**Berland Lookou**	**74.53**	**332**	P	**P**	**17 22 17.3 +1.2**
BRLDA				IAmb	IAmb	17 22 18.7
	comp=Z,53nm,1.0s					
Q32M	**Nakina River**	**74.54**	**342**	P	**P**	**17 22 18.4 +2.1**
	baz=26,SNR=11					
PBMO	**Poplar Bluff**	**74.56**	**306**	P	**P**	**17 22 15.6 -0.9**
PBMO				IAmb	IAmb	17 22 19.5
	comp=Z,41nm,0.8s					
O29M	**Mount Kennedy**	**74.58**	**346**	P	**P**	**17 22 17.5 +1.1**
	baz=21,SNR=20					
SML	**Sawmill**	**74.59**	**351**	P	**P**	**17 22 17.0 +0.8**
SML	**Sawmill**	**74.59**	**351**	P	**P**	**17 22 17.6 +1.4**
	baz=14,SNR=56					
KLU	**Klutina**	**74.59**	**350**	P	**P**	**17 22 16.4 0.0**
KLU				IAmb	IAmb	17 22 22.1
	comp=Z,78nm,1.0s					
KLU	**Klutina**	**74.59**	**350**	P	**P**	**17 22 17.8 +1.4**
	baz=16,SNR=47					
CN2	**Changchun**	**74.61**	**44**	*e*P	**P**	**17 22 17.5 +0.8**
CN2				*e*PP	**PP**	**17 25 05.0 +2.1**
CN2				*e*S	**S**	**17 31 48.8 -3.6**
CN2				*e*SS	**SS**	**17 36 36.3 -2.1**
CN2				pmax	pmax	
	comp=Z,100nm,0.9s					
CN2				pmax	pmax	
	comp=Z,600nm,4.0s					
CN2				LR	LR	
	comp=Z,3µm,18.0s					
CN2				LR	LR	
	comp=Z,3µm,18.0s					
CN2				LR	LR	
	comp=Z,3µm,19.0s					
R40A	**Maddies Statio**	**74.63**	**308**	P	**P**	**17 22 16.3 -0.6**
	baz=47,SNR=32					
GHO	**Glory Hole Cre**	**74.69**	**351**	P	**P**	**17 22 17.6 +0.7**
GHO				IAmb	IAmb	17 22 21.9
	comp=Z,62nm,0.9s					
CM31	**Chiang Mai Arr**	**74.70**	**79**	P	**P**	**17 22 17.4 -0.1**
CM31				IAmb	IAmb	17 22 22.2
	comp=Z,54nm,0.8s					
CM31	**Chiang Mai Arr**	**74.70**	**79**	P	**P**	**17 22 18.1 +0.6**
CMAR	**Chiang Mai Arr**	**74.70**	**79**	P	**P**	**17 22 17.6 +0.1**
	comp=Z,53nm,0.8s,baz=305,slow=7.2,SNR=266					
CMAR				LR	LR	18 04 42.4
	comp=Z,543nm,19.2s,baz=315,slow=44					
	comp=Z,53nm,0.8s					
CMAR	**Chiang Mai Arr**	**74.70**	**79**	P	**P**	**17 22 16.9 -0.6**
CMAR	**Chiang Mai Arr**	**74.70**	**79**	P	**P**	**17 22 16.9 -0.6**
SKAG	**Skagway**	**74.74**	**344**	P	**P**	**17 22 17.9 +0.8**
SKAG				IAmb	IAmb	17 22 23.0
	comp=Z,55nm,1.0s					
SKAG	**Skagway**	**74.74**	**344**	P	**P**	**17 22 19.0 +1.9**
	baz=24,SNR=17					
SKT	**Skwentna**	**74.75**	**353**	P	**P**	**17 22 17.1 -0.1**
SKT				IAmb	IAmb	17 22 21.6
	comp=Z,89nm,1.0s					
SKT	**Skwentna**	**74.75**	**353**	P	**P**	**17 22 17.7 +0.5**
	baz=12,SNR=38					
M22K	**Willow**	**74.83**	**352**	P	**P**	**17 22 18.7 +1.1**
M22K	**Willow**	**74.83**	**352**	P	**P**	**17 22 18.3 +0.7**
	baz=13,SNR=16					
L19K	**White Mountain**	**74.84**	**354**	P	**P**	**17 22 19.2 +1.5**
L19K				IAmb	IAmb	17 22 21.6
	comp=Z,49nm,1.0s					
L19K	**White Mountain**	**74.84**	**354**	P	**P**	**17 22 19.2 +1.5**
	baz=9.2,SNR=21					
TGL	**Tana Glacier**	**74.86**	**348**	P	**P**	**17 22 19.1 +1.1**
TGL				IAmb	IAmb	17 22 24.4
	comp=Z,92nm,1.1s					
MALB	**Monte Alegre**	**74.87**	**253**	*e*P	**P**	**17 22 17.6 -1.0**
PMR	**Palmer**	**74.89**	**351**	P	**P**	**17 22 19.0 +1.1**
PMR				IAmb	IAmb	17 22 23.2
	comp=Z,60nm,0.9s					
PMR	**Palmer**	**74.89**	**351**	P	**P**	**17 22 19.0 +1.1**
PMR				pmax	pmax	
	comp=Z,60nm,0.9s					
PMR	**Palmer**	**74.89**	**351**	P	**P**	**17 22 19.5 +1.7**
	baz=14,SNR=11					
TABL	**Table Mountain**	**74.90**	**347**	P	**P**	**17 22 18.8 +0.5**
TABL				IAmb	IAmb	17 22 23.6
	comp=Z,70nm,1.0s					
PRPB	**Parauapebas**	**74.91**	**246**	*e*P	**P**	**17 22 18.2 -0.5**
ISLE	**Juniper Island**	**74.93**	**348**	P	**P**	**17 22 19.3 +0.9**
LRAL	**Lakeview Retre**	**74.95**	**301**	P	**P**	**17 22 17.5 -1.3**
LRAL				IAmb	IAmb	17 22 21.9
	comp=Z,32nm,0.8s					
LRAL				IAms_20	IAms_20	17 54 02.3
	comp=Z,2µm,20.0s					
LRAL	**Lakeview Retre**	**74.95**	**301**	P	**P**	**17 22 18.2 -0.6**
	baz=48,SNR=16					
LRAL	**Lakeview Retre**	**74.95**	**301**	P	**P**	**17 22 17.8 -1.0**
	baz=48,SNR=16					
PLBC	**Pleasant Camp**	**74.95**	**344**	P	**P**	**17 22 20.1 +1.8**
	baz=23,SNR=14					
GYA	**Guiyang**	**74.96**	**68**	⇑*i*P	**P**	**17 22 20.5 +1.4**
GYA				S	**S**	**17 31 57.0 0.0**
GYA				pmax	pmax	
	comp=Z,38nm,1.8s					
GYA				pmax	pmax	
	comp=Z,620nm,3.8s					
GYA				LR	LR	
	comp=Z,1µm,19.6s					
GYA				LR	LR	
	comp=Z,850nm,18.0s					
GYA				LR	LR	
	comp=Z,1µm,18.4s					
KNK	**Knik Glacier**	**74.98**	**351**	P	**P**	**17 22 19.6 +1.0**
KNK				IAmb	IAmb	17 22 24.4
	comp=Z,82nm,1.0s					
KNK	**Knik Glacier**	**74.98**	**351**	P	**P**	**17 22 20.0 +1.5**
	baz=14,SNR=32					
M20K	**Styx River**	**75.00**	**353**	P	**P**	**17 22 18.9 +0.3**
M20K				IAmb	IAmb	17 22 23.0
	comp=Z,73nm,1.0s					
M20K	**Styx River**	**75.00**	**353**	P	**P**	**17 22 18.9 +0.3**
	baz=10					
SNY	**Shenyang**	**75.03**	**46**	⇑P	**P**	**17 22 21.0 +1.9**
SNY				S	**S**	**17 31 59.3 +2.2**
SNY				pmax	pmax	
	comp=Z,70nm,0.9s					
SNY				pmax	pmax	
	comp=Z,570nm,5.5s					
SNY				LR	LR	
	comp=Z,4µm,15.9s					
SNY				LR	LR	
	comp=Z,5µm,17.7s					
SNY				LR	LR	
	comp=Z,3µm,14.4s					
P29M	**Windy Craggy**	**75.06**	**345**	P	**P**	**17 22 20.0 +1.0**
P29M				IAms_20	IAms_20	17 57 32.7
	comp=Z,1µm,20.0s					
P29M	**Windy Craggy**	**75.06**	**345**	P	**P**	**17 22 20.8 +1.8**
	baz=22,SNR=47					
YAH	**Yahtse**	**75.07**	**347**	P	**P**	**17 22 20.5 +1.2**
PCA	**Pinnacle**	**75.07**	**347**	P	**P**	**17 22 20.5 +1.4**
PINM	**Pinnacle**	**75.07**	**347**	P	**P**	**17 22 21.0 +1.9**
	baz=20,SNR=28					
M19K	**Big River Lodg**	**75.08**	**354**	P	**P**	**17 22 20.4 +1.3**
M19K				IAmb	IAmb	17 22 22.3
	comp=Z,65nm,0.9s					
M19K	**Big River Lodg**	**75.08**	**354**	P	**P**	**17 22 20.7 +1.6**
	baz=9.5					
WAX	**Waxell Ridge**	**75.16**	**348**	P	**P**	**17 22 20.3 +0.7**
SUA	**Susitna One**	**75.18**	**352**	P	**P**	**17 22 21.0 +1.2**
SUA	**Susitna One**	**75.18**	**352**	P	**P**	**17 22 21.4 +1.6**
	baz=12,SNR=31					
S34M	**Telegraph Cree**	**75.22**	**341**	P	**P**	**17 22 22.0 +2.1**
	baz=26,SNR=16					
SUR	**Sutherland**	**75.23**	**173**	LR	LR	17 57 05.3
	comp=Z,1µm,18.9s,baz=351,slow=37					
SUR	**Sutherland**	**75.23**	**173**	P	**P**	**17 22 19.2 -1.1**
SUR	**Sutherland**	**75.23**	**173**	P	**P**	**17 22 21.7 +1.4**
TIA	**Tai'an**	**75.24**	**54**	⇑P	**P**	**17 22 22.3 +1.9**
TIA				S	**S**	**17 32 00.0 +0.4**
TIA				pmax	pmax	
	comp=Z,15nm,0.8s					
TIA				pmax	pmax	
	comp=Z,330nm,3.9s					
TIA				LR	LR	
	comp=Z,1µm,14.9s					
TIA				LR	LR	
	comp=Z,1µm,16.5s					
TIA				LR	LR	
	comp=Z,2µm,18.5s					
MESA	**MESA**	**75.28**	**347**	P	**P**	**17 22 21.5 +1.0**
MESA	**MESA**	**75.28**	**347**	P	**P**	**17 22 22.2 +1.7**
	baz=19,SNR=16					
PNL	**Peninsula**	**75.33**	**346**	P	**P**	**17 22 22.3 +1.7**
	baz=21,SNR=27					
PNL	**Peninsula**	**75.33**	**346**	P	**P**	**17 22 22.6 +2.1**
	comp=Z,254nm,0.9s					
GLI	**Glacier Island**	**75.34**	**350**	P	**P**	**17 22 21.6 +1.1**
GLI				IAmb	IAmb	17 22 26.6
	comp=Z,82nm,1.0s					
GLI	**Glacier Island**	**75.34**	**350**	P	**P**	**17 22 21.5 +0.9**
	baz=15,SNR=17					
MGMO	**Mountain Grove**	**75.40**	**307**	P	**P**	**17 22 19.9 -1.5**
MGMO				IAmb	IAmb	17 22 24.8
	comp=Z,32nm,0.8s					
SMTB	**Santa Maria do**	**75.41**	**243**	*e*P	**P**	**17 22 22.1 +0.4**
SNH	**Sunshine Point**	**75.41**	**348**	P	**P**	**17 22 23.0 +1.9**
GTBY	**Guantanamo Bay**	**75.44**	**284**	IAms_20	IAms_20	17 50 11.3
	comp=Z,1µm,20.0s					
RC01	**Rabbit Creek A**	**75.44**	**351**	P	**P**	**17 22 22.0 +0.8**
RC01	**Rabbit Creek A**	**75.44**	**351**	P	**P**	**17 22 22.1 +1.0**
	baz=13,SNR=12					
OXF	**Oxford**	**75.47**	**304**	P	**P**	**17 22 18.9 -2.8**
OXF	**Oxford**	**75.47**	**304**	P	**P**	**17 22 18.9 -2.8**
OXF				pmax	pmax	
	comp=Z,111nm,1.3s					
OXF				MLR	MLR	
	comp=Z,2µm,19.0s					
OXF	**Oxford**	**75.47**	**304**	P	**P**	**17 22 18.9 -2.8**
	baz=48					
HMT	**Hamilton**	**75.48**	**349**	P	**P**	**17 22 20.5 -0.9**
HMT				IAmb	IAmb	17 22 27.8
	comp=Z,54nm,1.1s					
RAGM	**Ragged Mountai**	**75.49**	**349**	P	**P**	**17 22 21.1 -0.4**
RAGM				IAmb	IAmb	17 22 28.4
	comp=Z,52nm,0.9s					
PWL	**Port Wells**	**75.51**	**351**	P	**P**	**17 22 22.4 +0.8**
PWL	**Port Wells**	**75.51**	**351**	P	**P**	**17 22 22.6 +1.0**
	baz=14,SNR=33					
N20K	**Mount Spurr**	**75.58**	**353**	P	**P**	**17 22 21.9 -0.2**
	baz=11,SNR=13					
SPCR	**Spurr Chakacha**	**75.58**	**353**	P	**P**	**17 22 22.0 -0.1**
	baz=11,SNR=8.3					
SPU	**Mount Spurr**	**75.59**	**353**	P	**P**	**17 22 22.1 +0.1**
PHRA	**Phrae**	**75.60**	**78**	P	**P**	**17 22 21.9 -0.8**
JIS	**Juneau Island**	**75.63**	**343**	P	**P**	**17 22 22.6 +0.3**
JIS				IAMs_20	IAMs_20	17 58 47.9
	comp=Z,1µm,18.0s					
JIS	**Juneau Island**	**75.63**	**343**	P	**P**	**17 22 25.3 +3.1**
	comp=Z,37nm,1.1s					
S39A	**Bolivar**	**75.64**	**308**	P	**P**	**17 22 22.4 -0.3**
	baz=47,SNR=16					
R32K	**Eaglecrest**	**75.66**	**343**	P	**P**	**17 22 24.6 +2.2**
	baz=24,SNR=9.0					
HIN	**Hinchinbrook I**	**75.73**	**350**	P	**P**	**17 22 23.9 +1.0**
HIN				IAmb	IAmb	17 22 28.7
	comp=Z,89nm,1.1s					
BGNE	**Belgrade**	**75.74**	**314**	P	**P**	**17 22 23.0 -0.2**
BGNE	**Belgrade**	**75.74**	**314**	P	**P**	**17 22 23.3 +0.1**
	baz=45					
BGNE	**Belgrade**	**75.74**	**314**	P	**P**	**17 22 23.0 -0.2**
	baz=45					
R31K	**City Hall, Gus**	**75.79**	**344**	P	**P**	**17 22 24.5 +1.3**
	baz=23					
T35M	**Bob Quinn**	**75.85**	**340**	P	**P**	**17 22 25.2 +1.7**
	baz=27,SNR=8.2					
LAO	**LASA Array**	**75.88**	**322**	P	**P**	**17 22 24.8 +0.8**
LAO				IAMs_20	IAMs_20	17 57 07.0
	comp=Z,2µm,20.0s					
LAO	**LASA Array**	**75.88**	**322**	P	**P**	**17 22 25.5 +1.5**
	baz=41,SNR=48					
LAO	**LASA Array**	**75.88**	**322**	P	**P**	**17 22 25.5 +1.5**
	baz=41,SNR=48					
KAIM	**Kayak Island**	**75.89**	**349**	P	**P**	**17 22 25.2 +1.5**
KAIM	**Kayak Island**	**75.89**	**349**	P	**P**	**17 22 24.8 +1.1**
	baz=17					
Y45A	**Yeager Farm, C**	**75.98**	**303**	P	**P**	**17 22 23.9 -0.8**
	baz=48,SNR=25					
DL2	**Dalian**	**76.00**	**50**	P	**P**	**17 22 28.5 +3.8**
DL2				S	**S**	**17 32 09.0 +1.1**
DL2				pmax	pmax	
	comp=Z,88nm,0.8s					
DL2				pmax	pmax	
	comp=Z,230nm,5.2s					
DL2				LR	LR	
	comp=Z,3µm,17.7s					
DL2				LR	LR	
	comp=Z,3µm,16.9s					
DL2				LR	LR	
	comp=Z,3µm,16.0s					
O22K	**Cooper Landing**	**76.04**	**351**	P	**P**	**17 22 24.7 +0.2**
O22K	**Cooper Landing**	**76.04**	**351**	P	**P**	**17 22 25.8 +1.3**
	baz=13					
MDJ	**Mudanjiang**	**76.09**	**41**	P	**P**	**17 22 24.4 -0.7**
MDJ	**Mudanjiang**	**76.09**	**41**	P	**P**	**17 22 25.0 -0.1**
MDJ				pmax	pmax	
	comp=Z,500nm,5.5s					
MDJ				pmax	pmax	
	comp=Z,28nm,3.1s					
N19K	**Bonanza Creek**	**76.16**	**354**	P	**P**	**17 22 26.8 +1.4**
N19K				IAmb	IAmb	17 22 28.0
	comp=Z,37nm,0.8s					
N19K	**Bonanza Creek**	**76.16**	**354**	P	**P**	**17 22 26.9 +1.5**
	baz=9.4,SNR=11					
FCAR	**Ozark Folk Cen**	**76.17**	**306**	P	**P**	**17 22 25.2 -0.5**
FCAR				IAmb	IAmb	17 22 30.4
	comp=Z,68nm,1.2s					
BRAL	**Brewton**	**76.22**	**300**	P	**P**	**17 22 25.8 -0.3**
	baz=48					
P23K	**Montague Islan**	**76.23**	**350**	P	**P**	**17 22 27.2 +1.5**
	baz=15,SNR=7.3					
S31K	**Pelican**	**76.31**	**344**	P	**P**	**17 22 28.3 +2.2**
	baz=23,SNR=18					
RSO	**Redoubt South**	**76.36**	**353**	P	**P**	**17 22 27.2 +0.6**
SDBA	**SAO DESIDERIO**	**76.36**	**238**	*e*P	**P**	**17 22 26.5 -0.6**
SEW	**Seward**	**76.38**	**351**	P	**P**	**17 22 26.8 +0.4**
SEW				IAmb	IAmb	17 22 32.3
	comp=Z,56nm,1.0s					
SEW	**Seward**	**76.38**	**351**	P	**P**	**17 22 27.5 +1.1**
	baz=13,SNR=12					
BOAV	**Boa Vista**	**76.39**	**260**	*e*P	**P**	**17 22 27.3 0.0**
N18K	**Kilae Creek**	**76.40**	**354**	P	**P**	**17 22 27.9 +1.3**
N18K				IAmb	IAmb	17 22 32.7
	comp=Z,86nm,1.1s					
N18K	**Kilae Creek**	**76.40**	**354**	P	**P**	**17 22 28.4 +1.7**
	baz=8.3,SNR=18					
S32K	**Killisnoo**	**76.41**	**343**	P	**P**	**17 22 28.6 +1.9**
	baz=24					
EGMT	**Eagleton**	**76.42**	**325**	P	**P**	**17 22 28.1 +1.0**
EGMT				IAMs_20	IAMs_20	17 55 23.1
	comp=Z,2µm,19.0s					
EGMT	**Eagleton**	**76.42**	**325**	P	**P**	**17 22 28.1 +1.0**
	baz=39,SNR=74					
KSU1	**Kansas State U**	**76.53**	**311**	P	**P**	**17 22 27.3 -0.4**
KSU1	**Kansas State U**	**76.53**	**311**	IAMs_20	IAMs_20	17 54 29.6
	comp=Z,2µm,20.0s					
KSU1	**Kansas State U**	**76.53**	**311**	P	**P**	**17 22 27.1 -0.6**
	baz=45,SNR=17					
KSU1	**Kansas State U**	**76.53**	**311**	P	**P**	**17 22 27.0 -0.8**
	baz=45,SNR=17					
GUA01	**Guaratinga, BA**	**76.54**	**232**	*e*P	**P**	**17 22 28.5 +0.6**
Q23K	**Middleton Isla**	**76.64**	**349**	P	**P**	**17 22 28.7 +0.8**
	baz=15					
WHAR	**Wooly Hollow**	**76.68**	**306**	P	**P**	**17 22 27.9 -0.7**
WHAR				IAmb	IAmb	17 22 32.9
	comp=Z,72nm,1.1s					
O20K	**Slope Mountain**	**76.73**	**353**	P	**P**	**17 22 29.0 +0.4**
	baz=11,SNR=5.5					
O19K	**Port Alsworth**	**76.76**	**354**	P	**P**	**17 22 29.7 +1.1**
O19K				IAmb	IAmb	17 22 33.8
	comp=Z,34nm,0.9s					
O19K	**Port Alsworth**	**76.76**	**354**	P	**P**	**17 22 29.2 +0.5**
	baz=9.5					
RSSD	**Black Hills**	**76.77**	**319**	P	**P**	**17 22 29.4 +0.1**
RSSD	**Black Hills**	**76.77**	**319**	P	**P**	**17 22 29.4 +0.1**
RSSD				pmax	pmax	
	comp=Z,26nm,0.9s					
RSSD				MLR	MLR	
	comp=Z,2µm,18.0s					
RSSD	**Black Hills**	**76.77**	**319**	P	**P**	**17 22 29.7 +0.4**
	baz=42,SNR=18					
RSSD	**Black Hills**	**76.77**	**319**	P	**P**	**17 22 29.6 +0.3**
	baz=42					
RSSD	**Black Hills**	**76.77**	**319**	P	**P**	**17 22 30.3 +1.0**
N16K	**Nishlik Lake**	**76.79**	**356**	P	**P**	**17 22 30.6 +1.7**
	baz=6.2,SNR=10.0					
WRAK	**Wrangell Islan**	**76.86**	**341**	P	**P**	**17 22 29.1 -0.2**
WRAK				IAmb	IAmb	17 22 32.5
	comp=Z,41nm,0.9s					
WRAK	**Wrangell Islan**	**76.86**	**341**	P	**P**	**17 22 30.3 +1.1**
	baz=25,SNR=7.2					
SIT	**Sitka**	**76.95**	**343**	P	**P**	**17 22 31.2 +1.5**
SIT				IAmb	IAmb	17 22 37.0
	comp=Z,44nm,1.0s					
SIT	**Sitka**	**76.95**	**343**	P	**P**	**17 22 31.2 +1.5**
SIT				pmax	pmax	
	comp=Z,44nm,1.0s					
SIT	**Sitka**	**76.95**	**343**	P	**P**	**17 22 30.6 +0.9**
	baz=23					
HHAR	**Hobb

baz=8.8
P19K Oil Pt 77.20 353 P P 17 22 31.4 +0.2
baz=10
WALA Waterton Lakes 77.31 327 P P 17 22 32.5 +0.3
U33K Whale Pass 77.32 341 P P 17 22 32.3 +0.5
baz=25
WHN Wuhan 77.34 60 ⇓P P 17 22 35.3 +2.9
WHN sP PcP 17 22 43.8 +0.8
WHN PP PP 17 25 31.3 +5.1
WHN S S 17 32 23.8 +1.0
WHN pmax pmax
comp=Z,35nm,0.6s
WHN pmax pmax
comp=Z,900nm,4.4s
WHN LR LR
comp=Z,3μm,16.0s
WHN LR LR
comp=Z,2μm,15.5s
WHN LR LR
comp=Z,5μm,21.2s
O17K Koliganek Bris 77.39 355 P P 17 22 33.5 +1.3
baz=7.4,SNR=14
BAUV El Baul 77.49 271 P P 17 22 31.7 -1.8
SRDT SRDT 77.50 82 P P 17 22 33.6 +0.1
comp=Z,1μmcomp=Z,71nm,0.9s
USA0B Ussuriysk Arra 77.55 40 P P 17 22 33.6 +0.2
USA0B IAmb IAmb 17 22 37.8
comp=Z,46nm,1.0s
USA0B Ussuriysk Arra 77.55 40 P P 17 22 33.6 +0.2
USA0B pmax pmax
comp=Z,46nm,1.0s
USRK Ussuriysk Ar. 77.55 40 P P 17 22 33.6 +0.3
comp=Z,40nm,1.0s,baz=314,slow=4.1,SNR=15
USRK LR LR 17 59 28.6
comp=Z,1μm,18.0s,baz=312,slow=38
comp=Z,40nm,1.0s
O16K Kokwok River B 77.63 355 P P 17 22 33.8 +0.3
baz=6.7,SNR=8.1
P18K Big Mountain, 77.63 354 P P 17 22 33.7 +0.1
baz=8.8
V35K Ketchikan 77.67 340 P P 17 22 34.3 +0.5
baz=26
ITTB Itaituba 77.68 252 eP P 17 22 34.2 -0.3
VBMS Vicksburg 77.70 303 P P 17 22 33.1 -1.2
VBMS IAmb IAmb 17 22 38.0
comp=Z,65nm,0.9s
VBMS IAMs_20 IAMs_20 17 56 47.0
comp=Z,1μm,20.0s
VBMS Vicksburg 77.70 303 P P 17 22 34.1 -0.3
baz=47
P17K Kvichak River 77.92 355 P P 17 22 35.1 0.0
baz=7.9
Q19K Cape Douglas, 77.96 353 P P 17 22 34.8 -0.6
baz=10.0
MIAR Mount Ida 77.96 306 P P 17 22 35.5 -0.3
MIAR IAMs_20 IAMs_20 17 55 08.8
comp=Z,2μm,21.0s
MIAR Mount Ida 77.96 306 P P 17 22 35.5 -0.3
MIAR pmax pmax
comp=Z,87nm,1.0s
MIAR MLR MLR
comp=Z,2μm,21.0s
MIAR Mount Ida 77.96 306 P P 17 22 36.1 +0.2
baz=46,SNR=32
MIAR Mount Ida 77.96 306 P P 17 22 35.3 -0.6
baz=46,SNR=32
T35B Sooner Cattle 78.01 309 P P 17 22 36.3 +0.2
baz=45,SNR=34
CNSH ChangSha 78.01 63 ⇑P P 17 22 37.5 +1.3
CNSH S S 17 32 30.5 +0.4
CNSH pmax pmax
comp=Z,36nm,0.8s
CNSH LR LR
comp=Z,810nm,18.5s
CNSH LR LR
comp=Z,970nm,21.5s
CNSH LR LR
comp=Z,1μm,18.6s
JANB Januaria 78.03 236 eP P 17 22 36.4 0.0
OGNE Ogallala 78.10 316 P P 17 22 35.2 -1.4
OGNE IAmb IAmb 17 22 41.7
comp=Z,46nm,0.9s
OGNE IAMs_20 IAMs_20 17 58 10.1
comp=Z,1μm,18.0s
OGNE Ogallala 78.10 316 P P 17 22 35.9 -0.8
baz=43
GCMT Greycliff 78.11 323 P P 17 22 37.8 +1.2
Q20K Shuyak Island 78.15 352 P P 17 22 36.4 -0.1
baz=11
R32A Long Quarter, 78.16 312 P P 17 22 36.9 -0.1
baz=44,SNR=7.6
P16K Nushagak River 78.18 355 P P 17 22 36.9 +0.3
baz=6.7
MTDJ Mount Denham 78.28 284 IAMs_20 IAMs_20 18 00 43.5
comp=Z,1μm,18.0s
TUL1 Leonard 78.30 308 P 17 22 37.0 -0.7
TUL1 IAmb IAmb 17 22 40.5
comp=Z,37nm,0.8s
TUL1 IAMs_20 IAMs_20 17 56 05.8
comp=Z,1μm,20.0s
TUL1 Leonard 78.30 308 P P 17 22 37.6 -0.2
baz=45,SNR=8.6
TUL1 Leonard 78.30 308 P P 17 22 37.6 -0.2
baz=45,SNR=8.6
HRY Holter Researc 78.32 325 P P 17 22 38.6 +0.8
KS20 Mayfield South 78.37 310 P 17 22 37.6 -0.5
CBKS Cedar Bluff 78.44 313 P P 17 22 37.5 -1.0
CBKS IAmb IAmb 17 22 43.0
comp=Z,89nm,1.1s
CBKS Cedar Bluff 78.44 313 P P 17 22 37.5 -1.0
CBKS pmax pmax
comp=Z,89nm,1.1s
CBKS MLR MLR
comp=Z,3μm,20.0s
CBKS Cedar Bluff 78.44 313 P P 17 22 38.8 +0.3
baz=44,SNR=11
CBKS Cedar Bluff 78.44 313 P P 17 22 37.7 -0.8
baz=44,SNR=11
Q16K King Salmon 78.45 355 P P 17 22 37.4 -0.6
baz=7.7
RLMT Red Lodge 78.45 322 P P 17 22 37.1 -1.5
RLMT IAMs_20 IAMs_20 17 58 45.9
comp=Z,2μm,21.0s
RLMT Red Lodge 78.45 322 P P 17 22 39.3 +0.6
baz=39,SNR=10
KAN09 Caldwell North 78.47 310 P P 17 22 38.9 +0.2
OK051 E0350 and S346 78.48 309 P 17 22 39.2 +0.5
OK051 IAmb IAmb 17 22 43.5
comp=Z,78nm,0.9s
OK051 IAMs_20 IAMs_20 17 57 00.5
comp=Z,1μm,20.0s
KAN13 South Haven SW 78.48 310 P 17 22 38.9 +0.2
KAN06 Argonia West S 78.53 311 P P 17 22 39.2 +0.2
KAN06 IAmb IAmb 17 22 43.6
comp=Z,77nm,1.0s
KAN01 Argonia South 78.54 310 P 17 22 39.2 +0.2
OK044 Pawnee Station 78.55 309 P 17 22 39.3 +0.2
KAN12 Harper NE Stat 78.57 311 P 17 22 38.7 -0.5
OK045 Pawnee Station 78.57 309 P P 17 22 39.6 +0.4
OK045 IAMs_20 IAMs_20 17 57 03.9
comp=Z,2μm,20.0s
GRNB Grenville Isla 78.57 339 P P 17 22 38.1 -0.8
GRNB IAmb IAmb 17 22 44.8
comp=Z,42nm,0.9s
OK046 Pawnee Station 78.60 309 P P 17 22 39.9 +0.6
OK046 IAMs_20 IAMs_20 17 57 04.6
comp=Z,1μm,20.0s
OK048 Pawnee Station 78.61 309 P 17 22 39.9 +0.5
OK048 IAMs_20 IAMs_20 17 57 04.7
comp=Z,1μm,20.0s
KAN08 Anthony NE Sta 78.61 311 P P 17 22 38.7 -0.7
KAN08 IAmb IAmb 17 22 43.9
comp=Z,54nm,0.9s
KAN17 Caldwell West 78.62 310 P 17 22 39.2 -0.3
OK050 Pawnee Station 78.64 309 P P 17 22 40.1 +0.5
OK050 IAMs_20 IAMs_20 17 57 14.7
comp=Z,1μm,20.0s
KAN16 Harper SW Stat 78.66 311 P 17 22 39.0 -0.7
KAN16 IAmb IAmb 17 22 43.5
comp=Z,31nm,0.8s
OK034 N. Norfolk Rd. 78.76 309 P 17 22 40.5 +0.2
OK034 IAmb IAmb 17 22 42.1
comp=Z,72nm,0.9s
OK034 IAMs_20 IAMs_20 17 54 32.9
comp=Z,892nm,19.0s
KAN14 Manchester OK 78.80 310 P P 17 22 40.6 +0.2

Q17K Contact Creek 78.80 354 P P 17 22 39.6 -0.6
baz=8.3
OK049 E0420 Rd and N 78.82 310 P 17 22 40.9 +0.3
OK049 IAMs_20 IAMs_20 17 57 12.3
comp=Z,1μm,20.0s
OK033 Mehan 78.87 309 P 17 22 41.4 +0.6
OK031 S. Brethren Rd 78.87 309 P 17 22 41.3 +0.5
LLLB Lillooet 78.96 333 P P 17 22 41.6 +0.5
X37A Clayton 78.99 307 P 17 22 41.4 -0.1
X37A IAmb IAmb 17 22 46.1
comp=Z,58nm,0.8s
X37A Clayton 78.99 307 P P 17 22 41.7 +0.2
baz=45,SNR=27
KDAK Kodiak Island 78.99 352 LR LR 17 58 06.5
comp=Z,545nm,20.4s,baz=36,slow=36
KDAK Kodiak Island 78.99 352 P P 17 22 42.6 +1.5
KDAK IAmb IAmb 17 22 43.8
comp=Z,68nm,0.8s
KDAK Kodiak Island 78.99 352 P P 17 22 42.6 +1.5
KDAK pmax pmax
comp=Z,68nm,0.9s
KDAK Kodiak Island 78.99 352 P P 17 22 40.7 -0.4
baz=11
KDAK Kodiak Island 78.99 352 P P 17 22 43.3 +2.2
SJMB Sao Joao De Ma 79.01 232 eP P 17 22 41.5 -0.2
OK032 Salt Plains WL 79.04 310 P 17 22 41.7 -0.1
OK032 IAmb IAmb 17 22 46.3
comp=Z,62nm,1.1s
OK032 IAMs_20 IAMs_20 17 59 07.3
comp=Z,1μm,20.0s
RIB01 Linhares ES 79.04 231 eP P 17 22 43.0 +1.1
K22A Casper 79.07 319 P P 17 22 41.5 -0.6
K22A Casper 79.07 319 P P 17 22 41.6 -0.4
baz=41,SNR=8.0
K22A Casper 79.07 319 P P 17 22 41.5 -0.6
baz=41,SNR=8.0
MC01 Montes Claros 79.08 235 eP P 17 22 42.5 +0.3
MSO Missoula 79.11 326 P P 17 22 42.4 +0.3
MSO IAmb IAmb 17 22 44.8
comp=Z,34nm,0.8s
MSO Missoula 79.11 326 P P 17 22 42.0 -0.2
baz=37,SNR=24
BOZ Bozeman (W) 79.12 324 P P 17 22 43.4 +1.2
BOZ IAmb IAmb 17 22 45.7
comp=Z,66nm,0.8s
BOZ IAMs_20 IAMs_20 17 56 21.6
comp=Z,1μm,20.0s
BOZ Bozeman (W) 79.12 324 P P 17 22 43.4 +1.2
BOZ pmax pmax
comp=Z,66nm,0.9s
BOZ MLR MLR
comp=Z,1μm,20.0s
BOZ Bozeman (W) 79.12 324 P P 17 22 43.2 +0.9
baz=38,SNR=95
NJ2 Nanjing 79.13 56 eP P 17 22 43.5 +1.2
NJ2 pP **sP** **17 22 46.3 -0.4**
NJ2 S **S** **17 32 42.0 0.0**
NJ2 sS **SKSac** **17 32 55.0 -3.5**
NJ2 SS **SS** **17 37 55.0 +7.9**
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,330nm,4.7s
NJ2 LR LR
comp=Z,2μm,17.1s
NJ2 LR LR
comp=Z,2μm,19.9s
NJ2 LR LR
comp=Z,2μm,16.1s
YMP Mirror Lake Pl 79.14 323 P P 17 22 43.1 +0.6
YMP IAmb IAmb 17 22 59.1
comp=Z,62nm,0.9s
NEW Newport 79.20 329 LR LR 17 57 08.9
comp=Z,986nm,20.7s,baz=42,slow=35
NEW Newport 79.20 329 P P 17 22 43.4 +0.9
NEW IAmb IAmb 17 22 45.5
comp=Z,41nm,0.8s
NEW Newport 79.20 329 IAMs_20 IAMs_20 17 57 40.7
comp=Z,1μm,19.0s
NEW Newport 79.20 329 P P 17 22 43.4 +0.9
NEW pmax pmax
comp=Z,41nm,0.9s
NEW MLR MLR
comp=Z,1μm,19.0s
NEW Newport 79.20 329 P P 17 22 43.1 +0.6
baz=35,SNR=21
LRM Limekiln Ridge 79.29 325 P P 17 22 44.4 +1.1
YUF Upper Falls 79.32 323 P P 17 22 45.0 +1.5
NPGB Novo Progresso 79.32 250 eP P 17 22 42.8 -0.8
OK029 Liberty Lake 79.34 309 P 17 22 43.8 +0.4
OK029 IAmb IAmb 17 22 48.2
comp=Z,84nm,1.0s
OK029 IAMs_20 IAMs_20 17 54 51.1
comp=Z,986nm,21.0s
LKWY Lake 79.39 323 P P 17 22 46.7 +2.8
LKWY Lake 79.39 323 P P 17 22 46.7 +2.8
LKWY pmax pmax
comp=Z,91nm,0.9s
LKWY MLR MLR
comp=Z,2μm,20.0s
OK035 E0210 Rd and N 79.39 311 P P 17 22 43.4 -0.3
OK035 IAMs_20 IAMs_20 17 58 05.5
comp=Z,1μm,18.0s
YNR Norris Junctio 79.39 323 P P 17 22 45.0 +1.1
YHH Holmes Hill 79.41 323 P P 17 22 45.3 +1.2
OK025 Westminster Rd 79.42 309 P 17 22 44.4 +0.5
OK025 IAmb IAmb 17 22 48.5
comp=Z,67nm,0.8s
OK025 IAMs_20 IAMs_20 17 56 32.4
comp=Z,943nm,21.0s
SDV Santo Domingo 79.44 272 LR LR 17 53 49.8
comp=Z,556nm,21.6s,baz=46,slow=33
SDV Santo Domingo 79.44 272 P P 17 22 44.0 -0.5
SDV IAmb IAmb 17 22 48.8
comp=Z,41nm,0.8s
SDV Santo Domingo 79.44 272 eP P 17 22 43.9 -0.5
YHL Hebgen Lake 79.51 323 P P 17 22 45.8 +1.2
YHL IAmb IAmb 17 22 49.3
comp=Z,49nm,0.9s
BRIGG Briggsdale 79.54 317 P P 17 22 45.6 +1.0
BRIGG IAMs_20 IAMs_20 17 57 25.1
comp=Z,1μm,19.0s
BBB Bella Bella 79.54 337 LR LR 17 59 24.5
comp=Z,783nm,21.0s,baz=32,slow=37
YMR Madison River 79.56 323 P P 17 22 45.9 +1.2
YMR IAmb IAmb 17 22 48.7
comp=Z,46nm,0.9s
PHWY Pilot Hill 79.57 318 P P 17 22 45.7 +0.7
PHWY IAMs_20 IAMs_20 17 55 48.8
comp=Z,2μm,21.0s
OK038 West end E0370 79.58 310 P P 17 22 44.0 -0.7
OK038 IAmb IAmb 17 22 48.5
comp=Z,83nm,0.9s
OK038 IAMs_20 IAMs_20 17 59 20.4
comp=Z,1μm,18.0s
YHB Horse Butte 79.59 323 P P 17 22 45.4 +0.5
YHB IAmb IAmb 17 22 48.3
comp=Z,54nm,1.1s
H17A Grant Village 79.60 323 P P 17 22 47.0 +1.9
H17A IAmb IAmb 17 22 52.8
comp=Z,78nm,1.1s
H17A Grant Village 79.60 323 P P 17 22 46.9 +1.9
baz=38,SNR=24
OHAK Old Harbor 79.61 353 P P 17 22 46.1 +1.6
OHAK IAmb IAmb 17 22 50.3
comp=Z,43nm,0.8s
OHAK Old Harbor 79.61 353 P P 17 22 45.4 +1.0
baz=10
R16K Pilot Point 79.61 355 P P 17 22 45.0 +0.5
baz=7.0
QLMT Earthquake Lak 79.63 323 P P 17 22 46.8 +1.6
PEA0B Petropavlovsk- 79.64 21 P P 17 22 46.2 +1.5
PEA0B Petropavlovsk- 79.64 21 P P 17 22 46.3 +1.5
PEA0B pmax pmax
comp=Z,142nm,1.2s
PETK Petropavlovsk- 79.64 21 P P 17 22 45.2 +0.4
comp=Z,44nm,1.0s,baz=347,slow=5.9,SNR=16
PETK LR LR 18 03 14.0
comp=Z,1μm,18.1s,baz=327,slow=40
comp=Z,44nm,1.0s
YFT Old Faithful 79.67 323 P P 17 22 48.2 +2.8
YFT IAmb IAmb 17 22 52.1
comp=Z,53nm,0.9s
FNO Franklin 79.69 309 P 17 22 45.6 +0.2
DLMT Dillon 79.72 324 P P 17 22 46.8 +1.3
INCN Inchon 79.78 48 P P 17 22 48.0 +2.2

INCN IAmb IAmb 17 22 51.1
comp=Z,84nm,1.0s
INCN Inchon 79.78 48 P P 17 22 48.0 +2.2
INCN pmax pmax
comp=Z,84nm,1.0s
INCN MLR MLR
comp=Z,2μm,18.0s
INCN Inchon 79.78 48 P P 17 22 46.5 +0.6
INCN Inchon 79.78 48 P P 17 22 49.8 +4.0
comp=Z,103nm,1.0s
INCN Inchon 79.78 48 P P 17 22 49.9 +4.0
U32A Winter Ranch, 79.79 311 P 17 22 46.1 +0.2
U32A Winter Ranch, 79.79 311 P P 17 22 46.9 +0.9
baz=44,SNR=27
YPP Pitchstone Pla 79.80 323 P P 17 22 48.8 +2.6
YPP IAmb IAmb 17 22 59.5
comp=Z,56nm,1.0s
DIB Dawson Inlet, 79.81 340 P P 17 22 46.4 +0.8
KSCO Kaye Shedlock' 79.83 315 P P 17 22 47.1 +0.8
KSCO Kaye Shedlock' 79.83 315 P P 17 22 47.4 +1.1
baz=42,SNR=21
KSCO Kaye Shedlock' 79.83 315 P P 17 22 47.0 +0.8
baz=42,SNR=21
FLWY Flagg Ranch 79.90 323 P P 17 22 48.6 +2.0
FLWY IAmb IAmb 17 22 54.9
comp=Z,56nm,0.8s
FLWY IAMs_20 IAMs_20 18 00 23.3
comp=Z,1μm,20.0s
B08A Colville Reser 79.95 330 P P 17 22 47.4 +0.8
PET Petropavlovsk 79.97 20 eP P 17 22 49.8 +3.3
PET e 17 25 52.8
PET eS **S** **17 32 49.5 -0.7**
PET ePS **PnS** **17 33 32.4 -1.1**
PET ePPS PPS 17 33 51.0
PET eSS **SS** **17 37 59.6 +1.3**
PET pmax pmax
comp=Z,100nm,10.1s
PET MLR MLR
comp=Z,2μm,15.0s
PET MLR MLR
comp=Z,2μm,16.0s
C09A Chrisman Ranch 80.02 329 P P 17 22 47.5 +0.5
YSS Yuzh-Sakhalins 80.06 32 P P 17 22 48.4 +1.3
YSS Yuzh-Sakhalins 80.06 32 eP P 17 22 48.7 +1.6
YSS eS **S** **17 32 51.0 -0.4**
YSS pmax pmax
comp=Z,350nm,1.0s
YSS pmax pmax
comp=Z,1μm,4.5s
YSS smax smax
comp=N,500nm,5.5s
YSS smax smax
comp=E,700nm,4.5s
YSS MLR MLR
comp=Z,2μm,18.0s
YSS Yuzh-Sakhalins 80.06 32 P P 17 22 49.1 +2.0
comp=Z,483nm,0.9s
YSS Yuzh-Sakhalins 80.06 32 P P 17 22 49.1 +2.0
N23A Red Feather La 80.11 318 P P 17 22 48.6 +0.7
baz=41,SNR=17
RWWY Rawlins 80.13 319 P P 17 22 47.2 -0.8
SNDB Serra Nova Dou 80.15 244 eP P 17 22 48.2 +0.2
IMW Indian Meadow 80.15 323 IAMs_20 IAMs_20 18 00 42.2
comp=Z,1μm,20.0s
MOOW Moose Ponds 80.18 322 IAMs_20 IAMs_20 18 00 02.8
comp=Z,1μm,21.0s
LOHW Long Hollow 80.22 322 IAMs_20 IAMs_20 17 59 04.0
comp=Z,1μm,18.0s
MACA Manacapuru-AM 80.34 257 eP P 17 22 49.4 +0.3
SII Sitkinak Islan 80.35 353 P P 17 22 48.4 -0.1
baz=9.5
FXWY Fox Creek 80.39 322 IAMs_20 IAMs_20 18 00 38.4
comp=Z,1μm,19.0s
X34A Smith Ranch, M 80.41 309 P 17 22 49.5 +0.2
BW06 Boulder Array 80.41 321 P P 17 22 49.0 -0.4
BW06 Boulder Array 80.41 321 P P 17 22 49.5 +0.1
baz=39,SNR=23
PD31 Pinedale Array 80.41 321 P P 17 22 49.1 -0.3
PDAR Pinedale Array 80.41 321 P P 17 22 49.8 +0.3
comp=Z,13nm,0.8s,baz=55,slow=5.2,SNR=56
PDAR PP **PP** **17 25 50.6 -1.0**
comp=Z,1.6nm,0.8s,baz=47,slow=5.3,SNR=2.7
PDAR LR LR 17 58 10.2
comp=Z,2μm,19.2s,baz=53,slow=36
comp=Z,13nm,0.8s
PDAR Pinedale Array 80.41 321 P P 17 22 49.0 -0.4
SNOW Snow King Moun 80.41 322 IAMs_20 IAMs_20 17 59 59.9
comp=Z,1μm,19.0s
TPAW Teton Pass 80.48 322 IAMs_20 IAMs_20 17 59 52.9
comp=Z,1μm,19.0s
KSAR Wonju Array Be 80.49 47 P P 17 22 50.0 +0.4
KSAR Wonju Array Be 80.49 47 P P 17 22 50.0 +0.4
KSRS Korea Array 80.50 47 P P 17 22 50.8 +1.1
comp=Z,38nm,0.9s,baz=323,slow=4.6,SNR=29
KSRS LR LR 18 02 21.4
comp=Z,1μm,18.3s,baz=315,slow=39
comp=Z,38nm,0.9s
REDW Red Top Meadow 80.53 322 IAMs_20 IAMs_20 17 58 06.1
comp=Z,1μm,21.0s
NATX Nacogdoches 80.55 305 IAMs_20 IAMs_20 17 58 35.5
comp=Z,1μm,18.0s
BDFB Brasilia 80.77 239 P P 17 22 52.1 +0.7
comp=Z,30nm,0.8s,baz=62,slow=5.2,SNR=32
BDFB LR LR 17 58 06.7
comp=Z,345nm,19.9s,baz=38,slow=35
comp=Z,30nm,0.8s
BDFB Brasilia 80.77 239 eP P 17 22 51.7 +0.3
WMOK Wichita Mounta 80.85 309 P 17 22 51.6 -0.1
WMOK IAmb IAmb 17 22 56.5
comp=Z,54nm,0.9s
WMOK Wichita Mounta 80.85 309 P P 17 22 51.6 -0.1
WMOK pmax pmax
comp=Z,54nm,0.9s
WMOK MLR MLR
comp=Z,900nm,20.0s
WMOK Wichita Mounta 80.85 309 P P 17 22 52.1 +0.5
baz=44,SNR=63
WMOK Wichita Mounta 80.85 309 P P 17 22 52.1 +0.5
baz=44,SNR=63
D08A Wollman Farm, 80.89 329 P P 17 22 53.1 +1.5
D08A IAmb IAmb 17 22 55.0
comp=Z,48nm,1.0s
BCYI Bear Canyon 80.90 324 P P 17 22 52.3 +0.3
CHGN Chignik 80.93 355 P P 17 22 52.0 +0.4
baz=5.3
Z35A Perchaven, San 80.98 307 P P 17 22 52.2 -0.1
baz=44
TJN Taejon 80.99 48 P P 17 22 52.3 0.0
TJN Taejon 80.99 48 P P 17 22 52.3 0.0
TJN pmax pmax
comp=Z,262nm,0.9s
TJN Taejon 80.99 48 P P 17 22 55.9 +3.6
comp=Z,333nm,0.9s
E09A Wood Farm, Sta 81.04 328 P P 17 22 53.0 +0.5
AHID Auburn Hatcher 81.11 322 P P 17 22 53.5 +0.3
AHID IAMs_20 IAMs_20 17 58 24.5
comp=Z,1μm,20.0s
PGC Sidney 81.16 333 P P 17 22 54.4 +1.4
PGC IAmb IAmb 17 22 55.3
comp=Z,90nm,1.0s
Q24A Divide 81.17 316 P P 17 22 53.6 -0.1
Q24A IAmb IAmb 17 22 58.9
comp=Z,39nm,0.9s
Q24A Divide 81.17 316 P P 17 22 54.2 +0.5
baz=41,SNR=20
SSE Sheshan 81.22 56 P P 17 22 52.5 -1.1
SSE S **S** **17 33 03.0 -1.0**
SSE pmax pmax
comp=Z,17nm,0.7s
SSE pmax pmax
comp=Z,260nm,5.5s
SSE LR LR
comp=Z,1μm,18.0s
SSE LR LR
comp=Z,870nm,18.0s
PLID Pearl Lake 81.36 326 P P 17 22 54.2 -0.2
LTY Liberty 81.37 330 P P 17 22 54.7 +0.5
UBPT Khong Chiam 81.48 77 P P 17 22 57.1 +1.9
comp=Z,14nm,0.9s
O20A White River Ci 81.82 319 P P 17 22 57.2 +0.2
O20A IAmb IAmb 17 22 59.2
comp=Z,46nm,0.7s
O20A White River Ci 81.82 319 P P 17 22 57.4 +0.4
baz=39,SNR=23
SMCO Snowmass 81.93 317 P P 17 22 57.8 0.0
HLID Hailey 81.94 324 P P 17 22 58.2 +0.8

baz=36,SNR=33
PAMC Pamplona, Colo 81.98 273 *e*P **P 17 22 54.1 -4.4**
SDPT Sand Point 81.99 356 P **P 17 22 56.9 -0.3**
baz=4.8
PMNB Patos De Minas 81.99 236 *e*P **P 17 22 57.5 -0.3**
WHTX Lake Whitney, 82.06 307 P **P 17 22 57.9 -0.1**
WHTX Lake Whitney, 82.06 307 P **P 17 22 58.2 +0.2**
baz=44
WHTX Lake Whitney, 82.06 307 P **P 17 22 57.6 -0.5**
baz=44
QIZ Qiongzhong 82.06 72 IAMs_20 IAMs_20 18 04 14.9
comp=Z,1μm,21.0s
QIZ Qiongzhong 82.06 72 P **P 17 22 59.0 +0.8**
QIZ S **S 17 33 13.0 -0.1**
QIZ SS **SS 17 38 31.5 -0.2**
QIZ pmax pmax
comp=Z,330nm,4.1s
QIZ LR LR
comp=Z,690nm,20.5s
QIZ LR LR
comp=Z,1μm,18.2s
QIZ LR LR
comp=Z,1μm,20.0s
BMO Blue Mountains 82.08 327 P **P 17 22 58.3 +0.2**
BMO Blue Mountains 82.08 327 P **P 17 22 58.3 +0.2**
BMO pmax pmax
comp=Z,173nm,0.9s
BMO MLR MLR
comp=Z,2μm,22.0s
SJCC San Jacinto, C 82.09 276 *e*P **P 17 23 00.4 +1.9**
RDMU Red Mountain 82.12 320 P **P 17 22 58.9 +0.4**
RDMU IAmb IAmb 17 23 02.5
comp=Z,63nm,0.8s
T25A Trinidad 82.17 314 P **P 17 22 58.7 -0.1**
baz=41,SNR=15
MLSI Meulaboh, Aceh 82.21 91 P **P 17 23 00.4 +1.4**
comp=Z,51nm,0.8s
LON Longmire 82.21 331 P **P 17 22 59.4 +0.7**
LON IAmb IAmb 17 23 01.0
comp=Z,46nm,1.1s
LON Longmire 82.21 331 P **P 17 22 59.4 +0.7**
LON pmax pmax
comp=Z,46nm,1.1s
HWUT Hardware Ranch 82.24 322 P **P 17 22 59.5 +0.4**
HWUT IAmb IAmb 17 23 02.0
comp=Z,52nm,0.8s
SDCO Great Sand Dun 82.28 315 P **P 17 22 59.7 +0.2**
SDCO IAMs_20 IAMs_20 17 58 41.6
comp=Z,1μm,20.0s
SDCO Great Sand Dun 82.28 315 P **P 17 23 00.2 +0.7**
baz=41,SNR=40
SDCO Great Sand Dun 82.28 315 P **P 17 23 00.2 +0.7**
baz=41,SNR=40
CLDB Colider 82.36 248 *e*P **P 17 22 59.5 -0.3**
AMTX Amarillo 82.37 311 IAMs_20 IAMs_20 17 59 11.3
comp=Z,1μm,21.0s
AMTX Amarillo 82.37 311 P **P 17 22 59.9 +0.1**
baz=42
AMTX Amarillo 82.37 311 P **P 17 23 00.0 +0.3**
baz=42
G08A Pilot Rock 82.38 328 P **P 17 23 00.1 +0.5**
HKT Hockley 82.54 304⇑ *e*P **P 17 23 01.1 +0.6**
HKT MLR MLR
comp=Z,2μm,18.0s
HKT Hockley 82.54 304 P **P 17 23 03.3 +2.8**
HVU Hansel Valley 82.65 322 P **P 17 23 02.0 +0.8**
HVU IAmb IAmb 17 23 03.8
comp=Z,26nm,0.9s
HVU Hansel Valley 82.65 322 P **P 17 23 02.0 +0.8**
HVU pmax pmax
comp=Z,27nm,0.9s
IPMB Ipameri, GO 82.66 237 *e*P **P 17 23 01.3 0.0**
HKPS Hong Kong Po S 82.81 66 IAMs_20 IAMs_20 18 02 32.3
comp=Z,837nm,20.0s
SGCB São Gabriel d 82.84 263 *e*P **P 17 23 02.5 +0.1**
ABTX Abilene, Hawle 82.88 308 P **P 17 23 02.1 -0.3**
ABTX IAmb IAmb 17 23 07.8
comp=Z,53nm,1.3s
ABTX Abilene, Hawle 82.88 308 P **P 17 23 02.1 -0.3**
baz=43,SNR=10
ABTX Abilene, Hawle 82.88 308 P **P 17 23 03.0 +0.6**
baz=43,SNR=10
S22A 4UR Ranch, Cre 82.96 316 P **P 17 23 03.2 +0.2**
S22A IAmb IAmb 17 23 07.9
comp=Z,26nm,0.9s
S22A 4UR Ranch, Cre 82.96 316 P **P 17 23 03.7 +0.6**
baz=40,SNR=42
435B Jarrell 83.00 306 P **P 17 23 02.3 -0.7**
baz=44
P18A Preston Nutter 83.18 319 P **P 17 23 03.9 -0.3**
P18A IAmb IAmb 17 23 08.4
comp=Z,32nm,0.9s
ARAG Araguaiana, MT 83.24 241 *e*P **P 17 23 04.5 +0.2**
PV15 Paradox Valley 83.33 318 P **P 17 23 05.2 +0.3**
PV15 IAmb IAmb 17 23 08.0
comp=Z,39nm,0.9s
PV07 Paradox Valley 83.33 318 P **P 17 23 05.3 +0.4**
PV07 IAmb IAmb 17 23 07.2
comp=Z,48nm,0.8s
SKLT Songkhla 83.36 86 P **P 17 23 03.8 -1.2**
comp=Z,743nmcomp=Z,32nm,1.1s
SHEM Shemya Is, Ala 83.36 11 LR LR 18 03 04.7
comp=Z,246nm,18.3s,baz=315,slow=38
KUR Kuril'sk 83.45 30 P **P 17 23 07.5 +2.5**
KUR S **S 17 33 25.9 -0.5**
KUR MLR MLR
comp=Z,2μm,14.0s
PV23 Carpenter Ridg 83.50 318 P **P 17 23 06.3 +0.5**
PDRB Porto dos Gac 83.53 248 *e*P **P 17 23 06.3 +0.5**
P17A Butcher Ranch, 83.54 320 P **P 17 23 06.0 +0.1**
PV11 David Mesa, Pa 83.56 318 P **P 17 23 06.5 +0.5**
PV13 Radium Mtn., P 83.64 318 P **P 17 23 06.9 +0.4**
PV13 IAmb IAmb 17 23 08.8
comp=Z,42nm,0.8s
UNV Unalaska Valle 83.65 360 P **P 17 23 05.4 -0.4**
baz=0.3
MSTX Muleshoe 83.65 311 P **P 17 23 06.0 -0.5**
MSTX IAmb IAmb 17 23 10.5
comp=Z,22nm,0.8s
MSTX Muleshoe 83.65 311 P **P 17 23 06.5 +0.1**
baz=42,SNR=10
MSTX Muleshoe 83.65 311 P **P 17 23 06.5 +0.1**
baz=42,SNR=10
KCSI Kotacane, Aceh 83.71 91 P **P 17 23 08.7 +1.8**
SRU San Rafael Swe 83.72 319 P **P 17 23 06.9 +0.1**
SRU San Rafael Swe 83.72 319 P **P 17 23 06.9 +0.1**
SRU pmax pmax
comp=Z,56nm,0.8s
NLU North Lily Min 83.79 321 P **P 17 23 07.7 +0.5**
J08A Circle Bar Ran 83.79 327 P **P 17 23 06.9 -0.1**
J08A IAmb IAmb 17 23 10.6
comp=Z,36nm,0.9s
PTBC PUERTO BERRIO, 83.81 273 *e*P **P 17 23 05.2 -2.1**
QZH Quanzhou 83.91 62⇓ *i*P **P 17 23 08.0 +0.3**
QZH PP **PP 17 26 25.5 +4.8**
QZH S **S 17 33 29.5 -2.2**
QZH SS **SS 17 39 02.0 +3.4**
QZH pmax pmax
comp=Z,230nm,4.2s
QZH LR LR
comp=Z,720nm,15.5s
QZH LR LR
comp=Z,960nm,14.3s
QZH LR LR
comp=Z,1μm,17.2s
DUG Dugway, Tooele 83.94 321 P **P 17 23 09.0 +1.2**
DUG IAmb IAmb 17 23 10.3
comp=Z,24nm,0.8s
DUG Dugway, Tooele 83.94 321 P **P 17 23 09.0 +1.2**
DUG pmax pmax
comp=Z,24nm,0.8s
DUG MLR MLR
comp=Z,2μm,18.0s
DUG Dugway, Tooele 83.94 321 P **P 17 23 08.4 +0.6**
baz=37,SNR=14
KNMB Chin-men Tao 84.11 62 IAMs_20 IAMs_20 18 06 00.5
comp=Z,1μm,20.0s
Q16A Castle Valley 84.19 320 P **P 17 23 09.6 +0.4**
Q16A IAmb IAmb 17 23 11.2
comp=Z,23nm,0.8s
MVCO Mesa Verde 84.21 317 P **P 17 23 09.9 +0.5**
MVCO IAmb IAmb 17 23 12.7
comp=Z,32nm,0.8s
MVCO Mesa Verde 84.21 317 P **P 17 23 09.9 +0.5**
baz=39,SNR=25
ERM Erimo 84.28 35⇑ *e*P **P 17 23 11.6 +2.3**
ERM pmax pmax
comp=Z,89nm,1.0s
ERM MLR MLR
comp=Z,3μm,17.0s
ERM Erimo 84.28 35 P P 17 23 16.7 +7.4
comp=Z,157nm,1.0s
ERM Erimo 84.28 35 P P 17 23 16.7 +7.4
PINE Pine Mountain 84.40 328 P **P 17 23 10.2 -0.1**
TEIG Tepich 84.44 292 IAMs_20 IAMs_20 17 55 46.2
comp=Z,1μm,22.0s
NIKH Nikolski High 84.51 1 P **P 17 23 10.3 0.0**
baz=359
JCT Junction City 84.53 307 P **P 17 23 11.0 +0.1**
JCT IAmb IAmb 17 23 16.6
comp=Z,32nm,0.9s
JCT IAMs_20 IAMs_20 18 00 59.8
comp=Z,1μm,19.0s
JCT Junction City 84.53 307 P **P 17 23 11.0 +0.1**
JCT pmax pmax
comp=Z,32nm,1.0s
JCT MLR MLR
comp=Z,1μm,19.0s
JCT Junction City 84.53 307 P **P 17 23 11.6 +0.7**
baz=43
JCT Junction City 84.53 307 P **P 17 23 11.2 +0.3**
baz=43,SNR=9.5
ELK Elko 84.58 323 LR LR 18 02 34.2
comp=Z,655nm,18.6s,baz=44,slow=37
ELK Elko 84.58 323 IAMs_20 IAMs_20 18 02 02.3
comp=Z,884nm,19.0s
KULM Kulim 84.64 88 P **P 17 23 11.3 -0.3**
KULM Kulim 84.64 88 P **P 17 23 13.0 +1.4**
comp=Z,736nmcomp=Z,16nm,1.1s
NORC Norcasia 84.77 273 *e*P **P 17 23 12.0 -0.3**
ROSC El Rosal 84.85 272 P **P 17 23 12.7 -0.4**
comp=Z,12nm,0.4s,baz=215,slow=22,SNR=2.1
ROSC LR LR 17 56 38.2
comp=Z,3μm,21.8s,baz=51,slow=33
comp=Z,12nm,0.4s
ANMO Albuquerque 84.91 314 LR LR 17 59 35.6
comp=Z,3μm,21.0s,baz=44,slow=35
ANMO Albuquerque 84.91 314 *de*P **P 17 23 13.8 +0.9**
ANMO pmax pmax
comp=Z,25nm,1.0s
ANMO MLR MLR
comp=Z,2μm,20.0s
ANMO Albuquerque 84.91 314 P **P 17 23 14.3 +1.5**
baz=40,SNR=24
ANMO Albuquerque 84.91 314 P **P 17 23 12.5 -0.5**
baz=40
ANMO Albuquerque 84.91 314 P **P 17 23 14.4 +1.5**
CPRX Cap Rock 84.96 311 P **P 17 23 13.9 +0.7**
PSI Prapat 85.05 91 P **P 17 23 13.7 -0.1**
comp=Z,19nm,0.7s,baz=304,slow=7.0,SNR=19
PSI LR LR 18 03 52.6
comp=Z,457nm,21.9s,baz=302,slow=38
comp=Z,19nm,0.7s
PSI Prapat 85.05 91 P **P 17 23 14.5 +0.7**
comp=Z,575nmcomp=Z,21nm,1.2s,comp=Z,927nm,1.2s,
comp=Z,35nm,1.2s
PSI P **P 17 23 14.5 +0.7**
comp=Z,575nmcomp=Z,21nm,1.2s,comp=Z,927nm,1.2s,
comp=Z,35nm,1.2s
PSI Prapat 85.05 91 P **P 17 23 14.2 +0.4**
comp=Z,35nm,1.2s
GSI Gunungsitoli 85.06 93 P **P 17 23 14.5 +0.8**
GSI IAmb IAmb 17 23 15.5
comp=Z,39nm,1.0s
GSI Gunungsitoli 85.06 93 P **P 17 23 15.7 +2.0**
comp=Z,49nm,1.3s
GSI Gunungsitoli 85.06 93 P P 17 23 18.0 +4.3
comp=Z,49nm,1.3s
RPSI Rantau Prapat 85.12 91 P **P 17 23 13.8 -0.1**
RPSI IAmb IAmb 17 23 17.6
comp=Z,25nm,0.9s
RPSI Rantau Prapat 85.12 91 P **P 17 23 13.7 -0.3**
BB19B Bebedouro 85.19 236 *e*P **P 17 23 16.3 +2.2**
PARB Paraibuna 85.20 232 *e*P **P 17 23 15.1 +0.9**
ITRB Iturama 85.28 238 *e*P **P 17 23 14.8 +0.2**
GUY2C Guyana, Caldas 85.36 273 *e*P **P 17 23 15.9 +0.1**
IPM Ipoh 85.46 88 P **P 17 23 14.7 -1.0**
IPM Ipoh 85.46 88 P **P 17 23 18.4 +2.7**
comp=Z,523nmcomp=Z,22nm,1.2s
IPM Ipoh 85.46 88 P **P 17 23 18.4 +2.7**
comp=Z,22nm,1.2s
CLNB Carlsbad 85.54 311 P **P 17 23 16.2 +0.2**
BNM Barren Site 85.61 314 P **P 17 23 17.5 +1.0**
VAO Valinhos 85.73 233 *e*P **P 17 23 16.6 -0.2**
TATO Taipei 85.74 60 IAMs_20 IAMs_20 18 07 32.7
comp=Z,1μm,19.0s
MOD Modoc Plateau 85.75 327 IAMs_20 IAMs_20 18 00 47.0
comp=Z,1μm,19.0s
Y22F Passcal Instru 85.82 314 P **P 17 23 18.6 +1.2**
baz=40
GDL2 Guadalupe Moun 85.86 311 P **P 17 23 18.1 +0.4**
833A Chaparral WMA, 85.86 305 P **P 17 23 18.5 +0.9**
baz=43
SALV Santo Antonio 85.92 244 *e*P **P 17 23 17.5 -0.2**
Y22A Socorro 85.95 314 P **P 17 23 19.0 +0.9**
baz=40,SNR=13
PRAC Prado 86.02 271 *e*P **P 17 23 16.8 -1.7**
ORTC Ortega, Tolima 86.15 272 *e*P **P 17 23 17.8 -1.4**
HUMO Hull Mountain 86.18 329 P **P 17 23 19.9 +1.0**
HUMO IAmb IAmb 17 23 20.6
comp=Z,38nm,1.2s
JSU Suzuyama 86.32 49 P **P 17 23 19.9 +0.1**
JSU IAmb IAmb 17 23 24.3
comp=Z,28nm,0.9s
NACB Ninganchiao 86.38 60 IAMs_20 IAMs_20 18 07 37.5
comp=Z,1μm,21.0s
TPUB Ta-pu 86.38 61 IAMs_20 IAMs_20 18 07 47.6
comp=Z,858nm,19.0s
MJB9 Matsu-Tunnel 86.47 41 P **P 17 23 21.6 +1.1**
MJB9 IAmb IAmb 17 23 25.3
comp=Z,46nm,1.1s
W18A Petrified Fore 86.47 316 P **P 17 23 21.2 +0.6**
baz=38
MAJO Matsushiro 86.47 41 P **P 17 23 20.3 -0.1**
MAJO IAmb IAmb 17 23 24.3
comp=Z,46nm,1.1s
MAJO Matsushiro 86.47 41⇓ *e*P **P 17 23 20.2 -0.2**
MAJO pmax pmax
comp=Z,51nm,1.1s
MAJO Matsushiro 86.47 41 P **P 17 23 23.0 +2.6**
comp=Z,44nm,1.3s
MAJO Matsushiro 86.47 41 P **P 17 23 23.0 +2.6**
MJAR Matsushiro Arr 86.47 41 P **P 17 23 20.8 +0.4**
comp=Z,24nm,0.8s,baz=326,slow=4.5,SNR=25
MJAR LR LR 18 06 01.7
comp=Z,2μm,18.2s,baz=324,slow=38
comp=Z,24nm,0.8s
KNB Kanab 86.48 320 P **P 17 23 20.8 +0.1**
KNB Kanab 86.48 320 P **P 17 23 20.8 +0.1**
KNB pmax pmax
comp=Z,8.0nm,0.8s
PP1B Ponte de Pedra 86.61 242 *e*P **P 17 23 21.2 0.0**
JMM Marumori 86.63 39 P **P 17 23 20.9 -0.2**
JMM IAmb IAmb 17 23 24.1
comp=Z,69nm,1.2s
R11A Troy Canyon, C 86.69 322 P **P 17 23 21.0 -0.7**
R11A Troy Canyon, C 86.69 322 P **P 17 23 21.8 +0.1**
baz=35,SNR=9.9
U15A North Rim 86.70 319 P **P 17 23 22.2 +0.3**
YULB Yu-li 86.75 61 IAMs_20 IAMs_20 18 08 02.2
comp=Z,1μm,21.0s
JGF Kuroka 86.80 42 P **P 17 23 22.4 +0.2**
JGF IAmb IAmb 17 23 29.4
comp=Z,25nm,0.9s
YBH Yreka Blue Hor 86.84 328 LR LR 18 01 57.3
comp=Z,1μm,19.6s,baz=31,slow=36
YBH Yreka Blue Hor 86.84 328 P **P 17 23 22.8 +0.6**
YBH Yreka Blue Hor 86.84 328 P **P 17 23 22.8 +0.6**
YBH pmax pmax
comp=Z,17nm,1.0s
VILB Vilhena 86.85 249 *e*P **P 17 23 22.6 +0.1**
YOTC Yotoco, Valle 86.91 273 *e*P **P 17 23 21.6 -1.4**
WUAZ Wupatki 86.98 318 P **P 17 23 23.7 +0.6**
baz=37
TWG Pinlang 87.01 62 IAMs_20 IAMs_20 18 08 10.4
comp=Z,1μm,18.0s
PAHR Pah Rah Range 87.22 325 P **P 17 23 25.4 +1.2**
PAHR IAmb IAmb 17 23 31.1
comp=Z,24nm,0.9s
KVN Kaiserville 87.22 324 P **P 17 23 24.7 +0.4**
KVN Kaiserville 87.22 324 P **P 17 23 24.7 +0.4**
KVN pmax pmax
comp=Z,9.0nm,1.0s
PCMB Pacaembu 87.26 237 *e*P **P 17 23 24.4 +0.1**
EPT El Paso 87.36 312 IAMs_20 IAMs_20 18 02 22.5
comp=Z,1μm,21.0s
121A Cookes Peak, D 87.47 313 P **P 17 23 26.5 +0.9**
baz=39,SNR=8.8
121A Cookes Peak, D 87.47 313 P **P 17 23 26.2 +0.6**
baz=39,SNR=8.8
BEKR Beckworth 87.49 326 P **P 17 23 26.3 +0.7**
FRTB Fartura 87.53 235 *e*P **P 17 23 25.9 +0.3**
TX31 Lajitas Ar. Si 87.63 309 P **P 17 23 26.8 +0.6**
TX31 Lajitas Ar. Si 87.63 309 P **P 17 23 27.3 +1.0**
baz=41,SNR=21
TX32 Lajitas Array 87.63 309 P **P 17 23 26.8 +0.6**
TX32 IAmb IAmb 17 23 29.0
comp=Z,35nm,1.4s
TXAR Lajitas Array 87.63 309 P **P 17 23 27.0 +0.7**
comp=Z,8.3nm,0.8s,baz=69,slow=4.2,SNR=60
TXAR PKKPbc **PKKPbc 17 41 13.7 +1.1**
comp=Z,0.7nm,0.8s,baz=205,slow=5.5,SNR=7.7
TXAR LR LR 18 02 13.0
comp=Z,982nm,20.6s,baz=45,slow=35
comp=Z,8.3nm,0.8s
TXAR Lajitas Array 87.63 309 P **P 17 23 26.3 0.0**
TXAR Lajitas Array 87.63 309 P **P 17 23 26.3 0.0**
JYT Yasato 87.68 40 P **P 17 23 26.0 -0.2**
RYN Ryan 87.76 324 P **P 17 23 25.0 -1.8**
NV11 Mina Array Sit 87.76 324 P **P 17 23 26.2 -0.7**
NVAR Mina Array Bea 87.83 324 P **P 17 23 27.2 -0.1**
comp=Z,6.8nm,0.8s,baz=52,slow=4.3,SNR=32
NVAR PP **PP 17 26 52.6 +0.4**
comp=Z,1.8nm,0.8s,baz=47,slow=6.3,SNR=4.0
NVAR PKKPbc **PKKPbc 17 41 13.2 +0.8**
comp=Z,1.2nm,0.7s,baz=197,slow=3.6,SNR=5.5
NVAR LR LR 18 02 49.8
comp=Z,623nm,19.1s,baz=48,slow=36
comp=Z,6.8nm,0.8s
NVAR Mina Array Bea 87.83 324 P **P 17 23 27.5 +0.2**
PNTR Pine Nut 87.83 325 P **P 17 23 27.3 +0.1**
PTLB Pontes e Lacer 87.89 247 *e*P **P 17 23 27.0 -0.4**
TGUH Tegucigalpa,Un 87.98 287 IAMs_20 IAMs_20 17 56 38.3
comp=Z,1μm,22.0s
TPNV Topopah Spring 88.14 322 P **P 17 23 29.3 +0.6**
TPNV Topopah Spring 88.14 322 P **P 17 23 29.3 +0.6**
TPNV pmax pmax
comp=Z,7.0nm,0.9s
TPNV Topopah Spring 88.14 322 P **P 17 23 29.3 +0.6**
baz=35
ORV Oroville 88.22 327 P **P 17 23 29.2 +0.4**
ORV Oroville 88.22 327 P **P 17 23 29.2 +0.4**
ORV pmax pmax
comp=Z,9.0nm,0.8s
ORV MLR MLR
comp=Z,2μm,18.0s
GMN Gold Mountain 88.31 323 P **P 17 23 28.9 -0.7**
V12A Nelson 88.49 320 P **P 17 23 30.6 +0.3**
HDC Heredia 88.51 282 IAMs_20 IAMs_20 18 05 44.4
comp=Z,807nm,18.0s
AFDM Forest Hills D 88.52 326 P **P 17 23 30.3 +0.1**
JOW Kunigami 88.57 54 LR LR 18 07 19.3
comp=Z,1μm,18.6s,baz=335,slow=38
JOW Kunigami 88.57 54 P **P 17 23 31.2 +0.6**
GRAC Grapevine Rang 88.61 322 P **P 17 23 31.6 +0.8**
GRAC Grapevine Rang 88.61 322 P **P 17 23 31.8 +1.0**
baz=34
MLAC Mammoth, Mammo 88.73 324 P **P 17 23 32.0 +0.4**
baz=33
FURC Furnace Creek, 88.81 322 P **P 17 23 32.2 +0.6**
baz=34
ETMB Extrema 88.88 256 *e*P **P 17 23 31.9 -0.3**
JTS Las Juntas de 88.91 283 LR LR 17 58 44.5
comp=Z,775nm,19.9s,baz=108,slow=32
TIN Tinemaha, Big 88.94 323 P **P 17 23 33.0 +0.6**
baz=34
GWY Greenwater Val 88.96 322 P **P 17 23 33.8 +1.2**
GWY IAmb IAmb 17 23 35.5
comp=Z,18nm,0.8s
TRCB Terra Rica 88.99 237 *e*P **P 17 23 32.4 -0.2**
SHOC Shoshone, Teco 89.01 321 P **P 17 23 32.6 -0.1**
baz=35
CMB Columbia Colle 89.05 325 P **P 17 23 31.7 -1.1**
CMB IAMs_20 IAMs_20 18 05 05.4
comp=Z,1μm,20.0s
CMB Columbia Colle 89.05 325 P **P 17 23 31.7 -1.1**
CMB pmax pmax
comp=Z,11nm,1.2s
CMB MLR MLR
comp=Z,1μm,20.0s
TUC Tucson 89.22 315 P **P 17 23 34.9 +1.2**
AQDB Aquidauana 89.23 241 *e*P **P 17 23 33.8 +0.1**
TUQ Turquoise Moun 89.23 321 P **P 17 23 34.1 +0.3**
baz=35,SNR=8.5
PDMCI Parker Dam,Lak 89.30 319 P **P 17 23 34.8 +0.8**
baz=36,SNR=7.9
CWC Cottonwood Cre 89.39 323 P **P 17 23 34.9 +0.3**
baz=34
SDSI Sungai Dareh 89.40 92 P **P 17 23 34.0 -0.7**
comp=Z,17nm,0.9s
MPMC Manual Prospec 89.44 322 P **P 17 23 34.9 0.0**
baz=34,SNR=7.3
BTDF Bukit Timah Da 89.58 89 P **P 17 23 36.0 +0.5**
comp=Z,326nmcomp=Z,10nm,0.9s
PPSI Pulau Pagai 89.59 94 P **P 17 23 37.2 +1.6**
comp=Z,198nm,1.2s
SNET Serv Nac Est T 89.61 288 IAMs_20 IAMs_20 17 57 19.3
comp=Z,1μm,22.0s
GMRC Granite Mounta 89.64 320 P **P 17 23 35.6 -0.1**
baz=35,SNR=9.4
GSC Goldstone, Bar 89.75 321 P **P 17 23 37.1 +0.9**
baz=34
IRM Iron Mountain 89.91 319 P **P 17 23 37.1 +0.3**
baz=35,SNR=15
HEC Hector,Ludlow 89.92 321 P **P 17 23 37.4 +0.4**
baz=34
BLYC Blythe 89.94 319 P **P 17 23 36.9 0.0**
BLYC IAmb IAmb 17 23 39.9
comp=Z,22nm,0.9s
LRMC Laurel Mtn Rad 90.00 322 P **P 17 23 37.7 +0.2**
baz=34,SNR=5.1
PTGB Pitanga 90.07 236 *e*P **P 17 23 36.6 -0.9**
BBSD Serra de San D 90.12 247 *e*P **P 17 23 37.9 0.0**
ISA Isabella, Lake 90.21 322 P **P 17 23 38.8 +0.5**
ISA Isabella, Lake 90.21 322 P **P 17 23 38.8 +0.5**
ISA pmax pmax
comp=Z,15nm,1.1s
ISA Isabella, Lake 90.21 322 P **P 17 23 39.1 +0.8**
baz=33,SNR=10
BBRB Robore, Bolivi 90.35 245 *e*P **P 17 23 38.4 -0.5**
BELC Belle Mtn. Jos 90.44 320 P **P 17 23 40.1 +0.6**
baz=35,SNR=12
BC3 Big Chuckawall 90.46 319 P **P 17 23 40.2 +0.6**
baz=35,SNR=13
ANTJ Antonio Joao (90.53 240 *e*P **P 17 23 39.4 -0.3**
214A Organ Pipe Nat 90.53 316 P **P 17 23 40.5 +0.6**
baz=36,SNR=6.5
EDW2 Edwards Air Fo 90.64 322 P **P 17 23 41.7 +1.4**
baz=34
GLA Glamis 90.65 319 P **P 17 23 41.1 +0.7**
baz=35
BBRC Big Bear Solar 90.66 321 P **P 17 23 41.8 +1.1**
baz=34
ARVC Arvin 90.81 322 P **P 17 23 41.9 +0.9**
baz=33
PFO Pinyon Flats O 90.98 320 LR LR 18 05 55.2
comp=Z,927nm,18.5s,baz=36,slow=36
PFO Pinyon Flats O 90.98 320⇓ *i*P **P 17 23 44.2 +2.2**
PFO pmax pmax
comp=Z,30nm,0.9s
PFO MLR MLR
comp=Z,1μm,17.0s
PFO Pinyon Flats O 90.98 320 P **P 17 23 42.7 +0.7**
baz=34,SNR=16
TPFO Pinon Flats 90.98 320 P **P 17 23 42.5 +0.5**
baz=34,SNR=13
BFSC Mount Baldy Ra 91.02 321 P **P 17 23 43.0 +0.8**
baz=34
CMIG Matias Romero 91.09 295 LR LR 18 00 49.9
comp=Z,504nm,21.5s,baz=21,slow=33
PIX Pinacate 91.18 317 P **P 17 23 42.0 -0.8**
OSI Osito Audit: C 91.19 322 P **P 17 23 43.2 +0.3**
baz=33
SWSC Sam W. Stewart 91.21 319 P **P 17 23 43.3 +0.4**
baz=35
MURT Porto Murtinho 91.31 241 *e*P **P 17 23 43.3 0.0**
MURC Murrieta 91.33 320 P **P 17 23 45.0 +1.5**
baz=34

ELS	**Elsinore Mount**	**91.40 321**	P	**P**	**17 23 42.9**	**-1.0**
PKM	**Mcpherson Peak**	**91.45 323**	P	**P**	**17 23 45.5**	**+1.3**
	baz=32					
YUH	**Yuha Desert**	**91.51 319**	P	**P**	**17 23 44.5**	**+0.2**
MONP2	**Monument Peak**	**91.55 320**	P	**P**	**17 23 46.0**	**+1.3**
	baz=34,SNR=11					
IKP	**In-Ko-Pah, Jac**	**91.60 319**	P	**P**	**17 23 45.1**	**+0.3**
	baz=35,SNR=5.3					
BAR	**Barrett**	**91.84 320**	P	**P**	**17 23 46.1**	**+0.2**
BAR			IAmb	IAmb	17 23 48.9	
	comp=Z,18nm,0.8s					
SCZ2	**Santa Cruz Isl**	**92.12 322**	P	**P**	**17 23 48.5**	**+1.4**
	baz=33					
UNM	**Universidad Na**	**92.30 299**	IAMs_20	IAMs_20	18 08 37.9	
	comp=Z,887nm,20.0s					
SCI2	**San Clemente I**	**92.48 321**	P	**P**	**17 23 50.1**	**+1.3**
	baz=33					
BOSC	**San Juan Bosco**	**93.29 269**	P	**P**	**17 23 51.7**	**-1.2**
BOSC			IAmb	IAmb	17 23 59.2	
	comp=Z,26nm,1.5s					
CPUP	**Villa Florida**	**94.48 238**	P	**P**	**17 23 58.0**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=60,slow=8.8,SNR=3.7					
CPUP			LR	LR	18 07 31.5	
	comp=Z,789nm,18.1s,baz=48,slow=36					
	comp=Z,2.8nm,0.8s					
LPAZ	**La Paz**	**94.67 252**	P	**P**	**17 23 57.2**	**-2.5**
	comp=Z,1.8nm,0.8s,baz=28,slow=2.4,SNR=6.5					
LPAZ			PP	**PP**	**17 27 46.4**	**-1.7**
	comp=Z,2.1nm,1.0s,baz=15,slow=1.3,SNR=4.6					
LPAZ			LR	LR	18 03 17.8	
	comp=Z,567nm,21.9s,baz=22,slow=33					
LPAZ	**La Paz**	**94.67 252**	P	**P**	**17 23 57.5**	**-2.2**
LPAZ	**La Paz**	**94.67 252**	P	**P**	**17 23 57.5**	**-2.2**
LPAZ			pmax	pmax		
	comp=Z,7.0nm,1.3s					
LPAZ	**La Paz**	**94.67 252**	*e*P	**P**	**17 23 57.5**	**-2.2**
LPIG	**La Paz**	**95.42 310**	LR	LR	18 05 53.1	
	comp=Z,702nm,21.2s,baz=36,slow=35					
ATAH	**Atahualpa**	**95.89 266**	LR	LR	18 06 08.1	
	comp=Z,795nm,20.0s,baz=26,slow=35					
JCJ	**Chichijima**	**96.08 44**	LR	LR	18 11 17.5	
	comp=Z,1μm,18.9s,baz=322,slow=38					
PB16	**IPOC Station P**	**97.02 252**	P	**P**	**17 24 09.1**	**-1.2**
PB16			IAmb	IAmb	17 24 28.0	
	comp=Z,39nm,1.8s					
LEM	**Lembang**	**97.91 92**	LR	LR	18 12 10.1	
	comp=Z,408nm,21.5s,baz=339,slow=38					
NNA	**Nana**	**98.00 261**	LR	LR	18 04 00.1	
	comp=Z,516nm,21.7s,baz=17,slow=33					
NNA	**Nana**	**98.00 261**	IAMs_20	IAMs_20	18 08 41.0	
	comp=Z,678nm,20.0s					
LVC	**Limon Verde**	**99.48 248**	LR	LR	18 07 34.8	
	comp=Z,284nm,21.8s,baz=23,slow=34					
LCO	**Las Campanas**	**104.93 244**	IAMs_20	IAMs_20	18 15 18.8	
	comp=Z,839nm,19.0s					
SOEI	**Soe**	**112.07 83**	IAMs_20	IAMs_20	18 21 36.8	
	comp=Z,801nm,22.0s					
SNAA	**Sanae**	**114.81 185**	IAMs_20	IAMs_20	18 14 30.5	
	comp=Z,619nm,20.0s					
MAW	**Mawson**	**116.38 161**	PKP	**PKiKP**	**17 29 20.0**	**0.0**
	comp=Z,2.0nm,1.0s,baz=262,slow=23,SNR=3.0					
MAW			PKKPab	**PKKPab**	**17 39 50.6**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=124,slow=17,SNR=3.3					
BELA	**Belgrano 2**	**123.93 191**	PKPdf	**PKPdf**	**17 29 33.2**	**-1.2**
WRA	**Warramunga Arr**	**126.05 84**	PKP	**PKPdf**	**17 29 38.9**	**-1.2**
	comp=Z,3.1nm,0.9s,baz=292,slow=2.0,SNR=21					
WRA			PP	**PP**	**17 31 33.2**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=302,slow=5.8,SNR=5.1					
WRA	**Warramunga Arr**	**126.05 84**		**PKPdf**	**17 29 38.1**	**-2.0**
WRAB	**Tennant Creek**	**126.05 84**	P	**PKiKP**	**17 29 40.2**	**-0.4**
WR0	**Warramunga Arr**	**126.21 84**		**PKPdf**	**17 29 37.4**	**-3.0**
AS31	**Alice Springs**	**128.01 88**	PKPdf	**PKPdf**	**17 29 42.7**	**-1.1**
ASAR	**Alice Springs**	**128.01 88**	PKP	**PKPdf**	**17 29 43.1**	**-0.7**
	comp=Z,3.4nm,0.7s,baz=326,slow=1.5,SNR=39					
ASAR			PP	**PP**	**17 31 47.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=315,slow=6.0,SNR=6.2					
ASAR	**Alice Springs**	**128.01 88**		**PKPdf**	**17 29 42.4**	**-1.4**
CASY	**Casey**	**131.19 148**		**PKiKP**	**17 29 48.2**	**-1.2**
QSPA	**South Pole Qui**	**132.74 180**		**PKPdf**	**17 29 49.8**	**-1.6**
QSPA	**South Pole Qui**	**132.74 180**	IAMs_20	IAMs_20	18 27 11.2	
	comp=Z,531nm,19.0s					
QSPA	**South Pole Qui**	**132.74 180**	P	**PKPdf**	**17 29 51.0**	**-0.5**
STKA	**Stephens Creek**	**138.21 92**	PKhKP	PKPpre	17 29 52.0	
	comp=Z,3.2nm,0.7s,baz=36,slow=22,SNR=2.2					
STKA			PKP	**PKPdf**	**17 30 01.9**	**-0.8**
	comp=Z,4.6nm,0.8s,baz=333,slow=6.9,SNR=7.9					
STKA	**Stephens Creek**	**138.21 92**		PKPpre	17 29 55.8	
TAOE	**Nuku Hiva Isla**	**138.79 318**	*e*LR	LR	18 14 55.8	
	comp=Z,795nm,22.3s					
VNDA	**Vanda**	**142.99 169**	PKhKP	PKPpre	17 30 04.8	
	comp=Z,1.2nm,0.8s,baz=248,slow=3.0,SNR=9.7					
VNDA	**Vanda**	**142.99 169**		PKPpre	17 30 06.1	
VNDA	**Vanda**	**142.99 169**	PKIKP	**PKPdf**	**17 30 06.1**	**-3.8**
SBA	**Scott Base**	**143.34 171**	PKPdf	PKPbc	17 30 08.0	+0.3
SBA	**Scott Base**	**143.34 171**	PKIKP	PKPbc	17 30 08.0	+0.3
SBA	**Scott Base**	**143.34 171**	P	**PKPdf**	**17 30 08.8**	**-1.8**
ARMA	**Armidale**	**144.82 83**	PKPdf	**PKPdf**	**17 30 14.7**	**-0.1**
CAN	**Canberra**	**145.28 93**		**PKPdf**	**17 30 15.1**	**-0.2**
CAN	**Canberra**	**145.28 93**	PKIKP	**PKPdf**	**17 30 15.1**	**-0.2**
TAU	**Tasmania Unive**	**146.78 106**	P	**PKiKP**	**17 30 24.6**	**+2.7**
DZM	**Mont Dzumac**	**149.62 55**	*e*LR	LR	18 19 57.3	
	comp=Z,766nm,23.6s					
DZM	**Mont Dzumac**	**149.62 55**		**PKPbc**	**17 30 26.0**	**-1.5**
DUENC	**Ouen Island, N**	**150.12 55**		**PKiKP**	**17 30 29.6**	**+0.1**
PPT2	**Papeete2**	**150.80 324**	*e*LR	LR	18 20 30.3	
	comp=Z,828nm,25.8s					
AFI	**Afiamalu**	**150.82 10**		**PKiKP**	**17 30 31.5**	**+0.3**
AFI	**Afiamalu**	**150.82 10**	PKIKP	**PKiKP**	**17 30 31.5**	**+0.3**
AFI	**Afiamalu**	**150.82 10**	P	**PKiKP**	**17 30 32.7**	**+1.5**
MSVF	**Nonsavu**	**151.86 32**		**PKiKP**	**17 30 32.4**	**-0.9**
MSVF	**Nonsavu**	**151.86 32**	PKIKP	**PKiKP**	**17 30 32.4**	**-0.9**
MSVF	**Nonsavu**	**151.86 32**	P	**PKPab**	**17 30 38.2**	**-3.7**
TBI	**Tubuai**	**155.74 318**	*e*LR	LR	18 22 46.4	
	comp=Z,3μm,26.8s					

JMA 26 17:20:56.2±0.0, 35°.4N±0°.2×133°.7E±0°.2, h4km, EASTERN TOTTORI PREF, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.07**	**102**	P	Pg	17 20 57.8	+0.1

PRU ***26*** *17:36:41.8±0.0, 43°.06N×13°.28E, h0km*

ROM 26 17:36:38.3±0.1, 42°.866N±0°.004×13°.131E±0°.005, h8km, ML2.8/37, 18C-14D, Error ellipse: s-maj=0.4km s-min=0.2km az=112.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**201**	P	Pg	17 36 39.2	-0.8
NRCA				S	Sg	17 36 41.3	+0.1
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				END			
T1245	**Castelsantange**	**0.04**	**103**	⇓P	Pg	17 36 38.2	-1.9
T1245				AML	AML		
	comp=N,67470μm,0.2s						
T1245				AML	AML		
	comp=E,79660μm,0.2s						
T1245				AML	AML		
	comp=N,57153μm,0.2s						
T1245				AML	AML		
	comp=E,78560μm,0.1s						
MC2	**Monte Cornacci**	**0.06**	**43**	P	Pg	17 36 40.6	+0.1
MC2				S	Sg	17 36 42.1	+0.2
MC2				END			
FEMA	**Monte Fema**	**0.11**	**328**	⇑P	Pg	17 36 41.1	+0.1
FEMA				AML	AML		
	comp=E,30950μm,0.3s						
FEMA				AML	AML		
	comp=N,33050μm,0.4s						
FEMA				AML	AML		
	comp=E,31000μm,0.3s						
FEMA				AML	AML		
	comp=N,33100μm,0.4s						
FEMA				AML	AML		
	comp=E,30950μm,0.3s						
FEMA				AML	AML		
	comp=E,30963μm,0.3s						
FEMA				AML	AML		
	comp=N,30818μm,0.1s						
MMO1	**Montemonaco**	**0.15**	**77**	⇑P	Pg	17 36 41.9	+0.4
MMO1				S	Sg	17 36 44.5	+0.8
MMO1				END			
FDMO	**Fiordimonte**	**0.17**	**349**	P	Pg	17 36 42.5	+0.5
FDMO				S	Sg	17 36 45.4	+1.0
FDMO				AML	AML		
	comp=E,5955μm,0.5s						
FDMO				AML	AML		
	comp=N,5910μm,1.2s						
FDMO				AML	AML		
	comp=N,5183μm,0.3s						
FDMO				AML	AML		
	comp=E,5161μm,0.2s						
FDMO				END			
AM05	**Amandola Campo**	**0.20**	**56**	P	Pg	17 36 42.9	+0.6
AM05				AML	AML		
	comp=E,1825μm,1.1s						
AM05				AML	AML		
	comp=N,2490μm,1.6s						
AM05				AML	AML		
	comp=N,19μm,1.6s						
AM05				AML	AML		
	comp=E,8245μm,0.5s						
AM05				AML	AML		
	comp=E,1830μm,1.1s						
AM05				AML	AML		
	comp=N,19μm,1.6s						
AM05				AML	AML		
	comp=E,8077μm,0.1s						
AM05				AML	AML		
	comp=E,1772μm,0.1s						
AM05				AML	AML		
	comp=N,2452μm,0.2s						
AM05				AML	AML		
	comp=N,14μm,0.8s						
AM05				END			
T1215	**Vallo di Nera,**	**0.20**	**252**	P	Pg	17 36 43.3	+0.8
T1215				S	Sg	17 36 47.1	+1.8
T1215				AML	AML		
	comp=N,2540μm,1.3s						
T1215				AML	AML		
	comp=E,2025μm,1.5s						
T1215				AML	AML		
	comp=N,2565μm,1.3s						
T1215				AML	AML		
	comp=E,2020μm,1.5s						
T1215				AML	AML		
	comp=N,2575μm,1.4s						
T1215				AML	AML		
	comp=N,2540μm,1.4s						
T1215				AML	AML		
	comp=E,2015μm,1.5s						
T1215				AML	AML		
	comp=N,2580μm,1.4s						
T1215				AML	AML		
	comp=E,1780μm,0.3s						
T1215				AML	AML		
	comp=E,1842μm,0.3s						
T1215				AML	AML		
	comp=N,1834μm,0.2s						
T1215				AML	AML		
	comp=N,1833μm,0.2s						
T1215				END			
T1217	**Poggiodomo (PG**	**0.21**	**224**	⇓P	Pg	17 36 41.1	-1.5
T1217				AML	AML		
	comp=N,3940μm,0.5s						
T1217				AML	AML		
	comp=E,2800μm,0.4s						
T1217				AML	AML		
	comp=N,3980μm,1.5s						
T1217				AML	AML		
	comp=E,2915μm,0.4s						
T1217				AML	AML		
	comp=N,3935μm,0.4s						
T1217				AML	AML		
	comp=E,2810μm,0.4s						
T1217				AML	AML		
	comp=N,3995μm,1.5s						
T1217				AML	AML		
	comp=E,2810μm,0.4s						
T1217				AML	AML		
	comp=N,4000μm,1.5s						
T1217				AML	AML		
	comp=N,3935μm,0.5s						
T1217				AML	AML		
	comp=E,2910μm,0.4s						
T1217				AML	AML		
	comp=E,2809μm,0.4s						
T1217				AML	AML		
	comp=N,3710μm,0.4s						
T1217				AML	AML		
	comp=E,2864μm,0.4s						
T1217				AML	AML		
	comp=N,3677μm,0.4s						
CESI	**CESI - Serrava**	**0.22**	**310**	P	Pg	17 36 43.4	+0.6
CESI				S	Sg	17 36 47.3	+1.6
CESI				AML	AML		
	comp=E,11570μm,0.2s						
CESI				AML	AML		
	comp=N,27650μm,0.2s						
CESI				AML	AML		
	comp=N,27679μm,0.2s						
CESI				AML	AML		
	comp=E,11575μm,0.2s						
CESI				END			
T1241	**Roccafluvione,**	**0.22**	**92**	⇑P	Pg	17 36 43.2	+0.4
T1241				AML	AML		
	comp=N,6085μm,0.8s						
T1241				AML	AML		
	comp=N,6080μm,0.8s						
T1241				AML	AML		
	comp=E,7985μm,0.8s						
T1241				AML	AML		
	comp=E,151μm,0.8s						
T1241				AML	AML		
	comp=N,199μm,0.7s						
T1241				AML	AML		
	comp=E,7653μm,0.3s						
T1241				AML	AML		
	comp=N,5238μm,0.5s						
T1204	**Amatrice, Fraz**	**0.23**	**144**	P	Pg	17 36 43.9	+0.8
T1204				S	Sg	17 36 48.0	+1.8
T1204				AML	AML		
	comp=N,1980μm,0.8s						
T1204				AML	AML		
	comp=N,1985μm,0.8s						
T1204				AML	AML		
	comp=E,3300μm,0.2s						
T1204				AML	AML		
	comp=N,1427μm,0.1s						
T1204				AML	AML		
	comp=E,3300μm,0.2s						
T1204				END			
GUMA	**Gualdo di Mace**	**0.25**	**37**	⇑P	Pg	17 36 44.0	+0.8
GUMA				S	Sg	17 36 48.4	+1.7
GUMA				AML	AML		
	comp=N,17500μm,0.5s						
GUMA				AML	AML		
	comp=N,17450μm,0.5s						
GUMA				AML	AML		
	comp=E,23500μm,0.2s						
GUMA				AML	AML		
	comp=E,16600μm,0.6s						
GUMA				AML	AML		
	comp=N,21100μm,0.6s						
GUMA				AML	AML		
	comp=N,20649μm,0.3s						
GUMA				AML	AML		
	comp=N,17492μm,0.5s						
GUMA				AML	AML		
	comp=E,16099μm,0.2s						
GUMA				AML	AML		
	comp=E,23471μm,0.2s						
GUMA				END			
LNSS	**Leonessa**	**0.27**	**194**	P	Pg	17 36 44.4	+0.6
LNSS				S	Sb	17 36 49.0	-1.3
LNSS				AML	AML		
	comp=N,5440μm,0.4s						
LNSS				AML	AML		
	comp=E,4465μm,0.4s						
LNSS				AML	AML		
	comp=N,3935μm,0.3s						
LNSS				AML	AML		
	comp=E,3673μm,0.3s						
LNSS				END			
SMA1	**SAN MARTINO**	**0.28**	**147**	P	Pb	17 36 45.4	-0.3
SMA1				AML	AML		
	comp=N,3090μm,0.6s						
SMA1				AML	AML		
	comp=E,3055μm,0.5s						
SMA1				AML	AML		
	comp=E,3055μm,0.5s						
SMA1				AML	AML		
	comp=N,3088μm,0.6s						
SMA1				END			
T1243	**Rocca Santa Ma**	**0.29**	**126**	P	Pg	17 36 44.5	+0.4
SEF1	**Sefro**	**0.31**	**334**	⇑P	Pg	17 36 45.1	+0.6
SEF1				AML	AML		
	comp=N,6290μm,0.2s						
SEF1				AML	AML		
	comp=E,4805μm,1.2s						
SEF1				AML	AML		
	comp=N,6285μm,0.2s						
SEF1				AML	AML		
	comp=E,4775μm,0.2s						
SEF1				AML	AML		
	comp=N,6288μm,0.2s						
FIU1	**Fiuminata**	**0.35**	**336**	P	Pg	17 36 46.1	+0.8
FIU1				AML	AML		
	comp=N,1581μm,0.2s						
FIU1				AML	AML		
	comp=E,1892μm,0.1s						
RM33	**Pellescritta (**	**0.36**	**170**	P	Pg	17 36 46.0	+0.6
RM33				S	Sb	17 36 52.3	-0.7
RM33				AML	AML		
	comp=E,1230μm,0.5s						
RM33				AML	AML		
	comp=N,1520μm,0.3s						
RM33				AML	AML		
	comp=E,1200μm,0.5s						
RM33				AML	AML		
	comp=N,1515μm,0.3s						
RM33				AML	AML		
	comp=E,1370μm,0.9s						
RM33				AML	AML		
	comp=N,1515μm,0.3s						
RM33				AML	AML		
	comp=E,1435μm,0.9s						
RM33				AML	AML		
	comp=N,1510μm,0.3s						
RM33				AML	AML		
	comp=N,1516μm,0.3s						
RM33				AML	AML		
	comp=E,1146μm,0.3s						
RM33				AML	AML		
	comp=N,1514μm,0.3s						
RM33				AML	AML		
	comp=E,1098μm,0.3s						
RM33				END			
GAG1	**Gagliole**	**0.38**	**353**	P	Pb	17 36 46.8	-0.5
GAG1				AML	AML		
	comp=E,4405μm,0.7s						
GAG1				AML	AML		
	comp=N,5360μm,0.4s						
GAG1				AML	AML		
	comp=E,3979μm,0.3s						
GAG1				AML	AML		
	comp=N,4807μm,0.2s						
T1211	**Morro Reatino**	**0.39**	**212**	P	Pg	17 36 46.6	+0.6
T1211				S	Sb	17 36 53.2	-0.6
T1211				AML	AML		
	comp=N,2010μm,0.2s						
T1211				AML	AML		
	comp=E,1420μm,0.9s						
T1211				AML	AML		
	comp=N,2008μm,0.2s						
T1211				AML	AML		
	comp=N,2010μm,0.2s						
T1211				AML	AML		
	comp=E,1385μm,0.1s						
T1211				AML	AML		
	comp=N,2010μm,0.2s						
T1211				AML	AML		
	comp=N,2010μm,0.2s						
T1211				AML	AML		
	comp=E,1420μm,0.1s						
T1211				AML	AML		
	comp=E,1384μm,0.1s						
OFFI	**Offida**	**0.41**	**80**	⇑P	Pb	17 36 47.6	-0.3
OFFI				AML	AML		
	comp=E,3565μm,0.5s						
OFFI				AML	AML		
	comp=N,3190μm,0.4s						
OFFI				AML	AML		
	comp=N,3190μm,0.4s						
OFFI				AML	AML		
	comp=E,3561μm,0.5s						
SNTG	**Esanatoglia**	**0.41**	**340**	S	Sb	17 36 54.0	-0.4
TERO	**Teramo**	**0.42**	**125**	⇓P	Pg	17 36 46.9	+0.3
TERO				AML	AML		
	comp=E,1145μm,0.4s						
TERO				AML	AML		
	comp=N,2425μm,0.5s						
TERO				AML	AML		
	comp=E,1140μm,0.4s						
TERO				AML	AML		
	comp=E,1205μm,1.5s						
TERO				AML	AML		
	comp=N,2280μm,0.5s						
TERO				AML	AML		
	comp=E,1142μm,0.4s						
TERO				AML	AML		
	comp=N,2013μm,0.3s						
TERO				AML	AML		
	comp=E,1185μm,0.4s						
TERO				AML	AML		
	comp=N,2163μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.44**	**164**	P	Pg	17 36 47.6	+0.7
T1247				AML	AML		
	comp=E,1425μm,0.9s						
T1247				AML	AML		
	comp=N,1580μm,0.6s						
T1247				AML	AML		
	comp=E,1333μm,0.3s						
T1247				AML	AML		
	comp=N,1409μm,0.3s						
EL6	**Elcito**	**0.46**	**357**	S	Sb	17 36 56.0	+0.1
CESX	**Cesi**	**0.48**	**238**	⇓P	Pg	17 36 47.8	+0.2
CESX				AML	AML		
	comp=N,1475μm,0.5s						
CESX				AML	AML		
	comp=E,1079μm,0.4s						
CESX				AML	AML		
	comp=N,1476μm,0.5s						
CESX				AML	AML		
	comp=E,1079μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.48**	**312**	⇑P	Pg	17 36 48.1	+0.4
ATCC				AML	AML		
	comp=E,3070μm,0.2s						
ATCC				AML	AML		
	comp=N,2055μm,0.9s						
ATCC				AML	AML		
	comp=E,3075μm,0.2s						
ATCC				AML	AML		
	comp=N,2060μm,0.9s						
ATCC				AML	AML		
	comp=E,3073μm,0.2s						
ATCC				AML	AML		
	comp=N,1678μm,0.3s						
GIGS	**Gran Sasso**	**0.53**	**142**	⇑P	Pg	17 36 48.7	+0.2
GIGS				AML	AML		
	comp=E,204μm,1.3s						
GIGS				AML	AML		
	comp=N,190μm,0.9s						
GIGS				AML	AML		
	comp=E,213μm,0.2s						
GIGS				AML	AML		
	comp=N,144μm,0.3s						
GIGS				AML	AML		
	comp=E,174μm,0.3s						
MURB	**Monte Urbino**	**0.60**	**312**	P	Pg	17 36 50.2	+0.4
MURB				S	Sb	17 37 01.0	+1.3
MURB				AML	AML		
	comp=E,4495μm,0.2s						
MURB				AML	AML		
	comp=N,3415μm,0.3s						
MURB				AML	AML		
	comp=E,3930μm,0.2s						
MURB				AML	AML		
	comp=N,3080μm,0.3s						
MURB				AML	AML		
	comp=N,3414μm,0.3s						
MURB				AML	AML		
	comp=N,3081μm,0.3s						
MURB				AML	AML		

	comp=E,3931μm,0.2s					
MURB				AML	AML	
	comp=E,4493μm,0.2s					
FIAM	**Fiamignano**	**0.60**	**181**	⇑P	Pg	17 36 50.0 +0.1
FIAM				S	Sb	17 36 60.0 +0.3
FIAM				AML	AML	
	comp=N,486μm,0.6s					
FIAM				AML	AML	
	comp=E,602μm,0.8s					
FIAM				AML	AML	
	comp=N,485μm,0.6s					
FIAM				AML	AML	
	comp=N,485μm,0.6s					
FIAM				AML	AML	
	comp=E,577μm,0.5s					
PP3	**Marolino**	**0.62**	**34**	⇓P	Pb	17 36 51.4 0.0
PP3				AML	AML	
	comp=E,3125μm,1.4s					
PP3				AML	AML	
	comp=N,3005μm,0.5s					
PP3				AML	AML	
	comp=E,3070μm,1.4s					
PP3				AML	AML	
	comp=N,3085μm,0.5s					
PP3				AML	AML	
	comp=E,2770μm,0.4s					
PP3				AML	AML	
	comp=N,2647μm,0.2s					
PP3				AML	AML	
	comp=E,2792μm,0.4s					
PP3				AML	AML	
	comp=N,2807μm,0.2s					
ARVD	**Arcevia**	**0.65**	**348**	S	Sb	17 37 02.0 +0.9
ATTE	**AVT- Monte Tez**	**0.66**	**300**	⇑P	Pg	17 36 51.2 +0.1
ATTE				AML	AML	
	comp=E,618μm,0.4s					
ATTE				AML	AML	
	comp=N,405μm,0.4s					
ATTE				AML	AML	
	comp=E,618μm,0.4s					
ATTE				AML	AML	
	comp=E,618μm,0.4s					
ATTE				AML	AML	
	comp=N,405μm,0.4s					
FAGN	**Fagnano**	**0.69**	**151**	⇑P	Pg	17 36 52.0 +0.5
FAGN				AML	AML	
	comp=E,813μm,0.5s					
FAGN				AML	AML	
	comp=N,964μm,0.4s					
FAGN				AML	AML	
	comp=E,813μm,0.5s					
FAGN				AML	AML	
	comp=N,965μm,0.4s					
VCEL	**Villa Celiera**	**0.70**	**132**	⇓P	Pg	17 36 52.2 +0.3
VCEL				AML	AML	
	comp=E,834μm,0.5s					
VCEL				AML	AML	
	comp=N,827μm,0.4s					
VCEL				AML	AML	
	comp=E,834μm,0.5s					
VCEL				AML	AML	
	comp=N,827μm,0.4s					
ATVO	**AVT- Monte Val**	**0.74**	**314**	⇑P	Pg	17 36 52.5 0.0
ATVO				AML	AML	
	comp=E,472μm,0.4s					
ATVO				AML	AML	
	comp=N,396μm,0.4s					
ATVO				AML	AML	
	comp=E,472μm,0.5s					
ATVO				AML	AML	
	comp=N,396μm,0.4s					
MGAB	**Montegabbione**	**0.75**	**274**	⇑P	Pg	17 36 53.0 +0.3
MGAB				AML	AML	
	comp=E,890μm,0.4s					
MGAB				AML	AML	
	comp=N,1645μm,0.4s					
MGAB				AML	AML	
	comp=E,1058μm,0.7s					
MGAB				AML	AML	
	comp=N,1640μm,0.4s					
MGAB				AML	AML	
	comp=N,1680μm,0.4s					
MGAB				AML	AML	
	comp=E,890μm,0.4s					
MGAB				AML	AML	
	comp=E,890μm,0.4s					
MGAB				AML	AML	
	comp=N,1642μm,0.4s					
MGAB				AML	AML	
	comp=E,1059μm,0.7s					
MGAB				AML	AML	
	comp=N,1681μm,0.4s					
AOI	**Ancona**	**0.77**	**27**	S	Sn	17 37 07.0 -0.2
ATMI	**Monte Miggiano**	**0.79**	**307**	P	Pb	17 36 54.4 +0.1
ATMI				AML	AML	
	comp=E,1270μm,1.2s					
ATMI				AML	AML	
	comp=N,1550μm,1.5s					
ATMI				AML	AML	
	comp=E,1052μm,0.3s					
ATMI				AML	AML	
	comp=N,1315μm,0.3s					
ATPI	**Pietralunga -**	**0.79**	**318**	⇓P	Pg	17 36 53.6 +0.1
ATPI				S	Sn	17 37 07.0 -0.9
ATPI				AML	AML	
	comp=N,412μm,0.3s					
ATPI				AML	AML	
	comp=E,392μm,1.2s					
ATPI				AML	AML	
	comp=N,412μm,0.3s					
ATPI				AML	AML	
	comp=E,354μm,0.6s					
PIEI	**Pieia**	**0.80**	**327**	P	Pg	17 36 53.8 0.0
PIEI				AML	AML	
	comp=E,445μm,0.8s					
PIEI				AML	AML	
	comp=N,334μm,0.4s					
PIEI				AML	AML	
	comp=N,334μm,0.4s					
PIEI				AML	AML	
	comp=E,409μm,0.1s					
T0110	**Collepietro**	**0.80**	**143**	⇑P	Pg	17 36 53.7 0.0
T0110				AML	AML	
	comp=E,677μm,0.5s					
T0110				AML	AML	
	comp=N,742μm,0.5s					
T0110				AML	AML	
	comp=E,678μm,0.5s					
T0110				AML	AML	
	comp=N,742μm,0.5s					
T0110				AML	AML	
	comp=E,677μm,0.5s					
MPAG	**Monte Paganucc**	**0.81**	**341**	⇑P	Pg	17 36 54.2 +0.2
MPAG				S	Sn	17 37 08.0 -0.4
MPAG				AML	AML	
	comp=E,510μm,0.2s					
MPAG				AML	AML	
	comp=N,368μm,0.4s					
MPAG				AML	AML	
	comp=E,575μm,0.2s					
MPAG				AML	AML	
	comp=N,367μm,0.4s					
MPAG				AML	AML	
	comp=N,595μm,0.4s					
MPAG				AML	AML	
	comp=E,510μm,0.2s					
FSSB	**Fossombrone**	**0.86**	**343**	⇓P	Pg	17 36 55.2 +0.3
FSSB				S	Sn	17 37 10.0 +0.3
FSSB				AML	AML	
	comp=E,1185μm,1.3s					
FSSB				AML	AML	
	comp=N,1790μm,0.2s					
FSSB				AML	AML	
	comp=E,1167μm,0.4s					
FSSB				AML	AML	
	comp=N,1791μm,0.2s					
SACS	**San Casciano d**	**0.90**	**269**	⇑P	Pg	17 36 55.9 +0.3
SACS				AML	AML	
	comp=N,372μm,1.3s					
SACS				AML	AML	
	comp=E,427μm,1.0s					
SACS				AML	AML	
	comp=N,364μm,1.3s					
SACS				AML	AML	
	comp=E,426μm,1.0s					
SACS				AML	AML	
	comp=E,326μm,0.7s					
SACS				AML	AML	
	comp=N,310μm,0.5s					
SACS				AML	AML	
	comp=E,332μm,0.6s					
SACS				AML	AML	
	comp=N,315μm,0.5s					
CERT	**Cerreto**	**0.92**	**187**	⇓P	Pb	17 36 56.6 0.0
CERT				AML	AML	
	comp=E,636μm,0.5s					
CERT				AML	AML	
	comp=N,365μm,0.6s					
CERT				AML	AML	
	comp=E,636μm,0.5s					
CERT				AML	AML	
	comp=N,365μm,0.6s					
PE3	**Peglio**	**0.95**	**331**	⇓P	Pn	17 36 58.0 -0.1
PE3				AML	AML	
	comp=N,12μm,0.1s					
PE3				AML	AML	
	comp=E,7μm,0.1s					
INTR	**Introdacqua**	**1.03**	**146**	⇑P	Pg	17 36 57.4 -0.7
INTR				AML	AML	
	comp=N,388μm,1.1s					
INTR				AML	AML	
	comp=E,194μm,0.6s					
INTR				AML	AML	
	comp=N,326nm,0.8s					
INTR				AML	AML	
	comp=E,388nm,1.5s					
INTR				AML	AML	
	comp=E,194μm,0.6s					
INTR				AML	AML	
	comp=N,363μm,0.9s					
SF04	**Casetta**	**1.08**	**269**	P	Pg	17 36 58.9 -0.2
SF04				AML	AML	
	comp=E,215μm,0.3s					
SF04				AML	AML	
	comp=N,176μm,0.3s					
LPEL	**Lama dei Pelig**	**1.13**	**136**	⇓P	Pg	17 36 60.0 0.0
LPEL				AML	AML	
	comp=N,173μm,1.0s					
LPEL				AML	AML	
	comp=E,210μm,1.0s					
LPEL				AML	AML	
	comp=N,155μm,0.5s					
LPEL				AML	AML	
	comp=E,191μm,0.4s					
ARCI	**Arcidosso**	**1.22**	**270**	P	Pb	17 37 00.6 -1.1
ARCI				AML	AML	
	comp=N,45μm,0.4s					
ARCI				AML	AML	
	comp=E,51μm,1.4s					
ARCI				AML	AML	
	comp=N,45μm,0.4s					
ARCI				AML	AML	
	comp=E,49μm,1.4s					
LATB	**Latina**	**1.38**	**185**	⇓P	Pg	17 37 06.0 +1.3
RNI2	**Rionero Sannit**	**1.39**	**147**	S	Sb	17 37 22.0 -0.5
CERA	**Filignano**	**1.43**	**152**	⇑P	Pg	17 37 07.0 +1.2
OSSC	**Osservatorio P**	**1.53**	**296**	P	Pg	17 37 07.5 -0.2
MTCR	**Monte La Croce**	**1.94**	**307**	⇓P	Pb	17 37 13.6 -0.4
SGRT	**San Giovanni R**	**2.23**	**119**	⇓P	Pb	17 37 17.4 -1.5
MCRV	**Calabrutti - M**	**2.58**	**143**	S	Sg	17 37 60.0 -1.2
ABTA	**Abfaltersbach**	**3.91**	**354**	*e*Pn	Pn	17 37 40.4 +1.7
	comp=E,6.2nm,0.5s					
KBA	**Koelnbreinsper**	**4.21**	**2**	*e*Pn	Pn	17 37 44.8 +1.7
	comp=E,1.0nm,0.2s					
FETA	**Feichten**	**4.49**	**339**	*e*Pn	Pn	17 37 52.0 +5.2
	comp=E,0.4nm,0.2s					
SQTA	**Sankt Quirin**	**4.56**	**343**	*e*Pn	Pn	17 37 51.5 +3.7
	comp=E,1.3nm,0.2s					
ARSA	**Arzberg**	**4.70**	**20**	*e*Pn	Pn	17 37 50.9 +1.3
	comp=E,0.4nm,0.3s					
BIOA	**Bad Ischl, Aus**	**4.84**	**4**	*e*Pn	Pn	17 37 53.0 +1.6
	comp=E,2.2nm,0.3s					
RETA	**Reutte**	**4.92**	**341**	*e*Pn	Pn	17 37 55.6 +3.1
	comp=E,0.5nm,0.3s					
DAVA	**Damuels**	**4.98**	**334**	*e*Pn	Pb	17 37 59.8 -6.1
	comp=E,1.9nm,0.4s					
MOA	**Molln**	**5.05**	**9**	*e*Pn	Pn	17 37 56.5 +2.1
	comp=E,0.8nm,0.3s					
CONA	**Conrad Observa**	**5.42**	**20**	*e*Pn	Pn	17 38 00.9 +1.5
	comp=E,0.8nm,0.2s					
KHC	**Kasperske Hory**	**6.27**	**3**	*e*PN	Pn	17 38 10.4 -0.8
KHC				*e*SN	Sn	17 39 20.1 -2.9

ROM 26 17:37:37.5±0.1, 42°.775N±0°.004×13°.140E±0°.007, h7km, ML2.4/16, 9C-11D, Error ellipse: s-maj=0.6km s-min=0.2km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**342**	P	Pg	17 37 39.4	+0.1
NRCA				S	Sg	17 37 40.4	-0.1
NRCA				AML	AML		
	comp=E,63650μm,0.2s						
NRCA				AML	AML		
	comp=N,49250μm,0.2s						
NRCA				AML	AML		
	comp=E,63650μm,0.1s						
NRCA				AML	AML		
	comp=N,49250μm,0.2s						
NRCA				AML	AML		
	comp=E,71300μm,0.2s						
NRCA				AML	AML		
	comp=N,49300μm,0.2s						
NRCA				AML	AML		
	comp=N,53800μm,0.2s						
NRCA				AML	AML		
	comp=N,53800μm,1.8s						
NRCA				AML	AML		
	comp=N,49300μm,1.8s						
T1245	**Castelsantange**	**0.09**	**23**	⇓P	Pg	17 37 40.0	+0.3
T1245				AML	AML		
	comp=E,23750μm,0.2s						
T1245				AML	AML		
	comp=E,22250μm,0.2s						
T1245				AML	AML		
	comp=N,63850μm,1.2s						
T1245				AML	AML		
	comp=N,64850μm,1.2s						
MC2	**Monte Cornacci**	**0.14**	**15**	P	Pg	17 37 41.1	+0.5
MC2				S	Sg	17 37 43.8	+1.1
T1204	**Amatrice, Fraz**	**0.16**	**127**	⇑P	Pg	17 37 41.8	+0.9
T1204				S	Sg	17 37 45.0	+1.8
T1204				AML	AML		
	comp=E,3035μm,1.1s						
T1204				AML	AML		
	comp=N,1840μm,0.7s						
T1204				AML	AML		
	comp=N,1835μm,0.7s						
T1204				AML	AML		
	comp=N,1835μm,1.3s						
T1204				AML	AML		
	comp=E,3035μm,0.9s						
MMO1	**Montemonaco**	**0.18**	**48**	⇑P	Pg	17 37 41.7	+0.5
MMO1				S	Sg	17 37 44.8	+0.9
T1215	**Vallo di Nera,**	**0.20**	**278**	⇑P	Pg	17 37 42.6	+1.1
T1215				S	Sg	17 37 46.3	+2.0
T1215				AML	AML		
	comp=N,1484μm,1.5s						
T1215				AML	AML		
	comp=E,1565μm,0.6s						
T1215				AML	AML		
	comp=N,1455μm,1.5s						
T1215				AML	AML		
	comp=E,1530μm,0.1s						
T1215				AML	AML		
	comp=N,1483μm,1.5s						
T1215				AML	AML		
	comp=N,1483μm,0.5s						
SMA1	**SAN MARTINO**	**0.20**	**135**	⇑P	Pg	17 37 42.8	+1.2
SMA1				AML	AML		
	comp=E,2095μm,0.6s						
SMA1				AML	AML		
	comp=N,2855μm,0.5s						
SMA1				AML	AML		
	comp=E,2100μm,0.6s						
SMA1				AML	AML		
	comp=N,2850μm,0.5s						
SMA1				AML	AML		
	comp=E,2100μm,1.4s						
T1241	**Roccafluvione,**	**0.23**	**69**	AML	AML		
	comp=N,2135μm,0.7s						
T1241				AML	AML		
	comp=E,1990μm,0.5s						
FDMO	**Fiordimonte**	**0.27**	**352**	⇓P	Pg	17 37 43.2	+0.5
FDMO				S	Sg	17 37 47.5	+1.3
FDMO				AML	AML		
	comp=E,1595μm,1.4s						
FDMO				AML	AML		
	comp=N,1740μm,1.5s						
FDMO				AML	AML		
	comp=N,1740μm,0.5s						
FDMO				AML	AML		
	comp=E,1595μm,0.6s						
RM33	**Pellescritta (**	**0.27**	**168**	⇓P	Pg	17 37 43.6	+0.8
RM33				S	Sb	17 37 48.2	-1.5
RM33				AML	AML		
	comp=E,1435μm,0.9s						
RM33				AML	AML		
	comp=N,1235μm,0.4s						
RM33				AML	AML		
	comp=E,1370μm,0.9s						
RM33				AML	AML		
	comp=N,1215μm,0.4s						
RM33				AML	AML		
	comp=E,1435μm,0.9s						
RM33				AML	AML		
	comp=N,1235μm,0.4s						
RM33				AML	AML		
	comp=N,1215μm,1.6s						
RM33				AML	AML		
	comp=N,1235μm,1.6s						
CESI	**CESI - Serrava**	**0.29**	**323**	P	Pg	17 37 43.7	+0.6
CESI				S	Sg	17 37 48.5	+1.4
CESI				AML	AML		
	comp=E,1385μm,1.0s						
CESI				AML	AML		
	comp=N,2060μm,0.4s						
CESI				AML	AML		
	comp=E,1385μm,1.0s						
CAMP	**Campotosto**	**0.31**	**140**	⇑P	Pg	17 37 44.4	+0.8
CAMP				S	Sg	17 37 49.1	+1.4
CAMP				AML	AML		
	comp=E,527μm,0.9s						
CAMP				AML	AML		
	comp=N,568μm,0.5s						
CAMP				AML	AML		
	comp=E,527μm,1.1s						
T1211	**Morro Reatino**	**0.32**	**221**	⇓P	Pg	17 37 44.3	+0.5
T1211				S	Sb	17 37 50.3	-0.7
T1211				AML	AML		
	comp=E,1080μm,0.1s						
T1211				AML	AML		
	comp=N,1440μm,0.3s						
T1211				AML	AML		
	comp=E,1080μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.35**	**161**	P	Pg	17 37 45.0	+0.6
T1247				AML	AML		
	comp=N,808μm,0.3s						
T1247				AML	AML		
	comp=E,662μm,0.5s						
T1247				AML	AML		
	comp=N,809μm,0.3s						
TERO	**Teramo**	**0.37**	**114**	P	Pg	17 37 45.6	+0.8
TERO				S	Sg	17 37 51.0	+1.3
TERO				AML	AML		
	comp=E,622μm,0.5s						
TERO				AML	AML		
	comp=E,622μm,0.5s						
TERO				AML	AML		
	comp=N,877μm,0.5s						
TERO				AML	AML		
	comp=N,912μm,0.4s						
TERO				AML	AML		
	comp=E,714μm,0.5s						
SEF1	**Sefro**	**0.40**	**339**	S	Sb	17 37 53.0	-0.2
OFFI	**Offida**	**0.43**	**68**	⇓P	Pb	17 37 47.4	0.0
OFFI				AML	AML		
	comp=N,1455μm,0.7s						
OFFI				AML	AML		
	comp=E,968μm,0.5s						
CESX	**Cesi**	**0.45**	**248**	⇑P	Pb	17 37 47.4	-0.3
CESX				S	Sb	17 37 54.9	+0.4
CESX				AML	AML		
	comp=E,632μm,0.4s						
CESX				AML	AML		
	comp=N,566μm,0.2s						
SNTG	**Esanatoglia**	**0.50**	**343**	P	Pg	17 37 47.3	+0.2
SNTG				S	Sb	17 37 55.5	-0.8
FIAM	**Fiamignano**	**0.51**	**182**	⇓P	Pg	17 37 47.6	+0.4
FIAM				S	Sb	17 37 55.5	-0.9
FIAM				AML	AML		
	comp=N,198μm,0.9s						
FIAM				AML	AML		
	comp=E,246μm,0.9s						
FIAM				AML	AML		
	comp=N,198μm,1.1s						
EL6	**Elcito**	**0.56**	**357**	⇓P	Pg	17 37 48.4	+0.2
EL6				S	Sb	17 37 57.5	-0.4
EL6				AML	AML		
	comp=E,998μm,0.3s						
EL6				AML	AML		
	comp=N,1310μm,0.2s						
VCEL	**Villa Celiera**	**0.64**	**126**	⇑P	Pb	17 37 50.8	-0.3
VCEL				S	Sb	17 38 01.0	+0.7
ATFO	**Monte Foce - G**	**0.72**	**325**	⇓P	Pb	17 37 52.0	-0.5
T0110	**Collepietro**	**0.72**	**139**	⇓P	Pg	17 37 51.7	+0.3
T0110				S	Sb	17 38 03.1	+0.5
T0110				AML	AML		
	comp=E,530μm,0.5s						
T0110				AML	AML		
	comp=N,476μm,1.3s						
T0110				AML	AML		
	comp=E,529μm,0.5s						
T0110				AML	AML		
	comp=E,529μm,1.5s						
ARVD	**Arcevia**	**0.74**	**349**	⇑P	Pg	17 37 51.8	+0.2
ARVD				S	Sb	17 38 03.1	+0.1
ARVD				AML	AML		
	comp=N,268μm,0.2s						
ARVD				AML	AML		
	comp=E,242μm,1.0s						
PIEI	**Pieia**	**0.88**	**330**	⇑P	Pg	17 37 54.7	+0.3
PIEI				S	Sn	17 38 08.7	-0.8
PIEI				AML	AML		
	comp=N,120μm,0.7s						
PIEI				AML	AML		
	comp=E,160μm,0.3s						
MPAG	**Monte Paganucc**	**0.90**	**342**	P	Pb	17 37 55.5	+0.1
MPAG				S	Sn	17 38 09.1	-0.9
SACS	**San Casciano d**	**0.91**	**275**	⇓P	Pn	17 37 57.0	+0.3
FSSB	**Fossombrone**	**0.95**	**344**	S	Sn	17 38 12.0	+0.7
PE3	**Peglio**	**1.03**	**333**	⇓P	Pg	17 37 55.8	-1.6
LIK	**San Giovanni I**	**1.31**	**166**	S	Sb	17 38 19.0	-0.3

ROM 26 17:44:01.5±0.1, 42°.857N±0°.004×13°.153E±0°.004, h8km, Md1.2/4, 5C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=339.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**92**	⇓P	Pg	17 44 03.5	+0.2
T1245				S	Sg	17 44 04.4	-0.1
T1245				AML	AML		
	comp=E,34750μm,0.7s						
T1245				AML	AML		
	comp=N,30050μm,1.4s						
T1245				AML	AML		
	comp=E,35700μm,0.7s						
T1245				AML	AML		
	comp=N,31400μm,0.1s						
T1245				AML	AML		
	comp=E,4813μm,0.2s						
T1245				AML	AML		
	comp=N,5532μm,0.1s						
T1245				AML	AML		
	comp=E,5488μm,0.2s						
T1245				AML	AML		
	comp=N,5319μm,0.1s						
T1245				END			
NRCA	**Norcia**	**0.04**	**230**	⇑P	Pg	17 44 03.5	+0.3
NRCA				S	Sg	17 44 04.5	+0.1
NRCA				AML	AML		
	comp=E,13450μm,0.4s						
NRCA				AML	AML		
	comp=N,16600μm,0.4s						
NRCA				AML	AML		
	comp=E,15150μm,0.4s						
NRCA				AML	AML		

	comp=N,18000µm,0.5s					
NRCA				AML	AML	
	comp=N,11620µm,0.1s					
NRCA				AML	AML	
	comp=E,12998µm,0.1s					
NRCA				AML	AML	
	comp=E,11587µm,0.1s					
NRCA				AML	AML	
	comp=N,10718µm,0.2s					
NRCA				END		
MC2	**Monte Cornacci**	**0.06**	**27**	⇑P	Pg	17 44 03.8 +0.1
MC2				S	Sg	17 44 05.1 -0.1
MC2				END		
MMO1	**Montemonaco**	**0.14**	**72**	⇑P	Pg	17 44 05.1 +0.6
MMO1				S	Sg	17 44 07.5 +0.8
MMO1				END		
T1241	**Roccafluvione,**	**0.20**	**90**	P	Pg	17 44 06.3 +0.6
T1241				S	Sg	17 44 09.9 +1.4
T1241				AML	AML	
	comp=E,2610µm,0.4s					
T1241				AML	AML	
	comp=N,1710µm,0.5s					
T1241				AML	AML	
	comp=N,191µm,0.3s					
T1241				AML	AML	
	comp=E,117µm,0.7s					
T1241				AML	AML	
	comp=E,217µm,0.1s					
T1241				AML	AML	
	comp=N,174µm,0.7s					
T1215	**Vallo di Nera,**	**0.22**	**255**	⇑P	Pg	17 44 06.6 +0.7
T1215				S	Sg	17 44 10.1 +1.2
T1215				AML	AML	
	comp=E,816µm,0.5s					
T1215				AML	AML	
	comp=N,859µm,0.6s					
T1215				AML	AML	
	comp=E,115µm,0.1s					
T1215				AML	AML	
	comp=N,139µm,0.1s					
T1215				AML	AML	
	comp=E,114µm,0.2s					
T1215				AML	AML	
	comp=N,137µm,0.1s					
T1204	**Amatrice, Fraz**	**0.22**	**146**	P	Pg	17 44 06.9 +1.0
T1204				S	Sg	17 44 10.7 +1.7
T1204				AML	AML	
	comp=N,106µm,0.1s					
T1204				AML	AML	
	comp=E,168µm,0.1s					
T1217	**Poggiodomo (PG**	**0.22**	**228**	⇑P	Pg	17 44 06.7 +0.8
T1217				S	Sg	17 44 10.6 +1.6
T1217				AML	AML	
	comp=E,820µm,0.9s					
T1217				AML	AML	
	comp=N,1098µm,1.6s					
T1217				AML	AML	
	comp=N,218µm,0.3s					
T1217				AML	AML	
	comp=N,159µm,0.3s					
T1217				AML	AML	
	comp=E,121µm,0.1s					
T1217				AML	AML	
	comp=E,116µm,0.1s					
LNSS	**Leonessa**	**0.27**	**198**	P	Pg	17 44 07.6 +0.8
LNSS				S	Sb	17 44 12.2 -1.2
LNSS				AML	AML	
	comp=E,1400µm,1.4s					
LNSS				AML	AML	
	comp=N,1555µm,0.4s					
LNSS				AML	AML	
	comp=E,215µm,0.1s					
LNSS				AML	AML	
	comp=N,336µm,0.1s					
T1243	**Rocca Santa Ma**	**0.27**	**126**	P	Pg	17 44 07.8 +0.8
T1243				S	Sg	17 44 11.9 +1.3
TERO	**Teramo**	**0.41**	**125**	P	Pg	17 44 10.0 +0.5
TERO				S	Sb	17 44 16.6 -0.8
TERO				AML	AML	
	comp=E,500µm,0.4s					
TERO				AML	AML	
	comp=N,519µm,0.8s					
TERO				AML	AML	
	comp=E,552µm,0.4s					
TERO				AML	AML	
	comp=N,556µm,0.8s					
TERO				AML	AML	
	comp=E,126µm,0.8s					
TERO				AML	AML	
	comp=N,123µm,0.1s					
TERO				AML	AML	
	comp=E,71µm,0.1s					
TERO				AML	AML	
	comp=N,140µm,0.1s					
ARVD	**Arcevia**	**0.66**	**347**	S	Sb	17 44 24.0 -0.6
PESA	**Pesaro**	**1.11**	**348**	⇓P	Pg	17 44 20.6 -2.2

ROM 26 17:44:52.8±0.1, 42°.883N±0°.003×13°.138E±0°.004, h9km, ML2.5/24, 20C-18D, Error ellipse: s-maj=0.3km s-min=0.3km az=341.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**126**	⇑P		Pg	17 44 55.0	+0.3
T1245				S		Sg	17 44 56.5	+0.4
T1245				AML		AML		
	comp=E,34750µm,0.7s							
T1245				AML		AML		
	comp=N,31400µm,0.1s							
T1245				AML		AML		
	comp=N,30050µm,1.4s							
T1245				AML		AML		
	comp=N,30050µm,1.5s							
T1245				AML		AML		
	comp=E,35700µm,0.7s							
T1245				AML		AML		
	comp=E,34700µm,0.7s							
T1245				AML		AML		
	comp=E,30445µm,0.2s							
T1245				AML		AML		
	comp=N,31405µm,0.1s							
T1245				AML		AML		
	comp=E,29750µm,0.2s							
T1245				AML		AML		
	comp=N,29858µm,0.1s							
MC2	**Monte Cornacci**	**0.05**	**53**	P		Pg	17 44 55.0	+0.1
MC2				S		Sg	17 44 56.2	-0.1
NRCA	**Norcia**	**0.05**	**199**	⇓P		Pg	17 44 55.1	+0.4
NRCA				S		Sg	17 44 56.3	+0.1
NRCA				AML		AML		
	comp=E,15150µm,0.4s							
NRCA				AML		AML		
	comp=N,16600µm,0.4s							
NRCA				AML		AML		
	comp=N,18000µm,0.5s							
NRCA				AML		AML		
	comp=E,13450µm,0.4s							
NRCA				AML		AML		
	comp=N,16600µm,0.5s							
NRCA				AML		AML		
	comp=E,9122µm,0.1s							
NRCA				AML		AML		
	comp=N,14995µm,0.1s							
NRCA				AML		AML		
	comp=N,16388µm,0.1s							
NRCA				AML		AML		
	comp=E,9806µm,0.1s							
MMO1	**Montemonaco**	**0.14**	**83**	P		Pg	17 44 56.1	+0.1
MMO1				S		Sg	17 44 59.0	+0.9
FDMO	**Fiordimonte**	**0.16**	**346**	⇓P		Pg	17 44 56.8	+0.5
FDMO				S		Sg	17 44 59.2	+0.6
FDMO				AML		AML		
	comp=N,4420µm,0.9s							
FDMO				AML		AML		
	comp=E,2395µm,0.4s							
FDMO				AML		AML		
	comp=E,2083µm,0.2s							
FDMO				AML		AML		
	comp=N,4151µm,0.2s							
AM05	**Amandola Campo**	**0.18**	**59**	⇑P		Pg	17 44 57.4	+0.8
AM05				S		Sg	17 45 00.4	+1.1
AM05				AML		AML		
	comp=E,918µm,0.6s							
AM05				AML		AML		
	comp=N,1104µm,0.1s							
AM05				AML		AML		
	comp=E,918µm,0.6s							
AM05				AML		AML		
	comp=N,1102µm,0.1s							
AM05				AML		AML		
	comp=N,9µm,1.0s							
AM05				AML		AML		
	comp=E,3917µm,0.1s							
AM05				AML		AML		
	comp=E,833µm,0.1s							
AM05				AML		AML		
	comp=N,1104µm,0.1s							
CESI	**CESI - Serrava**	**0.21**	**305**	⇑P		Pg	17 44 57.7	+0.6
CESI				S		Sg	17 45 01.4	+1.3
CESI				AML		AML		
	comp=N,8800µm,0.2s							
CESI				AML		AML		
	comp=E,4745µm,0.5s							
CESI				AML		AML		
	comp=E,3754µm,0.2s							
CESI				AML		AML		
	comp=N,8798µm,0.2s							
CSP1	**Cessapalombo**	**0.21**	**13**	⇑P		Pg	17 44 57.7	+0.5
CSP1				AML		AML		
	comp=N,6120µm,0.4s							
CSP1				AML		AML		
	comp=E,5650µm,1.2s							
CSP1				AML		AML		
	comp=E,4895µm,0.3s							
CSP1				AML		AML		
	comp=N,4397µm,0.2s							
T1215	**Vallo di Nera,**	**0.21**	**248**	⇑P		Pg	17 44 58.0	+0.8
T1215				S		Sg	17 45 01.5	+1.3
T1215				AML		AML		
	comp=E,818µm,0.5s							
T1215				AML		AML		
	comp=E,816µm,0.5s							
T1215				AML		AML		
	comp=N,859µm,0.6s							
T1215				AML		AML		
	comp=E,817µm,0.5s							
T1215				AML		AML		
	comp=N,505µm,0.1s							
T1215				AML		AML		
	comp=E,802µm,0.3s							
T1215				AML		AML		
	comp=E,806µm,0.3s							
T1215				AML		AML		
	comp=N,495µm,0.2s							
T1241	**Roccafluvione,**	**0.22**	**97**	⇑P		Pg	17 44 57.9	+0.6
T1241				S		Sg	17 45 01.4	+1.1
T1241				AML		AML		
	comp=E,2610µm,0.4s							
T1241				AML		AML		
	comp=N,1715µm,0.9s							
T1241				AML		AML		
	comp=N,1710µm,0.9s							
T1241				AML		AML		
	comp=N,1711µm,0.5s							
T1241				AML		AML		
	comp=E,159µm,0.8s							
T1241				AML		AML		
	comp=N,145µm,0.8s							
T1241				AML		AML		
	comp=E,2608µm,0.4s							
T1217	**Poggiodomo (PG**	**0.23**	**222**	⇑P		Pg	17 44 58.3	+0.8
T1217				S		Sg	17 45 02.1	+1.5
T1217				AML		AML		
	comp=E,819µm,0.9s							
T1217				AML		AML		
	comp=N,1100µm,1.6s							
T1217				AML		AML		
	comp=E,776µm,1.0s							
T1217				AML		AML		
	comp=N,1152µm,0.3s							
T1217				AML		AML		
	comp=N,1100µm,1.6s							
T1217				AML		AML		
	comp=E,779µm,1.0s							
T1217				AML		AML		
	comp=N,1152µm,0.3s							
T1217				AML		AML		
	comp=N,1150µm,0.3s							
T1217				AML		AML		
	comp=E,782µm,1.0s							
T1217				AML		AML		
	comp=N,1087µm,0.3s							
T1217				AML		AML		
	comp=E,706µm,0.2s							
T1217				AML		AML		
	comp=N,1152µm,0.3s							
T1217				AML		AML		
	comp=E,738µm,0.3s							
LNSS	**Leonessa**	**0.29**	**194**	⇑P		Pg	17 44 59.3	+0.7
LNSS				AML		AML		
	comp=E,1400µm,1.4s							
LNSS				AML		AML		
	comp=N,1555µm,0.4s							
LNSS				AML		AML		
	comp=E,1395µm,1.4s							
LNSS				AML		AML		
	comp=E,1293µm,0.3s							
LNSS				AML		AML		
	comp=N,1186µm,0.1s							
T1243	**Rocca Santa Ma**	**0.29**	**129**	P		Pg	17 44 59.4	+0.7
T1243				S		Sb	17 45 04.2	-1.2
SEF1	**Sefro**	**0.30**	**332**	⇓P		Pg	17 44 59.3	+0.6
SEF1				AML		AML		
	comp=E,2663µm,0.3s							
SEF1				AML		AML		
	comp=N,2640µm,0.3s							
RM33	**Pellescritta (**	**0.38**	**171**	⇓P		Pb	17 45 01.1	-0.7
RM33				AML		AML		
	comp=E,525µm,0.3s							
RM33				AML		AML		
	comp=N,856µm,0.3s							
RM33				AML		AML		
	comp=E,526µm,0.3s							
RM33				AML		AML		
	comp=N,856µm,0.3s							
RM33				AML		AML		
	comp=E,478µm,0.4s							
RM33				AML		AML		
	comp=N,849µm,0.3s							
RM33				AML		AML		
	comp=E,519µm,0.4s							
RM33				AML		AML		
	comp=N,856µm,0.3s							
SNTG	**Esanatoglia**	**0.40**	**339**	⇑P		Pg	17 45 01.0	+0.3
SNTG				S		Sb	17 45 08.0	-0.4
SNTG				AML		AML		
	comp=E,1154µm,0.5s							
SNTG				AML		AML		
	comp=N,1015µm,0.5s							
SNTG				AML		AML		
	comp=E,1151µm,0.5s							
SNTG				AML		AML		
	comp=N,1155µm,0.5s							
SNTG				AML		AML		
	comp=N,930µm,0.1s							
SNTG				AML		AML		
	comp=E,1071µm,0.1s							
CAMP	**Campotosto**	**0.40**	**150**	⇑P		Pg	17 45 01.3	+0.6
CAMP				S		Sb	17 45 07.7	-0.8
CAMP				AML		AML		
	comp=N,302µm,1.6s							
CAMP				AML		AML		
	comp=E,271µm,0.7s							
CAMP				AML		AML		
	comp=E,271µm,0.7s							
CAMP				AML		AML		
	comp=N,293µm,0.4s							
OFFI	**Offida**	**0.41**	**82**	⇑P		Pb	17 45 02.2	0.0
OFFI				AML		AML		
	comp=E,1180µm,0.7s							
OFFI				AML		AML		
	comp=N,1590µm,0.4s							
OFFI				AML		AML		
	comp=E,1184µm,0.7s							
OFFI				AML		AML		
	comp=N,1589µm,0.4s							
TERO	**Teramo**	**0.43**	**127**	P		Pg	17 45 01.8	+0.5
TERO				AML		AML		
	comp=E,499µm,0.4s							
TERO				AML		AML		
	comp=E,552µm,0.4s							
TERO				AML		AML		
	comp=E,500µm,0.4s							
TERO				AML		AML		
	comp=N,519µm,0.8s							
TERO				AML		AML		
	comp=N,556µm,0.8s							
EL6	**Elcito**	**0.45**	**357**	⇑P		Pg	17 45 01.3	-0.3
EL6				AML		AML		
	comp=E,3210µm,1.4s							
EL6				AML		AML		
	comp=N,3855µm,0.2s							
EL6				AML		AML		
	comp=E,3205µm,1.4s							
EL6				AML		AML		
	comp=E,3167µm,0.2s							
EL6				AML		AML		
	comp=N,3852µm,0.2s							
T1247	**Pizzolo (AQ)**	**0.46**	**165**	⇓P		Pg	17 45 02.4	+0.7
T1247				AML		AML		
	comp=E,589µm,0.6s							
T1247				AML		AML		
	comp=N,734µm,0.5s							
T1247				AML		AML		
	comp=E,588µm,0.6s							
T1247				AML		AML		
	comp=N,655µm,0.4s							
T1247				AML		AML		
	comp=E,570µm,0.4s							
ATCC	**AVT- Casa Cast**	**0.47**	**310**	⇓P		Pg	17 45 02.5	+0.5
ATCC				AML		AML		
	comp=E,1211µm,0.2s							
ATCC				AML		AML		
	comp=N,1083µm,0.5s							
ATCC				AML		AML		
	comp=E,1210µm,0.2s							
ATCC				AML		AML		
	comp=N,1082µm,0.5s							
ATCC				AML		AML		
	comp=N,1084µm,0.5s							
ATCC				AML		AML		
	comp=E,1209µm,0.2s							
CESX	**Cesi**	**0.49**	**237**	⇓P		Pg	17 45 02.6	+0.2
CESX				S		Sb	17 45 12.0	+1.0
CESX				AML		AML		
	comp=N,450µm,0.7s							
CESX				AML		AML		
	comp=E,464µm,0.7s							
CESX				AML		AML		
	comp=E,434µm,0.2s							
CESX				AML		AML		
	comp=N,373µm,0.2s							
GIGS	**Gran Sasso**	**0.54**	**144**	⇑P		Pg	17 45 03.7	+0.4
GIGS				AML		AML		
	comp=N,54µm,0.4s							
GIGS				AML		AML		
	comp=E,69µm,1.5s							
GIGS				AML		AML		
	comp=E,66µm,0.3s							
GIGS				AML		AML		
	comp=N,47µm,0.3s							
MMUR	**Monte Murano**	**0.57**	**350**	S		Sb	17 45 14.0	+0.7
MURB	**Monte Urbino**	**0.59**	**310**	P		Pg	17 45 04.6	+0.4
MURB				S		Sb	17 45 15.0	+1.1
MURB				AML		AML		
	comp=N,1865µm,0.2s							
MURB				AML		AML		
	comp=E,2020µm,0.2s							
MURB				AML		AML		
	comp=N,1866µm,0.2s							
MURB				AML		AML		
	comp=N,1757µm,0.2s							
MURB				AML		AML		
	comp=E,1775µm,0.2s							
MURB				AML		AML		
	comp=E,2020µm,0.2s							
PP3	**Marolino**	**0.60**	**35**	⇓P		Pb	17 45 05.8	+0.2
PP3				AML		AML		
	comp=E,1170µm,0.4s							
PP3				AML		AML		
	comp=E,1110µm,1.2s							
PP3				AML		AML		
	comp=N,1330µm,0.3s							
PP3				AML		AML		
	comp=E,1166µm,0.4s							
PP3				AML		AML		
	comp=N,1325µm,0.3s							
PP3				AML		AML		
	comp=N,1290µm,0.3s							
PP3				AML		AML		
	comp=E,1168µm,0.4s							
PP3				AML		AML		
	comp=N,1327µm,0.3s							
PP3				AML		AML		
	comp=N,1289µm,0.3s							
PP3				AML		AML		
	comp=E,1014µm,0.2s							
FIAM	**Fiamignano**	**0.61**	**181**	⇑P		Pg	17 45 04.8	+0.1
FIAM				S		Sb	17 45 15.0	+0.4
FIAM				AML		AML		
	comp=E,214µm,0.6s							
FIAM				AML		AML		
	comp=N,166µm,0.5s							
FIAM				AML		AML		
	comp=N,166µm,0.5s							
FIAM				AML		AML		
	comp=N,162µm,0.3s							
FIAM				AML		AML		
	comp=E,213µm,0.6s							
ARVD	**Arcevia**	**0.63**	**347**	⇓P		Pg	17 45 05.2	+0.2
ARVD				S		Sb	17 45 16.0	+0.9
ARVD				AML		AML		
	comp=N,325µm,0.1s							
ARVD				AML		AML		
	comp=E,596µm,0.1s							
ARVD				AML		AML		
	comp=N,325µm,0.1s							
ARVD				AML		AML		
	comp=E,596µm,0.1s							
ATFO	**Monte Foce - G**	**0.64**	**320**	⇓P		Pg	17 45 05.3	+0.2
ATFO				AML		AML		
	comp=E,359µm,0.9s							
ATFO				AML		AML		
	comp=N,272µm,0.5s							
ATFO				AML		AML		
	comp=E,358µm,0.9s							
ATFO				AML		AML		
	comp=N,273µm,0.5s							
ATFO				AML		AML		
	comp=N,240µm,0.2s							
ATFO				AML		AML		
	comp=E,324µm,0.2s							
ATTE	**AVT- Monte Tez**	**0.66**	**299**	⇑P		Pg	17 45 05.9	+0.4
ATTE				AML		AML		
	comp=E,268µm,0.4s							
ATTE				AML		AML		
	comp=N,205µm,1.0s							
ATTE				AML		AML		
	comp=N,166µm,0.6s							
ATTE				AML		AML		
	comp=E,267µm,0.4s							
FAGN	**Fagnano**	**0.70**	**152**	⇓P		Pb	17 45 06.9	-0.3
FAGN				AML		AML		
	comp=E,364µm,0.7s							
FAGN				AML		AML		
	comp=E,365µm,0.7s							
FAGN				AML		AML		
	comp=N,319µm,0.6s							
FAGN				AML		AML		
	comp=N,319µm,0.6s							
FAGN				AML		AML		
	comp=E,365µm,0.7s							
FRON	**Frontone**	**0.70**	**335**	⇓P		Pg	17 45 06.3	-0.1
FRON				AML		AML		
	comp=E,458µm,0.1s							
FRON				AML		AML		
	comp=N,519µm,0.3s							
FRON				AML		AML		
	comp=E,459µm,0.1s							
FRON				AML		AML		
	comp=N,470µm,0.1s							
VCEL	**Villa Celiera**	**0.71**	**133**	P		Pb	17 45 07.2	-0.3
VCEL				AML		AML		
	comp=E,248µm,0.6s							
VCEL				AML		AML		
	comp=N,216µm,1.0s							
VCEL				AML		AML		
	comp=N,211µm,0.5s							
VCEL				AML		AML		

comp=E,248μm,0.6s
ATVO AVT- Monte Val 0.73 313 ⇓P Pg 17 45 06.9 0.0
ATVO S Sb 17 45 19.0 +1.0
ATVO AML AML
comp=E,298μm,0.3s
ATVO AML AML
comp=N,240μm,1.3s
ATVO AML AML
comp=N,231μm,0.3s
ATVO AML AML
comp=E,298μm,0.3s
ATPI Pietralunga - 0.78 317 ⇑P Pg 17 45 08.0 +0.1
ATPI AML AML
comp=E,199μm,0.9s
ATPI AML AML
comp=N,166μm,0.5s
ATPI AML AML
comp=E,161μm,0.3s
ATPI AML AML
comp=N,166μm,0.5s
PIEI Pieia 0.79 326 ⇑P Pg 17 45 07.8 -0.2
PIEI AML AML
comp=N,216μm,1.4s
PIEI AML AML
comp=E,332μm,1.1s
PIEI AML AML
comp=E,292μm,0.1s
PIEI AML AML
comp=N,200μm,0.2s
MPAG Monte Paganucc 0.80 340 ⇑P Pg 17 45 08.2 +0.1
MPAG S Sn 17 45 22.0 -0.4
MPAG AML AML
comp=N,257μm,1.5s
MPAG AML AML
comp=E,462μm,0.4s
MPAG AML AML
comp=N,258μm,1.5s
MPAG AML AML
comp=N,483μm,0.5s
MPAG AML AML
comp=N,214μm,0.2s
MPAG AML AML
comp=E,461μm,0.4s
MPAG AML AML
comp=E,479μm,0.5s
T0110 Collepietro 0.81 144 ⇓P Pg 17 45 08.7 +0.3
T0110 AML AML
comp=E,304μm,0.7s
T0110 AML AML
comp=N,266μm,0.4s
T0110 AML AML
comp=E,304μm,0.7s
T0110 AML AML
comp=N,266μm,0.4s
FSSB Fossombrone 0.85 342 ⇑P Pg 17 45 09.3 +0.1
FSSB S Sn 17 45 24.0 +0.3
FSSB AML AML
comp=E,634μm,1.4s
FSSB AML AML
comp=N,1045μm,0.3s
FSSB AML AML
comp=N,1046μm,0.3s
FSSB AML AML
comp=E,622μm,0.3s
APEC Apecchio 0.85 322 S Sn 17 45 24.0 +0.2
BADI Badiali 0.91 314 ⇓P Pg 17 45 10.3 +0.1
BADI AML AML
comp=E,39μm,0.3s
BADI AML AML
comp=N,107μm,0.5s
PE3 Peglio 0.94 330 ⇑P Pg 17 45 10.2 -0.7
PE3 AML AML
comp=E,9μm,0.4s
PE3 AML AML
comp=N,15μm,0.1s
PE3 AML AML
comp=N,15μm,0.1s
PE3 AML AML
comp=E,8μm,0.1s
CAFI Castiglion Fio 0.97 298 ⇓P Pb 17 45 12.1 +0.3
CAFI AML AML
comp=E,114μm,1.6s
CAFI AML AML
comp=N,124μm,1.0s
CAFI AML AML
comp=E,108μm,0.5s
CAFI AML AML
comp=N,117μm,0.3s
CAFI AML AML
comp=E,106μm,0.6s
CAFI AML AML
comp=N,107μm,0.3s
INTR Introdacqua 1.04 147 P Pg 17 45 12.3 -0.5
INTR AML AML
comp=E,109μm,0.6s
INTR AML AML
comp=N,177μm,1.0s
INTR AML AML
comp=E,109μm,0.6s
INTR AML AML
comp=E,124nm,0.6s
INTR AML AML
comp=N,143nm,0.9s
INTR AML AML
comp=N,177μm,1.0s
CPGN Carpegna, Ital 1.09 327 ⇓P Pn 17 45 14.6 0.0
IMOL Imola, Italy 1.79 326 ⇓P Pn 17 45 22.6 -1.3
IMOL AML AML
comp=E,4585μm,1.4s
IMOL AML AML
comp=N,4860μm,1.4s
IMOL AML AML
comp=E,4584μm,0.1s
IMOL AML AML
comp=N,4712μm,0.1s
MTCR Monte La Croce 1.93 307 P Pb 17 45 28.2 -0.1
CARD Cardoso 2.25 301 P Pg 17 45 35.2 -0.7
NDIM Novi di Modena 2.58 322 S Sb 17 46 11.0 +0.1
MCRV Calabrutti - M 2.59 143 P Pg 17 45 42.5 0.0
PZUN Potenza 3.00 137 P Pg 17 45 50.3 0.0
OBKA Obir 3.76 15 *e*Pn Pg 17 46 08.0 +3.2
comp=N,0.8nm,0.2s
ABTA Abfaltersbach 3.89 354 *i* Pn Pn 17 45 54.6 +1.7
comp=N,2.1nm,0.4s
SQTA Sankt Quirin 4.55 343 *e*Sn Sb 17 47 01.4 -6.4
comp=N,1.9nm,0.4s
BIOA Bad Ischl, Aus 4.82 4 *e*Pn Pn 17 46 07.4 +1.8

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*IDC **26** 17:50:34.8±0.5, 17°.79N×61°.11W, h0km, mb4.2/23, mbtmp4.3/28, ML3.8/5, Error ellipse: s-maj=13.6km s-min=10.4km az=91.0*
*NEIC **26** 17:50:38.2±1.5, 17°.74N±0°.05×61°.22W±0°.08, h10km±1km, mb4.7/69, Error ellipse: s-maj=15.2km s-min=5.8km az=58.0*
*TRN **26** 17:50:38.1, 17°.86N×61°.12W, h38km, MD4.6*
ISC 26 17:50:38.2±0.4, 17°.78N±0°.04×61°.15W±0°.05, h21km±3km, **n201,σ1$26/223, mb4.6**/54, **5C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.62 260**			**Pb**	**17 50 51.0**	**+0.5**
ANWB	**Willy Bob**	**0.62 260**		*e*P	**Pn**	**17 50 51.7**	**0.0**
ANWB				*e*S	**Sn**	**17 51 02.5**	**+1.4**
ANDO	**Antigua, Disas**	**0.93 224**		*e*P	**Pn**	**17 50 56.4**	**+0.4**
ANDO				*e*S	**Sn**	**17 51 11.0**	**+2.2**
ANBD	**Bethesda, Anti**	**0.94 219**		*e*P	**Pb**	**17 50 56.3**	**+0.5**
ANBD				*e*S	**Sn**	**17 51 10.6**	**+1.6**
ABD	**La Joyeuse, An**	**1.34 194**			**Pn**	**17 51 02.3**	**+0.6**
ABD	**La Joyeuse, An**	**1.34 194**		*e*P	**Pn**	**17 51 02.2**	**+0.6**
ABD				*e*S	**Sb**	**17 51 21.9**	**+2.5**
MBFL	**Flemmings, Mon**	**1.45 225**		⇑*i*P	**Pb**	**17 51 04.4**	**0.0**
MBFL				*e*S	**Sb**	**17 51 23.2**	**+0.7**
H05N1	**Guadeloupe/Mar**	**1.46 177**		Pn	**Pn**	**17 51 03.8**	**+0.4**
H05N1				Sn	**Sn**	**17 51 22.2**	**+0.4**
GDSD	**La Dsirade Is**	**1.46 177**		Pn	**Pn**	**17 51 03.6**	**+0.2**
GDHS	**Morne Mazeau,**	**1.61 202**			**Pn**	**17 51 06.6**	**+1.1**
CBE	**Ff, Capester**	**1.76 195**			**Pn**	**17 51 08.3**	**+0.8**
CBE	**Ff, Capester**	**1.76 195**		*e*P	**Pn**	**17 51 09.0**	**+1.5**
SEUS	**St. Eustatius**	**1.77 261**			**Pn**	**17 51 08.8**	**+1.2**
SEUS	**St. Eustatius**	**1.77 261**		*e*P	**Pn**	**17 51 09.0**	**+1.4**
SEUS				*e*S	**Sb**	**17 51 31.1**	**-0.7**
MAGL	**Barre de l'ile**	**1.83 184**			**Pn**	**17 51 09.5**	**+1.1**
MAGL	**Barre de l'ile**	**1.83 184**		*e*P	**Pn**	**17 51 09.8**	**+1.4**
MAGL				*e*S	**Sb**	**17 51 32.9**	**-0.5**
SMRT	**St. Maarten**	**1.85 279**		Pn	**Pn**	**17 51 09.3**	**+0.5**
SMRT	**St. Maarten**	**1.85 279**		⇑*i*P	**Pn**	**17 51 09.3**	**+0.5**
SMRT				*e*S	**Sb**	**17 51 33.1**	**-1.1**
TBG	**Guadaloupe-3**	**1.98 194**		*e*P	**Pn**	**17 51 11.9**	**+1.4**
TDBA	**Terre de Bas,**	**1.98 194**		Pn	**Pn**	**17 51 12.0**	**+1.5**
TDBA	**Terre de Bas,**	**1.98 194**		*e*P	**Pn**	**17 51 11.7**	**+1.2**
TDBA				*e*S	**Sb**	**17 51 36.9**	**-0.8**
MDVC	**Dominica, Viel**	**2.17 187**		*e*P	**Pn**	**17 51 15.0**	**+1.9**
MDVC				*e*S	**Sn**	**17 51 41.2**	**+1.9**
MDCT	**Cottage Hill,**	**2.17 188**		*e*P	**Pn**	**17 51 15.3**	**+2.1**
MDCT				*e*S	**Sn**	**17 51 41.7**	**+2.2**
DSLB	**Salisbury**	**2.35 186**		*e*P	**Pn**	**17 51 15.9**	**+0.3**
DLPL	**La Plaine**	**2.44 182**			**Pn**	**17 51 17.6**	**+0.8**
DLPL	**La Plaine**	**2.44 182**		*e*P	**Pn**	**17 51 18.8**	**+1.9**
DLPL				*e*S	**Sn**	**17 51 46.8**	**+0.8**
MDN	**Morne-Daniel**	**2.46 186**		*e*P	**Pn**	**17 51 19.4**	**+2.2**
MDN				*e*S	**Sn**	**17 51 49.0**	**+2.5**
SVN	**Savane Anatole**	**2.92 180**			**Pn**	**17 51 24.1**	**+0.5**
SVN	**Savane Anatole**	**2.92 180**		*e*P	**Pn**	**17 51 26.2**	**+2.7**
BAMF	**Morne Balai**	**2.95 180**		*e*P	**Pn**	**17 51 26.6**	**+2.7**
PCM	**Pelee Case Pet**	**2.95 181**		*e*P	**Pn**	**17 51 26.5**	**+2.6**
CXM	**Morne La Croix**	**2.95 180**		*e*P	**Pn**	**17 51 25.4**	**+1.3**
GBMF	**Grand Be**	**2.97 180**		*e*P	**Pn**	**17 51 26.8**	**+2.6**
PML	**Morne Lenard**	**2.98 181**		*e*P	**Pb**	**17 51 29.2**	**-1.5**
ILAM	**Ilet Lapin Mar**	**3.00 175**			**Pn**	**17 51 24.7**	**+0.2**
ILAM	**Ilet Lapin Mar**	**3.00 175**		*e*P	**Pn**	**17 51 25.6**	**+1.0**
ILAM				*e*S	**Sn**	**17 52 01.0**	**+1.1**
FDF	**Fort de France**	**3.03 180**			**Pn**	**17 51 25.4**	**+0.3**
FDF	**Fort de France**	**3.03 180**		*e*P	**Pn**	**17 51 25.8**	**+0.8**
FDF				*e*S	**Sn**	**17 52 01.9**	**+1.1**
BIM	**Bigot**	**3.25 179**			**Pn**	**17 51 28.8**	**+0.8**
BIM	**Bigot**	**3.25 179**		*e*P	**Pn**	**17 51 29.1**	**+1.1**
BIM				*e*S	**Sn**	**17 52 06.3**	**+0.2**
MPOM	**Morne Pois Mar**	**3.33 175**		Pn	**Pn**	**17 51 29.7**	**+0.6**
MPOM	**Morne Pois Mar**	**3.33 175**		*e*P	**Pn**	**17 51 29.9**	**+0.8**
MPOM				*e*S	**Sn**	**17 52 08.8**	**+0.7**
H05S1	**Guadeloupe/Mar**	**3.35 175**		Pn	**Pn**	**17 51 30.1**	**+0.7**
H05S1				Sn	**Sn**	**17 52 08.6**	**0.0**
CDVI	**St. Croix**	**3.45 270**		Pn	**Pn**	**17 51 31.6**	**+0.9**
CDVI	**St. Croix**	**3.45 270**		*e*P	**Pn**	**17 51 31.8**	**+1.1**
SJVI	**Gifft Hill Sch**	**3.49 280**		Pn	**Pn**	**17 51 30.4**	**-0.9**
STVI	**Saint Thomas**	**3.67 279**			**Pn**	**17 51 33.2**	**-0.5**
SLBI	**Saint Lucia, B**	**3.74 177**		*e*P	**Pn**	**17 51 35.9**	**+1.2**
SLBI				*e*S	**Sn**	**17 52 18.3**	**+0.1**
SLB	**Belfond**	**3.93 179**		*e*P	**Pn**	**17 51 39.1**	**+1.6**
CUPR	**Culebra, Puert**	**3.97 278**		Pn	**Pn**	**17 51 37.6**	**-0.3**
MCLT	**Moule a Chique**	**4.05 177**		Pn	**Pn**	**17 51 40.2**	**+1.1**
MCLT	**Moule a Chique**	**4.05 177**		*e*P	**Pn**	**17 51 40.9**	**+1.8**
MCLT	**Moule a Chique**	**4.05 177**		*e*S	**Sn**	**17 52 26.4**	**+0.5**
MTP	**Monte Pirata**	**4.21 275**		Pn	**Pn**	**17 51 41.5**	**+0.4**
SSV	**Crater Summit**	**4.43 181**		*e*P	**Pn**	**17 51 46.5**	**+2.2**
SVB	**Belmont**	**4.49 181**			**Pn**	**17 51 45.5**	**+0.5**
SVB	**Belmont**	**4.49 181**		*e*P	**Pn**	**17 51 46.8**	**+1.8**
HUMP	**Col San Antoni**	**4.49 275**			**Pn**	**17 51 44.5**	**-0.6**
CBYP	**Canovanas**	**4.51 277**			**Pn**	**17 51 44.7**	**-0.7**
GCPR	**Guaynabo City**	**4.73 277**			**Pn**	**17 51 48.6**	**+0.3**
SJG	**San Juan**	**4.77 275**		Pn	**Pn**	**17 51 48.9**	**-0.1**
	13nm,0.3s,baz=85,slow=11,SNR=32						
SJG				Sn	**Sn**	**17 52 43.3**	**-0.3**
	baz=315,slow=18						
	85nm,0.7s						
SJG	**San Juan**	**4.77 275**			**Pn**	**17 51 49.5**	**+0.6**
GCMP	**Grenada, Carri**	**5.27 183**		*e*P	**Pn**	**17 51 57.3**	**+1.5**
AOPR	**Arecibo Observ**	**5.36 277**			**Pn**	**17 51 57.2**	**+0.2**
AOPR	**Arecibo Observ**	**5.36 277**		*e*P	**Pn**	**17 51 57.3**	**+0.2**
MLPR	**Magueyes Islan**	**5.62 273**		Pn	**Pn**	**17 52 00.2**	**-0.4**
GRGR	**Grenville**	**5.64 185**		Pn	**Pn**	**17 52 01.1**	**+0.3**
GRGR	**Grenville**	**5.64 185**		*e*P	**Pn**	**17 52 02.9**	**+2.1**
CRPR	**Cabo Rojo, PR**	**5.68 273**			**Pn**	**17 52 02.0**	**+0.6**
AGPR	**Aguadilla, PR**	**5.71 278**		Pn	**Pn**	**17 52 00.7**	**-1.1**
PRSN	**Puerto Rico Se**	**5.72 275**			**Pn**	**17 52 01.1**	**-0.9**
TOSP	**Speyside**	**6.47 175**		Pn	**Pn**	**17 52 13.3**	**+1.0**
TOSP	**Speyside**	**6.47 175**		*e*P	**Pn**	**17 52 14.5**	**+2.2**
TRN	**Trinidad (W)**	**7.10 182**		*e*	Pn	17 52 26.5	+5.6
DR12	**Loma Pena Alta**	**7.89 279**			**Pn**	**17 52 29.4**	**-2.4**
PCRV	**Puerto La Cruz**	**8.28 205**		Pn	**Pn**	**17 52 37.0**	**-0.3**
	1.4nm,0.3s,baz=11,slow=4.7,SNR=8.8						
PCRV				Sn	**Sn**	**17 54 11.0**	**+0.8**
	0.5nm,0.3s,baz=54,slow=20,SNR=1.3						
	27nm,0.8s						
BANI	**BANI**	**8.78 275**		Pn	**Pn**	**17 52 43.2**	**-0.9**
SC01	**Santiago de lo**	**9.23 282**		Pn	**Pn**	**17 52 49.2**	**-1.0**
SDDR	**Presa de Saban**	**9.70 279**		Pn	**Pn**	**17 52 54.9**	**-1.8**
SDDR	**Presa de Saban**	**9.70 279**		*e*P	**Pn**	**17 52 56.2**	**-0.5**
BAUV	**El Baul**	**11.05 218**		Pn	**Pn**	**17 53 14.2**	**-1.0**
BAUV	**El Baul**	**11.05 218**		*e*P	**Pn**	**17 53 16.7**	**+1.6**
BAUV	**El Baul**	**11.05 218**		*e*S	**Sn**	**17 55 11.6**	**-6.6**
SDV	**Santo Domingo**	**12.78 227**		Pn	**Pn**	**17 53 38.1**	**-0.8**
	0.5nm,0.3s,baz=350,slow=14,SNR=1.3						
	2.8nm,0.4s						
SDV	**Santo Domingo**	**12.78 227**		Pn	**Pn**	**17 53 38.5**	**-0.5**
MDP	**Montagnes des**	**15.10 146**		Pn	**Pn**	**17 54 07.3**	**-3.1**
	1.1nm,0.3s,baz=324,slow=12,SNR=7.1						
MDP				Sn	Sn	17 56 41.9	-15
	0.9nm,0.3s,baz=63,slow=23,SNR=6.5						
	5.1nm,0.5s						
OCAC	**Ocana**	**15.18 233**		⇑*e*P	**Pn**	**17 54 14.1**	**+2.5**
PAMC	**Pamplona, Colo**	**15.31 229**		*e*P	**Pn**	**17 54 14.1**	**+0.4**
SJCC	**San Jacinto, C**	**15.71 242**		*e*P	**P**	**17 54 21.7**	**-0.6**
BARC	**Barichara**	**16.18 228**		*e*P	**Pn**	**17 54 24.6**	**0.0**
BRRC	**Barranca, Sant**	**16.21 231**		*e*P	**P**	**17 54 27.5**	**-0.4**
RUSC	**La Rusia**	**16.60 226**		⇑*e*P	**P**	**17 54 32.2**	**-0.5**
PTBC	**PUERTO BERRIO,**	**17.14 231**		*e*P	**Pn**	**17 54 35.1**	**-1.5**
SPBC	**San Pablo de B**	**17.46 228**		*e*P	**Pn**	**17 54 39.9**	**-0.8**
CHIC	**Chingaza**	**17.96 225**		*e*P	**P**	**17 54 48.5**	**+0.8**
NORC	**Norcasia**	**18.09 229**		*e*P	**Pn**	**17 54 48.5**	**0.0**
HELC	**Santa Helena**	**18.16 232**		*e*P	**Pn**	**17 54 49.5**	**-0.2**
ROSC	**El Rosal**	**18.21 227**		P	**P**	**17 54 51.3**	**+0.9**
	4.8nm,0.3s,baz=40,slow=4.7,SNR=11						
	38nm,0.5s						
ROSC	**El Rosal**	**18.21 227**		P	**P**	**17 54 51.3**	**+0.9**
ROSC				IAmb	IAmb	17 54 56.8	
	comp=Z,47nm,0.8s						
ROSC	**El Rosal**	**18.21 227**		*e*P	**P**	**17 54 51.4**	**+0.9**
GUY2C	**Guyana, Caldas**	**18.68 230**		*e*P	**P**	**17 54 56.2**	**+0.5**
ANIL	**Santa Ana**	**19.22 228**		⇑*e*P	**Pn**	**17 55 02.9**	**+0.5**
PRAC	**Prado**	**19.41 225**		*e*P	**P**	**17 55 02.9**	**-0.4**
ORTC	**Ortega, Tolima**	**19.52 227**		*e*P	**P**	**17 55 04.8**	**+0.4**
BCIP	**Isla Barro Col**	**20.08 247**			**P**	**17 55 10.5**	**+0.1**
BCIP	**Isla Barro Col**	**20.08 247**		*e*P	**P**	**17 55 11.5**	**+1.0**
YOTC	**Yotoco, Valle**	**20.24 229**		*e*P	**P**	**17 55 11.5**	**-0.9**
GARC	**Garzon, Huila**	**20.94 224**		*e*P	**P**	**17 55 21.0**	**+0.9**
SRBA	**San Rafael, Bu**	**23.19 251**		P	**P**	**17 55 44.0**	**+0.1**
SRBA				IAmb	IAmb	17 55 46.9	
	comp=Z,15nm,0.8s						
TULM	**Tulcn-Chalpat**	**23.56 226**		P	**P**	**17 55 47.1**	**-0.9**
IMBA	**Imbabura, San**	**24.16 226**		P	**P**	**17 55 52.6**	**-1.1**
BOAB	**BOACO BROADBAND**	**24.25 261**		P	**P**	**17 55 53.6**	**-0.4**
JTS	**Las Juntas de**	**24.25 255**		P	**P**	**17 55 53.4**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=94,slow=2.1,SNR=4.2						
	comp=Z,4.1nm,0.6s						
MATN	**Matagalpa**	**24.37 262**		P	**P**	**17 55 55.0**	**-0.1**
MATN				IAmb	IAmb	17 55 57.6	
	comp=Z,14nm,0.9s						
PULU	**Pululahua**	**24.56 226**		P	**P**	**17 55 55.2**	**-2.0**
ORTG	**Ortega, Santa**	**24.69 256**		P	**P**	**17 55 57.0**	**-1.1**
ORTG				IAmb	IAmb	17 56 04.6	
	comp=Z,28nm,1.1s						
HODGE	**Hodges**	**24.99 315**		P	**P**	**17 55 59.8**	**-0.7**
PAULI	**Pauline**	**25.04 317**		P	**P**	**17 56 01.6**	**+0.6**
PAULI				IAmb	IAmb	17 56 04.0	
	comp=Z,16nm,1.2s						
SLOR	**San Lorenzo -**	**25.10 225**		P	**P**	**17 56 01.3**	**-1.0**
SLOR				IAmb	IAmb	17 56 42.9	
	comp=Z,7.6nm,0.7s						
PORT	**Chimborazo Vol**	**25.83 224**		P	**P**	**17 56 10.4**	**+1.4**
PORT				IAmb	IAmb	17 56 26.1	
	comp=Z,22nm,0.8s						
BG3	**Lake Jocassee**	**25.88 316**		P	**P**	**17 56 09.3**	**+0.7**
BG3				IAmb	IAmb	17 56 13.0	
	comp=Z,16nm,0.9s						
P57A	**Homestead Farm**	**26.12 329**		P	**P**	**17 56 10.5**	**-0.2**
TKL	**Tuckaleechee C**	**26.83 316**		P	**P**	**17 56 16.9**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=144,slow=2.3,SNR=3.7						
	comp=Z,3.7nm,0.8s						
BOSC	**San Juan Bosco**	**26.93 221**		P	**P**	**17 56 16.9**	**-1.6**
PLAL	**Pickwick Lake**	**29.45 311**		P	**P**	**17 56 41.6**	**+1.0**
ATAH	**Atahualpa**	**30.05 216**		P	**P**	**17 56 47.5**	**+0.9**
	comp=Z,9.2nm,0.8s,baz=29,slow=7.8,SNR=4.4						
	comp=Z,9.2nm,0.8s						
NNA	**Nana**	**33.39 209**		P	**P**	**17 57 15.0**	**-0.5**
	comp=Z,11nm,0.5s,baz=355,slow=7.0,SNR=7.7						
	comp=Z,11nm,0.5s						
NNA	**Nana**	**33.39 209**		P	**P**	**17 57 14.8**	**-0.7**
SIV	**San Ignacio**	**33.56 180**		P	**P**	**17 57 18.0**	**+1.1**
	comp=Z,15nm,0.6s,baz=7.5,slow=8.3,SNR=72						
	comp=Z,15nm,0.6s						
LPAZ	**La Paz**	**34.55 192**		P	**P**	**17 57 25.7**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=346,slow=7.8,SNR=12						
	comp=Z,3.0nm,0.8s						
LPAZ	**La Paz**	**34.55 192**		P	**P**	**17 57 25.4**	**-0.7**
PB11	**IPOC Station P**	**38.23 193**		P	**P**	**17 57 54.8**	**-2.3**
PB11				IAmb	IAmb	17 57 55.5	
	comp=Z,16nm,0.8s						
PB08	**IPOC Station P**	**38.50 192**		P	**P**	**17 57 57.3**	**-2.2**
PB08				IAmb	IAmb	17 58 02.7	
	comp=Z,12nm,1.2s						
ECSD	**EROS Data Cent**	**39.50 319**		P	**P**	**17 58 07.6**	**+0.3**
TX31	**Lajitas Ar. Si**	**40.44 295**		P	**P**	**17 58 15.5**	**+0.1**
TX32	**Lajitas Array**	**40.44 295**		P	**P**	**17 58 15.8**	**+0.3**
TXAR	**Lajitas Array**	**40.44 295**		P	**P**	**17 58 14.8**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=119,slow=6.4,SNR=17						
TXAR				PcP	**PcP**	**18 00 19.4**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=121,slow=6.4,SNR=6.0						
	comp=Z,1.2nm,0.6s						
LVC	**Limon Verde**	**40.86 191**		P	**P**	**17 58 17.1**	**-2.0**
	comp=Z,4.3nm,0.7s,baz=30,slow=5.3,SNR=2.0						
	comp=Z,4.3nm,0.7s						
HPIG		**41.99 291**		P	**P**	**17 58 28.1**	**-0.2**
HPIG				IAmb	IAmb	17 58 30.0	
	comp=Z,9.5nm,0.9s						
ULM	**Lac du Bonnet**	**42.65 327**		P	**P**	**17 58 33.0**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=63,slow=10.0,SNR=3.1						
	comp=Z,4.9nm,0.8s						
BNM	**Barren Site**	**43.64 301**		P	**P**	**17 58 42.7**	**+0.9**
CPUP	**Villa Florida**	**44.01 175**		P	**P**	**17 58 43.0**	**-1.3**
	comp=Z,5.5nm,0.8s,baz=357,slow=6.5,SNR=8.3						
	comp=Z,5.5nm,0.8s						
319A	**Douglas**	**45.48 297**		P	**P**	**17 58 57.6**	**+1.3**
319A				IAmb	IAmb	17 59 14.0	
	comp=Z,11nm,0.8s						
K22A	**Casper**	**45.68 313**		P	**P**	**17 58 58.8**	**+1.0**
K22A				IAmb	IAmb	17 58 59.8	
	comp=Z,16nm,1.1s						
PV13	**Radium Mtn., P**	**46.17 306**		P	**P**	**17 59 03.1**	**+1.3**
LAO	**LASA Array**	**46.89 318**		P	**P**	**17 59 08.7**	**+1.5**
BW06	**Boulder Array**	**47.85 312**		P	**P**	**17 59 15.5**	**+0.7**
BW06				IAmb	IAmb	17 59 16.8	
	comp=Z,7.4nm,1.0s						
PD31	**Pinedale Array**	**47.85 312**		P	**P**	**17 59 15.4**	**+0.5**
PD31				IAmb	IAmb	17 59 16.7	
	comp=Z,6.5nm,1.0s						
PDAR	**Pinedale Array**	**47.85 312**		P	**P**	**17 59 15.2**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=112,slow=9.3,SNR=29						
PDAR				PcP	**PcP**	**18 00 44.3**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=98,slow=6.5,SNR=3.0						
	comp=Z,4.0nm,0.8s						
TMUT	**Trail Mountain**	**48.23 307**		P	**P**	**17 59 18.9**	**+0.9**
RLMT	**Red Lodge**	**48.34 315**		P	**P**	**17 59 19.6**	**+1.0**
JLU	**Jordanelle**	**48.69 309**		P	**P**	**17 59 22.1**	**+0.8**
JLU				IAmb	IAmb	17 59 23.9	
	comp=Z,5.4nm,0.7s						
PKCU	**Pink Cliffs**	**48.75 304**		P	**P**	**17 59 20.3**	**-1.8**
PKCU				IAmb	IAmb	17 59 26.8	
	comp=Z,6.6nm,0.9s						
GCMT	**Greycliff**	**48.82 316**		P	**P**	**17 59 23.2**	**+1.0**
MOOW	**Moose Ponds**	**48.95 313**		P	**P**	**17 59 24.4**	**+1.1**
HWUT	**Hardware Ranch**	**49.00 310**		P	**P**	**17 59 24.1**	**+0.4**
HWUT				IAmb	IAmb	17 59 30.0	
	comp=Z,6.7nm,1.1s						
TPAW	**Teton Pass**	**49.02 313**		P	**P**	**17 59 24.8**	**+0.8**
YHB	**Horse Butte**	**49.54 314**		P	**P**	**17 59 30.4**	**+2.5**
YHL	**Hebgen Lake**	**49.56 314**		P	**P**	**17 59 29.5**	**+1.5**
SPUT	**South Promonto**	**49.58 309**		P	**P**	**17 59 29.5**	**+1.4**
SPUT				IAmb	IAmb	17 59 31.4	
	comp=Z,5.6nm,1.0s						
EGMT	**Eagleton**	**49.62 319**		P	**P**	**17 59 29.6**	**+1.4**
EGMT				IAmb	IAmb	17 59 30.6	
	comp=Z,10nm,1.1s						
DUG	**Dugway, Tooele**	**49.62 308**		P	**P**	**17 59 29.9**	**+1.4**
DUG				IAmb	IAmb	17 59 30.9	
	comp=Z,6.7nm,1.1s						
QLMT	**Earthquake Lak**	**49.72 314**		P	**P**	**17 59 31.1**	**+1.9**
HVU	**Hansel Valley**	**49.92 310**		P	**P**	**17 59 31.3**	**+0.6**
BGU	**Big Grassy Mou**	**49.93 309**		P	**P**	**17 59 31.8**	**+1.0**
BGU				IAmb	IAmb	17 59 33.1	
	comp=Z,8.1nm,1.0s						
PSUT	**Pine Spring**	**50.13 306**		P	**P**	**17 59 34.1**	**+1.7**
PSUT				IAmb	IAmb	17 59 46.4	
	comp=Z,5.4nm,0.9s						
HRY	**Holter Researc**	**50.53 316**		P	**P**	**17 59 36.2**	**+1.0**
YUH	**Yuha Desert**	**51.20 298**		P	**P**	**17 59 42.2**	**+1.9**
YUH				IAmb	IAmb	18 00 03.2	
	comp=Z,11nm,1.4s						
H10N3	**ASCENSION HYDR**	**52.63 115**		T	T	18 57 04.5	
	baz=299,slow=75,SNR=25						
H10N2	**ASCENSION HYDR**	**52.64 115**		T	T	18 57 04.9	
	baz=299,slow=75,SNR=24						
H10N1	**ASCENSION HYDR**	**52.65 115**		T	T	18 57 06.1	
	baz=299,slow=75,SNR=34						
MDT	**Midelt**	**52.69 62**		P	**P**	**17 59 51.2**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=64,slow=15,SNR=2.0						
	comp=Z,1.3nm,0.8s						
PLID	**Pearl Lake**	**52.93 313**		P	**P**	**17 59 53.4**	**+0.2**
H10S3	**ASCENSION HYDR**	**53.04 116**		T	T	18 57 34.8	
	baz=297,slow=74,SNR=17						
H10S2	**ASCENSION HYDR**	**53.06 116**		T	T	18 57 36.0	
	baz=283,slow=74,SNR=3.9						
BO02	**Sierra Bellavi**	**53.08 190**		P	**P**	**17 59 54.3**	**+0.1**
NVAR	**Mina Array Bea**	**53.58 305**		P	**P**	**17 59 58.7**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=108,slow=7.4,SNR=6.0						
NVAR				PcP	**PcP**	**18 01 05.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=123,slow=6.0,SNR=4.6						
	comp=Z,1.2nm,0.8s						
ESDC	**Sonseca Array**	**53.73 54**		P	**P**	**17 59 59.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=267,slow=7.2,SNR=2.5						
	comp=Z,0.1nm,0.3s						
J08A	**Circle Bar Ran**	**54.35 311**		P	**P**	**18 00 04.1**	**+0.5**
J08A				IAmb	IAmb	18 00 05.1	
	comp=Z,9.8nm,1.1s						
NEW	**Newport**	**54.40 317**	

comp=Z,2.1nm,0.9s
KTH Kantishna Hill 74.15 332 P P 18 02 13.9 +0.9
BRTR Keskin Array B 82.42 51 P P 18 02 60.0 +0.6
comp=Z,0.8nm,0.8s,baz=256,slow=4.0,SNR=4.5
comp=Z,0.8nm,0.8s
ASAR Alice Springs 164.76 245 PKP PKPdf 18 10 40.9 -0.5
comp=Z,0.7nm,1.0s,baz=98,slow=2.5,SNR=4.6
ASAR PKPab **PKPab 18 11 36.8 -0.3**
comp=Z,0.8nm,0.9s,baz=100,slow=3.4,SNR=5.3
WRA Warramunga Arr 165.19 259 PKP PKPdf 18 10 41.5 -0.3
comp=Z,0.4nm,0.8s,baz=84,slow=0.6,SNR=5.4
WRA PKPab **PKPab 18 11 38.8 -0.3**
comp=Z,0.6nm,1.1s,baz=98,slow=5.4,SNR=2.3

ROM 26 17:51:50.8±0.1, 42°.861N±0°.004×13°.097E±0°.005,
h10km, ML2.1/19, 14C-10D, Error ellipse: s-maj=0.4km
s-min=0.3km az=328.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**155**	⇓P	Pg	17 51 53.0	+0.3
NRCA				S	Sg	17 51 54.1	+0.1
NRCA				AML	AML		
	comp=E,14100μm,0.2s						
NRCA				AML	AML		
	comp=N,25600μm,0.2s						
NRCA				AML	AML		
	comp=E,14100μm,0.2s						
NRCA				AML	AML		
	comp=E,16350μm,0.2s						
NRCA				AML	AML		
	comp=N,25650μm,0.2s						
NRCA				AML	AML		
	comp=N,27650μm,0.2s						
NRCA				AML	AML		
	comp=E,14089μm,0.2s						
NRCA				AML	AML		
	comp=N,25628μm,0.1s						
NRCA				AML	AML		
	comp=N,27617μm,0.1s						
NRCA				AML	AML		
	comp=E,16334μm,0.2s						
T1245	**Castelsantange**	**0.07**	**94**	⇓P	Pg	17 51 53.5	+0.4
T1245				S	Sg	17 51 55.1	+0.3
T1245				AML	AML		
	comp=E,8455μm,0.8s						
T1245				AML	AML		
	comp=E,8310μm,0.8s						
T1245				AML	AML		
	comp=E,8460μm,0.8s						
T1245				AML	AML		
	comp=N,10750μm,0.7s						
T1245				AML	AML		
	comp=N,10750μm,0.7s						
T1245				AML	AML		
	comp=N,10950μm,0.7s						
T1245				AML	AML		
	comp=E,8465μm,0.8s						
T1245				AML	AML		
	comp=N,10302μm,0.1s						
T1245				AML	AML		
	comp=E,7544μm,0.2s						
T1245				AML	AML		
	comp=N,10072μm,0.1s						
T1245				AML	AML		
	comp=E,8125μm,0.1s						
MMO1	**Montemonaco**	**0.17**	**77**	⇓P	Pg	17 51 55.2	+0.7
MMO1				S	Sg	17 51 57.9	+0.8
FDMO	**Fiordimonte**	**0.17**	**358**	⇑P	Pg	17 51 55.2	+0.6
FDMO				S	Sg	17 51 58.0	+0.8
FDMO				AML	AML		
	comp=N,1002μm,1.0s						
FDMO				AML	AML		
	comp=E,830μm,0.8s						
FDMO				AML	AML		
	comp=E,707μm,0.1s						
FDMO				AML	AML		
	comp=N,690μm,0.1s						
T1215	**Vallo di Nera,**	**0.18**	**251**	⇑P	Pg	17 51 55.3	+0.7
T1215				S	Sg	17 51 58.3	+1.1
T1215				AML	AML		
	comp=E,974μm,0.4s						
T1215				AML	AML		
	comp=N,816μm,0.6s						
T1215				AML	AML		
	comp=E,1014μm,0.4s						
T1215				AML	AML		
	comp=N,768μm,1.5s						
T1215				AML	AML		
	comp=E,974μm,0.4s						
T1215				AML	AML		
	comp=N,815μm,0.6s						
T1215				AML	AML		
	comp=E,976μm,0.4s						
T1215				AML	AML		
	comp=N,630μm,0.1s						
T1215				AML	AML		
	comp=N,672μm,0.1s						
T1215				AML	AML		
	comp=E,759μm,0.2s						
T1215				AML	AML		
	comp=E,763μm,0.2s						
CESI	**CESI - Serrava**	**0.20**	**316**	⇑P	Pg	17 51 55.6	+0.6
CESI				S	Sg	17 51 58.9	+0.9
CESI				AML	AML		
	comp=E,1111μm,0.5s						
CESI				AML	AML		
	comp=N,1515μm,0.2s						
CESI				AML	AML		
	comp=E,1116μm,0.5s						
CESI				AML	AML		
	comp=E,1112μm,0.5s						
CESI				AML	AML		
	comp=N,1512μm,0.2s						
CESI				AML	AML		
	comp=E,997μm,0.2s						
AM05	**Amandola Campo**	**0.22**	**58**	⇓P	Pg	17 51 56.1	+0.8
AM05				S	Sg	17 51 59.5	+1.0
AM05				AML	AML		
	comp=N,800μm,0.1s						
AM05				AML	AML		
	comp=E,640μm,0.4s						
AM05				AML	AML		
	comp=E,3085μm,0.4s						
AM05				AML	AML		
	comp=N,21μm,1.6s						
AM05				AML	AML		
	comp=E,626μm,0.1s						
AM05				AML	AML		
	comp=N,799μm,0.1s						
AM05				AML	AML		
	comp=N,10μm,0.7s						
AM05				AML	AML		
	comp=E,2728μm,0.1s						
T1204	**Amatrice, Fraz**	**0.25**	**139**	⇑P	Pg	17 51 56.6	+0.7
T1204				S	Sg	17 52 00.9	+1.6
T1204				AML	AML		
	comp=N,329μm,0.1s						
T1204				AML	AML		
	comp=E,634μm,0.1s						
T1241	**Roccafluvione,**	**0.25**	**91**	P	Pg	17 51 56.4	+0.6
T1241				S	Sg	17 52 00.5	+1.3
LNSS	**Leonessa**	**0.26**	**189**	⇑P	Pg	17 51 56.6	+0.5
LNSS				S	Sb	17 52 01.0	-1.2
LNSS				AML	AML		
	comp=E,609μm,0.5s						
LNSS				AML	AML		
	comp=N,604μm,0.7s						
LNSS				AML	AML		
	comp=N,604μm,0.7s						
LNSS				AML	AML		
	comp=N,918μm,0.6s						
LNSS				AML	AML		
	comp=E,1255μm,0.5s						
LNSS				AML	AML		
	comp=E,501μm,0.1s						
LNSS				AML	AML		
	comp=N,594μm,0.1s						
GUMA	**Gualdo di Mace**	**0.27**	**41**	P	Pb	17 51 57.1	-0.6
GUMA				S	Sb	17 52 01.5	-0.9
GUMA				AML	AML		
	comp=E,1178μm,0.3s						
GUMA				AML	AML		
	comp=N,1260μm,0.3s						
GUMA				AML	AML		
	comp=E,1560μm,0.2s						
GUMA				AML	AML		
	comp=E,1179μm,0.3s						
GUMA				AML	AML		
	comp=N,1270μm,0.4s						
GUMA				AML	AML		
	comp=N,1610μm,0.9s						
GUMA				AML	AML		
	comp=N,1118μm,0.1s						
GUMA				AML	AML		
	comp=E,1025μm,0.3s						
GUMA				AML	AML		
	comp=N,1261μm,0.3s						
GUMA				AML	AML		
	comp=E,1561μm,0.2s						
SMA1	**SAN MARTINO**	**0.29**	**143**	⇑P	Pb	17 51 57.4	-0.7
SMA1				AML	AML		
	comp=E,612μm,0.3s						
SMA1				AML	AML		
	comp=N,540μm,0.3s						
SMA1				AML	AML		
	comp=E,2470μm,0.4s						
SMA1				AML	AML		
	comp=N,2220μm,0.3s						
SMA1				AML	AML		
	comp=E,350μm,0.4s						
SMA1				AML	AML		
	comp=N,400μm,0.2s						
T1243	**Rocca Santa Ma**	**0.31**	**122**	⇑P	Pg	17 51 57.4	+0.4
T1243				S	Sb	17 52 02.4	-1.2
RM33	**Pellescritta (**	**0.36**	**166**	P	Pg	17 51 58.6	+0.6
RM33				S	Sb	17 52 04.3	-0.8
RM33				AML	AML		
	comp=E,210μm,0.9s						
RM33				AML	AML		
	comp=N,192μm,0.3s						
RM33				AML	AML		
	comp=N,813μm,0.2s						
RM33				AML	AML		
	comp=E,522μm,0.2s						
RM33				AML	AML		
	comp=N,778μm,0.2s						
RM33				AML	AML		
	comp=E,520μm,0.3s						
RM33				AML	AML		
	comp=N,187μm,0.1s						
RM33				AML	AML		
	comp=E,232μm,0.3s						
RM33				AML	AML		
	comp=E,192μm,0.2s						
RM33				AML	AML		
	comp=N,167μm,0.1s						
T1211	**Morro Reatino**	**0.37**	**209**	P	Pg	17 51 58.5	+0.3
T1211				AML	AML		
	comp=E,248μm,0.3s						
T1211				AML	AML		
	comp=N,396μm,0.5s						
T1211				AML	AML		
	comp=N,303μm,0.2s						
T1211				AML	AML		
	comp=E,190μm,0.2s						
T1211				AML	AML		
	comp=E,192μm,0.2s						
T1211				AML	AML		
	comp=N,332μm,0.3s						
CAMP	**Campotosto**	**0.40**	**145**	⇑P	Pg	17 51 59.0	+0.4
CAMP				S	Sb	17 52 05.1	-1.1
CAMP				AML	AML		
	comp=E,172μm,0.2s						
CAMP				AML	AML		
	comp=N,92μm,0.5s						
CAMP				AML	AML		
	comp=E,288μm,0.7s						
CAMP				AML	AML		
	comp=N,216μm,0.5s						
CAMP				AML	AML		
	comp=E,172μm,0.2s						
CAMP				AML	AML		
	comp=N,83μm,0.2s						
SNTG	**Esanatoglia**	**0.41**	**344**	P	Pg	17 51 59.5	+0.6
SNTG				AML	AML		
	comp=E,93μm,0.3s						
SNTG				AML	AML		
	comp=N,112μm,0.7s						
SNTG				AML	AML		
	comp=N,112μm,0.7s						
SNTG				AML	AML		
	comp=E,109μm,0.2s						
SNTG				AML	AML		
	comp=N,99μm,0.1s						
SNTG				AML	AML		
	comp=N,156μm,0.6s						
SNTG				AML	AML		
	comp=E,92μm,0.1s						
OFFI	**Offida**	**0.44**	**80**	⇑P	Pb	17 52 00.7	+0.1
OFFI				AML	AML		
	comp=E,334μm,0.7s						
OFFI				AML	AML		
	comp=N,308μm,0.8s						
OFFI				AML	AML		
	comp=N,314μm,0.5s						
OFFI				AML	AML		
	comp=N,288μm,0.5s						
OFFI				AML	AML		
	comp=E,255μm,0.6s						
TERO	**Teramo**	**0.44**	**122**	⇑P	Pg	17 51 59.7	+0.2
TERO				S	Sb	17 52 06.6	-0.8
TERO				AML	AML		
	comp=E,294μm,0.6s						
TERO				AML	AML		
	comp=N,351μm,0.8s						
TERO				AML	AML		
	comp=N,322μm,0.4s						
TERO				AML	AML		
	comp=E,293μm,0.6s						
TERO				AML	AML		
	comp=E,250μm,0.6s						
TERO				AML	AML		
	comp=N,283μm,0.1s						
TERO				AML	AML		
	comp=E,249μm,0.1s						
TERO				AML	AML		
	comp=N,246μm,0.1s						
TERO				AML	AML		
	comp=E,214μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.45**	**160**	⇓P	Pb	17 52 00.7	-0.1
T1247				AML	AML		
	comp=E,173μm,0.5s						
T1247				AML	AML		
	comp=N,192μm,0.1s						
T1247				AML	AML		
	comp=N,405μm,0.3s						
T1247				AML	AML		
	comp=E,360μm,0.7s						
T1247				AML	AML		
	comp=N,192μm,0.1s						
T1247				AML	AML		
	comp=E,166μm,0.1s						
CESX	**Cesi**	**0.46**	**237**	P	Pg	17 51 59.5	-0.1
CESX				AML	AML		
	comp=E,170μm,0.8s						
CESX				AML	AML		
	comp=N,180μm,0.6s						
CESX				AML	AML		
	comp=N,157μm,0.3s						
CESX				AML	AML		
	comp=E,139μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.47**	**314**	⇑P	Pg	17 52 00.3	+0.4
EL6	**Elcito**	**0.47**	**0**	⇑P	Pg	17 52 00.4	+0.5
EL6				AML	AML		
	comp=E,169μm,0.2s						
EL6				AML	AML		
	comp=N,153μm,0.1s						
GIGS	**Gran Sasso**	**0.54**	**140**	P	Pg	17 52 01.1	-0.1
GIGS				AML	AML		
	comp=E,50μm,0.9s						
GIGS				AML	AML		
	comp=N,38μm,0.6s						
GIGS				AML	AML		
	comp=E,58μm,0.4s						
GIGS				AML	AML		
	comp=N,44μm,0.8s						
GIGS				AML	AML		
	comp=E,49μm,0.1s						
GIGS				AML	AML		
	comp=N,32μm,0.1s						
MURB	**Monte Urbino**	**0.58**	**314**	S	Sb	17 52 12.0	+0.6
FIAM	**Fiamignano**	**0.59**	**179**	⇓P	Pb	17 52 02.8	-0.5
FIAM				AML	AML		
	comp=N,78μm,1.1s						
FIAM				AML	AML		
	comp=E,85μm,0.4s						
FIAM				AML	AML		
	comp=N,38μm,0.3s						
FIAM				AML	AML		
	comp=E,45μm,0.2s						
ATFO	**Monte Foce - G**	**0.64**	**323**	⇑P	Pg	17 52 03.4	+0.3
ATFO				AML	AML		
	comp=E,106μm,0.2s						
ATFO				AML	AML		
	comp=N,96μm,0.3s						
ATFO				AML	AML		
	comp=E,106μm,0.2s						
ATFO				AML	AML		
	comp=N,96μm,0.3s						
ATFO				AML	AML		
	comp=N,96μm,0.3s						
ATFO				AML	AML		
	comp=E,105μm,0.2s						
ARVD	**Arcevia**	**0.65**	**350**	⇓P	Pg	17 52 03.7	+0.4
ARVD				S	Sn	17 52 15.0	-1.4
ARVD				AML	AML		
	comp=E,44μm,0.1s						
ARVD				AML	AML		
	comp=N,29μm,0.1s						
VCEL	**Villa Celiera**	**0.72**	**130**	⇓P	Pg	17 52 04.9	+0.3
VCEL				AML	AML		
	comp=E,152μm,1.3s						
VCEL				AML	AML		
	comp=N,146μm,1.2s						
VCEL				AML	AML		
	comp=E,102μm,0.4s						
VCEL				AML	AML		
	comp=N,99μm,0.1s						
ATVO	**AVT- Monte Val**	**0.73**	**316**	⇓P	Pg	17 52 04.8	0.0
ATVO				S	Sn	17 52 17.0	-1.3
ATVO				AML	AML		
	comp=E,58μm,0.9s						
ATVO				AML	AML		
	comp=N,47μm,0.5s						
ATVO				AML	AML		
	comp=E,58μm,0.9s						
ATVO				AML	AML		
	comp=E,52μm,0.3s						
ATVO				AML	AML		
	comp=N,47μm,0.5s						
ATPI	**Pietralunga -**	**0.78**	**319**	⇓P	Pg	17 52 06.0	+0.2
ATPI				AML	AML		
	comp=E,34μm,0.5s						
ATPI				AML	AML		
	comp=N,34μm,0.4s						
PIEI	**Pieia**	**0.79**	**329**	S	Sn	17 52 19.0	-0.9
T0110	**Collepietro**	**0.81**	**141**	⇑P	Pb	17 52 06.8	-0.2
T0110				AML	AML		
	comp=E,83μm,0.4s						
T0110				AML	AML		
	comp=N,107μm,0.5s						
T0110				AML	AML		
	comp=N,158μm,0.6s						
T0110				AML	AML		
	comp=E,142μm,0.4s						
T0110				AML	AML		
	comp=N,106μm,0.5s						
T0110				AML	AML		
	comp=E,83μm,0.4s						
FSSB	**Fossombrone**	**0.86**	**344**	S	Sn	17 52 22.0	+0.3

ROM 26 17:52:42.4±0.0, 42°.733N±0°.003×13°.166E±0°.004,
h11km, ML2.2/6, Error ellipse: s-maj=0.3km
s-min=0.2km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.10**	**140**	P	Pg	17 52 45.4	+0.3
T1201				S	Sg	17 52 47.8	+0.7
T1244	**Arquata del Tr**	**0.10**	**76**	P	Pg	17 52 45.6	+0.5
T1244				S	Sg	17 52 48.0	+0.8
NRCA	**Norcia**	**0.11**	**339**	P	Pg	17 52 45.3	0.0
NRCA				S	Sg	17 52 47.4	0.0
NRCA				AML	AML		
	comp=E,6940μm,0.2s						
NRCA				AML	AML		
	comp=N,3230μm,0.1s						
NRCA				AML	AML		
	comp=E,7450μm,0.2s						
NRCA				AML	AML		
	comp=N,3505μm,0.1s						
NRCA				AML	AML		
	comp=N,7080μm,0.2s						
NRCA				AML	AML		
	comp=N,7480μm,0.2s						
NRCA				AML	AML		
	comp=E,11850μm,0.1s						
NRCA				AML	AML		
	comp=E,10850μm,0.1s						
NRCA				AML	AML		
	comp=N,3153μm,0.1s						
NRCA				AML	AML		
	comp=N,3506μm,0.1s						
NRCA				AML	AML		
	comp=E,6870μm,0.1s						
NRCA				AML	AML		
	comp=E,6866μm,0.1s						
T1245	**Castelsantange**	**0.12**	**7**	P	Pg	17 52 45.4	-0.2
T1245				S	Sg	17 52 48.3	+0.4
T1245				AML	AML		
	comp=E,4475μm,0.7s						
T1245				AML	AML		
	comp=N,5315μm,0.8s						
T1245				AML	AML		
	comp=E,4250μm,0.7s						
T1245				AML	AML		
	comp=E,4890μm,0.1s						
T1245				AML	AML		
	comp=E,4525μm,0.9s						
T1245				AML	AML		
	comp=N,5310μm,0.8s						
T1245				AML	AML		
	comp=N,5135μm,0.8s						
T1245				AML	AML		
	comp=E,3145μm,0.2s						
T1245				AML	AML		
	comp=E,2720μm,0.2s						
T1245				AML	AML		
	comp=N,3540μm,0.6s						
T1245				AML	AML		
	comp=N,3266μm,0.5s						
T1204	**Amatrice, Fraz**	**0.12**	**117**	P	Pg	17 52 46.0	+0.4
T1204				AML	AML		
	comp=E,2216μm,0.2s						
LNSS	**Leonessa**	**0.16**	**216**	P	Pg	17 52 46.4	+0.4
LNSS				S	Sg	17 52 49.4	+0.8
SMA1	**SAN MARTINO**	**0.16**	**129**	P	Pb	17 52 46.9	-0.6
SMA1				S	Sg	17 52 49.8	+1.1
T1217	**Poggiodomo (PG**	**0.17**	**263**	P	Pb	17 52 47.0	-0.7
T1217				S	Sg	17 52 50.7	+1.7
MC2	**Monte Cornacci**	**0.18**	**6**	P	Pg	17 52 47.1	+0.6
MC2				S	Sg	17 52 51.0	+1.7
MMO1	**Montemonaco**	**0.20**	**35**	P	Pg	17 52 47.3	+0.5
MMO1				S	Sg	17 52 50.9	+1.1
T1243	**Rocca Santa Ma**	**0.21**	**100**	P	Pg	17 52 47.3	+0.4
T1243				S	Sg	17 52 51.0	+1.0
RM33	**Pellescritta (**	**0.23**	**171**	P	Pg	17 52 47.6	+0.4
RM33				S	Sg	17 52 51.5	+1.1
T1215	**Vallo di Nera,**	**0.23**	**288**	P	Pg	17 52 47.5	+0.3
T1215				S	Sg	17 52 51.5	+1.0
T1215				AML	AML		
	comp=E,186μm,0.2s						
T1215				AML	AML		
	comp=N,244μm,0.5s						
T1215				AML	AML		
	comp=N,284μm,0.5s						
T1215				AML	AML		
	comp=E,194μm,0.3s						
T1241	**Roccafluvione,**	**0.23**	**58**	P	Pg	17 52 47.8	+0.6
T1241				S	Sg	17 52 51.7	+1.2
T1241				AML	AML		
	comp=N,213μm,1.2s						
FEMA	**Monte Fema**	**0.24**	**340**	P	Pb	17 52 52.2	+3.2
FEMA				S	Sg	17 52 53.6	+2.6
CAMP	**Campotosto**	**0.27**	**138**	P	Pg	17 52 48.4	+0.4
CAMP				S	Sb	17 52 52.9	-1.0
T1246	**Crognaleto (TE**	**0.28**	**122**	P	Pg	17 52 48.6	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1246				S	Sb	17 52 53.3	-1.1
T1211	**Morro Reatino**	**0.30**	**229**	P	Pg	17 52 49.2	+0.7
T1211				S	Sb	17 52 54.1	-0.9
T1247	**Pizzolo (AQ)**	**0.31**	**161**	P	Pg	17 52 48.9	+0.3
T1247				S	Sb	17 52 54.4	-0.6
FDMO	**Fiordimonte**	**0.31**	**349**	P	Pg	17 52 49.1	+0.4
FDMO				S	Sb	17 52 54.6	-0.5
CESI	**CESI - Serrava**	**0.33**	**325**	P	Pb	17 52 49.8	-0.6
CESI				S	Sb	17 52 54.9	-0.9
TERO	**Teramo**	**0.34**	**109**	P	Pg	17 52 49.5	+0.2
TERO				S	Sg	17 52 54.9	+1.1
TERO				AML	AML		
	comp=N,326µm,0.4s						
TERO				AML	AML		
	comp=E,274µm,0.9s						
TERO				AML	AML		
	comp=N,312µm,0.4s						
TERO				AML	AML		
	comp=E,281µm,1.7s						
GUMA	**Gualdo di Mace**	**0.35**	**21**	P	Pb	17 52 50.2	-0.6

ROM 26 18:01:32.1±0.1, 42°.879N±0°.003×13°.125E±0°.004, h9km, Md1.0/2, 2C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=103.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**190**	P	Pg	18 01 34.4	+0.3
NRCA				S	Sg	18 01 35.4	0.0
NRCA				AML	AML		
	comp=E,4140µm,0.1s						
NRCA				AML	AML		
	comp=N,5635µm,0.1s						
NRCA				AML	AML		
	comp=E,4515µm,0.1s						
NRCA				AML	AML		
	comp=N,6405µm,0.1s						
NRCA				AML	AML		
	comp=E,16700µm,0.1s						
NRCA				AML	AML		
	comp=N,13900µm,0.1s						
NRCA				AML	AML		
	comp=E,17950µm,1.5s						
NRCA				AML	AML		
	comp=N,15400µm,0.8s						
NRCA				AML	AML		
	comp=E,3204µm,0.1s						
NRCA				AML	AML		
	comp=N,5517µm,0.1s						
NRCA				AML	AML		
	comp=N,6023µm,0.1s						
NRCA				AML	AML		
	comp=E,3806µm,0.1s						
NRCA				END			
T1245	**Castelsantange**	**0.05**	**116**	P	Pg	18 01 34.5	+0.3
T1245				S	Sg	18 01 35.6	-0.1
T1245				AML	AML		
	comp=E,2570µm,0.8s						
T1245				AML	AML		
	comp=N,2320µm,0.3s						
T1245				AML	AML		
	comp=E,2510µm,0.8s						
T1245				AML	AML		
	comp=N,2305µm,0.3s						
T1245				AML	AML		
	comp=E,22150µm,0.4s						
T1245				AML	AML		
	comp=N,20450µm,0.3s						
T1245				AML	AML		
	comp=E,22050µm,0.4s						
T1245				AML	AML		
	comp=N,21300µm,0.3s						
T1245				AML	AML		
	comp=E,506µm,0.2s						
T1245				AML	AML		
	comp=N,1351µm,0.1s						
MC2	**Monte Cornacci**	**0.06**	**55**	P	Pg	18 01 34.5	+0.2
MC2				S	Sg	18 01 36.0	0.0
MMO1	**Montemonaco**	**0.15**	**82**	⇑P	Pg	18 01 36.0	+0.6
MMO1				S	Sg	18 01 38.6	+0.8
MMO1				END			
FDMO	**Fiordimonte**	**0.16**	**350**	P	Pg	18 01 36.0	+0.4
FDMO				S	Sg	18 01 38.5	+0.6
FDMO				AML	AML		
	comp=E,312µm,1.3s						
FDMO				AML	AML		
	comp=N,236µm,0.9s						
FDMO				AML	AML		
	comp=E,3630µm,0.2s						
FDMO				AML	AML		
	comp=N,3415µm,1.1s						
FDMO				AML	AML		
	comp=N,233µm,0.2s						
FDMO				AML	AML		
	comp=E,139µm,0.1s						
AM05	**Amandola Campo**	**0.19**	**59**	P	Pg	18 01 36.8	+0.7
AM05				S	Sg	18 01 40.0	+1.1
AM05				AML	AML		
	comp=E,1255µm,0.2s						
AM05				AML	AML		
	comp=N,1410µm,0.1s						
AM05				AML	AML		
	comp=E,392µm,0.3s						
AM05				AML	AML		
	comp=E,77µm,0.2s						
T1215	**Vallo di Nera,**	**0.20**	**248**	P	Pg	18 01 37.0	+0.7
T1215				S	Sg	18 01 40.5	+1.3
CESI	**CESI - Serrava**	**0.20**	**308**	P	Pg	18 01 37.4	+1.1
CESI				S	Sg	18 01 40.5	+1.2
CESI				AML	AML		
	comp=E,298µm,0.2s						
CESI				AML	AML		
	comp=N,466µm,0.2s						
CESI				AML	AML		
	comp=E,4530µm,1.6s						
CESI				AML	AML		
	comp=N,5915µm,0.4s						
CESI				AML	AML		
	comp=E,134µm,0.8s						
T1217	**Poggiodomo (PG**	**0.22**	**221**	P	Pg	18 01 37.4	+0.8
T1217				S	Sg	18 01 41.1	+1.4
T1217				AML	AML		
	comp=E,1685µm,1.1s						
T1217				AML	AML		
	comp=N,2975µm,0.8s						
T1217				AML	AML		
	comp=E,1714µm,0.9s						
T1217				AML	AML		
	comp=N,2710µm,0.8s						
T1217				AML	AML		
	comp=E,85µm,0.2s						
T1217				AML	AML		
	comp=E,83µm,0.2s						
T1217				AML	AML		
	comp=N,124µm,0.2s						
T1241	**Roccafluvione,**	**0.23**	**96**	⇓P	Pg	18 01 37.3	+0.6
T1241				S	Sg	18 01 41.1	+1.3
T1241				AML	AML		
	comp=E,322µm,0.1s						
T1241				AML	AML		
	comp=N,190µm,0.1s						
T1241				AML	AML		
	comp=E,1865µm,1.0s						
T1241				AML	AML		
	comp=N,1860µm,0.9s						
T1241				AML	AML		
	comp=E,322µm,0.1s						
T1241				AML	AML		
	comp=N,190µm,0.1s						
GUMA	**Gualdo di Mace**	**0.24**	**40**	P	Pg	18 01 37.8	+0.8
GUMA				S	Sg	18 01 42.0	+1.7
GUMA				AML	AML		
	comp=E,6585µm,1.6s						
GUMA				AML	AML		
	comp=N,10475µm,0.3s						
GUMA				AML	AML		
	comp=E,11695µm,0.3s						
GUMA				AML	AML		
	comp=N,8405µm,0.2s						
GUMA				AML	AML		
	comp=E,385µm,0.2s						
T1204	**Amatrice, Fraz**	**0.25**	**145**	⇓P	Pg	18 01 38.0	+0.9
T1204				S	Sg	18 01 42.1	+1.6
T1204				AML	AML		
	comp=E,2965µm,0.2s						
T1204				AML	AML		
	comp=N,1985µm,0.2s						
T1204				AML	AML		
	comp=N,92µm,0.1s						
LNSS	**Leonessa**	**0.28**	**193**	P	Pg	18 01 38.4	+0.6
LNSS				S	Sg	18 01 42.8	+1.2
LNSS				AML	AML		
	comp=E,155µm,1.3s						
LNSS				AML	AML		
	comp=N,187µm,0.6s						
LNSS				AML	AML		
	comp=E,2390µm,0.8s						
LNSS				AML	AML		
	comp=N,1555µm,0.6s						
LNSS				AML	AML		
	comp=E,132µm,0.1s						
LNSS				AML	AML		
	comp=N,79µm,0.1s						
SMA1	**SAN MARTINO**	**0.29**	**148**	P	Pb	18 01 39.2	-0.4
SMA1				S	Sb	18 01 43.5	-1.1
T1243	**Rocca Santa Ma**	**0.30**	**127**	P	Pg	18 01 38.7	+0.6
RM33	**Pellescritta (**	**0.38**	**170**	⇑P	Pb	18 01 40.2	-0.7
RM33				S	Sb	18 01 46.2	-0.7
RM33				AML	AML		
	comp=E,680µm,0.3s						
RM33				AML	AML		
	comp=N,872µm,0.3s						
RM33				AML	AML		
	comp=E,694µm,0.9s						
RM33				AML	AML		
	comp=N,856µm,0.3s						
RM33				AML	AML		
	comp=E,60µm,0.3s						
RM33				AML	AML		
	comp=N,124µm,0.3s						
RM33				AML	AML		
	comp=N,82µm,0.2s						
T1211	**Morro Reatino**	**0.40**	**210**	AML	AML		
	comp=E,1006µm,1.1s						
T1211				AML	AML		
	comp=N,1410µm,0.2s						
TERO	**Teramo**	**0.44**	**126**	AML	AML		
	comp=N,1400µm,0.3s						
TERO				AML	AML		
	comp=E,1073µm,0.4s						
TERO				AML	AML		
	comp=E,1240µm,0.4s						
TERO				AML	AML		
	comp=N,1540µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.47**	**311**	AML	AML		
	comp=N,700µm,0.7s						
ATCC				AML	AML		
	comp=E,770µm,0.7s						
FIAM	**Fiamignano**	**0.61**	**181**	⇓P	Pg	18 01 44.0	+0.1
FIAM				S	Sb	18 01 53.3	-0.4
FIAM				AML	AML		
	comp=E,336µm,0.2s						
FIAM				AML	AML		
	comp=N,191µm,0.6s						

ROM 26 18:02:22.9±0.1, 42°.906N±0°.004×13°.121E±0°.005, h9km, ML2.5/37, 13C-13D, Error ellipse: s-maj=0.4km s-min=0.3km az=258.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**82**	P	Pg	18 02 24.8	-0.2
MC2				S	Sg	18 02 26.4	-0.1
T1245	**Castelsantange**	**0.07**	**135**	⇓P	Pg	18 02 25.5	+0.4
T1245				AML	AML		
	comp=N,20500µm,0.3s						
T1245				AML	AML		
	comp=E,22150µm,0.4s						
T1245				AML	AML		
	comp=N,20450µm,0.3s						
T1245				AML	AML		
	comp=E,22150µm,0.4s						
T1245				AML	AML		
	comp=E,22050µm,0.4s						
T1245				AML	AML		
	comp=N,21300µm,0.3s						
T1245				AML	AML		
	comp=N,20500µm,0.3s						
NRCA	**Norcia**	**0.07**	**184**	P	Pg	18 02 25.1	0.0
NRCA				S	Sg	18 02 27.2	+0.5
NRCA				AML	AML		
	comp=E,17950µm,1.5s						
NRCA				AML	AML		
	comp=N,13900µm,0.1s						
NRCA				AML	AML		
	comp=N,15400µm,0.8s						
NRCA				AML	AML		
	comp=E,17950µm,0.5s						
NRCA				AML	AML		
	comp=E,16750µm,0.1s						
NRCA				AML	AML		
	comp=N,13950µm,0.1s						
NRCA				AML	AML		
	comp=N,15400µm,1.2s						
NRCA				END			
FEMA	**Monte Fema**	**0.08**	**317**	P	Pg	18 02 25.6	+0.3
FEMA				S	Sg	18 02 27.1	+0.2
FEMA				AML	AML		
	comp=E,41500µm,0.2s						
FEMA				AML	AML		
	comp=E,41550µm,0.2s						
FEMA				AML	AML		
	comp=E,41550µm,0.2s						
FEMA				AML	AML		
	comp=N,18950µm,0.2s						
FEMA				END			
FDMO	**Fiordimonte**	**0.13**	**349**	P	Pg	18 02 26.4	+0.5
FDMO				S	Sg	18 02 28.8	+0.8
FDMO				AML	AML		
	comp=E,3630µm,0.2s						
FDMO				AML	AML		
	comp=N,3415µm,1.1s						
FDMO				AML	AML		
	comp=N,3415µm,0.9s						
FDMO				END			
MMO1	**Montemonaco**	**0.15**	**92**	P	Pg	18 02 26.8	+0.6
MMO1				S	Sg	18 02 29.6	+1.0
MMO1				END			
AM05	**Amandola Campo**	**0.18**	**67**	P	Pg	18 02 27.5	+0.7
AM05				AML	AML		
	comp=E,1255µm,0.2s						
AM05				AML	AML		
	comp=N,1405µm,0.1s						
AM05				AML	AML		
	comp=E,6180µm,0.2s						
AM05				AML	AML		
	comp=N,308µm,1.0s						
AM05				AML	AML		
	comp=E,6175µm,0.2s						
AM05				AML	AML		
	comp=N,567µm,0.3s						
AM05				AML	AML		
	comp=N,1410µm,0.1s						
AM05				END			
CESI	**CESI - Serrava**	**0.19**	**302**	P	Pg	18 02 27.5	+0.6
CESI				S	Sg	18 02 31.1	+1.5
CESI				AML	AML		
	comp=E,4530µm,1.6s						
CESI				AML	AML		
	comp=N,5915µm,0.4s						
CESI				AML	AML		
	comp=E,4530µm,0.4s						
CESI				END			
T1215	**Vallo di Nera,**	**0.21**	**241**	⇑P	Pg	18 02 27.2	-0.1
T1215				AML	AML		
	comp=N,1570µm,1.5s						
T1215				AML	AML		
	comp=N,1574µm,1.5s						
T1215				AML	AML		
	comp=E,1645µm,0.4s						
T1215				AML	AML		
	comp=N,1575µm,1.5s						
T1215				AML	AML		
	comp=E,1700µm,0.4s						
T1215				AML	AML		
	comp=N,1576µm,1.5s						
T1215				AML	AML		
	comp=E,1650µm,0.4s						
T1215				AML	AML		
	comp=N,1576µm,1.5s						
T1215				AML	AML		
	comp=E,1695µm,0.4s						
T1215				AML	AML		
	comp=N,1581µm,1.5s						
T1215				AML	AML		
	comp=E,1695µm,1.6s						
T1215				AML	AML		
	comp=N,1575µm,0.5s						
T1215				AML	AML		
	comp=N,1581µm,0.5s						
T1215				AML	AML		
	comp=E,1650µm,1.6s						
T1241	**Roccafluvione,**	**0.23**	**102**	⇑P	Pg	18 02 27.2	-0.5
T1241				AML	AML		
	comp=E,1870µm,1.0s						
T1241				AML	AML		
	comp=N,1860µm,0.9s						
T1217	**Poggiodomo (PG**	**0.24**	**216**	P	Pg	18 02 27.8	0.0
T1217				S	Sg	18 02 33.0	+2.0
T1217				AML	AML		
	comp=N,2970µm,0.8s						
T1217				AML	AML		
	comp=E,1720µm,0.9s						
T1217				AML	AML		
	comp=N,2720µm,0.8s						
T1217				AML	AML		
	comp=E,1685µm,1.1s						
T1217				AML	AML		
	comp=N,2975µm,0.8s						
T1217				AML	AML		
	comp=E,1725µm,0.9s						
T1217				AML	AML		
	comp=E,1714µm,0.9s						
T1217				AML	AML		
	comp=N,2710µm,0.8s						
T1217				AML	AML		
	comp=E,1730µm,0.9s						
T1217				AML	AML		
	comp=N,2725µm,0.8s						
T1217				AML	AML		
	comp=E,1685µm,1.1s						
T1217				AML	AML		
	comp=E,1685µm,0.9s						
T1217				AML	AML		
	comp=E,1730µm,1.1s						
T1217				END			
T1204	**Amatrice, Fraz**	**0.27**	**148**	P	Pg	18 02 29.2	+0.8
T1204				S	Sb	18 02 34.1	-0.7
T1204				AML	AML		
	comp=E,2965µm,0.2s						
T1204				AML	AML		
	comp=N,1985µm,0.2s						
T1204				END			
SEF1	**Sefro**	**0.27**	**332**	S	Sb	18 02 34.0	-0.9
LNSS	**Leonessa**	**0.31**	**191**	P	Pg	18 02 29.9	+0.8
LNSS				S	Sb	18 02 35.1	-0.8
LNSS				AML	AML		
	comp=E,2390µm,0.8s						
LNSS				AML	AML		
	comp=N,1555µm,0.6s						
LNSS				AML	AML		
	comp=E,2390µm,1.2s						
LNSS				END			
SMA1	**SAN MARTINO**	**0.32**	**150**	S	Sb	18 02 36.0	-0.2
T1243	**Rocca Santa Ma**	**0.32**	**131**	P	Pg	18 02 28.9	-0.4
MNTP	**Montappone**	**0.34**	**48**	⇓P	Pb	18 02 31.0	-0.3
MNTP				AML	AML		
	comp=N,1325µm,0.7s						
MNTP				AML	AML		
	comp=E,1445µm,1.1s						
RM33	**Pellescritta (**	**0.40**	**170**	⇓P	Pg	18 02 30.7	-0.1
RM33				AML	AML		
	comp=N,872µm,0.3s						
RM33				AML	AML		
	comp=N,859µm,0.3s						
RM33				AML	AML		
	comp=N,872µm,0.3s						
RM33				AML	AML		
	comp=N,856µm,0.3s						
RM33				AML	AML		
	comp=N,854µm,0.3s						
RM33				AML	AML		
	comp=E,680µm,0.3s						
RM33				AML	AML		
	comp=E,694µm,0.9s						
RM33				AML	AML		
	comp=N,872µm,0.3s						
RM33				AML	AML		
	comp=E,680µm,1.7s						
OFFI	**Offida**	**0.42**	**86**	⇓P	Pg	18 02 31.6	+0.6
OFFI				AML	AML		
	comp=N,1325µm,0.5s						
OFFI				AML	AML		
	comp=E,1205µm,0.5s						
OFFI				AML	AML		
	comp=N,1325µm,1.5s						
T1211	**Morro Reatino**	**0.42**	**208**	S	Sb	18 02 39.0	-0.1
EL6	**Elcito**	**0.42**	**358**	P	Pg	18 02 31.6	+0.4
EL6				AML	AML		
	comp=E,981µm,1.4s						
EL6				AML	AML		
	comp=N,1515µm,0.2s						
EL6				AML	AML		
	comp=N,1510µm,0.2s						
EL6				AML	AML		
	comp=E,980µm,1.4s						
EL6				AML	AML		
	comp=E,980µm,0.6s						
CAMP	**Campotosto**	**0.43**	**150**	⇓P	Pg	18 02 31.8	+0.5
CAMP				AML	AML		
	comp=E,502µm,0.2s						
CAMP				AML	AML		
	comp=N,360µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.45**	**309**	⇓P	Pg	18 02 31.4	-0.4
ATCC				AML	AML		
	comp=E,770µm,0.7s						
ATCC				AML	AML		
	comp=N,700µm,0.7s						
TERO	**Teramo**	**0.45**	**128**	P	Pg	18 02 31.4	-0.4
TERO				AML	AML		
	comp=E,1074µm,0.4s						
TERO				AML	AML		
	comp=E,1073µm,0.4s						
TERO				AML	AML		
	comp=E,1072µm,0.4s						
TERO				AML	AML		
	comp=N,1400µm,0.3s						
TERO				AML	AML		
	comp=E,1072µm,1.6s						
T1247	**Pizzolo (AQ)**	**0.48**	**164**	⇑P	Pg	18 02 32.9	+0.6
T1247				AML	AML		
	comp=N,766µm,0.4s						
T1247				AML	AML		
	comp=N,766µm,0.4s						
T1247				AML	AML		
	comp=E,738µm,0.1s						
T1247				AML	AML		
	comp=E,738µm,1.9s						
CESX	**Cesi**	**0.50**	**234**	S	Sb	18 02 41.0	-0.2
GIGS	**Gran Sasso**	**0.56**	**144**	⇓P	Pg	18 02 34.3	+0.4
GIGS				AML	AML		
	comp=E,146µm,0.5s						
GIGS				AML	AML		
	comp=N,124µm,0.3s						
GIGS				AML	AML		
	comp=E,146µm,0.5s						
MURB	**Monte Urbino**	**0.56**	**309**	⇑P	Pg	18 02 34.3	+0.4
MURB				AML	AML		
	comp=E,1101µm,0.9s						
MURB				AML	AML		
	comp=N,1435µm,0.9s						
MURB				AML	AML		
	comp=E,1101µm,1.1s						
TRTR	**Tortoreto Alta**	**0.59**	**99**	⇑P	Pb	18 02 35.7	+0.2
TRTR				AML	AML		
	comp=E,994µm,0.3s						
TRTR				AML	AML		
	comp=E,994µm,1.7s						
TRTR				AML	AML		
	comp=N,1370µm,0.3s						
PP3	**Marolino**	**0.59**	**37**	⇓P	Pb	18 02 35.7	+0.2
PP3				AML	AML		
	comp=E,714µm,1.5s						
PP3				AML	AML		
	comp=N,785µm,0.9s						
PP3				AML	AML		
	comp=E,722µm,0.5s						
PP3				AML	AML		

	comp=N,736μm,1.2s						
PP3				AML	AML		
	comp=N,785μm,0.8s						
PP3				AML	AML		
	comp=N,736μm,1.2s						
PP3				AML	AML		
	comp=E,714μm,1.6s						
PP3				AML	AML		
	comp=N,736μm,0.8s						
PP3				AML	AML		
	comp=E,714μm,0.4s						
ARVD	**Arcevia**	**0.61 348**	⇑P		Pb	18 02 35.3	-0.5
ARVD			S		Sb	18 02 45.0	+0.5
ARVD				AML	AML		
	comp=N,162μm,0.4s						
ARVD				AML	AML		
	comp=E,190μm,0.4s						
ATFO	**Monte Foce - G**	**0.61 319**	⇑P		Pg	18 02 35.1	+0.3
ATFO				AML	AML		
	comp=E,230μm,1.1s						
ATFO				AML	AML		
	comp=E,231μm,1.1s						
ATFO				AML	AML		
	comp=N,202μm,0.7s						
ATFO				AML	AML		
	comp=E,231μm,0.9s						
FIAM	**Fiamignano**	**0.64 180**	⇑P		Pg	18 02 35.4	+0.2
FIAM			S		Sb	18 02 46.0	+0.6
FIAM				AML	AML		
	comp=N,191μm,0.6s						
FIAM				AML	AML		
	comp=E,336μm,0.2s						
FIAM				AML	AML		
	comp=N,192μm,0.6s						
FIAM				AML	AML		
	comp=N,192μm,1.4s						
FRON	**Frontone**	**0.68 335**	⇓P		Pb	18 02 36.6	-0.3
FRON				AML	AML		
	comp=N,300μm,0.3s						
FRON				AML	AML		
	comp=E,172μm,1.3s						
ATVO	**AVT- Monte Val**	**0.71 313**	⇑P		Pg	18 02 36.7	+0.1
ATVO				AML	AML		
	comp=N,168μm,0.4s						
ATVO				AML	AML		
	comp=E,173μm,0.9s						
ATVO				AML	AML		
	comp=N,169μm,0.4s						
ATVO				AML	AML		
	comp=E,173μm,1.1s						
FAGN	**Fagnano**	**0.72 152**	P		Pb	18 02 37.9	+0.1
FAGN			S		Sb	18 02 49.0	+1.1
FAGN				AML	AML		
	comp=E,458μm,0.5s						
FAGN				AML	AML		
	comp=N,448μm,0.4s						
FAGN				AML	AML		
	comp=E,458μm,1.5s						
VCEL	**Villa Celiera**	**0.74 134**	⇓P		Pb	18 02 37.6	-0.4
VCEL				AML	AML		
	comp=E,394μm,0.8s						
VCEL				AML	AML		
	comp=N,408μm,1.4s						
VCEL				AML	AML		
	comp=E,394μm,0.8s						
VCEL				AML	AML		
	comp=N,408μm,1.4s						
VCEL				AML	AML		
	comp=E,394μm,1.2s						
VCEL				AML	AML		
	comp=N,408μm,0.6s						
MGAB	**Montegabbione**	**0.74 271**	⇓P		Pb	18 02 37.7	-0.3
MGAB				AML	AML		
	comp=N,502μm,0.3s						
MGAB				AML	AML		
	comp=N,488μm,0.5s						
MGAB				AML	AML		
	comp=N,502μm,0.3s						
MGAB				AML	AML		
	comp=E,408μm,0.5s						
MGAB				AML	AML		
	comp=N,488μm,0.5s						
MGAB				AML	AML		
	comp=N,488μm,1.5s						
MGAB				AML	AML		
	comp=N,502μm,1.7s						
MGAB				AML	AML		
	comp=E,371μm,0.5s						
ATPI	**Pietralunga -**	**0.76 316**	⇓P		Pg	18 02 37.7	+0.2
ATPI				AML	AML		
	comp=N,118μm,1.2s						
ATPI				AML	AML		
	comp=E,132μm,1.1s						
ATPI				AML	AML		
	comp=N,118μm,0.8s						
PIEI	**Pieia**	**0.76 326**	⇑P		Pg	18 02 37.7	0.0
PIEI				AML	AML		
	comp=E,152μm,0.9s						
PIEI				AML	AML		
	comp=N,122μm,0.2s						
PIEI				AML	AML		
	comp=N,122μm,1.8s						
MPAG	**Monte Paganucc**	**0.77 340**	⇑P		Pb	18 02 38.3	-0.3
MPAG				AML	AML		
	comp=N,160μm,1.1s						
MPAG				AML	AML		
	comp=N,160μm,0.9s						
MPAG				AML	AML		
	comp=E,161μm,0.5s						
SRES	**S.Oreste - Sor**	**0.81 214**	S		Sn	18 02 53.0	+0.3
NARO	**Abbazia di Nar**	**0.81 331**	P		Pg	18 02 38.5	0.0
NARO				AML	AML		
	comp=N,90μm,0.9s						
NARO				AML	AML		
	comp=E,112μm,0.6s						
NARO				AML	AML		
	comp=N,90μm,1.1s						
FSSB	**Fossombrone**	**0.82 342**	⇓P		Pb	18 02 39.2	-0.3
FSSB				AML	AML		
	comp=N,484μm,1.5s						
FSSB				AML	AML		
	comp=E,394μm,0.4s						
FSSB				AML	AML		
	comp=N,484μm,1.5s						
FSSB				AML	AML		
	comp=N,484μm,0.5s						
T0110	**Collepietro**	**0.83 144**	⇑P		Pg	18 02 39.1	+0.1
T0110				AML	AML		
	comp=N,348μm,0.4s						
T0110				AML	AML		
	comp=E,293μm,0.5s						
T0110				AML	AML		
	comp=N,348μm,1.6s						
SACS	**San Casciano d**	**0.89 267**	P		Pb	18 02 40.5	-0.1
SACS				AML	AML		
	comp=E,124μm,1.4s						
SACS				AML	AML		
	comp=N,114μm,0.3s						
LPEL	**Lama dei Pelig**	**1.16 137**	⇑P		Pb	18 02 44.8	-0.5
LPEL				AML	AML		
	comp=E,108μm,0.7s						
LPEL				AML	AML		
	comp=N,114μm,0.8s						
ABTA	**Abfaltersbach**	**3.87 354**	*e*Pn		Pn	18 03 23.1	+0.4
	comp=N,0.7nm,0.4s						
WTTA	**Wattenberg**	**4.48 347**	*e*Pn		Pn	18 03 34.4	+3.1
	comp=N,0.2nm,0.2s						
CONA	**Conrad Observa**	**5.38 20**	*e*Pn		Pn	18 03 44.9	+1.4
	comp=N,0.6nm,0.3s						

TAP 26 18:22:34.4,24°.13N×121°.65E,h11km,ML0.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.04 315**		P	Pg	18 22 36.9	+0.4
	baz=314						
ETL				S	Sg	18 22 38.7	+0.8
	baz=314						
NACB	**Ninganchiao**	**0.07 308**		P	Pg	18 22 37.1	+0.5
	baz=308						
NACB				S	Sg	18 22 39.0	+0.7
	baz=308						
TWD	**Chiawan**	**0.07 224**		*i* P	Pg	18 22 37.1	+0.4
	baz=220						
TWD				*i* S	Sg	18 22 39.1	+0.7
	baz=220						
HWA	**Hwalien**	**0.16 195**		*e*P	Pg	18 22 38.4	+0.4
	baz=192						
HWA				S	Sg	18 22 42.0	+1.5
	baz=192						
ETLH	**Xiulin Townshi**	**0.17 295**		*e*P	Pb	18 22 39.1	-0.6
	baz=295						
ETLH				*e*S	Sg	18 22 42.2	+1.4
	baz=295						
EHP	**Heping Village**	**0.19 25**		*e*P	Pb	18 22 39.6	-0.5
	baz=27						
EHP				*e*S	Sg	18 22 43.3	+1.9
	baz=27						
EWUT	**Wuta**	**0.33 20**		*e*P	Pb	18 22 42.0	-0.4
	baz=20						
EWUT				*e*S	Sb	18 22 47.5	-0.2
	baz=20						
WHF	**Hehuan Shan**	**0.35 272**		P	Pg	18 22 42.1	+0.5
	baz=271						
WHF				S	Sb	18 22 48.5	-0.3
	baz=271						
NNSB	**Datong**	**0.38 320**		*e*P	Pb	18 22 42.9	-0.4
	baz=320						
NNSB				S	Sb	18 22 49.0	-0.3
	baz=320						
FUSS	**Fushou**	**0.39 287**		*e*P	Pb	18 22 42.9	-0.6
	baz=287						
NNS	**Nan Shan**	**0.40 320**		P	Pb	18 22 43.2	-0.4
	baz=320						
NNS				*e*S	Sb	18 22 49.4	-0.4
	baz=320						
CHGB	**Renai**	**0.44 261**		*e*P	Pb	18 22 44.0	-0.4
	baz=260						
CHGB				*e*S	Sb	18 22 50.9	-0.2
	baz=260						
TDCB	**Techi**	**0.47 285**		*e*P	Pb	18 22 44.3	-0.5
	baz=284						
TDCB				*e*S	Sb	18 22 51.8	+0.1
	baz=284						
NDT	**Datong Townshi**	**0.48 345**		*e*P	Pb	18 22 44.7	-0.3
	baz=344						
NDT				*e*S	Sb	18 22 52.0	-0.2
	baz=344						
WUSB	**Renai**	**0.51 254**		*e*P	Pb	18 22 45.2	-0.3
	baz=254						
WUSB				*e*S	Sb	18 22 53.8	+0.9
	baz=254						

JMA 26 18:22:45.0±0.3,24°N±2°×123°.4E±0°.7,h39km±2km, MV1.1/8,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.41**	**62**	P	Pn	18 22 54.4	0.0
HATJ				*e*S	Sn	18 23 01.0	-0.1
IRIF	**Iriomote-Funau**	**0.55**	**32**	P	Pn	18 22 56.3	-0.2
JKRS	**Kuro-shima**	**0.67**	**56**	P	Pn	18 22 58.3	+0.3
JYNG	**Yonagunijimaku**	**0.72**	**324**	*e*P	Pn	18 22 58.6	0.0
JYNG				*e*S	Sn	18 23 09.0	+0.5
JIJ	**Ishigaki jima**	**0.84**	**54**	*e*P	Pn	18 23 00.5	+0.1
JISG	**Ishigakijimahi**	**1.09**	**49**	*e*P	Pn	18 23 04.2	+0.3

*MDD **26** 18:30:25.2±0.3,35°.55N×3°.79W,h0km,mb_Lg2.6/14, Error ellipse: s-maj=3.0km s-min=2.2km az=11.0*
*INMG **26** 18:30:25.9±1.2,35°.61N×3°.78W,h4km±4km,ML2.1,Error ellipse: s-maj=4.3km s-min=2.1km az=74.0*
*CNRM **26** 18:30:31.4,35°.20N×3°.44W,h20km,ml2.5*

ISC 26 18:30:25.2±1.3,35°.55N±0°.04×3°.80W±0°.04,h11km±11km, n32,σ1§27/54,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.35**	**199**	P	**Pn**	**18 30 40.0**	**+3.7**
EMEL	**Melilla**	**0.73**	**109**	Pg	**Pg**	**18 30 39.4**	**-0.1**
EMEL				Sg	**Sg**	**18 30 48.2**	**-0.8**
GOG	**Mont Gurugu**	**0.74**	**116**	P	**Pg**	**18 30 39.0**	**-0.4**
EALB	**Alboran**	**0.74**	**58**	Pg	**Pg**	**18 30 39.5**	**+0.1**
EALB				Sg	**Sg**	**18 30 49.4**	**+0.3**
EALB				*i* Vmb_Lg		18 30 51.7	
EMIJ	**Mijas**	**1.28**	**323**	Pg	**Pn**	**18 30 49.0**	**-0.1**
EMIJ				Sg	**Sb**	**18 31 05.4**	**-0.5**
EMIJ				*i* Vmb_Lg		18 31 06.8	
ELGU	**Los Guajares,**	**1.32**	**6**	Pg	**Pn**	**18 30 48.7**	**-1.1**
ELGU				Sg	**Sb**	**18 31 07.4**	**+0.3**
ELGU				*i* Vmb_Lg		18 31 09.6	
ECEU	**Ceuta**	**1.33**	**286**	Pg	**Pn**	**18 30 49.9**	**+0.2**
ECEU				Sg	**Sb**	**18 31 04.7**	**-2.4**
ECEU				*i* Vmb_Lg		18 31 07.0	
TAF	**Taforalt**	**1.35**	**122**	P	**Pn**	**18 30 48.7**	**-1.4**
EBER	**Berja**	**1.54**	**28**	Pg	**Pn**	**18 30 51.4**	**-1.4**
EBER				Sg	**Sn**	**18 31 12.7**	**-0.1**
EBER				*i* Vmb_Lg		18 31 25.7	
EGOR	**Sierra Gorda,**	**1.58**	**351**	Pg	**Pn**	**18 30 53.6**	**+0.3**
EGOR				Sg	**Sn**	**18 31 13.4**	**-0.4**
EGOR				*i* Vmb_Lg		18 31 21.1	
JBK	**JBK**	**1.58**	**140**	P	**Pn**	**18 30 52.0**	**-1.4**
EQES	**Quesada**	**2.33**	**14**	Pn	**Pn**	**18 31 05.8**	**+2.2**
EQES				Sn	**Sn**	**18 31 33.8**	**+1.7**
EQES				*i* Vmb_Lg		18 31 37.1	
EADA	**Adamuz**	**2.69**	**347**	Pn	**Pn**	**18 31 10.1**	**+1.7**
EADA				Pg	**Pb**	**18 31 13.2**	**-0.1**
EADA				Sn	**Sn**	**18 31 41.5**	**+0.5**
EADA				Sg	**Sb**	**18 31 46.5**	**+0.2**
EADA				*i* Vmb_Lg		18 31 48.2	
MDT	**Midelt**	**2.81**	**194**	P	**Pn**	**18 31 11.8**	**+1.7**
ECAB	**El Cabril**	**2.84**	**333**	Pn	**Pn**	**18 31 11.8**	**+1.3**
ECAB				Sn	**Sn**	**18 31 43.7**	**-0.9**
ECAB				*i* Vmb_Lg		18 31 57.4	
EMIN	**Mina Concepcio**	**3.20**	**315**	Pn	**Pn**	**18 31 16.0**	**+0.6**
EMIN				Sn	**Sn**	**18 31 52.3**	**-1.2**
EMIN				*i* Vmb_Lg		18 31 55.7	
EGRO	**El Granado**	**3.56**	**305**	Pn	**Pn**	**18 31 21.0**	**+0.6**
EGRO				Sn	**Sn**	**18 32 01.2**	**-1.3**
EGRO				*i* Vmb_Lg		18 32 02.1	
ETOB	**Tobarra**	**3.58**	**30**	Pn	**Pn**	**18 31 22.2**	**+1.5**
ETOB				Sn	**Sn**	**18 32 03.1**	**+0.1**
PBAR	**Barrancos**	**3.69**	**316**	*e*Pn	**Pn**	**18 31 22.7**	**+0.6**
PBAR				*e*Sn	**Sn**	**18 32 04.5**	**-1.1**
PBAR				A	A	18 32 09.2	
	3.1nm,0.3s						
PCVE	**Castro Verde**	**3.99**	**303**	*e*Pn	**Pn**	**18 31 27.0**	**+0.7**
PCVE				*e*Sn	**Sn**	**18 32 11.8**	**-1.3**
PCVE				A	A	18 32 12.7	
	2.7nm,0.4s						
PAB	**San Pablo**	**4.01**	**354**	Pn	**Pn**	**18 31 28.3**	**+1.6**
PAB				Sn	**Sn**	**18 32 14.3**	**+0.6**
PAB				*i* Vmb_Lg		18 32 38.2	
EBAD	**Badajoz**	**4.10**	**322**	Pn	**Pn**	**18 31 28.3**	**+0.5**
EBAD				Sn	**Sn**	**18 32 13.8**	**-2.0**
EBAD				*i* Vmb_Lg		18 32 16.5	
MORF	**Marmelete**	**4.29**	**296**	*e*Pn	**Pn**	**18 31 31.7**	**+1.3**
MORF				*e*Sn	**Sn**	**18 32 20.0**	**-0.4**
MORF				A	A	18 32 24.0	
	3.0nm,0.2s						
PFVI	**Vila Bisbo**	**4.35**	**293**	*e*Sn	**Sn**	**18 32 21.1**	**-0.9**
EVO	**Evora**	**4.50**	**313**	*e*Pn	**Pn**	**18 31 34.6**	**+1.4**
EVO				*e*Sn	**Sn**	**18 32 24.1**	**-1.4**
EVO				A	A	18 32 26.0	
	3.7nm,0.3s						
PNCL	**Nicolau / Gran**	**4.57**	**305**	*e*Pn	**Pn**	**18 31 34.9**	**+0.6**
PNCL				*e*Sn	**Sn**	**18 32 26.0**	**-1.4**
PNCL				A	A	18 32 28.0	
	2.1nm,0.5s						
PMTG	**Montargil**	**4.98**	**316**	*e*Pn	**Pn**	**18 31 41.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**18 32 36.0**	**-1.4**
PCBR	**Castelo Branco**	**5.18**	**327**	*e*Pn	**Pn**	**18 31 44.2**	**+1.6**
MVO	**Moncorvo**	**6.15**	**337**	*e*Pn	**Pn**	**18 31 57.8**	**+1.7**
FETA	**Feichten**	**15.80**	**39**	*e*Pn	**Pn**	**18 34 08.0**	**+0.2**
	comp=Z,0.6nm,0.3s						
RETA	**Reutte**	**16.13**	**38**	*e*Pn	**Pn**	**18 34 12.7**	**+0.8**
	comp=Z,0.7nm,0.3s						
CLL	**Collm**	**19.85**	**32**	*e*Sg	Sn	18 38 54.0	+13
CLL				*ex*	x	18 39 08.0	

*IDC **26** 18:37:24.2±1.6,35°.28N×133°.83E,h0km,mb3.4/2, mbtmp3.3/4,ML2.4/2,Error ellipse: s-maj=29.0km s-min=19.4km az=1.0*
*NIED **26** 18:37:25.3,35°.38N×133°.89E,h7km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.25; $M_{\theta\theta}$2.84; $M_{\phi\phi}$0.40; $M_{r\theta}$-0.47; $M_{\theta\phi}$-1.33; $M_{\phi r}$3.28; Fault plane solution: $M_0$4.59000×10^{14} NP1: ϕ_s274.00000°,δ35.00000°,λ-137.00000°. NP2: ϕ_s146.00000°,δ67.00000°,λ-63.00000°.*
*JMA **26** 18:37:25.3±0.0,35°.4N±0°.1×133°.89E±0°.08,h7km, MV3.5/20,EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .

ISC 26 18:37:25.2±0.9,35°.37N±0°.04×133°.87E±0°.04,h8km±6km, n13,σ0§76/18,3D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKR	**Kurayoshi**	**0.04 285**		⇓P	**Pg**	**18 37 26.9**	**0.0**
JKR				⇓*e*S	**Sg**	**18 37 28.1**	**0.0**
JAD	**Aida**	**0.49 150**		*i* P	**Pg**	**18 37 34.9**	**+0.2**
JAD				S	**Sg**	**18 37 41.6**	**+0.4**
JKSM	**Kasumi**	**0.69 71**		*i* P	**Pg**	**18 37 38.0**	**-0.4**
JKSM				S	**Sg**	**18 37 46.9**	**-0.5**
JNM	**Ikuma**	**0.70 281**		*i* P	**Pb**	**18 37 39.1**	**-0.5**
JHS	**Saijyo**	**0.72 239**		*i* P	**Pb**	**18 37 39.1**	**-0.8**
JISK	**Izumosakaura**	**0.84 279**		*i* P	**Pb**	**18 37 41.4**	**-0.7**
JKS	**Kasai**	**0.89 115**		⇓*i* P	**Pg**	**18 37 41.7**	**-0.5**
JJS	**Sakaide**	**0.99 177**		*i* P	**Pb**	**18 37 43.9**	**-0.7**
JJS				S	**Sb**	**18 37 57.3**	**-0.5**
JKY	**Yasaka**	**1.04 75**		*i* P	**Pg**	**18 37 44.4**	**-0.8**
MJAR	**Matsushiro Arr**	**3.71 70**		Pn	**Pn**	**18 38 24.7**	**+1.9**
	0.1nm,0.3s,baz=249,slow=12,SNR=2.8						
MJAR				Lg	Lg	18 39 23.8	
	0.3nm,0.3s,baz=251,slow=37,SNR=9.4 1.7nm,0.5s						
KSRS	**Korea Array**	**5.23 295**		Pn	**Pn**	**18 38 44.2**	**+0.6**
	0.4nm,0.3s,baz=109,slow=14,SNR=2.0						
KSRS				Sn	**Sn**	**18 39 43.8**	**-0.2**
	0.3nm,0.3s,baz=115,slow=23,SNR=1.3 1.0nm,0.3s						
SONM	**Songino Array**	**23.89 310**		P	**P**	**18 42 39.9**	**+0.6**
	1.4nm,0.9s,baz=120,slow=8.4,SNR=6.4 1.4nm,0.9s						
WRA	**Warramunga Arr**	**55.01 179**		P	**P**	**18 46 56.8**	**-0.3**
	0.3nm,0.8s,baz=354,slow=7.6,SNR=2.7 0.3nm,0.8s						

*ROM **26** 18:39:19.4±0.0,42°.881N±0°.002×13°.093E±0°.004, h10km,ML3.4/72,Error ellipse: s-maj=0.2km s-min=0.2km az=270.0*
*IDC **26** 18:39:19.4±1.5,43°.01N×13°.06E,h0km,mb3.5/4, mbtmp3.5/6,ML3.2/2,Error ellipse: s-maj=33.0km s-min=15.6km az=85.0*
*PDG **26** 18:39:20.3±0.5,42°.88N×13°.11E,h8km,ML3.3/11,Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*STR **26** 18:39:20.6±1.5,43°N±7°×1°3E±1°2,h6km,MLv3.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=110.6, preliminary*
*LDG **26** 18:39:21.2±0.1,42°.74N×13°.07E,h10km,Ml3.2/17,Error ellipse: s-maj=5.3km s-min=2.9km az=38.0*
*PRU **26** 18:39:22.0±0.0,42°.97N×13°.37E,h0km*
*GEN **26** 18:39:40.1,43°.84N×11°.71E,h40km±10km,Ml0.0*

ISC 26 18:39:20.5±0.8,42°.88N±0°.01×13°.07E±0°.02,h9km±4km, n203,σ1§52/260,50C-36D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.04 291**		⇑P	**Pg**	**18 39 21.9**	**-0.4**
T1216				S	**Sg**	**18 39 23.4**	**-0.3**
FEMA	**Monte Fema**	**0.09 348**		P	**Pg**	**18 39 22.5**	**-0.5**
FEMA				S	**Sg**	**18 39 24.2**	**-0.6**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,86650μm,0.7s						
FDMO	**Fiordimonte**	**0.16 3**		P	**Pg**	**18 39 23.5**	**-0.5**
FDMO				S	**Sg**	**18 39 26.0**	**-0.4**
FDMO				AML	AML		
	comp=E,19300μm,0.9s						
FDMO				AML	AML		
	comp=N,19450μm,0.5s						
T1215	**Vallo di Nera,**	**0.17 244**		⇑P	**Pg**	**18 39 24.1**	**0.0**
T1215				S	**Sg**	**18 39 27.1**	**+0.6**
T1215				AML	AML		
	comp=N,24550μm,0.4s						
T1215				AML	AML		
	comp=N,23550μm,0.4s						
T1215				AML	AML		
	comp=N,24550μm,0.4s						
T1215				AML	AML		
	comp=E,27300μm,0.3s						
T1215				AML	AML		
	comp=E,26200μm,0.3s						
T1215				AML	AML		
	comp=E,26250μm,0.3s						
T1215				AML	AML		
	comp=N,23550μm,0.4s						
T1215				AML	AML		
	comp=N,24500μm,0.4s						
T1215				AML	AML		
	comp=E,27250μm,0.3s						
CESI	**CESI - Serrava**	**0.18 316**		⇑P	**Pg**	**18 39 24.0**	**-0.3**
CESI				S	**Sg**	**18 39 27.2**	**+0.3**
CESI				AML	AML		
	comp=E,30300μm,0.5s						
CESI				AML	AML		
	comp=N,50800μm,0.3s						
CESI				AML	AML		
	comp=E,30300μm,1.5s						
T1217	**Poggiodomo (PG**	**0.19 213**		⇑P	**Pg**	**18 39 24.6**	**0.0**
T1217				S	**Sg**	**18 39 28.2**	**+0.9**
T1217				AML	AML		
	comp=N,77300μm,0.2s						
T1217				AML	AML		
	comp=N,75650μm,0.2s						
T1217				AML	AML		
	comp=E,51750μm,0.2s						
T1217				AML	AML		
	comp=E,52650μm,0.2s						
T1217				AML	AML		
	comp=N,75700μm,0.2s						
T1217				AML	AML		
	comp=N,77350μm,0.2s						
T1217				AML	AML		
	comp=E,51800μm,0.2s						
AM05	**Amandola Campo**	**0.23 63**		⇑P	**Pg**	**18 39 24.6**	**-0.6**
AM05				S	**Sg**	**18 39 28.1**	**-0.2**
AM05				AML	AML		
	comp=E,9795μm,0.3s						
AM05				AML	AML		
	comp=N,11025μm,0.5s						
AM05				AML	AML		
	comp=E,9785μm,0.3s						
AM05				AML	AML		
	comp=N,11020μm,0.5s						
AM05				AML	AML		
	comp=E,41350μm,0.3s						
AM05				AML	AML		
AM05				AML	AML		
	comp=E,41300μm,0.3s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,11015μm,0.5s						
AM05				AML	AML		
	comp=E,9775μm,0.3s						
AM05				AML	AML		
GUMA	**Gualdo di Mace**	**0.27 46**		⇑P	**Pg**	**18 39 25.4**	**-0.4**
GUMA				S	**Sg**	**18 39 30.0**	**+0.5**
GUMA				AML	AML		
	comp=E,49000μm,0.8s						
GUMA				AML	AML		
	comp=N,60050μm,0.4s						
GUMA				AML	AML		
	comp=E,53100μm,0.5s						
GUMA				AML	AML		
	comp=N,60000μm,0.4s						
GUMA				AML	AML		
	comp=E,53100μm,1.5s						
GUMA				AML	AML		
	comp=N,63200μm,0.6s						
T1204	**Amatrice, Fraz**	**0.27 138**		⇑P	**Pg**	**18 39 25.5**	**-0.4**
T1204				S	**Sg**	**18 39 29.9**	**+0.4**
T1204				AML	AML		
	comp=E,30300μm,0.3s						
T1204				AML	AML		
	comp=N,17550μm,0.9s						
T1204				AML	AML		
	comp=N,17600μm,0.9s						
T1204				AML	AML		
	comp=N,17600μm,1.1s						

LNSS	**Leonessa**	**0.27 185**	P	**Pg**	**18 39 25.9**	**-0.1**
LNSS			S	**Sg**	**18 39 30.3**	**+0.6**
LNSS			AML	AML		
	comp=E,25400μm,1.2s					
LNSS			AML	AML		
	comp=N,27500μm,1.1s					
LNSS			AML	AML		
	comp=E,25400μm,0.8s					
SEF1	**Sefro**	**0.29 341**	P	**Pg**	**18 39 25.8**	**-0.4**
SEF1			S	**Sg**	**18 39 30.6**	**+0.5**
SEF1			AML	AML		
	comp=E,11760μm,0.2s					
SEF1			AML	AML		
	comp=N,11300μm,0.3s					
PIO1	**Pioraco**	**0.31 348**	P	**Pg**	**18 39 26.2**	**-0.4**
PIO1			S	**Sg**	**18 39 31.3**	**+0.5**
PIO1			AML	AML		
	comp=E,5345μm,0.3s					
PIO1			AML	AML		
	comp=N,6910μm,0.6s					
SMA1	**SAN MARTINO**	**0.31 142**	⇑P	**Pg**	**18 39 26.2**	**-0.5**
SMA1			S	**Sg**	**18 39 31.2**	**+0.4**
SMA1			AML	AML		
	comp=N,19200μm,1.1s					
SMA1			AML	AML		
	comp=E,15600μm,0.5s					
SMA1			AML	AML		
	comp=N,19200μm,0.9s					
MDAR	**Monte D'Aria**	**0.32 9**	P	**Pg**	**18 39 26.1**	**-0.8**
MDAR			S	**Sg**	**18 39 31.3**	**+0.1**
MDAR			AML	AML		
	comp=E,9090μm,0.6s					
MDAR			AML	AML		
	comp=N,7655μm,0.6s					
T1243	**Rocca Santa Ma**	**0.33 123**	⇑P	**Pg**	**18 39 26.3**	**-0.8**
T1243			S	**Sg**	**18 39 31.3**	**-0.1**
FIU1	**Fiuminata**	**0.33 342**	P	**Pg**	**18 39 26.7**	**-0.4**
FIU1			S	**Sg**	**18 39 31.9**	**+0.5**
FIU1			AML	AML		
	comp=E,4290μm,0.5s					
FIU1			AML	AML		
	comp=N,4495μm,0.7s					
SSM1	**San Severino M**	**0.36 12**	P	**Pg**	**18 39 27.4**	**-0.2**
GAG1	**Gagliole**	**0.36 359**	P	**Pg**	**18 39 27.1**	**-0.5**
GAG1			AML	AML		
	comp=E,14200μm,0.5s					
GAG1			AML	AML		
	comp=N,13800μm,0.4s					
T1211	**Morro Reatino**	**0.38 205**	P	**Pg**	**18 39 27.6**	**-0.3**
T1211			AML	AML		
	comp=E,9850μm,1.3s					
T1211			AML	AML		
	comp=E,10155μm,1.3s					
T1211			AML	AML		
	comp=E,9845μm,1.3s					
T1211			AML	AML		
	comp=E,10230μm,1.3s					
T1211			AML	AML		
	comp=N,20000μm,0.3s					
T1211			AML	AML		
	comp=N,20100μm,0.3s					
T1211			AML	AML		
	comp=E,10230μm,0.7s					
T1211			AML	AML		
	comp=E,9845μm,0.7s					
RM33	**Pellescritta (**	**0.38 164**	⇓P	**Pg**	**18 39 27.5**	**-0.5**
RM33			AML	AML		
	comp=E,10405μm,0.3s					
RM33			AML	AML		
	comp=E,10295μm,0.3s					
RM33			AML	AML		
	comp=N,7260μm,0.5s					
RM33			AML	AML		
	comp=E,10385μm,0.3s					
RM33			AML	AML		
	comp=E,10290μm,0.3s					
RM33			AML	AML		
	comp=E,10375μm,0.3s					
RM33			AML	AML		
	comp=N,7325μm,0.5s					
RM33			AML	AML		
	comp=E,10275μm,0.3s					
RM33			AML	AML		
	comp=N,7255μm,0.5s					
RM33			AML	AML		
	comp=N,7320μm,0.5s					
RM33			AML	AML		
	comp=E,10280μm,0.3s					
RM33			AML	AML		
	comp=N,7255μm,1.5s					
RM33			AML	AML		
	comp=N,7320μm,1.5s					
SNTG	**Esanatoglia**	**0.39 346**	P	**Pg**	**18 39 27.5**	**-0.7**
SNTG			AML	AML		
	comp=E,3145μm,0.7s					
SNTG			AML	AML		
	comp=N,2765μm,0.4s					
SNTG			AML	AML		
	comp=N,2930μm,0.4s					
SNTG			AML	AML		
	comp=E,3110μm,0.7s					
CAMP	**Campotosto**	**0.42 144**	⇑P	**Pg**	**18 39 28.0**	**-0.7**
CAMP			AML	AML		
	comp=E,6590μm,1.0s					
CAMP			AML	AML		
	comp=N,4025μm,1.4s					
CAMP			AML	AML		
	comp=N,4025μm,0.6s					
ATCC	**AVT- Casa Cast**	**0.44 314**	⇑P	**Pg**	**18 39 28.7**	**-0.5**
ATCC			AML	AML		
	comp=E,7330μm,0.8s					
ATCC			AML	AML		
	comp=N,6420μm,1.5s					
ATCC			AML	AML		
	comp=E,7325μm,0.8s					
ATCC			AML	AML		
	comp=N,6420μm,0.5s					
CESX	**Cesi**	**0.45 234**	⇑P	**Pg**	**18 39 28.8**	**-0.4**
CESX			AML	AML		
	comp=N,11425μm,0.2s					
CESX			AML	AML		
	comp=E,6995μm,0.8s					
OFFI	**Offida**	**0.45 82**	⇑P	**Pg**	**18 39 29.3**	**0.0**
OFFI			AML	AML		
	comp=N,13700μm,0.5s					
OFFI			AML	AML		
	comp=E,13800μm,0.6s					
OFFI			AML	AML		
	comp=E,13800μm,1.4s					
EL6	**Elcito**	**0.45 3**	⇑P	**Pg**	**18 39 28.5**	**-0.9**
EL6			S	**Sb**	**18 39 37.0**	**-0.6**
EL6			AML	AML		
	comp=E,6155μm,0.4s					
EL6			AML	AML		
	comp=N,6210μm,0.4s					
T1247	**Pizzolo (AQ)**	**0.46 159**	⇑P	**Pg**	**18 39 29.0**	**-0.5**
T1247			AML	AML		
	comp=E,6735μm,0.3s					
T1247			AML	AML		
	comp=N,10295μm,0.2s					
T1247			AML	AML		
	comp=E,6730μm,0.3s					
T1247			AML	AML		
	comp=N,10290μm,0.2s					
TERO	**Teramo**	**0.47 123**	⇑P	**Pg**	**18 39 28.6**	**-0.9**
TERO			AML	AML		
	comp=E,13450μm,0.2s					
TERO			AML	AML		
	comp=N,13800μm,0.5s					
TERO			AML	AML		
	comp=N,14750μm,0.5s					
TERO			AML	AML		
	comp=N,13800μm,1.5s					
TERO			AML	AML		
	comp=E,12450μm,0.2s					
TERO			AML	AML		
	comp=N,14750μm,1.5s					
TRE1	**Treia**	**0.47 22**	⇑P	**Pg**	**18 39 29.6**	**0.0**
TRE1			AML	AML		
	comp=E,8840μm,0.5s					
TRE1			AML	AML		
	comp=E,8840μm,1.5s					
TRE1			AML	AML		
	comp=N,7540μm,0.7s					
CING	**Cingoli**	**0.51 10**	⇓P	**Pg**	**18 39 29.4**	**-0.9**
CING			AML	AML		
	comp=N,2270μm,1.1s					
CING			AML	AML		
	comp=E,3055μm,0.4s					
MURB	**Monte Urbino**	**0.56 314**	⇑P	**Pg**	**18 39 30.8**	**-0.5**
MURB			S	**Sb**	**18 39 41.0**	**+0.4**
MURB			AML	AML		
	comp=E,8215μm,0.9s					
MURB			AML	AML		
	comp=E,9560μm,0.2s					
MURB			AML	AML		
	comp=N,8495μm,0.2s					
MURB			AML	AML		
	comp=E,8215μm,1.1s					
MURB			AML	AML		
	comp=N,7760μm,0.3s					
MURB			AML	AML		
	comp=E,9560μm,1.8s					
GIGS	**Gran Sasso**	**0.56 139**	⇑P	**Pg**	**18 39 30.1**	**-1.2**
GIGS			AML	AML		
	comp=N,1490μm,1.4s					
GIGS			AML	AML		
	comp=N,1490μm,0.6s					
GIGS			AML	AML		
	comp=E,1690μm,0.4s					
MMUR	**Monte Murano**	**0.57 354**	⇓P	**Pg**	**18 39 31.1**	**-0.4**
MMUR			AML	AML		
	comp=E,4285μm,0.3s					
MMUR			AML	AML		
	comp=N,3400μm,0.3s					
AQU	**L'Aquila**	**0.57 155**	⇓P	**Pg**	**18 39 30.9**	**-0.7**
AQU			AML	AML		
	comp=E,3545μm,0.2s					
AQU			AML	AML		
	comp=N,2645μm,1.5s					
AQU			AML	AML		
	comp=E,3630μm,0.2s					
AQU			AML	AML		
	comp=N,2735μm,1.5s					
AQU			AML	AML		
	comp=N,2735μm,0.5s					
AQU			AML	AML		
	comp=N,2645μm,0.5s					
FIAM	**Fiamignano**	**0.61 177**	⇓P	**Pg**	**18 39 31.4**	**-0.9**
FIAM			S	**Sg**	**18 39 40.2**	**0.0**
FIAM			AML	AML		
	comp=N,2310μm,0.3s					
FIAM			AML	AML		
	comp=E,2875μm,0.8s					
FIAM			AML	AML		
	comp=N,2305μm,0.3s					
ATFO	**Monte Foce - G**	**0.61 323**	⇑P	**Pg**	**18 39 31.6**	**-0.7**
ATFO			AML	AML		
	comp=E,2035μm,0.9s					
ATFO			AML	AML		
	comp=N,1890μm,0.4s					
ATFO			AML	AML		
	comp=E,2035μm,1.1s					
ATTE	**AVT- Monte Tez**	**0.62 302**	⇑P	**Pg**	**18 39 31.8**	**-0.7**
ATTE			S	**Sb**	**18 39 43.0**	**+0.7**
ATTE			AML	AML		
	comp=E,2020μm,0.4s					
ATTE			AML	AML		
	comp=N,1970μm,0.7s					
ATTE			AML	AML		
	comp=N,1970μm,1.3s					
TRTR	**Tortoreto Alta**	**0.62 96**	AML	AML		
	comp=E,14900μm,0.5s					
TRTR			AML	AML		
	comp=N,13250μm,0.3s					
ARVD	**Arcevia**	**0.63 351**	P	**Pg**	**18 39 31.7**	**-1.0**
ARVD			S	**Sb**	**18 39 43.0**	**+0.4**
ARVD			AML	AML		
	comp=E,1600μm,0.9s					
ARVD			AML	AML		
	comp=N,995μm,0.7s					
ARVD			AML	AML		
	comp=E,1600μm,1.1s					
ARVD			AML	AML		
	comp=N,995μm,1.3s					
PP3	**Marolino**	**0.64 38**	P	**Pg**	**18 39 32.8**	**0.0**
PP3			AML	AML		
	comp=E,4940μm,0.4s					
PP3			AML	AML		
	comp=E,4960μm,0.4s					
PP3			AML	AML		
	comp=N,7160μm,0.9s					
PP3			AML	AML		
	comp=N,7130μm,0.9s					
PP3			AML	AML		
	comp=N,7130μm,1.1s					
PP3			AML	AML		
	comp=N,7160μm,1.1s					
FRON	**Frontone**	**0.69 338**	P	**Pg**	**18 39 32.9**	**-0.9**
FRON			AML	AML		
	comp=E,1295μm,0.4s					
FRON			AML	AML		
	comp=N,2335μm,0.5s					
MGAB	**Montegabbione**	**0.71 273**	⇑P	**Pg**	**18 39 33.6**	**-0.5**
MGAB			AML	AML		
	comp=E,5765μm,0.4s					
MGAB			AML	AML		
	comp=N,5015μm,0.6s					
FAGN	**Fagnano**	**0.72 148**	⇓P	**Pg**	**18 39 33.4**	**-0.9**
FAGN			AML	AML		
	comp=E,5690μm,0.4s					
FAGN			AML	AML		
	comp=N,5465μm,0.3s					
VCEL	**Villa Celiera**	**0.74 130**	⇑P	**Pg**	**18 39 33.8**	**-1.0**
VCEL			AML	AML		
	comp=E,7135μm,0.8s					
VCEL			AML	AML		
	comp=N,5805μm,0.3s					
ATMI	**Monte Miggiano**	**0.75 308**	P	**Pg**	**18 39 34.3**	**-0.5**
ATMI			AML	AML		
	comp=N,5220μm,0.8s					
ATMI			AML	AML		
	comp=E,4115μm,0.7s					
ATPI	**Pietralunga -**	**0.76 320**	⇑P	**Pg**	**18 39 34.3**	**-0.8**
SRES	**S.Oreste - Sor**	**0.76 213**	⇓P	**Pg**	**18 39 34.7**	**-0.5**
SRES			S	**Sb**	**18 39 47.0**	**+0.6**
SRES			AML	AML		
	comp=E,2715μm,0.8s					
SRES			AML	AML		
	comp=N,3145μm,0.3s					
PIEI	**Pieia**	**0.77 329**	⇑P	**Pg**	**18 39 34.2**	**-1.1**
PIEI			AML	AML		
	comp=E,1044μm,0.4s					
PIEI			AML	AML		
	comp=N,697μm,0.7s					
AOI	**Ancona**	**0.78 30**	P	**Pg**	**18 39 34.8**	**-0.6**
AOI			AML	AML		
	comp=N,1925μm,0.3s					
AOI			AML	AML		
	comp=E,2115μm,0.7s					
MPAG	**Monte Paganucc**	**0.79 343**	⇑P	**Pg**	**18 39 34.8**	**-0.8**
MPAG			AML	AML		
	comp=E,1585μm,0.5s					
MPAG			AML	AML		
	comp=N,1086μm,0.6s					
MPAG			AML	AML		
	comp=E,1585μm,1.5s					
MPAG			AML	AML		
	comp=N,1086μm,1.4s					
T0110	**Collepietro**	**0.83 141**	⇑P	**Pg**	**18 39 35.0**	**-1.5**
T0110			AML	AML		
	comp=E,4945μm,0.3s					
T0110			AML	AML		
	comp=N,4515μm,0.3s					
APEC	**Apecchio**	**0.83 325**	⇑P	**Pg**	**18 39 36.0**	**-0.5**
APEC			S	**Sb**	**18 39 50.0**	**+1.5**
FSSB	**Fossombrone**	**0.84 345**	⇓P	**Pg**	**18 39 35.8**	**-1.0**
FSSB			AML	AML		
	comp=E,2670μm,1.2s					
FSSB			AML	AML		
	comp=E,2670μm,0.8s					
FSSB			AML	AML		
	comp=N,5445μm,0.4s					
SACS	**San Casciano d**	**0.86 269**	⇑P	**Pg**	**18 39 36.5**	**-0.5**
SACS			AML	AML		
	comp=E,2165μm,0.7s					
SACS			AML	AML		
	comp=N,1925μm,0.6s					
SACS			AML	AML		
	comp=N,1925μm,1.4s					
SACS			AML	AML		
	comp=E,2165μm,1.3s					
BADI	**Badiali**	**0.88 317**	⇓P	**Pg**	**18 39 36.6**	**-0.7**
MTCE	**Montecelio**	**0.89 196**	⇓P	**Pg**	**18 39 36.5**	**-1.0**
MTCE			AML	AML		
	comp=E,1770μm,0.7s					
MTCE			AML	AML		
	comp=N,1430μm,0.4s					
MTCE			AML	AML		
	comp=N,1430μm,1.6s					
MTCE			AML	AML		
	comp=E,1765μm,0.7s					
PE3	**Peglio**	**0.92 333**	⇑P	**Pg**	**18 39 38.0**	**-0.3**
PE3			AML	AML		
	comp=N,17μm,0.1s					
PE3			AML	AML		
	comp=E,10μm,0.1s					
CERT	**Cerreto**	**0.93 184**	⇓P	**Pg**	**18 39 36.9**	**-1.4**
CERT			AML	AML		
	comp=E,2225μm,0.5s					
CERT			AML	AML		
	comp=N,1515μm,0.7s					
CAFI	**Castiglion Fio**	**0.93 300**	⇑P	**Pg**	**18 39 37.5**	**-0.8**
CAFI			AML	AML		
	comp=N,1088μm,0.8s					
CAFI			AML	AML		
	comp=E,1280μm,0.7s					
CAFI			AML	AML		
	comp=N,1088μm,1.2s					
LATE	**Laterza**	**0.97 255**	⇓P	**Pg**	**18 39 38.7**	**-0.4**
SSP9	**Sansepolcro**	**0.98 316**	⇓P	**Pb**	**18 39 40.2**	**+0.6**
MCIV	**Monte Civitell**	**1.03 265**	⇓P	**Pg**	**18 39 39.9**	**-0.5**
MCIV			AML	AML		
	comp=E,990μm,0.7s					
MCIV			AML	AML		
	comp=N,810μm,0.7s					
MCIV			AML	AML		
	comp=E,990μm,1.3s					
MCIV			AML	AML		
	comp=N,810μm,1.3s					
SF04	**Casetta**	**1.04 268**	⇑P	**Pg**	**18 39 40.4**	**-0.1**
SF04			AML	AML		
	comp=N,810μm,0.3s					
SF04			AML	AML		
	comp=E,1271μm,0.3s					
INTR	**Introdacqua**	**1.06 144**	P	**Pg**	**18 39 38.8**	**-2.0**
INTR			AML	AML		
	comp=E,2μm,0.7s					
INTR			AML	AML		
	comp=E,2080μm,0.7s					
INTR			AML	AML		
	comp=N,4055μm,0.7s					
INTR			AML	AML		
	comp=N,3μm,0.7s					
INTR			AML	AML		
	comp=E,2μm,0.7s					
SF01	**Poggio Pratacc**	**1.11 267**	⇓P	**Pg**	**18 39 41.4**	**-0.4**
SF01			AML	AML		
	comp=E,1073μm,1.1s					
SF01			AML	AML		
	comp=N,845μm,0.7s					
SF01			AML	AML		
	comp=E,1073μm,0.9s					
RDP	**Rocca di Papa**	**1.15 193**	AML	AML		
	comp=N,5225μm,0.5s					
RDP			AML	AML		
	comp=E,5030μm,0.6s					
RDP			AML	AML		
	comp=E,5030μm,1.4s					
LPEL	**Lama dei Pelig**	**1.17 135**	⇑P	**Pg**	**18 39 40.6**	**-2.3**
LPEL			AML	AML		
	comp=N,1665μm,1.2s					
LPEL			AML	AML		
	comp=E,1460μm,1.4s					
POFI	**Posta Fibreno**	**1.25 158**	⇓P	**Pn**	**18 39 44.2**	**0.0**
POFI			AML	AML		
	comp=N,724μm,0.9s					
POFI			AML	AML		
	comp=E,684μm,0.6s					
GIUL	**Giuliano Di Ro**	**1.32 174**	⇑P	**Pn**	**18 39 45.3**	**+0.2**
GIUL			AML	AML		
	comp=N,723μm,0.7s					
GIUL			AML	AML		
	comp=E,538μm,1.0s					
CERA	**Filignano**	**1.46 151**	⇓P	**Pn**	**18 39 46.9**	**-0.1**
CERA			AML	AML		
	comp=E,1113μm,0.9s					
CERA			AML	AML		
	comp=N,934μm,0.4s					
CERA			AML	AML		
	comp=E,1084μm,0.8s					
CERA			AML	AML		
	comp=N,894μm,0.4s					
FRES	**Fresagrandinar**	**1.49 127**	P	**Pb**	**18 39 48.4**	**+0.1**
FRES			AML	AML		
	comp=N,348μm,0.9s					
FRES			AML	AML		
	comp=E,624μm,0.6s					
RUFI	**Rufina**	**1.49 311**	P	**Pn**	**18 39 47.5**	**+0.1**
RUFI	**Rufina**	**1.49 311**	⇑P	**Pn**	**18 39 47.5**	**+0.1**
LMD	**Lutirano**	**1.56 321**	P	**Pn**	**18 39 49.0**	**+0.7**
TRIF	**Trifonti**	**1.61 279**	⇓P	**Pn**	**18 39 49.0**	**-0.1**
TRIF			AML	AML		
	comp=E,216μm,0.6s					
TRIF			AML	AML		
	comp=N,256μm,0.6s					
CASP	**Castiglione de**	**1.63 268**	⇑P	**Pn**	**18 39 48.7**	**-0.6**
CASP			AML	AML		
	comp=N,115μm,0.6s					
CASP			AML	AML		
	comp=E,84μm,1.2s					
VAGA	**Valle Agricola**	**1.69 149**	⇓P	**Pb**	**18 39 52.0**	**+0.1**
CIGN	**Sant'Elia a Pi**	**1.83 131**	⇑P	**Pg**	**18 39 55.2**	**-0.3**
MTCR	**Monte La Croce**	**1.90 308**	P	**Pn**	**18 39 52.9**	**-0.3**
MELA	**Melanico ??? S**	**1.92 127**	⇓P	**Pn**	**18 39 54.2**	**+0.9**
MELA			AML	AML		
	comp=N,1104μm,0.6s					
MELA			AML	AML		
	comp=E,887μm,1.5s					
MELA			AML	AML		
	comp=E,969μm,1.5s					
MELA			AML	AML		
	comp=N,1072μm,0.6s					
MELA			AML	AML		
	comp=E,887μm,0.5s					
MELA			AML	AML		
	comp=E,969μm,0.5s					
PII	**Pisa**	**2.04 295**	P	**Pn**	**18 39 56.2**	**+1.2**
BRJN	**Brijuni**	**2.09 13**	⇑P	**Pn**	**18 39 55.3**	**-0.3**
CELB	**S.Piero in Cam**	**2.11 267**	⇓P	**Pn**	**18 39 55.5**	**-0.5**
CELB			AML	AML		
	comp=E,51μm,1.0s					
CELB			AML	AML		
	comp=N,48μm,0.9s					
MAIM	**Mastiano**	**2.15 300**	P	**Pn**	**18 39 56.3**	**-0.2**
SGRT	**San Giovanni R**	**2.27 119**	⇓P	**Pn**	**18 39 58.7**	**+0.4**
SARO	**Sassorosso**	**2.34 305**	P	**Pn**	**18 39 58.3**	**-0.9**
SGTA	**Sant Agata di**	**2.44 135**	⇑P	**Pg**	**18 40 06.4**	**-0.8**
HVAR	**Hvar**	**2.49 82**	P	**Pn**	**18 40 01.6**	**+0.4**
MORSI	**Morsiglia**	**2.73 273**	P	**Pn**	**18 40 04.7**	**+0.3**
PALZ	**Palazzo San Ge**	**2.89 131**	⇑P	**Pn**	**18 40 08.0**	**+1.3**
SMPL	**Sampolo**	**2.91 256**	P	**Pn**	**18 40 07.4**	**+0.4**
SMPL			S	**Sn**	**18 40 44.1**	**+2.1**
MSSA	**Maissana**	**2.96 300**	S	**Sn**	**18 40 45.0**	**+1.7**
PGF	**Pioggiola**	**3.02 265**	*e*Pn	**Pn**	**18 40 08.7**	**+0.1**
PGF			*e*Sn	**Sn**	**18 40 42.1**	**-2.8**
	comp=N,21nm,0.8s					
PGF	**Pioggiola**	**3.02 265**	P	**Pn**	**18 40 09.1**	**+0.5**
PZUN	**Potenza**	**3.02 137**	⇓P	**Pb**	**18 40 11.9**	**-2.6**
BOJS	**Bojanci**	**3.06 30**	S	**Sn**	**18 40 47.0**	**+1.3**
ROVR	**Rover Verones**	**3.12 333**	⇑P	**Pn**	**18 40 12.2**	**+2.3**
SABO	**M.te Sabotino**	**3.13 7**	⇓P	**Pn**	**18 40 09.5**	**-0.4**
SABO			AML	AML		
	comp=E,789μm,0.9s					
SABO			AML	AML		
	comp=E,188μm,0.5s					
SABO			AML	AML		
	comp=N,1210μm,0.8s					
SABO			AML	AML		
	comp=E,789μm,1.1s					
SABO			AML	AML		
	comp=N,301μm,0.8s					
CGRP	**Cima Grappa**	**3.14 344**	⇓P	**Pn**	**18 40 11.5**	**+1.3**
VARN	**Col Varnada, M**	**3.19 348**	P	**Pn**	**18 40 12.2**	**+1.2**
AMUR	**Altamura**	**3.29 126**	⇑P	**Pn**	**18 40 12.8**	**+0.6**
AMUR			AML	AML		
	comp=E,118μm,0.4s					
AMUR			AML	AML		
	comp=N,115μm,0.5s					
AMUR			AML	AML		

comp=E,118μm,1.6s
DOSS Dosso del Somm 3.29 336 ⇓P **Pn 18 40 15.0 +2.7**
SALO Salr 3.30 327 ⇓P **Pn 18 40 14.1 +1.8**
AJAC Base Areonaval 3.33 255 P **Pn 18 40 14.3 +1.6**
LJU Ljubljana 3.33 18 S **Sn 18 40 55.0 +2.5**
MPRI Monte Prat 3.37 359 P **Pn 18 40 13.1 -0.2**
MPRI AML AML
comp=N,210μm,0.6s
MPRI AML AML
comp=E,162μm,0.7s
MPRI AML AML
comp=N,210μm,1.4s
MIGL Miglionico 3.39 131 ⇑P **Pn 18 40 15.6 +2.0**
STON Ston 3.40 88 ⇓P **Pn 18 40 12.8 -0.9**
STON AML AML
comp=E,44μm,1.4s
STON AML AML
comp=E,44μm,0.6s
STON AML AML
comp=N,50μm,0.6s
LUSI Trento, Gardas 3.44 334 P **Pn 18 40 15.8 +1.5**
PTCC Patocco-Chiusa 3.54 3 ⇓P **Pn 18 40 15.0 -0.6**
PTCC AML AML
comp=N,67μm,0.7s
PTCC AML AML
comp=E,54μm,0.7s
ZONE Zone 3.58 325 P **Pn 18 40 13.1 -3.2**
LTRZ Laterza 3.61 128 ⇓P **Pn 18 40 17.6 +1.0**
MABI Malga Bissina 3.67 331 P **Pn 18 40 19.3 +1.7**
ZOU Zoufplan 3.68 359 ⇓P **Pn 18 40 17.7 0.0**
ZOU AML AML
comp=E,120μm,1.0s
ZOU AML AML
comp=N,102μm,1.4s
ZOU AML AML
comp=E,120μm,1.0s
ZOU AML AML
comp=N,102μm,0.6s
MYKA Terra Mystica 3.78 6 *e*Pn **Pn 18 40 19.1 +0.2**
comp=N,3.6nm,0.2s
OBKA Obir 3.78 16 *e*Pn **Pn 18 40 19.1 +0.1**
comp=N,1.4nm,0.2s
KOSI Kohlern 3.79 342 ⇓P **Pn 18 40 20.9 +1.7**
SALB San Lorenzo Be 3.88 139 ⇓P **Pn 18 40 22.3 +2.0**
ABTA Abfaltersbach 3.89 354 *i* Pn **Pn 18 40 21.4 +0.9**
comp=N,16nm,0.4s,SNR=9.8
ABTA *e*Sn **Sn 18 41 07.5 +1.1**
comp=N,14nm,0.4s
BRY Bratogost 4.02 88 *e*Pn **Pn 18 40 22.9 +0.6**
BRY *i* Sn **Sn 18 41 11.0 +1.5**
HCY Herceg Novi 4.02 94 ⇑*i*Pn **Pn 18 40 22.9 +0.7**
HCY *i* Sn **Sn 18 41 11.1 +1.7**
SOKA Soboth 4.05 19 *e*Pn **Pn 18 40 21.5 -1.2**
comp=N,1.1nm,0.4s
SAOF Saorge 4.17 287 P **Pn 18 40 25.3 +1.1**
KBA Koelnbreinsper 4.21 3 *i* Pn **Pn 18 40 24.9 0.0**
comp=N,4.7nm,0.3s,SNR=5.3
ROSI Rosskopf 4.22 344 ⇑P **Pn 18 40 27.3 +2.1**
SBF Sospel 4.23 285 *e*Pn **Pn 18 40 24.4 -0.7**
SBF *e*Sn **Sn 18 41 11.4 -3.2**
comp=N,13nm,0.6s
CEME Cevo 4.32 92 ⇑*i*Pn **Pn 18 40 27.1 +0.7**
CEME *i* Sn **Sn 18 41 18.3 +1.4**
NKME Niksic 4.33 89 ⇑*i*Pn **Pn 18 40 27.2 +0.8**
NKME *i* Sn **Sn 18 41 18.5 +1.5**
BUM Brajici-Budva 4.33 96 ⇑*i*Pn **Pn 18 40 27.4 +0.8**
BUM *i* Sn **Sn 18 41 18.7 +1.4**
VSL Villasalto 4.38 221 ⇓P **Pn 18 40 28.6 +1.4**
SPIF crte de Spivo 4.41 288 P **Pn 18 40 27.7 0.0**
FETA Feichten 4.47 339 *e*Pn **Pn 18 40 29.7 +1.2**
comp=N,3.3nm,0.4s
WTTA Wattenberg 4.50 347 *e*Pn **Pn 18 40 31.2 +2.2**
comp=N,3.5nm,0.4s
DAVOX Davos/Dischmat 4.52 331 Pn **Pn 18 40 29.2 0.0**
comp=N,1.4nm,0.3s,baz=156,slow=18,SNR=12
DAVOX Sn **Sn 18 41 23.5 +1.6**
comp=N,1.2nm,0.3s,baz=287,slow=21,SNR=8.8
comp=N,3.7nm,0.3s
SQTA Sankt Quirin 4.54 344 *e*Pn **Pn 18 40 32.0 +2.5**
comp=N,4.9nm,0.4s,SNR=5.9
DRME Dracevica, Mon 4.57 97 ⇓*i*Pn **Pn 18 40 30.5 +0.8**
DRME *i* Sn **Sn 18 41 24.4 +1.5**
TTG Podgorica 4.58 93 *e*Pn **Pn 18 40 30.7 +0.8**
TTG *i* Sn **Sn 18 41 24.3 +1.1**
WATA Walderalm 4.58 347 *e*Pn **Pn 18 40 32.3 +2.2**
comp=N,1.8nm,0.2s,SNR=5.4
PLE Pljevlja 4.65 82 ⇓*i*Pn **Pn 18 40 31.7 +0.8**
PLE *i* Sn **Sn 18 41 26.2 +1.2**
ULC Ulcinj 4.66 99 *e*Pn **Pn 18 40 31.5 +0.5**
ULC *i* Sn **Sn 18 41 26.6 +1.4**
MOTA Moosalm 4.68 343 *e*Pn **Pn 18 40 33.8 +2.3**
comp=N,7.8nm,0.6s
ARSA Arzberg 4.71 21 *e*Pn **Pn 18 40 31.2 -0.4**
comp=N,1.2nm,0.5s
ARSA *e*Sn **Sn 18 41 24.5 -1.9**
comp=N,5.2nm,0.5s
KOME Kolasin 4.74 88 ⇑*i*Pn **Pn 18 40 32.9 +0.8**
KOME *i* Sn **Sn 18 41 28.4 +1.2**
SURF Saint Ours 4.82 292 P **Pn 18 40 36.0 +2.7**
LMR La Mourre 4.83 278 *e*Pn **Pn 18 40 32.7 -0.6**
LMR *e*Sn **Sn 18 41 25.5 -3.8**
comp=N,16nm,1.1s
BIOA Bad Ischl, Aus 4.83 5 *e*Pn **Pn 18 40 33.8 +0.4**
comp=N,8.5nm,0.5s,SNR=5.3
BIOA *e*Sn **Sn 18 41 31.1 +1.6**
comp=N,14nm,0.6s
JAUF Jausiers 4.84 291 P **Pn 18 40 36.4 +2.7**
RETA Reutte 4.89 341 *e*Pn **Pn 18 40 36.9 +2.6**
comp=N,1.5nm,0.3s
MBDF Montbardon 4.92 294 *e*Pn **Pn 18 40 34.6 -0.1**
MBDF *e*Sn **Sn 18 41 28.5 -3.4**
comp=N,8.0nm,0.8s
TRIGF Trigance 4.94 282 P **Pn 18 40 36.3 +1.4**
DAVA Damuels 4.96 334 *e*Pn **Pn 18 40 37.2 +2.0**
comp=N,11nm,0.6s,SNR=5.0
CREF Crivoux 4.97 292 P **Pn 18 40 39.1 +3.8**
IVA Berane 5.01 88 ⇑*i*Pn **Pn 18 40 36.7 +0.8**
IVA *i* Sn **Sn 18 41 35.1 +1.1**
MOA Molln 5.04 9 *e*Pn **Pn 18 40 37.0 +0.7**
comp=N,1.9nm,0.5s
PVY Plav 5.08 91 *e*Pn **Pn 18 40 37.7 +0.8**
PVY *i* Sn **Sn 18 41 36.7 +1.0**
DIX Grande Dixence 5.17 310 P **Pn 18 40 40.2 +2.0**
DIX Grande Dixence 5.17 310 S **Sn 18 41 39.7 +1.7**
LPG La Plagne 5.25 302 *e*Pn **Pn 18 40 39.5 +0.2**
LPG *e*Sn **Sn 18 41 36.7 -3.4**
comp=N,9.2nm,0.8s
LPL La Plagne 5.27 302 *e*Pn **Pn 18 40 39.5 0.0**
LPL *e*Sn **Sn 18 41 37.4 -3.1**
comp=N,6.9nm,0.7s
RONA Rosalia, Austr 5.33 24 *e*Pn **Pn 18 40 39.4 -0.9**
comp=N,0.8nm,0.1s
CONA Conrad Observa 5.42 20 *e*Pn **Pn 18 40 40.3 -1.2**
comp=N,0.5nm,0.1s,SNR=6.1
CONA *e*Sn **Sn 18 41 41.6 -2.4**
comp=N,4.0nm,0.5s
SMRF Simiane la Rot 5.57 284 *e*Pn **Pn 18 40 43.2 -0.3**
SMRF *e*Sn **Sn 18 41 43.3 -4.4**
comp=N,44nm,1.6s
AIGLE Aigle 5.58 311 P **Pn 18 40 46.1 +2.5**
ORIF Oris-en-Rattie 5.58 294 *e*Pn **Pn 18 40 43.4 -0.4**
ORIF *e*Sn **Sn 18 41 44.3 -3.8**
comp=N,21nm,1.2s
ORIF Oris-en-Rattie 5.58 294 P **Pn 18 40 47.9 +4.2**
BALST Balsthal 5.86 321 P **Pn 18 40 48.2 +0.7**
BALST Balsthal 5.86 321 S **Sn 18 41 57.7 +2.8**
GERES GERESS Array B 5.99 4 Pn **Pn 18 40 47.1 -2.1**
comp=N,0.4nm,0.3s,baz=171,slow=14,SNR=8.7
GERES Sn **Sn 18 41 54.3 -3.7**
comp=N,1.0nm,0.3s,baz=181,slow=18,SNR=6.0
comp=N,0.6nm,0.4s
BOURR Bourrignon 6.12 320 P **Pn 18 40 52.5 +1.3**
FELD Feldberg im Sc 6.14 326 S **Sn 18 42 01.4 -0.5**
FELD Feldberg im Sc 6.14 326 P **Pn 18 40 52.3 +0.8**
BRANT Les Verrieres 6.20 313 P **Pn 18 40 54.0 +1.7**
CABF La Chapelle 6.22 309 *e*Pn **Pn 18 40 51.7 -0.8**
KIZ Kirchzarten 6.24 326 S **Sn 18 42 02.9 -1.3**
KIZ Kirchzarten 6.24 326 P **Pn 18 40 53.4 +0.7**
KHC Kasperske Hory 6.27 3 *e*PN **Pn 18 40 52.4 -0.7**
KHC *ex* x 18 41 07.0
KHC *e*SN **Sn 18 42 02.0 -2.8**
CHMF Charmoille 6.31 316 P **Pn 18 40 54.7 +1.1**
VIVF Saint-Julien-l 6.39 291 *e*Pn **Pn 18 40 54.1 -0.6**
VOGT Vogtsburg - To 6.44 326 P **Pn 18 40 55.9 +0.4**
MOF Molkenrain 6.50 322 P **Pn 18 40 56.9 +0.5**
HINF Hinteralfeld 6.60 321 *e*Pn **Pn 18 40 57.1 -0.6**
HINF *e*Sn **Sn 18 42 09.6 -3.5**
comp=N,21nm,0.9s
RONF Ronchamp 6.63 319 P **Pn 18 40 59.0 +1.0**
RONF S **Sn 18 42 15.9 +2.3**
ECH Echery 6.76 324 P **Pn 18 41 00.5 +0.6**
ECH S **Sn 18 42 15.6 -1.4**
LASF Ste Croix 6.81 283 *e*Pn **Pn 18 41 00.3 -0.3**
WLS Welschbruch 6.83 326 P **Pn 18 41 01.8 +0.9**
CDF Champ du Feu 6.87 326 *e*Pn **Pn 18 41 00.9 -0.5**
CDF *e*Sn **Sn 18 42 15.7 -3.9**
comp=N,7.3nm,0.7s
HAU Haudompre 6.98 320 *e*Pn **Pn 18 41 02.4 -0.4**
HAU *e*Sn **Sn 18 42 18.3 -3.9**
comp=N,9.1nm,0.5s
SMF Signal de Mont 7.57 303 *e*Pn **Pn 18 41 09.5 -1.5**
SMF *e*Sn **Sn 18 42 32.5 -4.4**
comp=N,6.6nm,0.8s
PAGF Fort de Pagny 7.66 320 *e*Pn **Pn 18 41 10.8 -1.4**
baz=138
PAGF *e*Sn **Sn 18 42 34.8 -4.2**
comp=N,11nm,0.7s
KEST Kesra 7.70 203 Pn Pn 18 41 21.6 +8.8
comp=N,0.3nm,0.3s,baz=12,slow=5.8,SNR=2.4
LOR Lormes 7.86 307 *e*Pn **Pn 18 41 14.2 -0.7**
baz=129
LOR *e*Sn **Sn 18 42 39.2 -4.8**
comp=N,2.4nm,0.4s
AVF Avril sur Loir 7.94 303 *e*Pn **Pn 18 41 14.9 -1.1**
MTLF Montolieu 7.96 277 *e*Pn **Pn 18 41 16.1 -0.2**
SSF Saint Saulge 7.97 305 *e*Pn **Pn 18 41 15.8 -0.6**
SSF *e*Sn **Sn 18 42 41.4 -5.2**
comp=N,8.6nm,1.1s
BGF Bois d'Agland 8.16 300 *e*Pn **Pn 18 41 18.4 -0.6**
CAF Calviac 8.21 288 *e*Pn **Pn 18 41 19.3 -0.5**
CLL Collm 8.44 360 *e*Sg **Sg 18 43 47.0 -4.0**
comp=Z,7.0nm,0.9s
TCF Toulx Ste Croi 8.47 297 *e*Pn **Pn 18 41 22.6 -0.7**
HYF Humbligny 8.59 304 *e*Pn **Pn 18 41 24.5 -0.4**
MMAI Mount Meron Ar 20.12 112 P **P 18 43 55.7 +1.0**
comp=Z,2.3nm,0.8s,baz=316,slow=10,SNR=2.8
comp=Z,2.3nm,0.8s
FINES FINESS Array B 20.16 18 P **P 18 43 55.5 +0.7**
comp=Z,1.2nm,0.6s,baz=204,slow=13,SNR=1.4
comp=Z,1.2nm,0.6s
TORD Torodi Ar. Bea 31.21 202 P **P 18 45 40.7 +0.5**
comp=Z,0.5nm,0.7s,baz=26,slow=9.9,SNR=3.1
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 47.79 60 P **P 18 47 58.5 +0.6**
comp=Z,0.3nm,0.5s,baz=282,slow=6.6,SNR=4.3
comp=Z,0.3nm,0.5s

ANF 26 19:04:34.2±0.2, 60°.26N×138°.17W, h9km±3km, ML2.5/15, ML1.5/4, Error ellipse: s-maj=1.5km s-min=1.1km az=118.0, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O29M	**Mount Kennedy**	**0.20**	**283**	P	Pg	19 04 38.7	+0.2
O29M	baz=103,SNR=150			S	Sg	19 04 41.9	+0.6
P30M	**Million Dollar**	**0.62**	**102**	P	Pg	19 04 46.2	0.0
P30M	baz=283			S	Sg	19 04 55.1	+0.8
HYT	**Haines Junctio**	**0.66**	**30**	P	Pg	19 04 47.3	+0.4
HYT	baz=210,SNR=9.9			S	Sb	19 04 56.5	-0.7
P29M	**Windy Craggy**	**0.67**	**161**	P	Pg	19 04 46.7	-0.3
P29M	baz=341,SNR=33			S	Sg	19 04 56.1	+0.4
YUK6	**Outpost Mounta**	**0.69**	**352**	P	Pg	19 04 47.3	-0.3
YUK6	baz=172,SNR=27			S	Sg	19 04 57.2	+0.5
PNL	**Peninsula**	**0.85**	**227**	P	Pg	19 04 50.7	+0.2
PNL	baz=46			S	Sb	19 05 02.5	-0.2
PINM	**Pinnacle**	**1.05**	**262**	P	Pb	19 04 54.8	+0.2
PINM	baz=80			S	Sn	19 05 09.3	-0.7
YUK4	**Talbot Arm**	**1.11**	**348**	P	Pn	19 04 57.1	+1.0
O28M	baz=171 **Mount Upton**	**1.12**	**298**	P	Pb	19 04 55.9	0.0
YUK8	baz=117 **Steele Glacier**	**1.29**	**324**	P	Pb	19 04 58.8	0.0
WHY	baz=142 **Whitehorse**	**1.68**	**75**	Pg	Pg	19 05 06.4	0.0
	baz=257						

*ANF **26** 19:05:02.5±0.1, 61°.56N×141°.00W, h2km±1km, Error ellipse: s-maj=1.1km s-min=0.9km az=37.0*
PGC 26 19:05:03.7, 61°.56N×141°.00W, h1km, ML1.8, ML2.1/11, 206km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK2	**White River**	**0.24**	**18**	P	Pg	19 05 07.8	+0.6
YUK2				S	Sg	19 05 11.6	+1.2
YUK3	**Moose Creek**	**0.34**	**49**	P	Pg	19 05 09.4	+0.4
YUK3				S	Sg	19 05 14.1	+0.5
YUK3	**Moose Creek**	**0.34**	**49**	P	Pg	19 05 09.4	+0.3
YUK3	baz=228,SNR=1000			S	Sg	19 05 14.3	+0.8
CTGM	**Chitina Glacie**	**0.61**	**195**	P	Pg	19 05 14.5	+0.3
CTGM				S	Sg	19 05 23.0	+0.9
CTG	**Chitna Glacier**	**0.61**	**196**	P	Pg	19 05 14.5	+0.3
CTG	baz=16,SNR=93			S	Sg	19 05 23.4	+1.2
YUK8	**Steele Glacier**	**0.66**	**114**	P	Pg	19 05 15.6	+0.5
YUK8				S	Sg	19 05 24.9	+1.4
YUK8	**Steele Glacier**	**0.66**	**114**	P	Pg	19 05 15.6	+0.5
YUK8	baz=295			S	Sb	19 05 25.1	-1.3
LOGN	**Logan Glacier**	**0.73**	**180**	P	Pg	19 05 16.6	+0.1
PTPK	**Patty Peak**	**0.80**	**243**	P	Pg	19 05 18.2	+0.5
PTPK				S	Sg	19 05 28.4	+0.5
BALM	**Baldy**	**0.83**	**232**	P	Pg	19 05 18.4	0.0
BALM				S	Sg	19 05 29.6	+0.4
BVCY	**Beaver Creek**	**0.86**	**4**	P	Pg	19 05 19.2	+0.1
BVCY				S	Sg	19 05 30.8	+0.6
BVCY	**Beaver Creek**	**0.86**	**4**	P	Pg	19 05 19.1	+0.1
BVCY	baz=184,SNR=216			S	Sg	19 05 30.6	+0.4
O28M	**Mount Upton**	**0.88**	**153**	P	Pg	19 05 19.1	-0.2
O28M				S	Sg	19 05 31.1	+0.4
O28M	**Mount Upton**	**0.88**	**153**	P	Pg	19 05 19.1	-0.2
O28M	baz=334,SNR=24			S	Sg	19 05 31.1	+0.4
M27K	**Edge Creek, AK**	**0.91**	**333**	P	Pg	19 05 20.1	+0.3
M27K				S	Sg	19 05 32.3	+0.7
M27K	**Edge Creek, AK**	**0.91**	**333**	P	Pg	19 05 20.0	+0.2
M27K	baz=152,SNR=261			S	Sg	19 05 32.0	+0.4
KIAG	**Kiagna River**	**0.91**	**227**	P	Pg	19 05 19.8	-0.1
KIAG				S	Sg	19 05 32.4	+0.6
MCARA	**McCarthy VSAT**	**0.98**	**261**	P	Pb	19 05 22.0	-0.2
MCARA	baz=80,SNR=230			Sb	Sb	19 05 36.2	+0.6
TABL	**Table Mountain**	**1.12**	**184**	P	Pg	19 05 23.8	-0.2
TABL				S	Sb	19 05 39.4	-0.3
YUK4	**Talbot Arm**	**1.15**	**100**	P	Pg	19 05 24.4	-0.1
YUK4	**Talbot Arm**	**1.15**	**100**	P	Pg	19 05 24.5	0.0
M26K	baz=277 **Nabesna, AK**	**1.27**	**313**	P	Pg	19 05 26.3	-0.5
M26K	baz=131,SNR=205			S	Sb	19 05 43.8	0.0
YUK6	**Outpost Mounta**	**1.42**	**115**	Pn	Pn	19 05 28.6	-0.8
YUK6				Sg	Sn	19 05 48.5	-0.2
YUK6	**Outpost Mounta**	**1.42**	**115**	P	Pn	19 05 28.7	-0.7
YUK6	baz=297,SNR=18			S	Sn	19 05 49.2	+0.5
SAMH	**Samovar Hills**	**1.44**	**176**	Pn	Pg	19 05 30.1	+0.1
SAMH				Sg	Sn	19 05 49.2	+0.3
MESA	**MESA**	**1.46**	**199**	Pn	Pn	19 05 29.9	0.0
MESA				Sg	Sn	19 05 50.5	+0.9
MESA	**MESA**	**1.46**	**199**	P	Pn	19 05 29.6	-0.3
MESA	baz=18,SNR=18			S	Sn	19 05 50.7	+1.0
M29M	**Somme Creek**	**1.49**	**52**	Pn	Pn	19 05 30.1	-0.2
M29M	baz=18			Sg	Sb	19 05 50.1	-0.3
M29M	**Somme Creek**	**1.49**	**52**	P	Pn	19 05 30.2	-0.2
M29M	baz=234,SNR=102			S	Sn	19 05 51.3	+0.8
PCA	**Pinnacle**	**1.51**	**166**	Pn	Pb	19 05 31.2	0.0
PCA	baz=234			Sg	Sg	19 05 52.1	+1.2
PINM	**Pinnacle**	**1.51**	**166**	P	Pn	19 05 30.6	+0.1
PINM	baz=346,SNR=82			S	Sg	19 05 52.1	+1.2
L27K	**Beaver Creek,**	**1.56**	**346**	Pn	Pn	19 05 31.4	+0.2
L27K	baz=346			Sg	Sn	19 05 51.8	-0.2
L27K	**Beaver Creek,**	**1.56**	**346**	P	Pn	19 05 31.3	+0.1
L27K	baz=165,SNR=90			S	Sg	19 05 53.0	+0.4
YUK5	**Granite Creek**	**1.57**	**104**	Pn	Pn	19 05 31.4	-0.1
YUK5	baz=165			Sg	Sn	19 05 52.3	-0.1
N25K	**Chitina, Valde**	**1.72**	**273**	Pb	Pb	19 05 34.5	-0.3
N25K	baz=90			Sb	Sg	19 05 58.2	+0.5
O29M	**Mount Kennedy**	**1.73**	**136**	Pn	Pb	19 05 34.8	-0.2
O29M	baz=90			Sg	Sg	19 05 58.0	+0.1
O29M	**Mount Kennedy**	**1.73**	**136**	Pb	Pb	19 05 34.8	-0.1
O29M	baz=318,SNR=13			Sb	Sg	19 05 58.5	+0.6
YUK7	**Dusty Glacier**	**1.73**	**125**	Pn	Pb	19 05 35.0	0.0
YUK7	baz=318			Sg	Sg	19 05 58.3	+0.3
BMRM	**Bremner River**	**1.84**	**253**	P	Pn	19 05 35.4	+0.4
BMRM	baz=70,SNR=50			S	Sb	19 05 59.8	-0.4
L26K	**Log Cabin Wild**	**1.84**	**324**	P	Pn	19 05 35.5	+0.5
L26K	baz=70			Sb	Sg	19 06 01.2	-0.2
HYT	**Haines Junctio**	**1.85**	**112**	Pn	Pn	19 05 35.5	+0.3
HYT	baz=142,SNR=24			Sg	Sb	19 06 00.7	+0.2
HYT	**Haines Junctio**	**1.85**	**112**	Pb	Pb	19 05 37.1	+0.1
HYT	baz=295			S	Sb	19 06 00.5	0.0
PNL	**Peninsula**	**2.05**	**157**	Pn	Pb	19 05 39.7	-0.7
PNL	baz=295			Sg	Sg	19 06 08.6	+0.3
PNL	**Peninsula**	**2.05**	**157**	Pb	Pb	19 05 40.2	-0.2
L29M	baz=338 **L29M**	**2.06**	**39**	Pn	Pn	19 05 38.9	+0.8
L29M				Sg	Sg	19 06 07.6	-0.8
L29M	**L29M**	**2.06**	**39**	P	Pn	19 05 38.4	+0.4
L29M	baz=222,SNR=29			Sb	Sg	19 06 08.2	-0.3
HARP	**HAARP**	**2.14**	**295**	Pb	Pb	19 05 42.1	+0.2
M30M	baz=222 **Minto, Yukon**	**2.23**	**61**	Pg	Pb	19 05 43.6	+0.1
M30M	baz=112,SNR=6.0			Sg	Sb	19 06 12.2	+0.7
M30M	**Minto, Yukon**	**2.23**	**61**	Pb	Pb	19 05 43.5	0.0
M30M	baz=244			Sb	Sb	19 06 12.6	+1.1
DIV	baz=244 **Divide**	**2.34**	**262**	Pg	Pb	19 05 45.2	-0.1
KLU	**Klutina**	**2.36**	**271**	Pb	Pb	19 05 45.3	-0.3
KLU	baz=86			Sb	Sg	19 06 17.3	-0.9
P30M	baz=86 **Million Dollar**	**2.45**	**124**	Pg	Pb	19 05 47.7	+0.5
P30M				Sg	Sg	19 06 19.8	-1.2
N31M	**Braeburn, Yuko**	**2.50**	**89**	Pg	Pb	19 05 48.9	+0.8
N31M				Sg	Sg	19 06 21.9	-0.9
P29M	**Windy Craggy**	**2.52**	**139**	Pg	Pb	19 05 49.2	+0.9
P29M				Sg	Sg	19 06 22.1	-1.1
DOT	**Dot Lake**	**2.53**	**327**	Sg	Sb	19 06 21.2	+1.1
DAWY	**Dawson**	**2.63**	**16**	Pn	Pn	19 05 46.5	+0.7
DAWY				Sg	Sb	19 06 24.4	+1.5
DAWY	**Dawson**	**2.63**	**16**	P	Pn	19 05 46.6	+0.8
K29M	baz=197,SNR=7.2 **Barlow Dome**	**2.80**	**33**	Pn	Pn	19 05 49.6	+1.3
K29M				Sg	Sg	19 06 30.2	-2.2
WHY	**Whitehorse**	**3.10**	**104**	Pg	Pb	19 05 59.8	+1.4
WHY				Sg	Sg	19 06 40.4	-1.7
J26L	**Joseph Creek**	**3.18**	**340**	P	Pn	19 05 54.1	+0.6
I27K	baz=157,SNR=9.4 **Kandik River**	**4.07**	**356**	Sg	Sg	19 07 09.8	-3.3
P33M	**Teslin, Yukon**	**4.22**	**105**	Sg	Sg	19 07 14.7	-3.2
H27K	**Steamboat Moun**	**4.70**	**357**	Sg	Sg	19 07 30.6	-2.6
MMPY	**Sheldon Lake,**	**4.70**	**73**	Pn	Pn	19 06 13.9	-0.4
MMPY				Sg	Sg	19 07 28.7	-4.6

*KRNET **26** 19:11:55.9±0.1, 43°.01N×71°.56E, h13km, mb2.9*
*NNC **26** 19:11:55.0±0.4, 42°.92N×71°.54E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=5.2km s-min=2.2km az=4.0*
*SOME **26** 19:11:57.1, 42°.92N×71°.52E, h10km*
ISC 26 19:11:56.4±1.2, 43°.02N±0°.04×71°.50E±0°.02, h3km±10km, n35, σ1°.04/53, 21C-10D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	**Taraz**	**0.18**	**224**	*e*P	**Pg**	**19 12 00.2**	**+0.3**
DZA	baz=35			*e*S	**Sg**	**19 12 03.0**	**+0.6**
DZA	**Taraz**	**0.18**	**224**	*e*P	**Pg**	**19 12 00.2**	**+0.3**
DZA	187nm,0.2s			*e*S	**Sg**	**19 12 03.0**	**+0.6**
KK31	924nm,0.6s **Karatay Array**	**0.73**	**277**	P	**Pb**	**19 12 10.9**	**-0.9**
KK31	1.3nm,0.4s,baz=104,slow=17,SNR=326			⇓S	**Sb**	**19 12 20.7**	**-1.5**
KKAR	6.5nm,0.3s,baz=105,slow=31,SNR=44 **Karatay Array**	**0.73**	**277**	⇑*e*P	**Pg**	**19 12 10.7**	**+0.3**
KKAR	baz=77			⇑*e*S	**Sb**	**19 12 20.8**	**-1.4**
ARK	**Arkit**	**1.27**	**164**	⇑*e*P	**Pg**	**19 12 19.5**	**-1.2**
ARK	baz=66			⇑*e*S	**Sg**	**19 12 35.9**	**-1.3**
MRKS	**Merke**	**1.30**	**102**	*e*P	**Pn**	**19 12 21.3**	**-0.1**
MRKS	2.8nm,0.2s			*e*S	**Sg**	**19 12 38.3**	**+0.3**
MRKS	30nm,0.2s **Merke**	**1.30**	**102**	P	**Pn**	**19 12 20.0**	**-1.5**
MRKS	2.7nm,0.1s			S	**Sg**	**19 12 36.3**	**-1.8**
IUG	37nm,0.3s **luzhnay**	**1.40**	**232**	*e*P	**Pg**	**19 12 23.0**	**-0.2**
IUG	baz=33			*e*S	**Sn**	**19 12 41.9**	**0.0**
IUG	**luzhnay**	**1.40**	**232**	*e*P	**Pg**	**19 12 23.0**	**-0.2**
IUG	118nm,0.4s			*e*S	**Sn**	**19 12 41.8**	**0.0**
TRKS	37nm,0.4s **Terek-Say**	**1.52**	**190**	⇑*e*P	**Pb**	**19 12 24.8**	**-0.4**
TRKS	baz=91			⇑*e*S	**Sg**	**19 12 46.3**	**+1.2**
CHM	**Chimkent**	**1.57**	**244**	*e*P	**Pg**	**19 12 26.7**	**+0.3**
CHM	43nm,0.1s			*e*S	**Sg**	**19 12 47.9**	**+1.1**
EKS2	67nm,0.1s **Erkin-Say**	**1.71**	**101**	⇑*e*P	**Pn**	**19 12 27.1**	**-0.1**
EKS2	baz=1.0			⇑*e*S	**Sn**	**19 12 49.1**	**-0.5**
USP	baz=1.0 **Ospenovka**	**2.21**	**83**	⇑*e*P	**Pn**	**19 12 34.3**	**+0.4**
USP	baz=82			⇑*e*S	**Sn**	**19 13 02.8**	**+1.1**

	baz=82						
AAK	Ala-Archa	2.23	99	⇑eP	Pn	19 12 34.6	+0.2
	baz=99						
AAK				⇑eS	Sn	19 13 03.4	+0.8
	baz=99						
FRU1	Bishkek	2.31	94	⇑eP	Pn	19 12 35.4	+0.1
	baz=94						
FRU1				⇑eS	Sn	19 13 05.2	+1.0
	baz=94						
SGDS	Sogindy	2.32	78	eP	Pb	19 12 38.1	-0.8
	2.3nm,0.3s						
SGDS				eS	Sb	19 13 07.5	-0.5
	58nm,0.4s						
UCH	Uchtor	2.36	109	⇓eP	Pn	19 12 36.3	-0.1
	baz=9.0						
UCH				⇓eS	Sn	19 13 06.4	+0.3
	baz=9.0						
CHMS	Chumysh	2.38	89	⇓eP	Pn	19 12 37.1	+0.8
	baz=89						
CHMS				⇓eS	Sn	19 13 07.2	+1.1
	baz=89						
CHMS	Chumysh	2.38	89	⇑Pg	Pn	19 12 36.9	+0.6
	1.2nm,0.3s						
CHMS				⇓Lg	Lg	19 13 09.2	
	5.8nm,0.3s						
ARLS	Aral	2.39	118	⇑eP	Pn	19 12 37.2	+0.7
	baz=18						
ARLS				⇑eS	Sn	19 13 07.4	+1.0
	baz=18						
KBK	Karagaybulak	2.56	97	⇓eP	Pn	19 12 39.5	+0.6
	baz=97						
KBK				⇓eS	Sn	19 13 11.8	+1.2
	baz=97						
BTLS	Baital	2.73	41	Pg	Pb	19 12 43.8	-1.9
	3.1nm,0.2s						
BTLS				Lg	Lg	19 13 16.9	
	5.6nm,0.2s						
TKM2	Tokmak 2	3.00	91	⇑Pg	Pb	19 12 49.4	-1.3
	1.1nm,0.7s						
TKM2				⇑Lg	Lg	19 13 26.9	
	7.5nm,0.7s						
KRBS	Karabastau	3.12	76	eP	Pg	19 12 55.5	-0.6
	2.9nm,0.4s						
KRBS				eS	Sg	19 13 36.8	+0.4
	8.2nm,0.5s						
KRBS	Karabastau	3.12	76	Pg	Pb	19 12 52.0	-0.4
	1.0nm,0.2s						
KRBS				Lg	Lg	19 13 31.2	
	11nm,0.6s						
DGS	Degeres	3.13	85	eP	Pb	19 12 54.8	+2.1
	1.9nm,0.2s						
DGS				eS	Sg	19 13 36.0	-0.9
	7.4nm,0.3s						
DGS	Degeres	3.13	85	Pg	Pb	19 12 53.0	+0.2
	2.2nm,0.5s						
DGS				Lg	Lg	19 13 32.5	
	8.9nm,0.5s						
KUU	Kurty	3.63	74	Pg	Pb	19 13 01.7	+0.6
	1.4nm,0.5s						
KUU				Lg	Lg	19 13 47.5	
	16nm,0.7s						
CHKK	Chushkaly	4.08	76	Pg	Pb	19 13 10.3	+1.5
	0.5nm,0.1s						
CHKK				Lg	Lg	19 14 02.2	
	16nm,0.5s						
ARXS	Arharly	4.74	73	Pg	Pb	19 13 22.9	+2.7
	2.9nm,1.3s						
ARXS				Lg	Lg	19 14 24.0	
	5.0nm,0.6s						
BLB	Baldybastay	5.18	76	Pg	Pb	19 13 29.8	+2.2
	0.9nm,0.2s						
BLB				Lg	Lg	19 14 36.0	
	7.7nm,0.7s						
MAKZ	Makanchi	8.34	59	⇓Lg	Lg	19 16 20.3	
	3.9nm,1.2s						
MK31	Makanchi Array	8.53	60	⇓Lg	Lg	19 16 26.6	
	1.4nm,0.8s						
KURBB	Kurchatov Arra	8.99	30	⇑Lg	Lg	19 16 43.4	
	2.4nm,0.7s						
KURK	Kurchatov	9.10	30	⇑Lg	Lg	19 16 46.0	
	2.5nm,0.9s						

*IDC **26** 19:12:44.1±5.6, 30°.46N×56°.83E, h0km, mb4.0/4, mbtmp3.9/5, ML3.2/1, Error ellipse: s-maj=102.3km s-min=39.2km az=2.0*
*TEH **26** 19:12:46.0, 30°.76N×56°.85E, h7km, ML3.8*
ISC 26 19:12:47.4±0.8, 30°.72N±0°.04×56°.87E±0°.04, h10km, n52, σ0°92/55, mb4.0/4, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.48	224	ePg	Pg	19 12 56.3	-0.6
KHGB				eSg	Sg	19 13 02.9	-0.4
TVBK	TV Kerman	0.74	187	ePg	Pg	19 13 01.8	+0.1
TVBK				eSg	Sb	19 13 12.8	-0.1
TVBK				e		19 13 16.6	
	comp=Z,42μm,0.2s						
KRBR	Kerman	0.74	187	ePn	Pg	19 13 01.9	+0.1
CHMN	Cheshme madani	1.04	146	ePg	Pg	19 13 06.8	-0.6
NGRK	Negar Kerman	1.08	186	eSg	Sn	19 13 23.7	-0.5
NGRK				ePg	Pg	19 13 08.2	0.0
NGRK				e		19 13 24.8	
	comp=Z,33μm,0.2s						
IBAF	Bafgh	1.41	308	ePg	Pn	19 13 12.1	-1.2
IBAF				e		19 13 36.1	
	comp=Z,18μm,0.2s						
IMEH	Mehriz	2.04	290	ePn	Pn	19 13 22.6	+0.5
IMEH				e		19 13 53.1	
	comp=Z,10μm,0.4s						
KBAM	BAM	2.10	139	ePn	Pb	19 13 24.3	-1.3
KBAM				e		19 13 58.5	
	comp=Z,7μm,0.4s						
BSRN	Basiran	2.29	57	ePn	Pn	19 13 25.5	+0.1
TPRV	Parvadeh(Tabas	2.30	356	ePn	Pn	19 13 25.9	+0.4
TPRV				e		19 14 00.0	
	comp=Z,9μm,0.6s						
IKOO	Kooshah	2.49	47	ePn	Pn	19 13 28.7	+0.5
IKOO				e		19 14 16.6	
	comp=Z,5μm,0.3s						
YZKH	Yazd	2.56	311	ePn	Pn	19 13 29.7	+0.7
ICHK	Chekchek	2.59	306	ePn	Pn	19 13 30.1	+0.5
ICHK				e		19 14 12.1	
	comp=Z,4μm,0.4s						
ITEG	Tejag	2.69	36	ePn	Pn	19 13 31.5	+0.5
ITEG				e		19 14 21.6	
	comp=Z,3μm,0.4s						
NHDN	Nehbandan	2.81	75	ePn	Pn	19 13 33.5	+1.0
BAGH	Bagheran - Bir	2.86	44	ePn	Pn	19 13 33.1	-0.2
BAGH				e		19 14 26.5	
	comp=Z,2μm,0.4s						
KHNJ	Kahnooj	2.86	165	ePn	Pn	19 13 35.3	+2.2
TKDS	Koohdasht(Taba	2.89	4	ePn	Pn	19 13 33.8	+0.2
TKDS				e		19 14 25.1	
	comp=Z,4μm,0.4s						
TABS	Tabas	2.92	4	ePn	Pn	19 13 34.4	+0.4
ISAD	Sadrabad	2.97	294	ePn	Pn	19 13 35.8	+1.0
TNSJ	Nastanj	3.24	356	ePn	Pn	19 13 38.5	+0.2
IDAH	Dahanechah	3.25	51	ePn	Pn	19 13 39.3	+0.6
AFRZ	Afriz	3.25	34	ePn	Pn	19 13 39.2	+0.6
GENO	Geno	3.37	191	ePn	Pn	19 13 42.8	+2.6
GENO				e		19 14 33.8	
	comp=Z,1μm,0.3s						
ZHSF	Zahedan	3.56	107	ePn	Pn	19 13 44.9	+2.0
ANAR	Anarak	3.63	313	ePn	Pn	19 13 44.4	+0.7
ZHDN	Zahedan	3.67	110	ePn	Pn	19 13 45.6	+1.3
IRAM	Ramesheh	3.99	287	ePn	Pn	19 13 49.6	+0.8
NASN	Na'in	4.03	302	ePn	Pn	19 13 50.3	+0.9
SHRT	Shahrakht	4.11	44	ePn	Pn	19 13 51.1	+0.8
IZEF	Zefreh	4.43	300	ePn	Pn	19 13 55.2	+0.3
IZEF				e		19 15 11.8	
	comp=Z,447nm,0.5s						
KLNJ	Kolanjah	4.54	275	ePn	Pn	19 13 57.3	+0.8
KRSH	Karshahi	5.15	310	ePn	Pn	19 14 05.1	+0.4
IKLH	Kolahrood	5.18	301	ePn	Pn	19 14 06.9	+1.7
AHBU	AHRAM	5.18	250	ePn	Pn	19 14 06.1	+1.1
SHRO	Shahrood	5.30	352	ePn	Pn	19 14 07.5	+0.8
ISFB	Sefidab	5.32	314	ePn	Pn	19 14 07.9	+0.9
IANJ	Anjilo	5.34	333	ePn	Pn	19 14 07.6	+0.2
TBJM	Torbat-e-JAM	5.38	32	ePn	Pn	19 14 08.5	+0.6
IPAY	Payeh	5.98	17	ePn	Pn	19 14 17.2	+1.0
IFIR	Firoozkooh	5.99	326	ePn	Pn	19 14 17.4	+1.0
IAKL	Akhelmad	6.07	15	ePn	Pn	19 14 18.1	+0.7
DAMV	Damavand	6.38	321	ePn	Pn	19 14 22.3	+0.6
IKRD	Kardeh	6.43	19	ePn	Pn	19 14 23.6	+1.3
ASAO	Ashtian	6.92	305	ePn	Pn	19 14 29.7	+0.7
MRVT	Maraveh tapeh	6.95	355	ePn	Pn	19 14 29.9	+0.6
MRVT				ePn	Pb	19 14 30.3	-18
CHTH	Charan	7.06	319	ePn	Pn	19 14 31.3	+0.3
GEYT	Alibeck	7.26	8	Pn	Pn	19 14 35.3	+1.7
	comp=Z,0.4nm,0.3s,baz=185,slow=15,SNR=12						
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	25.35	44	P	P	19 18 15.1	+0.6
	comp=Z,0.8nm,0.6s,baz=231,slow=10.0,SNR=8.0						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	30.72	33	P	P	19 19 02.5	+0.2
	comp=Z,1.2nm,0.5s,baz=236,slow=9.1,SNR=6.2						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	36.75	336	P	P	19 19 54.3	-0.3
	comp=Z,3.2nm,1.0s,baz=143,slow=14,SNR=4.0						
HFS	Hagfors	41.02	329	P	P	19 20 30.8	+0.3
	comp=Z,1.7nm,0.7s,baz=133,slow=12,SNR=2.2						

*IDC **26** 19:16:01.6±0.7, 11°.61S×13°.90W, h0km, mb4.2/15, mbtmp4.2/15, MS4.9/5, Error ellipse: s-maj=22.2km s-min=15.5km az=178.0*
*NEIC **26** 19:16:02.9±1.7, 11°.50S±0°.09×13°.8W±0°.1, h10km±1km, mb5.1/34, Error ellipse: s-maj=17.4km s-min=14.7km az=83.0*
*GCMT **26** 19:16:06.9±0.2, 11°.67S±0°.01×13°.86W±0°.01, h17km±1km, MW5.4/113, Moment Tensor Solution. s40,c54; s113,c186; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.15±.05; Mθθ-0.67±.04; Mφφ0.51±.04; Mrθ-0.40±.11; Mθφ1.38±.04; Mφr0.03±.11; Best double couple: M0 1.55100×10^17 NP1:φs78.00000°, δ88.00000°, λ-14.00000°. NP2:φs169.00000°, δ76.00000°, λ-178.00000°. Principal axes: T 1.4560, Plg9.0000°, Azm124.0000°; N 0.1900, Plg76.0000°, Azm252.0000°; P -1.6460, Plg11.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 19:16:02.0±0.4, 11°.53S±0°.06×13°.81W±0°.07, h7km, n83, σ1°38/69, mb4.8/28, MS4.8/5, 2C-1D, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	2.69	342	Pn	Pn	19 16 45.8	+0.2
	baz=326						
H10S2				T	T	19 19 51.6	
	baz=55,slow=74						
H10S3	ASCENSION HYDR	2.70	342	Pn	Pn	19 16 45.9	+0.2
	baz=254						
H10S3				T	T	19 19 39.0	
	baz=165,slow=74						
ASCN	Ascension	3.62	351	Pn	Pn	19 16 58.6	+0.1
ASCN				Sn	Sn	19 17 40.3	-1.3
H10N1	ASCENSION HYDR	3.73	350	Pn	Pn	19 17 00.6	+0.9
	baz=164,slow=19						
H10N1				Sn	Sn	19 17 42.6	-1.2
	baz=119						
H10N3	ASCENSION HYDR	3.73	349	Pn	Pn	19 17 00.9	+1.1
	baz=164,slow=19						
H10N3				Sn	Sn	19 17 42.7	-1.3
	baz=119						
H10N2	ASCENSION HYDR	3.74	350	Pn	Pn	19 17 01.0	+1.0
	baz=164,slow=19						
H10N2				Sn	Sn	19 17 42.9	-1.3
	baz=119						
SHEL	Horse Pasture	8.98	120	Pn	Pn	19 18 09.5	-2.8
LIC	Lamto	19.69	27	⇑eP	Pn	19 20 36.2	+2.8
	23nm,0.5s						
KIC	Kosan Boka	19.93	27	⇑eP	Pn	19 20 36.7	+0.4
	5.4nm,0.6s						
TIC	Toumodi	20.06	26	⇓iP	Pn	19 20 39.6	+1.7
	6.9nm,0.3s						
DBIC	Dimbokro	20.16	27	P	Pn	19 20 39.2	+0.2
	19nm,1.0s,baz=183,slow=11,SNR=7.0						
	19nm,1.0s						
DBIC	Dimbokro	20.16	27	P	P	19 20 35.9	-1.2
DBIC	Dimbokro	20.16	27		P	19 20 36.2	-0.9
RCBR	Riachuelo	22.56	283	P	P	19 21 03.4	+0.3
	23nm,0.9s,baz=254,slow=9.2,SNR=4.1						
RCBR				LR	LR	19 27 26.9	
	comp=Z,4μm,21.3s,baz=260,slow=30						
	23nm,0.9s						
RCBR	Riachuelo	22.56	283	P	P	19 20 59.5	-3.6
RCBR				IAmb	IAmb	19 21 23.2	
	comp=Z,34nm,1.0s						
RIB01	Linhares ES	26.75	250	eP	P	19 21 51.9	+9.3
SJMB	Sao Joao De Ma	27.35	252	eP	P	19 21 55.5	+7.5
TOA0	Torodi Ar. Sit	28.95	33	P	P	19 22 01.6	-0.6
TORD	Torodi Ar. Bea	28.95	33	P	P	19 22 03.5	+1.2
	comp=Z,5.2nm,0.8s,baz=217,slow=10.0,SNR=15						
	comp=Z,5.2nm,0.8s						
TSUM	Tsumeb	31.17	108	LR	LR	19 32 14.7	
	comp=Z,2μm,21.3s,baz=268,slow=31						
TSUM	Tsumeb	31.17	108	P	P	19 22 21.7	-0.5
PMNB	Patos De Minas	32.24	254	eP	P	19 22 37.7	+6.3
BDFB	Brasilia	33.48	259	P	P	19 22 41.1	-1.2
	comp=Z,2.1nm,0.5s,baz=97,slow=6.7,SNR=1.2						
	comp=Z,2.1nm,0.5s						
BDFB	Brasilia	33.48	259	P	P	19 22 43.5	+1.1
BDFB				IAmb	IAmb	19 22 50.3	
	comp=Z,16nm,1.1s						
BB19B	Bebedouro	34.58	250	eP	P	19 22 58.7	+6.9
SNDB	Serra Nova Dou	36.69	265	eP	P	19 23 18.1	+8.1
PCMB	Pacaembu	37.18	249	eP	P	19 23 20.1	+6.0
SUR	Sutherland	37.97	129	LR	LR	19 35 33.1	
	comp=Z,3μm,21.1s,baz=289,slow=31						
LBTB	Lobatse	39.59	115	P	P	19 23 35.7	+1.2
	comp=Z,1.4nm,0.8s,baz=284,slow=4.2,SNR=1.5						
	comp=Z,1.4nm,0.8s						
BOSA	Boshof	40.21	121	P	P	19 23 41.0	+1.4
	comp=Z,4.4nm,1.1s,baz=290,slow=12,SNR=3.2						
BOSA				LR	LR	19 37 21.3	
	comp=Z,3μm,20.2s,baz=341,slow=32						
	comp=Z,4.4nm,1.1s						
SALV	Santo Antonio	40.87	259	eP	P	19 23 52.5	+7.4
LSZ	Lusaka	40.98	100	P	P	19 23 47.5	+1.4
	comp=Z,2.3nm,0.3s,baz=284,slow=4.2,SNR=7.8						
	comp=Z,2.3nm,0.3s						
AQDB	Aquidauana	41.14	252	P	P	19 23 47.6	+0.4
AQDB	Aquidauana	41.14	252	eP	P	19 23 53.2	+5.9
CPSB	Cacapava Do Su	41.22	237	eP	P	19 23 46.5	-1.3
MALB	Monte Alegre	41.26	280	eP	P	19 23 57.6	+9.3
MATP	Matopo	41.52	108	P	P	19 23 50.6	+0.1
	comp=Z,4.0nm,1.1s,baz=284,slow=12,SNR=4.0						
	comp=Z,4.0nm,1.1s						
PLTB	Pedras Altas	41.80	235	P	P	19 23 52.6	0.0
PLTB				IAmb	IAmb	19 24 06.3	
	comp=Z,33nm,1.3s						
PDRB	Porto dos Gac	42.02	265	eP	P	19 24 02.5	+8.0
ITTB	Itaituba	42.09	276	eP	P	19 24 03.2	+8.1
CPUP	Villa Florida	43.50	244	P	P	19 24 05.7	-0.7
	comp=Z,1.7nm,0.7s,baz=80,slow=11,SNR=3.5						
	comp=Z,1.7nm,0.7s						
CPUP	Villa Florida	43.50	244	P	P	19 24 06.6	+0.3
ITQB	Itaqui	43.66	239	P	P	19 24 08.7	+1.1
MBAR	Mbarara	45.53	79	P	P	19 24 21.2	-1.8
SIV	San Ignacio	46.05	259	P	P	19 24 26.9	0.0
	comp=Z,0.9nm,0.6s,baz=87,slow=7.7,SNR=4.2						
	comp=Z,0.9nm,0.6s						
LPAZ	La Paz	52.82	258	P	P	19 25 19.2	-0.1
	comp=Z,1.0nm,0.6s,baz=90,slow=9.1,SNR=3.7						
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	52.82	258	P	P	19 25 18.4	-0.9
H05S1	Guadeloupe/Mar	53.27	298	T	T	20 22 41.7	
	SNR=69						
EFI	East Falkland	53.66	213	P	P	19 25 24.5	+0.2
PB11	IPOC Station P	54.20	254	P	P	19 25 29.6	+0.6
PB11				IAmb	IAmb	19 25 49.4	
	comp=Z,31nm,1.4s						
H05N1	Guadeloupe/Mar	54.31	300	T	T	20 24 00.6	
	SNR=14						
PB03	IPOC Station P	54.32	251	P	P	19 25 29.5	-0.3
PB03				IAmb	IAmb	19 25 36.0	
	comp=Z,30nm,1.2s						
PB07	IPOC Station P	54.43	252	P	P	19 25 30.1	-0.5
PB07				IAmb	IAmb	19 26 27.4	
	comp=Z,39nm,1.3s						
PATCX	Punta Patache	54.67	253	P	P	19 25 33.7	+1.5
GO03	Copiap	55.07	244	P	P	19 25 34.9	-0.1
AC06	Mina Casimiro	55.16	245	P	P	19 25 35.0	-0.7
AC06				IAmb	IAmb	19 25 42.7	
	comp=Z,33nm,0.9s						
CO01	Juntas del Tor	55.20	242	P	P	19 25 36.0	-0.2
CO01				IAmb	IAmb	19 25 44.0	
	comp=Z,34nm,1.2s						
AC05	El Transito	55.23	243	P	P	19 25 36.8	+0.5
LCO	Las Campanas	55.62	243	P	P	19 25 38.4	-0.8
LCO				IAmb	IAmb	19 25 45.9	
	comp=Z,26nm,1.0s						
CO03	El Pedregal	55.81	241	P	P	19 25 41.0	+0.6
CO03				IAmb	IAmb	19 25 59.0	
	comp=Z,44nm,1.4s						
GO04	Tololo Observa	55.83	241	P	P	19 25 39.7	-1.0
FURI	Furi	56.00	71	P	P	19 25 45.6	+3.5
ML02	Panimavida	57.14	235	P	P	19 25 50.4	+0.7
ML02				IAmb	IAmb	19 25 56.8	
	comp=Z,30nm,1.1s						
ANKE	Ethiopia-Afar	57.22	71	eP	P	19 25 54.3	+3.4
PLCA	Paso Flores	57.48	229	P	P	19 25 52.1	0.0
PLCA				IAmb	IAmb	19 27 45.6	
	comp=Z,31nm,1.9s						
BAUV	El Baul	57.64	288	P	P	19 25 54.1	+0.6
BAUV				IAmb	IAmb	19 26 26.2	
	comp=Z,23nm,1.2s						
LL02	Futaleuf	59.01	226	P	P	19 26 02.4	-0.2
LL02				IAmb	IAmb	19 27 22.5	
	comp=Z,49nm,1.9s						
VNA1	Neumayer--Stat	59.17	178	P	P	19 26 04.6	+1.4
VNA2	Neumayer--Watz	59.48	178	P	P	19 26 05.7	+0.3
	baz=345,slow=8.2						
VNA3	Neumayer Olymp	59.72	178	P	P	19 26 07.4	+0.3
SDV	Santo Domingo	60.04	287	eP	P	19 26 13.6	+3.2
SNAA	Sanae	60.47	176	P	P	19 26 11.1	-1.2
SNAA	Sanae	60.47	176	P	P	19 26 12.1	-0.2
	comp=Z,6.2nm,0.9s,baz=347,slow=9.2,SNR=10						
	comp=Z,6.2nm,0.9s						
PMSA	Palmer Station	63.38	202	LR	LR	19 47 40.7	
	comp=Z,641nm,21.7s,baz=16,slow=30						
BELA	Belgrano 2	67.18	185	P	P	19 26 55.8	-0.5
BELA				IAmb	IAmb	19 27 02.9	
	comp=Z,19nm,1.4s						
MAW	Mawson	74.33	157	P	P	19 27 40.7	+0.7
	comp=Z,2.1nm,0.9s,baz=263,slow=8.4,SNR=3.7						
	comp=Z,2.1nm,0.9s						
V55A	Taylorsville	79.05	310	P	P	19 28 06.0	-1.2
SBA	Scott Base	90.77	180	P	P	19 29 05.3	-0.2
SBA				IAmb	IAmb	19 29 30.7	
	comp=Z,29nm,1.8s						
VNDA	Vanda	91.07	179	P	P	19 29 08.5	+1.6
	comp=Z,0.6nm,1.0s,baz=212,slow=0.7,SNR=3.0						
	comp=Z,0.6nm,1.0s						
TXAR	Lajitas Array	95.44	299	P	P	19 29 29.1	+1.1
	comp=Z,0.6nm,1.0s,baz=102,slow=4.0,SNR=3.0						
	comp=Z,0.6nm,1.0s						
HHC	Hu-ho-hao-te	124.04	48	eP	PKPdf	19 34 58.3	-3.4
NJ2	Nanjing	131.98	57	eP	PKPdf	19 35 14.5	-2.4
MJAR	Matsushiro Arr	144.56	41	PKP	PKPdf	19 35 39.6	-0.3
	comp=Z,6.0nm,0.9s,baz=303,slow=3.7,SNR=3.7						

*BGR **26** 19:18:04.7±0.7, 42°.59N×13°.64E, h10km, ML6.4/6, Error ellipse: s-maj=17.8km s-min=12.2km az=85.0*
*ROM **26** 19:18:05.8±0.0, 42°.909N±0°.002×13°.129E±0°.003, h8km, ML5.9/84, Mw5.9, Mw5.9, Error ellipse: s-maj=0.2km s-min=0.1km az=76.0, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-7.27; Mθθ0.61; Mφφ6.66; Mrθ-0.43; Mθφ-2.30; Mφr0.35; Fault plane solution: M0 7.37690×10^17 NP1:φs344.00000°, δ43.00000°, λ-87.00000°. NP2:φs159.00000°, δ47.00000°, λ-93.00000°.*
*IDC **26** 19:18:06.7±0.3, 42°.89N×13°.06E, h0km, mb5.5/54, mbtmp5.5/65, ML4.5/11, MS6.0/97 Error ellipse: s-maj=8.3km s-min=7.0km az=170.0*
*PDG **26** 19:18:06.8±0.6, 42°.97N×13°.13E, h12km, MD6.0/13, ML6.0/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*BEO **26** 19:18:06.5±0.7, 42°.92N×13°.01E, h0km, ML6.1/15*
*RHSSO **26** 19:18:06.6±0.4, 42°.89N×12°.98E, h10km±8km, ML6.3/20*
*MOS **26** 19:18:07.8±1.2, 43°.01N×13°.10E, h18km, mb6.2/130, MS6.0/105, Error ellipse: s-maj=3.5km s-min=2.5km az=73.3*
*PRU **26** 19:18:07.0±0.0, 42°.95N×13°.00E, h0km, M6.1, Felt In Prachatice*
*LDG **26** 19:18:07.5±0.1, 42°.91N×13°.00E, h8km, Md5.8/7, Ml5.7/53, ms5.5/6, Error ellipse: s-maj=3.9km s-min=2.5km az=34.0*
*BJI **26** 19:18:07.0±0.0, 42°.94N×13°.09E, h10km, mb5.7/95, mB6.0/69, Ms6.5/86, Ms7 6.3/86*
*MED_RC **26** 19:18:07.0±0.1, 42°.89N×13°.08E, h10km, MW6.1/35, Moment Tensor Solution. Body waves: s18,c32;Mantle waves: s35,c91; Duration: 2s5 Moment tensor: Scale 10^18 Nm; Mrr-1.49±.02; Mθθ0.23±.02; Mφφ1.25±.01; Mrθ0.10±.06; Mθφ-0.63±.01; Mφr-0.49±.06; Best double couple: M0 1.60000×10^18 NP1:φs339.00000°, δ54.00000°, λ-85.00000°. NP2:φs150.00000°, δ36.00000°, λ-98.00000°. Principal axes: T 1.6300, Plg9.0000°, Azm65.0000°; N -0.0600, Plg4.0000°, Azm156.0000°; P -1.5700, Plg80.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*CRAAG **26** 19:18:07.2, 42°.92N×13°.13E, Mw6.1*
*NEIC **26** 19:18:08.4±1.4, 42°.96N±0°.04×13°.07E±0°.06, h10km±1km, mb6.1/684, Ms_20 6.0/373, Mwb6.0/93, Mwr6.1/48, Mww6.1, ML5.9(ROM), Mwr5.9(VIE), Error ellipse: s-maj=7.8km s-min=6.7km az=211.0*
*BGS **26** 19:18:08.0±3.2, 42°.96N×13°.07E, h10km, MW6.1(NEIC)*
*NEIC **26** 19:18:08.3, 42°.94N×13°.06E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr-1.38; Mθθ0.34; Mφφ1.04; Mrθ0.43; Mθφ-0.44; Mφr0.59; Fault plane solution: M0 1.51000×10^18 NP1:φs318.11000°, δ40.19000°, λ-120.18000°. NP2:φs175.38000°, δ56.09000°, λ-66.99000°. Principal axes: T 1.3015, Plg8.0000°, Azm249.0000°; N 0.3534, Plg19.0000°, Azm342.0000°; P -1.6548, Plg69.0000°, Azm136.0000°;*
*NEIC **26** 19:18:08.3, 42°.93N×13°.04E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr-1.12; Mθθ0.28; Mφφ0.84; Mrθ0.83; Mθφ-0.25; Mφr-0.29; Fault plane solution: M0 1.36000×10^18 NP1:φs312.31000°, δ64.51000°, λ-108.46000°. NP2:φs170.11000°, δ31.11000°, λ-56.41000°. Principal axes: T 1.1191, Plg18.0000°, Azm56.0000°; N 0.4015, Plg17.0000°, Azm320.0000°; P -1.5207, Plg65.0000°, Azm190.0000°;*
*TIR **26** 19:18:09.5, 42°.51N×13°.19E, h10km±6km, Md6.2, Ml6.1*
*STR **26** 19:18:09.9±0.2, 43°N±3°×1°3E±°, h10km, mb5.8/41*
*BNS **26** 19:18:10.6±0.4, 42°.96N×13°.30E, h10km, ML5.9*
*GCMT **26** 19:18:11.4±0.1, 42°.88N×13°.11E, h12km, MW6.1/173, Moment Tensor Solution. s147,c313; s173,c622; Duration: 2s7 Moment tensor: Scale 10^18 Nm; Mrr-1.47±.01; Mθθ0.23±.01; Mφφ1.23±.01; Mrθ0.20±.02; Mθφ-0.63±.01; Mφr-0.54±.02; Best double couple: M0 1.60800×10^18 NP1:φs336.00000°, δ56.00000°, λ-87.00000°. NP2:φs152.00000°, δ35.00000°, λ-94.00000°. Principal axes: T 1.6390, Plg10.0000°, Azm65.0000°;

NRCA			S	Sg	19 18 09.4	-2.3
T1245	Castelsantange	0.09 129	⇑P	Pg	19 18 08.2	-2.2
T1245			S	Sg	19 18 09.8	-2.2
T1245			AML	AML		
T1245			AML	AML		
T1245			AML	AML		
T1245			AML	AML		
T1245			AML	AML		
T1245			AML	AML		
FDMO	Fiordimonte	0.12 357	Pg	Pg	19 18 09.5	-1.3
FDMO	Fiordimonte	0.12 357	⇑P	Pg	19 18 09.3	-1.5
FDMO			S	Sg	19 18 10.8	-2.0
CESI	CESI - Serrava	0.17 304	⇑P	Pg	19 18 10.6	-1.0
MMO1	Montemonaco	0.17 94	⇑P	Pg	19 18 09.5	-2.1
MMO1			S	Sg	19 18 11.7	-2.4
AM05	Amandola Campo	0.20 71	⇑P	Pg	19 18 10.2	-1.9
AM05			S	Sg	19 18 12.5	-2.4
T1215	Vallo di Nera,	0.20 237	⇑P	Pg	19 18 11.2	-1.0
T1215			S	Sg	19 18 15.3	+0.4
T1215			AML	AML		
T1215			AML	AML		
T1215			AML	AML		
T1215			AML	AML		
T1215			AML	AML		
T1215			AML	AML		
T1215			AML	AML		
T1244	Arquata del Tr	0.21 136	P	Pg	19 18 10.9	-1.4
GUMA	Gualdo di Mace	0.23 49	⇑P	Pg	19 18 11.2	-1.5
GUMA			S	Sg	19 18 13.8	-2.1
GUMA			AML	AML		
GUMA			AML	AML		
GUMA			AML	AML		
T127	Poggiodomo (PG	0.23 211	⇑P	Pg	19 18 11.6	-1.1
T1217			S	Sg	19 18 15.5	-0.4
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1217			AML	AML		
T1241	Roccafluvione,	0.25 103	AML	AML		
T1241			AML	AML		
SEF1	Sefro	0.26 335	⇓P	Pg	19 18 12.1	-1.1
PIO1	Pioraco	0.28 343	P	Pg	19 18 12.4	-1.2
T1201	Domo (RI)	0.28 156	P	Pg	19 18 12.2	-1.4
MDAR	Monte D'Aria	0.28 7	⇑P	Pg	19 18 12.1	-1.6
MDAR			S	Sg	19 18 17.2	-0.3
T1204	Amatrice, Fraz	0.29 145	P	Pg	19 18 11.9	-1.8
FIU1	Fiuminata	0.30 337	P	Pg	19 18 12.8	-1.2
LNSS	Leonessa	0.31 188	⇑P	Pg	19 18 12.6	-1.6
SSM1	San Severino M	0.32 11	P	Pg	19 18 12.8	-1.6
GAG1	Gagliole	0.33 356	⇑P	Pg	19 18 13.3	-1.2
SMA1	SAN MARTINO	0.33 148	⇓P	Pg	19 18 12.6	-2.0
T1243	Rocca Santa Ma	0.34 130	P	Pg	19 18 12.7	-2.0
MNTP	Montappone	0.35 50	⇑P	Pg	19 18 13.7	-1.3
SNTG	Esanatoglia	0.36 342	⇑P	Pg	19 18 13.7	-1.5
RM33	Pellescritta (	0.41 168	⇓P	Pg	19 18 14.3	-1.8
RM33			S	Sg	19 18 22.0	+0.5
RM33			AML	AML		
RM33			AML	AML		
RM33			AML	AML		
RM33			AML	AML		
RM33			AML	AML		
EL6	Elcito	0.42 1	⇑P	Pg	19 18 14.6	-1.6
T1211	Morro Reatino	0.42 205	P	Pg	19 18 14.9	-1.3
T1211			AML	AML		
T1211			AML	AML		
T1211			AML	AML		
T1211			AML	AML		
T1211			AML	AML		
TRE1	Treia	0.43 22	P	Pg	19 18 15.1	-1.3
ATCC	AVT- Casa Cast	0.43 309	⇑P	Pg	19 18 15.3	-1.1
ATCC			S	Sg	19 18 22.2	+0.1
ATCC			AML	AML		
ATCC			AML	AML		
ATCC			AML	AML		
ATCC			AML	AML		
OFFI	Offida	0.43 87	⇑P	Pg	19 18 15.2	-1.3
T1246	Crognaleto (TE	0.44 138	P	Pg	19 18 14.6	-2.0
CAMP	Campotosto	0.44 148	Pg	Pg	19 18 16.7	+0.1
CAMP	Campotosto	0.44 148	⇓P	Pg	19 18 14.4	-2.2
CAMP			S	Sg	19 18 22.7	+0.3
CAMP			AML	AML		
CAMP			AML	AML		
CING	Cingoli	0.47 9	⇑P	Pg	19 18 15.4	-1.8
CING			S	Sg	19 18 22.9	-0.4
TERO	Teramo	0.47 128	P	Pg	19 18 15.1	-2.1
TERO			S	Sg	19 18 23.3	-0.1
TERO			AML	AML		
TERO			AML	AML		
CESX	Cesi	0.48 232	Pg	Pg	19 18 16.9	-0.5
CESX	Cesi	0.48 232	⇑P	Pg	19 18 16.0	-1.5
T1247	Pizzolo (AQ)	0.49 162	⇓P	Pg	19 18 15.7	-1.9
MMUR	Monte Murano	0.54 352	P	Pg	19 18 17.7	-0.7
MURB	Monte Urbino	0.55 310	Pg	Pg	19 18 17.2	-1.4
MURB	Monte Urbino	0.55 310	⇑P	Pg	19 18 17.4	-1.3
CADA	Capodarco di F	0.56 60	P	Pg	19 18 18.2	-0.7
CIMA	Civitanova Mar	0.58 47	P	Pg	19 18 18.0	-1.1
GIGS	Gran Sasso	0.58 143	⇑P	Pg	19 18 16.9	-2.3
ATFO	Monte Foce - G	0.59 320	⇑P	Pg	19 18 18.1	-1.4
ARVD	Arcevia	0.60 349	⇑P	Pg	19 18 18.0	-1.6
PPI3	Marolino	0.60 39	⇑P	Pg	19 18 18.5	-1.1
AQU	L'Aquila	0.60 158		Pg	19 18 18.2	-1.5
AQU	L'Aquila	0.60 158	*e*Pg	Pg	19 18 17.4	-2.3
AQU			*e*Sg	Sg	19 18 27.7	+0.2
AQU	L'Aquila	0.60 158	P	Pg	19 18 18.2	-1.5
AQU	L'Aquila	0.60 158	P	Pg	19 18 17.6	-2.1
TRTR	Tortoreto Alta	0.61 100	⇑P	Pg	19 18 18.7	-1.1
ATTE	AVT- Monte Tez	0.61 298	⇑P	Pg	19 18 18.6	-1.3
FIAM	Fiamignano	0.64 179	P	Pg	19 18 18.2	-2.3
FIAM			AML	AML		
FIAM			AML	AML		
FRON	Frontone	0.66 336	⇑P	Pg	19 18 19.0	-1.8
ATVO	AVT- Monte Val	0.69 313	⇑P	Pg	19 18 19.8	-1.5
MGAB	Montegabbione	0.72 270	⇑P	Pg	19 18 20.6	-1.4
AOI	Ancona	0.74 30	P	Pg	19 18 20.7	-1.5
ATMI	Monte Miggiano	0.74 305	P	Pg	19 18 21.0	-1.3
FAGN	Fagnano	0.74 151	P	Pg	19 18 20.5	-1.7
ATPI	Pietralunga -	0.74 317	⇑P	Pg	19 18 20.7	-1.6
VCEL	Villa Celiera	0.75 133	P	Pg	19 18 20.3	-2.2
MPAG	Monte Paganucc	0.76 341	P	Pg	19 18 21.4	-1.2
PCRO	Pietralacroce	0.77 24	P	Pg	19 18 21.4	-1.4
SENI	Senigallia	0.80 7	P	Pg	19 18 22.5	-0.9
SRES	S.Oreste - Sor	0.80 213	⇑P	Pg	19 18 21.4	-2.1
APEC	Apecchio	0.81 323	P	Pg	19 18 22.6	-1.1
FSSB	Fossombrone	0.81 344	⇑P	Pg	19 18 22.4	-1.3
CDCA	Citt' di Caste	0.83 311	P	Pg	19 18 23.5	-0.6
T0110	Collepietro	0.85 143	P	Pg	19 18 21.5	-2.9
BADI	Badiali	0.86 314	⇑P	Pg	19 18 23.0	-1.6
SACS	San Casciano d	0.87 266	⇑P	Pg	19 18 23.5	-1.4
PE3	Peglio	0.90 331	P	Pg	19 18 24.1	-1.2
PTQR	Pietraquaria	0.92 166	P	Pg	19 18 23.6	-2.1
CAFI	Castiglion Fio	0.93 297	P	Pg	19 18 24.2	-1.7
MTCE	Montecelio	0.93 197	⇑P	Pg	19 18 23.8	-2.0
CERT	Cerreto	0.97 185	⇓P	Pg	19 18 25.0	-1.6
SSP9	Sansepolcro	0.97 314	P	Pg	19 18 25.3	-1.3
LATE	Laterza	1.00 253		Pg	19 18 25.4	-1.8
LATE	Laterza	1.00 253	⇑P	Pg	19 18 25.5	-1.7
MCIV	Monte Civitell	1.05 263	⇑P	Pg	19 18 26.3	-1.9
SF04	Casetta	1.06 266	⇓P	Pg	19 18 26.8	-1.5
RCAV	Rocca di Cave	1.07 186	P	Pg	19 18 26.5	-2.0
INTR	Introdacqua	1.08 146		Pg	19 18 27.1	-1.6
INTR	Introdacqua	1.08 146	P	Pg	19 18 26.0	-2.8
CRE	Caprese Michel	1.10 311	⇑P	Pg	19 18 27.6	-1.5
VVLD	Villa Vallelon	1.11 159	P	Pg	19 18 26.7	-2.7
GUAR	Guarcino	1.13 172	P	Pg	19 18 27.9	-1.8
SF01	Poggio Pratacc	1.13 265	P	Pg	19 18 28.0	-1.8
RMP	Rome, Mte Porz	1.14 195	⇓P	Pg	19 18 28.0	-1.8
CAFR	Castel Frentan	1.15 126	P	Pg	19 18 27.2	-2.9
ROM9	Roma	1.17 202	P	Pg	19 18 28.2	-2.2
TOLF	Tolfa	1.17 224	⇑P	Pg	19 18 28.2	-2.4
LPEL	Lama dei Pelig	1.18 137	P	Pg	19 18 27.5	-3.2
LPEL			AML	AML		
LPEL			AML	AML		
MA9	Marino	1.19 196	⇓P	Pg	19 18 28.7	-2.0
VIVA	Pratoni del Vi	1.19 192	P	Pg	19 18 28.8	-2.0
RDP	Rocca di Papa	1.19 194	P	Pg	19 18 28.7	-2.1
SAMA	S.Maria delle	1.19 198	P	Pg	19 18 29.2	-1.7
ARCI	Arcidosso	1.19 268	P	Pg	19 18 29.2	-1.7
LAV9	Lanuvio	1.27 194	P	Pn	19 18 30.5	-1.5
POFI	Posta Fibreno	1.28 159	P	Pn	19 18 30.1	-2.2
ASQU	Asqua	1.30 313	P	Pn	19 18 30.9	-1.7
ASQU	Asqua	1.30 313	⇑P	Pn	19 18 31.0	-1.6
BLLA	Bellaria	1.31 340	P	Pg	19 18 33.1	-0.1
LRP	Arpino	1.31 164	P	Pn	19 18 31.7	-1.0
SFI	Santa Sofia	1.35 318	P	Pn	19 18 32.1	-1.1
GIUL	Giuliano Di Ro	1.36 175	⇓P	Pn	19 18 31.7	-1.6
CSNT	Castellina Chi	1.43 294	P	Pn	19 18 33.1	-1.3
CSNT	Castellina Chi	1.43 294	⇑P	Pn	19 18 33.0	-1.4
RNI2	Rionero Sannit	1.44 147	⇑P	Pn	19 18 32.6	-1.9
LIK	San Giovanni I	1.45 166	P	Pn	19 18 34.2	-0.3
CERA	Filignano	1.48 152	P	Pn	19 18 32.9	-2.1
CERA			AML	AML		
CERA			AML	AML		
CERA			AML	AML		
CERA			AML	AML		
RUFI	Rufina	1.48 309	P	Pn	19 18 33.8	-1.2
OSSC	Osservatorio P	1.48 295	Pn	Pn	19 18 33.6	-1.4
OSSC	Osservatorio P	1.48 295	P	Pn	19 18 33.7	-1.4
OSSC	Osservatorio P	1.48 295	⇑P	Pn	19 18 33.8	-1.3
FRES	Fresagrandinar	1.50 128	P	Pn	19 18 33.6	-1.6
FRES			AML	AML		
FRES			AML	AML		
LMD	Lutirano	1.54 320	P	Pn	19 18 35.1	-0.8
LMD	Lutirano	1.54 320	⇑P	Pn	19 18 35.0	-0.8
TRIV	Trivento	1.57 136	⇑P	Pn	19 18 35.6	-0.7
TRIF	Trifonti	1.62 278	⇑P	Pn	19 18 35.3	-1.7
CASP	Castiglione de	1.65 267		Pn	19 18 35.5	-1.7
CASP	Castiglione de	1.65 267	P	Pn	19 18 35.8	-1.5
CASP			AML	AML		
	comp=E,57250µm,1.1s					
CASP			AML	AML		
	comp=N,68350µm,1.6s					
BRIS	BRISIGHELLA	1.69 318	P	Pn	19 18 35.8	-2.1
SEI	Scarperia	1.71 313	P	Pn	19 18 37.4	-0.7
VAGA	Valle Agricola	1.72 150	⇓P	Pn	19 18 37.7	-0.6
IMOL	Imola, Italy	1.75 326	P	Pg	19 18 41.2	-0.4
BSSO	Busso	1.76 140	P	Pn	19 18 39.2	+0.2
CRMI	Carmignano	1.78 300	P	Pn	19 18 38.7	-0.5
DUGI	Dugi Otok	1.79 52	*e*Pn	Pn	19 18 37.0	-2.2
DUGI			Sn	Sn	19 19 02.4	+0.3
CIGN	Sant'Elia a Pi	1.84 133	⇑P	Pn	19 18 39.4	-0.5
CIGN			AML	AML		
CIGN			AML	AML		
PTRJ	Pietraroja	1.88 145	⇓P	Pn	19 18 40.2	-0.4
MTRZ	Monterenzio	1.88 322	⇑P	Pb	19 18 42.1	-0.6
MTCR	Monte La Croce	1.89 307	P	Pn	19 18 39.6	-1.1
PIGN	Pignataro Magg	1.89 154	⇓P	Pn	19 18 39.7	-0.9
MELA	Melanico ??? S	1.93 128	P	Pn	19 18 40.4	-0.8
MELA			AML	AML		
MELA			AML	AML		
MELA			AML	AML		
MELA			AML	AML		
SACR	S. Croce Del S	1.93 141	P	Pn	19 18 41.6	+0.3
TREM	Isole Tremiti	1.95 113	P	Pn	19 18 40.9	-0.5
VIRC	Vir	1.98 45	*e*Pn	Pn	19 18 39.9	-1.9
VIRC			Sn	Sn	19 19 07.5	+0.6
ZIRJ	Zirje	2.00 67	*e*Pn	Pn	19 18 40.1	-2.1
PII	Pisa	2.04 294	P	Pn	19 18 41.9	-0.8
PII	Pisa	2.04 294	⇑P	Pn	19 18 42.6	-0.1
PII			AML	AML		
	comp=E,86450µm,0.8s					
PII			AML	AML		
POPM	Popiglio	2.04 304	P	Pn	19 18 41.4	-1.3
POPM	Popiglio	2.04 304	⇑P	Pn	19 18 41.2	-1.5
BRJN	Brijuni	2.05 13	⇑P	Pn	19 18 41.0	-1.7
VITU	Vitulano (BN)	2.07 146	⇓P	Pn	19 18 42.4	-0.8
NVLJ	Novalja	2.09 37	*e*Pn	Pn	19 18 41.3	-2.1
NVLJ			Sn	Sn	19 19 09.2	-0.4
ZCCA	Zocca	2.11 314		Pn	19 18 43.1	-0.5
ZCCA	Zocca	2.11 314	P	Pb	19 18 44.8	-1.7
PSB1	Pescosannita	2.12 142	⇓P	Pn	19 18 43.0	-0.8
CELB	S.Piero in Cam	2.13 267	P	Pn	19 18 42.2	-1.7
CELB			AML	AML		
	comp=E,18800µm,0.9s					
CELB			AML	AML		
	comp=N,28050µm,1.3s					
MORI	Morici	2.13 62	*i* Pn	Pn	19 18 42.1	-1.8
MORI			Sn	Sn	19 19 11.2	+0.7
VENT	Ventotene	2.13 173	⇓P	Pn	19 18 43.1	-0.8
VENT			AML	AML		
VENT			AML	AML		
MAIM	Mastiano	2.15 299	P	Pn	19 18 42.9	-1.2
MAIM	Mastiano	2.15 299	⇑P	Pn	19 18 44.0	-0.1
APRC	Apricena	2.15 122	P	Pn	19 18 42.9	-1.3
APRC			AML	AML		
APRC			AML	AML		
APRC			AML	AML		
	comp=N,91550µm,1.1s					
APRC			AML	AML		
BDI	Bagni Di Lucca	2.15 303	⇑P	Pn	19 18 43.2	-1.1
BDI			AML	AML		
	comp=N,75950µm,1.1s					
BDI			AML	AML		
BDI			AML	AML		
	comp=E,40500µm,1.3s					
BDI			AML	AML		
	comp=N,37750µm,1.1s					
MOCO	Biccari - m.te	2.17 134	⇓P	Pn	19 18 44.5	-0.1
MOCO			AML	AML		
MOCO			AML	AML		
	comp=N,70700µm,1.6s					
MOCO			AML	AML		
MOCO			AML	AML		
	comp=N,66800µm,1.6s					
PAOL	Paolisi	2.18 149		Pn	19 18 44.1	-0.5
PAOL	Paolisi	2.18 149	⇓P	Pn	19 18 43.8	-0.8
PAOL			AML	AML		
	comp=N,70400µm,1.6s					
PAOL			AML	AML		
	comp=E,58800µm,1.5s					
PAOL			AML	AML		
	comp=E,60950µm,1.5s					
PAOL			AML	AML		
	comp=N,72650µm,1.6s					
CARD	Cardoso	2.21 301	P	Pn	19 18 43.7	-1.3
CARD	Cardoso	2.21 301	⇑P	Pn	19 18 43.5	-1.5
RABC	Rab	2.21 33	*e*Pn	Pn	19 18 43.0	-2.0
RABC			Sn	Sn	19 19 11.9	-0.5
SMRN	Sveta Marina	2.26 19	*e*Pn	Pn	19 18 43.5	-2.2
SMRN			Sn	Sn	19 19 13.1	-0.5
SGRT	San Giovanni R	2.28 120		Pn	19 18 45.8	-0.2
SGRT	San Giovanni R	2.28 120	P	Pn	19 18 46.7	+0.7
SGRT	baz=110		S	Sn	19 19 13.2	-1.1
	baz=110					
SGRT	San Giovanni R	2.28 120	P	Pn	19 18 45.1	-0.9
SGRT			AML	AML		
SGRT			AML	AML		
VBKN	Vesuvio Bunker	2.31 154	AML	AML		
VBKN			AML	AML		
CRTO	Cratere Ovest,	2.31 154	AML	AML		
CRTO			AML	AML		
GSCL	Gusciola	2.32 309	P	Pn	19 18 46.4	-0.1
GSCL	Gusciola	2.32 309	P	Pn	19 18 46.5	-0.1
VLC	Villacollemand	2.33 303		Pn	19 18 45.3	-1.5
VLC	Villacollemand	2.33 303	P	Pn	19 18 45.3	-1.5
VLC	Villacollemand	2.33 303	P	Pn	19 18 45.7	-1.0
VLC			AML	AML		
	comp=E,67600µm,1.5s					
VLC			AML	AML		
	comp=N,92000µm,1.5s					
VLC			AML	AML		
	comp=E,67250µm,1.5s					
VLC			AML	AML		
	comp=N,92350µm,1.5s					
SARO	Sassorosso	2.34 304	P	Pn	19 18 45.3	-1.5
GROG	Isola di Gorgo	2.40 283	P	Pn	19 18 47.4	-0.3
GROG			AML	AML		
	comp=N,29700µm,1.6s					
GROG			AML	AML		
	comp=E,28000µm,1.6s					
SGTA	Sant Agata di	2.45 136	⇓P	Pn	19 18 48.1	-0.3
SGTA			AML	AML		
SGTA			AML	AML		
SGTA			AML	AML		
SGTA			AML	AML		
HVAR	Hvar	2.47 83	*e*Pn	Pn	19 18 46.9	-1.7
HVAR	Hvar	2.47 83	⇑P	Pn	19 18 47.0	-1.6
EQUI	Equi	2.48 301	P	Pn	19 18 48.0	-0.7
UDBI	Udbina	2.52 49	*e*Pn	Pn	19 18 48.5	-0.8
UDBI			Sn	Sn	19 19 21.6	+1.3
SNAL	S. Angelo Dei	2.54 141	⇑P	Pn	19 18 51.0	+1.5
SNAL			AML	AML		
SNAL			AML	AML		
SNAL			AML	AML		
SNAL			AML	AML		
RIY	Rijeka	2.61 22	*e*Pn	Pn	19 18 50.1	-0.4
RIY			*e*Sn	Sn	19 19 23.6	+1.2
PLMA	Palmaria, Port	2.62 297	P	Pn	19 18 50.0	-0.6
MCRV	Calabrutti - M	2.63 143	P	Pn	19 18 50.5	-0.5
MCRV			AML	AML		
	comp=E,40500µm,0.9s					
MCRV			AML	AML		
	comp=N,44600µm,1.4s					
TEOL	Teolo	2.65 338		Pn	19 18 50.0	-1.1
TEOL	Teolo	2.65 338	P	Pn	19 18 50.3	-0.8
TEOL			AML	AML		
TEOL			AML	AML		
CAPA	Cerignola FG	2.68 130	⇑P	Pn	19 18 51.9	+0.4
GRAM	Graiana	2.71 307	P	Pn	19 18 52.5	+0.6
VULT	Monte Vulture	2.71 135	P	Pn	19 18 53.0	+0.9
VULT			AML	AML		
VULT			AML	AML		
VULT			AML	AML		
VULT			AML	AML		
SKDS	Skadanscina	2.71 14	⇑*i* Pn	Pn	19 18 50.2	-1.8
SKDS			*e*Sn	Sn	19 19 24.6	-0.4
SKDS	Skadanscina	2.71 14	*e*Pn	Pn	19 18 50.0	-2.0
SKDS			*i* pPn	pPn	19 18 51.4	-2.8
SKDS			*e*Sn	Sn	19 19 25.1	0.0
PRMA	PARMA	2.73 314		Pn	19 18 51.3	-0.9
OPPE	Oppeano	2.77 331	P	Pn	19 18 52.3	-0.4
OPPE			AML	AML		
OPPE			AML	AML		
LSTV	Lastovo	2.79 92	*i* Pn	Pn	19 18 51.2	-1.8
LSTV			Sn	Sn	19 19 26.7	-0.3
MRLC	Muro Lucano	2.80 139	⇑P	Pn	19 18 54.3	+1.2
MRLC			AML	AML		
	comp=N,48950µm,1.4s					
MRLC			AML	AML		
	comp=E,54650µm,1.3s					
MRLC			AML	AML		
	comp=E,61450µm,1.3s					
MRLC			AML	AML		
	comp=N,45250µm,1.5s					
GBRS	Gornja Briga	2.89 25	*i* Pn	Pn	19 18 54.5	+0.1
PALZ	Palazzo San Ge	2.90 132	P	Pn	19 18 53.7	-0.9
PALZ			AML	AML		
PALZ			AML	AML		
CDRU	Civita di Ruta	2.93 145	⇓P	Pn	19 18 54.3	-0.8
CDRU			AML	AML		
	comp=N,18000µm,1.6s					
CDRU			AML	AML		
	comp=E,24450µm,1.0s					
SMPL	Sampolo	2.93 255	⇑P	Pn	19 18 55.5	+0.5
MSSA	Maissana	2.95 300		Pn	19 18 54.3	-1.0
MSSA	Maissana	2.95 300	P	Pn	19 18 54.3	-1.0
MSSA			AML	AML		
	comp=E,30000µm,1.3s					
MSSA			AML	AML		
	comp=N,41850µm,0.9s					
TREG	Tregnago	2.96 333	P	Pn	19 18 55.2	-0.1
TREG			AML	AML		
TREG			AML	AML		
	comp=E,78950µm,0.5s					
MRVN	Minervino Murg	2.96 128	⇑P	Pn	19 18 54.6	-0.8
MRVN			AML	AML		
	comp=E,37500µm,1.3s					
MRVN			AML	AML		
	comp=N,43600µm,1.4s					
CEY	Cerknica	2.98 18	⇑*i* Pn	Pn	19 18 54.0	-1.7
CEY			*e*Sn	Sn	19 19 31.1	-0.6
ACER	Acerenza	3.00 134	P	Pn	19 18 55.3	-0.7
ACER			AML	AML		
ACER			AML	AML		
ACER			AML	AML		
ACER			AML	AML		
RICI	Ricice	3.01 77	*e*Pn	Pn	19 18 54.8	-1.2
BOJS	Bojanci	3.02 30	⇑*i* Pn	Pn	19 18 54.8	-1.4
BOJS			*e*Sn	Sn	19 19 32.4	-0.1
BOJS	Bojanci	3.02 30	*i* Pn	Pn	19 18 54.7	-1.4
BOJS			IAML		19 20 05.4	
	comp=Z,208µm,2.1s					
BOJS	Bojanci	3.02 30	⇑P	Pn	19 18 54.9	-1.2
BOJS			AML	AML		
BOJS			AML	AML		
PZUN	Potenza	3.04 137	AML	AML		
	comp=E,83200µm,1.6s					
PZUN			AML	AML		
	comp=N,74850µm,1.3s					
PZUN			AML	AML		
	comp=N,71900µm,1.3s					
PZUN			AML	AML		
	comp=E,81000µm,1.6s					
PGF	Pioggiola	3.04 265	*e*P	Pn	19 18 56.1	-0.4
PGF			*e*Sn	Sn	19 19 27.3	-5.9
	comp=E,5µm,0.8s					
PGF	Pioggiola	3.04 265	P	Pn	19 18 55.4	-1.1
PGF			AML	AML		
	comp=N,8130µm,1.6s					
PGF			AML	AML		
	comp=E,6825µm,1.6s					
ROVR	Rover Verones	3.10 333	P	Pn	19 18 56.4	-0.9
ROVR			AML	AML		
	comp=E,76250µm,0.9s					
ROVR			AML	AML		
	comp=E,30000µm,0.9s					
ROVR			AML	AML		
	comp=N,31000µm,1.5s					
ROVR			AML	AML		
	comp=N,76350µm,1.5s					
SRKY	Kupres RS	3.18 67	*e*Pn	Pn	19 18 58.6	+0.2
SRKY			*e*Sn	Sn	19 19 36.2	-0.4
BOB	Bobbio (Coli)	3.23 306	P	Pn	19 19 01.5	+2.4
BOB			AML	AML		
	comp=N,76700µm,1.2s					
BOB			AML	AML		
	comp=N,77650µm,1.6s					
BOB			AML	AML		
BOB			AML	AML		
GORR	Gorreto	3.23 303	P	Pn	19 18 59.4	+0.3
GORR			AML	AML		
	comp=E,37100µm,1.0s					
GORR			AML	AML		
	comp=N,50150µm,1.6s					
PTRP	Pietrapertosa	3.26 136	P	Pn	19 18 59.9	+0.4
PTRP			AML	AML		
	comp=E,80950µm,1.1s					
PTRP			AML	AML		
MGRS	Mrkonjic Grad	3.26 61	⇑*i* Pn	Pn	19 18 59.2	-0.3
MGRS			*e*Sn	Sn	19 19 37.5	-1.0
DOSS	Dosso del Somm	3.27 336	P	Pn	19 18 59.2	-0.6
DOSS			AML	AML		
	comp=N,73500µm,0.7s					
DOSS			AML	AML		
	comp=E,77150µm,0.7s					
DOSS			AML	AML		
	comp=N,87000µm,0.9s					
DOSS			AML	AML		
	comp=E,84850µm,0.9s					
SALO	Salr	3.28 327		Pn	19 18 59.6	-0.1
SALO	Salr	3.28 327	⇓P	Pn	19 18 59.7	0.0
SALO			AML	AML		
SALO			AML	AML		
SALO			AML	AML		
SALO			AML	AML		
MCEL	Monticello	3.29 141	⇑P	Pn	19 19 00.5	+0.6
MCEL			AML	AML		
	comp=N,30950µm,1.3s					
MCEL			AML	AML		
	comp=E,50900µm,1.4s					
MCEL			AML	AML		
	comp=E,50450µm,1.4s					
MCEL			AML	AML		
	comp=N,31650µm,1.3s					
LJU	Ljubljana	3.29 18	*i* Pn	Pn	19 18 58.8	-1.2
LJU			*i* pPn	pPn	19 19 00.3	-1.8
LJU			*i*		19 19 02.2	
LJU			*i* Sn	Sn	19 19 38.6	-0.7
LJU	Ljubljana	3.29 18	⇑P	Pn	19 18 58.7	-1.2
LJU			AML	AML		

LJU AML AML
AMUR Altamura 3.30 126 P **Pn 19 18 59.0 -1.0**
AMUR AML AML
comp=N,41650µm,1.4s
AMUR AML AML
comp=E,49200µm,0.9s
CTI Castel Tesino 3.30 342 Pn **Pn 19 18 59.0 -1.1**
CTI Castel Tesino 3.30 342 P **Pn 19 18 59.0 -1.1**
CTI Castel Tesino 3.30 342 P **Pn 19 18 59.3 -0.8**
CTI AML AML
CTI AML AML
comp=N,92700µm,1.6s
VOBA Vobarno 3.30 327 P **Pn 19 19 00.9 +0.8**
VOBA AML AML
comp=E,39850µm,1.6s
VOBA AML AML
comp=N,36700µm,1.4s
MTSN Montesano sull 3.31 142 P **Pn 19 19 01.3 +1.0**
MTSN AML AML
comp=E,30250µm,1.0s
MTSN AML AML
comp=N,22650µm,1.6s
VARA Varagna 3.31 332 P **Pn 19 18 59.8 -0.6**
VARA AML AML
VARA AML AML
comp=E,86350µm,1.5s
MGR Morigerati 3.33 146 ⇓P **Pn 19 19 01.7 +1.3**
MGR AML AML
comp=N,20600µm,1.6s
MGR AML AML
comp=N,21100µm,1.5s
MGR AML AML
comp=E,22750µm,1.0s
MGR AML AML
comp=E,23300µm,1.0s
PRIJ Prijedor 3.33 50⇑*i*Pn **Pn 19 19 00.3 -0.1**
PRIJ *e*Sn **Sn 19 19 40.2 +0.1**
CADS Cadrg 3.35 8 *i* Pn **Pn 19 18 58.9 -1.8**
CADS *e*Sn **Sn 19 19 39.9 -0.7**
CADS IAML 19 20 13.7
comp=Z,136µm,1.7s
AG11 Viggiano (PZ) 3.35 139 P **Pn 19 19 01.4 +0.6**
AG11 AML AML
comp=N,64900µm,1.4s
AG11 AML AML
comp=E,63700µm,1.6s
AJAC Base Areonaval 3.35 254 ⇑P **Pn 19 19 00.2 -0.5**
STAL STALIGIAL 3.36 355 **Pn 19 18 59.5 -1.3**
STAL STALIGIAL 3.36 355 P **Pn 19 18 59.7 -1.1**
STAL AML AML
STAL AML AML
STAL AML AML
STAL AML AML
STON Ston 3.38 89 *e*Pn **Pn 19 19 00.3 -0.8**
STON *e*Sn **Sn 19 19 40.9 -0.5**
STON Ston 3.38 89 *e*Pn **Pn 19 19 00.9 -0.2**
STON *e*Sn **Sn 19 19 43.3 +1.9**
STON Ston 3.38 89 ⇑P **Pn 19 18 58.6 -2.5**
STON AML AML
comp=E,25200µm,1.3s
STON AML AML
comp=N,32200µm,1.6s
MIGL Miglionico 3.40 132 P **Pn 19 19 01.2 -0.2**
MIGL AML AML
MIGL AML AML
LUSI Trento, Gardas 3.42 334 P **Pn 19 19 01.1 -0.5**
LUSI AML AML
comp=E,68600µm,1.5s
LUSI AML AML
comp=N,71450µm,1.2s
SIRI Monte Sirino - 3.43 142 P **Pn 19 19 01.7 -0.1**
SIRI AML AML
comp=N,26200µm,1.6s
SIRI AML AML
comp=E,34300µm,1.6s
SIRI AML AML
comp=E,33650µm,1.6s
SIRI AML AML
comp=N,26700µm,1.6s
A051A Mrakovica 3.46 51⇑*i*Pn **Pn 19 19 01.2 -1.1**
A051A *e*Sn **Sn 19 19 42.6 -0.9**
BLY Banja Luka 3.48 57⇑*i*Pn **Pn 19 19 01.5 -1.0**
BLY *e*Sn **Sn 19 19 42.7 -1.2**
BLY Banja Luka 3.48 57 *e*Pn **Pn 19 19 03.6 +1.1**
BLY Banja Luka 3.48 57 ⇑P **Pn 19 19 01.4 -1.0**
BLY AML AML
comp=N,89800µm,1.6s
BLY AML AML
comp=E,77250µm,1.6s
BLY AML AML
comp=E,74400µm,1.6s
BLY AML AML
comp=N,88650µm,1.6s
PTCC Patocco-Chiusa 3.50 3 ⇑P **Pn 19 19 00.9 -1.8**
PTCC AML AML
comp=E,71150µm,1.6s
PTCC AML AML
comp=N,50450µm,1.2s
SCHR S. Chirico Rap 3.51 139 P **Pn 19 19 04.1 +1.1**
SCHR AML AML
comp=E,21100µm,1.2s
SCHR AML AML
comp=N,28000µm,1.2s
GAGG Gaggia 3.52 335 ⇑P **Pn 19 19 03.3 +0.1**
GAGG AML AML
GAGG AML AML
GAGG AML AML
comp=N,99200µm,1.2s
GAGG AML AML
comp=E,96300µm,1.2s
MATE Matera 3.52 129 P **Pn 19 19 03.7 +0.7**
MATE Matera 3.52 129 P **Pn 19 19 02.1 -0.9**
MATE AML AML
comp=E,50400µm,0.8s
MATE AML AML
comp=N,44950µm,0.9s
RONC Roncone 3.54 331 P **Pn 19 19 03.5 0.0**
RONC AML AML
RONC AML AML
comp=N,78600µm,1.6s
PRED Cave del Predi 3.55 5 **Pn 19 19 01.8 -1.6**
CLUD Cludinico 3.55 358 **Pn 19 19 02.1 -1.3**
CUC Castrocucco 3.56 144 **Pn 19 19 04.7 +1.0**
CUC Castrocucco 3.56 144 P **Pn 19 19 05.4 +1.8**
CUC AML AML
comp=N,19400µm,1.4s
CUC AML AML
comp=N,15950µm,1.4s
CUC AML AML
comp=E,30900µm,1.2s
CUC AML AML
comp=E,37650µm,1.1s
ZONE Zone 3.56 324 P **Pn 19 19 03.2 -0.5**
ZONE AML AML
comp=E,8660µm,1.0s
ZONE AML AML
comp=E,35400µm,1.0s
ZONE AML AML
comp=N,34250µm,0.7s
ZONE AML AML
comp=N,8410µm,0.9s
CRAC Craco 3.57 134 P **Pn 19 19 03.4 -0.3**
CRAC AML AML
CRAC AML AML
SARZ Sarezzano 3.60 304 P **Pn 19 19 06.5 +2.3**
SARZ AML AML
SARZ AML AML
SARZ AML AML
SARZ AML AML
LTRZ Laterza 3.62 128 P **Pn 19 19 03.3 -1.0**
MABI Malga Bissina 3.65 330 P **Pn 19 19 04.5 -0.5**
MABI AML AML
comp=E,19750µm,1.6s
MABI AML AML
comp=N,17800µm,1.5s
NOCI Noci 3.65 124 P **Pn 19 19 03.6 -1.1**
NOCI AML AML
comp=N,45300µm,1.4s
NOCI AML AML
comp=E,39400µm,1.0s
PCP Piancastagn 3.68 298 P **Pn 19 19 04.3 -1.0**
DGI Dorgali Grotta 3.68 226 P **Pn 19 19 04.3 -1.0**
FVI Forni Avoltri 3.69 357 P **Pn 19 19 04.7 -0.8**
FVI AML AML
comp=E,84600µm,0.9s
FVI AML AML
comp=N,66150µm,1.4s
MMN Mormanno 3.72 143 P **Pn 19 19 07.1 +1.3**
MMN AML AML
comp=N,9845µm,1.6s
MMN AML AML
comp=E,6725µm,1.6s
QLNO Quiliano 3.73 294 P **Pn 19 19 05.4 -0.5**
MYKA Terra Mystica 3.74 6 *i* Pn **Pn 19 19 04.9 -1.2**
comp=E,1µm,0.4s,SNR=1179
MYKA *e*Sn **Sn 19 19 50.0 -0.4**
comp=E,4µm,0.5s
OBKA Obir 3.74 16⇑*i*Pn **Pn 19 19 05.8 -0.4**
OBKA *e*Sn **Sn 19 19 48.3 -2.2**
OBKA Obir 3.74 16 *i* Pn **Pn 19 19 04.5 -1.7**
comp=E,17nm,0.2s,SNR=177
OBKA Obir 3.74 16 *e*Pn **Pn 19 19 04.8 -1.4**
KOSI Kohlern 3.76 342 P **Pn 19 19 06.3 -0.1**
KOSI AML AML
KOSI AML AML
CANO Canova, Maglio 3.76 292 P **Pn 19 19 06.5 +0.1**
MILN Milano 3.78 314 P **Pn 19 19 08.0 +1.3**
MILN AML AML
comp=E,42750µm,1.6s
MILN AML AML
comp=N,42350µm,1.6s
MILN AML AML
MILN AML AML
comp=E,90200µm,1.6s
BOSI Bolzano 3.80 341 P **Pn 19 19 07.0 +0.2**
BOSI AML AML
BOSI AML AML
ORI Oriolo Calabro 3.80 137 P **Pn 19 19 09.1 +2.2**
ORI Oriolo Calabro 3.80 137 P **Pn 19 19 07.4 +0.5**
ORI AML AML
comp=E,36900µm,1.5s
ORI AML AML
comp=N,43000µm,0.8s
APPI Appiano 3.81 340 P **Pn 19 19 06.7 -0.4**
APPI AML AML
comp=N,55200µm,1.3s
APPI AML AML
comp=E,53600µm,1.4s
MERA Merate 3.82 318 P **Pn 19 19 08.1 +0.9**
MERA AML AML
comp=E,48450µm,0.5s
MERA AML AML
comp=N,55550µm,1.5s
RORO Rocca Rossa 3.85 290 P **Pn 19 19 07.0 -0.5**
ABTA Abfaltersbach 3.86 354 *i* Pn **Pn 19 19 07.1 -0.6**
comp=N,1µm,0.4s,SNR=4683
ABTA *e*Sn **Sn 19 19 52.9 -0.4**
comp=N,17µm,0.7s
A052A Srbac 3.87 54⇑*i*Pn **Pn 19 19 07.3 -0.5**
A052A *e*Sn **Sn 19 19 52.0 -1.4**
TREB Trebinje 3.87 91 *e*Pn **Pn 19 19 06.7 -1.1**
TREB *e*Sn **Sn 19 19 52.7 -0.8**
TREB Trebinje 3.87 91 *e*Pn **Pn 19 19 07.5 -0.3**
TREB *e*Sn **Sn 19 19 55.4 +1.9**
SALB San Lorenzo Be 3.89 140 P **Pn 19 19 08.0 -0.3**
SALB AML AML
comp=E,15900µm,1.6s
SALB AML AML
comp=N,15250µm,1.2s
SALB AML AML
comp=E,16600µm,1.6s
SALB AML AML
comp=N,15000µm,1.2s
BRES Bressanone 3.91 346 ⇑P **Pn 19 19 08.9 +0.3**
BRES AML AML
comp=E,82650µm,1.4s
BRES AML AML
comp=N,80600µm,1.5s
TAR1 Taranto 3.94 126 AML AML
comp=N,42900µm,1.2s
TAR1 AML AML
comp=E,42350µm,0.9s
BRY Bratogost 4.00 88⇑*i*Pn **Pn 19 19 08.8 -0.9**
BRY Bratogost 4.00 88⇓*i*Pn **Pn 19 19 08.9 -0.8**
BRY *i* Sn **Sn 19 19 56.3 -0.5**
HCY Herceg Novi 4.01 95 *e*Pn **Pn 19 19 08.8 -0.9**
HCY Herceg Novi 4.01 95⇓*i*Pn **Pn 19 19 09.1 -0.6**
HCY *i* Sn **Sn 19 19 56.6 -0.3**
CET2 Cetraro 4.01 147 AML AML
comp=E,23550µm,1.2s
CET2 AML AML
comp=N,21650µm,1.6s
SOKA Soboth 4.01 19 *e*Pn **Pn 19 19 08.2 -1.7**
comp=N,101nm,0.3s,SNR=238
DOB Doboj 4.05 62 *e*Pn **Pn 19 19 09.6 -0.7**
DOB *e*Sn **Sn 19 19 57.2 -0.7**
BRMO Bormio 4.06 332 AML AML
comp=E,24100µm,1.5s
BRMO AML AML
comp=N,20300µm,1.1s
TDS Terranova Siba 4.07 142 AML AML
comp=N,15400µm,1.6s
TDS AML AML
comp=E,16900µm,1.5s
RISI Rein 4.10 350 AML AML
RISI AML AML
MOSI Grossmontoni 4.12 335 AML AML
MOSI AML AML
comp=E,82250µm,0.8s
BERNI Berninapass 4.13 329 AML AML
comp=N,16350µm,0.7s
BERNI AML AML
comp=E,17050µm,1.0s
KBA Koelnbreinsper 4.17 2 *i* Pn **Pn 19 19 11.5 -0.7**
comp=E,1µm,0.4s,SNR=1570
KBA *e*Sn **Sn 19 20 00.2 -0.9**
comp=E,5µm,0.5s
KBA Koelnbreinsper 4.17 2 *e*Pn **Pn 19 19 11.8 -0.3**
KBA *e*Sn **Sn 19 19 59.3 -1.8**
MUGIO Muggio 4.18 317 AML AML
comp=N,16850µm,1.6s
MUGIO AML AML
comp=E,17400µm,1.4s
KOGS Kog 4.19 31 AML AML
KOGS AML AML
ROSI Rosskopf 4.19 344 AML AML
ROSI AML AML
FUORN Ofenpass-Fuorn 4.22 332 **Pn 19 19 13.0 +0.1**
SBF Sospel 4.23 285 *e*P **Pn 19 19 12.2 -0.7**
SBF *e*Sn **Sn 19 19 55.4 -7.1**
comp=E,3µm,0.7s
SBF *e*Sg **Sg 19 20 18.3 -5.7**
A252A Venje 4.25 52 *e*Pn **Pn 19 19 10.8 -2.2**
A252A Sn **Sn 19 20 01.8 -1.0**
UPM Unac-Piva 4.27 84 *e*Pn **Pn 19 19 13.2 -0.3**
UPM *e*Sn **Sn 19 20 01.4 -2.1**
UPM Unac-Piva 4.27 84 *e*Pn **Pn 19 19 12.6 -0.9**
UPM *i* Sn **Sn 19 20 02.7 -0.8**
VARE Varese 4.28 315 AML AML
comp=E,26850µm,1.6s
VARE AML AML
comp=N,27000µm,0.7s
CEME Cevo 4.30 93⇑*i*Pn **Pn 19 19 13.2 -0.7**
CEME *i* Sn **Sn 19 20 03.7 -0.6**
MONC Moncucco Torin 4.31 302 AML AML
comp=N,27750µm,1.3s
MONC AML AML
comp=E,30100µm,1.6s
NKME Niksic 4.31 90⇓*i*Pn **Pn 19 19 13.3 -0.6**
NKME *i* Sn **Sn 19 20 03.8 -0.6**
BUM Brajici-Budva 4.32 96⇓*i*Pn **Pn 19 19 13.6 -0.5**
BUM *i* Sn **Sn 19 20 04.2 -0.5**
CAR1 CAROLEI 4.35 146 AML AML
comp=N,14750µm,1.2s
CAR1 AML AML
comp=E,13100µm,0.9s
CAR1 AML AML
comp=N,13750µm,1.1s
CAR1 AML AML
comp=E,15150µm,1.1s
VSL Villasalto 4.42 221⇓P **Pn 19 19 15.2 -0.2**
HAPS Han Pijesak,BI 4.42 73⇑*i*Pn **Pn 19 19 14.7 -0.8**
HAPS *e*Sn **Sn 19 20 05.1 -2.0**
BEHE Becsehely 4.42 35⇑*i*Pn **Pn 19 19 14.6 -0.8**
BEHE *e*Sn **Sn 19 20 05.2 -1.8**
BEHE Becsehely 4.42 35 P **Pn 19 19 14.0 -1.4**
FETA Feichten 4.44 339 *i* Pn **Pn 19 19 15.5 -0.3**
comp=E,752nm,0.8s,SNR=1485
TUE Stuetta 4.45 324 **Pn 19 19 15.6 -0.5**
WTTA Wattenberg 4.47 347 *i* Pn **Pn 19 19 16.3 0.0**
comp=E,199nm,0.5s,SNR=1095
WTTA *e*Sn **Sn 19 20 08.8 +0.2**
comp=E,19µm,0.6s
WTTA Wattenberg 4.47 347 *e*Pn **Pn 19 19 16.8 +0.5**
WTTA Wattenberg 4.47 347 AML AML
comp=N,65350µm,1.4s
WTTA AML AML
comp=E,80000µm,1.0s
IFIL Filicudi I Eol 4.49 165 AML AML
comp=E,12800µm,0.7s
IFIL AML AML
comp=N,3950µm,0.7s
DAVOX Davos/Dischmat 4.49 331 Pn **Pn 19 19 17.3 +0.7**
comp=N,129nm,0.3s,baz=134,slow=12,SNR=353
DAVOX Sn **Sn 19 20 10.7 +1.6**
comp=N,628nm,0.3s,baz=119,slow=19,SNR=9.1
DAVOX LR LR 19 21 37.5
comp=N,199µm,21.9s,baz=149,slow=47
comp=N,2µm,0.7s
DAVOX Davos/Dischmat 4.49 331 AML AML
comp=E,27100µm,1.1s
DAVOX AML AML
comp=N,18000µm,0.6s
SQTA Sankt Quirin 4.51 343 **Pn 19 19 16.9 +0.1**
SQTA **Sn 19 20 11.8 +2.4**
SQTA Sankt Quirin 4.51 343 *i* Pn **Pn 19 19 16.9 +0.1**
comp=N,455nm,0.4s,SNR=880
SQTA *e*Sn **Sn 19 20 11.9 +2.4**
comp=N,14µm,0.5s
WATA Walderalm 4.55 347 **Pn 19 19 17.6 +0.2**
WATA **Sn 19 20 11.6 +1.1**
WATA Walderalm 4.55 347 *i* Pn **Pn 19 19 17.6 +0.2**
comp=N,147nm,0.3s,SNR=1501
WATA *e*Sn **Sn 19 20 11.6 +1.1**
comp=N,10µm,0.5s
DRME Dracevica, Mon 4.56 97⇑*i*Pn **Pn 19 19 16.6 -0.7**
DRME *e*Sn **Sn 19 20 09.3 -1.1**
DRME Dracevica, Mon 4.56 97⇑*i*Pn **Pn 19 19 16.8 -0.5**
DRME *i* Sn **Sn 19 20 10.0 -0.4**
CGL Cagliari Serpe 4.56 220⇓P **Pn 19 19 17.8 +0.3**
CGL AML AML
comp=E,9345µm,1.6s
CGL AML AML
comp=N,27µm,1.2s
PDG Podgorica 4.57 94⇑P **Pn 19 19 18.2 +0.9**
PDG Podgorica 4.57 94 Pn **Pn 19 19 17.3 -0.1**
PDG Podgorica 4.57 94 *e*Pn **Pn 19 19 17.5 +0.1**
PDG *e*Sn **Sn 19 20 11.1 +0.5**
PDG Podgorica 4.57 94 AML AML
comp=N,24500µm,1.5s
PDG AML AML
comp=E,14500µm,1.1s
PDG AML AML
comp=E,18500µm,1.1s
PDG AML AML
comp=N,31950µm,1.5s
TTG Podgorica 4.57 94⇑*i*Pn **Pn 19 19 16.8 -0.6**
TTG *i* Sn **Sn 19 20 10.2 -0.4**
PLE Pljevlja 4.62 83 *e*Pn **Pn 19 19 17.5 -0.8**
PLE *i* Sn **Sn 19 20 11.3 -1.0**
RUDO Rudo 4.64 79⇑*i*Pn **Pn 19 19 17.6 -0.8**
RUDO *e*Sn **Sn 19 20 11.1 -1.3**
TIP Timpagrande 4.64 142 **Pn 19 19 20.6 +2.0**
ULC Ulcinj 4.65 100 *e*Pn **Pn 19 19 18.1 -0.5**
ULC *i* Sn **Sn 19 20 11.8 -0.9**
MOTA Moosalm 4.65 343 **Pn 19 19 19.0 +0.3**
MOTA Moosalm 4.65 343 P **Pn 19 19 19.0 +0.3**
MOTA Moosalm 4.65 343 *i* Pn **Pn 19 19 19.0 +0.3**
comp=N,1µm,0.7s,SNR=1272
ARSA Arzberg 4.67 21⇑*i*Pn **Pn 19 19 16.9 -1.9**
ARSA *e*Sn **Sn 19 20 10.5 -2.6**
ARSA Arzberg 4.67 21 *i* Pn **Pn 19 19 16.9 -1.9**
comp=N,104nm,0.5s,SNR=446
ARSA *e*Sn **Sn 19 20 11.9 -1.2**
comp=N,1µm,0.5s
ARSA Arzberg 4.67 21 *e*Pn **Pn 19 19 17.3 -1.5**
BBLS Lazići 4.70 76⇑*i*Pn **Pn 19 19 18.5 -0.8**
BBLS *e*Sn **Sn 19 20 12.7 -1.2**
BBLS Lazići 4.70 76 *e*Pn **Pn 19 19 19.7 +0.4**
KOME Kolasin 4.72 89 *e*Pn **Pn 19 19 18.9 -0.7**
KOME *i* Sn **Sn 19 20 13.7 -0.8**
SERS Sersale 4.73 144 AML AML
comp=N,7535µm,1.6s
SERS AML AML
comp=E,6685µm,1.6s
SERS AML AML
comp=N,7945µm,1.6s
SERS AML AML
comp=E,8170µm,1.6s
ZUGS Zugspitze, Sch 4.75 342 *e*Pn **Pn 19 19 21.9 +1.8**
ZUGS *e*Sn **Sn 19 20 18.0 +2.5**
FUSIO Fusio 4.75 320 AML AML
comp=E,22300µm,1.5s
FUSIO AML AML
comp=N,16350µm,0.6s
VPL Vulcano Piano 4.75 162 AML AML
comp=N,16050µm,1.1s
VPL AML AML
comp=E,16300µm,1.0s
KOVH Kovagotottos 4.79 47 P **Pn 19 19 17.6 -2.8**
KOVH S **Sn 19 20 15.1 -0.9**
JOPP Joppolo 4.79 153 AML AML
comp=N,3215µm,1.3s
JOPP AML AML
comp=E,4205µm,1.3s
PART Garmisch-Parte 4.79 344 *e*Pn **Pn 19 19 22.0 +1.4**
BIOA Bad Ischl, Aus 4.79 4 **Pn 19 19 19.8 -0.8**
BIOA **Sn 19 20 16.0 -0.3**
BIOA Bad Ischl, Aus 4.79 4 *i* Pn **Pn 19 19 19.8 -0.8**
comp=E,649nm,0.5s,SNR=1862
BIOA *e*Sn **Sn 19 20 16.0 -0.3**
comp=E,13µm,0.6s
RJOB Jochberg 4.83 358 *e*Pn **Pn 19 19 20.7 -0.4**
BLJ Bijeljina 4.84 65 *e*Pn **Pn 19 19 18.9 -2.2**
BLJ *e*Sn **Sn 19 20 13.4 -3.9**
LMR La Mourre 4.84 277 *e*P **Pn 19 19 19.9 -1.2**
LMR *e*Sn **Sn 19 20 10.0 -7.4**
comp=E,843nm,0.6s
RETA Reutte 4.86 341 *i* Pn **Pn 19 19 21.8 +0.3**
SNR=812
RETA *e*Sn **Sn 19 20 19.2 +1.1**
comp=E,3µm,0.5s
OBER Oberstdorf 4.91 337 *e*Pn **Pn 19 19 23.6 +1.3**
MBDF Montbardon 4.92 294 *e*P **Pn 19 19 22.4 0.0**
MBDF *e*Sn Sn 19 20 10.6 -9.0
comp=E,3µm,0.7s
DAVA Damuels 4.93 334 *e*Pn **Pn 19 19 22.8 +0.3**
comp=E,254nm,0.6s,SNR=1307
DAVA *e*Sn **Sn 19 20 21.8 +1.9**
comp=E,4µm,0.5s
DAVA Damuels 4.93 334 *e*Pn **Pn 19 19 23.2 +0.7**
SCTE Santa Cesarea 4.93 123 **Pn 19 19 22.1 -0.3**
TEKS Tekeris 4.94 68 *e*Pn **Pn 19 19 21.8 -0.8**
TEKS Tekeris 4.94 68 *e*Pn **Pn 19 19 21.5 -1.1**
GIB Gibilmanna 4.97 171 AML AML
comp=E,3840µm,0.8s
GIB AML AML
comp=N,3370µm,0.7s
PLLN Pollina 4.98 170 AML AML
comp=E,4265µm,0.9s
PLLN AML AML
comp=N,6400µm,1.5s
IVA Berane 4.99 88 *e*Pn **Pn 19 19 22.7 -0.7**
IVA *i* Sn **Sn 19 20 20.4 -0.9**
MSFR San Fratello 5.00 166 AML AML
comp=E,1500µm,1.1s
MSFR AML AML
comp=N,1570µm,1.6s
MOA Molln 5.01 9 *i* Pn **Pn 19 19 22.5 -1.0**
comp=N,781nm,0.5s,SNR=1263
MOA *e*Sn **Sn 19 20 22.6 +1.1**
comp=N,5µm,0.6s
MOA Molln 5.01 9 *e*Pn **Pn 19 19 22.1 -1.4**
CORL Corleone 5.01 178 AML AML
comp=E,2985µm,1.6s
CORL AML AML
comp=N,2595µm,1.0s
SJES Sjenica 5.05 84 *e*Pn **Pn 19 19 23.7 -0.4**
SJES *e*Sn **Sn 19 20 20.4 -2.3**
SJES Sjenica 5.05 84 *e*Pn **Pn 19 19 24.8 +0.7**
SJES *e*Sn **Sn 19 20 20.7 -2.0**
PVY Plav 5.06 91⇓*i*Pn **Pn 19 19 23.8 -0.6**
PVY *i* Sn **Sn 19 20 22.0 -1.1**
CEL Celeste 5.11 154 **Pn 19 19 25.6 +0.7**
PLAC Placanica 5.13 149 AML AML

comp=E,6055µm,1.6s
PLAC AML AML
comp=N,5775µm,1.6s
PLAC AML AML
comp=E,5870µm,1.6s
PLAC AML AML
comp=N,6060µm,1.6s
DIVS Divibare 5.15 74 Pn 19 19 24.7 -0.9
DIVS Divibare 5.15 74⇑ *i* Pn Pn 19 19 24.2 -1.4
DIVS *e*Sn **Sn 19 20 23.4 -1.8**
DIVS Divibare 5.15 74 *e*Pn Pn 19 19 25.0 -0.6
MORH Mrgy, Hungar 5.16 48 ⇓P Pn 19 19 26.4 +0.9
MORH Mrgy, Hungar 5.16 48⇑ *i* Pn Pn 19 19 24.4 -1.1
MORH Mrgy, Hungar 5.16 48 P Pn 19 19 24.4 -1.1
BCI Bajram Curri 5.17 94 P Pn 19 19 26.8 +1.1
baz=89
BCI S **Sn 19 20 29.5 +3.9**
baz=89
UBR Ueberruh 5.21 337 *e*Pn Pn 19 19 27.0 +0.7
UBR *e*Sn **Sn 19 20 28.6 +1.9**
LPG La Plagne 5.24 302 *e*P Pn 19 19 27.4 +0.4
LPG *e*Sn **Sn 19 20 20.2 -7.5**
comp=N,6µm,0.8s
TIH Tihany 5.24 39 P Pn 19 19 26.8 +0.1
LPL La Plagne 5.26 302 *e*P Pn 19 19 28.0 +0.8
LPL *e*Sn **Sn 19 20 19.4 -8.7**
comp=N,3µm,0.7s
LPL La Plagne 5.26 302 P Pn 19 19 27.1 -0.1
TIR Tirane 5.27 105 Pn 19 19 27.4 +0.3
TIR Tirane 5.27 105 P Pn 19 19 26.0 -1.1
TIR Tirane 5.27 105 *e*Pn Pn 19 19 26.6 -0.5
TIR Tirane 5.27 105 P Pn 19 19 26.0 -1.1
TIR S **Sn 19 20 25.0 -3.0**
TIR Tirane 5.27 105 P Pn 19 19 26.4 -0.7
baz=100
TIR S Sg 19 21 30.8 +34
baz=100
TIR AMP
comp=N,42nm,1.7s,baz=100
RONA Rosalia, Austr 5.29 24 Pn 19 19 25.7 -1.7
RONA **Sn 19 20 27.6 -1.0**
RONA Rosalia, Austr 5.29 24 *i* Pn Pn 19 19 25.7 -1.7
comp=N,194nm,0.3s,SNR=1215
RONA *e*Sn **Sn 19 20 27.6 -1.0**
comp=N,997nm,0.6s
MPLH Magyarpolny 5.29 35 P Pn 19 19 26.3 -1.1
CLTB Caltabellotta 5.33 179 Pn Pn 19 19 30.9 +2.9
FRGS Fruska Gora 5.34 63 P Pn 19 19 28.9 +0.9
FRGS Fruska Gora 5.34 63⇑ *i* Pn Pn 19 19 26.2 -1.8
FRGS *e*Sn **Sn 19 20 27.8 -1.8**
FRGS Fruska Gora 5.34 63 *e*Pn Pn 19 19 26.7 -1.3
SOP Sopron 5.36 26 P Pn 19 19 28.1 -0.1
SOP S **Sn 19 20 29.3 -0.8**
VLO Vlora 5.38 115 Pn 19 19 28.9 +0.3
VLO Vlora 5.38 115 P Pn 19 19 28.1 -0.4
VLO Vlora 5.38 115 P Pn 19 19 28.4 -0.1
VLO Vlora 5.38 115 P Pn 19 19 28.1 -0.4
baz=111
CONA Conrad Observa 5.38 20 *i* Pn Pn 19 19 27.1 -1.5
comp=N,275nm,0.5s,SNR=1114
CONA *e*Sn **Sn 19 20 29.4 -1.4**
comp=N,2µm,0.5s
SENIN Lac Senin/Sane 5.39 312 Pn 19 19 28.6 -0.3
FUR Furstenfeldbru 5.41 347 *e*Pn Pn 19 19 28.8 -0.2
EGYH Egyhazasskeszo 5.41 32 P Pn 19 19 28.6 -0.3
EGYH S **Sn 19 20 30.2 -1.1**
TRUS Trudelj 5.47 74 *e*Pn Pn 19 19 29.3 -0.5
VAE Valguarnera 5.52 169 Pn Pn 19 19 35.7 +5.1
comp=N,5.0nm,0.3s,baz=8.0,slow=4.1,SNR=29
SMRF Simiane la Rot 5.58 284 *e*P Pn 19 19 32.3 +1.0
SMRF *e*Sn **Sn 19 20 27.0 -8.6**
comp=N,3µm,1.0s
PHP Peshkopia 5.58 100 P Pn 19 19 30.9 -0.5
PHP Peshkopia 5.58 100 P Pn 19 19 31.9 +0.5
baz=96
PHP S **Sn 19 20 32.2 -3.6**
baz=96
PHP AMP
comp=N,54nm,1.4s,baz=96
ORIF Oris-en-Rattie 5.58 294 *e*P Pn 19 19 32.4 +0.9
ORIF *e*Sn **Sn 19 20 29.1 -6.8**
comp=N,3µm,0.7s
GRUS Gruza 5.64 77 *e*Pn Pn 19 19 31.7 -0.4
CSKK Cskako 5.76 38 P Pn 19 19 32.6 -1.1
RAFF Raffo Rosso 5.76 170 Pn Pn 19 19 37.3 +3.4
SELS Selova 5.89 84 *e*Pn Pn 19 19 35.2 -0.4
SELS *e*Sn **Sn 19 20 40.2 -3.0**
GEC2 GERESS Array S 5.95 4 Pn 19 19 34.5 -2.0
GEC2 GERESS Array S 5.95 4 *e*Pn Pn 19 19 35.1 -1.4
GEC2 *e*Sn **Sn 19 20 42.8 -2.0**
GERES GERESS Array B 5.95 4 Pn Pn 19 19 33.2 -3.3
comp=N,52nm,0.3s,baz=171,slow=13,SNR=207
GERES Sn **Sn 19 20 42.5 -2.3**
comp=N,916nm,0.3s,baz=177,slow=25,SNR=19
GERES Lg Lg 19 21 20.1
baz=189,slow=26
GERES GERESS Array B 5.95 4 Pn 19 19 35.3 -1.2
GERES GERESS Array B 5.95 4 P Pn 19 19 35.3 -1.2
I26DE FREYUNG INFRAS 5.96 4 Pn Pn 19 19 36.3 -0.3
baz=176,slow=26
I26DE I 19 50 30.0
baz=179,slow=324,SNR=1.4
CKRC Cesky Krumlov 5.97 8 *e*PN Pn 19 19 34.8 -1.9
CKRC *e*SN **Sn 19 20 42.4 -2.8**
CKRC AMS AMS 19 22 00.0
comp=N,230µm,14.7s
KEK Kerkira 5.97 120 Pn 19 19 36.2 -0.5
KEK Kerkira 5.97 120 P Pn 19 19 35.8 -0.9
SRN Sarande 6.01 118 P Pn 19 19 36.2 -1.0
SRN Sarande 6.01 118 P Pn 19 19 38.4 +1.2
baz=114
SRN S **Sb 19 21 03.1 -2.0**
baz=114
SRN AMP
comp=N,28nm,1.4s,baz=114
OHR Ohrid 6.01 105 *i* Pn Pn 19 19 37.3 0.0
NORI Noerdlinger Ri 6.06 344 *e*Pn Pn 19 19 37.0 -1.0
SRO Srobarova 6.12 35 *e*P Pn 19 19 38.4 -0.4
KBN Korca 6.19 109 Pn 19 19 39.7 0.0
KBN Korca 6.19 109 P Pn 19 19 39.4 -0.4
KBN Korca 6.19 109 P Pn 19 19 39.7 0.0
KBN Korca 6.19 109 P Pn 19 19 40.4 +0.7
baz=105
KBN S **Sn 19 20 45.5 -5.3**
baz=105
MODS Modra-Piesok 6.20 27 *e*P Pn 19 19 39.1 -0.7
MODS *e* 19 20 48.4
MODS MLR MLR
comp=Z,385µm,21.2s
BUD Budapest 6.20 40 P Pn 19 19 38.9 -0.8
CABF La Chapelle 6.21 309 *e*P Pn 19 19 39.9 -0.2
CABF *e*Sn **Sn 19 20 44.5 -6.8**
comp=Z,4µm,0.8s
KHC Kasperske Hory 6.23 3 Pn 19 19 38.3 -2.0
KHC Kasperske Hory 6.23 3 *e*P Pn 19 19 38.4 -1.9
KHC *e* 19 20 47.7
KHC MLR MLR
comp=Z,255µm,14.3s
KHC Kasperske Hory 6.23 3 *e*PN Pn 19 19 38.4 -1.9
KHC *e*SN **Sn 19 20 47.7 -3.9**
KHC AMS AMS 19 22 10.0
comp=Z,255µm,14.3s
WET Wettzell 6.24 359 *e*Pn Pn 19 19 38.7 -1.6
WET *e*Sn **Sn 19 20 48.1 -3.7**
SKO Skopje 6.24 96 *i* Pn Pn 19 19 40.3 -0.2
LSK Leskovik 6.27 114 P Pn 19 19 40.1 -0.8
LSK Leskovik 6.27 114 P Pn 19 19 40.2 -0.7
baz=110
LSK S **Sn 19 20 50.5 -2.2**
baz=110
BANR Banloc 6.29 64 ⇓P Pn 19 19 41.8 +0.7
BOVS Bovan 6.33 81 ⇑P Pn 19 19 41.9 +0.3
BOVS Bovan 6.33 81 *e*Pn Pn 19 19 40.2 -1.4
BOVS *e*Sn **Sn 19 20 51.3 -2.7**
BFO Black Forest 6.37 330 Pn 19 19 40.9 -1.2
BFO Black Forest 6.37 330 P Pn 19 19 40.9 -1.2
BFO Black Forest 6.37 330 P Pn 19 19 41.4 -0.7
SMOL Smolenice 6.37 27 *e*P Pn 19 19 41.5 -0.7
SMOL *e* 19 20 54.9
SMOL MLR MLR
comp=Z,51µm,14.9s
VIVF Saint-Julien-l 6.39 291 *e*P Pn 19 19 42.3 -0.2
VIVF *e*Sn Sn 19 20 46.5 -9.1
comp=Z,2µm,1.1s

KUBS Kucevo 6.40 74 *e*Pn Pn 19 19 41.1 -1.5
BARS Barje 6.41 88 *e*Pn Pn 19 19 42.1 -0.6
IGT Igoumenitsa 6.42 119 P Pn 19 19 42.4 -0.4
AMBH Ambrzfalva 6.44 55 ⇓P Pn 19 19 43.8 +0.7
NEST Nestorio 6.46 110 P Pn 19 19 43.4 -0.1
STU Stuttgart 6.46 336 Pn 19 19 43.3 -0.1
STU Stuttgart 6.46 336 P Pn 19 19 43.3 -0.1
STU Stuttgart 6.46 336 *e*Pn Pn 19 19 43.4 -0.1
MDVR Moldovita 6.50 70 ⇓P Pn 19 19 44.8 +0.7
KRUC Moravsky 6.57 19 *e*SN Sn 19 20 57.1 -2.8
KRUC Moravsky 6.57 19 *e*PN Pn 19 19 42.9 -1.9
HINF Hinteralfeld 6.59 320 *e*P Pn 19 19 44.0 -1.2
HINF *e*Sn **Sn 19 20 52.0 -8.4**
comp=Z,5µm,0.6s
TREC Trest 6.60 14 *e*P Pn 19 19 43.7 -1.6
TREC MLR MLR
comp=Z,310µm,12.2s
TREC Trest 6.60 14 *e*PN Pn 19 19 43.7 -1.6
TREC AMS AMS 19 22 30.0
comp=Z,310µm,12.2s
SSB Saint Sauveur 6.60 294 Pn Pn 19 19 44.6 -0.8
SSB Saint Sauveur 6.60 294 P Pn 19 19 44.6 -0.8
PENT Pentalofos 6.61 112 P Pn 19 19 45.4 -0.2
JAN Janina 6.68 117 P Pn 19 19 45.3 -1.2
BZS Buzias 6.69 63 ⇓P Pn 19 19 47.5 +1.0
BSZH Besenyszg 6.71 47 ⇓P Pn 19 19 47.8 +1.0
BSZH Besenyszg 6.71 47 P Pn 19 19 48.0 +1.2
ZAGS Zajecar 6.72 79 *e*Pn Pn 19 19 45.9 -1.1
ZAGS *e*Sn **Sn 19 21 01.7 -2.0**
ECH Echery 6.74 324 Pn 19 19 46.2 -1.1
ECH Echery 6.74 324 P Pn 19 19 46.2 -1.1
JAVC Velka Javorina 6.75 27 *e*PN Pn 19 19 46.2 -1.2
LASF Ste Croix 6.82 283 *e*P Pn 19 19 48.0 -0.4
LASF *e*Sn Sn 19 20 56.8 -9.4
comp=Z,1µm,1.0s
VRAC Vranov 6.84 20 ⇓P Pn 19 19 49.3 +0.6
VRAC Vranov 6.84 20 Pn Pn 19 19 47.4 -1.2
comp=Z,11nm,0.3s,baz=208,slow=13,SNR=72
VRAC Sn **Sn 19 21 03.0 -3.7**
comp=Z,26nm,0.3s,baz=188,slow=11,SNR=5.0
VRAC Lg Lg 19 21 45.6
comp=Z,42nm,0.3s,baz=88,slow=23,SNR=1.7
VRAC LR LR 19 23 14.6
comp=Z,122µm,19.4s,baz=208,slow=45
VRAC Vranov 6.84 20 *e*SN Sn 19 21 02.8 -3.9
VRAC Vranov 6.84 20 *e*PN Pn 19 19 46.6 -2.1
CDF Champ du Feu 6.84 325 *e*P Pn 19 19 48.4 -0.4
CDF *e*Sn Sn 19 20 57.9 -9.0
comp=Z,3µm,0.6s
STIP Stip 6.85 97 *i* Pn Pn 19 19 49.6 +0.9
VYHS Vyhne 6.88 34 *e*P Pn 19 19 48.7 -0.4
VYHS MLR MLR
comp=Z,321µm,16.1s
KPRO Kipourio 6.88 113 P Pn 19 19 48.8 -0.4
ROTZ Rotzenmuhle 6.88 355 *e*Pn Pn 19 19 46.7 -2.5
GRFO Grafenberg 6.90 350 Pn 19 19 47.1 -2.4
GRFO Grafenberg 6.90 350 P Pn 19 19 47.1 -2.4
GRA1 Grafenberg Arr 6.91 350 Pn 19 19 47.0 -2.5
GRF Grafenberg Arr 6.91 350 P Pn 19 19 47.0 -2.5
GRF Grafenberg Arr 6.91 350 *e*Pn Pn 19 19 48.0 -1.5
GRF *e*Sn **Sn 19 21 03.3 -4.9**
HAU Haudompre 6.96 319 *e*P Pn 19 19 49.6 -0.7
HAU *e*Sn **Sn 19 21 01.5 -8.1**
comp=Z,9µm,0.6s
SIRR Siria 6.97 58 ⇑P Pn 19 19 51.3 +0.8
ZAPS Zavoj 6.99 84 *e*Pn Pn 19 19 51.0 +0.2
ZAPS *e*Sn **Sn 19 21 09.2 -1.3**
KZN Kozani 7.00 109 P Pn 19 19 49.9 -1.0
HERR Herculane 7.01 71 ⇓P Pn 19 19 51.9 +0.9
BLKB Belogradchik 7.03 81 ⇓P Pn 19 19 51.9 +0.7
TSLK Tsoukalades, L 7.03 123 P Pn 19 19 51.0 -0.3
DJES Djerdap 7.04 72 ⇓P Pn 19 19 52.1 +0.7
LKD2 Lefkada island 7.06 123 P Pn 19 19 51.3 -0.3
GOPC GO Pecny, Ondr 7.10 9 *e*P Pn 19 19 50.0 -2.2
GOPC GO Pecny, Ondr 7.10 9 *e*PN Pn 19 19 50.0 -2.2
MANZ Manzenberg 7.11 355 *e*Pn Pn 19 19 49.9 -2.4
MANZ *e*Sn **Sn 19 21 07.1 -6.2**
PRU Pruhonice 7.15 8 *e*P Pn 19 19 50.5 -2.3
PRU *e* 19 21 09.9
PRU MLR MLR
comp=Z,234µm,15.4s
PRU Pruhonice 7.15 8 *e*PN Pn 19 19 50.5 -2.3
PRU *e*SN **Sn 19 21 09.9 -4.3**
PRU AMS AMS 19 22 50.0
comp=Z,234µm,15.4s
WDD Wied Dalam 7.15 171 Pn Pn 19 19 53.5 +0.6
EVGI Lefkada island 7.16 124 P Pn 19 19 52.4 -0.6
RMGR Halanga-Turnu 7.16 73 ⇓P Pn 19 19 53.8 +0.8
FSK Fiskardo 7.21 126 P Pn 19 19 53.0 -0.7
GRG Griva 7.21 103 P Pn 19 19 51.6 -2.1
KTI Kastanea 7.21 107 P Pn 19 19 53.3 -0.5
VAY Valandovo 7.22 100 *i* Pn Pn 19 19 52.9 -0.9
DMLN Damoulianata-K 7.24 128 P Pn 19 19 53.8 -0.4
MAUC Maruska 7.24 25 *e*PN Pn 19 19 53.5 -0.7
KEF3 Kipouria, Keph 7.25 128 P Pn 19 19 54.5 +0.2
KEF4 Livadi, Kephal 7.26 127 P Pn 19 19 53.7 -0.7
PUNG Punghina 7.27 76 ⇑P Pn 19 19 55.4 +0.9
MAHO Mahon 7.29 249 P Pn 19 19 55.9 +1.2
MAHO S **Sb 19 21 35.8 -6.0**
MAHO Mahon 7.29 249 Pn 19 19 54.2 -0.6
NKC Novy Kostel 7.34 357 *e*P Pn 19 19 53.5 -2.0
NKC *e* 19 21 14.7
NKC MLR MLR
comp=Z,228µm,12.1s
NKC Novy Kostel 7.34 357 *e*PN Pn 19 19 53.5 -2.0
NKC *e*SN **Sn 19 21 14.7 -4.2**
NKC AMS AMS 19 23 00.0
comp=Z,228µm,12.1s
GZR Gura Zlata 7.39 67 ⇓P Pn 19 19 56.9 +0.7
VLS Valsamata 7.41 127 P Pn 19 19 55.9 -0.6
PSDA Pessada-Kefalo 7.45 128 P Pn 19 19 56.7 -0.3
VTS Vitosha 7.47 89 ⇑P Pn 19 19 57.8 +0.4
VTS Vitosha 7.47 89 Pn 19 19 56.5 -0.9
VTS Vitosha 7.47 89 P Pn 19 19 56.5 -0.9
KNT Kendrikon 7.50 100 P Pn 19 19 55.5 -2.3
THL Klokotos Trika 7.51 113 P Pn 19 19 56.9 -0.9
SRE Strehaia 7.52 73 ⇓P Pn 19 19 58.8 +0.8
MORC Moravsky Berou 7.52 23 ⇑P Pn 19 19 58.7 +0.7
MORC Moravsky Berou 7.52 23 Pn 19 19 56.6 -1.4
MORC Moravsky Berou 7.52 23 P Pn 19 19 56.6 -1.4
MORC Moravsky Berou 7.52 23 *e*PN Pn 19 19 56.7 -1.4
BAIL Bailesti 7.54 78 ⇑P Pn 19 19 58.4 +0.3
SMF Signal de Mont 7.57 303 *e*P Pn 19 19 58.7 +0.1
SMF *e*Sn Sn 19 21 15.4 -9.2
comp=Z,2µm,0.6s
LIT Litokhoron 7.59 109 Pn 19 19 57.8 -1.2
LIT Litokhoron 7.59 109 P Pn 19 19 57.2 -1.7
LIT Litokhoron 7.59 109 P Pn 19 19 57.8 -1.2
KECS Kecovo 7.60 40 *e*P Pn 19 20 00.8 +1.8
KRLC Kraliky 7.60 18 *e*P Pn 19 19 57.8 -1.3
KRLC *e* 19 21 22.0
KRLC MLR MLR
comp=Z,206µm,12.9s
KRLC Kraliky 7.60 18 *e*PN Pn 19 19 58.7 -0.4
KRLC AMS AMS 19 23 10.0
comp=Z,195µm,13.5s
DEV Deva 7.63 64 ⇑P Pn 19 19 59.4 0.0
PAGF Fort de Pagny 7.64 320 *e*P Pn 19 19 59.6 0.0
PAGF *e*Sn **Sn 19 21 17.5 -8.9**
comp=Z,3µm,0.6s
CMAH Djebel Manchou 7.65 217 P Pn 19 20 02.3 +2.5
LTVH Ltavrtes, Hu 7.66 51 ⇓P Pn 19 20 00.7 +0.8
PVCC Panska Ves 7.69 7 *e*P Pn 19 19 58.3 -1.9
PVCC MLR MLR
comp=Z,186µm,14.6s
PVCC Panska Ves 7.69 7 *e*PN Pn 19 19 58.3 -1.9
PVCC AMS AMS 19 23 10.0
comp=Z,186µm,14.6s
PVO Paravola 7.70 121 P Pn 19 19 59.9 -0.6
EVR Evrytania 7.71 118 P Pn 19 20 00.9 +0.2
THE Thessaloniki 7.72 104 P Pn 19 19 58.6 -2.1
KEST Kesra 7.74 203 Pn Pn 19 20 04.0 +3.0
comp=Z,17nm,0.3s,baz=338,slow=2.3,SNR=188
KEST Sn **Sn 19 21 28.7 -0.1**
baz=197,slow=17
KEST LR LR 19 23 16.1
comp=Z,179µm,18.1s,baz=338,slow=40
KEST Kesra 7.74 203 Pn Pn 19 20 03.2 +2.2
KEST Kesra 7.74 203 P Pn 19 20 04.1 +3.0
SNR=783
KEST P **Pn 19 20 04.1 +3.0**
SNR=783

KEST P **Pn 19 20 04.1 +3.0**
SNR=783
SFTF Sexfontaines 7.74 316 *e*P Pn 19 20 00.3 -0.7
SFTF *e*Sn **Sn 19 21 20.0 -8.8**
comp=Z,13µm,1.4s
OKC Ostrava-Krasne 7.76 25 *e*P Pn 19 20 00.4 -0.8
OKC *e* 19 21 25.1
OKC Ostrava-Krasne 7.76 25 *e*PN Pn 19 20 00.4 -0.8
OKC *e*SN **Sn 19 21 25.1 -4.0**
DPC Dobruska-Polom 7.76 15 *e*P Pn 19 19 59.9 -1.4
DPC MLR MLR
comp=Z,245µm,13.6s
DPC Dobruska-Polom 7.76 15 *e*PN Pn 19 19 59.9 -1.4
DPC AMS AMS 19 23 10.0
comp=Z,245µm,13.6s
MOX Moxa 7.80 353 P Pn 19 19 59.5 -2.3
MOX Moxa 7.80 353 *e*Pn Pn 19 20 00.8 -1.0
MOX *e*Sn **Sn 19 21 22.7 -7.6**
HORT Hortiatis 7.83 104 P Pn 19 20 00.0 -2.3
ABAH Abaujker 7.85 44 P Pn 19 20 02.0 -0.4
LOR Lormes 7.85 307 *e*P Pn 19 20 02.3 -0.2
baz=121
LOR *e*Sn Sn 19 21 22.4 -9.2
comp=Z,1µm,0.6s
DRGR 7.86 57 ⇑P Pn 19 20 03.4 +0.8
DRGR 7.86 57 P Pn 19 20 02.5 -0.1
UPC Upice 7.86 14 *e*P Pn 19 20 00.9 -1.7
UPC MLR MLR
comp=Z,297µm,12.9s
UPC Upice 7.86 14 *e*PN Pn 19 20 00.9 -1.7
UPC AMS AMS 19 23 10.0
comp=Z,297µm,12.9s
MAKR Makrakomi, Fth 7.87 117 P Pn 19 20 03.3 +0.5
LTHK Lithakia 7.87 129 P Pn 19 20 01.3 -1.5
MEZF Maizieres J'vi 7.93 318 *e*P Pn 19 20 03.4 -0.2
baz=134
MEZF *e*Sn **Sn 19 21 24.9 -8.5**
comp=Z,2µm,0.6s
AVF Avril sur Loir 7.93 303 *e*P Pn 19 20 03.3 -0.3
AVF *e*Sn Sn 19 21 24.4 -9.1
comp=Z,2µm,0.9s
SOH Sokhos 7.94 102 P Pn 19 20 01.9 -1.8
OSTC Ostas 7.94 15 *e*PN Pn 19 20 02.5 -1.2
OSTC AMS AMS 19 23 10.0
comp=Z,262µm,12.9s
CHVC Chvalec 7.94 14 *e*PN Pn 19 20 01.8 -2.0
CHVC AMS AMS 19 23 20.0
comp=Z,259µm,12.7s
SSF Saint Saulge 7.96 305 *e*P Pn 19 20 02.7 -1.3
SSF *e*Sn Sn 19 21 25.3 -8.9
comp=Z,1µm,0.6s
SSF Saint Saulge 7.96 305 P Pn 19 20 02.6 -1.4
MTLF Montolieu 7.97 277 *e*P Pn 19 20 03.8 -0.3
MTLF *e*Sn Sn 19 21 24.7 -10
comp=Z,946nm,1.1s
SAVF Savonnieres en 7.97 318 *e*P Pn 19 20 03.9 -0.2
SAVF *e*Sn Sn 19 21 25.0 -9.4
comp=Z,1µm,0.5s
TNS Taunus Mts 7.98 338 *e*Pn Pn 19 20 03.7 -0.6
BRG Berggiesshubel 7.99 4 *e*P Pn 19 20 02.6 -1.7
BRG *e* 19 21 30.0
BRG pmax pmax
comp=Z,206nm,0.6s
BRG MLR MLR
comp=E,112µm,9.0s
BRG MLR MLR
comp=N,120µm,13.7s
BRG MLR MLR
comp=Z,200µm,13.1s
RLS Riolos of Patr 8.01 124 P Pn 19 20 04.9 +0.2
SRS Serrai 8.02 99 P Pn 19 20 03.0 -1.8
EFP Efpalio 8.05 121 P Pn 19 20 05.0 -0.3
UPR University Cam 8.07 122 P Pn 19 20 08.0 +2.6
LOT Lotru 8.08 68 ⇑P Pn 19 20 07.3 +1.6
NAST IGS Nastaetten 8.13 335 *e*Pn Pn 19 20 07.7 +1.4
NAST *e*Sn **Sn 19 21 36.9 -1.4**
comp=Z,560nm,1.2s
CKFL Kef-Lekhel 8.15 219 P Pn 19 20 10.3 +3.6
NVR Nevrokopi 8.15 97 P Pn 19 20 05.3 -1.4
BGF Bois d'Agland 8.16 300 *e*P Pn 19 20 06.3 -0.4
BGF *e*Sn **Sn 19 21 30.8 -8.2**
comp=Z,2µm,0.6s
SERG Sergoula 8.16 120 P Pn 19 20 06.8 +0.1
MESR Meseseni 8.16 55 ⇑P Pn 19 20 07.6 +0.8
LAKA Lakka 8.21 122 P Pn 19 20 08.2 +0.7
CAF Calviac 8.21 288 *e*P Pn 19 20 07.5 0.0
CAF *e*Sn Sn 19 21 30.6 -10
comp=Z,5µm,2.2s
CAF Calviac 8.21 288 P Pn 19 20 08.1 +0.6
DRO Drossia 8.23 124 P Pn 19 20 07.8 +0.1
KSP Ksiaz 8.23 14 *e*P Pn 19 20 08.8 +1.1
KSP *e*L L 19 23 29.1
comp=Z,250µm,16.3s
WLF Walferdange 8.29 327 Pn Pn 19 20 08.6 +0.1
WLF Walferdange 8.29 327 P Pn 19 20 08.6 +0.1
WLF Walferdange 8.29 327 *d*P Pn 19 20 08.8 +0.3
WLF Walferdange 8.29 327 *e*Pn Pn 19 20 08.3 -0.1
VLAD Vladila 8.30 79 ⇑P Pn 19 20 10.0 +1.4
BGG Burgeitz 8.30 333 *e*Pn Pn 19 20 10.2 +1.6
AXAR Agios Charalam 8.35 117 P Pn 19 20 08.9 -0.4
CRVS Cervenica-Dubn 8.36 41 *e*P Pn 19 20 11.7 +2.3
CRVS MLR MLR
comp=Z,212µm,20.6s
CBBR Cluj-Babes-Bol 8.37 59 ⇓P Pn 19 20 10.4 +0.9
KOE Koeppel 8.37 336 *e*Pn Pn 19 20 11.7 +2.1
CASM Ain Smara 8.37 220 P Pn 19 20 12.8 +3.1
CJR Cluj-Napoca 8.38 59 ⇓P Pn 19 20 10.7 +1.0
CLL Collm 8.40 360 Pn 19 20 08.3 -1.7
CLL Collm 8.40 360 *e*P Pn 19 20 09.0 -1.0
CLL *e* 19 21 42.0
CLL pmax pmax
comp=Z,505nm,0.8s
CLL MLR MLR
comp=Z,163µm,17.4s
CLL Collm 8.40 360 *e*Pn Pn 19 20 09.0 -1.0
comp=Z,505nm,0.8s
CLL *i* x x 19 20 14.9
CLL *e*x x 19 20 51.0
CLL *e*Sn **Sn 19 21 42.0 -2.9**
CLL *e*x x 19 22 00.0
CLL *e*Sg **Sg 19 22 45.0 +7.6**
comp=Z,10µm,1.4s
CLL Lmax 19 24 00.0
KOKK Kokkinochori, 8.40 101 P Pn 19 20 08.9 -1.2
TRPA Tarpa 8.43 49 ⇑P Pn 19 20 11.4 +0.9
TRPA Tarpa 8.43 49 P Pn 19 20 10.5 +0.1
KLV Kalavryta, Ach 8.44 122 P Pn 19 20 11.1 +0.5
DFRA Djebel Bou Aff 8.45 224 P Pn 19 20 14.9 +4.1
NEO Neokhori 8.45 112 P Pn 19 20 09.8 -1.0
TCF Toulx Ste Croi 8.47 297 *e*P Pn 19 20 11.0 0.0
TCF *e*Sn Sn 19 21 36.8 -10
comp=Z,831nm,0.8s
PAIG Paliouri 8.49 107 P Pn 19 20 08.3 -3.0
OUR Ouranopolis 8.55 104 P Pn 19 20 09.9 -2.2
HYF Humbligny 8.58 304 *e*P Pn 19 20 13.3 +0.8
HYF *e*Sn Sn 19 21 40.1 -9.4
comp=Z,4µm,0.6s
HILG Hillesheim 8.60 331 *e*Pn Pn 19 20 14.9 +2.1
UZH Uzhgorod 8.60 45 *e*P Pn 19 20 14.4 +1.7
UZH *e*S **Sn 19 21 53.4 +3.5**
UZH MLR MLR
comp=N,34µm,15.0s
UZH MLR MLR
comp=E,48µm,15.0s
UZH MLR MLR
comp=Z,22µm,15.0s
STHS Stebnicka Huta 8.62 38 *e*P Pn 19 20 12.5 -0.5
LKR Lokris 8.63 116 P Pn 19 20 11.7 -1.5
OJC Ojcow 8.64 30 *e*P Pn 19 20 13.0 -0.4
OJC *e*L L 19 24 15.2
comp=Z,309µm,13.6s
OJC Ojcow 8.64 30 Pn Pn 19 20 10.8 -2.5
OJC Ojcow 8.64 30 P Pn 19 20 10.8 -2.5
ARR Arges 8.65 70 ⇑P Pn 19 20 14.3 +0.7
RJF Les Rejaudoux 8.67 290 *e*P Pn 19 20 14.4 +0.7
RJF *e*Sn Sn 19 21 40.5 -11
comp=Z,7µm,2.1s
MDB Medias 8.68 64 ⇓P Pn 19 20 14.7 +0.8
KAVA Kavala 8.72 99 P Pn 19 20 12.9 -1.5
BMR Baia Mare 8.74 53 ⇑P Pn 19 20 16.5 +1.8
HUMR Humele 8.76 75 ⇓P Pn 19 20 15.2 +0.3
THAL Thalero 8.77 121 P Pn 19 20 13.5 -1.5
KOLS Kolonicke sedl 8.78 44 *e*P Pn 19 20 16.8 +1.6

STFAR Stefanesti-Arg 8.79 73 ⇓P **Pn 19 20 16.3 +0.9**
STB Steinbach 8.80 333 *e*Pn **Pn 19 20 16.9 +1.4**
TRIP Tripoli 8.84 124 P Pn 19 20 08.4 -7.7
ITM Ithomi 8.86 127 Pn 19 20 17.0 +0.6
ITM Ithomi 8.86 127 P **Pn 19 20 14.5 -1.9**
COPA Copaceanca 8.89 78 ⇓P **Pn 19 20 17.4 +0.7**
BHOU Houvegnez 8.90 329 *d*P **Pn 19 20 18.1 +1.3**
BHOU *d*S **Sn 19 21 55.0 -2.2**
TGMR Targu Mures 8.90 62 ⇑P **Pn 19 20 17.8 +0.9**
VOIR 8.95 70 ⇓P **Pn 19 20 19.0 +1.3**
PYL PYLOS 8.96 129 P **Pn 19 20 15.2 -2.4**
HOBG Hohbusch 8.98 336 *e*Pn **Pn 19 20 19.7 +1.7**
ZIMR 8.98 81 ⇓P **Pn 19 20 18.0 0.0**
THAS Thassos island 8.99 101 P Pn 19 20 11.8 -6.3
LOUT Loutraki 8.99 120 P **Pn 19 20 15.7 -2.5**
ARCR ARCALIA 9.00 59 ⇑P **Pn 19 20 19.5 +1.2**
BNS Bensberg 9.01 335 *e*Pn **Pn 19 20 19.7 +1.3**
KLL Kalltalsperre 9.03 331 *e*Pn **Pn 19 20 20.4 +1.8**
BTNL Ternell 9.04 331 *d*P **Pn 19 20 20.6 +1.8**
RCHB Rochefort 9.04 326 *d*P **Pn 19 20 19.5 +0.7**
RCHB *d*S **Sn 19 21 58.2 -2.6**
DREG Dreilaegerbach 9.07 331 *e*Pn **Pn 19 20 20.9 +1.8**
MEM Membach 9.10 330 *d*P **Pn 19 20 20.7 +1.0**
VILL Villia 9.11 118 P **Pn 19 20 19.4 -0.4**
LFF La Frestale 9.14 287 *e*P **Pn 19 20 21.0 +0.8**
LFF *e*Sn Sn 19 21 51.7 -12
comp=Z,565nm,1.0s
CLF Chambon-Foret 9.17 308 Pn **Pn 19 20 19.4 -1.1**
GIVF Givet 9.17 324 *e*P **Pn 19 20 20.9 +0.3**
GIVF *e*Sn Sn 19 21 52.1 -12
comp=Z,4μm,1.1s
BCLA Clavier 9.22 327 *d*P **Pn 19 20 22.6 +1.4**
BCLA *d*S **Sn 19 22 01.2 -3.9**
BSTI Sart Tilman 9.25 329 *d*P **Pn 19 20 23.6 +2.0**
DOU Dourbes 9.27 324 *d*P **Pn 19 20 22.0 +0.1**
BGES Gesves 9.28 326 *d*P **Pn 19 20 22.9 +0.8**
BGES *d*S **Sn 19 22 02.8 -3.8**
EPID Epidavros 9.31 121 P **Pn 19 20 22.0 -0.5**
DOPR Dopca 9.31 67 ⇑P **Pn 19 20 24.1 +1.6**
BMRD Maredsous 9.35 325 *d*P **Pn 19 20 22.4 -0.6**
BMRD *d*S **Sn 19 22 05.9 -2.4**
EPF Esparros 9.35 275 *e*P **Pn 19 20 23.9 +0.7**
EPF *e*Sn Sn 19 21 57.5 -11
comp=Z,222nm,1.0s
KYMI Kymi, Euboea I 9.38 113 P **Pn 19 20 22.2 -1.2**
BEBN Eben Emael 9.38 330 *d*P **Pn 19 20 25.2 +1.8**
BAIF Baives 9.41 322 *e*P **Pn 19 20 23.7 -0.2**
BAIF *e*Sn Sn 19 21 57.4 -12
comp=Z,1μm,0.8s
LAUG Laupendahl 9.42 336 *e*Pn **Pn 19 20 26.0 +2.0**
RDO Rodhopi 9.43 97 Pn 19 20 23.2 -0.8
RDO Rodhopi 9.43 97 P **Pn 19 20 22.6 -1.5**
SGRR Singureni 9.44 78 ⇑P **Pn 19 20 25.2 +0.9**
KRND KRANIDI 9.47 122 P **Pn 19 20 24.4 -0.3**
ATH Athens Observa 9.48 118 P **Pn 19 20 23.2 -1.6**
ATHU Athens Univers 9.53 118 P **Pn 19 20 23.1 -2.4**
PTL Penteli 9.53 117 P **Pn 19 20 24.4 -1.2**
PLAR PLOIESTI 9.55 73 ⇑P **Pn 19 20 26.6 +0.9**
DION Dionisos Attik 9.56 117 P **Pn 19 20 26.7 +0.7**
MLR Muntele Rosu 9.58 70 ⇑P **Pn 19 20 27.0 +0.6**
MLR Muntele Rosu 9.58 70 Pn **Pn 19 20 27.9 +1.6**
comp=Z,6.6nm,0.3s,baz=261,slow=5.4,SNR=120
MLR Sn **Sn 19 22 12.7 -1.5**
baz=345,slow=10.0
MLR Lg Lg 19 23 08.8
comp=Z,1.3nm,0.3s,baz=198,slow=21,SNR=1.4
MLR LR LR 19 25 01.8
comp=Z,360μm,20.1s,baz=258,slow=43
comp=Z,243nm,0.8s
MLR Muntele Rosu 9.58 70 Pn 19 20 26.6 +0.3
MLR Muntele Rosu 9.58 70 P **Pn 19 20 26.7 +0.3**
SECR 9.59 73 ⇓P **Pn 19 20 26.9 +0.6**
VLY Voula,Athens 9.60 118 P **Pn 19 20 25.1 -1.4**
OZUR 9.61 66 ⇑P **Pn 19 20 28.2 +1.5**
SMTH Samothraki Isl 9.62 100 P **Pn 19 20 23.6 -3.1**
SULR 9.68 75 ⇓P **Pn 19 20 29.0 +1.4**
SNF Seneffe 9.71 325 *d*P **Pn 19 20 28.8 +0.9**
BURAR Bucovina Array 9.75 57 ⇑P **Pn 19 20 29.2 +0.5**
BURAR Bucovina Array 9.75 57 Pn 19 20 28.5 -0.1
BUR08 Bucovina Ar. S 9.75 57 Pn **Pn 19 20 28.9 +0.3**
VLI Veliai 9.77 126 P **Pn 19 20 29.5 +0.7**
NEHR Nehoiu 9.81 71 ⇓P **Pn 19 20 30.2 +0.8**
RAZG Razgrad 9.81 82 ⇑P **Pn 19 20 29.8 +0.4**
COVR Voineasa-Covas 9.83 68 ⇓P **Pn 19 20 30.6 +0.9**
ISR Istrita 9.94 73 ⇑P **Pn 19 20 32.1 +1.0**
ETSF Etsaut 10.02 275 *e*P **Pn 19 20 34.5 +2.2**
ETSF *e*Sn Sn 19 22 14.6 -10
comp=Z,324nm,1.1s
BIZ Bicaz 10.06 62 ⇓P **Pn 19 20 34.2 +1.3**
LEHL Lehliu 10.06 76 ⇑P **Pn 19 20 33.4 +0.6**
MFF Saint Martin d 10.12 296 *e*P **Pn 19 20 33.9 +0.4**
MFF *e*Sn Sn 19 22 16.3 -11
comp=Z,202nm,0.7s
KTHR Kythira 10.12 128 P **Pn 19 20 34.8 +1.1**
PLOR Plostina 10.14 69 ⇓P **Pn 19 20 34.5 +0.6**
PLOR Plostina 10.14 69 P **Pn 19 20 34.7 +0.8**
EDRB Edirne 10.16 91 P **Pn 19 20 31.6 -2.5**
KTHA Kythira Island 10.16 128 P **Pn 19 20 35.1 +0.9**
VRI Vrincioaia 10.20 68 ⇑P **Pn 19 20 35.2 +0.6**
VRI Vrincioaia 10.20 68 P **Pn 19 20 35.5 +0.9**
PGOR Pogoanele 10.22 74 ⇓P **Pn 19 20 35.7 +0.8**
LVV L'vov 10.23 44 *e*P **Pn 19 20 37.0 +1.9**
LVV *e*S **Sn 19 22 34.4 +4.5**
LVV MLR MLR
comp=Z,153μm,9.0s
GRER 10.28 71 ⇓P **Pn 19 20 36.5 +0.7**
RASA Rasa 10.29 78 ⇑P **Pn 19 20 37.0 +1.1**
TESR Tescani 10.30 65 ⇓P **Pn 19 20 36.7 +0.7**
SIGR SIGRI 10.32 107 P **Pn 19 20 33.9 -2.4**
BEL Belsk 10.33 28 *e*P **Pn 19 20 39.6 +3.1**
BEL *e*L L 19 25 28.9
comp=Z,231μm,14.0s
ODBI Odobesti 10.40 69 ⇓P **Pn 19 20 37.9 +0.5**
EZIN Ezine 10.41 103 P **Pn 19 20 36.4 -1.2**
AMRR Amara 10.44 76 ⇑P **Pn 19 20 38.5 +0.5**
PANC Panciu 10.48 69 ⇓P **Pn 19 20 39.4 +0.8**
SJPF Ste Jean 10.49 276 *e*P **Pn 19 20 39.7 +1.0**
SJPF *e*Sn Sn 19 22 24.9 -12
comp=Z,247nm,1.1s
ANKY Antikythira Is 10.57 128 P **Pn 19 20 40.7 +0.9**
PRK Paraskevi 10.60 106 P **Pn 19 20 39.2 -0.9**
MHLO Agia Marina, M 10.68 122 P **Pn 19 20 40.6 -0.7**
GHRR 10.70 68 ⇓P **Pn 19 20 42.5 +1.0**
GKP Gorka Klasztor 10.73 13 *e*P **Pn 19 20 42.9 +1.1**
GKP *e*L L 19 25 25.3
comp=Z,256μm,15.2s
ICOR Ion Corvin 10.75 79 ⇓P **Pn 19 20 42.4 +0.2**
LDF La Druitiere 10.84 306 *e*P **Pn 19 20 43.1 -0.3**
LDF *e*Sn Sn 19 22 34.4 -10
comp=Z,602nm,0.9s
IZVR Izvoarele 10.85 71 ⇓P **Pn 19 20 44.4 +0.8**
SLCR Slobozia Conac 10.86 71 ⇑P **Pn 19 20 44.0 +0.3**
HARR Harsova 10.87 76 ⇓P **Pn 19 20 43.8 -0.1**
SCHL Schela 10.89 71 ⇓P **Pn 19 20 45.3 +1.2**
TLBR Topalu 10.95 76 ⇓P **Pn 19 20 45.4 +0.6**
SCTR Scanteiesti 11.03 70 ⇓P **Pn 19 20 47.6 +1.6**
RODP Rodopos 11.05 128 P **Pn 19 20 49.0 +2.6**
TATR Tatarca 11.06 71 ⇑P **Pn 19 20 47.2 +0.8**
CFR Carcaliu 11.06 73 ⇑P **Pn 19 20 46.6 +0.1**
IAS Iasi 11.09 62 ⇑P **Pn 19 20 47.4 +0.6**
IAS Iasi 11.09 62 P **Pn 19 20 49.3 +2.5**
VASR Vaslui 11.09 65 ⇑P **Pn 19 20 47.8 +0.9**
VLDR Vladesti 11.12 70 ⇑P **Pn 19 20 47.9 +0.7**
FLN La Foliniere 11.13 306 *e*P **Pn 19 20 47.0 -0.3**
baz=122
FLN *e*Sn Sn 19 22 40.9 -11
comp=Z,695nm,1.0s
APE Apeiranthos 11.18 117 *c*e**P Pn 19 20 49.2 +1.1**
GRR Gorron 11.19 304 *e*P **Pn 19 20 47.1 -1.1**
GRR *e*Sn Sn 19 22 41.8 -12
comp=Z,465nm,0.8s
TIRR Tirgusor 11.20 77 ⇑P **Pn 19 20 48.3 -0.1**
TIRR Tirgusor 11.20 77 Pn 19 20 48.2 -0.1
TIRR Tirgusor 11.20 77 P **Pn 19 20 48.3 -0.1**
TPGR Topolog 11.23 75 ⇑P **Pn 19 20 49.6 +0.8**
KNDR Palaiochora Ch 11.24 129 P **Pn 19 20 48.9 0.0**
IMMV Iera Moni Meta 11.25 128 P **Pn 19 20 49.9 +0.8**
MANR Mangalia 11.32 80 ⇓P **Pn 19 20 49.8 -0.2**
EFOR EFORIE 11.35 79 ⇑P **Pn 19 20 50.2 -0.2**
THR5 Thira Island, 11.45 120 P **Pn 19 20 51.4 -0.4**
BLCB Balcova 11.52 108 P **Pn 19 20 51.6 -1.1**

JURR Jurilovca 11.55 75 ⇓P **Pn 19 20 53.7 +0.6**
RGN Rugen 11.65 1 Pn 19 20 53.2 -1.2
SMG Samos 11.70 112 P **Pn 19 20 52.6 -2.7**
GVDS Gavdos 11.75 130 P **Pn 19 20 56.7 +0.8**
MILM Milestii Mici 11.84 65 ⇑P **Pn 19 20 57.4 +0.4**
MILM Milestii Mici 11.84 65 ⇑*i*P **Pn 19 20 57.6 +0.5**
comp=Z,2μm,1.4s
MILM *e*S **Sn 19 23 10.2 +0.9**
MILM *e*Li 19 24 05.0
MILM LqM 19 25 24.0
comp=Z,105μm,15.7s
MILM LRM MLR 19 26 28.0
comp=Z,108μm,10.5s
MILM Milestii Mici 11.84 65*c i*P **Pn 19 20 57.6 +0.5**
MILM *i* S **Sn 19 23 10.2 +0.9**
MILM pmax pmax
comp=Z,2μm,1.4s
MILM MLR MLR
comp=Z,323μm,12.3s
MILM MLR MLR
comp=N,108μm,10.5s
MILM MLR MLR
comp=E,239μm,11.5s
KIS Kishinev 11.86 64 ⇑P **Pn 19 20 58.3 +0.9**
KIS Kishinev 11.86 64 ⇑*i*P **Pn 19 20 58.0 +0.6**
comp=E,4μm,10.5s
KIS *e*S **Sn 19 23 10.0 +0.1**
KIS *e*L L 19 24 16.0
KIS LqM 19 25 25.0
comp=E,68μm,15.6s
KIS LRM MLR 19 26 31.0
comp=E,162μm,11.5s
KIS Kishinev 11.86 64*c i*P **Pn 19 20 58.0 +0.6**
KIS *e*S **Sn 19 23 10.0 +0.1**
KIS pmax pmax
comp=Z,4μm,10.5s
KIS MLR MLR
comp=Z,176μm,12.0s
KIS MLR MLR
comp=E,162μm,11.5s
IDI Anoyia 11.90 126 Pn **Pn 19 20 57.9 -0.2**
comp=E,4.4nm,0.3s,baz=324,slow=15,SNR=23
IDI Sn **Sn 19 23 05.8 -5.3**
comp=E,19nm,0.3s,baz=35,slow=22,SNR=7.1
IDI LR LR 19 26 14.5
comp=E,23μm,21.8s,baz=310,slow=41
comp=E,76nm,0.8s
IDI Anoyia 11.90 126 Pn 19 20 58.2 +0.1
IDI Anoyia 11.90 126 P **Pn 19 20 58.8 +0.7**
CART Cartagena 12.01 248 P **Pn 19 21 01.5 +2.1**
CART S Sn 19 23 50.4 +37
CART Cartagena 12.01 248 Pn **Pn 19 20 59.3 -0.1**
CART Cartagena 12.01 248 P Pn 19 21 06.9 +7.5
ISK Istanbul-Kandi 12.02 93 P **Pn 19 20 58.8 -0.8**
SGMF Saint Gilles 12.19 301 *e*Pn **Pn 19 21 00.0 -1.9**
SGMF Saint Gilles 12.19 301 *e*P **Pn 19 21 04.2 +2.3**
SGMF *e*Sn Sn 19 23 06.0 -12
comp=E,4μm,1.9s
BSD Bornholm Skovb 12.27 5 *e*P **Pn 19 21 04.6 +1.7**
BSD Bornholm Skovb 12.27 5 *e*P **Pn 19 21 02.4 -0.5**
BSD IAMs_20 IAMs_20 19 27 01.6
comp=Z,71μm,14.0s
BSD IVMsBB 19 27 11.3
comp=Z,38μm,5.7s
ELMS Elmsett, Ipswi 12.29 323 *e*P **Pn 19 21 03.4 +0.2**
ELMS IAMs_20 IAMs_20 19 27 09.9
comp=Z,88μm,10.8s
JSA Saint Aubin 12.31 306 *e*P **Pn 19 21 01.9 -1.6**
JSA IAMs_20 IAMs_20 19 26 08.5
comp=Z,75μm,14.3s
QUIF Quistinic 12.47 299 *e*Pn **Pn 19 21 02.5 -3.2**
QUIF Quistinic 12.47 299 *e*P **Pn 19 21 08.3 +2.6**
QUIF *e*Sn Sn 19 23 11.9 -13
comp=Z,3μm,2.1s
UCM Universidad Co 12.51 264 P **Pn 19 21 04.9 -1.4**
UCM S **Sn 19 23 32.9 +7.2**
KLNR Kaliningrad 12.60 19*c i*P **Pn 19 21 08.3 +0.9**
ROSF Rostrenen 12.67 301 *e*Pn **Pn 19 21 04.8 -3.6**
ROSF Rostrenen 12.67 301 *e*P **Pn 19 21 10.2 +1.8**
ROSF *e*Sn Sn 19 23 18.3 -11
comp=Z,2μm,1.8s
COP Copenhagen 12.79 358 IAmb IAmb 19 21 17.1
comp=Z,353nm,0.9s
ZKR Zakros 12.82 123 P **Pn 19 21 11.9 +1.3**
WOL Wolverton 12.86 316 *e*P **Pn 19 21 10.3 -0.6**
WOL IAMs_20 IAMs_20 19 27 54.5
comp=Z,153μm,10.2s
WACR West Acre 12.89 324 *e*P **Pn 19 21 11.6 +0.2**
WACR IAmb IAmb 19 21 19.1
comp=Z,546nm,0.9s
WACR IAMs_20 IAMs_20 19 26 44.5
comp=Z,60μm,22.4s
YER Yerkesik 12.98 111 P **Pn 19 21 12.3 -0.6**
KARP Karpathos 13.14 119 Pn 19 21 15.2 +0.2
KARP Karpathos 13.14 119 P **Pn 19 21 13.5 -1.5**
BJUU Bjuv 13.18 360 *e*P **Pn 19 21 15.0 -0.2**
ESBB Sonseca Array 13.23 262 Pn 19 21 14.3 -1.8
ESDC Sonseca Array 13.23 262 Pn **Pn 19 21 14.6 -1.6**
comp=Z,0.2nm,0.3s,baz=71,slow=11,SNR=27
ESDC Sn **Sn 19 23 42.9 -0.5**
baz=129,slow=33
ESDC LR LR 19 26 19.2
comp=Z,92μm,20.1s,baz=60,slow=37
comp=Z,12nm,1.0s
ESDC Sonseca Array 13.23 262 Pn 19 21 15.2 -0.9
SWN1 Swindon 13.27 316 *e*P **Pn 19 21 16.0 -0.5**
SWN1 IAmb IAmb 19 21 20.2
comp=Z,2μm,1.3s
SWN1 IAMs_20 IAMs_20 19 28 08.1
comp=Z,125μm,11.0s
ARG Arkhangelos 13.38 115 Pn 19 21 18.6 +0.5
ARG Arkhangelos 13.38 115 P **Pn 19 21 18.7 +0.5**
ARG Arkhangelos 13.38 115 P **Pn 19 21 18.6 +0.5**
BORA Eskisehir 13.38 97 Pn 19 21 18.8 +0.5
AKASG Malin Array Be 13.50 49 Pn **Pn 19 21 18.2 -1.5**
comp=Z,2.0nm,0.3s,baz=242,slow=12,SNR=59
AKASG Sn **Sn 19 23 47.8 -2.0**
comp=Z,0.8nm,0.3s,baz=93,slow=36,SNR=1.2
AKASG LR LR 19 27 27.3
comp=Z,80μm,18.8s,baz=238,slow=41
comp=Z,80nm,1.0s
AKASG Malin Array Be 13.50 49 Pn 19 21 18.7 -1.0
AKBB Malin Array Si 13.50 49 Pn 19 21 17.9 -1.8
AKBB Malin Array Si 13.50 49 P **Pn 19 21 17.9 -1.8**
PAB San Pablo 13.55 262 Pn 19 21 19.5 -1.1
PAB San Pablo 13.55 262 P **Pn 19 21 19.5 -1.1**
PAB San Pablo 13.55 262 P **Pn 19 21 21.4 +0.8**
PAB San Pablo 13.55 262 P **Pn 19 21 21.1 +0.5**
DEL Delary 13.58 2 *e*P **Pn 19 21 19.6 -1.2**
DEL Delary 13.58 2 *e*P **Pn 19 21 19.5 -1.2**
STRD Stroud 13.60 316 *e*P **Pn 19 21 19.4 -1.7**
STRD IAmb IAmb 19 21 23.0
comp=Z,5μm,2.4s
STRD IAMs_20 IAMs_20 19 28 12.5
comp=Z,121μm,11.9s
KDZE Karadeniz Ereo 13.72 90 ⇓P **Pn 19 21 23.6 +0.8**
OLDB Oldbury-Upon-S 13.74 315 *e*P **Pn 19 21 22.8 -0.1**
OLDB IAmb IAmb 19 21 25.7
comp=Z,5μm,2.8s
OLDB IAMs_20 IAMs_20 19 28 24.9
comp=Z,82μm,12.1s
MDUB Mudurnu 13.75 94 Pn 19 21 22.9 -0.4
CWF Charnwood Fore 13.77 321 *e*P **Pn 19 21 21.4 -2.0**
CWF IAMs_20 IAMs_20 19 27 15.3
comp=Z,70μm,11.8s
MUD Monsted U'grnd 13.79 351 *e*P **Pn 19 21 24.0 +0.4**
MUD IAmb IAmb 19 21 55.3
comp=Z,572nm,1.6s
LMK Market Rasen 13.81 324 *e*P **Pn 19 21 24.8 +0.8**
LMK IAMs_20 IAMs_20 19 27 16.8
comp=Z,51μm,9.6s
DYA Yadsworthy 13.88 309 *e*P **Pn 19 21 22.2 -2.7**
DYA IAMs_20 IAMs_20 19 26 17.8
comp=Z,73μm,10.9s
MONM Monmouth 13.97 315 *e*P **Pn 19 21 23.8 -2.4**
MONM IAMs_20 IAMs_20 19 28 32.9
comp=Z,104μm,9.4s
ISP Isparta 14.22 105 Pn 19 21 29.3 -0.5
ISP Isparta 14.22 105*c i*P **Pn 19 21 29.5 -0.3**
ELL Elmali 14.30 110 Pn **Pn 19 21 32.7 +1.8**
ELL Elmali 14.30 110 P **Pn 19 21 32.7 +1.8**
PBUR Paburge 14.31 20 *e*P **Pn 19 21 33.0 +2.3**
CHAS Isla Isabel II 14.31 243 P **Pn 19 21 31.3 +0.4**
CHAS S **S 19 24 28.7 -1.6**

AKAS Kas 14.36 112 Pn **Pn 19 21 31.2 -0.5**
HLM1 Long Mynd 14.39 317 *e*P **Pn 19 21 28.8 -3.1**
HLM1 IAMs_20 IAMs_20 19 28 06.4
comp=Z,85μm,12.9s
KSL Kastellorizon 14.39 112 P **Pn 19 21 31.2 -0.8**
STNC Stoke 14.41 320 *e*P **Pn 19 21 30.1 -2.1**
STNC IAMs_20 IAMs_20 19 27 43.7
comp=Z,84μm,17.1s
PABE Paberze 14.44 25 Pn 19 21 31.9 -0.7
PABE Paberze 14.44 25 *e*P **Pn 19 21 34.6 +2.0**
HTL Hartland 14.45 310 *e*P **Pn 19 21 31.7 -1.0**
HTL IAMs_20 IAMs_20 19 28 04.3
comp=Z,72μm,8.9s
TAF Taforalt 14.52 241 P **P 19 21 40.0 -0.6**
CCA1 Carnmenellis 14.53 306 *e*P **Pn 19 21 30.9 -3.0**
CCA1 IAMs_20 IAMs_20 19 27 33.8
comp=Z,86μm,15.1s
WMELI Melilla 14.57 244 P **Pn 19 21 35.0 +0.6**
WMELI S **S 19 24 40.6 +5.0**
GDLE Glaisdale, N Y 14.70 326 *e*P **Pn 19 21 35.1 -1.0**
GDLE IAmb IAmb 19 21 49.7
comp=Z,578nm,1.2s
GDLE IAMs_20 IAMs_20 19 29 35.2
comp=Z,68μm,11.1s
PBRG Braganca 14.71 272 *e*P **Pn 19 21 36.3 -0.1**
comp=Z,470nm,1.6s
PBRG *es*P **P 19 21 46.6 +4.0**
PBRG *e*S **Sn 19 24 21.0 +1.4**
HPK Haverah Park 14.72 324 *e*P **Pn 19 21 35.6 -0.7**
HPK IAMs_20 IAMs_20 19 28 09.1
comp=Z,47μm,14.6s
BORU Boraas 14.74 359 *e*P **P 19 21 39.7 -3.1**
LPW Lampeter 14.77 314 *e*P **Pn 19 21 35.7 -1.4**
EMAL Malaga-Limoner 14.79 251 P **Pn 19 21 39.3 +1.9**
EMAL S **S 19 24 31.9 -8.2**
VSVD Vaisvydziai 14.83 24 *e*P **P 19 21 40.9 -2.9**
JBK JBK 14.92 240 P **P 19 21 42.0 -3.2**
NACGM Naroch 14.96 32 ⇑*i*P **Pn 19 21 38.1 -1.6**
RSBS Rosebush, Pemb 15.05 313 *e*P **Pn 19 21 38.8 -2.0**
RSBS IAMs_20 IAMs_20 19 28 50.5
comp=Z,78μm,9.5s
MVO Moncorvo 15.06 270 *e*P **Pn 19 21 40.8 -0.3**
comp=Z,646nm,1.6s
MVO *es*P **sP 19 21 52.1 +1.9**
MVO *e*S **S 19 24 36.6 -9.1**
MVO A A 19 27 56.6
comp=Z,60μm,20.0s
BR231 Keskin MP Arra 15.09 95 Pn 19 21 41.3 -0.2
ANTO Ankara 15.09 95 ⇓P **Pn 19 21 41.2 -0.3**
ANTO Ankara 15.09 95 Pn 19 21 41.1 -0.5
ANTO Ankara 15.09 95 P **Pn 19 21 41.1 -0.5**
ANTO pmax pmax
comp=Z,121nm,1.2s
ANTO Ankara 15.09 95 P **Pn 19 21 41.5 0.0**
ANTO P **Pn 19 21 41.5 0.0**
ANTO P **Pn 19 21 41.5 0.0**
MNK Minsk 15.12 35 *i* P **Pn 19 21 39.3 -2.4**
MNK *i* S **Sn 19 24 26.8 -2.5**
MNK pmax pmax
comp=N,136nm,0.8s
MNK pmax pmax
comp=E,23nm,0.8s
MNK pmax pmax
comp=Z,118nm,0.8s
MNK MLR MLR
comp=Z,77μm,16.0s
MNK MLR MLR
comp=E,11μm,16.0s
MNK MLR MLR
comp=N,43μm,16.0s
MNK Minsk 15.12 35 *i* P **Pn 19 21 39.4 -2.4**
comp=E,23nm,0.8s
MNK *i* P **Pn 19 21 39.4 -2.4**
comp=N,136nm,0.8s
MNK *i* P **Pn 19 21 39.4 -2.4**
comp=Z,118nm,0.8s,baz=226
MNK *i* PP **P 19 21 47.4 +0.3**
MNK *i* S **Sn 19 24 26.8 -2.5**
MNK *i* SS **SnSn 19 24 40.7 -1.1**
MNK *i* LR LR 19 27 12.8
MNK *i* LRM MLR 19 28 08.9
comp=Z,77μm,15.8s
MNK *i* LRM MLR 19 28 13.1
comp=E,11μm,15.8s
MNK *i* LRM MLR 19 28 13.6
comp=N,43μm,15.8s
ISAL Salakas 15.22 29 *e*P **Pn 19 21 42.4 -0.7**
SIM Simferopol' 15.28 75*c i*P **Pn 19 21 42.0 -2.0**
SIM *e*S **Sn 19 24 28.0 -5.3**
SIM pmax pmax
comp=Z,285nm,0.9s
SIM MLR MLR
comp=Z,22μm,12.4s
PALE Palemas 15.29 245 P **P 19 21 50.0 +0.9**
YLL Llanberis 15.39 318 *e*P **Pn 19 21 42.8 -2.5**
ILGA Ilgaz 15.45 90 Pn 19 21 46.2 -0.2
EDMD Edmundbyers 15.46 326 *e*P **Pn 19 21 44.9 -1.5**
EDMD IAMs_20 IAMs_20 19 28 00.3
comp=Z,43μm,19.1s
BZK Bozkurt 15.47 86 ⇑P **Pn 19 21 47.2 +0.8**
BZK Bozkurt 15.47 86 Pn **Pn 19 21 43.0 -3.4**
PVRL Vila Real 15.54 271 *e*P **Pn 19 21 47.4 0.0**
comp=Z,446nm,1.5s
PVLZ Peæn de 15.55 246 S **S 19 24 50.2 -5.5**
PVLZ Peæn de 15.55 246 P **Pn 19 21 47.5 -0.1**
POLO Lamas de Olo 15.57 271 *e*P **Pn 19 21 47.8 -0.1**
comp=Z,176nm,1.2s
POLO *e*S **S 19 24 52.7 -3.6**
WLF1 Llynfaes 15.59 318 *e*P **Pn 19 21 45.8 -2.1**
WLF1 IAmb IAmb 19 21 59.6
comp=Z,864nm,1.3s
WLF1 IAMs_20 IAMs_20 19 28 51.8
comp=Z,140μm,13.8s
WME Myndd Eilian 15.60 318 *e*P **Pn 19 21 46.9 -1.2**
MTE Manteigas 15.63 268 *e*P **Pn 19 21 48.3 -0.3**
comp=Z,484nm,1.3s
MTE *e*S **S 19 24 57.1 -0.3**
MTE A A 19 28 31.8
comp=Z,79μm,18.0s
MTE Manteigas 15.63 268 Pn **Pn 19 21 47.2 -1.4**
HOMB Homborsund 15.64 351 *e*P **P 19 21 51.1 -1.7**
HOMB *e* 19 24 55.5
YRC Rhoscolyn 15.65 317 *e*P **Pn 19 21 47.5 -1.3**
PCAB Cabril 15.67 273 *e*P **Pn 19 21 49.2 0.0**
comp=Z,428nm,1.4s
PCAB *es*P **sP 19 21 57.5 +0.5**
WPS Cemaes, Angles 15.70 318 *e*P **Pn 19 21 47.5 -1.9**
WPS IAMs_20 IAMs_20 19 28 54.8
comp=Z,77μm,14.7s
PCBR Castelo Branco 15.74 266 *e*P **Pn 19 21 50.5 +0.5**
comp=Z,213nm,1.2s
BR131 Keskin Array S 15.76 95 Pn **Pn 19 21 49.7 -0.6**
BR131 Keskin Array S 15.76 95 P **Pn 19 21 49.7 -0.6**
BR131 pmax pmax
comp=Z,212nm,1.2s
BR131 Keskin Array S 15.76 95 P **Pn 19 21 50.3 0.0**
SNR=122
BR131 P **Pn 19 21 50.3 0.0**
SNR=122
BR131 P **Pn 19 21 50.3 0.0**
SNR=122
BRTR Keskin Array B 15.76 95 Pn **Pn 19 21 50.5 +0.1**
comp=Z,0.4nm,0.3s,baz=286,slow=8.9,SNR=62
BRTR LR LR 19 29 02.4
comp=Z,152μm,19.4s,baz=295,slow=42
comp=Z,32nm,0.9s
BRTR Keskin Array B 15.76 95 Pn **Pn 19 21 49.1 -1.2**
BRTR Keskin Array B 15.76 95 P **Pn 19 21 49.1 -1.2**
VIKU Vikbolandet 15.77 7 *e*P **Pn 19 21 50.9 +0.6**
KESW Keswick, Cumbr 15.79 323 *e*P **Pn 19 21 49.1 -1.4**
KESW IAMs_20 IAMs_20 19 29 56.3
comp=Z,45μm,11.5s
PGAV Gavieira, Arco 15.80 274 *e*P **Pn 19 21 50.9 0.0**
comp=Z,483nm,1.9s
PGAV *e*S **S 19 25 02.8 +1.8**
PGAV A A 19 28 09.1
comp=Z,60μm,22.0s
PVIS Viseu 15.80 269 *e*P **Pn 19 21 51.5 +0.6**
comp=Z,384nm,1.3s
PMRV Marv??o 15.81 264 *e*P **Pn 19 21 49.7 -1.3**
comp=Z,251nm,1.4s
PMRV *e*S **S 19 25 04.6 +3.6**
PMRV A A 19 28 22.9
comp=Z,66μm,18.0s
SLIT Slitere, Latvi 15.84 18 *e*P **P 19 21 54.0 -0.9**

SNART Snartemo 15.88 349 *e*P **P 19 21 53.6 -1.8**
SNART IVmBBB 19 21 60.0
comp=Z,11μm,1.4s
CEU Ceuta 15.88 250 P **Pn 19 21 49.8 -2.0**
CEU S **S 19 24 56.6 -5.8**
SMIR Smir Dam 16.00 249 P **P 19 21 59.0 +2.0**
PBAR Barrancos 16.01 260 *e*P **Pn 19 21 51.7 -1.8**
comp=Z,499nm,1.4s
PBAR *e*sP **P 19 21 57.4 +0.4**
PBAR *e*S **S 19 25 02.0 -3.1**
PESTR Estremoz 16.15 262 *e*P **Pn 19 21 54.2 -1.1**
comp=Z,416nm,2.4s
PESTR *e*S **S 19 25 11.2 +3.2**
PESTR Estremoz 16.15 262 Pn **Pn 19 21 54.3 -1.0**
PESTR Estremoz 16.15 262 P **P 19 22 00.7 +2.1**
PESTR Estremoz 16.15 262 P **Pn 19 21 54.9 -0.4**
STRU Stroemstad 16.19 356 *e*P **Pn 19 21 56.7 +1.1**
WIM Isle of Man 16.22 320 *e*P **Pn 19 21 55.5 -0.6**
IOMK Kirk Michael 16.24 320 *e*P **Pn 19 21 56.3 0.0**
IOMK IAMs_20 IAMs_20 19 28 58.6
comp=Z,170μm,15.1s
ARNO Arenosillo 16.25 256 P **Pn 19 21 55.5 -1.0**
ARNO S **S 19 25 13.1 +3.2**
EKA Eskdalemuir Ar 16.31 325 Pn **Pn 19 21 56.8 -0.4**
baz=132,slow=14
EKA Sn **Sn 19 24 55.7 -2.5**
baz=140,slow=26
EKA LR LR 19 28 44.7
comp=Z,32μm,19.6s,baz=146,slow=39
comp=Z,62nm,0.9s
ESK Eskdalemuir 16.32 325 *e*P **Pn 19 21 56.1 -1.2**
ESK IAMs_20 IAMs_20 19 28 27.9
comp=Z,33μm,16.4s
ESK Eskdalemuir 16.32 325 Pn **Pn 19 21 54.9 -2.4**
ESK Eskdalemuir 16.32 325 P **Pn 19 21 54.9 -2.4**
ESK pmax pmax
comp=Z,244nm,1.0s
ESK Eskdalemuir 16.32 325 P **P 19 21 58.3 -2.0**
COI Coimbra 16.32 268 *e*P **Pn 19 21 58.1 +0.7**
comp=Z,523nm,1.1s
COI *e*S **S 19 25 05.9 -5.5**
COI Coimbra 16.32 268 Pn **Pn 19 21 56.6 -0.9**
COI Coimbra 16.32 268 P **Pn 19 21 56.6 -0.9**
COI pmax pmax
comp=Z,263nm,1.3s
PCAS Casmilo, Conde 16.43 267 *e*P **Pn 19 21 59.1 +0.2**
comp=Z,505nm,1.6s
PCAS *e*S **S 19 25 14.4 +0.8**
DIKM Dikmen 16.45 87 ⇑P **Pn 19 21 59.3 +0.2**
ESY Stoneypath 16.50 328 *e*P **Pn 19 21 59.4 -0.2**
PMTG Montargil 16.54 264 *e*P **Pn 19 21 59.6 -0.7**
comp=Z,393nm,1.4s
PMTG *e*S **S 19 25 14.4 -1.5**
EBL Broad Law 16.56 327 *e*P **Pn 19 22 00.5 0.0**
EVO Evora 16.58 262 P **Pn 19 21 57.8 -3.0**
EVO S **S 19 25 18.7 +1.9**
EVO Evora 16.58 262 *e*P **Pn 19 22 01.1 +0.3**
comp=Z,285nm,1.6s
EVO *e*sP **sP 19 22 07.6 +0.6**
NEWG New Galloway 16.62 323 *e*P **Pn 19 22 00.8 -0.4**
NEWG IAmb IAmb 19 22 06.9
comp=Z,5μm,2.6s
NEWG IAMs_20 IAMs_20 19 30 30.0
comp=Z,47μm,9.9s
PBEJ Beja 16.67 260 *e*P **Pn 19 22 02.4 +0.5**
comp=Z,146nm,1.5s
GAL1 Galloway 16.68 322 *e*P **Pn 19 22 00.8 -1.1**
GAL1 IAMs_20 IAMs_20 19 29 47.2
comp=Z,51μm,15.9s
PSBE So Bento 16.81 266 *e*P **Pn 19 22 03.5 -0.2**
comp=Z,484nm,1.3s
PSBE *e*S **S 19 25 23.0 +1.5**
KONO Kongsberg 16.90 354 Pn **Pn 19 22 04.2 -0.5**
KONO Kongsberg 16.90 354 P **Pn 19 22 04.2 -0.5**
KONO pmax pmax
comp=Z,718nm,1.3s
KONO Kongsberg 16.90 354 *e*P **Pn 19 22 04.7 0.0**
KONO IVmB_BB 19 22 10.6
comp=Z,6μm,1.8s
KONO Kongsberg 16.90 354 P **P 19 22 07.7 +1.0**
PCVE Castro Verde 16.96 259 *e*P **Pn 19 22 04.1 -1.4**
comp=Z,207nm,1.6s
PCVE *e*S **S 19 25 25.7 +1.3**
KMY Karmoy 17.03 346 *e*P **Pn 19 22 06.5 +0.2**
KMY IVmB_BB 19 22 09.7
comp=Z,4μm,3.0s
BLS5 Blasjo 17.03 348 *e*P **Pn 19 22 06.6 +0.2**
BLS5 IVmB_BB 19 22 27.8
comp=Z,6μm,3.0s
BLS5 *e*S **S 19 25 25.1 -0.7**
IFR Ifrane 17.09 243 P **P 19 22 08.3 -0.9**
IFR S **S 19 25 23.2 -4.3**
PACT Alcochete 17.09 263 *e*P **P 19 22 09.5 +0.5**
OSL Oslo 17.11 356 *e*P **Pn 19 22 07.1 -0.3**
OSL IVmBBB 19 22 10.8
comp=Z,6μm,1.4s
OSL *e*S **S 19 25 23.6 -3.7**
PNCL Nicolau / Gran 17.12 261 *e*P **Pn 19 22 06.7 -0.8**
comp=Z,147nm,2.4s
PNCL *e*S **S 19 25 27.8 +0.2**
MTSE Matsula 17.17 19 *e*P **Pn 19 22 06.8 -1.3**
UPP Uppsala 17.20 8 *e*P **P 19 22 08.7 -1.3**
MDT Midelt 17.20 240 P **Pn 19 22 09.0 +0.2**
comp=Z,0.5nm,0.3s,baz=60,slow=12,SNR=19
MDT LR LR 19 28 58.5
comp=Z,33μm,18.5s,baz=46,slow=38
comp=Z,25nm,1.2s
MDT Midelt 17.20 240 P **P 19 22 13.2 +2.8**
HFS Hagfors 17.25 1 P **Pn 19 22 08.1 -0.9**
comp=Z,2.0nm,0.3s,baz=179,slow=12,SNR=32
HFS S **Sn 19 25 21.1 +0.1**
comp=Z,13nm,0.9s,baz=153,slow=17,SNR=1.4
HFS LR LR 19 29 40.7
comp=Z,61μm,19.6s,baz=183,slow=40
comp=Z,46nm,0.7s
HFS Hagfors 17.25 1
comp=Z,1.7nm,0.7s
LIS Lisbon 17.34 264 *e*P **Pn 19 22 08.9 -1.5**
LIS IAMs_20 IAMs_20 19 30 12.5
comp=N,95μm,11.5s
LIS Lisbon 17.34 264 *e*P **Pn 19 22 08.9 -1.5**
PMAFR Mafra 17.35 264 *e*P **Pn 19 22 10.3 -0.2**
comp=N,502nm,1.3s
PMAFR *e*S **Sn 19 25 26.6 +2.9**
PMST Lisbon--Monsan 17.36 264 *e*P **P 19 22 12.1 +0.2**
comp=N,553nm,1.2s
ODD1 Odda 17.48 349 *e*P **P 19 22 13.8 +0.6**
ODD1 IVmBBB 19 22 14.5
comp=Z,5μm,4.3s
ODD1 *e*S **S 19 25 33.6 -1.2**
PTEO Sao Teotonio 17.49 259 *e*P **Pn 19 22 11.9 -0.3**
comp=Z,234nm,1.5s
MORF Marmelete 17.54 259 *e*P **Pn 19 22 11.3 -1.5**
MORF IAMs_20 IAMs_20 19 30 32.7
comp=N,64μm,15.8s
MORF Marmelete 17.54 259 *e*P **Pn 19 22 12.7 -0.1**
comp=N,326nm,1.6s
MORF *e*S **S 19 25 36.9 +0.6**
MORF Marmelete 17.54 259 *e*P **Pn 19 22 11.3 -1.5**
ANN Anapa 17.64 76 *e*P **Pn 19 22 09.9 -4.1**
ANN *e*S **Sn 19 25 24.5 -6.0**
ANN pmax pmax
comp=N,503nm,1.3s
ANN pmax pmax
comp=Z,2μm,1.6s
ANN pmax pmax
comp=E,777nm,1.5s
ANN MLR MLR
comp=N,31μm,12.0s
ANN MLR MLR
comp=Z,56μm,12.0s
ANN MLR MLR
comp=E,31μm,12.0s
BNN Bunyan 17.66 96 **Pn 19 22 14.4 -0.1**
TOKA Tokat 17.66 90 P **P 19 22 15.3 -0.1**
PFVI Vila Bisbo 17.74 258 *e*P **P 19 22 15.4 -0.7**
comp=E,302nm,1.5s
PFVI *e*S **S 19 25 38.4 -1.9**
PFVI Vila Bisbo 17.74 258 P **P 19 22 15.2 -0.9**
PFVI Vila Bisbo 17.74 258 P **P 19 22 18.4 +2.3**
VSU Vasula 17.75 24 *e*P **Pn 19 22 14.9 -0.3**
VSU Vasula 17.75 24*ce*P **Pn 19 22 13.4 -1.8**
VSU pmax pmax
comp=Z,612nm,0.8s
AAL Aland 17.80 11 *e*P **Pn 19 22 13.7 -2.1**

LAWE Loch Awe, Argy 17.87 325 *e*P **P 19 22 18.1 +0.6**
LAWE IAMs_20 IAMs_20 19 31 23.7
comp=Z,52μm,12.1s
NC602 NORSAR Array S 17.88 358 Pn **Pn 19 22 15.3 -1.5**
NC602 NORSAR Array S 17.88 358 *e*P **Pn 19 22 15.7 -1.2**
NC602 IVmBBB 19 22 22.0
comp=Z,5μm,1.6s
NC602 *e*S **S 19 25 41.8 -1.0**
MCD Coleburn Disti 17.95 331 *e*P **P 19 22 18.8 +0.4**
NAO01 NORSAR Array S 18.01 356 **Pn 19 22 17.8 -0.7**
NAO01 IAmb IAmb 19 22 23.9
comp=Z,3μm,1.7s
SKAR Skarslia 18.03 352 *e*P **P 19 22 19.1 -0.2**
SKAR IVmBBB 19 22 24.9
comp=Z,3μm,1.7s
SKAR *e*S **S 19 25 44.9 -1.2**
IDGL Inch Island, C 18.11 319 *e*P **P 19 22 21.0 +1.0**
IDGL IAMs_20 IAMs_20 19 30 01.8
comp=Z,72μm,16.0s
BER Bergen 18.12 348 *e*P **Pn 19 22 19.1 -0.8**
BER IVmBBB 19 22 23.7
comp=Z,3μm,2.4s
BER *e*S **S 19 25 46.9 -0.9**
NB2 NORSAR Subarra 18.19 357 P **Pn 19 22 19.3 -1.5**
comp=Z,1μm,2.0s,baz=176,slow=11
NB2 NORSAR Subarra 18.19 357 P **Pn 19 22 19.3 -1.5**
baz=176,slow=11
NOA NORSAR Array B 18.19 357 P **Pn 19 22 19.8 -1.0**
comp=Z,0.3nm,0.3s,baz=175,slow=11,SNR=31
NOA S **Sn 19 25 37.1 -6.7**
comp=Z,2.6nm,0.8s,baz=17,slow=12,SNR=1.5
NOA PcP **PcP 19 26 54.6 +1.2**
comp=Z,8.3nm,0.8s,baz=162,slow=1.5,SNR=3.4
NOA LR LR 19 30 10.2
comp=Z,49μm,19.5s,baz=180,slow=40
comp=Z,32nm,0.9s
NB201 NORSAR Array S 18.20 357 P **Pn 19 22 19.9 -1.0**
NB201 IAmb IAmb 19 22 26.1
comp=Z,1μm,1.4s
NBO00 NORSAR Array S 18.20 356 P **P 19 22 20.5 -0.7**
NBO00 IAmb IAmb 19 22 25.3
comp=Z,2μm,1.6s
ASK Askoy 18.24 347 *e*P **P 19 22 24.8 +3.3**
ASK IVmBBB 19 22 24.9
comp=Z,7μm,2.6s
ASK *e*S **S 19 25 48.6 -1.5**
NC405 NORSAR Array S 18.25 358 **Pn 19 22 20.7 -0.7**
NC303 NORSAR Array S 18.37 357 P **Pn 19 22 21.5 -1.4**
NC204 NORSAR Array S 18.45 356 **P 19 22 22.3 -1.5**
MEF Metsahovi 18.65 18 *e*P **Pn 19 22 26.8 +0.6**
KAC Achnashellach 18.66 328 *e*P **Pn 19 22 27.3 +0.8**
KPL Plockton 18.69 327 *e*P **Pn 19 22 26.3 -0.5**
KPL IAMs_20 IAMs_20 19 32 46.0
comp=Z,30μm,10.6s
AVE Averroes 18.74 246 P **P 19 22 25.0 -2.2**
AVE S **Sn 19 25 56.2 -1.1**
AVE Averroes 18.74 246 P **Pn 19 22 29.2 +1.7**
HYA Hoyanger 18.75 350 *e*P **Pn 19 22 29.6 +2.1**
HYA *e*S **S 19 25 59.8 -0.6**
SUE Sulen 18.86 347 *e*P **P 19 22 26.6 -1.7**
SUE IVmBBB 19 22 40.1
comp=Z,4μm,3.1s
SUE *e*S **S 19 26 02.1 -0.4**
RAF Rauma 18.88 13 *e*P **P 19 22 28.1 -0.4**
GAZ Gaziantep 19.30 99 **P 19 22 33.2 -0.2**
DOMB Dombas 19.31 354 *e*P **P 19 22 30.3 -3.0**
DOMB IVmBBB 19 22 37.1
comp=Z,3μm,2.3s
DOMB *e*S **S 19 26 11.7 -0.1**
LRW Lerwick 19.32 338 *e*P **Pn 19 22 34.8 +0.4**
LRW IAMs_20 IAMs_20 19 32 52.2
comp=Z,80μm,14.1s
FOO Floro 19.32 348 *e*P **Pn 19 22 36.1 +1.6**
FOO IVmB_BB 19 22 36.5
comp=Z,6μm,4.2s
FOO *e*S **S 19 26 11.6 -0.5**
SOC Sochi 19.38 79*c i*P **P 19 22 33.0 -1.2**
SOC *e* 19 26 10.5
SOC pmax pmax
comp=Z,494nm,0.9s
SOC MLR MLR
comp=Z,33μm,16.0s
VSR Storozhevoye 19.53 56 *e*P **P 19 22 34.9 -0.8**
VSR *e*S **Sn 19 26 06.3 -10**
VSR pmax pmax
comp=Z,880nm,1.4s
VSR smax smax
comp=N,3μm,6.9s
VSR MLR MLR
comp=Z,88μm,14.0s
OBN Obninsk 19.54 43 P **P 19 22 34.4 -1.3**
comp=Z,2.1nm,0.3s,baz=236,slow=14,SNR=41
OBN S Sn 19 26 04.6 -12
comp=Z,4.6nm,0.5s,baz=316,slow=23,SNR=1.4
OBN LR LR 19 30 59.8
comp=Z,19μm,19.2s,baz=236,slow=40
comp=Z,75nm,1.0s
OBN Obninsk 19.54 43 P **P 19 22 33.6 -2.1**
OBN IAmb IAmb 19 22 40.3
comp=Z,3μm,1.9s
OBN Obninsk 19.54 43*c i*P **P 19 22 33.5 -2.2**
OBN *i* S Sn 19 26 03.7 -12
OBN pmax pmax
comp=Z,502nm,1.3s
OBN MLR MLR
comp=Z,69μm,20.0s
OBN Obninsk 19.54 43 P **P 19 22 35.1 -0.6**
GUZR Guzeripl' 19.62 78*c i*P **Pn 19 22 37.3 -0.9**
GUZR MLR MLR
comp=Z,509μm,17.0s
VSLR Vesyoloye 19.62 79⇓*e*P **Pn 19 22 37.2 -1.0**
AKN Aaknes 19.63 351 *e*P **Pn 19 22 38.9 +0.8**
AKN IVmBBB 19 22 56.1
comp=Z,7μm,2.6s
AKN *e*S **S 19 26 17.7 -0.6**
VORR Voronezh 19.67 55 *e*P **P 19 22 36.0 -1.3**
VORR pmax pmax
comp=Z,1μm,1.4s
LEWI Lewis, Hebride 19.72 328 *e*P **Pn 19 22 38.7 -0.5**
LEWI IAMs_20 IAMs_20 19 30 33.3
comp=Z,29μm,15.8s
BHL Bhannes 19.79 110 *e*P **P 19 22 38.9 +0.1**
LPSR Galich'ya Gora 19.79 52 *e*P **P 19 22 37.3 -1.3**
LPSR *e*S **S 19 26 11.0 -11**
LPSR pmax pmax
comp=Z,630nm,1.4s
LPSR smax smax
comp=N,5μm,6.1s
LPSR MLR MLR
comp=Z,53μm,11.0s
DQRL Deir Qamar 19.84 110 *e*P **Pn 19 22 39.8 -1.1**
KTUT Trabzon 19.91 86 ⇑P **P 19 22 40.1 +0.2**
PUL Pulkovo 19.91 26*ce*P **P 19 22 39.1 -0.7**
PUL pmax pmax
comp=Z,415nm,1.0s
PUL MLR MLR
comp=Z,63μm,15.0s
MOL Molde 19.96 352 *e*P **Pn 19 22 42.7 +0.7**
MOL IVmBBB 19 23 01.5
comp=Z,7μm,2.3s
MOL *e*S **S 19 26 24.0 -0.7**
QRWL Qaraoun 20.01 110 *e*P Pn 19 22 42.1 -0.8
MMAI Mount Meron Ar 20.12 112 P Pn 19 22 43.5 -0.7
comp=Z,164nm,0.8s,baz=314,slow=8.7,SNR=73
MMAI S **S 19 26 27.5 -1.1**
comp=Z,4.8nm,0.6s,baz=287,slow=15,SNR=1.3
MMAI LR LR 19 32 33.8
comp=Z,42μm,19.7s,baz=191,slow=43
comp=Z,164nm,0.8s
FINES FINESS Array B 20.12 18 P **P 19 22 41.7 -0.4**
comp=Z,74nm,0.6s,baz=190,slow=6.7,SNR=98
FINES S **S 19 26 19.5 -8.5**
comp=Z,14nm,1.0s,baz=13,slow=29,SNR=2.2
FINES LR LR 19 31 04.1
comp=Z,62μm,19.0s,baz=208,slow=39
comp=Z,74nm,0.6s
FINES FINESS Array B 20.12 18 P **P 19 22 41.4 -0.7**
FINES FINESS Array B 20.12 18 P **P 19 22 41.4 -0.7**
FINES FINESS Array B 20.12 18
comp=Z,3.2nm,1.0s
FIA1 FINESS Array S 20.12 18 P **P 19 22 41.4 -0.7**
RCY Rachaya 20.14 110 *e*P Pn 19 22 43.8 -0.7
OUK Oukaimeden 20.34 242 P Pn 19 22 47.0 -0.2
OUK Oukaimeden 20.34 242 P Pn 19 22 49.0 +1.8
MOS Moscow 20.36 42 *e*P **P 19 22 39.8 -5.0**

MOS *e*S **S 19 26 24.1 -8.8**
MOS pmax pmax
comp=Z,2μm,1.3s
MOS pmax pmax
comp=Z,3μm,1.4s
MOS pmax pmax
comp=E,1μm,1.2s
MOS smax smax
comp=N,24μm,6.4s
MOS smax smax
comp=E,19μm,4.7s
MOS MLR MLR
comp=N,46μm,11.0s
MOS MLR MLR
comp=E,90μm,11.0s
MOS MLR MLR
comp=Z,104μm,11.0s
TBLU Trondheim 20.44 356 *e*P Pn 19 22 48.1 +0.5
TBLU IVmB_BB 19 22 51.6
comp=Z,6μm,1.0s
TBLU *e*S Sn 19 26 36.6 -1.3
KOPT Kop Dagi 20.70 89 Pn Pn 19 22 50.6 -0.6
KOPT IAmb IAmb 19 22 58.8
comp=Z,1μm,1.3s
DOMR Dombai 20.80 79*ce*P Pn 19 22 50.8 -1.4
TAM Tamanrasset 21.03 200 P **P 19 22 54.0 +1.6**
TAM IAMs_20 IAMs_20 19 32 01.1
comp=Z,73μm,18.0s
TAM Tamanrasset 21.03 200 P **P 19 22 54.0 +1.6**
TAM pmax pmax
comp=Z,771nm,1.7s
TAM MLR MLR
comp=Z,73μm,18.0s
VRH Novokhopyorsk 21.09 57 *e*P **P 19 22 52.1 -0.5**
VRH *e*S **S 19 26 44.3 -3.0**
VRH pmax pmax
comp=Z,2μm,1.6s
VRH smax smax
comp=N,12μm,9.0s
VRH MLR MLR
comp=Z,94μm,19.0s
TTIG Tnine Tigouga, 21.15 241 P **P 19 22 55.0 +1.4**
VALR Valaam 21.32 24*c i*P **P 19 22 55.2 +0.1**
VALR pmax pmax
comp=Z,435nm,0.9s
VALR MLR MLR
comp=Z,28μm,14.0s
KIV Kislovodsk 21.47 77 P **P 19 22 56.5 -0.4**
KIV Kislovodsk 21.47 77 *e*P **P 19 22 56.4 -0.5**
KIV *e*S **S 19 26 55.3 +0.2**
KIV pmax pmax
comp=Z,2μm,1.1s
KIV MLR MLR
comp=Z,24μm,14.0s
KIV Kislovodsk 21.47 77 P **P 19 22 57.1 +0.2**
KIV P **P 19 22 57.1 +0.2**
KIV P **P 19 22 57.1 +0.2**
KIV S **S 19 26 55.3 +0.2**
KIV S **S 19 26 55.3 +0.2**
KIV S **S 19 26 55.3 +0.2**
KIV Kislovodsk 21.47 77 *i* P **P 19 22 57.7 +0.8**
SNR=365
KIV Kislovodsk 21.47 77 P **P 19 22 57.2 +0.3**
KVAR Kislovodsk Arr 21.47 77 P **P 19 22 57.5 +0.5**
comp=Z,80nm,1.0s,baz=287,slow=19,SNR=24
KVAR LR LR 19 33 14.5
comp=Z,18μm,18.4s,baz=241,slow=42
comp=Z,80nm,1.0s
SHA1 Shidzhatmaz 21.48 78*d i*P **P 19 22 57.5 +0.3**
GOF Gofitskoye 21.60 74⇑*e*P **P 19 22 56.4 -1.8**
GOF pmax pmax
comp=Z,660nm,1.1s
ASF Jabal al Asfar 21.63 112 P **P 19 23 00.3 +1.5**
comp=Z,68nm,0.9s,baz=312,slow=12,SNR=27
ASF LR LR 19 33 31.4
comp=Z,33μm,19.0s,baz=323,slow=43
comp=Z,68nm,0.9s
KBZ Khabaz 21.65 78 P **P 19 22 59.3 +0.6**
comp=Z,633nm,1.0s,baz=287,slow=8.6,SNR=106
KBZ LR LR 19 33 27.9
comp=Z,32μm,19.1s,baz=282,slow=42
comp=Z,633nm,1.0s
KBZ Khabaz 21.65 78*ce*P **P 19 22 58.9 +0.2**
NSS Namsos 21.67 359 *e*P **P 19 23 01.7 +2.9**
NSS IVmBBB 19 23 03.4
comp=Z,4μm,1.9s
NSS *e*S **S 19 26 57.8 -0.8**
MARD Mardin 21.84 95 P **P 19 23 01.8 +0.8**
MARD IAmb IAmb 19 23 10.0
comp=Z,846nm,1.2s
EIL Elat 21.94 120 P **P 19 23 03.4 +1.4**
comp=Z,107nm,1.1s,baz=329,slow=4.7,SNR=28
EIL S **S 19 26 58.9 -5.6**
comp=Z,29nm,0.7s,baz=252,slow=23,SNR=2.1
EIL LR LR 19 35 11.8
comp=Z,8μm,20.2s,baz=318,slow=47
comp=Z,107nm,1.1s
CGR Cap Guir 22.03 244 P **P 19 23 05.0 +2.0**
CGR Cap Guir 22.03 244 P **P 19 23 09.0 +6.0**
NCK Nalchik 22.18 78 *i* P **P 19 23 06.8 +2.2**
NCK MLR MLR
comp=Z,34μm,20.0s
ONI Oni 22.24 80 P **P 19 23 05.7 +0.5**
ONI IAmb IAmb 19 23 18.8
comp=Z,559nm,1.0s
ONI Oni 22.24 80 P **P 19 23 05.7 +0.5**
ONI pmax pmax
comp=Z,559nm,1.0s
GURO Guroymak-BITLI 22.30 91 P **P 19 23 06.5 +0.6**
GURO IAmb IAmb 19 23 22.3
comp=Z,727nm,1.2s
KARS Kars 22.43 86 P **P 19 23 06.7 -0.6**
KARS Kars 22.43 86 P **P 19 23 06.7 -0.6**
KARS pmax pmax
comp=Z,4μm,1.5s
ZEI Tsey 22.53 80 *e*P **P 19 23 07.3 -1.1**
ZEI pmax pmax
comp=Z,774nm,1.7s
GEVA Gevas 23.14 91 P **P 19 23 16.0 +1.2**
GEVA IAmb IAmb 19 23 38.6
comp=Z,465nm,1.2s
MOR8 Moi Rana 23.32 1 *e*P **P 19 23 19.2 +3.0**
MOR8 IVmBBB 19 23 22.7
comp=Z,6μm,2.1s
MOR8 *e*S **S 19 27 29.6 +0.8**
STOK Stokkvaagen 23.47 360 *e*S **S 19 27 30.3 -0.8**
KONS Konsvik 23.64 0 *e*P **P 19 23 18.8 -0.5**
KONS IVmBBB 19 23 22.3
comp=Z,4μm,2.8s
KONS *e*S **S 19 27 33.5 -0.3**
GNI Garni 23.78 86 P **P 19 23 22.6 +1.4**
comp=Z,252nm,0.8s,baz=296,slow=5.5,SNR=53
GNI S **S 19 27 39.1 +2.2**
comp=Z,24nm,1.1s,baz=205,slow=22,SNR=1.2
GNI LR LR 19 35 40.5
comp=Z,24μm,20.4s,baz=289,slow=44
comp=Z,252nm,0.8s
GNI Garni 23.78 86 P **P 19 23 20.8 -0.4**
GNI IAmb IAmb 19 23 27.1
comp=Z,1μm,1.4s
GNI Garni 23.78 86*c i*P **P 19 23 22.4 +1.2**
GNI pmax pmax
comp=Z,433nm,1.1s
GNI MLR MLR
comp=Z,24μm,20.0s
GNI Garni 23.78 86 P **P 19 23 21.6 +0.4**
GNI P **P 19 23 21.6 +0.4**
GNI P **P 19 23 21.6 +0.4**
GNI S **S 19 27 36.7 -0.2**
GNI S **S 19 27 36.7 -0.2**
GNI S **S 19 27 36.7 -0.2**
GNI Garni 23.78 86 P **P 19 23 22.0 +0.8**
GNI Garni 23.78 86 P **P 19 23 22.4 +1.2**
GROC Groznyy 23.82 78 *e*P **P 19 23 22.6 +1.3**
GROC *e* 19 23 53.2
GROC pmax pmax
comp=Z,1μm,1.6s
GROC MLR MLR
comp=Z,20μm,10.0s
KLMR Klimovskoe 23.99 32*c i*P **P 19 23 21.9 -0.8**
KLMR S **S 19 27 37.3 -2.2**
KLMR pmax pmax
comp=Z,2μm,1.6s
KLMR pmax pmax
comp=Z,3μm,1.6s

KLMR MLR MLR
comp=Z,42μm,14.0s
KLMR Klimovskoe 23.99 32⇑ *i*P P 19 23 22.0 -0.8
KLMR ⇑ *i*P **P 19 23 22.0 -0.8**
KLMR ⇑ *i*P **P 19 23 22.0 -0.8**
KLMR AMP 19 23 26.9
comp=Z,3μm,1.6s
KLMR AMP 19 23 27.2
comp=Z,2μm,1.6s
KLMR S **S 19 27 37.4 -2.1**
KLMR S **S 19 27 37.4 -2.1**
KLMR LQ LQ 19 31 00.7
KLMR LQ LQ 19 31 00.7
KLMR LR LR 19 31 48.1
KLMR AMP 19 34 03.7
comp=Z,42μm,13.6s
FAUS Fauske 24.55 2 *e*P **P 19 23 27.3 -0.6**
FAUS IVmBBB 19 23 56.2
comp=Z,4μm,2.7s
FAUS *e*S **S 19 27 48.1 -0.4**
DBC Dubki 24.59 78⇓ *e*P **P 19 23 29.2 +0.6**
NAX Nakhchivan 24.64 88 P **P 19 23 31.9 +2.9**
ZKTA Zakatala 24.75 81 P **P 19 23 33.2 +3.2**
GANJ Ganja 24.79 84 P **P 19 23 33.7 +3.3**
BELG Belogornoye 24.90 56 P **P 19 23 31.1 -0.1**
comp=Z,616nm,0.8s,baz=265,slow=1.6,SNR=74
BELG S **S 19 27 56.2 +1.8**
comp=Z,63nm,1.1s,baz=248,slow=20,SNR=0.7
BELG LR LR 19 34 14.4
comp=Z,65μm,20.5s,baz=255,slow=39
comp=Z,616nm,0.8s
BELG Belogornoye 24.90 56*c i*P **P 19 23 31.0 -0.1**
BELG pmax pmax
comp=Z,140nm,1.0s
BELG MLR MLR
comp=Z,9μm,15.0s
MAK Makhachkala 25.09 78*d i*P **P 19 23 27.8 -5.2**
MAK *e*S **S 19 27 50.1 -7.5**
MAK pmax pmax
comp=Z,3μm,1.1s
MAK MLR MLR
comp=Z,51μm,14.0s
STEI Steigen 25.10 2 *e*P **P 19 23 35.4 +2.6**
STEI IVmBBB 19 23 37.3
comp=Z,4μm,1.9s
STEI *e*S **S 19 27 56.4 -0.9**
LOF Lofoten 25.28 0 *e*P **P 19 23 33.6 -0.8**
LOF IVmB_BB 19 23 39.4
comp=Z,5μm,2.0s
LOF *e*S **S 19 27 59.1 -1.0**
SEKA Sheki 25.28 82 P **P 19 23 37.2 +2.4**
MNGR Mingechevir, A 25.32 83 P **P 19 23 37.6 +2.6**
AKT Akhty 25.59 81 *e*P **P 19 23 38.8 +1.1**
AKT *e* 19 24 16.9
AKT *e*S **S 19 28 09.8 +3.9**
AKT *e*SS **SnSn 19 29 06.6 +7.5**
AKT pmax pmax
comp=Z,580nm,0.9s
PMAR Madeira 25.68 257 *e*P **P 19 23 39.3 +0.7**
comp=Z,638nm,2.0s
PMOZ Porto Moniz, M 25.83 257 *e*P **P 19 23 41.4 +1.5**
comp=Z,628nm,1.4s
PMOZ *e*S **S 19 28 17.4 +7.8**
PMOZ A A 19 32 33.1
comp=Z,13μm,22.0s
KTK1 Kautokeino 26.70 8 *e*P **P 19 23 47.8 +0.5**
KTK1 IVmBBB 19 23 49.9
comp=Z,2μm,1.7s
KTK1 *e*S **S 19 28 22.7 +0.2**
PRGR Permogore 26.89 35 *e*P **P 19 23 47.3 -1.8**
PRGR pmax pmax
comp=Z,234nm,0.7s
TRO Tromso 26.95 5 *e*P **P 19 23 50.6 +1.1**
TRO IVmB_BB 19 23 56.6
comp=Z,4μm,2.1s
TRO *e*S **S 19 28 25.6 -1.0**
JETT Jettan, Norway 26.98 6 *e*P **P 19 23 51.8 +1.9**
JETT IVmB_BB 19 24 18.5
comp=Z,3μm,1.9s
JETT *e*S **S 19 28 26.8 -0.3**
APA Apatity 27.02 17⇓ *i*P **P 19 23 53.3 +3.1**
APA *i* 19 24 32.0
APA *i* S **S 19 28 28.0 +0.4**
APA pmax pmax
comp=Z,102nm,0.9s
APA MLR MLR
comp=Z,6μm,12.0s
KIRV Kirov 27.38 42 P **P 19 23 53.0 -0.5**
comp=Z,164nm,0.7s,baz=254,slow=4.2,SNR=52
KIRV S **S 19 28 30.8 -2.6**
comp=Z,13nm,0.8s,baz=137,slow=20,SNR=1.1
KIRV LR LR 19 35 55.2
comp=Z,64μm,18.8s,baz=248,slow=39
comp=Z,164nm,0.7s
KIRV Kirov 27.38 42*c i*P **P 19 23 52.2 -1.3**
ARA0 ARCESS Array S 27.45 9 *e*P **P 19 23 54.4 +0.3**
ARA0 IVmBBB 19 24 21.6
comp=Z,2μm,1.6s
ARA0 *e*S **S 19 28 33.5 -1.0**
ARCES ARCESS Array B 27.45 9 P **P 19 23 53.6 -0.4**
comp=Z,69nm,1.1s,baz=193,slow=6.1,SNR=38
ARCES PP **PnPn 19 24 37.0 -1.3**
comp=Z,43nm,0.9s,baz=204,slow=14,SNR=5.8
ARCES PcP **PcP 19 27 12.5 +0.3**
comp=Z,13nm,0.8s,baz=180,slow=3.2,SNR=3.6
ARCES S **S 19 28 32.0 -2.4**
comp=Z,14nm,1.1s,baz=145,slow=4.4,SNR=1.7
ARCES LR LR 19 35 31.5
comp=Z,24μm,18.6s,baz=202,slow=38
comp=Z,69nm,1.1s
ARCES ARCESS Array B 27.45 9 P **P 19 23 54.1 0.0**
ARCES ARCESS Array B 27.45 9 P **P 19 23 54.1 0.0**
ARCES pmax pmax
comp=Z,170nm,1.3s
LVZ Lovozero 27.56 17 P **P 19 23 54.7 -0.4**
LVZ IAmb IAmb 19 24 27.6
comp=Z,309nm,1.2s
LVZ IAMs_20 IAMs_20 19 35 10.2
comp=Z,41μm,20.0s
LVZ Lovozero 27.56 17*c e*P **P 19 23 56.0 +0.9**
LVZ pmax pmax
comp=Z,146nm,1.3s
LVZ MLR MLR
comp=Z,65μm,16.0s
LVZ Lovozero 27.56 17 P **P 19 23 57.5 +2.4**
KEV Kevo 27.84 10 P **P 19 23 57.4 -0.2**
KEV IAMs_20 IAMs_20 19 35 42.7
comp=Z,55μm,19.0s
KEV Kevo 27.84 10 P **P 19 23 57.4 -0.2**
KEV pmax pmax
comp=Z,277nm,1.7s
KEV MLR MLR
comp=Z,55μm,19.0s
KEV Kevo 27.84 10 P **P 19 23 59.4 +1.9**
HAMF Hammerfest 28.31 7 *e*P **P 19 24 03.6 +1.9**
HAMF IVmB_BB 19 24 36.8
comp=Z,2μm,2.6s
HAMF *e*S **S 19 28 47.6 -0.3**
BORG Borgarnes 29.21 330 P **P 19 24 11.5 +1.7**
comp=Z,42nm,1.0s,baz=129,slow=10.0,SNR=3.3
BORG LR LR 19 36 01.5
comp=Z,18μm,21.5s,baz=136,slow=37
comp=Z,42nm,1.0s
PSMN Pico do Norte, 29.66 272 *e*P **P 19 24 16.5 +2.5**
comp=Z,293nm,1.6s
PSMN *e*LQ LQ 19 30 42.5
PSMN *e*LR LR 19 32 36.1
comp=Z,13μm,17.7s
CMLA Cha da Macela 29.70 273 *e*P **P 19 24 15.6 +1.2**
comp=Z,189nm,1.2s
CMLA Cha da Macela 29.70 273 IAMs_20 IAMs_20 19 34 23.4
comp=Z,41μm,22.0s
PSET Sete Cidades 29.82 273 *e*P **P 19 24 14.6 -0.9**
comp=Z,387nm,1.0s
PSET *e*LQ LQ 19 30 50.0
PSET *e*LR LR 19 32 33.3
comp=Z,4μm,13.9s
JMIC Jan Mayen 30.14 346 LR LR 19 38 05.4
comp=Z,16μm,18.2s,baz=142,slow=40
JMIC Jan Mayen 30.14 346 *e*P **P 19 24 19.4 +1.5**
JMIC *e*S **S 19 29 15.8 -0.8**
PAGU Agualva, Azore 30.55 276 *e*P **P 19 24 21.2 -0.7**
comp=Z,333nm,1.1s
PAGU *e*LQ LQ 19 31 04.1
PAGU *e*LR LR 19 32 42.7
comp=Z,3μm,14.7s
PGRA Graciosa 31.04 277 *e*P **P 19 24 27.8 +1.6**
comp=Z,238nm,1.2s
PGRA *e*LQ LQ 19 30 57.5
PGRA *e*LR LR 19 32 55.7
comp=Z,3μm,17.8s
TOA0 Torodi Ar. Sit 31.25 202 P **P 19 24 28.2 -0.1**
TOA0 IAmb IAmb 19 24 35.4
comp=Z,479nm,1.6s
TOA0 Torodi Ar. Sit 31.25 202 P **P 19 24 28.9 +0.7**
SNR=24
TOA0 P **P 19 24 28.9 +0.7**
SNR=24
TORD Torodi Ar. Bea 31.25 202 P **P 19 24 28.0 -0.2**
comp=Z,79nm,0.7s,baz=21,slow=8.3,SNR=68
TORD LR LR 19 38 25.0
comp=Z,46μm,18.7s,baz=15,slow=39
TORD P3KPbc 19 56 10.2
comp=Z,2.6nm,0.9s,baz=195,slow=2.9,SNR=10
comp=Z,79nm,0.7s
TORD Torodi Ar. Bea 31.25 202 P **P 19 24 28.1 -0.2**
TORD IAmb IAmb 19 24 35.5
comp=Z,283nm,1.5s
AKTO Aktyubinsk 31.32 60 LR LR 19 38 48.0
comp=Z,37μm,20.0s,baz=275,slow=40
ROSA Rosais 31.34 277 *e*P **P 19 24 29.6 +0.7**
comp=Z,262nm,1.0s
ROSA *e*LQ LQ 19 31 14.4
ROSA *e*LR LR 19 33 09.0
comp=Z,3μm,19.4s
ROSA Rosais 31.34 277 P **P 19 24 28.5 -0.4**
ROSA IAmb IAmb 19 24 34.4
comp=Z,666nm,1.7s
I31KZ AKTYUBINSK INF 31.34 60 I 22 35 40.0
baz=270,slow=329,SNR=2.0
PICO Pico 31.55 276 *e*P **P 19 24 32.5 +1.7**
comp=Z,224nm,1.6s
PICO *e*LQ LQ 19 30 47.2
PICO *e*LR LR 19 33 31.5
comp=Z,4μm,17.7s
CALA Caldeira 31.72 277 *e*P **P 19 24 33.4 +1.0**
comp=Z,787nm,1.0s
CALA *e*LQ LQ 19 31 08.8
CALA *e*LR LR 19 32 46.4
comp=Z,1μm,15.1s
ARU Arti 31.75 49 S **S 19 29 36.5 -5.7**
comp=Z,17nm,0.8s,baz=120,slow=17,SNR=2.1
ARU LR LR 19 37 56.8
comp=Z,40μm,19.7s,baz=254,slow=37
ARU Arti 31.75 49 P **P 19 24 30.9 -1.4**
ARU Arti 31.75 49*c i*P **P 19 24 31.6 -0.7**
ARU 19 25 40.4
ARU PPP PPP 19 25 52.1
ARU 19 27 20.9
ARU S **S 19 29 43.7 +1.6**
ARU SS **SnSn 19 31 31.4 +2.8**
ARU SSS SSS 19 31 54.1
ARU pmax pmax
comp=Z,832nm,1.1s
ARU pmax pmax
comp=Z,1μm,13.2s
ARU MLR MLR
comp=Z,74μm,16.0s
BJO1 Bjornoya 31.80 3 *e*P **P 19 24 34.7 +2.2**
BJO1 IVmBBB 19 24 35.9
comp=Z,2μm,1.6s
BJO1 *e*S **S 19 29 43.5 +1.1**
AB31 Akbulak array 32.68 62 P **P 19 24 40.2 -0.3**
ABKAR Akbulak array 32.68 62 P **P 19 24 39.0 -1.5**
ABKAR Akbulak array 32.68 62 P **P 19 24 40.0 -0.5**
ABKAR IAmb IAmb 19 24 44.0
comp=Z,89nm,1.0s
SVE Sverdlovsk 32.93 48*d i*P **P 19 24 43.0 +0.4**
SVE *e*S **S 19 30 00.5 0.0**
SVE pmax pmax
comp=Z,958nm,1.5s
SVE pmax pmax
comp=Z,894nm,10.5s
SVE MLR MLR
comp=E,55μm,15.0s
SVE MLR MLR
comp=Z,68μm,15.0s
RAYN Ar Rayn 33.01 115 P **P 19 24 44.5 +0.8**
RAYN Ar Rayn 33.01 115 P **P 19 24 44.6 +0.8**
RAYN pmax pmax
comp=Z,135nm,1.5s
RAYN MLR MLR
comp=Z,14μm,20.0s
RAYN Ar Rayn 33.01 115 P **P 19 24 44.8 +1.1**
RAYN Ar Rayn 33.01 115 *i*P **P 19 24 44.7 +1.0**
SNR=21
RAYN Ar Rayn 33.01 115 P **P 19 24 45.0 +1.2**
H07S1 FLORES T-PHASE 33.26 279 P **P 19 24 45.8 0.0**
SNR=8.9
H07S1 FLORES T-PHASE 33.26 279 *e*P **P 19 24 45.6 -0.2**
comp=Z,242nm,1.1s
HOPEN Hopen 34.08 5 *e*P **P 19 24 54.3 +1.8**
HOPEN IVmB_BB 19 24 55.6
comp=Z,2μm,1.8s
HOPEN *e*S **S 19 30 16.6 -1.3**
HSPB Hornsund (broa 34.21 1 *e*P **P 19 24 55.7 +2.2**
HSPB *e*L L 19 35 57.2
comp=Z,16μm,31.9s
GEYT Alibeck 34.32 83 P **P 19 24 55.3 +0.3**
comp=Z,79nm,0.8s,baz=284,slow=6.0,SNR=81
GEYT S **S 19 30 17.2 -5.3**
comp=Z,2.7nm,0.9s,baz=102,slow=3.6,SNR=1.7
GEYT LR LR 19 43 08.1
comp=Z,25μm,18.1s,baz=312,slow=44
comp=Z,79nm,0.8s
GEYT Alibeck 34.32 83 P **P 19 24 54.8 -0.2**
GEYT IAmb IAmb 19 25 20.1
comp=Z,382nm,1.5s
GYA0B ALIBECK ARRAY 34.32 83 P **P 19 24 55.7 +0.7**
GYA0B IAmb IAmb 19 25 20.0
comp=Z,465nm,1.6s
SAKB Bahrain 34.85 107 P **P 19 25 00.3 +0.7**
SAKB S **S 19 30 31.5 +0.7**
SHMA Al-Shehemyia 35.23 107 P **P 19 25 03.9 +1.0**
SHMA S **S 19 30 35.8 -0.8**
SPB2 Spitsbergen Ar 35.40 1 P **P 19 25 03.9 0.0**
SPB2 IAmb IAmb 19 25 08.8
comp=Z,224nm,1.1s
SPA0 Spitsbergen Ar 35.41 1 *e*P **P 19 25 04.9 +1.0**
SPA0 IVmB_BB 19 25 08.1
comp=Z,3μm,1.4s
SPA0 *e*S **S 19 30 38.6 +0.2**
SPITS Spitsbergen Ar 35.41 1 P **P 19 25 05.7 +1.8**
comp=Z,124nm,1.0s,baz=155,slow=10,SNR=25
SPITS S **S 19 30 33.4 -5.0**
comp=Z,1.1nm,0.4s,baz=17,slow=12,SNR=4.7
SPITS LR LR 19 39 16.4
comp=Z,20μm,21.8s,baz=154,slow=36
comp=Z,124nm,1.0s
SMRA Abu-Samra 35.83 108 P **P 19 25 08.5 +0.4**
SMRA S **S 19 30 44.0 -1.8**
ANGG Ammassalik, Gr 35.88 327 IAMs_20 IAMs_20 19 41 08.1
comp=Z,25μm,18.0s
KBS Kingsbay 36.14 360 P **P 19 25 10.0 -0.1**
KBS Kingsbay 36.14 360 IAMs_20 IAMs_20 19 40 00.4
comp=Z,21μm,20.0s
KBS Kingsbay 36.14 360 P **P 19 25 10.0 -0.1**
KBS pmax pmax
comp=Z,207nm,1.2s
KBS MLR MLR
comp=Z,22μm,20.0s
KBS Kingsbay 36.14 360 *e*P **P 19 25 13.8 +3.7**
KBS Kingsbay 36.14 360 *e*P **P 19 25 12.7 +2.6**
KBS Kingsbay 36.14 360 P **P 19 25 14.0 +3.8**
ISOG Isortoq, Green 36.41 326 *i*P **P 19 25 15.1 +2.6**
DAG Danmarks Havn 36.48 348 *i*P **P 19 25 14.4 +1.3**
DAG IAmb IAmb 19 25 17.1
comp=Z,99nm,1.3s
SLWR Sila 36.87 108 P **P 19 25 17.0 0.0**
SLWR P **P 19 25 17.0 0.0**
SLWR P **P 19 25 17.0 0.0**
SLWR S **S 19 31 01.4 -0.3**
SLWR S **S 19 31 01.4 -0.3**
SLWR S **S 19 31 01.4 -0.3**
ICESG Greenland Ices 37.55 332 *i*P **P 19 25 25.4 +2.7**
ICESG IAmb IAmb 19 25 27.0
comp=Z,5μm,2.8s
GHWR Ruwais 37.77 107 P **P 19 25 25.3 +0.8**
GHWR P **P 19 25 25.3 +0.8**
GHWR P **P 19 25 25.3 +0.8**
GHWR S **S 19 31 15.4 0.0**
GHWR S **S 19 31 15.4 0.0**
GHWR S **S 19 31 15.4 0.0**
BBTS Babate 37.93 231 P **P 19 25 26.8 +0.7**
comp=Z,59nm,0.6s,baz=92,slow=4.6,SNR=9.6
BBTS LR LR 19 41 55.2
comp=Z,32μm,18.7s,baz=48,slow=38
comp=Z,59nm,0.6s
SUMG Summit 38.32 338 *i*P **P 19 25 29.0 -0.2**
SUMG IAmb IAmb 19 25 34.2
comp=Z,3μm,2.9s
MBO M'Bour 38.39 231 P **P 19 25 26.9 -3.0**
MBO IAMs_20 IAMs_20 19 41 03.4
comp=Z,27μm,20.0s
MZWR Madinat Zayed 38.60 106 P **P 19 25 32.0 +0.4**
MZWR P **P 19 25 32.0 +0.4**
MZWR P **P 19 25 32.0 +0.4**
MZWR S **S 19 31 28.8 +0.8**
MZWR S **S 19 31 28.8 +0.8**
MZWR S **S 19 31 28.8 +0.8**
BRVK Borovoye 38.63 54 P **P 19 25 31.1 -0.5**
BRVK IAmb IAmb 19 25 36.0
comp=Z,604nm,1.1s
BRVK Borovoye 38.63 54 P **P 19 25 31.1 -0.5**
BRVK pmax pmax
comp=Z,604nm,1.1s
BRVK MLR MLR
comp=Z,59μm,19.0s
BRVK Borovoye 38.63 54 P **P 19 25 32.5 +1.0**
BRVK P **P 19 25 32.5 +1.0**
BRVK S **S 19 31 28.7 +0.8**
BRVK S **S 19 31 28.7 +0.8**
BRVK Borovoye 38.63 54 P **P 19 25 31.8 +0.2**
EKNA AfricaArray - 38.66 186⇓ *e*P **P 19 25 34.4 +2.2**
BVAR Borovoye Array 38.70 54 LR LR 19 42 48.0
comp=Z,63μm,18.0s,baz=276,slow=38
UMQ Umm Al-Quwin 38.77 103 P **P 19 25 35.1 +2.0**
SNR=17
UMQ P **P 19 25 35.1 +2.0**
SNR=17
UMQ S **S 19 31 32.8 +2.2**
UMQ S **S 19 31 32.8 +2.2**
UMQ Umm Al-Quwin 38.77 103 *i*P **P 19 25 34.0 +0.9**
SNR=17
SHME Shamm 38.80 102 P **P 19 25 34.3 +1.0**
SNR=37
SHME P **P 19 25 34.3 +1.0**
SNR=37
SHME S **S 19 31 29.0 -2.1**
SHME S **S 19 31 29.0 -2.1**
SHME Shamm 38.80 102 *i*P **P 19 25 32.6 -0.7**
SNR=42
HRA Herat 38.85 86 P **P 19 25 34.6 +0.7**
AJN Ajban 38.88 104 P **P 19 25 34.3 +0.4**
SNR=18
AJN P **P 19 25 34.3 +0.4**
SNR=18
AJN P **P 19 25 34.3 +0.4**
SNR=18
AJN S **S 19 31 32.0 -0.3**
AJN S **S 19 31 32.0 -0.3**
AJN S **S 19 31 32.0 -0.3**
AJN Ajban 38.88 104 *i*P **P 19 25 34.2 +0.2**
SNR=21
BANOM Banah 38.99 102 P **P 19 25 35.0 +0.1**
SNR=65
BANOM P **P 19 25 35.0 +0.1**
SNR=65
BANOM S **S 19 31 30.6 -3.4**
BANOM S **S 19 31 30.6 -3.4**
BANOM Banah 38.99 102 *i*P **P 19 25 35.0 +0.1**
SNR=93
ASUD Al Ashush, Dub 39.09 104 *i*P **P 19 25 36.3 +0.6**
SNR=54
NAZ Nazwa, Dubai 39.10 103 *i*P **P 19 25 36.0 +0.2**
SNR=50
DESE Dese 39.19 136 *e*P P 19 25 42.0 +5.0
FAQ Al Faqa, Dubai 39.20 104 *i*P **P 19 25 36.8 +0.1**
SNR=26
MASF Masafi 39.22 102 P **P 19 25 37.2 +0.3**
SNR=52
MASF P **P 19 25 37.2 +0.3**
SNR=52
MASF P **P 19 25 37.2 +0.3**
SNR=52
MASF S **S 19 31 36.1 -1.4**
MASF S **S 19 31 36.1 -1.4**
MASF S **S 19 31 36.1 -1.4**
MSFE Esma-Masafi 39.23 102 *i*P **P 19 25 36.7 -0.3**
SNR=54
DBIC Dimbokro 39.42 209 P **P 19 25 37.8 -0.6**
comp=Z,33nm,0.7s,baz=351,slow=9.5,SNR=19
DBIC LR LR 19 43 52.7
comp=Z,30μm,18.0s,baz=0.0,slow=39
comp=Z,33nm,0.7s
DBIC Dimbokro 39.42 209 **P 19 25 37.7 -0.8**
DBIC Dimbokro 39.42 209 P **P 19 25 36.9 -1.6**
DBIC Dimbokro 39.42 209 *e*P **P 19 25 37.9 -0.6**
DBIC Dimbokro 39.42 209 P **P 19 25 36.9 -1.6**
DBIC *PP **P 19 25 37.7 -0.8**
DY2G Dye2 39.50 327 *i*P **P 19 25 40.6 +1.7**
DY2G IAmb IAmb 19 25 44.5
comp=Z,3μm,2.6s
TIC Toumodi 39.50 209⇑ *e*PKP2 **P 19 25 40.4 +1.2**
comp=Z,21nm,0.6s
HATD Hatta, Dubai 39.54 103 *i*P **P 19 25 39.5 0.0**
SNR=80
ASHO Ashiyiah 39.57 103 P **P 19 25 39.7 -0.1**
SNR=160
ASHO P **P 19 25 39.7 -0.1**
SNR=160
ASHO Ashiyiah 39.57 103 *i*P **P 19 25 39.5 -0.3**
SNR=203
KIC Kosan Boka 39.67 208⇑ *e*PKP2 **P 19 25 40.3 -0.3**
comp=Z,23nm,0.6s
ALNE Al Ain 39.74 104 P **P 19 25 41.6 +0.4**
SNR=104
ALNE P **P 19 25 41.6 +0.4**
SNR=104
ALNE P **P 19 25 41.6 +0.4**
SNR=104
ALNE S **S 19 31 44.8 -0.5**
ALNE S **S 19 31 44.8 -0.5**
ALNE S **S 19 31 44.8 -0.5**
ALNE Al Ain 39.74 104 *i*P **P 19 25 41.5 +0.3**
SNR=62
LIC Lamto 39.89 209⇑ *e*PKP2 **P 19 25 41.5 -0.9**
comp=Z,136nm,0.5s
LIC Lamto 39.89 209 *e*P **P 19 25 41.7 -0.7**
comp=Z,132nm,0.7s,baz=25
NOR Nord 40.11 353 *e*P **P 19 25 43.1 -0.5**
NOR IAmb IAmb 19 25 47.6
comp=Z,584nm,2.1s
IVI Ivigtut 40.13 319 P **P 19 25 44.1 +0.2**
IVI Ivigtut 40.13 319 *e*P **P 19 25 45.0 +1.1**
IVI IAmb IAmb 19 25 45.8
comp=Z,202nm,1.0s
UMZA Um Al Zommool 40.17 106 P **P 19 25 45.1 +0.3**
UMZA P **P 19 25 45.1 +0.3**
UMZA P **P 19 25 45.1 +0.3**
ATD Arta Tunnel 40.55 132 P **P 19 25 48.0 0.0**
ATD Arta Tunnel 40.55 132 P **P 19 25 50.2 +2.3**
ATD Arta Tunnel 40.55 132⇓ *e*P **P 19 25 49.3 +1.4**
ATD *e*S S 19 31 47.7 -10
ATD Arta Tunnel 40.55 132 *e*P P 19 25 53.2 +5.3
ATD Arta Tunnel 40.55 132 *e*P **P 19 25 48.0 0.0**
AAE Adis Abeba 40.55 139 *e*P **P 19 25 49.6 +1.3**
AAE *e*S **S 19 32 02.7 +4.8**
AAE Adis Abeba 40.55 139 *e*P **P 19 25 51.1 +2.8**
AAE Adis Abeba 40.55 139 *e*P **P 19 25 50.8 +2.5**
FURI Furi 40.62 139 *e*P **P 19 25 50.9 +2.0**
FURI *e*S S 19 31 41.3 -18
FURI Furi 40.62 139 *e*P **P 19 25 51.8 +2.9**
FURI Furi 40.62 139 *e*P **P 19 25 51.3 +2.4**
FURI Furi 40.62 139 P P 19 25 58.4 +9.5
BRZS Berezniki 40.69 59*c i*P **P 19 25 48.6 -0.2**
BRZS *e*S **S 19 32 01.2 +2.3**
BRZS pmax pmax
comp=Z,68nm,1.0s
BRZS Berezniki 40.69 59⇑ *i*P **P 19 25 48.6 -0.2**
comp=Z,68nm,1.0s,baz=58
BRZS *e*S **S 19 32 01.3 +2.3**
baz=58
ARQ Araqi 40.74 105 P **P 19 25 49.8 +0.3**
SNR=74

ARQ P **P** **19 25 49.8 +0.3**
SNR=74
ARQ P **P** **19 25 49.8 +0.3**
SNR=74
ARQ S **S** **19 32 00.1 -0.2**
ARQ S **S** **19 32 00.1 -0.2**
ARQ S **S** **19 32 00.1 -0.2**
CHM Chimkent 40.91 71 *e*P **P** **19 25 50.5 -0.1**
CHM *e*S **S** **19 32 01.4 -1.0**
CHM Chimkent 40.91 71 *e*P **P** **19 25 50.6 -0.1**
baz=70
CHM *e*S **S** **19 32 01.5 -1.0**
baz=70
OTUK Ortayu 40.91 61 P **P** **19 25 51.8 +1.2**
TAS Tashkent 41.05 72 P **P** **19 25 52.4 +0.5**
TAS IAmb IAmb 19 25 56.5
comp=Z,447nm,1.4s
TAS Tashkent 41.05 72 P **P** **19 25 52.4 +0.5**
TAS pmax pmax
comp=Z,447nm,1.4s
HOQ Hoqain 41.15 104 P **P** **19 25 52.1 -0.7**
SNR=86
HOQ P **P** **19 25 52.1 -0.7**
SNR=86
HOQ P **P** **19 25 52.1 -0.7**
SNR=86
HOQ S **S** **19 32 04.0 -2.3**
HOQ S **S** **19 32 04.0 -2.3**
HOQ S **S** **19 32 04.0 -2.3**
KK31 Karatay Array 41.26 69 P **P** **19 25 54.1 +0.5**
KK31 Karatay Array 41.26 69 P **P** **19 25 54.1 +0.5**
KK31 pmax pmax
comp=Z,150nm,0.9s
KKAR Karatay Array 41.26 69 P **P** **19 25 54.0 +0.4**
KKAR Karatay Array 41.26 69 P **P** **19 25 54.3 +0.7**
KKAR IAmb IAmb 19 25 59.4
comp=Z,150nm,0.8s
KKAR Karatay Array 41.26 69 P **P** **19 25 54.3 +0.7**
KKAR pmax pmax
comp=Z,150nm,0.9s
SFJD Kangerlussuaq 41.26 328 P **P** **19 25 52.9 -0.3**
comp=Z,146nm,0.9s,baz=84,slow=8.2,SNR=32
SFJD LR LR 19 44 46.1
comp=Z,19μm,18.5s,baz=95,slow=39
comp=Z,146nm,0.9s
SFJD Kangerlussuaq 41.26 328 P **P** **19 25 52.5 -0.7**
SFJD Kangerlussuaq 41.26 328 IAMs_20 IAMs_20 19 43 53.6
comp=Z,19μm,19.0s
SFJD Kangerlussuaq 41.26 328 P **P** **19 25 52.5 -0.7**
SFJD pmax pmax
comp=Z,168nm,0.9s
SFJD MLR MLR
comp=Z,19μm,19.0s
SFJD Kangerlussuaq 41.26 328 *e*P **P** **19 25 53.9 +0.7**
SFJD IAmb IAmb 19 25 58.2
comp=Z,3μm,2.5s
SFJD Kangerlussuaq 41.26 328 P **P** **19 25 53.5 +0.2**
IUG Iuzhnay 41.27 71 *e*P **P** **19 25 52.6 -1.1**
IUG *e*S **S** **19 32 11.8 +3.9**
IUG Iuzhnay 41.27 71 *e*P **P** **19 25 52.7 -1.1**
baz=70
IUG *e*S **S** **19 32 11.9 +3.9**
baz=70
BSY Bisya 41.60 105 P **P** **19 25 56.4 -0.2**
SNR=78
BSY P **P** **19 25 56.4 -0.2**
SNR=78
BSY S **S** **19 32 11.3 -1.7**
BSY S **S** **19 32 11.3 -1.7**
BIDO Bidbid 41.77 103 P **P** **19 25 57.0 -1.0**
SNR=45
BIDO P **P** **19 25 57.0 -1.0**
SNR=45
BIDO S **S** **19 32 10.1 -5.4**
BIDO S **S** **19 32 10.1 -5.4**
DZA Taraz 41.90 69 *e*P **P** **19 25 58.6 -0.2**
DZA Taraz 41.90 69 *e*P **P** **19 25 58.7 -0.2**
baz=69
CHGR Chuyangaron 42.00 76 P **P** **19 26 00.1 +0.3**
CHGR IAmb IAmb 19 26 04.4
comp=Z,531nm,1.0s
CHGR Chuyangaron 42.00 76 P **P** **19 26 00.1 +0.3**
CHGR pmax pmax
comp=Z,531nm,1.0s
SMDO Samad 42.01 103 P **P** **19 25 59.8 -0.2**
SNR=118
SMDO P **P** **19 25 59.8 -0.2**
SNR=118
SMDO P **P** **19 25 59.8 -0.2**
SNR=118
SMDO S **S** **19 32 18.1 -1.0**
SMDO S **S** **19 32 18.1 -1.0**
SMDO S **S** **19 32 18.1 -1.0**
DOK Doka 42.20 112 P **P** **19 26 01.8 +0.3**
SNR=93
DOK P **P** **19 26 01.8 +0.3**
SNR=93
DOK P **P** **19 26 01.8 +0.3**
SNR=93
DOK S **S** **19 32 22.2 +0.4**
DOK S **S** **19 32 22.2 +0.4**
DOK S **S** **19 32 22.2 +0.4**
WSAR Wadi Sarin 42.31 103 LR LR 19 47 38.8
comp=Z,14μm,20.6s,baz=332,slow=42
WSAR Wadi Sarin 42.31 103 P **P** **19 26 02.0 -0.3**
SNR=56
WSAR S **S** **19 32 19.6 -3.8**
WHFO Wadi Hawf 42.44 113 P **P** **19 26 04.0 +0.6**
SNR=38
WHFO P **P** **19 26 04.0 +0.6**
SNR=38
WHFO S **S** **19 32 23.6 -1.9**
WHFO S **S** **19 32 23.6 -1.9**
JMDO Jabal Madar 42.48 104 P **P** **19 26 03.2 -0.6**
SNR=65
JMDO P **P** **19 26 03.2 -0.6**
SNR=65
JMDO P **P** **19 26 03.2 -0.6**
SNR=65
ABTO Aybut 42.52 114 P **P** **19 26 04.4 +0.3**
SNR=43
ABTO P **P** **19 26 04.4 +0.3**
SNR=43
ABTO P **P** **19 26 04.4 +0.3**
SNR=43
ABTO S **S** **19 32 25.0 -1.8**
ABTO S **S** **19 32 25.0 -1.8**
ABTO S **S** **19 32 25.0 -1.8**
BTK Batken 42.61 73 P **P** **19 26 05.4 +0.7**
BTK IAmb IAmb 19 26 09.5
comp=Z,446nm,1.5s
BTK Batken 42.61 73 P **P** **19 26 05.4 +0.7**
BTK pmax pmax
comp=Z,446nm,1.5s
GAR Garm 42.68 75 P **P** **19 26 05.8 +0.4**
NGCH Negor - Chabah 42.83 98 P **P** **19 26 06.7 +0.2**
SNR=17
NEEM North Greenlan 42.94 343 *i* P **P** **19 26 09.3 +2.1**
NEEM IAmb IAmb 19 26 12.5
comp=Z,3μm,2.6s
WBK Wadi Bani Khal 42.95 103 P **P** **19 26 08.2 +0.6**
SNR=27
WBK P **P** **19 26 08.2 +0.6**
SNR=27
WBK P **P** **19 26 08.2 +0.6**
SNR=27
WBK S **S** **19 32 34.0 +1.1**
WBK S **S** **19 32 34.0 +1.1**
WBK S **S** **19 32 34.0 +1.1**
BTLS Baital 43.00 65 *e*P **P** **19 26 07.2 -0.5**
BTLS *e*S **S** **19 32 33.8 +0.6**
BTLS pmax pmax
comp=Z,59nm,1.3s
BTLS Baital 43.00 65 *e*P **P** **19 26 07.3 -0.5**
comp=Z,59nm,1.3s,baz=65
BTLS *e*S **S** **19 32 33.9 +0.6**
baz=65
RBK Rabkut 43.03 113 P **P** **19 26 08.4 +0.2**
SNR=105
RBK P **P** **19 26 08.4 +0.2**
SNR=105
RBK P **P** **19 26 08.4 +0.2**
SNR=105
RBK S **S** **19 32 33.8 -0.4**
RBK S **S** **19 32 33.8 -0.4**

RBK S **S** **19 32 33.8 -0.4**
SNR=84
MHTO MHTO 43.27 106 P **P** **19 26 10.4 +0.2**
SNR=84
MHTO P **P** **19 26 10.4 +0.2**
SNR=84
MHTO P **P** **19 26 10.4 +0.2**
SNR=84
MHTO S **S** **19 32 32.9 -4.7**
MHTO S **S** **19 32 32.9 -4.7**
MHTO S **S** **19 32 32.9 -4.7**
DMTO DMTO 43.38 112 P **P** **19 26 10.5 -0.6**
SNR=50
DMTO P **P** **19 26 10.5 -0.6**
SNR=50
DMTO S **S** **19 32 38.4 -0.9**
DMTO S **S** **19 32 38.4 -0.9**
UPNV Upernavik 43.51 336 *i* P **P** **19 26 13.2 +1.7**
DRK Karamyk 43.53 74 P **P** **19 26 13.1 +0.6**
EKS2 Erkin-Say 43.66 69 P **P** **19 26 14.6 +1.4**
SNR=144
DQM DQM 43.67 107 P **P** **19 26 13.4 0.0**
SNR=146
DQM P **P** **19 26 13.4 0.0**
SNR=146
DQM P **P** **19 26 13.4 0.0**
SNR=146
DQM S **S** **19 32 44.7 +1.3**
DQM S **S** **19 32 44.7 +1.3**
DQM S **S** **19 32 44.7 +1.3**
KBL Kabul 43.74 82 P **P** **19 26 14.8 +0.7**
KBL Kabul 43.74 82 P **P** **19 26 14.8 +0.7**
KBL pmax pmax
comp=Z,98nm,1.2s
KBL Kabul 43.74 82 P **P** **19 26 15.1 +1.1**
SNR=47
KBL P **P** **19 26 15.1 +1.1**
SNR=47
KBL P **P** **19 26 15.1 +1.1**
SNR=47
KBL S **S** **19 32 43.0 -1.7**
KBL S **S** **19 32 43.0 -1.7**
KBL S **S** **19 32 43.0 -1.7**
AML Almayashu 43.80 69 P **P** **19 26 16.2 +1.4**
SNR=36
USP Ospenovka 43.93 68 P **P** **19 26 16.7 +1.4**
SNR=42
SGDS Sogindy 43.95 67 *e*P **P** **19 26 13.9 -1.6**
SGDS pmax pmax
comp=Z,111nm,1.9s
SGDS Sogindy 43.95 67 *e*P **P** **19 26 13.9 -1.6**
comp=Z,111nm,1.9s,baz=67
LODK Lodwar 44.03 147 P **P** **19 26 16.6 +0.2**
SNR=29
LODK Lodwar 44.03 147⇓ *e*P **P** **19 26 15.8 -0.6**
LODK *e*S S 19 32 39.4 -10
LODK Lodwar 44.03 147 *e*P P 19 26 21.2 +4.8
LODK Lodwar 44.03 147 *e*P **P** **19 26 17.7 +1.3**
KURBB Kurchatov Arra 44.15 56 LR LR 19 46 02.6
comp=Z,46μm,20.6s,baz=283,slow=38
AAK Ala-Archa 44.16 68 P **P** **19 26 18.9 +1.6**
SNR=111
AAK Ala-Archa 44.16 68 LR LR 19 47 51.7
comp=Z,51μm,18.2s,baz=305,slow=40
AAK Ala-Archa 44.16 68 P **P** **19 26 18.5 +1.2**
AAK IAmb IAmb 19 26 22.6
comp=Z,353nm,1.4s
AAK Ala-Archa 44.16 68 P **P** **19 26 18.5 +1.2**
AAK pmax pmax
comp=Z,353nm,1.4s
AAK MLR MLR
comp=Z,53μm,20.0s
AAK Ala-Archa 44.16 68 P **P** **19 26 18.4 +1.1**
AAK P **P** **19 26 18.4 +1.1**
AAK P **P** **19 26 18.4 +1.1**
AAK Ala-Archa 44.16 68 *i* P **P** **19 26 18.0 +0.7**
SNR=123
AAK Ala-Archa 44.16 68 P **P** **19 26 18.9 +1.6**
KURK Kurchatov 44.18 56 P **P** **19 26 16.1 -1.0**
KURK IAmb IAmb 19 26 20.7
comp=Z,245nm,1.1s
KURK Kurchatov 44.18 56 P **P** **19 26 16.1 -1.0**
KURK pmax pmax
comp=Z,245nm,1.1s
KURK MLR MLR
comp=Z,53μm,21.0s
KURK Kurchatov 44.18 56 P **P** **19 26 17.3 +0.2**
KURK P **P** **19 26 17.3 +0.2**
KURK S **S** **19 32 48.4 -1.8**
KURK S **S** **19 32 48.4 -1.8**
KURK Kurchatov 44.18 56 P **P** **19 26 17.2 +0.1**
CHMS Chumysh 44.20 68 P **P** **19 26 19.0 +1.5**
SNR=35
UCH Uchtor 44.33 69 P **P** **19 26 20.8 +1.7**
SNR=50
KBK Karagaybulak 44.46 68 P **P** **19 26 21.5 +1.7**
SNR=31
TKM2 Tokmak 2 44.80 68 P **P** **19 26 23.6 +1.1**
SNR=25
TKM2 Tokmak 2 44.80 68 *i* P **P** **19 26 23.0 +0.5**
TKM2 pmax pmax
comp=Z,86nm,1.3s
KUU Kurty 44.94 66*ce*P **P** **19 26 23.8 +0.5**
KUU *e*S **S** **19 33 03.5 +2.0**
KUU pmax pmax
comp=Z,514nm,2.1s
KUU Kurty 44.94 66⇑ *e*P **P** **19 26 23.9 +0.5**
comp=Z,514nm,2.1s,baz=66
KUU *e*S **S** **19 33 03.6 +2.0**
baz=66
BOOM Boomskoye usch 45.20 68 P **P** **19 26 27.0 +1.3**
BOOM IAmb IAmb 19 26 30.8
comp=Z,333nm,1.6s
BOOM Boomskoye usch 45.20 68 P **P** **19 26 27.0 +1.3**
BOOM pmax pmax
comp=Z,333nm,1.6s
NRIK Noril'sk 45.24 29 P **P** **19 26 26.1 +0.7**
comp=Z,381nm,1.4s,baz=270,slow=7.2,SNR=41
NRIK LR LR 19 47 20.3
comp=Z,27μm,20.0s,baz=272,slow=39
comp=Z,381nm,1.4s
NRIK Noril'sk 45.24 29 P **P** **19 26 26.2 +0.8**
NRIK IAmb IAmb 19 26 31.5
comp=Z,353nm,1.4s
NRIK Noril'sk 45.24 29*c i* P **P** **19 26 25.8 +0.5**
NRIK pmax pmax
comp=Z,205nm,1.3s
NRIK MLR MLR
comp=Z,25μm,19.0s
CHKK Chushkaly 45.39 66 *e*P **P** **19 26 26.2 -0.7**
CHKK Chushkaly 45.39 66 *e*P **P** **19 26 26.3 -0.7**
baz=66
ULHL Ulahol 45.51 68 P **P** **19 26 31.4 +3.4**
SNR=6.2
AAA Alma-Ata 45.59 67 *e*P **P** **19 26 28.9 +0.4**
AAA *e*S **S** **19 33 11.9 +0.9**
AAA pmax pmax
comp=Z,728nm,1.8s
AAA MLR MLR
comp=Z,26μm,18.0s
AAA Alma-Ata 45.59 67 *e*P **P** **19 26 28.9 +0.4**
comp=Z,728nm,1.8s,baz=66
AAA *e*S **S** **19 33 11.1 +0.1**
baz=66
AAA *e*LR LR 19 46 26.5
comp=Z,26μm,18.1s,baz=66
KNDC Almaty 45.62 67 P **P** **19 26 30.0 +1.2**
NRN Naryn 45.66 69 P **P** **19 26 29.7 +0.2**
NRN IAmb IAmb 19 26 35.8
comp=Z,220nm,1.4s
NRN Naryn 45.66 69 P **P** **19 26 29.7 +0.2**
NRN pmax pmax
comp=Z,220nm,1.4s
MDOK Medeo 45.70 67 *e*P **P** **19 26 29.6 +0.1**
MDOK *e*S **S** **19 33 15.1 +2.4**
MDOK MLR MLR
comp=Z,15μm,17.0s
MDOK Medeo 45.70 67 *e*P **P** **19 26 29.6 +0.1**
baz=66
MDOK *e*S **S** **19 33 15.2 +2.4**
baz=66
MDOK *e*LR LR 19 46 29.7
comp=Z,15μm,16.8s,baz=66
TDK Taldyqorghan 45.91 64 *e*P **P** **19 26 30.3 -0.7**
TDK *e*S **S** **19 33 14.5 -1.0**
TDK pmax pmax
comp=Z,159nm,0.9s

TDK MLR MLR
comp=Z,26μm,18.0s
TDK Taldyqorghan 45.91 64 *e*P **P** **19 26 30.3 -0.7**
comp=Z,159nm,0.9s,baz=64
TDK *e*S **S** **19 33 14.5 -1.0**
baz=64
TDK *e*LR LR 19 47 20.3
comp=Z,26μm,18.3s,baz=64
MBAR Mbarara 46.13 155 P **P** **19 26 32.8 -0.4**
MBAR Mbarara 46.13 155 P **P** **19 26 32.8 -0.4**
MBAR pmax pmax
comp=Z,168nm,1.4s
MBAR MLR MLR
comp=Z,7μm,21.0s
MBAR Mbarara 46.13 155 P **P** **19 26 33.2 +0.1**
MBAR S **S** **19 33 21.9 +2.5**
MBAR Mbarara 46.13 155 *e*P **P** **19 26 31.1 -2.1**
MBAR *e*S **S** **19 33 19.2 -0.2**
MBAR Mbarara 46.13 155 *e*P **P** **19 26 32.5 -0.7**
MBAR Mbarara 46.13 155 *e*P **P** **19 26 31.5 -1.6**
MBAR Mbarara 46.13 155 P **P** **19 26 34.0 +0.9**
KSH Kashi 46.45 72 P **P** **19 26 37.0 +1.6**
KSH pP sP 19 26 38.8 -0.7
KSH S **S** **19 33 20.0 -3.6**
KSH SS **ScS** **19 36 38.5 +7.5**
KSH pmax pmax
comp=Z,520nm,1.1s
KSH pmax pmax
comp=Z,2μm,5.9s
KSH LR LR
comp=Z,14μm,19.9s
KSH LR LR
comp=Z,31μm,16.5s
KSH LR LR
comp=Z,32μm,17.2s
ZHN Zhinishke 46.63 66 *e*P **P** **19 26 36.2 -0.6**
ZHN *e*S **S** **19 33 24.4 -1.7**
ZHN Zhinishke 46.63 66 *e*P **P** **19 26 36.2 -0.6**
baz=66
ZHN *e*S **S** **19 33 24.4 -1.7**
baz=66
SATY Saty 46.65 66 *e*P **P** **19 26 37.7 +0.7**
SATY *e*S **S** **19 33 28.6 +2.2**
SATY pmax pmax
comp=Z,160nm,1.7s
SATY Saty 46.65 66 *e*P **P** **19 26 37.8 +0.7**
comp=Z,160nm,1.7s,baz=66
SATY *e*S **S** **19 33 28.7 +2.2**
baz=66
KPKS Kokpek 46.68 66*ce*P **P** **19 26 36.2 -0.9**
KPKS *e*S **S** **19 33 27.0 +0.3**
KPKS pmax pmax
comp=Z,122nm,1.7s
KPKS Kokpek 46.68 66⇑ *e*P **P** **19 26 36.3 -0.9**
comp=Z,122nm,1.7s,baz=65
KPKS *e*S **S** **19 33 27.0 +0.3**
baz=65
TULEG Thule 46.86 341 P **P** **19 26 37.2 -0.8**
TULEG IAmb IAmb 19 26 40.8
comp=Z,246nm,1.3s
TULEG IAMs_20 IAMs_20 19 47 39.6
comp=Z,21μm,19.0s
TULEG Thule 46.86 341 *e*P **P** **19 26 38.8 +0.7**
TULEG IAmb IAmb 19 26 42.8
comp=Z,444nm,1.6s
ZAA0 Zalesovo Array 46.89 50 P **P** **19 26 38.3 -0.2**
ZAA0 IAmb IAmb 19 26 42.3
comp=Z,173nm,1.2s
ZALV Zalesovo Beam 46.89 50 P **P** **19 26 38.8 +0.3**
comp=Z,87nm,0.9s,baz=286,slow=8.0,SNR=90
ZALV PP **PP** **19 28 30.9 +2.4**
comp=Z,55nm,1.0s,baz=292,slow=7.8,SNR=5.6
ZALV S **S** **19 33 27.5 -1.8**
comp=Z,0.6nm,0.4s,baz=199,slow=2.7,SNR=1.9
ZALV LR LR 19 48 14.1
comp=Z,27μm,18.4s,baz=278,slow=38
comp=Z,87nm,0.9s
ZALV Zalesovo Beam 46.89 50 P **P** **19 26 38.5 -0.1**
ZALV Zalesovo Beam 46.89 50 *i* P **P** **19 26 38.7 +0.2**
ZALV pmax pmax
comp=Z,87nm,0.9s
UZB Uzynbulak 47.03 66 *e*P **P** **19 26 39.0 -1.0**
UZB *e*S **S** **19 33 31.9 0.0**
UZB pmax pmax
comp=Z,63nm,1.7s
UZB Uzynbulak 47.03 66 *e*P **P** **19 26 39.0 -1.0**
comp=Z,63nm,1.7s,baz=66
UZB *e*S **S** **19 33 32.0 0.0**
baz=66
NIL Nilore 47.22 80 P **P** **19 26 42.6 +1.1**
NIL Nilore 47.22 80 IAMs_20 IAMs_20 19 50 08.0
comp=Z,17μm,20.0s
NIL Nilore 47.22 80 P **P** **19 26 42.6 +1.1**
NIL pmax pmax
comp=Z,800nm,1.3s
NIL MLR MLR
comp=Z,17μm,20.0s
NIL Nilore 47.22 80 P **P** **19 26 41.5 0.0**
NIL P **P** **19 26 41.5 0.0**
NIL Nilore 47.22 80 P **P** **19 26 43.0 +1.5**
PDGK Podgornoye 47.27 66 *i* P **P** **19 26 42.3 +0.5**
PDGK pmax pmax
comp=Z,500nm,1.4s
SHLS Shalkode 47.32 66 *e*P **P** **19 26 44.8 +2.6**
SHLS *e*S **S** **19 33 39.5 +3.5**
SHLS pmax pmax
comp=Z,128nm,1.5s
SHLS Shalkode 47.32 66 *e*P **P** **19 26 44.9 +2.6**
comp=Z,128nm,1.5s,baz=65
SHLS *e*S **S** **19 33 39.5 +3.5**
baz=65
MAKZ Makanchi 47.56 60 P **P** **19 26 43.9 0.0**
MAKZ IAmb IAmb 19 26 48.0
comp=Z,276nm,1.4s
MAKZ Makanchi 47.56 60 P **P** **19 26 43.9 0.0**
MAKZ pmax pmax
comp=Z,276nm,1.4s
MAKZ MLR MLR
comp=Z,51μm,20.0s
MAKZ Makanchi 47.56 60 P **P** **19 26 44.4 +0.5**
DRLN Deer Lake 47.75 303 P **P** **19 26 43.5 -1.8**
DRLN IAmb IAmb 19 26 50.8
comp=Z,187nm,1.0s
MK31 Makanchi Array 47.76 60 P **P** **19 26 44.9 -0.6**
MK31 IAmb IAmb 19 26 49.4
comp=Z,151nm,1.1s
MK31 Makanchi Array 47.76 60 P **P** **19 26 44.9 -0.6**
MK31 pmax pmax
comp=Z,151nm,1.1s
MKAR Makanchi Array 47.76 60 P **P** **19 26 44.5 -1.0**
comp=Z,98nm,0.9s,baz=291,slow=5.3,SNR=102
MKAR S **S** **19 33 39.8 -2.1**
comp=Z,1.2nm,0.9s,baz=303,slow=9.8,SNR=1.3
MKAR LR LR 19 51 07.4
comp=Z,51μm,18.5s,baz=299,slow=41
comp=Z,98nm,0.9s
MKAR Makanchi Array 47.76 60 P **P** **19 26 45.0 -0.5**
JMU Jammu 48.89 80 *e*P **P** **19 26 55.0 +0.7**
KMBO Kilima Mbogo 48.93 147 P **P** **19 26 55.8 +0.8**
comp=Z,0.9nm,0.8s,baz=343,slow=20,SNR=13
KMBO LR LR 19 48 13.3
comp=Z,129nm,21.5s,baz=322,slow=37
KMBO Kilima Mbogo 48.93 147 P **P** **19 26 55.2 +0.2**
KMBO Kilima Mbogo 48.93 147 *e*P **P** **19 26 55.5 +0.5**
KMBO IAmb IAmb 19 26 59.6
comp=Z,412nm,1.6s
KMBO Kilima Mbogo 48.93 147 P **P** **19 26 55.3 +0.2**
KMBO pmax pmax
comp=Z,104nm,1.5s
KMBO Kilima Mbogo 48.93 147 P **P** **19 26 56.3 +1.3**
KMBO P **P** **19 26 56.3 +1.3**
KMBO Kilima Mbogo 48.93 147 *e*P **P** **19 26 55.9 +0.8**
KMBO Kilima Mbogo 48.93 147 *e*P P 19 27 00.1 +5.0
KMBO Kilima Mbogo 48.93 147 *e*P **P** **19 26 56.9 +1.9**
KMBO Kilima Mbogo 48.93 147 *i* P **P** **19 26 55.5 +0.5**
SNR=24
KMBO Kilima Mbogo 48.93 147 P **P** **19 26 56.2 +1.1**
FRB Frobisher Bay 49.07 324 P **P** **19 26 55.0 -0.2**
comp=Z,55nm,0.7s,baz=71,slow=7.7,SNR=16
FRB LR LR 19 48 48.6
comp=Z,20μm,18.2s,baz=76,slow=38
comp=Z,55nm,0.7s
JASL Jaisalmer 49.08 89 *e*P **P** **19 26 57.0 +1.1**
ZSN Zaisan 49.14 58 *e*P **P** **19 26 55.6 -0.4**
ZSN *e*S **S** **19 34 04.1 +2.7**

ZSN pmax pmax
comp=Z,207nm,1.9s
ZSN Zaisan 49.14 58 *e*P **P 19 26 55.7 -0.4**
comp=Z,207nm,1.9s,baz=58
ZSN *e*S **S 19 34 04.1 +2.7**
baz=58
THN Thein Dam 49.62 80 *e*P **P 19 27 00.1 +0.2**
EUNU Eureka 49.69 347 P **P 19 26 59.2 -0.6**
DGZ Jazzator, Alta 49.85 55*c i*P **P 19 27 02.2 +0.5**
DGZ pmax pmax
comp=Z,146nm,1.3s
DGZ MLR MLR
comp=Z,38μm,18.0s
BHUJ Bhuj 50.30 94 *e*P **P 19 27 05.5 +0.3**
BHUJ IAmb IAmb 19 27 11.6
comp=Z,247nm,1.2s
BHUJ IAMs_20 IAMs_20 19 47 47.1
comp=Z,15μm,31.8s
KIBK Kibwezi 50.35 147 P **P 19 27 06.1 +0.4**
SNR=23
BHK Bhakra 50.66 81 *e*P **P 19 27 08.5 +0.7**
SCHQ Schefferville 51.12 313 P **P 19 27 09.3 -1.7**
comp=Z,52nm,0.7s,baz=63,slow=6.3,SNR=29
SCHQ LR LR 19 46 28.1
comp=Z,12μm,21.9s,baz=67,slow=30
comp=Z,52nm,0.7s
SCHQ Schefferville 51.12 313 P **P 19 27 09.1 -1.9**
SMLA Simla 51.36 81 *e*P **P 19 27 12.4 -0.6**
SMLA IAmb IAmb 19 27 16.6
comp=Z,382nm,1.0s
SMLA IAMs_20 IAMs_20 19 54 28.1
comp=Z,22μm,16.5s
GBN Guysborough 51.77 300 P **P 19 27 14.2 -1.7**
AJM Ajmer 52.08 87 *e*P **P 19 27 18.9 +0.3**
WMQ Urumqi 52.46 62 ⇓P **P 19 27 23.0 +1.8**
WMQ pP sP 19 27 28.5 +3.3
WMQ S **S 19 34 51.3 +3.7**
WMQ pmax pmax
comp=Z,180nm,1.1s
WMQ pmax pmax
comp=Z,2μm,7.3s
WMQ LR LR
comp=Z,27μm,20.1s
HAL Halifax 53.43 300 P **P 19 27 24.2 -4.0**
HAL Halifax 53.43 300 P **P 19 27 24.3 -4.0**
HAL pmax pmax
comp=Z,80nm,0.7s
RES Resolute Bay 53.58 342 P **P 19 27 28.7 -0.2**
RES IAmb IAmb 19 27 34.1
comp=Z,324nm,1.9s
RES Resolute Bay 53.58 342 P **P 19 27 28.7 -0.2**
RES pmax pmax
comp=Z,324nm,1.9s
BATG Bathurst New B 53.77 304 P **P 19 27 29.8 -1.0**
PTH Pithoragarh 54.42 81 *e*P **P 19 27 35.9 0.0**
LGTI Lohaghat 54.50 81 *e*P **P 19 27 35.5 -0.8**
PQI Presque Isle 55.24 304 P **P 19 27 40.6 -0.8**
PQI IAMs_20 IAMs_20 19 49 54.7
comp=Z,13μm,20.0s
JHNI Jhansi 55.52 86 *e*P **P 19 27 43.1 -0.6**
E63A Oxbow 55.61 304 P **P 19 27 44.0 0.0**
baz=62,SNR=8.4
E63A P **P 19 27 44.0 0.0**
baz=62,SNR=8.4
E63A S **S 19 35 26.8 -3.1**
baz=62
E63A S **S 19 35 26.8 -3.1**
baz=62
G65A Princeton 55.66 302 P **P 19 27 43.8 -0.7**
G65A Princeton 55.66 302 P **P 19 27 43.9 -0.5**
baz=61
G65A P **P 19 27 43.9 -0.5**
baz=61
D62A Allapoint, All 55.67 305 P **P 19 27 43.0 -1.5**
D62A Allapoint, All 55.67 305 P **P 19 27 44.7 +0.2**
baz=62,SNR=15
D62A P **P 19 27 44.7 +0.2**
baz=62,SNR=15
F64A Sherman 55.83 303 P **P 19 27 45.5 -0.2**
F64A Sherman 55.83 303 P **P 19 27 46.1 +0.4**
baz=61,SNR=6.8
F64A P **P 19 27 46.1 +0.4**
baz=61,SNR=6.8
F64A S **S 19 35 29.6 -3.3**
baz=61
F64A S **S 19 35 29.6 -3.3**
baz=61
EMMW East Machias 55.83 302 IAMs_20 IAMs_20 19 50 04.3
comp=Z,11μm,20.0s
BHPL Bhopal 56.02 89 *e*P **P 19 27 45.6 -1.8**
BHPL IAmb IAmb 19 27 49.8
comp=Z,212nm,1.3s
E62A Clayton Lake 56.18 305 P **P 19 27 46.8 -1.4**
E62A Clayton Lake 56.18 305 P **P 19 27 49.1 +0.9**
baz=61,SNR=6.4
E62A P **P 19 27 49.1 +0.9**
baz=61,SNR=6.4
E62A S **S 19 35 34.8 -2.8**
baz=61
E62A S **S 19 35 34.8 -2.8**
baz=61
F63A Nahmakanta, Br 56.37 304 P **P 19 27 48.0 -1.6**
baz=61
F63A P **P 19 27 48.0 -1.6**
baz=61
F63A S **S 19 35 37.5 -2.6**
baz=61
F63A S **S 19 35 37.5 -2.6**
baz=61
ASCN Ascension 56.44 213 IAMs_20 IAMs_20 19 50 09.4
comp=Z,11μm,22.0s
PKME Peaks-Kenny Pk 56.70 303 P **P 19 27 51.0 -0.8**
PKME IAMs_20 IAMs_20 19 51 00.2
comp=Z,17μm,19.0s
PKME Peaks-Kenny Pk 56.70 303 P **P 19 27 52.7 +0.8**
baz=60,SNR=5.6
PKME S **S 19 35 43.8 -0.6**
baz=60
PKME Peaks-Kenny Pk 56.70 303 P **P 19 27 50.1 -1.8**
baz=60,SNR=5.6
PKME S **S 19 35 41.5 -2.9**
baz=60
MOY Mondy 56.80 48 *e*P **P 19 27 54.4 +1.7**
MOY pmax pmax
comp=Z,177nm,2.2s
F62A Pittston Farm, 56.80 304 P **P 19 27 53.2 +0.6**
F62A Pittston Farm, 56.80 304 P **P 19 27 53.0 +0.4**
baz=61
F62A P **P 19 27 53.0 +0.4**
baz=61
F62A S **S 19 35 45.0 -0.8**
baz=61
F62A S **S 19 35 45.0 -0.8**
baz=61
TIXI Tiksi 57.16 20 LR LR 19 56 29.0
comp=Z,23μm,18.7s,baz=270,slow=40
TIXI Tiksi 57.16 20 P **P 19 27 53.5 -1.3**
TIXI IAmb IAmb 19 27 59.6
comp=Z,178nm,1.3s
TIXI Tiksi 57.16 20*de*P **P 19 27 55.5 +0.8**
TIXI pmax pmax
comp=Z,105nm,1.2s
TIXI MLR MLR
comp=Z,22μm,17.0s
TIXI Tiksi 57.16 20 P **P 19 27 55.8 +1.1**
PYUN Piuthan 57.25 81 *e*P **P 19 27 56.7 +0.4**
comp=Z,3μm,1.3s
PYUN Piuthan 57.25 81 *e*P **P 19 27 55.9 -0.4**
AKL Akola 57.26 91 *e*P **P 19 27 58.5 +2.3**
WVL Waterville 57.27 303 IAMs_20 IAMs_20 19 51 24.4
comp=Z,12μm,19.0s
KAD Karad 57.32 97 *e*P **P 19 27 56.0 -0.7**
G62A West of Eustis 57.48 304 P **P 19 27 56.5 -0.9**
G62A West of Eustis 57.48 304 P **P 19 27 59.0 +1.5**
baz=60
G62A P **P 19 27 59.0 +1.5**
baz=60
G62A S **S 19 35 55.7 +0.9**
baz=60
G62A S **S 19 35 55.7 +0.9**
baz=60
DANN Dangsing 57.66 80 *e*P **P 19 27 59.5 +0.2**
comp=Z,2μm,1.5s
DANN Dangsing 57.66 80 *e*Pg **P 19 27 58.6 -0.7**
KOLN Koldanda 57.88 80 *e*P **P 19 27 59.2 -1.5**
JBP Jabalpur 57.94 87 *e*P **P 19 27 57.9 -3.0**

JBP IVmB_BB 19 28 03.5
comp=Z,2μm,1.0s
JBP *e*S S 19 35 51.8 -9.5
ALBI Allahabad 58.01 84 *e*P **P 19 28 01.0 -0.4**
I63A Otisfield 58.10 302 P **P 19 28 01.9 +0.1**
baz=59
I63A P **P 19 28 01.9 +0.1**
baz=59
I63A S **S 19 36 04.4 +1.4**
baz=59
I63A S **S 19 36 04.4 +1.4**
baz=59
H62A Milan 58.19 303 P **P 19 28 03.3 +0.9**
baz=59
H62A P **P 19 28 03.3 +0.9**
baz=59
H62A S **S 19 36 04.5 +0.4**
baz=59
H62A S **S 19 36 04.5 +0.4**
baz=59
IRK Irkutsk 58.28 46 *e*P **P 19 28 02.7 -0.3**
IRK *e*S **S 19 36 06.3 +1.2**
IRK pmax pmax
comp=Z,325nm,2.2s
VLK Valmikinagar 58.33 81 *e*P **P 19 28 03.5 -0.1**
NGP Nagpur 58.48 90 *e*P **P 19 28 03.7 -1.1**
GKN Gorkha 58.50 80 *e*P **P 19 28 04.8 -0.2**
comp=Z,2μm,1.3s
GKN Gorkha 58.50 80 *e*P **P 19 28 03.8 -1.2**
I62A Tamworth 58.66 303 P **P 19 28 05.2 -0.5**
I62A Tamworth 58.66 303 P **P 19 28 04.1 -1.6**
baz=59
I62A P **P 19 28 04.1 -1.6**
baz=59
I62A S **S 19 36 10.9 +0.7**
baz=59
I62A S **S 19 36 10.9 +0.7**
baz=59
ZAK Zakamensk 58.69 49 *e*P **P 19 28 06.4 +0.4**
ZAK pmax pmax
comp=Z,75nm,1.8s
UNH University of 58.77 302 P **P 19 28 06.3 -0.1**
baz=59
UNH S **S 19 36 14.0 +2.3**
baz=59
LBNH Lisbon 58.84 303 P **P 19 28 06.5 -0.4**
LBNH Lisbon 58.84 303 P **P 19 28 06.5 -0.4**
LBNH pmax pmax
comp=Z,91nm,1.3s
LBNH MLR MLR
comp=Z,20μm,20.0s
LBNH Lisbon 58.84 303 P **P 19 28 06.1 -0.8**
baz=59,SNR=6.1
LBNH Lisbon 58.84 303 P **P 19 28 05.1 -1.9**
baz=59,SNR=6.1
LBNH S **S 19 36 08.0 -4.5**
baz=59
DMN Daman 59.06 80 *e*P **P 19 28 09.2 +0.1**
comp=Z,982nm,1.2s
DMN Daman 59.06 80 *e*P **P 19 28 08.3 -0.8**
FFD Franklin Falls 59.07 302 **P 19 28 06.5 -2.0**
FFD IAMs_20 IAMs_20 19 51 52.9
comp=Z,13μm,20.0s
KKN Kakani 59.08 79 *e*P **P 19 28 07.2 -2.0**
MNTQ Montreal, Queb 59.21 305 P **P 19 28 07.9 -1.6**
PKIN Phulchoki 59.29 80 *e*P **P 19 28 10.4 -0.3**
comp=Z,536nm,1.2s
PKIN Phulchoki 59.29 80 *e*P **P 19 28 09.5 -1.2**
VT1 Waterbury 59.30 304 IAMs_20 IAMs_20 19 52 39.0
comp=Z,16μm,20.0s
PKI Pulchoki 59.30 80 *e*P **P 19 28 10.5 -0.3**
comp=Z,762nm,1.3s
PKI Pulchoki 59.30 80 *e*P **P 19 28 09.0 -1.8**
HNH Hanover 59.34 303 IAMs_20 IAMs_20 19 52 48.0
comp=Z,11μm,20.0s
BCX Boston College 59.36 301 IAMs_20 IAMs_20 19 53 28.7
comp=Z,8μm,19.0s
L64A Middleborough 59.36 300 P **P 19 28 10.1 -0.5**
baz=58
L64A P **P 19 28 10.1 -0.5**
baz=58
L64A S **S 19 36 19.0 -0.3**
baz=58
L64A S **S 19 36 19.0 -0.3**
baz=58
TRQ Mont Tremblant 59.39 306 P **P 19 28 09.4 -1.5**
WES Weston 59.43 301 P **P 19 28 11.7 +0.6**
WES IAMs_20 IAMs_20 19 52 29.6
comp=Z,10μm,20.0s
WES Weston 59.43 301 P **P 19 28 11.7 +0.6**
WES pmax pmax
comp=Z,51nm,1.1s
WES MLR MLR
comp=Z,10μm,20.0s
GUN Gumba 59.45 79 *e*P **P 19 28 12.0 +0.2**
comp=Z,658nm,0.9s
GUN Gumba 59.45 79 *e*P **P 19 28 11.2 -0.6**
HRV Adam Dziewonsk 59.51 301 IAMs_20 IAMs_20 19 52 32.9
comp=Z,7μm,19.0s
HRV Adam Dziewonsk 59.51 301 P **P 19 28 10.0 -1.6**
baz=58
LSZ Lusaka 59.54 163 P **P 19 28 11.4 -0.7**
comp=Z,97nm,0.9s,baz=2.4,slow=7.1,SNR=33
LSZ LR LR 19 56 53.1
comp=Z,8μm,18.5s,baz=356,slow=39
comp=Z,97nm,0.9s
MCVT Middlebury Col 59.64 303 P **P 19 28 10.9 -1.6**
baz=58
MCVT S **S 19 36 24.0 +1.0**
baz=58
J61A Chester 59.69 303 P **P 19 28 11.9 -0.9**
J61A Chester 59.69 303 P **P 19 28 13.0 +0.2**
baz=58,SNR=5.6
J61A P **P 19 28 13.0 +0.2**
baz=58,SNR=5.6
J61A S **S 19 36 23.0 -0.6**
baz=58
J61A S **S 19 36 23.0 -0.6**
baz=58
BRYW Bryant College 59.81 301 IAMs_20 IAMs_20 19 50 51.7
comp=Z,9μm,22.0s
JIRN Jiri 59.82 79 *e*P **P 19 28 13.9 -0.5**
comp=Z,1μm,1.3s
JIRN Jiri 59.82 79 *e*P **P 19 28 13.4 -1.0**
K62A Royalston 59.85 302 P **P 19 28 13.0 -1.0**
K62A Royalston 59.85 302 S **S 19 36 27.8 +2.0**
baz=58
K62A S **S 19 36 27.8 +2.0**
baz=58
BOD Bodaibo 60.09 37 *e*P **P 19 28 14.8 -0.5**
BOD pmax pmax
comp=Z,188nm,1.8s
BMNY Brushton-Moira 60.09 305 S **S 19 36 30.9 +2.2**
baz=58
QUA2 Belchertown 60.13 301 P **P 19 28 14.7 -1.2**
QUA2 IAMs_20 IAMs_20 19 52 51.2
comp=Z,10μm,20.0s
QUA2 Belchertown 60.13 301 P **P 19 28 16.7 +0.8**
baz=58,SNR=6.3
BLSP Bilaspur 60.15 87 *e*P **P 19 28 15.7 -0.6**
L61B Northampton 60.25 302 P **P 19 28 16.1 -0.5**
L61B IAmb IAmb 19 29 07.7
comp=Z,206nm,1.8s
L61B IAMs_20 IAMs_20 19 52 45.2
comp=Z,11μm,20.0s
L61B Northampton 60.25 302 P **P 19 28 16.1 -0.5**
baz=58
L61B S **S 19 36 32.3 +1.5**
baz=58
L61B Northampton 60.25 302 P **P 19 28 15.2 -1.5**
baz=58
L61B S **S 19 36 30.5 -0.3**
baz=58
LONY Lake Ozonia 60.26 305 P **P 19 28 16.2 -0.5**
LONY IAMs_20 IAMs_20 19 52 21.3
comp=Z,8μm,20.0s
LONY Lake Ozonia 60.26 305 P **P 19 28 15.2 -1.5**
baz=58,SNR=9.9
LONY S **S 19 36 28.8 -2.0**
baz=58
ACCN Adirondack Com 60.36 303 P **P 19 28 16.8 -0.7**
ACCN IAmb IAmb 19 28 22.1
comp=Z,179nm,1.5s
ACCN Adirondack Com 60.36 303 P **P 19 28 14.5 -2.9**
baz=58,SNR=8.7
NCB Newcomb 60.38 304 P **P 19 28 17.8 +0.1**
NCB Newcomb 60.38 304 P **P 19 28 16.4 -1.2**

baz=58
NCB S **S 19 36 33.6 +1.0**
baz=58
M63A Gales Ferry 60.41 300 P **P 19 28 16.3 -1.5**
baz=57
M63A P **P 19 28 16.3 -1.5**
baz=57
M63A S **S 19 36 33.0 +0.1**
baz=57
M63A S **S 19 36 33.0 +0.1**
baz=57
HYBB Hyderabad (bro 60.45 93 *e*P **P 19 28 17.8 -0.7**
HYBB IVmB_BB 19 28 20.0
comp=Z,668nm,1.5s
HYBB *es*P **sP 19 28 22.9 +0.4**
HYBB *e*PP **PP 19 30 31.9 +0.3**
HYBB *e*ScP **ScP 19 33 04.4 -0.2**
HYBB *e*PcS **PcS 19 33 05.5 -0.6**
HYBB *e*S **S 19 36 34.2 +0.1**
HYBB *e*ScS SKKSac 19 38 09.0 -0.6
HYBB *e*SS **SS 19 40 34.2 +2.5**
HYBB IVMs_BB IVMs_BB 20 01 35.3
comp=Z,1μm,15.3s
HYB Hyderabad 60.45 93 *e*P **P 19 28 18.5 +0.1**
BBSR BB Station 60.47 288 IAMs_20 IAMs_20 19 49 45.5
comp=Z,12μm,21.0s
RAMN Ramite 60.52 79 *e*P **P 19 28 18.1 -1.0**
comp=Z,747nm,1.0s
RAMN Ramite 60.52 79 *e*P **P 19 28 17.1 -2.0**
TRY Troy 60.71 302 P **P 19 28 18.2 -1.6**
TRY IAMs_20 IAMs_20 19 53 02.4
comp=Z,14μm,20.0s
J59A Piesco 60.83 304 P **P 19 28 19.3 -1.4**
J59A IAmb IAmb 19 28 25.4
comp=Z,226nm,1.8s
J59A Piesco 60.83 304 P **P 19 28 22.9 +2.2**
baz=57,SNR=6.7
J59A P **P 19 28 22.9 +2.2**
baz=57,SNR=6.7
J59A S **S 19 36 38.2 0.0**
baz=57
J59A S **S 19 36 38.2 0.0**
baz=57
MSEY Mahe Island 60.92 130 P **P 19 28 21.0 -0.6**
MSEY IAmb IAmb 19 28 25.4
comp=Z,294nm,1.3s
MSEY Mahe Island 60.92 130 P **P 19 28 21.0 -0.6**
MSEY pmax pmax
comp=Z,294nm,1.3s
MSEY MLR MLR
comp=Z,3μm,21.0s
MSEY Mahe Island 60.92 130 P **P 19 28 21.6 0.0**
MSEY Mahe Island 60.92 130 *i* P **P 19 28 21.6 0.0**
SNR=35
MSEY Mahe Island 60.92 130 P **P 19 28 22.3 +0.6**
GOMU GeErMu 61.02 66 P **P 19 28 24.0 +1.5**
GOMU pP sP 19 28 28.5 +2.0
GOMU sP pP 19 28 31.0 +5.6
GOMU pmax pmax
comp=Z,32nm,1.3s
GOMU LR LR
comp=Z,12μm,20.4s
GOMU LR LR
comp=Z,10μm,17.1s
GOMU LR LR
comp=Z,11μm,21.6s
YLE Yale 61.02 301 IAMs_20 IAMs_20 19 51 48.4
comp=Z,9μm,22.0s
SHEL Horse Pasture 61.09 201 IAMs_20 IAMs_20 19 53 00.7
comp=Z,17μm,21.0s
ODAN Odare 61.15 79 *e*Pg **P 19 28 20.8 -2.6**
HCNY Howe Caverns 61.18 303 P **P 19 28 22.5 -0.6**
baz=57,SNR=6.2
HCNY S **S 19 36 43.3 +0.6**
baz=57
WCNY West Carthage 61.25 305 P **P 19 28 21.5 -1.9**
baz=57,SNR=6.0
WCNY S **S 19 36 42.8 -0.7**
baz=57
J58A Remsen 61.36 304 P **P 19 28 23.9 -0.4**
J58A Remsen 61.36 304 S **S 19 36 46.8 +1.7**
baz=57
J58A S **S 19 36 46.8 +1.7**
baz=57
N62A Caumsett State 61.57 301 P **P 19 28 22.8 -2.9**
baz=56
N62A P **P 19 28 22.8 -2.9**
baz=56
N62A S **S 19 36 47.8 +0.2**
baz=56
N62A S **S 19 36 47.8 +0.2**
baz=56
BRNY Black Rk. Fore 61.64 301 P **P 19 28 25.7 -0.5**
baz=56
BRNY S **S 19 36 50.5 +1.9**
baz=56
A36M Sachs Harbour 61.71 346 P **P 19 28 26.3 +0.2**
A36M IAmb IAmb 19 28 29.3
comp=Z,140nm,0.9s
A36M IAMs_20 IAMs_20 19 56 03.7
comp=Z,7μm,19.0s
A36M Sachs Harbour 61.71 346 P **P 19 28 25.7 -0.4**
baz=34
A36M S **S 19 36 48.9 +0.4**
baz=34
GTK Tadong 61.75 78 *e*P **P 19 28 27.6 +0.3**
GTK IAMs_20 IAMs_20 20 00 40.3
comp=Z,8μm,17.6s
J57A Williamstown 61.77 304 P **P 19 28 27.0 0.0**
J57A Williamstown 61.77 304 P **P 19 28 27.4 +0.4**
baz=56,SNR=6.4
J57A P **P 19 28 27.4 +0.4**
baz=56,SNR=6.4
J57A S **S 19 36 52.7 +2.5**
baz=56
J57A S **S 19 36 52.7 +2.5**
baz=56
SONM Songino Array 61.78 50 P **P 19 28 28.1 +0.9**
comp=Z,194nm,1.1s,baz=289,slow=8.5,SNR=128
SONM LR LR 19 57 27.3
comp=Z,36μm,19.4s,baz=304,slow=38
SONM PKP2ab 19 57 55.0
comp=Z,0.3nm,0.5s,baz=78,slow=3.0,SNR=4.6
comp=Z,194nm,1.1s
SONM Songino Array 61.78 50 P **P 19 28 27.1 -0.1**
SONM Songino Array 61.78 50 P **P 19 28 27.1 -0.1**
SONM pmax pmax
comp=Z,349nm,1.2s
PAL Palisades 61.80 301 P **P 19 28 26.0 -1.2**
PAL IAMs_20 IAMs_20 19 54 10.4
comp=Z,7μm,20.0s
PAL Palisades 61.80 301 P **P 19 28 26.0 -1.2**
PAL pmax pmax
comp=Z,140nm,1.6s
PAL MLR MLR
comp=Z,7μm,20.0s
PAL Palisades 61.80 301 P **P 19 28 28.1 +0.9**
baz=56
PAL S **S 19 36 51.6 +1.0**
baz=56
PAL Palisades 61.80 301 P **P 19 28 25.5 -1.7**
baz=56
PAL S **S 19 36 49.0 -1.6**
baz=56
L59A Walton 61.86 303 P **P 19 28 27.2 -0.5**
L59A Walton 61.86 303 P **P 19 28 26.8 -0.9**
baz=56,SNR=5.7
L59A P **P 19 28 26.8 -0.9**
baz=56,SNR=5.7
L59A S **S 19 36 55.6 +4.1**
baz=56
L59A S **S 19 36 55.6 +4.1**
baz=56
FOR Fordham 61.87 301 P **P 19 28 28.1 +0.4**
baz=56
FOR S **S 19 36 53.9 +2.5**
baz=56
BOK Bokaro 61.88 83 *e*P **P 19 28 27.7 -0.3**
BOK IAmb IAmb 19 28 31.4
comp=Z,347nm,1.0s
TRNY Table Rock, Ra 61.93 301 P **P 19 28 27.6 -0.6**
TSUM Tsumeb 61.94 175 LR LR 19 57 20.5
comp=Z,7μm,18.2s,baz=355,slow=38
TSUM Tsumeb 61.94 175 P **P 19 28 26.8 -1.6**
TSUM IAmb IAmb 19 28 31.8
comp=Z,99nm,1.0s
TSUM Tsumeb 61.94 175 IAMs_20 IAMs_20 19 56 59.6

comp=Z,8µm,20.0s
TSUM Tsumeb 61.94 175 *e*P **P 19 28 27.1 -1.4**
TSUM IAmb IAmb 19 28 31.3
comp=Z,96nm,1.0s
TSUM Tsumeb 61.94 175 P **P 19 28 27.9 -0.5**
CPNY Central Park 61.96 301 P **P 19 28 27.3 -0.9**
SLGI Shiliguri 61.98 79 *e*P **P 19 28 28.9 +0.2**
PECO Prince Edward 62.08 305 P **P 19 28 29.3 +0.2**
PECO IAmb IAmb 19 28 33.5
comp=Z,134nm,1.4s
DELO Deloro Mine 62.13 306 P **P 19 28 28.7 -0.7**
DELO IAmb IAmb 19 28 33.8
comp=Z,164nm,1.5s
ULN Ulaanbaatar 62.13 49 P **P 19 28 30.1 +0.5**
ULN Ulaanbaatar 62.13 49 P **P 19 28 30.1 +0.5**
ULN pmax pmax
comp=Z,536nm,1.6s
ULN MLR MLR
comp=Z,29µm,18.0s
ULN Ulaanbaatar 62.13 49 P **P 19 28 30.1 +0.5**
ULN P **P 19 28 30.1 +0.5**
ULN P **P 19 28 30.1 +0.5**
ULN S **S 19 36 52.1 -2.9**
ULN S **S 19 36 52.1 -2.9**
ULN S **S 19 36 52.1 -2.9**
ULN Ulaanbaatar 62.13 49 P **P 19 28 29.5 -0.1**
comp=Z,20µmcomp=Z,11µmcomp=Z,766nm,1.5s
ULN Ulaanbaatar 62.13 49 P **P 19 28 31.0 +1.4**
LSA Lhasa 62.18 74 P **P 19 28 30.6 +0.1**
LSA IAmb IAmb 19 28 35.0
comp=Z,271nm,1.4s
LSA IAMs_20 IAMs_20 20 00 05.8
comp=Z,13µm,22.0s
LSA Lhasa 62.18 74 P **P 19 28 30.8 +0.3**
LSA pmax pmax
comp=Z,36nm,0.8s
LSA LR LR
comp=Z,11µm,23.9s
LSA LR LR
comp=Z,13µm,24.2s
LSA LR LR
comp=Z,21µm,25.3s
LSA Lhasa 62.18 74 P **P 19 28 30.6 +0.1**
LSA pmax pmax
comp=Z,271nm,1.4s
LSA MLR MLR
comp=Z,13µm,22.0s
LSA Lhasa 62.18 74 *i* P **P 19 28 28.4 -2.2**
SNR=52
ODNJ Ogdensburg 62.20 301 P **P 19 28 28.7 -1.2**
ODNJ Ogdensburg 62.20 301 P **P 19 28 26.4 -3.5**
baz=56
ODNJ S **S 19 36 57.4 +1.8**
baz=56
FCC Fort Churchill 62.23 326 P **P 19 28 29.1 -0.7**
FCC Fort Churchill 62.23 326 P **P 19 28 29.1 -0.7**
FCC pmax pmax
comp=Z,657nm,1.8s
J56A Wolcott 62.37 304 P **P 19 28 29.8 -1.2**
J56A IAmb IAmb 19 28 35.4
comp=Z,180nm,1.6s
J56A Wolcott 62.37 304 P **P 19 28 31.8 +0.8**
baz=56
J56A P **P 19 28 31.8 +0.8**
baz=56
J56A S **S 19 36 58.9 +1.3**
baz=56
J56A S **S 19 36 58.9 +1.3**
baz=56
BRNJ Basking Ridge 62.40 301 P **P 19 28 30.0 -1.2**
BRNJ IAmb IAmb 19 28 37.4
comp=Z,231nm,1.9s
BRNJ Basking Ridge 62.40 301 P **P 19 28 32.7 +1.5**
baz=56
BRNJ S **S 19 36 57.4 -0.7**
baz=56
BINY Binghamton 62.43 303 P **P 19 28 30.1 -1.4**
BINY IAMs_20 IAMs_20 19 54 05.0
comp=Z,12µm,20.0s
BINY Binghamton 62.43 303 P **P 19 28 31.2 -0.3**
baz=56
BINY Binghamton 62.43 303 P **P 19 28 29.7 -1.8**
baz=56
BINY S **S 19 36 53.2 -5.5**
baz=56
K57A Scipio Center 62.46 304 P **P 19 28 31.0 -0.7**
K57A Scipio Center 62.46 304 P **P 19 28 30.5 -1.2**
baz=56,SNR=6.0
K57A S **S 19 36 58.7 -0.3**
baz=56
GTA Gaotai 62.51 61 *e*P **P 19 28 32.0 -0.2**
GTA pP sP 19 28 35.3 -0.9
GTA sP pP 19 28 38.3 +3.2
GTA PP **PP 19 30 54.0 +4.6**
GTA S **S 19 37 02.0 +2.1**
GTA sS sS 19 37 13.0 +8.3
GTA SS **SS 19 41 07.8 +4.5**
GTA pmax pmax
comp=Z,47nm,1.7s
GTA pmax pmax
comp=Z,1µm,8.1s
GTA LR LR
comp=Z,25µm,19.6s
GTA LR LR
comp=Z,26µm,18.2s
GTA LR LR
comp=Z,44µm,20.0s
MNCI Minicoy 62.55 105 P **P 19 28 31.9 -0.7**
MNCI IAmb IAmb 19 28 35.6
comp=Z,180nm,1.4s
VJD Vijayawada 62.56 93 *e*P **P 19 28 31.5 -1.2**
KSPA Keystone Colle 62.66 302 S **S 19 37 01.8 +0.4**
baz=56
SADO Sadowa 62.89 307 P **P 19 28 33.6 -0.9**
comp=Z,20nm,0.8s,baz=83,slow=5.3,SNR=13
SADO LR LR 19 54 21.5
comp=Z,12µm,20.1s,baz=44,slow=35
comp=Z,20nm,0.8s
SADO Sadowa 62.89 307 P **P 19 28 34.1 -0.4**
SADO IAmb IAmb 19 28 39.8
comp=Z,153nm,1.2s
RAGD RAYAGADA 62.90 88 *e*P **P 19 28 34.2 -0.7**
J55A Hilton 62.95 305 P **P 19 28 34.1 -0.8**
J55A IAmb IAmb 19 28 40.3
comp=Z,99nm,1.1s
J55A Hilton 62.95 305 P **P 19 28 35.3 +0.4**
baz=56
J55A P **P 19 28 35.3 +0.4**
baz=56
J55A S **S 19 37 08.9 +3.9**
baz=56
J55A S **S 19 37 08.9 +3.9**
baz=56
LUPA Lehigh Univers 62.95 301 P **P 19 28 33.7 -1.3**
LUPA IAmb IAmb 19 28 39.5
comp=Z,261nm,1.9s
TUPA Temple Univers 63.08 301 P **P 19 28 34.3 -1.5**
baz=55,SNR=5.1
P61A Hammonton 63.11 300 P **P 19 28 35.9 -0.1**
baz=55
P61A P **P 19 28 35.9 -0.1**
baz=55
MMNY Mt. Morris Dam 63.31 304 P **P 19 28 36.4 -0.9**
MMNY IAmb IAmb 19 28 41.8
comp=Z,158nm,1.5s
PCHI Peechi 63.36 101 *e*P **P 19 28 37.0 -1.0**
PCHI *e*S **S 19 37 07.9 -2.9**
MEDO Medina 63.39 305 P **P 19 28 36.8 -1.1**
L56A Greenwood 63.44 304 P **P 19 28 36.8 -1.4**
L56A IAmb IAmb 19 28 42.7
comp=Z,225nm,1.6s
L56A Greenwood 63.44 304 P **P 19 28 38.7 +0.5**
baz=55
L56A P **P 19 28 38.7 +0.5**
baz=55
L56A S **S 19 37 11.5 +0.2**
baz=55
L56A S **S 19 37 11.5 +0.2**
baz=55
J54A Appleton 63.44 305 P **P 19 28 37.5 -0.6**
J54A Appleton 63.44 305 P **P 19 28 38.6 +0.4**
baz=55
J54A P **P 19 28 38.6 +0.4**
baz=55
J54A S **S 19 37 13.0 +1.9**
baz=55
J54A S **S 19 37 13.0 +1.9**
baz=55
WUPA West Chester U 63.48 301 P **P 19 28 37.8 -0.7**
DHUB DHUBRI 63.52 78 *e*P **P 19 28 38.0 -1.0**
DHUB IAmb IAmb 19 28 44.0
comp=Z,172nm,0.9s
GEDE Greenville 63.57 301 P **P 19 28 38.8 -0.2**
baz=55,SNR=7.4
M57A Sunshine Farm, 63.63 303 P **P 19 28 39.4 -0.1**
M57A IAmb IAmb 19 28 45.0
comp=Z,107nm,1.1s
M57A Sunshine Farm, 63.63 303 P **P 19 28 39.3 -0.2**
baz=55,SNR=10
M57A P **P 19 28 39.3 -0.2**
baz=55,SNR=10
M57A S **S 19 37 13.2 -0.4**
baz=55
M57A S **S 19 37 13.2 -0.4**
baz=55
N58A Sunbury 63.66 302 P **P 19 28 39.4 -0.3**
N58A IAmb IAmb 19 28 44.0
comp=Z,199nm,1.6s
N58A Sunbury 63.66 302 P **P 19 28 36.1 -3.5**
baz=55,SNR=7.1
N58A P **P 19 28 36.1 -3.5**
baz=55,SNR=7.1
N58A S **S 19 37 14.5 +0.6**
baz=55
N58A S **S 19 37 14.5 +0.6**
baz=55
YAK Yakutsk 63.69 28 LR LR 19 59 35.9
comp=Z,14µm,18.6s,baz=314,slow=39
YAK Yakutsk 63.69 28 P **P 19 28 38.9 -0.6**
YAK IAMs_20 IAMs_20 19 59 25.3
comp=Z,15µm,19.0s
YAK Yakutsk 63.69 28 *d i* P **P 19 28 39.8 +0.4**
YAK pmax pmax
comp=Z,390nm,0.9s
YAK MLR MLR
comp=Z,15µm,16.0s
YAK Yakutsk 63.69 28 P **P 19 28 39.8 +0.4**
C36M Paulatuk 63.70 344 P **P 19 28 38.9 -0.5**
C36M IAMs_20 IAMs_20 19 58 34.3
comp=Z,15µm,19.0s
C36M Paulatuk 63.70 344 P **P 19 28 39.2 -0.2**
baz=34,SNR=18
C36M S **S 19 37 13.6 +0.1**
baz=34
MVL Millersville 63.91 301 P **P 19 28 40.2 -1.1**
WVNY West Valley, N 63.92 304 P **P 19 28 40.6 -0.8**
WVNY West Valley, N 63.92 304 P P 19 28 36.0 -5.3
baz=55,SNR=5.9
WVNY S **S 19 37 18.4 +1.3**
baz=55
SALM Salem 63.95 98 *e*P **P 19 28 44.5 +2.6**
BWNR Bhubaneshwar 63.97 86 *e*P **P 19 28 43.2 +1.3**
R61A Willards 64.23 299 P **P 19 28 43.1 -0.3**
baz=54
R61A P **P 19 28 43.1 -0.3**
baz=54
R61A S **S 19 37 22.0 +0.9**
baz=54
R61A S **S 19 37 22.0 +0.9**
baz=54
SSPA Standing Stone 64.50 303 P **P 19 28 44.7 -0.5**
SSPA IAmb IAmb 19 28 49.7
comp=Z,270nm,1.6s
SSPA Standing Stone 64.50 303 IAMs_20 IAMs_20 19 55 26.7
comp=Z,9µm,20.0s
SSPA Standing Stone 64.50 303 P **P 19 28 46.0 +0.8**
baz=54,SNR=12
SSPA Standing Stone 64.50 303 P **P 19 28 43.9 -1.3**
baz=54
SSPA S **S 19 37 22.5 -1.9**
baz=54
SSPA Standing Stone 64.50 303 P **P 19 28 47.8 +2.6**
MDRS Chennai 64.51 96 *e*P **P 19 28 46.5 +1.0**
M55A Ridgway 64.56 304 P **P 19 28 45.1 -0.5**
M55A IAmb IAmb 19 28 50.1
comp=Z,168nm,1.4s
M55A Ridgway 64.56 304 P **P 19 28 44.4 -1.2**
baz=54,SNR=5.9
M55A P **P 19 28 44.4 -1.2**
baz=54,SNR=5.9
M55A S **S 19 37 26.7 +1.6**
baz=54
M55A S **S 19 37 26.7 +1.6**
baz=54
SDMD Soldier's Deli 64.56 301 P **P 19 28 44.6 -1.0**
MATP Matopo 64.60 164 P **P 19 28 45.2 -0.9**
comp=Z,126nm,1.1s,baz=346,slow=7.5,SNR=21
MATP LR LR 19 59 16.8
comp=Z,4µm,18.9s,baz=341,slow=38
comp=Z,126nm,1.1s
MATP Matopo 64.60 164 *i* P **P 19 28 45.5 -0.5**
MATP Matopo 64.60 164 *i* P **P 19 28 45.5 -0.5**
S61A Accomac 64.82 299 S **S 19 37 32.2 +3.8**
baz=54
S61A S **S 19 37 32.2 +3.8**
baz=54
E46A Sault Ste Mari 64.92 311 P **P 19 28 48.5 +0.6**
E46A IAmb IAmb 19 28 53.1
comp=Z,124nm,1.1s
E46A Sault Ste Mari 64.92 311 P **P 19 28 45.6 -2.2**
baz=54,SNR=11
ERPA Erie 64.92 305 P **P 19 28 47.2 -0.7**
ERPA IAmb IAmb 19 28 53.2
comp=Z,202nm,1.4s
ERPA IAMs_20 IAMs_20 19 55 51.7
comp=Z,14µm,20.0s
ERPA Erie 64.92 305 P **P 19 28 47.7 -0.2**
baz=54
ERPA Erie 64.92 305 P **P 19 28 45.6 -2.3**
baz=54
ERPA S **S 19 37 26.0 -3.6**
baz=54
SHL Shillong 65.15 78 P **P 19 28 48.5 -1.4**
SHL Shillong 65.15 78 P **P 19 28 48.5 -1.4**
SHL pmax pmax
comp=Z,1µm,1.8s
SHL Shillong 65.15 78 P **P 19 28 47.8 -2.0**
SNR=112
SHL Shillong 65.15 78 *e*P **P 19 28 48.7 -1.2**
SHL IAmb IAmb 19 28 55.8
comp=Z,75nm,0.7s
TEZP TEZPUR 65.17 76 *e*P **P 19 28 47.9 -1.9**
TRD Trivandrum 65.17 102 *e*P **P 19 28 51.4 +1.5**
P57A Homestead Farm 65.25 302 P **P 19 28 50.0 -0.1**
P57A IAmb IAmb 19 28 54.7
comp=Z,211nm,1.6s
P57A Homestead Farm 65.25 302 P **P 19 28 49.3 -0.8**
baz=54,SNR=7.3
P57A P **P 19 28 49.3 -0.8**
baz=54,SNR=7.3
P57A S **S 19 37 33.6 -0.1**
baz=54
P57A S **S 19 37 33.6 -0.1**
baz=54
ALLY Alegheny Colle 65.29 305 P **P 19 28 49.5 -0.8**
ALLY IAmb IAmb 19 28 54.7
comp=Z,94nm,1.0s
ALLY Alegheny Colle 65.29 305 P **P 19 28 47.6 -2.7**
baz=54
ALLY S **S 19 37 34.6 +0.5**
baz=54
ZIRO ZIRO 65.37 75 *e*P **P 19 28 50.8 -0.5**
SBV Sambava 65.47 140 *e*P **P 19 28 51.9 +0.3**
SBV Sambava 65.47 140 P **P 19 28 51.9 +0.3**
SNR=10
ITAN ITANAGAR 65.51 75 *e*P **P 19 28 52.5 +0.6**
I49A Point Hope 65.52 308 P **P 19 28 52.0 +0.3**
baz=53
I49A P **P 19 28 52.0 +0.3**
baz=53
I49A S **S 19 37 39.2 +2.4**
baz=53
I49A S **S 19 37 39.2 +2.4**
baz=53
CBN Corbin Frederi 65.60 300 IAMs_20 IAMs_20 19 56 11.9
comp=Z,9µm,19.0s
CBN Corbin Frederi 65.60 300 P **P 19 28 52.0 -0.4**
baz=54
CBN Corbin Frederi 65.60 300 P **P 19 28 51.9 -0.4**
baz=54
CBN S **S 19 37 36.2 -1.7**
baz=54
RCBR Riachuelo 65.72 235 P **P 19 28 52.9 -0.6**
comp=Z,78nm,1.1s,baz=166,slow=7.6,SNR=9.7
RCBR LR LR 19 54 07.0
comp=Z,9µm,22.0s,baz=192,slow=33
comp=Z,78nm,1.1s
RCBR Riachuelo 65.72 235 P **P 19 28 53.0 -0.4**
RCBR Riachuelo 65.72 235 IAMs_20 IAMs_20 19 53 56.2
comp=Z,7µm,21.0s
RCBR Riachuelo 65.72 235 P **P 19 28 53.0 -0.4**
RCBR pmax pmax
comp=Z,92nm,1.2s
RCBR MLR MLR
comp=Z,7µm,21.0s
RCBR Riachuelo 65.72 235 P **P 19 28 55.5 +2.1**
RCBR Riachuelo 65.72 235 *e*P **P 19 28 54.9 +1.5**
M53A WI Miller and 65.73 305 P **P 19 28 52.8 -0.4**
M53A IAmb IAmb 19 28 57.4
comp=Z,237nm,1.5s
M53A IAMs_20 IAMs_20 19 56 26.3
comp=Z,13µm,20.0s
M53A WI Miller and 65.73 305 P **P 19 28 51.7 -1.5**
baz=53,SNR=5.2
M53A S **S 19 37 35.5 -4.1**
baz=53
T60A Surry 65.82 299 P **P 19 28 53.5 -0.3**
T60A IAmb IAmb 19 28 58.5
comp=Z,112nm,0.9s
T60A Surry 65.82 299 P **P 19 28 53.1 -0.7**
baz=54
T60A P **P 19 28 53.1 -0.7**
baz=54
T60A S **S 19 37 41.4 +0.7**
baz=54
T60A S **S 19 37 41.4 +0.7**
baz=54
GLMI Grayling 66.02 309 IAMs_20 IAMs_20 19 57 26.6
comp=Z,10µm,19.0s
GLMI Grayling 66.02 309 P **P 19 28 55.1 +0.1**
baz=53
GLMI Grayling 66.02 309 P **P 19 28 52.9 -2.1**
baz=53
GLMI S **S 19 37 41.7 -1.2**
baz=53
R58B Mineral 66.06 300 P **P 19 28 54.4 -0.9**
R58B IAmb IAmb 19 28 59.8
comp=Z,101nm,1.1s
R58B Mineral 66.06 300 P **P 19 28 52.9 -2.5**
baz=53,SNR=10
R58B P **P 19 28 52.9 -2.5**
baz=53,SNR=10
R58B S **S 19 37 46.9 +3.3**
baz=53
R58B S **S 19 37 46.9 +3.3**
baz=53
M52A Chesterland 66.08 305 P **P 19 28 54.6 -0.9**
M52A IAmb IAmb 19 28 59.9
comp=Z,144nm,0.9s
M52A Chesterland 66.08 305 P **P 19 28 56.3 +0.8**
baz=53
M52A P **P 19 28 56.3 +0.8**
baz=53
M52A S **S 19 37 40.2 -3.6**
baz=53
M52A S **S 19 37 40.2 -3.6**
baz=53
K50A Casco 66.10 307 P **P 19 28 55.0 -0.5**
K50A IAmb IAmb 19 28 59.9
comp=Z,156nm,1.1s
K50A Casco 66.10 307 P **P 19 28 52.6 -2.9**
baz=53
K50A P **P 19 28 52.6 -2.9**
baz=53
K50A S **S 19 37 40.7 -3.2**
baz=53
K50A S **S 19 37 40.7 -3.2**
baz=53
N53A Lisbon 66.21 304 P **P 19 28 56.3 0.0**
N53A IAmb IAmb 19 29 00.9
comp=Z,193nm,1.2s
N53A Lisbon 66.21 304 P P 19 28 51.0 -5.3
baz=53,SNR=11
N53A P P 19 28 51.0 -5.3
baz=53,SNR=11
JSRW J. Sargeant Re 66.22 300 P **P 19 28 55.5 -0.8**
Q56A Snyder Ridge, 66.25 302 P **P 19 28 55.9 -0.7**
Q56A IAmb IAmb 19 29 01.2
comp=Z,140nm,0.9s
Q56A Snyder Ridge, 66.25 302 P **P 19 28 56.1 -0.4**
baz=53,SNR=21
Q56A P **P 19 28 56.1 -0.4**
baz=53,SNR=21
Q56A S **S 19 37 44.9 -1.0**
baz=53
Q56A S **S 19 37 44.9 -1.0**
baz=53
MCWV Mont Chateau 66.29 303 P **P 19 28 56.2 -0.6**
MCWV IAmb IAmb 19 29 01.6
comp=Z,101nm,0.9s
MCWV IAMs_20 IAMs_20 19 56 44.0
comp=Z,12µm,21.0s
MCWV Mont Chateau 66.29 303 P **P 19 28 58.1 +1.3**
baz=53,SNR=5.4
MCWV Mont Chateau 66.29 303 P **P 19 28 57.3 +0.5**
baz=53,SNR=5.4
MCWV S **S 19 37 45.2 -1.2**
baz=53
SILR SILCHAR 66.29 78 *e*P **P 19 28 58.4 +1.5**
SILR IAMs_20 IAMs_20 19 59 16.1
comp=Z,16µm,29.3s
O54A Avella 66.30 303 P **P 19 28 56.9 0.0**
O54A IAmb IAmb 19 29 01.5
comp=Z,112nm,1.1s
O54A Avella 66.30 303 P **P 19 28 57.2 +0.3**
baz=53,SNR=8.1
O54A P **P 19 28 57.2 +0.3**
baz=53,SNR=8.1
O54A S **S 19 37 47.0 +0.5**
baz=53
O54A S **S 19 37 47.0 +0.5**
baz=53
INK Inuvik 66.32 347 P **P 19 28 55.9 -0.5**
comp=Z,74nm,0.9s,baz=19,slow=9.5,SNR=45
INK PcP **PcP 19 29 26.7 +0.4**
comp=Z,33nm,0.9s,baz=53,slow=5.0,SNR=4.3
INK LR LR 19 59 18.3
comp=Z,4µm,21.9s,baz=28,slow=37
comp=Z,74nm,0.9s
INK Inuvik 66.32 347 P **P 19 28 55.5 -0.9**
INK Inuvik 66.32 347 P **P 19 28 55.6 -0.9**
INK pmax pmax
comp=Z,345nm,1.5s
INK Inuvik 66.32 347 P **P 19 28 54.6 -1.8**
baz=26,SNR=70
INK S **S 19 37 45.5 -0.3**
baz=26
C26K Camden Bay 66.34 352 P **P 19 28 56.0 -0.6**
baz=18,SNR=30
C26K S **S 19 37 46.0 0.0**
baz=18
E43A Lone Tree Farm 66.40 312 P **P 19 28 56.5 -0.9**
E43A IAmb IAmb 19 29 01.7
comp=Z,190nm,1.4s
E43A Lone Tree Farm 66.40 312 P **P 19 28 56.1 -1.3**
baz=52
E43A S **S 19 37 49.0 +1.6**
baz=52
T59A Double "B" Far 66.45 299 P **P 19 28 57.7 -0.2**
T59A Double "B" Far 66.45 299 S **S 19 37 49.4 +1.1**
baz=53
T59A S **S 19 37 49.4 +1.1**
baz=53
G45A Suttons Bay 66.47 310 P **P 19 28 56.1 -1.8**
G45A IAmb IAmb 19 29 02.2
comp=Z,293nm,1.5s
G45A Suttons Bay 66.47 310 P **P 19 28 58.9 +1.0**
baz=52
G45A P **P 19 28 58.9 +1.0**
baz=52
G45A S **S 19 37 50.0 +1.6**
baz=52
G45A S **S 19 37 50.0 +1.6**
baz=52
C27K Jago River 66.49 351 P **P 19 28 58.5 +0.9**
baz=18,SNR=131
C27K S **S 19 37 48.1 +0.2**
baz=18
V61A Roper 66.52 298 P **P 19 28 56.5 -1.8**
baz=53

V61A				P	P	19 28 56.5	-1.8
	baz=53						
V61A				S	S	19 37 50.2	+1.0
	baz=53						
V61A				S	S	19 37 50.2	+1.0
	baz=53						
MOKO	MOKOCHONG	66.57	75	eP	P	19 28 59.0	0.0
KOHI	KOHIMA	66.65	76	eP	P	19 28 59.5	0.0
MUSN	Musina, Limpop	66.69	163	eP	P	19 28 59.3	-0.1
MUSN				IAmb	IAmb	19 29 02.9	
	comp=Z,207nm,1.0s						
MUSN	Musina, Limpop	66.69	163	i P	P	19 28 59.2	-0.2
MUSN	Musina, Limpop	66.69	163	i P	P	19 28 59.2	-0.2
BRDH	Bariadhala	66.75	80	LR	LR	20 06 10.5	
	comp=Z,22μm,18.3s,baz=322,slow=43						
O53A	New Philadelph	66.77	304	P	P	19 28 59.3	-0.6
O53A				IAmb	IAmb	19 29 04.6	
	comp=Z,157nm,1.0s						
O53A	New Philadelph	66.77	304	P	P	19 29 00.1	+0.3
	baz=53,SNR=17						
O53A				S	S	19 37 49.4	-2.8
	baz=53						
D41A	Chassel	66.82	313	P	P	19 28 57.9	-2.1
D41A	Chassel	66.82	313	P	P	19 29 00.4	+0.4
	baz=51						
D41A				S	S	19 37 55.3	+2.7
	baz=51						
S57A	Dark Hollow, R	66.87	301	P	P	19 28 58.9	-1.6
S57A	Dark Hollow, R	66.87	301	P	P	19 28 59.4	-1.1
	baz=53,SNR=5.4						
S57A				P	P	19 28 59.4	-1.1
	baz=53,SNR=5.4						
S57A				S	S	19 37 53.7	+0.2
	baz=53						
S57A				S	S	19 37 53.7	+0.2
	baz=53						
C24K	Franklin Bluff	66.89	353	P	P	19 28 59.5	-0.6
	baz=14						
C24K				S	S	19 37 54.3	+1.6
	baz=14						
LKP	Lekhapani	66.90	74	eP	P	19 29 01.3	+0.5
YKA	Yellowknife Ar	66.91	336	P	P	19 28 59.7	-0.6
	comp=Z,137nm,1.0s,baz=38,slow=5.5,SNR=94						
YKA				PKPPKP	P'P'df	19 57 30.2	-6.5
	comp=Z,5.1nm,1.0s,baz=208,slow=2.9,SNR=12						
YKA				LR	LR	19 58 14.4	
	comp=Z,11μm,21.7s,baz=57,slow=36						
	comp=Z,137nm,1.0s						
C23K	Itkillik River	66.93	354	P	P	19 28 59.3	-1.1
	baz=13,SNR=32						
C23K				S	S	19 37 54.3	+1.1
	baz=13						
U59A	Littleton	66.97	299	P	P	19 28 59.8	-1.4
U59A				IAmb	IAmb	19 29 05.7	
	comp=Z,167nm,1.5s						
U59A	Littleton	66.97	299	P	P	19 29 01.2	+0.1
	baz=53,SNR=6.2						
U59A				P	P	19 29 01.2	+0.1
	baz=53,SNR=6.2						
U59A				S	S	19 37 56.2	+1.5
	baz=53						
U59A				S	S	19 37 56.2	+1.5
	baz=53						
AAM	Ann Arbor	66.99	307	P	P	19 28 59.0	-2.2
AAM				IAmb	IAmb	19 29 05.5	
	comp=Z,168nm,1.4s						
AAM				IAMs_20	IAMs_20	19 55 40.5	
	comp=Z,14μm,22.0s						
AAM	Ann Arbor	66.99	307	P	P	19 28 59.0	-2.2
AAM				pmax	pmax		
	comp=Z,168nm,1.4s						
AAM				MLR	MLR		
	comp=Z,14μm,22.0s						
AAM	Ann Arbor	66.99	307	P	P	19 28 59.1	-2.2
	baz=52						
AAM	Ann Arbor	66.99	307	P	P	19 29 02.0	+0.7
	baz=52						
AAM				S	S	19 37 53.8	-1.0
	baz=52						
LZH	Lanzhou	67.04	62	‖P	P	19 29 03.5	+1.6
LZH				pP	sP	19 29 11.3	+5.4
LZH				PP	PP	19 31 31.0	+1.8
LZH				S	S	19 37 56.5	+0.6
LZH				pmax	pmax		
	comp=Z,390nm,1.4s						
LZH				pmax	pmax		
	comp=Z,2μm,5.5s						
LZH				LR	LR		
	comp=Z,29μm,19.2s						
LZH				LR	LR		
	comp=Z,22μm,18.5s						
LZH				LR	LR		
	comp=Z,32μm,19.9s						
D25K	Kavik River	67.06	352	P	P	19 29 01.9	+0.6
	baz=16,SNR=34						
D25K				S	S	19 37 55.1	+0.2
	baz=16						
N51A	Ashland	67.07	305	P	P	19 29 00.8	-1.0
N51A				IAmb	IAmb	19 29 06.0	
	comp=Z,209nm,1.3s						
N51A	Ashland	67.07	305	P	P	19 29 01.2	-0.6
	baz=52,SNR=7.3						
N51A				P	P	19 29 01.2	-0.6
	baz=52,SNR=7.3						
N51A				S	S	19 37 54.8	-1.0
	baz=52						
N51A				S	S	19 37 54.8	-1.0
	baz=52						
J47A	Sunmer	67.10	308	P	P	19 29 01.2	-0.7
J47A				IAmb	IAmb	19 29 07.1	
	comp=Z,162nm,1.1s						
J47A	Sunmer	67.10	308	P	P	19 29 02.1	+0.2
	baz=52						
J47A				P	P	19 29 02.1	+0.2
	baz=52						
F31M	Tsiigehtchic	67.13	347	P	P	19 29 01.4	-0.3
	baz=26,SNR=140						
F31M				S	S	19 37 54.9	-0.8
	baz=26						
M50A	Fremont	67.18	306	P	P	19 29 00.8	-1.7
M50A				IAmb	IAmb	19 29 06.5	
	comp=Z,202nm,1.4s						
M50A	Fremont	67.18	306	P	P	19 29 00.2	-2.2
	baz=52						
M50A				P	P	19 29 00.2	-2.2
	baz=52						
M50A				S	S	19 37 56.8	-0.2
	baz=52						
M50A				S	S	19 37 56.8	-0.2
	baz=52						
ANWB	Willy Bob	67.21	273	IAMs_20	IAMs_20	19 52 19.0	
	comp=Z,10μm,22.0s						
ANWB	Willy Bob	67.21	273	eP	P	19 29 05.9	+3.0
O52A	Adamsville	67.23	304	P	P	19 29 01.5	-1.3
O52A				IAmb	IAmb	19 29 07.2	
	comp=Z,149nm,1.1s						
O52A	Adamsville	67.23	304	P	P	19 29 01.6	-1.2
	baz=52,SNR=8.8						
O52A				P	P	19 29 01.6	-1.2
	baz=52,SNR=8.8						
O52A				S	S	19 37 55.9	-1.9
	baz=52						
O52A				S	S	19 37 55.9	-1.9
	baz=52						
R55A	Marlinton	67.29	302	P	P	19 29 02.0	-1.2
R55A				IAmb	IAmb	19 29 07.8	
	comp=Z,218nm,1.4s						
R55A	Marlinton	67.29	302	P	P	19 29 02.7	-0.6
	baz=53,SNR=11						
R55A				P	P	19 29 02.7	-0.6
	baz=53,SNR=11						
R55A				S	S	19 38 02.1	+3.5
	baz=53						
R55A				S	S	19 38 02.1	+3.5
	baz=53						
Q54A	Coxs Mills	67.31	303	P	P	19 29 02.4	-0.9
Q54A				IAmb	IAmb	19 29 07.5	
	comp=Z,115nm,1.1s						
Q54A	Coxs Mills	67.31	303	P	P	19 29 03.1	-0.1
	baz=52,SNR=8.8						
Q54A				P	P	19 29 03.1	-0.1
	baz=52,SNR=8.8						
Q54A				S	S	19 38 01.3	+2.7
	baz=52						
Q54A				S	S	19 38 01.3	+2.7
	baz=52						
P53A	Whipple	67.34	303	P	P	19 29 02.6	-0.9
P53A				IAmb	IAmb	19 29 08.3	
	comp=Z,240nm,1.2s						
P53A	Whipple	67.34	303	P	P	19 29 03.1	-0.4
	baz=52,SNR=20						
P53A				P	P	19 29 03.1	-0.4
	baz=52,SNR=20						
F42A	Maple Grove Fa	67.40	312	P	P	19 29 01.9	-1.9
F42A	Maple Grove Fa	67.40	312	S	S	19 37 59.5	-0.2
	baz=51						
I45A	Fountain	67.42	310		P	19 29 02.5	-1.3
I45A	Fountain	67.42	310	P	P	19 29 03.6	-0.3
	baz=52						
I45A				P	P	19 29 03.6	-0.3
	baz=52						
D24K	Happy Valley	67.45	353	P	P	19 29 03.2	-0.5
	baz=14						
D24K				S	S	19 38 01.3	+1.8
	baz=14						
T57A	Hurt	67.52	300	P	P	19 29 02.8	-1.9
T57A				IAmb	IAmb	19 29 09.2	
	comp=Z,124nm,1.3s						
T57A	Hurt	67.52	300	P	P	19 29 03.9	-0.7
	baz=52,SNR=11						
T57A				P	P	19 29 03.9	-0.7
	baz=52,SNR=11						
T57A				S	S	19 38 01.0	-0.3
	baz=52						
T57A				S	S	19 38 01.0	-0.3
	baz=52						
BILL	Bilibino	67.54	11	P	P	19 29 04.8	+0.6
BILL				IAMs_20	IAMs_20	19 58 46.8	
	comp=Z,7μm,20.0s						
BILL	Bilibino	67.54	11	i P	P	19 29 04.0	-0.3
BILL				i		19 29 37.8	
BILL				i S	S	19 38 01.3	+0.7
BILL				pmax	pmax		
	comp=Z,127nm,1.2s						
BILL				MLR	MLR		
	comp=Z,7μm,20.0s						
GDSD	La Dsirade Is	67.55	272	IAMs_20	IAMs_20	19 53 18.8	
	comp=Z,10μm,22.0s						
ANBD	Bethesda, Anti	67.59	273	eP	P	19 29 08.2	+2.8
E27K	Coleen River	67.60	350	P	P	19 29 05.5	+0.7
	baz=20,SNR=73						
E27K				S	S	19 38 02.4	+1.0
	baz=20						
L48A	N Adams	67.67	307	P	P	19 29 04.7	-0.9
L48A				IAmb	IAmb	19 29 10.4	
	comp=Z,177nm,1.1s						
L48A	N Adams	67.67	307	P	P	19 29 04.3	-1.2
	baz=52,SNR=7.0						
L48A				P	P	19 29 04.3	-1.2
	baz=52,SNR=7.0						
L48A				S	S	19 37 57.0	-5.9
	baz=52						
L48A				S	S	19 37 57.0	-5.9
	baz=52						
CNNC	Cliffs of the	67.71	298	P	P	19 29 04.8	-1.0
CNNC				IAMs_20	IAMs_20	19 57 04.9	
	comp=Z,8μm,20.0s						
CNNC	Cliffs of the	67.71	298	P	P	19 29 04.2	-1.6
	baz=52						
P52A	Corning	67.71	304	P	P	19 29 04.8	-1.0
P52A				IAmb	IAmb	19 29 10.0	
	comp=Z,197nm,1.2s						
P52A	Corning	67.71	304	P	P	19 29 06.2	+0.3
	baz=52,SNR=20						
P52A				S	S	19 37 59.5	-4.0
	baz=52						
COWI	Conover	67.73	313	P	P	19 29 05.2	-0.7
COWI				IAmb	IAmb	19 29 11.0	
	comp=Z,116nm,1.1s						
ABD	La Joyeuse, An	67.75	272	IAMs_20	IAMs_20	19 53 35.3	
	comp=Z,11μm,21.0s						
ABD	La Joyeuse, An	67.75	272	eP	P	19 29 03.1	-3.3
D23K	Nanushuk River	67.79	354	P	P	19 29 05.2	-0.7
	baz=13						
D23K				S	S	19 38 05.9	+2.3
	baz=13						
EYMN	Ely	67.80	315	P	P	19 29 04.9	-1.4
EYMN	Ely	67.80	315	IAMs_20	IAMs_20	19 57 36.6	
	comp=Z,11μm,20.0s						
EYMN	Ely	67.80	315	P	P	19 29 05.7	-0.6
	baz=50						
EYMN				S	S	19 38 02.9	-1.5
	baz=50						
LEPH	Lephalale, Lim	67.81	165	eP	P	19 29 05.2	-1.3
LEPH				IAmb	IAmb	19 29 09.1	
	comp=Z,103nm,1.0s						
SAIH	SAIHA	67.83	79	eP	P	19 29 07.6	+0.6
ACSO	Alum Creek Sta	67.86	305	P	P	19 29 05.7	-1.0
ACSO				IAmb	IAmb	19 29 10.9	
	comp=Z,168nm,1.1s						
ACSO				IAMs_20	IAMs_20	19 55 32.5	
	comp=Z,10μm,21.0s						
ACSO	Alum Creek Sta	67.86	305	P	P	19 29 07.6	+0.8
	baz=52,SNR=9.7						
ACSO	Alum Creek Sta	67.86	305	P	P	19 29 05.0	-1.8
	baz=52,SNR=9.7						
ACSO				S	S	19 38 02.7	-2.5
	baz=52						
SMRT	St. Maarten	67.91	274	eP	P	19 29 09.7	+2.3
MAGL	Barre de l'ile	67.94	272	eP	P	19 29 07.8	+0.2
G30M	tAoh Zraii Nji	67.96	347	P	P	19 29 06.5	-0.5
	baz=24,SNR=35						
G30M				S	S	19 38 03.9	-1.9
	baz=24						
HIA	Hailar	67.99	43	P	P	19 29 08.4	+0.9
HIA				IAmb	IAmb	19 29 13.8	
	comp=Z,199nm,1.3s						
HIA	Hailar	67.99	43	P	P	19 29 08.4	+0.9
HIA				pmax	pmax		
	comp=Z,199nm,1.3s						
HIA				MLR	MLR		
	comp=Z,50μm,18.0s						
H43A	Windswept, Lux	68.01	311	P	P	19 29 07.0	-0.6
H43A	Windswept, Lux	68.01	311	P	P	19 29 05.9	-1.7
	baz=51						
H43A				S	S	19 38 08.7	+1.8
	baz=51						
TOLK	Toolik Lake Re	68.02	353	P	P	19 29 08.1	+0.7
TOLK				IAmb	IAmb	19 29 13.0	
	comp=Z,156nm,1.0s						
TOLK				IAMs_20	IAMs_20	19 57 29.4	
	comp=Z,6μm,21.0s						
TOLK	Toolik Lake Re	68.02	353	P	P	19 29 06.9	-0.5
	baz=14,SNR=38						
TOLK				S	S	19 38 08.1	+1.6
	baz=14						
KAAM	Kaadhehdhoo	68.02	111	P	P	19 29 10.9	+2.8
	comp=Z,328nm,1.3s						
GDHS	Morne Mazeau,	68.09	272	IAMs_20	IAMs_20	19 53 44.1	
	comp=Z,11μm,21.0s						
CBE	Ff, Capester	68.10	272	IAMs_20	IAMs_20	19 53 56.6	
	comp=Z,12μm,21.0s						
CBE	Ff, Capester	68.10	272	eP	P	19 29 08.8	+0.2
MBFL	Flemmings, Mon	68.11	273	eP	P	19 29 07.8	-0.8
MLYT	Lee's Yard	68.11	273	eP	P	19 29 07.8	-0.8
BLA	Blacksburg	68.13	301	P	P	19 29 09.0	+0.4
BLA				IAmb	IAmb	19 29 12.7	
	comp=Z,167nm,1.6s						
BLA				IAMs_20	IAMs_20	19 59 30.8	
	comp=Z,9μm,18.0s						
BLA	Blacksburg	68.13	301	P	P	19 29 09.0	+0.4
BLA				pmax	pmax		
	comp=Z,167nm,1.7s						
BLA				MLR	MLR		
	comp=Z,9μm,18.0s						
BLA	Blacksburg	68.13	301	P	P	19 29 06.0	-2.5
	baz=52						
BLA	Blacksburg	68.13	301	P	P	19 29 08.8	+0.2
	baz=52						
BLA				S	S	19 38 07.2	-1.5
	baz=52						
E25K	Arctic Village	68.13	352	P	P	19 29 08.8	+0.8
	baz=17,SNR=36						
E25K				S	S	19 38 08.4	+0.6
	baz=17						
BTO	Baotou	68.14	55	eP	P	19 29 08.8	+0.2
BTO				S	S	19 38 07.5	-1.3
N49A	Columbus Grove	68.15	306	P	P	19 29 07.6	-1.0
N49A				IAmb	IAmb	19 29 13.4	
	comp=Z,139nm,0.9s						
N49A	Columbus Grove	68.15	306	P	P	19 29 06.5	-2.1
	baz=52,SNR=9.9						
N49A				P	P	19 29 06.5	-2.1
	baz=52,SNR=9.9						
N49A				S	S	19 38 07.0	-1.7
	baz=52						
N49A				S	S	19 38 07.0	-1.7
	baz=52						
FFC	Flin Flon	68.16	326	P	P	19 29 07.9	-0.5
FFC				IAmb	IAmb	19 29 11.4	
	comp=Z,201nm,1.3s						
FFC	Flin Flon	68.16	326	P	P	19 29 07.9	-0.5
FFC				pmax	pmax		
	comp=Z,201nm,1.3s						
FFC				MLR	MLR		
	comp=Z,16μm,22.0s						
FFC	Flin Flon	68.16	326	P	P	19 29 08.9	+0.5
V58A	Windy Hill, Pi	68.16	299	P	P	19 29 08.4	-0.3
V58A				IAmb	IAmb	19 29 13.2	
	comp=Z,215nm,1.6s						
V58A	Windy Hill, Pi	68.16	299	P	P	19 29 07.8	-0.9
	baz=52,SNR=5.9						
V58A				P	P	19 29 07.8	-0.9
	baz=52,SNR=5.9						
SEUS	St. Eustatius	68.20	274	IAMs_20	IAMs_20	19 53 01.0	
	comp=Z,16μm,22.0s						
SEUS	St. Eustatius	68.20	274	eP	P	19 29 09.4	+0.3
Q52A	Bidwell	68.20	303	P	P	19 29 07.9	-1.0
Q52A				IAmb	IAmb	19 29 13.1	
	comp=Z,181nm,1.1s						
Q52A	Bidwell	68.20	303	P	P	19 29 07.5	-1.4
	baz=52,SNR=8.3						
Q52A				P	P	19 29 07.5	-1.4
	baz=52,SNR=8.3						
Q52A				S	S	19 38 07.9	-1.5
	baz=52						
Q52A				S	S	19 38 07.9	-1.5
	baz=52						
MOPA	Mopani	68.22	162	eP	P	19 29 09.8	+0.8
MOPA				IAmb	IAmb	19 29 13.0	
	comp=Z,18nm,1.0s						
MOPA	Mopani	68.22	162	i P	P	19 29 10.9	+1.9
MOPA	Mopani	68.22	162	i P	P	19 29 10.9	+1.9
TDBA	Terre de Bas,	68.26	272	IAMs_20	IAMs_20	19 54 00.7	
	comp=Z,9μm,21.0s						
TDBA	Terre de Bas,	68.26	272	eP	P	19 29 10.5	+0.9
S54A	Dingess, Beckl	68.33	302	P	P	19 29 09.4	-0.4
S54A				IAmb	IAmb	19 29 13.8	
	comp=Z,141nm,1.4s						
S54A	Dingess, Beckl	68.33	302	P	P	19 29 09.0	-0.8
	baz=52						
S54A				P	P	19 29 09.0	-0.8
	baz=52						
S54A				S	S	19 38 12.3	+1.3
	baz=52						
S54A				S	S	19 38 12.3	+1.3
	baz=52						
P51A	Williamsport	68.37	304	P	P	19 29 08.2	-1.7
P51A				IAmb	IAmb	19 30 29.2	
	comp=Z,87nm,0.6s						
P51A	Williamsport	68.37	304	P	P	19 29 08.3	-1.7
	baz=52						
P51A				P	P	19 29 08.3	-1.7
	baz=52						
P51A				S	S	19 38 09.3	-2.0
	baz=52						
P51A				S	S	19 38 09.3	-2.0
	baz=52						
DSLB	Salisbury	68.37	271	eP	P	19 29 11.8	+1.5
F26K	Sheenjek River	68.38	351	P	P	19 29 10.2	+0.5
	baz=18,SNR=106						
F26K				S	S	19 38 12.6	+1.9
	baz=18						
R53A	Hurricane	68.40	303	P	P	19 29 09.2	-0.9
R53A				IAmb	IAmb	19 29 14.6	
	comp=Z,128nm,0.9s						
R53A	Hurricane	68.40	303	P	P	19 29 08.7	-1.5
	baz=52,SNR=20						
R53A				P	P	19 29 08.7	-1.5
	baz=52,SNR=20						
R53A				S	S	19 38 10.9	-0.8
	baz=52						
R53A				S	S	19 38 10.9	-0.8
	baz=52						
MDN	Morne-Daniel	68.43	271	eP	P	19 29 11.9	+1.3
BBSP	Saint Philip	68.44	268	eP	P	19 29 15.6	+4.9
ZEA	Zeya	68.46	36	eP	P	19 29 11.7	+1.4
ZEA				e		19 29 18.2	
ZEA				eS	S	19 38 17.2	+5.2
ZEA				pmax	pmax		
	comp=E,20nm,2.1s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.1s						
ZEA				pmax	pmax		
	comp=E,100nm,5.2s						
ZEA				pmax	pmax		
	comp=Z,400nm,2.7s						
ZEA				smax	smax		
	comp=N,900nm,6.8s						
ZEA				smax	smax		
	comp=E,1μm,7.7s						
ZEA				MLR	MLR		
	comp=E,15μm,17.0s						
ZEA				MLR	MLR		
	comp=Z,28μm,17.0s						
ZEA				MLR	MLR		
	comp=N,11μm,18.0s						
E24K	Your Creek	68.47	353	P	P	19 29 08.3	-1.9
	baz=14						
E24K				S	S	19 38 14.2	+2.4
	baz=14						
ULM	Lac du Bonnet	68.48	319	P	P	19 29 10.4	-0.1
	comp=N,54nm,0.8s,baz=48,slow=6.4,SNR=24						
ULM				LR	LR	19 57 47.8	
	comp=N,12μm,21.3s,baz=54,slow=35						
	comp=N,54nm,0.8s						
ULM	Lac du Bonnet	68.48	319	P	P	19 29 10.2	-0.3
ULM	Lac du Bonnet	68.48	319	P	P	19 29 10.2	-0.3
ULM				pmax	pmax		
	comp=Z,584nm,1.7s						
BBGH	Gun Hill	68.49	268	IAMs_20	IAMs_20	19 59 03.0	
	comp=Z,7μm,21.0s						
BBGH	Gun Hill	68.49	268	eP	P	19 29 09.6	-1.4
LBTB	Lobatse	68.56	168	LR	LR	20 02 54.1	
	comp=Z,4μm,18.1s,baz=350,slow=39						
LBTB	Lobatse	68.56	168	P	P	19 29 10.4	-0.8
LBTB				IAmb	IAmb	19 29 14.5	
	comp=Z,230nm,1.1s						
LBTB	Lobatse	68.56	168	P	P	19 29 10.5	-0.8
LBTB				pmax	pmax		
	comp=Z,230nm,1.2s						
E23K	Chandalar	68.59	353	P	P	19 29 11.9	+0.9
	baz=14,SNR=45						
E23K				S	S	19 38 15.8	+2.5
	baz=14						
MPOM	Morne Pois Mar	68.60	270	P	P	19 29 10.4	-1.3
MPOM	Morne Pois Mar	68.60	270	eP	P	19 29 11.8	+0.1
EPYK	Eagle Plains	68.60	347	P	P	19 29 10.3	-0.7
EPYK				IAMs_20	IAMs_20	20 01 48.9	
	comp=Z,7μm,18.0s						
EPYK	Eagle Plains	68.60	347	P	P	19 29 11.6	+0.5
	baz=23,SNR=52						
EPYK				S	S	19 38 11.7	-1.7
	baz=23						
FDF	Fort de France	68.63	270	P	P	19 29 10.7	-1.2
FDF				IAmb	IAmb	19 29 27.2	
	comp=Z,134nm,1.3s						
FDF	Fort de France	68.63	270	P	P	19 29 10.7	-1.2
FDF				pmax	pmax		
	comp=Z,134nm,1.3s						
FDF				MLR	MLR		
	comp=Z,4μm,21.0s						
FDF	Fort de France	68.63	270	eP	P	19 29 13.3	+1.4
U56A	King	68.63	300	P	P	19 29 10.9	-0.8
U56A	King	68.63	300	P	P	19 29 10.6	-1.1
	baz=52,SNR=6.4						
U56A				P	P	19 29 10.6	-1.1
	baz=52,SNR=6.4						
F25K	Christian Rive	68.65	351	P	P	19 29 10.6	-0.7
	baz=17,SNR=24						
F25K				S	S	19 38 16.6	+2.6
	baz=17						
B35A	Bob, Littlefor	68.67	317	P	P	19 29 11.0	-0.8
B35A				IAmb	IAmb	19 29 16.9	
	comp=Z,172nm,1.2s						
B35A	Bob, Littlefor	68.67	317	P	P	19 29 10.4	-1.3
	baz=49,SNR=27						
B35A				S	S	19 38 13.7	-1.1
	baz=49						
Y60A	Bolivia	68.67	297	P	P	19 29 11.6	-0.4
	baz=52						

Y60A				P	P	19 29 11.6	-0.4
	baz=52						
Y60A				S	S	19 38 19.6	+4.5
	baz=52						
Y60A				S	S	19 38 19.6	+4.5
	baz=52						
BMAR	Burnt Mountain	68.69	351	P	P	19 29 11.5	0.0
WRGLY	Wrigley	68.70	340	P	P	19 29 11.2	-0.4
	baz=33,SNR=30						
WRGLY				S	S	19 38 15.0	+0.6
	baz=33						
E22K	Anaktuvuk Pass	68.70	354	P	P	19 29 10.6	-1.0
	baz=12						
E22K				S	S	19 38 16.1	+1.6
	baz=12						
E38A	The Farm, Brul	68.70	314	P	P	19 29 12.0	0.0
E38A				IAmb	IAmb	19 29 16.1	
	comp=Z,185nm,1.2s						
E38A	The Farm, Brul	68.70	314	P	P	19 29 10.3	-1.7
	baz=50,SNR=12						
E38A				S	S	19 38 17.5	+2.4
	baz=50						
O49A	Covington	68.70	305	P	P	19 29 10.3	-1.7
O49A				IAmb	IAmb	19 29 15.8	
	comp=Z,198nm,1.3s						
O49A	Covington	68.70	305	P	P	19 29 10.5	-1.6
	baz=51,SNR=5.4						
O49A				P	P	19 29 10.5	-1.6
	baz=51,SNR=5.4						
O49A				S	S	19 38 14.5	-0.8
	baz=51						
O49A				S	S	19 38 14.5	-0.8
	baz=51						
ROSB	Rosrio	68.70	244	eP	P	19 29 12.0	-0.3
BIM	Bigot	68.71	270	P	P	19 29 12.5	0.0
BIM	Bigot	68.71	270	eP	P	19 29 13.7	+1.3
L46A	Eue Claire	68.71	308	P	P	19 29 11.4	-0.7
PALK	Pallekele	68.72	100	LR	LR	20 02 26.0	
	comp=Z,5μm,20.1s,baz=68,slow=39						
PALK	Pallekele	68.72	100	P	P	19 29 12.0	-0.5
PALK				IAmb	IAmb	19 29 15.4	
	comp=Z,284nm,1.9s						
PALK	Pallekele	68.72	100	P	P	19 29 12.0	-0.5
PALK				pmax	pmax		
	comp=Z,284nm,1.9s						
PALK				MLR	MLR		
	comp=Z,6μm,21.0s						
PALK	Pallekele	68.72	100	P	P	19 29 12.5	0.0
PALK				P	P	19 29 12.5	0.0
PALK				P	P	19 29 12.5	0.0
PALK	Pallekele	68.72	100	P	P	19 29 12.3	-0.2
	comp=Z,3μmcomp=Z,2μmcomp=Z,51nm,1.0s						
PALK	Pallekele	68.72	100	P	P	19 29 13.3	+0.8
Q51A	Peebles	68.82	304	P	P	19 29 12.2	-0.6
Q51A				IAmb	IAmb	19 29 16.8	
	comp=Z,272nm,1.4s						
Q51A	Peebles	68.82	304	P	P	19 29 11.8	-1.1
	baz=51,SNR=14						
Q51A				P	P	19 29 11.8	-1.1
	baz=51,SNR=14						
Q51A				S	S	19 38 15.4	-1.5
	baz=51						
Q51A				S	S	19 38 15.4	-1.5
	baz=51						
G40A	Rib Lake	68.84	313	P	P	19 29 12.3	-0.6
G40A				IAmb	IAmb	19 29 17.3	
	comp=Z,176nm,1.2s						
G40A	Rib Lake	68.84	313	P	P	19 29 13.3	+0.5
	baz=50,SNR=15						
G40A				S	S	19 38 17.9	+1.1
	baz=50						
MDP	Montagnes des	68.86	257	P	P	19 29 13.6	+0.2
	comp=Z,16nm,0.9s,baz=42,slow=7.4,SNR=9.5						
MDP				LR	LR	19 58 50.6	
	comp=Z,5μm,18.1s,baz=43,slow=36						
	comp=Z,16nm,0.9s						
HHC	Hu-ho-hao-te	68.90	54	eP	P	19 29 12.5	-0.9
HHC				PP	PP	19 31 46.3	+1.2
HHC				S	S	19 38 13.3	-4.6
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,2μm,5.8s						
G27K	Doyon Strip	68.91	350	P	P	19 29 12.0	-1.0
	baz=20,SNR=76						
G27K				S	S	19 38 19.4	+2.3
	baz=20						
F24K	Squaw Lake	68.95	352	P	P	19 29 13.3	0.0
	baz=15,SNR=49						
F24K				S	S	19 38 18.5	+0.9
	baz=15						
SLBI	Saint Lucia, B	68.96	270	eP	P	19 29 14.8	+0.9
SJVI	Gifft Hill Sch	68.98	276	P	P	19 29 12.7	-1.3
I42A	Draeger Farm,	69.01	311	P	P	19 29 12.0	-1.9
I42A				IAmb	IAmb	19 29 18.4	
	comp=Z,183nm,1.4s						
I42A	Draeger Farm,	69.01	311	P	P	19 29 14.0	+0.1
	baz=50						
I42A				S	S	19 38 19.1	+0.2
	baz=50						
G26K	Porcupine Rive	69.05	350	P	P	19 29 13.1	-0.6
	baz=18,SNR=118						
G26K				S	S	19 38 20.2	+1.7
	baz=18						
X58A	Rowland	69.07	298	P	P	19 29 13.8	-0.6
X58A				IAmb	IAmb	19 29 19.0	
	comp=Z,211nm,1.6s						
X58A	Rowland	69.07	298	P	P	19 29 13.0	-1.4
	baz=52						
X58A				P	P	19 29 13.0	-1.4
	baz=52						
X58A				S	S	19 38 20.2	+0.4
	baz=52						
X58A				S	S	19 38 20.2	+0.4
	baz=52						
N47A	Urbana	69.07	307	P	P	19 29 13.1	-1.3
N47A	Urbana	69.07	307	P	P	19 29 12.7	-1.7
	baz=51						
N47A				P	P	19 29 12.7	-1.7
	baz=51						
N47A				S	S	19 38 15.5	-4.2
	baz=51						
N47A				S	S	19 38 15.5	-4.2
	baz=51						
Y59A	Loris	69.11	297	P	P	19 29 13.7	-1.0
	baz=52						
Y59A				P	P	19 29 13.7	-1.0
	baz=52						
W57A	Gilead	69.12	299	P	P	19 29 13.0	-1.7
W57A				IAmb	IAmb	19 29 18.9	
	comp=Z,146nm,1.5s						
W57A	Gilead	69.12	299	P	P	19 29 13.5	-1.2
	baz=52,SNR=7.7						
W57A				P	P	19 29 13.5	-1.2
	baz=52,SNR=7.7						
W57A				S	S	19 38 21.8	+1.4
	baz=52						
W57A				S	S	19 38 21.8	+1.4
	baz=52						
MCLT	Moule a Chique	69.14	269	eP	P	19 29 15.7	+0.6
O48B	Farmland	69.14	306	P	P	19 29 13.0	-1.8
	baz=51,SNR=6.6						
O48B				S	S	19 38 18.2	-2.4
	baz=51						
O48B	Farmland	69.14	306	P	P	19 29 14.0	-0.8
	baz=51,SNR=6.6						
O48B				S	S	19 38 19.2	-1.4
	baz=51						
ABPO	Ambohimpanom	69.17	145	P	P	19 29 14.9	-0.3
ABPO	Ambohimpanom	69.17	145	P	P	19 29 14.9	-0.3
ABPO				pmax	pmax		
	comp=Z,68nm,1.4s						
ABPO	Ambohimpanom	69.17	145	P	P	19 29 16.9	+1.6
P49A	Miami Univ. Ec	69.34	305	P	P	19 29 13.7	-2.3
P49A				IAmb	IAmb	19 29 19.3	
	comp=Z,158nm,1.4s						
P49A				IAMs_20	IAMs_20	20 02 09.6	
	comp=Z,8μm,18.0s						
P49A	Miami Univ. Ec	69.34	305	P	P	19 29 14.1	-1.9
	baz=51						
P49A				S	S	19 38 22.6	-0.2
	baz=51						
P49A	Miami Univ. Ec	69.34	305	P	P	19 29 15.0	-1.0
	baz=51						
P49A				S	S	19 38 22.7	-0.2
	baz=51						
CDVI	St. Croix	69.34	275	P	P	19 29 14.8	-1.4
CDVI				IAmb	IAmb	19 29 21.2	
	comp=Z,106nm,1.1s						
F22K	John River	69.34	354	P	P	19 29 15.1	-0.5
	baz=12						
F22K				S	S	19 38 24.1	+2.0
	baz=12						
U54A	Nelsons Funny	69.44	301	P	P	19 29 15.9	-0.8
U54A				IAmb	IAmb	19 29 20.9	
	comp=Z,241nm,1.4s						
U54A	Nelsons Funny	69.44	301	P	P	19 29 16.1	-0.7
	baz=51,SNR=9.6						
U54A				P	P	19 29 16.1	-0.7
	baz=51,SNR=9.6						
U54A				S	S	19 38 24.2	-0.1
	baz=51						
U54A				S	S	19 38 24.2	-0.1
	baz=51						
H27K	Steamboat Moun	69.44	349	P	P	19 29 16.3	0.0
	baz=20,SNR=109						
H27K				S	S	19 38 25.0	+1.6
	baz=20						
K43A	Burlington	69.44	309	P	P	19 29 15.4	-1.2
K43A	Burlington	69.44	309	P	P	19 29 16.5	-0.1
	baz=50						
K43A				S	S	19 38 23.6	-0.4
	baz=50						
COLD	Coldfoot	69.45	353	P	P	19 29 15.8	-0.5
COLD				IAmb	IAmb	19 29 21.5	
	comp=Z,120nm,1.0s						
COLD	Coldfoot	69.45	353	P	P	19 29 16.6	+0.3
	baz=13,SNR=63						
COLD				S	S	19 38 23.1	-0.3
	baz=13						
V55A	Taylorsville	69.47	300	P	P	19 29 15.8	-1.0
V55A	Taylorsville	69.47	300	P	P	19 29 15.4	-1.5
	baz=51,SNR=12						
V55A				P	P	19 29 15.4	-1.5
	baz=51,SNR=12						
G25K	Bearman Lake	69.50	351	P	P	19 29 17.1	+0.6
	baz=16,SNR=41						
L44A	Lake County Fo	69.54	309	IAMs_20	IAMs_20	19 59 12.8	
	comp=Z,8μm,19.0s						
L44A	Lake County Fo	69.54	309	P	P	19 29 16.7	-0.5
	baz=50						
L44A				S	S	19 38 24.2	-1.0
	baz=50						
L44A	Lake County Fo	69.54	309	P	P	19 29 17.4	+0.2
	baz=50						
L44A				S	S	19 38 21.1	-4.0
	baz=50						
XLT	XiLinHaoTe	69.55	49	eP	P	19 29 18.8	+1.5
XLT				pP	sP	19 29 21.8	+0.4
XLT				sP	pP	19 29 24.5	+4.2
XLT				PcP	PcP	19 29 43.5	+3.0
XLT				S	S	19 38 26.5	+1.1
XLT				pmax	pmax		
	comp=Z,180nm,1.3s						
XLT				pmax	pmax		
	comp=Z,1μm,4.6s						
XLT				LR	LR		
	comp=Z,29μm,14.7s						
XLT				LR	LR		
	comp=Z,40μm,15.1s						
FYU	Fort Yukon	69.59	351	P	P	19 29 17.1	+0.1
KSR	Koster	69.59	167	eP	P	19 29 17.3	-0.4
KSR				IAmb	IAmb	19 29 21.2	
	comp=Z,435nm,1.8s						
SEY	Seymchan	69.60	19	LR	LR	20 07 04.7	
	comp=Z,6μm,19.4s,baz=329,slow=42						
SEY	Seymchan	69.60	19	deP	P	19 29 18.8	+1.6
SEY				pmax	pmax		
	comp=Z,275nm,1.7s						
SEY				MLR	MLR		
	comp=Z,10μm,22.0s						
SVB	Belmont	69.65	269	eP	P	19 29 18.1	-0.2
Y58A	Scranton	69.68	298	P	P	19 29 17.2	-1.0
	baz=51						
Y58A				P	P	19 29 17.2	-1.0
	baz=51						
MTP	Monte Pirata	69.70	276	P	P	19 29 17.2	-1.3
G24K	Hadweenzic Riv	69.71	352	P	P	19 29 18.7	+0.8
	baz=15,SNR=33						
G24K				S	S	19 38 27.4	+1.0
	baz=15						
F21K	Alatna River	69.72	354	P	P	19 29 18.0	+0.1
	baz=10,SNR=94						
F21K				S	S	19 38 28.2	+1.6
	baz=10						
BIRD	Birdtown, Kers	69.74	299	P	P	19 29 18.1	-0.5
BIRD	Birdtown, Kers	69.74	299	P	P	19 29 17.5	-1.0
	baz=51,SNR=8.6						
AGMN	Agassiz Nation	69.78	318	P	P	19 29 18.6	0.0
AGMN				IAmb	IAmb	19 29 23.1	
	comp=Z,231nm,1.5s						
AGMN	Agassiz Nation	69.78	318	P	P	19 29 20.1	+1.6
	baz=48,SNR=18						
AGMN	Agassiz Nation	69.78	318	P	P	19 29 19.0	+0.4
	baz=48,SNR=18						
AGMN				S	S	19 38 25.5	-2.3
	baz=48						
I29M	Ogilvie Camp,	69.79	348	P	P	19 29 17.8	-0.6
I29M				IAMs_20	IAMs_20	20 02 36.3	
	comp=Z,6μm,18.0s						
I29M	Ogilvie Camp,	69.79	348	P	P	19 29 17.9	-0.5
	baz=22,SNR=60						
I29M				S	S	19 38 26.3	-1.1
	baz=22						
CBYP	Canovanas	69.81	276	P	P	19 29 17.9	-1.3
P48A	Milroy	69.81	305	P	P	19 29 17.5	-1.4
P48A				IAmb	IAmb	19 29 22.2	
	comp=Z,190nm,1.5s						
P48A	Milroy	69.81	305	S	S	19 38 25.0	-3.4
	baz=51						
P48A				S	S	19 38 25.0	-3.4
	baz=51						
S51A	Beattyville	69.84	303	P	P	19 29 18.0	-1.2
S51A				IAmb	IAmb	19 29 23.1	
	comp=Z,171nm,1.6s						
S51A	Beattyville	69.84	303	S	S	19 38 29.6	+0.7
	baz=51						
S51A				S	S	19 38 29.6	+0.7
	baz=51						
G22K	Bettles	69.86	354	P	P	19 29 18.1	-0.6
	baz=12						
G22K				S	S	19 38 29.8	+1.7
	baz=12						
HUMP	Col San Antoni	69.89	276	P	P	19 29 18.2	-1.4
HUMP				IAmb	IAmb	19 29 24.8	
	comp=Z,239nm,1.9s						
R50A	Paris	69.89	304	P	P	19 29 18.9	-0.5
R50A				IAmb	IAmb	19 29 23.3	
	comp=Z,156nm,1.4s						
R50A	Paris	69.89	304	P	P	19 29 17.8	-1.6
	baz=51,SNR=12						
R50A				P	P	19 29 17.8	-1.6
	baz=51,SNR=12						
R50A				S	S	19 38 29.8	+0.4
	baz=51						
R50A				S	S	19 38 29.8	+0.4
	baz=51						
G23K	Bananza Creek	69.94	353	P	P	19 29 19.4	0.0
	baz=13,SNR=56						
G23K				S	S	19 38 31.1	+1.8
	baz=13						
H25K	Birch Creek	69.94	351	P	P	19 29 20.9	+1.7
	baz=16,SNR=76						
GCPR	Guaynabo City	69.95	277	P	P	19 29 18.6	-1.4
I40A	Norwalk	69.95	312	P	P	19 29 18.2	-1.5
I40A				IAmb	IAmb	19 29 24.2	
	comp=Z,143nm,1.1s						
I40A	Norwalk	69.95	312	P	P	19 29 19.6	-0.1
	baz=49						
I40A				S	S	19 38 29.1	-0.9
	baz=49						
KMSC	Kings Mountain	69.99	300	P	P	19 29 19.3	-0.8
KMSC				IAmb	IAmb	19 29 24.3	
	comp=Z,230nm,1.7s						
KMSC	Kings Mountain	69.99	300	P	P	19 29 19.9	-0.2
	baz=51,SNR=7.3						
KMSC				S	S	19 38 30.5	-0.1
	baz=51						
KMSC	Kings Mountain	69.99	300	P	P	19 29 18.4	-1.7
	baz=51,SNR=7.3						
KMSC				S	S	19 38 28.0	-2.7
	baz=51						
I27K	Kandik River	70.05	349	P	P	19 29 20.2	+0.1
	baz=20,SNR=83						
I27K				S	S	19 38 27.5	-3.0
	baz=20						
Y57A	Sumter	70.08	298	P	P	19 29 20.2	-0.5
Y57A				IAmb	IAmb	19 29 25.0	
	comp=Z,310nm,1.7s						
Y57A	Sumter	70.08	298	P	P	19 29 20.0	-0.6
	baz=51						
Y57A				P	P	19 29 20.0	-0.6
	baz=51						
Y57A				S	S	19 38 31.2	-0.6
	baz=51						
Y57A				S	S	19 38 31.2	-0.6
	baz=51						
M44A	Midewin, Midew	70.12	308	P	P	19 29 21.0	+0.2
	baz=50						
M44A				S	S	19 38 32.5	+0.5
	baz=50						
SJG	San Juan	70.12	277	P	P	19 29 21.3	+0.2
	comp=Z,10nm,0.7s,baz=27,slow=8.5,SNR=5.1						
SJG				LR	LR	19 55 15.3	
	comp=Z,7μm,21.9s,baz=82,slow=32						
	comp=Z,10nm,0.7s						
SJG	San Juan	70.12	277	IAMs_20	IAMs_20	19 54 51.9	
	comp=Z,8μm,22.0s						
SJG	San Juan	70.12	277	P	P	19 29 33.3	+12
CD2	Chengdu	70.16	66	⇓P	P	19 29 22.8	+1.6
CD2				PP	PP	19 32 01.0	+4.9
CD2				S	S	19 38 31.0	-1.8
CD2				pmax	pmax		
	comp=Z,180nm,1.1s						
CD2				pmax	pmax		
	comp=Z,1μm,7.9s						
CD2				LR	LR		
	comp=Z,10μm,14.2s						
CD2				LR	LR		
	comp=Z,13μm,20.1s						
CD2				LR	LR		
	comp=Z,16μm,16.7s						
SFIN	Lafayette	70.22	307	P	P	19 29 20.4	-1.0
SFIN				IAmb	IAmb	19 29 25.0	
	comp=Z,280nm,1.6s						
SFIN	Lafayette	70.22	307	P	P	19 29 20.8	-0.5
	baz=50						
SFIN				S	S	19 38 27.0	-6.1
	baz=50						
SFIN	Lafayette	70.22	307	P	P	19 29 18.9	-2.5
	baz=50						
SFIN				S	S	19 38 27.7	-5.5
	baz=50						
F36A	Milaca	70.22	315	P	P	19 29 21.4	0.0
F36A				IAmb	IAmb	19 29 25.6	
	comp=Z,142nm,1.2s						
F36A	Milaca	70.22	315	P	P	19 29 20.5	-0.8
	baz=48,SNR=36						
F36A				S	S	19 38 30.0	-3.0
	baz=48						
WDLM	Western Deep L	70.24	166	eP	P	19 29 22.2	+0.5
WDLM				IAmb	IAmb	19 29 24.6	
	comp=Z,80nm,1.2s						
SPMN	Marine on St.	70.26	314	P	P	19 29 20.9	-0.6
SPMN				IAmb	IAmb	19 29 26.0	
	comp=Z,266nm,1.6s						
SPMN	Marine on St.	70.26	314	P	P	19 29 21.2	-0.4
	baz=49,SNR=11						
SPMN				S	S	19 38 33.7	+0.1
	baz=49						
SPMN	Marine on St.	70.26	314	P	P	19 29 21.0	-0.6
	baz=49,SNR=11						
SPMN				S	S	19 38 32.7	-0.8
	baz=49						
GCMP	Grenada, Carri	70.29	269	eP	P	19 29 20.0	-2.2
CRLN	Carolina, Mapu	70.32	164	eP	P	19 29 22.6	+0.5
CRLN				IAmb	IAmb	19 29 28.3	
	comp=Z,380nm,2.3s						
JFWS	Jewell Farm	70.39	311	P	P	19 29 21.4	-1.0
JFWS				IAmb	IAmb	19 29 27.1	
	comp=Z,249nm,1.6s						
JFWS	Jewell Farm	70.39	311	P	P	19 29 21.4	-1.0
JFWS				pmax	pmax		
	comp=Z,249nm,1.7s						
JFWS	Jewell Farm	70.39	311	P	P	19 29 22.1	-0.3
	baz=49						
JFWS				S	S	19 38 32.0	-3.0
	baz=49						
R49A	Shelbyville	70.40	304	P	P	19 29 21.2	-1.3
R49A				IAmb	IAmb	19 29 26.2	
	comp=Z,188nm,1.5s						
R49A	Shelbyville	70.40	304	P	P	19 29 22.6	+0.1
	baz=50,SNR=9.3						
R49A				P	P	19 29 22.6	+0.1
	baz=50,SNR=9.3						
R49A				S	S	19 38 33.8	-1.5
	baz=50						
R49A				S	S	19 38 33.8	-1.5
	baz=50						
AOPR	Arecibo Observ	70.41	277	P	P	19 29 21.6	-1.3
G21K	Allakaket	70.42	354	P	P	19 29 22.5	+0.3
	baz=10,SNR=79						
G21K				S	S	19 38 34.8	0.0
	baz=10						
TOSP	Speyside	70.42	267	eP	P	19 29 24.2	+1.3
UUPR	Utuado, UPR, P	70.45	277	P	P	19 29 21.7	-1.5
CELP	Cerrillos	70.46	277	P	P	19 29 21.9	-1.3
JSC	Jenkinsville	70.48	299	P	P	19 29 22.6	-0.5
JSC				IAmb	IAmb	19 29 27.5	
	comp=Z,198nm,1.6s						
JSC	Jenkinsville	70.48	299	P	P	19 29 22.6	-0.5
JSC				pmax	pmax		
	comp=Z,198nm,1.6s						
JSC	Jenkinsville	70.48	299	P	P	19 29 23.4	+0.3
	baz=51,SNR=7.7						
PAULI	Pauline	70.50	300	P	P	19 29 22.1	-1.0
PAULI				IAmb	IAmb	19 29 27.5	
	comp=Z,137nm,1.3s						
PAULI	Pauline	70.50	300	P	P	19 29 22.5	-0.7
	baz=51,SNR=10						
TZTN	Tazewell	70.50	302	P	P	19 29 23.0	-0.2
TZTN				IAmb	IAmb	19 29 28.3	
	comp=Z,154nm,1.5s						
TZTN				IAMs_20	IAMs_20	19 57 57.7	
	comp=Z,12μm,21.0s						
TZTN	Tazewell	70.50	302	P	P	19 29 22.5	-0.8
	baz=51,SNR=8.4						
TZTN	Tazewell	70.50	302	P	P	19 29 22.0	-1.2
	baz=51,SNR=8.4						
TZTN				S	S	19 38 35.3	-1.4
	baz=51						
NHSC	New Hope	70.51	297	P	P	19 29 21.7	-1.6
NHSC				IAMs_20	IAMs_20	20 00 18.1	
	comp=Z,6μm,20.0s						
NHSC	New Hope	70.51	297	P	P	19 29 23.4	+0.1
	baz=51						
NHSC	New Hope	70.51	297	P	P	19 29 22.5	-0.8
	baz=51						
I26K	Coal Creek Min	70.54	350	P	P	19 29 22.7	-0.3
I26K				IAmb	IAmb	19 29 29.8	
	comp=Z,270nm,1.6s						
I26K	Coal Creek Min	70.54	350	P	P	19 29 22.5	-0.5
	baz=18						
I26K				S	S	19 38 39.5	+3.3
	baz=18						
H24K	Noodor Dome	70.59	352	P	P	19 29 23.3	0.0
H24K				IAmb	IAmb	19 29 28.8	
	comp=Z,413nm,1.9s						
H24K	Noodor Dome	70.59	352	P	P	19 29 22.3	-1.0
	baz=15,SNR=53						
H24K				S	S	19 38 37.7	+0.9
	baz=15						
V53A	Saluda	70.59	301	P	P	19 29 23.2	-0.7
V53A	Saluda	70.59	301	P	P	19 29 20.3	-3.5
	baz=51,SNR=5.9						
V53A				P	P	19 29 20.3	-3.5
	baz=51,SNR=5.9						
V53A				S	S	19 38 33.3	-4.5
	baz=51						
V53A				S	S	19 38 33.3	-4.5
	baz=51						
J29M	Klondike Camp	70.62	347	IAMs_20	IAMs_20	20 02 51.2	
	comp=Z,6μm,18.0s						
J29M	Klondike Camp	70.62	347	P	P	19 29 23.0	-0.5
	baz=22						
J29M				S	S	19 38 37.1	-0.1
	baz=22						
PRP	Porcupine Dome	70.63	351	P	P	19 29 23.1	-0.6
PRP				IAmb	IAmb	19 29 29.6	
	comp=Z,331nm,1.6s						
PRP	Porcupine Dome	70.63	351	P	P	19 29 23.4	-0.4

baz=16,SNR=62
PRP S **S** **19 38 41.0 +3.5**
baz=16
BLO Bloomington 70.65 306 P **P** **19 29 22.9 -1.1**
BLO IAmb IAmb 19 29 27.8
comp=Z,174nm,1.3s
BLO Bloomington 70.65 306 P **P** **19 29 22.9 -1.1**
BLO pmax pmax
comp=Z,174nm,1.3s
L42A Oliver, Polo 70.65 310 P **P** **19 29 23.6 -0.4**
L42A IAmb IAmb 19 29 28.8
comp=Z,124nm,1.1s
L42A Oliver, Polo 70.65 310 P **P** **19 29 21.8 -2.2**
baz=49,SNR=5.5
SWZ Schweizer 70.65 168 *e*P **P** **19 29 22.7 -1.4**
SWZ IAmb IAmb 19 29 26.5
comp=Z,142nm,1.1s
GRGR Grenville 70.69 269 *e*P P 19 29 19.9 -4.8
PRYS Parys 70.72 167 *e*P **P** **19 29 23.8 -0.8**
PRYS IAmb IAmb 19 29 28.5
comp=Z,709nm,2.5s
HILA High Level 70.76 335 P **P** **19 29 24.1 -0.3**
EGAK Eagle 70.77 349 P **P** **19 29 24.1 -0.3**
EGAK Eagle 70.77 349 P **P** **19 29 24.6 +0.3**
baz=20,SNR=23
EGAK S **S** **19 38 39.2 +0.4**
baz=20
H23K Yukon River 70.77 353 P **P** **19 29 24.8 +0.4**
H23K Yukon River 70.77 353 P **P** **19 29 24.7 +0.3**
baz=13,SNR=61
H23K S **S** **19 38 41.4 +2.6**
baz=13
P46A Rosedale 70.77 306 P **P** **19 29 23.8 -1.0**
P46A Rosedale 70.77 306 P **P** **19 29 24.0 -0.8**
baz=50
P46A S **S** **19 38 36.5 -3.1**
baz=50
H22K Ishtalitna Cre 70.86 353 P **P** **19 29 24.0 -1.0**
baz=12
H22K S **S** **19 38 43.6 +3.6**
baz=12
MLPR Magueyes Islan 70.87 277 P **P** **19 29 24.9 -0.7**
CRPR Cabo Rojo, PR 70.89 277 P **P** **19 29 25.0 -0.8**
CRPR IAmb IAmb 19 29 32.3
comp=Z,286nm,1.9s
IMAR Indian Mountai 70.96 354 P **P** **19 29 25.4 -0.1**
V52A Sevierville 70.98 301 P **P** **19 29 24.5 -1.6**
V52A Sevierville 70.98 301 P **P** **19 29 24.7 -1.5**
baz=50,SNR=5.4
V52A S **S** **19 38 38.4 -3.8**
baz=50
TMAB Tom-Au,PA,Br 70.98 248 *e*P P 19 29 30.9 +4.6
T50A Nancy 71.00 303 P **P** **19 29 25.4 -0.8**
T50A IAmb IAmb 19 29 30.2
comp=Z,177nm,1.5s
T50A Nancy 71.00 303 P **P** **19 29 25.5 -0.8**
baz=50
T50A P **P** **19 29 25.5 -0.8**
baz=50
T50A S **S** **19 38 43.0 +0.5**
baz=50
T50A S **S** **19 38 43.0 +0.5**
baz=50
MMPY Sheldon Lake, 71.00 343 P **P** **19 29 25.9 0.0**
baz=27,SNR=54
MAYO Mayo, Yukon 71.02 346 P **P** **19 29 25.3 -0.6**
MAYO Mayo, Yukon 71.02 346 P **P** **19 29 26.0 +0.1**
baz=24,SNR=15
K29M Barlow Dome 71.07 347 P **P** **19 29 26.5 +0.1**
baz=22,SNR=53
K29M S **S** **19 38 45.2 +2.6**
baz=22
BG3 Lake Jocassee 71.10 300 P **P** **19 29 26.8 -0.1**
CASEE Lake Jocassee 71.10 300 P **P** **19 29 26.4 -0.5**
baz=50,SNR=5.7
WCI Wyandotte Cave 71.11 305 P **P** **19 29 25.0 -1.9**
WCI IAmb IAmb 19 29 30.7
comp=Z,178nm,1.3s
WCI Wyandotte Cave 71.11 305 IAMs_20 IAMs_20 19 59 15.7
comp=Z,11µm,20.0s
WCI Wyandotte Cave 71.11 305 P **P** **19 29 25.0 -1.9**
WCI pmax pmax
comp=Z,178nm,1.3s
WCI MLR MLR
comp=Z,11µm,20.0s
WCI Wyandotte Cave 71.11 305 P **P** **19 29 25.3 -1.6**
baz=50,SNR=5.4
WCI Wyandotte Cave 71.11 305 P **P** **19 29 24.2 -2.8**
baz=50
WCI S **S** **19 38 42.7 -1.0**
baz=50
WCI Wyandotte Cave 71.11 305 P **P** **19 29 27.1 +0.2**
D32B Dogwood Acres, 71.14 317 P **P** **19 29 25.6 -1.3**
baz=47
D32B S **S** **19 38 43.9 +0.2**
baz=47
D32A Dogwood Acres, 71.14 317 P **P** **19 29 26.3 -0.6**
D32A IAmb IAmb 19 29 31.1
comp=Z,210nm,1.4s
HODGE Hodges 71.15 299 P **P** **19 29 26.0 -1.2**
HODGE Hodges 71.15 299 P **P** **19 29 26.5 -0.7**
baz=50,SNR=9.2
DAWY Dawson 71.17 348 P **P** **19 29 26.8 -0.1**
DAWY Dawson 71.17 348 P **P** **19 29 27.2 +0.3**
baz=21,SNR=133
DAWY S **S** **19 38 44.3 +0.7**
baz=21
TKL Tuckaleechee C 71.21 301 P **P** **19 29 27.2 -0.4**
comp=Z,25nm,1.1s,baz=70,slow=5.8,SNR=13
TKL PP **PP** **19 32 04.6 -0.3**
comp=Z,6.6nm,0.6s,baz=121,slow=12,SNR=6.8
comp=Z,25nm,1.1s
TKL Tuckaleechee C 71.21 301 P **P** **19 29 26.1 -1.5**
TKL Tuckaleechee C 71.21 301 P **P** **19 29 26.1 -1.5**
TKL pmax pmax
comp=Z,114nm,1.5s
TKL Tuckaleechee C 71.21 301 P **P** **19 29 25.9 -1.6**
baz=50,SNR=7.1
TKL S **S** **19 38 43.4 -1.5**
baz=50
H21K Melozitna Rive 71.21 354 P **P** **19 29 28.1 +1.0**
H21K IAMs_20 IAMs_20 19 59 40.9
comp=Z,6µm,21.0s
H21K Melozitna Rive 71.21 354 P **P** **19 29 27.9 +0.8**
baz=11,SNR=186
H21K S **S** **19 38 46.8 +2.8**
baz=11
FLDN Fort Liard 71.23 339 P **P** **19 29 27.3 +0.1**
baz=32
POKR Poker Plat Res 71.24 351 P **P** **19 29 27.6 +0.4**
POKR IAMs_20 IAMs_20 20 00 40.6
comp=Z,6µm,21.0s
POKR Poker Plat Res 71.24 351 P **P** **19 29 25.8 -1.5**
baz=15,SNR=51
POKR S **S** **19 38 46.6 +2.3**
baz=15
HAW Hawthorne Fire 71.28 298 P **P** **19 29 27.6 -0.4**
baz=50,SNR=12
TGTN Hyland Airport 71.31 342 P **P** **19 29 27.3 -0.5**
baz=29,SNR=68
TGTN S **S** **19 38 49.0 +3.6**
baz=29
UPI Upington 71.32 172 *e*P **P** **19 29 27.3 -0.8**
UPI IAmb IAmb 19 29 30.5
comp=Z,59nm,0.9s
J26L Joseph Creek 71.36 350 P **P** **19 29 27.8 -0.3**
J26L Joseph Creek 71.36 350 P **P** **19 29 28.6 +0.6**
baz=18,SNR=139
J26L S **S** **19 38 45.5 -0.5**
baz=18
HDIL Hopedale 71.38 308 P **P** **19 29 26.5 -2.0**
HDIL IAmb IAmb 19 29 32.3
comp=Z,215nm,1.4s
HDIL IAMs_20 IAMs_20 20 00 28.5
comp=Z,12µm,19.0s
HDIL Hopedale 71.38 308 P **P** **19 29 28.2 -0.3**
baz=49
HDIL Hopedale 71.38 308 P **P** **19 29 27.2 -1.3**
baz=49
HDIL S **S** **19 38 43.9 -2.8**
baz=49
I37A Lemond, Waseca 71.38 313 P **P** **19 29 27.9 -0.6**
I37B Waseca 71.38 313 P **P** **19 29 27.6 -0.9**
baz=48,SNR=22
I37B S **S** **19 38 42.8 -3.9**
baz=48
I23K Minto, Yukon-K 71.41 352 P **P** **19 29 28.7 +0.5**
I23K IAmb IAmb 19 29 33.9
comp=Z,330nm,1.6s
I23K Minto, Yukon-K 71.41 352 P **P** **19 29 28.1 -0.1**
baz=14,SNR=48
I23K S **S** **19 38 49.5 +3.4**
baz=14
TIY Taiyuan 71.42 56 *e*P **P** **19 29 29.8 +1.0**
TIY PP **PP** **19 32 09.5 +2.7**
TIY S **S** **19 38 48.0 +0.6**
TIY pmax pmax
comp=Z,75nm,1.4s
TIY LR LR
comp=Z,24µm,18.5s
TIY LR LR
comp=Z,29µm,15.7s
AUGR Augrabies 71.46 173 *e*P **P** **19 29 28.2 -0.8**
AUGR IAmb IAmb 19 29 31.4
comp=Z,130nm,1.0s
KOTAN Kotaneelee Air 71.47 339 P **P** **19 29 27.8 -0.9**
baz=32,SNR=50
KOTAN S **S** **19 38 48.1 +0.9**
baz=32
V51A Loudon 71.47 302 P **P** **19 29 29.0 -0.1**
V51A IAmb IAmb 19 29 33.3
comp=Z,138nm,1.3s
V51A Loudon 71.47 302 P **P** **19 29 29.4 +0.3**
baz=50,SNR=8.9
V51A S **S** **19 38 42.3 -5.7**
baz=50
MDM Murphy Dome 71.48 352 P **P** **19 29 28.7 0.0**
TRN Trinidad (W) 71.48 267 *e*P **P** **19 29 31.0 +1.5**
J25K Salcha River, 71.49 350 P **P** **19 29 28.4 -0.4**
J25K IAmb IAmb 19 29 34.2
comp=Z,315nm,1.9s
J25K Salcha River, 71.49 350 P **P** **19 29 28.0 -0.8**
baz=16
J25K S **S** **19 38 49.7 +2.4**
baz=16
L40A Anamosa 71.49 310 P **P** **19 29 27.7 -1.4**
L40A IAmb IAmb 19 29 33.5
comp=Z,104nm,1.0s
L40A Anamosa 71.49 310 P **P** **19 29 27.0 -2.1**
baz=48,SNR=8.3
L40A S **S** **19 38 44.8 -3.1**
baz=48
IL31 71.51 351 P **P** **19 29 28.5 -0.3**
ILAR Eielson Array 71.51 351 P **P** **19 29 28.7 -0.1**
comp=Z,41nm,0.9s,baz=6.8,slow=5.5,SNR=77
ILAR PKP2ab 19 57 14.3
comp=Z,3.2nm,1.2s,baz=195,slow=3.3,SNR=5.7
ILAR LR LR 20 01 22.9
comp=Z,4µm,21.4s,baz=1.5,slow=36
comp=Z,41nm,0.9s
ILAR Eielson Array 71.51 351 P **P** **19 29 27.8 -1.1**
ILAR Eielson Array 71.51 351 P **P** **19 29 27.8 -1.1**
COLA College 71.52 352 P **P** **19 29 28.4 -0.5**
COLA College 71.52 352 P **P** **19 29 28.4 -0.5**
COLA pmax pmax
comp=Z,471nm,1.9s
COLA MLR MLR
comp=Z,5µm,21.0s
COLA College 71.52 352 P **P** **19 29 28.7 -0.1**
baz=15
COLA S **S** **19 38 47.9 +0.5**
baz=15
COLA College 71.52 352 P **P** **19 29 30.0 +1.1**
TCOL CIGO, UAF Yank 71.52 352 P **P** **19 29 28.8 -0.1**
TCOL IAmb IAmb 19 29 34.2
comp=Z,326nm,1.6s
TCOL CIGO, UAF Yank 71.52 352 P **P** **19 29 30.1 +1.2**
baz=15,SNR=11
TCOL S **S** **19 38 50.6 +3.1**
baz=15
PZH PanZhiHua 71.54 71 P **P** **19 29 30.5 +0.7**
PZH pP **sP** **19 29 33.0 -0.9**
PZH sP **pP** **19 29 36.3 +3.6**
PZH PP **PP** **19 32 11.3 +3.1**
PZH S **S** **19 38 47.5 -1.7**
PZH SS **SS** **19 43 25.0 +1.3**
PZH pmax pmax
comp=Z,110nm,1.4s
PZH pmax pmax
comp=Z,920nm,3.5s
PZH LR LR
comp=Z,9µm,21.0s
PZH LR LR
comp=Z,7µm,19.4s
PZH LR LR
comp=Z,11µm,22.4s
XAN Xi'an 71.57 61 P **P** **19 29 29.5 -0.3**
XAN pP sP 19 29 32.8 -1.1
XAN PP **PP** **19 32 11.3 +3.1**
XAN S **S** **19 38 47.3 -1.9**
XAN SS **SS** **19 43 28.8 +5.1**
XAN pmax pmax
comp=Z,55nm,0.9s
XAN pmax pmax
comp=Z,850nm,3.5s
XAN LR LR
comp=Z,21µm,20.9s
XAN LR LR
comp=Z,36µm,20.3s
VOI Vohitsoka 71.58 147 *e*P **P** **19 29 29.0 -0.9**
VOI Vohitsoka 71.58 147 P **P** **19 29 29.9 +0.1**
SNR=10
VOI Vohitsoka 71.58 147 P **P** **19 29 30.9 +1.1**
I21K Tanana 71.62 353 P **P** **19 29 30.2 +0.8**
I21K IAmb IAmb 19 29 38.2
comp=Z,190nm,1.1s
I21K IAMs_20 IAMs_20 20 04 32.6
comp=Z,5µm,20.0s
I21K Tanana 71.62 353 P **P** **19 29 30.7 +1.3**
baz=12,SNR=65
I21K S **S** **19 38 50.4 +1.8**
baz=12
KEIM Keimoes 71.63 173 *e*P **P** **19 29 28.6 -1.3**
KEIM IAmb IAmb 19 29 32.5
comp=Z,92nm,1.0s
MLY Manley 71.65 353 P **P** **19 29 30.3 +0.5**
MLY Manley 71.65 353 P **P** **19 29 30.7 +0.9**
baz=12,SNR=71
MLY S **S** **19 38 50.6 +1.4**
baz=12
F33A 5 Mile Ranch, 71.66 316 P **P** **19 29 29.6 -0.5**
F33A IAmb IAmb 19 29 35.1
comp=Z,218nm,1.3s
F33A 5 Mile Ranch, 71.66 316 P **P** **19 29 29.9 -0.2**
baz=47,SNR=28
F33A S **S** **19 38 50.2 +0.4**
baz=47
W52A Murphy 71.66 301 P **P** **19 29 29.7 -0.6**
W52A Murphy 71.66 301 P **P** **19 29 30.1 -0.3**
baz=50
CCB Clear Creek Bu 71.73 351 P **P** **19 29 30.1 -0.1**
CCB IAmb IAmb 19 29 35.2
comp=Z,282nm,1.8s
257A Skidaway Islan 71.78 297 S **S** **19 38 49.2 -2.3**
baz=50
FARO Faro, Yukon 71.78 344 P **P** **19 29 31.0 +0.4**
FARO IAmb IAmb 19 29 37.0
comp=Z,345nm,1.4s
FARO Faro, Yukon 71.78 344 P **P** **19 29 30.6 0.0**
baz=25,SNR=126
FARO S **S** **19 38 52.2 +1.5**
baz=25
CPCT Cooper Cave 71.81 302 P **P** **19 29 30.5 -0.7**
L29M L29M 71.86 347 P **P** **19 29 31.6 +0.6**
baz=22,SNR=37
L29M S **S** **19 38 54.9 +3.3**
baz=22
TNA Tin City 71.86 0 P **P** **19 29 30.5 -0.4**
TNA IAmb IAmb 19 29 36.4
comp=Z,263nm,1.2s
TNA Tin City 71.86 0 P **P** **19 29 29.5 -1.4**
baz=359
TNA S **S** **19 38 46.9 -4.4**
baz=359
OLIL Olney 71.87 306 P **P** **19 29 31.0 -0.5**
OLIL IAmb IAmb 19 29 34.8
comp=Z,294nm,1.6s
OLIL Olney 71.87 306 P **P** **19 29 29.8 -1.6**
baz=49
HDA Harding Lake 71.87 351 P **P** **19 29 30.5 -0.6**
HDA Harding Lake 71.87 351 P **P** **19 29 31.1 +0.1**
baz=15,SNR=96
U49A Red Boiling Sp 71.91 303 P **P** **19 29 30.2 -1.5**
U49A IAmb IAmb 19 29 35.5
comp=Z,218nm,1.5s
U49A Red Boiling Sp 71.91 303 P **P** **19 29 30.5 -1.2**
baz=50,SNR=22
U49A S **S** **19 38 50.2 -2.7**
baz=50
MDND Maddock 71.91 319 P **P** **19 29 30.2 -1.3**
MDND Maddock 71.91 319 P **P** **19 29 30.8 -0.8**
baz=45,SNR=9.5
MDND Maddock 71.91 319 P **P** **19 29 31.2 -0.4**
baz=45,SNR=9.5
MDND S **S** **19 38 54.5 +1.8**
baz=45
SCRK Sand Creek 71.92 350 P **P** **19 29 31.5 0.0**
SCRK IAmb IAmb 19 29 38.5
comp=Z,150nm,1.2s
SCRK IAMs_20 IAMs_20 20 04 12.7
comp=Z,5µm,20.0s
SCRK Sand Creek 71.92 350 P **P** **19 29 31.9 +0.4**
baz=18,SNR=63
SCRK S **S** **19 38 56.1 +3.6**
baz=18
NEA2 Nenana 71.92 352 P **P** **19 29 31.2 -0.1**
NEA2 Nenana 71.92 352 P **P** **19 29 31.7 +0.3**
baz=14,SNR=33
NEA2 S **S** **19 38 54.5 +2.3**
baz=14
WRH Wood River Hil 71.94 352 P **P** **19 29 31.2 -0.2**
K38A Parkersburg 71.96 312 P **P** **19 29 31.5 -0.4**
K38A Parkersburg 71.96 312 P **P** **19 29 31.9 0.0**
baz=48
NWCL Newcastle 71.98 164 *e*P **P** **19 29 31.9 -0.3**
NWCL IAmb IAmb 19 29 35.7
comp=Z,239nm,1.6s
POGA Pongola 71.98 163 P **P** **19 29 31.7 -0.3**
POGA IAmb IAmb 19 29 39.9
comp=Z,292nm,1.9s
POGA Pongola 71.98 163 *e*P **P** **19 29 32.3 +0.3**
POGA IAmb IAmb 19 29 39.4
comp=Z,305nm,1.9s
M31M Drury Creek, Y 72.01 345 P **P** **19 29 32.6 +0.6**
M31M IAmb IAmb 19 29 38.3
comp=Z,387nm,1.6s
M31M IAMs_20 IAMs_20 20 02 28.1
comp=Z,9µm,20.0s
M31M Drury Creek, Y 72.01 345 P **P** **19 29 33.2 +1.2**
baz=24,SNR=59
M31M S **S** **19 38 54.4 +1.0**
baz=24
DR12 Loma Pena Alta 72.04 279 P **P** **19 29 31.6 -1.2**
BOSA Boshof 72.05 169 P **P** **19 29 31.2 -1.4**
comp=Z,97nm,1.0s,baz=358,slow=6.8,SNR=30
BOSA LR LR 20 04 33.7
comp=Z,8µm,18.2s,baz=354,slow=39
comp=Z,97nm,1.0s
BOSA Boshof 72.05 169 P **P** **19 29 31.4 -1.1**
BOSA IAmb IAmb 19 29 35.3
comp=Z,149nm,1.1s
BOSA Boshof 72.05 169 *e*P **P** **19 29 31.6 -1.0**
BOSA IAmb IAmb 19 29 34.9
comp=Z,150nm,1.1s
BOSA Boshof 72.05 169 *i* P **P** **19 29 31.8 -0.8**
BOSA Boshof 72.05 169 P **P** **19 29 31.4 -1.1**
BOSA pmax pmax
comp=Z,149nm,1.1s
BOSA Boshof 72.05 169 *i* P **P** **19 29 31.8 -0.8**
MA2 Magadan 72.09 21 LR LR 20 05 26.8
comp=Z,18µm,18.0s,baz=332,slow=39
MA2 Magadan 72.09 21 P **P** **19 29 33.2 +0.8**
MA2 Magadan 72.09 21 *de*P **P** **19 29 34.0 +1.6**
MA2 pmax pmax
comp=Z,314nm,1.4s
MA2 MLR MLR
comp=Z,21µm,16.0s
MA2 Magadan 72.09 21 P **P** **19 29 35.6 +3.2**
P43A Skaggs, Pawnee 72.11 308 P **P** **19 29 31.3 -1.6**
P43A IAmb IAmb 19 29 36.7
comp=Z,474nm,1.9s
P43A Skaggs, Pawnee 72.11 308 P **P** **19 29 32.2 -0.7**
baz=49
USIN University of 72.11 305 P **P** **19 29 31.9 -1.1**
USIN IAmb IAmb 19 29 37.1
comp=Z,352nm,1.4s
SNKL Senekal, Frees 72.11 166 *e*P **P** **19 29 31.9 -1.1**
SNKL IAmb IAmb 19 29 37.2
comp=Z,1µm,2.1s
BJI Beijing 72.12 52 P **P** **19 29 34.5 +1.6**
BJI PcP **PcP** **19 29 54.3 +3.0**
BJI S **S** **19 38 56.3 +1.2**
BJI ScS **ScS** **19 39 39.3 0.0**
BJI SS **SS** **19 43 37.3 +5.8**
BJI pmax pmax
comp=Z,190nm,1.5s
BJI pmax pmax
comp=Z,840nm,4.6s
BJI LR LR
comp=Z,4µm,18.2s
BJI LR LR
comp=Z,25µm,18.1s
BJI LR LR
comp=Z,43µm,18.3s
M30M Minto, Yukon 72.12 346 P **P** **19 29 32.9 +0.3**
M30M IAmb IAmb 19 29 39.4
comp=Z,264nm,1.9s
M30M IAMs_20 IAMs_20 20 03 28.9
comp=Z,10µm,20.0s
M30M Minto, Yukon 72.12 346 P **P** **19 29 33.1 +0.5**
baz=23,SNR=29
M30M S **S** **19 38 58.0 +3.4**
baz=23
BJT Baijiatuau 72.13 52 P **P** **19 29 32.6 -0.4**
BJT Baijiatuau 72.13 52 P **P** **19 29 32.6 -0.4**
BJT pmax pmax
comp=Z,621nm,1.7s
BJT MLR MLR
comp=Z,39µm,19.0s
N41A Harden Midland 72.18 309 P **P** **19 29 31.6 -1.7**
N41A IAmb IAmb 19 29 37.6
comp=Z,172nm,1.1s
N41A Harden Midland 72.18 309 P **P** **19 29 32.1 -1.2**
baz=48,SNR=13
N41A S **S** **19 38 54.4 -1.5**
baz=48
DOT Dot Lake 72.24 350 P **P** **19 29 34.0 +0.7**
RIDG Independent Ri 72.26 350 P **P** **19 29 33.2 -0.3**
RIDG Independent Ri 72.26 350 P **P** **19 29 33.7 +0.2**
baz=17,SNR=44
RIDG S **S** **19 38 56.2 0.0**
baz=17
MCPB Macapa, AP 72.27 252 *e*P **P** **19 29 35.2 +1.0**
Q44A Meyer Farm, Va 72.30 307 P **P** **19 29 31.5 -2.5**
baz=49
K24K Donnelly Dome 72.32 350 P **P** **19 29 34.2 +0.5**
baz=16,SNR=49
K24K S **S** **19 38 58.8 +2.0**
baz=16
MANA Manning 72.33 334 P **P** **19 29 33.5 -0.5**
BWN Browne 72.37 352 P **P** **19 29 33.8 -0.3**
GCSA Galena City Sc 72.39 356 P **P** **19 29 33.7 -0.4**
baz=7.7,SNR=18
GCSA S **S** **19 39 00.8 +3.3**
baz=7.7
T47A Sharon Grove 72.41 304 P **P** **19 29 32.5 -2.2**
T47A Sharon Grove 72.41 304 P **P** **19 29 33.1 -1.6**
baz=49,SNR=44
T47A S **S** **19 38 53.7 -5.0**
baz=49
GOGA Godfrey 72.45 299 P **P** **19 29 34.3 -0.7**
GOGA Godfrey 72.45 299 IAMs_20 IAMs_20 19 59 38.3
comp=Z,12µm,21.0s
GOGA Godfrey 72.45 299 P **P** **19 29 34.3 -0.7**
GOGA pmax pmax
comp=Z,118nm,1.5s
GOGA MLR MLR
comp=Z,12µm,21.0s
GOGA Godfrey 72.45 299 P **P** **19 29 35.1 +0.1**
baz=50,SNR=6.6
GOGA S **S** **19 38 59.3 +0.1**
baz=50
W50A Signal Mountai 72.46 302 P **P** **19 29 35.0 -0.1**
W50A IAmb IAmb 19 29 40.0
comp=Z,181nm,1.4s
W50A Signal Mountai 72.46 302 P **P** **19 29 33.6 -1.5**
baz=50,SNR=17
W50A S **S** **19 38 55.4 -4.0**
baz=50

KOMG	**Komaggas**	**72.46 176**	*e*P	**P**	**19 29 35.1**	**+0.3**
KOMG			IAmb	IAmb	19 29 38.8	
	comp=Z,476nm,2.0s					
BCAR	**Beaver Creek A**	**72.48 348**	P	**P**	**19 29 35.0**	**+0.3**
L27K	**Beaver Creek,**	**72.49 348**	P	**P**	**19 29 35.0**	**+0.2**
L27K			IAmb	IAmb	19 29 40.9	
	comp=Z,367nm,1.7s					
L27K	**Beaver Creek,**	**72.49 348**	P	**P**	**19 29 35.5**	**+0.7**
	baz=19,SNR=81					
L27K			S	**S**	**19 38 57.6**	**-1.3**
	baz=19					
CLTN	**Cedars of Leba**	**72.52 303**	P	**P**	**19 29 33.8**	**-1.6**
M29M	**Somme Creek**	**72.53 347**	P	**P**	**19 29 35.1**	**-0.1**
	baz=22,SNR=72					
M29M			S	**S**	**19 39 01.7**	**+2.1**
	baz=22					
Y52A	**Lilburn**	**72.54 300**	P	**P**	**19 29 34.3**	**-1.2**
Y52A	**Lilburn**	**72.54 300**	P	**P**	**19 29 34.4**	**-1.2**
	baz=50,SNR=5.9					
Y52A			P	**P**	**19 29 34.4**	**-1.2**
	baz=50,SNR=5.9					
Y52A			S	**S**	**19 38 57.7**	**-2.5**
	baz=50					
Y52A			S	**S**	**19 38 57.7**	**-2.5**
	baz=50					
X51A	**Calhoun**	**72.59 301**	P	**P**	**19 29 35.3**	**-0.5**
X51A	**Calhoun**	**72.59 301**	P	**P**	**19 29 33.9**	**-1.9**
	baz=50					
X51A			P	**P**	**19 29 33.9**	**-1.9**
	baz=50					
BPAW	**Bear Paw Mtn.**	**72.59 353**	P	**P**	**19 29 34.7**	**-0.6**
BPAW			IAmb	IAmb	19 29 40.2	
	comp=Z,291nm,1.3s					
BPAW	**Bear Paw Mtn.**	**72.59 353**	P	**P**	**19 29 34.1**	**-1.2**
	baz=12,SNR=75					
BPAW			S	**S**	**19 39 02.0**	**+2.0**
	baz=12					
LIRD	**Liard River Hi**	**72.63 340**	P	**P**	**19 29 34.7**	**-1.0**
	baz=30,SNR=65					
WTLY	**Watson Lake, Y**	**72.68 341**	P	**P**	**19 29 36.2**	**+0.3**
WTLY			IAmb	IAmb	19 29 41.8	
	comp=Z,275nm,1.2s					
WTLY	**Watson Lake, Y**	**72.68 341**	P	**P**	**19 29 35.7**	**-0.2**
	baz=28,SNR=101					
WTLY			S	**SKiKP**	**19 39 05.6**	**-4.5**
	baz=28					
SCIA	**State Center**	**72.70 311**	P	**P**	**19 29 35.7**	**-0.7**
SCIA			IAmb	IAmb	19 29 41.1	
	comp=Z,324nm,1.8s					
SCIA	**State Center**	**72.70 311**	P	**P**	**19 29 36.1**	**-0.2**
	baz=48					
SCIA	**State Center**	**72.70 311**	P	**P**	**19 29 34.3**	**-2.1**
	baz=48					
N32M	**Quiet Lake**	**72.71 344**	P	**P**	**19 29 36.1**	**-0.1**
	baz=25					
154A	**Montrose**	**72.73 299**	P	**P**	**19 29 36.2**	**-0.5**
154A			IAmb	IAmb	19 29 41.8	
	comp=Z,133nm,1.1s					
154A	**Montrose**	**72.73 299**	P	**P**	**19 29 37.0**	**+0.4**
	baz=50					
154A			S	**S**	**19 39 02.0**	**-0.4**
	baz=50					
L26K	**Log Cabin Wild**	**72.74 349**	P	**P**	**19 29 36.9**	**+0.6**
L26K			IAmb	IAmb	19 29 42.3	
	comp=Z,294nm,1.2s					
L26K	**Log Cabin Wild**	**72.74 349**	P	**P**	**19 29 37.4**	**+1.1**
	baz=18,SNR=55					
L26K			S	**S**	**19 39 04.8**	**+3.1**
	baz=18					
MCK	**McKinley**	**72.75 352**	P	**P**	**19 29 36.1**	**-0.2**
MCK	**McKinley**	**72.75 352**	P	**P**	**19 29 36.1**	**-0.2**
MCK			pmax	pmax		
	comp=Z,614nm,1.4s					
MCK			MLR	MLR		
	comp=Z,5μm,21.0s					
MCK	**McKinley**	**72.75 352**	P	**P**	**19 29 36.6**	**+0.3**
	baz=14,SNR=133					
MCK			S	**S**	**19 39 00.6**	**-1.1**
	baz=14					
255A	**Hazlehurst**	**72.76 298**	P	**P**	**19 29 36.9**	**0.0**
255A	**Hazlehurst**	**72.76 298**	P	**P**	**19 29 36.9**	**0.0**
	baz=50					
J20K	**Nowinta River**	**72.78 354**	P	**P**	**19 29 36.7**	**+0.3**
J20K	**Nowinta River**	**72.78 354**	P	**P**	**19 29 35.5**	**-0.9**
	baz=9.8,SNR=65					
J20K			S	**SKiKP**	**19 39 05.8**	**-4.4**
	baz=9.8					
SWET	**Sewanee**	**72.84 302**	P	**P**	**19 29 37.1**	**-0.3**
ANM	**Nome**	**72.86 359**	P	**P**	**19 29 36.0**	**-0.9**
	baz=1.2					
MENT	**Mentasta**	**72.88 349**	P	**P**	**19 29 37.0**	**-0.1**
MENT			IAmb	IAmb	19 29 44.4	
	comp=Z,287nm,1.8s					
CHUM	**Lake Minchumin**	**72.92 353**	P	**P**	**19 29 36.6**	**-0.7**
	baz=11,SNR=122					
CHUM			S	**S**	**19 39 05.8**	**+2.2**
	baz=11					
N31M	**Braeburn, Yuko**	**72.94 345**	P	**P**	**19 29 37.4**	**-0.1**
N31M			IAmb	IAmb	19 29 42.8	
	comp=Z,211nm,1.2s					
N31M			IAMs_20	IAMs_20	20 03 16.5	
	comp=Z,11μm,20.0s					
N31M	**Braeburn, Yuko**	**72.94 345**	P	**P**	**19 29 36.2**	**-1.3**
	baz=23,SNR=57					
N31M			S	**S**	**19 39 06.3**	**+2.4**
	baz=23					
BVCY	**Beaver Creek**	**72.95 348**	P	**P**	**19 29 37.1**	**-0.5**
	baz=20,SNR=45					
BVCY			S	**SKiKP**	**19 39 09.5**	**-1.0**
	baz=20					
HNS	**HongShan**	**72.99 55**	⇓P	**P**	**19 29 39.3**	**+1.2**
HNS			PP	**PP**	**19 32 26.5**	**+6.4**
HNS			S	**S**	**19 39 05.3**	**+0.1**
HNS			pmax	pmax		
	comp=Z,160nm,1.3s					
HNS			pmax	pmax		
	comp=Z,1μm,7.0s					
HNS			LR	LR		
	comp=Z,12μm,16.9s					
HNS			LR	LR		
	comp=Z,23μm,18.2s					
HNS			LR	LR		
	comp=Z,28μm,19.6s					
BANI	**BANI**	**73.00 279**	P	**P**	**19 29 36.9**	**-1.8**
V48A	**Smith Brothers**	**73.05 303**	P	**P**	**19 29 36.9**	**-1.6**
V48A			IAmb	IAmb	19 29 43.0	
	comp=Z,193nm,1.3s					
V48A	**Smith Brothers**	**73.05 303**	P	**P**	**19 29 37.4**	**-1.1**
	baz=49,SNR=20					
RND	**Reindeer**	**73.06 352**	P	**P**	**19 29 37.1**	**-1.1**
RND	**Reindeer**	**73.06 352**	P	**P**	**19 29 37.1**	**-1.1**
RND			pmax	pmax		
	comp=Z,58nm,0.8s					
RND			MLR	MLR		
	comp=Z,3μm,20.0s					
FPAL	**Fort Paine**	**73.08 301**	P	**P**	**19 29 37.5**	**-1.3**
PAX	**Paxson**	**73.08 350**	P	**P**	**19 29 38.1**	**-0.3**
PAX			IAmb	IAmb	19 29 43.6	
	comp=Z,185nm,1.4s					
PAX	**Paxson**	**73.08 350**	P	**P**	**19 29 38.1**	**-0.3**
PAX			pmax	pmax		
	comp=Z,185nm,1.4s					
PAX	**Paxson**	**73.08 350**	P	**P**	**19 29 38.1**	**-0.3**
	baz=16,SNR=42					
PAX			S	**S**	**19 39 07.6**	**+1.9**
	baz=16					
KMI	**Kunming**	**73.11 71**	⇑P	**P**	**19 29 39.3**	**0.0**
KMI			pP	sP	19 29 42.5	-1.0
KMI			PcP	**PcP**	**19 30 00.0**	**+3.9**
KMI			PP	**PP**	**19 32 25.5**	**+3.7**
KMI			S	**S**	**19 39 02.5**	**-4.9**
KMI			SKS	**SKSac**	**19 39 36.8**	**-9.0**
KMI			SS	**SS**	**19 43 43.5**	**-4.4**
KMI			pmax	pmax		
	comp=Z,100nm,1.4s					
KMI			pmax	pmax		
	comp=Z,910nm,4.0s					
KMI			LR	LR		
	comp=Z,8μm,23.3s					
KMI			LR	LR		
	comp=Z,8μm,22.7s					
KMI			LR	LR		
	comp=Z,16μm,22.8s					
KTH	**Kantishna Hill**	**73.12 353**	P	**P**	**19 29 38.1**	**-0.5**
KTH			IAmb	IAmb	19 29 44.8	
	comp=Z,423nm,1.8s					
TRF	**Thorofare Moun**	**73.16 352**	P	**P**	**19 29 38.3**	**-0.6**
TRF			IAMs_20	IAMs_20	20 01 07.4	
	comp=Z,6μm,22.0s					
TRF	**Thorofare Moun**	**73.16 352**	P	**P**	**19 29 39.0**	**+0.1**
	baz=13,SNR=51					
TRF			S	**S**	**19 39 05.4**	**-1.4**
	baz=13					
M27K	**Edge Creek, AK**	**73.16 348**	P	**P**	**19 29 38.7**	**-0.2**
M27K			IAmb	IAmb	19 29 51.5	
	comp=Z,253nm,1.4s					
M27K			IAMs_20	IAMs_20	20 04 42.5	
	comp=Z,5μm,19.0s					
M27K	**Edge Creek, AK**	**73.16 348**	P	**P**	**19 29 39.3**	**+0.4**
	baz=19,SNR=48					
M27K			S	**SKiKP**	**19 39 11.9**	**+0.9**
	baz=19					
SLM	**Saint Louis**	**73.19 307**	P	**P**	**19 29 38.9**	**-0.4**
SLM			IAmb	IAmb	19 29 44.0	
	comp=Z,328nm,1.4s					
SLM	**Saint Louis**	**73.19 307**	P	**P**	**19 29 38.9**	**-0.4**
SLM			pmax	pmax		
	comp=Z,328nm,1.5s					
SLM	**Saint Louis**	**73.19 307**	P	**P**	**19 29 36.9**	**-2.4**
	baz=48					
SLM			S	**S**	**19 39 04.5**	**-3.0**
	baz=48					
SIUC	**Southern Illin**	**73.20 306**	P	**P**	**19 29 38.3**	**-1.1**
SIUC			IAmb	IAmb	19 29 43.7	
	comp=Z,138nm,1.2s					
N30M	**Aishikik Lake**	**73.21 346**	P	**P**	**19 29 38.8**	**-0.3**
	baz=22,SNR=64					
DHY	**Denali Highway**	**73.21 351**	P	**P**	**19 29 38.8**	**-0.5**
DHY	**Denali Highway**	**73.21 351**	P	**P**	**19 29 39.6**	**+0.4**
	baz=15,SNR=274					
DHY			S	**SKiKP**	**19 39 09.1**	**-1.9**
	baz=15					
456A	**Hilliard**	**73.23 296**	P	**P**	**19 29 41.2**	**+1.5**
	baz=50					
S44A	**Carbondale**	**73.24 306**	P	**P**	**19 29 37.7**	**-1.9**
	baz=48,SNR=6.6					
S44A			S	**S**	**19 39 02.6**	**-5.4**
	baz=48					
ECSD	**EROS Data Cent**	**73.28 315**	P	**P**	**19 29 39.0**	**-0.8**
ECSD			IAmb	IAmb	19 29 44.3	
	comp=Z,256nm,1.4s					
ECSD	**EROS Data Cent**	**73.28 315**	P	**P**	**19 29 37.8**	**-2.0**
	baz=46,SNR=41					
ECSD	**EROS Data Cent**	**73.28 315**	P	**P**	**19 29 39.4**	**-0.4**
	baz=46,SNR=41					
ECSD			S	**S**	**19 39 08.4**	**0.0**
	baz=46					
M26K	**Nabesna, AK**	**73.29 349**	P	**P**	**19 29 40.0**	**+0.4**
M26K			IAmb	IAmb	19 29 45.5	
	comp=Z,284nm,1.4s					
M26K			IAMs_20	IAMs_20	20 04 58.8	
	comp=Z,5μm,20.0s					
M26K	**Nabesna, AK**	**73.29 349**	P	**P**	**19 29 39.8**	**+0.2**
	baz=18,SNR=64					
M26K			S	**SKiKP**	**19 39 12.6**	**+1.6**
	baz=18					
SDDR	**Presa de Saban**	**73.30 281**	P	**P**	**19 29 39.9**	**-0.4**
SDDR			IAMs_20	IAMs_20	20 01 30.8	
	comp=Z,8μm,18.0s					
T45B	**Paducah**	**73.32 305**	P	P	19 29 33.9	-6.2
	baz=48					
E28A	**Huff**	**73.34 319**	P	**P**	**19 29 40.0**	**-0.1**
E28A	**Huff**	**73.34 319**	P	**P**	**19 29 40.9**	**+0.8**
	baz=44,SNR=34					
CAST	**Castle Rocks**	**73.36 353**	P	**P**	**19 29 39.9**	**0.0**
CAST			IAmb	IAmb	19 29 45.2	
	comp=Z,196nm,1.2s					
CAST	**Castle Rocks**	**73.36 353**	P	**P**	**19 29 39.7**	**-0.2**
	baz=11,SNR=119					
CAST			S	**SKiKP**	**19 39 10.3**	**-0.7**
	baz=11					
WVT	**Waverly**	**73.41 304**	P	**P**	**19 29 39.3**	**-1.4**
WVT			IAmb	IAmb	19 29 44.6	
	comp=Z,160nm,1.3s					
WVT	**Waverly**	**73.41 304**	P	**P**	**19 29 39.3**	**-1.4**
WVT			pmax	pmax		
	comp=Z,160nm,1.3s					
WVT			MLR	MLR		
	comp=Z,17μm,21.0s					
WVT	**Waverly**	**73.41 304**	P	**P**	**19 29 38.8**	**-1.9**
	baz=49,SNR=21					
WVT	**Waverly**	**73.41 304**	P	**P**	**19 29 39.0**	**-1.7**
	baz=49					
WVT	**Waverly**	**73.41 304**	P	**P**	**19 29 40.4**	**-0.3**
N38A	**Joes South For**	**73.46 311**	P	**P**	**19 29 39.8**	**-1.1**
	baz=47					
DGAR	**Diego Garcia**	**73.47 117**⇓	*e*P	**P**	**19 29 42.1**	**+0.9**
DGAR			pmax	pmax		
	comp=Z,500nm,1.2s					
DGAR			MLR	MLR		
	comp=Z,4μm,18.0s					
DGAR	**Diego Garcia**	**73.47 117**	P	P	19 29 45.8	+4.6
LYN	**LuoYang**	**73.49 58**⇓	*e*P	**P**	**19 29 42.0**	**+0.9**
LYN			PP	**PP**	**19 32 27.5**	**+3.0**
LYN			S	**S**	**19 39 11.0**	**0.0**
LYN			SKS	**SKSac**	**19 39 42.3**	**-5.6**
LYN			SS	**SS**	**19 43 58.0**	**+5.3**
LYN			pmax	pmax		
	comp=Z,70nm,1.6s					
LYN			pmax	pmax		
	comp=Z,1μm,6.2s					
LYN			LR	LR		
	comp=Z,11μm,20.4s					
LYN			LR	LR		
	comp=Z,11μm,20.6s					
LYN			LR	LR		
	comp=Z,15μm,18.0s					
YUK3	**Moose Creek**	**73.49 347**	P	**P**	**19 29 41.0**	**0.0**
	baz=20,SNR=78					
YUK3			S	**SKiKP**	**19 39 14.2**	**+2.6**
	baz=20					
P33M	**Teslin, Yukon**	**73.50 343**	P	**P**	**19 29 40.6**	**-0.3**
P33M			IAmb	IAmb	19 29 47.8	
	comp=Z,210nm,1.2s					
P33M			IAMs_20	IAMs_20	20 01 48.5	
	comp=Z,9μm,22.0s					
P33M	**Teslin, Yukon**	**73.50 343**	P	**P**	**19 29 40.9**	**-0.1**
	baz=25,SNR=83					
P33M			S	**SKiKP**	**19 39 13.5**	**+2.1**
	baz=25					
WHY	**Whitehorse**	**73.52 344**	P	**P**	**19 29 40.4**	**-0.6**
WHY			IAmb	IAmb	19 29 47.6	
	comp=Z,342nm,1.6s					
WHY	**Whitehorse**	**73.52 344**	P	**P**	**19 29 40.7**	**-0.3**
	baz=24,SNR=34					
WHY			S	**SKiKP**	**19 39 12.9**	**+1.4**
	baz=24					
K20K	**Telida**	**73.58 354**	P	**P**	**19 29 41.2**	**0.0**
K20K			IAmb	IAmb	19 29 48.0	
	comp=Z,390nm,1.5s					
K20K	**Telida**	**73.58 354**	P	**P**	**19 29 41.3**	**0.0**
	baz=9.8,SNR=48					
K20K			S	**SKiKP**	**19 39 14.3**	**+2.9**
	baz=9.8					
WAT1	**Susitna Watana**	**73.58 351**	P	**P**	**19 29 40.0**	**-1.3**
	baz=14					
WAT1			S	**SKiKP**	**19 39 11.7**	**+0.2**
	baz=14					
GAMB	**Gambell**	**73.59 2**	P	**P**	**19 29 40.3**	**-0.9**
	baz=356					
HARP	**HAARP**	**73.59 350**	P	**P**	**19 29 41.8**	**+0.5**
	baz=16,SNR=33					
HARP			S	**SKiKP**	**19 39 12.5**	**+1.0**
	baz=16					
YUK4	**Talbot Arm**	**73.59 346**	P	**P**	**19 29 41.0**	**-0.6**
	baz=21,SNR=27					
Z51A	**Franklin**	**73.60 300**	P	**P**	**19 29 40.5**	**-1.4**
Z51A	**Franklin**	**73.60 300**	P	**P**	**19 29 40.8**	**-1.1**
	baz=49,SNR=5.1					
DGMT	**Dagmar**	**73.61 322**	P	**P**	**19 29 43.0**	**+1.3**
DGMT	**Dagmar**	**73.61 322**	IAMs_20	IAMs_20	20 03 15.8	
	comp=Z,9μm,19.0s					
DGMT	**Dagmar**	**73.61 322**	P	**P**	**19 29 40.3**	**-1.4**
	baz=43,SNR=9.8					
DGMT	**Dagmar**	**73.61 322**	P	**P**	**19 29 42.0**	**+0.3**
	baz=43,SNR=9.8					
DGMT			S	**S**	**19 39 11.8**	**-0.3**
	baz=43					
P40A	**Paris**	**73.64 309**	P	**P**	**19 29 40.0**	**-2.0**
P40A	**Paris**	**73.64 309**	P	**P**	**19 29 40.2**	**-1.8**
	baz=48,SNR=12					
O30N	**Mendenhall**	**73.66 345**	P	**P**	**19 29 41.2**	**-0.5**
	baz=23,SNR=83					
O30N			S	**S**	**19 39 14.8**	**+2.6**
	baz=23					
KLR	**Kul'dur**	**73.66 37**	LR	LR	20 05 46.9	
	comp=Z,43μm,18.2s,baz=319,slow=39					
KLR	**Kul'dur**	**73.66 37**	*de*P	**P**	**19 29 42.8**	**+0.9**
KLR			pmax	pmax		
	comp=Z,145nm,1.3s					
KLR			MLR	MLR		
	comp=Z,43μm,16.0s					
152A	**Waverly Hall**	**73.73 299**	P	**P**	**19 29 41.5**	**-1.1**
152A			IAmb	IAmb	19 29 46.7	
	comp=Z,179nm,1.4s					
152A	**Waverly Hall**	**73.73 299**	P	**P**	**19 29 41.1**	**-1.5**
	baz=49,SNR=9.9					
152A			S	**SKiKP**	**19 39 10.8**	**-1.6**
	baz=49					
WAT6	**Susitna Watana**	**73.73 351**	P	**P**	**19 29 41.7**	**-0.7**
	baz=15,SNR=100					
WAT6			S	**S**	**19 39 15.2**	**+2.0**
	baz=15					
FVM	**French Village**	**73.74 307**	P	**P**	**19 29 40.6**	**-2.0**
FVM	**French Village**	**73.74 307**	P	**P**	**19 29 40.6**	**-2.0**
FVM			pmax	pmax		
	comp=Z,107nm,1.1s					
FVM	**French Village**	**73.74 307**	P	**P**	**19 29 41.7**	**-0.9**
	baz=48					
FVM			S	**SKiKP**	**19 39 11.2**	**-1.1**
	baz=48					
EDM	**Edmonton**	**73.76 330**	P	**P**	**19 29 42.2**	**-0.3**
EDM	**Edmonton**	**73.76 330**	P	**P**	**19 29 42.2**	**-0.3**
EDM			pmax	pmax		
	comp=Z,1μm,1.7s					
TIGA	**Tifton**	**73.80 298**	P	**P**	**19 29 42.8**	**-0.2**
TIGA			IAmb	IAmb	19 29 47.4	
	comp=Z,207nm,1.3s					
TIGA	**Tifton**	**73.80 298**	P	**P**	**19 29 42.4**	**-0.6**
	baz=49					
TIGA			S	**SKiKP**	**19 39 12.7**	**+0.1**
	baz=49					
TIGA	**Tifton**	**73.80 298**	P	**P**	**19 29 42.2**	**-0.8**
	baz=49					
TIGA			S	**SKiKP**	**19 39 13.1**	**+0.6**
	baz=49					
R33M	**Jennings River**	**73.83 342**	P	**P**	**19 29 42.5**	**-0.4**
	baz=27,SNR=126					
R33M			S	**S**	**19 39 19.2**	**+4.9**
	baz=27					
YUK8	**Steele Glacier**	**73.84 347**	P	**P**	**19 29 41.6**	**-1.5**
	baz=20,SNR=22					
YUK8			S	**S**	**19 39 19.7**	**+5.0**
	baz=20					
HYT	**Haines Junctio**	**73.87 346**	P	**P**	**19 29 43.2**	**+0.1**
HYT			IAmb	IAmb	19 29 50.1	
	comp=Z,208nm,1.3s					
HYT	**Haines Junctio**	**73.87 346**	P	**P**	**19 29 43.3**	**+0.1**
	baz=22,SNR=45					
HYT			S	**S**	**19 39 19.1**	**+4.3**
	baz=22					
PPLA	**Purkeypile**	**73.88 353**	P	**P**	**19 29 42.8**	**-0.4**
PPLA			IAmb	IAmb	19 29 49.9	
	comp=Z,133nm,1.0s					
PPLA	**Purkeypile**	**73.88 353**	P	**P**	**19 29 42.8**	**-0.4**
	baz=11,SNR=35					
PPLA			S	**S**	**19 39 15.3**	**+0.5**
	baz=11					
YUK6	**Outpost Mounta**	**73.92 346**	P	**P**	**19 29 43.5**	**0.0**
	baz=21,SNR=96					
YUK6			S	**S**	**19 39 19.7**	**+4.2**
	baz=21					
SUSD	**Miller**	**73.99 316**	P	**P**	**19 29 44.1**	**+0.2**
SUSD			IAmb	IAmb	19 29 48.6	
	comp=Z,213nm,1.1s					
SUSD	**Miller**	**73.99 316**	P	**P**	**19 29 43.3**	**-0.7**
	baz=45					
SUSD			S	**S**	**19 39 17.1**	**+0.7**
	baz=45					
SUSD	**Miller**	**73.99 316**	P	**P**	**19 29 43.1**	**-0.9**
	baz=45					
SUSD			S	**S**	**19 39 18.3**	**+1.9**
	baz=45					
M24K	**Tolsona, Glenn**	**74.00 350**	P	**P**	**19 29 44.0**	**+0.2**
M24K			IAmb	IAmb	19 29 49.5	
	comp=Z,296nm,1.4s					
M24K	**Tolsona, Glenn**	**74.00 350**	P	**P**	**19 29 44.0**	**+0.2**
	baz=16,SNR=20					
M24K			S	**S**	**19 39 19.5**	**+3.4**
	baz=16					
Y49A	**Blount Mountai**	**74.02 301**	P	**P**	**19 29 44.0**	**-0.3**
Y49A			IAmb	IAmb	19 29 48.3	
	comp=Z,209nm,1.6s					
Y49A	**Blount Mountai**	**74.02 301**	S	**SKiKP**	**19 39 13.4**	**+0.6**
	baz=49					
X48A	**Hartselle**	**74.03 302**	P	**P**	**19 29 42.7**	**-1.7**
X48A			IAmb	IAmb	19 29 49.0	
	comp=Z,313nm,1.2s					
X48A	**Hartselle**	**74.03 302**	P	**P**	**19 29 43.1**	**-1.2**
	baz=49,SNR=47					
X48A			S	**S**	**19 39 17.7**	**+0.6**
	baz=49					
HVD	**Gariep Dam**	**74.04 169**	*e*P	**P**	**19 29 44.3**	**0.0**
HVD			IAmb	IAmb	19 29 48.9	
	comp=Z,776nm,2.1s					
TTA	**Tatalina**	**74.15 355**	P	**P**	**19 29 45.1**	**+0.5**
TTA			IAmb	IAmb	19 29 50.7	
	comp=Z,498nm,1.7s					
TTA	**Tatalina**	**74.15 355**	P	**P**	**19 29 45.1**	**+0.5**
TTA			pmax	pmax		
	comp=Z,498nm,1.7s					
TTA	**Tatalina**	**74.15 355**	P	**P**	**19 29 44.1**	**-0.5**
	baz=8.3,SNR=43					
TTA			S	**S**	**19 39 19.9**	**+2.2**
	baz=8.3					
CCM	**Cathedral Cave**	**74.17 307**	P	**P**	**19 29 43.5**	**-1.6**
CCM	**Cathedral Cave**	**74.17 307**	P	**P**	**19 29 43.5**	**-1.6**
CCM			pmax	pmax		
	comp=Z,87nm,1.1s					
CCM			MLR	MLR		
	comp=Z,15μm,18.0s					
CCM	**Cathedral Cave**	**74.17 307**	P	**P**	**19 29 42.3**	**-2.8**
	baz=48,SNR=16					
CCM	**Cathedral Cave**	**74.17 307**	P	**P**	**19 29 43.6**	**-1.6**
	baz=48					
CCM	**Cathedral Cave**	**74.17 307**	P	**P**	**19 29 44.1**	**-1.0**
PCRV	**Puerto La Cruz**	**74.17 269**	LR	LR	19 59 08.9	
	comp=Z,5μm,21.1s,slow=33					
CUT	**Chulitna**	**74.18 352**	P	**P**	**19 29 43.3**	**-1.4**
CUT			IAmb	IAmb	19 30 28.0	
	comp=Z,290nm,1.4s					
CUT	**Chulitna**	**74.18 352**	P	**P**	**19 29 44.0**	**-0.7**
	baz=13,SNR=11					
CUT			S	**S**	**19 39 17.5**	**-0.4**
	baz=13					
BNX	**BinXian**	**74.19 42**	⇓P	**P**	**19 29 45.8**	**+0.7**
BNX			pP	**sP**	**19 29 48.3**	**-0.8**
BNX			sP	**pP**	**19 29 50.3**	**+2.3**
BNX			S	**S**	**19 39 19.0**	**+0.5**
BNX			sS	**sS**	**19 39 27.8**	**+4.4**
BNX			pmax	pmax		
	comp=Z,34nm,1.0s					
BNX			pmax	pmax		
	comp=Z,810nm,4.7s					
BNX			LR	LR		
	comp=Z,8μm,22.2s					
WAPA	**Wapiti River**	**74.22 334**	P	**P**	**19 29 45.4**	**+0.2**
P32M	**Atlin**	**74.26 343**	P	**P**	**19 29 44.8**	**-0.5**
	baz=25,SNR=28					
P32M			S	**S**	**19 39 20.2**	**+1.2**
	baz=25					
MCARA	**McCarthy VSAT**	**74.26 348**	P	**P**	**19 29 44.8**	**-0.5**
MCARA			IAmb	IAmb	19 29 52.0	
	comp=Z,327nm,1.4s					
MCARA			IAMs_20	IAMs_20	20 05 28.6	
	comp=Z,7μm,19.0s					
MCARA	**McCarthy VSAT**	**74.26 348**	P	**P**	**19 29 46.6**	**+1.3**
	baz=18,SNR=41					
MCARA			S	**S**	**19 39 22.9**	**+4.0**
	baz=18					
N25K	**Chitina, Valde**	**74.28 349**	P	**P**	**19 29 45.5**	**+0.1**
N25K			IAmb	IAmb	19 29 50.8	
	comp=Z,339nm,1.6s					
N25K	**Chitina, Valde**	**74.28 349**	P	**P**	**19 29 44.4**	**-1.1**
	baz=17,SNR=92					
N25K			S	**S**	**19 39 21.1**	**+1.9**
	baz=17					
CVNA	**Calvinia**	**74.28 174**	*e*P	**P**	**19 29 43.3**	**-2.4**
CVNA			IAmb	IAmb	19 29 48.2	
	comp=Z,117nm,1.1s					

PLAL	**Pickwick Lake**	**74.32 303**	P	**P**	**19 29 43.5**	**-2.5**
PLAL			IAmb	IAmb	19 29 50.1	
	comp=Z,210nm,1.2s					
GLB	**Gilahina Butte**	**74.32 349**	P	**P**	**19 29 45.4**	**-0.3**
PAPH	**Port-au-Prince**	**74.33 281**	P	**P**	**19 29 45.4**	**-0.9**
PAPH			IAmb	IAmb	19 29 52.9	
	comp=Z,468nm,1.6s					
BARN	**Barnard Glacie**	**74.36 348**	P	**P**	**19 29 46.0**	**0.0**
BARN			IAmb	IAmb	19 29 53.0	
	comp=Z,368nm,1.8s					
BARN			IAMs_20	IAMs_20	20 05 10.2	
	comp=Z,6μm,18.0s					
ENH	**Enshi**	**74.36 63**	P	**P**	**19 29 44.8**	**-1.6**
ENH			IAmb	IAmb	19 29 53.5	
	comp=Z,213nm,0.9s					
L34A	**Svendsen Farm,**	**74.38 313**	P	**P**	**19 29 45.1**	**-1.1**
L34A			IAmb	IAmb	19 29 50.6	
	comp=Z,192nm,1.1s					
L34A	**Svendsen Farm,**	**74.38 313**	P	**P**	**19 29 45.0**	**-1.3**
	baz=46,SNR=7.1					
O28M	**Mount Upton**	**74.39 347**	P	**P**	**19 29 45.8**	**-0.6**
	baz=20,SNR=56					
O28M			S	**S**	**19 39 23.3**	**+2.3**
	baz=20					
CTGM	**Chitina Glacie**	**74.40 347**	P	**P**	**19 29 45.4**	**-0.8**
CTGM			IAmb	IAmb	19 29 53.1	
	comp=Z,415nm,1.6s					
CTG	**Chitna Glacier**	**74.40 347**	P	**P**	**19 29 45.6**	**-0.6**
	baz=19,SNR=64					
SCM	**Sheep Creek Mo**	**74.41 350**	P	**P**	**19 29 46.3**	**+0.1**
SCM	**Sheep Creek Mo**	**74.41 350**	P	**P**	**19 29 46.3**	**+0.1**
SCM			pmax	pmax		
	comp=Z,688nm,1.3s					
SCM			MLR	MLR		
	comp=Z,4μm,22.0s					
SCM	**Sheep Creek Mo**	**74.41 350**	P	**P**	**19 29 46.1**	**0.0**
	baz=15,SNR=101					
SCM			S	**S**	**19 39 21.9**	**+1.2**
	baz=15					
P38A	**Dawn**	**74.42 310**	P	**P**	**19 29 45.0**	**-1.5**
P38A			IAmb	IAmb	19 29 51.2	
	comp=Z,563nm,1.9s					
P38A	**Dawn**	**74.42 310**	P	**P**	**19 29 46.0**	**-0.6**
	baz=47,SNR=22					
P38A			S	**S**	**19 39 21.8**	**+0.5**
	baz=47					
P30M	**Million Dollar**	**74.42 345**	P	**P**	**19 29 46.9**	**+0.6**
	baz=22					
L20K	**Farewell, AK**	**74.44 354**	P	**P**	**19 29 45.8**	**-0.5**
	baz=9.9,SNR=42					
L20K			S	**S**	**19 39 19.7**	**-1.2**
	baz=9.9					
656A	**Willston**	**74.45 296**	P	**P**	**19 29 46.3**	**-0.5**
	baz=49					
656A			S	**S**	**19 39 23.1**	**+1.1**
	baz=49					
DLBC	**Dease Lake**	**74.46 341**	P	**P**	**19 29 46.4**	**-0.2**
	comp=Z,62nm,1.1s,baz=31,slow=5.6,SNR=22					
DLBC			LR	LR	20 05 03.8	
	comp=Z,21μm,19.7s,baz=29,slow=38					
	comp=Z,62nm,1.1s					
DLBC	**Dease Lake**	**74.46 341**	P	**P**	**19 29 47.2**	**+0.6**
DLBC			IAmb	IAmb	19 29 54.2	
	comp=Z,437nm,1.8s					
DLBC	**Dease Lake**	**74.46 341**	P	**P**	**19 29 47.0**	**+0.5**
	baz=27,SNR=16					
DLBC			S	**S**	**19 39 26.0**	**+4.7**
	baz=27					
CHTO	**Chiang Mai**	**74.46 79**	P	**P**	**19 29 45.1**	**-2.0**
CHTO			IAmb	IAmb	19 29 52.0	
	comp=Z,270nm,1.2s					
CHTO	**Chiang Mai**	**74.46 79**	P	**P**	**19 29 45.1**	**-2.0**
CHTO			pmax	pmax		
	comp=Z,270nm,1.2s					
CHTO			MLR	MLR		
	comp=Z,1μm,19.0s					
GRNR	**Gornyy**	**74.47 33**	⇓*iP*	**P**	**19 29 47.8**	**+1.2**
GRNR			*e*		19 32 37.7	
GRNR			*e*S	**S**	**19 39 25.2**	**+3.7**
GRNR			pmax	pmax		
	comp=E,20nm,1.1s					
GRNR			pmax	pmax		
	comp=N,20nm,1.2s					
GRNR			pmax	pmax		
	comp=Z,80nm,1.2s					
GRNR			smax	smax		
	comp=E,7.0nm,0.9s					
GRNR			MLR	MLR		
	comp=N,14μm,15.0s					
GRNR			MLR	MLR		
	comp=E,13μm,15.0s					
GRNR			MLR	MLR		
	comp=Z,64nm,15.0s					
GRNR			MLR	MLR		
	comp=Z,3μm,16.0s					
VRDI	**Verde Repeater**	**74.48 348**	P	**P**	**19 29 45.6**	**-1.1**
VRDI			IAMs_20	IAMs_20	20 05 37.2	
	comp=Z,6μm,19.0s					
LOGN	**Logan Glacier**	**74.48 347**	P	**P**	**19 29 46.7**	**0.0**
LOGN			IAmb	IAmb	19 29 52.5	
	comp=Z,220nm,1.2s					
M23K	**Glacier View**	**74.50 351**	P	**P**	**19 29 47.5**	**+0.9**
	baz=14,SNR=45					
M23K			S	**S**	**19 39 22.4**	**+0.8**
	baz=14					
060A	**Indiantown**	**74.50 292**	S	**S**	**19 39 28.6**	**+6.1**
	baz=49					
BRLDA	**Berland Lookou**	**74.50 332**	P	**P**	**19 29 45.9**	**-1.0**
Q32M	**Nakina River**	**74.51 342**	P	**P**	**19 29 47.3**	**+0.3**
	baz=26,SNR=23					
Q32M			S	**S**	**19 39 23.3**	**+1.1**
	baz=26					
DWPF	**Disney Wildern**	**74.53 294**	IAMs_20	IAMs_20	20 02 39.7	
	comp=Z,6μm,20.0s					
DWPF	**Disney Wildern**	**74.53 294**	P	**P**	**19 29 46.6**	**-0.7**
	baz=49					
PBMO	**Poplar Bluff**	**74.55 306**	P	**P**	**19 29 45.9**	**-1.4**
PBMO			IAmb	IAmb	19 29 51.8	
	comp=Z,353nm,1.6s					
O29M	**Mount Kennedy**	**74.56 346**	P	**P**	**19 29 48.3**	**+1.1**
	baz=21,SNR=25					
O29M			S	**S**	**19 39 23.1**	**+0.6**
	baz=21					
SML	**Sawmill**	**74.56 351**	P	**P**	**19 29 46.3**	**-0.7**
SML	**Sawmill**	**74.56 351**	P	**P**	**19 29 46.8**	**-0.2**
	baz=14,SNR=85					
SML			S	**S**	**19 39 24.6**	**+2.3**
	baz=14					
KLU	**Klutina**	**74.56 350**	P	**P**	**19 29 46.8**	**-0.3**
KLU			IAmb	IAmb	19 29 52.4	
	comp=Z,408nm,1.6s					
KLU	**Klutina**	**74.56 350**	P	**P**	**19 29 46.0**	**-1.1**
	baz=16,SNR=70					
KLU			S	**S**	**19 39 25.0**	**+2.6**
	baz=16					
CN2	**Changchun**	**74.60 44**	*e*P	**P**	**19 29 47.5**	**0.0**
CN2			PP	**PP**	**19 32 36.5**	**+2.9**
CN2			*e*S	**S**	**19 39 19.5**	**-3.7**
CN2			SS	**SS**	**19 44 07.5**	**-1.6**
CN2			pmax	pmax		
	comp=Z,290nm,1.5s					
CN2			LR	LR		
	comp=Z,23μm,19.0s					
CN2			LR	LR		
	comp=Z,19μm,19.0s					
CN2			LR	LR		
	comp=Z,26μm,20.0s					
PBA	**Port Blair**	**74.60 88**	P	**P**	**19 29 47.8**	**-0.1**
PBA			IAmb	IAmb	19 29 50.9	
	comp=Z,342nm,1.5s					
PBA	**Port Blair**	**74.60 88**	P	**P**	**19 29 48.1**	**+0.2**
	SNR=5.0					
R40A	**Maddies Statio**	**74.61 308**	P	**P**	**19 29 46.2**	**-1.5**
R40A			IAmb	IAmb	19 29 52.2	
	comp=Z,236nm,1.4s					
R40A	**Maddies Statio**	**74.61 308**	S	**S**	**19 39 22.5**	**-1.0**
	baz=47					
GHO	**Glory Hole Cre**	**74.66 351**	P	**P**	**19 29 47.8**	**+0.2**
GHO			IAmb	IAmb	19 29 54.1	
	comp=Z,430nm,1.6s					
KSTD	**Kokstad**	**74.67 166**	*e*P	**P**	**19 29 48.0**	**0.0**
KSTD			IAmb	IAmb	19 29 53.2	
	comp=Z,380nm,2.2s					
CM31	**Chiang Mai Arr**	**74.69 79**	P	**P**	**19 29 48.3**	**-0.1**
CM31			IAmb	IAmb	19 29 53.9	
	comp=Z,221nm,1.1s					
CM31	**Chiang Mai Arr**	**74.69 79**	P	**P**	**19 29 49.1**	**+0.7**
	SNR=133					
CM31			P	**P**	**19 29 49.1**	**+0.7**
	SNR=133					
CM31			S	**S**	**19 39 24.6**	**-0.4**
CM31			S	**S**	**19 39 24.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**74.69 79**	P	**P**	**19 29 47.0**	**-1.4**
	comp=Z,52nm,0.7s,baz=304,slow=6.6,SNR=138					
CMAR			PP	**PP**	**19 32 28.8**	**-6.3**
	comp=Z,20nm,1.1s,baz=300,slow=9.8,SNR=4.4					
CMAR			LR	LR	20 09 31.7	
	comp=Z,7μm,21.1s,baz=315,slow=41					
	comp=Z,52nm,0.7s					
CMAR	**Chiang Mai Arr**	**74.69 79**	P	**P**	**19 29 47.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**74.69 79**	P	**P**	**19 29 47.0**	**-1.4**
SKAG	**Skagway**	**74.71 344**	P	**P**	**19 29 47.9**	**+0.1**
SKAG			IAmb	IAmb	19 29 55.4	
	comp=Z,184nm,1.2s					
SKAG	**Skagway**	**74.71 344**	P	**P**	**19 29 47.2**	**-0.7**
	baz=24,SNR=32					
SKT	**Skwentna**	**74.72 353**	P	**P**	**19 29 46.8**	**-1.2**
SKT			IAmb	IAmb	19 29 52.1	
	comp=Z,167nm,1.2s					
SKT			IAMs_20	IAMs_20	20 01 53.7	
	comp=Z,6μm,22.0s					
SKT	**Skwentna**	**74.72 353**	P	**P**	**19 29 47.5**	**-0.4**
	baz=12,SNR=56					
SKT			S	**S**	**19 39 20.6**	**-3.4**
	baz=12					
N35A	**Tabor**	**74.74 312**	P	**P**	**19 29 47.7**	**-0.7**
N35A			IAmb	IAmb	19 29 53.4	
	comp=Z,362nm,1.6s					
N35A	**Tabor**	**74.74 312**	S	**S**	**19 39 20.9**	**-4.0**
	baz=46					
M22K	**Willow**	**74.81 352**	P	**P**	**19 29 48.2**	**-0.1**
M22K	**Willow**	**74.81 352**	P	**P**	**19 29 47.9**	**-0.4**
	baz=13,SNR=10					
M22K			S	**S**	**19 39 26.8**	**+2.0**
	baz=13					
L19K	**White Mountain**	**74.81 354**	P	**P**	**19 29 48.9**	**+0.5**
L19K			IAmb	IAmb	19 29 54.1	
	comp=Z,180nm,1.1s					
L19K	**White Mountain**	**74.81 354**	P	**P**	**19 29 48.4**	**0.0**
	baz=9.2,SNR=39					
L19K			S	**S**	**19 39 28.0**	**+2.9**
	baz=9.2					
TGL	**Tana Glacier**	**74.83 348**	P	**P**	**19 29 48.8**	**+0.1**
TGL			IAmb	IAmb	19 29 54.2	
	comp=Z,378nm,1.4s					
PMR	**Palmer**	**74.86 351**	P	**P**	**19 29 48.4**	**-0.2**
PMR			IAmb	IAmb	19 29 53.7	
	comp=Z,464nm,1.8s					
PMR	**Palmer**	**74.86 351**	P	**P**	**19 29 48.4**	**-0.2**
PMR			pmax	pmax		
	comp=Z,464nm,1.8s					
PMR	**Palmer**	**74.86 351**	P	**P**	**19 29 49.0**	**+0.4**
	baz=13,SNR=13					
PMR			S	**S**	**19 39 28.6**	**+3.2**
	baz=13					
FRAZ	**Fraserburg**	**74.87 173**	*e*P	**P**	**19 29 48.1**	**-1.0**
FRAZ			IAmb	IAmb	19 29 52.4	
	comp=Z,213nm,1.2s					
TABL	**Table Mountain**	**74.87 347**	P	**P**	**19 29 49.0**	**0.0**
TABL			IAmb	IAmb	19 29 58.4	
	comp=Z,254nm,1.1s					
TABL			IAMs_20	IAMs_20	20 05 24.5	
	comp=Z,6μm,19.0s					
BRAK	**Brakfontein**	**74.87 171**	*e*P	**P**	**19 29 48.4**	**-0.7**
BRAK			IAmb	IAmb	19 29 52.0	
	comp=Z,98nm,1.0s					
MALB	**Monte Alegre**	**74.88 253**	*e*P	**P**	**19 29 49.1**	**-0.4**
W45A	**Hickory Valley**	**74.88 304**	P	**P**	**19 29 48.8**	**-0.5**
W45A			IAmb	IAmb	19 29 52.8	
	comp=Z,137nm,0.8s					
W45A	**Hickory Valley**	**74.88 304**	P	**P**	**19 29 46.1**	**-3.2**
	baz=48					
BMRM	**Bremner River**	**74.89 349**	P	**P**	**19 29 49.1**	**+0.1**
BMRM	**Bremner River**	**74.89 349**	P	**P**	**19 29 49.0**	**+0.1**
	baz=17,SNR=138					
BMRM			S	**S**	**19 39 28.1**	**+2.0**
	baz=17					
DIV	**Divide**	**74.89 350**	P	**P**	**19 29 48.7**	**-0.3**
DIV			IAmb	IAmb	19 29 55.5	
	comp=Z,166nm,1.2s					
ISLE	**Juniper Island**	**74.90 348**	P	**P**	**19 29 49.2**	**0.0**
ISLE			IAMs_20	IAMs_20	20 05 29.5	
	comp=Z,6μm,18.0s					
PRPB	**Parauapebas**	**74.92 246**	*e*P	**P**	**19 29 50.4**	**+0.6**
PLBC	**Pleasant Camp**	**74.92 344**	P	**P**	**19 29 50.3**	**+1.3**
	baz=23,SNR=26					
PLBC			S	**S**	**19 39 30.6**	**+4.3**
	baz=23					
LRAL	**Lakeview Retre**	**74.93 301**	P	**P**	**19 29 47.9**	**-1.7**
LRAL			IAmb	IAmb	19 29 53.5	
	comp=Z,386nm,1.7s					
LRAL	**Lakeview Retre**	**74.93 301**	P	**P**	**19 29 48.9**	**-0.7**
	baz=48					
LRAL			S	**S**	**19 39 27.2**	**0.0**
	baz=48					
GYA	**Guiyang**	**74.95 68**	⇓P	**P**	**19 29 50.8**	**+0.8**
GYA			PP	**PP**	**19 32 35.8**	**-1.5**
GYA			S	**S**	**19 39 26.5**	**-1.4**
GYA			SKS	**SKSac**	**19 39 58.5**	**-0.9**
GYA			SS	**SS**	**19 44 18.5**	**+2.8**
GYA			pmax	pmax		
	comp=Z,69nm,1.8s					
GYA			pmax	pmax		
	comp=Z,1μm,4.0s					
GYA			LR	LR		
	comp=Z,5μm,24.1s					
GYA			LR	LR		
	comp=Z,7μm,15.8s					
GYA			LR	LR		
	comp=Z,8μm,23.3s					
KNK	**Knik Glacier**	**74.95 351**	P	**P**	**19 29 49.2**	**-0.1**
KNK	**Knik Glacier**	**74.95 351**	P	**P**	**19 29 49.5**	**+0.3**
	baz=14,SNR=74					
KNK			S	**S**	**19 39 28.4**	**+1.8**
	baz=14					
M20K	**Styx River**	**74.97 353**	P	**P**	**19 29 48.6**	**-0.8**
M20K			IAmb	IAmb	19 29 54.0	
	comp=Z,483nm,1.7s					
M20K	**Styx River**	**74.97 353**	P	**P**	**19 29 48.6**	**-0.8**
	baz=10					
M20K			S	**S**	**19 39 27.2**	**+0.3**
	baz=10					
BFON	**Badsfontein, M**	**74.98 171**	*e*P	**P**	**19 29 48.2**	**-1.5**
BFON			IAmb	IAmb	19 29 52.7	
	comp=Z,116nm,1.0s					
SNY	**Shenyang**	**75.01 46**	⇓P	**P**	**19 29 51.0**	**+1.1**
SNY			S	**S**	**19 39 25.3**	**-2.5**
SNY			pmax	pmax		
	comp=Z,220nm,1.4s					
SNY			pmax	pmax		
	comp=Z,1μm,5.1s					
SNY			LR	LR		
	comp=Z,28μm,16.1s					
SNY			LR	LR		
	comp=Z,40μm,16.6s					
SNY			LR	LR		
	comp=Z,45μm,13.9s					
P29M	**Windy Craggy**	**75.03 345**	P	**P**	**19 29 50.2**	**+0.4**
P29M			IAmb	IAmb	19 29 53.2	
	comp=Z,173nm,0.8s					
P29M			IAMs_20	IAMs_20	20 04 52.8	
	comp=Z,11μm,20.0s					
P29M	**Windy Craggy**	**75.03 345**	P	**P**	**19 29 50.7**	**+1.0**
	baz=22,SNR=61					
P29M			S	**S**	**19 39 30.0**	**+2.5**
	baz=22					
YAH	**Yahtse**	**75.04 347**	P	**P**	**19 29 50.7**	**+0.7**
YAH			IAMs_20	IAMs_20	20 05 31.2	
	comp=Z,9μm,19.0s					
PCA	**Pinnacle**	**75.04 347**	P	**P**	**19 29 50.0**	**+0.1**
PINM	**Pinnacle**	**75.04 347**	P	**P**	**19 29 49.3**	**-0.5**
	baz=20,SNR=39					
PINM			S	**S**	**19 39 32.8**	**+5.0**
	baz=20					
M19K	**Big River Lodg**	**75.05 354**	P	**P**	**19 29 50.7**	**+0.9**
M19K			IAmb	IAmb	19 29 55.7	
	comp=Z,218nm,1.1s					
M19K			IAMs_20	IAMs_20	20 09 21.2	
	comp=Z,6μm,20.0s					
M19K	**Big River Lodg**	**75.05 354**	P	**P**	**19 29 50.6**	**+0.8**
	baz=9.5,SNR=53					
M19K			S	**S**	**19 39 32.0**	**+4.4**
	baz=9.5					
BCPM	**Bancas Point**	**75.07 346**	P	**P**	**19 29 49.3**	**-0.6**
BCPM			IAmb	IAmb	19 29 56.6	
	comp=Z,454nm,1.8s					
BCPM			IAMs_20	IAMs_20	20 05 44.9	
	comp=Z,10μm,19.0s					
WAX	**Waxell Ridge**	**75.13 348**	P	**P**	**19 29 50.8**	**+0.4**
WAX			IAMs_20	IAMs_20	20 05 47.5	
	comp=Z,6μm,18.0s					
SUA	**Susitna One**	**75.15 352**	P	**P**	**19 29 50.2**	**-0.3**
SUA	**Susitna One**	**75.15 352**	P	**P**	**19 29 51.1**	**+0.6**
	baz=12,SNR=70					
SUA			S	**S**	**19 39 30.3**	**+1.3**
	baz=12					
250A	**Grady**	**75.17 300**	P	**P**	**19 29 49.6**	**-1.4**
K31A	**O'Neill**	**75.17 315**	P	**P**	**19 29 50.2**	**-0.7**
K31A			IAmb	IAmb	19 29 55.2	
	comp=Z,184nm,1.1s					
S34M	**Telegraph Cree**	**75.20 341**	P	**P**	**19 29 50.7**	**+0.1**
	baz=26,SNR=25					
S34M			S	**S**	**19 39 34.1**	**+4.7**
	baz=26					
TIA	**Tai'an**	**75.23 54**	⇓P	**P**	**19 29 51.5**	**+0.2**
TIA			S	**S**	**19 39 27.8**	**-2.7**
TIA			pmax	pmax		
	comp=Z,160nm,1.3s					
TIA			pmax	pmax		
	comp=Z,1μm,4.7s					
TIA			LR	LR		
	comp=Z,11μm,13.6s					
TIA			LR	LR		
	comp=Z,15μm,18.4s					
TIA			LR	LR		
	comp=Z,25μm,19.6s					
MESA	**MESA**	**75.25 347**	P	**P**	**19 29 51.4**	**+0.2**
MESA			IAmb	IAmb	19 29 57.0	
	comp=Z,328nm,1.1s					
MESA			IAMs_20	IAMs_20	20 05 48.5	
	comp=Z,9μm,19.0s					
MESA	**MESA**	**75.25 347**	P	**P**	**19 29 52.5**	**+1.3**
	baz=19,SNR=33					
SUR	**Sutherland**	**75.26 173**	LR	LR	20 05 25.9	
	comp=Z,11μm,18.8s,baz=352,slow=38					
SUR	**Sutherland**	**75.26 173**	P	**P**	**19 29 50.9**	**-0.5**
SUR	**Sutherland**	**75.26 173**	P	**P**	**19 29 52.6**	**+1.1**
PNL	**Peninsula**	**75.30 346**	P	**P**	**19 29 51.8**	**+0.5**
	baz=20,SNR=42					
PNL			S	**S**	**19 39 33.9**	**+3.4**
	baz=20					
GLI	**Glacier Island**	**75.31 350**	P	**P**	**19 29 51.1**	**-0.2**
GLI			IAmb	IAmb	19 29 56.6	
	comp=Z,380nm,1.5s					
GLI	**Glacier Island**	**75.31 350**	P	**P**	**19 29 50.8**	**-0.5**
	baz=15,SNR=20					
GLI			S	**S**	**19 39 32.0**	**+1.4**
	baz=15					
GRAN	**Grantham**	**75.31 172**	*e*P	**P**	**19 29 51.7**	**+0.1**
GRAN			IAmb	IAmb	19 29 54.8	
	comp=Z,59nm,1.0s					
BERG	**Berg Lake**	**75.31 348**	P	**P**	**19 29 51.7**	**+0.3**
BERG			IAMs_20	IAMs_20	20 06 04.3	
	comp=Z,8μm,19.0s					
FID	**Port Fidalgo**	**75.36 350**	P	**P**	**19 29 52.0**	**+0.4**
MGMO	**Mountain Grove**	**75.38 307**	P	**P**	**19 29 51.0**	**-1.1**
SNH	**Sunshine Point**	**75.38 348**	P	**P**	**19 29 51.8**	**0.0**
SNH			IAmb	IAmb	19 29 56.3	
	comp=Z,364nm,1.3s					
SNH			IAMs_20	IAMs_20	20 05 55.2	
	comp=Z,9μm,18.0s					
RC01	**Rabbit Creek A**	**75.41 351**	P	**P**	**19 29 51.7**	**-0.2**
RC01	**Rabbit Creek A**	**75.41 351**	P	**P**	**19 29 52.3**	**+0.4**
	baz=13,SNR=44					
RC01			S	**S**	**19 39 34.1**	**+2.4**
	baz=13					
BESE	**Bessie Mountai**	**75.42 343**	P	**P**	**19 29 52.2**	**+0.1**
BESE			IAmb	IAmb	19 29 56.4	
	comp=Z,169nm,1.2s					
SMTB	**Santa Maria do**	**75.42 243**	*e*P	**P**	**19 29 53.3**	**+0.7**
GTBY	**Guantanamo Bay**	**75.44 284**	IAMs_20	IAMs_20	20 01 26.2	
	comp=Z,6μm,19.0s					
HMT	**Hamilton**	**75.45 349**	P	**P**	**19 29 52.9**	**+0.7**
HMT			IAmb	IAmb	19 29 57.9	
	comp=Z,329nm,1.5s					
HMT			IAMs_20	IAMs_20	20 06 17.9	
	comp=Z,7μm,19.0s					
OXF	**Oxford**	**75.45 304**	P	**P**	**19 29 50.6**	**-1.9**
OXF	**Oxford**	**75.45 304**	P	**P**	**19 29 50.6**	**-1.9**
OXF			pmax	pmax		
	comp=Z,604nm,1.6s					
OXF			MLR	MLR		
	comp=Z,14μm,19.0s					
OXF	**Oxford**	**75.45 304**	P	**P**	**19 29 51.0**	**-1.6**
	baz=48,SNR=6.1					
OXF	**Oxford**	**75.45 304**	P	**P**	**19 29 51.6**	**-1.0**
	baz=48,SNR=6.1					
EYAK	**Cordova Ski Ar**	**75.45 349**	P	**P**	**19 29 52.8**	**+0.7**
EYAK			IAmb	IAmb	19 29 57.9	
	comp=Z,283nm,1.4s					
EYAK	**Cordova Ski Ar**	**75.45 349**	P	**P**	**19 29 50.9**	**-1.2**
	baz=16,SNR=25					
EYAK			S	**S**	**19 39 32.5**	**+0.4**
	baz=16					
LCAR	**Lake Charles**	**75.45 306**	P	**P**	**19 29 51.4**	**-1.2**
RAGM	**Ragged Mountai**	**75.46 349**	P	**P**	**19 29 53.4**	**+1.1**
RAGM			IAMs_20	IAMs_20	20 06 31.2	
	comp=Z,8μm,20.0s					
PWL	**Port Wells**	**75.48 351**	P	**P**	**19 29 52.2**	**-0.1**
PWL	**Port Wells**	**75.48 351**	P	**P**	**19 29 52.6**	**+0.3**
	baz=14,SNR=46					
PWL			S	**S**	**19 39 32.6**	**+0.1**
	baz=14					
Z47A	**Carrollton**	**75.50 302**	P	**P**	**19 29 52.3**	**-0.5**
Z47A			IAmb	IAmb	19 29 56.1	
	comp=Z,182nm,1.3s					
Z47A	**Carrollton**	**75.50 302**	S	**S**	**19 39 26.5**	**-7.0**
	baz=48					
HBAR	**Harrisburg**	**75.50 305**	P	**P**	**19 29 52.5**	**-0.3**
HBAR			IAmb	IAmb	19 29 57.7	
	comp=Z,192nm,0.7s					
BGLC	**Bering Glacier**	**75.51 348**	P	**P**	**19 29 52.5**	**+0.1**
	baz=18					
GRAF	**Camdeboo Natio**	**75.55 170**	*e*P	**P**	**19 29 53.2**	**+0.3**
GRAF			IAmb	IAmb	19 29 56.4	
	comp=Z,128nm,1.1s					
N20K	**Mount Spurr**	**75.56 353**	P	**P**	**19 29 51.5**	**-1.3**
	baz=11,SNR=36					
N20K			S	**S**	**19 39 33.8**	**+0.4**
	baz=11					
SPCR	**Spurr Chakacha**	**75.56 353**	P	**P**	**19 29 51.7**	**-1.1**
	baz=11,SNR=23					
SPCR			S	**S**	**19 39 33.4**	**0.0**
	baz=11					
SPU	**Mount Spurr**	**75.56 353**	P	**P**	**19 29 52.0**	**-0.8**
PHRA	**Phrae**	**75.59 78**	P	**P**	**19 29 52.8**	**-0.8**
JIS	**Juneau Island**	**75.60 343**	P	**P**	**19 29 53.5**	**+0.5**
JIS			IAmb	IAmb	19 30 00.5	
	comp=Z,366nm,1.7s					
JIS			IAMs_20	IAMs_20	20 06 10.0	
	comp=Z,8μm,18.0s					
MERW	**Merweville**	**75.61 173**	*e*P	**P**	**19 29 52.6**	**-0.8**
MERW			IAmb	IAmb	19 29 56.1	
	comp=Z,146nm,1.0s					
S39A	**Bolivar**	**75.62 308**	P	**P**	**19 29 52.6**	**-0.9**
S39A			IAmb	IAmb	19 29 58.5	
	comp=Z,419nm,1.9s					
SUCK	**Suckling Hills**	**75.63 348**	P	**P**	**19 29 52.1**	**-1.0**
SUCK			IAMs_20	IAMs_20	20 06 23.7	
	comp=Z,11μm,19.0s					
061Z	**Ochoppi**	**75.63 292**	S	**S**	**19 39 39.9**	**+4.7**
	baz=49					
R32K	**Eaglecrest**	**75.63 343**	P	**P**	**19 29 54.0**	**+0.8**
	baz=24,SNR=12					
ROOI	**Rooidraai Farm**	**75.65 171**	*e*P	**P**	**19 29 53.9**	**+0.4**
ROOI			IAmb	IAmb	19 29 59.1	
	comp=Z,2μm,2.9s					
HIN	**Hinchinbrook I**	**75.70 350**	P	**P**	**19 29 54.6**	**+1.0**
HIN			IAmb	IAmb	19 29 59.1	
	comp=Z,301nm,1.3s					
BGNE	**Belgrade**	**75.71 314**	P	**P**	**19 29 53.8**	**-0.2**
BGNE	**Belgrade**	**75.71 314**	S	**S**	**19 39 38.2**	**+2.4**
	baz=45					
BGNE	**Belgrade**	**75.71 314**	P	**P**	**19 29 53.9**	**-0.2**
	baz=45,SNR=12					
BGNE			S	**S**	**19 39 33.7**	**-2.1**
	baz=45					
R31K	**City Hall, Gus**	**75.76 344**	P	**P**	**19 29 52.2**	**-1.7**
	baz=23					

N33A J Bar K, Exete 75.81 313 P **P** **19 29 53.7 -0.9**
N33A IAmb IAmb 19 29 59.3
comp=Z,167nm,0.9s
N33B J Bar K, Exete 75.81 313 S **S** **19 39 29.8 -7.1**
baz=45
T35M Bob Quinn 75.82 340 P **P** **19 29 53.6 -0.7**
baz=27,SNR=14
LAO LASA Array 75.85 322 P **P** **19 29 55.0 +0.3**
LAO LASA Array 75.85 322 P **P** **19 29 56.2 +1.5**
baz=41,SNR=109
LAO S **S** **19 39 35.5 -1.7**
baz=41
KAIM Kayak Island 75.86 349 P **P** **19 29 55.0 +0.5**
KAIM IAmb IAmb 19 30 00.6
comp=Z,338nm,1.4s
KAIM IAMs_20 IAMs_20 20 06 50.9
comp=Z,7μm,18.0s
KAIM Kayak Island 75.86 349 P **P** **19 29 54.3 -0.2**
baz=17,SNR=5.9
CAPN Captain Cook N 75.88 352 P **P** **19 29 54.4 -0.1**
baz=12
Y45A Yeager Farm, C 75.96 303 P **P** **19 29 53.7 -1.8**
DL2 Dalian 75.99 50 P **P** **19 29 57.5 +2.0**
DL2 S **S** **19 39 39.3 +0.6**
DL2 pmax pmax
comp=Z,180nm,1.3s
DL2 pmax pmax
comp=Z,1μm,6.2s
DL2 LR LR
comp=Z,19μm,17.2s
DL2 LR LR
comp=Z,22μm,18.1s
DL2 LR LR
comp=Z,26μm,14.8s
O22K Cooper Landing 76.01 351 P **P** **19 29 55.2 0.0**
O22K IAmb IAmb 19 30 00.4
comp=Z,230nm,1.1s
O22K Cooper Landing 76.01 351 P **P** **19 29 56.6 +1.4**
baz=13,SNR=10
MDJ Mudanjiang 76.07 41 P **P** **19 29 56.9 +1.0**
MDJ IAmb IAmb 19 30 00.6
comp=Z,240nm,1.6s
MDJ Mudanjiang 76.07 41 P **P** **19 29 57.0 +1.1**
MDJ pP sP 19 30 01.0 +1.0
MDJ sP PcP 19 30 04.5 -3.7
MDJ PP **PP** **19 32 50.0 +4.0**
MDJ S **S** **19 39 39.5 0.0**
MDJ SS **SS** **19 44 30.8 -0.5**
MDJ pmax pmax
comp=Z,32nm,2.2s
MDJ pmax pmax
comp=Z,1μm,7.2s
CER Ceres 76.12 175 *e*P **P** **19 29 56.1 0.0**
CER IAmb IAmb 19 30 01.5
comp=Z,1μm,3.0s
SOE Somerset East 76.12 169 P **P** **19 29 55.7 -0.5**
SOE IAmb IAmb 19 30 00.4
comp=Z,186nm,1.3s
SOE Somerset East 76.12 169 *e*P **P** **19 29 55.3 -0.9**
SOE IAmb IAmb 19 29 60.0
comp=Z,216nm,1.4s
N19K Bonanza Creek 76.13 354 P **P** **19 29 56.5 +0.4**
N19K IAmb IAmb 19 30 02.7
comp=Z,313nm,1.6s
N19K Bonanza Creek 76.13 354 P **P** **19 29 56.1 -0.1**
baz=9.4,SNR=25
N19K S **S** **19 39 40.2 +0.3**
baz=9.4
FCAR Ozark Folk Cen 76.15 306 P **P** **19 29 55.1 -1.5**
FCAR IAmb IAmb 19 30 01.7
comp=Z,361nm,1.4s
P23K Montague Islan 76.20 350 P **P** **19 29 55.7 -0.7**
baz=15,SNR=11
BRAL Brewton 76.20 300 IAMs_20 IAMs_20 20 01 00.7
comp=Z,9μm,22.0s
BRAL Brewton 76.20 300 P **P** **19 29 55.3 -1.6**
baz=48
S31K Pelican 76.28 344 P **P** **19 29 56.7 -0.1**
baz=23,SNR=37
S31K S **S** **19 39 47.2 +5.9**
baz=23
RSO Redoubt South 76.33 353 P **P** **19 29 57.1 -0.3**
SEW Seward 76.34 351 P **P** **19 29 56.9 -0.3**
SEW IAmb IAmb 19 30 02.2
comp=Z,275nm,1.4s
SEW Seward 76.34 351 P **P** **19 29 58.0 +0.8**
baz=13,SNR=14
SEW S **S** **19 39 43.3 +1.3**
baz=13
N18K Kilae Creek 76.37 354 P **P** **19 29 58.2 +0.8**
N18K Kilae Creek 76.37 354 P **P** **19 29 55.6 -1.8**
baz=8.3
N18K S **S** **19 39 46.7 +4.4**
baz=8.3
SDBA SAO DESIDERIO 76.38 238 *e*P **P** **19 29 57.9 -0.2**
S32K Killisnoo 76.38 343 P **P** **19 29 55.8 -1.7**
baz=24
EGMT Eagleton 76.39 325 P **P** **19 29 57.4 -0.5**
EGMT Eagleton 76.39 325 P **P** **19 29 57.3 -0.5**
baz=39,SNR=206
EGMT S **S** **19 39 45.0 +1.8**
baz=39
BOAV Boa Vista 76.40 260 *e*P **P** **19 29 58.1 -0.2**
146A Union 76.49 302 P **P** **19 29 58.0 -0.5**
KSU1 Kansas State U 76.50 311 P **P** **19 29 57.5 -1.0**
KSU1 IAmb IAmb 19 30 03.4
comp=Z,223nm,1.0s
KSU1 Kansas State U 76.50 311 P **P** **19 29 57.7 -0.8**
baz=45,SNR=11
KSU1 S **S** **19 39 45.1 +0.7**
baz=45
GUA01 Guaratinga, BA 76.56 232 *e*P **P** **19 29 58.9 -0.1**
Q23K Middleton Isla 76.61 349 P **P** **19 29 57.0 -1.7**
baz=15
Q23K S **S** **19 39 44.8 -0.1**
baz=15
T33K Petersburg 76.62 342 P **P** **19 29 58.4 -0.4**
baz=25
WHAR Wooly Hollow 76.66 306 P **P** **19 29 58.0 -1.5**
O20K Slope Mountain 76.70 353 P **P** **19 29 58.5 -0.8**
baz=11,SNR=8.8
O20K S **S** **19 39 47.9 +1.9**
baz=11
SUJ Sinuiju 76.72 47 P **P** **19 30 02.5 +2.8**
SUJ pP **sP** **19 30 06.5 +2.7**
SUJ S **S** **19 39 48.1 +1.4**
O19K Port Alsworth 76.73 354 P **P** **19 29 59.1 -0.3**
O19K Port Alsworth 76.73 354 P **P** **19 29 59.5 +0.1**
baz=9.5,SNR=8.4
O19K S **S** **19 39 47.0 +0.8**
baz=9.5
RSSD Black Hills 76.74 319 P **P** **19 29 59.8 -0.2**
RSSD IAmb IAmb 19 30 05.2
comp=Z,204nm,1.4s
RSSD Black Hills 76.74 319 P **P** **19 29 59.8 -0.2**
RSSD pmax pmax
comp=Z,204nm,1.4s
RSSD MLR MLR
comp=Z,15μm,19.0s
RSSD Black Hills 76.74 319 P **P** **19 30 00.2 +0.1**
baz=42
RSSD S **S** **19 39 48.6 +1.2**
baz=42
RSSD Black Hills 76.74 319 P **P** **19 30 01.1 +1.0**
N16K Nishlik Lake 76.76 356 P **P** **19 30 00.1 +0.5**
baz=6.2,SNR=17
N16K S **S** **19 39 49.8 +3.2**
baz=6.2
GRHM Grahamstown, E 76.79 169 *e*P **P** **19 29 58.5 -1.5**
GRHM IAmb IAmb 19 30 03.4
comp=Z,127nm,1.1s
TYV Tymovskoe 76.81 30 *e*P **P** **19 30 01.5 +1.5**
TYV *e*S **S** **19 39 52.2 +4.9**
WRAK Wrangell Islan 76.83 341 P **P** **19 30 00.5 +0.5**
WRAK Wrangell Islan 76.83 341 P **P** **19 30 00.1 +0.1**
baz=25,SNR=12
BRLK Bradley Lake 76.83 352 P **P** **19 30 00.1 +0.1**
BRLK IAmb IAmb 19 30 06.3
comp=Z,425nm,1.7s
BRSE Bradley Lake S 76.84 352 P **P** **19 30 00.1 0.0**
baz=12,SNR=9.1
BRSE S **S** **19 39 46.9 -0.7**
baz=12
SIT Sitka 76.92 343 P **P** **19 30 02.0 +1.4**
SIT IAmb IAmb 19 30 06.9
comp=Z,234nm,1.4s
SIT Sitka 76.92 343 P **P** **19 30 01.9 +1.4**
baz=23,SNR=13
HHAR Hobbs 76.95 308 P **P** **19 29 59.9 -1.2**
HHAR IAmb IAmb 19 30 05.0
comp=Z,236nm,1.4s
HOM Homer 77.02 352 P **P** **19 29 59.8 -1.2**
baz=12
UALR University of 77.05 305 P **P** **19 30 00.7 -0.9**
U38A Gravette 77.10 308 P **P** **19 30 00.7 -1.2**
U38A IAmb IAmb 19 30 05.9
comp=Z,244nm,1.2s
U38A Gravette 77.10 308 S **S** **19 39 48.5 -2.6**
baz=46
CNPM China Poot 77.11 352 P **P** **19 30 01.8 +0.2**
O18K Koktuh Hills 77.14 354 P **P** **19 30 02.0 +0.2**
O18K IAmb IAmb 19 30 07.2
comp=Z,286nm,1.2s
O18K Koktuh Hills 77.14 354 P **P** **19 30 00.3 -1.4**
baz=8.8
O18K S **S** **19 39 54.0 +3.3**
baz=8.8
P19K Oil Pt 77.17 353 IAMs_20 IAMs_20 20 03 10.5
comp=Z,6μm,22.0s
WALA Waterton Lakes 77.29 327 P **P** **19 30 02.2 -0.7**
WALA IAmb IAmb 19 30 06.8
comp=Z,236nm,0.9s
CCAR Cane Creek 77.29 305 P **P** **19 30 02.4 -0.6**
U33K Whale Pass 77.29 341 P **P** **19 30 03.4 +0.9**
baz=25
U33K S **S** **19 39 57.9 +5.5**
baz=25
WHN Wuhan 77.33 60 ⇓P **P** **19 30 04.3 +1.0**
WHN sP **PcP** **19 30 12.0 -1.8**
WHN PP **PP** **19 32 59.5 +2.5**
WHN S **S** **19 39 54.0 +0.3**
WHN pmax pmax
comp=Z,530nm,1.4s
WHN pmax pmax
comp=Z,2μm,2.6s
WHN LR LR
comp=Z,54μm,18.0s
O17K Koliganek Bris 77.36 355 P **P** **19 30 03.5 +0.6**
baz=7.4,SNR=19
O17K S **S** **19 39 55.5 +2.5**
baz=7.4
ELIM Elim 77.38 174 *e*P **P** **19 30 04.7 +1.5**
ELIM IAmb IAmb 19 30 06.0
comp=Z,79nm,1.0s
KROM Kromhout 77.41 170 *e*P **P** **19 30 03.7 +0.4**
KROM IAmb IAmb 19 30 10.1
comp=Z,129nm,1.1s
BAUV El Baul 77.49 271 P **P** **19 30 02.5 -1.8**
SRDT SRDT 77.50 82 P **P** **19 30 03.1 -1.3**
comp=Z,277μmcomp=Z,4μmcomp=Z,289nm,1.5s
USA0B Ussuriysk Arra 77.53 40 P **P** **19 30 03.6 -0.5**
USA0B Ussuriysk Arra 77.53 40 P **P** **19 30 03.7 -0.5**
USA0B pmax pmax
comp=Z,374nm,1.4s
USRK Ussuriysk Ar. 77.53 40 P **P** **19 30 04.6 +0.5**
comp=Z,138nm,1.2s,baz=287,slow=4.3,SNR=46
USRK LR LR 20 06 59.1
comp=Z,12μm,18.4s,baz=314,slow=38
comp=Z,138nm,1.2s
USRK Ussuriysk Ar. 77.53 40 P **P** **19 30 03.3 -0.8**
USRK Ussuriysk Ar. 77.53 40 P **P** **19 30 03.3 -0.8**
346A Big Creek Wild 77.59 301 P **P** **19 30 04.6 -0.1**
346A Big Creek Wild 77.59 301 S **S** **19 39 56.6 +0.1**
baz=47
O16K Kokwok River B 77.60 355 P **P** **19 30 04.3 +0.1**
baz=6.6,SNR=18
O16K S **S** **19 39 59.6 +4.0**
baz=6.6
P18K Big Mountain, 77.60 354 P **P** **19 30 03.1 -1.3**
baz=8.8
V35K Ketchikan 77.64 340 P **P** **19 30 02.6 -1.9**
baz=26
VBMS Vicksburg 77.68 303 P **P** **19 30 04.3 -0.9**
VBMS IAmb IAmb 19 30 10.3
comp=Z,102nm,0.8s
VBMS IAMs_20 IAMs_20 20 00 51.6
comp=Z,10μm,22.0s
VBMS Vicksburg 77.68 303 P **P** **19 30 04.8 -0.4**
baz=47
VBMS S **S** **19 39 55.8 -1.6**
baz=47
ITTB Itaituba 77.69 252 *e*P **P** **19 30 05.0 -0.5**
CRAG Craig 77.88 341 P **P** **19 30 05.0 -0.9**
baz=25
P17K Kvichak River 77.89 355 P **P** **19 30 05.4 -0.4**
baz=7.9
Q19K Cape Douglas, 77.93 353 IAMs_20 IAMs_20 20 03 45.4
comp=Z,6μm,22.0s
Q19K Cape Douglas, 77.93 353 P **P** **19 30 05.2 -1.0**
baz=9.9
MIAR Mount Ida 77.94 306 P **P** **19 30 05.7 -0.9**
MIAR IAmb IAmb 19 30 12.1
comp=Z,272nm,1.1s
MIAR IAMs_20 IAMs_20 20 02 40.3
comp=Z,11μm,20.0s
MIAR Mount Ida 77.94 306 P **P** **19 30 05.7 -0.9**
MIAR pmax pmax
comp=Z,272nm,1.1s
MIAR MLR MLR
comp=Z,11μm,20.0s
MIAR Mount Ida 77.94 306 P **P** **19 30 05.4 -1.2**
baz=46,SNR=94
MIAR S **S** **19 39 57.9 -2.3**
baz=46
T35A Sooner Cattle 77.99 309 P **P** **19 30 05.4 -1.5**
T35B Sooner Cattle 77.99 309 S **S** **19 39 58.1 -2.6**
baz=45
CNSH ChangSha 78.00 63 ⇑P **P** **19 30 06.8 -0.2**
CNSH S **S** **19 40 01.3 +0.3**
CNSH pmax pmax
comp=Z,180nm,1.5s
CNSH LR LR
comp=Z,10μm,19.2s
CNSH LR LR
comp=Z,11μm,19.8s
CNSH LR LR
comp=Z,19μm,19.4s
UGL Uglegorsk 78.03 32 *e*P P 19 30 11.3 +4.4
UGL *e*S **S** **19 39 53.8 -6.9**
UGL pmax pmax
comp=Z,500nm,1.1s
UGL smax smax
comp=E,4μm,9.7s
UGL smax smax
comp=N,3μm,7.4s
UGL MLR MLR
comp=E,17μm,15.0s
UGL MLR MLR
comp=N,20μm,17.0s
UGL MLR MLR
comp=Z,26μm,16.0s
JANB Januaria 78.04 236 *e*P **P** **19 30 07.2 -0.2**
OGNE Ogallala 78.08 315 P **P** **19 30 07.6 +0.2**
OGNE IAMs_20 IAMs_20 20 05 42.5
comp=Z,7μm,21.0s
OGNE Ogallala 78.08 315 P **P** **19 30 07.2 -0.2**
baz=43,SNR=16
OGNE S **S** **19 39 60.0 -1.7**
baz=43
GCMT Greycliff 78.08 323 P **P** **19 30 07.6 +0.2**
Q20K Shuyak Island 78.12 352 P **P** **19 30 07.0 -0.2**
baz=11,SNR=13
Q20K S **S** **19 40 01.3 -0.1**
baz=11
R32A Long Quarter, 78.14 312 P **P** **19 30 08.2 +0.4**
R32A IAmb IAmb 19 30 12.9
comp=Z,240nm,1.1s
R32A Long Quarter, 78.14 312 S **S** **19 40 01.2 -1.2**
baz=44
P16K Nushagak River 78.15 355 P **P** **19 30 06.2 -1.2**
baz=6.7
RUBB Prince Rupert 78.19 339 P **P** **19 30 08.5 +0.9**
RUBB IAmb IAmb 19 30 15.0
comp=Z,281nm,1.4s
GULI GuiLin 78.22 67 ⇓P **P** **19 30 06.0 -2.4**
GULI S **S** **19 40 00.8 -2.7**
GULI pmax pmax
comp=Z,70nm,1.4s
GULI LR LR
comp=Z,9μm,17.4s
GULI LR LR
comp=Z,4μm,14.1s
GULI LR LR
comp=Z,10μm,15.7s
WLAR White Oak Lake 78.25 305 P **P** **19 30 08.3 -0.1**
WLAR IAmb IAmb 19 30 13.8
comp=Z,204nm,1.2s
MTDJ Mount Denham 78.28 284 IAMs_20 IAMs_20 19 59 20.5
comp=Z,8μm,22.0s
TUL1 Leonard 78.28 308 P **P** **19 30 07.9 -0.7**
TUL1 IAmb IAmb 19 30 12.8
comp=Z,412nm,1.6s
TUL1 IAMs_20 IAMs_20 20 04 33.2
comp=Z,8μm,18.0s
TUL1 Leonard 78.28 308 P **P** **19 30 08.5 -0.1**
baz=45,SNR=12
TUL1 S **S** **19 40 01.3 -2.6**
baz=45
HRY Holter Researc 78.30 325 P **P** **19 30 08.4 -0.2**
Q18K Katmai Hardscr 78.32 354 P **P** **19 30 06.6 -1.9**
baz=8.9
344A Westbrook Farm 78.33 302 P **P** **19 30 08.1 -0.8**
MSHR Mys Shultsa 78.34 42⇑*e*P **P** **19 30 08.2 -0.5**
MSHR pmax pmax
comp=Z,118nm,1.3s
MSHR MLR MLR
comp=Z,36μm,17.0s
KS20 Mayfield South 78.35 310 **P** **19 30 08.8 -0.1**
KS20 IAmb IAmb 19 30 13.7
comp=Z,283nm,1.2s
CBKS Cedar Bluff 78.42 313 P **P** **19 30 09.2 -0.1**
CBKS IAmb IAmb 19 30 14.7
comp=Z,295nm,1.1s
CBKS Cedar Bluff 78.42 313 P **P** **19 30 09.2 -0.1**
CBKS pmax pmax
comp=Z,295nm,1.1s
CBKS MLR MLR
comp=Z,24μm,21.0s
CBKS Cedar Bluff 78.42 313 P **P** **19 30 09.7 +0.4**
baz=44,SNR=26
CBKS S **S** **19 40 04.2 -1.1**
baz=44
RLMT Red Lodge 78.42 322 P **P** **19 30 09.5 0.0**
RLMT Red Lodge 78.42 322 P **P** **19 30 10.0 +0.6**
baz=39,SNR=54
RLMT S **S** **19 40 06.3 +0.8**
baz=39
KAN09 Caldwell North 78.45 310 P **P** **19 30 09.1 -0.4**
OK051 E0350 and S346 78.46 309 **P** **19 30 08.7 -0.8**
OK051 IAMs_20 IAMs_20 20 03 59.0
comp=Z,10μm,20.0s
HHU Hamhung 78.46 46 P **P** **19 30 11.8 +2.4**
HHU pP **sP** **19 30 13.9 +0.4**
HHU S **S** **19 40 06.7 +1.1**
KAN13 South Haven SW 78.46 310 **P** **19 30 09.3 -0.2**
KAN06 Argonia West S 78.51 310 P **P** **19 30 09.7 -0.1**
KAN01 Argonia South 78.52 310 **P** **19 30 09.6 -0.2**
OK044 Pawnee Station 78.53 309 P **P** **19 30 09.3 -0.6**
OK044 IAMs_20 IAMs_20 20 03 59.8
comp=Z,9μm,20.0s
GRNB Grenville Isla 78.55 339 P **P** **19 30 10.9 +1.2**
GRNB IAmb IAmb 19 30 16.9
comp=Z,336nm,1.4s
KAN12 Harper NE Stat 78.55 311 P **P** **19 30 07.4 -2.6**
KAN12 IAmb IAmb 19 30 14.7
comp=Z,203nm,1.3s
OK045 Pawnee Station 78.55 309 P **P** **19 30 09.4 -0.6**
OK045 IAMs_20 IAMs_20 20 04 01.3
comp=Z,10μm,20.0s
URIC Uribia, Colomb 78.56 275 *e*P **P** **19 30 09.2 -1.1**
OK046 Pawnee Station 78.58 309 P **P** **19 30 09.9 -0.2**
OK046 IAMs_20 IAMs_20 20 04 03.0
comp=Z,10μm,21.0s
OK048 Pawnee Station 78.58 309 **P** **19 30 09.7 -0.5**
OK048 IAMs_20 IAMs_20 20 04 03.2
comp=Z,10μm,20.0s
KAN08 Anthony NE Sta 78.59 311 P **P** **19 30 10.4 +0.2**
KAN17 Caldwell West 78.60 310 **P** **19 30 10.1 -0.2**
OK050 Pawnee Station 78.62 309 P **P** **19 30 10.2 -0.2**
OK050 IAMs_20 IAMs_20 20 04 04.2
comp=Z,10μm,20.0s
KAN16 Harper SW Stat 78.64 311 P **P** **19 30 11.0 +0.5**
KAN16 IAmb IAmb 19 30 15.2
comp=Z,254nm,1.5s
OK034 N. Norfolk Rd. 78.74 309 **P** **19 30 10.4 -0.6**
OK034 IAMs_20 IAMs_20 20 02 03.3
comp=Z,8μm,21.0s
Q17K Contact Creek 78.77 354 P **P** **19 30 10.1 -0.8**
baz=8.2,SNR=9.4
KAN14 Manchester OK 78.78 310 P **P** **19 30 11.3 +0.1**
KAN14 IAmb IAmb 19 30 16.7
comp=Z,218nm,1.0s
OK049 E0420 Rd and N 78.80 310 **P** **19 30 10.9 -0.5**
OK033 Mehan 78.84 309 P **P** **19 30 11.7 +0.1**
OK033 IAMs_20 IAMs_20 20 04 18.1
comp=Z,8μm,21.0s
OK031 S. Brethren Rd 78.85 309 **P** **19 30 11.6 -0.1**
OK031 IAMs_20 IAMs_20 20 02 08.3
comp=Z,8μm,21.0s
HJU Haeju 78.86 48 P **P** **19 30 13.9 +2.2**
HJU pP **PcP** **19 30 18.1 -2.2**
HJU S **S** **19 40 11.8 +1.8**
LLLB Lillooet 78.93 333 P **P** **19 30 11.9 0.0**
KDAK Kodiak Island 78.96 352 LR LR 20 05 46.9
comp=Z,4μm,20.5s,baz=43,slow=36
KDAK Kodiak Island 78.96 352 P **P** **19 30 12.3 +0.5**
KDAK IAmb IAmb 19 30 16.8
comp=Z,163nm,0.9s
KDAK Kodiak Island 78.96 352 IAMs_20 IAMs_20 20 09 39.7
comp=Z,5μm,20.0s
KDAK Kodiak Island 78.96 352⇑*e*P **P** **19 30 11.6 -0.2**
KDAK pmax pmax
comp=Z,165nm,0.9s
KDAK MLR MLR
comp=Z,6μm,21.0s
KDAK Kodiak Island 78.96 352 P **P** **19 30 10.6 -1.2**
baz=11
KDAK S **S** **19 40 12.0 +1.7**
baz=11
KDAK Kodiak Island 78.96 352 P **P** **19 30 14.0 +2.2**
X37A Clayton 78.97 307 P **P** **19 30 12.1 -0.2**
X37A IAmb IAmb 19 30 17.2
comp=Z,237nm,1.2s
X37A Clayton 78.97 307 S **S** **19 40 12.1 +0.9**
baz=45
TEY Ternei 79.00 37 *e*P **P** **19 30 12.1 -0.2**
TEY *e* 19 30 15.5
OK032 Salt Plains WL 79.02 310 P **P** **19 30 13.1 +0.5**
OK032 IAmb IAmb 19 30 18.1
comp=Z,438nm,1.6s
OK032 IAMs_20 IAMs_20 20 06 28.7
comp=Z,6μm,20.0s
SJMB Sao Joao De Ma 79.03 232 *e*P **P** **19 30 12.5 -0.2**
K22A Casper 79.04 319 P **P** **19 30 12.5 -0.3**
K22A Casper 79.04 319 P **P** **19 30 12.0 -0.8**
baz=40,SNR=24
K22A S **S** **19 40 10.2 -2.0**
baz=40
RIB01 Linhares ES 79.06 231 *e*P **P** **19 30 12.3 -0.5**
MSO Missoula 79.08 326 P **P** **19 30 12.4 -0.5**
MSO IAmb IAmb 19 30 18.9
comp=Z,348nm,1.6s
MSO Missoula 79.08 326 P **P** **19 30 12.3 -0.6**
baz=37,SNR=58
MSO S **S** **19 40 12.9 +0.6**
baz=37
BOZ Bozeman (W) 79.09 324 P **P** **19 30 12.6 -0.4**
BOZ IAmb IAmb 19 30 16.9
comp=Z,286nm,1.2s
BOZ Bozeman (W) 79.09 324 P **P** **19 30 12.6 -0.4**
BOZ pmax pmax
comp=Z,286nm,1.3s
BOZ MLR MLR
comp=Z,12μm,18.0s
BOZ Bozeman (W) 79.09 324 P **P** **19 30 12.2 -0.9**
baz=38,SNR=96
BOZ S **S** **19 40 14.2 +1.6**
baz=38
MC01 Montes Claros 79.09 235 *e*P **P** **19 30 13.5 +0.3**
NJ2 Nanjing 79.11 56 ⇓P **P** **19 30 14.3 +1.2**
NJ2 sP **PcP** **19 30 19.8 -1.8**
NJ2 PP **PP** **19 33 16.5 +4.6**
NJ2 S **S** **19 40 12.3 -0.5**
NJ2 pmax pmax

comp=Z,190nm,1.6s
NJ2 pmax pmax
comp=Z,730nm,6.2s
NJ2 LR LR
comp=Z,17μm,13.3s
NJ2 LR LR
comp=Z,14μm,17.1s
NJ2 LR LR
comp=Z,22μm,16.1s
YMP Mirror Lake Pl 79.12 323 P **P 19 30 13.3 -0.1**
NEW Newport 79.18 329 LR LR 20 05 52.4
comp=Z,9μm,18.1s,baz=41,slow=36
NEW Newport 79.18 329 P **P 19 30 13.2 -0.1**
NEW Newport 79.18 329 IAMs_20 IAMs_20 20 08 41.9
comp=Z,7μm,18.0s
NEW Newport 79.18 329 P **P 19 30 13.2 -0.1**
NEW pmax pmax
comp=Z,738nm,1.9s
NEW MLR MLR
comp=Z,7μm,18.0s
NEW Newport 79.18 329 P **P 19 30 13.7 +0.4**
baz=35,SNR=100
NEW S **S 19 40 16.8 +3.7**
baz=35
LRM Limekiln Ridge 79.26 325 P **P 19 30 14.0 -0.1**
YUF Upper Falls 79.30 323 P **P 19 30 16.5 +2.2**
OK029 Liberty Lake 79.32 309 P **P 19 30 14.1 -0.1**
OK029 IAMs_20 IAMs_20 20 02 20.5
comp=Z,9μm,22.0s
NPGB Novo Progresso 79.33 250 *e*P **P 19 30 14.1 -0.4**
LKWY Lake 79.36 323 P **P 19 30 15.6 +1.0**
LKWY IAmb IAmb 19 30 22.5
comp=Z,240nm,1.1s
LKWY Lake 79.36 323 P **P 19 30 15.6 +1.0**
LKWY pmax pmax
comp=Z,240nm,1.1s
YNR Norris Junctio 79.37 323 P **P 19 30 15.5 +0.9**
OK035 E0210 Rd and N 79.37 311 P **P 19 30 14.3 -0.2**
OK035 IAmb IAmb 19 30 20.2
comp=Z,244nm,1.0s
OK035 IAMs_20 IAMs_20 20 05 36.9
comp=Z,9μm,19.0s
YNM Yellowstone No 79.37 323 P **P 19 30 16.6 +2.0**
342B Flagon Creek P 79.38 303 S **S 19 40 17.4 +1.8**
baz=46
YHH Holmes Hill 79.39 323 P **P 19 30 14.4 -0.5**
OK025 Westminster Rd 79.40 309 **P 19 30 14.2 -0.5**
OK025 IAMs_20 IAMs_20 20 04 42.9
comp=Z,6μm,21.0s
SDV Santo Domingo 79.43 272 LR LR 20 01 33.9
comp=Z,3μm,21.3s,baz=44,slow=33
SDV Santo Domingo 79.43 272 P **P 19 30 13.9 -1.5**
SDV IAmb IAmb 19 30 19.9
comp=Z,169nm,1.0s
SDV Santo Domingo 79.43 272 *e*P **P 19 30 13.9 -1.5**
YHL Hebgen Lake 79.48 323 P **P 19 30 15.7 +0.4**
YHL IAmb IAmb 19 30 19.6
comp=Z,190nm,1.2s
BBB Bella Bella 79.51 337 P **P 19 30 16.8 +1.9**
comp=Z,101nm,1.1s,baz=37,slow=3.2,SNR=8.3
BBB LR LR 20 08 00.2
comp=Z,6μm,18.8s,baz=27,slow=38
comp=Z,101nm,1.1s
BBB Bella Bella 79.51 337 P **P 19 30 16.0 +1.1**
BBB IAmb IAmb 19 30 18.8
comp=Z,169nm,1.2s
BRIGG Briggsdale 79.52 317 P **P 19 30 16.8 +1.3**
BRIGG IAmb IAmb 19 30 21.9
comp=Z,224nm,1.0s
BRIGG IAMs_20 IAMs_20 20 04 57.4
comp=Z,10μm,19.0s
YMR Madison River 79.53 323 P **P 19 30 15.7 +0.2**
PHWY Pilot Hill 79.54 318 P **P 19 30 15.8 0.0**
PHWY IAmb IAmb 19 30 23.5
comp=Z,358nm,1.8s
OK038 West end E0370 79.55 310 **P 19 30 15.0 -0.5**
OK038 IAmb IAmb 19 30 19.6
comp=Z,425nm,1.5s
OK038 IAMs_20 IAMs_20 20 06 43.8
comp=Z,7μm,18.0s
YHB Horse Butte 79.57 323 **P 19 30 17.0 +1.3**
YHB IAmb IAmb 19 30 22.9
comp=Z,396nm,1.4s
H17A Grant Village 79.57 323 P **P 19 30 18.2 +2.4**
H17A IAmb IAmb 19 30 24.0
comp=Z,356nm,1.2s
H17A Grant Village 79.57 323 P **P 19 30 14.6 -1.2**
baz=38,SNR=117
OHAK Old Harbor 79.58 353 P **P 19 30 15.6 +0.4**
OHAK IAmb IAmb 19 30 23.5
comp=Z,178nm,1.1s
OHAK Old Harbor 79.58 353 P **P 19 30 14.3 -0.9**
baz=10
R16K Pilot Point 79.58 355 P **P 19 30 15.8 +0.6**
baz=7.0
QLMT Earthquake Lak 79.61 323 **P 19 30 17.1 +1.2**
PEA0B Petropavlovsk- 79.62 21 P **P 19 30 16.0 +0.5**
PEA0B Petropavlovsk- 79.62 21 P **P 19 30 16.0 +0.5**
PEA0B pmax pmax
comp=Z,767nm,1.4s
PETK Petropavlovsk- 79.62 21 P **P 19 30 16.7 +1.2**
comp=Z,201nm,1.1s,baz=17,slow=2.6,SNR=38
PETK LR LR 20 09 29.2
comp=Z,12μm,19.8s,baz=327,slow=39
comp=Z,201nm,1.1s
YFT Old Faithful 79.64 323 **P 19 30 18.7 +2.5**
YFT IAmb IAmb 19 30 23.8
comp=Z,207nm,1.1s
CRJC Cerrejon, Guaj 79.66 275 *e*P **P 19 30 16.9 +0.4**
FNO Franklin 79.67 309 P **P 19 30 16.6 +0.5**
FNO IAmb IAmb 19 30 21.1
comp=Z,430nm,1.7s
Z38A Mt. Pleasant 79.67 306 P **P 19 30 16.5 +0.3**
Z38A IAmb IAmb 19 30 21.3
comp=Z,220nm,1.4s
Z38A Mt. Pleasant 79.67 306 S **S 19 40 19.0 +0.2**
baz=45
DLMT Dillon 79.69 324 P **P 19 30 16.4 +0.2**
DLMT IAmb IAmb 19 30 21.3
comp=Z,233nm,0.8s
INCN Inchon 79.76 48 P **P 19 30 17.0 +0.4**
INCN Inchon 79.76 48 P **P 19 30 17.0 +0.4**
INCN pmax pmax
comp=Z,531nm,1.4s
INCN MLR MLR
comp=Z,13μm,19.0s
INCN Inchon 79.76 48 P **P 19 30 19.7 +3.0**
U32A Winter Ranch, 79.77 311 P **P 19 30 16.9 +0.2**
U32A IAmb IAmb 19 30 22.7
comp=Z,331nm,1.1s
U32A Winter Ranch, 79.77 311 S **S 19 40 21.2 +1.4**
baz=44
YPP Pitchstone Pla 79.77 323 P **P 19 30 18.3 +1.3**
DIB Dawson Inlet, 79.78 340 **P 19 30 17.6 +1.3**
H02S1 DAWSON INLET T 79.78 340 P **P 19 30 16.2 -0.2**
SNR=8.1
KSCO Kaye Shedlock' 79.81 315 P **P 19 30 17.2 +0.2**
KSCO Kaye Shedlock' 79.81 315 P **P 19 30 16.0 -1.0**
baz=42,SNR=14
KSCO S **S 19 40 23.3 +2.9**
baz=42
FLWY Flagg Ranch 79.87 323 P **P 19 30 18.6 +1.2**
B08A Colville Reser 79.93 330 P **P 19 30 17.0 -0.3**
B08A IAmb IAmb 19 30 22.7
comp=Z,190nm,1.2s
PET Petropavlovsk 79.94 20 P **P 19 30 17.1 -0.2**
PET IAmb IAmb 19 30 21.6
comp=Z,217nm,1.3s
PET Petropavlovsk 79.94 20 *e*P **P 19 30 17.2 0.0**
PET *e* 19 33 21.0
PET *e*PPP PPP 19 35 14.1
PET *e*S **S 19 40 14.8 -6.1**
PET *e*PS **PnS 19 41 00.1 -4.0**
PET *e*PPS PPS 19 41 17.4
PET *e*SS **SS 19 45 30.3 +1.4**
PET pmax pmax
comp=Z,177nm,1.3s
PET pmax pmax
comp=Z,1μm,12.7s
PET pmax pmax
comp=Z,2μm,12.0s
PET pmax pmax
comp=Z,700nm,19.5s
PET smax smax
comp=E,2μm,10.6s
PET smax smax
comp=E,1μm,9.9s
PET MLR MLR
comp=Z,16μm,19.0s
PET Petropavlovsk 79.94 20 P **P 19 30 19.6 +2.4**
C09A Chrisman Ranch 80.00 329 P **P 19 30 17.4 -0.3**
C09A IAmb IAmb 19 30 21.3
comp=Z,305nm,1.1s
YSS Yuzh-Sakhalins 80.04 32 P **P 19 30 19.0 +1.1**
YSS Yuzh-Sakhalins 80.04 32 *e*P **P 19 30 19.4 +1.5**
YSS *e*S **S 19 40 23.8 +1.7**
YSS *e* 19 40 43.0
YSS pmax pmax
comp=Z,1μm,1.1s
YSS pmax pmax
comp=Z,2μm,3.7s
YSS smax smax
comp=N,2μm,5.1s
YSS smax smax
comp=E,2μm,7.6s
YSS MLR MLR
comp=E,18μm,18.0s
YSS MLR MLR
comp=Z,26μm,18.0s
YSS Yuzh-Sakhalins 80.04 32 P **P 19 30 19.4 +1.5**
N23A Red Feather La 80.09 318 P **P 19 30 19.0 +0.3**
baz=41,SNR=76
N23A S **S 19 40 26.6 +3.1**
baz=41
MOOW Moose Ponds 80.16 322 P **P 19 30 19.5 +0.6**
SNDB Serra Nova Dou 80.16 244 *e*P **P 19 30 18.6 -0.3**
MCMT McKenzie Canyo 80.23 324 P **P 19 30 19.8 +0.5**
SPIA Saint Paul Isl 80.24 2 P **P 19 30 18.9 +0.1**
baz=358
ALF01 Guarapari-ES 80.28 230 *e*P **P 19 30 21.4 +2.0**
SII Sitkinak Islan 80.32 353 IAMs_20 IAMs_20 20 05 40.6
comp=Z,5μm,20.0s
SII Sitkinak Islan 80.32 353 P **P 19 30 18.8 -0.5**
baz=9.5
MACA Manacapuru-AM 80.34 257 *e*P **P 19 30 21.2 +1.2**
BW06 Boulder Array 80.38 321 P **P 19 30 19.5 -0.7**
BW06 IAmb IAmb 19 30 24.9
comp=Z,404nm,1.9s
BW06 Boulder Array 80.38 321 P **P 19 30 18.7 -1.5**
baz=39,SNR=52
BW06 S **S 19 40 28.1 +1.6**
baz=39
PD31 Pinedale Array 80.38 321 P **P 19 30 19.6 -0.6**
PD31 IAmb IAmb 19 30 24.9
comp=Z,363nm,1.9s
PDAR Pinedale Array 80.38 321 P **P 19 30 20.2 +0.1**
comp=Z,15nm,0.7s,baz=57,slow=5.5,SNR=67
PDAR PP PP 19 33 13.9 -8.4
comp=Z,6.3nm,1.0s,baz=41,slow=8.4,SNR=4.5
PDAR LR LR 20 05 42.7
comp=Z,13μm,19.2s,baz=53,slow=36
comp=Z,15nm,0.7s
PDAR Pinedale Array 80.38 321 P **P 19 30 19.5 -0.7**
TPAW Teton Pass 80.45 322 IAMs_20 IAMs_20 20 08 22.1
comp=Z,10μm,20.0s
KSAR Wonju Array Be 80.47 47 P **P 19 30 19.6 -0.8**
KSAR Wonju Array Be 80.47 47 P **P 19 30 19.6 -0.8**
KSRS Korea Array 80.48 47 P **P 19 30 20.7 +0.3**
comp=Z,65nm,0.9s,baz=326,slow=4.7,SNR=66
KSRS LR LR 20 09 51.1
comp=Z,19μm,18.0s,baz=315,slow=39
comp=Z,65nm,0.9s
NATX Nacogdoches 80.53 305 IAMs_20 IAMs_20 20 05 09.0
comp=Z,8μm,18.0s
NATX Nacogdoches 80.53 305 P **P 19 30 19.4 -1.4**
baz=45
NATX S **S 19 40 27.8 -0.1**
baz=45
B06A Marblemount 80.57 331 P **P 19 30 19.8 -0.9**
ISCO Idaho Springs 80.75 317 S **S 19 40 32.5 +1.9**
baz=41
BDFB Brasilia 80.78 239 P **P 19 30 22.3 0.0**
comp=Z,19nm,0.7s,baz=69,slow=4.5,SNR=17
BDFB LR LR 20 03 48.0
comp=Z,4μm,22.0s,baz=52,slow=34
comp=Z,19nm,0.7s
BDFB Brasilia 80.78 239 P **P 19 30 21.6 -0.8**
BDFB Brasilia 80.78 239 P **P 19 30 21.6 -0.8**
BDFB pmax pmax
comp=Z,110nm,1.1s
BDFB Brasilia 80.78 239 *e*P **P 19 30 22.2 -0.2**
WMOK Wichita Mounta 80.83 309 P **P 19 30 21.5 -1.0**
WMOK Wichita Mounta 80.83 309 IAMs_20 IAMs_20 20 07 11.6
comp=Z,6μm,18.0s
WMOK Wichita Mounta 80.83 309 P **P 19 30 21.5 -1.0**
WMOK pmax pmax
comp=Z,127nm,1.1s
WMOK MLR MLR
comp=Z,6μm,18.0s
WMOK Wichita Mounta 80.83 309 P **P 19 30 21.2 -1.3**
baz=44,SNR=73
WMOK S **S 19 40 31.5 +0.6**
baz=44
D08A Wollman Farm, 80.86 329 P **P 19 30 22.3 0.0**
D08A IAmb IAmb 19 30 28.1
comp=Z,265nm,1.3s
BCYI Bear Canyon 80.88 324 P **P 19 30 22.6 -0.2**
CHGN Chignik 80.90 355 P **P 19 30 21.6 -0.7**
CHGN Chignik 80.90 355 P **P 19 30 20.6 -1.7**
baz=6.3
TJN Taejon 80.97 48 *de*P **P 19 30 23.4 +0.3**
E09A Wood Farm, Sta 81.02 328 P **P 19 30 22.9 -0.3**
E09A IAmb IAmb 19 30 28.5
comp=Z,234nm,1.0s
AHID Auburn Hatcher 81.09 322 IAMs_20 IAMs_20 20 06 07.7
comp=Z,10μm,20.0s
PGC Sidney 81.14 333 P **P 19 30 22.3 -1.5**
PGC IAmb IAmb 19 30 27.1
comp=Z,332nm,1.2s
Q24A Divide 81.15 316 P **P 19 30 23.7 -0.7**
baz=41,SNR=55
Q24A S **S 19 40 36.5 +1.7**
baz=41
SSE Sheshan 81.20 56 P **P 19 30 23.3 -1.1**
SSE S **S 19 40 31.0 -3.8**
SSE SS **SS 19 45 46.3 -2.8**
SSE pmax pmax
comp=Z,84nm,1.4s
SSE pmax pmax
comp=Z,570nm,7.6s
SSE LR LR
comp=Z,6μm,18.7s
PLID Pearl Lake 81.34 326 P **P 19 30 23.9 -1.3**
LTY Liberty 81.34 330 P **P 19 30 24.9 -0.1**
LTY IAmb IAmb 19 30 31.3
comp=Z,413nm,1.9s
SKR Severo-Kuril's 81.37 23 *e*P P 19 30 11.5 -13
SKR pmax pmax
comp=Z,200nm,4.0s
SKR MLR MLR
comp=Z,2μm,23.0s
ARGC Ariguani, Magd 81.43 275 *e*P **P 19 30 27.5 +1.6**
HAWA Hanford 81.65 329 P **P 19 30 26.5 0.0**
HAWA IAmb IAmb 19 30 30.4
comp=Z,237nm,1.2s
HAWA IAMs_20 IAMs_20 20 10 29.2
comp=Z,5μm,18.0s
GZH Guangzhou 81.71 66 P **P 19 30 26.5 -0.7**
GZH S **S 19 40 36.5 -3.8**
GZH LR LR
comp=Z,6μm,16.4s
GZH LR LR
comp=Z,7μm,19.4s
O20A White River Ci 81.80 319 P **P 19 30 28.3 +0.6**
O20A White River Ci 81.80 319 P **P 19 30 25.6 -2.1**
baz=39,SNR=41
O20A S **S 19 40 42.2 +1.0**
baz=39
D05A Enumclaw 81.88 331 P **P 19 30 28.3 +0.6**
D05A IAmb IAmb 19 30 34.2
comp=Z,293nm,1.2s
HLID Hailey 81.91 324 P **P 19 30 28.3 +0.1**
HLID IAmb IAmb 19 30 34.3
comp=Z,214nm,1.3s
HLID Hailey 81.91 324 P **P 19 30 27.6 -0.6**
baz=36,SNR=105
HLID S **S 19 40 45.7 +3.5**
baz=36
SDPT Sand Point 81.96 356 P **P 19 30 25.8 -2.2**
baz=4.8
LHMI Lhok Sumawe 81.97 90 IAMs_20 IAMs_20 20 11 56.6
comp=Z,5μm,22.0s
LHMI Lhok Sumawe 81.97 90 P **P 19 30 29.5 +0.8**
comp=Z,110nm,1.7s
PAMC Pamplona, Colo 81.98 273 *e*P **P 19 30 28.5 -0.9**
PMNB Patos De Minas 82.01 236 *e*P **P 19 30 28.5 -0.3**
WHTX Lake Whitney, 82.04 307 P **P 19 30 26.9 -2.0**
baz=44
WHTX S **S 19 40 46.4 +2.9**
baz=44
QIZ Qiongzhong 82.06 72 P **P 19 30 29.0 -0.1**
QIZ PP **PP 19 33 43.0 +6.3**
QIZ S **S 19 40 42.0 -2.0**
QIZ SS **SS 19 46 00.8 -1.8**
QIZ pmax pmax
comp=Z,120nm,1.5s
QIZ LR LR
comp=Z,2μm,23.1s
QIZ LR LR
comp=Z,2μm,23.4s
BMO Blue Mountains 82.06 327 P **P 19 30 27.4 -1.5**
BMO Blue Mountains 82.06 327 P **P 19 30 27.4 -1.5**
BMO pmax pmax
comp=Z,512nm,1.1s
BMO MLR MLR
comp=Z,13μm,22.0s
SJCC San Jacinto, C 82.09 276 *e*P **P 19 30 33.3 +3.9**
RDMU Red Mountain 82.10 320 P **P 19 30 29.0 -0.3**
T25A Trinidad 82.14 314 P **P 19 30 27.8 -1.9**
baz=41,SNR=33
T25A S **S 19 40 46.0 +1.1**
baz=41
LON Longmire 82.19 331 P **P 19 30 28.7 -0.8**
LON Longmire 82.19 331 P **P 19 30 28.7 -0.8**
LON pmax pmax
comp=Z,681nm,1.9s
MLSI Meulaboh, Aceh 82.21 91 P **P 19 30 30.3 +0.3**
comp=Z,124nm,1.3s
MLSI pP **PcP 19 30 37.6 +2.3**
comp=Z,124nm,1.3s
HWUT Hardware Ranch 82.22 321 P **P 19 30 29.6 -0.2**
SDCO Great Sand Dun 82.25 315 P **P 19 30 30.3 0.0**
SDCO IAMs_20 IAMs_20 20 09 16.0
comp=Z,9μm,20.0s
SDCO Great Sand Dun 82.25 315 P **P 19 30 27.8 -2.5**
baz=40,SNR=87
SDCO S **S 19 40 47.0 +0.8**
baz=40
G08A Pilot Rock 82.35 328 P **P 19 30 29.9 -0.5**
AMTX Amarillo 82.35 311 IAMs_20 IAMs_20 20 06 43.7
comp=Z,10μm,21.0s
AMTX Amarillo 82.35 311 P **P 19 30 29.9 -0.6**
baz=42
CLDB Colider 82.37 248 *e*P **P 19 30 30.1 -0.6**
DUB01 Friburgo-RJ 82.37 230 *e*P **P 19 30 31.5 +0.9**
CHNA Chernabura Isl 82.43 356 P **P 19 30 29.5 -0.9**
baz=5.4
CNBA Chernabura Isl 82.44 356 IAMs_20 IAMs_20 20 13 48.4
comp=Z,5μm,20.0s
HKT Hockley 82.52 304 *ce*P **P 19 30 33.2 +1.9**
HKT pmax pmax
comp=Z,106nm,1.4s
HKT Hockley 82.52 304 P **P 19 30 34.3 +3.0**
TCUT Toone Canyon 82.53 321 P **P 19 30 31.9 +0.2**
TCUT IAmb IAmb 19 30 36.9
comp=Z,168nm,1.1s
HVU Hansel Valley 82.63 322 P **P 19 30 31.8 -0.2**
HVU Hansel Valley 82.63 322 P **P 19 30 31.8 -0.2**
HVU pmax pmax
comp=Z,397nm,1.5s
MFID Camas Ranch 82.63 325 P **P 19 30 31.8 -0.1**
MFID IAMs_20 IAMs_20 20 06 13.5
comp=Z,9μm,20.0s
IPMB Ipameri, GO 82.67 237 *e*P **P 19 30 31.5 -0.8**
JMP Maruseppu 82.70 34 P **P 19 30 32.6 +0.5**
HKPS Hong Kong Po S 82.80 66 P **P 19 30 31.8 -1.2**
SGCB São Gabriel d 82.85 263 *e*P **P 19 30 32.7 -0.6**
SPUT South Promonto 82.86 322 P **P 19 30 32.9 -0.3**
SPUT IAmb IAmb 19 30 38.7
comp=Z,376nm,1.8s
ABTX Abilene, Hawle 82.86 308 P **P 19 30 31.9 -1.3**
baz=43,SNR=24
ABTX S **S 19 40 50.7 -1.3**
baz=43
JEW Eniwo 82.86 36 P **P 19 30 33.0 0.0**
JEW Eniwo 82.86 36 P **P 19 30 33.9 +0.9**
BRRC Barranca, Sant 82.88 273 *e*P **P 19 30 33.3 -0.2**
BSCB Bom Sucesso 82.91 233 *e*P **P 19 30 34.4 +1.0**
S22A 4UR Ranch, Cre 82.93 316 P **P 19 30 33.5 -0.3**
S22A IAmb IAmb 19 30 39.6
comp=Z,191nm,1.2s
S22A 4UR Ranch, Cre 82.93 316 P **P 19 30 32.9 -1.0**
baz=40,SNR=129
S22A S **S 19 40 52.0 -1.1**
baz=40
435B Jarrell 82.98 306 P **P 19 30 32.4 -1.4**
baz=44
435B S **S 19 40 54.1 +0.9**
baz=44
JNB Noboribetsu 82.98 36 P **P 19 30 34.1 +0.5**
CTU Camp Tracy 83.03 321 P **P 19 30 34.0 -0.1**
VAS01 Vassouras-RJ 83.14 231 *e*P **P 19 30 34.0 -0.5**
P18A Preston Nutter 83.16 319 P **P 19 30 34.4 -0.6**
P18A IAmb IAmb 19 30 40.1
comp=Z,209nm,1.1s
RUSC La Rusia 83.23 272 *e*P **P 19 30 36.2 +0.3**
ARAG Araguaiana, MT 83.25 241 *e*P **P 19 30 35.0 -0.2**
PV15 Paradox Valley 83.30 318 P **P 19 30 36.1 +0.5**
PV15 IAmb IAmb 19 30 38.8
comp=Z,98nm,1.0s
PV07 Paradox Valley 83.31 318 P **P 19 30 35.9 +0.2**
AKUT Akutan 83.32 359 P **P 19 30 34.5 -0.6**
SKLT Songkhla 83.36 86 P **P 19 30 35.3 -0.6**
comp=Z,2μmcomp=Z,150nm,1.5s
BGU Big Grassy Mou 83.42 322 P **P 19 30 36.0 -0.2**
KUR Kuril'sk 83.43 30 P P 19 30 28.8 -7.0
KUR *e* 19 33 41.9
KUR *e*SS SS 19 46 20.3 -0.9
KUR SSS SSS 19 49 49.8
KUR MLR MLR
comp=N,12μm,16.0s
KUR MLR MLR
comp=Z,17μm,16.0s
JTU Tsushima 83.46 48 P **P 19 30 37.9 +1.8**
PV23 Carpenter Ridg 83.48 318 P **P 19 30 36.5 -0.1**
PV11 David Mesa, Pa 83.53 318 P **P 19 30 36.6 -0.2**
PDRB Porto dos Gac 83.54 248 *e*P **P 19 30 36.6 -0.2**
PV10 Paradox Valley 83.55 318 P **P 19 30 37.2 +0.3**
I07A Izee 83.57 328 P **P 19 30 36.7 -0.1**
PV13 Radium Mtn., P 83.61 318 P **P 19 30 37.0 -0.2**
UNV Unalaska Valle 83.62 360 P **P 19 30 35.2 -1.5**
baz=0.3
UNV S **S 19 40 54.3 -4.5**
baz=0.3
MSTX Muleshoe 83.63 311 P **P 19 30 36.1 -1.2**
baz=42
PTGC Puerto Gaitan, 83.67 270 *e*P **P 19 30 38.1 +0.5**
YUK Yuzh-Kuril'sk 83.68 32 *c i*P **P 19 30 39.8 +2.7**
YUK *e* 19 33 48.0
YUK *e*PPP PPP 19 35 43.0
YUK *e*S **S 19 41 02.1 +2.4**
YUK *e*SS **SS 19 46 21.7 -3.2**
YUK *e*SSS SSS 19 49 51.7
YUK pmax pmax
comp=Z,814nm,1.3s
YUK pmax pmax
comp=N,281nm,1.0s
SRU San Rafael Swe 83.70 319 P **P 19 30 36.9 -0.7**
SRU San Rafael Swe 83.70 319 P **P 19 30 36.9 -0.7**
SRU pmax pmax
comp=Z,348nm,1.2s
KCSI Kotacane, Aceh 83.72 91 P **P 19 30 37.4 -0.4**
comp=Z,2μmcomp=Z,106nm,1.3s
NLU North Lily Min 83.76 321 P **P 19 30 38.0 0.0**
J08A Circle Bar Ran 83.77 327 P **P 19 30 37.6 -0.2**
J08A IAmb IAmb 19 30 43.2
comp=Z,110nm,1.0s
PTBC PUERTO BERRIO, 83.80 273 *e*P **P 19 30 36.2 -2.1**
TMUT Trail Mountain 83.88 320 P **P 19 30 38.3 -0.4**
QZH Quanzhou 83.90 62 *ij i*P **P 19 30 39.0 +0.4**
QZH PP **PP 19 33 53.8 +2.3**
QZH S **S 19 40 59.5 -3.1**
QZH SS **SS 19 46 33.5 +4.1**
QZH pmax pmax
comp=Z,100nm,1.6s
QZH pmax pmax

comp=Z,780nm,6.6s
QZH LR LR
comp=Z,6μm,19.9s
QZH LR LR
comp=Z,8μm,17.5s
QZH LR LR
comp=Z,11μm,19.4s
DUG Dugway, Tooele 83.91 321 P P 19 30 38.6 0.0
DUG IAmb IAmb 19 30 44.1
comp=Z,269nm,1.6s
DUG Dugway, Tooele 83.91 321 P P 19 30 38.6 0.0
DUG pmax pmax
comp=Z,269nm,1.6s
DUG MLR MLR
comp=Z,10μm,19.0s
DUG Dugway, Tooele 83.91 321 P P 19 30 37.3 -1.3
baz=37,SNR=62
DUG S S 19 41 00.4 -2.2
baz=37
JAK Akkeshi 84.08 33 P P 19 30 39.7 +0.5
H04A Detroit Lake 84.09 330 P P 19 30 39.9 +0.6
Q16A Castle Valley 84.16 320 P P 19 30 39.3 -0.7
MVCO Mesa Verde 84.19 317 P P 19 30 38.6 -1.6
baz=39,SNR=48
MVCO S S 19 41 01.6 -4.2
baz=39
ERM Erimo 84.26 35 *ceP* **P 19 30 39.4 -0.7**
ERM pmax pmax
comp=Z,207nm,1.3s
ERM MLR MLR
comp=Z,26μm,18.0s
ERM Erimo 84.26 35 P P 19 30 43.6 +3.4
TSI Tuntungan 84.31 91 P P 19 30 40.6 -0.2
comp=Z,160nm,1.0s
TEIG Tepich 84.43 292 IAMs_20 IAMs_20 20 07 49.0
comp=Z,6μm,20.0s
TEIG Tepich 84.43 292 P P 19 30 43.1 +1.8
NIKH Nikolski High 84.48 1 P P 19 30 39.6 -1.5
baz=359
JFU Fukue jima 2 84.49 50 P P 19 30 44.7 +3.2
JCT Junction City 84.51 307 P P 19 30 41.0 -0.8
baz=43,SNR=27
JCT S S 19 41 06.1 -2.7
baz=43
CHIC Chingaza 84.55 271 *eP* **P 19 30 43.9 +1.3**
ELK Elko 84.56 323 LR LR 20 10 25.3
comp=Z,6μm,19.0s,baz=42,slow=37
ELK Elko 84.56 323 P P 19 30 42.1 +0.1
ELK IAmb IAmb 19 30 48.2
comp=Z,191nm,1.4s
ELK IAMs_20 IAMs_20 20 11 53.4
comp=Z,8μm,20.0s
ELK Elko 84.56 323 P P 19 30 42.1 +0.1
ELK pmax pmax
comp=Z,191nm,1.4s
ELK MLR MLR
comp=Z,8μm,20.0s
COR Corvallis 84.58 330 P P 19 30 49.1 +7.4
WVOR Wild Horse Val 84.60 326 P **P 19 30 41.5 -0.6**
WVOR Wild Horse Val 84.60 326 P **P 19 30 41.5 -0.6**
WVOR pmax pmax
comp=Z,418nm,1.8s
WVOR MLR MLR
comp=Z,12μm,22.0s
KULM Kulim 84.64 88 IAMs_20 IAMs_20 20 12 17.4
comp=Z,5μm,21.0s
KULM Kulim 84.64 88 P P 19 30 42.8 +0.3
comp=Z,2μmcomp=Z,107nm,1.5s
NORC Norcasia 84.76 273 *eP* **P 19 30 42.9 -0.3**
BUCK Buck Mountain 84.80 330 P **P 19 30 43.5 +0.5**
HELC Santa Helena 84.82 274 *eP* **P 19 30 43.9 0.0**
ROSC El Rosal 84.84 272 P **P 19 30 44.4 +0.4**
comp=Z,18nm,0.6s,baz=54,slow=12,SNR=10
ROSC LR LR 20 04 11.7
comp=Z,19μm,21.9s,baz=50,slow=33
comp=Z,18nm,0.6s
ANMO Albuquerque 84.88 314 LR LR 20 07 07.8
comp=Z,19μm,21.2s,baz=44,slow=35
ANMO Albuquerque 84.88 314 P **P 19 30 44.6 +0.9**
ANMO IAmb IAmb 19 30 49.5
comp=Z,120nm,1.2s
ANMO Albuquerque 84.88 314 P P 19 30 44.6 +0.9
ANMO pmax pmax
comp=Z,120nm,1.2s
ANMO MLR MLR
comp=Z,18μm,21.0s
ANMO Albuquerque 84.88 314 P P 19 30 41.9 -1.8
baz=40
ANMO S S 19 41 08.2 -4.5
baz=40
ANMO Albuquerque 84.88 314 P P 19 30 45.2 +1.5
MSU Marysvale 84.96 320 P P 19 30 44.2 +0.1
MSU Marysvale 84.96 320 P P 19 30 44.2 +0.1
MVU Marysvale 84.98 320 P P 19 30 44.0 -0.2
TCRU Three Creeks R 85.01 320 P P 19 30 43.9 -0.5
PSI Prapat 85.05 91 P P 19 30 44.3 -0.3
comp=Z,87nm,1.1s,baz=317,slow=5.6,SNR=23
PSI LR LR 20 13 08.2
comp=Z,5μm,21.9s,baz=304,slow=39
comp=Z,87nm,1.1s
PSI Prapat 85.05 91 P P 19 30 43.7 -1.0
PSI 19 30 44.3
PSI MLR MLR
comp=Z,5μm,22.0s
PSI Prapat 85.05 91 P P 19 30 43.7 -1.0
comp=Z,2μmcomp=Z,2μmcomp=Z,85nm,1.4s,comp=Z,3μm,1.4s,
comp=Z,140nm,1.4s
PSI P **P 19 30 44.4 -0.3**
comp=Z,2μmcomp=Z,2μmcomp=Z,85nm,1.4s,comp=Z,3μm,1.4s,
comp=Z,140nm,1.4s
GSI Gunungsitoli 85.07 93 IAMs_20 IAMs_20 20 11 29.0
comp=Z,6μm,22.0s
GSI Gunungsitoli 85.07 93 P P 19 30 45.4 +0.8
comp=Z,3μmcomp=Z,165nm,1.6s
RPSI Rantau Prapat 85.12 91 P P 19 30 43.7 -1.2
RPSI IAmb IAmb 19 30 48.7
comp=Z,225nm,1.4s
RPSI IAMs_20 IAMs_20 20 12 35.3
comp=Z,5μm,22.0s
RPSI Rantau Prapat 85.12 91 P P 19 30 44.3 -0.6
BB19B Bebedouro 85.20 236 *eP* **P 19 30 45.5 +0.4**
ADK Adak 85.20 6 IAMs_20 IAMs_20 20 11 24.7
comp=Z,5μm,20.0s
ADK Adak 85.20 6 P P 19 30 50.9 +6.2
PARB Paraibuna 85.22 232 *eP* **P 19 30 45.9 +0.8**
K05A Summer Lake 85.26 328 P **P 19 30 46.1 +0.6**
JSD Sado 85.29 40 P **P 19 30 44.5 -0.9**
ITRB Iturama 85.30 238 *eP* **P 19 30 45.9 +0.3**
MTPU Mount Pierson 85.34 320 P **P 19 30 46.1 -0.1**
GUY2C Guyana, Caldas 85.35 273 *eP* **P 19 30 45.8 -0.9**
CBOC Ciudad Bolivar 85.40 274 *eP* **P 19 30 48.7 +2.1**
IPM Ipoh 85.46 88 P **P 19 30 45.6 -1.1**
IPM IAmb IAmb 19 30 49.5
comp=Z,125nm,1.3s
IPM Ipoh 85.46 88 P P 19 30 47.5 +0.9
comp=Z,5μmcomp=Z,2μmcomp=Z,89nm,1.7s
JYA Atsumi 85.52 39 P P 19 30 48.5 +1.9
BNM Barren Site 85.58 314 P P 19 30 46.7 -0.6
RCLB Rio Claro- Sao 85.63 234 *eP* **P 19 30 47.5 +0.3**
JAD Aida 85.68 45 P P 19 30 48.9 +1.5
MOD Modoc Plateau 85.72 327 P P 19 30 48.1 +0.4
MOD IAmb IAmb 19 30 51.6
comp=Z,150nm,1.1s
TATO Taipei 85.73 60 P P 19 30 50.1 +2.3
TATO P **P 19 30 50.1 +2.3**
TATO Taipei 85.73 60 P P 19 30 52.1 +4.3
VAO Valinhos 85.74 233 *eP* **P 19 30 47.9 +0.1**
Y22D IRIS PASSCAL I 85.80 314 P P 19 30 47.2 -1.0
baz=40
Y22F Passcal Instru 85.80 314 P P 19 30 47.7 -0.5
baz=40
GDL2 Guadalupe Moun 85.84 311 P P 19 30 49.1 +0.6
833A Chaparral WMA, 85.85 305 P P 19 30 48.5 +0.1
baz=43
833A S S 19 41 17.4 -4.5
baz=43
ANIL Santa Ana 85.87 272 *eP* **P 19 30 49.6 +0.6**
PKCU Pink Cliffs 85.88 319 P **P 19 30 49.0 +0.2**
PKCU IAmb IAmb 19 31 00.4
comp=Z,376nm,1.8s
SALV Santo Antonio 85.93 244 *eP* **P 19 30 47.7 -1.1**
BCIP Isla Barro Col 85.97 279 *eP* **P 19 30 50.6 +1.4**
ORTC Ortega, Tolima 86.15 272 *eP* **P 19 30 50.6 +0.5**
HUMO Hull Mountain 86.15 329 P **P 19 30 49.8 +0.1**
HUMO IAmb IAmb 19 30 55.0
comp=Z,194nm,1.4s
HUMO IAMs_20 IAMs_20 20 09 55.5
comp=Z,6μm,20.0s
C2SB Chapadao do Su 86.16 240 *eP* **P 19 30 50.3 +0.4**
PLMC San Jos del P 86.24 273 *eP* **P 19 30 50.6 0.0**
JGN Niukaw 86.27 42 P **P 19 30 51.6 +1.2**
W18A Petrified Fore 86.45 316 P **P 19 30 49.1 -2.3**
baz=38
W18A S **S 19 41 27.7 -0.3**
baz=38
MAJO Matsushiro 86.45 41 P **P 19 30 52.1 +0.8**
MAJO Matsushiro 86.45 41 *cP* **P 19 30 51.9 +0.7**
MAJO pmax pmax
comp=Z,317nm,1.5s
MAJO Matsushiro 86.45 41 P **P 19 30 52.8 +1.6**
MAT Matsushiro 86.45 41 P **P 19 30 52.5 +1.2**
MJAR Matsushiro Arr 86.45 41 P **P 19 30 52.3 +1.1**
comp=Z,81nm,0.9s,baz=320,slow=4.5,SNR=70
MJAR LR LR 20 13 40.8
comp=Z,30μm,18.1s,baz=328,slow=39
comp=Z,81nm,0.9s
KNB Kanab 86.46 320 P **P 19 30 51.9 +0.4**
KNB IAmb IAmb 19 30 56.2
comp=Z,236nm,2.0s
KNB Kanab 86.46 320 P **P 19 30 51.9 +0.4**
KNB pmax pmax
comp=Z,236nm,2.0s
PBSI Pulau Batu 86.50 93 P **P 19 30 51.8 +0.1**
comp=Z,232nm,1.8s
JMM Marumori 86.61 39 P **P 19 30 52.3 +0.3**
PP1B Ponte de Pedra 86.62 242 *eP* **P 19 30 52.4 +0.2**
R11A Troy Canyon, C 86.67 322 P **P 19 30 51.4 -1.1**
baz=35,SNR=55
R11A S **S 19 41 34.8 +4.8**
baz=35
U15A North Rim 86.68 319 P **P 19 30 52.5 -0.2**
JGF Kuroka 86.78 42 P **P 19 30 54.3 +1.4**
YBH Yreka Blue Hor 86.81 328 LR LR 20 09 38.1
comp=Z,6μm,20.1s,baz=24,slow=36
YBH Yreka Blue Hor 86.81 328 P **P 19 30 52.7 -0.3**
YBH IAmb IAmb 19 30 57.7
comp=Z,133nm,1.5s
YBH IAMs_20 IAMs_20 20 09 16.9
comp=Z,7μm,20.0s
YBH Yreka Blue Hor 86.81 328 P **P 19 30 52.7 -0.3**
YBH pmax pmax
comp=Z,133nm,1.5s
YBH MLR MLR
comp=Z,7μm,20.0s
INU Inuyama 86.81 43 P **P 19 30 54.0 +1.0**
VILB Vilhena 86.86 249 *eP* **P 19 30 53.5 +0.1**
MNSI Mandailing Nat 86.88 92 P **P 19 30 53.6 0.0**
comp=Z,1μmcomp=Z,40nm,1.3s
YOTC Yotoco, Valle 86.91 273 *eP* **P 19 30 53.5 -0.4**
PET01 Itanhaem-SP 86.91 233 *eP* **P 19 30 53.5 +0.1**
WUAZ Wupatki 86.95 318 P **P 19 30 54.8 +0.9**
WUAZ IAmb IAmb 19 31 01.8
comp=Z,130nm,1.5s
WUAZ Wupatki 86.95 318 P **P 19 30 52.6 -1.3**
baz=37,SNR=22
WUAZ S **S 19 41 34.4 +1.5**
baz=37
PAHR Pah Rah Range 87.19 325 P **P 19 30 55.3 +0.3**
KVN Kaiserville 87.20 324 P **P 19 30 54.4 -0.7**
KVN Kaiserville 87.20 324 P **P 19 30 54.4 -0.7**
KVN pmax pmax
comp=Z,37nm,1.1s
PCMB Pacaembu 87.28 237 *eP* **P 19 30 55.6 +0.3**
121A Cookes Peak, D 87.44 313 P **P 19 30 55.3 -1.0**
baz=39
121A S **S 19 41 39.5 +1.8**
baz=39
BEKR Beckworth 87.47 326 P **P 19 30 55.8 -0.6**
GARC Garzon, Huila 87.49 271 *eP* **P 19 30 56.4 -0.5**
FRTB Fartura 87.55 235 *eP* **P 19 30 56.5 -0.1**
TX31 Lajitas Ar. Si 87.61 309 P **P 19 30 56.2 -0.9**
TX32 Lajitas Array 87.61 309 P **P 19 30 56.2 -0.9**
TX32 IAmb IAmb 19 31 02.7
comp=Z,168nm,1.3s
TXAR Lajitas Array 87.61 309 P **P 19 30 56.8 -0.2**
comp=Z,21nm,1.0s,baz=62,slow=3.0,SNR=63
TXAR PKKPbc **PKKPbc 19 48 43.9 +0.4**
comp=Z,2.9nm,1.1s,baz=189,slow=3.4,SNR=9.3
comp=Z,21nm,1.0s
TXAR Lajitas Array 87.61 309 P **P 19 30 56.0 -1.0**
TXAR Lajitas Array 87.61 309 P **P 19 30 56.1 -1.0**
JYT Yasato 87.66 40 P **P 19 30 57.1 0.0**
TBTG Tabatinga, AM 87.71 262 *eP* **P 19 30 57.4 -0.1**
NV11 Mina Array Sit 87.74 324 P **P 19 30 57.8 +0.1**
YERR Yerington 87.74 325 P **P 19 30 57.5 -0.2**
YERR IAmb IAmb 19 31 00.9
comp=Z,103nm,1.2s
NVAR Mina Array Bea 87.80 324 P **P 19 30 58.1 +0.1**
comp=Z,12nm,0.7s,baz=49,slow=5.1,SNR=36
NVAR PP **PP 19 34 20.8 -2.1**
comp=Z,3.1nm,1.0s,baz=45,slow=6.5,SNR=3.6
NVAR PKKPbc **PKKPbc 19 48 44.6 +1.2**
comp=Z,1.2nm,0.7s,baz=195,slow=2.8,SNR=8.3
NVAR PKPPKP **P'P'df 19 56 51.2 -7.4**
comp=Z,0.2nm,0.3s,baz=171,slow=2.4,SNR=3.8
NVAR LR LR 20 10 22.4
comp=Z,7μm,20.4s,baz=40,slow=36
comp=Z,12nm,0.7s
NVAR Mina Array Bea 87.80 324 P **P 19 30 57.7 -0.4**
PTLB Pontes e Lacer 87.90 247 *eP* **P 19 30 57.9 -0.4**
ACON Acoyapa 87.92 284 P **P 19 30 58.0 -0.6**
ACON IAmb IAmb 19 31 05.0
comp=Z,153nm,1.8s
TGUH Tegucigalpa,Un 87.97 287 IAMs_20 IAMs_20 20 03 28.2
comp=Z,9μm,22.0s
RPRD Ribas do Rio P 87.97 240 *eP* **P 19 30 59.0 +0.4**
JCC Jacoby Creek, 88.10 329 IAMs_20 IAMs_20 20 13 18.1
comp=Z,7μm,18.0s
TPNV Topopah Spring 88.11 322 IAMs_20 IAMs_20 20 12 26.8
comp=Z,8μm,18.0s
TPNV Topopah Spring 88.11 322 P **P 19 30 58.1 -1.4**
baz=34,SNR=12
TPNV S **S 19 41 43.7 -0.2**
baz=34
ORV Oroville 88.19 327 P **P 19 30 59.0 -0.6**
ORV IAmb IAmb 19 31 04.2
comp=Z,109nm,1.4s
ORV Oroville 88.19 327 P **P 19 30 59.0 -0.6**
ORV pmax pmax
comp=Z,109nm,1.4s
ORV MLR MLR
comp=Z,10μm,18.0s
WAKR Walker 88.23 325 P **P 19 30 59.8 -0.2**
WAKR IAmb IAmb 19 31 05.7
comp=Z,165nm,1.5s
BKNI Bangkinang 88.27 91 IAMs_20 IAMs_20 20 14 44.8
comp=Z,4μm,20.0s
BKNI Bangkinang 88.27 91 P **P 19 30 59.0 -1.3**
comp=Z,2μmcomp=Z,65nm,1.5s
GMN Gold Mountain 88.28 323 P **P 19 30 59.7 -0.7**
BRU2 Volcan 88.29 280 *eP* **P 19 30 58.3 -2.3**
V12A Nelson 88.47 320 P **P 19 31 00.8 -0.3**
SRBA San Rafael, Bu 88.48 281 P **P 19 31 01.0 -0.5**
AFDM Forest Hills D 88.49 326 P **P 19 31 01.1 0.0**
HDC Heredia 88.50 282 IAMs_20 IAMs_20 20 08 32.4
comp=Z,5μm,19.0s
HDC Heredia 88.50 282 *eP* **P 19 31 01.2 -0.3**
LCH Last Change Ra 88.51 323 P **P 19 31 01.4 +0.1**
W13A Hualapai Mount 88.51 319 P **P 19 31 01.8 +0.3**
JOW Kunigami 88.55 54 LR LR 20 15 16.3
comp=Z,14μm,18.6s,baz=336,slow=39
JOW Kunigami 88.55 54 P **P 19 31 00.4 -1.1**
JOW Kunigami 88.55 54 P **P 19 31 02.8 +1.4**
GRAC Grapevine Rang 88.58 322 P **P 19 31 00.3 -1.2**
baz=34,SNR=7.2
GRAC S **S 19 41 47.0 -1.1**
baz=34
MLAC Mammoth, Mammo 88.70 324 P **P 19 31 01.4 -1.0**
baz=33
TIJ01 Guaruva-PR 88.71 233 *eP* **P 19 31 02.4 +0.3**
PANT Pantanal (Braz 88.76 243 *eP* **P 19 31 02.8 +0.4**
FURC Furnace Creek, 88.79 322 P **P 19 31 02.3 -0.1**
baz=34
ETMB Extrema 88.89 256 *eP* **P 19 31 02.3 -0.8**
JTS Las Juntas de 88.90 283 LR LR 20 09 32.5
comp=Z,4μm,18.2s,baz=106,slow=35
TIN Tinemaha, Big 88.92 323 P **P 19 31 02.6 -0.5**
baz=33,SNR=6.4
GWY Greenwater Val 88.93 322 P **P 19 31 03.2 -0.2**
GWY IAmb IAmb 19 31 09.0
comp=Z,98nm,1.3s
SHOC Shoshone, Teco 88.99 321 P **P 19 31 02.8 -0.7**
baz=34
SHOC S **S 19 41 56.2 +4.3**
baz=34
TRCB Terra Rica 89.01 237 *eP* **P 19 31 03.4 -0.1**
CMB Columbia Colle 89.02 325 P **P 19 31 03.4 -0.2**
CMB IAMs_20 IAMs_20 20 09 35.7
comp=Z,10μm,21.0s
CMB Columbia Colle 89.02 325 P **P 19 31 03.4 -0.2**
CMB pmax pmax
comp=Z,37nm,1.2s
CMB MLR MLR
comp=Z,10μm,21.0s
NEE2 Needles Airpor 89.13 319 P **P 19 31 03.5 -0.6**
baz=35
NEE2 S **S 19 41 53.9 +0.6**
baz=35
MTO3 Montecristo 89.19 289 P **P 19 31 04.3 -0.6**
MTO3 IAmb IAmb 19 31 09.2
comp=Z,178nm,1.5s
TUC Tucson 89.19 315 P **P 19 31 04.8 +0.3**
TUC IAmb IAmb 19 31 10.7
comp=Z,90nm,1.2s
TUC Tucson 89.19 315 P **P 19 31 04.8 +0.3**
TUC pmax pmax
comp=Z,90nm,1.2s
TUC MLR MLR
comp=Z,18μm,21.0s
TUC Tucson 89.19 315 P **P 19 31 03.1 -1.4**
baz=38
TUC Tucson 89.19 315 P **P 19 31 05.3 +0.8**
TUQ Turquoise Moun 89.20 321 P **P 19 31 02.5 -2.1**
baz=35,SNR=27
TUQ S **S 19 41 57.6 +3.4**
baz=35
AQDB Aquidauana 89.24 241 P **P 19 31 04.2 -0.4**
AQDB IAmb IAmb 19 31 10.3
comp=Z,117nm,1.4s
AQDB Aquidauana 89.24 241 *eP* **P 19 31 04.5 -0.1**
PDMCI Parker Dam,Lak 89.28 319 P **P 19 31 04.2 -0.6**
baz=36,SNR=16
PDMCI S **S 19 41 57.6 +3.0**
baz=36
MYKOM Kota Tinggi 89.35 88 P **P 19 31 05.3 -0.1**
MYKOM Kota Tinggi 89.35 88 P **P 19 31 05.4 0.0**
comp=Z,1μmcomp=Z,52nm,1.9s
CWC Cottonwood Cre 89.36 323 P **P 19 31 03.5 -1.9**
baz=34
CWC S **S 19 41 56.8 +1.1**
baz=34
SDSI Sungai Dareh 89.40 92 P **P 19 31 04.7 -0.9**
comp=Z,2μmcomp=Z,80nm,1.6s
MPMC Manual Prospec 89.41 322 P **P 19 31 03.5 -2.2**
baz=34,SNR=30
MPMC S **S 19 41 57.4 +1.2**
baz=34
GCUF Volcan Galeras 89.50 271 *eP* **P 19 31 04.0 -2.6**
BTDF Bukit Timah Da 89.58 89 P **P 19 31 06.5 0.0**
comp=Z,1μmcomp=Z,46nm,1.8s
SIV San Ignacio 89.60 248 P **P 19 31 05.3 -1.2**
comp=Z,2.4nm,0.6s,baz=50,slow=6.3,SNR=14
SIV LR LR 20 11 37.6
comp=Z,3μm,18.1s,baz=66,slow=36
comp=Z,2.4nm,0.6s
GMRC Granite Mounta 89.61 320 P **P 19 31 05.0 -1.6**
baz=35,SNR=21
GMRC S **S 19 41 59.9 +1.9**
baz=35
GSC Goldstone, Bar 89.72 321 P **P 19 31 06.5 -0.5**
baz=34,SNR=16
IRM Iron Mountain 89.88 319 P **P 19 31 06.5 -1.2**
baz=35,SNR=48
HEC Hector,Ludlow 89.89 321 P **P 19 31 06.5 -1.2**
baz=34,SNR=11
HEC S **S 19 42 03.9 +3.4**
baz=34
BLYC Blythe 89.91 319 P **P 19 31 07.6 -0.1**
BLYC IAmb IAmb 19 31 13.3
comp=Z,90nm,1.1s
MCCM Marconi Confer 89.96 327 IAMs_20 IAMs_20 20 13 06.3
comp=Z,8μm,19.0s
JHJ Hachijo jima 2 89.97 42 LR LR 20 15 34.3
comp=Z,18μm,19.3s,baz=348,slow=38
LRMC Laurel Mtn Rad 89.98 322 P **P 19 31 06.6 -1.6**
baz=34,SNR=10
VOG Valley Oaks Go 90.03 323 P **P 19 31 07.1 -1.1**
baz=33
PTGB Pitanga 90.08 236 *eP* **P 19 31 08.5 -0.1**
RRX Edison Barstow 90.16 321 P **P 19 31 08.5 -0.4**
baz=34
ISA Isabella, Lake 90.18 322 P **P 19 31 08.9 -0.2**
ISA Isabella, Lake 90.18 322 P **P 19 31 08.9 -0.2**
ISA pmax pmax
comp=Z,90nm,1.2s
ISA Isabella, Lake 90.18 322 P **P 19 31 08.3 -0.8**
baz=33,SNR=32
BBRB Robore, Bolivi 90.36 245 *eP* **P 19 31 09.8 -0.1**
BELC Belle Mtn. Jos 90.42 320 P **P 19 31 08.7 -1.6**
baz=35,SNR=26
TPRI Tanjung Pinang 90.43 88 P **P 19 31 11.7 +1.3**
comp=Z,35nm,0.6s
BC3 Big Chuckawall 90.44 319 P **P 19 31 09.4 -1.0**
baz=35,SNR=29
214A Organ Pipe Nat 90.51 316 P **P 19 31 10.7 0.0**
214A Organ Pipe Nat 90.51 316 P **P 19 31 10.0 -0.6**
baz=36,SNR=18
ANTJ Antonio Joao (90.54 240 *eP* **P 19 31 10.7 0.0**
SAO San Andreas Ge 90.55 325 P **P 19 31 09.6 -1.1**
SAO IAMs_20 IAMs_20 20 15 49.0
comp=Z,8μm,19.0s
SAO San Andreas Ge 90.55 325 P **P 19 31 09.6 -1.1**
SAO pmax pmax
comp=Z,47nm,1.3s
SAO MLR MLR
comp=Z,8μm,19.0s
EDW2 Edwards Air Fo 90.62 322 P **P 19 31 10.6 -0.5**
baz=34,SNR=16
GLA Glamis 90.63 319 P **P 19 31 09.2 -1.9**
baz=35,SNR=10.0
BBRC Big Bear Solar 90.63 321 P **P 19 31 10.7 -0.7**
baz=34
ARVC Arvin 90.79 322 P **P 19 31 09.7 -2.2**
baz=33
PFO Pinyon Flats O 90.95 320 LR LR 20 14 20.2
comp=Z,7μm,18.4s,baz=34,slow=37
PFO Pinyon Flats O 90.95 320 P **P 19 31 12.5 -0.3**
PFO Pinyon Flats O 90.95 320 P **P 19 31 12.5 -0.3**
PFO pmax pmax
comp=Z,69nm,1.1s
PFO MLR MLR
comp=Z,9μm,19.0s
PFO Pinyon Flats O 90.95 320 P **P 19 31 11.5 -1.3**
baz=34,SNR=31
TPFO Pinon Flats 90.96 320 P **P 19 31 11.5 -1.3**
baz=34,SNR=38
BFSC Mount Baldy Ra 91.00 321 P **P 19 31 12.4 -0.6**
baz=34,SNR=6.6
CMIG Matias Romero 91.07 295 P **P 19 31 12.8 -0.6**
comp=Z,18nm,1.0s,baz=37,slow=4.1,SNR=10
CMIG LR LR 20 07 59.6
comp=Z,6μm,22.0s,baz=22,slow=33
comp=Z,18nm,1.0s
SMMC Simmler 91.15 323 P **P 19 31 12.1 -1.5**
baz=32
PIX Pinacate 91.16 317 P **P 19 31 13.4 -0.2**
OSI Osito Audit: C 91.17 322 P **P 19 31 11.4 -2.2**
baz=33
SWSC Sam W. Stewart 91.19 319 P **P 19 31 11.8 -1.9**
baz=35,SNR=11
DECC Green Verdugo 91.29 322 P **P 19 31 12.5 -1.7**
baz=33
MURC Murrieta 91.31 320 P **P 19 31 14.6 +0.3**
baz=34,SNR=10
MURT Porto Murtinho 91.33 241 *eP* **P 19 31 14.6 +0.3**
ELS Elsinore Mount 91.38 321 P **P 19 31 14.4 -0.3**
DSRI Dabo 91.41 89 P **P 19 31 15.9 +0.9**
comp=Z,2μmcomp=Z,1μmcomp=Z,38nm,1.9s
PKM Mcpherson Peak 91.43 323 P **P 19 31 14.4 -0.7**
baz=32,SNR=11
YUH Yuha Desert 91.49 319 P **P 19 31 15.1 0.0**
MONP2 Monument Peak 91.53 320 P **P 19 31 13.4 -2.2**
baz=34,SNR=25
IKP In-Ko-Pah, Jac 91.58 319 P **P 19 31 12.9 -2.8**
baz=35,SNR=18
FMP Fort Macarthur 91.72 321 P **P 19 31 14.3 -1.9**
baz=33
SBC Santa Barbara 91.76 323 P **P 19 31 13.9 -2.4**

	baz=32						
BAR	**Barrett**	**91.82**	**320**	P	**P**	**19 31 16.9**	**+0.2**
BAR				IAmb	IAmb	19 31 21.9	
	comp=Z,66nm,1.1s						
ITAB	**Concordia**	**91.99**	**234**	*e*P	**P**	**19 31 17.4**	**+0.2**
ESJX	**Sierra Juarez**	**92.03**	**319**	P	**P**	**19 31 17.7**	**-0.1**
CIS	**Catalina Islan**	**92.04**	**321**	P	**P**	**19 31 14.5**	**-3.2**
	baz=33						
KSI	**Kapahiang**	**92.09**	**93**	P	**P**	**19 31 18.3**	**+0.1**
SCZ2	**Santa Cruz Isl**	**92.10**	**322**	P	**P**	**19 31 14.2**	**-3.7**
	baz=33						
CZSB	**Cruzeiro do Su**	**92.14**	**262**	*e*P	**P**	**19 31 18.5**	**+0.2**
UNM	**Universidad Na**	**92.28**	**299**	IAms_20	IAms_20	20 16 10.6	
	comp=Z,4μm,19.0s						
SCI2	**San Clemente I**	**92.45**	**321**	P	**P**	**19 31 16.4**	**-3.2**
	baz=33						
CNLB	**Canela**	**92.79**	**232**	*e*P	**P**	**19 31 21.3**	**+0.3**
MNAI	**Manna**	**92.83**	**93**	IAms_20	IAms_20	20 15 53.9	
	comp=Z,4μm,21.0s						
PMBI	**Palembang**	**93.20**	**91**	IAms_20	IAms_20	20 17 22.7	
	comp=Z,5μm,21.0s						
BOSC	**San Juan Bosco**	**93.29**	**269**	P	**P**	**19 31 23.6**	**-0.3**
BOSC				IAmb	IAmb	19 31 29.0	
	comp=Z,127nm,1.6s						
CRSM	**Crissiumal (Br**	**93.33**	**235**	*e*P	**P**	**19 31 23.9**	**+0.5**
ALGR	**Alto Alegre (B**	**93.68**	**234**	*e*P	**P**	**19 31 25.7**	**+0.6**
PPBI	**Pangkal Pinang**	**93.69**	**90**	P	**P**	**19 31 25.9**	**+0.4**
	comp=Z,17nm,1.2s						
KSM	**Kuching**	**94.29**	**84**	P	**P**	**19 31 29.5**	**+1.2**
	comp=Z,645nmcomp=Z,25nm,1.9s						
CPUP	**Villa Florida**	**94.50**	**238**	P	**P**	**19 31 28.1**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=65,slow=6.8,SNR=2.3						
CPUP				LR	LR	20 11 33.6	
	comp=Z,5μm,22.0s,baz=48,slow=34						
	comp=Z,3.0nm,0.9s						
CPUP	**Villa Florida**	**94.50**	**238**	*e*P	**P**	**19 31 28.2**	**-0.7**
LPAZ	**La Paz**	**94.67**	**252**	P	**P**	**19 31 30.6**	**-0.1**
	comp=Z,7.5nm,1.1s,baz=30,slow=5.7,SNR=12						
LPAZ				PP	**PP**	**19 35 17.1**	**-2.0**
	comp=Z,2.4nm,0.8s,baz=58,slow=7.1,SNR=3.7						
LPAZ				PKPPKP	**P'P'df**	**19 56 44.0**	**+4.6**
	comp=Z,0.7nm,0.3s,baz=191,slow=3.4,SNR=3.6						
LPAZ				LR	LR	20 12 14.9	
	comp=Z,3μm,20.1s,baz=27,slow=34						
	comp=Z,7.5nm,1.1s						
LPAZ	**La Paz**	**94.67**	**252**	P	**P**	**19 31 31.1**	**+0.5**
LPAZ	**La Paz**	**94.67**	**252**	P	**P**	**19 31 31.1**	**+0.5**
LPAZ				pmax	pmax		
	comp=Z,26nm,1.4s						
LPAZ	**La Paz**	**94.67**	**252**	*e*P	**P**	**19 31 27.8**	**-2.8**
SBUM	**Sibu**	**95.03**	**82**	P	**P**	**19 31 30.5**	**-1.1**
SBUM	**Sibu**	**95.03**	**82**	P	**P**	**19 31 31.3**	**-0.3**
	comp=Z,294nmcomp=Z,12nm,1.3s						
SBUM				pP	**sP**	**19 31 41.7**	**+5.9**
	comp=Z,294nmcomp=Z,12nm,1.3s						
LPIG	**La Paz**	**95.40**	**310**	P	**P**	**19 31 33.6**	**+0.3**
	comp=Z,21nm,0.3s,baz=63,slow=2.3,SNR=4.6						
LPIG				LR	LR	20 13 24.5	
	comp=Z,4μm,20.5s,baz=32,slow=35						
	comp=Z,21nm,0.3s						
SLBS	**Sierra La Lagu**	**95.52**	**309**	IAms_20	IAms_20	20 13 37.7	
	comp=Z,3μm,20.0s						
ATAH	**Atahualpa**	**95.89**	**266**	LR	LR	20 13 42.0	
	comp=Z,6μm,20.0s,baz=26,slow=35						
JCJ	**Chichijima**	**96.06**	**44**	LR	LR	20 18 58.0	
	comp=Z,10μm,19.8s,baz=344,slow=38						
PLTB	**Pedras Altas**	**96.19**	**232**	*e*P	**P**	**19 31 37.3**	**+0.8**
PB16	**IPOC Station P**	**97.02**	**252**	P	**P**	**19 31 39.5**	**-1.7**
PB16				IAmb	IAmb	19 31 45.4	
	comp=Z,86nm,1.5s						
LEM	**Lembang**	**97.91**	**92**	LR	LR	20 19 41.9	
	comp=Z,4μm,21.9s,baz=318,slow=38						
NNA	**Nana**	**98.00**	**261**	LR	LR	20 11 33.3	
	comp=Z,4μm,21.6s,baz=14,slow=33						
MTKI	**Muara Teweh, K**	**99.28**	**83**	P	**Pdif**	**19 31 49.8**	**-1.1**
MTKI				pP	sP	19 32 03.3	+8.2
LVC	**Limon Verde**	**99.49**	**248**	P	**Pdif**	**19 31 53.1**	**+1.1**
	comp=Z,6.1nm,0.9s,baz=44,slow=4.6,SNR=5.4						
LVC				LR	LR	20 15 06.7	
	comp=Z,2μm,21.8s,baz=28,slow=34						
	comp=Z,6.1nm,0.9s						
LVC	**Limon Verde**	**99.49**	**248**	P	**Pdif**	**19 31 56.7**	**+4.7**
SMRI	**Semarang**	**100.13**	**90**	IAms_20	IAms_20	20 24 19.2	
	comp=Z,4μm,20.0s						
BKB	**Balikpapan**	**100.95**	**81**	IAms_20	IAms_20	20 21 17.7	
	comp=Z,5μm,22.0s						
LCO	**Las Campanas**	**104.94**	**244**	IAms_20	IAms_20	20 18 31.0	
	comp=Z,6μm,22.0s						
LUWI	**Luwuk**	**105.05**	**77**	IAms_20	IAms_20	20 27 48.4	
	comp=Z,4μm,21.0s						
TRQA	**Tornquist**	**105.49**	**232**	IAms_20	IAms_20	20 20 22.7	
	comp=Z,5μm,19.0s						
KAPI	**Kappang**	**105.59**	**82**	PP	**PP**	**19 36 39.8**	**-1.2**
	comp=Z,18nm,0.9s,baz=306,slow=2.8,SNR=6.5						
GUMO	**Guam**	**108.51**	**50**	IAms_20	IAms_20	20 27 32.6	
	comp=Z,4μm,19.0s						
MMRI	**Maumere**	**109.84**	**83**	IAms_20	IAms_20	20 28 44.0	
	comp=Z,4μm,22.0s						
SIJI	**Sorong**	**110.92**	**71**	PP	**PP**	**19 37 20.5**	**+0.7**
	comp=Z,18nm,1.2s,baz=329,slow=10.0,SNR=3.6						
SOEI	**Soe**	**112.07**	**83**	IAms_20	IAms_20	20 31 32.0	
	comp=Z,3μm,20.0s						
WAKE	**Wake Island**	**113.50**	**27**	IAms_20	IAms_20	20 24 55.4	
	comp=Z,5μm,20.0s						
SNAA	**Sanae**	**114.84**	**185**	IAms_20	IAms_20	20 22 15.2	
	comp=Z,4μm,21.0s						
SNAA	**Sanae**	**114.84**	**185**	⇓*i*PKIKP	**PKiKP**	**19 36 51.4**	**+3.4**
SNAA				pmax	pmax		
	comp=Z,24nm,2.5s						
SNAA				MLR	MLR		
	comp=Z,3μm,18.0s						
COYC	**Coyhaique**	**116.07**	**231**	IAms_20	IAms_20	20 21 51.7	
	comp=Z,6μm,22.0s						
MBWA	**Marble Bar**	**116.09**	**95**	IAms_20	IAms_20	20 25 57.3	
	comp=Z,5μm,21.0s						
MAW	**Mawson**	**116.41**	**161**	PKP	**PKiKP**	**19 36 51.5**	**+0.6**
	comp=Z,2.9nm,1.0s,baz=302,slow=1.4,SNR=5.1						
MAW				PP	**PP**	**19 37 58.1**	**-0.2**
	comp=Z,5.0nm,1.0s,baz=343,slow=7.8,SNR=4.7						
MAW				PKKPab	**PKKPab**	**19 47 23.0**	**+2.0**
	comp=Z,5.5nm,0.9s,baz=116,slow=5.1,SNR=8.8						
PSA00	**Pilbara Seismi**	**116.43**	**96**	PKPdf	**PKPdf**	**19 36 51.7**	**-0.8**
GENI	**Genyem**	**118.22**	**65**	PKP	**PKiKP**	**19 36 57.7**	**+1.5**
MTN	**Manton Dam**	**119.12**	**80**	PKPdf	**PKPdf**	**19 36 56.4**	**-1.4**
KNRA	**Kununurra**	**119.25**	**84**		**PKPdf**	**19 36 57.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**121.19**	**108**	PKP	**PKiKP**	**19 37 01.5**	**+0.1**
	comp=Z,5.2nm,0.7s,baz=319,slow=4.0,SNR=2.0						
BELA	**Belgrano 2**	**123.96**	**191**	PKPdf	**PKPdf**	**19 37 03.1**	**-2.2**
WRA	**Warramunga Arr**	**126.05**	**84**	PKP	**PKPdf**	**19 37 09.7**	**-1.3**
	comp=Z,9.5nm,1.1s,baz=312,slow=2.2,SNR=20						
WRA				PP	PP	19 38 51.4	-14
	comp=Z,4.8nm,1.1s,baz=320,slow=5.9,SNR=5.7						
WRA	**Warramunga Arr**	**126.05**	**84**		**PKPdf**	**19 37 08.9**	**-2.2**
WRA	**Warramunga Arr**	**126.05**	**84**	PKIKP	**PKPdf**	**19 37 08.9**	**-2.2**
WRAB	**Tennant Creek**	**126.05**	**84***d*	*i*PKIKP	**PKPdf**	**19 37 10.6**	**-0.4**
WRAB	**Tennant Creek**	**126.05**	**84**	P	**PKiKP**	**19 37 11.3**	**-0.1**
WB2	**Warramunga Arr**	**126.06**	**84**	PKPdf	**PKPdf**	**19 37 08.8**	**-2.3**
WR0	**Warramunga Arr**	**126.21**	**84**		**PKPdf**	**19 37 09.9**	**-1.5**
FORT	**Forrest**	**127.76**	**99**		**PKPdf**	**19 37 13.3**	**-0.7**
PMG	**Port Moresby**	**127.90**	**64**	PKP	**PKiKP**	**19 37 14.8**	**-0.5**
	comp=Z,32nm,1.1s,baz=329,slow=7.8,SNR=4.4						
PMG	**Port Moresby**	**127.90**	**64**	IAms_20	IAms_20	20 37 04.9	
	comp=Z,2μm,20.0s						
PMG	**Port Moresby**	**127.90**	**64***c*	*i*PKIKP	**PKiKP**	**19 37 15.8**	**+0.5**
PMG				pmax	pmax		
	comp=Z,40nm,1.0s						
PMG	**Port Moresby**	**127.90**	**64**	P	**PKiKP**	**19 37 17.8**	**+2.5**
AS31	**Alice Springs**	**128.01**	**88**	PKPdf	**PKPdf**	**19 37 12.2**	**-2.5**
ASAR	**Alice Springs**	**128.01**	**88**	PKP	**PKPdf**	**19 37 13.1**	**-1.6**
	comp=Z,6.8nm,0.7s,baz=311,slow=1.4,SNR=41						
ASAR				PP	PP	19 39 07.5	-10
	comp=Z,5.3nm,1.1s,baz=310,slow=4.8,SNR=7.3						
ASAR				SKKPbc	SKKPbc	19 50 31.4	+4.1
	comp=Z,1.1nm,1.1s,baz=110,slow=2.9,SNR=4.4						
ASAR	**Alice Springs**	**128.01**	**88**	PKPdf	**PKPdf**	**19 37 11.4**	**-3.3**
ASAR	**Alice Springs**	**128.01**	**88**	PKIKP	**PKPdf**	**19 37 11.4**	**-3.3**
CASY	**Casey**	**131.22**	**148**	IAms_20	IAms_20	20 35 51.9	
	comp=Z,3μm,20.0s						
CASY	**Casey**	**131.22**	**148**	P	**PKiKP**	**19 37 23.1**	**+2.8**
QSPA	**South Pole Qui**	**132.77**	**180**	IAms_20	IAms_20	20 33 48.9	
	comp=Z,4μm,21.0s						
CTA	**Charters Tower**	**134.75**	**75**	PKP	**PKiKP**	**19 37 28.1**	**-0.8**
	comp=Z,19nm,1.0s,baz=310,slow=4.7,SNR=10						
CTAO	**Charters Tower**	**134.75**	**75**	IAms_20	IAms_20	20 43 33.3	
	comp=Z,4μm,22.0s						
CTAO	**Charters Tower**	**134.75**	**75**	P	**PKiKP**	**19 37 29.9**	**+1.0**
HNR	**Honiara**	**135.84**	**51**	IAms_20	IAms_20	20 44 11.0	
	comp=Z,3μm,20.0s						
STKA	**Stephens Creek**	**138.21**	**92**	PKhKP	PKPpre	19 37 26.1	
	comp=Z,6.2nm,1.0s,baz=322,slow=6.7,SNR=5.8						
STKA	**Stephens Creek**	**138.21**	**92**		PKPpre	19 37 25.5	
STKA	**Stephens Creek**	**138.21**	**92**	PKHKP	PKPpre	19 37 25.5	
TAOE	**Nuku Hiva Isla**	**138.77**	**318**	*e*LR	LR	20 22 25.2	
	comp=Z,7μm,23.0s						
VNDA	**Vanda**	**143.02**	**169**	PKhKP	PKPpre	19 37 35.6	
	comp=Z,5.7nm,1.1s,baz=237,slow=4.0,SNR=7.2						
VNDA				PKP	**PKPdf**	**19 37 40.2**	**-0.7**
	comp=Z,9.5nm,1.1s,baz=227,slow=5.0,SNR=10						
VNDA	**Vanda**	**143.02**	**169**		PKPpre	19 37 36.6	
SBA	**Scott Base**	**143.37**	**171**		PKPpre	19 37 37.6	
SBA	**Scott Base**	**143.37**	**171**	IAms_20	IAms_20	20 40 45.1	
	comp=Z,3μm,21.0s						
SBA	**Scott Base**	**143.37**	**171**	PKIKP	PKPab	19 37 37.6	0.0
SBA				MLR	MLR		
	comp=Z,3μm,21.0s						
SBA	**Scott Base**	**143.37**	**171**	P	PKPbc	19 37 39.2	+0.5
FUNA	**Funafuti**	**143.64**	**24**	PKPdf	**PKPdf**	**19 37 43.6**	**-0.3**
TOO	**Toolangi**	**143.66**	**98**		PKPpre	19 37 38.8	
TOO	**Toolangi**	**143.66**	**98**	PKIKP	PKPab	19 37 38.8	-1.2
ARMA	**Armidale**	**144.82**	**83**	PKPdf	PKPbc	19 37 44.4	-0.3
CAN	**Canberra**	**145.28**	**92**		**PKPbc**	**19 37 44.2**	**-1.8**
CAN				IAms_20	IAms_20	20 54 38.1	
	comp=Z,3μm,21.0s						
CAN	**Canberra**	**145.28**	**92**	PKIKP	**PKPbc**	**19 37 44.2**	**-1.8**
CAN				MLR	MLR		
	comp=Z,3μm,21.0s						
TAU	**Tasmania Unive**	**146.79**	**106**	P	**PKiKP**	**19 37 52.3**	**-0.6**
KOUNC	**Koumac, New Ca**	**147.14**	**56**	IAms_20	IAms_20	20 44 25.0	
	comp=Z,4μm,20.0s						
LIFNC	**LIFOU**	**149.08**	**53**		**PKiKP**	**19 37 57.3**	**-1.0**
LIFNC				IAms_20	IAms_20	20 46 20.0	
	comp=Z,2μm,22.0s						
DZM	**Mont Dzumac**	**149.60**	**55**	*e*P	**PKPbc**	**19 37 56.2**	**-2.2**
	comp=Z,487nm,1.4s						
DZM	**Mont Dzumac**	**149.60**	**55**	*e*LR	LR	20 27 25.9	
	comp=Z,8μm,22.5s						
DZM	**Mont Dzumac**	**149.60**	**55**		**PKPdf**	**19 37 55.6**	**+1.8**
ONTNC	**Ouen Toro**	**149.78**	**56**		**PKPbc**	**19 37 57.3**	**-1.4**
PPT2	**Papeete2**	**150.78**	**324**	*e*P	**PKPbc**	**19 37 59.2**	**-2.1**
PPT2	**Papeete2**	**150.78**	**324**	*e*LR	LR	20 27 58.6	
	comp=Z,8μm,26.0s						
AFI	**Afiamalu**	**150.80**	**10**		**PKPbc**	**19 37 59.6**	**-1.7**
AFI	**Afiamalu**	**150.80**	**10**	IAms_20	IAms_20	20 50 57.1	
	comp=Z,4μm,20.0s						
AFI	**Afiamalu**	**150.80**	**10**	PKIKP	**PKPbc**	**19 37 59.7**	**-1.7**
AFI				MLR	MLR		
	comp=Z,4μm,20.0s						
AFI	**Afiamalu**	**150.80**	**10**	P	**PKiKP**	**19 38 03.0**	**+1.0**
MSVF	**Nonsavu**	**151.83**	**32**	PKPdf	**PKPdf**	**19 37 58.0**	**+0.6**
MSVF	**Nonsavu**	**151.83**	**32**	PKIKP	**PKPdf**	**19 37 58.0**	**+0.6**
MSVF	**Nonsavu**	**151.83**	**32**	P	**PKiKP**	**19 38 05.8**	**+1.7**
TBI	**Tubuai**	**155.72**	**318**	*e*LR	LR	20 30 15.6	
	comp=Z,23μm,24.5s						

ROM 26 19:24:21.8±0.1, 42°.974N±0°.003×13°.066E±0°.004, h8km, ML3.6/6, Error ellipse: s-maj=0.3km s-min=0.3km az=54.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**226**	P	**Pg**	**19 24 23.9**	**-0.4**
FEMA				S	**Sg**	**19 24 25.2**	**-0.6**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.11**	**124**	P	**Pg**	**19 24 25.1**	**0.0**
MC2				S	**Sg**	**19 24 26.8**	**-0.6**
CESI	**CESI - Serrava**	**0.12**	**285**	P	**Pg**	**19 24 25.2**	**+0.1**
CESI				S	**Sg**	**19 24 27.6**	**+0.2**
CSP1	**Cessapalombo**	**0.16**	**41**	P	**Pg**	**19 24 25.8**	**0.0**
CSP1				S	**Sg**	**19 24 28.6**	**+0.1**
SEF1	**Sefro**	**0.19**	**333**	P	**Pg**	**19 24 26.3**	**0.0**
SEF1				S	**Sg**	**19 24 29.6**	**+0.3**
MMO1	**Montemonaco**	**0.20**	**111**	P	**Pg**	**19 24 26.7**	**+0.2**
MMO1				S	**Sg**	**19 24 30.0**	**+0.4**
AM05	**Amandola Campo**	**0.21**	**89**	P	**Pg**	**19 24 26.9**	**+0.3**
AM05				S	**Sg**	**19 24 30.5**	**+0.8**
PIO1	**Pioraco**	**0.21**	**344**	P	**Pg**	**19 24 26.6**	**0.0**
PIO1				S	**Sg**	**19 24 30.4**	**+0.6**
GUMA	**Gualdo di Mace**	**0.22**	**66**	P	**Pg**	**19 24 27.1**	**+0.4**
GUMA				S	**Sg**	**19 24 31.2**	**+1.2**
T1215	**Vallo di Nera,**	**0.23**	**220**	P	**Pg**	**19 24 27.0**	**+0.4**
T1215				S	**Sg**	**19 24 30.6**	**+0.8**
T1215				AML	AML		
	comp=E,9975μm,1.1s						
T1215				AML	AML		
	comp=E,10015μm,1.1s						
T1215				AML	AML		
	comp=N,14150μm,0.4s						
T1215				AML	AML		
	comp=E,10045μm,1.1s						
T1215				AML	AML		
	comp=N,14500μm,0.4s						
T1215				AML	AML		
	comp=E,76200μm,0.5s						
T1215				AML	AML		
	comp=N,62350μm,0.4s						
T1215				AML	AML		
	comp=E,75450μm,0.5s						
T1215				AML	AML		
	comp=N,61800μm,0.4s						
T1215				AML	AML		
	comp=N,11040μm,0.3s						
T1215				AML	AML		
	comp=N,13001μm,0.3s						
T1215				AML	AML		
	comp=E,76000μm,0.5s						
T1215				AML	AML		
	comp=E,75400μm,0.5s						
MDAR	**Monte D'Aria**	**0.23**	**14**	P	**Pg**	**19 24 26.8**	**-0.1**
MDAR				S	**Sg**	**19 24 30.7**	**+0.4**
FIU1	**Fiuminata**	**0.24**	**335**	P	**Pg**	**19 24 27.2**	**+0.2**
FIU1				S	**Sg**	**19 24 31.0**	**+0.6**
GAG1	**Gagliole**	**0.26**	**0**	P	**Pg**	**19 24 27.8**	**+0.2**
GAG1				S	**Sg**	**19 24 32.2**	**+0.9**
SSM1	**San Severino M**	**0.27**	**18**	P	**Pg**	**19 24 27.6**	**0.0**
SSM1				S	**Sg**	**19 24 32.0**	**+0.6**
T1217	**Poggiodomo (PG**	**0.28**	**201**	P	**Pg**	**19 24 28.0**	**+0.3**
T1217				S	**Sg**	**19 24 32.4**	**+0.9**
T1217				AML	AML		
	comp=E,14050μm,0.4s						
T1217				AML	AML		
	comp=N,21150μm,0.4s						
T1217				AML	AML		
	comp=E,14000μm,1.6s						
T1217				AML	AML		
	comp=N,20850μm,0.4s						
T1217				AML	AML		
	comp=E,13900μm,1.6s						
T1217				AML	AML		
	comp=N,20900μm,0.4s						
T1217				AML	AML		
	comp=E,70150μm,0.2s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,71600μm,0.1s						
T1217				AML	AML		
	comp=E,13920μm,0.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=N,21131μm,0.1s						
T1241	**Roccafluvione,**	**0.29**	**114**	P	**Pg**	**19 24 28.0**	**0.0**
T1241				S	**Sg**	**19 24 32.8**	**+0.7**
MNTP	**Montappone**	**0.34**	**61**	P	**Pb**	**19 24 29.6**	**-0.5**
T1201	**Domo (RI)**	**0.34**	**157**	P	**Pg**	**19 24 29.4**	**+0.5**
T1201				S	**Sb**	**19 24 35.1**	**-0.4**
T1204	**Amatrice, Fraz**	**0.35**	**148**	P	**Pg**	**19 24 29.2**	**+0.1**
T1204				S	**Sb**	**19 24 35.1**	**-0.7**
T1204				AML	AML		
	comp=E,43650μm,0.4s						
T1204				AML	AML		
	comp=N,20730μm,1.3s						
T1204				AML	AML		
	comp=N,4058μm,0.4s						
T1204				AML	AML		
	comp=E,5943μm,0.2s						
EL6	**Elcito**	**0.36**	**4**	P	**Pg**	**19 24 29.2**	**-0.1**
EL6				S	**Sg**	**19 24 35.0**	**+0.9**
LNSS	**Leonessa**	**0.37**	**183**	P	**Pg**	**19 24 29.5**	**+0.1**
LNSS				S	**Sb**	**19 24 35.5**	**-0.8**
LNSS				AML	AML		
	comp=E,14200μm,1.1s						
LNSS				AML	AML		
	comp=E,14150μm,1.1s						
LNSS				AML	AML		
	comp=N,15950μm,0.1s						
LNSS				AML	AML		
	comp=E,51500μm,1.1s						
LNSS				AML	AML		
	comp=N,61800μm,1.2s						
LNSS				AML	AML		
	comp=E,12868μm,0.1s						
LNSS				AML	AML		
	comp=N,15957μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.38**	**304**	P	**Pg**	**19 24 29.5**	**0.0**
TRE1	**Treia**	**0.38**	**28**	P	**Pg**	**19 24 30.0**	**+0.3**
T1243	**Rocca Santa Ma**	**0.40**	**134**	P	**Pb**	**19 24 31.0**	**0.0**
T1243				S	**Sb**	**19 24 36.2**	**-0.9**
OFFI	**Offida**	**0.46**	**95**	P	**Pb**	**19 24 32.2**	**+0.1**
T1211	**Morro Reatino**	**0.47**	**200**	P	**Pb**	**19 24 32.5**	**+0.4**
T1211				S	**Sb**	**19 24 38.6**	**-0.4**
T1211				AML	AML		
	comp=E,6275μm,0.4s						
T1211				AML	AML		
	comp=N,6985μm,0.5s						
T1211				AML	AML		
	comp=E,6280μm,0.4s						
T1211				AML	AML		
	comp=N,6990μm,0.5s						
T1211				AML	AML		
	comp=E,20250μm,0.9s						
T1211				AML	AML		
	comp=E,20550μm,0.7s						
T1211				AML	AML		
	comp=E,4706μm,0.1s						
T1211				AML	AML		
	comp=E,4609μm,0.1s						
T1211				AML	AML		
	comp=N,33500μm,0.2s						
T1211				AML	AML		
	comp=N,33300μm,0.2s						
MMUR	**Monte Murano**	**0.47**	**354**	P	**Pb**	**19 24 32.0**	**-0.4**
MMUR				S	**Sb**	**19 24 38.9**	**-0.5**
RM33	**Pellescritta (**	**0.48**	**167**	P	**Pb**	**19 24 32.8**	**+0.4**
RM33				S	**Sb**	**19 24 39.0**	**-0.4**
MURB	**Monte Urbino**	**0.49**	**306**	P	**Pg**	**19 24 31.8**	**+0.1**
T1246	**Crognaleto (TE**	**0.50**	**141**	P	**Pg**	**19 24 31.9**	**+0.1**
T1246				S	**Sb**	**19 24 39.5**	**-0.6**
CESX	**Cesi**	**0.51**	**225**	P	**Pg**	**19 24 31.0**	**-0.8**
TERO	**Teramo**	**0.53**	**131**	P	**Pb**	**19 24 33.3**	**0.0**
TERO				S	**Sb**	**19 24 40.3**	**-0.6**
ARVD	**Arcevia**	**0.53**	**350**	P	**Pg**	**19 24 32.4**	**-0.1**
ARVD				S	**Sb**	**19 24 40.7**	**-0.4**
ATFO	**Monte Foce - G**	**0.53**	**317**	P	**Pg**	**19 24 32.3**	**-0.1**
ATFO				S	**Sb**	**19 24 40.8**	**-0.3**
CIMA	**Civitanova Mar**	**0.55**	**53**	P	**Pb**	**19 24 33.8**	**0.0**
CADA	**Capodarco di F**	**0.56**	**66**	P	**Pb**	**19 24 34.3**	**+0.5**
PP3	**Marolino**	**0.57**	**44**	P	**Pb**	**19 24 33.9**	**-0.1**
FRON	**Frontone**	**0.60**	**336**	P	**Pg**	**19 24 33.5**	**-0.2**
ATVO	**AVT- Monte Val**	**0.63**	**310**	P	**Pg**	**19 24 34.1**	**-0.2**
GIGS	**Gran Sasso**	**0.64**	**145**	P	**Pg**	**19 24 33.9**	**-0.6**
ATPI	**Pietralunga -**	**0.68**	**315**	P	**Pg**	**19 24 34.9**	**-0.4**
ATMI	**Monte Miggiano**	**0.69**	**302**	P	**Pb**	**19 24 36.4**	**+0.4**
AOI	**Ancona**	**0.70**	**34**	P	**Pg**	**19 24 35.5**	**-0.1**
MGAB	**Montegabbione**	**0.70**	**265**	P	**Pg**	**19 24 35.7**	**+0.1**
FIAM	**Fiamignano**	**0.71**	**177**	P	**Pg**	**19 24 35.4**	**-0.2**
FIAM				S	**Sb**	**19 24 46.1**	**+0.2**
FSSB	**Fossombrone**	**0.75**	**344**	P	**Pb**	**19 24 37.0**	**-0.1**
BADI	**Badiali**	**0.81**	**312**	P	**Pg**	**19 24 37.3**	**-0.2**
VCEL	**Villa Celiera**	**0.81**	**135**	P	**Pg**	**19 24 37.3**	**-0.4**
SRES	**S.Oreste - Sor**	**0.84**	**209**	P	**Pg**	**19 24 38.0**	**-0.2**
SACS	**San Casciano d**	**0.86**	**262**	P	**Pb**	**19 24 39.0**	**+0.2**
CAFI	**Castiglion Fio**	**0.88**	**294**	P	**Pg**	**19 24 38.5**	**-0.5**
MTCE	**Montecelio**	**0.98**	**194**	P	**Pg**	**19 24 40.2**	**-0.6**
SF11	**Podere del Sol**	**1.02**	**265**	P	**Pg**	**19 24 41.9**	**+0.3**
MCIV	**Monte Civitell**	**1.04**	**260**	P	**Pg**	**19 24 42.0**	**+0.1**
SF13	**Bagnolo**	**1.07**	**262**	P	**Pb**	**19 24 42.4**	**-0.1**
SF01	**Poggio Pratacc**	**1.12**	**262**	P	**Pb**	**19 24 43.2**	**0.0**
ARCI	**Arcidosso**	**1.18**	**265**	P	**Pg**	**19 24 44.6**	**+0.1**

ROM 26 19:25:04.8±0.1, 42°.921N±0°.003×13°.066E±0°.005, h10km, ML3.3/7, 2C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=290.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.04**	**344**	⇓P	Pg	19 25 07.1	+0.2
FEMA				S	Sg	19 25 08.5	+0.1
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,30839μm,0.3s						
MC2	**Monte Cornacci**	**0.09**	**95**	P	Pg

MDAR			S	Sg	19 25 15.3	+1.1
MDAR			AML	AML		
comp=E,28900μm,0.6s						
MDAR			AML	AML		
comp=N,28250μm,1.5s						
MDAR			AML	AML		
MDAR			AML	AML		
T1201	**Domo (RI)**	**0.30 153**	P	Pb	19 25 11.6	-0.7
T1201			S	Sb	19 25 16.8	-0.5
T1204	**Amatrice, Fraz**	**0.31 143**	P	Pg	19 25 11.6	+0.6
T1204			S	Sb	19 25 16.7	-1.0
T1204			AML	AML		
comp=E,43750μm,0.4s						
T1204			AML	AML		
comp=N,20450μm,1.3s						
T1204			AML	AML		
comp=E,4568μm,0.3s						
T1204			AML	AML		
comp=N,3366μm,0.5s						
LNSS	**Leonessa**	**0.32 183**	P	Pg	19 25 11.7	+0.5
LNSS			S	Sb	19 25 16.9	-1.0
SSM1	**San Severino M**	**0.32 15**	P	Pg	19 25 11.6	+0.4
T1243	**Rocca Santa Ma**	**0.36 128**	P	Pg	19 25 12.3	+0.4
T1243			S	Sb	19 25 18.1	-1.1
MNTP	**Montappone**	**0.37 54**	P	Pb	19 25 13.1	-0.4
MNTP			AML	AML		
comp=E,31850μm,0.8s						
MNTP			AML	AML		
comp=N,27000μm,0.6s						
RM33	**Pellescritta (**	**0.43 165**	P	Pg	19 25 13.4	+0.2
RM33			S	Sb	19 25 20.4	-0.6
OFFI	**Offida**	**0.46 88**	P	Pb	19 25 14.9	-0.1
CAMP	**Campotosto**	**0.46 147**	P	Pg	19 25 14.0	+0.2
CAMP			S	Sb	19 25 21.1	-0.9
TERO	**Teramo**	**0.50 127**	P	Pb	19 25 15.1	-0.6
TERO			S	Sb	19 25 22.2	-0.8
TERO			AML	AML		
comp=E,17450μm,0.2s						
TERO			AML	AML		
comp=N,18200μm,0.3s						
TERO			AML	AML		
comp=E,18400μm,0.2s						
TERO			AML	AML		
comp=N,19300μm,0.3s						
TERO			AML	AML		
comp=E,1678μm,0.2s						
TERO			AML	AML		
comp=N,2399μm,0.1s						
TERO			AML	AML		
comp=N,2169μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.51 160**	P	Pb	19 25 15.5	-0.4
MMUR	**Monte Murano**	**0.52 355**	AML	AML		
comp=E,51750μm,0.2s						
MMUR			AML	AML		
comp=N,53050μm,0.6s						
CADA	**Capodarco di F**	**0.58 62**	P	Pb	19 25 17.6	+0.6
ARVD	**Arcevia**	**0.58 351**	P	Pg	19 25 16.3	+0.2
PP3	**Marolino**	**0.61 41**	P	Pb	19 25 17.4	-0.1

*ROM **26** 19:25:18.8±0.0, 42°.936N±0°.002×13°.070E±0°.003, h9km, ML3.9/36, Error ellipse: s-maj=0.2km s-min=0.1km az=58.0*
*IDC **26** 19:25:18.6±1.4, 43°.03N×13°.05E, h0km, mb4.0/3, mbtmp4.0/6, ML3.4/2, Error ellipse: s-maj=38.9km s-min=15.3km az=97.0*
*LDG **26** 19:25:19.0±0.2, 42°.91N×13°.11E, h9km, Ml3.6/9, Error ellipse: s-maj=5.9km s-min=3.5km az=39.0*
ISC 26 19:25:18.8±0.7, 42°.93N±0°.01×13°.06E±0°.02, h13km±4km, n137, σ1°39/174, 7C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**353**	⇓P		**Pg**		**19 25 20.8**	**-0.5**
FEMA				S		**Sg**		**19 25 21.9**	**-1.2**
FEMA				AML		AML			
FEMA				AML		AML			
FEMA				AML		AML			
FEMA				END					
MC2	**Monte Cornacci**	**0.10**	**101**	P		**Pg**		**19 25 21.6**	**-0.3**
MC2				S		**Sg**		**19 25 23.6**	**-0.7**
MC2				END					
T1245	**Castelsantange**	**0.12**	**127**	⇑P		**Pg**		**19 25 22.2**	**0.0**
T1245				S		**Sg**		**19 25 24.6**	**0.0**
T1245				AML		AML			
T1245				AML		AML			
T1245				AML		AML			
T1245				AML		AML			
T1245				AML		AML			
T1245				END					
CESI	**CESI - Serrava**	**0.13**	**304**	⇑P		**Pg**		**19 25 22.5**	**+0.2**
CESI				S		**Sg**		**19 25 25.0**	**+0.3**
CESI				AML		AML			
CESI				AML		AML			
CESI				END					
T1215	**Vallo di Nera,**	**0.19**	**227**	⇑P		**Pg**		**19 25 23.6**	**+0.6**
T1215				S		**Sg**		**19 25 26.9**	**+0.9**
T1215				AML		AML			
comp=E,75950μm,0.5s									
T1215				AML		AML			
comp=E,75300μm,0.5s									
T1215				AML		AML			
comp=E,76200μm,0.5s									
T1215				AML		AML			
comp=E,75350μm,0.5s									
T1215				AML		AML			
comp=N,61800μm,0.4s									
T1215				AML		AML			
comp=N,62350μm,0.4s									
T1215				AML		AML			
comp=E,76000μm,0.5s									
T1215				AML		AML			
comp=E,75400μm,0.5s									
T1215				END					
CSP1	**Cessapalombo**	**0.19**	**34**	P		**Pg**		**19 25 23.1**	**-0.1**
CSP1				S		**Sg**		**19 25 26.3**	**0.0**
CSP1				AML		AML			
CSP1				AML		AML			
CSP1				AML		AML			
CSP1				AML		AML			
comp=N,87648μm,0.5s									
MMO1	**Montemonaco**	**0.20**	**99**	⇑P		**Pg**		**19 25 23.3**	**0.0**
MMO1				S		**Sg**		**19 25 26.6**	**+0.2**
AM05	**Amandola Campo**	**0.22**	**78**	AML		AML			
comp=N,19915μm,0.5s									
AM05				AML		AML			
comp=N,16950μm,0.4s									
AM05				AML		AML			
comp=N,19910μm,0.5s									
AM05				AML		AML			
comp=E,13350μm,0.4s									
AM05				AML		AML			
comp=N,19900μm,0.5s									
AM05				AML		AML			
comp=E,70900μm,0.4s									
SEF1	**Sefro**	**0.23**	**340**	P		**Pg**		**19 25 24.5**	**+0.7**
SEF1				S		**Sg**		**19 25 27.9**	**+0.8**
SEF1				AML		AML			
comp=E,38600μm,0.7s									
SEF1				AML		AML			
comp=N,45000μm,0.6s									
SEF1				AML		AML			
SEF1				AML		AML			
SEF1				AML		AML			
SEF1				AML		AML			
SEF1				AML		AML			
comp=N,33281μm,0.2s									
T1217	**Poggiodomo (PG**	**0.24**	**203**	⇑P		**Pg**		**19 25 24.5**	**+0.6**
T1217				S		**Sg**		**19 25 28.7**	**+1.3**
T1217				AML		AML			
T1217				AML		AML			
comp=E,71550μm,0.1s									
T1217				AML		AML			
T1217				AML		AML			
comp=E,70150μm,0.2s									
T1217				AML		AML			
T1217				AML		AML			
T1217				AML		AML			
T1217				AML		AML			
comp=E,71600μm,0.1s									
GUMA	**Gualdo di Mace**	**0.24**	**57**	⇑P		**Pg**		**19 25 24.3**	**+0.3**
GUMA				S		**Sg**		**19 25 28.4**	**+0.9**
T1244	**Arquata del Tr**	**0.25**	**134**	P		**Pg**		**19 25 24.6**	**+0.4**
T1244				S		**Sg**		**19 25 28.8**	**+1.1**
PIO1	**Pioraco**	**0.25**	**348**	P		**Pg**		**19 25 24.5**	**+0.3**
PIO1				AML		AML			
PIO1				AML		AML			
PIO1				AML		AML			
PIO1				AML		AML			
PIO1				AML		AML			
comp=N,17885μm,0.5s									
MDAR	**Monte D'Aria**	**0.27**	**14**	P		**Pg**		**19 25 24.5**	**0.0**
MDAR				S		**Sg**		**19 25 28.7**	**+0.4**
MDAR				AML		AML			
comp=E,28900μm,0.6s									
MDAR				AML		AML			
comp=N,28250μm,1.5s									
MDAR				AML		AML			
MDAR				AML		AML			
MDAR				AML		AML			
MDAR				AML		AML			
MDAR				AML		AML			
comp=N,27126μm,0.2s									
FIU1	**Fiuminata**	**0.27**	**341**	P		**Pg**		**19 25 24.7**	**+0.2**
FIU1				S		**Sg**		**19 25 29.0**	**+0.6**
FIU1				AML		AML			
comp=E,37800μm,0.4s									
FIU1				AML		AML			
comp=N,54800μm,0.1s									
FIU1				AML		AML			
comp=E,37750μm,0.4s									
T1241	**Roccafluvione,**	**0.29**	**105**	AML		AML			
comp=N,41000μm,0.9s									
T1241				AML		AML			
comp=E,42750μm,0.3s									
GAG1	**Gagliole**	**0.31**	**2**	P		**Pg**		**19 25 25.5**	**+0.4**
GAG1				AML		AML			
GAG1				AML		AML			
GAG1				AML		AML			
GAG1				AML		AML			
comp=N,28035μm,0.3s									
T1201	**Domo (RI)**	**0.31**	**152**	P		**Pb**		**19 25 25.8**	**-0.5**
T1201				S		**Sb**		**19 25 31.2**	**-0.1**
SSM1	**San Severino M**	**0.31**	**17**	P		**Pg**		**19 25 25.1**	**0.0**
T1204	**Amatrice, Fraz**	**0.32**	**143**	P		**Pg**		**19 25 25.7**	**+0.3**
T1204				S		**Sb**		**19 25 31.3**	**-0.3**
T1204				AML		AML			
comp=E,43700μm,0.4s									
T1204				AML		AML			
comp=N,20400μm,1.3s									
T1204				AML		AML			
comp=N,20450μm,1.3s									
T1204				AML		AML			
comp=E,43750μm,0.4s									
MTL1	**Matelica**	**0.33**	**354**	P		**Pg**		**19 25 25.8**	**+0.3**
MTL1				S		**Sb**		**19 25 31.2**	**-0.5**
MTL1				AML		AML			
MTL1				AML		AML			
MTL1				AML		AML			
MTL1				AML		AML			
comp=N,33350μm,0.5s									
LNSS	**Leonessa**	**0.33**	**182**	P		**Pg**		**19 25 26.0**	**+0.4**
LNSS				S		**Sb**		**19 25 31.5**	**-0.3**
LNSS				AML		AML			
comp=N,61800μm,1.2s									
LNSS				AML		AML			
comp=E,51500μm,1.1s									
SMA1	**SAN MARTINO**	**0.36**	**145**	P		**Pb**		**19 25 27.2**	**-0.1**
SMA1				S		**Sb**		**19 25 32.3**	**-0.6**
MNTP	**Montappone**	**0.37**	**56**	P		**Pb**		**19 25 26.7**	**-0.5**
MNTP				AML		AML			
comp=E,28550μm,0.6s									
MNTP				AML		AML			
comp=N,27000μm,0.6s									
MNTP				AML		AML			
comp=E,31850μm,0.8s									
T1243	**Rocca Santa Ma**	**0.37**	**129**	P		**Pg**		**19 25 26.4**	**+0.1**
T1243				S		**Sb**		**19 25 32.3**	**-0.8**
ATCC	**AVT- Casa Cast**	**0.40**	**310**	P		**Pg**		**19 25 27.1**	**+0.4**
ATCC				S		**Sb**		**19 25 33.9**	**+0.1**
ATCC				AML		AML			
comp=E,23550μm,0.7s									
ATCC				AML		AML			
comp=N,37350μm,0.6s									
ATCC				AML		AML			
comp=E,30250μm,0.7s									
ATCC				AML		AML			
comp=N,20256μm,0.4s									
EL6	**Elcito**	**0.40**	**5**	P		**Pg**		**19 25 26.9**	**+0.1**
EL6				S		**Sb**		**19 25 33.5**	**-0.4**
TRE1	**Treia**	**0.42**	**26**	P		**Pb**		**19 25 27.8**	**-0.4**
TRE1				AML		AML			
comp=E,73800μm,0.4s									
TRE1				AML		AML			
comp=N,53750μm,0.4s									
TRE1				AML		AML			
comp=E,83250μm,0.5s									
TRE1				AML		AML			
comp=E,22696μm,0.7s									
TRE1				AML		AML			
comp=N,13375μm,0.6s									
T1211	**Morro Reatino**	**0.42**	**200**	P		**Pb**		**19 25 28.2**	**0.0**
T1211				S		**Sb**		**19 25 34.9**	**+0.3**
RM33	**Pellescritta (**	**0.44**	**164**	P		**Pg**		**19 25 27.9**	**+0.4**
RM33				S		**Sb**		**19 25 34.9**	**-0.1**
RM33				AML		AML			
comp=E,12800μm,1.1s									
RM33				AML		AML			
comp=N,11405μm,0.2s									
RM33				AML		AML			
comp=E,12900μm,1.1s									
RM33				AML		AML			
comp=N,11180μm,0.8s									
RM33				AML		AML			
comp=E,11600μm,0.7s									
RM33				AML		AML			
comp=N,11380μm,0.2s									
RM33				AML		AML			
comp=E,11800μm,0.7s									
RM33				AML		AML			
comp=N,11140μm,0.8s									
RM33				AML		AML			
comp=E,12850μm,1.1s									
RM33				AML		AML			
comp=E,12850μm,1.1s									
OFFI	**Offida**	**0.46**	**89**	P		**Pb**		**19 25 28.9**	**+0.1**
OFFI				AML		AML			
comp=E,20650μm,0.4s									
OFFI				AML		AML			
comp=N,23150μm,0.6s									
CAMP	**Campotosto**	**0.47**	**146**	P		**Pg**		**19 25 28.4**	**+0.2**
CAMP				S		**Sb**		**19 25 35.5**	**-0.5**
CAMP				AML		AML			
comp=N,5040μm,0.4s									
CAMP				AML		AML			
comp=E,9140μm,0.3s									
T1246	**Crognaleto (TE**	**0.47**	**137**	P		**Pg**		**19 25 28.1**	**-0.1**
T1246				S		**Sb**		**19 25 35.3**	**-0.7**
CESX	**Cesi**	**0.47**	**228**	P		**Pg**		**19 25 28.5**	**+0.3**
CESX				S		**Sb**		**19 25 36.0**	**0.0**
CESX				AML		AML			
comp=N,24850μm,0.3s									
CESX				AML		AML			
comp=E,20650μm,0.3s									
TERO	**Teramo**	**0.51**	**127**	P		**Pg**		**19 25 28.7**	**-0.1**
TERO				S		**Sg**		**19 25 36.2**	**+0.6**
TERO				AML		AML			
comp=E,17450μm,0.2s									
TERO				AML		AML			
comp=N,18200μm,0.3s									
TERO				AML		AML			
comp=E,18400μm,0.2s									
TERO				AML		AML			
comp=N,19300μm,0.3s									
TERO				AML		AML			
comp=N,18250μm,0.3s									
TERO				AML		AML			
comp=N,19250μm,0.3s									
MURB	**Monte Urbino**	**0.51**	**311**	P		**Pg**		**19 25 29.2**	**+0.4**
MURB				S		**Sb**		**19 25 37.8**	**+0.7**
T1247	**Pizzolo (AQ)**	**0.52**	**160**	P		**Pg**		**19 25 29.3**	**+0.2**
T1247				S		**Sb**		**19 25 37.8**	**+0.5**
ATFO	**Monte Foce - G**	**0.56**	**321**	P		**Pg**		**19 25 30.0**	**+0.2**
ATFO				S		**Sb**		**19 25 39.0**	**+0.5**
ATFO				AML		AML			
comp=E,5955μm,1.0s									
ATFO				AML		AML			
comp=N,5350μm,0.5s									
ATFO				AML		AML			
comp=N,7365μm,0.9s									
ATFO				AML		AML			
comp=E,10630μm,0.6s									
ATFO				AML		AML			
comp=N,4562μm,0.4s									
ARVD	**Arcevia**	**0.57**	**352**	P		**Pb**		**19 25 30.4**	**-0.3**
ATTE	**AVT- Monte Tez**	**0.58**	**298**	P		**Pg**		**19 25 30.4**	**+0.3**
CADA	**Capodarco di F**	**0.58**	**63**	AML		AML			
comp=E,24600μm,1.4s									
CADA				AML		AML			
comp=N,27400μm,0.5s									
CIMA	**Civitanova Mar**	**0.59**	**50**	P		**Pb**		**19 25 30.9**	**-0.1**
PP3	**Marolino**	**0.60**	**42**	P		**Pb**		**19 25 31.4**	**+0.2**
PP3				AML		AML			
comp=E,16277μm,0.5s									
ATLO	**AVT- Montelove**	**0.61**	**309**	P		**Pg**		**19 25 30.6**	**-0.1**
GIGS	**Gran Sasso**	**0.61**	**142**	P		**Pg**		**19 25 31.0**	**+0.2**
GIGS				S		**Sb**		**19 25 39.5**	**-0.5**
GIGS				AML		AML			
comp=E,1689μm,0.2s									
AQU	**L'Aquila**	**0.63**	**156**	P		**Pg**		**19 25 31.1**	**0.0**
AQU				AML		AML			
comp=N,6340μm,0.2s									
AQU				AML		AML			
comp=E,5675μm,0.7s									
AQU				AML		AML			
comp=N,5905μm,0.2s									
AQU				AML		AML			
comp=N,6345μm,0.2s									
AQU				AML		AML			
comp=E,5735μm,0.7s									
TB01	**Gubbio**	**0.64**	**315**	P		**Pg**		**19 25 31.3**	**0.0**
TB01				S		**Sb**		**19 25 41.5**	**+0.8**
TRTR	**Tortoreto Alta**	**0.64**	**101**	P		**Pb**		**19 25 32.3**	**+0.4**
TRTR				AML		AML			
comp=N,25850μm,1.3s									
TRTR				AML		AML			
comp=E,22750μm,0.3s									
TRTR				AML		AML			
comp=N,25800μm,1.3s									
ATVO	**AVT- Monte Val**	**0.65**	**314**	P		**Pg**		**19 25 31.7**	**+0.1**
ATVA	**AVT- Monte Val**	**0.66**	**302**	P		**Pg**		**19 25 31.7**	**0.0**
FIAM	**Fiamignano**	**0.67**	**176**	P		**Pb**		**19 25 32.4**	**+0.1**
FIAM				AML		AML			
comp=E,6525μm,0.8s									
FIAM				AML		AML			
comp=N,5480μm,1.1s									
TB03	**Pietralunga**	**0.67**	**315**	P		**Pg**		**19 25 31.8**	**+0.1**
TB03				S		**Sb**		**19 25 42.3**	**+0.8**
MGAB	**Montegabbione**	**0.69**	**269**	P		**Pb**		**19 25 32.8**	**+0.1**
MPAG	**Monte Paganucc**	**0.73**	**343**	P		**Pb**		**19 25 33.6**	**+0.2**
MPAG				AML		AML			
comp=E,9020μm,0.3s									
MPAG				AML		AML			
comp=N,11405μm,0.2s									
MPAG				AML		AML			
comp=N,11400μm,0.2s									
MPAG				AML		AML			
comp=E,9675μm,0.8s									
MPAG				AML		AML			
comp=E,2678μm,0.3s									
MPAG				AML		AML			
comp=N,4668μm,2.2s									
AOI	**Ancona**	**0.74**	**33**	P		**Pb**		**19 25 33.2**	**+0.1**
AOI				AML		AML			
comp=N,6995μm,0.5s									
AOI				AML		AML			
comp=E,8085μm,0.4s									
AOI				AML		AML			
comp=N,3724μm,0.4s									
AOI				AML		AML			
comp=E,3870μm,0.4s									
PCRO	**Pietralacroce**	**0.76**	**27**	P		**Pb**		**19 25 34.5**	**+0.6**
PCRO				AML		AML			
comp=E,11800μm,0.4s									
PCRO				AML		AML			
comp=N,14600μm,0.4s									
PCRO				AML		AML			
comp=N,20600μm,0.4s									
PCRO				AML		AML			
comp=E,24400μm,0.6s									
PCRO				AML		AML			
comp=N,10191μm,1.7s									
SENI	**Senigallia**	**0.78**	**9**	AML		AML			
comp=N,35400μm,1.2s									
SENI				AML		AML			
comp=E,41000μm,0.9s									
SENI				AML		AML			
comp=N,8505μm,0.3s									
FSSB	**Fossombrone**	**0.79**	**345**	P		**Pg**		**19 25 34.2**	**+0.2**
VCEL	**Villa Celiera**	**0.79**	**133**	⇑P		**Pg**		**19 25 33.7**	**-0.4**
VCEL				AML		AML			
comp=E,9875μm,1.3s									
VCEL				AML		AML			
comp=N,11515μm,0.9s									
VCEL				AML		AML			
comp=N,11510μm,0.9s									
VCEL				AML		AML			
comp=E,9890μm,1.3s									
SRES	**S.Oreste - Sor**	**0.80**	**210**	P		**Pg**		**19 25 33.8**	**-0.6**
SACS	**San Casciano d**	**0.85**	**265**	P		**Pg**		**19 25 35.5**	**+0.4**
PE3	**Peglio**	**0.87**	**332**	AML		AML			
comp=N,81μm,0.4s									
PE3				AML		AML			
comp=E,62μm,0.8s									
T0110	**Collepietro**	**0.88**	**143**	P		**Pg**		**19 25 35.5**	**-0.4**
T0110				AML		AML			
comp=E,8745μm,1.0s									
T0110				AML		AML			
comp=N,10540μm,0.4s									
CAFI	**Castiglion Fio**	**0.89**	**297**	P		**Pg**		**19 25 36.0**	**0.0**
MTCE	**Montecelio**	**0.94**	**194**	P		**Pg**		**19 25 36.5**	**-0.4**
MTCE				AML		AML			
comp=E,4240μm,1.1s									
MTCE				AML		AML			
comp=N,2860μm,1.3s									
PTQR	**Pietraquaria**	**0.94**	**164**	P		**Pb**		**19 25 37.7**	**+0.6**
CERT	**Cerreto**	**0.98**	**183**	P		**Pg**		**19 25 37.1**	**-0.7**
SF11	**Podere del Sol**	**1.01**	**267**	P		**Pb**		**19 25 38.7**	**+0.4**
SF13	**Bagnolo**	**1.06**	**264**	P		**Pb**		**19 25 39.5**	**+0.5**
RCAV	**Rocca di Cave**	**1.09**	**184**	P		**Pg**		**19 25 39.5**	**-0.2**
VVLD	**Villa Vallelon**	**1.14**	**158**	P		**Pn**		**19 25 41.9**	**+1.4**
GUAR	**Guarcino**	**1.15**	**170**	P		**Pn**		**19 25 41.9**	**+1.2**
ARCI	**Arcidosso**	**1.16**	**267**	P		**Pn**		**19 25 42.0**	**+1.0**
TOLF	**Tolfa**	**1.17**	**222**	P		**Pn**		**19 25 41.6**	**+0.8**
CAFR	**Castel Frentan**	**1.19**	**126**	P		**Pb**		**19 25 40.6**	**-0.6**
RDP	**Rocca di Papa**	**1.20**	**192**	P		**Pg**		**19 25 42.4**	**+0.6**
LPEL	**Lama dei Pelig**	**1.22**	**136**	P		**Pb**		**19 25 41.6**	**-0.1**
CSNT	**Castellina Chi**	**1.40**	**293**	P		**Pb**		**19 25 45.0**	**+0.2**
FROS	**Frosini**	**1.42**	**282**	P		**Pn**		**19 25 44.8**	**+0.5**
LATB	**Latina**	**1.44**	**183**	P		**Pn**		**19 25 45.3**	**+0.7**
RUFI	**Rufina**	**1.45**	**309**	P		**Pn**		**19 25 45.5**	**+0.7**
OSSC	**Osservatorio P**	**1.45**	**295**	P		**Pb**		**19 25 45.8**	**+0.1**
MAON	**Monte Argentar**	**1.50**	**251**	P		**Pn**		**19 25 46.2**	**+0.7**
TRIV	**Trivento**	**1.61**	**136**	P		**Pg**		**19 25 50.0**	**+0.3**
MTCR	**Monte La Croce**	**1.85**	**307**	P		**Pn**		**19 25 51.1**	**+0.7**
PGF	**Pioggiola**	**3.01**	**264**	*e*Pn		**Pn**		**19 26 07.7**	**+1.4**
PGF				*e*Sn		**Sn**		**19 26 41.1**	**-1.2**
comp=N,17nm,0.3s									
MYKA	**Terra Mystica**	**3.72**	**6**	*e*Pn		**Pn**		**19 26 17.4**	**+1.3**
comp=N,13nm,0.3s									
ABTA	**Abfaltersbach**	**3.83**	**354**	*e*Pn		**Pn**		**19 26 20.0**	**+2.3**
comp=N,56nm,0.5s									
SBF	**Sospel**	**4.20**	**285**	*e*Pn		**Pn**		**19 26 21.8**	**-0.8**
SBF				*e*Sn		**Sn**		**19 27 08.8**	**-2.8**
comp=N,29nm,0.6s									
DAVOX	**Davos/Dischmat**	**4.46**	**331**	Pn		**Pn**		**19 26 27.4**	**+1.1**
comp=N,4.9nm,0.3s,baz=150,slow=20,SNR=1.8									
DAVOX				Sn		**Sn**		**19 27 18.6**	**+0.3**
comp=N,3.5nm,0.3s,baz=150,slow=20,SNR=1.5									
comp=N,28nm,0.5s									
SQTA	**Sankt Quirin**	**4.48**	**344**	*e*Pn		**Pn**		**19 26 30.0**	**+3.5**
comp=N,9.0nm,0.2s									
WATA	**Walderalm**	**4.53**	**347**	*e*Pn		**Pn**		**19 26 30.7**	**+3.5**
comp=N,6.6nm,0.2s									
BIOA	**Bad Ischl, Aus**	**4.78**	**5**	*e*Pn		**Pn**		**19 26 32.1**	**+1.6**
comp=N,19nm,0.3s									
LMR	**La Mourre**	**4.81**	**277**	*e*Pn		**Pn**		**19 26 29.7**	**-1.2**
LMR				*e*Sn		**Sn**		**19 27 23.9**	**-2.5**
comp=N,12nm,0.4s									
RETA	**Reutte**	**4.83**	**341**	*e*Pn		**Pn**		**19 26 35.3**	**+3.9**
comp=N,20nm,0.5s									
MBDF	**Montbardon**	**4.89**	**294**	*e*Pn		**Pn**		**19 26 31.3**	**-0.8**
MBDF				*e*Sn		**Sn**		**19 27 25.1**	**-3.5**
comp=N,13nm,0.5s									

LPG	**La Plagne**	**5.21**	**302**	*e*Pn	**Pn**	**19 26 33.9**	**-2.7**
LPG				*e*Sn	**Sn**	**19 27 33.3**	**-3.4**
comp=N,20nm,0.5s							
LPL	**La Plagne**	**5.23**	**302**	*e*Pn	**Pn**	**19 26 36.5**	**-0.4**
LPL				*e*Sn	**Sn**	**19 27 33.7**	**-3.4**
comp=N,25nm,0.7s							
RONA	**Rosalia, Austr**	**5.29**	**24**	*e*Pn	**Pn**	**19 26 38.7**	**+1.2**
comp=N,7.7nm,0.5s							
CONA	**Conrad Observa**	**5.37**	**21**	*e*Pn	**Pn**	**19 26 39.8**	**+1.0**
comp=N,8.8nm,0.3s							
SMRF	**Simiane la Rot**	**5.54**	**283**	*e*Pn	**Pn**	**19 26 38.5**	**-2.6**
ORIF	**Oris-en-Rattie**	**5.55**	**293**	*e*Pn	**Pn**	**19 26 40.6**	**-0.6**
ORIF				*e*Sn	**Sn**	**19 27 41.3**	**-3.6**
GERES	**GERESS Array B**	**5.93**	**4**	Pn	**Pn**	**19 26 46.5**	**0.0**
comp=N,26nm,1.1s,baz=184,slow=15,SNR=6.2							
GERES				Sn	**Sn**	**19 27 53.8**	**-0.5**
comp=N,3.8nm,0.3s,baz=186,slow=26,SNR=3.6							
VIVF	**Saint-Julien-l**	**6.36**	**290**	*e*Pn	**Pn**	**19 26 50.3**	**-1.9**
HINF	**Hinteralfeld**	**6.55**	**320**	*e*Pn	**Pn**	**19 26 53.7**	**-1.2**
HINF				*e*Sn	**Sn**	**19 28 05.3**	**-4.2**
comp=N,21nm,0.4s							
LASF	**Ste Croix**	**6.79**	**283**	*e*Pn	**Pn**	**19 26 57.1**	**-1.0**
CDF	**Champ du Feu**	**6.81**	**326**	*e*Pn	**Pn**	**19 26 58.9**	**+0.4**
VRAC	**Vranov**	**6.83**	**20**	Sn	**Sn**	**19 28 15.2**	**-1.2**
comp=N,0.8nm,0.3s,baz=126,slow=19,SNR=1.2							
HAU	**Haudompre**	**6.92**	**319**	*e*Pn	**Pn**	**19 27 02.0**	**+2.0**
HAU				*e*Sn	**Sn**	**19 28 14.1**	**-4.5**
comp=N,75nm,0.7s							
SMF	**Signal de Mont**	**7.53**	**303**	*e*Pn	**Pn**	**19 27 06.7**	**-1.6**
PAGF	**Fort de Pagny**	**7.61**	**320**	*e*Pn	**Pn**	**19 27 08.9**	**-0.4**
baz=120							
SFTF	**Sexfontaines**	**7.71**	**316**	*e*Pn	**Pn**	**19 27 10.4**	**-0.3**
baz=135							
KEST	**Kesra**	**7.74**	**203**	Pn	**Pn**	**19 27 14.4**	**+3.1**
comp=N,0.2nm,0.3s,baz=14,slow=12,SNR=1.3							
comp=N,3.9nm,0.7s							
LOR	**Lormes**	**7.82**	**307**	*e*Pn	**Pn**	**19 27 13.7**	**+1.5**
baz=126							
MEZF	**Maizieres J'vi**	**7.90**	**318**	*e*Pn	**Pn**	**19 27 10.4**	**-2.9**
baz=131							
AVF	**Avril sur Loir**	**7.90**	**303**	*e*Pn	Pn	19 27 09.0	-4.3
SSF	**Saint Saulge**	**7.93**	**305**	*e*Pn	**Pn**	**19 27 13.2**	**-0.5**
SAVF	**Savonnieres en**	**7.94**	**318**	*e*Pn	**Pn**	**19 27 15.1**	**+1.3**
MTLF	**Montolieu**	**7.94**	**277**	*e*Pn	**Pn**	**19 27 12.9**	**-1.0**
BGF	**Bois d'Agland**	**8.12**	**300**	*e*Pn	**Pn**	**19 27 16.1**	**-0.3**
CAF	**Calviac**	**8.18**	**288**	*e*Pn	**Pn**	**19 27 14.2**	**-3.0**
TCF	**Toulx Ste Croi**	**8.43**	**297**	*e*Pn	**Pn**	**19 27 19.8**	**-0.9**
HYF	**Humbligny**	**8.55**	**304**	*e*Pn	**Pn**	**19 27 21.4**	**-0.8**
RJF	**Les Rejaudoux**	**8.63**	**290**	*e*Pn	**Pn**	**19 27 22.5**	**-0.9**
LFF	**La Frestale**	**9.11**	**287**	*e*Pn	**Pn**	**19 27 28.3**	**-1.6**
GIVF	**Givet**	**9.14**	**325**	*e*Pn	**Pn**	**19 27 31.8**	**+1.5**
GIVF				*e*Sn	**Sn**	**19 29 06.6**	**-6.4**
comp=N,36nm,0.9s							
EPF	**Esparros**	**9.32**	**275**	*e*Pn	**Pn**	**19 27 31.8**	**-1.1**
ETSF	**Etsaut**	**9.99**	**274**	*e*Pn	**Pn**	**19 27 39.5**	**-2.6**
MFF	**Saint Martin d**	**10.08**	**296**	*e*Pn	**Pn**	**19 27 43.1**	**-0.1**
GRR	**Gorron**	**11.16**	**304**	*e*Pn	**Pn**	**19 27 55.6**	**-2.3**
SGMF	**Saint Gilles**	**12.16**	**301**	*e*Pn	**Pn**	**19 28 10.0**	**-1.6**
QUIF	**Quistinic**	**12.43**	**299**	*e*Pn	**Pn**	**19 28 14.1**	**-1.3**
ROSF	**Rostrenen**	**12.63**	**301**	*e*Pn	**Pn**	**19 28 15.4**	**-2.7**
HOMB	**Homborsund**	**15.62**	**351**	IVMs_BB	IVMs_BB	19 29 01.7	
comp=Z,53μm,15.8s							
FINES	**FINESS Array B**	**20.11**	**18**	P	Pn	19 29 53.8	-0.1
comp=Z,32nm,1.1s,baz=198,slow=8.7,SNR=1.3							
comp=Z,32nm,1.1s							
TORD	**Torodi Ar. Bea**	**31.26**	**202**	P	**P**	**19 31 40.6**	**+2.3**
comp=Z,1.5nm,1.0s,baz=9.4,slow=10,SNR=1.6							
comp=Z,1.5nm,1.0s							
MKAR	**Makanchi Array**	**47.78**	**60**	P	**P**	**19 33 56.9**	**+1.3**
comp=Z,0.6nm,0.7s,baz=294,slow=6.4,SNR=1.2							
comp=Z,0.6nm,0.7s							

ROM 26 19:25:43.6±0.1, 42°.936N±0°.003×13°.084E±0°.004, h8km, ML3.1/4, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.04**	**316**	⇓P	Pg	19 25 45.6	+0.2
FEMA				S	Sg	19 25 46.7	+0.1
FEMA				AML	AML		
FEMA				AML	AML		
comp=N,79073μm,0.3s							
MC2	**Monte Cornacci**	**0.08**	**107**	⇑P	Pg	19 25 46.6	+0.8
MC2				S	Sg	19 25 47.3	-0.2
T1245	**Castelsantange**	**0.11**	**136**	P	Pg	19 25 46.9	+0.7
T1245				S	Sg	19 25 48.9	+0.8
T1245				AML	AML		
T1245				AML	AML		
CESI	**CESI - Serrava**	**0.15**	**298**	P	Pg	19 25 47.2	+0.4
CESI				S	Sg	19 25 49.8	+0.8
CESI				AML	AML		
comp=E,14976μm,0.3s							
CESI				AML	AML		
comp=N,21055μm,0.2s							
CSP1	**Cessapalombo**	**0.18**	**30**	P	Pg	19 25 47.9	+0.5
CSP1				S	Sg	19 25 51.0	+1.1
MMO1	**Montemonaco**	**0.18**	**102**	P	Pg	19 25 48.0	+0.6
MMO1				S	Sg	19 25 50.7	+0.7
AM05	**Amandola Campo**	**0.20**	**78**	P	Pg	19 25 48.4	+0.7
AM05				S	Sg	19 25 51.9	+1.4
comp=E,37993μm,0.5s							
AM05				AML	AML		
comp=N,10097μm,0.2s							
T1215	**Vallo di Nera,**	**0.21**	**230**	P	Pg	19 25 48.4	+0.6
T1215				S	Sg	19 25 51.9	+1.2
T1215				AML	AML		
comp=N,6201μm,0.1s							
T1215				AML	AML		
comp=E,4787μm,0.2s							
T1215				AML	AML		
comp=N,5890μm,0.1s							
GUMA	**Gualdo di Mace**	**0.22**	**55**	P	Pg	19 25 49.0	+0.9
T1217	**Poggiodomo (PG**	**0.25**	**207**	P	Pg	19 25 49.3	+0.6
T1217				S	Sg	19 25 53.5	+1.5
PIO1	**Pioraco**	**0.25**	**343**	P	Pb	19 25 49.6	-0.8
PIO1				S	Sb	19 25 53.8	-1.3
MDAR	**Monte D'Aria**	**0.26**	**9**	P	Pg	19 25 49.7	+0.9
MDAR				S	Sg	19 25 53.4	+1.1
T1241	**Roccafluvione,**	**0.27**	**107**	P	Pg	19 25 49.5	+0.5
T1241				S	Sg	19 25 53.8	+1.3
T1201	**Domo (RI)**	**0.30**	**156**	P	Pb	19 25 50.6	-0.8
T1201				S	Sb	19 25 56.0	-0.6
T1204	**Amatrice, Fraz**	**0.31**	**147**	P	Pg	19 25 50.0	+0.2
T1204				S	Sb	19 25 56.0	-0.8
CAMP	**Campotosto**	**0.47**	**149**	P	Pb	19 25 53.9	-0.3
CAMP				S	Sb	19 26 00.9	-0.4
TERO	**Teramo**	**0.49**	**129**	P	Pg	19 25 53.7	+0.5
TERO				S	Sb	19 26 01.3	-0.7

ROM 26 19:26:03.6±0.0, 43°.021N±0°.002×13°.065E±0°.004, h9km, ML3.7/8, Error ellipse: s-maj=0.3km s-min=0.1km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**191**	P	Pg	19 26 06.0	+0.3
FEMA				S	Sg	19 26 07.5	+0.4
FEMA				AML	AML		
comp=N,54862μm,0.1s							
CESI	**CESI - Serrava**	**0.12**	**262**	P	Pg	19 26 07.0	+0.6
CESI				S	Sg	19 26 09.5	+1.1
CESI				AML	AML		
comp=E,63100μm,0.3s							
CESI				AML	AML		
comp=N,55550μm,0.6s							
CSP1	**Cessapalombo**	**0.12**	**55**	P	Pg	19 26 07.0	+0.5
CSP1				S	Sg	19 26 09.3	+0.7
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
SEF1	**Sefro**	**0.15**	**326**	P	Pg	19 26 07.6	+0.6
SEF1				S	Sg	19 26 10.0	+0.8
PIO1	**Pioraco**	**0.17**	**339**	P	Pg	19 26 07.8	+0.6
PIO1				S	Sg	19 26 10.7	+1.0
MDAR	**Monte D'Aria**	**0.18**	**18**	P	Pg	19 26 08.0	+0.5
MDAR				S	Sg	19 26 11.1	+0.9
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		

T1245	**Castelsantange**	**0.19**	**151**	P	Pg	19 26 08.4	+0.8
T1245				S	Sg	19 26 11.1	+0.8
FIU1	**Fiuminata**	**0.19**	**330**	P	Pg	19 26 08.3	+0.6
FIU1				S	Sg	19 26 11.7	+1.3
GUMA	**Gualdo di Mace**	**0.20**	**78**	P	Pg	19 26 08.6	+0.8
GUMA				S	Sg	19 26 12.5	+1.8
GUMA				AML	AML		
comp=E,99550μm,0.9s							
GUMA				AML	AML		
comp=E,99400μm,0.5s							
GUMA				AML	AML		
comp=N,71150μm,1.0s							
GUMA				AML	AML		
comp=N,60050μm,0.4s							
GUMA				AML	AML		
comp=E,99500μm,0.9s							
AM05	**Amandola Campo**	**0.21**	**102**	P	Pg	19 26 08.6	+0.5
AM05				S	Sg	19 26 12.6	+1.6
AM05				AML	AML		
comp=E,24685μm,0.2s							
AM05				AML	AML		
comp=N,5406μm,0.1s							
GAG1	**Gagliole**	**0.22**	**0**	P	Pg	19 26 09.0	+0.9
GAG1				S	Sg	19 26 12.5	+1.4
SSM1	**San Severino M**	**0.22**	**21**	P	Pg	19 26 08.8	+0.6
SSM1				S	Sg	19 26 12.5	+1.3
MMO1	**Montemonaco**	**0.23**	**122**	P	Pg	19 26 08.7	+0.4
MMO1				S	Sg	19 26 12.4	+1.0
MTL1	**Matelica**	**0.24**	**350**	P	Pg	19 26 09.2	+0.7
MTL1				S	Sg	19 26 13.4	+1.6
SNTG	**Esanatoglia**	**0.25**	**339**	P	Pg	19 26 09.5	+0.7
SNTG				S	Sg	19 26 13.4	+1.3
T1215	**Vallo di Nera,**	**0.26**	**214**	P	Pb	19 26 09.9	-0.7
T1215				S	Sg	19 26 13.7	+1.2
T1215				AML	AML		
comp=E,4445μm,0.1s							
T1215				AML	AML		
comp=N,4160μm,0.1s							
T1215				AML	AML		
comp=E,4018μm,0.1s							
EL6	**Elcito**	**0.31**	**5**	P	Pg	19 26 10.3	+0.4
EL6				S	Sb	19 26 15.4	-1.3
MNTP	**Montappone**	**0.32**	**68**	P	Pb	19 26 11.1	-0.5
T1217	**Poggiodomo (PG**	**0.32**	**198**	P	Pb	19 26 11.6	-0.1
T1217				S	Sb	19 26 15.8	-1.2
T1217				AML	AML		
comp=N,8400μm,0.1s							
T1217				AML	AML		
comp=N,10326μm,0.4s							
T1217				AML	AML		
comp=E,6590μm,0.1s							
TRE1	**Treia**	**0.34**	**32**	P	Pb	19 26 11.3	-0.6
ATCC	**AVT- Casa Cast**	**0.35**	**298**	P	Pg	19 26 11.2	+0.6
ATCC				S	Sb	19 26 17.1	-0.7
T1204	**Amatrice, Fraz**	**0.39**	**152**	P	Pg	19 26 11.8	+0.4
LNSS	**Leonessa**	**0.42**	**183**	P	Pg	19 26 12.1	+0.3
MMUR	**Monte Murano**	**0.42**	**353**	P	Pg	19 26 12.6	+0.6
MMUR				S	Sb	19 26 19.2	-0.7
T1243	**Rocca Santa Ma**	**0.43**	**139**	P	Pg	19 26 12.8	+0.7
MURB	**Monte Urbino**	**0.46**	**302**	P	Pg	19 26 13.2	+0.5
ARVD	**Arcevia**	**0.49**	**349**	P	Pg	19 26 13.6	+0.5
ARVD				S	Sb	19 26 21.2	-0.4
ATFO	**Monte Foce - G**	**0.50**	**314**	P	Pg	19 26 13.9	+0.5
RM33	**Pellescritta (**	**0.52**	**168**	P	Pb	19 26 14.6	-0.5
PP3	**Marolino**	**0.54**	**48**	P	Pb	19 26 15.4	+0.2
FRON	**Frontone**	**0.56**	**334**	P	Pg	19 26 15.0	+0.6
FRON				S	Sb	19 26 23.6	-0.1
TERO	**Teramo**	**0.56**	**135**	P	Pg	19 26 15.1	+0.5

*CNRM **26** 19:27:15.9, 36°.05N×8°.28W, h30km, ml3.9*
*LDG **26** 19:27:18.7±0.2, 36°.22N×8°.24W, h10km, Ml3.5/3, Error ellipse: s-maj=5.2km s-min=2.5km az=39.0*
*MDD **26** 19:27:19.1±0.6, 36°.22N×8°.31W, h24km±8km, mb_Lg3.2/19, Error ellipse: s-maj=7.9km s-min=2.5km az=40.0*
*INMG **26** 19:27:19.3±1.2, 36°.14N×8°.34W, h31km, ML2.7, Error ellipse: s-maj=3.5km s-min=1.8km az=70.0*

ISC 26 19:27:17.2±1.1, 36°.20N±0°.05×8°.23W±0°.04, h35km, n83, σ2°.00/141, 3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.05**	**333**	⇓*i*P	**Pn**	**19 27 56.2**	**+0.8**
PFVI				*e*S	**Sn**	**19 27 49.4**	**+0.6**
PFVI				A	A	19 27 53.8	
82nm,0.3s							
PFVI	**Vila Bisbo**	**1.05**	**333**	P	**Pn**	**19 27 35.7**	**+0.3**
PFVI				S	**Sn**	**19 27 48.9**	**0.0**
MORF	**Marmelete**	**1.16**	**343**	*e*P	**Pn**	**19 27 37.9**	**+1.0**
MORF				*e*S	**Sn**	**19 27 51.4**	**-0.2**
MORF				IAML		19 27 53.4	
comp=N,176nm,0.1s							
MORF	**Marmelete**	**1.16**	**343**	⇓*e*P	**Pn**	**19 27 37.9**	**+1.0**
MORF				*e*S	**Sn**	**19 27 52.6**	**+1.1**
MORF				A	A	19 27 53.6	
comp=N,123nm,0.1s							
PTEO	**Sao Teotonio**	**1.40**	**344**	⇓*i*P	**Pn**	**19 27 41.6**	**+1.3**
PTEO				*e*S	**Sn**	**19 27 58.5**	**+1.0**
PTEO				A	A	19 28 00.4	
comp=N,39nm,0.2s							
PCVE	**Castro Verde**	**1.44**	**6**	*e*P	**Pn**	**19 27 43.1**	**+2.3**
PCVE				*e*S	**Sn**	**19 28 00.5**	**+2.0**
PCVE				A	A	19 28 01.9	
comp=N,51nm,0.1s							
EGRO	**El Granado**	**1.46**	**24**	P	**Pn**	**19 27 43.5**	**+2.4**
EGRO				S	**Sn**	**19 28 01.0**	**+2.0**
EGRO				*i* Vmb_Lg		19 28 02.7	
PBEJ	**Beja**	**1.85**	**9**	*e*Pn	**Pn**	**19 27 48.4**	**+2.0**
PBEJ				*e*Sn	**Sn**	**19 28 09.7**	**+1.1**
PBEJ				A	A	19 28 10.3	
comp=N,34nm,0.2s							
PNCL	**Nicolau / Gran**	**1.93**	**353**	*e*Pn	**Pn**	**19 27 49.0**	**+1.5**
PNCL				*e*Sn	**Sn**	**19 28 11.7**	**+1.3**
PNCL				A	A	19 28 12.1	
comp=N,34nm,0.1s							
EMIN	**Mina Concepcio**	**2.00**	**38**	P	**Pn**	**19 27 50.6**	**+2.1**
EMIN				S	**Sn**	**19 28 13.0**	**+0.6**
EMIN				*i* Vmb_Lg		19 28 15.1	
ESPR	**Espera**	**2.03**	**70**	P	**Pn**	**19 27 51.3**	**+2.4**
ESPR				S	**Sn**	**19 28 15.5**	**+2.6**
ESPR				*i* Vmb_Lg		19 28 17.9	
PBAR	**Barrancos**	**2.19**	**25**	*e*Pn	**Pn**	**19 27 53.4**	**+2.3**
PBAR				*e*Sn	**Sn**	**19 28 18.9**	**+1.9**
PBAR				A	A	19 28 21.4	
comp=N,20nm,0.2s							
ECEU	**Ceuta**	**2.33**	**97**	P	**Pn**	**19 27 56.0**	**+3.0**
ECEU				S	**Sn**	**19 28 23.8**	**+3.3**
ECEU				*i* Vmb_Lg		19 28 27.4	
EVO	**Evora**	**2.34**	**4**	*e*Pn	**Pn**	**19 27 55.2**	**+2.1**
EVO				*e*Sn	**Sn**	**19 28 21.6**	**+1.0**
EVO				A	A	19 28 22.4	
comp=N,49nm,0.1s							
SMIR	**Smir Dam**	**2.37**	**102**	P	**Pn**	**19 27 55.1**	**+1.5**
SMIR				S	**Sn**	**19 28 20.8**	**-0.6**
PACT	**Alcochete**	**2.61**	**350**	*e*Pn	**Pn**	**19 27 59.1**	**+2.2**
PACT				*e*Sn	**Sn**	**19 28 29.6**	**+2.3**
PMST	**Lisbon--Monsan**	**2.65**	**344**	*e*Pn	**Pn**	**19 27 59.8**	**+2.4**
PMST				*e*Sn	**Sn**	**19 28 29.6**	**+1.4**
PMST				A	A	19 28 31.1	
comp=N,25nm,0.3s							
PESTR	**Estremoz**	**2.71**	**11**	*e*Pn	**Pn**	**19 28 00.5**	**+2.2**
PESTR				*e*Sn	**Sn**	**19 28 31.1**	**+1.2**
PESTR	**Estremoz**	**2.71**	**11**	P	**Pn**	**19 28 01.3**	**+3.0**
EBAD	**Badajoz**	**2.73**	**20**	P	**Pn**	**19 28 00.4**	**+1.9**
EBAD				S	**Sn**	**19 28 30.8**	**+0.5**
EBAD				*i* Vmb_Lg		19 28 34.2	
EMIJ	**Mijas**	**2.81**	**81**	P	**Pn**	**19 28 01.5**	**+1.7**
EMIJ				S	**Sn**	**19 28 34.3**	**+1.9**
EMIJ				*i* Vmb_Lg		19 28 39.3	
PMTG	**Montargil**	**2.87**	**0**	*e*Pn	**Pn**	**19 28 02.1**	**+1.7**
PMTG				*e*Sn	**Sn**	**19 28 34.5**	**+0.8**
PMTG				A	A	19 28 36.0	
comp=N,19nm,0.5s							
PMAFR	**Mafra**	**2.88**	**343**	*e*Pn	**Pn**	**19 28 02.1**	**+1.5**
PMAFR				*e*Sn	**Sn**	**19 28 35.0**	**+1.1**
PMAFR				A	A	19 28 36.0	
comp=N,64nm,0.3s							
ECAB	**El Cabril**	**2.93**	**49**	P	**Pn**	**19 28 03.3**	**+2.0**
ECAB				S	**Sn**	**19 28 34.7**	**-0.5**
ECAB				*i* Vmb_Lg		19 28 39.1	
PMRV	**Marv??o**	**3.29**	**11**	*e*Pn	**Pn**	**19 28 08.1**	**+1.8**
PMRV				*e*Sn	**Sn**	**19 28 45.2**	**+1.0**
PMRV				A	A	19 28 45.5	
comp=N,19nm,0.2s							
PSBE	**So Bento**	**3.34**	**352**	*e*Pn	**Pn**	**19 28 08.8**	**+1.8**
PSBE				*e*Sn	**Sn**	**19 28 46.2**	**+0.8**
PSBE				A	A	19 28 48.5	
comp=N,16nm,0.3s							
EGOR	**Sierra Gorda,**	**3.44**	**73**	P	**Pn**	**19 28 11.4**	**+3.0**
EGOR				S	**Sn**	**19 28 48.6**	**+0.7**
EGOR				*i* Vmb_Lg		19 28 53.7	
EADA	**Adamuz**	**3.52**	**55**	P	**Pn**	**19 28 11.9**	**+2.5**
EADA				S	**Sn**	**19 28 51.6**	**+1.8**
EADA				*i* Vmb_Lg		19 28 54.8	
PCBR	**Castelo Branco**	**3.69**	**9**	*e*Pn	**Pn**	**19 28 13.7**	**+2.1**
PCBR				*e*Sn	**Sn**	**19 28 54.0**	**+0.2**
PCBR				A	A	19 28 55.0	
comp=N,22nm,0.2s							
SRHM	**Skhour des Reh**	**3.73**	**176**	P	**Pn**	**19 28 12.1**	**-0.2**
LCRM	**LCR**	**3.73**	**131**	P	**Pn**	**19 28 13.3**	**+0.8**
ELGU	**Los Guajares,**	**3.77**	**78**	P	**Pn**	**19 28 15.5**	**+2.6**
ELGU				S	**Sn**	**19 28 58.1**	**+2.1**
ELGU				*i* Vmb_Lg		19 29 01.8	
PCAS	**Casmilo, Conde**	**3.85**	**357**	*e*Pn	**Pn**	**19 28 16.0**	**+2.0**
PCAS				*e*Sn	**Sn**	**19 28 58.4**	**+0.3**
EPLA	**Plasencia**	**4.22**	**23**	P	**Pn**	**19 28 21.1**	**+2.1**
EPLA				S	**Sn**	**19 29 04.6**	**-2.5**
EPLA				*i* Vmb_Lg		19 29 09.3	
MTE	**Manteigas**	**4.23**	**7**	*e*Pn	**Pn**	**19 28 21.2**	**+2.0**
MTE				*e*Sn	**Sn**	**19 29 06.9**	**-0.5**
EBER	**Berja**	**4.36**	**79**	P	**Pn**	**19 28 23.8**	**+2.8**
EBER				S	**Sn**	**19 29 09.9**	**-0.8**
MD31	**MD31**	**4.39**	**138**	P	**Pn**	**19 28 21.4**	**0.0**
MD31				S	**Sn**	**19 29 07.7**	**-3.6**
EQES	**Quesada**	**4.43**	**67**	P	**Pn**	**19 28 24.2**	**+2.2**
EQES				S	**Sn**	**19 29 12.0**	**-0.4**
EQES				*i* Vmb_Lg		19 29 18.3	
MDT	**Midelt**	**4.51**	**137**	P	**Pn**	**19 28 23.2**	**+0.1**
MDT				S	**Sn**	**19 29 10.2**	**-4.2**
PVIS	**Viseu**	**4.52**	**3**	*e*Sn	**Sn**	**19 29 14.1**	**-0.4**
PVIS				A	A	19 29 16.1	
comp=N,6.4nm,0.2s							
PAB	**San Pablo**	**4.54**	**41**	P	**Pn**	**19 28 25.6**	**+2.1**
PAB				*i* Vmb_Lg		19 29 13.0	
PAB				S	**Sn**	**19 29 13.3**	**-1.7**
PAB	**San Pablo**	**4.54**	**41**	P	**Pn**	**19 28 25.9**	**+2.4**
ESDC	**Sonseca Array**	**4.84**	**43**	P	**Pn**	**19 28 29.0**	**+1.4**
ESDC				S	**Sn**	**19 29 20.2**	**-2.2**
ESDC				*i* Vmb_Lg		19 29 22.1	
TAF	**Taforalt**	**4.94**	**105**	P	**Pn**	**19 28 27.7**	**-1.3**
TAF				S	**Sn**	**19 29 23.0**	**-1.9**
OUK	**Oukaimeden**	**4.99**	**176**	P	**Pn**	**19 28 28.6**	**-1.2**
JBK	**JBK**	**4.99**	**110**	P	**Pn**	**19 28 28.8**	**-1.0**
MVO	**Moncorvo**	**5.05**	**10**	*e*Sn	**Sn**	**19 29 26.5**	**-1.1**
MVO				A	A	19 29 29.0	
comp=N,8.3nm,0.1s							
PVRL	**Vila Real**	**5.09**	**4**	*e*Sn	**Sn**	**19 29 28.0**	**-0.5**
PVRL				A	A	19 29 31.0	
comp=N,7.4nm,0.1s							
POLO	**Lamas de Olo**	**5.18**	**4**	*e*Pn	**Pn**	**19 28 34.4**	**+2.1**
POLO				*e*Sn	**Sn**	**19 29 29.6**	**-1.2**
POLO				A	A	19 29 31.4	
comp=N,2.5nm,0.2s							
GUD	**Guadarrama**	**5.47**	**35**	P	**Pn**	**19 28 38.7**	**+2.4**
GUD				S	**Sn**	**19 29 36.9**	**-1.2**
GUD				*i* Vmb_Lg		19 29 38.5	
EZAR	**Zarzadilla de**	**5.49**	**70**	P	**Pn**	**19 28 38.1**	**+1.5**
EZAR				S	**Sn**	**19 29 37.7**	**-0.8**
PCAB	**Cabril**	**5.51**	**2**	*e*Pn	**Pn**	**19 28 38.9**	**+2.2**
PCAB				*e*Sn	**Sn**	**19 29 37.0**	**-1.8**
PCAB				A	A	19 29 39.9	
comp=N,7.4nm,0.6s							
TTIG	**Tnine Tigouga,**	**5.64**	**182**	P	Pn	19 28 34.9	-3.7
ELOB	**Lobios**	**5.66**	**1**	P	**Pn**	**19 28 40.3**	**+1.4**
ELOB				S	**Sn**	**19 29 40.2**	**-2.5**
ELOB				*i* Vmb_Lg		19 29 42.8	
PBRG	**Braganca**	**5.72**	**11**	*e*Sn	**Sn**	**19 29 42.4**	**-1.6**
PBRG				A	A	19 29 45.4	
comp=N,5.3nm,0.2s							
PGAV	**Gavieira, Arco**	**5.76**	**360**	*e*Pn	**Pn**	**19 28 41.8**	**+1.6**
PGAV				*e*Sn	**Sn**	**19 29 43.0**	**-2.1**
EMUR	**La Murta**	**5.83**	**72**	P	**Pn**	**19 28 43.8**	**+2.7**
EMUR				S	**Sn**	**19 29 44.5**	**-2.2**
ECAL	**Calabor**	**5.85**	**11**	P	**Pn**	**19 28 44.1**	**+2.6**
ECAL				S	**Sn**	**19 29 45.9**	**-1.5**
ECAL				*i* Vmb_Lg		19 29 49.4	
ETOB	**Tobarra**	**5.85**	**63**	P	**Pn**	**19 28 43.0**	**+1.5**
ETOB				S	**Sn**	**19 29 46.0**	**-1.4**
EAGO	**Agolada(Pontev**	**6.60**	**1**	P	**Pn**	**19 28 53.2**	**+1.5**
EAGO				S	**Sn**	**19 30 01.9**	**-3.7**
ECHE	**Chera**	**6.67**	**57**	P	**Pn**	**19 28 54.8**	**+2.2**
ECHE				S	**Sn**	**19 30 05.4**	**-2.0**
ETOR	**Torete**	**6.69**	**45**	P	**Pn**	**19 28 56.1**	**+3.1**
ETOR				S	**Sn**	**19 30 07.5**	**-0.5**
EMAZ	**Mazaricos**	**6.77**	**355**	P	**Pn**	**19 28 55.0**	**+1.1**
EMAZ				S	**Sn**	**19 30 05.8**	**-4.0**
FIGM	**Figuig**	**7.06**	**123**	P	**Pn**	**19 28 57.7**	**-0.4**
EMOS	**Mosqueruela**	**7.38**	**53**	P	**Pn**	**19 29 05.4**	**+2.8**
EMOS				S	**Sn

```
MC2  Monte Cornacci     0.08  74  P   Pg   19 27 56.5  -0.2
MC2                                 S   Sg   19 27 59.0  +0.4
T1245 Castelsantange    0.09 113    P   Pg   19 27 57.1  +0.4
T1245                               S   Sg   19 27 59.0  +0.5
T1245                               AML AML
T1245                               AML AML
T1245                               AML AML
T1245                               AML AML
T1245                               AML AML
CESI  CESI - Serrava    0.17 312    P   Pg   19 27 58.6  +0.6
CESI                                S   Sg   19 28 01.5  +1.0
CESI                                AML AML
        comp=E,19900µm,0.5s
CESI                                AML AML
        comp=N,32800µm,0.5s
CESI                                AML AML
        comp=E,20750µm,0.4s
CESI                                AML AML
        comp=N,32771µm,0.5s
MMO1 Montemonaco        0.18  87    P   Pg   19 27 58.6  +0.5
MMO1                                S   Sg   19 28 01.8  +1.1
T1215 Vallo di Nera,    0.18 241    P   Pg   19 27 58.7  +0.7
T1215                               S   Sg   19 28 01.7  +1.0
T1215                               AML AML
        comp=E,9620µm,0.5s
T1215                               AML AML
        comp=N,8470µm,0.5s
T1215                               AML AML
        comp=N,8090µm,0.8s
T1215                               AML AML
        comp=E,9695µm,0.5s
T1215                               AML AML
        comp=E,9615µm,0.5s
T1215                               AML AML
        comp=N,8075µm,0.8s
T1215                               AML AML
        comp=N,8470µm,0.5s
T1217 Poggiodomo (PG    0.21 212    P   Pg   19 27 59.3  +0.8
T1217                               S   Sg   19 28 02.9  +1.3
T1217                               AML AML
        comp=E,20650µm,0.3s
T1217                               AML AML
        comp=E,21000µm,0.3s
T1217                               AML AML
        comp=N,43850µm,0.2s
T1217                               AML AML
        comp=N,42700µm,0.2s
AM05 Amandola Campo     0.22  66    P   Pg   19 27 59.0  +0.3
AM05                                S   Sg   19 28 03.0  +1.2
AM05                                AML AML
        comp=E,4135µm,0.7s
AM05                                AML AML
        comp=N,3805µm,0.3s
AM05                                AML AML
        comp=N,1240µm,0.1s
AM05                                AML AML
        comp=E,4130µm,0.7s
AM05                                AML AML
        comp=N,5000µm,0.5s
AM05                                AML AML
        comp=N,1245µm,0.1s
AM05                                AML AML
        comp=E,15400µm,0.1s
T1241 Roccafluvione,    0.26  97    P   Pg   19 28 00.0  +0.5
T1241                               S   Sg   19 28 04.3  +1.3
T1241                               AML AML
        comp=N,8430µm,1.2s
T1241                               AML AML
        comp=E,15500µm,0.3s
SEF1 Sefro              0.28 339    P   Pb   19 28 00.7  -0.6
SEF1                                S   Sg   19 28 04.8  +1.3
SEF1                                AML AML
        comp=E,19150µm,0.2s
SEF1                                AML AML
        comp=N,21550µm,0.3s
T1204 Amatrice, Fraz    0.28 141    P   Pb   19 28 00.7  -0.6
T1204                               S   Sb   19 28 05.1  -1.1
T1204                               AML AML
        comp=N,8285µm,0.6s
T1204                               AML AML
        comp=E,13150µm,0.3s
T1204                               AML AML
        comp=N,8285µm,1.4s
LNSS Leonessa           0.29 186    P   Pg   19 28 00.8  +0.8
LNSS                                S   Sb   19 28 05.2  -1.3
LNSS                                AML AML
        comp=N,19950µm,0.4s
LNSS                                AML AML
        comp=E,24750µm,0.4s
T1243 Rocca Santa Ma    0.33 125    P   Pg   19 28 01.2  +0.4
T1243                               S   Sg   19 28 06.5  +1.2
MNTP Montappone         0.38  49    P   Pb   19 28 02.9  -0.2
MNTP                                AML AML
        comp=E,7920µm,1.0s
MNTP                                AML AML
        comp=N,6525µm,1.2s
RM33 Pellescritta (     0.39 166    P   Pg   19 28 02.6  +0.6
RM33                                S   Sb   19 28 08.6  -0.9
RM33                                AML AML
        comp=N,5150µm,0.1s
RM33                                AML AML
        comp=E,5045µm,1.2s
RM33                                AML AML
        comp=N,5280µm,0.1s
RM33                                AML AML
        comp=E,5135µm,1.2s
RM33                                AML AML
        comp=E,5040µm,1.2s
RM33                                AML AML
        comp=E,2000µm,0.2s
T1211 Morro Reatino     0.39 205    P   Pb   19 28 02.7  -0.6
T1211                               S   Sb   19 28 08.6  -0.9
OFFI Offida             0.45  84    P   Pb   19 28 04.3  +0.1
CESX Cesi               0.46 233    P   Pg   19 28 03.5  +0.3
CESX                                S   Sb   19 28 10.7  -0.7
TERO Teramo             0.47 125    P   Pg   19 28 03.7  +0.4
TERO                                S   Sb   19 28 10.8  -0.8
TERO                                AML AML
        comp=N,8650µm,0.3s
TERO                                AML AML
        comp=E,7855µm,0.4s
TERO                                AML AML
        comp=E,7390µm,0.4s
TERO                                AML AML
        comp=N,8125µm,0.3s
T1247 Pizzolo (AQ)      0.48 160    P   Pg   19 28 04.0  +0.5
T1247                               S   Sb   19 28 11.4  -0.4
GIGS Gran Sasso         0.57 141    P   Pg   19 28 05.6  +0.4
GIGS                                S   Sg   19 28 13.2  +0.5
GIGS                                AML AML
        comp=E,956µm,1.2s
GIGS                                AML AML
        comp=N,911µm,0.1s
FIAM Fiamignano         0.62 178    P   Pg   19 28 06.5  +0.2
FIAM                                S   Sb   19 28 15.6  -0.5
```

ROM 26 19:28:54.2±0.1, 43°.017N±0°.004×13°.075E±0°.005, h9km, Md1.8/13, 2C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=22.0, Central Italy

```
Code  Station Name      Δ°  AZ°  Phase ID        Time      Res
                                 Op    ISC       h m s     ISC
CESI  CESI - Serrava    0.13 265  P     Pg        19 28 57.6  +0.5
CESI                              S     Sg        19 29 00.1  +1.0
CESI                              AML   AML
        comp=E,20750µm,0.4s
CESI                              AML   AML
        comp=N,29500µm,0.2s
CESI                              AML   AML
CESI                              AML   AML
        comp=E,69800µm,0.3s
CESI                              AML   AML
        comp=E,14327µm,0.3s
CESI                              AML   AML
        comp=N,29506µm,0.2s
CESI                              END
SEF1  Sefro             0.16 324 ⇓P     Pg        19 28 58.2  +0.5
SEF1                              S     Sg        19 29 01.0  +1.0
SEF1                              AML   AML
        comp=E,19150µm,0.2s
SEF1                              AML   AML
        comp=N,21550µm,0.3s
SEF1                              END
PIO1  Pioraco           0.17 338  P     Pg        19 28 58.5  +0.6
PIO1                              S     Sg        19 29 01.5  +1.1
PIO1                              AML   AML
        comp=E,7355µm,0.5s
PIO1                              AML   AML
        comp=N,9145µm,0.4s
PIO1                              AML   AML
        comp=N,9119µm,0.5s
PIO1                              AML   AML
        comp=E,4185µm,0.4s
PIO1                              END
MDAR  Monte D'Aria      0.18  16  P     Pg        19 28 58.5  +0.5
MDAR                              S     Sg        19 29 01.8  +1.1
MDAR                              AML   AML
        comp=E,8200µm,0.3s
MDAR                              AML   AML
        comp=N,8370µm,0.5s
MDAR                              AML   AML
        comp=E,9475µm,0.5s
MDAR                              AML   AML
        comp=N,11610µm,0.3s
MDAR                              AML   AML
        comp=N,7360µm,0.1s
MDAR                              AML   AML
        comp=E,7757µm,0.1s
MDAR                              END
GUMA  Gualdo di Mace    0.20  76  P     Pg        19 28 59.1  +0.8
GUMA                              S     Sg        19 29 02.9  +1.8
FIU1  Fiuminata         0.20 329  P     Pg        19 28 59.0  +0.6
FIU1                              S     Sg        19 29 02.3  +1.1
FIU1                              AML   AML
        comp=E,4635µm,1.3s
FIU1                              AML   AML
        comp=N,4785µm,0.3s
FIU1                              AML   AML
        comp=N,3498µm,0.1s
FIU1                              AML   AML
        comp=E,3125µm,0.2s
FIU1                              END
AM05  Amandola Campo    0.21 101  P     Pg        19 28 59.1  +0.6
AM05                              S     Sg        19 29 02.6  +1.2
AM05                              AML   AML
        comp=E,2625µm,0.5s
AM05                              AML   AML
        comp=N,5000µm,0.5s
AM05                              AML   AML
        comp=E,11700µm,0.2s
AM05                              AML   AML
        comp=N,1105µm,1.0s
AM05                              AML   AML
        comp=E,4420µm,1.1s
AM05                              AML   AML
        comp=N,5610µm,0.1s
AM05                              AML   AML
        comp=E,22700µm,0.1s
AM05                              AML   AML
        comp=N,1480µm,0.4s
AM05                              END
GAG1  Gagliole          0.22 359  P     Pg        19 28 59.5  +0.8
GAG1                              S     Sg        19 29 03.3  +1.5
GAG1                              AML   AML
        comp=E,12250µm,0.9s
GAG1                              AML   AML
        comp=N,11330µm,0.3s
GAG1                              AML   AML
        comp=E,16850µm,0.4s
GAG1                              AML   AML
        comp=N,14600µm,0.4s
GAG1                              AML   AML
        comp=N,8844µm,0.5s
GAG1                              AML   AML
        comp=E,10650µm,0.5s
GAG1                              END
SSM1  San Severino M    0.23  19  P     Pg        19 28 59.3  +0.6
SSM1                              S     Sg        19 29 03.2  +1.3
SSM1                              END
MTL1  Matelica          0.24 349  P     Pg        19 28 59.8  +0.7
MTL1                              S     Sg        19 29 04.2  +1.7
MTL1                              AML   AML
        comp=E,11920µm,0.5s
MTL1                              AML   AML
        comp=N,16850µm,0.5s
MTL1                              AML   AML
        comp=N,9236µm,0.2s
MTL1                              END
SNTG  Esanatoglia       0.26 338 ⇑P     Pg        19 29 00.1  +0.7
SNTG                              S     Sg        19 29 04.2  +1.3
SNTG                              AML   AML
        comp=E,3565µm,1.5s
SNTG                              AML   AML
        comp=N,3645µm,0.3s
SNTG                              AML   AML
        comp=E,3720µm,1.5s
SNTG                              AML   AML
        comp=E,3725µm,1.5s
SNTG                              AML   AML
        comp=N,3875µm,1.2s
SNTG                              AML   AML
        comp=N,3386µm,0.3s
SNTG                              AML   AML
        comp=N,3665µm,0.3s
SNTG                              AML   AML
        comp=E,3479µm,0.1s
SNTG                              END
T1241 Roccafluvione,    0.31 121  P     Pb        19 29 01.9  -0.1
T1241                             S     Sg        19 29 05.7  +1.3
T1217 Poggiodomo (PG    0.32 199  P     Pg        19 29 01.0  +0.4
T1217                             S     Sb        19 29 06.3  -1.3
ATCC  AVT- Casa Cast    0.36 298  P     Pg        19 29 01.8  +0.5
ATCC                              S     Sb        19 29 08.0  -0.7
ATCC                              AML   AML
        comp=E,9455µm,0.3s
ATCC                              AML   AML
        comp=N,6975µm,1.2s
ATCC                              AML   AML
        comp=E,8599µm,0.1s
ATCC                              AML   AML
        comp=N,5495µm,0.3s
ATCC                              END
MURB  Monte Urbino      0.47 302  P     Pg        19 29 03.9  +0.5
MURB                              S     Sb        19 29 12.0  +0.1
MURB                              AML   AML
        comp=E,14800µm,0.3s
MURB                              AML   AML
        comp=N,14950µm,1.0s
MURB                              AML   AML
        comp=E,15900µm,0.3s
MURB                              AML   AML
        comp=N,15050µm,0.9s
MURB                              END
PIEI  Pieia             0.65 323  S     Sb        19 29 18.0  +0.9
FSSB  Fossombrone       0.71 342  S     Sb        19 29 20.0  +1.3
PE3   Peglio            0.80 328 ⇑P     Pb        19 29 10.9  +0.6
```

*ROM **26** 19:34:26.7±0.1, 42°.947N±0°.004×13°.056E±0°.005, h10km, ML3.3/38, Error ellipse: s-maj=0.4km s-min=0.3km az=342.0*

*IDC **26** 19:34:27.9±3.2, 43°.16N×13°.57E, h0km, mb3.4/1, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=47.1km s-min=25.7km az=63.0*

*PRU **26** 19:34:28.9±0.0, 43°.07N×13°.43E, h0km*

ISC 26 19:34:27.2±0.8, 42°.94N±0°.02×13°.07E±0°.02, h9km±4km, n79, σ1s30/110, 21C-12D, Central Italy

```
Code  Station Name      Δ°  AZ°  Phase ID        Time      Res
                                 Op    ISC       h m s     ISC
FEMA  Monte Fema        0.03 330  P     Pg        19 34 28.8  -0.3
FEMA                              S     Sg        19 34 30.0  -0.4
FEMA                              AML   AML
FEMA                              AML   AML
MC2   Monte Cornacci    0.09 106  P     Pg        19 34 30.5  +0.8
MC2                               S     Sg        19 34 31.9  +0.3
T1245 Castelsantange    0.12 133  P     Pg        19 34 30.3  +0.3
T1245                             AML   AML
        comp=E,76700µm,0.2s
T1245                             AML   AML
        comp=N,93150µm,0.3s
T1245                             AML   AML
        comp=N,96500µm,0.3s
T1245                             AML   AML
        comp=N,96450µm,0.3s
T1245                             AML   AML
        comp=E,83050µm,0.2s
CESI  CESI - Serrava    0.14 299  P     Pg        19 34 30.3  0.0
CESI                              S     Sg        19 34 32.8  +0.3
CESI                              AML   AML
CESI                              AML   AML
        comp=E,64350µm,0.3s
T1215 Vallo di Nera,    0.20 227  P     Pg        19 34 31.5  +0.2
T1215                             S     Sg        19 34 35.0  +0.8
T1215                             AML   AML
        comp=E,8665µm,0.1s
T1215                             AML   AML
        comp=N,11740µm,0.3s
T1215                             AML   AML
        comp=E,9225µm,0.1s
T1215                             AML   AML
        comp=N,11490µm,0.3s
T1215                             AML   AML
        comp=E,8670µm,0.1s
T1215                             AML   AML
        comp=N,11765µm,0.3s
T1215                             AML   AML
        comp=E,9205µm,0.1s
T1215                             AML   AML
        comp=N,11475µm,0.3s
T1215                             AML   AML
        comp=N,11515µm,0.3s
T1215                             AML   AML
        comp=N,11740µm,0.3s
T1215                             AML   AML
        comp=E,9235µm,0.1s
T1215                             AML   AML
        comp=E,8675µm,0.1s
AM05  Amandola Campo    0.21  79  P     Pg        19 34 31.8  +0.3
AM05                              S     Sg        19 34 35.5  +1.0
AM05                              AML   AML
        comp=E,14550µm,1.1s
AM05                              AML   AML
        comp=N,1500µm,0.1s
AM05                              AML   AML
        comp=N,4340µm,1.5s
AM05                              AML   AML
        comp=E,14500µm,1.1s
AM05                              AML   AML
        comp=N,1495µm,0.1s
AM05                              AML   AML
        comp=E,3575µm,1.4s
SEF1  Sefro             0.23 337  P     Pg        19 34 31.8  0.0
SEF1                              S     Sg        19 34 35.3  +0.4
GUMA  Gualdo di Mace    0.23  57  P     Pg        19 34 32.3  +0.4
GUMA                              S     Sg        19 34 36.5  +1.4
GUMA                              AML   AML
        comp=E,55050µm,0.6s
GUMA                              AML   AML
        comp=E,37250µm,1.0s
GUMA                              AML   AML
        comp=N,41000µm,1.6s
GUMA                              AML   AML
        comp=N,62350µm,0.5s
T1217 Poggiodomo (PG    0.25 204  P     Pg        19 34 32.5  +0.3
T1217                             S     Sg        19 34 36.8  +1.2
T1217                             AML   AML
        comp=E,14450µm,0.2s
T1217                             AML   AML
        comp=N,26750µm,1.0s
T1217                             AML   AML
        comp=E,14250µm,0.2s
T1217                             AML   AML
        comp=N,27100µm,1.0s
T1217                             AML   AML
        comp=E,14500µm,0.2s
PIO1  Pioraco           0.25 345  P     Pg        19 34 32.4  +0.2
MDAR  Monte D'Aria      0.26  12 ⇓P     Pg        19 34 32.5  0.0
MDAR                              AML   AML
        comp=E,18250µm,0.3s
MDAR                              AML   AML
        comp=N,23150µm,0.3s
FIU1  Fiuminata         0.27 338 ⇓P     Pg        19 34 32.8  +0.1
FIU1                              AML   AML
        comp=E,7540µm,0.5s
FIU1                              AML   AML
        comp=E,7500µm,0.5s
FIU1                              AML   AML
        comp=N,7560µm,0.7s
FIU1                              AML   AML
        comp=E,7495µm,0.5s
FIU1                              AML   AML
        comp=N,7560µm,1.3s
FIU1                              AML   AML
        comp=E,7495µm,1.5s
FIU1                              AML   AML
        comp=N,4399µm,0.1s
FIU1                              AML   AML
        comp=E,4723µm,0.3s
GAG1  Gagliole          0.30 360 ⇑P     Pg        19 34 33.3  +0.1
GAG1                              AML   AML
        comp=N,18650µm,0.8s
GAG1                              AML   AML
        comp=E,20150µm,1.1s
GAG1                              AML   AML
        comp=N,18700µm,0.8s
GAG1                              AML   AML
        comp=N,18700µm,0.9s
GAG1                              AML   AML
        comp=E,20150µm,1.0s
GAG1                              AML   AML
        comp=N,16595µm,0.5s
SSM1  San Severino M    0.30  15 ⇑P     Pg        19 34 33.3  +0.1
T1204 Amatrice, Fraz    0.32 145  P     Pg        19 34 33.8  +0.3
T1204                             AML   AML
        comp=N,6130µm,0.5s
T1204                             AML   AML
        comp=E,10190µm,0.9s
T1204                             AML   AML
        comp=N,6125µm,0.5s
T1204                             AML   AML
        comp=N,4081µm,0.4s
T1204                             AML   AML
        comp=E,4948µm,0.5s
T1204                             AML   AML
        comp=N,6125µm,1.5s
T1204                             AML   AML
        comp=E,10190µm,1.1s
SNTG  Esanatoglia       0.33 344  P     Pg        19 34 33.8  +0.1
SNTG                              AML   AML
        comp=E,3965µm,0.7s
SNTG                              AML   AML
        comp=N,3960µm,1.0s
SNTG                              AML   AML
        comp=N,3965µm,1.0s
SNTG                              AML   AML
        comp=N,4205µm,0.8s
SNTG                              AML   AML
        comp=E,3970µm,0.7s
SNTG                              AML   AML
        comp=N,3965µm,1.0s
SNTG                              AML   AML
        comp=E,4100µm,0.3s
SNTG                              AML   AML
        comp=N,2912µm,0.5s
SNTG                              AML   AML
        comp=E,2808µm,0.7s
LNSS  Leonessa          0.34 184 ⇑P     Pg        19 34 34.0  +0.2
LNSS                              AML   AML
        comp=E,12950µm,0.1s
LNSS                              AML   AML
        comp=N,15700µm,0.1s
MNTP  Montappone        0.35  56 ⇑P     Pg        19 34 34.9  +0.7
MNTP                              AML   AML
        comp=N,10335µm,1.4s
MNTP                              AML   AML
        comp=E,12050µm,0.2s
MNTP                              AML   AML
        comp=N,10335µm,1.4s
MNTP                              AML   AML
        comp=N,10335µm,0.6s
SMA1  SAN MARTINO       0.36 147 ⇓P     Pg        19 34 34.7  +0.3
SMA1                              AML   AML
        comp=E,5180µm,0.4s
SMA1                              AML   AML
        comp=E,5185µm,0.4s
SMA1                              AML   AML
        comp=N,5770µm,0.4s
SMA1                              AML   AML
        comp=N,5770µm,1.6s
SMA1                              AML   AML
        comp=E,2838µm,0.5s
SMA1                              AML   AML
        comp=N,2957µm,0.8s
T1243 Rocca Santa Ma    0.37 131  P     Pg        19 34 34.5  0.0
T1211 Morro Reatino     0.43 201 ⇓P     Pg        19 34 36.3  +0.6
```

```
T1211                                  S   Sb      19 34 43.0 -0.7
T1211                                  AML AML
                comp=E,5190µm,1.3s
T1211                                  AML AML
                comp=E,5225µm,0.2s
T1211                                  AML AML
                comp=N,6730µm,0.3s
T1211                                  AML AML
                comp=E,5185µm,1.3s
T1211                                  AML AML
                comp=E,5230µm,0.1s
T1211                                  AML AML
                comp=N,6730µm,0.3s
T1211                                  AML AML
                comp=N,3164µm,0.2s
T1211                                  AML AML
                comp=N,3109µm,0.2s
T1211                                  AML AML
                comp=N,6730µm,1.7s
T1211                                  AML AML
                comp=E,5185µm,0.7s
T1211                                  AML AML
                comp=N,6770µm,0.2s
RM33 Pellescritta (          0.44 166 ⇓P   Pb      19 34 37.8 +0.6
OFFI Offida                  0.45  90 ⇑P   Pg      19 34 36.9 +0.9
OFFI                                   AML AML
                comp=N,6475µm,0.6s
OFFI                                   AML AML
                comp=E,6735µm,0.4s
OFFI                                   AML AML
                comp=N,6475µm,1.4s
CAMP Campotosto              0.47 148 ⇑P   Pg      19 34 36.4  0.0
CAMP                                   AML AML
                comp=E,2395µm,0.7s
CAMP                                   AML AML
                comp=N,1520µm,0.2s
CAMP                                   AML AML
                comp=E,2395µm,1.3s
CAMP                                   AML AML
                comp=E,2398µm,0.7s
CAMP                                   AML AML
                comp=N,1448µm,0.2s
CESX Cesi                    0.49 228 ⇓P   Pg      19 34 36.7  0.0
CESX                                   AML AML
                comp=E,3595µm,0.4s
CESX                                   AML AML
                comp=N,4270µm,0.6s
CESX                                   AML AML
                comp=N,4079µm,0.8s
CESX                                   AML AML
                comp=E,2188µm,0.6s
TERO Teramo                  0.50 128 P    Pg      19 34 36.8 -0.2
TERO                                   AML AML
                comp=N,6690µm,0.8s
TERO                                   AML AML
                comp=N,6695µm,0.8s
TERO                                   AML AML
                comp=N,7600µm,0.8s
TERO                                   AML AML
                comp=E,4585µm,0.3s
TERO                                   AML AML
                comp=E,4045µm,0.3s
TERO                                   AML AML
                comp=N,6695µm,1.2s
TERO                                   AML AML
                comp=N,7600µm,1.2s
MMUR Monte Murano            0.51 354 S    Sg      19 34 45.0 +1.3
MURB Monte Urbino            0.51 309 ⇓P   Pg      19 34 37.1 -0.1
MURB                                   S   Sg      19 34 46.0 +2.0
MURB                                   AML AML
                comp=E,11650µm,0.2s
MURB                                   AML AML
                comp=N,14700µm,1.0s
MURB                                   AML AML
                comp=E,11650µm,0.2s
MURB                                   AML AML
                comp=N,14750µm,1.0s
MURB                                   AML AML
                comp=N,13300µm,1.0s
MURB                                   AML AML
                comp=E,12900µm,0.3s
MURB                                   AML AML
                comp=N,13300µm,1.0s
MURB                                   AML AML
                comp=N,14750µm,1.0s
MURB                                   AML AML
                comp=E,11650µm,1.8s
T1247 Pizzolo (AQ)           0.52 161 ⇑P   Pb      19 34 38.8 +0.2
T1247                                  AML AML
                comp=N,3500µm,0.2s
T1247                                  AML AML
                comp=E,2885µm,0.2s
ATFO Monte Foce - G          0.56 320 ⇑P   Pg      19 34 37.9 -0.2
ATFO                                   S   Sg      19 34 47.0 +1.5
ATFO                                   AML AML
                comp=N,1895µm,0.4s
ATFO                                   AML AML
                comp=E,2360µm,0.9s
ARVD Arcevia                 0.57 351 S    Sg      19 34 47.0 +1.3
ATTE AVT- Monte Tez          0.58 297 ⇓P   Pg      19 34 38.2 -0.3
ATTE                                   S   Sg      19 34 48.0 +1.8
ATTE                                   AML AML
                comp=N,1755µm,0.9s
ATTE                                   AML AML
                comp=E,2395µm,1.0s
PP3 Marolino                 0.59  42 P    Pg      19 34 39.6 +1.0
PP3                                    AML AML
                comp=E,6485µm,0.7s
PP3                                    AML AML
                comp=E,6830µm,0.7s
PP3                                    AML AML
                comp=N,5325µm,0.8s
PP3                                    AML AML
                comp=N,5320µm,0.8s
PP3                                    AML AML
                comp=E,6825µm,0.7s
PP3                                    AML AML
                comp=E,6825µm,1.3s
PP3                                    AML AML
                comp=N,5115µm,0.8s
PP3                                    AML AML
                comp=E,6485µm,1.3s
GIGS Gran Sasso              0.61 143 ⇑P   Pg      19 34 38.8 -0.2
GIGS                                   S   Sg      19 34 48.0 +1.0
GIGS                                   AML AML
                comp=E,712µm,0.6s
GIGS                                   AML AML
                comp=N,532µm,0.1s
GIGS                                   AML AML
                comp=N,531µm,0.1s
ATVO AVT- Monte Val          0.66 313 ⇑P   Pg      19 34 39.3 -0.6
ATVO                                   S   Sg      19 34 50.0 +1.5
ATVO                                   AML AML
                comp=E,2640µm,0.3s
ATVO                                   AML AML
                comp=N,2035µm,0.4s
ATVO                                   AML AML
                comp=N,2040µm,0.4s
FIAM Fiamignano              0.67 177 S    Sb      19 34 51.0 +0.5
ATMI Monte Miggiano          0.71 304 S    Sb      19 34 52.0 +0.4
ATPI Pietralunga -           0.71 317 S    Sg      19 34 52.0 +1.9
PIEI Pieia                   0.71 327 ⇑P   Pg      19 34 40.5 -0.4
PIEI                                   S   Sg      19 34 52.0 +1.7
PIEI                                   AML AML
                comp=N,999µm,0.8s
PIEI                                   AML AML
                comp=N,999µm,1.2s
PIEI                                   AML AML
                comp=E,1495µm,0.3s
AOI Ancona                   0.73  32 ⇑P   Pg      19 34 41.5 +0.3
AOI                                    AML AML
                comp=E,2185µm,0.4s
AOI                                    AML AML
                comp=N,1731µm,0.9s
AOI                                    AML AML
                comp=E,2180µm,0.4s
AOI                                    AML AML
                comp=N,1730µm,0.9s
MPAG Monte Paganucc          0.73 342 ⇑P   Pg      19 34 41.2  0.0
MPAG                                   S   Sg      19 34 53.0 +2.3
MPAG                                   AML AML
                comp=N,1104µm,0.7s
MPAG                                   AML AML
                comp=N,1100µm,0.7s
MPAG                                   AML AML
                comp=E,1460µm,0.6s
MPAG                                   AML AML
                comp=N,1100µm,1.3s
FAGN Fagnano                 0.77 150 ⇓P   Pn      19 34 44.1 -0.2
FAGN                                   S   Sb      19 34 54.0 +0.6
FSSB Fossombrone             0.78 344 ⇓P   Pg      19 34 41.9 -0.3
FSSB                                   S   Sg      19 34 55.0 +2.5
FSSB                                   AML AML
                comp=N,4735µm,0.4s
FSSB                                   AML AML
                comp=E,3210µm,0.4s
VCEL Villa Celiera           0.79 133 ⇓P   Pg      19 34 42.0 -0.3
VCEL                                   AML AML
                comp=E,1715µm,0.3s
VCEL                                   AML AML
                comp=E,1710µm,0.3s
VCEL                                   AML AML
                comp=N,2110µm,1.2s
SRES S.Oreste - Sor          0.81 211 S    Sn      19 34 56.0 -1.0
BADI Badiali                 0.83 314 ⇑P   Pg      19 34 42.9 -0.3
BADI                                   AML AML
                comp=N,832µm,0.4s
BADI                                   AML AML
                comp=E,139µm,1.6s
SACS San Casciano d          0.86 264 ⇓P   Pg      19 34 44.0 +0.3
SACS                                   AML AML
                comp=E,1430µm,1.6s
SACS                                   AML AML
                comp=N,1540µm,0.6s
SACS                                   AML AML
                comp=E,1430µm,0.4s
SACS                                   AML AML
                comp=N,1565µm,0.6s
SACS                                   AML AML
                comp=E,1495µm,0.8s
PE3 Peglio                   0.87 331 ⇑P   Pg      19 34 44.6 +0.8
T0110 Collepietro            0.88 143 ⇑P   Pg      19 34 45.0 +0.8
T0110                                  AML AML
                comp=E,1555µm,0.2s
T0110                                  AML AML
                comp=N,1825µm,0.5s
MCIV Monte Civitell          1.04 262 ⇑P   Pb      19 34 47.3  0.0
MCIV                                   AML AML
                comp=E,714µm,0.7s
MCIV                                   AML AML
                comp=N,604µm,0.7s
SF04 Casetta                 1.04 265 ⇑P   Pb      19 34 47.0 -0.3
SF04                                   AML AML
                comp=E,765µm,0.4s
SF04                                   AML AML
                comp=N,765µm,0.3s
SF01 Poggio Pratacc          1.11 264 ⇑P   Pb      19 34 48.4 -0.2
LPEL Lama dei Pelig          1.21 137 ⇑P   Pg      19 34 52.2 +1.7
FROS Frosini                 1.43 282 P    Pn      19 34 53.4 +0.1
FROS                                   AML AML
                comp=E,475µm,0.8s
FROS                                   AML AML
                comp=N,488µm,0.8s
LIK San Giovanni I           1.48 166 ⇑P   Pg      19 34 56.4 +0.9
NDIM Novi di Modena          2.50 322 P    Pn      19 35 06.7 -1.3
MYKA Terra Mystica           3.71   6 i Pn Pn      19 35 25.4 +0.6
                comp=N,5.0nm,0.3s
MYKA                                   eSn Sn      19 36 09.1 +0.5
                comp=N,9.1nm,0.3s
OBKA Obir                    3.72  16 ePn Pn      19 35 23.6 -1.3
                comp=N,1.8nm,0.2s
ABTA Abfaltersbach           3.83 354 ePn Pn      19 35 27.1 +0.8
                comp=N,3.9nm,0.3s
SOKA Soboth                  3.99  20 i Pn Pn     19 35 32.0 +3.5
                comp=N,2.9nm,0.3s
KBA Koelnbreinsper           4.14   3 ePn Pn      19 35 31.5 +0.7
                comp=N,5.0nm,0.3s
KBA                                    eSn Sn      19 36 18.3 -1.1
                comp=N,22nm,0.8s
FETA Feichten                4.41 339 ePn Pn      19 35 35.9 +1.6
                comp=N,2.5nm,0.4s
WTTA Wattenberg              4.44 347 ePn Pn      19 35 37.4 +2.5
                comp=N,1.4nm,0.2s
DAVOX Davos/Dischmat         4.46 331 Pn   Pn      19 35 37.2 +2.1
                comp=N,2.2nm,0.3s,baz=149,slow=18,SNR=10
DAVOX                                  Sn  Sn      19 36 28.3 +1.1
                comp=N,0.3nm,0.3s,baz=150,slow=20,SNR=1.3
                comp=N,6.7nm,0.6s
SQTA Sankt Quirin            4.48 344 ePn Pn      19 35 37.7 +2.4
                comp=N,3.3nm,0.2s
SQTA                                   eSn Sn      19 36 29.6 +2.0
                comp=N,9.5nm,0.4s
WATA Walderalm               4.52 347 ePn Pn      19 35 38.4 +2.5
                comp=N,3.2nm,0.2s
WATA                                   eSn Sn      19 36 30.2 +1.5
                comp=N,9.3nm,0.3s
MOTA Moosalm                 4.62 343 ePn Pn      19 35 40.0 +2.7
                comp=N,2.4nm,0.4s
MOTA                                   eSn Sn      19 36 33.1 +1.9
                comp=N,7.6nm,0.6s
ARSA Arzberg                 4.65  21 ePn Pn      19 35 36.8 -0.7
                comp=N,1.6nm,0.3s
ARSA                                   eSn Sn      19 36 29.9 -1.7
                comp=N,8.4nm,0.6s
BIOA Bad Ischl, Aus          4.77   5 ePn Pn      19 35 40.1 +0.8
                comp=N,9.0nm,0.4s
RETA Reutte                  4.83 341 ePn Pn      19 35 42.6 +2.5
                comp=N,1.9nm,0.3s
RETA                                   eSn Sn      19 36 37.3 +1.1
                comp=N,3.6nm,0.5s
DAVA Damuels                 4.90 334 ePn Pn      19 35 41.4 +0.2
                comp=N,3.8nm,0.5s
MOA Molln                    4.98   9 ePn Pn      19 35 42.8 +0.6
                comp=N,2.7nm,0.4s
MOA                                    eSn Sn      19 36 39.7 -0.1
                comp=N,5.1nm,0.3s
RONA Rosalia, Austr          5.28  24 ePn Pn      19 35 46.4 +0.2
                comp=N,0.6nm,0.2s
CONA Conrad Observa          5.36  21 ePn Pn      19 35 46.9 -0.5
                comp=N,1.6nm,0.3s
CONA                                   eSn Sn      19 36 48.2 -1.1
                comp=N,6.4nm,0.5s
GERES GERESS Array B         5.92   4 Pn   Pn      19 35 54.3 -0.8
                comp=N,0.6nm,0.3s,baz=180,slow=13,SNR=8.6
GERES                                  Sn  Sn      19 36 59.0 -4.1
                comp=N,1.7nm,0.3s,baz=180,slow=26,SNR=10.0
                comp=N,0.9nm,0.3s
CKRC Cesky Krumlov           5.95   8 ePN  Pn      19 35 54.2 -1.2
CKRC                                   eSN Sn      19 37 00.6 -3.0
KHC Kasperske Hory           6.21   3 ePN  Pn      19 35 58.1 -0.8
KHC                                    eSN Sn      19 37 05.6 -4.4
FINES FINESS Array B        20.10  18 P    P       19 38 59.7 -1.2
                comp=N,0.1nm,0.3s,baz=216,slow=13,SNR=1.9
                comp=N,2.5nm,1.0s
MKAR Makanchi Array         47.77  60 P    P       19 43 02.7 -1.8
                comp=N,0.4nm,0.7s,baz=274,slow=8.5,SNR=2.6
                comp=N,0.4nm,0.7s
```

ROM 26 19:36:33.2±0.1, 43°.212N±0°.007×11°.028E±0°.009, h6km, ML1.9/6, Error ellipse: s-maj=0.7km s-min=0.6km az=336.0, Central Italy

```
Code Station Name            Δ°   AZ°  Phase ID        Time      Res
                                       Op   ISC        h m s     ISC
FROS Frosini                 0.09  91 P    Pg      19 36 35.8 +0.5
FROS                                   S   Sg      19 36 37.6 +0.8
FROS                                   AML AML
                comp=N,4070µm,0.2s
FROS                                   AML AML
                comp=E,5895µm,0.7s
FROS                                   AML AML
                comp=N,4070µm,0.2s
FROS                                   AML AML
                comp=E,5377µm,0.2s
FROS                                   AML AML
                comp=N,4069µm,0.2s
TRIF Trifonti                0.13 223 P    Pg      19 36 36.6 +0.6
TRIF                                   S   Sg      19 36 38.6 +0.7
TRIF                                   AML AML
                comp=N,1655µm,0.1s
TRIF                                   AML AML
                comp=E,2060µm,1.1s
TRIF                                   AML AML
                comp=N,1655µm,0.1s
TRIF                                   AML AML
                comp=E,1920µm,0.2s
TRIF                                   AML AML
                comp=N,1654µm,0.1s
CSNT Castellina Chi          0.32  36 P    Pb      19 36 40.6 -0.9
CSNT                                   S   Sg      19 36 45.4 +1.5
CSNT                                   AML AML
                comp=N,75µm,0.2s
CSNT                                   AML AML
                comp=E,101µm,0.3s
A318A Donoratico (LI         0.34 255 P    Pb      19 36 40.9 -0.9
A318A                                  S   Sg      19 36 45.8 +1.4
OSSC Osservatorio P          0.35  27 P    Pb      19 36 41.0 -0.9
OSSC                                   AML AML
                comp=E,91µm,0.3s
OSSC                                   AML AML
                comp=N,75µm,0.3s
OSSC                                   AML AML
                comp=N,115µm,0.7s
CASP Castiglione de          0.44 196 P    Pg      19 36 42.4 +0.8
CASP                                   AML AML
                comp=E,342µm,0.2s
CASP                                   AML AML
                comp=N,253µm,0.4s
CASP                                   AML AML
                comp=N,254µm,0.4s
CASP                                   AML AML
                comp=N,253µm,0.4s
CASP                                   AML AML
                comp=E,341µm,0.1s
ARCI Arcidosso               0.49 137 P    Pb      19 36 43.4 -0.8
ARCI                                   S   Sg      19 36 50.1 +1.1
PII Pisa                     0.63 325 P    Pb      19 36 46.2 -0.3
CELB S.Piero in Cam          0.76 232 P    Pb      19 36 49.0 +0.1
CELB                                   S   Sb      19 36 59.2 -0.2
MAON Monte Argentar          0.79 174 P    Pb      19 36 49.1 -0.2
MAON                                   S   Sb      19 37 00.0 -0.1
MAON                                   AML AML
                comp=N,90µm,0.2s
MAON                                   AML AML
                comp=E,135µm,0.3s
```

ROM 26 19:37:17.7±0.1, 42°.919N±0°.004×13°.120E±0°.004, h9km, ML3.0/38, 16C-11D, Error ellipse: s-maj=0.4km s-min=0.2km az=341.0, Central Italy

```
Code Station Name            Δ°   AZ°  Phase ID        Time      Res
                                       Op   ISC        h m s     ISC
T1245 Castelsantange         0.08 141 P    Pg      19 37 20.4 +0.4
T1245                                  S   Sg      19 37 22.2 +0.4
T1245                                  AML AML
                comp=E,50350µm,0.2s
T1245                                  AML AML
                comp=N,87100µm,0.3s
T1245                                  AML AML
                comp=E,61600µm,0.5s
T1245                                  AML AML
                comp=E,50350µm,0.2s
T1245                                  AML AML
                comp=N,83000µm,0.3s
T1245                                  END
CESI CESI - Serrava          0.18 299 P    Pg      19 37 22.1 +0.6
CESI                                   S   Sg      19 37 25.3 +1.2
CESI                                   AML AML
                comp=E,11650µm,0.5s
CESI                                   AML AML
                comp=N,12850µm,0.5s
CESI                                   END
AM05 Amandola Campo          0.18  71 P    Pg      19 37 22.0 +0.6
AM05                                   S   Sg      19 37 25.2 +1.1
AM05                                   AML AML
                comp=E,20950µm,1.5s
AM05                                   AML AML
                comp=N,1610µm,0.2s
AM05                                   AML AML
                comp=N,1605µm,0.2s
AM05                                   AML AML
                comp=E,6955µm,0.2s
AM05                                   AML AML
                comp=E,20950µm,0.5s
AM05                                   AML AML
                comp=N,5405µm,0.3s
AM05                                   END
GUMA Gualdo di Mace          0.21  48 P    Pg      19 37 22.8 +0.7
GUMA                                   S   Sg      19 37 26.9 +1.8
GUMA                                   AML AML
                comp=E,40000µm,0.2s
GUMA                                   AML AML
                comp=N,40700µm,0.2s
GUMA                                   AML AML
                comp=E,39200µm,0.6s
GUMA                                   AML AML
                comp=N,40700µm,0.3s
GUMA                                   AML AML
                comp=E,40000µm,0.2s
GUMA                                   AML AML
                comp=N,65100µm,0.2s
GUMA                                   END
T1215 Vallo di Nera,         0.22 238 P    Pg      19 37 22.7 +0.6
T1215                                  S   Sg      19 37 26.5 +1.3
T1215                                  AML AML
                comp=E,3345µm,0.5s
T1215                                  AML AML
                comp=E,3545µm,0.5s
T1215                                  AML AML
                comp=N,3150µm,0.4s
T1215                                  AML AML
                comp=E,3340µm,0.5s
T1215                                  AML AML
                comp=E,3345µm,0.5s
T1215                                  AML AML
                comp=N,3105µm,0.2s
T1215                                  AML AML
                comp=N,3100µm,0.2s
T1215                                  AML AML
                comp=E,3546µm,0.5s
T1215                                  END
T1241 Roccafluvione,         0.24 105 P    Pg      19 37 23.0 +0.5
T1241                                  S   Sg      19 37 27.1 +1.3
T1241                                  AML AML
                comp=N,6925µm,0.7s
T1241                                  AML AML
                comp=E,5800µm,1.5s
T1241                                  AML AML
                comp=N,6920µm,0.7s
T1241                                  END
T1217 Poggiodomo (PG         0.25 214 P    Pg      19 37 23.4 +0.7
T1217                                  S   Sg      19 37 28.1 +1.9
T1217                                  AML AML
                comp=E,5360µm,0.3s
T1217                                  AML AML
                comp=N,5715µm,0.2s
T1217                                  AML AML
                comp=N,5825µm,0.4s
T1217                                  AML AML
                comp=E,5355µm,0.3s
T1217                                  AML AML
                comp=N,5710µm,0.2s
T1217                                  AML AML
                comp=E,5255µm,0.3s
T1217                                  AML AML
                comp=E,5250µm,0.3s
T1217                                  AML AML
                comp=N,5825µm,1.6s
SEF1 Sefro                   0.26 331 S    Sb      19 37 28.0 -1.2
T1204 Amatrice, Fraz         0.28 149 P    Pg      19 37 24.2 +0.8
T1204                                  S   Sb      19 37 29.1 -0.8
T1204                                  AML AML
                comp=E,6760µm,1.1s
T1204                                  AML AML
                comp=N,4770µm,0.9s
T1204                                  AML AML
                comp=E,6745µm,1.1s
T1204                                  AML AML
                comp=N,4765µm,0.2s
T1204                                  AML AML
                comp=E,6755µm,1.1s
T1204                                  END
FIU1 Fiuminata               0.30 333 ⇑P   Pg      19 37 24.5 +0.8
FIU1                                   AML AML
                comp=E,3225µm,1.6s
FIU1                                   AML AML
                comp=N,3830µm,1.5s
FIU1                                   AML AML
                comp=N,3830µm,0.5s
FIU1                                   AML AML
                comp=E,3225µm,0.4s
SSM1 San Severino M          0.31   8 ⇑P   Pg      19 37 24.6 +0.7
GAG1 Gagliole                0.32 353 ⇑P   Pg      19 37 24.7 +0.6
GAG1                                   AML AML
                comp=E,14000µm,0.5s
GAG1                                   AML AML
                comp=N,14000µm,0.5s
GAG1                                   AML AML
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comp=E,14000μm,0.5s
GAG1 AML AML
comp=N,14000μm,0.4s
LNSS Leonessa 0.32 191 P Pg 19 37 24.6 +0.5
LNSS S Sb 19 37 30.5 -0.5
LNSS AML AML
comp=N,7040μm,0.4s
LNSS AML AML
comp=E,6130μm,0.5s
LNSS AML AML
comp=E,6130μm,1.5s
LNSS AML AML
comp=N,7040μm,1.6s
LNSS END
T1243 Rocca Santa Ma 0.33 132 P Pg 19 37 24.9 +0.6
T1243 S Sb 19 37 30.4 -0.8
T1243 END
SMA1 SAN MARTINO 0.33 151 P Pb 19 37 25.0 -0.8
SMA1 AML AML
comp=E,5675μm,1.4s
SMA1 AML AML
comp=E,5670μm,1.4s
SMA1 AML AML
comp=N,5150μm,0.7s
SMA1 AML AML
comp=E,5670μm,0.6s
SMA1 END
MNTP Montappone 0.34 49 ⇓P Pb 19 37 25.4 -0.4
MNTP AML AML
comp=E,12450μm,0.6s
MNTP AML AML
comp=N,5965μm,0.3s
MNTP AML AML
comp=E,12400μm,0.6s
MNTP AML AML
comp=N,5965μm,0.3s
MNTP AML AML
comp=N,5965μm,1.7s
SNTG Esanatoglia 0.36 339 P Pg 19 37 25.3 +0.5
SNTG AML AML
comp=N,2115μm,0.5s
SNTG AML AML
comp=E,2545μm,0.5s
SNTG AML AML
comp=E,2515μm,0.6s
SNTG AML AML
comp=N,2310μm,0.5s
SNTG AML AML
comp=E,2550μm,0.5s
SNTG AML AML
comp=N,2120μm,0.5s
SNTG AML AML
comp=E,2515μm,1.4s
SNTG AML AML
comp=N,2120μm,1.5s
SNTG AML AML
comp=N,2310μm,1.5s
RM33 Pellescritta (0.41 170 ⇑P Pg 19 37 26.2 +0.4
RM33 AML AML
comp=E,3180μm,0.5s
RM33 AML AML
comp=N,6650μm,0.2s
RM33 AML AML
comp=E,3175μm,0.5s
RM33 AML AML
comp=N,6655μm,0.2s
RM33 AML AML
comp=E,3080μm,0.5s
RM33 AML AML
comp=N,6620μm,0.2s
RM33 AML AML
comp=N,6615μm,0.2s
RM33 AML AML
comp=N,6655μm,0.2s
RM33 AML AML
comp=E,3175μm,0.5s
OFFI Offida 0.42 88 ⇓P Pb 19 37 27.4 +0.2
OFFI AML AML
comp=N,5450μm,0.5s
OFFI AML AML
comp=E,6095μm,0.6s
T1211 Morro Reatino 0.43 207 ⇓P Pg 19 37 26.7 +0.6
T1211 S Sb 19 37 35.0 +0.8
T1211 AML AML
comp=E,1705μm,1.2s
T1211 AML AML
comp=E,1800μm,1.2s
T1211 AML AML
comp=N,3230μm,0.7s
T1211 AML AML
comp=N,3280μm,0.7s
T1211 AML AML
comp=N,3235μm,0.7s
T1211 AML AML
comp=E,1705μm,1.2s
T1211 AML AML
comp=E,1800μm,1.2s
CAMP Campotosto 0.44 151 ⇓P Pg 19 37 26.6 +0.4
CAMP AML AML
comp=E,1655μm,0.7s
CAMP AML AML
comp=N,1280μm,1.3s
CAMP AML AML
comp=E,1655μm,1.3s
ATCC AVT- Casa Cast 0.44 307 P Pg 19 37 26.6 +0.2
ATCC AML AML
comp=E,4780μm,0.6s
ATCC AML AML
comp=E,4785μm,0.6s
ATCC AML AML
comp=N,4740μm,0.2s
ATCC AML AML
comp=N,4745μm,0.2s
TERO Teramo 0.46 130 ⇑P Pg 19 37 27.2 +0.5
TERO AML AML
comp=E,1800μm,0.3s
TERO AML AML
comp=N,2060μm,0.5s
TERO AML AML
comp=N,2065μm,0.5s
TERO AML AML
comp=N,2160μm,0.5s
TERO AML AML
comp=E,1895μm,0.4s
T1247 Pizzolo (AQ) 0.49 165 ⇑P Pg 19 37 27.6 +0.3
T1247 AML AML
comp=E,2785μm,0.8s
T1247 AML AML
comp=N,3105μm,0.4s
T1247 AML AML
comp=N,3110μm,0.4s
CESX Cesi 0.50 232 ⇑P Pg 19 37 27.7 +0.3
CESX AML AML
comp=N,2270μm,0.7s
CESX AML AML
comp=E,1750μm,0.3s
CESX AML AML
comp=E,1750μm,1.7s
MMUR Monte Murano 0.53 350 S Sb 19 37 37.0 0.0
MURB Monte Urbino 0.56 308 ⇓P Pg 19 37 28.6 +0.2
MURB AML AML
comp=E,3275μm,0.3s
MURB AML AML
comp=N,3515μm,0.2s
MURB AML AML
comp=E,3420μm,0.3s
MURB AML AML
comp=N,3520μm,0.2s
MURB AML AML
comp=E,3425μm,0.3s
MURB AML AML
comp=N,3525μm,0.2s
GIGS Gran Sasso 0.57 145 ⇑P Pg 19 37 29.1 +0.3
GIGS AML AML
comp=N,410μm,0.4s
GIGS AML AML
comp=E,373μm,1.1s
PP3 Marolino 0.58 38 ⇑P Pb 19 37 30.0 -0.1
PP3 AML AML
comp=E,3815μm,0.5s
PP3 AML AML
comp=E,3915μm,0.5s
PP3 AML AML
comp=E,3910μm,0.5s
PP3 AML AML
comp=N,3870μm,0.6s
PP3 AML AML
comp=N,3985μm,0.3s
PP3 AML AML
comp=E,3810μm,0.5s
ARVD Arcevia 0.59 347 ⇑P Pg 19 37 29.4 +0.2
ARVD S Sb 19 37 40.0 +1.2
ARVD AML AML
comp=N,920μm,0.7s
ARVD AML AML
comp=E,1280μm,1.6s
ARVD AML AML
comp=N,920μm,1.3s
TRTR Tortoreto Alta 0.59 100 ⇓P Pb 19 37 30.9 +0.7
TRTR AML AML
comp=E,4330μm,0.5s
TRTR AML AML
comp=N,3715μm,0.4s
ATFO Monte Foce - G 0.60 318 ⇓P Pg 19 37 29.4 +0.1
ATFO AML AML
comp=E,1149μm,0.9s
ATFO AML AML
comp=N,1002μm,0.6s
ATFO AML AML
comp=E,1148μm,0.9s
ATFO AML AML
comp=N,1001μm,0.6s
ATFO AML AML
comp=E,1146μm,0.9s
ATFO AML AML
comp=N,1003μm,0.6s
FIAM Fiamignano 0.65 180 ⇑P Pg 19 37 30.2 0.0
FIAM S Sb 19 37 41.0 +0.5
FIAM AML AML
comp=N,1041μm,0.4s
FIAM AML AML
comp=E,1255μm,0.3s
FRON Frontone 0.66 334 P Pg 19 37 30.8 +0.2
FRON AML AML
comp=E,988μm,0.4s
FRON AML AML
comp=N,1555μm,0.5s
ATVO AVT- Monte Val 0.70 312 ⇓P Pg 19 37 31.0 -0.1
ATVO AML AML
comp=E,759μm,0.6s
ATVO AML AML
comp=N,1008μm,0.4s
ATVO AML AML
comp=E,760μm,0.6s
ATVO AML AML
comp=N,1008μm,0.4s
AOI Ancona 0.72 29 P Pg 19 37 32.0 +0.4
AOI AML AML
comp=N,1095μm,0.4s
AOI AML AML
comp=E,1325μm,0.4s
ATPI Pietralunga - 0.75 316 ⇑P Pg 19 37 32.1 0.0
ATPI AML AML
comp=N,636μm,1.6s
ATPI AML AML
comp=N,634μm,1.6s
ATPI AML AML
comp=E,790μm,1.0s
VCEL Villa Celiera 0.75 134 ⇓P Pg 19 37 32.0 0.0
VCEL AML AML
comp=E,1140μm,1.0s
VCEL AML AML
comp=N,1091μm,0.8s
VCEL AML AML
comp=N,1092μm,0.8s
VCEL AML AML
comp=E,1138μm,1.0s
PIEI Pieia 0.75 325 ⇓P Pg 19 37 32.1 -0.1
PIEI AML AML
comp=E,662μm,0.3s
PIEI AML AML
comp=N,576μm,1.4s
PIEI AML AML
comp=N,262μm,0.4s
PIEI AML AML
comp=N,576μm,0.6s
MPAG Monte Paganucc 0.76 340 ⇑P Pb 19 37 32.8 -0.3
FSSB Fossombrone 0.81 342 ⇑P Pg 19 37 33.4 +0.1
FSSB S Sn 19 37 47.0 -0.6
FSSB AML AML
comp=E,2865μm,0.3s
FSSB AML AML
comp=N,5325μm,0.3s
SRES S.Oreste - Sor 0.82 214 ⇓P Pg 19 37 33.5 +0.2
SRES AML AML
comp=E,837μm,0.5s
SRES AML AML
comp=N,876μm,0.5s
T0110 Collepietro 0.85 145 ⇑P Pg 19 37 34.1 +0.1
T0110 AML AML
comp=E,1305μm,0.4s
T0110 AML AML
comp=N,1185μm,1.6s
TOLF Tolfa 1.19 224 P Pb 19 37 40.4 0.0
LIK San Giovanni I 1.45 167 S Sg 19 38 04.0 -0.3
BRSN Barisano 1.56 331 ⇑P Pn 19 37 44.6 -1.0
BRSN AML AML
comp=E,1060μm,1.6s
BRSN AML AML
comp=N,1395μm,1.6s
TRIF Trifonti 1.64 278 P Pb 19 37 48.3 +0.3
ZCCA Zocca 2.11 313 S Sg 19 38 26.0 +0.4
MYKA Terra Mystica 3.73 6 *e*Pn Pn 19 38 16.7 +1.2
comp=N,4.2nm,0.4s
OBKA Obir 3.73 15 Pg Pg 19 38 28.2 -1.0
comp=N,5.1nm,0.4s
ABTA Abfaltersbach 3.85 354 *e*Pn Pn 19 38 18.5 +1.3
comp=N,9.5nm,0.4s
FETA Feichten 4.44 338 *e*Pn Pn 19 38 28.6 +3.2
comp=N,2.0nm,0.4s
WTTA Wattenberg 4.47 347 *e*Pn Pn 19 38 27.5 +1.8
comp=N,2.9nm,0.3s
SQTA Sankt Quirin 4.51 343 *e*Pn Pn 19 38 28.7 +2.5
comp=N,1.5nm,0.3s
WATA Walderalm 4.55 347 *e*Pn Pn 19 38 29.0 +2.2
comp=N,2.9nm,0.4s
BIOA Bad Ischl, Aus 4.79 4 *e*Pn Pn 19 38 31.5 +1.6
comp=N,5.3nm,0.3s
RETA Reutte 4.86 341 *e*Pn Pn 19 38 33.6 +2.5
comp=N,2.1nm,0.3s
MOA Molln 5.00 9 *e*Pn Pn 19 38 34.1 +1.3
comp=N,0.6nm,0.2s
CONA Conrad Observa 5.37 20 *e*Pn Pn 19 38 38.6 +0.6
comp=N,0.4nm,0.2s

PRU ***26*** *19:43:42.0±0.0, 42°.90N×12°.99E, h0km, M4.1*
BGR ***26*** *19:43:43.0±0.7, 42°.58N×13°.50E, h10km, mb4.3/5, Error ellipse: s-maj=11.1km s-min=10.0km az=83.0*
MOS ***26*** *19:43:43.3±1.3, 42°.99N×13°.06E, h12km, mb4.3/5, Error ellipse: s-maj=7.4km s-min=4.5km az=85.7*
IDC ***26*** *19:43:43.9±0.8, 43°.07N×13°.05E, h0km, mb3.8/14, mbtmp3.8/25, ML3.7/10, Error ellipse: s-maj=14.5km s-min=10.5km az=82.0*
ROM ***26*** *19:43:43.8±0.0, 42°.894N±0°.001×13°.067E±0°.003, h10km, ML3.8/117, Error ellipse: s-maj=0.2km s-min=0.0km az=251.0*
LDG ***26*** *19:43:44.3±0.1, 42°.83N×12°.93E, h2km, Ml3.7/25, Error ellipse: s-maj=5.7km s-min=2.9km az=38.0*
PDG ***26*** *19:43:44.3±0.6, 42°.90N×13°.08E, h13km, ML4.1/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
NEIC ***26*** *19:43:44.6±2.1, 42°.83N±0°.05×12°.99E±0°.07, h10km±1km, Error ellipse: s-maj=10.1km s-min=5.7km az=226.0*
STR ***26*** *19:43:46.3±0.4, 43°.N±5°×1°.3E±°, h10km, MLv3.9/33, Error ellipse: s-maj=0.0km s-min=0.0km az=35.0, preliminary*
BEO ***26*** *19:43:47.4±0.7, 43°.09N×13°.33E, h0km, ML3.8/10*
GEN ***26*** *19:44:03.6, 43°.56N×11°.59E, h26km±6km, Ml0.0*
ISC 26 19:43:44.5±0.7, 42°.89N±0°.01×13°.05E±0°.02, h11km±4km, n511, σ1°.74/617, mb3.9/17, 55C-26D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**1**	⇓P	**Pg**	**19 43 46.4**	**-0.6**
FEMA				S	**Sg**	**19 43 47.8**	**-1.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.11**	**80**	⇓P	**Pg**	**19 43 46.8**	**-0.7**
MC2				S	**Sg**	**19 43 48.5**	**-1.1**
T1245	**Castelsantange**	**0.11**	**110**	⇓P	**Pg**	**19 43 46.9**	**-0.6**
T1245				S	**Sg**	**19 43 48.8**	**-0.8**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
CESI	**CESI - Serrava**	**0.15**	**316**	⇑P	**Pg**	**19 43 48.0**	**0.0**
CESI				S	**Sg**	**19 43 50.9**	**+0.4**
CESI				AML	AML		
CESI				AML	AML		
T1215	**Vallo di Nera,**	**0.16**	**235**	⇑P	**Pg**	**19 43 48.4**	**+0.2**
T1215				S	**Sg**	**19 43 51.3**	**+0.6**
T1215				AML	AML		
comp=E,59500μm,0.5s
T1215 AML AML
comp=E,61350μm,0.5s
T1215 AML AML
comp=N,44950μm,0.5s
T1215 AML AML
comp=E,59550μm,0.5s
T1215 AML AML
comp=E,61250μm,0.5s
T1215 AML AML
comp=N,45050μm,0.5s
T1215 AML AML
comp=N,48750μm,0.5s
T1217 Poggiodomo (PG 0.20 205 ⇑P Pg 19 43 49.0 +0.1
T1217 S Sg 19 43 52.5 +0.7
T1217 AML AML
comp=N,88800μm,0.4s
T1217 AML AML
comp=E,43450μm,0.4s
T1217 AML AML
comp=N,87000μm,0.4s
T1217 AML AML
comp=N,88400μm,0.4s
T1217 AML AML
comp=E,43400μm,0.4s
T1217 AML AML
comp=N,87200μm,0.4s
T1217 AML AML
comp=N,88500μm,0.4s
T1217 AML AML
comp=E,43500μm,0.4s
T1217 AML AML
comp=N,86800μm,0.4s
T1217 AML AML
comp=N,88450μm,0.4s
T1217 AML AML
comp=N,86850μm,0.4s
T1217 AML AML
comp=E,43800μm,0.4s
CSP1 Cessapalombo 0.23 30 P Pg 19 43 48.9 -0.5
CSP1 S Sg 19 43 52.5 -0.1
T1244 Arquata del Tr 0.23 127 ⇑P Pg 19 43 49.1 -0.3
T1244 S Sg 19 43 52.9 +0.3
AM05 Amandola Campo 0.24 70 AML AML
AM05 AML AML
comp=E,29150μm,0.1s
AM05 AML AML
comp=N,40200μm,0.3s
AM05 AML AML
AM05 AML AML
comp=E,29200μm,0.1s
AM05 AML AML
comp=N,40250μm,0.3s
AM05 AML AML
SEF1 Sefro 0.26 344 P Pg 19 43 49.7 -0.3
SEF1 S Sg 19 43 54.2 +0.6
SEF1 AML AML
comp=N,59850μm,0.9s
SEF1 AML AML
comp=E,60950μm,1.5s
SEF1 AML AML
comp=N,49150μm,0.3s
SEF1 AML AML
comp=E,60900μm,1.5s
SEF1 AML AML
comp=N,59900μm,0.9s
GUMA Gualdo di Mace 0.27 51 ⇑P Pg 19 43 49.9 -0.2
GUMA S Sg 19 43 54.3 +0.5
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
T1201 Domo (RI) 0.28 148 ⇑P Pg 19 43 50.2 -0.1
T1201 S Sg 19 43 55.1 +1.0
T1241 Roccafluvione, 0.28 98 AML AML
T1241 AML AML
comp=N,58300μm,0.6s
PIO1 Pioraco 0.29 351 P Pg 19 43 50.2 -0.2
PIO1 S Sg 19 43 54.7 +0.4
PIO1 AML AML
comp=E,30550μm,0.6s
PIO1 AML AML
comp=N,33950μm,0.6s
PIO1 AML AML
comp=N,33900μm,0.6s
PIO1 AML AML
comp=E,30550μm,0.6s
LNSS Leonessa 0.29 181 ⇓P Pg 19 43 50.3 -0.1
LNSS S Sg 19 43 55.1 +0.7
LNSS AML AML
comp=N,41100μm,1.5s
LNSS AML AML
comp=E,63150μm,1.2s
T1204 Amatrice, Fraz 0.29 138 ⇑P Pg 19 43 50.2 -0.3
T1204 S Sg 19 43 54.9 +0.3
T1204 AML AML
comp=N,28950μm,0.4s
T1204 AML AML
comp=E,51150μm,1.0s
FIU1 Fiuminata 0.31 344 P Pg 19 43 50.6 -0.1
FIU1 S Sg 19 43 55.5 +0.6
FIU1 AML AML
comp=N,21400μm,0.5s
FIU1 AML AML
comp=E,27950μm,0.7s
MDAR Monte D'Aria 0.31 13 ⇑P Pg 19 43 50.4 -0.4
MDAR S Sg 19 43 55.1 +0.2
MDAR AML AML
comp=E,79650μm,0.2s
MDAR AML AML
comp=N,70100μm,0.3s
MDAR AML AML
comp=E,79650μm,0.2s
MDAR AML AML
comp=N,70050μm,0.3s
SMA1 SAN MARTINO 0.34 141 ⇑P Pg 19 43 50.9 -0.5
SMA1 S Sg 19 43 56.0 +0.1
SMA1 AML AML
comp=E,40000μm,1.5s
SMA1 AML AML
comp=N,32500μm,0.5s
GAG1 Gagliole 0.34 2 P Pg 19 43 50.9 -0.5
GAG1 S Sg 19 43 56.7 +0.7
GAG1 AML AML
comp=E,89550μm,0.3s
GAG1 AML AML
comp=N,70850μm,0.4s
GAG1 AML AML
comp=E,89950μm,0.3s
GAG1 AML AML
comp=N,70900μm,0.5s
GAG1 AML AML
comp=N,70900μm,0.4s
SSM1 San Severino M 0.35 16 P Pg 19 43 51.1 -0.4
SSM1 S Sg 19 43 56.5 +0.4
T1243 Rocca Santa Ma 0.35 124 ⇑P Pg 19 43 51.0 -0.7
T1243 S Sg 19 43 56.3 -0.1
MTL1 Matelica 0.36 356 P Pg 19 43 51.7 -0.1
MTL1 S Sb 19 43 57.4 -1.4
MTL1 AML AML
comp=E,59200μm,0.4s
MTL1 AML AML
comp=N,55550μm,0.1s
MTL1 AML AML
comp=E,59150μm,0.4s
MTL1 AML AML
comp=N,55550μm,0.2s
SNTG Esanatoglia 0.37 348 P Pg 19 43 51.8 -0.1
SNTG S Sg 19 43 57.5 +0.7
SNTG AML AML
comp=E,15550μm,0.4s

SNTG				AML	AML		
	comp=E,16200µm,0.4s						
SNTG				AML	AML		
	comp=N,16800µm,0.8s						
SNTG				AML	AML		
	comp=N,16050µm,0.2s						
T1211	**Morro Reatino**	**0.39 202**	⇓P	**Pg**	**19 43 52.2**	**-0.1**	
T1211			S	**Sg**	**19 43 58.2**	**+0.8**	
T1211				AML	AML		
	comp=E,22900µm,0.2s						
T1211				AML	AML		
	comp=E,22900µm,0.2s						
T1211				AML	AML		
	comp=N,27200µm,0.4s						
T1211				AML	AML		
	comp=N,27150µm,0.4s						
MNTP	**Montappone**	**0.39 52**	P	**Pg**	**19 43 52.4**	**0.0**	
MNTP				AML	AML		
	comp=E,90050µm,0.3s						
MNTP				AML	AML		
	comp=N,78650µm,0.5s						
RM33	**Pellescritta (**	**0.40 162**	⇓P	**Pg**	**19 43 52.1**	**-0.5**	
RM33			S	**Sg**	**19 43 58.2**	**+0.3**	
RM33				AML	AML		
	comp=E,15100µm,1.1s						
RM33				AML	AML		
	comp=N,11450µm,0.4s						
RM33				AML	AML		
	comp=N,11700µm,0.2s						
RM33				AML	AML		
	comp=E,15050µm,1.1s						
RM33				AML	AML		
	comp=N,11500µm,0.4s						
RM33				AML	AML		
	comp=N,11650µm,0.2s						
RM33				AML	AML		
	comp=E,14950µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.42 314**	⇑P	**Pg**	**19 43 52.8**	**0.0**	
ATCC			S	**Sb**	**19 43 59.5**	**-0.9**	
ATCC				AML	AML		
	comp=E,39350µm,0.6s						
ATCC				AML	AML		
	comp=N,32400µm,0.4s						
ATCC				AML	AML		
	comp=E,39400µm,0.6s						
EL6	**Elcito**	**0.44 5**	⇓P	**Pg**	**19 43 52.9**	**-0.3**	
EL6			S	**Sb**	**19 43 59.8**	**-1.2**	
CAMP	**Campotosto**	**0.45 143**		**Pg**	**19 43 52.6**	**-0.7**	
CAMP	**Campotosto**	**0.45 143**	⇑P	**Pg**	**19 43 52.7**	**-0.7**	
CAMP			S	**Sg**	**19 43 59.4**	**+0.1**	
CAMP				AML	AML		
	comp=N,10430µm,0.5s						
CAMP				AML	AML		
	comp=E,14950µm,1.0s						
CESX	**Cesi**	**0.45 231**		**Pg**	**19 43 53.2**	**-0.1**	
CESX	**Cesi**	**0.45 231**	⇑P	**Pg**	**19 43 53.2**	**-0.1**	
CESX			S	**Sg**	**19 44 00.0**	**+0.8**	
CESX				AML	AML		
	comp=N,22050µm,0.4s						
CESX				AML	AML		
	comp=E,24350µm,0.4s						
T1246	**Crognaleto (TE**	**0.45 133**	⇑P	**Pg**	**19 43 52.7**	**-0.7**	
T1246			S	**Sg**	**19 43 59.5**	**+0.1**	
TRE1	**Treia**	**0.46 25**	P	**Pg**	**19 43 53.5**	**-0.1**	
TRE1			S	**Sb**	**19 44 01.2**	**-0.4**	
OFFI	**Offida**	**0.47 85**	⇑P	**Pg**	**19 43 54.0**	**+0.2**	
OFFI				AML	AML		
	comp=N,37150µm,0.4s						
OFFI				AML	AML		
	comp=E,42900µm,0.7s						
T1247	**Pizzolo (AQ)**	**0.49 158**	P	**Pg**	**19 43 53.7**	**-0.4**	
T1247			S	**Sg**	**19 44 01.1**	**+0.5**	
T1247				AML	AML		
	comp=N,13500µm,0.6s						
T1247				AML	AML		
	comp=E,15600µm,0.6s						
TERO	**Teramo**	**0.49 123**	⇑P	**Pg**	**19 43 53.3**	**-0.9**	
TERO			S	**Sg**	**19 44 00.6**	**0.0**	
TERO				AML	AML		
	comp=N,32150µm,0.8s						
TERO				AML	AML		
	comp=E,30100µm,0.3s						
TERO				AML	AML		
	comp=E,30150µm,0.3s						
TERO				AML	AML		
	comp=N,35250µm,0.9s						
TERO				AML	AML		
	comp=E,27850µm,0.3s						
TERO				AML	AML		
	comp=N,32100µm,0.8s						
CING	**Cingoli**	**0.49 13**	P	**Pg**	**19 43 53.8**	**-0.4**	
MURB	**Monte Urbino**	**0.53 314**		**Pg**	**19 43 54.7**	**-0.2**	
MURB	**Monte Urbino**	**0.53 314**	⇑P	**Pg**	**19 43 54.8**	**-0.2**	
MURB				AML	AML		
	comp=E,43950µm,1.5s						
MURB				AML	AML		
	comp=N,50600µm,0.3s						
MURB				AML	AML		
	comp=E,49300µm,1.5s						
MURB				AML	AML		
	comp=N,45650µm,0.4s						
MURB				AML	AML		
	comp=E,43950µm,1.5s						
MURB				AML	AML		
	comp=N,50550µm,0.3s						
MMUR	**Monte Murano**	**0.55 356**	P	**Pg**	**19 43 54.9**	**-0.3**	
MMUR				AML	AML		
	comp=E,34350µm,0.5s						
MMUR				AML	AML		
	comp=N,21400µm,0.9s						
ATFO	**Monte Foce - G**	**0.59 324**	⇑P	**Pg**	**19 43 55.7**	**-0.3**	
ATFO				AML	AML		
	comp=N,12500µm,0.3s						
ATFO				AML	AML		
	comp=E,9215µm,1.6s						
GIGS	**Gran Sasso**	**0.59 139**	⇑P	**Pg**	**19 43 54.8**	**-1.2**	
GIGS				AML	AML		
	comp=N,3270µm,1.1s						
GIGS				AML	AML		
	comp=E,3135µm,1.5s						
ATSC	**Scheggia e Pas**	**0.59 334**	P	**Pg**	**19 43 55.7**	**-0.4**	
ATTE	**AVT- Monte Tez**	**0.59 301**	P	**Pg**	**19 43 55.9**	**-0.2**	
ATTE				AML	AML		
	comp=N,7380µm,0.5s						
ATTE				AML	AML		
	comp=E,9855µm,0.4s						
AQU	**L'Aquila**	**0.60 154**		**Pg**	**19 43 55.4**	**-0.8**	
AQU	**L'Aquila**	**0.60 154**	P	**Pg**	**19 43 55.4**	**-0.8**	
AQU	**L'Aquila**	**0.60 154**	⇑P	**Pg**	**19 43 55.4**	**-0.8**	
AQU				AML	AML		
	comp=N,5880µm,0.6s						
AQU				AML	AML		
	comp=N,5690µm,1.2s						
AQU				AML	AML		
	comp=N,5885µm,0.6s						
AQU				AML	AML		
	comp=E,6480µm,1.4s						
AQU				AML	AML		
	comp=E,7030µm,1.4s						
CADA	**Capodarco di F**	**0.60 60**	P	**Pb**	**19 43 56.8**	**-0.3**	
ARVD	**Arcevia**	**0.61 353**	P	**Pg**	**19 43 55.6**	**-0.8**	
ARVD				AML	AML		
	comp=E,9640µm,0.2s						
ARVD				AML	AML		
	comp=N,6610µm,0.6s						
CIMA	**Civitanova Mar**	**0.61 48**	P	**Pb**	**19 43 56.7**	**-0.6**	
FIAM	**Fiamignano**	**0.63 175**	⇓P	**Pg**	**19 43 55.9**	**-0.9**	
FIAM				AML	AML		
	comp=N,4870µm,0.7s						
FIAM				AML	AML		
	comp=E,7225µm,0.6s						
ATLO	**AVT- Montelove**	**0.63 312**	⇑P	**Pg**	**19 43 56.4**	**-0.4**	
PP3	**Marolino**	**0.63 40**	⇑P	**Pb**	**19 43 57.0**	**-0.7**	
PP3				AML	AML		
	comp=E,41600µm,0.7s						
PP3				AML	AML		
	comp=E,40550µm,0.2s						
PP3				AML	AML		
	comp=N,60900µm,0.5s						
PP3				AML	AML		
	comp=E,41550µm,0.7s						
PP3				AML	AML		
	comp=N,60600µm,0.5s						
TRTR	**Tortoreto Alta**	**0.64 97**	⇑P	**Pb**	**19 43 57.4**	**-0.5**	
TRTR				AML	AML		
	comp=N,35450µm,0.3s						
TRTR				AML	AML		
	comp=E,37050µm,1.6s						
FRON	**Frontone**	**0.67 339**	P	**Pg**	**19 43 57.0**	**-0.5**	
ATVO	**AVT- Monte Val**	**0.68 316**	⇑P	**Pg**	**19 43 57.1**	**-0.5**	
ATVO				AML	AML		
	comp=E,7175µm,0.7s						
ATVO				AML	AML		
	comp=N,9095µm,0.4s						
ATVA	**AVT- Monte Val**	**0.68 305**	P	**Pg**	**19 43 57.3**	**-0.4**	
ATBU	**Serra di Buran**	**0.69 328**	P	**Pg**	**19 43 57.6**	**-0.2**	
MGAB	**Montegabbione**	**0.69 272**	P	**Pg**	**19 43 57.3**	**-0.5**	
MGAB				AML	AML		
	comp=E,16050µm,0.4s						
MGAB				AML	AML		
	comp=N,20550µm,1.1s						
MGAB				AML	AML		
	comp=E,16100µm,0.4s						
MGAB				AML	AML		
	comp=N,18200µm,1.1s						
MGAB				AML	AML		
	comp=E,18750µm,1.1s						
ATMI	**Monte Miggiano**	**0.72 308**	P	**Pg**	**19 43 58.3**	**-0.2**	
ATMI				AML	AML		
	comp=N,27850µm,1.0s						
ATMI				AML	AML		
	comp=E,21900µm,0.6s						
ATPC	**Poggio Castell**	**0.73 324**	P	**Pg**	**19 43 58.2**	**-0.4**	
ATPI	**Pietralunga -**	**0.73 320**	P	**Pg**	**19 43 58.0**	**-0.6**	
ATPI				AML	AML		
	comp=E,7890µm,0.6s						
ATPI				AML	AML		
	comp=N,8425µm,0.9s						
FAGN	**Fagnano**	**0.74 148**	P	**Pg**	**19 43 57.9**	**-1.0**	
FAGN				AML	AML		
	comp=E,13850µm,0.4s						
FAGN				AML	AML		
	comp=N,11900µm,1.3s						
PIEI	**Pieia**	**0.74 330**	P	**Pg**	**19 43 58.2**	**-0.7**	
PIEI				AML	AML		
	comp=E,6165µm,1.0s						
PIEI				AML	AML		
	comp=N,4470µm,0.4s						
PIEI				AML	AML		
	comp=E,6170µm,1.0s						
MPAG	**Monte Paganucc**	**0.76 344**	P	**Pg**	**19 43 58.7**	**-0.7**	
SRES	**S.Oreste - Sor**	**0.77 211**	P	**Pg**	**19 43 58.9**	**-0.5**	
SRES				AML	AML		
	comp=N,4765µm,0.9s						
SRES				AML	AML		
	comp=E,7985µm,1.0s						
VCEL	**Villa Celiera**	**0.77 130**	⇑P	**Pg**	**19 43 58.5**	**-0.9**	
VCEL				AML	AML		
	comp=E,13750µm,0.3s						
VCEL				AML	AML		
	comp=N,14200µm,0.9s						
VCEL				AML	AML		
	comp=E,13700µm,0.3s						
AOI	**Ancona**	**0.77 32**	P	**Pg**	**19 43 58.7**	**-0.7**	
AOI				AML	AML		
	comp=N,14500µm,0.3s						
AOI				AML	AML		
	comp=E,13550µm,0.5s						
PCRO	**Pietralacroce**	**0.80 26**	P	**Pb**	**19 44 00.1**	**-0.3**	
FSSB	**Fossombrone**	**0.82 346**	P	**Pg**	**19 43 59.9**	**-0.5**	
FSSB				AML	AML		
	comp=N,31050µm,0.3s						
FSSB				AML	AML		
	comp=E,17100µm,0.4s						
SENI	**Senigallia**	**0.82 9**	P	**Pg**	**19 44 00.1**	**-0.3**	
SENI				AML	AML		
	comp=E,35900µm,0.4s						
SENI				AML	AML		
	comp=N,37400µm,0.3s						
SENI				AML	AML		
	comp=E,10035µm,0.7s						
SENI				AML	AML		
	comp=N,6355µm,0.4s						
SENI				AML	AML		
	comp=E,35900µm,0.4s						
SENI				AML	AML		
	comp=N,37400µm,0.4s						
SACS	**San Casciano d**	**0.84 267**	P	**Pg**	**19 44 00.6**	**-0.2**	
SACS				AML	AML		
	comp=N,5905µm,0.9s						
SACS				AML	AML		
	comp=N,5985µm,0.9s						
SACS				AML	AML		
	comp=N,5900µm,0.9s						
SACS				AML	AML		
	comp=E,8265µm,0.8s						
SACS				AML	AML		
	comp=E,8660µm,0.8s						
T0110	**Collepietro**	**0.86 141**	⇑P	**Pg**	**19 43 59.7**	**-1.4**	
T0110				AML	AML		
	comp=E,10830µm,0.7s						
T0110				AML	AML		
	comp=N,11685µm,0.6s						
PE3	**Peglio**	**0.90 334**	P	**Pg**	**19 44 01.1**	**-0.8**	
PE3				AML	AML		
	comp=N,60µm,0.4s						
PE3				AML	AML		
	comp=E,46µm,0.4s						
MTCE	**Montecelio**	**0.90 195**	P	**Pg**	**19 44 00.7**	**-1.2**	
MTCE				AML	AML		
	comp=E,5375µm,0.7s						
MTCE				AML	AML		
	comp=N,3350µm,0.7s						
CAFI	**Castiglion Fio**	**0.90 299**	P	**Pg**	**19 44 01.5**	**-0.4**	
PTQR	**Pietraquaria**	**0.91 163**	P	**Pg**	**19 44 00.9**	**-1.2**	
PTQR				AML	AML		
	comp=E,2510µm,1.5s						
PTQR				AML	AML		
	comp=N,2415µm,0.7s						
CERT	**Cerreto**	**0.95 183**	P	**Pg**	**19 44 01.6**	**-1.1**	
CERT				AML	AML		
	comp=N,4135µm,1.2s						
CERT				AML	AML		
	comp=E,5030µm,0.5s						
SSP9	**Sansepolcro**	**0.95 316**	P	**Pg**	**19 44 02.7**	**-0.2**	
SSP9				AML	AML		
	comp=E,4115µm,1.4s						
SSP9				AML	AML		
	comp=N,4550µm,1.5s						
LATE	**Laterza**	**0.96 253**		**Pg**	**19 44 02.7**	**-0.3**	
LATE	**Laterza**	**0.96 253**	P	**Pb**	**19 44 03.0**	**-0.2**	
MCIV	**Monte Civitell**	**1.01 264**	P	**Pg**	**19 44 03.6**	**-0.5**	
MCIV				AML	AML		
	comp=E,3065µm,0.8s						
MCIV				AML	AML		
	comp=N,3300µm,0.4s						
RCAV	**Rocca di Cave**	**1.05 184**	P	**Pg**	**19 44 03.5**	**-1.2**	
RCAV				AML	AML		
	comp=N,3760µm,0.4s						
RCAV				AML	AML		
	comp=E,3560µm,0.4s						
CPGN	**Carpegna, Ital**	**1.05 330**	P	**Pg**	**19 44 03.9**	**-0.9**	
CPGN				AML	AML		
	comp=E,6725µm,0.7s						
CPGN				AML	AML		
	comp=N,5930µm,0.7s						
CPGN				AML	AML		
	comp=N,5610µm,0.9s						
CPGN				AML	AML		
	comp=E,5385µm,0.6s						
CRE	**Caprese Michel**	**1.08 313**	P	**Pg**	**19 44 04.4**	**-1.0**	
CRE				AML	AML		
	comp=N,2790µm,0.7s						
CRE				AML	AML		
	comp=E,2155µm,0.5s						
INTR	**Introdacqua**	**1.09 144**		**Pg**	**19 44 03.2**	**-2.2**	
INTR	**Introdacqua**	**1.09 144**	P	**Pg**	**19 44 03.3**	**-2.2**	
INTR				AML	AML		
	comp=E,6µm,1.1s						
INTR				AML	AML		
	comp=E,6200µm,1.1s						
INTR				AML	AML		
	comp=N,9895µm,1.1s						
INTR				AML	AML		
	comp=N,7µm,1.1s						
SF01	**Poggio Pratacc**	**1.09 266**	AML	AML			
	comp=E,3688µm,0.4s						
SF01				AML	AML		
	comp=N,4100µm,0.5s						
VVLD	**Villa Vallelon**	**1.11 157**	P	**Pb**	**19 44 05.5**	**-0.3**	
RMP	**Rome, Mte Porz**	**1.11 193**	P	**Pb**	**19 44 04.6**	**-1.2**	
RMP				AML	AML		
	comp=N,5695µm,0.7s						
RMP				AML	AML		
	comp=E,4470µm,0.4s						
GUAR	**Guarcino**	**1.12 170**	P	**Pb**	**19 44 05.3**	**-0.7**	
GUAR				AML	AML		
	comp=E,4375µm,1.1s						
GUAR				AML	AML		
	comp=N,4815µm,0.7s						
TOLF	**Tolfa**	**1.14 223**	P	**Pb**	**19 44 05.1**	**-1.1**	
TOLF				AML	AML		
	comp=E,2630µm,0.6s						
TOLF				AML	AML		
	comp=N,2020µm,0.5s						
ARCI	**Arcidosso**	**1.16 268**	P	**Pb**	**19 44 05.8**	**-0.9**	
ARCI				AML	AML		
	comp=E,844µm,0.6s						
ARCI				AML	AML		
	comp=N,834µm,0.7s						
VIVA	**Pratoni del Vi**	**1.16 190**	P	**Pb**	**19 44 05.5**	**-1.2**	
VIVA				AML	AML		
	comp=E,7410µm,0.5s						
VIVA				AML	AML		
	comp=N,9455µm,0.4s						
CAFR	**Castel Frentan**	**1.17 124**	P	**Pb**	**19 44 05.2**	**-1.6**	
CAFR				AML	AML		
	comp=N,4730µm,0.9s						
CAFR				AML	AML		
	comp=E,3490µm,0.7s						
LPEL	**Lama dei Pelig**	**1.19 135**	P	**Pb**	**19 44 05.2**	**-2.0**	
LPEL				AML	AML		
	comp=E,3980µm,1.0s						
LPEL				AML	AML		
	comp=N,3920µm,1.0s						
POFI	**Posta Fibreno**	**1.27 157**	P	**Pn**	**19 44 07.8**	**-0.6**	
ASQU	**Asqua**	**1.29 315**	P	**Pn**	**19 44 08.4**	**-0.2**	
ASQU	**Asqua**	**1.29 315**	P	**Pg**	**19 44 08.8**	**-0.4**	
LRP	**Arpino**	**1.31 162**	P	**Pb**	**19 44 09.1**	**-0.1**	
LRP				AML	AML		
	comp=N,2230µm,0.6s						
LRP				AML	AML		
	comp=E,1235µm,1.6s						
SFI	**Santa Sofia**	**1.34 319**	P	**Pb**	**19 44 09.5**	**-0.2**	
GIUL	**Giuliano Di Ro**	**1.34 173**	P	**Pn**	**19 44 08.7**	**-0.7**	
GIUL				AML	AML		
	comp=N,1840µm,0.6s						
GIUL				AML	AML		
	comp=E,1760µm,0.8s						
LATB	**Latina**	**1.40 183**	P	**Pn**	**19 44 09.2**	**-0.9**	
LATB				AML	AML		
	comp=E,534µm,0.6s						
LATB				AML	AML		
	comp=N,412µm,0.8s						
A309A	**Martorano (FC)**	**1.40 336**	P	**Pg**	**19 44 12.6**	**+1.1**	
CSNT	**Castellina Chi**	**1.41 295**	P	**Pn**	**19 44 10.1**	**-0.2**	
FROS	**Frosini**	**1.42 283**	P	**Pn**	**19 44 10.3**	**-0.1**	
FROS				AML	AML		
	comp=N,1935µm,1.3s						
FROS				AML	AML		
	comp=E,2010µm,1.4s						
RNI2	**Rionero Sannit**	**1.45 145**	P	**Pg**	**19 44 12.4**	**+0.1**	
OSSC	**Osservatorio P**	**1.46 296**		**Pn**	**19 44 10.8**	**-0.2**	
OSSC	**Osservatorio P**	**1.46 296**	P	**Pn**	**19 44 10.8**	**-0.2**	
OSSC	**Osservatorio P**	**1.46 296**	P	**Pn**	**19 44 10.7**	**-0.2**	
RUFI	**Rufina**	**1.47 311**	P	**Pb**	**19 44 11.3**	**-0.6**	
RUFI	**Rufina**	**1.47 311**	P	**Pn**	**19 44 10.8**	**-0.3**	
RUFI				AML	AML		
	comp=N,2100µm,1.4s						
RUFI				AML	AML		
	comp=E,1825µm,0.5s						
CERA	**Filignano**	**1.48 151**	P	**Pn**	**19 44 11.2**	**-0.1**	
CERA				AML	AML		
	comp=N,2680µm,0.5s						
CERA				AML	AML		
	comp=N,2770µm,0.5s						
CERA				AML	AML		
	comp=E,2675µm,0.9s						
CERA				AML	AML		
	comp=E,2600µm,0.9s						
MAON	**Monte Argentar**	**1.49 252**	P	**Pn**	**19 44 10.8**	**-0.5**	
MAON				AML	AML		
	comp=N,621µm,1.1s						
MAON				AML	AML		
	comp=E,584µm,0.6s						
FRES	**Fresagrandinar**	**1.51 127**	P	**Pn**	**19 44 10.4**	**-1.2**	
FRES				AML	AML		
	comp=E,2125µm,0.7s						
FRES				AML	AML		
	comp=N,1205µm,1.5s						
LMD	**Lutirano**	**1.53 321**	P	**Pb**	**19 44 12.7**	**-0.3**	
TRIV	**Trivento**	**1.58 135**	P	**Pb**	**19 44 13.9**	**0.0**	
TRIF	**Trifonti**	**1.59 279**	P	**Pn**	**19 44 12.3**	**-0.4**	
TRIF				AML	AML		
	comp=N,744µm,0.5s						
TRIF				AML	AML		
	comp=E,906µm,0.8s						
CASP	**Castiglione de**	**1.61 267**		**Pn**	**19 44 12.2**	**-0.7**	
CASP	**Castiglione de**	**1.61 267**	P	**Pn**	**19 44 12.3**	**-0.6**	
CASP				AML	AML		
	comp=E,390µm,1.5s						
CASP				AML	AML		
	comp=N,434µm,0.7s						
VAGA	**Valle Agricola**	**1.72 149**	P	**Pn**	**19 44 15.2**	**+0.7**	
VAGA				AML	AML		
	comp=E,756µm,0.5s						
VAGA				AML	AML		
	comp=N,1008µm,1.2s						
VAGA				AML	AML		
	comp=N,989µm,1.2s						
VAGA				AML	AML		
	comp=E,728µm,0.5s						
CRMI	**Carmignano**	**1.76 301**	P	**Pn**	**19 44 15.3**	**+0.3**	
BSSO	**Busso**	**1.77 139**	P	**Pb**	**19 44 16.7**	**-0.4**	
BSSO				AML	AML		
	comp=N,392µm,0.8s						
BSSO				AML	AML		
	comp=E,417µm,1.4s						
BSSO				AML	AML		
	comp=E,980µm,1.4s						
BSSO				AML	AML		
	comp=N,946µm,0.8s						
MPPT	**Montemurlo**	**1.78 307**	P	**Pn**	**19 44 15.4**	**0.0**	
MPPT				AML	AML		
	comp=N,1022µm,1.1s						
MPPT				AML	AML		
	comp=E,800µm,0.6s						
CIGN	**Sant'Elia a Pi**	**1.85 131**	P	**Pn**	**19 44 16.7**	**+0.4**	
CIGN				AML	AML		
	comp=E,862µm,1.1s						
CIGN				AML	AML		
	comp=N,830µm,1.3s						
MTCR	**Monte La Croce**	**1.87 308**	P	**Pn**	**19 44 16.5**	**-0.3**	
MTCR	**Monte La Croce**	**1.87 308**	P	**Pn**	**19 44 16.4**	**-0.3**	
MTCR				AML	AML		
	comp=E,1103µm,1.0s						
MTCR				AML	AML		
	comp=N,1481µm,1.0s						
FNVD	**Fontana Vidola**	**1.89 313**	P	**Pn**	**19 44 17.5**	**+0.5**	
MELA	**Melanico ??? S**	**1.95 127**	P	**Pn**	**19 44 17.6**	**0.0**	
MELA				AML	AML		
	comp=N,2440µm,0.6s						
MELA				AML	AML		
	comp=E,2710µm,0.6s						
MELA				AML	AML		
	comp=N,2450µm,1.0s						
MELA				AML	AML		
	comp=E,2595µm,0.6s						
TREM	**Isole Tremiti**	**1.98 112**	P	**Pn**	**19 44 18.5**	**+0.5**	
TREM				AML	AML		
	comp=N,3040µm,0.8s						
TREM				AML	AML		
	comp=E,2320µm,0.7s						
PII	**Pisa**	**2.02 295**	P	**Pn**	**19 44 18.9**	**+0.4**	
POPM	**Popiglio**	**2.03 305**	P	**Pn**	**19 44 18.4**	**-0.3**	
POPM				AML	AML		
	comp=E,546µm,1.6s						
POPM				AML	AML		
	comp=N,586µm,0.7s						
BRJN	**Brijuni**	**2.07 14**	P	**Pn**	**19 44 18.9**	**-0.4**	
ZCCA	**Zocca**	**2.09 315**		**Pg**	**19 44 23.8**	**-0.9**	
ZCCA	**Zocca**	**2.09 315**	S	Sn	19 44 34.8	-11	
MAIM	**Mastiano**	**2.12 300**	P	**Pn**	**19 44 20.1**	**+0.1**	
MAIM				AML	AML		
	comp=E,475µm,0.6s						
MAIM				AML	AML		
	comp=N,391µm,1.6s						
BDI	**Bagni Di Lucca**	**2.13 304**	P	**Pn**	**19 44 19.6**	**-0.6**	

BDI				AML	AML	
	comp=E,248µm,1.4s					
BDI				AML	AML	
	comp=N,558µm,1.1s					
BDI				AML	AML	
	comp=E,539µm,1.4s					
BDI				AML	AML	
	comp=N,198µm,1.6s					
APRC	**Apricena**	**2.17 121**	P	**Pn**	**19 44 20.5 -0.3**	
APRC				AML	AML	
	comp=E,1404µm,0.9s					
APRC				AML	AML	
	comp=N,1805µm,0.5s					
PAOL	**Paolisi**	**2.18 148**		**Pn**	**19 44 20.9 +0.1**	
CARD	**Cardoso**	**2.18 302**	P	**Pn**	**19 44 20.7 -0.2**	
MOCO	**Biccari - m.te**	**2.19 133**	P	**Pn**	**19 44 22.0 +1.0**	
SGRT	**San Giovanni R**	**2.30 119**		**Pn**	**19 44 22.9 +0.3**	
SGRT	**San Giovanni R**	**2.30 119**	P	**Pn**	**19 44 23.1 +0.5**	
SGRT				AML	AML	
	comp=E,1221µm,0.6s					
SGRT				AML	AML	
	comp=N,1910µm,0.5s					
GSCL	**Gusciola**	**2.30 310**	P	**Pn**	**19 44 23.3 +0.7**	
VLC	**Villacollemand**	**2.31 304**		**Pn**	**19 44 22.2 -0.4**	
VLC	**Villacollemand**	**2.31 304**	P	**Pn**	**19 44 22.2 -0.4**	
VLC				AML	AML	
	comp=N,302µm,1.3s					
VLC				AML	AML	
	comp=E,366µm,1.2s					
VLC				AML	AML	
	comp=N,288µm,1.3s					
VLC				AML	AML	
	comp=E,372µm,1.2s					
SARO	**Sassorosso**	**2.32 305**	P	**Pn**	**19 44 22.2 -0.6**	
EQUI	**Equi**	**2.46 302**	P	**Pn**	**19 44 24.8 +0.1**	
EQUI				AML	AML	
	comp=N,247µm,0.7s					
EQUI				AML	AML	
	comp=E,208µm,0.6s					
SGTA	**Sant Agata di**	**2.46 135**	P	**Pn**	**19 44 26.5 +1.7**	
SGTA				AML	AML	
	comp=N,542µm,1.0s					
SGTA				AML	AML	
	comp=E,904µm,0.8s					
SGTA				AML	AML	
	comp=E,737µm,1.0s					
SGTA				AML	AML	
	comp=N,858µm,1.4s					
CAFE	**Carife**	**2.48 138**	P	**Pb**	**19 44 27.2 -2.0**	
SNAL	**S. Angelo Dei**	**2.54 140**	P	**Pn**	**19 44 27.5 +1.6**	
PLMA	**Palmaria, Port**	**2.60 297**	P	**Pn**	**19 44 26.6 +0.1**	
PLMA	**Palmaria, Port**	**2.60 297**	P	**Pn**	**19 44 26.7 +0.2**	
PLMA				AML	AML	
	comp=E,158µm,0.6s					
PLMA				AML	AML	
	comp=N,196µm,0.5s					
TEOL	**Teolo**	**2.66 339**		**Pn**	**19 44 27.6 +0.3**	
CAPA	**Cerignola FG**	**2.69 129**	P	**Pn**	**19 44 28.7 +0.8**	
CAPA				AML	AML	
	comp=N,1560µm,0.8s					
CAPA				AML	AML	
	comp=E,1345µm,0.8s					
MORSI	**Morsiglia**	**2.71 272**	P	**Pn**	**19 44 28.5 +0.4**	
PRMA	**PARMA**	**2.72 314**		**Pn**	**19 44 28.9 +0.7**	
VULT	**Monte Vulture**	**2.73 134**	P	**Pn**	**19 44 29.8 +1.4**	
VULT				AML	AML	
	comp=E,646µm,0.9s					
VULT				AML	AML	
	comp=E,608µm,1.0s					
VULT				AML	AML	
	comp=N,796µm,0.8s					
VULT				AML	AML	
	comp=N,764µm,1.0s					
SKDS	**Skadanscina**	**2.74 14**	⇑*i* Pn	**Pn**	**19 44 28.1 -0.5**	
SMPL	**Sampolo**	**2.90 255**	P	**Pn**	**19 44 30.7 +0.1**	
SMPL				AML	AML	
	comp=E,61µm,0.5s					
SMPL				AML	AML	
	comp=N,38µm,1.0s					
SMPL	**Sampolo**	**2.90 255**	P	**Pn**	**19 44 30.7 +0.1**	
PALZ	**Palazzo San Ge**	**2.92 131**	P	**Pn**	**19 44 31.5 +0.5**	
PALZ				AML	AML	
	comp=N,1000µm,1.0s					
PALZ				AML	AML	
	comp=E,1029µm,0.7s					
MSSA	**Maissana**	**2.93 300**		**Pn**	**19 44 31.8 +0.6**	
CORF	**Corte**	**2.94 260**	P	**Pn**	**19 44 31.8 +0.6**	
MRVN	**Minervino Murg**	**2.98 127**	P	**Pn**	**19 44 32.3 +0.5**	
MRVN				AML	AML	
	comp=N,209µm,0.6s					
MRVN				AML	AML	
	comp=E,238µm,0.7s					
PGF	**Pioggiola**	**3.00 265**	*e*P	**Pn**	**19 44 32.7 +0.5**	
PGF			*e*Sn	**Sn**	**19 45 03.2 -5.1**	
	comp=E,28nm,0.5s					
PGF	**Pioggiola**	**3.00 265**	P	**Pn**	**19 44 32.8 +0.6**	
CEY	**Cerknica**	**3.01 19**	*e*Pn	**Pn**	**19 44 31.4 -0.9**	
ACER	**Acerenza**	**3.02 133**	P	**Pn**	**19 44 33.0 +0.6**	
ACER				AML	AML	
	comp=E,547µm,1.0s					
ACER				AML	AML	
	comp=E,492µm,1.0s					
ACER				AML	AML	
	comp=N,492µm,0.7s					
ACER				AML	AML	
	comp=N,508µm,0.6s					
BOJS	**Bojanci**	**3.05 31**	*e*Pn	**Pn**	**19 44 33.0 +0.2**	
BOJS	**Bojanci**	**3.05 31**	P	**Pn**	**19 44 32.7 -0.1**	
BOJS				AML	AML	
	comp=N,984µm,0.5s					
BOJS				AML	AML	
	comp=E,858µm,1.1s					
ROVR	**Rover Verones**	**3.10 333**	P	**Pn**	**19 44 34.4 +0.9**	
ROVR				AML	AML	
	comp=N,800µm,0.9s					
ROVR				AML	AML	
	comp=N,308µm,0.7s					
ROVR				AML	AML	
	comp=E,590µm,1.6s					
ROVR				AML	AML	
	comp=E,174µm,0.6s					
VOJS	**Vojsko**	**3.19 11**	*i* Pn	**Pn**	**19 44 34.4 -0.5**	
SRKY	**Kupres RS**	**3.22 67**	⇑*i* Pn	**Pn**	**19 44 36.3 +1.1**	
DOSS	**Dosso del Somm**	**3.27 337**	P	**Pn**	**19 44 36.9 +1.0**	
DOSS				AML	AML	
	comp=E,423µm,0.5s					
DOSS				AML	AML	
	comp=N,630µm,0.8s					
DOSS				AML	AML	
	comp=N,420µm,0.8s					
DOSS				AML	AML	
	comp=E,626µm,0.8s					
SALO	**Salr**	**3.27 327**		**Pn**	**19 44 37.5 +1.6**	
SALO	**Salr**	**3.27 327**	P	**Pn**	**19 44 37.4 +1.5**	
SALO				AML	AML	
	comp=E,576µm,0.5s					
SALO				AML	AML	
	comp=N,604µm,0.8s					
SALO				AML	AML	
	comp=N,574µm,0.8s					
SALO				AML	AML	
	comp=E,595µm,0.5s					
MGRS	**Mrkonjic Grad**	**3.30 61**	⇑*i* Pn	**Pn**	**19 44 37.6 +1.4**	
CTI	**Castel Tesino**	**3.31 343**	Pn	**Pn**	**19 44 37.7 +1.3**	
CTI	**Castel Tesino**	**3.31 343**	P	**Pn**	**19 44 37.7 +1.3**	
CTI	**Castel Tesino**	**3.31 343**	P	**Pn**	**19 44 37.1 +0.7**	
CTI				AML	AML	
	comp=N,507µm,0.3s					
CTI				AML	AML	
	comp=E,602µm,0.9s					
AMUR	**Altamura**	**3.31 126**	P	**Pn**	**19 44 36.9 +0.4**	
AMUR				AML	AML	
	comp=N,313µm,0.5s					
AMUR				AML	AML	
	comp=E,278µm,0.7s					
AJAC	**Base Areonaval**	**3.32 255**	P	**Pn**	**19 44 37.4 +1.0**	
AJAC	**Base Areonaval**	**3.32 255**	AML	AML		
	comp=N,91µm,0.5s					
AJAC				AML	AML	
	comp=E,150µm,1.5s					
AJAC	**Base Areonaval**	**3.32 255**	P	**Pn**	**19 44 37.4 +1.0**	
LJU	**Ljubljana**	**3.32 18**	*i* Pn	**Pn**	**19 44 37.0 +0.4**	
LJU			*i* Sn	**Sn**	**19 45 16.5 +0.5**	
LJU			IAML		19 45 18.7	
	comp=Z,113nm,0.4s					
LJU	**Ljubljana**	**3.32 18**	P	**Pn**	**19 44 36.9 +0.4**	
LJU				AML	AML	
	comp=E,3780µm,1.0s					
LJU				AML	AML	
	comp=N,3385µm,0.8s					
RNCA	**Ronca, Sant'Ol**	**3.36 299**	AML	AML		
	comp=E,52µm,0.9s					
RNCA				AML	AML	
	comp=N,57µm,1.6s					
CADS	**Cadrg**	**3.37 8**	*i* Pn	**Pn**	**19 44 37.0 -0.3**	
PRIJ	**Prijedor**	**3.37 51**	*e*Pn	**Pn**	**19 44 37.3 +0.2**	
STAL	**STALIGIAL**	**3.37 356**		**Pn**	**19 44 37.7 +0.5**	
STAL	**STALIGIAL**	**3.37 356**	P	**Pn**	**19 44 37.3 0.0**	
STAL				AML	AML	
	comp=N,509µm,0.4s					
STAL				AML	AML	
	comp=E,894µm,0.4s					
LUSI	**Trento, Gardas**	**3.42 335**	P	**Pn**	**19 44 38.8 +1.0**	
LUSI				AML	AML	
	comp=N,499µm,0.5s					
LUSI				AML	AML	
	comp=E,436µm,0.5s					
MIGL	**Miglionico**	**3.42 131**	P	**Pn**	**19 44 38.8 +1.0**	
MIGL				AML	AML	
	comp=E,958µm,0.8s					
MIGL				AML	AML	
	comp=N,1168µm,0.8s					
STON	**Ston**	**3.42 89**	*e*Pn	**Pn**	**19 44 37.2 -0.6**	
STON	**Ston**	**3.42 89**	*e*Pn	**Pn**	**19 44 37.1 -0.7**	
STON			*e*Sn	**Sn**	**19 45 18.4 +0.1**	
A051A	**Mrakovica**	**3.50 51**	⇑*i* Pn	**Pn**	**19 44 39.3 +0.3**	
PTCC	**Patocco-Chiusa**	**3.52 3**	P	**Pn**	**19 44 38.9 -0.3**	
PTCC				AML	AML	
	comp=E,354µm,0.5s					
PTCC				AML	AML	
	comp=N,388µm,0.7s					
BLY	**Banja Luka**	**3.52 57**	*e*Pn	**Pn**	**19 44 39.3 +0.1**	
BLY	**Banja Luka**	**3.52 57**	*e*Pn	**Pn**	**19 44 40.7 +1.5**	
SCHR	**S. Chirico Rap**	**3.52 139**	AML	AML		
	comp=E,84µm,1.3s					
SCHR				AML	AML	
	comp=N,86µm,1.0s					
MATE	**Matera**	**3.54 128**	⇑P	**Pn**	**19 44 40.7 +1.2**	
MATE	**Matera**	**3.54 128**	P	**Pn**	**19 44 40.5 +1.1**	
MATE				AML	AML	
	comp=N,326µm,0.5s					
MATE				AML	AML	
	comp=E,278µm,0.6s					
ZONE	**Zone**	**3.56 325**	P	**Pn**	**19 44 40.4 +0.6**	
ZONE				AML	AML	
	comp=N,323µm,0.9s					
ZONE				AML	AML	
	comp=E,294µm,1.1s					
CLUD	**Cludinico**	**3.56 358**		**Pn**	**19 44 40.2 +0.3**	
PRED	**Cave del Predi**	**3.57 6**		**Pn**	**19 44 39.7 -0.3**	
CUC	**Castrocucco**	**3.57 143**		**Pn**	**19 44 41.0 +1.0**	
LTRZ	**Laterza**	**3.63 128**	P	**Pn**	**19 44 41.6 +0.9**	
MABI	**Malga Bissina**	**3.64 331**	P	**Pn**	**19 44 42.1 +1.0**	
MABI				AML	AML	
	comp=E,157µm,1.0s					
MABI				AML	AML	
	comp=N,212µm,0.5s					
NOCI	**Noci**	**3.67 124**	P	**Pn**	**19 44 41.8 +0.6**	
NOCI				AML	AML	
	comp=N,272µm,1.1s					
NOCI				AML	AML	
	comp=E,219µm,1.4s					
FVI	**Forni Avoltri**	**3.71 357**	P	**Pn**	**19 44 42.5 +0.6**	
FVI				AML	AML	
	comp=E,309µm,0.9s					
FVI				AML	AML	
	comp=N,436µm,0.5s					
MYKA	**Terra Mystica**	**3.76 6**	*e*Pn	**Pn**	**19 44 43.1 +0.5**	
	comp=N,19nm,0.2s,SNR=23					
KOSI	**Kohlern**	**3.76 342**	P	**Pn**	**19 44 44.2 +1.5**	
KOSI				AML	AML	
	comp=N,368µm,0.8s					
KOSI				AML	AML	
	comp=E,456µm,0.7s					
OBKA	**Obir**	**3.77 16**	⇑*i* Pn	**Pn**	**19 44 42.3 -0.4**	
OBKA	**Obir**	**3.77 16**	*i* Pn	**Pn**	**19 44 42.6 -0.2**	
	comp=E,7.2nm,0.2s					
OBKA	**Obir**	**3.77 16**	*e*Pn	**Pn**	**19 44 42.5 -0.2**	
ABTA	**Abfaltersbach**	**3.87 355**	*i* Pn	**Pn**	**19 44 45.3 +1.2**	
	comp=E,49nm,0.4s,SNR=34					
TREB	**Trebinje**	**3.91 91**	⇑*i* Pn	**Pn**	**19 44 45.1 +0.6**	
TREB	**Trebinje**	**3.91 91**	*e*Pn	**Pn**	**19 44 45.4 +0.9**	
TREB			*e*Sn	**Sn**	**19 45 31.1 +0.7**	
A052A	**Srbac**	**3.91 54**	*e*Pn	**Pn**	**19 44 44.3 -0.2**	
TAR1	**Taranto**	**3.96 125**	AML	AML		
	comp=E,302µm,0.9s					
TAR1				AML	AML	
	comp=N,252µm,0.5s					
BRY	**Bratogost**	**4.03 88**	⇑*i* Pn	**Pn**	**19 44 47.4 +1.0**	
BRY	**Bratogost**	**4.03 88**	⇓*i* Pn	**Pn**	**19 44 46.9 +0.5**	
BRY			*i* Sn	**Sn**	**19 45 35.0 +1.2**	
SOKA	**Soboth**	**4.04 20**	*i* Pn	**Pn**	**19 44 46.5 0.0**	
	comp=N,4.5nm,0.3s,SNR=9.9					
HCY	**Herceg Novi**	**4.04 95**	⇑*i* Pn	**Pn**	**19 44 46.3 -0.1**	
HCY	**Herceg Novi**	**4.04 95**	⇓*i* Pn	**Pn**	**19 44 47.0 +0.6**	
HCY			*i* Sn	**Sn**	**19 45 35.2 +1.5**	
RISI	**Rein**	**4.11 351**	P	**Pn**	**19 44 48.6 +1.1**	
RISI				AML	AML	
	comp=N,1041µm,0.4s					
RISI				AML	AML	
	comp=E,1020µm,0.6s					
SAOF	**Saorge**	**4.15 287**	P	**Pn**	**19 44 48.8 +0.9**	
KBA	**Koelnbreinsper**	**4.19 3**	*i* Pn	**Pn**	**19 44 49.4 +0.8**	
	comp=E,9.8nm,0.2s,SNR=27					
KBA			*e*Sn	**Sn**	**19 45 38.0 +0.3**	
	comp=E,45nm,0.4s					
KBA	**Koelnbreinsper**	**4.19 3**	*e*Pn	**Pn**	**19 44 49.3 +0.8**	
KBA			*e*Sn	**Sn**	**19 45 38.3 +0.6**	
ROSI	**Rosskopf**	**4.20 344**	P	**Pn**	**19 44 50.0 +1.3**	
ROSI				AML	AML	
	comp=E,439µm,0.7s					
ROSI				AML	AML	
	comp=N,604µm,0.6s					
SBF	**Sospel**	**4.20 285**	*e*P	**Pn**	**19 44 49.1 +0.4**	
SBF			*e*Sn	**Sn**	**19 45 33.5 -4.4**	
	comp=N,19nm,0.4s					
FUORN	**Ofenpass-Fuorn**	**4.22 333**	Pn	**Pn**	**19 44 51.2 +2.1**	
TURF	**col de Turini**	**4.26 287**	P	**Pn**	**19 44 50.3 +0.8**	
VARE	**Varese**	**4.27 316**	AML	AML		
	comp=E,182µm,0.4s					
VARE				AML	AML	
	comp=N,222µm,0.6s					
UPM	**Unac-Piva**	**4.30 84**	⇑*i* Pn	**Pn**	**19 44 51.3 +1.1**	
UPM	**Unac-Piva**	**4.30 84**	*e*Pn	**Pn**	**19 44 50.7 +0.5**	
UPM			*i* Sn	**Sn**	**19 45 41.5 +1.0**	
CEME	**Cevo**	**4.34 93**	⇑*i* Pn	**Pn**	**19 44 51.2 +0.7**	
CEME			*i* Sn	**Sn**	**19 45 42.5 +1.3**	
NKME	**Niksic**	**4.34 90**	⇓*i* Pn	**Pn**	**19 44 51.3 +0.7**	
NKME			*i* Sn	**Sn**	**19 45 42.6 +1.3**	
BUM	**Brajici-Budva**	**4.36 96**	⇑*i* Pn	**Pn**	**19 44 51.4 +0.6**	
BUM			*i* Sn	**Sn**	**19 45 42.8 +1.2**	
VSL	**Villasalto**	**4.38 220**	P	**Pn**	**19 44 51.7 +0.7**	
VSL				AML	AML	
	comp=E,45µm,0.8s					
VSL				AML	AML	
	comp=N,67µm,0.7s					
SPIF	**crte de Spivo**	**4.39 287**	P	**Pn**	**19 44 52.7 +1.5**	
FETA	**Feichten**	**4.44 339**	*e*Pn	**Pn**	**19 44 53.7 +1.6**	
	comp=N,9.6nm,0.5s,SNR=9.7					
FETA			*e*Sn	**Sn**	**19 45 46.7 +2.9**	
	comp=N,24nm,0.6s					
TUE	**Stuetta**	**4.45 325**		**Pn**	**19 44 53.4 +1.2**	
BEHE	**Becsehely**	**4.46 35**	P	**Pn**	**19 44 52.8 +0.7**	
HAPS	**Han Pijesak,BI**	**4.46 72**	⇑*i* Pn	**Pn**	**19 44 52.8 +0.6**	
WTTA	**Wattenberg**	**4.48 348**	*e*Pn	**Pn**	**19 44 54.9 +2.4**	
	comp=N,7.3nm,0.3s,SNR=9.8					
WTTA	**Wattenberg**	**4.48 348**	*e*Pn	**Pn**	**19 44 55.0 +2.4**	
WTTA	**Wattenberg**	**4.48 348**	P	**Pn**	**19 44 54.8 +2.2**	
DAVOX	**Davos/Dischmat**	**4.49 331**	Pn	**Pn**	**19 44 53.4 +0.7**	
	comp=N,9.0nm,0.3s,baz=150,slow=22,SNR=40					
DAVOX			Sn	**Sn**	**19 45 46.2 +1.1**	
	comp=N,5.4nm,0.3s,baz=292,slow=22,SNR=7.4					
	comp=N,20nm,0.4s					
SQTA	**Sankt Quirin**	**4.52 344**	*i* Pn	**Pn**	**19 44 55.2 +2.1**	
	comp=N,11nm,0.2s,SNR=18					
CALF	**Calern**	**4.55 283**	P	**Pn**	**19 44 54.1 +0.6**	
WATA	**Walderalm**	**4.56 347**	*e*Pn	**Pn**	**19 44 56.1 +2.4**	
	comp=N,13nm,0.3s,SNR=12					
WATA			*e*Sn	**Sn**	**19 45 49.1 +2.4**	
	comp=N,50nm,0.4s					
DRME	**Dracevica, Mon**	**4.59 97**	⇑*i* Pn	**Pn**	**19 44 54.8 +0.8**	
DRME	**Dracevica, Mon**	**4.59 97**	⇓*i* Pn	**Pn**	**19 44 54.7 +0.8**	
DRME			*i* Sn	**Sn**	**19 45 48.5 +1.3**	
PDG	**Podgorica**	**4.60 94**	⇓P	**Pn**	**19 44 54.7 +0.6**	
PDG	**Podgorica**	**4.60 94**		**Pn**	**19 44 54.6 +0.6**	
PDG	**Podgorica**	**4.60 94**	*e*Pn	**Pn**	**19 44 55.3 +1.2**	
TTG	**Podgorica**	**4.60 94**	⇓*i* Pn	**Pn**	**19 44 54.8 +0.7**	
TTG			*i* Sn	**Sn**	**19 45 48.8 +1.3**	
TIP	**Timpagrande**	**4.65 142**	⇑P	**Pn**	**19 44 57.6 +2.7**	
TIP	**Timpagrande**	**4.65 142**	Pn	**Pn**	**19 44 58.8 +3.9**	
MOTA	**Moosalm**	**4.66 343**	*e*Pn	**Pn**	**19 44 57.9 +2.9**	
	comp=N,32nm,0.8s,SNR=12					
MOTA			*e*Sn	**Sn**	**19 45 51.1 +2.0**	
	comp=N,46nm,0.6s					
PLE	**Pljevlja**	**4.66 82**	*e*Pn	**Pn**	**19 44 55.7 +0.7**	
PLE			*i* Sn	**Sn**	**19 45 50.2 +1.0**	
RUDO	**Rudo**	**4.67 79**	⇑*i* Pn	**Pn**	**19 44 55.4 +0.3**	
ULC	**Ulcinj**	**4.68 99**	⇓*i* Pn	**Pn**	**19 44 56.0 +0.8**	
ULC			*i* Sn	**Sn**	**19 45 50.8 +1.3**	
ARSA	**Arzberg**	**4.70 21**	*i* Pn	**Pn**	**19 44 55.0 -0.4**	
	comp=N,9.3nm,0.5s,SNR=13					
ARSA			*e*Sn	**Sn**	**19 45 48.1 -1.8**	
	comp=N,16nm,0.3s					
ARSA	**Arzberg**	**4.70 21**	*e*Pn	**Pn**	**19 44 55.2 -0.2**	
ARSA			*e*Sn	**Sn**	**19 45 47.9 -2.0**	
BBLS	**Lazići**	**4.73 76**	*e*Pn	**Pn**	**19 44 56.7 +0.7**	
BBLS	**Lazići**	**4.73 76**	*e*Pn	**Pn**	**19 44 57.1 +1.1**	
BBLS			*e*Sn	**Sn**	**19 45 47.4 -3.5**	
KOME	**Kolasin**	**4.75 88**	*e*Pn	**Pn**	**19 44 56.9 +0.6**	
KOME			*i* Sn	**Sn**	**19 45 52.5 +1.1**	
ZUGS	**Zugspitze, Sch**	**4.75 343**	*e*Pn	**Pn**	**19 44 59.7 +3.2**	
SURF	**Saint Ours**	**4.79 291**	P	**Pn**	**19 44 57.8 +0.9**	
PART	**Garmisch-Parte**	**4.80 344**	*e*Pn	**Pn**	**19 44 59.8 +2.9**	
LMR	**La Mourre**	**4.81 277**	*e*P	**Pn**	**19 44 56.9 0.0**	
LMR			*e*Sn	**Sn**	**19 45 47.3 -5.3**	
	comp=N,7.6nm,0.6s					
BIOA	**Bad Ischl, Aus**	**4.81 5**	*i* Pn	**Pn**	**19 44 57.7 +0.6**	
	comp=N,26nm,0.3s,SNR=48					
BIOA			*e*Sn	**Sn**	**19 45 54.6 +1.8**	
	comp=N,136nm,0.6s					
JAUF	**Jausiers**	**4.82 291**	P	**Pn**	**19 44 57.8 +0.6**	
KOVH	**Kovagotottos**	**4.82 47**	P	**Pn**	**19 44 56.3 -0.8**	
KOVH			S	**Sn**	**19 45 49.7 -3.2**	
RJOB	**Jochberg**	**4.85 358**	*e*Pn	**Pn**	**19 44 58.6 +1.1**	
RJOB			*e*Sn	**Sn**	**19 45 55.8 +2.2**	
RETA	**Reutte**	**4.87 341**	*i* Pn	**Pn**	**19 45 00.4 +2.6**	
	comp=N,18nm,0.4s,SNR=9.5					
LLS	**Linth-Limmern**	**4.88 325**	P	**Pn**	**19 45 01.8 +3.6**	
MBDF	**Montbardon**	**4.90 294**	*e*P	**Pn**	**19 44 59.0 +0.7**	
OBER	**Oberstdorf**	**4.92 338**	*e*Pn	**Pn**	**19 45 01.2 +2.8**	
OBER			*e*Sn	**Sn**	**19 45 58.1 +2.7**	
TRIGF	**Trigance**	**4.92 282**	P	**Pn**	**19 45 00.0 +1.5**	
DAVA	**Damuels**	**4.93 334**	*i* Pn	**Pn**	**19 45 01.9 +3.2**	
	comp=N,17nm,0.5s,SNR=11					
DAVA			*e*Sn	**Sn**	**19 45 58.1 +2.2**	
	comp=N,36nm,0.4s					
DAVA	**Damuels**	**4.93 334**	*e*Pn	**Pn**	**19 45 01.5 +2.7**	
DAVA			*e*Sn	**Sn**	**19 45 58.2 +2.3**	
CREF	**Crivoux**	**4.94 292**	P	**Pn**	**19 45 00.3 +1.4**	
OGAG	**Argentiere**	**4.97 291**	P	Pn	19 45 04.2 +4.9	
TEKS	**Tekeris**	**4.98 68**	*e*Pn	**Pn**	**19 44 55.6 -3.7**	
TEKS	**Tekeris**	**4.98 68**	*e*Pn	**Pn**	**19 44 59.0 -0.3**	
FLAF	**Flassans-sur-I**	**5.00 278**	P	**Pn**	**19 45 01.2 +1.7**	
MOA	**Molln**	**5.03 9**	*i* Pn	**Pn**	**19 45 00.6 +0.6**	
	comp=N,8.6nm,0.2s,SNR=14					
MOA			*e*Sn	**Sn**	**19 45 58.2 +0.1**	
	comp=N,26nm,0.3s					
MOA	**Molln**	**5.03 9**	*e*Pn	**Pn**	**19 45 00.5 +0.6**	
MOA			*e*Sn	**Sn**	**19 45 58.2 +0.1**	
IVA	**Berane**	**5.03 88**	*e*Pn	**Pn**	**19 45 00.8 +0.7**	
IVA			*i* Sn	**Sn**	**19 45 59.2 +1.0**	
OGDI	**Digne**	**5.06 286**	P	**Pn**	**19 45 02.9 +2.5**	
SJES	**Sjenica**	**5.09 84**	*e*Pn	**Pn**	**19 45 02.2 +1.3**	
SJES			*e*Sn	**Sn**	**19 45 57.5 -2.2**	
PVY	**Plav**	**5.10 91**	*e*Pn	**Pn**	**19 45 01.8 +0.8**	
PVY			*i* Sn	**Sn**	**19 46 00.9 +0.9**	
DIX	**Grande Dixence**	**5.14 310**	P	**Pn**	**19 45 03.0 +1.3**	
DIVS	**Divibare**	**5.19 74**	Pn	**Pn**	**19 45 02.2 -0.1**	
DIVS	**Divibare**	**5.19 74**	*e*Pn	**Pn**	**19 45 02.5 +0.2**	
DIVS	**Divibare**	**5.19 74**	*e*Pn	**Pn**	**19 45 03.0 +0.7**	
DIVS			*e*Sn	**Sn**	**19 45 58.5 -3.7**	
MORH	**Mrgy, Hungar**	**5.20 48**	⇓P	**Pn**	**19 45 04.0 +1.8**	
MORH	**Mrgy, Hungar**	**5.20 48**	P	**Pn**	**19 45 01.6 -0.6**	
UBR	**Ueberruh**	**5.22 338**	*e*Pn	**Pn**	**19 45 04.9 +2.3**	
UBR			*e*Sn	**Sn**	**19 46 06.1 +3.3**	
LPG	**La Plagne**	**5.22 302**	*e*P	**Pn**	**19 45 03.8 +0.9**	
LPG			*e*Sn	**Sn**	**19 45 58.3 -4.9**	
	comp=N,31nm,0.7s					
LPL	**La Plagne**	**5.24 302**	*e*P	**Pn**	**19 45 04.5 +1.4**	
LPL			*e*Sn	**Sn**	**19 45 58.8 -4.8**	
	comp=N,18nm,0.4s					
LPL	**La Plagne**	**5.24 302**	P	**Pn**	**19 45 03.7 +0.6**	
LPL			S	**Sn**	**19 46 03.8 +0.2**	
TIR	**Tirane**	**5.30 105**	⇑P	**Pn**	**19 45 04.5 +0.8**	
TIR	**Tirane**	**5.30 105**	Pn	**Pn**	**19 45 03.9 +0.2**	
TIR	**Tirane**	**5.30 105**	P	**Pn**	**19 45 03.9 +0.2**	
TIR	**Tirane**	**5.30 105**	*e*Pn	**Pn**	**19 45 04.2 +0.5**	
TIR	**Tirane**	**5.30 105**	P	**Pn**	**19 45 03.9 +0.2**	
RONA	**Rosalia, Austr**	**5.32 24**	*i* Pn	**Pn**	**19 45 04.0 0.0**	
	comp=N,12nm,0.4s,SNR=17					
RONA			*e*Sn	**Sn**	**19 46 05.0 -0.4**	
	comp=N,8.2nm,0.3s					
MPLH	**Magyarpolny**	**5.33 35**	P	**Pn**	**19 45 02.9 -1.1**	
SENIN	**Lac Senin/Sane**	**5.37 312**	Pn	**Pn**	**19 45 07.0 +2.1**	
FRGS	**Fruska Gora**	**5.38 63**	⇓P	**Pn**	**19 45 05.5 +0.8**	
FRGS	**Fruska Gora**	**5.38 63**	*e*Pn	**Pn**	**19 45 04.3 -0.4**	
FRGS	**Fruska Gora**	**5.38 63**	*e*Pn	**Pn**	**19 45 04.4 -0.3**	
SOP	**Sopron**	**5.39 26**	P	**Pn**	**19 45 04.7 -0.2**	
SOP			S	**Sn**	**19 46 06.2 -0.8**	
VLO	**Vlora**	**5.40 114**		**Pn**	**19 45 05.4 +0.4**	
VLO	**Vlora**	**5.40 114**	P	**Pn**	**19 45 05.4 +0.4**	
CONA	**Conrad Observa**	**5.41 21**	*i* Pn	**Pn**	**19 45 05.2 -0.1**	
	comp=N,18nm,0.5s,SNR=32					
CONA			*e*Sn	**Sn**	**19 46 05.8 -1.8**	
	comp=N,22nm,0.8s					
EGYH	**Egyhazaskeszo**	**5.44 32**	P	**Pn**	**19 45 05.4 -0.2**	
EGYH			S	**Sn**	**19 46 09.3 +1.1**	
ZUR	**Degenried**	**5.48 326**	P	**Pn**	**19 45 08.7 +2.5**	
GDM	**Grand'Maison**	**5.50 297**	P	**Pn**	**19 45 09.8 +3.1**	
TRUS	**Trudelj**	**5.51 74**	*e*Pn	**Pn**	**19 45 07.2 +0.6**	
TRUS			*e*Sn	**Sn**	**19 46 05.8 -4.1**	
SMRF	**Simiane la Rot**	**5.55 284**	*e

CABF	La Chapelle	6.19	309	P	Pn	19 45 16.2	+0.2
OG35	Corcelles	6.21	303	P	Pn	19 45 17.0	+0.8
KIZ	Kirchzarten	6.22	326	P	Pn	19 45 17.7	+1.4
KIZ	Kirchzarten	6.22	326	S	Sn	19 46 25.8	-1.5
MODS	Modra-Piesok	6.23	27	eP	Pn	19 45 15.7	-0.8
MODS				e		19 46 23.1	
KHC	Kasperske Hory	6.25	3		P	Pn	19 45 16.1	-0.6
KHC	Kasperske Hory	6.25	3	eP	Pn	19 45 16.3	-0.4
KHC				e		19 46 25.8	
KHC	Kasperske Hory	6.25	3	ePN	Pn	19 45 16.3	-0.4
KHC				eSN	Sn	19 46 25.8	-2.4
WET	Wettzell	6.25	359	ePn	Pn	19 45 16.2	-0.6
WET				eSn	Sn	19 46 25.7	-2.5
SKO	Skopje	6.28	96	i Pn	Pn	19 45 18.0	+0.9
CHMF	Charmoille	6.28	316	P	Pn	19 45 17.5	+0.3
CHMF				S	Sn	19 46 27.3	-1.7
BFO	Black Forest	6.36	330	Pn	Pn	19 45 18.9	+0.6
BFO	Black Forest	6.36	330	P	Pn	19 45 18.9	+0.6
BFO	Black Forest	6.36	330	ePn	Pn	19 45 20.6	+2.3
BFO				eSn	Sn	19 46 30.4	-0.6
VIVF	Saint-Julien-l	6.36	291	eP	Pn	19 45 19.0	+0.7
BOVS	Bovan	6.37	80	⇑P	Pn	19 45 18.2	-0.1
BOVS	Bovan	6.37	80	ePn	Pn	19 45 18.0	-0.3
BOVS				eSn	Sn	19 46 25.7	-5.3
RIVEL	MONT RIVEL	6.37	310	P	Pn	19 45 20.7	+2.3
SMOL	Smolenice	6.40	27	eP	Pn	19 45 18.0	-0.8
SMOL				e		19 46 32.1	
VOGT	Vogtsburg - To	6.42	326	P	Pn	19 45 20.4	+1.4
IGT	Igoumenitsa	6.44	119	P	Pn	19 45 20.6	+1.3
BARS	Barje	6.45	88	ePn	Pn	19 45 20.1	+0.7
MOF	Molkenrain	6.47	322	P	Pn	19 45 20.0	+0.1
MOF				S	Sn	19 46 33.6	-0.1
NEST	Nestorio	6.48	110	P	Pn	19 45 21.7	+1.7
MDVR	Moldovita	6.54	70	⇑P	Pn	19 45 21.1	+0.3
HINF	Hinteralfeld	6.58	321	eP	Pn	19 45 20.7	-0.5
HINF				eSn	Sn	19 46 31.6	-4.6
	comp=N,65nm,0.6s						
KRUC	Moravsky	6.59	20	ePN	Pn	19 45 21.1	-0.3
KRUC				eSN	Sn	19 46 33.4	-3.2
RONF	Ronchamp	6.60	319	P	Pn	19 45 21.9	+0.4
BZS	Buzias	6.73	63	⇑P	Pn	19 45 24.4	+1.2
ECH	Echery	6.74	324	Pn	Pn	19 45 23.2	-0.2
ECH				Sn	Sn	19 46 37.6	-2.5
ECH	Echery	6.74	324	P	Pn	19 45 23.6	+0.2
ECH				S	Sn	19 46 39.0	-1.2
ZAGS	Zajecar	6.76	79	ePn	Pn	19 45 23.7	0.0
JAVC	Velka Javorina	6.78	27	ePN	Pn	19 45 24.1	0.0
LASF	Ste Croix	6.79	283	eP	Pn	19 45 24.5	+0.3
WLS	Welschbruch	6.81	326	P	Pn	19 45 25.7	+1.3
CDF	Champ du Feu	6.84	326	eP	Pn	19 45 25.2	+0.3
CDF				eSn	Sn	19 46 38.4	-4.4
	comp=N,54nm,0.8s						
VRAC	Vranov	6.87	20	⇓P	Pn	19 45 29.6	+4.3
VRAC	Vranov	6.87	20	Pn	Pn	19 45 24.7	-0.6
	comp=N,1.3nm,0.3s,baz=203,slow=13,SNR=2.9						
VRAC				Sn	Sn	19 46 38.9	-4.5
	comp=N,1.0nm,0.3s,baz=302,slow=20,SNR=3.9						
	comp=N,1.6nm,0.3s						
VRAC	Vranov	6.87	20	ePN	Pn	19 45 24.8	-0.5
VRAC				eSN	Sn	19 46 38.6	-4.8
STIP	Stip	6.88	97	i Pn	Pn	19 45 27.5	+2.1
ROTZ	Rotzenmuhle	6.90	355	ePn	Pn	19 45 25.4	-0.2
ROTZ				eSn	Sn	19 46 40.4	-3.7
VYHS	Vyhne	6.91	34	eP	Pn	19 45 26.8	+1.0
VYHS				e		19 46 39.6	
GRF	Grafenberg Arr	6.92	350	eSn	Sn	19 46 42.4	-2.1
HAU	Haudompre	6.95	320	eP	Pn	19 45 26.5	+0.2
HAU				eSn	Sn	19 46 40.2	-5.2
	comp=N,60nm,0.5s						
SIRR	Siria	7.01	58	⇓P	Pn	19 45 28.2	+1.0
ZAPS	Zavoj	7.03	84	ePn	Pn	19 45 28.3	+0.8
ZAPS				eSn	Sn	19 46 42.9	-4.5
HERR	Herculane	7.05	70	⇑P	Pn	19 45 28.7	+1.0
TSLK	Tsoukalades, L	7.05	123	P	Pn	19 45 29.1	+1.3
BLKB	Belogradchik	7.07	81	⇓P	Pn	19 45 29.0	+1.0
DRAG	Dragano-Lefkad	7.09	124	P	Pn	19 45 29.2	+0.9
GOPC	GO Pecny, Ondr	7.12	9	eP	Pn	19 45 27.4	-1.3
GOPC	GO Pecny, Ondr	7.12	9	ePN	Pn	19 45 27.4	-1.3
MANZ	Manzenberg	7.12	355	eSn	Sn	19 46 45.7	-4.0
CIEL	Dossenheim-sur	7.14	328	P	Pn	19 45 30.0	+1.1
NYDR	Nydri-Lefkada	7.15	123	P	Pn	19 45 29.6	+0.6
PRU	Pruhonice	7.17	8	eP	Pn	19 45 28.1	-1.2
PRU				e		19 46 46.6	
PRU	Pruhonice	7.17	8	ePN	Pn	19 45 28.1	-1.2
PRU				eSN	Sn	19 46 46.6	-4.2
EVGI	Lefkada island	7.18	124	P	Pn	19 45 30.2	+0.7
NKC	Novy Kostel	7.35	357	eSN	Sn	19 46 53.6	-1.7
GZR	Gura Zlata	7.43	67	⇑P	Pn	19 45 33.4	+0.4
VTS	Vitosha	7.50	89	⇑P	Pn	19 45 35.0	+1.0
VTS	Vitosha	7.50	89	Pn	Pn	19 45 34.2	+0.1
VTS	Vitosha	7.50	89	P	Pn	19 45 34.2	+0.1
SMF	Signal de Mont	7.55	303	eP	Pn	19 45 34.5	0.0
SMF				eSn	Sn	19 46 54.1	-6.0
	comp=N,17nm,0.6s						
MORC	Moravsky Berou	7.55	23		Pn	19 45 34.1	-0.6
MORC	Moravsky Berou	7.55	23	P	Pn	19 45 34.1	-0.6
MORC	Moravsky Berou	7.55	23	ePN	Pn	19 45 34.0	-0.6
KRLC	Kraliky	7.63	18	eP	Pn	19 45 35.8	+0.1
KRLC	Kraliky	7.63	18	ePN	Pn	19 45 35.5	-0.2
PAGF	Fort de Pagny	7.63	320	eP	Pn	19 45 36.9	+1.2
	baz=142						
PAGF				eSn	Sn	19 46 56.5	-5.7
	comp=N,42nm,0.7s						
DEV	Deva	7.67	64	⇓P	Pn	19 45 37.8	+1.7
KEST	Kesra	7.71	203	Pn	Pn	19 45 40.5	+3.7
	comp=N,0.6nm,0.3s,baz=15,slow=9.8,SNR=9.6						
	comp=N,5.9nm,0.8s						
SFTF	Sexfontaines	7.73	316	eP	Pn	19 45 36.4	-0.6
	baz=136						
SFTF				eSn	Sn	19 46 59.1	-5.5
	comp=N,28nm,0.8s						
EVR	Evrytania	7.73	118	P	Pn	19 45 39.0	+1.8
DPC	Dobruska-Polom	7.79	16	eP	Pn	19 45 36.8	-1.1
DPC	Dobruska-Polom	7.79	16	ePN	Pn	19 45 36.8	-1.1
MOX	Moxa	7.81	353	eSn	Sn	19 47 02.2	-4.4
LOR	Lormes	7.83	307	eP	Pn	19 45 38.8	+0.3
	baz=126						
LOR				eSn	Sn	19 47 00.9	-6.3
	comp=N,15nm,0.4s						
LOR	Lormes	7.83	307	P	Pn	19 45 39.6	+1.1
DRGR		7.89	57	⇓P	Pn	19 45 40.7	+1.4
DRGR		7.89	57	P	Pn	19 45 40.7	+1.4
AVF	Avril sur Loir	7.91	303	eP	Pn	19 45 39.1	-0.4
AVF				eSn	Sn	19 47 02.6	-6.5
	comp=N,11nm,0.9s						
MEZF	Maizieres J'vi	7.92	318	eP	Pn	19 45 41.8	+2.2
	baz=136						
MEZF				eSn	Sn	19 47 02.8	-6.4
	comp=N,16nm,0.5s						
MTLF	Montolieu	7.94	277	eP	Pn	19 45 42.1	+2.2
MTLF	Montolieu	7.94	277	P	Pn	19 45 43.4	+3.5
SSF	Saint Saulge	7.94	305	ePn	Pn	19 45 37.7	-2.3
SSF	Saint Saulge	7.94	305	eP	Pn	19 45 43.1	+3.1
SSF				eSn	Sn	19 47 03.8	-6.0
	comp=N,10nm,0.6s						
SSF	Saint Saulge	7.94	305	P	Pn	19 45 38.7	-1.3
SSF				SN	Sn	19 47 08.9	-0.9
ABH	Alteburg	7.95	333	P	Pn	19 45 42.5	+2.3
SAVF	Savonnieres en	7.96	319	eP	Pn	19 45 42.3	+2.1
	baz=137						
SAVF				eSn	Sn	19 47 03.4	-6.8
	comp=N,13nm,0.5s						
CHVC	Chvalec	7.97	14	ePN	Pn	19 45 38.4	-1.9
BRG	Berggiesshubel	8.01	4	eP	Pn	19 45 41.7	+0.9
BRG				e		19 47 09.6	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SRS	Serrai	8.05	99	P	Pn	19 45 42.6	+1.1
EFP	Efpalio	8.07	121	P	Pn	19 45 43.9	+2.1
LOT	Lotru	8.12	68	⇑P	Pn	19 45 43.3	+0.8
BGF	Bois d'Agland	8.13	300	eP	Pn	19 45 42.3	-0.3
BGF				eSn	Sn	19 47 07.2	-7.3
	comp=Z,8.6nm,0.4s						
CAF	Calviac	8.19	288	eP	Pn	19 45 44.7	+1.4
CAF	Calviac	8.19	288	P	Pn	19 45 43.5	+0.2
CAF				SN	Sn	19 47 19.7	+3.8
VLAD	Vladila	8.34	79	⇓P	Pn	19 45 46.0	+0.7
CLL	Collm	8.42	360		Pn	19 45 46.0	-0.4
CLL	Collm	8.42	360	eP	Pn	19 45 45.0	-1.4
CLL				e		19 47 16.0	
CLL	Collm	8.42	360	ePn	Pn	19 45 45.0	-1.4
CLL				eSn	Sn	19 47 16.0	-5.4
CLL				eSg	Sg	19 48 11.0	-3.5
	comp=Z,22nm,1.1s						
TCF	Toulx Ste Croi	8.45	297	eSn	Sn	19 47 14.6	-7.6
	comp=Z,7.0nm,0.9s						
ARR	Arges	8.69	70	⇓P	Pn	19 45 51.5	+1.2
MONQ	Montcuq	8.72	284	P	Pn	19 45 51.6	+1.0
VOIR		8.99	69	⇑P	Pn	19 45 55.8	+1.3
GIVF	Givet	9.17	325	eP	Pn	19 45 57.6	+0.9
GIVF				eSn	Sn	19 47 33.3	-6.6
	comp=Z,15nm,0.6s						
BAIF	Baives	9.40	323	eP	Pn	19 45 58.9	-1.1
BAIF				eSn	Sn	19 47 38.1	-7.5
	comp=Z,9.2nm,0.7s						
RDO	Rodhopi	9.46	96	Pn	Pn	19 46 01.1	+0.3
MLR	Muntele Rosu	9.62	70	⇓P	Pn	19 46 03.7	+0.6
MLR	Muntele Rosu	9.62	70	Pn	Pn	19 46 03.7	+0.6
	comp=Z,0.2nm,0.3s,baz=258,slow=13,SNR=3.9						
	comp=Z,4.7nm,0.7s						
MLR	Muntele Rosu	9.62	70	Pn	Pn	19 46 03.1	0.0
BURAR	Bucovina Array	9.79	57	⇓P	Pn	19 46 07.4	+2.0
BURAR	Bucovina Array	9.79	57	P	Pn	19 46 07.3	+2.0
BUR08	Bucovina Ar. S	9.79	57	Pn	Pn	19 46 07.8	+2.4
NEHR	Nehoiu	9.85	71	⇑P	Pn	19 46 06.9	+0.8
ESDC	Sonseca Array	13.19	262	Pn	Pn	19 46 52.3	+0.5
	baz=68,slow=13,SNR=1.9						
	comp=Z,0.3nm,0.8s						
AKASG	Malin Array Be	13.54	49	Pn	Pn	19 46 56.1	-0.3
	comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=1.8						
	comp=Z,0.1nm,0.3s						
BRTR	Keskin Array B	15.79	95	Pn	P	19 47 29.0	-1.9
	comp=Z,0.1nm,0.3s,baz=242,slow=13,SNR=1.9						
	comp=Z,0.3nm,0.3s						
EKA	Eskdalemuir Ar	16.30	325	Pn	Pn	19 47 33.3	0.0
	baz=135,slow=14						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	17.27	1	P	Pn	19 47 44.0	-1.5
	comp=Z,5.0nm,1.1s,baz=198,slow=14,SNR=2.3						
HFS	Hagfors	17.27	1	P	Pn	19 47 44.0	-1.5
OBN	Obninsk	19.57	43	⇑eP	P	19 48 11.9	-0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MMAI	Mount Meron Ar	20.15	112	P	Pn	19 48 19.8	-0.9
	comp=Z,3.2nm,0.7s,baz=300,slow=14,SNR=5.0						
	comp=Z,3.2nm,0.7s						
FINES	FINESS Array B	20.15	18	P	P	19 48 18.6	+0.1
	comp=Z,0.2nm,0.3s,baz=208,slow=8.2,SNR=8.6						
	comp=Z,1.5nm,0.6s						
KVAR	Kislovodsk Arr	21.51	77	P	P	19 48 35.2	+1.7
	comp=Z,5.6nm,1.0s,baz=283,slow=19,SNR=1.8						
	comp=Z,5.6nm,1.0s						
ASF	Jabal al Asfar	21.66	112	P	P	19 48 36.5	+1.3
	comp=Z,1.5nm,0.6s,baz=307,slow=15,SNR=3.0						
	comp=Z,1.5nm,0.6s						
KBZ	Khabaz	21.69	78	P	P	19 48 36.5	+1.2
	comp=Z,2.1nm,0.8s,baz=261,slow=13,SNR=2.5						
	comp=Z,2.1nm,0.8s						
BELG	Belogornoye	24.94	56	P	P	19 49 08.4	+0.8
	comp=Z,8.6nm,0.8s,baz=266,slow=9.9,SNR=3.9						
	comp=Z,8.6nm,0.8s						
BELG	Belogornoye	24.94	56	⇑eP	P	19 49 09.4	+1.7
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	Torodi Ar. Bea	31.22	202	P	P	19 50 05.0	+0.8
	comp=Z,1.3nm,0.8s,baz=12,slow=9.0,SNR=6.9						
	comp=Z,1.3nm,0.8s						
ARU	Arti	31.79	49	P	P	19 50 08.6	-0.2
	comp=Z,2.4nm,0.5s,baz=267,slow=7.8,SNR=6.9						
	comp=Z,2.4nm,0.5s						
ARU	Arti	31.79	49	P	P	19 50 08.5	-0.2
ARU				IAmb	IAmb	19 50 14.4	
	comp=Z,3.0nm,0.7s						
ARU	Arti	31.79	49	⇑eP	P	19 50 09.2	+0.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GEYT	Alibeck	34.35	83	P	P	19 50 32.1	+0.6
	comp=Z,0.7nm,0.4s,baz=289,slow=4.4,SNR=2.2						
	comp=Z,0.7nm,0.4s						
BRVK	Borovoye	38.67	54	P	P	19 51 09.2	+1.3
BRVK				IAmb	IAmb	19 51 12.3	
	comp=Z,5.5nm,1.1s						
BRVK	Borovoye	38.67	54	P	P	19 51 09.3	+1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	Karatay Array	41.30	69	P	P	19 51 30.5	+0.5
KK31	Karatay Array	41.30	69	P	P	19 51 30.5	+0.5
KK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KKAR	Karatay Array	41.30	69	P	P	19 51 30.5	+0.5
KKAR	Karatay Array	41.30	69	P	P	19 51 32.0	+2.0
KKAR				IAmb	IAmb	19 51 42.4	
	comp=Z,1.1nm,0.7s						
KKAR	Karatay Array	41.30	69	P	P	19 51 30.5	+0.5
KKAR						19 51 32.0	
ZALV	Zalesovo Beam	46.93	50	P	P	19 52 14.1	-0.9
	comp=Z,0.8nm,0.7s,baz=256,slow=5.8,SNR=2.1						
	comp=Z,0.8nm,0.7s						
MK31	Makanchi Array	47.80	60	P	P	19 52 21.1	-0.8
MK31				IAmb	IAmb	19 52 33.0	
	comp=Z,3.5nm,1.4s						
MK31	Makanchi Array	47.80	60	P	P	19 52 21.1	-0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MKAR	Makanchi Array	47.80	60	P	P	19 52 22.5	+0.6
	comp=Z,0.9nm,0.7s,baz=286,slow=6.3,SNR=7.0						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	47.80	60	P	P	19 52 21.3	-0.6
SONM	Songino Array	61.82	50	P	P	19 54 04.7	+1.1
	comp=Z,0.8nm,0.8s,baz=309,slow=9.4,SNR=4.6						
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	66.91	336	P	P	19 54 36.9	+0.5
	comp=Z,0.7nm,0.7s,baz=41,slow=5.7,SNR=2.9						
	comp=Z,0.7nm,0.7s						
FFC	Flin Flon	68.16	326	P	P	19 54 42.7	-1.8
FFC	Flin Flon	68.16	326	P	P	19 54 42.7	-1.8
ILAR	Eielson Array	71.52	351	P	P	19 55 05.5	+0.5
	comp=Z,0.3nm,0.7s,baz=356,slow=5.4,SNR=2.8						
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	74.73	79	P	P	19 55 25.3	+0.5
	comp=Z,0.7nm,0.7s,baz=302,slow=7.1,SNR=7.2						
	comp=Z,0.7nm,0.7s						

IDC 26 19:45:42.4±170.0, 45°.98N×152°.00E, h0km, Error ellipse: s-maj=379.3km s-min=17.7km az=121.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N2	WAKE ISLAND Hy	28.91	150	H	H	20 21 55.8	
	baz=338,slow=76,SNR=81						
H11N1	WAKE ISLAND Hy	28.93	150	H	H	20 21 56.8	
	baz=338,slow=76,SNR=68						
H11N3	WAKE ISLAND Hy	28.93	150	H	H	20 21 56.7	
	baz=338,slow=76,SNR=59						
H11S1	WAKE ISLAND Hy	29.98	151	H	H	20 23 16.0	
	baz=338,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	29.99	151	H	H	20 23 16.9	
	baz=338,slow=76,SNR=74						
H11S2	WAKE ISLAND Hy	30.00	151	H	H	20 23 17.5	
	baz=338,slow=76,SNR=89						
H03N2	Juan Fernandez	139.52	90	H	H	22 40 16.3	
	baz=308,slow=77,SNR=18						
H03N3	Juan Fernandez	139.53	90	H	H	22 40 18.5	
	baz=308,slow=77,SNR=28						
H03N1	Juan Fernandez	139.54	90	H	H	22 40 18.7	
	baz=308,slow=77,SNR=22						

*IDC **26** 19:49:25.8±1.5, 42°.97N×13°.27E, h0km, mb3.3/2, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=37.1km s-min=14.9km az=95.0*

*ROM **26** 19:49:26.6±0.0, 42°.963N±0°.002×13°.056E±0°.003, h9km, ML3.5/54, Error ellipse: s-maj=0.2km s-min=0.1km az=72.0*

*LDG **26** 19:49:26.5±0.1, 42°.95N×12°.99E, h2km, Ml3.2/11, Error ellipse: s-maj=4.1km s-min=2.5km az=42.0*

*PRU **26** 19:49:28.3±0.0, 43°.07N×13°.04E, h1km*

ISC 26 19:49:26.9±0.7, 42°.96N±0°.01×13°.05E±0°.02, h11km±4km, n160, σ1§81/205, 8C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	Monte Fema	0.00	124	⇓P	Pg	19 49 28.7	-0.3
FEMA				S	Sg	19 49 29.9	-0.5
FDMO	Fiordimonte	0.08	23	⇓P	Pg	19 49 29.2	-0.2
FDMO				S	Sg	19 49 30.7	-0.4
CESI	CESI - Serrava	0.11	291	⇑P	Pg	19 49 30.2	+0.4
CESI				S	Sg	19 49 32.5	+0.7
CESI				AML	AML		
	comp=E,52350μm,0.3s						
CESI				AML	AML		
CESI				AML	AML		
	comp=E,52400μm,0.3s						
MC2	Monte Cornacci	0.12	116	P	Pg	19 49 30.1	0.0
MC2				S	Sg	19 49 32.0	-0.3
T1245	Castelsantange	0.15	136	P	Pg	19 49 30.5	0.0
T1245				S	Sg	19 49 33.0	+0.1
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
SEF1	Sefro	0.20	339	P	Pg	19 49 31.4	+0.3
SEF1				S	Sg	19 49 34.8	+0.8
SEF1				AML	AML		
	comp=N,23600μm,1.3s						
SEF1				AML	AML		
	comp=E,23700μm,0.2s						
T1215	Vallo di Nera,	0.21	219	⇑P	Pg	19 49 31.8	+0.4
T1215				S	Sg	19 49 35.4	+1.1
T1215				AML	AML		
	comp=E,31800μm,0.5s						
T1215				AML	AML		
	comp=N,41100μm,0.4s						
T1215				AML	AML		
	comp=E,31700μm,0.5s						
T1215				AML	AML		
	comp=E,31850μm,0.5s						
T1215				AML	AML		
	comp=E,31750μm,0.5s						
T1215				AML	AML		
	comp=N,40650μm,0.4s						
T1215				AML	AML		
	comp=E,31700μm,0.5s						
T1215				AML	AML		
	comp=N,40600μm,0.4s						
T1215				AML	AML		
	comp=N,41050μm,0.4s						
T1215				AML	AML		
	comp=E,31800μm,0.5s						
T1212	Cascia, Frazio	0.21	180	⇑P	Pg	19 49 31.7	+0.3
T1212				S	Sg	19 49 35.4	+0.9
MMO1	Montemonaco	0.22	107	⇑P	Pg	19 49 31.5	0.0
MMO1				S	Sg	19 49 34.9	+0.2
PIO1	Pioraco	0.22	348	P	Pg	19 49 31.7	+0.1
PIO1				S	Sg	19 49 35.5	+0.9
PIO1				AML	AML		
	comp=E,7750μm,0.8s						
PIO1				AML	AML		
	comp=N,11215μm,0.7s						
PIO1				AML	AML		
	comp=N,11255μm,0.7s						
PIO1				AML	AML		
	comp=E,7750μm,0.9s						
AM05	Amandola Campo	0.23	87	⇑P	Pg	19 49 31.7	+0.1
AM05				S	Sg	19 49 35.3	+0.5
AM05				AML	AML		
	comp=E,9615μm,1.1s						
AM05				AML	AML		
	comp=N,7150μm,0.4s						
AM05				AML	AML		
	comp=E,9635μm,1.1s						
AM05				AML	AML		
	comp=N,8270μm,0.7s						
AM05				AML	AML		
	comp=E,34100μm,1.1s						
AM05				AML	AML		
	comp=N,7155μm,0.4s						
AM05				AML	AML		
	comp=N,8275μm,0.7s						
AM05				AML	AML		
	comp=N,7130μm,0.4s						
AM05				AML	AML		
	comp=E,9610μm,1.1s						
AM05				AML	AML		
	comp=E,34150μm,1.1s						
GUMA	Gualdo di Mace	0.23	65	⇑P	Pg	19 49 32.1	+0.3
GUMA				S	Sg	19 49 36.1	+1.0
GUMA				AML	AML		
	comp=N,43900μm,0.6s						
GUMA				AML	AML		
	comp=E,34100μm,0.5s						
GUMA				AML	AML		
	comp=N,43950μm,0.6s						
GUMA				AML	AML		
	comp=E,38550μm,0.7s						
GUMA				AML	AML		
	comp=E,34050μm,0.5s						
GUMA				AML	AML		
	comp=N,48350μm,0.6s						
T1214	Arquata del Tr	0.24	150	P	Pg	19 49 32.2	+0.3
T1214				S	Sg	19 49 36.0	+0.8
FIU1	Fiuminata	0.24	340	P	Pg	19 49 32.0	+0.1
FIU1				S	Sg	19 49 36.3	+1.0
FIU1				AML	AML		
	comp=E,5320μm,1.1s						
FIU1				AML	AML		
	comp=N,5670μm,0.4s						
FIU1				AML	AML		
	comp=N,5670μm,0.4s						
MDAR	Monte D'Aria	0.24	17	P	Pg	19 49 31.9	0.0
MDAR				S	Sg	19 49 35.8	+0.5
MDAR				AML	AML		
	comp=E,21050μm,0.3s						
MDAR				AML	AML		
	comp=N,20600μm,0.2s						
MDAR				AML	AML		
	comp=E,21000μm,0.3s						
MDAR				AML	AML		
	comp=N,20650μm,0.2s						
T1217	Poggiodomo (PG	0.27	198	⇑P	Pg	19 49 32.8	+0.4
T1217				S	Sg	19 49 37.3	+1.2
T1217				AML	AML		
	comp=E,43150μm,0.8s						
T1217				AML	AML		
	comp=N,79150μm,0.4s						
T1217				AML	AML		
	comp=E,42800μm,0.8s						
T1217				AML	AML		
	comp=N,79150μm,0.5s						
T1217				AML	AML		
	comp=N,80450μm,0.2s						
T1217				AML	AML		
	comp=E,42750μm,0.8s						
T1217				AML	AML		
	comp=N,79100μm,0.4s						
GAG1	Gagliole	0.27	3	P	Pg	19 49 32.9	+0.3
GAG1				S	Sg	19 49 37.6	+1.3
GAG1				AML	AML		
	comp=E,16650μm,0.4s						
GAG1				AML	AML		
	comp=N,21200μm,1.2s						
GAG1				AML	AML		
	comp=E,16600μm,0.4s						
GAG1				AML	AML		
	comp=N,21150μm,1.2s						
T1244	Arquata del Tr	0.28	138	P	Pg

comp=E,22700µm,0.4s
T1201 Domo (RI) 0.34 154 P **Pg 19 49 34.1 +0.3**
T1201 S **Sg 19 49 39.9 +1.5**
T1204 Amatrice, Fraz 0.35 145 P **Pg 19 49 34.0 0.0**
T1204 S **Sg 19 49 39.6 +0.9**
T1204 AML AML
comp=E,22150µm,0.2s
T1204 AML AML
comp=N,16750µm,0.5s
T1204 AML AML
comp=E,22200µm,0.2s
MNTP Montappone 0.36 61 ⇑P **Pb 19 49 34.5 -0.8**
MNTP S **Sb 19 49 41.0 0.0**
MNTP AML AML
comp=E,13250µm,0.4s
MNTP AML AML
comp=N,13750µm,1.2s
MNTP AML AML
comp=E,13250µm,0.4s
LNSS Leonessa 0.36 181 P **Pg 19 49 34.2 +0.1**
LNSS S **Sg 19 49 40.0 +1.1**
LNSS AML AML
comp=N,44950µm,0.1s
LNSS AML AML
comp=E,37550µm,1.1s
EL6 Elcito 0.37 6 P **Pg 19 49 34.3 0.0**
EL6 S **Sb 19 49 40.3 -1.1**
SMA1 SAN MARTINO 0.40 147 P **Pg 19 49 34.7 -0.1**
SMA1 S **Sg 19 49 41.1 +1.0**
SMA1 AML AML
comp=E,14850µm,0.5s
SMA1 AML AML
comp=N,13450µm,0.4s
TRE1 Treia 0.40 29 P **Pg 19 49 35.1 +0.3**
TRE1 AML AML
comp=E,10715µm,1.4s
TRE1 AML AML
comp=N,8100µm,0.8s
TRE1 AML AML
comp=N,8120µm,0.8s
TRE1 AML AML
comp=E,10735µm,1.4s
T1243 Rocca Santa Ma 0.40 132 P **Pg 19 49 34.7 -0.2**
T1243 S **Sg 19 49 40.8 +0.6**
ARRO Arrone 0.44 208 P **Pg 19 49 35.7 +0.2**
ARRO S **Sg 19 49 42.8 +1.5**
T1211 Morro Reatino 0.45 198 P **Pg 19 49 36.0 +0.2**
T1211 S **Sg 19 49 43.2 +1.4**
T1211 AML AML
comp=E,16300µm,0.2s
T1211 AML AML
comp=N,20050µm,1.4s
T1211 AML AML
comp=N,20050µm,1.4s
T1211 AML AML
comp=E,16350µm,0.2s
T1211 AML AML
comp=N,20000µm,1.3s
T1211 AML AML
comp=E,16250µm,0.2s
T1211 AML AML
comp=N,20100µm,1.3s
OFFI Offida 0.47 93 P **Pb 19 49 36.8 -0.5**
OFFI AML AML
comp=E,14950µm,0.4s
OFFI AML AML
comp=N,23900µm,0.6s
RM33 Pellescritta (0.47 165 P **Pg 19 49 36.2 0.0**
RM33 S **Sg 19 49 43.6 +1.2**
RM33 AML AML
comp=E,9840µm,0.6s
RM33 AML AML
comp=N,9620µm,0.1s
RM33 AML AML
comp=E,9905µm,0.6s
RM33 AML AML
comp=N,9520µm,0.1s
RM33 AML AML
comp=E,9850µm,0.6s
RM33 AML AML
comp=N,9625µm,0.1s
RM33 AML AML
comp=E,9910µm,0.6s
RM33 AML AML
comp=N,9545µm,0.1s
MMUR Monte Murano 0.48 356 P **Pg 19 49 36.5 +0.2**
MMUR AML AML
comp=E,8085µm,0.3s
MMUR AML AML
comp=E,8080µm,0.3s
MMUR AML AML
comp=N,5060µm,0.6s
MURB Monte Urbino 0.48 308 P **Pg 19 49 36.7 +0.3**
MURB S **Sg 19 49 44.9 +2.0**
MURB AML AML
comp=E,13000µm,1.2s
MURB AML AML
comp=N,12850µm,1.6s
MURB AML AML
comp=E,13000µm,1.2s
MURB AML AML
comp=N,13600µm,1.0s
MURB AML AML
comp=N,12850µm,1.6s
MURB AML AML
comp=E,13400µm,1.2s
CESX Cesi 0.49 224 P **Pg 19 49 36.6 +0.1**
CESX S **Sg 19 49 44.2 +1.1**
CESX AML AML
comp=E,16500µm,1.4s
CESX AML AML
comp=N,14050µm,0.5s
T1246 Crognaleto (TE 0.50 139 P **Pg 19 49 36.6 -0.2**
T1246 S **Sg 19 49 44.0 +0.5**
CAMP Campotosto 0.51 148 P **Pg 19 49 36.5 -0.3**
CAMP S **Sg 19 49 44.1 +0.6**
CAMP AML AML
comp=N,4220µm,0.5s
CAMP AML AML
comp=E,3690µm,1.5s
ATSC Scheggia e Pas 0.53 330 P **Pg 19 49 37.7 +0.5**
ATFO Monte Foce - G 0.53 319 P **Pg 19 49 37.5 +0.2**
ATFO AML AML
comp=E,2290µm,1.1s
ATFO AML AML
comp=N,1800µm,1.2s
TERO Teramo 0.54 130 P **Pg 19 49 37.0 -0.4**
TERO AML AML
comp=E,14900µm,0.4s
TERO AML AML
comp=N,23350µm,0.3s
TERO AML AML
comp=E,14950µm,0.4s
TERO AML AML
comp=E,16600µm,0.4s
TERO AML AML
comp=N,21550µm,0.3s
ARVD Arcevia 0.54 352 P **Pg 19 49 37.6 +0.2**
ARVD AML AML
comp=N,1245µm,0.8s
ARVD AML AML
comp=E,1520µm,0.6s
T1247 Pizzolo (AQ) 0.56 160 P **Pg 19 49 37.8 +0.1**
T1247 AML AML
comp=N,9120µm,0.4s
T1247 AML AML
comp=E,9875µm,0.5s
ATTE AVT- Monte Tez 0.56 295 P **Pg 19 49 37.9 +0.1**
ATTE AML AML
comp=E,1990µm,1.3s
ATTE AML AML
comp=N,2090µm,1.1s
ATTE AML AML
comp=E,1985µm,1.3s
CIMA Civitanova Mar 0.57 53 P **Pb 19 49 38.7 -0.3**
CADA Capodarco di F 0.57 66 P **Pb 19 49 39.2 +0.1**
PP3 Marolino 0.58 45 P **Pb 19 49 38.9 -0.3**
PP3 AML AML
comp=N,5245µm,0.8s
PP3 AML AML
comp=E,5825µm,0.2s
PP3 AML AML
comp=N,5625µm,1.0s
PP3 AML AML
comp=E,5985µm,0.2s
PP3 AML AML
comp=N,5630µm,1.0s
PP3 AML AML
comp=N,5250µm,0.9s
FRON Frontone 0.60 337 P **Pg 19 49 38.7 +0.1**
ATVO AVT- Monte Val 0.63 312 P **Pg 19 49 39.0 -0.1**
ATVO AML AML
comp=E,1870µm,0.8s
ATVO AML AML
comp=N,1680µm,0.6s
ATVA AVT- Monte Val 0.64 300 P **Pg 19 49 39.4 0.0**
GIGS Gran Sasso 0.64 143 P **Pg 19 49 38.6 -0.9**
GIGS AML AML
comp=E,2295µm,1.0s
GIGS AML AML
comp=N,1750µm,0.4s
TRTR Tortoreto Alta 0.66 103 P **Pb 19 49 40.5 0.0**
AQU L'Aquila 0.67 157 P **Pg 19 49 39.6 -0.2**
AQU AML AML
comp=E,2870µm,0.6s
AQU AML AML
comp=N,3365µm,0.3s
AQU AML AML
comp=E,2750µm,0.6s
AQU AML AML
comp=E,2875µm,0.6s
AQU AML AML
comp=N,3360µm,0.3s
AQU AML AML
comp=N,3345µm,0.3s
ATPI Pietralunga - 0.68 316 P **Pg 19 49 40.2 +0.1**
PIEI Pieia 0.68 327 P **Pg 19 49 40.0 -0.2**
PIEI AML AML
comp=N,970µm,1.6s
PIEI AML AML
comp=E,1245µm,1.6s
MGAB Montegabbione 0.69 266 P **Pg 19 49 40.3 +0.1**
FIAM Fiamignano 0.70 176 P **Pg 19 49 40.2 -0.2**
FIAM S **Sg 19 49 50.7 +1.1**
FIAM AML AML
comp=E,3690µm,0.2s
FIAM AML AML
comp=N,3235µm,0.8s
AOI Ancona 0.71 35 P **Pg 19 49 40.5 -0.2**
FSSB Fossombrone 0.75 345 P **Pg 19 49 41.6 +0.1**
FSSB AML AML
comp=E,4020µm,1.5s
FSSB AML AML
comp=N,5920µm,0.3s
SENI Senigallia 0.75 10 P **Pg 19 49 41.3 -0.2**
SENI AML AML
comp=E,5310µm,1.6s
SENI AML AML
comp=N,6270µm,0.3s
SENI AML AML
comp=E,5305µm,1.6s
ATMC Monte Cedrone 0.79 308 P **Pg 19 49 42.2 0.0**
FAGN Fagnano 0.80 150 P **Pg 19 49 42.5 0.0**
VCEL Villa Celiera 0.82 134 P **Pg 19 49 42.2 -0.5**
VCEL AML AML
comp=E,5710µm,0.4s
VCEL AML AML
comp=N,5820µm,1.6s
VCEL AML AML
comp=E,5715µm,0.4s
SRES S.Oreste - Sor 0.83 209 P **Pg 19 49 41.9 -1.0**
SRES AML AML
comp=E,4175µm,0.9s
SRES AML AML
comp=N,2845µm,1.2s
SACS San Casciano d 0.84 263 P **Pg 19 49 43.0 -0.1**
SACS AML AML
comp=E,1600µm,0.9s
SACS AML AML
comp=N,2095µm,0.7s
SACS AML AML
comp=E,1725µm,0.8s
SACS AML AML
comp=N,2055µm,0.7s
T0110 Collepietro 0.92 143 P **Pg 19 49 43.9 -0.6**
T0110 AML AML
comp=N,6435µm,0.4s
T0110 AML AML
comp=E,5470µm,1.3s
MTCE Montecelio 0.97 193 P **Pg 19 49 45.2 -0.4**
PTQR Pietraquaria 0.98 164 P **Pg 19 49 47.0 +1.2**
LATE Laterza 0.98 249 P **Pg 19 49 45.8 0.0**
CERT Cerreto 1.02 183 P **Pg 19 49 46.5 0.0**
CERT AML AML
comp=E,3515µm,0.4s
CERT AML AML
comp=N,2930µm,0.4s
MCIV Monte Civitell 1.02 260 P **Pg 19 49 46.5 -0.1**
MCIV AML AML
comp=N,624µm,1.6s
MCIV AML AML
comp=E,842µm,0.8s
SF13 Bagnolo 1.06 263 P **Pg 19 49 47.3 +0.1**
SF14 Selvena 1.07 259 P **Pg 19 49 47.3 -0.3**
SF01 Poggio Pratacc 1.10 263 AML AML
comp=E,902µm,0.6s
SF01 AML AML
comp=N,1520µm,0.6s
RCAV Rocca di Cave 1.12 184 P **Pg 19 49 48.8 +0.4**
RCAV AML AML
comp=N,2260µm,0.7s
RCAV AML AML
comp=E,2390µm,1.1s
INTR Introdacqua 1.15 146 P **Pg 19 49 47.4 -1.6**
INTR AML AML
comp=E,3485µm,1.0s
INTR AML AML
comp=E,3µm,1.0s
INTR AML AML
comp=N,3µm,0.5s
INTR AML AML
comp=N,4970µm,0.5s
ARCI Arcidosso 1.16 265 P **Pg 19 49 49.4 +0.2**
ARCI AML AML
comp=E,376µm,0.9s
ARCI AML AML
comp=N,264µm,0.9s
VVLD Villa Vallelon 1.17 158 P **Pn 19 49 51.2 +1.7**
TOLF Tolfa 1.19 221 P **Pg 19 49 49.1 -0.6**
TOLF AML AML
comp=E,1143µm,0.5s
TOLF AML AML
comp=N,1118µm,0.4s
CAFR Castel Frentan 1.21 127 P **Pn 19 49 52.1 +2.3**
ASQU Asqua 1.24 313 P **Pg 19 49 51.5 +0.8**
LPEL Lama dei Pelig 1.25 137 P **Pg 19 49 49.9 -1.0**
LPEL AML AML
comp=E,1965µm,0.7s
LPEL AML AML
comp=N,2045µm,1.6s
POFI Posta Fibreno 1.34 158 P **Pg 19 49 54.5 +1.8**
LRP Arpino 1.38 163 P **Pg 19 49 55.0 +1.7**
GIUL Giuliano Di Ro 1.41 174 P **Pn 19 49 54.1 +1.5**
RUFI Rufina 1.42 309 P **Pn 19 49 53.3 +0.5**
RNI2 Rionero Sannit 1.50 147 P **Pg 19 49 57.2 +1.3**
MAON Monte Argentar 1.51 250 P **Pn 19 49 53.6 -0.4**
MAON AML AML
comp=E,252µm,0.9s
MAON AML AML
comp=N,198µm,1.4s
CERA Filignano 1.54 152 P **Pn 19 49 56.2 +1.7**
FRES Fresagrandinar 1.56 129 P **Pb 19 49 56.5 +0.7**
TRIF Trifonti 1.58 276 P **Pn 19 49 55.5 +0.6**
TRIF AML AML
comp=E,238µm,0.6s
TRIF AML AML
comp=N,250µm,0.7s
TRIV Trivento 1.64 137 P **Pg 19 49 58.7 +0.4**
MELA Melanico ??? S 1.99 128 P **Pb 19 50 03.1 -0.1**
PGF Pioggiola 3.01 263 *e*P **Pn 19 50 16.2 +1.5**
PGF *e*Sn **Sn 19 50 47.3 -3.5**
comp=N,28nm,0.9s
ROVR Rover Verones 3.03 333 P **Pn 19 50 17.4 +2.3**
DOSS Dosso del Somm 3.21 336 P **Pn 19 50 19.6 +2.1**
SALO Salr 3.21 327 P **Pn 19 50 19.5 +2.1**
CTI Castel Tesino 3.24 343 P **Pn 19 50 19.4 +1.5**
LJU Ljubljana 3.26 18 P **Pn 19 50 18.5 +0.5**
LJU AML AML
comp=E,704µm,0.6s
LJU AML AML
comp=N,730µm,0.7s
STAL STALIGIAL 3.30 356 P **Pn 19 50 19.3 +0.6**
STAL AML AML
comp=E,146µm,0.8s
STAL AML AML
comp=N,109µm,1.5s
LUSI Trento, Gardas 3.35 334 P **Pn 19 50 21.9 +2.6**
AMUR Altamura 3.36 127 P **Pn 19 50 21.5 +2.1**
STON Ston 3.42 90 AML AML
comp=N,67µm,1.1s
STON AML AML
comp=E,60µm,0.7s
MYKA Terra Mystica 3.69 6 *e*Pn **Pn 19 50 25.3 +1.3**
comp=E,8.5nm,0.4s
NOCI Noci 3.71 125 P **Pn 19 50 25.3 +1.1**
ABTA Abfaltersbach 3.80 354 *e*Pn **Pn 19 50 27.0 +1.5**
comp=E,6.1nm,0.3s
SOKA Soboth 3.97 20 *e*Pn **Pn 19 50 30.4 +2.5**
comp=E,1.6nm,0.3s
MUGIO Muggio 4.12 317 P **Pn 19 50 31.1 +1.2**
KBA Koelnbreinsper 4.12 3 *e*Pn **Pn 19 50 31.4 +1.4**
comp=E,7.2nm,0.3s
ROSI Rosskopf 4.13 344 P **Pn 19 50 32.6 +2.4**
SBF Sospel 4.18 284 *e*P **Pn 19 50 30.7 -0.1**
FETA Feichten 4.38 339 *e*Pn **Pn 19 50 34.8 +1.3**
comp=E,4.9nm,0.7s
WTTA Wattenberg 4.41 347 *e*Pn **Pn 19 50 37.4 +3.4**
comp=E,2.5nm,0.2s
DAVOX Davos/Dischmat 4.43 331 Pn **Pn 19 50 37.7 +3.4**
comp=E,1.7nm,0.3s,baz=294,slow=4.2,SNR=8.5
DAVOX Sn **Sn 19 51 31.6 +5.6**
comp=E,0.7nm,0.3s,baz=120,slow=23,SNR=6.4
comp=E,3.7nm,0.4s
VSL Villasalto 4.43 220 P **Pn 19 50 36.0 +1.8**
SQTA Sankt Quirin 4.45 344 *e*Pn **Pn 19 50 37.5 +3.0**
comp=E,3.6nm,0.2s
WATA Walderalm 4.49 347 *e*Pn **Pn 19 50 38.1 +3.0**
comp=E,1.8nm,0.1s
MOTA Moosalm 4.59 343 *e*Pn **Pn 19 50 39.9 +3.4**
comp=E,11nm,0.6s
ARSA Arzberg 4.63 21 *e*Pn **Pn 19 50 36.2 -0.7**
comp=E,2.0nm,0.3s
BIOA Bad Ischl, Aus 4.75 5 *e*Pn **Pn 19 50 39.6 +1.1**
comp=E,6.0nm,0.2s
LMR La Mourre 4.80 277 *e*P **Pn 19 50 38.5 -0.6**
RETA Reutte 4.80 341 *e*Pn **Pn 19 50 41.3 +2.0**
comp=E,3.1nm,0.3s
MBDF Montbardon 4.87 293 *e*P **Pn 19 50 42.6 +2.3**
MBDF *e*Sn **Sn 19 51 32.4 -4.3**
comp=E,13nm,1.0s
MOA Molln 4.96 10 *e*Pn **Pn 19 50 41.7 +0.2**
comp=E,2.1nm,0.3s
LPG La Plagne 5.18 301 *e*P **Pn 19 50 47.5 +2.8**
LPG *e*Sn **Sn 19 51 40.3 -4.4**
comp=E,16nm,0.9s
LPL La Plagne 5.20 302 *e*P **Pn 19 50 47.4 +2.5**
LPL *e*Sn **Sn 19 51 40.8 -4.3**
comp=E,3.3nm,0.3s
RONA Rosalia, Austr 5.26 25 *e*Pn **Pn 19 50 45.5 0.0**
comp=E,0.7nm,0.1s
CONA Conrad Observa 5.34 21 *e*Pn **Pn 19 50 46.6 -0.2**
comp=E,1.2nm,0.2s
ORIF Oris-en-Rattie 5.53 293 *e*P **Pn 19 50 52.4 +3.1**
ORIF *e*Sn **Sn 19 51 47.9 -5.0**
comp=E,25nm,1.3s
SMRF Simiane la Rot 5.53 283 *e*P **Pn 19 50 50.6 +1.3**
SMRF *e*Sn **Sn 19 51 48.3 -4.6**
comp=E,86nm,1.9s
GERES GERESS Array B 5.90 4 Pn **Pn 19 50 54.4 0.0**
comp=E,0.7nm,0.3s,baz=176,slow=14,SNR=10
GERES Sn **Sn 19 52 01.2 -0.8**
comp=E,1.9nm,0.3s,baz=179,slow=26,SNR=9.2
comp=E,1.1nm,0.3s
CKRC Cesky Krumlov 5.92 8 *e*PN **Pn 19 50 54.2 -0.4**
CKRC *e*SN **Sn 19 52 00.6 -1.9**
CABF La Chapelle 6.15 309 *e*P **Pn 19 51 00.4 +2.6**
KHC Kasperske Hory 6.18 3 *e*PN **Pn 19 50 58.6 +0.4**
KHC *e*SN **Sn 19 52 05.9 -2.9**
VIVF Saint-Julien-l 6.34 290 *e*P **Pn 19 51 03.2 +2.9**
HINF Hinteralfeld 6.52 320 *e*P **Pn 19 51 05.0 +2.1**
HINF *e*Sn **Sn 19 52 12.3 -5.0**
comp=E,13nm,0.7s
LASF Ste Croix 6.77 283 *e*P **Pn 19 51 08.5 +2.2**
CDF Champ du Feu 6.78 325 *e*P **Pn 19 51 07.9 +1.4**
CDF *e*Sn **Sn 19 52 17.8 -5.9**
comp=E,18nm,1.2s
HAU Haudompre 6.89 319 *e*P **Pn 19 51 09.9 +1.9**
HAU *e*Sn **Sn 19 52 21.5 -4.9**
comp=E,13nm,0.5s
SMF Signal de Mont 7.51 303 *e*P **Pn 19 51 18.1 +1.7**
PAGF Fort de Pagny 7.58 320 *e*P **Pn 19 51 20.6 +3.3**
baz=137
SFTF Sexfontaines 7.68 316 *e*P **Pn 19 51 21.4 +2.7**
baz=132
KEST Kesra 7.77 203 Pn **Pn 19 51 19.2 -0.8**
comp=E,0.2nm,0.3s,baz=27,slow=6.8,SNR=2.2
comp=E,1.5nm,0.6s
LOR Lormes 7.79 307 *e*P **Pn 19 51 22.5 +2.2**
baz=119
LOR *e*Sn **Sn 19 52 42.2 -6.3**
comp=E,18nm,1.6s
MEZF Maizieres J'vi 7.87 317 *e*P **Pn 19 51 23.9 +2.6**
AVF Avril sur Loir 7.87 302 *e*P **Pn 19 51 22.7 +1.3**
SSF Saint Saulge 7.90 304 *e*P **Pn 19 51 25.6 +3.8**
SAVF Savonnieres en 7.91 318 *e*P **Pn 19 51 24.6 +2.8**
baz=133
MTLF Montolieu 7.93 276 *e*P **Pn 19 51 26.8 +4.7**
BGF Bois d'Agland 8.10 300 *e*P **Pn 19 51 25.6 +1.1**
CAF Calviac 8.16 288 *e*P **Pn 19 51 28.3 +2.9**
CLL Collm 8.35 360 *e*(Sg) **Sg 19 53 59.0 +4.4**
TCF Toulx Ste Croi 8.41 297 *e*P **Pn 19 51 31.6 +2.8**
HYF Humbligny 8.52 304 *e*P **Pn 19 51 33.9 +3.6**
GIVF Givet 9.11 324 *e*P Pn 19 51 43.9 +5.6
GRR Gorron 11.13 304 *e*P Pn 19 52 12.3 +6.3
TORD Torodi Ar. Bea 31.29 202 P **P 19 55 47.7 +0.7**
comp=E,0.3nm,0.7s,baz=21,slow=12,SNR=2.7
comp=E,0.3nm,0.7s
MKAR Makanchi Array 47.77 60 P **P 19 58 04.8 +0.7**
comp=E,0.4nm,0.7s,baz=273,slow=8.4,SNR=2.6
comp=E,0.4nm,0.7s

PRU ***26*** *19:53:41.7±0.0,43.89N×13.40E,h1km*
ROM 26 19:53:27.4±0.1,42.863N±0.005×13.221E±0.006,
h9km,ML3.1/36,23C-14D,Error ellipse: s-maj=0.5km
s-min=0.5km az=264.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**336**	P	Pg	19 53 29.3	-0.3
MC2				S	Sg	19 53 30.4	-0.8
MC2				END			
MMO1	**Montemonaco**	**0.09**	**65**	P	Pg	19 53 29.9	+0.1
MMO1				S	Sg	19 53 31.6	+0.1
MMO1				END			
AM05	**Amandola Campo**	**0.15**	**40**	P	Pg	19 53 31.3	+0.7
AM05				S	Sg	19 53 34.0	+1.0
AM05				AML	AML		
	comp=N,6950µm,0.1s						
AM05				AML	AML		
	comp=E,20050µm,0.1s						
AM05				AML	AML		
	comp=N,1715µm,0.2s						
AM05				AML	AML		
	comp=E,4185µm,0.6s						
AM05				AML	AML		
	comp=E,4180µm,0.6s						
AM05				AML	AML		
	comp=N,6955µm,0.1s						
AM05				AML	AML		
	comp=E,20000µm,0.1s						
AM05				AML	AML		
	comp=N,1720µm,0.2s						
AM05				AML	AML		
	comp=N,1718µm,0.2s						
AM05				AML	AML		
	comp=N,6952µm,0.1s						
AM05				END			
T1216	**Preci, Frazion**	**0.15**	**281**	P	Pg	19 53 31.4	+0.7
T1216				S	Sg	19 53 34.5	+1.5
T1216				AML	AML		
	comp=N,57500µm,0.3s						
T1216				AML	AML		
	comp=E,48700µm,0.4s						
T1216				AML	AML		
	comp=N,57550µm,0.3s						
T1216				AML	AML		

comp=E,49600µm,0.3s
T1216 END
T1241 Roccafluvione, 0.15 92 P Pg 19 53 31.4 +0.6
T1241 S Sg 19 53 34.4 +1.3
T1241 AML AML
comp=E,22050µm,0.3s
T1241 AML AML
comp=N,14750µm,0.3s
T1241 AML AML
comp=N,14800µm,0.3s
T1241 AML AML
comp=E,22069µm,0.3s
T1241 AML AML
comp=N,12414µm,0.4s
T1241 END
GUMA Gualdo di Mace 0.22 23 P Pg 19 53 32.7 +0.9
GUMA S Sg 19 53 36.9 +2.0
GUMA AML AML
comp=N,48300µm,0.6s
GUMA AML AML
comp=E,51650µm,0.6s
GUMA AML AML
comp=N,44400µm,1.6s
GUMA AML AML
comp=E,34000µm,0.4s
GUMA AML AML
comp=N,48300µm,0.6s
GUMA END
CSP1 Cessapalombo 0.23 357 P Pg 19 53 32.6 +0.6
CSP1 S Sg 19 53 36.5 +1.2
CSP1 AML AML
comp=N,11550µm,1.3s
CSP1 AML AML
comp=E,7160µm,0.7s
CSP1 END
T1243 Rocca Santa Ma 0.24 135 P Pg 19 53 32.9 +0.6
T1243 S Sg 19 53 37.3 +1.9
T1243 END
SMA1 SAN MARTINO 0.25 160 P Pg 19 53 33.1 +0.7
SMA1 AML AML
comp=E,6095µm,0.7s
SMA1 AML AML
comp=N,5635µm,1.2s
SMA1 AML AML
comp=N,5630µm,1.2s
SMA1 END
T1215 Vallo di Nera, 0.27 257 ⇑P Pg 19 53 33.5 +0.7
T1215 S Sb 19 53 38.2 -0.8
T1215 AML AML
comp=E,3480µm,0.5s
T1215 AML AML
comp=N,3490µm,1.5s
T1215 AML AML
comp=E,3725µm,0.5s
T1215 AML AML
comp=N,3390µm,1.5s
T1215 AML AML
comp=N,6590µm,0.2s
T1215 AML AML
comp=E,5335µm,0.3s
T1215 AML AML
comp=E,5395µm,0.3s
T1215 AML AML
comp=N,6700µm,0.2s
T1215 AML AML
comp=E,3476µm,0.5s
T1215 AML AML
comp=N,3121µm,0.3s
T1215 AML AML
comp=N,3397µm,0.3s
T1215 AML AML
comp=E,3719µm,0.5s
T1215 END
CESI CESI - Serrava 0.27 301 ⇑P Pg 19 53 33.5 +0.6
CESI AML AML
comp=E,38450µm,0.1s
CESI AML AML
comp=N,38000µm,0.3s
CESI AML AML
comp=E,5381µm,0.4s
CESI AML AML
comp=N,9583µm,0.3s
MNTP Montappone 0.33 34 ⇑P Pb 19 53 35.3 -0.1
MNTP AML AML
comp=E,9895µm,0.3s
MNTP AML AML
comp=N,7635µm,0.4s
MNTP AML AML
comp=E,9900µm,0.3s
MNTP AML AML
comp=N,7195µm,0.2s
MNTP AML AML
comp=E,9901µm,0.3s
OFFI Offida 0.35 78 ⇑P Pb 19 53 36.0 +0.2
OFFI AML AML
comp=N,5975µm,0.5s
OFFI AML AML
comp=E,5635µm,0.6s
OFFI AML AML
comp=N,6020µm,0.8s
RM33 Pellescritta (0.35 181 P Pg 19 53 34.2 -0.2
RM33 S Sb 19 53 41.3 -0.3
RM33 AML AML
comp=E,2505µm,1.5s
RM33 AML AML
comp=N,2005µm,0.8s
RM33 AML AML
comp=E,2505µm,1.5s
RM33 AML AML
comp=N,2030µm,0.8s
RM33 AML AML
comp=N,2740µm,0.3s
RM33 AML AML
comp=N,2665µm,0.3s
RM33 AML AML
comp=E,2510µm,1.5s
RM33 AML AML
comp=E,2500µm,1.5s
RM33 AML AML
comp=N,943µm,1.1s
RM33 AML AML
comp=E,2377µm,0.5s
RM33 AML AML
comp=E,2316µm,0.5s
RM33 END
TERO Teramo 0.37 130 P Pg 19 53 35.1 +0.5
TERO S Sb 19 53 41.6 -0.4
TERO AML AML
comp=E,2640µm,0.4s
TERO AML AML
comp=N,3460µm,0.8s
TERO AML AML
comp=E,2745µm,0.4s
TERO AML AML
comp=N,3595µm,0.8s
TERO AML AML
comp=E,2635µm,0.4s
TERO AML AML
comp=N,4370µm,0.5s
TERO AML AML
comp=N,4180µm,0.5s
TERO AML AML
comp=N,2817µm,0.5s
TERO AML AML
comp=N,2964µm,0.5s
TERO END
GAG1 Gagliole 0.39 343 ⇑P Pb 19 53 36.0 -0.5
GAG1 AML AML
comp=E,12800µm,1.6s
GAG1 AML AML
comp=N,11350µm,0.4s
GAG1 AML AML
comp=E,24900µm,0.3s
GAG1 AML AML
comp=N,24550µm,0.4s
GAG1 AML AML
comp=E,11275µm,0.3s
GAG1 AML AML
comp=N,11288µm,0.5s
T1247 Pizzolo (AQ) 0.42 172 P Pg 19 53 36.3 +0.6
T1247 AML AML
comp=E,2220µm,0.9s
T1247 AML AML
comp=N,2200µm,0.5s
T1247 AML AML
comp=E,2455µm,0.2s
T1247 END

SNTG Esanatoglia 0.44 332 ⇑P Pg 19 53 36.3 +0.3
SNTG AML AML
comp=E,3125µm,1.0s
SNTG AML AML
comp=N,3205µm,0.1s
SNTG AML AML
comp=E,3020µm,1.0s
SNTG AML AML
comp=N,3465µm,0.1s
SNTG AML AML
comp=E,3975µm,0.3s
SNTG AML AML
comp=E,4080µm,0.3s
SNTG AML AML
comp=N,4425µm,0.2s
SNTG AML AML
comp=N,4045µm,0.3s
SNTG AML AML
comp=E,1878µm,0.2s
SNTG AML AML
comp=N,1761µm,0.1s
SNTG AML AML
comp=E,1915µm,0.2s
SNTG AML AML
comp=N,1649µm,0.2s
EL6 Elcito 0.47 349 ⇓P Pg 19 53 36.5 -0.1
EL6 AML AML
comp=E,5565µm,0.2s
EL6 AML AML
comp=N,8115µm,0.2s
EL6 AML AML
comp=N,12300µm,0.4s
EL6 AML AML
comp=E,11935µm,0.4s
EL6 AML AML
comp=N,8110µm,0.2s
EL6 AML AML
comp=E,5561µm,0.2s
GIGS Gran Sasso 0.49 148 ⇓P Pg 19 53 37.3 +0.4
GIGS AML AML
comp=E,452µm,1.4s
GIGS AML AML
comp=N,406µm,0.2s
GIGS AML AML
comp=N,440µm,1.2s
GIGS AML AML
comp=E,488µm,1.6s
TRTR Tortoreto Alta 0.51 96 ⇓P Pb 19 53 39.2 +0.7
TRTR AML AML
comp=E,4405µm,0.6s
TRTR AML AML
comp=N,5080µm,0.4s
AQU L'Aquila 0.53 165 P Pg 19 53 37.9 +0.3
AQU AML AML
comp=E,1110µm,1.1s
AQU AML AML
comp=N,1315µm,1.6s
AQU AML AML
comp=E,1085µm,1.4s
AQU AML AML
comp=N,1320µm,1.6s
AQU AML AML
comp=N,1305µm,1.6s
AQU END
ATCC AVT- Casa Cast 0.53 307 ⇑P Pg 19 53 38.1 +0.4
ATCC AML AML
comp=E,2900µm,1.5s
ATCC AML AML
comp=N,2540µm,1.6s
ATCC AML AML
comp=E,10070µm,0.1s
ATCC AML AML
comp=N,7340µm,0.6s
PP3 Marolino 0.59 29 ⇑P Pb 19 53 40.1 +0.3
PP3 AML AML
comp=E,3700µm,0.3s
PP3 AML AML
comp=E,3995µm,0.3s
PP3 AML AML
comp=N,7935µm,0.3s
PP3 AML AML
comp=N,7955µm,0.3s
PP3 AML AML
comp=E,4315µm,1.3s
PP3 AML AML
comp=E,4080µm,1.3s
PP3 AML AML
comp=E,3699µm,0.3s
PP3 AML AML
comp=E,3996µm,0.3s
PP3 AML AML
comp=N,7955µm,0.3s
FIAM Fiamignano 0.60 187 ⇑P Pg 19 53 39.2 +0.2
FIAM S Sb 19 53 49.0 +0.3
FIAM AML AML
comp=E,1168µm,0.5s
FIAM AML AML
comp=N,782µm,0.8s
FIAM AML AML
comp=E,1197µm,0.9s
FIAM AML AML
comp=N,782µm,0.8s
MURB Monte Urbino 0.65 308 P Pg 19 53 40.3 +0.3
MURB AML AML
comp=E,3045µm,0.9s
MURB AML AML
comp=N,2695µm,0.4s
MURB AML AML
comp=E,3320µm,0.9s
MURB AML AML
comp=N,2495µm,0.9s
MURB AML AML
comp=N,10300µm,0.2s
MURB AML AML
comp=E,7240µm,0.3s
MURB AML AML
comp=N,10255µm,0.2s
MURB AML AML
comp=E,7705µm,1.0s
FAGN Fagnano 0.65 156 ⇓P Pb 19 53 40.8 -0.2
FAGN AML AML
comp=N,1445µm,0.4s
FAGN AML AML
comp=E,1905µm,0.5s
FAGN AML AML
comp=N,2305µm,0.7s
VCEL Villa Celiera 0.66 135 ⇑P Pg 19 53 40.4 +0.4
VCEL AML AML
comp=E,1600µm,0.5s
VCEL AML AML
comp=N,1400µm,1.3s
VCEL AML AML
comp=E,1605µm,0.5s
VCEL AML AML
comp=N,1535µm,0.8s
ARVD Arcevia 0.67 342 ⇑P Pg 19 53 40.4 +0.2
ARVD S Sb 19 53 52.0 +1.4
ARVD AML AML
comp=E,1595µm,0.2s
ARVD AML AML
comp=N,726µm,0.3s
ARVD AML AML
comp=E,2460µm,1.6s
ARVD AML AML
comp=N,2095µm,1.3s
ARVD AML AML
comp=E,1593µm,0.2s
ARVD AML AML
comp=N,600µm,0.1s
ATFO Monte Foce - G 0.69 317 ⇓P Pg 19 53 40.7 0.0
ATFO AML AML
comp=E,1008µm,0.5s
ATFO AML AML
comp=N,736µm,0.8s
ATFO AML AML
comp=N,1835µm,1.1s
ATFO AML AML
comp=E,1465µm,1.5s
ATTE AVT- Monte Tez 0.72 298 ⇓P Pg 19 53 41.1 -0.1
ATTE AML AML
comp=E,528µm,1.5s
ATTE AML AML
comp=N,571µm,0.9s
ATTE AML AML
comp=E,1310µm,0.6s
ATTE AML AML
comp=N,1595µm,0.7s

FRON Frontone 0.75 331 ⇑P Pg 19 53 41.7 -0.1
FRON AML AML
comp=E,1770µm,0.3s
FRON AML AML
comp=N,2020µm,0.3s
FRON AML AML
comp=E,828µm,0.2s
T0110 Collepietro 0.76 147 ⇑P Pg 19 53 42.0 0.0
T0110 AML AML
comp=E,1330µm,0.4s
T0110 AML AML
comp=N,1755µm,0.4s
T0110 AML AML
comp=E,1535µm,0.3s
T0110 AML AML
comp=N,1755µm,0.4s
ATVO AVT- Monte Val 0.79 311 ⇑P Pg 19 53 42.6 0.0
ATVO AML AML
comp=E,568µm,0.6s
ATVO AML AML
comp=N,565µm,0.4s
ATVO AML AML
comp=E,1102µm,0.3s
ATVO AML AML
comp=N,1080µm,0.4s
ATVO AML AML
comp=E,568µm,0.6s
MGAB Montegabbione 0.82 274 ⇓P Pn 19 53 46.1 +1.0
MGAB AML AML
comp=E,2975µm,0.5s
MGAB AML AML
comp=N,3485µm,0.4s
MGAB AML AML
comp=E,1010µm,0.6s
MGAB AML AML
comp=N,1555µm,0.3s
MPAG Monte Paganucc 0.84 336 ⇓P Pg 19 53 43.4 -0.1
MPAG S Sn 19 53 58.0 +0.1
MPAG AML AML
comp=E,766µm,0.9s
MPAG AML AML
comp=N,663µm,0.2s
MPAG AML AML
comp=N,1430µm,0.3s
MPAG AML AML
comp=E,1375µm,0.4s
ATPI Pietralunga - 0.84 315 ⇓P Pg 19 53 43.4 -0.1
ATPI AML AML
comp=E,657µm,0.7s
ATPI AML AML
comp=N,488µm,0.6s
ATPI AML AML
comp=E,1130µm,0.7s
ATPI AML AML
comp=N,708µm,0.8s
PIEI Pieia 0.84 324 ⇑P Pg 19 53 43.5 0.0
PIEI S Sn 19 53 58.0 +0.1
PIEI AML AML
comp=E,508µm,0.3s
PIEI AML AML
comp=N,486µm,1.1s
PIEI AML AML
comp=E,1250µm,1.5s
PIEI AML AML
comp=N,1245µm,0.3s
FSSB Fossombrone 0.89 339 ⇓P Pg 19 53 44.6 +0.1
FSSB AML AML
comp=E,2405µm,0.3s
FSSB AML AML
comp=N,2515µm,0.3s
FSSB AML AML
comp=E,2760µm,0.3s
FSSB AML AML
comp=N,3570µm,0.2s
LPEL Lama dei Pelig 1.08 139 ⇑P Pg 19 53 48.2 0.0
LPEL AML AML
comp=E,464µm,0.7s
LPEL AML AML
comp=N,394µm,0.5s
CPGN Carpegna, Ital 1.15 325 P Pn 19 53 50.0 +0.3
SF04 Casetta 1.15 269 ⇓P Pn 19 53 50.8 +1.2
SF04 AML AML
comp=E,657µm,1.0s
SF04 AML AML
comp=N,510µm,0.2s
FRES Fresagrandinar 1.39 129 ⇑P Pg 19 53 55.1 +1.0
FRES AML AML
comp=N,170µm,0.6s
FRES AML AML
comp=E,182µm,1.5s
ASQU Asqua 1.40 312 ⇓P Pg 19 53 56.4 +2.1
RUFI Rufina 1.58 309 ⇑P Pg 19 53 57.6 -0.2
RUFI AML AML
comp=E,178µm,0.8s
RUFI AML AML
comp=N,214µm,1.0s
MELA Melanico ??? S 1.83 129 ⇓P Pb 19 54 01.1 +0.1
MELA AML AML
comp=E,359µm,0.7s
MELA AML AML
comp=E,344µm,0.8s
MELA AML AML
comp=N,348µm,1.1s
MELA AML AML
comp=N,460µm,1.0s
SGRT San Giovanni R 2.17 120 ⇑P Pb 19 54 05.7 -1.2
SGRT AML AML
comp=E,138µm,0.7s
SGRT AML AML
comp=N,112µm,0.3s
SGTA Sant Agata di 2.35 136 P Pn 19 54 07.3 +1.1
SGTA AML AML
comp=E,81µm,0.6s
SGTA AML AML
comp=N,57µm,1.4s
NDIM Novi di Modena 2.63 321 S Sn 19 54 43.0 +1.1
PGF Pioggiola 3.13 266 S Sg 19 55 07.0 -0.8
AMUR Altamura 3.19 127 P Pn 19 54 20.1 +2.3
STON Ston 3.29 88 ⇓P Pn 19 54 19.8 +0.7
STON AML AML
comp=N,37µm,1.4s
STON AML AML
comp=E,33µm,0.6s
LJU Ljubljana 3.31 16 P Pn 19 54 21.7 +2.3
LJU S Sg 19 55 11.0 -2.8
DOSS Dosso del Somm 3.35 335 S Sg 19 55 13.0 -2.0
CTI Castel Tesino 3.38 341 P Pn 19 54 22.2 +1.9
CTI S Sg 19 55 13.0 -2.8
CTI AML AML
comp=E,89µm,1.0s
CTI AML AML
comp=N,89µm,0.2s
STAL STALIGIAL 3.42 354 ⇑P Pn 19 54 21.9 +1.1
STAL AML AML
comp=N,580µm,0.8s
STAL AML AML
comp=E,92µm,1.6s
STAL AML AML
comp=N,110µm,1.6s
STAL AML AML
comp=E,522µm,1.4s
BLY Banja Luka 3.43 55 S Sg 19 55 22.0 +4.4
LUSI Trento, Gardas 3.50 333 ⇑P Pn 19 54 24.4 +2.4
ZONE Zone 3.66 324 P Pb 19 54 32.4 +0.2
MYKA Terra Mystica 3.78 4 *e*Pn Pn 19 54 27.4 +1.5
comp=E,0.8nm,0.2s
APPI Appiano 3.88 339 ⇑P Pn 19 54 29.5 +2.2
APPI AML AML
comp=E,52µm,1.0s
APPI AML AML
comp=N,57µm,1.3s
ABTA Abfaltersbach 3.92 353 *e*Pn Pn 19 54 29.7 +1.9
comp=N,9.6nm,0.3s,SNR=6.6
MGRO Montegrosso 4.11 288 P Pn 19 54 34.4 +3.9
RISI Rein 4.16 349 ⇑P Pn 19 54 33.5 +2.3
RISI AML AML
comp=E,97µm,0.4s
RISI AML AML
comp=N,126µm,0.4s
KBA Koelnbreinsper 4.22 1 *e*Pn Pn 19 54 33.6 +1.6
comp=N,2.8nm,0.3s
FETA Feichten 4.52 338 *e*Pn Pn 19 54 39.4 +3.3
comp=N,1.9nm,0.3s
WTTA Wattenberg 4.54 346 *e*Pn Pn 19 54 38.7 +2.3
comp=N,2.0nm,0.2s,SNR=5.3
SQTA Sankt Quirin 4.58 343 *e*Pn Pn 19 54 39.7 +2.7

comp=N,3.7nm,0.2s,SNR=5.2
WATA Walderalm 4.62 346 *e*Pn Pn 19 54 40.5 +3.0
comp=N,2.0nm,0.3s
MOTA Moosalm 4.72 342 *e*Pn Pn 19 54 42.6 +3.7
comp=N,1.7nm,0.3s
BIOA Bad Ischl, Aus 4.84 3 *e*Pn Pn 19 54 41.1 +0.7
comp=N,4.6nm,0.4s
RETA Reutte 4.94 340 *i* Pn Pn 19 54 44.8 +3.0
comp=N,1.4nm,0.3s,SNR=4.1
MOA Molln 5.04 8 *e*Pn Pn 19 54 44.8 +1.6
comp=N,0.3nm,0.1s
CONA Conrad Observa 5.39 19 *i* Pn Pn 19 54 49.3 +1.2
comp=N,0.9nm,0.2s
KHC Kasperske Hory 6.27 2 *e*PN Pn 19 54 59.2 -0.9

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*ROM **26** 20:03:29.1±0.1, 42°.985N±0°.004×13°.125E±0°.004, h9km, ML3.4/65, Error ellipse: s-maj=0.4km s-min=0.2km az=30.0*
*PRU **26** 20:03:30.2±0.0, 42°.97N×13°.65E, h0km*
*PDG **26** 20:03:36.9±2.4, 42°.60N×13°.87E, h9km±16km, ML3.4/9, Error ellipse: s-maj=9.2km s-min=13.8km az=0.0*
ISC 26 20:03:29.5±0.8, 42°.97N±0°.02×13°.13E±0°.02, h12km±4km, n111, σ1°81/144, 39C-38D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**266**	⇓P	**Pg**	**20 03 31.3**	**-0.7**
FEMA				S	**Sg**	**20 03 33.0**	**-0.8**
FEMA				AML	AML		
	comp=E,99750μm,1.6s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,83700μm,0.2s						
FEMA				AML	AML		
	comp=N,64060μm,0.5s						
MC2	**Monte Cornacci**	**0.07**	**140**	⇑P	**Pg**	**20 03 31.9**	**-0.3**
MC2				S	**Sg**	**20 03 33.6**	**-0.6**
T1216	**Preci, Frazion**	**0.11**	**227**	⇑P	**Pg**	**20 03 32.5**	**+0.1**
T1216				S	**Sg**	**20 03 35.1**	**+0.4**
T1216				AML	AML		
	comp=E,52650μm,1.1s						
T1216				AML	AML		
	comp=E,52650μm,1.1s						
T1216				AML	AML		
	comp=E,48377μm,0.3s						
T1216				AML	AML		
	comp=N,83601μm,0.2s						
T1216				AML	AML		
	comp=E,52650μm,0.9s						
T1216				AML	AML		
	comp=N,83600μm,0.2s						
T1245	**Castelsantange**	**0.12**	**158**	P	**Pg**	**20 03 32.8**	**+0.1**
T1245				S	**Sg**	**20 03 35.4**	**+0.4**
MMO1	**Montemonaco**	**0.16**	**115**	⇑P	**Pg**	**20 03 33.3**	**+0.1**
MMO1				S	**Sg**	**20 03 36.2**	**+0.4**
AM05	**Amandola Campo**	**0.17**	**86**	P	**Pg**	**20 03 33.2**	**-0.1**
AM05				S	**Sg**	**20 03 36.1**	**+0.2**
AM05				AML	AML		
	comp=N,1060μm,0.1s						
AM05				AML	AML		
	comp=E,4515μm,1.2s						
AM05				AML	AML		
	comp=N,6195μm,1.4s						
AM05				AML	AML		
	comp=N,1060μm,0.1s						
AM05				AML	AML		
	comp=E,4510μm,1.2s						
AM05				AML	AML		
	comp=E,18600μm,1.5s						
AM05				AML	AML		
	comp=N,1062μm,0.1s						
AM05				AML	AML		
	comp=N,737μm,0.1s						
AM05				AML	AML		
	comp=E,3796μm,0.3s						
AM05				AML	AML		
	comp=N,4766μm,0.3s						
AM05				AML	AML		
	comp=E,17490μm,0.2s						
CESI	**CESI - Serrava**	**0.17**	**283**	⇑P	**Pg**	**20 03 33.3**	**-0.1**
CESI				S	**Sg**	**20 03 36.2**	**+0.1**
CESI				AML	AML		
	comp=E,39300μm,1.6s						
CESI				AML	AML		
	comp=N,29750μm,0.2s						
CESI				AML	AML		
	comp=N,45750μm,1.0s						
CESI				AML	AML		
	comp=N,29772μm,0.2s						
CESI				AML	AML		
	comp=E,59050μm,0.3s						
CESI				AML	AML		
	comp=E,32299μm,0.2s						
GUMA	**Gualdo di Mace**	**0.18**	**57**	⇑P	**Pg**	**20 03 33.6**	**+0.1**
GUMA				S	**Sg**	**20 03 37.0**	**+0.7**
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,82600μm,0.5s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,82600μm,1.5s						
GUMA				AML	AML		
SEF1	**Sefro**	**0.22**	**324**	⇓P	**Pg**	**20 03 34.1**	**-0.2**
SEF1				AML	AML		
	comp=E,17350μm,0.2s						
SEF1				AML	AML		
	comp=N,17050μm,0.7s						
SEF1				AML	AML		
	comp=N,45350μm,0.2s						
SEF1				AML	AML		
	comp=E,17310μm,0.2s						
SEF1				AML	AML		
	comp=N,17096μm,0.7s						
SEF1				AML	AML		
	comp=E,63550μm,0.2s						
T1241	**Roccafluvione,**	**0.25**	**116**	⇓P	**Pg**	**20 03 34.7**	**+0.1**
T1241				S	**Sg**	**20 03 39.0**	**+0.8**
T1241				AML	AML		
	comp=N,9065μm,0.4s						
T1241				AML	AML		
	comp=E,16350μm,0.4s						
T1241				AML	AML		
	comp=N,9060μm,0.4s						
T1241				AML	AML		
	comp=E,16345μm,0.4s						
T1241				AML	AML		
	comp=N,9040μm,0.4s						
T1215	**Vallo di Nera,**	**0.25**	**229**	⇓P	**Pg**	**20 03 35.3**	**+0.5**
T1215				S	**Sb**	**20 03 39.8**	**-0.6**
T1215				AML	AML		
	comp=N,8975μm,0.3s						
T1215				AML	AML		
	comp=E,11850μm,1.3s						
T1215				AML	AML		
	comp=N,8360μm,0.3s						
T1215				AML	AML		
	comp=N,8980μm,0.3s						
T1215				AML	AML		
	comp=E,11860μm,1.3s						
T1215				AML	AML		
	comp=E,10950μm,1.3s						
T1215				AML	AML		
	comp=N,5808μm,0.2s						
T1215				AML	AML		
	comp=E,4245μm,0.4s						
T1215				AML	AML		
	comp=E,4080μm,0.4s						
T1215				AML	AML		
	comp=N,8355μm,0.3s						
T1215				AML	AML		
	comp=E,11860μm,0.7s						
T1215				AML	AML		
	comp=E,10950μm,0.7s						
T1215				AML	AML		
	comp=N,5780μm,0.2s						
FIU1	**Fiuminata**	**0.27**	**327**	⇑P	**Pg**	**20 03 35.0**	**0.0**
FIU1				AML	AML		
	comp=E,4920μm,0.7s						
FIU1				AML	AML		
	comp=N,6005μm,1.3s						
FIU1				AML	AML		
	comp=E,7365μm,0.9s						
FIU1				AML	AML		
	comp=N,10145μm,1.6s						
FIU1				AML	AML		
	comp=E,7365μm,0.9s						
FIU1				AML	AML		
	comp=N,10140μm,1.6s						
FIU1				AML	AML		
	comp=N,3324μm,0.6s						
FIU1				AML	AML		
	comp=N,10140μm,0.4s						
GAG1	**Gagliole**	**0.28**	**351**	⇑P	**Pg**	**20 03 35.2**	**0.0**
GAG1				AML	AML		
	comp=N,34500μm,0.4s						
GAG1				AML	AML		
	comp=E,28000μm,0.8s						
GAG1				AML	AML		
	comp=N,34500μm,1.6s						
T1217	**Poggiodomo (PG**	**0.29**	**210**	⇓P	**Pg**	**20 03 36.0**	**+0.5**
T1217				S	**Sb**	**20 03 41.4**	**-0.2**
T1217				AML	AML		
	comp=E,9985μm,0.6s						
T1217				AML	AML		
	comp=N,12250μm,0.6s						
T1217				AML	AML		
	comp=E,9835μm,0.6s						
T1217				AML	AML		
	comp=N,12050μm,0.6s						
T1217				AML	AML		
	comp=N,12200μm,0.6s						
T1217				AML	AML		
	comp=E,9790μm,0.6s						
T1217				AML	AML		
	comp=E,9985μm,0.6s						
T1217				AML	AML		
	comp=N,7501μm,0.2s						
T1217				AML	AML		
	comp=N,7710μm,0.2s						
T1217				AML	AML		
	comp=N,12050μm,0.6s						
MNTP	**Montappone**	**0.30**	**55**	⇑P	**Pb**	**20 03 36.6**	**-0.3**
MNTP				AML	AML		
	comp=E,25650μm,1.0s						
MNTP				AML	AML		
	comp=E,31350μm,0.6s						
MNTP				AML	AML		
	comp=N,16750μm,0.7s						
MNTP				AML	AML		
	comp=E,31400μm,0.6s						
SNTG	**Esanatoglia**	**0.32**	**335**	⇓P	**Pg**	**20 03 35.8**	**-0.2**
SNTG				AML	AML		
	comp=E,7320μm,0.5s						
SNTG				AML	AML		
	comp=N,6565μm,0.6s						
SNTG				AML	AML		
	comp=E,7325μm,0.6s						
SNTG				AML	AML		
	comp=E,7300μm,0.6s						
SNTG				AML	AML		
	comp=E,3207μm,0.3s						
SNTG				AML	AML		
	comp=E,3100μm,0.3s						
SNTG				AML	AML		
	comp=N,7220μm,0.6s						
SNTG				AML	AML		
	comp=N,6565μm,0.6s						
T1204	**Amatrice, Fraz**	**0.32**	**154**	⇓P	**Pg**	**20 03 36.4**	**+0.3**
T1204				S	**Sb**	**20 03 42.4**	**0.0**
T1204				AML	AML		
	comp=N,8235μm,1.3s						
T1204				AML	AML		
	comp=E,13395μm,1.2s						
T1204				AML	AML		
	comp=N,8215μm,1.3s						
T1204				AML	AML		
	comp=N,8315μm,1.3s						
T1204				AML	AML		
	comp=E,13405μm,1.2s						
T1204				AML	AML		
	comp=N,8315μm,0.7s						
T1204				AML	AML		
	comp=E,10035μm,0.3s						
T1204				AML	AML		
	comp=N,4147μm,0.4s						
T1204				AML	AML		
	comp=E,13405μm,0.8s						
T1243	**Rocca Santa Ma**	**0.36**	**139**	⇓P	**Pg**	**20 03 36.8**	**+0.1**
T1243				S	**Sb**	**20 03 43.0**	**-0.4**
EL6	**Elcito**	**0.36**	**357**	P	**Pg**	**20 03 36.3**	**-0.5**
LNSS	**Leonessa**	**0.37**	**190**	⇓P	**Pg**	**20 03 37.2**	**+0.3**
LNSS				S	**Sb**	**20 03 44.1**	**+0.4**
LNSS				AML	AML		
	comp=E,9555μm,0.5s						
LNSS				AML	AML		
	comp=N,9085μm,0.7s						
LNSS				AML	AML		
	comp=E,10700μm,1.1s						
LNSS				AML	AML		
	comp=N,9105μm,1.3s						
LNSS				AML	AML		
	comp=E,5040μm,1.2s						
LNSS				AML	AML		
	comp=N,9105μm,0.7s						
LNSS				AML	AML		
	comp=E,10700μm,0.9s						
OFFI	**Offida**	**0.41**	**94**	⇑P	**Pb**	**20 03 38.9**	**+0.2**
OFFI				AML	AML		
	comp=E,8185μm,0.7s						
OFFI				AML	AML		
	comp=N,7030μm,0.7s						
OFFI				AML	AML		
	comp=N,13200μm,0.6s						
OFFI				AML	AML		
	comp=E,8370μm,0.9s						
OFFI				AML	AML		
	comp=E,8370μm,1.1s						
ATCC	**AVT- Casa Cast**	**0.42**	**302**	⇑P	**Pg**	**20 03 37.6**	**-0.1**
ATCC				AML	AML		
	comp=N,25250μm,1.3s						
ATCC				AML	AML		
	comp=N,25250μm,0.7s						
ATCC				AML	AML		
	comp=N,4979μm,0.4s						
ATCC				AML	AML		
	comp=E,28600μm,0.2s						
RM33	**Pellescritta (**	**0.46**	**172**	⇓P	**Pg**	**20 03 38.8**	**+0.2**
RM33				S	**Sb**	**20 03 47.0**	**+0.6**
RM33				AML	AML		
	comp=E,3125μm,1.0s						
RM33				AML	AML		
	comp=N,2790μm,0.4s						
RM33				AML	AML		
	comp=E,3030μm,1.0s						
RM33				AML	AML		
	comp=N,2735μm,0.3s						
RM33				AML	AML		
	comp=E,4395μm,1.6s						
RM33				AML	AML		
	comp=N,4245μm,1.3s						
RM33				AML	AML		
	comp=E,4265μm,1.6s						
RM33				AML	AML		
	comp=N,4165μm,1.3s						
RM33				AML	AML		
	comp=E,4260μm,1.6s						
RM33				AML	AML		
	comp=E,4395μm,0.4s						
RM33				AML	AML		
	comp=E,4260μm,0.4s						
RM33				AML	AML		
	comp=N,2136μm,0.3s						
RM33				AML	AML		
	comp=N,2156μm,0.3s						
RM33				AML	AML		
	comp=E,2491μm,0.2s						
RM33				AML	AML		
	comp=E,2565μm,0.2s						
CAMP	**Campotosto**	**0.48**	**154**	⇓P	**Pg**	**20 03 38.9**	**0.0**
CAMP				S	**Sb**	**20 03 46.9**	**0.0**
CAMP				AML	AML		
	comp=E,3855μm,1.2s						
CAMP				AML	AML		
	comp=N,3325μm,1.1s						
CAMP				AML	AML		
	comp=E,3679μm,0.2s						
CAMP				AML	AML		
	comp=N,1578μm,0.7s						
TERO	**Teramo**	**0.49**	**134**	P	**Pg**	**20 03 39.0**	**-0.1**
TERO				S	**Sb**	**20 03 47.5**	**+0.3**
TERO				AML	AML		
	comp=E,5365μm,0.4s						
TERO				AML	AML		
	comp=N,4190μm,1.1s						
TERO				AML	AML		
	comp=E,5560μm,0.4s						
TERO				AML	AML		
	comp=N,4335μm,1.1s						
TERO				AML	AML		
	comp=N,4330μm,1.1s						
TERO				AML	AML		
	comp=N,4185μm,1.1s						
TERO				AML	AML		
	comp=E,3880μm,0.2s						
TERO				AML	AML		
	comp=E,4111μm,0.2s						
TERO				AML	AML		
	comp=E,5560μm,1.6s						
TERO				AML	AML		
	comp=E,5365μm,1.6s						
TERO				AML	AML		
	comp=N,2635μm,1.0s						
MURB	**Monte Urbino**	**0.53**	**304**	⇑P	**Pg**	**20 03 39.7**	**-0.2**
MURB				S	**Sb**	**20 03 49.0**	**+0.5**
MURB				AML	AML		
	comp=E,13630μm,0.4s						
MURB				AML	AML		
	comp=N,11125μm,1.5s						
MURB				AML	AML		
	comp=E,13600μm,0.4s						
MURB				AML	AML		
	comp=N,11145μm,1.5s						
MURB				AML	AML		
	comp=E,6178μm,0.3s						
MURB				AML	AML		
	comp=E,6886μm,0.3s						
MURB				AML	AML		
	comp=N,11105μm,1.5s						
MURB				AML	AML		
	comp=E,13595μm,0.4s						
MURB				AML	AML		
	comp=N,11950μm,1.5s						
MURB				AML	AML		
	comp=E,15550μm,0.3s						
CESX	**Cesi**	**0.54**	**229**	⇑P	**Pg**	**20 03 39.8**	**-0.1**
CESX				AML	AML		
	comp=E,7650μm,0.5s						
CESX				AML	AML		
	comp=N,9115μm,0.3s						
CESX				AML	AML		
	comp=E,3226μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.54**	**167**	⇓P	**Pg**	**20 03 40.1**	**+0.1**
T1247				AML	AML		
	comp=E,4330μm,0.9s						
T1247				AML	AML		
	comp=E,6005μm,1.1s						
T1247				AML	AML		
	comp=N,4180μm,1.1s						
T1247				AML	AML		
	comp=E,6005μm,0.9s						
PP3	**Marolino**	**0.54**	**40**	⇓P	**Pb**	**20 03 40.8**	**-0.1**
PP3				AML	AML		
	comp=E,5290μm,0.6s						
PP3				AML	AML		
	comp=N,5105μm,0.9s						
PP3				AML	AML		
	comp=E,4935μm,0.6s						
PP3				AML	AML		
	comp=N,5465μm,0.9s						
PP3				AML	AML		
	comp=N,10715μm,1.6s						
PP3				AML	AML		
	comp=N,10600μm,1.6s						
PP3				AML	AML		
	comp=E,9535μm,1.6s						
PP3				AML	AML		
	comp=N,10720μm,1.6s						
PP3				AML	AML		
	comp=E,9840μm,1.1s						
PP3				AML	AML		
	comp=N,10600μm,0.4s						
PP3				AML	AML		
	comp=E,9535μm,0.4s						
PP3				AML	AML		
	comp=N,3460μm,0.3s						
PP3				AML	AML		
	comp=N,10720μm,0.4s						
ARVD	**Arcevia**	**0.55**	**346**	⇑P	**Pg**	**20 03 39.7**	**-0.5**
ARVD				S	**Sb**	**20 03 49.0**	**+0.1**
ARVD				AML	AML		
	comp=E,3775μm,0.7s						
ARVD				AML	AML		
	comp=N,2815μm,1.6s						
ARVD				AML	AML		
	comp=E,2093μm,0.2s						
ARVD				AML	AML		
	comp=N,1334μm,0.3s						
ARVD				AML	AML		
	comp=E,3775μm,1.3s						
ARVD				AML	AML		
	comp=N,2815μm,0.4s						
ATFO	**Monte Foce - G**	**0.57**	**315**	⇑P	**Pg**	**20 03 40.2**	**-0.4**
ATFO				AML	AML		
	comp=N,3310μm,0.6s						
ATFO				AML	AML		
	comp=N,3340μm,0.9s						
ATFO				AML	AML		
	comp=E,3970μm,1.0s						
TRTR	**Tortoreto Alta**	**0.60**	**105**	⇓P	**Pb**	**20 03 42.4**	**+0.6**
TRTR				S	**Sn**	**20 03 53.7**	**+0.3**
TRTR				AML	AML		
	comp=E,6890μm,0.5s						
TRTR				AML	AML		
	comp=N,5885μm,1.4s						
TRTR				AML	AML		
	comp=N,8805μm,0.6s						
TRTR				AML	AML		
	comp=E,12750μm,0.5s						
GIGS	**Gran Sasso**	**0.61**	**148**	⇓P	**Pg**	**20 03 41.3**	**0.0**
GIGS				S	**Sb**	**20 03 51.3**	**+0.6**
GIGS				AML	AML		
	comp=N,1088μm,1.2s						
GIGS				AML	AML		
	comp=N,1088μm,1.2s						
GIGS				AML	AML		
	comp=E,1375μm,0.6s						
GIGS				AML	AML		
	comp=E,779μm,0.2s						
GIGS				AML	AML		
	comp=N,650μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.61**	**292**	⇓P	**Pg**	**20 03 41.2**	**-0.2**
ATTE				AML	AML		
	comp=N,1325μm,0.9s						
ATTE				AML	AML		
	comp=E,2600μm,1.6s						
ATTE				AML	AML		
	comp=N,1750μm,1.0s						
ATTE				AML	AML		
	comp=E,2600μm,0.4s						
FRON	**Frontone**	**0.62**	**332**	⇓P	**Pg**	**20 03 41.4**	**-0.2**
FRON				AML	AML		
	comp=E,3475μm,0.5s						
FRON				AML	AML		
	comp=N,5475μm,0.3s						
FRON				AML	AML		
	comp=E,3480μm,0.5s						
FRON				AML	AML		
	comp=N,2458μm,0.4s						
FRON				AML	AML		
	comp=E,1636μm,0.3s						
AQU	**L'Aquila**	**0.64**	**162**	⇓P	**Pg**	**20 03 41.8**	**-0.2**
AQU				S	**Sb**	**20 03 53.1**	**+1.5**
AQU				AML	AML		
	comp=E,1495μm,1.6s						
AQU				AML	AML		
	comp=N,2195μm,1.2s						
AQU				AML	AML		
	comp=E,1525μm,1.6s						
AQU				AML	AML		
	comp=N,2100μm,1.2s						
AQU				AML	AML		
	comp=E,3435μm,1.6s						
AQU				AML	AML		
	comp=N,2785μm,1.1s						
AQU				AML	AML		
	comp=N,3060μm,1.0s						
AQU				AML	AML		
	comp=E,3530μm,1.6s						
AQU				AML	AML		

	comp=N,2785μm,0.9s					
AQU				AML	AML	
	comp=N,3060μm,1.0s					
AQU				AML	AML	
	comp=E,3435μm,0.4s					
AQU				AML	AML	
	comp=E,3530μm,0.4s					
AQU				AML	AML	
	comp=E,1145μm,0.3s					
AQU				AML	AML	
	comp=E,1141μm,0.3s					
ATVO	**AVT- Monte Val**	**0.67**	**308**	⇑P	**Pg**	**20 03 42.0 -0.6**
ATVO				AML	AML	
	comp=E,2010μm,1.3s					
ATVO				AML	AML	
	comp=N,2580μm,0.7s					
ATVO				AML	AML	
	comp=E,2955μm,0.8s					
ATVO				AML	AML	
	comp=E,1314μm,0.3s					
ATVO				AML	AML	
	comp=N,1176μm,0.5s					
FIAM	**Fiamignano**	**0.70**	**181**	⇓P	**Pg**	**20 03 42.7 -0.3**
FIAM				S	**Sb**	**20 03 54.0 +0.8**
FIAM				AML	AML	
	comp=E,2870μm,1.3s					
FIAM				AML	AML	
	comp=N,1785μm,1.2s					
FIAM				AML	AML	
	comp=N,1785μm,0.8s					
FIAM				AML	AML	
	comp=E,2870μm,0.7s					
FIAM				AML	AML	
	comp=E,648μm,0.7s					
MPAG	**Monte Paganucc**	**0.71**	**338**	⇓P	**Pg**	**20 03 43.2 -0.1**
MPAG				AML	AML	
	comp=E,2840μm,1.2s					
MPAG				AML	AML	
	comp=N,3035μm,0.6s					
MPAG				AML	AML	
	comp=E,2985μm,1.2s					
MPAG				AML	AML	
	comp=N,3115μm,1.1s					
MPAG				AML	AML	
	comp=E,2980μm,1.2s					
MPAG				AML	AML	
	comp=N,1097μm,0.7s					
MPAG				AML	AML	
	comp=N,3115μm,0.9s					
MPAG				AML	AML	
	comp=E,2980μm,0.8s					
MPAG				AML	AML	
	comp=E,1389μm,0.3s					
MPAG				AML	AML	
	comp=E,1415μm,0.3s					
MPAG				AML	AML	
	comp=N,1550μm,0.6s					
PIEI	**Pieia**	**0.72**	**323**	⇑P	**Pg**	**20 03 43.3 0.0**
PIEI				S	**Sn**	**20 03 55.0 -1.4**
PIEI				AML	AML	
	comp=N,1620μm,1.5s					
PIEI				AML	AML	
	comp=E,2115μm,0.2s					
PIEI				AML	AML	
	comp=N,1620μm,0.5s					
ATPI	**Pietralunga -**	**0.72**	**313**	⇑P	**Pg**	**20 03 42.8 -0.6**
ATPI				AML	AML	
	comp=E,2205μm,0.7s					
ATPI				AML	AML	
	comp=N,1835μm,1.2s					
ATPI				AML	AML	
	comp=E,2325μm,0.5s					
ATPI				AML	AML	
	comp=N,1870μm,1.6s					
ATPI				AML	AML	
	comp=N,1865μm,1.6s					
ATPI				AML	AML	
	comp=E,1052μm,0.5s					
ATMI	**Monte Miggiano**	**0.73**	**301**	⇑P	**Pn**	**20 03 45.7 +0.1**
ATMI				AML	AML	
	comp=N,5655μm,0.5s					
ATMI				AML	AML	
	comp=E,3150μm,1.2s					
MGAB	**Montegabbione**	**0.75**	**266**	⇓P	**Pb**	**20 03 44.6 +0.2**
MGAB				AML	AML	
	comp=N,5310μm,1.3s					
MGAB				AML	AML	
	comp=N,5050μm,1.3s					
MGAB				AML	AML	
	comp=N,5315μm,1.3s					
MGAB				AML	AML	
	comp=E,4065μm,0.4s					
MGAB				AML	AML	
	comp=E,3195μm,0.4s					
MGAB				AML	AML	
	comp=E,2437μm,0.4s					
MGAB				AML	AML	
	comp=E,4065μm,1.6s					
MGAB				AML	AML	
	comp=N,5050μm,0.7s					
MGAB				AML	AML	
	comp=N,5315μm,0.7s					
MGAB				AML	AML	
	comp=E,2813μm,0.4s					
MGAB				AML	AML	
	comp=N,3356μm,0.3s					
MGAB				AML	AML	
	comp=N,3184μm,0.3s					
FSSB	**Fossombrone**	**0.77**	**341**	⇓P	**Pg**	**20 03 44.0 -0.4**
FSSB				AML	AML	
	comp=N,19450μm,0.4s					
FSSB				AML	AML	
	comp=N,19500μm,0.4s					
FSSB				AML	AML	
	comp=E,7330μm,0.3s					
FSSB				AML	AML	
	comp=E,5050μm,0.4s					
FSSB				AML	AML	
	comp=N,7067μm,0.4s					
FAGN	**Fagnano**	**0.78**	**154**	⇓P	**Pg**	**20 03 44.8 +0.3**
FAGN				AML	AML	
	comp=N,3670μm,0.5s					
FAGN				AML	AML	
	comp=E,5210μm,0.4s					
FAGN				AML	AML	
	comp=N,4035μm,0.4s					
VCEL	**Villa Celiera**	**0.78**	**137**	⇓P	**Pg**	**20 03 44.4 -0.1**
VCEL				S	**Sn**	**20 03 57.4 -0.5**
VCEL				AML	AML	
	comp=E,2125μm,0.5s					
VCEL				AML	AML	
	comp=N,1875μm,1.4s					
VCEL				AML	AML	
	comp=E,3100μm,0.7s					
VCEL				AML	AML	
	comp=E,1896μm,0.2s					
VCEL				AML	AML	
	comp=N,2750μm,0.8s					
APEC	**Apecchio**	**0.79**	**319**	P	**Pg**	**20 03 44.4 -0.3**
APEC				S	**Sn**	**20 03 58.0 -0.1**
BADI	**Badiali**	**0.84**	**310**	P	**Pg**	**20 03 45.5 -0.3**
BADI				AML	AML	
	comp=N,707μm,0.5s					
PE3	**Peglio**	**0.86**	**328**	P	**Pb**	**20 03 46.7 +0.3**
PE3				AML	AML	
	comp=N,18μm,0.2s					
PE3				AML	AML	
	comp=E,15μm,0.2s					
T0110	**Collepietro**	**0.88**	**147**	⇓P	**Pg**	**20 03 45.7 -0.8**
T0110				AML	AML	
	comp=E,2815μm,0.9s					
T0110				AML	AML	
	comp=N,2425μm,0.4s					
T0110				AML	AML	
	comp=E,4605μm,0.5s					
T0110				AML	AML	
	comp=N,2427μm,0.4s					
T0110				AML	AML	
	comp=N,3430μm,0.8s					
CAFI	**Castiglion Fio**	**0.93**	**293**	⇓P	**Pg**	**20 03 47.0 -0.3**
CAFI				AML	AML	
	comp=N,2200μm,1.2s					
CAFI				AML	AML	
	comp=E,2035μm,0.8s					
CAFI				AML	AML	
	comp=N,655μm,0.4s					
CAFI				AML	AML	
	comp=E,654μm,0.4s					
CAFI				AML	AML	
	comp=E,664μm,0.4s					
CAFI				AML	AML	
	comp=N,696μm,0.4s					
MTCE	**Montecelio**	**0.98**	**197**	⇑P	**Pn**	**20 03 50.1 +1.0**
MTCE				AML	AML	
	comp=E,1610μm,0.5s					
MTCE				AML	AML	
	comp=N,980μm,1.2s					
MTCE				AML	AML	
	comp=E,621μm,0.5s					
CERT	**Cerreto**	**1.02**	**186**	⇓P	**Pn**	**20 03 50.3 +0.6**
CERT				AML	AML	
	comp=E,1975μm,1.4s					
CERT				AML	AML	
	comp=N,1164μm,0.8s					
CERT				AML	AML	
	comp=N,1164μm,1.2s					
CERT				AML	AML	
	comp=E,1975μm,0.6s					
CPGN	**Carpegna, Ital**	**1.02**	**325**	⇑P	**Pn**	**20 03 49.6 -0.1**
CPGN				AML	AML	
	comp=E,1945μm,1.4s					
CPGN				AML	AML	
	comp=E,2345μm,1.3s					
CPGN				AML	AML	
	comp=N,2260μm,1.2s					
CPGN				AML	AML	
	comp=N,1768μm,0.8s					
CPGN				AML	AML	
	comp=N,2260μm,0.8s					
CPGN				AML	AML	
	comp=E,2345μm,0.7s					
CPGN				AML	AML	
	comp=E,1945μm,0.6s					
LATE	**Laterza**	**1.04**	**251**	⇑P	**Pn**	**20 03 49.8 -0.1**
MCIV	**Monte Civitell**	**1.08**	**261**	P	**Pn**	**20 03 50.5 0.0**
MCIV				AML	AML	
	comp=N,650μm,1.3s					
MCIV				AML	AML	
	comp=E,686μm,0.8s					
MCIV				AML	AML	
	comp=N,650μm,0.7s					
INTR	**Introdacqua**	**1.11**	**149**	⇑P	**Pb**	**20 03 49.7 -1.0**
INTR				AML	AML	
	comp=N,2465μm,0.7s					
INTR				AML	AML	
	comp=E,1545μm,0.9s					
VVLD	**Villa Vallelon**	**1.15**	**161**	⇑P	**Pg**	**20 03 54.6 +3.0**
VVLD				AML	AML	
	comp=N,1765μm,1.1s					
VVLD				AML	AML	
	comp=E,1045μm,0.8s					
LPEL	**Lama dei Pelig**	**1.21**	**139**	⇑P	**Pg**	**20 03 52.7 0.0**
LPEL				AML	AML	
	comp=E,1745μm,0.9s					
LPEL				AML	AML	
	comp=N,1040μm,1.1s					
TOLF	**Tolfa**	**1.23**	**223**	⇑P	**Pg**	**20 03 53.2 +0.1**
TOLF				AML	AML	
	comp=E,808μm,0.8s					
TOLF				AML	AML	
	comp=N,696μm,0.7s					
TOLF				AML	AML	
	comp=E,808μm,1.2s					
POFI	**Posta Fibreno**	**1.32**	**161**	⇓P	**Pg**	**20 03 57.2 +2.4**
POFI				AML	AML	
	comp=E,828μm,1.2s					
POFI				AML	AML	
	comp=N,892μm,1.4s					
POFI				AML	AML	
	comp=N,896μm,1.3s					
POFI				AML	AML	
	comp=N,892μm,0.6s					
POFI				AML	AML	
	comp=E,822μm,1.1s					
POFI				AML	AML	
	comp=N,896μm,0.7s					
FRES	**Fresagrandinar**	**1.51**	**131**	⇑P	**Pg**	**20 03 58.7 +0.3**
FRES				AML	AML	
	comp=N,464μm,1.1s					
FRES				AML	AML	
	comp=E,712μm,0.9s					
FRES				AML	AML	
	comp=N,464μm,0.9s					
CERA	**Filignano**	**1.52**	**154**	⇑P	**Pg**	**20 03 59.5 +0.9**
CERA				AML	AML	
	comp=E,1077μm,1.3s					
CERA				AML	AML	
	comp=N,604μm,0.9s					
CERA				AML	AML	
	comp=E,1065μm,1.3s					
CERA				AML	AML	
	comp=N,632μm,0.9s					
TRIV	**Trivento**	**1.60**	**138**	⇑P	**Pg**	**20 04 00.6 +0.6**
TRIV				AML	AML	
	comp=E,876μm,1.1s					
TRIV				AML	AML	
	comp=N,799μm,1.0s					
TRIV				AML	AML	
	comp=E,876μm,0.9s					
TRIF	**Trifonti**	**1.64**	**276**	⇓P	**Pn**	**20 03 58.7 +0.6**
TRIF				AML	AML	
	comp=E,326μm,1.0s					
TRIF				AML	AML	
	comp=N,229μm,0.5s					
TRIF				AML	AML	
	comp=E,326μm,1.0s					
BRIS	**BRISIGHELLA**	**1.67**	**316**	⇑P	**Pg**	**20 04 02.3 +0.8**
MELA	**Melanico ??? S**	**1.94**	**130**	⇑P	**Pb**	**20 04 04.5 -0.3**
MELA				AML	AML	
	comp=N,1160μm,0.9s					
MELA				AML	AML	
	comp=E,1016μm,0.7s					
MELA				AML	AML	
	comp=N,1145μm,0.9s					
MELA				AML	AML	
	comp=N,1160μm,1.1s					
MELA				AML	AML	
	comp=N,1145μm,1.1s					
MELA				AML	AML	
	comp=E,1038μm,0.7s					
SGRT	**San Giovanni R**	**2.29**	**121**	⇑P	**Pn**	**20 04 08.9 +1.9**
SGRT				AML	AML	
	comp=N,334μm,0.8s					
SGRT				AML	AML	
	comp=E,439μm,1.0s					
SGTA	**Sant Agata di**	**2.47**	**137**	P	**Pb**	**20 04 12.7 -1.2**
SGTA				AML	AML	
	comp=N,192μm,1.1s					
SGTA				AML	AML	
	comp=E,252μm,0.9s					
SGTA				AML	AML	
	comp=N,192μm,0.9s					
PALZ	**Palazzo San Ge**	**2.92**	**133**	⇓P	**Pn**	**20 04 18.0 +2.2**
PALZ				AML	AML	
	comp=E,390μm,0.9s					
PALZ				AML	AML	
	comp=N,432μm,0.9s					
PALZ				AML	AML	
	comp=N,432μm,1.1s					
CGRP	**Cima Grappa**	**3.06**	**342**	⇑P	**Pn**	**20 04 19.5 +1.7**
CGRP				AML	AML	
	comp=N,291μm,0.5s					
CGRP				AML	AML	
	comp=E,306μm,0.4s					
LJU	**Ljubljana**	**3.23**	**18**	P	**Pn**	**20 04 22.8 +2.8**
LJU				AML	AML	
	comp=E,994μm,0.8s					
LJU				AML	AML	
	comp=N,1040μm,1.3s					
MPRI	**Monte Prat**	**3.28**	**358**	S	**Sn**	**20 05 01.0 +1.4**
STAL	**STALIGIAL**	**3.31**	**355**	S	**Sn**	**20 05 01.0 +0.7**
STON	**Ston**	**3.36**	**90**	⇑P	**Pn**	**20 04 21.1 -0.6**
STON				AML	AML	
	comp=E,44μm,0.7s					
STON				AML	AML	
	comp=N,45μm,0.9s					
CIMO	**Cimolais**	**3.38**	**352**	S	**Sn**	**20 05 01.0 -1.1**
RNCA	**Ronca, Sant'Ol**	**3.38**	**298**	S	**Sb**	**20 05 09.0 -1.4**
ZONE	**Zone**	**3.53**	**323**	S	**Sn**	**20 05 05.0 -0.9**
ACOM	**Acomizza, Ital**	**3.59**	**4**	S	**Sn**	**20 05 05.0 -2.6**
MYKA	**Terra Mystica**	**3.68**	**6**	*e*Pn	**Pn**	**20 04 27.7 +1.5**
	comp=N,2.0nm,0.3s					
OBKA	**Obir**	**3.68**	**15**	*e*Pn	**Pn**	**20 04 26.5 +0.2**
	comp=N,1.1nm,0.2s					
KOSI	**Kohlern**	**3.71**	**341**	⇓P	**Pn**	**20 04 29.2 +2.4**
KOSI				AML	AML	
	comp=N,130μm,0.5s					
KOSI				AML	AML	
	comp=E,200μm,0.9s					
KOSI				AML	AML	
	comp=E,200μm,1.1s					
ABTA	**Abfaltersbach**	**3.81**	**354**	*i* Pn	**Pn**	**20 04 29.8 +1.9**
	comp=E,14nm,0.4s,SNR=19					
HCY	**Herceg Novi**	**3.99**	**96**	⇑*i*Pn	**Pn**	**20 04 32.4 +2.0**
HCY				*e*Sn	**Sn**	**20 05 11.0 -6.0**
KBA	**Koelnbreinsper**	**4.12**	**2**	*e*Pn	**Pn**	**20 04 33.6 +1.3**
	comp=E,2.3nm,0.2s					
ROSI	**Rosskopf**	**4.14**	**343**	⇑P	**Pn**	**20 04 35.2 +2.4**
ROSI				AML	AML	
	comp=E,200μm,0.6s					
ROSI				AML	AML	
	comp=N,228μm,0.8s					
VARE	**Varese**	**4.26**	**314**	⇑P	**Pg**	**20 04 51.1 +0.1**
CEME	**Cevo**	**4.28**	**94**	⇓*i*Pn	**Pn**	**20 04 36.3 +1.8**
CEME				*e*Sn	**Sn**	**20 05 16.1 -8.3**
NKME	**Niksic**	**4.29**	**91**	⇑*i*Pn	**Pn**	**20 04 37.0 +2.5**
NKME				*e*Sn	**Sn**	**20 05 20.4 -4.1**
BUM	**Brajici-Budva**	**4.30**	**97**	⇓*i*Pn	**Pn**	**20 04 36.9 +2.1**
BUM				*e*Sn	**Sn**	**20 05 16.3 -8.7**
FETA	**Feichten**	**4.40**	**338**	*i* Pn	**Pn**	**20 04 38.9 +2.7**
	comp=N,1.8nm,0.3s,SNR=4.6					
WTTA	**Wattenberg**	**4.42**	**347**	*e*Pn	**Pn**	**20 04 39.1 +2.5**
	comp=N,1.6nm,0.2s,SNR=5.5					
SQTA	**Sankt Quirin**	**4.47**	**343**	*i* Pn	**Pn**	**20 04 39.2 +2.1**
	comp=N,9.1nm,0.5s,SNR=8.9					
VSL	**Villasalto**	**4.47**	**220**	⇓P	**Pn**	**20 04 39.5 +2.5**
WATA	**Walderalm**	**4.50**	**346**	*e*Pn	**Pn**	**20 04 40.3 +2.6**
	comp=N,7.7nm,0.5s,SNR=9.7					
DRME	**Dracevica, Mon**	**4.54**	**98**	⇓*i*Pn	**Pn**	**20 04 39.8 +1.8**
DRME				*e*Sn	Sn	20 05 17.6 -13
TTG	**Podgorica**	**4.55**	**95**	⇑*i*Pn	**Pn**	**20 04 41.6 +3.6**
TTG				*e*Sn	**Sn**	**20 05 26.5 -4.3**
PLE	**Pljevlja**	**4.59**	**83**	⇓*i*Pn	**Pn**	**20 04 42.6 +3.8**
PLE				*e*Sn	**Sn**	**20 05 34.2 +2.0**
ARSA	**Arzberg**	**4.61**	**21**	*e*Pn	**Pn**	**20 04 38.9 0.0**
	comp=N,0.6nm,0.2s					
MOTA	**Moosalm**	**4.61**	**343**	*e*Pn	**Pn**	**20 04 42.2 +3.2**
	comp=N,2.8nm,0.4s					
ULC	**Ulcinj**	**4.63**	**100**	⇓*i*Pn	**Pn**	**20 04 41.6 +2.3**
ULC				*e*Sn	Sn	20 05 19.6 -13
KOME	**Kolasin**	**4.69**	**89**	⇓*i*Pn	**Pn**	**20 04 43.1 +2.9**
KOME				*e*Sn	Sn	20 05 22.1 -12
BIOA	**Bad Ischl, Aus**	**4.74**	**4**	*e*Pn	**Pn**	**20 04 42.4 +1.7**
	comp=N,4.4nm,0.3s,SNR=8.2					
RETA	**Reutte**	**4.82**	**341**	*e*Pn	**Pn**	**20 04 44.0 +2.1**
	comp=N,2.8nm,0.3s,SNR=6.0					
DAVA	**Damuels**	**4.89**	**333**	*i* Pn	**Pn**	**20 04 46.1 +3.1**
	comp=N,1.5nm,0.2s					
MOA	**Molln**	**4.95**	**9**	*i* Pn	**Pn**	**20 04 45.2 +1.6**
	comp=N,0.9nm,0.2s,SNR=4.7					
IVA	**Berane**	**4.97**	**89**	⇑*i*Pn	**Pn**	**20 04 47.3 +3.4**
IVA				*e*Sn	Sn	20 05 26.5 -15
RONA	**Rosalia, Austr**	**5.23**	**24**	*e*Pn	**Pn**	**20 04 49.9 +2.4**
	comp=N,1.2nm,0.3s					
CONA	**Conrad Observa**	**5.32**	**20**	*e*Pn	**Pn**	**20 04 49.9 +1.1**
	comp=N,1.5nm,0.3s,SNR=4.7					
KHC	**Kasperske Hory**	**6.17**	**3**	*e*PN	**Pn**	**20 05 00.8 +0.4**
KHC				*e*SN	**Sn**	**20 06 10.4 -0.5**
KHC				*ex*	x	20 06 49.0
CLL	**Collm**	**8.35**	**359**	*e*Pn	**Pg**	**20 06 06.0 -3.1**
CLL				*e*Sn	Sb	20 07 31.0 -2.0

*ROM **26** 20:04:07.9±0.1, 43°.013N±0°.003×13°.123E±0°.005, h6km, ML3.4/32, Error ellipse: s-maj=0.4km s-min=0.2km az=235.0*

*IDC **26** 20:04:09.9±1.8, 43°.23N×13°.36E, h0km, mb3.7/3, mbtmp3.6/6, ML3.4/3, Error ellipse: s-maj=32.5km s-min=18.8km az=78.0*

ISC 26 20:04:09.3±0.9, 43°.03N±0°.02×13°.15E±0°.02, h6km±6km, n50, σ1§26/72, mb3.8/3, 4C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.10**	**225**	⇑P	**Pg**	**20 04 10.4**	**-1.1**
FEMA				AML	AML		
	comp=E,99650μm,1.6s						
FEMA				AML	AML		
GUMA	**Gualdo di Mace**	**0.14**	**78**	P	**Pg**	**20 04 12.1**	**-0.1**
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,82600μm,0.5s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,82600μm,1.5s						
MDAR	**Monte D'Aria**	**0.16**	**359**	P	**Pg**	**20 04 11.9**	**-0.6**
MDAR				S	**Sg**	**20 04 14.9**	**+0.2**
MDAR				AML	AML		
	comp=N,21800μm,1.0s						
MDAR				AML	AML		
	comp=E,14050μm,1.3s						
MDAR				AML	AML		
	comp=N,21750μm,1.0s						
AM05	**Amandola Campo**	**0.16**	**110**	P	**Pg**	**20 04 12.0**	**-0.6**
AM05				S	**Sg**	**20 04 14.9**	**+0.1**
AM05				AML	AML		
	comp=N,1060μm,0.1s						
AM05				AML	AML		
	comp=E,4515μm,1.2s						
AM05				AML	AML		
	comp=N,1060μm,0.1s						
AM05				AML	AML		
	comp=E,4510μm,1.2s						
AM05				AML	AML		
	comp=E,18600μm,1.5s						
AM05				AML	AML		
	comp=N,1062μm,0.1s						
AM05				AML	AML		
	comp=E,4510μm,0.8s						
AM05				AML	AML		
	comp=E,18600μm,0.5s						
AM05				AML	AML		
	comp=N,6195μm,1.4s						
T1216	**Preci, Frazion**	**0.17**	**213**	⇓P	**Pg**	**20 04 11.7**	**-1.1**
T1216				S	**Sg**	**20 04 14.5**	**-0.5**
T1216				AML	AML		
	comp=E,48900μm,0.8s						
T1216				AML	AML		
	comp=N,63550μm,1.1s						
T1216				AML	AML		
	comp=E,48850μm,0.8s						
T1216				AML	AML		
	comp=N,63550μm,1.1s						
T1216				AML	AML		
	comp=E,48950μm,0.8s						
T1216				AML	AML		
	comp=N,63550μm,0.9s						
T1216				AML	AML		
	comp=E,48950μm,1.2s						
T1245	**Castelsantange**	**0.18**	**170**	P	**Pg**	**20 04 11.7**	**-1.2**
T1245				S	**Sg**	**20 04 15.0**	**-0.4**
T1245				AML	AML		
	comp=N,47400μm,0.6s						
T1245				AML	AML		
	comp=N,47100μm,0.6s						
T1245				AML	AML		
	comp=E,31850μm,0.6s						
T1245				AML	AML		
	comp=E,35500μm,0.6s						
T1245				AML	AML		
	comp=N,47450μm,0.6s						
T1245				AML	AML		
	comp=E,31850μm,1.4s						
T1245				AML	AML		
	comp=E,35500μm,1.4s						
SEF1	**Sefro**	**0.18**	**308**	P	**Pg**	**20 04 12.0**	**-0.9**
SEF1				S	**Sg**	**20 04 15.5**	**+0.1**
SEF1				AML	AML		
	comp=E,63550μm,0.2s						
SEF1				AML	AML		
	comp=N,45350μm,0.2s						
PIO1	**Pioraco**	**0.19**	**320**	P	**Pg**	**20 04 12.1**	**-0.9**
PIO1				S	**Sg**	**20 04 15.9**	**+0.3**
PIO1				AML	AML		
	comp=E,15605μm,1.1s						
PIO1				AML	AML		
	comp=N,20900μm,1.6s						

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PIO1                                AML   AML
     comp=E,15595µm,1.1s
PIO1                                AML   AML
     comp=N,20950µm,1.6s
PIO1                                AML   AML
     comp=N,20950µm,0.4s
PIO1                                AML   AML
     comp=E,15595µm,0.9s
MMO1 Montemonaco        0.19 135    P     Pg    20 04 11.8 -1.2
MMO1                                S     Sg    20 04 15.3 -0.3
SSM1 San Severino M     0.20   7    P     Pg    20 04 12.7 -0.4
SSM1                                S     Sg    20 04 16.9 +1.0
GAG1 Gagliole           0.21 344    P     Pg    20 04 13.1 -0.4
FIU1 Fiuminata          0.22 315    P     Pg    20 04 12.5 -1.1
FIU1                                S     Sg    20 04 16.7 +0.1
FIU1                                AML   AML
     comp=E,7365µm,0.9s
FIU1                                AML   AML
     comp=E,7360µm,0.9s
FIU1                                AML   AML
     comp=N,10145µm,1.6s
FIU1                                AML   AML
     comp=N,10145µm,0.4s
MTL1 Matelica           0.24 336    P     Pg    20 04 13.5 -0.6
MTL1                                S     Sg    20 04 18.4 +1.0
MTL1                                AML   AML
     comp=E,28950µm,0.9s
MTL1                                AML   AML
     comp=N,41000µm,1.1s
MTL1                                AML   AML
     comp=E,29000µm,0.9s
MTL1                                AML   AML
     comp=N,40950µm,1.1s
MNTP Montappone         0.26  66    P     Pg    20 04 14.6 +0.3
MNTP                                AML   AML
     comp=E,31400µm,0.6s
MNTP                                AML   AML
     comp=E,31350µm,0.6s
MNTP                                AML   AML
     comp=N,16750µm,0.7s
MNTP                                AML   AML
     comp=E,31400µm,0.6s
SNTG Esanatoglia        0.27 326 ⇓P     Pg    20 04 13.7 -0.8
SNTG                                AML   AML
     comp=E,7320µm,0.5s
SNTG                                AML   AML
     comp=N,6565µm,0.6s
SNTG                                AML   AML
     comp=N,6565µm,0.6s
SNTG                                AML   AML
     comp=E,7300µm,0.6s
SNTG                                AML   AML
     comp=E,7325µm,0.6s
SNTG                                AML   AML
     comp=N,7220µm,0.6s
EL6  Elcito             0.30 354 ⇓P     Pg    20 04 14.4 -0.7
T1215 Vallo di Nera,    0.31 221    P     Pg    20 04 14.6 -0.7
T1215                               S     Sg    20 04 19.0 -0.4
T1217 Poggiodomo (PG    0.36 206    P     Pg    20 04 15.1 -1.2
T1217                               S     Sg    20 04 20.9 -0.1
T1217                               AML   AML
     comp=N,12250µm,0.6s
T1217                               AML   AML
     comp=E,8770µm,1.4s
T1217                               AML   AML
     comp=N,12100µm,0.6s
T1217                               AML   AML
     comp=E,8750µm,1.4s
T1217                               AML   AML
     comp=N,12050µm,0.6s
T1217                               AML   AML
     comp=N,12200µm,0.6s
T1217                               AML   AML
     comp=E,8715µm,1.4s
T1217                               AML   AML
     comp=N,12050µm,0.6s
T1217                               AML   AML
     comp=E,8505µm,1.4s
T1217                               AML   AML
     comp=N,12250µm,0.6s
T1204 Amatrice, Fraz    0.38 161    P     Pg    20 04 15.4 -1.2
T1204                               S     Sg    20 04 22.0 +0.3
T1204                               AML   AML
     comp=E,13400µm,1.2s
T1204                               AML   AML
     comp=N,8300µm,1.3s
T1204                               AML   AML
     comp=E,13395µm,1.2s
T1204                               AML   AML
     comp=N,8215µm,1.3s
T1204                               AML   AML
     comp=E,13405µm,1.2s
T1204                               AML   AML
     comp=N,8315µm,1.3s
T1204                               AML   AML
     comp=E,13405µm,0.8s
T1204                               AML   AML
     comp=N,8315µm,0.7s
ATCC AVT- Casa Cast     0.40 292 ⇓P     Pg    20 04 16.2 -0.8
ATCC                                S     Sg    20 04 23.1 +0.8
ATCC                                AML   AML
     comp=E,28600µm,0.2s
ATCC                                AML   AML
     comp=N,25250µm,1.3s
ATCC                                AML   AML
     comp=N,25250µm,0.7s
OFFI Offida             0.41 104 ⇓P     Pg    20 04 17.6 +0.5
LNSS Leonessa           0.44 190    AML   AML
     comp=N,9105µm,1.3s
LNSS                                AML   AML
     comp=E,10700µm,1.1s
LNSS                                AML   AML
     comp=E,10700µm,0.9s
LNSS                                AML   AML
     comp=N,9105µm,0.7s
PP3  Marolino           0.48  44    P     Pb    20 04 19.5 -0.6
PP3                                 AML   AML
     comp=N,10705µm,1.6s
PP3                                 AML   AML
     comp=E,11250µm,1.3s
PP3                                 AML   AML
     comp=E,10800µm,1.3s
PP3                                 AML   AML
     comp=N,10715µm,1.6s
PP3                                 AML   AML
     comp=E,11300µm,1.3s
PP3                                 AML   AML
     comp=N,10600µm,1.6s
PP3                                 AML   AML
     comp=N,10720µm,1.6s
PP3                                 AML   AML
     comp=N,10600µm,0.4s
PP3                                 AML   AML
     comp=N,10720µm,0.4s
ARVD Arcevia            0.49 342 ⇑P     Pg    20 04 17.9 -0.7
ARVD                                S     Sb    20 04 27.0 -0.7
ARVD                                AML   AML
     comp=N,2815µm,1.6s
ARVD                                AML   AML
     comp=E,3775µm,0.7s
ARVD                                AML   AML
     comp=E,3775µm,1.3s
ARVD                                AML   AML
     comp=N,2815µm,0.4s
MURB Monte Urbino       0.51 297    P     Pg    20 04 18.2 -0.9
MURB                                S     Sg    20 04 27.0 +1.2
MURB                                AML   AML
     comp=E,13630µm,0.4s
MURB                                AML   AML
     comp=N,11125µm,1.5s
MURB                                AML   AML
     comp=E,13600µm,0.4s
MURB                                AML   AML
     comp=N,11145µm,1.5s
MURB                                AML   AML
     comp=E,15550µm,0.3s
MURB                                AML   AML
     comp=E,13595µm,0.4s
MURB                                AML   AML
     comp=N,11105µm,1.5s
MURB                                AML   AML
     comp=N,11950µm,1.5s
RM33 Pellescritta (     0.53 175 ⇑P     Pg    20 04 18.1 -1.3
RM33                                AML   AML
     comp=E,4395µm,1.6s
RM33                                AML   AML
     comp=N,4165µm,1.3s
RM33                                AML   AML
     comp=N,4245µm,1.3s
RM33                                AML   AML
     comp=E,4265µm,1.6s
RM33                                AML   AML
     comp=E,4260µm,1.6s
RM33                                AML   AML
     comp=E,4395µm,0.4s
RM33                                AML   AML
     comp=E,4260µm,0.4s
TERO Teramo             0.53 141    P     Pg    20 04 19.1 -0.4
TERO                                S     Sg    20 04 27.0 +0.6
TERO                                AML   AML
     comp=E,5365µm,0.4s
TERO                                AML   AML
     comp=N,3140µm,0.8s
TERO                                AML   AML
     comp=E,5560µm,0.4s
TERO                                AML   AML
     comp=N,3260µm,0.8s
TERO                                AML   AML
     comp=E,5365µm,1.6s
TERO                                AML   AML
     comp=E,5560µm,1.6s
CAMP Campotosto         0.53 159    AML   AML
     comp=N,3325µm,1.1s
CAMP                                AML   AML
     comp=E,3855µm,1.2s
ATFO Monte Foce - G     0.54 309 ⇓P     Pg    20 04 18.6 -1.0
ATFO                                AML   AML
     comp=E,3970µm,1.0s
ATFO                                AML   AML
     comp=N,3340µm,0.9s
FRON Frontone           0.57 328    P     Pg    20 04 19.2 -1.1
FRON                                S     Sg    20 04 28.7 +0.9
FRON                                AML   AML
     comp=N,5475µm,0.3s
FRON                                AML   AML
     comp=E,3475µm,0.5s
FRON                                AML   AML
     comp=E,3480µm,0.5s
CESX Cesi               0.59 225 ⇓P     Pg    20 04 19.2 -1.5
CESX                                S     Sg    20 04 28.2 -0.2
CESX                                AML   AML
     comp=E,7650µm,0.5s
CESX                                AML   AML
     comp=N,9115µm,0.3s
ATTE AVT- Monte Tez     0.60 286 ⇓P     Pb    20 04 22.6 +0.4
AOI  Ancona             0.61  33    P     Pg    20 04 20.8 -0.3
AOI                                 AML   AML
     comp=N,1365µm,0.3s
AOI                                 AML   AML
     comp=E,1785µm,0.7s
ATVO AVT- Monte Val     0.64 303 ⇓P     Pg    20 04 20.8 -0.8
ATVO                                S     Sg    20 04 30.9 +0.9
ATVO                                AML   AML
     comp=E,2955µm,0.8s
ATVO                                AML   AML
     comp=N,2580µm,0.7s
MPAG Monte Paganucc     0.66 335    P     Pg    20 04 21.6 -0.3
MPAG                                AML   AML
     comp=E,2985µm,1.2s
MPAG                                AML   AML
     comp=N,3115µm,1.1s
MPAG                                AML   AML
     comp=E,2980µm,1.2s
MPAG                                AML   AML
     comp=E,2980µm,0.8s
MPAG                                AML   AML
     comp=N,3115µm,0.9s
GIGS Gran Sasso         0.66 152    P     Pg    20 04 20.3 -1.7
GIGS                                S     Sg    20 04 30.8 +0.2
GIGS                                AML   AML
     comp=E,1375µm,0.6s
GIGS                                AML   AML
     comp=N,1088µm,1.2s
GIGS                                AML   AML
     comp=N,1088µm,1.2s
PIEI Pieia              0.67 319    P     Pg    20 04 21.4 -0.8
PIEI                                S     Sg    20 04 31.9 +0.9
PIEI                                AML   AML
     comp=E,2115µm,0.2s
PIEI                                AML   AML
     comp=N,1620µm,1.5s
PIEI                                AML   AML
     comp=N,1620µm,0.5s
ATPI Pietralunga -      0.69 308    P     Pg    20 04 22.0 -0.5
ATPI                                S     Sb    20 04 32.4 -0.9
ATPI                                AML   AML
     comp=N,1870µm,1.6s
ATPI                                AML   AML
     comp=N,1865µm,1.6s
ATPI                                AML   AML
     comp=E,2325µm,0.5s
FSSB Fossombrone        0.71 338 ⇑P     Pg    20 04 22.3 -0.6
FSSB                                AML   AML
     comp=E,7330µm,0.3s
FSSB                                AML   AML
     comp=N,19450µm,0.4s
FSSB                                AML   AML
     comp=N,19500µm,0.4s
BADI Badiali            0.81 306 ⇓P     Pg    20 04 24.0 -0.9
CAFI Castiglion Fio     0.91 289 ⇓P     Pg    20 04 26.0 -0.8
CAFI                                AML   AML
     comp=N,2200µm,1.2s
CAFI                                AML   AML
     comp=E,2035µm,0.8s
LATE Laterza            1.07 247 ⇓P     Pg    20 04 29.8  0.0
DAVOX Davos/Dischmat    4.41 329    Pn    Pn    20 05 18.4 +1.6
     comp=E,3.7nm,0.3s,baz=337,slow=4.5,SNR=8.0
DAVOX                               Sn    Sn    20 06 07.8 -0.7
     baz=336,slow=21
     comp=E,7.9nm,0.3s
GERES GERESS Array B    5.83   4    Pn    Pn    20 05 34.8 -1.4
     comp=E,0.6nm,0.3s,baz=182,slow=14,SNR=7.7
GERES                               Sn    Sn    20 06 40.5 -2.8
     comp=E,0.2nm,0.3s,baz=181,slow=24,SNR=1.7
     comp=E,1.8nm,0.5s
KEST Kesra              7.86 203    Pn    Pn    20 06 08.8 +4.7
     comp=E,0.3nm,0.3s,baz=0.0,slow=11,SNR=4.4
     comp=E,2.8nm,0.6s
CLL  Collm              8.28 359    ex    x     20 08 20.0
CLL  Collm              8.28 359    eSg   Sg    20 08 29.0 -5.8
     comp=Z,21nm,1.6s
ARU  Arti              31.64  49    P     P     20 10 31.7 -1.1
     comp=Z,1.5nm,0.6s,baz=288,slow=6.4,SNR=4.1
     comp=Z,1.5nm,0.6s
BVAR Borovoye Array    38.60  55    P     P     20 11 33.0 +0.3
     comp=Z,0.5nm,0.9s,baz=282,slow=9.6,SNR=3.9
     comp=Z,0.5nm,0.9s
MKAR Makanchi Array    47.67  60    P     P     20 12 46.1 -0.1
     comp=Z,0.6nm,0.8s,baz=274,slow=7.6,SNR=4.3
     comp=Z,0.6nm,0.8s
```

*ROM **26** 20:12:41.1±0.1, 43°.017N±0°.003×13°.123E±0°.004, h8km, ML3.3/60, Error ellipse: s-maj=0.3km s-min=0.2km az=61.0*
*PRU **26** 20:12:42.7±0.0, 43°.12N×13°.53E, h0km*
*IDC **26** 20:12:42.4±1.4, 43°.15N×13°.23E, h0km, mb3.3/3, mbtmp3.4/6, ML3.4/3, MS4.2/1, Error ellipse: s-maj=32.0km s-min=15.3km az=94.0*
ISC 26 20:12:42.0±0.8, 43°.04N±0°.01×13°.13E±0°.02, h7km±5km, n103, σ1§10/140, mb3.4/3, 20C-18D, Central Italy

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Code Station Name       Δ°   AZ°   Phase ID        Time     Res
                                   Op    ISC       h m s    ISC
FEMA Monte Fema         0.09 218   P     Pg        20 12 43.7 -0.6
FEMA                               S     Sg        20 12 45.6 -0.3
FEMA                               AML   AML
FEMA                               AML   AML
FEMA                               AML   AML
FEMA                               AML   AML
MC2  Monte Cornacci     0.13 159   P     Pg        20 12 44.3 -0.6
MC2                                S     Sg        20 12 47.0 +0.1
GUMA Gualdo di Mace     0.15  80   P     Pg        20 12 45.3  0.0
GUMA                               S     Sg        20 12 48.5 +1.1
GUMA                               AML   AML
     comp=N,92600µm,0.5s
GUMA                               AML   AML
     comp=N,97300µm,0.4s
GUMA                               AML   AML
     comp=E,88450µm,0.5s
GUMA                               AML   AML
     comp=E,81450µm,0.6s
MDAR Monte D'Aria       0.16   4   P     Pg        20 12 45.0 -0.3
MDAR                               S     Sg        20 12 48.0 +0.3
MDAR                               AML   AML
     comp=E,15400µm,0.5s
MDAR                               AML   AML
     comp=E,15450µm,0.5s
MDAR                               AML   AML
     comp=N,14600µm,1.6s
MDAR                               AML   AML
     comp=E,15420µm,0.5s
MDAR                               AML   AML
     comp=N,14600µm,0.4s
T1216 Preci, Frazion    0.17 209   AML   AML
     comp=E,47850µm,0.9s
T1216                              AML   AML
     comp=N,51450µm,1.4s
CESI CESI - Serrava     0.17 259 ⇑P     Pg        20 12 45.2 -0.2
CESI                               S     Sg        20 12 48.3 +0.5
CESI                               AML   AML
     comp=E,46450µm,0.5s
CESI                               AML   AML
     comp=N,39000µm,0.4s
CESI                               AML   AML
     comp=E,46450µm,1.5s
SEF1 Sefro              0.17 310   P     Pg        20 12 45.3 -0.2
SEF1                               S     Sg        20 12 48.5 +0.5
SEF1                               AML   AML
     comp=N,40800µm,0.4s
SEF1                               AML   AML
     comp=N,40800µm,0.4s
SEF1                               AML   AML
     comp=E,54000µm,0.3s
AM05 Amandola Campo     0.18 109   P     Pg        20 12 45.3 -0.3
AM05                               S     Sg        20 12 48.2 +0.2
AM05                               AML   AML
     comp=N,5815µm,1.4s
AM05                               AML   AML
     comp=N,804µm,0.1s
AM05                               AML   AML
     comp=N,5820µm,1.4s
AM05                               AML   AML
     comp=N,804µm,0.1s
AM05                               AML   AML
     comp=E,4765µm,1.0s
AM05                               AML   AML
     comp=E,18600µm,1.1s
AM05                               AML   AML
     comp=E,4770µm,1.0s
AM05                               AML   AML
     comp=N,802µm,0.1s
AM05                               AML   AML
     comp=N,5820µm,0.6s
AM05                               AML   AML
     comp=E,18600µm,0.9s
AM05                               AML   AML
     comp=E,4765µm,1.0s
PIO1 Pioraco            0.18 324   P     Pg        20 12 45.4 -0.2
PIO1                               S     Sg        20 12 49.2 +1.1
PIO1                               AML   AML
     comp=N,19950µm,0.9s
PIO1                               AML   AML
     comp=E,11180µm,1.3s
PIO1                               AML   AML
     comp=N,19900µm,0.9s
PIO1                               AML   AML
     comp=E,11170µm,1.3s
PIO1                               AML   AML
     comp=N,19900µm,1.1s
PIO1                               AML   AML
     comp=E,11170µm,0.7s
MMO1 Montemonaco        0.20 133   P     Pg        20 12 45.5 -0.5
MMO1                               S     Sg        20 12 48.9 +0.1
GAG1 Gagliole           0.21 348   P     Pg        20 12 46.2  0.0
GAG1                               S     Sg        20 12 50.2 +1.2
GAG1                               AML   AML
     comp=E,33300µm,0.7s
GAG1                               AML   AML
     comp=N,26850µm,0.6s
GAG1                               AML   AML
     comp=E,33250µm,0.7s
GAG1                               AML   AML
     comp=E,33250µm,1.3s
MTL1 Matelica           0.24 339   P     Pg        20 12 46.7  0.0
MTL1                               S     Sg        20 12 51.1 +1.2
MTL1                               AML   AML
     comp=E,20900µm,1.4s
MTL1                               AML   AML
     comp=N,28800µm,1.2s
MTL1                               AML   AML
     comp=E,20900µm,1.4s
MTL1                               AML   AML
     comp=N,28800µm,1.2s
MTL1                               AML   AML
     comp=E,20900µm,0.6s
SNTG Esanatoglia        0.26 328   P     Pg        20 12 46.9 -0.3
SNTG                               S     Sg        20 12 51.6 +1.0
SNTG                               AML   AML
     comp=E,4090µm,0.7s
SNTG                               AML   AML
     comp=N,5985µm,1.5s
SNTG                               AML   AML
     comp=N,6060µm,1.5s
SNTG                               AML   AML
     comp=N,5980µm,1.5s
SNTG                               AML   AML
     comp=E,4095µm,0.7s
SNTG                               AML   AML
     comp=E,4095µm,0.7s
SNTG                               AML   AML
     comp=E,4090µm,0.7s
MNTP Montappone         0.27  68   P     Pg        20 12 47.9 +0.5
MNTP                               S     Sg        20 12 53.5 +2.5
MNTP                               AML   AML
     comp=N,12400µm,0.8s
MNTP                               AML   AML
     comp=E,21150µm,0.6s
MNTP                               AML   AML
     comp=N,12400µm,0.8s
MNTP                               AML   AML
     comp=E,21150µm,1.4s
T1241 Roccafluvione,    0.29 129   P     Pg        20 12 47.0 -0.7
T1241                              S     Sg        20 12 51.7 +0.3
T1241                              AML   AML
     comp=E,6995µm,1.0s
T1241                              AML   AML
     comp=N,5220µm,1.5s
T1241                              AML   AML
     comp=E,6990µm,1.0s
T1241                              AML   AML
     comp=E,6990µm,1.0s
T1241                              AML   AML
     comp=N,5225µm,1.5s
EL6  Elcito             0.29 356   P     Pg        20 12 47.6 -0.3
EL6                                S     Sg        20 12 52.5 +0.7
T1215 Vallo di Nera,    0.30 219   P     Pg        20 12 47.5 -0.5
T1215                              S     Sg        20 12 52.2 +0.3
T1215                              AML   AML
     comp=E,6655µm,1.3s
T1215                              AML   AML
     comp=E,6735µm,1.1s
T1215                              AML   AML
     comp=E,6725µm,1.1s
T1215                              AML   AML
     comp=N,6855µm,0.3s
T1215                              AML   AML
     comp=E,6660µm,1.3s
T1215                              AML   AML
     comp=E,6730µm,1.1s
T1215                              AML   AML
     comp=N,7140µm,0.3s
T1215                              AML   AML
     comp=E,6660µm,0.7s
T1215                              AML   AML
     comp=E,6725µm,0.9s
TRE1 Treia              0.31  26   P     Pb        20 12 48.5 -1.4
TRE1                               S     Sb        20 12 53.8 -1.2
TRE1                               AML   AML
     comp=E,21850µm,0.4s
TRE1                               AML   AML
     comp=N,18400µm,0.6s
TRE1                               AML   AML
     comp=E,21850µm,0.4s
TRE1                               AML   AML
     comp=N,18400µm,0.6s
TRE1                               AML   AML
     comp=N,18400µm,1.4s
T1217 Poggiodomo (PG    0.35 204   P     Pg        20 12 48.3 -0.6
T1217                              S     Sg        20 12 54.0 +0.4
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T1217                                AML   AML
     comp=E,6105µm,0.9s
T1217                                AML   AML
     comp=N,7450µm,0.8s
T1217                                AML   AML
     comp=E,5990µm,0.9s
T1217                                AML   AML
     comp=N,7455µm,0.7s
T1217                                AML   AML
     comp=E,5975µm,0.9s
T1217                                AML   AML
     comp=E,6110µm,0.9s
T1217                                AML   AML
     comp=E,5970µm,0.9s
T1217                                AML   AML
     comp=N,7455µm,0.8s
T1217                                AML   AML
     comp=N,7445µm,0.4s
T1217                                AML   AML
     comp=E,6105µm,0.9s
T1217                                AML   AML
     comp=N,7445µm,0.4s
ATCC AVT- Casa Cast      0.39 293    P     Pg    20 12 49.4 -0.1
ATCC                                 S     Sb    20 12 56.2 -1.1
ATCC                                 AML   AML
     comp=N,17700µm,1.1s
ATCC                                 AML   AML
     comp=E,18950µm,0.3s
ATCC                                 AML   AML
     comp=N,17700µm,0.9s
T1204 Amatrice, Fraz     0.39 159    P     Pg    20 12 48.9 -0.7
T1204                                S     Sg    20 12 55.1 +0.5
T1204                                AML   AML
     comp=E,8940µm,0.3s
T1204                                AML   AML
     comp=N,6675µm,0.7s
T1204                                AML   AML
     comp=N,6670µm,0.7s
T1204                                AML   AML
     comp=E,8945µm,0.3s
T1243 Rocca Santa Ma     0.41 145    P     Pg    20 12 49.3 -0.7
T1243                                S     Sg    20 12 55.8 +0.3
MMUR Monte Murano        0.42 347    P     Pb    20 12 49.9 -1.8
MMUR                                 S     Sb    20 12 57.2 -1.1
MMUR                                 AML   AML
     comp=E,8470µm,0.3s
MMUR                                 AML   AML
     comp=N,6510µm,0.4s
MMUR                                 AML   AML
     comp=E,8450µm,0.3s
MMUR                                 AML   AML
     comp=N,6510µm,0.5s
MMUR                                 AML   AML
     comp=E,8450µm,1.7s
OFFI Offida              0.42 104    P     Pb    20 12 51.0 -0.8
OFFI                                 AML   AML
     comp=E,7995µm,0.5s
OFFI                                 AML   AML
     comp=N,10945µm,0.6s
OFFI                                 AML   AML
     comp=N,10945µm,1.4s
SMA1 SAN MARTINO         0.43 159    P     Pg    20 12 49.6 -0.8
SMA1                                 S     Sg    20 12 56.1  0.0
SMA1                                 AML   AML
     comp=E,6685µm,0.6s
SMA1                                 AML   AML
     comp=N,6735µm,0.6s
SMA1                                 AML   AML
     comp=E,6690µm,0.6s
LNSS Leonessa            0.44 188    P     Pg    20 12 49.6 -0.9
LNSS                                 S     Sg    20 12 56.6 +0.4
LNSS                                 AML   AML
     comp=E,8085µm,0.6s
LNSS                                 AML   AML
     comp=N,6720µm,0.8s
LNSS                                 AML   AML
     comp=E,8080µm,0.6s
LNSS                                 AML   AML
     comp=N,6720µm,1.2s
LNSS                                 AML   AML
     comp=E,8085µm,1.4s
ARVD Arcevia             0.48 344    ⇓P    Pb    20 12 51.0 -1.8
ARVD                                 S     Sb    20 12 58.9 -1.2
ARVD                                 AML   AML
     comp=N,2380µm,0.5s
ARVD                                 AML   AML
     comp=E,3530µm,0.4s
PP3  Marolino            0.49  46    P     Pb    20 12 52.4 -0.6
PP3                                  AML   AML
     comp=E,6485µm,1.3s
PP3                                  AML   AML
     comp=N,6930µm,1.4s
PP3                                  AML   AML
     comp=E,6625µm,1.3s
PP3                                  AML   AML
     comp=N,6820µm,1.4s
PP3                                  AML   AML
     comp=N,6930µm,0.6s
PP3                                  AML   AML
     comp=E,6485µm,0.7s
PP3                                  AML   AML
     comp=E,6625µm,0.7s
PP3                                  AML   AML
     comp=N,6820µm,0.6s
MURB Monte Urbino        0.50 298    P     Pg    20 12 51.5 -0.1
MURB                                 S     Sb    20 12 59.5 -1.0
MURB                                 AML   AML
     comp=N,6840µm,0.5s
MURB                                 AML   AML
     comp=E,12500µm,1.4s
MURB                                 AML   AML
     comp=N,7705µm,0.5s
MURB                                 AML   AML
     comp=N,6840µm,0.5s
MURB                                 AML   AML
     comp=N,7705µm,1.5s
MURB                                 AML   AML
     comp=N,6840µm,1.5s
MURB                                 AML   AML
     comp=E,11215µm,0.4s
MURB                                 AML   AML
     comp=E,12500µm,0.6s
ATFO Monte Foce - G      0.52 309    P     Pg    20 12 51.7 -0.5
ATFO                                 S     Sb    20 13 00.5 -0.8
ATFO                                 AML   AML
     comp=E,3175µm,0.5s
ATFO                                 AML   AML
     comp=N,3095µm,0.6s
ATFO                                 AML   AML
     comp=N,3100µm,0.6s
RM33 Pellescritta (      0.53 173    ⇓P    Pg    20 12 51.2 -1.0
RM33                                 S     Sg    20 12 59.3 +0.1
RM33                                 AML   AML
     comp=E,3005µm,1.5s
RM33                                 AML   AML
     comp=E,2905µm,1.5s
RM33                                 AML   AML
     comp=N,2690µm,0.4s
RM33                                 AML   AML
     comp=N,2630µm,0.9s
RM33                                 AML   AML
     comp=N,2685µm,0.9s
RM33                                 AML   AML
     comp=E,2900µm,1.5s
RM33                                 AML   AML
     comp=E,3010µm,1.5s
RM33                                 AML   AML
     comp=E,3010µm,0.5s
RM33                                 AML   AML
     comp=E,2900µm,0.5s
CAMP Campotosto          0.54 157    P     Pg    20 12 51.3 -1.1
CAMP                                 S     Sg    20 12 59.7 +0.1
CAMP                                 AML   AML
     comp=N,2290µm,0.5s
CAMP                                 AML   AML
     comp=N,2290µm,1.5s
CAMP                                 AML   AML
     comp=E,3390µm,0.8s
T1211 Morro Reatino      0.54 202    P     Pg    20 12 52.3 -0.2
T1211                                S     Sg    20 12 59.4 -0.1
T1211                                AML   AML
     comp=E,3435µm,1.4s
T1211                                AML   AML
     comp=N,5665µm,0.3s
T1211                                AML   AML
     comp=E,3595µm,1.4s
T1211                                AML   AML
     comp=N,5735µm,1.4s
T1211                                AML   AML
     comp=E,3595µm,1.4s
T1211                                AML   AML
     comp=N,5735µm,1.4s
T1211                                AML   AML
     comp=N,5660µm,0.3s
T1211                                AML   AML
     comp=E,3435µm,1.4s
T1211                                AML   AML
     comp=N,5735µm,0.6s
TERO Teramo              0.54 139    P     Pg    20 12 51.5 -1.0
TERO                                 S     Sg    20 12 59.9 +0.4
TERO                                 AML   AML
     comp=N,3075µm,1.2s
TERO                                 AML   AML
     comp=E,4025µm,0.5s
TERO                                 AML   AML
     comp=E,4150µm,0.5s
TERO                                 AML   AML
     comp=N,2960µm,1.2s
TERO                                 AML   AML
     comp=N,2960µm,0.8s
TERO                                 AML   AML
     comp=N,3075µm,0.8s
FRON Frontone            0.56 329    P     Pg    20 12 52.3 -0.6
FRON                                 S     Sb    20 13 01.6 -0.8
FRON                                 AML   AML
     comp=E,2475µm,0.2s
FRON                                 AML   AML
     comp=N,4490µm,0.3s
CESX Cesi                0.58 224    ⇑P    Pg    20 12 52.4 -0.9
CESX                                 S     Sg    20 13 01.3 +0.4
CESX                                 AML   AML
     comp=E,7235µm,0.4s
CESX                                 AML   AML
     comp=N,6820µm,0.4s
ATTE AVT- Monte Tez      0.59 286    ⇑P    Pb    20 12 53.5 -1.1
ATTE                                 AML   AML
     comp=E,1820µm,0.4s
ATTE                                 AML   AML
     comp=N,2075µm,0.7s
T1247 Pizzolo (AQ)       0.61 168    P     Pg    20 12 52.6 -1.1
T1247                                S     Sg    20 13 01.8 +0.1
T1247                                AML   AML
     comp=E,3805µm,1.3s
T1247                                AML   AML
     comp=N,3630µm,0.4s
T1247                                AML   AML
     comp=E,3805µm,0.7s
AOI  Ancona              0.62  34    ⇑P    Pb    20 12 54.2 -1.0
AOI                                  AML   AML
     comp=N,1450µm,0.9s
AOI                                  AML   AML
     comp=E,1495µm,0.4s
TRTR Tortoreto Alta      0.62 111    AML   AML
     comp=N,8100µm,0.6s
TRTR                                 AML   AML
     comp=E,7290µm,1.2s
TRTR                                 AML   AML
     comp=N,8105µm,0.6s
TRTR                                 AML   AML
     comp=E,7290µm,0.8s
ATVO AVT- Monte Val      0.63 304    ⇓P    Pg    20 12 53.6 -0.6
ATVO                                 AML   AML
     comp=E,2020µm,0.6s
ATVO                                 AML   AML
     comp=N,2415µm,0.9s
ATVO                                 AML   AML
     comp=E,2020µm,1.4s
MPAG Monte Paganucc      0.65 336    ⇓P    Pb    20 12 54.1 -1.6
MPAG                                 S     Sb    20 13 05.2 +0.2
MPAG                                 AML   AML
     comp=E,2690µm,0.6s
MPAG                                 AML   AML
     comp=N,2135µm,0.5s
MPAG                                 AML   AML
     comp=N,2135µm,1.5s
MPAG                                 AML   AML
     comp=E,2690µm,1.4s
PIEI Pieia               0.66 319    ⇑P    Pg    20 12 54.1 -0.6
PIEI                                 AML   AML
     comp=E,1430µm,0.8s
PIEI                                 AML   AML
     comp=N,1315µm,0.9s
PIEI                                 AML   AML
     comp=N,1310µm,0.9s
PIEI                                 AML   AML
     comp=N,1315µm,1.1s
PIEI                                 AML   AML
     comp=E,1430µm,1.2s
GIGS Gran Sasso          0.67 151    ⇓P    Pg    20 12 53.8 -1.1
GIGS                                 AML   AML
     comp=N,1022µm,0.5s
GIGS                                 AML   AML
     comp=E,1027µm,0.5s
GIGS                                 AML   AML
     comp=N,1022µm,1.5s
ATPI Pietralunga -       0.67 308    ⇓P    Pg    20 12 54.5 -0.5
ATPI                                 AML   AML
     comp=N,1580µm,1.6s
ATPI                                 AML   AML
     comp=N,1585µm,1.6s
ATPI                                 AML   AML
     comp=E,1925µm,0.5s
ATPI                                 AML   AML
     comp=N,1585µm,0.4s
SENI Senigallia          0.67   7    ⇑P    Pb    20 12 55.6 -0.5
SENI                                 AML   AML
     comp=E,2125µm,0.9s
SENI                                 AML   AML
     comp=N,1840µm,1.3s
SENI                                 AML   AML
     comp=N,6680µm,0.3s
SENI                                 AML   AML
     comp=E,6560µm,0.4s
ATMI Monte Miggiano      0.69 296    AML   AML
     comp=N,4480µm,0.5s
ATMI                                 AML   AML
     comp=E,3155µm,0.7s
ATMI                                 AML   AML
     comp=N,4480µm,1.5s
ATMI                                 AML   AML
     comp=E,3155µm,1.3s
FSSB Fossombrone         0.70 339    ⇑P    Pb    20 12 55.4 -1.2
FSSB                                 AML   AML
     comp=E,4305µm,0.6s
FSSB                                 AML   AML
     comp=N,11250µm,0.4s
APEC Apecchio            0.73 316    ⇑P    Pb    20 12 55.9 -1.3
APEC                                 S     Sn    20 13 09.0 -1.2
MGAB Montegabbione       0.76 261    ⇓P    Pn    20 12 58.5 -0.6
MGAB                                 AML   AML
     comp=E,2810µm,0.4s
MGAB                                 AML   AML
     comp=N,5215µm,1.3s
MGAB                                 AML   AML
     comp=N,5645µm,1.3s
MGAB                                 AML   AML
     comp=E,3940µm,0.5s
MGAB                                 AML   AML
     comp=N,5645µm,0.7s
MGAB                                 AML   AML
     comp=E,2810µm,1.6s
MGAB                                 AML   AML
     comp=E,3940µm,1.5s
MGAB                                 AML   AML
     comp=N,5215µm,0.7s
FIAM Fiamignano          0.77 181    ⇑P    Pg    20 12 55.5 -1.2
FIAM                                 AML   AML
     comp=E,1980µm,0.7s
FIAM                                 AML   AML
     comp=N,1145µm,1.0s
FIAM                                 AML   AML
     comp=N,1145µm,1.0s
BADI Badiali             0.80 307    ⇑P    Pb    20 12 56.9 -1.3
PE3  Peglio              0.80 325    ⇑P    Pb    20 12 57.4 -0.9
VCEL Villa Celiera       0.83 140    ⇓P    Pg    20 12 57.4 -0.5
VCEL                                 AML   AML
     comp=N,2405µm,1.5s
VCEL                                 AML   AML
     comp=E,2580µm,0.9s
VCEL                                 AML   AML
     comp=N,2400µm,1.5s
FAGN Fagnano             0.84 156    ⇑P    Pg    20 12 57.7 -0.5
FAGN                                 AML   AML
     comp=E,3860µm,0.4s
FAGN                                 AML   AML
     comp=N,2585µm,1.5s
FAGN                                 AML   AML
     comp=N,2585µm,0.5s
SACS San Casciano d      0.91 259    ⇑P    Pb    20 13 00.1  0.0
SACS                                 AML   AML
     comp=E,1205µm,0.9s
SACS                                 AML   AML
     comp=N,1455µm,1.0s
SRES S.Oreste - Sor      0.92 210    ⇓P    Pg    20 12 59.0 -0.6
SRES                                 AML   AML
     comp=N,1265µm,1.2s
SRES                                 AML   AML
     comp=E,1635µm,0.9s
T0110 Collepietro        0.94 149    ⇓P    Pg    20 12 58.9 -1.2
T0110                                AML   AML
     comp=E,3495µm,0.6s
T0110                                AML   AML
     comp=N,2540µm,0.4s
SF04 Casetta             1.09 260    ⇓P    Pn    20 13 03.7 -0.1
SF04                                 S     Sn    20 13 20.0 +0.8
MCIV Monte Civitell      1.10 257    ⇓P    Pn    20 13 03.8  0.0
MCIV                                 S     Sn    20 13 21.0 +1.8
MCIV                                 AML   AML
     comp=N,712µm,0.6s
MCIV                                 AML   AML
     comp=E,674µm,0.4s
BLLA Bellaria            1.21 337    ⇓P    Pn    20 13 06.7 +1.4
ASQU Asqua               1.24 308    ⇑P    Pn    20 13 07.4 +1.6
LPEL Lama dei Pelig      1.26 141    S     Sn    20 13 25.0 +1.8
TOLF Tolfa               1.28 221    ⇓P    Pn    20 13 05.7 -0.5
TOLF                                 AML   AML
     comp=N,468µm,0.6s
TOLF                                 AML   AML
     comp=E,500µm,1.6s
TOLF                                 AML   AML
     comp=N,468µm,1.4s
VIVA Pratoni del Vi      1.31 192    AML   AML
     comp=N,2085µm,0.5s
VIVA                                 AML   AML
     comp=E,1605µm,0.5s
VIVA                                 AML   AML
     comp=N,2085µm,1.5s
LRP  Arpino              1.43 166    ⇓P    Pg    20 13 10.2 +0.8
CERA Filignano           1.58 155    ⇓P    Pg    20 13 12.2 -0.1
BRIS BRISIGHELLA         1.62 314    ⇓P    Pg    20 13 13.7 +0.7
TRIF Trifonti            1.63 274    P     Pn    20 13 10.8 -0.4
TRIF                                 AML   AML
     comp=N,230µm,0.6s
TRIF                                 AML   AML
     comp=E,350µm,0.5s
VAGA Valle Agricola      1.82 153    ⇑P    Pg    20 13 17.1 +0.3
APRC Apricena            2.20 125    ⇑P    Pb    20 13 22.4 +0.3
SGRT San Giovanni R      2.32 123    ⇓P    Pn    20 13 20.9 +0.3
SGRT                                 AML   AML
     comp=E,300µm,0.6s
SGRT                                 AML   AML
     comp=N,394µm,1.1s
SGRT                                 AML   AML
     comp=E,300µm,1.4s
CGRP Cima Grappa         3.00 342    S     Sn    20 14 07.0 +0.7
VARN Col Varnada, M      3.05 346    ⇑P    Pn    20 13 30.8 +0.2
VARN                                 AML   AML
     comp=N,224µm,0.5s
VARN                                 AML   AML
     comp=E,258µm,1.4s
VARN                                 AML   AML
     comp=E,258µm,0.6s
MPRI Monte Prat          3.21 358    ⇑P    Pn    20 13 33.3 +0.5
MPRI                                 AML   AML
     comp=N,228µm,1.4s
MPRI                                 AML   AML
     comp=E,225µm,1.3s
MPRI                                 AML   AML
     comp=E,225µm,0.7s
MPRI                                 AML   AML
     comp=N,228µm,0.6s
STAL STALIGIAL           3.24 355    ⇑P    Pn    20 13 33.3 +0.1
STAL                                 AML   AML
     comp=E,1252µm,1.5s
STAL                                 AML   AML
     comp=N,1314µm,1.5s
STAL                                 AML   AML
     comp=N,126µm,1.4s
STAL                                 AML   AML
     comp=E,213µm,0.4s
STAL                                 AML   AML
     comp=N,1314µm,0.5s
STAL                                 AML   AML
     comp=E,1252µm,0.5s
CIMO Cimolais            3.31 352    P     Pn    20 13 34.1 -0.1
CIMO                                 AML   AML
     comp=E,48µm,0.8s
CIMO                                 AML   AML
     comp=N,49µm,1.4s
CIMO                                 AML   AML
     comp=E,48µm,1.2s
ACOM Acomizza, Ital      3.52   4    ⇑P    Pn    20 13 38.1 +0.8
ACOM                                 AML   AML
     comp=N,210µm,0.5s
ACOM                                 AML   AML
     comp=E,166µm,0.9s
ACOM                                 AML   AML
     comp=E,166µm,1.1s
MYKA Terra Mystica       3.61   6    ePn   Pn    20 13 38.5 +0.1
     comp=E,8.0nm,0.3s
ABTA Abfaltersbach       3.74 354    ePn   Pn    20 13 40.4 +0.3
     comp=E,36nm,0.4s,SNR=14
FETA Feichten            4.33 338    ePn   Pn    20 13 48.6 +0.2
     comp=E,6.5nm,0.4s
WTTA Wattenberg          4.36 347    ePn   Pn    20 13 51.1 +2.4
     comp=E,2.8nm,0.2s
DAVOX Davos/Dischmat     4.40 329    Pn    Pn    20 13 51.8 +2.5
     comp=E,2.8nm,0.3s,baz=153,slow=16,SNR=9.2
DAVOX                                Sn    Sn    20 14 42.8 +1.9
     comp=E,0.8nm,0.3s,baz=165,slow=24,SNR=1.6
     comp=E,9.8nm,0.4s
SQTA Sankt Quirin        4.40 343    ePn   Pn    20 13 50.9 +1.7
     comp=E,13nm,0.3s,SNR=7.5
WATA Walderalm           4.44 346    ePn   Pn    20 13 52.1 +2.3
     comp=E,15nm,0.3s,SNR=12
MOTA Moosalm             4.54 342    ePn   Pn    20 13 54.1 +2.9
     comp=E,6.8nm,0.4s
ARSA Arzberg             4.54  21    ePn   Pn    20 13 50.3 -0.8
     comp=E,2.3nm,0.3s
BIOA Bad Ischl, Aus      4.67   4    ePn   Pn    20 13 53.3 +0.5
     comp=E,9.2nm,0.3s,SNR=7.9
RETA Reutte              4.75 340    i Pn  Pn    20 13 56.0 +1.9
     comp=E,5.1nm,0.4s,SNR=4.7
DAVA Damuels             4.83 333    ePn   Pn    20 13 56.9 +1.7
     comp=E,9.7nm,0.8s
MOA  Molln               4.88   9    ePn   Pn    20 13 56.5 +0.7
     comp=E,4.0nm,0.3s,SNR=5.9
RONA Rosalia, Austr      5.17  24    ePn   Pn    20 13 59.4 -0.4
     comp=E,1.2nm,0.2s
CONA Conrad Observa      5.26  21    ePn   Pn    20 14 00.6 -0.4
     comp=E,1.4nm,0.3s
GERES GERESS Array B     5.83   4    Pn    Pn    20 14 08.3 -0.5
     comp=E,0.8nm,0.3s,baz=172,slow=13,SNR=8.9
GERES                                Sn    Sn    20 15 14.3 -1.5
     comp=E,1.4nm,0.3s,baz=184,slow=25,SNR=3.4
     comp=E,0.8nm,0.3s
CKRC Cesky Krumlov       5.84   8    ePN   Pn    20 14 07.8 -1.2
CKRC                                 eSN   Sn    20 15 12.1 -4.1
KHC  Kasperske Hory      6.11   3    ePN   Pn    20 14 11.2 -1.4
KHC                                  eSN   Sn    20 15 19.3 -3.3
NKC  Novy Kostel         7.21 357    eSN   Sn    20 15 47.6 -2.3
KEST Kesra               7.86 203    Pn    Pn    20 14 41.7 +5.0
     comp=E,0.3nm,0.3s,baz=42,slow=15,SNR=2.8
     comp=E,2.9nm,0.8s
CLL  Collm               8.28 359    ePn   Pn    20 14 42.0 -0.3
CLL                                  eSn   Sn    20 16 03.0  -13
CLL                                  eSg   Sg    20 17 05.0 -2.5
     comp=Z,7.0nm,1.2s
BORG Borgarnes          29.12 330    LR    LR    20 29 45.3
     comp=Z,493nm,19.8s,baz=9.1,slow=35
TORD Torodi Ar. Bea     31.38 202    P     P     20 19 04.7 +1.3
     comp=Z,0.5nm,0.9s,baz=11,slow=8.9,SNR=2.6
     comp=Z,0.5nm,0.9s
BVAR Borovoye Array     38.61  55    P     P     20 20 06.6 +1.2
     comp=Z,0.3nm,0.7s,baz=282,slow=7.2,SNR=2.7
     comp=Z,0.3nm,0.7s
MKAR Makanchi Array     47.68  60    P     P     20 21 19.4 +0.5
     comp=Z,0.3nm,0.6s,baz=289,slow=7.3,SNR=2.3
     comp=Z,0.3nm,0.6s
```

*ROM **26** 20:25:53.2±0.0, 42°.991N±0°.002×13°.137E±0°.004, h10km, ML3.2/65, Error ellipse: s-maj=0.3km s-min=0.1km az=232.0*
*PDG **26** 20:25:53.9±0.6, 43°.01N×13°.17E, h8km, ML3.7/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*LDG **26** 20:25:54.5±0.1, 42°.87N×13°.05E, h10km, Ml3.4/24, Error ellipse: s-maj=5.3km s-min=3.3km az=43.0*
*IDC **26** 20:25:54.6±1.4, 43°.14N×13°.24E, h0km, mb3.4/2, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=36.8km s-min=14.8km az=95.0*
*PRU **26** 20:25:56.6±0.0, 43°.16N×13°.43E, h0km*
*STR **26** 20:25:56.1±0.6, 43°N±6°×1°3E±°, h10km, MLv3.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=45.9, preliminary*
ISC 26 20:25:54.4±0.8, 43°.01N±0°.01×13°.15E±0°.02, h8km±5km, n233, σ1$92/301, 51C-44D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.09**	**239**	P		**Pg**	**20 25 55.5**	**-1.1**
FEMA				S		**Sg**	**20 25 57.5**	**-0.8**
FEMA				AML		AML		
	comp=E,55900μm,0.7s							
FEMA				AML		AML		
	comp=N,56850μm,1.4s							
MC2	**Monte Cornacci**	**0.10**	**163**	P		**Pg**	**20 25 55.9**	**-1.0**
MC2				S		**Sg**	**20 25 58.0**	**-0.6**
GUMA	**Gualdo di Mace**	**0.15**	**67**	⇓P		**Pg**	**20 25 57.6**	**+0.1**
GUMA				S		**Sg**	**20 26 00.9**	**+1.2**
GUMA				AML		AML		
	comp=E,99950μm,0.4s							
GUMA				AML		AML		
	comp=E,79600μm,0.5s							
GUMA				AML		AML		
GUMA				AML		AML		
	comp=N,91550μm,0.6s							
GUMA				AML		AML		
	comp=E,79600μm,1.5s							
GUMA				END				
AM05	**Amandola Campo**	**0.15**	**101**	⇓P		**Pg**	**20 25 57.3**	**-0.3**
AM05				S		**Sg**	**20 26 00.3**	**+0.5**
AM05				AML		AML		
	comp=E,9055μm,1.6s							
AM05				AML		AML		
	comp=N,2295μm,0.1s							
AM05				AML		AML		
	comp=E,9085μm,1.6s							
AM05				AML		AML		
	comp=N,2290μm,0.1s							
AM05				AML		AML		
	comp=E,9065μm,1.6s							
AM05				AML		AML		
	comp=E,38700μm,0.2s							
AM05				AML		AML		
	comp=E,9065μm,0.4s							
AM05				AML		AML		
	comp=N,7385μm,0.3s							
AM05				END				
T1216	**Preci, Frazion**	**0.15**	**220**	⇑P		**Pg**	**20 25 56.7**	**-0.9**
T1216				S		**Sg**	**20 25 59.4**	**-0.4**
T1216				AML		AML		
	comp=N,83650μm,1.1s							
T1216				AML		AML		
	comp=E,66000μm,1.6s							
T1216				AML		AML		
	comp=N,83700μm,1.1s							
T1216				AML		AML		
	comp=E,66000μm,1.6s							
T1216				AML		AML		
	comp=N,83650μm,1.1s							
T1216				AML		AML		
	comp=E,66000μm,0.4s							
T1216				AML		AML		
	comp=N,83650μm,0.9s							
T1245	**Castelsantange**	**0.15**	**170**	P		**Pg**	**20 25 56.9**	**-0.8**
T1245				AML		AML		
	comp=N,43800μm,1.3s							
T1245				AML		AML		
	comp=E,34400μm,0.3s							
T1245				AML		AML		
	comp=N,43800μm,0.7s							
T1245				AML		AML		
	comp=E,34400μm,1.7s							
T1245				END				
MMO1	**Montemonaco**	**0.17**	**130**	P		**Pg**	**20 25 57.3**	**-0.6**
MMO1				S		**Sg**	**20 26 00.3**	**0.0**
MMO1				END				
CESI	**CESI - Serrava**	**0.18**	**270**	⇑P		**Pg**	**20 25 57.5**	**-0.7**
CESI				S		**Sg**	**20 26 00.7**	**0.0**
CESI				AML		AML		
	comp=E,47250μm,1.6s							
CESI				AML		AML		
	comp=N,45500μm,0.3s							
CESI				AML		AML		
	comp=E,47250μm,0.4s							
CESI				END				
MDAR	**Monte D'Aria**	**0.19**	**358**	P		**Pg**	**20 25 57.9**	**-0.4**
MDAR				S		**Sg**	**20 26 01.3**	**+0.4**
MDAR				AML		AML		
	comp=N,15200μm,0.8s							
MDAR				AML		AML		
	comp=N,15200μm,0.8s							
MDAR				AML		AML		
	comp=E,15250μm,0.4s							
MDAR				AML		AML		
	comp=E,15250μm,1.6s							
SEF1	**Sefro**	**0.20**	**313**	⇓P		**Pg**	**20 25 58.1**	**-0.4**
SEF1				S		**Sg**	**20 26 02.1**	**+0.7**
SEF1				AML		AML		
	comp=E,27050μm,1.2s							
SEF1				AML		AML		
	comp=N,24350μm,0.6s							
SEF1				AML		AML		
	comp=E,27050μm,1.2s							
SEF1				AML		AML		
	comp=N,24400μm,0.6s							
SEF1				AML		AML		
	comp=E,27000μm,1.2s							
PIO1	**Pioraco**	**0.21**	**325**	P		**Pg**	**20 25 58.3**	**-0.4**
PIO1				AML		AML		
	comp=E,10440μm,1.5s							
PIO1				AML		AML		
	comp=N,12200μm,1.2s							
PIO1				AML		AML		
	comp=E,10405μm,1.5s							
PIO1				AML		AML		
	comp=N,12250μm,1.2s							
PIO1				AML		AML		
	comp=E,10405μm,0.5s							
PIO1				AML		AML		
	comp=N,12250μm,0.8s							
GAG1	**Gagliole**	**0.24**	**345**	P		**Pg**	**20 25 59.0**	**-0.3**
GAG1				S		**Sg**	**20 26 03.5**	**+1.1**
GAG1				AML		AML		
	comp=E,35000μm,0.9s							
GAG1				AML		AML		
	comp=N,31250μm,0.2s							
GAG1				AML		AML		
	comp=E,34950μm,0.9s							
GAG1				AML		AML		
	comp=N,31300μm,0.2s							
GAG1				AML		AML		
	comp=N,31300μm,0.2s							
GAG1				AML		AML		
	comp=E,34950μm,1.1s							
GAG1				AML		AML		
	comp=N,31300μm,1.8s							
GAG1				END				
FIU1	**Fiuminata**	**0.24**	**319**	P		**Pg**	**20 25 58.8**	**-0.4**
FIU1				AML		AML		
	comp=N,8385μm,1.3s							
FIU1				AML		AML		
	comp=E,6685μm,0.7s							
FIU1				END				
T1241	**Roccafluvione,**	**0.26**	**126**	⇓P		**Pg**	**20 25 58.8**	**-0.7**
T1241				S		**Sg**	**20 26 03.5**	**+0.6**
T1241				AML		AML		
	comp=E,12600μm,0.6s							
T1241				AML		AML		
	comp=N,11850μm,0.7s							
MNTP	**Montappone**	**0.27**	**61**	P		**Pg**	**20 26 00.1**	**+0.4**
MNTP				AML		AML		
	comp=E,26150μm,0.5s							
MNTP				AML		AML		
	comp=N,19550μm,0.5s							
MNTP				AML		AML		
	comp=E,26200μm,0.5s							
MTL1	**Matelica**	**0.27**	**338**	P		**Pg**	**20 25 59.6**	**-0.2**
MTL1				S		**Sb**	**20 26 04.6**	**-1.8**
MTL1				AML		AML		
	comp=E,24900μm,0.5s							
MTL1				AML		AML		
	comp=E,24900μm,1.5s							
MTL1				AML		AML		
	comp=N,28200μm,0.5s							
T1215	**Vallo di Nera,**	**0.29**	**225**	P		**Pg**	**20 25 59.5**	**-0.7**
T1215				S		**Sg**	**20 26 04.1**	**+0.1**
T1215				AML		AML		
	comp=N,6130μm,0.5s							
T1215				AML		AML		
	comp=N,5700μm,0.5s							
T1215				AML		AML		
	comp=N,6125μm,0.4s							
T1215				AML		AML		
	comp=N,5700μm,0.5s							
T1215				AML		AML		
	comp=E,6205μm,0.4s							
T1215				AML		AML		
	comp=E,6535μm,0.4s							
T1215				END				
SNTG	**Esanatoglia**	**0.29**	**328**	P		**Pg**	**20 25 59.6**	**-0.6**
SNTG				S		**Sg**	**20 26 05.2**	**+1.1**
SNTG				AML		AML		
	comp=E,4540μm,0.8s							
SNTG				AML		AML		
	comp=N,5455μm,0.9s							
SNTG				AML		AML		
	comp=E,4705μm,0.8s							
SNTG				AML		AML		
	comp=N,4965μm,0.8s							
SNTG				AML		AML		
	comp=N,4960μm,0.9s							
SNTG				AML		AML		
	comp=E,4705μm,1.2s							
SNTG				AML		AML		
	comp=E,4540μm,1.2s							
SNTG				END				
EL6	**Elcito**	**0.33**	**354**	⇓P		**Pg**	**20 26 00.4**	**-0.5**
T1217	**Poggiodomo (PG**	**0.34**	**209**	P		**Pg**	**20 26 00.1**	**-0.9**
T1217				S		**Sg**	**20 26 05.7**	**+0.2**
T1217				AML		AML		
	comp=E,8840μm,0.8s							
T1217				AML		AML		
	comp=E,8740μm,0.8s							
T1217				AML		AML		
	comp=N,10265μm,1.4s							
T1217				AML		AML		
	comp=E,8845μm,0.8s							
T1217				AML		AML		
	comp=N,10270μm,1.4s							
T1217				AML		AML		
	comp=E,8760μm,0.8s							
T1217				AML		AML		
	comp=N,10250μm,1.4s							
T1217				AML		AML		
	comp=E,8760μm,1.2s							
T1217				AML		AML		
	comp=N,10250μm,0.6s							
T1217				AML		AML		
	comp=N,10270μm,0.6s							
T1217				AML		AML		
	comp=E,8845μm,1.2s							
T1204	**Amatrice, Fraz**	**0.35**	**160**	⇓P		**Pg**	**20 26 00.6**	**-0.8**
T1204				AML		AML		
	comp=E,9740μm,0.4s							
T1204				AML		AML		
	comp=N,7485μm,0.7s							
T1204				AML		AML		
	comp=E,9770μm,0.4s							
T1204				AML		AML		
	comp=E,9755μm,0.4s							
T1204				AML		AML		
	comp=N,7480μm,0.7s							
T1204				AML		AML		
	comp=N,7480μm,1.3s							
T1243	**Rocca Santa Ma**	**0.38**	**145**	P		**Pg**	**20 26 00.9**	**-0.9**
OFFI	**Offida**	**0.40**	**100**	⇓P		**Pb**	**20 26 02.7**	**-1.0**
OFFI				AML		AML		
	comp=E,6625μm,0.8s							
OFFI				AML		AML		
	comp=E,6625μm,1.2s							
OFFI				AML		AML		
	comp=N,12000μm,0.8s							
SMA1	**SAN MARTINO**	**0.40**	**160**	⇓P		**Pg**	**20 26 01.2**	**-1.0**
SMA1				AML		AML		
	comp=N,10650μm,0.8s							
SMA1				AML		AML		
	comp=N,10665μm,0.8s							
SMA1				AML		AML		
	comp=N,10665μm,1.2s							
SMA1				AML		AML		
	comp=E,8930μm,0.7s							
LNSS	**Leonessa**	**0.41**	**191**	⇑P		**Pg**	**20 26 01.5**	**-0.9**
LNSS				AML		AML		
	comp=N,5490μm,0.7s							
LNSS				AML		AML		
	comp=E,5915μm,0.9s							
ATCC	**AVT- Casa Cast**	**0.41**	**296**	⇑P		**Pg**	**20 26 01.9**	**-0.6**
ATCC				AML		AML		
	comp=E,17050μm,0.2s							
ATCC				AML		AML		
	comp=E,17000μm,0.2s							
ATCC				AML		AML		
	comp=N,12900μm,0.3s							
ATCC				AML		AML		
	comp=N,12900μm,1.7s							
PP3	**Marolino**	**0.50**	**42**	⇑P		**Pg**	**20 26 02.7**	**-1.4**
PP3				AML		AML		
	comp=N,11315μm,0.3s							
PP3				AML		AML		
	comp=E,9110μm,0.3s							
PP3				AML		AML		
	comp=E,9500μm,0.3s							
PP3				AML		AML		
	comp=N,11050μm,0.3s							
RM33	**Pellescritta (**	**0.50**	**175**	⇓P		**Pg**	**20 26 03.0**	**-1.1**
RM33				S		**Sb**	**20 26 13.0**	**0.0**
RM33				AML		AML		
	comp=E,3125μm,0.6s							
RM33				AML		AML		
	comp=N,2875μm,0.7s							
RM33				AML		AML		
	comp=E,2925μm,0.6s							
RM33				AML		AML		
	comp=N,2965μm,0.7s							
RM33				AML		AML		
	comp=E,3125μm,1.4s							
RM33				AML		AML		
	comp=E,2925μm,1.4s							
RM33				AML		AML		
	comp=N,2875μm,0.7s							
CAMP	**Campotosto**	**0.51**	**158**	⇓P		**Pg**	**20 26 03.1**	**-1.2**
CAMP				AML		AML		
	comp=N,3045μm,0.5s							
CAMP				AML		AML		
	comp=E,3730μm,0.3s							
ARVD	**Arcevia**	**0.52**	**343**	⇑P		**Pg**	**20 26 03.4**	**-1.0**
ARVD				S		**Sb**	**20 26 13.0**	**-0.4**
ARVD				AML		AML		
	comp=N,2765μm,0.1s							
ARVD				AML		AML		
	comp=E,3900μm,0.5s							
ARVD				AML		AML		
	comp=N,2770μm,0.1s							
T1211	**Morro Reatino**	**0.52**	**205**	⇓P		**Pg**	**20 26 03.6**	**-0.9**
T1211				S		**Sg**	**20 26 13.0**	**+1.7**
T1211				AML		AML		
	comp=E,3455μm,0.3s							
T1211				AML		AML		
	comp=E,3465μm,0.3s							
T1211				AML		AML		
	comp=N,5290μm,0.5s							
T1211				AML		AML		
	comp=N,5295μm,0.5s							
T1211				AML		AML		
	comp=E,3470μm,0.3s							
T1211				AML		AML		
	comp=N,5390μm,0.5s							
MURB	**Monte Urbino**	**0.53**	**299**	⇑P		**Pg**	**20 26 03.9**	**-0.7**
MURB				S		**Sg**	**20 26 13.0**	**+1.5**
MURB				AML		AML		
	comp=N,10400μm,1.0s							
MURB				AML		AML		
	comp=E,12850μm,0.3s							
MURB				AML		AML		
	comp=N,10400μm,1.0s							
ATFO	**Monte Foce - G**	**0.56**	**311**	⇓P		**Pg**	**20 26 04.4**	**-0.8**
ATFO				AML		AML		
	comp=E,3285μm,0.9s							
ATFO				AML		AML		
	comp=N,2760μm,0.4s							
ATFO				AML		AML		
	comp=E,3285μm,1.1s							
T1247	**Pizzolo (AQ)**	**0.57**	**169**	⇓P		**Pg**	**20 26 04.3**	**-1.2**
T1247				AML		AML		
	comp=N,4035μm,0.5s							
T1247				AML		AML		
	comp=E,4110μm,0.5s							
T1247				AML		AML		
	comp=E,4110μm,1.5s							
CESX	**Cesi**	**0.58**	**227**	⇑P		**Pg**	**20 26 04.3**	**-1.3**
CESX				AML		AML		
	comp=E,5505μm,0.5s							
CESX				AML		AML		
	comp=N,6080μm,0.5s							
CESX				AML		AML		
	comp=E,5505μm,1.5s							
TRTR	**Tortoreto Alta**	**0.59**	**109**	⇓P		**Pb**	**20 26 06.5**	**-0.6**
TRTR				AML		AML		
	comp=E,8475μm,0.5s							
TRTR				AML		AML		
	comp=N,7630μm,1.0s							
TRTR				AML		AML		
	comp=E,8480μm,0.5s							
TRTR				AML		AML		
	comp=N,7625μm,1.0s							
TRTR				AML		AML		
	comp=E,8480μm,1.5s							
FRON	**Frontone**	**0.60**	**329**	⇓P		**Pg**	**20 26 05.0**	**-0.9**
FRON				AML		AML		
	comp=N,5595μm,0.4s							
FRON				AML		AML		
	comp=E,3135μm,0.6s							
ATTE	**AVT- Monte Tez**	**0.61**	**288**	P		**Pg**	**20 26 05.3**	**-1.0**
ATTE				AML		AML		
	comp=E,1545μm,0.4s							
ATTE				AML		AML		
	comp=N,1835μm,0.4s							
ATTE				AML		AML		
	comp=E,1545μm,1.6s							
AOI	**Ancona**	**0.64**	**31**	⇑P		**Pb**	**20 26 06.5**	**-1.4**
AOI				AML		AML		
	comp=E,2875μm,0.5s							
AOI				AML		AML		
	comp=N,2655μm,0.5s							
GIGS	**Gran Sasso**	**0.64**	**151**	⇓P		**Pg**	**20 26 05.4**	**-1.3**
GIGS				S		**Sg**	**20 26 16.0**	**+1.0**
GIGS				AML		AML		
	comp=E,904μm,0.3s							
GIGS				AML		AML		
	comp=N,1087μm,0.4s							
GIGS				AML		AML		
	comp=E,904μm,1.7s							
ATVO	**AVT- Monte Val**	**0.66**	**305**	⇑P		**Pg**	**20 26 06.2**	**-1.0**
ATVO				AML		AML		
	comp=N,1970μm,0.5s							
ATVO				AML		AML		
	comp=E,1760μm,0.3s							
AQU	**L'Aquila**	**0.68**	**164**	⇓P		**Pg**	**20 26 07.3**	**-0.1**
AQU				AML		AML		
	comp=E,2065μm,1.5s							
AQU				AML		AML		
	comp=E,2020μm,1.5s							
AQU				AML		AML		
	comp=N,2170μm,0.3s							
AQU				AML		AML		
	comp=N,2105μm,0.3s							
AQU				AML		AML		
	comp=E,2020μm,0.5s							
AQU				AML		AML		
	comp=E,2065μm,0.5s							
AQU				AML		AML		
	comp=N,2170μm,1.7s							
AQU				AML		AML		
	comp=N,2105μm,1.7s							
MPAG	**Monte Paganucc**	**0.69**	**335**	⇑P		**Pg**	**20 26 06.9**	**-0.7**
MPAG				AML		AML		
	comp=E,2075μm,0.9s							
MPAG				AML		AML		
	comp=N,2165μm,0.5s							
MPAG				AML		AML		
	comp=E,2075μm,1.1s							
PIEI	**Pieia**	**0.69**	**320**	⇑P		**Pg**	**20 26 06.7**	**-1.1**
PIEI				S		**Sb**	**20 26 19.0**	**+0.4**
PIEI				AML		AML		
	comp=N,1585μm,0.8s							
PIEI				AML		AML		
	comp=E,1815μm,0.3s							
SENI	**Senigallia**	**0.70**	**5**	⇑P		**Pb**	**20 26 08.2**	**-0.7**
ATPI	**Pietralunga -**	**0.70**	**309**	⇑P		**Pg**	**20 26 07.0**	**-1.0**
ATPI				AML		AML		
	comp=E,2195μm,0.5s							
ATPI				AML		AML		
	comp=N,1515μm,0.6s							
ATPI				AML		AML		
	comp=N,1515μm,1.4s							
ATMI	**Monte Miggiano**	**0.72**	**297**	S		**Sb**	**20 26 21.0**	**+1.5**
NARO	**Abbazia di Nar**	**0.73**	**326**	⇓P		**Pg**	**20 26 07.5**	**-1.0**
NARO				AML		AML		
	comp=E,1320μm,0.7s							
NARO				AML		AML		
	comp=N,1112μm,0.3s							
FSSB	**Fossombrone**	**0.74**	**338**	⇓P		**Pg**	**20 26 08.0**	**-0.6**
FSSB				S		**Sb**	**20 26 21.0**	**+1.2**
FSSB				AML		AML		
	comp=N,15450μm,0.3s							
FSSB				AML		AML		
	comp=E,9375μm,0.4s							
FSSB				AML		AML		
	comp=E,9375μm,1.6s							
FIAM	**Fiamignano**	**0.74**	**182**	⇑P		**Pg**	**20 26 06.6**	**-2.0**
FIAM				S		**Sg**	**20 26 20.0**	**+1.8**
FIAM				AML		AML		
	comp=E,1610μm,0.9s							
FIAM				AML		AML		
	comp=N,1420μm,0.7s							
APEC	**Apecchio**	**0.77**	**316**	⇓P		**Pg**	**20 26 08.9**	**-0.3**
MGAB	**Montegabbione**	**0.77**	**263**	⇓P		**Pg**	**20 26 08.2**	**-1.0**
MGAB				AML		AML		
	comp=E,3890μm,0.5s							
MGAB				AML		AML		
	comp=N,5510μm,1.3s							
VCEL	**Villa Celiera**	**0.80**	**140**	⇓P		**Pg**	**20 26 08.5**	**-1.2**
VCEL				AML		AML		
	comp=E,3255μm,0.4s							
VCEL				AML		AML		
	comp=N,3150μm,0.8s							
VCEL				AML		AML		
	comp=N,3145μm,0.8s							
VCEL				AML		AML		
	comp=N,3145μm,1.2s							
FAGN	**Fagnano**	**0.81**	**156**	⇓P		**Pg**	**20 26 08.6**	**-1.3**
FAGN				AML		AML		
	comp=E,4160μm,0.5s							
FAGN				AML		AML		
	comp=N,3925μm,0.5s							
FAGN				AML		AML		
	comp=E,4160μm,1.5s							
BADI	**Badiali**	**0.83**	**308**	⇑P		**Pg**	**20 26 09.4**	**-1.0**
PE3	**Peglio**	**0.84**	**326**	P		**Pg**	**20 26 09.7**	**-0.8**
PE3				AML		AML		
	comp=N,19μm,0.2s							
PE3				AML		AML		
	comp=E,16μm,0.4s							
SRES	**S.Oreste - Sor**	**0.90**	**212**	⇑P		**Pg**	**20 26 10.1**	**-1.6**
SRES				AML		AML		
	comp=E,1440μm,1.3s							
SRES				AML		AML		
	comp=N,1425μm,0.6s							
SRES				AML		AML		
	comp=E,1440μm,0.7s							
T0110	**Collepietro**	**0.91**	**149**	⇓P		**Pg**	**20 26 10.0**	**-1.8**
T0110				AML		AML		
	comp=N,3290μm,0.5s							
T0110				AML		AML		
	comp=E,3330μm,1.1s							
CAFI	**Castiglion Fio**	**0.93**	**291**	⇓P		**Pg**	**20 26 11.5**	**-0.6**
CAFI				AML		AML		

comp=N,1238µm,1.3s
CAFI AML AML
comp=E,1165µm,0.7s
SACS San Casciano d 0.93 261 ⇓P Pg 20 26 11.5 -0.7
SACS AML AML
comp=E,1375µm,0.5s
SACS AML AML
comp=E,1225µm,0.4s
SACS AML AML
comp=N,1940µm,0.7s
SACS AML AML
comp=N,1855µm,0.8s
SACS AML AML
comp=E,1225µm,1.6s
SACS AML AML
comp=N,1855µm,1.2s
SACS AML AML
comp=N,1940µm,1.3s
SACS AML AML
comp=E,1375µm,1.5s
SSP9 Sansepolcro 0.94 308 ⇑P Pg 20 26 12.3 -0.1
SSP9 AML AML
comp=E,1000µm,1.6s
SSP9 AML AML
comp=N,1129µm,0.6s
SSP9 AML AML
comp=E,1000µm,0.4s
MTCE Montecelio 1.03 197 ⇑P Pg 20 26 12.2 -1.9
MTCE AML AML
comp=E,1004µm,1.5s
MTCE AML AML
comp=E,1004µm,1.5s
MTCE AML AML
comp=N,934µm,0.8s
MTCE AML AML
comp=E,1004µm,0.5s
CERT Cerreto 1.06 187 ⇑P Pg 20 26 13.5 -1.3
CERT AML AML
comp=N,883µm,1.2s
CERT AML AML
comp=E,1340µm,1.1s
CERT AML AML
comp=E,1340µm,0.9s
LATE Laterza 1.07 249 ⇑P Pg 20 26 14.6 -0.3
SF04 Casetta 1.11 262 ⇑P Pg 20 26 16.7 +1.0
INTR Introdacqua 1.14 150 ⇓P Pg 20 26 13.9 -2.3
INTR AML AML
comp=E,1165µm,0.6s
INTR AML AML
comp=E,1µm,0.7s
INTR AML AML
comp=N,1815µm,0.5s
INTR AML AML
comp=N,1µm,0.5s
SF01 Poggio Pratacc 1.18 261 ⇑P Pg 20 26 16.9 -0.2
LPEL Lama dei Pelig 1.23 141 ⇓P Pg 20 26 15.7 -2.3
LPEL AML AML
comp=E,1020µm,1.0s
LPEL AML AML
comp=N,752µm,0.5s
ARCI Arcidosso 1.24 263 P Pg 20 26 19.1 +0.9
ARCI AML AML
comp=E,197µm,0.7s
ARCI AML AML
comp=N,258µm,0.7s
TOLF Tolfa 1.27 222 P Pg 20 26 14.2 -4.5
TOLF AML AML
comp=N,584µm,0.5s
TOLF AML AML
comp=E,756µm,0.7s
POFI Posta Fibreno 1.35 162 ⇓P Pg 20 26 19.8 -0.6
POFI AML AML
comp=N,368µm,1.5s
POFI AML AML
comp=E,505µm,1.1s
POFI AML AML
comp=N,368µm,1.5s
POFI AML AML
comp=E,482µm,0.6s
POFI AML AML
comp=N,368µm,0.5s
POFI AML AML
comp=N,368µm,0.5s
LRP Arpino 1.40 166 ⇓P Pb 20 26 21.9 +1.2
LRP AML AML
comp=E,282µm,0.7s
LRP AML AML
comp=N,433µm,0.9s
LRP AML AML
comp=N,433µm,1.1s
CSNT Castellina Chi 1.44 290 ⇓P Pn 20 26 20.5 -0.3
CSNT AML AML
comp=N,288µm,1.6s
CSNT AML AML
comp=E,427µm,0.5s
CSNT AML AML
comp=N,288µm,0.4s
GIUL Giuliano Di Ro 1.45 177 ⇑P Pn 20 26 21.5 +0.5
GIUL AML AML
comp=N,473µm,0.9s
GIUL AML AML
comp=E,309µm,0.9s
RUFI Rufina 1.46 305 ⇓P Pn 20 26 20.7 -0.4
FRES Fresagrandinar 1.53 132 ⇑P Pb 20 26 22.8 -0.2
FRES AML AML
comp=E,578µm,0.8s
FRES AML AML
comp=E,578µm,1.2s
FRES AML AML
comp=N,436µm,0.8s
CERA Filignano 1.55 155 ⇑P Pb 20 26 23.5 +0.1
CERA AML AML
comp=E,764µm,0.6s
CERA AML AML
comp=N,493µm,0.5s
CERA AML AML
comp=E,784µm,0.6s
CERA AML AML
comp=N,476µm,0.5s
CERA AML AML
comp=E,784µm,1.4s
CERA AML AML
comp=E,764µm,1.4s
CERA AML AML
comp=N,493µm,1.5s
CERA AML AML
comp=N,476µm,1.5s
TRIV Trivento 1.62 140 ⇓P Pb 20 26 24.6 +0.1
TRIV AML AML
comp=N,64700µm,1.6s
TRIV AML AML
comp=E,65300µm,1.6s
TRIV AML AML
comp=N,64700µm,0.4s
TRIV AML AML
comp=E,65300µm,0.4s
BRIS BRISIGHELLA 1.65 314 ⇓P Pb 20 26 25.2 +0.1
BRIS AML AML
comp=E,734µm,0.7s
BRIS AML AML
comp=N,821µm,1.5s
BRIS AML AML
comp=N,821µm,0.5s
VAGA Valle Agricola 1.78 153 ⇑P Pb 20 26 27.0 -0.4
VAGA AML AML
comp=E,192µm,0.7s
VAGA AML AML
comp=N,308µm,0.6s
MTCR Monte La Croce 1.87 304 P Pb 20 26 29.6 +0.7
BRJN Brijuni 1.95 13 ⇑P Pn 20 26 27.3 -0.5
MELA Melanico ??? S 1.96 131 ⇓P Pn 20 26 28.9 +0.9
MELA AML AML
comp=E,802µm,0.8s
MELA AML AML
comp=N,673µm,0.4s
MELA AML AML
comp=E,842µm,0.8s
MELA AML AML
comp=E,842µm,1.2s
MELA AML AML
comp=N,673µm,1.6s
MELA AML AML
comp=N,822µm,0.9s
MELA AML AML
comp=E,802µm,1.2s
APRC Apricena 2.17 124 P Pn 20 26 31.7 +0.8
APRC AML AML
comp=N,434µm,0.5s
APRC AML AML
comp=E,388µm,0.4s
SGRT San Giovanni R 2.29 122 P Pn 20 26 32.8 +0.2
SGRT AML AML
comp=E,313µm,1.1s
SGRT AML AML
comp=N,272µm,0.8s
SGRT AML AML
comp=E,313µm,0.9s
NDIM Novi di Modena 2.49 320 S Sb 20 27 11.0 +0.9
SGTA Sant Agata di 2.49 138 ⇓P Pn 20 26 36.8 +1.4
SGTA AML AML
comp=E,269µm,0.6s
SGTA AML AML
comp=N,162µm,0.8s
SKDS Skadanscina 2.61 13 *e*Pn Pn 20 26 35.4 -1.6
VULT Monte Vulture 2.75 137 ⇑P Pn 20 26 39.8 +0.8
VULT AML AML
comp=E,161µm,1.0s
VULT AML AML
comp=N,199µm,0.8s
VULT AML AML
comp=E,161µm,1.0s
VULT AML AML
comp=N,199µm,1.2s
MORSI Morsiglia 2.78 270 P Pn 20 26 39.3 +0.1
CEY Cerknica 2.88 18 *e*Pn Pn 20 26 40.0 -0.7
BOJS Bojanci 2.92 30 *e*Pn Pn 20 26 41.4 +0.3
BOJS Bojanci 2.92 30 ⇓P Pn 20 26 39.6 -1.5
BOJS AML AML
comp=N,314µm,0.6s
BOJS AML AML
comp=E,272µm,1.0s
BOJS AML AML
comp=N,314µm,1.4s
PALZ Palazzo San Ge 2.94 134 ⇑P Pn 20 26 42.0 +0.6
PALZ AML AML
comp=E,350µm,1.5s
PALZ AML AML
comp=N,244µm,1.1s
PALZ AML AML
comp=E,350µm,0.5s
PALZ AML AML
comp=N,244µm,0.9s
SABO M.te Sabotino 2.99 6 ⇑P Pn 20 26 42.0 -0.2
SABO S Sn 20 27 20.0 +1.7
SABO AML AML
comp=N,1028µm,1.5s
SABO AML AML
comp=E,261µm,0.5s
SABO AML AML
comp=E,1066µm,0.5s
SABO AML AML
comp=N,268µm,0.7s
SABO AML AML
comp=N,1028µm,0.5s
SMPL Sampolo 3.00 254 P Pn 20 26 42.9 +0.7
CGRP Cima Grappa 3.03 342 ⇑P Pn 20 26 42.7 -0.2
CGRP AML AML
comp=E,356µm,0.7s
CGRP AML AML
comp=N,266µm,0.4s
CGRP AML AML
comp=N,266µm,1.6s
VARN Col Varnada, M 3.08 346 ⇑P Pn 20 26 43.5 +0.1
VARN AML AML
comp=E,290µm,0.7s
VARN AML AML
comp=N,206µm,0.5s
VARN AML AML
comp=N,208µm,0.5s
VARN AML AML
comp=E,284µm,0.7s
PGF Pioggiola 3.09 263 *e*P Pn 20 26 43.5 -0.1
PGF *e*Sn Sn 20 27 15.3 -5.5
comp=E,118nm,1.7s
PGF Pioggiola 3.09 263 P Pn 20 26 44.2 +0.6
SRKY Kupres RS 3.11 69 *e*Pn Pn 20 26 45.7 +1.9
MGRS Mrkonjic Grad 3.18 62 *e*Pn Pn 20 26 45.9 +1.1
LJU Ljubljana 3.19 17 P Pn 20 26 45.3 +0.4
LJU AML AML
comp=N,952µm,0.6s
LJU AML AML
comp=E,788µm,0.6s
LJU AML AML
comp=N,952µm,1.4s
DOSS Dosso del Somm 3.20 335 ⇑P Pn 20 26 46.4 +1.3
DOSS AML AML
comp=N,212µm,0.6s
DOSS AML AML
comp=E,140µm,1.6s
SALO Salr 3.22 325 ⇓P Pn 20 26 46.6 +1.3
SALO AML AML
comp=E,143µm,1.6s
SALO AML AML
comp=N,157µm,1.4s
CTI Castel Tesino 3.23 341 ⇑P Pn 20 26 46.0 +0.6
CTI S Sn 20 27 25.0 +0.8
CTI AML AML
comp=E,160µm,0.4s
CTI AML AML
comp=N,172µm,0.5s
MPRI Monte Prat 3.24 358 ⇑P Pn 20 26 45.8 +0.2
MPRI AML AML
comp=N,258µm,0.6s
MPRI AML AML
comp=E,210µm,0.7s
MPRI AML AML
comp=N,258µm,1.4s
STAL STALIGIAL 3.27 355 P Pn 20 26 45.6 -0.4
STAL AML AML
comp=N,142µm,0.4s
STAL AML AML
comp=E,196µm,0.3s
AMUR Altamura 3.32 128 ⇓P Pn 20 26 47.2 +0.5
AMUR AML AML
comp=E,91µm,1.2s
AMUR AML AML
comp=N,74µm,0.5s
AMUR AML AML
comp=N,74µm,1.5s
AMUR AML AML
comp=E,91µm,0.8s
CIMO Cimolais 3.34 352 P Pn 20 26 46.6 -0.4
CIMO AML AML
comp=E,51µm,1.5s
CIMO AML AML
comp=N,56µm,0.7s
CIMO AML AML
comp=N,56µm,1.3s
STON Ston 3.34 91 *e*Pn Pn 20 26 46.0 -0.9
STON Ston 3.34 91 ⇑P Pn 20 26 46.1 -0.9
STON AML AML
comp=N,56µm,0.8s
STON AML AML
comp=E,45µm,1.0s
LUSI Trento, Gardas 3.35 333 ⇑P Pn 20 26 48.1 +0.9
LUSI AML AML
comp=E,123µm,0.4s
LUSI AML AML
comp=N,121µm,1.3s
LUSI AML AML
comp=E,123µm,1.6s
A051A Mrakovica 3.37 52 *e*Pn Pn 20 26 48.3 +0.9
BLY Banja Luka 3.40 58 *e*Pn Pb 20 26 54.3 -0.5
PTCC Patocco-Chiusa 3.40 2 ⇑P Pn 20 26 47.3 -0.5
PTCC S Sn 20 27 27.0 -1.4
PTCC AML AML
comp=E,74µm,1.6s
PTCC AML AML
comp=N,78µm,0.7s
PTCC AML AML
comp=N,78µm,1.3s
PTCC AML AML
comp=E,74µm,0.4s
CLUD Cludinico 3.46 357 P Pn 20 26 49.0 +0.4
CLUD AML AML
comp=E,90µm,1.0s
CLUD AML AML
comp=N,104µm,0.7s
ZONE Zone 3.51 323 ⇑P Pn 20 26 50.4 +1.1
ZONE AML AML
comp=N,83µm,0.3s
ZONE AML AML
comp=E,98µm,0.8s
ZONE AML AML
comp=N,83µm,1.7s
ACOM Acomizza, Ital 3.55 4 ⇑P Pn 20 26 50.6 +0.6
ACOM AML AML
comp=N,130µm,0.8s
ACOM AML AML
comp=N,114µm,0.9s
ACOM AML AML
comp=E,141µm,1.5s
ACOM AML AML
comp=E,141µm,0.5s
ACOM AML AML
comp=E,152µm,0.5s
ACOM AML AML
comp=N,130µm,1.2s
ACOM AML AML
comp=N,114µm,1.1s
ZOU Zoufplan 3.55 358 ⇑P Pn 20 26 50.1 0.0
ZOU AML AML
comp=E,85µm,1.3s
ZOU AML AML
comp=N,108µm,1.5s
ZOU AML AML
comp=E,85µm,0.7s
FVI Forni Avoltri 3.60 356 P Pn 20 26 51.1 +0.5
FVI AML AML
comp=N,83µm,0.7s
FVI AML AML
comp=E,86µm,1.6s
FVI AML AML
comp=N,83µm,1.3s
CRAC Craco 3.61 136 S Sn 20 27 37.0 +3.5
MYKA Terra Mystica 3.64 5 *e*Pn Pn 20 26 51.4 +0.2
comp=N,2.1nm,0.2s,SNR=12
MYKA *e*Sn Sn 20 27 35.4 +1.0
comp=N,8.1nm,0.3s
OBKA Obir 3.64 15 *e*Pn Pn 20 26 51.0 -0.2
OBKA Obir 3.64 15 *e*Pn Pn 20 26 50.2 -1.0
comp=N,3.0nm,0.2s
LTRZ Laterza 3.65 130 ⇑P Pn 20 26 51.9 +0.8
LTRZ AML AML
comp=N,45000µm,1.6s
LTRZ AML AML
comp=E,50000µm,1.6s
LTRZ AML AML
comp=N,45000µm,0.4s
LTRZ AML AML
comp=E,50000µm,0.4s
NOCI Noci 3.67 126 ⇓P Pn 20 26 51.7 +0.2
NOCI AML AML
comp=N,120µm,0.6s
NOCI AML AML
comp=E,63µm,1.2s
KOSI Kohlern 3.68 341 ⇓P Pn 20 26 52.9 +1.1
KOSI AML AML
comp=N,138µm,0.6s
KOSI AML AML
comp=E,134µm,0.6s
APPI Appiano 3.73 339 ⇓P Pn 20 26 53.2 +0.8
APPI AML AML
comp=N,89µm,1.0s
APPI AML AML
comp=E,113µm,0.3s
ABTA Abfaltersbach 3.77 353 *i* Pn **Pn 20 26 53.5 +0.6**
comp=E,20nm,0.4s,SNR=12
A052A Srbac 3.78 55 *e*Pn Pn 20 26 53.4 +0.4
TREB Trebinje 3.83 93 *e*Pn Pn 20 26 54.1 +0.4
SOKA Soboth 3.91 19 *e*Pn Pn 20 26 53.5 -1.3
comp=E,0.9nm,0.4s
BRY Bratogost 3.96 90 *e*Pn Pn 20 26 55.4 -0.2
BRY Bratogost 3.96 90 *e*Pn Pn 20 26 56.0 +0.4
BRY *i* Sn Sn 20 27 43.5 +1.3
HCY Herceg Novi 3.98 96 *e*Pn Pn 20 26 56.0 +0.3
HCY Herceg Novi 3.98 96 ⇑*i*Pn Pn 20 26 56.2 +0.5
HCY *i* Sn Sn 20 27 44.0 +1.5
RISI Rein 4.01 349 ⇑P Pn 20 26 57.5 +1.1
RISI AML AML
comp=E,225µm,0.5s
RISI AML AML
comp=N,252µm,0.4s
KBA Koelnbreinsper 4.07 2 *i* Pn **Pn 20 26 57.8 +0.5**
comp=N,6.8nm,0.3s,SNR=8.1
KBA *e*Sn Sn 20 27 44.8 -0.4
comp=N,19nm,0.6s
KOGS Kog 4.09 32 ⇑P Pn 20 26 56.8 -0.4
KOGS AML AML
comp=E,580µm,0.6s
KOGS AML AML
comp=N,534µm,0.8s
KOGS AML AML
comp=N,534µm,1.2s
ROSI Rosskopf 4.11 343 ⇑P Pn 20 26 58.8 +1.1
ROSI AML AML
comp=N,156µm,0.5s
ROSI AML AML
comp=E,136µm,0.7s
ROSI AML AML
comp=N,156µm,1.5s
MUGIO Muggio 4.14 316 ⇑P Pn 20 26 58.1 +0.1
VARE Varese 4.25 314 S Sn 20 27 50.0 +0.7
SBF Sospel 4.25 284 *e*P Pn 20 27 01.1 +1.6
SBF *e*Sn Sn 20 27 44.4 -5.0
comp=N,21nm,0.6s
CEME Cevo 4.27 94 *e*Pn Pn 20 27 00.3 +0.5
CEME *i* Sn Sn 20 27 51.1 +1.2
NKME Niksic 4.27 91 ⇑*i*Pn Pn 20 27 00.3 +0.5
NKME *i* Sn Sn 20 27 51.2 +1.4
BUM Brajici-Budva 4.29 98 *e*Pn Pn 20 27 00.7 +0.6
BUM *i* Sn Sn 20 27 51.7 +1.3
HAPS Han Pijesak,Bl 4.35 74 *e*Pn Pn 20 27 02.9 +1.9
FETA Feichten 4.37 338 *e*Pn Pn 20 27 02.5 +1.3
comp=N,3.0nm,0.4s,SNR=11
WTTA Wattenberg 4.39 346 *e*Pn Pn 20 27 03.0 +1.5
comp=N,3.3nm,0.2s,SNR=7.4
WTTA Wattenberg 4.39 346 ⇓P Pn 20 27 03.2 +1.6
DAVOX Davos/Dischmat 4.43 330 Pn **Pn 20 27 03.9 +1.8**
comp=N,1.8nm,0.3s,baz=154,slow=18,SNR=13
DAVOX Sn Sn 20 27 56.3 +2.3
comp=N,1.1nm,0.3s,baz=127,slow=20,SNR=1.8
comp=N,5.4nm,0.3s
SQTA Sankt Quirin 4.43 343 *e*Pn Pn 20 27 03.1 +1.0
comp=N,5.4nm,0.2s,SNR=13
WATA Walderalm 4.47 346 *e*Pn Pn 20 27 04.1 +1.5
comp=N,4.5nm,0.2s,SNR=13
DRME Dracevica, Mon 4.53 98 *e*Pn Pn 20 27 03.7 +0.4
DRME Dracevica, Mon 4.53 98 ⇑*i*Pn Pn 20 27 03.9 +0.6
DRME *i* Sn Sn 20 27 57.4 +1.3
TTG Podgorica 4.53 95 *e*Pn Pn 20 27 04.0 +0.7
TTG *i* Sn Sn 20 27 57.6 +1.4
ARSA Arzberg 4.56 21 *e*Pn Pn 20 27 02.4 -1.4
comp=N,1.2nm,0.3s,SNR=5.4
ARSA *e*Sn Sn 20 27 54.7 -2.3
comp=N,6.4nm,0.5s
ARSA Arzberg 4.56 21 ⇓P Pn 20 27 03.7 -0.1
MOTA Moosalm 4.57 342 *e*Pn Pn 20 27 05.1 +1.1
comp=N,1.7nm,0.2s,SNR=10
MOTA *e*Sn Sn 20 27 58.9 +1.5
comp=N,11nm,0.4s
PLE Pljevlja 4.57 84 *e*Pn Pn 20 27 04.5 +0.5
PLE *i* Sn Sn 20 27 58.5 +1.1
RUDO Rudo 4.58 80 *e*Pn Pn 20 27 04.2 +0.2
ULC Ulcinj 4.62 101 ⇑*i*Pn Pn 20 27 05.3 +0.7
ULC *i* Sn Sn 20 27 59.7 +1.1
BBLS Lazići 4.63 77 *e*Pn Pn 20 27 06.7 +1.9
KOME Kolasin 4.68 90 *e*Pn Pn 20 27 05.9 +0.5
KOME *i* Sn Sn 20 28 00.9 +1.0
BIOA Bad Ischl, Aus 4.70 4 *e*Pn Pn 20 27 05.9 +0.3
comp=N,4.2nm,0.3s,SNR=16
LLI Lipari 4.76 163 P **Pn 20 27 10.6 +4.2**
RETA Reutte 4.79 340 *i* Pn **Pn 20 27 08.7 +1.8**
comp=N,1.7nm,0.2s,SNR=7.8
SURF Saint Ours 4.82 290 P **Pn 20 27 07.9 +0.4**
JAUF Jausiers 4.85 289 P **Pn 20 27 09.7 +1.8**
DAVA Damuels 4.87 333 *e*Pn Pn 20 27 09.3 +1.3
comp=N,7.6nm,0.5s
LMR La Mourre 4.87 276 *e*P Pn 20 27 07.2 -0.8
LMR *e*Sn Sn 20 27 57.0 -7.5
comp=N,0.9nm,0.3s
MOA Molln 4.91 9 *i* Pn **Pn 20 27 08.7 +0.2**
comp=N,1.9nm,0.2s,SNR=11
MOA *e*Sn Sn 20 28 06.1 +0.6
comp=N,6.7nm,0.4s
MBDF Montbardon 4.92 293 *e*P Pn 20 27 11.1 +2.3
MBDF *e*Sn Sn 20 28 01.2 -4.9
comp=N,7.5nm,0.6s
IVA Berane 4.95 89 *e*Pn Pn 20 27 09.8 +0.6

IVA				*i* Sn	**Sn**	**20 28 07.6**	**+0.9**
TRIGF	**Trigance**	**4.97**	**281**	P	**Pn**	**20 27 10.0**	**+0.5**
PVY	**Plav**	**5.03**	**92**	*e*Pn	**Pn**	**20 27 10.9**	**+0.7**
PVY				*i* Sn	**Sn**	**20 28 09.5**	**+0.9**
DIVS	**Divibare**	**5.09**	**75**	*e*Pn	**Pn**	**20 27 12.4**	**+1.3**
MTGR	**Montagna Grand**	**5.12**	**183**	P	Pb	20 27 19.2	-5.0
DIX	**Grande Dixence**	**5.13**	**309**	P	**Pn**	**20 27 12.7**	**+1.0**
RONA	**Rosalia, Austr**	**5.19**	**24**	*e*Pn	**Pn**	**20 27 12.3**	**-0.1**
	comp=N,1.3nm,0.3s						
LPG	**La Plagne**	**5.23**	**301**	*e*P	**Pn**	**20 27 14.6**	**+1.4**
LPG				*e*Sn	**Sn**	**20 28 08.8**	**-5.0**
	comp=N,11nm,0.6s						
LPL	**La Plagne**	**5.25**	**301**	*e*P	**Pn**	**20 27 15.0**	**+1.6**
LPL				*e*Sn	**Sn**	**20 28 08.6**	**-5.6**
	comp=N,5.3nm,0.4s						
FRGS	**Fruska Gora**	**5.26**	**64**	*e*Pn	**Pn**	**20 27 13.8**	**+0.5**
CONA	**Conrad Observa**	**5.28**	**20**	*i* Pn	**Pn**	**20 27 12.9**	**-0.8**
	comp=N,3.6nm,0.4s,SNR=9.9						
RSL	**Roselend**	**5.39**	**302**	P	**Pn**	**20 27 17.8**	**+2.5**
OGSI	**Sixt**	**5.50**	**306**	P	**Pn**	**20 27 19.8**	**+3.1**
GDM	**Grand'Maison**	**5.52**	**296**	P	**Pn**	**20 27 20.6**	**+3.5**
ORIF	**Oris-en-Rattie**	**5.58**	**292**	*e*P	**Pn**	**20 27 20.3**	**+2.4**
ORIF				*e*Sn	**Sn**	**20 28 16.9**	**-5.4**
	comp=N,6.7nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.58**	**292**	P	**Pn**	**20 27 20.3**	**+2.4**
SMRF	**Simiane la Rot**	**5.60**	**283**	*e*P	**Pn**	**20 27 19.2**	**+1.2**
TORNY	**Torny/Romont**	**5.79**	**313**	P	**Pn**	**20 27 22.2**	**+1.6**
BALST	**Balsthal**	**5.80**	**320**	P	**Pn**	**20 27 21.2**	**+0.5**
GERES	**GERESS Array B**	**5.85**	**4**	Pn	**Pn**	**20 27 20.8**	**-0.8**
	comp=N,0.7nm,0.3s,baz=172,slow=13,SNR=18						
GERES				Sn	**Sn**	**20 28 27.0**	**-1.9**
	comp=N,1.6nm,0.3s,baz=190,slow=34,SNR=8.4						
	comp=N,0.7nm,0.3s						
CKRC	**Cesky Krumlov**	**5.87**	**8**	*e*PN	**Pn**	**20 27 20.9**	**-0.8**
CKRC				*e*SN	**Sn**	**20 28 25.6**	**-3.6**
OGSM	**Saint Maurice**	**5.95**	**298**	P	**Pn**	**20 27 23.5**	**+0.7**
OHR	**Ohrid**	**6.00**	**106**	*i* Pn	**Pn**	**20 27 25.0**	**+1.4**
BOURR	**Bourrignon**	**6.06**	**318**	P	**Pn**	**20 27 25.7**	**+1.3**
FELD	**Feldberg im Sc**	**6.07**	**325**	P	**Pn**	**20 27 24.7**	**+0.1**
KHC	**Kasperske Hory**	**6.13**	**3**	*e*PN	**Pn**	**20 27 24.3**	**-1.0**
KHC				*e*SN	**Sn**	**20 28 32.5**	**-3.2**
BRANT	**Les Verrieres**	**6.15**	**312**	P	**Pn**	**20 27 26.6**	**+0.9**
BRANT	**Les Verrieres**	**6.15**	**312**	S	**Sn**	**20 28 36.2**	**-0.1**
KIZ	**Kirchzarten**	**6.17**	**325**	P	**Pn**	**20 27 24.9**	**-0.8**
CABF	**La Chapelle**	**6.18**	**308**	*e*P	**Pn**	**20 27 27.2**	**+1.1**
CABF				*e*Sn	**Sn**	**20 28 32.4**	**-4.6**
	comp=N,22nm,1.1s						
OG35	**Corcelles**	**6.21**	**302**	P	**Pn**	**20 27 27.3**	**+0.8**
CHMF	**Charmoille**	**6.25**	**315**	P	**Pn**	**20 27 27.7**	**+0.7**
CHMF				S	**Sn**	**20 28 38.8**	**+0.1**
VOGT	**Vogtsburg - To**	**6.37**	**325**	P	**Pn**	**20 27 28.8**	**+0.3**
VIVF	**Saint-Julien-l**	**6.39**	**290**	*e*P	**Pn**	**20 27 30.5**	**+1.5**
MOF	**Molkenrain**	**6.43**	**321**	P	**Pn**	**20 27 29.3**	**-0.2**
MOF				S	**Sn**	**20 28 43.8**	**+0.6**
HINF	**Hinteralfeld**	**6.54**	**320**	*e*P	**Pn**	**20 27 31.0**	**+0.1**
HINF				*e*Sn	**Sn**	**20 28 41.3**	**-4.4**
	comp=N,15nm,0.5s						
RONF	**Ronchamp**	**6.56**	**318**	P	**Pn**	**20 27 31.6**	**+0.3**
RONF				S	**Sn**	**20 28 46.4**	**+0.1**
ECH	**Echery**	**6.69**	**323**	P	**Pn**	**20 27 33.1**	**+0.1**
CDF	**Champ du Feu**	**6.79**	**325**	*e*P	**Pn**	**20 27 34.3**	**-0.1**
CDF				*e*Sn	**Sn**	**20 28 47.3**	**-4.7**
	comp=N,6.4nm,0.5s						
STIP	**Stip**	**6.82**	**98**	*i* Pn	**Pn**	**20 27 37.3**	**+2.5**
LASF	**Ste Croix**	**6.84**	**282**	*e*P	**Pn**	**20 27 37.6**	**+2.6**
HAU	**Haudompre**	**6.91**	**319**	*e*P	**Pn**	**20 27 36.2**	**+0.1**
HAU				*e*Sn	**Sn**	**20 28 50.3**	**-4.6**
	comp=N,16nm,0.4s						
SMF	**Signal de Mont**	**7.55**	**302**	*e*P	**Pn**	**20 27 48.1**	**+3.3**
SMF				*e*Sn	**Sn**	**20 29 04.6**	**-6.0**
	comp=N,6.8nm,0.5s						
PAGF	**Fort de Pagny**	**7.60**	**319**	*e*P	**Pn**	**20 27 47.0**	**+1.6**
PAGF				*e*Sn	**Sn**	**20 29 06.4**	**-5.2**
	comp=N,18nm,0.8s						
SFTF	**Sexfontaines**	**7.70**	**315**	*e*P	**Pn**	**20 27 48.7**	**+1.8**
	baz=137						
SFTF				*e*Sn	**Sn**	**20 29 08.5**	**-5.8**
	comp=N,110nm,2.0s						
LOR	**Lormes**	**7.83**	**306**	*e*P	**Pn**	**20 27 49.0**	**+0.4**
	baz=126						
LOR				*e*Sn	**Sn**	**20 29 10.6**	**-6.8**
	comp=N,4.1nm,0.4s						
KEST	**Kesra**	**7.84**	**203**	Pn	**Pn**	**20 27 53.3**	**+4.5**
	comp=N,0.2nm,0.3s,baz=14,slow=7.5,SNR=2.9						
	comp=N,1.6nm,0.6s						
MEZF	**Maizieres J'vi**	**7.89**	**317**	*e*P	**Pn**	**20 27 51.2**	**+1.8**
	baz=138						
MEZF				*e*Sn	**Sn**	**20 29 13.4**	**-5.4**
	comp=N,37nm,1.3s						
AVF	**Avril sur Loir**	**7.92**	**302**	*e*P	**Pn**	**20 27 52.7**	**+2.9**
AVF				*e*Sn	**Sn**	**20 29 12.7**	**-6.8**
	comp=N,34nm,1.7s						
SAVF	**Savonnieres en**	**7.93**	**318**	*e*P	**Pn**	**20 27 50.9**	**+1.0**
	baz=139						
SSF	**Saint Saulge**	**7.94**	**304**	*e*P	**Pn**	**20 27 53.1**	**+3.0**
SSF				*e*Sn	**Sn**	**20 29 14.0**	**-6.2**
	comp=N,3.0nm,0.4s						
MTLF	**Montolieu**	**8.00**	**276**	*e*P	**Pn**	**20 27 53.1**	**+2.1**
BGF	**Bois d'Agland**	**8.14**	**299**	*e*P	**Pn**	**20 27 54.7**	**+1.8**
BGF				*e*Sn	**Sn**	**20 29 18.1**	**-7.0**
	comp=N,13nm,1.0s						
CAF	**Calviac**	**8.22**	**287**	*e*P	**Pn**	**20 27 58.0**	**+3.9**
CLL	**Collm**	**8.31**	**359**	*e*Pn	**Pn**	**20 27 54.0**	**-1.1**
CLL				*e*Sn	**Sn**	**20 29 23.0**	**-6.0**
CLL				*e*Sg	**Sg**	**20 30 17.0**	**-3.8**
	comp=Z,9.0nm,1.2s						
TCF	**Toulx Ste Croi**	**8.46**	**297**	*e*P	**Pn**	**20 27 59.7**	**+2.4**
TCF				*e*Sn	**Sn**	**20 29 25.8**	**-7.2**
	comp=Z,27nm,1.8s						
ETSF	**Etsaut**	**10.05**	**274**	*e*Sn	Sn	20 30 05.4	-6.8
	comp=Z,1.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**31.36**	**202**	P	**P**	**20 32 17.7**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=25,slow=11,SNR=2.8						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**47.68**	**60**	P	**P**	**20 34 31.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=292,slow=7.6,SNR=2.2						
	comp=Z,0.4nm,0.7s						

MAN 26 20:27:21.2, 9°.83N×126°.26E, h21km, mb4.0, ML2.8, MS2.4, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.14**	**251**	⇓*e*P	Pb	20 27 26.7	-0.7
GLSP				*e*S	Sb	20 27 30.8	-0.9
BUTP	**Butuan**	**1.07**	**217**	⇑*e*P	Pn	20 27 40.5	-0.4
BUTP				*e*S	Sn	20 27 55.9	+0.8
MSLP	**Maasin**	**1.42**	**282**	⇑*e*P	Pb	20 27 47.2	+0.3
MSLP				*e*S	Sb	20 28 04.3	-0.2
BIPH	**Bislig**	**1.64**	**177**	⇑*e*P	Pn	20 27 49.1	+0.3
BIPH				*e*S	Sn	20 28 09.3	0.0
GHBP	**Garcia Hernand**	**1.93**	**264**	⇓*i*P	Pn	20 27 54.0	+1.2
GHBP				*i* S	Sn	20 28 17.3	+0.9
CGP	**Cagayan de Oro**	**2.07**	**229**	⇓*e*P	Pn	20 27 55.9	+1.1
CGP				*e*S	Sn	20 28 20.7	+0.8
BUKP	**Musuan**	**2.27**	**212**	⇑*e*P	Pb	20 28 01.8	+0.1
BUKP				*e*S	Sb	20 28 31.5	+2.2

IDC 26 20:29:29.6±3.8, 20°.39S×176°.39W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=265.8km s-min=75.2km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.01**	**256**	P	P	20 37 55.5	+0.3
	0.9nm,0.5s,baz=96,slow=7.9,SNR=24						
ASAR				PcP	PcP	20 39 30.6	-1.3
	0.3nm,0.7s,baz=94,slow=4.0,SNR=5.1						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**46.11**	**262**	P	P	20 37 55.6	-0.4
	0.4nm,0.6s,baz=96,slow=8.1,SNR=2.5						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**143.63**	**332**	PKP	PKPdf	20 49 07.5	+1.1
	1.0nm,0.3s,baz=41,slow=3.9,SNR=7.7						

*HVO **26** 20:37:00.2±1.2, 19°.27N±0°.04×155°.29W±0°.04, h27km±7km, ML3.6/39, ML3.8/50(NEIC), Error ellipse: s-maj=7.2km s-min=4.0km az=152.0*

NEIC 26 20:36:59.0±1.2, 19°.29N±0°.02×155°.31W±0°.01, h31km±2km, Error ellipse: s-maj=3.3km s-min=1.3km az=163.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLP	**Hilina Pali**	**0.00**	**24**		Pb	20 37 04.7	+0.4
HLP	**Hilina Pali**	**0.00**	**24**	IAML		20 37 08.1	
	comp=E,40μm,0.3s						
HLP				IAML		20 37 08.2	
	comp=N,42μm,0.2s						
SDHHI	**Sand Hill**	**0.10**	**9**		Pb	20 37 05.0	+0.3
HTC	**Hot Caves**	**0.10**	**237**		Pb	20 37 05.0	+0.5
HTC					Sb	20 37 09.3	+0.9
RIM	**Rim**	**0.11**	**18**		Pn	20 37 04.9	+0.2
RIM					Sn	20 37 08.2	+0.2
RIM	**Rim**	**0.11**	**18**	IAML		20 37 08.4	
	comp=E,15μm,0.4s						
RIM				IAML		20 37 08.7	
	comp=N,18μm,0.5s						
KKO	**Keanakako`i**	**0.11**	**21**		Pn	20 37 05.0	+0.2
KKO	**Keanakako`i**	**0.11**	**21**	IAML		20 37 08.5	
	comp=E,35μm,0.3s						
KKO				IAML		20 37 08.8	
	comp=N,17μm,0.6s						
WRMHI	**West Rim**	**0.11**	**5**		Pn	20 37 04.9	+0.1
PUH	**Pauahi**	**0.12**	**48**		Pn	20 37 04.9	0.0
PUH					Sn	20 37 08.2	-0.1
PUH	**Pauahi**	**0.12**	**48**	IAML		20 37 08.4	
	comp=E,16μm,0.4s						
PUH				IAML		20 37 08.4	
	comp=N,15μm,0.3s						
NPH	**North Pit**	**0.12**	**13**		Pn	20 37 05.0	0.0
NPH					Sn	20 37 08.6	+0.1
NPH	**North Pit**	**0.12**	**13**	IAML		20 37 08.9	
	comp=N,8μm,0.6s						
NPH				IAML		20 37 09.1	
	comp=E,4μm,0.2s						
OBL	**Observatory Le**	**0.13**	**11**		Pn	20 37 05.0	0.0
OBL	**Observatory Le**	**0.13**	**11**	IAML		20 37 09.3	
	comp=N,33μm,0.7s						
OBL				IAML		20 37 11.2	
	comp=E,24μm,0.4s						
BYL	**Byron's Ledge**	**0.13**	**22**		Pn	20 37 05.0	0.0
BYL	**Byron's Ledge**	**0.13**	**22**	IAML		20 37 08.7	
	comp=E,20μm,0.2s						
BYL				IAML		20 37 08.8	
	comp=N,20μm,0.3s						
UWE	**Uwekahuna**	**0.13**	**7**		Pn	20 37 05.1	+0.1
UWE	**Uwekahuna**	**0.13**	**7**	IAML		20 37 08.8	
	comp=N,17μm,0.5s						
UWE				IAML		20 37 09.0	
	comp=E,22μm,0.3s						
UWB	**Uwekahuna B**	**0.14**	**13**		Pb	20 37 04.9	0.0
UWB					Sn	20 37 08.3	-0.5
UWB	**Uwekahuna B**	**0.14**	**13**	IAML		20 37 08.5	
	comp=E,6μm,0.5s						
UWB				IAML		20 37 08.8	
	comp=N,5μm,0.6s						
HATHI	**Halema'uma'u T**	**0.14**	**19**		Pn	20 37 05.0	-0.1
HATHI	**Halema'uma'u T**	**0.14**	**19**	IAML		20 37 09.0	
	comp=N,17μm,0.2s						
HATHI				IAML		20 37 09.3	
	comp=E,15μm,0.3s						
SBLHI	**Steaming Bluff**	**0.14**	**16**		Pb	20 37 05.0	+0.1
SBLHI					Sn	20 37 08.2	-0.7
SBLHI	**Steaming Bluff**	**0.14**	**16**	IAML		20 37 08.7	
	comp=E,10μm,0.5s						
SBLHI				IAML		20 37 08.9	
	comp=N,21μm,0.2s						
KNHH	**Kane Nui o Ham**	**0.16**	**57**		Pb	20 37 05.2	+0.1
AIN	**Ainahou**	**0.16**	**299**		Pn	20 37 05.8	+0.3
AIN	**Ainahou**	**0.16**	**299**	IAML		20 37 10.4	
	comp=E,132μm,0.9s						
AIN				IAML		20 37 11.1	
	comp=N,191μm,0.6s						
RSD	**Rainshed**	**0.17**	**10**		Pb	20 37 05.4	+0.1
RSD	**Rainshed**	**0.17**	**10**	IAML		20 37 09.3	
	comp=E,7μm,0.5s						
RSD				IAML		20 37 12.1	
	comp=N,5μm,0.4s						
MLH	**Mauna Loa**	**0.21**	**340**		Pn	20 37 06.3	0.0
MLH	**Mauna Loa**	**0.21**	**340**	IAML		20 37 10.8	
	comp=E,14μm,0.3s						
MLH				IAML		20 37 11.1	
	comp=N,11μm,0.4s						
NPOC	**North of Pu'u**	**0.21**	**62**		Pb	20 37 05.6	0.0
NPOC	**North of Pu'u**	**0.21**	**62**	IAML		20 37 09.9	
	comp=E,5μm,0.1s						
NPOC				IAML		20 37 10.0	
	comp=N,6μm,0.3s						
JCUZ	**Jacuzzi**	**0.22**	**65**		Pb	20 37 05.7	+0.1
JCUZ	**Jacuzzi**	**0.22**	**65**	IAML		20 37 09.8	
	comp=N,3μm,0.3s						
JCUZ				IAML		20 37 09.8	
	comp=E,10μm,0.4s						
KHU	**Kahuku**	**0.29**	**261**		Pb	20 37 06.7	+0.1
KHU	**Kahuku**	**0.29**	**261**	IAML		20 37 11.9	
	comp=N,20μm,0.5s						
KHU				IAML		20 37 12.1	
	comp=E,26μm,0.4s						
MWH	**Moku'aweowe**	**0.33**	**305**		Pb	20 37 07.5	+0.1
MWH	**Moku'aweowe**	**0.33**	**305**	IAML		20 37 16.4	
	comp=N,7μm,0.6s						
MWH				IAML		20 37 24.3	
	comp=E,8μm,0.5s						
HMH	**Humu'ula Sheep**	**0.35**	**332**		Pn	20 37 08.1	-0.1
HMH	**Humu'ula Sheep**	**0.35**	**332**	IAML		20 37 14.2	
	comp=E,11μm,0.6s						
HMH				IAML		20 37 14.4	
	comp=N,10μm,0.5s						
MLOA	**Mauna Loa Obse**	**0.35**	**314**		Pb	20 37 07.8	+0.2
MLOA				IAML		20 37 13.9	
	comp=E,6μm,0.1s						
MLOA				IAML		20 37 14.0	
	comp=N,6μm,0.2s						
PHO	**Puu Honuaula**	**0.44**	**65**		Pb	20 37 08.2	-0.3
POHA	**Pohakuloa**	**0.51**	**336**		Pb	20 37 09.6	-0.2
POHA					Sb	20 37 16.5	-0.7
POHA	**Pohakuloa**	**0.51**	**336**	IAML		20 37 17.0	
	comp=N,16μm,0.2s						
POHA				IAML		20 37 17.7	
	comp=N,8μm,0.2s						
CPH	**Captain Cook**	**0.61**	**289**		Pb	20 37 10.6	-0.7
KHLU	**Kahalu`u**	**0.63**	**298**		Pb	20 37 11.1	-0.5
KHLU					Sb	20 37 18.9	-1.3
KHLU	**Kahalu`u**	**0.63**	**298**	IAML		20 37 19.2	
	comp=E,3μm,0.3s						
KHLU				IAML		20 37 23.6	
	comp=N,2μm,0.3s						
HUH	**Hualalai**	**0.63**	**308**		Pb	20 37 11.7	-0.1
HUH	**Hualalai**	**0.63**	**308**	IAML		20 37 35.6	
	comp=N,4μm,0.3s						
HUH				IAML		20 37 38.0	
	comp=E,4μm,0.5s						
HPAH	**Hawaii Prepara**	**0.82**	**334**		Pn	20 37 13.6	-0.9
HPAH	**Hawaii Prepara**	**0.82**	**334**		Sn	20 37 23.6	-2.0
HLK	**Haleakala**	**1.70**	**329**	Pn	Pn	20 37 25.6	-1.2
HON	**Honolulu**	**3.23**	**309**	Pn	Pn	20 37 46.2	-1.4
KIP	**Kipapa**	**3.31**	**310**	IAML		20 38 26.6	
	comp=E,181nm,0.9s						
KIP				IAML		20 38 26.8	
	comp=E,289nm,0.6s						
KIP	**Kipapa**	**3.31**	**310**	Pn	Pn	20 37 46.4	-2.2
OPA	**Opana**	**3.48**	**314**	Pn	Pn	20 37 48.5	-2.4
KEKH	**Kekaha**	**4.92**	**304**	Pn	Pn	20 38 08.9	-1.9

ROM 26 20:41:24.9±0.1, 42°.873N±0°.003×13°.153E±0°.004, h8km, ML3.1/22, 13C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=353.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**123**	⇓P	Pg	20 41 26.4	-0.2
T1245				S	Sg	20 41 27.6	-0.2
MC2	**Monte Cornacci**	**0.05**	**35**	⇑P	Pg	20 41 26.7	-0.1
MC2				S	Sg	20 41 28.0	-0.2
T1216	**Preci, Frazion**	**0.10**	**280**	P	Pg	20 41 27.6	+0.4
T1216				S	Sg	20 41 29.6	+0.7
T1216				AML	AML		
	comp=E,5435μm,0.3s						
T1216				AML	AML		
	comp=N,5640μm,0.3s						
T1216				AML	AML		
	comp=E,36300μm,0.7s						
T1216				AML	AML		
	comp=N,45100μm,0.3s						
MMO1	**Montemonaco**	**0.13**	**78**	P	Pg	20 41 28.2	+0.5
MMO1				S	Sg	20 41 30.6	+0.9
AM05	**Amandola Campo**	**0.18**	**55**	⇑P	Pg	20 41 29.2	+0.6
AM05				S	Sg	20 41 32.3	+1.2
AM05				AML	AML		
	comp=E,688μm,0.1s						
AM05				AML	AML		
	comp=N,1425μm,0.1s						
AM05				AML	AML		
	comp=E,3695μm,0.6s						
AM05				AML	AML		
	comp=N,407μm,0.4s						
AM05				AML	AML		
	comp=N,4575μm,0.5s						
AM05				AML	AML		
	comp=E,22600μm,1.6s						
AM05				AML	AML		
	comp=E,5650μm,1.0s						
AM05				AML	AML		
	comp=N,794μm,0.1s						
AM05				AML	AML		
	comp=N,505μm,0.2s						
T1241	**Roccafluvione,**	**0.20**	**95**	⇑P	Pg	20 41 29.6	+0.6
T1241				S	Sg	20 41 33.1	+1.3
T1241				AML	AML		
	comp=E,1295μm,0.4s						
T1241				AML	AML		
	comp=N,1335μm,0.4s						
T1241				AML	AML		
	comp=N,7535μm,0.8s						
T1241				AML	AML		
	comp=E,7695μm,1.6s						
T1215	**Vallo di Nera,**	**0.22**	**251**	P	Pg	20 41 29.9	+0.6
T1215				S	Sg	20 41 33.8	+1.5
T1215				AML	AML		
	comp=E,569μm,0.5s						
T1215				AML	AML		
	comp=N,648μm,0.2s						
T1215				AML	AML		
	comp=E,561μm,0.5s						
T1215				AML	AML		
	comp=N,646μm,0.2s						
T1215				AML	AML		
	comp=N,5995μm,1.0s						
T1215				AML	AML		
	comp=N,6165μm,1.0s						
T1215				AML	AML		
	comp=E,5950μm,0.9s						
T1215				AML	AML		
	comp=E,5965μm,1.0s						
T1215				AML	AML		
	comp=E,332μm,0.2s						
T1215				AML	AML		
	comp=N,415μm,0.6s						
CESI	**CESI - Serrava**	**0.23**	**306**	⇑P	Pg	20 41 29.9	+0.5
CESI				S	Sg	20 41 34.0	+1.5
CESI				AML	AML		
	comp=N,3730μm,0.3s						
CESI				AML	AML		
	comp=E,2715μm,0.2s						
CESI				AML	AML		
	comp=E,26650μm,0.5s						
CESI				AML	AML		
	comp=N,37800μm,0.8s						
T1217	**Poggiodomo (PG**	**0.23**	**225**	⇑P	Pg	20 41 30.2	+0.7
T1217				S	Sg	20 41 34.4	+1.8
T1217				AML	AML		
	comp=E,5840μm,1.5s						
T1217				AML	AML		
	comp=N,12900μm,0.3s						
T1217				AML	AML		
	comp=N,12845μm,0.3s						
T1217				AML	AML		
	comp=E,5625μm,1.5s						
T1217				AML	AML		
	comp=N,607μm,0.3s						
T1217				AML	AML		
	comp=N,713μm,0.3s						
T1204	**Amatrice, Fraz**	**0.23**	**148**	⇓P	Pg	20 41 30.3	+0.8
T1204				S	Sg	20 41 35.1	+2.4
T1204				AML	AML		
	comp=E,8025μm,0.7s						
T1204				AML	AML		
	comp=N,4475μm,0.8s						
T1204				AML	AML		
	comp=E,643μm,0.3s						
T1204				AML	AML		
	comp=N,225μm,1.8s						
GUMA	**Gualdo di Mace**	**0.23**	**35**	⇑P	Pg	20 41 30.3	+0.8
GUMA				S	Sg	20 41 34.6	+1.9
GUMA				AML	AML		
	comp=E,4920μm,0.5s						
GUMA				AML	AML		
	comp=N,6255μm,0.2s						
GUMA				AML	AML		
	comp=E,7030μm,0.2s						
GUMA				AML	AML		
	comp=N,5165μm,0.4s						
GUMA				AML	AML		
	comp=E,65400μm,0.6s						
GUMA				AML	AML		
	comp=N,61800μm,0.6s						
GUMA				AML	AML		
	comp=N,63500μm,0.4s						
GUMA				AML	AML		
	comp=E,56650μm,1.0s						
SMA1	**SAN MARTINO**	**0.28**	**151**	⇓P	Pg	20 41 31.1	+0.7
SMA1				S	Sb	20 41 36.3	-0.8
SMA1				AML	AML		
	comp=E,408μm,0.4s						
SMA1				AML	AML		
	comp=N,504μm,0.6s						
SMA1				AML	AML		
	comp=N,6835μm,0.4s						
SMA1				AML	AML		
	comp=E,3620μm,0.7s						
SMA1				AML	AML		
	comp=N,318μm,0.3s						
SMA1				AML	AML		
	comp=E,267μm,0.5s						
T1243	**Rocca Santa Ma**	**0.28**	**129**	⇑P	Pg	20 41 31.0	+0.5
T1243				S	Sg	20 41 35.7	+1.5
LNSS	**Leonessa**	**0.28**	**197**	P	Pg	20 41 31.1	+0.6
LNSS				S	Sb	20 41 36.0	-1.2
LNSS				AML	AML		
	comp=N,1605μm,0.4s						
LNSS				AML	AML		
	comp=E,1033μm,0.1s						
LNSS				AML	AML		
	comp=N,1610μm,0.4s						
LNSS				AML	AML		
	comp=E,10500μm,0.4s						
LNSS				AML	AML		
	comp=N,5915μm,0.9s						
CAMP	**Campotosto**	**0.39**	**151**	⇓P	Pg	20 41 32.8	+0.4
CAMP				S	Sb	20 41 39.3	-0.9
CAMP				AML	AML		
	comp=E,217μm,1.1s						
CAMP				AML	AML		
	comp=N,128μm,0.3s						
CAMP				AML	AML		
	comp=N,1780μm,0.6s						
CAMP				AML	AML		
	comp=E,2140μm,1.1s						
OFFI	**Offida**	**0.40**	**81**	P	Pb	20 41 34.1	0.0
OFFI				S	Sb	20 41 42.2	+1.8
OFFI				AML	AML		
	comp=E,606μm,0.2s						
OFFI				AML	AML		
	comp=N,676μm,0.4s						
OFFI				AML	AML		
	comp=E,6310μm,0.4s						
OFFI				AML	AML		
	comp=N,5155μm,0.6s						
T1211	**Morro Reatino**	**0.41**	**213**	⇑P	Pg	20 41 33.5	+0.7
T1211				S	Sb	20 41 40.2	-0.5
T1211				AML	AML		
	comp=E,2490μm,1.4s						
T1211				AML	AML		
	comp=N,5145

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T1247 Pizzolo (AQ)      0.45 166 ⇓P      Pg      20 41 33.9 +0.4
T1247                            S       Sb      20 41 41.4 -0.5
T1247                            AML     AML
        comp=E,466µm,1.2s
T1247                            AML     AML
        comp=N,602µm,1.0s
T1247                            AML     AML
        comp=E,2090µm,0.8s
T1247                            AML     AML
        comp=N,2795µm,1.1s
EL6   Elcito            0.46 355 S       Sb      20 41 42.0 -0.3
ATCC  AVT- Casa Cast    0.49 310 P       Pg      20 41 34.6 +0.3
ATCC                             AML     AML
        comp=E,2680µm,0.2s
ATCC                             AML     AML
        comp=N,1975µm,0.3s
ATCC                             AML     AML
        comp=E,15350µm,0.2s
ATCC                             AML     AML
        comp=N,11490µm,0.7s
CESX  Cesi              0.50 238 ⇓P      Pg      20 41 34.8 +0.3
CESX                             S       Sb      20 41 43.0 -0.3
CESX                             AML     AML
        comp=E,460µm,0.3s
CESX                             AML     AML
        comp=N,599µm,0.4s
CESX                             AML     AML
        comp=E,4210µm,0.4s
CESX                             AML     AML
        comp=N,4325µm,0.4s
GIGS  Gran Sasso        0.52 144 ⇓P      Pg      20 41 35.2 +0.3
GIGS                             S       Sb      20 41 43.4 -0.7
GIGS                             AML     AML
        comp=E,71µm,0.2s
GIGS                             AML     AML
        comp=N,45µm,1.2s
GIGS                             AML     AML
        comp=E,802µm,0.7s
GIGS                             AML     AML
        comp=N,522µm,1.0s
MURB  Monte Urbino      0.60 310 S       Sb      20 41 47.0 +0.6
PP3   Marolino          0.60  33 ⇑P      Pb      20 41 38.4 +0.7
PP3                              AML     AML
        comp=E,5230µm,0.3s
PP3                              AML     AML
        comp=N,5560µm,0.7s
PP3                              AML     AML
        comp=N,5535µm,0.7s
PP3                              AML     AML
        comp=E,5180µm,0.2s
FIAM  Fiamignano        0.61 182 ⇑P      Pg      20 41 36.8 +0.2
FIAM                             S       Sb      20 41 46.0 -0.5
FIAM                             AML     AML
        comp=E,128µm,0.3s
FIAM                             AML     AML
        comp=N,118µm,0.3s
FIAM                             AML     AML
        comp=E,811µm,0.8s
FIAM                             AML     AML
        comp=N,724µm,0.9s
FIAM                             AML     AML
        comp=E,98µm,0.3s
FIAM                             AML     AML
        comp=N,67µm,0.3s
ATFO  Monte Foce - G    0.65 319 ⇑P      Pg      20 41 37.2 -0.3
ATFO                             S       Sb      20 41 48.0 +0.1
ATFO                             AML     AML
        comp=E,232µm,0.2s
ATFO                             AML     AML
        comp=N,201µm,0.4s
ATFO                             AML     AML
        comp=E,1845µm,0.4s
ATFO                             AML     AML
        comp=N,2105µm,0.7s
VCEL  Villa Celiera     0.70 133 ⇑P      Pg      20 41 38.7 +0.4
VCEL                             AML     AML
        comp=E,214µm,0.3s
VCEL                             AML     AML
        comp=N,156µm,1.1s
VCEL                             AML     AML
        comp=E,1423µm,0.7s
VCEL                             AML     AML
        comp=N,1480µm,1.0s
FRON  Frontone          0.72 334 S       Sb      20 41 51.0 +1.3
T0110 Collepietro       0.80 144 ⇑P      Pg      20 41 39.9 -0.3
T0110                            AML     AML
        comp=E,144µm,0.5s
T0110                            AML     AML
        comp=N,205µm,0.4s
T0110                            AML     AML
        comp=E,1635µm,0.4s
T0110                            AML     AML
        comp=N,1190µm,0.4s
ATPI  Pietralunga -     0.80 317 S       Sb      20 41 53.0 +1.0
PIEI  Pieia             0.80 326 S       Sb      20 41 53.0 +0.9
NARO  Abbazia di Nar    0.85 331 S       Sn      20 41 55.0 -0.8
LPEL  Lama dei Pelig    1.12 137 S       Sg      20 42 01.0  0.0
LAV9  Lanuvio           1.24 196 S       Sn      20 42 07.0 +1.5
TRIF  Trifonti          1.67 279 S       Sg      20 42 23.0 +4.5
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PRU 26 20:42:23.8±0.0, 43°.13N×13°.37E, h0km
ROM 26 20:42:21.2±0.1, 43°.008N±0°.004×13°.113E±0°.005, h9km, ML3.1/67, 37C-33D, Error ellipse: s-maj=0.4km s-min=0.2km az=244.0, Central Italy

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Code  Station Name      Δ°    AZ°   Phase ID        Time      Res
                                    Op      ISC     h m s     ISC
FEMA  Monte Fema        0.07 225 ⇓P      Pg      20 42 23.4  0.0
FEMA                             S       Sg      20 42 25.1 +0.2
T1216 Preci, Frazion    0.14 210 P       Pg      20 42 24.7 +0.5
T1216                            S       Sg      20 42 27.6 +1.2
T1216                            AML     AML
        comp=E,36250µm,0.7s
T1216                            AML     AML
        comp=E,36300µm,0.7s
T1216                            AML     AML
        comp=N,45100µm,0.3s
T1216                            AML     AML
        comp=N,45100µm,1.7s
CESI  CESI - Serrava    0.15 269 P       Pg      20 42 25.0 +0.5
CESI                             S       Sg      20 42 28.2 +1.3
CESI                             AML     AML
        comp=N,37800µm,0.8s
CESI                             AML     AML
        comp=E,26650µm,0.5s
T1245 Castelsantange    0.16 160 ⇑P      Pg      20 42 25.2 +0.5
T1245                            S       Sg      20 42 28.4 +1.2
T1245                            AML     AML
        comp=E,34200µm,0.5s
T1245                            AML     AML
        comp=E,34150µm,0.5s
T1245                            AML     AML
        comp=N,29250µm,0.9s
T1245                            AML     AML
        comp=E,34150µm,0.5s
T1245                            AML     AML
        comp=N,29250µm,0.9s
T1245                            AML     AML
        comp=N,28200µm,0.8s
T1245                            AML     AML
        comp=E,35750µm,0.5s
T1245                            AML     AML
        comp=E,34150µm,1.5s
T1245                            AML     AML
        comp=N,28200µm,1.2s
T1245                            AML     AML
        comp=E,35750µm,1.5s
GUMA  Gualdo di Mace    0.17  71 ⇓P      Pg      20 42 25.5 +0.6
GUMA                             S       Sg      20 42 29.0 +1.7
GUMA                             AML     AML
        comp=E,65400µm,0.7s
GUMA                             AML     AML
        comp=E,65400µm,0.6s
GUMA                             AML     AML
        comp=E,56650µm,1.0s
GUMA                             AML     AML
        comp=N,63500µm,0.4s
GUMA                             AML     AML
        comp=N,61800µm,0.6s
AM05  Amandola Campo    0.18 100 P       Pg      20 42 25.5 +0.5
AM05                             S       Sg      20 42 28.7 +1.2
AM05                             AML     AML
        comp=E,5650µm,1.0s
AM05                             AML     AML
        comp=N,4570µm,0.5s
AM05                             AML     AML
        comp=E,22550µm,1.6s
AM05                             AML     AML
        comp=E,22600µm,1.6s
AM05                             AML     AML
        comp=N,4575µm,0.5s
AM05                             AML     AML
        comp=N,794µm,0.1s
AM05                             AML     AML
        comp=E,5650µm,1.0s
AM05                             AML     AML
        comp=E,22600µm,0.4s
SEF1  Sefro             0.18 319 P       Pg      20 42 25.6 +0.5
SEF1                             S       Sg      20 42 29.1 +1.4
SEF1                             AML     AML
        comp=E,30600µm,1.3s
SEF1                             AML     AML
        comp=N,34350µm,0.3s
SEF1                             AML     AML
        comp=E,30600µm,1.3s
SEF1                             AML     AML
        comp=E,30600µm,0.7s
MMO1  Montemonaco       0.19 125 P       Pg      20 42 25.6 +0.3
MMO1                             S       Sg      20 42 29.0 +1.1
GAG1  Gagliole          0.23 352 ⇑P      Pg      20 42 26.6 +0.7
GAG1                             S       Sg      20 42 30.9 +1.8
GAG1                             AML     AML
        comp=E,22350µm,0.4s
GAG1                             AML     AML
        comp=N,19750µm,0.2s
GAG1                             AML     AML
        comp=E,22400µm,0.4s
GAG1                             AML     AML
        comp=N,19800µm,0.2s
GAG1                             AML     AML
        comp=E,22400µm,1.6s
T1215 Vallo di Nera,    0.27 221 ⇑P      Pg      20 42 27.3 +0.6
T1215                            S       Sb      20 42 32.1 -1.0
T1215                            AML     AML
        comp=E,5950µm,0.9s
T1215                            AML     AML
        comp=N,6000µm,1.0s
T1215                            AML     AML
        comp=E,5995µm,1.0s
T1215                            AML     AML
        comp=N,5995µm,1.0s
T1215                            AML     AML
        comp=E,5950µm,0.9s
T1215                            AML     AML
        comp=N,6180µm,1.0s
T1215                            AML     AML
        comp=E,5965µm,1.0s
T1215                            AML     AML
        comp=N,6180µm,1.0s
T1215                            AML     AML
        comp=N,5995µm,1.0s
SNTG  Esanatoglia       0.28 333 ⇓P      Pg      20 42 26.9 +0.2
SNTG                             S       Sb      20 42 31.9 -1.3
SNTG                             AML     AML
        comp=E,4075µm,0.1s
SNTG                             AML     AML
        comp=N,4805µm,0.3s
T1241 Roccafluvione,    0.28 123 P       Pg      20 42 27.1 +0.3
T1241                            S       Sb      20 42 32.0 -1.3
T1241                            AML     AML
        comp=N,7535µm,0.8s
T1241                            AML     AML
        comp=E,7695µm,1.6s
T1241                            AML     AML
        comp=N,7535µm,1.2s
T1241                            AML     AML
        comp=E,7695µm,0.4s
MNTP  Montappone        0.29  64 P       Pb      20 42 28.1 -0.6
MNTP                             S       Sb      20 42 34.2 +0.5
MNTP                             AML     AML
        comp=E,15650µm,0.7s
MNTP                             AML     AML
        comp=N,10800µm,1.0s
EL6   Elcito            0.32 359 ⇓P      Pg      20 42 27.8 +0.1
EL6                              S       Sb      20 42 33.5 -1.1
T1217 Poggiodomo (PG    0.33 204 P       Pg      20 42 28.2 +0.5
T1217                            S       Sb      20 42 34.0 -0.7
T1217                            AML     AML
        comp=E,5845µm,1.5s
T1217                            AML     AML
        comp=N,12950µm,0.3s
T1217                            AML     AML
        comp=E,5600µm,1.5s
T1217                            AML     AML
        comp=N,12855µm,0.3s
T1217                            AML     AML
        comp=E,5625µm,1.5s
T1217                            AML     AML
        comp=N,12845µm,0.3s
T1217                            AML     AML
        comp=E,5840µm,1.5s
ATCC  AVT- Casa Cast    0.39 297 ⇓P      Pg      20 42 29.2 +0.3
ATCC                             S       Sb      20 42 36.1 -0.4
ATCC                             AML     AML
        comp=N,11475µm,0.7s
ATCC                             AML     AML
        comp=N,11490µm,0.7s
ATCC                             AML     AML
        comp=E,15350µm,0.2s
T1243 Rocca Santa Ma    0.40 141 P       Pg      20 42 29.2 +0.1
T1243                            S       Sb      20 42 35.9 -0.9
LNSS  Leonessa          0.41 187 ⇑P      Pg      20 42 29.6 +0.4
LNSS                             S       Sb      20 42 36.7 -0.4
LNSS                             AML     AML
        comp=E,10500µm,0.4s
LNSS                             AML     AML
        comp=N,5915µm,0.9s
LNSS                             AML     AML
        comp=N,5915µm,1.1s
OFFI  Offida            0.43 100 ⇓P      Pb      20 42 30.8 -0.1
OFFI                             AML     AML
        comp=E,6310µm,0.4s
OFFI                             AML     AML
        comp=N,5775µm,1.4s
OFFI                             AML     AML
        comp=N,5775µm,0.6s
MURB  Monte Urbino      0.50 301 P       Pg      20 42 31.2 +0.3
MURB                             S       Sb      20 42 40.0 +0.3
MURB                             AML     AML
        comp=E,10015µm,0.3s
MURB                             AML     AML
        comp=N,6860µm,0.4s
MURB                             AML     AML
        comp=E,10710µm,0.3s
MURB                             AML     AML
        comp=N,7590µm,0.4s
MURB                             AML     AML
        comp=E,10045µm,0.3s
RM33  Pellescritta (    0.51 171 ⇓P      Pg      20 42 28.5 -2.5
RM33                             AML     AML
        comp=N,2160µm,0.6s
RM33                             AML     AML
        comp=E,2075µm,1.0s
RM33                             AML     AML
        comp=E,2045µm,1.0s
RM33                             AML     AML
        comp=N,2120µm,0.6s
RM33                             AML     AML
        comp=E,2045µm,1.0s
RM33                             AML     AML
        comp=E,2075µm,1.0s
T1211 Morro Reatino     0.51 202 ⇓P      Pg      20 42 31.7 +0.5
T1211                            S       Sb      20 42 40.3 +0.2
T1211                            AML     AML
        comp=E,2495µm,1.4s
T1211                            AML     AML
        comp=N,5145µm,0.3s
T1211                            AML     AML
        comp=E,2490µm,1.4s
PP3   Marolino          0.52  44 P       Pb      20 42 32.5 -0.1
PP3                              S       Sn      20 42 42.5 -1.3
PP3                              AML     AML
        comp=E,5180µm,0.3s
PP3                              AML     AML
        comp=N,5535µm,0.7s
PP3                              AML     AML
        comp=N,5565µm,0.7s
PP3                              AML     AML
        comp=E,5180µm,0.2s
PP3                              AML     AML
        comp=N,5535µm,0.7s
PP3                              AML     AML
        comp=E,5230µm,0.3s
PP3                              AML     AML
        comp=E,5230µm,1.7s
PP3                              AML     AML
        comp=N,5560µm,0.7s
PP3                              AML     AML
        comp=E,5180µm,1.8s
CAMP  Campotosto        0.52 155 ⇓P      Pg      20 42 31.3  0.0
CAMP                             S       Sb      20 42 39.8 -0.5
CAMP                             AML     AML
        comp=E,2140µm,1.1s
CAMP                             AML     AML
        comp=N,1780µm,0.6s
CAMP                             AML     AML
        comp=E,2140µm,0.9s
ATFO  Monte Foce - G    0.53 312 ⇓P      Pg      20 42 31.7 +0.1
ATFO                             AML     AML
        comp=N,2105µm,0.7s
ATFO                             AML     AML
        comp=E,1845µm,0.4s
ATFO                             AML     AML
        comp=E,1845µm,1.6s
CESX  Cesi              0.56 225 ⇓P      Pg      20 42 30.8 -1.2
CESX                             S       Sb      20 42 42.0 +0.7
CESX                             AML     AML
        comp=N,4325µm,0.4s
CESX                             AML     AML
        comp=E,4210µm,0.4s
FRON  Frontone          0.58 331 ⇑P      Pg      20 42 32.4 -0.1
FRON                             AML     AML
        comp=N,3625µm,0.4s
FRON                             AML     AML
        comp=E,1905µm,0.6s
FRON                             AML     AML
        comp=E,1905µm,1.4s
T1247 Pizzolo (AQ)      0.58 166 ⇑P      Pg      20 42 32.5  0.0
T1247                            AML     AML
        comp=N,2975µm,1.5s
T1247                            AML     AML
        comp=N,2795µm,1.1s
T1247                            AML     AML
        comp=E,2625µm,0.8s
T1247                            AML     AML
        comp=E,2625µm,1.2s
T1247                            AML     AML
        comp=N,2795µm,0.9s
ATTE  AVT- Monte Tez    0.59 289 ⇓P      Pg      20 42 33.1 +0.5
ATTE                             AML     AML
        comp=N,1225µm,0.9s
ATTE                             AML     AML
        comp=E,1845µm,0.4s
TRTR  Tortoreto Alta    0.62 108 ⇑P      Pb      20 42 34.7 +0.4
TRTR                             AML     AML
        comp=E,5725µm,0.6s
TRTR                             AML     AML
        comp=E,5725µm,1.4s
TRTR                             AML     AML
        comp=N,5610µm,1.3s
ATVO  AVT- Monte Val    0.64 306 ⇑P      Pg      20 42 33.5 -0.1
ATVO                             S       Sb      20 42 45.0 +1.3
ATVO                             AML     AML
        comp=N,1155µm,1.0s
ATVO                             AML     AML
        comp=E,1465µm,0.4s
ATVO                             AML     AML
        comp=N,1156µm,1.0s
AOI   Ancona            0.65  33 ⇓P      Pg      20 42 34.1 +0.3
AOI                              S       Sn      20 42 46.0 -1.1
AOI                              AML     AML
        comp=E,1395µm,0.2s
AOI                              AML     AML
        comp=N,1024µm,1.1s
GIGS  Gran Sasso        0.65 149 ⇓P      Pg      20 42 33.6 -0.2
GIGS                             S       Sb      20 42 45.0 +0.9
GIGS                             AML     AML
        comp=E,802µm,0.7s
GIGS                             AML     AML
        comp=N,522µm,1.0s
GIGS                             AML     AML
        comp=E,802µm,0.7s
MPAG  Monte Paganucc    0.67 338 ⇑P      Pg      20 42 34.4 +0.2
MPAG                             S       Sb      20 42 46.0 +1.3
MPAG                             AML     AML
        comp=E,1930µm,0.8s
MPAG                             AML     AML
        comp=N,1745µm,0.9s
MPAG                             AML     AML
        comp=E,1930µm,1.2s
MPAG                             AML     AML
        comp=N,1745µm,1.1s
PIEI  Pieia             0.68 322 ⇑P      Pg      20 42 34.1 -0.2
PIEI                             S       Sb      20 42 46.0 +1.2
PIEI                             AML     AML
        comp=E,1132µm,0.4s
PIEI                             AML     AML
        comp=N,1145µm,1.4s
PIEI                             AML     AML
        comp=N,1145µm,0.6s
ATPI  Pietralunga -     0.68 311 ⇑P      Pg      20 42 34.4  0.0
ATPI                             S       Sn      20 42 47.0 -1.0
ATPI                             AML     AML
        comp=N,1120µm,0.5s
ATPI                             AML     AML
        comp=E,1260µm,0.6s
ATPI                             AML     AML
        comp=E,1255µm,0.6s
ATPI                             AML     AML
        comp=E,1255µm,1.4s
AQU   L'Aquila          0.69 162 P       Pg      20 42 34.0 -0.5
AQU                              AML     AML
        comp=N,1630µm,1.1s
AQU                              AML     AML
        comp=E,1400µm,1.1s
AQU                              AML     AML
        comp=E,1380µm,1.4s
AQU                              AML     AML
        comp=N,1625µm,1.1s
AQU                              AML     AML
        comp=E,1400µm,0.9s
AQU                              AML     AML
        comp=E,1380µm,0.6s
ATMI  Monte Miggiano    0.70 298 S       Sn      20 42 47.0 -1.4
NARO  Abbazia di Nar    0.72 327 ⇑P      Pg      20 42 34.8 -0.2
NARO                             S       Sn      20 42 48.0 -0.8
NARO                             AML     AML
        comp=E,1265µm,0.7s
NARO                             AML     AML
        comp=N,650µm,1.2s
NARO                             AML     AML
        comp=N,650µm,0.8s
FSSB  Fossombrone       0.73 340 ⇑P      Pg      20 42 35.2  0.0
FSSB                             S       Sn      20 42 48.0 -1.0
FSSB                             AML     AML
        comp=E,3230µm,0.3s
FSSB                             AML     AML
        comp=N,7550µm,0.3s
FIAM  Fiamignano        0.74 180 ⇓P      Pg      20 42 34.6 -0.8
FIAM                             AML     AML
        comp=E,1212µm,0.6s
FIAM                             AML     AML
        comp=N,1274µm,1.4s
FIAM                             AML     AML
        comp=N,1274µm,0.6s
MGAB  Montegabbione     0.74 263 ⇓P      Pb      20 42 36.1 -0.2
MGAB                             AML     AML
        comp=E,1365µm,0.5s
MGAB                             AML     AML
        comp=N,2065µm,0.4s
MGAB                             AML     AML
        comp=E,1880µm,0.4s
MGAB                             AML     AML
        comp=N,2320µm,0.5s
MGAB                             AML     AML
        comp=E,1370µm,0.5s
MGAB                             AML     AML
        comp=N,2065µm,1.6s
APEC  Apecchio          0.75 318 ⇓P      Pg      20 42 35.9 +0.3
APEC                             S       Sn      20 42 49.0 -0.6
BADI  Badiali           0.81 309 ⇓P      Pg      20 42 36.8  0.0
BADI                             S       Sn      20 42 51.0  0.0
VCEL  Villa Celiera     0.81 139 ⇓P      Pg      20 42 36.7 -0.2
VCEL                             AML     AML
        comp=N,1485µm,0.7s
VCEL                             AML     AML
        comp=E,2015µm,0.5s
FAGN  Fagnano           0.82 155 ⇓P      Pg      20 42 37.2 +0.2
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FAGN				AML	AML	
	comp=E,2760μm,0.5s					
FAGN				AML	AML	
	comp=N,2120μm,1.5s					
FAGN				AML	AML	
	comp=E,2760μm,1.5s					
PE3	**Peglio**	**0.82 327**	⇑P	Pg	20 42 37.3 +0.2	
SRES	**S.Oreste - Sor**	**0.89 210**	⇑P	Pg	20 42 38.1 -0.2	
SRES				AML	AML	
	comp=N,1165μm,0.8s					
SRES				AML	AML	
	comp=E,1379μm,1.0s					
SRES				AML	AML	
	comp=E,1379μm,1.0s					
CAFI	**Castiglion Fio**	**0.90 291**	⇓P	Pg	20 42 38.5 0.0	
CAFI			S	Sn	20 42 53.0 -0.3	
CAFI				AML	AML	
	comp=N,626μm,1.0s					
CAFI				AML	AML	
	comp=E,730μm,0.4s					
SACS	**San Casciano d**	**0.90 260**	⇑P	Pb	20 42 39.1 +0.1	
SACS				AML	AML	
	comp=N,816μm,1.4s					
SACS				AML	AML	
	comp=E,787μm,1.4s					
SACS				AML	AML	
	comp=E,696μm,0.7s					
SACS				AML	AML	
	comp=N,750μm,1.2s					
SACS				AML	AML	
	comp=N,816μm,0.6s					
SACS				AML	AML	
	comp=E,787μm,0.6s					
T0110	**Collepietro**	**0.92 148**	⇓P	Pg	20 42 38.2 -0.7	
T0110				AML	AML	
	comp=E,2100μm,0.6s					
T0110				AML	AML	
	comp=N,1655μm,0.8s					
LATE	**Laterza**	**1.04 248**	⇓P	Pb	20 42 41.6 +0.1	
MCIV	**Monte Civitell**	**1.08 258**	⇓P	Pn	20 42 42.9 +0.2	
MCIV				AML	AML	
	comp=N,294μm,1.0s					
MCIV				AML	AML	
	comp=E,351μm,1.1s					
INTR	**Introdacqua**	**1.16 149**	⇑P	Pg	20 42 42.2 -1.2	
INTR				AML	AML	
	comp=N,1μm,0.8s					
INTR				AML	AML	
	comp=E,659μm,0.6s					
INTR				AML	AML	
	comp=E,656nm,0.6s					
INTR				AML	AML	
	comp=N,1460μm,0.8s					
VVLD	**Villa Vallelon**	**1.20 161**	⇑P	Pn	20 42 46.5 +2.3	
VVLD				AML	AML	
	comp=N,632μm,1.0s					
VVLD				AML	AML	
	comp=N,632μm,1.0s					
VVLD				AML	AML	
	comp=E,543μm,0.7s					
LPEL	**Lama dei Pelig**	**1.25 140**	⇑P	Pn	20 42 43.8 -1.1	
LPEL				AML	AML	
	comp=E,870μm,1.0s					
LPEL				AML	AML	
	comp=N,546μm,0.9s					
LPEL				AML	AML	
	comp=N,546μm,1.1s					
MA9	**Marino**	**1.28 195**	P	Pn	20 42 44.9 -0.4	
MA9				AML	AML	
	comp=E,800μm,0.5s					
MA9				AML	AML	
	comp=N,1038μm,0.6s					
POFI	**Posta Fibreno**	**1.36 161**	⇓P	Pg	20 42 49.3 +1.9	
GIUL	**Giuliano Di Ro**	**1.45 176**	⇓P	Pg	20 42 50.0 +1.0	
OSSC	**Osservatorio P**	**1.46 291**	P	Pg	20 42 49.8 +0.6	
OSSC				AML	AML	
	comp=E,181μm,0.6s					
OSSC				AML	AML	
	comp=N,147μm,0.7s					
CERA	**Filignano**	**1.56 154**	⇑P	Pg	20 42 51.8 +0.6	
TRIF	**Trifonti**	**1.62 275**	⇓P	Pn	20 42 49.6 -0.5	
TRIF				AML	AML	
	comp=N,120μm,0.5s					
TRIF				AML	AML	
	comp=E,154μm,0.8s					
TRIV	**Trivento**	**1.64 139**	⇑P	Pg	20 42 52.9 +0.3	
TRIV				AML	AML	
TRIV				AML	AML	
TRIV				AML	AML	
TRIV				AML	AML	
MELA	**Melanico ??? S**	**1.98 130**	⇑P	Pb	20 42 57.0 -0.4	
MELA				AML	AML	
	comp=N,632μm,0.7s					
MELA				AML	AML	
	comp=E,452μm,0.8s					
APRC	**Apricena**	**2.19 124**	⇑P	Pn	20 42 59.3 +1.4	
APRC				AML	AML	
	comp=E,182μm,0.4s					
APRC				AML	AML	
	comp=N,243μm,0.4s					
SGRT	**San Giovanni R**	**2.32 122**	⇓P	Pn	20 43 00.8 +1.1	
SGRT				AML	AML	
	comp=E,182μm,1.6s					
SGRT				AML	AML	
	comp=N,200μm,0.9s					
SGRT				AML	AML	
	comp=E,182μm,0.4s					
SGRT				AML	AML	
	comp=N,200μm,1.1s					
MNTV	**Mantova**	**2.72 323**	S	Sg	20 43 52.0 +3.5	
PALZ	**Palazzo San Ge**	**2.96 133**	⇑P	Pn	20 43 10.1 +1.6	
PALZ				AML	AML	
	comp=N,236μm,1.6s					
PALZ				AML	AML	
	comp=E,176μm,0.9s					
PALZ				AML	AML	
	comp=N,236μm,0.4s					
SABO	**M.te Sabotino**	**2.99 7**	⇑P	Pn	20 43 09.4 +0.5	
SABO				AML	AML	
	comp=N,744μm,1.6s					
SABO				AML	AML	
	comp=E,138μm,1.3s					
SABO				AML	AML	
	comp=E,606μm,1.6s					
SABO				AML	AML	
	comp=N,180μm,1.6s					
SABO				AML	AML	
	comp=E,606μm,0.4s					
MRVN	**Minervino Murg**	**3.01 129**	P	Pn	20 43 11.4 +2.3	
CGRP	**Cima Grappa**	**3.02 342**	S	Sn	20 43 47.0 +1.1	
DOSS	**Dosso del Somm**	**3.19 335**	⇓P	Pn	20 43 13.7 +2.0	
DOSS				AML	AML	
	comp=E,81μm,0.6s					
DOSS				AML	AML	
	comp=N,84μm,0.5s					
SALO	**Salr**	**3.20 325**	⇑P	Pn	20 43 14.9 +3.1	
CTI	**Castel Tesino**	**3.21 342**	P	Pn	20 43 13.3 +1.3	
CTI				AML	AML	
	comp=E,79μm,0.6s					
CTI				AML	AML	
	comp=N,83μm,0.5s					
MPRI	**Monte Prat**	**3.23 358**	⇑P	Pn	20 43 13.4 +1.1	
MPRI				AML	AML	
	comp=E,128μm,0.8s					
MPRI				AML	AML	
	comp=N,141μm,1.6s					
MPRI				AML	AML	
	comp=E,128μm,1.2s					
MPRI				AML	AML	
	comp=N,141μm,0.4s					
STAL	**STALIGIAL**	**3.26 355**	⇑P	Pn	20 43 13.5 +0.9	
STAL				AML	AML	
	comp=E,110μm,0.9s					
STAL				AML	AML	
	comp=N,99μm,1.3s					
STAL				AML	AML	
	comp=N,99μm,0.7s					
LUSI	**Trento, Gardas**	**3.33 333**	⇑P	Pn	20 43 16.5 +2.8	
CIMO	**Cimolais**	**3.34 352**	⇓P	Pn	20 43 14.4 +0.8	
CIMO				AML	AML	
	comp=N,39μm,1.0s					
CIMO				AML	AML	
	comp=N,31μm,0.7s					
CIMO				AML	AML	
	comp=E,42μm,1.3s					
CIMO				AML	AML	
	comp=E,30μm,0.7s					
CIMO				AML	AML	
	comp=N,31μm,1.3s					
CIMO				AML	AML	
	comp=E,42μm,0.7s					
AMUR	**Altamura**	**3.34 128**	⇓P	Pn	20 43 15.4 +1.6	
AMUR				AML	AML	
	comp=E,49μm,1.0s					
AMUR				AML	AML	
	comp=N,52μm,0.5s					
AMUR				AML	AML	
	comp=E,49μm,1.0s					
STON	**Ston**	**3.37 91**	⇑P	Pn	20 43 14.6 +0.6	
PTCC	**Patocco-Chiusa**	**3.40 3**	⇑P	Pn	20 43 15.0 +0.5	
PTCC				AML	AML	
	comp=E,44μm,1.5s					
PTCC				AML	AML	
	comp=N,61μm,1.0s					
PTCC				AML	AML	
	comp=N,61μm,1.0s					
PTCC				AML	AML	
	comp=E,44μm,0.5s					
CLUD	**Cludinico**	**3.45 357**	⇑P	Pn	20 43 16.0 +0.8	
CLUD				AML	AML	
	comp=E,101μm,1.4s					
CLUD				AML	AML	
	comp=N,92μm,0.9s					
CLUD				AML	AML	
	comp=E,101μm,0.6s					
CLUD				AML	AML	
	comp=N,92μm,1.1s					
ZOU	**Zoufplan**	**3.55 358**	⇑P	Pn	20 43 17.7 +1.0	
ZOU				AML	AML	
	comp=E,78μm,1.1s					
ZOU				AML	AML	
	comp=N,90μm,1.0s					
ZOU				AML	AML	
	comp=E,78μm,0.9s					
FVI	**Forni Avoltri**	**3.60 356**	⇑P	Pn	20 43 18.5 +1.3	
FVI				AML	AML	
	comp=N,75μm,0.7s					
FVI				AML	AML	
	comp=E,63μm,1.2s					
FVI				AML	AML	
	comp=N,75μm,1.3s					
FVI				AML	AML	
	comp=E,63μm,0.8s					
MYKA	**Terra Mystica**	**3.64 6**	Pn	Pn	20 43 19.1 +1.3	
	comp=E,2.4nm,0.2s,SNR=6.5					
OBKA	**Obir**	**3.65 16**	*e*Pn	Pn	20 43 19.1 +1.1	
	comp=E,1.2nm,0.2s					
KOSI	**Kohlern**	**3.67 341**	⇑P	Pn	20 43 20.3 +2.0	
ABTA	**Abfaltersbach**	**3.76 354**	Pn	Pn	20 43 21.3 +1.8	
	comp=E,17nm,0.5s,SNR=8.1					
SOKA	**Soboth**	**3.92 20**	*e*Pn	Pn	20 43 21.8 +0.2	
	comp=E,0.7nm,0.4s					
RISI	**Rein**	**4.01 350**	⇑P	Pn	20 43 25.0 +2.0	
KBA	**Koelnbreinsper**	**4.07 2**	*e*Pn	Pn	20 43 25.3 +1.4	
	comp=E,2.2nm,0.2s					
ROSI	**Rosskopf**	**4.10 343**	⇓P	Pn	20 43 27.1 +2.8	
MUGIO	**Muggio**	**4.12 316**	⇓P	Pn	20 43 25.7 +1.2	
MUGIO				AML	AML	
	comp=N,21μm,1.0s					
MUGIO				AML	AML	
	comp=E,17μm,0.7s					
MUGIO				AML	AML	
	comp=E,17μm,1.3s					
FETA	**Feichten**	**4.35 338**	*e*Pn	Pn	20 43 31.7 +3.9	
	comp=E,0.8nm,0.2s					
FETA			*e*Sn	Sb	20 44 30.0 -0.6	
	comp=E,3.2nm,0.4s					
WTTA	**Wattenberg**	**4.38 347**	Pn	Pn	20 43 31.5 +3.4	
	comp=E,1.4nm,0.2s,SNR=5.7					
SQTA	**Sankt Quirin**	**4.42 343**	Pn	Pn	20 43 31.4 +2.8	
	comp=E,4.5nm,0.4s,SNR=12					
WATA	**Walderalm**	**4.46 346**	Pn	Pn	20 43 32.8 +3.6	
	SNR=7.2					
VSL	**Villasalto**	**4.50 220**	⇑P	Pn	20 43 31.7 +2.2	
ARSA	**Arzberg**	**4.57 21**	*e*Pn	Pn	20 43 31.5 +0.9	
	comp=E,0.9nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.70 4**	Pn	Pn	20 43 34.3 +2.0	
	SNR=12					
RETA	**Reutte**	**4.78 340**	Pn	Pn	20 43 36.6 +3.2	
	SNR=6.3					
DAVA	**Damuels**	**4.85 333**	*e*Pn	Pn	20 43 38.8 +4.3	
MOA	**Molln**	**4.91 9**	Pn	Pn	20 43 36.6 +1.4	
	comp=E,0.3nm,0.1s,SNR=5.8					
MRGE	**Morge**	**5.14 305**	P	Pb	20 43 47.5 -3.9	
CONA	**Conrad Observa**	**5.29 20**	Pn	Pn	20 43 41.7 +1.2	
	comp=E,1.6nm,0.3s,SNR=6.6					
CKRC	**Cesky Krumlov**	**5.87 8**	*e*PN	Pn	20 43 48.4 -0.1	
KHC	**Kasperske Hory**	**6.13 3**	*e*PN	Pn	20 43 52.0 0.0	
KHC			*e*SN	Sn	20 44 59.7 -2.6	
CLL	**Collm**	**8.30 360**	*e*(Sn)	Sn	20 45 50.0 -5.6	
CLL			*e*Sg	Sg	20 46 46.0 -1.5	

VIE 26 20:43:28.2±0.3, 47°.37N×11°.06E, h8km, mb0.3/2, ml0.4/3, Error ellipse: s-maj=9.1km s-min=1.3km az=39.0 7 km N of Telfs, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm**	**0.04**	**132**	*e*Pg	Pg	20 43 30.4	+0.4
MOTA				*e*Sg	Sg	20 43 31.7	+0.4
	2.3nm,0.1s						
SQTA	**Sankt Quirin**	**0.18**	**146**	*e*Pg	Pg	20 43 32.4	+0.4
	2.7nm,0.1s						
SQTA				*i* Sg	Sg	20 43 34.8	+0.2
	2.8nm,0.1s						
RETA	**Reutte**	**0.23**	**300**	*i* Pg	Pg	20 43 33.0	+0.2
	0.2nm,0.1s						

PRU ***26*** *20:48:14.7±0.0, 43°.16N×13°.58E, h1km*

VIE 26 20:48:14.9±2.1, 43°.15N×13°.78E, h10km, mb2.7/7, ml2.5/10, Error ellipse: s-maj=31.5km s-min=16.4km az=99.0 135 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica**	**3.48**	**358**	*e*Pn	Pn	20 49 11.1	+1.9
	1.6nm,0.3s						
MYKA				*e*Sn	Sn	20 49 52.6	+2.2
ABTA	**Abfaltersbach**	**3.70**	**346**	*e*Pn	Pn	20 49 11.0	-1.3
	6.7nm,0.4s						
ABTA				*e*Sn	Sn	20 49 57.5	+1.5
WTTA	**Wattenberg**	**4.38**	**341**	*e*Pn	Pn	20 49 20.2	-1.4
	0.6nm,0.2s						
SQTA	**Sankt Quirin**	**4.45**	**337**	*e*Pn	Pn	20 49 21.6	-1.0
	1.8nm,0.4s						
WATA	**Walderalm**	**4.46**	**340**	*e*Pn	Pn	20 49 22.4	-0.3
	2.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.54**	**359**	*e*Pn	Pn	20 49 24.1	+0.4
	3.0nm,0.4s						
MOTA	**Moosalm**	**4.60**	**337**	*e*Pn	Pn	20 49 25.3	+0.7
	1.5nm,0.5s						
MOA	**Molln**	**4.71**	**4**	*e*Pn	Pn	20 49 26.8	+0.8
	0.5nm,0.2s						
RETA	**Reutte**	**4.83**	**335**	*e*Pn	Pn	20 49 26.6	-1.1
	0.5nm,0.3s						
DAVA	**Damuels**	**4.96**	**328**	*e*Pn	Pn	20 49 32.7	+3.0
	1.8nm,0.4s						
KHC	**Kasperske Hory**	**5.98**	**359**	*e*PN	Pn	20 49 43.6	+0.1
KHC				*e*SN	Sn	20 50 50.2	-1.8

ROM 26 20:49:12.7±0.1, 42°.998N±0°.003×13°.108E±0°.004, h8km, ML2.7/32, 9C-4D, Error ellipse: s-maj=0.3km s-min=0.1km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**230**	P	Pg	20 49 14.8	+0.2
FEMA				S	Sg	20 49 16.1	+0.2
FEMA				AML	AML		
	comp=E,35800μm,0.6s						
FEMA				AML	AML		
	comp=N,30500μm,0.3s						
FEMA				AML	AML		
	comp=N,30450μm,0.3s						
FEMA				AML	AML		
	comp=E,35750μm,0.6s						
FEMA				AML	AML		
	comp=E,35750μm,1.4s						
FEMA				AML	AML		
	comp=N,30500μm,0.3s						
T1216	**Preci, Frazion**	**0.12 212**		P	Pg	20 49 16.1	+0.6
T1216				S	Sg	20 49 18.3	+0.9
T1216				AML	AML		
	comp=N,13350μm,0.4s						
T1216				AML	AML		
	comp=E,13500μm,0.4s						
T1216				AML	AML		
	comp=N,14450μm,0.3s						
T1216				AML	AML		
	comp=N,14800μm,0.3s						
T1216				AML	AML		
	comp=E,13500μm,0.3s						
CESI	**CESI - Serrava**	**0.15 273**		P	Pg	20 49 16.6	+0.6
CESI				S	Sg	20 49 19.3	+1.2
CESI				AML	AML		
	comp=N,18150μm,0.2s						
CESI				AML	AML		
	comp=E,15400μm,0.4s						
AM05	**Amandola Campo**	**0.18 96**		P	Pg	20 49 17.1	+0.7
AM05				S	Sg	20 49 20.6	+1.6
AM05				AML	AML		
	comp=E,1345μm,1.0s						
AM05				AML	AML		
	comp=N,1535μm,0.3s						
AM05				AML	AML		
	comp=E,4990μm,1.4s						
AM05				AML	AML		
	comp=N,327μm,1.0s						
AM05				AML	AML		
	comp=E,4315μm,0.1s						
AM05				AML	AML		
	comp=N,3530μm,1.3s						
AM05				AML	AML		
	comp=E,17150μm,0.7s						
AM05				AML	AML		
	comp=N,1084μm,0.1s						
AM05				AML	AML		
	comp=N,1498μm,0.0s						
AM05				AML	AML		
	comp=E,4328μm,0.0s						
AM05				AML	AML		
	comp=E,1278μm,0.0s						
AM05				AML	AML		
	comp=N,277μm,0.1s						
MMO1	**Montemonaco**	**0.19 121**		P	Pg	20 49 17.2	+0.6
MMO1				S	Sg	20 49 20.6	+1.3
SEF1	**Sefro**	**0.19 322**		P	Pg	20 49 17.0	+0.4
SEF1				S	Sg	20 49 20.5	+1.2
SEF1				AML	AML		
	comp=E,9730μm,0.3s						
SEF1				AML	AML		
	comp=E,9735μm,0.3s						
SEF1				AML	AML		
	comp=N,9450μm,0.3s						
SEF1				AML	AML		
	comp=N,9425μm,0.3s						
SEF1				AML	AML		
	comp=E,9740μm,0.3s						
SEF1				AML	AML		
	comp=N,9425μm,0.3s						
GAG1	**Gagliole**	**0.24 353**		P	Pg	20 49 18.2	+0.7
GAG1				S	Sg	20 49 22.7	+1.9
GAG1				AML	AML		
	comp=E,6310μm,0.4s						
GAG1				AML	AML		
	comp=E,6285μm,0.4s						
GAG1				AML	AML		
	comp=E,6305μm,0.4s						
GAG1				AML	AML		
	comp=N,7675μm,0.5s						
T1215	**Vallo di Nera,**	**0.26 222**		P	Pg	20 49 18.7	+0.7
T1215				S	Sb	20 49 23.5	-1.0
T1215				AML	AML		
	comp=E,1220μm,1.0s						
T1215				AML	AML		
	comp=N,1045μm,1.5s						
T1215				AML	AML		
	comp=E,1860μm,1.0s						
T1215				AML	AML		
	comp=N,2510μm,0.2s						
T1215				AML	AML		
	comp=E,1860μm,1.0s						
T1241	**Roccafluvione,**	**0.28 121**		P	Pg	20 49 18.7	+0.5
T1241				S	Sb	20 49 23.8	-1.1
T1241				AML	AML		
	comp=E,2885μm,0.4s						
T1241				AML	AML		
	comp=N,1375μm,0.6s						
T1241				AML	AML		
	comp=N,1380μm,0.6s						
T1241				AML	AML		
	comp=N,2880μm,0.5s						
T1241				AML	AML		
	comp=N,1408μm,0.0s						
SNTG	**Esanatoglia**	**0.28 335**		P	Pg	20 49 18.8	+0.4
SNTG				S	Sg	20 49 23.4	+1.2
SNTG				AML	AML		
	comp=E,2020μm,0.1s						
SNTG				AML	AML		
	comp=N,1760μm,0.5s						
SNTG				AML	AML		
	comp=E,2020μm,0.1s						
SNTG				AML	AML		
	comp=E,2120μm,0.1s						
SNTG				AML	AML		
	comp=N,1780μm,0.5s						
SNTG				AML	AML		
	comp=N,1760μm,0.5s						
MNTP	**Montappone**	**0.30 62**		P	Pb	20 49 19.8	-0.6
MNTP				S	Sb	20 49 25.1	-0.4
MNTP				AML	AML		
	comp=E,4245μm,0.7s						
MNTP				AML	AML		
	comp=N,2185μm,0.7s						
MNTP				AML	AML		
	comp=E,4350μm,0.6s						
MNTP				AML	AML		
	comp=N,3360μm,0.5s						
MNTP				AML	AML		
	comp=E,4181μm,0.0s						
MNTP				AML	AML		
	comp=N,2379μm,0.0s						
T1217	**Poggiodomo (PG**	**0.31 205**		P	Pg	20 49 19.7	+0.7
T1217				S	Sb	20 49 25.2	-0.8
T1217				AML	AML		
	comp=E,2195μm,0.3s						
T1217				AML	AML		
	comp=N,2860μm,0.8s						
T1217				AML	AML		
	comp=E,2185μm,0.2s						
T1217				AML	AML		
	comp=N,2610μm,0.8s						
EL6	**Elcito**	**0.33 359**		P	Pg	20 49 19.6	+0.3
EL6				S	Sb	20 49 25.2	-1.3
EL6				AML	AML		
	comp=E,3450μm,0.3s						
EL6				AML	AML		
	comp=E,4480μm,0.1s						
EL6				AML	AML		
	comp=N,4275μm,1.6s						
EL6				AML	AML		
	comp=E,3338μm,0.3s						
EL6				AML	AML		
	comp=N,4275μm,0.4s						
T1204	**Amatrice, Fraz**	**0.36 154**		P	Pg	20 49 20.4	+0.6
T1204				S	Sb	20 49 26.6	-0.7
T1204				AML	AML		
	comp=E,2390μm,0.3s						
T1204				AML	AML		
	comp=N,1746μm,0.3s						
T1204				AML	AML		
	comp=E,2389μm,0.3s						
T1204				AML	AML		
	comp=N,1745μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.39 299**		P	Pg	20 49 21.1	+0.8
ATCC				S	Sb	20 49 27.5	-0.6
ATCC				AML	AML		
	comp=E,3300μm,0.1s						
ATCC				AML	AML		
	comp=N,2930μm,0.2s						
ATCC				AML	AML		
	comp=E,6485μm,0.6s						
ATCC				AML	AML		
	comp=N,6690μm,0.3s						
ATCC				AML	AML		
	comp=E,3299μm,0.0s						
ATCC				AML	AML		

comp=N,2893μm,0.2s
T1243 Rocca Santa Ma 0.39 140 P Pg 20 49 20.6 +0.3
T1243 S Sb 20 49 27.7 -0.5
LNSS Leonessa 0.40 187 P Pg 20 49 21.1 +0.6
LNSS S Sb 20 49 27.6 -0.8
LNSS AML AML
comp=E,2415μm,0.7s
LNSS AML AML
comp=N,1920μm,0.2s
LNSS AML AML
comp=N,2260μm,0.2s
SMA1 SAN MARTINO 0.40 155 ⇑P Pg 20 49 21.1 +0.5
SMA1 S Sb 20 49 28.2 -0.3
OFFI Offida 0.43 98 P Pb 20 49 22.4 -0.1
OFFI AML AML
comp=E,1430μm,0.4s
OFFI AML AML
comp=N,1605μm,0.5s
OFFI AML AML
comp=E,1510μm,0.9s
OFFI AML AML
comp=N,1970μm,0.4s
OFFI AML AML
comp=E,1413μm,0.3s
OFFI AML AML
comp=N,1602μm,0.5s
RM33 Pellescritta (0.49 171 ⇑P Pg 20 49 22.8 +0.5
RM33 S Sb 20 49 30.5 -0.7
RM33 AML AML
comp=E,1008μm,0.2s
RM33 AML AML
comp=N,910μm,0.3s
RM33 AML AML
comp=E,980μm,0.2s
RM33 AML AML
comp=N,874μm,0.3s
RM33 AML AML
comp=N,874μm,0.3s
RM33 AML AML
comp=N,910μm,0.3s
RM33 AML AML
comp=E,979μm,0.2s
RM33 AML AML
comp=E,1007μm,0.2s
MURB Monte Urbino 0.50 302 P Pg 20 49 22.6 +0.2
MURB S Sb 20 49 31.3 -0.1
MURB AML AML
comp=N,1985μm,0.3s
MURB AML AML
comp=E,2855μm,1.2s
MURB AML AML
comp=N,2240μm,0.2s
MURB AML AML
comp=N,2870μm,0.2s
MURB AML AML
comp=E,3095μm,0.6s
MURB AML AML
comp=N,2865μm,0.2s
MURB AML AML
comp=E,2475μm,1.2s
MURB AML AML
comp=N,1766μm,0.2s
MURB AML AML
comp=N,2242μm,0.2s
MURB AML AML
comp=N,2242μm,1.8s
MURB AML AML
comp=E,2729μm,0.0s
MURB AML AML
comp=N,1766μm,1.8s
CAMP Campotosto 0.51 154 ⇓P Pg 20 49 22.9 +0.3
CAMP S Sb 20 49 31.0 -0.7
CAMP AML AML
comp=N,649μm,0.4s
CAMP AML AML
comp=E,732μm,0.3s
TERO Teramo 0.52 136 P Pg 20 49 23.0 +0.1
TERO S Sb 20 49 32.0 0.0
TERO AML AML
comp=E,814μm,0.6s
TERO AML AML
comp=E,685μm,0.3s
TERO AML AML
comp=N,1085μm,0.5s
PP3 Marolino 0.53 44 ⇑P Pb 20 49 24.6 +0.3
PP3 S Sb 20 49 31.0 -1.0
PP3 AML AML
comp=E,1330μm,0.3s
PP3 AML AML
comp=N,1345μm,0.5s
PP3 AML AML
comp=N,1374μm,0.5s
PP3 AML AML
comp=E,1385μm,0.3s
ATFO Monte Foce - G 0.54 313 ⇓P Pg 20 49 23.5 +0.3
ATFO S Sb 20 49 32.1 -0.4
ATFO AML AML
comp=N,508μm,0.4s
ATFO AML AML
comp=E,566μm,0.5s
ATFO AML AML
comp=N,508μm,0.4s
ATFO AML AML
comp=N,474μm,1.0s
CESX Cesi 0.55 225 P Pg 20 49 23.5 +0.1
CESX S Sb 20 49 32.3 -0.3
CESX AML AML
comp=E,882μm,0.6s
CESX AML AML
comp=N,916μm,0.4s
CESX AML AML
comp=E,1485μm,0.4s
CESX AML AML
comp=N,1145μm,0.4s
T1247 Pizzolo (AQ) 0.57 166 P Pg 20 49 24.1 +0.3
T1247 S Sb 20 49 33.0 -0.4
T1247 AML AML
comp=N,750μm,0.4s
T1247 AML AML
comp=E,817μm,0.5s
T1247 AML AML
comp=N,777μm,0.4s
T1247 AML AML
comp=N,691μm,0.2s
T1247 AML AML
comp=N,691μm,1.8s
ATTE AVT- Monte Tez 0.59 290 ⇑P Pn 20 49 27.6 +0.1
FRON Frontone 0.59 332 P Pg 20 49 24.1 0.0
FRON S Sb 20 49 33.8 -0.1
FRON AML AML
comp=N,806μm,0.8s
FRON AML AML
comp=N,872μm,0.6s
FRON AML AML
comp=E,820μm,0.1s
FRON AML AML
comp=N,768μm,0.2s
FRON AML AML
comp=E,816μm,0.1s
TRTR Tortoreto Alta 0.62 107 ⇑P Pb 20 49 26.4 +0.6
ATVO AVT- Monte Val 0.64 307 ⇓P Pg 20 49 25.2 +0.1
ATVO S Sb 20 49 35.3 -0.1
ATVO AML AML
comp=E,426μm,1.6s
ATVO AML AML
comp=N,307μm,1.4s
ATVO AML AML
comp=N,334μm,0.4s
ATVO AML AML
comp=N,294μm,0.3s
ATVO AML AML
comp=E,426μm,0.4s
GIGS Gran Sasso 0.64 148 P Pg 20 49 25.4 +0.3
GIGS S Sb 20 49 35.5 +0.1
GIGS AML AML
comp=N,128μm,0.8s
GIGS AML AML
comp=N,183μm,0.3s
GIGS AML AML
comp=N,126μm,0.7s
GIGS AML AML
comp=E,226μm,0.6s
AOI Ancona 0.66 33 S Sn 20 49 38.0 -1.1
MPAG Monte Paganucc 0.68 338 P Pg 20 49 26.4 +0.5
MPAG AML AML
comp=E,998μm,0.7s
MPAG AML AML
comp=E,994μm,0.7s
MPAG AML AML
comp=N,648μm,0.5s
MPAG AML AML
comp=N,647μm,0.5s
MPAG AML AML
comp=E,994μm,0.7s
MPAG AML AML
comp=E,994μm,1.3s
MPAG AML AML
comp=N,647μm,1.5s
PIEI Pieia 0.68 322 P Pg 20 49 26.0 +0.1
PIEI S Sb 20 49 36.7 +0.1
PIEI AML AML
comp=E,685μm,0.3s
PIEI AML AML
comp=N,488μm,0.7s
PIEI AML AML
comp=E,684μm,0.3s
ATPI Pietralunga - 0.69 312 P Pg 20 49 26.3 +0.3
ATPI S Sb 20 49 37.1 +0.4
ATPI AML AML
comp=E,372μm,0.4s
ATPI AML AML
comp=E,401μm,0.5s
ATPI AML AML
comp=N,296μm,0.3s
ATPI AML AML
comp=E,372μm,0.4s
NARO Abbazia di Nar 0.72 328 ⇑P Pg 20 49 26.6 -0.1
NARO S Sb 20 49 39.0 +1.3
NARO AML AML
comp=E,282μm,1.0s
NARO AML AML
comp=N,224μm,0.8s
NARO AML AML
comp=E,282μm,1.0s
NARO AML AML
comp=E,282μm,1.0s
FIAM Fiamignano 0.73 179 S Sb 20 49 39.0 +1.1
FSSB Fossombrone 0.73 341 P Pg 20 49 27.3 +0.4
FSSB AML AML
comp=N,1415μm,1.5s
FSSB AML AML
comp=E,1635μm,0.3s
FSSB AML AML
comp=N,1415μm,0.5s
MGAB Montegabbione 0.74 264 ⇑P Pn 20 49 30.2 +0.7
APEC Apecchio 0.75 318 S Sn 20 49 41.0 -0.4
VCEL Villa Celiera 0.81 138 P Pg 20 49 28.5 +0.2
BADI Badiali 0.81 309 P Pg 20 49 28.5 +0.2
SACS San Casciano d 0.89 261 ⇓P Pb 20 49 30.9 +0.4
SACS AML AML
comp=E,190μm,0.4s
SACS AML AML
comp=N,240μm,0.6s
CAFI Castiglion Fio 0.90 292 P Pb 20 49 30.5 -0.1
CAFI AML AML
comp=E,213μm,1.2s
CAFI AML AML
comp=N,216μm,0.6s
CAFI AML AML
comp=E,213μm,0.8s
CAFI AML AML
comp=N,216μm,1.4s
T0110 Collepietro 0.92 147 P Pg 20 49 29.8 -0.5
LATE Laterza 1.03 249 ⇑P Pb 20 49 33.1 +0.2
RUFI Rufina 1.44 306 ⇑P Pg 20 49 40.4 +0.2

IDC 26 21:08:25.9±2.5, 2°.93N×128°.23E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=166.5km s-min=29.0km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.51**	**165**	P	P	21 13 36.9	-0.8
	0.5nm,0.7s,baz=344,slow=10.0,SNR=5.8 0.5nm,0.7s						
ASAR	**Alice Springs**	**27.01**	**168**	P	P	21 14 10.0	+0.3
	0.2nm,0.5s,baz=359,slow=8.7,SNR=1.8 0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.06**	**325**	P	P	21 18 28.3	+0.4
	0.2nm,0.5s,baz=129,slow=6.6,SNR=1.7 0.2nm,0.5s						

*BGR **26** 21:24:49.7±0.9, 42°.46N×13°.41E, h10km, ML3.9/8, Error ellipse: s-maj=21.1km s-min=12.2km az=115.0*
*PRU **26** 21:24:50.9±0.0, 42°.87N×13°.22E, h0km, M4.1*
*STR **26** 21:24:50.6±3.3, 43°N±14°×1°3E±2°6, h10km, MLv3.8/33, Error ellipse: s-maj=0.0km s-min=0.0km az=116.5, preliminary*
*MOS **26** 21:24:51.4±0.9, 42°.93N×13°.11E, h11km, mb4.3/9, Error ellipse: s-maj=6.7km s-min=4.1km az=89.4*
*IDC **26** 21:24:51.8±0.9, 43°.03N×13°.00E, h0km, mb3.7/8, mbtmp3.7/15, ML3.6/7, MS3.5/2, Error ellipse: s-maj=17.6km s-min=11.1km az=92.0*
*ROM **26** 21:24:51.7±0.0, 42°.871N±0°.001×13°.074E±0°.003, h10km, ML3.7/129, Error ellipse: s-maj=0.2km s-min=0.0km az=254.0*
*LDG **26** 21:24:52.7±0.1, 42°.77N×12°.99E, h10km, Ml3.6/23, Error ellipse: s-maj=4.7km s-min=2.6km az=41.0*
*NEIC **26** 21:24:52.8±1.8, 42°.87N±0°.04×13°.02E±0°.06, h10km±1km, Error ellipse: s-maj=7.4km s-min=5.9km az=69.0*
*PDG **26** 21:24:52.4±0.7, 42°.89N×13°.10E, h10km, ML3.9/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **26** 21:24:56.7±0.7, 42°.96N×13°.41E, h10km, ML3.9/13*

ISC 26 21:24:52.5±0.6, 42°.87N±0°.01×13°.06E±0°.01, h11km±3km, n543, σ1°.79/631, mb4.0/15, 62C-19D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**306**	P	**Pg**	**21 24 54.0**	**-0.8**
T1216				S	**Sg**	**21 24 55.1**	**-1.2**
T1245	**Castelsantange**	**0.09**	**96**	⇓P	**Pg**	**21 24 54.5**	**-0.8**
T1245				S	**Sg**	**21 24 56.2**	**-1.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.10**	**354**	⇓P	**Pg**	**21 24 54.6**	**-0.8**
FEMA				S	**Sg**	**21 24 56.3**	**-1.2**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**64**	P	**Pg**	**21 24 54.8**	**-0.8**
MC2				S	**Sg**	**21 24 56.7**	**-1.0**
T1212	**Cascia, Frazio**	**0.12**	**187**	⇑P	**Pg**	**21 24 55.3**	**-0.2**
T1212				S	**Sg**	**21 24 57.6**	**-0.1**
T1214	**Arquata del Tr**	**0.15**	**135**	⇑P	**Pg**	**21 24 55.7**	**-0.4**
T1214				S	**Sg**	**21 24 58.5**	**-0.2**
T1215	**Vallo di Nera,**	**0.16**	**246**	⇑P	**Pg**	**21 24 56.0**	**-0.1**
T1215				S	**Sg**	**21 24 58.9**	**+0.2**
T1215				AML	AML		
	comp=N,44650μm,0.5s						
T1215				AML	AML		
	comp=E,77800μm,0.4s						
T1215				AML	AML		
	comp=E,75600μm,0.4s						
T1215				AML	AML		
	comp=E,77800μm,0.4s						
T1215				AML	AML		
	comp=N,41600μm,0.3s						
T1215				AML	AML		
	comp=E,75600μm,0.4s						
T1215				AML	AML		
	comp=N,44700μm,0.5s						
T1215				AML	AML		
	comp=E,77750μm,0.4s						
T1215				AML	AML		
	comp=N,41650μm,0.3s						
FDMO	**Fiordimonte**	**0.17**	**6**	P	**Pg**	**21 24 55.8**	**-0.6**
FDMO				S	**Sg**	**21 24 58.6**	**-0.4**
CESI	**CESI - Serrava**	**0.18**	**320**	⇑P	**Pg**	**21 24 56.2**	**-0.3**
CESI				S	**Sg**	**21 24 59.5**	**+0.1**
CESI				AML	AML		
	comp=E,57050μm,0.6s						
CESI				AML	AML		
T1217	**Poggiodomo (PG**	**0.18**	**212**	⇑P	**Pg**	**21 24 56.5**	**-0.1**
T1217				S	**Sg**	**21 24 59.9**	**+0.5**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
MMO1	**Montemonaco**	**0.20**	**80**	⇑P	**Pg**	**21 24 56.2**	**-0.6**
MMO1				S	**Sg**	**21 24 59.4**	**-0.4**
T1218	**Civita (PG)**	**0.20**	**169**	⇑P	**Pg**	**21 24 56.6**	**-0.2**
T1218				S	**Sg**	**21 25 00.2**	**+0.3**
T1244	**Arquata del Tr**	**0.20**	**122**	⇑P	**Pg**	**21 24 56.6**	**-0.3**
T1244				S	**Sg**	**21 25 00.2**	**+0.3**
AM05	**Amandola Campo**	**0.24**	**62**	⇑P	**Pg**	**21 24 57.1**	**-0.5**
AM05				S	**Sg**	**21 25 00.8**	**-0.1**
AM05				AML	AML		
AM05				AML	AML		
	comp=N,10270μm,0.3s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,10265μm,0.3s						
AM05				AML	AML		
	comp=E,20350μm,0.3s						
AM05				AML	AML		
	comp=N,28100μm,0.3s						
AM05				AML	AML		
	comp=N,10275μm,0.3s						
T1201	**Domo (RI)**	**0.25**	**147**	⇓P	**Pg**	**21 24 57.8**	**0.0**
T1201				S	**Sg**	**21 25 02.1**	**+0.8**
LNSS	**Leonessa**	**0.26**	**184**	⇑P	**Pg**	**21 24 57.8**	**-0.2**
LNSS				S	**Sb**	**21 25 02.4**	**-1.5**
LNSS				AML	AML		
LNSS				AML	AML		
T1204	**Amatrice, Fraz**	**0.27**	**136**	⇑P	**Pg**	**21 24 57.8**	**-0.3**
T1204				S	**Sg**	**21 25 02.2**	**+0.4**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
	comp=N,58500μm,0.6s						
T1204				AML	AML		
	comp=N,58550μm,0.6s						
T1204				AML	AML		
T1241	**Roccafluvione,**	**0.27**	**92**	AML	AML		
	comp=N,60750μm,0.4s						
T1241				AML	AML		
GUMA	**Gualdo di Mace**	**0.28**	**45**	⇑P	**Pb**	**21 24 58.0**	**-1.6**
GUMA				S	**Sb**	**21 25 02.7**	**-1.6**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SEF1	**Sefro**	**0.29**	**343**	P	**Pg**	**21 24 58.1**	**-0.4**
SEF1				AML	AML		
	comp=E,34550μm,0.6s						
SEF1				AML	AML		
	comp=E,34600μm,0.6s						
SEF1				AML	AML		
	comp=N,35800μm,0.3s						
SMA1	**SAN MARTINO**	**0.31**	**140**	⇑P	**Pg**	**21 24 58.4**	**-0.4**
SMA1				S	**Sb**	**21 25 03.4**	**-1.8**
SMA1				AML	AML		
	comp=E,61950μm,0.6s						
SMA1				AML	AML		
	comp=N,77550μm,0.3s						
PIO1	**Pioraco**	**0.32**	**349**	P	**Pg**	**21 24 58.4**	**-0.6**
PIO1				AML	AML		
	comp=N,26050μm,0.7s						
PIO1				AML	AML		
	comp=E,18650μm,0.5s						
T1243	**Rocca Santa Ma**	**0.33**	**121**	⇑P	**Pg**	**21 24 58.6**	**-0.6**
T1243				S	**Sb**	**21 25 03.7**	**-2.1**
MDAR	**Monte D'Aria**	**0.33**	**10**	P	**Pg**	**21 24 58.6**	**-0.7**
MDAR				S	**Sg**	**21 25 03.7**	**0.0**
MDAR				AML	AML		
	comp=E,31400μm,0.4s						
MDAR				AML	AML		
	comp=N,23200μm,0.5s						
FIU1	**Fiuminata**	**0.34**	**343**	P	**Pg**	**21 24 58.8**	**-0.5**
FIU1				S	**Sg**	**21 25 04.1**	**+0.3**
FIU1				AML	AML		
	comp=E,13350μm,1.6s						
FIU1				AML	AML		
	comp=N,10970μm,0.5s						
ARRO	**Arrone**	**0.36**	**218**	⇑P	**Pg**	**21 24 59.6**	**-0.1**
ARRO				S	**Sb**	**21 25 05.6**	**-1.0**
T1211	**Morro Reatino**	**0.37**	**205**	⇑P	**Pg**	**21 24 59.7**	**-0.2**
T1211				S	**Sb**	**21 25 05.7**	**-1.2**
T1211				AML	AML		
	comp=E,34150μm,0.3s						
T1211				AML	AML		
	comp=N,60550μm,0.3s						
T1211				AML	AML		
	comp=N,59800μm,0.3s						
T1211				AML	AML		
	comp=E,34200μm,0.3s						
T1211				AML	AML		
	comp=N,60550μm,0.3s						
T1211				AML	AML		
	comp=E,34950μm,1.0s						
T1211				AML	AML		
	comp=N,59800μm,0.3s						
GAG1	**Gagliole**	**0.37**	**0**	P	**Pg**	**21 24 59.6**	**-0.4**
GAG1				S	**Sb**	**21 25 05.6**	**-1.4**
GAG1				AML	AML		
	comp=E,44200μm,0.5s						
GAG1				AML	AML		
	comp=N,39350μm,0.5s						
SSM1	**San Severino M**	**0.37**	**13**	⇑P	**Pg**	**21 24 59.3**	**-0.7**
RM33	**Pellescritta (**	**0.37**	**163**	⇓P	**Pg**	**21 24 59.6**	**-0.4**
RM33				S	**Sb**	**21 25 05.6**	**-1.5**
RM33				AML	AML		
	comp=N,30100μm,0.2s						
RM33				AML	AML		
	comp=E,29250μm,0.2s						
RM33				AML	AML		
	comp=N,30150μm,0.2s						
RM33				AML	AML		
	comp=N,29350μm,0.2s						
RM33				AML	AML		
	comp=E,28800μm,0.2s						
MTL1	**Matelica**	**0.39**	**354**	P	**Pg**	**21 24 60.0**	**-0.4**
MTL1				S	**Sb**	**21 25 06.3**	**-1.3**
SNTG	**Esanatoglia**	**0.40**	**347**	P	**Pg**	**21 24 59.9**	**-0.6**
SNTG				S	**Sb**	**21 25 06.2**	**-1.6**
SNTG				AML	AML		
	comp=E,10720μm,0.5s						
SNTG				AML	AML		
	comp=N,7720μm,0.5s						
SNTG				AML	AML		
	comp=E,10900μm,0.5s						
SNTG				AML	AML		
	comp=N,8135μm,0.5s						
MNTP	**Montappone**	**0.40**	**48**	⇑P	**Pb**	**21 25 00.5**	**-1.2**
CAMP	**Campotosto**	**0.42**	**142**		**Pg**	**21 25 00.2**	**-0.6**
CAMP				Sg	**Sb**	**21 25 06.7**	**-1.7**
CAMP	**Campotosto**	**0.42**	**142**	⇑P	**Pg**	**21 25 00.2**	**-0.6**
CAMP				S	**Sb**	**21 25 06.7**	**-1.7**
CAMP				AML	AML		
	comp=N,17045μm,0.4s						
CAMP				AML	AML		
	comp=E,12300μm,0.6s						
T1246	**Crognaleto (TE**	**0.42**	**132**	⇑P	**Pg**	**21 25 00.3**	**-0.7**
T1246				S	**Sb**	**21 25 06.8**	**-1.8**
CESX	**Cesi**	**0.44**	**234**		**Pg**	**21 25 00.7**	**-0.4**
CESX				Sg	**Sg**	**21 25 07.6**	**+0.5**
CESX	**Cesi**	**0.44**	**234**	⇑P	**Pg**	**21 25 00.8**	**-0.4**
CESX				AML	AML		
	comp=E,22050μm,0.7s						
CESX				AML	AML		
	comp=N,31100μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.45**	**316**	P	**Pg**	**21 25 00.8**	**-0.5**
ATCC				AML	AML		
	comp=E,17500μm,0.8s						
ATCC				AML	AML		
	comp=N,15300μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.46**	**158**	⇓P	**Pg**	**21 25 01.0**	**-0.6**
T1247				S	**Sb**	**21 25 08.5**	**-1.0**
T1247				AML	AML		

comp=E,31200µm,1.5s
T1247 AML AML
comp=N,28800µm,0.2s
OFFI Offida 0.46 81 Pg 21 24 59.3 -2.3
OFFI Offida 0.46 81 ⇑P Pb 21 25 01.8 -0.9
OFFI AML AML
comp=N,41300µm,0.6s
OFFI AML AML
comp=E,32400µm,0.5s
EL6 Elcito 0.46 3 ⇑P Pg 21 25 01.0 -0.7
TERO Teramo 0.47 121 ⇑P Pg 21 25 00.9 -0.8
TERO S Sb 21 25 08.1 -1.5
TERO AML AML
comp=N,54500µm,0.3s
TERO AML AML
comp=N,54550µm,0.3s
TERO AML AML
comp=E,51450µm,0.3s
TERO AML AML
comp=E,48250µm,0.3s
TERO AML AML
comp=N,58900µm,0.3s
TRE1 Treia 0.48 22 P Pb 21 25 01.6 -1.4
TRE1 AML AML
comp=E,42150µm,1.4s
TRE1 AML AML
comp=N,37650µm,0.4s
GIGS Gran Sasso 0.56 138 P Pg 21 25 02.4 -1.0
GIGS S Sb 21 25 10.7 -1.7
GIGS AML AML
comp=E,4550µm,0.3s
GIGS AML AML
comp=N,5390µm,0.4s
MURB Monte Urbino 0.56 315 Pg 21 25 02.9 -0.6
MURB Monte Urbino 0.56 315 ⇓P Pg 21 25 03.1 -0.4
MURB AML AML
comp=E,18350µm,0.3s
MURB AML AML
comp=E,20450µm,0.3s
MURB AML AML
comp=N,23250µm,0.4s
MURB AML AML
comp=N,23350µm,0.4s
AQU L'Aquila 0.57 154 Pg 21 25 02.7 -1.0
AQU Sg Sb 21 25 11.6 -1.1
AQU L'Aquila 0.57 154 P Pg 21 25 02.0 -1.6
AQU S Sb 21 25 12.4 -0.3
AQU L'Aquila 0.57 154 ⇓P Pg 21 25 03.0 -0.7
AQU S Sb 21 25 11.6 -1.1
AQU AML AML
comp=E,8830µm,0.4s
AQU AML AML
comp=N,10585µm,1.6s
AQU AML AML
comp=E,9180µm,0.4s
AQU AML AML
comp=N,11180µm,1.6s
MMUR Monte Murano 0.58 355 P Pg 21 25 03.1 -0.7
MMUR AML AML
comp=N,10060µm,1.1s
MMUR AML AML
comp=E,15650µm,0.9s
FIAM Fiamignano 0.60 176 P Pg 21 25 03.5 -0.7
FIAM AML AML
comp=E,12100µm,0.6s
FIAM AML AML
comp=N,10880µm,0.8s
CADA Capodarco di F 0.61 57 P Pb 21 25 04.9 -0.2
ATFO Monte Foce - G 0.62 324 Pb 21 25 04.6 -0.8
ATFO Monte Foce - G 0.62 324 P Pg 21 25 04.0 -0.5
ATFO AML AML
comp=N,6060µm,1.1s
ATFO AML AML
comp=E,5925µm,0.4s
ATTE AVT- Monte Tez 0.62 303 P Pg 21 25 03.8 -0.8
ATTE AML AML
comp=E,5620µm,0.5s
ATTE AML AML
comp=N,5050µm,1.5s
CIMA Civitanova Mar 0.62 45 P Pb 21 25 04.7 -0.7
TRTR Tortoreto Alta 0.63 95 ⇑P Pb 21 25 05.1 -0.4
TRTR AML AML
comp=E,33850µm,0.7s
TRTR AML AML
comp=N,56150µm,0.3s
ARVD Arcevia 0.64 352 P Pg 21 25 04.1 -0.9
ARVD AML AML
comp=N,3550µm,0.7s
ARVD AML AML
comp=E,4045µm,0.8s
PP3 Marolino 0.65 38 ⇑P Pb 21 25 05.1 -0.7
PP3 AML AML
comp=E,19550µm,0.4s
PP3 AML AML
comp=N,21300µm,0.4s
PP3 AML AML
comp=N,20550µm,0.4s
PP3 AML AML
comp=E,20000µm,0.4s
ATLO AVT- Montelove 0.66 313 P Pg 21 25 04.5 -0.8
FRON Frontone 0.70 339 P Pg 21 25 05.4 -0.7
FRON AML AML
comp=E,3600µm,1.0s
FRON AML AML
comp=N,6490µm,0.5s
ATVA AVT- Monte Val 0.70 306 P Pg 21 25 05.3 -0.9
ATVO AVT- Monte Val 0.70 317 Pg 21 25 05.3 -0.9
ATVO AVT- Monte Val 0.70 317 P Pg 21 25 05.3 -0.9
ATVO AML AML
comp=N,4080µm,0.4s
ATVO AML AML
comp=E,4300µm,0.6s
FAGN Fagnano 0.71 147 P Pg 21 25 05.3 -1.1
FAGN AML AML
comp=E,17350µm,0.3s
FAGN AML AML
comp=N,19450µm,1.5s
ATBU Serra di Buran 0.72 328 P Pg 21 25 06.0 -0.4
VCEL Villa Celiera 0.74 129 P Pg 21 25 06.0 -0.9
VCEL AML AML
comp=E,19100µm,1.4s
VCEL AML AML
comp=N,18550µm,0.4s
VCEL AML AML
comp=E,19150µm,1.4s
ATMI Monte Miggiano 0.75 309 P Pg 21 25 06.7 -0.3
ATMI AML AML
comp=E,11350µm,0.7s
ATMI AML AML
comp=N,13150µm,1.5s
SRES S.Oreste - Sor 0.75 213 P Pg 21 25 06.2 -0.8
SRES AML AML
comp=E,7910µm,1.0s
SRES AML AML
comp=N,6825µm,1.5s
ATPC Poggio Castell 0.76 324 P Pg 21 25 06.3 -0.9
ATPI Pietralunga - 0.76 321 P Pg 21 25 06.3 -0.9
ATPI AML AML
comp=E,5165µm,0.5s
ATPI AML AML
comp=N,4090µm,0.5s
PIEI Pieia 0.77 330 P Pg 21 25 06.9 -0.6
PIEI AML AML
comp=N,2940µm,0.4s
PIEI AML AML
comp=E,3485µm,0.8s
AOI Ancona 0.79 30 Pb 21 25 07.0 -1.3
AOI Ancona 0.79 30 ⇑P Pb 21 25 07.0 -1.3
AOI AML AML
comp=E,6880µm,0.4s
AOI AML AML
comp=N,6375µm,0.4s
MPAG Monte Paganucc 0.79 344 P Pg 21 25 07.2 -0.7
MPAG AML AML
comp=E,3725µm,0.4s
MPAG AML AML
comp=N,4425µm,0.6s
MPAG AML AML
comp=E,4030µm,0.7s
MPAG AML AML
comp=N,4435µm,0.6s
MPAG AML AML
comp=N,4430µm,0.6s
PCRO Pietralacroce 0.82 25 P Pb 21 25 07.9 -0.8
NARO Abbazia di Nar 0.82 335 P Pg 21 25 07.6 -0.9
NARO AML AML
comp=N,2745µm,0.9s
NARO AML AML
comp=E,2160µm,0.8s
T0110 Collepietro 0.83 140 ⇓P Pg 21 25 07.3 -1.2
T0110 AML AML
comp=N,22150µm,0.4s
T0110 AML AML
comp=E,16100µm,0.4s
SENI Senigallia 0.85 8 P Pg 21 25 07.9 -1.0
FSSB Fossombrone 0.85 346 Pg 21 25 08.5 -0.5
FSSB Fossombrone 0.85 346 P Pg 21 25 08.1 -0.9
FSSB AML AML
comp=N,11450µm,0.3s
FSSB AML AML
comp=E,11000µm,0.5s
MTCE Montecelio 0.88 196 P Pg 21 25 08.3 -1.1
MTCE AML AML
comp=E,6425µm,0.7s
MTCE AML AML
comp=E,6430µm,0.7s
MTCE AML AML
comp=N,4625µm,0.7s
BADI Badiali 0.88 317 AML AML
comp=N,2480µm,0.4s
BADI AML AML
comp=E,138µm,0.9s
PTQR Pietraquaria 0.88 163 P Pg 21 25 08.1 -1.4
PTQR AML AML
comp=N,4385µm,0.7s
PTQR AML AML
comp=E,4330µm,0.5s
CERT Cerreto 0.92 184 ⇑P Pg 21 25 08.9 -1.3
CERT AML AML
comp=E,8820µm,0.4s
CERT AML AML
comp=N,6760µm,1.2s
PE3 Peglio 0.93 334 P Pg 21 25 09.9 -0.5
PE3 AML AML
comp=E,25µm,0.4s
PE3 AML AML
comp=N,26µm,0.4s
CAFI Castiglion Fio 0.93 300 ⇑P Pg 21 25 09.6 -0.9
CAFI AML AML
comp=E,3845µm,0.5s
CAFI AML AML
comp=N,3365µm,1.4s
CAFI AML AML
comp=E,3880µm,0.5s
CAFI AML AML
comp=N,3605µm,1.4s
LATE Laterza 0.96 255 Pg Pg 21 25 10.2 -0.9
LATE Laterza 0.96 255 P Pg 21 25 10.2 -0.9
SSP9 Sansepolcro 0.98 316 P Pg 21 25 10.5 -0.9
SSP9 AML AML
comp=N,2760µm,1.3s
SSP9 AML AML
comp=E,2355µm,1.6s
SF11 Podere del Sol 1.02 271 P Pg 21 25 11.2 -0.9
RCAV Rocca di Cave 1.02 185 P Pg 21 25 10.5 -1.7
RCAV AML AML
comp=E,6945µm,0.6s
RCAV AML AML
comp=N,6825µm,0.5s
MCIV Monte Civitell 1.02 266 P Pg 21 25 11.0 -1.3
MCIV AML AML
comp=N,1790µm,0.9s
MCIV AML AML
comp=E,2570µm,0.8s
SF04 Casetta 1.03 269 AML AML
comp=N,2677µm,1.5s
SF04 AML AML
comp=E,3865µm,0.4s
INTR Introdacqua 1.06 144 Pg 21 25 11.0 -1.9
INTR Introdacqua 1.06 144 P Pg 21 25 10.9 -2.0
INTR AML AML
comp=E,6µm,0.7s
INTR AML AML
comp=N,10µm,0.5s
INTR AML AML
comp=E,6290µm,0.7s
INTR AML AML
comp=N,14650µm,0.5s
SF13 Bagnolo 1.06 268 P Pg 21 25 11.4 -1.6
SF14 Selvena 1.07 265 P Pb 21 25 11.2 -1.9
VVLD Villa Vallelon 1.08 157 P Pg 21 25 11.9 -1.3
VVLD AML AML
comp=E,5320µm,0.5s
VVLD AML AML
comp=N,3860µm,0.5s
CPGN Carpegna, Ital 1.08 330 P Pb 21 25 12.8 -0.5
CPGN AML AML
comp=E,4660µm,0.8s
CPGN AML AML
comp=N,4155µm,0.8s
CPGN AML AML
comp=E,4910µm,0.9s
CPGN AML AML
comp=N,4930µm,0.6s
GUAR Guarcino 1.09 170 P Pg 21 25 12.7 -0.8
GUAR AML AML
comp=E,5335µm,0.8s
GUAR AML AML
comp=N,5850µm,0.9s
RMP Rome, Mte Porz 1.09 194 Pb 21 25 12.2 -1.2
RMP Rome, Mte Porz 1.09 194 P Pb 21 25 12.2 -1.2
RMP Rome, Mte Porz 1.09 194 P Pb 21 25 12.1 -1.2
RMP AML AML
comp=E,6850µm,0.8s
RMP AML AML
comp=N,10305µm,0.8s
CRE Caprese Michel 1.11 313 P Pb 21 25 11.7 -2.1
TOLF Tolfa 1.12 225 P Pb 21 25 13.0 -1.0
TOLF AML AML
comp=E,2435µm,1.6s
TOLF AML AML
comp=N,3020µm,0.9s
MA9 Marino 1.14 195 P Pb 21 25 13.4 -0.7
RDP Rocca di Papa 1.14 193 Pn 21 25 14.6 +0.2
RDP Rocca di Papa 1.14 193 P Pn 21 25 14.6 +0.2
RDP Rocca di Papa 1.14 193 P Pb 21 25 13.1 -1.1
RDP AML AML
comp=E,11145µm,0.5s
RDP AML AML
comp=N,16250µm,0.5s
VIVA Pratoni del Vi 1.14 191 P Pb 21 25 13.1 -1.1
VIVA AML AML
comp=N,18050µm,0.4s
VIVA AML AML
comp=E,10500µm,1.5s
SAMA S.Maria delle 1.14 198 P Pb 21 25 12.9 -1.4
CAFR Castel Frentan 1.14 124 P Pb 21 25 12.7 -1.5
LPEL Lama dei Pelig 1.17 134 P Pb 21 25 12.7 -2.0
LPEL AML AML
comp=E,5770µm,0.7s
LPEL AML AML
comp=N,5690µm,1.3s
ARCI Arcidosso 1.17 270 P Pb 21 25 14.3 -0.5
LAV9 Lanuvio 1.22 193 P Pn 21 25 13.4 -2.1
POFI Posta Fibreno 1.25 157 P Pg 21 25 15.7 -0.8
POFI AML AML
comp=N,2190µm,1.3s
POFI AML AML
comp=N,2085µm,0.5s
POFI AML AML
comp=E,2725µm,0.6s
POFI AML AML
comp=E,3005µm,1.2s
LRP Arpino 1.28 162 P Pg 21 25 16.5 -0.6
LRP AML AML
comp=E,2290µm,0.4s
LRP AML AML
comp=E,2295µm,0.4s
LRP AML AML
comp=N,2415µm,0.8s
ASQU Asqua 1.31 315 P Pn 21 25 16.4 -0.5
GIUL Giuliano Di Ro 1.31 174 P Pn 21 25 15.9 -1.0
GIUL AML AML
comp=N,2915µm,0.7s
GIUL AML AML
comp=E,2210µm,0.6s
SFI Santa Sofia 1.37 320 P Pn 21 25 17.3 -0.2
SFI AML AML
comp=E,1088µm,0.8s
SFI AML AML
comp=E,1114µm,0.8s
SFI AML AML
comp=N,959µm,0.9s
SFI AML AML
comp=N,1026µm,0.9s
LATB Latina 1.37 183 P Pn 21 25 16.1 -1.5
LATB AML AML
comp=N,1022µm,1.1s
LATB AML AML
comp=E,1070µm,0.8s
RNI2 Rionero Sannit 1.42 145 P Pg 21 25 18.7 -1.0
CSNT Castellina Chi 1.43 296 P Pn 21 25 18.0 -0.4
CSNT AML AML
comp=E,588µm,0.4s
CSNT AML AML
comp=N,630µm,0.8s
FROS Frosini 1.44 284 P Pn 21 25 17.5 -1.1
CERA Filignano 1.45 150 P Pn 21 25 18.2 -0.6
CERA AML AML
comp=N,2840µm,0.5s
CERA AML AML
comp=N,2925µm,0.5s
CERA AML AML
comp=E,2960µm,1.5s
CERA AML AML
comp=E,2875µm,1.5s
OSSC Osservatorio P 1.48 297 Pn 21 25 18.9 -0.2
OSSC Osservatorio P 1.48 297 P Pn 21 25 18.8 -0.4
OSSC AML AML
comp=E,760µm,1.2s
OSSC AML AML
comp=N,746µm,1.4s
FRES Fresagrandinar 1.49 126 Pg 21 25 20.9 -0.2
FRES Fresagrandinar 1.49 126 P Pb 21 25 19.2 -0.9
FRES AML AML
comp=E,2165µm,0.9s
FRES AML AML
comp=N,1460µm,0.9s
MAON Monte Argentar 1.49 254 Pn 21 25 18.8 -0.4
MAON Monte Argentar 1.49 254 P Pn 21 25 18.7 -0.6
MAON AML AML
comp=E,574µm,1.4s
MAON AML AML
comp=N,502µm,1.1s
RUFI Rufina 1.49 311 P Pn 21 25 19.2 -0.1
TRIV Trivento 1.56 134 P Pg 21 25 21.1 -1.3
TRIV AML AML
comp=E,3370µm,0.7s
TRIV AML AML
comp=N,2610µm,1.6s
LMD Lutirano 1.56 321 AML AML
comp=N,835µm,1.4s
LMD AML AML
comp=E,812µm,0.8s
CASP Castiglione de 1.62 268 Pn Pn 21 25 20.4 -0.6
CASP Castiglione de 1.62 268 ⇑P Pn 21 25 20.6 -0.4
CASP AML AML
comp=E,328µm,0.4s
CASP AML AML
comp=N,353µm,0.6s
VAGA Valle Agricola 1.69 149 P Pb 21 25 23.3 -0.4
VAGA AML AML
comp=N,1315µm,0.9s
VAGA AML AML
comp=N,1280µm,0.9s
VAGA AML AML
comp=E,1044µm,1.6s
VAGA AML AML
comp=E,998µm,1.6s
BSSO Busso 1.74 139 P Pb 21 25 23.9 -0.6
BSSO AML AML
comp=N,439µm,1.6s
BSSO AML AML
comp=E,637µm,0.8s
MPPT Montemurlo 1.81 308 P Pn 21 25 23.4 -0.3
MODR Mondragone 1.82 160 P Pb 21 25 24.1 -1.7
MODR AML AML
comp=N,666µm,1.2s
MODR AML AML
comp=E,566µm,1.5s
CIGN Sant'Elia a Pi 1.83 131 P Pn 21 25 23.7 -0.2
CIGN AML AML
comp=E,1195µm,1.3s
CIGN AML AML
comp=N,878µm,0.8s
PIGN Pignataro Magg 1.86 153 P Pb 21 25 25.0 -1.5
PIGN AML AML
comp=N,506µm,0.7s
PIGN AML AML
comp=E,699µm,0.7s
PIGN AML AML
comp=N,644µm,1.6s
PIGN AML AML
comp=E,658µm,0.9s
MTCR Monte La Croce 1.90 308 P Pn 21 25 24.5 -0.5
MTCR AML AML
comp=E,592µm,0.6s
MTCR AML AML
comp=N,725µm,0.6s
MELA Melanico ??? S 1.92 126 P Pn 21 25 25.3 +0.2
MELA AML AML
comp=N,3175µm,0.5s
MELA AML AML
comp=E,2915µm,0.6s
MELA AML AML
comp=E,2805µm,1.3s
MELA AML AML
comp=N,3320µm,0.5s
TREM Isole Tremiti 1.96 111 P Pn 21 25 25.5 -0.1
TREM AML AML
comp=E,2715µm,1.2s
TREM AML AML
comp=N,3790µm,0.7s
PII Pisa 2.04 296 P Pn 21 25 26.9 +0.1
PII AML AML
comp=E,366µm,1.4s
PII AML AML
comp=N,357µm,0.6s
PSB1 Pescosannita 2.10 141 Pg 21 25 30.6 -2.1
PSB1 Pescosannita 2.10 141 P Pb 21 25 29.9 -0.6
PSB1 AML AML
comp=N,775µm,1.1s
PSB1 AML AML
comp=E,816µm,0.9s
PSB1 AML AML
comp=N,757µm,1.3s
PSB1 AML AML
comp=E,796µm,0.9s
BRJN Brijuni 2.10 13 Pn 21 25 27.4 -0.2
BRJN Brijuni 2.10 13 P Pn 21 25 27.3 -0.3
ZCCA Zocca 2.12 315 Pb 21 25 29.6 -1.4
APRC Apricena 2.15 120 P Pn 21 25 28.2 -0.1
APRC AML AML
comp=E,1530µm,1.1s
APRC AML AML
comp=N,2330µm,0.5s
MAIM Mastiano 2.15 300 P Pn 21 25 28.2 0.0
MAIM AML AML
comp=E,282µm,0.6s
MAIM AML AML
comp=N,314µm,0.6s
PAOL Paolisi 2.15 148 Pn 21 25 28.9 +0.5
SGRT San Giovanni R 2.28 118 Pn 21 25 30.9 +0.7
SGRT San Giovanni R 2.28 118 P Pn 21 25 29.5 -0.6
SGRT AML AML
comp=E,1455µm,0.6s
SGRT AML AML
comp=N,1700µm,1.2s
VLC Villacollemand 2.34 304 Pn 21 25 30.1 -0.8
VLC Villacollemand 2.34 304 P Pn 21 25 30.5 -0.4
VLC AML AML
comp=E,315µm,1.1s
VLC AML AML
comp=N,216µm,0.8s
VLC AML AML
comp=E,300µm,1.2s
VLC AML AML
comp=N,208µm,0.8s
SGTA Sant Agata di 2.44 134 P Pb 21 25 34.2 -2.1
SGTA AML AML
comp=N,606µm,0.8s
SGTA AML AML
comp=N,664µm,0.8s
SGTA AML AML
comp=E,803µm,0.5s
SGTA AML AML
comp=E,803µm,0.5s
CAFE Carife 2.45 138 P Pb 21 25 34.5 -2.1

CAFE AML AML
comp=N,462µm,1.1s
CAFE AML AML
comp=E,578µm,0.5s
CAFE AML AML
comp=N,500µm,0.5s
CAFE AML AML
comp=E,621µm,0.5s
SNAL S. Angelo Dei 2.52 140 P Pb 21 25 35.1 -2.7
SNAL AML AML
comp=N,639µm,0.8s
SNAL AML AML
comp=E,746µm,1.2s
SNAL AML AML
comp=N,648µm,1.5s
SNAL AML AML
comp=E,778µm,1.2s
RIY Rijeka 2.66 22 ePn Pn 21 25 35.5 +0.2
RIY eSn Sn 21 26 08.6 +1.1
CAPA Cerignola FG 2.67 129 P Pn 21 25 36.1 +0.7
CAPA AML AML
comp=E,1550µm,0.9s
CAPA AML AML
comp=N,1216µm,1.0s
TEOL Teolo 2.69 339 Pn 21 25 36.8 +1.1
VULT Monte Vulture 2.70 134 P Pb 21 25 37.7 -3.2
VULT AML AML
comp=N,1050µm,0.7s
VULT AML AML
comp=N,1010µm,0.6s
VULT AML AML
comp=E,804µm,0.5s
VULT AML AML
comp=E,828µm,1.0s
MORSI Morsiglia 2.72 273 P Pn 21 25 36.6 +0.5
MORSI S Sn 21 26 10.1 +1.1
PRMA PARMA 2.75 315 Pn 21 25 36.5 0.0
SKDS Skadanscina 2.77 14⇑ iPn Pn 21 25 36.2 -0.6
PALZ Palazzo San Ge 2.89 131 P Pn 21 25 39.9 +1.4
PALZ AML AML
comp=N,1170µm,1.2s
PALZ AML AML
comp=E,918µm,0.8s
SMPL Sampolo 2.90 256 P Pn 21 25 38.5 -0.2
SMPL AML AML
comp=N,38µm,0.8s
SMPL AML AML
comp=E,46µm,1.4s
SMPL Sampolo 2.90 256 P Pn 21 25 39.1 +0.4
CORF Corte 2.94 260 P Pn 21 25 39.7 +0.5
MSSA Maissana 2.96 301 Pn 21 25 39.3 -0.2
MSSA Maissana 2.96 301 P Pn 21 25 39.6 +0.1
MSSA AML AML
comp=N,172µm,1.1s
MSSA AML AML
comp=E,121µm,0.6s
ACER Acerenza 2.99 133 P Pn 21 25 41.2 +1.3
ACER AML AML
comp=N,798µm,0.9s
ACER AML AML
comp=E,682µm,0.8s
ACER AML AML
comp=N,784µm,0.9s
ACER AML AML
comp=E,638µm,0.8s
PGF Pioggiola 3.01 265 eP Pn 21 25 40.8 +0.5
PGF eSn Sn 21 26 12.9 -3.5
comp=E,39nm,0.7s
PGF Pioggiola 3.01 265 AML AML
comp=N,45µm,1.0s
PGF AML AML
comp=E,56µm,1.4s
PGF Pioggiola 3.01 265 P Pn 21 25 40.9 +0.7
CEY Cerknica 3.03 18⇑ iPn Pn 21 25 39.9 -0.6
BOJS Bojanci 3.07 30 Pn 21 25 41.2 +0.3
BOJS Bojanci 3.07 30⇑ iPn Pn 21 25 40.9 0.0
BOJS Bojanci 3.07 30 P Pn 21 25 40.9 0.0
BOJS AML AML
comp=N,613µm,0.8s
BOJS AML AML
comp=E,620µm,1.3s
ROVR Rover Verones 3.13 333 P Pn 21 25 42.9 +1.0
ROVR AML AML
comp=N,158µm,1.4s
ROVR AML AML
comp=E,105µm,0.7s
SABO M.te Sabotino 3.14 7⇑ Pn 21 25 41.6 -0.2
SABO AML AML
comp=N,2640µm,0.5s
SABO AML AML
comp=N,678µm,0.5s
SABO AML AML
comp=E,596µm,0.4s
SABO AML AML
comp=E,2395µm,0.4s
CGRP Cima Grappa 3.15 344 Pn 21 25 43.6 +1.5
CGRP Cima Grappa 3.15 344 P Pn 21 25 43.1 +1.0
CGRP AML AML
comp=N,640µm,0.6s
CGRP AML AML
comp=E,558µm,0.5s
SRKY Kupres RS 3.22 67⇑ iPn Pn 21 25 44.4 +1.3
PTRP Pietrapertosa 3.24 135 AML AML
comp=E,389µm,0.6s
PTRP AML AML
comp=N,501µm,0.8s
AMUR Altamura 3.29 125 P Pn 21 25 44.7 +0.7
AMUR AML AML
comp=E,412µm,0.5s
AMUR AML AML
comp=N,506µm,0.5s
DOSS Dosso del Somm 3.30 337 P Pn 21 25 45.4 +1.1
DOSS AML AML
comp=E,332µm,0.8s
DOSS AML AML
comp=E,298µm,0.7s
DOSS AML AML
comp=N,289µm,0.6s
DOSS AML AML
comp=N,346µm,0.8s
SALO Salr 3.30 327 Pn 21 25 45.2 +1.0
MGRS Mrkonjic Grad 3.30 61⇑ iPn Pn 21 25 45.6 +1.4
AJAC Base Areonaval 3.32 255 P Pn 21 25 45.5 +1.2
CTI Castel Tesino 3.34 343 Pn **Pn 21 25 45.4 +0.6**
CTI Castel Tesino 3.34 343 P Pn 21 25 45.4 +0.6
LJU Ljubljana 3.34 18 P Pn 21 25 45.1 +0.3
LJU AML AML
comp=E,2115µm,0.6s
LJU AML AML
comp=N,2815µm,0.9s
MPRI Monte Prat 3.38 359 P Pn 21 25 45.4 +0.2
MPRI AML AML
comp=E,469µm,1.6s
MPRI AML AML
comp=N,820µm,0.6s
PRIJ Prijedor 3.38 50 ePn Pn 21 25 43.4 -1.7
MIGL Miglionico 3.39 131 P Pn 21 25 46.8 +1.5
MIGL AML AML
comp=E,1126µm,1.0s
MIGL AML AML
comp=N,1495µm,0.8s
STAL STALIGIAL 3.40 356 Pn 21 25 45.8 +0.2
STAL STALIGIAL 3.40 356 P Pn 21 25 45.5 0.0
STAL AML AML
comp=N,458µm,0.8s
STAL AML AML
comp=E,428µm,0.4s
STAL AML AML
comp=E,393µm,0.5s
STAL AML AML
comp=N,436µm,0.8s
STON Ston 3.41 88⇑ iPn Pn 21 25 44.5 -1.0
STON Ston 3.41 88 ePn Pn 21 25 45.1 -0.4
STON eSn Sn 21 26 23.2 -2.7
STON Ston 3.41 88 AML AML
comp=E,166µm,0.9s
STON AML AML
comp=N,181µm,1.0s
SIRI Monte Sirino - 3.41 141 P Pn 21 25 48.3 +2.6
SIRI AML AML
comp=N,138µm,1.6s
SIRI AML AML
comp=E,121µm,0.9s
LUSI Trento, Gardas 3.44 335 P Pn 21 25 47.0 +0.9
LUSI AML AML
comp=E,272µm,1.1s
LUSI AML AML
comp=N,327µm,0.4s
A051A Mrakovica 3.51 51⇑ iPn Pn 21 25 47.2 +0.2
MATE Matera 3.51 128⇑ P Pn 21 25 49.6 +2.6
BLY Banja Luka 3.53 56⇑ iPn Pn 21 25 47.7 +0.5
BLY Banja Luka 3.53 56 ePn Pn 21 25 48.1 +0.9
BLY Banja Luka 3.53 56 P Pn 21 25 47.9 +0.7
BLY AML AML
comp=E,476µm,0.6s
BLY AML AML
comp=N,406µm,0.9s
BLY AML AML
comp=E,460µm,0.6s
BLY AML AML
comp=N,402µm,0.9s
CUC Castrocucco 3.54 143 Pn 21 25 48.8 +1.3
PTCC Patocco-Chiusa 3.54 3 P Pn 21 25 47.0 -0.5
PTCC AML AML
comp=E,282µm,0.5s
PTCC AML AML
comp=N,214µm,0.8s
ZONE Zone 3.59 325 P Pn 21 25 48.7 +0.6
ZONE AML AML
comp=E,217µm,0.8s
ZONE AML AML
comp=N,284µm,0.8s
CLUD Cludinico 3.59 358 Pn **Pn 21 25 48.5 +0.3**
CLUD Cludinico 3.59 358 Pn 21 25 48.1 -0.1
CLUD Cludinico 3.59 358 P Pn 21 25 48.0 -0.1
CLUD AML AML
comp=E,292µm,0.8s
CLUD AML AML
comp=N,275µm,1.2s
PRED Cave del Predi 3.59 6 Pn 21 25 48.1 -0.1
NOCI Noci 3.64 123 P Pn 21 25 49.6 +0.8
NOCI AML AML
comp=E,284µm,0.6s
NOCI AML AML
comp=N,352µm,0.3s
MABI Malga Bissina 3.67 331 P Pn 21 25 50.6 +1.2
MABI AML AML
comp=E,93µm,0.4s
MABI AML AML
comp=N,122µm,0.4s
ZOU Zoufplan 3.69 359 P Pn 21 25 49.6 0.0
ZOU AML AML
comp=N,358µm,1.4s
ZOU AML AML
comp=N,344µm,1.4s
ZOU AML AML
comp=E,258µm,0.9s
ZOU AML AML
comp=E,286µm,1.1s
ACOM Acomizza, Ital 3.69 5 Pn 21 25 49.9 +0.2
ACOM Acomizza, Ital 3.69 5 P Pn 21 25 49.9 +0.2
ACOM AML AML
comp=E,424µm,1.3s
ACOM AML AML
comp=N,400µm,0.9s
ACOM AML AML
comp=N,340µm,0.9s
ACOM AML AML
comp=E,464µm,1.3s
FVI Forni Avoltri 3.73 357 P Pn 21 25 50.5 +0.3
FVI AML AML
comp=E,193µm,0.8s
FVI AML AML
comp=N,238µm,1.6s
MYKA Terra Mystica 3.79 6 i Pn Pn 21 25 51.3 +0.5
comp=N,14nm,0.3s,SNR=12
KOSI Kohlern 3.79 342 P Pn 21 25 52.1 +1.0
KOSI AML AML
comp=E,348µm,1.0s
KOSI AML AML
comp=N,295µm,0.9s
OBKA Obir 3.79 16⇑ iPn Pn 21 25 50.9 -0.1
OBKA Obir 3.79 16 i Pn Pn 21 25 51.0 0.0
comp=N,4.4nm,0.2s,SNR=6.4
TREB Trebinje 3.89 90 ePn Pn 21 25 53.2 +1.0
TREB Trebinje 3.89 90 ePn Pn 21 25 53.3 +1.0
TREB eSn Sn 21 26 35.1 -2.8
ABTA Abfaltersbach 3.90 354 Pn **Pn 21 25 53.5 +1.0**
comp=N,23nm,0.3s,SNR=16
A052A Srbac 3.91 54 ePn Pn 21 25 52.0 -0.5
TAR1 Taranto 3.93 125 AML AML
comp=N,378µm,0.5s
TAR1 AML AML
comp=E,287µm,1.0s
BRY Bratogost 4.02 88⇑ iPn Pn 21 25 55.2 +1.0
BRY Bratogost 4.02 88 ePn Pn 21 25 55.2 +1.0
BRY i Sn Sn 21 26 42.1 +0.7
HCY Herceg Novi 4.03 94⇑ iPn Pn 21 25 54.3 +0.2
HCY Herceg Novi 4.03 94 ePn Pn 21 25 55.3 +1.2
HCY i Sn Sn 21 26 42.2 +1.0
SOKA Soboth 4.06 20 ePn Pn 21 25 55.5 +0.9
comp=E,2.2nm,0.2s
RISI Rein 4.14 351 P Pn 21 25 57.1 +1.3
RISI AML AML
comp=E,447µm,0.5s
RISI AML AML
comp=N,510µm,0.6s
SAOF Saorge 4.17 287 P Pn 21 25 56.4 +0.4
MUGIO Muggio 4.20 318 P Pn 21 25 56.4 -0.1
MUGIO AML AML
comp=E,75µm,0.7s
MUGIO AML AML
comp=N,87µm,0.5s
KBA Koelnbreinsper 4.22 3 ePn Pn 21 25 57.7 +0.8
comp=N,35nm,0.4s
KBA Koelnbreinsper 4.22 3 ePn Pn 21 25 57.7 +0.8
KBA eSn Sn 21 26 46.2 0.0
SBF Sospel 4.22 286 eP Pn 21 25 57.3 +0.4
SBF eSn Sn 21 26 42.9 -3.3
comp=N,42nm,0.5s
ROSI Rosskopf 4.23 344 Pn 21 25 59.5 +2.5
ROSI Rosskopf 4.23 344 P Pn 21 25 58.2 +1.2
ROSI AML AML
comp=N,412µm,1.4s
ROSI AML AML
comp=E,278µm,0.9s
KOGS Kog 4.24 31 P Pn 21 25 56.4 -0.6
FUORN Ofenpass-Fuorn 4.25 333 Pn **Pn 21 25 59.5 +2.1**
TURF col de Turini 4.28 287 P Pn 21 25 58.4 +0.6
UPM Unac-Piva 4.29 84 ePn Pn 21 26 01.2 +3.2
UPM Unac-Piva 4.29 84⇑ iPn Pn 21 25 58.9 +0.9
UPM i Sn Sn 21 26 48.7 +0.6
CEME Cevo 4.33 92⇓ iPn Pn 21 25 59.4 +1.1
CEME i Sn Sn 21 26 49.6 +0.9
NKME Niksic 4.33 89⇓ iPn Pn 21 25 59.5 +1.1
NKME i Sn Sn 21 26 49.7 +0.8
BUM Brajici-Budva 4.34 96⇑ iPn Pn 21 25 59.7 +1.2
BUM i Sn Sn 21 26 49.9 +0.8
VSL Villasalto 4.37 221 P Pn 21 25 59.7 +0.9
VSL AML AML
comp=E,90µm,0.9s
VSL AML AML
comp=N,62µm,0.4s
SPIF crte de Spivo 4.41 288 P Pn 21 26 01.5 +2.0
MVIF Mont Vial 4.43 285 P Pn 21 26 01.6 +1.9
HAPS Han Pijesak,BI 4.45 72⇑ iPn Pn 21 26 00.6 +0.5
FETA Feichten 4.47 339 i Pn Pn 21 26 03.8 +3.5
comp=N,6.7nm,0.6s,SNR=8.3
TUE Stuetta 4.47 325 Pn **Pn 21 26 00.6 +0.1**
WTTA Wattenberg 4.51 348 ePn Pn 21 26 03.5 +2.6
comp=N,4.7nm,0.2s
WTTA Wattenberg 4.51 348 ePn Pn 21 26 03.5 +2.6
WTTA Wattenberg 4.51 348 P Pn 21 26 03.3 +2.3
WTTA AML AML
comp=E,204µm,0.6s
WTTA AML AML
comp=N,190µm,0.8s
DAVOX Davos/Dischmat 4.52 331 Pn **Pn 21 26 03.9 +2.8**
comp=N,4.7nm,0.3s,baz=161,slow=19,SNR=24
DAVOX Sn **Sn 21 26 52.4 -1.3**
comp=N,2.5nm,0.3s,baz=286,slow=22,SNR=8.2
SQTA Sankt Quirin 4.55 344 Pn **Pn 21 26 04.0 +2.6**
comp=N,3.4nm,0.3s,SNR=10
CALF Calern 4.57 283 P Pn 21 26 02.4 +0.7
DRME Dracevica, Mon 4.57 96⇑ iPn Pn 21 26 02.7 +1.1
DRME Dracevica, Mon 4.57 96⇑ iPn Pn 21 26 02.8 +1.1
DRME i Sn Sn 21 26 55.7 +1.0
PDG Podgorica 4.59 93 ⇓P Pn 21 26 03.1 +1.3
PDG Podgorica 4.59 93 Pn 21 26 02.9 +1.1
PDG Podgorica 4.59 93 ePn Pn 21 26 02.9 +1.1
PDG eSn **Sn 21 26 51.2 -3.8**
TTG Podgorica 4.59 93 ePn Pn 21 26 03.0 +1.2
TTG i Sn Sn 21 26 55.9 +0.9
WATA Walderalm 4.59 347 i Pn Pn 21 26 04.3 +2.3
comp=N,8.2nm,0.3s,SNR=7.5
TIP Timpagrande 4.62 142 ⇓P Pn 21 26 06.3 +3.9
TIP Timpagrande 4.62 142 Pn 21 26 05.4 +3.0
PLE Pljevlja 4.65 82 ePn Pn 21 26 03.9 +1.1
PLE i Sn Sn 21 26 57.5 +0.6
ULC Ulcinj 4.66 99 ePn Pn 21 26 03.8 +0.9
ULC i Sn Sn 21 26 57.8 +0.8
RUDO Rudo 4.67 79⇑ iPn Pn 21 26 03.6 +0.7
MOTA Moosalm 4.69 343 Pn **Pn 21 26 06.3 +3.0**
comp=N,2.5nm,0.3s,SNR=5.5
ARSA Arzberg 4.72 21 Pn **Pn 21 26 03.5 -0.1**
comp=N,5.3nm,0.3s,SNR=6.0
ARSA Arzberg 4.72 21 ePn Pn 21 26 03.3 -0.3
ARSA eSn Sn 21 26 56.8 -1.5
ARSA Arzberg 4.72 21 P Pn 21 26 03.0 -0.6
BBLS Lazići 4.73 76⇑ iPn Pn 21 26 04.3 +0.5
BBLS Lazići 4.73 76 ePn Pn 21 26 05.1 +1.3
KOME Kolasin 4.74 88 ePn Pn 21 26 05.2 +1.2
KOME i Sn Sn 21 26 59.7 +0.7
SURF Saint Ours 4.81 292 P Pn 21 26 05.6 +0.5
LMR La Mourre 4.82 278 eP Pn 21 26 04.7 -0.3
KOVH Kovagotottos 4.83 46 P Pn 21 26 04.2 -1.0
KOVH S Sn 21 26 59.8 -1.3
JAUF Jausiers 4.84 291 P Pn 21 26 06.5 +1.1
BIOA Bad Ischl, Aus 4.84 5 Pn **Pn 21 26 06.1 +0.7**
comp=N,41nm,0.3s,SNR=41
RJOB Jochberg 4.88 358 ePn Pn 21 26 07.0 +1.2
RJOB eSn Sn 21 27 03.9 +1.7
RETA Reutte 4.90 341 Pn **Pn 21 26 08.7 +2.6**
comp=N,7.3nm,0.3s,SNR=15
MBDF Montbardon 4.92 294 eP Pn 21 26 09.0 +2.5
MBDF eSn Sn 21 26 59.3 -4.2
comp=N,25nm,0.6s
SCTE Santa Cesarea 4.93 123 Pn **Pn 21 26 07.0 +0.5**
TRIGF Trigance 4.94 283 P Pn 21 26 08.0 +1.3
OBER Oberstdorf 4.95 338 ePn Pn 21 26 09.5 +2.7
DAVA Damuels 4.96 334 Pn **Pn 21 26 10.0 +2.9**
comp=N,5.1nm,0.2s,SNR=12
DAVA Damuels 4.96 334 ePn Pn 21 26 09.9 +2.9
CREF Crivoux 4.96 292 P Pn 21 26 06.9 -0.2
MTGR Montagna Grand 4.97 183 Pb 21 26 15.9 -3.7
OGAG Argentiere 4.99 291 P Pn 21 26 12.4 +4.9
FLAF Flassans-sur-I 5.01 278 P Pn 21 26 07.8 +0.2
IVA Berane 5.02 88 ePn Pn 21 26 09.0 +1.2
IVA i Sn Sn 21 27 06.5 +0.7
MOA Molln 5.05 9 ePn Pn 21 26 08.6 +0.4
MOA eSn Sn 21 27 05.5 -1.1
MOA Molln 5.05 9 Pn **Pn 21 26 08.7 +0.5**
comp=N,9.8nm,0.4s,SNR=29
MOA Molln 5.05 9 ePn Pn 21 26 08.6 +0.4
MOA eSn Sn 21 27 08.7 +2.1
SJES Sjenica 5.08 83 ePn Pn 21 26 10.0 +1.4
SJES eSn Sn 21 27 02.6 -4.7
PVY Plav 5.09 91 ePn Pn 21 26 10.0 +1.2
PVY i Sn Sn 21 27 08.1 +0.6
OGMO Fort Saint-Gob 5.16 299 P Pn 21 26 14.3 +4.5
DIX Grande Dixence 5.17 310 S Sn 21 27 14.3 +4.6
DIX Grande Dixence 5.17 310 P Pn 21 26 12.8 +2.8
DIVS Divibare 5.19 74 Pn 21 26 10.7 +0.5
DIVS Divibare 5.19 74 ePn Pn 21 26 10.9 +0.8
DIVS Divibare 5.19 74 ePn Pn 21 26 11.5 +1.4
DIVS eSn Sn 21 27 06.6 -3.4
MORH Mrgy, Hungar 5.21 48 P Pn 21 26 13.2 +3.0
MORH Mrgy, Hungar 5.21 48 P Pn 21 26 10.2 0.0
LPG La Plagne 5.25 302 eP Pn 21 26 14.0 +2.9
LPG eSn Sn 21 27 08.1 -3.6
comp=N,30nm,0.8s
LPG La Plagne 5.25 302 P Pn 21 26 13.2 +2.1
UBR Ueberruh 5.25 338 ePn Pn 21 26 13.0 +2.1
LPL La Plagne 5.27 302 eP Pn 21 26 14.8 +3.5
LPL eSn Sn 21 27 07.5 -4.6
comp=N,9.8nm,0.4s
TIR Tirane 5.28 104 ⇓P Pn 21 26 12.2 +0.8
TIR Tirane 5.28 104 Pn 21 26 12.1 +0.8
TIR Tirane 5.28 104 ePn Pn 21 26 12.4 +1.1
TIR eSn Sn 21 27 07.2 -5.0
TIR Tirane 5.28 104 P Pn 21 26 12.1 +0.8
RONA Rosalia, Austr 5.34 24 i Pn Pn 21 26 12.3 0.0
comp=N,4.7nm,0.3s,SNR=7.1
MPLH Magyarpolny 5.34 35 P Pn 21 26 11.2 -1.0
MPLH S Sn 21 27 14.0 +0.3
FRGS Fruska Gora 5.38 62 P Pn 21 26 14.5 +1.8
FRGS Fruska Gora 5.38 62⇑ iPn Pn 21 26 12.2 -0.5
VLO Vlora 5.38 114 Pn 21 26 13.5 +0.8
VLO Vlora 5.38 114 P Pn 21 26 13.5 +0.8
SENIN Lac Senin/Sane 5.40 312 Pn **Pn 21 26 13.8 +0.7**
SOP Sopron 5.41 26 P Pn 21 26 13.1 0.0
SOP S Sn 21 27 14.7 -0.7
RSL Roselend 5.42 304 P Pn 21 26 15.5 +2.2
CONA Conrad Observa 5.43 20 i Pn Pn 21 26 13.4 -0.1
comp=N,6.6nm,0.2s,SNR=26
EGYH Egyhazaskeszo 5.46 32 P Pb 21 26 22.4 -5.4
BSTF la Bastide-des 5.50 283 P Pn 21 26 14.8 +0.4
TRUS Trudelj 5.51 73 ePn Pn 21 26 14.9 +0.5
OGSI Sixt 5.53 307 P Pn 21 26 17.9 +3.0
SMRF Simiane la Rot 5.57 284 eP Pn 21 26 18.1 +2.8
AIGLE Aigle 5.58 311 P Pn 21 26 16.7 +1.2
ORIF Oris-en-Rattie 5.58 294 eP Pn 21 26 18.6 +3.1
ORIF eSn Sn 21 27 14.1 -5.6
comp=N,20nm,0.8s
ORIF Oris-en-Rattie 5.58 294 P Pn 21 26 18.4 +2.9
ORIF Oris-en-Rattie 5.58 294 P Pn 21 26 18.3 +2.7
RUSF Rustrel 5.63 284 P Pn 21 26 18.7 +2.6
GRUS Gruza 5.67 77 ePn Pn 21 26 17.5 +0.8
SULZ Cheisacher 5.83 325 P Pn 21 26 20.0 +1.2
TORNY Torny/Romont 5.84 314 P Pn 21 26 21.8 +2.7
SLE Schleitheim 5.86 328 P Pn 21 26 20.6 +1.2
BALST Balsthal 5.87 321 P Pn 21 26 20.7 +1.3
SAUF chteau de Sau 5.90 283 P Pn 21 26 23.9 +4.2
SELS Selova 5.91 84 ePn Pn 21 26 20.6 +0.6
OGSM Saint Maurice 5.96 300 P Pn 21 26 22.5 +1.8
KEK Kerkira 5.97 120 Pn 21 26 21.8 +1.0
GEC2 GERESS Array S 6.00 4 Pn **Pn 21 26 20.7 -0.5**
GEC2 GERESS Array S 6.00 4 ePn Pn 21 26 20.7 -0.5
GEC2 eSn Sn 21 27 27.8 -2.1
GERES GERESS Array B 6.00 4 Pn **Pn 21 26 20.4 -0.9**
comp=N,2.7nm,0.3s,baz=174,slow=13,SNR=26
GERES Sn **Sn 21 27 27.8 -2.1**
comp=N,4.1nm,0.3s,baz=177,slow=24,SNR=6.1
comp=N,3.9nm,0.4s
CKRC Cesky Krumlov 6.02 8 ePN Pn 21 26 20.6 -0.8
CKRC eSN Sn 21 27 28.1 -2.2
OHR Ohrid 6.02 104 *i Pn* **Pn 21 26 23.5 +1.9**
BOURR Bourrignon 6.12 320 P Pn 21 26 23.9 +1.0
FELD Feldberg im Sc 6.15 326 P Pn 21 26 24.5 +1.1
KBN Korca 6.20 109 Pn 21 26 23.0 -1.0
KBN Korca 6.20 109 P Pn 21 26 23.0 -1.0
BRANT Les Verrieres 6.20 313 P Pn 21 26 25.7 +1.6
CABF La Chapelle 6.22 309 eP Pn 21 26 26.9 +2.6
CABF eSn Sn 21 27 30.3 -5.1
comp=N,22nm,0.9s
CABF La Chapelle 6.22 309 P Pn 21 26 25.4 +1.1
KIZ Kirchzarten 6.25 326 S Sn 21 27 34.4 -1.5
KIZ Kirchzarten 6.25 326 P Pn 21 26 25.8 +1.2
MODS Modra-Piesok 6.25 27 eP Pn 21 26 23.8 -0.8
MODS *e* 21 27 32.2
KHC Kasperske Hory 6.28 3 Pn 21 26 24.4 -0.6
KHC Kasperske Hory 6.28 3 eP Pn 21 26 24.6 -0.4
KHC *e* 21 27 33.7
KHC Kasperske Hory 6.28 3 ePN Pn 21 26 24.6 -0.4
KHC eSN Sn 21 27 33.7 -3.0
WET Wettzell 6.28 359 ePn Pn 21 26 24.4 -0.6
CHMF Charmoille 6.31 316 P Pn 21 26 26.6 +1.1
BOVS Bovan 6.36 80 ⇓P Pn 21 26 26.3 +0.2
BOVS Bovan 6.36 80 ePn Pn 21 26 26.2 +0.1
BOVS eSn Sn 21 27 33.6 -5.0
VIVF Saint-Julien-I 6.38 291 eP Pn 21 26 29.0 +2.5
BFO Black Forest 6.39 330 Pn 21 26 27.6 +1.0
BFO Black Forest 6.39 330 P Pn 21 26 27.6 +1.0
BFO Black Forest 6.39 330 ePn Pn 21 26 27.7 +1.0
RIVEL MONT RIVEL 6.40 310 P Pn 21 26 29.4 +2.7
SMOL Smolenice 6.42 27 eP Pn 21 26 26.1 -0.9
SMOL *e* 21 27 34.0
BARS Barje 6.43 87 ePn Pn 21 26 27.9 +0.7
VOGT Vogtsburg - To 6.45 326 S Sn 21 27 40.6 -0.3
VOGT Vogtsburg - To 6.45 326 P Pn 21 26 28.6 +1.3
MOF Molkenrain 6.50 322 P Pn 21 26 29.2 +1.0
MOF S **Sn 21 27 42.9 +0.5**

MDVR Moldovita 6.54 70 ⇓P Pn 21 26 29.7 +1.0
HINF Hinteralfeld 6.61 321 eP Pn 21 26 30.6 +1.0
HINF eSn **Sn 21 27 40.5 -4.3**
comp=N,20nm,0.4s
KRUC Moravsky 6.62 19 ePN Pn 21 26 29.1 -0.5
KRUC eSN **Sn 21 27 42.8 -2.2**
RONF Ronchamp 6.63 319 P Pn 21 26 31.2 +1.4
RONF S **Sn 21 27 44.9 -0.4**
BZS Buzias 6.73 63 ⇑P Pn 21 26 33.2 +2.0
ZAGS Zajecar 6.75 79 ePn Pn 21 26 31.7 +0.2
ECH Echery 6.77 324 Pn 21 26 32.1 +0.3
ECH Echery 6.77 324 P Pn 21 26 32.1 +0.3
ECH Echery 6.77 324 P Pn 21 26 31.9 +0.1
ECH S **Sn 21 27 47.5 -1.3**
JAVC Velka Javorina 6.80 27 ePN Pn 21 26 31.8 -0.4
LASF Ste Croix 6.81 283 eP Pn 21 26 35.2 +2.9
WLS Welschbruch 6.84 326 P Pn 21 26 33.3 +0.6
WLS S **Sn 21 27 49.9 -0.7**
STIP Stip 6.87 97 i Pn Pn 21 26 35.7 +2.6
CDF Champ du Feu 6.87 326 eP Pn 21 26 34.0 +0.8
CDF eSn **Sn 21 27 46.4 -5.0**
comp=N,36nm,0.8s
VRAC Vranov 6.89 20 Pn Pn 21 26 32.7 -0.7
comp=N,0.5nm,0.3s,baz=226,slow=16,SNR=2.9
VRAC Sn **Sn 21 27 47.7 -4.2**
comp=N,0.8nm,0.3s,baz=146,slow=19,SNR=3.2
comp=N,1.4nm,0.3s
VRAC Vranov 6.89 20 ePN Pn 21 26 33.1 -0.4
VYHS Vyhne 6.93 34 eP Pn 21 26 34.7 +0.8
GRFO Grafenberg 6.94 350 Pn Pn 21 26 35.1 +0.9
GRFO Grafenberg 6.94 350 P Pn 21 26 35.1 +0.9
GRA1 Grafenberg Arr 6.95 350 Pn Pn 21 26 34.7 +0.5
GRF Grafenberg Arr 6.95 350 P Pn 21 26 34.7 +0.5
GRF Grafenberg Arr 6.95 350 ePn Pn 21 26 35.2 +1.1
HAU Haudompre 6.98 320 eP Pn 21 26 35.6 +1.0
HAU eSn **Sn 21 27 49.0 -5.0**
comp=N,34nm,0.5s
SIRR Siria 7.02 58 ⇓P Pn 21 26 36.6 +1.4
ZAPS Zavoj 7.02 83 ePn Pn 21 26 36.3 +1.1
ZAPS eSn **Sn 21 27 49.7 -5.3**
HERR Herculane 7.05 70 ⇓P Pn 21 26 36.6 +1.0
BLKB Belogradchik 7.06 81 ⇓P Pn 21 26 36.8 +1.0
DJES Djerdap 7.08 72 P Pn 21 26 37.6 +1.6
GOPC GO Pecny, Ondr 7.15 9 eP Pn 21 26 35.2 -1.8
GOPC GO Pecny, Ondr 7.15 9 ePN Pn 21 26 35.2 -1.8
PRU Pruhonice 7.20 8 eP Pn 21 26 36.0 -1.6
PRU Pruhonice 7.20 8 ePN Pn 21 26 36.0 -1.6
VAY Valandovo 7.24 99 i Pn Pn 21 26 38.8 +0.6
MAHO Mahon 7.25 249 Pn Pn 21 26 39.4 +1.0
GZR Gura Zlata 7.43 67 ⇑P Pn 21 26 42.0 +1.1
KKB Krupnik 7.49 94 P Pn 21 26 42.9 +1.3
VTS Vitosha 7.49 88 ⇑P Pn 21 26 42.5 +0.7
VTS Vitosha 7.49 88 Pn 21 26 42.7 +0.9
VTS Vitosha 7.49 88 P Pn 21 26 42.7 +0.9
VTS Vitosha 7.49 88 P Pn 21 26 42.9 +1.1
MORC Moravsky Berou 7.57 23 P Pn 21 26 48.8 +5.9
MORC Moravsky Berou 7.57 23 Pn Pn 21 26 42.5 -0.3
MORC Moravsky Berou 7.57 23 P Pn 21 26 42.5 -0.3
SMF Signal de Mont 7.57 303 eP Pn 21 26 44.7 +1.9
SMF eSn **Sn 21 28 03.0 -5.6**
comp=N,15nm,0.7s
LIT Litokhoron 7.60 108 Pn Pn 21 26 43.7 +0.6
LIT Litokhoron 7.60 108 P Pn 21 26 43.7 +0.6
KRLC Kraliky 7.65 18 eP Pn 21 26 45.7 +1.8
KRLC Kraliky 7.65 18 ePN Pn 21 26 43.4 -0.5
PAGF Fort de Pagny 7.66 320 eP Pn 21 26 45.7 +1.7
baz=138
PAGF eSn **Sn 21 28 05.3 -5.4**
comp=N,27nm,0.7s
DEV Deva 7.67 63 ⇑P Pn 21 26 46.1 +2.1
KEST Kesra 7.69 203 Pn Pn 21 26 49.0 +4.6
comp=N,0.7nm,0.3s,baz=327,slow=4.8,SNR=12
comp=N,4.4nm,0.6s
SFTF Sexfontaines 7.76 316 eP Pn 21 26 46.5 +1.2
baz=138
SFTF eSn **Sn 21 28 07.7 -5.4**
comp=N,79nm,1.5s
MOX Moxa 7.84 353 P Pn 21 26 47.1 +0.6
MOX Moxa 7.84 353 eSn Sn 21 28 11.3 -3.9
LOR Lormes 7.86 307 eP Pn 21 26 48.8 +2.0
baz=128
LOR eSn **Sn 21 28 10.3 -5.4**
comp=N,7.4nm,0.4s
LOR Lormes 7.86 307 S Sn 21 28 16.2 +0.5
LOR Lormes 7.86 307 P Pn 21 26 48.1 +1.4
DRGR 7.90 57 P Pn 21 26 49.7 +2.4
DRGR 7.90 57 P Pn 21 26 51.4 +4.1
AVF Avril sur Loir 7.94 303 eP Pn 21 26 50.0 +2.2
AVF eSn **Sn 21 28 12.6 -4.9**
comp=N,15nm,1.1s
MEZF Maizieres J'vi 7.95 318 eP Pn 21 26 49.3 +1.4
baz=137
MEZF eSn **Sn 21 28 12.0 -5.8**
comp=N,13nm,0.6s
MTLF Montolieu 7.95 277 eP Pn 21 26 51.8 +3.8
SSF Saint Saulge 7.97 305 eP Pn 21 26 49.8 +1.6
SSF eSn **Sn 21 28 11.8 -6.5**
comp=N,5.4nm,0.5s
SSF Saint Saulge 7.97 305 P Pn 21 26 48.5 +0.3
SAVF Savonnieres en 7.99 319 eP Pn 21 26 51.6 +3.1
baz=138
SAVF eSn **Sn 21 28 13.3 -5.5**
comp=N,11nm,0.5s
MMB Musomiste 8.02 96 P Pn 21 26 50.1 +1.2
BRG Berggiesshubel 8.03 4 eP Pn 21 26 51.7 +2.6
BRG pmax pmax
comp=Z,2.0nm,0.4s
MARR Marisel-Cluj 8.10 59 P Pn 21 26 51.9 +1.8
LOT Lotru 8.12 68 ⇑P Pn 21 26 51.7 +1.4
BGF Bois d'Agland 8.16 300 eP Pn 21 26 54.1 +3.3
BGF eSn **Sn 21 28 16.7 -6.3**
comp=Z,8.1nm,0.5s
CAF Calviac 8.21 288 eP Pn 21 26 53.9 +2.4
CAF Calviac 8.21 288 P Pn 21 26 53.8 +2.3
WLF Walferdange 8.31 327 Pn Pn 21 26 55.1 +2.2
WLF Walferdange 8.31 327 P Pn 21 26 55.1 +2.2
CLL Collm 8.45 360 Pn 21 26 53.9 -0.7
CLL Collm 8.45 360 eP Pn 21 26 54.0 -0.7
CLL e 21 28 23.0
CLL Collm 8.45 360 ePn Pn 21 26 54.0 -0.7
CLL ePg **Pg 21 27 30.0 -4.1**
CLL eSn **Sn 21 28 23.0 -6.9**
CLL eSg **Sg 21 29 20.0 -3.3**
comp=Z,21nm,1.3s
TCF Toulx Ste Croi 8.47 298 eP Pn 21 26 58.6 +3.5
TCF eSn **Sn 21 28 24.5 -6.1**
comp=Z,30nm,1.7s
TRPA Tarpa 8.48 48 ⇑P Pn 21 26 58.6 +3.4
TRPA Tarpa 8.48 48 P Pn 21 26 57.9 +2.7
HYF Humbligny 8.59 304 eP Pn 21 27 01.4 +4.7
RJF Les Rejaudoux 8.66 290 eP Pn 21 27 00.7 +3.0
ARR Arges 8.69 69 ⇑P Pn 21 27 00.4 +2.3
HUMR Humele 8.79 75 ⇑P Pn 21 27 01.2 +1.7
ITM Ithomi 8.86 127 Pn Pn 21 27 02.3 +1.9
VOIR 8.99 69 ⇑P Pn 21 27 04.1 +1.8
LFF La Frestale 9.14 287 eP Pn 21 27 06.4 +2.2
GIVF Givet 9.20 325 ePn Pn 21 27 08.7 +3.7
EPF Esparros 9.34 275 eP Pn 21 27 10.6 +3.6
BAIF Baives 9.43 323 eP Pn 21 27 12.6 +4.3
RDO Rodhopi 9.45 96 Pn Pn 21 27 08.7 +0.3
MLR Muntele Rosu 9.62 70 P Pn 21 27 12.8 +1.9
MLR Muntele Rosu 9.62 70 Pn Pn 21 27 12.8 +1.9
comp=Z,0.2nm,0.3s,baz=308,slow=19,SNR=2.1
comp=Z,1.5nm,0.5s
BURAR Bucovina Array 9.80 57 ⇑P Pn 21 27 16.1 +2.8
BURAR Bucovina Array 9.80 57 Pn Pn 21 27 15.8 +2.4
BURAR Bucovina Array 9.80 57 P Pn 21 27 16.1 +2.8
BUR08 Bucovina Ar. S 9.80 57 Pn Pn 21 27 15.4 +2.0
RAZG Razgrad 9.84 81 ⇑P Pn 21 27 15.6 +1.7
ETSF Etsaut 10.00 275 eP Pn 21 27 20.1 +3.9
PLOR Plostina 10.18 68 P Pn 21 27 19.9 +1.3
PLOR Plostina 10.18 68 P Pn 21 27 19.8 +1.3
VRI Vrincioaia 10.23 68 P Pn 21 27 20.6 +1.4
LDF La Druitiere 10.85 306 eP Pn 21 27 29.3 +1.7
FLN La Foliniere 11.13 307 eP Pn 21 27 33.6 +2.0
GRR Gorron 11.20 304 eP Pn 21 27 35.7 +3.3
IDI Anoyia 11.90 126 Pn Pn 21 27 43.5 +1.4
comp=Z,0.1nm,0.3s,baz=302,slow=19,SNR=1.4
IDI Sn **Sn 21 29 47.1 -7.7**
comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=2.0
comp=Z,8.6nm,1.0s
IDI Anoyia 11.90 126 Pn Pn 21 27 43.9 +1.8

ROSF Rostrenen 12.67 301 eP Pn 21 27 55.8 +3.2
ESDC Sonseca Array 13.20 262 Pn Pn 21 28 01.7 +1.8
baz=83,slow=10,SNR=2.2
comp=Z,0.3nm,0.7s
ELL Elmali 14.31 110 Pn Pn 21 28 16.4 +1.3
ELL Elmali 14.31 110 P Pn 21 28 16.4 +1.3
BRTR Keskin Array B 15.78 95 Pn P 21 28 38.3 -0.3
comp=Z,0.1nm,0.3s,baz=353,slow=10,SNR=1.8
BRTR LR LR 21 34 25.0
comp=Z,152nm,20.5s,baz=88,slow=36
comp=Z,1.0nm,0.9s
ESK Eskdalemuir 16.34 325 Pn 21 28 42.3 +0.6
ESK IAmb IAmb 21 29 11.1
comp=Z,13nm,1.1s
ESK Eskdalemuir 16.34 325 P Pn 21 28 42.3 +0.6
ESK pmax pmax
comp=Z,13nm,1.1s
HFS Hagfors 17.30 1 LR LR 21 36 03.7
comp=Z,214nm,19.7s,baz=80,slow=39
NC602 NORSAR Array S 17.92 358 Pn 21 29 00.7 -0.7
VORR Voronezh 19.72 54 eP P 21 29 19.8 -2.0
VORR pmax pmax
comp=Z,10.0nm,0.4s
MMAI Mount Meron Ar 20.12 112 P Pn 21 29 27.3 -1.0
comp=Z,2.9nm,0.7s,baz=324,slow=9.0,SNR=3.3
comp=Z,2.9nm,0.7s
FINES FINESS Array B 20.17 18 P P 21 29 25.4 -1.3
comp=Z,2.8nm,1.0s,baz=199,slow=12,SNR=1.8
comp=Z,2.8nm,1.0s
FINES FINESS Array B 20.17 18 P P 21 29 26.9 +0.2
FINES FINESS Array B 20.17 18 P Pn 21 29 26.9 -1.7
FIA1 FINESS Array S 20.17 18 P P 21 29 26.6 -0.1
KIV Kislovodsk 21.50 77 P P 21 29 42.1 +0.8
KIV IAmb IAmb 21 29 48.7
comp=Z,12nm,1.2s
KIV Kislovodsk 21.50 77 eP P 21 29 41.5 +0.2
KIV pmax pmax
comp=Z,10.0nm,1.1s
KBZ Khabaz 21.68 77 P P 21 29 44.7 +1.6
comp=Z,6.7nm,1.0s,baz=316,slow=4.0,SNR=6.1
comp=Z,6.7nm,1.0s
GNI Garni 23.80 86 eP P 21 30 06.3 +0.8
GNI pmax pmax
comp=Z,5.0nm,1.0s
KLMR Klimovskoe 24.04 32 eP P 21 30 06.5 -0.7
KLMR pmax pmax
comp=Z,25nm,1.8s
KLMR Klimovskoe 24.04 32 eP P 21 30 06.5 -0.7
KLMR AMP 21 30 12.3
comp=Z,25nm,1.8s
TOA0 Torodi Ar. Sit 31.20 202 P P 21 31 12.1 +0.3
TOA0 IAmb IAmb 21 31 15.2
comp=Z,3.7nm,1.4s
TORD Torodi Ar. Bea 31.20 202 P P 21 31 12.3 +0.5
comp=Z,0.8nm,0.8s,baz=15,slow=9.3,SNR=8.0
comp=Z,0.8nm,0.8s
ARU Arti 31.80 49 P P 21 31 16.0 -0.8
ARU IAmb IAmb 21 31 27.3
comp=Z,4.0nm,1.0s
ARU Arti 31.80 49 d iP P 21 31 17.0 +0.3
ARU 21 32 18.3
ARU S **S 21 36 28.8 +2.2**
ARU SS **SnSn 21 38 14.2 +0.6**
ARU pmax pmax
comp=Z,13nm,2.6s
SPITS Spitsbergen Ar 35.45 1 P P 21 31 48.6 +0.3
BRVK Borovoye 38.67 54 P P 21 32 16.1 +0.2
BRVK IAmb IAmb 21 32 23.8
comp=Z,3.3nm,0.8s
BRVK Borovoye 38.67 54 P P 21 32 16.1 +0.2
BRVK pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array 41.30 69 P P 21 32 38.7 +0.8
KK31 Karatay Array 41.30 69 P P 21 32 38.7 +0.8
KK31 pmax pmax
comp=Z,2.0nm,1.1s
KKAR Karatay Array 41.30 69 P P 21 32 39.3 +1.4
KKAR Karatay Array 41.30 69 P P 21 32 39.3 +1.4
NRIK Noril'sk 45.29 29 eP P 21 33 10.8 +1.1
NRIK pmax pmax
comp=Z,3.0nm,1.4s
KSH Kashi 46.48 72 P P 21 33 22.0 +2.3
ZALV Zalesovo Beam 46.94 50 P P 21 33 24.0 +1.1
ZALV Zalesovo Beam 46.94 50 P P 21 33 24.0 +1.1
MK31 Makanchi Array 47.80 60 P P 21 33 30.1 +0.3
MK31 IAmb IAmb 21 33 35.1
comp=Z,2.2nm,1.1s
MK31 Makanchi Array 47.80 60 P P 21 33 30.1 +0.3
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 47.80 60 P P 21 33 30.3 +0.5
comp=Z,0.6nm,0.6s,baz=282,slow=6.4,SNR=7.3
comp=Z,0.6nm,0.6s
WMQ Urumqi 52.50 62 eP P 21 34 08.5 +3.0
TIXI Tiksi 57.21 20 eP P 21 34 37.6 -1.4
TIXI pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 61.83 50 P P 21 35 12.9 +1.4
comp=Z,1.1nm,0.9s,baz=288,slow=5.7,SNR=5.0
comp=Z,1.1nm,0.9s
GTA Gaotai 62.55 61 eP P 21 35 19.5 +3.0
GTA pP sP 21 35 22.8 +0.7
GTA sP pP 21 35 25.5 +5.0
YKA Yellowknife Ar 66.94 336 P P 21 35 44.3 -0.1
comp=Z,0.7nm,0.8s,baz=30,slow=7.0,SNR=2.7
comp=Z,0.7nm,0.8s
LZH Lanzhou 67.08 62 eP P 21 35 47.0 +0.9
LZH pP sP 21 35 55.0 +3.3
ZEA Zeya 68.51 36 eP P 21 35 46.1 -8.5
HHC Hu-ho-hao-te 68.95 54 eP P 21 35 57.5 -0.2
CMAR Chiang Mai Arr 74.72 79 P P 21 36 33.9 +1.4
comp=Z,0.8nm,0.7s,baz=309,slow=7.7,SNR=7.9
comp=Z,0.8nm,0.7s

*IDC **26** 21:28:19.6±1.5, 0°.86S×135°.53E, h0km, mb3.6/4, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=41.6km s-min=22.8km az=77.0*

ISC 26 21:28:23.8±1.3, 0°.9S±0°.1×135°.6E±0°.1, h35km, n7, σ1§61/8, mb3.6/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.31**	**270**	Pn	**Pn**	**21 29 25.5**	**-1.4**
	0.8nm,0.3s,baz=152,slow=12,SNR=6.2						
SIJI				Sn	**Sn**	**21 30 17.6**	**+1.7**
	baz=229,slow=19						
	2.9nm,0.3s						
WRA	**Warramunga Arr**	**19.00**	**184**	P	**Pn**	**21 32 43.4**	**-0.1**
	0.1nm,0.3s,baz=3.0,slow=11,SNR=10						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**22.72**	**184**	P	**P**	**21 33 23.1**	**+0.2**
	0.9nm,0.7s,baz=7.0,slow=12,SNR=11						
	0.9nm,0.7s						
PZH	**PanZhiHua**	**42.47**	**312**	P	**P**	**21 36 13.8**	**-2.1**
MKAR	**Makanchi Array**	**66.43**	**323**	P	**P**	**21 39 11.1**	**+1.4**
	0.3nm,0.4s,baz=111,slow=7.8,SNR=7.4						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**70.43**	**325**	P	**P**	**21 39 35.2**	**+0.8**
	0.4nm,0.4s,baz=134,slow=5.0,SNR=4.9						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**76.02**	**326**	P	**P**	**21 40 08.5**	**+1.0**
	0.3nm,0.5s,baz=102,slow=6.6,SNR=3.9						
	0.3nm,0.5s						

THE 26 21:42:01.7, 38°.73N×20°.64E, h8km±1km, ML0.5/3, Error ellipse: s-maj=1.2km s-min=0.4km az=77.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.05**	**109**	P	Pg	21 42 03.1	-0.3
NYDR				S	Sg	21 42 04.6	+0.1
	42nm,0.1s						
LKD2	**Lefkada island**	**0.06**	**12**	P	Pg	21 42 03.3	-0.3
LKD2				S	Sg	21 42 04.8	-0.2
	75nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.07**	**229**	P	Pg	21 42 03.5	-0.1
DRAG				S	Sg	21 42 05.0	0.0
TSLK	**Tsoukalades, L**	**0.10**	**7**	P	Pg	21 42 04.0	0.0
TSLK				S	Sg	21 42 06.2	+0.5
EVGI	**Lefkada island**	**0.11**	**174**	P	Pg	21 42 04.3	+0.1
EVGI				S	Sg	21 42 06.4	+0.5
	48nm,0.1s						
FSK	**Fiskardo**	**0.28**	**193**	P	Pg	21 42 07.0	-0.2
FSK				S	Sg	21 42 11.4	+0.6

*BGR **26** 21:42:00.4±1.0, 42°.54N×13°.59E, h10km, ML5.0/12, Error ellipse: s-maj=26.7km s-min=17.8km az=103.0*
*IDC **26** 21:42:01.7±0.4, 42°.98N×13°.03E, h0km, mb4.6/33, mbtmp4.5/47, ML4.2/11, MS3.9/27, Error ellipse: s-maj=9.2km s-min=7.9km az=106.0*
*ROM **26** 21:42:01.9±0.0, 42°.863N±0°.001×13°.121E±0°.003, h10km, ML4.6/166, Mw4.5, Error ellipse: s-maj=0.2km s-min=0.0km az=245.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.74; $M_{\theta\theta}$1.57; $M_{\phi\phi}$5.17; $M_{r\theta}$1.07; $M_{r\phi}$-2.78; $M_{\theta r}$-1.54; Fault plane solution: $M_0$6.97028×10^{15} NP1:φs153.00000°, δ37.00000°, λ-87.00000°. NP2:φs330.00000°, δ53.00000°, λ-92.00000°.*
*NEIC **26** 21:42:02.4±1.4, 42°.87N±0°.04×13°.10E±0°.06, h7km±3km, mb4.9/115, Mwr4.7/33, ML4.6(ROM) Error ellipse: s-maj=6.3km s-min=5.7km az=206.0*
*LDG **26** 21:42:02.8±0.1, 42°.80N×13°.02E, h10km, Ml4.6/32, Error ellipse: s-maj=5.1km s-min=2.6km az=43.0*
*MOS **26** 21:42:02.5±1.1, 42°.93N×13°.18E, h19km, mb5.0/51, Error ellipse: s-maj=4.5km s-min=2.8km az=75.2*
*BJI **26** 21:42:02.7±0.0, 43°.37N×12°.99E, h10km, mb4.7/40, mB5.0/20, Ms4.8/8, Ms7 4.4/8*
*PDG **26** 21:42:02.2±0.8, 42°.91N×13°.20E, h9km, MD4.7/2, ML4.8/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*MED_RC **26** 21:42:02.0±0.6, 42°.89N×13°.22E, h12km±2km, MW4.8/11, Moment Tensor Solution.Mantle waves: s11,c13; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.35±.29; $M_{\theta\theta}$0.39±.24; $M_{\phi\phi}$0.96±.15; $M_{r\theta}$1.07±.56; $M_{\theta\phi}$-0.38±.14; $M_{\phi r}$-1.08±.33; Best double couple: $M_0$1.96000×10^{16} NP1:φs320.00000°, δ70.00000°, λ-97.00000°. NP2:φs161.00000°, δ21.00000°, λ-71.00000°. Principal axes: T 1.8400, Plg25.0000°, Azm56.0000°; N 0.2500, Plg7.0000°, Azm322.0000°; P -2.0900, Plg64.0000°, Azm219.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*PRU **26** 21:42:03.6±0.0, 42°.95N×13°.34E, h0km, M4.7*
*NEIC **26** 21:42:03.3, 42°.92N×13°.15E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.19; $M_{\theta\theta}$0.27; $M_{\phi\phi}$0.92; $M_{r\theta}$0.38; $M_{\theta\phi}$-0.32; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.19000×10^{16} NP1:φs169.13000°, δ40.12000°, λ-70.80000°. NP2:φs324.64000°, δ52.51000°, λ-105.49000°. Principal axes: T 1.0741, Plg6.0000°, Azm66.0000°; N 0.2085, Plg12.0000°, Azm334.0000°; P -1.2826, Plg76.0000°, Azm182.0000°;*
*STR **26** 21:42:05.7±0.3, 43°.N±6°×1°.3E±°.1, h10km, mb4.9/14*
*BEO **26** 21:42:06.2±0.6, 43°.00N×13°.39E, h10km, ML4.9/18*
*BNS **26** 21:42:06.6±0.4, 42°.88N×12°.90E, h10km, ML4.5*
*GEN **26** 21:42:17.1, 43°.42N×12°.06E, h31km±2km, Ml0.0*

ISC 26 21:42:02.9±0.5, 42°.87N±0°.01×13°.11E±0°.01, h11km±2km, n1272, σ1§78/1386, mb4.8/112, MS4.2/22, 134C-68D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**98**	⇓P	**Pg**	**21 42 04.3**	**-1.0**
T1245				S	**Sg**	**21 42 05.6**	**-1.5**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.07**	**291**	⇑P	**Pg**	**21 42 04.7**	**-0.8**
T1216				S	**Sg**	**21 42 06.4**	**-0.9**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.07**	**50**	⇑P	**Pg**	**21 42 04.6**	**-1.0**
MC2				S	**Sg**	**21 42 05.9**	**-1.7**
FEMA	**Monte Fema**	**0.11**	**335**	⇓P	**Pg**	**21 42 05.2**	**-0.8**
FEMA				S	**Sg**	**21 42 07.3**	**-0.8**
FEMA				AML	AML		
FEMA				AML	AML		
MMO1	**Montemonaco**	**0.16**	**77**	⇑P	**Pg**	**21 42 06.0**	**-0.7**
MMO1				S	**Sg**	**21 42 08.5**	**-0.7**
T1244	**Arquata del Tr**	**0.17**	**128**	⇑P	**Pg**	**21 42 06.4**	**-0.4**
T1244				S	**Sg**	**21 42 09.5**	**0.0**
T1215	**Vallo di Nera,**	**0.19**	**251**	⇑P	**Pg**	**21 42 06.8**	**-0.3**
T1215				S	**Sg**	**21 42 10.2**	**+0.2**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1217	**Poggiodomo (PG**	**0.20**	**221**	⇑P	**Pg**	**21 42 07.0**	**-0.3**
T1217				S	**Sg**	**21 42 10.7**	**+0.4**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
CESI	**CESI - Serrava**	**0.21**	**313**	⇑P	**Pg**	**21 42 07.0**	**-0.4**
CESI				S	**Sg**	**21 42 10.6**	**+0.1**
AM05	**Amandola Campo**	**0.21**	**57**	AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
T1201	**Domo (RI)**	**0.23**	**154**	⇑P	**Pg**	**21 42 07.6**	**-0.2**
T1201				S	**Sg**	**21 42 11.8**	**+0.7**
T1241	**Roccafluvione,**	**0.23**	**92**	AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1204	**Amatrice, Fraz**	**0.24**	**141**	⇑P	**Pg**	**21 42 07.6**	**-0.4**
T1204				S	**Sg**	**21 42 11.5**	**+0.1**
T1204				AML	AML		
T1204				AML	AML		
GUMA	**Gualdo di Mace**	**0.26**	**39**	⇑P	**Pg**	**21 42 07.9**	**-0.3**
GUMA				S	**Sg**	**21 42 12.0**	**+0.2**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
LNSS	**Leonessa**	**0.27**	**192**	⇑P	**Pg**	**21 42 08.0**	**-0.4**
LNSS				S	**Sg**	**21 42 12.3**	**+0.1**
LNSS				AML	AML		
LNSS				AML	AML		
SMA1	**SAN MARTINO**	**0.29**	**145**	⇓P	**Pg**	**21 42 08.3**	**-0.5**
SMA1				S	**Sg**	**21 42 12.6**	**-0.1**
SMA1				AML	AML		
SMA1				AML	AML		
T1243	**Rocca Santa Ma**	**0.30**	**124**	⇑P	**Pg**	**21 42 08.3**	**-0.7**
T1243				S	**Sg**	**21 42 12.9**	**-0.2**
SEF1	**Sefro**	**0.31**	**337**	P	**Pg**	**21 42 08.6**	**-0.6**
SEF1				S	**Sb**	**21 42 13.8**	**-1.7**
SEF1				AML	AML		
SEF1				AML	AML		
PIO1	**Pioraco**	**0.33**	**343**	⇑P	**Pg**	**21 42 08.8**	**-0.7**
PIO1				S	**Sb**	**21 42 14.2**	**-1.9**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
MDAR	**Monte D'Aria**	**0.33**	**4**	⇑P	**Pg**	**21 42 08.8**	**-0.8**
MDAR				S	**Sb**	**21 42 14.1**	**-2.1**
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
FIU1	**Fiuminata**	**0.35**	**338**	P	**Pg**	**21 42 09.4**	**-0.5**
FIU1				S	**Sb**	**21 42 15.2**	**-1.5**
FIU1				AML	AML		
	comp=E,70750μm,0.7s						
FIU1				AML	AML		
	comp=N,63500μm,1.3s						
FIU1				AML	AML		
	comp=E,70750μm,0.7s						
FIU1				AML	AML		
	comp=N,63450μm,1.4s						
RM33	**Pellescritta (**	**0.36**	**168**	⇑P	**Pg**	**21 42 09.6**	**-0.6**
RM33				S	**Sg**	**21 42 15.4**	**+0.4**
RM33				AML	AML		

RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
SSM1	**San Severino M**	**0.37**	**7**	P	**Pg**	**21 42 09.6**	**-0.7**
SSM1				S	**Sb**	**21 42 15.5**	**-1.7**
GAG1	**Gagliole**	**0.38**	**355**	⇑P	**Pg**	**21 42 09.9**	**-0.5**
GAG1				S	**Sb**	**21 42 16.0**	**-1.4**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
MNTP	**Montappone**	**0.38**	**44**	⇑P	**Pb**	**21 42 10.3**	**-1.3**
MNTP				AML	AML		
MNTP				AML	AML		
T1211	**Morro Reatino**	**0.38**	**210**	⇑P	**Pg**	**21 42 10.1**	**-0.5**
T1211				S	**Sg**	**21 42 16.1**	**+0.5**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
CAMP	**Campotosto**	**0.39**	**146**		**Pg**	**21 42 10.0**	**-0.7**
CAMP				Sg	**Sg**	**21 42 12.8**	**-3.2**
CAMP	**Campotosto**	**0.39**	**146**	⇓P	**Pg**	**21 42 10.0**	**-0.7**
CAMP				S	**Sg**	**21 42 15.6**	**-0.4**
CAMP				AML	AML		
	comp=N,84700µm,0.5s						
CAMP				AML	AML		
T1246	**Crognaleto (TE**	**0.40**	**135**	⇑P	**Pg**	**21 42 10.1**	**-0.7**
T1246				S	**Sg**	**21 42 16.1**	**0.0**
MTL1	**Matelica**	**0.40**	**349**	P	**Pg**	**21 42 10.2**	**-0.6**
MTL1				S	**Sb**	**21 42 16.8**	**-1.3**
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.41**	**342**	⇑P	**Pg**	**21 42 10.4**	**-0.6**
SNTG				S	**Sb**	**21 42 17.0**	**-1.5**
SNTG				AML	AML		
	comp=N,57300µm,1.0s						
SNTG				AML	AML		
	comp=N,60200µm,0.9s						
SNTG				AML	AML		
	comp=E,56900µm,0.7s						
SNTG				AML	AML		
	comp=E,57650µm,0.7s						
OFFI	**Offida**	**0.43**	**80**	⇑P	**Pb**	**21 42 11.5**	**-1.0**
OFFI				AML	AML		
OFFI				AML	AML		
TERO	**Teramo**	**0.43**	**124**	⇑P	**Pg**	**21 42 10.6**	**-0.9**
TERO				S	**Sg**	**21 42 17.1**	**-0.2**
TERO				AML	AML		
TERO				AML	AML		
T1247	**Pizzolo (AQ)**	**0.44**	**162**	⇓P	**Pg**	**21 42 11.0**	**-0.6**
T1247				S	**Sg**	**21 42 17.7**	**+0.1**
T1247				AML	AML		
T1247				AML	AML		
EL6	**Elcito**	**0.47**	**359**	⇑P	**Pg**	**21 42 11.3**	**-0.8**
EL6				S	**Sb**	**21 42 18.7**	**-1.4**
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
CESX	**Cesi**	**0.47**	**237**	Pg	**Pg**	**21 42 11.2**	**-0.9**
CESX				Sg	**Sg**	**21 42 18.5**	**+0.2**
CESX	**Cesi**	**0.47**	**237**	⇑P	**Pg**	**21 42 11.4**	**-0.6**
CESX				S	**Sg**	**21 42 18.8**	**+0.5**
CESX				AML	AML		
CESX				AML	AML		
	comp=N,91100µm,1.6s						
TRE1	**Treia**	**0.47**	**18**	⇑P	**Pb**	**21 42 11.8**	**-1.4**
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
ATCC	**AVT- Casa Cast**	**0.47**	**313**	P	**Pg**	**21 42 11.6**	**-0.6**
ATCC				S	**Sg**	**21 42 19.3**	**+0.8**
GIGS	**Gran Sasso**	**0.53**	**141**	P	**Pg**	**21 42 12.2**	**-1.2**
GIGS				S	**Sg**	**21 42 20.1**	**-0.3**
GIGS				AML	AML		
	comp=E,29700µm,1.2s						
GIGS				AML	AML		
	comp=N,23850µm,0.4s						
AQU	**L'Aquila**	**0.55**	**157**		**Pg**	**21 42 12.8**	**-0.9**
AQU				Sg	**Sg**	**21 42 21.0**	**-0.1**
AQU	**L'Aquila**	**0.55**	**157**	P	**Pg**	**21 42 12.8**	**-0.9**
AQU						21 42 21.0	
AQU	**L'Aquila**	**0.55**	**157**	⇓P	**Pg**	**21 42 12.8**	**-0.9**
AQU				AML	AML		
	comp=N,80100µm,1.5s						
AQU				AML	AML		
	comp=E,83050µm,1.1s						
AQU				AML	AML		
	comp=E,87300µm,1.1s						
AQU				AML	AML		
	comp=N,78750µm,1.5s						
CADA	**Capodarco di F**	**0.58**	**55**	P	**Pb**	**21 42 14.5**	**-0.5**
CADA				AML	AML		
CADA				AML	AML		
MMUR	**Monte Murano**	**0.58**	**352**	P	**Pg**	**21 42 13.4**	**-0.9**
MMUR				S	**Sb**	**21 42 22.7**	**-0.8**
MURB	**Monte Urbino**	**0.59**	**313**	Pg	**Pg**	**21 42 13.7**	**-0.7**
MURB				Sg	**Sb**	**21 42 23.6**	**0.0**
MURB	**Monte Urbino**	**0.59**	**313**	P	**Pg**	**21 42 13.8**	**-0.5**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
TRTR	**Tortoreto Alta**	**0.59**	**95**	⇑P	**Pb**	**21 42 14.7**	**-0.5**
TRTR				AML	AML		
TRTR				AML	AML		
FIAM	**Fiamignano**	**0.60**	**180**	⇑P	**Pg**	**21 42 13.5**	**-1.0**
FIAM				S	**Sg**	**21 42 22.5**	**+0.1**
FIAM				AML	AML		
	comp=N,56650µm,0.4s						
FIAM				AML	AML		
	comp=E,47350µm,0.2s						
CIMA	**Civitanova Mar**	**0.60**	**43**	P	**Pb**	**21 42 14.6**	**-0.8**
CIMA				AML	AML		
CIMA				AML	AML		
PP3	**Marolino**	**0.63**	**35**	⇑P	**Pb**	**21 42 15.1**	**-0.8**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
ATFO	**Monte Foce - G**	**0.64**	**322**	⇓P	**Pg**	**21 42 14.6**	**-0.7**
ATFO				AML	AML		
	comp=N,46750µm,1.0s						
ATFO				AML	AML		
	comp=E,50000µm,1.0s						
ATSC	**Scheggia e Pas**	**0.64**	**331**	P	**Pg**	**21 42 14.5**	**-0.9**
ARVD	**Arcevia**	**0.65**	**349**	P	**Pg**	**21 42 14.6**	**-0.9**
ARVD				AML	AML		
	comp=E,33200µm,0.9s						
ARVD				AML	AML		
	comp=N,35800µm,0.9s						
ATTE	**AVT- Monte Tez**	**0.65**	**301**	⇑P	**Pg**	**21 42 14.7**	**-0.8**
ATTE				AML	AML		
	comp=N,35600µm,1.6s						
ATTE				AML	AML		
	comp=E,30300µm,0.5s						
ATLO	**AVT- Montelove**	**0.69**	**311**	P	**Pg**	**21 42 15.2**	**-1.0**
FAGN	**Fagnano**	**0.69**	**150**	⇓P	**Pg**	**21 42 14.9**	**-1.4**
FAGN				AML	AML		
	comp=N,92650µm,0.3s						
FAGN				AML	AML		
FRON	**Frontone**	**0.71**	**337**		**Pg**	**21 42 15.8**	**-1.0**
FRON	**Frontone**	**0.71**	**337**	⇓P	**Pg**	**21 42 15.7**	**-1.0**
FRON				AML	AML		
	comp=N,44750µm,1.3s						
FRON				AML	AML		
	comp=E,34850µm,0.6s						
VCEL	**Villa Celiera**	**0.71**	**131**	⇑P	**Pg**	**21 42 15.8**	**-0.9**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
TB01	**Gubbio**	**0.72**	**316**	P	**Pg**	**21 42 15.8**	**-1.0**
TB01				S	**Sg**	**21 42 26.3**	**+0.1**
TB02	**Pietralunga**	**0.72**	**315**	⇑P	**Pg**	**21 42 15.9**	**-1.0**
TB02				S	**Sg**	**21 42 25.7**	**-0.7**
ATVO	**AVT- Monte Val**	**0.73**	**315**	⇑P	**Pg**	**21 42 16.2**	**-0.8**
ATVO				AML	AML		
	comp=N,38000µm,0.8s						
ATVO				AML	AML		
	comp=E,39050µm,0.6s						
ATVA	**AVT- Monte Val**	**0.73**	**305**	P	**Pg**	**21 42 16.1**	**-1.1**
ATBU	**Serra di Buran**	**0.74**	**326**	P	**Pg**	**21 42 16.4**	**-0.8**
TB03	**Pietralunga**	**0.74**	**316**	P	**Pg**	**21 42 16.1**	**-1.2**
SRES	**S.Oreste - Sor**	**0.77**	**216**	⇑P	**Pg**	**21 42 16.6**	**-1.1**
SRES				AML	AML		
	comp=E,47800µm,0.6s						
SRES				AML	AML		
	comp=N,41200µm,0.5s						
AOI	**Ancona**	**0.77**	**27**		**Pb**	**21 42 17.2**	**-1.2**
AOI	**Ancona**	**0.77**	**27**	⇑P	**Pb**	**21 42 17.0**	**-1.4**
AOI				AML	AML		
	comp=E,54050µm,1.0s						
AOI				AML	AML		
	comp=N,54700µm,0.6s						
ATMI	**Monte Miggiano**	**0.78**	**307**	⇑P	**Pg**	**21 42 17.2**	**-0.8**
ATMI				AML	AML		
	comp=E,85550µm,1.5s						
ATMI				AML	AML		
	comp=N,95600µm,1.4s						
ATPC	**Poggio Castell**	**0.78**	**322**	P	**Pg**	**21 42 16.9**	**-1.1**
ATPI	**Pietralunga -**	**0.78**	**319**	P	**Pg**	**21 42 17.2**	**-0.9**
ATPI				AML	AML		
	comp=N,25250µm,1.6s						
ATPI				AML	AML		
	comp=N,25300µm,1.6s						
ATPI				AML	AML		
	comp=E,38650µm,1.0s						
PIEI	**Pieia**	**0.79**	**328**	⇓P	**Pg**	**21 42 17.0**	**-1.2**
PIEI				AML	AML		
	comp=E,22800µm,1.3s						
PIEI				AML	AML		
	comp=N,24350µm,1.1s						
PCRO	**Pietralacroce**	**0.80**	**22**	P	**Pb**	**21 42 17.9**	**-1.0**
T0110	**Collepietro**	**0.81**	**142**	⇓P	**Pg**	**21 42 16.9**	**-1.6**
T0110				AML	AML		
T0110				AML	AML		
	comp=E,94000µm,0.5s						
MPAG	**Monte Paganucc**	**0.81**	**341**	⇑P	**Pg**	**21 42 17.5**	**-1.0**
MPAG				AML	AML		
	comp=N,38550µm,1.0s						
MPAG				AML	AML		
	comp=E,37850µm,0.8s						
MPAG				AML	AML		
	comp=N,37500µm,1.0s						
MPAG				AML	AML		
	comp=E,37550µm,0.8s						
NARO	**Abbazia di Nar**	**0.84**	**333**	⇓P	**Pg**	**21 42 17.8**	**-1.3**
NARO				AML	AML		
	comp=E,29700µm,0.8s						
NARO				AML	AML		
	comp=N,22050µm,1.1s						
SENI	**Senigallia**	**0.84**	**6**	P	**Pb**	**21 42 18.8**	**-0.7**
SENI				AML	AML		
SENI				AML	AML		
APEC	**Apecchio**	**0.86**	**324**		**Pg**	**21 42 18.9**	**-0.6**
APEC	**Apecchio**	**0.86**	**324**	P	**Pg**	**21 42 18.7**	**-0.8**
APEC				AML	AML		
	comp=N,7990µm,0.6s						
APEC				AML	AML		
	comp=E,9470µm,0.8s						
FSSB	**Fossombrone**	**0.86**	**344**	⇑P	**Pg**	**21 42 18.5**	**-1.0**
FSSB				AML	AML		
	comp=E,81250µm,0.4s						
FSSB				AML	AML		
PTQR	**Pietraquaria**	**0.87**	**166**	⇓P	**Pg**	**21 42 17.9**	**-1.8**
PTQR				AML	AML		
	comp=E,28750µm,1.0s						
PTQR				AML	AML		
	comp=N,26600µm,1.5s						
MTCE	**Montecelio**	**0.89**	**198**	⇑P	**Pg**	**21 42 18.2**	**-1.7**
MTCE				AML	AML		
	comp=E,39200µm,1.6s						
MTCE				AML	AML		
	comp=N,23550µm,1.6s						
SACS	**San Casciano d**	**0.89**	**269**	⇑P	**Pg**	**21 42 19.2**	**-0.8**
SACS				AML	AML		
	comp=N,40450µm,1.4s						
SACS				AML	AML		
	comp=E,41000µm,0.6s						
SACS				AML	AML		
	comp=N,43250µm,1.4s						
SACS				AML	AML		
	comp=E,40150µm,0.5s						
ATMC	**Monte Cedrone**	**0.89**	**311**	P	**Pg**	**21 42 18.9**	**-1.2**
CERT	**Cerreto**	**0.92**	**186**	P	**Pg**	**21 42 19.1**	**-1.6**
CERT				AML	AML		
	comp=N,33050µm,0.5s						
CERT				AML	AML		
	comp=E,63700µm,0.5s						
PE3	**Peglio**	**0.94**	**332**	P	**Pg**	**21 42 20.2**	**-0.9**
PE3				AML	AML		
	comp=N,120µm,1.0s						
PE3				AML	AML		
	comp=E,141µm,0.4s						
CAFI	**Castiglion Fio**	**0.96**	**299**		**Pg**	**21 42 20.4**	**-1.0**
CAFI	**Castiglion Fio**	**0.96**	**299**	P	**Pg**	**21 42 20.2**	**-1.2**
CAFI				AML	AML		
	comp=N,22750µm,1.2s						
CAFI				AML	AML		
	comp=N,21900µm,1.3s						
CAFI				AML	AML		
	comp=E,23200µm,1.5s						
CAFI				AML	AML		
	comp=E,23050µm,1.5s						
SSP9	**Sansepolcro**	**1.01**	**315**	P	**Pg**	**21 42 21.3**	**-1.0**
SSP9				AML	AML		
	comp=E,30350µm,1.2s						
SSP9				AML	AML		
	comp=N,37000µm,1.2s						
RCAV	**Rocca di Cave**	**1.02**	**187**	P	**Pg**	**21 42 21.2**	**-1.5**
RCAV				AML	AML		
	comp=E,38750µm,1.2s						
RCAV				AML	AML		
	comp=N,38400µm,1.0s						
INTR	**Introdacqua**	**1.03**	**145**	Pg	**Pg**	**21 42 20.6**	**-2.2**
INTR	**Introdacqua**	**1.03**	**145**	⇓P	**Pg**	**21 42 20.6**	**-2.2**
INTR				AML	AML		
	comp=N,78µm,1.4s						
INTR				AML	AML		
	comp=E,52µm,0.8s						
MCIV	**Monte Civitell**	**1.06**	**266**	⇑P	**Pb**	**21 42 22.0**	**-1.3**
MCIV				AML	AML		
	comp=E,14400µm,0.7s						
MCIV				AML	AML		
	comp=N,15700µm,1.4s						
VVLD	**Villa Vallelon**	**1.06**	**159**	P	**Pg**	**21 42 21.4**	**-2.0**
VVLD				AML	AML		
	comp=N,31500µm,0.6s						
VVLD				AML	AML		
	comp=E,35700µm,0.7s						
SF04	**Casetta**	**1.07**	**269**	AML	AML		
	comp=N,16255µm,1.6s						
SF04				AML	AML		
	comp=E,21850µm,0.5s						
GUAR	**Guarcino**	**1.08**	**172**	P	**Pb**	**21 42 22.8**	**-0.8**
GUAR				AML	AML		
	comp=E,29500µm,1.3s						
GUAR				AML	AML		
	comp=N,27300µm,1.1s						
RMP	**Rome, Mte Porz**	**1.10**	**196**	⇑P	**Pb**	**21 42 22.0**	**-1.9**
RMP				AML	AML		
	comp=E,38600µm,0.5s						
RMP				AML	AML		
	comp=N,40050µm,0.5s						
CAFR	**Castel Frentan**	**1.11**	**125**	P	**Pb**	**21 42 22.4**	**-1.7**
CAFR				AML	AML		
	comp=E,33800µm,0.6s						
CAFR				AML	AML		
	comp=N,27850µm,0.5s						
CRE	**Caprese Michel**	**1.14**	**312**	P	**Pb**	**21 42 23.6**	**-1.0**
CRE				AML	AML		
	comp=N,15350µm,1.2s						
CRE				AML	AML		
	comp=E,17400µm,0.6s						
LPEL	**Lama dei Pelig**	**1.14**	**136**	P	**Pb**	**21 42 22.6**	**-2.0**
LPEL				AML	AML		
	comp=N,37350µm,0.8s						
LPEL				AML	AML		
	comp=E,44000µm,0.6s						
SF01	**Poggio Pratacc**	**1.14**	**268**	AML	AML		
	comp=E,23800µm,0.8s						
SF01				AML	AML		
	comp=N,24950µm,0.6s						
VIVA	**Pratoni del Vi**	**1.14**	**193**	P	**Pb**	**21 42 22.6**	**-2.0**
VIVA				AML	AML		
	comp=N,58650µm,0.4s						
VIVA				AML	AML		
	comp=E,59550µm,0.6s						
RDP	**Rocca di Papa**	**1.14**	**195**		**Pb**	**21 42 24.7**	**0.0**
RDP	**Rocca di Papa**	**1.14**	**195**	P	**Pb**	**21 42 24.7**	**0.0**
RDP	**Rocca di Papa**	**1.14**	**195**	P	**Pb**	**21 42 23.0**	**-1.7**
RDP				AML	AML		
	comp=E,63250µm,0.5s						
RDP				AML	AML		
	comp=N,59950µm,0.5s						
TOLF	**Tolfa**	**1.15**	**226**		**Pn**	**21 42 23.5**	**-1.4**
TOLF	**Tolfa**	**1.15**	**226**	P	**Pn**	**21 42 23.5**	**-1.4**
TOLF				AML	AML		
	comp=N,18000µm,0.7s						
TOLF				AML	AML		
	comp=E,23750µm,1.6s						
ARCI	**Arcidosso**	**1.20**	**270**	P	**Pn**	**21 42 24.9**	**-0.9**
ARCI				AML	AML		
	comp=E,8170µm,0.8s						
ARCI				AML	AML		
	comp=N,5850µm,1.6s						
LAV9	**Lanuvio**	**1.23**	**195**	P	**Pn**	**21 42 24.1**	**-1.9**
LAV9				AML	AML		
	comp=N,39900µm,1.5s						
LAV9				AML	AML		
	comp=E,46200µm,1.5s						
LAV9				AML	AML		
	comp=E,43450µm,1.5s						
LAV9				AML	AML		
	comp=N,40800µm,0.4s						
POFI	**Posta Fibreno**	**1.23**	**159**	P	**Pn**	**21 42 24.5**	**-1.6**
POFI				AML	AML		
	comp=N,18250µm,1.6s						
POFI				AML	AML		
	comp=E,19900µm,1.3s						
LRP	**Arpino**	**1.27**	**164**	P	**Pn**	**21 42 26.4**	**-0.1**
LRP				AML	AML		
	comp=E,13550µm,0.8s						
LRP				AML	AML		
	comp=N,19700µm,0.9s						
GIUL	**Giuliano Di Ro**	**1.31**	**175**	P	**Pn**	**21 42 27.0**	**-0.1**
GIUL				AML	AML		
	comp=N,16200µm,0.6s						
GIUL				AML	AML		
	comp=E,13500µm,1.3s						
ASQU	**Asqua**	**1.34**	**314**	P	**Pn**	**21 42 26.9**	**-0.7**
ASQU	**Asqua**	**1.34**	**314**	P	**Pn**	**21 42 27.0**	**-0.7**
ASQU				AML	AML		
	comp=N,15550µm,1.6s						
ASQU				AML	AML		
	comp=E,15250µm,0.8s						
BLLA	**Bellaria**	**1.36**	**340**		**Pg**	**21 42 28.6**	**-0.5**
BLLA	**Bellaria**	**1.36**	**340**	P	**Pg**	**21 42 28.5**	**-0.5**
BLLA				AML	AML		
	comp=N,41650µm,1.6s						
BLLA				AML	AML		
	comp=E,46100µm,1.3s						
LATB	**Latina**	**1.37**	**185**	P	**Pn**	**21 42 26.2**	**-1.7**
LATB				AML	AML		
	comp=E,5725µm,1.3s						
LATB				AML	AML		
	comp=N,5860µm,1.5s						
SFI	**Santa Sofia**	**1.39**	**319**	P	**Pn**	**21 42 28.1**	**-0.1**
SFI				AML	AML		
	comp=N,14400µm,1.5s						
SFI				AML	AML		
	comp=E,12400µm,1.6s						
SFI				AML	AML		
	comp=E,12300µm,1.6s						
SFI				AML	AML		
	comp=N,14650µm,1.5s						
RNI2	**Rionero Sannit**	**1.39**	**146**	P	**Pn**	**21 42 28.6**	**+0.2**
RNI2				AML	AML		
	comp=E,28050µm,0.7s						
RNI2				AML	AML		
	comp=N,25750µm,0.8s						
RNI2				AML	AML		
	comp=E,27100µm,0.6s						
RNI2				AML	AML		
	comp=N,24850µm,0.8s						
LIK	**San Giovanni I**	**1.40**	**166**	P	**Pn**	**21 42 28.8**	**+0.5**
LIK	**San Giovanni I**	**1.40**	**166**	AML	AML		
	comp=N,29100µm,0.9s						
LIK				AML	AML		
	comp=E,27500µm,0.8s						
CERA	**Filignano**	**1.43**	**152**	P	**Pn**	**21 42 28.2**	**-0.7**
CERA				AML	AML		
	comp=N,22200µm,0.8s						
CERA				AML	AML		
	comp=N,22950µm,0.8s						
CERA				AML	AML		
	comp=E,26350µm,1.0s						
CERA				AML	AML		
	comp=E,27050µm,0.9s						
FRES	**Fresagrandinar**	**1.46**	**127**	P	**Pn**	**21 42 28.0**	**-1.1**
CSNT	**Castellina Chi**	**1.47**	**295**	P	**Pn**	**21 42 29.1**	**-0.2**
CSNT	**Castellina Chi**	**1.47**	**295**	P	**Pn**	**21 42 28.8**	**-0.5**
CSNT				AML	AML		
	comp=E,7135µm,1.6s						
CSNT				AML	AML		
	comp=N,6535µm,0.9s						
FROS	**Frosini**	**1.48**	**284**	P	**Pn**	**21 42 29.0**	**-0.4**
FROS	**Frosini**	**1.48**	**284**	P	**Pn**	**21 42 29.1**	**-0.3**
FROS				AML	AML		
	comp=N,8440µm,1.0s						
FROS				AML	AML		
	comp=E,13950µm,1.0s						
OSSC	**Osservatorio P**	**1.52**	**296**	Pn	**Pn**	**21 42 29.2**	**-0.8**
OSSC	**Osservatorio P**	**1.52**	**296**	P	**Pn**	**21 42 29.7**	**-0.2**
OSSC	**Osservatorio P**	**1.52**	**296**	P	**Pn**	**21 42 29.3**	**-0.6**
OSSC				AML	AML		
	comp=N,8690µm,1.2s						
OSSC				AML	AML		
	comp=E,6350µm,0.7s						
OSSC				AML	AML		
	comp=N,6380µm,0.7s						
OSSC				AML	AML		
	comp=E,8800µm,1.2s						
RUFI	**Rufina**	**1.52**	**310**		**Pn**	**21 42 30.4**	**+0.4**
RUFI	**Rufina**	**1.52**	**310**	P	**Pn**	**21 42 29.6**	**-0.4**
RUFI	**Rufina**	**1.52**	**310**	P	**Pn**	**21 42 30.0**	**0.0**
RUFI				AML	AML		
	comp=E,9440µm,1.3s						
RUFI				AML	AML		
	comp=N,13550µm,1.4s						
MAON	**Monte Argentar**	**1.53**	**254**	⇑P	**Pn**	**21 42 29.5**	**-0.6**
MAON				AML	AML		
	comp=N,4370µm,1.6s						
MAON				AML	AML		
	comp=E,3865µm,0.9s						
TRIV	**Trivento**	**1.53**	**135**	P	**Pn**	**21 42 30.2**	**+0.1**
TRIV				AML	AML		
	comp=E,40700µm,1.2s						
TRIV				AML	AML		
	comp=N,27200µm,1.2s						
LMD	**Lutirano**	**1.59**	**320**	P	**Pn**	**21 42 31.2**	**+0.3**
LMD	**Lutirano**	**1.59**	**320**	P	**Pn**	**21 42 31.2**	**+0.3**
LMD				AML	AML		
	comp=E,9740µm,1.2s						
LMD				AML	AML		
	comp=N,12550µm,1.3s						
TRIF	**Trifonti**	**1.64**	**280**	P	**Pn**	**21 42 31.3**	**-0.4**
TRIF				AML	AML		
	comp=E,5450µm,1.2s						
TRIF				AML	AML		
	comp=N,5570µm,0.9s						
VAGA	**Valle Agricola**	**1.67**	**150**	P	**Pn**	**21 42 32.1**	**0.0**
VAGA				AML	AML		
	comp=N,12150µm,1.6s						
VAGA				AML	AML		
	comp=E,9955µm,1.1s						
VAGA				AML	AML		
	comp=E,10280µm,1.1s						
VAGA				AML	AML		
	comp=N,11750µm,1.6s						
BSSO	**Busso**	**1.72**	**140**		**Pb**	**21 42 34.4**	**-0.1**
BSSO	**Busso**	**1.72**	**140**	P	**Pb**	**21 42 34.0**	**-0.5**
BRIS	**BRISIGHELLA**	**1.73**	**318**	P	**Pn**	**21 42 32.4**	**-0.6**
BRIS				AML	AML		
	comp=E,20050µm,1.3s						
BRIS				AML	AML		
	comp=N,12950µm,1.4s						
BRIS				AML	AML		
	comp=E,19000µm,1.4s						
BRIS				AML	AML		

comp=N,13500µm,1.4s
SEI Scarperia 1.75 314 P Pn 21 42 33.3 +0.1
SEI Scarperia 1.75 314 P Pn 21 42 33.1 0.0
CIGN Sant'Elia a Pi 1.80 132 P Pn 21 42 34.1 +0.3
CIGN AML AML
comp=N,9145µm,0.9s
CIGN AML AML
comp=E,15650µm,1.0s
MODR Mondragone 1.81 161 P Pn 21 42 34.1 +0.1
MODR AML AML
comp=E,7240µm,1.0s
MODR AML AML
comp=N,6730µm,1.0s
PTRJ Pietraroja 1.83 144 Pb 21 42 36.3 -0.1
PTRJ Pietraroja 1.83 144 P Pb 21 42 35.8 -0.7
PTRJ AML AML
comp=N,12250µm,0.7s
PTRJ AML AML
comp=E,19100µm,0.6s
PTRJ AML AML
comp=E,16750µm,0.6s
PTRJ AML AML
comp=N,11200µm,0.7s
PIGN Pignataro Magg 1.84 154 P Pn 21 42 34.6 +0.2
PIGN AML AML
comp=E,5990µm,1.2s
PIGN AML AML
comp=E,6135µm,1.2s
PIGN AML AML
comp=N,6585µm,1.4s
PIGN AML AML
comp=N,6225µm,1.4s
SACR S. Croce Del S 1.89 141 P Pb 21 42 36.6 -0.7
SACR AML AML
comp=N,10475µm,0.9s
SACR AML AML
comp=E,7920µm,1.2s
MELA Melanico ??? S 1.89 127 P Pb 21 42 36.1 -1.3
MELA AML AML
comp=N,29400µm,0.7s
MELA AML AML
comp=E,34250µm,1.0s
MELA AML AML
comp=N,30550µm,0.7s
MELA AML AML
comp=E,33100µm,0.9s
GATE Gambatesa 1.90 135 AML AML
comp=N,9200µm,1.6s
GATE AML AML
comp=N,9100µm,1.6s
GATE AML AML
comp=E,5725µm,1.3s
GATE AML AML
comp=E,8220µm,1.2s
TREM Isole Tremiti 1.92 112 P Pn 21 42 35.2 -0.2
TREM AML AML
comp=E,25900µm,0.8s
TREM AML AML
comp=N,35150µm,0.7s
MTCR Monte La Croce 1.93 308 P Pn 21 42 35.2 -0.6
MTCR Monte La Croce 1.93 308 P Pn 21 42 35.0 -0.7
MTCR AML AML
comp=N,7555µm,1.2s
MTCR AML AML
comp=E,6685µm,1.6s
VITU Vitulano (BN) 2.02 146 P Pn 21 42 37.5 +0.5
VITU AML AML
comp=E,6830µm,0.7s
VITU AML AML
comp=N,9180µm,1.6s
VITU AML AML
comp=N,8855µm,1.6s
VITU AML AML
comp=E,3335µm,0.9s
PSB1 Pescosannita 2.07 142 P Pb 21 42 39.2 -1.2
PSB1 AML AML
comp=N,8630µm,0.9s
PSB1 AML AML
comp=E,8685µm,1.2s
PSB1 AML AML
comp=N,8030µm,0.9s
PSB1 AML AML
comp=E,9120µm,1.2s
PII Pisa 2.08 295 P Pn 21 42 37.6 0.0
PII Pisa 2.08 295 P Pn 21 42 37.4 -0.1
PII AML AML
comp=N,3780µm,0.7s
PII AML AML
comp=E,3440µm,0.9s
VENT Ventotene 2.08 174 P Pn 21 42 38.2 +0.5
VENT AML AML
comp=N,5555µm,1.1s
VENT AML AML
comp=E,5710µm,1.6s
POPM Popiglio 2.08 305 P Pn 21 42 37.4 -0.3
POPM Popiglio 2.08 305 P Pn 21 42 37.3 -0.5
BRJN Brijuni 2.09 13 P Pn 21 42 37.3 -0.5
APRC Apricena 2.12 121 P Pn 21 42 38.3 +0.1
APRC AML AML
comp=N,23150µm,0.6s
APRC AML AML
comp=E,16600µm,0.6s
PAOL Paolisi 2.13 149 Pn 21 42 38.4 0.0
MOCO Biccari - m.te 2.13 134 AML AML
comp=E,7950µm,0.7s
MOCO AML AML
comp=N,3710µm,1.3s
CELB S.Piero in Cam 2.14 268 P Pn 21 42 38.1 -0.4
CELB AML AML
comp=E,2055µm,0.9s
CELB AML AML
comp=N,1218µm,0.8s
ZCCA Zocca 2.15 314 Pn Pn 21 42 40.2 +1.5
ZCCA Zocca 2.15 314 P Pb 21 42 41.1 -0.7
ZCCA AML AML
comp=E,6455µm,1.1s
ZCCA AML AML
comp=N,7610µm,1.2s
ZCCA AML AML
comp=E,6430µm,1.0s
ZCCA AML AML
comp=N,7335µm,1.1s
MAIM Mastiano 2.18 300 Pn 21 42 38.9 -0.2
MAIM Mastiano 2.18 300 P Pn 21 42 38.9 -0.2
MAIM Mastiano 2.18 300 P Pn 21 42 38.8 -0.2
BDI Bagni Di Lucca 2.19 304 P Pn 21 42 38.6 -0.7
BDI AML AML
comp=E,1510µm,0.6s
BDI AML AML
comp=N,1500µm,1.0s
BDI AML AML
comp=E,3670µm,1.5s
BDI AML AML
comp=N,3495µm,1.0s
CARD Cardoso 2.24 302 P Pn 21 42 39.4 -0.5
CARD Cardoso 2.24 302 P Pn 21 42 39.6 -0.3
CARD AML AML
comp=E,2980µm,0.6s
CARD AML AML
comp=N,3145µm,0.6s
SGRT San Giovanni R 2.24 119 Pn 21 42 40.6 +0.6
SGRT San Giovanni R 2.24 119 P Pn 21 42 40.3 +0.2
GSCL Gusciola 2.36 310 P Pn 21 42 42.0 +0.4
VLC Villacollemand 2.37 304 Pn 21 42 40.8 -0.9
VLC Villacollemand 2.37 304 P Pn 21 42 41.1 -0.6
SARO Sassorosso 2.37 305 P Pn 21 42 40.9 -0.9
SGTA Sant Agata di 2.41 135 P Pn 21 42 43.6 +1.4
SGTA AML AML
comp=E,9630µm,1.2s
SGTA AML AML
comp=E,9475µm,1.2s
SGTA AML AML
comp=N,5160µm,1.6s
SGTA AML AML
comp=N,4980µm,1.6s
GROG Isola di Gorgo 2.42 284 P Pn 21 42 42.2 -0.2
GROG AML AML
comp=E,946µm,1.5s
GROG AML AML
comp=N,900µm,1.6s
SNAL S. Angelo Dei 2.49 140 P Pb 21 42 45.7 -2.0
SNAL AML AML
comp=E,9735µm,1.1s
SNAL AML AML
comp=N,9575µm,1.1s
SNAL AML AML
comp=N,9525µm,1.1s
SNAL AML AML
comp=E,9745µm,1.1s
SERM Sermide 2.52 329 P Pb 21 42 46.4 -1.6
EQUI Equi 2.52 302 P Pn 21 42 43.7 0.0
EQUI AML AML
comp=E,2060µm,0.8s
EQUI AML AML
comp=N,2585µm,1.0s
MCRV Calabrutti - M 2.59 143 P Pn 21 42 45.5 +0.8
MCRV AML AML
comp=E,2135µm,0.7s
MCRV AML AML
comp=N,2590µm,1.6s
CAPA Cerignola FG 2.64 129 P Pn 21 42 46.3 +0.9
CAPA AML AML
comp=N,19200µm,0.9s
CAPA AML AML
comp=E,16050µm,1.4s
RIY Rijeka 2.65 21 *e*Pn **Pn 21 42 45.3 -0.2**
RIY *e*Sn **Sn 21 43 17.8 +0.2**
PLMA Palmaria, Port 2.65 298 P Pn 21 42 44.7 -0.8
PLMA AML AML
comp=E,1220µm,0.9s
PLMA AML AML
comp=N,1410µm,1.1s
VULT Monte Vulture 2.67 135 P Pn 21 42 47.2 +1.4
VULT AML AML
comp=N,11740µm,1.0s
VULT AML AML
comp=N,11280µm,1.0s
VULT AML AML
comp=E,8930µm,0.8s
VULT AML AML
comp=E,8625µm,0.8s
TEOL Teolo 2.70 338 Pn **Pn 21 42 46.8 +0.5**
TEOL Teolo 2.70 338 P Pn 21 42 46.4 +0.2
TEOL AML AML
comp=N,10355µm,1.0s
TEOL AML AML
comp=E,16550µm,0.7s
GRAM Graiana 2.74 307 Pn 21 42 47.8 +0.9
GRAM Graiana 2.74 307 P Pn 21 42 47.2 +0.3
GRAM AML AML
comp=E,4765µm,1.0s
GRAM AML AML
comp=N,4375µm,0.9s
MRLC Muro Lucano 2.75 139 P Pn 21 42 48.4 +1.4
MRLC AML AML
comp=N,3105µm,1.0s
MRLC AML AML
comp=N,3440µm,1.0s
MRLC AML AML
comp=E,2885µm,1.6s
MRLC AML AML
comp=E,2745µm,1.6s
SKDS Skadanscina 2.76 13⇑ *i*Pn **Pn 21 42 46.3 -0.7**
PRMA PARMA 2.78 314 Pn 21 42 48.2 +1.0
OPPE Oppeano 2.81 331 Pn 21 42 49.8 +2.1
OPPE Oppeano 2.81 331 P Pn 21 42 49.0 +1.3
OPPE AML AML
comp=N,8870µm,1.0s
OPPE AML AML
comp=E,11080µm,1.1s
PALZ Palazzo San Ge 2.86 131 P Pn 21 42 49.1 +0.7
PALZ AML AML
comp=N,13400µm,0.8s
PALZ AML AML
comp=E,11900µm,0.9s
CDRU Civita di Ruta 2.88 145 P Pn 21 42 48.7 -0.1
CDRU AML AML
comp=N,1440µm,0.9s
CDRU AML AML
comp=E,1870µm,0.8s
MRVN Minervino Murg 2.92 127 P Pn 21 42 49.4 +0.1
MRVN AML AML
comp=E,3425µm,1.0s
MRVN AML AML
comp=N,2885µm,0.8s
SMPL Sampolo 2.93 256 P Pn 21 42 49.2 -0.3
SMPL AML AML
comp=E,315µm,1.4s
SMPL AML AML
comp=N,292µm,1.5s
ACER Acerenza 2.96 134 P Pn 21 42 50.7 +0.9
ACER AML AML
comp=E,7500µm,0.8s
ACER AML AML
comp=E,7840µm,0.8s
ACER AML AML
comp=N,6360µm,1.0s
ACER AML AML
comp=N,6020µm,1.2s
MSSA Maissana 2.99 300 Pn **Pn 21 42 50.5 +0.3**
MSSA Maissana 2.99 300 P Pn 21 42 50.2 -0.1
MSSA AML AML
comp=N,1525µm,1.2s
MSSA AML AML
comp=E,1410µm,1.0s
PZUN Potenza 3.00 137 Pb 21 42 53.4 -2.8
PZUN Potenza 3.00 137 AML AML
comp=N,3810µm,1.3s
PZUN AML AML
comp=E,4555µm,1.0s
PZUN AML AML
comp=N,3350µm,1.3s
PZUN AML AML
comp=E,4290µm,1.0s
CEY Cerknica 3.02 18⇑ *i*Pn **Pn 21 42 50.2 -0.5**
PGF Pioggiola 3.05 265 *e*P **Pn 21 42 51.6 +0.5**
PGF *e*Sn **Sn 21 43 22.3 -5.3**
comp=E,595nm,0.8s
PGF Pioggiola 3.05 265 AML AML
comp=E,516µm,1.3s
PGF AML AML
comp=N,404µm,0.8s
BOJS Bojanci 3.05 30⇑ *i*Pn **Pn 21 42 50.9 -0.2**
BOJS Bojanci 3.05 30 P Pn 21 42 51.0 -0.1
BOJS AML AML
comp=N,10165µm,1.0s
BOJS AML AML
comp=E,8030µm,0.8s
SABO M.te Sabotino 3.13 6⇑P Pn 21 42 51.9 -0.3
SABO AML AML
comp=E,8220µm,0.7s
SABO AML AML
comp=N,50250µm,0.6s
SABO AML AML
comp=N,12725µm,0.6s
SABO AML AML
comp=E,37850µm,0.7s
ROVR Rover Verones 3.14 333 P Pn 21 42 53.2 +0.8
ROVR AML AML
comp=N,1355µm,0.8s
ROVR AML AML
comp=N,3400µm,1.1s
ROVR AML AML
comp=E,3180µm,0.9s
ROVR AML AML
comp=E,1305µm,0.9s
CGRP Cima Grappa 3.16 343 P Pn 21 42 52.9 +0.2
CGRP AML AML
comp=E,9115µm,0.8s
CGRP AML AML
comp=N,7315µm,0.9s
CGRP AML AML
comp=E,9200µm,0.8s
CGRP AML AML
comp=N,7285µm,0.9s
SRKY Kupres RS 3.19 66⇑ *i*Pn **Pn 21 42 54.2 +1.2**
VARN Col Varnada, M 3.21 347 P Pn 21 42 53.4 +0.1
VARN AML AML
comp=N,5775µm,0.8s
VARN AML AML
comp=N,5825µm,0.8s
VARN AML AML
comp=E,9470µm,1.0s
VARN AML AML
comp=E,9475µm,1.0s
VOJS Vojsko 3.21 10⇑ *i*Pn **Pn 21 42 52.6 -0.7**
VOJS IAML 21 44 04.5
comp=Z,3µm,1.1s
PTRP Pietrapertosa 3.22 136 Pn 21 42 55.4 +2.0
PTRP Pietrapertosa 3.22 136 P Pn 21 42 55.4 +2.0
PTRP AML AML
comp=N,5840µm,0.8s
PTRP AML AML
comp=E,6020µm,0.7s
MCEL Monticello 3.24 141 P Pn 21 42 55.6 +1.9
MCEL AML AML
comp=N,1760µm,0.8s
MCEL AML AML
comp=N,1790µm,0.8s
MCEL AML AML
comp=E,1885µm,1.1s
MCEL AML AML
comp=E,1885µm,1.1s
AMUR Altamura 3.26 126 P Pn 21 42 53.6 -0.3
AMUR AML AML
comp=E,3410µm,1.0s
AMUR AML AML
comp=N,3685µm,0.6s
MTSN Montesano sull 3.27 142 P Pn 21 42 55.9 +1.8
MTSN AML AML
comp=N,1355µm,0.9s
MTSN AML AML
comp=E,1870µm,0.7s
MGRS Mrkonjic Grad 3.27 60⇑ *i*Pn **Pn 21 42 55.4 +1.3**
MGR Morigerati 3.28 145 P Pn 21 42 55.7 +1.4
MGR AML AML
comp=E,1350µm,0.9s
MGR AML AML
comp=E,1176µm,1.0s
MGR AML AML
comp=N,1245µm,0.9s
MGR AML AML
comp=N,958µm,1.4s
AG11 Viggiano (PZ) 3.31 139 AML AML
comp=N,3230µm,0.8s
AG11 AML AML
comp=E,2810µm,1.4s
DOSS Dosso del Somm 3.32 336 P Pn 21 42 55.1 +0.3
DOSS AML AML
comp=N,4010µm,1.6s
DOSS AML AML
comp=E,3375µm,0.9s
DOSS AML AML
comp=N,3310µm,0.9s
DOSS AML AML
comp=E,3835µm,1.6s
SALO Salr 3.32 327 Pn **Pn 21 42 55.9 +1.1**
SALO Salr 3.32 327 P Pn 21 42 55.9 +1.1
SALO AML AML
comp=N,6680µm,1.2s
SALO AML AML
comp=E,5315µm,1.0s
SALO AML AML
comp=E,5120µm,1.0s
SALO AML AML
comp=N,6495µm,1.2s
LJU Ljubljana 3.34 17⇑ *i*Pn **Pn 21 42 55.2 +0.3**
LJU *e*Sn **Sn 21 43 35.0 +0.4**
LJU IAML 21 44 08.6
comp=Z,4µm,1.2s
LJU Ljubljana 3.34 17 ⇑P Pn 21 42 55.2 +0.3
LJU AML AML
comp=E,30150µm,0.5s
LJU AML AML
comp=N,33400µm,0.5s
CTI Castel Tesino 3.35 342 Pn **Pn 21 42 55.4 +0.2**
CTI Castel Tesino 3.35 342 P Pn 21 42 55.4 +0.2
CTI Castel Tesino 3.35 342 P Pn 21 42 55.6 +0.4
CTI AML AML
comp=E,4730µm,1.0s
CTI AML AML
comp=N,2780µm,0.7s
PRIJ Prijedor 3.35 50 *e*Pn **Pn 21 42 55.8 +0.7**
AJAC Base Areonaval 3.35 255 P Pn 21 42 55.7 +0.6
AJAC Base Areonaval 3.35 255 AML AML
comp=E,860µm,0.9s
AJAC AML AML
comp=N,658µm,1.4s
MIGL Miglionico 3.36 131 P Pn 21 42 55.9 +0.6
MIGL AML AML
comp=N,17650µm,1.1s
MIGL AML AML
comp=E,12800µm,0.7s
STON Ston 3.37 88⇑ *i*Pn **Pn 21 42 54.2 -1.2**
STON Ston 3.37 88 *e*Pn **Pn 21 42 54.6 -0.8**
STON *e*Sn **Sn 21 43 33.0 -2.4**
STON Ston 3.37 88 AML AML
comp=E,1565µm,0.7s
STON AML AML
comp=N,2065µm,1.3s
MPRI Monte Prat 3.38 359 ⇑P Pn 21 42 55.7 +0.1
MPRI AML AML
comp=N,5300µm,0.5s
MPRI AML AML
comp=E,4250µm,1.1s
MPRI AML AML
comp=N,6970µm,0.5s
MPRI AML AML
comp=E,5580µm,1.1s
SIRI Monte Sirino - 3.38 141 P Pn 21 42 57.2 +1.5
SIRI AML AML
comp=N,1185µm,0.9s
SIRI AML AML
comp=E,1032µm,1.3s
SIRI AML AML
comp=E,1048µm,1.3s
SIRI AML AML
comp=N,1190µm,0.9s
CADS Cadrg 3.39 7⇑ *i*Pn **Pn 21 42 55.3 -0.5**
STAL STALIGIAL 3.41 355 Pn 21 42 55.8 -0.2
STAL STALIGIAL 3.41 355 ⇑P Pn 21 42 55.8 -0.2
STAL AML AML
comp=N,4585µm,0.8s
STAL AML AML
comp=N,3705µm,0.8s
STAL AML AML
comp=E,3820µm,1.1s
STAL AML AML
comp=E,4955µm,0.5s
LUSI Trento, Gardas 3.46 334 P Pn 21 42 57.2 +0.5
LUSI AML AML
comp=N,3730µm,0.9s
LUSI AML AML
comp=E,3420µm,1.1s
SCHR S. Chirico Rap 3.47 139 P Pn 21 42 58.3 +1.4
SCHR AML AML
comp=E,972µm,1.0s
SCHR AML AML
comp=N,1250µm,1.1s
CIMO Cimolais 3.48 352 ⇑P Pn 21 42 56.7 -0.2
CIMO AML AML
comp=E,1640µm,0.7s
CIMO AML AML
comp=E,1620µm,0.7s
CIMO AML AML
comp=N,1305µm,1.3s
CIMO AML AML
comp=N,1280µm,1.3s
A051A Mrakovica 3.48 51⇑ *i*Pn **Pn 21 42 57.4 +0.4**
MATE Matera 3.48 128 ⇓P Pn 21 42 57.5 +0.1
MATE Matera 3.48 128 P Pn 21 42 57.8 +0.9
MATE AML AML
comp=E,3270µm,0.6s
MATE AML AML
comp=N,4480µm,0.6s
BLY Banja Luka 3.50 56⇑ *i*Pn **Pn 21 42 57.4 +0.3**
BLY Banja Luka 3.50 56 *e*Pn **Pn 21 42 58.1 +0.9**
BLY *e*Sn **Sn 21 43 35.6 -2.9**
BLY Banja Luka 3.50 56 P Pn 21 42 57.5 +0.3
BLY AML AML
comp=N,5005µm,1.4s
BLY AML AML
comp=E,4845µm,1.0s
BLY AML AML
comp=N,4910µm,1.4s
BLY AML AML
comp=E,4815µm,1.0s
AGOR Agordo 3.50 348 P Pn 21 42 57.5 +0.2
AGOR AML AML
comp=E,2695µm,1.3s
AGOR AML AML
comp=N,2950µm,1.1s
AGOR AML AML
comp=N,2375µm,1.1s
AGOR AML AML
comp=E,2215µm,1.3s
CUC Castrocucco 3.52 144 Pn 21 42 58.5 +1.1
CRAC Craco 3.53 134 P Pn 21 42 58.8 +1.3

CRAC AML AML
comp=E,7960µm,1.1s
CRAC AML AML
comp=N,5920µm,1.3s
PTCC Patocco-Chiusa 3.54 3 P **Pn 21 42 57.4 -0.5**
PTCC AML AML
comp=E,2610µm,0.6s
PTCC AML AML
comp=N,2090µm,1.6s
GAGG Gaggia 3.57 335 P **Pn 21 42 59.2 +0.9**
GAGG AML AML
comp=N,5095µm,0.9s
GAGG AML AML
comp=E,5705µm,0.9s
GAGG AML AML
comp=N,5550µm,0.9s
GAGG AML AML
comp=E,5030µm,0.9s
LTRZ Laterza 3.58 128 P **Pn 21 42 59.3 +1.0**
PRED Cave del Predi 3.59 5 Pn **Pn 21 42 58.4 -0.2**
CLUD Cludinico 3.60 357 **Pn 21 42 58.5 -0.1**
CLUD Cludinico 3.60 357 ⇑P **Pn 21 42 58.4 -0.1**
CLUD AML AML
comp=N,4660µm,0.9s
CLUD AML AML
comp=N,4705µm,1.2s
CLUD AML AML
comp=E,4920µm,1.0s
CLUD AML AML
comp=E,4840µm,1.0s
NOCI Noci 3.61 124 P **Pn 21 42 58.7 0.0**
NOCI AML AML
comp=E,2545µm,0.5s
NOCI AML AML
comp=N,3585µm,0.5s
ZONE Zone 3.61 324 P **Pn 21 42 59.1 +0.4**
ZONE AML AML
comp=E,388µm,0.9s
ZONE AML AML
comp=N,2842µm,1.3s
ZONE AML AML
comp=N,1935µm,1.2s
ZONE AML AML
comp=E,1685µm,0.7s
DGI Dorgali Grotta 3.66 227 ⇑P **Pn 21 42 59.5 +0.1**
MABI Malga Bissina 3.69 331 P **Pn 21 43 01.0 +1.0**
MABI AML AML
comp=N,1105µm,0.8s
MABI AML AML
comp=E,1062µm,1.0s
ZOU Zoufplan 3.69 359 ⇑P **Pn 21 43 00.1 +0.1**
ZOU AML AML
comp=N,3955µm,1.0s
ZOU AML AML
comp=N,3905µm,1.0s
ZOU AML AML
comp=E,4135µm,1.2s
ZOU AML AML
comp=E,4235µm,1.2s
ACOM Acomizza, Ital 3.69 4 ⇑P **Pn 21 42 60.0 -0.1**
ACOM AML AML
comp=E,6115µm,0.8s
ACOM AML AML
comp=N,4930µm,0.9s
ACOM AML AML
comp=N,4490µm,0.9s
ACOM AML AML
comp=E,6180µm,0.8s
FVI Forni Avoltri 3.74 356 ⇑P **Pn 21 43 00.4 -0.1**
FVI AML AML
comp=N,3810µm,0.9s
FVI AML AML
comp=E,2745µm,1.5s
ORI Oriolo Calabro 3.76 137 AML AML
comp=N,3655µm,0.9s
ORI AML AML
comp=E,4080µm,0.7s
MYKA Terra Mystica 3.78 6 *i* Pn **Pn 21 43 01.6 +0.4**
comp=E,62nm,0.3s,SNR=86
MYKA *e*Sn **Sn 21 43 46.5 +0.8**
comp=E,480nm,0.5s
OBKA Obir 3.79 15 ⇑*i*Pn **Pn 21 43 00.5 -0.7**
OBKA Obir 3.79 15 *i* Pn **Pn 21 43 01.2 0.0**
comp=E,59nm,0.4s,SNR=16
KOSI Kohlern 3.81 342 AML AML
comp=E,4975µm,1.0s
KOSI AML AML
comp=N,4760µm,1.1s
BOSI Bolzano 3.85 341 AML AML
comp=N,12240µm,0.9s
BOSI AML AML
comp=E,12000µm,1.0s
SALB San Lorenzo Be 3.85 140 AML AML
comp=E,1090µm,0.8s
SALB AML AML
comp=N,854µm,0.7s
SALB AML AML
comp=N,798µm,1.5s
SALB AML AML
comp=E,1145µm,0.8s
APPI Appiano 3.86 340 AML AML
comp=N,2385µm,0.8s
APPI AML AML
comp=E,2515µm,0.8s
TREB Trebinje 3.86 90 *e*Pn **Pn 21 43 02.8 +0.7**
TREB Trebinje 3.86 90 *e*Pn **Pn 21 43 02.6 +0.5**
TREB *e*Sn **Sn 21 43 46.2 -1.2**
A052A Srbac 3.88 53 ⇑*i*Pn **Pn 21 43 02.3 -0.2**
TAR1 Taranto 3.90 125 AML AML
comp=N,3435µm,0.5s
TAR1 AML AML
comp=E,2825µm,1.1s
ABTA Abfaltersbach 3.91 354 *i* Pn **Pn 21 43 03.8 +0.9**
comp=E,513nm,0.6s,SNR=243
ABTA *e*Sn **Sn 21 43 51.3 +2.6**
comp=E,1µm,0.9s
CET2 Cetraro 3.96 146 AML AML
comp=N,1580µm,0.6s
CET2 AML AML
comp=E,1220µm,0.9s
ROTM Rocchetta Tana 3.97 302 AML AML
comp=E,3235µm,1.3s
ROTM AML AML
comp=N,4785µm,1.5s
BRY Bratogost 3.99 88 ⇑*i*Pn **Pn 21 43 04.6 +0.6**
BRY Bratogost 3.99 88 ⇓*i*Pn **Pn 21 43 04.0 0.0**
BRY *i* Sn **Sn 21 43 50.8 0.0**
HCY Herceg Novi 3.99 94 ⇑*i*Pn **Pn 21 43 04.5 +0.6**
HCY Herceg Novi 3.99 94 ⇓*i*Pn **Pn 21 43 04.1 +0.2**
HCY *i* Sn **Sn 21 43 51.0 +0.3**
SOKA Soboth 4.05 19 *i* Pn **Pn 21 43 05.0 +0.1**
comp=N,27nm,0.4s,SNR=24
SOKA *e*Sn **Sn 21 43 53.2 +0.9**
comp=N,191nm,0.6s
DOB Doboj 4.07 61 *e*Pn **Pn 21 43 04.3 -0.6**
RISI Rein 4.15 350 AML AML
comp=E,4345µm,0.6s
RISI AML AML
comp=N,4675µm,1.5s
BERNI Berninapass 4.18 329 AML AML
comp=N,921µm,0.9s
BERNI AML AML
comp=E,790µm,1.1s
SAOF Saorge 4.20 287 AML AML
comp=N,426µm,0.9s
SAOF AML AML
comp=E,481µm,0.6s
KBA Koelnbreinsper 4.22 2 *e*Pn **Pn 21 43 08.0 +0.8**
comp=E,378nm,0.7s
KBA *e*Sn **Sn 21 43 57.7 +1.2**
comp=E,609nm,0.7s
KBA Koelnbreinsper 4.22 2 *e*Pn **Pn 21 43 07.9 +0.7**
KBA *e*Sn **Sn 21 43 56.8 +0.3**
KOGS Kog 4.22 31 AML AML
comp=N,17000µm,1.0s
KOGS AML AML
comp=E,22200µm,1.5s
MUGIO Muggio 4.22 318 AML AML
comp=N,860µm,1.0s
MUGIO AML AML
comp=E,662µm,1.4s
ROSI Rosskopf 4.24 344 AML AML
comp=E,4305µm,0.9s
ROSI AML AML
comp=N,4055µm,1.4s
SBF Sospel 4.26 285 *e*P **Pn 21 43 08.1 +0.4**
SBF *e*Sn **Sn 21 43 51.8 -5.6**
comp=N,352nm,0.6s
UPM Unac-Piva 4.26 83 *e*Pn **Pn 21 43 09.5 +1.7**
UPM Unac-Piva 4.26 83 ⇓*i*Pn **Pn 21 43 07.7 -0.1**
UPM *i* Sn **Sn 21 43 57.4 -0.2**
FUORN Ofenpass-Fuorn 4.27 333 Pn **Pn 21 43 09.7 +1.7**
CEME Cevo 4.29 92 ⇑*i*Pn **Pn 21 43 08.2 +0.1**
CEME *i* Sn **Sn 21 43 58.2 +0.1**
NKME Niksic 4.30 89 ⇓*i*Pn **Pn 21 43 08.3 +0.1**
NKME *i* Sn **Sn 21 43 58.3 0.0**
CAR1 CAROLEI 4.30 146 AML AML
comp=N,594µm,1.6s
CAR1 AML AML
comp=E,790µm,1.1s
CAR1 AML AML
comp=N,591µm,1.5s
CAR1 AML AML
comp=E,832µm,1.0s
BUM Brajici-Budva 4.30 96 ⇑*i*Pn **Pn 21 43 08.4 +0.1**
BUM *i* Sn **Sn 21 43 58.7 +0.2**
CELI Celico 4.30 142 AML AML
comp=E,1181µm,1.6s
CELI AML AML
comp=E,460µm,1.6s
CELI AML AML
comp=N,461µm,1.3s
CELI AML AML
comp=N,1175µm,1.3s
VARE Varese 4.33 315 AML AML
comp=N,1320µm,1.0s
VARE AML AML
comp=E,1070µm,0.8s
ENR Entracque 4.36 290 AML AML
comp=E,428µm,0.8s
ENR AML AML
comp=N,377µm,0.7s
VSL Villasalto 4.39 221 AML AML
comp=N,512µm,0.7s
VSL AML AML
comp=E,442µm,0.7s
HAPS Han Pijesak,Bl 4.42 72 ⇑*i*Pn **Pn 21 43 10.7 +0.7**
BEHE Becsehely 4.45 35 P **Pn 21 43 11.4 +1.1**
FETA Feichten 4.49 339 *i* Pn **Pn 21 43 13.1 +2.2**
comp=E,148nm,0.9s,SNR=124
TUE Stuetta 4.50 325 Pn **Pn 21 43 12.5 +1.4**
WTTA Wattenberg 4.52 347 *i* Pn **Pn 21 43 13.2 +1.8**
comp=E,47nm,0.3s,SNR=90
WTTA Wattenberg 4.52 347 *e*Pn **Pn 21 43 13.3 +1.8**
WTTA Wattenberg 4.52 347 AML AML
comp=E,3995µm,1.0s
WTTA AML AML
comp=N,2430µm,0.8s
DRME Dracevica, Mon 4.54 97 ⇑*i*Pn **Pn 21 43 12.5 +1.0**
DRME Dracevica, Mon 4.54 97 ⇑*i*Pn **Pn 21 43 11.7 +0.2**
DRME *i* Sn **Sn 21 44 04.3 +0.1**
DAVOX Davos/Dischmat 4.54 331 Pn **Pn 21 43 12.5 +0.8**
comp=N,39nm,0.3s,baz=132,slow=7.1,SNR=167
DAVOX Sn **Sn 21 44 03.7 -0.8**
comp=N,8.4nm,0.3s,baz=300,slow=20,SNR=1.5
DAVOX LR LR 21 44 33.8
comp=N,147nm,18.9s,baz=107,slow=34
PDG Podgorica 4.55 93 ⇓P **Pn 21 43 12.3 +0.7**
PDG Podgorica 4.55 93 Pn **Pn 21 43 12.5 +0.9**
PDG Podgorica 4.55 93 *e*Pn **Pn 21 43 12.5 +0.9**
PDG *e*Sn **Sn 21 44 02.0 -2.5**
PDG Podgorica 4.55 93 AML AML
comp=E,1330µm,0.9s
PDG AML AML
comp=E,1690µm,0.9s
PDG AML AML
comp=N,1790µm,0.5s
PDG AML AML
comp=N,1385µm,0.5s
TTG Podgorica 4.55 93 ⇑*i*Pn **Pn 21 43 11.8 +0.2**
TTG *i* Sn **Sn 21 44 04.6 +0.1**
SQTA Sankt Quirin 4.56 343 **Pn 21 43 14.4 +2.5**
SQTA Sankt Quirin 4.56 343 P **Pn 21 43 14.4 +2.5**
SQTA Sankt Quirin 4.56 343 *i* Pn **Pn 21 43 14.4 +2.5**
comp=N,76nm,0.5s,SNR=134
SQTA *e*Sn **Sn 21 44 08.8 +3.9**
comp=N,669nm,0.7s
TIP Timpagrande 4.60 142 ⇑P **Pn 21 43 13.0 +0.6**
TIP Timpagrande 4.60 142 **Pn 21 43 14.9 +2.6**
WATA Walderalm 4.60 347 **Pn 21 43 14.2 +1.7**
WATA Walderalm 4.60 347 P **Pn 21 43 14.2 +1.7**
WATA Walderalm 4.60 347 *i* Pn **Pn 21 43 14.2 +1.7**
comp=N,103nm,0.5s,SNR=175
PLE Pljevlja 4.62 82 *e*Pn **Pn 21 43 12.7 0.0**
PLE *i* Sn **Sn 21 44 06.1 -0.2**
ULC Ulcinj 4.63 99 ⇓*i*Pn **Pn 21 43 12.9 +0.2**
ULC *i* Sn **Sn 21 44 06.5 +0.1**
RUDO Rudo 4.63 79 *e*Pn **Pn 21 43 13.0 +0.2**
PZZ Stroppo 4.65 293 AML AML
comp=E,364µm,1.2s
PZZ AML AML
comp=N,410µm,0.9s
BHB Bricherasio 4.67 297 AML AML
comp=E,320µm,1.3s
BHB AML AML
comp=N,310µm,1.6s
TRAV Traversella 4.68 306 AML AML
comp=E,456µm,0.7s
TRAV AML AML
comp=N,532µm,0.9s
BBLS Lazići 4.70 76 ⇑*i*Pn **Pn 21 43 14.3 +0.6**
BBLS Lazići 4.70 76 *e*Pn **Pn 21 43 14.4 +0.7**
MOTA Moosalm 4.70 343 **Pn 21 43 15.7 +1.9**
MOTA Moosalm 4.70 343 P **Pn 21 43 15.7 +1.9**
MOTA Moosalm 4.70 343 *i* Pn **Pn 21 43 15.7 +1.9**
comp=N,4.6nm,0.3s,SNR=104
MOTA *e*Sn **Sn 21 44 12.8 +4.4**
comp=N,358nm,0.6s
ARSA Arzberg 4.71 20 *i* Pn **Pn 21 43 13.4 -0.4**
comp=N,28nm,0.3s,SNR=44
ARSA Arzberg 4.71 20 *e*Pn **Pn 21 43 13.4 -0.4**
ARSA Arzberg 4.71 20 AML AML
comp=E,1008µm,1.5s
ARSA AML AML
comp=N,598µm,1.1s
KOME Kolasin 4.71 88 ⇓*i*Pn **Pn 21 43 14.0 +0.1**
KOME *i* Sn **Sn 21 44 08.2 -0.3**
ZUGS Zugspitze, Sch 4.79 342 *e*Pn **Pn 21 43 17.9 +2.6**
KOVH Kovagotottos 4.81 46 P **Pn 21 43 14.3 -0.8**
KOVH S **Sn 21 44 09.1 -1.7**
BIOA Bad Ischl, Aus 4.84 4 **Pn 21 43 16.3 +0.7**
BIOA Bad Ischl, Aus 4.84 4 *i* Pn **Pn 21 43 16.3 +0.7**
comp=N,300nm,0.5s,SNR=234
PART Garmisch-Parte 4.84 344 *e*Pn **Pn 21 43 18.2 +2.5**
BLJ Bijeljina 4.85 65 ⇑*i*Pn **Pn 21 43 14.5 -1.2**
LMR La Mourre 4.86 278 *e*P **Pn 21 43 15.7 -0.2**
LMR *e*Sn **Sn 21 44 06.0 -6.1**
comp=N,159nm,1.1s
RJOB Jochberg 4.88 357 *e*Pn **Pn 21 43 17.2 +1.0**
RJOB *e*Sn **Sn 21 44 13.8 +1.2**
SCTE Santa Cesarea 4.89 123 Pn **Pn 21 43 17.2 +0.8**
RETA Reutte 4.91 341 *i* Pn **Pn 21 43 18.7 +2.0**
comp=N,85nm,0.3s,SNR=71
RETA *e*Sn **Sn 21 44 18.0 +4.5**
comp=N,255nm,0.8s
LLS Linth-Limmern 4.94 325 P **Pn 21 43 19.4 +2.3**
TEKS Tekeris 4.95 68 *e*Pn **Pn 21 43 15.4 -1.7**
TEKS Tekeris 4.95 68 *e*Pn **Pn 21 43 16.5 -0.6**
MBDF Montbardon 4.95 294 *e*P **Pn 21 43 20.4 +3.1**
MBDF *e*Sn **Sn 21 44 07.8 -6.8**
comp=N,440nm,0.9s
OBER Oberstdorf 4.96 337 *e*Pn **Pn 21 43 19.7 +2.3**
DAVA Damuels 4.98 334 *i* Pn **Pn 21 43 19.8 +2.1**
comp=N,211nm,0.7s,SNR=108
DAVA *e*Sn **Sn 21 44 18.8 +3.6**
comp=N,173nm,0.7s
DAVA Damuels 4.98 334 *e*Pn **Pn 21 43 20.4 +2.7**
IVA Berane 4.98 88 *e*Pn **Pn 21 43 17.8 +0.1**
IVA *i* Sn **Sn 21 44 14.9 -0.4**
SJES Sjenica 5.04 83 *e*Pn **Pn 21 43 19.0 +0.5**
SJES *e*Sn **Sn 21 44 13.6 -3.2**
PVY Plav 5.05 91 *e*Pn **Pn 21 43 18.7 +0.1**
PVY *i* Sn **Sn 21 44 16.6 -0.4**
MOA Molln 5.05 9 *e*Pn **Pn 21 43 18.9 +0.4**
MOA *e*Sn **Sn 21 44 13.3 -3.5**
MOA Molln 5.05 9 *i* Pn **Pn 21 43 19.0 +0.4**
comp=N,82nm,0.5s,SNR=68
MOA Molln 5.05 9 *e*Pn **Pn 21 43 18.9 +0.4**
CEL Celeste 5.06 154 Pn **Pn 21 43 20.2 +1.4**
DIVS Divibare 5.16 74 **Pn 21 43 20.0 -0.1**
DIVS Divibare 5.16 74 ⇑*i*Pn **Pn 21 43 19.9 -0.1**
DIVS Divibare 5.16 74 *e*Pn **Pn 21 43 20.5 +0.5**
DIVS *e*Sn **Sn 21 44 14.4 -5.1**
MORH Mrgy, Hungar 5.18 48 ⇑P **Pn 21 43 21.0 +0.7**
MORH Mrgy, Hungar 5.18 48 P **Pn 21 43 19.7 -0.6**
TIR Tirane 5.25 105 ⇑P **Pn 21 43 21.9 +0.7**
TIR Tirane 5.25 105 **Pn 21 43 21.8 +0.7**
TIR Tirane 5.25 105 P **Pn 21 43 21.9 +0.7**
TIR Tirane 5.25 105 *e*Pn **Pn 21 43 22.1 +0.9**
TIR *e*Sn **Sn 21 44 18.5 -3.1**
TIR Tirane 5.25 105 P **Pn 21 43 21.8 +0.7**
TIR S **Sn 21 44 19.6 -2.0**
UBR Ueberruh 5.26 337 *e*Pn **Pn 21 43 23.3 +1.8**
TIH Tihany 5.27 38 P **Pn 21 43 20.4 -1.1**
LPG La Plagne 5.28 302 *e*P **Pn 21 43 24.5 +2.6**
LPG *e*Sn **Sn 21 44 16.1 -6.7**
comp=N,243nm,0.8s
CLTB Caltabellotta 5.28 179 Pn **Pn 21 43 26.0 +4.2**
LPL La Plagne 5.30 302 *e*P **Pn 21 43 24.4 +2.3**
LPL *e*Sn **Sn 21 44 17.6 -5.6**
comp=N,250nm,0.9s
MPLH Magyarpolny 5.33 35 P **Pn 21 43 21.7 -0.6**
MPLH S **Sn 21 44 22.8 -0.8**
RONA Rosalia, Austr 5.33 24 **Pn 21 43 22.2 -0.2**
RONA Rosalia, Austr 5.33 24 *i* Pn **Pn 21 43 22.2 -0.2**
comp=N,37nm,0.5s,SNR=68
FRGS Fruska Gora 5.35 62 ⇓P **Pn 21 43 22.5 -0.1**
FRGS Fruska Gora 5.35 62 ⇑*i*Pn **Pn 21 43 22.0 -0.6**
FRGS Fruska Gora 5.35 62 *e*Pn **Pn 21 43 22.4 -0.2**
VLO Vlora 5.35 114 **Pn 21 43 24.2 +1.7**
VLO Vlora 5.35 114 P **Pn 21 43 23.6 +1.1**
VLO Vlora 5.35 114 P **Pn 21 43 24.2 +1.7**
SOP Sopron 5.40 26 P **Pn 21 43 22.6 -0.6**
SOP S **Sn 21 44 23.5 -1.8**
CONA Conrad Observa 5.42 20 *i* Pn **Pn 21 43 23.6 -0.1**
comp=N,34nm,0.2s,SNR=84
CONA *e*Sn **Sn 21 44 24.3 -1.7**
comp=N,128nm,0.6s
SENIN Lac Senin/Sane 5.43 312 **Pn 21 43 25.5 +1.6**
EGYH Egyhazaskeszo 5.44 32 P **Pn 21 43 23.3 -0.6**
FUR Furstenfeldbru 5.46 347 *e*Pn **Pn 21 43 26.7 +2.6**
VAE Valguarnera 5.47 169 Pn **Pn 21 43 27.6 +3.2**
comp=N,11nm,0.8s,baz=324,slow=17,SNR=1.8
TRUS Trudelj 5.47 73 *e*Pn **Pn 21 43 24.2 -0.1**
PHP Peshkopia 5.56 100 P **Pn 21 43 26.5 +0.9**
SMRF Simiane la Rot 5.60 284 *e*P **Pn 21 43 28.7 +2.6**
SMRF *e*Sn **Sn 21 44 24.1 -6.3**
comp=N,308nm,1.4s
ORIF Oris-en-Rattie 5.62 294 *e*P **Pn 21 43 30.6 +4.2**
ORIF *e*Sn **Sn 21 44 24.6 -6.3**
comp=N,208nm,0.7s
GRUS Gruza 5.63 77 *e*Pn **Pn 21 43 26.9 +0.4**
CSKK Cskako 5.79 37 P **Pn 21 43 29.3 +0.6**
SELS Selova 5.88 84 *e*Pn **Pn 21 43 30.3 +0.4**
SELS *e*Sn **Sn 21 44 33.1 -4.1**
KEK Kerkira 5.94 120 **Pn 21 43 31.1 +0.4**
KEK Kerkira 5.94 120 P **Pn 21 43 31.8 +1.1**
SRN Sarande 5.98 118 P **Pn 21 43 32.0 +0.8**
OHR Ohrid 5.99 104 *i* Pn **Pn 21 43 33.1 +1.6**
OHR *i* Sn **Sn 21 44 39.8 -0.3**
GEC2 GERESS Array S 6.00 4 **Pn 21 43 30.9 -0.7**
GEC2 GERESS Array S 6.00 4 *e*Pn **Pn 21 43 31.0 -0.6**
GERES GERESS Array B 6.00 4 Pn **Pn 21 43 30.8 -0.7**
comp=N,9.7nm,0.3s,baz=171,slow=14,SNR=92
GERES Sn **Sn 21 44 36.5 -3.7**
comp=N,39nm,0.3s,baz=171,slow=27,SNR=11
GERES Lg Lg 21 45 09.2
baz=185,slow=34
comp=N,17nm,0.4s
GERES GERESS Array B 6.00 4 **Pn 21 43 29.2 -2.3**
CKRC Cesky Krumlov 6.01 8 *e*PN **Pn 21 43 31.0 -0.8**
CKRC *e*SN **Sn 21 44 37.9 -2.7**
NORI Noerdlinger Ri 6.11 344 *e*Pn **Pn 21 43 33.0 0.0**
SRO Srobarova 6.16 35 *e*P **Pn 21 43 33.6 -0.1**
SRO *e* 21 44 43.0
KBN Korca 6.16 109 **Pn 21 43 34.8 +1.0**
KBN Korca 6.16 109 P **Pn 21 43 34.0 +0.2**
KBN Korca 6.16 109 P **Pn 21 43 34.8 +1.0**
BUD Budapest 6.23 40 P **Pn 21 43 34.4 -0.2**
SKO Skopje 6.23 95 *i* Pn **Pn 21 43 35.8 +1.1**
MODS Modra-Piesok 6.24 26 *e*P **Pn 21 43 34.0 -0.8**
LSK Leskovik 6.24 113 P **Pn 21 43 35.0 +0.1**
CABF La Chapelle 6.25 309 *e*P **Pn 21 43 37.2 +2.2**
KHC Kasperske Hory 6.28 3 **Pn 21 43 34.7 -0.7**
KHC Kasperske Hory 6.28 3 *e*P **Pn 21 43 34.7 -0.7**
KHC *e* 21 44 43.9
KHC Kasperske Hory 6.28 3 *e*PN **Pn 21 43 34.7 -0.7**
KHC *e*SN **Sn 21 44 43.9 -3.1**
WET Wettzell 6.28 359 *e*Pn **Pn 21 43 34.6 -0.8**
BANR Banloc 6.30 64 ⇓P **Pn 21 43 36.2 +0.6**
BOVS Bovan 6.32 80 ⇑P **Pn 21 43 35.8 -0.1**
BOVS Bovan 6.32 80 *e*Pn **Pn 21 43 35.7 -0.3**
BOVS *e*Sn **Sn 21 44 44.0 -4.1**
IGT Igoumenitsa 6.38 119 P **Pn 21 43 37.2 +0.4**
BARS Barje 6.40 87 *e*Pn **Pn 21 43 37.4 +0.4**
SMOL Smolenice 6.41 27 *e*P **Pn 21 43 36.5 -0.6**
SMOL *e* 21 44 50.1
BFO Black Forest 6.41 330 **Pn 21 43 37.4 +0.2**
BFO Black Forest 6.41 330 P **Pn 21 43 37.4 +0.2**
BFO S **Sn 21 44 52.1 +1.7**
BFO Black Forest 6.41 330 *e*Pn **Pn 21 43 37.9 +0.6**
BFO Black Forest 6.41 330 P **Pn 21 43 38.6 +1.4**
VIVF Saint-Julien-l 6.42 291 *e*P **Pn 21 43 40.1 +2.8**
NEST Nestorio 6.43 110 P **Pn 21 43 38.9 +1.4**
MDVR Moldovita 6.51 70 ⇓P **Pn 21 43 38.6 0.0**
STU Stuttgart 6.51 337 **Pn 21 43 39.5 +1.0**
STU Stuttgart 6.51 337 P **Pn 21 43 39.5 +1.0**
STU S **Sn 21 44 52.2 -0.5**
KRUC Moravsky 6.61 19 *e*PN **Pn 21 43 38.9 -0.9**
KRUC *e*SN **Sn 21 44 51.5 -3.6**
SSB Saint Sauveur 6.63 294 **Pn 21 43 40.2 0.0**
SSB Saint Sauveur 6.63 294 P **Pn 21 43 40.2 0.0**
HINF Hinteralfeld 6.63 320 *e*P **Pn 21 43 40.8 +0.6**
HINF *e*Sn **Sn 21 44 50.0 -5.8**
comp=N,858nm,1.1s
TREC Trest 6.64 14 *e*P **Pn 21 43 39.1 -1.2**
TREC *e* 21 44 53.0
TREC Trest 6.64 14 *e*PN **Pn 21 43 39.1 -1.2**
TREC *e*SN **Sn 21 44 53.0 -3.0**
JAN Janina 6.65 116 P **Pn 21 43 41.1 +0.6**
BZS Buzias 6.70 63 ⇓P **Pn 21 43 41.0 -0.1**
ZAGS Zajecar 6.72 79 *e*Pn **Pn 21 43 41.0 -0.4**
ZAGS *e*Sn **Sn 21 44 52.1 -5.7**
BSZH Besenyszg 6.73 46 ⇑P **Pn 21 43 41.9 +0.4**
JAVC Velka Javorina 6.79 26 *e*PN **Pn 21 43 42.4 0.0**
ECH Echery 6.79 324 **Pn 21 43 42.3 -0.1**
ECH Echery 6.79 324 P **Pn 21 43 42.3 -0.1**
STIP Stip 6.83 97 *i* Pn **Pn 21 43 45.2 +2.2**
STIP *i* Sn **Sn 21 45 03.0 +2.3**
LASF Ste Croix 6.84 283 *e*P **Pn 21 43 45.5 +2.4**
KPRO Kipourio 6.85 112 P **Pn 21 43 45.1 +1.8**
VRAC Vranov 6.88 19 ⇑P **Pn 21 43 43.4 -0.3**
VRAC Vranov 6.88 19 Pn **Pn 21 43 42.4 -1.3**
comp=N,3.3nm,0.3s,baz=196,slow=12,SNR=16
VRAC Sn **Sn 21 44 57.6 -4.4**
comp=N,3.2nm,0.3s,baz=289,slow=23,SNR=6.6
VRAC Lg Lg 21 45 37.7
baz=311,slow=20
VRAC LR LR 21 47 10.3
comp=N,712nm,18.6s,baz=212,slow=45
comp=N,11nm,0.4s
VRAC Vranov 6.88 19 *e*PN **Pn 21 43 43.0 -0.7**
VRAC *e*SN **Sn 21 44 58.0 -3.9**
CDF Champ du Feu 6.89 326 *e*P **Pn 21 43 44.7 +0.8**
CDF *e*Sn **Sn 21 44 56.6 -5.6**
comp=N,565nm,1.0s
VYHS Vyhne 6.91 33 *e*P **Pn 21 43 44.4 +0.4**
VYHS *e* 21 44 57.6
ROTZ Rotzenmuhle 6.93 355 *e*Pn **Pn 21 43 43.2 -1.2**
ROTZ *e*Sn **Sn 21 44 58.2 -4.9**
GRA1 Grafenberg Arr 6.95 350 **Pn 21 43 43.9 -0.7**
GRF Grafenberg Arr 6.95 350 P **Pn 21 43 43.9 -0.7**
GRF Grafenberg Arr 6.95 350 *e*Pn **Pn 21 43 43.9 -0.7**
GRFO Grafenberg 6.95 350 **Pn 21 43 43.8 -0.8**
GRFO Grafenberg 6.95 350 P **Pn 21 43 43.8 -0.8**
KZN Kozani 6.97 109 P **Pn 21 43 45.5 +0.5**
ZAPS Zavoj 6.99 83 *e*Pn **Pn 21 43 45.7 +0.6**
ZAPS *e*Sn **Sn 21 44 57.2 -7.3**
SIRR Siria 6.99 58 ⇑P **Pn 21 43 45.1 0.0**
TSLK Tsoukalades, L 7.00 123 P **Pn 21 43 46.5 +1.3**
HAU Haudompre 7.00 320 *e*P **Pn 21 43 46.1 +0.8**
HAU *e*Sn **Sn 21 44 58.2 -6.7**

comp=N,339nm,0.5s
HERR Herculane 7.02 70 ⇑P Pn 21 43 45.9 +0.3
LKD2 Lefkada island 7.02 123 P Pn 21 43 46.0 +0.4
BLKB Belogradchik 7.02 81 ⇑P Pn 21 43 45.7 +0.1
DRAG Dragano-Lefkad 7.04 124 P Pn 21 43 46.8 +1.0
DJES Djerdap 7.04 72 ⇑P Pn 21 43 46.5 +0.6
NYDR Nydri-Lefkada 7.09 123 P Pn 21 43 47.6 +1.1
EVGI Lefkada island 7.12 124 P Pn 21 43 47.7 +0.7
GOPC GO Pecny, Ondr 7.15 9 eP Pn 21 43 46.2 -1.1
GOPC GO Pecny, Ondr 7.15 9 ePN Pn 21 43 46.2 -1.1
MANZ Manzenberg 7.16 355 ePn Pn 21 43 46.2 -1.2
RMGR Halanga-Turnu 7.17 72 ⇓P Pn 21 43 47.9 +0.4
FSK Fiskardo 7.17 125 P Pn 21 43 48.9 +1.3
GRG Griva 7.19 102 P Pn 21 43 47.6 -0.3
PRU Pruhonice 7.19 7 eP Pn 21 43 46.7 -1.2
PRU e 21 45 05.9
PRU Pruhonice 7.19 7 ePN Pn 21 43 46.7 -1.2
PRU eSN Sn 21 45 05.9 -3.6
VAY Valandovo 7.20 99 i Pn Pn 21 43 48.7 +0.7
VAY i Sn Sn 21 45 06.5 -3.3
DMLN Damoulianata-K 7.20 127 P Pn 21 43 49.9 +1.8
KEF3 Kipouria, Keph 7.21 128 P Pn 21 43 49.2 +1.0
PUNG Punghina 7.27 75 ⇓P Pn 21 43 50.1 +1.2
MAUC Maruska 7.28 25 ePN Pn 21 43 49.1 0.0
MAHO Mahon 7.28 249 Pn 21 43 48.7 -0.4
VLS Valsamata 7.37 127 P Pn 21 43 51.5 +1.1
NKC Novy Kostel 7.38 357 eP Pn 21 43 49.8 -0.8
NKC e 21 45 11.4
NKC Novy Kostel 7.38 357 ePN Pn 21 43 49.8 -0.8
NKC eSN Sn 21 45 11.4 -2.9
GZR Gura Zlata 7.40 67 ⇓P Pn 21 43 51.0 +0.3
PSDA Pessada-Kefalo 7.41 127 P Pn 21 43 52.0 +1.1
VTS Vitosha 7.46 88 ⇑P Pn 21 43 51.9 +0.2
VTS Vitosha 7.46 88 Pn 21 43 52.2 +0.5
VTS Vitosha 7.46 88 P Pn 21 43 52.2 +0.5
VTS S Sn 21 45 14.2 -2.1
THL Klokotos Trika 7.48 113 P Pn 21 43 51.8 0.0
KNT Kendrikon 7.48 100 P Pn 21 43 51.7 -0.2
SRE Strehaia 7.52 73 ⇓P Pn 21 43 52.6 +0.1
BAIL Bailesti 7.54 78 ⇑P Pn 21 43 52.6 0.0
LIT Litokhoron 7.56 108 Pn 21 43 52.5 -0.5
LIT Litokhoron 7.56 108 P Pn 21 43 52.5 -0.5
LIT Litokhoron 7.56 108 P Pn 21 43 52.6 -0.5
MORC Moravsky Berou 7.56 22 ⇑P Pn 21 43 52.8 -0.2
MORC Moravsky Berou 7.56 22 Pn 21 43 52.5 -0.6
MORC Moravsky Berou 7.56 22 P Pn 21 43 52.5 -0.6
MORC Moravsky Berou 7.56 22 ePN Pn 21 43 52.4 -0.6
SMF Signal de Mont 7.60 303 eP Pn 21 43 55.2 +1.6
SMF eSn Sn 21 45 13.3 -6.4
comp=N,166nm,0.9s
DEV Deva 7.64 63 ⇑P Pn 21 43 54.2 +0.2
KRLC Kraliky 7.64 18 eP Pn 21 43 54.4 +0.3
PVO Paravola 7.67 121 P Pn 21 43 55.6 +1.2
EVR Evrytania 7.68 118 P Pn 21 43 57.0 +2.3
PAGF Fort de Pagny 7.69 320 eP Pn 21 43 56.3 +1.6
baz=141
PAGF eSn Sn 21 45 15.1 -6.6
comp=N,735nm,1.3s
KEST Kesra 7.70 204 Pn Pn 21 43 58.1 +3.2
comp=N,2.8nm,0.3s,baz=301,slow=4.9,SNR=47
KEST Sn Sn 21 45 22.6 +0.5
baz=338,slow=19
comp=N,31nm,0.7s
KEST Kesra 7.70 204 Pn Pn 21 43 56.2 +1.3
THE Thessaloniki 7.70 104 P Pn 21 43 54.6 -0.2
PVCC Panska Ves 7.73 7 eP Pn 21 43 53.9 -1.4
PVCC Panska Ves 7.73 7 ePN Pn 21 43 53.9 -1.4
SFTF Sexfontaines 7.79 316 eP Pn 21 43 57.2 +1.2
baz=135
SFTF eSn Sn 21 45 17.3 -6.8
comp=N,353nm,1.1s
OKC Ostrava-Krasne 7.79 25 eP Pn 21 43 55.7 -0.4
OKC Ostrava-Krasne 7.79 25 ePN Pn 21 43 55.7 -0.4
HORT Hortiatis 7.80 104 P Pn 21 43 55.7 -0.7
DPC Dobruska-Polom 7.81 15 eP Pn 21 43 55.2 -1.2
DPC Dobruska-Polom 7.81 15 ePN Pn 21 43 55.2 -1.2
LTHK Lithakia 7.83 129 P Pn 21 43 57.4 +0.7
MAKR Makrakomi, Fth 7.83 116 P Pn 21 43 58.5 +1.7
MOX Moxa 7.85 353 P Pn 21 43 54.7 -2.2
MOX Moxa 7.85 353 ePn Pn 21 43 54.8 -2.2
DRGR 7.87 57 ⇓P Pn 21 43 57.8 +0.5
DRGR 7.87 57 P Pn 21 43 58.1 +0.8
ABAH Abaujker 7.87 44 P Pn 21 43 57.3 +0.1
ABAH S Sn 21 45 21.9 -4.3
LOR Lormes 7.89 307 eP Pn 21 43 59.0 +1.5
baz=126
LOR eSn Sn 21 45 20.8 -5.9
comp=N,72nm,0.6s
UPC Upice 7.90 14 eP Pn 21 43 57.7 +0.1
UPC Upice 7.90 14 ePN Pn 21 43 57.7 +0.1
SOH Sokhos 7.91 101 P Pn 21 43 58.3 +0.4
AVF Avril sur Loir 7.97 303 eP Pn 21 44 00.8 +2.2
RLS Riolos of Patr 7.97 124 P Pn 21 44 00.5 +1.9
MEZF Maizieres J'vi 7.97 318 eP Pn 21 44 00.2 +1.6
baz=139
MEZF eSn Sn 21 45 21.7 -7.0
comp=N,180nm,0.8s
OSTC Ostas 7.98 14 ePN Pn 21 43 57.9 -0.9
CHVC Chvalec 7.99 14 ePN Pn 21 43 57.8 -1.0
MTLF Montolieu 7.99 277 eP Pn 21 44 01.1 +2.3
SRS Serrai 8.00 99 P Pn 21 43 58.9 -0.1
SSF Saint Saulge 8.00 305 eP Pn 21 44 00.0 +1.0
SSF eSn Sn 21 45 22.5 -6.9
comp=N,71nm,0.7s
SAVF Savonnieres en 8.02 319 eP Pn 21 44 00.7 +1.5
baz=136
SAVF eSn Sn 21 45 22.8 -6.9
comp=N,128nm,0.8s
EFP Efpalio 8.02 121 P Pn 21 44 01.7 +2.4
UPR University Cam 8.03 122 P Pn 21 44 02.7 +3.3
BRG Berggiesshubel 8.03 4 eP Pn 21 43 59.0 -0.4
BRG pmax pmax
comp=Z,16nm,0.5s
BRG MLR MLR
comp=N,546nm,17.3s
BRG MLR MLR
comp=Z,890nm,15.2s
BRG MLR MLR
comp=E,764nm,12.7s
LOT Lotru 8.09 68 ⇓P Pn 21 44 00.9 +0.6
SERG Sergoula 8.12 120 P Pn 21 44 03.0 +2.3
NVR Nevrokopi 8.13 97 P Pn 21 44 01.5 +0.6
CEI Carei 8.16 51 ⇓P Pn 21 44 02.0 +0.8
NAST IGS Nastaetten 8.18 336 ePn Pn 21 44 03.2 +1.8
NAST eSn Sn 21 45 31.6 -2.1
LAKA Lakka 8.18 121 P Pn 21 44 03.3 +1.8
MESR Meseseni 8.18 55 ⇑P Pn 21 44 02.1 +0.7
DRO Drossia 8.19 124 P Pn 21 44 03.8 +2.2
BGF Bois d'Agland 8.19 300 eP Pn 21 44 03.8 +2.2
BGF eSn Sn 21 45 26.6 -7.5
comp=E,222nm,1.1s
CAF Calviac 8.24 288 eP Pn 21 44 04.2 +1.9
KSP Ksiaz 8.27 14 eP Pn 21 44 02.9 +0.2
VLAD Vladila 8.30 78 ⇓P Pn 21 44 03.7 +0.7
AXAR Agios Charalam 8.31 116 P Pn 21 44 04.2 +0.9
WLF Walferdange 8.33 327 Pn 21 44 05.1 +1.6
WLF Walferdange 8.33 327 P Pn 21 44 05.1 +1.6
WLF Walferdange 8.33 327 dP Pn 21 44 05.2 +1.7
BGG Burgeitz 8.35 334 ePn Pn 21 44 05.6 +1.9
KOKK Kokkinochori, 8.38 100 P Pn 21 44 04.2 0.0
CBBR Cluj-Babes-Bol 8.38 59 ⇑P Pn 21 44 04.8 +0.6
CRVS Cervenica-Dubn 8.38 41 eP Pn 21 44 05.3 +1.0
CJR Cluj-Napoca 8.39 59 ⇓P Pn 21 44 04.5 +0.1
KLV Kalavryta, Ach 8.40 122 P Pn 21 44 06.7 +2.1
KOE Koeppel 8.42 336 ePn Pn 21 44 06.9 +2.2
NEO Neokhori 8.42 112 P Pn 21 44 03.4 -1.4
CLL Collm 8.45 360 Pn 21 44 03.9 -1.2
CLL Collm 8.45 360 eP Pn 21 44 04.0 -1.1
CLL e 21 45 34.0
CLL Collm 8.45 360 ePn Pn 21 44 04.0 -1.1
CLL ex x 21 44 09.0
CLL ex x 21 44 17.0
CLL ex x 21 44 28.0
CLL eSn Sn 21 45 34.0 -6.3
CLL LmH 21 46 00.0
comp=N,300nm,19.6s
CLL LmH 21 46 00.0
comp=E,2µm,19.5s
CLL ex x 21 46 13.0
CLL eSg Sg 21 46 31.0 -2.8
comp=Z,404nm,1.2s
CLL Lmax 21 48 00.0

TRPA Tarpa 8.46 48 ⇓P Pn 21 44 05.6 +0.4
TRPA Tarpa 8.46 48 P Pn 21 44 05.3 +0.1
PAIG Paliouri 8.47 107 P Pn 21 44 03.9 -1.5
TCF Toulx Ste Croi 8.50 297 eP Pn 21 44 09.1 +3.2
TCF eSn Sn 21 45 34.0 -7.8
comp=Z,61nm,0.9s
OUR Ouranopolis 8.53 104 P Pn 21 44 05.3 -0.9
LKR Lokris 8.60 116 P Pn 21 44 07.4 +0.2
HYF Humbligny 8.62 304 eP Pn 21 44 07.0 -0.5
HYF eSn Sn 21 45 37.0 -7.6
UZH Uzhgorod 8.62 45 eP Pn 21 44 10.6 +3.1
UZH eS Sn 21 45 49.6 +4.9
UZH MLR MLR
comp=N,220nm,14.0s
UZH MLR MLR
comp=E,230nm,14.0s
UZH MLR MLR
comp=Z,140nm,14.0s
STHS Stebnicka Huta 8.64 38 eP Pn 21 44 08.0 +0.2
HILG Hillesheim 8.65 331 ePn Pn 21 44 09.3 +1.4
ARR Arges 8.66 69 ⇑P Pn 21 44 08.2 +0.1
OJC Ojcow 8.68 30 eP Pn 21 44 08.5 +0.2
OJC Ojcow 8.68 30 Pn 21 44 07.8 -0.5
OJC Ojcow 8.68 30 P Pn 21 44 07.8 -0.5
MDB Medias 8.69 64 ⇑P Pn 21 44 09.2 +0.7
RJF Les Rejaudoux 8.70 290 eP Pn 21 44 11.1 +2.5
THAL Thalero 8.73 120 P Pn 21 44 12.0 +3.0
BMR Baia Mare 8.76 53 ⇑P Pn 21 44 10.1 +0.7
HUMR Humele 8.76 75 ⇓P Pn 21 44 09.9 +0.5
TRIP Tripoli 8.80 124 P Pn 21 44 04.6 -5.5
KOLS Kolonicke sedl 8.81 43 eP Pn 21 44 12.7 +2.7
ITM Ithomi 8.83 127 Pn 21 44 11.7 +1.4
ITM Ithomi 8.83 127 P Pn 21 44 12.7 +2.3
STB Steinbach 8.85 333 ePn Pn 21 44 12.1 +1.5
COPA Copaceanca 8.89 78 ⇓P Pn 21 44 11.2 0.0
TGMR Targu Mures 8.91 62 ⇓P Pn 21 44 12.1 +0.6
PYL PYLOS 8.91 129 P Pn 21 44 12.4 +0.8
MTUR Matau 8.93 71 ⇓P Pn 21 44 12.9 +1.2
LOUT Loutraki 8.96 120 P Pn 21 44 12.7 +0.6
VOIR 8.96 69 ⇑P Pn 21 44 12.3 +0.1
VOIR 8.96 69 P Pn 21 44 14.6 +2.4
THAS Thassos island 8.97 101 P Pn 21 44 07.3 -4.9
ZIMR 8.98 81 ⇑P Pn 21 44 12.9 +0.6
ARCR ARCALIA 9.01 58 ⇑P Pn 21 44 13.5 +0.6
HOBG Hohbusch 9.03 336 ePn Pn 21 44 14.7 +1.6
KLL Kalltalsperre 9.07 331 ePn Pn 21 44 15.6 +1.9
VILL Villia 9.07 118 P Pn 21 44 14.9 +1.1
BTNL Ternell 9.09 331 dP Pn 21 44 16.1 +2.2
RCHB Rochefort 9.09 326 dP Pn 21 44 15.2 +1.3
MEM Membach 9.15 330 dP Pn 21 44 15.9 +1.2
LFF La Frestale 9.17 287 eP Pn 21 44 17.1 +2.1
CLF Chambon-Foret 9.21 308 Pn 21 44 15.3 -0.2
GIVF Givet 9.22 325 eP Pn 21 44 18.6 +2.9
GIVF eSn Sn 21 45 51.8 -7.5
comp=Z,156nm,1.0s
BCLA Clavier 9.27 327 dP Pn 21 44 18.8 +2.5
EPID Epidavros 9.27 121 P Pn 21 44 17.9 +1.4
BSTI Sart Tilman 9.29 329 dP Pn 21 44 20.3 +3.6
DOU Dourbes 9.31 324 dP Pn 21 44 17.6 +0.6
DOPR Dopca 9.32 66 ⇓P Pn 21 44 17.0 0.0
BGES Geves 9.33 327 dP Pn 21 44 19.5 +2.4
EPF Esparros 9.37 275 eP Pn 21 44 20.0 +2.2
BMRD Maredsous 9.39 325 dP Pn 21 44 19.7 +1.6
RDO Rodhopi 9.41 96 Pn 21 44 18.2 -0.1
RDO Rodhopi 9.41 96 P Pn 21 44 18.2 -0.1
KRND KRANIDI 9.43 122 P Pn 21 44 19.4 +0.7
SGRR Singureni 9.44 77 ⇑P Pn 21 44 19.5 +0.8
BAIF Baives 9.46 323 eP Pn 21 44 22.9 +4.0
BAIF eSn Sn 21 45 57.4 -7.7
comp=Z,84nm,0.9s
PTL Penteli 9.50 117 P Pn 21 44 20.0 +0.4
MLR Muntele Rosu 9.59 70 ⇓P Pn 21 44 22.1 +1.3
MLR Muntele Rosu 9.59 70 Pn Pn 21 44 23.0 +2.2
comp=Z,2.7nm,0.3s,baz=223,slow=7.5,SNR=35
MLR LR LR 21 48 56.0
comp=Z,2µm,20.7s,baz=252,slow=43
comp=Z,37nm,0.8s
MLR Muntele Rosu 9.59 70 Pn 21 44 22.1 +1.3
SECR 9.59 73 ⇓P Pn 21 44 21.4 +0.6
OZUR 9.62 66 ⇑P Pn 21 44 21.8 +0.6
VLI Veliai 9.73 126 P Pn 21 44 25.7 +2.9
SNF Seneffe 9.75 325 dP Pn 21 44 25.0 +2.0
BUR01 Bucovina Ar. S 9.77 57 ⇓P Pn 21 44 23.3 0.0
BURAR Bucovina Array 9.77 57 Pn 21 44 24.8 +1.5
BURAR Bucovina Array 9.77 57 P Pn 21 44 24.5 +1.2
BUR08 Bucovina Ar. S 9.77 57 Pn Pn 21 44 25.0 +1.7
RAZG Razgrad 9.81 81 ⇑P Pn 21 44 23.2 -0.5
NEHR Nehoiu 9.82 70 ⇑P Pn 21 44 24.6 +0.7
COVR Voineasa-Covas 9.84 68 ⇑P Pn 21 44 24.7 +0.4
ISR Istrita 9.94 72 ⇓P Pn 21 44 25.8 +0.2
ETSF Etsaut 10.04 275 eP Pn 21 44 32.7 +5.7
LEHL Lehliu 10.06 76 ⇑P Pn 21 44 28.2 +1.0
BIZ Bicaz 10.08 62 ⇓P Pn 21 44 28.1 +0.7
KTHR Kythira 10.09 128 P Pn 21 44 30.2 +2.6
KTHA Kythira Island 10.12 127 P Pn 21 44 31.1 +3.0
EDRB Edirne 10.14 91 P Pn 21 44 29.9 +1.5
PLOR Plostina 10.14 68 ⇓P Pn 21 44 29.6 +1.2
PLOR Plostina 10.14 68 P Pn 21 44 29.6 +1.2
MFF Saint Martin d 10.15 296 eP Pn 21 44 30.8 +2.4
MFF eSn Sn 21 46 12.9 -9.2
comp=Z,14nm,0.7s
MFF Saint Martin d 10.15 296 P Pn 21 44 32.5 +4.1
VRI Vrincioaia 10.20 68 ⇓P Pn 21 44 29.6 +0.4
LVV L'vov 10.26 44 *c i P* Pn 21 44 34.1 +4.2
LVV eS Sn 21 46 29.2 +4.4
LVV MLR MLR
comp=Z,1µm,9.3s
TESR Tescani 10.30 65 ⇓P Pn 21 44 31.3 +0.7
ODBI Odobesti 10.40 69 ⇑P Pn 21 44 32.7 +0.8
SJPF Ste Jean 10.51 276 eP Pn 21 44 37.9 +4.5
ANKY Antikythira Is 10.53 128 P Pn 21 44 36.7 +3.0
GHRR 10.71 68 ⇑P Pn 21 44 36.8 +0.8
ICOR Ion Corvin 10.75 78 ⇓P Pn 21 44 37.1 +0.5
GKP Gorka Klasztor 10.77 13 eP Pn 21 44 37.1 +0.2
HARR Harsova 10.87 75 ⇓P Pn 21 44 38.9 +0.6
LDF La Druitiere 10.88 306 eP Pn 21 44 40.9 +2.5
LDF eSn Sn 21 46 30.9 -9.1
comp=Z,47nm,1.0s
CVDA Cernavoda 10.93 77 ⇑P Pn 21 44 39.4 +0.3
TLBR Topalu 10.94 76 ⇑P Pn 21 44 40.2 +0.9
TATR Tatarca 11.06 71 ⇑P Pn 21 44 41.5 +0.6
CFR Carcaliu 11.06 73 ⇑P Pn 21 44 40.5 -0.4
VLDR Vladesti 11.12 69 ⇑P Pn 21 44 42.9 +1.1
APE Apeiranthos 11.14 117⇑eP Pn 21 44 42.0 -0.1
FLN La Foliniere 11.16 307 eP Pn 21 44 44.4 +2.1
baz=126
FLN eSn Sn 21 46 37.6 -9.4
comp=Z,110nm,1.4s
TIRR Tirgusor 11.20 77 ⇑P Pn 21 44 42.7 -0.1
TIRR Tirgusor 11.20 77 ⇑P Pn 21 44 42.7 -0.1
TIRR Tirgusor 11.20 77 Pn Pn 21 44 42.4 -0.4
TIRR Tirgusor 11.20 77 P Pn 21 44 42.4 -0.4
GRR Gorron 11.23 304 eP Pn 21 44 44.2 +1.0
GRR eSn Sn 21 46 38.5 -10
comp=Z,34nm,0.9s
TPGR Topolog 11.23 75 ⇑P Pn 21 44 43.7 +0.5
SANT Santorini 11.51 120 Pn Pn 21 44 48.1 +0.9
MILM Milestii Mici 11.85 65 ⇓P Pn 21 44 52.6 +1.0
MILM Milestii Mici 11.85 65 eP Pn 21 44 53.0 +1.4
comp=Z,63nm,0.8s
MILM eS Sn 21 47 06.0 +2.3
MILM eL L 21 49 07.0
MILM LqM 21 49 46.0
comp=Z,800nm,10.6s
MILM LRM MLR 21 50 24.0
comp=Z,1µm,11.0s
MILM Milestii Mici 11.85 65 eP Pn 21 44 53.0 +1.4
MILM eS Sn 21 47 06.0 +2.3
MILM pmax pmax
comp=Z,60nm,0.8s
MILM MLR MLR
comp=Z,1µm,11.0s
MILM MLR MLR
comp=E,2µm,11.5s
IDI Anoyia 11.87 126 Pn Pn 21 44 52.4 +0.4
comp=E,1.5nm,0.3s,baz=317,slow=15,SNR=12
IDI Sn Sn 21 46 54.3 -10
comp=E,1.2nm,0.3s,baz=114,slow=20,SNR=1.7
IDI LR LR 21 50 48.5
comp=E,204nm,19.7s,baz=291,slow=44
comp=E,17nm,0.7s
IDI Anoyia 11.87 126 Pn Pn 21 44 51.6 -0.4

KIS Kishinev 11.87 64 ⇑P Pn 21 44 53.2 +1.2
KIS Kishinev 11.87 64 eP Pn 21 44 54.0 +2.0
comp=E,80nm,1.3s
KIS eS Sn 21 47 07.0 +2.7
KIS eL L 21 48 21.0
KIS LRM MLR 21 50 26.0
comp=E,1µm,12.0s
KIS Kishinev 11.87 64 eP Pn 21 44 54.0 +2.0
KIS eS Sn 21 47 07.0 +2.7
KIS pmax pmax
comp=Z,80nm,1.3s
KIS MLR MLR
comp=E,1µm,12.0s
KIS MLR MLR
comp=Z,1µm,12.0s
SGMF Saint Gilles 12.23 302 eP Pn 21 44 58.9 +2.1
SGMF eSn Sn 21 47 02.9 -10
comp=Z,36nm,1.1s
QUIF Quistinic 12.50 299 eP Pn 21 45 00.4 -0.2
QUIF eSn Sn 21 47 08.7 -11
comp=Z,46nm,1.3s
ROSF Rostrenen 12.71 301 eP Pn 21 45 04.3 +0.9
ROSF eSn Sn 21 47 14.4 -10
comp=Z,14nm,0.7s
KARP Karpathos 13.11 119 Pn Pn 21 45 09.1 +0.2
ESBB Sonseca Array 13.23 262 Pn 21 45 11.4 +0.7
ESDC Sonseca Array 13.23 262 Pn Pn 21 45 09.4 -1.3
comp=Z,0.1nm,0.3s,baz=73,slow=9.9,SNR=21
ESDC LR LR 21 50 10.4
comp=Z,644nm,19.4s,baz=58,slow=37
comp=Z,5.8nm,0.8s
ESDC Sonseca Array 13.23 262 Pn 21 45 11.4 +0.7
ARG Arkhangelos 13.35 115 Pn Pn 21 45 12.4 +0.3
ARG Arkhangelos 13.35 115 P Pn 21 45 12.5 +0.3
BORA Eskisehir 13.36 97 Pn 21 45 11.6 -0.9
AKASG Malin Array Be 13.52 49 Pn Pn 21 45 13.6 -0.9
comp=Z,0.4nm,0.3s,baz=242,slow=12,SNR=7.1
AKASG LR LR 21 51 01.7
comp=Z,452nm,19.3s,baz=249,slow=40
comp=Z,8.0nm,1.0s
AKASG Malin Array Be 13.52 49 Pn Pn 21 45 13.2 -1.2
AKASG Malin Array Be 13.52 49 *i* P **Pn 21 45 13.8 -0.6**
AKASG pmax pmax
comp=Z,9.0nm,1.1s
AKBB Malin Array Si 13.52 49 Pn 21 45 13.1 -1.3
AKBB Malin Array Si 13.52 49⇓eP Pn 21 45 14.1 -0.3
PAB San Pablo 13.56 262 Pn 21 45 14.5 -0.6
PAB San Pablo 13.56 262 P Pn 21 45 14.5 -0.6
PAB San Pablo 13.56 262 P Pn 21 45 19.2 +4.0
MDUB Mudurnu 13.73 94 Pn Pn 21 45 17.9 +0.4
AKAS Kas 14.33 112 Pn 21 45 26.8 +0.9
PBUR Paburge 14.35 20 eP P 21 45 30.8 -2.0
PABE Paberze 14.48 25 Pn Pn 21 45 26.6 -0.9
PABE Paberze 14.48 25 eP P 21 45 30.5 -3.8
PBRG Braganca 14.72 273 eP Pn 21 45 33.0 +1.9
comp=Z,33nm,2.0s
PBRG esP P 21 45 42.8 +5.6
PBRG eS S 21 48 31.9 -1.1
NACGM Naroch 15.00 32 eP Pn 21 45 33.6 -1.0
MVO Moncorvo 15.07 270 eP Pn 21 45 37.9 +2.2
comp=Z,39nm,1.2s
MVO esP sP 21 45 46.4 +0.3
MVO eS Sn 21 48 20.4 -2.2
MVO A A 21 51 47.9
comp=Z,447nm,18.0s
BR231 Keskin MP Arra 15.07 95 Pn Pn 21 45 36.1 +0.3
ANTO Ankara 15.08 95 P P 21 45 44.7 +3.6
ANTO P P 21 45 44.7 +3.6
MNK Minsk 15.15 35 *i* P **Pn 21 45 34.2 -2.4**
MNK *i* S **Sn 21 48 21.7 -2.6**
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK pmax pmax
comp=N,22nm,0.8s
MNK MLR MLR
comp=Z,536nm,16.0s
MNK MLR MLR
comp=E,45nm,16.0s
MNK MLR MLR
comp=N,237nm,16.0s
MNK Minsk 15.15 35 *i* P **Pn 21 45 34.3 -2.4**
comp=E,2.0nm,0.8s
MNK *i* P **Pn 21 45 34.3 -2.4**
comp=N,22nm,0.8s
MNK *i* P **Pn 21 45 34.3 -2.4**
comp=Z,7.0nm,0.8s,baz=226
MNK *i* PP **P 21 45 42.3 +0.5**
MNK *i* S **Sn 21 48 21.7 -2.6**
MNK *i* SS **SnSn 21 48 35.6 -1.2**
MNK *i* LR LR 21 51 07.6
MNK *i* LRM MLR 21 52 14.4
comp=Z,536nm,16.1s
MNK *i* LRM MLR 21 52 25.6
comp=E,45nm,16.1s
MNK *i* LRM MLR 21 52 33.7
comp=N,237nm,16.3s
SIM Simferopol' 15.28 75 eP P 21 45 44.0 +0.7
SIM pmax pmax
comp=Z,69nm,1.5s
SIM MLR MLR
comp=Z,200nm,17.0s
ILGA Ilgaz 15.44 90 Pn 21 45 40.5 -0.2
ILGA IAmb IAmb 21 46 06.0
comp=Z,52nm,1.1s
BZK Bozkurt 15.46 86 Pn Pn 21 45 40.5 -0.3
PVRL Vila Real 15.55 271 eP P 21 45 45.1 -1.2
comp=Z,30nm,1.4s
POLO Lamas de Olo 15.59 272 eP Pn 21 45 44.3 +1.8
comp=Z,16nm,2.0s
POLO eS Sn 21 48 43.7 +8.5
MTE Manteigas 15.64 268 eP Pn 21 45 45.2 +2.0
comp=Z,34nm,1.6s
MTE A A 21 51 28.6
comp=Z,476nm,18.0s
MTE Manteigas 15.64 268 Pn 21 45 44.3 +1.1
PCAB Cabril 15.69 273 eP Pn 21 45 45.6 +1.8
comp=Z,31nm,1.9s
BR131 Keskin Array S 15.74 95 Pn 21 45 44.0 -0.6
BR131 Keskin Array S 15.74 95⇑eP Pn 21 45 43.5 -1.1
BR131 Keskin Array S 15.74 95 P P 21 45 49.3 +0.7
SNR=6.5
BRTR Keskin Array B 15.74 95 Pn P 21 45 46.5 -2.1
comp=Z,0.2nm,0.3s,baz=284,slow=13,SNR=9.6
BRTR LR LR 21 52 44.5
comp=Z,663nm,21.2s,baz=298,slow=41
comp=Z,2.5nm,0.9s
BRTR Keskin Array B 15.74 95 Pn 21 45 43.5 -1.1
BRTR Keskin Array B 15.74 95 P Pn 21 45 43.5 -1.1
PCBR Castelo Branco 15.75 266 eP Pn 21 45 43.9 -0.7
comp=Z,17nm,1.4s
PVIS Viseu 15.81 269 eP P 21 45 47.9 -1.4
comp=Z,39nm,2.1s
PGAV Gavieira, Arco 15.82 274 eP Pn 21 45 47.8 +2.3
comp=Z,49nm,1.7s
PGAV eS Sn 21 48 43.6 +2.8
PGAV A A 21 52 22.7
comp=Z,359nm,20.0s
PMRV Marv??o 15.82 264 eP Pn 21 45 47.5 +2.0
comp=Z,17nm,1.9s
PMRV eS Sn 21 48 37.5 -3.2
PMRV A A 21 52 15.3
comp=Z,470nm,18.0s
PBAR Barrancos 16.02 260 eP P 21 45 51.9 +0.4
comp=Z,45nm,1.7s
PESTR Estremoz 16.16 263 eP P 21 45 52.3 -0.7
comp=Z,40nm,1.4s
PESTR eS S 21 49 12.5 +10
PESTR Estremoz 16.16 263 Pn 21 45 49.1 -0.7
EKA Eskdalemuir Ar 16.35 325 Pn Pn 21 45 51.7 -0.5
baz=136,slow=14
comp=Z,4.2nm,0.6s
ESK Eskdalemuir 16.36 325 P Pn 21 45 52.5 +0.2
ESK Eskdalemuir 16.36 325 P Pn 21 45 52.5 +0.2
ESK pmax pmax
comp=Z,20nm,0.9s
PCAS Casmilo, Conde 16.44 267 eP P 21 45 56.9 +0.7
comp=Z,38nm,1.4s
PCAS eS Sn 21 48 47.9 -7.8
PMTG Montargil 16.55 264 eP P 21 45 58.4 +1.0
comp=Z,44nm,1.5s
EVO Evora 16.59 262 eP Pn 21 45 57.1 +1.8
comp=Z,28nm,1.3s
DSB Dublin 16.61 315 Pn 21 45 54.8 -0.6

PSBE So Bento 16.82 266 *eS* **S 21 49 21.2 +5.4**
KONO Kongsberg 16.95 354⇑ *eP* **P 21 46 02.1 +0.5**
KONO pmax pmax
comp=Z,41nm,1.2s
KONO Kongsberg 16.95 354 P **P 21 46 05.7 +4.1**
PCVE Castro Verde 16.96 259 *eS* S 21 49 31.1 +13
PNCL Nicolau / Gran 17.12 261 *eS* S 21 49 44.5 +23
MDT Midelt 17.19 240 P **Pn 21 46 03.2 +0.1**
comp=Z,1.9nm,0.9s,baz=108,slow=6.4,SNR=2.9
MDT LR LR 21 52 13.4
comp=Z,146nm,18.2s,baz=40,slow=36
MTSE Matsula 17.21 19 *eP* **Pn 21 46 03.0 0.0**
HFS Hagfors 17.30 1 P **Pn 21 46 02.7 -1.4**
comp=Z,4.7nm,0.7s,baz=220,slow=13,SNR=4.3
HFS LR LR 21 52 51.2
comp=Z,302nm,19.3s,baz=183,slow=38
PMAFR Mafra 17.36 265 *eS* S 21 49 47.0 +20
CSS Mathiatis 17.57 110 **Pn 21 46 05.1 -2.6**
ANN Anapa 17.64 75 *eP* **P 21 46 08.5 -0.9**
ANN pmax pmax
comp=Z,121nm,1.3s
ANN MLR MLR
comp=Z,384nm,11.0s
BNN Bunyan 17.64 95 P **Pn 21 46 07.3 -1.4**
BNN IAmb IAmb 21 46 29.2
comp=Z,84nm,1.1s
TOKA Tokat 17.65 90 Pn **Pn 21 46 08.1 -0.6**
PFVI Vila Bisbo 17.74 259 *eS* **S 21 49 36.9 +2.5**
VSU Vasula 17.79 24 *eP* **Pn 21 46 09.8 -0.4**
VSU Vasula 17.79 24⇑ *eP* **Pn 21 46 09.4 -0.7**
NC602 NORSAR Array S 17.92 357 P **Pn 21 46 11.0 -0.8**
NC602 IAmb IAmb 21 46 16.8
comp=Z,115nm,1.5s
NB2 NORSAR Subarra 18.24 357 P **Pn 21 46 14.4 -1.3**
comp=Z,18nm,0.9s,baz=175,slow=11
NOA NORSAR Array B 18.24 357 P **Pn 21 46 14.4 -1.3**
baz=175,slow=11,SNR=12
NOA LR LR 21 54 05.7
comp=Z,288nm,18.6s,baz=160,slow=40
comp=Z,5.5nm,1.0s
NB201 NORSAR Array S 18.25 357 P **Pn 21 46 14.6 -1.2**
NB201 IAmb IAmb 21 46 31.8
comp=Z,68nm,1.2s
MEF Metsahovi 18.69 18 *eP* **P 21 46 20.1 -0.8**
RAF Rauma 18.92 13 *eP* **Pn 21 46 23.6 -0.4**
GAZ Gaziantep 19.28 99 P **P 21 46 26.1 -1.6**
SOC Sochi 19.38 79 *eP* **P 21 46 28.2 -0.3**
SOC *e* 21 50 05.0
SOC MLR MLR
comp=Z,173nm,18.0s
VSR Storozhevoye 19.54 56 *eP* **P 21 46 29.3 -0.9**
VSR pmax pmax
comp=Z,40nm,0.8s
OBN Obninsk 19.56 43 P **P 21 46 29.4 -0.9**
comp=Z,1.0nm,0.3s,baz=242,slow=16,SNR=8.2
OBN LR LR 21 54 32.5
comp=Z,79nm,20.3s,baz=234,slow=38
comp=Z,6.3nm,0.5s
OBN Obninsk 19.56 43 P **P 21 46 28.1 -2.3**
OBN IAmb IAmb 21 46 32.7
comp=Z,68nm,1.2s
OBN Obninsk 19.56 43 *deP* **P 21 46 29.7 -0.7**
OBN *eS* **S 21 50 10.1 -0.8**
OBN pmax pmax
comp=Z,33nm,0.7s
OBN MLR MLR
comp=Z,284nm,14.0s
OBN Obninsk 19.56 43 P **Pn 21 46 30.6 -1.1**
VORR Voronezh 19.69 54 *eP* **P 21 46 31.1 -0.8**
VORR pmax pmax
comp=Z,33nm,0.4s
BHL Bhannes 19.76 109 *eP* **Pn 21 46 35.0 +0.7**
LPSR Galich'ya Gora 19.81 52 *eP* **P 21 46 31.8 -1.3**
LPSR pmax pmax
comp=Z,20nm,0.8s
ZAHL Zahle 19.95 109 *eP* **Pn 21 46 38.0 +1.4**
MMAI Mount Meron Ar 20.09 112 P Pn 21 46 38.1 -0.2
comp=Z,61nm,0.9s,baz=321,slow=9.1,SNR=46
MMAI LR LR 21 55 38.2
comp=Z,163nm,20.5s,baz=220,slow=40
comp=Z,61nm,0.9s
FINES FINESS Array B 20.16 18 P **P 21 46 36.1 -0.8**
comp=Z,12nm,0.8s,baz=204,slow=8.4,SNR=29
comp=Z,12nm,0.8s
FINES FINESS Array B 20.16 18 P **P 21 46 35.9 -1.0**
FIA1 FINESS Array S 20.16 18 P **P 21 46 35.9 -1.0**
FIA1 IAmb IAmb 21 46 52.1
comp=Z,53nm,1.1s
MOS Moscow 20.39 42 *eP* **P 21 46 37.3 -2.1**
MOS *eS* **S 21 50 25.7 -1.8**
MOS pmax pmax
comp=Z,131nm,1.2s
MOS MLR MLR
comp=Z,800nm,10.0s
MOS MLR MLR
comp=E,500nm,9.0s
VAF Ylistaro 20.97 12 P Pn 21 46 49.8 +1.6
VAF pmax pmax
comp=Z,37nm,1.2s
TAM Tamanrasset 20.99 200 P **P 21 46 44.8 -1.6**
TAM Tamanrasset 20.99 200 P **P 21 46 44.8 -1.6**
TAM pmax pmax
comp=Z,44nm,1.5s
VRH Novokhopyorsk 21.10 57 *eP* **P 21 46 47.0 -0.2**
VRH pmax pmax
comp=Z,70nm,0.7s
GHAJ Ghor Haditha 21.24 116 P **P 21 46 46.0 -2.7**
GHAJ IAmb IAmb 21 47 05.2
comp=Z,37nm,0.9s
VALR Valaam 21.36 24⇑ *eP* **P 21 46 50.1 +0.2**
VALR pmax pmax
comp=Z,37nm,0.6s
KIV Kislovodsk 21.46 77 P **P 21 46 50.3 -0.9**
KIV Kislovodsk 21.46 77 *eP* **P 21 46 52.8 +1.5**
KIV *eS* **S 21 50 51.0 +1.8**
KIV pmax pmax
comp=Z,79nm,1.1s
KIV MLR MLR
comp=Z,74nm,14.0s
KIV Kislovodsk 21.46 77 P **P 21 46 53.1 +1.8**
KIV P **P 21 46 53.1 +1.8**
KIV Kislovodsk 21.46 77 *i* P **P 21 46 53.0 +1.8**
SNR=16
KIV Kislovodsk 21.46 77 P **P 21 46 53.7 +2.5**
KVAR Kislovodsk Arr 21.47 77 LR LR 21 55 56.5
comp=Z,176nm,18.4s,baz=233,slow=39
ASF Jabal al Asfar 21.61 112 P **P 21 46 55.0 +2.1**
comp=Z,13nm,0.7s,baz=291,slow=8.2,SNR=22
comp=Z,13nm,0.7s
KBZ Khabaz 21.65 77 P **P 21 46 54.8 +1.7**
comp=Z,37nm,0.9s,baz=295,slow=8.2,SNR=27
KBZ LR LR 21 57 22.8
comp=Z,143nm,21.7s,baz=285,slow=42
comp=Z,37nm,0.9s
KBZ Khabaz 21.65 77 *ceP* **P 21 46 54.6 +1.5**
MARD Mardin 21.83 95 P **P 21 46 53.4 -1.9**
MARD IAmb IAmb 21 47 05.8
comp=Z,27nm,1.0s
EIL Elat 21.91 120 P **P 21 46 58.5 +2.5**
comp=Z,10nm,0.9s,baz=316,slow=9.4,SNR=6.4
comp=Z,10nm,0.9s
ONI Oni 22.24 80 P **P 21 46 57.6 -1.9**
ONI IAmb IAmb 21 47 13.0
comp=Z,28nm,0.9s
ONI Oni 22.24 80 P **P 21 46 57.6 -1.9**
ONI pmax pmax
comp=Z,28nm,0.9s
ZEI Tsey 22.52 80 *eP* **P 21 47 05.4 +2.6**
ZEI pmax pmax
comp=Z,19nm,0.8s
GEVA Gevas 23.13 91 P **P 21 47 06.9 -2.2**
GNI Garni 23.77 86 P **P 21 47 17.4 +2.0**
comp=Z,16nm,0.7s,baz=19,slow=5.2,SNR=14
comp=Z,16nm,0.7s
GNI Garni 23.77 86 P **P 21 47 14.6 -0.8**
GNI IAmb IAmb 21 47 20.1
comp=Z,20nm,0.8s
GNI Garni 23.77 86 *deP* **P 21 47 17.9 +2.4**
GNI pmax pmax
comp=Z,24nm,0.8s
GNI Garni 23.77 86 P **P 21 47 17.4 +2.0**
GNI Garni 23.77 86 P **P 21 47 17.5 +2.0**
GNI Garni 23.77 86 P **P 21 47 19.1 +3.7**
GROC Groznyy 23.81 78 *eP* **P 21 47 16.0 +0.4**
GROC *e* 21 47 44.2
GROC pmax pmax
comp=Z,64nm,1.0s
GROC MLR MLR
comp=Z,620nm,14.0s
KLMR Klimovskoe 24.02 32 *eP* **P 21 47 15.3 -2.1**
KLMR pmax pmax
comp=Z,50nm,1.2s
KLMR MLR MLR
comp=Z,201nm,6.0s
KLMR Klimovskoe 24.02 32 *eP* **P 21 47 15.3 -2.1**
KLMR AMP 21 47 23.1
comp=Z,50nm,1.2s
KLMR LQ LQ 21 55 06.9
KLMR LQ LQ 21 55 06.9
KLMR LR LR 21 56 51.2
KLMR AMP 21 58 04.8
comp=Z,201nm,6.0s
BELG Belogornoye 24.92 55 P **P 21 47 27.0 +1.3**
comp=Z,106nm,0.8s,baz=242,slow=1.4,SNR=23
BELG LR LR 21 58 07.5
comp=Z,380nm,18.1s,baz=317,slow=39
comp=Z,106nm,0.8s
BELG Belogornoye 24.92 55 *deP* **P 21 47 26.5 +0.8**
BELG pmax pmax
comp=Z,18nm,0.9s
MAK Makhachkala 25.09 78 *eP* **P 21 47 22.7 -4.6**
MAK *eS* **S 21 51 44.9 -6.6**
AKT Akhty 25.59 81 *eP* **P 21 47 31.9 -0.1**
AKT *e* 21 48 06.5
AKT pmax pmax
comp=Z,46nm,1.0s
PRGR Permogore 26.93 35 *eP* **P 21 47 44.1 +0.4**
PRGR pmax pmax
comp=Z,22nm,0.8s
KIRV Kirov 27.41 42 P **P 21 47 48.9 +0.8**
comp=Z,9.1nm,0.4s,baz=273,slow=12,SNR=3.6
KIRV LR LR 21 59 07.1
comp=Z,296nm,18.0s,baz=174,slow=38
comp=Z,9.1nm,0.4s
KIRV Kirov 27.41 42⇑ *eP* **P 21 47 49.0 +0.9**
ARCES ARCESS Array B 27.49 9 P **P 21 47 49.6 +0.8**
comp=Z,8.4nm,1.1s,baz=174,slow=9.1,SNR=4.2
comp=Z,8.4nm,1.1s
TOA0 Torodi Ar. Sit 31.21 202 P **P 21 48 21.8 -0.5**
TOA0 IAmb IAmb 21 48 26.0
comp=Z,14nm,0.9s
TOA0 Torodi Ar. Sit 31.21 202 P **P 21 48 22.3 0.0**
TOA0 P **P 21 48 22.3 0.0**
TORD Torodi Ar. Bea 31.21 202 P **P 21 48 22.6 +0.3**
comp=Z,11nm,0.8s,baz=18,slow=8.9,SNR=43
TORD PcP **PcP 21 51 17.1 +0.2**
comp=Z,0.9nm,0.8s,baz=10,slow=3.4,SNR=2.9
TORD LR LR 22 02 05.4
comp=Z,352nm,18.0s,baz=262,slow=38
comp=Z,11nm,0.8s
AKTO Aktyubinsk 31.34 60 P **P 21 48 22.6 -0.5**
comp=Z,3.4nm,0.7s,baz=278,slow=9.9,SNR=13
comp=Z,3.4nm,0.7s
ARU Arti 31.77 49 P **P 21 48 26.5 -0.4**
comp=Z,32nm,0.8s,baz=261,slow=6.2,SNR=33
comp=Z,32nm,0.8s
ARU Arti 31.77 49 P **P 21 48 25.9 -0.9**
ARU Arti 31.77 49 *c i* P **P 21 48 26.6 -0.2**
ARU S **S 21 53 36.2 -0.3**
ARU pmax pmax
comp=Z,30nm,0.9s
ABKAR Abkulak array 32.69 62 P **P 21 48 34.3 -0.6**
ABKAR Abkulak array 32.69 62 P **P 21 48 33.2 -1.7**
ABKAR IAmb IAmb 21 48 45.1
comp=Z,5.7nm,1.1s
SVE Sverdlovsk 32.95 48 *eP* **P 21 48 37.8 +0.6**
SVE pmax pmax
comp=Z,36nm,1.0s
RAYN Ar Rayn 32.98 115 P **P 21 48 37.8 0.0**
RAYN Ar Rayn 32.98 115 P **P 21 48 37.8 0.0**
RAYN pmax pmax
comp=Z,4.0nm,1.3s
RAYN Ar Rayn 32.98 115 P **P 21 48 39.3 +1.5**
RAYN Ar Rayn 32.98 115 P **P 21 48 39.5 +1.6**
RAYN Ar Rayn 32.98 115 P P 21 48 49.1 +11
GEYT Alibeck 34.31 83 P **P 21 48 50.1 +0.8**
comp=Z,8.1nm,0.7s,baz=282,slow=7.0,SNR=22
comp=Z,8.1nm,0.7s
GEYT Alibeck 34.31 83 P **P 21 48 49.3 0.0**
GEYT IAmb IAmb 21 48 55.1
comp=Z,10nm,0.8s
GYA0 ALIBECK ARRAY 34.31 83 P **P 21 48 49.7 +0.4**
GYA0B ALIBECK ARRAY 34.31 83 P **P 21 48 49.1 -0.2**
GYA0B IAmb IAmb 21 48 55.1
comp=Z,9.5nm,0.8s
SAKB Bahrain 34.83 107 P **P 21 48 55.8 +2.0**
SHMA Al-Shehemyia 35.20 106 P **P 21 49 00.4 +3.3**
SUMG Summit 38.37 338 *i* P **P 21 49 24.0 0.0**
MZWR Madinat Zayed 38.58 106 P **P 21 49 27.4 +1.7**
MZWR P **P 21 49 27.4 +1.7**
BRVK Borovoye 38.65 54 P **P 21 49 26.1 +0.1**
BRVK IAmb IAmb 21 49 30.7
comp=Z,23nm,0.8s
BRVK Borovoye 38.65 54 *ceP* **P 21 49 27.1 +1.1**
BRVK pmax pmax
comp=Z,24nm,0.8s
BRVK Borovoye 38.65 54 P **P 21 49 26.8 +0.7**
BRVK P **P 21 49 26.8 +0.7**
BRVK Borovoye 38.65 54 P **P 21 49 27.5 +1.5**
BVAR Borovoye Array 38.72 54 P **P 21 49 27.2 +0.6**
comp=Z,7.4nm,0.8s,baz=269,slow=7.4,SNR=42
BVAR LR LR 22 06 42.2
comp=Z,283nm,21.6s,baz=86,slow=38
comp=Z,7.4nm,0.8s
SHME Shamm 38.78 101 P **P 21 49 31.3 +3.9**
SHME Shamm 38.78 101 P **P 21 49 31.3 +3.9**
HRA Herat 38.84 86 P **P 21 49 27.3 -0.8**
BANOM Banah 38.97 101 P **P 21 49 31.0 +1.9**
BANOM P **P 21 49 31.0 +1.9**
BANOM Banah 38.97 101 P **P 21 49 30.4 +1.3**
ASUD Al Ashush, Dub 39.06 104 P **P 21 49 32.2 +2.4**
NAZ Nazwa, Dubai 39.08 103 P **P 21 49 32.2 +2.2**
MASF Masafi 39.20 102 P **P 21 49 33.3 +2.2**
MASF P **P 21 49 33.3 +2.2**
MSFE Esma-Masafi 39.21 102 P **P 21 49 33.1 +2.0**
DBIC Dimbokro 39.38 209 P **P 21 49 32.9 +0.3**
comp=Z,6.6nm,0.9s,baz=357,slow=7.8,SNR=6.3
comp=Z,6.6nm,0.9s
DBIC Dimbokro 39.38 209 P **P 21 49 32.2 -0.3**
DBIC Dimbokro 39.38 209 P **P 21 49 32.2 -0.3**
DBIC pmax pmax
comp=Z,11nm,1.2s
HATD Hatta, Dubai 39.52 103 *i* P **P 21 49 36.0 +2.3**
SNR=11
ASHO Ashiyiah 39.55 103 P **P 21 49 36.2 +2.2**
SNR=9.0
ASHO P **P 21 49 36.2 +2.2**
SNR=9.0
ASHO Ashiyiah 39.55 103 *i* P **P 21 49 36.0 +2.0**
SNR=22
ALNE Al Ain 39.72 104 P **P 21 49 37.7 +2.4**
SNR=6.7
ALNE P **P 21 49 37.7 +2.4**
SNR=6.7
ALNE Al Ain 39.72 104 *i* P **P 21 49 37.7 +2.4**
SNR=6.0
UMZA Um Al Zommool 40.15 106 P **P 21 49 39.5 +0.6**
BRZS Berezniki 40.70 59 *eP* **P 21 49 42.3 -0.9**
BRZS Berezniki 40.70 59 *eP* **P 21 49 42.3 -0.9**
baz=59
ARQ Araqi 40.72 104 P **P 21 49 45.6 +2.0**
SNR=6.6
HOQ Hoqain 41.13 103 P **P 21 49 48.5 +1.5**
SNR=6.3
KK31 Karatay Array 41.27 69 P **P 21 49 48.3 +0.3**
KK31 IAmb IAmb 21 49 52.7
comp=Z,16nm,0.9s
KK31 Karatay Array 41.27 69 P **P 21 49 48.3 +0.3**
KK31 pmax pmax
comp=Z,17nm,0.9s
KKAR Karatay Array 41.27 69 P **P 21 49 48.0 0.0**
KKAR Karatay Array 41.27 69 P **P 21 49 48.0 0.0**
IUG luzhnay 41.27 71 *eP* **P 21 49 48.4 +0.3**
IUG luzhnay 41.27 71 *eP* **P 21 49 48.4 +0.3**
baz=71
SFJD Kangerlussuaq 41.31 328 P **P 21 49 47.2 -0.7**
comp=Z,18nm,0.8s,baz=62,slow=8.0,SNR=5.2
comp=Z,18nm,0.8s
BSY Bisya 41.57 105 P **P 21 49 52.4 +1.7**
BSY P **P 21 49 52.4 +1.7**
BIDO Bidbid 41.75 103 P **P 21 49 54.8 +2.7**
SMDO Samad 41.98 103 P **P 21 49 55.7 +1.5**
SNR=6.8
CHGR Chuyangaron 42.00 76 P **P 21 49 53.3 -0.8**
CHGR Chuyangaron 42.00 76 P **P 21 49 53.3 -0.8**
CHGR pmax pmax
comp=Z,28nm,0.8s
DOK Doka 42.17 112 P **P 21 49 56.2 +0.6**
DOK P **P 21 49 56.2 +0.6**
WSAR Wadi Sarin 42.29 103 LR LR 22 10 06.1
comp=Z,181nm,20.5s,baz=166,slow=40
WSAR Wadi Sarin 42.29 103 P **P 21 49 58.0 +1.5**
WHFO Wadi Hawf 42.41 113 P **P 21 49 58.2 +0.6**
JMDO Jabal Madar 42.46 104 P **P 21 49 58.3 +0.4**
JMDO P **P 21 49 58.3 +0.4**
ABTO Aybut 42.49 114 P **P 21 49 58.9 +0.7**
BTK Batken 42.61 73 P **P 21 49 58.5 -0.5**
BTK Batken 42.61 73 P **P 21 49 58.6 -0.5**
BTK pmax pmax
comp=Z,8.0nm,0.8s
GAR Garm 42.68 75 P **P 21 50 00.4 +0.7**
WBK Wadi Bani Khal 42.92 103 P **P 21 50 05.5 +3.8**
RBK Rabkut 43.00 113 P **P 21 50 04.0 +1.6**
BTLS Baital 43.01 65 *eP* **P 21 50 01.8 -0.3**
BTLS Baital 43.01 65 *eP* **P 21 50 01.8 -0.3**
baz=65
MHTO MHTO 43.25 106 P **P 21 50 07.0 +2.7**
MHTO P **P 21 50 07.0 +2.7**
DMTO DMTO 43.35 112 P **P 21 50 05.7 +0.6**
DRK Karamyk 43.53 74 P **P 21 50 06.4 -0.4**
DRK IAmb IAmb 21 50 12.4
comp=Z,18nm,1.1s
DQM DQM 43.64 107 P **P 21 50 07.7 +0.2**
SNR=7.3
KBL Kabul 43.73 82 P **P 21 50 08.1 -0.2**
KBL Kabul 43.73 82 P **P 21 50 08.1 -0.2**
KBL pmax pmax
comp=Z,5.0nm,1.1s
LODK Lodwar 43.99 147 P **P 21 50 09.6 -0.8**
KURBB Kurchatov Arra 44.16 56 P **P 21 50 11.4 +0.1**
comp=Z,2.8nm,0.7s,baz=298,slow=8.6,SNR=16
KURBB PP **PP 21 51 54.9 +0.8**
comp=Z,2.3nm,0.8s,baz=290,slow=11,SNR=4.8
comp=Z,2.8nm,0.7s
AAK Ala-Archa 44.17 68 P **P 21 50 11.2 -0.5**
AAK Ala-Archa 44.17 68⇓ *eP* **P 21 50 13.3 +1.7**
AAK pmax pmax
comp=Z,11nm,1.3s
AAK Ala-Archa 44.17 68 P **P 21 50 13.7 +2.0**
AAK P **P 21 50 13.7 +2.0**
AAK Ala-Archa 44.17 68 *i* P **P 21 50 13.4 +1.7**
SNR=6.9
AAK Ala-Archa 44.17 68 P **P 21 50 15.0 +3.3**
KURK Kurchatov 44.19 56 P **P 21 50 11.1 -0.4**
KURK Kurchatov 44.19 56 P **P 21 50 11.1 -0.4**
KURK pmax pmax
comp=Z,7.0nm,0.8s
KUU Kurty 44.95 66 *eP* **P 21 50 18.1 +0.4**
KUU pmax pmax
comp=Z,12nm,0.9s
KUU Kurty 44.95 66 *eP* **P 21 50 18.2 +0.4**
comp=Z,12nm,0.9s,baz=66
BOOM Boomskoye usch 45.21 68 P **P 21 50 20.4 +0.3**
BOOM IAmb IAmb 21 50 48.1
comp=Z,21nm,1.3s
BOOM Boomskoye usch 45.21 68 P **P 21 50 20.4 +0.3**
BOOM pmax pmax
comp=Z,21nm,1.3s
NRIK Noril'sk 45.28 29 P **P 21 50 20.9 +0.9**
comp=Z,7.0nm,0.9s,baz=287,slow=4.8,SNR=7.3
comp=Z,7.0nm,0.9s
NRIK Noril'sk 45.28 29 P **P 21 50 19.9 0.0**
NRIK IAmb IAmb 21 50 24.1
comp=Z,16nm,1.1s
NRIK Noril'sk 45.28 29 *ceP* **P 21 50 21.9 +1.9**
MDOK Medeo 45.70 67 *eP* **P 21 50 24.9 +1.0**
MDOK Medeo 45.70 67 *eP* **P 21 50 24.9 +1.0**
baz=67
TDK Taldyqorghan 45.92 64 *eP* **P 21 50 26.2 +0.8**
TDK Taldyqorghan 45.92 64 *eP* **P 21 50 26.2 +0.8**
baz=64
KSH Kashi 46.45 72 P **P 21 50 31.5 +1.7**
KSH pP sP 21 50 35.5 +0.3
KSH pmax pmax
comp=Z,30nm,0.9s
ZAA0 Zalesovo Array 46.91 50 P **P 21 50 32.3 -0.7**
ZAA0 IAmb IAmb 21 50 44.0
comp=Z,11nm,1.4s
ZALV Zalesovo Beam 46.91 50 P **P 21 50 33.1 +0.1**
comp=Z,4.2nm,0.7s,baz=289,slow=9.1,SNR=11
ZALV PP **PP 21 52 23.6 +0.5**
comp=Z,3.6nm,0.7s,baz=294,slow=10,SNR=5.3
comp=Z,4.2nm,0.7s
ZALV Zalesovo Beam 46.91 50 P **P 21 50 32.8 -0.3**
ZALV Zalesovo Beam 46.91 50 *i* P **P 21 50 33.7 +0.7**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
NIL Nilore 47.22 80 P **P 21 50 35.1 -0.6**
NIL Nilore 47.22 80 P **P 21 50 35.1 -0.6**
NIL pmax pmax
comp=Z,20nm,1.0s
NIL Nilore 47.22 80 P **P 21 50 37.7 +1.9**
NIL Nilore 47.22 80 P **P 21 50 38.4 +2.6**
SHLS Shalkode 47.33 66 *eP* **P 21 50 38.7 +2.1**
SHLS pmax pmax
comp=Z,4.0nm,0.9s
SHLS Shalkode 47.33 66 *eP* **P 21 50 38.7 +2.1**
comp=Z,4.2nm,0.9s,baz=66
MAKZ Makanchi 47.57 60 P **P 21 50 38.1 -0.2**
MAKZ IAmb IAmb 21 50 44.4
comp=Z,8.3nm,1.1s
MAKZ Makanchi 47.57 60 P **P 21 50 38.1 -0.2**
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 47.57 60 P **P 21 50 40.7 +2.4**
MK31 Makanchi Array 47.77 60 P **P 21 50 39.5 -0.4**
MK31 IAmb IAmb 21 50 43.2
comp=Z,7.6nm,0.8s
MK31 Makanchi Array 47.77 60 P **P 21 50 39.5 -0.4**
MK31 pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 47.77 60 P **P 21 50 40.4 +0.5**
comp=Z,10.0nm,0.7s,baz=290,slow=5.1,SNR=54
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 47.77 60 P **P 21 50 39.5 -0.5**
MKAR Makanchi Array 47.77 60 *ceP* **P 21 50 40.7 +0.8**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
KMBO Kilima Mbogo 48.88 147 P **P 21 50 47.4 -1.6**
KMBO Kilima Mbogo 48.88 147 P **P 21 50 47.4 -1.6**
KMBO pmax pmax
comp=Z,6.0nm,1.2s
EUNU Eureka 49.73 347 P **P 21 50 55.0 +0.4**
EUNU IAmb IAmb 21 50 56.9
comp=Z,22nm,1.2s
DGZ Jazzator, Alta 49.87 55 *ceP* **P 21 50 57.3 +1.2**
DGZ pmax pmax
comp=Z,9.0nm,0.7s
SCHQ Schefferville 51.16 313 P **P 21 51 04.9 -0.7**
comp=Z,4.9nm,0.7s,baz=73,slow=5.8,SNR=5.3
comp=Z,4.9nm,0.7s
SCHQ Schefferville 51.16 313 P **P 21 51 04.8 -0.8**
WMQ Urumqi 52.47 62 *eP* **P 21 51 17.3 +1.7**
WMQ pP sP 21 51 20.5 -0.6
WMQ sP pP 21 51 24.3 +4.8
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,210nm,4.3s
WMQ LR LR
comp=Z,200nm,16.7s
WMQ LR LR
comp=Z,380nm,18.1s
WMQ LR LR
comp=Z,210nm,19.3s
BATG Bathurst New B 53.81 304 P **P 21 51 23.9 -1.4**
TIXI Tiksi 57.20 20 P **P 21 51 49.0 -0.3**
TIXI Tiksi 57.20 20⇑ *eP* **P 21 51 51.6 +2.3**
TIXI pmax pmax
comp=Z,9.0nm,1.3s
TIXI Tiksi 57.20 20 P **P 21 51 52.8 +3.5**
PYUN Piuthan 57.24 81 *eP* **P 21 51 51.2 +0.6**
PYUN Piuthan 57.24 81 *eP* **P 21 51 51.6 +1.0**
comp=Z,101nm,1.0s
DANN Dangsing 57.66 80 *eP* **P 21 51 54.5 +0.9**

DANN	Dangsing	57.66	80	eP	P	21 51 54.6	+0.9
	comp=Z,31nm,0.8s						
KOLN	Koldanda	57.88	80	eP	P	21 51 55.7	+0.7
GKN	Gorkha	58.49	80	eP	P	21 51 59.9	+0.6
GKN	Gorkha	58.49	80	eP	P	21 52 00.3	+1.0
	comp=Z,73nm,1.1s						
DMN	Daman	59.06	80	eP	P	21 52 04.3	+1.0
	comp=Z,59nm,1.0s						
DMN	Daman	59.06	80	eP	P	21 52 04.6	+1.3
	comp=Z,59nm,1.0s						
PKIN	Phulchoki	59.29	80	eP	P	21 52 05.4	+0.5
PKIN	Phulchoki	59.29	80	eP	P	21 52 05.9	+1.0
	comp=Z,28nm,1.0s						
PKI	Pulchoki	59.30	80	eP	P	21 52 06.0	+0.9
PKI	Pulchoki	59.30	80	eP	P	21 52 06.0	+0.9
	comp=Z,40nm,1.1s						
GUN	Gumba	59.44	79	eP	P	21 52 06.5	+0.4
GUN	Gumba	59.44	79	eP	P	21 52 06.9	+0.8
	comp=Z,77nm,1.0s						
LSZ	Lusaka	59.49	163	P	P	21 52 05.7	-0.4
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LSZ	Lusaka	59.49	163	P	P	21 52 07.0	+0.9
JIRN	Jiri	59.81	79	eP	P	21 52 09.3	+0.6
JIRN	Jiri	59.81	79	eP	P	21 52 09.6	+0.9
	comp=Z,51nm,1.0s						
RAMN	Ramite	60.52	79	eP	P	21 52 13.7	+0.3
	comp=Z,49nm,0.9s						
RAMN	Ramite	60.52	79	eP	P	21 52 14.3	+0.9
	comp=Z,49nm,0.9s						
ODAN	Odare	61.15	79	eP	P	21 52 18.7	+1.1
A36M	Sachs Harbour	61.76	346	P	P	21 52 18.5	-2.3
	baz=34						
SONM	Songino Array	61.80	50	P	P	21 52 22.9	+1.3
	comp=Z,14nm,0.9s,baz=294,slow=6.2,SNR=37						
	comp=Z,14nm,0.9s						
SONM	Songino Array	61.80	50	P	P	21 52 22.2	+0.6
SONM	Songino Array	61.80	50	P	P	21 52 22.2	+0.6
SONM				pmax	pmax		
	comp=Z,24nm,1.1s						
ULN	Ulaanbaatar	62.15	49	P	P	21 52 24.4	+0.3
ULN				IAmb	IAmb	21 52 30.6	
	comp=Z,12nm,1.1s						
ULN	Ulaanbaatar	62.15	49⇑	eP	P	21 52 25.8	+1.8
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	Ulaanbaatar	62.15	49	P	P	21 52 18.4	-5.6
ULN	Ulaanbaatar	62.15	49	P	P	21 52 27.1	+3.1
LSA	Lhasa	62.18	74	P	P	21 52 22.7	-2.1
GTA	Gaotai	62.52	61	eP	P	21 52 29.3	+2.7
GTA				pP	sP	21 52 31.5	-0.7
GTA				sP	pP	21 52 35.5	+4.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,83nm,4.2s						
GTA				LR	LR		
	comp=Z,110nm,20.0s						
GTA				LR	LR		
	comp=Z,150nm,18.9s						
GTA				LR	LR		
	comp=Z,210nm,20.0s						
YAK	Yakutsk	63.72	28	P	P	21 52 34.2	+0.2
YAK	Yakutsk	63.72	28	eP	P	21 52 37.3	+3.3
YAK				e*PP	sP	21 52 41.6	+2.0
YAK				e		21 53 12.0	
YAK				e		21 54 57.4	
YAK				ePPP	PPP	21 56 26.2	
YAK				eS	S	22 01 12.2	+4.2
YAK				e*SS	sS	22 01 34.7	+20
YAK				eSS	SS	22 05 19.4	+4.6
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,261nm,4.8s						
YAK				pmax	pmax		
	comp=N,227nm,3.5s						
YAK				pmax	pmax		
	comp=E,144nm,3.2s						
YAK				smax	smax		
	comp=E,128nm,4.2s						
YAK				smax	smax		
	comp=N,80nm,2.0s						
YAK	Yakutsk	63.72	28	P	P	21 52 38.1	+4.1
C36M	Paulatuk	63.74	344	P	P	21 52 30.8	-3.2
	baz=34						
ERPA	Erie	64.96	305	P	P	21 52 40.4	-2.0
	baz=54						
SHL	Shillong	65.15	78	P	P	21 52 43.8	-0.4
SHL	Shillong	65.15	78	P	P	21 52 43.8	-0.4
SHL				pmax	pmax		
	comp=Z,16nm,0.8s						
INK	Inuvik	66.36	347	P	P	21 52 51.2	+0.2
INK				IAmb	IAmb	21 52 54.3	
	comp=Z,10nm,0.9s						
INK	Inuvik	66.36	347	P	P	21 52 51.2	+0.2
INK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
INK	Inuvik	66.36	347	P	P	21 52 50.5	-0.6
	baz=26,SNR=7.3						
C27K	Jago River	66.54	351	P	P	21 52 51.7	-0.5
	baz=18,SNR=6.8						
O53A	New Philadelph	66.81	304	P	P	21 52 52.7	-1.7
	baz=53						
YKA	Yellowknife Ar	66.95	336	P	P	21 52 55.3	+0.4
	comp=Z,10nm,0.9s,baz=43,slow=6.0,SNR=29						
	comp=Z,10nm,0.9s						
C23K	Itkillik River	66.98	354	P	P	21 52 54.5	-0.5
	baz=13						
LZH	Lanzhou	67.05	62	eP	P	21 53 00.8	+4.6
LZH				pP	sP	21 53 07.8	+6.0
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				LR	LR		
	comp=Z,160nm,13.8s						
LZH				LR	LR		
	comp=Z,240nm,16.7s						
LZH				LR	LR		
	comp=Z,310nm,16.0s						
D25K	Kavik River	67.11	352	P	P	21 52 55.0	-0.9
	baz=16						
F31M	Tsiigehtchic	67.18	347	P	P	21 52 56.1	-0.2
	baz=26,SNR=16						
D24K	Happy Valley	67.50	353	P	P	21 52 57.5	-0.8
	baz=14						
BILL	Bilibino	67.59	11	i P	P	21 52 59.0	+0.1
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
E27K	Coleen River	67.65	350	P	P	21 52 59.2	-0.1
	baz=20,SNR=9.3						
D23K	Nanushuk River	67.84	354	P	P	21 52 59.0	-1.4
	baz=13						
G30M	tAoh Zraii Nji	68.01	348	P	P	21 53 01.8	+0.1
	baz=24						
TOLK	Toolik Lake Re	68.06	353	P	P	21 53 02.5	+0.5
TOLK	Toolik Lake Re	68.06	353	P	P	21 53 01.4	-0.6
	baz=14						
E25K	Arctic Village	68.18	352	P	P	21 53 02.0	-0.7
	baz=17						
FFC	Flin Flon	68.21	326	P	P	21 53 06.1	+3.1
F26K	Sheenjek River	68.43	351	P	P	21 53 04.6	+0.3
	baz=18,SNR=7.2						
LBTB	Lobatse	68.52	168	P	P	21 53 04.9	-0.4
LBTB	Lobatse	68.52	168	P	P	21 53 04.9	-0.4
LBTB				pmax	pmax		
	comp=Z,25nm,1.4s						
ULM	Lac du Bonnet	68.52	319	P	P	21 53 06.0	+1.0
	comp=Z,7.9nm,0.7s,baz=72,slow=7.0,SNR=5.6						
	comp=Z,7.9nm,0.7s						
ULM	Lac du Bonnet	68.52	319	P	P	21 53 05.4	+0.3
ULM				IAmb	IAmb	21 53 09.0	
	comp=Z,7.9nm,0.8s						
E23K	Chandalar	68.64	353	P	P	21 53 05.9	+0.3
	baz=14,SNR=6.0						
EPYK	Eagle Plains	68.65	347	P	P	21 53 03.8	-1.8
	baz=23						
F25K	Christian Rive	68.70	351	P	P	21 53 04.7	-1.2
	baz=17						
BMAR	Burnt Mountain	68.73	351	P	P	21 53 06.9	+0.7
HHC	Hu-ho-hao-te	68.92	54	eP	P	21 53 07.5	-0.3
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
G27K	Doyon Strip	68.96	350	P	P	21 53 05.8	-1.8
	baz=20,SNR=8.1						
F24K	Squaw Lake	69.00	352	P	P	21 53 07.6	-0.2
	baz=15,SNR=5.5						
G26K	Porcupine Rive	69.10	350	P	P	21 53 06.9	-1.4
	baz=18,SNR=16						
F22K	John River	69.39	354	P	P	21 53 09.1	-1.1
	baz=12						
H27K	Steamboat Moun	69.49	349	P	P	21 53 10.0	-0.9
	baz=20,SNR=17						
COLD	Coldfoot	69.50	353	P	P	21 53 11.4	+0.5
COLD				IAmb	IAmb	21 53 15.1	
	comp=Z,10nm,1.0s						
COLD	Coldfoot	69.50	353	P	P	21 53 11.7	+0.8
	baz=13						
G25K	Bearman Lake	69.55	351	P	P	21 53 11.5	+0.4
	baz=16,SNR=5.4						
FYU	Fort Yukon	69.64	351	P	P	21 53 12.6	+0.9
SEY	Seymchan	69.64	19⇑	eP	P	21 53 12.7	+0.9
SEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
G24K	Hadweenzic Riv	69.75	352	P	P	21 53 12.5	0.0
	baz=15						
F21K	Alatna River	69.77	354	P	P	21 53 13.0	+0.5
	baz=10,SNR=12						
I29M	Ogilvie Camp,	69.84	348	P	P	21 53 12.9	-0.1
I29M	Ogilvie Camp,	69.84	348	P	P	21 53 13.9	+0.9
	baz=22,SNR=16						
G22K	Bettles	69.91	354	P	P	21 53 13.0	-0.3
	baz=12						
G23K	Bananza Creek	69.99	353	P	P	21 53 14.6	+0.7
	baz=13						
H25K	Birch Creek	69.99	351	P	P	21 53 14.9	+1.0
	baz=16,SNR=7.3						
I27K	Kandik River	70.10	349	P	P	21 53 15.3	+0.6
	baz=20,SNR=5.3						
G21K	Allakaket	70.47	354	P	P	21 53 17.3	+0.5
	baz=10,SNR=6.2						
I26K	Coal Creek Min	70.59	350	P	P	21 53 16.7	-0.8
	baz=18						
H24K	Noodor Dome	70.64	352	P	P	21 53 18.1	+0.2
	baz=15						
PRP	Porcupine Dome	70.68	351	P	P	21 53 18.5	+0.2
	baz=16,SNR=7.6						
HILA	High Level	70.81	335	P	P	21 53 19.5	+0.5
H23K	Yukon River	70.81	353	P	P	21 53 19.6	+0.6
H23K				IAmb	IAmb	21 53 23.8	
	comp=Z,11nm,0.8s						
H23K	Yukon River	70.81	353	P	P	21 53 18.8	-0.1
	baz=13						
EGAK	Eagle	70.81	349	P	P	21 53 19.3	+0.4
	baz=20						
H22K	Ishtalitna Cre	70.91	353	P	P	21 53 19.5	0.0
	baz=12						
IMAR	Indian Mountai	71.01	354	P	P	21 53 20.5	+0.3
MMPY	Sheldon Lake,	71.05	343	P	P	21 53 20.7	+0.2
	baz=27						
K29M	Barlow Dome	71.12	347	P	P	21 53 20.7	-0.2
	baz=22						
DAWY	Dawson	71.22	348	P	P	21 53 22.3	+0.9
DAWY				IAmb	IAmb	21 53 25.9	
	comp=Z,12nm,1.0s						
DAWY	Dawson	71.22	348	P	P	21 53 21.5	+0.1
	baz=21,SNR=13						
H21K	Melozitna Rive	71.26	354	P	P	21 53 22.0	+0.3
	baz=11,SNR=28						
POKR	Poker Plat Res	71.29	351	P	P	21 53 19.4	-2.4
	baz=15						
TGTN	Hyland Airport	71.36	342	P	P	21 53 21.5	-0.9
	baz=29,SNR=5.8						
J26L	Joseph Creek	71.41	350	P	P	21 53 22.7	0.0
	baz=18						
I23K	Minto, Yukon-K	71.46	352	P	P	21 53 21.4	-1.4
	baz=14						
KOTAN	Kotaneelee Air	71.52	339	P	P	21 53 24.2	+0.9
	baz=32						
MDM	Murphy Dome	71.53	352	P	P	21 53 23.8	+0.5
J25K	Salcha River,	71.53	350	P	P	21 53 24.2	+0.8
	baz=16						
PZH	PanZhiHua	71.54	71	P	P	21 53 25.3	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,70nm,5.1s						
IL31		71.56	351	P	P	21 53 23.5	+0.1
IL31				IAmb	IAmb	21 53 28.1	
	comp=Z,7.2nm,0.9s						
ILAR	Eielson Array	71.56	351	P	P	21 53 23.7	+0.2
	comp=Z,5.9nm,0.9s,baz=7.4,slow=5.1,SNR=29						
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	71.56	351	P	P	21 53 23.6	+0.1
COLA	College	71.57	352⇑	eP	P	21 53 24.8	+1.3
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
COLA	College	71.57	352	P	P	21 53 28.1	+4.7
XAN	Xi'an	71.59	61	P	P	21 53 27.5	+3.3
XAN				pP	PcP	21 53 36.8	-6.7
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
K27K	Chicken	71.66	349	P	P	21 53 24.3	+0.2
K27K				IAmb	IAmb	21 53 28.4	
	comp=Z,12nm,1.1s						
K27K	Chicken	71.66	349	P	P	21 53 24.2	+0.1
	baz=19						
I21K	Tanana	71.67	353	P	P	21 53 23.2	-0.8
	baz=12						
MLY	Manley	71.70	353	P	P	21 53 23.2	-1.2
	baz=12,SNR=7.7						
FARO	Faro, Yukon	71.83	344	P	P	21 53 25.3	+0.1
	baz=25,SNR=10						
L29M	L29M	71.91	347	P	P	21 53 26.4	+0.8
	baz=22						
SCRK	Sand Creek	71.97	350	P	P	21 53 27.1	+1.0
SCRK				IAmb	IAmb	21 53 31.1	
	comp=Z,6.0nm,0.9s						
SCRK	Sand Creek	71.97	350	P	P	21 53 27.1	+1.0
	baz=18						
NEA2	Nenana	71.97	352	P	P	21 53 24.8	-1.2
	baz=14						
BOSA	Boshof	72.00	169	P	P	21 53 26.5	0.0
	comp=Z,8.8nm,1.2s,baz=346,slow=4.1,SNR=5.7						
	comp=Z,8.8nm,1.2s						
BOSA	Boshof	72.00	169	P	P	21 53 25.7	-0.8
BOSA				IAmb	IAmb	21 53 32.4	
	comp=Z,13nm,1.1s						
BOSA	Boshof	72.00	169	P	P	21 53 25.7	-0.8
BOSA				pmax	pmax		
	comp=Z,13nm,1.2s						
M31M	Drury Creek, Y	72.06	345	P	P	21 53 26.3	-0.2
	baz=24						
BJT	Baijiatuau	72.15	52	P	P	21 53 27.6	+0.2
BJT				IAmb	IAmb	21 53 33.4	
	comp=Z,7.6nm,0.8s						
BJT	Baijiatuau	72.15	52	P	P	21 53 27.6	+0.2
BJT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
M30M	Minto, Yukon	72.17	346	P	P	21 53 25.1	-2.1
	baz=23						
DOT	Dot Lake	72.29	350	P	P	21 53 28.8	+0.9
DOT				IAmb	IAmb	21 53 32.3	
	comp=Z,16nm,1.0s						
RIDG	Independent Ri	72.31	350	P	P	21 53 26.2	-1.9
	baz=17						
K24K	Donnelly Dome	72.36	350	P	P	21 53 29.5	+1.1
	baz=16						
BCAR	Beaver Creek A	72.53	348	P	P	21 53 29.6	+0.3
L27K	Beaver Creek,	72.54	348	P	P	21 53 30.3	+0.9
L27K				IAmb	IAmb	21 53 34.3	
	comp=Z,5.4nm,0.8s						
L27K	Beaver Creek,	72.54	348	P	P	21 53 28.8	-0.6
	baz=19,SNR=6.9						
M29M	Somme Creek	72.58	347	P	P	21 53 29.1	-0.7
	baz=22,SNR=7.1						
BPAW	Bear Paw Mtn.	72.64	353	P	P	21 53 30.2	+0.3
BPAW	Bear Paw Mtn.	72.64	353	P	P	21 53 28.8	-1.2
	baz=12						
WTLY	Watson Lake, Y	72.73	341	P	P	21 53 29.7	-0.9
	baz=28						
N32M	Quiet Lake	72.75	344	P	P	21 53 29.6	-1.2
	baz=25						
L26K	Log Cabin Wild	72.79	349	P	P	21 53 29.4	-1.5
	baz=18,SNR=7.9						
MCK	McKinley	72.80	352	P	P	21 53 31.4	+0.5
MCK	McKinley	72.80	352	P	P	21 53 31.4	+0.5
MCK				pmax	pmax		
	comp=Z,31nm,1.1s						
MCK	McKinley	72.80	352	P	P	21 53 29.7	-1.2
	baz=14,SNR=12						
J20K	Nowinta River	72.83	354	P	P	21 53 28.9	-2.1
	baz=9.8						
CHUM	Lake Minchumin	72.97	353	P	P	21 53 30.7	-1.1
	baz=11,SNR=13						
N31M	Braeburn, Yuko	72.99	345	P	P	21 53 31.5	-0.6
	baz=23						
BVCY	Beaver Creek	73.00	348	P	P	21 53 30.7	-1.5
	baz=20						
PAX	Paxson	73.13	350	P	P	21 53 32.3	-0.6
	baz=16						
KTH	Kantishna Hill	73.17	353	P	P	21 53 33.4	+0.2
KTH				IAmb	IAmb	21 53 37.4	
	comp=Z,6.7nm,0.8s						
TRF	Thorofare Moun	73.21	352	P	P	21 53 34.0	+0.5
TRF	Thorofare Moun	73.21	352	P	P	21 53 30.9	-2.6
	baz=13						
M27K	Edge Creek, AK	73.21	348	P	P	21 53 30.3	-3.2
	baz=19						
DHY	Denali Highway	73.26	351	P	P	21 53 31.2	-2.6
	baz=15,SNR=25						
ECSD	EROS Data Cent	73.32	315	P	P	21 53 34.3	0.0
ECSD				IAmb	IAmb	21 53 38.2	
	comp=Z,7.9nm,1.1s						
ECSD	EROS Data Cent	73.32	315	P	P	21 53 34.2	-0.2
	baz=46						
M26K	Nabesna, AK	73.34	349	P	P	21 53 34.2	0.0
	baz=18,SNR=8.6						
CAST	Castle Rocks	73.41	353	P	P	21 53 32.1	-2.5
	baz=11,SNR=6.2						
WVT	Waverly	73.45	304	P	P	21 53 33.5	-1.7
	baz=49						
YUK3	Moose Creek	73.54	347	P	P	21 53 33.2	-2.4
	baz=20,SNR=9.6						
P33M	Teslin, Yukon	73.55	343	P	P	21 53 36.5	+1.1
P33M				IAmb	IAmb	21 53 39.9	
	comp=Z,10nm,0.8s						
P33M	Teslin, Yukon	73.55	343	P	P	21 53 31.7	-3.8
	baz=25						
WHY	Whitehorse	73.57	344	P	P	21 53 36.0	+0.3
WHY				IAmb	IAmb	21 53 39.1	
	comp=Z,8.2nm,1.1s						
WHY	Whitehorse	73.57	344	P	P	21 53 33.6	-2.0
	baz=24						
K20K	Telida	73.63	354	P	P	21 53 35.7	-0.2
	baz=9.8						
WAT1	Susitna Watana	73.63	351	P	P	21 53 34.5	-1.4
	baz=14						
GAMB	Gambell	73.64	2	P	P	21 53 34.4	-1.3
	baz=356						
YUK4	Talbot Arm	73.64	346	P	P	21 53 34.2	-2.0
	baz=21						
KLR	Kul'dur	73.69	37	LR	LR	22 29 51.3	
	comp=Z,208nm,19.0s,baz=346,slow=39						
KLR	Kul'dur	73.69	37⇓	eP	P	21 53 37.7	+1.3
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
O30N	Mendenhall	73.70	345	P	P	21 53 33.9	-2.4
	baz=23						
WAT6	Susitna Watana	73.78	351	P	P	21 53 34.7	-2.2
	baz=14						
EDM	Edmonton	73.81	330	P	P	21 53 37.2	+0.1
EDM				IAmb	IAmb	21 53 40.9	
	comp=Z,18nm,1.0s						
EDM	Edmonton	73.81	330	P	P	21 53 37.2	+0.1
EDM				pmax	pmax		
	comp=Z,18nm,1.0s						
R33M	Jennings River	73.88	342	P	P	21 53 34.1	-3.3
	baz=27,SNR=8.4						
YUK8	Steele Glacier	73.89	347	P	P	21 53 35.4	-2.3
	baz=20						
HYT	Haines Junctio	73.92	346	P	P	21 53 34.4	-3.4
	baz=22						
PPLA	Purkeypile	73.93	353	P	P	21 53 35.5	-2.3
	baz=11						
YUK6	Outpost Mounta	73.97	346	P	P	21 53 35.7	-2.4
	baz=21,SNR=11						
M24K	Tolsona, Glenn	74.05	350	P	P	21 53 35.9	-2.5
	baz=16						
TTA	Tatalina	74.19	355	P	P	21 53 38.0	-1.2
	baz=8.3						
CCM	Cathedral Cave	74.21	307	P	P	21 53 37.2	-2.4
	baz=48						
P32M	Atlin	74.31	343	P	P	21 53 37.1	-2.8
	baz=25						
MCARA	McCarthy VSAT	74.31	348	P	P	21 53 36.6	-3.2
	baz=18						
N25K	Chitina, Valde	74.33	349	P	P	21 53 40.4	+0.4
N25K				IAmb	IAmb	21 53 44.3	
	comp=Z,14nm,1.1s						
N25K	Chitina, Valde	74.33	349	P	P	21 53 37.9	-2.1
	baz=17						
ENH	Enshi	74.37	63	P	P	21 53 41.0	+0.3
ENH				IAmb	IAmb	21 53 50.4	
	comp=Z,6.7nm,0.7s						
O28M	Mount Upton	74.44	347	P	P	21 53 37.4	-3.6
	baz=20						
CTG	Chitna Glacier	74.45	347	P	P	21 53 38.3	-2.6
	baz=19						
CHTO	Chiang Mai	74.46	79	P	P	21 53 40.5	-0.9
CHTO	Chiang Mai	74.46	79	P	P	21 53 40.5	-0.9
SCM	Sheep Creek Mo	74.46	351	P	P	21 53 39.1	-1.7
	baz=15,SNR=7.5						
P30M	Million Dollar	74.47	345	P	P	21 53 39.2	-1.6
	baz=22						
L20K	Farewell, AK	74.49	354	P	P	21 53 38.4	-2.4
	baz=9.9						
DLBC	Dease Lake	74.51	341	P	P	21 53 38.3	-2.9
	baz=27						
M23K	Glacier View	74.55	351	P	P	21 53 39.3	-1.9
	baz=14						
BRLDA	Berland Lookou	74.55	332	P	P	21 53 42.0	+0.5
BRLDA				IAmb	IAmb	21 53 45.8	
	comp=Z,12nm,1.1s						
Q32M	Nakina River	74.56	342	P	P	21 53 39.0	-2.6
	baz=26						
SML	Sawmill	74.61	351	P	P	21 53 39.1	-2.5
	baz=14,SNR=8.5						
KLU	Klutina	74.61	350	P	P	21 53 39.6	-2.1
	baz=16						
CN2	Changchun	74.62	44	eP	P	21 53 43.0	+1.1
CM31	Chiang Mai Arr	74.69	79	P	P	21 53 40.3	-2.4
	SNR=5.5						
CMAR	Chiang Mai Arr	74.69	79	P	P	21 53 43.1	+0.4
	comp=Z,6.1nm,0.8s,baz=306,slow=7.4,SNR=48						
CMAR				LR	LR	22 33 45.7	
	comp=Z,44nm,20.1s,baz=320,slow=42						
	comp=Z,6.1nm,0.8s						
CMAR	Chiang Mai Arr	74.69	79	P	P	21 53 42.7	0.0
SKAG	Skagway	74.76	344	P	P	21 53 41.3	-1.1
	baz=24						
SKT	Skwentna	74.77	353	P	P	21 53 42.5	0.0
SKT				IAmb	IAmb	21 53 45.7	
	comp=Z,13nm,0.9s						
SKT	Skwentna	74.77	353	P	P	21 53 41.7	-0.8
	baz=12,SNR=5.3						
M22K	Willow	74.85	352	P	P	21 53 40.2	-2.7
	baz=13						
L19K	White Mountain	74.86	354	P	P	21 53 41.4	-1.6
	baz=9.1						
BMRM	Bremner River	74.94	349	P	P	21 53 41.1	-2.5
	baz=17,SNR=11						
ISLE	Juniper Island	74.95	348	P	P	21 53 44.3	+0.5
PLBC	Pleasant Camp	74.97	344	P	P	21 53 40.9	-2.7
	baz=23						
KNK	Knik Glacier	75.00	351	P	P	21 53 41.7	-2.1
	baz=14						
M20K	Styx River	75.01	353	P	P	21 53 41.3	-2.7
	baz=10						
P29M	Windy Craggy	75.08	345	P	P	21 53 45.5	+1.2
P29M	Windy Craggy	75.08	345	P	P	21 53 41.9	-2.4
	baz=22,SNR=10						
PINM	Pinnacle	75.09	347	P	P	21 53 42.0	-2.5
	baz=20						
M19K	Big River Lodg	75.09	354	P	P	21 53 45.8	+1.4
M19K				IAmb	IAmb	21 53 49.3	
	comp=Z,15nm,0.9s						
M19K	Big River Lodg	75.09	354	P	P	21 53 42.2	-2.1
	baz=9.4						
SUA	Susitna One	75.20	352	P	P	21 53 45.2	0.0
SUA	Susitna One	75.20	352	P	P	21 53 42.2	-2.9
	baz=12						
S34M	Telegraph Cree	75.24	341	P	P	21 53 43.3	-1.9
	baz=26						
PNL	Peninsula	75.34	346	P	P	21 53 44.0	-1.9
	baz=20						
GLI	Glacier Island	75.36	350	P	P	21 53 43.5	-2.4

baz=15
RC01 Rabbit Creek A 75.46 351 P P 21 53 44.9 -1.6
baz=13
EYAK Cordova Ski Ar 75.50 349 P P 21 53 45.3 -1.3
baz=16
PWL Port Wells 75.53 351 P P 21 53 45.0 -1.9
baz=14
N20K Mount Spurr 75.60 353 P P 21 53 44.5 -2.9
baz=11
R32K Eaglecrest 75.68 343 P P 21 53 45.0 -2.8
baz=24
LAO LASA Array 75.90 322 P P 21 53 47.4 -1.9
baz=41
N19K Bonanza Creek 76.18 354 P P 21 53 48.2 -2.5
baz=9.3
S31K Pelican 76.33 344 P P 21 53 49.9 -1.5
baz=23
SEW Seward 76.39 351 P P 21 53 49.4 -2.3
baz=13
N18K Kilae Creek 76.42 354 P P 21 53 48.7 -3.2
baz=8.3
EGMT Eagleton 76.44 325 P P 21 53 52.8 +0.4
RSSD Black Hills 76.78 319 P P 21 53 51.7 -2.9
baz=42
BAUV El Baul 77.50 271 P P 21 53 57.8 -0.9
BAUV IAmb IAmb 21 54 02.8
comp=Z,15nm,1.1s
MIAR Mount Ida 77.98 306 P P 21 54 00.8 -0.3
baz=46
Q20K Shuyak Island 78.17 352 P P 21 54 01.2 -0.6
baz=11
RLMT Red Lodge 78.47 322 P P 21 54 01.5 -2.5
baz=39
OK050 Pawnee Station 78.66 309 P P 21 54 05.1 +0.2
OK050 IAmb IAmb 21 54 09.0
comp=Z,14nm,0.9s
MSO Missoula 79.13 326 P P 21 54 07.1 -0.4
MSO IAmb IAmb 21 54 11.3
comp=Z,8.7nm,0.9s
MSO Missoula 79.13 326 P P 21 54 05.9 -1.6
baz=37
NJ2 Nanjing 79.13 56 eP P 21 54 09.5 +2.0
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
BOZ Bozeman (W) 79.14 324 P P 21 54 05.5 -2.0
baz=38
NEW Newport 79.22 329 P P 21 54 07.1 -0.7
baz=35
LRM Limekiln Ridge 79.31 325 P P 21 54 07.9 -0.7
SDV Santo Domingo 79.45 272 P P 21 54 08.7 -1.1
SDV IAmb IAmb 21 54 12.8
comp=Z,8.7nm,0.9s
SDV Santo Domingo 79.45 272 eP P 21 54 09.7 0.0
H17A Grant Village 79.62 323 P P 21 54 07.8 -2.6
baz=38
PETK Petropavlovsk- 79.66 21 LR LR 22 33 57.2
comp=Z,109nm,18.7s,baz=8.1,slow=39
YSS Yuzh-Sakhalins 80.07 32 eP P 21 54 16.4 +4.0
N23A Red Feather La 80.14 318 P P 21 54 11.1 -2.1
baz=41
MCMT McKenzie Canyo 80.27 324 P P 21 54 14.1 +0.2
BW06 Boulder Array 80.43 321 P P 21 54 12.2 -2.5
baz=39
PD31 Pinedale Array 80.43 321 P P 21 54 14.7 0.0
PDAR Pinedale Array 80.43 321 P P 21 54 15.2 +0.4
comp=Z,1.6nm,0.7s,baz=70,slow=4.9,SNR=13
comp=Z,1.6nm,0.7s
PDAR Pinedale Array 80.43 321 P P 21 54 14.6 -0.1
KSRS Korea Array 80.51 47 P P 21 54 14.8 -0.1
comp=Z,2.2nm,0.8s,baz=330,slow=4.3,SNR=5.8
comp=Z,2.2nm,0.8s
BDFB Brasilia 80.77 239 P P 21 54 17.7 +1.1
comp=Z,5.5nm,0.8s,baz=114,slow=4.5,SNR=7.1
comp=Z,5.5nm,0.8s
BDFB Brasilia 80.77 239 eP P 21 54 16.8 +0.2
E09A Wood Farm, Sta 81.06 328 P P 21 54 18.3 +0.6
E09A IAmb IAmb 21 54 22.1
comp=Z,12nm,0.7s
Q24A Divide 81.19 316 P P 21 54 16.0 -3.0
baz=41
PLID Pearl Lake 81.38 326 P P 21 54 19.3 -0.5
O20A White River Ci 81.84 319 P P 21 54 22.6 +0.4
O20A IAmb IAmb 21 54 27.1
comp=Z,9.2nm,0.8s
O20A White River Ci 81.84 319 P P 21 54 20.2 -2.0
baz=39
HLID Hailey 81.96 324 P P 21 54 20.3 -2.5
baz=36
WHTX Lake Whitney, 82.08 307 P P 21 54 21.4 -2.0
baz=44
BMO Blue Mountains 82.11 327 P P 21 54 23.3 -0.1
BMO Blue Mountains 82.11 327 P P 21 54 23.3 -0.1
BMO pmax pmax
comp=Z,27nm,0.8s
RDMU Red Mountain 82.14 320 P P 21 54 23.4 -0.4
RDMU IAmb IAmb 21 54 28.8
comp=Z,9.2nm,0.7s
T25A Trinidad 82.19 314 P P 21 54 21.3 -2.8
baz=41
HWUT Hardware Ranch 82.26 322 P P 21 54 24.0 -0.4
HWUT IAmb IAmb 21 54 28.7
comp=Z,11nm,0.8s
SDCO Great Sand Dun 82.30 315 P P 21 54 22.7 -2.1
baz=40
S22A 4UR Ranch, Cre 82.98 316 P P 21 54 26.2 -2.1
baz=40
PV23 Carpenter Ridg 83.52 318 P P 21 54 30.6 -0.6
SRU San Rafael Swe 83.74 319 P P 21 54 31.7 -0.4
SRU San Rafael Swe 83.74 319 P P 21 54 31.7 -0.4
SRU pmax pmax
comp=Z,12nm,0.7s
DUG Dugway, Tooele 83.96 321 P P 21 54 29.1 -4.0
baz=37
MVCO Mesa Verde 84.23 317 P P 21 54 31.1 -3.7
baz=39
ROSC El Rosal 84.86 272 LR LR 22 31 20.0
comp=Z,81nm,18.0s,baz=76,slow=35
ANMO Albuquerque 84.93 314 LR LR 22 31 10.2
comp=Z,129nm,19.7s,baz=40,slow=35
ANMO Albuquerque 84.93 314⇑ eP P 21 54 40.1 +1.9
ANMO pmax pmax
comp=Z,6.0nm,1.7s
ANMO Albuquerque 84.93 314 P P 21 54 35.5 -2.8
baz=40
ANMO Albuquerque 84.93 314 P P 21 54 42.0 +3.8
MJAR Matsushiro Arr 86.48 41 P P 21 54 46.1 +0.4
comp=Z,2.8nm,0.8s,baz=326,slow=4.9,SNR=2.3
MJAR LR LR 22 36 26.6
comp=Z,163nm,19.1s,baz=340,slow=38
comp=Z,2.8nm,0.8s
TX31 Lajitas Ar. Si 87.64 309 P P 21 54 51.5 -0.1
TX31 IAmb IAmb 21 55 04.8
comp=Z,8.9nm,1.0s
TXAR Lajitas Array 87.64 309 P P 21 54 52.4 +0.8
comp=Z,0.8nm,0.7s,baz=83,slow=3.9,SNR=7.6
comp=Z,0.8nm,0.7s
TXAR Lajitas Array 87.64 309 P P 21 54 51.5 0.0
NVAR Mina Array Bea 87.85 324 P P 21 54 52.9 +0.4
comp=Z,0.4nm,0.5s,baz=47,slow=4.2,SNR=2.0
comp=Z,0.4nm,0.5s
JOW Kunigami 88.57 54 LR LR 22 36 54.3
comp=Z,92nm,20.8s,baz=351,slow=37
JHJ Hachijo jima 2 89.99 42 LR LR 22 39 28.7
comp=Z,101nm,18.9s,baz=360,slow=38
BELC Belle Mtn. Jos 90.46 320 P P 21 55 01.2 -3.6
baz=35
PFO Pinyon Flats O 91.00 320 P P 21 55 05.3 -2.0
baz=34
PKM Mcpherson Peak 91.47 323 P P 21 55 06.2 -3.3
baz=32
MONP2 Monument Peak 91.57 320 P P 21 55 08.8 -1.2
baz=34
WRA Warramunga Arr 126.04 84 PKP PKPdf 22 01 04.3 -1.0
comp=Z,0.8nm,1.0s,baz=328,slow=1.9,SNR=4.6
ASAR Alice Springs 128.00 88 PKP PKPdf 22 01 08.4 -0.6
comp=Z,0.5nm,0.4s,baz=329,slow=1.8,SNR=6.6
SBA Scott Base 143.32 171 P PKiKP 22 01 37.9 -1.1

ROM 26 21:48:57.7±0.1, 42°809N±0°004×13°109E±0°006,
h10km, ML2.9/20, 5C-7D, Error ellipse: s-maj=0.5km
s-min=0.4km az=333.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**51**	P	Pg	21 49 00.4	+0.2
T1245				S	Sg	21 49 02.1	+0.1
T1245				AML	AML		
	comp=N,38650μm,0.4s						
T1245				AML	AML		
	comp=E,77400μm,1.1s						
T1245				AML	AML		
	comp=E,74200μm,1.1s						
T1245				AML	AML		
	comp=N,38650μm,0.7s						
T1245				AML	AML		
	comp=E,60191μm,0.3s						
T1245				AML	AML		
	comp=N,33924μm,0.3s						
T1245				AML	AML		
	comp=E,66417μm,0.3s						
T1245				AML	AML		
	comp=N,30146μm,0.5s						
T1216	**Preci, Frazion**	**0.10**	**321**	P	Pg	21 49 00.9	+0.4
T1216				AML	AML		
	comp=N,46250μm,0.3s						
T1216				AML	AML		
	comp=E,42200μm,0.3s						
T1216				AML	AML		
	comp=E,42250μm,0.3s						
T1216				AML	AML		
	comp=E,15058μm,0.4s						
T1216				AML	AML		
	comp=N,18377μm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**30**	P	Pg	21 49 01.2	+0.4
MC2				S	Sg	21 49 03.4	+0.4
FEMA	**Monte Fema**	**0.16**	**344**	P	Pb	21 49 03.4	+0.6
FEMA				S	Sg	21 49 04.5	+0.7
FEMA				AML	AML		
	comp=E,19850μm,1.0s						
FEMA				AML	AML		
	comp=N,16550μm,1.3s						
FEMA				AML	AML		
	comp=N,42550μm,0.4s						
FEMA				AML	AML		
	comp=E,51550μm,0.2s						
FEMA				AML	AML		
	comp=E,8528μm,0.2s						
FEMA				AML	AML		
	comp=N,9553μm,0.3s						
T1217	**Poggiodomo (PG**	**0.16**	**233**	P	Pg	21 49 01.9	+0.6
T1215	**Vallo di Nera,**	**0.18**	**268**	P	Pg	21 49 02.2	+0.6
T1215				S	Sg	21 49 05.2	+1.0
T1215				AML	AML		
	comp=E,3540μm,0.3s						
T1215				AML	AML		
	comp=E,3665μm,0.3s						
T1215				AML	AML		
	comp=N,2720μm,0.4s						
T1215				AML	AML		
	comp=N,2895μm,0.4s						
T1215				AML	AML		
	comp=E,3665μm,0.3s						
T1215				AML	AML		
	comp=N,2020μm,0.1s						
T1215				AML	AML		
	comp=E,3541μm,0.3s						
T1215				AML	AML		
	comp=N,2046μm,0.1s						
MMO1	**Montemonaco**	**0.18**	**61**	P	Pg	21 49 02.2	+0.5
MMO1				S	Sg	21 49 05.4	+0.9
T1204	**Amatrice, Fraz**	**0.20**	**131**	P	Pb	21 49 02.9	-0.7
LNSS	**Leonessa**	**0.21**	**194**	P	Pb	21 49 03.0	-0.7
T1241	**Roccafluvione,**	**0.24**	**79**	P	Pg	21 49 03.0	+0.3
T1241				AML	AML		
	comp=E,3080μm,0.8s						
T1241				AML	AML		
	comp=N,1760μm,0.1s						
T1241				AML	AML		
	comp=N,1765μm,0.1s						
T1241				AML	AML		
	comp=E,3085μm,0.8s						
SMA1	**SAN MARTINO**	**0.24**	**137**	P	Pb	21 49 04.1	-0.2
AM05	**Amandola Campo**	**0.25**	**47**	P	Pg	21 49 03.5	+0.7
AM05				S	Sg	21 49 07.5	+1.3
AM05				AML	AML		
	comp=N,1180μm,1.5s						
AM05				AML	AML		
	comp=E,1335μm,0.4s						
AM05				AML	AML		
	comp=N,1180μm,1.5s						
AM05				AML	AML		
	comp=E,4290μm,0.9s						
AM05				AML	AML		
	comp=N,1181μm,1.5s						
AM05				AML	AML		
	comp=N,308μm,0.6s						
AM05				AML	AML		
	comp=N,289μm,0.1s						
AM05				AML	AML		
	comp=E,4124μm,0.1s						
AM05				AML	AML		
	comp=E,1049μm,0.1s						
AM05				AML	AML		
	comp=N,969μm,0.1s						
CESI	**CESI - Serrava**	**0.25**	**323**	P	Pg	21 49 03.3	+0.5
CESI				S	Sg	21 49 07.4	+1.2
CESI				AML	AML		
	comp=N,12000μm,0.3s						
CESI				AML	AML		
	comp=N,12050μm,0.3s						
CESI				AML	AML		
	comp=E,6965μm,0.4s						
CESI				AML	AML		
	comp=N,3902μm,0.7s						
CESI				AML	AML		
	comp=E,4245μm,0.4s						
T1243	**Rocca Santa Ma**	**0.27**	**114**	P	Pg	21 49 03.8	+0.5
T1243				S	Sb	21 49 08.4	-1.1
GUMA	**Gualdo di Mace**	**0.30**	**33**	P	Pb	21 49 04.7	-0.6
GUMA				S	Sb	21 49 09.8	-0.5
GUMA				AML	AML		
	comp=N,8690μm,0.4s						
GUMA				AML	AML		
	comp=E,8625μm,0.5s						
GUMA				AML	AML		
	comp=N,8690μm,0.4s						
GUMA				AML	AML		
	comp=E,8200μm,0.4s						
GUMA				AML	AML		
	comp=N,11500μm,0.6s						
GUMA				AML	AML		
	comp=N,8690μm,0.4s						
GUMA				AML	AML		
	comp=E,8200μm,0.4s						
GUMA				AML	AML		
	comp=E,8626μm,0.5s						
GUMA				AML	AML		
	comp=N,9948μm,0.3s						
RM33	**Pellescritta (**	**0.31**	**165**	P	Pg	21 49 04.1	+0.1
T1211	**Morro Reatino**	**0.33**	**214**	S	Sg	21 49 06.0	-2.9
SEF1	**Sefro**	**0.36**	**341**	P	Pg	21 49 05.1	+0.3
SEF1				AML	AML		
	comp=N,3175μm,1.2s						
SEF1				AML	AML		
	comp=E,3550μm,0.8s						
SEF1				AML	AML		
	comp=N,3175μm,1.2s						
TERO	**Teramo**	**0.41**	**117**	P	Pg	21 49 06.3	+0.5
TERO				AML	AML		
	comp=E,902μm,1.4s						
TERO				AML	AML		
	comp=N,1212μm,1.4s						
TERO				AML	AML		
	comp=E,903μm,1.4s						
TERO				AML	AML		
	comp=E,493μm,0.5s						
TERO				AML	AML		
	comp=N,934μm,0.5s						
CESX	**Cesi**	**0.44**	**243**	⇑P	Pg	21 49 06.7	+0.4
CESX				AML	AML		
	comp=E,1045μm,1.4s						
CESX				AML	AML		
	comp=N,928μm,0.7s						
CESX				AML	AML		
	comp=E,799μm,0.4s						
CESX				AML	AML		
	comp=N,928μm,0.7s						
OFFI	**Offida**	**0.44**	**73**	⇑P	Pb	21 49 07.4	-0.2
OFFI				AML	AML		
	comp=E,1480μm,0.7s						
OFFI				AML	AML		
	comp=N,1780μm,0.6s						
SNTG	**Esanatoglia**	**0.46**	**345**	⇑P	Pg	21 49 07.0	+0.2
SNTG				AML	AML		
	comp=E,1260μm,0.3s						
SNTG				AML	AML		
	comp=N,940μm,0.8s						
SNTG				AML	AML		
	comp=E,1210μm,0.3s						
SNTG				AML	AML		
	comp=N,1080μm,0.8s						
SNTG				AML	AML		
	comp=E,1215μm,0.3s						
SNTG				AML	AML		
	comp=E,960μm,0.1s						
SNTG				AML	AML		
	comp=E,1008μm,0.1s						
SNTG				AML	AML		
	comp=N,852μm,0.1s						
SNTG				AML	AML		
	comp=N,919μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.51**	**318**	⇑P	Pg	21 49 08.1	+0.5
ATCC				AML	AML		
	comp=N,2410μm,0.7s						
ATCC				AML	AML		
	comp=N,2405μm,0.7s						
ATCC				AML	AML		
	comp=E,2945μm,0.1s						
ATCC				AML	AML		
	comp=E,2947μm,0.1s						
ATCC				AML	AML		
	comp=N,1972μm,0.3s						
EL6	**Elcito**	**0.52**	**359**	⇓P	Pg	21 49 08.3	+0.4
EL6				S	Sb	21 49 17.0	+0.4
EL6				AML	AML		
	comp=E,1972μm,0.7s						
EL6				AML	AML		
	comp=N,2835μm,0.4s						
EL6				AML	AML		
	comp=N,2657μm,0.2s						
EL6				AML	AML		
	comp=E,1861μm,0.1s						
MURB	**Monte Urbino**	**0.62**	**317**	⇓P	Pb	21 49 10.3	-0.4
MURB				S	Sb	21 49 21.0	+1.4
MURB				AML	AML		
	comp=N,2055μm,1.1s						
MURB				AML	AML		
	comp=E,1950μm,0.3s						
MURB				AML	AML		
	comp=N,1556μm,0.2s						
MURB				AML	AML		
	comp=E,1863μm,0.3s						
MURB				AML	AML		
	comp=E,1948μm,0.3s						
MURB				AML	AML		
	comp=N,1886μm,0.2s						
PP3	**Marolino**	**0.68**	**33**	⇓P	Pb	21 49 12.1	+0.5
PP3				AML	AML		
	comp=N,1258μm,0.8s						
PP3				AML	AML		
	comp=E,1098μm,1.4s						
PP3				AML	AML		
	comp=N,1282μm,0.5s						
PP3				AML	AML		
	comp=N,1260μm,0.8s						
PP3				AML	AML		
	comp=E,1093μm,1.4s						
PP3				AML	AML		
	comp=N,1283μm,0.5s						
PP3				AML	AML		
	comp=N,1285μm,0.5s						
PP3				AML	AML		
	comp=N,1260μm,0.8s						
PP3				AML	AML		
	comp=E,1155μm,1.4s						
PP3				AML	AML		
	comp=N,1253μm,0.2s						
PP3				AML	AML		
	comp=E,1069μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.68**	**305**	S	Sb	21 49 22.0	+0.9
ATFO	**Monte Foce - G**	**0.68**	**325**	⇓P	Pb	21 49 11.8	+0.1
ATFO				AML	AML		
	comp=E,352μm,1.0s						
ATFO				AML	AML		
	comp=N,462μm,0.4s						
ATFO				AML	AML		
	comp=N,462μm,0.4s						
ATFO				AML	AML		
	comp=E,352μm,1.0s						
ATFO				AML	AML		
	comp=E,342μm,0.1s						
ATFO				AML	AML		
	comp=N,382μm,0.1s						
ARVD	**Arcevia**	**0.70**	**350**	S	Sb	21 49 23.0	+1.3
ATVO	**AVT- Monte Val**	**0.77**	**318**	S	Sb	21 49 25.0	+1.3
ATMI	**Monte Miggiano**	**0.81**	**311**	S	Sn	21 49 27.0	-0.3
PIEI	**Pieia**	**0.84**	**330**	S	Sn	21 49 28.0	0.0
MPAG	**Monte Paganucc**	**0.86**	**343**	⇓P	Pg	21 49 14.3	+0.1
MPAG				S	Sn	21 49 29.0	+0.4
MPAG				AML	AML		
	comp=E,300μm,0.2s						
MPAG				AML	AML		
	comp=N,238μm,1.1s						
MPAG				AML	AML		
	comp=N,238μm,1.1s						
NARO	**Abbazia di Nar**	**0.89**	**334**	⇓P	Pb	21 49 15.2	0.0
NARO				S	Sn	21 49 30.0	+0.8
NARO				AML	AML		
	comp=E,188μm,0.6s						
NARO				AML	AML		
	comp=N,157μm,1.0s						
NARO				AML	AML		
	comp=N,158μm,1.0s						
NARO				AML	AML		
	comp=E,188μm,0.6s						
FSSB	**Fossombrone**	**0.92**	**345**	⇓P	Pb	21 49 15.7	0.0
FSSB				S	Sn	21 49 31.0	+1.1
FSSB				AML	AML		
	comp=E,702μm,0.4s						
FSSB				AML	AML		
	comp=N,928μm,1.4s						
FSSB				AML	AML		
	comp=N,928μm,1.4s						
CAFI	**Castiglion Fio**	**0.98**	**302**	⇑P	Pb	21 49 16.9	+0.1
LAV9	**Lanuvio**	**1.17**	**195**	AML	AML		
	comp=N,708μm,0.9s						
LAV9				AML	AML		
	comp=E,1010μm,0.1s						

ROM 26 21:49:36.1±0.1, 42°971N±0°004×13°060E±0°005,
h11km, ML2.9/3, 7C-10D, Error ellipse: s-maj=0.4km
s-min=0.4km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.01**	**220**	⇓P	Pg	21 49 38.4	+0.1
FEMA				S	Sg	21 49 39.5	-0.2
FEMA				AML	AML		
	comp=E,51600μm,0.2s						
FEMA				AML	AML		
	comp=N,42600μm,0.4s						
FEMA				AML	AML		
	comp=E,51550μm,0.2s						
FEMA				AML	AML		
	comp=N,42550μm,0.4s						
FEMA				AML	AML		
	comp=N,42571μm,0.4s						
FEMA				AML	AML		
	comp=E,51560μm,0.2s						
T1216	**Preci, Frazion**	**0.09**	**200**	⇑P	Pg	21 49 39.1	+0.4
T1216				S	Sg	21 49 41.1	+0.5
T1216				AML	AML		
	comp=N,7685μm,0.4s						
T1216				AML	AML		
	comp=E,10942μm,0.3s						
MC2	**Monte Cornacci**	**0.11**	**121**	⇑P	Pb	21 49 40.3	-0.1
MC2				S	Sg	21 49 42.0	+0.6
CESI	**CESI - Serrava**	**0.12**	**287**	⇑P	Pg	21 49 39.8	+0.6
CESI				S	Sg	21 49 42.1	+0.7
CESI				AML	AML		
	comp=E,6965μm,0.4s						
CESI				AML	AML		
	comp=N,10755μm,0.3s						
CESI				AML	AML		
	comp=E,6582μm,0.3s						
CESI				AML	AML		
	comp=N,10743μm,0.3s						
SEF1	**Sefro**	**0.19**	**335**	P	Pg	21 49 40.9	+0.5
SEF1				S	Sg	21 49 44.2	+0.9

MMO1	**Montemonaco**	**0.21 110**	⇓P	Pg	21 49 41.1	+0.5
MMO1			S	Sg	21 49 44.3	+0.6
AM05	**Amandola Campo**	**0.21 88**	⇑P	Pg	21 49 41.2	+0.5
PIO1	**Pioraco**	**0.21 345**	P	Pg	21 49 40.8	+0.1
T1215	**Vallo di Nera,**	**0.22 220**	P	Pg	21 49 41.4	+0.6
T1215			S	Sg	21 49 45.0	+1.1
T1215			AML	AML		
	comp=E,1581μm,0.4s					
T1215			AML	AML		
	comp=N,2096μm,0.3s					
T1215			AML	AML		
	comp=E,1102μm,0.1s					
T1215			AML	AML		
	comp=N,2026μm,0.1s					
T1215			AML	AML		
	comp=N,1988μm,0.1s					
T1215			AML	AML		
	comp=E,1130μm,0.1s					
GUMA	**Gualdo di Mace**	**0.22 65**	P	Pg	21 49 41.5	+0.6
GUMA			S	Sg	21 49 45.5	+1.5
GUMA			AML	AML		
	comp=N,5971μm,0.3s					
GUMA			AML	AML		
	comp=N,8536μm,0.2s					
GUMA			AML	AML		
	comp=E,5137μm,0.2s					
GUMA			AML	AML		
	comp=E,6205μm,4.3s					
MDAR	**Monte D'Aria**	**0.23 15**	P	Pg	21 49 41.5	+0.5
MDAR			AML	AML		
	comp=N,3302μm,0.1s					
MDAR			AML	AML		
	comp=E,2903μm,0.1s					
GAG1	**Gagliole**	**0.27 1**	P	Pb	21 49 42.4	-0.6
GAG1			S	Sb	21 49 46.9	-0.8
GAG1			AML	AML		
	comp=E,4219μm,0.4s					
T1217	**Poggiodomo (PG**	**0.28 200**	⇓P	Pg	21 49 42.5	+0.7
T1217			S	Sb	21 49 46.9	-0.9
T1217			AML	AML		
	comp=N,2337μm,0.2s					
T1217			AML	AML		
	comp=E,1498μm,0.1s					
T1217			AML	AML		
	comp=N,2289μm,0.2s					
T1217			AML	AML		
	comp=E,1462μm,0.1s					
MTL1	**Matelica**	**0.29 353**	P	Pg	21 49 42.1	+0.1
MTL1			S	Sb	21 49 47.5	-0.7
T1241	**Roccafluvione,**	**0.30 113**	P	Pg	21 49 42.4	+0.2
T1241			AML	AML		
	comp=N,1026μm,0.2s					
SNTG	**Esanatoglia**	**0.30 343**	⇑P	Pg	21 49 42.9	+0.7
MNTP	**Montappone**	**0.34 61**	⇓P	Pb	21 49 44.0	-0.3
T1204	**Amatrice, Fraz**	**0.35 147**	P	Pg	21 49 43.5	+0.4
EL6	**Elcito**	**0.36 5**	⇓P	Pg	21 49 43.8	+0.4
EL6			AML	AML		
	comp=N,1762μm,0.2s					
EL6			AML	AML		
	comp=E,1779μm,0.1s					
ATCC	**AVT- Casa Cast**	**0.38 305**	⇓P	Pb	21 49 44.3	-0.5
ATCC			AML	AML		
	comp=E,1286μm,0.1s					
ATCC			AML	AML		
	comp=N,898μm,0.1s					
T1211	**Morro Reatino**	**0.46 199**	S	Sb	21 49 54.0	+0.7
MMUR	**Monte Murano**	**0.47 355**	S	Sb	21 49 54.0	+0.4
RM33	**Pellescritta (**	**0.47 166**	S	Sb	21 49 54.0	+0.4
MURB	**Monte Urbino**	**0.49 307**	⇑P	Pb	21 49 46.3	-0.5
MURB			S	Sb	21 49 55.0	+1.0
MURB			AML	AML		
	comp=E,1477μm,0.3s					
MURB			AML	AML		
	comp=N,1226μm,0.3s					
MURB			AML	AML		
	comp=N,1164μm,0.3s					
MURB			AML	AML		
	comp=E,1489μm,0.3s					
ATFO	**Monte Foce - G**	**0.53 318**	P	Pb	21 49 47.9	+0.3
ARVD	**Arcevia**	**0.53 351**	⇓P	Pg	21 49 47.0	+0.4
ARVD			S	Sb	21 49 56.0	+0.7
ARVD			AML	AML		
	comp=N,345μm,0.1s					
ARVD			AML	AML		
	comp=E,353μm,0.1s					
PP3	**Marolino**	**0.57 44**	⇓P	Pb	21 49 48.4	+0.3
FRON	**Frontone**	**0.60 336**	⇓P	Pb	21 49 48.7	+0.1
ATVO	**AVT- Monte Val**	**0.63 311**	S	Sb	21 49 59.0	+0.9
PIEI	**Pieia**	**0.68 326**	S	Sb	21 50 01.0	+1.4
MPAG	**Monte Paganucc**	**0.69 342**	S	Sn	21 50 02.0	-0.8
NARO	**Abbazia di Nar**	**0.73 332**	⇑P	Pb	21 49 50.9	+0.1
NARO			S	Sn	21 50 03.0	-0.6
FSSB	**Fossombrone**	**0.75 344**	S	Sn	21 50 04.0	-0.1
SF04	**Casetta**	**1.04 263**	S	Sn	21 50 13.0	+1.8
SF01	**Poggio Pratacc**	**1.11 262**	⇓P	Pn	21 49 59.8	+2.0
ARCI	**Arcidosso**	**1.17 265**	S	Sn	21 50 17.0	+2.4
TRIF	**Trifonti**	**1.59 276**	S	Sg	21 50 28.0	+0.8

*BGR **26** 21:52:47.6±1.2, 42°.28N×13°.83E, h10km, ML3.7/7, Error ellipse: s-maj=21.1km s-min=16.7km az=54.0*
*IDC **26** 21:52:52.2±1.2, 42°.93N×13°.07E, h0km, mb3.6/5, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=29.9km s-min=14.6km az=91.0*
*PRU **26** 21:52:52.6±0.0, 42°.82N×13°.61E, h0km*
*ROM **26** 21:52:52.0±0.1, 42°.861N±0°.003×13°.209E±0°.004, h9km, ML3.3/82, Error ellipse: s-maj=0.3km s-min=0.2km az=250.0*

ISC 26 21:52:52.8±0.7, **42°.85N**±0°.01×**13°.27E**±0°.02, **h9**km±4km, **n139**,σ1§**66**/158, **mb3.7**/4, **31C-26D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MMO1	**Montemonaco**	**0.06**	**41**	P	**Pg**	**21 52 54.6**	**-0.4**
MMO1				S	**Sg**	**21 52 57.0**	**+0.5**
MC2	**Monte Cornacci**	**0.09**	**317**	P	**Pg**	**21 52 53.8**	**-1.6**
T1241	**Roccafluvione,**	**0.12**	**87**	P	**Pg**	**21 52 55.8**	**+0.2**
T1241				S	**Sg**	**21 52 59.0**	**+1.3**
T1241				AML	AML		
	comp=E,35150μm,0.8s						
T1241				AML	AML		
	comp=N,41950μm,0.5s						
T1241				AML	AML		
	comp=E,35100μm,0.8s						
T1241				AML	AML		
	comp=N,41950μm,1.5s						
AM05	**Amandola Campo**	**0.14**	**26**	P	**Pg**	**21 52 55.8**	**-0.2**
AM05				S	**Sg**	**21 52 58.7**	**+0.6**
AM05				AML	AML		
	comp=N,6210μm,0.5s						
AM05				AML	AML		
	comp=E,4155μm,1.0s						
AM05				AML	AML		
	comp=N,6215μm,0.5s						
AM05				AML	AML		
	comp=N,898μm,1.0s						
AM05				AML	AML		
	comp=E,18600μm,1.4s						
AM05				AML	AML		
	comp=N,898μm,1.0s						
AM05				AML	AML		
	comp=E,18600μm,0.6s						
AM05				AML	AML		
	comp=E,4155μm,1.0s						
T1204	**Amatrice, Fraz**	**0.18**	**169**	P	**Pg**	**21 52 56.9**	**+0.2**
T1204				S	**Sg**	**21 53 01.1**	**+1.8**
T1204				AML	AML		
	comp=E,16700μm,0.9s						
T1204				AML	AML		
	comp=N,16500μm,0.8s						
T1204				AML	AML		
	comp=E,16700μm,0.9s						
T1204				AML	AML		
	comp=E,16700μm,1.1s						
T1204				AML	AML		
	comp=N,16500μm,1.2s						
T1216	**Preci, Frazion**	**0.19**	**282**	P	**Pg**	**21 52 55.6**	**-1.2**
T1216				S	**Sg**	**21 52 58.6**	**-0.9**
T1216				AML	AML		
	comp=E,56150μm,0.3s						
T1216				AML	AML		
	comp=E,56100μm,0.3s						
T1216				AML	AML		
	comp=N,58350μm,1.1s						
T1216				AML	AML		
	comp=N,58400μm,1.1s						
T1216				AML	AML		
	comp=E,56100μm,0.3s						
FEMA	**Monte Fema**	**0.20**	**305**	P	**Pg**	**21 52 55.8**	**-1.2**
FEMA				S	**Sg**	**21 52 58.7**	**-1.1**
FEMA				AML	AML		
	comp=E,40650μm,0.5s						
FEMA				AML	AML		
	comp=N,30300μm,1.5s						
FEMA				AML	AML		
	comp=N,30350μm,1.5s						
FEMA				AML	AML		
	comp=E,40650μm,0.5s						
FEMA				AML	AML		
	comp=N,30350μm,0.5s						
T1243	**Rocca Santa Ma**	**0.20**	**139**	P	**Pg**	**21 52 57.5**	**+0.4**
T1243				S	**Sg**	**21 53 01.8**	**+1.9**
GUMA	**Gualdo di Mace**	**0.22**	**13**	P	**Pg**	**21 52 57.3**	**0.0**
GUMA				S	**Sg**	**21 53 01.6**	**+1.2**
GUMA				AML	AML		
	comp=E,32050μm,1.6s						
GUMA				AML	AML		
	comp=N,41650μm,0.5s						
GUMA				AML	AML		
	comp=N,41650μm,0.6s						
GUMA				AML	AML		
	comp=E,34150μm,0.5s						
GUMA				AML	AML		
	comp=N,35700μm,0.5s						
GUMA				AML	AML		
	comp=E,34150μm,1.5s						
GUMA				AML	AML		
	comp=N,41650μm,1.4s						
GUMA				AML	AML		
	comp=E,32050μm,1.6s						
SMA1	**SAN MARTINO**	**0.23**	**168**	P	**Pg**	**21 52 57.7**	**+0.2**
SMA1				AML	AML		
	comp=E,28500μm,0.8s						
SMA1				AML	AML		
	comp=N,21650μm,0.6s						
T1217	**Poggiodomo (PG**	**0.28**	**241**	P	**Pg**	**21 52 57.7**	**-0.8**
T1217				S	**Sg**	**21 53 02.7**	**+0.3**
T1217				AML	AML		
	comp=E,11350μm,0.7s						
T1217				AML	AML		
	comp=E,11100μm,0.6s						
T1217				AML	AML		
	comp=E,11125μm,0.6s						
T1217				AML	AML		
	comp=N,12750μm,0.7s						
T1217				AML	AML		
	comp=E,11105μm,0.6s						
T1217				AML	AML		
	comp=N,12550μm,0.7s						
T1215	**Vallo di Nera,**	**0.30**	**261**	P	**Pg**	**21 52 57.8**	**-1.0**
T1215				S	**Sg**	**21 53 02.3**	**-0.5**
T1215				AML	AML		
	comp=E,6590μm,1.1s						
T1215				AML	AML		
	comp=N,9095μm,0.8s						
T1215				AML	AML		
	comp=N,8710μm,0.7s						
T1215				AML	AML		
	comp=E,6600μm,1.1s						
T1215				AML	AML		
	comp=N,9085μm,0.8s						
T1215				AML	AML		
	comp=E,6300μm,1.3s						
T1215				AML	AML		
	comp=N,8720μm,0.7s						
T1215				AML	AML		
	comp=E,6675μm,1.1s						
T1215				AML	AML		
	comp=N,9135μm,0.8s						
T1215				AML	AML		
	comp=N,9110μm,0.8s						
T1215				AML	AML		
	comp=E,6305μm,1.3s						
T1215				AML	AML		
	comp=N,9110μm,1.2s						
T1215				AML	AML		
	comp=E,6605μm,1.1s						
LNSS	**Leonessa**	**0.30**	**214**	P	**Pg**	**21 52 58.2**	**-0.6**
LNSS				AML	AML		
	comp=E,14650μm,0.8s						
LNSS				AML	AML		
	comp=N,14000μm,1.2s						
LNSS				AML	AML		
	comp=E,14650μm,1.2s						
LNSS				AML	AML		
	comp=N,14000μm,0.8s						
CESI	**CESI - Serrava**	**0.31**	**300**	P	**Pg**	**21 52 57.8**	**-1.2**
CESI				S	**Sg**	**21 53 02.6**	**-0.6**
CESI				AML	AML		
	comp=N,22900μm,0.4s						
CESI				AML	AML		
	comp=E,18450μm,0.6s						
CESI				AML	AML		
	comp=N,22900μm,1.6s						
OFFI	**Offida**	**0.32**	**74**	P	Pg	21 53 00.4	+1.3
OFFI				AML	AML		
	comp=N,17300μm,1.2s						
OFFI				AML	AML		
	comp=E,16250μm,0.5s						
CAMP	**Campotosto**	**0.33**	**162**	P	**Pb**	**21 52 59.3**	**-1.6**
CAMP				S	**Sb**	**21 53 05.2**	**-1.2**
CAMP				AML	AML		
	comp=E,6245μm,0.8s						
CAMP				AML	AML		
	comp=N,3745μm,1.1s						
TERO	**Teramo**	**0.34**	**133**	P	**Pg**	**21 52 59.8**	**+0.3**
TERO				S	**Sg**	**21 53 06.1**	**+2.2**
TERO				AML	AML		
	comp=E,13300μm,0.3s						
TERO				AML	AML		
	comp=E,14000μm,0.3s						
TERO				AML	AML		
	comp=N,16900μm,0.3s						
TERO				AML	AML		
	comp=E,13350μm,0.3s						
TERO				AML	AML		
	comp=N,16250μm,0.3s						
RM33	**Pellescritta (**	**0.34**	**187**	P	**Pg**	**21 52 59.5**	**-0.2**
RM33				S	**Sg**	**21 53 05.7**	**+1.5**
RM33				AML	AML		
	comp=E,9935μm,1.3s						
RM33				AML	AML		
	comp=E,9770μm,1.3s						
RM33				AML	AML		
	comp=N,7415μm,1.0s						
RM33				AML	AML		
	comp=N,7410μm,1.0s						
RM33				AML	AML		
	comp=E,9940μm,1.3s						
RM33				AML	AML		
	comp=E,9775μm,1.3s						
RM33				AML	AML		
	comp=N,7360μm,1.0s						
RM33				AML	AML		
	comp=E,9775μm,0.7s						
RM33				AML	AML		
	comp=E,9940μm,0.7s						
SEF1	**Sefro**	**0.38**	**322**	P	**Pg**	**21 52 59.1**	**-1.2**
SEF1				S	**Sg**	**21 53 05.7**	**+0.4**
SEF1				AML	AML		
	comp=E,15600μm,0.3s						
SEF1				AML	AML		
	comp=N,9130μm,1.6s						
SEF1				AML	AML		
	comp=E,15550μm,0.3s						
SEF1				AML	AML		
	comp=N,9130μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.41**	**177**	P	**Pb**	**21 53 00.8**	**-1.5**
T1247				AML	AML		
	comp=E,10055μm,0.5s						
T1247				AML	AML		
	comp=N,7705μm,0.9s						
T1211	**Morro Reatino**	**0.44**	**224**	P	**Pg**	**21 53 00.7**	**-0.7**
T1211				S	**Sg**	**21 53 08.2**	**+0.9**
T1211				AML	AML		
	comp=N,9465μm,1.0s						
T1211				AML	AML		
	comp=E,4200μm,0.7s						
T1211				AML	AML		
	comp=N,9575μm,1.0s						
T1211				AML	AML		
	comp=E,4195μm,0.6s						
T1211				AML	AML		
	comp=E,4195μm,0.7s						
T1211				AML	AML		
	comp=N,9570μm,1.0s						
T1211				AML	AML		
	comp=N,9445μm,1.0s						
GIGS	**Gran Sasso**	**0.46**	**151**	P	**Pb**	**21 53 01.8**	**-1.3**
GIGS				S	**Sb**	**21 53 09.9**	**-0.1**
GIGS				AML	AML		
	comp=E,1075μm,1.3s						
GIGS				AML	AML		
	comp=N,1128μm,0.3s						
GIGS				AML	AML		
	comp=E,1075μm,0.7s						
SNTG	**Esanatoglia**	**0.47**	**329**	P	**Pg**	**21 53 00.8**	**-1.2**
SNTG				S	**Sg**	**21 53 08.1**	**-0.1**
SNTG				AML	AML		
	comp=N,3445μm,0.8s						
SNTG				AML	AML		
	comp=N,3735μm,0.8s						
SNTG				AML	AML		
	comp=E,2835μm,0.9s						
SNTG				AML	AML		
	comp=E,2690μm,0.8s						
SNTG				AML	AML		
	comp=N,3735μm,1.2s						
SNTG				AML	AML		
	comp=E,2690μm,1.2s						
SNTG				AML	AML		
	comp=N,3445μm,1.2s						
SNTG				AML	AML		
	comp=E,2835μm,1.1s						
TRTR	**Tortoreto Alta**	**0.48**	**95**	AML	AML		
	comp=E,15200μm,0.9s						
TRTR				AML	AML		
	comp=N,12550μm,0.4s						
EL6	**Elcito**	**0.49**	**346**	P	**Pg**	**21 53 01.4**	**-1.1**
EL6				S	**Sg**	**21 53 09.9**	**+0.9**
EL6				AML	AML		
	comp=N,7055μm,0.7s						
EL6				AML	AML		
	comp=E,8465μm,0.4s						
EL6				AML	AML		
	comp=N,7050μm,0.7s						
AQU	**L'Aquila**	**0.51**	**169**	P	**Pb**	**21 53 02.4**	**-1.5**
AQU				AML	AML		
	comp=N,4620μm,1.1s						
AQU				AML	AML		
	comp=E,5900μm,1.4s						
AQU				AML	AML		
	comp=E,6260μm,1.4s						
AQU				AML	AML		
	comp=N,4530μm,1.1s						
AQU				AML	AML		
	comp=E,5900μm,0.6s						
AQU				AML	AML		
	comp=E,6260μm,0.6s						
AQU				AML	AML		
	comp=N,4530μm,0.9s						
AQU				AML	AML		
	comp=N,4620μm,0.9s						
CESX	**Cesi**	**0.56**	**245**	⇓P	**Pg**	**21 53 02.4**	**-1.3**
CESX				AML	AML		
	comp=E,2780μm,0.8s						
CESX				AML	AML		
	comp=N,3710μm,1.2s						
CESX				AML	AML		
	comp=E,2780μm,1.2s						
CESX				AML	AML		
	comp=N,3710μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.57**	**306**	P	**Pg**	**21 53 02.5**	**-1.4**
ATCC				AML	AML		
	comp=E,10160μm,1.0s						
ATCC				AML	AML		
	comp=N,6830μm,1.2s						
ATCC				AML	AML		
	comp=N,6825μm,1.2s						
ATCC				AML	AML		
	comp=E,10170μm,1.0s						
FIAM	**Fiamignano**	**0.59**	**191**	P	**Pg**	**21 53 03.6**	**-0.7**
FIAM				S	**Sb**	**21 53 13.3**	**-0.6**
FIAM				AML	AML		
	comp=E,3405μm,1.1s						
FIAM				AML	AML		
	comp=N,3630μm,1.0s						
FIAM				AML	AML		
	comp=N,3630μm,1.0s						
FIAM				AML	AML		
	comp=E,3405μm,0.9s						
VCEL	**Villa Celiera**	**0.62**	**137**	⇓P	**Pn**	**21 53 05.2**	**-2.7**
VCEL				AML	AML		
	comp=E,3870μm,1.0s						
VCEL				AML	AML		
	comp=N,4525μm,1.0s						
VCEL				AML	AML		
	comp=N,4530μm,1.0s						
VCEL				AML	AML		
	comp=N,4530μm,1.0s						
FAGN	**Fagnano**	**0.63**	**158**	P	**Pb**	**21 53 04.9**	**-1.1**
FAGN				AML	AML		
	comp=E,6335μm,0.5s						
FAGN				AML	AML		
	comp=N,4595μm,1.3s						
MURB	**Monte Urbino**	**0.68**	**307**	⇓P	**Pg**	**21 53 04.7**	**-1.4**
MURB				AML	AML		
	comp=E,4835μm,1.0s						
MURB				AML	AML		
	comp=N,5655μm,0.8s						
MURB				AML	AML		
	comp=E,5035μm,1.0s						
MURB				AML	AML		
	comp=E,4835μm,1.0s						
MURB				AML	AML		
	comp=N,5655μm,0.9s						
MURB				AML	AML		
	comp=E,5035μm,1.0s						
MURB				AML	AML		
	comp=N,5685μm,0.9s						
ARVD	**Arcevia**	**0.69**	**340**	⇓P	**Pg**	**21 53 05.0**	**-1.2**
ARVD				S	**Sg**	**21 53 17.0**	**+1.8**
ARVD				AML	AML		
	comp=N,1535μm,0.7s						
ARVD				AML	AML		
	comp=E,1705μm,0.9s						
ATFO	**Monte Foce - G**	**0.73**	**315**	⇑P	**Pg**	**21 53 05.5**	**-1.4**
ATFO				S	**Sg**	**21 53 17.0**	**+0.6**
ATFO				AML	AML		
	comp=N,2375μm,0.7s						
ATFO				AML	AML		
	comp=N,2380μm,0.7s						
ATFO				AML	AML		
	comp=E,2645μm,1.0s						
ATFO				AML	AML		
	comp=E,2645μm,1.0s						
T0110	**Collepietro**	**0.73**	**149**	P	**Pn**	**21 53 06.5**	**-2.8**
T0110				AML	AML		
	comp=N,3555μm,0.4s						
T0110				AML	AML		
	comp=E,4310μm,0.5s						
AOI	**Ancona**	**0.74**	**19**	P	**Pb**	**21 53 08.1**	**+0.2**
AOI				AML	AML		
	comp=N,1180μm,1.0s						
AOI				AML	AML		
	comp=E,1030μm,0.9s						
ATTE	**AVT- Monte Tez**	**0.76**	**298**	⇑P	**Pg**	**21 53 06.1**	**-1.3**
ATTE				AML	AML		
	comp=N,1810μm,0.7s						
ATTE				AML	AML		
	comp=N,1810μm,1.3s						
ATTE				AML	AML		
	comp=E,1770μm,1.0s						
FRON	**Frontone**	**0.78**	**329**	⇓P	**Pg**	**21 53 06.4**	**-1.4**
FRON				AML	AML		
	comp=E,2150μm,0.8s						
FRON				AML	AML		
	comp=N,3055μm,0.5s						
FRON				AML	AML		
	comp=N,3055μm,1.5s						
ATVO	**AVT- Monte Val**	**0.83**	**310**	P	**Pg**	**21 53 07.0**	**-1.8**
ATVO				S	**Sg**	**21 53 21.0**	**+1.5**
ATVO				AML	AML		
	comp=E,1950μm,0.7s						
ATVO				AML	AML		
	comp=N,1750μm,0.6s						
SRES	**S.Oreste - Sor**	**0.83**	**223**	⇑P	**Pg**	**21 53 07.8**	**-1.0**
SRES				AML	AML		

	comp=N,936μm,1.5s					
SRES				AML	AML	
	comp=N,936μm,0.5s					
SRES				AML	AML	
	comp=E,1080μm,0.8s					
MPAG	**Monte Paganucc**	**0.86**	**335**	⇓P	**Pg**	**21 53 08.1 -1.3**
MPAG				S	**Sg**	**21 53 23.0 +2.3**
MPAG				AML	AML	
	comp=N,2145μm,0.7s					
MPAG				AML	AML	
	comp=N,2145μm,1.3s					
MPAG				AML	AML	
	comp=E,2120μm,0.8s					
PIEI	**Pieia**	**0.87**	**322**	⇑P	**Pg**	**21 53 07.8 -1.8**
PIEI				AML	AML	
	comp=E,1000μm,0.8s					
PIEI				AML	AML	
	comp=N,1345μm,1.5s					
PIEI				AML	AML	
	comp=N,1345μm,0.5s					
ATPI	**Pietralunga -**	**0.87**	**314**	⇓P	**Pg**	**21 53 07.9 -1.7**
ATPI				AML	AML	
	comp=E,2225μm,0.7s					
ATPI				AML	AML	
	comp=N,1540μm,0.6s					
ATMI	**Monte Miggiano**	**0.88**	**304**	⇓P	**Pg**	**21 53 09.1 -0.6**
ATMI				AML	AML	
	comp=E,2945μm,0.7s					
ATMI				AML	AML	
	comp=N,4240μm,0.6s					
ATMI				AML	AML	
	comp=N,4240μm,1.4s					
NARO	**Abbazia di Nar**	**0.91**	**327**	⇑P	**Pg**	**21 53 08.6 -1.8**
NARO				AML	AML	
	comp=N,917μm,1.4s					
NARO				AML	AML	
	comp=E,1102μm,1.0s					
NARO				AML	AML	
	comp=N,917μm,0.6s					
FSSB	**Fossombrone**	**0.92**	**337**	⇑P	**Pg**	**21 53 09.2 -1.2**
FSSB				AML	AML	
	comp=N,4280μm,0.3s					
FSSB				AML	AML	
	comp=E,3005μm,0.5s					
FSSB				AML	AML	
	comp=N,4280μm,1.7s					
MTCE	**Montecelio**	**0.92**	**205**	⇓P	**Pg**	**21 53 08.7 -1.7**
MTCE				AML	AML	
	comp=N,1215μm,1.1s					
MTCE				AML	AML	
	comp=E,1685μm,0.9s					
MTCE				AML	AML	
	comp=N,1215μm,0.9s					
CERT	**Cerreto**	**0.93**	**193**	⇑P	**Pb**	**21 53 10.7 -0.3**
CERT				AML	AML	
	comp=N,1740μm,0.8s					
CERT				AML	AML	
	comp=E,2455μm,0.6s					
APEC	**Apecchio**	**0.94**	**319**	P	**Pg**	**21 53 10.0 -1.0**
INTR	**Introdacqua**	**0.96**	**151**	P	**Pn**	**21 53 10.3 -2.3**
INTR				AML	AML	
	comp=E,1μm,0.8s					
INTR				AML	AML	
	comp=N,2μm,1.2s					
INTR				AML	AML	
	comp=N,2μm,1.2s					
INTR				AML	AML	
	comp=E,1495μm,0.8s					
INTR				AML	AML	
	comp=E,1μm,0.8s					
INTR				AML	AML	
	comp=N,2820μm,1.1s					
BADI	**Badiali**	**1.00**	**312**	⇑P	**Pg**	**21 53 10.7 -1.3**
PE3	**Peglio**	**1.02**	**327**	⇓P	**Pg**	**21 53 11.5 -0.9**
LPEL	**Lama dei Pelig**	**1.05**	**140**	⇓P	**Pn**	**21 53 12.6 -1.1**
LPEL				S	**Sn**	**21 53 30.0 +1.4**
LPEL				AML	AML	
	comp=E,1405μm,0.7s					
LPEL				AML	AML	
	comp=N,1365μm,1.1s					
LPEL				AML	AML	
	comp=E,1405μm,1.3s					
CAFI	**Castiglion Fio**	**1.07**	**297**	P	Pg	21 53 10.7 -2.7
CAFI				AML	AML	
	comp=N,798μm,0.9s					
CAFI				AML	AML	
	comp=N,744μm,0.9s					
CAFI				AML	AML	
	comp=E,928μm,1.5s					
CAFI				AML	AML	
	comp=E,888μm,1.5s					
CAFI				AML	AML	
	comp=N,798μm,1.1s					
CAFI				AML	AML	
	comp=N,744μm,1.1s					
SSP9	**Sansepolcro**	**1.10**	**311**	⇑P	**Pg**	**21 53 12.7 -1.4**
SSP9				AML	AML	
	comp=N,1460μm,0.7s					
SSP9				AML	AML	
	comp=E,1675μm,1.4s					
SSP9				AML	AML	
	comp=E,1675μm,0.6s					
POFI	**Posta Fibreno**	**1.18**	**164**	⇑P	**Pn**	**21 53 17.3 +1.7**
POFI				AML	AML	
	comp=N,564μm,1.2s					
POFI				AML	AML	
	comp=E,949μm,0.8s					
POFI				AML	AML	
	comp=N,590μm,1.2s					
POFI				AML	AML	
	comp=N,564μm,0.8s					
POFI				AML	AML	
	comp=E,934μm,0.8s					
POFI				AML	AML	
	comp=N,590μm,0.8s					
LRP	**Arpino**	**1.23**	**169**	P	**Pn**	**21 53 17.9 +1.8**
LRP				AML	AML	
	comp=E,470μm,0.6s					
LRP				AML	AML	
	comp=N,810μm,1.3s					
LRP				AML	AML	
	comp=N,810μm,0.7s					
TOLF	**Tolfa**	**1.23**	**231**	⇑P	**Pg**	**21 53 15.5 -0.8**
TOLF				AML	AML	
	comp=E,716μm,1.1s					
TOLF				AML	AML	
	comp=E,716μm,0.9s					
TOLF				AML	AML	
	comp=N,660μm,1.0s					
CRE	**Caprese Michel**	**1.23**	**309**	⇓P	**Pn**	**21 53 16.6 +0.3**
CRE				AML	AML	
	comp=E,622μm,1.4s					
CRE				AML	AML	
	comp=N,632μm,0.7s					
CRE				AML	AML	
	comp=E,622μm,0.6s					
LAV9	**Lanuvio**	**1.25**	**200**	⇓P	**Pn**	**21 53 17.4 +0.9**
LAV9				AML	AML	
	comp=E,1640μm,1.0s					
LAV9				AML	AML	
	comp=N,1810μm,0.6s					
LAV9				AML	AML	
	comp=E,1565μm,1.0s					
LAV9				AML	AML	
	comp=N,1860μm,0.6s					
LAV9				AML	AML	
	comp=E,1565μm,1.0s					
LAV9				AML	AML	
	comp=E,1640μm,1.0s					
SF01	**Poggio Pratacc**	**1.26**	**269**	P	**Pn**	**21 53 16.4 -0.2**
GIUL	**Giuliano Di Ro**	**1.29**	**181**	⇑P	**Pn**	**21 53 18.3 +1.2**
GIUL				AML	AML	
	comp=N,1075μm,1.0s					
GIUL				AML	AML	
	comp=E,728μm,1.0s					
GIUL				AML	AML	
	comp=E,728μm,1.0s					
CERA	**Filignano**	**1.37**	**156**	⇓P	**Pn**	**21 53 19.6 +1.4**
CERA				AML	AML	
	comp=E,939μm,0.8s					
CERA				AML	AML	
	comp=N,955μm,1.0s					
CERA				AML	AML	
	comp=E,974μm,0.8s					
CERA				AML	AML	
	comp=N,923μm,1.0s					
CERA				AML	AML	
	comp=E,974μm,1.2s					
CERA				AML	AML	
	comp=N,939μm,1.2s					
CERA				AML	AML	
	comp=N,955μm,1.0s					
TRIV	**Trivento**	**1.44**	**138**	⇑P	**Pn**	**21 53 21.5 +2.4**
TRIV				AML	AML	
	comp=E,1345μm,0.9s					
TRIV				AML	AML	
	comp=E,1345μm,1.1s					
TRIV				AML	AML	
	comp=N,882μm,0.9s					
SFI	**Santa Sofia**	**1.48**	**316**	⇓P	**Pn**	**21 53 20.7 +1.1**
SFI				AML	AML	
	comp=N,626μm,1.2s					
SFI				AML	AML	
	comp=E,596μm,0.9s					
SFI				AML	AML	
	comp=N,665μm,1.2s					
SFI				AML	AML	
	comp=N,626μm,0.8s					
SFI				AML	AML	
	comp=E,579μm,0.9s					
SFI				AML	AML	
	comp=N,665μm,0.8s					
VAGA	**Valle Agricola**	**1.60**	**153**	⇑P	**Pg**	**21 53 24.2 +0.6**
VAGA				AML	AML	
	comp=N,453μm,1.2s					
VAGA				AML	AML	
	comp=E,356μm,1.0s					
VAGA				AML	AML	
	comp=E,376μm,1.0s					
VAGA				AML	AML	
	comp=N,449μm,1.2s					
VAGA				AML	AML	
	comp=E,376μm,1.0s					
VAGA				AML	AML	
	comp=E,356μm,1.0s					
VAGA				AML	AML	
	comp=N,449μm,0.8s					
VAGA				AML	AML	
	comp=N,453μm,0.8s					
BRSN	**Barisano**	**1.68**	**329**	⇑P	**Pn**	**21 53 23.8 +1.5**
BRSN				AML	AML	
	comp=N,1715μm,0.9s					
BRSN				AML	AML	
	comp=N,1690μm,0.9s					
BRSN				AML	AML	
	comp=N,1715μm,1.1s					
BRSN				AML	AML	
	comp=E,1660μm,1.1s					
BRSN				AML	AML	
	comp=E,1580μm,1.1s					
BRSN				AML	AML	
	comp=N,1690μm,1.1s					
CIGN	**Sant'Elia a Pi**	**1.70**	**134**	⇓P	**Pg**	**21 53 25.3 -0.2**
CIGN				AML	AML	
	comp=E,326μm,0.8s					
CIGN				AML	AML	
	comp=N,377μm,0.8s					
CIGN				AML	AML	
	comp=N,377μm,1.2s					
CIGN				AML	AML	
	comp=E,326μm,1.2s					
PTRJ	**Pietraroja**	**1.76**	**147**	P	**Pg**	**21 53 24.8 -1.7**
PTRJ				AML	AML	
	comp=E,656μm,0.9s					
PTRJ				AML	AML	
	comp=N,466μm,0.8s					
PTRJ				AML	AML	
	comp=E,656μm,1.1s					
MELA	**Melanico ??? S**	**1.79**	**129**	⇑P	**Pg**	**21 53 25.9 -1.3**
MELA				AML	AML	
	comp=N,991μm,0.9s					
MELA				AML	AML	
	comp=E,1135μm,1.6s					
MELA				AML	AML	
	comp=N,962μm,0.8s					
MELA				AML	AML	
	comp=E,1105μm,0.7s					
MELA				AML	AML	
	comp=E,1105μm,1.3s					
MELA				AML	AML	
	comp=N,991μm,1.1s					
MELA				AML	AML	
	comp=E,1135μm,0.4s					
MELA				AML	AML	
	comp=N,962μm,1.2s					
APRC	**Apricena**	**2.01**	**122**	⇓P	**Pg**	**21 53 28.7 -2.6**
APRC				AML	AML	
	comp=N,550μm,1.4s					
APRC				AML	AML	
	comp=E,384μm,0.4s					
APRC				AML	AML	
	comp=N,550μm,0.6s					
SGRT	**San Giovanni R**	**2.14**	**120**	⇑P	**Pg**	**21 53 30.4 -3.4**
SGRT				AML	AML	
	comp=E,396μm,1.0s					
SGRT				AML	AML	
	comp=N,656μm,1.0s					
PII	**Pisa**	**2.19**	**294**	⇑P	**Pn**	**21 53 32.8 +3.5**
PALZ	**Palazzo San Ge**	**2.77**	**133**	⇑P	**Pb**	**21 53 39.6 -2.9**
PALZ				AML	AML	
	comp=E,402μm,0.8s					
PALZ				AML	AML	
	comp=N,400μm,1.4s					
BOJS	**Bojanci**	**3.01**	**28**	⇓P	**Pb**	**21 53 42.4 -4.2**
BOJS				AML	AML	
	comp=E,220μm,1.2s					
BOJS				AML	AML	
	comp=N,492μm,1.0s					
BOJS				AML	AML	
	comp=E,220μm,0.8s					
SABO	**M.te Sabotino**	**3.14**	**4**	⇓P	**Pn**	**21 53 42.5 +0.1**
SABO				AML	AML	
	comp=E,1385μm,0.9s					
SABO				AML	AML	
	comp=N,1715μm,0.9s					
SABO				AML	AML	
	comp=E,310μm,0.9s					
SABO				AML	AML	
	comp=N,448μm,0.9s					
SABO				AML	AML	
	comp=N,448μm,1.1s					
SABO				AML	AML	
	comp=N,1715μm,1.1s					
AMUR	**Altamura**	**3.16**	**127**	P	**Pb**	**21 53 45.0 -4.1**
AMUR				AML	AML	
	comp=E,140μm,0.5s					
AMUR				AML	AML	
	comp=N,157μm,0.8s					
DOSS	**Dosso del Somm**	**3.38**	**334**	P	**Pn**	**21 53 47.4 +1.6**
DOSS				AML	AML	
	comp=E,142μm,1.3s					
DOSS				AML	AML	
	comp=N,198μm,1.0s					
DOSS				AML	AML	
	comp=N,198μm,1.0s					
DOSS				AML	AML	
	comp=E,142μm,0.7s					
MATE	**Matera**	**3.38**	**129**	⇑P	Pb	21 53 46.7 -6.2
MPRI	**Monte Prat**	**3.40**	**357**	⇑P	**Pn**	**21 53 46.4 +0.4**
MPRI				AML	AML	
	comp=E,234μm,0.8s					
MPRI				AML	AML	
	comp=N,328μm,0.7s					
MPRI				AML	AML	
	comp=E,234μm,1.2s					
CTI	**Castel Tesino**	**3.40**	**341**	P	**Pn**	**21 53 45.5 -0.7**
CTI				AML	AML	
	comp=E,184μm,0.8s					
CTI				AML	AML	
	comp=N,146μm,0.5s					
STAL	**STALIGIAL**	**3.43**	**354**	⇑P	**Pn**	**21 53 46.5 0.0**
STAL				AML	AML	
	comp=E,155μm,0.7s					
STAL				AML	AML	
	comp=N,153μm,1.2s					
STAL				AML	AML	
	comp=N,153μm,0.8s					
LEOD	**Capriano del C**	**3.45**	**320**	⇑P	**Pb**	**21 53 52.9 -1.3**
NOCI	**Noci**	**3.50**	**125**	⇑P	Pb	21 53 50.0 -5.1
NOCI				AML	AML	
	comp=E,82μm,0.7s					
NOCI				AML	AML	
	comp=N,117μm,1.0s					
NOCI				AML	AML	
	comp=E,82μm,1.3s					
CIMO	**Cimolais**	**3.51**	**351**	P	**Pn**	**21 53 47.4 -0.2**
CIMO				AML	AML	
	comp=E,47μm,1.1s					
CIMO				AML	AML	
	comp=N,61μm,0.9s					
LUSI	**Trento, Gardas**	**3.53**	**333**	⇑P	**Pn**	**21 53 49.2 +1.4**
PTCC	**Patocco-Chiusa**	**3.56**	**1**	P	**Pn**	**21 53 48.1 -0.1**
PTCC				AML	AML	
	comp=E,90μm,0.7s					
PTCC				AML	AML	
	comp=N,83μm,0.8s					
PTCC				AML	AML	
	comp=E,90μm,1.3s					
CLUD	**Cludinico**	**3.62**	**356**	⇑P	**Pn**	**21 53 49.3 +0.3**
CLUD				AML	AML	
	comp=E,140μm,0.7s					
CLUD				AML	AML	
	comp=N,124μm,1.0s					
ZONE	**Zone**	**3.69**	**323**	⇓P	**Pn**	**21 53 51.0 +1.0**
ZONE				AML	AML	
	comp=E,81μm,1.1s					
ZONE				AML	AML	
	comp=N,110μm,0.7s					
ZONE				AML	AML	
	comp=E,81μm,0.9s					
ACOM	**Acomizza, Ital**	**3.70**	**3**	⇓P	**Pn**	**21 53 51.0 +0.7**
ACOM				AML	AML	
	comp=N,180μm,0.9s					
ACOM				AML	AML	
	comp=N,150μm,1.0s					
ACOM				AML	AML	
	comp=E,196μm,1.1s					
ACOM				AML	AML	
	comp=E,220μm,0.9s					
ACOM				AML	AML	
	comp=N,180μm,1.1s					
ACOM				AML	AML	
	comp=N,150μm,1.0s					
ACOM				AML	AML	
	comp=E,196μm,0.9s					
ACOM				AML	AML	
	comp=E,220μm,1.1s					
ZOU	**Zoufplan**	**3.71**	**357**	P	**Pn**	**21 53 50.7 +0.2**
ZOU				AML	AML	
	comp=E,206μm,1.0s					
ZOU				AML	AML	
	comp=N,175μm,1.2s					
ZOU				AML	AML	
	comp=E,206μm,1.0s					
ZOU				AML	AML	
	comp=N,175μm,0.8s					
OBKA	**Obir**	**3.77**	**14**	*e*Pn	**Pn**	**21 53 52.5 +1.3**
	comp=N,1.1nm,0.2s					
MYKA	**Terra Mystica**	**3.79**	**4**	Pn	**Pn**	**21 53 52.2 +0.8**
	comp=N,15nm,0.7s,SNR=5.3					
EUCT	**Pavia**	**3.80**	**310**	P	**Pn**	**21 53 54.5 +3.1**
KOSI	**Kohlern**	**3.86**	**340**	⇓P	**Pn**	**21 53 53.9 +1.5**
KOSI				AML	AML	
	comp=E,152μm,0.7s					
KOSI				AML	AML	
	comp=E,152μm,1.3s					
KOSI				AML	AML	
	comp=N,149μm,0.9s					
ABTA	**Abfaltersbach**	**3.93**	**352**	Pn	**Pn**	**21 53 54.5 +1.0**
	comp=N,41nm,0.5s,SNR=21					
USI	**Ustica**	**4.14**	**181**	S	**Sn**	**21 54 41.0 -3.7**
RISI	**Rein**	**4.18**	**349**	⇓P	**Pn**	**21 53 58.3 +1.4**
RISI				AML	AML	
	comp=E,232μm,0.5s					
RISI				AML	AML	
	comp=N,286μm,0.5s					
RISI				AML	AML	
	comp=E,232μm,1.5s					
RISI				AML	AML	
	comp=N,286μm,1.5s					
KBA	**Koelnbreinsper**	**4.23**	**1**	*e*Pn	**Pn**	**21 53 58.6 +1.1**
	comp=N,14nm,0.6s					
KBA	**Koelnbreinsper**	**4.23**	**1**	*e*Pn	**Pn**	**21 53 58.7 +1.1**
PDG	**Podgorica**	**4.44**	**93**	⇑P	Pb	21 54 03.2 -7.6
FETA	**Feichten**	**4.54**	**337**	Pn	**Pn**	**21 54 04.1 +2.2**
	comp=N,5.8nm,0.7s,SNR=11					
WTTA	**Wattenberg**	**4.56**	**346**	Pn	**Pn**	**21 54 04.3 +2.1**
	comp=N,15nm,0.6s,SNR=12					
WTTA	**Wattenberg**	**4.56**	**346**	*e*Pn	**Pn**	**21 54 04.2 +2.1**
SQTA	**Sankt Quirin**	**4.61**	**342**	Pn	**Pn**	**21 54 04.7 +1.9**
	comp=N,17nm,0.4s,SNR=23					
DAVOX	**Davos/Dischmat**	**4.61**	**330**	⇓P	**Pn**	**21 54 05.8 +2.9**
WATA	**Walderalm**	**4.64**	**346**	Pn	**Pn**	**21 54 05.6 +2.4**
	comp=N,12nm,0.4s,SNR=13					
ARSA	**Arzberg**	**4.68**	**19**	*e*Pn	**Pn**	**21 54 07.2 +3.5**
	comp=N,2.4nm,0.5s					
MOTA	**Moosalm**	**4.75**	**342**	Pn	**Pn**	**21 54 06.9 +2.2**
	comp=N,12nm,0.7s,SNR=19					
BIOA	**Bad Ischl, Aus**	**4.85**	**3**	Pn	**Pn**	**21 54 07.3 +1.4**
	comp=N,10nm,0.5s,SNR=14					
RJOB	**Jochberg**	**4.90**	**356**	*e*Pn	**Pn**	**21 54 07.8 +1.1**
RJOB				*e*Sn	**Sn**	**21 55 06.0 +2.6**
RETA	**Reutte**	**4.96**	**340**	Pn	**Pn**	**21 54 09.6 +2.0**
	comp=N,6.0nm,0.3s,SNR=12					
OBER	**Oberstdorf**	**5.02**	**336**	*e*Pn	**Pn**	**21 54 11.1 +2.7**
DAVA	**Damuels**	**5.04**	**333**	*i* Pn	**Pn**	**21 54 11.4 +2.7**
	comp=N,7.7nm,0.5s,SNR=10					
DAVA				*e*Sn	**Sn**	**21 55 09.7 +2.5**
	comp=N,9.5nm,0.5s					
DAVA	**Damuels**	**5.04**	**333**	*e*Pn	**Pn**	**21 54 11.2 +2.5**
DAVA				*e*Sn	**Sn**	**21 55 11.4 +4.2**
MOA	**Molln**	**5.05**	**8**	Pn	**Pn**	**21 54 10.0 +1.3**
	comp=N,4.4nm,0.5s,SNR=4.4					
MOA	**Molln**	**5.05**	**8**	*e*Pn	**Pn**	**21 54 09.7 +1.0**
TIR	**Tirane**	**5.13**	**105**	⇑P	Pn	21 54 12.6 +2.8
RONA	**Rosalia, Austr**	**5.30**	**23**	*e*Pn	Pn	21 54 16.4 +4.3
	comp=N,0.7nm,0.3s					
UBR	**Ueberruh**	**5.32**	**336**	*e*Pn	**Pn**	**21 54 14.3 +1.8**
CONA	**Conrad Observa**	**5.40**	**19**	*i* Pn	**Pn**	**21 54 14.3 +0.7**
	comp=N,0.6nm,0.2s,SNR=6.7					
FAVR	**Favara**	**5.58**	**177**	⇑P	Pb	21 54 25.6 -4.9
GEC2	**GERESS Array S**	**6.00**	**3**	*e*Pn	**Pn**	**21 54 21.7 -0.1**
GERES	**GERESS Array B**	**6.00**	**3**	Pn	**Pn**	**21 54 21.8 -0.1**
	comp=N,0.5nm,0.3s,baz=183,slow=12,SNR=21					
GERES				Sn	**Sn**	**21 55 29.5 -1.2**
	comp=N,1.0nm,0.3s,baz=186,slow=24,SNR=5.2					
	comp=N,1.5nm,0.4s					
CKRC	**Cesky Krumlov**	**6.01**	**7**	*e*PN	**Pn**	**21 54 22.1 +0.1**
CKRC				*e*SN	**Sn**	**21 55 29.3 -1.6**
BOVS	**Bovan**	**6.21**	**80**	⇑P	Pn	21 54 26.7 +2.0
KHC	**Kasperske Hory**	**6.29**	**2**	*e*PN	**Pn**	**21 54 25.4 -0.3**
KHC				*e*SN	**Sn**	**21 55 36.4 -1.2**
WET	**Wettzell**	**6.30**	**358**	*e*Pn	**Pn**	**21 54 24.8 -1.1**
BFO	**Black Forest**	**6.48**	**329**	*e*Pn	**Pn**	**21 54 30.0 +1.6**
BZS	**Buzias**	**6.60**	**62**	⇓P	Pn	21 54 33.8 +3.8
HERR	**Herculane**	**6.92**	**70**	⇓P	Pn	21 54 39.6 +5.3
DRGR		**7.78**	**56**	⇑P	Pn	21 54 51.8 +5.5
CLL	**Collm**	**8.46**	**359**	*e*Pn	**Pn**	**21 54 54.0 -1.5**
CLL				*e*Sn	Sn	21 56 12.0 -19
CLL				*ex*	x	21 56 59.0
CLL				*e*Sg	**Sg**	**21 57 19.0 -5.2**
	comp=Z,16nm,1.3s					
ESDC	**Sonseca Array**	**13.35**	**262**	Pn	**Pn**	**21 56 02.1 -0.3**
	baz=72,slow=12,SNR=2.8					
	comp=Z,0.5nm,0.9s					
MMAI	**Mount Meron Ar**	**19.98**	**112**	P	**Pn**	**21 57 28.6 +1.4**
	comp=Z,1.9nm,0.7s,baz=334,slow=13,SNR=2.4					
	comp=Z,1.9nm,0.7s					
TORD	**Torodi Ar. Bea**	**31.25**	**202**	P	**P**	**21 59 13.4 +0.6**
	comp=Z,1.0nm,0.9s,baz=16,slow=7.7,SNR=5.8					
	comp=Z,1.0nm,0.9s					
MKAR	**Makanchi Array**	**47.68**	**60**	P	**P**	**22 01 30.7 +1.2**
	comp=Z,0.5nm,0.8s,baz=278,slow=7.0,SNR=3.0					
	comp=Z,0.5nm,0.8s					
SONM	**Songino Array**	**61.72**	**50**	P	**P**	**22 03 14.0 +2.6**
	comp=Z,0.5nm,0.8s,baz=297,slow=9.5,SNR=2.9					
	comp=Z,0.5nm,0.8s					
CMAR	**Chiang Mai Arr**	**74.58**	**79**	P	**P**	**22 04 33.1 +0.7**
	comp=Z,0.3nm,0.3s,baz=332,slow=7.5,SNR=1.8					
	comp=Z,0.3nm,0.3s					

NEIC ***26*** *22:03:00.7±1.6, 18°.74N±0°.05×145°.6E±0°.2, h200km±9km, mb4.2/15, Error ellipse: s-maj=25.7km s-min=6.8km az=98.0*

IDC ***26*** *22:03:01.0±2.4, 18°.76N×145°.60E, h213km±23km, mb3.3/7, mbtmp4.0/9, MS3.7/2, Error ellipse: s-maj=34.1km s-min=14.2km az=96.0*

ISC 26 22:03:00.1±0.6**, 18°.76N**±0°.06×**145°.6E**±0°.1**, h200**km**, n34,**

σ1$08/35, mb4.0/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.18**	**187**	P	**Pn**	**22 04 18.6**	**+1.7**
	31nm,0.4s,baz=79,slow=18,SNR=2.0						
GUMO				S	**Sn**	**22 05 14.9**	**-2.6**
	27nm,0.4s,baz=31,slow=20,SNR=1.7						
GUMO	**Guam**	**5.18**	**187**	Pn	**Pn**	**22 04 17.6**	**+0.7**
JCJ	**Chichijima**	**8.86**	**340**	P	**Pn**	**22 05 04.9**	**+0.4**
	33nm,0.8s,baz=176,slow=19,SNR=7.1						
JCJ				S	**Sn**	**22 06 41.4**	**-2.6**
	17nm,0.4s,baz=236,slow=21,SNR=0.8						
JCJ	**Chichijima**	**8.86**	**340**	Pn	**Pn**	**22 05 05.7**	**+1.2**
JOW	**Kunigami**	**17.83**	**300**	P	**Pn**	**22 06 57.6**	**+1.4**
JOW				IAmb	IAmb	22 07 24.1	
	comp=Z,15nm,1.3s						
FAKI	**Fak Fak**	**25.21**	**213**	P	**P**	**22 08 08.3**	**+0.7**
COEN	**Coen**	**32.59**	**184**	P	**P**	**22 09 13.2**	**+0.3**
MTN	**Manton Dam**	**34.47**	**205**	P	**P**	**22 09 28.5**	**-0.6**
MTN				IAmb	IAmb	22 09 51.5	
	comp=Z,14nm,1.4s						
BATI	**Baumata**	**35.98**	**219**	LR	LR	22 24 17.9	
	comp=Z,143nm,20.9s,baz=198,slow=36						
KNRA	**Kununurra**	**38.00**	**207**	P	**P**	**22 09 59.1**	**+0.1**
KNRA				IAmb	IAmb	22 10 16.2	
	comp=Z,14nm,1.3s						
WR0	**Warramunga Arr**	**39.96**	**196**	P	**P**	**22 10 14.8**	**-0.5**
WR0				IAmb	IAmb	22 10 15.5	
	comp=Z,6.9nm,1.3s						
WRA	**Warramunga Arr**	**40.00**	**197**	P	**P**	**22 10 15.2**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=14,slow=8.1,SNR=64						
WRA				PcP	**PcP**	**22 12 15.6**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=18,slow=3.6,SNR=2.0						
	comp=Z,1.8nm,0.3s						
WRA	**Warramunga Arr**	**40.00**	**197**	P	**P**	**22 10 14.4**	**-1.1**
ASAR	**Alice Springs**	**43.67**	**196**	P	**P**	**22 10 45.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=13,slow=7.1,SNR=7.0						
	comp=Z,0.3nm,0.3s						
PSA00	**Pilbara Seismi**	**47.33**	**213**	P	**P**	**22 11 14.3**	**+0.4**
PSA00				IAmb	IAmb	22 11 38.7	
	comp=Z,13nm,1.3s						
MSVF	**Nonsavu**	**48.32**	**137**	LR	LR	22 30 20.3	
	comp=Z,54nm,18.5s,baz=152,slow=34						
TIXI	**Tiksi**	**53.80**	**354**	P	**P**	**22 12 02.4**	**+0.8**
TIXI				IAmb	IAmb	22 12 16.7	
	comp=Z,5.4nm,1.4s						
MORW	**Morawa**	**55.43**	**212**	P	**P**	**22 12 14.3**	**+0.3**
MK31	**Makanchi Array**	**58.32**	**314**	P	**P**	**22 12 34.8**	**+0.7**
MKAR	**Makanchi Array**	**58.32**	**314**	P	**P**	**22 12 34.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=103,slow=5.7,SNR=5.3						
	comp=Z,0.3nm,0.5s						
CAST	**Castle Rocks**	**61.10**	**27**	P	**P**	**22 12 54.1**	**+1.3**
CAST				IAmb	IAmb	22 13 17.5	
	comp=Z,7.1nm,1.4s						
IMAR	**Indian Mountai**	**61.22**	**24**	P	**P**	**22 12 54.4**	**+0.9**
SML	**Sawmill**	**62.39**	**29**	P	**P**	**22 13 01.7**	**+0.3**
SML				IAmb	IAmb	22 13 21.7	
	comp=Z,10nm,1.2s						
ILAR	**Eielson Array**	**63.65**	**26**	P	**P**	**22 13 09.1**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=276,slow=5.7,SNR=4.9						
	comp=Z,0.7nm,0.8s						
BMAR	**Burnt Mountain**	**65.12**	**24**	P	**P**	**22 13 20.2**	**+1.1**
BCAR	**Beaver Creek A**	**65.60**	**29**	P	**P**	**22 13 22.8**	**+0.5**
BRVK	**Borovoye**	**66.41**	**320**	P	**P**	**22 13 26.8**	**-0.8**
BRVK				IAmb	IAmb	22 13 29.4	
	comp=Z,2.0nm,1.1s						
KKAR	**Karatay Array**	**66.63**	**310**	P	**P**	**22 13 29.4**	**+0.2**
ABKAR	**Akbulak array**	**73.20**	**317**	P	**P**	**22 14 08.3**	**-0.8**
ABKAR	**Akbulak array**	**73.20**	**317**	P	**P**	**22 14 08.4**	**-0.6**
ABKAR				IAmb	IAmb	22 14 09.5	
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**22 14 35.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=291,slow=5.2,SNR=3.0						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**83.21**	**52**	P	**P**	**22 15 04.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=274,slow=4.3,SNR=5.7						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**86.78**	**335**	P	**P**	**22 15 19.8**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=67,slow=4.7,SNR=7.0						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**86.78**	**335**	P	**P**	**22 15 20.4**	**-1.1**

BUC 26 22:07:28.4±0.3, 45°.62N×26°.48E, h142km±2km, ml3.5/33, 80C-84D, Error ellipse: s-maj=1.9km s-min=1.5km az=166.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.23**	**213**	⇓P	Pn	22 07 47.5	-0.3
NEHR				⇑S	Sn	22 08 03.4	+0.8
NEHR	**Nehoiu**	**0.23**	**213**	⇓P	Pn	22 07 47.5	-0.3
NEHR				⇑S	Sn	22 08 03.4	+0.8
PLOR	**Plostina**	**0.26**	**28**	⇓P	Pn	22 07 48.2	+0.3
PLOR				⇓S	Sn	22 08 03.0	+0.2
PLOR	**Plostina**	**0.26**	**28**	⇓P	Pn	22 07 48.2	+0.3
PLOR				⇓S	Sn	22 08 03.0	+0.2
COVR	**Voineasa-Covas**	**0.29**	**320**	⇑P	Pn	22 07 47.9	-0.1
COVR				⇑S	Sn	22 08 02.8	-0.1
COVR	**Voineasa-Covas**	**0.29**	**320**	⇑P	Pn	22 07 47.9	-0.1
COVR				⇑S	Sn	22 08 02.8	-0.1
VRI	**Vrincioaia**	**0.30**	**36**	⇑P	Pn	22 07 48.2	+0.2
VRI				⇓S	Sn	22 08 04.1	+1.1
VRI	**Vrincioaia**	**0.30**	**36**	⇑P	Pn	22 07 48.2	+0.2
VRI				⇓S	Sn	22 08 04.1	+1.1
MLR	**Muntele Rosu**	**0.39**	**251**	⇓P	Pn	22 07 48.9	+0.4
MLR				⇓S	Sn	22 08 05.1	+1.4
MLR	**Muntele Rosu**	**0.39**	**251**	⇓P	Pn	22 07 48.9	+0.4
MLR				⇓S	Sn	22 08 05.1	+1.4
ODBI	**Odobesti**	**0.43**	**70**	⇓P	Pn	22 07 49.5	+1.0
ODBI				⇑S	Sn	22 08 04.8	+1.1
ODBI	**Odobesti**	**0.43**	**70**	⇓P	Pn	22 07 49.5	+1.0
ODBI				⇑S	Sn	22 08 04.8	+1.1
PANC	**Panciu**	**0.53**	**62**	⇑P	Pn	22 07 49.5	+0.5
PANC				⇓S	Sn	22 08 05.6	+0.9
PANC	**Panciu**	**0.53**	**62**	⇑P	Pn	22 07 49.5	+0.5
PANC				⇓S	Sn	22 08 05.6	+0.9
SECR		**0.65**	**206**	⇑P	Pn	22 07 50.0	+0.2
SECR				⇑S	Sn	22 08 07.3	+1.3
SECR		**0.65**	**206**	⇑P	Pn	22 07 50.0	+0.2
SECR				⇑S	Sn	22 08 07.3	+1.3
OZUR		**0.68**	**315**	⇓P	Pn	22 07 49.5	-0.5
OZUR				⇓S	Sn	22 08 05.7	-0.6
OZUR		**0.68**	**315**	⇓P	Pn	22 07 49.5	-0.5
OZUR				⇓S	Sn	22 08 05.7	-0.6
PLAR	**PLOIESTI**	**0.77**	**204**	⇑P	Pn	22 07 51.4	+0.9
PLAR				⇑S	Sn	22 08 09.0	+1.7
PLAR	**PLOIESTI**	**0.77**	**204**	⇑P	Pn	22 07 51.4	+0.9
PLAR				⇑S	Sn	22 08 09.0	+1.7
GHRR		**0.79**	**56**	⇑P	Pn	22 07 51.1	+0.4
GHRR				⇑S	Sn	22 08 08.7	+1.1
GHRR		**0.79**	**56**	⇑P	Pn	22 07 51.1	+0.4
GHRR				⇑S	Sn	22 08 08.7	+1.1
DOPR	**Dopca**	**0.84**	**295**	⇓P	Pn	22 07 50.8	-0.3
DOPR				⇓S	Sn	22 08 08.3	0.0
DOPR	**Dopca**	**0.84**	**295**	⇓P	Pn	22 07 50.8	-0.3
DOPR				⇓S	Sn	22 08 08.3	0.0
TUDR		**0.84**	**91**	⇑P	Pn	22 07 50.4	-0.7
TUDR				⇑S	Sn	22 08 09.0	+0.8
TUDR		**0.84**	**91**	⇑P	Pn	22 07 50.4	-0.7
TUDR				⇑S	Sn	22 08 09.0	+0.8
TESR	**Tescani**	**0.90**	**8**	⇓P	Pn	22 07 51.1	-0.5
TESR				⇓S	Sn	22 08 09.5	+0.3
TESR	**Tescani**	**0.90**	**8**	⇓P	Pn	22 07 51.1	-0.5
TESR				⇓S	Sn	22 08 09.5	+0.3
SLCR	**Slobozia Conac**	**0.91**	**91**	⇓P	Pn	22 07 51.8	+0.2
SLCR				⇓S	Sn	22 08 09.6	+0.4
SLCR	**Slobozia Conac**	**0.91**	**91**	⇓P	Pn	22 07 51.8	+0.2
SLCR				⇓S	Sn	22 08 09.6	+0.4
IZVR	**Izvoarele**	**0.91**	**94**	⇑P	Pn	22 07 51.5	-0.1
IZVR				⇑S	Sn	22 08 09.1	-0.1
IZVR	**Izvoarele**	**0.91**	**94**	⇑P	Pn	22 07 51.5	-0.1
IZVR				⇑S	Sn	22 08 09.1	-0.1
SULR		**0.95**	**189**	⇑P	Pn	22 07 52.5	+0.4
SULR		**0.95**	**189**	⇑P	Pn	22 07 52.5	+0.4
SCHL	**Schela**	**0.96**	**97**	⇓S	Sn	22 08 10.6	+0.6
SCHL	**Schela**	**0.96**	**97**	⇓S	Sn	22 08 10.6	+0.6
VARL	**Varlezi**	**1.00**	**73**	⇑P	Pn	22 07 52.6	+0.3
VARL				⇓S	Sn	22 08 10.5	-0.1
VARL	**Varlezi**	**1.00**	**73**	⇑P	Pn	22 07 52.6	+0.3
VARL				⇓S	Sn	22 08 10.5	-0.1
VOIR		**1.02**	**260**	⇓P	Pn	22 07 52.3	-0.4
VOIR				⇓S	Sn	22 08 11.0	-0.1
VOIR		**1.02**	**260**	⇓P	Pn	22 07 52.3	-0.4
VOIR				⇓S	Sn	22 08 11.0	-0.1
BIR	**Birlad**	**1.03**	**51**	⇑P	Pn	22 07 52.8	+0.2
BIR				⇓S	Sn	22 08 10.7	-0.5
BIR	**Birlad**	**1.03**	**51**	⇑P	Pn	22 07 52.8	+0.2
BIR				⇓S	Sn	22 08 10.7	-0.5
SCTR	**Scanteiesti**	**1.07**	**87**	⇓P	Pn	22 07 53.5	+0.5
SCTR				⇓S	Sn	22 08 12.3	+0.6
SCTR	**Scanteiesti**	**1.07**	**87**	⇓P	Pn	22 07 53.5	+0.5
SCTR				⇓S	Sn	22 08 12.3	+0.6
TATR	**Tatarca**	**1.11**	**91**	⇑P	Pn	22 07 54.2	+0.9
TATR				⇓S	Sn	22 08 12.4	+0.1
TATR	**Tatarca**	**1.11**	**91**	⇑P	Pn	22 07 54.2	+0.9
TATR				⇓S	Sn	22 08 12.4	+0.1
GISR	**Galati**	**1.12**	**99**	⇓P	Pn	22 07 53.9	+0.3
GISR				⇓S	Sn	22 08 12.8	+0.2
GISR	**Galati**	**1.12**	**99**	⇓P	Pn	22 07 53.9	+0.3
GISR				⇓S	Sn	22 08 12.8	+0.2
VLDR	**Vladesti**	**1.15**	**78**	⇓P	Pn	22 07 54.5	+0.7
VLDR				⇑S	Sn	22 08 13.0	0.0
VLDR	**Vladesti**	**1.15**	**78**	⇓P	Pn	22 07 54.5	+0.7
VLDR				⇑S	Sn	22 08 13.0	0.0
LEHL	**Lehliu**	**1.17**	**168**	⇑P	Pn	22 07 54.5	+0.5
LEHL				⇓S	Sn	22 08 14.0	+0.5
LEHL	**Lehliu**	**1.17**	**168**	⇑P	Pn	22 07 54.5	+0.5
LEHL				⇓S	Sn	22 08 14.0	+0.5
AMRR	**Amara**	**1.18**	**149**	⇑P	Pn	22 07 54.6	+0.5
AMRR				⇑S	Sn	22 08 14.5	+0.9
AMRR	**Amara**	**1.18**	**149**	⇑P	Pn	22 07 54.6	+0.5
AMRR				⇑S	Sn	22 08 14.5	+0.9
GIUM	**Giurgiulesti**	**1.23**	**96**	⇓P	Pn	22 07 55.2	+0.7
GIUM				⇓S	Sn	22 08 15.3	+0.9
GIUM	**Giurgiulesti**	**1.23**	**96**	⇓P	Pn	22 07 55.2	+0.7
GIUM				⇓S	Sn	22 08 15.3	+0.9
CFR	**Carcaliu**	**1.25**	**110**	⇓P	Pn	22 07 54.7	0.0
CFR				⇓S	Sn	22 08 14.3	-0.5
CFR	**Carcaliu**	**1.25**	**110**	⇓P	Pn	22 07 54.7	0.0
CFR				⇓S	Sn	22 08 14.3	-0.5
BUC1	**Bucharest**	**1.31**	**194**	⇓P	Pn	22 07 55.7	+0.3
BUC1				⇑S	Sn	22 08 16.6	+0.7
BUC1	**Bucharest**	**1.31**	**194**	⇓P	Pn	22 07 55.7	+0.3
BUC1				⇑S	Sn	22 08 16.6	+0.7
ARR	**Arges**	**1.32**	**260**	⇑P	Pn	22 07 55.4	-0.1
ARR				⇑S	Sn	22 08 16.2	0.0
ARR	**Arges**	**1.32**	**260**	⇑P	Pn	22 07 55.4	-0.1
ARR				⇑S	Sn	22 08 16.2	0.0
VASR	**Vaslui**	**1.37**	**41**	⇓P	Pn	22 07 55.9	0.0
VASR				⇓S	Sn	22 08 16.4	-0.6
VASR	**Vaslui**	**1.37**	**41**	⇓P	Pn	22 07 55.9	0.0
VASR				⇓S	Sn	22 08 16.4	-0.6
SGRR	**Singureni**	**1.44**	**194**	⇓P	Pn	22 07 56.8	+0.1
SGRR				⇑S	Sn	22 08 18.3	0.0
SGRR	**Singureni**	**1.44**	**194**	⇓P	Pn	22 07 56.8	+0.1
SGRR				⇑S	Sn	22 08 18.3	0.0
RASA	**Rasa**	**1.48**	**161**	⇓P	Pn	22 07 57.3	+0.1
RASA				⇑S	Sn	22 08 19.6	+0.5
RASA	**Rasa**	**1.48**	**161**	⇓P	Pn	22 07 57.3	+0.1
RASA				⇑S	Sn	22 08 19.6	+0.5
HUMR	**Humele**	**1.52**	**225**	⇑P	Pn	22 07 57.2	-0.4
HUMR				⇑S	Sn	22 08 19.4	-0.4
HUMR	**Humele**	**1.52**	**225**	⇑P	Pn	22 07 57.2	-0.4
HUMR				⇑S	Sn	22 08 19.4	-0.4
TLBR	**Topalu**	**1.55**	**133**	⇑P	Pn	22 07 58.0	+0.2
TLBR				⇓S	Sn	22 08 19.6	-0.8
TLBR	**Topalu**	**1.55**	**133**	⇑P	Pn	22 07 58.0	+0.2
TLBR				⇓S	Sn	22 08 19.6	-0.8
TPGR	**Topolog**	**1.57**	**118**	⇓P	Pn	22 07 58.0	-0.2
TPGR				⇑S	Sn	22 08 20.2	-0.7
TPGR	**Topolog**	**1.57**	**118**	⇓P	Pn	22 07 58.0	-0.2
TPGR				⇑S	Sn	22 08 20.2	-0.7
CVDA	**Cernavoda**	**1.70**	**139**	⇑P	Pn	22 07 59.7	+0.2
CVDA				⇓S	Sn	22 08 23.6	+0.3
CVDA	**Cernavoda**	**1.70**	**139**	⇑P	Pn	22 07 59.7	+0.2
CVDA				⇓S	Sn	22 08 23.6	+0.3
COPA	**Copaceanca**	**1.73**	**211**	⇓S	Sn	22 08 23.6	-0.4
COPA	**Copaceanca**	**1.73**	**211**	⇓S	Sn	22 08 23.6	-0.4
ICOR	**Ion Corvin**	**1.77**	**147**	⇑P	Pn	22 08 00.9	+0.5
ICOR				⇑S	Sn	22 08 24.4	-0.5
ICOR	**Ion Corvin**	**1.77**	**147**	⇑P	Pn	22 08 00.9	+0.5
ICOR				⇑S	Sn	22 08 24.4	-0.5
TIRR	**Tirgusor**	**1.80**	**130**	⇑P	Pn	22 08 00.7	0.0
TIRR	**Tirgusor**	**1.80**	**130**	⇑P	Pn	22 08 00.7	0.0
LOT	**Lotru**	**1.91**	**266**	⇑P	Pn	22 08 02.6	+0.5
LOT				⇓S	Sn	22 08 28.3	+0.4
LOT	**Lotru**	**1.91**	**266**	⇑P	Pn	22 08 02.6	+0.5
LOT				⇓S	Sn	22 08 28.3	+0.4
MILM	**Milestii Mici**	**2.08**	**50**	⇓P	Pn	22 08 03.5	-0.4
MILM	**Milestii Mici**	**2.08**	**50**	⇓P	Pn	22 08 03.5	-0.4
BURAR	**Bucovina Array**	**2.18**	**337**	⇑P	Pn	22 08 05.9	+0.6
BURAR	**Bucovina Array**	**2.18**	**337**	⇑P	Pn	22 08 05.9	+0.6

*KRSC **26** 22:15:08.5±0.8, 54°.82N×160°.95E, h102km±18km, ML3.8*
*IDC **26** 22:15:09.9±2.4, 55°.03N×160°.58E, h103km±27km, mb3.3/10, mbtmp3.6/10, Error ellipse: s-maj=31.5km s-min=17.4km az=165.0*

ISC 26 22:15:09.8±0.8, 54°.85N±0°.04×160°.84E±0°.05, h107km±7km, n46, σ1$01/58, mb3.5/10, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.59**	**317**	*eP*	**Pn**	**22 15 26.9**	**-0.1**
TUMR				*eS*	**Sn**	**22 15 40.1**	**+0.1**
KMNR	**Kamenistaya**	**0.97**	**339**	*eP*	**Pn**	**22 15 30.1**	**-0.4**
KMNR				*eS*	**Sn**	**22 15 45.8**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.09**	**356**	*eP*	**Pn**	**22 15 32.1**	**+0.3**
BZMR	**Bezymyannaya**	**1.10**	**350**	*eP*	**Pn**	**22 15 31.9**	**0.0**
BZWR	**Bezymyannyi-We**	**1.13**	**350**	*eP*	**Pn**	**22 15 32.3**	**0.0**
KIRR	**Kirishev**	**1.14**	**346**	*eP*	**Pn**	**22 15 32.3**	**0.0**
KII	**Karymskiy**	**1.15**	**225**	*eP*	**Pn**	**22 15 32.5**	**+0.1**
KPT	**Kopyto**	**1.17**	**343**	*eP*	**Pn**	**22 15 32.3**	**-0.3**
KLY	**Klyuchi**	**1.47**	**356**	*eS*	**Sn**	**22 15 56.6**	**+0.8**
SRDR	**Sredinnyy**	**1.60**	**337**	*eP*	**Pn**	**22 15 37.0**	**-0.6**
ESO	**Esso**	**1.63**	**312**	*eP*	**Pn**	**22 15 37.5**	**-0.4**
BDR	**Baidarnaya**	**1.73**	**7**	*eP*	**Pn**	**22 15 38.7**	**-0.6**
KBG	**Krutoberegovo**	**1.76**	**36**	*eP*	**Pn**	**22 15 40.7**	**+1.2**
KBG				*eS*	**Sn**	**22 16 04.2**	**+2.1**
KBTR	**Krutoberegovo**	**1.76**	**39**	*eP*	**Pn**	**22 15 39.9**	**+0.4**
KBTR				*eS*	**Sn**	**22 16 02.2**	**-0.1**
SMKR	**Semkarok**	**1.77**	**11**	*eP*	**Pn**	**22 15 39.9**	**+0.2**
SRKR	**Sorokina**	**1.81**	**6**	*eP*	**Pn**	**22 15 40.7**	**+0.4**
SRKR				*eS*	**Sn**	**22 16 03.9**	**+0.3**
SPN	**Mys Shipunski**	**1.82**	**196**	*eP*	**Pn**	**22 15 40.1**	**-0.2**
SPN				*eS*	**Sn**	**22 16 02.6**	**-1.0**
NLC	**Nalytchevo**	**1.90**	**208**	*eP*	**Pn**	**22 15 41.6**	**+0.3**
NLC				*eS*	**Sn**	**22 16 05.0**	**-0.4**
SDLR	**Sedlovina**	**1.96**	**217**	*eP*	**Pn**	**22 15 42.8**	**+0.7**
SDLR				*eS*	**Sn**	**22 16 08.1**	**+1.3**
KRX	**Arik**	**1.98**	**222**	*eP*	**Pn**	**22 15 43.4**	**+1.0**
KRER	**Koryakskii**	**1.98**	**219**	*eP*	**Pn**	**22 15 43.7**	**+1.2**
SMAR	**Somma**	**2.00**	**218**	*eP*	**Pn**	**22 15 43.3**	**+0.6**
AVH	**Avacha**	**2.02**	**219**	*eP*	**Pn**	**22 15 44.1**	**+1.2**
UGLR	**Uglovaya**	**2.03**	**217**	*eP*	**Pn**	**22 15 43.9**	**+0.8**
KOK	**Koryaka**	**2.03**	**221**	*eP*	**Pn**	**22 15 44.3**	**+1.2**
GNL	**Ganaly**	**2.06**	**237**	*eP*	**Pn**	**22 15 43.8**	**+0.4**
GNL				*eS*	**Sn**	**22 16 09.2**	**0.0**
DALK	**Dalny**	**2.20**	**215**	*eP*	**Pn**	**22 15 45.1**	**-0.1**
DALK				*eS*	**Sn**	**22 16 11.3**	**-1.0**
PET	**Petropavlovsk**	**2.24**	**216**	*eP*	**Pn**	**22 15 46.6**	**+0.9**
PETK	**Petropavlovsk-**	**2.55**	**228**	P	**Pn**	**22 15 49.4**	**-0.3**
	2.6nm,0.4s,baz=57,slow=15,SNR=26						
PETK				S	**Sn**	**22 16 21.5**	**+1.2**
	6.0nm,0.7s,baz=23,slow=27,SNR=5.3						
KRMR	**Karymshinskiy**	**2.59**	**220**	*eP*	**Pn**	**22 15 50.6**	**+0.5**
RUS	**Russkaya**	**2.79**	**211**	*eP*	**Pn**	**22 15 52.5**	**-0.4**
RUS				*eS*	**Sn**	**22 16 24.6**	**-1.4**
GRL	**Gorelyy**	**2.83**	**217**	*eP*	**Pn**	**22 15 53.8**	**+0.3**
MTVR	**Mutnovka**	**2.85**	**215**	*eP*	**Pn**	**22 15 54.9**	**+1.1**
APC	**Apacha**	**2.91**	**230**	*eP*	**Pn**	**22 15 56.9**	**+2.5**
BKI	**Bering**	**2.97**	**81**	*eS*	**Sn**	**22 16 27.1**	**-3.1**
KDTR	**Khodutka, Kamc**	**3.47**	**210**	*eP*	**Pn**	**22 16 01.3**	**-0.6**
ILAR	**Eielson Array**	**27.28**	**48**	P	**P**	**22 20 43.2**	**-0.5**
	0.6nm,0.8s,baz=288,slow=6.5,SNR=6.0						
	0.6nm,0.8s						
SONM	**Songino Array**	**33.96**	**281**	P	**P**	**22 21 42.7**	**0.0**
	0.5nm,0.9s,baz=68,slow=9.5,SNR=2.5						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**41.58**	**44**	P	**P**	**22 22 46.8**	**+0.4**
	0.7nm,0.7s,baz=299,slow=7.7,SNR=3.2						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**47.81**	**295**	P	**P**	**22 23 34.2**	**-1.9**
	0.2nm,0.6s,baz=40,slow=7.3,SNR=2.6						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**54.75**	**72**	P	**P**	**22 24 29.9**	**+1.7**
	0.9nm,0.6s,baz=301,slow=7.8,SNR=6.6						
	0.9nm,0.6s						
PDAR	**Pinedale Array**	**56.29**	**62**	P	**P**	**22 24 40.5**	**+1.2**
	0.4nm,0.5s,baz=342,slow=4.7,SNR=4.3						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**58.68**	**336**	P	**P**	**22 24 53.2**	**-2.1**
	1.5nm,0.8s,baz=29,slow=6.3,SNR=3.4						
	1.5nm,0.8s						
TXAR	**Lajitas Array**	**69.55**	**68**	P	**P**	**22 26 08.2**	**+1.2**
	0.7nm,0.5s,baz=304,slow=6.4,SNR=4.5						
	0.7nm,0.5s						
BRTR	**Keskin Array B**	**75.54**	**321**	P	**P**	**22 26 42.9**	**+0.5**
	0.2nm,0.5s,baz=31,slow=6.1,SNR=1.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**81.55**	**205**	P	**P**	**22 27 15.2**	**0.0**
	0.3nm,0.5s,baz=9.8,slow=5.0,SNR=2.2						
	0.3nm,0.5s						

IDC 26 22:16:19.4±12.0, 5°.12S×147°.14E, h144km±134km, mb2.8/1, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=238.5km s-min=61.2km az=129.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.26**	**180**	P	Pn	22 17 24.8	+2.0
	7.5nm,0.3s,baz=336,slow=9.6,SNR=3.5						
PMG				S	Sn	22 18 07.4	-4.9
	13nm,0.5s,baz=161,slow=8.8,SNR=1.8						
WRA	**Warramunga Arr**	**19.30**	**219**	P	P	22 20 33.0	-0.3
	0.2nm,0.3s,baz=40,slow=11,SNR=16						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**22.42**	**213**	P	P	22 21 06.1	-0.3
	0.7nm,0.8s,baz=47,slow=9.5,SNR=6.1						
	0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**145.00**	**286**	PKPbc	PKPbc	22 35 39.0	-1.3
	0.6nm,1.1s,baz=100,slow=4.1,SNR=2.8						

*IDC **26** 22:20:42.0±2.5, 6°.66S×129°.87E, h160km±23km, mb3.5/1, mbtmp3.9/4, Error ellipse: s-maj=39.4km s-min=23.5km az=95.0*
*NEIC **26** 22:20:42.5±1.5, 6°.67S±0°.06×129°.9E±0°.1, h170km±10km, mb4.1/5, Error ellipse: s-maj=17.7km s-min=7.3km az=103.0*

ISC 26 22:20:42.8±0.7, 6°.68S±0°.06×129°.94E±0°.09, h200km, n19, σ3$40/22, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.86**	**134**	Pn	**Pn**	**22 21 18.5**	**-1.5**
SAUI				Sn	**Sn**	**22 21 44.2**	**-4.8**
FAKI	**Fak Fak**	**4.39**	**32**	Pn	**Pn**	**22 21 47.2**	**-2.3**
SIJI	**Sorong**	**5.93**	**13**	P	**Pn**	**22 22 07.7**	**-1.5**
	3.3nm,0.3s,baz=162,slow=20,SNR=47						
SIJI				S	**Sn**	**22 23 10.4**	**-7.2**
	16nm,0.2s,baz=216,slow=22,SNR=9.3						
MTN	**Manton Dam**	**6.23**	**169**		**Pn**	**22 22 11.0

GUMA				AML	AML	
	comp=N,13650µm,0.3s					
MDAR	**Monte D'Aria**	**0.22**	**14** ⇓P		Pg	22 20 57.6 +0.8
MDAR				AML	AML	
	comp=E,9505µm,0.3s					
MDAR				AML	AML	
	comp=N,11300µm,0.3s					
MDAR				AML	AML	
	comp=E,9470µm,0.3s					
MDAR				AML	AML	
	comp=N,11325µm,0.3s					
MDAR				AML	AML	
	comp=E,9465µm,0.3s					
T1215	**Vallo di Nera,**	**0.23**	**220** ⇑P		Pg	22 20 57.5 +0.5
T1215				AML	AML	
	comp=N,3225µm,0.3s					
T1215				AML	AML	
	comp=E,2375µm,0.5s					
T1215				AML	AML	
	comp=N,3225µm,0.3s					
T1215				AML	AML	
	comp=E,2380µm,0.5s					
T1215				AML	AML	
	comp=E,2480µm,0.5s					
T1215				AML	AML	
	comp=N,3220µm,0.3s					
T1215				AML	AML	
	comp=N,3220µm,0.3s					
FIU1	**Fiuminata**	**0.23**	**334** ⇑P		Pg	22 20 57.9 +0.9
FIU1				AML	AML	
	comp=N,3850µm,0.5s					
FIU1				AML	AML	
	comp=E,3820µm,0.7s					
FIU1				AML	AML	
	comp=N,3855µm,0.5s					
GAG1	**Gagliole**	**0.26**	**360** ⇑P		Pb	22 20 58.6 -0.5
GAG1				AML	AML	
	comp=E,9925µm,1.4s					
GAG1				AML	AML	
	comp=N,8770µm,1.1s					
GAG1				AML	AML	
	comp=E,9935µm,1.4s					
GAG1				AML	AML	
	comp=N,8770µm,1.2s					
GAG1				AML	AML	
	comp=E,9935µm,0.6s					
GAG1				AML	AML	
	comp=N,8770µm,0.8s					
SSM1	**San Severino M**	**0.26**	**18** P		Pg	22 20 58.2 +0.7
SSM1				S	Sb	22 21 02.8 -0.9
MTL1	**Matelica**	**0.28**	**351** ⇑P		Pb	22 20 59.3 -0.2
T1217	**Poggiodomo (PG**	**0.29**	**201** ⇑P		Pg	22 20 58.5 +0.5
T1217				AML	AML	
	comp=E,1790µm,0.4s					
T1217				AML	AML	
	comp=N,2815µm,0.2s					
T1217				AML	AML	
	comp=E,1765µm,0.4s					
T1217				AML	AML	
	comp=N,2795µm,0.2s					
T1217				AML	AML	
	comp=E,1785µm,0.4s					
T1217				AML	AML	
	comp=N,2815µm,0.2s					
T1217				AML	AML	
	comp=E,1761µm,0.4s					
T1217				AML	AML	
	comp=N,2795µm,0.2s					
T1217				AML	AML	
	comp=E,1755µm,0.4s					
T1217				AML	AML	
	comp=N,2790µm,0.2s					
SNTG	**Esanatoglia**	**0.29**	**341** P		Pb	22 20 59.2 -0.5
SNTG				AML	AML	
	comp=N,1935µm,0.1s					
SNTG				AML	AML	
	comp=E,2475µm,0.1s					
SNTG				AML	AML	
	comp=E,2450µm,0.1s					
SNTG				AML	AML	
	comp=N,2230µm,0.1s					
SNTG				AML	AML	
	comp=N,1935µm,0.1s					
T1241	**Roccafluvione,**	**0.29**	**115** P		Pg	22 20 58.5 +0.4
T1241				S	Sb	22 21 03.4 -1.2
T1241				AML	AML	
	comp=E,2680µm,0.5s					
T1241				AML	AML	
	comp=N,2220µm,0.1s					
MNTP	**Montappone**	**0.33**	**62** S		Sg	22 21 01.0 -2.3
EL6	**Elcito**	**0.35**	**4** ⇑P		Pg	22 20 59.8 +0.6
T1204	**Amatrice, Fraz**	**0.35**	**149** P		Pb	22 21 00.0 -0.7
T1204				S	Sb	22 21 05.7 -0.8
ATCC	**AVT- Casa Cast**	**0.38**	**303** ⇑P		Pg	22 21 00.2 +0.5
ATCC				AML	AML	
	comp=N,4785µm,0.8s					
ATCC				AML	AML	
	comp=E,3860µm,0.7s					
ATCC				AML	AML	
	comp=N,4790µm,0.8s					
ATCC				AML	AML	
	comp=E,3860µm,1.3s					
ATCC				AML	AML	
	comp=N,4790µm,1.2s					
TRE1	**Treia**	**0.38**	**28** ⇓P		Pb	22 21 01.1 0.0
TRE1				AML	AML	
	comp=E,3805µm,0.7s					
TRE1				AML	AML	
	comp=N,3555µm,0.3s					
TRE1				AML	AML	
	comp=N,3560µm,0.3s					
TRE1				AML	AML	
	comp=E,3805µm,1.3s					
T1243	**Rocca Santa Ma**	**0.40**	**135** P		Pg	22 21 00.7 +0.6
T1243				S	Sb	22 21 06.9 -0.8
MMUR	**Monte Murano**	**0.47**	**354** ⇑P		Pb	22 21 03.0 +0.4
MMUR				AML	AML	
	comp=E,2885µm,0.4s					
MMUR				AML	AML	
	comp=N,3120µm,0.6s					
MMUR				AML	AML	
	comp=N,3120µm,0.7s					
MMUR				AML	AML	
	comp=E,2885µm,1.6s					
T1211	**Morro Reatino**	**0.47**	**200** ⇓P		Pg	22 21 01.4 0.0
T1211				AML	AML	
	comp=N,1367µm,1.5s					
T1211				AML	AML	
	comp=N,1295µm,1.5s					
T1211				AML	AML	
	comp=E,979µm,0.8s					
T1211				AML	AML	
	comp=N,1367µm,0.5s					
T1211				AML	AML	
	comp=N,1295µm,0.5s					
T1211				AML	AML	
	comp=E,930µm,0.8s					
MURB	**Monte Urbino**	**0.49**	**306** ⇑P		Pg	22 21 02.3 +0.5
MURB				AML	AML	
	comp=N,7020µm,0.9s					
MURB				AML	AML	
	comp=E,6130µm,0.2s					
MURB				AML	AML	
	comp=N,7610µm,0.9s					
MURB				AML	AML	
	comp=N,7025µm,0.9s					
MURB				AML	AML	
	comp=E,6625µm,0.2s					
CESX	**Cesi**	**0.52**	**224** ⇑P		Pg	22 21 02.4 +0.1
CESX				AML	AML	
	comp=N,1500µm,0.6s					
CESX				AML	AML	
	comp=E,1600µm,0.5s					
CESX				AML	AML	
	comp=N,1500µm,1.4s					
ARVD	**Arcevia**	**0.53**	**350** S		Sb	22 21 12.0 +0.6
ATFO	**Monte Foce - G**	**0.53**	**317** ⇑P		Pg	22 21 02.9 +0.3
ATFO				AML	AML	
	comp=E,948µm,0.6s					
ATFO				AML	AML	
	comp=E,948µm,0.6s					
ATFO				AML	AML	
	comp=E,948µm,1.4s					
ATFO				AML	AML	
	comp=N,806µm,0.2s					
PP3	**Marolino**	**0.56**	**45** ⇑P		Pb	22 21 04.6 +0.4
PP3				AML	AML	
	comp=E,2160µm,0.4s					
PP3				AML	AML	
	comp=N,1640µm,0.3s					
PP3				AML	AML	
	comp=E,2185µm,0.5s					
PP3				AML	AML	
	comp=E,2160µm,1.6s					
PP3				AML	AML	
	comp=N,1745µm,0.3s					
ATTE	**AVT- Monte Tez**	**0.57**	**293** P		Pg	22 21 01.9 -1.4
ATTE				AML	AML	
	comp=E,634µm,1.6s					
ATTE				AML	AML	
	comp=N,751µm,0.8s					
ATTE				AML	AML	
	comp=N,752µm,0.8s					
ATTE				AML	AML	
	comp=E,634µm,1.6s					
ATTE				AML	AML	
	comp=E,634µm,0.4s					
FRON	**Frontone**	**0.59**	**335** ⇑P		Pg	22 21 04.1 +0.3
FRON				AML	AML	
	comp=E,712µm,0.1s					
FRON				AML	AML	
	comp=N,976µm,1.3s					
FRON				AML	AML	
	comp=N,976µm,0.7s					
ATVO	**AVT- Monte Val**	**0.63**	**310** ⇑P		Pg	22 21 04.6 +0.1
ATVO				AML	AML	
	comp=N,822µm,1.4s					
ATVO				AML	AML	
	comp=E,920µm,0.4s					
ATPI	**Pietralunga -**	**0.68**	**314** ⇑P		Pg	22 21 05.5 +0.2
ATPI				S	Sb	22 21 17.0 +1.3
ATPI				AML	AML	
	comp=E,642µm,0.6s					
ATPI				AML	AML	
	comp=N,476µm,0.2s					
ATPI				AML	AML	
	comp=N,476µm,1.8s					
PIEI	**Pieia**	**0.68**	**325** P		Pg	22 21 05.8 +0.4
PIEI				S	Sb	22 21 17.0 +1.2
PIEI				AML	AML	
	comp=N,443µm,1.4s					
PIEI				AML	AML	
	comp=E,726µm,0.3s					
PIEI				AML	AML	
	comp=N,443µm,0.6s					
ATMI	**Monte Miggiano**	**0.69**	**301** S		Sb	22 21 16.0 +0.1
MPAG	**Monte Paganucc**	**0.69**	**341** ⇓P		Pg	22 21 05.9 +0.4
MPAG				S	Sn	22 21 18.0 -1.0
MPAG				AML	AML	
	comp=N,554µm,0.4s					
MPAG				AML	AML	
	comp=E,666µm,0.4s					
AOI	**Ancona**	**0.69**	**34** ⇓P		Pb	22 21 06.3 -0.1
AOI				S	Sn	22 21 18.0 -1.0
AOI				AML	AML	
	comp=E,848µm,0.4s					
AOI				AML	AML	
	comp=N,624µm,0.5s					
NARO	**Abbazia di Nar**	**0.72**	**331** ⇓P		Pg	22 21 06.3 +0.1
NARO				S	Sb	22 21 18.0 +1.0
NARO				AML	AML	
	comp=E,382µm,1.5s					
NARO				AML	AML	
	comp=N,313µm,0.4s					
SENI	**Senigallia**	**0.73**	**9** P		Pb	22 21 07.1 0.0
FSSB	**Fossombrone**	**0.74**	**343** P		Pb	22 21 07.0 -0.4
FSSB				S	Sn	22 21 20.0 -0.3
FSSB				AML	AML	
	comp=N,2475µm,0.2s					
FSSB				AML	AML	
	comp=E,1590µm,1.1s					
FSSB				AML	AML	
	comp=E,1590µm,0.9s					
APEC	**Apecchio**	**0.75**	**321** ⇓P		Pb	22 21 07.4 0.0
BADI	**Badiali**	**0.80**	**312** ⇑P		Pg	22 21 07.8 +0.1
BADI				S	Sn	22 21 21.0 -0.7
PE3	**Peglio**	**0.83**	**330** ⇑P		Pb	22 21 09.4 +0.6
PE3				AML	AML	
	comp=E,8µm,0.4s					
PE3				AML	AML	
	comp=N,14µm,0.1s					
SACS	**San Casciano d**	**0.86**	**262** ⇑P		Pb	22 21 09.8 +0.4
CAFI	**Castiglion Fio**	**0.88**	**294** ⇑P		Pg	22 21 09.2 +0.1
CAFI				S	Sn	22 21 24.0 +0.3
SSP9	**Sansepolcro**	**0.91**	**311** ⇓P		Pn	22 21 10.9 -0.2
SF04	**Casetta**	**1.04**	**263** P		Pn	22 21 13.3 +0.3
SF01	**Poggio Pratacc**	**1.12**	**262** S		Sn	22 21 33.0 +3.4
BRSN	**Barisano**	**1.49**	**331** ⇓P		Pn	22 21 15.8 -3.3
MYKA	**Terra Mystica**	**3.67**	**6** *e*Pn		Pn	22 21 52.5 +3.3
	comp=N,2.3nm,0.3s					
ABTA	**Abfaltersbach**	**3.79**	**354** *e*Pn		Pn	22 21 52.9 +2.1
	comp=N,7.2nm,0.5s					
WTTA	**Wattenberg**	**4.40**	**347** *e*Pn		Pn	22 22 04.0 +4.7
	comp=N,0.4nm,0.2s					
SQTA	**Sankt Quirin**	**4.44**	**343** *e*Pn		Pn	22 22 04.5 +4.8
	comp=N,2.0nm,0.3s					
WATA	**Walderalm**	**4.48**	**347** *e*Pn		Pn	22 22 05.2 +4.8
	comp=N,1.0nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.73**	**5** *e*Pn		Pn	22 22 05.4 +1.7
	comp=N,1.8nm,0.3s					
RETA	**Reutte**	**4.79**	**341** *e*Pn		Pn	22 22 08.9 +4.4
	comp=N,0.7nm,0.3s					
DAVA	**Damuels**	**4.86**	**333** *e*Pn		Pn	22 22 11.3 +5.7
	comp=N,0.3nm,0.2s					
MOA	**Molln**	**4.94**	**9** *e*Pn		Pn	22 22 08.1 +1.5
	comp=N,0.6nm,0.2s					
CONA	**Conrad Observa**	**5.32**	**21** *e*Pn		Pn	22 22 12.9 +1.0
	comp=N,0.7nm,0.3s					
CKRC	**Cesky Krumlov**	**5.91**	**8** *e*SN		Sn	22 23 25.6 -1.9
KHC	**Kasperske Hory**	**6.16**	**3** *e*PN		Pn	22 22 23.8 +0.4
KHC				*e*SN	Sn	22 23 30.5 -3.4

NEIC ***26*** *22:27:46.9±0.9, 9°.36N±0°.04×84°.03W±0°.02, h53km±6km, mb4.2/2, ML4.6(UCR), Error ellipse: s-maj=6.5km s-min=2.3km az=195.0*
UPA ***26*** *22:27:46.6±0.8, 9°.33N×84°.04W, h19km±5km, MW4.1*
UCR ***26*** *22:27:47.3±1.5, 9°.40N×83°.98W, h53km±3km, MW4.4, mb4.2(NEIC)*
INET ***26*** *22:27:49.2±1.3, 9°.54N×83°.79W, h30km, MW3.8*
ISC 26 22:27:47.2±0.9, 9°.39N±0°.03×84°.00W±0°.03, h50km±6km, n96, σ0=86/122, 5C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	**Dominical**	**0.19**	**136**	*e*P	**Pn**	**22 27 56.0**	**+0.5**
EDDO				*e*S	**Sn**	**22 28 03.2**	**+1.8**
CDM	**Cerro de Muert**	**0.28**	**54**	*e*P	**Pn**	**22 27 56.8**	**0.0**
PEZE	**Perez Zeledon,**	**0.32**	**91**		**Pn**	**22 27 56.9**	**+0.3**
PEZE					**Sn**	**22 28 04.6**	**+1.2**
PEZE	**Perez Zeledon,**	**0.32**	**91**	*e*P	**Pn**	**22 27 57.0**	**+0.3**
LCR2	**La Lucha 2**	**0.35**	**359**	*e*P	**Pn**	**22 27 56.8**	**-0.3**
RIMA	**Rio Macho**	**0.40**	**19**	Pn	**Pn**	**22 27 57.3**	**-0.3**
RIMA				Sn	**Sn**	**22 28 05.1**	**+0.1**
OCM	**Ochomogo**	**0.51**	**4**	*e*P	**Pn**	**22 27 58.5**	**-0.3**
SJS	**Escuela Geolog**	**0.55**	**354**	*e*P	**Pn**	**22 27 59.4**	**+0.1**
RAFA	**San Farael, Vo**	**0.59**	**18**	*e*P	**Pn**	**22 27 59.9**	**-0.2**
HAYA	**Volcan Irazu**	**0.61**	**14**	*e*P	**Pn**	**22 28 00.1**	**-0.1**
HDC	**Heredia**	**0.62**	**349**	Pn	**Pn**	**22 27 59.9**	**-0.3**
HDC				Sn	**Sn**	**22 28 09.9**	**+0.5**
HDC	**Heredia**	**0.62**	**349**	*e*P	**Pn**	**22 28 00.2**	**0.0**
HDC	**Heredia**	**0.62**	**349**	*e*P	**Pn**	**22 27 60.0**	**-0.2**
HDC				*i* S	**Sn**	**22 28 10.1**	**+0.6**
HDC3	**Heredia 3**	**0.62**	**349**	*e*P	**Pn**	**22 28 00.1**	**0.0**
VTRT	**Volcan Turrial**	**0.64**	**18**	*e*P	**Pn**	**22 28 00.4**	**-0.2**
SRBA	**San Rafael, Bu**	**0.65**	**104**	Pn	**Pn**	**22 28 00.3**	**-0.1**
SRBA				Sn	**Sn**	**22 28 10.4**	**+0.4**
SRBA	**San Rafael, Bu**	**0.65**	**104**	*e*P	**Pn**	**22 28 00.3**	**-0.1**
VTCV	**VTCV, Calle Va**	**0.65**	**24**	*e*P	**Pn**	**22 28 00.4**	**-0.2**
CVTR	**Volcan Turrial**	**0.67**	**20**	Pn	**Pn**	**22 28 00.8**	**-0.2**
CVTR				Sn	**Sn**	**22 28 10.9**	**0.0**
CVTR	**Volcan Turrial**	**0.67**	**20**	*e*P	**Pn**	**22 28 00.8**	**-0.2**
VTUN	**Crater Central**	**0.67**	**20**	*e*P	**Pn**	**22 28 00.9**	**-0.2**
VTUC	**Crater, Volcan**	**0.67**	**20**	*e*P	**Pn**	**22 28 00.8**	**-0.3**
EDPN	**Palmar Norte**	**0.68**	**128**	*e*P	**Pn**	**22 28 01.2**	**+0.4**
MRVA	**Moravia de Chi**	**0.70**	**52**	*e*P	**Pn**	**22 28 00.8**	**-0.3**
JACO	**JACO, Garabito**	**0.71**	**293**	Pn	**Pn**	**22 28 00.9**	**-0.2**
JACO				Sn	**Sn**	**22 28 11.5**	**+0.3**
JACO	**JACO, Garabito**	**0.71**	**293**	*e*P	**Pn**	**22 28 00.9**	**-0.2**
CRPO	**Crater poas**	**0.83**	**344**	*e*P	**Pn**	**22 28 03.1**	**0.0**
RIOS	**Rincon, Osa**	**0.83**	**145**	Pn	**Pn**	**22 28 02.9**	**+0.2**
SRA1	**San Ramn**	**0.84**	**325**	*e*P	**Pn**	**22 28 02.7**	**-0.3**
POTG	**Potrero Grande**	**0.93**	**111**	*e*P	**Pn**	**22 28 03.8**	**-0.3**
BATAN	**Batan**	**0.93**	**41**	Pn	**Pn**	**22 28 04.3**	**+0.2**
BATAN				Sn	**Sn**	**22 28 17.9**	**+1.4**
BATAN	**Batan**	**0.93**	**41**	⇓*i*P	**Pn**	**22 28 04.3**	**+0.2**
BATAN				*e*S	**Sn**	**22 28 17.5**	**+1.1**
EDSV	**San Vito**	**1.16**	**119**	*e*P	**Pn**	**22 28 07.7**	**+0.4**
TRT1	**Tortuguero**	**1.24**	**14**	*e*P	**Pn**	**22 28 12.0**	**+3.8**
FORC	**Fortuna**	**1.26**	**328**	⇑*e*P	**Pn**	**22 28 09.2**	**+0.6**
FORC				*e*S	**Sn**	**22 28 26.6**	**+2.1**
CASO	**Castillo**	**1.27**	**325**	*e*P	**Pn**	**22 28 09.6**	**+0.9**
CASO				*e*S	**Sn**	**22 28 27.5**	**+2.9**
CEDE	**Laguna Cedeo**	**1.29**	**328**	⇑*e*P	**Pn**	**22 28 09.8**	**+0.8**
CEDE				*e*S	**Sn**	**22 28 27.7**	**+2.3**
JTS	**Las Juntas de**	**1.30**	**314**	Pn	**Pn**	**22 28 08.9**	**-0.2**
JTS	**Las Juntas de**	**1.30**	**314**	*e*P	**Pn**	**22 28 09.2**	**+0.1**
JTS	**Las Juntas de**	**1.30**	**314**	*e*P	**Pn**	**22 28 09.0**	**-0.1**
JTS				*i* S	**Sn**	**22 28 25.8**	**+0.4**
CTCR	**Cotoan**	**1.32**	**112**	*e*P	**Pn**	**22 28 09.3**	**-0.2**
CDITO	**Canoas**	**1.37**	**126**	Pn	**Pn**	**22 28 09.5**	**-0.5**
CDITO	**Canoas**	**1.37**	**126**	*e*P	**Pn**	**22 28 09.6**	**-0.5**
CDITO				*e*S	**Sn**	**22 28 27.4**	**+0.2**
COVE	**Coope Vega, Sa**	**1.38**	**343**	Pn	**Pn**	**22 28 10.0**	**-0.2**
COVE	**Coope Vega, Sa**	**1.38**	**343**	*e*P	**Pn**	**22 28 10.1**	**-0.2**
RGM0	**Gandoca**	**1.39**	**82**	*e*P	**Pn**	**22 28 11.0**	**+0.8**
BRU2	**Volcan**	**1.42**	**115**	Pn	**Pn**	**22 28 10.6**	**-0.1**
BRU2	**Volcan**	**1.42**	**115**	*e*P	**Pn**	**22 28 10.7**	**-0.1**
BRU2	**Volcan**	**1.42**	**115**	*e*P	**Pn**	**22 28 10.7**	**-0.1**
BRU2				*e*S	**Sn**	**22 28 29.6**	**+1.2**
POPE	**POPE, Guanacas**	**1.42**	**298**	*e*P	**Pn**	**22 28 10.0**	**-0.7**
BC3P	**Paso Ancho**	**1.48**	**112**	⇓*i*P	**Pn**	**22 28 12.0**	**+0.2**
BC3P				*e*S	**Sn**	**22 28 31.6**	**+1.6**
CNI2	**El Empalme, Bo**	**1.50**	**89**	*e*P	**Pn**	**22 28 11.4**	**-0.5**
CNI2				*e*S	**Sn**	**22 28 30.7**	**+0.3**
BCO2	**Palmira**	**1.59**	**115**	*e*P	**Pn**	**22 28 13.3**	**0.0**
BCO2				*e*S	**Sn**	**22 28 34.4**	**+1.6**
ACAL	**Aguas Claras**	**1.61**	**321**	⇑*e*P	**Pn**	**22 28 13.6**	**+0.3**
ACAL				*e*S	**Sn**	**22 28 34.6**	**+1.7**
NICO	**Nicoya**	**1.61**	**298**	*e*P	**Pn**	**22 28 12.8**	**-0.5**
DUNO	**Dulce Nombre,**	**1.63**	**295**	Pn	**Pn**	**22 28 12.5**	**-1.0**
DUNO	**Dulce Nombre,**	**1.63**	**295**	*e*P	**Pn**	**22 28 12.6**	**-1.0**
PTEN	**Parque Tenorio**	**1.64**	**324**	⇑*i*P	**Pn**	**22 28 14.2**	**+0.4**
PTEN				*e*S	**Sn**	**22 28 35.8**	**+2.0**
VERA	**Finca Concepci**	**1.69**	**330**	*e*P	**Pn**	**22 28 14.5**	**+0.1**
LIMO3	**Limones**	**1.70**	**139**	*e*P	**Pn**	**22 28 15.2**	**+0.7**
LIMO3				*e*S	**Sn**	**22 28 37.0**	**+1.9**
CUI	**Cuipilapa**	**1.71**	**318**	*e*P	**Pn**	**22 28 14.8**	**+0.1**
ORTG	**Ortega, Santa**	**1.74**	**304**		**Pn**	**22 28 14.3**	**-0.8**
COLC	**Colonia**	**1.74**	**317**	*e*P	**Pn**	**22 28 15.1**	**0.0**
HORNC	**Hornillas**	**1.76**	**319**	*e*P	**Pn**	**22 28 15.3**	**-0.1**
HORNC				*e*S	**Sn**	**22 28 36.8**	**+0.1**
GUAB	**Guayabo de Bag**	**1.79**	**317**	*e*P	**Pn**	**22 28 16.9**	**+1.2**
MESS	**Mesas**	**1.79**	**319**	⇑*e*P	**Pn**	**22 28 15.8**	**0.0**
MESS				*e*S	**Sn**	**22 28 37.8**	**+0.4**
DVD	**David**	**1.80**	**122**	*e*P	**Pn**	**22 28 16.8**	**+0.9**
DVD				*e*S	**Sn**	**22 28 38.5**	**+1.0**
VMAR	**Armenia, Volca**	**1.80**	**322**	*e*P	**Pn**	**22 28 16.1**	**+0.2**
SAJU	**San Juanillo,**	**1.82**	**292**	*e*P	**Pn**	**22 28 17.4**	**+1.2**
GUAL3	**Gualaca, Chiri**	**1.88**	**117**	⇓*i*P	**Pn**	**22 28 17.2**	**+0.2**
GPS2	**Hotel Rincn d**	**1.90**	**316**	*e*P	**Pn**	**22 28 17.1**	**-0.2**
GPS3	**Bodega del ICE**	**1.91**	**315**	*e*P	**Pn**	**22 28 17.9**	**+0.4**
CHIR3	**Chiriqui UPA,**	**1.92**	**121**	*e*P	**Pn**	**22 28 18.0**	**+0.5**
LAPC	**Finca la Perla**	**1.97**	**314**	*e*P	**Pn**	**22 28 17.9**	**-0.3**
BUEV	**Buena Vista**	**1.97**	**315**	*e*P	**Pn**	**22 28 17.9**	**-0.4**
GB1A	**Borinquen Arri**	**1.98**	**316**	*e*P	**Pn**	**22 28 18.3**	**-0.2**
GBS3	**Finca Las Img**	**2.00**	**314**	*e*P	**Pn**	**22 28 18.5**	**-0.1**
CONN	**Concepcion**	**2.69**	**324**	*e*P	**Pn**	**22 28 29.7**	**+1.6**
ESPN	**Las Esperanzas**	**2.81**	**354**	Pn	**Pn**	**22 28 29.7**	**0.0**
ESPN	**Las Esperanzas**	**2.81**	**354**	*e*P	**Pn**	**22 28 29.5**	**-0.2**
ESPN	**Las Esperanzas**	**2.81**	**354**	*e*P	**Pn**	**22 28 29.5**	**-0.2**
ACON	**Acoyapa**	**2.81**	**336**	Pn	**Pn**	**22 28 29.5**	**-0.2**
ACON	**Acoyapa**	**2.81**	**336**	*e*P	**Pn**	**22 28 30.1**	**+0.3**
ACON	**Acoyapa**	**2.81**	**336**	*e*P	**Pn**	**22 28 29.6**	**-0.2**
ACON				*e*S	**Sn**	**22 29 02.8**	**+0.3**
BOAB	**BOACO BROADBAN**	**8.46**	**332**	Pn	**Pn**	**22 28 38.4**	**-0.2**
BOAB	**BOACO BROADBAN**	**8.46**	**332**	*e*P	**Pn**	**22 28 38.8**	**+0.2**
MOMN	**Momotombo**	**3.91**	**320**	*e*P	**Pn**	**22 28 47.1**	**+2.3**
MATN	**Matagalpa**	**4.00**	**332**		**Pn**	**22 28 46.7**	**+0.6**
MATN	**Matagalpa**	**4.00**	**332**	*e*P	**Pn**	**22 28 46.9**	**+0.8**
CNGN	**Cerro Negro**	**4.08**	**320**	Pn	**Pn**	**22 28 47.3**	**+0.2**
BCIP	**Isla Barro Col**	**4.11**	**93**		**Pn**	**22 28 47.5**	**0.0**
CRIN	**San Cristobal**	**4.45**	**318**		**Pn**	**22 28 52.6**	**+0.2**
ARNL	**Arenillas**	**13.43**	**163**	Pn	**Pn**	**22 30 55.1**	**-0.2**
BAUV	**El Baul**	**15.76**	**90**	Pn	**Pn**	**22 31 25.1**	**-1.0**
BAUV				IAmb	IAmb	22 31 34.3	
	comp=Z,7.0nm,0.9s						
BANI	**BANI**	**15.97**	**54**	Pn	**Pn**	**22 31 27.5**	**-1.4**
MLPR	**Magueyes Islan**	**18.54**	**61**	P	**P**	**22 31 59.2**	**-0.6**
MLPR				IAmb	IAmb	22 32 19.9	
	comp=Z,53nm,1.5s						

AEIC ***26*** *22:41:56±2.9, 52°.59N±0°.05×169°.28W±0°.04, h12km±2km, Error ellipse: s-maj=7.3km s-min=3.2km az=163.0*
NEIC 26 22:41:56.5±1.1, 52°.57N±0°.07×169°.32W±0°.04, h19km±10km, mb3.7/8, ML3.2(AEIC), Error ellipse: s-maj=10.2km s-min=1.7km az=162.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.50**	**35**		Pg	22 42 06.6	0.0
NIKH				Sg	Sb	22 42 13.5	0.0
UNV	**Unalaska Valle**	**2.12**	**52**		Pn	22 42 30.8	-0.1
AKUT	**Akutan**	**2.65**	**52**	Pn	Pn	22 42 39.2	+1.1
ADK	**Adak**	**4.58**	**264**	Pn	Pn	22 43 05.9	+1.2
KIWB	**Kanaga Island**	**4.87**	**265**	Pn	Pn	22 43 07.4	-1.2
M19K	**Big River Lodg**	**12.33**	**35**	Pn	Pn	22 44 52.4	+1.5
KLU	**Klutina**	**15.48**	**46**	Pn	Pn	22 45 33.0	-0.6
BERG	**Berg Lake**	**16.09**	**51**	Pn	Pn	22 45 40.4	-1.0
N25K	**Chitina, Valde**	**16.10**	**46**	Pn	Pn	22 45 41.5	-0.1
N25K				IAmb	IAmb	22 45 44.3	
	comp=Z,7.5nm,1.2s						
VRDI	**Verde Repeater**	**16.48**	**48**	Pn	Pn	22 45 46.0	-0.5
VRDI				IAmb	IAmb	22 45 54.9	
	comp=Z,8.1nm,1.2s						
M26K	**Nabesna, AK**	**17.11**	**45**		Pn	22 45 55.0	+0.6
SCRK	**Sand Creek**	**17.40**	**39**	Pn	Pn	22 45 56.6	-1.5
M27K	**Edge Creek, AK**	**17.58**	**45**		P	22 46 01.2	0.0
M27K				IAmb	IAmb	22 46 07.6	
	comp=Z,9.0nm,1.4s						
J26L	**Joseph Creek**	**17.82**	**38**		P	22 46 03.8	-0.1
J26L				IAmb	IAmb	22 46 04.9	
	comp=Z,6.7nm,1.4s						
BCAR	**Beaver Creek A**	**17.89**	**43**		Pn	22 46 04.2	+0.2

PRU ***26*** *22:58:59.8±0.0, 43°.08N×13°.69E, h0km*
ROM 26 22:58:51.1±0.0, 42°.960N±0°.003×13°.059E±0°.003, h10km, ML2.9/24, 15C-9D, Error ellipse: s-maj=0.3km s-min=0.2km az=172.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.01**	**287**	⇑P	Pg	22 58 53.3	+0.2
FEMA				S	Sg	22 58 54.6

```
     comp=E,6038µm,0.3s
T1216                    AML  AML
     comp=N,4453µm,0.3s
MC2  Monte Cornacci  0.11 116 ⇓P   Pg   22 58 54.6 +0.7
CESI CESI - Serrava  0.12 292 ⇑P   Pg   22 58 54.5 +0.4
CESI                         S    Sg   22 58 56.9 +0.6
CESI                         AML  AML
     comp=E,13680µm,0.3s
CESI                         AML  AML
     comp=N,28200µm,0.3s
CESI                         AML  AML
     comp=E,18300µm,0.5s
CESI                         AML  AML
     comp=E,2411µm,0.5s
CESI                         AML  AML
     comp=N,3084µm,0.2s
T1245 Castelsantange 0.14 138 ⇓P   Pg   22 58 55.1 +0.7
T1245                        AML  AML
     comp=N,9375µm,0.3s
T1245                        AML  AML
     comp=E,10170µm,0.6s
T1245                        AML  AML
     comp=N,9380µm,0.3s
T1245                        AML  AML
     comp=E,10200µm,0.6s
T1245                        AML  AML
     comp=N,9550µm,0.3s
T1245                        AML  AML
     comp=E,10250µm,0.6s
T1245                        AML  AML
     comp=E,10190µm,0.6s
MMO1 Montemonaco     0.21 107 P    Pg   22 58 56.0 +0.5
MMO1                         S    Sg   22 58 59.6 +1.2
T1215 Vallo di Nera, 0.21 222 ⇑P   Pg   22 58 56.2 +0.7
T1215                        S    Sg   22 58 59.8 +1.3
T1215                        AML  AML
     comp=E,2160µm,0.1s
T1215                        AML  AML
     comp=N,3450µm,0.2s
T1215                        AML  AML
     comp=E,2370µm,0.1s
T1215                        AML  AML
     comp=E,2165µm,0.1s
T1215                        AML  AML
     comp=N,3425µm,0.2s
T1215                        AML  AML
     comp=E,2845µm,1.3s
T1215                        AML  AML
     comp=E,2815µm,1.3s
T1215                        AML  AML
     comp=N,3420µm,0.2s
T1215                        AML  AML
     comp=E,2803µm,1.3s
T1215                        AML  AML
     comp=E,2845µm,1.3s
T1215                        AML  AML
     comp=N,1779µm,0.3s
T1215                        AML  AML
     comp=N,1746µm,0.3s
AM05 Amandola Campo  0.22  85 ⇓P   Pg   22 58 56.3 +0.7
AM05                         S    Sg   22 59 00.0 +1.3
AM05                         AML  AML
     comp=E,830µm,0.9s
AM05                         AML  AML
     comp=N,1050µm,0.3s
AM05                         AML  AML
     comp=N,1052µm,0.3s
AM05                         AML  AML
     comp=E,4010µm,0.8s
AM05                         AML  AML
     comp=N,238µm,0.6s
AM05                         AML  AML
     comp=E,1060µm,0.4s
AM05                         AML  AML
     comp=N,434µm,0.7s
AM05                         AML  AML
     comp=E,5465µm,0.5s
AM05                         AML  AML
     comp=N,1630µm,1.0s
AM05                         AML  AML
     comp=E,363µm,0.8s
AM05                         AML  AML
     comp=E,1820µm,1.8s
GUMA Gualdo di Mace  0.23  63 ⇑P   Pg   22 58 56.6 +0.8
GUMA                         S    Sg   22 59 00.8 +1.7
GUMA                         AML  AML
     comp=E,9345µm,1.6s
GUMA                         AML  AML
     comp=N,11500µm,0.5s
GUMA                         AML  AML
     comp=E,11300µm,0.5s
GUMA                         AML  AML
     comp=N,11550µm,0.5s
GUMA                         AML  AML
     comp=E,15950µm,0.5s
GUMA                         AML  AML
     comp=N,12850µm,0.6s
GUMA                         AML  AML
     comp=E,15100µm,0.6s
GUMA                         AML  AML
     comp=N,12900µm,0.6s
GUMA                         AML  AML
     comp=N,16600µm,0.4s
GUMA                         AML  AML
     comp=E,1155µm,0.4s
GUMA                         AML  AML
     comp=N,3173µm,0.2s
T1217 Poggiodomo (PG 0.27 201 P    Pg   22 58 57.1 +0.6
T1217                        S    Sb   22 59 01.8 -0.9
T1217                        AML  AML
     comp=E,1790µm,0.5s
T1217                        AML  AML
     comp=E,1706µm,0.5s
T1217                        AML  AML
     comp=N,2945µm,1.0s
T1217                        AML  AML
     comp=N,2860µm,0.2s
T1217                        AML  AML
     comp=E,2228µm,0.7s
T1217                        AML  AML
     comp=N,2940µm,1.0s
T1217                        AML  AML
     comp=E,2220µm,0.7s
T1217                        AML  AML
     comp=N,2944µm,1.0s
T1217                        AML  AML
     comp=N,2855µm,0.2s
T1217                        AML  AML
     comp=E,2305µm,1.0s
T1217                        AML  AML
     comp=N,1594µm,0.2s
T1217                        AML  AML
     comp=E,1285µm,0.9s
GAG1 Gagliole        0.28   1 S    Sb   22 59 03.0  0.0
T1241 Roccafluvione, 0.29 111 ⇑P   Pg   22 58 57.3 +0.3
T1241                        S    Sb   22 59 02.3 -1.1
T1241                        AML  AML
     comp=N,2095µm,0.2s
T1241                        AML  AML
     comp=E,2220µm,0.4s
T1241                        AML  AML
     comp=E,2225µm,0.4s
T1241                        AML  AML
     comp=N,1052µm,0.5s
T1241                        AML  AML
     comp=E,1285µm,0.7s
SNTG Esanatoglia     0.31 344 ⇑P   Pg   22 58 57.7 +0.4
SNTG                         S    Sb   22 59 02.8 -1.0
SNTG                         AML  AML
     comp=E,1058µm,0.7s
SNTG                         AML  AML
     comp=N,992µm,0.6s
SNTG                         AML  AML
     comp=E,1138µm,0.7s
SNTG                         AML  AML
     comp=E,1061µm,0.7s
SNTG                         AML  AML
     comp=N,992µm,0.6s
SNTG                         AML  AML
     comp=N,1075µm,0.1s
SNTG                         AML  AML
     comp=N,3060µm,0.2s
SNTG                         AML  AML
     comp=N,3330µm,0.2s
SNTG                         AML  AML
     comp=N,3060µm,0.2s
SNTG                         AML  AML
     comp=E,2775µm,1.1s
SNTG                         AML  AML
     comp=E,2560µm,1.1s
T1204 Amatrice, Fraz 0.34 146 ⇑P   Pb   22 58 58.7 -0.7
MNTP Montappone      0.35  59 S    Sb   22 59 04.0 -1.0
LNSS Leonessa        0.36 182 ⇓P   Pg   22 58 58.8 +0.5
LNSS                         AML  AML
     comp=E,1455µm,1.1s
LNSS                         AML  AML
     comp=N,1395µm,0.1s
LNSS                         AML  AML
     comp=E,1910µm,0.7s
LNSS                         AML  AML
     comp=N,2045µm,0.1s
EL6  Elcito          0.37   5 ⇓P   Pg   22 58 58.8 +0.3
EL6                          AML  AML
     comp=E,3220µm,0.1s
EL6                          AML  AML
     comp=N,4090µm,0.4s
EL6                          AML  AML
     comp=N,7790µm,0.2s
EL6                          AML  AML
     comp=E,7970µm,0.7s
EL6                          AML  AML
     comp=N,7815µm,0.2s
ATCC AVT- Casa Cast  0.38 306 ⇑P   Pg   22 58 58.9 +0.3
ATCC                         AML  AML
     comp=E,1790µm,0.2s
ATCC                         AML  AML
     comp=N,1740µm,0.7s
ATCC                         AML  AML
     comp=E,4960µm,0.2s
ATCC                         AML  AML
     comp=N,5305µm,0.2s
SMA1 SAN MARTINO     0.39 148 S    Sb   22 59 07.0 +0.8
T1243 Rocca Santa Ma 0.39 132 P    Pg   22 58 59.1 +0.3
T1211 Morro Reatino  0.45 199 ⇑P   Pb   22 59 00.6 -0.6
T1211                        AML  AML
     comp=E,781µm,0.3s
T1211                        AML  AML
     comp=N,1230µm,0.4s
T1211                        AML  AML
     comp=E,786µm,0.3s
T1211                        AML  AML
     comp=N,1260µm,0.4s
T1211                        AML  AML
     comp=E,1260µm,0.7s
T1211                        AML  AML
     comp=N,1770µm,0.6s
T1211                        AML  AML
     comp=E,1315µm,0.7s
T1211                        AML  AML
     comp=N,1788µm,1.3s
T1211                        AML  AML
     comp=E,1260µm,0.7s
OFFI Offida          0.46  93 ⇑P   Pb   22 59 01.3  0.0
OFFI                         AML  AML
     comp=E,1880µm,0.5s
OFFI                         AML  AML
     comp=N,2375µm,0.5s
RM33 Pellescritta (  0.47 166 S    Sb   22 59 09.0 +0.6
MURB Monte Urbino    0.49 308 P    Pg   22 59 01.1 +0.3
MURB                         AML  AML
     comp=E,2480µm,0.3s
MURB                         AML  AML
     comp=N,2980µm,0.3s
MURB                         AML  AML
     comp=E,2780µm,0.3s
MURB                         AML  AML
     comp=N,2755µm,0.9s
MURB                         AML  AML
     comp=E,4330µm,0.4s
MURB                         AML  AML
     comp=N,4925µm,0.2s
MURB                         AML  AML
     comp=E,4430µm,0.4s
MURB                         AML  AML
     comp=N,4415µm,0.2s
MURB                         AML  AML
     comp=N,4930µm,0.2s
CAMP Campotosto      0.50 149 ⇑P   Pg   22 59 01.1 +0.3
CAMP                         AML  AML
     comp=E,267µm,0.8s
CAMP                         AML  AML
     comp=N,350µm,0.5s
CAMP                         AML  AML
     comp=N,382µm,0.7s
CAMP                         AML  AML
     comp=E,278µm,0.5s
CESX Cesi            0.50 225 P    Pg   22 59 01.0 +0.2
CESX                         AML  AML
     comp=E,1195µm,1.3s
CESX                         AML  AML
     comp=N,1120µm,0.4s
CESX                         AML  AML
     comp=N,1610µm,0.3s
CESX                         AML  AML
     comp=E,1625µm,0.4s
TERO Teramo          0.52 130 ⇓P   Pg   22 59 01.5 +0.2
TERO                         AML  AML
     comp=E,768µm,1.0s
TERO                         AML  AML
     comp=N,914µm,0.6s
ATFO Monte Foce - G  0.54 319 P    Pg   22 59 01.8 +0.2
ATFO                         AML  AML
     comp=E,472µm,1.2s
ATFO                         AML  AML
     comp=N,419µm,0.3s
ATFO                         AML  AML
     comp=E,836µm,0.4s
ATFO                         AML  AML
     comp=N,764µm,0.8s
ARVD Arcevia         0.55 351 ⇓P   Pg   22 59 02.1 +0.4
ARVD                         AML  AML
     comp=E,672µm,0.8s
ARVD                         AML  AML
     comp=N,618µm,1.5s
ARVD                         AML  AML
     comp=E,1675µm,0.1s
ARVD                         AML  AML
     comp=N,1136µm,0.5s
PP3  Marolino        0.58  44 ⇑P   Pb   22 59 03.5 +0.2
PP3                          AML  AML
     comp=E,1360µm,0.3s
PP3                          AML  AML
     comp=N,1082µm,0.7s
PP3                          AML  AML
     comp=E,1400µm,0.7s
PP3                          AML  AML
     comp=N,1125µm,0.7s
PP3                          AML  AML
     comp=E,1475µm,1.0s
PP3                          AML  AML
     comp=N,1250µm,1.3s
PP3                          AML  AML
     comp=N,1410µm,1.2s
PP3                          AML  AML
     comp=E,1430µm,1.0s
FRON Frontone        0.61 337 ⇓P   Pb   22 59 04.7 +0.8
ATVO AVT- Monte Val  0.64 312 ⇓P   Pg   22 59 03.5 +0.1
ATVO                         AML  AML
     comp=N,350µm,0.4s
ATVO                         AML  AML
     comp=E,526µm,0.4s
ATVO                         AML  AML
     comp=N,530µm,0.8s
ATVO                         AML  AML
     comp=N,529µm,0.8s
TRTR Tortoreto Alta  0.65 103 ⇑P   Pb   22 59 05.1 +0.7
TRTR                         AML  AML
     comp=E,1640µm,0.5s
TRTR                         AML  AML
     comp=E,1645µm,0.5s
TRTR                         AML  AML
     comp=N,1810µm,0.4s
FIAM Fiamignano      0.69 176 P    Pn   22 59 06.3 -0.8
FSSB Fossombrone     0.76 344 ⇑P   Pg   22 59 04.5 -1.2
MYKA Terra Mystica   3.69   6 ePn  Pb   22 59 55.7 -0.8
     comp=N,1.3nm,0.2s
ABTA Abfaltersbach   3.81 354 ePn  Pb   22 59 57.0 -1.4
     comp=N,0.7nm,0.3s
KBA  Koelnbreinsper  4.12   3 ePn  Pb   23 00 01.5 -2.3
     comp=N,3.9nm,0.4s
FETA Feichten        4.38 339 ePn  Pb   23 00 07.5 -0.8
     comp=N,0.7nm,0.3s
WTTA Wattenberg      4.42 347 ePn  Pb   23 00 09.1 +0.2
     comp=N,0.6nm,0.2s
SQTA Sankt Quirin    4.46 344 ePn  Pb   23 00 09.6 +0.1
     comp=N,0.6nm,0.2s
WATA Walderalm       4.50 347 ePn  Pb   23 00 09.3 -1.0
     comp=N,0.8nm,0.3s
BIOA Bad Ischl, Aus  4.75   5 ePn  Pb   23 00 09.0 -5.4
     comp=N,1.6nm,0.3s
MOA  Molln           4.96   9 ePn  Pb   23 00 12.1 -5.9
     comp=N,0.4nm,0.1s
RONA Rosalia, Austr  5.26  25 ePn  Pn   23 00 14.9 +5.1
     comp=N,0.6nm,0.4s
CONA Conrad Observa  5.34  21 ePn  Pn   23 00 16.6 +5.6
     comp=N,0.7nm,0.3s
KHC  Kasperske Hory  6.18   3 ePN  Pn   23 00 29.3 +6.9
KHC                          eSN  Sn   23 01 37.4 +4.2
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ROM 26 22:59:41.7±0.0, 43°.004N±0°.002×13°.070E±0°.004, h9km, ML2.8/43, 3C-7D, Error ellipse: s-maj=0.3km s-min=0.0km az=63.0, Central Italy

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Code Station Name    Δ°   AZ°  Phase ID  Time     Res
                              Op    ISC  h m s    ISC
FEMA Monte Fema      0.04 200  P     Pg   22 59 43.9 +0.3
FEMA                           S     Sg   22 59 45.3 +0.4
FEMA                           AML   AML
     comp=E,49250µm,0.4s
FEMA                           AML   AML
     comp=N,32600µm,0.3s
FEMA                           AML   AML
     comp=N,32623µm,0.3s
FEMA                           AML   AML
     comp=E,49251µm,0.4s
T1216 Preci, Frazion 0.12 198  P     Pg   22 59 45.0 +0.6
T1216                          S     Sg   22 59 47.3 +1.0
T1216                          AML   AML
     comp=E,14705µm,0.2s
T1216                          AML   AML
     comp=E,14685µm,0.2s
T1216                          AML   AML
     comp=N,17600µm,1.4s
T1216                          AML   AML
     comp=N,16722µm,0.2s
T1216                          AML   AML
     comp=E,14701µm,0.2s
CESI CESI - Serrava  0.12 271 ⇑P   Pg   22 59 45.1 +0.6
CESI                           S     Sg   22 59 47.5 +1.1
CESI                           AML   AML
     comp=E,18300µm,0.5s
CESI                           AML   AML
     comp=N,23200µm,1.6s
CESI                           AML   AML
     comp=N,22583µm,0.3s
CESI                           AML   AML
     comp=E,14823µm,0.2s
MC2  Monte Cornacci  0.13 136  S     Sg   22 59 48.0 +1.2
SEF1 Sefro           0.17 328  P     Pg   22 59 45.8 +0.5
SEF1                           S     Sg   22 59 48.7 +1.0
SEF1                           AML   AML
     comp=E,14950µm,0.2s
SEF1                           AML   AML
     comp=N,16000µm,0.1s
SEF1                           AML   AML
     comp=E,14900µm,0.2s
SEF1                           AML   AML
     comp=N,15988µm,0.1s
SEF1                           AML   AML
     comp=E,14928µm,0.2s
PIO1 Pioraco         0.18 340  P     Pg   22 59 46.1 +0.6
PIO1                           AML   AML
     comp=E,5455µm,0.5s
PIO1                           AML   AML
     comp=N,6800µm,0.8s
PIO1                           AML   AML
     comp=E,5450µm,0.5s
PIO1                           AML   AML
     comp=N,6820µm,0.8s
PIO1                           AML   AML
     comp=E,4464µm,0.3s
PIO1                           AML   AML
     comp=N,6612µm,0.4s
MDAR Monte D'Aria    0.20  16  P     Pg   22 59 46.4 +0.6
MDAR                           S     Sg   22 59 49.7 +1.1
MDAR                           AML   AML
     comp=E,9395µm,0.3s
MDAR                           AML   AML
     comp=E,9375µm,0.3s
MDAR                           AML   AML
     comp=N,7015µm,0.4s
MDAR                           AML   AML
     comp=E,9398µm,0.3s
MDAR                           AML   AML
     comp=N,6309µm,0.2s
GUMA Gualdo di Mace  0.20  73  P     Pg   22 59 46.6 +0.8
GUMA                           S     Sg   22 59 50.5 +1.8
GUMA                           AML   AML
     comp=E,15950µm,0.5s
GUMA                           AML   AML
     comp=N,12850µm,0.5s
GUMA                           AML   AML
     comp=N,16600µm,0.4s
GUMA                           AML   AML
     comp=E,15950µm,0.5s
GUMA                           AML   AML
     comp=N,12850µm,0.6s
GUMA                           AML   AML
     comp=E,15100µm,0.6s
GUMA                           AML   AML
     comp=N,12900µm,0.6s
GUMA                           AML   AML
     comp=N,15138µm,0.3s
GUMA                           AML   AML
     comp=E,14442µm,0.3s
AM05 Amandola Campo  0.21  97  P     Pg   22 59 46.6 +0.7
AM05                           S     Sg   22 59 50.2 +1.4
AM05                           AML   AML
     comp=N,1630µm,1.0s
AM05                           AML   AML
     comp=E,5470µm,0.5s
AM05                           AML   AML
     comp=N,434µm,0.7s
AM05                           AML   AML
     comp=E,1060µm,0.4s
FIU1 Fiuminata       0.21 331  P     Pg   22 59 46.5 +0.5
FIU1                           S     Sg   22 59 50.1 +1.2
FIU1                           AML   AML
     comp=E,3520µm,1.6s
FIU1                           AML   AML
     comp=N,3190µm,0.5s
FIU1                           AML   AML
     comp=E,3525µm,1.6s
FIU1                           AML   AML
     comp=N,3195µm,0.5s
FIU1                           AML   AML
     comp=N,2902µm,0.2s
FIU1                           AML   AML
     comp=E,2872µm,0.2s
MMO1 Montemonaco     0.21 119  P     Pg   22 59 46.6 +0.5
MMO1                           S     Sg   22 59 50.3 +1.2
SSM1 San Severino M  0.24  19  P     Pg   22 59 47.4 +0.9
T1215 Vallo di Nera, 0.25 216  P     Pg   22 59 47.4 +0.7
T1215                          S     Sb   22 59 51.6 -1.4
T1215                          AML   AML
     comp=E,2845µm,1.3s
T1215                          AML   AML
     comp=E,2805µm,1.3s
T1215                          AML   AML
     comp=N,3100µm,0.1s
T1215                          AML   AML
     comp=E,2845µm,1.3s
T1215                          AML   AML
     comp=N,3050µm,0.1s
T1215                          AML   AML
     comp=E,2815µm,1.3s
T1215                          AML   AML
     comp=N,3098µm,0.1s
T1215                          AML   AML
     comp=E,2803µm,1.3s
T1215                          AML   AML
     comp=N,3097µm,0.1s
T1215                          AML   AML
     comp=N,3047µm,0.1s
MTL1 Matelica        0.26 350  P     Pg   22 59 47.5 +0.7
MTL1                           S     Sb   22 59 51.9 -1.2
MTL1                           AML   AML
     comp=E,10705µm,0.2s
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MTL1				AML	AML		
	comp=N,16300μm,0.2s						
MTL1				AML	AML		
	comp=E,10720μm,0.2s						
MTL1				AML	AML		
	comp=N,16283μm,0.2s						
MTL1				AML	AML		
	comp=E,10699μm,0.2s						
SNTG	**Esanatoglia**	**0.27**	**339**	P	Pg	22 59 47.5	+0.4
SNTG				S	Sg	22 59 52.0	+1.3
SNTG				AML	AML		
	comp=E,2775μm,1.1s						
SNTG				AML	AML		
	comp=N,3060μm,0.2s						
SNTG				AML	AML		
	comp=E,2560μm,1.1s						
SNTG				AML	AML		
	comp=N,3330μm,0.2s						
SNTG				AML	AML		
	comp=E,2770μm,1.1s						
SNTG				AML	AML		
	comp=N,3060μm,0.2s						
SNTG				AML	AML		
	comp=E,2143μm,0.2s						
SNTG				AML	AML		
	comp=E,2272μm,0.2s						
SNTG				AML	AML		
	comp=N,3330μm,0.2s						
SNTG				AML	AML		
	comp=N,3061μm,0.2s						
T1241	**Roccafluvione,**	**0.30**	**119**	P	Pg	22 59 47.9	+0.2
T1241				S	Sg	22 59 53.1	+1.3
T1241				AML	AML		
	comp=E,1570μm,0.4s						
T1241				AML	AML		
	comp=E,1565μm,0.4s						
T1241				AML	AML		
	comp=N,1470μm,0.7s						
T1217	**Poggiodomo (PG**	**0.31**	**199**	P	Pg	22 59 48.5	+0.7
T1217				S	Sb	22 59 53.5	-1.1
T1217				AML	AML		
	comp=E,2300μm,1.0s						
T1217				AML	AML		
	comp=N,2765μm,0.7s						
T1217				AML	AML		
	comp=E,2220μm,0.7s						
T1217				AML	AML		
	comp=N,2758μm,0.7s						
T1217				AML	AML		
	comp=E,2228μm,0.7s						
T1217				AML	AML		
	comp=N,2750μm,0.8s						
T1217				AML	AML		
	comp=E,2305μm,1.0s						
T1217				AML	AML		
	comp=N,2760μm,0.8s						
T1217				AML	AML		
	comp=E,2146μm,0.1s						
T1217				AML	AML		
	comp=N,2604μm,0.2s						
MNTP	**Montappone**	**0.32**	**65**	P	Pb	22 59 49.1	-0.5
MNTP				S	Sb	22 59 54.7	-0.3
MNTP				AML	AML		
	comp=E,3695μm,0.6s						
MNTP				AML	AML		
	comp=N,2920μm,0.5s						
MNTP				AML	AML		
	comp=E,3690μm,0.6s						
MNTP				AML	AML		
	comp=N,2925μm,0.5s						
EL6	**Elcito**	**0.33**	**4**	P	Pg	22 59 48.5	+0.4
EL6				S	Sg	22 59 53.7	+1.2
EL6				AML	AML		
	comp=E,7970μm,0.7s						
EL6				AML	AML		
	comp=N,7815μm,0.2s						
EL6				AML	AML		
	comp=N,7790μm,0.2s						
EL6				AML	AML		
	comp=N,7816μm,0.2s						
EL6				AML	AML		
	comp=E,7095μm,0.2s						
TRE1	**Treia**	**0.35**	**30**	P	Pb	22 59 49.5	-0.7
TRE1				AML	AML		
	comp=E,4165μm,0.5s						
TRE1				AML	AML		
	comp=N,4435μm,0.5s						
TRE1				AML	AML		
	comp=N,4440μm,0.5s						
TRE1				AML	AML		
	comp=E,4170μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.36**	**300**	P	Pg	22 59 49.4	+0.6
ATCC				S	Sb	22 59 55.5	-0.7
ATCC				AML	AML		
	comp=N,5300μm,0.2s						
ATCC				AML	AML		
	comp=N,5305μm,0.2s						
ATCC				AML	AML		
	comp=E,4960μm,0.2s						
ATCC				AML	AML		
	comp=N,5305μm,0.2s						
ATCC				AML	AML		
	comp=E,4961μm,0.2s						
T1204	**Amatrice, Fraz**	**0.37**	**151**	P	Pg	22 59 49.7	+0.6
T1204				S	Sb	22 59 56.1	-0.5
T1204				AML	AML		
	comp=N,1016μm,1.0s						
T1204				AML	AML		
	comp=E,1665μm,1.0s						
LNSS	**Leonessa**	**0.40**	**183**	P	Pg	22 59 50.1	+0.5
LNSS				S	Sb	22 59 56.5	-0.9
LNSS				AML	AML		
	comp=N,2040μm,0.1s						
LNSS				AML	AML		
	comp=N,2045μm,0.1s						
LNSS				AML	AML		
	comp=E,1910μm,0.7s						
T1243	**Rocca Santa Ma**	**0.41**	**138**	P	Pb	22 59 50.6	-0.7
T1243				S	Sb	22 59 56.8	-0.9
SMA1	**SAN MARTINO**	**0.42**	**152**	P	Pg	22 59 50.3	+0.4
SMA1				AML	AML		
	comp=E,1066μm,0.7s						
SMA1				AML	AML		
	comp=N,795μm,1.6s						
SMA1				AML	AML		
	comp=E,1063μm,0.7s						
SMA1				AML	AML		
	comp=N,794μm,1.6s						
MMUR	**Monte Murano**	**0.44**	**353**	⇓P	Pg	22 59 51.0	+0.7
MMUR				AML	AML		
	comp=N,3615μm,0.1s						
MMUR				AML	AML		
	comp=N,3610μm,0.1s						
MMUR				AML	AML		
	comp=E,3905μm,0.3s						
MMUR				AML	AML		
	comp=N,3613μm,0.1s						
MMUR				AML	AML		
	comp=E,2871μm,0.4s						
OFFI	**Offida**	**0.46**	**98**	P	Pb	22 59 52.0	+0.1
OFFI				AML	AML		
	comp=N,1910μm,1.0s						
OFFI				AML	AML		
	comp=E,1320μm,0.8s						
MURB	**Monte Urbino**	**0.48**	**303**	⇓P	Pg	22 59 51.5	+0.6
MURB				S	Sb	22 59 60.0	+0.5
MURB				AML	AML		
	comp=E,4335μm,0.3s						
MURB				AML	AML		
	comp=N,4925μm,0.2s						
MURB				AML	AML		
	comp=E,4330μm,0.4s						
MURB				AML	AML		
	comp=N,4415μm,0.2s						
MURB				AML	AML		
	comp=N,4930μm,0.2s						
MURB				AML	AML		
	comp=E,4430μm,0.4s						
MURB				AML	AML		
	comp=N,4416μm,0.2s						
MURB				AML	AML		
	comp=E,4428μm,0.4s						
MURB				AML	AML		
	comp=E,4334μm,0.4s						
MURB				AML	AML		
	comp=N,4929μm,0.2s						
T1211	**Morro Reatino**	**0.50**	**199**	⇓P	Pg	22 59 51.2	-0.1
T1211				S	Sb	22 59 60.0	-0.1
T1211				AML	AML		
	comp=E,1260μm,0.7s						
T1211				AML	AML		
	comp=N,1775μm,0.6s						
T1211				AML	AML		
	comp=E,1260μm,0.7s						
T1211				AML	AML		
	comp=N,1770μm,0.6s						
ARVD	**Arcevia**	**0.50**	**349**	P	Pg	22 59 51.7	+0.2
ARVD				S	Sb	22 59 59.8	-0.4
ARVD				AML	AML		
	comp=N,1136μm,0.5s						
ARVD				AML	AML		
	comp=E,1675μm,0.1s						
ARVD				AML	AML		
	comp=E,1676μm,0.1s						
ARVD				AML	AML		
	comp=N,1069μm,0.2s						
RM33	**Pellescritta (**	**0.51**	**168**	⇓P	Pb	22 59 52.3	-0.5
RM33				AML	AML		
	comp=N,556μm,0.7s						
RM33				AML	AML		
	comp=E,552μm,1.6s						
RM33				AML	AML		
	comp=N,556μm,0.7s						
RM33				AML	AML		
	comp=E,526μm,0.1s						
RM33				AML	AML		
	comp=N,442μm,0.3s						
RM33				AML	AML		
	comp=N,438μm,0.3s						
RM33				AML	AML		
	comp=E,520μm,0.2s						
ATFO	**Monte Foce - G**	**0.51**	**315**	P	Pg	22 59 52.0	+0.3
ATFO				S	Sb	23 00 00.2	-0.4
ATFO				AML	AML		
	comp=E,836μm,0.4s						
ATFO				AML	AML		
	comp=E,836μm,0.4s						
ATFO				AML	AML		
	comp=N,764μm,0.8s						
CAMP	**Campotosto**	**0.53**	**152**	P	Pg	22 59 52.2	+0.3
CAMP				AML	AML		
	comp=E,278μm,0.5s						
CAMP				AML	AML		
	comp=N,382μm,0.7s						
CESX	**Cesi**	**0.53**	**223**	P	Pg	22 59 52.2	+0.2
CESX				S	Sb	23 00 00.6	-0.4
CESX				AML	AML		
	comp=E,1625μm,0.4s						
CESX				AML	AML		
	comp=N,1610μm,0.3s						
CESX				AML	AML		
	comp=E,1622μm,0.4s						
CESX				AML	AML		
	comp=N,1609μm,0.3s						
PP3	**Marolino**	**0.54**	**46**	P	Pb	22 59 53.3	-0.1
PP3				AML	AML		
	comp=E,1425μm,1.0s						
PP3				AML	AML		
	comp=E,1430μm,1.0s						
PP3				AML	AML		
	comp=N,1410μm,1.2s						
TERO	**Teramo**	**0.55**	**134**	P	Pg	22 59 52.8	+0.6
TERO				S	Sb	23 00 01.2	-0.3
TERO				AML	AML		
	comp=E,760μm,0.3s						
TERO				AML	AML		
	comp=N,630μm,0.6s						
TERO				AML	AML		
	comp=N,630μm,0.6s						
TERO				AML	AML		
	comp=N,456μm,0.1s						
TERO				AML	AML		
	comp=E,482μm,0.1s						
ATTE	**AVT- Monte Tez**	**0.56**	**291**	P	Pb	22 59 53.7	0.0
ATTE				AML	AML		
	comp=N,754μm,0.3s						
ATTE				AML	AML		
	comp=E,618μm,0.3s						
FRON	**Frontone**	**0.57**	**334**	P	Pg	22 59 52.9	+0.2
FRON				S	Sb	23 00 02.0	-0.2
FRON				AML	AML		
	comp=E,795μm,0.8s						
FRON				AML	AML		
	comp=N,1145μm,0.4s						
FRON				AML	AML		
	comp=E,794μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.59**	**163**	P	Pg	22 59 53.5	+0.5
T1247				AML	AML		
	comp=E,568μm,0.5s						
T1247				AML	AML		
	comp=N,574μm,0.1s						
T1247				AML	AML		
	comp=N,573μm,0.1s						
T1247				AML	AML		
	comp=E,568μm,0.5s						
ATVO	**AVT- Monte Val**	**0.61**	**308**	P	Pg	22 59 53.7	+0.2
ATVO				S	Sb	23 00 03.4	-0.1
ATVO				AML	AML		
	comp=N,530μm,0.8s						
ATVO				AML	AML		
	comp=N,529μm,0.8s						
ATVO				AML	AML		
	comp=E,474μm,0.7s						
PIEI	**Pieia**	**0.66**	**324**	⇓P	Pg	22 59 54.6	+0.2
PIEI				S	Sb	23 00 04.1	-0.6
PIEI				AML	AML		
	comp=E,716μm,1.2s						
PIEI				AML	AML		
	comp=N,575μm,0.3s						
ATPI	**Pietralunga -**	**0.66**	**313**	⇑P	Pg	22 59 54.9	+0.4
ATPI				S	Sb	23 00 04.8	-0.1
ATPI				AML	AML		
	comp=E,428μm,0.6s						
ATPI				AML	AML		
	comp=N,384μm,0.7s						
GIGS	**Gran Sasso**	**0.66**	**146**	P	Pg	22 59 54.5	0.0
GIGS				AML	AML		
	comp=E,125μm,0.7s						
GIGS				AML	AML		
	comp=N,102μm,1.2s						
GIGS				AML	AML		
	comp=E,126μm,0.7s						
GIGS				AML	AML		
	comp=N,102μm,1.2s						
MPAG	**Monte Paganucc**	**0.67**	**340**	P	Pb	22 59 55.1	-0.4
MPAG				AML	AML		
	comp=E,1025μm,0.2s						
MPAG				AML	AML		
	comp=E,1024μm,0.2s						
MPAG				AML	AML		
	comp=E,1022μm,0.2s						
MPAG				AML	AML		
	comp=N,784μm,0.3s						
MPAG				AML	AML		
	comp=N,785μm,0.3s						
MPAG				AML	AML		
	comp=E,1024μm,0.2s						
AOI	**Ancona**	**0.67**	**35**	P	Pg	22 59 55.0	+0.4
AOI				AML	AML		
	comp=E,472μm,0.5s						
AOI				AML	AML		
	comp=N,451μm,0.6s						
AOI				AML	AML		
	comp=E,472μm,0.5s						
AOI				AML	AML		
	comp=N,401μm,0.5s						
AOI				AML	AML		
	comp=E,472μm,0.5s						
ATMI	**Monte Miggiano**	**0.67**	**300**	S	Sn	23 00 08.0	-0.2
NARO	**Abbazia di Nar**	**0.70**	**330**	P	Pg	22 59 55.2	-0.1
NARO				S	Sg	23 00 05.2	+0.7
NARO				AML	AML		
	comp=E,414μm,0.9s						
NARO				AML	AML		
	comp=N,366μm,0.7s						
NARO				AML	AML		
	comp=N,367μm,0.7s						
FSSB	**Fossombrone**	**0.72**	**343**	⇓P	Pg	22 59 55.9	+0.3
FSSB				AML	AML		
	comp=E,1925μm,0.3s						
FSSB				AML	AML		
	comp=N,2055μm,0.3s						
FSSB				AML	AML		
	comp=N,1832μm,0.2s						
FSSB				AML	AML		
	comp=E,1925μm,0.3s						
FIAM	**Fiamignano**	**0.74**	**177**	⇓P	Pg	22 59 56.1	+0.2
FIAM				S	Sb	23 00 08.0	+1.0
BADI	**Badiali**	**0.79**	**310**	⇑P	Pb	22 59 57.2	-0.4
PE3	**Peglio**	**0.81**	**329**	P	Pb	22 59 58.0	0.0
CAFI	**Castiglion Fio**	**0.87**	**292**	P	Pb	22 59 58.8	-0.2
CAFI				AML	AML		
	comp=E,259μm,0.3s						
CAFI				AML	AML		
	comp=N,348μm,0.9s						
CAFI				AML	AML		
	comp=N,331μm,0.6s						
CAFI				AML	AML		
	comp=E,259μm,0.3s						
SRES	**S.Oreste - Sor**	**0.87**	**209**	S	Sn	23 00 13.0	0.0
T0110	**Collepietro**	**0.94**	**146**	P	Pg	22 59 59.5	-0.1
MYKA	**Terra Mystica**	**3.65**	**6**	*e*Pn	Pn	23 00 39.2	+0.8
	comp=E,2.6nm,0.3s						
ABTA	**Abfaltersbach**	**3.76**	**354**	*e*Pn	Pn	23 00 41.6	+1.6
	comp=E,3.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.08**	**3**	*e*Pn	Pn	23 00 46.2	+1.8
	comp=E,3.5nm,0.3s						
ARSA	**Arzberg**	**4.59**	**21**	*e*Pn	Pb	23 00 59.6	-2.8
	comp=E,1.5nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.71**	**5**	*e*Pn	Pn	23 00 54.7	+1.8
	comp=E,1.6nm,0.3s						
MOA	**Molln**	**4.92**	**9**	*e*Pn	Pn	23 00 57.3	+1.5
	comp=E,1.0nm,0.3s						
CONA	**Conrad Observa**	**5.30**	**21**	*e*Pn	Pn	23 01 01.9	+0.8
	comp=E,0.6nm,0.3s						

ROM 26 23:16:22.6±0.1, 42°.840N±0°.003×13°.160E±0°.004, h8^{km}, ML2.7/38, 7C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=274.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**52**	P		Pg	23 16 24.1	-0.2
T1245				S		Sg	23 16 24.8	-0.7
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
MC2	**Monte Cornacci**	**0.08**	**17**	P		Pg	23 16 25.0	+0.1
MC2				S		Sg	23 16 26.6	+0.2
MMO1	**Montemonaco**	**0.14**	**64**	P		Pg	23 16 26.1	+0.5
MMO1				S		Sg	23 16 28.6	+0.9
AM05	**Amandola Campo**	**0.20**	**46**	P		Pg	23 16 27.3	+0.7
AM05				AML		AML		
	comp=E,1410μm,0.4s							
AM05				AML		AML		
	comp=N,1765μm,0.2s							
AM05				AML		AML		
	comp=E,5625μm,0.4s							
AM05				AML		AML		
	comp=N,346μm,1.3s							
AM05				AML		AML		
	comp=N,4115μm,1.5s							
AM05				AML		AML		
	comp=N,923μm,0.1s							
AM05				AML		AML		
	comp=E,3715μm,0.9s							
AM05				AML		AML		
	comp=E,15200μm,0.9s							
AM05				AML		AML		
	comp=N,924μm,0.1s							
AM05				AML		AML		
	comp=N,346μm,1.2s							
AM05				AML		AML		
	comp=N,1761μm,0.2s							
AM05				AML		AML		
	comp=E,6260μm,3.3s							
AM05				AML		AML		
	comp=E,1412μm,0.4s							
AM05				AML		AML		
	comp=N,305μm,0.1s							
AM05				AML		AML		
	comp=E,1061μm,0.3s							
T1241	**Roccafluvione,**	**0.20**	**85**	P		Pg	23 16 27.2	+0.6
T1241				S		Sg	23 16 30.9	+1.4
T1241				AML		AML		
	comp=E,6065μm,0.8s							
T1241				AML		AML		
	comp=N,6265μm,0.7s							
T1241				AML		AML		
	comp=N,6270μm,0.7s							
T1241				AML		AML		
	comp=E,6070μm,0.8s							
T1241				AML		AML		
	comp=E,5729μm,0.2s							
T1241				AML		AML		
	comp=N,5518μm,0.2s							
T1204	**Amatrice, Fraz**	**0.20**	**145**	P		Pg	23 16 27.7	+1.0
T1204				AML		AML		
	comp=E,9215μm,1.2s							
T1204				AML		AML		
	comp=N,4970μm,0.9s							
T1204				AML		AML		
	comp=E,9225μm,1.2s							
T1204				AML		AML		
	comp=N,4960μm,0.9s							
T1204				AML		AML		
	comp=N,3318μm,0.7s							
T1204				AML		AML		
	comp=E,4607μm,3.7s							
T1204				AML		AML		
	comp=N,2772μm,0.3s							
T1204				AML		AML		
	comp=E,3827μm,0.4s							
T1217	**Poggiodomo (PG**	**0.21**	**233**	P		Pg	23 16 27.8	+0.9
T1217				S		Sg	23 16 31.6	+1.8
T1217				AML		AML		
	comp=E,3080μm,1.5s							
T1217				AML		AML		
	comp=N,4110μm,0.4s							
T1217				AML		AML		
	comp=E,2915μm,1.4s							
T1217				AML		AML		
	comp=N,4045μm,0.4s							
T1217				AML		AML		
	comp=E,3475μm,1.6s							
T1217				AML		AML		
	comp=N,4345μm,1.0s							
T1217				AML		AML		
	comp=E,3430μm,1.6s							
T1217				AML		AML		
	comp=N,4145μm,1.0s							
T1217				AML		AML		
	comp=E,3835μm,0.8s							
T1217				AML		AML		
	comp=N,4340μm,1.0s							
T1217				AML		AML		
	comp=E,3750μm,0.8s							
T1217				AML		AML		
	comp=N,4150μm,1.0s							
T1217				AML		AML		
	comp=E,3164μm,2.7s							
T1217				AML		AML		
	comp=E,3229μm,2.7s							
T1217				AML		AML		
	comp=N,4113μm,0.4s							
T1217				AML		AML		
	comp=N,3915μm,0.3s							
T1217				AML		AML		
	comp=N,4047μm,0.4s							
T1217				AML		AML		
	comp=E,2411μm,0.3s							
T1217				AML		AML		
	comp=E,2437μm,0.3s							
T1215	**Vallo di Nera,**	**0.22**	**260**	P		Pg	23 16 27.7	+0.7
T1215				S		Sg	23 16 31.5	+1.5
T1215				AML		AML		
	comp=E,2670μm,1.2s							
T1215				AML		AML		
	comp=N,3415μm,0.8s							
T1215				AML		AML		
	comp=E,2845μm,1.2s							
T1215				AML		AML		
	comp=N,3430μm,0.8s							
T1215				AML		AML		
	comp=E,4160μm,1.2s							

T1215				AML	AML	
	comp=N,3890µm,1.3s					
T1215				AML	AML	
	comp=E,4665µm,1.4s					
T1215				AML	AML	
	comp=N,4000µm,1.3s					
T1215				AML	AML	
	comp=E,2499µm,0.4s					
T1215				AML	AML	
	comp=E,2441µm,0.4s					
T1215				AML	AML	
	comp=N,3426µm,0.8s					
T1215				AML	AML	
	comp=N,3417µm,0.8s					
T1215				AML	AML	
	comp=E,1891µm,0.3s					
T1215				AML	AML	
	comp=N,3340µm,0.2s					
T1215				AML	AML	
	comp=E,2021µm,0.2s					
T1215				AML	AML	
	comp=N,3330µm,0.2s					
SMA1	**SAN MARTINO**	**0.25**	**148**	P	Pg	23 16 28.3 +0.8
SMA1				AML	AML	
	comp=E,5220µm,0.4s					
SMA1				AML	AML	
	comp=N,3410µm,0.4s					
SMA1				AML	AML	
	comp=E,6230µm,0.9s					
SMA1				AML	AML	
	comp=N,4670µm,1.2s					
SMA1				AML	AML	
	comp=E,5217µm,0.5s					
SMA1				AML	AML	
	comp=N,3640µm,10.0s					
SMA1				AML	AML	
	comp=N,2493µm,0.3s					
CESI	**CESI - Serrava**	**0.25**	**311**	P	Pg	23 16 28.5 +0.9
CESI				S	Sg	23 16 32.5 +1.5
CESI				AML	AML	
	comp=E,16350µm,1.1s					
CESI				AML	AML	
	comp=N,18800µm,1.0s					
CESI				AML	AML	
	comp=E,2848µm,2.7s					
CESI				AML	AML	
	comp=N,4713µm,0.5s					
CESI				AML	AML	
	comp=E,2089µm,0.2s					
CESI				AML	AML	
	comp=N,4324µm,0.5s					
LNSS	**Leonessa**	**0.25**	**200**	P	Pg	23 16 28.4 +0.7
LNSS				S	Sb	23 16 32.9 -1.1
LNSS				AML	AML	
	comp=N,6620µm,0.1s					
LNSS				AML	AML	
	comp=E,8010µm,1.1s					
LNSS				AML	AML	
	comp=N,6620µm,0.1s					
LNSS				AML	AML	
	comp=E,7522µm,0.2s					
GUMA	**Gualdo di Mace**	**0.26**	**30**	P	Pg	23 16 28.6 +0.8
GUMA				S	Sb	23 16 33.4 -0.8
GUMA				AML	AML	
	comp=E,67500µm,0.7s					
GUMA				AML	AML	
	comp=N,40900µm,0.4s					
GUMA				AML	AML	
	comp=N,40950µm,0.4s					
GUMA				AML	AML	
	comp=E,67550µm,0.7s					
GUMA				AML	AML	
	comp=N,60200µm,0.8s					
GUMA				AML	AML	
	comp=E,70250µm,0.7s					
GUMA				AML	AML	
	comp=N,10182µm,0.5s					
GUMA				AML	AML	
	comp=E,6081µm,0.3s					
GUMA				AML	AML	
	comp=N,10199µm,0.4s					
T1243	**Rocca Santa Ma**	**0.26**	**124**	P	Pg	23 16 28.3 +0.6
T1243				S	Sb	23 16 33.1 -1.1
RM33	**Pellescritta (**	**0.33**	**173**	P	Pg	23 16 29.9 +0.8
RM33				S	Sb	23 16 35.3 -1.1
RM33				AML	AML	
	comp=E,1790µm,0.2s					
RM33				AML	AML	
	comp=N,1785µm,0.3s					
RM33				AML	AML	
	comp=E,1870µm,0.9s					
RM33				AML	AML	
	comp=N,1740µm,0.3s					
RM33				AML	AML	
	comp=E,2275µm,1.4s					
RM33				AML	AML	
	comp=N,1780µm,0.3s					
RM33				AML	AML	
	comp=E,2255µm,1.4s					
RM33				AML	AML	
	comp=E,1942µm,4.4s					
RM33				AML	AML	
	comp=N,1735µm,0.3s					
RM33				AML	AML	
	comp=E,2009µm,4.4s					
RM33				AML	AML	
	comp=N,1782µm,0.3s					
RM33				AML	AML	
	comp=E,1793µm,0.2s					
RM33				AML	AML	
	comp=E,1791µm,0.2s					
RM33				AML	AML	
	comp=N,1738µm,0.3s					
CAMP	**Campotosto**	**0.36**	**149**	P	Pg	23 16 30.2 +0.6
CAMP				S	Sb	23 16 36.1 -1.0
CAMP				AML	AML	
	comp=E,1620µm,0.3s					
CAMP				AML	AML	
	comp=E,1715µm,0.7s					
CAMP				AML	AML	
	comp=N,2400µm,1.6s					
CAMP				AML	AML	
	comp=N,845µm,10.8s					
CAMP				AML	AML	
	comp=E,993µm,9.4s					
MNTP	**Montappone**	**0.37**	**37**	⇓P	Pb	23 16 31.3 -0.2
TERO	**Teramo**	**0.39**	**123**	P	Pg	23 16 30.7 +0.5
TERO				S	Sb	23 16 37.2 -0.8
TERO				AML	AML	
	comp=E,1528µm,0.5s					
TERO				AML	AML	
	comp=N,2690µm,0.7s					
TERO				AML	AML	
	comp=E,1600µm,0.4s					
TERO				AML	AML	
	comp=E,2025µm,0.6s					
TERO				AML	AML	
	comp=E,2105µm,0.6s					
TERO				AML	AML	
	comp=N,2775µm,0.7s					
TERO				AML	AML	
	comp=N,1406µm,0.6s					
TERO				AML	AML	
	comp=E,1322µm,9.6s					
TERO				AML	AML	
	comp=E,1459µm,9.6s					
TERO				AML	AML	
	comp=N,1333µm,0.6s					
TERO				AML	AML	
	comp=N,873µm,0.2s					
TERO				AML	AML	
	comp=E,1125µm,0.2s					
TERO				AML	AML	
	comp=N,969µm,0.2s					
TERO				AML	AML	
	comp=E,1231µm,0.2s					
OFFI	**Offida**	**0.40**	**76**	P	Pb	23 16 31.8 -0.1
OFFI				S	Sb	23 16 39.8 +1.6
OFFI				AML	AML	
	comp=E,4310µm,1.1s					
OFFI				AML	AML	
	comp=N,3620µm,0.5s					
OFFI				AML	AML	
	comp=E,4585µm,1.4s					
OFFI				AML	AML	
	comp=N,5645µm,0.5s					
OFFI				AML	AML	
	comp=N,2936µm,2.6s					
OFFI				AML	AML	
	comp=E,2246µm,0.5s					
T1247	**Pizzolo (AQ)**	**0.41**	**166**	P	Pg	23 16 31.4 +0.8
T1247				S	Sb	23 16 38.2 -0.4
T1247				AML	AML	
	comp=E,1990µm,0.9s					
T1247				AML	AML	
	comp=N,1940µm,0.4s					
T1247				AML	AML	
	comp=E,2960µm,1.3s					
T1247				AML	AML	
	comp=N,2115µm,1.5s					
T1247				AML	AML	
	comp=N,2282µm,13.9s					
T1247				AML	AML	
	comp=E,2245µm,4.6s					
T1247				AML	AML	
	comp=E,1830µm,0.3s					
T1247				AML	AML	
	comp=N,1941µm,0.4s					
SNTG	**Esanatoglia**	**0.44**	**339**	P	Pg	23 16 31.8 +0.5
SNTG				S	Sb	23 16 38.8 -0.8
SNTG				AML	AML	
	comp=E,3025µm,1.4s					
SNTG				AML	AML	
	comp=N,2545µm,1.4s					
SNTG				AML	AML	
	comp=E,2945µm,1.4s					
SNTG				AML	AML	
	comp=N,2605µm,1.4s					
SNTG				AML	AML	
	comp=N,1162µm,0.6s					
SNTG				AML	AML	
	comp=E,1099µm,4.4s					
SNTG				AML	AML	
	comp=E,1117µm,4.4s					
SNTG				AML	AML	
	comp=N,1086µm,2.2s					
SNTG				AML	AML	
	comp=N,969µm,0.5s					
SNTG				AML	AML	
	comp=E,919µm,0.1s					
SNTG				AML	AML	
	comp=E,876µm,0.1s					
SNTG				AML	AML	
	comp=N,1105µm,0.5s					
CESX	**Cesi**	**0.48**	**242**	P	Pg	23 16 32.5 +0.5
CESX				S	Sb	23 16 40.4 -0.3
CESX				AML	AML	
	comp=E,2275µm,0.6s					
CESX				AML	AML	
	comp=N,2760µm,0.8s					
CESX				AML	AML	
	comp=E,2930µm,1.2s					
CESX				AML	AML	
	comp=E,884µm,1.4s					
CESX				AML	AML	
	comp=N,1010µm,6.4s					
CESX				AML	AML	
	comp=N,979µm,0.2s					
CESX				AML	AML	
	comp=E,798µm,0.7s					
EL6	**Elcito**	**0.49**	**355**	P	Pg	23 16 32.5 +0.4
EL6				S	Sb	23 16 40.5 -0.4
EL6				AML	AML	
	comp=E,8355µm,0.2s					
EL6				AML	AML	
	comp=N,7000µm,0.4s					
EL6				AML	AML	
	comp=E,8370µm,0.2s					
EL6				AML	AML	
	comp=N,7015µm,0.4s					
EL6				AML	AML	
	comp=E,4892µm,1.4s					
EL6				AML	AML	
	comp=N,5841µm,0.2s					
EL6				AML	AML	
	comp=E,4627µm,0.2s					
GIGS	**Gran Sasso**	**0.49**	**142**	P	Pg	23 16 32.4 +0.3
GIGS				S	Sb	23 16 40.3 -0.7
GIGS				AML	AML	
	comp=E,672µm,0.5s					
GIGS				AML	AML	
	comp=N,404µm,0.2s					
GIGS				AML	AML	
	comp=N,222µm,0.3s					
GIGS				AML	AML	
	comp=E,228µm,0.3s					
ATCC	**AVT- Casa Cast**	**0.51**	**312**	P	Pg	23 16 33.0 +0.4
ATCC				AML	AML	
	comp=E,7145µm,0.6s					
ATCC				AML	AML	
	comp=N,8000µm,1.4s					
ATCC				AML	AML	
	comp=E,7150µm,0.6s					
ATCC				AML	AML	
	comp=E,1035µm,2.4s					
ATCC				AML	AML	
	comp=N,976µm,3.7s					
AQU	**L'Aquila**	**0.52**	**160**	P	Pg	23 16 33.1 +0.5
AQU				S	Sb	23 16 41.5 -0.2
AQU				AML	AML	
	comp=E,706µm,0.8s					
AQU				AML	AML	
	comp=N,963µm,1.2s					
AQU				AML	AML	
	comp=E,716µm,1.6s					
AQU				AML	AML	
	comp=N,887µm,1.2s					
AQU				AML	AML	
	comp=E,1345µm,0.9s					
AQU				AML	AML	
	comp=N,1385µm,1.5s					
AQU				AML	AML	
	comp=E,1370µm,0.9s					
AQU				AML	AML	
	comp=N,1405µm,1.5s					
AQU				AML	AML	
	comp=E,807µm,10.8s					
AQU				AML	AML	
	comp=E,784µm,10.8s					
AQU				AML	AML	
	comp=N,1060µm,15.3s					
AQU				AML	AML	
	comp=N,978µm,15.3s					
TRTR	**Tortoreto Alta**	**0.56**	**93**	AML	AML	
	comp=E,5765µm,1.3s					
TRTR				AML	AML	
	comp=E,2425µm,0.4s					
TRTR				AML	AML	
	comp=N,1780µm,1.0s					
TRTR				AML	AML	
	comp=N,5320µm,1.2s					
TRTR				AML	AML	
	comp=N,1941µm,16.8s					
TRTR				AML	AML	
	comp=E,2035µm,0.5s					
TRTR				AML	AML	
	comp=N,1941µm,1.2s					
FIAM	**Fiamignano**	**0.57**	**183**	P	Pg	23 16 33.9 +0.2
FIAM				S	Sb	23 16 42.9 -0.4
FIAM				AML	AML	
	comp=E,566µm,1.0s					
FIAM				AML	AML	
	comp=N,471µm,1.2s					
FIAM				AML	AML	
	comp=E,1320µm,1.1s					
FIAM				AML	AML	
	comp=N,815µm,0.6s					
FIAM				AML	AML	
	comp=E,628µm,9.1s					
FIAM				AML	AML	
	comp=N,471µm,1.2s					
FIAM				AML	AML	
	comp=E,548µm,0.7s					
FIAM				AML	AML	
	comp=N,457µm,0.6s					
MURB	**Monte Urbino**	**0.63**	**312**	P	Pg	23 16 35.0 +0.3
MURB				AML	AML	
	comp=E,5030µm,1.2s					
MURB				AML	AML	
	comp=N,4550µm,0.9s					
MURB				AML	AML	
	comp=E,5025µm,1.2s					
MURB				AML	AML	
	comp=N,4545µm,0.9s					
MURB				AML	AML	
	comp=E,5560µm,1.2s					
MURB				AML	AML	
	comp=N,4590µm,0.9s					
MURB				AML	AML	
	comp=E,1414µm,2.5s					
MURB				AML	AML	
	comp=N,1139µm,0.3s					
MURB				AML	AML	
	comp=N,1204µm,0.3s					
MURB				AML	AML	
	comp=E,1370µm,22.5s					
MURB				AML	AML	
	comp=E,1283µm,0.2s					
MURB				AML	AML	
	comp=E,1310µm,0.2s					
PP3	**Marolino**	**0.63**	**31**	AML	AML	
	comp=E,4930µm,1.3s					
PP3				AML	AML	
	comp=E,3380µm,1.3s					
PP3				AML	AML	
	comp=N,3070µm,0.7s					
PP3				AML	AML	
	comp=E,3215µm,1.5s					
PP3				AML	AML	
	comp=N,3185µm,0.7s					
PP3				AML	AML	
	comp=E,5320µm,1.3s					
PP3				AML	AML	
	comp=N,6320µm,1.0s					
PP3				AML	AML	
	comp=N,6355µm,1.2s					
PP3				AML	AML	
	comp=N,2533µm,0.7s					
PP3				AML	AML	
	comp=E,1782µm,10.5s					
PP3				AML	AML	
	comp=E,1782µm,0.5s					
PP3				AML	AML	
	comp=E,1740µm,1.8s					
PP3				AML	AML	
	comp=N,2507µm,0.7s					
VCEL	**Villa Celiera**	**0.67**	**131**	P	Pg	23 16 36.1 +0.5
VCEL				AML	AML	
	comp=E,716µm,0.4s					
VCEL				AML	AML	
	comp=N,648µm,0.4s					
VCEL				AML	AML	
	comp=E,1695µm,0.6s					
VCEL				AML	AML	
	comp=N,1540µm,0.4s					
VCEL				AML	AML	
	comp=E,822µm,8.9s					
VCEL				AML	AML	
	comp=N,722µm,12.2s					
ARVD	**Arcevia**	**0.68**	**346**	⇓P	Pg	23 16 35.8 +0.2
ARVD				S	Sn	23 16 48.0 -1.3
ARVD				AML	AML	
	comp=E,1965µm,0.2s					
ARVD				AML	AML	
	comp=N,1370µm,1.0s					
ARVD				AML	AML	
	comp=N,384µm,2.7s					
ARVD				AML	AML	
	comp=E,553µm,0.1s					
ARVD				AML	AML	
	comp=N,378µm,0.3s					
ATFO	**Monte Foce - G**	**0.68**	**321**	P	Pg	23 16 36.0 +0.3
ATFO				AML	AML	
	comp=N,1475µm,0.7s					
ATFO				AML	AML	
	comp=E,1730µm,0.9s					
ATFO				AML	AML	
	comp=N,1790µm,1.6s					
ATFO				AML	AML	
	comp=E,507µm,0.5s					
ATFO				AML	AML	
	comp=N,412µm,0.4s					
FRON	**Frontone**	**0.75**	**335**	⇑P	Pg	23 16 37.1 +0.1
FRON				AML	AML	
	comp=E,1520µm,1.4s					
FRON				AML	AML	
	comp=E,1515µm,1.4s					
FRON				AML	AML	
	comp=E,427µm,0.3s					
FRON				AML	AML	
	comp=N,3225µm,0.4s					
T0110	**Collepietro**	**0.77**	**143**	⇑P	Pg	23 16 37.4 +0.1
T0110				AML	AML	
	comp=E,676µm,0.4s					
T0110				AML	AML	
	comp=N,680µm,0.3s					
T0110				AML	AML	
	comp=E,2220µm,0.6s					
T0110				AML	AML	
	comp=N,1435µm,0.5s					
T0110				AML	AML	
	comp=E,738µm,8.1s					
T0110				AML	AML	
	comp=N,718µm,15.5s					
SRES	**S.Oreste - Sor**	**0.77**	**219**	⇓P	Pb	23 16 38.5 +0.2
SRES				S	Sn	23 16 51.0 -0.6
SRES				AML	AML	
	comp=E,232µm,1.0s					
SRES				AML	AML	
	comp=N,310µm,1.0s					
SRES				AML	AML	
	comp=E,1270µm,1.2s					
SRES				AML	AML	
	comp=N,598µm,1.4s					
SRES				AML	AML	
	comp=E,232µm,1.0s					
SRES				AML	AML	
	comp=N,299µm,0.5s					
ATVO	**AVT- Monte Val**	**0.77**	**315**	⇑P	Pg	23 16 37.5 +0.1
ATVO				AML	AML	
	comp=E,892µm,1.6s					
ATVO				AML	AML	
	comp=N,1063µm,0.7s					
ATVO				AML	AML	
	comp=E,892µm,1.6s					
ATVO				AML	AML	
	comp=E,269µm,6.7s					
ATVO				AML	AML	
	comp=N,250µm,13.5s					
PIEI	**Pieia**	**0.83**	**327**	⇓P	Pg	23 16 38.7 +0.1
PIEI				S	Sn	23 16 53.0 -0.2
PIEI				AML	AML	
	comp=E,1038µm,1.4s					
PIEI				AML	AML	
	comp=N,872µm,0.3s					
PIEI				AML	AML	
	comp=N,246µm,1.2s					
PIEI				AML	AML	
	comp=E,332µm,3.4s					
MPAG	**Monte Paganucc**	**0.84**	**340**	⇑P	Pg	23 16 38.7 -0.1
MPAG				S	Sn	23 16 53.0 -0.5
MPAG				AML	AML	
	comp=E,1635µm,0.9s					
MPAG				AML	AML	
	comp=E,1640µm,0.9s					
MPAG				AML	AML	
	comp=N,1470µm,1.1s					
MPAG				AML	AML	
	comp=N,499µm,0.4s					
MPAG				AML	AML	
	comp=E,624µm,0.4s					
NARO	**Abbazia di Nar**	**0.88**	**331**	P	Pg	23 16 39.4 -0.1
NARO				S	Sn	23 16 54.0 -0.3
NARO				AML	AML	
	comp=E,878µm,0.8s					
NARO				AML	AML	
	comp=N,582µm,0.5s					
NARO				AML	AML	
	comp=N,590µm,1.6s					
NARO				AML	AML	
	comp=E,234µm,0.3s					
NARO				AML	AML	
	comp=N,140µm,25.5s					
FSSB	**Fossombrone**	**0.90**	**342**	⇑P	Pg	23 16 40.0 +0.2
FSSB				S	Sn	23 16 55.0 +0.3
FSSB				AML	AML	
	comp=N,8040µm,0.3s					
FSSB				AML	AML	
	comp=E,2755µm,0.3s					
PE3	**Peglio**	**0.98**	**331**	⇑P	Pg	23 16 41.7 +0.2
INTR	**Introdacqua**	**0.99**	**146**	P	Pg	23 16 41.1 -0.6
INTR				AML	AML	

comp=E,824μm,1.0s
INTR AML AML
comp=N,1640μm,0.7s
INTR AML AML
comp=E,213μm,1.1s
INTR AML AML
comp=E,812nm,1.0s
INTR AML AML
comp=N,1μm,0.7s
INTR AML AML
comp=N,467μm,10.6s
CAFI Castiglion Fio 1.00 300 P Pn 23 16 42.9 -0.1
CAFI AML AML
comp=E,816μm,0.7s
CAFI AML AML
comp=N,796μm,0.6s
CAFI AML AML
comp=N,106μm,2.5s
CAFI AML AML
comp=E,133μm,2.8s
LATE Laterza 1.02 258 ⇑P Pn 23 16 43.9 +0.6
LPEL Lama dei Pelig 1.10 136 P Pb 23 16 44.0 +0.1
LPEL AML AML
comp=E,623μm,1.1s
LPEL AML AML
comp=N,538μm,1.1s
LPEL AML AML
comp=N,187μm,8.3s
LPEL AML AML
comp=E,199μm,2.6s
VITU Vitulano (BN) 1.99 146 S Sn 23 17 21.0 -0.7
OBKA Obir 3.80 15 *e*Pn Pg 23 17 37.0 +1.7
comp=E,2.2nm,0.4s
ABTA Abfaltersbach 3.93 353 *e*Pn Pn 23 17 25.4 +2.0
comp=E,3.8nm,0.4s
BIOA Bad Ischl, Aus 4.86 4 *e*Pn Pn 23 17 38.9 +2.8
comp=E,2.3nm,0.3s

PRU ***26*** *23:17:03.2±0.0, 43.°08N×13.°64E, h0km*
VIE 26 23:17:01.5±1.6, 42.°91N×13.°52E, h10km±15km, mb3.0/17, ml2.9/17, Error ellipse: s-maj=15.8km s-min=13.6km az=4.0 140 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica** 6.9nm,0.6s	**3.72**	**1**	*e*Pn	Pn	23 18 00.0	+1.0
ABTA	**Abfaltersbach** 24nm,0.4s,SNR=22	**3.90**	**350**	*i* Pn	Pn	23 18 01.3	-0.2
ABTA	28nm,0.8s			*e*Sg	Sg	23 19 10.8	+4.0
KBA	**Koelnbreinsper** 5.8nm,0.4s	**4.17**	**358**	*e*Pn	Pn	23 18 06.0	+0.7
WTTA	**Wattenberg** 2.1nm,0.3s,SNR=4.7	**4.55**	**344**	Pn	Pn	23 18 11.3	+0.8
FETA	**Feichten** 2.4nm,0.3s,SNR=8.2	**4.56**	**335**	Pn	Pn	23 18 11.2	+0.5
ARSA	**Arzberg** 2.4nm,0.5s	**4.56**	**17**	*e*Pn	Pn	23 18 12.1	+1.5
SQTA	**Sankt Quirin** 8.3nm,0.3s,SNR=11	**4.61**	**340**	Pn	Pn	23 18 11.9	+0.6
WATA	**Walderalm** 8.7nm,0.4s,SNR=9.4	**4.63**	**343**	Pn	Pn	23 18 12.3	+0.7
MOTA	**Moosalm** 3.6nm,0.4s,SNR=9.5	**4.75**	**340**	Pn	Pn	23 18 14.1	+0.9
BIOA	**Bad Ischl, Aus** 8.2nm,0.5s,SNR=8.9	**4.78**	**1**	*i* Pn	Pn	23 18 13.8	+0.3
MOA	**Molln** 2.7nm,0.4s	**4.97**	**6**	*e*Pn	Pn	23 18 17.1	+1.0
RETA	**Reutte** 3.4nm,0.4s,SNR=5.9	**4.97**	**338**	Pn	Pn	23 18 16.4	+0.1
DAVA	**Damuels** 4.5nm,0.4s	**5.08**	**331**	*e*Pn	Pn	23 18 18.0	+0.3
RONA	**Rosalia, Austr** 0.5nm,0.2s	**5.17**	**21**	*e*Pn	Pn	23 18 20.2	+1.2
CONA	**Conrad Observa** 1.3nm,0.3s	**5.28**	**17**	*e*Pn	Pn	23 18 18.3	-2.1
KHC	**Kasperske Hory**	**6.22**	**0**	*e*PN	Pn	23 18 32.0	-1.3
KHC				*e*SN	Sn	23 19 39.9	-4.6

IDC ***26*** *23:31:02.6±0.6, 9.°23N×69.°89W, h0km, mb3.8/10, mbtmp3.9/11, ML4.9/2, MS3.5/15, Error ellipse: s-maj=19.0km s-min=8.7km az=154.0*
NEIC ***26*** *23:31:04.3±1.5, 9.°25N±0.°05×69.°90W±0.°03, h10km±1km, mb4.5/27, Mwr4.2(CAR), Error ellipse: s-maj=9.1km s-min=5.4km az=166.0*
CAR ***26*** *23:31:06.1±1.5, 9.°26N±0.°05×69.°93W±0.°04, h5km±3km, Error ellipse: s-maj=6.8km s-min=5.0km az=153.0*
FUNV ***26*** *23:31:06.2, 9.°27N×69.°92W, h5km, MW4.6*
ISC 26 23:31:03.7±1.2, 9.°29N±0.°03×69.°90W±0.°03, h8km±8km, n154, σ1°64/143, mb4.3/22, MS3.5/12, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CURV	**Curarigua**	**0.72**	**355**	*e*P	**Pn**	**23 31 21.2**	**+0.9**
CURV				*e*S	**Sn**	**23 31 30.1**	**-1.5**
SDV	**Santo Domingo** 781nm,0.3s,baz=98,slow=4.5,SNR=1143	**0.83**	**241**	Pg	**Pg**	**23 31 19.4**	**-0.3**
SDV	1μm,0.3s,baz=319,slow=20,SNR=19			Lg	Lg	23 31 29.1	
SDV	**Santo Domingo**	**0.83**	**241**		**Pg**	**23 31 19.6**	**-0.1**
SDV					**Sg**	**23 31 29.8**	**-0.7**
SIQV	**Siquisique**	**1.35**	**4**	*e*P	**Pg**	**23 31 30.7**	**+1.0**
SIQV				*e*S	**Sn**	**23 31 50.3**	**+3.1**
SOCV	**Socops**	**1.38**	**223**	*e*P	**Pn**	**23 31 29.8**	**+0.5**
SOCV				*e*S	**Sb**	**23 31 48.5**	**+0.9**
MAPV	**Macapo**	**1.52**	**69**	*e*P	**Pg**	**23 31 34.6**	**+1.8**
MAPV				*e*S	**Sg**	**23 31 55.4**	**+2.8**
DABV	**Dabajuro**	**1.77**	**336**	*e*P	**Pg**	**23 31 37.6**	**-0.2**
DABV				*e*S	**Sb**	**23 31 59.9**	**+0.9**
BAUV	**El Baul**	**1.87**	**101**		**Pb**	**23 31 37.2**	**-0.9**
BAUV	**El Baul**	**1.87**	**101**	*e*P	**Pb**	**23 31 37.7**	**-0.4**
BAUV				*e*S	**Sb**	**23 32 01.6**	**0.0**
JACV	**Jacura**	**2.07**	**30**	*e*P	**Pg**	**23 31 41.9**	**-1.5**
TURV	**Turiamo**	**2.33**	**60**	*e*P	**Pb**	**23 31 45.0**	**-1.0**
BENV	**Beln**	**2.36**	**73**	*e*P	**Pb**	**23 31 45.8**	**-0.9**
BENV				*e*S	**Sb**	**23 32 14.7**	**-1.3**
CAPV	**Capacho**	**2.78**	**240**	*e*P	**Pn**	**23 31 50.9**	**+2.1**
CAPV				*e*S	**Sn**	**23 32 24.0**	**+1.4**
TACV	**Tcata**	**2.95**	**73**	*e*P	**Pb**	**23 31 53.4**	**-3.3**
HATO	**Hato, Curacao**	**3.02**	**18**		**Pn**	**23 31 53.0**	**+1.2**
URIC	**Uribia, Colomb**	**3.16**	**319**	*e*P	**Pn**	**23 31 54.9**	**+1.1**
CARV	**Caracas**	**3.16**	**67**	*e*P	**Pb**	**23 31 56.6**	**-3.7**
FUNV	**FUNVISIS**	**3.26**	**69**	*e*P	**Pn**	**23 31 57.7**	**+2.4**
PAMC	**Pamplona, Colo**	**3.38**	**235**	*e*P	**Pn**	**23 31 59.0**	**+1.7**
TAMC	**Tame, Arauca**	**3.40**	**214**	*e*P	**Pn**	**23 31 59.1**	**+1.9**
CRJC	**Cerrejon, Guaj**	**3.40**	**301**	*e*P	**Pn**	**23 31 58.0**	**+0.8**
OCAC	**Ocana**	**3.54**	**253**	*e*P	**Pn**	**23 32 02.2**	**+3.0**
MERV	**Las Mercedes**	**3.56**	**90**	*e*P	**Pn**	**23 32 01.4**	**+2.2**
LL1C	**La Loma 1 Cana**	**3.62**	**274**	*e*P	**Pn**	**23 32 02.5**	**+2.4**
CACV	**CAICARA DEL OR**	**3.74**	**117**	*e*P	**Pb**	**23 32 09.3**	**-0.8**
BARC	**Barichara**	**4.22**	**231**	*e*P	**Pn**	**23 32 11.2**	**+2.6**
ARGC	**Ariguani, Magd**	**4.33**	**278**	*e*P	**Pn**	**23 32 11.6**	**+1.7**
BRRC	**Barranca, Sant**	**4.36**	**240**	*e*P	**Pn**	**23 32 12.6**	**+2.3**
RUSC	**La Rusia**	**4.62**	**223**	*e*P	**Pn**	**23 32 16.0**	**+1.6**
PRGV	**PARIAGUAN**	**5.21**	**95**	*e*P	**Pn**	**23 32 23.2**	**+1.1**
SJCC	**San Jacinto, C**	**5.24**	**277**	*e*P	**Pn**	**23 32 25.0**	**+2.5**
PCRV	**Puerto La Cruz** 24nm,0.3s,baz=310,slow=2.0,SNR=148	**5.26**	**80**	Pn	**Pn**	**23 32 25.8**	**+3.0**
PCRV	50nm,0.3s,baz=130,slow=18,SNR=16			Sn	**Sn**	**23 33 26.5**	**+2.8**
PCRV	**Puerto La Cruz**	**5.26**	**80**	*e*P	**Pn**	**23 32 25.1**	**+2.4**
PTBC	**PUERTO BERRIO,**	**5.28**	**239**	*e*P	**Pn**	**23 32 23.4**	**+0.4**
SPBC	**San Pablo de B**	**5.50**	**229**	*e*P	**Pn**	**23 32 28.0**	**+2.0**
PTGC	**Puerto Gaitan,**	**5.53**	**204**	*e*P	**Pn**	**23 32 26.7**	**+0.3**
CHIC	**Chingaza**	**6.00**	**220**	*e*P	**Pn**	**23 32 35.1**	**+1.9**
COAV	**Cumanacoa**	**6.05**	**81**	*e*P	**Pn**	**23 32 34.6**	**+0.9**
NORC	**Norcasia**	**6.17**	**233**	*e*P	**Pn**	**23 32 36.8**	**+1.5**
ROSC	**El Rosal** 13nm,0.3s,baz=279,slow=5.3,SNR=13	**6.23**	**225**	Pn	**Pn**	**23 32 39.9**	**+3.5**
ROSC	18nm,0.3s,baz=116,slow=22,SNR=1.7			Sn	**Sn**	**23 33 49.2**	**+1.2**
ROSC	10.0nm,0.3s,baz=9.2,slow=23,SNR=1.5			Lg	Lg	23 34 19.9	
ROSC	comp=Z,306nm,18.9s,baz=326,slow=40			LR	LR	23 35 10.9	
ROSC	**El Rosal**	**6.23**	**225**	Pn	**Pn**	**23 32 38.6**	**+2.2**
ROSC	**El Rosal**	**6.23**	**225**	*e*P	**Pn**	**23 32 40.7**	**+4.3**
HELC	**Santa Helena**	**6.37**	**241**	*e*P	**Pn**	**23 32 41.2**	**+2.9**
LCBC	**Los crdobas,**	**6.41**	**267**	*e*P	**Pn**	**23 32 42.1**	**+3.6**
GUY2C	**Guyana, Caldas**	**6.76**	**234**	*e*P	**Pn**	**23 32 46.5**	**+2.7**
GUVC	**San Jose del G**	**7.23**	**202**	*e*P	**Pn**	**23 32 49.9**	**0.0**
ANIL	**Santa Ana**	**7.25**	**229**	*e*P	**Pn**	**23 32 52.8**	**+2.4**
PRAC	**Prado**	**7.43**	**222**	*e*P	**Pn**	**23 32 53.6**	**+0.9**
ORTC	**Ortega, Tolima**	**7.54**	**225**	*e*P	**Pn**	**23 32 55.5**	**+1.4**
PLMC	**San Jos del P**	**7.69**	**236**	*e*P	**Pn**	**23 32 58.8**	**+2.6**
PTAC	**Punta Ardita,**	**8.12**	**255**	*e*P	Pn	23 33 11.7	+10
YOTC	**Yotoco, Valle**	**8.29**	**231**	*e*P	**Pn**	**23 33 05.6**	**+1.1**
GRGR	**Grenville**	**8.58**	**70**	Pn	**Pn**	**23 33 08.5**	**+0.1**
GRGR	**Grenville**	**8.58**	**70**	*e*P	**Pn**	**23 33 05.6**	**-2.7**
GCMP	**Grenada, Carri**	**8.90**	**68**	*e*P	Pn	23 33 05.6	-7.2
GARC	**Garzon, Huila**	**8.99**	**219**	*e*P	**Pn**	**23 33 15.6**	**+1.4**
BANI	**BANI**	**9.06**	**357**	Pn	**Pn**	**23 33 14.8**	**-0.2**
MLPR	**Magueyes Islan**	**9.06**	**18**	Pn	**Pn**	**23 33 15.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**9.08**	**17**		**Pn**	**23 33 15.0**	**-0.1**
PRSN	**Puerto Rico Se**	**9.27**	**16**		**Pn**	**23 33 18.2**	**+0.5**
PCDR	**Punta Cana, DR**	**9.29**	**9**	Pn	**Pn**	**23 33 19.1**	**+1.1**
CELP	**Cerrillos**	**9.31**	**20**	Pn	**Pn**	**23 33 18.5**	**+0.2**
SVB	**Belmont**	**9.36**	**64**		**Pn**	**23 33 19.1**	**+0.1**
TOSP	**Speyside**	**9.43**	**77**	Pn	**Pn**	**23 33 19.0**	**-0.9**
DR12	**Loma Pena Alta**	**9.45**	**3**	Pn	**Pn**	**23 33 19.6**	**-0.8**
SJG	**San Juan**	**9.49**	**22**	Pn	**Pn**	**23 33 20.8**	**0.0**
SJG	43nm,0.3s,baz=193,slow=13,SNR=76			Sn	Sn	23 34 57.0	-11
AOPR	**Arecibo Observ** 4.1nm,0.3s,baz=350,slow=16,SNR=4.5	**9.50**	**18**		**Pn**	**23 33 21.7**	**+0.7**
AOPR	**Arecibo Observ**	**9.50**	**18**	*e*P	**Pn**	**23 33 22.3**	**+1.3**
AGPR	**Aguadilla, PR**	**9.51**	**16**	Pn	**Pn**	**23 33 21.4**	**+0.2**
HUMP	**Col San Antoni**	**9.63**	**24**		**Pn**	**23 33 22.5**	**-0.3**
EMPR	**Esperanza - Ma**	**9.70**	**19**	Pn	**Pn**	**23 33 24.8**	**+1.1**
GCPR	**Guayanabo City**	**9.70**	**22**		**Pn**	**23 33 25.0**	**+1.3**
MTP	**Monte Pirata**	**9.72**	**25**	Pn	**Pn**	**23 33 23.6**	**-0.3**
SDDR	**Presa de Saban**	**9.73**	**352**	Pn	**Pn**	**23 33 27.1**	**+3.0**
CBYP	**Canovanas**	**9.75**	**23**		**Pn**	**23 33 24.2**	**-0.3**
CDVI	**St. Croix**	**9.78**	**30**		**Pn**	**23 33 25.1**	**+0.3**
CDVI	**St. Croix**	**9.78**	**30**	*e*P	**Pn**	**23 33 28.2**	**+3.5**
CDVI	**St. Croix**	**9.78**	**30**	*e*S	Sn	23 35 02.4	-12
BCIP	**Isla Barro Col**	**9.81**	**270**	Pn	**Pn**	**23 33 26.2**	**+0.9**
CUPR	**Culebra, Puert**	**10.02**	**26**	Pn	**Pn**	**23 33 27.8**	**-0.3**
BIM	**Bigot**	**10.08**	**58**	*e*P	**Pn**	**23 33 29.1**	**+0.2**
BIM	**Bigot**	**10.08**	**58**	*e*S	Sn	23 35 10.7	-12
FDF	**Fort de France**	**10.12**	**57**		**Pn**	**23 33 29.6**	**0.0**
FDF	**Fort de France**	**10.12**	**57**	*e*P	**Pn**	**23 33 29.8**	**+0.2**
STVI	**Saint Thomas**	**10.20**	**28**		**Pn**	**23 33 30.3**	**-0.3**
MPOM	**Morne Pois Mar**	**10.22**	**59**	Pn	**Pn**	**23 33 30.6**	**-0.2**
MPOM	**Morne Pois Mar**	**10.22**	**59**	*e*P	**Pn**	**23 33 29.6**	**-1.2**
BBAC	**Balboa, Cauca**	**10.28**	**226**	*e*P	Pn	23 33 36.9	+5.1
DSLB	**Salisbury**	**10.29**	**53**	*e*P	**Pn**	**23 33 27.6**	**-4.1**
TDBA	**Terre de Bas,**	**10.37**	**50**	*e*P	Pn	23 33 22.7	-10
TDBA				*e*S		23 33 39.8	
CBE	**Ff, Capester**	**10.52**	**49**	*e*P	Pn	23 33 26.1	-8.9
CBE				*e*S		23 33 41.2	
MAGL	**Barre de l'ile**	**10.70**	**51**	*e*P	Pn	23 33 26.5	-11
MAGL				*e*S		23 33 40.7	
ABD	**La Joyeuse, An**	**10.87**	**48**	*e*P	Pn	23 33 27.1	-13
ABD				*e*S		23 33 42.1	
ANDO	**Antigua, Disas**	**11.05**	**44**	*e*P	**Pn**	**23 33 38.4**	**-3.8**
ANDO				*e*S		23 33 50.4	
ANBD	**Bethesda, Anti**	**11.05**	**45**	*e*P	Pn	23 33 31.3	-11
ANBD				*e*S		23 33 49.0	
GDSD	**La Dsirade Is**	**11.08**	**50**	Pn	**Pn**	**23 33 41.6**	**-1.0**
ANWB	**Willy Bob**	**11.47**	**43**	*e*P	Pn	23 33 37.7	-10
ANWB				*e*S		23 34 00.5	
MTDJ	**Mount Denham**	**11.57**	**321**	Pn	**Pn**	**23 33 50.5**	**+1.1**
GTBY	**Guantanamo Bay**	**11.71**	**335**	Pn	**Pn**	**23 33 52.6**	**+1.3**
JTS	**Las Juntas de** comp=Z,89nm,18.9s,baz=150,slow=42	**14.87**	**275**	LR	LR	23 41 26.1	
BOSC	**San Juan Bosco**	**15.04**	**215**	Pn	**Pn**	**23 34 36.1**	**-0.9**
MATN	**Matagalpa**	**16.14**	**284**	Pn	**Pn**	**23 34 50.0**	**-1.2**
MDP	**Montagnes des** 1.1nm,0.3s,baz=281,slow=14,SNR=12	**17.62**	**102**	P	**Pn**	**23 35 07.9**	**-1.9**
MDP	6.9nm,0.7s,baz=239,slow=18,SNR=1.9			S	Sn	23 38 13.9	-12
MDP	1.1nm,0.3s,baz=3.9,slow=22,SNR=2.9 2.7nm,0.3s			Lg	Lg	23 40 11.3	
ATAH	**Atahualpa** comp=Z,133nm,20.6s,baz=5.1,slow=39	**18.38**	**208**	LR	LR	23 42 58.9	
MTO3	**Montecristo**	**19.71**	**287**	P	**P**	**23 35 33.4**	**-0.7**
MTO3	comp=Z,18nm,0.9s			IAmb	IAmb	23 35 44.2	
LPAZ	**La Paz** comp=Z,1.8nm,0.6s,baz=346,slow=11,SNR=7.1	**25.48**	**176**	P	**P**	**23 36 37.2**	**+4.0**
LPAZ	comp=Z,116nm,18.6s,baz=320,slow=39			LR	LR	23 47 38.5	
CMIG	**Matias Romero** comp=Z,88nm,18.2s,baz=70,slow=41	**25.51**	**290**	LR	LR	23 48 29.9	
SIV	**San Ignacio** comp=Z,1.4nm,0.8s,baz=337,slow=13,SNR=3.6 comp=Z,1.4nm,0.8s	**26.60**	**161**	P	**P**	**23 36 43.3**	**+0.6**
PB16	**IPOC Station P**	**27.45**	**179**	P	**P**	**23 36 51.0**	**-0.1**
PB16	comp=Z,8.2nm,1.2s			IAmb	IAmb	23 37 00.4	
GO01	**Chusmiza**	**28.79**	**179**	P	**P**	**23 37 02.6**	**-0.2**
GO01	comp=Z,12nm,1.4s			IAmb	IAmb	23 37 12.9	
PB11	**IPOC Station P**	**28.87**	**180**	P	**P**	**23 37 03.8**	**+0.6**
PB11	comp=Z,16nm,1.0s			IAmb	IAmb	23 37 10.8	
TKL	**Tuckaleechee C** comp=Z,105nm,18.2s,baz=150,slow=40	**29.14**	**336**	LR	LR	23 50 18.2	
PB01	**IPOC Station P**	**30.15**	**179**	P	**P**	**23 37 12.0**	**-2.5**
PB01	comp=Z,13nm,1.3s			IAmb	IAmb	23 37 22.2	
PB07	**IPOC Station P**	**30.82**	**180**	P	**P**	**23 37 19.9**	**-0.7**
WVT	**Waverly**	**31.30**	**331**	P	**P**	**23 37 23.8**	**-0.6**
WVT	comp=Z,7.5nm,1.2s			IAmb	IAmb	23 37 27.7	
SADO	**Sadowa** comp=Z,55nm,19.7s,baz=174,slow=36	**36.24**	**349**	LR	LR	23 53 06.9	
WMOK	**Wichita Mounta**	**36.60**	**318**	P	**P**	**23 38 10.2**	**-0.4**
RCBR	**Riachuelo** comp=Z,123nm,18.9s,baz=116,slow=37	**37.06**	**113**	LR	LR	23 53 42.3	
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=126,slow=9.0,SNR=2.5	**37.38**	**307**	P	**P**	**23 38 18.6**	**+1.2**
TXAR	comp=Z,0.2nm,0.6s,baz=115,slow=4.3,SNR=1.6 comp=Z,0.6nm,0.9s			PcP	**PcP**	**23 40 36.9**	**+0.5**
ANMO	**Albuquerque** comp=Z,18nm,20.9s,baz=72,slow=38	**42.03**	**313**	LR	LR	23 58 03.3	
EYMN	**Ely**	**42.63**	**339**	P	**P**	**23 39 00.7**	**+0.1**
SDCO	**Great Sand Dun**	**42.78**	**317**	P	**P**	**23 39 03.2**	**+0.9**
SDCO	comp=Z,8.7nm,1.4s			IAmb	IAmb	23 39 12.0	
SMCO	**Snowmass**	**44.52**	**318**	P	**P**	**23 39 17.1**	**+0.6**
SMCO	comp=Z,7.6nm,1.1s			IAmb	IAmb	23 39 25.7	
P17A	**Butcher Ranch,**	**47.19**	**316**	P	**P**	**23 39 37.2**	**-0.1**
P17A	comp=Z,6.1nm,1.0s			IAmb	IAmb	23 39 46.6	
BW06	**Boulder Array**	**48.08**	**321**	P	**P**	**23 39 44.2**	**-0.1**
BW06	comp=Z,6.7nm,1.2s			IAmb	IAmb	23 39 52.4	
PDAR	**Pinedale Array** comp=Z,0.8nm,0.6s,baz=125,slow=9.1,SNR=8.2	**48.08**	**321**	P	**P**	**23 39 45.3**	**+1.1**
PDAR	comp=Z,24nm,20.0s,baz=104,slow=40 comp=Z,0.8nm,0.6s			LR	LR	00 02 47.2	
PDAR	**Pinedale Array**	**48.08**	**321**	P	**P**	**23 39 44.2**	**-0.1**
PLCA	**Paso Flores** comp=Z,1.0nm,0.4s,baz=2.0,slow=9.7,SNR=6.8 comp=Z,1.0nm,0.4s	**49.78**	**181**	P	**P**	**23 39 56.5**	**-0.5**
PLCA	**Paso Flores**	**49.78**	**181**	P	**P**	**23 39 56.5**	**-0.5**
PLCA	comp=Z,3.8nm,0.7s			IAmb	IAmb	23 40 03.7	
ELK	**Elko** comp=Z,32nm,18.8s,baz=105,slow=39	**50.84**	**316**	LR	LR	00 04 08.0	
MCMT	**McKenzie Canyo**	**51.19**	**322**	P	**P**	**23 40 08.9**	**+1.0**
BCYI	**Bear Canyon**	**51.27**	**321**	P	**P**	**23 40 06.3**	**-2.3**
AY01	**Puyuhuapi**	**53.52**	**182**	P	**P**	**23 40 23.7**	**-1.0**
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.4s,baz=125,slow=6.8,SNR=3.8	**62.11**	**338**	P	**P**	**23 41 24.7**	**-0.2**
YKA	comp=Z,37nm,18.2s,baz=267,slow=40 comp=Z,0.6nm,0.4s			LR	LR	00 11 59.7	
DBIC	**Dimbokro** comp=Z,4.4nm,1.1s,baz=252,slow=9.8,SNR=4.2 comp=Z,4.4nm,1.1s	**64.39**	**87**	P	**P**	**23 41 41.1**	**+0.2**
DBIC	**Dimbokro**	**64.39**	**87**	P	**P**	**23 41 40.1**	**-0.9**
BORG	**Borgarnes**	**64.84**	**21**	P	**P**	**23 41 42.9**	**-0.1**
ESDC	**Sonseca Array** comp=Z,1.3nm,1.1s,baz=266,slow=6.2,SNR=5.4 comp=Z,1.3nm,1.1s	**65.63**	**51**	P	**P**	**23 41 49.9**	**+1.1**
DLBC	**Dease Lake** comp=Z,53nm,18.3s,baz=102,slow=37	**66.73**	**330**	LR	LR	00 12 20.2	
TOA0	**Torodi Ar. Sit**	**70.13**	**79**	P	**P**	**23 42 16.6**	**-0.8**
TOA0				IAmb	IAmb	23 42 42.0	
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.4s,baz=291,slow=6.1,SNR=12 comp=Z,0.3nm,0.4s	**70.13**	**79**	P	**P**	**23 42 17.4**	**0.0**
BCAR	**Beaver Creek A**	**73.59**	**333**	P	**P**	**23 42 37.8**	**+0.4**
BMAR	**Burnt Mountain**	**75.60**	**337**	P	**P**	**23 42 49.3**	**+0.3**
ILAR	**Eielson Array** comp=Z,0.1nm,0.4s,baz=87,slow=4.7,SNR=1.6 comp=Z,0.1nm,0.4s	**76.10**	**335**	P	**P**	**23 42 51.3**	**-0.5**
KDAK	**Kodiak Island** comp=Z,46nm,21.2s,baz=85,slow=36	**78.30**	**327**	LR	LR	00 17 38.8	
GERES	**GERESS Array B** comp=Z,0.6nm,0.7s,baz=284,slow=4.0,SNR=5.7 comp=Z,0.6nm,0.7s	**78.86**	**42**	P	**P**	**23 43 08.6**	**+0.9**
GERES	**GERESS Array B**	**78.86**	**42**	P	**P**	**23 43 07.6**	**-0.1**
J20K	**Nowinta River**	**79.19**	**334**	P	**P**	**23 43 08.9**	**-0.2**
J20K	comp=Z,5.8nm,1.1s			IAmb	IAmb	23 43 21.3	
BURAR	**Bucovina Array**	**86.64**	**42**	P	**P**	**23 43 48.3**	**+0.1**
BOSA	**Boshof** comp=Z,25nm,18.9s,baz=188,slow=34	**98.88**	**118**	LR	LR	00 26 58.2	
PZH	**PanZhiHua**	**143.50**	**13**	PKP	PKPbc	23 50 38.5	+1.3
CMAR	**Chiang Mai Arr** comp=Z,1.2nm,0.3s,baz=318,slow=3.9,SNR=6.2	**150.31**	**22**	PKPbc	**PKiKP**	**23 50 57.7**	**+0.3**
ASAR	**Alice Springs** comp=Z,0.4nm,0.8s,baz=114,slow=2.3,SNR=2.6	**153.13**	**235**	PKPbc	**PKPbc**	**23 51 00.9**	**-2.2**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.6s,baz=104,slow=3.0,SNR=1.8	**154.31**	**243**	PKPbc	**PKPbc**	**23 51 04.5**	**-1.2**

ROM 26 23:38:26.2±0.1, 42.°857N±0.°004×13.°048E±0.°004, h10km, Md1.0/1, ML2.0/2, 10C-9D, Error ellipse: s-maj=0.4km s-min=0.3km az=324.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**328**	P	Pg	23 38 28.5	+0.2
T1216				S	Sg	23 38 29.8	+0.1
T1216	comp=N,16600μm,0.3s			AML	AML		
T1216	comp=E,14850μm,0.3s			AML	AML		
T1216	comp=E,14850μm,0.4s			AML	AML		
T1216	comp=N,16600μm,0.3s			AML	AML		
T1216	comp=N,3634μm,0.1s			AML	AML		
T1216	comp=E,4312μm,0.1s			AML	AML		
T1216				END			
T1245	**Castelsantange**	**0.10**	**90**	P	Pg	23 38 29.5	+0.5
T1245				S	Sg	23 38 31.6	+0.6
T1245	comp=N,24900μm,0.3s			AML	AML		
T1245	comp=E,27400μm,0.6s			AML	AML		
T1245	comp=E,26400μm,0.6s			AML	AML		
T1245	comp=N,24950μm,0.3s			AML	AML		
T1245	comp=N,5130μm,0.1s			AML	AML		
T1245	comp=E,4773μm,0.1s			AML	AML		
T1245	comp=N,5214μm,0.1s			AML	AML		
T1245	comp=E,4707μm,0.1s			AML	AML		
FEMA	**Monte Fema**	**0.10**	**1**	P	Pg	23 38 29.2	+0.2
FEMA	comp=E,19250μm,0.5s			AML	AML		
FEMA	comp=N,16800μm,1.1s			AML	AML		
FEMA	comp=E,19300μm,0.5s			AML	AML		
FEMA	comp=N,16750μm,1.1s			AML	AML		
FEMA	comp=E,2994μm,0.2s			AML	AML		
FEMA	comp=N,2297μm,0.1s			AML	AML		
MC2	**Monte Cornacci**	**0.12**	**62**	⇑P	Pg	23 38 29.7	+0.5
MC2				S	Sg	23 38 32.1	+0.6
T1215	**Vallo di Nera,**	**0.14**	**247**	P	Pg	23 38 30.0	+0.5
T1215				S	Sg	23 38 32.5	+0.7
T1215	comp=N,1835μm,1.3s			AML	AML		
T1215	comp=E,1725μm,1.0s			AML	AML		
T1215	comp=N,1870μm,1.2s			AML	AML		
T1215	comp=E,1690μm,1.0s			AML	AML		
T1215	comp=N,1840μm,1.3s			AML	AML		
T1215	comp=E,1735μm,1.0s			AML	AML		
T1215	comp=N,1880μm,1.2s			AML	AML		
T1215	comp=E,1695μm,1.0s			AML	AML		
T1215	comp=E,1741μm,1.0s			AML	AML		
T1215	comp=N,1885μm,1.2s			AML	AML		
T1215	comp=E,511μm,0.1s			AML	AML		
T1215	comp=N,613μm,0.1s			AML	AML		
T1215	comp=E,505μm,0.1s			AML	AML		
T1215	comp=N,642μm,0.1s			AML	AML		
T1217	**Poggiodomo (PG**	**0.17**	**211**	⇑P	Pg	23 38 30.5	+0.6
T1217				S	Sg	23 38 33.6	+1.1
T1217	comp=N,2455μm,0.5s			AML	AML		
T1217	comp=E,1955μm,1.5s			AML	AML		
T1217	comp=N,2380μm,1.4s			AML	AML		
T1217	comp=N,2460μm,0.5s			AML	AML		
T1217	comp=E,1940μm,1.5s			AML	AML		
T1217	comp=N,1048μm,0.2s			AML	AML		
T1217	comp=N,1069μm,0.1s			AML	AML		
T1217	comp=E,833μm,0.1s			AML	AML		
T1217	comp=E,793μm,0.1s			AML	AML		
CESI	**CESI - Serrava**	**0.18**	**325**	⇑P	Pg	23 38 30.8	+0.6
CESI				S	Sg	23 38 33.8	+0.9
CESI	comp=N,10040μm,0.2s			AML	AML		
CESI	comp=E,7565μm,0.2s			AML	AML		
CESI	comp=N,10035μm,0.2s			AML	AML		
CESI	comp=N,2158μm,0.3s			AML	AML		
CESI	comp=E,1023μm,0.0s			AML	AML		
CESI	comp=E,1144μm

LNSS				AML	AML	
	comp=N,539μm,0.1s					
LNSS				AML	AML	
	comp=E,559μm,0.1s					
T1204	**Amatrice, Fraz**	**0.27 132**	⇓P	Pg	23 38 32.3	+0.6
T1204			S	Sb	23 38 36.8	-1.0
T1204			AML	AML		
	comp=N,356μm,0.5s					
T1204			AML	AML		
	comp=E,643μm,0.3s					
T1241	**Roccafluvione,**	**0.28 90**	P	Pg	23 38 32.1	+0.2
T1241			S	Sg	23 38 36.7	+1.0
T1241			AML	AML		
	comp=E,3520μm,0.2s					
T1241			AML	AML		
	comp=N,2145μm,1.0s					
T1241			AML	AML		
	comp=N,2150μm,1.0s					
T1241			AML	AML		
	comp=N,451μm,0.4s					
T1241			AML	AML		
	comp=E,431μm,0.4s					
GUMA	**Gualdo di Mace**	**0.29 46**	⇑P	Pb	23 38 32.9	-0.7
GUMA			S	Sb	23 38 38.0	-0.5
GUMA			AML	AML		
	comp=E,9005μm,0.4s					
GUMA			AML	AML		
	comp=N,5490μm,0.4s					
GUMA			AML	AML		
	comp=N,6170μm,0.3s					
GUMA			AML	AML		
	comp=E,8995μm,0.4s					
GUMA			AML	AML		
	comp=E,8900μm,0.2s					
GUMA			AML	AML		
	comp=N,1010μm,2.6s					
GUMA			AML	AML		
	comp=N,1205μm,0.6s					
SMA1	**SAN MARTINO**	**0.31 137**	P	Pb	23 38 33.4	-0.4
SMA1			AML	AML		
	comp=E,787μm,0.7s					
SMA1			AML	AML		
	comp=N,910μm,0.3s					
SMA1			AML	AML		
	comp=E,786μm,0.7s					
SMA1			AML	AML		
	comp=N,914μm,0.3s					
T1243	**Rocca Santa Ma**	**0.34 118**	⇑P	Pg	23 38 33.2	+0.3
T1243			S	Sb	23 38 38.6	-1.1
MDAR	**Monte D'Aria**	**0.34 12**	S	Sb	23 38 41.0	+1.0
T1211	**Morro Reatino**	**0.35 204**	⇑P	Pg	23 38 33.9	+0.7
T1211			S	Sb	23 38 39.4	-0.8
T1211			AML	AML		
	comp=E,353μm,0.8s					
T1211			AML	AML		
	comp=E,304μm,0.8s					
RM33	**Pellescritta (**	**0.37 160**	P	Pg	23 38 34.0	+0.5
RM33			AML	AML		
	comp=E,446μm,0.4s					
RM33			AML	AML		
	comp=N,525μm,0.6s					
RM33			AML	AML		
	comp=N,496μm,0.4s					
RM33			AML	AML		
	comp=E,446μm,0.4s					
RM33			AML	AML		
	comp=N,525μm,0.7s					
RM33			AML	AML		
	comp=E,434μm,0.4s					
GAG1	**Gagliole**	**0.38 2**	S	Sb	23 38 42.0	+1.0
SNTG	**Esanatoglia**	**0.41 349**	⇓P	Pg	23 38 34.7	+0.5
SNTG			AML	AML		
	comp=E,1063μm,0.8s					
SNTG			AML	AML		
	comp=N,970μm,0.9s					
SNTG			AML	AML		
	comp=E,1050μm,0.1s					
SNTG			AML	AML		
	comp=N,969μm,0.9s					
SNTG			AML	AML		
	comp=E,1060μm,0.8s					
SNTG			AML	AML		
	comp=N,918μm,0.9s					
CAMP	**Campotosto**	**0.42 140**	P	Pg	23 38 34.7	+0.3
CAMP			AML	AML		
	comp=E,352μm,0.2s					
CAMP			AML	AML		
	comp=N,221μm,0.7s					
CAMP			AML	AML		
	comp=N,52μm,1.1s					
CAMP			AML	AML		
	comp=E,74μm,0.2s					
MNTP	**Montappone**	**0.42 48**	S	Sb	23 38 44.0	+2.0
CESX	**Cesi**	**0.42 235**	⇓P	Pg	23 38 34.8	+0.3
CESX			AML	AML		
	comp=N,1098μm,0.4s					
CESX			AML	AML		
	comp=E,1012μm,0.4s					
CESX			AML	AML		
	comp=E,117μm,1.4s					
CESX			AML	AML		
	comp=N,176μm,2.5s					
ATCC	**AVT- Casa Cast**	**0.44 318**	P	Pg	23 38 35.1	+0.2
ATCC			S	Sb	23 38 44.0	+1.2
ATCC			AML	AML		
	comp=N,2085μm,0.3s					
ATCC			AML	AML		
	comp=E,1905μm,0.2s					
ATCC			AML	AML		
	comp=E,1443μm,0.3s					
ATCC			AML	AML		
	comp=N,2084μm,0.3s					
T1247	**Pizzolo (AQ)**	**0.45 156**	S	Sb	23 38 45.0	+1.9
TERO	**Teramo**	**0.47 120**	⇓P	Pg	23 38 35.5	+0.1
TERO			S	Sb	23 38 46.0	+2.4
TERO			AML	AML		
	comp=E,879μm,0.2s					
TERO			AML	AML		
	comp=N,786μm,0.3s					
TERO			AML	AML		
	comp=N,788μm,0.3s					
TERO			AML	AML		
	comp=E,972μm,0.2s					
TERO			AML	AML		
	comp=N,858μm,0.3s					
TERO			AML	AML		
	comp=N,236μm,0.1s					
TERO			AML	AML		
	comp=E,118μm,0.1s					
TERO			AML	AML		
	comp=E,143μm,0.1s					
TERO			AML	AML		
	comp=N,202μm,0.1s					
TERO			AML	AML		
	comp=N,236μm,1.2s					
TERO			AML	AML		
	comp=N,266μm,1.2s					
EL6	**Elcito**	**0.47 5**	⇓P	Pg	23 38 36.0	+0.5
OFFI	**Offida**	**0.47 80**	⇑P	Pb	23 38 36.7	+0.1
OFFI			AML	AML		
	comp=E,1195μm,0.3s					
OFFI			AML	AML		
	comp=N,1460μm,0.6s					
MURB	**Monte Urbino**	**0.56 317**	S	Sb	23 38 46.0	-0.2
GIGS	**Gran Sasso**	**0.56 136**	⇓P	Pg	23 38 37.5	+0.4
GIGS			AML	AML		
	comp=N,96μm,0.4s					
GIGS			AML	AML		
	comp=N,96μm,0.4s					
GIGS			AML	AML		
	comp=E,114μm,1.6s					
FIAM	**Fiamignano**	**0.59 175**	⇑P	Pg	23 38 38.0	+0.4
FIAM			S	Sb	23 38 48.0	+0.9
FIAM			AML	AML		
	comp=E,188μm,0.8s					
FIAM			AML	AML		
	comp=N,117μm,1.1s					
FIAM			AML	AML		
	comp=E,188μm,0.8s					
ATFO	**Monte Foce - G**	**0.62 326**	S	Sg	23 38 47.0	+0.7
TRTR	**Tortoreto Alta**	**0.64 94**	S	Sn	23 38 50.0	-1.5
ARVD	**Arcevia**	**0.65 353**	S	Sg	23 38 46.0	-1.2
PP3	**Marolino**	**0.66 38**	S	Sg	23 38 48.0	+0.3
FRON	**Frontone**	**0.70 340**	S	Sg	23 38 48.0	-1.0
ATVO	**AVT- Monte Val**	**0.70 318**	S	Sg	23 38 48.0	-1.1
SRES	**S.Oreste - Sor**	**0.74 213**	S	Sn	23 38 53.0	-0.9
VCEL	**Villa Celiera**	**0.75 128**	S	Sb	23 38 51.0	-0.6
ATPI	**Pietralunga -**	**0.76 322**	S	Sg	23 38 50.0	-0.8
PIEI	**Pieia**	**0.78 331**	S	Sg	23 38 49.0	-2.3
NARO	**Abbazia di Nar**	**0.83 336**	⇓P	Pb	23 38 42.6	0.0
NARO			AML	AML		
	comp=E,162μm,0.2s					
NARO			AML	AML		
	comp=N,98μm,1.4s					
T0110	**Collepietro**	**0.83 139**	⇓P	Pg	23 38 42.4	+0.2
T0110			AML	AML		
	comp=N,300μm,0.3s					
T0110			AML	AML		
	comp=E,334μm,1.3s					
SACS	**San Casciano d**	**0.84 270**	S	Sb	23 38 54.0	-0.2
TOLF	**Tolfa**	**1.11 225**	⇑P	Pb	23 38 45.3	-2.1
GIUL	**Giuliano Di Ro**	**1.31 173**	P	Pb	23 38 50.9	+0.1

ROM 26 23:38:36.0±0.2, 42°.97N±0°.02×13°.118E±0°.009, h11km, ML2.8/9, 8C-2D, Error ellipse: s-maj=1.7km s-min=0.7km az=0.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.05**	**261**	⇑P	Pg	23 38 38.4	+0.1
FEMA				S	Sg	23 38 40.0	+0.1
FEMA				AML	AML		
	comp=E,19250μm,0.5s						
FEMA				AML	AML		
	comp=N,16800μm,1.1s						
FEMA				AML	AML		
	comp=N,16750μm,1.1s						
FEMA				AML	AML		
	comp=E,19300μm,0.5s						
FEMA				AML	AML		
	comp=E,17202μm,0.4s						
FEMA				AML	AML		
	comp=N,12904μm,0.1s						
MC2	**Monte Cornacci**	**0.08**	**137**	⇓P	Pg	23 38 38.8	+0.2
MC2				S	Sg	23 38 40.8	+0.3
T1216	**Preci, Frazion**	**0.11**	**223**	P	Pb	23 38 39.6	-0.6
T1216				S	Sg	23 38 42.2	+1.4
T1216				AML	AML		
	comp=E,14850μm,0.4s						
T1216				AML	AML		
	comp=N,16600μm,0.3s						
T1216				AML	AML		
	comp=N,16626μm,0.3s						
T1216				AML	AML		
	comp=E,14839μm,0.4s						
T1245	**Castelsantange**	**0.12**	**156**	P	Pg	23 38 39.0	-0.2
T1245				AML	AML		
	comp=E,26400μm,0.6s						
T1245				AML	AML		
	comp=N,24950μm,0.3s						
T1245				AML	AML		
	comp=E,27400μm,0.7s						
T1245				AML	AML		
	comp=N,24900μm,0.3s						
T1245				AML	AML		
	comp=N,22754μm,0.2s						
T1245				AML	AML		
	comp=E,23048μm,0.1s						
T1245				AML	AML		
	comp=N,22326μm,0.1s						
T1245				AML	AML		
	comp=E,22535μm,0.1s						
CESI	**CESI - Serrava**	**0.16**	**283**	P	Pg	23 38 39.5	-0.2
CESI				AML	AML		
	comp=N,10035μm,0.2s						
CESI				AML	AML		
	comp=E,7565μm,0.2s						
CESI				AML	AML		
	comp=E,7563μm,0.2s						
CESI				AML	AML		
	comp=N,10054μm,0.2s						
MMO1	**Montemonaco**	**0.17**	**115**	⇑P	Pb	23 38 40.6	-0.6
MMO1				S	Sg	23 38 42.9	+0.5
AM05	**Amandola Campo**	**0.17**	**87**	P	Pb	23 38 40.9	-0.4
AM05				S	Sg	23 38 44.2	+1.8
AM05				AML	AML		
	comp=N,529μm,1.2s						
AM05				AML	AML		
	comp=N,1490μm,0.1s						
AM05				AML	AML		
	comp=E,1290μm,0.2s						
AM05				AML	AML		
	comp=E,5540μm,0.1s						
AM05				AML	AML		
	comp=N,479μm,0.1s						
AM05				AML	AML		
	comp=E,5543μm,0.1s						
AM05				AML	AML		
	comp=E,1289μm,0.2s						
AM05				AML	AML		
	comp=N,1489μm,0.1s						
SEF1	**Sefro**	**0.22**	**325**	AML	AML		
	comp=N,7880μm,0.3s						
SEF1				AML	AML		
	comp=E,6760μm,0.2s						
T1215	**Vallo di Nera,**	**0.25**	**228**	P	Pb	23 38 42.0	-0.6
T1215				S	Sg	23 38 46.2	+1.6
T1241	**Roccafluvione,**	**0.26**	**116**	⇓P	Pg	23 38 41.6	+0.3
T1241				S	Sg	23 38 45.6	+0.8
T1241				AML	AML		
	comp=N,2145μm,1.0s						
T1241				AML	AML		
	comp=E,3520μm,0.2s						
T1241				AML	AML		
	comp=N,2150μm,1.0s						
T1241				AML	AML		
	comp=E,3520μm,0.2s						
T1241				AML	AML		
	comp=N,2034μm,0.1s						
T1217	**Poggiodomo (PG**	**0.29**	**208**	P	Pb	23 38 43.0	-0.3
T1217				S	Sg	23 38 46.5	+0.6
T1204	**Amatrice, Fraz**	**0.33**	**154**	⇑P	Pg	23 38 42.5	-0.1
T1204				AML	AML		
	comp=E,1448μm,0.2s						
T1204				AML	AML		
	comp=N,812μm,0.1s						
EL6	**Elcito**	**0.36**	**358**	S	Sg	23 38 48.0	0.0
T1243	**Rocca Santa Ma**	**0.36**	**138**	⇑P	Pg	23 38 43.2	-0.1
LNSS	**Leonessa**	**0.37**	**189**	⇑P	Pb	23 38 44.1	-0.6
LNSS				AML	AML		
	comp=N,2160μm,0.1s						
LNSS				AML	AML		
	comp=E,1475μm,0.4s						
LNSS				AML	AML		
	comp=N,2162μm,0.1s						
LNSS				AML	AML		
	comp=E,1462μm,0.1s						
RM33	**Pellescritta (**	**0.47**	**171**	⇑P	Pb	23 38 46.4	+0.1
RM33				AML	AML		
	comp=N,525μm,0.7s						
RM33				AML	AML		
	comp=N,496μm,0.4s						
RM33				AML	AML		
	comp=E,434μm,0.4s						
RM33				AML	AML		
	comp=E,446μm,0.4s						
RM33				AML	AML		
	comp=N,397μm,0.2s						
RM33				AML	AML		
	comp=E,362μm,0.2s						
RM33				AML	AML		
	comp=N,399μm,0.1s						
RM33				AML	AML		
	comp=E,373μm,0.1s						
MURB	**Monte Urbino**	**0.52**	**304**	S	Sg	23 38 54.0	+0.8
CESX	**Cesi**	**0.54**	**228**	S	Sb	23 38 55.0	-0.2
MPAG	**Monte Paganucc**	**0.71**	**338**	⇑P	Pg	23 38 49.2	-0.6
MPAG				AML	AML		
	comp=N,200μm,0.3s						
MPAG				AML	AML		
	comp=E,203μm,1.6s						
MPAG				AML	AML		
	comp=N,1053μm,0.8s						
MPAG				AML	AML		
	comp=E,174μm,0.2s						
MPAG				AML	AML		
	comp=E,891μm,0.7s						
MPAG				AML	AML		
	comp=N,200μm,0.3s						
FSSB	**Fossombrone**	**0.76**	**341**	P	Pg	23 38 50.4	-0.3
FSSB				AML	AML		
	comp=E,614μm,0.3s						
FSSB				AML	AML		
	comp=N,774μm,0.3s						
FSSB				AML	AML		
	comp=N,775μm,0.3s						
FSSB				AML	AML		
	comp=E,615μm,0.3s						
PE3	**Peglio**	**0.86**	**328**	⇑P	Pg	23 38 51.3	-1.2
PE3				AML	AML		
	comp=E,3μm,0.1s						
PE3				AML	AML		
	comp=N,3μm,0.1s						
CERT	**Cerreto**	**1.02**	**186**	P	Pg	23 38 53.8	-1.9
CERT				AML	AML		
	comp=E,170μm,0.5s						
CERT				AML	AML		
	comp=N,87μm,0.3s						
CERT				AML	AML		
	comp=E,170μm,0.5s						
CERT				AML	AML		
	comp=N,87μm,0.3s						

*NEIC **26** 23:43:05.1±1.9, 32°.74S±0°.04×68°.59W±0°.03, h10km±1km, mb4.2/3, Md3.3(SJA), Error ellipse: s-maj=7.5km s-min=5.0km az=197.0*

ISC 26 23:43:05.5±2.4, 32°.72S±0°.05×68°.62W±0°.06, h15km±16km, n48, σ1°.22/64, mb4.2/3, 5D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**1.18**	**358**	Pn	**Pb**	**23 43 28.2**	**+0.7**
ZON				Sn	**Sn**	**23 43 43.9**	**+0.7**
RTLL	**Cerro Villicun**	**1.40**	**5**	⇓*e*P	**Pb**	**23 43 31.9**	**+0.6**
RTLL				*e*S	**Sg**	**23 43 50.9**	**+0.4**
FCH	**Farellones**	**1.53**	**246**	⇓*i*P	**Pn**	**23 43 31.6**	**-0.9**
FCH				*e*S	**Sn**	**23 43 49.4**	**-2.8**
VA03	**San Esteban**	**1.63**	**268**		**Pn**	**23 43 32.8**	**-0.8**
VA03	**San Esteban**	**1.63**	**268**	⇓*i*P	**Pn**	**23 43 32.9**	**-0.8**
VA03				*i* S	**Sn**	**23 43 52.8**	**-1.7**
VA03				IAML		23 43 55.1	
	comp=E,941nm,0.3s						
LMEL	**Las Melosas**	**1.74**	**229**		**Pn**	**23 43 35.8**	**+0.5**
LMEL	**Las Melosas**	**1.74**	**229**	*i* P	**Pn**	**23 43 35.5**	**+0.3**
LMEL				*i* S	**Sn**	**23 43 57.6**	**+0.4**
LMEL				IAML		23 44 00.4	
	comp=N,536nm,0.1s						
MT03	**Universidad Ad**	**1.76**	**244**		**Pn**	**23 43 35.9**	**+0.4**
MT03	**Universidad Ad**	**1.76**	**244**	*i* P	**Pn**	**23 43 35.7**	**+0.2**
MT03				*i* S	**Sn**	**23 43 57.6**	**-0.2**
MT03				IAML		23 43 58.8	
	comp=N,498nm,0.3s						
MT05	**Renca**	**1.90**	**249**		**Pn**	**23 43 38.1**	**+0.7**
MT05	**Renca**	**1.90**	**249**	*e*P	**Pn**	**23 43 38.2**	**+0.8**
MT05				*i* S	**Sn**	**23 44 01.0**	**-0.1**
MT05				IAML		23 44 02.5	
	comp=E,592nm,0.2s						
ROCH	**El Roble**	**2.03**	**262**	⇓*i*P	**Pn**	**23 43 39.8**	**+0.5**
ROCH				*i* S	**Sn**	**23 44 04.7**	**+0.2**
ROCH				IAML		23 44 10.9	
	comp=N,690nm,0.4s						
ROC1	**El Roble**	**2.03**	**262**		**Pn**	**23 43 39.9**	**+0.5**
BO04	**La Punta**	**2.09**	**232**		**Pn**	**23 43 41.2**	**+1.2**
BO04	**La Punta**	**2.09**	**232**	⇓*i*P	**Pn**	**23 43 41.9**	**+1.9**
BO04				*i* S	**Sn**	**23 44 07.9**	**+2.1**
BO04				IAML		23 44 10.4	
	comp=E,249nm,0.3s						
MT02	**Curacav**	**2.18**	**255**		**Pn**	**23 43 42.0**	**+0.8**
MT02	**Curacav**	**2.18**	**255**	*i* P	**Pn**	**23 43 42.0**	**+0.8**
MT02				*i* S	**Sn**	**23 44 08.9**	**+0.9**
MT02				IAML		23 44 11.3	
	comp=N,228nm,0.4s						
MT09	**Talagante**	**2.25**	**242**		**Pn**	**23 43 43.1**	**+0.8**
MT09	**Talagante**	**2.25**	**242**	*i* P	**Pn**	**23 43 42.8**	**+0.6**
MT09				*i* S	**Sn**	**23 44 12.0**	**+2.2**
MT09				IAML		23 44 21.0	
	comp=N,166nm,0.4s						
VA06	**Catapilco**	**2.26**	**273**		**Pn**	**23 43 43.3**	**+1.0**
VA06	**Catapilco**	**2.26**	**273**	*i* P	**Pn**	**23 43 43.4**	**+1.0**
VA06				*i* S	**Sn**	**23 44 10.8**	**+0.8**
MT01	**Popeta**	**2.48**	**242**	Pn	**Pn**	**23 43 45.9**	**+0.6**
MT01	**Popeta**	**2.48**	**242**	*i* P	**Pn**	**23 43 46.0**	**+0.6**
MT01				*i* S	**Sn**	**23 44 17.1**	**+1.8**
CO02	**Combarbal**	**2.53**	**306**		**Pn**	**23 43 47.9**	**+1.8**
CO03	**El Pedregal**	**2.58**	**316**	Pn	**Pn**	**23 43 48.6**	**+1.9**
CO03	**El Pedregal**	**2.58**	**316**	*i* P	**Pn**	**23 43 49.2**	**+2.5**
CO03				*i* S	**Sb**	**23 44 22.3**	**-0.6**
BO01	**Tunca**	**2.65**	**230**	Pn	**Pn**	**23 43 47.1**	**-0.5**
VA05	**Santo Domingo**	**2.68**	**249**		**Pn**	**23 43 47.5**	**-0.5**
VA05	**Santo Domingo**	**2.68**	**249**	*i* P	**Pn**	**23 43 48.3**	**+0.3**
VA05				*i* S	**Sn**	**23 44 22.5**	**+2.3**
VA05				IAML		23 44 26.8	
	comp=N,326nm,0.3s						
BO02	**Sierra Bellavi**	**2.74**	**221**	Pn	**Pn**	**23 43 49.9**	**+1.0**
CO01	**Juntas del Tor**	**3.02**	**335**	Pn	**Pn**	**23 43 55.6**	**+2.7**
CO01	**Juntas del Tor**	**3.02**	**335**	*e*P	**Pb**	**23 43 56.9**	**-2.1**
CO01				*i* S	**Sb**	**23 44 37.3**	**+1.6**
CO01				IAML		23 44 38.3	
	comp=E,177nm,0.4s						
GO04	**Tololo Observa**	**3.15**	**323**		**Pn**	**23 43 54.8**	**0.0**
GO04	**Tololo Observa**	**3.15**	**323**	*e*P	**Pn**	**23 43 56.5**	**+1.7**
GO04				*e*S	**Sb**	**23 44 40.8**	**+1.2**
CO06	**Fray Jorge**	**3.28**	**308**		**Pn**	**23 43 56.4**	**0.0**
GO05	**Huala**	**3.58**	**229**		**Pn**	**23 43 60.0**	**-0.4**
GO05	**Huala**	**3.58**	**229**	IAML		23 44 55.2	
	comp=N,89nm,0.3s						
CO05	**La Serena**	**3.58**	**321**		**Pn**	**23 44 00.1**	**-0.4**
LCO	**Las Campanas**	**4.11**	**334**	Pn	**Pn**	**23 44 08.4**	**+0.4**
AC05	**El Transito**	**4.13**	**339**	Pn	**Pn**	**23 44 09.8**	**+1.7**
AC04	**Llanos de Chal**	**4.98**	**334**	Pn	**Pn**	**23 44 17.3**	**-2.3**
AC06	**Mina Casimiro**	**5.56**	**344**	Pn	**Pn**	**23 44 27.4**	**-0.3**
AC01	**Pan de Azucar**	**6.78**	**345**	Pn	**Pn**	**23 44 44.7**	**+0.3**
TRQA	**Tornquist**	**7.59**	**136**	Pn	**Pn**	**23 44 56.2**	**+0.6**
PB14	**IPOC Station P**	**8.22**	**349**	Pn	**Pn**	**23 45 04.0**	**-0.5**
QSPA	**South Pole Qui**	**57.51**	**180**	P	**P**	**23 52 53.6**	**-0.3**
QSPA				IAmb	IAmb	23 53 11.9	
	comp=Z,2.8nm,1.1s						
TOA0	**Torodi Ar. Sit**	**81.08**	**68**	P	**P**	**23 55 19.9**	**-0.5**
TOA0				IAmb	IAmb	23 55 47.0	
	comp=Z,3.1nm,1.3s						
CASY	**Casey**	**81.31**	**180**	P	**P**	**23 55 20.4**	**-0.4**
CASY				IAmb	IAmb	23 55 44.7	
	comp=Z,6.9nm,1.5s						

IDC 26 23:43:21.5±22.0, 5°.41S×150°.45E, h196km±184km, mb2.9/2, mbtmp3.3/2, Error ellipse: s-maj=138.7km s-min=106.4km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.32**	**226**	P	P	23 47 53.0	-0.3
	0.7nm,0.6s,baz=53,slow=10,SNR=10						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**24.16**	**220**	P	P	23 48 20.1	+0.3
	0.8nm,0.8s,baz=48,slow=9.6,SNR=8.2						
	0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.25**	**286**	PKPbc	PKPbc	00 02 44.7	-0.7
	0.2nm,0.6s,baz=90,slow=2.1,SNR=1.9						

*IDC **26** 23:48:55.2±2.3, 30°.27S×177°.63W, h0km, mb3.8/3, mbtmp3.8/3, MS3.8/1, Error ellipse: s-maj=50.2km s-min=21.9km az=103.0*

*NEIC **26** 23:48:58.1±1.9, 30°.3S±0°.1×177°.2W±0°.2, h35km±2km, mb4.1/7, Error ellipse: s-maj=33.9km s-min=12.9km az=57.0*

ISC 26 23:48:58.8±1.4, 30°.30S±0°.08×177°.5W±0°.2, h33km, n14, σ0°.80/16, mb3.9/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.10**	**341**	Pn	**Pn**	**23 49 17.9**	**-0.1**
	475nm,0.3s,baz=105,slow=6.2,SNR=31						
RAO				Sn	**Sn**	**23 49 32.2**	**+0.2**
	579nm,0.3s,baz=100,slow=23,SNR=22						
RAO				LR	LR	23 49 43.2	
	comp=Z,262nm,19.6s,baz=145,slow=46						
RAO	**Raoul Island**	**1.10**	**341**	Pn	**Pn**	**23 49 18.2**	**+0.2**
RAO				Sn	**Sb**	**23 49 33.0**	**-0.5**
STKA	**Stephens Creek**	**34.92**	**257**	P	**P**	**23 55 48.9**	**+1.2**
	2.3nm,0.7s,baz=87,slow=8.5,SNR=4.9						
	2.3nm,0.7s						

STKA	**Stephens Creek**	**34.92 257**	P	**P**	**23 55 48.2**	**+0.6**
STKA			IAmb	IAmb	23 56 02.0	
	comp=Z,0.8nm,1.0s					
BBOO	**Buckleboo**	**39.41 254**	P	**P**	**23 56 24.2**	**-1.6**
AS31	**Alice Springs**	**43.55 267**	P	**P**	**23 57 00.9**	**+1.2**
AS31			IAmb	IAmb	23 57 38.1	
	comp=Z,0.8nm,0.9s					
ASAR	**Alice Springs**	**43.55 267**	P	**P**	**23 56 59.7**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=106,slow=7.6,SNR=6.8					
ASAR			LR	LR	00 15 02.0	
	comp=Z,108nm,18.2s,baz=128,slow=36					
	comp=Z,0.6nm,0.7s					
WR0	**Warramunga Arr**	**44.35 272**	P	**P**	**23 57 06.5**	**+0.4**
WR0			IAmb	IAmb	23 57 31.1	
	comp=Z,6.1nm,1.2s					
WRA	**Warramunga Arr**	**44.53 272**	P	**P**	**23 57 07.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=110,slow=8.1,SNR=19					
	comp=Z,0.6nm,0.4s					
WRA	**Warramunga Arr**	**44.53 272**	P	**P**	**23 57 06.8**	**-0.8**
CASY	**Casey**	**55.43 208**	P	**P**	**23 58 29.5**	**-0.2**
CASY			IAmb	IAmb	23 58 30.7	
	comp=Z,2.8nm,0.8s					
SNAA	**Sanae**	**78.25 178**	P	**P**	**00 00 54.6**	**-0.3**
SNAA			IAmb	IAmb	00 01 24.9	
	comp=Z,4.5nm,1.3s					
FINES	**FINESS Array B**	**145.19 340**	PKPbc	**PKPdf**	**00 08 32.1**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=40,slow=4.5,SNR=9.3					
AKASG	**Malin Array Be**	**151.48 323**	PKPbc	**PKiKP**	**00 08 50.5**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=50,slow=2.4,SNR=1.4					

*KRNET **26** 23:51:52.4±0.1, 39°.73N×71°.94E, h12km, mb3.0*
*ISU **26** 23:51:53, 39°.74N×71°.98E, h15km*
*SOME **26** 23:51:57.9, 39°.92N×72°.03E, h10km*
*NNC **26** 23:52:06.1±4.2, 40°.42N×71°.98E, h0km, mb3.4, mpv3.0,*
Error ellipse: s-maj=37.0km s-min=16.1km az=1.0
ISC 26 23:51:52.3±0.9, 39°.72N±0°.03×71°.99E±0°.03, h10km, n27,
σ1°78/47, 16C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.27**	**211**	⇑*eP*	**Pg**	**23 51 57.7**	**-0.3**
DRK				⇑*eS*	**Sg**	**23 52 01.5**	**-0.3**
	baz=3.0						
FRG	**Fergana**	**0.68**	**347**	P	**Pb**	**23 52 05.8**	**-0.4**
FRG				S	**Sb**	**23 52 15.7**	**0.0**
BTK	**Batken**	**0.96**	**291**	⇑*eP*	**Pg**	**23 52 10.1**	**-0.8**
BTK				⇑*eS*	**Sb**	**23 52 22.6**	**-1.3**
	baz=91						
BTK	**Batken**	**0.96**	**291**	P	**Pg**	**23 52 10.0**	**-0.8**
BTK				S	**Sb**	**23 52 22.8**	**-1.1**
OHH	**Osh**	**1.01**	**37**	⇑*eP*	**Pg**	**23 52 11.6**	**-0.3**
OHH				⇑*eS*	**Sb**	**23 52 25.9**	**+0.4**
	baz=39						
OHH	**Osh**	**1.01**	**37**	P	**Pg**	**23 52 11.5**	**-0.3**
OHH				S	**Sg**	**23 52 25.0**	**-0.1**
ANR	**Andizhan**	**1.08**	**15**	P	**Sn**	**23 52 30.8**	**+2.2**
MINT	**Mingtut**	**1.08**	**314**	P	**Sn**	**23 52 29.6**	**+1.1**
GAR	**Garm**	**1.48**	**242**	⇑*eP*	**Pb**	**23 52 19.5**	**-0.4**
GAR				⇑*eS*	**Sg**	**23 52 39.3**	**-0.5**
	baz=40						
TRKS	**Terek-Say**	**1.92**	**341**	⇓*eP*	**Pb**	**23 52 26.3**	**-1.3**
TRKS				⇓*eS*	**Sb**	**23 52 51.1**	**-0.6**
	baz=42						
CHGR	**Chuyangaron**	**2.44**	**245**	⇑*eP*	**Pb**	**23 52 34.5**	**-1.8**
CHGR				⇑*iS*	**Sb**	**23 53 05.4**	**-1.0**
	baz=45						
TAS	**Tashkent**	**2.61**	**309**	⇑*eP*	**Pb**	**23 52 36.9**	**-2.2**
TAS				⇑*eS*	**Sb**	**23 53 09.3**	**-1.9**
	baz=9.0						
ARLS	**Aral**	**2.78**	**39**	⇓*eP*	**Pb**	**23 52 40.0**	**-2.2**
ARLS				⇓*eS*	**Sb**	**23 53 14.8**	**-1.7**
	baz=40						
IUG	**Iuzhnay**	**2.84**	**329**	*eP*	**Pg**	**23 52 47.5**	**+0.7**
	115nm,2.0s						
IUG				*eS*	**Sg**	**23 53 24.1**	**+0.4**
	24nm,0.4s						
IUG	**Iuzhnay**	**2.84**	**329**	Pg	**Pg**	**23 52 45.7**	**-1.2**
	190nm,0.4s						
IUG				Lg	Lg	23 53 22.0	
	20nm,0.4s						
UCH	**Uchtor**	**3.16**	**37**	⇓*eP*	**Pn**	**23 52 45.2**	**+2.7**
UCH				⇓*eS*	**Sn**	**23 53 24.1**	**+3.7**
	baz=37						
CHM	**Chimkent**	**3.17**	**326**	*eP*	**Pg**	**23 52 53.8**	**+0.8**
	47nm,0.1s						
CHM				*eS*	**Sg**	**23 53 34.5**	**+0.5**
	65nm,0.4s						
MRKS	**Merke**	**3.17**	**17**	*eP*	**Pg**	**23 52 53.2**	**+0.2**
	1.6nm,0.2s						
MRKS				*eS*	**Sg**	**23 53 33.8**	**-0.3**
	14nm,0.3s						
MRKS	**Merke**	**3.17**	**17**	Pg	**Pg**	**23 52 52.7**	**-0.3**
	4.3nm,0.3s						
MRKS				Lg	Lg	23 53 33.3	
	14nm,0.3s						
DZA	**Taraz**	**3.21**	**351**	*eP*	**Pg**	**23 52 54.6**	**+0.7**
	13nm,0.3s						
DZA				*eS*	**Sg**	**23 53 35.5**	**+0.1**
	58nm,0.1s						
EKS2	**Erkin-Say**	**3.24**	**24**	⇓*eP*	**Pn**	**23 52 46.1**	**+2.8**
EKS2				⇓*eS*	**Sn**	**23 53 25.3**	**+3.3**
	baz=25						
KK31	**Karatay Array**	**3.56**	**342**	⇑Pn	**Pb**	**23 52 52.1**	**-3.3**
	0.1nm,0.2s,baz=151,slow=11,SNR=7.0						
KK31				⇓Pg	**Pg**	**23 52 58.6**	**-2.0**
	2.3nm,0.6s,baz=150,slow=12,SNR=8.7						
KK31				⇑Lg	Lg	23 53 39.1	
	1.0nm,0.3s,baz=154,slow=29,SNR=6.1						
TKM2	**Tokmak 2**	**4.20**	**39**	⇑Pn	**Pb**	**23 53 07.3**	**+0.9**
	1.6nm,0.6s						
TKM2				⇑Lg	Lg	23 54 05.2	
	1.6nm,0.3s						
KRBS	**Karabastau**	**4.84**	**34**	*eP*	**Pg**	**23 53 23.2**	**-1.8**
	1.3nm,0.6s						
KRBS				*eS*	**Sg**	**23 54 24.7**	**-3.0**
	4.2nm,0.7s						
KRBS	**Karabastau**	**4.84**	**34**	Pg	**Pg**	**23 53 21.8**	**-3.3**
	1.8nm,0.6s						
KRBS				Lg	Lg	23 54 23.8	
	4.2nm,0.7s						
KUU	**Kurty**	**5.29**	**37**	*eP*	**Pg**	**23 53 31.4**	**-2.2**
	0.7nm,0.6s						
KUU				*eS*	**Sg**	**23 54 39.3**	**-2.9**
	4.0nm,0.6s						
KUU	**Kurty**	**5.29**	**37**	Pg	**Pg**	**23 53 30.5**	**-3.1**
	1.2nm,0.5s						
KUU				Lg	Lg	23 54 38.0	
	4.0nm,0.6s						

*BGR **26** 23:52:28.9±1.1, 42°.48N×13°.63E, h10km, ML3.7/8, Error ellipse: s-maj=15.6km s-min=14.5km az=22.0*
*MOS **26** 23:52:29.7±1.4, 42°.81N×13°.19E, h11km, mb4.2/8, Error ellipse: s-maj=8.9km s-min=5.5km az=96.1*
*PDG **26** 23:52:30.6±0.9, 42°.86N×13°.20E, h5km±2km, ML3.7/12, Error ellipse: s-maj=1.2km s-min=1.2km az=0.0*
*ROM **26** 23:52:30.1±0.0, 42°.841N±0°.002×13°.163E±0°.004, h8km, ML3.5/88, Error ellipse: s-maj=0.2km s-min=0.1km az=77.0*
*IDC **26** 23:52:31.3±1.1, 42°.99N×13°.27E, h0km, mb3.5/5, mbtmp3.6/10, ML3.3/5, MS2.8/5, Error ellipse: s-maj=24.6km s-min=12.9km az=88.0*
*BEO **26** 23:52:31.0±0.7, 42°.84N×13°.04E, h10km, ML3.6/12*
*LDG **26** 23:52:31.6±0.1, 42°.74N×13°.02E, h10km, Ml3.4/16, Error ellipse: s-maj=5.4km s-min=2.9km az=46.0*
*NEIC **26** 23:52:31.4, 42°.80N×13°.11E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=3.42; $M_{\theta\theta}$2.16; $M_{\phi\phi}$1.27; $M_{r\theta}$-1.32; $M_{r\phi}$-1.19; $M_{\theta\phi}$0.09; Fault plane solution: $M_0$3.49000×10^{14} NP1:ϕ_s114.76000°, δ55.60000°, λ-100.41000°. NP2:ϕ_s312.77000°, δ35.75000°, λ-75.22000°. Principal axes: T 3.1830, Plg10.0000°, Azm212.0000°; N 0.5435, Plg9.0000°,*

Azm121.0000°; P -3.7265, Plg77.0000°, Azm351.0000°;
*NEIC **26** 23:52:31.1±1.6, 42°.82N±0°.05×13°.11E±0°.06, h10km±1km*
Error ellipse: s-maj=10.1km s-min=4.1km az=223.0
*STR **26** 23:52:32.8±0.5, 43°.N±.6°×1°.3E±°, h10km, MLv3.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=41.8, preliminary*
*PRU **26** 23:52:33.6±0.0, 43°.01N×13°.35E, h0km, M4.0*
ISC 26 23:52:30.7±0.7, 42°.83N±0°.01×13°.15E±0°.01, h7km±4km,
n394, σ1°88/475, mb4.0/13, 25C-26D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**47**	⇓P	**Pg**	**23 52 31.6**	**-0.7**
T1245				S	**Sg**	**23 52 32.3**	**-1.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**19**	⇑P	**Pg**	**23 52 32.5**	**-0.5**
MC2				S	**Sg**	**23 52 34.5**	**-0.1**
T1216	**Preci, Frazion**	**0.11**	**301**	⇑P	**Pg**	**23 52 33.4**	**+0.1**
T1216				S	**Sg**	**23 52 35.6**	**+0.5**
MMO1	**Montemonaco**	**0.14**	**62**	⇑P	**Pg**	**23 52 33.5**	**-0.3**
MMO1				S	**Sg**	**23 52 35.8**	**-0.2**
FEMA	**Monte Fema**	**0.15**	**330**	P	**Pg**	**23 52 34.0**	**0.0**
FEMA				S	**Sg**	**23 52 36.5**	**+0.3**
FEMA				AML	AML		
	comp=E,68200μm,0.8s						
FEMA				AML	AML		
	comp=N,60850μm,0.2s						
T1201	**Domo (RI)**	**0.19**	**157**	P	**Pg**	**23 52 35.2**	**+0.7**
T1204	**Amatrice, Fraz**	**0.20**	**142**	P	**Pg**	**23 52 35.2**	**+0.4**
T1217	**Poggiodomo (PG**	**0.20**	**234**	⇑P	**Pg**	**23 52 35.4**	**+0.6**
T1217				S	**Sg**	**23 52 39.3**	**+1.7**
T1217				AML	AML		
	comp=E,14500μm,0.5s						
T1217				AML	AML		
	comp=N,19900μm,0.5s						
T1217				AML	AML		
	comp=E,14050μm,0.5s						
T1217				AML	AML		
	comp=N,20200μm,0.5s						
T1217				AML	AML		
	comp=E,14000μm,0.5s						
T1217				AML	AML		
	comp=N,20250μm,0.5s						
T1217				AML	AML		
	comp=E,14550μm,0.5s						
T1217				AML	AML		
	comp=N,19950μm,0.5s						
T1241	**Roccafluvione,**	**0.21**	**83**	P	**Pg**	**23 52 34.6**	**-0.3**
T1241				S	**Sg**	**23 52 37.9**	**+0.2**
AM05	**Amandola Campo**	**0.21**	**45**	⇑P	**Pg**	**23 52 34.8**	**-0.1**
AM05				S	**Sg**	**23 52 38.1**	**+0.3**
AM05				AML	AML		
	comp=N,21850μm,0.2s						
AM05				AML	AML		
	comp=N,17430μm,0.7s						
AM05				AML	AML		
	comp=N,21900μm,0.2s						
AM05				AML	AML		
	comp=E,58200μm,0.2s						
AM05				AML	AML		
	comp=N,17385μm,0.7s						
AM05				AML	AML		
	comp=E,11000μm,1.4s						
T1215	**Vallo di Nera,**	**0.21**	**262**	⇑P	**Pg**	**23 52 35.4**	**+0.5**
T1215				S	**Sg**	**23 52 39.4**	**+1.6**
T1215				AML	AML		
	comp=E,15050μm,0.4s						
T1215				AML	AML		
	comp=E,16450μm,0.4s						
T1215				AML	AML		
	comp=N,17750μm,0.4s						
T1215				AML	AML		
	comp=N,19450μm,0.4s						
T1215				AML	AML		
	comp=N,17800μm,0.4s						
T1215				AML	AML		
	comp=E,15100μm,0.4s						
T1215				AML	AML		
	comp=E,16400μm,0.4s						
SMA1	**SAN MARTINO**	**0.24**	**146**	⇑P	**Pg**	**23 52 36.0**	**+0.4**
SMA1				S	**Sg**	**23 52 39.8**	**+1.0**
SMA1				AML	AML		
	comp=N,20900μm,0.7s						
SMA1				AML	AML		
	comp=E,21700μm,0.7s						
SMA1				AML	AML		
	comp=N,20850μm,0.7s						
LNSS	**Leonessa**	**0.24**	**200**	⇑P	**Pg**	**23 52 36.0**	**+0.5**
LNSS				S	**Sg**	**23 52 40.6**	**+1.8**
CESI	**CESI - Serrava**	**0.25**	**314**	P	**Pg**	**23 52 35.8**	**0.0**
T1243	**Rocca Santa Ma**	**0.26**	**122**	P	**Pg**	**23 52 35.8**	**0.0**
T1243				S	**Sg**	**23 52 40.1**	**+0.8**
CSP1	**Cessapalombo**	**0.26**	**8**	P	**Pg**	**23 52 35.6**	**-0.3**
CSP1				S	**Sg**	**23 52 40.0**	**+0.5**
CSP1				AML	AML		
	comp=N,33700μm,0.6s						
CSP1				AML	AML		
	comp=E,25100μm,1.5s						
GUMA	**Gualdo di Mace**	**0.27**	**30**	⇑P	**Pg**	**23 52 36.0**	**0.0**
GUMA				S	**Sg**	**23 52 40.6**	**+1.0**
RM33	**Pellescritta (**	**0.33**	**172**	⇑P	**Pg**	**23 52 37.3**	**+0.2**
RM33				S	**Sg**	**23 52 43.0**	**+1.6**
SEF1	**Sefro**	**0.35**	**335**	P	**Pg**	**23 52 37.4**	**-0.2**
SEF1				S	**Sg**	**23 52 43.2**	**+1.0**
SEF1				AML	AML		
	comp=E,25750μm,0.3s						
SEF1				AML	AML		
	comp=N,23800μm,0.3s						
SEF1				AML	AML		
	comp=E,25700μm,0.3s						
CAMP	**Campotosto**	**0.35**	**147**		**Pg**	**23 52 37.7**	**+0.1**
CAMP				Sg	**Sg**	**23 52 43.5**	**+1.3**
CAMP	**Campotosto**	**0.35**	**147**	⇓P	**Pg**	**23 52 37.7**	**+0.1**
CAMP				S	**Sg**	**23 52 43.3**	**+1.0**
T1246	**Crognaleto (TE**	**0.35**	**134**	⇓P	**Pg**	**23 52 37.6**	**-0.1**
T1246				S	**Sg**	**23 52 43.5**	**+1.1**
MDAR	**Monte D'Aria**	**0.36**	**359**	P	**Pg**	**23 52 37.5**	**-0.3**
MDAR				S	**Sg**	**23 52 43.6**	**+1.0**
PIO1	**Pioraco**	**0.37**	**340**	P	**Pg**	**23 52 37.7**	**-0.3**
T1211	**Morro Reatino**	**0.37**	**216**	⇑P	**Pg**	**23 52 38.2**	**+0.2**
T1211				S	**Sg**	**23 52 44.8**	**+2.0**
T1211				AML	AML		
	comp=N,11800μm,0.5s						
T1211				AML	AML		
	comp=E,8530μm,0.1s						
T1211				AML	AML		
	comp=N,11550μm,0.5s						
T1211				AML	AML		
	comp=E,8340μm,0.1s						
T1211				AML	AML		
	comp=E,8535μm,0.1s						
T1211				AML	AML		
	comp=N,11600μm,0.5s						
MNTP	**Montappone**	**0.38**	**37**	P	**Pg**	**23 52 38.5**	**+0.3**
MNTP				S	**Sb**	**23 52 45.3**	**-0.7**
MNTP				AML	AML		
	comp=E,26600μm,0.5s						
MNTP				AML	AML		
	comp=N,22000μm,1.0s						
MNTP				AML	AML		
	comp=E,26550μm,0.5s						
FIU1	**Fiuminata**	**0.39**	**336**	P	**Pg**	**23 52 38.2**	**-0.1**
FIU1				S	**Sg**	**23 52 44.9**	**+1.3**
FIU1				AML	AML		
	comp=E,6800μm,0.5s						
FIU1				AML	AML		
	comp=N,8530μm,0.2s						
FIU1				AML	AML		
	comp=E,6795μm,0.5s						
FIU1				AML	AML		
	comp=N,8500μm,0.2s						
TERO	**Teramo**	**0.39**	**122**	⇓P	**Pg**	**23 52 38.1**	**-0.2**
TERO				S	**Sg**	**23 52 44.5**	**+0.9**
SSM1	**San Severino M**	**0.40**	**3**	P	**Pg**	**23 52 38.1**	**-0.4**
T1247	**Pizzolo (AQ)**	**0.40**	**164**	⇑P	**Pg**	**23 52 38.8**	**+0.1**
T1247				S	**Sb**	**23 52 45.6**	**-1.0**
T1247				AML	AML		
	comp=N,19050μm,1.1s						
T1247				AML	AML		
	comp=E,19600μm,0.5s						
OFFI	**Offida**	**0.41**	**75**	⇑P	**Pb**	**23 52 39.3**	**-1.0**
OFFI				S	**Sb**	**23 52 46.7**	**+0.1**

GAG1	**Gagliole**	**0.41**	**351**	P	**Pg**	**23 52 38.6**	**-0.2**
GAG1				AML	AML		
	comp=E,26200μm,0.3s						
GAG1				AML	AML		
	comp=N,23450μm,0.4s						
GAG1				AML	AML		
	comp=E,26250μm,0.3s						
GAG1				AML	AML		
	comp=N,23450μm,0.4s						
MTL1	**Matelica**	**0.44**	**346**	P	**Pg**	**23 52 39.1**	**-0.2**
MTL1				AML	AML		
	comp=N,20800μm,0.5s						
MTL1				AML	AML		
	comp=E,17900μm,1.3s						
MTL1				AML	AML		
	comp=N,20800μm,0.5s						
SNTG	**Esanatoglia**	**0.45**	**340**	P	**Pg**	**23 52 39.0**	**-0.5**
SNTG				S	**Sg**	**23 52 46.5**	**+1.1**
SNTG				AML	AML		
	comp=E,4935μm,0.8s						
SNTG				AML	AML		
	comp=N,5640μm,0.7s						
SNTG				AML	AML		
	comp=E,4730μm,0.8s						
SNTG				AML	AML		
	comp=N,5640μm,0.7s						
SNTG				AML	AML		
	comp=N,5930μm,0.7s						
SNTG				AML	AML		
	comp=E,4935μm,0.8s						
CESX	**Cesi**	**0.48**	**242**		**Pg**	**23 52 40.0**	**0.0**
CESX	**Cesi**	**0.48**	**242**	⇑P	**Pg**	**23 52 40.0**	**0.0**
CESX				AML	AML		
	comp=N,6635μm,1.1s						
CESX				AML	AML		
	comp=E,5095μm,0.4s						
GIGS	**Gran Sasso**	**0.49**	**141**	P	**Pg**	**23 52 40.0**	**-0.2**
TRE1	**Treia**	**0.49**	**14**	P	**Pg**	**23 52 40.5**	**+0.2**
TRE1				S	**Sb**	**23 52 48.6**	**-0.6**
TRE1				AML	AML		
	comp=N,15850μm,0.3s						
TRE1				AML	AML		
	comp=E,18900μm,0.5s						
EL6	**Elcito**	**0.50**	**356**	P	**Pg**	**23 52 39.9**	**-0.5**
EL6				S	**Sg**	**23 52 48.1**	**+1.1**
EL6				AML	AML		
	comp=E,15000μm,0.3s						
EL6				AML	AML		
	comp=N,15250μm,0.2s						
EL6				AML	AML		
	comp=E,14950μm,0.3s						
EL6				AML	AML		
	comp=N,15300μm,0.2s						
AQU	**L'Aquila**	**0.51**	**159**		**Pg**	**23 52 40.5**	**-0.1**
AQU				Sg	**Sb**	**23 52 48.7**	**-1.0**
AQU	**L'Aquila**	**0.51**	**159**	P	**Pg**	**23 52 40.5**	**-0.1**
AQU						23 52 48.7	
AQU	**L'Aquila**	**0.51**	**159**	⇑P	**Pg**	**23 52 40.6**	**-0.1**
AQU				AML	AML		
	comp=E,6830μm,0.7s						
AQU				AML	AML		
	comp=E,6655μm,1.6s						
AQU				AML	AML		
	comp=E,6825μm,0.7s						
AQU				AML	AML		
	comp=N,8455μm,1.3s						
AQU				AML	AML		
	comp=N,8480μm,1.6s						
ATCC	**AVT- Casa Cast**	**0.52**	**313**	P	**Pg**	**23 52 40.5**	**-0.2**
ATCC				S	**Sg**	**23 52 49.0**	**+1.5**
ATCC				AML	AML		
	comp=N,8660μm,0.6s						
ATCC				AML	AML		
	comp=E,13750μm,0.8s						
CING	**Cingoli**	**0.55**	**3**	P	**Pg**	**23 52 40.5**	**-0.7**
TRTR	**Tortoreto Alta**	**0.56**	**92**	⇓P	**Pb**	**23 52 42.4**	**-0.5**
TRTR				AML	AML		
	comp=N,21000μm,0.6s						
TRTR				AML	AML		
	comp=E,19100μm,0.6s						
FIAM	**Fiamignano**	**0.56**	**183**	⇑P	**Pg**	**23 52 41.4**	**-0.2**
FIAM				AML	AML		
	comp=N,4745μm,0.7s						
FIAM				AML	AML		
	comp=E,4565μm,0.9s						
CADA	**Capodarco di F**	**0.58**	**51**	P	**Pb**	**23 52 43.0**	**-0.1**
CIMA	**Civitanova Mar**	**0.61**	**39**	P	**Pb**	**23 52 43.0**	**-0.6**
MMUR	**Monte Murano**	**0.62**	**350**	P	**Pg**	**23 52 42.3**	**-0.4**
MURB	**Monte Urbino**	**0.63**	**313**	Pg	**Pg**	**23 52 42.5**	**-0.4**
MURB	**Monte Urbino**	**0.63**	**313**	P	**Pg**	**23 52 42.7**	**-0.2**
MURB				AML	AML		
	comp=E,9215μm,0.8s						
MURB				AML	AML		
	comp=N,7235μm,0.4s						
MURB				AML	AML		
	comp=E,10340μm,0.8s						
MURB				AML	AML		
	comp=E,9190μm,0.8s						
MURB				AML	AML		
	comp=N,7235μm,0.4s						
MURB				AML	AML		
	comp=N,6970μm,0.4s						
PP3	**Marolino**	**0.64**	**31**	P	**Pg**	**23 52 43.3**	**+0.2**
PP3				AML	AML		
	comp=N,25950μm,0.3s						
PP3				AML	AML		
	comp=E,14850μm,0.6s						
PP3				AML	AML		
	comp=N,25700μm,0.3s						
PP3				AML	AML		
	comp=E,14350μm,0.6s						
PP3				AML	AML		
	comp=N,25900μm,0.3s						
FAGN	**Fagnano**	**0.65**	**150**	P	**Pg**	**23 52 43.1**	**-0.2**
FAGN				AML	AML		
	comp=N,7280μm,0.4s						
FAGN				AML	AML		
	comp=E,10600μm,0.4s						
VCEL	**Villa Celiera**	**0.67**	**130**	⇓P	**Pg**	**23 52 43.4**	**-0.2**
VCEL				AML	AML		
	comp=N,4880μm,0.6s						
VCEL				AML	AML		
	comp=E,5670μm,0.7s						
VCEL				AML	AML		
	comp=N,4875μm,0.6s						
ATFO	**Monte Foce - G**	**0.68**	**322**	P	**Pg**	**23 52 43.4**	**-0.5**
ATFO				AML	AML		
	comp=E,3375μm,0.7s						
ATFO				AML	AML		
	comp=N,2520μm,0.6s						
ARVD	**Arcevia**	**0.68**	**347**	P	**Pg**	**23 52 43.2**	**-0.7**
ARVD				AML	AML		
	comp=E,3170μm,0.2s						
ARVD				AML	AML		
	comp=N,3015μm,0.7s						
ATTE	**AVT- Monte Tez**	**0.69**	**302**	P	**Pg**	**23 52 43.6**	**-0.5**
ATTE				AML	AML		
	comp=E,2580μm,0.7s						
ATTE				AML	AML		
	comp=N,2280μm,0.4s						
FRON	**Frontone**	**0.75**	**336**	P	**Pg**	**23 52 44.3**	**-0.9**
FRON				AML	AML		
	comp=E,2560μm,0.9s						
FRON				AML	AML		
	comp=N,4175μm,0.8s						
SRES	**S.Oreste - Sor**	**0.76**	**219**	⇑P	**Pg**	**23 52 44.9**	**-0.4**
SRES				AML	AML		
	comp=E,2100μm,1.1s						
SRES				AML	AML		
	comp=N,2545μm,0.5s						
T0110	**Collepietro**	**0.76**	**142**	P	**Pg**	**23 52 44.5**	**-0.8**
T0110				AML	AML		
	comp=N,5110μm,0.6s						
T0110				AML	AML		
	comp=E,5250μm,0.5s						
MGAB	**Montegabbione**	**0.77**	**276**	P	**Pg**	**23 52 45.2**	**-0.3**
MGAB				AML	AML		
	comp=E,4350μm,0.6s						
MGAB				AML	AML		
	comp=N,6690μm,0.8s						
MGAB				AML	AML		
	comp=N,6610μm,0.8s						
MGAB				AML	AML		
	comp=E,4620μm,0.7s						
ATVO	**AVT- Monte Val**	**0.78**	**315**	P	**Pg**	**23 52 44.9**	**-0.7**
ATVO				AML	AML		

comp=N,1775µm,0.4s
ATVO AML AML
comp=E,1875µm,0.3s
AOI Ancona 0.79 24 P Pg 23 52 45.5 -0.4
AOI AML AML
comp=E,3120µm,0.3s
AOI AML AML
comp=N,3375µm,0.2s
ATMI Monte Miggiano 0.82 308 P Pg 23 52 46.5 0.0
ATMI AML AML
comp=E,5695µm,0.6s
ATMI AML AML
comp=N,5860µm,0.7s
ATPI Pietralunga - 0.83 319 P Pg 23 52 46.0 -0.7
PTQR Pietraquaria 0.83 167 P Pg 23 52 45.7 -1.0
PTQR AML AML
comp=E,2100µm,0.9s
PTQR AML AML
comp=N,1515µm,1.4s
PIEI Pieia 0.84 328 P Pg 23 52 46.0 -0.8
PIEI AML AML
comp=E,1970µm,0.3s
PIEI AML AML
comp=N,1395µm,0.9s
PIEI AML AML
comp=N,1390µm,0.9s
MPAG Monte Paganucc 0.85 340 P Pg 23 52 46.3 -0.8
MPAG AML AML
comp=E,2440µm,0.7s
MPAG AML AML
comp=N,2610µm,0.7s
MPAG AML AML
comp=N,3015µm,0.7s
MPAG AML AML
comp=N,2605µm,0.7s
MPAG AML AML
comp=E,2375µm,0.7s
MTCE Montecelio 0.86 201 ⇑P Pg 23 52 46.3 -1.0
MTCE AML AML
comp=N,2140µm,0.5s
MTCE AML AML
comp=E,3320µm,0.9s
SENI Senigallia 0.88 4 P Pg 23 52 47.2 -0.3
SENI AML AML
comp=E,11510µm,0.5s
SENI AML AML
comp=N,9895µm,1.4s
SENI AML AML
comp=E,3610µm,0.9s
SENI AML AML
comp=N,9900µm,1.4s
SENI AML AML
comp=N,2500µm,0.9s
SENI AML AML
comp=E,11550µm,0.5s
NARO Abbazia di Nar 0.88 332 P Pg 23 52 46.6 -1.1
NARO AML AML
comp=N,1900µm,1.2s
NARO AML AML
comp=E,1500µm,0.7s
CERT Cerreto 0.89 188 P Pg 23 52 46.7 -1.1
CERT AML AML
comp=E,6515µm,0.6s
CERT AML AML
comp=N,3390µm,0.6s
FSSB Fossombrone 0.90 342 P Pg 23 52 47.4 -0.7
FSSB AML AML
comp=E,4250µm,0.4s
FSSB AML AML
comp=N,7530µm,0.2s
SACS San Casciano d 0.91 272 P Pg 23 52 48.1 -0.2
SACS AML AML
comp=E,2020µm,0.9s
SACS AML AML
comp=E,2030µm,0.9s
SACS AML AML
comp=N,2295µm,0.6s
SACS AML AML
comp=N,2340µm,0.6s
BADI Badiali 0.95 316 P Pg 23 52 48.4 -0.5
BADI AML AML
comp=E,81µm,0.3s
BADI AML AML
comp=N,1076µm,1.6s
PE3 Peglio 0.99 331 P Pg 23 52 48.9 -0.8
PE3 AML AML
comp=N,17µm,1.1s
PE3 AML AML
comp=E,16µm,1.1s
INTR Introdacqua 0.99 146 Pg 23 52 48.4 -1.3
INTR Introdacqua 0.99 146 P Pg 23 52 48.5 -1.3
INTR AML AML
comp=E,3µm,0.6s
INTR AML AML
comp=N,3µm,0.7s
INTR AML AML
comp=E,3µm,0.6s
INTR AML AML
comp=E,2840µm,0.6s
INTR AML AML
comp=N,4560µm,0.7s
INTR AML AML
comp=N,3µm,0.7s
RCAV Rocca di Cave 0.99 189 P Pg 23 52 48.7 -1.2
RCAV AML AML
comp=E,2910µm,0.5s
RCAV AML AML
comp=N,4440µm,0.4s
CAFI Castiglion Fio 1.00 300 P Pg 23 52 49.0 -0.9
CAFI AML AML
comp=N,1395µm,0.9s
CAFI AML AML
comp=N,1410µm,0.9s
CAFI AML AML
comp=E,1465µm,0.8s
CAFI AML AML
comp=E,1470µm,0.8s
LATE Laterza 1.02 258 Pg 23 52 49.7 -0.6
VVLD Villa Vallelon 1.02 160 P Pg 23 52 50.2 -0.1
CAFR Castel Frentan 1.07 124 AML AML
comp=N,1620µm,0.5s
CAFR AML AML
comp=E,1455µm,0.5s
RMP Rome, Mte Porz 1.07 198 P Pg 23 52 49.9 -1.4
RMP AML AML
comp=N,3585µm,0.7s
RMP AML AML
comp=E,2100µm,0.4s
MCIV Monte Civitell 1.09 268 P Pb 23 52 51.0 -0.8
MCIV AML AML
comp=N,809µm,1.3s
MCIV AML AML
comp=E,930µm,0.6s
LPEL Lama dei Pelig 1.09 135 P Pg 23 52 50.1 -1.6
LPEL AML AML
comp=E,2040µm,0.6s
LPEL AML AML
comp=N,1950µm,0.6s
RDP Rocca di Papa 1.12 197 P Pb 23 52 50.9 -1.5
RDP AML AML
comp=E,5095µm,0.6s
RDP AML AML
comp=N,4020µm,0.5s
SF13 Bagnolo 1.13 270 P Pb 23 52 51.9 -0.6
TOLF Tolfa 1.15 228 P Pb 23 52 51.8 -1.0
TOLF AML AML
comp=N,1120µm,0.9s
TOLF AML AML
comp=E,1230µm,0.8s
SF01 Poggio Pratacc 1.17 270 P Pb 23 52 53.1 -0.2
CRE Caprese Michel 1.18 312 P Pb 23 52 53.6 +0.1
POFI Posta Fibreno 1.19 159 P Pg 23 52 54.0 +0.5
POFI AML AML
comp=N,1103µm,0.8s
POFI AML AML
comp=N,1084µm,0.8s
POFI AML AML
comp=E,1775µm,1.1s
POFI AML AML
comp=E,1830µm,1.1s
ARCI Arcidosso 1.23 272 P Pn 23 52 54.1 -0.3
GIUL Giuliano Di Ro 1.27 177 P Pn 23 52 54.3 -0.7
GIUL AML AML
comp=N,1265µm,0.7s
GIUL AML AML
comp=E,1041µm,0.8s
LIK San Giovanni I 1.36 167 AML AML
comp=E,1785µm,0.8s
LIK AML AML
comp=N,2390µm,0.7s
ASQU Asqua 1.39 315 P Pn 23 52 56.5 0.0
CERA Filignano 1.39 152 P Pn 23 52 56.5 -0.1
CERA AML AML
comp=E,1320µm,0.7s
CERA AML AML
comp=N,1130µm,1.5s
CERA AML AML
comp=E,1370µm,0.7s
CERA AML AML
comp=N,1070µm,1.5s
FRES Fresagrandinar 1.41 127 P Pg 23 52 57.7 -0.1
FRES AML AML
comp=E,1195µm,0.6s
FRES AML AML
comp=N,808µm,0.9s
SFI Santa Sofia 1.43 319 P Pn 23 52 57.3 +0.1
TRIV Trivento 1.49 135 P Pg 23 52 58.9 -0.3
TRIV AML AML
comp=N,77000µm,1.1s
TRIV AML AML
comp=E,1084µm,1.0s
TRIV AML AML
comp=N,1265µm,0.9s
TRIV AML AML
comp=E,72500µm,1.6s
CSNT Castellina Chi 1.50 296 P Pn 23 52 57.6 -0.5
FROS Frosini 1.51 285 P Pn 23 52 57.7 -0.5
MAON Monte Argentar 1.54 256 P Pn 23 52 58.2 -0.5
MAON AML AML
comp=E,293µm,0.7s
MAON AML AML
comp=N,245µm,0.9s
OSSC Osservatorio P 1.56 297 Pn Pn 23 52 59.0 +0.1
OSSC Osservatorio P 1.56 297 AML AML
comp=N,360µm,1.1s
OSSC AML AML
comp=E,325µm,1.5s
OSSC AML AML
comp=E,417µm,0.9s
OSSC AML AML
comp=N,420µm,0.9s
RUFI Rufina 1.57 311 AML AML
comp=N,510µm,0.9s
RUFI AML AML
comp=E,696µm,0.6s
VAGA Valle Agricola 1.63 150 P Pb 23 53 00.6 -0.6
LMD Lutirano 1.63 320 P Pb 23 53 01.0 -0.2
BSSO Busso 1.67 140 P Pg 23 53 02.9 +0.1
BSSO AML AML
comp=E,694µm,1.2s
BSSO AML AML
comp=E,274µm,1.2s
BSSO AML AML
comp=N,639µm,1.6s
BSSO AML AML
comp=N,255µm,1.6s
TRIF Trifonti 1.68 280 P Pn 23 52 60.0 -0.5
CASP Castiglione de 1.68 269 Pn Pn 23 53 00.1 -0.4
MODR Mondragone 1.77 162 P Pb 23 53 02.8 -0.7
MODR AML AML
comp=E,400µm,1.6s
MODR AML AML
comp=N,444µm,0.8s
PTRJ Pietraroja 1.79 145 AML AML
comp=N,872µm,0.8s
PTRJ AML AML
comp=E,889µm,0.6s
MELA Melanico ??? S 1.85 127 P Pn 23 53 02.8 0.0
MELA AML AML
comp=E,1200µm,0.7s
MELA AML AML
comp=N,1510µm,0.6s
MELA AML AML
comp=N,1550µm,0.6s
MELA AML AML
comp=E,1245µm,0.7s
TREM Isole Tremiti 1.88 111 P Pb 23 53 04.0 -1.4
TREM AML AML
comp=E,1270µm,0.7s
TREM AML AML
comp=N,1090µm,1.6s
PSB1 Pescosannita 2.03 142 P Pb 23 53 07.7 -0.2
PSB1 AML AML
comp=E,438µm,1.6s
PSB1 AML AML
comp=N,416µm,0.9s
PSB1 AML AML
comp=N,449µm,0.9s
PSB1 AML AML
comp=E,468µm,1.6s
APRC Apricena 2.07 120 P Pn 23 53 06.5 +0.5
APRC AML AML
comp=N,1128µm,0.5s
APRC AML AML
comp=E,543µm,0.8s
PAOL Paolisi 2.09 149 Pn 23 53 05.8 -0.4
ZCCA Zocca 2.19 315 Pn 23 53 09.1 +1.4
SGRT San Giovanni R 2.20 118 Pn Pn 23 53 07.9 +0.1
SGRT San Giovanni R 2.20 118 P Pn 23 53 08.6 +0.8
SGRT AML AML
comp=E,632µm,0.6s
SGRT AML AML
comp=N,661µm,0.9s
VLC Villacollemand 2.41 304 Pn 23 53 11.4 +0.8
RIY Rijeka 2.67 21 *e*Pn Pn 23 53 14.1 0.0
RIY *e*Sn **Sn 23 53 46.4 -0.3**
TEOL Teolo 2.74 338 Pn 23 53 16.4 +1.2
SKDS Skadanscina 2.78 13 *e*Pn Pn 23 53 14.7 -1.0
MORSI Morsiglia 2.79 274 P Pn 23 53 16.6 +0.9
PRMA PARMA 2.82 314 Pn 23 53 17.1 +1.0
SMPL Sampolo 2.95 257 P Pn 23 53 19.9 +1.8
MSSA Maissana 3.03 301 Pn 23 53 19.5 +0.3
CEY Cerknica 3.05 17 *e*Pn Pn 23 53 18.8 -0.6
BOJS Bojanci 3.07 29 *e*Pn Pn 23 53 20.5 +0.9
BOJS Bojanci 3.07 29 P Pn 23 53 20.7 +1.1
BOJS AML AML
comp=E,334µm,1.5s
BOJS AML AML
comp=N,424µm,0.6s
PGF Pioggiola 3.07 266 *e*P Pn 23 53 20.6 +0.8
PGF *e*Sn **Sn 23 53 51.8 -5.0**
comp=N,51nm,1.0s
PGF Pioggiola 3.07 266 P Pn 23 53 20.2 +0.4
PGF Pioggiola 3.07 266 P Pn 23 53 20.5 +0.7
SRKY Kupres RS 3.17 66 *e*Pn Pn 23 53 23.0 +1.9
CGRP Cima Grappa 3.20 343 P Pn 23 53 22.0 +0.4
CGRP AML AML
comp=E,312µm,0.6s
CGRP AML AML
comp=N,345µm,0.6s
AMUR Altamura 3.22 126 P Pn 23 53 22.5 +0.8
AMUR AML AML
comp=E,132µm,1.2s
AMUR AML AML
comp=N,152µm,0.8s
MGRS Mrkonjic Grad 3.27 60 *e*Pn Pn 23 53 23.1 +0.8
MIGL Miglionico 3.32 131 AML AML
comp=E,587µm,0.9s
MIGL AML AML
comp=N,492µm,1.3s
STON Ston 3.34 88 *e*Pn Pn 23 53 22.0 -1.4
STON Ston 3.34 88 *e*Pn Pn 23 53 22.7 -0.7
STON *e*Sn **Sn 23 54 03.8 +0.5**
STON Ston 3.34 88 P Pn 23 53 22.6 -0.8
STON AML AML
comp=E,73µm,1.6s
STON AML AML
comp=N,87µm,0.7s
PRIJ Prijedor 3.35 49 *e*Pn Pn 23 53 23.6 +0.1
DOSS Dosso del Somm 3.36 336 P Pn 23 53 24.6 +0.9
LJU Ljubljana 3.36 17 AML AML
comp=E,1055µm,0.6s
LJU AML AML
comp=N,1360µm,0.6s
SALO Salr 3.37 327 Pn Pn 23 53 24.8 +1.0
AJAC Base Areonaval 3.37 256 P Pn 23 53 25.0 +1.2
CTI Castel Tesino 3.39 342 Pn Pn 23 53 24.2 +0.1
CTI Castel Tesino 3.39 342 P Pn 23 53 24.2 +0.1
CTI Castel Tesino 3.39 342 P Pn 23 53 24.5 +0.3
CTI AML AML
comp=N,204µm,0.3s
CTI AML AML
comp=E,196µm,0.6s
MPRI Monte Prat 3.41 358 P Pn 23 53 24.5 +0.1
MPRI AML AML
comp=E,242µm,1.4s
MPRI AML AML
comp=N,376µm,0.8s
MATE Matera 3.44 128 ⇓P Pn 23 53 25.2 +0.5
STAL STALIGIAL 3.44 355 Pn 23 53 24.7 -0.1
STAL STALIGIAL 3.44 355 P Pn 23 53 24.7 -0.1
STAL AML AML
comp=E,264µm,0.3s
STAL AML AML
comp=N,182µm,0.6s
STAL AML AML
comp=N,280µm,1.3s
STAL AML AML
comp=E,260µm,0.3s
CUC Castrocucco 3.47 144 Pn 23 53 25.9 +0.7
A051A Mrakovica 3.48 50 *e*Pn Pn 23 53 25.3 0.0
BLY Banja Luka 3.49 55 *e*Pn Pn 23 53 26.2 +0.8
BLY Banja Luka 3.49 55 *e*Pn Pn 23 53 26.8 +1.4
BLY *e*Sn **Sn 23 54 08.4 +1.4**
CIMO Cimolais 3.52 352 P Pn 23 53 25.6 -0.1
CIMO AML AML
comp=E,74µm,0.6s
CIMO AML AML
comp=N,78µm,0.6s
CIMO AML AML
comp=N,83µm,0.6s
CIMO AML AML
comp=E,74µm,0.6s
PTCC Patocco-Chiusa 3.58 2 P Pn 23 53 26.0 -0.6
PTCC AML AML
comp=N,138µm,0.7s
PTCC AML AML
comp=E,110µm,0.9s
PRED Cave del Predi 3.62 5 Pn 23 53 26.7 -0.6
CLUD Cludinico 3.63 357 Pn Pn 23 53 27.3 -0.1
ZONE Zone 3.65 324 P Pn 23 53 28.8 +1.1
ZONE AML AML
comp=E,96µm,1.6s
ZONE AML AML
comp=N,117µm,0.3s
ACOM Acomizza, Ital 3.73 4 AML AML
comp=N,254µm,0.7s
ACOM AML AML
comp=E,296µm,0.8s
ACOM AML AML
comp=N,268µm,0.7s
ACOM AML AML
comp=E,290µm,0.8s
ZOU Zoufplan 3.73 358 AML AML
comp=E,208µm,1.1s
ZOU AML AML
comp=N,174µm,0.8s
ZOU AML AML
comp=E,192µm,1.1s
ZOU AML AML
comp=N,148µm,1.0s
OBKA Obir 3.81 15 *e*Pn Pn 23 53 30.2 +0.3
OBKA Obir 3.81 15 *e*Pn Pn 23 53 30.7 +0.8
comp=N,1.8nm,0.2s
MYKA Terra Mystica 3.81 5 Pn Pn 23 53 31.0 +1.0
comp=N,4.6nm,0.2s,SNR=11
MYKA *e*Sn **Sn 23 54 17.2 +2.1**
comp=N,20nm,0.6s
TREB Trebinje 3.83 90 *e*Pn Pn 23 53 29.2 -0.9
TREB Trebinje 3.83 90 *e*Pn Pn 23 53 30.1 0.0
TREB *e*Sn **Sn 23 54 15.4 +0.1**
KOSI Kohlern 3.84 341 AML AML
comp=N,156µm,0.7s
KOSI AML AML
comp=E,210µm,0.9s
TAR1 Taranto 3.86 125 AML AML
comp=E,144µm,0.6s
TAR1 AML AML
comp=N,116µm,0.7s
A052A Srbac 3.88 53 *e*Pn Pn 23 53 30.0 -0.8
ABTA Abfaltersbach 3.94 354 Pn Pn 23 53 32.7 +1.0
comp=N,30nm,0.6s,SNR=16
ABTA *e*Sn **Sn 23 54 18.7 +0.5**
comp=N,26nm,0.5s
HCY Herceg Novi 3.96 94 *e*Pn Pn 23 53 32.3 +0.4
HCY Herceg Novi 3.96 94 *e*Pn Pn 23 53 32.8 +0.9
HCY *i* Sn **Sn 23 54 20.2 +1.7**
BRY Bratogost 3.96 87 *e*Pn Pn 23 53 30.1 -1.9
BRY Bratogost 3.96 87 ⇓*i*Pn Pn 23 53 32.8 +0.8
BRY *i* Sn **Sn 23 54 20.3 +1.5**
RISI Rein 4.19 350 AML AML
comp=E,234µm,0.4s
RISI AML AML
comp=N,310µm,0.4s
UPM Unac-Piva 4.24 83 *e*Pn Pn 23 53 37.0 +1.2
UPM Unac-Piva 4.24 83 *e*Pn Pn 23 53 36.6 +0.8
UPM *i* Sn **Sn 23 54 26.9 +1.3**
KBA Koelnbreinsper 4.25 2 Pn Pn 23 53 36.9 +0.9
comp=N,12nm,0.6s,SNR=17
KBA *e*Sn **Sn 23 54 26.2 +0.3**
comp=N,31nm,0.6s
KBA Koelnbreinsper 4.25 2 *e*Pn Pn 23 53 36.9 +0.9
CEME Cevo 4.26 92 ⇓*i*Pn Pn 23 53 36.9 +0.9
CEME *i* Sn **Sn 23 54 27.4 +1.4**
MUGIO Muggio 4.27 318 AML AML
comp=E,38µm,1.1s
MUGIO AML AML
comp=N,40µm,1.6s
NKME Niksic 4.27 89 ⇑*i*Pn Pn 23 53 37.2 +1.0
NKME *i* Sn **Sn 23 54 27.7 +1.5**
BUM Brajici-Budva 4.27 95 ⇓*i*Pn Pn 23 53 37.2 +1.0
BUM *i* Sn **Sn 23 54 27.3 +0.9**
SBF Sospel 4.29 286 *e*P Pn 23 53 37.4 +0.9
SBF *e*Sn **Sn 23 54 22.6 -4.3**
comp=N,31nm,0.8s
FUORN Ofenpass-Fuorn 4.31 332 Pn 23 53 38.4 +1.5
HAPS Han Pijesak,Bl 4.40 71 *e*Pn Pn 23 53 38.8 +0.7
DRME Dracevica, Mon 4.51 96 *e*Pn Pn 23 53 40.6 +1.2
DRME Dracevica, Mon 4.51 96 ⇓*i*Pn Pn 23 53 40.4 +1.0
DRME *i* Sn **Sn 23 54 33.4 +1.4**
PDG Podgorica 4.52 93 ⇓P Pn 23 53 40.9 +1.4
PDG Podgorica 4.52 93 Pn Pn 23 53 39.9 +0.4
PDG Podgorica 4.52 93 *e*Pn Pn 23 53 40.4 +0.9
PDG *e*Sn **Sn 23 54 32.6 +0.3**
TTG Podgorica 4.52 93 ⇓*i*Pn Pn 23 53 40.7 +1.2
TTG *i* Sn **Sn 23 54 33.8 +1.5**
FETA Feichten 4.53 339 Pn Pn 23 53 42.2 +2.4
comp=N,4.7nm,0.4s,SNR=10
TUE Stuetta 4.54 325 Pn Pn 23 53 40.2 +0.1
TIP Timpagrande 4.56 142 ⇓P Pn 23 53 41.9 +1.8
WTTA Wattenberg 4.56 347 *e*Pn Pn 23 53 43.0 +2.7
comp=N,4.0nm,0.3s
WTTA *e*Sn **Sn 23 54 37.0 +3.4**
comp=N,19nm,0.4s
WTTA Wattenberg 4.56 347 *e*Pn Pn 23 53 41.8 +1.5
DAVOX Davos/Dischmat 4.58 331 Pn Pn 23 53 42.9 +2.3
comp=N,1.9nm,0.3s,baz=148,slow=14,SNR=23
DAVOX Sn **Sn 23 54 35.8 +1.6**
comp=N,1.0nm,0.3s,baz=165,slow=21,SNR=5.0
comp=N,5.7nm,0.3s
ULC Ulcinj 4.59 99 *e*Pn Pn 23 53 41.7 +1.1
ULC *i* Sn **Sn 23 54 35.5 +1.3**
PLE Pljevlja 4.60 82 *e*Pn Pn 23 53 41.7 +1.0
PLE *i* Sn **Sn 23 54 35.6 +1.2**
SQTA Sankt Quirin 4.60 343 Pn 23 53 43.4 +2.6
SQTA Sankt Quirin 4.60 343 P Pn 23 53 43.4 +2.6
SQTA Sankt Quirin 4.60 343 Pn Pn 23 53 43.4 +2.6
comp=N,9.1nm,0.3s,SNR=18
SQTA *e*Sn **Sn 23 54 37.8 +3.4**
comp=N,17nm,0.3s
RUDO Rudo 4.61 78 *e*Pn Pn 23 53 40.3 -0.5
WATA Walderalm 4.64 347 Pn 23 53 43.5 +2.2
WATA Walderalm 4.64 347 P Pn 23 53 43.5 +2.2
WATA Walderalm 4.64 347 Pn Pn 23 53 43.5 +2.2
comp=N,3.8nm,0.4s,SNR=7.0
WATA *e*Sn **Sn 23 54 38.7 +3.1**
comp=N,21nm,0.5s
BBLS Lazići 4.68 75 *e*Pn Pn 23 53 42.7 +0.9
BBLS Lazići 4.68 75 *e*Pn Pn 23 53 42.5 +0.7
KOME Kolasin 4.68 88 ⇓*i*Pn Pn 23 53 42.8 +1.0
KOME *i* Sn **Sn 23 54 37.7 +1.3**
ARSA Arzberg 4.73 20 *e*Pn Pn 23 53 43.9 +1.5
comp=N,1.9nm,0.3s
ARSA *e*Sn **Sn 23 54 34.8 -2.6**
comp=N,6.5nm,0.5s
MOTA Moosalm 4.74 343 Pn 23 53 45.1 +2.4
MOTA Moosalm 4.74 343 P Pn 23 53 45.1 +2.4

MOTA	**Moosalm**	**4.74**	**343**	*e*Pn	**Pn**	**23 53 45.1**	**+2.4**
	comp=N,12nm,0.7s						
MOTA				*e*Sn	**Sn**	**23 54 41.9**	**+3.9**
	comp=N,17nm,0.6s						
KOVH	**Kovagotottos**	**4.81**	**46**	P	**Pn**	**23 53 43.0**	**-0.5**
SCTE	**Santa Cesarea**	**4.85**	**123**	Pn	**Pn**	**23 53 43.9**	**-0.2**
BIOA	**Bad Ischl, Aus**	**4.87**	**4**		**Pn**	**23 53 44.8**	**+0.4**
BIOA	**Bad Ischl, Aus**	**4.87**	**4**	*i* Pn	**Pn**	**23 53 44.8**	**+0.4**
	comp=N,14nm,0.4s,SNR=17						
BIOA				*e*Sn	**Sn**	**23 54 45.3**	**+4.2**
	comp=N,41nm,0.5s						
SURF	**Saint Ours**	**4.89**	**292**	P	**Pn**	**23 53 47.6**	**+2.8**
LMR	**La Mourre**	**4.89**	**278**	*e*P	**Pn**	**23 53 44.9**	**+0.3**
RJOB	**Jochberg**	**4.91**	**357**	*e*Pn	**Pn**	**23 53 46.4**	**+1.4**
RJOB				*e*Sn	**Sn**	**23 54 42.7**	**+0.6**
JAUF	**Jausiers**	**4.91**	**291**	P	**Pn**	**23 53 49.1**	**+4.0**
RETA	**Reutte**	**4.95**	**341**	*e*Pn	**Pn**	**23 53 47.8**	**+2.3**
	comp=N,5.7nm,0.5s						
RETA				*e*Sn	**Sn**	**23 54 48.4**	**+5.3**
	comp=N,4.7nm,0.3s						
IVA	**Berane**	**4.96**	**87**⇑	*i* Pn	**Pn**	**23 53 46.7**	**+1.1**
IVA				*i* Sn	**Sn**	**23 54 44.3**	**+1.1**
MBDF	**Montbardon**	**4.99**	**294**	*e*P	**Pn**	**23 53 48.9**	**+2.7**
MBDF				*e*Sn	**Sn**	**23 54 39.5**	**-4.7**
	comp=N,20nm,0.9s						
OBER	**Oberstdorf**	**5.00**	**337**	*e*Sn	**Sn**	**23 54 46.0**	**+1.7**
TRIGF	**Trigance**	**5.01**	**283**	P	**Pn**	**23 53 48.2**	**+1.8**
SJES	**Sjenica**	**5.02**	**83**	*e*Pn	**Pn**	**23 53 47.9**	**+1.4**
SJES				*e*Sn	**Sn**	**23 54 44.8**	**0.0**
DAVA	**Damuels**	**5.02**	**334**	*i* Pn	**Pn**	**23 53 49.8**	**+3.2**
	comp=N,7.7nm,0.4s,SNR=8.7						
DAVA				*e*Sn	**Sn**	**23 54 48.0**	**+3.1**
	comp=N,14nm,0.5s						
DAVA	**Damuels**	**5.02**	**334**	*e*Pn	**Pn**	**23 53 49.1**	**+2.5**
DAVA				*e*Sn	**Sn**	**23 54 49.0**	**+4.1**
PVY	**Plav**	**5.02**	**90**	*e*Pn	**Pn**	**23 53 47.5**	**+0.9**
PVY				*i* Sn	**Sn**	**23 54 45.9**	**+1.0**
CREF	**Crivoux**	**5.04**	**292**	P	**Pn**	**23 53 51.5**	**+4.7**
OGAG	**Argentiere**	**5.06**	**291**	P	Pb	23 53 53.9	-5.8
MOA	**Molln**	**5.08**	**9**	*i* Pn	**Pn**	**23 53 47.8**	**+0.6**
	comp=N,8.0nm,0.5s,SNR=13						
MOA				*e*Sn	**Sn**	**23 54 47.8**	**+1.7**
	comp=N,9.0nm,0.3s						
MOA	**Molln**	**5.08**	**9**	*e*Pn	**Pn**	**23 53 47.8**	**+0.6**
DIVS	**Divibare**	**5.14**	**73**	Pn	**Pn**	**23 53 48.4**	**+0.3**
DIVS	**Divibare**	**5.14**	**73**	*e*Pn	**Pn**	**23 53 47.2**	**-0.9**
DIVS	**Divibare**	**5.14**	**73**	*e*Pn	**Pn**	**23 53 49.1**	**+1.0**
MORH	**Mrgy, Hungar**	**5.18**	**47**	⇓P	Pn	23 53 53.3	+4.6
MORH	**Mrgy, Hungar**	**5.18**	**47**	P	**Pn**	**23 53 48.7**	**+0.1**
TIR	**Tirane**	**5.21**	**104**	⇓P	**Pn**	**23 53 48.9**	**-0.1**
TIR	**Tirane**	**5.21**	**104**	Pn	**Pn**	**23 53 49.0**	**-0.1**
TIR	**Tirane**	**5.21**	**104**	*e*Pn	**Pn**	**23 53 49.5**	**+0.5**
TIR				*e*Sn	**Sn**	**23 54 48.3**	**-1.1**
TIR	**Tirane**	**5.21**	**104**	P	**Pn**	**23 53 49.0**	**-0.1**
DIX	**Grande Dixence**	**5.24**	**310**	P	**Pn**	**23 53 53.3**	**+3.6**
DIX	**Grande Dixence**	**5.24**	**310**	S	**Sn**	**23 54 55.2**	**+4.8**
UBR	**Ueberruh**	**5.30**	**337**	*e*Pn	**Pn**	**23 53 53.5**	**+3.1**
VLO	**Vlora**	**5.31**	**114**		**Pn**	**23 53 51.1**	**+0.8**
VLO	**Vlora**	**5.31**	**114**	P	**Pn**	**23 53 51.1**	**+0.8**
LPG	**La Plagne**	**5.32**	**302**	*e*P	**Pn**	**23 53 53.4**	**+2.6**
LPG				*e*Sn	**Sn**	**23 54 47.6**	**-4.9**
	comp=N,8.8nm,0.5s						
FRGS	**Fruska Gora**	**5.34**	**62**	⇓P	**Pn**	**23 53 53.6**	**+2.8**
FRGS	**Fruska Gora**	**5.34**	**62**	*e*Pn	**Pn**	**23 53 49.4**	**-1.4**
MPLH	**Magyarpolny**	**5.34**	**34**	P	**Pn**	**23 53 49.5**	**-1.2**
LPL	**La Plagne**	**5.34**	**302**	*e*P	**Pn**	**23 53 54.4**	**+3.4**
LPL				*e*Sn	**Sn**	**23 54 47.6**	**-5.3**
	comp=N,16nm,0.8s						
LPL	**La Plagne**	**5.34**	**302**	P	**Pn**	**23 53 52.2**	**+1.2**
LPL				S	**Sn**	**23 54 53.9**	**+1.0**
RONA	**Rosalia, Austr**	**5.35**	**23**		**Pn**	**23 53 52.5**	**+1.5**
RONA					**Sn**	**23 54 52.5**	**-0.3**
RONA	**Rosalia, Austr**	**5.35**	**23**	*e*Pn	**Pn**	**23 53 52.5**	**+1.5**
	comp=N,1.0nm,0.1s						
RONA				*e*Sn	**Sn**	**23 54 52.5**	**-0.3**
	comp=N,6.0nm,0.7s						
SOP	**Sopron**	**5.42**	**25**	P	**Pn**	**23 53 53.8**	**+1.9**
CONA	**Conrad Observa**	**5.44**	**20**	*i* Pn	**Pn**	**23 53 52.7**	**+0.4**
	comp=N,1.1nm,0.2s,SNR=10						
CONA				*e*Sn	**Sn**	**23 54 52.9**	**-2.3**
	comp=N,7.4nm,0.5s						
TRUS	**Trudelj**	**5.46**	**73**	*e*Pn	**Pn**	**23 53 52.7**	**+0.3**
SENIN	**Lac Senin/Sane**	**5.47**	**312**		**Pn**	**23 53 53.8**	**+1.0**
RSL	**Roselend**	**5.49**	**304**	P	**Pn**	**23 53 55.5**	**+2.5**
RSL				S	**Sn**	**23 54 59.5**	**+3.0**
OGSI	**Sixt**	**5.61**	**307**	P	Pn	23 53 59.3	+4.8
GRUS	**Gruza**	**5.62**	**77**	*e*Pn	**Pn**	**23 53 55.8**	**+1.2**
GRUS				*e*Sn	**Sn**	**23 54 58.7**	**-0.6**
SMRF	**Simiane la Rot**	**5.64**	**284**	*e*P	**Pn**	**23 53 57.5**	**+2.6**
AIGLE	**Aigle**	**5.65**	**311**	S	**Sn**	**23 55 03.3**	**+3.1**
AIGLE	**Aigle**	**5.65**	**311**	P	**Pn**	**23 53 57.9**	**+2.8**
ORIF	**Oris-en-Rattie**	**5.66**	**294**	*e*P	**Pn**	**23 53 59.2**	**+4.0**
SELS	**Selova**	**5.85**	**83**	*e*Pn	**Pn**	**23 53 58.2**	**+0.3**
KEK	**Kerkira**	**5.90**	**120**	Pn	**Pn**	**23 53 58.8**	**+0.3**
BALST	**Balsthal**	**5.93**	**321**	P	**Pn**	**23 54 00.8**	**+1.7**
BALST	**Balsthal**	**5.93**	**321**	S	**Sn**	**23 55 09.0**	**+1.8**
OHR	**Ohrid**	**5.95**	**104**	*i* Pn	**Pn**	**23 54 00.6**	**+1.3**
OHR				*i* Sn	**Sn**	**23 55 07.9**	**+0.1**
GEC2	**GERESS Array S**	**6.03**	**3**		**Pn**	**23 53 59.7**	**-0.7**
GEC2	**GERESS Array S**	**6.03**	**3**	*e*Pn	**Pn**	**23 54 00.3**	**-0.1**
GEC2				*e*Sn	**Sn**	**23 55 06.7**	**-2.9**
GERES	**GERESS Array B**	**6.03**	**3**	Pn	**Pn**	**23 53 59.6**	**-0.7**
	comp=N,0.7nm,0.3s,baz=186,slow=12,SNR=17						
GERES				Sn	**Sn**	**23 55 06.5**	**-3.0**
	comp=N,2.2nm,0.3s,baz=170,slow=23,SNR=12						
GERES				LR	LR	23 56 35.0	
	comp=N,43nm,18.3s,baz=70,slow=42						
	comp=N,1.1nm,0.4s						
GERES	**GERESS Array B**	**6.03**	**3**	Pn	**Pn**	**23 53 59.9**	**-0.4**
CKRC	**Cesky Krumlov**	**6.04**	**7**	*e*PN	**Pn**	**23 53 59.8**	**-0.7**
KBN	**Korca**	**6.12**	**109**		**Pn**	**23 54 00.4**	**-1.3**
KBN	**Korca**	**6.12**	**109**	P	**Pn**	**23 54 00.4**	**-1.3**
BOURR	**Bourrignon**	**6.19**	**319**	P	**Pn**	**23 54 04.3**	**+1.8**
BOURR	**Bourrignon**	**6.19**	**319**	S	**Sn**	**23 55 16.2**	**+2.6**
FELD	**Feldberg im Sc**	**6.21**	**326**	P	**Pn**	**23 54 04.1**	**+1.2**
FELD	**Feldberg im Sc**	**6.21**	**326**	S	**Sn**	**23 55 12.0**	**-2.3**
MODS	**Modra-Piesok**	**6.25**	**26**	*e*P	**Pn**	**23 54 04.7**	**+1.4**
CABF	**La Chapelle**	**6.29**	**309**	*e*Pn	**Pn**	**23 54 02.5**	**-1.5**
CABF	**La Chapelle**	**6.29**	**309**	*e*P	**Pn**	**23 54 06.7**	**+2.7**
CABF				*e*Sn	**Sn**	**23 55 11.1**	**-5.0**
	comp=N,9.9nm,0.7s						
BOVS	**Bovan**	**6.30**	**80**	⇓P	**Pn**	**23 54 05.4**	**+1.4**
KHC	**Kasperske Hory**	**6.31**	**3**		**Pn**	**23 54 03.5**	**-0.7**
KHC	**Kasperske Hory**	**6.31**	**3**	*e*P	**Pn**	**23 54 03.9**	**-0.2**
KHC				*e*		23 55 12.1	
KHC	**Kasperske Hory**	**6.31**	**3**	*e*PN	**Pn**	**23 54 03.9**	**-0.2**
KHC				*e*SN	**Sn**	**23 55 12.1**	**-4.3**
KIZ	**Kirchzarten**	**6.31**	**326**	S	**Sn**	**23 55 15.5**	**-0.9**
KIZ	**Kirchzarten**	**6.31**	**326**	P	**Pn**	**23 54 05.3**	**+1.1**
WET	**Wettzell**	**6.32**	**358**	*e*Pn	**Pn**	**23 54 03.5**	**-0.8**
BARS	**Barje**	**6.37**	**87**	*e*Pn	**Pn**	**23 54 05.6**	**+0.6**
BARS				*e*Sn	**Sn**	**23 55 16.0**	**-2.0**
BFO	**Black Forest**	**6.46**	**330**	Pn	**Pn**	**23 54 05.6**	**-0.5**
BFO	**Black Forest**	**6.46**	**330**	P	**Pn**	**23 54 05.6**	**-0.5**
BFO	**Black Forest**	**6.46**	**330**	*e*Sn	**Sn**	**23 55 18.5**	**-1.5**
VIVF	**Saint-Julien-l**	**6.46**	**291**	*e*P	**Pn**	**23 54 08.4**	**+2.2**
RIVEL	**MONT RIVEL**	**6.47**	**310**	P	**Pn**	**23 54 11.0**	**+4.6**
RIVEL				S	**Sn**	**23 55 21.2**	**+0.8**
VOGT	**Vogtsburg - To**	**6.51**	**326**	S	**Sn**	**23 55 20.9**	**-0.5**
VOGT	**Vogtsburg - To**	**6.51**	**326**	P	**Pn**	**23 54 08.0**	**+1.1**
MOF	**Molkenrain**	**6.57**	**322**	P	**Pn**	**23 54 09.1**	**+1.3**
KRUC	**Moravsky**	**6.63**	**19**	*e*PN	**Pn**	**23 54 09.0**	**+0.5**
KRUC				*e*SN	**Sn**	**23 55 20.5**	**-3.7**
HINF	**Hinteralfeld**	**6.67**	**320**	*e*P	**Pn**	**23 54 10.6**	**+1.4**
HINF				*e*Sn	**Sn**	**23 55 20.9**	**-4.5**
	comp=N,21nm,0.6s						
BZS	**Buzias**	**6.69**	**63**	⇓P	**Pn**	**23 54 11.2**	**+1.9**
ZAGS	**Zajecar**	**6.70**	**78**	*e*Pn	**Pn**	**23 54 09.6**	**+0.2**
RONF	**Ronchamp**	**6.70**	**319**	P	**Pn**	**23 54 10.9**	**+1.4**
RONF				S	**Sn**	**23 55 25.6**	**-0.3**
STIP	**Stip**	**6.80**	**97**	*i* Pn	**Pn**	**23 54 13.7**	**+2.8**
STIP				*i* Sn	**Sn**	**23 55 30.6**	**+2.1**
ECH	**Echery**	**6.83**	**324**		**Pn**	**23 54 11.7**	**+0.4**
ECH	**Echery**	**6.83**	**324**	P	**Pn**	**23 54 11.7**	**+0.4**
ECH	**Echery**	**6.83**	**324**	P	**Pn**	**23 54 12.4**	**+1.0**
ECH				S	**Sn**	**23 55 28.4**	**-0.9**
LASF	**Ste Croix**	**6.88**	**284**	*e*P	**Pn**	**23 54 15.8**	**+3.8**
VYHS	**Vyhne**	**6.92**	**33**	*e*P	**Pn**	**23 54 14.7**	**+2.2**
VYHS				*e*		23 55 29.4	
CDF	**Champ du Feu**	**6.94**	**326**	*e*P	**Pn**	**23 54 13.6**	**+0.8**
CDF				*e*Sn	**Sn**	**23 55 27.6**	**-4.3**
	comp=N,12nm,0.6s						
ZAPS	**Zavoj**	**6.96**	**83**	*e*Pn	**Pn**	**23 54 14.2**	**+1.1**
ZAPS				*e*Sn	**Sn**	**23 55 30.5**	**-2.0**
SIRR	**Siria**	**6.98**	**58**	⇑P	**Pn**	**23 54 15.8**	**+2.5**
GRFO	**Grafenberg**	**6.99**	**350**	Pn	**Pn**	**23 54 13.9**	**+0.5**
GRFO	**Grafenberg**	**6.99**	**350**	P	**Pn**	**23 54 13.9**	**+0.5**
BLKB	**Belogradchik**	**7.00**	**80**	P	**Pn**	**23 54 14.2**	**+0.5**
BLKB				⇓P	Pb	23 54 14.5	-18
HERR	**Herculane**	**7.00**	**70**	⇑P	**Pn**	**23 54 16.3**	**+2.7**
HAU	**Haudompre**	**7.05**	**320**	*e*P	**Pn**	**23 54 15.7**	**+1.4**
HAU				*e*Sn	**Sn**	**23 55 29.8**	**-4.8**
	comp=N,31nm,0.7s						
VAY	**Valandovo**	**7.17**	**99**	*i* Pn	**Pn**	**23 54 16.8**	**+0.9**
GZR	**Gura Zlata**	**7.38**	**66**	⇓P	**Pn**	**23 54 21.2**	**+2.3**
VTS	**Vitosha**	**7.43**	**88**	⇓P	**Pn**	**23 54 19.5**	**-0.1**
VTS	**Vitosha**	**7.43**	**88**	Pn	**Pn**	**23 54 19.8**	**+0.1**
VTS	**Vitosha**	**7.43**	**88**	P	**Pn**	**23 54 19.8**	**+0.1**
LIT	**Litokhoron**	**7.52**	**108**		**Pn**	**23 54 20.6**	**-0.2**
LIT	**Litokhoron**	**7.52**	**108**	P	**Pn**	**23 54 20.6**	**-0.2**
SMF	**Signal de Mont**	**7.65**	**303**	*e*P	**Pn**	**23 54 25.0**	**+2.5**
SMF				*e*Sn	**Sn**	**23 55 42.4**	**-6.9**
	comp=N,13nm,0.9s						
KEST	**Kesra**	**7.68**	**204**	Pn	Pn	23 54 28.1	+5.1
	comp=N,0.2nm,0.3s,baz=285,slow=9.0,SNR=4.9						
KEST				LR	LR	23 57 26.5	
	comp=N,99nm,21.5s,baz=259,slow=38						
	comp=N,1.3nm,0.6s						
PAGF	**Fort de Pagny**	**7.73**	**320**	*e*P	**Pn**	**23 54 25.0**	**+1.4**
	baz=137						
PAGF				*e*Sn	**Sn**	**23 55 45.7**	**-5.7**
	comp=N,40nm,1.1s						
SFTF	**Sexfontaines**	**7.83**	**316**	*e*Pn	**Pn**	**23 54 22.9**	**-2.1**
SFTF	**Sexfontaines**	**7.83**	**316**	*e*P	**Pn**	**23 54 28.3**	**+3.3**
	baz=133						
SFTF	**Sexfontaines**	**7.83**	**316**	*e*Pg	Pg	23 54 54.3	-6.3
SFTF				*e*Sn	**Sn**	**23 55 47.0**	**-6.8**
	comp=N,6.3nm,0.6s						
LOR	**Lormes**	**7.93**	**307**	*e*P	**Pn**	**23 54 28.8**	**+2.4**
	baz=127						
LOR				*e*Sn	**Sn**	**23 55 50.2**	**-6.2**
	comp=N,7.9nm,0.6s						
AVF	**Avril sur Loir**	**8.01**	**303**	*e*P	**Pn**	**23 54 30.2**	**+2.7**
MEZF	**Maizieres J'vi**	**8.02**	**318**	*e*P	**Pn**	**23 54 31.3**	**+3.8**
	baz=138						
MEZF				*e*Sn	**Sn**	**23 55 52.2**	**-6.2**
	comp=N,5.9nm,0.6s						
MTLF	**Montolieu**	**8.02**	**277**	*e*P	**Pn**	**23 54 31.1**	**+3.5**
SSF	**Saint Saulge**	**8.04**	**305**	*e*P	**Pn**	**23 54 29.9**	**+2.0**
SSF				*e*Sn	**Sn**	**23 55 51.5**	**-7.5**
	comp=N,2.8nm,0.6s						
SAVF	**Savonnieres en**	**8.06**	**319**	*e*P	**Pn**	**23 54 32.5**	**+4.4**
	baz=143						
BGF	**Bois d'Agland**	**8.23**	**300**	*e*Pn	**Pn**	**23 54 28.1**	**-2.4**
BGF	**Bois d'Agland**	**8.23**	**300**	*e*P	**Pn**	**23 54 33.4**	**+2.9**
BGF				*e*Sn	**Sn**	**23 55 55.7**	**-8.0**
	comp=N,6.1nm,0.6s						
CAF	**Calviac**	**8.28**	**288**	*e*P	**Pn**	**23 54 33.9**	**+2.7**
CAF	**Calviac**	**8.28**	**288**	P	**Pn**	**23 54 33.1**	**+1.9**
CLL	**Collm**	**8.48**	**359**	Pn	**Pn**	**23 54 32.9**	**-0.9**
CLL	**Collm**	**8.48**	**359**	*e*P	**Pn**	**23 54 33.0**	**-0.9**
CLL	**Collm**	**8.48**	**359**	*e*Pn	**Pn**	**23 54 33.0**	**-0.9**
CLL				*e*Sn	**Sn**	**23 56 02.0**	**-7.8**
CLL				*e*x	x	23 56 53.0	
CLL				*e*Sg	**Sg**	**23 57 02.0**	**-0.7**
	comp=Z,8.0nm,0.9s						
TCF	**Toulx Ste Croi**	**8.54**	**298**	*e*P	**Pn**	**23 54 37.1**	**+2.3**
HYF	**Humbligny**	**8.66**	**304**	*e*Pn	**Pn**	**23 54 36.2**	**-0.2**
ITM	**Ithomi**	**8.78**	**127**	Pn	**Pn**	**23 54 39.6**	**+1.5**
LFF	**La Frestale**	**9.21**	**287**	*e*Pn	Pn	23 54 39.4	-4.5
RDO	**Rodhopi**	**9.38**	**96**	Pn	**Pn**	**23 54 47.1**	**+0.9**
EPF	**Esparros**	**9.40**	**276**	*e*Pn	**Pn**	**23 54 42.4**	**-4.2**
BURAR	**Bucovina Array**	**9.76**	**57**	Pn	**Pn**	**23 54 52.6**	**+1.1**
BURAR	**Bucovina Array**	**9.76**	**57**	P	**Pn**	**23 54 53.9**	**+2.3**
BUR08	**Bucovina Ar. S**	**9.76**	**56**	Pn	**Pn**	**23 54 51.8**	**+0.2**
IDI	**Anoyia**	**11.82**	**126**	Pn	**Pn**	**23 55 20.6**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=330,slow=2.7,SNR=2.4						
IDI				Sn	**Sn**	**23 57 25.6**	**-6.3**
	comp=Z,0.1nm,0.3s,baz=58,slow=19,SNR=1.3						
	comp=Z,20nm,1.2s						
ESDC	**Sonseca Array**	**13.26**	**262**	Pn	**Pn**	**23 55 41.3**	**+2.0**
	baz=74,slow=14,SNR=3.3						
	comp=Z,0.3nm,0.8s						
ESDC	**Sonseca Array**	**13.26**	**262**	Pn	**Pn**	**23 55 36.9**	**-2.4**
AKASG	**Malin Array Be**	**13.52**	**49**	LR	LR	00 01 07.6	
	comp=Z,34nm,20.9s,baz=276,slow=39						
NOA	**NORSAR Array B**	**18.27**	**357**	LR	LR	00 03 45.7	
	comp=Z,20nm,20.6s,baz=245,slow=37						
OBN	**Obninsk**	**19.57**	**43**⇓	*e*P	**P**	**23 56 59.0**	**+0.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MMAI	**Mount Meron Ar**	**20.05**	**112**	P	Pn	23 57 05.7	-0.5
	comp=Z,1.2nm,0.6s,baz=323,slow=12,SNR=1.7						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**20.19**	**18**	P	**P**	**23 57 04.7**	**-0.9**
	comp=Z,5.2nm,1.1s,baz=206,slow=9.1,SNR=2.8						
	comp=Z,5.2nm,1.1s						
FINES	**FINESS Array B**	**20.19**	**18**	P	**P**	**23 57 05.2**	**-0.4**
FINES	**FINESS Array B**	**20.19**	**18**	P	**P**	**23 57 05.2**	**-0.4**
KIV	**Kislovodsk**	**21.44**	**77**	*i* P	**P**	**23 57 18.0**	**-1.5**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	**Klimovskoe**	**24.03**	**32**	*e*P	**P**	**23 57 46.8**	**+0.8**
KLMR				pmax	pmax		
	comp=Z,14nm,1.5s						
KLMR	**Klimovskoe**	**24.03**	**32**	*e*P	**P**	**23 57 46.9**	**+0.9**
KLMR				AMP		23 57 50.3	
	comp=Z,14nm,1.5s						
BELG	**Belogornoye**	**24.92**	**55**	*e*P	**P**	**23 57 55.5**	**+1.4**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TOA0	**Torodi Ar. Sit**	**31.19**	**202**	P	**P**	**23 58 50.6**	**0.0**
TOA0				IAmb	IAmb	23 59 18.1	
	comp=Z,4.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.19**	**202**	P	**P**	**23 58 52.7**	**+2.2**
	comp=Z,0.8nm,0.9s,baz=15,slow=9.9,SNR=4.1						
	comp=Z,0.8nm,0.9s						
ARU	**Arti**	**31.77**	**49***d*	*i* P	**P**	**23 58 56.6**	**+1.3**
ARU						23 59 57.5	
ARU				S	**S**	**00 04 06.5**	**+1.1**
ARU				SS	**SnSn**	**00 05 50.9**	**-1.1**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**38.64**	**54**	P	**P**	**23 59 55.6**	**+1.1**
BRVK				IAmb	IAmb	00 00 05.7	
	comp=Z,1.3nm,0.7s						
BRVK	**Borovoye**	**38.64**	**54**	P	**P**	**23 59 55.6**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**38.71**	**54**	LR	LR	00 16 12.1	
	comp=Z,38nm,19.0s,baz=300,slow=37						
AAK	**Ala-Archa**	**44.15**	**68**⇓	*e*P	**P**	**00 00 39.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MK31	**Makanchi Array**	**47.77**	**60**⇑	*e*P	**P**	**00 01 09.6**	**+1.3**
MKAR	**Makanchi Array**	**47.77**	**60**	P	**P**	**00 01 09.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=273,slow=7.5,SNR=3.9						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**47.77**	**60**	P	**P**	**00 01 08.1**	**-0.2**
DGZ	**Jazzator, Alta**	**49.87**	**55***ce*	P	**P**	**00 01 24.1**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SCHQ	**Schefferville**	**51.21**	**313**	P	**P**	**00 01 34.5**	**0.0**
SCHQ				IAmb	IAmb	00 01 37.0	
	comp=Z,12nm,1.2s						
WMQ	**Urumqi**	**52.46**	**62**	*e*P	**P**	**00 01 45.5**	**+1.4**
WMQ				pP	sP	00 01 50.5	+2.8
WMQ				sP	pP	00 01 54.0	+7.2
TIXI	**Tiksi**	**57.22**	**20**⇑	*e*P	**P**	**00 02 16.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.1s						
SONM	**Songino Array**	**61.80**	**50**	P	**P**	**00 02 51.8**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=292,slow=7.6,SNR=2.8						
	comp=Z,0.4nm,0.8s						
HHC	**Hu-ho-hao-te**	**68.92**	**54**	*e*P	**P**	**00 03 36.8**	**+0.5**
PZH	**PanZhiHua**	**71.53**	**71**	P	**P**	**00 03 53.5**	**+0.9**
XAN	**Xi'an**	**71.58**	**61**	P	**P**	**00 03 48.5**	**-4.2**

ROM 27 00:04:43.0±0.2, 42°.945N±0°.007×13°.144E±0°.009, h8km±1km, ML2.3/9, 2C-5D, Error ellipse: s-maj=0.8km s-min=0.1km az=7.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**160**	P	Pg	00 04 45.4	-0.1
T1245				S	Sg	00 04 47.3	+0.1
T1245				AML	AML		
	comp=N,8490μm,0.1s						
T1245				AML	AML		
	comp=E,5990μm,1.1s						
T1245				AML	AML		
	comp=E,6135μm,1.0s						
T1245				AML	AML		
	comp=N,8065μm,0.2s						
T1245				AML	AML		
	comp=N,8505μm,0.1s						
T1245				AML	AML		
	comp=E,5990μm,0.9s						
T1245				AML	AML		
	comp=E,6135μm,1.0s						
T1216	**Preci, Frazion**	**0.11**	**239**	P	Pg	00 04 45.6	+0.1
T1216				S	Sg	00 04 48.4	+1.1
T1216				AML	AML		
	comp=E,2240μm,1.4s						
T1216				AML	AML		
	comp=N,2648μm,0.3s						
T1216				AML	AML		
	comp=E,2235μm,1.4s						
T1216				AML	AML		
	comp=N,2645μm,0.3s						
T1216				AML	AML		
	comp=E,2235μm,0.6s						
MMO1	**Montemonaco**	**0.14**	**109**	P	Pg	00 04 47.0	+0.9
MMO1				S	Sg	00 04 49.6	+1.3
T1241	**Roccafluvione,**	**0.23**	**113**	P	Pg	00 04 48.4	+0.8
T1241				S	Sg	00 04 52.0	+1.2
T1241				AML	AML		
	comp=E,436μm,0.2s						
T1241				AML	AML		
	comp=N,378μm,1.2s						
MDAR	**Monte D'Aria**	**0.25**	**360**	P	Pg	00 04 50.0	+1.9
MDAR				S	Sg	00 04 52.4	+0.9
SEF1	**Sefro**	**0.25**	**325**	P	Pg	00 04 49.6	+1.6
SEF1				S	Sg	00 04 51.9	+0.5
SEF1				AML	AML		
	comp=E,4370μm,0.3s						
SEF1				AML	AML		
	comp=E,4365μm,0.3s						
SEF1				AML	AML		
	comp=N,3090μm,0.3s						
SEF1				AML	AML		
	comp=E,2362μm,1.0s						
SEF1				AML	AML		
	comp=N,2380μm,0.8s						
T1215	**Vallo di Nera,**	**0.25**	**235**	P	Pg	00 04 49.1	+1.1
T1215				S	Sg	00 04 53.1	+1.8
T1215				AML	AML		
	comp=N,214μm,0.3s						
T1215				AML	AML		
	comp=E,247μm,0.3s						
T1215				AML	AML		
	comp=E,252μm,0.3s						
T1215				AML	AML		
	comp=N,211μm,0.3s						
T1217	**Poggiodomo (PG**	**0.28**	**214**	P	Pg	00 04 49.5	+0.8
T1217				S	Sb	00 04 53.9	-1.3
T1217				AML	AML		
	comp=N,247μm,1.3s						
T1217				AML	AML		
	comp=E,307μm,4.5s						
T1204	**Amatrice, Fraz**	**0.30**	**155**	P	Pb	00 04 50.1	-0.6
GAG1	**Gagliole**	**0.30**	**349**	P	Pb	00 04 50.9	+0.2
T1243	**Rocca Santa Ma**	**0.33**	**138**

OSSC				AML	AML		
	comp=N,6595µm,0.4s						
OSSC				AML	AML		
	comp=E,6475µm,0.4s						
CSNT	**Castellina Chi**	**0.24**	**122**	P	**Pg**	**00 05 46.4**	**-0.2**
CSNT				S	**Sg**	**00 05 50.4**	**+0.2**
CSNT	**Castellina Chi**	**0.24**	**122**	⇓P	**Pg**	**00 05 46.4**	**-0.2**
CSNT				S	**Sg**	**00 05 50.5**	**+0.3**
CSNT				AML	AML		
	comp=E,2555µm,1.1s						
CSNT				AML	AML		
	comp=N,2445µm,0.2s						
MPPT	**Montemurlo**	**0.36**	**10**	P	**Pg**	**00 05 48.4**	**-0.3**
MPPT				S	**Sg**	**00 05 53.9**	**+0.3**
MPPT				AML	AML		
	comp=E,2070µm,1.5s						
MPPT				AML	AML		
	comp=N,2120µm,1.5s						
MPPT				AML	AML		
	comp=E,2075µm,1.5s						
MPPT				AML	AML		
	comp=N,2120µm,0.5s						
PII	**Pisa**	**0.37**	**289**	P	**Pg**	**00 05 48.8**	**0.0**
PII				S	**Sg**	**00 05 53.7**	**-0.1**
PII	**Pisa**	**0.37**	**289**	P	**Pg**	**00 05 48.8**	**0.0**
PII				S	**Sg**	**00 05 53.8**	**-0.1**
PII				AML	AML		
	comp=E,4455µm,0.2s						
PII				AML	AML		
	comp=N,5495µm,0.3s						
PII				AML	AML		
	comp=N,5495µm,1.7s						
PII				AML	AML		
	comp=E,4455µm,1.8s						
FROS	**Frosini**	**0.41**	**164**	P	**Pg**	**00 05 49.6**	**+0.1**
FROS				S	**Sg**	**00 05 55.4**	**+0.4**
FROS	**Frosini**	**0.41**	**164**	⇓P	**Pg**	**00 05 49.6**	**+0.1**
FROS				S	**Sg**	**00 05 55.4**	**+0.4**
FROS				AML	AML		
	comp=N,3865µm,0.7s						
FROS				AML	AML		
	comp=N,3865µm,0.7s						
FROS				AML	AML		
	comp=E,5400µm,0.2s						
FROS				AML	AML		
	comp=N,3865µm,1.3s						
MTCR	**Monte La Croce**	**0.43**	**359**	P	**Pg**	**00 05 49.6**	**-0.3**
MTCR				S	**Sg**	**00 05 55.1**	**-0.6**
MTCR	**Monte La Croce**	**0.43**	**359**	P	**Pg**	**00 05 49.7**	**-0.3**
MTCR				S	**Sg**	**00 05 56.0**	**+0.4**
MTCR				AML	AML		
	comp=E,1850µm,0.2s						
MTCR				AML	AML		
	comp=N,1518µm,0.5s						
MTCR				AML	AML		
	comp=E,1856µm,0.2s						
MTCR				AML	AML		
	comp=N,1516µm,0.5s						
RUFI	**Rufina**	**0.44**	**57**	P	**Pg**	**00 05 49.8**	**-0.2**
RUFI				S	**Sg**	**00 05 56.2**	**+0.3**
RUFI	**Rufina**	**0.44**	**57**	⇑P	**Pg**	**00 05 49.8**	**-0.2**
RUFI				S	**Sg**	**00 05 56.0**	**0.0**
RUFI				AML	AML		
	comp=E,864µm,1.5s						
RUFI				AML	AML		
	comp=N,1014µm,0.7s						
POPM	**Popiglio**	**0.48**	**338**	P	**Pg**	**00 05 50.5**	**-0.3**
POPM				S	**Sg**	**00 05 57.1**	**-0.2**
POPM	**Popiglio**	**0.48**	**338**	⇓P	**Pg**	**00 05 50.6**	**-0.2**
POPM				S	**Sb**	**00 05 57.6**	**-1.1**
POPM				AML	AML		
	comp=E,1805µm,1.0s						
POPM				AML	AML		
	comp=N,1640µm,0.2s						
MAIM	**Mastiano**	**0.49**	**310**	P	**Pg**	**00 05 50.8**	**-0.2**
MAIM				S	**Sg**	**00 05 57.0**	**-0.4**
MAIM	**Mastiano**	**0.49**	**310**	P	**Pg**	**00 05 50.8**	**-0.2**
MAIM				S	**Sg**	**00 05 57.1**	**-0.4**
MAIM				AML	AML		
	comp=E,592µm,1.2s						
MAIM				AML	AML		
	comp=N,684µm,1.2s						
MAIM				AML	AML		
	comp=N,684µm,0.8s						
TRIF	**Trifonti**	**0.49**	**189**	⇑P	**Pg**	**00 05 51.2**	**+0.1**
TRIF				S	**Sg**	**00 05 58.2**	**+0.6**
TRIF				AML	AML		
	comp=E,1925µm,0.5s						
TRIF				AML	AML		
	comp=N,1735µm,0.4s						
TRIF				AML	AML		
	comp=N,1730µm,0.3s						
SEI	**Scarperia**	**0.52**	**29**	P	**Pg**	**00 05 51.5**	**-0.2**
SEI				S	**Sb**	**00 05 59.0**	**-0.8**
SEI	**Scarperia**	**0.52**	**29**	⇑P	**Pg**	**00 05 51.3**	**-0.3**
SEI				AML	AML		
	comp=N,2820µm,0.4s						
SEI				AML	AML		
	comp=N,2820µm,1.6s						
SEI				AML	AML		
	comp=E,2130µm,0.3s						
BDI	**Bagni Di Lucca**	**0.55**	**327**	P	**Pg**	**00 05 51.8**	**-0.3**
BDI				AML	AML		
	comp=E,1110µm,0.3s						
BDI				AML	AML		
	comp=N,755µm,1.1s						
BDI				AML	AML		
	comp=N,320µm,1.1s						
BDI				AML	AML		
	comp=E,536µm,0.3s						
BDI				AML	AML		
	comp=E,1112µm,0.3s						
BDI				AML	AML		
	comp=N,754µm,1.1s						
CARD	**Cardoso**	**0.57**	**318**	P	**Pg**	**00 05 52.1**	**-0.4**
CARD	**Cardoso**	**0.57**	**318**	⇓P	**Pg**	**00 05 52.2**	**-0.3**
CARD				AML	AML		
	comp=E,1130µm,0.3s						
CARD				AML	AML		
	comp=N,1275µm,0.3s						
FNVD	**Fontana Vidola**	**0.57**	**8**	⇓P	**Pg**	**00 05 52.6**	**-0.1**
FNVD				S	**Sb**	**00 06 00.8**	**-0.7**
FNVD				AML	AML		
	comp=E,684µm,1.5s						
FNVD				AML	AML		
	comp=N,1125µm,0.4s						
FNVD				AML	AML		
	comp=E,684µm,0.5s						
ASQU	**Asqua**	**0.60**	**71**	P	**Pg**	**00 05 53.1**	**-0.1**
ASQU				S	**Sg**	**00 06 01.2**	**+0.1**
ASQU	**Asqua**	**0.60**	**71**	P	**Pg**	**00 05 53.0**	**-0.1**
ASQU				S	**Sg**	**00 06 01.2**	**+0.1**
ASQU				AML	AML		
	comp=N,751µm,0.3s						
ASQU				AML	AML		
	comp=E,701µm,0.2s						
BRIS	**BRISIGHELLA**	**0.66**	**33**	P	**Pn**	**00 05 56.9**	**+0.5**
BRIS				AML	AML		
	comp=E,404µm,0.6s						
BRIS				AML	AML		
	comp=N,386µm,1.3s						
BRIS				AML	AML		
	comp=E,404µm,0.6s						
BRIS				AML	AML		
	comp=N,386µm,0.7s						
SFI	**Santa Sofia**	**0.68**	**63**	P	**Pg**	**00 05 54.5**	**-0.1**
SFI				S	**Sg**	**00 06 03.6**	**0.0**
SFI				AML	AML		
	comp=E,740µm,0.7s						
SFI				AML	AML		
	comp=N,554µm,0.4s						
SFI				AML	AML		
	comp=E,746µm,0.8s						
SFI				AML	AML		
	comp=N,542µm,0.4s						
SFI				AML	AML		
	comp=N,555µm,0.4s						
SFI				AML	AML		
	comp=E,745µm,0.8s						
SFI				AML	AML		
	comp=E,745µm,1.2s						
SFI				AML	AML		
	comp=E,740µm,1.3s						
SFI				AML	AML		
	comp=N,542µm,1.6s						
SFI				AML	AML		
	comp=N,555µm,1.6s						
CRE	**Caprese Michel**	**0.69**	**88**	P	**Pg**	**00 05 54.7**	**-0.1**
CRE				S	**Sb**	**00 06 04.3**	**-0.5**
CRE				AML	AML		
	comp=N,716µm,0.3s						
CRE				AML	AML		
	comp=E,682µm,1.5s						
CRE				AML	AML		
	comp=E,682µm,0.5s						
LMD	**Lutirano**	**0.70**	**47**	P	**Pg**	**00 05 54.7**	**-0.2**
LMD				S	**Sb**	**00 06 05.1**	**+0.2**
LMD	**Lutirano**	**0.70**	**47**	⇓P	**Pg**	**00 05 54.7**	**-0.2**
LMD				S	**Sb**	**00 06 04.5**	**-0.4**
LMD				AML	AML		
	comp=N,512µm,0.2s						
LMD				AML	AML		
	comp=E,530µm,0.6s						
VLC	**Villacollemand**	**0.72**	**321**	P	**Pg**	**00 05 54.9**	**-0.4**
VLC	**Villacollemand**	**0.72**	**321**	P	**Pg**	**00 05 54.9**	**-0.4**
VLC				S	**Sg**	**00 06 04.8**	**+0.1**
VLC				AML	AML		
	comp=N,282µm,0.8s						
VLC				AML	AML		
	comp=N,290µm,0.9s						
VLC				AML	AML		
	comp=E,318µm,1.3s						
VLC				AML	AML		
	comp=N,290µm,1.1s						
VLC				AML	AML		
	comp=N,282µm,1.2s						
VLC				AML	AML		
	comp=E,293µm,0.7s						
VLC				AML	AML		
	comp=E,318µm,0.7s						
SARO	**Sassorosso**	**0.73**	**323**	P	**Pg**	**00 05 55.0**	**-0.6**
SARO				S	**Sb**	**00 06 07.1**	**+1.2**
ZCCA	**Zocca**	**0.75**	**358**	P	**Pn**	**00 05 57.0**	**-0.7**
ZCCA	**Zocca**	**0.75**	**358**	P	**Pb**	**00 05 56.1**	**-0.2**
ZCCA				AML	AML		
	comp=E,420µm,0.4s						
ZCCA				AML	AML		
	comp=E,403µm,1.4s						
ZCCA				AML	AML		
	comp=N,548µm,1.6s						
ZCCA				AML	AML		
	comp=N,548µm,0.4s						
ZCCA				AML	AML		
	comp=E,403µm,0.6s						
ZCCA				AML	AML		
	comp=N,582µm,0.4s						
GSCL	**Gusciola**	**0.81**	**338**	P	**Pb**	**00 05 57.1**	**-0.2**
GSCL				S	**Sb**	**00 06 09.2**	**+1.1**
GSCL	**Gusciola**	**0.81**	**338**	P	**Pb**	**00 05 57.1**	**-0.2**
GSCL				AML	AML		
	comp=E,604µm,1.2s						
GSCL				AML	AML		
	comp=N,639µm,0.3s						
GSCL				AML	AML		
	comp=E,604µm,0.8s						
CASP	**Castiglione de**	**0.82**	**187**	⇑P	**Pb**	**00 05 57.5**	**+0.1**
CASP				S	**Sb**	**00 06 08.4**	**0.0**
CASP				AML	AML		
	comp=N,599µm,0.5s						
CASP				AML	AML		
	comp=N,599µm,1.5s						
CASP				AML	AML		
	comp=E,782µm,0.4s						
SSP9	**Sansepolcro**	**0.82**	**92**	P	**Pb**	**00 05 57.4**	**-0.1**
ARCI	**Arcidosso**	**0.82**	**155**	P	**Pg**	**00 05 57.2**	**-0.1**
ARCI				S	**Sb**	**00 06 08.4**	**-0.2**
ARCI				AML	AML		
	comp=N,328µm,1.4s						
ARCI				AML	AML		
	comp=E,237µm,0.6s						
ARCI				AML	AML		
	comp=N,328µm,0.6s						
GROG	**Isola di Gorgo**	**0.83**	**258**	P	**Pg**	**00 05 57.3**	**-0.1**
GROG				S	**Sb**	**00 06 08.8**	**+0.1**
GROG	**Isola di Gorgo**	**0.83**	**258**	P	**Pg**	**00 05 57.4**	**-0.1**
EQUI	**Equi**	**0.84**	**313**	P	**Pg**	**00 05 57.1**	**-0.5**
EQUI				S	**Sg**	**00 06 08.2**	**-0.4**
EQUI	**Equi**	**0.84**	**313**	P	**Pg**	**00 05 57.1**	**-0.5**
EQUI				AML	AML		
	comp=E,440µm,0.4s						
EQUI				AML	AML		
	comp=N,434µm,0.4s						
EQUI				AML	AML		
	comp=E,440µm,1.6s						
MTRZ	**Monterenzio**	**0.84**	**23**	P	**Pg**	**00 05 55.4**	**-2.3**
MTRZ				AML	AML		
	comp=N,470µm,0.5s						
MTRZ				AML	AML		
	comp=N,462µm,0.4s						
MTRZ				AML	AML		
	comp=E,686µm,0.5s						
MTRZ				AML	AML		
	comp=N,470µm,1.5s						
MTRZ				AML	AML		
	comp=E,706µm,0.5s						
SF01	**Poggio Pratacc**	**0.89**	**152**	⇑P	**Pg**	**00 05 58.3**	**-0.2**
SF01				AML	AML		
	comp=E,430µm,0.4s						
SF01				AML	AML		
	comp=N,622µm,1.4s						
SF01				AML	AML		
	comp=N,622µm,0.6s						
FIVI	**Fivizzano**	**0.90**	**315**	P	**Pg**	**00 05 58.5**	**-0.3**
FIVI				S	**Sn**	**00 06 12.2**	**-0.5**
SF04	**Casetta**	**0.90**	**148**	P	**Pb**	**00 05 58.8**	**-0.1**
BADI	**Badiali**	**0.91**	**95**	P	**Pb**	**00 05 58.8**	**-0.1**
PLMA	**Palmaria, Port**	**0.95**	**299**	P	**Pg**	**00 05 59.2**	**-0.5**
PLMA	**Palmaria, Port**	**0.95**	**299**	⇓P	**Pg**	**00 05 59.2**	**-0.5**
PLMA				AML	AML		
	comp=E,252µm,1.3s						
PLMA				AML	AML		
	comp=N,206µm,0.3s						
PLMA				AML	AML		
	comp=E,252µm,0.7s						
PLMA				AML	AML		
	comp=N,206µm,1.7s						
ATMI	**Monte Miggiano**	**0.96**	**106**	⇑P	**Pn**	**00 06 00.6**	**+0.1**
ATMI				AML	AML		
	comp=N,774µm,0.5s						
ATMI				AML	AML		
	comp=N,774µm,0.5s						
ATMI				AML	AML		
	comp=E,710µm,0.5s						
ATMI				AML	AML		
	comp=E,710µm,1.5s						
SACS	**San Casciano d**	**1.00**	**138**	⇑P	**Pb**	**00 06 00.5**	**-0.1**
SACS				AML	AML		
	comp=E,156µm,0.4s						
SACS				AML	AML		
	comp=N,190µm,1.6s						
SACS				AML	AML		
	comp=N,198µm,1.6s						
SACS				AML	AML		
	comp=E,145µm,0.4s						
ATPI	**Pietralunga -**	**1.03**	**98**	⇑P	**Pg**	**00 06 00.9**	**-0.3**
ATPI				AML	AML		
	comp=N,214µm,0.4s						
ATPI				AML	AML		
	comp=E,231µm,0.5s						
APEC	**Apecchio**	**1.03**	**92**	⇑P	**Pb**	**00 06 01.1**	**0.0**
APEC				S	**Sn**	**00 06 16.0**	**+0.2**
CELB	**S.Piero in Cam**	**1.03**	**215**	P	**Pg**	**00 06 01.1**	**-0.2**
CELB				S	**Sb**	**00 06 15.0**	**+0.3**
CELB	**S.Piero in Cam**	**1.03**	**215**	P	**Pg**	**00 06 01.1**	**-0.2**
CELB				AML	AML		
	comp=E,280µm,1.0s						
CELB				AML	AML		
	comp=N,259µm,0.2s						
ATVO	**AVT- Monte Val**	**1.04**	**102**	⇑P	**Pb**	**00 06 01.3**	**0.0**
ATVO				AML	AML		
	comp=E,331µm,0.3s						
ATVO				AML	AML		
	comp=N,341µm,0.5s						
MGAB	**Montegabbione**	**1.06**	**130**	P	**Pg**	**00 06 00.6**	**-1.2**
MGAB				AML	AML		
	comp=N,1290µm,0.4s						
MGAB				AML	AML		
	comp=E,487µm,1.3s						
PIEI	**Pieia**	**1.11**	**93**	⇓P	**Pb**	**00 06 00.5**	**-2.0**
PIEI				S	**Sn**	**00 06 20.0**	**+2.0**
PIEI				AML	AML		
	comp=N,187µm,0.4s						
PIEI				AML	AML		
	comp=E,288µm,0.9s						
GRAM	**Graiana**	**1.12**	**323**	P	**Pn**	**00 06 03.1**	**+0.2**
GRAM	**Graiana**	**1.12**	**323**	P	**Pb**	**00 06 01.8**	**-0.8**
GRAM				AML	AML		
	comp=E,794µm,0.3s						
GRAM				AML	AML		
	comp=N,478µm,0.6s						
NARO	**Abbazia di Nar**	**1.14**	**89**	S	**Sn**	**00 06 21.0**	**+2.3**
FRON	**Frontone**	**1.25**	**93**	⇓P	**Pg**	**00 06 07.6**	**+2.1**
MSSA	**Maissana**	**1.29**	**304**	P	**Pn**	**00 06 04.6**	**-0.5**
MSSA	**Maissana**	**1.29**	**304**	P	**Pn**	**00 06 04.7**	**-0.5**
MSSA				AML	AML		
	comp=N,134µm,0.3s						
MSSA				AML	AML		
	comp=E,126µm,0.4s						
MORSI	**Morsiglia**	**1.36**	**242**	P	**Pn**	**00 06 04.9**	**-1.2**
ARVD	**Arcevia**	**1.41**	**94**	⇓P	**Pn**	**00 06 06.3**	**-0.5**
ARVD				AML	AML		
	comp=E,390µm,1.2s						
ARVD				AML	AML		
	comp=N,364µm,0.8s						
SEF1	**Sefro**	**1.49**	**107**	⇓P	**Pg**	**00 06 09.9**	**0.0**
SEF1				AML	AML		
	comp=N,4235µm,0.3s						
SEF1				AML	AML		
	comp=N,4240µm,0.3s						
SEF1				AML	AML		
	comp=E,4370µm,0.3s						
CESI	**CESI - Serrava**	**1.51**	**113**	⇑P	**Pn**	**00 06 08.4**	**+0.2**
CESI				AML	AML		
	comp=N,15300µm,0.2s						
CESI				AML	AML		
	comp=E,8405µm,0.2s						
MNTV	**Mantova**	**1.56**	**354**	⇑P	**Pg**	**00 06 11.7**	**+0.4**
T1215	**Vallo di Nera,**	**1.58**	**120**	P	**Pn**	**00 06 07.8**	**-1.3**
T1215				AML	AML		
	comp=N,1660µm,0.2s						
T1215				AML	AML		
	comp=E,1925µm,0.3s						
T1217	**Poggiodomo (PG**	**1.67**	**122**	P	**Pn**	**00 06 09.5**	**-0.9**
T1217				AML	AML		
	comp=E,2050µm,0.5s						
T1217				AML	AML		
	comp=N,3380µm,0.5s						
T1217				AML	AML		
	comp=N,3240µm,0.5s						
T1217				AML	AML		
	comp=E,2020µm,0.5s						
RNCA	**Ronca, Sant'Ol**	**1.72**	**301**	P	**Pn**	**00 06 10.5**	**-0.5**
RNCA				AML	AML		
	comp=E,50µm,1.5s						
RNCA				AML	AML		
	comp=N,63µm,0.4s						
T1211	**Morro Reatino**	**1.73**	**128**	⇑P	**Pb**	**00 06 13.5**	**+0.5**
LNSS	**Leonessa**	**1.79**	**123**	⇑P	**Pn**	**00 06 11.2**	**-1.0**
LNSS				AML	AML		
	comp=N,5115µm,0.4s						
LNSS				AML	AML		
	comp=E,2985µm,0.8s						
PGF	**Pioggiola**	**1.81**	**235**	⇓P	**Pn**	**00 06 11.6**	**-0.7**
PGF	**Pioggiola**	**1.81**	**235**	P	**Pn**	**00 06 11.4**	**-1.0**
MNTP	**Montappone**	**1.85**	**104**	⇓P	**Pn**	**00 06 12.6**	**-0.3**
MNTP				AML	AML		
	comp=N,3365µm,1.5s						
MNTP				AML	AML		
	comp=E,4270µm,0.1s						
CORF	**Corte**	**1.88**	**227**	P	**Pn**	**00 06 13.2**	**-0.1**
PP3	**Marolino**	**1.91**	**96**	⇑P	**Pg**	**00 06 17.3**	**-0.6**
SMPL	**Sampolo**	**1.97**	**221**	P	**Pn**	**00 06 14.4**	**0.0**
T1247	**Pizzolo (AQ)**	**2.04**	**124**	⇓P	**Pn**	**00 06 14.0**	**-1.5**
T1247				AML	AML		
	comp=E,1395µm,0.5s						
T1247				AML	AML		
	comp=N,1305µm,0.9s						
FIAM	**Fiamignano**	**2.04**	**130**	⇓P	**Pn**	**00 06 16.8**	**+1.2**
FIAM				AML	AML		
	comp=E,552µm,0.8s						
FIAM				AML	AML		
	comp=N,358µm,1.5s						
FIAM	**Fiamignano**	**2.04**	**130**	P	**Pn**	**00 06 16.8**	**+1.2**
SALO	**Salr**	**2.05**	**350**	P	**Pg**	**00 06 20.8**	**+0.2**
AQU	**L'Aquila**	**2.15**	**125**	P	**Pn**	**00 06 15.8**	**-1.3**
AQU				AML	AML		
	comp=E,508µm,1.0s						
AQU				AML	AML		
	comp=N,595µm,0.8s						
AQU				AML	AML		
	comp=E,488µm,1.0s						
AQU				AML	AML		
	comp=N,564µm,0.8s						
RMP	**Rome, Mte Porz**	**2.18**	**144**	S	**Sn**	**00 06 45.0**	**+0.7**
ZONE	**Zone**	**2.25**	**344**	⇑P	**Pn**	**00 06 19.6**	**+1.2**
ZONE				AML	AML		
	comp=E,87µm,0.3s						
ZONE				AML	AML		
	comp=N,90µm,0.7s						
DOSS	**Dosso del Somm**	**2.28**	**3**	⇑P	**Pn**	**00 06 19.1**	**+0.1**
DOSS				AML	AML		
	comp=E,123µm,1.2s						
DOSS				AML	AML		
	comp=N,96µm,1.0s						
DOSS				AML	AML		
	comp=N,95µm,0.5s						
DOSS				AML	AML		
	comp=E,84µm,0.8s						
FAGN	**Fagnano**	**2.32**	**124**	⇓P	**Pn**	**00 06 18.9**	**-0.4**
FAGN				AML	AML		
	comp=E,868µm,0.3s						
FAGN				AML	AML		
	comp=N,542µm,0.4s						
AJAC	**Base Areonaval**	**2.35**	**225**	P	**Pn**	**00 06 20.0**	**+0.4**
LUSI	**Trento, Gardas**	**2.36**	**359**	⇑P	**Pn**	**00 06 20.4**	**+0.5**
LUSI				AML	AML		
	comp=E,72µm,0.6s						
LUSI				AML	AML		
	comp=N,119µm,0.4s						
T0110	**Collepietro**	**2.46**	**123**	⇑P	**Pn**	**00 06 19.9**	**-1.4**
T0110				AML	AML		
	comp=N,502µm,0.3s						
T0110				AML	AML		
	comp=E,534µm,0.2s						
SAOF	**Saorge**	**2.53**	**280**	P	**Pn**	**00 06 22.3**	**+0.1**
VVLD	**Villa Vallelon**	**2.59**	**131**	⇓P	**Pg**	**00 06 29.4**	**-1.6**
TURF	**col de Turini**	**2.64**	**279**	P	**Pn**	**00 06 24.3**	**+0.4**
INTR	**Introdacqua**	**2.66**	**126**	P	**Pn**	**00 06 23.4**	**-0.7**
INTR				AML	AML		
	comp=N,287µm,0.7s						
INTR				AML	AML		
	comp=E,200µm,0.8s						
MUGIO	**Muggio**	**2.71**	**330**	⇓P	**Pn**	**00 06 25.4**	**+0.7**
MUGIO				AML	AML		
	comp=E,39µm,0.2s						
MUGIO				AML	AML		
	comp=N,42µm,0.1s						
LPEL	**Lama dei Pelig**	**2.81**	**123**	⇑P	**Pn**	**00 06 25.9**	**-0.1**
LPEL				AML	AML		
	comp=N,114µm,0.6s						
LPEL				AML	AML		
	comp=E,210µm,0.8s						
KOSI	**Kohlern**	**2.87**	**5**	⇑P	**Pn**	**00 06 29.2**	**+2.2**
KOSI				AML	AML		
	comp=E,63µm,1.5s						
KOSI				AML	AML		
	comp=N,47µm,1.6s						
STAL	**STALIGIAL**	**2.92**	**24**	⇑P	**Pn**	**00 06 28.0**	**+0.4**
STAL				AML	AML		
	comp=N,44µm,1.4s						
STAL				AML	AML		
	comp=E,65µm,1.5s						
CALF	**Calern**	**2.97**	**274**	P	**Pn**	**00 06 28.3**	**0.0**
BRES	**Bressanone**	**3.14**	**9**	⇑P	**Pn**	**00 06 33.6**	**+2.8**
SURF	**Saint Ours**	**3.15**	**288**	P	**Pn**	**00 06 31.2**	**+0.3**
JAUF	**Jausiers**	**3.18**	**287**	P	**Pn**	**00 06 31.9**	**+0.6**
CREF	**Crivoux**	**3.30**	**288**	P	**Pn**	**00 06 33.4**	**+0.5**
FUSIO	**Fusio**	**3.30**	**331**	⇓P	**Pn**	**00 06 33.7**	**+0.8**
FUSIO				S	**Sn**	**00 07 13.0**	**+0.9**
FUSIO				AML	AML		
	comp=E,39µm,0.2s						
FUSIO				AML	AML		
	comp=N,22µm,0.4s						
TRIGF	**Trigance**	**3.34**	**274**	P	**Pn**	**00 06 34.0**	**+0.6**
FETA	**Feichten**	**3.43**	**357**	*e*Pn	**Pn**	**00 06 38.1**	**+3.4**
	comp=N,2.4nm,0.4s						
PTRJ	**Pietraroja**	**3.43**	**129**	S	**Sg**	**00 07 31.0**	**-0.6**

REMY	**Saint-Rhmy-en**	**3.54**	**311**	⇑P	**Pn**	**00 06 39.0 +2.7**
VITU	**Vitulano (BN)**	**3.61**	**131**	⇑P	**Pg**	**00 06 50.7 +0.1**
SQTA	**Sankt Quirin**	**3.62**	**2**	Pn	**Pn**	**00 06 39.6 +2.3**
	comp=N,6.0nm,0.2s,SNR=18					
WTTA	**Wattenberg**	**3.69**	**7**	Pn	**Pn**	**00 06 40.7 +2.4**
	SNR=8.3					
WTTA	**Wattenberg**	**3.69**	**7**	⇓P	**Pn**	**00 06 40.7 +2.4**
MOTA	**Moosalm**	**3.74**	**1**	Pn	**Pn**	**00 06 41.6 +2.6**
	comp=N,2.8nm,0.2s,SNR=9.4					
WATA	**Walderalm**	**3.76**	**6**	Pn	**Pn**	**00 06 42.2 +3.0**
	comp=N,4.7nm,0.2s,SNR=11					
RSL	**Roselend**	**3.76**	**305**	P	**Pn**	**00 06 42.0 +2.8**
DAVA	**Damuels**	**3.77**	**348**	*e*Pn	**Pn**	**00 06 42.3 +3.0**
	comp=N,1.2nm,0.2s					
DAVA				*e*Sn	**Sn**	**00 07 26.0 +2.4**
	comp=N,6.2nm,0.3s					
ARTF	**Artigues**	**3.78**	**272**	P	**Pn**	**00 06 40.4 +1.0**
RETA	**Reutte**	**3.89**	**358**	Pn	**Pn**	**00 06 43.2 +2.3**
	comp=N,6.2nm,0.3s,SNR=22					
BSTF	**la Bastide-des**	**3.90**	**276**	P	**Pn**	**00 06 42.0 +1.0**
ORIF	**Oris-en-Rattie**	**3.91**	**291**	P	**Pn**	**00 06 43.8 +2.6**
AIGLE	**Aigle**	**3.97**	**315**	P	**Pn**	**00 06 44.4 +2.4**
RUSF	**Rustrel**	**4.01**	**277**	P	**Pn**	**00 06 43.4 +0.8**
OGSM	**Saint Maurice**	**4.29**	**300**	P	**Pn**	**00 06 48.5 +2.1**
BALST	**Balsthal**	**4.40**	**329**	P	**Pn**	**00 06 48.7 +0.7**
BALST	**Balsthal**	**4.40**	**329**	S	**Sn**	**00 07 37.3 -1.8**
SLE	**Schleitheim**	**4.52**	**338**	P	**Pn**	**00 06 49.9 +0.3**
BOURR	**Bourrignon**	**4.63**	**326**	S	**Sn**	**00 07 44.9 +0.2**
BOURR	**Bourrignon**	**4.63**	**326**	P	**Pn**	**00 06 51.9 +0.9**
FELD	**Feldberg im Sc**	**4.76**	**335**	P	**Pn**	**00 06 54.2 +1.2**
KIZ	**Kirchzarten**	**4.86**	**335**	P	**Pn**	**00 06 54.7 +0.4**
MOF	**Molkenrain**	**5.04**	**329**	P	**Pn**	**00 06 57.3 +0.6**
RONF	**Ronchamp**	**5.12**	**325**	P	**Pn**	**00 06 59.0 +1.2**
ECH	**Echery**	**5.34**	**331**	P	**Pn**	**00 07 01.1 +0.3**
ECH				S	**Sn**	**00 07 59.2 -2.9**
KHC	**Kasperske Hory**	**5.81**	**17**	*e*PN	**Pn**	**00 07 05.5 -1.8**
KHC				*e*SN	**Sn**	**00 08 10.9 -2.8**

ROM 27 00:06:04.5±0.1, 42°.892N±0°.004×13°.148E±0°.006, h8km, ML2.7/15, 10C-6D, Error ellipse: s-maj=0.5km s-min=0.5km az=85.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**56**	⇑P	Pg	00 06 06.2	-0.2
MC2				S	Sg	00 06 07.1	-0.6
T1245	**Castelsantange**	**0.05**	**140**	P	Pg	00 06 06.7	+0.4
T1245				S	Sg	00 06 08.2	+0.5
T1245				AML	AML		
	comp=E,68650μm,0.1s						
T1245				AML	AML		
	comp=N,50650μm,0.9s						
T1245				AML	AML		
	comp=N,50650μm,0.9s						
T1245				AML	AML		
	comp=N,50750μm,0.8s						
T1245				AML	AML		
	comp=E,68700μm,0.1s						
T1245				AML	AML		
	comp=E,64200μm,0.1s						
T1245				AML	AML		
	comp=N,50650μm,1.1s						
T1216	**Preci, Frazion**	**0.10**	**269**	⇑P	Pg	00 06 07.2	+0.4
T1216				S	Sg	00 06 08.8	+0.4
T1216				AML	AML		
	comp=N,13550μm,0.8s						
T1216				AML	AML		
	comp=E,18000μm,0.4s						
MMO1	**Montemonaco**	**0.13**	**87**	⇑P	Pg	00 06 07.8	+0.4
MMO1				S	Sg	00 06 10.2	+0.7
AM05	**Amandola Campo**	**0.17**	**60**	⇑P	Pg	00 06 08.8	+0.7
AM05				S	Sg	00 06 11.7	+1.1
AM05				AML	AML		
	comp=E,1495μm,1.1s						
AM05				AML	AML		
	comp=N,2435μm,0.2s						
AM05				AML	AML		
	comp=N,511μm,0.2s						
AM05				AML	AML		
	comp=E,7950μm,0.2s						
AM05				AML	AML		
	comp=E,1495μm,0.9s						
T1241	**Roccafluvione,**	**0.21**	**100**	⇑P	Pg	00 06 09.1	+0.3
T1241				S	Sg	00 06 12.9	+1.2
T1241				AML	AML		
	comp=N,4365μm,0.6s						
T1241				AML	AML		
	comp=E,4520μm,0.3s						
T1241				AML	AML		
	comp=E,4520μm,1.7s						
GUMA	**Gualdo di Mace**	**0.22**	**39**	⇑P	Pg	00 06 09.8	+0.9
GUMA				S	Sg	00 06 13.9	+2.0
GUMA				AML	AML		
	comp=E,17050μm,0.3s						
GUMA				AML	AML		
	comp=N,10715μm,0.3s						
GUMA				AML	AML		
	comp=E,17150μm,0.7s						
GUMA				AML	AML		
	comp=N,13700μm,0.3s						
T1215	**Vallo di Nera,**	**0.22**	**246**	AML	AML		
	comp=E,1920μm,0.3s						
T1215				AML	AML		
	comp=E,1830μm,0.3s						
T1215				AML	AML		
	comp=N,1655μm,0.2s						
T1215				AML	AML		
	comp=N,1655μm,0.2s						
T1204	**Amatrice, Fraz**	**0.25**	**150**	⇓P	Pg	00 06 10.3	+0.8
T1204				S	Sg	00 06 15.1	+2.3
T1204				AML	AML		
	comp=E,2545μm,1.2s						
T1204				AML	AML		
	comp=N,1684μm,1.4s						
T1204				AML	AML		
	comp=E,2544μm,1.2s						
T1204				AML	AML		
	comp=N,1682μm,1.4s						
T1204				AML	AML		
	comp=E,2544μm,0.8s						
T1204				AML	AML		
	comp=N,1682μm,0.6s						
SMA1	**SAN MARTINO**	**0.29**	**152**	⇓P	Pg	00 06 11.0	+0.6
SMA1				S	Sb	00 06 16.4	-0.7
SMA1				AML	AML		
	comp=N,2515μm,0.7s						
SMA1				AML	AML		
	comp=N,2515μm,1.3s						
SMA1				AML	AML		
	comp=E,2575μm,0.6s						
T1243	**Rocca Santa Ma**	**0.29**	**131**	P	Pg	00 06 10.9	+0.6
T1243				S	Sb	00 06 15.9	-1.2
RM33	**Pellescritta (**	**0.39**	**173**	⇑P	Pg	00 06 12.7	+0.7
RM33				S	Sb	00 06 19.4	-0.3
RM33				AML	AML		
	comp=N,1012μm,0.3s						
RM33				AML	AML		
	comp=N,1036μm,0.3s						
RM33				AML	AML		
	comp=E,1155μm,1.5s						
RM33				AML	AML		
	comp=E,1180μm,1.5s						
RM33				AML	AML		
	comp=E,1180μm,0.5s						
RM33				AML	AML		
	comp=E,1155μm,0.5s						
RM33				AML	AML		
	comp=N,1035μm,0.3s						
SNTG	**Esanatoglia**	**0.39**	**337**	S	Sg	00 06 18.0	+0.6
OFFI	**Offida**	**0.40**	**84**	⇓P	Pb	00 06 13.9	+0.2
OFFI				S	Sb	00 06 21.8	+1.8
OFFI				AML	AML		
	comp=N,2675μm,0.5s						
OFFI				AML	AML		
	comp=E,2160μm,0.5s						
CAMP	**Campotosto**	**0.41**	**151**	⇓P	Pg	00 06 12.8	+0.4
CAMP				S	Sb	00 06 19.3	-0.9
CAMP				AML	AML		
	comp=E,670μm,0.2s						
CAMP				AML	AML		
	comp=N,838μm,0.6s						
TERO	**Teramo**	**0.43**	**129**	⇑P	Pg	00 06 13.2	+0.4
TERO				S	Sb	00 06 20.2	-0.7
TERO				AML	AML		
	comp=N,1480μm,0.3s						
TERO				AML	AML		
	comp=E,1415μm,0.6s						
TERO				AML	AML		
	comp=E,1285μm,0.6s						
TERO				AML	AML		
	comp=N,1605μm,0.3s						
EL6	**Elcito**	**0.44**	**356**	S	Sg	00 06 20.0	+1.2
CESX	**Cesi**	**0.50**	**236**	⇓P	Pg	00 06 14.4	+0.2
CESX				AML	AML		
	comp=E,748μm,0.7s						
CESX				AML	AML		
	comp=N,1240μm,0.4s						
CESX				AML	AML		
	comp=E,748μm,1.3s						
GIGS	**Gran Sasso**	**0.54**	**145**	P	Pg	00 06 15.2	+0.2
GIGS				S	Sb	00 06 23.9	-0.2
GIGS				AML	AML		
	comp=E,193μm,1.6s						
GIGS				AML	AML		
	comp=N,231μm,0.6s						
GIGS				AML	AML		
	comp=N,232μm,0.6s						
GIGS				AML	AML		
	comp=N,232μm,1.4s						
GIGS				AML	AML		
	comp=E,193μm,0.4s						
MMUR	**Monte Murano**	**0.56**	**349**	S	Sb	00 06 24.0	-0.8
TRTR	**Tortoreto Alta**	**0.57**	**98**	⇑P	Pb	00 06 17.2	+0.5
TRTR				AML	AML		
	comp=N,2320μm,0.3s						
TRTR				AML	AML		
	comp=E,2060μm,0.5s						
TRTR				AML	AML		
	comp=E,2060μm,1.5s						
ARVD	**Arcevia**	**0.62**	**346**	⇓P	Pg	00 06 14.3	-2.2
ARVD				S	Sg	00 06 25.0	+0.3
FIAM	**Fiamignano**	**0.62**	**182**	S	Sb	00 06 26.4	-0.1
VCEL	**Villa Celiera**	**0.71**	**134**	⇑P	Pg	00 06 18.7	+0.5
VCEL				S	Sn	00 06 32.0	-0.1
VCEL				AML	AML		
	comp=N,591μm,0.7s						
VCEL				AML	AML		
	comp=N,591μm,1.3s						
VCEL				AML	AML		
	comp=E,606μm,0.3s						
PIEI	**Pieia**	**0.78**	**325**	S	Sg	00 06 30.0	+0.2
MPAG	**Monte Paganucc**	**0.79**	**339**	P	Pg	00 06 19.4	-0.2
MPAG				AML	AML		
	comp=N,276μm,0.7s						
MPAG				AML	AML		
	comp=E,296μm,0.5s						
NARO	**Abbazia di Nar**	**0.83**	**330**	S	Sb	00 06 32.0	-0.4

*BGR **27** 00:21:27.8±0.8, 42°.60N×13°.66E, h10km, ML3.7/12, Error ellipse: s-maj=16.7km s-min=14.5km az=103.0*
*ROM **27** 00:21:29.9±0.0, 42°.996N±0°.002×13°.115E±0°.003, h8km, ML3.5/87, Error ellipse: s-maj=0.2km s-min=0.1km az=64.0*
*BEO **27** 00:21:30.9±0.8, 43°.04N×13°.05E, h5km±8km, ML3.5/12*
*NEIC **27** 00:21:30.7±1.8, 42°.95N±0°.04×13°.04E±0°.05, h10km±1km, Error ellipse: s-maj=6.8km s-min=6.1km az=126.0*
*LDG **27** 00:21:31.3±0.1, 42°.89N×13°.00E, h10km, Ml3.4/18, Error ellipse: s-maj=5.8km s-min=3.2km az=44.0*
*PRU **27** 00:21:32.7±0.0, 43°.11N×13°.37E, h1km, M4.2*

ISC 27 00:21:30.6±0.7, 42°.99N±0°.01×13°.11E±0°.01, h10km±4km, n298, σ1$77/357, 12C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.05**	**237**	⇑P	**Pg**	**00 21 32.2**	**-0.7**
FEMA				S	**Sg**	**00 21 33.3**	**-1.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**142**	⇓P	**Pg**	**00 21 32.8**	**-0.6**
MC2				S	**Sg**	**00 21 34.9**	**-0.5**
T1216	**Preci, Frazion**	**0.12**	**213**	⇑P	**Pg**	**00 21 33.5**	**-0.1**
T1216				S	**Sg**	**00 21 36.0**	**+0.4**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.15**	**156**	⇓P	**Pg**	**00 21 33.8**	**-0.2**
T1245				S	**Sg**	**00 21 36.6**	**+0.1**
T1245				AML	AML		
	comp=N,89900μm,0.5s						
T1245				AML	AML		
	comp=E,49950μm,0.7s						
T1245				AML	AML		
	comp=E,48900μm,0.3s						
T1245				AML	AML		
	comp=N,89900μm,0.4s						
T1245				AML	AML		
	comp=E,48950μm,0.3s						
T1245				AML	AML		
	comp=N,89700μm,0.5s						
CESI	**CESI - Serrava**	**0.15**	**276**	⇑P	**Pg**	**00 21 34.0**	**-0.1**
CESI				S	**Sg**	**00 21 36.8**	**+0.4**
CESI				AML	AML		
	comp=N,72400μm,0.7s						
CESI				AML	AML		
AM05	**Amandola Campo**	**0.18**	**94**	P	**Pg**	**00 21 34.3**	**-0.2**
AM05				S	**Sg**	**00 21 37.2**	**0.0**
AM05				AML	AML		
	comp=E,12370μm,0.3s						
AM05				AML	AML		
	comp=E,44950μm,0.3s						
AM05				AML	AML		
	comp=N,2470μm,0.2s						
AM05				AML	AML		
	comp=E,12365μm,0.3s						
AM05				AML	AML		
	comp=E,12360μm,0.3s						
AM05				AML	AML		
	comp=E,45000μm,0.3s						
AM05				AML	AML		
	comp=N,8790μm,0.9s						
GUMA	**Gualdo di Mace**	**0.18**	**66**	⇑P	**Pg**	**00 21 34.4**	**-0.2**
GUMA				S	**Sg**	**00 21 37.3**	**0.0**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
MMO1	**Montemonaco**	**0.18**	**119**	P	**Pg**	**00 21 34.3**	**-0.3**
MMO1				S	**Sg**	**00 21 37.5**	**+0.1**
SEF1	**Sefro**	**0.20**	**323**	P	**Pg**	**00 21 34.5**	**-0.3**
SEF1				S	**Sg**	**00 21 38.0**	**+0.3**
SEF1				AML	AML		
	comp=E,37250μm,1.3s						
SEF1				AML	AML		
	comp=N,35800μm,0.9s						
SEF1				AML	AML		
	comp=N,35850μm,0.9s						
MDAR	**Monte D'Aria**	**0.20**	**7**	P	**Pg**	**00 21 34.4**	**-0.6**
MDAR				S	**Sg**	**00 21 37.8**	**-0.2**
PIO1	**Pioraco**	**0.21**	**334**	P	**Pg**	**00 21 34.9**	**-0.2**
PIO1				S	**Sg**	**00 21 38.4**	**+0.4**
PIO1				AML	AML		
	comp=E,19700μm,1.4s						
PIO1				AML	AML		
	comp=N,20750μm,0.6s						
PIO1				AML	AML		
	comp=E,19700μm,1.4s						
PIO1				AML	AML		
	comp=N,20700μm,0.6s						
FIU1	**Fiuminata**	**0.24**	**327**	P	**Pg**	**00 21 35.4**	**-0.1**
SSM1	**San Severino M**	**0.24**	**12**	P	**Pg**	**00 21 35.3**	**-0.3**
SSM1				S	**Sg**	**00 21 39.2**	**+0.2**
T1215	**Vallo di Nera,**	**0.26**	**223**	⇑P	**Pg**	**00 21 36.0**	**+0.1**
T1215				S	**Sg**	**00 21 40.6**	**+1.2**
T1215				AML	AML		
	comp=N,17600μm,0.3s						
T1215				AML	AML		
	comp=E,15800μm,0.5s						
T1215				AML	AML		
	comp=E,15700μm,0.5s						
T1215				AML	AML		
	comp=N,16750μm,0.3s						
T1215				AML	AML		
	comp=E,15750μm,0.5s						
T1241	**Roccafluvione,**	**0.27**	**119**	P	**Pg**	**00 21 35.7**	**-0.5**
T1241				S	**Sg**	**00 21 40.4**	**+0.5**
T1241				AML	AML		
	comp=E,14700μm,0.6s						
T1241				AML	AML		
	comp=N,15900μm,0.6s						
T1241				AML	AML		
	comp=E,14750μm,0.6s						
T1241				AML	AML		
	comp=N,15950μm,0.6s						
SNTG	**Esanatoglia**	**0.29**	**335**	P	**Pg**	**00 21 36.2**	**-0.3**
SNTG				S	**Sg**	**00 21 41.0**	**+0.5**
SNTG				AML	AML		
	comp=N,6725μm,1.4s						
SNTG				AML	AML		
	comp=E,6600μm,0.6s						
SNTG				AML	AML		
	comp=N,6720μm,1.4s						
SNTG				AML	AML		
	comp=E,6155μm,0.5s						
SNTG				AML	AML		
	comp=N,6720μm,1.4s						
SNTG				AML	AML		
	comp=N,7220μm,1.4s						
SNTG				AML	AML		
	comp=E,6600μm,0.5s						
MNTP	**Montappone**	**0.30**	**61**	P	**Pg**	**00 21 37.0**	**+0.2**
MNTP				AML	AML		
	comp=E,35600μm,0.8s						
MNTP				AML	AML		
	comp=N,24200μm,0.6s						
MNTP				AML	AML		
	comp=E,35550μm,0.8s						
T1217	**Poggiodomo (PG**	**0.31**	**205**	P	**Pg**	**00 21 36.9**	**+0.1**
T1217				S	**Sg**	**00 21 42.2**	**+1.3**
T1217				AML	AML		
	comp=E,21250μm,0.6s						
T1217				AML	AML		
	comp=N,17000μm,0.5s						
T1217				AML	AML		
	comp=E,20750μm,0.6s						
T1217				AML	AML		
	comp=N,16750μm,0.5s						
T1217				AML	AML		
	comp=N,17050μm,0.5s						
T1217				AML	AML		
	comp=N,17050μm,0.5s						
T1217				AML	AML		
	comp=E,21200μm,0.6s						
T1217				AML	AML		
	comp=N,16750μm,0.5s						
EL6	**Elcito**	**0.34**	**359**	P	**Pg**	**00 21 36.9**	**-0.5**
EL6				S	**Sg**	**00 21 42.6**	**+0.6**
EL6				AML	AML		
	comp=N,20450μm,0.3s						
EL6				AML	AML		
	comp=E,19300μm,1.0s						
EL6				AML	AML		
	comp=N,20500μm,0.3s						
T1201	**Domo (RI)**	**0.35**	**162**	⇓P	**Pg**	**00 21 37.7**	**+0.1**
T1201				S	**Sb**	**00 21 44.1**	**-0.5**
T1204	**Amatrice, Fraz**	**0.35**	**154**	⇓P	**Pg**	**00 21 37.5**	**-0.2**
T1204				S	**Sg**	**00 21 43.4**	**+1.1**
T1204				AML	AML		
	comp=N,11335μm,0.6s						
T1204				AML	AML		
	comp=E,18650μm,0.4s						
T1204				AML	AML		
	comp=N,11320μm,0.6s						
TRE1	**Treia**	**0.35**	**25**	P	**Pg**	**00 21 37.8**	**+0.1**
TRE1				S	**Sb**	**00 21 44.0**	**-0.7**
TRE1				AML	AML		
	comp=E,25900μm,0.9s						
TRE1				AML	AML		
	comp=E,25900μm,0.9s						
TRE1				AML	AML		
	comp=N,31800μm,0.4s						
T1243	**Rocca Santa Ma**	**0.39**	**139**	⇓P	**Pg**	**00 21 37.8**	**-0.5**
T1243				S	**Sg**	**00 21 44.3**	**+0.9**
LNSS	**Leonessa**	**0.39**	**187**	⇓P	**Pg**	**00 21 38.2**	**-0.1**
LNSS				S	**Sg**	**00 21 44.9**	**+1.4**
LNSS				AML	AML		
	comp=E,14000μm,0.6s						
LNSS				AML	AML		
	comp=N,9905μm,0.7s						
CING	**Cingoli**	**0.39**	**9**	P	**Pg**	**00 21 37.5**	**-0.9**
ATCC	**AVT- Casa Cast**	**0.39**	**300**	P	**Pg**	**00 21 38.3**	**-0.1**
ATCC				S	**Sg**	**00 21 45.0**	**+1.3**
ATCC				AML	AML		
	comp=E,32150μm,0.2s						
ATCC				AML	AML		
	comp=N,15450μm,1.6s						
SMA1	**SAN MARTINO**	**0.40**	**155**	⇓P	**Pg**	**00 21 38.2**	**-0.3**
SMA1				S	**Sg**	**00 21 44.8**	**+1.1**
SMA1				AML	AML		
	comp=N,13200μm,0.6s						
SMA1				AML	AML		
	comp=E,11100μm,0.4s						
OFFI	**Offida**	**0.43**	**97**	P	**Pb**	**00 21 39.8**	**-0.4**
OFFI				AML	AML		
	comp=E,10265μm,0.5s						
OFFI				AML	AML		
	comp=N,15500μm,0.5s						
MMUR	**Monte Murano**	**0.46**	**350**	P	**Pg**	**00 21 39.3**	**-0.4**
RM33	**Pellescritta (**	**0.49**	**171**	P	**Pg**	**00 21 39.7**	**-0.4**
RM33				S	**Sg**	**00 21 47.8**	**+1.2**
RM33				AML	AML		
	comp=N,3830μm,1.2s						
RM33				AML	AML		
	comp=E,5190μm,1.5s						
RM33				AML	AML		
	comp=N,3910μm,1.2s						
RM33				AML	AML		
	comp=E,5230μm,1.5s						
RM33				AML	AML		
	comp=E,5195μm,1.5s						
RM33				AML	AML		
	comp=N,3830μm,1.2s						
RM33				AML	AML		
	comp=N,3915μm,1.2s						
T1211	**Morro Reatino**	**0.49**	**202**	P	**Pg**	**00 21 40.2**	**-0.1**
T1211				S	**Sb**	**00 21 48.4**	**-0.3**
T1211				AML	AML		
	comp=E,7355μm,1.0s						
T1211				AML	AML		
	comp=N,10800μm,1.2s						
T1211				AML	AML		
	comp=E,7155μm,1.0s						
T1211				AML	AML		
	comp=N,10890μm,1.1s						
T1246	**Crognaleto (TE**	**0.50**	**145**	⇓P	**Pg**	**00 21 39.8**	**-0.5**
T1246				S	**Sg**	**00 21 47.8**	**+0.9**
CAMP	**Campotosto**	**0.51**	**154**	Pg	**Pg**	**00 21 39.8**	**-0.7**
CAMP				Sg	**Sg**	**00 21 44.1**	**-3.0**
CAMP	**Campotosto**	**0.51**	**154**	⇓P	**Pg**	**00 21 40.0**	**-0.6**
CAMP				S	**Sg**	**00 21 47.9**	**+0.7**
MURB	**Monte Urbino**	**0.51**	**303**	Pg	**Pg**	**00 21 39.5**	**-1.0**
MURB	**Monte Urbino**	**0.51**	**303**	P	**Pg**	**00 21 40.3**	**-0.2**
MURB				AML	AML		
	comp=E,27300μm,0.3s						
MURB				AML	AML		
	comp=N,15950μm,1.1s						
MURB				AML	AML		
	comp=N,15850μm,1.1s						
MURB				AML	AML		
	comp=E,25500μm,0.3s						
TERO	**Teramo**	**0.52**	**135**	P	**Pg**	**00 21 40.1**	**-0.7**
TERO				S	**Sg**	**00 21 48.5**	**+0.9**
TERO				AML	AML		
	comp=N,6540μm,0.4s						
TERO				AML	AML		
	comp=E,6900μm,0.8s						
TERO				AML	AML		
	comp=E,6560μm,0.8s						
TERO				AML	AML		
	comp=N,6785μm,0.4s						
CIMA	**Civitanova Mar**	**0.52**	**52**	P	**Pg**	**00 21 41.3**	**+0.6**
CADA	**Capodarco di F**	**0.52**	**67**	P	**Pb**	**00 21 41.9**	**0.0**
ARVD	**Arcevia**	**0.52**	**347**	P	**Pg**	**00 21 40.2**	**-0.6**
ARVD				S	**Sg**	**00 21 48.8**	**+1.1**
ARVD				AML	AML		
	comp=N,3260μm,0.5s						
ARVD				AML	AML		
	comp=E,5915μm,0.4s						

PP3	**Marolino**	**0.53 43**	P	**Pg**	**00 21 41.4 +0.4**
PP3			AML	AML	
	comp=E,13000µm,0.9s				
PP3			AML	AML	
	comp=N,12750µm,0.7s				
PP3			AML	AML	
	comp=E,13450µm,0.8s				
PP3			AML	AML	
	comp=N,13450µm,0.7s				
PP3			AML	AML	
	comp=N,12700µm,0.7s				
PP3			AML	AML	
	comp=E,13400µm,0.8s				
PP3			AML	AML	
	comp=E,13050µm,0.9s				
PP3			AML	AML	
	comp=N,13500µm,0.7s				
ATFO	**Monte Foce - G**	**0.54 314**	P	**Pg**	**00 21 40.6 -0.6**
ATFO			AML	AML	
	comp=N,4490µm,0.6s				
ATFO			AML	AML	
	comp=E,5305µm,0.8s				
CESX	**Cesi**	**0.54 226**	Pg	**Pg**	**00 21 40.9 -0.3**
CESX			Sg	**Sg**	**00 21 48.2 -0.1**
CESX	**Cesi**	**0.54 226**	P	**Pg**	**00 21 40.9 -0.3**
CESX			AML	AML	
	comp=E,11600µm,0.4s				
CESX			AML	AML	
	comp=N,10750µm,0.7s				
T1247	**Pizzolo (AQ)**	**0.57 166**	P	**Pg**	**00 21 41.2 -0.4**
T1247			AML	AML	
	comp=E,6850µm,1.2s				
T1247			AML	AML	
	comp=N,5360µm,1.4s				
ATTE	**AVT- Monte Tez**	**0.59 291**	AML	AML	
	comp=N,3335µm,0.9s				
ATTE			AML	AML	
	comp=E,2480µm,1.6s				
FRON	**Frontone**	**0.60 332**	P	**Pg**	**00 21 41.5 -0.8**
FRON			S	**Sg**	**00 21 51.0 +0.9**
FRON			AML	AML	
	comp=N,6350µm,0.4s				
FRON			AML	AML	
	comp=N,6345µm,0.4s				
FRON			AML	AML	
	comp=E,3310µm,0.7s				
TRTR	**Tortoreto Alta**	**0.62 107**	⇓P	**Pb**	**00 21 43.4 -0.1**
TRTR			AML	AML	
	comp=E,17500µm,0.4s				
TRTR			AML	AML	
	comp=N,14450µm,0.4s				
GIGS	**Gran Sasso**	**0.64 148**	P	**Pg**	**00 21 42.3 -0.7**
GIGS			S	**Sg**	**00 21 52.2 +0.8**
GIGS			AML	AML	
	comp=E,1270µm,0.9s				
GIGS			AML	AML	
	comp=N,1150µm,0.4s				
ATVO	**AVT- Monte Val**	**0.65 308**	P	**Pg**	**00 21 42.6 -0.6**
ATVO			S	**Sg**	**00 21 52.8 +1.2**
ATVO			AML	AML	
	comp=E,2260µm,0.5s				
ATVO			AML	AML	
	comp=N,2430µm,0.6s				
AOI	**Ancona**	**0.67 33**	P	**Pg**	**00 21 43.6 0.0**
AOI			AML	AML	
	comp=E,2255µm,0.3s				
AOI			AML	AML	
	comp=N,2580µm,0.4s				
AQU	**L'Aquila**	**0.67 161**	Pg	**Pg**	**00 21 42.6 -1.0**
AQU	**L'Aquila**	**0.67 161**	P	**Pg**	**00 21 43.0 -0.7**
AQU			AML	AML	
	comp=E,3035µm,0.9s				
AQU			AML	AML	
	comp=N,3465µm,1.2s				
AQU			AML	AML	
	comp=E,3065µm,0.9s				
AQU			AML	AML	
	comp=N,3575µm,1.4s				
PIEI	**Pieia**	**0.69 323**	P	**Pg**	**00 21 43.2 -0.8**
PIEI			AML	AML	
	comp=N,2500µm,0.5s				
PIEI			AML	AML	
	comp=E,2235µm,0.3s				
MPAG	**Monte Paganucc**	**0.69 338**	P	**Pg**	**00 21 43.6 -0.4**
MPAG			AML	AML	
	comp=E,2920µm,1.1s				
MPAG			AML	AML	
	comp=N,2605µm,1.6s				
MPAG			AML	AML	
	comp=E,2905µm,1.1s				
MPAG			AML	AML	
	comp=N,2750µm,0.9s				
MPAG			AML	AML	
	comp=E,2915µm,1.1s				
MPAG			AML	AML	
	comp=N,2600µm,1.6s				
MPAG			AML	AML	
	comp=E,2910µm,1.1s				
ATPI	**Pietralunga -**	**0.69 312**	P	**Pg**	**00 21 43.4 -0.6**
ATPI			AML	AML	
	comp=N,2340µm,0.9s				
ATPI			AML	AML	
	comp=E,3675µm,0.7s				
ATPI			AML	AML	
	comp=N,2335µm,0.9s				
PCRO	**Pietralacroce**	**0.69 27**	P	**Pg**	**00 21 44.0 0.0**
ATMI	**Monte Miggiano**	**0.70 300**	P	**Pb**	**00 21 45.4 +0.4**
SENI	**Senigallia**	**0.72 7**	P	**Pg**	**00 21 45.0 +0.4**
SENI			AML	AML	
	comp=E,2635µm,0.7s				
SENI			AML	AML	
	comp=N,2990µm,0.7s				
FIAM	**Fiamignano**	**0.72 179**	P	**Pg**	**00 21 43.8 -0.8**
FIAM			AML	AML	
	comp=N,2410µm,1.5s				
FIAM			AML	AML	
	comp=E,2640µm,0.6s				
NARO	**Abbazia di Nar**	**0.73 328**	P	**Pg**	**00 21 44.2 -0.6**
NARO			AML	AML	
	comp=E,1810µm,0.7s				
NARO			AML	AML	
	comp=N,1815µm,1.2s				
MGAB	**Montegabbione**	**0.73 264**	P	**Pg**	**00 21 44.6 -0.2**
MGAB			AML	AML	
	comp=E,3840µm,1.4s				
MGAB			AML	AML	
	comp=N,5810µm,0.4s				
MGAB			AML	AML	
	comp=E,3835µm,1.4s				
MGAB			AML	AML	
	comp=E,4315µm,1.4s				
MGAB			AML	AML	
	comp=N,5805µm,0.4s				
MGAB			AML	AML	
	comp=N,5550µm,0.4s				
FSSB	**Fossombrone**	**0.74 341**	P	**Pg**	**00 21 44.5 -0.5**
FSSB			AML	AML	
	comp=N,11900µm,0.4s				
FSSB			AML	AML	
	comp=E,8665µm,0.4s				
APEC	**Apecchio**	**0.76 319**	P	**Pg**	**00 21 45.1 -0.1**
VCEL	**Villa Celiera**	**0.80 137**	P	**Pg**	**00 21 45.5 -0.7**
VCEL			AML	AML	
	comp=N,3280µm,1.0s				
VCEL			AML	AML	
	comp=E,4260µm,0.5s				
FAGN	**Fagnano**	**0.81 154**	P	**Pg**	**00 21 45.5 -0.7**
FAGN			AML	AML	
	comp=N,6405µm,0.4s				
FAGN			AML	AML	
	comp=E,6650µm,0.5s				
BADI	**Badiali**	**0.82 310**	P	**Pg**	**00 21 45.9 -0.5**
PE3	**Peglio**	**0.83 328**	P	**Pg**	**00 21 45.8 -1.0**
PE3			AML	AML	
	comp=N,21µm,0.5s				
PE3			AML	AML	
	comp=E,16µm,0.4s				
SRES	**S.Oreste - Sor**	**0.87 211**	P	**Pg**	**00 21 46.9 -0.6**
SRES			AML	AML	
	comp=E,2940µm,0.6s				
SRES			AML	AML	
	comp=N,2045µm,0.7s				
SACS	**San Casciano d**	**0.89 261**	P	**Pg**	**00 21 48.3 +0.5**
SACS			AML	AML	
	comp=N,3085µm,0.7s				
SACS			AML	AML	
	comp=N,3125µm,0.7s				
SACS			AML	AML	
	comp=E,2605µm,0.6s				
SACS			AML	AML	
	comp=E,2330µm,0.6s				
CAFI	**Castiglion Fio**	**0.90 292**	P	**Pg**	**00 21 48.0 0.0**
CAFI			AML	AML	
	comp=E,2625µm,1.0s				
CAFI			AML	AML	
	comp=N,1565µm,1.2s				
CAFI			AML	AML	
	comp=N,1670µm,1.2s				
CAFI			AML	AML	
	comp=E,2665µm,1.0s				
T0110	**Collepietro**	**0.91 147**	P	**Pg**	**00 21 46.9 -1.2**
T0110			AML	AML	
	comp=E,4095µm,0.6s				
T0110			AML	AML	
	comp=N,4120µm,0.4s				
SSP9	**Sansepolcro**	**0.92 310**	P	**Pg**	**00 21 48.0 -0.3**
PTQR	**Pietraquaria**	**0.99 167**	P	**Pg**	**00 21 48.5 -1.2**
CPGN	**Carpegna, Ital**	**0.99 325**	P	**Pg**	**00 21 49.7 0.0**
MTCE	**Montecelio**	**1.00 196**	P	**Pg**	**00 21 48.9 -1.1**
MTCE			AML	AML	
	comp=N,1240µm,0.4s				
MTCE			AML	AML	
	comp=E,1910µm,1.0s				
LATE	**Laterza**	**1.03 249**	Pn	**Pg**	**00 21 50.1 -0.3**
LATE	**Laterza**	**1.03 249**	P	**Pg**	**00 21 50.8 +0.3**
CERT	**Cerreto**	**1.04 185**	P	**Pg**	**00 21 50.5 -0.2**
CERT			AML	AML	
	comp=N,2315µm,1.2s				
CERT			AML	AML	
	comp=E,2450µm,0.5s				
CRE	**Caprese Michel**	**1.05 307**	P	**Pg**	**00 21 51.2 +0.3**
RSM	**Repubblica di**	**1.05 333**	P	**Pb**	**00 21 51.9 +0.9**
SF11	**Podere del Sol**	**1.06 264**	P	**Pg**	**00 21 51.3 +0.3**
SF03	**Valle Cupa**	**1.06 260**	P	**Pg**	**00 21 51.0 0.0**
MCIV	**Monte Civitell**	**1.07 259**	P	**Pg**	**00 21 51.2 -0.1**
MCIV			AML	AML	
	comp=N,824µm,0.5s				
MCIV			AML	AML	
	comp=E,865µm,0.9s				
SF04	**Casetta**	**1.07 262**	P	**Pg**	**00 21 51.4 +0.1**
SF13	**Bagnolo**	**1.11 262**	P	**Pg**	**00 21 51.9 0.0**
SF14	**Selvena**	**1.12 258**	P	**Pg**	**00 21 52.2 +0.1**
INTR	**Introdacqua**	**1.14 149**	Pn	**Pg**	**00 21 50.8 -1.8**
INTR	**Introdacqua**	**1.14 149**	P	**Pg**	**00 21 50.6 -1.9**
INTR			AML	AML	
	comp=E,1375µm,0.7s				
INTR			AML	AML	
	comp=E,1µm,0.7s				
INTR			AML	AML	
	comp=N,2µm,0.6s				
INTR			AML	AML	
	comp=N,2545µm,0.6s				
RCAV	**Rocca di Cave**	**1.15 186**	P	**Pg**	**00 21 52.3 -0.4**
RCAV			AML	AML	
	comp=N,1825µm,0.5s				
RCAV			AML	AML	
	comp=E,1755µm,0.6s				
SF01	**Poggio Pratacc**	**1.15 262**	P	**Pb**	**00 21 53.4 +0.8**
VVLD	**Villa Vallelon**	**1.18 161**	P	**Pb**	**00 21 53.7 +0.6**
CAFR	**Castel Frentan**	**1.19 129**	P	**Pg**	**00 21 52.1 -1.4**
GUAR	**Guarcino**	**1.20 173**	P	**Pn**	**00 21 54.8 +1.2**
ARCI	**Arcidosso**	**1.21 264**	P	**Pg**	**00 21 53.9 +0.1**
RMP	**Rome, Mte Porz**	**1.22 194**	P	**Pg**	**00 21 52.6 -1.3**
LPEL	**Lama dei Pelig**	**1.23 139**	P	**Pg**	**00 21 53.3 -1.0**
TOLF	**Tolfa**	**1.23 222**	P	**Pg**	**00 21 53.5 -0.9**
TOLF			AML	AML	
	comp=N,846µm,0.5s				
TOLF			AML	AML	
	comp=E,771µm,0.8s				
ASQU	**Asqua**	**1.25 310**	P	**Pn**	**00 21 55.2 +0.9**
MA9	**Marino**	**1.26 195**	P	**Pg**	**00 21 54.7 -0.2**
RDP	**Rocca di Papa**	**1.26 193**	P	**Pg**	**00 21 54.6 -0.3**
VIVA	**Pratoni del Vi**	**1.26 192**	P	**Pg**	**00 21 54.2 -0.7**
SAMA	**S.Maria delle**	**1.27 198**	P	**Pg**	**00 21 54.8 -0.1**
SFI	**Santa Sofia**	**1.30 315**	P	**Pg**	**00 21 55.2 -0.3**
POFI	**Posta Fibreno**	**1.35 160**	P	**Pb**	**00 21 56.8 +0.8**
LRP	**Arpino**	**1.39 165**	P	**Pn**	**00 21 56.9 +0.8**
CSNT	**Castellina Chi**	**1.41 291**	P	**Pn**	**00 21 56.9 +0.4**
CSNT			AML	AML	
	comp=E,507µm,1.0s				
CSNT			AML	AML	
	comp=N,513µm,0.9s				
RUFI	**Rufina**	**1.44 307**	P	**Pn**	**00 21 56.5 -0.2**
FROS	**Frosini**	**1.45 279**	P	**Pn**	**00 21 56.6 -0.2**
OSSC	**Osservatorio P**	**1.46 292**	Pn	**Pn**	**00 21 57.2 +0.1**
LATB	**Latina**	**1.50 184**	P	**Pn**	**00 21 56.2 -1.3**
LATB			AML	AML	
	comp=E,246µm,0.5s				
LATB			AML	AML	
	comp=N,228µm,1.1s				
FRES	**Fresagrandinar**	**1.54 131**	P	**Pb**	**00 21 59.4 +0.2**
FRES			AML	AML	
	comp=E,774µm,0.9s				
FRES			AML	AML	
	comp=N,467µm,0.9s				
TRIF	**Trifonti**	**1.62 275**	P	**Pn**	**00 21 59.0 -0.3**
TRIF			AML	AML	
	comp=N,400µm,0.6s				
TRIF			AML	AML	
	comp=E,436µm,0.7s				
TRIV	**Trivento**	**1.62 138**	P	**Pb**	**00 22 01.2 +0.5**
TRIV			AML	AML	
	comp=E,985µm,1.2s				
TRIV			AML	AML	
	comp=N,646µm,1.6s				
BRIS	**BRISIGHELLA**	**1.64 316**	P	**Pn**	**00 22 00.9 +1.4**
CASP	**Castiglione de**	**1.66 264**		**Pn**	**00 21 59.1 -0.7**
VAGA	**Valle Agricola**	**1.78 152**	P	**Pb**	**00 22 03.6 +0.2**
BSSO	**Busso**	**1.82 142**	P	**Pn**	**00 22 03.2 +1.2**
CIGN	**Sant'Elia a Pi**	**1.89 134**	P	**Pb**	**00 22 04.7 -0.4**
CIGN			AML	AML	
	comp=E,386µm,1.1s				
CIGN			AML	AML	
	comp=N,434µm,1.1s				
PTRJ	**Pietraroja**	**1.94 146**	P	**Pn**	**00 22 04.4 +0.7**
PTRJ			AML	AML	
	comp=N,645µm,0.6s				
PTRJ			AML	AML	
	comp=E,683µm,0.8s				
MELA	**Melanico ??? S**	**1.97 130**	P	**Pn**	**00 22 05.3 +1.3**
MELA			AML	AML	
	comp=N,1310µm,0.5s				
MELA			AML	AML	
	comp=N,1225µm,0.7s				
MELA			AML	AML	
	comp=E,1220µm,0.6s				
MELA			AML	AML	
	comp=E,1270µm,1.0s				
ZCCA	**Zocca**	**2.06 312**		**Pn**	**00 22 07.0 +1.6**
VITU	**Vitulano (BN)**	**2.13 147**	P	**Pn**	**00 22 07.8 +1.4**
APRC	**Apricena**	**2.19 123**	P	**Pn**	**00 22 08.1 +1.1**
APRC			AML	AML	
	comp=E,524µm,0.5s				
APRC			AML	AML	
	comp=N,638µm,1.5s				
PAOL	**Paolisi**	**2.24 150**		**Pn**	**00 22 08.9 +1.1**
VLC	**Villacollemand**	**2.30 302**		**Pn**	**00 22 08.2 -0.4**
SGRT	**San Giovanni R**	**2.31 121**		**Pn**	**00 22 09.3 +0.5**
SGRT	**San Giovanni R**	**2.31 121**	P	**Pn**	**00 22 09.9 +1.1**
SGRT			AML	AML	
	comp=E,489µm,0.5s				
SGRT			AML	AML	
	comp=N,376µm,0.5s				
RIY	**Rijeka**	**2.54 23**	*e*Pn	**Pn**	**00 22 12.0 +0.2**
RIY			*e*Sn	**Sn**	**00 22 43.6 +0.9**
TEOL	**Teolo**	**2.58 337**		**Pn**	**00 22 12.8 +0.2**
SNAL	**S. Angelo Dei**	**2.59 142**	P	**Pn**	**00 22 14.7 +2.1**
SNAL			AML	AML	
	comp=N,324µm,1.6s				
SNAL			AML	AML	
	comp=E,289µm,1.6s				
SNAL			AML	AML	
	comp=E,288µm,1.0s				
SNAL			AML	AML	
	comp=N,314µm,1.6s				
SKDS	**Skadanscina**	**2.64 14**	*e*Pn	**Pn**	**00 22 12.8 -0.5**
PRMA	**PARMA**	**2.69 312**	Pn	**Pn**	**00 22 14.0 +0.1**
CEY	**Cerknica**	**2.91 19**	*e*Pn	**Pn**	**00 22 16.7 -0.3**
MSSA	**Maissana**	**2.92 298**	Pn	**Pn**	**00 22 17.7 +0.5**
BOJS	**Bojanci**	**2.95 31**	*e*Pn	**Pn**	**00 22 18.2 +0.7**
BOJS	**Bojanci**	**2.95 31**	P	**Pn**	**00 22 19.1 +1.6**
BOJS			AML	AML	
	comp=E,402µm,0.6s				
BOJS			AML	AML	
	comp=N,448µm,0.7s				
PALZ	**Palazzo San Ge**	**2.95 133**	P	**Pn**	**00 22 18.9 +1.3**
PALZ			AML	AML	
	comp=E,411µm,1.2s				
PALZ			AML	AML	
	comp=N,439µm,0.9s				
MRVN	**Minervino Murg**	**3.00 129**	P	**Pn**	**00 22 19.3 +1.1**
MRVN			AML	AML	
	comp=N,103µm,0.7s				
MRVN			AML	AML	
	comp=E,108µm,0.6s				
SABO	**M.te Sabotino**	**3.01 7**	P	**Pn**	**00 22 18.4 0.0**
SABO			AML	AML	
	comp=E,1825µm,0.6s				
SABO			AML	AML	
	comp=N,1780µm,0.7s				
SABO			AML	AML	
	comp=E,431µm,0.6s				
SABO			AML	AML	
	comp=N,446µm,0.7s				
CGRP	**Cima Grappa**	**3.04 342**	P	**Pn**	**00 22 19.7 +0.8**
CGRP			AML	AML	
	comp=E,380µm,0.6s				
CGRP			AML	AML	
	comp=N,385µm,0.7s				
CGRP			AML	AML	
	comp=E,394µm,0.6s				
CGRP			AML	AML	
	comp=N,441µm,0.8s				
PGF	**Pioggiola**	**3.06 263**	*e*P	**Pn**	**00 22 20.5 +1.4**
PGF			*e*Sn	**Sn**	**00 22 51.2 -4.5**
	comp=N,18nm,0.7s				
DOSS	**Dosso del Somm**	**3.20 335**	P	**Pn**	**00 22 22.8 +1.7**
SALO	**Salr**	**3.22 326**	Pn	**Pn**	**00 22 21.9 +0.7**
MGRS	**Mrkonjic Grad**	**3.22 62**	*e*Pn	**Pn**	**00 22 21.5 +0.3**
LJU	**Ljubljana**	**3.22 18**	P	**Pn**	**00 22 21.8 +0.6**
LJU			AML	AML	
	comp=N,1235µm,0.5s				
LJU			AML	AML	
	comp=E,1245µm,0.8s				
CTI	**Castel Tesino**	**3.23 342**		**Pn**	**00 22 22.0 +0.5**
CTI	**Castel Tesino**	**3.23 342**	P	**Pn**	**00 22 22.4 +0.9**
CTI			AML	AML	
	comp=N,205µm,0.5s				
CTI			AML	AML	
	comp=E,238µm,0.5s				
MPRI	**Monte Prat**	**3.25 359**	P	**Pn**	**00 22 22.3 +0.6**
MPRI			AML	AML	
	comp=N,386µm,0.8s				
MPRI			AML	AML	
	comp=E,326µm,0.6s				
STAL	**STALIGIAL**	**3.28 355**		**Pn**	**00 22 21.9 -0.2**
STAL	**STALIGIAL**	**3.28 355**	P	**Pn**	**00 22 22.2 +0.1**
STAL			AML	AML	
	comp=E,288µm,0.5s				
STAL			AML	AML	
	comp=N,255µm,1.0s				
AMUR	**Altamura**	**3.34 127**	P	**Pn**	**00 22 24.1 +1.2**
AMUR			AML	AML	
	comp=E,183µm,0.6s				
AMUR			AML	AML	
	comp=N,170µm,0.6s				
LUSI	**Trento, Gardas**	**3.35 333**	AML	AML	
	comp=N,184µm,0.8s				
LUSI			AML	AML	
	comp=E,210µm,0.7s				
CIMO	**Cimolais**	**3.35 352**	P	**Pn**	**00 22 23.1 +0.1**
CIMO			AML	AML	
	comp=E,78µm,1.0s				
CIMO			AML	AML	
	comp=N,84µm,0.8s				
CIMO			AML	AML	
	comp=N,87µm,0.7s				
CIMO			AML	AML	
	comp=E,89µm,1.1s				
STON	**Ston**	**3.38 90**	*e*Pn	**Pn**	**00 22 22.3 -1.0**
STON	**Ston**	**3.38 90**	*e*Pn	**Pn**	**00 22 23.1 -0.2**
STON			*e*Sn	**Sn**	**00 23 04.4 +1.0**
A051A	**Mrakovica**	**3.41 52**	*e*Pn	**Pn**	**00 22 25.5 +1.6**
PTCC	**Patocco-Chiusa**	**3.42 3**	AML	AML	
	comp=E,162µm,0.5s				
PTCC			AML	AML	
	comp=N,119µm,0.5s				
BLY	**Banja Luka**	**3.43 58**	*e*Pn	**Pn**	**00 22 26.6 +2.5**
BLY	**Banja Luka**	**3.43 58**	*e*Pn	**Pn**	**00 22 25.5 +1.4**
BLY			*e*Sn	**Sn**	**00 23 05.7 +0.8**
PRED	**Cave del Predi**	**3.47 5**		**Pn**	**00 22 25.1 +0.4**
CLUD	**Cludinico**	**3.47 357**		**Pn**	**00 22 25.0 +0.3**
CLUD	**Cludinico**	**3.47 357**	AML	AML	
	comp=E,225µm,0.8s				
CLUD			AML	AML	
	comp=E,248µm,1.2s				
CLUD			AML	AML	
	comp=N,145µm,0.7s				
CLUD			AML	AML	
	comp=N,150µm,0.7s				
ZONE	**Zone**	**3.50 323**	AML	AML	
	comp=N,124µm,0.5s				
ZONE			AML	AML	
	comp=E,103µm,0.7s				
MATE	**Matera**	**3.56 130**	⇑P	**Pb**	**00 22 36.2 +2.5**
ZOU	**Zoufplan**	**3.57 359**	AML	AML	
	comp=E,210µm,0.9s				
ZOU			AML	AML	
	comp=N,226µm,1.1s				
ACOM	**Acomizza, Ital**	**3.57 5**	AML	AML	
	comp=E,280µm,0.8s				
ACOM			AML	AML	
	comp=E,257µm,0.7s				
ACOM			AML	AML	
	comp=N,264µm,1.2s				
ACOM			AML	AML	
	comp=N,226µm,1.2s				
CUC	**Castrocucco**	**3.62 145**		**Pn**	**00 22 28.7 +1.9**
MYKA	**Terra Mystica**	**3.66 6**	*i* Pn	**Pn**	**00 22 28.4 +1.0**
	comp=N,9.5nm,0.3s,SNR=8.0				
OBKA	**Obir**	**3.67 16**	*e*Pn	**Pn**	**00 22 27.7 +0.3**
OBKA	**Obir**	**3.67 16**	*e*Pn	**Pn**	**00 22 28.1 +0.7**
	comp=N,1.8nm,0.2s				
OBKA	**Obir**	**3.67 16**	*e*Pn	**Pn**	**00 22 28.0 +0.6**
NOCI	**Noci**	**3.68 125**	AML	AML	
	comp=E,131µm,0.5s				
NOCI			AML	AML	
	comp=N,194µm,1.0s				
KOSI	**Kohlern**	**3.69 341**	AML	AML	
	comp=E,229µm,1.6s				
KOSI			AML	AML	
	comp=N,172µm,0.6s				
ABTA	**Abfaltersbach**	**3.78 354**	*i* Pn	**Pn**	**00 22 30.4 +1.4**
	comp=N,44nm,0.5s,SNR=20				
A052A	**Srbac**	**3.81 55**	*e*Pn	**Pn**	**00 22 29.7 +0.3**
BRES	**Bressanone**	**3.83 346**	AML	AML	
	comp=N,182µm,1.6s				
BRES			AML	AML	
	comp=E,154µm,1.2s				
TREB	**Trebinje**	**3.86 92**	*e*Pn	**Pn**	**00 22 31.1 +1.0**
TREB	**Trebinje**	**3.86 92**	*e*Pn	**Pn**	**00 22 31.4 +1.3**
TREB			*e*Sn	**Sn**	**00 23 16.6 +1.1**
BRY	**Bratogost**	**3.99 89**	*e*Pn	**Pn**	**00 22 34.8 +2.9**
KBA	**Koelnbreinsper**	**4.09 2**	*i* Pn	**Pn**	**00 22 34.6 +1.2**
	comp=E,13nm,0.3s,SNR=6.4				
KBA	**Koelnbreinsper**	**4.09 2**	*e*Pn	**Pn**	**00 22 34.7 +1.3**
MUGIO	**Muggio**	**4.13 317**	AML	AML	
	comp=E,37µm,0.4s				
MUGIO			AML	AML	
	comp=N,43µm,1.6s				
FUORN	**Ofenpass-Fuorn**	**4.16 332**		**Pn**	**00 22 36.0 +1.7**
SBF	**Sospel**	**4.22 284**	*e*P	**Pn**	**00 22 37.5 +2.4**
SBF			*e*Sn	**Sn**	**00 23 20.8 -3.6**
	comp=N,23nm,0.6s				
FETA	**Feichten**	**4.37 338**	*e*Pn	**Pn**	**00 22 39.6 +2.4**
	comp=N,6.7nm,0.4s				
HAPS	**Han Pijesak,BI**	**4.39 74**	*e*Pn	**Pn**	**00 22 37.4 0.0**
TUE	**Stuetta**	**4.39 324**		**Pn**	**00 22 38.2 +0.7**
WTTA	**Wattenberg**	**4.40 347**	*e*Pn	**Pn**	**00 22 40.0 +2.4**
	comp=N,7.9nm,0.5s				
WTTA	**Wattenberg**	**4.40 347**	*e*Pn	**Pn**	**00 22 39.8 +2.3**
SQTA	**Sankt Quirin**	**4.44 343**	*i* Pn	**Pn**	**00 22 40.7 +2.7**
	comp=N,18nm,0.3s,SNR=13				
WATA	**Walderalm**	**4.48 347**	*i* Pn	**Pn**	**00 22 41.2 +2.6**
	comp=N,19nm,0.5s,SNR=13				
VSL	**Villasalto**	**4.48 220**	AML	AML	
	comp=E,32µm,1.1s				

VSL					AML	AML		
	comp=N,35μm,0.4s							
DRME	**Dracevica, Mon**	**4.56**	**98**	*e*Pn	**Pn**	**Pn**	**00 22 40.6**	**+1.0**
PDG	**Podgorica**	**4.56**	**95**	Pn	**Pn**	**Pn**	**00 22 40.3**	**+0.6**
PDG	**Podgorica**	**4.56**	**95**	*e*Pn	**Pn**	**Pn**	**00 22 40.9**	**+1.2**
PDG				*e*Sn	**Sn**	**Sn**	**00 23 33.8**	**+1.0**
MOTA	**Moosalm**	**4.58**	**343**	*i* Pn	**Pn**	**Pn**	**00 22 42.9**	**+2.8**
	comp=N,12nm,0.5s,SNR=8.6							
ARSA	**Arzberg**	**4.59**	**21**	*e*Pn	**Pn**	**Pn**	**00 22 40.8**	**+0.7**
	comp=N,2.2nm,0.3s							
ARSA	**Arzberg**	**4.59**	**21**	*e*Pn	**Pn**	**Pn**	**00 22 40.6**	**+0.5**
ARSA				*e*Sn	**Sn**	**Sn**	**00 23 32.5**	**-1.0**
RUDO	**Rudo**	**4.61**	**80**	*e*Pn	**Pn**	**Pn**	**00 22 41.4**	**+1.0**
BBLS	**Lazići**	**4.67**	**77**	*e*Pn	**Pn**	**Pn**	**00 22 42.7**	**+1.5**
BBLS	**Lazići**	**4.67**	**77**	*e*Pn	**Pn**	**Pn**	**00 22 42.7**	**+1.5**
ZUGS	**Zugspitze, Sch**	**4.67**	**342**	*e*Pn	**Pn**	**Pn**	**00 22 45.6**	**+4.2**
ZUGS				*e*Sn	**Sn**	**Sn**	**00 23 42.5**	**+6.6**
TIP	**Timpagrande**	**4.70**	**143**	⇑P	**Pb**	**Pn**	**00 22 49.1**	**-4.1**
TIP	**Timpagrande**	**4.70**	**143**	Pn	**Pn**	**Pn**	**00 22 43.6**	**+1.9**
BIOA	**Bad Ischl, Aus**	**4.72**	**4**	*i* Pn	**Pn**	**Pn**	**00 22 43.1**	**+1.3**
	comp=N,13nm,0.3s,SNR=18							
KOVH	**Kovagotottos**	**4.72**	**47**	P	**Pn**	**Pn**	**00 22 45.3**	**+3.4**
KOVH				S	**Sn**	**Sn**	**00 23 34.4**	**-2.4**
RJOB	**Jochberg**	**4.75**	**357**	*e*Pn	**Pn**	**Pn**	**00 22 43.8**	**+1.5**
RJOB				*e*Sn	**Sn**	**Sn**	**00 23 40.8**	**+3.3**
RETA	**Reutte**	**4.79**	**341**	*e*Pn	**Pn**	**Pn**	**00 22 45.2**	**+2.3**
	comp=N,5.2nm,0.4s							
LMR	**La Mourre**	**4.84**	**276**	*e*P	**Pn**	**Pn**	**00 22 44.5**	**+1.0**
OBER	**Oberstdorf**	**4.84**	**337**	*e*Pn	**Pn**	**Pn**	**00 22 47.0**	**+3.3**
OBER				*e*Sn	**Sn**	**Sn**	**00 23 43.5**	**+3.8**
DAVA	**Damuels**	**4.87**	**333**	*i* Pn	**Pn**	**Pn**	**00 22 46.7**	**+2.7**
	comp=N,4.1nm,0.4s,SNR=5.3							
DAVA	**Damuels**	**4.87**	**333**	*e*Pn	**Pn**	**Pn**	**00 22 46.6**	**+2.7**
MBDF	**Montbardon**	**4.90**	**293**	*e*P	**Pn**	**Pn**	**00 22 46.8**	**+2.4**
MBDF				*e*Sn	**Sn**	**Sn**	**00 23 37.9**	**-3.4**
	comp=N,15nm,0.7s							
MOA	**Molln**	**4.93**	**9**	*i* Pn	**Pn**	**Pn**	**00 22 46.1**	**+1.3**
	comp=N,14nm,0.7s,SNR=6.8							
MOA	**Molln**	**4.93**	**9**	*e*Pn	**Pn**	**Pn**	**00 22 45.5**	**+0.8**
MOA				*e*Sn	**Sn**	**Sn**	**00 23 42.6**	**+0.8**
SCTE	**Santa Cesarea**	**4.97**	**124**	Pn	**Pn**	**Pn**	**00 22 46.3**	**+1.0**
SJES	**Sjenica**	**5.03**	**85**	*e*Pn	**Pn**	**Pn**	**00 22 47.5**	**+1.3**
SJES				*e*Sn	**Sn**	**Sn**	**00 23 44.8**	**+0.3**
DIVS	**Divibare**	**5.13**	**75**		**Pn**	**Pn**	**00 22 48.6**	**+1.1**
DIVS	**Divibare**	**5.13**	**75**	*e*Pn	**Pn**	**Pn**	**00 22 48.8**	**+1.3**
DIVS	**Divibare**	**5.13**	**75**	*e*Pn	**Pn**	**Pn**	**00 22 48.5**	**+1.1**
UBR	**Ueberruh**	**5.14**	**337**	*e*Pn	**Pn**	**Pn**	**00 22 50.9**	**+3.1**
LPG	**La Plagne**	**5.21**	**301**	*e*P	**Pn**	**Pn**	**00 22 52.3**	**+3.5**
LPG				*e*Sn	**Sn**	**Sn**	**00 23 45.4**	**-3.7**
	comp=N,18nm,0.7s							
RONA	**Rosalia, Austr**	**5.22**	**24**	*e*Pn	**Pn**	**Pn**	**00 22 48.7**	**0.0**
	comp=N,1.5nm,0.2s							
LPL	**La Plagne**	**5.23**	**301**	*e*P	**Pn**	**Pn**	**00 22 51.6**	**+2.6**
LPL				*e*Sn	**Sn**	**Sn**	**00 23 45.6**	**-3.9**
	comp=N,18nm,0.8s							
TIR	**Tirane**	**5.28**	**106**	⇓P	**Pn**	**Pn**	**00 22 45.6**	**-4.0**
TIR	**Tirane**	**5.28**	**106**		**Pn**	**Pn**	**00 22 50.2**	**+0.6**
TIR	**Tirane**	**5.28**	**106**	*e*Pn	**Pn**	**Pn**	**00 22 50.4**	**+0.8**
TIR				*e*Sn	**Sn**	**Sn**	**00 23 51.1**	**+0.6**
FRGS	**Fruska Gora**	**5.29**	**64**	⇓P	**Pn**	**Pn**	**00 22 49.8**	**+0.1**
FRGS	**Fruska Gora**	**5.29**	**64**	*e*Pn	**Pn**	**Pn**	**00 22 49.5**	**-0.2**
CONA	**Conrad Observa**	**5.30**	**20**	*e*Pn	**Pn**	**Pn**	**00 22 50.4**	**+0.4**
	comp=N,2.7nm,0.3s							
SENIN	**Lac Senin/Sane**	**5.34**	**311**		**Pn**	**Pn**	**00 22 52.1**	**+1.5**
VLO	**Vlora**	**5.40**	**116**	Pn	**Pn**	**Pn**	**00 22 51.9**	**+0.7**
CLTB	**Caltabellotta**	**5.41**	**179**		**Pn**	**Pn**	**00 22 52.5**	**+1.1**
TRUS	**Trudelj**	**5.44**	**74**	*e*Pn	**Pn**	**Pn**	**00 22 52.7**	**+0.9**
ORIF	**Oris-en-Rattie**	**5.56**	**293**	*e*P	**Pn**	**Pn**	**00 22 57.0**	**+3.5**
ORIF				*e*Sn	**Sn**	**Sn**	**00 23 52.3**	**-5.2**
	comp=N,34nm,1.2s							
SMRF	**Simiane la Rot**	**5.57**	**283**	*e*P	**Pn**	**Pn**	**00 22 55.8**	**+2.3**
GRUS	**Gruza**	**5.61**	**78**	*e*Pn	**Pn**	**Pn**	**00 22 54.5**	**+0.4**
GEC2	**GERESS Array S**	**5.87**	**4**	Pn	**Pn**	**Pn**	**00 22 58.1**	**+0.4**
GEC2	**GERESS Array S**	**5.87**	**4**	*e*Pn	**Pn**	**Pn**	**00 22 58.0**	**+0.2**
GEC2				*e*Sn	**Sn**	**Sn**	**00 24 04.7**	**-0.4**
GERES	**GERESS Array B**	**5.87**	**4**		**Pn**	**Pn**	**00 22 57.6**	**-0.1**
CKRC	**Cesky Krumlov**	**5.89**	**8**	*e*PN	**Pn**	**Pn**	**00 22 57.3**	**-0.6**
CKRC				*e*SN	**Sn**	**Sn**	**00 24 03.5**	**-2.0**
NORI	**Noerdlinger Ri**	**5.99**	**344**	*e*Sn	**Sn**	**Sn**	**00 24 06.8**	**-1.0**
KEK	**Kerkira**	**6.00**	**121**	Pn	**Pn**	**Pn**	**00 23 00.2**	**+0.7**
OHR	**Ohrid**	**6.03**	**106**	*i* Pn	**Pn**	**Pn**	**00 23 01.9**	**+2.0**
KHC	**Kasperske Hory**	**6.15**	**3**		**Pn**	**Pn**	**00 23 01.0**	**-0.5**
KHC	**Kasperske Hory**	**6.15**	**3**	*e*PN	**Pn**	**Pn**	**00 23 01.0**	**-0.5**
KHC				*e*SN	**Sn**	**Sn**	**00 24 09.1**	**-2.8**
WET	**Wettzell**	**6.16**	**359**	*e*Pn	**Pn**	**Pn**	**00 23 01.0**	**-0.6**
WET				*e*Sn	**Sn**	**Sn**	**00 24 10.5**	**-1.5**
CABF	**La Chapelle**	**6.17**	**308**	*e*P	**Pn**	**Pn**	**00 23 04.1**	**+2.3**
CABF				*e*Sn	**Sn**	**Sn**	**00 24 07.7**	**-4.7**
	comp=N,11nm,0.7s							
KBN	**Korca**	**6.21**	**110**		**Pn**	**Pn**	**00 23 02.6**	**+0.3**
BFO	**Black Forest**	**6.30**	**330**	Pn	**Pn**	**Pn**	**00 23 04.8**	**+1.2**
BOVS	**Bovan**	**6.31**	**81**	⇑P	**Pn**	**Pn**	**00 23 00.3**	**-3.4**
VIVF	**Saint-Julien-I**	**6.37**	**290**	*e*P	**Pn**	**Pn**	**00 23 07.5**	**+3.0**
BARS	**Barje**	**6.40**	**89**	*e*Pn	**Pn**	**Pn**	**00 23 05.2**	**+0.3**
BARS				*e*Sn	**Sn**	**Sn**	**00 24 16.8**	**-1.2**
KRUC	**Moravsky**	**6.49**	**20**	*e*PN	**Pn**	**Pn**	**00 23 04.1**	**-2.0**
HINF	**Hinteralfeld**	**6.53**	**320**	*e*P	**Pn**	**Pn**	**00 23 07.3**	**+0.6**
HINF				*e*Sn	**Sn**	**Sn**	**00 24 17.5**	**-3.8**
	comp=N,41nm,0.9s							
SSB	**Saint Sauveur**	**6.57**	**293**	Pn	**Pn**	**Pn**	**00 23 08.1**	**+0.8**
BZS	**Buzias**	**6.65**	**64**	⇑P	**Pn**	**Pn**	**00 23 07.7**	**-0.6**
ECH	**Echery**	**6.69**	**323**		**Pn**	**Pn**	**00 23 09.3**	**+0.4**
CDF	**Champ du Feu**	**6.79**	**325**	*e*P	**Pn**	**Pn**	**00 23 11.4**	**+1.1**
CDF				*e*Sn	**Sn**	**Sn**	**00 24 23.6**	**-4.0**
	comp=N,9.0nm,0.5s							
LASF	**Ste Croix**	**6.81**	**282**	*e*P	**Pn**	**Pn**	**00 23 12.7**	**+2.1**
STIP	**Stip**	**6.85**	**98**	*i* Pn	**Pn**	**Pn**	**00 23 13.9**	**+2.8**
HAU	**Haudompre**	**6.91**	**319**	*e*P	**Pn**	**Pn**	**00 23 12.9**	**+1.0**
HAU				*e*Sn	**Sn**	**Sn**	**00 24 26.8**	**-3.7**
	comp=N,41nm,0.6s							
SIRR	**Siria**	**6.92**	**59**	⇑P	Pn		00 23 18.4	+6.3
ZAPS	**Zavoj**	**6.98**	**84**	*e*Pn	**Pn**	**Pn**	**00 23 14.1**	**+1.2**
ZAPS				*e*Sn	**Sn**	**Sn**	**00 24 30.0**	**-2.2**
HERR	**Herculane**	**6.98**	**71**	⇑P	**Pn**	**Pn**	**00 23 11.4**	**-1.5**
BLKB	**Belogradchik**	**7.01**	**82**	⇓P	Pn		00 23 08.4	-4.9
VAY	**Valandovo**	**7.23**	**100**	*i* Pn	**Pn**	**Pn**	**00 23 17.2**	**+1.0**
VTS	**Vitosha**	**7.46**	**89**	⇓P	**Pn**	**Pn**	**00 23 20.3**	**+0.7**
VTS	**Vitosha**	**7.46**	**89**		**Pn**	**Pn**	**00 23 20.6**	**+1.0**
SMF	**Signal de Mont**	**7.53**	**302**	*e*P	**Pn**	**Pn**	**00 23 23.9**	**+3.4**
SMF				*e*Sn	**Sn**	**Sn**	**00 24 40.6**	**-5.3**
	comp=N,10nm,0.7s							
PAGF	**Fort de Pagny**	**7.59**	**320**	*e*P	**Pn**	**Pn**	**00 23 23.5**	**+2.3**
PAGF				*e*Sn	**Sn**	**Sn**	**00 24 41.7**	**-5.5**
	comp=N,12nm,0.6s							
LIT	**Litokhoron**	**7.61**	**109**	Pn	**Pn**	**Pn**	**00 23 21.3**	**-0.2**
SFTF	**Sexfontaines**	**7.69**	**315**	*e*Pn	**Pn**	**Pn**	**00 23 21.2**	**-1.4**
SFTF	**Sexfontaines**	**7.69**	**315**	*e*P	**Pn**	**Pn**	**00 23 25.6**	**+3.0**
SFTF				*e*Sn	**Sn**	**Sn**	**00 24 43.1**	**-6.7**
	comp=N,5.0nm,0.4s							
LOR	**Lormes**	**7.81**	**306**	*e*P	**Pn**	**Pn**	**00 23 24.9**	**+0.6**
LOR				*e*Sn	**Sn**	**Sn**	**00 24 47.2**	**-5.6**
	comp=N,6.1nm,0.6s							
MEZF	**Maizieres J'vi**	**7.88**	**317**	*e*P	**Pn**	**Pn**	**00 23 26.6**	**+1.4**
AVF	**Avril sur Loir**	**7.90**	**302**	*e*P	**Pn**	**Pn**	**00 23 27.6**	**+2.1**
AVF				*e*Sn	**Sn**	**Sn**	**00 24 48.2**	**-6.6**
	comp=N,9.8nm,1.0s							
SAVF	**Savonnieres en**	**7.92**	**318**	*e*P	**Pn**	**Pn**	**00 23 29.6**	**+3.9**
SSF	**Saint Saulge**	**7.92**	**304**	*e*P	**Pn**	**Pn**	**00 23 27.4**	**+1.6**
SSF				*e*Sn	**Sn**	**Sn**	**00 24 50.1**	**-5.4**
	comp=N,9.4nm,0.7s							
MTLF	**Montolieu**	**7.97**	**276**	*e*P	**Pn**	**Pn**	**00 23 30.0**	**+3.5**
MARR	**Marisel-Cluj**	**8.01**	**59**	⇑P	**Pn**	**Pn**	**00 23 28.6**	**+1.5**
BGF	**Bois d'Agland**	**8.12**	**300**	*e*P	**Pn**	**Pn**	**00 23 30.7**	**+2.1**
BGF				*e*Sn	**Sn**	**Sn**	**00 24 54.7**	**-5.7**
	comp=N,7.2nm,0.6s							
CAF	**Calviac**	**8.20**	**287**	*e*P	**Pn**	**Pn**	**00 23 33.5**	**+3.9**
WLF	**Walferdange**	**8.23**	**327**	Pn	**Pn**	**Pn**	**00 23 30.6**	**+0.7**
CLL	**Collm**	**8.32**	**360**	*e*Pn	**Pn**	**Pn**	**00 23 32.0**	**+0.8**
CLL				*e*Sn	**Sn**	**Sn**	**00 24 59.0**	**-6.2**
CLL				*ex*	x		00 25 52.0	
CLL				*e*Sg	**Sg**	**Sg**	**00 25 54.0**	**-3.5**
	comp=Z,9.0nm,1.1s							
RDO	**Rodhopi**	**9.43**	**97**	Pn	**Pn**	**Pn**	**00 23 46.2**	**-0.2**
BURAR	**Bucovina Array**	**9.70**	**57**	Pn	**Pn**	**Pn**	**00 23 50.5**	**+0.3**
ETSF	**Etsaut**	**10.03**	**274**	*e*P	**Pn**	**Pn**	**00 23 57.1**	**+2.4**
TOA0	**Torodi Ar. Sit**	**31.33**	**202**	P	**P**	**P**	**00 27 50.5**	**-0.7**
TOA0				IAmb	IAmb	IAmb	00 28 12.0	
	comp=Z,4.4nm,1.3s							
ARU	**Arti**	**31.69**	**49**	P	**P**	**P**	**00 27 53.4**	**-0.7**
KK31	**Karatay Array**	**41.23**	**69**	P	**P**	**P**	**00 29 15.6**	**+0.1**
KKAR	**Karatay Array**	**41.23**	**69**	P	**P**	**P**	**00 29 15.5**	**-0.1**
ZAA0	**Zalesovo Array**	**46.83**	**50**	P	**P**	**P**	**00 30 00.1**	**-0.2**
ZAA0				IAmb	IAmb	IAmb	00 30 01.2	
	comp=Z,1.1nm,0.5s							
MKAR	**Makanchi Array**	**47.72**	**60**	P	**P**	**P**	**00 30 06.5**	**-0.9**
WMQ	**Urumqi**	**52.41**	**62**	*e*P	**P**	**P**	**00 30 46.5**	**+3.4**
HHC	**Hu-ho-hao-te**	**68.85**	**54**	*e*P	**P**	**P**	**00 32 35.5**	**+0.2**
PZH	**PanZhiHua**	**71.50**	**71**	P	**P**	**P**	**00 32 53.0**	**+1.2**

IDC 27 00:21:51.5±4.5, 12°.38S×167°.05E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=194.2km s-min=34.8km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.26**	**252**	P	P	00 28 21.8	-0.4
	0.2nm,0.5s,baz=84,slow=9.2,SNR=4.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**33.37**	**246**	P	P	00 28 32.2	+0.3
	0.4nm,0.7s,baz=74,slow=9.8,SNR=2.8						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**84.37**	**18**	P	P	00 34 25.2	0.0
	0.3nm,0.5s,baz=209,slow=4.5,SNR=5.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**95.37**	**317**	P	P	00 35 17.7	-0.1
	0.2nm,0.6s,baz=97,slow=7.4,SNR=2.0						
	0.2nm,0.6s						

*IDC **27** 00:31:36.7±2.1, 12°.74S×76°.72W, h61km±12km, mb3.6/6, mbtmp3.9/8, MS3.1/3, Error ellipse: s-maj=42.0km s-min=18.9km az=52.0*
*ARE **27** 00:31:36±3.0, 12°.99S±0°.06×76°.9W±0°.1, h52km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=166.0*
*NEIC **27** 00:31:36.6±1.0, 12°.81S±0°.05×76°.7W±0°.1, h60km±5km, mb4.5/14, ML4.6(ARE), Error ellipse: s-maj=16.0km s-min=7.2km az=80.0*

ISC 27 00:31:34.0±0.7, 12°.93S±0°.07×76°.9W±0°.1, h45km, n62, σ1§39/52, mb4.3/12, 1C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**0.93**	**4**	P	**Pn**	**00 31 52.5**	**+1.6**
	719nm,0.3s,baz=195,slow=9.2,SNR=308						
NNA				S	**Sn**	**00 32 04.1**	**+0.9**
	2μm,0.3s,baz=213,slow=21,SNR=35						
NNA				LR	LR	00 32 20.7	
	comp=Z,591nm,18.8s,baz=201,slow=58						
ATAH	**Atahualpa**	**5.94**	**346**	P	**Pn**	**00 33 01.7**	**+1.9**
	44nm,0.3s,baz=160,slow=4.5,SNR=212						
ATAH				S	**Sn**	**00 34 07.9**	**+1.0**
	40nm,0.6s,baz=29,slow=9.9,SNR=4.4						
PB12	**IPOC Station P**	**8.49**	**133**	Pn	**Pn**	**00 33 34.4**	**-0.2**
PB16	**IPOC Station P**	**8.92**	**128**	Pn	**Pn**	**00 33 41.8**	**+0.8**
LPAZ	**La Paz**	**9.12**	**113**	P	**Pn**	**00 33 46.6**	**+2.8**
	0.8nm,0.5s,baz=308,slow=7.0,SNR=3.9						
LPAZ	**La Paz**	**9.12**	**113**		**Pn**	**00 33 45.5**	**+1.7**
PB11	**IPOC Station P**	**9.72**	**135**	Pn	**Pn**	**00 33 51.6**	**+0.1**
BOSC	**San Juan Bosco**	**9.84**	**351**		**Pn**	**00 33 51.3**	**-1.8**
TA01	**Diego Aracena**	**9.96**	**141**	Pn	**Pn**	**00 33 57.4**	**+2.8**
GO01	**Chusmiza**	**9.98**	**133**		**Pn**	**00 33 55.5**	**+0.2**
PATCX	**Punta Patache**	**10.16**	**141**	Pn	**Pn**	**00 33 58.0**	**+0.5**
PB08	**IPOC Station P**	**10.33**	**135**	Pn	**Pn**	**00 33 57.9**	**-2.1**
COHC	**Cochancay**	**10.65**	**347**	Pn	**Pn**	**00 34 05.5**	**+1.4**
COHC	**Cochancay**	**10.65**	**347**	*e*P	**Pn**	**00 34 05.2**	**+1.2**
PB09	**IPOC Station P**	**11.46**	**141**	Pn	**Pn**	**00 34 17.2**	**+2.0**
PORT	**Chimborazo Vol**	**11.54**	**351**		**Pn**	**00 34 18.5**	**+1.7**
PIAT	**Ana Tenorio**	**11.93**	**353**	*e*P	**Pn**	**00 34 18.7**	**-3.2**
PPLP	**Puerto Lpez**	**11.94**	**341**	*e*P	**Pn**	**00 34 20.6**	**-1.2**
SLOR	**San Lorenzo -**	**12.22**	**352**		**Pn**	**00 34 26.6**	**+0.6**
LVC	**Limon Verde**	**12.27**	**143**	LR	LR	00 39 05.4	
	comp=Z,50nm,18.8s,baz=327,slow=36						
PAC1	**Pacto, Paraso**	**13.24**	**352**	*e*P	**Pn**	**00 34 39.8**	**+0.2**
BBAC	**Balboa, Cauca**	**14.85**	**359**	*e*P	**Pn**	**00 35 01.0**	**-0.5**
ROSC	**El Rosal**	**17.84**	**8**	LR	LR	00 43 45.7	
	comp=Z,126nm,21.5s,baz=216,slow=41						
GUY2C	**Guyana, Caldas**	**18.10**	**5**	*e*P	**P**	**00 35 44.2**	**+1.5**
NORC	**Norcasia**	**18.48**	**6⇑**	*e*P	**Pn**	**00 35 48.0**	**+1.1**
SPBC	**San Pablo de B**	**18.67**	**9**	*e*P	**Pn**	**00 35 51.9**	**+2.6**
RUSC	**La Rusia**	**19.08**	**12**	*e*P	**Pn**	**00 35 54.8**	**+0.2**
PTBC	**PUERTO BERRIO,**	**19.49**	**7**	*e*P	**Pn**	**00 35 57.6**	**-1.4**
H03N1	**Juan Fernandez**	**20.50**	**185**	T	T	00 57 13.4	
	baz=6.1,slow=75,SNR=10						
H03N2	**Juan Fernandez**	**20.50**	**185**	T	T	00 57 12.7	
	baz=6.1,slow=75,SNR=18						
H03N3	**Juan Fernandez**	**20.52**	**185**	T	T	00 57 12.1	
	baz=6.1,slow=75,SNR=18						
PAMC	**Pamplona, Colo**	**20.56**	**12**	*e*P	Pn	00 36 10.1	-2.1
SDV	**Santo Domingo**	**22.55**	**16**	P	**P**	**00 36 29.7**	**-1.0**
	6.2nm,0.4s,baz=187,slow=5.0,SNR=12						
SDV				LR	LR	00 46 09.6	
	comp=Z,51nm,20.2s,baz=118,slow=39						
	6.2nm,0.4s						
SDV	**Santo Domingo**	**22.55**	**16**	P	**P**	**00 36 29.1**	**-1.6**
SDV				IAmb	IAmb	00 36 31.5	
	comp=Z,14nm,0.9s						
SJCC	**San Jacinto, C**	**22.74**	**4**	*e*P	**P**	**00 36 32.2**	**-0.3**
BAUV	**El Baul**	**23.44**	**22**	P	**P**	**00 36 38.3**	**-1.2**
BAUV				IAmb	IAmb	00 36 40.2	
	comp=Z,24nm,0.8s						
GRGR	**Grenville**	**29.13**	**32**	P	**P**	**00 37 29.2**	**-1.7**
SJG	**San Juan**	**32.61**	**19**	P	**P**	**00 38 00.2**	**-1.4**
SMRT	**St. Maarten**	**33.67**	**24**	P	**P**	**00 38 08.2**	**-2.7**
TXAR	**Lajitas Array**	**49.32**	**329**	P	**P**	**00 40 19.8**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=146,slow=9.0,SNR=11						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**49.32**	**329**	P	**P**	**00 40 19.6**	**+0.6**
TX32	**Lajitas Array**	**49.32**	**329**	P	**P**	**00 40 19.5**	**+0.4**
TX32				IAmb	IAmb	00 40 21.4	
	comp=Z,4.6nm,1.5s						
MIAR	**Mount Ida**	**49.80**	**342**	P	**P**	**00 40 22.7**	**+0.3**
ABTX	**Abilene, Hawle**	**50.24**	**335**	P	**P**	**00 40 26.1**	**+0.2**
ABTX				IAmb	IAmb	00 40 27.3	
	comp=Z,6.5nm,0.8s						
X37A	**Clayton**	**50.41**	**340**	P	**P**	**00 40 27.4**	**+0.4**
X37A				IAmb	IAmb	00 40 28.1	
	comp=Z,5.9nm,0.8s						
PDAR	**Pinedale Array**	**62.99**	**334**	P	**P**	**00 41 56.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=163,slow=6.6,SNR=2.0						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**64.10**	**325**	P	**P**	**00 42 04.9**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=136,slow=9.3,SNR=5.5						
	comp=Z,0.9nm,0.8s						
SNAA	**Sanae**	**72.81**	**161**	P	**P**	**00 42 58.6**	**+1.0**
SNAA				IAmb	IAmb	00 43 05.3	
	comp=Z,5.4nm,1.3s						
YKA	**Yellowknife Ar**	**80.72**	**343**	P	**P**	**00 43 41.5**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=144,slow=4.9,SNR=4.8						
	comp=Z,0.8nm,0.7s						
TOA0	**Torodi Ar. Sit**	**82.09**	**75**	P	**P**	**00 43 49.5**	**-1.0**
TOA0				IAmb	IAmb	00 43 50.1	
	comp=Z,8.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**82.09**	**75**	P	**P**	**00 43 50.0**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=259,slow=4.0,SNR=7.1						
	comp=Z,1.5nm,0.9s						
BCAR	**Beaver Creek A**	**90.54**	**336**	P	**P**	**00 44 31.0**	**0.0**
H11N3	**WAKE ISLAND Hyl**	**18.68**	**286**	T	T	03 00 36.9	
	baz=91,slow=74,SNR=3.4						
H11N2	**WAKE ISLAND Hyl**	**18.69**	**286**	T	T	03 00 36.9	
	baz=91,slow=74,SNR=3.8						
H11N1	**WAKE ISLAND Hyl**	**18.70**	**286**	T	T	03 00 40.0	
	baz=91						
H11S2	**WAKE ISLAND Hyl**	**18.77**	**284**	T	T	03 00 44.5	
	baz=95,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hyl**	**18.78**	**284**	T	T	03 00 47.5	
	baz=95,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hyl**	**18.79**	**284**	T	T	03 00 45.4	
	baz=95,slow=75,SNR=13						
WRA	**Warramunga Arr**	**135.14**	**224**	PKP	**PKPdf**	**00 50 49.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=142,slow=1.6,SNR=1.9						
ZALV	**Zalesovo Beam**	**136.59**	**16**	PKP	**PKPdf**	**00 50 50.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=321,slow=2.0,SNR=2.4						
SONM	**Songino Array**	**145.09**	**356**	PKP	**PKPbc**	**00 51 06.2**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=326,slow=3.4,SNR=8.5						
PZH	**PanZhiHua**	**166.43**	**5**	PKP	**PKPdf**	**00 51 34.3**	**-1.0**

JMA 27 00:49:03.1±0.0, 32°.4N±0°.1×130°.7E±0°.1, h12km, MV0.7/21, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZO	**Okuchi**	**0.22**	**191**	P	Pg	00 49 07.7	0.0
JZO				*e*S	Sg	00 49 10.9	0.0

*IDC **27** 00:50:38.9±0.6, 32°.91N×139°.88E, h107km±3km, mb3.4/6, mbtmp3.7/8, Error ellipse: s-maj=35.8km s-min=10.8km az=73.0.*
*JMA **27** 00:50:39.9±0.1, 33°.2N±0°.2×140°.1E±0°.9, h109km, MV3.7/31, E OFF HACHIJOJIMA ISLAND*

ISC 27 00:50:39.4±0.8, 33°.17N±0°.05×140°.06E±0°.07, h100km, n30, σ1§72/33, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.21**	**255**	P	**Pn**	**00 50 55.4**	**+1.8**
JHJ2	**Mitsune**	**0.21**	**255**	P	**Pn**	**00 50 55.4**	**+1.8**
JHJ2				*e*S	**Sn**	**00 51 07.1**	**+2.9**
JHJ	**Hachijo jima 2**	**0.24**	**259**	P	**Pn**	**00 50 55.4**	**+1.7**
	510nm,0.3s,baz=339,slow=23,SNR=88						
JHJ				S	**Sn**	**00 51 06.9**	**+2.4**
	1μm,0.3s,baz=83,slow=14,SNR=16						
JAOM	**Aogashimamukai**	**0.74**	**200**	P	**Pn**	**00 50 58.8**	**+1.5**
JAOM				S	**Sn**	**00 51 13.4**	**+2.7**
JMKN	**Mikurajimanish**	**0.82**	**332**	P	**Pn**	**00 50 59.1**	**+1.1**
JMYK	**Miyake Tsubota**	**0.99**	**334**	*e*P	**Pn**	**00 51 00.7**	**+1.0**
JKO	**Kozu shima**	**1.28**	**323**	P	**Pn**	**00 51 04.3**	**+1.3**
JTHY	**Toshimahigashi**	**1.50**	**335**	P	**Pn**	**00 51 07.2**	**+1.6**
JIM2	**Oshima 3**	**1.64**	**341**	P	**Pn**	**00 51 08.7**	**+1.3**
BSO1	**Boso 1**	**1.67**	**27**	P	**P

Q18K	Katmai Hardscr	6.94	40	P		Pn	01 00 10.2 +0.2
	baz=226						
O17K	Koliganek Bris	7.11	28	P		Pn	01 00 12.9 +0.8
	baz=212						
N16K	Nishlik Lake	7.33	19	P		Pn	01 00 15.8 +0.7
	baz=202,SNR=14						
KDAK	Kodiak Island	7.48	52	Pn		Pn	01 00 15.4 -1.9
	comp=N,2.9nm,0.3s,baz=219,slow=5.1,SNR=23						
KDAK				Sn		Sn	01 01 35.0 -6.1
	comp=N,2.6nm,0.3s,baz=167,slow=23,SNR=5.7						
	comp=N,5.6nm,0.3s						
KDAK	Kodiak Island	7.48	52	P		Pn	01 00 15.7 -1.6
	baz=240						
Q19K	Cape Douglas,	7.66	42	Pn		Pn	01 00 20.4 +0.6
Q19K	Cape Douglas,	7.66	42	P		Pn	01 00 18.5 -1.3
	baz=229						
O18K	Koktuh Hills	7.74	33			Pn	01 00 21.8 +1.0
O18K	Koktuh Hills	7.74	33	P		Pn	01 00 20.3 -0.6
	baz=219						
Q20K	Shuyak Island	8.00	47	P		Pn	01 00 24.0 -0.3
	baz=235						
ADK	Adak	8.11	263	Pn		Pn	01 00 27.3 +1.4
ADK	Adak	8.11	263	P		Pn	01 00 27.3 +1.4
N18K	Kilae Creek	8.20	28	Pn		Pn	01 00 28.1 +1.0
N18K	Kilae Creek	8.20	28	P		Pn	01 00 27.5 +0.4
	baz=213						
O19K	Port Alsworth	8.29	34			Pn	01 00 29.5 +1.1
O19K	Port Alsworth	8.29	34	P		Pn	01 00 30.0 +1.6
	baz=221						
KIWB	Kanaga Island	8.40	263			Pn	01 00 30.3 +0.4
N19K	Bonanza Creek	8.71	31	Pn		Pn	01 00 36.1 +1.8
N19K	Bonanza Creek	8.71	31	P		Pn	01 00 36.4 +2.1
	baz=218						
CNPM	China Poot	9.01	44	Pn		Pn	01 00 38.1 -0.2
RSO	Redoubt South	9.03	37	Pn		Pn	01 00 39.7 +1.0
M19K	Big River Lodg	9.62	27			Pn	01 00 47.4 +0.9
M19K	Big River Lodg	9.62	27	P		Pn	01 00 48.2 +1.6
	baz=214						
L19K	White Mountain	9.73	25	Pn		Pn	01 00 48.9 +0.8
L19K	White Mountain	9.73	25	P		Pn	01 00 48.9 +0.8
	baz=212,SNR=8.1						
N20K	Mount Spurr	9.74	35	P		Pn	01 00 48.9 +0.7
	baz=223						
SPU	Mount Spurr	9.78	35			Pn	01 00 50.4 +1.6
CAPN	Captain Cook N	9.81	38	P		Pn	01 00 50.1 +0.9
	baz=228						
M20K	Styx River	9.96	30			Pn	01 00 52.8 +1.5
M20K	Styx River	9.96	30	P		Pn	01 00 52.3 +1.1
	baz=218						
SEW	Seward	10.08	45	P		Pn	01 00 52.7 -0.1
	baz=235						
TTA	Tatalina	10.12	20	Pn		Pn	01 00 54.4 +1.0
TTA	Tatalina	10.12	20	P		Pn	01 00 54.4 +1.0
TTA	Tatalina	10.12	20	P		Pn	01 00 56.0 +2.6
	baz=206						
O22K	Cooper Landing	10.19	42			Pn	01 00 54.0 -0.3
O22K	Cooper Landing	10.19	42	P		Pn	01 00 55.3 +1.0
	baz=233						
L20K	Farewell, AK	10.23	26	P		Pn	01 00 56.6 +1.7
	baz=214						
SUA	Susitna One	10.43	36	Pn		Pn	01 00 57.8 +0.1
SUA	Susitna One	10.43	36	P		Pn	01 00 57.1 -0.6
	baz=226						
SKT	Skwentna	10.53	33	Pn		Pn	01 01 00.2 +1.2
SKT	Skwentna	10.53	33	P		Pn	01 00 59.6 +0.5
	baz=222						
RC01	Rabbit Creek A	10.55	40	P		Pn	01 00 56.9 -2.4
	baz=230						
AMKA	Amchitka	10.65	265	Pn		Pn	01 01 00.6 0.0
M22K	Willow	10.85	36	P		Pn	01 01 02.9 -0.3
	baz=227						
K20K	Telida	10.92	23			Pn	01 01 05.5 +1.2
K20K	Telida	10.92	23	P		Pn	01 01 04.8 +0.5
	baz=211,SNR=9.4						
PWL	Port Wells	10.96	43			Pn	01 01 03.5 -1.4
PWL	Port Wells	10.96	43	P		Pn	01 01 03.5 -1.4
	baz=235						
PPLA	Purkeypile	11.03	28			Pn	01 01 08.0 +2.0
KNK	Knik Glacier	11.24	40			Pn	01 01 06.1 -2.6
KNK	Knik Glacier	11.24	40	P		Pn	01 01 06.4 -2.4
	baz=232						
CUT	Chulitna	11.25	34	P		Pn	01 01 08.7 -0.1
	baz=224						
GHO	Glory Hole Cre	11.29	38			Pn	01 01 07.6 -1.8
CAST	Castle Rocks	11.47	27	Pn		Pn	01 01 12.2 +0.3
CAST	Castle Rocks	11.47	27	P		Pn	01 01 12.6 +0.6
	baz=216						
GLI	Glacier Island	11.48	44	Pn		Pn	01 01 10.5 -1.6
GLI	Glacier Island	11.48	44	P		Pn	01 01 10.5 -1.6
	baz=237						
HIN	Hinchinbrook I	11.50	47	Pn		Pn	01 01 11.0 -1.2
SML	Sawmill	11.53	39			Pn	01 01 10.6 -2.1
SML	Sawmill	11.53	39	P		Pn	01 01 11.5 -1.2
	baz=231						
J20K	Nowinta River	11.61	21	Pn		Pn	01 01 14.8 +1.0
J20K	Nowinta River	11.61	21	P		Pn	01 01 14.8 +1.0
	baz=208,SNR=8.3						
GCSA	Galena City Sc	11.64	14	P		Pn	01 01 16.1 +2.0
	baz=200						
M23K	Glacier View	11.75	40	P		Pn	01 01 14.1 -1.6
	baz=232						
CHUM	Lake Minchumin	11.79	25	P		Pn	01 01 17.1 +0.9
	baz=214						
EYAK	Cordova Ski Ar	11.90	47	P		Pn	01 01 14.8 -2.9
	baz=242						
KTH	Kantishna Hill	11.90	29	Pn		Pn	01 01 18.3 +0.4
SCM	Sheep Creek Mo	11.93	40	P		Pn	01 01 15.7 -2.5
	baz=233						
TRF	Thorofare Moun	12.01	30			Pn	01 01 19.3 0.0
TRF	Thorofare Moun	12.01	30	P		Pn	01 01 19.4 0.0
	baz=220						
WAT1	Susitna Watana	12.12	35	P		Pn	01 01 18.5 -2.2
	baz=227						
DIV	Divide	12.17	45			Pn	01 01 20.0 -1.4
WAT6	Susitna Watana	12.23	37	P		Pn	01 01 19.6 -2.9
	baz=229						
KAIM	Kayak Island	12.23	51	Pn		Pn	01 01 21.1 -1.2
KLU	Klutina	12.29	43			Pn	01 01 21.2 -2.0
KLU	Klutina	12.29	43	P		Pn	01 01 20.4 -2.7
	baz=237,SNR=19						
BPAW	Bear Paw Mtn.	12.31	27	Pn		Pn	01 01 23.9 +0.5
BPAW	Bear Paw Mtn.	12.31	27	P		Pn	01 01 22.8 -0.6
	baz=217						
M24K	Tolsona, Glenn	12.53	41	P		Pn	01 01 24.4 -1.9
	baz=234						
MCK	McKinley	12.63	31	P		Pn	01 01 27.3 -0.3
	baz=223						
DHY	Denali Highway	12.68	35			Pn	01 01 26.0 -2.5
DHY	Denali Highway	12.68	35	P		Pn	01 01 26.0 -2.5
	baz=228						
BERG	Berg Lake	12.75	50			Pn	01 01 27.8 -1.5
BWN	Browne	12.79	29	Pn		Pn	01 01 30.5 +0.6
N25K	Chitina, Valde	12.90	44	Pn		Pn	01 01 29.7 -1.7
N25K	Chitina, Valde	12.90	44	P		Pn	01 01 30.0 -1.4
	baz=240						
I21K	Tanana	12.96	22			Pn	01 01 32.5 +0.4
I21K	Tanana	12.96	22	P		Pn	01 01 30.7 -1.4
	baz=212,SNR=14						
SNH	Sunshine Point	13.07	52	Pn		Pn	01 01 32.9 -0.8
HARP	HAARP	13.09	41	P		Pn	01 01 32.3 -1.7
	baz=236						
MLY	Manley	13.13	25	Pn		Pn	01 01 35.0 +0.5
MLY	Manley	13.13	25	P		Pn	01 01 33.3 -1.2
	baz=215,SNR=6.5						
GLB	Gilahina Butte	13.15	46			Pn	01 01 33.1 -1.7
WAX	Waxell Ridge	13.16	51			Pn	01 01 34.0 -1.0
H21K	Melozitna Rive	13.19	20			Pn	01 01 37.0 +1.7
H21K	Melozitna Rive	13.19	20	P		Pn	01 01 37.0 +1.7
	baz=209,SNR=12						
VRDI	Verde Repeater	13.21	47	Pn		Pn	01 01 34.6 -1.1
TGL	Tana Glacier	13.29	49			Pn	01 01 35.3 -1.4
PAX	Paxson	13.30	38			Pn	01 01 34.8 -2.1
PAX	Paxson	13.30	38	P		Pn	01 01 34.8 -2.1
PAX	Paxson	13.30	38	P		Pn	01 01 35.4 -1.4
	baz=233,SNR=9.3						
IMAR	Indian Mountai	13.30	18	Pn		Pn	01 01 38.7 +1.9
SHEM	Shemya Is, Ala	13.37	275	LR		LR	01 06 34.7
	comp=N,419nm,20.6s,baz=95,slow=36						
MCARA	McCarthy VSAT	13.46	47	P		Pn	01 01 37.3 -1.7
	baz=243						
I23K	Minto, Yukon-K	13.57	26	P		Pn	01 01 40.2 -0.4
	baz=218						
YAH	Yahtse	13.64	52			Pn	01 01 40.9 -0.8
H22K	Ishtalitna Cre	13.70	22	P		Pn	01 01 43.0 +0.8
	baz=212						
K24K	Donnelly Dome	13.70	35	P		Pn	01 01 41.1 -1.3
	baz=230						
HDA	Harding Lake	13.72	32			Pn	01 01 40.3 -2.3
HDA	Harding Lake	13.72	32	P		Pn	01 01 41.5 -1.1
	baz=225						
COLA	College	13.79	29⇓	eP		Pn	01 01 42.0 -1.4
COLA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
G21K	Allakaket	13.82	17	P		Pn	01 01 44.1 +0.2
	baz=205,SNR=12						
BARN	Barnard Glacie	13.93	49			Pn	01 01 45.7 +0.1
M26K	Nabesna, AK	13.95	43			Pn	01 01 44.0 -1.7
M26K	Nabesna, AK	13.95	43	P		Pn	01 01 44.3 -1.4
	baz=240,SNR=6.3						
TABL	Table Mountain	13.95	52			Pn	01 01 44.5 -1.4
ILAR	Eielson Array	14.00	31	Pn		Pn	01 01 43.7 -2.6
	comp=Z,0.3nm,0.3s,baz=216,slow=12,SNR=8.6						
ILAR				LR		LR	01 07 43.7
	comp=Z,1μm,18.4s,baz=220,slow=40						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	14.00	31	Pn		Pn	01 01 44.8 -1.5
ILAR	Eielson Array	14.00	31	P		Pn	01 01 44.8 -1.5
CTG	Chitna Glacier	14.04	50	P		Pn	01 01 44.3 -2.8
	baz=248						
CTGM	Chitina Glacie	14.04	50			Pn	01 01 45.6 -1.5
H23K	Yukon River	14.07	24	Pn		Pn	01 01 47.4 +0.1
H23K	Yukon River	14.07	24	P		Pn	01 01 45.9 -1.4
	baz=216,SNR=9.0						
L26K	Log Cabin Wild	14.13	40			Pn	01 01 48.0 -0.1
L26K	Log Cabin Wild	14.13	40	P		Pn	01 01 47.4 -0.8
	baz=237						
DOT	Dot Lake	14.21	38			Pn	01 01 46.5 -2.8
PCA	Pinnacle	14.26	54			Pn	01 01 49.1 -1.0
PINM	Pinnacle	14.27	54	P		Pn	01 01 48.7 -1.3
	baz=253						
J25K	Salcha River,	14.37	33	P		Pn	01 01 49.1 -2.3
	baz=228						
M27K	Edge Creek, AK	14.38	44			Pn	01 01 49.9 -1.9
M27K	Edge Creek, AK	14.38	44	P		Pn	01 01 50.5 -1.3
	baz=242,SNR=15						
SCRK	Sand Creek	14.43	37	Pn		Pn	01 01 49.5 -2.9
SCRK	Sand Creek	14.43	37	P		Pn	01 01 50.3 -2.1
	baz=233,SNR=18						
F21K	Alatna River	14.47	16	P		Pn	01 01 53.0 +0.2
	baz=204,SNR=5.5						
O28M	Mount Upton	14.50	51	P		Pn	01 01 50.1 -3.4
	baz=250						
H24K	Noodor Dome	14.50	27	Pn		Pn	01 01 51.0 -2.3
H24K	Noodor Dome	14.50	27	P		Pn	01 01 51.5 -1.8
	baz=220						
G22K	Bettles	14.55	19	P		Pn	01 01 53.1 -0.7
	baz=209						
PNL	Peninsula	14.57	56	P		Pn	01 01 52.9 -1.2
	baz=255						
G23K	Bananza Creek	14.68	22	P		Pn	01 01 55.2 -0.5
	baz=213,SNR=17						
YUK3	Moose Creek	14.74	47	P		Pn	01 01 55.9 -0.8
	baz=246,SNR=10						
L27K	Beaver Creek,	14.74	42	P		Pn	01 01 54.6 -1.9
	baz=240						
BCAR	Beaver Creek A	14.76	42	Pn		Pn	01 01 55.5 -1.3
YUK8	Steele Glacier	14.87	50	P		Pn	01 01 56.7 -1.8
	baz=249						
J26L	Joseph Creek	14.90	35			Pn	01 01 56.4 -2.3
J26L	Joseph Creek	14.90	35	P		Pn	01 01 56.5 -2.1
	baz=232,SNR=19						
PRP	Porcupine Dome	14.93	30	P		Pn	01 01 57.3 -1.8
	baz=225,SNR=8.2						
F22K	John River	14.95	17	P		Pn	01 01 59.9 +0.7
	baz=207						
COLD	Coldfoot	15.08	20	P		Pn	01 02 00.6 -0.4
	baz=212,SNR=24						
O29M	Mount Kennedy	15.13	54	P		Pn	01 02 01.2 -0.6
	baz=254						
K27K	Chicken	15.15	38			Pn	01 01 59.9 -2.1
K27K	Chicken	15.15	38	P		Pn	01 02 00.6 -1.3
	baz=236						
G24K	Hadweenzic Riv	15.27	25	P		Pn	01 02 02.2 -1.4
	baz=218						
P29M	Windy Craggy	15.38	57			Pn	01 02 04.8 -0.2
P29M	Windy Craggy	15.38	57	P		Pn	01 02 02.8 -2.3
	baz=258						
H25K	Birch Creek	15.38	28	P		Pn	01 02 03.4 -1.6
	baz=223						
YUK4	Talbot Arm	15.40	50	P		Pn	01 02 04.4 -1.0
	baz=250,SNR=5.4						
YUK6	Outpost Mounta	15.40	52	P		Pn	01 02 04.6 -0.9
	baz=252						
I26K	Coal Creek Min	15.54	33			Pn	01 02 05.1 -1.8
I26K	Coal Creek Min	15.54	33	P		Pn	01 02 04.9 -2.0
	baz=230						
G25K	Bearman Lake	15.68	26	P		Pn	01 02 06.1 -2.6
	baz=221						
FYU	Fort Yukon	15.76	28			Pn	01 02 08.6 -1.2
HYT	Haines Junctio	15.78	53			Pn	01 02 10.7 +0.5
HYT	Haines Junctio	15.78	53	P		Pn	01 02 06.8 -3.4
	baz=254,SNR=8.0						
F24K	Squaw Lake	15.83	23	P		Pn	01 02 08.7 -2.1
	baz=216						
M29M	Somme Creek	15.87	46	P		Pn	01 02 09.4 -1.9
	baz=247,SNR=6.7						
EGAK	Eagle	15.90	37			Pn	01 02 12.7 +1.0
EGAK	Eagle	15.90	37	P		Pn	01 02 09.7 -2.0
	baz=235,SNR=9.3						
E23K	Chandalar	15.91	19	P		Pn	01 02 10.0 -1.9
	baz=211,SNR=13						
S31K	Pelican	15.94	63	P		Pn	01 02 08.4 -3.7
	baz=265						
PLBC	Pleasant Camp	16.04	58	P		Pn	01 02 10.8 -2.7
	baz=260,SNR=7.1						
N30M	Aishikik Lake	16.15	51	P		Pn	01 02 13.5 -1.4
	baz=252,SNR=9.5						
E24K	Your Creek	16.15	21	P		Pn	01 02 14.7 -0.2
	baz=213						
DAWY	Dawson	16.19	40	Pn		Pn	01 02 13.7 -1.6
DAWY	Dawson	16.19	40	P		Pn	01 02 12.9 -2.4
	baz=240,SNR=19						
I27K	Kandik River	16.23	34	P		Pn	01 02 13.9 -2.0
	baz=232,SNR=9.5						
L29M	L29M	16.27	44	P		Pn	01 02 14.9 -1.5
	baz=246,SNR=54						
TOLK	Toolik Lake Re	16.42	18	Pn		Pn	01 02 18.4 +0.1
TOLK	Toolik Lake Re	16.42	18	P		Pn	01 02 15.4 -2.9
	baz=210,SNR=7.4						
F25K	Christian Rive	16.42	25	P		Pn	01 02 15.2 -3.1
	baz=220,SNR=5.2						
O30N	Mendenhall	16.43	53	P		Pn	01 02 15.7 -2.8
	baz=256						
G26K	Porcupine Rive	16.44	28	P		Pn	01 02 14.9 -3.6
	baz=225						
SKAG	Skagway	16.56	58			Pn	01 02 21.0 +0.9
SKAG				IAmb		IAmb	01 02 36.6
	comp=Z,43nm,0.9s						
SKAG	Skagway	16.56	58	P		Pn	01 02 15.9 -4.1
	baz=261						
BMAR	Burnt Mountain	16.57	26			Pn	01 02 20.6 +0.4
M30M	Minto, Yukon	16.64	47	P		Pn	01 02 18.2 -2.9
	baz=249,SNR=9.9						
H27K	Steamboat Moun	16.64	32	P		Pn	01 02 18.6 -2.5
	baz=231,SNR=6.6						
N31M	Braeburn, Yuko	16.76	51	P		Pn	01 02 19.2 -3.4
	baz=254,SNR=10						
K29M	Barlow Dome	16.82	42	P		Pn	01 02 20.5 -3.0
	baz=244,SNR=32						
F26K	Sheenjek River	16.88	26	P		Pn	01 02 21.4 -2.6
	baz=223,SNR=6.6						
G27K	Doyon Strip	16.97	31	P		Pn	01 02 23.1 -2.1
	baz=229						
WHY	Whitehorse	16.99	54			Pn	01 02 26.4 +0.8
WHY				IAmb		IAmb	01 02 42.2
	comp=Z,48nm,0.9s						
WHY	Whitehorse	16.99	54	P		Pn	01 02 23.4 -2.2
	baz=258,SNR=7.5						
D24K	Happy Valley	17.00	18	P		Pn	01 02 24.1 -1.5
	baz=211						
I29M	Ogilvie Camp,	17.24	37			Pn	01 02 28.2 -0.4
I29M	Ogilvie Camp,	17.24	37	P		Pn	01 02 26.2 -2.3
	baz=239,SNR=17						
C23K	Itkillik River	17.29	15	P		Pn	01 02 28.5 -0.7
	baz=206,SNR=6.2						
P32M	Atlin	17.40	58	P		Pn	01 02 28.1 -2.5
	baz=262						
M31M	Drury Creek, Y	17.59	49	P		P	01 02 34.8 +1.0
M31M	Drury Creek, Y	17.59	49	P		Pn	01 02 32.6 -0.3
	baz=254,SNR=19						
D25K	Kavik River	17.62	20	P		Pn	01 02 32.2 -1.1
	baz=215						
P33M	Teslin, Yukon	17.92	56	P		P	01 02 39.2 +1.6
P33M	Teslin, Yukon	17.92	56	P		Pn	01 02 36.8 -0.3
	baz=262,SNR=24						
N32M	Quiet Lake	17.95	53	P		Pn	01 02 36.3 -1.1
	baz=258						
FARO	Faro, Yukon	18.06	50	P		P	01 02 41.0 +2.0
FARO	Faro, Yukon	18.06	50	P		P	01 02 40.2 +1.2
	baz=255,SNR=21						
Q32M	Nakina River	18.08	60	P		Pn	01 02 35.3 -3.8
	baz=266						
EPYK	Eagle Plains	18.32	35	P		P	01 02 40.8 -1.0
EPYK	Eagle Plains	18.32	35	P		P	01 02 39.6 -2.2
	baz=238,SNR=12						
C26K	Camden Bay	18.41	21	P		P	01 02 41.4 -1.3
	baz=217,SNR=5.4						
C27K	Jago River	18.44	22	P		P	01 02 42.1 -1.0
	baz=219						
S34M	Telegraph Cree	18.66	64	P		P	01 02 42.6 -2.9
	baz=270						
R33M	Jennings River	18.77	59	P		P	01 02 45.4 -1.6
	baz=266						
G30M	tAoh Zraii Nji	18.80	34	P		P	01 02 46.1 -1.1
	baz=238						
MMPY	Sheldon Lake,	19.10	49	P		Pn	01 02 51.2 -0.2
	baz=256,SNR=23						
DLBC	Dease Lake	19.23	62	P		P	01 02 51.9 0.0
	comp=Z,0.1nm,0.3s,baz=269,slow=9.9,SNR=5.9						
	comp=Z,2.3nm,0.7s						
DLBC	Dease Lake	19.23	62	P		Pn	01 02 53.0 0.0
DLBC	Dease Lake	19.23	62	P		P	01 02 51.5 -0.5
	baz=270						
F31M	Tsiigehtchic	19.87	34	P		P	01 02 57.3 -1.4
	baz=240						
WTLY	Watson Lake, Y	19.91	57	P		P	01 02 59.6 +0.3
	baz=266						
BILL	Bilibino	20.24	327	P		P	01 03 02.8 +0.1
BILL				IAmb		IAmb	01 03 09.0
	comp=Z,32nm,0.9s						
BILL	Bilibino	20.24	327⇓	eP		Pn	01 03 04.0 -0.7
BILL				*SP		pP	01 03 10.0 0.0
BILL				S		S	01 06 48.0 0.0
BILL				e			01 06 59.2
BILL				pmax		pmax	
	comp=Z,18nm,1.0s						
BILL				MLR		MLR	
	comp=Z,976nm,16.0s						
INK	Inuvik	20.38	32	P		P	01 03 02.3 -1.9
	comp=Z,3.8nm,0.6s,baz=217,slow=11,SNR=17						
INK				PcP		PcP	01 07 15.9 +0.2
	comp=Z,3.7nm,0.8s,baz=101,slow=2.3,SNR=3.8						
INK				LR		LR	01 11 10.4
	comp=Z,354nm,19.0s,baz=234,slow=38						
	comp=Z,3.8nm,0.6s						
INK	Inuvik	20.38	32	P		P	01 03 02.6 -1.6
INK	Inuvik	20.38	32	P		P	01 03 02.6 -1.6
INK				pmax		pmax	
	comp=Z,16nm,0.9s						
INK	Inuvik	20.38	32	P		P	01 03 03.0 -1.2
	baz=238,SNR=5.5						
BBB	Bella Bella	21.34	79	LR		LR	01 09 45.1
	comp=Z,215nm,20.4s,baz=296,slow=32						
KOTAN	Kotaneelee Air	22.29	57	P		P	01 03 24.1 -0.7
	baz=270						
PET	Petropavlovsk	22.36	284⇑	eP		P	01 03 26.6 +1.0
PET				pmax		pmax	
	comp=Z,48nm,1.1s						
WRGLY	Wrigley	22.72	49	P		P	01 03 28.2 -1.2
	baz=263						
PEA0B	Petropavlovsk-	22.88	284	P		P	01 03 31.2 0.0
PEA0B				IAmb		IAmb	01 03 58.9
	comp=Z,105nm,1.5s						
PEA0B	Petropavlovsk-	22.88	284	P		P	01 03 31.2 0.0
PEA0B				pmax		pmax	
	comp=Z,105nm,1.5s						
PETK	Petropavlovsk-	22.88	284	P		P	01 03 30.9 -0.3
	comp=Z,12nm,0.5s,baz=84,slow=9.7,SNR=93						
PETK				LR		LR	01 12 09.2
	comp=Z,369nm,21.1s,baz=80,slow=36						
	comp=Z,12nm,0.5s						
PETK	Petropavlovsk-	22.88	284	P		P	01 03 31.8 +0.6
PETK	Petropavlovsk-	22.88	284	P		P	01 03 31.8 +0.6
C36M	Paulatuk	23.92	34	P		P	01 03 40.1 -1.1
	baz=249						
SEY	Seymchan	24.43	310	P		P	01 03 45.4 -0.5
	comp=Z,4.2nm,0.7s,baz=107,slow=8.6,SNR=9.3						
	comp=Z,4.2nm,0.7s						
SEY	Seymchan	24.43	310⇑	eP		P	01 03 45.6 -0.3
SEY				pmax		pmax	
	comp=Z,11nm,0.9s						
A36M	Sachs Harbour	24.65	28	P		P	01 03 49.4 +1.5
MA2	Magadan	25.35	302	P		P	01 03 54.6 +0.3
	comp=Z,5.8nm,0.5s,baz=174,slow=17,SNR=2.0						
MA2				LR		LR	01 14 45.0
	comp=Z,290nm,18.1s,baz=110,slow=39						
	comp=Z,5.8nm,0.5s						
MA2	Magadan	25.35	302	P		P	01 03 54.6 +0.3
MA2	Magadan	25.35	302	P		P	01 03 54.6 +0.3
MA2				pmax		pmax	
	comp=Z,120nm,1.8s						
YKA	Yellowknife Ar	26.76	51	P		P	01 04 07.3 +0.3
	comp=Z,4.4nm,0.8s,baz=268,slow=8.3,SNR=21						
YKA				LR		LR	01 15 43.5
	comp=Z,479nm,18.5s,baz=247,slow=39						
	comp=Z,4.4nm,0.8s						
YKA	Yellowknife Ar	26.76	51	P		P	01 04 07.8 +0.7
YKA	Yellowknife Ar	26.76	51	P		P	01 04 07.8 +0.7
HAWA	Hanford	28.86	86	P		P	01 04 27.4 +1.4
NEW	Newport	29.36	81	LR		LR	01 13 50.5
	comp=Z,172nm,21.8s,baz=304,slow=32						
YBH	Yreka Blue Hor	29.60	97	LR		LR	01 13 21.1
	comp=Z,331nm,21.6s,baz=304,slow=30						
I07A	Izee	30.12	90	P		P	01 04 38.6 +1.3
BMO	Blue Mountains	31.00	87	P		P	01 04 46.7 +1.7
BMO	Blue Mountains	31.00	87	P		P	01 04 46.7 +1.7
BMO				pmax		pmax	
	comp=Z,5.0nm,1.1s						
PLID	Pearl Lake	31.65	86	P		P	01 04 51.8 +0.9
MFID	Camas Ranch	32.69	88	P		P	01 05 00.0 +0.1
PAHR	Pah Rah Range	32.84	97	P		P	01 05 03.4 +2.1
PAHR				IAmb		IAmb	01 05 18.4
	comp=Z,30nm,1.8s						
HLID	Hailey	33.45	87	P		P	01 05 07.8 +1.3
HLID	Hailey	33.45	87	P		P	01 05 03.6 -3.0
	baz=305						
TIXI	Tiksi	33.45

YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,155nm,3.0s
YAK pmax pmax
comp=N,60nm,2.8s
YAK pmax pmax
comp=E,101nm,3.0s
YAK smax smax
comp=N,147nm,2.9s
YAK smax smax
comp=E,41nm,2.5s
YAK MLR MLR
comp=Z,598nm,18.0s
YAK MLR MLR
comp=E,326nm,16.0s
EUNU Eureka 35.49 17 P **P 01 05 24.6 +0.8**
EUNU IAmb IAmb 01 05 37.8
comp=Z,13nm,1.3s
CWC Cottonwood Cre 35.78 100 P **P 01 05 24.6 -2.2**
baz=313
GRNR Gornyy 35.90 290⇓*i*P **P 01 05 27.2 -0.3**
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=N,800nm,14.0s
GRNR MLR MLR
comp=Z,220nm,18.0s
ISA Isabella, Lake 36.08 101 P **P 01 05 25.0 -4.3**
baz=314
DUG Dugway, Tooele 36.43 91 P **P 01 05 33.3 +1.0**
DUG Dugway, Tooele 36.43 91 P **P 01 05 33.3 +1.0**
DUG pmax pmax
comp=Z,8.0nm,1.0s
DUG Dugway, Tooele 36.43 91 P **P 01 05 32.2 -0.1**
baz=309
TPNV Topopah Spring 36.51 98 P **P 01 05 34.4 +1.4**
TPNV Topopah Spring 36.51 98 P **P 01 05 34.4 +1.4**
TPNV pmax pmax
comp=Z,9.0nm,1.1s
TPNV Topopah Spring 36.51 98 P **P 01 05 28.3 -4.7**
baz=312
ERM Erimo 36.73 274 P **P 01 05 35.3 +0.7**
ERM Erimo 36.73 274 P **P 01 05 35.3 +0.7**
ERM pmax pmax
comp=Z,84nm,1.2s
PD31 Pinedale Array 36.79 85 P **P 01 05 37.6 +2.1**
PDAR Pinedale Array 36.79 85 P **P 01 05 37.1 +1.6**
comp=Z,0.4nm,0.6s,baz=280,slow=5.4,SNR=1.2
GSC Goldstone, Bar 37.31 100 P **P 01 05 41.4 +1.6**
GSC Goldstone, Bar 37.31 100 P **P 01 05 41.4 +1.6**
GSC pmax pmax
comp=Z,8.0nm,1.2s
RDMU Red Mountain 38.12 88 P **P 01 05 48.5 +1.7**
PFO Pinyon Flats O 38.70 102 P **P 01 05 52.1 +0.5**
comp=Z,1.1nm,0.7s,baz=323,slow=5.1,SNR=1.9
comp=Z,1.1nm,0.7s
O20A White River Ci 39.19 87 P **P 01 05 56.4 +0.8**
O20A IAmb IAmb 01 06 15.2
comp=Z,15nm,0.9s
O20A White River Ci 39.19 87 P **P 01 05 56.2 +0.5**
baz=309
KLR Kul'dur 39.27 291 P **P 01 05 55.3 -0.7**
comp=Z,5.1nm,0.7s,baz=56,slow=9.1,SNR=13
KLR LR LR 01 24 23.2
comp=Z,172nm,18.0s,baz=34,slow=40
comp=Z,5.1nm,0.7s
KLR Kul'dur 39.27 291⇑*e*P **P 01 05 55.2 -0.8**
KLR pmax pmax
comp=Z,11nm,1.3s
ZEA Zeya 39.42 299 *e*P **P 01 05 56.8 -0.4**
ZEA *e*S **S 01 11 52.0 -4.9**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=Z,200nm,11.0s
MDND Maddock 39.69 71 P **P 01 06 00.5 +0.9**
MDND IAmb IAmb 01 06 16.5
comp=Z,45nm,1.1s
MDND Maddock 39.69 71 P **P 01 05 57.7 -1.8**
baz=303
PV11 David Mesa, Pa 39.99 90 P **P 01 06 03.0 +0.6**
ULM Lac du Bonnet 40.47 66 P **P 01 06 05.5 -0.5**
comp=Z,3.2nm,0.6s,baz=252,slow=6.4,SNR=2.4
comp=Z,3.2nm,0.6s
ULM Lac du Bonnet 40.47 66⇓*e*P **P 01 06 05.8 -0.2**
H11N2 WAKE ISLAND Hy 40.73 225 T T 01 49 47.9
baz=26,slow=76,SNR=136
H11N3 WAKE ISLAND Hy 40.73 225 T T 01 49 51.6
baz=26,slow=76,SNR=297
H11N1 WAKE ISLAND Hy 40.74 225 T T 01 49 53.9
baz=26,slow=76,SNR=148
AGMN Agassiz Nation 41.54 69 P **P 01 06 14.9 +0.1**
AGMN IAmb IAmb 01 06 28.7
comp=Z,22nm,1.1s
AGMN Agassiz Nation 41.54 69 P **P 01 06 13.0 -1.8**
baz=304
H11S1 WAKE ISLAND Hy 41.90 225 T T 01 51 20.4
baz=26,slow=76,SNR=170
H11S2 WAKE ISLAND Hy 41.91 225 T T 01 51 18.5
baz=26,slow=76,SNR=198
H11S3 WAKE ISLAND Hy 41.92 225 T T 01 51 18.8
baz=26,slow=76,SNR=181
USRK Ussuriysk Ar. 41.98 284 LR LR 01 24 04.9
comp=Z,109nm,19.9s,baz=53,slow=37
JSD Sado 42.15 273 P **P 01 06 20.1 +0.2**
NEEM North Greenlan 42.77 17 *e*P **P 01 06 25.1 +0.3**
NEEM IAmb IAmb 01 06 26.3
comp=Z,32nm,1.1s
MJAR Matsushiro Arr 43.17 271 P **P 01 06 28.5 +0.2**
comp=Z,8.4nm,0.9s,baz=27,slow=8.1,SNR=18
comp=Z,8.4nm,0.9s
MJB9 Matsu-Tunnel 43.17 271 P **P 01 06 29.4 +1.1**
MJB9 IAmb IAmb 01 06 32.6
comp=Z,33nm,0.7s
MAJO Matsushiro 43.17 271 P **P 01 06 28.5 +0.3**
MAJO IAmb IAmb 01 06 31.6
comp=Z,34nm,0.8s
MAJO Matsushiro 43.17 271*ce*P **P 01 06 28.9 +0.7**
MAJO pmax pmax
comp=Z,37nm,0.9s
MSHR Mys Shultsa 43.44 283⇑*e*P **P 01 06 30.3 0.0**
MSHR pmax pmax
comp=Z,22nm,1.7s
ANMO Albuquerque 43.68 92⇓*e*P **P 01 06 32.3 -0.2**
ANMO pmax pmax
comp=Z,7.0nm,2.0s
ECSD EROS Data Cent 43.78 75 P **P 01 06 33.8 +0.7**
ECSD EROS Data Cent 43.78 75 P **P 01 06 31.8 -1.2**
baz=307
NOR Nord 43.82 7 *e*P **P 01 06 33.2 +0.4**
NOR IAmb IAmb 01 06 33.6
comp=Z,8.4nm,1.0s
BOD Bodaibo 43.85 310 *e*P **P 01 06 32.9 -0.5**
BOD pmax pmax
comp=Z,13nm,1.2s
JGF Kuroka 44.32 271 P **P 01 06 38.8 +1.3**
JGF IAmb IAmb 01 06 40.0
comp=Z,20nm,0.9s
121A Cookes Peak, D 44.58 95 P **P 01 06 40.9 +1.2**
121A Cookes Peak, D 44.58 95 P **P 01 06 38.8 -0.9**
baz=315
HIA Hailar 45.78 297 P **P 01 06 48.8 -0.1**
HIA IAmb IAmb 01 06 49.6
comp=Z,15nm,0.7s
HIA Hailar 45.78 297 P **P 01 06 48.8 -0.1**
HIA pmax pmax
comp=Z,15nm,0.7s
CN2 Changchun 45.96 288 *e*P **P 01 06 47.5 -2.8**
CN2 *e*PP **PP 01 08 35.0 -3.1**
CN2 *e*S **S 01 13 29.5 -3.6**
CN2 *e*sS pS 01 13 39.5 -3.4
CN2 *e*SS **ScS 01 16 45.5 +1.8**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 LR LR
comp=Z,180nm,19.0s
CN2 LR LR
comp=Z,160nm,19.0s
CN2 LR LR
comp=Z,150nm,20.0s
NRIK Noril'sk 46.91 333 P **P 01 06 58.4 +1.0**
comp=Z,12nm,0.9s,baz=54,slow=4.7,SNR=12
comp=Z,12nm,0.9s
NRIK Noril'sk 46.91 333 P **P 01 06 57.9 +0.4**
NRIK IAmb IAmb 01 06 59.2
comp=Z,20nm,1.1s
NRIK Noril'sk 46.91 333*ce*P **P 01 06 58.3 +0.9**
NRIK pmax pmax
comp=Z,16nm,1.0s
JCJ Chichijima 47.58 258 LR LR 01 24 48.0
comp=Z,107nm,21.8s,baz=80,slow=33
DAG Danmarks Havn 47.95 10 *e*P **P 01 07 05.7 +0.2**
DAG IAmb IAmb 01 07 07.3
comp=Z,26nm,0.9s
SNY Shenyang 48.27 287⇓P **P 01 07 09.8 +1.4**
SNY pmax pmax
comp=Z,32nm,0.9s
SPITS Spitsbergen Ar 48.42 360 P **P 01 07 09.7 +0.5**
SPITS pmax pmax
comp=Z,57nm,1.4s
SUMG Summit 48.48 19 *e*P **P 01 07 11.3 +1.2**
SUMG IAmb IAmb 01 07 12.4
comp=Z,18nm,0.7s
KSRS Korea Array 48.65 280 P **P 01 07 13.1 +1.7**
comp=Z,13nm,0.8s,baz=52,slow=6.9,SNR=28
comp=Z,13nm,0.8s
KSAR Wonju Array Be 48.68 280 P **P 01 07 12.1 +0.5**
KSAR Wonju Array Be 48.68 280 P **P 01 07 12.1 +0.5**
TX31 Lajitas Ar. Si 49.33 95 P **P 01 07 16.8 +0.1**
TX31 IAmb IAmb 01 07 36.2
comp=Z,14nm,0.9s
TXAR Lajitas Array 49.33 95 P **P 01 07 16.8 0.0**
comp=Z,1.2nm,0.6s,baz=302,slow=5.5,SNR=17
comp=Z,1.2nm,0.6s
SFJD Kangerlussuaq 49.65 28 P **P 01 07 19.4 +0.8**
SFJD IAmb IAmb 01 07 20.6
comp=Z,22nm,0.8s
SFJD Kangerlussuaq 49.65 28 P **P 01 07 19.4 +0.8**
SFJD pmax pmax
comp=Z,22nm,0.9s
SFJD Kangerlussuaq 49.65 28 *e*P **P 01 07 19.9 +1.3**
SFJD IAmb IAmb 01 07 20.9
comp=Z,24nm,0.9s
TJN Taejon 49.71 279⇑*e*P **P 01 07 20.5 +1.0**
DBG Daneborg 49.97 12 *e*P **P 01 07 21.9 +0.9**
DBG IAmb IAmb 01 07 22.4
comp=Z,17nm,0.8s
HDIL Hopedale 49.99 73 P **P 01 07 20.5 -1.1**
HDIL Hopedale 49.99 73 P **P 01 07 17.0 -4.6**
baz=311
X37A Clayton 50.51 83 P **P 01 07 25.2 -0.3**
X37A IAmb IAmb 01 07 39.0
comp=Z,10nm,1.1s
CCM Cathedral Cave 50.55 77 P **P 01 07 25.2 -0.6**
CCM IAmb IAmb 01 07 47.0
comp=Z,11nm,1.4s
CCM Cathedral Cave 50.55 77 P **P 01 07 25.2 -0.6**
CCM pmax pmax
comp=Z,11nm,1.4s
ICESG Greenland Ices 50.91 23 *e*P **P 01 07 29.0 +0.5**
ICESG IAmb IAmb 01 07 30.1
comp=Z,23nm,0.7s
WHTX Lake Whitney, 51.10 87 P P 01 07 24.8 -5.3
baz=316
XLT XiLinHaoTe 51.11 294⇑*i*P **P 01 07 31.3 +1.2**
XLT pP pP 01 07 37.3 -0.9
XLT sP sP 01 07 41.0 -0.4
XLT pmax pmax
comp=Z,30nm,0.8s
XLT pmax pmax
comp=Z,97nm,3.7s
XLT LR LR
comp=Z,31nm,15.5s
XLT LR LR
comp=Z,160nm,14.7s
XLT LR LR
comp=Z,260nm,13.6s
DY2G Dye2 51.23 27 *e*P **P 01 07 32.6 +1.8**
MIAR Mount Ida 51.60 82 P **P 01 07 34.1 +0.3**
MIAR Mount Ida 51.60 82 P **P 01 07 34.1 +0.3**
MIAR pmax pmax
comp=Z,6.0nm,1.0s
MIAR Mount Ida 51.60 82 P **P 01 07 31.8 -1.9**
baz=314
SCHQ Schefferville 52.07 47 P **P 01 07 36.9 -0.1**
comp=Z,8.1nm,0.8s,baz=317,slow=7.1,SNR=5.2
comp=Z,8.1nm,0.8s
ULN Ulaanbaatar 53.21 303 P **P 01 07 46.0 +0.3**
ULN IAmb IAmb 01 07 47.3
comp=Z,26nm,0.9s
ULN Ulaanbaatar 53.21 303*c i*P **P 01 07 46.2 +0.5**
ULN pmax pmax
comp=Z,23nm,0.9s
ZAK Zakamensk 53.36 307 *e*P **P 01 07 47.3 +0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
SONM Songino Array 53.56 303 P **P 01 07 48.4 +0.1**
comp=Z,18nm,1.0s,baz=47,slow=7.3,SNR=50
SONM PcP **PcP 01 08 55.6 +1.0**
comp=Z,2.7nm,0.8s,baz=54,slow=2.5,SNR=2.8
comp=Z,18nm,1.0s
SONM Songino Array 53.56 303 P **P 01 07 48.7 +0.4**
SONM IAmb IAmb 01 07 50.3
comp=Z,25nm,1.1s
SONM Songino Array 53.56 303 P **P 01 07 48.7 +0.4**
SONM pmax pmax
comp=Z,25nm,1.1s
BJI Beijing 53.64 290 P **P 01 07 50.0 +1.2**
BJI pmax pmax
comp=Z,8.0nm,0.8s
BJI LR LR
comp=Z,49nm,20.5s
BJI LR LR
comp=Z,200nm,18.6s
BJI LR LR
comp=Z,200nm,18.0s
BJT Baijiatuau 53.66 290 P **P 01 07 48.5 -0.5**
BJT IAmb IAmb 01 07 54.3
comp=Z,8.3nm,1.0s
BJT Baijiatuau 53.66 290 P **P 01 07 48.5 -0.5**
BJT pmax pmax
comp=Z,8.0nm,1.0s
WVT Waverly 53.85 76 P **P 01 07 49.3 -1.1**
WVT IAmb IAmb 01 07 52.4
comp=Z,7.3nm,0.7s
WVT Waverly 53.85 76 P **P 01 07 49.3 -1.1**
WVT pmax pmax
comp=Z,7.0nm,0.7s
WVT Waverly 53.85 76 P **P 01 07 47.8 -2.6**
baz=314
ANGG Ammassalik, Gr 54.14 24 P **P 01 07 51.9 -0.1**
IVI Ivigtut 54.60 32 P **P 01 07 56.5 +1.1**
HHC Hu-ho-hao-te 55.63 294 *e*P **P 01 08 05.0 +1.6**
HHC pmax pmax
comp=Z,51nm,0.9s
HHC pmax pmax
comp=Z,120nm,4.6s
HHC LR LR
comp=Z,370nm,18.1s
HHC LR LR
comp=Z,340nm,16.7s
HHC LR LR
comp=Z,500nm,16.9s
TZTN Tazewell 56.02 73 P **P 01 08 04.8 -1.3**
TZTN IAmb IAmb 01 08 06.2
comp=Z,21nm,1.3s
HNS HongShan 56.30 289⇑P **P 01 08 09.5 +1.5**
HNS *e*S **S 01 15 55.0 -1.2**
HNS pmax pmax
comp=Z,44nm,0.8s
HNS LR LR
comp=Z,160nm,18.3s
HNS LR LR
comp=Z,160nm,19.1s
HNS LR LR
comp=Z,250nm,18.8s
BTO Baotou 56.64 295 *e*P **P 01 08 11.3 +0.7**
BTO LR LR
comp=Z,960nm,13.8s
BTO LR LR
comp=Z,730nm,13.6s
KEV Kevo 56.65 356 P **P 01 08 09.8 -0.2**
KEV Kevo 56.65 356 P **P 01 08 09.8 -0.2**
KEV pmax pmax
comp=Z,33nm,1.2s
ARA0 ARCESS Array S 56.94 356 *e*P **P 01 08 12.2 +0.1**
ARCES ARCESS Array B 56.94 356 P **P 01 08 11.4 -0.7**
comp=Z,1.1nm,0.4s,baz=14,slow=8.5,SNR=30
comp=Z,1.1nm,0.4s
ARCES ARCESS Array B 56.94 356 P **P 01 08 11.7 -0.4**
ARCES ARCESS Array B 56.94 356 P **P 01 08 11.7 -0.4**
ARCES pmax pmax
comp=Z,56nm,1.7s
TRO Tromso 57.01 359 *e*P **P 01 08 13.4 +0.9**
TRO IAmb IAmb 01 08 14.6
comp=Z,190nm,2.0s
JETT Jettan, Norway 57.06 358 *e*P **P 01 08 14.5 +1.4**
JETT IAmb IAmb 01 08 18.9
comp=Z,21nm,1.1s
KTK1 Kautokeino 57.54 357 *e*P **P 01 08 16.6 +0.2**
KTK1 IAmb IAmb 01 08 30.6
comp=Z,33nm,1.4s
NJ2 Nanjing 57.74 281 *e*P **P 01 08 19.0 +0.7**
NJ2 pmax pmax
comp=Z,18nm,0.8s
LVZ Lovozero 58.00 352 P **P 01 08 19.8 +0.2**
LVZ Lovozero 58.00 352 P **P 01 08 19.8 +0.2**
LVZ pmax pmax
comp=Z,35nm,1.2s
ZAA0 Zalesovo Array 58.74 320 P **P 01 08 25.0 0.0**
ZAA0 IAmb IAmb 01 08 26.3
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 58.74 320 P **P 01 08 24.6 -0.3**
comp=Z,7.1nm,0.8s,baz=38,slow=6.7,SNR=28
ZALV PcP **PcP 01 09 15.5 +1.0**
comp=Z,4.7nm,0.7s,baz=52,slow=4.2,SNR=7.8
comp=Z,7.1nm,0.8s
ZALV Zalesovo Beam 58.74 320 P **P 01 08 25.1 +0.2**
ZALV Zalesovo Beam 58.74 320 *i* P **P 01 08 25.6 +0.7**
ZALV pmax pmax
comp=Z,7.0nm,0.8s
LYN LuoYang 59.61 288⇑P **P 01 08 32.3 +1.0**
LYN pmax pmax
comp=Z,10.0nm,0.7s
LYN LR LR
comp=Z,210nm,19.4s
LYN LR LR
comp=Z,180nm,20.2s
LYN LR LR
comp=Z,180nm,23.6s
DGZ Jazzator, Alta 60.94 315*ce*P **P 01 08 41.1 +0.8**
DGZ pmax pmax
comp=Z,11nm,0.9s
WHN Wuhan 61.47 283⇓P **P 01 08 44.8 +0.8**
XAN Xi'an 61.98 290 P **P 01 08 48.3 +0.8**
XAN pP pP 01 08 51.8 -4.0
XAN pmax pmax
comp=Z,12nm,1.0s
NSS Namsos 62.10 2 *e*P **P 01 08 48.4 +0.7**
NSS IAmb IAmb 01 08 54.9
comp=Z,36nm,1.2s
SSLB Suanglung 62.64 273 P **P 01 08 52.0 0.0**
PRGR Permogore 62.74 345 *e*P **P 01 08 51.4 -0.6**
PRGR pmax pmax
comp=Z,21nm,0.9s
GTA Gaotai 62.90 300⇑P **P 01 08 54.3 +0.6**
GTA pP pP 01 08 58.5 -3.4
GTA sP sP 01 09 01.3 -3.8
GTA S **S 01 17 15.5 -6.0**
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,110nm,4.7s
GTA LR LR
comp=Z,160nm,13.8s
GTA LR LR
comp=Z,220nm,16.7s
GTA LR LR
comp=Z,310nm,16.0s
LZH Lanzhou 63.25 295 *e*P **P 01 08 57.0 +0.9**
LZH pP sP 01 09 06.0 -1.5
LZH pmax pmax
comp=Z,38nm,0.9s
LZH pmax pmax
comp=Z,140nm,6.8s
LZH LR LR
comp=Z,220nm,13.8s
LZH LR LR
comp=Z,250nm,16.7s
LZH LR LR
comp=Z,310nm,16.0s
KURK Kurchatov 63.63 321 P **P 01 08 58.6 +0.5**
KURK IAmb IAmb 01 09 00.5
comp=Z,18nm,0.9s
KURK Kurchatov 63.63 321 P **P 01 08 58.6 +0.5**
KURK pmax pmax
comp=Z,18nm,1.0s
KURBB Kurchatov Arra 63.74 321 P **P 01 08 59.2 +0.4**
ZSN Zaisan 63.76 315 *e*P **P 01 08 58.7 -0.4**
ZSN pmax pmax
comp=Z,6.0nm,0.6s
ZSN Zaisan 63.76 315 *e*P **P 01 08 58.7 -0.4**
comp=Z,5.9nm,0.6s,baz=315
SVE Sverdlovsk 64.09 335 *e*P **P 01 09 02.1 +1.1**
SVE pmax pmax
comp=Z,27nm,0.9s
KLMR Klimovskoe 64.35 348 *e*P **P 01 09 01.9 -0.8**
KLMR pmax pmax
comp=Z,31nm,1.4s
KLMR Klimovskoe 64.35 348 *e*P **P 01 09 01.9 -0.8**
KLMR AMP 01 09 03.9
comp=Z,31nm,1.4s
ENH Enshi 64.46 287 P **P 01 09 03.8 -0.1**
DOMB Dombas 64.50 4 *e*P **P 01 09 04.2 +0.5**
DOMB IAmb IAmb 01 09 05.2
comp=Z,15nm,0.8s
BRVK Borovoye 64.59 327 P **P 01 09 05.2 +0.9**
BRVK Borovoye 64.59 327 P **P 01 09 05.3 +0.9**
BRVK pmax pmax
comp=Z,19nm,0.9s
KIRV Kirov 64.96 342*d i*P **P 01 09 07.2 +0.5**
ARU Arti 64.96 336 P **P 01 09 06.9 +0.2**
ARU Arti 64.96 336*c i*P **P 01 09 07.1 +0.3**
ARU *PP **pP 01 09 14.9 0.0**
ARU S **S 01 17 49.5 +3.2**
ARU SS **SS 01 22 00.5 +3.3**
ARU pmax pmax
comp=Z,21nm,0.8s
FIA1 FINESS Array S 64.98 355 P **P 01 09 07.1 +0.3**
FINES FINESS Array B 64.98 355 P **P 01 09 07.0 +0.2**
comp=Z,14nm,0.8s,baz=25,slow=7.4,SNR=21
comp=Z,14nm,0.8s
FINES FINESS Array B 64.98 355 P **P 01 09 06.9 +0.2**
NC204 NORSAR Array S 65.33 3 P **P 01 09 09.8 +0.7**
MK31 Makanchi Array 65.35 316 P **P 01 09 09.9 +0.4**
MK31 IAmb IAmb 01 09 10.6
comp=Z,6.1nm,0.9s
MK31 Makanchi Array 65.35 316 P **P 01 09 09.9 +0.4**
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 65.35 316 P **P 01 09 09.8 +0.3**
comp=Z,5.6nm,0.8s,baz=49,slow=6.4,SNR=50
comp=Z,5.6nm,0.8s
MKAR Makanchi Array 65.35 316 P **P 01 09 09.5 0.0**
WMQ Urumqi 65.38 311 *e*P **P 01 09 11.5 +1.7**
WMQ pP pP 01 09 18.8 +0.7
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,220nm,12.5s
WMQ LR LR
comp=Z,610nm,15.1s
WMQ LR LR
comp=Z,220nm,21.3s
MAKZ Makanchi 65.47 317 P **P 01 09 10.5 +0.3**
MAKZ IAmb IAmb 01 09 11.3
comp=Z,13nm,1.1s
MAKZ Makanchi 65.47 317 P **P 01 09 10.5 +0.3**
MAKZ pmax pmax
comp=Z,13nm,1.2s
NB2 NORSAR Subarra 65.58 3 P **P 01 09 11.2 +0.5**
comp=Z,2.6nm,0.7s,baz=358,slow=6.2
NOA NORSAR Array B 65.58 3 P **P 01 09 11.5 +0.8**
comp=Z,7.6nm,0.9s,baz=358,slow=6.6,SNR=18
comp=Z,7.6nm,0.9s
SKAR Skarslia 65.83 4 *e*P **P 01 09 13.0 +0.6**
SKAR IAmb IAmb 01 09 14.3
comp=Z,21nm,0.9s
NC602 NORSAR Array S 65.89 3 *e*P **P 01 09 13.4 +0.7**
BRZS Berezniki 66.38 324 *e*P **P 01 09 14.7 -1.4**
BRZS pmax pmax
comp=Z,4.0nm,0.6s
BRZS Berezniki 66.38 324 *e*P **P 01 09 14.7 -1.4**
comp=Z,3.8nm,0.6s,baz=324
KONO Kongsberg 66.91 4 P **P 01 09 20.3 +1.1**
KONO Kongsberg 66.91 4 P **P 01 09 20.3 +1.1**

KONO pmax pmax
comp=Z,32nm,1.3s
KONO Kongsberg 66.91 4 *e*P **P 01 09 20.3 +1.1**
GOMU GeErMu 67.91 301 P **P 01 09 27.3 +0.9**
GOMU pP pP 01 09 31.5 -3.2
GOMU sP sP 01 09 33.5 -4.4
GOMU pmax pmax
comp=Z,9.0nm,0.8s
GOMU pmax pmax
comp=Z,60nm,4.5s
GOMU LR LR
comp=Z,150nm,19.0s
GOMU LR LR
comp=Z,170nm,16.3s
GOMU LR LR
comp=Z,150nm,18.5s
VSU Vasula 67.92 354*d i*P **P 01 09 26.5 +0.9**
VSU pmax pmax
comp=Z,70nm,0.9s
OTUK Ortayu 67.97 323 P **P 01 09 26.9 +0.7**
SNART Snartemo 68.11 5 *e*P **P 01 09 28.5 +1.7**
GYA Guiyang 68.97 286⇓*i*P **P 01 09 34.5 +1.7**
GYA pmax pmax
comp=Z,29nm,0.8s
BORU Boraas 69.03 2 *e*P **P 01 09 33.4 +0.8**
PDGK Podgornoye 69.32 316 *i*P **P 01 09 35.7 +0.9**
PDGK pmax pmax
comp=Z,15nm,1.2s
SHLS Shalkode 69.47 316 *e*P **P 01 09 34.8 -0.9**
SHLS pmax pmax
comp=Z,12nm,1.1s
SHLS Shalkode 69.47 316 *e*P **P 01 09 34.9 -0.9**
comp=Z,12nm,1.1s,baz=316
KPKS Kokpek 69.54 317 *e*P **P 01 09 35.7 -0.4**
KPKS pmax pmax
comp=Z,13nm,1.2s
KPKS Kokpek 69.54 317 *e*P **P 01 09 35.8 -0.4**
comp=Z,13nm,1.2s,baz=316
MOS Moscow 69.57 347 *e*P **P 01 09 35.2 -0.7**
MOS *e* 01 09 45.1
UZB Uzynbulak 69.67 316 *e*P **P 01 09 38.0 +1.0**
UZB Uzynbulak 69.67 316 *e*P **P 01 09 38.0 +1.0**
baz=316
SATY Saty 69.99 316 *e*P **P 01 09 38.5 -0.4**
SATY pmax pmax
comp=Z,16nm,1.6s
SATY Saty 69.99 316 *e*P **P 01 09 38.6 -0.4**
comp=Z,16nm,1.6s,baz=316
BTLS Baital 70.05 320 *e*P **P 01 09 38.7 -0.4**
BTLS pmax pmax
comp=Z,10.0nm,0.8s
BTLS Baital 70.05 320 *e*P **P 01 09 38.7 -0.4**
comp=Z,9.8nm,0.8s,baz=320
KUU Kurty 70.13 318 *e*P **P 01 09 38.8 -0.8**
KUU Kurty 70.13 318 *e*P **P 01 09 38.9 -0.8**
baz=318
ESK Eskdalemuir 70.20 12 P **P 01 09 40.5 +0.7**
ESK Eskdalemuir 70.20 12 P **P 01 09 40.5 +0.7**
ESK pmax pmax
comp=Z,91nm,1.7s
DEL Delary 70.21 1 *e*P **P 01 09 40.8 +0.9**
OBN Obninsk 70.32 348⇓*e*P **P 01 09 40.7 +0.2**
OBN *e**SP **sP 01 09 52.4 +0.5**
OBN 01 10 04.0
OBN pmax pmax
comp=Z,16nm,1.0s
OBN MLR MLR
comp=Z,991nm,22.0s
MDOK Medeo 70.46 317 *e*P **P 01 09 41.1 -0.7**
MDOK Medeo 70.46 317 *e*P **P 01 09 41.1 -0.7**
baz=317
AKTO Aktyubinsk 70.53 333 P **P 01 09 43.1 +1.2**
BJUU Bjuv 70.60 2 *e*P **P 01 09 43.0 +0.8**
PABE Paberze 71.02 355 P **P 01 09 45.4 +0.6**
LUNU Lund 71.05 2 *e*P **P 01 09 46.2 +1.2**
AB31 Akbulak array 71.06 331 *i*P **P 01 09 46.3 +1.1**
ABKAR Akbulak array 71.06 331 P **P 01 09 46.4 +1.2**
ABKAR Akbulak array 71.06 331 P **P 01 09 46.3 +1.2**
ABKAR IAmb IAmb 01 09 47.4
comp=Z,20nm,0.7s
BELG Belogornoye 71.14 340*ce*P **P 01 09 45.9 +0.3**
BELG pmax pmax
comp=Z,7.0nm,1.0s
SGDS Sogindy 71.17 319 *e*P **P 01 09 45.9 -0.1**
SGDS Sogindy 71.17 319 *e*P **P 01 09 46.0 -0.1**
baz=319
TKM2 Tokmak 2 71.24 318 P **P 01 09 48.3 +1.7**
SNR=9.1
TKM2 Tokmak 2 71.24 318 *i*P **P 01 09 47.9 +1.2**
TKM2 pmax pmax
comp=Z,14nm,1.4s
USP Ospenovka 71.38 319 P **P 01 09 48.8 +1.5**
SNR=13
NACGM Naroch 71.46 354 *e*P **P 01 09 48.5 +1.0**
baz=6.9
BOOM Boomskoye usch 71.47 318 P **P 01 09 49.2 +1.2**
BOOM IAmb IAmb 01 09 50.5
comp=Z,8.8nm,0.8s
BOOM Boomskoye usch 71.47 318 P **P 01 09 49.2 +1.2**
BOOM pmax pmax
comp=Z,9.0nm,0.9s
CHMS Chumysh 71.51 319 P **P 01 09 49.6 +1.6**
SNR=6.3
BSD Bornholm Skovb 71.59 1 *e*P **P 01 09 48.3 +0.1**
PZH PanZhiHua 71.72 290 P **P 01 09 51.0 +1.3**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,5.1s
MNK Minsk 71.78 353 *i*P **P 01 09 48.1 -1.3**
MNK *i* 01 12 27.3
MNK *i*PPP PPP 01 14 10.9
MNK *i*S **S 01 19 05.8 -1.7**
MNK pmax pmax
comp=Z,29nm,0.9s
MNK pmax pmax
comp=N,39nm,0.8s
MNK pmax pmax
comp=E,4.0nm,1.4s
MNK MLR MLR
comp=Z,2μm,21.0s
MNK MLR MLR
comp=N,973nm,18.0s
MNK MLR MLR
comp=E,188nm,23.0s
MNK Minsk 71.78 353 *i*P **P 01 09 48.1 -1.3**
comp=E,4.0nm,1.4s
MNK *i*P **P 01 09 48.1 -1.3**
comp=N,39nm,0.8s
MNK *i*P **P 01 09 48.1 -1.3**
comp=Z,29nm,0.9s,baz=7.4
MNK *i*PP **PP 01 12 27.3 -0.8**
MNK *i*PPP PPP 01 14 10.9
MNK *i*S **S 01 19 05.8 -1.7**
MNK *i*SS **SS 01 23 37.4 -4.9**
MNK *i*SSS SSS 01 27 04.7
MNK *i*LQ LQ 01 36 27.7
MNK *i*LR LR 01 39 55.0
MNK *i*LRM MLR 01 42 48.0
comp=Z,2μm,20.9s
MNK *i*LRM MLR 01 42 54.4
comp=N,973nm,17.7s
MNK *i*LRM MLR 01 43 00.7
comp=E,188nm,23.0s
AAK Ala-Archa 71.91 319 P **P 01 09 52.2 +1.5**
SNR=11
AAK Ala-Archa 71.91 319 P **P 01 09 51.8 +1.1**
AAK IAmb IAmb 01 09 53.8
comp=Z,14nm,1.0s
AAK Ala-Archa 71.91 319 P **P 01 09 51.8 +1.1**
AAK pmax pmax
comp=Z,15nm,1.0s
EKS2 Erkin-Say 72.17 319 P **P 01 09 53.8 +1.7**
SNR=8.0
NRN Naryn 72.33 317 P **P 01 09 53.2 -0.2**
NRN IAmb IAmb 01 09 56.2
comp=Z,7.8nm,1.0s
NRN Naryn 72.33 317 P **P 01 09 53.2 -0.2**
NRN pmax pmax
comp=Z,8.0nm,1.0s
LPSR Galich'ya Gora 72.45 346 *e*P **P 01 09 51.9 -1.5**
LPSR pmax pmax
comp=Z,20nm,1.1s
AML Almayashu 72.66 319 P **P 01 09 57.6 +2.2**
SNR=11

KK31 Karatay Array 73.03 322 P **P 01 09 57.5 +0.4**
KK31 IAmb IAmb 01 09 59.2
comp=Z,7.3nm,0.8s
KK31 Karatay Array 73.03 322 P **P 01 09 57.5 +0.4**
KK31 pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 73.03 322 P **P 01 09 57.5 +0.4**
KKAR Karatay Array 73.03 322 P **P 01 09 57.5 +0.4**
VORR Voronezh 73.31 345 *e*P **P 01 09 59.1 +0.5**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VRH Novokhopyorsk 73.36 344 *e*P P 01 09 51.4 -7.5
VRH pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 73.76 345 *e*P **P 01 10 00.0 -1.2**
VSR pmax pmax
comp=Z,30nm,1.2s
KSH Kashi 73.96 316 P P 01 10 07.8 +5.0
KSH sP sP 01 10 16.0 +1.7
KSH pmax pmax
comp=Z,11nm,1.3s
KSH LR LR
comp=Z,410nm,15.8s
KSH LR LR
comp=Z,310nm,16.5s
IUG Iuzhnay 74.04 321 *e*P **P 01 10 03.7 +0.5**
IUG Iuzhnay 74.04 321 *e*P **P 01 10 03.8 +0.5**
baz=322
LSA Lhasa 74.92 300 P **P 01 10 10.0 +1.1**
LSA Lhasa 74.92 300 P **P 01 10 10.0 +1.1**
LSA pmax pmax
comp=Z,19nm,0.7s
CLL Collm 75.37 2 P **P 01 10 11.0 +0.5**
CLL IAmb IAmb 01 10 12.7
comp=Z,9.4nm,0.9s
CLL Collm 75.37 2 *i*P **P 01 10 10.6 +0.1**
CLL *e**SP **pwP 01 10 20.0 -1.4**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 75.37 2 *i*P **P 01 10 10.6 +0.1**
comp=Z,12nm,1.0s
CLL *e*sP **pwP 01 10 20.0 -1.4**
CLL *e*PP **PP 01 12 58.0 -0.7**
AKASG Malin Array Be 75.45 352 P **P 01 10 11.0 0.0**
comp=Z,9.5nm,0.5s,baz=11,slow=5.7,SNR=32
comp=Z,9.5nm,0.5s
AKASG Malin Array Be 75.45 352 P **P 01 10 10.8 -0.2**
AKASG Malin Array Be 75.45 352 P **P 01 10 10.8 -0.2**
AKASG pmax pmax
comp=Z,7.0nm,1.5s
AKBB Malin Array Si 75.45 352 P **P 01 10 11.3 +0.3**
AKBB IAmb IAmb 01 10 11.9
comp=Z,16nm,0.7s
AKBB Malin Array Si 75.45 352 P **P 01 10 11.3 +0.3**
AKBB pmax pmax
comp=Z,16nm,0.7s
BTK Batken 75.55 320 P **P 01 10 12.8 +0.8**
BTK IAmb IAmb 01 10 24.6
comp=Z,11nm,0.8s
BTK Batken 75.55 320 P **P 01 10 12.8 +0.8**
BTK pmax pmax
comp=Z,11nm,0.9s
DRK Karamyk 75.67 319 P **P 01 10 13.5 +0.6**
BSTI Sart Tilman 75.73 7 *d*P **P 01 10 13.3 +0.7**
BSTI *d*PcP **PcP 01 10 25.3 0.0**
MEM Membach 75.74 7 *d*P **P 01 10 13.9 +1.2**
comp=Z,9.9nm,0.9s
MEM *d*PcP **sP 01 10 24.6 +0.5**
BTNL Ternell 75.77 7 *d*P **P 01 10 14.1 +1.2**
comp=Z,8.7nm,1.2s
BRG Berggiesshubel 75.82 2 *i*P **P 01 10 14.5 +1.3**
BRG *e* 01 10 25.3
BRG pmax pmax
comp=Z,10.0nm,1.1s
BCLA Clavier 75.88 7 *d*P **P 01 10 14.2 +0.7**
comp=Z,8.4nm,1.1s
BGES Gesves 75.90 7 *d*P **P 01 10 12.3 -1.3**
BGES *d*PcP **PcP 01 10 25.6 -0.4**
MOX Moxa 75.99 3 P **P 01 10 15.3 +1.1**
MOX pmax pmax
comp=Z,17nm,1.1s
BHOU Houvegnez 76.00 7 *d*P **P 01 10 14.8 +0.6**
BHOU *d*PcP **PcP 01 10 26.5 0.0**
CHVC Chvalec 76.13 0 *e*P **P 01 10 15.9 +0.9**
RCHB Rochefort 76.13 7 *d*P **P 01 10 16.0 +1.1**
comp=Z,10.0nm,1.0s
RCHB *d*PcP **PcP 01 10 27.1 +0.1**
DOU Dourbes 76.14 8 *d*P **P 01 10 15.8 +0.8**
comp=Z,6.2nm,1.2s
OSTC Ostas 76.16 0 *e*P **P 01 10 16.1 +1.0**
PVCC Panska Ves 76.17 1 *e*P **P 01 10 16.4 +1.2**
PVCC Panska Ves 76.17 1 *e*P **P 01 10 16.4 +1.2**
DPC Dobruska-Polom 76.36 0 *e*P **P 01 10 17.8 +1.5**
DPC Dobruska-Polom 76.36 0 *e*P **P 01 10 17.8 +1.5**
NKC Novy Kostel 76.43 3 *e*P **P 01 10 17.9 +1.2**
NKC Novy Kostel 76.43 3 *e*P **P 01 10 17.9 +1.2**
KRLC Kraliky 76.64 360 *e*P **P 01 10 16.0 -1.9**
KRLC *e* 01 10 26.7
KRLC Kraliky 76.64 360 *e*P **P 01 10 19.0 +1.1**
GAR Garm 76.66 320 P **P 01 10 18.9 +0.6**
WLF Walferdange 76.69 7 P **P 01 10 18.6 +0.5**
WLF IAmb IAmb 01 10 20.5
comp=Z,15nm,1.1s
WLF Walferdange 76.69 7 P **P 01 10 18.6 +0.5**
WLF pmax pmax
comp=Z,15nm,1.1s
WLF Walferdange 76.69 7 *d*P **P 01 10 19.8 +1.7**
comp=Z,7.6nm,1.0s
LVV L'vov 76.69 355 *e*P **P 01 10 19.2 +1.1**
PRU Pruhonice 76.72 1 *e*P **P 01 10 19.4 +1.1**
PRU MLR MLR
comp=Z,2μm,18.7s
PRU Pruhonice 76.72 1 *e*P **P 01 10 19.4 +1.1**
GRA1 Grafenberg Arr 76.93 3 P **P 01 10 20.3 +0.8**
GRA1 IAmb IAmb 01 10 21.9
comp=Z,16nm,1.0s
GRF Grafenberg Arr 76.93 3 P **P 01 10 20.3 +0.8**
GRF pmax pmax
comp=Z,16nm,1.0s
GRFO Grafenberg 76.93 3 P **P 01 10 20.2 +0.7**
GRFO IAmb IAmb 01 10 21.9
comp=Z,14nm,0.9s
GRFO Grafenberg 76.93 3 P **P 01 10 20.2 +0.7**
GRFO pmax pmax
comp=Z,14nm,0.9s
MORC Moravsky Berou 76.93 359⇓P **P 01 10 20.8 +1.2**
MORC Moravsky Berou 76.93 359 P **P 01 10 20.0 +0.4**
MORC IAmb IAmb 01 10 21.6
comp=Z,7.3nm,1.0s
MORC Moravsky Berou 76.93 359 P **P 01 10 20.0 +0.4**
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 76.93 359 *e*P **P 01 10 20.5 +0.9**
CHGR Chuyangaron 77.40 320 P **P 01 10 22.8 +0.3**
CHGR Chuyangaron 77.40 320 P **P 01 10 22.8 +0.3**
CHGR pmax pmax
comp=Z,40nm,0.7s
VRAC Vranov 77.41 360⇓P **P 01 10 24.1 +1.9**
VRAC Vranov 77.41 360⇓P **P 01 10 24.1 +1.9**
VRAC Vranov 77.41 360 *e*P **P 01 10 23.2 +1.0**
KHC Kasperske Hory 77.56 2 P **P 01 10 24.3 +1.2**
KHC IAmb IAmb 01 10 25.6
comp=Z,11nm,1.0s
KHC Kasperske Hory 77.56 2 P **P 01 10 24.3 +1.2**
KHC pmax pmax
comp=Z,11nm,1.0s
KHC Kasperske Hory 77.56 2 *e*P **P 01 10 24.5 +1.4**
KRUC Moravsky 77.65 360 *e*P **P 01 10 24.5 +1.0**
KOLS Kolonicke sedl 77.66 356 *e*P **P 01 10 25.3 +1.7**
KOLS pmax pmax
comp=Z,9.0nm,0.9s
CRVS Cervenica-Dubn 77.72 357 *e*P **P 01 10 24.3 +0.3**
CRVS pmax pmax
comp=Z,10.0nm,0.9s
STU Stuttgart 77.76 5 P **P 01 10 24.5 +0.4**
STU IAmb IAmb 01 10 26.1
comp=Z,14nm,0.7s
STU Stuttgart 77.76 5 P **P 01 10 24.5 +0.4**
STU pmax pmax
comp=Z,14nm,0.7s
GEC2 GERESS Array S 77.85 2 P **P 01 10 25.5 +0.8**
GEC2 IAmb IAmb 01 10 26.7
comp=Z,4.4nm,0.8s
GERES GERESS Array B 77.85 2 P **P 01 10 25.9 +1.1**

comp=Z,3.7nm,0.8s,baz=15,slow=5.5,SNR=27
comp=Z,3.7nm,0.8s
GERES GERESS Array B 77.85 2 P **P 01 10 25.5 +0.8**
GERES GERESS Array B 77.85 2 P **P 01 10 25.5 +0.8**
SHL Shillong 77.85 297 P **P 01 10 25.1 -0.2**
SHL Shillong 77.85 297 P **P 01 10 25.1 -0.2**
SHL pmax pmax
comp=Z,16nm,0.4s
JAVC Velka Javorina 77.85 359 *e*P **P 01 10 26.1 +1.4**
CKRC Cesky Krumlov 77.88 1 *e*P **P 01 10 25.8 +0.9**
UZH Uzhgorod 77.96 356 *e*P **P 01 10 22.6 -2.6**
UZH *e* 01 10 26.2
UZH *i* 01 10 31.1
CLF Chambon-Foret 77.99 10 P **P 01 10 26.1 +0.7**
SMOL Smolenice 78.20 359 *e*P **P 01 10 28.4 +1.8**
SMOL pmax pmax
comp=Z,4.0nm,0.8s
ECH Echery 78.20 6 P **P 01 10 27.1 +0.4**
ECH IAmb IAmb 01 10 28.6
comp=Z,11nm,0.9s
ECH Echery 78.20 6 P **P 01 10 27.1 +0.4**
ECH pmax pmax
comp=Z,11nm,0.9s
VYHS Vyhne 78.20 358 *e*P **P 01 10 28.0 +1.4**
VYHS pmax pmax
comp=Z,11nm,1.1s
MODS Modra-Piesok 78.34 359 *e*P **P 01 10 29.1 +1.7**
MODS pmax pmax
comp=Z,27nm,1.1s
TRPA Tarpa 78.45 356⇑P **P 01 10 28.8 +0.8**
CONA Conrad Observa 78.79 0 *i*P **P 01 10 31.7 +1.7**
comp=Z,7.1nm,0.9s,SNR=6.1
BUR08 Bucovina Ar. S 78.79 354 P **P 01 10 30.8 +0.8**
BUR08 IAmb IAmb 01 10 31.9
comp=Z,6.9nm,0.9s
BURAR Bucovina Array 78.82 354⇑P **P 01 10 30.2 0.0**
BURAR Bucovina Array 78.82 354 P **P 01 10 30.9 +0.8**
BURAR IAmb IAmb 01 10 32.4
comp=Z,8.9nm,0.9s
BURAR Bucovina Array 78.82 354⇑P **P 01 10 30.2 0.0**
PHRA Phrae 78.87 286 P **P 01 10 31.0 +0.3**
GOF Gofitskoye 79.05 341⇑*e*P **P 01 10 32.8 +1.5**
GUN Gumba 79.06 302 *e*P **P 01 10 33.1 +1.0**
GUN Gumba 79.06 302 *e*P **P 01 10 33.1 +1.0**
SSF Saint Saulge 79.06 9 *e*P **P 01 10 31.3 -0.1**
SSF pmax pmax
comp=Z,9.0nm,0.9s
JIRN Jiri 79.11 302 *e*P **P 01 10 33.4 +1.0**
comp=Z,114nm,0.5s
JIRN Jiri 79.11 302 *e*P **P 01 10 33.6 +1.2**
comp=Z,114nm,0.5s
RETA Reutte 79.12 4 *i*P **P 01 10 33.1 +1.4**
comp=Z,6.3nm,0.9s,SNR=5.8
LTVH Ltavrtes, Hu 79.22 356⇑P **P 01 10 33.3 +1.1**
MILM Milestii Mici 79.24 351⇓P **P 01 10 32.7 +0.4**
MILM Milestii Mici 79.24 351⇓P **P 01 10 32.7 +0.4**
MOTA Moosalm 79.27 4 *i*P **P 01 10 34.3 +1.6**
comp=Z,17nm,1.0s,SNR=13
WATA Walderalm 79.30 3 *i*P **P 01 10 34.3 +1.5**
comp=Z,16nm,1.1s,SNR=8.0
WTTA Wattenberg 79.37 3 *i*P **P 01 10 35.2 +1.9**
comp=Z,15nm,0.8s,SNR=6.2
SQTA Sankt Quirin 79.40 4 *i*P **P 01 10 35.3 +1.9**
comp=Z,25nm,1.0s,SNR=8.1
ARCR ARCALIA 79.40 354⇓P **P 01 10 34.9 +1.7**
BIZ Bicaz 79.44 353⇓P **P 01 10 34.3 +0.9**
KKN Kakani 79.45 303 *e*P **P 01 10 35.3 +1.2**
KKN Kakani 79.45 303 *e*P **P 01 10 35.3 +1.2**
ARSA Arzberg 79.46 1 *i*P **P 01 10 35.6 +2.0**
comp=Z,9.8nm,0.9s,SNR=5.1
RAMN Ramite 79.48 301 *e*P **P 01 10 34.9 +0.6**
comp=Z,70nm,0.7s
RAMN Ramite 79.48 301 *e*P **P 01 10 34.9 +0.6**
comp=Z,75nm,0.7s
PKI Pulchoki 79.57 303 *e*P **P 01 10 35.2 +0.3**
PKI Pulchoki 79.57 303 *e*P **P 01 10 35.4 +0.5**
PKIN Phulchoki 79.57 303 *e*P **P 01 10 35.4 +0.6**
PKIN Phulchoki 79.57 303 *e*P **P 01 10 35.4 +0.6**
FETA Feichten 79.58 4 *i*P **P 01 10 36.2 +1.8**
comp=Z,15nm,0.9s,SNR=7.3
GKN Gorkha 79.60 303 *e*P **P 01 10 35.7 +0.9**
comp=Z,84nm,0.8s
GKN Gorkha 79.60 303 *e*P **P 01 10 35.6 +0.8**
comp=Z,60nm,0.7s
CM31 Chiang Mai Arr 79.64 287 P **P 01 10 34.4 -0.5**
CM31 IAmb IAmb 01 10 36.8
comp=Z,16nm,1.0s
CMAR Chiang Mai Arr 79.64 287 P **P 01 10 36.1 +1.2**
comp=Z,6.2nm,0.4s,baz=18,slow=5.6,SNR=37
comp=Z,6.2nm,0.4s
CMAR Chiang Mai Arr 79.64 287 P **P 01 10 35.4 +0.4**
DMN Daman 79.69 303 *e*P **P 01 10 36.1 +0.7**
DMN Daman 79.69 303 *e*P **P 01 10 36.4 +1.0**
DANN Dangsing 79.75 304 *e*P **P 01 10 36.9 +1.2**
comp=Z,195nm,0.7s
DANN Dangsing 79.75 304 *e*P **P 01 10 37.0 +1.2**
comp=Z,195nm,0.7s
CBBR Cluj-Babes-Bol 79.76 355⇓P **P 01 10 36.4 +1.2**
DRGR 79.78 356⇑P **P 01 10 35.6 +0.2**
DRGR 79.78 356⇑P **P 01 10 35.6 +0.2**
FUORN Ofenpass-Fuorn 79.96 4 P **P 01 10 38.0 +1.4**
FUORN IAmb IAmb 01 10 52.5
comp=Z,8.2nm,0.9s
SOKA Soboth 80.03 1 *i*P **P 01 10 39.0 +2.3**
comp=Z,21nm,1.2s,SNR=5.5
PERS Pernice 80.08 1 *i*P **P 01 10 38.2 +1.3**
NIL Nilore 80.10 315 P **P 01 10 38.1 +0.8**
NIL IAmb IAmb 01 10 39.7
comp=Z,22nm,0.9s
NIL Nilore 80.10 315 P **P 01 10 38.1 +0.8**
NIL pmax pmax
comp=Z,22nm,1.0s
MAK Makhachkala 80.11 337 *e*P **P 01 10 35.2 -1.9**
MAK *e* 01 13 39.7
MAK *e*PPP PPP 01 15 31.3
MAK *e*S **S 01 20 37.0 -2.5**
MAK *e*SS **SS 01 25 49.7 +1.0**
MAK *e*SSS SSS 01 29 14.5
KVAR Kislovodsk Arr 80.18 341 LR LR 01 49 31.3
comp=Z,215nm,18.6s,baz=116,slow=38
KIV Kislovodsk 80.18 341⇓P **P 01 10 38.7 +1.1**
KIV Kislovodsk 80.18 341 P **P 01 10 38.8 +1.1**
KIV IAmb IAmb 01 10 40.0
comp=Z,12nm,0.8s
KIV Kislovodsk 80.18 341 *e*P **P 01 10 39.1 +1.5**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,269nm,19.0s
OBKA Obir 80.20 1 *i*P **P 01 10 39.9 +2.2**
comp=Z,31nm,0.9s,SNR=6.1
KOLN Koldanda 80.31 304 *e*P **P 01 10 39.3 +0.6**
comp=Z,12nm,1.3s
KOLN Koldanda 80.31 304 *e*P **P 01 10 39.4 +0.7**
comp=Z,12nm,1.3s
PYUN Piuthan 80.33 305 *e*P **P 01 10 39.6 +0.8**
comp=Z,149nm,1.0s
PYUN Piuthan 80.33 305 *e*P **P 01 10 39.7 +0.9**
comp=Z,149nm,1.0s
KBZ Khabaz 80.36 341 P **P 01 10 40.4 +2.0**
comp=Z,8.4nm,0.9s,baz=1.5,slow=4.2,SNR=13
KBZ LR LR 01 50 19.7
comp=Z,433nm,18.2s,baz=254,slow=39
comp=Z,8.4nm,0.9s
KBZ Khabaz 80.36 341*ce*P **P 01 10 40.9 +2.5**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
NCK Nalchik 80.44 340⇑*e*P **P 01 10 40.8 +1.9**
NCK pmax pmax
comp=Z,23nm,0.9s
DOPR Dopca 80.45 354⇑P **P 01 10 40.5 +1.5**
CADS Cadrg 80.47 2 *i*P **P 01 10 39.4 +0.4**
MORH Mrgy, Hungar 80.48 358⇑P **P 01 10 39.9 +0.9**
COVR Voineasa-Covas 80.52 353⇓P **P 01 10 39.7 +0.4**
SHTL Shatili 80.92 339 P **P 01 10 38.6 -3.1**
SHTL Shatili 80.92 339 P **P 01 10 38.6 -3.1**
BZS Buzias 81.00 356⇓P **P 01 10 42.5 +0.7**
BZS Buzias 81.00 356⇓P **P 01 10 42.5 +0.7**
CFR Carcaliu 81.03 352⇓P **P 01 10 41.6 -0.3**
CFR Carcaliu 81.03 352⇓P **P 01 10 41.6 -0.3**
KBL Kabul 81.04 318 P **P 01 10 42.1 -0.5**
KBL IAmb IAmb 01 10 44.0
comp=Z,7.4nm,0.8s
KBL Kabul 81.04 318 P **P 01 10 42.1 -0.5**
KBL pmax pmax

comp=Z,7.0nm,0.9s
ZEI Tsey 81.06 340 *e*P **P 01 10 43.1 +0.6**
ZEI pmax pmax
comp=Z,9.0nm,0.9s
SOC Sochi 81.08 343 *e*P **P 01 10 45.1 +2.8**
SOC *e* 01 13 46.9
SOC *e*PPP PPP 01 15 38.4
SOC *e*S **S 01 20 58.1 +8.4**
SOC *e*SS **SS 01 26 05.1 +2.0**
SOC pmax pmax
comp=Z,51nm,1.1s
SOC MLR MLR
comp=Z,396nm,18.0s
GZR Gura Zlata 81.17 355 ⇑P **P 01 10 43.1 +0.3**
GZR Gura Zlata 81.17 355 ⇑P **P 01 10 43.1 +0.3**
TEOL Teolo 81.28 3 P **P 01 10 44.4 +1.1**
AKT Akhty 81.47 337 *e*P **P 01 10 43.4 -1.2**
AKT *e* 01 10 49.0
AKT pmax pmax
comp=Z,29nm,0.8s
FRGS Fruska Gora 81.52 358 ⇑P **P 01 10 45.4 +0.8**
HERR Herculane 81.70 356 ⇑P **P 01 10 46.3 +0.7**
TIRR Tirgusor 81.72 351 ⇑P **P 01 10 46.1 +0.4**
TIRR Tirgusor 81.72 351 P **P 01 10 46.0 +0.4**
TIRR Tirgusor 81.72 351 P **P 01 10 46.0 +0.4**
MDVR Moldovita 81.83 356 ⇓P **P 01 10 47.5 +1.2**
GEYT Alibeck 81.91 328 P **P 01 10 48.1 +1.2**
comp=Z,8.5nm,0.8s,baz=341,slow=3.6,SNR=20
comp=Z,8.5nm,0.8s
GEYT Alibeck 81.91 328 P **P 01 10 48.0 +1.2**
GEYT IAmb IAmb 01 10 50.0
comp=Z,9.2nm,0.8s
GYA0B ALIBECK ARRAY 81.91 328 P **P 01 10 48.0 +1.1**
GYA0B IAmb IAmb 01 10 52.1
comp=Z,9.4nm,0.8s
DIVS Divibare 82.57 357 P **P 01 10 50.9 +0.7**
DIVS IAmb IAmb 01 10 53.1
comp=Z,6.5nm,0.9s
BOVS Bovan 82.97 356 ⇑P **P 01 10 52.0 -0.2**
GNI Garni 83.41 338⇑*e*P **P 01 10 55.1 +0.3**
GNI pmax pmax
comp=Z,11nm,0.8s
HRA Herat 83.74 323 P **P 01 10 57.1 +0.5**
HRA IAmb IAmb 01 10 58.3
comp=Z,5.2nm,0.9s
VTS Vitosha 83.92 355 P **P 01 10 57.6 +0.3**
VTS IAmb IAmb 01 10 58.8
comp=Z,4.9nm,0.8s
VTS Vitosha 83.92 355 P **P 01 10 57.6 +0.3**
VTS pmax pmax
comp=Z,5.0nm,0.8s
RDO Rodhopi 85.24 353 P **P 01 11 04.3 +0.5**
RDO IAmb IAmb 01 11 05.9
comp=Z,10nm,0.7s
ESBB Sonseca Array 85.40 16 P **P 01 11 05.2 +0.5**
ESBB IAmb IAmb 01 11 43.2
comp=Z,14nm,1.4s
ESDC Sonseca Array 85.40 16 P **P 01 11 05.2 +0.5**
comp=Z,3.3nm,1.2s,baz=337,slow=4.4,SNR=12
comp=Z,3.3nm,1.2s
ESDC Sonseca Array 85.40 16 P **P 01 11 05.4 +0.6**
ESDC IAmb IAmb 01 11 09.3
comp=Z,13nm,1.5s
PAB San Pablo 85.46 16 P **P 01 11 04.1 -1.0**
PAB San Pablo 85.46 16 ⇑P **P 01 11 02.9 -2.2**
PAB San Pablo 85.46 16 P **P 01 11 04.1 -1.3**
BR131 Keskin Array S 85.80 347 P **P 01 11 07.5 +0.7**
BR131 IAmb IAmb 01 11 09.9
comp=Z,13nm,0.9s
BR131 Keskin Array S 85.80 347 P **P 01 11 07.6 +0.7**
BR131 pmax pmax
comp=Z,13nm,0.9s
BRTR Keskin Array B 85.80 347 P **P 01 11 07.5 +0.7**
comp=Z,8.1nm,0.9s,baz=34,slow=2.3,SNR=38
comp=Z,8.1nm,0.9s
BRTR Keskin Array B 85.80 347 P **P 01 11 07.7 +0.8**
BRTR Keskin Array B 85.80 347*ce*P **P 01 11 08.1 +1.3**
BRTR pmax pmax
comp=Z,8.0nm,0.9s
KAPI Kappang 86.13 256⇑*e*P **P 01 11 09.6 +1.1**
KAPI pmax pmax
comp=Z,10.0nm,1.1s
BNN Bunyan 86.33 345 P **P 01 11 10.1 +0.6**
TIP Timpagrande 87.53 360 P **P 01 11 14.9 -0.4**
TIP IAmb IAmb 01 11 17.4
comp=Z,6.0nm,0.9s
WRAB Tennant Creek 90.55 236⇑*e*P **P 01 11 28.4 -1.0**
WRAB pmax pmax
comp=Z,9.0nm,1.6s
WRA Warramunga Arr 90.56 236 P **P 01 11 28.9 -0.6**
comp=Z,0.9nm,1.0s,baz=34,slow=5.7,SNR=6.1
comp=Z,0.9nm,1.0s
ASAR Alice Springs 93.92 235 P **P 01 11 44.2 -0.7**
comp=Z,0.7nm,0.8s,baz=37,slow=4.6,SNR=6.6
comp=Z,0.7nm,0.8s
RAYN Ar Rayn 99.11 333 P **Pdif 01 12 09.2 +0.5**
RAYN IAmb IAmb 01 12 11.4
comp=Z,3.3nm,1.1s
RAYN Ar Rayn 99.11 333 P **Pdif 01 12 09.2 +0.5**
RAYN pmax pmax
comp=Z,3.0nm,1.1s
H03N2 Juan Fernandez 113.25 115 T T 03 20 40.1
baz=322,slow=77,SNR=19
H03N1 Juan Fernandez 113.27 115 T T 03 20 46.0
baz=322,slow=77,SNR=21
H03N3 Juan Fernandez 113.27 115 T T 03 20 45.3
baz=322,slow=77,SNR=23
MAW Mawson 154.06 219 PKPbc **PKPbc 01 18 24.9 -0.6**
comp=Z,1.1nm,0.7s,baz=180,slow=2.0,SNR=2.0
BOSA Boshof 154.14 342 PKPbc **PKPbc 01 18 26.9 -0.2**
comp=Z,4.1nm,0.8s,baz=135,slow=0.5,SNR=7.5

SJA ***27*** *00:59:31.9±1.7,22.°12S×68.°49W,h142km±8km,ML4.6, MW4.2*
IDC ***27*** *00:59:32.5±0.5,22.°12S×68.°19W,h107km±7km,mb4.4/10, mbtmp4.6/16,MS2.8/3,Error ellipse: s-maj=17.2km s-min=11.9km az=113.0*
NEIC ***27*** *00:59:33.3±2.2,22.°18S±0.°05×68.°30W±0.°08,h118km±7km, mb4.8/33,Mwr4.6(GUC),Error ellipse: s-maj=10.6km s-min=7.4km az=89.0*
GUC ***27*** *00:59:34.4±0.9,22.°20S×68.°45W,h127km±6km,ML4.8*
ISC 27 00:59:33.6±0.6,22.°18S±0.°03×68.°38W±0.°05,h125km±5km, n158,σ1§40/172,mb4.7/16,9C-7D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.65**	**229**	P	**Pn**	**00 59 53.3**	**-0.2**
	11μm,0.3s,baz=42,slow=7.6						
LVC				S	**Sn**	**01 00 07.5**	**-1.0**
	5μm,0.3s,baz=205,slow=20,SNR=32						
LVC	**Limon Verde**	**0.65**	**229**		**Pn**	**00 59 53.5**	**0.0**
LVC				Sn	**Sn**	**01 00 07.9**	**-0.6**
LVC	**Limon Verde**	**0.65**	**229**	*i* P	**Pn**	**00 59 53.3**	**-0.2**
LVC				*i* S	**Sn**	**01 00 08.0**	**-0.6**
LVC	**Limon Verde**	**0.65**	**229**	*i* P	**Pn**	**00 59 53.6**	**+0.1**
LVC				*e*S	**Sn**	**01 00 08.2**	**-0.4**
LVC				IAML		01 00 08.4	
	comp=Z,5μm,0.3s						
AF01	**San Pedro de A**	**0.79**	**166**		**Pn**	**00 59 55.3**	**+0.8**
AF01	**San Pedro de A**	**0.79**	**166**⇑*i* P		**Pn**	**00 59 55.3**	**+0.8**
PB09	**IPOC Station P**	**0.89**	**296**		**Pn**	**00 59 55.6**	**+0.4**
PB09				Sn	**Sn**	**01 00 11.4**	**0.0**
PB09	**IPOC Station P**	**0.89**	**296**⇑*i* P		**Pn**	**00 59 55.6**	**+0.4**
PB09				*i* S	**Sn**	**01 00 11.5**	**0.0**
PB09				IAML		01 00 12.3	
	comp=N,18μm,0.4s						
PB09	**IPOC Station P**	**0.89**	**296**	*i* P	**Pn**	**00 59 55.8**	**+0.6**
PB09				*e*S	**Sn**	**01 00 12.2**	**+0.7**
PB09				IAML		01 00 12.5	
	comp=Z,12μm,0.3s						
PB06	**IPOC Station P**	**1.22**	**244**		**Pn**	**00 59 58.4**	**0.0**
PB06				Sn	**Sn**	**01 00 17.4**	**+0.2**
PB06	**IPOC Station P**	**1.22**	**244**⇑*i* P		**Pn**	**00 59 58.4**	**0.0**
PB06				*i* S	**Sn**	**01 00 17.4**	**+0.2**
PB06				IAML		01 00 25.2	
	comp=E,5μm,0.3s						
PB06	**IPOC Station P**	**1.22**	**244**	*i* P	**Pn**	**00 59 58.0**	**-0.4**
PB06				IAML		01 00 20.5	
	comp=Z,4μm,0.1s						
PB03	**IPOC Station P**	**1.28**	**276**		**Pn**	**00 59 58.9**	**-0.1**
PB03	**IPOC Station P**	**1.28**	**276**⇑*i* P		**Pn**	**00 59 59.0**	**-0.1**
PB03				*i* S	**Sn**	**01 00 17.8**	**-0.6**
PB03				IAML		01 00 18.9	
	comp=N,30μm,0.1s						
PB03	**IPOC Station P**	**1.28**	**276**	*i* P	**Pn**	**00 59 59.0**	**0.0**
PB03				*e*S	**Sn**	**01 00 18.2**	**-0.1**
PB03				IAML		01 00 19.1	
	comp=Z,30μm,0.1s						
PB15	**IPOC Station P**	**1.43**	**224**		**Pn**	**01 00 01.0**	**+0.2**
PB15	**IPOC Station P**	**1.43**	**224**⇑*i* P		**Pn**	**01 00 01.1**	**+0.2**
PB15				*i* S	**Sn**	**01 00 21.6**	**+0.1**
PB15				IAML		01 00 24.7	
	comp=E,63μm,0.7s						
PB15	**IPOC Station P**	**1.43**	**224**	*i* P	**Pn**	**01 00 01.0**	**+0.2**
PB15				*e*S	**Sn**	**01 00 22.1**	**+0.7**
PB15				IAML		01 00 24.9	
	comp=Z,32μm,0.2s						
PB07	**IPOC Station P**	**1.47**	**288**		**Pn**	**01 00 00.8**	**-0.3**
PB07	**IPOC Station P**	**1.47**	**288**⇑*i* P		**Pn**	**01 00 01.2**	**0.0**
PB07				*i* S	**Sn**	**01 00 21.4**	**-0.7**
PB07				IAML		01 00 22.0	
	comp=N,65μm,0.2s						
PB07	**IPOC Station P**	**1.47**	**288**	*i* P	**Pn**	**01 00 01.0**	**-0.1**
PB07				IAML		01 00 24.8	
	comp=Z,13μm,0.4s						
PB01	**IPOC Station P**	**1.53**	**318**		**Pn**	**01 00 01.7**	**0.0**
PB01	**IPOC Station P**	**1.53**	**318**⇓*i* P		**Pn**	**01 00 01.8**	**0.0**
PB01				*i* S	**Sn**	**01 00 23.2**	**0.0**
PB01				IAML		01 00 24.2	
	comp=E,13μm,0.3s						
PB01	**IPOC Station P**	**1.53**	**318**	*i* P	**Pn**	**01 00 01.8**	**0.0**
PB01				*e*S	**Sn**	**01 00 23.6**	**+0.3**
PB01				IAML		01 00 24.4	
	comp=Z,6μm,0.1s						
PB04	**IPOC Station P**	**1.64**	**264**		**Pn**	**01 00 02.9**	**-0.3**
PB04	**IPOC Station P**	**1.64**	**264**⇑*i* P		**Pn**	**01 00 02.8**	**-0.3**
PB04				*i* S	**Sn**	**01 00 24.6**	**-1.1**
PB04				IAML		01 00 26.9	
	comp=N,16μm,0.2s						
PB04	**IPOC Station P**	**1.64**	**264**	*i* P	**Pn**	**01 00 03.0**	**-0.2**
PB04				IAML		01 00 27.9	
	comp=Z,10μm,0.3s						
PB02	**IPOC Station P**	**1.65**	**301**		**Pn**	**01 00 03.2**	**0.0**
PB02	**IPOC Station P**	**1.65**	**301**⇓*i* P		**Pn**	**01 00 03.1**	**0.0**
PB02				*i* S	**Sn**	**01 00 24.5**	**-1.1**
PB02				IAML		01 00 25.9	
	comp=N,28μm,0.4s						
PB02	**IPOC Station P**	**1.65**	**301**	*i* P	**Pn**	**01 00 03.0**	**-0.2**
PB02				*e*S	**Sn**	**01 00 24.9**	**-0.7**
PB02				IAML		01 00 30.0	
	comp=Z,19μm,0.3s						
PATCX	**Punta Patache**	**2.13**	**309**	Pn	**Pn**	**01 00 08.5**	**-0.6**
PATCX	**Punta Patache**	**2.13**	**309**⇓*i* P		**Pn**	**01 00 08.4**	**-0.6**
PATCX				*i* S	**Sn**	**01 00 34.7**	**-1.5**
PATCX				IAML		01 00 40.5	
	comp=N,6μm,0.3s						
PATCX	**Punta Patache**	**2.13**	**309**	*i* P	**Pn**	**01 00 08.0**	**-1.0**
PATCX				IAML		01 00 38.8	
	comp=Z,3μm,0.5s						
PB08	**IPOC Station P**	**2.15**	**340**		**Pn**	**01 00 10.6**	**+1.0**
PB08	**IPOC Station P**	**2.15**	**340**⇓*i* P		**Pn**	**01 00 10.6**	**+1.0**
PB08				*i* S	**Sn**	**01 00 38.1**	**+1.0**
PB08				IAML		01 00 41.6	
	comp=E,2μm,0.3s						
PB08	**IPOC Station P**	**2.15**	**340**	*i* P	**Pn**	**01 00 10.0**	**+0.4**
PB08				IAML		01 00 41.4	
	comp=Z,1μm,0.3s						
TA01	**Diego Aracena**	**2.32**	**314**	Pn	**Pn**	**01 00 10.3**	**-1.0**
TA01	**Diego Aracena**	**2.32**	**314**⇓*i* P		**Pn**	**01 00 10.3**	**-1.0**
TA01				*i* S	**Sn**	**01 00 38.8**	**-1.5**
TA01				IAML		01 00 40.1	
	comp=E,5μm,0.2s						
TA01	**Diego Aracena**	**2.32**	**314**	*i* P	**Pn**	**01 00 10.0**	**-1.3**
TA01				IAML		01 00 40.5	
	comp=Z,2μm,0.7s						
HMBC	**Humberstone**	**2.36**	**323**⇓*i* P		**Pn**	**01 00 11.1**	**-0.8**
HMBC				*i* S	**Sn**	**01 00 39.8**	**-1.5**
HMBC				IAML		01 00 43.5	
	comp=E,6μm,0.7s						
PB10	**IPOC Station P**	**2.40**	**236**	Pn	**Pn**	**01 00 11.4**	**-0.9**
PB10	**IPOC Station P**	**2.40**	**236**⇑*i* P		**Pn**	**01 00 11.4**	**-0.9**
PB10				IAML		01 00 51.3	
	comp=E,1μm,0.1s						
PB10	**IPOC Station P**	**2.40**	**236**	*i* P	**Pn**	**01 00 11.0**	**-1.3**
PB10				IAML		01 00 49.2	
	comp=Z,670nm,0.3s						
TA02	**Huaiquique**	**2.51**	**319**		**Pn**	**01 00 12.6**	**-1.0**
TA02	**Huaiquique**	**2.51**	**319**	*i* P	**Pn**	**01 00 12.6**	**-1.0**
TA02	**Huaiquique**	**2.51**	**319**	*i* P	**Pn**	**01 00 13.0**	**-0.6**
TA02				IAML		01 00 47.9	
	comp=Z,2μm,0.1s						
GO01	**Chusmiza**	**2.61**	**343**		**Pn**	**01 00 15.8**	**+0.2**
GO01	**Chusmiza**	**2.61**	**343**	*i* P	**Pn**	**01 00 15.9**	**+0.4**
PB11	**IPOC Station P**	**2.69**	**333**	Pn	**Pn**	**01 00 15.6**	**-0.6**
PB11	**IPOC Station P**	**2.69**	**333**⇓*i* P		**Pn**	**01 00 15.4**	**-0.7**
PB11				*i* S	**Sn**	**01 00 45.9**	**-3.0**
PB11				IAML		01 00 56.0	
	comp=E,2μm,0.6s						
PB11	**IPOC Station P**	**2.69**	**333**	*i* P	**Pn**	**01 00 15.0**	**-1.2**
PB11				IAML		01 00 53.8	
	comp=Z,1μm,0.3s						
HJA	**Humahuaca**	**2.93**	**111**	*i* P	**Pn**	**01 00 22.0**	**+2.5**
HJA				IAML		01 01 07.4	
	comp=Z,53nm,0.9s						
PB14	**IPOC Station P**	**3.06**	**217**	Pn	**Pn**	**01 00 20.3**	**-0.8**
PB14	**IPOC Station P**	**3.06**	**217**	*i* P	**Pn**	**01 00 20.4**	**-0.8**
PB14				*i* S	**Sn**	**01 00 54.8**	**-3.0**
PB14				IAML		01 00 57.6	
	comp=E,2μm,0.3s						
PB14	**IPOC Station P**	**3.06**	**217**	*i* P	**Pn**	**01 00 20.0**	**-1.1**
PB14				IAML		01 01 05.1	
	comp=Z,1μm,0.4s						
GO02	**Mina Guanaco**	**3.17**	**200**	Pn	**Pn**	**01 00 22.2**	**-0.3**
GO02	**Mina Guanaco**	**3.17**	**200**⇑*i* P		**Pn**	**01 00 22.2**	**-0.3**
GO02				*i* S	**Sn**	**01 00 58.3**	**-1.9**
GO02				IAML		01 01 03.0	
	comp=N,4μm,0.5s						
SLA	**San Lorenzo**	**3.66**	**134**	*i* P	**Pn**	**01 00 31.0**	**+2.2**
AZAP	**Zapla**	**3.67**	**124**	*i* P	**Pn**	**01 00 30.0**	**+1.0**
AZAP				IAML		01 01 15.8	
	comp=Z,174nm,0.8s						
PB16	**IPOC Station P**	**3.97**	**344**		**Pn**	**01 00 33.5**	**+0.1**
PB16	**IPOC Station P**	**3.97**	**344**	*i* P	**Pn**	**01 00 33.4**	**+0.1**
PB16	**IPOC Station P**	**3.97**	**344**	*i* P	**Pn**	**01 00 33.0**	**-0.4**
PB12	**IPOC Station P**	**3.99**	**332**	Pn	**Pn**	**01 00 31.0**	**-2.3**
PB12	**IPOC Station P**	**3.99**	**332**	*i* P	**Pn**	**01 00 30.9**	**-2.3**
PB12	**IPOC Station P**	**3.99**	**332**	*i* P	**Pn**	**01 00 31.0**	**-2.3**
PB12				IAML		01 01 39.6	
	comp=Z,395nm,0.4s						
ASTB	**Santa Barbara**	**4.02**	**117**	*i* P	**Pn**	**01 00 34.0**	**+0.3**
AP01	**Chacalluta**	**4.21**	**334**		**Pn**	**01 00 35.0**	**-1.1**
AP01	**Chacalluta**	**4.21**	**334**	*i* P	**Pn**	**01 00 36.0**	**-0.1**
ALOL	**LOMAS DE OLMED**	**4.37**	**113**	*i* P	**Pn**	**01 00 38.0**	**-0.2**
AC01	**Pan de Azucar**	**4.44**	**207**	Pn	**Pn**	**01 00 37.2**	**-1.9**
AC01	**Pan de Azucar**	**4.44**	**207**	*i* P	**Pn**	**01 00 37.2**	**-1.9**
AC01	**Pan de Azucar**	**4.44**	**207**	*i* P	**Pn**	**01 00 37.0**	**-2.0**
AC01				IAML		01 01 27.6	
	comp=Z,760nm,0.7s						
AC02	**Maricunga**	**4.68**	**188**	Pn	**Pn**	**01 00 42.5**	**-0.3**
AC02	**Maricunga**	**4.68**	**188**	*i* P	**Pn**	**01 00 42.0**	**-0.8**
AC02				IAML		01 02 09.4	
	comp=Z,520nm,0.5s						
AC06	**Mina Casimiro**	**5.46**	**199**	Pn	**Pn**	**01 00 50.1**	**-2.6**
GO03	**Copiap**	**5.64**	**197**		**Pn**	**01 00 52.8**	**-2.5**
LPAZ	**La Paz**	**5.87**	**2**	P	**Pn**	**01 00 58.6**	**-0.3**
	comp=Z,71nm,0.4s,baz=197,slow=3.6,SNR=291						
LPAZ				LR	LR	01 03 36.6	
	comp=Z,74nm,20.9s,baz=149,slow=42						
LPAZ	**La Paz**	**5.87**	**2**	Pn	**Pn**	**01 00 59.6**	**+0.7**
AC04	**Llanos de Chal**	**6.47**	**202**	Pn	**Pn**	**01 01 02.2**	**-4.2**
LCO	**Las Campanas**	**7.11**	**197**		**Pn**	**01 01 11.3**	**-4.0**
CO01	**Juntas del Tor**	**7.91**	**191**	Pn	**Pn**	**01 01 23.7**	**-2.4**
CO03	**El Pedregal**	**8.87**	**193**	Pn	**Pn**	**01 01 34.3**	**-4.4**
SIV	**San Ignacio**	**9.26**	**50**	P	**Pn**	**01 01 41.0**	**-3.1**
	comp=Z,37nm,0.4s,baz=239,slow=10,SNR=225						
SIV				S	**Sn**	**01 03 20.1**	**-6.4**
	comp=Z,13nm,0.5s,baz=168,slow=21,SNR=6.5						
SIV				LR	LR	01 06 10.5	
	comp=Z,57nm,21.9s,baz=241,slow=44						
ZON	**Zonda**	**9.33**	**182**		**Pn**	**01 01 43.4**	**-1.6**
VA03	**San Esteban**	**10.71**	**190**		**Pn**	**01 02 00.3**	**-3.3**
CPUP	**Villa Florida**	**10.90**	**114**	P	**Pn**	**01 02 03.5**	**-2.6**
	comp=Z,2.7nm,0.8s,baz=273,slow=15,SNR=2.9						
CPUP				LR	LR	01 06 44.8	
	comp=Z,52nm,19.4s,baz=324,slow=40						
CPUP	**Villa Florida**	**10.90**	**114**	Pn	**Pn**	**01 02 03.7**	**-2.3**
ROC1	**El Roble**	**11.00**	**192**	Pn	**Pn**	**01 02 04.3**	**-3.3**
MT09	**Talagante**	**11.78**	**191**	Pn	**Pn**	**01 02 14.2**	**-3.6**
AQDB	**Aquidauana**	**11.94**	**84**	Pn	**Pn**	**01 02 19.7**	**-0.2**
BO01	**Tunca**	**12.39**	**190**	Pn	**Pn**	**01 02 24.8**	**-1.0**
BO02	**Sierra Bellavi**	**12.74**	**189**	Pn	**Pn**	**01 02 28.6**	**-1.6**
NNA	**Nana**	**12.96**	**320**	P	**Pn**	**01 02 35.0**	**+1.7**
	comp=Z,4.4nm,0.4s,baz=120,slow=16,SNR=1.9						
ML02	**Panimavida**	**13.79**	**190**	Pn	**Pn**	**01 02 42.9**	**-0.8**
H03N1	**Juan Fernandez**	**14.57**	**217**	T	T	01 17 43.9	
	baz=37,slow=72,SNR=4.5						
TRCB	**Terra Rica**	**14.57**	**95**	P	**Pn**	**01 02 54.5**	**+0.7**
H03N2	**Juan Fernandez**	**14.58**	**217**	T	T	01 17 43.4	
	baz=37,slow=72,SNR=5.7						
H03N3	**Juan Fernandez**	**14.59**	**217**	T	T	01 17 42.3	
	baz=37,slow=72,SNR=3.9						
VA04	**Juan Fernndez**	**14.67**	**217**	Pn	**Pn**	**01 02 54.5**	**-0.5**
ITAB	**Concordia**	**15.60**	**112**		**P**	**01 03 07.8**	**-0.4**
ITAB				IAmb	IAmb	01 03 10.1	
	comp=Z,61nm,1.4s						
PLTB	**Pedras Altas**	**16.25**	**129**		**Pn**	**01 03 14.4**	**-0.3**
GO06	**Curarrehue**	**17.55**	**188**	P	**P**	**01 03 29.9**	**+0.2**
ATAH	**Atahualpa**	**17.81**	**326**	P	**Pn**	**01 03 35.0**	**+0.9**
	comp=Z,7.2nm,0.9s,baz=121,slow=12,SNR=4.0						
LR04	**Corral**	**18.16**	**193**	P	**P**	**01 03 36.2**	**0.0**
LR04				IAmb	IAmb	01 04 03.8	
	comp=Z,48nm,1.1s						
PLCA	**Paso Flores**	**18.59**	**185**	P	**P**	**01 03 41.6**	**+0.6**
	comp=Z,3.9nm,0.6s,baz=358,slow=11,SNR=16						
PLCA	**Paso Flores**	**18.59**	**185**	P	**P**	**01 03 41.0**	**0.0**
LL04	**Puerto Octay**	**18.98**	**189**	P	**P**	**01 03 44.9**	**-0.3**
LL04				IAmb	IAmb	01 03 47.7	
	comp=Z,14nm,0.6s						
LL03	**Petrohue**	**19.20**	**189**	P	**P**	**01 03 47.4**	**-0.2**
LL03				IAmb	IAmb	01 04 04.5	
	comp=Z,38nm,0.9s						
BDFB	**Brasilia**	**20.33**	**75**	P	**P**	**01 03 58.9**	**-1.2**
	comp=Z,14nm,0.4s,baz=267,slow=12,SNR=36						
	comp=Z,14nm,0.4s						
BDFB	**Brasilia**	**20.33**	**75**	P	**P**	**01 03 59.0**	**-1.1**
BDFB				IAmb	IAmb	01 04 03.1	
	comp=Z,18nm,0.8s						
LL02	**Futaleuf**	**21.15**	**187**	P	**P**	**01 04 08.5**	**-0.1**
BOSC	**San Juan Bosco**	**21.31**	**331**	P	**P**	**01 04 11.3**	**+0.5**
BOSC				IAmb	IAmb	01 04 23.2	
	comp=Z,33nm,0.5s						
GO07	**Milladeo Hill,**	**21.33**	**191**	P	**P**	**01 04 10.2**	**-0.3**
GO07				IAmb	IAmb	01 04 11.2	
	comp=Z,49nm,0.5s						
AY01	**Puyuhuapi**	**22.46**	**188**	P	**P**	**01 04 21.1**	**-1.1**
COYC	**Coyhaique**	**23.53**	**187**	P	**P**	**01 04 31.8**	**-0.5**
CBOC	**Ciudad Bolivar**	**28.86**	**344**	*e*P	**P**	**01 05 24.2**	**+3.5**
GO09	**Cerro Castillo**	**29.20**	**185**	P	**P**	**01 05 24.4**	**+1.2**
GO09				IAmb	IAmb	01 05 54.2	
	comp=Z,30nm,1.3s						
MG05	**Puerto Natales**	**29.62**	**185**	P	**P**	**01 05 27.4**	**+0.6**
MG05				IAmb	IAmb	01 05 28.7	
	comp=Z,21nm,0.9s						
MG02	**Cerro Sombrero**	**30.55**	**181**	P	**P**	**01 05 34.8**	**-0.2**
BAUV	**El Baul**	**30.93**	**1**	P	**P**	**01 05 37.4**	**-1.3**
MDP	**Montagnes des**	**31.19**	**31**	P	**P**	**01 05 40.4**	**-0.6**
	comp=Z,9.2nm,0.6s,baz=211,slow=11,SNR=7.6						
	comp=Z,9.2nm,0.6s						
TOSP	**Speyside**	**34.15**	**14**	P	**P**	**01 06 06.9**	**+0.1**
TOSP				IAmb	IAmb	01 06 10.6	
	comp=Z,26nm,0.8s						
GRGR	**Grenville**	**34.73**	**12**	P	**P**	**01 06 12.9**	**+1.1**
RCBR	**Riachuelo**	**35.34**	**67**	P	**P**	**01 06 16.4**	**-0.8**
	comp=Z,28nm,0.7s,baz=42,slow=9.4,SNR=13						
	comp=Z,28nm,0.7s						
RCBR	**Riachuelo**	**35.34**	**67**	P	**P**	**01 06 16.8**	**-0.4**
MCLT	**Moule a Chique**	**36.41**	**12**	P	**P**	**01 06 26.4**	**+0.3**
FDF	**Fort de France**	**37.37**	**12**	P	**P**	**01 06 34.3**	**0.0**
SVN	**Savane Anatole**	**37.47**	**12**	P	**P**	**01 06 35.6**	**+0.5**
SJG	**San Juan**	**40.11**	**3**	P	**P**	**01 06 55.3**	**-1.7**
	comp=Z,7.1nm,0.5s,baz=160,slow=5.8,SNR=4.4						
	comp=Z,7.1nm,0.5s						
BELA	**Belgrano 2**	**58.01**	**172**	P	**P**	**01 09 13.9**	**+1.2**
VNA3	**Neumayer Olymp**	**59.28**	**161**	P	**P**	**01 09 22.7**	**+1.1**
VNA3	**Neumayer Olymp**	**59.28**	**161**	pP	pP	01 09 53.4	+0.9
VNA1	**Neumayer--Stat**	**59.48**	**160**	P	**P**	**01 09 21.5**	**-1.5**
SNAA	**Sanae**	**61.48**	**161**	P	**P**	**01 09 37.6**	**+0.9**
SNAA	**Sanae**	**61.48**	**161**	pP	pP	01 10 08.7	+1.1
SNAA	**Sanae**	**61.48**	**161**	P	**P**	**01 09 37.5**	**+0.9**
	comp=Z,4.4nm,0.6s,baz=268,slow=7.9,SNR=15						
	comp=Z,4.4nm,0.6s						
SNAA	**Sanae**	**61.48**	**161**	P	**P**	**01 09 37.6**	**+0.9**
SNAA				IAmb	IAmb	01 09 38.7	
	comp=Z,5.1nm,0.8s						
TROLL	**Troll, Antarti**	**63.19**	**161**	P	**P**	**01 09 49.6**	**+1.4**
TROLL	**Troll, Antarti**	**63.19**	**161**	pP	pP	01 10 20.7	+1.2
QSPA	**South Pole Qui**	**68.01**	**180**	P	**P**	**01 10 20.7**	**+1.5**
QSPA				IAmb	IAmb	01 10 21.7	
	comp=Z,5.5nm,0.6s						
TRQ	**Mont Tremblant**	**68.31**	**355**	P	**P**	**01 10 21.9**	**+0.8**
TRQ				IAmb	IAmb	01 10 22.5	
	comp=Z,8.0nm,0.8s						
SCHQ	**Schefferville**	**76.71**	**1**	P	**P**	**01 11 10.9**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=229,slow=5.3,SNR=3.8						
	comp=Z,5.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.13**	**70**	P	**P**	**01 11 13.3**	**-0.5**
	comp=Z,7.7nm,0.5s,baz=256,slow=5.8,SNR=5.3						
	comp=Z,7.7nm,0.5s						
TSUM	**Tsumeb**	**79.38**	**106**	P	**P**	**01 11 26.7**	**+0.3**
	comp=Z,7.8nm,0.8s,baz=267,slow=3.9,SNR=4.1						
	comp=Z,7.8nm,0.8s						
MAW	**Mawson**	**83.54**	**163**	P	**P**	**01 11 49.1**	**+1.9**
	comp=Z,1.6nm,0.6s,baz=209,slow=6.2,SNR=13						
	comp=Z,1.6nm,0.6s						
**YKA

MW5.6/164, Moment Tensor Solution. s138,c269; s164,c355; Duration: 1ˢ6 Moment tensor: Scale 10¹⁷ Nm; M_{rr}-0.20±.03; $M_{\theta\theta}$1.26±.03; $M_{\phi\phi}$-1.05±.03; $M_{r\theta}$0.48±.08; $M_{r\phi}$-2.87±.03; $M_{\theta\phi}$0.91±.09; Best double couple: $M_0$3.26400×10¹⁷ NP1:ϕ_s168.00000°,δ79.00000°, λ-15.00000°. NP2:ϕ_s261.00000°,δ76.00000°, λ-168.00000°. Principal axes: T 3.2030, Plg2.0000°, Azm214.0000°; N 0.1280, Plg72.0000°, Azm310.0000°; P -3.3250, Plg18.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 01:03:11.8±0.3, 1°67S±0°05×15°58W±0°06, h12ᵏᵐ, n468, σ2ˢ02/379, mb5.1/125, MS5.0/170, 23C-29D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.21**	**170**	T	T	01 11 23.8	
baz=352,slow=73,SNR=235							
H10N3	**ASCENSION HYDR**	**6.22**	**170**	T	T	01 11 28.7	
baz=352,slow=73,SNR=300							
H10N1	**ASCENSION HYDR**	**6.23**	**170**	T	T	01 11 30.2	
baz=352,slow=73,SNR=284							
ASCN	**Ascension**	**6.34**	**169**		**Pn**	**01 04 45.9**	**+0.8**
H10S3	**ASCENSION HYDR**	**7.29**	**173**	T	T	01 12 59.2	
baz=226,slow=74,SNR=346							
H10S2	**ASCENSION HYDR**	**7.30**	**173**	T	T	01 12 52.6	
baz=354,slow=74,SNR=259							
LIC	**Lamto**	**13.14**	**53⇑**	*e*P	**Pn**	**01 06 14.0**	**-4.4**
72nm,0.4s							
TIC	**Toumodi**	**13.39**	**52⇑**	*i*P	**Pn**	**01 06 17.1**	**-4.8**
36nm,0.3s							
KIC	**Kosan Boka**	**13.45**	**54⇑**	*e*P	Pn	01 06 17.5	-5.1
44nm,0.4s							
DBIC	**Dimbokro**	**13.54**	**52**	Pn	**Pn**	**01 06 19.2**	**-4.6**
12nm,0.3s,baz=213,slow=11,SNR=89							
DBIC				Sn	Sn	01 08 39.1	-15
5.0nm,0.3s,baz=137,slow=17,SNR=2.1							
DBIC				LR	LR	01 10 28.8	
comp=Z,11μm,19.4s,baz=203,slow=33							
48nm,0.3s							
DBIC	**Dimbokro**	**13.54**	**52**	Pn	Pn	01 06 18.5	-5.3
MBO	**M'Bour**	**16.02**	**355**	Pn	**Pn**	**01 06 51.9**	**-5.2**
MBO				IAmb	IAmb	01 07 02.1	
comp=Z,367nm,1.7s							
BBTS	**Babate**	**16.26**	**357**	Pn	**Pn**	**01 06 55.0**	**-5.2**
comp=Z,4.3nm,0.3s,baz=328,slow=15,SNR=6.8							
BBTS				Sn	Sn	01 09 46.2	-14
comp=Z,4.1nm,0.3s,baz=333,slow=23,SNR=12							
BBTS				LR	LR	01 12 35.7	
comp=Z,13μm,19.4s,baz=202,slow=35							
SHEL	**Horse Pasture**	**17.19**	**146**		**P**	**01 07 15.9**	**+2.3**
SHEL	**Horse Pasture**	**17.19**	**146**	P	**P**	**01 07 15.9**	**+2.3**
SHEL				pmax	pmax		
comp=Z,70nm,1.1s							
RCBR	**Riachuelo**	**20.69**	**258**	P	**P**	**01 07 52.2**	**+0.2**
comp=Z,16nm,0.7s,baz=216,slow=10,SNR=5.9							
RCBR				LR	LR	01 14 48.1	
comp=Z,1μm,18.1s,baz=227,slow=34							
comp=Z,16nm,0.7s							
RCBR	**Riachuelo**	**20.69**	**258**	P	**P**	**01 07 52.8**	**+0.8**
RCBR	**Riachuelo**	**20.69**	**258**	P	**P**	**01 07 52.8**	**+0.8**
RCBR				pmax	pmax		
comp=Z,73nm,1.6s							
RCBR				MLR	MLR		
comp=Z,1μm,20.0s							
TOA0	**Torodi Ar. Sit**	**22.60**	**49**	P	**P**	**01 08 08.5**	**-4.0**
TORD	**Torodi Ar. Bea**	**22.60**	**49**	P	**P**	**01 08 09.4**	**-3.1**
comp=Z,61nm,0.9s,baz=219,slow=6.3,SNR=59							
TORD				LR	LR	01 15 53.0	
comp=Z,9μm,19.1s,baz=226,slow=34							
comp=Z,61nm,0.9s							
TORD	**Torodi Ar. Bea**	**22.60**	**49**	P	**P**	**01 08 11.3**	**-1.2**
TORD				IAmb	IAmb	01 08 23.0	
comp=Z,142nm,1.1s							
EKNA	**AfricaArray -**	**25.57**	**77**	*e*P	**P**	**01 08 42.7**	**+1.6**
TAM	**Tamanrasset**	**31.85**	**39**	P	**P**	**01 09 36.2**	**-0.9**
TAM				IAMs_20	IAMs_20	01 21 11.3	
comp=Z,4μm,19.0s							
TAM	**Tamanrasset**	**31.85**	**39**	P	**P**	**01 09 36.2**	**-0.9**
TAM				pmax	pmax		
comp=Z,14nm,1.1s							
TAM				MLR	MLR		
comp=Z,4μm,19.0s							
PMOZ	**Porto Moniz, M**	**34.34**	**358**	*e*LR	LR	01 20 34.7	
comp=Z,1μm,16.0s							
BDFB	**Brasilia**	**34.85**	**245**	P	**P**	**01 10 03.0**	**-0.3**
comp=Z,13nm,1.0s,baz=52,slow=7.0,SNR=6.8							
BDFB				LR	LR	01 24 05.4	
comp=Z,671nm,18.2s,baz=74,slow=36							
comp=Z,13nm,1.0s							
BDFB	**Brasilia**	**34.85**	**245**	P	**P**	**01 10 03.8**	**+0.5**
BDFB	**Brasilia**	**34.85**	**245**	P	**P**	**01 10 03.8**	**+0.5**
BDFB				pmax	pmax		
comp=Z,19nm,1.0s							
MDT	**Midelt**	**35.84**	**16**	P	**P**	**01 10 10.6**	**-1.0**
comp=Z,3.1nm,0.8s,baz=288,slow=7.2,SNR=6.2							
MDT				LR	LR	01 24 31.6	
comp=Z,3μm,19.1s,baz=206,slow=36							
comp=Z,3.1nm,0.8s							
TSUM	**Tsumeb**	**36.85**	**120**	P	**P**	**01 10 19.7**	**-0.7**
comp=Z,14nm,0.9s,baz=298,slow=9.0,SNR=13							
TSUM				LR	LR	01 22 23.7	
comp=Z,2μm,21.9s,baz=323,slow=31							
comp=Z,14nm,0.9s							
TSUM	**Tsumeb**	**36.85**	**120**	P	**P**	**01 10 21.2**	**+0.8**
TSUM				IAmb	IAmb	01 10 22.9	
comp=Z,32nm,1.2s							
TSUM	**Tsumeb**	**36.85**	**120**	IAMs_20	IAMs_20	01 22 01.5	
comp=Z,2μm,22.0s							
TSUM	**Tsumeb**	**36.85**	**120**	*e*P	**P**	**01 10 19.8**	**-0.7**
TSUM				IAmb	IAmb	01 10 22.6	
comp=Z,33nm,1.2s							
MDP	**Montagnes des**	**37.63**	**281**	LR	LR	01 23 14.6	
comp=Z,800nm,19.9s,baz=95,slow=32							
PFVI	**Vila Bisbo**	**39.12**	**9**	*e*S	**S**	**01 16 42.5**	**+3.8**
MORF	**Marmelete**	**39.31**	**9**	*e*PP	PP	01 12 09.6	-1.6
MORF				*e*S	**S**	**01 16 40.6**	**-1.1**
MORF				IAMs_20	IAMs_20	01 25 49.5	
comp=Z,3μm,15.8s							
MORF	**Marmelete**	**39.31**	**9**	*e*S	S	01 16 24.8	-17
PSMN	**Pico do Norte,**	**39.48**	**348**	*e*LQ	LQ	01 19 31.1	
PTEO	**Sao Teotonio**	**39.54**	**9**	*e*P	**P**	**01 10 42.7**	**+0.1**
comp=Z,50nm,1.6s							
PCVE	**Castro Verde**	**39.73**	**9**	*e*P	**P**	**01 10 43.6**	**-0.6**
comp=Z,37nm,1.5s							
PCVE				*e*S	**S**	**01 16 51.1**	**+3.2**
PNCL	**Nicolau / Gran**	**40.12**	**9**	*e*P	**P**	**01 10 46.5**	**-1.0**
comp=Z,29nm,1.7s							
PNCL				*e*S	**S**	**01 16 59.6**	**+5.9**
BART	**Pico Bartolome**	**40.24**	**348**	*e*LQ	LQ	01 19 56.9	
CMLA	**Cha da Macela**	**40.30**	**348**	*e*LQ	LQ	01 19 45.3	
PBAR	**Barrancos**	**40.43**	**10**	*e*S	**S**	**01 17 01.6**	**+3.3**
EVO	**Evora**	**40.61**	**9**	*e*P	**P**	**01 10 50.8**	**-0.8**
comp=Z,37nm,1.7s							
LIS	**Lisbon**	**40.63**	**8**	*e*PP	PP	01 12 23.8	-1.6
LIS				*e*S	**S**	**01 17 00.2**	**-1.0**
LIS				IAMs_20	IAMs_20	01 30 18.7	
comp=Z,3μm,21.8s							
PMAFR	**Mafra**	**40.84**	**8**	*e*S	**S**	**01 17 10.9**	**+6.4**
PESTR	**Estremoz**	**41.01**	**10**	*e*S	**S**	**01 17 12.2**	**+5.2**
PMTG	**Montargil**	**41.10**	**9**	*e*P	**P**	**01 10 54.6**	**-1.0**
comp=Z,33nm,1.6s							
PMTG				*e*S	**S**	**01 17 14.6**	**+6.2**
CART	**Cartagena**	**41.33**	**18**	IAMs_20	IAMs_20	01 26 45.3	
comp=Z,2μm,18.0s							
PSBE	**So Bento**	**41.46**	**8**	*e*S	**S**	**01 17 17.9**	**+4.2**
PMRV	**Marv??o**	**41.59**	**10**	*e*S	S	01 17 23.0	+7.4
PMRV				*e*LR	LR	01 23 36.5	
comp=Z,2μm,20.0s							
ROSA	**Rosais**	**41.85**	**345**	*e*LQ	LQ	01 20 19.5	
PCAS	**Casmilo, Conde**	**42.03**	**8**	*e*P	**P**	**01 11 00.6**	**-2.6**
comp=Z,52nm,1.5s							
PCAS				*e*S	**S**	**01 17 27.3**	**+5.2**
ESDC	**Sonseca Array**	**42.51**	**13**	PP	**PP**	**01 12 49.0**	**+3.2**
comp=Z,5.4nm,1.1s,baz=203,slow=8.6,SNR=6.3							
ESDC				LR	LR	01 29 11.8	
comp=Z,3μm,19.2s,baz=193,slow=37							
MTE	**Manteigas**	**42.51**	**9**	*e*P	**P**	**01 11 06.3**	**-0.9**
comp=Z,30nm,0.7s							
MTE				*e*S	**S**	**01 17 36.6**	**+7.3**
MTE				*e*LR	LR	01 23 43.1	
comp=Z,2μm,16.0s							
MTE	**Manteigas**	**42.51**	**9**	P	**P**	**01 11 05.9**	**-1.3**
MVO	**Moncorvo**	**43.34**	**9**	*e*P	**P**	**01 11 13.3**	**-0.6**
comp=Z,43nm,1.8s							
MVO				*e*S	**S**	**01 17 43.9**	**+2.4**
MVO				*e*LR	LR	01 23 50.7	
comp=Z,2μm,18.0s							
POLO	**Lamas de Olo**	**43.43**	**9**	*e*P	**P**	**01 11 14.9**	**+0.3**
comp=Z,12nm,2.3s							
POLO				*e*S	**S**	**01 17 47.4**	**+4.6**
KEST	**Kesra**	**43.89**	**30**	P	**P**	**01 11 17.0**	**-1.5**
comp=Z,6.1nm,0.8s,baz=150,slow=7.1,SNR=7.5							
KEST				LR	LR	01 31 53.2	
comp=Z,3μm,18.2s,baz=174,slow=39							
comp=Z,6.1nm,0.8s							
KEST	**Kesra**	**43.89**	**30**	P	**P**	**01 11 17.9**	**-0.6**
KEST				IAmb	IAmb	01 11 23.7	
comp=Z,48nm,1.4s							
PGAV	**Gavieira, Arco**	**43.94**	**8**	*e*S	**S**	**01 17 55.2**	**+4.9**
PGAV				*e*LR	LR	01 24 02.1	
comp=Z,2μm,18.0s							
KEIM	**Keimoes**	**44.01**	**131**	*e*P	**P**	**01 11 20.3**	**+0.8**
KEIM				IAmb	IAmb	01 11 33.5	
comp=Z,106nm,1.6s							
PBRG	**Braganca**	**44.01**	**10**	*e*P	**P**	**01 11 19.4**	**+0.1**
comp=Z,21nm,2.0s							
PBRG				*e*S	**S**	**01 17 57.6**	**+6.3**
MAHO	**Mahon**	**45.19**	**22**	IAMs_20	IAMs_20	01 29 16.4	
comp=Z,2μm,20.0s							
LSZ	**Lusaka**	**45.23**	**110**	P	**P**	**01 11 28.0**	**-1.6**
comp=Z,13nm,0.8s,baz=292,slow=6.1,SNR=28							
LSZ				LR	LR	01 27 19.9	
comp=Z,2μm,21.5s,baz=294,slow=32							
comp=Z,13nm,0.8s							
LSZ	**Lusaka**	**45.23**	**110**	IAMs_20	IAMs_20	01 26 45.8	
comp=Z,2μm,22.0s							
LSZ	**Lusaka**	**45.23**	**110**	P	**P**	**01 11 28.0**	**-1.6**
SUR	**Sutherland**	**45.87**	**136**	LR	LR	01 27 37.8	
comp=Z,2μm,19.8s,baz=298,slow=32							
SUR	**Sutherland**	**45.87**	**136**	IAMs_20	IAMs_20	01 27 11.0	
comp=Z,2μm,21.0s							
LBTB	**Lobatse**	**45.99**	**124**	LR	LR	01 27 58.4	
comp=Z,1μm,21.7s,baz=282,slow=32							
MBAR	**Mbarara**	**46.32**	**89**	LR	LR	01 28 45.6	
comp=Z,2μm,19.7s,baz=251,slow=33							
MBAR	**Mbarara**	**46.32**	**89**	P	**P**	**01 11 38.6**	**+0.3**
MBAR				IAmb	IAmb	01 11 50.7	
comp=Z,40nm,1.2s							
MBAR	**Mbarara**	**46.32**	**89**	IAMs_20	IAMs_20	01 28 24.5	
comp=Z,2μm,18.0s							
MBAR	**Mbarara**	**46.32**	**89**	P	**P**	**01 11 38.6**	**+0.3**
MBAR				pmax	pmax		
comp=Z,40nm,1.2s							
SWZ	**Schweizer**	**46.68**	**127**	*e*P	**P**	**01 11 40.5**	**-0.4**
SWZ				IAmb	IAmb	01 11 54.3	
comp=Z,84nm,1.4s							
GRAN	**Grantham**	**46.79**	**135**	*e*P	**P**	**01 11 41.5**	**0.0**
GRAN				IAmb	IAmb	01 11 46.8	
comp=Z,62nm,1.9s							
MATP	**Matopo**	**46.88**	**117**	LR	LR	01 28 52.0	
comp=Z,2μm,21.2s,baz=246,slow=33							
MATP	**Matopo**	**46.88**	**117**	*i*P	**P**	**01 11 41.6**	**-0.9**
MATP	**Matopo**	**46.88**	**117**	*i*P	**P**	**01 11 41.6**	**-0.9**
CPUP	**Villa Florida**	**46.99**	**235**	P	**P**	**01 11 43.4**	**+0.2**
comp=Z,3.8nm,0.8s,baz=74,slow=12,SNR=5.8							
CPUP				LR	LR	01 29 01.0	
comp=Z,1μm,21.9s,baz=71,slow=33							
comp=Z,3.8nm,0.8s							
SIV	**San Ignacio**	**47.01**	**250**	P	**P**	**01 11 43.6**	**+0.1**
comp=Z,2.9nm,0.9s,baz=83,slow=7.5,SNR=7.2							
SIV				LR	LR	01 30 45.6	
comp=Z,2μm,19.0s,baz=30,slow=35							
comp=Z,2.9nm,0.9s							
BOSA	**Boshof**	**47.26**	**128**	P	**P**	**01 11 43.9**	**-1.4**
comp=Z,18nm,0.8s,baz=304,slow=6.6,SNR=30							
BOSA				LR	LR	01 29 19.4	
comp=Z,958nm,18.5s,baz=280,slow=33							
comp=Z,18nm,0.8s							
BOSA	**Boshof**	**47.26**	**128**	⇓*i*P	**P**	**01 11 45.4**	**0.0**
BOSA				IAmb	IAmb	01 11 59.2	
comp=Z,29nm,0.8s							
BOSA	**Boshof**	**47.26**	**128**	*i*P	**P**	**01 11 44.8**	**-0.6**
BOSA	**Boshof**	**47.26**	**128**	*i*P	**P**	**01 11 44.8**	**-0.6**
BOSA	**Boshof**	**47.26**	**128**	P	**P**	**01 11 44.5**	**-0.8**
CLTB	**Caltabellotta**	**47.29**	**31**	P	**P**	**01 11 43.2**	**-2.1**
LEPH	**Lephalale, Lim**	**47.40**	**121**	*e*P	**P**	**01 11 46.8**	**+0.3**
LEPH				IAmb	IAmb	01 12 00.1	
comp=Z,42nm,1.0s							
BFON	**Badsfontein, M**	**47.61**	**133**	*e*P	**P**	**01 11 48.3**	**+0.3**
VAE	**Valguarnera**	**47.84**	**32**	LR	LR	01 30 59.4	
comp=Z,1μm,18.5s,baz=184,slow=35							
PRYS	**Parys**	**48.21**	**125**	*e*P	**P**	**01 11 53.3**	**+0.5**
PRYS				IAmb	IAmb	01 11 55.0	
comp=Z,176nm,2.8s							
HVD	**Gariep Dam**	**48.37**	**131**	*e*P	**P**	**01 11 54.5**	**+0.6**
HVD				IAmb	IAmb	01 12 07.6	
comp=Z,37nm,1.1s							
GRAF	**Camdeboo Natio**	**48.44**	**133**	*e*P	**P**	**01 11 55.2**	**+0.8**
GRAF				IAmb	IAmb	01 12 10.3	
comp=Z,567nm,2.8s							
SLR	**Silverton**	**48.51**	**123**	*e*P	**P**	**01 11 55.0**	**-0.1**
SLR				IAmb	IAmb	01 12 08.7	
comp=Z,24nm,0.9s							
MUSN	**Musina, Limpop**	**48.66**	**118**	*e*P	**P**	**01 11 55.8**	**-0.4**
MUSN				IAmb	IAmb	01 11 57.5	
comp=Z,34nm,1.1s							
MUSN	**Musina, Limpop**	**48.66**	**118**	*i*P	**P**	**01 11 55.4**	**-0.8**
MUSN	**Musina, Limpop**	**48.66**	**118**	*i*P	**P**	**01 11 55.4**	**-0.8**
SNKL	**Senekal, Frees**	**49.10**	**127**	*e*P	**P**	**01 11 59.0**	**-0.7**
SNKL				IAmb	IAmb	01 12 12.9	
comp=Z,56nm,0.9s							
CEL	**Celeste**	**49.22**	**33**	IAMs_20	IAMs_20	01 33 14.6	
comp=Z,2μm,20.0s							
SSB	**Saint Sauveur**	**50.05**	**18**	P	**P**	**01 12 03.9**	**-2.5**
SSB	**Saint Sauveur**	**50.05**	**18**	IAMs_20	IAMs_20	01 32 17.0	
comp=Z,2μm,21.0s							
SSB	**Saint Sauveur**	**50.05**	**18**	P	**P**	**01 12 03.9**	**-2.5**
SSB				pmax	pmax		
comp=Z,21nm,1.3s							
CRLN	**Carolina, Mapu**	**50.06**	**123**	*e*P	**P**	**01 12 06.4**	**-0.6**
CRLN				IAmb	IAmb	01 12 20.2	
comp=Z,20nm,1.2s							
PCRV	**Puerto La Cruz**	**50.22**	**285**	LR	LR	01 31 59.9	
comp=Z,244nm,18.4s,slow=34							
TIP	**Timpagrande**	**50.34**	**33**	P	**P**	**01 12 07.3**	**-1.5**
TIP				IAMs_20	IAMs_20	01 34 37.5	
comp=Z,2μm,20.0s							
MOPA	**Mopani**	**50.40**	**119**	*i*P	**P**	**01 12 08.0**	**-1.4**
MOPA	**Mopani**	**50.40**	**119**	*i*P	**P**	**01 12 08.0**	**-1.4**
PAOL	**Paolisi**	**50.59**	**29**	P	**P**	**01 12 10.5**	**-0.1**
PAOL				IAmb	IAmb	01 12 32.5	
comp=Z,73nm,1.9s							
INTR	**Introdacqua**	**51.02**	**28**	P	**P**	**01 12 13.7**	**-0.2**
AQU	**L'Aquila**	**51.05**	**28**	P	**P**	**01 12 14.3**	**+0.3**
AQU	**L'Aquila**	**51.05**	**28**	P	**P**	**01 12 14.4**	**+0.3**
AQU				MLR	MLR		
comp=Z,4μm,19.0s							
LODK	**Lodwar**	**51.17**	**84**	P	**P**	**01 12 15.8**	**+0.4**
VLC	**Villacollemand**	**51.20**	**24**	IAMs_20	IAMs_20	01 34 33.5	
comp=Z,1μm,19.0s							
CLF	**Chambon-Foret**	**51.89**	**15**	P	**P**	**01 12 19.1**	**-0.9**
CLF				IAmb	IAmb	01 12 26.5	
comp=Z,24nm,1.0s							
CLF				IAMs_20	IAMs_20	01 35 59.5	
comp=Z,2μm,20.0s							
SENIN	**Lac Senin/Sane**	**51.92**	**20**	P	**P**	**01 12 18.8**	**-1.9**
SENIN				IAmb	IAmb	01 12 28.3	
comp=Z,58nm,1.9s							
POGA	**Pongola**	**51.95**	**124**	P	**P**	**01 12 21.1**	**0.0**
ITM	**Ithomi**	**51.99**	**38**	P	**P**	**01 12 20.1**	**-1.0**
ITM				IAmb	IAmb	01 12 25.9	
comp=Z,19nm,0.8s							
TUE	**Stuetta**	**52.73**	**21**	IAMs_20	IAMs_20	01 34 07.1	
comp=Z,1μm,20.0s							
IDI	**Anoyia**	**52.74**	**42**	⇑P	**P**	**01 12 29.9**	**+3.1**
IDI	**Anoyia**	**52.74**	**42**	LR	LR	01 34 17.1	
comp=Z,1μm,21.4s,baz=234,slow=36							
KMBO	**Kilima Mbogo**	**52.82**	**90**	LR	LR	01 32 56.5	
comp=Z,72nm,19.7s,baz=256,slow=34							
KMBO	**Kilima Mbogo**	**52.82**	**90**	P	**P**	**01 12 29.4**	**+1.4**
KMBO	**Kilima Mbogo**	**52.82**	**90**	P	**P**	**01 12 29.4**	**+1.4**
KMBO				pmax	pmax		
comp=Z,31nm,1.8s							
DAVOX	**Davos/Dischmat**	**53.19**	**22**	LR	LR	01 34 43.1	
comp=Z,2μm,19.3s,baz=226,slow=36							
FUORN	**Ofenpass-Fuorn**	**53.20**	**22**	P	**P**	**01 12 30.4**	**+0.2**
FUORN				IAMs_20	IAMs_20	01 34 26.5	
comp=Z,2μm,20.0s							
CTI	**Castel Tesino**	**53.26**	**23**	P	**P**	**01 12 30.8**	**+0.3**
CTI	**Castel Tesino**	**53.26**	**23**	P	**P**	**01 12 30.8**	**+0.3**
CTI				pmax	pmax		
comp=Z,109nm,2.0s							
BAUV	**El Baul**	**53.32**	**282**	P	**P**	**01 12 31.1**	**-0.3**
ECH	**Echery**	**53.49**	**19**	P	**P**	**01 12 30.3**	**-1.7**
ECH				IAMs_20	IAMs_20	01 34 54.0	
comp=Z,1μm,18.0s							
ECH	**Echery**	**53.49**	**19**	P	**P**	**01 12 30.3**	**-1.7**
ECH				pmax	pmax		
comp=Z,22nm,1.4s							
ECH				MLR	MLR		
comp=Z,1μm,18.0s							
SJG	**San Juan**	**53.50**	**294**	LR	LR	01 30 01.9	
comp=Z,593nm,21.1s,baz=100,slow=30							
KIBK	**Kibwezi**	**53.60**	**92**	IAMs_20	IAMs_20	01 32 12.5	
comp=Z,2μm,22.0s							
DAVA	**Damuels**	**53.62**	**21**	*i*P	**P**	**01 12 31.7**	**-1.5**
comp=Z,51nm,1.2s,SNR=12							
FETA	**Feichten**	**53.71**	**22**	*e*P	**P**	**01 12 32.7**	**-1.2**
comp=Z,16nm,1.0s							
LPAZ	**La Paz**	**53.71**	**251**	P	**P**	**01 12 33.6**	**-1.3**
comp=Z,1.9nm,0.8s,baz=89,slow=6.5,SNR=6.9							
LPAZ				LR	LR	01 34 38.4	
comp=Z,2μm,20.2s,baz=88,slow=35							
comp=Z,1.9nm,0.8s							
LPAZ	**La Paz**	**53.71**	**251**	P	**P**	**01 12 34.7**	**-0.2**
LPAZ	**La Paz**	**53.71**	**251**	*e*P	P	01 12 30.4	-4.6
LPAZ	**La Paz**	**53.71**	**251**	P	**P**	**01 12 34.7**	**-0.2**
LPAZ				pmax	pmax		
comp=Z,13nm,1.4s							
BFO	**Black Forest**	**53.97**	**20**	P	**P**	**01 12 34.4**	**-1.2**
BFO				IAmb	IAmb	01 12 48.3	
comp=Z,19nm,1.0s							
BFO				IAMs_20	IAMs_20	01 34 44.8	
comp=Z,1μm,20.0s							
BFO	**Black Forest**	**53.97**	**20**	P	**P**	**01 12 34.4**	**-1.2**
BFO				pmax	pmax		
comp=Z,19nm,1.0s							
PDG	**Podgorica**	**53.99**	**32**	IAMs_20	IAMs_20	01 37 09.0	
comp=Z,2μm,20.0s							
SQTA	**Sankt Quirin**	**54.06**	**22**	*i*P	**P**	**01 12 34.1**	**-2.2**
comp=Z,30nm,1.0s,SNR=11							
CLUD	**Cludinico**	**54.09**	**24**	P	**P**	**01 12 36.8**	**+0.3**
CLUD				IAmb	IAmb	01 12 55.0	
comp=Z,24nm,1.0s							
RETA	**Reutte**	**54.11**	**22**	*e*P	**P**	**01 12 35.3**	**-1.4**
comp=Z,20nm,1.2s							
MOTA	**Moosalm**	**54.12**	**22**	*e*P	**P**	**01 12 35.5**	**-1.4**
comp=Z,23nm,1.2s							
WTTA	**Wattenberg**	**54.26**	**23**	*i*P	**P**	**01 12 36.3**	**-1.5**
comp=Z,38nm,1.7s,SNR=9.4							
PRED	**Cave del Predi**	**54.36**	**24**	P	**P**	**01 12 38.7**	**+0.3**
DOU	**Dourbes**	**54.40**	**16**	*d*P	**P**	**01 12 37.1**	**-1.5**
comp=Z,8.8nm,1.0s							
KARP	**Karpathos**	**54.42**	**43**	IAMs_20	IAMs_20	01 35 17.1	
comp=Z,2μm,21.0s							
WLF	**Walferdange**	**54.46**	**17**	IAMs_20	IAMs_20	01 36 50.6	
comp=Z,2μm,19.0s							
RCHB	**Rochefort**	**54.63**	**16**	*d*P	**P**	**01 12 38.8**	**-1.4**
BMRD	**Maredsous**	**54.64**	**16**	*d*P	**P**	**01 12 42.5**	**+2.2**
STU	**Stuttgart**	**54.64**	**20**	IAMs_20	IAMs_20	01 37 39.6	
comp=Z,2μm,18.0s							
BGES	**Gesves**	**54.80**	**16**	*d*P	**P**	**01 12 40.0**	**-1.6**
comp=Z,7.5nm,0.8s							
BCLA	**Clavier**	**54.89**	**16**	*d*P	**P**	**01 12 38.7**	**-3.4**
BHOU	**Houvegnez**	**55.03**	**17**	*d*P	**P**	**01 12 45.9**	**+2.7**
FURI	**Furi**	**55.08**	**78**	IAMs_20	IAMs_20	01 33 38.3	
comp=Z,1μm,20.0s							
DIVS	**Divibare**	**55.55**	**31**	P	**P**	**01 12 46.1**	**-1.1**
LVC	**Limon Verde**	**55.76**	**244**	LR	LR	01 38 06.6	
comp=Z,256nm,18.1s,baz=80,slow=38							
BEHE	**Becsehely**	**55.76**	**27**	P	**P**	**01 12 46.4**	**-2.2**
SDV	**Santo Domingo**	**55.85**	**282**	LR	LR	01 35 35.1	
comp=Z,326nm,19.7s,baz=99,slow=35							
KOVH	**Kovagotottos**	**56.08**	**28**	P	**P**	**01 12 48.5**	**-2.3**
VTS	**Vitosha**	**56.27**	**34**	⇑P	**P**	**01 12 51.1**	**-1.3**
VTS	**Vitosha**	**56.27**	**34**	P	**P**	**01 12 50.8**	**-1.6**
VTS				IAmb	IAmb	01 13 13.1	
comp=Z,30nm,1.3s							
VTS	**Vitosha**	**56.27**	**34**	P	**P**	**01 12 50.8**	**-1.6**
VTS				pmax	pmax		
comp=Z,30nm,1.3s							
GEC2	**GERESS Array S**	**56.35**	**23**	P	**P**	**01 12 51.3**	**-1.5**
GEC2				IAmb	IAmb	01 13 13.7	
comp=Z,45nm,1.5s							
GERES	**GERESS Array B**	**56.35**	**23**	P	**P**	**01 12 50.2**	**-2.6**
comp=Z,2.4nm,0.8s,baz=197,slow=4.2,SNR=15							
GERES				LR	LR	01 36 56.6	
comp=Z,722nm,19.5s,baz=240,slow=36							
comp=Z,2.4nm,0.8s							
GERES	**GERESS Array B**

VRAC Vranov 57.87 24 ⇑P **P 01 13 01.2 -2.3**
VRAC Vranov 57.87 24 LR LR 01 38 14.1
comp=Z,734nm,21.1s,baz=224,slow=36
VRAC Vranov 57.87 24 ⇑P **P 01 13 01.2 -2.3**
VRAC Vranov 57.87 24 *e*P **P 01 13 00.8 -2.7**
GZR Gura Zlata 57.88 31 ⇓P **P 01 13 04.0 +0.3**
GZR Gura Zlata 57.88 31 ⇓P **P 01 13 04.0 +0.3**
SIRR Siria 57.92 30 ⇑P **P 01 13 03.1 -0.7**
ISP Isparta 57.92 42 IAMs_20 IAMs_20 01 42 39.7
comp=Z,1μm,18.0s
JAVC Velka Javorina 57.98 25 *e*P **P 01 13 05.5 +1.2**
PVCC Panska Ves 58.04 22 *e*P **P 01 13 03.8 -0.8**
PVCC MLR MLR
comp=Z,1μm,19.7s
PVCC Panska Ves 58.04 22 *e*P **P 01 13 03.8 -0.8**
PVCC AMS AMS 01 37 20.0
comp=Z,1μm,19.7s
BRG Berggiesshubel 58.09 22 *e*P **P 01 13 04.3 -0.6**
BRG *e* 01 21 10.0
BRG pmax pmax
comp=Z,16nm,1.2s
BRG MLR MLR
comp=Z,871nm,18.6s
BRG MLR MLR
comp=N,1μm,17.0s
BRG MLR MLR
comp=E,568nm,16.6s
CLL Collm 58.10 21 P **P 01 13 05.2 +0.2**
CLL IAmb IAmb 01 13 16.3
comp=Z,27nm,1.5s
CLL Collm 58.10 21 *i* P **P 01 13 05.9 +0.9**
CLL *i* 01 13 13.7
CLL *e*S **S 01 21 05.0 -0.9**
CLL pmax pmax
comp=Z,23nm,1.5s
CLL MLR MLR
comp=Z,2μm,18.2s
CLL Collm 58.10 21 *i* P **P 01 13 05.9 +0.9**
comp=Z,23nm,1.5s
CLL *i* x x 01 13 13.7
CLL *i* x x 01 13 22.5
CLL *e*PP **PP 01 15 18.0 +4.1**
CLL *e*PPP PPP 01 16 30.0
CLL *e*S **S 01 21 05.0 -0.9**
comp=N,1μm,26.0s
CLL *e*S **S 01 21 05.0 -0.9**
comp=E,700nm,23.6s
CLL *e*S **S 01 21 05.0 -0.9**
comp=Z,400nm,21.0s
CLL *e*x x 01 24 06.0
CLL *e*SS **SS 01 25 06.0 +8.4**
CLL *e*x x 01 26 24.0
CLL *e*SSS SSS 01 27 18.0
CLL Lm MLR 01 39 00.0
comp=N,1μm,18.0s
CLL Lm MLR 01 39 00.0
comp=E,800nm,18.0s
CLL Lm MLR 01 39 00.0
comp=Z,2μm,18.2s
VYHS Vyhne 58.21 26 *e*P **P 01 13 04.7 -1.2**
VYHS pmax pmax
comp=Z,27nm,1.3s
SDDR Presa de Saban 58.43 293 IAMs_20 IAMs_20 01 32 24.1
comp=Z,1μm,22.0s
MAUC Maruska 58.43 25 AMS AMS 01 38 10.0
comp=Z,2μm,16.6s
LOT Lotru 58.43 32 ⇓P **P 01 13 07.0 -0.6**
CHIC Chingaza 58.44 276 *e*P **P 01 13 05.1 -3.4**
CSS Mathiatis 58.47 47 IAMs_20 IAMs_20 01 39 32.3
comp=Z,1μm,18.0s
KRLC Kraliky 58.55 24 *e*P **P 01 13 07.3 -0.9**
KRLC MLR MLR
comp=Z,1μm,15.4s
KRLC Kraliky 58.55 24 *e*P **P 01 13 07.3 -0.9**
KRLC AMS AMS 01 39 50.0
comp=Z,1μm,15.4s
DPC Dobruska-Polom 58.58 23 *e*P **P 01 13 07.2 -1.2**
DPC *e*S **S 01 21 12.3 0.0**
DPC MLR MLR
comp=Z,800nm,14.4s
DPC Dobruska-Polom 58.58 23 *e*P **P 01 13 07.2 -1.2**
DPC *e*S **S 01 21 12.3 0.0**
DPC AMS AMS 01 37 50.0
comp=Z,800nm,14.4s
UPC Upice 58.58 23 AMS AMS 01 38 10.0
comp=Z,1μm,18.9s
MORC Moravsky Berou 58.63 25 ⇑P **P 01 13 06.6 -2.2**
MORC Moravsky Berou 58.63 25 P **P 01 13 09.1 +0.3**
MORC IAmb IAmb 01 13 19.5
comp=Z,24nm,1.4s
MORC Moravsky Berou 58.63 25 P **P 01 13 09.1 +0.3**
MORC pmax pmax
comp=Z,24nm,1.4s
MORC Moravsky Berou 58.63 25 *e*P **P 01 13 10.3 +1.5**
OSTC Ostas 58.70 23 *e*P **P 01 13 11.2 +1.9**
OSTC *e*S **S 01 21 15.0 +1.2**
OSTC AMS AMS 01 38 10.0
comp=Z,1μm,17.8s
DRGR 58.80 30 ⇓P **P 01 13 08.9 -1.2**
DRGR 58.80 30 ⇓P **P 01 13 08.9 -1.2**
ARR Arges 58.84 32 ⇓P **P 01 13 10.5 +0.1**
OKC Ostrava-Krasne 58.92 25 *e*S **S 01 21 18.0 +1.3**
OKC AMS AMS 01 39 00.0
comp=Z,1μm,17.4s
ROSC El Rosal 59.04 277 P **P 01 13 12.1 -0.7**
comp=Z,10nm,0.6s,baz=178,slow=17,SNR=5.5
ROSC LR LR 01 37 00.5
comp=Z,1μm,20.2s,baz=130,slow=34
comp=Z,10nm,0.6s
ROSC El Rosal 59.04 277 P **P 01 13 12.3 -0.4**
ROSC El Rosal 59.04 277 P **P 01 13 12.3 -0.4**
ROSC pmax pmax
comp=Z,94nm,1.8s
MMAI Mount Meron Ar 59.14 50 LR LR 01 39 37.8
comp=Z,519nm,19.4s,baz=128,slow=37
ABAH Abaujker 59.15 28 P **P 01 13 09.2 -3.2**
ATD Arta Tunnel 59.53 76 LR LR 01 37 40.3
comp=Z,487nm,19.5s,baz=272,slow=35
MLR Muntele Rosu 59.62 33 ⇓P **P 01 13 15.6 -0.3**
MLR Muntele Rosu 59.62 33 LR LR 01 40 05.9
comp=Z,2μm,20.9s,baz=224,slow=37
MLR Muntele Rosu 59.62 33 P **P 01 13 15.5 -0.3**
MLR Muntele Rosu 59.62 33 P **P 01 13 15.5 -0.3**
MLR pmax pmax
comp=Z,50nm,1.2s
MLR MLR MLR
comp=Z,2μm,21.0s
DOPR Dopca 59.63 32 ⇓P **P 01 13 15.5 -0.3**
TRPA Tarpa 59.65 29 ⇓P **P 01 13 14.0 -1.8**
TRPA Tarpa 59.65 29 P **P 01 13 15.8 0.0**
CRVS Cervenica-Dubn 59.69 27 *e*P **P 01 13 18.9 +2.7**
CRVS pmax pmax
comp=Z,54nm,1.3s
MDUB Mudurnu 59.77 40 P **P 01 13 16.9 -0.1**
UZH Uzhgorod 59.88 28 *e*P **P 01 13 18.8 +1.3**
UZH *e* 01 13 23.0
UZH *e* 01 14 09.0
UZH *e* 01 15 29.3
UZH *e*PPP PPP 01 16 53.0
UZH *e*S **S 01 21 26.9 -2.2**
UZH *i* 01 21 38.2
UZH *e*SS **SS 01 25 18.0 -7.7**
OJC Ojcow 59.91 25 P **P 01 13 17.2 -0.4**
OJC IAmb IAmb 01 13 18.9
comp=Z,12nm,1.0s
OJC Ojcow 59.91 25 P **P 01 13 17.2 -0.4**
OJC pmax pmax
comp=Z,12nm,1.0s
OZUR 59.92 32 ⇑P **P 01 13 17.2 -0.6**
ASF Jabal al Asfar 59.94 51 LR LR 01 38 58.8
comp=Z,619nm,21.4s,baz=272,slow=36
COVR Voineasa-Covas 59.98 33 ⇑P **P 01 13 18.1 -0.1**
KOLS Kolonicke sedl 60.09 28 *e*P **P 01 13 18.9 0.0**
KOLS pmax pmax
comp=Z,11nm,1.1s
GUY2C Guyana, Caldas 60.11 277 *e*P **P 01 13 17.7 -2.5**
FLOC Florencia 60.15 273 *e*P **P 01 13 17.7 -2.3**
PLOR Plostina 60.23 33 ⇓P **P 01 13 18.6 -1.4**
PLOR Plostina 60.23 33 ⇓P **P 01 13 18.6 -1.4**
VRI Vrincioaia 60.28 33 ⇑P **P 01 13 19.0 -1.3**
VRI Vrincioaia 60.28 33 ⇑P **P 01 13 19.0 -1.3**
ANTO Ankara 60.50 41 P **P 01 13 22.7 +0.7**
ANTO IAmb IAmb 01 13 38.5
comp=Z,15nm,0.8s
ANTO Ankara 60.50 41 IAMs_20 IAMs_20 01 42 46.8
comp=Z,1μm,19.0s
ANTO Ankara 60.50 41 P **P 01 13 22.7 +0.7**
ANTO pmax pmax
comp=Z,15nm,0.8s
ANTO MLR MLR
comp=Z,1μm,19.0s
BURAR Bucovina Array 60.62 30 ⇑P **P 01 13 21.3 -1.3**
BURAR Bucovina Array 60.62 30 P **P 01 13 22.6 -0.1**
BURAR Bucovina Array 60.62 30 ⇑P **P 01 13 21.3 -1.3**
BUR08 Bucovina Ar. S 60.63 30 P **P 01 13 22.9 +0.2**
BUR08 IAmb IAmb 01 13 50.8
comp=Z,26nm,1.4s
CBOC Ciudad Bolivar 60.80 278 *e*P **P 01 13 20.6 -4.0**
RGN Rugen 60.91 19 IAMs_20 IAMs_20 01 41 11.2
comp=Z,2μm,20.0s
BR131 Keskin Array S 60.98 42 P **P 01 13 25.8 +0.4**
BR131 Keskin Array S 60.98 42 P **P 01 13 25.8 +0.4**
BR131 pmax pmax
comp=Z,40nm,1.2s
BRTR Keskin Array B 60.98 42 P **P 01 13 24.8 -0.6**
comp=Z,6.8nm,0.9s,baz=224,slow=6.7,SNR=17
BRTR LR LR 01 41 39.5
comp=Z,716nm,20.0s,baz=222,slow=38
comp=Z,6.8nm,0.9s
BRTR Keskin Array B 60.98 42 P **P 01 13 25.4 0.0**
BRTR Keskin Array B 60.98 42 P **P 01 13 25.4 0.0**
BO01 Tunca 61.02 231 P **P 01 13 25.0 -0.6**
BO01 IAmb IAmb 01 13 26.1
comp=Z,18nm,0.9s
LVV L'vov 61.53 28 *e*P **P 01 13 27.4 -1.3**
NNA Nana 61.56 257 LR LR 01 39 17.0
comp=Z,361nm,18.1s,baz=71,slow=35
BNN Bunyan 62.06 44 P **P 01 13 32.0 -0.7**
GAZ Gaziantep 62.27 46 P **P 01 13 34.2 +0.2**
ATAH Atahualpa 62.82 263 LR LR 01 39 12.8
comp=Z,901nm,21.8s,baz=99,slow=34
BOSC San Juan Bosco 62.87 267 P **P 01 13 37.8 -0.8**
BOSC IAmb IAmb 01 13 38.4
comp=Z,13nm,0.6s
PLCA Paso Flores 62.94 224 P **P 01 13 36.8 -1.7**
comp=Z,2.2nm,0.9s,baz=91,slow=5.9,SNR=3.4
PLCA LR LR 01 36 44.2
comp=Z,1μm,21.9s,baz=68,slow=32
comp=Z,2.2nm,0.9s
COHC Cochancay 63.63 268 P **P 01 13 41.9 -1.5**
OPO Ambohidratompo 63.70 110 LR LR 01 35 53.0
comp=Z,618nm,21.2s,baz=57,slow=31
VOI Vohitsoka 63.82 114 IAMs_20 IAMs_20 01 37 26.0
comp=Z,1μm,22.0s
SIM Simferopol' 63.98 37 *e*P **P 01 13 49.1 +4.0**
SIM *e*S **S 01 22 17.0 -4.1**
SIM pmax pmax
comp=Z,18nm,1.0s
SIM smax smax
comp=N,92nm,16.9s
LL04 Puerto Octay 64.31 225 P **P 01 13 47.2 -0.2**
RAYN Ar Rayn 64.40 63 ⇑P **P 01 13 50.7 +2.4**
AKASG Malin Array Be 64.62 30 P **P 01 13 47.5 -1.7**
comp=N,3.7nm,0.8s,baz=231,slow=6.0,SNR=23
comp=N,3.7nm,0.8s
AKASG Malin Array Be 64.62 30 P **P 01 13 48.8 -0.4**
AKASG IAmb IAmb 01 14 08.3
comp=Z,17nm,1.4s
AKASG Malin Array Be 64.62 30 P **P 01 13 48.8 -0.4**
AKASG pmax pmax
comp=Z,17nm,1.4s
AKBB Malin Array Si 64.62 30 P **P 01 13 49.1 -0.1**
AKBB IAmb IAmb 01 13 56.5
comp=Z,28nm,1.1s
AKBB Malin Array Si 64.62 30 P **P 01 13 49.1 -0.1**
AKBB pmax pmax
comp=Z,28nm,1.2s
LL02 Futaleuf 64.80 222 P **P 01 13 50.5 0.0**
LL02 IAmb IAmb 01 13 51.8
comp=Z,34nm,1.5s
HFS Hagfors 65.72 16 LR LR 01 44 02.1
comp=Z,1μm,19.6s,baz=218,slow=37
KOPT Kop Dagi 65.81 44 P **P 01 13 56.3 -1.1**
NB2 NORSAR Subarra 65.86 14 P **P 01 13 59.3 +2.2**
comp=Z,20nm,1.4s,baz=208,slow=6.9
NOA NORSAR Array B 65.86 14 P **P 01 13 56.5 -0.6**
comp=Z,2.9nm,0.8s,baz=208,slow=6.3,SNR=5.8
NOA LR LR 01 43 19.3
comp=Z,1μm,21.3s,baz=205,slow=37
comp=Z,2.9nm,0.8s
NACGM Naroch 66.24 25 ⇓*e*P **P 01 14 02.0 +2.5**
baz=228
BORG Borgarnes 66.40 357 LR LR 01 37 27.4
comp=Z,388nm,20.8s,baz=172,slow=31
MNK Minsk 66.45 26 *i* P **P 01 14 02.3 +1.4**
MNK *i* 01 16 28.0
MNK *i* PPP PPP 01 18 02.4
MNK *i* S **S 01 22 54.1 +3.1**
MNK *i* SS **SS 01 27 09.2 +1.3**
MNK pmax pmax
comp=Z,33nm,1.4s
MNK pmax pmax
comp=E,5.0nm,1.4s
MNK pmax pmax
comp=N,24nm,0.8s
MNK MLR MLR
comp=E,157nm,20.0s
MNK MLR MLR
comp=Z,1μm,19.0s
MNK MLR MLR
comp=N,1μm,19.0s
MNK Minsk 66.45 26 *i* P **P 01 14 02.3 +1.4**
comp=E,5.0nm,1.4s
MNK *i* P **P 01 14 02.3 +1.4**
comp=N,24nm,0.8s
MNK *i* P **P 01 14 02.3 +1.4**
comp=Z,33nm,1.4s,baz=228
MNK *i* PP **PP 01 16 28.0 +0.7**
MNK *i* PPP PPP 01 18 02.4
MNK *i* S **S 01 22 54.1 +3.1**
MNK *i* SS **SS 01 27 09.3 +1.3**
MNK *i* SSS SSS 01 30 22.2
MNK *i* LQ LQ 01 38 18.4
MNK *i* LR LR 01 41 51.0
MNK *i* LRM MLR 01 43 21.4
comp=E,157nm,19.6s
MNK *i* LRM MLR 01 43 58.2
comp=Z,1μm,18.8s
MNK *i* LRM MLR 01 44 23.7
comp=N,1μm,18.7s
SOC Sochi 66.82 41 *e*P **P 01 14 00.4 -3.1**
SOC *e* 01 16 26.4
SOC *e*PPP PPP 01 18 02.9
SOC *e*S **S 01 22 52.4 -3.6**
GEVA Gevas 66.97 47 P **P 01 14 04.5 -0.3**
GEVA IAmb IAmb 01 14 16.3
comp=Z,14nm,1.0s
USHA Ushuaia 68.11 210 LR LR 01 40 43.5
comp=Z,1μm,19.4s,baz=64,slow=33
VSU Vasula 68.67 22 ⇓*e*P **P 01 14 15.0 +0.2**
VSU pmax pmax
comp=Z,56nm,1.0s
GNI Garni 68.86 46 LR LR 01 48 28.6
comp=Z,251nm,18.0s,baz=258,slow=40
GNI Garni 68.86 46 ⇑*e*P **P 01 14 14.2 -2.5**
GNI pmax pmax
comp=Z,8.0nm,1.2s
KIV Kislovodsk 68.92 41 *e*P **P 01 14 15.3 -1.6**
KIV *e*S **S 01 23 19.8 -1.5**
KIV *e*SS **SS 01 27 44.4 -2.6**
KIV pmax pmax
comp=Z,13nm,1.1s
KBZ Khabaz 68.97 41 P **P 01 14 15.4 -1.6**
comp=Z,3.4nm,0.9s,baz=268,slow=7.4,SNR=4.8
comp=Z,3.4nm,0.9s
KBZ Khabaz 68.97 41 ⇓*e*P **P 01 14 16.1 -0.9**
KBZ pmax pmax
comp=Z,12nm,1.1s
VNA1 Neumayer--Stat 69.03 177 P **P 01 14 18.0 +1.1**
ZEI Tsey 69.27 43 *e*P **P 01 14 23.5 +4.3**
ZEI pmax pmax
comp=Z,10.0nm,1.5s
NCK Nalchik 69.34 42 ⇑*e*P **P 01 14 20.5 +1.1**
NCK pmax pmax
comp=Z,6.0nm,1.0s
VNA2 Neumayer--Watz 69.35 177 P **P 01 14 20.2 +1.3**
baz=342,slow=7.1
VNA3 Neumayer Olymp 69.57 178 P **P 01 14 19.4 -0.9**
VSR Storozhevoye 70.11 33 *e*P **P 01 14 22.9 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,950nm,17.0s
SCHQ Schefferville 70.23 331 LR LR 01 40 53.5
comp=Z,302nm,19.4s,baz=142,slow=32
VORR Voronezh 70.36 33 *e*P **P 01 14 23.6 -1.8**
VORR pmax pmax
comp=Z,28nm,1.5s
SNAA Sanae 70.37 176 P **P 01 14 26.4 +1.1**
SNAA Sanae 70.37 176 P **P 01 14 24.6 -0.7**
comp=Z,2.8nm,0.9s,baz=344,slow=7.4,SNR=1.7
SNAA LR LR 01 37 37.5
comp=Z,561nm,19.7s,baz=2.5,slow=29
comp=Z,2.8nm,0.9s
SNAA Sanae 70.37 176 P **P 01 14 26.4 +1.1**
SNAA IAmb IAmb 01 14 47.3
comp=Z,16nm,1.1s
SNAA Sanae 70.37 176 *e*P **P 01 14 27.4 +2.1**
SNAA Sanae 70.37 176 P **P 01 14 26.4 +1.1**
SNAA pmax pmax
comp=Z,16nm,1.1s
FINES FINESS Array B 70.53 20 P **P 01 14 24.9 -1.3**
comp=Z,4.9nm,0.6s,baz=224,slow=4.8,SNR=30
FINES LR LR 01 47 41.2
comp=Z,796nm,18.5s,baz=230,slow=38
comp=Z,4.9nm,0.6s
FINES FINESS Array B 70.53 20 P **P 01 14 25.6 -0.6**
FINES FINESS Array B 70.53 20 P **P 01 14 25.6 -0.6**
FIA1 FINESS Array S 70.53 20 P P 01 14 20.1 -6.2
FIA1 IAmb IAmb 01 14 35.2
comp=Z,26nm,1.0s
LPSR Galich'ya Gora 70.67 32 *e*P **P 01 14 26.1 -1.2**
LPSR pmax pmax
comp=Z,20nm,1.1s
LPSR MLR MLR
comp=Z,1μm,17.0s
GROC Groznyy 70.71 43 *e*P **P 01 14 32.2 +4.4**
GROC *e* 01 14 54.3
GROC *e* 01 17 08.2
GROC pmax pmax
comp=Z,36nm,1.0s
OBN Obninsk 70.81 29 LR LR 01 48 16.5
comp=Z,282nm,18.2s,baz=242,slow=38
OBN Obninsk 70.81 29 ⇓*e*P **P 01 14 29.8 +1.7**
OBN *e**SP **sP 01 14 32.8 +1.2**
OBN *e* 01 14 46.2
OBN 01 17 01.0
OBN *e*S **S 01 23 46.4 +3.6**
OBN *e*PS PnS 01 24 31.1 +20
OBN pmax pmax
comp=Z,23nm,1.4s
OBN MLR MLR
comp=Z,1μm,17.0s
TROLL Troll, Antarti 71.17 174 P **P 01 14 31.7 +1.5**
BLA Blacksburg 71.23 310 IAMs_20 IAMs_20 01 38 50.1
comp=Z,738nm,19.0s
VRH Novokhopyorsk 71.51 34 *e*P **P 01 14 33.1 +0.7**
VRH pmax pmax
comp=Z,30nm,1.7s
VRH MLR MLR
comp=Z,740nm,18.0s
MOS Moscow 71.66 28 *e*P **P 01 14 31.5 -1.8**
MOS *e* 01 17 08.8
MOS pmax pmax
comp=Z,47nm,1.5s
MOS MLR MLR
comp=Z,900nm,17.0s
MAK Makhachkala 71.79 44 *e*P P 01 14 28.2 -6.1
MAK *e*PPP PPP 01 18 50.6
MAK *e*S S 01 23 42.7 -12
PMSA Palmer Station 71.93 200 LR LR 01 38 41.7
comp=Z,996nm,21.3s,baz=44,slow=30
VALR Valaam 72.16 22 *ce*P **P 01 14 36.4 +0.2**
VALR pmax pmax
comp=Z,22nm,0.9s
JMIC Jan Mayen 72.68 2 LR LR 01 42 31.6
comp=Z,550nm,21.4s,baz=196,slow=32
CRZF Crozet Islands 73.37 138 IAMs_20 IAMs_20 01 39 02.9
comp=Z,926nm,22.0s
TKL Tuckaleechee C 73.41 308 LR LR 01 41 11.9
comp=Z,262nm,21.3s,baz=120,slow=31
T50A Nancy 74.58 309 P **P 01 14 50.3 -0.6**
T50A IAmb IAmb 01 15 23.3
comp=Z,41nm,1.6s
U49A Red Boiling Sp 75.19 308 P **P 01 14 55.4 +0.8**
U49A IAmb IAmb 01 15 10.4
comp=Z,19nm,1.1s
KLMR Klimovskoe 75.25 25 *e*P **P 01 14 55.5 +1.2**
KLMR S **S 01 24 38.3 +5.2**
KLMR pmax pmax
comp=Z,46nm,1.7s
KLMR MLR MLR
comp=Z,949nm,17.0s
KLMR Klimovskoe 75.25 25 *e*P **P 01 14 55.5 +1.2**
KLMR *e*P **P 01 14 55.5 +1.2**
KLMR *e*P **P 01 14 55.5 +1.2**
KLMR AMP 01 15 15.7
comp=Z,46nm,1.7s
KLMR S **S 01 24 38.3 +5.2**
KLMR S **S 01 24 38.3 +5.2**
KLMR LR LR 01 42 19.0
KLMR AMP 01 50 25.0
comp=Z,949nm,16.7s
BELG Belogornoye 75.33 34 P 01 49 22.9
comp=Z,648nm,19.9s,baz=271,slow=37
BELG Belogornoye 75.33 34 *de*P **P 01 14 55.1 +0.2**
BELG pmax pmax
comp=Z,5.0nm,1.2s
WSAR Wadi Sarin 76.19 66 LR LR 01 48 51.4
comp=Z,833nm,19.2s,baz=274,slow=36
ARCES ARCESS Array B 76.24 14 P **P 01 15 00.2 +0.4**
comp=Z,2.6nm,0.6s,baz=240,slow=4.9,SNR=13
ARCES LR LR 01 49 31.3
comp=Z,1μm,20.3s,baz=232,slow=36
comp=Z,2.6nm,0.6s
PLAL Pickwick Lake 76.68 306 IAMs_20 IAMs_20 01 41 13.0
comp=Z,716nm,22.0s
WVT Waverly 76.72 308 P **P 01 15 03.1 -0.2**
WVT IAmb IAmb 01 15 18.8
comp=Z,15nm,1.1s
WVT Waverly 76.72 308 P **P 01 15 03.1 -0.2**
WVT pmax pmax
comp=Z,15nm,1.1s
BELA Belgrano 2 76.81 184 P **P 01 15 04.2 +1.2**
BELA IAmb IAmb 01 15 32.6
comp=Z,21nm,1.2s
OXF Oxford 77.67 306 IAMs_20 IAMs_20 01 42 15.2
comp=Z,802nm,22.0s
PRGR Permogore 78.20 25 *e*P **P 01 15 12.3 +1.3**
PRGR pmax pmax
comp=Z,17nm,0.9s
GEYT Alibeck 78.22 51 P **P 01 15 11.2 -0.5**
comp=Z,1.5nm,0.6s,baz=284,slow=5.8,SNR=1.8
comp=Z,1.5nm,0.6s
GEYT Alibeck 78.22 51 P **P 01 15 11.7 0.0**
KIRV Kirov 78.66 29 LR LR 01 52 08.7
comp=Z,1μm,19.2s,baz=259,slow=37
KIRV Kirov 78.66 29 ⇑*e*P **P 01 15 12.9 -0.7**
CCM Cathedral Cave 79.77 309 P **P 01 15 19.8 -0.3**
CCM IAmb IAmb 01 15 35.9
comp=Z,24nm,1.3s
CCM Cathedral Cave 79.77 309 P **P 01 15 19.8 -0.3**
CCM pmax pmax
comp=Z,24nm,1.3s
CMIG Matias Romero 80.27 288 LR LR 01 50 31.4
comp=Z,106nm,18.0s,baz=91,slow=35
MGMO Mountain Grove 80.42 308 P **P 01 15 23.4 -0.3**
MGMO IAmb IAmb 01 15 39.6
comp=Z,40nm,1.4s
AKTO Aktyubinsk 80.90 38 LR LR 01 55 54.2
comp=Z,234nm,18.1s,baz=261,slow=39
S39A Bolivar 81.33 308 P **P 01 15 27.7 -0.8**
SPITS Spitsbergen Ar 81.58 6 LR LR 01 49 20.8
comp=Z,350nm,18.8s,baz=173,slow=34
EYMN Ely 81.83 319 IAMs_20 IAMs_20 01 44 35.9
comp=Z,552nm,20.0s
ABKAR Akbulak array 81.85 40 P **P 01 15 30.2 -0.8**
ABKAR Akbulak array 81.85 40 P **P 01 15 29.4 -1.6**
ARU Arti 82.67 33 LR LR 01 54 03.9
comp=Z,885nm,21.0s,baz=257,slow=37
ARU Arti 82.67 33 P **P 01 15 34.8 -0.3**
ARU IAmb IAmb 01 15 46.1
comp=Z,17nm,1.1s
ARU Arti 82.67 33 *d i*P **P 01 15 36.0 +0.9**
ARU 01 18 48.2
ARU S **S 01 25 55.3 +2.9**

ARU pmax pmax
comp=Z,13nm,1.1s
ARU MLR MLR
comp=Z,800nm,18.0s
SVE Sverdlovsk 83.88 32 *e*P **P 01 15 44.4 +3.1**
SVE pmax pmax
comp=Z,9.0nm,1.0s
OK051 E0350 and S346 83.96 307 IAMs_20 IAMs_20 01 45 47.5
comp=Z,527nm,20.0s
OK033 Mehan 83.99 306 P P 01 15 41.3 -1.1
OK033 IAmb IAmb 01 15 50.0
comp=Z,19nm,1.1s
OK046 Pawnee Station 84.00 307 IAMs_20 IAMs_20 01 45 15.7
comp=Z,620nm,22.0s
OK045 Pawnee Station 84.02 307 IAMs_20 IAMs_20 01 44 47.3
comp=Z,574nm,20.0s
MAW Mawson 84.06 158 P **P 01 15 41.2 -0.9**
comp=Z,0.9nm,1.0s,baz=288,slow=6.4,SNR=1.6
comp=Z,0.9nm,1.0s
OK025 Westminster Rd 84.26 306 IAMs_20 IAMs_20 01 46 20.7
comp=Z,611nm,20.0s
OK049 E0420 Rd and N 84.32 307 IAMs_20 IAMs_20 01 46 01.2
comp=Z,605nm,20.0s
AGMN Agassiz Nation 84.77 319 P **P 01 15 44.0 -2.1**
JCT Junction City 85.86 301 P **P 01 15 51.3 -0.7**
JCT IAmb IAmb 01 16 08.4
comp=Z,14nm,1.1s
JCT Junction City 85.86 301 P **P 01 15 51.3 -0.7**
JCT pmax pmax
comp=Z,14nm,1.1s
ABTX Abilene, Hawle 85.89 303 P **P 01 15 50.9 -1.2**
ABTX IAmb IAmb 01 16 08.8
comp=Z,32nm,1.4s
CBKS Cedar Bluff 86.48 309 P **P 01 15 54.0 -0.9**
CBKS Cedar Bluff 86.48 309 P **P 01 15 54.0 -0.9**
CBKS pmax pmax
comp=Z,33nm,1.1s
GAR Garm 87.85 51 P **P 01 16 01.8 +0.1**
BTK Batken 88.31 50 P **P 01 16 02.6 -1.1**
BTK IAmb IAmb 01 16 13.2
comp=Z,17nm,1.4s
BTK Batken 88.31 50 P **P 01 16 02.6 -1.1**
BTK pmax pmax
comp=Z,17nm,1.4s
OGNE Ogallala 88.40 311 IAMs_20 IAMs_20 01 48 57.5
comp=Z,635nm,21.0s
QSPA South Pole Qui 88.41 180 LR LR 01 49 39.2
comp=Z,466nm,19.1s,baz=208,slow=32
QSPA South Pole Qui 88.41 180 IAMs_20 IAMs_20 01 49 27.8
comp=Z,518nm,19.0s
MSTX Muleshoe 88.59 304 P **P 01 16 05.5 +0.3**
MSTX IAmb IAmb 01 16 22.0
comp=Z,21nm,1.1s
BRVK Borovoye 88.83 37 P **P 01 16 07.0 +1.2**
BRVK Borovoye 88.83 37 P **P 01 16 07.0 +1.2**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BVAR Borovoye Array 88.89 37 LR LR 01 59 15.8
comp=Z,698nm,19.5s,baz=266,slow=38
TXAR Lajitas Array 89.14 299 P **P 01 16 07.7 -0.2**
comp=Z,1.1nm,0.9s,baz=122,slow=6.5,SNR=5.3
TXAR LR LR 01 49 49.5
comp=Z,133nm,21.8s,baz=72,slow=31
comp=Z,1.1nm,0.9s
NIL Nilore 89.94 57 IAMs_20 IAMs_20 01 58 46.4
comp=Z,723nm,20.0s
SDCO Great Sand Dun 90.95 308 P **P 01 16 16.6 +0.1**
SDCO IAmb IAmb 01 16 33.3
comp=Z,10.0nm,1.1s
AAK Ala-Archa 91.18 48 LR LR 02 02 20.1
comp=Z,478nm,18.2s,baz=280,slow=39
AAK Ala-Archa 91.18 48 P **P 01 16 14.8 -2.4**
AAK IAmb IAmb 01 16 46.8
comp=Z,12nm,1.2s
AAK IAMs_20 IAMs_20 02 02 11.3
comp=Z,678nm,18.0s
AAK Ala-Archa 91.18 48 P **P 01 16 14.8 -2.4**
AAK pmax pmax
comp=Z,12nm,1.2s
ANMO Albuquerque 91.67 305 LR LR 01 52 20.7
comp=Z,525nm,20.1s,baz=94,slow=32
ANMO Albuquerque 91.67 305⇑ *e*P **P 01 16 20.3 +0.6**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
KSH Kashi 92.26 51 P **P 01 16 24.8 +2.6**
KSH pP **sP 01 16 27.5 +1.5**
KSH SKS **SKSac 01 26 53.5 -2.3**
KSH S **S 01 27 26.5 +1.0**
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH LR LR
comp=Z,570nm,19.9s
KSH LR LR
comp=Z,480nm,20.6s
KSH LR LR
comp=Z,800nm,19.2s
NRN Naryn 92.28 49 P **P 01 16 20.8 -1.8**
NRN IAmb IAmb 01 18 57.0
comp=Z,7.0nm,0.8s
NRN Naryn 92.28 49 P **P 01 16 20.8 -1.8**
NRN pmax pmax
comp=Z,7.0nm,0.8s
RPN Rapa Nui 92.59 243 LR LR 01 54 10.8
comp=Z,371nm,19.3s,baz=94,slow=33
KURK Kurchatov 93.95 39 IAMs_20 IAMs_20 02 02 20.8
comp=Z,494nm,18.0s
PDAR Pinedale Array 94.05 313 P **P 01 16 30.9 +0.3**
comp=Z,0.2nm,0.6s,baz=107,slow=4.8,SNR=1.8
PDAR LR LR 01 52 40.1
comp=Z,422nm,21.7s,baz=90,slow=32
comp=Z,0.2nm,0.6s
LOHW Long Hollow 94.79 313 IAMs_20 IAMs_20 01 52 43.3
comp=Z,753nm,22.0s
FLWY Flagg Ranch 94.84 314 IAMs_20 IAMs_20 01 58 02.5
comp=Z,426nm,20.0s
LPIG La Paz 94.99 294 LR LR 01 56 33.3
comp=Z,123nm,19.0s,baz=100,slow=34
FXWY Fox Creek 95.09 313 IAMs_20 IAMs_20 01 53 06.3
comp=Z,737nm,22.0s
AHID Auburn Hatcher 95.19 313 IAMs_20 IAMs_20 01 53 18.9
comp=Z,663nm,20.0s
DLMT Dillon 96.12 315 IAMs_20 IAMs_20 01 53 47.5
comp=Z,556nm,19.0s
NRIK Noril'sk 96.19 20 LR LR 02 05 14.3
comp=Z,563nm,18.0s,baz=296,slow=39
MAKZ Makanchi 96.40 43 IAMs_20 IAMs_20 02 03 02.9
comp=Z,538nm,21.0s
PALK Pallekele 96.44 83 LR LR 01 57 31.5
comp=Z,489nm,19.2s,baz=8.2,slow=34
MKAR Makanchi Array 96.61 43 P **P 01 16 39.3 -2.6**
comp=Z,0.2nm,0.6s,baz=232,slow=3.5,SNR=1.6
MKAR LR LR 02 04 39.3
comp=Z,535nm,20.9s,baz=298,slow=38
comp=Z,0.2nm,0.6s
ZALV Zalesovo Beam 97.47 36 LR LR 02 04 23.1
comp=Z,521nm,18.9s,baz=305,slow=38
ELK Elko 98.41 311 LR LR 01 54 51.2
comp=Z,378nm,21.9s,baz=78,slow=32
NEW Newport 98.93 318 LR LR 01 55 20.1
comp=Z,576nm,21.9s,baz=71,slow=32
109C Camp Elliot, M 100.58 303 IAMs_20 IAMs_20 01 53 15.3
comp=Z,504nm,20.0s
WMQ Urumqi 100.73 46 *e*P **Pdif 01 17 00.3 -0.2**
WMQ pP sP 01 17 04.8 +0.5
WMQ PP **PP 01 21 11.5 +3.6**
WMQ S **Sdif 01 28 35.0 -3.1**
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,140nm,4.5s
WMQ LR LR
comp=Z,370nm,20.5s
WMQ LR LR
comp=Z,320nm,20.5s
WMQ LR LR
comp=Z,400nm,22.5s
FYU Fort Yukon 106.36 341 IAMs_20 IAMs_20 01 56 15.3
comp=Z,385nm,22.0s
TIXI Tiksi 106.56 11 IAMs_20 IAMs_20 02 12 18.7
comp=Z,394nm,20.0s
GOMU GeErMu 107.39 53 Pdif **Pdif 01 17 31.3 +0.6**
GOMU AMB AMB
comp=Z,46nm,4.6s
GOMU LR LR
comp=Z,170nm,21.0s
GOMU LR LR
comp=Z,200nm,18.0s
GOMU LR LR
comp=Z,210nm,20.6s
LOGN Logan Glacier 108.01 335 IAMs_20 IAMs_20 02 02 24.4
comp=Z,484nm,18.0s
RND Reindeer 109.53 340 IAMs_20 IAMs_20 02 02 26.3
comp=Z,357nm,21.0s
RPSI Rantau Prapat 114.55 88 IAMs_20 IAMs_20 02 04 00.7
comp=Z,498nm,22.0s
PZH PanZhiHua 115.09 62 PKP **PKPdf 01 21 53.8 -0.1**
CD2 Chengdu 115.84 56 PKP **PKPdf 01 21 54.3 -0.8**
HHC Hu-ho-hao-te 118.48 43 *e*PKP **PKPdf 01 21 58.0 -2.0**
HHC AMB AMB
comp=Z,170nm,9.3s
HHC LR LR
comp=Z,840nm,18.1s
HHC LR LR
comp=Z,1μm,17.6s
HHC LR LR
comp=Z,1μm,19.3s
MYKOM Kota Tinggi 119.46 89 IAMs_20 IAMs_20 02 08 35.9
comp=Z,354nm,22.0s
ENH Enshi 120.76 55 IAMs_20 IAMs_20 02 20 52.8
comp=Z,369nm,22.0s
BJT Baijiatuau 121.99 42 IAMs_20 IAMs_20 02 22 07.0
comp=Z,465nm,20.0s
HNS HongShan 122.16 46 *e*PKP **PKiKP 01 22 09.5 +2.3**
HNS LR LR
comp=Z,480nm,18.8s
HNS LR LR
comp=Z,330nm,18.4s
HNS LR LR
comp=Z,480nm,19.0s
TAOE Nuku Hiva Isla 123.78 258 *e*LR LR 02 00 34.4
comp=Z,280nm,22.9s
QIZ Qiongzhong 123.89 68 PKP **PKPdf 01 22 09.3 -1.5**
QIZ PP **PP 01 23 54.5 +0.4**
QIZ LR LR
comp=Z,240nm,20.8s
QIZ LR LR
comp=Z,230nm,26.5s
QIZ LR LR
comp=Z,280nm,25.4s
NJ2 Nanjing 127.56 50 *e*PKP **PKiKP 01 22 18.5 +0.4**
TBI Tubuai 128.71 238 *e*LR LR 02 02 53.5
comp=Z,3μm,27.5s
KNMB Chin-men Tao 130.12 59 IAMs_20 IAMs_20 02 25 44.4
comp=Z,386nm,20.0s
PPT2 Papeete2 130.81 245 *e*LR LR 02 03 50.4
comp=Z,467nm,23.5s
KKM Kota Kinabalu 131.73 83 IAMs_20 IAMs_20 02 16 50.4
comp=Z,354nm,22.0s
TPUB Ta-pu 132.44 60 IAMs_20 IAMs_20 02 21 20.0
comp=Z,398nm,21.0s
SSLB Suanglung 132.55 59 IAMs_20 IAMs_20 02 27 59.7
comp=Z,425nm,20.0s
YHNB Yeheng 132.59 57 IAMs_20 IAMs_20 02 33 20.4
comp=Z,326nm,20.0s
NACB Ningan chiao 132.96 58 IAMs_20 IAMs_20 02 33 55.3
comp=Z,362nm,19.0s
YULB Yu-li 132.99 59 IAMs_20 IAMs_20 02 28 18.3
comp=Z,423nm,20.0s
TWG Pinlang 132.99 60 IAMs_20 IAMs_20 02 28 27.9
comp=Z,395nm,22.0s
MYLDM Lahad Datu 134.04 84 IAMs_20 IAMs_20 02 19 09.8
comp=Z,409nm,21.0s
KAPI Kappang 134.89 99 IAMs_20 IAMs_20 02 16 56.8
comp=Z,330nm,19.0s
TOLI2 Tolitoli 136.37 90 IAMs_20 IAMs_20 02 18 57.4
comp=Z,348nm,21.0s
ASAR Alice Springs 141.08 132 PKhKP PKPpre 01 22 34.7
comp=Z,0.4nm,0.6s,baz=250,slow=1.9,SNR=2.8
ASAR PKP **PKPdf 01 22 39.5 -3.6**
comp=Z,1.4nm,0.8s,baz=228,slow=2.5,SNR=6.5
WRA Warramunga Arr 143.50 128 PKP PKPab 01 22 44.0 +0.2
comp=Z,0.9nm,0.9s,baz=242,slow=2.3,SNR=8.9
WRA Warramunga Arr 143.50 128 PKPdf 01 22 47.4 -0.1
WRA Warramunga Arr 143.50 128 PKIKP **PKPdf 01 22 47.4 -0.1**
DZM Mont Dzumac 156.32 185 *e*LR LR 02 15 43.9
comp=Z,429nm,21.8s

*ROM **27** 01:13:39.8±0.1, 43°.008N±0°.004×13°.108E±0°.006,*
h10km, ML3.1/59, Error ellipse: s-maj=0.5km s-min=0.2km
az=54.0
*PRU **27** 01:13:41.7±0.0, 43°.06N×13°.44E, h0km*
*IDC **27** 01:13:43.2±2.3, 43°.39N×12°.02E, h0km, mb3.2/1,*
mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=70.3km
s-min=19.8km az=97.0

ISC 27 01:13:40.6±0.8, 43°.00N±0°.02×13°.11E±0°.02, h11km±5km,
n102, σ1°10/131, 25C-41D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.10**	**146**	P	**Pg**	**01 13 42.8**	**-0.8**
MC2				S	**Sg**	**01 13 46.0**	**+0.3**
CSP1	**Cessapalombo**	**0.12**	**35**	P	**Pg**	**01 13 42.8**	**-0.9**
CSP1				S	**Sg**	**01 13 45.1**	**-0.8**
CSP1				AML	AML		
	comp=E,58800μm,0.3s						
CSP1				AML	AML		
	comp=N,78950μm,1.1s						
T1216	**Preci, Frazion**	**0.13**	**213**	AML	AML		
	comp=N,36100μm,0.6s						
T1216				AML	AML		
	comp=E,44900μm,0.6s						
T1245	**Castelsantange**	**0.15**	**159**	P	**Pg**	**01 13 43.7**	**-0.5**
T1245				S	**Sg**	**01 13 47.5**	**+0.8**
T1245				AML	AML		
	comp=E,18400μm,1.2s						
T1245				AML	AML		
	comp=N,39650μm,0.6s						
T1245				AML	AML		
	comp=E,18450μm,1.2s						
T1245				AML	AML		
	comp=E,17550μm,0.3s						
T1245				AML	AML		
	comp=N,40350μm,0.6s						
T1245				AML	AML		
	comp=N,39650μm,0.6s						
T1245				AML	AML		
	comp=E,29650μm,0.2s						
T1245				AML	AML		
	comp=E,33500μm,0.2s						
CESI	**CESI - Serrava**	**0.15**	**273**	⇑P	**Pg**	**01 13 43.6**	**-0.5**
CESI				S	**Sg**	**01 13 46.7**	**0.0**
CESI				AML	AML		
	comp=E,38450μm,0.6s						
CESI				AML	AML		
	comp=N,38450μm,1.5s						
GUMA	**Gualdo di Mace**	**0.17**	**68**	⇓P	**Pg**	**01 13 44.4**	**-0.1**
GUMA				S	**Sg**	**01 13 48.0**	**+0.8**
GUMA				AML	AML		
	comp=E,79850μm,0.5s						
GUMA				AML	AML		
	comp=N,75500μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,79800μm,0.5s						
GUMA				AML	AML		
	comp=N,38750μm,1.0s						
GUMA				AML	AML		
	comp=E,79850μm,0.5s						
GUMA				AML	AML		
	comp=N,75500μm,0.4s						
AM05	**Amandola Campo**	**0.18**	**96**	⇓P	**Pg**	**01 13 44.2**	**-0.2**
AM05				AML	AML		
	comp=E,3405μm,0.4s						
AM05				AML	AML		
	comp=N,780μm,1.2s						
AM05				AML	AML		
	comp=E,12200μm,0.4s						
AM05				AML	AML		
	comp=N,781μm,1.2s						
AM05				AML	AML		
	comp=E,3400μm,0.4s						
AM05				AML	AML		
	comp=N,3250μm,0.5s						
MMO1	**Montemonaco**	**0.18**	**122**	⇓P	**Pg**	**01 13 44.2**	**-0.4**
MMO1				S	**Sg**	**01 13 47.9**	**+0.4**
SEF1	**Sefro**	**0.19**	**321**	P	**Pg**	**01 13 44.1**	**-0.6**
SEF1				S	**Sg**	**01 13 48.1**	**+0.4**
SEF1				AML	AML		
	comp=N,38800μm,0.3s						
SEF1				AML	AML		
	comp=N,38750μm,0.3s						
SEF1				AML	AML		
	comp=E,40750μm,0.3s						
PIO1	**Pioraco**	**0.20**	**332**	P	**Pg**	**01 13 44.4**	**-0.6**
PIO1				S	**Sg**	**01 13 48.3**	**+0.3**
PIO1				AML	AML		
	comp=N,17100μm,0.4s						
PIO1				AML	AML		
	comp=E,11800μm,0.5s						
FIU1	**Fiuminata**	**0.23**	**325**	P	**Pg**	**01 13 44.9**	**-0.6**
FIU1				S	**Sg**	**01 13 49.3**	**+0.6**
FIU1				AML	AML		
	comp=E,8075μm,0.5s						
FIU1				AML	AML		
	comp=N,9910μm,0.3s						
FIU1				AML	AML		
	comp=E,8075μm,0.4s						
FIU1				AML	AML		
	comp=N,9915μm,0.3s						
GAG1	**Gagliole**	**0.24**	**352**	P	**Pg**	**01 13 45.3**	**-0.4**
GAG1				S	**Sg**	**01 13 50.0**	**+1.0**
GAG1				AML	AML		
	comp=E,41850μm,0.4s						
GAG1				AML	AML		
	comp=N,30450μm,0.4s						
GAG1				AML	AML		
	comp=E,41800μm,0.4s						
T1215	**Vallo di Nera,**	**0.27**	**223**	P	**Pg**	**01 13 45.8**	**-0.2**
T1215				S	**Sg**	**01 13 51.0**	**+1.3**
T1215				AML	AML		
	comp=E,5060μm,0.7s						
T1215				AML	AML		
	comp=N,4560μm,1.1s						
T1215				AML	AML		
	comp=E,5020μm,0.7s						
T1215				AML	AML		
	comp=N,4285μm,1.0s						
T1215				AML	AML		
	comp=N,4565μm,1.1s						
T1215				AML	AML		
	comp=N,4275μm,1.0s						
T1215				AML	AML		
	comp=N,4565μm,1.1s						
T1215				AML	AML		
	comp=N,4280μm,1.0s						
T1215				AML	AML		
	comp=E,5015μm,0.7s						
MTL1	**Matelica**	**0.27**	**344**	P	**Pg**	**01 13 45.7**	**-0.5**
MTL1				S	**Sg**	**01 13 50.7**	**+0.8**
MTL1				AML	AML		
	comp=N,23650μm,0.9s						
MTL1				AML	AML		
	comp=E,30150μm,1.5s						
MTL1				AML	AML		
	comp=N,23600μm,0.9s						
MTL1				AML	AML		
	comp=E,30150μm,1.4s						
T1241	**Roccafluvione,**	**0.27**	**121**	⇓P	**Pg**	**01 13 45.6**	**-0.6**
T1241				S	**Sg**	**01 13 51.2**	**+1.3**
T1241				AML	AML		
	comp=E,6320μm,0.5s						
T1241				AML	AML		
	comp=N,5180μm,0.6s						
SNTG	**Esanatoglia**	**0.29**	**334**	⇑P	**Pg**	**01 13 45.7**	**-0.7**
SNTG				S	**Sg**	**01 13 50.9**	**+0.5**
SNTG				AML	AML		
	comp=N,4820μm,1.1s						
SNTG				AML	AML		
	comp=E,7690μm,0.6s						
SNTG				AML	AML		
	comp=N,5350μm,0.4s						
SNTG				AML	AML		
	comp=E,7695μm,0.6s						
SNTG				AML	AML		
	comp=E,7465μm,0.6s						
MNTP	**Montappone**	**0.30**	**62**	P	**Pg**	**01 13 46.9**	**+0.3**
MNTP				S	**Sb**	**01 13 53.1**	**+0.3**
MNTP				AML	AML		
	comp=E,21250μm,0.5s						
MNTP				AML	AML		
	comp=N,10685μm,1.5s						
T1217	**Poggiodomo (PG**	**0.32**	**205**	⇑P	**Pg**	**01 13 46.8**	**-0.2**
T1217				S	**Sg**	**01 13 52.8**	**+1.6**
T1217				AML	AML		
	comp=E,5160μm,0.7s						
T1217				AML	AML		
	comp=N,6565μm,1.4s						
T1217				AML	AML		
	comp=E,5050μm,0.6s						
T1217				AML	AML		
	comp=N,6590μm,1.4s						
T1217				AML	AML		
	comp=N,6570μm,1.4s						
T1217				AML	AML		
	comp=N,6580μm,1.4s						
T1217				AML	AML		
	comp=E,5155μm,0.7s						
T1217				AML	AML		
	comp=E,5050μm,0.6s						
EL6	**Elcito**	**0.33**	**359**	⇑P	**Pg**	**01 13 46.6**	**-0.7**
EL6				AML	AML		
	comp=E,10350μm,0.3s						
EL6				AML	AML		
	comp=N,13400μm,0.3s						
EL6				AML	AML		
	comp=E,10365μm,0.3s						
EL6				AML	AML		
	comp=N,13450μm,0.3s						
EL6				AML	AML		
	comp=E,10370μm,0.3s						
T1204	**Amatrice, Fraz**	**0.35**	**155**	⇓P	**Pg**	**01 13 47.4**	**-0.3**
T1204				S	**Sb**	**01 13 54.2**	**-0.4**
T1204				AML	AML		
	comp=E,5815μm,0.7s						
T1204				AML	AML		
	comp=N,4420μm,1.1s						
T1204				AML	AML		
	comp=N,4405μm,1.1s						
T1204				AML	AML		
	comp=E,5820μm,0.7s						
T1243	**Rocca Santa Ma**	**0.39**	**141**	P	**Pg**	**01 13 47.8**	**-0.5**
T1243				S	**Sg**	**01 13 54.9**	**+1.4**
ATCC	**AVT- Casa Cast**	**0.39**	**299**	⇓P	**Pg**	**01 13 47.9**	**-0.5**
ATCC				AML	AML		
	comp=E,4740μm,1.2s						
ATCC				AML	AML		
	comp=N,5535μm,1.6s						
LNSS	**Leonessa**	**0.40**	**188**	⇓P	**Pg**	**01 13 48.2**	**-0.3**
LNSS				AML	AML		
	comp=N,5370μm,0.9s						
LNSS				AML	AML		
	comp=E,6580μm,0.6s						
SMA1	**SAN MARTINO**	**0.40**	**156**	⇓P	**Pg**	**01 13 48.1**	**-0.5**
SMA1				AML	AML		
	comp=N,5955μm,0.4s						
SMA1				AML	AML		
	comp=E,4535μm,1.6s						
SMA1				AML	AML		
	comp=N,5950μm,0.4s						
OFFI	**Offida**	**0.42**	**98**	⇓P	**Pg**	**01 13 49.6**	**+0.6**
OFFI				AML	AML		
	comp=E,4190μm,0.4s						
OFFI				AML	AML		
	comp=N,6195μm,0.6s						
RM33	**Pellescritta (**	**0.49**	**171**	⇓P	**Pg**	**01 13 49.7**	**-0.5**
RM33				AML	AML		
	comp=N,2380μm,0.8s						
RM33				AML	AML		
	comp=E,2595μm,1.1s						
RM33				AML	AML		
	comp=N,2380μm,0.8s						
RM33				AML	AML		
	comp=E,2625μm,1.1s						
T1211	**Morro Reatino**	**0.50**	**202**	P	**Pg**	**01 13 48.6**	**-1.8**
T1211				AML	AML		
	comp=N,3960μm,0.5s						
T1211				AML	AML		
	comp=E,2465μm,1.0s						
MURB	**Monte Urbino**	**0.51**	**302**	⇓P	**Pg**	**01 13 50.0**	**-0.5**
MURB				S	**Sb**	**01 13 59.0**	**0.0**
MURB				AML	AML		
	comp=N,5010μm,1.0s						
MURB				AML	AML		
	comp=N,5405μm,1.0s						
MURB				AML	AML		
	comp=E,4760μm,0.3s						
MURB				AML	AML		
	comp=N,5400μm,1.0s						
MURB				AML	AML		

comp=E,4255μm,0.4s
CAMP Campotosto 0.51 155 ⇓P Pg 01 13 49.9 -0.7
CAMP AML AML
comp=E,1940μm,0.7s
CAMP AML AML
comp=N,1595μm,0.6s
ARVD Arcevia 0.52 346 ⇑P Pg 01 13 49.9 -0.8
ARVD S Sb 01 13 59.0 -0.2
ARVD AML AML
comp=E,4630μm,0.6s
ARVD AML AML
comp=N,1985μm,0.5s
TERO Teramo 0.52 136 ⇓P Pg 01 13 50.1 -0.7
TERO S Sb 01 13 60.0 +0.7
TERO AML AML
comp=N,1825μm,0.5s
TERO AML AML
comp=E,1835μm,0.5s
PP3 Marolino 0.53 44 ⇑P Pg 01 13 51.3 +0.5
PP3 AML AML
comp=N,5440μm,0.3s
PP3 AML AML
comp=N,5325μm,0.8s
PP3 AML AML
comp=E,6635μm,0.3s
PP3 AML AML
comp=N,5445μm,0.3s
PP3 AML AML
comp=E,7225μm,0.3s
PP3 AML AML
comp=N,5320μm,0.8s
ATFO Monte Foce - G 0.54 313 ⇓P Pg 01 13 50.6 -0.6
ATFO S Sb 01 13 60.0 0.0
ATFO AML AML
comp=N,1840μm,1.4s
ATFO AML AML
comp=E,1900μm,1.1s
CESX Cesi 0.55 226 ⇑P Pg 01 13 50.7 -0.6
CESX S Sb 01 13 60.0 -0.2
CESX AML AML
comp=E,3800μm,0.3s
CESX AML AML
comp=N,4425μm,0.5s
T1247 Pizzolo (AQ) 0.57 166 ⇓P Pg 01 13 51.1 -0.6
T1247 AML AML
comp=N,2535μm,0.4s
T1247 AML AML
comp=E,2975μm,1.6s
ATTE AVT- Monte Tez 0.59 290 ⇑P Pg 01 13 51.5 -0.6
ATTE AML AML
comp=N,780μm,1.3s
ATTE AML AML
comp=E,922μm,0.4s
ATTE AML AML
comp=N,781μm,1.3s
FRON Frontone 0.59 332 ⇑P Pg 01 13 51.2 -0.9
FRON AML AML
comp=E,2645μm,0.3s
FRON AML AML
comp=N,4660μm,0.3s
FRON AML AML
comp=E,2650μm,0.3s
TRTR Tortoreto Alta 0.62 108 ⇓P Pb 01 13 53.4 0.0
TRTR AML AML
comp=E,5020μm,0.8s
TRTR AML AML
comp=N,4455μm,0.7s
GIGS Gran Sasso 0.64 148 P Pg 01 13 52.1 -1.0
GIGS AML AML
comp=E,560μm,0.7s
GIGS AML AML
comp=N,426μm,1.6s
ATVO AVT- Monte Val 0.64 307 ⇓P Pg 01 13 52.3 -0.8
ATVO S Sb 01 14 03.0 +0.1
ATVO AML AML
comp=E,1205μm,0.4s
ATVO AML AML
comp=N,918μm,1.3s
ATVO AML AML
comp=E,1204μm,0.4s
AOI Ancona 0.66 33 ⇓P Pg 01 13 53.0 -0.3
AOI S Sn 01 14 05.0 -1.3
AOI AML AML
comp=E,1540μm,0.3s
AOI AML AML
comp=N,1270μm,0.4s
AQU L'Aquila 0.68 162 ⇓P Pg 01 13 52.9 -0.9
AQU AML AML
comp=E,1340μm,0.7s
AQU AML AML
comp=N,1420μm,1.0s
AQU AML AML
comp=E,1345μm,0.7s
AQU AML AML
comp=N,1425μm,1.0s
AQU AML AML
comp=N,1325μm,1.0s
AQU AML AML
comp=E,1380μm,0.7s
MPAG Monte Paganucc 0.68 338 P Pg 01 13 53.0 -0.9
MPAG S Sb 01 14 05.0 +0.9
MPAG AML AML
comp=N,1905μm,0.8s
MPAG AML AML
comp=E,2640μm,1.5s
MPAG AML AML
comp=N,1575μm,0.5s
MPAG AML AML
comp=N,1910μm,0.8s
MPAG AML AML
comp=E,2635μm,1.5s
MPAG AML AML
comp=E,2560μm,0.6s
PIEI Pieia 0.68 322 ⇓P Pg 01 13 52.9 -1.0
PIEI AML AML
comp=N,1103μm,0.3s
PIEI AML AML
comp=E,1020μm,0.3s
ATPI Pietralunga - 0.69 311 ⇓P Pg 01 13 53.2 -0.8
ATPI AML AML
comp=N,1625μm,0.8s
ATPI AML AML
comp=E,1155μm,0.9s
ATMI Monte Miggiano 0.70 299 S Sb 01 14 06.0 +1.4
SENI Senigallia 0.71 7 ⇓P Pb 01 13 55.0 0.0
NARO Abbazia di Nar 0.73 328 ⇓P Pg 01 13 53.6 -1.1
NARO S Sn 01 14 07.0 -0.9
NARO AML AML
comp=E,1094μm,0.6s
NARO AML AML
comp=N,696μm,0.5s
FIAM Fiamignano 0.73 180 ⇓P Pg 01 13 53.7 -1.0
FIAM S Sb 01 14 06.0 +0.6
FIAM AML AML
comp=N,1077μm,0.5s
FIAM AML AML
comp=E,1245μm,0.5s
FSSB Fossombrone 0.74 341 ⇓P Pg 01 13 54.1 -0.8
FSSB AML AML
comp=E,5505μm,0.4s
FSSB AML AML
comp=N,7830μm,0.3s
MGAB Montegabbione 0.74 264 ⇓P Pb 01 13 55.7 +0.2
MGAB AML AML
comp=E,1905μm,0.4s
MGAB AML AML
comp=N,1107μm,0.6s
MGAB AML AML
comp=N,1160μm,0.6s
MGAB AML AML
comp=E,2020μm,0.4s
APEC Apecchio 0.76 318 ⇓P Pg 01 13 54.8 -0.5
APEC S Sn 01 14 08.0 -0.7
VCEL Villa Celiera 0.81 138 ⇓P Pg 01 13 55.5 -0.7
VCEL AML AML
comp=E,1505μm,0.9s
VCEL AML AML
comp=N,1385μm,0.8s
FAGN Fagnano 0.81 154 ⇓P Pg 01 13 55.4 -0.8
FAGN AML AML
comp=E,2530μm,0.5s
FAGN AML AML
comp=N,1905μm,0.6s
BADI Badiali 0.82 309 P Pg 01 13 55.5 -0.8
PE3 Peglio 0.83 327 ⇓P Pg 01 13 55.9 -0.7
PE3 AML AML
comp=E,11μm,0.2s
PE3 AML AML
comp=N,11μm,0.5s
SRES S.Oreste - Sor 0.88 211 ⇓P Pg 01 13 56.9 -0.7
SRES AML AML
comp=E,785μm,1.6s
SRES AML AML
comp=N,788μm,0.7s
SACS San Casciano d 0.90 261 ⇑P Pb 01 13 58.4 +0.2
SACS AML AML
comp=E,738μm,0.7s
SACS AML AML
comp=E,772μm,0.7s
SACS AML AML
comp=N,1076μm,0.6s
SACS AML AML
comp=N,1065μm,0.6s
CAFI Castiglion Fio 0.90 292 ⇑P Pg 01 13 57.2 -0.8
CAFI AML AML
comp=E,632μm,0.6s
CAFI AML AML
comp=N,777μm,0.4s
T0110 Collepietro 0.91 147 ⇓P Pg 01 13 56.9 -1.3
T0110 AML AML
comp=N,1550μm,0.8s
T0110 AML AML
comp=E,1345μm,0.6s
SSP9 Sansepolcro 0.92 309 ⇓P Pg 01 13 57.7 -0.6
SSP9 AML AML
comp=E,654μm,0.9s
SSP9 AML AML
comp=N,578μm,0.7s
CPGN Carpegna, Ital 0.99 325 ⇑P Pg 01 13 59.8 +0.1
CPGN AML AML
comp=N,1245μm,0.8s
CPGN AML AML
comp=E,1295μm,0.4s
CERT Cerreto 1.05 185 ⇑P Pg 01 13 59.8 -1.0
CERT AML AML
comp=E,882μm,0.5s
CERT AML AML
comp=N,848μm,1.0s
INTR Introdacqua 1.15 149 ⇑P Pb 01 14 00.7 -1.7
INTR AML AML
comp=N,874nm,0.7s
INTR AML AML
comp=N,1415μm,0.7s
INTR AML AML
comp=E,552nm,0.7s
INTR AML AML
comp=E,516μm,0.7s
SF01 Poggio Pratacc 1.15 261 P Pn 01 14 03.7 +1.0
LPEL Lama dei Pelig 1.24 140 ⇓P Pn 01 14 02.2 -1.6
LPEL AML AML
comp=E,647μm,1.3s
LPEL AML AML
comp=N,468μm,1.0s
POFI Posta Fibreno 1.35 161 ⇓P Pg 01 14 07.8 +1.2
CSNT Castellina Chi 1.41 290 ⇓P Pn 01 14 06.8 +0.5
CSNT AML AML
comp=E,139μm,1.0s
CSNT AML AML
comp=N,154μm,0.6s
RUFI Rufina 1.44 306 ⇑P Pn 01 14 06.8 +0.2
CERA Filignano 1.55 154 P Pb 01 14 09.7 +0.3
TRIF Trifonti 1.62 275 ⇓P Pb 01 14 10.9 +0.3
TRIV Trivento 1.63 139 ⇑P Pg 01 14 11.7 -0.1
MELA Melanico ??? S 1.97 130 ⇑P Pb 01 14 15.9 -0.5
APRC Apricena 2.19 124 ⇑P Pn 01 14 18.0 +1.1
SGRT San Giovanni R 2.31 122 ⇑P Pn 01 14 19.9 +1.3
SALO Salr 3.21 326 ⇑P Pn 01 14 31.6 +0.6
CTI Castel Tesino 3.23 342 P Pn 01 14 27.7 -3.6
STAL STALIGIAL 3.27 355 ⇑P Pn 01 14 32.6 +0.7
AMUR Altamura 3.34 128 ⇑P Pn 01 14 34.0 +1.3
LUSI Trento, Gardas 3.34 333 ⇓P Pn 01 14 34.1 +1.2
CIMO Cimolais 3.35 352 P Pn 01 14 33.0 +0.2
CIMO AML AML
comp=E,34μm,1.6s
CIMO AML AML
comp=N,41μm,1.0s
PTCC Patocco-Chiusa 3.41 3 ⇓P Pn 01 14 34.7 +0.9
ZOU Zoufplan 3.56 358 P Pn 01 14 35.8 -0.1
ZOU AML AML
comp=N,120μm,1.2s
ZOU AML AML
comp=E,83μm,1.4s
ACOM Acomizza, Ital 3.56 4 ⇑P Pn 01 14 37.3 +1.4
MYKA Terra Mystica 3.65 6 *e*Pn Pn 01 14 38.2 +1.2
comp=E,4.1nm,0.3s
KOSI Kohlern 3.68 341 ⇑P Pn 01 14 39.6 +2.1
ABTA Abfaltersbach 3.77 354 Pn Pn 01 14 40.5 +1.8
comp=E,22nm,0.5s,SNR=20
RISI Rein 4.02 350 ⇓P Pn 01 14 44.1 +1.9
BURY Giardini Botan 4.12 283 ⇑P Pn 01 14 45.0 +1.5
MUGIO Muggio 4.13 316 ⇓P Pn 01 14 44.4 +0.8
FETA Feichten 4.36 338 Pn Pn 01 14 49.8 +2.9
comp=E,3.4nm,0.3s,SNR=8.7
WTTA Wattenberg 4.39 347 *e*Pn Pn 01 14 50.0 +2.7
comp=E,6.9nm,0.7s
SQTA Sankt Quirin 4.43 343 Pn Pn 01 14 50.8 +2.9
comp=E,7.6nm,0.4s,SNR=7.3
MOTA Moosalm 4.57 343 Pn Pn 01 14 52.8 +3.0
comp=E,5.9nm,0.5s,SNR=6.2
ARSA Arzberg 4.58 21 *e*Pn Pn 01 14 49.4 -0.4
comp=E,1.8nm,0.4s
BIOA Bad Ischl, Aus 4.71 4 *i* Pn Pn 01 14 53.2 +1.6
comp=E,8.7nm,0.4s,SNR=11
RETA Reutte 4.79 341 Pn Pn 01 14 55.4 +2.8
comp=E,2.0nm,0.3s,SNR=4.7
GERES GERESS Array B 5.86 4 Pn Pn 01 15 07.7 +0.2
comp=E,0.4nm,0.3s,baz=200,slow=8.3,SNR=6.5
GERES Sn Sn 01 16 12.3 -2.3
comp=E,1.6nm,0.3s,baz=188,slow=26,SNR=9.8
comp=E,0.4nm,0.3s
CKRC Cesky Krumlov 5.88 8 *e*PN Pn 01 15 08.6 +0.9
CKRC *e*SN Sn 01 16 13.6 -1.5
KHC Kasperske Hory 6.14 3 *e*PN Pn 01 15 11.1 -0.2
KHC *e*SN Sn 01 16 18.9 -2.6
KEST Kesra 7.82 203 Pn Pn 01 15 39.5 +5.2
comp=E,0.1nm,0.3s,baz=40,slow=7.9,SNR=1.1
comp=E,1.4nm,0.7s
MKAR Makanchi Array 47.71 60 P P 01 22 25.7 +8.6
comp=E,0.2nm,0.6s,baz=291,slow=7.8,SNR=2.0
comp=E,0.2nm,0.6s

*ROM **27** 01:37:05.1±0.0, 42°.843N±0°.002×13°.160E±0°.003, h9km, ML3.5/104, Error ellipse: s-maj=0.2km s-min=0.1km az=68.0*
*IDC **27** 01:37:05.7±1.1, 43°.01N×12°.97E, h0km, mb3.5/5, mbtmp3.5/10, ML3.3/5, Error ellipse: s-maj=27.2km s-min=13.3km az=96.0*
*LDG **27** 01:37:05.0±0.2, 42°.95N×13°.14E, h8km, Ml3.4/21, Error ellipse: s-maj=6.5km s-min=3.2km az=44.0*
*BEO **27** 01:37:06.3±0.7, 42°.82N×13°.08E, h11km±3km, ML3.6/12*
*PRU **27** 01:37:07.6±0.0, 42°.96N×13°.40E, h0km*
*STR **27** 01:37:08.3±0.8, 43°N±5°×1°3E±°, h10km, MLv3.7/24, Error ellipse: s-maj=0.0km s-min=0.0km az=74.3, preliminary*
ISC 27 01:37:05.7±0.8, 42.85N±0°.01×13.16E±0°.01, h6km±4km, n261, σ1§59/305, mb3.7/3, 29C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**77**	⇓P	**Pg**	**01 37 06.9**	**-0.2**
T1245				S	**Sg**	**01 37 07.8**	**-0.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.07**	**21**	⇑P	**Pg**	**01 37 07.6**	**0.0**
MC2				S	**Sg**	**01 37 09.0**	**+0.1**
T1216	**Preci, Frazion**	**0.11**	**291**	⇑P	**Pg**	**01 37 08.3**	**+0.2**
T1216				S	**Sg**	**01 37 10.3**	**+0.6**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MMO1	**Montemonaco**	**0.13**	**69**	⇑P	**Pg**	**01 37 08.6**	**+0.1**
MMO1				S	**Sg**	**01 37 11.0**	**+0.6**
FEMA	**Monte Fema**	**0.14**	**324**	P	**Pg**	**01 37 09.0**	**+0.4**
FEMA				S	**Sg**	**01 37 11.4**	**+0.8**
FEMA				AML	AML		
comp=E,97850μm,0.2s
FEMA AML AML
comp=N,82000μm,0.3s
FEMA AML AML
comp=E,97950μm,0.2s
FEMA AML AML
comp=E,98150μm,0.2s
FEMA AML AML
comp=E,98000μm,0.2s
FEMA AML AML
comp=N,81950μm,0.3s
AM05 Amandola Campo 0.19 48 ⇑P Pg 01 37 09.8 +0.2
AM05 S Sg 01 37 13.0 +0.9
T1241 Roccafluvione, 0.20 89 ⇑P Pg 01 37 09.5 -0.2
T1241 S Sg 01 37 13.0 +0.6
T1241 AML AML
comp=E,41050μm,1.4s
T1241 AML AML
comp=N,48500μm,0.2s
T1241 AML AML
comp=N,48450μm,0.2s
T1241 AML AML
comp=E,41100μm,1.4s
T1201 Domo (RI) 0.21 161 ⇑P Pg 01 37 10.2 +0.4
T1201 S Sg 01 37 14.2 +1.7
T1204 Amatrice, Fraz 0.21 146 ⇑P Pg 01 37 10.1 +0.2
T1204 S Sg 01 37 14.1 +1.4
T1204 AML AML
comp=E,28400μm,0.2s
T1204 AML AML
comp=N,18800μm,0.6s
T1204 AML AML
comp=N,18750μm,0.6s
T1217 Poggiodomo (PG 0.22 230 ⇑P Pg 01 37 10.3 +0.2
T1217 S Sg 01 37 14.1 +1.1
T1217 AML AML
comp=E,17600μm,0.4s
T1217 AML AML
comp=N,34100μm,0.3s
T1217 AML AML
comp=E,17700μm,0.4s
T1217 AML AML
comp=N,33150μm,0.3s
T1217 AML AML
comp=N,34100μm,0.3s
T1217 AML AML
comp=E,17650μm,0.3s
T1217 AML AML
comp=N,33150μm,0.2s
T1217 AML AML
comp=E,17600μm,0.4s
T1215 Vallo di Nera, 0.22 257 ⇑P Pg 01 37 10.3 +0.2
T1215 S Sg 01 37 14.0 +1.0
T1215 AML AML
comp=E,19150μm,0.5s
T1215 AML AML
comp=N,19250μm,1.6s
T1215 AML AML
comp=N,18650μm,0.5s
T1215 AML AML
comp=N,18700μm,0.5s
T1215 AML AML
comp=E,19900μm,0.4s
T1215 AML AML
comp=N,19250μm,1.6s
T1215 AML AML
comp=E,19200μm,0.5s
T1215 AML AML
comp=E,19850μm,0.4s
T1215 AML AML
comp=N,19300μm,1.6s
CESI CESI - Serrava 0.24 309 P Pg 01 37 10.7 +0.2
CESI S Sg 01 37 14.7 +1.0
CESI AML AML
comp=E,46200μm,0.5s
CESI AML AML
comp=N,70750μm,0.5s
GUMA Gualdo di Mace 0.25 31 ⇑P Pg 01 37 11.1 +0.5
GUMA S Sg 01 37 15.6 +1.7
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
SMA1 SAN MARTINO 0.26 149 ⇑P Pg 01 37 10.8 0.0
SMA1 S Sg 01 37 15.5 +1.3
SMA1 AML AML
comp=E,27300μm,0.5s
SMA1 AML AML
comp=N,27000μm,0.5s
LNSS Leonessa 0.26 199 ⇑P Pg 01 37 11.0 +0.1
LNSS S Sg 01 37 15.5 +1.1
LNSS AML AML
comp=E,43350μm,0.3s
LNSS AML AML
comp=E,43400μm,0.3s
LNSS AML AML
comp=N,41600μm,0.8s
T1243 Rocca Santa Ma 0.26 126 ⇑P Pg 01 37 10.8 -0.1
T1243 S Sg 01 37 15.1 +0.7
SEF1 Sefro 0.33 332 P Pg 01 37 12.4 +0.2
SEF1 S Sg 01 37 17.8 +1.1
SEF1 AML AML
comp=E,30550μm,0.2s
SEF1 AML AML
comp=E,30500μm,0.2s
SEF1 AML AML
comp=N,21900μm,0.2s
SEF1 AML AML
comp=E,30550μm,0.3s
RM33 Pellescritta (0.34 173 ⇑P Pg 01 37 12.3 -0.1
RM33 S Sg 01 37 17.8 +0.8
RM33 AML AML
comp=E,15800μm,1.4s
RM33 AML AML
comp=E,15700μm,1.4s
RM33 AML AML
comp=N,11005μm,1.6s
RM33 AML AML
comp=N,10980μm,1.6s
RM33 AML AML
comp=E,15800μm,1.4s
RM33 AML AML
comp=N,11050μm,1.6s
T1246 Crognaleto (TE 0.36 137 ⇑P Pg 01 37 12.6 -0.2
T1246 S Sg 01 37 18.4 +0.8
MNTP Montappone 0.36 38 ⇑P Pb 01 37 13.4 -1.2
MNTP S Sb 01 37 20.4 -0.3
CAMP Campotosto 0.37 150 ⇑P Pg 01 37 12.6 -0.3
CAMP S Sg 01 37 18.4 +0.7
CAMP AML AML
comp=E,5140μm,0.6s
CAMP AML AML
comp=N,6165μm,0.5s
FIU1 Fiuminata 0.38 334 P Pg 01 37 13.4 +0.4
FIU1 S Sg 01 37 19.2 +1.2
T1211 Morro Reatino 0.39 215 ⇑P Pg 01 37 13.1 -0.2
T1211 S Sg 01 37 19.8 +1.4
T1211 AML AML
comp=E,11995μm,0.3s
T1211 AML AML
comp=N,26450μm,0.3s
T1211 AML AML
comp=E,12700μm,0.3s
T1211 AML AML
comp=N,26500μm,0.3s
T1211 AML AML
comp=N,26100μm,0.2s
T1211 AML AML
comp=E,12005μm,0.3s
GAG1 Gagliole 0.39 350 P Pg 01 37 13.6 +0.3
GAG1 S Sb 01 37 19.9 -1.6
GAG1 AML AML
comp=E,28950μm,0.6s
GAG1 AML AML
comp=N,29250μm,0.4s
OFFI Offida 0.40 78 ⇑P Pb 01 37 14.2 -1.0
OFFI AML AML
comp=E,23050μm,0.4s
OFFI AML AML
comp=N,24100μm,0.3s
TERO Teramo 0.40 125 ⇑P Pg 01 37 13.1 -0.3
TERO S Sg 01 37 19.6 +0.9
MTL1 Matelica 0.42 345 P Pg 01 37 13.9 +0.1
MTL1 S Sb 01 37 20.8 -1.4

T1247	**Pizzolo (AQ)**	**0.42 166**	P	**Pg**	**01 37 13.7**	**-0.2**
T1247			S	**Sg**	**01 37 20.6**	**+1.2**
T1247			AML	AML		
	comp=E,12495µm,0.8s					
T1247			AML	AML		
	comp=N,12400µm,0.9s					
SNTG	**Esanatoglia**	**0.43 338**	P	**Pg**	**01 37 14.4**	**+0.2**
SNTG			S	**Sb**	**01 37 21.3**	**-1.4**
SNTG			AML	AML		
	comp=E,6335µm,0.2s					
SNTG			AML	AML		
	comp=N,8405µm,1.1s					
SNTG			AML	AML		
	comp=N,7945µm,1.1s					
SNTG			AML	AML		
	comp=E,6360µm,0.2s					
TRE1	**Treia**	**0.47 14**	P	**Pb**	**01 37 15.3**	**-1.2**
EL6	**Elcito**	**0.48 355**	P	**Pg**	**01 37 15.2**	**+0.2**
EL6			S	**Sb**	**01 37 23.1**	**-0.9**
EL6			AML	AML		
	comp=E,13050µm,0.4s					
EL6			AML	AML		
	comp=N,15440µm,1.2s					
EL6			AML	AML		
	comp=N,15495µm,1.2s					
EL6			AML	AML		
	comp=E,13000µm,0.4s					
EL6			AML	AML		
	comp=N,15450µm,1.2s					
CESX	**Cesi**	**0.49 241**	⇑P	**Pg**	**01 37 14.8**	**-0.3**
CESX			S	**Sg**	**01 37 23.2**	**+1.6**
CESX			AML	AML		
	comp=N,8460µm,0.5s					
CESX			AML	AML		
	comp=E,7665µm,0.5s					
GIGS	**Gran Sasso**	**0.50 143**	P	**Pg**	**01 37 14.8**	**-0.6**
GIGS			S	**Sg**	**01 37 22.9**	**+0.9**
GIGS			AML	AML		
	comp=E,1425µm,0.3s					
GIGS			AML	AML		
	comp=N,1349µm,0.2s					
ATCC	**AVT- Casa Cast**	**0.51 311**	P	**Pg**	**01 37 15.5**	**0.0**
ATCC			AML	AML		
	comp=N,13950µm,0.6s					
ATCC			AML	AML		
	comp=E,14800µm,1.2s					
ATCC			AML	AML		
	comp=N,13900µm,0.6s					
AQU	**L'Aquila**	**0.53 160**	⇑P	**Pg**	**01 37 15.5**	**-0.4**
AQU			AML	AML		
	comp=E,3850µm,0.6s					
AQU			AML	AML		
	comp=N,5680µm,0.6s					
AQU			AML	AML		
	comp=E,3845µm,0.6s					
AQU			AML	AML		
	comp=N,5760µm,0.6s					
AQU			AML	AML		
	comp=E,3705µm,1.0s					
TRTR	**Tortoreto Alta**	**0.56 94**	⇑P	**Pb**	**01 37 17.4**	**-0.5**
TRTR			AML	AML		
	comp=E,20050µm,0.5s					
TRTR			AML	AML		
	comp=N,22450µm,0.5s					
CADA	**Capodarco di F**	**0.56 52**	P	**Pb**	**01 37 17.8**	**-0.2**
FIAM	**Fiamignano**	**0.58 183**	⇑P	**Pg**	**01 37 16.4**	**-0.6**
FIAM			AML	AML		
	comp=E,4535µm,0.8s					
FIAM			AML	AML		
	comp=N,3030µm,1.6s					
MMUR	**Monte Murano**	**0.60 349**	P	**Pg**	**01 37 17.4**	**+0.1**
MMUR			AML	AML		
	comp=N,9960µm,0.9s					
MMUR			AML	AML		
	comp=E,12400µm,0.4s					
MURB	**Monte Urbino**	**0.62 312**	P	**Pg**	**01 37 17.6**	**-0.1**
MURB			AML	AML		
	comp=E,17250µm,1.0s					
MURB			AML	AML		
	comp=E,17300µm,1.0s					
MURB			AML	AML		
	comp=N,16000µm,1.1s					
MURB			AML	AML		
	comp=E,19500µm,1.0s					
MURB			AML	AML		
	comp=N,16050µm,0.4s					
PP3	**Marolino**	**0.62 32**	P	**Pb**	**01 37 18.3**	**-0.7**
PP3			AML	AML		
	comp=E,20800µm,0.3s					
PP3			AML	AML		
	comp=N,24750µm,0.4s					
PP3			AML	AML		
	comp=N,23750µm,0.4s					
PP3			AML	AML		
	comp=E,22300µm,0.3s					
PP3			AML	AML		
	comp=N,23800µm,0.4s					
PP3			AML	AML		
	comp=E,22250µm,0.3s					
PP3			AML	AML		
	comp=N,24750µm,0.4s					
PP3			AML	AML		
	comp=E,20800µm,0.3s					
FAGN	**Fagnano**	**0.66 152**	P	**Pg**	**01 37 18.2**	**-0.3**
FAGN			AML	AML		
	comp=E,5980µm,1.0s					
FAGN			AML	AML		
	comp=N,7895µm,0.4s					
ARVD	**Arcevia**	**0.67 346**	P	**Pg**	**01 37 18.6**	**+0.1**
ARVD			AML	AML		
	comp=N,2455µm,0.2s					
ARVD			AML	AML		
	comp=E,3540µm,0.4s					
ATFO	**Monte Foce - G**	**0.67 320**	P	**Pg**	**01 37 18.6**	**-0.1**
ATFO			AML	AML		
	comp=E,4400µm,0.8s					
ATFO			AML	AML		
	comp=E,4405µm,0.8s					
ATFO			AML	AML		
	comp=N,3585µm,0.2s					
VCEL	**Villa Celiera**	**0.68 132**	⇑P	**Pg**	**01 37 18.4**	**-0.4**
ATTE	**AVT- Monte Tez**	**0.69 301**	P	**Pg**	**01 37 18.5**	**-0.4**
ATTE			AML	AML		
	comp=N,3515µm,1.5s					
ATTE			AML	AML		
	comp=E,4185µm,0.5s					
FRON	**Frontone**	**0.74 335**	P	**Pg**	**01 37 19.4**	**-0.5**
FRON			AML	AML		
	comp=N,4675µm,0.8s					
FRON			AML	AML		
	comp=E,2955µm,0.5s					
ATVO	**AVT- Monte Val**	**0.77 314**	P	**Pg**	**01 37 19.9**	**-0.5**
ATVO			AML	AML		
	comp=E,3010µm,1.2s					
ATVO			AML	AML		
	comp=N,2735µm,0.4s					
ATVO			AML	AML		
	comp=E,3005µm,1.2s					
AOI	**Ancona**	**0.77 25**	P	**Pb**	**01 37 20.5**	**-1.1**
AOI			AML	AML		
	comp=E,6550µm,0.4s					
AOI			AML	AML		
	comp=N,4150µm,1.3s					
MGAB	**Montegabbione**	**0.77 275**	P	**Pg**	**01 37 20.2**	**-0.3**
MGAB			AML	AML		
	comp=E,5470µm,0.6s					
MGAB			AML	AML		
	comp=N,8550µm,0.5s					
MGAB			AML	AML		
	comp=N,8285µm,0.5s					
MGAB			AML	AML		
	comp=E,6175µm,0.5s					
T0110	**Collepietro**	**0.78 144**	P	**Pg**	**01 37 19.8**	**-0.8**
T0110			AML	AML		
	comp=N,5760µm,0.5s					
T0110			AML	AML		
	comp=E,5515µm,0.4s					
SRES	**S.Oreste - Sor**	**0.78 218**	P	**Pg**	**01 37 20.3**	**-0.4**
SRES			AML	AML		
	comp=N,2370µm,1.5s					
SRES			AML	AML		
	comp=E,2050µm,1.0s					
ATMI	**Monte Miggiano**	**0.81 307**	P	**Pg**	**01 37 21.6**	**+0.3**
ATMI			AML	AML		
	comp=E,7125µm,0.8s					
ATMI			AML	AML		
	comp=N,8365µm,1.0s					
ATPI	**Pietralunga -**	**0.82 317**	P	**Pg**	**01 37 21.2**	**-0.2**
ATPI			AML	AML		
	comp=E,3230µm,1.0s					
ATPI			AML	AML		
	comp=N,2825µm,0.5s					
PIEI	**Pieia**	**0.82 327**	P	**Pg**	**01 37 21.3**	**-0.2**
PIEI			AML	AML		
	comp=N,2015µm,1.5s					
PIEI			AML	AML		
	comp=E,2265µm,0.9s					
MPAG	**Monte Paganucc**	**0.83 340**	P	**Pg**	**01 37 21.3**	**-0.4**
PTQR	**Pietraquaria**	**0.85 168**	P	**Pg**	**01 37 20.9**	**-1.1**
PTQR			AML	AML		
	comp=E,1585µm,0.9s					
PTQR			AML	AML		
	comp=N,1068µm,0.4s					
NARO	**Abbazia di Nar**	**0.87 331**	P	**Pg**	**01 37 22.3**	**-0.2**
NARO			AML	AML		
	comp=N,1420µm,0.6s					
NARO			AML	AML		
	comp=E,1670µm,0.3s					
MTCE	**Montecelio**	**0.88 201**	P	**Pg**	**01 37 23.9**	**+1.2**
MTCE			AML	AML		
	comp=E,2795µm,0.5s					
MTCE			AML	AML		
	comp=N,1640µm,1.0s					
FSSB	**Fossombrone**	**0.89 342**	P	**Pg**	**01 37 22.1**	**-0.6**
FSSB			AML	AML		
	comp=N,10195µm,0.4s					
FSSB			AML	AML		
	comp=E,8445µm,0.4s					
CERT	**Cerreto**	**0.91 188**	P	**Pg**	**01 37 22.1**	**-1.1**
CERT			AML	AML		
	comp=N,3370µm,0.8s					
CERT			AML	AML		
	comp=E,4915µm,0.5s					
SACS	**San Casciano d**	**0.92 270**	P	**Pg**	**01 37 24.2**	**+0.9**
SACS			AML	AML		
	comp=E,2300µm,1.3s					
SACS			AML	AML		
	comp=N,2485µm,0.9s					
SACS			AML	AML		
	comp=N,2595µm,0.8s					
SACS			AML	AML		
	comp=E,2410µm,1.3s					
BADI	**Badiali**	**0.94 315**	P	**Pg**	**01 37 23.3**	**-0.4**
CAFI	**Castiglion Fio**	**1.00 299**	P	**Pg**	**01 37 24.8**	**0.0**
CAFI			AML	AML		
	comp=N,2170µm,0.9s					
CAFI			AML	AML		
	comp=E,1975µm,0.5s					
CAFI			AML	AML		
	comp=E,2025µm,0.5s					
CAFI			AML	AML		
	comp=N,2080µm,0.9s					
INTR	**Introdacqua**	**1.00 146**	P	**Pg**	**01 37 24.5**	**-0.5**
INTR			AML	AML		
	comp=E,2µm,1.1s					
INTR			AML	AML		
	comp=N,2µm,0.6s					
INTR			AML	AML		
	comp=N,3535µm,0.6s					
INTR			AML	AML		
	comp=E,1670µm,1.1s					
VVLD	**Villa Vallelon**	**1.04 161**	P	**Pg**	**01 37 25.3**	**-0.3**
VVLD			AML	AML		
	comp=E,1570µm,0.5s					
VVLD			AML	AML		
	comp=N,1740µm,0.4s					
SSP9	**Sansepolcro**	**1.04 314**	P	**Pg**	**01 37 26.5**	**+0.8**
SSP9			AML	AML		
	comp=N,1414µm,1.5s					
SSP9			AML	AML		
	comp=E,1585µm,0.8s					
CAFR	**Castel Frentan**	**1.08 125**	P	**Pg**	**01 37 27.2**	**+0.8**
CAFR			AML	AML		
	comp=N,1970µm,0.7s					
CAFR			AML	AML		
	comp=E,1575µm,0.4s					
MCIV	**Monte Civitell**	**1.09 267**	P	**Pb**	**01 37 26.9**	**-0.2**
MCIV			AML	AML		
	comp=N,1011µm,1.1s					
MCIV			AML	AML		
	comp=E,1056µm,0.8s					
RMP	**Rome, Mte Porz**	**1.09 198**	P	**Pb**	**01 37 27.3**	**+0.2**
RMP			AML	AML		
	comp=N,2885µm,0.6s					
RMP			AML	AML		
	comp=E,2235µm,0.4s					
LPEL	**Lama dei Pelig**	**1.10 136**	P	**Pg**	**01 37 26.6**	**-0.4**
LPEL			AML	AML		
	comp=E,1595µm,1.2s					
LPEL			AML	AML		
	comp=N,1360µm,0.6s					
TOLF	**Tolfa**	**1.16 228**	P	**Pn**	**01 37 26.8**	**-1.8**
TOLF			AML	AML		
	comp=E,1730µm,0.9s					
TOLF			AML	AML		
	comp=N,1034µm,0.5s					
SF01	**Poggio Pratacc**	**1.17 269**	P	**Pn**	**01 37 28.7**	**-0.1**
POFI	**Posta Fibreno**	**1.21 160**	P	**Pn**	**01 37 28.7**	**-0.6**
LAV9	**Lanuvio**	**1.22 196**	P	**Pn**	**01 37 29.3**	**-0.1**
LAV9			AML	AML		
	comp=E,3480µm,0.8s					
LAV9			AML	AML		
	comp=N,3695µm,0.4s					
LAV9			AML	AML		
	comp=E,3225µm,0.8s					
LAV9			AML	AML		
	comp=N,3575µm,0.4s					
ARCI	**Arcidosso**	**1.24 271**	P	**Pn**	**01 37 29.6**	**-0.1**
ARCI			AML	AML		
	comp=E,356µm,0.5s					
ARCI			AML	AML		
	comp=N,358µm,1.0s					
LRP	**Arpino**	**1.25 165**	P	**Pn**	**01 37 29.4**	**-0.3**
LRP			AML	AML		
	comp=E,714µm,0.6s					
LRP			AML	AML		
	comp=N,919µm,1.5s					
GIUL	**Giuliano Di Ro**	**1.29 177**	P	**Pn**	**01 37 29.6**	**-0.8**
GIUL			AML	AML		
	comp=E,838µm,1.4s					
GIUL			AML	AML		
	comp=N,676µm,0.5s					
LATB	**Latina**	**1.36 186**	P	**Pn**	**01 37 30.1**	**-1.3**
LATB			AML	AML		
	comp=N,358µm,1.0s					
LATB			AML	AML		
	comp=E,364µm,0.8s					
LIK	**San Giovanni I**	**1.38 167**	P	**Pn**	**01 37 32.2**	**+0.7**
CERA	**Filignano**	**1.41 153**	P	**Pn**	**01 37 31.3**	**-0.7**
CERA			AML	AML		
	comp=E,1026µm,0.6s					
CERA			AML	AML		
	comp=N,1105µm,1.4s					
CERA			AML	AML		
	comp=E,1038µm,0.6s					
CERA			AML	AML		
	comp=N,1053µm,0.7s					
FRES	**Fresagrandinar**	**1.42 128**	P	**Pb**	**01 37 33.0**	**+0.4**
FRES			AML	AML		
	comp=N,821µm,0.7s					
FRES			AML	AML		
	comp=E,1050µm,0.7s					
TRIV	**Trivento**	**1.50 136**	P	**Pb**	**01 37 34.8**	**+0.8**
TRIV			AML	AML		
	comp=N,1140µm,0.7s					
TRIV			AML	AML		
	comp=E,1140µm,0.8s					
OSSC	**Osservatorio P**	**1.55 296**	P	**Pn**	**01 37 34.0**	**0.0**
OSSC			AML	AML		
	comp=N,406µm,1.0s					
OSSC			AML	AML		
	comp=N,565µm,0.8s					
OSSC			AML	AML		
	comp=E,583µm,0.6s					
OSSC			AML	AML		
	comp=E,378µm,0.9s					
MAON	**Monte Argentar**	**1.56 255**	P	**Pn**	**01 37 33.1**	**-0.9**
MAON			AML	AML		
	comp=E,331µm,1.1s					
MAON			AML	AML		
	comp=N,265µm,0.9s					
RUFI	**Rufina**	**1.56 310**	P	**Pn**	**01 37 34.6**	**+0.6**
TRIF	**Trifonti**	**1.68 280**	P	**Pn**	**01 37 35.2**	**-0.4**
TRIF			AML	AML		
	comp=E,416µm,0.5s					
TRIF			AML	AML		
	comp=N,346µm,0.8s					
BSSO	**Busso**	**1.69 140**	P	**Pb**	**01 37 37.8**	**+0.6**
BSSO			AML	AML		
	comp=N,470µm,1.3s					
BSSO			AML	AML		
	comp=E,508µm,0.9s					
BSSO			AML	AML		
	comp=E,208µm,0.9s					
BSSO			AML	AML		
	comp=N,193µm,1.3s					
CASP	**Castiglione de**	**1.69 269**	P	**Pn**	**01 37 35.3**	**-0.5**
CASP			AML	AML		
	comp=E,160µm,1.1s					
CASP			AML	AML		
	comp=N,142µm,1.2s					
MODR	**Mondragone**	**1.79 162**	P	**Pn**	**01 37 37.9**	**+0.8**
MODR			AML	AML		
	comp=E,168µm,0.8s					
MODR			AML	AML		
	comp=N,335µm,1.0s					
MELA	**Melanico ??? S**	**1.86 127**	P	**Pn**	**01 37 39.1**	**+1.0**
MELA			AML	AML		
	comp=N,1570µm,0.6s					
MELA			AML	AML		
	comp=E,1155µm,0.5s					
APRC	**Apricena**	**2.08 121**	P	**Pn**	**01 37 42.0**	**+0.8**
PII	**Pisa**	**2.11 295**	P	**Pb**	**01 37 43.9**	**-0.5**
PII			AML	AML		
	comp=E,294µm,0.6s					
PII			AML	AML		
	comp=N,289µm,0.7s					
CELB	**S.Piero in Cam**	**2.17 268**	P	**Pn**	**01 37 41.7**	**-0.8**
CELB			AML	AML		
	comp=N,116µm,1.2s					
CELB			AML	AML		
	comp=E,109µm,0.9s					
SGRT	**San Giovanni R**	**2.21 119**	P	**Pn**	**01 37 43.7**	**+0.7**
SGRT			AML	AML		
	comp=N,682µm,0.9s					
SGRT			AML	AML		
	comp=E,572µm,0.4s					
MAIM	**Mastiano**	**2.22 300**	P	**Pn**	**01 37 42.8**	**-0.3**
MAIM			AML	AML		
	comp=N,257µm,0.5s					
MAIM			AML	AML		
	comp=E,180µm,0.5s					
SGTA	**Sant Agata di**	**2.38 135**	P	**Pn**	**01 37 46.5**	**+1.2**
SGTA			AML	AML		
	comp=N,202µm,0.5s					
SGTA			AML	AML		
	comp=E,362µm,0.8s					
HVAR	**Hvar**	**2.44 81**	P	**Pn**	**01 37 46.3**	**+0.2**
RIY	**Rijeka**	**2.65 21**	*e*Pn	**Pn**	**01 37 49.1**	**+0.1**
RIY			*e*Sn	**Sb**	**01 38 22.3**	**-4.1**
MORSI	**Morsiglia**	**2.79 273**	P	**Pn**	**01 37 51.5**	**+0.6**
PALZ	**Palazzo San Ge**	**2.83 131**	P	**Pn**	**01 37 52.5**	**+1.0**
PALZ			AML	AML		
	comp=E,493µm,1.1s					
PALZ			AML	AML		
	comp=N,416µm,1.2s					
MRVN	**Minervino Murg**	**2.89 127**	P	**Pn**	**01 37 52.8**	**+0.5**
MRVN			AML	AML		
	comp=N,144µm,0.7s					
MRVN			AML	AML		
	comp=E,150µm,0.9s					
SMPL	**Sampolo**	**2.96 257**	P	**Pn**	**01 37 53.8**	**+0.4**
CORF	**Corte**	**3.01 261**	P	**Pn**	**01 37 54.2**	**+0.2**
BOJS	**Bojanci**	**3.05 29**	P	**Pn**	**01 37 55.8**	**+1.3**
BOJS			AML	AML		
	comp=E,422µm,0.9s					
BOJS			AML	AML		
	comp=N,596µm,1.0s					
PGF	**Pioggiola**	**3.08 266**	*e*P	**Pn**	**01 37 55.4**	**+0.3**
PGF			*e*Sn	**Sn**	**01 38 25.9**	**-6.4**
	comp=N,126nm,1.4s					
PGF	**Pioggiola**	**3.08 266**	P	**Pn**	**01 37 55.3**	**+0.3**
SABO	**M.te Sabotino**	**3.14 6**	P	**Pn**	**01 37 55.8**	**0.0**
SABO			AML	AML		
	comp=E,440µm,0.6s					
SABO			AML	AML		
	comp=N,2080µm,0.8s					
SABO			AML	AML		
	comp=N,530µm,0.7s					
SABO			AML	AML		
	comp=E,1930µm,0.6s					
ROVR	**Rover Verones**	**3.17 333**	P	**Pn**	**01 37 56.6**	**+0.3**
ROVR			AML	AML		
	comp=N,97µm,1.0s					
ROVR			AML	AML		
	comp=E,77µm,0.4s					
CGRP	**Cima Grappa**	**3.18 343**	P	**Pn**	**01 37 56.9**	**+0.4**
CGRP			AML	AML		
	comp=N,398µm,0.5s					
CGRP			AML	AML		
	comp=E,390µm,1.3s					
AMUR	**Altamura**	**3.22 126**	P	**Pn**	**01 37 57.6**	**+0.7**
AMUR			AML	AML		
	comp=E,174µm,1.1s					
AMUR			AML	AML		
	comp=N,162µm,1.2s					
MIGL	**Miglionico**	**3.33 131**	P	**Pn**	**01 37 58.3**	**-0.1**
MIGL			AML	AML		
	comp=N,570µm,1.6s					
MIGL			AML	AML		
	comp=E,410µm,0.8s					
STON	**Ston**	**3.34 88**	*e*Pn	**Pn**	**01 37 57.7**	**-0.8**
STON			*e*Sn	**Sn**	**01 38 37.9**	**-0.5**
STON	**Ston**	**3.34 88**	P	**Pn**	**01 37 57.6**	**-0.9**
STON			AML	AML		
	comp=N,130µm,1.0s					
STON			AML	AML		
	comp=E,99µm,1.0s					
DOSS	**Dosso del Somm**	**3.34 336**	P	**Pn**	**01 37 59.8**	**+1.1**
DOSS			AML	AML		
	comp=N,282µm,0.8s					
DOSS			AML	AML		
	comp=E,250µm,0.8s					
DOSS			AML	AML		
	comp=N,218µm,0.5s					
DOSS			AML	AML		
	comp=E,212µm,0.5s					
SALO	**Salr**	**3.35 327**	P	**Pn**	**01 38 00.2**	**+1.5**
SALO			AML	AML		
	comp=E,254µm,0.6s					
SALO			AML	AML		
	comp=N,262µm,0.9s					
AJAC	**Base Areonaval**	**3.38 256**	P	**Pn**	**01 37 59.8**	**+0.7**
MPRI	**Monte Prat**	**3.39 358**	P	**Pn**	**01 37 59.5**	**+0.2**
MPRI			AML	AML		
	comp=N,546µm,0.5s					
MPRI			AML	AML		
	comp=E,308µm,0.4s					
STAL	**STALIGIAL**	**3.42 355**	P	**Pn**	**01 38 00.0**	**+0.3**
STAL			AML	AML		
	comp=N,341µm,0.8s					
STAL			AML	AML		
	comp=N,238µm,0.5s					
STAL			AML	AML		
	comp=E,344µm,0.7s					
STAL			AML	AML		
	comp=E,348µm,0.8s					
MATE	**Matera**	**3.45 128**	⇓P	**Pn**	**01 38 00.7**	**+0.8**
BLY	**Banja Luka**	**3.48 56**	*e*Pn	**Pn**	**01 38 01.8**	**+1.4**
BLY			*e*Sn	**Sn**	**01 38 43.3**	**+1.4**
LUSI	**Trento, Gardas**	**3.49 334**	AML	AML		
	comp=E,174µm,0.6s					
LUSI			AML	AML		
	comp=N,246µm,0.5s					
CIMO	**Cimolais**	**3.50 352**	P	**Pn**	**01 38 00.6**	**-0.1**
CIMO			AML	AML		
	comp=E,81µm,1.0s					
CIMO			AML	AML		
	comp=E,78µm,0.6s					
CIMO			AML	AML		
	comp=N,87µm,0.7s					
CIMO			AML	AML		
	comp=N,92µm,0.7s					
PTCC	**Patocco-Chiusa**	**3.56 2**	P	**Pn**	**01 38 01.2**	**-0.3**
PTCC			AML	AML		
	comp=E,130µm,0.5s					
PTCC			AML	AML		
	comp=N,133µm,0.5s					
NOCI	**Noci**	**3.57 124**	AML	AML		

comp=E,129μm,0.7s
NOCI AML AML
GAGG Gaggia 3.59 335 AML AML
comp=E,238μm,0.7s
GAGG AML AML
comp=N,200μm,0.8s
CLUD Cludinico 3.61 357 AML AML
comp=E,198μm,0.8s
CLUD AML AML
comp=N,237μm,0.9s
CLUD AML AML
comp=N,231μm,0.9s
CLUD AML AML
comp=E,232μm,0.9s
ZONE Zone 3.64 324 AML AML
comp=N,176μm,0.7s
ZONE AML AML
comp=E,187μm,0.4s
ACOM Acomizza, Ital 3.71 4 AML AML
comp=N,281μm,0.7s
ACOM AML AML
comp=E,334μm,1.2s
ACOM AML AML
comp=N,340μm,0.9s
ACOM AML AML
comp=N,268μm,0.7s
ZOU Zoufplan 3.71 358 AML AML
comp=N,174μm,1.0s
ZOU AML AML
comp=E,150μm,1.1s
ZOU AML AML
comp=N,158μm,1.6s
ZOU AML AML
comp=E,158μm,1.2s
MABI Malga Bissina 3.72 330 AML AML
comp=E,61μm,0.3s
MABI AML AML
comp=N,59μm,0.5s
FVI Forni Avoltri 3.75 356 AML AML
comp=E,158μm,0.6s
FVI AML AML
comp=N,148μm,0.6s
OBKA Obir 3.79 15 *e*Sn **Sg 01 39 13.2 +5.8**
comp=N,69nm,0.6s
MYKA Terra Mystica 3.79 5 Pn **Pn 01 38 05.9 +1.1**
comp=N,9.8nm,0.4s,SNR=6.1
TREB Trebinje 3.82 90 *e*Pn **Pn 01 38 05.7 +0.5**
TREB *e*Sn **Sn 01 38 51.1 +0.7**
KOSI Kohlern 3.83 341 AML AML
comp=E,208μm,0.6s
KOSI AML AML
comp=N,180μm,0.8s
TAR1 Taranto 3.87 126 AML AML
comp=E,100μm,0.5s
TAR1 AML AML
comp=N,128μm,0.7s
APPI Appiano 3.88 340 AML AML
comp=E,143μm,0.4s
APPI AML AML
comp=N,160μm,0.5s
ABTA Abfaltersbach 3.92 353 *e*Pn **Pn 01 38 04.8 -1.8**
comp=N,9.2nm,0.5s
KOGS Kog 4.22 30 AML AML
comp=N,689μm,1.2s
KOGS AML AML
comp=E,798μm,1.2s
SAOF Saorge 4.24 287 P **Pn 01 38 12.1 +1.3**
MUGIO Muggio 4.26 318 AML AML
comp=E,51μm,0.5s
MUGIO AML AML
comp=N,49μm,1.4s
SBF Sospel 4.29 286 *e*P **Pn 01 38 12.0 +0.3**
SBF *e*Sn **Sn 01 38 54.3 -7.8**
comp=N,28nm,0.6s
TURF col de Turini 4.35 287 P **Pn 01 38 14.7 +2.2**
FETA Feichten 4.51 338 Pn **Pn 01 38 15.1 +0.3**
comp=N,4.8nm,0.6s,SNR=8.4
PDG Podgorica 4.52 93 ⇓P **Pn 01 38 11.7 -2.9**
PDG Podgorica 4.52 93 *e*Pn **Pn 01 38 15.9 +1.2**
PDG *e*Sn **Sn 01 39 06.3 -1.2**
WTTA Wattenberg 4.54 347 Pn **Pn 01 38 14.6 -0.6**
comp=N,3.6nm,0.3s,SNR=10
WTTA *e*Sn **Sn 01 39 10.5 +2.1**
comp=N,20nm,0.5s
DAVOX Davos/Dischmat 4.57 330 Pn **Pn 01 38 14.9 -0.7**
comp=N,3.8nm,0.3s,baz=148,slow=13,SNR=20
DAVOX Sn **Sn 01 39 09.8 +0.7**
comp=N,2.1nm,0.3s,baz=17,slow=23,SNR=4.6
comp=N,12nm,0.4s
SQTA Sankt Quirin 4.58 343 *e*Pn **Pn 01 38 15.1 -0.6**
comp=N,11nm,0.3s
WATA Walderalm 4.62 347 Pn **Pn 01 38 15.6 -0.7**
comp=N,2.6nm,0.3s,SNR=6.5
CALF Calern 4.64 283 P **Pn 01 38 18.1 +1.6**
BBLS Lazići 4.67 75 *e*Pn **Pn 01 38 17.7 +0.9**
BBLS *e*Sn **Sn 01 39 10.3 -1.0**
ARSA Arzberg 4.71 20 *e*Pn **Pn 01 38 18.2 +0.9**
comp=N,2.1nm,0.3s
MOTA Moosalm 4.72 343 *i* Pn **Pn 01 38 17.8 +0.2**
comp=N,3.8nm,0.9s,SNR=5.3
KOVH Kovagotottos 4.79 46 P **Pn 01 38 17.5 -0.9**
KOVH S **Sn 01 39 11.4 -2.9**
BIOA Bad Ischl, Aus 4.85 4 *i* Pn **Pn 01 38 18.1 -1.2**
comp=N,14nm,0.3s,SNR=18
SURF Saint Ours 4.88 292 P **Pn 01 38 22.0 +2.1**
LMR La Mourre 4.89 278 *e*P **Pn 01 38 20.0 +0.2**
JAUF Jausiers 4.91 291 P **Pn 01 38 22.5 +2.3**
RETA Reutte 4.94 341 *i* Pn **Pn 01 38 20.0 -0.5**
comp=N,0.8nm,0.3s,SNR=16
MBDF Montbardon 4.99 294 *e*P **Pn 01 38 22.0 +0.7**
MBDF *e*Sn Sn 01 39 10.8 -8.6
comp=N,11nm,0.5s
DAVA Damuels 5.01 333 *i* Pn **Pn 01 38 24.0 +2.4**
comp=N,4.7nm,0.4s,SNR=9.9
TRIGF Trigance 5.01 283 P **Pn 01 38 22.7 +1.2**
SJES Sjenica 5.01 83 *e*Pn **Pn 01 38 22.5 +0.9**
SJES *e*Sn **Sn 01 39 19.2 -0.6**
CREF Crivoux 5.03 292 P **Pn 01 38 25.4 +3.5**
MOA Molln 5.06 8 *e*Pn **Pn 01 38 22.4 +0.3**
MOA *e*Sn **Sn 01 39 19.6 -1.3**
MOA Molln 5.06 8 *e*Pn **Pn 01 38 22.5 +0.3**
comp=N,1.8nm,0.3s
MOA *e*Sn **Sn 01 39 24.0 +3.1**
comp=N,9.6nm,0.3s
DIVS Divibare 5.13 74 *e*Pn **Pn 01 38 23.5 +0.4**
DIVS *e*Sn **Sn 01 39 22.1 -0.6**
MORH Mrgy, Hungar 5.17 48 ⇓P **Pn 01 38 26.3 +2.8**
MORH Mrgy, Hungar 5.17 48 P **Pn 01 38 24.9 +1.3**
TIR Tirane 5.21 104 ⇑P **Pn 01 38 21.9 -2.4**
TIR Tirane 5.21 104 *e*Pn **Pn 01 38 24.8 +0.6**
TIR *e*Sn **Sn 01 39 23.3 -1.3**
OGMO Fort Saint-Gob 5.23 299 P **Pn 01 38 27.0 +2.4**
DIX Grande Dixence 5.23 310 P **Pn 01 38 27.3 +2.6**
BLAF les Blancs 5.30 284 P **Pn 01 38 26.9 +1.4**
LPG La Plagne 5.31 302 *e*P **Pn 01 38 28.4 +2.5**
LPG *e*Sn Sn 01 39 16.8 -11
comp=N,18nm,0.8s
FRGS Fruska Gora 5.32 62 P **Pn 01 38 25.6 -0.1**
FRGS Fruska Gora 5.32 62 *e*Pn **Pn 01 38 25.5 -0.3**
RONA Rosalia, Austr 5.33 23 *e*Pn **Pn 01 38 25.8 0.0**
comp=N,0.4nm,0.1s
LPL La Plagne 5.33 302 *e*P **Pn 01 38 26.4 +0.3**
LPL *e*Sn **Sn 01 39 20.5 -7.5**
comp=N,13nm,0.6s
SOP Sopron 5.39 25 P **Pn 01 38 26.7 0.0**
CONA Conrad Observa 5.42 20 *e*Pn **Pn 01 38 24.9 -2.3**
comp=N,0.9nm,0.2s
TRUS Trudelj 5.44 73 *e*Pn **Pn 01 38 28.2 +0.8**
RSL Roselend 5.48 303 P **Pn 01 38 30.2 +2.1**
OGSI Sixt 5.60 307 P **Pn 01 38 32.3 +2.7**
GRUS Gruza 5.61 77 *e*Pn **Pn 01 38 30.4 +0.8**
SMRF Simiane la Rot 5.64 284 *e*P **Pn 01 38 31.6 +1.5**
AIGLE Aigle 5.64 310 P **Pn 01 38 33.4 +3.3**
ORIF Oris-en-Rattie 5.65 294 *e*P **Pn 01 38 31.0 +0.6**
ORIF *e*Sn Sn 01 39 25.5 -10
comp=N,30nm,1.1s
ORIF Oris-en-Rattie 5.65 294 P **Pn 01 38 33.6 +3.3**
SELS Selova 5.85 84 *e*Pn **Pn 01 38 32.8 -0.2**
SELS *e*Sn **Sn 01 39 38.8 -1.5**
SULZ Cheisacher 5.88 324 P **Pn 01 38 35.3 +1.8**
SULZ Cheisacher 5.88 324 S **Sn 01 39 41.3 +0.1**
TORNY Torny/Romont 5.90 314 P **Pn 01 38 36.0 +2.3**
SLE Schleitheim 5.91 328 P **Pn 01 38 34.6 +0.7**
BALST Balsthal 5.92 321 P **Pn 01 38 35.1 +1.1**

BALST Balsthal 5.92 321 S **Sn 01 39 42.8 +0.6**
OHR Ohrid 5.95 104 *i* Pn **Pn 01 38 36.4 +1.9**
GERES GERESS Array B 6.01 3 Pn **Pn 01 38 33.6 -1.6**
comp=N,1.3nm,0.3s,baz=188,slow=13,SNR=17
GERES Sn **Sn 01 39 41.9 -2.4**
comp=N,4.0nm,0.3s,baz=168,slow=25,SNR=5.9
comp=N,1.1nm,0.3s
CKRC Cesky Krumlov 6.02 7 *e*PN **Pn 01 38 34.4 -1.0**
CKRC *e*SN **Sn 01 39 41.3 -3.4**
BOURR Bourrignon 6.18 319 P **Pn 01 38 38.1 +0.5**
FELD Feldberg im Sc 6.20 326 P **Pn 01 38 38.0 +0.1**
BRANT Les Verrieres 6.26 313 P **Pn 01 38 38.5 -0.3**
CABF La Chapelle 6.28 309 *e*P **Pn 01 38 39.6 +0.6**
CABF *e*Sn Sn 01 39 41.9 -9.3
comp=N,10nm,0.7s
KHC Kasperske Hory 6.29 3 *e*PN **Pn 01 38 38.3 -0.7**
KHC *e*SN **Sn 01 39 47.6 -3.6**
BOVS Bovan 6.29 80 ⇓P **Pn 01 38 36.8 -2.3**
BOVS Bovan 6.29 80 *e*Pn **Pn 01 38 38.8 -0.2**
BOVS *e*Sn **Sn 01 39 48.5 -2.7**
KIZ Kirchzarten 6.30 326 P **Pn 01 38 40.0 +0.9**
OG35 Corcelles 6.30 303 P **Pn 01 38 40.4 +1.2**
BARS Barje 6.37 87 *e*Pn **Pn 01 38 40.6 +0.5**
BARS *e*Sn **Sn 01 39 50.7 -2.4**
VIVF Saint-Julien-I 6.45 291 *e*P **Pn 01 38 40.2 -1.1**
VIVF *e*Sn Sn 01 39 46.7 -8.6
comp=N,1.7nm,0.4s
RIVEL MONT RIVEL 6.46 310 P **Pn 01 38 42.9 +1.5**
VOGT Vogtsburg - To 6.50 325 P **Pn 01 38 42.8 +0.9**
VOGT Vogtsburg - To 6.50 325 S **Sn 01 39 57.4 +1.0**
MOF Molkenrain 6.56 322 P **Pn 01 38 41.0 -1.8**
MOF S **Sn 01 39 55.8 -2.1**
KRUC Moravsky 6.61 19 *e*PN **Pn 01 38 43.4 0.0**
KRUC *e*SN **Sn 01 39 54.7 -4.3**
TREC Trest 6.64 13 *e*SN **Sn 01 39 56.8 -3.1**
HINF Hinteralfeld 6.66 320 *e*P **Pn 01 38 44.4 +0.2**
HINF *e*Sn Sn 01 39 49.7 -11
comp=N,21nm,0.6s
BZS Buzias 6.67 63 ⇑P **Pn 01 38 44.2 -0.1**
RONF Ronchamp 6.69 319 P **Pn 01 38 45.5 +1.0**
RONF S **Sn 01 39 59.8 -1.1**
ZAGS Zajecar 6.69 79 *e*Pn **Pn 01 38 44.1 -0.4**
STIP Stip 6.80 97 *i* Pn **Pn 01 38 48.6 +2.6**
ECH Echery 6.82 324 P **Pn 01 38 44.3 -2.0**
ECH S **Sn 01 40 02.5 -1.8**
LASF Ste Croix 6.88 283 *e*P **Pn 01 38 47.8 +0.7**
VRAC Vranov 6.88 19 Pn **Pn 01 38 47.0 -0.2**
comp=N,0.2nm,0.3s,baz=201,slow=14,SNR=1.8
comp=N,0.6nm,0.3s
WLS Welschbruch 6.89 326 P **Pn 01 38 48.2 +0.8**
CDF Champ du Feu 6.92 325 *e*Pn **Pn 01 38 45.2 -2.6**
CDF Champ du Feu 6.92 325 *e*P **Pn 01 38 48.1 +0.3**
CDF *e*Sn Sn 01 39 55.6 -11
comp=N,17nm,0.6s
HERR Herculane 6.99 70 ⇓P **Pn 01 38 47.0 -1.7**
BLKB Belogradchik 6.99 80 ⇑P **Pn 01 38 46.0 -2.7**
HAU Haudompre 7.04 319 *e*P **Pn 01 38 49.3 0.0**
HAU *e*Sn Sn 01 39 58.1 -11
comp=N,50nm,0.8s
PRU Pruhonice 7.20 7 *e*SN **Sn 01 40 09.2 -4.4**
GZR Gura Zlata 7.37 67 ⇓P **Pn 01 38 52.6 -1.3**
NKC Novy Kostel 7.40 356 *e*SN **Sn 01 40 14.8 -3.7**
VTS Vitosha 7.42 88 ⇑P **Pn 01 38 51.6 -3.1**
DEV Deva 7.61 63 ⇓P **Pn 01 38 56.6 -0.6**
SMF Signal de Mont 7.64 303 *e*P **Pn 01 38 57.5 -0.1**
SMF *e*Sn Sn 01 40 13.9 -11
comp=N,14nm,0.8s
KEST Kesra 7.70 204 Pn **Pn 01 39 01.1 +2.6**
comp=N,0.1nm,0.3s,baz=60,slow=20,SNR=1.8
comp=N,1.5nm,0.7s
PAGF Fort de Pagny 7.72 320 *e*P **Pn 01 38 58.8 +0.2**
baz=128
PAGF *e*Sn Sn 01 40 14.5 -12
comp=N,26nm,0.9s,baz=160
SFTF Sexfontaines 7.82 316 *e*P **Pn 01 39 00.0 0.0**
baz=137
SFTF *e*Sn Sn 01 40 18.0 -11
comp=N,7.4nm,0.5s
DRGR 7.85 57 P **Pn 01 39 01.3 +0.8**
LOR Lormes 7.93 307 *e*P **Pn 01 39 01.4 -0.1**
baz=119
LOR *e*Sn Sn 01 40 21.5 -10
comp=N,5.0nm,0.4s
AVF Avril sur Loir 8.01 303 *e*P **Pn 01 39 02.3 -0.3**
MEZF Maizieres J'vi 8.01 318 *e*P **Pn 01 39 02.7 +0.1**
baz=129
MEZF *e*Sn Sn 01 40 22.9 -11
comp=N,8.4nm,0.5s
SSF Saint Saulge 8.04 305 *e*P **Pn 01 39 02.6 -0.4**
SSF *e*Sn Sn 01 40 23.2 -11
comp=N,58nm,1.8s
SAVF Savonnieres en 8.05 319 *e*P **Pn 01 39 01.9 -1.2**
MARR Marisel-Cluj 8.05 58 ⇓P **Pn 01 39 03.3 0.0**
BGF Bois d'Agland 8.23 300 *e*P **Pn 01 39 05.4 -0.2**
BGF *e*Sn Sn 01 40 29.6 -9.2
comp=N,3.8nm,0.4s
CAF Calviac 8.28 288 *e*P **Pn 01 39 06.5 +0.2**
CAF *e*Sn Sn 01 40 29.8 -10
comp=N,0.5nm,0.3s
CLL Collm 8.46 359 *e*Pn **Pn 01 39 09.0 +0.2**
CLL *e*Sn **Sn 01 40 36.0 -8.5**
CLL *e*Sg **Sg 01 41 41.0 +3.9**
comp=Z,14nm,1.2s
TCF Toulx Ste Croi 8.54 297 *e*P **Pn 01 39 10.6 +0.7**
TCF *e*Sn Sn 01 40 37.0 -10
comp=Z,1.0nm,0.4s
HYF Humbligny 8.65 304 *e*P **Pn 01 39 12.0 +0.5**
RJF Les Rejaudoux 8.73 290 *e*P **Pn 01 39 13.1 +0.5**
GIVF Givet 9.25 324 *e*Pn Pn 01 39 13.8 -5.8
ESDC Sonseca Array 13.27 262 Pn **Pn 01 40 15.4 +0.7**
baz=67,slow=12,SNR=2.5
comp=Z,0.3nm,0.8s
MMAI Mount Meron Ar 20.05 112 P Pn 01 41 42.6 +1.2
comp=Z,2.6nm,0.8s,baz=316,slow=10,SNR=3.7
comp=Z,2.6nm,0.8s
FINES FINESS Array B 20.16 18 P **P 01 41 39.7 -0.8**
comp=Z,1.7nm,0.8s,baz=197,slow=19,SNR=1.5
comp=Z,1.7nm,0.8s
TORD Torodi Ar. Bea 31.21 202 P **P 01 43 26.3 +0.3**
comp=Z,0.7nm,0.8s,baz=26,slow=10,SNR=4.2
comp=Z,0.7nm,0.8s
MKAR Makanchi Array 47.75 60 P **P 01 45 45.2 +1.7**
comp=Z,0.4nm,0.6s,baz=293,slow=6.3,SNR=4.2
comp=Z,0.4nm,0.6s
SONM Songino Array 61.78 50 P **P 01 47 27.3 +2.0**
comp=Z,0.4nm,0.7s,baz=292,slow=7.6,SNR=2.4
comp=Z,0.4nm,0.7s

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*BGS **27** 02:08:29.5±0.6, 50°.51N×4°.53W, h11km±3km, ML2.3*
*STR **27** 02:08:29.6±0.6, 51°N±4'×±', h9km, MLv2.6/5, Error*
ellipse: s-maj=0.0km s-min=0.0km az=146.8, preliminary
*LDG **27** 02:08:29.9±0.1, 50°.49N×4°.52W, h10km, Ml2.8/23, Error*
ellipse: s-maj=2.3km s-min=1.9km az=89.0
ISC 27 02:08:27.7±0.9, 50°.57N±0°.02×4°.57W±0°.03, h23km±6km,
n63, σ2°45/94, 4C-2D, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBD	**Saint Breward**	**0.07**	**266**	*e*P	**Pb**	**02 08 32.6**	**+0.8**
SBD				*e*S	**Sb**	**02 08 34.6**	**0.0**
SBD				IAML		02 08 34.7	
	comp=N,2μm,0.1s						
SBD				IAML		02 08 34.8	
	comp=E,1μm,0.1s						
SBD	**Saint Breward**	**0.07**	**266**	*e*P	**Pb**	**02 08 32.6**	**+0.8**
SBD				*e*S	**Sb**	**02 08 34.6**	**0.0**
SBD				IAML		02 08 34.7	
	comp=N,2μm,0.1s						
SBD				IAML		02 08 34.8	
	comp=E,1μm,0.1s						
HTL	**Hartland**	**0.43**	**7**	⇑*i*P	**Pn**	**02 08 39.2**	**+0.7**
HTL				*e*S	**Sn**	**02 08 45.5**	**-0.2**
HTL				IAML		02 08 46.4	
	comp=N,238nm,0.2s						
HTL				IAML		02 08 46.7	
	comp=E,233nm,0.1s						
HTL	**Hartland**	**0.43**	**7**	⇑*i*P	**Pn**	**02 08 39.2**	**+0.7**
HTL				*e*S	**Sn**	**02 08 45.5**	**-0.2**
HTL				IAML		02 08 46.4	
	comp=N,238nm,0.2s						
HTL				IAML		02 08 46.7	
	comp=E,233nm,0.1s						
HTL	**Hartland**	**0.43**	**7**	Pg	**Pn**	**02 08 39.2**	**+0.7**
HTL	**Hartland**	**0.43**	**7**	Sg	**Sn**	**02 08 45.5**	**-0.2**
DYA	**Yadsworthy**	**0.43**	**108**	⇓*i*P	**Pn**	**02 08 37.4**	**-1.2**
DYA				*e*S	**Sb**	**02 08 42.6**	**-0.1**
DYA				IAML		02 08 42.9	
	comp=N,505nm,0.2s						
DYA				IAML		02 08 42.9	
	comp=E,236nm,0.2s						
DYA	**Yadsworthy**	**0.43**	**108**	⇓*i*P	**Pn**	**02 08 37.4**	**-1.2**
DYA				*e*S	**Sb**	**02 08 42.6**	**-0.1**
DYA				IAML		02 08 42.9	
	comp=N,505nm,0.2s						
DYA				IAML		02 08 42.9	
	comp=E,236nm,0.2s						
DYA	**Yadsworthy**	**0.43**	**108**	Pg	**Pn**	**02 08 37.4**	**-1.2**
DYA	**Yadsworthy**	**0.43**	**108**	Sg	**Sb**	**02 08 42.6**	**-0.1**
CCA1	**Carnmenellis**	**0.57**	**228**	⇑*i*P	**Pn**	**02 08 40.3**	**-0.2**
CCA1				*e*S	**Sb**	**02 08 47.3**	**+0.5**
CCA1	**Carnmenellis**	**0.57**	**228**	⇑*i*P	**Pn**	**02 08 40.3**	**-0.2**
CCA1				*e*S	**Sb**	**02 08 47.3**	**+0.5**
CCA1	**Carnmenellis**	**0.57**	**228**	Pg	**Pn**	**02 08 40.2**	**-0.2**
CCA1	**Carnmenellis**	**0.57**	**228**	Sg	**Sb**	**02 08 47.3**	**+0.5**
RSBS	**Rosebush, Pemb**	**1.39**	**356**	*e*P	**Pb**	**02 08 54.3**	**+1.3**
RSBS				IAML		02 09 16.0	
	comp=E,18nm,0.1s						
RSBS				IAML		02 09 16.3	
	comp=N,19nm,0.2s						
RSBS	**Rosebush, Pemb**	**1.39**	**356**	*e*P	**Pb**	**02 08 54.3**	**+1.3**
RSBS				IAML		02 09 16.0	
	comp=E,18nm,0.1s						
RSBS				IAML		02 09 16.3	
	comp=N,19nm,0.2s						
OLDB	**Oldbury-Upon-S**	**1.68**	**49**	*e*P	**Pb**	**02 08 58.4**	**+0.6**
OLDB	**Oldbury-Upon-S**	**1.68**	**49**	*e*P	**Pb**	**02 08 58.4**	**+0.6**
MONM	**Monmouth**	**1.69**	**40**	*e*P	**Pb**	**02 08 58.4**	**+0.3**
MONM				IAML		02 09 24.4	
	comp=N,19nm,0.2s						
MONM				IAML		02 09 26.1	
	comp=E,20nm,0.3s						
MONM	**Monmouth**	**1.69**	**40**	*e*P	**Pb**	**02 08 58.4**	**+0.3**
MONM				IAML		02 09 24.4	
	comp=N,19nm,0.2s						
MONM				IAML		02 09 26.1	
	comp=E,20nm,0.3s						
STRD	**Stroud**	**1.94**	**50**	*e*P	**Pb**	**02 09 02.2**	**-0.1**
STRD	**Stroud**	**1.94**	**50**	*e*P	**Pb**	**02 09 02.2**	**-0.1**
SWN1	**Swindon**	**1.99**	**61**	Pn	**Pb**	**02 09 03.6**	**+0.5**
SWN1	**Swindon**	**1.99**	**61**	Pg	Pb	02 09 07.4	+4.3
SWN1				Sn	**Sb**	**02 09 29.1**	**+1.7**
JSA	**Saint Aubin**	**2.08**	**131**	*e*P	**Pb**	**02 09 06.4**	**+1.7**
JSA				IAML		02 09 33.5	
	comp=E,14nm,0.2s						
JSA				IAML		02 09 39.4	
	comp=N,9.4nm,0.4s						
JSA	**Saint Aubin**	**2.08**	**131**	*e*P	**Pb**	**02 09 06.4**	**+1.7**
JSA				IAML		02 09 33.5	
	comp=E,14nm,0.2s						
JSA				IAML		02 09 39.4	
	comp=N,9.4nm,0.4s						
JSA	**Saint Aubin**	**2.08**	**131**	Pg	**Pb**	**02 09 06.3**	**+1.6**
JSA	**Saint Aubin**	**2.08**	**131**	Pn	**Pb**	**02 09 02.3**	**-2.4**
JSA	**Saint Aubin**	**2.08**	**131**	Sg	**Sb**	**02 09 32.1**	**+2.1**
HLM1	**Long Mynd**	**2.22**	**28**	*e*P	**Pb**	**02 09 05.8**	**-1.4**
HLM1				IAML		02 09 43.0	
	comp=E,8.0nm,0.5s						
HLM1				IAML		02 09 43.2	
	comp=N,10nm,0.6s						
HLM1	**Long Mynd**	**2.22**	**28**	*e*P	**Pb**	**02 09 05.8**	**-1.4**
HLM1				IAML		02 09 43.0	
	comp=E,8.0nm,0.5s						
HLM1				IAML		02 09 43.2	
	comp=N,10nm,0.6s						
ROSF	**Rostrenen**	**2.39**	**159**	*e*Pn	**Pn**	**02 09 06.3**	**+0.8**
ROSF	**Rostrenen**	**2.39**	**159**	*e*P	**Pb**	**02 09 08.5**	**-1.5**
ROSF	**Rostrenen**	**2.39**	**159**	*e*Pg	**Pb**	**02 09 12.4**	**+2.4**
ROSF				*e*Sn	**Sn**	**02 09 32.7**	**-1.4**
ROSF				*e*Sg	**Sb**	**02 09 42.1**	**+3.0**
	comp=N,10nm,0.3s						
SGMF	**Saint Gilles**	**2.66**	**150**	*e*Pn	**Pn**	**02 09 09.7**	**+0.4**
SGMF	**Saint Gilles**	**2.66**	**150**	*e*Pg	**Pb**	**02 09 17.7**	**+3.0**
SGMF				*e*Sn	**Sn**	**02 09 39.4**	**-1.4**
SGMF				*e*Sg	**Sb**	**02 09 50.9**	**+4.0**
	comp=N,8.9nm,0.3s						
QUIF	**Quistinic**	**2.81**	**160**	*e*Pn	**Pn**	**02 09 11.8**	**+0.5**
QUIF	**Quistinic**	**2.81**	**160**	*e*Pg	**Pb**	**02 09 19.9**	**+2.7**
QUIF				*e*Sn	**Sn**	**02 09 42.6**	**-1.8**
QUIF				*e*Sg	**Sb**	**02 09 55.7**	**+4.6**
	comp=N,10nm,0.3s						
FLN	**La Foliniere**	**3.21**	**123**	*e*Pn	**Pn**	**02 09 17.4**	**+0.6**
	baz=300						
FLN	**La Foliniere**	**3.21**	**123**	*e*Pg	**Pb**	**02 09 27.9**	**+3.8**
	baz=307						
FLN				*e*Sn	**Sn**	**02 09 52.5**	**-1.8**
FLN				*e*Sg	**Sb**	**02 10 07.5**	**+4.8**
	comp=N,16nm,0.4s,baz=305						
GRR	**Gorron**	**3.26**	**131**	*e*Pn	**Pn**	**02 09 17.9**	**+0.5**
GRR	**Gorron**	**3.26**	**131**	*e*Pg	Pb	02 09 28.8	+4.0
GRR				*e*Sn	**Sn**	**02 09 53.1**	**-2.4**
GRR				*e*Sg	**Sb**	**02 10 10.2**	**+6.1**
	comp=N,9.3nm,0.3s						
LDF	**La Druitiere**	**3.50**	**123**	*e*Pn	**Pn**	**02 09 21.6**	**+0.8**
LDF	**La Druitiere**	**3.50**	**123**	*e*Pg	Pb	02 09 33.1	+4.1
LDF				*e*Sn	**Sn**	**02 10 00.2**	**-1.4**
LDF				*e*Sg	**Sb**	**02 10 14.3**	**+3.2**
	comp=N,6.5nm,0.3s						
MFF	**Saint Martin d**	**4.94**	**142**	*e*Pn	**Pn**	**02 09 40.6**	**+0.1**
MFF	**Saint Martin d**	**4.94**	**142**	*e*Pg	Pb	02 09 59.6	+6.2
MFF				*e*Sn	**Sn**	**02 10 32.7**	**-4.2**
MFF				*e*Sg	Sb	02 11 01.9	+10
	comp=N,3.4nm,0.4s						
GIVF	**Givet**	**6.03**	**91**	*e*Pn	**Pn**	**02 09 56.3**	**+0.8**
TCF	**Toulx Ste Croi**	**6.22**	**131**	*e*Pn	**Pn**	**02 09 58.3**	**+0.2**
TCF				*e*Sn	**Sn**	**02 11 03.5**	**-5.0**
	comp=N,1.1nm,0.2s						
BGF	**Bois d'Agland**	**6.35**	**126**	*e*Pn	**Pn**	**02 10 00.8**	**+0.9**
BGF				*e*Sn	**Sn**	**02 11 06.8**	**-4.9**
	comp=N,2.1nm,0.4s						
BGF				*e*Sg	Sb	02 11 46.4	+13
	comp=N,5.6nm,0.5s						
SSF	**Saint Saulge**	**6.38**	**120**	*e*Pn	**Pn**	**02 10 01.1**	**+0.7**
SSF				*e*Sn	**Sn**	**02 11 08.1**	**-4.4**
	comp=N,1.2nm,0.4s						
SSF				*e*Sg	Sb	02 11 44.0	+10
	comp=N,2.7nm,0.6s						
LOR	**Lormes**	**6.46**	**118**	*e*Pn	**Pn**	**02 10 02.0**	**+0.6**
	baz=295						
LOR				*e*Sn	**Sn**	**02 11 10.6**	**-3.8**
	comp=N,1.2nm,0.3s						
LOR				*e*Sg	Sb	02 11 50.2	+14
	comp=N,0.8nm,0.3s						
AVF	**Avril sur Loir**	**6.46**	**123**	*e*Pn	**Pn**	**02 10 02.5**	**+1.0**
AVF				*e*Sn	**Sn**	**02 11 09.4**	**-5.1**
	comp=N,0.7nm,0.4s						
MEZF	**Maizieres J'vi**	**6.59**	**105**	*e*Pn	**Pn**	**02 10 04.1**	**+0.9**
	baz=280						
RJF	**Les Rejaudoux**	**6.67**	**140**	*e*Pn	**Pn**	**02 10 05.1**	**+0.8**
RJF				*e*Sn	**Sn**	**02 11 14.9**	**-4.6**
	comp=N,1.7nm,0.3s						
RJF				*e*Sg	Sb	02 11 55.9	+14
LFF	**La Frestale**	**6.67**	**146**	*e*Pn	**Pn**	**02 10 03.9**	**-0.4**
LFF				*e*Sn	**Sn**	**02 11 13.9**	**-5.7**
	comp=N,2.1nm,0.4s						
LFF				*e*Sg	Sb	02 11 56.0	+14
SFTF	**Sexfontaines**	**6.70**	**107**	*e*Pn	**Pn**	**02 10 05.6**	**+0.9**
SFTF				*e*Sn	**Sn**	**02 11 16.9**	**-3.5**
	comp=N,1.3nm,0.2s						
SMF	**Signal de Mont**	**6.82**	**122**	*e*Pn	**Pn**	**02 10 07.3**	**+1.0**
SMF				*e*Sn	**Sn**	**02 11 17.6**	**-5.6**
	comp=N,1.0nm,0.3s						
CAF	**Calviac**	**7.20**	**139**	*e*Pn	**Pn**	**02 10 12.1**	**+0.5**
CAF				*e*Sn	**Sn**	**02 11 28.0**	**-4.7**
	comp=N,0.9nm,0.2s						
SJPF	**Ste Jean**	**7.80**	**162**	*e*Pn	**Pn**	**02 10 20.8**	**+0.9**
SJPF				*e*Sn	**Sn**	**02 11 42.0**	**-5.4**
CDF	**Champ du Feu**	**8.01**	**101**	*e*Pn	**Pn**	**02 10 23.0**	**+0.2**
CDF				*e*Sn	**Sn**	**02 11 49.0**	**-3.6**
	comp=N,0.6nm,0.2s						
CABF	**La Chapelle**	**8.10**	**115**	*e*Pn	**Pn**	**02 10 24.6**	**+0.6**
EPF	**Esparros**	**8.26**	**154**	*e*Pn	**Pn**	**02 10 26.1**	**0.0**
EPF				*e*Sn	**Sn**	**02 11 53.2**	**-5.5**
	comp=N,0.7nm,0.3s						
VIVF	**Saint-Julien-I**	**8.45**	**129**	*e*Pn	**Pn**	**02 10 29.8**	**+1.0**

MAN 27 02:12:49.7, 12°.60N×123°.45E, h7km, mb4.2, ML3.0, MS2.7,

6C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.29**	**145**	⇑*i*P	Pg	02 12 56.1	+0.7
MMPH				*i* S	Sb	02 13 01.1	-1.3
AUQP	**San Andres**	**1.04**	**314**	⇓*e*P	Pn	02 13 11.1	+0.3
CNP	**Catarman**	**1.19**	**94**	⇓*e*P	Pg	02 13 12.4	-0.1
PVCP	**Virac**	**1.20**	**35**	⇓*e*P	Pg	02 13 11.5	-1.4
OTRP	**Odiongan**	**1.42**	**261**	⇓*e*P	Pn	02 13 14.9	-1.0
GQP	**Guinayangan**	**1.63**	**323**	⇓*e*P	Pn	02 13 18.1	-0.7
GQP				*e*S	Sb	02 13 40.7	-0.1
JCNP	**Jose Panganiba**	**1.83**	**336**	⇑*e*P	Pn	02 13 22.0	+0.4
JCNP				*e*S	Sg	02 13 48.1	-0.6
GUIM	**Jordan**	**2.13**	**203**	⇓*e*P	Pb	02 13 28.8	+0.1
LQP	**Lukban**	**2.39**	**309**	⇑*i*P	Pn	02 13 29.6	+0.1
LQP				*i* S	Sg	02 14 07.6	+0.9
TABP	**Talibon, Bohol**	**2.64**	**161**	⇑*i*P	Pn	02 13 32.6	-0.2
TABP				*i* S	Sn	02 14 05.6	+0.6
TGY	**Tagaytay City**	**2.87**	**302**	*e*P	Pn	02 13 31.0	-4.9
TBP	**Tagbilaran**	**2.92**	**172**	⇑*e*P	Pn	02 13 37.0	+0.4
TBP				*i* S	Sn	02 14 14.7	+2.8
GHBP	**Garcia Hernand**	**3.07**	**164**	⇓*e*P	Pn	02 13 39.8	+1.1

MAN 27 02:24:43.0, 12°.56N × 123°.46E, h9km, mb3.9, ML2.7, MS2.3, 5C-7D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.26**	**141**	⇑*i*P	Pb	02 24 49.2	-0.7
MMPH				*i* S	Sb	02 24 54.1	-0.3
AUQP	**San Andres**	**1.07**	**315**	⇓*e*P	Pg	02 25 03.7	0.0
CNP	**Catarman**	**1.18**	**92**	⇓*e*P	Pb	02 25 04.9	-0.7
PVCP	**Virac**	**1.23**	**33**	⇓*e*P	Pn	02 25 04.7	-1.8
OTRP	**Odiongan**	**1.41**	**262**	⇓*e*P	Pn	02 25 08.9	0.0
GQP	**Guinayangan**	**1.66**	**324**	⇓*e*P	Pn	02 25 10.9	-1.4
GQP				*e*S	Sn	02 25 34.1	+0.4
JCNP	**Jose Panganiba**	**1.87**	**337**	⇑*e*P	Pn	02 25 14.7	-0.5
JCNP				*e*S	Sb	02 25 40.1	-0.8
JCNP	**Jose Panganiba**	**1.87**	**337**	⇓*e*P	Pn	02 25 15.4	+0.2
GUIM	**Jordan**	**2.10**	**204**	⇓*e*P	Pb	02 25 21.6	+0.4
LLP	**Lapu-Lapu**	**2.29**	**167**	*e*P	Pn	02 25 21.2	+0.3
LLP				*i* S	Sb	02 25 52.5	-0.3
LQP	**Lukban**	**2.42**	**310**	⇑*e*P	Pn	02 25 22.5	-0.5
LQP				*i* S	Sg	02 26 00.9	0.0
TABP	**Talibon, Bohol**	**2.60**	**161**	⇑*e*P	Pn	02 25 25.5	+0.3
TABP				*e*S	Sn	02 25 58.6	+1.6
TBP	**Tagbilaran**	**2.88**	**172**	*e*P	Pn	02 25 29.3	+0.2
GHBP	**Garcia Hernand**	**3.03**	**164**	⇓*e*P	Pn	02 25 31.5	+0.3

*IDC **27** 02:27:27.0±4.1, 13°.08N × 124°.56E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=345.5km s-min=28.2km az=64.0*

ISC 27 02:27:30.2±1.2, 12°.54N±0°.05 × 123°.38E±0°.06, h10km±9km, n15, σ1°.42/24, mb3.4/3, 7C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.30**	**128**	⇑*i*P	**Pg**	**02 27 36.0**	**-0.2**
MMPH				*i* S	**Sg**	**02 27 41.2**	**+0.9**
GQP	**Guinayangan**	**1.63**	**326**	⇑*e*P	**Pn**	**02 27 58.0**	**-1.0**
GQP				*e*S	**Sg**	**02 28 22.7**	**0.0**
JCNP	**Jose Panganiba**	**1.86**	**339**	⇓*i*P	**Pn**	**02 28 02.0**	**0.0**
JCNP				*i* S	**Sn**	**02 28 27.1**	**+1.5**
JAP	**San Jose, Anti**	**2.27**	**218**	⇓*e*P	**Pg**	**02 28 13.9**	**+0.1**
LLP	**Lapu-Lapu**	**2.29**	**165**	⇑*i*P	**Pn**	**02 28 08.8**	**+0.9**
LLP				*i* S	**Sb**	**02 28 39.2**	**-0.7**
LQP	**Lukban**	**2.38**	**311**	⇑*i*P	**Pn**	**02 28 09.5**	**+0.1**
LQP				*i* S	**Sg**	**02 28 48.4**	**+1.8**
TABP	**Talibon, Bohol**	**2.61**	**159**	⇑*i*P	**Pn**	**02 28 12.5**	**+0.1**
TABP				*i* S	**Sn**	**02 28 45.5**	**+1.4**
TGY	**Tagaytay City**	**2.84**	**303**	*e*P	**Pn**	**02 28 16.0**	**+0.4**
TBP	**Tagbilaran**	**2.87**	**171**	⇑*e*P	**Pn**	**02 28 16.8**	**+0.8**
TBP				*i* S	**Sn**	**02 28 54.0**	**+3.3**
GHBP	**Garcia Hernand**	**3.04**	**162**	⇓*i*P	**Pn**	**02 28 19.0**	**+0.7**
GHBP				*e*S	**Sn**	**02 28 51.3**	**-3.5**
SNPH	**Sibulan**	**3.19**	**183**	*e*P	**Pb**	**02 28 25.3**	**-1.6**
LUBP	**Lubang**	**3.28**	**292**	⇑*e*P	**Pn**	**02 28 21.7**	**+0.1**
LUBP				*e*S	**Sn**	**02 28 59.8**	**-0.8**
WRA	**Warramunga Arr**	**34.04**	**161**	P	**P**	**02 34 13.6**	**-1.1**
	0.4nm,1.1s,baz=343,slow=8.8,SNR=2.3 0.4nm,1.1s						
ASAR	**Alice Springs**	**37.43**	**164**	P	**P**	**02 34 44.6**	**+0.8**
	0.3nm,0.5s,baz=345,slow=6.8,SNR=2.8 0.3nm,0.5s						
MKAR	**Makanchi Array**	**48.52**	**323**	P	**P**	**02 36 13.8**	**+0.4**
	1.0nm,0.8s,baz=119,slow=8.9,SNR=6.8 1.0nm,0.8s						

*IDC **27** 02:34:51.5±2.6, 6°.28S × 133°.60E, h0km, mb3.9/3, mbtmp3.9/6, ML3.6/3, Error ellipse: s-maj=196.2km s-min=22.6km az=75.0*

*DJA **27** 02:35:11.5±0.8, 5°.5S±6°.6 × 13°.3E±°, h231km±7km, M4.2/7, mb4.1/2, mB5.0/2, MLv4.3/7, Mw(mB)4.3/2*

ISC 27 02:34:56.2±0.9, 6°.16S±0°.07 × 133°.64E±0°.08, h35km, n14, σ2°.53/21, mb3.9/4, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.51**	**337**	P	**Pn**	**02 35 49.1**	**+0.8**
FAKI				S	**Sn**	**02 36 26.9**	**-1.8**
BNDI	**Bandanaira**	**4.06**	**293**	P	**Pn**	**02 35 58.4**	**+2.5**
BNDI				S	**Sn**	**02 36 43.2**	**+0.9**
RKPI	**Ransiki, Papua**	**4.65**	**7**	P	**Pn**	**02 36 07.5**	**+3.4**
RKPI				S	**Sn**	**02 36 57.1**	**+0.2**
MSAI	**Masohi**	**5.47**	**301**	P	**Pn**	**02 36 16.4**	**+1.2**
MSAI				S	**Sn**	**02 37 13.6**	**-3.4**
SIJI	**Sorong**	**5.77**	**336**	Pn	**Pn**	**02 36 20.8**	**+1.4**
	5.5nm,0.3s,baz=55,slow=14,SNR=19						
SIJI				Sn	**Sn**	**02 37 20.2**	**-4.3**
	24nm,0.3s,baz=226,slow=22,SNR=6.3 12nm,0.3s						
SIJI	**Sorong**	**5.77**	**336**	P	**Pn**	**02 36 20.6**	**+1.2**
SIJI				S	**Sn**	**02 37 19.8**	**-4.6**
KRAI	**Karang Ratu**	**5.94**	**298**	P	**Pn**	**02 36 24.1**	**+2.3**
NLAI	**Namlea**	**7.14**	**294**	P	**Pn**	**02 36 42.3**	**+4.1**
	0.2nm8μm16nm,0.5s						
WRA	**Warramunga Arr**	**13.71**	**177**	Pn	**Pn**	**02 38 05.3**	**-3.0**
	0.2nm,0.3s,baz=353,slow=13,SNR=18						
WRA				Sn	Sn	02 40 27.2	-12
	0.4nm,0.3s,baz=350,slow=24,SNR=4.9 1.7nm,0.8s						
ASAR	**Alice Springs**	**17.40**	**179**	P	**Pn**	**02 38 54.8**	**-1.7**
	0.2nm,0.3s,baz=4.7,slow=13,SNR=22 1.7nm,0.7s						
STKA	**Stephens Creek**	**26.64**	**165**	pP	pP	02 40 43.5	+1.9
	1.6nm,0.6s,baz=338,slow=7.8,SNR=5.1						
MKAR	**Makanchi Array**	**69.56**	**325**	P	**P**	**02 46 03.0**	**+1.4**
	2.2nm,0.8s,baz=119,slow=7.2,SNR=11						
MKAR				pP	**sP**	**02 46 15.3**	**+0.3**
	0.8nm,0.6s,baz=113,slow=8.4,SNR=4.6 2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**72.49**	**332**	P	**P**	**02 46 19.6**	**+0.4**
	0.8nm,0.6s,baz=110,slow=7.8,SNR=1.6						
ZALV				pP	**pwP**	**02 46 33.1**	**+0.3**
	2.3nm,0.6s,baz=114,slow=7.2,SNR=5.7 0.8nm,0.6s						
VNDA	**Vanda**	**72.86**	**174**	P	**P**	**02 46 21.5**	**+0.4**
	0.4nm,0.8s,baz=330,slow=4.4,SNR=3.8 0.4nm,0.8s						

ROM 27 02:42:11.2±0.0, 42°.856N±0°.002 × 13°.076E±0°.003, h10km, ML2.7/34, 9C-8D, Error ellipse: s-maj=0.2km s-min=0.2km az=334.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**309**	P	Pg	02 42 13.8	+0.3
T1216				S	Sg	02 42 15.2	+0.2
T1216				AML	AML		
	comp=E,42500μm,0.2s						
T1216				AML	AML		
	comp=N,42550μm,0.3s						
T1216				AML	AML		
	comp=E,42500μm,0.2s						
T1216				AML	AML		
	comp=N,42500μm,0.3s						
T1245	**Castelsantange**	**0.08**	**90**	P	Pg	02 42 14.2	+0.4
T1245				S	Sg	02 42 16.1	+0.4
T1245				AML	AML		
	comp=E,53550μm,0.2s						
T1245				AML	AML		
	comp=N,83850μm,0.2s						
T1245				AML	AML		
	comp=N,84700μm,0.2s						
T1245				AML	AML		
	comp=E,53550μm,0.2s						
T1245				AML	AML		
	comp=E,53400μm,0.6s						
T1245				AML	AML		
	comp=N,83900μm,0.2s						
MC2	**Monte Cornacci**	**0.10**	**56**	P	Pg	02 42 14.6	+0.5
MC2				S	Sg	02 42 16.8	+0.6
FEMA	**Monte Fema**	**0.11**	**350**	P	Pg	02 42 14.6	+0.4
FEMA				AML	AML		
	comp=E,8190μm,0.4s						
FEMA				AML	AML		
	comp=N,10805μm,1.0s						
FEMA				AML	AML		
	comp=E,16250μm,0.2s						
FEMA				AML	AML		
	comp=N,16450μm,0.8s						
T1215	**Vallo di Nera,**	**0.16**	**251**	P	Pg	02 42 15.4	+0.5
T1215				S	Sg	02 42 18.4	+1.0
T1215				AML	AML		
	comp=N,1880μm,0.5s						
T1215				AML	AML		
	comp=E,2180μm,0.8s						
T1215				AML	AML		
	comp=E,2075μm,0.7s						
T1215				AML	AML		
	comp=E,2175μm,0.8s						
T1215				AML	AML		
	comp=N,1910μm,0.6s						
T1215				AML	AML		
	comp=E,2070μm,0.7s						
T1215				AML	AML		
	comp=E,2177μm,0.8s						
T1215				AML	AML		
	comp=N,1915μm,0.6s						
T1215				AML	AML		
	comp=N,1913μm,0.6s						
T1215				AML	AML		
	comp=E,2170μm,0.8s						
T1217	**Poggiodomo (PG**	**0.18**	**217**	P	Pg	02 42 15.7	+0.5
T1217				S	Sg	02 42 18.9	+1.0
T1217				AML	AML		
	comp=N,4190μm,0.7s						
T1217				AML	AML		
	comp=E,3390μm,0.7s						
T1217				AML	AML		
	comp=E,3295μm,0.7s						
T1217				AML	AML		
	comp=N,4185μm,0.7s						
T1217				AML	AML		
	comp=E,3300μm,0.7s						
T1217				AML	AML		
	comp=N,4190μm,0.7s						
T1217				AML	AML		
	comp=N,4180μm,0.7s						
T1217				AML	AML		
	comp=E,3385μm,0.7s						
MMO1	**Montemonaco**	**0.19**	**77**	P	Pg	02 42 15.9	+0.5
MMO1				S	Sg	02 42 19.1	+0.9
CESI	**CESI - Serrava**	**0.20**	**320**	P	Pg	02 42 15.9	+0.5
CESI				S	Sg	02 42 19.3	+1.0
CESI				AML	AML		
	comp=E,2955μm,0.5s						
CESI				AML	AML		
	comp=N,3595μm,0.4s						
CESI				AML	AML		
	comp=E,9240μm,0.5s						
CESI				AML	AML		
	comp=N,18500μm,0.1s						
CESI				AML	AML		
	comp=E,9245μm,0.5s						
AM05	**Amandola Campo**	**0.24**	**59**	P	Pg	02 42 16.8	+0.6
AM05				S	Sg	02 42 20.6	+1.2
AM05				AML	AML		
	comp=E,952μm,0.6s						
AM05				AML	AML		
	comp=N,1900μm,0.5s						
AM05				AML	AML		
	comp=E,956μm,0.6s						
AM05				AML	AML		
	comp=N,1905μm,0.5s						
AM05				AML	AML		
	comp=E,5330μm,0.7s						
AM05				AML	AML		
	comp=N,535μm,0.1s						
AM05				AML	AML		
	comp=E,954μm,0.6s						
T1204	**Amatrice, Fraz**	**0.25**	**135**	P	Pg	02 42 17.1	+0.7
T1204				S	Sb	02 42 21.5	-1.0
T1204				AML	AML		
	comp=E,3440μm,1.5s						
T1204				AML	AML		
	comp=N,3245μm,0.8s						
T1204				AML	AML		
	comp=E,3430μm,1.5s						
T1204				AML	AML		
	comp=E,3425μm,1.5s						
T1204				AML	AML		
	comp=N,3250μm,0.8s						
T1204				AML	AML		
	comp=N,3240μm,0.8s						
LNSS	**Leonessa**	**0.26**	**186**	P	Pg	02 42 16.9	+0.4
LNSS				S	Sg	02 42 21.2	+1.2
LNSS				AML	AML		
	comp=E,8155μm,0.2s						
LNSS				AML	AML		
	comp=N,6015μm,0.4s						
LNSS				AML	AML		
	comp=N,6020μm,0.4s						
LNSS				AML	AML		
	comp=E,8150μm,0.2s						
T1241	**Roccafluvione,**	**0.26**	**90**	P	Pg	02 42 16.8	+0.2
T1241				S	Sg	02 42 21.2	+1.0
T1241				AML	AML		
	comp=N,8930μm,0.3s						
T1241				AML	AML		
	comp=E,8550μm,0.3s						
T1241				AML	AML		
	comp=N,8925μm,0.3s						
T1241				AML	AML		
	comp=N,8895μm,0.3s						
SMA1	**SAN MARTINO**	**0.29**	**140**	P	Pg	02 42 17.9	+0.6
SMA1				S	Sb	02 42 22.6	-1.0
SMA1				AML	AML		
	comp=E,3080μm,0.5s						
SMA1				AML	AML		
	comp=N,3015μm,0.3s						
T1243	**Rocca Santa Ma**	**0.32**	**120**	P	Pg	02 42 18.0	+0.4
T1243				S	Sb	02 42 23.2	-1.0
RM33	**Pellescritta (**	**0.36**	**164**	P	Pg	02 42 18.9	+0.4
RM33				S	Sb	02 42 24.8	-0.7
RM33				AML	AML		
	comp=E,1620μm,0.1s						
RM33				AML	AML		
	comp=E,1625μm,0.1s						
RM33				AML	AML		
	comp=N,1525μm,1.4s						
RM33				AML	AML		
	comp=N,1565μm,1.2s						
RM33				AML	AML		
	comp=N,1520μm,1.4s						
RM33				AML	AML		
	comp=E,1565μm,0.1s						
T1211	**Morro Reatino**	**0.36**	**207**	P	Pg	02 42 18.8	+0.4
T1211				S	Sb	02 42 24.8	-0.7
T1211				AML	AML		
	comp=E,1935μm,0.7s						
T1211				AML	AML		
	comp=N,4725μm,0.2s						
T1211				AML	AML		
	comp=E,2055μm,0.7s						
T1211				AML	AML		
	comp=N,4715μm,0.2s						
T1211				AML	AML		
	comp=E,2050μm,0.7s						
CAMP	**Campotosto**	**0.40**	**142**	P	Pg	02 42 19.4	+0.2
CAMP				S	Sb	02 42 25.8	-1.0
CAMP				AML	AML		
	comp=E,691μm,0.2s						
CAMP				AML	AML		
	comp=N,686μm,0.5s						
CAMP				AML	AML		
	comp=N,686μm,0.5s						
SNTG	**Esanatoglia**	**0.41**	**346**	P	Pg	02 42 19.7	+0.4
SNTG				S	Sb	02 42 26.3	-0.6
SNTG				AML	AML		
	comp=E,452μm,1.5s						
SNTG				AML	AML		
	comp=N,426μm,0.5s						
SNTG				AML	AML		
	comp=E,338μm,0.4s						
SNTG				AML	AML		
	comp=N,451μm,0.6s						
SNTG				AML	AML		
	comp=N,528μm,0.5s						
SNTG				AML	AML		
	comp=N,610μm,0.5s						
SNTG				AML	AML		
	comp=E,543μm,1.0s						
SNTG				AML	AML		
	comp=E,496μm,1.2s						
CESX	**Cesi**	**0.44**	**236**	P	Pg	02 42 20.0	+0.2
CESX				S	Sb	02 42 27.0	-0.7
CESX				AML	AML		
	comp=E,1305μm,0.4s						
CESX				AML	AML		
	comp=N,1230μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.45**	**158**	P	Pb	02 42 20.7	-0.5
T1247				AML	AML		
	comp=N,1710μm,1.0s						
T1247				AML	AML		
	comp=E,1275μm,1.6s						
T1247				AML	AML		
	comp=N,1715μm,1.0s						
OFFI	**Offida**	**0.46**	**80**	⇑P	Pb	02 42 21.4	+0.1
OFFI				AML	AML		
	comp=E,2540μm,0.3s						
OFFI				AML	AML		
	comp=N,2915μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.46**	**316**	P	Pg	02 42 20.7	+0.5
ATCC				AML	AML		
	comp=E,729μm,0.9s						
ATCC				AML	AML		
	comp=N,674μm,0.7s						
ATCC				AML	AML		
	comp=E,998μm,0.2s						
ATCC				AML	AML		
	comp=N,806μm,0.6s						
GIGS	**Gran Sasso**	**0.55**	**138**	P	Pg	02 42 21.9	+0.1
GIGS				AML	AML		
	comp=E,260μm,1.4s						
GIGS				AML	AML		
	comp=N,188μm,0.2s						
GIGS				AML	AML		
	comp=N,188μm,0.2s						
AQU	**L'Aquila**	**0.56**	**154**	⇓P	Pg	02 42 22.4	+0.4
AQU				S	Sb	02 42 32.0	+0.9
AQU				AML	AML		
	comp=E,506μm,1.0s						
AQU				AML	AML		
	comp=N,490μm,0.3s						
AQU				AML	AML		
	comp=N,490μm,0.3s						
AQU				AML	AML		
	comp=E,467μm,1.0s						
AQU				AML	AML		
	comp=N,490μm,0.3s						
FIAM	**Fiamignano**	**0.59**	**177**	⇑P	Pb	02 42 23.7	0.0
FIAM				S	Sb	02 42 32.0	0.0
FIAM				AML	AML		
	comp=E,652μm,0.7s						
FIAM				AML	AML		
	comp=N,540μm,1.4s						
TRTR	**Tortoreto Alta**	**0.62**	**94**	⇑P	Pb	02 42 24.6	+0.5
TRTR				AML	AML		
	comp=E,1830μm,1.6s						
TRTR				AML	AML		
	comp=N,1880μm,1.3s						
ARVD	**Arcevia**	**0.65**	**351**	P	Pg	02 42 22.1	-1.8
ARVD				S	Sb	02 42 35.0	+1.2
PP3	**Marolino**	**0.65**	**37**	⇓P	Pb	02 42 25.2	+0.6
PP3				AML	AML		
	comp=E,1165μm,0.8s						
PP3				AML	AML		
	comp=N,1201μm,0.8s						
PP3				AML	AML		
	comp=E,1160μm,0.8s						
PP3				AML	AML		
	comp=N,1130μm,0.4s						
PP3				AML	AML		
	comp=E,1155μm,0.8s						
PP3				AML	AML		
	comp=N,1134μm,0.4s						
PP3				AML	AML		
	comp=E,1170μm,0.8s						
PP3				AML	AML		
	comp=N,1198μm,0.8s						
FAGN	**Fagnano**	**0.70**	**147**	⇑P	Pb	02 42 25.2	-0.3
FAGN				AML	AML		
	comp=E,886μm,0.5s						
FAGN				AML	AML		
	comp=E,886μm,0.5s						
FAGN				AML	AML		
	comp=N,1022μm,0.4s						
FRON	**Frontone**	**0.71**	**339**	P	Pg	02 42 25.1	+0.1
FRON				AML	AML		
	comp=E,205μm,0.6s						
FRON				AML	AML		
	comp=N,294μm,1.0s						
ATVO	**AVT- Monte Val**	**0.72**	**317**	⇑P	Pg	02 42 25.4	+0.2
ATVO				AML	AML		
	comp=N,228μm,0.6s						
ATVO				AML	AML		
	comp=E,229μm,0.4s						
VCEL	**Villa Celiera**	**0.73**	**129**	P	Pg	02 42 25.4	0.0
VCEL				AML	AML		
	comp=E,926μm,1.2s						
VCEL				AML	AML		
	comp=N,658μm,0.5s						
VCEL				AML	AML		
	comp=N,659μm,0.5s						
VCEL				AML	AML		
	comp=E,923μm,1.2s						
SRES	**S.Oreste - Sor**	**0.75**	**214**	⇓P	Pg	02 42 25.8	+0.1
SRES				S	Sn	02 42 38.0	-1.2
SRES				AML	AML		
	comp=N,626μm,0.4s						
SRES				AML	AML		
	comp=E,514μm,1.0s						
T0110	**Collepietro**	**0.82**	**140**	⇑P	Pg	02 42 26.9	-0.1
T0110				AML	AML		
	comp=E,931μm,0.5s						
T0110				AML	AML		
	comp=E,930μm,0.5s						
T0110				AML	AML		
	comp=N,598μm,0.8s						
NARO	**Abbazia di Nar**	**0.84**	**335**	⇓P	Pb	02 42 27.7	-0.1
NARO				S	Sn	02 42 41.0	-0.4
NARO				AML	AML		
	comp=N,121μm,0.8s						
NARO				AML	AML		
	comp=E,132μm,0.7s						
FSSB	**Fossombrone**	**0.86**	**345**	⇑P	Pg	02 42 28.1	+0.2
FSSB				AML	AML		
	comp=E,540μm,0.4s						
FSSB				AML	AML		
	comp=N,560μm,0.4s						
FSSB				AML	AML		
	comp=E,541μm,0.4s						
FSSB				AML	AML		
	comp=N,564μm,0.4s						
MTCE	**Montecelio**	**0.87**	**197**	⇓P	Pg	02 42 27.6	-0.4
MTCE				AML	AML		
	comp=E,333μm,0.7s						
MTCE				AML	AML		
	comp=N,378μm,0.4s						
CAFI	**Castiglion Fio**	**0.94**	**301**	⇓P	Pb	02 42 29.8	+0.2
CAFI				AML	AML		
	comp=E,205μm,0.7s						
CAFI				AML	AML		
	comp=N,245μm,0.7s						
INTR	**Introdacqua**	**1.04**	**144**	⇓P	Pg	02 42 31.0	-0.3
VVLD	**Villa Vallelon**	**1.06**	**157**	⇑P	Pg	02 42 30.0	-1.7
VVLD				AML	AML		
	comp=E,164μm,0.5s						
VVLD				AML	AML		
	comp=N,196μm,0.7s						
LPEL	**Lama dei Pelig**	**1.15**	**134**	⇑P	Pn	02 42 34.2	+0.8
POFI	**Posta Fibreno**	**1.23**	**157**	⇓P	Pn	02 42 33.9	-0.6

THE 27 02:43:01.5, 38.67N×20.62E, h8km±1km, ML0.7/5, Error ellipse: s-maj=1.1km s-min=0.4km az=88.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRAG	**Dragano-Lefkad**	**0.04**	**291**	P	Pg	02 43 02.8	-0.4
DRAG				S	Sg	02 43 04.3	-0.1
EVGI	**Lefkada island**	**0.06**	**150**	P	Pg	02 43 03.4	+0.1
EVGI				S	Sg	02 43 04.4	-0.3
	95nm,0.1s						
NYDR	**Nydri-Lefkada**	**0.07**	**55**	P	Pg	02 43 03.4	-0.1
NYDR				S	Sg	02 43 05.2	+0.2
	122nm,0.1s						
LKD2	**Lefkada island**	**0.12**	**14**	P	Pg	02 43 04.0	-0.3
LKD2				S	Sg	02 43 06.4	+0.2
	55nm,0.2s						
TSLK	**Tsoukalades, L**	**0.16**	**10**	P	Pg	02 43 04.6	-0.2
TSLK				S	Sg	02 43 07.6	+0.5
	55nm,0.2s						
FSK	**Fiskardo**	**0.22**	**192**	P	Pg	02 43 05.7	-0.2
FSK				S	Sg	02 43 09.5	+0.7
	38nm,0.2s						

ROM 27 02:43:03.5±0.1, 42.892N±0.004×13.058E±0.004, h10km, ML2.7/13, 9C-6D, Error ellipse: s-maj=0.3km s-min=0.2km az=189.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.03**	**268**	P	Pg	02 43 05.7	+0.3
T1216				S	Sg	02 43 07.2	+0.3
T1216				AML	AML		
	comp=E,42500μm,0.2s						
T1216				AML	AML		
	comp=N,42550μm,0.3s						
T1216				AML	AML		
	comp=E,42500μm,0.2s						
T1216				AML	AML		
	comp=N,42500μm,0.3s						
FEMA	**Monte Fema**	**0.07**	**355**	⇓P	Pg	02 43 06.2	+0.3
FEMA				S	Sg	02 43 07.9	+0.2
FEMA				AML	AML		
	comp=N,16400μm,0.8s						
FEMA				AML	AML		
	comp=E,16250μm,0.2s						
FEMA				AML	AML		
	comp=N,16450μm,0.8s						
MC2	**Monte Cornacci**	**0.10**	**78**	⇑P	Pg	02 43 06.7	+0.4
MC2				S	Sg	02 43 08.9	+0.5
T1245	**Castelsantange**	**0.10**	**110**	P	Pg	02 43 06.8	+0.5
T1245				S	Sg	02 43 09.0	+0.7
T1245				AML	AML		
	comp=N,11440μm,0.5s						
T1245				AML	AML		
	comp=N,11300μm,0.5s						
T1245				AML	AML		
	comp=N,11435μm,0.5s						
T1245				AML	AML		
	comp=E,8850μm,0.2s						
T1245				AML	AML		
	comp=E,9170μm,0.9s						
CESI	**CESI - Serrava**	**0.16**	**315**	⇑P	Pg	02 43 07.6	+0.5
CESI				S	Sg	02 43 10.4	+0.8
CESI				AML	AML		
	comp=E,9245μm,0.5s						
CESI				AML	AML		
	comp=N,18500μm,0.1s						
CESI				AML	AML		
	comp=E,9240μm,0.5s						
T1215	**Vallo di Nera,**	**0.17**	**237**	P	Pg	02 43 07.7	+0.6
T1215				S	Sg	02 43 10.6	+0.9
T1215				AML	AML		
	comp=E,1665μm,1.2s						
T1215				AML	AML		
	comp=N,1455μm,0.3s						
T1215				AML	AML		
	comp=N,1385μm,0.7s						
T1215				AML	AML		
	comp=E,1655μm,1.2s						
MMO1	**Montemonaco**	**0.20**	**88**	P	Pg	02 43 08.2	+0.5
MMO1				S	Sg	02 43 11.7	+1.0
T1217	**Poggiodomo (PG**	**0.20**	**207**	⇑P	Pg	02 43 08.4	+0.6
T1217				S	Sg	02 43 12.0	+1.3
T1217				AML	AML		
	comp=E,800μm,0.8s						
T1217				AML	AML		
	comp=N,1325μm,0.8s						
T1217				AML	AML		
	comp=E,792μm,1.3s						
T1217				AML	AML		
	comp=N,1166μm,0.8s						
T1217				AML	AML		
	comp=E,800μm,0.8s						
T1217				AML	AML		
	comp=N,1326μm,0.8s						
AM05	**Amandola Campo**	**0.23**	**68**	⇑P	Pg	02 43 08.9	+0.6
AM05				S	Sg	02 43 12.7	+1.1
GUMA	**Gualdo di Mace**	**0.27**	**50**	⇑P	Pg	02 43 09.6	+0.7
GUMA				S	Sb	02 43 14.4	-0.6
GUMA				AML	AML		
	comp=N,4820μm,0.6s						
GUMA				AML	AML		
	comp=E,5705μm,0.7s						
GUMA				AML	AML		
	comp=N,6060μm,0.5s						
GUMA				AML	AML		
	comp=E,6025μm,0.6s						
SEF1	**Sefro**	**0.27**	**342**	⇑P	Pg	02 43 09.4	+0.4
SEF1				AML	AML		
	comp=E,2375μm,1.2s						
SEF1				AML	AML		
	comp=N,2626μm,1.5s						
SEF1				AML	AML		
	comp=N,2755μm,0.7s						
SEF1				AML	AML		
	comp=E,2750μm,0.8s						
T1241	**Roccafluvione,**	**0.28**	**97**	⇑P	Pg	02 43 09.3	+0.2
T1241				S	Sg	02 43 14.0	+1.1
T1204	**Amatrice, Fraz**	**0.29**	**138**	⇓P	Pg	02 43 10.1	+0.7
T1204				S	Sb	02 43 15.1	-0.7
LNSS	**Leonessa**	**0.29**	**183**	⇓P	Pg	02 43 10.0	+0.7
LNSS				AML	AML		
	comp=N,939μm,0.6s						
LNSS				AML	AML		
	comp=E,906μm,0.7s						
GAG1	**Gagliole**	**0.35**	**1**	⇑P	Pb	02 43 11.3	-0.4
SNTG	**Esanatoglia**	**0.37**	**347**	P	Pb	02 43 11.6	-0.7
SNTG				AML	AML		
	comp=E,780μm,0.6s						
SNTG				AML	AML		
	comp=N,610μm,0.5s						
SNTG				AML	AML		
	comp=E,851μm,0.6s						
SNTG				AML	AML		
	comp=N,542μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.42**	**314**	⇑P	Pg	02 43 12.1	+0.3
ATCC				S	Sb	02 43 19.0	-0.5
ATCC				AML	AML		
	comp=E,1455μm,0.8s						
ATCC				AML	AML		
	comp=N,910μm,0.6s						
EL6	**Elcito**	**0.44**	**4**	⇓P	Pg	02 43 12.4	+0.2
EL6				AML	AML		
	comp=E,1359μm,1.3s						
EL6				AML	AML		
	comp=N,1585μm,0.2s						
CESX	**Cesi**	**0.45**	**231**	⇓P	Pg	02 43 12.7	+0.4
CESX				AML	AML		
	comp=N,447μm,1.2s						
CESX				AML	AML		
	comp=E,558μm,0.4s						
ARVD	**Arcevia**	**0.61**	**352**	S	Sg	02 43 24.0	+0.6
NARO	**Abbazia di Nar**	**0.80**	**334**	S	Sb	02 43 31.0	+0.7
FSSB	**Fossombrone**	**0.83**	**346**	⇓P	Pg	02 43 17.8	-1.6
BADI	**Badiali**	**0.86**	**316**	P	Pg	02 43 20.1	+0.1
SF04	**Casetta**	**1.03**	**267**	P	Pn	02 43 24.3	+0.3

ATH 27 02:43:20.2, 38.56N×21.60E, h23km±2km, ML1.3/1, Error ellipse: s-maj=3.0km s-min=1.1km az=336.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVO	**Paravola**	**0.08**	**315**	P	Pb	02 43 24.3	-0.2
PVO				S	Sb	02 43 27.3	-0.1
ANX	**Ano Chora**	**0.25**	**82**	P	Pb	02 43 26.4	-0.1
ANX				S	Sb	02 43 30.5	-0.2
EFP	**Efpalio**	**0.27**	**119**	P	Pb	02 43 26.4	-0.3
EFP				S	Sb	02 43 30.6	-0.4
SERG	**Sergoula**	**0.39**	**112**	P	Pb	02 43 28.2	-0.2
SERG				S	Sb	02 43 34.3	+0.3
EVR	**Evrytania**	**0.39**	**24**	P	Pb	02 43 28.5	-0.1
EVR				S	Sb	02 43 34.5	+0.1
RLS	**Riolos of Patr**	**0.51**	**192**	P	Pb	02 43 30.3	-0.3
RLS				S	Sb	02 43 38.0	+0.5
RLS				AML	AML	02 43 38.6	
	comp=N,95μm,0.3s						
RLS				AML	AML	02 43 38.7	
	comp=E,69μm,0.3s						
DRO	**Drossia**	**0.61**	**172**	P	Pb	02 43 31.7	-0.6
DRO				S	Sb	02 43 40.9	+0.5
KLV	**Kalavryta, Ach**	**0.67**	**140**	P	Pb	02 43 32.5	-0.8
KLV				S	Sb	02 43 42.4	+0.2

ROM 27 02:44:45.6±0.0, 42.906N±0.003×13.047E±0.004, h10km, ML3.5/2, Error ellipse: s-maj=0.3km s-min=0.2km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.03**	**233**	P	Pg	02 44 47.9	+0.4
T1216				S	Sg	02 44 49.3	+0.5
T1216				AML	AML		
	comp=E,81300μm,0.3s						
T1216				AML	AML		
	comp=N,94700μm,0.3s						
T1216				AML	AML		
	comp=E,81250μm,0.3s						
T1216				AML	AML		
	comp=N,94650μm,0.3s						
T1216				AML	AML		
	comp=N,94800μm,0.3s						
FEMA	**Monte Fema**	**0.06**	**2**	P	Pg	02 44 48.1	+0.2
FEMA				S	Sg	02 44 49.9	+0.4
MC2	**Monte Cornacci**	**0.10**	**86**	P	Pg	02 44 48.8	+0.3
MC2				S	Sg	02 44 51.1	+0.5
T1245	**Castelsantange**	**0.12**	**116**	P	Pg	02 44 49.0	+0.4
T1245				S	Sg	02 44 51.3	+0.6
T1245				AML	AML		
	comp=E,29900μm,1.4s						
T1245				AML	AML		
	comp=E,28400μm,0.3s						
T1245				AML	AML		
	comp=E,29850μm,1.4s						
T1245				AML	AML		
	comp=N,35850μm,0.1s						
T1245				AML	AML		
	comp=N,36950μm,1.1s						
T1245				AML	AML		
	comp=E,31250μm,0.7s						
T1245				AML	AML		
	comp=N,39550μm,0.8s						
T1245				AML	AML		
	comp=E,30250μm,0.6s						
T1245				AML	AML		
	comp=N,39600μm,0.3s						
T1245				AML	AML		
	comp=E,24588μm,0.2s						
T1245				AML	AML		
	comp=E,28058μm,0.3s						
T1245				AML	AML		
	comp=N,35854μm,0.1s						
T1245				AML	AML		
	comp=N,29794μm,0.1s						
CESI	**CESI - Serrava**	**0.14**	**313**	P	Pg	02 44 49.4	+0.5
CESI				S	Sg	02 44 52.1	+0.8
T1215	**Vallo di Nera,**	**0.17**	**232**	P	Pg	02 44 49.9	+0.6
T1215				S	Sg	02 44 52.8	+0.9
T1215				AML	AML		
	comp=E,3940μm,0.8s						
T1215				AML	AML		
	comp=N,10600μm,0.1s						
T1215				AML	AML		
	comp=E,3980μm,0.8s						
T1215				AML	AML		
	comp=N,10900μm,0.1s						
MMO1	**Montemonaco**	**0.20**	**92**	P	Pg	02 44 50.3	+0.4
MMO1				S	Sg	02 44 53.8	+0.8
T1217	**Poggiodomo (PG**	**0.21**	**204**	P	Pg	02 44 50.6	+0.5
T1217				S	Sg	02 44 54.4	+1.3
T1244	**Arquata del Tr**	**0.24**	**129**	P	Pg	02 44 51.0	+0.5
T1244				S	Sg	02 44 55.2	+1.4
SEF1	**Sefro**	**0.25**	**343**	P	Pg	02 44 51.1	+0.3
SEF1				S	Sg	02 44 55.2	+0.9
GUMA	**Gualdo di Mace**	**0.26**	**53**	P	Pg	02 44 51.6	+0.6
GUMA				S	Sb	02 44 56.2	-0.9
T1201	**Domo (RI)**	**0.29**	**149**	P	Pg	02 44 52.2	+0.7
T1201				S	Sb	02 44 57.2	-0.6
MDAR	**Monte D'Aria**	**0.29**	**14**	P	Pg	02 44 51.8	+0.2
MDAR				S	Sg	02 44 56.5	+0.9
LNSS	**Leonessa**	**0.30**	**181**	P	Pg	02 44 52.1	+0.4
LNSS				S	Sb	02 44 57.1	-1.1
T1204	**Amatrice, Fraz**	**0.30**	**139**	P	Pg	02 44 52.4	+0.6
T1204				S	Sb	02 44 57.2	-1.1
GAG1	**Gagliole**	**0.33**	**3**	P	Pg	02 44 52.8	+0.5
SSM1	**San Severino M**	**0.34**	**16**	P	Pg	02 44 52.5	+0.2
SMA1	**SAN MARTINO**	**0.35**	**142**	P	Pg	02 44 53.2	+0.7
SMA1				S	Sb	02 44 58.5	-1.0
MTL1	**Matelica**	**0.35**	**356**	P	Pg	02 44 53.0	+0.4
SNTG	**Esanatoglia**	**0.36**	**347**	P	Pg	02 44 52.9	+0.2
T1243	**Rocca Santa Ma**	**0.36**	**125**	P	Pg	02 44 53.1	+0.2
T1243				S	Sb	02 44 58.8	-1.1
MNTP	**Montappone**	**0.39**	**53**	P	Pb	02 44 54.0	-0.6
T1211	**Morro Reatino**	**0.40**	**201**	P	Pg	02 44 54.0	+0.5
T1211				S	Sb	02 45 00.5	-0.5
ATCC	**AVT- Casa Cast**	**0.41**	**313**	P	Pg	02 44 53.9	+0.3
ATCC				S	Sb	02 45 00.4	-0.8
RM33	**Pellescritta (**	**0.42**	**163**	P	Pg	02 44 54.1	+0.3
EL6	**Elcito**	**0.42**	**5**	P	Pg	02 44 54.2	+0.2
CESX	**Cesi**	**0.45**	**229**	P	Pg	02 44 54.7	+0.2
CESX				S	Sb	02 45 02.1	-0.4
CAMP	**Campotosto**	**0.46**	**144**	P	Pg	02 44 54.8	+0.3
CAMP				S	Sb	02 45 01.6	-1.0
T1246	**Crognaleto (TE**	**0.46**	**134**	P	Pg	02 44 54.6	0.0
T1246				S	Sg	02 45 01.6	+0.9
OFFI	**Offida**	**0.47**	**86**	P	Pb	02 44 55.9	-0.1
CING	**Cingoli**	**0.48**	**13**	P	Pg	02 44 55.2	+0.2
TERO	**Teramo**	**0.50**	**124**	P	Pg	02 44 55.3	0.0
TERO				S	Sb	02 45 02.9	-0.9
T1247	**Pizzolo (AQ)**	**0.50**	**158**	P	Pg	02 44 55.6	+0.3
MURB	**Monte Urbino**	**0.52**	**313**	P	Pg	02 44 56.1	+0.3
ARVD	**Arcevia**	**0.60**	**353**	P	Pb	02 44 57.7	-0.5
CADA	**Capodarco di F**	**0.60**	**61**	P	Pb	02 44 58.9	+0.7
GIGS	**Gran Sasso**	**0.60**	**140**	P	Pg	02 44 57.3	+0.1
GIGS				S	Sb	02 45 06.3	-0.4
AQU	**L'Aquila**	**0.61**	**155**	P	Pg	02 44 57.3	-0.2
PP3	**Marolino**	**0.63**	**41**	P	Pb	02 44 58.7	+0.1
FIAM	**Fiamignano**	**0.64**	**175**	P	Pg	02 44 58.0	-0.1
FIAM				S	Sb	02 45 07.8	-0.2
TRTR	**Tortoreto Alta**	**0.65**	**98**	P	Pb	02 44 59.1	+0.2
ATVO	**AVT- Monte Val**	**0.67**	**316**	P	Pg	02 44 58.6	0.0
ATVA	**AVT- Monte Val**	**0.67**	**304**	P	Pg	02 44 58.5	-0.1
MGAB	**Montegabbione**	**0.69**	**271**	P	Pb	02 44 59.5	-0.2
ATPI	**Pietralunga -**	**0.72**	**319**	P	Pg	02 44 59.5	-0.1
PIEI	**Pieia**	**0.73**	**329**	P	Pb	02 45 00.2	-0.3
VCEL	**Villa Celiera**	**0.78**	**131**	P	Pg	02 45 00.9	+0.3
FSSB	**Fossombrone**	**0.81**	**346**	P	Pg	02 45 01.4	+0.1
SACS	**San Casciano d**	**0.84**	**266**	P	Pb	02 45 02.5	+0.3
CAFI	**Castiglion Fio**	**0.90**	**298**	P	Pg	02 45 02.7	-0.2

ROM 27 02:45:39.0±0.1, 42.864N±0.003×13.127E±0.004, h8km, ML2.3/16, 3C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.05**	**99**	P	Pg	02 45 41.2	+0.2
T1245				S	Sg	02 45 42.4	+0.1
MC2	**Monte Cornacci**	**0.07**	**44**	P	Pg	02 45 41.6	+0.4
MC2				S	Sg	02 45 43.0	+0.1
T1216	**Preci, Frazion**	**0.08**	**289**	P	Pg	02 45 40.9	-0.4
T1216				S	Sg	02 45 43.3	+0.5
T1216				AML	AML		
	comp=E,5120μm,1.1s						
T1216				AML	AML		
	comp=N,5710μm,0.4s						
T1215	**Vallo di Nera,**	**0.20**	**252**	P	Pg	02 45 43.6	+0.5
T1215				S	Sg	02 45 47.3	+1.4
T1215				AML	AML		
	comp=N,868μm,0.4s						
T1215				AML	AML		
	comp=E,1600μm,0.3s						
T1215				AML	AML		
	comp=N,740μm,0.5s						
T1215				AML	AML		
	comp=E,1626μm,0.3s						
T1217	**Poggiodomo (PG**	**0.21**	**224**	P	Pg	02 45 44.2	+0.9
T1217				S	Sg	02 45 47.9	+1.7
T1217				AML	AML		
	comp=E,1270μm,0.3s						
T1217				AML	AML		
	comp=N,2495μm,0.3s						
T1217				AML	AML		
	comp=N,2535μm,0.7s						
T1217				AML	AML		
	comp=E,1265μm,0.3s						
T1217				AML	AML		
	comp=N,2495μm,0.3s						
T1217				AML	AML		
	comp=N,2530μm,0.7s						
T1217				AML	AML		
	comp=E,1269μm,0.3s						
CESI	**CESI - Serrava**	**0.22**	**311**	P	Pg	02 45 44.0	+0.5
CESI				S	Sg	02 45 46.9	+0.4
CESI				AML	AML		
	comp=N,1590μm,0.2s						
CESI				AML	AML		
	comp=E,1125μm,0.5s						
CESI				AML	AML		
	comp=N,1640μm,0.1s						
T1241	**Roccafluvione,**	**0.22**	**92**	P	Pg	02 45 44.1	+0.5
T1241				S	Sg	02 45 47.9	+1.2
T1241				AML	AML		
	comp=N,1620μm,0.3s						
T1241				AML	AML		
	comp=E,1625μm,0.2s						
T1204	**Amatrice, Fraz**	**0.23**	**143**	P	Pg	02 45 44.8	+1.0
T1204				S	Sg	02 45 48.8	+1.8
T1204				AML	AML		
	comp=E,1640μm,1.3s						
T1204				AML	AML		
	comp=N,1498μm,1.0s						
T1204				AML	AML		
	comp=E,1635μm,1.3s						
T1204				AML	AML		
	comp=N,1497μm,1.0s						
T1204				AML	AML		
	comp=E,1643μm,1.3s						
T1204				AML	AML		
	comp=N,1490μm,1.0s						
GUMA	**Gualdo di Mace**	**0.25**	**37**	P	Pb	02 45 45.0	-0.9
GUMA				S	Sb	02 45 49.5	-0.9
GUMA				AML	AML		
	comp=E,2935μm,0.8s						
GUMA				AML	AML		
	comp=N,3325μm,0.4s						
GUMA				AML	AML		
	comp=E,2940μm,0.8s						
GUMA				AML	AML		
	comp=N,3330μm,0.4s						
GUMA				AML	AML		
	comp=N,3360μm,0.5s						
GUMA				AML	AML		
	comp=E,3545μm,0.4s						
LNSS	**Leonessa**	**0.27**	**194**	P	Pb	02 45 45.4	-0.7
LNSS				S	Sb	02 45 49.9	-1.0
LNSS				AML	AML		
	comp=N,1535μm,0.8s						
LNSS				AML	AML		
	comp=N,1530μm,0.8s						
LNSS				AML	AML		
	comp=E,1385μm,1.4s						
SMA1	**SAN MARTINO**	**0.28**	**147**	P	Pb	02 45 45.7	-0.6
SMA1				S	Sg	02 45 49.6	+1.3
SMA1				AML	AML		
	comp=E,732μm,1.2s						
SMA1				AML	AML		
	comp=N,828μm,0.4s						
SMA1				AML	AML		
	comp=E,732μm,1.2s						
SMA1				AML	AML		
	comp=N,829μm,0.4s						
T1243	**Rocca Santa Ma**	**0.29**	**125**	P	Pg	02 45 45.5	+0.7
T1243				S	Sb	02 45 50.1	-1.4
RM33	**Pellescritta (**	**0.36**	**170**	P	Pg	02 45 46.9	+0.8
RM33				S	Sb	02 45 52.8	-0.8
RM33				AML	AML		
	comp=E,590μm,0.9s						
RM33				AML	AML		
	comp=N,650μm,0.2s						
RM33				AML	AML		
	comp=N,626μm,0.2s						
RM33				AML	AML		
	comp=E,588μm,0.9s						
T1211	**Morro Reatino**	**0.39**	**211**	P	Pb	02 45 47.7	-0.5
T1211				S	Sb	02 45 53.6	-0.6
T1211				AML	AML		
	comp=E,619μm,0.3s						
T1211				AML	AML		
	comp=N,818μm,0.3s						
T1211				AML	AML		
	comp=E,620μm,0.4s						
CAMP	**Campotosto**	**0.39**	**147**	P	Pg	02 45 47.3	+0.6
CAMP				S	Sb	02 45 53.3	-1.1
CAMP				AML	AML		
	comp=E,424μm,0.7s						
CAMP				AML	AML		
	comp=N,386μm,0.5s						
SNTG	**Esanatoglia**	**0.41**	**341**	P	Pg	02 45 47.7	+0.6
SNTG				S	Sb	02 45 54.2	-0.9
SNTG				AML	AML		
	comp=E,190μm,0.6s						
SNTG				AML	AML		
	comp=N,169μm,1.0s						
SNTG				AML	AML		
	comp=E,259μm,0.4s						
SNTG				AML	AML		
	comp=N,356μm,0.6s						
OFFI	**Offida**	**0.42**	**80**	P	Pb	02 45 48.7	0.0
OFFI				S	Sb	02 45 54.4	-0.7
OFFI				AML	AML		
	comp=E,891μm,0.5s						
OFFI				AML	AML		
	comp=N,820μm,0.6s						
TERO	**Teramo**	**0.43**	**124**	P	Pg	02 45 47.9	+0.5
TERO				S	Sb	02 45 54.5	-0.9
T1247	**Pizzolo (AQ)**	**0.44**	**163**	P	Pg	02 45 47.9	+0.3
T1247				S	Sb	02 45 55.4	-0.4
T1247				AML	AML		
	comp=E,482μm,1.4s						
T1247				AML	AML		
	comp=N,438μm,1.0s						
EL6	**Elcito**	**0.47**	**358**	P	Pg	02 45 48.7	+0.5
EL6				S	Sb	02 45 56.1	-0.5
CESX	**Cesi**	**0.48**	**238**	P	Pg	02 45 48.5	+0.2
CESX				S	Sb	02 45 57.0	+0.2
ATCC	**AVT- Casa Cast**	**0.48**	**312**	P	Pg	02 45 48.6	+0.2
ATCC				S	Sb	02 45 56.5	-0.5
ATCC				AML	AML		
	comp=E,414μm,0.6s						
ATCC				AML	AML		
	comp=N,330μm,0.8s						
ATCC				AML	AML		
	comp=E,413μm,0.6s						
ATCC				AML	AML		
	comp=N,331μm,0.8s						
GIGS	**Gran Sasso**	**0.53**	**142**	P	Pb	02 45 50.1	-0.5
GIGS				AML	AML		
	comp=E,160μm,0.5s						
GIGS				AML	AML		
	comp=N,96μm,0.4s						
GIGS				AML	AML		
	comp=N,96μm,0.4s						
GIGS				AML	AML		
	comp=E,159μm,0.5s						
AQU	**L'Aquila**	**0.55**	**158**	S	Sb	02 45 60.0	+1.1
FIAM	**Fiamignano**	**0.59**	**181**	⇓P	Pg	02 45 50.9	+0.3
FIAM				S	Sb	02 45 60.0	-0.3
ARVD	**Arcevia**	**0.65**	**348**	⇑P	Pb	02 45 52.1	-0.5
ARVD				S	Sb	02 46 03.0	+1.2
FAGN	**Fagnano**	**0.69**	**150**	S	Sb	02 46 04.0	+1.1

FRON	**Frontone**	**0.72**	**336**	⇑P	Pg	02 45 53.3	+0.4
ATVO	**AVT- Monte Val**	**0.74**	**315**	⇓P	Pb	02 45 53.9	-0.3
PIEI	**Pieia**	**0.80**	**327**	S	Sn	02 46 08.0	-0.7
T0110	**Collepietro**	**0.80**	**143**	⇑P	Pb	02 45 55.1	-0.1
FSSB	**Fossombrone**	**0.87**	**343**	S	Sn	02 46 11.0	+0.6
RCAV	**Rocca di Cave**	**1.02**	**188**	S	Sn	02 46 16.0	+1.7

ATH 27 03:03:10.7, 38.15N×22.68E, h12km±7km, ML0.8/1, Error ellipse: s-maj=7.4km s-min=1.8km az=288.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLFA	**Delphi**	**0.36**	**336**	P	Pg	03 03 17.9	0.0
DLFA				S	Sg	03 03 22.6	-0.2
KLV	**Kalavryta, Ach**	**0.43**	**256**	P	Pg	03 03 18.8	-0.5
KLV				S	Sg	03 03 25.1	+0.1
KLV				AML	AML	03 03 25.7	
	comp=N,36μm,0.1s						
KLV				AML	AML	03 03 26.5	
	comp=E,30μm,0.1s						
SERG	**Sergoula**	**0.56**	**298**	P	Pg	03 03 20.8	-0.8
SERG				S	Sg	03 03 29.2	+0.2
EFP	**Efpalio**	**0.67**	**294**	P	Pg	03 03 23.2	-0.5
EFP				S	Sg	03 03 32.2	-0.4
ANX	**Ano Chora**	**0.74**	**307**	P	Pg	03 03 24.7	-0.5
ANX				S	Sg	03 03 35.1	+0.3
DRO	**Drossia**	**0.79**	**256**	P	Pb	03 03 26.3	-0.2
DRO				S	Sg	03 03 36.7	+0.3
PVO	**Paravola**	**1.02**	**297**	P	Pb	03 03 30.3	0.0

THE 27 03:03:41.7, 38.01N×20.37E, h21km±1km, ML1.6/7, Error ellipse: s-maj=1.5km s-min=0.4km az=44.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.19**	**355**	P	Pb	03 03 46.6	-1.0
KEF3				S	Sb	03 03 50.8	-0.9
	872nm,0.2s						
PSDA	**Pessada-Kefalo**	**0.20**	**59**	P	Pb	03 03 46.8	-0.8
PSDA				S	Sb	03 03 50.4	-1.3
	82nm,0.1s						
DMLN	**Damoulianata-K**	**0.22**	**1**	P	Pb	03 03 46.9	-0.8
DMLN				S	Sb	03 03 51.3	-0.6
	198nm,0.1s						
VLS	**Valsamata**	**0.24**	**47**	P	Pb	03 03 47.4	-0.4
VLS				S	Sb	03 03 51.9	-0.1
	135nm,0.1s						
KEF4	**Livadi, Kephal**	**0.25**	**10**	P	Pb	03 03 47.3	-0.5
KEF4				S	Sb	03 03 52.1	0.0
	1μm,0.2s						
FSK	**Fiskardo**	**0.47**	**19**	P	Pb	03 03 51.2	0.0
FSK				S	Sb	03 03 58.2	+0.5
	48nm,0.2s						
LTHK	**Lithakia**	**0.48**	**129**	P	Pb	03 03 51.2	-0.2
LTHK				S	Sb	03 03 58.6	+0.7
	72nm,0.1s						

IDC 27 03:10:55.3±2.2, 23.33S×172.76E, h0km, mb3.5/2, mbtmp3.6/3, ML3.3/1, MS3.5/2, Error ellipse: s-maj=98.6km s-min=34.2km az=171.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.96**	**281**	Pn	Pn	03 12 26.3	+1.3
	0.8nm,0.3s,baz=112,slow=16,SNR=13						
DZM				Sn	Sn	03 13 35.2	+1.1
	0.8nm,0.3s,baz=58,slow=23,SNR=7.1						
	4.3nm,0.4s						
RPZ	**Rata Peaks**	**20.38**	**184**	LR	LR	03 22 07.7	
	comp=Z,106nm,18.2s,baz=333,slow=33						
ASAR	**Alice Springs**	**35.56**	**262**	P	P	03 17 54.8	+0.2
	0.9nm,0.9s,baz=93,slow=9.2,SNR=6.3						
	0.9nm,0.9s						
WRA	**Warramunga Arr**	**35.80**	**268**	P	P	03 17 55.5	-1.2
	0.3nm,0.4s,baz=97,slow=8.3,SNR=11						
	0.3nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**41.99**	**351**	T	T	04 03 22.1	
	baz=171,slow=76,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**41.99**	**351**	T	T	04 03 22.2	
	baz=171,slow=76,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**42.00**	**351**	T	T	04 03 22.2	
	baz=171,slow=76,SNR=4.2						
GUMO	**Guam**	**45.73**	**321**	LR	LR	03 35 41.6	
	comp=Z,48nm,19.3s,baz=106,slow=32						
EKA	**Eskdalemuir Ar**	**147.90**	**356**	PKPbc	PKPdf	03 30 39.7	+0.6
	0.5nm,0.4s,baz=352,slow=2.5,SNR=3.9						
GERES	**GERESS Array B**	**149.63**	**332**	PKPbc	PKiKP	03 30 48.7	+0.8
	0.5nm,0.7s,baz=24,slow=5.4,SNR=3.5						

*IDC **27** 03:13:41.4±1.7, 1.34S×15.49W, h0km, mb4.3/3, mbtmp4.3/4, ML4.2/1, MS3.5/10, Error ellipse: s-maj=47.9km s-min=26.9km az=147.0*

ISC 27 03:13:43.0±1.3, 1.3S±0.1×15.5W±0.2, h12km, n17, σ9.60/7, mb4.3/3, MS3.4/8, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.52**	**171**	Pn	**Pn**	**03 15 18.3**	**-0.2**
H10N2				T	T	03 21 55.1	
	baz=351,slow=73,SNR=25						
H10N3	**ASCENSION HYDR**	**6.53**	**172**	Pn	**Pn**	**03 15 18.7**	**0.0**
H10N3				T	T	03 21 35.1	
	baz=351,slow=73,SNR=65						
H10N1	**ASCENSION HYDR**	**6.54**	**171**	Pn	**Pn**	**03 15 18.4**	**-0.4**
H10N1				T	T	03 21 58.7	
	baz=351,slow=73,SNR=31						
H10S3	**ASCENSION HYDR**	**7.61**	**174**	T	T	03 23 25.5	
	baz=234,slow=74,SNR=48						
H10S2	**ASCENSION HYDR**	**7.62**	**174**	T	T	03 23 17.1	
	baz=346,slow=74,SNR=22						
DBIC	**Dimbokro**	**13.24**	**53**	Pn	**Pn**	**03 16 50.2**	**-0.7**
	1.1nm,0.3s,baz=224,slow=13,SNR=16						
DBIC				Sn	Sn	03 19 09.5	-8.6
	0.8nm,0.3s,baz=128,slow=16,SNR=4.2						
DBIC				LR	LR	03 20 58.6	
	comp=Z,166nm,19.4s,baz=206,slow=33						
	2.8nm,0.4s						
BBTS	**Babate**	**15.93**	**356**	LR	LR	03 23 24.1	
	comp=Z,172nm,18.4s,baz=194,slow=37						
TORD	**Torodi Ar. Bea**	**22.29**	**49**	P	**P**	**03 18 41.1**	**+0.8**
	4.4nm,0.7s,baz=230,slow=10.0,SNR=20						
TORD				LR	LR	03 26 22.5	
	comp=Z,135nm,18.3s,baz=207,slow=34						
	4.4nm,0.7s						
BDFB	**Brasilia**	**35.11**	**244**	P	**P**	**03 20 36.6**	**-0.1**
	3.9nm,0.9s,baz=83,slow=8.1,SNR=3.7						
	3.9nm,0.9s						
ESDC	**Sonseca Array**	**42.15**	**13**	LR	LR	03 39 01.1	
	comp=Z,57nm,20.4s,baz=125,slow=36						
LSZ	**Lusaka**	**45.23**	**110**	LR	LR	03 37 40.4	
	comp=Z,40nm,18.7s,baz=164,slow=32						
SUR	**Sutherland**	**46.02**	**136**	LR	LR	03 37 37.6	
	comp=Z,43nm,18.8s,baz=200,slow=31						
LBTB	**Lobatse**	**46.08**	**124**	LR	LR	03 38 52.3	
	comp=Z,43nm,18.5s,baz=171,slow=33						
BOSA	**Boshof**	**47.37**	**129**	P	**P**	**03 22 17.9**	**+0.5**
	5.5nm,0.7s,baz=312,slow=9.9,SNR=13						
	5.5nm,0.7s						
LPAZ	**La Paz**	**53.94**	**251**	LR	LR	03 45 54.9	
	comp=Z,42nm,18.8s,baz=86,slow=36						
SDV	**Santo Domingo**	**55.90**	**282**	LR	LR	03 44 51.4	
	comp=Z,50nm,19.2s,baz=112,slow=34						
EIL	**Elat**	**57.11**	**53**	LR	LR	03 47 43.0	
	comp=Z,68nm,19.9s,baz=296,slow=36						

*BGR **27** 03:19:26.0±1.1, 42.63N×13.47E, h10km, ML4.3/14, Error ellipse: s-maj=36.7km s-min=16.7km az=102.0*
*ROM **27** 03:19:27.1±0.0, 42.843N±0.001×13.143E±0.003, h9km, ML4.1/130, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.0km az=256.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.25; $M_{\theta\theta}$0.18; $M_{\phi\phi}$1.08; $M_{r\theta}$0.07; $M_{\theta r}$-0.27; $M_{\phi r}$-0.21; Fault plane solution: $M_0$1.22025×10^{15} NP1:ϕ_s165.00000°, δ40.00000°, λ-89.00000°. NP2:ϕ_s344.00000°, δ50.00000°, λ-91.00000°.*
*IDC **27** 03:19:27.9±0.8, 42.94N×13.08E, h0km, mb4.1/13, mbtmp4.0/20, ML3.7/7, MS3.2/20 Error ellipse: s-maj=14.0km s-min=12.0km az=74.0*
*PDG **27** 03:19:27.7±0.7, 42.85N×13.17E, h11km, ML4.2/13, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*MED_RC **27** 03:19:27.0±0.4, 42.70N×13.12E, h10km, MW4.2/13, Moment Tensor Solution. Mantle waves: s13, c18; Duration: 1±0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.86±.17; $M_{\theta\theta}$0.91±.20; $M_{\phi\phi}$1.94±.13; $M_{r\theta}$-0.31±.83; $M_{\theta\phi}$-0.85±.14; $M_{\phi r}$-0.33±.83; Best double couple: $M_0$2.67000×10^{15} NP1:ϕ_s338.00000°, δ47.00000°, λ-80.00000°. NP2:ϕ_s144.00000°, δ44.00000°, λ-101.00000°. Principal axes: T 2.4200, Plg1.0000°, Azm61.0000°; N 0.4900, Plg7.0000°, Azm151.0000°; P -2.9200, Plg83.0000°, Azm320.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*MOS **27** 03:19:27.6±1.2, 42.92N×13.19E, h13km, mb4.6/17 Error ellipse: s-maj=5.5km s-min=3.7km az=86.5*
*NEIC **27** 03:19:28.2±1.7, 42.82N±0.04×13.11E±0.06, h12km±4km, Error ellipse: s-maj=8.3km s-min=2.9km az=223.0*
*PRU **27** 03:19:28.3±0.0, 42.84N×13.47E, h0km, M4.4*
*LDG **27** 03:19:28.2±0.1, 42.83N×13.06E, h9km, Ml4.0/24, Error ellipse: s-maj=4.7km s-min=2.9km az=43.0*
*BEO **27** 03:19:28.5±0.6, 42.91N×13.19E, h0km, ML4.2/15*
*STR **27** 03:19:32.4±1.4, 43.N±6.°×1.°3E±1.°2, h10km, MLv4.0/34, Error ellipse: s-maj=0.0km s-min=0.0km az=102.7, preliminary*

ISC 27 03:19:28.0±0.7, 42.84N±0.01×13.13E±0.01, h7km±4km, n607, σ1.72/685, mb4.4/30, MS3.4/10, 62C-40D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**67**	⇓P	**Pg**	**03 19 29.1**	**-0.7**
T1245				S	**Sg**	**03 19 30.1**	**-1.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**32**	⇑P	**Pg**	**03 19 29.7**	**-0.6**
MC2				S	**Sg**	**03 19 31.5**	**-0.5**
T1216	**Preci, Frazion**	**0.10**	**304**	⇑P	**Pg**	**03 19 30.2**	**-0.1**
T1216				S	**Sg**	**03 19 32.1**	**+0.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1214	**Arquata del Tr**	**0.10**	**142**	⇓P	**Pg**	**03 19 30.1**	**-0.2**
T1214				S	**Sg**	**03 19 32.0**	**0.0**
T1212	**Cascia, Frazio**	**0.10**	**215**	⇑P	**Pg**	**03 19 30.7**	**+0.3**
T1212				S	**Sg**	**03 19 33.0**	**+0.9**
FEMA	**Monte Fema**	**0.14**	**336**	⇑P	**Pg**	**03 19 30.8**	**-0.2**
FEMA				S	**Sg**	**03 19 33.1**	**0.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1244	**Arquata del Tr**	**0.15**	**122**	⇑P	**Pg**	**03 19 31.0**	**-0.1**
T1244				S	**Sg**	**03 19 33.8**	**+0.5**
MMO1	**Montemonaco**	**0.16**	**67**	⇑P	**Pg**	**03 19 30.8**	**-0.6**
MMO1				S	**Sg**	**03 19 33.1**	**-0.5**
T1218	**Civita (PG)**	**0.17**	**183**	⇑P	**Pg**	**03 19 31.6**	**+0.1**
T1218				S	**Sg**	**03 19 34.6**	**+0.8**
T1217	**Poggiodomo (PG**	**0.19**	**229**	⇑P	**Pg**	**03 19 32.2**	**+0.3**
T1217				S	**Sg**	**03 19 35.8**	**+1.3**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1215	**Vallo di Nera,**	**0.19**	**260**	⇑P	**Pg**	**03 19 32.2**	**+0.3**
T1215				S	**Sg**	**03 19 35.7**	**+1.2**
T1215				AML	AML		
	comp=E,45900μm,1.3s						
T1215				AML	AML		
	comp=E,47300μm,1.3s						
T1215				AML	AML		
	comp=N,53450μm,1.1s						
T1215				AML	AML		
	comp=E,45900μm,1.4s						
T1215				AML	AML		
	comp=N,55350μm,1.1s						
T1215				AML	AML		
	comp=E,47350μm,1.3s						
T1215				AML	AML		
	comp=N,53400μm,1.1s						
T1201	**Domo (RI)**	**0.20**	**153**	⇑P	**Pg**	**03 19 32.3**	**+0.3**
T1201				S	**Sg**	**03 19 36.1**	**+1.3**
FDMO	**Fiordimonte**	**0.20**	**352**	P	**Pg**	**03 19 31.9**	**-0.2**
T1204	**Amatrice, Fraz**	**0.21**	**139**	⇑P	**Pg**	**03 19 32.2**	**-0.1**
T1204				S	**Sg**	**03 19 36.0**	**+0.8**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
AM05	**Amandola Campo**	**0.22**	**50**	⇑P	**Pg**	**03 19 31.9**	**-0.4**
AM05				S	**Sg**	**03 19 35.5**	**+0.2**
AM05				AML	AML		
	comp=E,40650μm,0.6s						
AM05				AML	AML		
	comp=N,54550μm,0.6s						
AM05				AML	AML		
	comp=E,40600μm,0.6s						
AM05				AML	AML		
	comp=N,61800μm,0.4s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,54500μm,0.6s						
T1241	**Roccafluviore,**	**0.23**	**85**	AML	AML		
T1241				AML	AML		
CESI	**CESI - Serrava**	**0.23**	**316**	⇑P	**Pg**	**03 19 32.6**	**-0.1**
CESI				S	**Sg**	**03 19 36.7**	**+0.9**
CESI				AML	AML		
	comp=E,73950μm,0.5s						
CESI				AML	AML		
	comp=N,77850μm,0.4s						
LNSS	**Leonessa**	**0.24**	**195**	⇑P	**Pg**	**03 19 32.9**	**+0.1**
LNSS				S	**Sg**	**03 19 37.2**	**+1.1**
LNSS				AML	AML		
LNSS				AML	AML		
SMA1	**SAN MARTINO**	**0.26**	**143**	⇑P	**Pg**	**03 19 32.9**	**-0.2**
SMA1				S	**Sg**	**03 19 37.2**	**+0.7**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
GUMA	**Gualdo di Mace**	**0.27**	**34**	⇑P	**Pg**	**03 19 33.1**	**-0.2**
GUMA				S	**Sg**	**03 19 37.7**	**+0.7**
RM33	**Pellescritta (**	**0.33**	**169**	P	**Pg**	**03 19 34.4**	**-0.2**
RM33				S	**Sg**	**03 19 39.9**	**+0.9**
RM33				AML	AML		
	comp=N,66400μm,1.0s						
RM33				AML	AML		
	comp=N,66450μm,1.0s						
RM33				AML	AML		
	comp=E,67200μm,0.2s						
RM33				AML	AML		
	comp=N,66350μm,1.0s						
RM33				AML	AML		
	comp=E,68000μm,0.2s						
SEF1	**Sefro**	**0.34**	**337**	P	**Pg**	**03 19 34.2**	**-0.3**
SEF1				S	**Sg**	**03 19 39.9**	**+0.8**
SEF1				AML	AML		
	comp=N,37650μm,1.0s						
SEF1				AML	AML		
	comp=E,45650μm,0.3s						
SEF1				AML	AML		
	comp=N,37700μm,1.0s						
MDAR	**Monte D'Aria**	**0.36**	**2**	P	**Pg**	**03 19 34.5**	**-0.5**
MDAR				S	**Sg**	**03 19 40.2**	**+0.5**
MDAR				AML	AML		
	comp=E,24050μm,0.6s						
MDAR				AML	AML		
	comp=N,33900μm,0.6s						
MDAR				AML	AML		
	comp=E,24000μm,0.6s						
PIO1	**Pioraco**	**0.36**	**343**	P	**Pg**	**03 19 34.7**	**-0.3**
PIO1				S	**Sg**	**03 19 40.6**	**+0.9**
PIO1				AML	AML		
	comp=N,31800μm,0.7s						
PIO1				AML	AML		
	comp=E,22250μm,0.6s						
T1211	**Morro Reatino**	**0.36**	**213**	⇑P	**Pg**	**03 19 35.1**	**0.0**
T1211				S	**Sb**	**03 19 41.6**	**-1.1**
T1211				AML	AML		
	comp=N,72400μm,1.1s						
T1211				AML	AML		
	comp=E,39700μm,0.7s						
T1211				AML	AML		
	comp=N,74350μm,1.1s						
T1211				AML	AML		
	comp=E,37000μm,0.7s						
T1211				AML	AML		
	comp=E,39650μm,0.7s						
T1211				AML	AML		
	comp=N,72450μm,1.1s						
CAMP	**Campotosto**	**0.37**	**145**		**Pg**	**03 19 34.7**	**-0.5**
CAMP				Sg	**Sg**	**03 19 40.4**	**+0.4**
CAMP	**Campotosto**	**0.37**	**145**	⇑P	**Pg**	**03 19 34.7**	**-0.5**
CAMP				S	**Sg**	**03 19 40.5**	**+0.5**
CAMP				AML	AML		
	comp=N,55900μm,0.6s						
CAMP				AML	AML		
	comp=E,53350μm,1.2s						
ARRO	**Arrone**	**0.37**	**226**	⇑P	**Pg**	**03 19 35.2**	**+0.1**
T1246	**Crognaleto (TE**	**0.37**	**133**	⇑P	**Pg**	**03 19 34.7**	**-0.5**
T1246				S	**Sg**	**03 19 40.6**	**+0.5**
FIU1	**Fiuminata**	**0.38**	**338**	P	**Pg**	**03 19 35.0**	**-0.4**
FIU1				AML	AML		
	comp=E,12350μm,0.9s						
FIU1				AML	AML		
	comp=N,13900μm,0.4s						
FIU1				AML	AML		
	comp=N,13900μm,0.4s						
FIU1				AML	AML		
	comp=E,12400μm,0.9s						
MNTP	**Montappone**	**0.39**	**40**	⇑P	**Pg**	**03 19 35.5**	**-0.1**
MNTP				S	**Sb**	**03 19 42.6**	**-0.9**
MNTP				AML	AML		
	comp=E,84850μm,1.1s						
MNTP				AML	AML		
	comp=N,68650μm,1.0s						
MNTP				AML	AML		
	comp=E,84800μm,1.1s						
SSM1	**San Severino M**	**0.39**	**5**	P	**Pg**	**03 19 35.1**	**-0.6**
SSM1				S	**Sg**	**03 19 41.5**	**+0.7**
GAG1	**Gagliole**	**0.40**	**354**	P	**Pg**	**03 19 35.5**	**-0.4**
GAG1				S	**Sb**	**03 19 42.3**	**-1.5**
TERO	**Teramo**	**0.41**	**121**	⇑P	**Pg**	**03 19 35.3**	**-0.7**
TERO				S	**Sg**	**03 19 41.5**	**+0.1**
T1247	**Pizzolo (AQ)**	**0.41**	**162**	P	**Pg**	**03 19 35.7**	**-0.3**
T1247				S	**Sg**	**03 19 42.6**	**+1.1**
T1247				AML	AML		
	comp=E,71250μm,0.6s						
T1247				AML	AML		
OFFI	**Offida**	**0.42**	**76**	⇑P	**Pg**	**03 19 36.3**	**+0.1**
OFFI				AML	AML		
OFFI				AML	AML		
MTL1	**Matelica**	**0.43**	**349**	P	**Pg**	**03 19 35.9**	**-0.4**
MTL1				AML	AML		
	comp=E,59300μm,0.6s						
MTL1				AML	AML		
	comp=N,63400μm,0.5s						
MTL1				AML	AML		
	comp=E,59350μm,0.6s						
SNTG	**Esanatoglia**	**0.44**	**342**	P	**Pg**	**03 19 35.9**	**-0.6**
SNTG				AML	AML		
	comp=E,10950μm,0.8s						
SNTG				AML	AML		
	comp=E,10950μm,0.8s						
SNTG				AML	AML		
	comp=N,13000μm,0.7s						
SNTG				AML	AML		
	comp=N,12200μm,0.7s						
SNTG				AML	AML		
	comp=E,10500μm,0.8s						
CESX	**Cesi**	**0.46**	**241**		**Pg**	**03 19 36.7**	**-0.2**
CESX	**Cesi**	**0.46**	**241**	⇑P	**Pg**	**03 19 36.7**	**-0.2**
CESX				S	**Sg**	**03 19 44.2**	**+1.2**
CESX				AML	AML		
	comp=N,23900μm,1.4s						
CESX				AML	AML		
	comp=E,29800μm,1.6s						
EL6	**Elcito**	**0.49**	**358**	P	**Pg**	**03 19 36.8**	**-0.7**
EL6				AML	AML		
	comp=N,34100μm,1.1s						
EL6				AML	AML		
	comp=E,27900μm,1.2s						
EL6				AML	AML		
	comp=N,34050μm,1.1s						
TRE1	**Treia**	**0.49**	**16**	P	**Pg**	**03 19 37.2**	**-0.3**
TRE1				S	**Sb**	**03 19 45.8**	**-0.6**
TRE1				AML	AML		
	comp=E,52250μm,1.3s						
TRE1				AML	AML		
	comp=N,38400μm,0.4s						
TRE1				AML	AML		
	comp=E,52300μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.50**	**314**	P	**Pg**	**03 19 37.3**	**-0.3**
ATCC				S	**Sb**	**03 19 45.4**	**-1.2**
ATCC				AML	AML		
	comp=N,34800μm,0.8s						
ATCC				AML	AML		
	comp=E,35700μm,0.8s						
GIGS	**Gran Sasso**	**0.51**	**140**	P	**Pg**	**03 19 36.7**	**-1.0**
GIGS				S	**Sg**	**03 19 44.5**	**+0.1**
GIGS				AML	AML		
	comp=N,12150μm,0.2s						
GIGS				AML	AML		
	comp=E,20500μm,0.3s						
AQU	**L'Aquila**	**0.52**	**157**	Pg	**Pg**	**03 19 37.6**	**-0.5**
AQU				Sg	**Sg**	**03 19 45.6**	**+0.7**
AQU	**L'Aquila**	**0.52**	**157**	P	**Pg**	**03 19 37.5**	**-0.5**
AQU				S	**Sg**	**03 19 45.0**	**+0.1**
AQU	**L'Aquila**	**0.52**	**157**	⇓P	**Pg**	**03 19 37.5**	**-0.5**
AQU				S	**Sg**	**03 19 45.7**	**+0.7**
AQU				AML	AML		
	comp=E,26150μm,0.4s						
AQU				AML	AML		
	comp=N,36050μm,0.6s						
AQU				AML	AML		
	comp=E,26950μm,0.4s						
AQU				AML	AML		
	comp=N,35400μm,0.6s						
FOSV	**Fossato di Vic**	**0.53**	**330**	P	**Pg**	**03 19 37.6**	**-0.6**
CING	**Cingoli**	**0.54**	**5**	P	**Pg**	**03 19 37.5**	**-0.9**
FIAM	**Fiamignano**	**0.57**	**181**	P	**Pg**	**03 19 38.4**	**-0.5**
FIAM				S	**Sg**	**03 19 47.1**	**+0.7**
FIAM				AML	AML		
	comp=E,21600μm,1.4s						
FIAM				AML	AML		
	comp=N,23250μm,1.2s						
TRTR	**Tortoreto Alta**	**0.58**	**93**	⇑P	**Pb**	**03 19 39.6**	**-0.9**
TRTR				AML	AML		
	comp=E,98250μm,0.6s						
TRTR				AML	AML		
CADA	**Capodarco di F**	**0.59**	**52**	P	**Pb**	**03 19 39.7**	**-0.9**
CADA				AML	AML		
	comp=N,82400μm,1.1s						
CADA				AML	AML		
MMUR	**Monte Murano**	**0.61**	**351**	P	**Pg**	**03 19 39.3**	**-0.5**
MMUR				AML	AML		
	comp=E,20950μm,0.6s						
MMUR				AML	AML		
	comp=N,16500μm,1.0s						
MMUR				AML	AML		
	comp=N,16550μm,1.0s						
MMUR				AML	AML		
	comp=E,20950μm,0.6s						
MURB	**Monte Urbino**	**0.61**	**314**		**Pg**	**03 19 39.4**	**-0.4**
MURB	**Monte Urbino**	**0.61**	**314**	P	**Pg**	**03 19 39.3**	**-0.5**
MURB				AML	AML		
	comp=N,29950μm,1.2s						
MURB				AML	AML		
	comp=E,32850μm,1.1s						
MURB				AML	AML		
	comp=N,29200μm,1.5s						
MURB				AML	AML		
	comp=E,33850μm,1.0s						
CIMA	**Civitanova Mar**	**0.61**	**40**	P	**Pg**	**03 19 39.9**	**+0.1**
PP3	**Marolino**	**0.65**	**33**	P	**Pg**	**03 19 40.2**	**-0.2**
PP3				AML	AML		
	comp=N,40950μm,1.0s						
PP3				AML	AML		
	comp=E,43300μm,1.5s						
PP3				AML	AML		
	comp=E,43350μm,1.5s						
PP3				AML	AML		
	comp=E,42100μm,1.5s						

PP3 AML AML
comp=N,40950µm,1.0s
PP3 AML AML
comp=N,42750µm,1.0s
ATFO Monte Foce - G 0.67 323 P **Pg 03 19 40.2 -0.6**
ATFO AML AML
comp=E,9735µm,1.1s
ATFO AML AML
comp=N,10400µm,0.4s
ATSC Scheggia e Pas 0.67 331 P **Pg 03 19 40.1 -0.7**
ATTE AVT- Monte Tez 0.67 303 P **Pg 03 19 40.4 -0.5**
ATTE AML AML
comp=E,8235µm,0.5s
ATTE AML AML
comp=N,7200µm,1.6s
ARVD Arcevia 0.68 348 P **Pg 03 19 40.3 -0.7**
ARVD AML AML
comp=N,8800µm,0.8s
ARVD AML AML
comp=E,6105µm,0.6s
VCEL Villa Celiera 0.69 130 ⇑P **Pg 03 19 40.5 -0.7**
VCEL AML AML
comp=E,98200µm,0.4s
VCEL AML AML
comp=N,71200µm,0.7s
VCEL AML AML
comp=E,98250µm,0.4s
ATLO AVT- Montelove 0.71 312 ⇑P **Pg 03 19 40.9 -0.8**
FRON Frontone 0.74 337 P **Pg 03 19 41.2 -1.1**
MGAB Montegabbione 0.75 276 P **Pg 03 19 41.8 -0.6**
MGAB AML AML
comp=E,17100µm,1.2s
MGAB AML AML
comp=E,17800µm,1.3s
MGAB AML AML
comp=N,15350µm,1.3s
MGAB AML AML
comp=E,17150µm,1.2s
MGAB AML AML
comp=N,14700µm,1.4s
SRES S.Oreste - Sor 0.75 217 ⇑P **Pg 03 19 41.7 -0.7**
SRES AML AML
comp=E,11450µm,0.7s
SRES AML AML
comp=N,8395µm,0.6s
ATVA AVT- Monte Val 0.76 306 P **Pg 03 19 41.7 -0.9**
ATVO AVT- Monte Val 0.76 316 P **Pg 03 19 41.6 -1.0**
ATVO AML AML
comp=E,8055µm,1.2s
ATVO AML AML
comp=N,11150µm,0.7s
T0110 Collepietro 0.78 141 P **Pg 03 19 41.9 -1.1**
T0110 AML AML
comp=E,38750µm,0.6s
T0110 AML AML
comp=N,38500µm,1.3s
AOI Ancona 0.79 26 P **Pg 03 19 42.3 -0.9**
AOI AML AML
comp=E,10560µm,0.8s
AOI AML AML
comp=N,10800µm,1.0s
ATMI Monte Miggiano 0.80 309 P **Pg 03 19 42.8 -0.6**
ATMI AML AML
comp=E,19900µm,0.7s
ATMI AML AML
comp=N,25150µm,1.4s
ATPI Pietralunga - 0.81 319 P **Pg 03 19 42.8 -0.8**
ATPI AML AML
comp=E,9295µm,1.0s
ATPI AML AML
comp=N,7410µm,0.7s
ATPI AML AML
comp=E,9270µm,1.0s
PIEI Pieia 0.82 328 P **Pg 03 19 42.8 -0.9**
PIEI AML AML
comp=E,5205µm,0.9s
PIEI AML AML
comp=N,6030µm,0.9s
MPAG Monte Paganucc 0.84 341 P **Pg 03 19 42.8 -1.3**
MPAG AML AML
comp=E,6810µm,0.5s
MPAG AML AML
comp=N,7310µm,1.0s
MPAG AML AML
comp=N,7310µm,1.0s
MPAG AML AML
comp=E,6750µm,0.5s
MPAG AML AML
comp=N,7695µm,1.0s
MPAG AML AML
comp=E,6810µm,0.5s
PTQR Pietraquaria 0.84 166 P **Pg 03 19 42.2 -1.9**
PTQR AML AML
comp=E,6355µm,1.6s
PTQR AML AML
comp=N,6260µm,0.9s
MTCE Montecelio 0.86 199 P **Pg 03 19 42.8 -1.7**
MTCE AML AML
comp=E,13350µm,0.5s
MTCE AML AML
comp=N,8930µm,1.2s
NARO Abbazia di Nar 0.87 333 P **Pg 03 19 43.2 -1.5**
NARO AML AML
comp=E,3585µm,1.3s
NARO AML AML
comp=N,4260µm,1.1s
SENI Senigallia 0.87 5 P **Pg 03 19 43.7 -1.0**
SENI AML AML
comp=E,12560µm,0.6s
SENI AML AML
comp=N,10275µm,1.1s
SENI AML AML
comp=E,12615µm,0.6s
SENI AML AML
comp=N,10285µm,1.1s
APEC Apecchio 0.89 325 P **Pg 03 19 44.6 -0.4**
APEC AML AML
comp=N,1760µm,0.5s
APEC AML AML
comp=E,1795µm,0.5s
FSSB Fossombrone 0.89 344 P **Pg 03 19 43.8 -1.3**
FSSB AML AML
comp=N,19400µm,0.4s
FSSB AML AML
comp=E,14050µm,1.1s
SACS San Casciano d 0.90 271 P **Pg 03 19 44.7 -0.5**
SACS AML AML
comp=N,9510µm,1.1s
SACS AML AML
comp=N,9230µm,1.6s
SACS AML AML
comp=E,10750µm,1.4s
SACS AML AML
comp=E,10250µm,1.3s
BADI Badiali 0.93 316 AML AML
comp=N,4260µm,0.9s
BADI AML AML
comp=E,296µm,0.5s
BADI AML AML
comp=N,4265µm,0.9s
BADI AML AML
comp=E,295µm,0.5s
CAFI Castiglion Fio 0.98 300 P **Pg 03 19 45.9 -1.0**
CAFI AML AML
comp=N,8380µm,1.0s
CAFI AML AML
comp=E,6050µm,0.9s
CAFI AML AML
comp=E,5960µm,0.9s
CAFI AML AML
comp=N,8025µm,1.0s
RCAV Rocca di Cave 1.00 188 P **Pg 03 19 46.4 -0.8**
RCAV AML AML
comp=N,19300µm,1.1s
RCAV AML AML
comp=E,17200µm,1.0s
LATE Laterza 1.00 258 Pg **Pg 03 19 46.7 -0.4**
INTR Introdacqua 1.01 145 **Pg 03 19 45.3 -2.1**
INTR Sg **Sg 03 20 00.4 +0.1**
INTR Introdacqua 1.01 145 P **Pg 03 19 45.2 -2.1**
INTR AML AML
comp=N,25600µm,1.4s
INTR AML AML
comp=E,12µm,0.7s
INTR AML AML
comp=E,12450µm,0.7s
INTR AML AML
comp=N,17µm,1.4s
VVLD Villa Vallelon 1.03 159 P **Pg 03 19 46.3 -1.5**
VVLD AML AML
comp=N,10885µm,0.4s
VVLD AML AML
comp=E,8090µm,0.6s
SSP9 Sansepolcro 1.03 316 P **Pg 03 19 47.2 -0.7**
SSP9 AML AML
comp=N,6680µm,0.9s
SSP9 AML AML
comp=E,7980µm,1.6s
GUAR Guarcino 1.05 172 P **Pg 03 19 47.4 -0.8**
GUAR AML AML
comp=E,11900µm,0.9s
GUAR AML AML
comp=N,16900µm,0.4s
MCIV Monte Civitell 1.07 267 P **Pg 03 19 47.6 -0.9**
MCIV AML AML
comp=N,2915µm,0.9s
MCIV AML AML
comp=E,3600µm,0.9s
RMP Rome, Mte Porz 1.07 197 P **Pg 03 19 47.1 -1.5**
RMP AML AML
comp=N,16650µm,0.7s
RMP AML AML
comp=E,9745µm,1.1s
CAFR Castel Frentan 1.09 124 P **Pg 03 19 47.1 -1.7**
CAFR AML AML
comp=N,11850µm,0.7s
CAFR AML AML
comp=E,10140µm,0.9s
LPEL Lama dei Pelig 1.11 135 P **Pb 03 19 46.8 -2.7**
LPEL AML AML
comp=E,16100µm,0.6s
LPEL AML AML
comp=N,11350µm,0.8s
RDP Rocca di Papa 1.12 196 P **Pb 03 19 48.4 -1.3**
RDP AML AML
comp=E,28750µm,0.5s
RDP AML AML
comp=N,28250µm,0.5s
MA9 Marino 1.12 198 P **Pb 03 19 48.0 -1.7**
MA9 AML AML
comp=E,21300µm,0.6s
MA9 AML AML
comp=N,18100µm,0.6s
TOLF Tolfa 1.14 228 P **Pb 03 19 48.1 -1.8**
TOLF AML AML
comp=E,8155µm,0.7s
TOLF AML AML
comp=N,5540µm,0.7s
SF01 Poggio Pratacc 1.15 269 AML AML
comp=N,4580µm,1.1s
SF01 AML AML
comp=E,3935µm,0.9s
LAV9 Lanuvio 1.20 195 P **Pn 03 19 49.6 -1.5**
LAV9 AML AML
comp=E,29050µm,0.5s
LAV9 AML AML
comp=N,21400µm,1.2s
LAV9 AML AML
comp=E,30400µm,0.5s
LAV9 AML AML
comp=N,20550µm,1.2s
LRP Arpino 1.24 164 P **Pn 03 19 50.7 -1.0**
LRP AML AML
comp=N,6165µm,0.5s
LRP AML AML
comp=E,3845µm,0.4s
GIUL Giuliano Di Ro 1.28 176 P **Pn 03 19 51.1 -1.2**
GIUL AML AML
comp=N,5505µm,0.5s
GIUL AML AML
comp=E,5460µm,0.8s
LATB Latina 1.35 185 P **Pn 03 19 51.1 -2.0**
LATB AML AML
comp=E,1815µm,1.0s
LATB AML AML
comp=N,1880µm,1.1s
CERA Filignano 1.40 152 P **Pn 03 19 52.8 -1.2**
CERA AML AML
comp=N,10040µm,0.7s
CERA AML AML
comp=E,7305µm,0.7s
SFI Santa Sofia 1.42 319 P **Pn 03 19 53.5 -0.6**
SFI AML AML
comp=E,3725µm,0.9s
SFI AML AML
comp=N,2580µm,1.1s
SFI AML AML
comp=N,2625µm,1.2s
SFI AML AML
comp=E,3770µm,0.9s
CSNT Castellina Chi 1.49 296 P **Pn 03 19 54.5 -0.6**
CSNT AML AML
comp=E,1290µm,1.4s
CSNT AML AML
comp=N,1445µm,0.9s
TRIV Trivento 1.50 135 P **Pn 03 19 54.9 -0.4**
TRIV AML AML
comp=E,61656µm,0.7s
TRIV AML AML
comp=N,60100µm,1.6s
TRIV AML AML
comp=E,9035µm,0.8s
TRIV AML AML
comp=N,9535µm,0.7s
MAON Monte Argentar 1.53 255 P **Pn 03 19 54.3 -1.3**
MAON AML AML
comp=E,2165µm,1.3s
MAON AML AML
comp=N,1645µm,0.8s
OSSC Osservatorio P 1.54 297 **Pn 03 19 55.0 -0.8**
OSSC Osservatorio P 1.54 297 P **Pn 03 19 55.0 -0.8**
OSSC AML AML
comp=N,1222µm,1.5s
OSSC AML AML
comp=E,1985µm,1.0s
OSSC AML AML
comp=E,1215µm,1.5s
OSSC AML AML
comp=N,1965µm,1.0s
RUFI Rufina 1.55 311 P **Pn 03 19 54.7 -1.2**
RUFI AML AML
comp=N,2070µm,0.7s
RUFI AML AML
comp=E,1908µm,0.6s
VAGA Valle Agricola 1.64 150 P **Pn 03 19 57.1 -0.1**
VAGA AML AML
comp=E,2620µm,0.9s
VAGA AML AML
comp=N,4115µm,0.9s
TRIF Trifonti 1.66 280 P **Pn 03 19 56.8 -0.7**
TRIF AML AML
comp=N,950µm,0.9s
TRIF AML AML
comp=E,955µm,0.8s
CASP Castiglione de 1.66 269 Pn **Pn 03 19 56.9 -0.7**
CASP Castiglione de 1.66 269 P **Pn 03 19 56.8 -0.7**
CASP AML AML
comp=N,668µm,0.9s
CASP AML AML
comp=E,560µm,1.6s
BSSO Busso 1.69 139 AML AML
comp=N,1206µm,1.5s
BSSO AML AML
comp=E,3645µm,1.1s
BSSO AML AML
comp=N,2935µm,1.5s
BSSO AML AML
comp=E,1530µm,1.1s
BRIS BRISIGHELLA 1.76 319 P **Pb 03 20 00.9 +0.4**
PTRJ Pietraroja 1.80 144 AML AML
comp=N,4475µm,0.5s
PTRJ AML AML
comp=E,4005µm,0.7s
PTRJ AML AML
comp=N,4065µm,0.5s
PTRJ AML AML
comp=E,4475µm,0.7s
MELA Melanico ??? S 1.87 127 P **Pn 03 20 00.4 +0.2**
MELA AML AML
comp=E,6910µm,0.9s
MELA AML AML
comp=N,9390µm,0.6s
MELA AML AML
comp=N,9040µm,0.6s
MELA AML AML
comp=E,7180µm,0.9s
TREM Isole Tremiti 1.90 111 P **Pn 03 20 01.1 +0.3**
TREM AML AML
comp=N,7960µm,0.8s
TREM AML AML
comp=E,7270µm,0.7s
PSB1 Pescosannita 2.04 142 P **Pb 03 20 04.4 -1.0**
PSB1 AML AML
comp=E,2085µm,1.2s
PSB1 AML AML
comp=N,2400µm,0.8s
PSB1 AML AML
comp=E,2100µm,1.1s
PSB1 AML AML
comp=N,2350µm,0.8s
APRC Apricena 2.09 120 P **Pn 03 20 03.2 -0.2**
APRC AML AML
comp=N,4715µm,1.5s
APRC AML AML
comp=E,3900µm,0.4s
PII Pisa 2.10 296 P **Pn 03 20 03.7 +0.3**
PII AML AML
comp=E,811µm,1.4s
PII AML AML
comp=N,974µm,0.7s
PAOL Paolisi 2.10 149 **Pn 03 20 03.6 +0.1**
PAOL Paolisi 2.10 149 P **Pn 03 20 03.7 +0.1**
MOCO Biccari - m.te 2.11 133 P **Pb 03 20 05.0 -1.5**
MOCO AML AML
comp=E,1855µm,0.6s
MOCO AML AML
comp=N,1014µm,0.7s
BRJN Brijuni 2.12 12 P **Pn 03 20 02.3 -1.4**
CELB S.Piero in Cam 2.15 269 P **Pn 03 20 03.5 -0.7**
CELB AML AML
comp=E,333µm,0.9s
CELB AML AML
comp=N,253µm,1.6s
ZCCA Zocca 2.17 315 **Pb 03 20 06.1 -1.6**
MAIM Mastiano 2.20 300 P **Pn 03 20 04.5 -0.5**
MAIM AML AML
comp=E,718µm,1.1s
MAIM AML AML
comp=N,720µm,0.6s
SGTA Sant Agata di 2.38 135 P **Pn 03 20 08.6 +1.1**
SGTA AML AML
comp=E,2395µm,0.7s
SGTA AML AML
comp=E,2495µm,0.7s
SGTA AML AML
comp=N,1308µm,0.7s
SGTA AML AML
comp=N,1260µm,1.1s
VLC Villacollemand 2.39 304 **Pn 03 20 07.1 -0.5**
EQUI Equi 2.54 303 P **Pn 03 20 09.3 -0.3**
EQUI AML AML
comp=N,522µm,1.0s
EQUI AML AML
comp=E,358µm,0.8s
CAPA Cerignola FG 2.61 129 P **Pn 03 20 11.0 +0.4**
CAPA AML AML
comp=E,3420µm,0.8s
CAPA AML AML
comp=N,3855µm,1.1s
VULT Monte Vulture 2.64 134 P **Pn 03 20 12.0 +0.9**
VULT AML AML
comp=N,2880µm,0.6s
VULT AML AML
comp=N,2790µm,0.6s
VULT AML AML
comp=E,1930µm,0.6s
VULT AML AML
comp=E,1900µm,0.6s
RIY Rijeka 2.67 21 *e*Pn **Pn 03 20 10.8 -0.6**
RIY *e*Sn **Sn 03 20 43.6 -0.4**
TEOL Teolo 2.73 338 Pn **Pn 03 20 12.2 0.0**
TEOL Teolo 2.73 338 P **Pn 03 20 12.1 -0.1**
TEOL AML AML
comp=N,2545µm,1.0s
TEOL AML AML
comp=E,3675µm,0.9s
MORSI Morsiglia 2.77 274 P **Pn 03 20 13.1 +0.5**
SKDS Skadanscina 2.78 13⇑*i*Pn **Pn 03 20 11.8 -1.1**
SKDS Skadanscina 2.78 13 *i* Pn **Pn 03 20 12.0 -0.9**
SKDS *e*Sn **Sn 03 20 47.4 +0.7**
SKDS IAML 03 21 08.7
comp=Z,431nm,0.7s
PRMA PARMA 2.80 314 Pn **Pn 03 20 12.3 -0.8**
PALZ Palazzo San Ge 2.84 131 P **Pn 03 20 13.7 0.0**
MRVN Minervino Murg 2.90 127 P **Pn 03 20 14.8 +0.3**
MRVN AML AML
comp=E,844µm,0.6s
MRVN AML AML
comp=N,740µm,0.6s
ACER Acerenza 2.94 133 P **Pn 03 20 16.0 +0.9**
ACER AML AML
comp=E,1455µm,0.5s
ACER AML AML
comp=N,1740µm,0.9s
ACER AML AML
comp=N,1780µm,0.9s
ACER AML AML
comp=E,1415µm,0.5s
SMPL Sampolo 2.94 257 P **Pn 03 20 14.7 -0.4**
SMPL AML AML
comp=E,86µm,0.8s
SMPL AML AML
comp=N,102µm,0.8s
SMPL Sampolo 2.94 257 P **Pn 03 20 15.4 +0.4**
CORF Corte 2.98 261 P **Pn 03 20 16.3 +0.6**
MSSA Maissana 3.01 301 Pn **Pn 03 20 16.2 +0.1**
CEY Cerknica 3.05 17 *e*Pn **Pn 03 20 15.5 -1.1**
PGF Pioggiola 3.06 266 *e*P **Pn 03 20 17.4 +0.6**
PGF *e*Sn **Sn 03 20 48.6 -5.0**
comp=N,173nm,1.0s
PGF Pioggiola 3.06 266 AML AML
comp=N,119µm,1.6s
PGF AML AML
comp=E,113µm,1.5s
PGF Pioggiola 3.06 266 P **Pn 03 20 17.3 +0.6**
BOJS Bojanci 3.07 29 *e*Pn **Pn 03 20 16.2 -0.7**
BOJS Bojanci 3.07 29 P **Pn 03 20 17.2 +0.3**
BOJS AML AML
comp=E,1480µm,0.8s
BOJS AML AML
comp=N,2190µm,1.3s
SABO M.te Sabotino 3.16 6 P **Pn 03 20 17.5 -0.6**
SABO AML AML
comp=N,5315µm,0.8s
SABO AML AML
comp=N,1282µm,0.7s
SABO AML AML
comp=E,1440µm,0.7s
SABO AML AML
comp=E,6095µm,0.7s
ROVR Rover Verones 3.17 333 P **Pn 03 20 18.9 +0.6**
ROVR AML AML
comp=N,652µm,0.4s
ROVR AML AML
comp=E,234µm,0.7s
ROVR AML AML
comp=E,702µm,1.6s
ROVR AML AML
comp=N,261µm,0.4s
CGRP Cima Grappa 3.19 343 P **Pn 03 20 18.5 -0.1**
CGRP AML AML
comp=N,1320µm,0.9s
CGRP AML AML
comp=E,1130µm,0.9s
CGRP AML AML
comp=N,1365µm,1.0s
CGRP AML AML
comp=E,1152µm,0.9s
PTRP Pietrapertosa 3.19 135 P **Pn 03 20 19.7 +1.1**
PTRP AML AML
comp=E,1330µm,0.8s
PTRP AML AML
comp=N,1565µm,0.9s
MCEL Monticello 3.21 140 P **Pn 03 20 20.5 +1.6**
MCEL AML AML
comp=E,370µm,1.6s
MCEL AML AML
comp=N,439µm,0.9s
AMUR Altamura 3.23 125 P **Pn 03 20 19.5 +0.3**
MTSN Montesano sull 3.24 142 P **Pn 03 20 21.0 +1.7**

MTSN AML AML
comp=E,358µm,0.7s
MTSN AML AML
comp=N,344µm,1.1s
GBAS Gorenja Brezov 3.24 16 *i* Pn **Pn 03 20 18.8 -0.4**
MGRS Mrkonjic Grad 3.28 60 *e*Pn **Pn 03 20 20.8 +1.1**
MIGL Miglionico 3.34 131 P **Pn 03 20 21.4 +0.9**
DOSS Dosso del Somm 3.35 336 P **Pn 03 20 21.4 +0.6**
DOSS AML AML
comp=E,628µm,1.2s
DOSS AML AML
comp=N,599µm,0.8s
DOSS AML AML
comp=N,842µm,0.8s
DOSS AML AML
comp=E,802µm,0.8s
SALO Salr 3.35 327 Pn **Pn 03 20 20.9 +0.1**
SALO Salr 3.35 327 P **Pn 03 20 21.8 +1.0**
SALO AML AML
comp=N,957µm,1.1s
SALO AML AML
comp=E,722µm,1.1s
AJAC Base Areonaval 3.36 256 P **Pn 03 20 21.5 +0.8**
AJAC AML AML
comp=E,199µm,0.4s
AJAC AML AML
comp=N,180µm,0.8s
AJAC Base Areonaval 3.36 256 P **Pn 03 20 21.7 +0.9**
LJU Ljubljana 3.36 17 P **Pn 03 20 20.6 -0.3**
LJU AML AML
comp=E,4540µm,0.7s
LJU AML AML
comp=N,5815µm,0.9s
PRIJ Prijedor 3.36 49 *e*Pn **Pn 03 20 20.3 -0.5**
STON Ston 3.36 88 ⇑*i*Pn **Pn 03 20 19.4 -1.4**
STON Ston 3.36 88 *e*Pn **Pn 03 20 19.7 -1.1**
STON *e*Sn **Sn 03 21 00.6 -0.4**
STON Ston 3.36 88 AML AML
comp=E,488µm,0.6s
STON AML AML
comp=N,612µm,0.9s
CTI Castel Tesino 3.38 342 **Pn 03 20 21.3 +0.1**
CTI Castel Tesino 3.38 342 P **Pn 03 20 21.3 +0.1**
CTI Castel Tesino 3.38 342 P **Pn 03 20 21.3 +0.1**
CTI AML AML
comp=E,697µm,0.7s
CTI AML AML
comp=N,492µm,0.9s
STAL STALIGIAL 3.44 355 **Pn 03 20 21.5 -0.4**
STAL STALIGIAL 3.44 355 P **Pn 03 20 21.2 -0.7**
STAL AML AML
comp=N,551µm,0.9s
STAL AML AML
comp=N,637µm,0.8s
STAL AML AML
comp=E,816µm,1.1s
STAL AML AML
comp=E,1049µm,0.9s
SCHR S. Chirico Rap 3.44 139 P **Pn 03 20 23.4 +1.3**
SCHR AML AML
comp=E,294µm,1.2s
SCHR AML AML
comp=N,234µm,1.3s
CUC Castrocucco 3.49 144 Pn **Pn 03 20 22.2 -0.4**
CUC Castrocucco 3.49 144 P **Pn 03 20 24.8 +2.1**
A051A Mrakovica 3.49 50 ⇑*i*Pn **Pn 03 20 22.4 -0.3**
LUSI Trento, Gardas 3.49 334 P **Pn 03 20 23.3 +0.6**
LUSI AML AML
comp=E,665µm,0.8s
LUSI AML AML
comp=N,702µm,1.3s
CRAC Craco 3.50 134 P **Pn 03 20 23.9 +1.1**
CRAC AML AML
comp=E,1725µm,1.0s
CRAC AML AML
comp=N,1610µm,1.2s
BLY Banja Luka 3.50 56 ⇑*i*Pn **Pn 03 20 22.7 -0.1**
BLY Banja Luka 3.50 56 *e*Pn **Pn 03 20 23.3 +0.5**
BLY *e*Sn **Sn 03 21 03.5 -1.0**
CIMO Cimolais 3.51 352 P **Pn 03 20 22.3 -0.6**
CIMO AML AML
comp=E,66µm,0.4s
CIMO AML AML
comp=E,229µm,0.8s
CIMO AML AML
comp=N,320µm,0.7s
CIMO AML AML
comp=N,92µm,0.9s
LTRZ Laterza 3.55 128 P **Pn 03 20 24.1 +0.7**
LTRZ AML AML
comp=E,643µm,0.7s
LTRZ AML AML
comp=N,2900µm,1.6s
PTCC Patocco-Chiusa 3.57 3 P **Pn 03 20 22.9 -0.8**
PTCC AML AML
comp=N,468µm,0.6s
PTCC AML AML
comp=E,438µm,0.7s
NOCI Noci 3.58 123 P **Pn 03 20 24.1 +0.1**
NOCI AML AML
comp=N,978µm,1.3s
NOCI AML AML
comp=E,869µm,0.8s
GAGG Gaggia 3.60 335 P **Pn 03 20 25.2 +1.0**
GAGG AML AML
comp=N,1093µm,1.0s
GAGG AML AML
comp=E,639µm,1.0s
GAGG AML AML
comp=N,672µm,1.0s
GAGG AML AML
comp=E,1065µm,1.0s
PRED Cave del Predi 3.62 5 **Pn 03 20 22.8 -1.7**
CLUD Cludinico 3.62 357 Pn **Pn 03 20 23.2 -1.3**
CLUD Cludinico 3.62 357 P **Pn 03 20 23.9 -0.6**
CLUD AML AML
comp=E,656µm,1.2s
CLUD AML AML
comp=E,636µm,1.2s
CLUD AML AML
comp=N,529µm,0.8s
CLUD AML AML
comp=N,532µm,1.0s
ZONE Zone 3.64 325 P **Pn 03 20 25.3 +0.6**
ZONE AML AML
comp=E,378µm,0.9s
ZONE AML AML
comp=N,412µm,0.5s
DGI Dorgali Grotta 3.65 228 P **Pn 03 20 25.0 +0.2**
ACOM Acomizza, Ital 3.72 4 P **Pn 03 20 25.6 -0.4**
ACOM AML AML
comp=N,838µm,1.0s
ACOM AML AML
comp=E,1155µm,1.1s
ACOM AML AML
comp=N,874µm,1.0s
ACOM AML AML
comp=E,1150µm,1.1s
ZOU Zoufplan 3.72 358 P **Pn 03 20 25.6 -0.3**
ZOU AML AML
comp=E,789µm,1.3s
ZOU AML AML
comp=N,963µm,1.1s
ZOU AML AML
comp=N,933µm,1.1s
ZOU AML AML
comp=E,800µm,1.4s
MABI Malga Bissina 3.72 331 P **Pn 03 20 26.8 +0.9**
ORI Oriolo Calabro 3.73 137 P **Pn 03 20 28.8 +2.9**
ORI Oriolo Calabro 3.73 137 P **Pn 03 20 28.5 +2.6**
ORI AML AML
comp=N,667µm,1.3s
ORI AML AML
comp=E,658µm,0.6s
FVI Forni Avoltri 3.77 356 P **Pn 03 20 26.2 -0.3**
FVI AML AML
comp=E,482µm,1.6s
FVI AML AML
comp=N,428µm,0.7s
OBKA Obir 3.81 15 *e*Pn **Pn 03 20 27.1 0.0**
MYKA Terra Mystica 3.81 5 *i*Pn **Pn 03 20 27.4 +0.3**
comp=N,16nm,0.5s,SNR=15
KOSI Kohlern 3.83 342 P **Pn 03 20 28.3 +0.8**
KOSI AML AML
comp=E,989µm,0.8s
KOSI AML AML
comp=N,673µm,0.9s
TREB Trebinje 3.85 90 *e*Pn **Pn 03 20 27.9 +0.4**
TREB Trebinje 3.85 90 *e*Pn **Pn 03 20 27.8 +0.3**
TREB *e*Sn **Sn 03 21 13.5 +0.5**
TAR1 Taranto 3.88 125 AML AML
comp=E,819µm,0.6s
TAR1 AML AML
comp=N,773µm,0.5s
A052A Srbac 3.89 53 *e*Pn **Pn 03 20 27.4 -0.7**
ABTA Abfaltersbach 3.94 354 *i*Pn **Pn 03 20 29.6 +0.8**
comp=N,24nm,0.4s,SNR=63
BRY Bratogost 3.98 87 ⇑*i*Pn **Pn 03 20 29.1 -0.4**
BRY Bratogost 3.98 87 ⇑*i*Pn **Pn 03 20 29.6 +0.1**
BRY *i*Sn **Sn 03 21 16.6 +0.2**
HCY Herceg Novi 3.98 94 *e*Pn **Pn 03 20 29.5 +0.2**
HCY Herceg Novi 3.98 94 ⇓*i*Pn **Pn 03 20 29.7 +0.4**
HCY *i*Sn **Sn 03 21 16.7 +0.5**
SOKA Soboth 4.07 19 *i*Pn **Pn 03 20 30.7 0.0**
comp=N,3.0nm,0.4s,SNR=5.9
RISI Rein 4.18 350 P **Pn 03 20 33.2 +0.9**
RISI AML AML
comp=E,779µm,0.5s
RISI AML AML
comp=N,850µm,0.7s
SAOF Saorge 4.22 288 P **Pn 03 20 34.1 +1.5**
KBA Koelnbreinsper 4.24 2 *e*Pn **Pn 03 20 33.8 +0.6**
comp=N,14nm,0.2s
MUGIO Muggio 4.25 318 P **Pn 03 20 33.0 -0.1**
MUGIO AML AML
comp=E,173µm,1.2s
MUGIO AML AML
comp=N,138µm,1.4s
UPM Unac-Piva 4.25 83 *e*Pn **Pn 03 20 34.6 +1.3**
UPM Unac-Piva 4.25 83 *e*Pn **Pn 03 20 33.4 +0.1**
UPM *i*Sn **Sn 03 21 23.3 +0.1**
SBF Sospel 4.28 286 *e*P **Pn 03 20 34.0 +0.5**
SBF *e*Sn **Sn 03 21 18.6 -5.0**
comp=N,55nm,0.5s
CEME Cevo 4.28 92 ⇑*i*Pn **Pn 03 20 33.8 +0.3**
CEME *i*Sn **Sn 03 21 23.8 +0.1**
NKME Niksic 4.29 89 ⇑*i*Pn **Pn 03 20 33.8 +0.2**
NKME *i*Sn **Sn 03 21 24.2 +0.3**
BUM Brajici-Budva 4.29 95 ⇓*i*Pn **Pn 03 20 33.9 +0.2**
BUM *i*Sn **Sn 03 21 24.2 +0.2**
TURF col de Turini 4.33 287 P **Pn 03 20 35.5 +1.1**
VSL Villasalto 4.38 222 P **Pn 03 20 35.3 +0.5**
HAPS Han Pijesak,Bl 4.42 72 ⇑*i*Pn **Pn 03 20 35.7 +0.2**
SPIF crte de Spivo 4.46 288 P **Pn 03 20 38.9 +2.9**
BEHE Becsehely 4.47 34 P **Pn 03 20 36.9 +0.8**
FETA Feichten 4.52 339 *i*Pn **Pn 03 20 39.8 +2.9**
comp=N,15nm,0.8s,SNR=43
CGL Cagliari Serpe 4.52 221 P **Pn 03 20 38.1 +1.2**
DRME Dracevica, Mon 4.53 96 ⇑*i*Pn **Pn 03 20 37.4 +0.6**
DRME Dracevica, Mon 4.53 96 ⇓*i*Pn **Pn 03 20 37.2 +0.4**
DRME *i*Sn **Sn 03 21 29.9 +0.2**
TUE Stuetta 4.53 325 Pn **Pn 03 20 35.7 -1.3**
PDG Podgorica 4.54 93 ⇑P **Pn 03 20 37.6 +0.6**
PDG Podgorica 4.54 93 Pn **Pn 03 20 35.8 -1.3**
PDG Podgorica 4.54 93 *e*Pn **Pn 03 20 37.9 +0.9**
PDG *e*Sn **Sn 03 21 29.7 -0.3**
TTG Podgorica 4.54 93 ⇓*i*Pn **Pn 03 20 37.4 +0.4**
TTG *i*Sn **Sn 03 21 30.1 +0.1**
WTTA Wattenberg 4.55 347 *i*Pn **Pn 03 20 39.4 +2.1**
comp=N,21nm,0.5s,SNR=19
DAVOX Davos/Dischmat 4.57 331 Pn **Pn 03 20 39.9 +2.3**
comp=N,8.4nm,0.3s,baz=158,slow=17,SNR=54
DAVOX Sn **Sn 03 21 36.7 +5.7**
comp=N,5.2nm,0.3s,baz=307,slow=23,SNR=6.6
DAVOX LR LR 03 22 16.7
comp=N,66nm,20.4s,baz=140,slow=38
DAVOX Davos/Dischmat 4.57 331 P **Pn 03 20 40.1 +2.5**
DAVOX Davos/Dischmat 4.57 331 P **Pn 03 20 39.9 +2.3**
TIP Timpagrande 4.57 142 ⇓P **Pn 03 20 41.4 +3.9**
TIP Timpagrande 4.57 142 Pn **Pn 03 20 36.6 -0.9**
SQTA Sankt Quirin 4.59 343 **Pn 03 20 39.3 +1.4**
SQTA Sankt Quirin 4.59 343 P **Pn 03 20 39.3 +1.4**
SQTA Sankt Quirin 4.59 343 *i*Pn **Pn 03 20 39.3 +1.4**
comp=N,16nm,0.4s,SNR=28
PLE Pljevlja 4.61 82 ⇑*i*Pn **Pn 03 20 38.4 +0.2**
PLE *i*Sn **Sn 03 21 31.9 -0.1**
ULC Ulcinj 4.61 99 ⇓*i*Pn **Pn 03 20 38.4 +0.3**
ULC *i*Sn **Sn 03 21 31.8 -0.1**
CALF Calern 4.62 284 P **Pn 03 20 39.1 +0.8**
RUDO Rudo 4.63 78 ⇑*i*Pn **Pn 03 20 38.6 +0.3**
WATA Walderalm 4.63 347 **Pn 03 20 40.7 +2.3**
WATA Walderalm 4.63 347 P **Pn 03 20 40.7 +2.3**
WATA Walderalm 4.63 347 *i*Pn **Pn 03 20 40.7 +2.3**
comp=N,10nm,0.3s,SNR=23
BBLS Lazići 4.69 75 ⇑*i*Pn **Pn 03 20 39.3 +0.1**
BBLS Lazići 4.69 75 *e*Pn **Pn 03 20 39.9 +0.7**
KOME Kolasin 4.70 88 ⇑*i*Pn **Pn 03 20 39.5 +0.2**
KOME *i*Sn **Sn 03 21 34.0 -0.1**
TRAV Traversella 4.70 306 P **Pn 03 20 39.3 0.0**
TRAV AML AML
comp=E,103µm,1.3s
TRAV AML AML
comp=N,88µm,0.9s
ARSA Arzberg 4.73 20 *i*Pn **Pn 03 20 39.4 -0.2**
comp=N,9.7nm,0.4s,SNR=6.1
ARSA Arzberg 4.73 20 P **Pn 03 20 38.9 -0.7**
MOTA Moosalm 4.73 343 **Pn 03 20 42.2 +2.5**
MOTA Moosalm 4.73 343 P **Pn 03 20 42.3 +2.5**
MOTA Moosalm 4.73 343 *i*Pn **Pn 03 20 42.3 +2.5**
comp=N,4.8nm,0.3s,SNR=20
FUSIO Fusio 4.82 320 P **Pn 03 20 41.8 +0.8**
KOVH Kovagotottos 4.82 46 P **Pn 03 20 40.0 -0.9**
BLJ Bijeljina 4.85 64 *e*Pn **Pn 03 20 38.4 -2.9**
SURF Saint Ours 4.87 292 P **Pn 03 20 42.9 +1.2**
BIOA Bad Ischl, Aus 4.87 4 **Pn 03 20 42.1 +0.5**
BIOA Bad Ischl, Aus 4.87 4 *i*Pn **Pn 03 20 42.1 +0.5**
comp=N,11nm,0.3s,SNR=23
LMR La Mourre 4.87 278 *e*P **Pn 03 20 41.9 +0.3**
LMR *e*Sn **Sn 03 21 32.8 -5.4**
comp=N,335nm,2.0s
SCTE Santa Cesarea 4.87 123 Pn **Pn 03 20 41.4 -0.2**
JAUF Jausiers 4.89 291 P **Pn 03 20 43.4 +1.4**
RJOB Jochberg 4.91 357 *e*Pn **Pn 03 20 42.7 +0.6**
RETA Reutte 4.94 341 *i*Pn **Pn 03 20 44.3 +1.6**
comp=N,6.3nm,0.3s,SNR=17
TEKS Tekeris 4.95 68 *e*Pn **Pn 03 20 41.7 -1.0**
MBDF Montbardon 4.97 294 *e*P **Pn 03 20 44.3 +1.2**
IVA Berane 4.97 87 *e*Pn **Pn 03 20 43.4 +0.3**
IVA *i*Sn **Sn 03 21 40.7 -0.2**
TRIGF Trigance 4.99 283 P **Pn 03 20 44.4 +1.1**
DAVA Damuels 5.01 334 *i*Pn **Pn 03 20 45.5 +1.9**
comp=N,11nm,0.5s,SNR=20
CREF Creux 5.02 292 P **Pn 03 20 46.2 +2.5**
CEL Celeste 5.04 154 **Pn 03 20 43.1 -0.8**
SJES Sjenica 5.04 83 *e*Pn **Pn 03 20 44.9 +0.9**
PVY Plav 5.04 90 *e*Pn **Pn 03 20 44.3 +0.3**
PVY *i*Sn **Sn 03 21 42.3 -0.2**
OGAG Argentiere 5.04 291 P Pn 03 20 49.4 +5.3
FLAF Flassans-sur-I 5.06 279 P **Pn 03 20 45.1 +0.9**
EMBD Embd, Matterta 5.07 314 P Pn 03 20 49.3 +4.8
MOA Molln 5.08 9 *e*Pn **Pn 03 20 44.6 +0.1**
MOA *e*Sn **Sn 03 21 41.8 -1.5**
MOA Molln 5.08 9 *i*Pn **Pn 03 20 44.6 +0.1**
comp=N,12nm,0.4s,SNR=7.9
OGDI Digne 5.13 287 P **Pn 03 20 48.0 +2.8**
DIVS Divibare 5.15 74 Pn **Pn 03 20 45.4 -0.2**
DIVS Divibare 5.15 74 *e*Pn **Pn 03 20 45.4 -0.2**
DIVS Divibare 5.15 74 *e*Pn **Pn 03 20 45.5 0.0**
MORH Mrgy, Hungar 5.19 48 ⇑P **Pn 03 20 46.9 +0.9**
MORH Mrgy, Hungar 5.19 48 P **Pn 03 20 45.9 0.0**
OGMO Fort Saint-Gob 5.21 299 P **Pn 03 20 48.1 +1.7**
DIX Grande Dixence 5.22 310 P **Pn 03 20 49.0 +2.3**
TIR Tirane 5.23 104 ⇑P **Pn 03 20 47.0 +0.4**
TIR Tirane 5.23 104 Pn **Pn 03 20 46.6 +0.1**
TIR Tirane 5.23 104 *e*Pn **Pn 03 20 46.9 +0.4**
TIR *e*Sn **Sn 03 21 46.2 -0.8**
TIR Tirane 5.23 104 P **Pn 03 20 46.6 +0.1**
TIR Tirane 5.23 104 P **Pn 03 20 46.9 +0.4**
BNALP Bannalp 5.24 322 P **Pn 03 20 49.0 +2.3**
CLTB Caltabellotta 5.25 179 Pn **Pn 03 20 45.2 -1.7**
TIH Tihany 5.29 38 P **Pn 03 20 49.7 +2.4**
UBR Ueberruh 5.29 337 *e*Pn **Pn 03 20 49.1 +1.7**
LPG La Plagne 5.30 302 *e*P **Pn 03 20 49.4 +1.6**
LPG *e*Sn **Sn 03 21 44.0 -5.2**
comp=N,108nm,1.1s
LPG La Plagne 5.30 302 P **Pn 03 20 47.8 0.0**
LPL La Plagne 5.32 302 *e*P **Pn 03 20 50.8 +2.8**
LPL *e*Sn **Sn 03 21 42.9 -6.7**
comp=N,72nm,1.0s
VLO Vlora 5.33 114 **Pn 03 20 46.8 -1.0**
VLO Vlora 5.33 114 P **Pn 03 20 46.8 -1.0**
MPLH Magyarpolny 5.34 34 P **Pn 03 20 48.7 +0.6**
FRGS Fruska Gora 5.35 62 *e*Pn **Pn 03 20 47.1 -1.1**
FRGS Fruska Gora 5.35 62 *e*Pn **Pn 03 20 47.8 -0.4**
RONA Rosalia, Austr 5.35 24 **Pn 03 20 48.0 -0.2**
RONA Rosalia, Austr 5.35 24 *i*Pn **Pn 03 20 48.0 -0.2**
comp=N,14nm,0.6s,SNR=14
ARTF Artigues 5.40 280 P **Pn 03 20 50.5 +1.6**
SOP Sopron 5.42 25 P **Pn 03 20 48.7 -0.4**
CONA Conrad Observa 5.44 20 *i*Pn **Pn 03 20 49.3 -0.2**
comp=N,8.6nm,0.3s,SNR=19
SENIN Lac Senin/Sane 5.45 312 Pn **Pn 03 20 49.4 -0.4**
EGYH Egyhazaskeszo 5.46 32 P **Pn 03 20 50.7 +1.1**
RSL Roselend 5.47 304 P **Pn 03 20 52.3 +2.3**
TRUS Trudelj 5.47 73 *e*Pn **Pn 03 20 49.8 0.0**
BSTF la Bastide-des 5.55 283 P **Pn 03 20 53.1 +2.1**
OGSI Sixt 5.59 307 P **Pn 03 20 54.4 +2.9**
SMRF Simiane la Rot 5.62 284 *e*P **Pn 03 20 54.4 +2.5**
AIGLE Aigle 5.63 311 P **Pn 03 20 54.0 +1.9**
GRUS Gruza 5.63 77 *e*Pn **Pn 03 20 52.1 +0.1**
GRUS *e*Sn **Sn 03 21 55.1 -1.8**
ORIF Oris-en-Rattie 5.64 294 *e*P **Pn 03 20 56.0 +3.8**
ORIF *e*Sn **Sn 03 21 51.3 -5.9**
comp=N,56nm,0.8s
ORIF Oris-en-Rattie 5.64 294 P **Pn 03 20 53.8 +1.6**
ORIF Oris-en-Rattie 5.64 294 P **Pn 03 20 55.4 +3.3**
CSKK Cskako 5.80 37 P **Pn 03 20 56.1 +1.8**
GRN Grenoble 5.84 297 P **Pn 03 20 57.9 +3.0**
SELS Selova 5.87 84 *e*Pn **Pn 03 20 55.4 0.0**
SELS *e*Sn **Sn 03 22 01.8 -1.1**
SULZ Cheisacher 5.88 325 P **Pn 03 20 56.9 +1.4**
TORNY Torny/Romont 5.89 314 P **Pn 03 20 57.3 +1.6**
SLE Schleitheim 5.91 328 P **Pn 03 20 56.2 +0.2**
KEK Kerkira 5.92 120 Pn **Pn 03 20 55.8 -0.1**
KEK Kerkira 5.92 120 P **Pn 03 20 57.0 +1.0**
BALST Balsthal 5.92 321 P **Pn 03 20 57.1 +1.1**
GUT Gutenstein 5.95 333 P **Pn 03 21 00.1 +3.7**
OHR Ohrid 5.97 104 *i*Pn **Pn 03 20 58.0 +1.3**
OHR *i*Sn **Sn 03 22 04.5 -0.9**
OGSM Saint Maurice 6.01 300 P **Pn 03 20 59.8 +2.4**
GEC2 GERESS Array S 6.02 4 Pn **Pn 03 20 56.6 -0.9**
GEC2 GERESS Array S 6.02 4 *e*Pn **Pn 03 20 56.6 -0.9**
GEC2 *e*Sn **Sn 03 22 04.7 -1.9**
GERES GERESS Array B 6.02 4 Pn **Pn 03 20 56.5 -0.9**
comp=N,1.8nm,0.3s,baz=190,slow=15,SNR=28
GERES Sn **Sn 03 22 05.0 -1.7**
comp=N,4.8nm,0.3s,baz=177,slow=23,SNR=6.8
GERES LR LR 03 23 50.7
comp=N,74nm,19.1s,baz=183,slow=44
comp=N,17nm,0.9s
GERES GERESS Array B 6.02 4 **Pn 03 20 56.7 -0.8**
CKRC Cesky Krumlov 6.04 7 *e*PN **Pn 03 20 56.7 -1.0**
CKRC *e*SN **Sn 03 22 04.3 -2.7**
GIMEL St. Georges / 6.13 309 P **Pn 03 20 59.8 +0.9**
KBN Korca 6.14 109 **Pn 03 21 00.1 +1.0**
KBN Korca 6.14 109 P **Pn 03 21 00.1 +1.0**
BOURR Bourrignon 6.18 320 P **Pn 03 21 00.8 +1.2**
FELD Feldberg im Sc 6.20 326 P **Pn 03 21 00.3 +0.4**
SKO Skopje 6.21 95 *i*Pn **Pn 03 21 01.0 +0.9**
MODS Modra-Piesok 6.25 26 *e*P **Pn 03 20 59.4 -1.2**
BRANT Les Verrieres 6.26 313 P **Pn 03 21 02.4 +1.7**
CABF La Chapelle 6.28 309 *e*P **Pn 03 21 02.7 +1.8**
CABF *e*Sn **Sn 03 22 05.6 -7.3**
comp=N,114nm,1.2s
OG35 Corcelles 6.29 303 P **Pn 03 21 01.9 +0.8**
KIZ Kirchzarten 6.30 326 P **Pn 03 21 01.7 +0.6**
KIZ Kirchzarten 6.30 326 S **Sn 03 22 12.3 -1.0**
KHC Kasperske Hory 6.30 3 **Pn 03 21 00.5 -0.9**
KHC Kasperske Hory 6.30 3 *e*P **Pn 03 21 00.4 -0.9**
KHC *e* 03 22 12.3
KHC Kasperske Hory 6.30 3 *e*PN **Pn 03 21 00.4 -0.9**
KHC *e*SN **Sn 03 22 12.3 -1.2**
WET Wettzell 6.31 359 *e*Pn **Pn 03 21 00.3 -1.0**
WET *e*Sn **Sn 03 22 09.1 -4.6**
BOVS Bovan 6.32 80 ⇓P **Pn 03 21 00.9 -0.5**
BOVS Bovan 6.32 80 *e*Pn **Pn 03 21 00.8 -0.6**
BOVS *e*Sn **Sn 03 22 10.3 -3.5**
IGT Igoumenitsa 6.36 119 P **Pn 03 21 02.6 +0.6**
BARS Barje 6.39 87 *e*Pn **Pn 03 21 02.4 -0.1**
NEST Nestorio 6.41 110 P **Pn 03 21 03.8 +1.0**
SMOL Smolenice 6.43 26 *e*P **Pn 03 21 04.9 +2.0**
SMOL *e* 03 22 17.0
VIVF Saint-Julien-l 6.44 291 *e*P **Pn 03 21 04.9 +1.8**
BFO Black Forest 6.44 330 Pn **Pn 03 21 04.7 +1.5**
BFO Black Forest 6.44 330 P **Pn 03 21 04.7 +1.5**
BFO Black Forest 6.44 330 *e*Pn **Pn 03 21 04.4 +1.2**
RIVEL MONT RIVEL 6.45 310 P **Pn 03 21 04.4 +1.1**
VOGT Vogtsburg - To 6.50 326 S **Sn 03 22 16.1 -2.2**
VOGT Vogtsburg - To 6.50 326 P **Pn 03 21 04.3 +0.3**
MDVR Moldovita 6.51 70 ⇓P **Pn 03 21 03.9 -0.2**
MOF Molkenrain 6.55 322 P **Pn 03 21 05.6 +0.8**
MOF S **Sn 03 22 18.6 -1.1**
PENT Pentalofos 6.57 111 P **Pn 03 21 06.2 +1.2**
KRUC Moravsky 6.63 19 *e*PN **Pn 03 21 04.7 -1.0**
JAN Janina 6.63 116 P **Pn 03 21 06.1 +0.3**
SSB Saint Sauveur 6.65 294 Pn **Pn 03 21 05.5 -0.6**
SSB Saint Sauveur 6.65 294 P **Pn 03 21 05.5 -0.6**
HINF Hinteralfeld 6.66 321 *e*P **Pn 03 21 05.9 -0.3**
HINF *e*Sn **Sn 03 22 16.5 -5.8**
comp=N,69nm,0.7s
TREC Trest 6.66 13 *e*P **Pn 03 21 05.8 -0.4**
TREC *e* 03 22 18.9
TREC Trest 6.66 13 *e*PN **Pn 03 21 05.8 -0.4**
TREC *e*SN **Sn 03 22 18.9 -3.5**
RONF Ronchamp 6.68 319 P **Pn 03 21 07.3 +0.9**
RONF S **Sn 03 22 21.5 -1.2**
BZS Buzias 6.70 63 ⇑P **Pn 03 21 07.5 +0.8**
ZAGS Zajecar 6.71 79 *e*Pn **Pn 03 21 06.5 -0.4**
JAVC Velka Javorina 6.81 26 *e*PN **Pn 03 21 09.3 +1.1**
ECH Echery 6.82 324 Pn **Pn 03 21 08.8 +0.5**
ECH Echery 6.82 324 P **Pn 03 21 08.8 +0.5**
ECH Echery 6.82 324 P **Pn 03 21 09.1 +0.7**
ECH S **Sn 03 22 28.0 +1.8**
STIP Stip 6.82 97 *i*Pn **Pn 03 21 10.4 +2.1**
LASF Ste Croix 6.86 284 *e*P **Pn 03 21 10.9 +2.0**
WLS Welschbruch 6.89 326 P **Pn 03 21 09.8 +0.4**
VRAC Vranov 6.91 19 ⇓P **Pn 03 21 12.8 +3.2**
VRAC Vranov 6.91 19 Pn **Pn 03 21 11.0 +1.5**
comp=N,0.9nm,0.3s,baz=194,slow=13,SNR=4.0
VRAC LR LR 03 23 54.7
comp=N,82nm,19.0s,baz=204,slow=39
comp=N,3.7nm,0.5s
VRAC Vranov 6.91 19 *e*PN **Pn 03 21 11.1 +1.5**
CDF Champ du Feu 6.92 326 *e*P **Pn 03 21 10.1 +0.3**
CDF *e*Sn **Sn 03 22 23.3 -5.5**
comp=N,60nm,0.8s
VYHS Vyhne 6.93 33 *e*P **Pn 03 21 11.8 +2.0**
VYHS *e* 03 22 28.4
KZN Kozani 6.96 108 P **Pn 03 21 12.9 +2.6**
ROTZ Rotzenmuhle 6.96 355 *e*Pn **Pn 03 21 09.1 -1.2**
ROTZ *e*Sn **Sn 03 22 25.4 -4.3**
ZAPS Zavoj 6.98 83 *e*Pn **Pn 03 21 11.3 +0.7**
ZAPS *e*Sn **Sn 03 22 26.5 -3.7**
GRA1 Grafenberg Arr 6.98 350 **Pn 03 21 09.8 -0.8**
GRF Grafenberg Arr 6.98 350 P **Pn 03 21 09.8 -0.8**
GRF Grafenberg Arr 6.98 350 *e*Pn **Pn 03 21 12.5 +1.9**
GRFO Grafenberg 6.98 350 Pn **Pn 03 21 09.9 -0.7**
GRFO Grafenberg 6.98 350 P **Pn 03 21 09.9 -0.7**
SIRR Siria 6.99 58 ⇓P **Pn 03 21 10.4 -0.3**
LKD2 Lefkada island 7.00 123 P **Pn 03 21 12.2 +1.4**
BLKB Belogradchik 7.02 80 ⇓P **Pn 03 21 11.1 0.0**
HERR Herculane 7.02 70 ⇑P **Pn 03 21 11.2 +0.1**
HAU Haudompre 7.03 320 *e*P **Pn 03 21 11.8 +0.5**
HAU *e*Sn **Sn 03 22 25.0 -6.4**
comp=N,112nm,0.8s
DJES Djerdap 7.04 72 ⇓P **Pn 03 21 11.8 +0.3**
GOPC GO Pecny, Ondr 7.17 9 *e*P **Pn 03 21 13.4 +0.2**
GOPC GO Pecny, Ondr 7.17 9 *e*PN **Pn 03 21 13.4 +0.2**
MANZ Manzenberg 7.19 355 *e*Pn **Pn 03 21 12.9 -0.5**
VAY Valandovo 7.19 99 *i*Pn **Pn 03 21 13.7 +0.3**
VAY *i*Sn **Sn 03 22 31.1 -4.2**
VAY Valandovo 7.19 99 P **Pn 03 21 13.8 +0.4**
CIEL Dossenheim-sur 7.22 328 P **Pn 03 21 14.6 +0.8**
CIEL S **Sn 03 22 37.9 +1.9**
PRU Pruhonice 7.22 7 *e*P **Pn 03 21 12.1 -1.7**
PRU *e* 03 22 34.0
PRU Pruhonice 7.22 7 *e*PN **Pn 03 21 12.1 -1.7**
PRU *e*SN **Sn 03 22 34.0 -2.0**
VLS Valsamata 7.35 127 P **Pn 03 21 16.4 +0.8**

GZR Gura Zlata 7.40 67 ⇓P Pn 03 21 16.2 -0.2
NKC Novy Kostel 7.41 357 eSN Sn 03 22 38.3 -2.5
VTS Vitosha 7.45 88 ⇑P Pn 03 21 16.3 -0.8
VTS Vitosha 7.45 88 Pn **Pn 03 21 16.9 -0.2**
VTS Vitosha 7.45 88 P **Pn 03 21 17.8 +0.7**
THL Klokotos Trika 7.46 113 P **Pn 03 21 18.3 +1.2**
KNT Kendrikon 7.47 100 P **Pn 03 21 18.3 +1.0**
WERN Wernitzgruen 7.47 356 ePn **Pn 03 21 16.3 -1.1**
GUNZ Gunzen 7.55 356 ePn **Pn 03 21 17.2 -1.1**
MORC Moravsky Berou 7.58 22 ⇑P Pn 03 21 21.7 +2.8
MORC Moravsky Berou 7.58 22 Pn **Pn 03 21 18.5 -0.4**
MORC Moravsky Berou 7.58 22 P **Pn 03 21 18.5 -0.4**
MORC Moravsky Berou 7.58 22 ePN **Pn 03 21 20.4 +1.5**
TANN Tannenbergstha 7.59 357 ePn **Pn 03 21 19.1 +0.1**
SMF Signal de Mont 7.63 303 eP **Pn 03 21 20.9 +1.5**
SMF eSn **Sn 03 22 40.5 -5.6**
comp=N,20nm,0.6s
WERD Werda 7.63 356 ePn **Pn 03 21 18.9 -0.6**
DEV Deva 7.64 63 ⇑P Pn 03 21 19.7 +0.1
EVR Evrytania 7.66 118 P **Pn 03 21 22.3 +2.4**
KEST Kesra 7.68 204 Pn Pn 03 21 24.9 +4.7
comp=N,1.0nm,0.3s,baz=343,slow=5.2,SNR=13
KEST LR LR 03 24 30.7
comp=N,226nm,18.5s,baz=306,slow=39
PAGF Fort de Pagny 7.71 320 eP **Pn 03 21 21.5 +0.9**
baz=138
PAGF eSn **Sn 03 22 41.7 -6.5**
comp=N,68nm,0.9s
PVCC Panska Ves 7.76 7 eP **Pn 03 21 21.3 +0.1**
PVCC Panska Ves 7.76 7 ePN **Pn 03 21 21.3 +0.1**
SFTF Sexfontaines 7.81 316 ePn **Pn 03 21 20.5 -1.5**
SFTF Sexfontaines 7.81 316 eP **Pn 03 21 24.5 +2.5**
baz=136
SFTF eSn **Sn 03 22 43.0 -7.6**
comp=N,154nm,1.5s
DRGR 7.88 57 ⇑P Pn 03 21 23.2 +0.3
DRGR 7.88 57 P **Pn 03 21 25.1 +2.2**
MOX Moxa 7.88 353 P **Pn 03 21 22.6 -0.3**
MOX Moxa 7.88 353 ePn **Pn 03 21 21.5 -1.4**
SOH Sokhos 7.90 101 P **Pn 03 21 24.3 +1.1**
LOR Lormes 7.92 307 eP **Pn 03 21 24.9 +1.5**
baz=130
LOR eSn **Sn 03 22 45.8 -7.4**
comp=N,15nm,0.4s
LOR Lormes 7.92 307 P **Pn 03 21 24.4 +1.0**
RLS Riolos of Patr 7.95 124 P **Pn 03 21 26.2 +2.4**
SRS Serrai 7.99 99 P **Pn 03 21 25.4 +1.0**
AVF Avril sur Loir 7.99 303 eP **Pn 03 21 27.1 +2.7**
AVF eSn **Sn 03 22 48.5 -6.5**
comp=N,23nm,1.1s
MEZF Maizieres J'vi 8.00 318 eP **Pn 03 21 26.5 +2.0**
baz=139
MEZF eSn **Sn 03 22 48.0 -7.2**
comp=N,20nm,0.5s
MTLF Montolieu 8.00 277 eP **Pn 03 21 27.4 +2.8**
OSTC Ostas 8.01 14 ePN **Pn 03 21 24.0 -0.7**
SSF Saint Saulge 8.02 305 eP **Pn 03 21 26.8 +1.9**
SSF eSn **Sn 03 22 47.9 -7.9**
comp=N,24nm,1.0s
SSF Saint Saulge 8.02 305 P **Pn 03 21 24.4 -0.5**
SSF SG **Sn 03 22 54.7 -1.1**
ABH Alteburg 8.03 333 P **Pn 03 21 26.2 +1.2**
SAVF Savonnieres en 8.04 319 eP **Pn 03 21 28.4 +3.3**
SAVF eSn **Sn 03 22 49.3 -6.9**
comp=N,51nm,1.1s
BRG Berggiesshubel 8.06 4 eP **Pn 03 21 26.8 +1.5**
BRG e 03 22 49.1
BRG pmax pmax
comp=Z,8.0nm,1.0s
TNS Taunus Mts 8.06 338 ePn **Pn 03 21 24.2 -1.2**
MARR Marisel-Cluj 8.08 58 ⇓P Pn 03 21 26.0 +0.3
LOT Lotru 8.09 68 ⇓P Pn 03 21 25.3 -0.6
NVR Nevrokopi 8.12 97 P **Pn 03 21 26.7 +0.5**
BGF Bois d'Agland 8.21 300 eP **Pn 03 21 28.1 +0.6**
BGF eSn **Sn 03 22 52.7 -7.7**
comp=Z,19nm,0.6s
CAF Calviac 8.26 288 eP **Pn 03 21 30.6 +2.5**
CAF Calviac 8.26 288 P **Pn 03 21 29.9 +1.8**
WLF Walferdange 8.36 327 **Pn 03 21 29.4 -0.1**
WLF Walferdange 8.36 327 P **Pn 03 21 29.4 -0.1**
WLF Walferdange 8.36 327 dPP Pn 03 21 34.2 +4.7
KLV Kalavryta, Ach 8.38 122 P **Pn 03 21 31.9 +2.1**
NEO Neokhori 8.40 111 P Pn 03 21 23.5 -6.6
TRPA Tarpa 8.47 48 P **Pn 03 21 33.7 +2.8**
CLL Collm 8.47 359 Pn **Pn 03 21 30.0 -1.0**
CLL Collm 8.47 359 eP **Pn 03 21 30.0 -1.0**
CLL Collm 8.47 359 ePn **Pn 03 21 30.0 -1.0**
CLL ex x 03 21 33.0
CLL eSn Sn 03 22 56.0 -11
CLL ex x 03 23 13.0
CLL ex x 03 23 28.0
CLL ex x 03 23 48.0
CLL eSg **Sg 03 24 03.0 +3.2**
comp=Z,57nm,1.3s
CLL LmV 03 25 00.0
comp=Z,100nm,19.2s
TCF Toulx Ste Croi 8.52 298 eP **Pn 03 21 34.4 +2.7**
TCF eSn **Sn 03 23 01.0 -7.1**
comp=Z,50nm,1.6s
HYF Humbligny 8.64 304 eP **Pn 03 21 35.9 +2.5**
ARR Arges 8.66 69 ⇑P Pn 03 21 32.9 -0.8
RJF Les Rejaudoux 8.72 290 eP **Pn 03 21 35.9 +1.5**
ITM Ithomi 8.80 127 Pn **Pn 03 21 37.2 +1.7**
VOIR 8.96 69 ⇓P Pn 03 21 37.2 -0.6
VOIR 8.96 69 P **Pn 03 21 40.1 +2.3**
RCHB Rochefort 9.12 326 dP **Pn 03 21 39.2 -0.7**
RCHB dPP **PnPn 03 21 45.4 -2.0**
RCHB Rochefort 9.12 326 P **Pn 03 21 41.9 +2.0**
MEM Membach 9.18 330 dPP Pn 03 21 46.6 +6.0
GIVF Givet 9.25 325 eP **Pn 03 21 43.4 +1.8**
GIVF eSn Sn 03 23 16.8 -9.0
comp=Z,3.8nm,0.3s
DOPR Dopca 9.32 66 ⇑P Pn 03 21 41.3 -1.3
DOU Dourbes 9.34 324 dP **Pn 03 21 42.2 -0.7**
DOU dx x 03 22 00.1
DOU dS **Sn 03 23 27.1 -1.0**
EPF Esparros 9.38 276 eP **Pn 03 21 47.7 +4.1**
RDO Rodhopi 9.40 96 Pn **Pn 03 21 43.7 0.0**
RDO Rodhopi 9.40 96 P Pn 03 21 35.2 -8.5
BMRD Maredsous 9.42 325 dPP Pn 03 21 49.3 +5.3
BAIF Baives 9.48 323 ePn **Pn 03 21 44.3 -0.6**
BAIF eSn Sn 03 23 20.9 -11
comp=Z,3.9nm,0.2s
MLR Muntele Rosu 9.59 70 ⇑P Pn 03 21 44.1 -2.3
MLR Muntele Rosu 9.59 70 Pn **Pn 03 21 48.3 +1.9**
comp=Z,0.3nm,0.3s,baz=131,slow=17,SNR=8.6
MLR LR LR 03 26 20.1
comp=Z,364nm,19.8s,baz=276,slow=43
comp=Z,9.4nm,0.8s
MLR Muntele Rosu 9.59 70 Pn **Pn 03 21 46.5 +0.1**
MLR Muntele Rosu 9.59 70 P **Pn 03 21 46.5 +0.1**
BURAR Bucovina Array 9.77 57 ⇓P Pn 03 21 48.5 -0.4
BURAR Bucovina Array 9.77 57 P **Pn 03 21 48.5 -0.4**
BUR08 Bucovina Ar. S 9.78 56 Pn **Pn 03 21 49.2 +0.3**
SNF Seneffe 9.78 325 dPP Pn 03 21 55.3 +6.4
COVR Voineasa-Covas 9.84 68 ⇓P Pn 03 21 48.6 -1.2
ETSF Etsaut 10.05 275 eP Pn 03 21 58.1 +5.4
PLOR Plostina 10.15 68 ⇑P Pn 03 21 52.7 -1.3
PLOR Plostina 10.15 68 P **Pn 03 21 52.6 -1.3**
MFF Saint Martin d 10.17 296 eP **Pn 03 21 55.8 +1.6**
VRI Vrincioaia 10.20 68 ⇓P Pn 03 21 54.1 -0.7
VRI Vrincioaia 10.20 68 P **Pn 03 21 54.0 -0.7**
LVV L'vov 10.27 43 eP **Pn 03 21 57.0 +1.4**
APE Apeiranthos 11.12 117⇓ eP **Pn 03 22 08.2 +0.8**
GRR Gorron 11.25 304 eP **Pn 03 22 11.1 +2.0**
IDI Anoyia 11.84 126 Pn **Pn 03 22 19.7 +2.5**
comp=Z,0.6nm,0.3s,baz=312,slow=18,SNR=1.2
comp=Z,2.9nm,0.4s
ESDC Sonseca Array 13.24 262 Pn **Pn 03 22 37.9 +1.6**
baz=82,slow=14,SNR=5.4
ESDC LR LR 03 27 46.0
comp=Z,109nm,18.4s,baz=62,slow=38
comp=Z,0.4nm,0.8s
AKASG Malin Array Be 13.53 49 Pn **Pn 03 22 39.8 -0.3**
comp=Z,0.3nm,0.3s,baz=241,slow=13,SNR=2.5
AKASG LR LR 03 28 27.0
comp=Z,97nm,18.7s,baz=330,slow=40
comp=Z,0.3nm,0.4s
AKBB Malin Array Si 13.53 49⇑ eP **Pn 03 23 39.8 -0.3**
MDUB Mudurnu 13.72 94 **Pn 03 22 41.1 -1.8**
ELL Elmali 14.26 110 Pn **Pn 03 22 51.0 +0.7**
ELL Elmali 14.26 110 P **Pn 03 22 51.0 +0.7**
NACGM Naroch 15.02 32⇓ eP **Pn 03 23 00.3 0.0**
baz=222
BR131 Keskin Array S 15.73 94⇑ eP **P 03 23 11.7 -2.4**
BRTR Keskin Array B 15.73 94 Pn **P 03 23 11.9 -2.2**
comp=Z,0.1nm,0.3s,baz=281,slow=10,SNR=2.9
BRTR LR LR 03 30 28.2
comp=Z,142nm,18.4s,baz=246,slow=42
comp=Z,0.7nm,0.8s
NOA NORSAR Array B 18.27 357 P **P 03 23 43.6 +1.8**
comp=Z,1.9nm,0.8s,baz=176,slow=11,SNR=3.5
NOA LR LR 03 31 29.9
comp=Z,55nm,19.2s,baz=295,slow=40
VSR Storozhevoye 19.55 56 eP **P 03 23 55.7 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 19.57 43 LR LR 03 33 00.6
comp=Z,23nm,19.8s,baz=354,slow=42
OBN Obninsk 19.57 43⇑ eP **P 03 23 54.7 -1.5**
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN MLR MLR
comp=Z,71nm,16.0s
VORR Voronezh 19.70 54 eP **P 03 23 51.3 -6.3**
VORR pmax pmax
comp=Z,30nm,0.4s
LPSR Galich'ya Gora 19.82 52 eP **P 03 23 59.0 +0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MMAI Mount Meron Ar 20.07 112 P Pn 03 24 04.5 +0.9
comp=Z,14nm,0.8s,baz=317,slow=11,SNR=15
comp=Z,14nm,0.8s
FINES FINESS Array B 20.19 18 P Pn 03 24 03.6 -1.1
comp=Z,4.2nm,0.8s,baz=210,slow=8.9,SNR=17
comp=Z,4.2nm,0.8s
FINES FINESS Array B 20.19 18 **P 03 24 01.4 -1.4**
FIA1 FINESS Array S 20.19 18 **P 03 24 02.5 -0.3**
FIA1 IAmb IAmb 03 24 09.5
comp=Z,15nm,0.8s
MOS Moscow 20.41 42 eP **P 03 24 04.1 -1.1**
MOS e 03 24 23.6
VRH Novokhopyorsk 21.11 57 eP **P 03 24 13.5 +0.6**
VRH pmax pmax
comp=Z,30nm,0.7s
VALR Valaam 21.39 24 deP **P 03 24 15.6 -0.1**
VALR pmax pmax
comp=Z,50nm,0.8s
KIV Kislovodsk 21.46 77 P **P 03 24 15.4 -1.5**
KIV Kislovodsk 21.46 77 eP **P 03 24 19.3 +2.4**
KIV pmax pmax
comp=Z,24nm,1.7s
NEY Neytrino 21.59 79⇓ eP **P 03 24 19.3 +1.0**
NEY pmax pmax
comp=Z,4.0nm,1.0s
KBZ Khabaz 21.64 77 P **P 03 24 19.9 +1.2**
comp=Z,7.0nm,0.8s,baz=299,slow=7.6,SNR=11
KBZ LR LR 03 34 12.2
comp=Z,98nm,19.6s,baz=11,slow=41
comp=Z,7.0nm,0.8s
KBZ Khabaz 21.64 77 deP **P 03 24 21.6 +2.9**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
MARD Mardin 21.82 95 P **P 03 24 19.6 -1.1**
ONI Oni 22.23 80 P **P 03 24 25.4 +0.3**
ONI Oni 22.23 80 P **P 03 24 25.4 +0.3**
ONI pmax pmax
comp=Z,12nm,1.1s
ZEI Tsey 22.52 80 eP **P 03 24 31.1 +2.7**
ZEI pmax pmax
comp=Z,9.0nm,1.3s
KLMR Klimovskoe 24.04 32 eP **P 03 24 41.7 -1.5**
KLMR pmax pmax
comp=Z,33nm,2.0s
KLMR Klimovskoe 24.04 32 eP **P 03 24 41.7 -1.5**
KLMR AMP 03 24 55.7
comp=Z,33nm,2.0s
BELG Belogornoye 24.93 55 LR LR 03 35 31.7
comp=Z,140nm,18.3s,baz=113,slow=39
BELG Belogornoye 24.93 55 deP **P 03 24 52.8 +1.4**
BELG pmax pmax
comp=Z,7.0nm,0.9s
TOA0 Torodi Ar. Sit 31.19 202 P **P 03 25 47.2 -0.5**
TOA0 IAmb IAmb 03 25 49.1
comp=Z,4.5nm,0.9s
TORD Torodi Ar. Bea 31.19 202 P **P 03 25 48.2 +0.4**
comp=Z,3.2nm,0.9s,baz=16,slow=9.0,SNR=15
comp=Z,3.2nm,0.9s
AKTO Aktyubinsk 31.34 60 LR LR 03 42 05.9
comp=Z,37nm,18.4s,baz=356,slow=43
ARU Arti 31.78 49 P **P 03 25 52.3 -0.3**
ARU Arti 31.78 49 c iP **P 03 25 53.5 +0.9**
ARU 03 26 52.7
ARU S **S 03 31 05.7 +3.0**
ARU SS **SnSn 03 32 51.1 +1.7**
ARU pmax pmax
comp=Z,19nm,1.3s
ABKAR Akbulak array 32.69 62 P **P 03 26 00.1 -0.6**
ABKAR IAmb IAmb 03 26 03.1
comp=Z,7.6nm,1.4s
ABKAR Akbulak array 32.69 62 P **P 03 25 59.6 -1.1**
GEYT Alibeck 34.30 83 P **P 03 26 17.2 +2.3**
comp=Z,4.0nm,0.8s,baz=302,slow=6.8,SNR=8.3
comp=Z,4.0nm,0.8s
GEYT Alibeck 34.30 83 P **P 03 26 13.4 -1.5**
GEYT IAmb IAmb 03 26 20.1
comp=Z,3.8nm,0.8s
BRVK Borovoye 38.66 54 P **P 03 26 50.1 -1.7**
BRVK IAmb IAmb 03 26 57.1
comp=Z,10nm,0.8s
BRVK Borovoye 38.66 54 deP **P 03 26 53.2 +1.4**
BRVK pmax pmax
comp=Z,13nm,1.0s
BVAR Borovoye Array 38.72 54 LR LR 03 43 45.1
comp=Z,63nm,19.4s,baz=301,slow=38
DBIC Dimbokro 39.36 209 LR LR 03 42 56.2
comp=Z,52nm,18.9s,baz=335,slow=36
AAK Ala-Archa 44.17 68 LR LR 03 50 37.9
comp=Z,52nm,18.6s,baz=306,slow=42
KSH Kashi 46.45 72 P **P 03 27 58.3 +2.8**
KSH pP sP 03 28 04.8 +5.6
ZALV Zalesovo Beam 46.92 50 LR LR 03 48 25.0
comp=Z,30nm,20.2s,baz=64,slow=37
MK31 Makanchi Array 47.78 60 P **P 03 28 04.3 -1.3**
MK31 IAmb IAmb 03 28 10.2
comp=Z,3.2nm,0.8s
MK31 Makanchi Array 47.78 60 P **P 03 28 04.3 -1.3**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 47.78 60 P **P 03 28 05.9 +0.3**
comp=Z,3.4nm,0.7s,baz=291,slow=6.1,SNR=14
MKAR LR LR 03 52 16.0
comp=Z,43nm,18.9s,baz=260,slow=41
comp=Z,3.4nm,0.7s
MKAR Makanchi Array 47.78 60 P **P 03 28 05.7 0.0**
MKAR Makanchi Array 47.78 60 ceP **P 03 28 07.5 +1.9**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
EUNU Eureka 49.76 347 P **P 03 28 20.6 +0.1**
EUNU IAmb IAmb 03 29 04.2
comp=Z,14nm,1.4s
DGZ Jazzator, Alta 49.88 55⇑ eP **P 03 28 23.0 +1.1**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 51.19 313 P **P 03 28 29.4 -2.1**
WMQ Urumqi 52.48 62 eP **P 03 28 41.0 -0.4**
WMQ pP sP 03 28 46.8 +1.7
SONM Songino Array 61.81 50 P **P 03 29 48.7 +1.3**
comp=Z,5.3nm,0.9s,baz=294,slow=8.4,SNR=18
comp=Z,5.3nm,0.9s
SONM Songino Array 61.81 50 P **P 03 29 46.0 -1.4**
SONM IAmb IAmb 03 29 50.8
comp=Z,4.8nm,1.0s
SONM Songino Array 61.81 50 P **P 03 29 46.0 -1.4**
SONM pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 62.16 49⇓ eP **P 03 29 51.5 +1.7**
ULN pmax pmax
comp=Z,4.0nm,1.3s
GTA Gaotai 62.53 61 eP **P 03 29 54.5 +2.1**
GTA pP sP 03 29 58.0 +1.9
GTA sP pP 03 30 00.5 +5.4
YKA Yellowknife Ar 66.98 336 P **P 03 30 21.3 +0.4**
comp=Z,2.8nm,0.9s,baz=44,slow=6.4,SNR=8.6
comp=Z,2.8nm,0.9s
HHC Hu-ho-hao-te 68.93 54 eP **P 03 30 32.8 -0.8**
H21K Melozitna Rive 71.29 354 P **P 03 30 47.9 +0.4**
I23K Minto, Yukon-K 71.49 352 P **P 03 30 48.4 -0.3**
I23K IAmb IAmb 03 30 59.1
comp=Z,6.2nm,0.9s
PZH PanZhiHua 71.54 71 P **P 03 30 49.0 -0.9**
ILAR Eielson Array 71.59 351 P **P 03 30 50.6 +1.3**
comp=Z,1.2nm,0.9s,baz=12,slow=6.3,SNR=7.5
comp=Z,1.2nm,0.9s
XAN Xi'an 71.59 61 P **P 03 30 52.3 +2.3**
DHY Denali Highway 73.29 351 P **P 03 30 59.5 -0.3**
CMAR Chiang Mai Arr 74.69 79 P **P 03 31 09.4 +1.0**
comp=Z,1.8nm,0.4s,baz=303,slow=6.6,SNR=8.8
CMAR LR LR 04 10 59.5
comp=Z,12nm,18.2s,baz=115,slow=41
comp=Z,1.8nm,0.4s
EGMT Eagleton 76.47 325 P **P 03 31 17.8 -0.5**
BOZ Bozeman (W) 79.16 324 P **P 03 31 32.7 -0.7**
BOZ Bozeman (W) 79.16 324 P **P 03 31 32.7 -0.7**
BOZ pmax pmax
comp=Z,3.0nm,1.0s
PEA0B Petropavlovsk- 79.68 21⇑ eP **P 03 31 36.1 +0.2**
MOOW Moose Ponds 80.23 322 P **P 03 31 35.0 -4.4**
PDAR Pinedale Array 80.45 321 P **P 03 31 40.9 +0.3**
comp=Z,0.3nm,0.7s,baz=5.2,slow=3.3,SNR=3.7
comp=Z,0.3nm,0.7s
KSRS Korea Array 80.52 47 P **P 03 31 42.4 +1.8**
comp=Z,2.2nm,0.9s,baz=316,slow=5.2,SNR=3.6
comp=Z,2.2nm,0.9s
BMO Blue Mountains 82.13 327 P **P 03 31 48.7 -0.6**
BMO IAmb IAmb 03 31 51.0
comp=Z,4.6nm,0.8s
BMO Blue Mountains 82.13 327 P **P 03 31 48.7 -0.6**
BMO pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 84.95 314⇓ eP **P 03 32 05.9 +1.8**
ANMO pmax pmax
comp=Z,2.0nm,2.5s
MJAR Matsushiro Arr 86.50 41 LR LR 04 12 42.5
comp=Z,34nm,18.8s,baz=312,slow=37
TXAR Lajitas Array 87.67 309 P **P 03 32 19.5 +2.1**
comp=Z,0.3nm,0.7s,baz=82,slow=6.5,SNR=2.8
comp=Z,0.3nm,0.7s

NNC 27 03:23:25.9±9.6, 36°.96N×70°.10E, h0km, mb4.1, mpv3.7, 2C-5D, Error ellipse: s-maj=78.2km s-min=54.1km az=173.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.14**	**3**	⇓P	Pn	03 25 00.9	+3.1
1.9nm,0.3s,baz=184,slow=14,SNR=46							
KK31				⇓S	Sn	03 26 11.4	+2.6
19nm,0.5s,baz=189,slow=22,SNR=15							
TKM2	**Tokmak 2**	**7.30**	**34**	⇓P	Pn	03 25 13.1	-0.8
2.7nm,0.5s							
TKM2				⇑S	Sn	03 26 35.6	-1.9
7.3nm,1.0s							
AB31	**Akbulak array**	**14.33**	**332**	⇑P	Pn	03 26 48.7	-1.2
1.8nm,0.7s,baz=144,slow=13,SNR=16							
AB31				⇓S	Sn	03 29 29.7	+0.1
0.5nm,0.5s,baz=161,slow=22,SNR=4.7							
AKTO	**Aktyubinsk**	**16.02**	**331**	⇓P	Pn	03 27 10.4	-2.1
8.8nm,0.9s							

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*DJA **27** 03:28:57.0±0.2, 3°.S±2°.×12°.7E±°, h10km, M4.4/12, mb4.7/8, mB5.0/6, MLv4.2/12, Mw(mB)4.3/6*
*IDC **27** 03:28:59.8±2.1, 2°.96S×126°.82E, h49km±24km, mb3.8/7, mbtmp4.1/10, ML3.8/3, MS3.2/2, Error ellipse: s-maj=19.2km s-min=16.6km az=117.0*
ISC 27 03:28:56.0±1.4, **2°.76S**±0°.05×**126°.71E**±0°.04, **h15**km±10km, **n35**, σ1**9**92/42, **mb4.2**/7, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.62**	**141**	P	**Pn**	**03 29 08.7**	**-1.6**
NLAI				S	**Sn**	**03 29 18.7**	**-1.3**
SANI	**Sanana**	**1.00**	**314**	P	**Pb**	**03 29 13.2**	**-1.9**
SANI				S	**Sb**	**03 29 25.5**	**-2.6**
AAI	**Ambon**	**1.75**	**122**	P	**Pg**	**03 29 30.2**	**+0.5**
AAI				S	**Sg**	**03 29 56.3**	**+3.8**
KRAI	**Karang Ratu**	**1.78**	**108**	P	**Pg**	**03 29 28.8**	**-1.4**
KRAI				S	**Sg**	**03 29 54.2**	**+0.8**
LBMI	**Labuha**	**2.25**	**21**	P	**Pn**	**03 29 33.2**	**+0.5**
LBMI				S	**Sn**	**03 30 01.7**	**+1.5**
MSAI	**Masohi**	**2.30**	**105**	P	**Pb**	**03 29 36.4**	**-0.8**
MSAI				S	Sn	03 29 44.2	-17
LUWI	**Luwuk**	**4.28**	**293**	P	**Pn**	**03 30 01.4**	**+0.7**
LUWI				S	**Sn**	**03 30 48.8**	**-1.6**
SWI	**Sorong**	**4.92**	**68**	P	**Pb**	**03 30 18.8**	**-3.2**
SIJI	**Sorong**	**4.93**	**68**	P	**Pn**	**03 30 11.6**	**+2.0**
4.1nm,0.3s,baz=98,slow=23,SNR=12							
SIJI				S	**Sn**	**03 31 06.9**	**+0.5**
19nm,0.6s,baz=127,slow=18,SNR=3.8							
SIJI				LR	LR	03 32 20.2	
comp=Z,88nm,18.0s,baz=278,slow=41							
21nm,0.5s							
SIJI	**Sorong**	**4.93**	**68**	P	**Pb**	**03 30 18.6**	**-3.5**
APSI	**Ampana**	**5.38**	**290**	P	**Pn**	**03 30 16.6**	**+0.9**
1.9nm6μm398nm,0.5s							
MRSI	**Marisa**	**5.74**	**304**	P	**Pn**	**03 30 21.5**	**+0.7**
0.7nm2μm74nm,0.6s							
SPSI	**Sidrap Palu**	**7.03**	**260**	P	**Pn**	**03 30 42.1**	**+3.7**
0.1nm2μm20nm,0.5s							
BKSI	**Bulukumba**	**7.04**	**249**	P	**Pn**	**03 30 42.5**	**+3.8**
0.1nm278nm15nm,0.6s							
KAPI	**Kappang**	**7.29**	**252**	P	**Pn**	**03 30 44.4**	**+2.3**
2.6nm,0.3s,baz=86,slow=6.2,SNR=13							
12nm,0.5s							
KAPI	**Kappang**	**7.29**	**252**	P	**Pn**	**03 30 43.2**	**+1.1**
0.1nm17nm,0.9s							
MPSI	**Mapaga**	**7.47**	**294**	P	**Pn**	**03 30 45.7**	**+1.2**
0.2nm47nm,0.6s							
MTKI	**Muara Teweh, K**	**11.94**	**278**	P	**Pn**	**03 31 44.3**	**-1.5**
79nm,0.5s							
PBKI	**Pangkalan Bun**	**15.02**	**270**	P	**P**	**03 32 33.0**	**-0.2**
WRA	**Warramunga Arr**	**18.64**	**157**	P	**P**	**03 33 11.5**	**-1.9**
0.3nm,0.3s,baz=339,slow=12,SNR=15							
1.0nm,0.5s							
ASAR	**Alice Springs**	**21.92**	**162**	P	**P**	**03 33 47.1**	**-1.9**
1.5nm,0.5s,baz=342,slow=12,SNR=20							
1.5nm,0.5s							
PSI	**Prapat**	**28.31**	**281**	P	**P**	**03 34 50.2**	**+0.6**
3.3nm,0.4s,baz=75,slow=1.8,SNR=6.4							
3.3nm,0.4s							
KSRS	**Korea Array**	**40.02**	**2**	P	**P**	**03 36 31.8**	**+1.4**
2.8nm,0.8s,baz=186,slow=8.8,SNR=6.0							
2.8nm,0.8s							
RAMN	**Ramite**	**48.67**	**310**	eP	**P**	**03 37 42.0**	**+1.9**
JIRN	**Jiri**	**49.34**	**311**	eP	**P**	**03 37 46.9**	**+1.4**
GUN	**Gumba**	**49.71**	**311**	eP	**P**	**03 37 49.8**	**+1.6**
33nm,0.8s							
PKI	**Pulchoki**	**49.89**	**310**	eP	**P**	**03 37 51.0**	**+1.4**
KKN	**Kakani**	**50.10**	**310**	eP	**P**	**03 37 52.2**	**+1.1**
DMN	**Daman**	**50.15**	**310**	eP	**P**	**03 37 52.9**	**+1.5**
DANN	**Dangsing**	**51.55**	**310**	eP	**P**	**03 38 03.3**	**+1.3**
43nm,0.7s							
SONM	**Songino Array**	**53.43**	**343**	P	**P**	**03 38 16.7**	**+1.3**
2.7nm,1.1s,baz=163,slow=9.3,SNR=8.2							
2.7nm,1.1s							
MKAR	**Makanchi Array**	**62.90**	**327**	P	**P**	**03 39 22.7**	**+1.0**
3.6nm,0.7s,baz=128,slow=8.1,SNR=27							
3.6nm,0.7s							
ZALV	**Zalesovo Beam**	**66.36**	**334**	P	**P**	**03 39 44.1**	**+0.1**
0.9nm,0.5s,baz=96,slow=6.0,SNR=4.2							
0.9nm,0.5s							
VNDA	**Vanda**	**77.04**	**173**	P	**P**	**03 40 45.2**	**-2.7**
0.4nm,0.6s,baz=354,slow=5.9,SNR=2.4							
VNDA				LR	LR	04 14 11.2	
comp=Z,43nm,18.5s,baz=359,slow=35							
0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**124.68**	**284**	PKP	**PKPdf**	**03 47 56.0**	**-0.1**
0.8nm,0.8s,baz=55,slow=1.5,SNR=4.0							

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*ATH **27** 03:29:30.9, 39°.37N×26°.12E, h25km±3km, ML2.5/3, Error ellipse: s-maj=3.9km s-min=1.4km az=178.0*
*ISK **27** 03:29:31.7, 39°.40N×26°.11E, h5km, ML2.6/13*
*DDA **27** 03:29:32.0±0.0, 39°.41N×26°.17E, h11km, ML2.4*
*THE **27** 03:29:32.2, 39°.40N×26°.12E, h8km, ML2.4/4, Error ellipse: s-maj=1.0km s-min=0.5km az=119.0*
ISC 27 03:29:32.0±0.8, **39°.40N**±0°.02×**26°.12E**±0°.02, **h12**km±5km, **n40**, σ0**8**65/58, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.06**	**8**	PG	**Pg**	**03 29 34.0**	**-0.4**
KOCA	**Canakkale, Ayv**	**0.11**	**7**	P	**Pg**	**03 29 34.8**	**-0.1**

KOCA			S	Sg	03 29 36.9	-0.2
KOCA			*i* AML	AML	03 29 37.0	
	comp=N,2μm,0.4s					
KOCA			*i* AML	AML	03 29 37.0	
	comp=E,2μm,0.5s					
PRK	**Paraskevi**	**0.19 142**	P	**Pg**	**03 29 36.6**	**+0.5**
PRK			S	**Sg**	**03 29 39.5**	**+0.5**
	4μm,0.2s					
PRK	**Paraskevi**	**0.19 142**	P	**Pg**	**03 29 36.5**	**+0.3**
PRK			S	**Sg**	**03 29 39.4**	**+0.5**
PRK			AML	AML	03 29 39.5	
	comp=N,11661μm,0.2s					
PRK			AML	AML	03 29 39.5	
	comp=E,9712μm,0.2s					
SIGR	**SIGRI**	**0.28 229**	PG	**Pg**	**03 29 37.6**	**-0.1**
SIGR			SG	**Sg**	**03 29 41.9**	**+0.4**
SIGR	**SIGRI**	**0.28 229**	P	**Pg**	**03 29 37.6**	**-0.1**
SIGR			S	**Sg**	**03 29 41.8**	**+0.3**
	comp=E,825nm,0.3s					
SIGR	**SIGRI**	**0.28 229**	P	**Pg**	**03 29 37.6**	**-0.1**
SIGR			S	**Sg**	**03 29 41.5**	**0.0**
SIGR			AML	AML	03 29 42.0	
	comp=N,1924μm,0.4s					
SIGR			AML	AML	03 29 42.7	
	comp=E,1344μm,0.2s					
AYVA	**Ayvalik**	**0.45 101**	P	**Pg**	**03 29 40.0**	**-0.9**
AYVA			S	**Sg**	**03 29 46.6**	**-0.2**
AYVA			*i* AML	AML	03 29 54.0	
	comp=E,295nm,0.3s					
BOZC	**Bozcaada**	**0.45 353**	PG	**Pg**	**03 29 40.9**	**0.0**
BOZC			SG	**Sg**	**03 29 47.5**	**+0.7**
BOZC	**Bozcaada**	**0.45 353**	P	**Pg**	**03 29 40.8**	**-0.1**
BOZC			S	**Sg**	**03 29 47.2**	**+0.4**
EZN	**Ezine**	**0.46 20**	PG	**Pg**	**03 29 40.9**	**-0.1**
EZN	**Ezine**	**0.46 20**	P	**Pg**	**03 29 40.9**	**-0.1**
EZN			S	**Sg**	**03 29 47.5**	**+0.4**
	comp=E,655nm,0.3s					
BAYC	**CANAKKALE_Bayr**	**0.48 43**	P	**Pg**	**03 29 40.5**	**-0.9**
BAYC			S	**Sg**	**03 29 47.1**	**-0.6**
ECEA	**Canakkale, Ece**	**0.65 4**	P	**Pg**	**03 29 44.3**	**-0.3**
ECEA			S	**Sb**	**03 29 54.4**	**+0.1**
ECEA			*i* AML	AML	03 29 55.0	
	comp=E,201nm,0.6s					
ECEA			*i* AML	AML	03 29 57.0	
	comp=E,215nm,0.3s					
DKL	**Dikili**	**0.69 118**	PG	**Pg**	**03 29 45.6**	**+0.3**
BUHA	**Balikesir, Bur**	**0.75 82**	P	**Pg**	**03 29 45.4**	**-1.1**
GOKA	**anakkale-Gk**	**0.81 348**	P	**Pg**	**03 29 47.5**	**-0.2**
GADA	**Gvkgeada**	**0.81 348**	PG	**Pg**	**03 29 47.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.04 15**	PG	**Pg**	**03 29 51.7**	**-0.3**
SMTH	**Samothraki Isl**	**1.17 337**	P	**Pg**	**03 29 54.3**	**-0.1**
SMTH			S	**Sn**	**03 30 10.1**	**+0.1**
	comp=E,122nm,0.2s					
SMTH	**Samothraki Isl**	**1.17 337**	P	**Pb**	**03 29 52.9**	**-1.2**
SMTH			AML	AML	03 30 11.3	
	comp=N,250μm,0.2s					
SMTH			AML	AML	03 30 12.0	
	comp=E,235μm,0.2s					
BLCB	**Balcova**	**1.24 144**	PN	**Pn**	**03 29 55.2**	**+0.1**
BLCB	**Balcova**	**1.24 144**	P	**Pn**	**03 29 55.2**	**+0.1**
BLCB			S	**Sg**	**03 30 11.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.37 61**	PN	**Pb**	**03 29 57.8**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.52 32**	PN	**Pb**	**03 30 00.1**	**-0.1**
EDC	**Edincik**	**1.64 54**	PN	**Pb**	**03 30 01.9**	**-0.3**
MRMT	**Marmara Adasi**	**1.65 43**	PN	**Pb**	**03 30 01.8**	**-0.6**
KYMI	**Kymi, Euboea I**	**1.75 245**	P	**Pn**	**03 30 01.5**	**-0.7**
KYMI			S	**Sn**	**03 30 25.4**	**+1.0**
SMG	**Samos**	**1.77 161**	P	**Pn**	**03 30 01.7**	**-0.8**
UKOP	**Uzunkopru-Edir**	**1.77 13**	PN	**Pb**	**03 30 03.8**	**-0.6**
RDO	**Rodhopi**	**1.81 346**	PN	**Pn**	**03 30 03.8**	**+0.9**
RDO	**Rodhopi**	**1.81 346**	P	**Pn**	**03 30 02.8**	**-0.1**
RDO			S	**Sn**	**03 30 26.1**	**+0.4**
RDO	**Rodhopi**	**1.81 346**	P	**Pn**	**03 30 02.8**	**-0.1**
RDO			S	**Sn**	**03 30 26.2**	**+0.5**
OUR	**Ouranopolis**	**1.90 300**	PN	**Pb**	**03 30 05.5**	**-1.0**
OUR	**Ouranopolis**	**1.90 300**	P	**Pn**	**03 30 04.3**	**+0.1**
OUR			S	**Sn**	**03 30 28.8**	**+0.9**
OUR	**Ouranopolis**	**1.90 300**	P	**Pn**	**03 30 04.2**	**+0.1**
KOKK	**Kokkinochori,**	**2.16 312**	P	**Pn**	**03 30 08.8**	**+1.0**
ORLT	**Orhaneli**	**2.24 72**	PN	**Pn**	**03 30 10.4**	**+1.5**
SLVT	**Silivri**	**2.43 40**	PN	**Pb**	**03 30 13.7**	**-1.9**
EDRB	**Edirne**	**2.49 11**	PN	**Pn**	**03 30 14.1**	**+1.7**

*NNC **27** 03:41:10.9±11.0, 39°.68N×53°.71E, h0km, mb4.1, Error ellipse: s-maj=125.8km s-min=33.3km az=61.0*
*TEH **27** 03:41:14.9, 39°.63N×54°.46E, h10km, ML3.6*
*IDC **27** 03:41:17.0±1.7, 39°.44N×54°.29E, h0km, mb3.6/4, mbtmp3.7/8, ML3.4/4, Error ellipse: s-maj=26.2km s-min=17.0km az=176.0*
*AZER **27** 03:41:25.1±0.9, 39°.41N×53°.93E, h16km±31km, Error ellipse: s-maj=32.7km s-min=7.3km az=99.0*

ISC 27 03:41:17.7±0.7, 39°.60N±0°.05×54°.42E±0°.04, h10km, n54, σ2§13/77, mb3.5/3, 3C-3D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**2.34**	**146**	*e*Pn	**Pn**	**03 41 55.3**	**-1.0**
IGLO	**Ghaloghah**	**3.13**	**189**	*e*		03 42 45.8	
	comp=Z,2μm,0.3s						
IGLO				*e*Pn	**Pn**	**03 42 07.5**	**+0.2**
GEYT	**Alibeck**	**3.34**	**119**	Pn	**Pn**	**03 42 08.8**	**-1.2**
	comp=Z,2.0nm,0.3s,baz=302,slow=17,SNR=15						
	comp=Z,3.0nm,0.2s						
GYA0B	**ALIBECK ARRAY**	**3.34**	**119**	⇓P	**Pn**	**03 42 09.4**	**-0.6**
GYA0B				⇑S	**Sb**	**03 43 00.0**	**+2.4**
IPRN	**Peran**	**3.74**	**207**	*e*Pn	**Pn**	**03 42 14.3**	**-1.3**
ISHM	**Shahmirzad**	**3.89**	**194**	*e*Pn	**Pn**	**03 42 17.6**	**-0.3**
IEMG	**Emamgholi**	**3.97**	**122**	*e*Pn	**Pn**	**03 42 18.2**	**-0.8**
IEMG				*e*		03 43 48.8	
	comp=Z,1μm,0.3s						
KLST	**Kelardasht - M**	**4.07**	**222**	*e*	**Sn**	**03 43 12.2**	**+4.2**
	comp=Z,720nm,0.2s						
IANJ	**Anjilo**	**4.15**	**186**	*e*Pn	**Pn**	**03 42 21.2**	**-0.1**
IANJ				*e*		03 43 10.6	
	comp=Z,437nm,0.2s						
IFIR	**Firoozkooh**	**4.17**	**199**	*e*Pn	**Pn**	**03 42 22.1**	**+0.5**
LHJ2	**Lahijan - Gila**	**4.20**	**236**	*e*Pn	**Pn**	**03 42 21.3**	**-0.5**
GBS	**Qobustan**	**4.30**	**284**	P	**Pn**	**03 42 26.5**	**+3.2**
GBS				S	**Sn**	**03 43 14.0**	**+0.4**
QALM	**Alamut, Qazvin**	**4.35**	**224**	*e*	**Sn**	**03 43 10.0**	**-5.0**
	comp=Z,564nm,0.2s						
ILAS	**Lasjerd**	**4.37**	**196**	*e*Pn	**Pn**	**03 42 24.7**	**+0.3**
ILAS				*e*		03 42 27.5	
	comp=Z,868nm,0.2s						
IDMV	**Damavand**	**4.44**	**206**	*e*Pn	**Pn**	**03 42 26.3**	**+0.9**
IDMV				*e*		03 42 27.4	
	comp=Z,992nm,0.2s						
SIZA	**Siyzn**	**4.47**	**291**	P	**Pn**	**03 42 29.4**	**+3.9**
SIZA				S	**Sn**	**03 43 16.8**	**-0.9**
ASTR	**Astara**	**4.50**	**258**	P	**Pn**	**03 42 28.0**	**+2.0**
	SNR=8.3						
ASTR				S	**Sn**	**03 43 14.7**	**-3.7**
IAKL	**Akhelmad**	**4.55**	**130**	*e*Pn	**Pn**	**03 42 26.0**	**-0.8**
IAKL				*e*		03 42 58.9	
	comp=Z,316nm,0.2s						
PQL	**Pirkuli**	**4.62**	**287**	P	**Pn**	**03 42 29.9**	**+2.2**
PQL				S	**Sn**	**03 43 23.8**	**+2.3**
JIR1	**Jirandeh**	**4.65**	**233**	*e*Pn	**Pn**	**03 42 28.6**	**+0.5**
GLBA	**Ciilabad**	**4.68**	**267**	P	**Pn**	**03 42 30.0**	**+1.6**
	SNR=5.7						
GLBA				S	**Sn**	**03 43 21.3**	**-1.5**
YRD	**Yardimli**	**4.85**	**264**	P	**Pn**	**03 42 31.4**	**+0.6**
	SNR=43						
YRD				S	**Sn**	**03 43 23.3**	**-3.8**
IKRD	**Kardeh**	**4.91**	**124**	*e*Pn	**Pn**	**03 42 30.4**	**-1.3**
IKRD				*e*		03 44 16.6	
	comp=Z,431nm,0.4s						
XNQ	**Khinaliq**	**5.05**	**290**	P	**Pn**	**03 42 35.9**	**+2.3**
XNQ				S	**Sn**	**03 43 32.6**	**+0.5**
QSAR	**Qusar**	**5.06**	**294**	P	**Pn**	**03 42 36.6**	**+2.9**
QSAR				S	**Sn**	**03 43 32.6**	**+0.3**
IVRN	**Varamin**	**5.08**	**206**	*e*Pn	**Pn**	**03 42 34.5**	**+0.6**
QSDN	**Sirdan**	**5.17**	**235**	*e*Pn	**Pn**	**03 42 35.2**	**-0.1**
QSDN				*e*		03 43 35.4	
	comp=Z,308nm,0.3s						
ZRD	**Zardab**	**5.22**	**280**	P	**Pn**	**03 42 38.4**	**+2.6**
	SNR=10						
ZRD				S	**Sn**	**03 43 35.0**	**-1.0**
BLQ	**Beylaqan**	**5.30**	**273**	P	**Pn**	**03 42 37.9**	**+1.1**
	SNR=5.3						
BLQ				S	**Sn**	**03 43 35.3**	**-2.7**
QRD	**Qoradiz**	**5.49**	**271**	P	**Pn**	**03 42 40.0**	**+0.5**
QRD				S	**Sn**	**03 43 40.8**	**-2.0**
IRAZ	**Razeghan**	**5.50**	**222**	*e*Pn	**Pn**	**03 42 39.8**	**-0.1**
ISFB	**Sefidab**	**5.52**	**199**	*e*Pn	**Pn**	**03 42 39.9**	**-0.2**
IMYA	**Miami**	**5.54**	**124**	*e*Pn	**Pn**	**03 42 39.1**	**-1.3**
ISRB	**Sarab**	**5.57**	**254**	*e*Pn	**Pn**	**03 42 40.7**	**-0.2**
AGDM	**Agdam**	**5.65**	**277**	P	**Pn**	**03 42 43.9**	**+2.1**
	SNR=5.8						
AGDM				S	**Sn**	**03 43 45.1**	**-1.6**
SEKA	**Sheki**	**5.74**	**289**	P	**Pn**	**03 42 45.5**	**+2.4**
SEKA				S	**Sn**	**03 43 46.4**	**-2.6**
KRSH	**Karshahi**	**5.91**	**199**	*e*Pn	**Pn**	**03 42 45.1**	**-0.4**
ZKTA	**Zakatala**	**6.27**	**291**	P	**Pn**	**03 42 53.3**	**+3.0**
ZKTA				S	**Sn**	**03 44 02.1**	**+0.1**
GANJ	**Ganja**	**6.29**	**282**	P	**Pn**	**03 42 51.7**	**+1.1**
GANJ				S	**Sn**	**03 43 59.7**	**-2.9**
ORD	**Ordubad**	**6.57**	**267**	P	**Pn**	**03 42 55.2**	**+0.7**
	SNR=6.0						
ORD				S	**Sn**	**03 44 06.8**	**-2.7**
GDB	**GEDABAY**	**6.73**	**282**	P	**Pn**	**03 42 58.1**	**+1.3**
	SNR=41						
GDB				S	**Sn**	**03 44 10.6**	**-3.0**
SBZ	**Shahbuz**	**6.86**	**271**	P	**Pn**	**03 43 01.0**	**+2.5**
	SNR=8.7						
SBZ				S	**Sn**	**03 44 15.7**	**-1.0**
NAX	**Nakhchivan**	**6.93**	**269**	P	**Pn**	**03 43 01.7**	**+2.3**
ITEG	**Tejag**	**7.55**	**151**	*e*		03 43 08.6	
	comp=Z,100nm,0.3s						
ITEG				*e*Pn	**Pn**	**03 43 08.3**	**+0.3**
KBZ	**Khabaz**	**9.56**	**299**	Pn	**Pn**	**03 43 35.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=112,slow=5.4,SNR=11						
KBZ				Sn	**Sn**	**03 45 16.5**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=111,slow=21,SNR=1.9						
	comp=Z,0.8nm,0.2s						
AB31	**Akbulak array**	**10.42**	**20**	⇓P	**Pn**	**03 43 44.7**	**-2.4**
	comp=Z,0.9nm,0.2s,baz=200,slow=13,SNR=215						
AB31				S	**Sn**	**03 45 42.9**	**-1.1**
	comp=Z,4.6nm,0.6s,baz=198,slow=24,SNR=8.6						
AKTO	**Aktyubinsk**	**11.12**	**12**	Pn	**Pn**	**03 43 58.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=191,slow=13,SNR=12						
AKTO				Sn	**Sn**	**03 45 57.9**	**-3.2**
	comp=Z,1.1nm,0.3s,baz=247,slow=23,SNR=7.6						
	comp=Z,1.3nm,0.3s						
AKTO	**Aktyubinsk**	**11.12**	**12**	⇑P	**Pn**	**03 43 53.3**	**-3.4**
	comp=Z,2.8nm,0.6s						
AKTO				⇓S	**Sn**	**03 45 57.7**	**-3.4**
	comp=Z,7.9nm,0.7s						
KK31	**Karatay Array**	**12.59**	**69**	⇑P	**Pn**	**03 44 15.7**	**-1.1**
	comp=Z,1.2nm,0.7s						
BVAR	**Borovoye Array**	**17.32**	**34**	P	**P**	**03 45 21.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=236,slow=10,SNR=5.5						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**20.84**	**310**	P	**P**	**03 46 00.3**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=106,slow=9.3,SNR=11						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**21.48**	**61**	P	**P**	**03 46 10.0**	**+3.7**
	comp=Z,0.9nm,0.9s,baz=263,slow=7.1,SNR=2.5						
	comp=Z,0.9nm,0.9s						
HFS	**Hagfors**	**32.57**	**323**	P	**P**	**03 47 50.4**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=96,slow=6.0,SNR=4.1						
	comp=Z,2.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**40.73**	**312**	P	**P**	**03 48 59.5**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=97,slow=8.7,SNR=2.2						
	comp=Z,0.4nm,0.3s						

*BGR **27** 03:50:22.9±0.7, 42°.77N×13°.56E, h10km, ML4.8/21, Error ellipse: s-maj=22.2km s-min=11.1km az=98.0*
*IDC **27** 03:50:24.6±0.6, 43°.13N×13°.10E, h0km, mb4.3/24, mbtmp4.3/35, ML3.8/11, MS3.4/38, Error ellipse: s-maj=11.2km s-min=9.6km az=59.0*
*MOS **27** 03:50:24.9±1.2, 43°.10N×13°.21E, h15km, mb4.7/26, Error ellipse: s-maj=4.8km s-min=3.1km az=77.6*
*NEIC **27** 03:50:24.7, 42°.96N×13°.10E, h2km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.19; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$1.23; $M_{r\theta}$0.25; $M_{\theta\phi}$-0.20; $M_{\phi r}$0.02; Fault plane solution: $M_0$1.25000×10^{15} NP1:ϕ_s339.21000°, δ46.60000°, λ-106.74000°. NP2:ϕ_s182.86000°, δ45.91000°, λ-73.06000°. Principal axes: T 1.2577, Plg0.0000°, Azm81.0000°; N -0.0167, Plg12.0000°, Azm351.0000°; P -1.2411, Plg78.0000°, Azm173.0000°;*
*NEIC **27** 03:50:24.7±1.7, 42°.96N±0°.04×13°.10E±0°.06, h10km±1km, mb4.6/25, Mwr4.0/23, ML4.4(VIE), ML4.4(ROM) Error ellipse: s-maj=9.0km s-min=5.8km az=225.0*
*MED_RC **27** 03:50:24.0±0.9, 42°.99N×13°.13E, h10km, MW4.3/8, Moment Tensor Solution. Mantle waves: s8, c9; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.51±.57; $M_{\theta\theta}$0.47±.74; $M_{\phi\phi}$2.05±.24; $M_{r\theta}$2.56±1.29; $M_{\theta\phi}$-0.86±.36; $M_{\phi r}$-1.69±.94; Best double couple: $M_0$3.91000×10^{15} NP1:ϕ_s313.00000°, δ71.00000°, λ-104.00000°. NP2: ϕ_s171.00000°, δ23.00000°, λ-54.00000°. Principal axes: T 3.6600, Plg25.0000°, Azm54.0000°; N 0.5200, Plg14.0000°, Azm317.0000°; P -4.1700, Plg61.0000°, Azm201.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*PDG **27** 03:50:24.5±0.7, 43°.01N×13°.16E, h11km, MD4.2/1, ML4.2/13 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*ROM **27** 03:50:24.1±0.0, 42°.984N±0°.001×13°.120E±0°.003, h9km, ML4.4/153, Mw4.1, Error ellipse: s-maj=0.2km s-min=0.0km az=253.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.20; $M_{\theta\theta}$0.12; $M_{\phi\phi}$1.08; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.42; $M_{\phi r}$-1.26; Fault plane solution: $M_0$1.75195×10^{15} NP1:ϕ_s146.00000°, δ24.00000°, λ-117.00000°. NP2:ϕ_s355.00000°, δ68.00000°, λ-79.00000°.*
*STR **27** 03:50:26.4±0.6, 43°N±5°×1°3E±°, h10km, MLv4.5/44 Error ellipse: s-maj=0.0km s-min=0.0km az=59.9, preliminary*
*LDG **27** 03:50:26.3±0.1, 42°.87N×13°.14E, h10km, Ml4.1/41, Error ellipse: s-maj=4.2km s-min=2.4km az=43.0*
*PRU **27** 03:50:26.2±0.0, 43°.09N×13°.26E, h0km, M4.5*
*BEO **27** 03:50:27.3±0.7, 43°.12N×13°.31E, h5km±1km, ML4.5/14*

ISC 27 03:50:25.2±0.6, 42°.98N±0°.01×13°.11E±0°.01, h9km±4km, n794, σ1§74/900, mb4.5/51, MS3.5/28, 82C-85D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.05**	**254**	⇑P	**Pg**	**03 50 26.4**	**-0.8**
FEMA				S	**Sg**	**03 50 27.9**	**-0.7**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**139**	⇑P	**Pg**	**03 50 26.8**	**-0.8**
MC2				S	**Sg**	**03 50 28.6**	**-0.8**
T1216	**Preci, Frazion**	**0.11**	**219**	⇑P	**Pg**	**03 50 27.5**	**-0.3**
T1216				S	**Sg**	**03 50 29.9**	**+0.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.13**	**156**	⇑P	**Pg**	**03 50 27.7**	**-0.6**
T1245				S	**Sg**	**03 50 30.4**	**0.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
NRCA	**Norcia**	**0.14**	**180**	Pg	**Pg**	**03 50 27.6**	**-0.7**
NRCA				Sg	**Sg**	**03 50 29.8**	**-0.7**
NRCA	**Norcia**	**0.14**	**180**	⇑P	**Pg**	**03 50 28.0**	**-0.4**
NRCA				S	**Sg**	**03 50 30.8**	**+0.2**
CESI	**CESI - Serrava**	**0.16**	**281**	⇑P	**Pg**	**03 50 28.3**	**-0.3**
CESI				S	**Sg**	**03 50 31.3**	**+0.4**
CESI				AML	AML		
CESI				AML	AML		
MMO1	**Montemonaco**	**0.17**	**116**	⇑P	**Pg**	**03 50 28.2**	**-0.6**
MMO1				S	**Sg**	**03 50 31.2**	**-0.2**
AM05	**Amandola Campo**	**0.17**	**90**	AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
GUMA	**Gualdo di Mace**	**0.18**	**62**	⇑P	**Pg**	**03 50 28.5**	**-0.5**
GUMA				S	**Sg**	**03 50 31.7**	**0.0**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SEF1	**Sefro**	**0.21**	**324**	P	**Pg**	**03 50 28.9**	**-0.6**
SEF1				S	**Sg**	**03 50 32.5**	**+0.1**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
MDAR	**Monte D'Aria**	**0.22 5**		P	**Pg**	**03 50 28.8**	**-0.9**
MDAR				S	**Sg**	**03 50 32.4**	**-0.3**
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
PIO1	**Pioraco**	**0.22**	**335**	⇓P	**Pg**	**03 50 29.1**	**-0.6**
PIO1				S	**Sg**	**03 50 33.0**	**+0.2**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
FIU1	**Fiuminata**	**0.25**	**328**	P	**Pg**	**03 50 29.6**	**-0.7**
FIU1				S	**Sg**	**03 50 33.8**	**+0.1**
FIU1				AML	AML		
	comp=E,84550μm,0.2s						
FIU1				AML	AML		
	comp=E,84350μm,0.2s						
FIU1				AML	AML		
T1215	**Vallo di Nera,**	**0.25**	**226**	P	**Pg**	**03 50 30.1**	**-0.2**
T1215				S	**Sg**	**03 50 34.6**	**+1.0**
T1215				AML	AML		
	comp=N,72800μm,0.6s						
T1215				AML	AML		
	comp=E,63700μm,1.1s						
T1215				AML	AML		
	comp=N,72750μm,0.6s						
T1215				AML	AML		
	comp=N,74300μm,0.6s						
T1215				AML	AML		
	comp=E,63000μm,1.1s						
T1215				AML	AML		
	comp=E,63900μm,1.1s						
SSM1	**San Severino M**	**0.26 10**		⇑P	**Pg**	**03 50 29.6**	**-0.8**
SSM1				S	**Sg**	**03 50 33.9**	**+0.1**
T1244	**Arquata del Tr**	**0.26**	**148**	⇑P	**Pg**	**03 50 30.0**	**-0.4**
T1244				S	**Sg**	**03 50 34.8**	**+0.9**
GAG1	**Gagliole**	**0.26**	**353**	P	**Pg**	**03 50 29.9**	**-0.6**
GAG1				S	**Sg**	**03 50 34.5**	**+0.4**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
MTL1	**Matelica**	**0.29**	**345**	⇓P	**Pg**	**03 50 30.4**	**-0.5**
MTL1				S	**Sg**	**03 50 35.3**	**+0.4**
MTL1				AML	AML		
MTL1				AML	AML		
T1217	**Poggiodomo (PG**	**0.30**	**207**	P	**Pg**	**03 50 30.9**	**-0.2**
T1217				S	**Sg**	**03 50 36.0**	**+0.9**
T1217				AML	AML		
	comp=E,92750μm,0.6s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,92800μm,0.6s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,94600μm,0.6s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,94650μm,0.6s						
MNTP	**Montappone**	**0.31 58**		⇑P	**Pg**	**03 50 31.1**	**-0.2**
MNTP				S	**Sg**	**03 50 36.2**	**+0.8**
MNTP				AML	AML		
MNTP				AML	AML		
SNTG	**Esanatoglia**	**0.31**	**336**	P	**Pg**	**03 50 30.6**	**-0.7**
SNTG				S	**Sg**	**03 50 35.5**	**+0.1**
SNTG				AML	AML		
	comp=N,90550μm,0.7s						
SNTG				AML	AML		
	comp=E,66500μm,1.4s						
SNTG				AML	AML		
	comp=N,95000μm,0.7s						
SNTG				AML	AML		
	comp=E,63900μm,1.4s						
SNTG				AML	AML		
	comp=N,94950μm,0.7s						
SNTG				AML	AML		
	comp=N,90500μm,0.7s						
SNTG				AML	AML		
	comp=E,63950μm,1.4s						
T1201	**Domo (RI)**	**0.33**	**162**	⇓P	**Pg**	**03 50 31.6**	**-0.2**
T1201				S	**Sb**	**03 50 37.7**	**-1.1**
T1204	**Amatrice, Fraz**	**0.34**	**154**	⇑P	**Pg**	**03 50 31.3**	**-0.5**
T1204				S	**Sg**	**03 50 37.0**	**+0.7**
T1204				AML	AML		
	comp=N,77700μm,0.8s						
T1204				AML	AML		
T1204				AML	AML		
	comp=N,77600μm,0.8s						
EL6	**Elcito**	**0.35**	**359**	⇑P	**Pg**	**03 50 31.4**	**-0.8**
EL6				S	**Sg**	**03 50 37.0**	**+0.1**
TRE1	**Treia**	**0.36 23**		⇑P	**Pg**	**03 50 32.0**	**-0.4**
TRE1				S	**Sg**	**03 50 38.4**	**+1.2**
TRE1				AML	AML		
TRE1				AML	AML		
T1243	**Rocca Santa Ma**	**0.37**	**139**	⇑P	**Pg**	**03 50 31.8**	**-0.8**
T1243				S	**Sg**	**03 50 38.0**	**+0.6**
LNSS	**Leonessa**	**0.38**	**188**	⇓P	**Pg**	**03 50 32.2**	**-0.4**
LNSS				S	**Sg**	**03 50 38.5**	**+0.9**
LNSS				AML	AML		
	comp=E,73800μm,1.2s						
LNSS				AML	AML		
	comp=N,87600μm,0.7s						
SMA1	**SAN MARTINO**	**0.38**	**155**	⇑P	**Pg**	**03 50 32.0**	**-0.7**
SMA1				S	**Sg**	**03 50 38.2**	**+0.5**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
CING	**Cingoli**	**0.40 8**		P	**Pg**	**03 50 32.2**	**-0.9**
CING				S	**Sg**	**03 50 38.7**	**+0.2**
ATCC	**AVT- Casa Cast**	**0.41**	**301**	⇑P	**Pg**	**03 50 32.7**	**-0.4**
ATCC				S	**Sg**	**03 50 39.1**	**+0.6**
ATCC				AML	AML		
ATCC				AML	AML		
ATCC				AML	AML		
OFFI	**Offida**	**0.42 95**		⇑P	**Pg**	**03 50 33.6**	**+0.2**
OFFI				AML	AML		
OFFI				AML	AML		
MMUR	**Monte Murano**	**0.47**	**350**	P	**Pg**	**03 50 33.6**	**-0.9**
MMUR				S	**Sg**	**03 50 41.2**	**+0.5**
MMUR				AML	AML		
MMUR				AML	AML		
MMUR				AML	AML		
RM33	**Pellescritta

T1211 AML AML
comp=N,66700µm,0.8s
T1246 Crognaleto (TE 0.48 144 ⇑P **Pg 03 50 33.7 -0.8**
T1246 S **Sg 03 50 41.4 +0.5**
CAMP Campotosto 0.49 154 **Pg 03 50 33.6 -1.1**
CAMP Sg **Sg 03 50 41.5 +0.3**
CAMP Campotosto 0.49 154 ⇑P **Pg 03 50 33.8 -0.9**
CAMP S **Sg 03 50 41.5 +0.3**
CAMP AML AML
comp=N,54300µm,0.5s
CAMP AML AML
comp=E,60000µm,0.7s
TERO Teramo 0.51 134 P **Pg 03 50 34.1 -0.8**
TERO S **Sg 03 50 42.1 +0.5**
TERO AML AML
comp=E,88950µm,0.8s
TERO AML AML
comp=N,57900µm,0.5s
TERO AML AML
comp=E,92050µm,0.8s
TERO AML AML
comp=N,59400µm,0.6s
MURB Monte Urbino 0.52 304 **Pg 03 50 34.3 -0.9**
MURB Monte Urbino 0.52 304 P **Pg 03 50 34.7 -0.6**
MURB S **Sb 03 50 43.2 -1.0**
MURB AML AML
MURB AML AML
MURB AML AML
MURB AML AML
CADA Capodarco di F 0.52 65 P **Pb 03 50 36.0 -0.6**
CADA AML AML
CADA AML AML
CIMA Civitanova Mar 0.52 51 P **Pg 03 50 35.3 0.0**
ARVD Arcevia 0.54 346 ⇓P **Pg 03 50 34.7 -0.9**
ARVD S **Sg 03 50 43.1 +0.4**
ARVD AML AML
comp=E,39900µm,0.5s
ARVD AML AML
comp=N,35900µm,0.3s
CESX Cesi 0.54 227 **Pg 03 50 34.4 -1.2**
CESX Cesi 0.54 227 ⇓P **Pg 03 50 35.0 -0.6**
CESX S **Sg 03 50 43.6 +1.0**
CESX AML AML
comp=E,43100µm,0.7s
CESX AML AML
comp=N,40800µm,0.5s
PP3 Marolino 0.54 42 ⇑P **Pg 03 50 35.6 0.0**
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
T1247 Pizzolo (AQ) 0.55 166 ⇓P **Pg 03 50 35.1 -0.8**
T1247 S **Sg 03 50 43.8 +0.7**
T1247 AML AML
comp=E,42700µm,1.1s
T1247 AML AML
comp=N,47150µm,0.7s
ATFO Monte Foce - G 0.56 315 ⇓P **Pg 03 50 35.3 -0.7**
ATFO AML AML
comp=E,62050µm,0.9s
ATFO AML AML
comp=N,45600µm,1.0s
ATTE AVT- Monte Tez 0.60 292 ⇓P **Pg 03 50 36.1 -0.7**
ATTE AML AML
comp=N,19350µm,0.8s
ATTE AML AML
comp=E,25850µm,1.2s
FRON Frontone 0.61 332 ⇓P **Pg 03 50 36.0 -1.0**
FRON S **Sg 03 50 45.6 +0.6**
FRON AML AML
comp=E,41000µm,0.8s
FRON AML AML
comp=N,56800µm,0.7s
FRON AML AML
comp=E,40950µm,0.8s
TRTR Tortoreto Alta 0.61 106 ⇑P **Pg 03 50 37.3 +0.3**
TRTR AML AML
TRTR AML AML
ATLO AVT- Montelove 0.62 303 ⇓P **Pg 03 50 36.3 -0.8**
GIGS Gran Sasso 0.62 147 ⇑P **Pg 03 50 36.0 -1.3**
GIGS S **Sg 03 50 45.6 +0.2**
GIGS AML AML
comp=E,21450µm,0.7s
GIGS AML AML
comp=N,11950µm,0.8s
AQU L'Aquila 0.66 161 **Pg 03 50 37.0 -0.9**
AQU Sg **Sg 03 50 45.5 -1.0**
AQU L'Aquila 0.66 161 P **Pg 03 50 36.0 -1.9**
AQU S **Sb 03 50 47.4 -0.7**
AQU L'Aquila 0.66 161 ⇑P **Pg 03 50 36.9 -0.9**
AQU AML AML
comp=E,24750µm,1.6s
AQU AML AML
comp=N,29900µm,0.9s
AQU AML AML
comp=N,29550µm,0.9s
AQU AML AML
comp=E,24350µm,1.6s
ATVO AVT- Monte Val 0.66 308 ⇓P **Pg 03 50 37.0 -0.9**
ATVO AML AML
comp=E,23150µm,1.4s
ATVO AML AML
comp=N,19750µm,1.4s
AOI Ancona 0.68 32 ⇑P **Pg 03 50 37.4 -0.9**
AOI AML AML
comp=N,23250µm,0.6s
AOI AML AML
comp=E,26650µm,0.3s
ATVA AVT- Monte Val 0.68 297 ⇓P **Pg 03 50 37.4 -0.9**
PCRO Pietralacroce 0.70 26 P **Pg 03 50 38.1 -0.6**
PCRO AML AML
comp=E,94900µm,0.6s
PCRO AML AML
comp=N,76400µm,1.1s
MPAG Monte Paganucc 0.70 338 ⇓P **Pg 03 50 37.7 -1.0**
MPAG AML AML
comp=N,24550µm,0.8s
MPAG AML AML
comp=E,40650µm,0.4s
MPAG AML AML
comp=N,26450µm,0.8s
MPAG AML AML
comp=E,40100µm,0.3s
MPAG AML AML
comp=N,26500µm,0.8s
MPAG AML AML
comp=N,24500µm,0.8s
MPAG AML AML
comp=E,40600µm,0.4s
PIEI Pieia 0.70 323 ⇓P **Pg 03 50 37.6 -1.2**
PIEI AML AML
comp=E,18700µm,0.9s
PIEI AML AML
comp=N,20700µm,0.8s
ATPI Pietralunga - 0.70 313 ⇓P **Pg 03 50 37.9 -0.9**
ATPI AML AML
comp=E,27650µm,0.8s
ATPI AML AML
comp=N,29950µm,1.1s
FIAM Fiamignano 0.71 180 ⇓P **Pg 03 50 37.7 -1.1**
FIAM AML AML
comp=N,20000µm,0.8s
FIAM AML AML
comp=E,19350µm,0.6s
ATMI Monte Miggiano 0.71 300 ⇓P **Pg 03 50 38.3 -0.7**
ATMI AML AML
comp=N,43100µm,0.7s
ATMI AML AML
comp=E,39450µm,0.6s
SENI Senigallia 0.73 7 P **Pg 03 50 38.9 -0.4**
SENI AML AML
comp=E,91500µm,0.6s
SENI AML AML
comp=E,30350µm,0.9s
SENI AML AML
SENI AML AML
comp=N,19350µm,0.7s
MGAB Montegabbione 0.74 265 ⇓P **Pg 03 50 38.8 -0.6**
MGAB AML AML
comp=E,30500µm,1.0s
MGAB AML AML
comp=N,33350µm,0.6s
MGAB AML AML
comp=N,32650µm,0.6s
MGAB AML AML
comp=E,27200µm,1.0s
NARO Abbazia di Nar 0.74 329 ⇓P **Pg 03 50 38.3 -1.2**
NARO AML AML
comp=N,15400µm,0.7s
NARO AML AML
comp=E,18250µm,0.7s
FSSB Fossombrone 0.76 341 ⇓P **Pg 03 50 38.7 -1.0**
FSSB AML AML
comp=E,81350µm,0.3s
FSSB AML AML
APEC Apecchio 0.77 319 ⇓P **Pg 03 50 39.4 -0.7**
APEC AML AML
comp=E,5525µm,1.1s
APEC AML AML
comp=N,6775µm,0.5s
APEC AML AML
comp=N,6770µm,0.5s
FAGN Fagnano 0.79 154 P **Pg 03 50 38.9 -1.5**
FAGN AML AML
comp=E,61050µm,0.7s
FAGN AML AML
comp=N,50500µm,0.5s
VCEL Villa Celiera 0.79 137 ⇑P **Pg 03 50 39.4 -1.0**
VCEL AML AML
comp=E,56900µm,0.7s
VCEL AML AML
comp=E,56850µm,0.7s
VCEL AML AML
comp=N,64700µm,0.7s
BADI Badiali 0.83 310 AML AML
comp=N,13850µm,1.3s
BADI AML AML
comp=E,788µm,1.4s
BADI AML AML
comp=E,786µm,1.4s
SRES S.Oreste - Sor 0.86 211 ⇓P **Pg 03 50 40.8 -1.0**
SRES AML AML
comp=E,16700µm,1.0s
SRES AML AML
comp=N,11950µm,1.0s
SACS San Casciano d 0.89 262 P **Pg 03 50 41.7 -0.7**
SACS AML AML
comp=N,19450µm,0.8s
SACS AML AML
comp=E,15300µm,1.1s
SACS AML AML
comp=N,19500µm,0.8s
SACS AML AML
comp=N,19900µm,0.8s
SACS AML AML
comp=E,15000µm,1.1s
T0110 Collepietro 0.90 147 ⇑P **Pg 03 50 40.9 -1.6**
T0110 AML AML
comp=E,46500µm,0.6s
T0110 AML AML
comp=N,36450µm,1.6s
CAFI Castiglion Fio 0.91 293 P **Pg 03 50 41.8 -0.9**
CAFI AML AML
comp=N,12430µm,1.2s
CAFI AML AML
comp=N,12650µm,1.2s
CAFI AML AML
comp=E,18200µm,0.9s
CAFI AML AML
comp=E,17500µm,0.9s
SSP9 Sansepolcro 0.93 310 ⇓P **Pg 03 50 42.2 -1.0**
SSP9 AML AML
comp=E,17950µm,1.3s
SSP9 AML AML
comp=N,21450µm,1.6s
PTQR Pietraquaria 0.98 167 P **Pg 03 50 42.6 -1.3**
PTQR AML AML
comp=E,9665µm,0.7s
PTQR AML AML
comp=N,10800µm,0.7s
MTCE Montecelio 0.99 196 P **Pg 03 50 42.8 -1.4**
MTCE AML AML
comp=E,11490µm,0.9s
MTCE AML AML
comp=N,9435µm,0.9s
LATE Laterza 1.03 250 **Pg 03 50 43.2 -1.7**
CERT Cerreto 1.03 185 P **Pg 03 50 43.5 -1.5**
CRE Caprese Michel 1.07 308 P **Pg 03 50 44.0 -1.7**
CRE AML AML
comp=E,7510µm,0.6s
CRE AML AML
comp=N,12900µm,0.6s
MCIV Monte Civitell 1.07 260 P **Pg 03 50 44.8 -1.0**
MCIV AML AML
comp=E,6955µm,1.0s
MCIV AML AML
comp=N,6520µm,1.1s
SF04 Casetta 1.08 263 AML AML
comp=N,6740µm,0.8s
SF04 AML AML
comp=E,5085µm,1.0s
INTR Introdacqua 1.13 149 Pn **Pg 03 50 44.3 -2.5**
RCAV Rocca di Cave 1.14 186 P **Pg 03 50 45.4 -1.6**
RCAV AML AML
comp=N,13650µm,0.7s
RCAV AML AML
comp=E,11910µm,0.5s
SF01 Poggio Pratacc 1.15 262 AML AML
comp=N,11600µm,1.1s
SF01 AML AML
comp=E,7390µm,0.8s
VVLD Villa Vallelon 1.17 161 P **Pb 03 50 45.8 -1.8**
VVLD AML AML
comp=E,12900µm,0.6s
VVLD AML AML
comp=N,14800µm,0.7s
CAFR Castel Frentan 1.18 129 P **Pb 03 50 46.3 -1.4**
CAFR AML AML
comp=N,16100µm,0.5s
CAFR AML AML
comp=E,16050µm,0.6s
GUAR Guarcino 1.19 173 P **Pb 03 50 46.2 -1.8**
GUAR AML AML
comp=N,11500µm,1.3s
GUAR AML AML
comp=E,12995µm,1.0s
RMP Rome, Mte Porz 1.20 195 P **Pb 03 50 46.6 -1.5**
RMP AML AML
comp=N,13050µm,0.8s
RMP AML AML
comp=E,11650µm,1.2s
ARCI Arcidosso 1.21 265 P **Pb 03 50 47.5 -0.8**
ARCI AML AML
comp=N,2290µm,1.0s
ARCI AML AML
comp=E,2585µm,0.8s
LPEL Lama dei Pelig 1.22 139 P **Pb 03 50 46.3 -2.2**
LPEL AML AML
comp=N,13200µm,0.9s
LPEL AML AML
comp=E,21300µm,0.7s
TOLF Tolfa 1.23 222 P **Pn 03 50 47.3 -1.2**
TOLF AML AML
comp=N,6300µm,1.1s
TOLF AML AML
comp=E,9170µm,0.7s
RDP Rocca di Papa 1.25 194 P **Pn 03 50 46.9 -2.0**
RDP AML AML
comp=N,20050µm,1.3s
RDP AML AML
comp=E,17750µm,0.9s
BLLA Bellaria 1.26 338 P **Pn 03 50 48.3 -0.6**
BLLA AML AML
comp=N,20495µm,1.2s
BLLA AML AML
comp=E,20465µm,1.6s
ASQU Asqua 1.27 311 P **Pn 03 50 47.8 -1.3**
ASQU AML AML
comp=N,6925µm,0.7s
ASQU AML AML
comp=E,7875µm,0.7s
SFI Santa Sofia 1.31 316 P **Pn 03 50 48.6 -1.1**
LRP Arpino 1.37 165 AML AML
comp=E,4775µm,0.9s
LRP AML AML
comp=N,8340µm,0.8s
CSNT Castellina Chi 1.42 291 ⇓P **Pn 03 50 50.3 -0.9**
CSNT AML AML
comp=E,3510µm,0.9s
CSNT AML AML
comp=N,5450µm,1.3s
FROS Frosini 1.45 280 ⇓P **Pn 03 50 50.8 -0.9**
FROS AML AML
comp=E,8885µm,1.0s
FROS AML AML
comp=N,6465µm,0.9s
RUFI Rufina 1.45 307 P **Pn 03 50 50.8 -0.9**
OSSC Osservatorio P 1.47 292 **Pn 03 50 50.6 -1.3**
OSSC Osservatorio P 1.47 292 P **Pn 03 50 51.4 -0.5**
OSSC AML AML
comp=N,4930µm,1.1s
OSSC AML AML
comp=N,4795µm,0.9s
OSSC AML AML
comp=E,4835µm,0.9s
OSSC AML AML
comp=E,4925µm,1.1s
RNI2 Rionero Sannit 1.49 148 P **Pn 03 50 51.9 -0.3**
RNI2 AML AML
comp=N,13750µm,0.9s
RNI2 AML AML
comp=N,14100µm,0.9s
RNI2 AML AML
comp=E,16050µm,1.1s
RNI2 AML AML
comp=E,16250µm,1.1s
LMD Lutirano 1.50 318 P **Pn 03 50 51.9 -0.5**
LMD AML AML
comp=N,7265µm,1.0s
LMD AML AML
comp=E,6150µm,0.6s
LIK San Giovanni I 1.51 167 P **Pn 03 50 52.2 -0.2**
CERA Filignano 1.53 154 P **Pn 03 50 52.3 -0.5**
CERA AML AML
comp=E,13200µm,0.9s
CERA AML AML
comp=E,13400µm,0.8s
CERA AML AML
comp=N,11500µm,0.8s
CERA AML AML
comp=N,12000µm,0.9s
MAON Monte Argentar 1.56 250 ⇓P **Pn 03 50 52.1 -1.0**
MAON AML AML
comp=N,2105µm,1.0s
MAON AML AML
comp=E,2095µm,1.0s
TRIV Trivento 1.61 138 P **Pn 03 50 53.5 -0.3**
TRIV AML AML
comp=E,12000µm,1.0s
TRIV AML AML
comp=N,74500µm,1.6s
TRIV AML AML
comp=N,11600µm,0.8s
TRIV AML AML
comp=E,74650µm,1.3s
TRIF Trifonti 1.63 276 P **Pn 03 50 53.1 -0.9**
TRIF AML AML
comp=E,2855µm,0.6s
TRIF AML AML
comp=N,2925µm,0.8s
BRIS BRISIGHELLA 1.65 316 P **Pn 03 50 54.7 +0.3**
BRIS AML AML
comp=N,7885µm,1.6s
BRIS AML AML
comp=E,8930µm,0.7s
BRIS AML AML
comp=E,9135µm,1.4s
BRIS AML AML
comp=N,7545µm,1.1s
CASP Castiglione de 1.66 264 **Pn 03 50 52.9 -1.6**
CASP Castiglione de 1.66 264 P **Pn 03 50 53.3 -1.2**
CASP AML AML
comp=E,1200µm,0.7s
CASP AML AML
comp=N,1148µm,1.2s
CRMI Carmignano 1.76 298 P **Pn 03 50 55.7 -0.2**
VAGA Valle Agricola 1.77 152 P **Pn 03 50 56.5 +0.5**
VAGA AML AML
comp=E,4425µm,1.1s
VAGA AML AML
comp=N,5915µm,0.8s
VAGA AML AML
comp=N,5750µm,0.8s
VAGA AML AML
comp=E,4305µm,1.1s
BSSO Busso 1.80 142 P **Pb 03 50 57.6 -0.8**
BSSO AML AML
comp=N,6695µm,0.8s
BSSO AML AML
comp=E,5075µm,0.8s
BSSO AML AML
comp=N,2790µm,0.8s
BSSO AML AML
comp=E,2100µm,0.8s
MODR Mondragone 1.92 162 P **Pn 03 50 57.6 -0.4**
MODR AML AML
comp=E,2960µm,1.6s
MODR AML AML
comp=N,2830µm,1.0s
MELA Melanico ??? S 1.96 130 P **Pn 03 50 59.1 +0.5**
MELA AML AML
comp=N,15100µm,0.6s
MELA AML AML
comp=N,15700µm,0.6s
MELA AML AML
comp=E,15550µm,0.7s
MELA AML AML
comp=E,16100µm,0.7s
TREM Isole Tremiti 1.96 115 P **Pn 03 50 58.6 0.0**
TREM AML AML
comp=E,19250µm,0.8s
TREM AML AML
comp=N,25000µm,0.7s
SACR S. Croce Del S 1.97 143 P **Pn 03 50 59.9 +1.1**
SACR AML AML
comp=E,3170µm,0.8s
SACR AML AML
comp=N,3820µm,0.8s
BRJN Brijuni 1.98 13 P **Pn 03 50 57.9 -1.0**
POPM Popiglio 2.02 303 P **Pn 03 50 58.5 -0.9**
POPM AML AML
comp=N,2300µm,1.2s
POPM AML AML
comp=E,2130µm,1.3s
ZCCA Zocca 2.07 312 Pn **Pn 03 51 00.1 -0.1**
MAIM Mastiano 2.13 297 P **Pn 03 51 00.5 -0.4**
MAIM AML AML
comp=N,2435µm,0.4s
MAIM AML AML
comp=E,2650µm,0.8s
BDI Bagni Di Lucca 2.13 302 P **Pn 03 51 00.0 -1.0**
BDI AML AML
comp=E,2515µm,0.9s
BDI AML AML
comp=N,848µm,0.8s
BDI AML AML
comp=N,1920µm,0.6s
BDI AML AML
comp=E,990µm,0.7s
APRC Apricena 2.17 123 ⇑P **Pn 03 51 01.5 0.0**
APRC AML AML
comp=E,4950µm,0.7s
APRC AML AML
comp=N,9150µm,0.7s
MOCO Biccari - m.te 2.21 136 P **Pn 03 51 02.9 +0.8**
MOCO AML AML
comp=N,1680µm,0.8s
MOCO AML AML
comp=E,3070µm,0.8s
MOCO AML AML
comp=N,1855µm,0.8s
MOCO AML AML
comp=E,3065µm,0.8s
PAOL Paolisi 2.23 150 Pn **Pn 03 51 02.8 +0.5**
SGRT San Giovanni R 2.30 121 **Pn 03 51 02.8 -0.5**
SGRT San Giovanni R 2.30 121 ⇑P **Pn 03 51 03.4 0.0**
SGRT AML AML
comp=E,6720µm,0.6s
SGRT AML AML
comp=N,5615µm,0.6s
VLC Villacollemand 2.31 302 **Pn 03 51 02.4 -1.0**
VLC Villacollemand 2.31 302 P **Pn 03 51 02.6 -0.8**
VLC AML AML
comp=E,1151µm,0.8s
VLC AML AML
comp=N,1830µm,1.1s
VLC AML AML

comp=N,1745µm,1.1s
VLC AML AML
comp=E,1085µm,1.1s
EQUI Equi 2.46 300 P Pn 03 51 04.9 -0.6
EQUI AML AML
comp=E,1235µm,0.6s
EQUI AML AML
comp=N,1390µm,0.8s
SGTA Sant Agata di 2.49 137 P Pn 03 51 06.1 +0.2
SGTA AML AML
comp=E,5185µm,0.9s
SGTA AML AML
comp=N,3030µm,0.8s
SGTA AML AML
comp=N,3120µm,0.8s
SGTA AML AML
comp=E,5050µm,0.9s
CAFE Carife 2.51 140 P Pn 03 51 07.9 +1.7
RIY Rijeka 2.55 22 ePn Pn 03 51 06.3 -0.4
RIY eSn Sn 03 51 34.5 -3.3
SNAL S. Angelo Dei 2.58 142 P Pn 03 51 08.1 +1.0
TEOL Teolo 2.60 337 Pn 03 51 07.0 -0.4
PLMA Palmaria, Port 2.60 295 P Pn 03 51 06.9 -0.6
PLMA AML AML
comp=N,881µm,0.9s
PLMA AML AML
comp=E,780µm,0.9s
SKDS Skadanscina 2.65 14⇑ iPn Pn 03 51 06.9 -1.2
SKDS Skadanscina 2.65 14 i Pn Pn 03 51 07.0 -1.1
SKDS eSn Sn 03 51 39.1 -1.3
SKDS IAML 03 51 40.2
comp=Z,423nm,0.2s
GRAM Graiana 2.68 305 P Pn 03 51 08.9 +0.4
GRAM AML AML
comp=E,3240µm,1.1s
GRAM AML AML
comp=N,2440µm,0.5s
PRMA PARMA 2.70 312 Pn Pn 03 51 07.8 -1.0
KNDS Knezji Dol 2.71 19 i Pn Pn 03 51 08.3 -0.7
CAPA Cerignola FG 2.71 131 P Pn 03 51 09.2 +0.3
CAPA AML AML
comp=N,5995µm,1.2s
CAPA AML AML
comp=E,10005µm,1.0s
VULT Monte Vulture 2.75 136 P Pn 03 51 10.2 +0.6
VULT AML AML
comp=N,4395µm,0.7s
VULT AML AML
comp=N,4520µm,1.3s
VULT AML AML
comp=E,3155µm,0.5s
VULT AML AML
comp=E,3335µm,0.5s
MORSI Morsiglia 2.75 271 P Pn 03 51 09.4 -0.1
CEY Cerknica 2.92 18⇑ iPn Pn 03 51 10.8 -1.0
MSSA Maissana 2.93 298 Pn 03 51 10.6 -1.5
PALZ Palazzo San Ge 2.94 133 P Pn 03 51 12.2 +0.1
PALZ AML AML
comp=E,9210µm,0.8s
PALZ AML AML
comp=N,5270µm,1.3s
BOJS Bojanci 2.96 31⇑ iPn Pn 03 51 11.7 -0.6
BOJS Bojanci 2.96 31 P Pn 03 51 11.7 -0.6
BOJS AML AML
comp=N,4990µm,0.8s
BOJS AML AML
comp=E,4450µm,1.2s
SMPL Sampolo 2.96 254 P Pn 03 51 12.5 +0.1
CDRU Civita di Ruta 2.98 146 P Pn 03 51 13.0 +0.3
CDRU AML AML
comp=E,522µm,1.1s
CDRU AML AML
comp=N,398µm,1.3s
MRVN Minervino Murg 2.99 129 ⇑P Pn 03 51 12.8 0.0
MRVN AML AML
comp=E,1460µm,0.9s
MRVN AML AML
comp=N,1150µm,0.6s
CORF Corte 3.00 258 P Pn 03 51 12.6 -0.3
CORF Corte 3.00 258 P Pn 03 51 12.9 0.0
SABO M.te Sabotino 3.02 6 P Pn 03 51 12.4 -0.8
SABO AML AML
comp=E,13750µm,0.6s
SABO AML AML
comp=E,3145µm,0.6s
SABO AML AML
comp=N,5125µm,0.9s
SABO AML AML
comp=N,20250µm,0.9s
ACER Acerenza 3.04 135 P Pn 03 51 13.9 +0.4
ROVR Rover Verones 3.05 332 P Pn 03 51 13.5 -0.2
ROVR AML AML
comp=N,1110µm,0.7s
ROVR AML AML
comp=N,2830µm,0.7s
ROVR AML AML
comp=E,552µm,0.7s
ROVR AML AML
comp=E,1600µm,1.1s
CGRP Cima Grappa 3.05 342 P Pn 03 51 13.2 -0.5
CGRP AML AML
comp=E,4305µm,1.0s
CGRP AML AML
comp=N,4255µm,0.8s
CGRP AML AML
comp=E,4205µm,1.1s
CGRP AML AML
comp=N,4275µm,0.8s
PGF Pioggiola 3.06 263 ePn Pn 03 51 13.2 -0.6
PGF eSn Sn 03 51 46.5 -4.1
comp=N,177nm,0.7s
PGF Pioggiola 3.06 263 AML AML
comp=N,258µm,1.0s
PGF AML AML
comp=E,238µm,1.4s
PGF Pioggiola 3.06 263 P Pn 03 51 13.7 -0.1
VARN Col Varnada, M 3.10 347 P Pn 03 51 13.8 -0.6
VARN AML AML
comp=E,4970µm,1.0s
VARN AML AML
comp=E,4970µm,1.0s
VARN AML AML
comp=N,4180µm,0.9s
VARN AML AML
comp=N,4200µm,0.9s
GBAS Gorenja Brezov 3.11 17 i Pn Pn 03 51 14.0 -0.4
GORR Gorreto 3.21 302 P Pn 03 51 16.6 +0.8
DOSS Dosso del Somm 3.21 335 P Pn 03 51 15.7 -0.3
DOSS AML AML
comp=N,2395µm,0.6s
DOSS AML AML
comp=E,2375µm,0.6s
DOSS AML AML
comp=E,2010µm,0.9s
DOSS AML AML
comp=N,1930µm,0.9s
MGRS Mrkonjic Grad 3.22 62⇑ iPn Pn 03 51 16.8 +0.9
LJU Ljubljana 3.23 18 ⇑P Pn 03 51 15.9 -0.1
LJU AML AML
comp=N,16250µm,0.6s
LJU AML AML
comp=E,13300µm,1.0s
SALO Salr 3.23 326 Pn 03 51 16.6 +0.5
SALO Salr 3.23 326 P Pn 03 51 16.7 +0.6
SALO AML AML
comp=N,2360µm,1.0s
SALO AML AML
comp=N,2460µm,0.8s
SALO AML AML
comp=E,2235µm,1.2s
SALO AML AML
comp=E,1990µm,1.3s
CTI Castel Tesino 3.25 342 Pn 03 51 16.4 0.0
CTI Castel Tesino 3.25 342 P Pn 03 51 16.4 0.0
CTI Castel Tesino 3.25 342 P Pn 03 51 16.1 -0.3
MPRI Monte Prat 3.27 358 P Pn 03 51 16.8 +0.2
MPRI AML AML
comp=N,3025µm,0.8s
MPRI AML AML
comp=E,3680µm,0.8s
MPRI AML AML
comp=E,2810µm,0.8s
MPRI AML AML
comp=N,3965µm,0.8s
PRIJ Prijedor 3.28 51 ePn Pb 03 51 20.3 -3.2
STAL STALIGIAL 3.30 355 Pn 03 51 16.6 -0.5

STAL STALIGIAL 3.30 355 ⇓P Pn 03 51 16.6 -0.5
STAL AML AML
comp=E,2910µm,0.7s
STAL AML AML
comp=E,2490µm,0.7s
STAL AML AML
comp=N,1890µm,1.1s
STAL AML AML
comp=N,1880µm,0.7s
PTRP Pietrapertosa 3.30 137 P Pn 03 51 18.1 +1.0
PTRP AML AML
comp=N,2675µm,0.7s
PTRP AML AML
comp=E,1990µm,0.8s
AMUR Altamura 3.32 127 ⇑P Pn 03 51 17.3 -0.1
AMUR AML AML
comp=N,1505µm,0.8s
AMUR AML AML
comp=E,1310µm,0.7s
BULG Bulgheria - Ca 3.36 149 P Pn 03 51 20.0 +2.2
LUSI Trento, Gardas 3.36 333 P Pn 03 51 17.9 0.0
LUSI AML AML
comp=E,1545µm,0.8s
LUSI AML AML
comp=N,1635µm,1.2s
CIMO Cimolais 3.37 352 P Pn 03 51 17.5 -0.5
CIMO AML AML
comp=N,730µm,0.9s
CIMO AML AML
comp=E,623µm,1.5s
CIMO AML AML
comp=N,747µm,0.9s
CIMO AML AML
comp=E,642µm,1.5s
STON Ston 3.37 90⇑ iPn Pn 03 51 16.4 -1.5
STON Ston 3.37 90 ePn Pn 03 51 16.7 -1.2
STON eSn Sn 03 51 56.5 -1.5
STON Ston 3.37 90 AML AML
comp=E,650µm,0.6s
STON AML AML
comp=N,832µm,0.7s
AJAC Base Areonaval 3.39 253 P Pn 03 51 18.4 +0.3
AJAC Base Areonaval 3.39 253 AML AML
comp=N,522µm,0.9s
AJAC AML AML
comp=E,380µm,0.8s
AJAC Base Areonaval 3.39 253 P Pn 03 51 18.9 +0.8
AG11 Viggiano (PZ) 3.39 140 AML AML
comp=N,1707µm,0.9s
AG11 AML AML
comp=E,1505µm,0.7s
AGOR Agordo 3.39 347 P Pn 03 51 17.9 -0.4
AGOR AML AML
comp=N,1160µm,0.9s
AGOR AML AML
comp=E,1290µm,0.6s
AGOR AML AML
comp=E,1014µm,0.6s
AGOR AML AML
comp=N,900µm,1.3s
A051A Mrakovica 3.41 52⇑ iPn Pn 03 51 18.4 -0.2
PTCC Patocco-Chiusa 3.43 3 P Pn 03 51 18.1 -0.8
PTCC AML AML
comp=E,1235µm,0.6s
PTCC AML AML
comp=N,1032µm,0.7s
BLY Banja Luka 3.44 58⇑ iPn Pn 03 51 18.9 0.0
BLY Banja Luka 3.44 58 ePn Pn 03 51 19.3 +0.4
BLY eSn Sn 03 51 58.1 -1.6
BLY Banja Luka 3.44 58 P Pn 03 51 18.4 -0.4
BLY AML AML
comp=N,2130µm,1.4s
BLY AML AML
comp=N,1985µm,1.4s
BLY AML AML
comp=E,2475µm,0.9s
BLY AML AML
comp=E,2530µm,0.9s
GAGG Gaggia 3.47 334 P Pn 03 51 18.9 -0.6
GAGG AML AML
comp=N,3055µm,0.9s
GAGG AML AML
comp=E,3155µm,0.9s
GAGG AML AML
comp=E,1940µm,0.8s
GAGG AML AML
comp=N,2020µm,0.8s
SIRI Monte Sirino - 3.47 143 P Pn 03 51 20.6 +1.1
PRED Cave del Predi 3.48 5 Pn 03 51 19.0 -0.6
CLUD Cludinico 3.48 357 Pn 03 51 19.0 -0.6
CLUD Cludinico 3.48 357 P Pn 03 51 19.3 -0.3
CLUD AML AML
comp=N,1540µm,0.9s
CLUD AML AML
comp=E,1785µm,1.2s
CLUD AML AML
comp=N,1570µm,0.9s
CLUD AML AML
comp=E,1785µm,1.2s
ZONE Zone 3.52 323 P Pn 03 51 19.8 -0.3
ZONE AML AML
comp=E,1134µm,1.0s
ZONE AML AML
comp=N,1250µm,0.5s
MATE Matera 3.55 130 ⇓P Pn 03 51 18.8 -1.7
MATE Matera 3.55 130 P Pn 03 51 20.2 -0.3
MATE AML AML
comp=N,1675µm,0.6s
MATE AML AML
comp=E,1685µm,1.0s
ZOU Zoufplan 3.58 358 P Pn 03 51 20.8 -0.2
ZOU AML AML
comp=N,1950µm,1.0s
ZOU AML AML
comp=E,1920µm,1.1s
ZOU AML AML
comp=E,1895µm,1.1s
ZOU AML AML
comp=N,1995µm,1.0s
ACOM Acomizza, Ital 3.58 4 P Pn 03 51 20.7 -0.4
ACOM AML AML
comp=N,2490µm,0.9s
ACOM AML AML
comp=E,2185µm,0.9s
ACOM AML AML
comp=E,2200µm,0.9s
ACOM AML AML
comp=N,2335µm,0.7s
MABI Malga Bissina 3.60 330 P Pn 03 51 21.3 0.0
MABI AML AML
comp=E,458µm,1.2s
MABI AML AML
comp=N,510µm,0.8s
CUC Castrocucco 3.60 145 Pn 03 51 20.2 -1.1
CUC Castrocucco 3.60 145 P Pn 03 51 23.6 +2.4
FVI Forni Avoltri 3.63 356 P Pn 03 51 21.2 -0.4
FVI AML AML
comp=E,1515µm,0.9s
FVI AML AML
comp=N,1625µm,1.0s
LTRZ Laterza 3.65 129 P Pn 03 51 21.7 -0.1
LTRZ AML AML
comp=E,1540µm,0.6s
LTRZ AML AML
comp=N,1885µm,0.8s
NOCI Noci 3.67 125 ⇑P Pn 03 51 22.2 +0.1
NOCI AML AML
comp=E,1315µm,0.6s
NOCI AML AML
comp=N,1810µm,0.7s
MYKA Terra Mystica 3.67 6 i Pn Pn 03 51 22.2 0.0
comp=N,206nm,0.7s,SNR=60
OBKA Obir 3.68 16 ePn Pn 03 51 22.2 -0.1
OBKA Obir 3.68 16 i Pn Pn 03 51 22.2 -0.1
comp=N,11nm,0.2s,SNR=13
KOSI Kohlern 3.70 341 P Pn 03 51 23.1 +0.4
KOSI AML AML
comp=N,1940µm,0.8s
KOSI AML AML
comp=E,1890µm,0.8s
QLNO Quiliano 3.71 293 P Pn 03 51 22.3 -0.4
QLNO AML AML
comp=E,232µm,1.4s
QLNO AML AML
comp=N,378µm,1.6s
DGI Dorgali Grotta 3.74 226 P Pn 03 51 23.2 +0.2

APPI Appiano 3.75 340 P Pn 03 51 23.2 -0.1
APPI AML AML
comp=E,1120µm,0.6s
APPI AML AML
comp=N,1265µm,0.3s
CANO Canova, Maglio 3.75 291 P Pn 03 51 22.9 -0.4
CANO AML AML
comp=N,538µm,1.1s
CANO AML AML
comp=E,1800µm,1.0s
ABTA Abfaltersbach 3.79 354 i Pn Pn 03 51 24.3 +0.4
comp=E,464nm,0.6s,SNR=215
A052A Srbac 3.82 55⇑ iPn Pn 03 51 23.1 -1.0
TREB Trebinje 3.86 92 ePn Pn 03 51 24.8 +0.1
TREB Trebinje 3.86 92 ePn Pn 03 51 24.6 -0.1
TREB eSn Sn 03 52 08.7 -1.5
SALB San Lorenzo Be 3.94 141 P Pn 03 51 27.5 +1.6
SOKA Soboth 3.94 20 i Pn Pn 03 51 25.8 -0.2
comp=E,14nm,0.5s,SNR=9.4
TAR1 Taranto 3.96 127 AML AML
comp=N,1135µm,0.8s
TAR1 AML AML
comp=E,1655µm,0.8s
BRY Bratogost 3.98 89 ePn Pn 03 51 26.9 +0.4
BRY Bratogost 3.98 89⇑ iPn Pn 03 51 26.5 0.0
BRY i Sn Sn 03 52 13.6 +0.2
HCY Herceg Novi 4.00 96 ePn Pn 03 51 26.8 +0.2
HCY Herceg Novi 4.00 96⇑ iPn Pn 03 51 26.6 0.0
HCY i Sn Sn 03 52 14.0 +0.4
MGRO Montegrosso 4.00 287 P Pn 03 51 26.6 -0.3
MGRO AML AML
comp=E,322µm,0.7s
MGRO AML AML
comp=N,318µm,1.2s
BRMO Bormio 4.01 332 P Pn 03 51 27.7 +0.8
BRMO AML AML
comp=N,510µm,0.9s
BRMO AML AML
comp=E,460µm,0.9s
RISI Rein 4.04 350 ⇓P Pn 03 51 28.2 +0.8
RISI AML AML
comp=E,4095µm,0.6s
RISI AML AML
comp=N,3425µm,0.5s
CET2 Cetraro 4.05 147 P Pn 03 51 29.2 +1.8
MOSI Grossmontoni 4.07 334 P Pn 03 51 29.0 +1.2
KOGS Kog 4.13 32 P Pn 03 51 27.5 -0.9
KOGS AML AML
comp=E,13150µm,1.5s
KOGS AML AML
comp=N,8975µm,0.9s
ROSI Rosskopf 4.13 344 ⇓P Pn 03 51 29.1 +0.5
ROSI AML AML
comp=N,2280µm,0.8s
ROSI AML AML
comp=E,2155µm,0.7s
MUGIO Muggio 4.14 317 ⇓P Pn 03 51 28.6 -0.1
MUGIO AML AML
comp=N,503µm,0.7s
MUGIO AML AML
comp=E,390µm,1.0s
FUORN Ofenpass-Fuorn 4.17 332 Pn 03 51 29.5 +0.3
SAOF Saorge 4.17 286 P Pn 03 51 28.6 -0.5
SBF Sospel 4.23 284 ePn Pn 03 51 29.2 -0.7
SBF eSn Sn 03 52 16.2 -3.2
comp=E,209nm,0.6s
UPM Unac-Piva 4.25 85 ePn Pn 03 51 31.8 +1.6
UPM Unac-Piva 4.25 85 ePn Pn 03 51 30.1 -0.1
UPM i Sn Sn 03 52 19.8 -0.2
VARE Varese 4.25 314 P Pn 03 51 29.9 -0.2
VARE AML AML
comp=N,740µm,0.6s
VARE AML AML
comp=E,963µm,0.7s
ESCA l'Escarene 4.27 284 P Pn 03 51 29.7 -0.7
TURF col de Turini 4.28 285 P Pn 03 51 30.6 -0.1
CEME Cevo 4.29 94 ⇓ iPn Pn 03 51 30.8 +0.1
CEME i Sn Sn 03 52 21.1 +0.1
NKME Niksic 4.30 91⇑ iPn Pn 03 51 30.8 0.0
NKME i Sn Sn 03 52 21.2 +0.2
BUM Brajici-Budva 4.32 97 ⇓ iPn Pn 03 51 31.2 +0.1
BUM i Sn Sn 03 52 21.7 +0.2
BEHE Becsehely 4.36 35 P Pn 03 51 30.4 -1.2
FETA Feichten 4.38 338 i Pn Pn 03 51 33.1 +1.1
comp=E,38nm,0.7s,SNR=129
HAPS Han Pijesak,Bl 4.39 73⇑ iPn Pn 03 51 32.1 0.0
EILF Villa Eilenroc 4.41 279 P Pn 03 51 32.3 +0.1
TUE Stuetta 4.41 324 Pn Pn 03 51 31.2 -1.2
SPIF crte de Spivo 4.41 286 P Pn 03 51 33.8 +1.4
WTTA Wattenberg 4.41 347 i Pn Pn 03 51 33.6 +1.2
comp=E,47nm,0.4s,SNR=64
WTTA Wattenberg 4.41 347 P Pn 03 51 33.0 +0.5
WTTA AML AML
comp=E,1580µm,0.8s
WTTA AML AML
comp=N,1132µm,0.8s
DAVOX Davos/Dischmat 4.44 330 Pn Pn 03 51 34.0 +1.1
comp=N,37nm,0.3s,baz=144,slow=10,SNR=125
DAVOX Sn Sn 03 52 25.6 +0.8
baz=297,slow=22
DAVOX LR LR 03 53 49.0
comp=N,403nm,19.7s,baz=103,slow=48
DAVOX Davos/Dischmat 4.44 330 P Pn 03 51 35.1 +2.2
DAVOX Davos/Dischmat 4.44 330 P Pn 03 51 33.7 +0.7
SQTA Sankt Quirin 4.45 343 Pn 03 51 34.1 +1.1
SQTA Sankt Quirin 4.45 343 P Pn 03 51 34.1 +1.1
SQTA Sankt Quirin 4.45 343 i Pn Pn 03 51 34.1 +1.1
comp=N,102nm,0.5s,SNR=72
VSL Villasalto 4.47 220 ⇓P Pn 03 51 33.3 +0.2
WATA Walderalm 4.49 347 Pn 03 51 35.2 +1.7
WATA Walderalm 4.49 347 P Pn 03 51 35.2 +1.7
WATA Walderalm 4.49 347 i Pn Pn 03 51 35.2 +1.7
comp=N,109nm,0.5s,SNR=106
DRME Dracevica, Mon 4.55 98⇑ iPn Pn 03 51 34.6 +0.4
DRME Dracevica, Mon 4.55 98 ⇓ iPn Pn 03 51 34.4 +0.2
DRME i Sn Sn 03 52 27.3 +0.1
PDG Podgorica 4.56 95 ⇑P Pn 03 51 35.7 +1.4
PDG Podgorica 4.56 95 Pn 03 51 34.0 -0.2
PDG Podgorica 4.56 95 ePn Pn 03 51 34.7 +0.4
PDG eSn Sn 03 52 25.1 -2.3
PDG Podgorica 4.56 95 AML AML
comp=E,768µm,0.5s
PDG AML AML
comp=N,1350µm,0.5s
PDG AML AML
comp=N,1048µm,0.5s
PDG AML AML
comp=E,983µm,0.6s
TTG Podgorica 4.56 95 ⇓ iPn Pn 03 51 34.5 +0.2
TTG i Sn Sn 03 52 27.5 +0.1
CALF Calern 4.58 282 P Pn 03 51 34.7 -0.1
MOTA Moosalm 4.59 343 Pn 03 51 36.4 +1.5
MOTA Moosalm 4.59 343 P Pn 03 51 36.4 +1.5
MOTA Moosalm 4.59 343 i Pn Pn 03 51 36.4 +1.5
comp=E,65nm,0.7s,SNR=106
ARSA Arzberg 4.60 21 i Pn Pn 03 51 34.1 -0.8
comp=E,35nm,0.6s,SNR=22
ARSA Arzberg 4.60 21 AML AML
comp=E,575µm,1.5s
ARSA AML AML
comp=N,256µm,1.0s
PLE Pljevlja 4.60 83 ⇓ iPn Pn 03 51 34.9 -0.2
PLE i Sn Sn 03 52 28.4 -0.3
PZZ Stroppo 4.61 291 AML AML
comp=N,280µm,0.7s
PZZ AML AML
comp=E,214µm,0.6s
RUDO Rudo 4.61 80⇑ iPn Pn 03 51 35.2 +0.2
RUDO Rudo 4.61 80 ePn Pn 03 51 35.2 +0.2
TRAV Traversella 4.62 305 AML AML
comp=N,342µm,0.8s
TRAV AML AML
comp=E,326µm,1.1s
CGL Cagliari Serpe 4.62 220 P Pn 03 51 36.3 +1.0
ULC Ulcinj 4.65 101⇑ iPn Pn 03 51 35.7 +0.2
ULC i Sn Sn 03 52 29.7 +0.1
BBLS Lazići 4.67 77⇑ iPn Pn 03 51 35.8 -0.1
BBLS Lazići 4.67 77 ePn Pn 03 51 36.7 +0.8
TIP Timpagrande 4.69 143 Pn 03 51 35.2 -0.9
KOME Kolasin 4.70 89 ePn Pn 03 51 36.4 0.0
KOME i Sn Sn 03 52 30.9 -0.2
BIOA Bad Ischl, Aus 4.73 4 Pn 03 51 37.0 +0.3
BIOA Bad Ischl, Aus 4.73 4 i Pn Pn 03 51 37.0 +0.3
comp=E,36nm,0.3s,SNR=108

KOVH Kovagotottos 4.73 47 P Pn 03 51 35.2 -1.5
RJOB Jochberg 4.77 357 *e*Pn Pn 03 51 38.1 +0.9
RJOB *e*Sn Sn 03 52 34.8 +2.2
BLJ Bijeljina 4.80 66 *e*Pn Pn 03 51 34.1 -3.5
RETA Reutte 4.81 341 *i* Pn Pn 03 51 39.3 +1.5
comp=E,37nm,0.3s,SNR=36
SURF Saint Ours 4.81 290 P Pn 03 51 38.5 +0.6
JAUF Jausiers 4.84 290 P Pn 03 51 38.7 +0.4
LMR La Mourre 4.85 276 *e*Pn Pn 03 51 37.3 -0.9
LMR *e*Sn Sn 03 52 32.6 -1.9
comp=E,31nm,0.6s
DAVA Damuels 4.88 333 *i* Pn Pn 03 51 40.5 +1.6
comp=E,92nm,0.5s,SNR=60
TEKS Tekeris 4.91 69 *e*Pn Pn 03 51 37.5 -1.6
MBDF Montbardon 4.91 293 *e*Pn Pn 03 51 39.2 -0.1
MBDF *e*Sn Sn 03 52 34.5 -1.8
comp=E,137nm,0.7s
MOA Molln 4.94 9 *e*Pn Pn 03 51 39.6 +0.1
MOA *e*Sn Sn 03 52 35.0 -1.8
MOA Molln 4.94 9 *i* Pn Pn 03 51 39.7 +0.1
comp=E,79nm,0.6s,SNR=44
TRIGF Trigance 4.95 281 P Pn 03 51 40.2 +0.5
SCTE Santa Cesarea 4.96 124 Pn 03 51 39.0 -0.8
CREF Crivoux 4.96 291 P Pn 03 51 41.2 +1.2
LSD Lago del Serru 4.96 302 AML AML
comp=E,154µm,0.6s
LSD AML AML
comp=N,122µm,1.0s
EMBD Embd, Matterta 4.97 312 P Pn 03 51 42.0 +1.9
IVA Berane 4.98 89 *e*Pn Pn 03 51 40.2 0.0
IVA *i* Sn Sn 03 52 37.6 -0.3
OGAG Argentiere 4.99 289 P Pn 03 51 43.0 +2.7
SJES Sjenica 5.03 84 *e*Pn Pn 03 51 42.0 +1.1
SJES *e*Sn Sn 03 52 36.2 -3.0
FLAF Flassans-sur-I 5.03 277 P Pn 03 51 40.9 +0.1
PVY Plav 5.05 92 *e*Pn Pn 03 51 41.3 +0.1
PVY *i* Sn Sn 03 52 39.4 -0.3
OGDI Digne 5.08 285 P Pn 03 51 43.4 +1.8
MORH Mrgy, Hungar 5.11 49 ⇓P Pn 03 51 45.6 +3.8
MORH Mrgy, Hungar 5.11 49 P Pn 03 51 41.4 -0.4
DIVS Divibare 5.12 75 Pn Pn 03 51 40.9 -1.3
DIVS Divibare 5.12 75 ⇑*i*Pn Pn 03 51 41.6 -0.6
DIVS Divibare 5.12 75 *e*Pn Pn 03 51 42.2 0.0
DIX Grande Dixence 5.12 309 P Pn 03 51 43.9 +1.5
OGMO Fort Saint-Gob 5.14 298 P Pn 03 51 44.1 +1.7
UBR Ueberruh 5.16 337 *e*Pn Pn 03 51 43.4 +0.8
UBR *e*Sn Sn 03 52 42.7 +0.4
TIH Tihany 5.19 39 P Pn 03 51 44.4 +1.5
LPG La Plagne 5.22 301 *e*Pn Pn 03 51 44.2 +0.5
LPG *e*Sn Sn 03 52 40.4 -3.7
comp=N,128nm,0.7s
RONA Rosalia, Austr 5.23 24 Pn 03 51 43.2 -0.3
RONA Rosalia, Austr 5.23 24 *i* Pn Pn 03 51 43.2 -0.3
comp=N,22nm,0.5s,SNR=21
MPLH Magyarpolny 5.24 35 P Pn 03 51 41.7 -1.9
LPL La Plagne 5.24 301 *e*Pn Pn 03 51 45.0 +1.1
LPL *e*Sn Sn 03 52 41.7 -2.8
comp=N,44nm,0.3s
LPL La Plagne 5.24 301 P Pn 03 51 44.1 +0.2
TIR Tirane 5.27 106 ⇑P Pn 03 51 44.7 +0.6
TIR Tirane 5.27 106 Pn Pn 03 51 44.1 -0.1
TIR Tirane 5.27 106 P Pn 03 51 43.9 -0.2
TIR Tirane 5.27 106 *e*Pn Pn 03 51 44.5 +0.4
TIR *e*Sn Sn 03 52 43.7 -1.4
TIR Tirane 5.27 106 P Pn 03 51 44.1 -0.1
FRGS Fruska Gora 5.29 63 ⇓P Pn 03 51 48.1 +3.6
FRGS Fruska Gora 5.29 63 ⇑*i*Pn Pn 03 51 43.4 -1.0
FRGS Fruska Gora 5.29 63 *e*Pn Pn 03 51 43.3 -1.1
SOP Sopron 5.30 26 P Pn 03 51 43.8 -0.6
CONA Conrad Observa 5.32 20 *i* Pn Pn 03 51 44.1 -0.6
comp=N,38nm,0.4s,SNR=34
EGYH Egyhazaskeszo 5.35 32 P Pn 03 51 45.6 +0.4
FUR Furstenfeldbru 5.35 347 *e*Pn Pn 03 51 46.2 +1.0
SENIN Lac Senin/Sane 5.35 311 Pn Pn 03 51 45.1 -0.3
RSL Roselend 5.39 302 P Pn 03 51 47.7 +1.8
VLO Vlora 5.39 116 Pn 03 51 45.9 +0.1
VLO Vlora 5.39 116 P Pn 03 51 46.9 +1.2
VLO Vlora 5.39 116 P Pn 03 51 45.9 +0.1
ZUR Degenried 5.44 325 P Pn 03 51 47.3 +0.9
TRUS Trudelj 5.44 74 *e*Pn Pn 03 51 46.7 +0.3
MLYF Mely 5.44 283 P Pn 03 51 47.7 +1.2
OGSI Sixt 5.50 306 P Pn 03 51 49.4 +2.1
GDM Grand'Maison 5.51 296 P Pn 03 51 51.3 +3.8
BSTF la Bastide-des 5.51 282 P Pn 03 51 48.2 +0.7
AIGLE Aigle 5.53 310 P Pn 03 51 49.1 +1.3
ORIF Oris-en-Rattie 5.57 293 *e*Pn Pn 03 51 49.7 +1.4
ORIF *e*Sn Sn 03 52 51.3 -1.2
comp=N,133nm,0.7s
ORIF Oris-en-Rattie 5.57 293 P Pn 03 51 50.3 +2.0
ORIF Oris-en-Rattie 5.57 293 P Pn 03 51 50.1 +1.8
SMRF Simiane la Rot 5.58 283 *e*Pn Pn 03 51 49.0 +0.7
SMRF *e*Sn Sn 03 52 47.0 -5.6
comp=N,94nm,1.0s
PHP Peshkopia 5.58 101 P Pn 03 51 49.2 +0.8
GRUS Gruza 5.61 78 *e*Pn Pn 03 51 49.1 +0.4
CSKK Cskako 5.70 38 P Pn 03 51 50.7 +0.7
SULZ Cheisacher 5.76 324 P Pn 03 51 50.9 +0.1
SLE Schleitheim 5.79 327 P Pn 03 51 51.3 0.0
TORNY Torny/Romont 5.79 313 P Pn 03 51 52.4 +1.1
BALST Balsthal 5.80 321 P Pn 03 51 51.7 +0.2
GUT Gutenstein 5.82 333 P Pn 03 51 52.1 +0.5
SELS Selova 5.87 85 *e*Pn Pn 03 51 52.5 +0.2
SELS *e*Sn Sn 03 52 55.9 -3.8
GEC2 GERESS Array S 5.88 4 Pn Pn 03 51 51.6 -1.0
GEC2 GERESS Array S 5.88 4 *e*Pn Pn 03 51 51.5 -1.0
GEC2 *e*Sn Sn 03 52 56.7 -3.5
GERES GERESS Array B 5.88 4 Pn Pn 03 51 50.1 -2.5
comp=N,6.5nm,0.3s,baz=175,slow=13,SNR=86
GERES Sn Sn 03 52 56.0 -4.2
comp=N,20nm,0.3s,baz=187,slow=21,SNR=12
GERES LR LR 03 54 51.6
comp=N,216nm,20.5s,baz=176,slow=47
comp=N,20nm,0.5s
CKRC Cesky Krumlov 5.90 8 *e*PN Pn 03 51 51.9 -0.9
CKRC *e*SN Sn 03 52 56.9 -3.7
SAUF chteau de Sau 5.91 282 P Pn 03 51 53.3 +0.4
OGSM Saint Maurice 5.94 299 P Pn 03 51 54.0 +0.7
KEK Kerkira 5.99 121 Pn Pn 03 51 54.6 +0.6
KEK Kerkira 5.99 121 P Pn 03 51 54.2 +0.2
OHR Ohrid 6.02 105 *i* Pn Pn 03 51 55.7 +1.3
OHR *i* Sn Sn 03 53 02.6 -0.9
OHR Ohrid 6.02 105 P Pn 03 51 55.3 +0.9
SRN Sarande 6.03 119 P Pn 03 51 54.7 +0.2
GIMEL St. Georges / 6.04 308 P Pn 03 51 55.5 +0.8
BOURR Bourrignon 6.07 319 P Pn 03 51 55.3 +0.2
SRO Srobarova 6.07 35 *e*P Pn 03 51 54.2 -0.8
FELD Feldberg im Sc 6.08 325 P Pn 03 51 55.0 -0.3
MODS Modra-Piesok 6.13 27 *e*P Pn 03 51 54.6 -1.4
BRANT Les Verrieres 6.16 312 P Pn 03 51 57.3 +1.0
KHC Kasperske Hory 6.17 3 Pn 03 51 55.1 -1.3
KHC Kasperske Hory 6.17 3 *e*P Pn 03 51 55.5 -0.9
KHC *e* 03 53 04.3
KHC Kasperske Hory 6.17 3 *e*PN Pn 03 51 55.5 -0.9
KHC *e*SN Sn 03 53 04.3 -2.7
WET Wettzell 6.17 359 P Pn 03 51 55.7 -0.8
WET SN Sn 03 53 04.0 -3.1
WET Wettzell 6.17 359 *e*Pn Pn 03 51 55.7 -0.8
WET *e*Sn Sn 03 53 04.0 -3.1
KIZ Kirchzarten 6.18 326 P Pn 03 51 56.6 +0.1
CABF La Chapelle 6.18 308 *e*Pn Pn 03 51 56.9 +0.2
CABF *e*Sn Sn 03 53 04.7 -2.8
comp=N,152nm,0.9s
KBN Korca 6.20 110 Pn 03 51 57.3 +0.4
KBN Korca 6.20 110 P Pn 03 51 57.7 +0.8
KBN Korca 6.20 110 P Pn 03 51 57.3 +0.4
OG35 Corcelles 6.20 302 P Pn 03 51 57.3 +0.3
SKO Skopje 6.24 96 *i* Pn Pn 03 51 58.1 +0.8
BANR Banloc 6.25 65 ⇑P Pn 03 52 00.2 +2.7
LSK Leskovik 6.28 114 P Pn 03 51 58.2 +0.1
BOVS Bovan 6.30 81 ⇓P Pn 03 51 59.1 +0.8
BOVS Bovan 6.30 81 *e*Pn Pn 03 51 57.9 -0.4
SMOL Smolenice 6.31 27 *e*P Pn 03 51 57.5 -0.8
SMOL *e* 03 53 11.2
BFO Black Forest 6.32 330 Pn Pn 03 51 57.9 -0.5
BFO Black Forest 6.32 330 P Pn 03 51 57.9 -0.5
BFO Black Forest 6.32 330 *e*Pn Pn 03 51 58.0 -0.5
BFO Black Forest 6.32 330 P Pn 03 51 59.0 +0.5
RIVEL MONT RIVEL 6.36 309 P Pn 03 51 59.4 +0.3
RIVEL S Sn 03 53 12.1 +0.4
KUBS Kucevo 6.37 74 *e*Pn Pn 03 51 58.1 -1.1
VOGT Vogtsburg - To 6.38 325 P Pn 03 51 59.4 +0.1

VIVF Saint-Julien-l 6.38 290 *e*Pn Pn 03 51 59.4 0.0
VIVF *e*Sn Sn 03 53 07.6 -4.7
comp=N,22nm,0.6s
AMBH Ambrzfalva 6.39 56 ⇓P Pn 03 52 02.1 +2.6
BARS Barje 6.39 88 *e*Pn Pn 03 51 59.7 +0.2
STU Stuttgart 6.41 336 *e*Pn Pn 03 52 00.9 +1.2
IGT Igoumenitsa 6.43 120 P Pn 03 52 00.5 +0.4
MOF Molkenrain 6.44 321 P Pn 03 52 00.1 -0.1
NEST Nestorio 6.47 111 P Pn 03 52 02.0 +1.4
MDVR Moldovita 6.47 71 ⇓P Pn 03 52 02.3 +1.7
KRUC Moravsky 6.50 19 *e*PN Pn 03 51 59.4 -1.6
KRUC *e*SN Sn 03 53 11.1 -4.1
TREC Trest 6.53 14 *e*P Pn 03 52 00.9 -0.5
TREC Trest 6.53 14 *e*PN Pn 03 52 00.9 -0.5
HINF Hinteralfeld 6.54 320 *e*Pn Pn 03 52 00.5 -1.1
HINF *e*Sn Sn 03 53 12.0 -4.4
comp=N,157nm,0.6s
RONF Ronchamp 6.57 318 P Pn 03 52 01.7 -0.2
SSB Saint Sauveur 6.58 293 P Pn 03 52 03.4 +1.2
BZS Buzias 6.65 64 ⇓P Pn 03 52 04.5 +1.5
BZS Buzias 6.65 64 ⇓P Pn 03 52 04.5 +1.5
JAVC Velka Javorina 6.69 27 *e*PN Pn 03 52 03.2 -0.4
ZAGS Zajecar 6.70 80 *e*Pn Pn 03 52 03.5 -0.2
ZAGS *e*Sn Sn 03 53 16.3 -3.7
ECH Echery 6.70 323 Pn Pn 03 52 03.3 -0.4
ECH Echery 6.70 323 P Pn 03 52 03.3 -0.4
ECH Echery 6.70 323 P Pn 03 52 03.5 -0.2
JAN Janina 6.70 117 P Pn 03 52 04.6 +0.8
WLS Welschbruch 6.77 325 P Pn 03 52 04.5 -0.2
VRAC Vranov 6.78 20 P Pn 03 52 04.5 -0.3
VRAC Vranov 6.78 20 Pn Pn 03 52 03.1 -1.7
comp=N,1.4nm,0.3s,baz=203,slow=12,SNR=11
VRAC LR LR 03 54 54.9
comp=N,143nm,19.1s,baz=206,slow=41
comp=N,14nm,0.6s
VRAC Vranov 6.78 20 P Pn 03 52 04.5 -0.3
VRAC Vranov 6.78 20 *e*PN Pn 03 52 03.4 -1.4
VRAC *e*SN Sn 03 53 18.1 -4.0
CDF Champ du Feu 6.80 325 *e*Pn Pn 03 52 04.8 -0.4
CDF *e*Sn Sn 03 53 18.0 -4.7
comp=N,48nm,0.5s
VYHS Vyhne 6.82 34 *e*P Pn 03 52 04.9 -0.4
VYHS *e* 03 53 20.6
LASF Ste Croix 6.82 282 *e*Pn Pn 03 52 04.3 -1.1
LASF *e*Sn Sn 03 53 17.5 -5.6
comp=N,36nm,0.9s
ROTZ Rotzenmuhle 6.82 355 *e*Pn Pn 03 52 04.6 -0.7
ROTZ *e*Sn Sn 03 53 17.2 -5.9
GRFO Grafenberg 6.84 350 Pn Pn 03 52 05.0 -0.7
GRFO Grafenberg 6.84 350 P Pn 03 52 05.0 -0.7
GRA1 Grafenberg Arr 6.84 350 Pn 03 52 05.1 -0.6
GRF Grafenberg Arr 6.84 350 P Pn 03 52 05.1 -0.6
GRF Grafenberg Arr 6.84 350 *e*Pn Pn 03 52 05.4 -0.3
STIP Stip 6.84 98 *i* Pn Pn 03 52 07.8 +2.1
HAU Haudompre 6.92 319 *e*Pn Pn 03 52 06.3 -0.5
HAU *e*Sn Sn 03 53 22.5 -3.1
comp=N,113nm,0.4s
SIRR Siria 6.93 59 ⇓P Pn 03 52 07.9 +1.1
ZAPS Zavoj 6.97 84 *e*Pn Pn 03 52 08.3 +0.8
ZAPS *e*Sn Sn 03 53 22.4 -4.5
HERR Herculane 6.98 71 ⇓P Pn 03 52 08.4 +0.8
SUBF Surbourg 6.98 330 P Pn 03 52 09.0 +1.5
SZBH soultz borehol 6.99 330 P Pn 03 52 08.1 +0.4
BLKB Belogradchik 7.01 81 ⇑P Pn 03 52 08.0 0.0
KZN Kozani 7.01 109 P Pn 03 52 08.8 +0.7
GOPC GO Pecny, Ondr 7.04 9 *e*P Pn 03 52 06.9 -1.4
GOPC GO Pecny, Ondr 7.04 9 *e*PN Pn 03 52 06.9 -1.4
MANZ Manzenberg 7.05 355 *e*Pn Pn 03 52 08.0 -0.5
MANZ *e*Sn Sn 03 53 22.5 -6.2
TSLK Tsoukalades, L 7.06 123 P Pn 03 52 09.9 +1.3
LKD2 Lefkada island 7.08 124 P Pn 03 52 09.9 +0.9
PRU Pruhonice 7.08 7 *e*P Pn 03 52 07.4 -1.6
PRU *e* 03 53 25.5
PRU Pruhonice 7.08 7 *e*PN Pn 03 52 07.4 -1.6
PRU *e*SN Sn 03 53 25.5 -4.0
CIEL Dossenheim-sur 7.10 328 P Pn 03 52 09.0 -0.2
DRAG Dragano-Lefkad 7.10 125 P Pn 03 52 10.9 +1.7
PLYF Puligny Montra 7.15 307 P Pn 03 52 10.6 +0.8
NYDR Nydri-Lefkada 7.15 124 P Pn 03 52 10.5 +0.6
EVGI Lefkada island 7.19 125 P Pn 03 52 11.0 +0.6
VAY Valandovo 7.22 100 *i* Pn Pn 03 52 11.1 +0.3
VAY *i* Sn Sn 03 53 29.2 -3.7
FSK Fiskardo 7.23 126 P Pn 03 52 11.9 +0.8
PUNG Punghina 7.24 76 ⇓P Pn 03 52 12.4 +1.3
DMLN Damoulianata-K 7.27 128 P Pn 03 52 13.1 +1.5
NKC Novy Kostel 7.27 357 *e*P Pn 03 52 11.9 +0.3
NKC Novy Kostel 7.27 357 *e*PN Pn 03 52 11.9 +0.3
KEF3 Kipouria, Keph 7.28 128 P Pn 03 52 12.6 +0.9
KEF4 Livadi, Kephal 7.29 128 P Pn 03 52 12.8 +1.0
WERN Wernitzgruen 7.33 356 *e*Pn Pn 03 52 11.5 -0.9
WERN *e*Sn Sn 03 53 32.9 -2.8
GZR Gura Zlata 7.35 68 ⇓P Pn 03 52 13.4 +0.7
GUNZ Gunzen 7.41 356 *e*Pn Pn 03 52 13.3 -0.1
VLS Valsamata 7.44 128 P Pn 03 52 14.7 +0.8
VTS Vitosha 7.45 89 ⇓P Pn 03 52 13.7 -0.5
VTS Vitosha 7.45 89 Pn Pn 03 52 14.1 -0.1
VTS Vitosha 7.45 89 P Pn 03 52 14.5 +0.3
VTS S Sn 03 53 36.3 -2.6
TANN Tannenbergstha 7.46 357 *e*Pn Pn 03 52 13.7 -0.4
MORC Moravsky Berou 7.46 23 ⇑P Pn 03 52 14.0 -0.1
MORC Moravsky Berou 7.46 23 ⇑P Pn 03 52 14.0 -0.1
MORC Moravsky Berou 7.46 23 *e*PN Pn 03 52 13.8 -0.4
PSDA Pessada-Kefalo 7.48 128 P Pn 03 52 15.2 +0.8
WERD Werda 7.50 356 *e*Pn Pn 03 52 14.6 -0.1
KNT Kendrikon 7.50 101 P Pn 03 52 14.5 -0.2
THL Klokotos Trika 7.52 114 P Pn 03 52 15.1 +0.1
KRLC Kraliky 7.54 18 *e*P Pn 03 52 14.5 -0.7
KRLC Kraliky 7.54 18 *e*PN Pn 03 52 14.5 -0.7
PLN Plauen 7.54 355 *e*Pn Pn 03 52 15.1 -0.1
KECS Kecovo 7.54 41 *e*P Pn 03 52 17.8 +2.5
SMF Signal de Mont 7.54 302 *e*Pn Pn 03 52 14.9 -0.4
SMF *e*Sn Sn 03 53 35.8 -5.2
comp=N,89nm,0.7s
DEV Deva 7.58 64 ⇑P Pn 03 52 16.4 +0.6
DEV Deva 7.58 64 ⇑P Pn 03 52 16.4 +0.6
PAGF Fort de Pagny 7.60 320 *e*Pn Pn 03 52 16.1 0.0
PAGF *e*Sn Sn 03 53 36.9 -5.4
comp=N,253nm,1.0s
PVCC Panska Ves 7.62 7 *e*P Pn 03 52 15.2 -1.1
PVCC Panska Ves 7.62 7 *e*PN Pn 03 52 15.2 -1.1
DPC Dobruska-Polom 7.70 16 *e*P Pn 03 52 16.8 -0.6
DPC Dobruska-Polom 7.70 16 *e*PN Pn 03 52 16.8 -0.6
SFTF Sexfontaines 7.71 316 *e*Pn Pn 03 52 17.2 -0.3
SFTF *e*Sn Sn 03 53 39.4 -5.5
comp=N,26nm,0.4s
PVO Paravola 7.72 121 P Pn 03 52 19.3 +1.5
EVR Evrytania 7.73 119 P Pn 03 52 19.6 +1.7
MOX Moxa 7.74 353 P Pn 03 52 16.6 -1.3
MOX Moxa 7.74 353 *e*Pn Pn 03 52 16.7 -1.3
PYM Petit Puy Mans 7.75 294 P Pn 03 52 19.5 +1.2
ABAH Abaujker 7.79 44 P Pn 03 52 15.8 -2.8
UPC Upice 7.79 14 *e*P Pn 03 52 18.4 -0.3
UPC Upice 7.79 14 *e*PN Pn 03 52 18.4 -0.3
KEST Kesra 7.80 203 Pn Pn 03 52 23.7 +4.8
comp=N,3.8nm,0.3s,baz=310,slow=4.8,SNR=42
KEST LR LR 03 55 31.6
comp=N,381nm,18.3s,baz=334,slow=39
DRGR 7.81 57 P Pn 03 52 20.0 +1.0
DRGR 7.81 57 P Pn 03 52 20.0 +1.0
LOR Lormes 7.83 306 *e*Pn Pn 03 52 18.9 -0.3
LOR *e*Sn Sn 03 53 42.8 -5.0
comp=N,33nm,0.4s
LOR Lormes 7.83 306 P Pn 03 52 19.4 +0.2
OSTC Ostas 7.88 15 *e*PN Pn 03 52 19.4 -0.5
CHVC Chvalec 7.88 14 *e*PN Pn 03 52 18.9 -1.0
MEZF Maizieres J'vi 7.89 317 *e*Pn Pn 03 52 20.1 0.0
MEZF *e*Sn Sn 03 53 44.8 -4.7
comp=N,119nm,0.9s
LTHK Lithakia 7.90 129 P Pn 03 52 20.7 +0.5
ABH Alteburg 7.90 333 P Pn 03 52 20.9 +0.7
AVF Avril sur Loir 7.91 302 *e*Pn Pn 03 52 20.1 -0.2
AVF *e*Sn Sn 03 53 45.2 -4.7
comp=N,58nm,0.8s
BRG Berggiesshubel 7.92 4 *e*P Pn 03 52 20.1 -0.3
BRG *e* 03 53 45.7
BRG pmax pmax
comp=Z,9.0nm,0.5s
BRG pmax pmax
comp=Z,82nm,1.1s
TNS Taunus Mts 7.93 338 *e*Pn Pn 03 52 20.8 +0.2
SAVF Savonnieres en 7.93 318 *e*Pn Pn 03 52 20.6 0.0

SAVF *e*Sn Sn 03 53 45.2 -5.2
comp=Z,78nm,0.7s
SOH Sokhos 7.94 102 P Pn 03 52 21.0 +0.3
SSF Saint Saulge 7.94 304 *e*Pn Pn 03 52 20.6 -0.1
SSF *e*Sn Sn 03 53 44.9 -5.7
comp=Z,44nm,0.7s
SSF Saint Saulge 7.94 304 P Pn 03 52 20.3 -0.4
FBE Freiberg 7.95 1 *e*Pn Pn 03 52 20.0 -0.8
FBE *e*Sn Sn 03 53 45.9 -5.0
MTLF Montolieu 7.98 276 *e*Pn Pn 03 52 21.2 0.0
MTLF *e*Sn Sn 03 53 44.7 -6.9
comp=Z,35nm,1.1s
MTLF Montolieu 7.98 276 P Pn 03 52 22.5 +1.3
MARR Marisel-Cluj 8.02 59 P Pn 03 52 23.2 +1.4
SRS Serrai 8.02 100 P Pn 03 52 22.1 +0.3
RLS Riolos of Patr 8.04 125 P Pn 03 52 23.7 +1.7
LOT Lotru 8.04 68 ⇓P Pn 03 52 23.0 +0.7
EFP Efpalio 8.08 121 P Pn 03 52 24.4 +1.8
FNEB Nbias 8.08 273 P Pn 03 52 22.6 0.0
MESR Meseseni 8.12 56 P Pn 03 52 24.1 +1.0
UBBA Unterbreizbach 8.13 346 *e*Pn Pn 03 52 23.5 +0.3
BGF Bois d'Agland 8.13 300 *e*Pn Pn 03 52 23.2 -0.2
BGF *e*Sn Sn 03 53 52.6 -2.9
comp=Z,40nm,0.6s
NVR Nevrokopi 8.15 98 P Pn 03 52 23.8 +0.2
SERG Sergoula 8.18 121 P Pn 03 52 26.4 +2.4
CAF Calviac 8.21 288 *e*Pn Pn 03 52 25.2 +0.8
CAF *e*Sn Sn 03 53 50.1 -7.2
comp=Z,20nm,0.9s
CAF Calviac 8.21 288 P Pn 03 52 25.3 +0.8
LAKA Lakka 8.23 122 P Pn 03 52 26.4 +1.6
WLF Walferdange 8.24 327 P Pn 03 52 26.8 +2.0
WLF Walferdange 8.24 327 *e*Pn Pn 03 52 26.8 +2.0
WLF Walferdange 8.24 327 P Pn 03 52 26.6 +1.8
DRO Drossia 8.25 125 P Pn 03 52 26.8 +1.8
ALIK Aliki, Aigiali 8.30 122 P Pn 03 52 28.4 +2.7
CJR Cluj-Napoca 8.33 60 ⇑P Pn 03 52 27.0 +0.8
CJR Cluj-Napoca 8.33 60 ⇑P Pn 03 52 27.0 +0.8
CLL Collm 8.34 360 Pn Pn 03 52 24.9 -1.3
CLL Collm 8.34 360 *e*P Pn 03 52 25.0 -1.1
CLL Collm 8.34 360 *e*Pn Pn 03 52 25.0 -1.1
CLL *e*Sn Sn 03 53 41.0 -19
CLL *ex* x 03 53 56.0
CLL *ex* x 03 54 11.0
CLL *ex* x 03 54 42.0
CLL *e*Sg Sg 03 54 51.0 -1.5
comp=Z,140nm,1.3s
CLL Lmax 03 57 00.0
AXAR Agios Charalam 8.36 117 P Pn 03 52 27.6 +1.0
TRPA Tarpa 8.38 49 ⇓P Pn 03 52 26.9 +0.1
TRPA Tarpa 8.38 49 P Pn 03 52 28.8 +2.0
TCF Toulx Ste Croi 8.45 297 *e*Pn Pn 03 52 27.4 -0.4
TCF *e*Sn Sn 03 53 57.2 -6.1
comp=Z,24nm,0.8s
KLV Kalavryta, Ach 8.46 123 P Pn 03 52 29.6 +1.6
UZH Uzhgorod 8.55 45 *e*P Pn 03 52 31.8 +2.8
UZH *e*S Sn 03 54 09.2 +3.7
UZH MLR MLR
comp=Z,30nm,10.0s
OUR Ouranopolis 8.55 104 P Pn 03 52 28.4 -0.7
STHS Stebnicka Huta 8.56 38 *e*P Pn 03 52 29.5 +0.3
HYF Humbligny 8.56 304 *e*Pn Pn 03 52 30.0 +0.8
HYF *e*Sn Sn 03 53 58.4 -7.5
ARR Arges 8.62 70 ⇑P Pn 03 52 30.6 +0.5
AHRW Bad Neuenahr-A 8.62 333 *e*Pn Pn 03 52 32.2 +2.1
LKR Lokris 8.65 117 P Pn 03 52 29.5 -1.0
RJF Les Rejaudoux 8.66 290 *e*Pn Pn 03 52 31.0 +0.4
RJF *e*Sn Sn 03 54 02.0 -6.4
comp=Z,34nm,1.1s
HUMR Humele 8.73 76 ⇓P Pn 03 52 31.1 -0.4
MONQ Montcuq 8.75 283 P Pn 03 52 32.4 +0.6
THAL Thalero 8.79 121 P Pn 03 52 36.1 +3.8
BHOU Houvegnez 8.85 329 *d*PP Pg 03 52 58.0 -16
COPA Copaceanca 8.87 78 ⇓P Pn 03 52 33.0 -0.4
VOIR 8.92 70 ⇓P Pn 03 52 36.3 +2.0
VOIR 8.92 70 ⇓P Pn 03 52 36.3 +2.0
ARCR ARCALIA 8.96 59 ⇑P Pn 03 52 34.8 +0.2
PYL PYLOS 8.98 130 P Pn 03 52 35.8 +0.7
BTNL Ternell 8.99 330 *d*P Pn 03 52 37.2 +2.0
RCHB Rochefort 9.00 326 *d*P Pn 03 52 36.0 +0.7
RCHB Rochefort 9.00 326 P Pn 03 52 36.7 +1.5
MEM Membach 9.05 330 *d*P Pn 03 52 38.4 +2.4
VILL Villia 9.12 118 P Pn 03 52 37.4 +0.3
GIVF Givet 9.13 324 *e*Pn Pn 03 52 37.3 +0.3
GIVF *e*Sn Sn 03 54 13.5 -6.3
comp=Z,49nm,0.8s
CLF Chambon-Foret 9.14 307 P Pn 03 52 39.7 +2.5
LFF La Frestale 9.14 287 *e*Pn Pn 03 52 38.1 +0.9
LFF *e*Sn Sn 03 54 11.9 -8.2
comp=Z,14nm,0.7s
BCLA Clavier 9.17 327 *d*P Pn 03 52 39.6 +2.0
BCLA *d*S Sn 03 54 18.5 -2.4
BSTI Sart Tilman 9.20 328 *d*S Sn 03 54 16.2 -5.4
DOU Dourbes 9.22 323 *d*P Pn 03 52 39.1 +0.8
DOU *d*S Sn 03 54 21.4 -0.7
DOU Dourbes 9.22 323 P Pn 03 52 40.4 +2.1
BGES Gesves 9.23 326 *d*P Pn 03 52 40.3 +1.9
BGES *d*S Sn 03 54 22.3 -0.1
DOPR Dopca 9.27 67 P Pn 03 52 38.1 -1.0
BMRD Maredsous 9.30 325 *d*P Pn 03 52 39.9 +0.5
BMRD *d*S Sn 03 54 23.1 -1.0
EPID Epidavros 9.33 122 P Pn 03 52 40.6 +0.8
EPF Esparros 9.36 275 *e*Pn Pn 03 52 41.1 +0.8
EPF *e*Sn Sn 03 54 21.3 -4.4
comp=Z,3.8nm,0.7s
BAIF Baives 9.37 322 *e*Pn Pn 03 52 40.8 +0.5
BAIF *e*Sn Sn 03 54 19.3 -6.4
comp=Z,56nm,1.0s
KYMI Kymi, Euboea I 9.39 114 P Pn 03 52 39.0 -1.6
RDO Rodhopi 9.42 97 Pn Pn 03 52 40.7 -0.3
RDO Rodhopi 9.42 97 P Pn 03 52 41.1 +0.1
KRND KRANIDI 9.49 123 P Pn 03 52 42.6 +0.6
ECHI Chisagues Biel 9.50 273 P Pn 03 52 47.6 +5.3
MLR Muntele Rosu 9.55 70 ⇑P Pn 03 52 42.1 -0.8
MLR Muntele Rosu 9.55 70 Pn Pn 03 52 45.3 +2.4
comp=Z,0.6nm,0.3s,baz=134,slow=16,SNR=22
MLR LR LR 03 57 15.7
comp=Z,418nm,19.7s,baz=259,slow=43
comp=Z,16nm,0.8s
MLR Muntele Rosu 9.55 70 ⇑P Pn 03 52 42.1 -0.8
OZUR 9.57 67 ⇑P Pn 03 52 42.4 -0.7
VIEF Viey 9.61 274 P Pn 03 52 49.2 +5.5
VLY Voula,Athens 9.62 119 P Pn 03 52 44.3 +0.6
SNF Seneffe 9.66 324 *d*P Pn 03 52 46.8 +2.5
BURAR Bucovina Array 9.71 57 ⇓P Pn 03 52 44.3 -0.7
BURAR Bucovina Array 9.71 57 ⇓P Pn 03 52 44.3 -0.7
RAZG Razgrad 9.79 82 ⇑P Pn 03 52 43.7 -2.4
COVR Voineasa-Covas 9.80 68 ⇓P Pn 03 52 45.2 -1.0
CANF Canfranc 10.01 273 P Pn 03 52 54.0 +4.7
BIZ Bicaz 10.02 62 ⇑P Pn 03 52 48.2 -1.0
ETSF Etsaut 10.03 274 *e*Pn Pn 03 52 52.7 +3.2
ETSF *e*Sn Sn 03 54 35.3 -6.8
RETH Rethem/Aller, 10.09 347 *e*Pn Pn 03 52 51.0 +1.0
MFF Saint Martin d 10.10 296 *e*Pn Pn 03 52 50.9 +0.6
MFF *e*Sn Sn 03 54 36.3 -7.4
comp=Z,27nm,1.0s
MFF Saint Martin d 10.10 296 P Pn 03 52 51.2 +0.9
PLOR Plostina 10.10 69 ⇑P Pn 03 52 49.0 -1.4
PLOR Plostina 10.10 69 ⇑P Pn 03 52 49.0 -1.4
KTHR Kythira 10.15 128 P Pn 03 52 54.0 +2.9
VRI Vrincioaia 10.16 69 ⇓P Pn 03 52 49.3 -1.8
VRI Vrincioaia 10.16 69 ⇓P Pn 03 52 49.3 -1.8
LVV L'vov 10.18 44 *e*P Pn 03 52 56.0 +4.7
KTHA Kythira Island 10.19 128 P Pn 03 52 54.2 +2.6
SJPF Ste Jean 10.50 276 *e*Pn Pn 03 52 58.0 +2.2
SJPF *e*Sn Sn 03 54 46.0 -7.6
comp=Z,10nm,0.9s
LDF La Druitiere 10.81 306 *e*Pn Pn 03 52 58.9 -1.1
LDF *e*Sn Sn 03 54 53.7 -7.4
comp=Z,26nm,0.8s
RODP Rodopos 11.08 128 P Pn 03 53 06.5 +2.7
FLN La Foliniere 11.10 306 *e*Pn Pn 03 53 03.8 -0.2
FLN *e*Sn Sn 03 55 01.9 -6.3
comp=Z,12nm,0.6s
GRR Gorron 11.17 304 *e*Pn Pn 03 53 03.1 -1.8
GRR *e*Sn Sn 03 55 04.1 -5.7
comp=Z,12nm,0.7s
APE Apeiranthos 11.20 118 ⇑*e*P Pn 03 53 05.7 +0.3
IDI Anoyia 11.93 126 Pn Pn 03 53 15.3 -0.2
comp=Z,0.8nm,0.3s,baz=318,slow=16,SNR=2.6
IDI Sn Sn 03 55 23.2 -5.5
comp=Z,1.1nm,0.3s,baz=212,slow=23,SNR=2.8

comp=Z,7.8nm,0.7s
IDI Anoyia 11.93 126 Pn **Pn 03 53 14.9 -0.5**
SGMF Saint Gilles 12.17 301 *e*Pn **Pn 03 53 17.3 -1.3**
SGMF *e*Sn Sn 03 55 25.0 -9.4
comp=Z,4.4nm,0.6s
QUIF Quistinic 12.45 299 *e*Pn **Pn 03 53 20.2 -2.2**
QUIF *e*Sn **Sn 03 55 33.7 -7.5**
comp=Z,1.5nm,0.3s
ROSF Rostrenen 12.65 301 *e*Pn **Pn 03 53 23.7 -1.5**
ESDC Sonseca Array 13.25 261 Pn **Pn 03 53 33.6 +0.1**
baz=68,slow=13,SNR=13
ESDC LR LR 03 58 42.8
comp=Z,153nm,18.8s,baz=52,slow=38
comp=Z,2.3nm,1.0s
BORA Eskisehir 13.37 98 Pn **Pn 03 53 35.6 +0.4**
AKASG Malin Array Be 13.45 49 Pn **Pn 03 53 35.0 -1.0**
comp=Z,0.1nm,0.3s,baz=238,slow=12,SNR=8.8
AKASG LR LR 03 59 30.4
comp=Z,121nm,20.8s,baz=221,slow=41
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 13.45 49 P **Pn 03 53 35.0 -1.0**
AKBB Malin Array Si 13.45 49 Pn **Pn 03 53 35.9 -0.1**
AKBB Malin Array Si 13.45 49 P **Pn 03 53 35.9 -0.1**
MDUB Mudurnu 13.74 94 Pn **Pn 03 53 39.9 -0.3**
ISP Isparta 14.22 105 *de*P **Pn 03 53 46.4 -0.4**
AKAS Kas 14.38 112 P **Pn 03 53 51.0 +2.1**
PABE Paberze 14.38 26 **Pn 03 53 48.7 -0.1**
PBRG Braganca 14.72 272 *e*P **P 03 54 02.4 +2.6**
comp=Z,22nm,1.8s
NACGM Naroch 14.90 32⇓*e*P **Pn 03 53 55.5 -0.3**
baz=222
MVO Moncorvo 15.07 270 *e*P **P 03 54 06.9 +3.2**
comp=Z,26nm,1.7s
MVO A A 04 00 18.5
comp=Z,135nm,18.0s
MTE Manteigas 15.64 268 *e*P **P 03 54 10.9 +0.9**
comp=Z,43nm,1.3s
MTE A A 04 00 44.5
comp=Z,136nm,18.0s
BR131 Keskin Array S 15.75 95 P **Pn 03 54 03.3 -4.0**
BR131 Keskin Array S 15.75 95 P **Pn 03 54 03.3 -4.0**
BR131 pmax pmax
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 15.75 95 Pn **Pn 03 54 07.2 0.0**
comp=Z,0.2nm,0.3s,baz=285,slow=12,SNR=16
BRTR LR LR 04 01 17.1
comp=Z,210nm,19.6s,baz=246,slow=41
comp=Z,2.8nm,0.8s
BRTR Keskin Array B 15.75 95 **Pn 03 54 07.0 -0.3**
BRTR Keskin Array B 15.75 95 P **Pn 03 54 07.0 -0.3**
PGAV Gavieira, Arco 15.81 274 A A 04 00 34.0
comp=Z,108nm,20.0s
PVIS Viseu 15.82 269 *e*P **P 03 54 14.8 +2.9**
comp=Z,20nm,1.3s
PMRV Marv??o 15.83 264 *e*P **P 03 54 13.3 +1.2**
comp=Z,18nm,1.6s
PMRV A A 04 00 35.8
comp=Z,146nm,18.0s
PBAR Barrancos 16.04 259 *e*P **P 03 54 15.2 +0.9**
comp=Z,20nm,1.3s
PESTR Estremoz 16.17 262 *e*P **Pn 03 54 14.1 +1.5**
comp=Z,18nm,1.8s
PESTR Estremoz 16.17 262 P **P 03 54 14.6 -1.3**
EKA Eskdalemuir Ar 16.26 325 Pn **Pn 03 54 13.1 -0.5**
baz=137,slow=14
EKA LR LR 04 01 47.6
comp=Z,152nm,18.1s,baz=194,slow=42
comp=Z,2.0nm,0.5s
PCAS Casmilo, Conde 16.44 267 *e*P **P 03 54 21.0 +2.2**
comp=Z,32nm,1.6s
DSB Dublin 16.53 315 P **Pn 03 54 15.8 -1.2**
DSB IAmb IAmb 03 54 22.5
comp=Z,43nm,1.1s
PMTG Montargil 16.56 264 *e*P **P 03 54 19.8 -0.3**
comp=Z,21nm,1.3s
KONO Kongsberg 16.84 354⇑*e*P **Pn 03 54 21.3 +0.4**
HFS Hagfors 17.19 1 P **Pn 03 54 25.0 -0.3**
comp=Z,0.4nm,0.3s,baz=182,slow=9.9,SNR=12
HFS LR LR 04 01 30.7
comp=Z,111nm,20.0s,baz=208,slow=39
comp=Z,7.2nm,0.7s
HFS Hagfors 17.19 1 P **Pn 03 54 25.0 -0.3**
ANN Anapa 17.61 76 *e*P **Pn 03 54 29.2 -1.5**
ANN *e*S **Sn 03 57 39.9 -6.9**
ANN pmax pmax
comp=Z,57nm,1.1s
BNN Bunyan 17.65 96 P **Pn 03 54 30.2 -1.2**
NAO01 NORSAR Array S 17.95 356 P **Pn 03 54 34.2 -0.5**
NAO01 IAmb IAmb 03 54 40.0
comp=Z,50nm,1.2s
NB2 NORSAR Subarra 18.13 357 P **P 03 54 37.3 0.0**
comp=Z,7.6nm,0.7s,baz=172,slow=12
NOA NORSAR Array B 18.13 357 P **P 03 54 37.3 0.0**
baz=171,slow=12,SNR=6.7
NOA LR LR 04 02 30.9
comp=Z,86nm,18.7s,baz=265,slow=40
comp=Z,1.4nm,0.6s
NC405 NORSAR Array S 18.18 358 P **Pn 03 54 36.5 -1.2**
NC405 IAmb IAmb 03 54 41.5
comp=Z,53nm,1.1s
NC303 NORSAR Array S 18.31 357 P **P 03 54 39.9 +0.6**
NC204 NORSAR Array S 18.38 356 **Pn 03 54 39.7 -0.4**
NC204 IAmb IAmb 03 54 53.6
comp=Z,35nm,1.0s
VSR Storozhevoye 19.48 56 *e*P **P 03 54 50.7 -1.5**
VSR pmax pmax
comp=Z,8.0nm,0.5s
OBN Obninsk 19.48 43⇓*e*P **P 03 54 50.9 -1.2**
OBN pmax pmax
comp=Z,19nm,0.7s
OBN MLR MLR
comp=Z,89nm,13.0s
OBN Obninsk 19.48 43 P **P 03 54 52.2 +0.1**
VORR Voronezh 19.62 55 *e*P **P 03 54 51.7 -2.1**
VORR pmax pmax
comp=Z,70nm,0.4s
LPSR Galich'ya Gora 19.74 52 *e*P **P 03 54 52.9 -2.1**
LPSR pmax pmax
comp=Z,8.0nm,0.5s
FINES FINESS Array B 20.06 18 P **P 03 54 58.4 +0.1**
comp=Z,0.5nm,0.3s,baz=207,slow=8.9,SNR=16
FINES LR LR 04 03 41.2
comp=Z,181nm,18.1s,baz=238,slow=40
comp=Z,3.0nm,0.5s
MMAI Mount Meron Ar 20.13 112 P Pn 03 55 00.5 -0.8
comp=Z,12nm,0.8s,baz=319,slow=10.0,SNR=8.2
MMAI LR LR 04 04 50.6
comp=Z,80nm,19.1s,baz=114,slow=43
comp=Z,12nm,0.8s
MOS Moscow 20.31 43 *e*P **P 03 54 59.5 -1.7**
VRH Novokhopyorsk 21.04 57 *e*P **P 03 55 06.6 -2.5**
VRH pmax pmax
comp=Z,10.0nm,0.7s
TAM Tamanrasset 21.10 200 P **P 03 55 12.9 +2.8**
TAM pmax pmax
comp=Z,10.0nm,1.4s
KIV Kislovodsk 21.44 77 P **P 03 55 12.3 -1.3**
KIV Kislovodsk 21.44 77 *e*P **P 03 55 14.0 +0.4**
KIV pmax pmax
comp=Z,63nm,1.1s
KIV MLR MLR
comp=Z,40nm,14.0s
KIV Kislovodsk 21.44 77 P **P 03 55 14.8 +1.2**
NEY Neytrino 21.57 79⇑*e*P **P 03 55 17.0 +1.9**
NEY pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 21.62 78 P **P 03 55 16.8 +1.4**
comp=Z,32nm,1.0s,baz=288,slow=8.8,SNR=34
KBZ LR LR 04 05 40.8
comp=Z,69nm,18.6s,baz=338,slow=42
comp=Z,32nm,1.0s
KBZ Khabaz 21.62 78 *ce*P **P 03 55 16.4 +1.0**
KBZ pmax pmax
comp=Z,36nm,0.9s
ASF Jabal al Asfar 21.65 112 P **P 03 55 17.9 +1.9**
comp=Z,16nm,0.9s,baz=306,slow=8.8,SNR=11
comp=Z,16nm,0.9s
MARD Mardin 21.84 96 P **P 03 55 17.9 -0.1**
MARD IAmb IAmb 03 55 21.1
comp=Z,30nm,1.0s
EIL Elat 21.96 120 P **P 03 55 21.2 +2.0**
comp=Z,6.3nm,0.9s,baz=330,slow=7.3,SNR=3.6
EIL LR LR 04 06 21.0
comp=Z,39nm,20.1s,baz=308,slow=43
comp=Z,6.3nm,0.9s
NCK Nalchik 22.16 78⇑*e*P **P 03 55 24.6 +3.3**
NCK pmax pmax
comp=Z,10.0nm,0.8s
ONI Oni 22.22 81 P **P 03 55 22.1 +0.1**
ONI IAmb IAmb 03 55 27.4
comp=Z,21nm,0.9s
ONI Oni 22.22 81 P **P 03 55 22.1 +0.1**
ONI pmax pmax
comp=Z,21nm,0.9s
ZEI Tsey 22.50 80 *e*P **P 03 55 26.1 +0.9**
ZEI pmax pmax
comp=Z,15nm,1.0s
GEVA Gevas 23.13 91 P **P 03 55 28.4 -3.4**
GNI Garni 23.76 86 P **P 03 55 39.0 +1.0**
comp=Z,19nm,0.9s,baz=240,slow=1.4,SNR=7.6
GNI LR LR 04 08 04.2
comp=Z,58nm,18.9s,baz=306,slow=45
comp=Z,19nm,0.9s
GNI Garni 23.76 86 P **P 03 55 37.6 -0.4**
GNI Garni 23.76 86 *de*P **P 03 55 39.4 +1.4**
GNI pmax pmax
comp=Z,22nm,1.0s
GNI Garni 23.76 86 P **P 03 55 40.5 +2.5**
KLMR Klimovskoe 23.92 32 *e*P **P 03 55 36.8 -2.3**
KLMR pmax pmax
comp=Z,27nm,1.5s
KLMR Klimovskoe 23.92 32 *e*P **P 03 55 36.9 -2.2**
KLMR AMP 03 55 52.8
comp=Z,27nm,1.5s
BELG Belogornoye 24.86 56 P **P 03 55 48.4 +0.6**
comp=Z,36nm,0.9s,baz=179,slow=0.4,SNR=11
BELG LR LR 04 06 17.0
comp=Z,80nm,18.2s,baz=159,slow=38
comp=Z,36nm,0.9s
BELG Belogornoye 24.86 56 *c i*P **P 03 55 48.0 +0.3**
BELG pmax pmax
comp=Z,7.0nm,0.9s
AKT Akhty 25.57 81 *e*P **P 03 55 55.7 +1.2**
AKT *e* 03 56 30.1
AKT pmax pmax
comp=Z,29nm,0.7s
PRGR Permogore 26.83 35 *e*P **P 03 56 04.0 -1.5**
PRGR pmax pmax
comp=Z,13nm,0.7s
KIRV Kirov 27.32 42 LR LR 04 07 58.6
comp=Z,86nm,20.3s,baz=248,slow=39
KIRV Kirov 27.32 42⇑*e*P **P 03 56 10.6 +0.6**
ARCES ARCESS Array B 27.38 9 P **P 03 56 10.5 +0.1**
comp=Z,3.5nm,1.0s,baz=186,slow=7.3,SNR=6.8
ARCES LR LR 04 08 37.8
comp=Z,44nm,18.1s,baz=21,slow=40
comp=Z,3.5nm,1.0s
BORG Borgarnes 29.17 330 LR LR 04 08 50.6
comp=Z,64nm,18.1s,baz=149,slow=38
AKTO Aktyubinsk 31.28 60 P **P 03 56 44.9 -0.4**
comp=Z,1.6nm,0.5s,baz=257,slow=5.4,SNR=6.5
comp=Z,1.6nm,0.5s
TOA0 Torodi Ar. Sit 31.32 202 P **P 03 56 43.0 -2.9**
TOA0 IAmb IAmb 03 56 47.8
comp=Z,10nm,1.2s
TORD Torodi Ar. Bea 31.32 202 P **P 03 56 46.2 +0.4**
comp=Z,5.0nm,1.0s,baz=18,slow=9.4,SNR=17
TORD LR LR 04 10 40.5
comp=Z,104nm,18.5s,baz=198,slow=39
comp=Z,5.0nm,1.0s
ARU Arti 31.70 49 LR LR 04 10 10.1
comp=Z,93nm,19.0s,baz=266,slow=38
ARU Arti 31.70 49 P **P 03 56 47.7 -1.1**
ARU Arti 31.70 49 *c i*P **P 03 56 48.3 -0.5**
ARU 03 57 49.1
ARU 03 59 36.0
ARU S **S 04 01 58.6 +0.4**
ARU SS **SnSn 04 03 42.0 -2.3**
ARU pmax pmax
comp=Z,15nm,0.6s
ABKAR Abkulak array 32.63 62 P **P 03 56 55.1 -2.0**
ABKAR Abkulak array 32.63 62 P **P 03 56 56.6 -0.5**
SVE Sverdlovsk 32.88 48 *e*P **P 03 56 59.6 +0.5**
SVE pmax pmax
comp=Z,23nm,0.9s
GEYT Alibeck 34.30 83 P **P 03 57 12.5 +0.7**
comp=Z,2.9nm,0.6s,baz=270,slow=8.7,SNR=7.8
comp=Z,2.9nm,0.6s
GEYT Alibeck 34.30 83 P **P 03 57 11.9 +0.1**
GEYT IAmb IAmb 03 57 13.8
comp=Z,7.8nm,1.1s
BBTS Babate 37.98 231 LR LR 04 13 14.0
comp=Z,78nm,18.7s,baz=340,slow=36
BRVK Borovoye 38.58 54 P **P 03 57 48.0 -0.2**
BRVK Borovoye 38.58 54 *c i*P **P 03 57 48.6 +0.5**
BRVK pmax pmax
comp=Z,14nm,0.8s
BRVK Borovoye 38.58 54 P **P 03 57 49.3 +1.2**
BVAR Borovoye Array 38.65 54 P **P 03 57 49.6 +0.9**
comp=Z,3.7nm,0.8s,baz=270,slow=7.4,SNR=18
BVAR LR LR 04 15 02.0
comp=Z,76nm,18.0s,baz=289,slow=38
comp=Z,3.7nm,0.8s
DBIC Dimbokro 39.48 209 LR LR 04 15 41.8
comp=Z,82nm,18.2s,baz=290,slow=38
KK31 Karatay Array 41.23 69 P **P 03 58 11.3 +1.0**
KK31 IAmb IAmb 03 58 16.7
comp=Z,8.4nm,0.8s
KK31 Karatay Array 41.23 69 P **P 03 58 11.3 +1.0**
KK31 pmax pmax
comp=Z,8.0nm,0.9s
KKAR Karatay Array 41.23 69 P **P 03 58 10.1 -0.2**
KKAR Karatay Array 41.23 69 P **P 03 58 10.1 -0.2**
WSAR Wadi Sarin 42.31 103 LR LR 04 19 52.2
comp=Z,30nm,18.7s,baz=338,slow=42
KURBB Kurchatov Arra 44.10 56 P **P 03 58 32.8 -0.7**
comp=Z,2.1nm,0.8s,baz=293,slow=9.3,SNR=9.9
comp=Z,2.1nm,0.8s
AAK Ala-Archa 44.12 68 LR LR 04 21 21.6
comp=Z,75nm,18.2s,baz=327,slow=42
AAK Ala-Archa 44.12 68⇓*e*P **P 03 58 35.3 +1.3**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 44.12 68 P P 03 58 41.1 +7.1
KURK Kurchatov 44.13 56 P **P 03 58 32.6 -1.1**
KURK IAmb IAmb 03 58 39.3
comp=Z,8.3nm,0.8s
KURK Kurchatov 44.13 56 P **P 03 58 32.6 -1.1**
KURK pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 44.13 56 P **P 03 58 34.3 +0.6**
NRIK Noril'sk 45.18 29⇑*e*P **P 03 58 43.0 +1.2**
NRIK pmax pmax
comp=Z,5.0nm,1.4s
MBAR Mbarara 46.18 155⇓*e*P **P 03 58 51.8 +1.2**
MBAR pmax pmax
comp=Z,5.0nm,1.1s
KSH Kashi 46.41 72 P **P 03 58 53.8 +1.6**
KSH pP sP 03 58 57.5 +1.0
ZAA0 Zalesovo Array 46.84 50 P **P 03 58 52.9 -2.2**
ZAA0 IAmb IAmb 03 59 00.3
comp=Z,5.9nm,1.2s
ZALV Zalesovo Beam 46.84 50 P **P 03 58 54.9 -0.2**
comp=Z,2.0nm,0.5s,baz=283,slow=8.5,SNR=7.5
ZALV PP **PP 04 00 44.3 -0.7**
comp=Z,1.7nm,0.6s,baz=294,slow=11,SNR=3.9
ZALV LR LR 04 19 42.4
comp=Z,38nm,19.2s,baz=330,slow=38
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 46.84 50 P **P 03 58 55.4 +0.3**
ZALV Zalesovo Beam 46.84 50 P **P 03 58 55.4 +0.3**
NIL Nilore 47.20 80 P **P 03 58 56.8 -1.5**
NIL Nilore 47.20 80 P **P 03 58 56.8 -1.5**
NIL pmax pmax
comp=Z,11nm,1.0s
NIL Nilore 47.20 80 P **P 03 59 01.1 +2.8**
MAKZ Makanchi 47.51 60 P **P 03 58 58.3 -2.2**
MAKZ IAmb IAmb 03 59 05.9
comp=Z,10.0nm,1.4s
MAKZ Makanchi 47.51 60 P **P 03 58 58.3 -2.2**
MAKZ pmax pmax
comp=Z,10.0nm,1.5s
MK31 Makanchi Array 47.72 60 P **P 03 59 01.9 -0.3**
MK31 IAmb IAmb 03 59 08.0
comp=Z,4.7nm,0.9s
MK31 Makanchi Array 47.72 60 P **P 03 59 01.9 -0.3**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 47.72 60 P **P 03 59 02.1 0.0**
comp=Z,3.7nm,0.7s,baz=287,slow=6.4,SNR=17
MKAR LR LR 04 23 21.1
comp=Z,74nm,18.6s,baz=257,slow=42
comp=Z,3.7nm,0.7s
MKAR Makanchi Array 47.72 60 P **P 03 59 01.7 -0.4**
DGZ Jazzator, Alta 49.80 55⇓*e*P **P 03 59 19.1 +0.8**
DGZ pmax pmax
comp=Z,3.0nm,1.0s
SCHQ Schefferville 51.09 313 P **P 03 59 27.6 -0.1**
comp=Z,4.5nm,0.6s,baz=61,slow=11,SNR=5.3
comp=Z,4.5nm,0.6s
WMQ Urumqi 52.42 62 *e*P **P 03 59 39.0 +1.1**
WMQ pP sP 03 59 44.0 +1.7
TIXI Tiksi 57.09 20 P P 03 59 57.2 -14
GOMU GeErMu 60.98 66 P **P 04 00 41.0 +1.8**
GOMU pP sP 04 00 44.3 +0.6
GOMU sP pP 04 00 45.5 +3.1
SONM Songino Array 61.73 50 P **P 04 00 44.5 +0.6**
comp=Z,3.9nm,0.9s,baz=292,slow=8.6,SNR=13
comp=Z,3.9nm,0.9s
ULN Ulaanbaatar 62.08 49⇓*e*P **P 04 00 47.3 +1.1**
ULN pmax pmax
comp=Z,6.0nm,1.6s
SHL Shillong 65.12 78 P **P 04 01 08.4 +1.7**
SHL pmax pmax
comp=Z,14nm,0.7s
YKA Yellowknife Ar 66.85 336 P **P 04 01 17.4 +0.5**
comp=Z,7.7nm,1.1s,baz=43,slow=6.4,SNR=18
YKA LR LR 04 31 38.9
comp=Z,35nm,18.2s,baz=306,slow=37
comp=Z,7.7nm,1.1s
HIA Hailar 67.94 43⇑*e*P **P 04 01 25.8 +1.7**
HIA pmax pmax
comp=Z,3.0nm,0.9s
FFC Flin Flon 68.12 326 P **P 04 01 27.9 +2.8**
FFC Flin Flon 68.12 326 P **P 04 01 27.9 +2.8**
PALK Pallekele 68.71 100 LR LR 04 35 56.4
comp=Z,26nm,18.9s,baz=218,slow=40
HHC Hu-ho-hao-te 68.85 54 *e*P **P 04 01 28.0 -2.1**
ILAR Eielson Array 71.45 351 P **P 04 01 46.4 +0.9**
comp=Z,2.0nm,0.8s,baz=8.3,slow=5.7,SNR=18
comp=Z,2.0nm,0.8s
PZH PanZhiHua 71.50 71 P **P 04 01 46.5 -0.1**
XAN Xi'an 71.53 61 P **P 04 01 47.5 +1.0**
XAN pP sP 04 01 55.3 +4.3
MA2 Magadan 72.02 21 LR LR 04 38 36.0
comp=Z,23nm,18.8s,baz=324,slow=40
BOSA Boshof 72.11 169 P **P 04 01 51.0 +1.1**
comp=Z,1.3nm,0.6s,baz=13,slow=5.4,SNR=4.6
comp=Z,1.3nm,0.6s
BOSA Boshof 72.11 169 P **P 04 01 51.0 +1.1**
WVT Waverly 73.39 304 P **P 04 01 59.4 +1.9**
KLR Kul'dur 73.60 37 LR LR 04 38 09.6
comp=Z,50nm,19.4s,baz=287,slow=39
KLR Kul'dur 73.60 37⇑*e*P **P 04 01 59.5 +1.0**
KLR pmax pmax
comp=Z,8.0nm,1.2s
CMAR Chiang Mai Arr 74.67 79 P **P 04 02 05.4 +0.2**
comp=Z,3.4nm,0.8s,baz=306,slow=7.6,SNR=14
CMAR LR LR 04 43 59.6
comp=Z,11nm,18.0s,baz=150,slow=43
comp=Z,3.4nm,0.8s
PDAR Pinedale Array 80.34 321 P **P 04 02 37.2 +0.3**
comp=Z,1.2nm,0.8s,baz=57,slow=5.5,SNR=6.7
PDAR LR LR 04 38 03.2
comp=Z,30nm,18.2s,baz=30,slow=36
comp=Z,1.2nm,0.8s
ANMO Albuquerque 84.85 314 LR LR 04 39 51.6
comp=Z,43nm,18.1s,baz=48,slow=35
ANMO Albuquerque 84.85 314⇑*e*P **P 04 03 01.9 +1.4**
ANMO pmax pmax
comp=Z,21nm,3.5s
ANMO Albuquerque 84.85 314 P **P 04 03 02.5 +2.0**
MJAR Matsushiro Arr 86.40 41 P **P 04 03 09.3 +1.4**
comp=Z,2.8nm,0.8s,baz=337,slow=4.6,SNR=5.0
MJAR LR LR 04 44 10.3
comp=Z,36nm,19.2s,baz=358,slow=37
comp=Z,2.8nm,0.8s
TXAR Lajitas Array 87.58 309 P **P 04 03 15.1 +1.2**
comp=Z,1.6nm,1.0s,baz=65,slow=3.3,SNR=9.4
TXAR LR LR 04 42 07.2
comp=Z,22nm,18.6s,baz=68,slow=36
comp=Z,1.6nm,1.0s
NVAR Mina Array Bea 87.76 324 P **P 04 03 15.6 +0.8**
comp=Z,0.5nm,0.8s,baz=50,slow=4.4,SNR=3.8
comp=Z,0.5nm,0.8s
TUC Tucson 89.16 315 P **P 04 03 23.5 +2.2**

ROM 27 03:52:51.4±0.1, 42°.948N±0°.005×13°.046E±0°.005,
h10km, ML2.9/12, 13C-9D, Error ellipse: s-maj=0.6km
s-min=0.2km az=15.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.01**	**12**	P	Pg	Pg	03 52 53.5	+0.2
FEMA				S	Sg	Sg	03 52 54.7	0.0
FEMA					AML	AML		
	comp=E,63150μm,0.2s							
FEMA					AML	AML		
	comp=E,63100μm,0.2s							
FEMA					AML	AML		
	comp=N,43800μm,0.3s							
FEMA					AML	AML		
	comp=N,43800μm,0.3s							
MC2	**Monte Cornacci**	**0.11**	**108**	⇑P		Pg	03 52 54.4	+0.1
MC2				S		Sg	03 52 56.9	+0.4
CESI	**CESI - Serrava**	**0.12**	**299**	⇑P		Pg	03 52 54.9	+0.5
CESI				S		Sg	03 52 56.8	+0.4
CESI					AML	AML		
	comp=N,8740μm,0.4s							
CESI					AML	AML		
	comp=E,8160μm,0.4s							
NRCA	**Norcia**	**0.12**	**156**	P		Pg	03 52 55.4	+1.0
NRCA				S		Sg	03 52 57.4	+0.8
NRCA					AML	AML		
	comp=N,11950μm,0.8s							
NRCA					AML	AML		
	comp=E,9790μm,1.3s							
T1245	**Castelsantange**	**0.14**	**131**	⇓P		Pg	03 52 55.4	+0.7
T1245				S		Sg	03 52 57.6	+0.6
T1245					AML	AML		
	comp=N,17250μm,1.5s							
T1245					AML	AML		
	comp=E,14550μm,0.8s							
T1245					AML	AML		
	comp=E,13800μm,0.1s							
T1245					AML	AML		
	comp=N,17200μm,1.5s							
T1245					AML	AML		
	comp=N,16500μm,1.5s							
T1245					AML	AML		
	comp=E,13800μm,0.1s							
T1215	**Vallo di Nera,**	**0.20**	**222**	P		Pg	03 52 56.2	+0.7
T1215				S		Sg	03 52 59.5	+1.1
T1215					AML	AML		
	comp=E,3385μm,0.1s							
T1215					AML	AML		
	comp=E,3000μm,0.1s							
T1215					AML	AML		
	comp=N,5265μm,0.3s							
T1215					AML	AML		
	comp=E,2995μm,0.1s							
T1215					AML	AML		
	comp=E,3381μm,0.1s							
T1215					AML	AML		
	comp=N,5270μm,0.3s							
T1215					AML	AML		
	comp=E,3380μm,0.1s							
T1215					AML	AML		
	comp=N,5425μm,0.3s							
T1215					AML	AML		
	comp=E,3000μm,0.1s							
MMO1	**Montemonaco**	**0.21**	**103**	⇑P		Pg	03 52 56.5	+0.6
MMO1				S		Sg	03 52 59.9	+1.0
SEF1	**Sefro**	**0.21**	**340**	⇓P		Pg	03 52 56.6	+0.8
SEF1					AML	AML		
	comp=E,3495μm,0.3s							
SEF1					AML	AML		
	comp=E,3500μm,0.3s							
SEF1					AML	AML		
	comp=N,2930μm,1.5s							
AM05	**Amandola Campo**	**0.23**	**82**	⇑P		Pg	03 52 56.8	+0.7
AM05					AML	AML		
	comp=N,1065μm,0.7s							
AM05					AML	AML		
	comp=E,888μm,0.7s							
AM05					AML	AML		
	comp=N,286μm,0.2s							
AM05					AML	AML		
	comp=N,1070μm,0.7s							

AM05				AML	AML		
	comp=E,3305μm,0.8s						
GUMA	**Gualdo di Mace**	**0.24**	**61**	⇑P	Pg	03 52 57.2	+0.9
GUMA				AML	AML		
	comp=E,6015μm,1.5s						
GUMA				AML	AML		
	comp=N,11060μm,0.5s						
GUMA				AML	AML		
	comp=N,7515μm,0.5s						
GUMA				AML	AML		
	comp=N,6010μm,1.5s						
GUMA				AML	AML		
	comp=N,11095μm,0.5s						
GUMA				AML	AML		
	comp=E,8710μm,0.4s						
T1217	**Poggiodomo (PG**	**0.25**	**200**	⇑P	Pg	03 52 57.3	+0.8
T1217				S	Sb	03 53 01.4	-1.2
T1217				AML	AML		
	comp=E,3655μm,0.2s						
T1217				AML	AML		
	comp=N,5675μm,0.2s						
T1217				AML	AML		
	comp=E,3625μm,0.2s						
T1217				AML	AML		
	comp=N,5550μm,0.1s						
T1217				AML	AML		
	comp=E,3660μm,0.3s						
T1217				AML	AML		
	comp=N,5680μm,0.2s						
T1217				AML	AML		
	comp=E,3630μm,0.3s						
T1217				AML	AML		
	comp=N,5550μm,0.2s						
T1217				AML	AML		
	comp=N,5555μm,0.2s						
T1217				AML	AML		
	comp=E,3655μm,0.3s						
GAG1	**Gagliole**	**0.29**	**3**	⇓P	Pg	03 52 58.0	+0.7
T1241	**Roccafluvione,**	**0.30**	**108**	⇑P	Pg	03 52 57.6	+0.2
T1241				AML	AML		
	comp=N,2410μm,0.1s						
T1241				AML	AML		
	comp=E,3520μm,0.3s						
SNTG	**Esanatoglia**	**0.32**	**346**	⇑P	Pg	03 52 58.4	+0.6
T1204	**Amatrice, Fraz**	**0.34**	**144**	P	Pg	03 52 58.7	+0.6
LNSS	**Leonessa**	**0.34**	**181**	⇑P	Pg	03 52 58.7	+0.4
LNSS				AML	AML		
	comp=N,3435μm,1.2s						
LNSS				AML	AML		
	comp=E,2800μm,1.3s						
MNTP	**Montappone**	**0.36**	**58**	⇑P	Pb	03 52 59.8	-0.2
ATCC	**AVT- Casa Cast**	**0.38**	**309**	⇓P	Pg	03 52 59.5	+0.6
SMA1	**SAN MARTINO**	**0.38**	**146**	⇓P	Pg	03 52 59.5	+0.5
EL6	**Elcito**	**0.38**	**6**	⇓P	Pg	03 52 59.5	+0.4
T1243	**Rocca Santa Ma**	**0.39**	**130**	P	Pg	03 52 59.4	+0.3
T1211	**Morro Reatino**	**0.44**	**199**	⇑P	Pb	03 53 00.7	-0.6
T1211				AML	AML		
	comp=E,1545μm,0.1s						
T1211				AML	AML		
	comp=N,1710μm,0.7s						
RM33	**Pellescritta (**	**0.46**	**164**	⇓P	Pb	03 53 01.1	-0.6
CESX	**Cesi**	**0.48**	**226**	⇓P	Pg	03 53 01.2	+0.4
CESX				AML	AML		
	comp=E,1925μm,0.4s						
CESX				AML	AML		
	comp=N,1985μm,0.4s						
TERO	**Teramo**	**0.52**	**128**	⇓P	Pg	03 53 01.8	+0.2
T1247	**Pizzolo (AQ)**	**0.54**	**160**	S	Sn	03 53 13.0	-1.4
ARVD	**Arcevia**	**0.56**	**352**	⇑P	Pg	03 53 02.5	+0.2
ARVD				S	Sb	03 53 12.0	+0.7
GIGS	**Gran Sasso**	**0.63**	**142**	⇑P	Pg	03 53 03.4	-0.2
FIAM	**Fiamignano**	**0.68**	**176**	S	Sb	03 53 16.0	+1.0
PIEI	**Pieia**	**0.70**	**328**	S	Sn	03 53 17.0	-1.3
FSSB	**Fossombrone**	**0.77**	**345**	S	Sn	03 53 19.0	-1.1
SRES	**S.Oreste - Sor**	**0.81**	**209**	S	Sn	03 53 20.0	-1.1
LATB	**Latina**	**1.45**	**182**	S	Sg	03 53 39.0	+0.8

*IDC **27** 04:21:35.2±1.9, 0.°97N×97.°02E, h0km, mb3.7/5, mbtmp3.7/7, ML4.0/2, MS2.6/1, Error ellipse: s-maj=49.1km s-min=22.5km az=62.0*
*NEIC **27** 04:21:39.0±2.1, 1.°0N±0.°1×97.°1E±0.°1, h29km±8km, mb4.3/8, Error ellipse: s-maj=18.2km s-min=16.1km az=213.0*
*DJA **27** 04:21:40.1±0.8, 1.°N±4.°×9.°7E±.°, h23km±4km, M3.8/8, MLv3.8/8*

ISC 27 04:21:38.3±0.9, 1.°09N±0.°06×97.°16E±0.°08, h25km, n35, σ1§54/33, mb4.1/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.47**	**63**		**Pn**	**04 21 50.5**	**+1.1**
GSI	**Gunungsitoli**	**0.47**	**63**	P	**Pn**	**04 21 50.6**	**+1.1**
GSI				S	**Sb**	**04 21 55.8**	**+1.2**
PBSI	**Pulau Batu**	**1.60**	**135**	P	**Pb**	**04 22 06.4**	**-0.7**
PBSI				S	**Sb**	**04 22 26.0**	**-0.8**
TRSI	**Tarutung**	**2.03**	**63**	P	**Pn**	**04 22 11.4**	**+0.4**
RPSI	**Rantau Prapat**	**2.38**	**48**		**Pn**	**04 22 16.5**	**+0.8**
RPSI	**Rantau Prapat**	**2.38**	**48**		**Pn**	**04 22 18.2**	**+2.5**
MNSI	**Mandailing Nat**	**2.44**	**97**	P	**Pn**	**04 22 18.6**	**+2.1**
MNSI				S	**Sn**	**04 22 45.8**	**+0.2**
PSI	**Prapat**	**2.45**	**46**	Pn	**Pn**	**04 22 18.2**	**+1.4**
	3.3nm,0.3s,baz=218,slow=8.7,SNR=8.2						
	6.8nm,0.3s						
PSI	**Prapat**	**2.45**	**46**	P	**Pn**	**04 22 17.7**	**+0.9**
PSI				P	**Pb**	**04 22 18.1**	**-3.7**
KCSI	**Kotacane, Aceh**	**2.50**	**14**	P	**Pn**	**04 22 18.6**	**+1.3**
TSI	**Tuntungan**	**2.78**	**30**	P	**Pn**	**04 22 21.2**	**0.0**
LASI	**Langsa, Aceh**	**3.44**	**14**	P	**Pn**	**04 22 30.1**	**-0.3**
IPM	**Ipoh**	**5.13**	**49**	Pn	**Pn**	**04 22 54.1**	**+0.5**
KULM	**Kulim**	**5.44**	**40**		**Pn**	**04 22 59.3**	**+1.5**
CMAR	**Chiang Mai Arr**	**17.35**	**6**	P	**P**	**04 25 42.5**	**+2.4**
	0.9nm,0.3s,baz=185,slow=8.7,SNR=4.3						
CMAR				LR	LR	04 31 46.2	
	comp=Z,21nm,19.6s,baz=195,slow=35						
	1.0nm,0.4s						
PHRA	**Phrae**	**17.57**	**10**	P	**Pn**	**04 25 40.9**	**-0.6**
H08S2	**Diego Garcia H**	**26.08**	**250**	T	T	04 54 04.1	
	baz=71,slow=75,SNR=1172						
H08S3	**Diego Garcia H**	**26.09**	**250**	T	T	04 54 07.9	
	baz=71,slow=75,SNR=2555						
H08S1	**Diego Garcia H**	**26.10**	**250**	T	T	04 54 05.6	
	baz=71,slow=75,SNR=708						
GIRL	**Giralia**	**28.87**	**146**	P	**P**	**04 27 30.6**	**-4.5**
ENH	**Enshi**	**31.30**	**21**	P	**P**	**04 27 57.1**	**+0.5**
ENH				IAmb	IAmb	04 27 57.3	
	comp=Z,3.9nm,0.5s						
H01W3	**Cape Leeuwin H**	**39.16**	**158**	T	T	05 10 32.4	
	baz=333,slow=76,SNR=60						
H01W2	**Cape Leeuwin H**	**39.17**	**158**	T	T	05 10 33.3	
	baz=333,slow=76,SNR=80						
H01W1	**Cape Leeuwin H**	**39.17**	**158**	T	T	05 10 38.3	
	baz=333,slow=76,SNR=62						
WB0	**Warramunga Arr**	**41.98**	**122**	P	**P**	**04 29 27.8**	**0.0**
WB0				IAmb	IAmb	04 29 50.9	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**42.01**	**122**	P	**P**	**04 29 28.8**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=303,slow=8.8,SNR=6.9						
	comp=Z,0.3nm,0.7s						
WB2	**Warramunga Arr**	**42.02**	**122**	P	**P**	**04 29 28.4**	**+0.4**
ASAR	**Alice Springs**	**43.36**	**127**	P	**P**	**04 29 40.3**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=329,slow=8.1,SNR=5.3						
	comp=Z,0.3nm,0.5s						
KSRS	**Korea Array**	**45.97**	**34**	P	**P**	**04 30 00.6**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=231,slow=7.9,SNR=4.8						
	comp=Z,2.0nm,0.8s						
MK31	**Makanchi Array**	**47.34**	**346**	P	**P**	**04 30 09.5**	**-0.6**
MKAR	**Makanchi Array**	**47.34**	**346**	P	**P**	**04 30 11.4**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=167,slow=8.8,SNR=7.7						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**47.34**	**346**	P	**P**	**04 30 10.9**	**+0.8**
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**04 30 58.9**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=168,slow=7.6,SNR=4.4						
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**57.59**	**332**	P	**P**	**04 31 26.1**	**0.0**
ABKAR	**Akbulak array**	**57.59**	**332**	P	**P**	**04 31 26.4**	**+0.4**
ABKAR				IAmb	IAmb	04 31 33.3	
	comp=Z,2.2nm,1.1s						

*INET **27** 04:23:50.4±1.7, 13.°17N×89.°61W, h15km±16km, MW4.1*
*SNET **27** 04:23:50.9±1.9, 13.°18N×89.°62W, h28km, ML4.4*
*NEIC **27** 04:23:51.2±1.5, 13.°22N±0.°03×89.°59W±0.°07, h60km±11km, mb4.1/11, Md4.4(SNET), Error ellipse: s-maj=9.7km s-min=4.9km az=87.0*
*IDC **27** 04:23:52.1±2.3, 13.°64N×89.°33W, h71km±25km, mb3.7/4, mbtmp4.1/7, MS3.2/4, Error ellipse: s-maj=54.6km s-min=16.8km az=33.0*
*GCG **27** 04:23:53.8±0.6, 13.°40N×89.°71W, h77km±23km, MD3.9*

ISC 27 04:23:50.7±0.9, 13.°24N±0.°06×89.°58W±0.°04, h67km±7km, n94, σ1§04/113, mb4.1/8, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.43**	**18**	*eP*	**Pn**	**04 24 02.3**	**-0.5**
ITCA	**Escuela Especi**	**0.52**	**34**	*eP*	**Pn**	**04 24 03.4**	**-0.2**
PMON	**Piamonte**	**0.54**	**29**	*eP*	**Pn**	**04 24 03.6**	**-0.1**
SNET	**Serv Nac Est T**	**0.56**	**38**	Pn	**Pn**	**04 24 03.8**	**-0.1**
SNET				Sn	**Sn**	**04 24 13.1**	**-0.6**
SNET	**Serv Nac Est T**	**0.56**	**38**	*eP*	**Pn**	**04 24 03.8**	**-0.1**
SNET	**Serv Nac Est T**	**0.56**	**38**	*eP*	**Pn**	**04 24 03.8**	**-0.1**
SNET				*eS*	**Sn**	**04 24 14.0**	**+0.3**
BOQS	**Boqueron**	**0.57**	**31**	*eP*	**Pn**	**04 24 04.1**	**-0.1**
SEMO	**Seminario San**	**0.58**	**37**	*eP*	**Pn**	**04 24 03.9**	**-0.2**
UEES	**Universidad Ev**	**0.58**	**35**	*i P*	**Pn**	**04 24 04.2**	**0.0**
CEVE	**Cerro Verde**	**0.58**	**356**	*eP*	**Pn**	**04 24 04.2**	**-0.2**
CEDA	**San Andres**	**0.59**	**18**	*eP*	**Pn**	**04 24 04.1**	**-0.1**
CEDA				*eS*	**Sn**	**04 24 14.8**	**+0.7**
UTEC	**Universidad Te**	**0.59**	**39**	*eP*	**Pn**	**04 24 04.2**	**0.0**
IGN	**Direccin Gen**	**0.62**	**40**	*eP*	**Pn**	**04 24 04.8**	**+0.2**
IGN				*eS*	**Sn**	**04 24 15.5**	**+0.8**
AEIL	**Aeropuerto Ilo**	**0.64**	**45**	*eP*	**Pn**	**04 24 05.4**	**+0.6**
AEIL				*eS*	**Sn**	**04 24 17.2**	**+2.0**
SJTE	**Alcalda de S**	**0.67**	**56**	*eP*	**Pn**	**04 24 05.3**	**+0.1**
SJTE				*eS*	**Sn**	**04 24 16.4**	**+0.6**
LFU	**La Fuente**	**0.68**	**42**	*eP*	**Pn**	**04 24 05.7**	**+0.4**
NUBE	**Las Nubes**	**0.69**	**344**	⇓*i P*	**Pn**	**04 24 05.1**	**-0.3**
NUBE				*eS*	**Sn**	**04 24 16.2**	**+0.1**
LBRS	**Las Brisas**	**0.72**	**47**	*eP*	**Pn**	**04 24 06.2**	**+0.4**
UNIC	**Universidad Ca**	**0.74**	**3**	*eP*	**Pn**	**04 24 06.1**	**+0.2**
LOAL	**Lomas de Alarc**	**0.78**	**346**	*eP*	**Pn**	**04 24 06.7**	**+0.3**
COEG	**Centro de Oper**	**0.78**	**61**	*eP*	**Pn**	**04 24 06.6**	**+0.2**
COEG				*eS*	**Sn**	**04 24 18.4**	**+0.5**
PAVA	**Las Pavas**	**0.78**	**53**	*eP*	**Pn**	**04 24 07.2**	**+0.7**
PAVA				*eS*	**Sn**	**04 24 19.7**	**+1.6**
SLOZ	**Alcaldia de Sa**	**0.81**	**346**	*eP*	**Pn**	**04 24 06.8**	**+0.1**
SLOZ				*eS*	**Sn**	**04 24 19.8**	**+1.4**
SCLA	**Alcaldia de Sa**	**0.95**	**61**	*eP*	**Pn**	**04 24 09.0**	**+0.6**
SCLA				*eS*	**Sn**	**04 24 23.0**	**+1.4**
ALJI	**Alcalda de J**	**0.99**	**85**	*eP*	**Pn**	**04 24 08.9**	**0.0**
COEB	**Comit de Eme**	**1.06**	**76**	*eP*	**Pn**	**04 24 10.1**	**+0.2**
PQSS	**Presa 15 de Se**	**1.06**	**69**	*eP*	**Pn**	**04 24 10.3**	**+0.5**
P5NO	**Presa 5 de nov**	**1.09**	**47**	⇑*i P*	**Pn**	**04 24 10.5**	**+0.3**
LLGN	**La Laguna**	**1.11**	**34**	*eS*	**Sn**	**04 24 26.4**	**+1.1**
MTO3	**Montecristo**	**1.17**	**11**	Pn	**Pn**	**04 24 11.8**	**+0.3**
MTO3				Sn	**Sn**	**04 24 27.0**	**+0.1**
MTO3	**Montecristo**	**1.17**	**11**	*eP*	**Pn**	**04 24 11.8**	**+0.3**
MTO3	**Montecristo**	**1.17**	**11**	*eP*	**Pn**	**04 24 11.8**	**+0.3**
MTO3				*eS*	**Sn**	**04 24 27.4**	**+0.4**
PACA	**Pacayal**	**1.25**	**79**	*eS*	**Sn**	**04 24 29.8**	**+1.3**
ESQI	**Esquipulas**	**1.33**	**10**	Pn	**Pn**	**04 24 14.2**	**+0.7**
ESQI				Sn	**Sn**	**04 24 31.7**	**+1.2**
ESQI	**Esquipulas**	**1.33**	**10**	*eP*	**Pn**	**04 24 14.2**	**+0.7**
ESQI				*eS*	**Sn**	**04 24 31.8**	**+1.3**
CAHU	**Cacacuatique**	**1.43**	**68**	*eP*	**Pn**	**04 24 15.3**	**+0.4**
PCG	**Pacaya**	**1.52**	**319**	*eP*	**Pn**	**04 24 18.0**	**+2.0**
PCG				*eS*	**Sn**	**04 24 36.1**	**+1.0**
NBG	**Las Nubes**	**1.53**	**331**	*eP*	**Pn**	**04 24 18.0**	**+1.7**
CNCH	**Conchagua**	**1.70**	**89**	*eP*	**Pn**	**04 24 19.0**	**+0.6**
CNCH				*eS*	**Sn**	**04 24 41.4**	**+2.1**
FUG	**Fuego 3**	**1.71**	**315**	*eP*	**Pn**	**04 24 19.9**	**+1.3**
MRL	**Marmol**	**1.83**	**357**	*eP*	**Pn**	**04 24 22.0**	**+1.8**
TGUH	**Tegucigalpa,Un**	**2.39**	**70**	Pn	**Pn**	**04 24 28.2**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.39**	**70**	*eP*	**Pn**	**04 24 28.3**	**+0.6**
RTAL	**Retalhuleu**	**2.42**	**302**	Pn	**Pn**	**04 24 27.8**	**-0.2**
STG3	**Santiaguito 3,**	**2.42**	**307**	*eP*	**Pn**	**04 24 29.4**	**+1.3**
STG3				*eS*	**Sn**	**04 24 57.7**	**+0.9**
CRIN	**San Cristobal**	**2.53**	**102**	Pn	**Pn**	**04 24 30.4**	**+1.0**
CRIN	**San Cristobal**	**2.53**	**102**	*eP*	**Pn**	**04 24 30.5**	**+1.0**
CRIN				*eS*	**Sn**	**04 25 01.4**	**+2.2**
CNGN	**Cerro Negro**	**2.91**	**104**	Pn	**Pn**	**04 24 34.0**	**-0.6**
CNGN	**Cerro Negro**	**2.91**	**104**	*eP*	**Pn**	**04 24 33.9**	**-0.8**
MOMN	**Momotombo**	**3.08**	**105**	*eP*	**Pn**	**04 24 37.1**	**+0.1**
COPN	**Copaltepe**	**3.10**	**110**	*eP*	**Pn**	**04 24 37.9**	**+0.6**
MATN	**Matagalpa**	**3.58**	**95**	Pn	**Pn**	**04 24 44.2**	**+0.3**
PETF	**Flores**	**3.67**	**356**	Pn	**Pn**	**04 24 46.8**	**+1.9**
BOAB	**BOACO BROADBAN**	**3.90**	**101**	Pn	**Pn**	**04 24 48.2**	**0.0**
BOAB	**BOACO BROADBAN**	**3.90**	**101**	*eP*	**Pn**	**04 24 48.2**	**0.0**
CCIG	**Comitan**	**3.91**	**321**	Pn	**Pn**	**04 24 49.3**	**+0.9**
ACON	**Acoyapa**	**4.49**	**106**	Pn	**Pn**	**04 24 56.3**	**+0.1**
ORTG	**Ortega, Santa**	**4.95**	**125**	Pn	**Pn**	**04 25 04.3**	**+1.7**
DUNO	**Dulce Nombre,**	**5.09**	**128**	Pn	**Pn**	**04 25 05.9**	**+1.4**
ESPN	**Las Esperanzas**	**5.26**	**101**	Pn	**Pn**	**04 25 07.2**	**+0.4**
JTS	**Las Juntas de**	**5.40**	**122**	P	**Pn**	**04 25 10.3**	**+1.6**
	6.9nm,0.3s,baz=13,slow=21,SNR=17						
JTS				S	**Sn**	**04 26 07.0**	**-2.6**
	10nm,0.3s,baz=329,slow=18,SNR=3.7						
COVE	**Coope Vega, Sa**	**5.65**	**116**	Pn	**Pn**	**04 25 11.9**	**-0.2**
JACO	**JACO, Garabito**	**5.99**	**126**	Pn	**Pn**	**04 25 16.6**	**-0.2**
CMIG	**Matias Romero**	**6.39**	**307**	P	**Pn**	**04 25 23.8**	**+1.5**
	3.9nm,0.4s,baz=139,slow=12,SNR=19						
CMIG				S	**Sn**	**04 26 35.0**	**+1.1**
	7.1nm,0.4s,baz=257,slow=21,SNR=9.0						
RIMA	**Rio Macho**	**6.58**	**121**	Pn	**Pn**	**04 25 26.9**	**+1.8**
PEZE	**Perez Zeledon,**	**6.95**	**123**	Pn	**Pn**	**04 25 31.1**	**+1.1**
TEIG	**Tepich**	**7.06**	**10**		**Pn**	**04 25 32.7**	**+1.3**
SRBA	**San Rafael, Bu**	**7.29**	**122**	Pn	**Pn**	**04 25 37.0**	**+2.3**
CDITO	**Canoas**	**8.06**	**124**	Pn	**Pn**	**04 25 44.2**	**-0.8**
SOR	**Soroa**	**11.37**	**32**	Pn	**Pn**	**04 26 31.3**	**+1.0**
CBCY	**The Bluff, Cay**	**11.42**	**54**	Pn	**Pn**	**04 26 30.3**	**-0.7**
ROSC	**El Rosal**	**17.22**	**118**		**Pn**	**04 27 47.0**	**-0.3**
ROSC				IAmb	IAmb	04 27 56.5	
	comp=Z,8.4nm,0.5s						
352A	**Blakely**	**18.65**	**13**	P	**P**	**04 28 03.9**	**+0.7**
SDV	**Santo Domingo**	**19.09**	**101**	P	**P**	**04 28 07.4**	**-1.0**
	comp=Z,4.2nm,0.4s,baz=297,slow=4.5,SNR=2.5						
SDV	**Santo Domingo**	**19.09**	**101**	P	**P**	**04 28 07.3**	**-1.0**
SDV				IAmb	IAmb	04 28 11.6	
	comp=Z,6.2nm,0.6s						
Y45A	**Yeager Farm, C**	**20.53**	**0**	P	**P**	**04 28 24.5**	**+0.8**
Y45A				IAmb	IAmb	04 28 28.8	
	comp=Z,13nm,0.7s						
TXAR	**Lajitas Array**	**20.67**	**323**	P	**P**	**04 28 27.7**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=148,slow=10,SNR=6.9						
TXAR				PcP	**PcP**	**04 32 33.6**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=126,slow=4.6,SNR=4.1						
TX31	**Lajitas Ar. Si**	**20.67**	**323**	P	**P**	**04 28 25.9**	**+0.6**
OXF	**Oxford**	**21.18**	**0**	P	**P**	**04 28 31.4**	**+0.9**
OXF				IAmb	IAmb	04 28 34.0	
	comp=Z,13nm,0.9s						
UALR	**University of**	**21.59**	**354**	P	**P**	**04 28 35.8**	**+0.9**
UALR				IAmb	IAmb	04 28 38.5	
	comp=Z,6.2nm,0.7s						
X37A	**Clayton**	**21.89**	**347**	P	**P**	**04 28 39.4**	**+1.2**
HODGE	**Hodges**	**21.93**	**16**	P	**P**	**04 28 38.9**	**+0.3**
HODGE				IAmb	IAmb	04 28 40.7	
	comp=Z,7.4nm,1.0s						
WHAR	**Wooly Hollow**	**22.09**	**354**	P	**P**	**04 28 40.1**	**-0.2**
WHAR				IAmb	IAmb	04 28 44.1	
	comp=Z,6.3nm,1.1s						
TKL	**Tuckaleechee C**	**22.93**	**12**	LR	LR	04 37 26.6	
	comp=Z,47nm,20.2s,baz=184,slow=36						
FNO	**Franklin**	**23.03**	**343**	P	**P**	**04 28 48.7**	**-1.6**
PFO	**Pinyon Flats O**	**31.76**	**314**	LR	LR	04 44 55.1	
	comp=Z,55nm,20.2s,baz=2.0,slow=40						
SCHQ	**Schefferville**	**45.16**	**18**	P	**P**	**04 31 58.5**	**-2.1**
	comp=Z,4.9nm,0.6s,baz=227,slow=6.0,SNR=10						
	comp=Z,4.9nm,0.6s						
YKA	**Yellowknife Ar**	**52.32**	**346**	P	**P**	**04 32 54.0**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=140,slow=7.5,SNR=8.1						
	comp=Z,0.9nm,0.6s						
FRB	**Frobisher Bay**	**52.55**	**12**	LR	LR	04 56 00.4	
	comp=Z,26nm,19.7s,baz=198,slow=37						
ILAR	**Eielson Array**	**64.47**	**336**	P	**P**	**04 34 18.9**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=146,slow=5.0,SNR=3.8						
ILAR				LR	LR	05 08 33.0	
	comp=Z,12nm,21.2s,baz=298,slow=42						
	comp=Z,0.4nm,0.9s						
ARCES	**ARCESS Array B**	**86.11**	**19**	P	**P**	**04 36 22.1**	**-2.0**
	comp=Z,2.0nm,0.8s,baz=323,slow=3.2,SNR=3.9						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**137.48**	**255**	PKP	**PKiKP**	**04 43 11.0**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=88,slow=2.2,SNR=10						
PZH	**PanZhiHua**	**138.99**	**344**	PKP	**PKPdf**	**04 43 10.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**147.40**	**345**	PKPbc	**PKPdf**	**04 43 26.8**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=321,slow=4.5,SNR=4.3						

ROM 27 04:26:51.9±0.1, 43.°013N±0.°004×13.°114E±0.°005, h10km, ML2.8/36, 22C-17D, Error ellipse: s-maj=0.4km s-min=0.3km az=356.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**223**	P	Pg	04 26 54.2	-0.1
FEMA				S	Sg	04 26 56.2	+0.3
FEMA				AML	AML		
	comp=E,30600μm,0.9s						
FEMA				AML	AML		
	comp=N,21750μm,0.5s						
FEMA				AML	AML		
	comp=N,21800μm,0.5s						
MC2	**Monte Cornacci**	**0.12**	**151**	⇑P	Pg	04 26 55.0	+0.1
MC2				S	Sg	04 26 57.5	+0.6
T1216	**Preci, Frazion**	**0.14**	**210**	⇑P	Pg	04 26 55.5	+0.4
T1216				S	Sg	04 26 58.4	+1.1
T1216				AML	AML		
	comp=E,49450μm,0.4s						
T1216				AML	AML		
	comp=E,49450μm,0.4s						
T1216				AML	AML		
	comp=N,50850μm,0.3s						
T1216				AML	AML		
	comp=N,50850μm,0.3s						
CESI	**CESI - Serrava**	**0.15**	**267**	⇑P	Pg	04 26 55.8	+0.4
CESI				S	Sg	04 26 58.9	+1.1
CESI				AML	AML		
	comp=E,12250μm,0.8s						
CESI				AML	AML		
	comp=N,9255μm,1.6s						
CESI				AML	AML		
	comp=E,16300μm,0.2s						
CESI				AML	AML		
	comp=N,30200μm,0.3s						
T1245	**Castelsantange**	**0.17**	**161**	⇑P	Pg	04 26 55.9	+0.4
T1245				S	Sg	04 26 59.0	+0.9
T1245				AML	AML		
	comp=E,8045μm,0.6s						
T1245				AML	AML		
	comp=N,9295μm,0.7s						
T1245				AML	AML		
	comp=E,6960μm,0.5s						
T1245				AML	AML		
	comp=N,10200μm,0.7s						
T1245				AML	AML		
	comp=N,30150μm,0.4s						
T1245				AML	AML		
	comp=E,32200μm,0.8s						
T1245				AML	AML		
	comp=N,30300μm,0.4s						
T1245				AML	AML		
	comp=N,30100μm,0.4s						
T1245				AML	AML		
	comp=E,32400μm,0.8s						
GUMA	**Gualdo di Mace**	**0.17**	**73**	⇓P	Pg	04 26 56.2	+0.6
GUMA				S	Sg	04 26 60.0	+1.8
GUMA				AML	AML		
	comp=E,19150μm,0.6s						
GUMA				AML	AML		
	comp=N,15050μm,0.6s						
GUMA				AML	AML		
	comp=N,15050μm,0.7s						
GUMA				AML	AML		
	comp=E,17950μm,0.9s						
GUMA				AML	AML		
	comp=N,15700μm,0.5s						
GUMA				AML	AML		
	comp=E,19150μm,0.6s						
AM05	**Amandola Campo**	**0.18**	**101**	⇓P	Pg	04 26 56.2	+0.5
AM05				S	Sg	04 26 59.4	+1.1
AM05				AML	AML		
	comp=E,1225μm,0.2s						
AM05				AML	AML		
	comp=E,5510μm,0.2s						
AM05				AML	AML		
	comp=N,268μm,0.1s						
AM05				AML	AML		
	comp=N,336μm,1.4s						
AM05				AML	AML		
	comp=E,5515μm,0.2s						
AM05				AML	AML		
	comp=N,1335μm,0.3s						
SEF1	**Sefro**	**0.18**	**318**	P	Pg	04 26 56.1	+0.3
SEF1				S	Sg	04 26 59.9	+1.5
SEF1				AML	AML		
	comp=E,16150μm,0.4s						
SEF1				AML	AML		
	comp=N,14600μm,0.3s						
SEF1				AML	AML		
	comp=N,14650μm,0.3s						
SEF1				AML	AML		
	comp=E,16100μm,0.4s						
SNTG	**Esanatoglia**	**0.27**	**332**	⇓P	Pg	04 26 57.7	+0.2
SNTG				AML	AML		
	comp=E,1955μm,1.1s						
SNTG				AML	AML		
	comp=N,2140μm,0.3s						
SNTG				AML	AML		
	comp=E,1950μm,1.1s						
SNTG				AML	AML		
	comp=N,1965μm,0.2s						
SNTG				AML	AML		
	comp=E,1955μm,1.1s						
SNTG				AML

T1243 S Sb 04 27 06.8 -0.6
LNSS Leonessa 0.41 188 ⇑P Pg 04 27 00.4 +0.3
LNSS AML AML
comp=E,3095μm,0.2s
LNSS AML AML
comp=N,2390μm,0.1s
LNSS AML AML
comp=N,2395μm,0.1s
LNSS AML AML
comp=E,3090μm,0.2s
SMA1 SAN MARTINO 0.41 157 P Pg 04 27 00.4 +0.3
SMA1 S Sb 04 27 07.2 -0.7
SMA1 AML AML
comp=E,2215μm,0.8s
SMA1 AML AML
comp=E,2220μm,0.8s
SMA1 AML AML
comp=N,1960μm,1.0s
OFFI Offida 0.43 100 ⇓P Pb 04 27 01.6 0.0
OFFI AML AML
comp=E,1615μm,0.7s
OFFI AML AML
comp=N,1905μm,0.7s
MMUR Monte Murano 0.44 349 S Sb 04 27 10.0 +1.5
MURB Monte Urbino 0.50 300 ⇓P Pg 04 27 02.1 +0.4
MURB S Sb 04 27 11.0 +0.7
MURB AML AML
comp=N,3845μm,0.3s
MURB AML AML
comp=E,5710μm,0.3s
MURB AML AML
comp=N,3840μm,0.3s
MURB AML AML
comp=N,4075μm,0.3s
MURB AML AML
comp=E,5215μm,0.3s
ARVD Arcevia 0.50 345 ⇑P Pg 04 27 01.9 +0.2
ARVD S Sb 04 27 11.0 +0.7
ARVD AML AML
comp=N,902μm,1.0s
ARVD AML AML
comp=E,1072μm,0.4s
RM33 Pellescritta (0.51 172 ⇑P Pg 04 27 02.0 +0.1
RM33 AML AML
comp=E,726μm,0.6s
RM33 AML AML
comp=N,765μm,0.6s
RM33 AML AML
comp=E,730μm,1.6s
RM33 AML AML
comp=N,772μm,0.6s
RM33 AML AML
comp=E,725μm,0.6s
RM33 AML AML
comp=N,772μm,0.6s
RM33 AML AML
comp=E,729μm,1.6s
PP3 Marolino 0.51 45 ⇑P Pb 04 27 03.4 +0.3
PP3 AML AML
comp=E,1870μm,1.6s
PP3 AML AML
comp=N,1805μm,0.9s
PP3 AML AML
comp=E,1870μm,1.5s
PP3 AML AML
comp=N,1805μm,0.9s
T1211 Morro Reatino 0.52 202 ⇓P Pg 04 27 02.5 +0.5
T1211 S Sb 04 27 11.0 +0.2
T1211 AML AML
comp=E,1435μm,0.9s
T1211 AML AML
comp=N,1790μm,0.4s
T1211 AML AML
comp=E,1430μm,0.9s
CAMP Campotosto 0.52 155 ⇑P Pg 04 27 02.2 +0.1
CAMP AML AML
comp=E,738μm,1.2s
CAMP AML AML
comp=N,820μm,0.6s
TERO Teramo 0.53 137 ⇑P Pg 04 27 02.2 0.0
TERO S Sb 04 27 12.0 +0.8
TERO AML AML
comp=E,1115μm,0.4s
TERO AML AML
comp=N,1008μm,0.4s
TERO AML AML
comp=N,924μm,0.8s
TERO AML AML
comp=E,1195μm,0.1s
TERO AML AML
comp=N,926μm,0.8s
TERO AML AML
comp=N,1008μm,0.4s
ATFO Monte Foce - G 0.53 312 P Pg 04 27 01.7 -0.6
ATFO AML AML
comp=E,827μm,1.0s
ATFO AML AML
comp=E,826μm,1.0s
ATFO AML AML
comp=N,796μm,0.7s
CESX Cesi 0.56 225 ⇑P Pg 04 27 03.0 +0.1
CESX S Sb 04 27 12.0 -0.1
CESX AML AML
comp=E,1450μm,0.6s
CESX AML AML
comp=N,2215μm,0.4s
FRON Frontone 0.58 331 ⇓P Pg 04 27 03.2 0.0
FRON AML AML
comp=E,852μm,0.9s
FRON AML AML
comp=N,1295μm,0.4s
ATTE AVT- Monte Tez 0.59 289 ⇑P Pn 04 27 06.7 +0.2
ATVO AVT- Monte Val 0.64 306 ⇓P Pg 04 27 04.3 +0.1
ATVO S Sb 04 27 15.0 +0.8
ATVO AML AML
comp=E,587μm,0.9s
ATVO AML AML
comp=N,545μm,0.3s
AOI Ancona 0.64 33 S Sn 04 27 17.0 -0.6
GIGS Gran Sasso 0.66 149 ⇑P Pg 04 27 04.5 -0.1
GIGS AML AML
comp=E,216μm,1.1s
GIGS AML AML
comp=N,167μm,1.5s
MPAG Monte Paganucc 0.67 337 ⇓P Pg 04 27 05.2 +0.3
MPAG S Sn 04 27 17.0 -1.3
MPAG AML AML
comp=N,670μm,1.1s
MPAG AML AML
comp=E,658μm,0.6s
PIEI Pieia 0.67 321 ⇑P Pg 04 27 04.8 -0.1
PIEI S Sn 04 27 17.0 -1.3
PIEI AML AML
comp=E,614μm,0.3s
PIEI AML AML
comp=N,590μm,1.0s
ATPI Pietralunga - 0.68 310 ⇑P Pg 04 27 05.2 +0.2
ATPI AML AML
comp=E,562μm,0.9s
ATPI AML AML
comp=N,368μm,0.7s
ATMI Monte Miggiano 0.70 298 ⇓P Pn 04 27 07.8 -0.2
FSSB Fossombrone 0.72 340 ⇓P Pg 04 27 06.1 +0.2
FSSB AML AML
comp=E,1965μm,0.4s
FSSB AML AML
comp=N,3835μm,0.3s
FIAM Fiamignano 0.74 180 ⇓P Pg 04 27 06.2 -0.1
FIAM AML AML
comp=N,328μm,0.7s
FIAM AML AML
comp=E,410μm,0.7s
APEC Apecchio 0.74 317 ⇓P Pb 04 27 07.1 +0.1
APEC S Sn 04 27 20.0 -0.1
BADI Badiali 0.81 308 ⇑P Pg 04 27 07.6 +0.1
BADI S Sn 04 27 22.0 +0.4
SRES S.Oreste - Sor 0.89 210 ⇓P Pg 04 27 09.2 0.0
SRES AML AML
comp=E,452μm,1.2s
SRES AML AML
comp=N,304μm,0.6s
CAFI Castiglion Fio 0.90 291 ⇑P Pb 04 27 09.5 -0.2
CAFI AML AML
comp=E,479μm,0.4s
CAFI AML AML
comp=N,293μm,0.8s

SSP9 Sansepolcro 0.91 308 ⇑P Pn 04 27 12.3 +1.4
T0110 Collepietro 0.93 148 ⇑P Pg 04 27 09.1 -0.7
T0110 AML AML
comp=E,638μm,0.6s
T0110 AML AML
comp=N,634μm,1.6s
SEI Scarperia 1.65 310 P Pg 04 27 26.0 +2.5
ABTA Abfaltersbach 3.76 354 *e*Pn Pn 04 27 52.2 +2.1
comp=N,12nm,0.6s
FETA Feichten 4.35 338 *e*Pn Pn 04 28 02.0 +3.7
comp=N,3.4nm,0.5s
DAVA Damuels 4.85 333 *e*Pn Pn 04 28 09.9 +4.8
comp=N,1.2nm,0.3s
CONA Conrad Observa 5.28 21 *e*Pn Pn 04 28 12.1 +1.1
comp=N,0.6nm,0.2s

ROM 27 04:27:18.6±0.1, 42°.932N±0°.004×13°.047E±0°.005, h10km, ML3.2/6, 10C-6D, Error ellipse: s-maj=0.5km s-min=0.5km az=170.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**3**	⇓P	Pg	04 27 21.0	+0.4
FEMA				S	Sg	04 27 22.5	+0.5
FEMA				AML	AML		
	comp=E,24500μm,1.1s						
FEMA				AML	AML		
	comp=E,24500μm,1.1s						
FEMA				AML	AML		
	comp=N,18850μm,0.6s						
T1216	**Preci, Frazion**	**0.05**	**207**	P	Pg	04 27 20.9	+0.3
T1216				S	Sg	04 27 22.4	+0.4
T1216				AML	AML		
	comp=E,49450μm,0.4s						
T1216				AML	AML		
	comp=N,50850μm,0.3s						
T1216				AML	AML		
	comp=E,49450μm,0.4s						
T1216				AML	AML		
	comp=N,50850μm,0.3s						
MC2	**Monte Cornacci**	**0.11**	**100**	⇓P	Pg	04 27 21.0	-0.5
MC2				S	Sg	04 27 24.2	+0.7
NRCA	**Norcia**	**0.11**	**153**	P	Pg	04 27 21.8	+0.4
NRCA				S	Sg	04 27 23.9	+0.6
NRCA				AML	AML		
	comp=E,19700μm,1.1s						
NRCA				AML	AML		
	comp=N,17400μm,0.1s						
CESI	**CESI - Serrava**	**0.13**	**305**	P	Pg	04 27 22.1	+0.5
CESI				S	Sg	04 27 24.6	+0.8
CESI				AML	AML		
	comp=N,30200μm,0.3s						
CESI				AML	AML		
	comp=E,16300μm,0.2s						
T1245	**Castelsantange**	**0.13**	**126**	⇑P	Pg	04 27 22.2	+0.5
T1245				S	Sg	04 27 24.7	+0.8
T1245				AML	AML		
	comp=E,32400μm,0.7s						
T1245				AML	AML		
	comp=N,30150μm,0.4s						
T1245				AML	AML		
	comp=E,32400μm,0.8s						
T1245				AML	AML		
	comp=N,30100μm,0.4s						
T1245				AML	AML		
	comp=E,32200μm,0.8s						
T1245				AML	AML		
	comp=N,30300μm,0.4s						
T1215	**Vallo di Nera,**	**0.18**	**225**	P	Pg	04 27 22.9	+0.4
T1215				S	Sg	04 27 25.9	+0.7
T1215				AML	AML		
	comp=E,3090μm,0.2s						
T1215				AML	AML		
	comp=N,6945μm,0.1s						
T1215				AML	AML		
	comp=N,6945μm,0.1s						
T1215				AML	AML		
	comp=E,3225μm,0.2s						
T1215				AML	AML		
	comp=N,7110μm,0.1s						
T1215				AML	AML		
	comp=E,3230μm,0.2s						
MMO1	**Montemonaco**	**0.21**	**99**	P	Pg	04 27 23.4	+0.5
MMO1				S	Sg	04 27 26.9	+1.0
SEF1	**Sefro**	**0.23**	**341**	⇑P	Pg	04 27 23.8	+0.5
AM05	**Amandola Campo**	**0.23**	**78**	⇑P	Pg	04 27 23.9	+0.6
AM05				S	Sg	04 27 27.7	+1.2
T1217	**Poggiodomo (PG**	**0.24**	**201**	⇑P	Pg	04 27 23.8	+0.4
GUMA	**Gualdo di Mace**	**0.25**	**58**	⇑P	Pg	04 27 24.5	+0.9
GUMA				S	Sg	04 27 29.1	+2.0
PIO1	**Pioraco**	**0.25**	**349**	P	Pg	04 27 24.1	+0.4
PIO1				S	Sb	04 27 28.5	-1.2
FIU1	**Fiuminata**	**0.27**	**342**	⇓P	Pg	04 27 24.7	+0.6
MDAR	**Monte D'Aria**	**0.27**	**15**	P	Pg	04 27 23.1	-1.0
T1241	**Roccafluvione,**	**0.29**	**105**	⇑P	Pg	04 27 24.6	+0.1
GAG1	**Gagliole**	**0.31**	**3**	⇓P	Pg	04 27 25.5	+0.7
T1204	**Amatrice, Fraz**	**0.32**	**142**	P	Pg	04 27 25.5	+0.4
LNSS	**Leonessa**	**0.33**	**181**	⇑P	Pg	04 27 25.4	+0.2
SNTG	**Esanatoglia**	**0.33**	**346**	P	Pg	04 27 25.6	+0.3
MNTP	**Montappone**	**0.37**	**56**	⇑P	Pb	04 27 27.0	-0.3
T1243	**Rocca Santa Ma**	**0.38**	**128**	P	Pg	04 27 26.2	+0.2
ATCC	**AVT- Casa Cast**	**0.39**	**310**	P	Pg	04 27 26.7	+0.3
EL6	**Elcito**	**0.40**	**6**	⇓P	Pg	04 27 26.9	+0.4
T1211	**Morro Reatino**	**0.42**	**200**	P	Pb	04 27 28.1	-0.1
T1211				S	Sb	04 27 33.8	-0.9
RM33	**Pellescritta (**	**0.44**	**164**	⇓P	Pb	04 27 27.9	-0.6
CESX	**Cesi**	**0.47**	**227**	⇑P	Pg	04 27 28.1	+0.3
CAMP	**Campotosto**	**0.48**	**146**	P	Pg	04 27 28.0	+0.1
TERO	**Teramo**	**0.51**	**127**	P	Pg	04 27 28.6	0.0
ARVD	**Arcevia**	**0.57**	**352**	S	Sb	04 27 40.0	+1.0
GIGS	**Gran Sasso**	**0.62**	**141**	⇑P	Pg	04 27 30.4	-0.1
LAV9	**Lanuvio**	**1.28**	**192**	P	Pg	04 27 43.1	-0.1

ISC 27 04:45:15.4±1.1, 64°.16N±0°.04×140°.77W±0°.03, h11km±10km, n15, σ0°57/23, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K27K	**Chicken**	**0.59**	**258**	P	**Pg**	**04 45 26.9**	**+0.1**
	baz=78						
K27K				S	**Sg**	**04 45 35.2**	**+0.6**
	baz=78						
DAWY	**Dawson**	**0.61**	**98**	P	**Pg**	**04 45 27.1**	**-0.1**
	baz=278,SNR=55						
DAWY				S	**Sg**	**04 45 35.5**	**+0.2**
	baz=278						
EGAK	**Eagle**	**0.64**	**345**	P	**Pg**	**04 45 28.1**	**+0.3**
	baz=165,SNR=9.1						
EGAK				S	**Sg**	**04 45 36.8**	**+0.5**
	baz=165						
J29M	**Klondike Camp**	**1.15**	**74**	S	**Sg**	**04 45 51.6**	**-0.8**
	baz=256						
L27K	**Beaver Creek,**	**1.20**	**204**	P	**Pb**	**04 45 37.5**	**-0.6**
	baz=23,SNR=35						
L27K				S	**Sb**	**04 45 53.2**	**-0.3**
	baz=23						
J26L	**Joseph Creek**	**1.27**	**287**	P	**Pn**	**04 45 37.7**	**-1.3**
	baz=105,SNR=16						
J26L				S	**Sb**	**04 45 55.1**	**-0.5**
	baz=105						
SCRK	**Sand Creek**	**1.43**	**264**	Pb	**Pn**	**04 45 41.6**	**+0.3**
	baz=82,SNR=14						
SCRK				S	**Sn**	**04 45 59.8**	**-0.2**
	baz=82						
K29M	**Barlow Dome**	**1.47**	**101**	Pb	**Pn**	**04 45 41.8**	**0.0**
	baz=283,SNR=6.0						
K29M				S	**Sn**	**04 46 00.9**	**-0.1**
	baz=283						
I27K	**Kandik River**	**1.50**	**346**	Sb	**Sn**	**04 46 02.1**	**+0.4**
	baz=166						
I26K	**Coal Creek Min**	**1.54**	**319**	Sb	**Sn**	**04 46 03.6**	**+0.9**
	baz=138						
L29M	**L29M**	**1.58**	**131**	Pb	**Pn**	**04 45 43.9**	**+0.6**
	baz=313,SNR=17						
L29M				Sb	**Sb**	**04 46 05.0**	**+0.5**
	baz=313						
L26K	**Log Cabin Wild**	**1.62**	**227**	Sb	**Sb**	**04 46 05.8**	**+0.1**
	baz=44						
BVCY	**Beaver Creek**	**1.75**	**181**	Sb	**Sb**	**04 46 09.8**	**+0.3**
	baz=1.2						
M27K	**Edge Creek, AK**	**1.88**	**196**	Sb	**Sb**	**04 46 13.7**	**+0.6**
	baz=15						
J25K	**Salcha River,**	**2.05**	**285**	Sb	**Sb**	**04 46 18.5**	**+0.4**
	baz=101						

IGQ ***27*** *04:45:46±0.3, 1°.S±3°.×8°.1W±°, h5km*
NEIC ***27*** *04:45:51.6±1.9, 1°.11S±0°.05×80°.34W±0°.04, h31km±6km, mb4.5/21, Mwr4.3/20, Error ellipse: s-maj=7.8km s-min=5.1km az=207.0*
NEIC ***27*** *04:45:51.6, 1°.11S×80°.35W, h34km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; M_{rr}=2.27; $M_{\theta\theta}$=0.16; $M_{\phi\phi}$=2.11; $M_{r\theta}$=1.81; $M_{\theta\phi}$=-0.38; $M_{\phi r}$=-2.40; Fault plane solution: M_0=3.74000×10^15^ NP1:ϕ_s=183.18000°, δ=21.00000°, λ=-57.76000°. NP2:ϕ_s=329.13000°, δ=72.35000°, λ=-101.57000°. Principal axes: T 3.5497, Plg=26.0000°, Azm=68.0000°; N 0.3581, Plg=11.0000°, Azm=333.0000°; P -3.9078, Plg=61.0000°, Azm=222.0000°;*
IDC ***27*** *04:45:54.4±3.9, 1°.13S×80°.41W, h38km±38km, mb3.5/5, mbtmp3.9/10, ML3.4/5, MS3.5/16 Error ellipse: s-maj=41.0km s-min=19.4km az=71.0*

ISC 27 04:45:48.9±0.5, 1°.03S±0°.03×80°.47W±0°.05, h16km, n150, σ1°82/143, mb4.3/12, MS3.6/9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLP	**Puerto Lpez**	**0.60**	**211**	P	**Pg**	**04 45 57.0**	**-3.8**
PPLP	**Puerto Lpez**	**0.60**	**211**	P	**Pg**	**04 45 57.0**	**-3.8**
PPLP	**Puerto Lpez**	**0.60**	**211**	S	**Sg**	**04 46 07.0**	**-1.8**
PPLP	**Puerto Lpez**	**0.60**	**211**	S	**Sg**	**04 46 06.0**	**-2.8**
ISPT	**Isla de la Pla**	**0.65**	**249**	P	Pg	04 45 56.0	-5.7
ISPT	**Isla de la Pla**	**0.65**	**249**	S	**Sg**	**04 46 05.0**	**-5.4**
FLF1	**Flavio Alfaro-**	**0.91**	**43**	*e*P	**Pb**	**04 46 05.5**	**-0.9**
FLF1	**Flavio Alfaro-**	**0.91**	**43**	P	**Pb**	**04 46 04.0**	**-2.4**
MAG1	**Magdalena**	**1.18**	**36**	P	**Pn**	**04 46 08.0**	**-2.8**
AV18	**Acelerografo,**	**1.66**	**37**	P	**Pn**	**04 46 17.0**	**-0.4**
CHSH	**Refugio Sur-Vo**	**1.66**	**106**	P	**Pn**	**04 46 18.0**	**0.0**
BV15	**Puerto Quito-O**	**1.71**	**47**	P	**Pn**	**04 46 15.0**	**-3.1**
PORT	**Chimborazo Vol**	**1.75**	**104**	Pn	**Pn**	**04 46 18.3**	**-0.8**
PORT				Sn	**Sn**	**04 46 38.1**	**-3.3**
PORT	**Chimborazo Vol**	**1.75**	**104**	P	**Pn**	**04 46 18.0**	**-1.1**
TAMH	**Tambohuasha Ch**	**1.76**	**107**	P	**Pn**	**04 46 18.0**	**-1.2**
ILLI	**Illinizas Sur**	**1.77**	**80**	P	**Pn**	**04 46 18.0**	**-1.3**
PTGL	**Punta Galera**	**1.85**	**14**	P	**Pn**	**04 46 17.0**	**-3.0**
PAST	**Pastocalle**	**1.85**	**80**	P	**Pn**	**04 46 19.0**	**-1.5**
APR2	**Miler**	**1.86**	**54**	P	**Pn**	**04 46 19.0**	**-1.2**
COHC	**Cochancay**	**1.87**	**140**	Pn	**Pn**	**04 46 18.8**	**-1.5**
COHC	**Cochancay**	**1.87**	**140**	*e*P	**Pn**	**04 46 20.3**	**0.0**
COHC	**Cochancay**	**1.87**	**140**	P	**Pn**	**04 46 19.0**	**-1.3**
IGUA	**Igualata**	**1.88**	**104**	P	**Pb**	**04 46 22.0**	**-1.3**
AV21	**Acelerografo,**	**1.91**	**29**	P	**Pn**	**04 46 20.0**	**-0.9**
SRAM	**San Ramn-Vol**	**1.92**	**82**	P	**Pn**	**04 46 20.0**	**-1.3**
SLOR	**San Lorenzo -**	**1.99**	**81**	Pn	**Pn**	**04 46 22.3**	**-0.1**
SLOR	**San Lorenzo -**	**1.99**	**81**	P	**Pn**	**04 46 22.0**	**-0.4**
CAMI	**Rancho Maria**	**1.99**	**80**	P	**Pn**	**04 46 22.0**	**-0.4**
BIL2	**Estacion Bilba**	**2.01**	**102**	P	**Pb**	**04 46 25.0**	**-0.3**
SUCR	**Mariscal Sucre**	**2.01**	**79**	P	**Pn**	**04 46 22.0**	**-0.6**
BNAS	**Cotopaxi Volca**	**2.02**	**80**	P	**Pn**	**04 46 22.0**	**-0.8**
BBIL	**Ulba Tungurahu**	**2.02**	**102**	P	**Pn**	**04 46 23.0**	**+0.3**
BMOR	**Cotopaxi Volca**	**2.03**	**82**	P	**Pn**	**04 46 22.0**	**-1.0**
JUA2	**San Juan 2**	**2.03**	**67**	P	**Pn**	**04 46 21.0**	**-1.9**
NAS2	**Nasa**	**2.03**	**79**	P	**Pn**	**04 46 23.0**	**0.0**
BMAS	**Trigal station**	**2.04**	**103**	P	**Pn**	**04 46 23.0**	**0.0**
TUYU	**Q. Yuibug Volc**	**2.04**	**103**	P	**Pn**	**04 46 24.0**	**+0.9**
TERV	**Terraza Guagua**	**2.05**	**66**	P	**Pn**	**04 46 22.0**	**-1.2**
GGPC	**Guagua Pichinc**	**2.05**	**66**	P	**Pn**	**04 46 22.0**	**-1.3**
POND	**Pondoa**	**2.05**	**101**	P	**Pn**	**04 46 24.0**	**+0.9**
BREF	**Cotopaxi Volca**	**2.06**	**80**	P	**Pn**	**04 46 23.0**	**-0.4**
RETU	**Refugio**	**2.06**	**102**	P	**Pn**	**04 46 24.0**	**+0.6**
ARRY	**Arrayan**	**2.07**	**103**	P	**Pn**	**04 46 23.0**	**-0.3**
BRUN	**Tungurahua Vol**	**2.08**	**101**	P	**Pn**	**04 46 24.0**	**+0.6**
VCES	**Cotopaxi**	**2.08**	**84**	P	**Pn**	**04 46 23.0**	**-0.7**
AMA1	**Acelerografo,**	**2.09**	**21**	P	**Pn**	**04 46 23.0**	**-0.3**
BPAT	**Tungurahua Vol**	**2.09**	**103**	P	**Pn**	**04 46 24.0**	**+0.3**
BVC2	**Cotopaxi Volca**	**2.09**	**80**	P	**Pn**	**04 46 24.0**	**+0.2**
APR1	**Acelerografo,**	**2.09**	**62**	P	**Pn**	**04 46 23.0**	**-0.7**
BULB	**Ulba Tungurahu**	**2.10**	**101**	P	**Pb**	**04 46 26.0**	**-0.8**
BTAM	**Cotopaxi Volca**	**2.10**	**80**	P	**Pn**	**04 46 24.0**	**+0.1**
TOMA	**Boca Toma-Volc**	**2.10**	**76**	P	**Pn**	**04 46 23.0**	**-0.8**
VC1	**Cotopaxi 1**	**2.10**	**79**	P	**Pn**	**04 46 24.0**	**+0.1**
PAC1	**Pacto, Paraso**	**2.11**	**53**	*e*P	**Pn**	**04 46 23.9**	**+0.1**
PAC1	**Pacto, Paraso**	**2.11**	**53**	P	**Pn**	**04 46 21.0**	**-2.8**
TAMB	**Tambo**	**2.12**	**81**	P	**Pn**	**04 46 24.0**	**-0.3**
APSY	**Ecuador-Napo A**	**2.21**	**89**	P	**Pb**	**04 46 27.0**	**-1.7**
PIAT	**Ana Tenorio**	**2.21**	**89**	P	**Pn**	**04 46 26.0**	**+0.7**
PULU	**Pululahua**	**2.22**	**62**	Pn	**Pn**	**04 46 24.1**	**-1.4**
PULU	**Pululahua**	**2.22**	**62**	P	**Pn**	**04 46 24.0**	**-1.5**
ANTG	**Antisana-Guama**	**2.27**	**77**	P	**Pn**	**04 46 26.0**	**-0.3**
ANTM	**Antisana-La Mi**	**2.30**	**78**	P	**Pn**	**04 46 27.0**	**+0.4**
AV11	**Acelerografo,**	**2.30**	**66**	P	**Pb**	**04 46 29.0**	**-1.2**
ANTS	**Antisana-Sarah**	**2.36**	**77**	P	**Pn**	**04 46 28.0**	**+0.5**
ANTI	**Antisana**	**2.38**	**76**	P	**Pn**	**04 46 28.0**	**+0.2**
ACUE	**Ecuador-Cuenca**	**2.40**	**141**	P	**Pn**	**04 46 28.0**	**+0.1**
CUSE	**Cuicocha Este**	**2.46**	**57**	*e*P	**Pn**	**04 46 29.0**	**+0.3**
CUSE	**Cuicocha Este**	**2.46**	**57**	P	**Pn**	**04 46 27.0**	**-1.7**
CUSW	**Cuicocha Oeste**	**2.49**	**58**	P	**Pn**	**04 46 28.0**	**-1.1**
CUIC	**Cuicocha-Domo**	**2.49**	**58**	P	**Pn**	**04 46 27.0**	**-2.1**
ARNL	**Arenillas**	**2.54**	**171**	Pn	**Pn**	**04 46 28.6**	**-0.8**
ARNL	**Arenillas**	**2.54**	**171**	P	**Pn**	**04 46 28.0**	**-1.4**
IMBA	**Imbabura, San**	**2.61**	**60**	Pn	**Pn**	**04 46 31.0**	**+0.1**
IMBA	**Imbabura, San**	**2.61**	**60**	P	**Pn**	**04 46 31.0**	**+0.1**
URCU	**Urcuqui**	**2.65**	**57**	P	**Pn**	**04 46 31.0**	**-0.4**
ARDO	**Archidona, Ten**	**2.67**	**89**	P	**Pb**	**04 46 34.0**	**-2.4**
CAYR	**Refugio Cayamb**	**2.67**	**67**	P	**Pn**	**04 46 33.0**	**+1.1**
ANGU	**Angureal**	**2.68**	**67**	P	**Pb**	**04 46 35.0**	**-1.9**
CAYA	**Cayambe**	**2.71**	**66**	P	**Pn**	**04 46 33.0**	**+0.7**
YAHU	**Yahuarcocha**	**2.77**	**60**	P	**Pn**	**04 46 34.0**	**+1.0**
AIMI	**Ecuador-Imbabu**	**2.78**	**49**	P	**Pn**	**04 46 33.0**	**+0.1**
SNLR	**San Lorenzo-Es**	**2.82**	**35**	P	**Pn**	**04 46 33.0**	**-0.3**
BOSC	**San Juan Bosco**	**2.89**	**137**	Pn	**Pn**	**04 46 33.6**	**-0.8**
BOSC	**San Juan Bosco**	**2.89**	**137**	P	**Pn**	**04 46 36.0**	**+1.6**
LNGL	**El Angel-Carch**	**3.02**	**55**	P	**Pn**	**04 46 36.0**	**-0.7**
CHMA	**Chilma**	**3.05**	**52**	P	**Pn**	**04 46 36.0**	**-0.8**
ECEN	**Cerro Negro**	**3.10**	**54**	P	**Pn**	**04 46 38.0**	**+0.3**
CHL1	**Volc¡n Chiles**	**3.10**	**54**	P	**Pn**	**04 46 38.0**	**+0.3**
CHL2	**Volc¡n Chiles**	**3.13**	**55**	P	**Pn**	**04 46 38.0**	**-0.1**
TULM	**Tulcn-Chalpat**	**3.19**	**57**	Pn	**Pn**	**04 46 40.0**	**+1.1**
TULM	**Tulcn-Chalpat**	**3.19**	**57**	P	**Pn**	**04 46 40.0**	**+1.1**
BONI	**La Bonita**	**3.29**	**63**	*e*P	**Pn**	**04 46 41.8**	**+1.8**
CMBC	**Cumbal**	**3.29**	**53**	*e*P	**Pn**	**04 46 43.9**	**+3.7**
TUMC	**Tumaco**	**3.32**	**32**	P	**Pn**	**04 46 40.0**	**-0.3**
GCUF	**Volcan Galeras**	**3.84**	**54**	*e*P	**Pn**	**04 46 50.5**	**+2.6**
CRUC	**La Cruz**	**4.36**	**54**	*e*P	**Pn**	**04 46 51.5**	**-3.3**
BBAC	**Balboa, Cauca**	**4.42**	**47**	*e*P	**Pn**	**04 46 55.6**	**+0.1**
GR1C	**Gorgona, Isla**	**4.62**	**30**	*e*P	**Pn**	**04 46 59.7**	**+1.6**
FLOC	**Florencia**	**5.47**	**62**	*e*P	**Pn**	**04 47 13.0**	**+3.2**
MALC	**Bahia Malaga**	**5.91**	**32**	*e*P	**Pn**	**04 47 18.7**	**+2.9**
GARC	**Garzon, Huila**	**5.91**	**57**	*e*P	**Pn**	**04 47 17.1**	**+1.0**
ATAH	**Atahualpa**	**6.41**	**161**	Pn	**Pn**	**04 47 26.3**	**+3.2**
	1.5nm,0.3s,baz=23,slow=6.6,SNR=13						
ATAH				Sn	**Sn**	**04 48 42.6**	**+6.4**
	1.7nm,0.3s,baz=325,slow=20,SNR=2.1						
ATAH				LR	LR	04 50 15.0	
	comp=Z,472nm,20.9s,baz=338,slow=41 3.8nm,0.4s						
ORTC	**Ortega, Tolima**	**7.16**	**47**	*e*P	**Pn**	**04 47 34.0**	**+0.9**
PLMC	**San Jos del P**	**7.22**	**35**	*e*P	**Pn**	**04 47 32.4**	**-1.6**
PRAC	**Prado**	**7.30**	**50**	*e*P	**Pn**	**04 47 36.3**	**+1.2**
GUY2C	**Guyana, Caldas**	**8.03**	**39**	*e*P	**Pn**	**04 47 48.9**	**+3.4**
CBOC	**Ciudad Bolivar**	**8.16**	**33**	*e*P	**Pn**	**04 47 48.9**	**+1.9**
ROSC	**El Rosal**	**8.47**	**46**	Pn	**Pn**	**04 47 55.2**	**+3.8**
	1.8nm,0.3s,baz=144,slow=8.1,SNR=9.1						
ROSC				LR	LR	04 50 46.2	
	comp=Z,69nm,21.0s,baz=70,slow=34 22nm,0.6s						
ROSC	**El Rosal**	**8.47**	**46**	Pn	**Pn**	**04 47 52.0**	**+0.7**
NORC	**Norcasia**	**8.61**	**40**	*e*P	**Pn**	**04 47 57.1**	**+4.0**
CHIC	**Chingaza**	**8.77**	**50**	*e*P	**Pn**	**04 47 57.6**	**+2.1**
PTBC	**PUERTO BERRIO,**	**9.62**	**39**	*e*P	**Pn**	**04 48 08.1**	**+1.2**
PAYG	**Puerto Ayora**	**9.82**	**272**	Pn	**Pn**	**04 48 13.4**	**+3.7**
BCIP	**Isla Barro Col**	**10.15**	**4**	Pn	**Pn**	**04 48 15.8**	**+1.8**
NNA	**Nana**	**11.47**	**162**	Pn	**Pn**	**04 48 34.4**	**+2.2**
	1.8nm,0.3s,baz=307,slow=5.1,SNR=2.4						
NNA				Sn	**Sn**	**04 50 39.7**	**-0.4**
	4.2nm,0.3s,baz=213,slow=20,SNR=11						
NNA				LR	LR	04 53 45.5	
	comp=Z,59nm,20.6s,baz=349,slow=42 5.4nm,0.4s						
NNA	**Nana**	**11.47**	**162**	Pn	**Pn**	**04 48 32.0**	**-0.2**
JTS	**Las Juntas de**	**12.10**	**338**	LR	LR	04 52 19.9	
	comp=Z,189nm,19.6s,baz=203,slow=32						
SDV	**Santo Domingo**	**13.89**	**45**	Pn	**P**	**04 49 10.0**	**-3.7**
	0.7nm,0.3s,baz=273,slow=9.6,SNR=6.1						
SDV				LR	LR	04 55 35.3	
	comp=Z,186nm,20.4s,baz=224,slow=42						

5.6nm,0.5s
SDV Santo Domingo 13.89 45 Pn **Pn 04 49 05.8 +0.3**
BAUV El Baul 15.86 51 Pn **Pn 04 49 31.8 +0.1**
PCRV Puerto La Cruz 19.29 54 LR LR 04 58 49.5
comp=Z,273nm,20.1s,slow=40
LPAZ La Paz 19.44 142 P **Pn 04 50 16.6 0.0**
0.1nm,0.3s,baz=305,slow=10,SNR=5.5
LPAZ LR LR 04 59 49.8
comp=Z,113nm,19.2s,baz=302,slow=43
1.2nm,0.6s
LPAZ La Paz 19.44 142 P **P 04 50 13.2 -2.3**
PB16 IPOC Station P 20.29 149 P **P 04 50 24.1 -0.7**
PB11 IPOC Station P 21.42 151 P **P 04 50 34.7 -1.8**
PB11 IAmb IAmb 04 50 54.5
comp=Z,14nm,1.1s
GO01 Chusmiza 21.57 150 P **P 04 50 35.9 -2.6**
GO01 IAmb IAmb 04 50 49.3
comp=Z,23nm,1.1s
CMIG Matias Romero 22.94 322 LR LR 04 57 59.0
comp=Z,34nm,20.9s,baz=164,slow=31
CELP Cerrillos 23.39 35 P **P 04 50 55.9 -1.3**
CELP IAmb IAmb 04 51 15.2
comp=Z,17nm,1.1s
SJG San Juan 23.67 36 LR LR 05 01 32.2
comp=Z,38nm,20.9s,baz=212,slow=40
GCPR Guaynabo City 23.86 36 P **P 04 51 00.7 -1.2**
GCPR IAmb IAmb 04 51 09.7
comp=Z,30nm,1.4s
MTP Monte Pirata 24.01 37 P **P 04 51 03.5 +0.2**
MTP IAmb IAmb 04 51 36.9
comp=Z,11nm,0.9s
LVC Limon Verde 24.22 153 LR LR 05 01 37.9
comp=Z,77nm,21.0s,baz=328,slow=39
SIV San Ignacio 24.22 129 P **P 04 51 06.4 +1.1**
comp=Z,0.7nm,0.5s,baz=282,slow=11,SNR=5.6
SIV LR LR 05 01 40.4
comp=Z,394nm,19.4s,baz=15,slow=39
comp=Z,0.7nm,0.5s
MDP Montagnes des 28.45 77 LR LR 05 03 04.7
comp=Z,278nm,20.5s,baz=256,slow=36
ROC1 El Roble 33.00 165 P **P 04 52 23.5 -0.2**
BO01 Tunca 34.33 166 P **P 04 52 34.5 -0.4**
BDFB Brasilia 35.15 116 P **P 04 52 41.5 -0.9**
BDFB IAmb IAmb 04 53 11.6
comp=Z,13nm,1.4s
TKL Tuckaleechee C 36.63 355 LR LR 05 10 03.2
comp=Z,38nm,18.5s,baz=169,slow=39
DAL Dallas 37.05 337 P **P 04 52 59.4 +1.1**
TXAR Lajitas Array 37.46 326 P **P 04 53 04.8 +2.8**
comp=Z,0.4nm,0.7s,baz=146,slow=12,SNR=5.8
TXAR PcP **PcP 04 55 18.0 -2.4**
comp=Z,0.6nm,1.1s,baz=159,slow=5.3,SNR=4.6
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 37.46 326 P **P 04 53 02.3 +0.3**
MSTX Muleshoe 40.64 331 P **P 04 53 29.0 +0.4**
MSTX IAmb IAmb 04 53 40.0
comp=Z,5.6nm,0.8s
ANMO Albuquerque 43.27 328 P **P 04 53 49.8 -0.3**
RCBR Riachuelo 44.72 97 LR LR 05 13 49.4
comp=Z,334nm,19.7s,baz=103,slow=38
GLMI Grayling 45.80 356 P **P 04 54 10.3 +0.4**
NVAR Mina Array Bea 52.47 323 P **P 04 55 04.0 +2.5**
comp=Z,0.8nm,0.8s,baz=140,slow=7.0,SNR=6.5
comp=Z,0.8nm,0.8s
BBTS Babate 65.12 73 LR LR 05 25 09.7
comp=Z,42nm,18.0s,baz=280,slow=36
YKA Yellowknife Ar 68.38 344 P **P 04 56 52.7 +3.2**
comp=Z,1.9nm,0.9s,baz=137,slow=6.9,SNR=7.9
comp=Z,1.9nm,0.9s
DBIC Dimbokro 75.83 83 LR LR 05 29 04.8
comp=Z,26nm,18.5s,baz=246,slow=34
ILAR Eielson Array 81.06 337 P **P 04 58 07.2 +4.2**
comp=Z,0.6nm,0.9s,baz=93,slow=3.4,SNR=5.1
comp=Z,0.6nm,0.9s

*PRU **27** 05:05:31.1±0.0, 43.°04N×13.°93E, h0km*
ROM 27 05:05:28.2±0.1, 42.°887N±0.°003×13.°050E±0.°004,
h11km, Md1.9/2, ML3.4/13, Error ellipse: s-maj=0.4km
s-min=0.3km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.02**	**278**	P	Pg	05 05 30.6	+0.4
T1216				S	Sg	05 05 31.9	+0.3
NRCA	**Norcia**	**0.07**	**139**	P	Pg	05 05 31.5	+0.9
NRCA				S	Sg	05 05 32.8	+0.3
NRCA				AML	AML		
	comp=N,62950μm,0.2s						
NRCA				AML	AML		
	comp=N,68050μm,0.2s						
NRCA				AML	AML		
	comp=E,75950μm,0.2s						
NRCA				AML	AML		
	comp=E,81900μm,0.2s						
NRCA				AML	AML		
	comp=E,75950μm,0.1s						
NRCA				AML	AML		
	comp=N,63000μm,0.2s						
FEMA	**Monte Fema**	**0.07**	**360**	P	Pg	05 05 31.1	+0.3
FEMA				S	Sg	05 05 32.8	+0.1
FEMA				AML	AML		
	comp=E,77500μm,0.4s						
FEMA				AML	AML		
	comp=N,35950μm,0.8s						
FEMA				AML	AML		
	comp=E,77550μm,0.4s						
FEMA				AML	AML		
	comp=N,35900μm,0.8s						
MC2	**Monte Cornacci**	**0.11**	**76**	P	Pg	05 05 31.6	+0.4
MC2				S	Sg	05 05 33.7	+0.4
T1245	**Castelsantange**	**0.11**	**107**	P	Pg	05 05 31.6	+0.4
T1245				S	Sg	05 05 33.7	+0.5
T1245				AML	AML		
	comp=E,81450μm,0.2s						
T1245				AML	AML		
	comp=N,74500μm,0.9s						
T1245				AML	AML		
	comp=E,72950μm,0.2s						
T1245				AML	AML		
	comp=N,79250μm,0.9s						
T1245				AML	AML		
	comp=N,74450μm,0.9s						
T1245				AML	AML		
	comp=E,81400μm,0.2s						
T1245				END			
T1215	**Vallo di Nera,**	**0.16**	**237**	P	Pb	05 05 32.5	-0.7
T1215				S	Sg	05 05 35.4	+1.1
T1215				AML	AML		
	comp=E,17300μm,0.5s						
T1215				AML	AML		
	comp=N,14100μm,0.5s						
T1215				AML	AML		
	comp=N,13525μm,0.5s						
T1215				AML	AML		
	comp=N,13520μm,0.5s						
T1215				AML	AML		
	comp=N,14100μm,0.5s						
T1215				AML	AML		
	comp=E,17950μm,0.5s						
T1215				AML	AML		
	comp=N,13485μm,0.5s						
T1215				AML	AML		
	comp=E,18000μm,0.5s						
T1215				AML	AML		
	comp=E,17350μm,0.5s						
T1215				AML	AML		
	comp=N,13525μm,0.5s						
CESI	**CESI - Serrava**	**0.16**	**318**	P	Pg	05 05 32.5	+0.6
CESI				S	Sg	05 05 35.0	+0.6
T1217	**Poggiodomo (PG**	**0.20**	**207**	P	Pg	05 05 33.1	+0.7
T1217				S	Sg	05 05 36.6	+1.3
T1217				AML	AML		
	comp=N,14550μm,0.2s						
T1217				AML	AML		
	comp=E,11320μm,0.2s						
T1217				AML	AML		
	comp=N,14650μm,0.2s						
T1217				AML	AML		
	comp=E,11600μm,0.2s						
T1217				AML	AML		
	comp=E,11550μm,0.2s						
T1217				AML	AML		
	comp=E,11350μm,0.2s						
MMO1	**Montemonaco**	**0.20**	**87**	P	Pg	05 05 33.1	+0.5
MMO1				S	Sg	05 05 36.4	+0.8
AM05	**Amandola Campo**	**0.24**	**68**	P	Pg	05 05 33.8	+0.6
AM05				S	Sg	05 05 37.6	+1.0
SEF1	**Sefro**	**0.27**	**344**	P	Pg	05 05 34.3	+0.5
SEF1				S	Sb	05 05 38.7	-1.1
GUMA	**Gualdo di Mace**	**0.27**	**50**	P	Pb	05 05 34.5	-0.7
GUMA				S	Sb	05 05 39.4	-0.5
GUMA				AML	AML		
	comp=E,16650μm,0.3s						
GUMA				AML	AML		
	comp=N,10040μm,0.4s						
GUMA				AML	AML		
	comp=N,9445μm,0.6s						
GUMA				AML	AML		
	comp=E,16650μm,0.3s						
GUMA				AML	AML		
	comp=N,10005μm,0.4s						
GUMA				AML	AML		
	comp=E,19300μm,0.3s						
GUMA				AML	AML		
	comp=N,10030μm,0.4s						
T1241	**Roccafluvione,**	**0.28**	**96**	P	Pg	05 05 34.2	+0.2
T1241				S	Sg	05 05 38.6	+0.8
T1241				AML	AML		
	comp=E,10660μm,0.3s						
T1241				AML	AML		
	comp=N,15450μm,0.7s						
T1241				AML	AML		
	comp=E,10680μm,0.3s						
T1241				END			
LNSS	**Leonessa**	**0.28**	**181**	P	Pg	05 05 33.8	-0.3
LNSS				S	Sb	05 05 39.3	-0.9
T1204	**Amatrice, Fraz**	**0.29**	**137**	P	Pg	05 05 34.8	+0.7
T1204				S	Sb	05 05 39.5	-0.9
MDAR	**Monte D'Aria**	**0.31**	**13**	P	Pg	05 05 34.9	+0.3
MDAR				S	Sg	05 05 39.7	+0.9
T1243	**Rocca Santa Ma**	**0.35**	**123**	P	Pg	05 05 35.7	+0.5
T1243				S	Sg	05 05 40.9	+1.0
GAG1	**Gagliole**	**0.35**	**2**	P	Pb	05 05 35.9	-0.6
GAG1				S	Sb	05 05 41.5	-0.5
SNTG	**Esanatoglia**	**0.38**	**348**	P	Pg	05 05 36.2	+0.5
SNTG				S	Sb	05 05 42.0	-0.9
ABTA	**Abfaltersbach**	**3.88**	**355**	*e*Pn	Pn	05 06 29.3	+1.4
	comp=E,6.5nm,0.5s						
KHC	**Kasperske Hory**	**6.26**	**3**	*e*PN	Pn	05 07 02.3	+1.9
KHC				*e*SN	Sn	05 08 09.9	-2.0

PRU 27 05:20:17.0±0.0, 42.°98N×12.°53E, h0km, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir**	**3.81**	**21**	*e*Pn	Pn	05 21 18.7	+1.6
FETA	**Feichten**	**4.24**	**343**	*e*Pn	Pb	05 21 32.7	+0.3
	comp=Z,1.1nm,0.4s						
CONA	**Conrad Observa**	**5.47**	**24**	*e*Pn	Pn	05 21 39.6	-0.3
	comp=Z,1.1nm,0.3s						
KHC	**Kasperske Hory**	**6.20**	**6**	*e*PN	Pn	05 21 48.1	-1.6
KHC				*e*SN	Sn	05 22 58.4	-2.8

ROM 27 05:20:47.7±0.0, 42.°951N±0.°002×13.°070E±0.°004,
h10km, ML3.0/13, 3C-5D, Error ellipse: s-maj=0.3km
s-min=0.2km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**308**	P	Pg	05 20 49.8	+0.1
FEMA				S	Sg	05 20 51.1	0.0
FEMA				AML	AML		
	comp=N,65750μm,0.4s						
FEMA				AML	AML		
	comp=E,97650μm,0.2s						
T1216	**Preci, Frazion**	**0.07**	**212**	P	Pg	05 20 50.4	+0.5
T1216				S	Sg	05 20 52.2	+0.6
T1216				AML	AML		
	comp=N,18300μm,1.5s						
T1216				AML	AML		
	comp=E,39100μm,0.4s						
MC2	**Monte Cornacci**	**0.10**	**113**	P	Pg	05 20 50.9	+0.4
MC2				S	Sg	05 20 52.9	+0.5
NRCA	**Norcia**	**0.12**	**164**	P	Pg	05 20 51.1	+0.5
NRCA				S	Sg	05 20 53.5	+0.7
NRCA				AML	AML		
	comp=E,8905μm,0.2s						
NRCA				AML	AML		
	comp=E,9585μm,0.2s						
NRCA				AML	AML		
	comp=N,9350μm,0.2s						
NRCA				AML	AML		
	comp=E,8920μm,0.2s						
NRCA				AML	AML		
	comp=N,8760μm,0.2s						
NRCA				AML	AML		
	comp=E,11450μm,0.2s						
NRCA				AML	AML		
	comp=N,27000μm,0.1s						
NRCA				AML	AML		
	comp=E,12400μm,0.1s						
NRCA				AML	AML		
	comp=N,30000μm,0.1s						
NRCA				AML	AML		
	comp=N,9351μm,0.2s						
NRCA				AML	AML		
	comp=N,8763μm,0.2s						
NRCA				AML	AML		
	comp=E,9416μm,0.2s						
NRCA				AML	AML		
	comp=E,8905μm,0.2s						
T1245	**Castelsantange**	**0.13**	**137**	P	Pg	05 20 51.3	+0.5
T1245				S	Sg	05 20 54.0	+0.9
T1245				AML	AML		
	comp=E,10260μm,0.6s						
T1245				AML	AML		
	comp=E,10210μm,0.6s						
T1245				AML	AML		
	comp=N,12000μm,0.3s						
T1245				AML	AML		
	comp=E,9615μm,0.6s						
T1245				AML	AML		
	comp=N,11950μm,0.3s						
T1245				AML	AML		
	comp=N,11950μm,0.3s						
T1245				AML	AML		
	comp=E,10245μm,0.6s						
CESI	**CESI - Serrava**	**0.13**	**294**	P	Pg	05 20 51.3	+0.5
CESI				S	Sg	05 20 53.8	+0.7
CESI				AML	AML		
	comp=N,40550μm,0.3s						
CESI				AML	AML		
	comp=E,19200μm,0.4s						
MMO1	**Montemonaco**	**0.20**	**105**	P	Pg	05 20 52.5	+0.6
MMO1				S	Sg	05 20 55.8	+1.1
AM05	**Amandola Campo**	**0.21**	**83**	P	Pg	05 20 52.8	+0.7
AM05				S	Sg	05 20 56.4	+1.3
AM05				AML	AML		
	comp=E,1445μm,1.1s						
AM05				AML	AML		
	comp=N,1570μm,0.1s						
AM05				AML	AML		
	comp=E,5905μm,0.1s						
AM05				AML	AML		
	comp=N,444μm,1.3s						
AM05				AML	AML		
	comp=E,5910μm,0.1s						
AM05				AML	AML		
	comp=N,444μm,1.3s						
T1215	**Vallo di Nera,**	**0.21**	**225**	P	Pg	05 20 52.7	+0.6
T1215				S	Sg	05 20 56.1	+1.1
T1215				AML	AML		
	comp=E,4385μm,0.5s						
T1215				AML	AML		
	comp=N,6035μm,0.3s						
T1215				AML	AML		
	comp=E,4515μm,0.5s						
T1215				AML	AML		
	comp=N,5900μm,0.3s						
T1215				AML	AML		
	comp=E,4510μm,0.5s						
T1215				AML	AML		
	comp=N,5890μm,0.3s						
SEF1	**Sefro**	**0.22**	**335**	P	Pg	05 20 52.6	+0.4
SEF1				S	Sg	05 20 56.4	+1.1
GUMA	**Gualdo di Mace**	**0.23**	**60**	⇑P	Pg	05 20 53.3	+0.9
GUMA				S	Sg	05 20 57.2	+1.7
PIO1	**Pioraco**	**0.24**	**345**	P	Pg	05 20 53.8	+1.2
PIO1				S	Sg	05 20 57.1	+1.3
T1217	**Poggiodomo (PG**	**0.26**	**203**	P	Pg	05 20 53.6	+0.6
T1217				S	Sb	05 20 58.0	-1.1
T1217				AML	AML		
	comp=E,3870μm,0.8s						
T1217				AML	AML		
	comp=N,7590μm,0.8s						
T1217				AML	AML		
	comp=E,3865μm,0.8s						
T1217				AML	AML		
	comp=N,7365μm,0.2s						
T1217				AML	AML		
	comp=E,3865μm,0.8s						
T1217				AML	AML		
	comp=N,7360μm,0.2s						
T1217				AML	AML		
	comp=E,3855μm,0.8s						
T1217				AML	AML		
	comp=N,7585μm,0.8s						
T1241	**Roccafluvione,**	**0.28**	**109**	P	Pg	05 20 53.5	+0.1
T1241				S	Sg	05 20 58.2	+1.0
T1241				AML	AML		
	comp=E,3645μm,0.7s						
T1241				AML	AML		
	comp=N,4840μm,0.2s						
T1241				AML	AML		
	comp=N,4835μm,0.2s						
T1241				AML	AML		
	comp=E,3640μm,0.7s						
GAG1	**Gagliole**	**0.29**	**360**	P	Pb	05 20 54.3	-0.7
GAG1				S	Sb	05 20 59.0	-0.8
SNTG	**Esanatoglia**	**0.32**	**343**	P	Pg	05 20 54.5	+0.4
SNTG				S	Sg	05 20 59.6	+1.2
LNSS	**Leonessa**	**0.35**	**184**	⇓P	Pg	05 20 55.3	+0.7
LNSS				S	Sb	05 21 00.8	-0.9
LNSS				AML	AML		
	comp=E,3750μm,0.3s						
LNSS				AML	AML		
	comp=N,3370μm,0.1s						
LNSS				AML	AML		
	comp=E,3745μm,0.3s						
T1243	**Rocca Santa Ma**	**0.38**	**132**	⇓P	Pg	05 20 55.8	+0.6
EL6	**Elcito**	**0.38**	**3**	P	Pg	05 20 55.5	+0.2
EL6				S	Sb	05 21 01.7	-0.9
ATCC	**AVT- Casa Cast**	**0.39**	**307**	⇑P	Pg	05 20 55.9	+0.5
ATCC				S	Sb	05 21 02.5	-0.5
T1211	**Morro Reatino**	**0.45**	**201**	S	Sb	05 21 04.0	-0.5
OFFI	**Offida**	**0.45**	**92**	⇓P	Pb	05 20 58.1	+0.3
RM33	**Pellescritta (**	**0.45**	**166**	⇓P	Pg	05 20 57.2	+0.6
RM33				AML	AML		
	comp=E,927μm,0.3s						
RM33				AML	AML		
	comp=N,1010μm,0.3s						
RM33				AML	AML		
	comp=E,926μm,0.3s						
RM33				AML	AML		
	comp=N,1012μm,0.3s						
CAMP	**Campotosto**	**0.48**	**149**	P	Pg	05 20 57.5	+0.3
MMUR	**Monte Murano**	**0.49**	**354**	S	Sb	05 21 06.0	+0.1
CESX	**Cesi**	**0.50**	**227**	⇓P	Pg	05 20 57.3	0.0
CESX				S	Sb	05 21 05.2	-0.6
CESX				AML	AML		
	comp=E,2565μm,0.4s						
CESX				AML	AML		
	comp=N,2230μm,0.4s						
MURB	**Monte Urbino**	**0.51**	**308**	S	Sb	05 21 07.0	+0.8
TERO	**Teramo**	**0.51**	**130**	P	Pg	05 20 58.0	+0.3
TERO				S	Sb	05 21 05.8	-0.5
TERO				AML	AML		
	comp=E,1185μm,1.1s						
TERO				AML	AML		
	comp=N,1575μm,0.5s						
TERO				AML	AML		
	comp=E,1270μm,1.1s						
TERO				AML	AML		
	comp=E,1275μm,1.1s						
TERO				AML	AML		
	comp=E,1186μm,1.1s						
TERO				AML	AML		
	comp=N,1574μm,0.5s						
TERO				AML	AML		
	comp=N,1675μm,0.5s						
ATFO	**Monte Foce - G**	**0.55**	**319**	P	Pg	05 20 58.5	0.0
ATFO				S	Sb	05 21 07.5	-0.1
ARVD	**Arcevia**	**0.56**	**350**	⇑P	Pg	05 20 59.0	+0.4
ATVO	**AVT- Monte Val**	**0.65**	**312**	S	Sb	05 21 11.0	+0.7
PIEI	**Pieia**	**0.70**	**326**	S	Sb	05 21 13.0	+1.1
FSSB	**Fossombrone**	**0.77**	**344**	S	Sn	05 21 16.0	-0.4

*IDC **27** 05:40:15.1±4.1, 3.°94S×150.°03E, h0km, mb4.2/2,*
mbtmp4.2/2, MS3.6/22, Error ellipse: s-maj=147.9km
s-min=51.4km az=111.0
ISC 27 05:40:16.1±1.9, 3.°6S±0.°2×150.°3E±0.°1, h35km, n35,
σ1°01/15, MS3.6/17, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.93**	**109**	P	**Pn**	**05 40 46.0**	**-0.5**
PMG	**Port Moresby**	**6.62**	**208**	LR	LR	05 44 28.6	
	comp=Z,804nm,18.3s,baz=90,slow=41						
HNR	**Honiara**	**11.19**	**122**	LR	LR	05 47 09.1	
	comp=Z,2μm,18.6s,baz=290,slow=37						
MTSU	**Mount Surprise**	**15.65**	**202**	P	**Pn**	**05 43 54.8**	**+0.6**
CTA	**Charters Tower**	**16.91**	**193**	Pn	**P**	**05 44 12.8**	**+0.9**
	0.2nm,0.3s,baz=21,slow=12,SNR=6.0						
CTA				LR	LR	05 49 42.8	
	comp=Z,218nm,20.5s,baz=62,slow=34						
GUMO	**Guam**	**17.87**	**342**	LR	LR	05 49 40.6	
	comp=Z,175nm,21.3s,baz=122,slow=31						
SIJI	**Sorong**	**19.24**	**278**	LR	LR	05 50 56.9	
	comp=Z,153nm,19.8s,baz=45,slow=34						
RK1H	**Rockhampton Ha**	**19.72**	**180**	P	**P**	**05 44 43.8**	**+1.0**
KDU	**Kakadu**	**19.87**	**242**	P	**P**	**05 44 42.9**	**-1.5**
QIS	**Mount Isa**	**19.88**	**211**	P	**P**	**05 44 44.6**	**0.0**
EIDS	**Eidsvold**	**21.71**	**178**	P	**P**	**05 45 04.0**	**-0.2**
WRAB	**Tennant Creek**	**22.55**	**223**	P	**P**	**05 45 12.3**	**-1.1**
WRA	**Warramunga Arr**	**22.56**	**223**	P	**P**	**05 45 11.6**	**-2.0**
	4.8nm,0.7s,baz=47,slow=11,SNR=26						
WRA				LR	LR	05 54 29.0	
	comp=Z,106nm,21.4s,baz=106,slow=39						
	4.8nm,0.7s						
RMQ	**Roma**	**22.86**	**184**	P	**P**	**05 45 16.9**	**+0.3**
QLP	**Quilpie**	**23.64**	**194**	P	**P**	**05 45 25.0**	**+0.7**
DZM	**Mont Dzumac**	**24.15**	**141**	LR	LR	05 53 04.4	
	comp=Z,126nm,21.1s,baz=21,slow=32						
AS01	**Alice Springs**	**25.51**	**217**	P	**P**	**05 45 41.7**	**+0.2**
ASAR	**Alice Springs**	**25.54**	**217**	P	**P**	**05 45 41.5**	**-0.2**
	7.2nm,0.9s,baz=54,slow=8.5,SNR=57						
	7.2nm,0.9s						
DAV	**Davao City (W)**	**26.87**	**293**	LR	LR	05 56 26.8	
	comp=Z,41nm,18.0s,baz=322,slow=36						
OOD	**Oodnadatta**	**27.87**	**209**	P	**P**	**05 46 02.2**	**-0.5**
STKA	**Stephens Creek**	**29.35**	**195**	LR	LR	05 57 55.9	
	comp=Z,233nm,18.7s,baz=13,slow=37						
KAPI	**Kappang**	**30.54**	**266**	LR	LR	05 58 51.4	
	comp=Z,24nm,21.3s,baz=139,slow=37						
JOW	**Kunigami**	**36.97**	**326**	LR	LR	05 59 42.1	
	comp=Z,53nm,21.2s,baz=184,slow=31						
MJAR	**Matsushiro Arr**	**41.46**	**345**	LR	LR	06 04 49.4	
	comp=Z,53nm,18.7s,baz=158,slow=35						
LEM	**Lembang**	**42.66**	**264**	LR	LR	06 11 12.9	
	comp=Z,41nm,18.7s,baz=242,slow=44						
RPZ	**Rata Peaks**	**44.00**	**158**	LR	LR	06 05 02.1	
	comp=Z,133nm,21.0s,baz=289,slow=34						
PETK	**Petropavlovsk-**	**56.79**	**5**	LR	LR	06 10 03.4	
	comp=Z,55nm,20.8s,baz=192,slow=31						
SHEM	**Shemya Is, Ala**	**59.55**	**17**	LR	LR	06 09 49.5	
	comp=Z,41nm,20.9s,baz=188,slow=30						
MA2	**Magadan**	**62.93**	**0**	LR	LR	06 18 25.7	
	comp=Z,37nm,18.9s,baz=151,slow=36						
KDAK	**Kodiak Island**	**76.19**	**28**	LR	LR	06 19 56.6	
	comp=Z,45nm,20.2s,baz=164,slow=31						
ILAR	**Eielson Array**	**81.94**	**23**	LR	LR	06 25 04.0	
	comp=Z,30nm,21.0s,baz=151,slow=33						
MAW	**Mawson**	**85.77**	**203**	LR	LR	06 30 23.9	
	comp=Z,32nm,18.5s,baz=82,slow=35						
DLBC	**Dease Lake**	**87.58**	**31**	LR	LR	06 27 21.4	
	comp=Z,31nm,19.7s,baz=296,slow=32						
ARU	**Arti**	**93.92**	**326**	LR	LR	06 36 02.5	
	comp=Z,25nm,20.0s,baz=309,slow=36						
TORD	**Torodi Ar. Bea**	**147.59**	**289**	PKPbc	**PKPab**	**06 00 01.2**	**+1.1**
	0.6nm,0.8s,baz=68,slow=3.5,SNR=3.5						

*PRU **27** 06:04:20.6±0.0, 43.°36N×13.°82E, h0km*
ROM 27 06:04:15.3±0.1, 42.°997N±0.°004×13.°066E±0.°005,

h10km, ML3.0/24, 11C-1D, Error ellipse: s-maj=0.4km s-min=0.4km az=347.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.04**	**199**	P	Pg	06 04 17.5	+0.2
FEMA				S	Sg	06 04 18.9	+0.1
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,65000μm,0.5s						
FEMA				AML	AML		
	comp=N,64950μm,0.5s						
FEMA				AML	AML		
	comp=N,60662μm,0.1s						
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.11**	**198**	P	Pg	06 04 18.6	+0.5
T1216				S	Sg	06 04 20.9	+0.8
T1216				AML	AML		
	comp=N,32000μm,1.3s						
T1216				AML	AML		
	comp=E,29450μm,1.2s						
T1216				AML	AML		
	comp=E,27863μm,0.2s						
T1216				AML	AML		
	comp=N,30702μm,0.3s						
CESI	**CESI - Serrava**	**0.12**	**274**	⇑P	Pg	06 04 18.7	+0.5
CESI				S	Sg	06 04 21.0	+0.8
CESI				AML	AML		
	comp=E,28400μm,0.4s						
CESI				AML	AML		
	comp=E,28450μm,0.4s						
CESI				AML	AML		
	comp=N,17000μm,0.5s						
CESI				AML	AML		
	comp=E,24769μm,0.2s						
CESI				AML	AML		
	comp=N,12882μm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**133**	P	Pg	06 04 18.1	-0.2
CSP1	**Cessapalombo**	**0.14**	**47**	⇑P	Pg	06 04 18.9	+0.4
CSP1				S	Sg	06 04 21.5	+0.7
CSP1				AML	AML		
	comp=N,48300μm,0.5s						
CSP1				AML	AML		
	comp=E,81900μm,0.5s						
CSP1				AML	AML		
	comp=N,36237μm,0.4s						
CSP1				AML	AML		
	comp=E,63698μm,0.1s						
T1245	**Castelsantange**	**0.17**	**148**	P	Pg	06 04 19.6	+0.6
T1245				AML	AML		
	comp=E,10005μm,0.6s						
T1245				AML	AML		
	comp=N,11550μm,0.4s						
T1245				AML	AML		
	comp=E,9140μm,0.6s						
T1245				AML	AML		
	comp=N,11085μm,0.4s						
T1245				AML	AML		
	comp=N,11600μm,0.4s						
T1245				AML	AML		
	comp=E,9145μm,0.6s						
T1245				AML	AML		
	comp=N,11550μm,0.4s						
T1245				AML	AML		
	comp=N,11090μm,0.4s						
T1245				AML	AML		
	comp=E,10010μm,0.6s						
T1245				AML	AML		
	comp=N,11103μm,0.4s						
T1245				AML	AML		
	comp=N,11554μm,0.4s						
T1245				AML	AML		
	comp=N,11550μm,1.6s						
T1245				AML	AML		
	comp=E,6947μm,0.2s						
T1245				AML	AML		
	comp=E,6924μm,0.3s						
T1245				AML	AML		
	comp=N,11090μm,1.6s						
SEF1	**Sefro**	**0.17**	**330**	P	Pg	06 04 19.5	+0.5
PIO1	**Pioraco**	**0.19**	**342**	S	Sg	06 04 21.0	-1.1
MDAR	**Monte D'Aria**	**0.20**	**16**	S	Sg	06 04 21.0	-1.6
GUMA	**Gualdo di Mace**	**0.21**	**72**	⇑P	Pg	06 04 20.5	+0.9
GUMA				S	Sg	06 04 24.3	+1.7
GUMA				AML	AML		
	comp=N,17550μm,1.1s						
GUMA				AML	AML		
	comp=N,25950μm,0.5s						
GUMA				AML	AML		
	comp=N,17550μm,0.9s						
GUMA				AML	AML		
	comp=N,25930μm,0.5s						
GUMA				AML	AML		
	comp=E,33450μm,0.3s						
GUMA				AML	AML		
	comp=E,33478μm,0.3s						
GUMA				AML	AML		
	comp=E,30750μm,0.4s						
GUMA				AML	AML		
	comp=E,30712μm,0.4s						
GUMA				AML	AML		
	comp=N,17132μm,0.5s						
AM05	**Amandola Campo**	**0.21**	**95**	P	Pg	06 04 20.4	+0.7
AM05				S	Sg	06 04 24.1	+1.4
AM05				AML	AML		
	comp=E,2755μm,0.6s						
AM05				AML	AML		
	comp=E,10770μm,0.6s						
AM05				AML	AML		
	comp=N,3350μm,0.4s						
AM05				AML	AML		
	comp=E,10785μm,0.6s						
AM05				AML	AML		
	comp=N,734μm,0.1s						
AM05				AML	AML		
	comp=E,8596μm,0.1s						
AM05				AML	AML		
	comp=N,2889μm,0.1s						
AM05				AML	AML		
	comp=E,2283μm,0.1s						
AM05				AML	AML		
	comp=N,734μm,0.1s						
FIU1	**Fiuminata**	**0.21**	**333**	S	Sg	06 04 21.0	-1.8
MMO1	**Montemonaco**	**0.21**	**117**	⇑P	Pg	06 04 20.3	+0.6
MMO1				S	Sg	06 04 24.0	+1.2
GAG1	**Gagliole**	**0.24**	**0**	S	Sg	06 04 22.0	-1.6
T1215	**Vallo di Nera,**	**0.24**	**217**	P	Pg	06 04 20.9	+0.7
T1215				S	Sg	06 04 24.9	+1.3
T1215				AML	AML		
	comp=N,3970μm,0.2s						
T1215				AML	AML		
	comp=E,3980μm,0.3s						
T1215				AML	AML		
	comp=N,4120μm,1.0s						
T1215				AML	AML		
	comp=N,3975μm,0.2s						
T1215				AML	AML		
	comp=E,3905μm,0.8s						
T1215				AML	AML		
	comp=N,4115μm,1.0s						
T1215				AML	AML		
	comp=E,3985μm,0.3s						
T1215				AML	AML		
	comp=N,3603μm,0.1s						
T1215				AML	AML		
	comp=N,3696μm,0.1s						
T1215				AML	AML		
	comp=E,3444μm,0.1s						
T1215				AML	AML		
	comp=E,3692μm,0.1s						
SSM1	**San Severino M**	**0.24**	**19**	S	Sg	06 04 22.0	-1.7
MTL1	**Matelica**	**0.26**	**351**	P	Pg	06 04 21.3	+0.6
MTL1				S	Sb	06 04 25.8	-0.9
SNTG	**Esanatoglia**	**0.27**	**340**	S	Sg	06 04 22.0	-2.6
T1217	**Poggiodomo (PG**	**0.30**	**199**	P	Pg	06 04 22.0	+0.6
T1217				S	Sb	06 04 26.9	-0.9
T1217				AML	AML		
	comp=N,4935μm,0.2s						
T1217				AML	AML		
	comp=E,3295μm,1.6s						
T1217				AML	AML		
	comp=N,4985μm,1.3s						
T1217				AML	AML		
	comp=N,4990μm,1.4s						
T1217				AML	AML		
	comp=E,3290μm,1.6s						
T1217				AML	AML		
	comp=E,3310μm,0.2s						
T1217				AML	AML		
	comp=N,4990μm,0.6s						
T1217				AML	AML		
	comp=N,4935μm,0.2s						
T1217				AML	AML		
	comp=N,4911μm,0.2s						
T1217				AML	AML		
	comp=E,3307μm,0.2s						
T1217				AML	AML		
	comp=E,3163μm,0.2s						
T1241	**Roccafluvione,**	**0.30**	**118**	⇑P	Pg	06 04 21.5	+0.1
T1241				S	Sg	06 04 26.5	+1.0
T1241				AML	AML		
	comp=E,3880μm,0.4s						
T1241				AML	AML		
	comp=N,2645μm,0.2s						
EL6	**Elcito**	**0.33**	**4**	S	Sg	06 04 23.0	-3.4
TRE1	**Treia**	**0.36**	**30**	S	Sg	06 04 24.0	-3.3
ATCC	**AVT- Casa Cast**	**0.36**	**301**	S	Sg	06 04 24.0	-3.4
T1204	**Amatrice, Fraz**	**0.37**	**150**	P	Pg	06 04 23.2	+0.6
T1204				S	Sb	06 04 29.7	-0.2
T1204				AML	AML		
	comp=N,1801μm,0.2s						
T1204				AML	AML		
	comp=E,2095μm,0.3s						
LNSS	**Leonessa**	**0.40**	**183**	⇑P	Pg	06 04 23.6	+0.5
LNSS				S	Sb	06 04 30.1	-0.5
LNSS				AML	AML		
	comp=N,3915μm,1.2s						
LNSS				AML	AML		
	comp=E,4350μm,0.6s						
LNSS				AML	AML		
	comp=N,3707μm,0.1s						
LNSS				AML	AML		
	comp=E,4350μm,1.4s						
LNSS				AML	AML		
	comp=E,3718μm,0.2s						
T1243	**Rocca Santa Ma**	**0.41**	**137**	P	Pg	06 04 23.9	+0.5
T1243				S	Sb	06 04 30.3	-0.8
SMA1	**SAN MARTINO**	**0.42**	**152**	P	Pg	06 04 24.0	+0.5
SMA1				AML	AML		
	comp=E,1705μm,0.7s						
SMA1				AML	AML		
	comp=N,1915μm,1.6s						
SMA1				AML	AML		
	comp=N,1794μm,0.6s						
SMA1				AML	AML		
	comp=E,1705μm,1.3s						
SMA1				AML	AML		
	comp=E,1701μm,0.5s						
OFFI	**Offida**	**0.46**	**98**	P	Pb	06 04 25.6	+0.1
OFFI				AML	AML		
	comp=E,3280μm,0.5s						
OFFI				AML	AML		
	comp=N,4520μm,0.5s						
OFFI				AML	AML		
	comp=E,3280μm,0.5s						
OFFI				AML	AML		
	comp=E,3280μm,1.5s						
OFFI				AML	AML		
	comp=N,4284μm,0.4s						
MURB	**Monte Urbino**	**0.48**	**304**	S	Sg	06 04 26.0	-4.9
T1211	**Morro Reatino**	**0.49**	**199**	P	Pg	06 04 25.3	+0.5
T1211				AML	AML		
	comp=N,2375μm,0.5s						
T1211				AML	AML		
	comp=E,2020μm,0.3s						
T1211				AML	AML		
	comp=E,1666μm,0.1s						
T1211				AML	AML		
	comp=N,2380μm,0.5s						
T1211				AML	AML		
	comp=E,1717μm,0.1s						
T1211				AML	AML		
	comp=N,1859μm,0.3s						
T1211				AML	AML		
	comp=N,1855μm,0.3s						
RM33	**Pellescritta (**	**0.50**	**167**	P	Pg	06 04 25.3	+0.3
RM33				S	Sb	06 04 33.5	-0.1
RM33				AML	AML		
	comp=E,1184μm,0.3s						
RM33				AML	AML		
	comp=N,1005μm,0.2s						
RM33				AML	AML		
	comp=E,1175μm,0.3s						
RM33				AML	AML		
	comp=N,999μm,1.3s						
RM33				AML	AML		
	comp=E,1184μm,0.3s						
RM33				AML	AML		
	comp=N,1008μm,0.2s						
RM33				AML	AML		
	comp=N,1002μm,1.3s						
RM33				AML	AML		
	comp=N,1000μm,1.3s						
RM33				AML	AML		
	comp=N,1005μm,0.2s						
RM33				AML	AML		
	comp=N,970μm,0.2s						
RM33				AML	AML		
	comp=E,1170μm,0.3s						
RM33				AML	AML		
	comp=E,1186μm,0.3s						
RM33				AML	AML		
	comp=E,1167μm,0.1s						
RM33				AML	AML		
	comp=E,1173μm,0.1s						
RM33				AML	AML		
	comp=N,1000μm,0.7s						
RM33				AML	AML		
	comp=N,1007μm,0.2s						
CAMP	**Campotosto**	**0.53**	**151**	P	Pg	06 04 25.7	+0.2
CAMP				AML	AML		
	comp=E,632μm,0.7s						
CAMP				AML	AML		
	comp=N,592μm,0.6s						
CAMP				AML	AML		
	comp=E,632μm,1.3s						
CAMP				AML	AML		
	comp=N,471μm,0.3s						
CAMP				AML	AML		
	comp=E,452μm,0.5s						
CESX	**Cesi**	**0.53**	**223**	⇑P	Pg	06 04 25.9	+0.3
CESX				AML	AML		
	comp=N,2570μm,0.6s						
CESX				AML	AML		
	comp=E,2825μm,0.6s						
CESX				AML	AML		
	comp=E,2563μm,0.4s						
CESX				AML	AML		
	comp=N,2034μm,0.5s						
CESX				AML	AML		
	comp=N,2570μm,1.4s						
TERO	**Teramo**	**0.55**	**133**	P	Pg	06 04 25.9	0.0
TERO				AML	AML		
	comp=N,1445μm,0.5s						
TERO				AML	AML		
	comp=E,1345μm,0.5s						
TERO				AML	AML		
	comp=E,1238μm,0.5s						
TERO				AML	AML		
	comp=N,1450μm,0.5s						
TERO				AML	AML		
	comp=N,1525μm,0.5s						
TERO				AML	AML		
	comp=N,1217μm,0.1s						
TERO				AML	AML		
	comp=N,1331μm,0.1s						
TERO				AML	AML		
	comp=E,1084μm,0.4s						
TERO				AML	AML		
	comp=E,1013μm,0.4s						
PP3	**Marolino**	**0.55**	**46**	S	Sg	06 04 28.0	-5.2
TRTR	**Tortoreto Alta**	**0.65**	**107**	⇑P	Pb	06 04 29.3	+0.6
TRTR				AML	AML		
	comp=E,2535μm,0.5s						
TRTR				AML	AML		
	comp=N,3185μm,0.7s						
TRTR				AML	AML		
	comp=N,3185μm,1.3s						
TRTR				AML	AML		
	comp=N,3182μm,0.7s						
TRTR				AML	AML		
	comp=E,2535μm,1.5s						
TRTR				AML	AML		
	comp=E,2536μm,0.5s						
GIGS	**Gran Sasso**	**0.66**	**146**	P	Pg	06 04 27.9	-0.2
GIGS				AML	AML		
	comp=E,264μm,0.5s						
GIGS				AML	AML		
	comp=N,167μm,0.6s						
GIGS				AML	AML		
	comp=N,166μm,0.6s						
GIGS				AML	AML		
	comp=N,167μm,0.6s						
GIGS				AML	AML		
	comp=E,229μm,0.4s						
GIGS				AML	AML		
	comp=E,264μm,1.5s						
AOI	**Ancona**	**0.68**	**35**	S	Sg	06 04 29.0	-8.3
FIAM	**Fiamignano**	**0.73**	**177**	P	Pg	06 04 28.9	-0.5
FIAM				AML	AML		
	comp=N,490μm,0.5s						
FIAM				AML	AML		
	comp=E,474μm,0.6s						
FIAM				AML	AML		
	comp=E,474μm,0.6s						
FIAM				AML	AML		
	comp=N,491μm,0.5s						
FAGN	**Fagnano**	**0.82**	**152**	⇓P	Pb	06 04 31.7	0.0
FAGN				AML	AML		
	comp=N,971μm,0.5s						
FAGN				AML	AML		
	comp=N,970μm,0.5s						
FAGN				AML	AML		
	comp=E,1200μm,0.5s						
FAGN				AML	AML		
	comp=E,1200μm,0.5s						
T0110	**Collepietro**	**0.93**	**145**	⇑P	Pg	06 04 33.1	-0.1
T0110				AML	AML		
	comp=N,994μm,0.4s						
T0110				AML	AML		
	comp=E,1030μm,0.5s						
T0110				AML	AML		
	comp=N,992μm,0.4s						
T0110				AML	AML		
	comp=E,1027μm,0.5s						
MYKA	**Terra Mystica**	**3.66**	**6**	*e*Pn	Pn	06 05 13.6	+1.7
	comp=E,2.9nm,0.3s						
ABTA	**Abfaltersbach**	**3.77**	**354**	*e*Pn	Pn	06 05 17.1	+3.6
	comp=E,5.0nm,0.4s						
KBA	**Koelnbreinsper**	**4.09**	**3**	*e*Pn	Pn	06 05 20.0	+2.0
	comp=E,3.0nm,0.3s						
IST3	**Stromboli F**	**4.50**	**158**	⇑P	Pn	06 05 25.3	+1.8
CONA	**Conrad Observa**	**5.31**	**21**	*e*Pn	Pn	06 05 35.7	+1.0
	comp=E,2.5nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.53**	**293**	⇑P	Pn	06 05 29.2	-8.5
KHC	**Kasperske Hory**	**6.14**	**3**	*e*PN	Pn	06 05 45.9	-0.2
KHC				*e*SN	Sn	06 06 51.7	-4.8

*IDC **27** 06:05:47.0±5.4, 6°.69S×129°.60E, h54km±57km, mb3.7/3, mbtmp4.1/6, ML4.2/3, Error ellipse: s-maj=114.5km s-min=20.0km az=76.0*

*NEIC **27** 06:05:52.5±2.3, 6°.52S±0°.06×130°.49E±0°.09, h110km±9km, mb4.0/10, Error ellipse: s-maj=14.4km s-min=7.4km az=64.0*

*DJA **27** 06:05:59.7±1.4, 5°S±10°×13°3E±1°7, h351km±12km, M4.2/4, MLv4.2/4*

ISC 27 06:05:51.0±0.6, 6°.43S±0°.05×130°.47E±0°.09, h100km, n45, σ1.9 87/49, mb4.1/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.75**	**152**		**Pn**	**06 06 21.2**	**+0.8**
SAUI				Sn	Sn	06 06 50.4	+7.6
BNDI	**Bandanaira**	**1.97**	**344**	P	**Pn**	**06 06 26.9**	**+3.7**
FAKI	**Fak Fak**	**3.91**	**27**		**Pn**	**06 06 51.5**	**+2.5**
FAKI	**Fak Fak**	**3.91**	**27**	P	**Pn**	**06 06 51.5**	**+2.5**
FAKI				S	**Sn**	**06 07 34.7**	**+0.7**
FAKI	**Fak Fak**	**3.91**	**27**	P	**Pn**	**06 06 51.9**	**+2.9**
SIJI	**Sorong**	**5.58**	**8**	P	**Pn**	**06 07 13.2**	**+1.5**
	7.6nm,0.3s,baz=124,slow=24,SNR=51						
SIJI				S	**Sn**	**06 08 11.6**	**-2.9**
	84nm,0.2s,baz=203,slow=23,SNR=14						
	22nm,0.3s						
SIJI	**Sorong**	**5.58**	**8**	P	**Pn**	**06 07 13.0**	**+1.4**
SIJI				S	**Sn**	**06 08 12.1**	**-2.4**
SWI	**Sorong**	**5.58**	**8**	P	**Pn**	**06 07 13.1**	**+1.4**
SWI				S	**Sn**	**06 08 12.1**	**-2.5**
MTN	**Manton Dam**	**6.41**	**174**		**Pn**	**06 07 24.0**	**+1.1**
SOEI	**Soe**	**6.97**	**241**		**Pn**	**06 07 30.1**	**-0.5**
MMRI	**Maumere**	**8.45**	**254**		**Pn**	**06 07 53.6**	**+3.0**
KNRA	**Kununurra**	**9.34**	**190**		**Pn**	**06 08 01.1**	**-1.7**
KNRA	**Kununurra**	**9.34**	**190**	P	**Pn**	**06 08 01.1**	**-1.7**
	25nm,0.7s						
WB0	**Warramunga Arr**	**13.80**	**164**		**Pn**	**06 08 59.4**	**-3.0**
WRAB	**Tennant Creek**	**13.95**	**165**	P	**Pn**	**06 09 01.9**	**-2.4**
	7.8nm,0.6s						
WRA	**Warramunga Arr**	**13.95**	**165**	P	**Pn**	**06 09 01.5**	**-2.9**
	1.1nm,0.3s,baz=334,slow=13,SNR=32						
WRA				S	Sn	06 11 26.9	-11
	8.1nm,0.6s,baz=348,slow=22,SNR=13						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**13.95**	**165**		**Pn**	**06 09 00.2**	**-4.2**
WB2	**Warramunga Arr**	**13.96**	**165**		**Pn**	**06 09 01.3**	**-3.2**
WR0	**Warramunga Arr**	**14.02**	**164**		**Pn**	**06 09 02.7**	**-2.6**
QIS	**Mount Isa**	**16.61**	**149**	P	**P**	**06 09 37.6**	**-1.1**
	7.4nm,1.2s						
AS31	**Alice Springs**	**17.46**	**169**	P	**P**	**06 09 47.0**	**-1.0**
AS31				IAmb	IAmb	06 09 51.4	
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**17.46**	**169**	P	**Pn**	**06 09 47.4**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=346,slow=8.9,SNR=37						
	comp=Z,2.5nm,0.4s						
ASAR	**Alice Springs**	**17.46**	**169**	P	**P**	**06 09 47.2**	**-0.8**
AS01	**Alice Springs**	**17.46**	**169**	P	**Pn**	**06 09 47.8**	**-0.6**
	comp=Z,7.8nm,1.0s						
MBWA	**Marble Bar**	**17.96**	**214**	P	**P**	**06 09 53.2**	**-0.4**
MBWA	**Marble Bar**	**17.96**	**214**	P	**Pn**	**06 09 56.2**	**+1.9**
PSA00	**Pilbara Seismi**	**18.23**	**213**	P	**P**	**06 09 56.2**	**-0.3**
PSA00				IAmb	IAmb	06 10 00.3	
	comp=Z,9.7nm,1.2s						
WRKA	**Warakurna**	**18.62**	**186**	P	**Pn**	**06 10 01.3**	**-0.9**
	comp=Z,10nm,0.9s						
OOD	**Oodnadatta**	**21.82**	**167**	P	**P**	**06 10 36.2**	**+1.0**
	comp=Z,16nm,0.7s						
MEEK	**Meekatharra**	**23.05**	**208**	P	**P**	**06 10 49.3**	**+1.4**
	comp=Z,12nm,1.3s						
MULG	**Mulgathing**	**23.97**	**172**	P	**P**	**06 10 57.2**	**+1.0**
	comp=Z,11nm,0.6s						
FORT	**Forrest**	**24.33**	**185**	P	**P**	**06 10 58.9**	**-0.5**
FORT				IAmb	IAmb	06 11 14.4	
	comp=Z,12nm,1.1s						
FORT	**Forrest**	**24.33**	**185**	P	**P**	**06 11 00.3**	**+0.9**
LCRK	**Leigh Creek**	**24.98**	**164**	P	**P**	**06 11 06.2**	**+0.8**
	comp=Z,26nm,0.7s						
BBOO	**Buckleboo**	**26.76**	**169**	P	**P**	**06 11 21.0**	**-0.5**
BBOO				IAmb	IAmb	06 11 50.5	
	comp=Z,15nm,1.4s						
BBOO	**Buckleboo**	**26.76**	**169**	P	**P**	**06 11 23.1**	**+1.6**
	comp=Z,15nm,1.9s						
STKA	**Stephens Creek**	**27.37**	**159**	P	**P**	**06 11 27.8**	**+0.9**
	comp=Z,3.8nm,1.0s,baz=330,slow=8.9,SNR=5.0						
	comp=Z,3.8nm,1.0s						
STKA	**Stephens Creek**	**27.37**	**159**	P	**P**	**06 11 25.2**	**-1.7**
CMSA	**Cobar Meteorol**	**28.76**	**152**	P	**P**	**06 11 40.9**	**+1.6**
	comp=Z,9.0nm,1.8s						
CASY	**Casey**	**61.34**	**189**	P	**P**	**06 15 56.8**	**+1.0**
MKAR	**Makanchi Array**	**68.00**	**326**	P	**P**	**06 16 39.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=125,slow=7.5,SNR=7.5						
	comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**72.96**	**173**	P	**P**	**06 17 09.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=324,slow=7.6,SNR=8.2						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**72.96**	**173**	P	**P**	**06 17 09.3**	**+0.2**
VNDA				IAmb	IAmb	06 17 13.8	
	comp=Z,2.2nm,1.4s						
SBA	**Scott Base**	**73.84**	**172**	P	**P**	**06 17 15.0**	**+0.7**
SBA				IAmb	IAmb	06 17 21.5	
	comp=Z,2.8nm,1.3s						
QSPA	**South Pole Qui**	**83.55**	**180**	P	**P**	**06 18 07.2**	**-0.6**

*IDC **27** 06:06:05.6±1.8, 15°.09S×175°.17W, h247km±36km, mb3.4/5, mbtmp4.0/6, Error ellipse: s-maj=148.3km s-min=18.3km az=149.0*

ISC 27 06:06:05.6±1.5, 15°.2S±0°.6×175°.1W±0°.2, h250km, n6, σ0.9 47/7, mb3.4/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.48**	**69**	P	**Pn**	**06 07 03.2**	**-0.3**
	31nm,0.4s,baz=27,slow=0.9,SNR=14						
AFI				S	**S**	**06 07 49.8**	**+0.3**
	28nm,0.3s,baz=65,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**48.27**	**257**	P	**P**	**06 14 22.3**	**+0.1**
	1.0nm,0.5s,baz=87,slow=7.1,SNR=2.8 1.0nm,0.5s						
ASAR	**Alice Springs**	**48.60**	**252**	P	**P**	**06 14 24.6**	**+0.1**
	8.4nm,0.5s,baz=86,slow=8.2,SNR=18 8.4nm,0.5s						
NVAR	**Mina Array Bea**	**75.29**	**43**	P	**P**	**06 17 22.4**	**+0.7**
	0.4nm,0.7s,baz=226,slow=8.1,SNR=3.7 0.4nm,0.7s						
ILAR	**Eielson Array**	**82.57**	**12**	P	**P**	**06 18 00.1**	**-0.2**
	0.8nm,1.1s,baz=222,slow=5.4,SNR=5.1 0.8nm,1.1s						
PDAR	**Pinedale Array**	**83.22**	**42**	P	**P**	**06 18 04.0**	**-0.4**
	0.5nm,0.6s,baz=223,slow=3.4,SNR=3.6 0.5nm,0.6s						

*TUL **27** 06:08:39±0.9, 35°.66N±0°.01×97°.16W±0°.01, h6km±3km, ML3.6, mb_Lg3.2/95(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=164.0*
*ANF **27** 06:08:39.1±0.3, 35°.71N×97°.12W, h6km, ML3.7/7, Error ellipse: s-maj=2.8km s-min=2.5km az=7.0*
*NEIC **27** 06:08:39.1±0.8, 35°.66N±0°.01×97°.16W±0°.01, h8km±1km, Error ellipse: s-maj=1.6km s-min=1.4km az=169.0*

ISC 27 06:08:39.0±0.9, 35°.66N±0°.02×97°.16W±0°.02, h7km±6km, n89, σ0°54/73, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.03**	**260**	Pg	**Pg**	**06 08 40.2**	**-0.2**
OK005				Sg	**Sg**	**06 08 41.1**	**-0.3**
OK025	**Westminster Rd**	**0.17**	**242**	Pg	**Pg**	**06 08 42.7**	**+0.2**
OK009	**Oakdale Elemen**	**0.23**	**250**		**Pg**	**06 08 43.9**	**+0.3**
OK029	**Liberty Lake**	**0.28**	**299**	Pg	**Pg**	**06 08 44.9**	**+0.3**
OK029				Sg	**Sg**	**06 08 49.0**	**+0.8**
OKCSW	**OKLAHOMA CITY**	**0.34**	**222**	Pg	**Pg**	**06 08 46.0**	**+0.2**
OKCSW				Sg	**Sg**	**06 08 51.1**	**+0.9**
OK031	**S. Brethren Rd**	**0.39**	**41**	Pg	**Pg**	**06 08 47.0**	**+0.4**
OK031				Sg	**Sg**	**06 08 52.7**	**+0.9**
OK011	**Prague**	**0.42**	**114**	Pg	**Pg**	**06 08 47.6**	**+0.4**
OK011				Sg	**Sg**	**06 08 53.7**	**+0.9**
OK033	**Mehan**	**0.42**	**25**	Pg	**Pg**	**06 08 47.6**	**+0.4**
OK033				Sg	**Sg**	**06 08 53.7**	**+0.9**
FNO	**Franklin**	**0.45**	**206**	Pg	**Pg**	**06 08 47.9**	**+0.2**
FNO				Sg	**Sg**	**06 08 54.5**	**+0.9**
OK034	**N. Norfolk Rd.**	**0.50**	**46**	Pg	**Pg**	**06 08 49.0**	**+0.3**
OK050	**Pawnee Station**	**0.75**	**11**		**Pg**	**06 08 53.4**	**-0.1**
OK049	**E0420 Rd and N**	**0.76**	**351**	Pg	**Pg**	**06 08 53.6**	**0.0**
OK046	**Pawnee Station**	**0.76**	**15**		**Pg**	**06 08 53.5**	**-0.2**
OK044	**Pawnee Station**	**0.77**	**22**	Pg	**Pg**	**06 08 53.6**	**-0.2**
OK048	**Pawnee Station**	**0.77**	**13**	Pg	**Pg**	**06 08 53.8**	**-0.2**
OK045	**Pawnee Station**	**0.81**	**13**		**Pg**	**06 08 54.4**	**-0.2**
OK051	**E0350 and S346**	**0.88**	**17**	Pg	**Pg**	**06 08 55.6**	**-0.4**
TUL1	**Leonard**	**1.14**	**77**	P	**Pg**	**06 08 59.7**	**-1.1**
	baz=258						
TUL1				S	**Sg**	**06 09 15.5**	**-0.2**
	baz=258						
X34A	**Smith Ranch, M**	**1.19**	**208**		**Pg**	**06 09 01.6**	**-0.3**
T35A	**Sooner Cattle**	**1.36**	**22**		**Pn**	**06 09 03.8**	**-0.6**
T35B	**Sooner Cattle**	**1.36**	**22**	P	**Pn**	**06 09 03.8**	**-0.6**
	baz=203						
T35B				S	**Sb**	**06 09 22.3**	**0.0**
	baz=203						
KAN13	**South Haven SW**	**1.38**	**349**		**Pn**	**06 09 04.5**	**-0.2**
OK032	**Salt Plains WL**	**1.43**	**324**		**Pn**	**06 09 05.2**	**-0.1**
KAN14	**Manchester OK**	**1.45**	**334**		**Pn**	**06 09 05.7**	**0.0**
KAN17	**Caldwell West**	**1.47**	**341**		**Pn**	**06 09 06.0**	**+0.1**
KAN09	**Caldwell North**	**1.52**	**346**		**Pn**	**06 09 07.0**	**+0.3**
OK038	**West end E0370**	**1.52**	**303**	Pn	**Pn**	**06 09 05.7**	**-0.9**
KAN01	**Argonia South**	**1.57**	**342**		**Pn**	**06 09 07.7**	**+0.4**
KS20	**Mayfield South**	**1.60**	**349**		**Pn**	**06 09 08.2**	**+0.5**
KS20				IAmb_Lg		06 09 33.0	
	comp=Z,110nm,0.7s						
WMOK	**Wichita Mounta**	**1.62**	**236**	Pn	**Pn**	**06 09 07.9**	**-0.1**
OK035	**E0210 Rd and N**	**1.64**	**310**	Pn	**Pn**	**06 09 08.6**	**+0.3**
U32A	**Winter Ranch,**	**1.66**	**296**		**Pn**	**06 09 09.0**	**+0.4**
U32A	**Winter Ranch,**	**1.66**	**296**	P	**Pn**	**06 09 09.2**	**+0.6**
	baz=115						
U32A				S	**Sg**	**06 09 32.0**	**-0.4**
	baz=115						
KS21	**Milan North St**	**1.67**	**346**		**Pn**	**06 09 09.5**	**+0.8**
KAN06	**Argonia West S**	**1.68**	**341**		**Pn**	**06 09 09.7**	**+0.8**
KAN06				IAmb_Lg		06 09 32.9	
	comp=Z,154nm,0.8s						
KAN08	**Anthony NE Sta**	**1.70**	**337**		**Pn**	**06 09 09.7**	**+0.6**
KAN08				IAmb_Lg		06 09 35.3	
	comp=Z,176nm,0.9s						
KAN16	**Harper SW Stat**	**1.73**	**335**		**Pn**	**06 09 10.2**	**+0.7**
KAN16				IAmb_Lg		06 09 38.2	
	comp=Z,92nm,0.8s						
X37A	**Clayton**	**1.81**	**126**	Pn	**Pn**	**06 09 11.1**	**+0.5**
X37A				IAmb_Lg		06 09 39.1	
	comp=Z,125nm,0.8s						
X37A	**Clayton**	**1.81**	**126**	P	**Pn**	**06 09 11.4**	**+0.7**
	baz=307						
X37A				S	**Sb**	**06 09 35.0**	**-0.4**
	baz=307						
Z35A	**Perchaven, San**	**2.33**	**182**		**Pn**	**06 09 17.4**	**-0.3**
Z35A				IAmb_Lg		06 09 54.8	
	comp=Z,82nm,1.0s						
Z35A	**Perchaven, San**	**2.33**	**182**	P	**Pn**	**06 09 18.8**	**+1.1**
	baz=1.9						
Z35A				S	**Sb**	**06 09 49.0**	**-1.2**
	baz=1.9						
U38A	**Gravette**	**2.38**	**70**	Pn	**Pn**	**06 09 18.4**	**0.0**
U38A				IAmb_Lg		06 09 55.9	
	comp=Z,93nm,0.9s						
HHAR	**Hobbs**	**2.68**	**76**		**Pn**	**06 09 22.7**	**+0.1**
HHAR	**Hobbs**	**2.68**	**76**	P	**Pn**	**06 09 23.3**	**+0.7**
	baz=258						
Z38A	**Mt. Pleasant**	**2.99**	**143**		**Pn**	**06 09 26.9**	**+0.1**
MIAR	**Mount Ida**	**3.14**	**110**	P	**Pn**	**06 09 30.3**	**+1.4**
	baz=292						
KSU1	**Kansas State U**	**3.46**	**7**		**Pn**	**06 09 33.2**	**-0.1**
KSU1				IAmb_Lg		06 10 36.8	
	comp=Z,87nm,0.9s						
ABTX	**Abilene, Hawle**	**3.66**	**215**	Pn	**Pn**	**06 09 35.8**	**-0.3**
ABTX				IAmb_Lg		06 10 39.1	
	comp=Z,55nm,0.9s						
WHTX	**Lake Whitney,**	**3.67**	**184**		**Pn**	**06 09 35.9**	**-0.2**
S39A	**Bolivar**	**3.69**	**56**		**Pn**	**06 09 36.6**	**+0.1**
S39A				IAmb_Lg		06 10 39.2	
	comp=Z,82nm,0.8s						
CBKS	**Cedar Bluff**	**3.76**	**328**		**Pn**	**06 09 37.4**	**-0.1**
CBKS				IAmb_Lg		06 10 39.4	
	comp=Z,43nm,0.7s						
AMTX	**Amarillo**	**3.78**	**259**		**Pn**	**06 09 37.5**	**-0.3**
AMTX				IAmb_Lg		06 10 45.3	
	comp=Z,47nm,0.8s						
237A	**Washetta, Mont**	**3.82**	**163**		**Pn**	**06 09 37.6**	**-0.6**
WLAR	**White Oak Lake**	**3.87**	**119**		**Pn**	**06 09 39.0**	**0.0**
WLAR				IAmb_Lg		06 10 51.5	
	comp=Z,54nm,0.7s						
WHAR	**Wooly Hollow**	**3.99**	**94**		**Pn**	**06 09 40.5**	**0.0**
WHAR				IAmb_Lg		06 10 47.6	
	comp=Z,47nm,0.9s						
UALR	**University of**	**4.04**	**101**		**Pn**	**06 09 41.0**	**-0.2**
UALR				IAmb_Lg		06 10 54.0	
	comp=Z,68nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.10**	**85**		**Pn**	**06 09 42.1**	**+0.1**
FCAR				IAmb_Lg		06 10 53.3	
	comp=Z,64nm,0.9s						
MGMO	**Mountain Grove**	**4.21**	**68**		**Pn**	**06 09 44.1**	**+0.4**
MGMO				IAmb_Lg		06 10 54.1	
	comp=Z,55nm,0.9s						
R40A	**Maddies Statio**	**4.71**	**55**		**Pn**	**06 09 50.6**	**0.0**
R40A				IAmb_Lg		06 11 10.6	
	comp=Z,28nm,0.8s						
R40A	**Maddies Statio**	**4.71**	**55**	P	**Pn**	**06 09 50.6**	**0.0**
	baz=238						
CCAR	**Cane Creek**	**4.76**	**110**	IAmb_Lg		06 11 19.8	
	comp=Z,61nm,1.1s						
435B	**Jarrell**	**4.88**	**184**	IAmb_Lg		06 11 27.7	
	comp=Z,59nm,0.9s						
LCAR	**Lake Charles**	**4.89**	**83**		**Pn**	**06 09 52.1**	**-0.8**
P38A	**Dawn**	**4.89**	**35**	IAmb_Lg		06 11 24.2	
	comp=Z,39nm,0.8s						
N33A	**J Bar K, Exete**	**5.08**	**357**	IAmb_Lg		06 11 23.3	
	comp=Z,40nm,0.7s						
CCM	**Cathedral Cave**	**5.31**	**61**	IAmb_Lg		06 11 29.7	
	comp=Z,35nm,0.8s						
P40A	**Paris**	**5.60**	**45**	IAmb_Lg		06 11 42.2	
	comp=Z,48nm,0.8s						
143A	**Socs Landing,**	**5.61**	**120**	IAmb_Lg		06 11 52.0	
	comp=Z,35nm,0.8s						
JCT	**Junction City**	**5.62**	**204**	IAmb_Lg		06 11 45.9	
	comp=Z,41nm,0.7s						
GNAR	**Gosnell**	**5.81**	**85**	IAmb_Lg		06 11 43.9	
	comp=Z,55nm,1.0s						
T25A	**Trinidad**	**6.04**	**286**	IAmb_Lg		06 11 56.2	
	comp=Z,53nm,0.8s						
SLM	**Saint Louis**	**6.27**	**60**	IAmb_Lg		06 11 57.4	
	comp=Z,41nm,1.1s						
OXF	**Oxford**	**6.45**	**98**	IAmb_Lg		06 12 08.6	
	comp=Z,41nm,1.1s						
Y45A	**Yeager Farm, C**	**6.52**	**104**	IAmb_Lg		06 12 11.4	
	comp=Z,17nm,0.7s						
OGNE	**Ogallala**	**6.52**	**325**	IAmb_Lg		06 12 06.3	
	comp=Z,42nm,0.8s						
W45A	**Hickory Valley**	**6.53**	**92**	IAmb_Lg		06 12 22.4	
	comp=Z,37nm,0.7s						
S44A	**Carbondale**	**6.67**	**70**	IAmb_Lg		06 12 10.7	
	comp=Z,29nm,0.9s						
735A	**Kenedy**	**6.81**	**185**	IAmb_Lg		06 12 21.7	
	comp=Z,22nm,0.7s						
SDCO	**Great Sand Dun**	**7.02**	**290**	IAmb_Lg		06 12 26.6	
	comp=Z,15nm,1.0s						
Q24A	**Divide**	**7.17**	**300**	IAmb_Lg		06 12 28.4	
	comp=Z,25nm,0.7s						
Q44A	**Meyer Farm, Va**	**7.25**	**61**	IAmb_Lg		06 12 37.2	
	comp=Z,29nm,0.8s						
833A	**Chaparral WMA,**	**7.56**	**195**	IAmb_Lg		06 12 43.3	
	comp=Z,19nm,0.9s						
OLIL	**Olney**	**7.85**	**64**	IAmb_Lg		06 12 57.6	
	comp=Z,24nm,0.9s						
USIN	**University of**	**7.95**	**70**	IAmb_Lg		06 13 02.5	
	comp=Z,34nm,0.9s						
O44A	**Mansfield**	**8.20**	**54**	IAmb_Lg		06 12 59.2	
	comp=Z,27nm,0.7s						
PHWY	**Pilot Hill**	**8.61**	**313**	IAmb_Lg		06 13 29.7	
	comp=Z,23nm,1.3s						
N23A	**Red Feather La**	**8.66**	**310**	IAmb_Lg		06 13 23.3	
	comp=Z,27nm,0.8s						
P46A	**Rosedale**	**8.82**	**60**	IAmb_Lg		06 13 23.4	
	comp=Z,30nm,0.8s						
I37A	**Lemond, Waseca**	**8.83**	**18**	IAmb_Lg		06 13 28.6	
	comp=Z,29nm,0.9s						

*IDC **27** 06:30:41.4±1.9, 1°.02N×124°.74E, h0km, mb3.6/3, mbtmp3.7/3, MS3.0/1, Error ellipse: s-maj=186.7km s-min=26.8km az=64.0*
*DJA **27** 06:30:58.5±0.5, 0°.5±3°.×12°.4E±°, h138km±6km, M3.9/7, MLv3.9/7*

ISC 27 06:30:58.8±1.1, 0°.06S±0°.08×123°.55E±0°.07, h150km, n11, σ1°88/15, mb3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.87**	**322**	P	**Pn**	**06 31 23.9**	**+1.3**
GTOI				S	**Sn**	**06 31 42.4**	**+1.7**
LUWI	**Luwuk**	**1.25**	**218**	P	**Pn**	**06 31 26.3**	**+0.4**
LUWI				S	**Sn**	**06 31 46.4**	**-0.2**
MRSI	**Marisa**	**1.69**	**288**	P	**Pn**	**06 31 29.3**	**-1.2**
MRSI				S	**Sn**	**06 31 51.6**	**-3.1**
APSI	**Ampana**	**2.08**	**246**	P	**Pn**	**06 31 35.5**	**+0.6**
APSI				S	**Sn**	**06 32 02.1**	**-0.5**
SANI	**Sanana**	**3.14**	**129**	P	**Pn**	**06 31 47.3**	**-0.7**
SANI				S	**Sn**	**06 32 22.9**	**-3.1**
MPSI	**Mapaga**	**3.67**	**276**	P	**Pn**	**06 31 55.4**	**+0.6**
MTKI	**Muara Teweh, K**	**8.70**	**264**	P	**Pn**	**06 33 01.4**	**-0.2**
WRA	**Warramunga Arr**	**22.41**	**152**	P	**P**	**06 35 46.3**	**+1.1**
	1.6nm,0.4s,baz=334,slow=10,SNR=47 1.6nm,0.4s						
ASAR	**Alice Springs**	**25.53**	**158**	P	**P**	**06 36 17.2**	**+3.5**
	0.3nm,0.5s,baz=346,slow=14,SNR=6.6 0.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**44.70**	**9**	LR	LR	06 56 55.4	
	comp=Z,19nm,21.4s,baz=77,slow=36						
MKAR	**Makanchi Array**	**58.95**	**328**	P	**P**	**06 40 41.1**	**-1.3**
	0.3nm,0.3s,baz=124,slow=8.7,SNR=3.7 0.3nm,0.3s						

*IDC **27** 06:37:21.5±2.3, 40°.42N×124°.29W, h0km, mb2.9/2, mbtmp3.4/5, ML3.7/3, MS3.1/6, Error ellipse: s-maj=27.8km s-min=10.4km az=100.0*
*NEIC **27** 06:37:23.0±1.5, 40°.37N±0°.02×124°.56W±0°.08, h31km±9km, Error ellipse: s-maj=8.5km s-min=3.2km az=83.0*
*NCEDC **27** 06:37:23.6±1.8, 40°.35N±0°.03×124°.55W±0°.06, h24km±7km, Mwr4.1/4, ML3.6/86(NEIC), Error ellipse: s-maj=6.4km s-min=3.5km az=79.0*
*NEIC **27** 06:37:23.9, 40°.37N×124°.52W, h33km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.26; $M_{\theta\theta}$-1.87; $M_{\phi\phi}$ 1.61; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.59; $M_{\phi r}$0.14; Fault plane solution: $M_0$1.85000×10^{15} NP1:φs305.56000°, δ85.51000°, λ177.15000°. NP2:φs35.78000°, δ87.16000°, λ4.50000°. Principal axes: T 1.7169, Plg5.0000°, Azm261.0000°; N 0.2496, Plg85.0000°, Azm68.0000°; P -1.9665, Plg1.0000°, Azm171.0000°;*

ISC 27 06:37:21.8±1.7, 40°.37N±0°.04×124°.66W±0°.09, h28km±10km, n231, σ1°18/228, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.27**	**66**		**Pn**	**06 37 29.8**	**-0.1**
KCTM					**Sn**	**06 37 34.8**	**-0.3**
KSMM	**Slide Mountain**	**0.41**	**116**		**Pb**	**06 37 31.0**	**+0.2**
KMPM	**Mount Pierce**	**0.41**	**83**		**Pb**	**06 37 31.1**	**+0.3**
KMPM					**Sb**	**06 37 36.9**	**-0.1**
KCRM	**Chalk Rock**	**0.64**	**84**		**Pb**	**06 37 34.4**	**-0.2**
JCC	**Jacoby Creek,**	**0.66**	**47**		**Pb**	**06 37 34.4**	**-0.3**
JCC				IAML		06 37 43.1	
	comp=E,4μm,0.8s						
JCC	**Jacoby Creek,**	**0.66**	**47**		**Sb**	**06 37 42.6**	**-0.9**
KMRM	**Mail Ridge**	**0.74**	**101**		**Pb**	**06 37 36.2**	**+0.1**
KMRM					**Sn**	**06 37 45.6**	**-1.1**
KHMM	**Horse Mountain**	**0.87**	**54**		**Pn**	**06 37 37.9**	**-0.4**
KHMM					**Sb**	**06 37 48.4**	**-1.4**
KRPM	**Rodgers**	**0.93**	**31**		**Pn**	**06 37 38.7**	**-0.3**
KRPM					**Sn**	**06 37 49.7**	**-1.7**
KRPM				IAML		06 37 50.8	
	comp=E,3μm,0.8s						
KBSM	**Bell Springs**	**0.93**	**118**		**Pn**	**06 37 38.6**	**-0.4**
KIPM	**Iron Peak**	**1.06**	**121**		**Pn**	**06 37 40.5**	**-0.4**
KCPM	**Cahto Peak**	**1.07**	**129**		**Pn**	**06 37 40.6**	**-0.4**
KHBM	**Hayfork Bally**	**1.14**	**75**		**Pn**	**06 37 41.3**	**-0.7**
KFPM	**Farley Peak**	**1.19**	**127**		**Pn**	**06 37 42.2**	**-0.4**
KBNM	**Bluenose Ridge**	**1.22**	**112**		**Pn**	**06 37 43.0**	**0.0**
GTC	**Three Chop Rid**	**1.29**	**138**		**Pn**	**06 37 43.5**	**-0.4**
KRMB	**Red Mountain**	**1.29**	**26**		**Pn**	**06 37 44.0**	**0.0**
KRMB				IAML		06 37 59.4	
	comp=N,2μm,0.3s						
KOMM	**Orleans Mounta**	**1.29**	**45**		**Pn**	**06 37 43.8**	**-0.2**
LBPM	**Beegum Peak**	**1.36**	**91**		**Pn**	**06 37 44.3**	**-0.7**
GNAM	**Navarro Ridge**	**1.41**	**146**		**Pn**	**06 37 45.3**	**-0.3**
LGPM	**Granite Peak**	**1.50**	**68**		**Pn**	**06 37 46.4**	**-0.4**
GWRM	**Wonder Ranch**	**1.56**	**137**		**Pn**	**06 37 47.3**	**-0.4**
GHOM	**Hamilton Openi**	**1.58**	**146**		**Pn**	**06 37 47.6**	**-0.3**
GHMM	**Hull Mountain**	**1.59**	**123**		**Pn**	**06 37 47.7**	**-0.5**
GVV	**Valley View**	**1.63**	**111**		**Pn**	**06 37 48.8**	**+0.1**
LBKM	**Bonanza King**	**1.68**	**64**		**Pn**	**06 37 49.1**	**-0.3**
GGUM	**Gualala**	**1.75**	**149**		**Pn**	**06 37 50.0**	**-0.4**
KTRM	**Thompson Ridge**	**1.82**	**32**		**Pn**	**06 37 51.3**	**0.0**
GHLM	**Highland Sprin**	**1.83**	**136**		**Pn**	**06 37 51.0**	**-0.4**
HOPS	**Hopland Field**	**1.84**	**138**	Pn	**Pn**	**06 37 51.1**	**-0.3**
KBO	**Bosley Butte**	**1.87**	**10**		**Pn**	**06 37 51.9**	**-0.1**
KBO				IAML		06 38 14.4	
	comp=E,818nm,0.3s						
GHGM	**Hogback Ridge**	**1.88**	**131**		**Pn**	**06 37 51.8**	**-0.3**
GCK	**Clark Valley**	**1.90**	**115**		**Pn**	**06 37 53.0**	**+0.7**
GTSM	**Trough Springs**	**1.90**	**123**		**Pn**	**06 37 52.2**	**-0.2**
LTCM	**Tuscan Springs**	**1.94**	**94**		**Pn**	**06 37 52.8**	**-0.1**
LAMM	**Antelope Mount**	**1.98**	**50**		**Pn**	**06 37 53.6**	**+0.1**
GMKM	**Mount Konoctai**	**2.01**	**133**		**Pn**	**06 37 54.0**	**+0.2**
YBH	**Yreka Blue Hor**	**2.01**	**47**	Pn	**Pn**	**06 37 53.9**	**+0.1**
	comp=E,38nm,0.3s,baz=234,slow=5.6,SNR=305						
YBH				Lg	Lg	06 38 17.1	
	comp=E,108nm,0.3s,baz=124,slow=20,SNR=24						
YBH				LR	LR	06 38 29.7	
	comp=E,75nm,21.3s,baz=284,slow=38						
YBH	**Yreka Blue Hor**	**2.01**	**47**	Pn	**Pn**	**06 37 54.1**	**+0.3**
YBH				IAML		06 38 19.5	
	comp=N,615nm,0.4s						
YBH				IAML		06 38 19.8	
	comp=E,585nm,0.6s						
GPMM	**Pine Mountain**	**2.01**	**138**		**Pn**	**06 37 55.2**	**+1.3**
LCSM	**College of the**	**2.01**	**58**		**Pn**	**06 37 54.4**	**+0.5**
GACM	**Adobe Creek**	**2.04**	**136**		**Pn**	**06 37 54.0**	**-0.2**
LSHM	**Sage Hen Hill**	**2.04**	**77**		**Pn**	**06 37 54.3**	**+0.1**
GBMM	**Baldy Mountain**	**2.07**	**126**		**Pn**	**06 37 55.0**	**+0.3**
GSSM	**Skaggs Springs**	**2.09**	**142**		**Pn**	**06 37 54.6**	**-0.4**
GSGM	**Seigler Mounta**	**2.12**	**134**		**Pn**	**06 37 57.5**	**+2.2**
GWKM	**Walker Ridge**	**2.13**	**127**		**Pn**	**06 37 55.6**	**+0.2**
M03C	**McCloud**	**2.13**	**64**		**Pn**	**06 37 55.9**	**+0.4**
GBGM	**Boggs Mountain**	**2.18**	**135**		**Pn**	**06 37 57.0**	**+0.8**
GCRM	**Castle Rock Sp**	**2.19**	**136**		**Pn**	**06 37 56.5**	**+0.2**
LMPM	**Military Pass**	**2.20**	**59**		**Pn**	**06 37 57.8**	**+1.2**
GAXM	**Alexander Vall**	**2.21**	**138**		**Pn**	**06 37 56.5**	**-0.1**
B040	**Montague**	**2.24**	**48**		**Pn**	**06 37 57.5**	**+0.6**
LHEM	**Herd Peak**	**2.24**	**55**		**Pn**	**06 37 57.9**	**+0.8**
NMTM	**Middletown**	**2.31**	**132**		**Pn**	**06 37 58.5**	**+0.5**
LBFM	**Black Fox Moun**	**2.32**	**64**		**Pn**	**06 37 58.8**	**+0.6**
NHSM	**Mount Saint He**	**2.33**	**137**		**Pn**	**06 37 58.2**	**0.0**
MAC	**Mark West Spri**	**2.35**	**140**		**Pn**	**06 37 58.6**	**+0.1**
LMEM	**Manzanita Entr**	**2.36**	**85**		**Pn**	**06 37 59.1**	**+0.3**
LCMM	**Colby Mountain**	**2.41**	**94**		**Pn**	**06 37 59.4**	**-0.1**
OSUM	**Sutter Buttes**	**2.42**	**116**		**Pn**	**06 37 58.8**	**-0.7**
LRDM	**Redding Peak**	**2.44**	**87**		**Pn**	**06 38 00.2**	**+0.4**
OGOM	**Van Goodin Ran**	**2.44**	**106**		**Pn**	**06 37 58.9**	**-0.9**
LGMM	**Garner Mountai**	**2.47**	**59**		**Pn**	**06 38 01.0**	**+0.7**
HATC	**Hat Creek Radi**	**2.48**	**79**		**Pn**	**06 38 00.9**	**+0.6**
SUTB	**Sutter Butte**	**2.49**	**116**		**Pn**	**06 37 59.6**	**-0.7**
NTYM	**Taylor**	**2.51**	**141**		**Pn**	**06 38 00.3**	**-0.3**
KEBM	**Edson Butte**	**2.52**	**5**		**Pn**	**06 38 01.0**	**+0.2**
KEBM				IAML		06 38 47.2	
	comp=N,166nm,1.1s						
KEBM				IAML		06 38 49.8	
	comp=E,153nm,0.8s						
LTIM	**Timbered Crate**	**2.54**	**70**		**Pn**	**06 38 01.4**	**+0.2**
NBPM	**Berryessa Peak**	**2.55**	**131**		**Pn**	**06 38 02.3**	**+1.1**
ORV	**Oroville**	**2.56**	**107**		**Pn**	**06 38 00.9**	**-0.5**
ORV				IAML		06 38 30.8	
	comp=N,227nm,0.2s						
ORV				IAML		06 38 32.1	
	comp=E,347nm,0.3s						
LBCM	**Butte Creek Ri**	**2.56**	**78**		**Pn**	**06 38 01.8**	**+0.2**
HUMO	**Hull Mountain**	**2.58**	**29**	Pn	**Pn**	**06 38 02.2**	**+0.6**
HUMO				IAML		06 38 34.2	
	comp=N,280nm,0.5s						
HUMO				IAML		06 38 34.9	
	comp=E,269nm,0.4s						
PAM	**Palermo**	**2.58**	**110**		**Pn**	**06 38 01.1**	**-0.5**
OWYM	**Wyandotte**	**2.60**	**109**		**Pn**	**06 38 01.3**	**-0.7**
MCCM	**Marconi Confer**	**2.61**	**148**	Pn	**Pn**	**06 38 02.0**	**0.0**
MCCM				IAML		06 38 32.1	
	comp=E,178nm,0.3s						
LASM	**Arnica Sink**	**2.64**	**61**		**Pn**	**06 37 59.9**	**-2.8**
CVS	**Carmenet Viney**	**2.64**	**139**		**Pn**	**06 38 02.1**	**-0.4**
OHCM	**Honcut**	**2.65**	**112**		**Pn**	**06 38 01.7**	**-0.9**
NDHM	**Dunnigan Hills**	**2.66**	**126**		**Pn**	**06 38 02.6**	**0.0**
NBRB	**Beebe Ranch Br**	**2.66**	**141**		**Pn**	**06 38 02.6**	**-0.2**
NAPC	**Atlas Peak**	**2.68**	**135**		**Pn**	**06 38 03.2**	**+0.1**
NPRM	**Point Reyes**	**2.69**	**151**		**Pn**	**06 38 02.8**	**-0.3**
KPK	**Kanaka Peak**	**2.69**	**106**		**Pn**	**06 38 03.2**	**-0.1**
NOLM	**Olema**	**2.74**	**147**		**Pn**	**06 38 03.6**	**-0.2**
SNT	**Sears Point**	**2.77**	**141**		**Pn**	**06 38 03.7**	**-0.5**
DBO	**Dodson Butte**	**2.95**	**21**		**Pn**	**06 38 08.2**	**+1.5**
DBO				IAML		06 38 59.5	
	comp=N,112nm,0.8s						
FARB	**Farallon Islan**	**2.96**	**154**		**Pn**	**06 38 06.8**	**0.0**
CPMM	**Point Molate**	**2.98**	**143**		**Pn**	**06 38 07.1**	**0.0**
CSPM	**San Pablo Ridg**	**3.02**	**142**		**Pn**	**06 38 08.2**	**+0.5**
CPIM	**Pinole Ridge**	**3.04**	**141**		**Pn**	**06 38 08.8**	**+0.8**
JPRM	**Presidio of Sa**	**3.08**	**146**		**Pn**	**06 38 08.2**	**-0.3**
BL67	**Building 67, L**	**3.11**	**142**		**Pn**	**06 38 09.4**	**+0.4**
VAK	**Adit at Lawren**	**3.11**	**142**		**Pn**	**06 38 09.

BJOM	**Mount Johnson**	**4.56**	**144**		**Pn**	**06 38 28.2 -0.6**
BJCM	**Johnson Can.**	**4.59**	**145**		**Pn**	**06 38 28.5 -0.8**
HAST	**Hastings Reser**	**4.66**	**147**		**Pn**	**06 38 29.4 -0.9**
H04A	**Detroit Lake**	**4.69**	**22**	Pn	**Pn**	**06 38 32.2 +1.7**
H04A				IAML		06 39 26.2
	comp=N,43nm,0.2s					
H04A				IAML		06 39 31.0
	comp=E,48nm,0.4s					
BPOM	**Post Ranch**	**4.71**	**150**		**Pn**	**06 38 30.9 -0.1**
BBGB	**Big Mountain B**	**4.73**	**142**		**Pn**	**06 38 31.4 +0.1**
BBGB				IAML		06 39 42.5
	comp=E,76nm,0.6s					
BPIM	**Pinnacles**	**4.74**	**144**		**Pn**	**06 38 30.5 -0.9**
BMSM	**Mercy Hot Spri**	**4.78**	**139**		**Pn**	**06 38 32.7 +0.7**
MHDM	**Hidden Dam**	**4.94**	**130**		**Pn**	**06 38 36.7 +2.7**
RYN	**Ryan**	**5.05**	**108**		**Pn**	**06 38 36.2 +0.5**
MDPB	**Devils Postpil**	**5.13**	**120**		**Pn**	**06 38 38.0 +1.1**
MDPB				IAML		06 40 07.1
	comp=N,21nm,0.6s					
PMPB	**Monarch Peak**	**5.13**	**143**		**Pn**	**06 38 37.2 +0.4**
PMPB				IAML		06 39 17.6
	comp=N,55nm,4.9s					
OMMB	**Old Mammoth Mi**	**5.20**	**120**	Pn	**Pn**	**06 38 38.8 +0.9**
LHV	**Little Huntoon**	**5.22**	**112**		**Pn**	**06 38 38.2 +0.4**
LHV				IAML		06 40 19.3
	comp=E,34nm,3.4s					
LHV				IAML		06 40 20.9
	comp=N,24nm,2.0s					
KVN	**Kaiserville**	**5.23**	**102**		**Pn**	**06 38 38.4 +0.2**
NVAR	**Mina Array Bea**	**5.29**	**109**	Pn	**Pn**	**06 38 39.9 +0.9**
	comp=N,3.3nm,0.3s,baz=287,slow=14,SNR=49					
NVAR				LR	LR	06 40 33.3
	comp=N,96nm,19.7s,baz=262,slow=37					
	comp=N,4.0nm,0.4s					
I07A	**Izee**	**5.33**	**44**	Pn	**Pn**	**06 38 41.4 +1.8**
I07A				IAML		06 41 07.2
	comp=E,22nm,4.9s					
PHSB	**Hesperia Broad**	**5.35**	**147**		**Pn**	**06 38 39.6 -0.1**
NV11	**Mina Array Sit**	**5.39**	**109**		**Pn**	**06 38 41.3 +0.8**
NV11				IAML		06 40 32.5
	comp=E,21nm,3.6s					
J08A	**Circle Bar Ran**	**5.50**	**55**		**Pn**	**06 38 42.4 +0.5**
PCMM	**Cholame Hills**	**5.65**	**142**		**Pn**	**06 38 44.3 +0.4**
BMN	**Battle Mountai**	**5.68**	**87**		**Pn**	**06 38 44.4 0.0**
VOG	**Valley Oaks Go**	**5.79**	**133**	P	**Pn**	**06 38 46.6 +0.9**
	baz=316					
VES	**Vestal, Richgr**	**6.30**	**134**	P	**Pn**	**06 38 54.2 +1.4**
	baz=318,SNR=11					
CWC	**Cottonwood Cre**	**6.48**	**125**	P	Pn	06 39 00.6 +5.2
	baz=310					
GRAC	**Grapevine Rang**	**6.62**	**118**	P	Pn	06 39 02.0 +4.8
	baz=303					
PKM	**Mcpherson Peak**	**6.68**	**143**	P	**Pn**	**06 38 59.2 +1.0**
	baz=327,SNR=5.5					
ISA	**Isabella, Lake**	**6.77**	**132**	P	**Pn**	**06 39 02.0 +2.6**
	baz=316,SNR=41					
BCW	**Bitter Crk WRg**	**6.83**	**141**		**Pn**	**06 39 00.2 +0.1**
ARVC	**Arvin**	**6.97**	**137**	P	**Pn**	**06 39 03.7 +1.7**
	baz=321,SNR=18					
BMO	**Blue Mountains**	**7.04**	**48**		**Pn**	**06 39 04.0 +1.1**
HAWA	**Hanford**	**7.08**	**30**	Pn	**Pn**	**06 39 04.8 +1.3**
ELK	**Elko**	**7.18**	**84**	Pn	**Pn**	**06 39 05.6 +0.5**
	comp=E,0.2nm,0.3s,baz=280,slow=16,SNR=7.4					
	comp=E,1.6nm,0.6s					
ELK	**Elko**	**7.18**	**84**		**Pn**	**06 39 05.5 +0.4**
MFID	**Camas Ranch**	**7.26**	**62**		**Pn**	**06 39 06.7 +0.7**
R11A	**Troy Canyon, C**	**7.31**	**103**	Pn	**Pn**	**06 39 06.6 -0.2**
R11A	**Troy Canyon, C**	**7.31**	**103**	P	**Pn**	**06 39 07.4 +0.5**
	baz=289					
LRMC	**Laurel Mtn Rad**	**7.36**	**129**	P	**Pn**	**06 39 09.5 +2.1**
	baz=314					
CCAC	**Calif City Air**	**7.40**	**133**		**Pn**	**06 39 09.2 +1.3**
OSI	**Osito Audit: C**	**7.43**	**139**	P	**Pn**	**06 39 10.7 +2.4**
	baz=323					
LTY	**Liberty**	**7.47**	**21**		**Pn**	**06 39 10.6 +1.8**
EDW2	**Edwards Air Fo**	**7.61**	**134**	P	**Pn**	**06 39 12.9 +2.0**
	baz=318,SNR=21					
PLID	**Pearl Lake**	**7.93**	**51**		**Pn**	**06 39 16.9 +1.6**
GSC	**Goldstone, Bar**	**8.01**	**127**		**Pn**	**06 39 15.7 -0.6**
GSC	**Goldstone, Bar**	**8.01**	**127**	P	**Pn**	**06 39 19.8 +3.5**
	baz=312,SNR=23					
PASC	**Pasadena Art C**	**8.05**	**138**		**Pn**	**06 39 18.2 +1.4**
RRX	**Edison Barstow**	**8.18**	**130**	P	**Pn**	**06 39 22.0 +3.4**
	baz=315					
HLID	**Hailey**	**8.27**	**64**	Pn	**Pn**	**06 39 20.5 +0.5**
HLID	**Hailey**	**8.27**	**64**	P	**Pn**	**06 39 22.6 +2.6**
	baz=250,SNR=11					
BFSC	**Mount Baldy Ra**	**8.28**	**135**	P	**Pn**	**06 39 21.7 +1.7**
	baz=320,SNR=10					
TUQ	**Turquoise Moun**	**8.48**	**123**	P	**Pn**	**06 39 27.2 +4.4**
	baz=308					
HEC	**Hector,Ludlow**	**8.61**	**127**	P	**Pn**	**06 39 27.8 +3.3**
	baz=313					
BBRC	**Big Bear Solar**	**8.66**	**132**	P	**Pn**	**06 39 27.5 +2.1**
	baz=317					
ELS	**Elsinore Mount**	**8.85**	**137**	Pn	**Pn**	**06 39 28.6 +0.7**
MURC	**Murrieta**	**9.01**	**136**	P	**Pn**	**06 39 30.8 +0.8**
	baz=321					
GMRC	**Granite Mounta**	**9.06**	**125**	P	**Pn**	**06 39 31.6 +0.9**
	baz=311					
DUG	**Dugway, Tooele**	**9.06**	**87**	P	**Pn**	**06 39 32.2 +1.5**
	baz=275,SNR=8.5					
BELC	**Belle Mtn. Jos**	**9.38**	**130**	P	**Pn**	**06 39 37.4 +2.2**
	baz=316,SNR=12					
PFO	**Pinyon Flats O**	**9.40**	**133**	Pn	**Pn**	**06 39 37.4 +2.0**
	comp=E,0.8nm,0.3s,baz=310,slow=12,SNR=11					
PFO				LR	LR	06 43 33.7
	comp=E,182nm,18.6s,baz=322,slow=40					
	comp=E,3.3nm,0.5s					
PFO	**Pinyon Flats O**	**9.40**	**133**	Pn	**Pn**	**06 39 37.2 +1.8**
PFO	**Pinyon Flats O**	**9.40**	**133**	P	**Pn**	**06 39 37.0 +1.6**
	baz=319					
TPFO	**Pinon Flats**	**9.41**	**133**	P	**Pn**	**06 39 36.8 +1.3**
	baz=319					
NEW	**Newport**	**9.56**	**32**	LR	LR	06 43 45.0
	comp=E,82nm,19.4s,baz=232,slow=41					
IRM	**Iron Mountain**	**9.79**	**126**	P	**Pn**	**06 39 43.0 +2.3**
	baz=312					
BC3	**Big Chuckawall**	**9.95**	**129**	P	**Pn**	**06 39 44.6 +1.7**
	baz=315,SNR=11					
MONP2	**Monument Peak**	**9.97**	**136**	P	**Pn**	**06 39 45.5 +2.3**
	baz=321					
MSO	**Missoula**	**10.10**	**47**	P	**Pn**	**06 39 48.8 +3.8**
	baz=234					
GLA	**Glamis**	**10.74**	**130**	P	**Pn**	**06 39 55.3 +1.6**
	baz=316					
BW06	**Boulder Array**	**11.56**	**73**	P	**Pn**	**06 40 06.6 +1.5**
	baz=263					
PDAR	**Pinedale Array**	**11.56**	**73**	Pn	Pn	06 40 11.3 +6.1
	comp=E,0.1nm,0.3s,baz=280,slow=8.9,SNR=9.1					
RLMT	**Red Lodge**	**12.27**	**62**	P	**Pn**	**06 40 18.0 +3.3**
	baz=252					
K22A	**Casper**	**13.78**	**75**	P	**Pn**	**06 40 37.0 +1.7**
	baz=266					
S22A	**4UR Ranch, Cre**	**14.10**	**95**	P	**Pn**	**06 40 42.0 +2.2**
	baz=286					
N23A	**Red Feather La**	**14.23**	**82**	P	**Pn**	**06 40 41.7 +0.2**
	baz=274					
LAO	**LASA Array**	**14.78**	**59**	P	**Pn**	**06 40 49.1 +0.3**
	baz=251					
SDCO	**Great Sand Dun**	**15.11**	**94**	P	**P**	**06 40 56.0 -2.4**
	baz=286,SNR=5.5					
ANMO	**Albuquerque**	**15.39**	**105**	LR	LR	06 47 49.3
	comp=E,54nm,21.9s,baz=292,slow=42					
RSSD	**Black Hills**	**15.72**	**69**	P	**Pn**	**06 41 01.5 +0.2**
	baz=263					
KSCO	**Kaye Shedlock'**	**17.01**	**87**	P	**P**	**06 41 19.0 -0.4**
	baz=282					
TXAR	**Lajitas Array**	**20.39**	**116**	P	Pn	06 41 59.4 +0.7
	comp=E,0.2nm,0.6s,baz=294,slow=8.0,SNR=4.3					
	comp=E,0.2nm,0.6s					
ECSD	**EROS Data Cent**	**21.05**	**72**	P	**P**	**06 42 01.7 -1.7**
	baz=270					
ULM	**Lac du Bonnet**	**22.40**	**54**	LR	LR	06 50 48.6
	comp=E,55nm,18.5s,baz=25,slow=36					
YKA	**Yellowknife Ar**	**22.97**	**12**	P	**P**	**06 42 26.9 +3.2**
	comp=E,0.5nm,0.7s,baz=204,slow=10,SNR=3.4					
	comp=E,0.5nm,0.7s					
KDAK	**Kodiak Island**	**24.99**	**324**	LR	LR	06 50 20.5
	comp=E,75nm,18.2s,baz=72,slow=31					

TRN ***27*** *06:45:35.4, 8°.37N×61°.70W, h61km, MD4.3*
FUNV ***27*** *06:45:36.3, 8°.47N×61°.58W, h20km, MW4.1*
ISC 27 06:45:35.6±2.4, 8°.4N±0°.1×61°.66W±0°.10, h109km±28km, n38, σ1°48/47, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**2.21**	**6**	*eP*	**Pn**	**06 46 11.4**	**+0.2**
CRUV	**Carupano**	**2.71**	**325**	*eP*	Pn	06 46 17.1	-0.6
CRUV				*eS*	**Sn**	**06 46 48.2**	**-2.0**
COAV	**Cumanacoa**	**2.74**	**309**	*eP*	**Pn**	**06 46 19.0**	**+0.7**
COAV				*eS*	**Sn**	**06 46 51.0**	**-0.1**
PRGV	**PARIAGUAN**	**2.97**	**276**	*eP*	**Pn**	**06 46 21.6**	**+0.4**
PRGV				*eS*	**Sn**	**06 46 57.0**	**+0.6**
TOSP	**Speyside**	**3.05**	**21**	*eP*	**Pn**	**06 46 22.9**	**+0.7**
TOSP				*eS*	**Sn**	**06 46 56.9**	**-1.2**
CUMV	**Cumana_UDO**	**3.19**	**308**	*eP*	**Pn**	**06 46 24.8**	**+0.8**
CUMV				*eS*	**Sn**	**06 47 01.4**	**0.0**
PCRV	**Puerto La Cruz**	**3.41**	**301**	*eP*	**Pn**	**06 46 27.6**	**+0.6**
PCRV				*eS*	**Sn**	**06 47 06.1**	**-0.7**
GRFF	**Grenada Fort F**	**3.59**	**359**	*eP*	**Pn**	**06 46 29.7**	**+0.3**
GRFF				*eS*	**Sn**	**06 47 10.7**	**-0.3**
GRGR	**Grenville**	**3.67**	**0**	*eP*	**Pn**	**06 46 30.8**	**+0.3**
GRGR				*eS*	**Sn**	**06 47 12.5**	**-0.5**
GCMP	**Grenada, Carri**	**4.03**	**3**	*eP*	**Pn**	**06 46 36.5**	**+1.2**
GCMP				*eS*	**Sn**	**06 47 20.1**	**-1.5**
MERV	**Las Mercedes**	**4.66**	**280**	*eP*	**Pn**	**06 46 44.2**	**+0.4**
MERV				*eS*	**Sn**	**06 47 35.0**	**-1.8**
SVB	**Belmont**	**4.82**	**5**	*eP*	**Pn**	**06 46 46.9**	**+0.9**
SVB	**Belmont**	**4.82**	**5**	*eS*	**Sn**	**06 47 40.4**	**-0.3**
SSV	**Crater Summit**	**4.88**	**5**	*eP*	**Pn**	**06 46 47.8**	**+0.9**
SSV	**Crater Summit**	**4.88**	**5**	*eS*	**Sn**	**06 47 41.2**	**-1.1**
CACV	**CAICARA DEL OR**	**4.92**	**260**	*eP*	Pn	06 46 42.2	-5.0
CACV				*eS*	Sn	06 47 31.0	-12
MCLT	**Moule a Chique**	**5.28**	**8**	*eP*	**Pn**	**06 46 54.1**	**+1.8**
MCLT	**Moule a Chique**	**5.28**	**8**	*eS*	**Sn**	**06 47 50.0**	**-2.0**
SLB	**Belfond**	**5.39**	**6**	*eP*	**Pn**	**06 46 57.2**	**+3.5**
SLB	**Belfond**	**5.39**	**6**	*eS*	**Sn**	**06 47 55.0**	**+0.4**
FUNV	**FUNVISIS**	**5.47**	**292**	*eP*	**Pn**	**06 46 55.4**	**+0.6**
TACV	**Tcata**	**5.56**	**288**	*eP*	**Pn**	**06 46 57.1**	**+1.0**
SLBI	**Saint Lucia, B**	**5.59**	**7**	*eP*	**Pn**	**06 46 58.1**	**+1.7**
SLBI	**Saint Lucia, B**	**5.59**	**7**	*eS*	**Sn**	**06 47 57.7**	**-1.6**
MPOM	**Morne Pois Mar**	**6.02**	**7**	*eP*	**Pn**	**06 47 03.6**	**+1.5**
MPOM	**Morne Pois Mar**	**6.02**	**7**	*eS*	**Sn**	**06 48 08.0**	**-1.7**
BENV	**Beln**	**6.06**	**285**	*eP*	**Pn**	**06 47 03.5**	**+0.7**
BIM	**Bigot**	**6.07**	**5**	*eP*	**Pn**	**06 47 04.5**	**+1.6**
BIM	**Bigot**	**6.07**	**5**	*eS*	**Sn**	**06 48 09.9**	**-1.0**
FDF	**Fort de France**	**6.27**	**4**	*eP*	**Pn**	**06 47 07.6**	**+1.9**
FDF	**Fort de France**	**6.27**	**4**	*eS*	**Sn**	**06 48 14.0**	**-2.1**
BAUV	**El Baul**	**6.33**	**275**	*eP*	**Pn**	**06 47 06.0**	**-0.5**
BAUV	**El Baul**	**6.33**	**275**	*eS*	Sn	06 48 13.1	-4.4
BAUV	**El Baul**	**6.33**	**275**	*eP*	**Pn**	**06 47 06.8**	**+0.3**
BAUV				*eS*	**Sn**	**06 48 14.4**	**-3.1**
TURV	**Turiamo**	**6.42**	**289**	*eP*	**Pn**	**06 47 09.1**	**+1.5**
TURV				*eS*	**Sn**	**06 48 16.9**	**-2.7**
MAPV	**Macapo**	**6.86**	**282**	*eP*	**Pn**	**06 47 13.9**	**+0.3**
SIQV	**Siquisique**	**8.33**	**286**	*eP*	**Pn**	**06 47 34.5**	**+0.9**
CURV	**Curarigua**	**8.35**	**281**	*eP*	**Pn**	**06 47 37.2**	**+3.3**

BJI ***27*** *06:48:30.3±0.0, 44°.58N×146°.92E, h122km, mb5.0/58, mB4.8/35*
NIED ***27*** *06:48:32.0, 44°.27N×147°.06E, h122km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.11; $M_{\theta\theta}$1.05; $M_{\phi\phi}$-3.16; $M_{r\theta}$-3.93; $M_{\theta\phi}$-1.30; $M_{\phi r}$-4.21; Fault plane solution: $M_0$6.51000×10^{15} NP1: ϕ_s343.00000°, δ20.00000°, λ33.00000°. NP2: ϕ_s222.00000°, δ79.00000°, λ107.00000°.*
MOS ***27*** *06:48:31.2±0.9, 44°.47N×146°.88E, h130km, mb4.7/56 Error ellipse: s-maj=6.6km s-min=4.9km az=118.7*
MOS Felt (III) at Malokuril'skoye.
JMA ***27*** *06:48:32.0±0.3, 44°N±1°×14°7E±°, h122km±4km, MD4.3/35, MV4.4/35, NEAR ETOROFU ISLAND*
SKHL ***27*** *06:48:31.7±0.2, 44°.40N×147°.00E, h121km±5km, mb5.2/2, msh6.2/2*
SKHL Felt (III) at Malokuril?skoe.
IDC ***27*** *06:48:31.5±0.6, 44°.59N×146°.84E, h115km±5km, mb4.2/25, mbtmp4.5/29, MS3.2/12, Error ellipse: s-maj=11.1km s-min=9.1km az=136.0*
NEIC ***27*** *06:48:32.5±1.1, 44°.48N±0°.08×146°.9E±0°.1, h122km±7km, mb4.6/135, Error ellipse: s-maj=13.3km s-min=10.9km az=129.0*
ISC 27 06:48:31.6±0.4, 44°.48N±0°.04×146°.96E±0°.04, h123km±3km, h122km:pP-P, n614, σ1°21/606, mb4.6/155, 39C-24D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.90**	**241**	*c iPN*	**Pn**	**06 48 52.9**	**0.0**
YUK				*i S*	**Sn**	**06 49 08.8**	**-0.2**
YUK				pmax	pmax		
	comp=Z,4μm,0.5s						
YUK				pmax	pmax		
	comp=N,393nm,0.2s						
YUK				smax	smax		
	comp=N,12μm,0.5s						
YUK				smax	smax		
	comp=E,18μm,0.5s						
YUK				smax	smax		
	comp=N,37μm,1.2s						
YUK				smax	smax		
	comp=E,14μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**0.90**	**241**	*i P*	**Pn**	**06 48 52.9**	**0.0**
YUK				AMB	AMB	06 48 53.7	
	comp=E,3μm,0.4s						
YUK				*i S*	**Sn**	**06 49 08.8**	**-0.2**
YUK				A	A	06 49 13.2	
	comp=E,37μm,2.0s						
YUK				A	A	06 49 13.2	
	comp=E,15μm,2.0s						
YUK				A	A	06 49 14.3	
	comp=E,15μm,0.6s						
YUK				A	A	06 49 14.3	
	comp=E,10μm,0.6s						
KUR	**Kuril'sk**	**0.99**	**40**	*d iPN*	**Pn**	**06 48 53.9**	**+0.2**
KUR				*eS*	**Sn**	**06 49 10.4**	**-0.1**
KUR				pmax	pmax		
	comp=E,952nm,0.3s						
KUR				pmax	pmax		
	comp=Z,5μm,0.3s						
KUR				pmax	pmax		
	comp=N,902nm,0.2s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR				smax	smax		
	comp=E,3μm,0.4s						
KUR				smax	smax		
	comp=E,21μm,2.0s						
KUR				smax	smax		
	comp=N,10μm,2.2s						
KUR	**Kuril'sk**	**0.99**	**40**	*i P*	**Pn**	**06 48 53.9**	**+0.2**
KUR				AMB	AMB	06 48 54.1	
	comp=N,2μm,0.3s						
KUR				*eS*	**Sn**	**06 49 10.4**	**-0.1**
KUR				A	A	06 49 11.8	
	comp=N,1μm,0.4s						
KUR				A	A	06 49 11.8	
	comp=N,3μm,0.4s						
KUR				A	A	06 49 12.4	
	comp=N,11μm,2.0s						
KUR				A	A	06 49 12.4	
	comp=N,21μm,2.0s						
NEM2	**Nemuro 2**	**1.42**	**219**	*eP*	**Pn**	**06 48 57.3**	**-0.9**
NEM2				*eS*	**Sn**	**06 49 15.8**	**-2.6**
NMR	**Nemuro--Hokkai**	**1.42**	**219**	*i iPN*	**Pn**	**06 48 57.3**	**-0.9**
NMR				*i S*	**Sn**	**06 49 15.7**	**-2.7**
NMR	**Nemuro--Hokkai**	**1.42**	**219**	*i P*	**Pn**	**06 48 57.5**	**-0.7**
NMR				*i S*	**Sn**	**06 49 15.8**	**-2.7**
JRA	**Rausu**	**1.43**	**248**	*eP*	**Pn**	**06 48 58.8**	**+0.5**
JRA				*eS*	**Sn**	**06 49 19.1**	**+0.5**
JNSB	**Nemuroshibetsu**	**1.57**	**244**	*eP*	**Pn**	**06 49 00.8**	**+0.8**
JNSB				*eS*	**Sn**	**06 49 22.4**	**+0.8**
JNK	**Nakash**	**1.84**	**242**	*eP*	**Pn**	**06 49 03.8**	**+0.5**
JNK	**Nakash**	**1.84**	**242**	A	A	06 49 03.8	
	comp=N,4.0nm,1.0s,comp=N,5.0nm,1.3s						
JKHN	**Kushirohamanak**	**1.91**	**224**	*eP*	**Pn**	**06 49 03.5**	**-0.5**
AKK	**Akkeshi**	**2.12**	**227**	*i P*	**Pn**	**06 49 06.1**	**-0.5**
AKK				*eS*	**Sn**	**06 49 31.9**	**-1.5**
JAK	**Akkeshi**	**2.21**	**229**	*eP*	**Pn**	**06 49 07.6**	**-0.1**
JAK				*eS*	**Sn**	**06 49 34.3**	**-1.2**
JAK	**Akkeshi**	**2.21**	**229**	A	A	06 49 07.6	
	comp=N,5.0nm,0.4s,comp=N,4.0nm,1.1s						
JTKR	**Abashiri--Toko**	**2.25**	**258**	*eP*	**Pn**	**06 49 09.2**	**+0.9**
JTKR				*eS*	**Sn**	**06 49 37.3**	**+1.0**
JAR	**Ashorobuto**	**2.59**	**244**	*eP*	**Pn**	**06 49 13.8**	**+1.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR				*eS*	**Sn**	**06 49 45.6**	**+1.5**
JAR	**Ashorobuto**	**2.59**	**244**	A	A	06 49 13.8	
	comp=N,9.0nm,0.8s,comp=N,9.0nm,1.7s						
JMP	**Maruseppu**	**2.63**	**261**	*eP*	**Pn**	**06 49 14.4**	**+1.3**
JOB	**Onbets**	**2.76**	**236**	*eS*	**Sn**	**06 49 47.6**	**-0.4**
JOB	**Onbets**	**2.76**	**236**	A	A	06 49 47.6	
	comp=N,5.0nm,3.3s,comp=N,4.0nm,1.0s						
JKK2	**Kamakawa 2**	**3.09**	**260**	*eP*	**Pn**	**06 49 20.7**	**+1.6**
JKK2				*eS*	**Sn**	**06 49 58.4**	**+2.7**
ASAJ	**Asahikawa**	**3.15**	**265**	*eP*	**Pn**	**06 49 21.7**	**+1.8**
JSE	**Soyaes**	**3.15**	**280**	*eP*	**Pn**	**06 49 21.4**	**+1.5**
JCH	**Churui**	**3.21**	**236**	*eP*	**Pn**	**06 49 20.8**	**+0.1**
JCH				*eS*	**Sn**	**06 49 56.4**	**-2.1**
JCH	**Churui**	**3.21**	**236**	A	A	06 49 20.8	
	comp=N,2.0nm,1.4s,comp=N,3.0nm,1.1s						
JFR	**Furan**	**3.42**	**249**	*eP*	**Pn**	**06 49 26.0**	**+2.5**
JWK2	**Keihoku**	**3.69**	**285**	*eP*	**Pn**	**06 49 30.0**	**+3.0**
JWK2				*eS*	**Sn**	**06 50 14.5**	**+4.6**
ERM	**Erimo**	**3.71**	**230**	Pn	**Pn**	**06 49 27.9**	**+0.6**
ERM	**Erimo**	**3.71**	**230**	*c iPN*	**Pn**	**06 49 28.2**	**+0.9**
JNBK	**Urakawa-nobuka**	**3.77**	**236**	*eP*	**Pn**	**06 49 27.5**	**-0.6**
JNBK				*eS*	**Sn**	**06 50 09.1**	**-2.8**
JNBK	**Urakawa-nobuka**	**3.77**	**236**	A	A	06 49 27.5	
	comp=N,3.0nm,3.6s,comp=N,3.0nm,0.5s						
JHR	**Hokuryu**	**3.84**	**261**	*eP*	**Pn**	**06 49 31.7**	**+2.7**
YSS	**Yuzh-Sakhalins**	**3.85**	**312**	Pn	**Pn**	**06 49 29.4**	**+0.3**
YSS	**Yuzh-Sakhalins**	**3.85**	**312**	*i iPN*	**Pn**	**06 49 30.4**	**+1.4**
YSS				*eS*	**Sn**	**06 50 14.6**	**+1.0**
YSS				pmax	pmax		
	comp=Z,120nm,0.5s						
YSS				smax	smax		
	comp=E,200nm,1.3s						
YSS				smax	smax		
	comp=E,1μm,3.1s						
YSS	**Yuzh-Sakhalins**	**3.85**	**312**	*eP*	**Pn**	**06 49 30.4**	**+1.4**
YSS				AMB	AMB	06 49 31.8	
	comp=E,90nm,0.4s						
YSS				*eS*	**Sn**	**06 50 14.6**	**+1.0**
YSS				A	A	06 50 21.5	
	comp=E,500nm,3.0s						
YSS				A	A	06 50 21.5	
	comp=E,1μm,3.0s						
YSS				A	A	06 50 22.2	
	comp=E,120nm,0.8s						
YSS				A	A	06 50 22.2	
	comp=E,100nm,0.8s						
JEW	**Eniwo**	**4.32**	**250**	Pn	**Pn**	**06 49 35.4**	**0.0**
JAHD	**Aomorihigashid**	**5.23**	**234**	A	A	06 49 48.3	
	comp=E,9.0nm,0.6s,comp=E,7.0nm,0.5s						
UGL	**Uglegorsk**	**5.70**	**326**	*eP*	**Pn**	**06 49 54.4**	**+0.6**
UGL				AMB	AMB	06 49 57.0	
	comp=E,110nm,0.7s						
JTM	**Tenmabayashi**	**5.70**	**232**	Pn	**Pn**	**06 49 52.7**	**-1.2**
TYV	**Tymovskoe**	**7.02**	**337**	*ePN*	**Pn**	**06 50 12.4**	**+0.8**
TYV				*eS*	**Sn**	**06 51 28.9**	**-0.9**
TYV				pmax	pmax		
	comp=Z,400nm,3.0s						
TYV				pmax	pmax		
	comp=Z,28nm,1.0s						
TYV				smax	smax		
	comp=N,300nm,3.0s						
TYV				smax	smax		
	comp=E,500nm,3.0s						
TYV				smax	smax		
	comp=N,28nm,1.6s						
TYV				smax	smax		
	comp=E,33nm,1.6s						
TYV	**Tymovskoe**	**7.02**	**337**	*eP*	**Pn**	**06 50 12.4**	**+0.8**
TYV				AMB	AMB	06 50 13.2	
	comp=E,400nm,3.0s						
TYV				AMB	AMB	06 50 14.9	
	comp=E,30nm,1.0s						
TYV				*eS*	**Sn**	**06 51 28.9**	**-0.9**
TYV				A	A	06 51 31.1	
	comp=E,300nm,3.0s						
TYV				A	A	06 51 31.1	
	comp=E,500nm,3.0s						
TYV				A	A	06 51 34.4	
	comp=E,30nm,2.0s						
TYV				A	A	06 51 34.4	
	comp=E,30nm,2.0s						
TEY	**Ternei**	**7.39**	**278**	*ePN*	**Pn**	**06 50 18.9**	**+2.2**
TEY				pmax	pmax		
	comp=N,100nm,1.3s						
TEY				pmax	pmax		
	comp=Z,100nm,1.3s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,70nm,1.0s						
TEY				pmax	pmax		
	comp=Z,70nm,1.0s						
TEY	**Ternei**	**7.39**	**278**	*eP*	**Pn**	**06 50 18.2**	**+1.5**
TEY				AMB	AMB	06 50 19.9	
	comp=Z,100nm,1.0s						
TEY				AMB	AMB	06 50 20.1	
	comp=Z,70nm,1.0s						
JMM	**Marumori**	**8.08**	**217**	Pn	**Pn**	**06 50 23.1**	**-2.9**
JSD	**Sado**	**9.18**	**228**	Pn	**Pn**	**06 50 40.3**	**-0.6**
GRNR	**Gornyy**	**9.49**	**315**	*i iPN*	**Pn**	**06 50 47.0**	**+1.9**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,540nm,17.0s						
GRNR				MLR	MLR		
	comp=N,320nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,140nm,10.0s						
GRNR	**Gornyy**	**9.49**	**315**	*eP*	**Pn**	**06 50 46.3**	**+1.2**
GRNR				AMB	AMB	06 50 48.4	
	comp

YAK	**Yakutsk**	**20.27 336**	P	**P**	**06 52 56.0 -1.2**
YAK			IAmb	IAmb	06 52 57.1
comp=Z,36nm,0.7s					
YAK	**Yakutsk**	**20.27 336**	*e*P	**P**	**06 52 55.9 -1.2**
YAK			*e**PP	**pwP**	**06 53 22.9 +0.1**
YAK			*e*S	**S**	**06 56 34.7 -2.8**
YAK			*e*		06 57 06.9
YAK			*e**SS	**sS**	**06 57 12.0 -2.7**
YAK			*e*		07 04 13.0
YAK			pmax	pmax	
comp=Z,36nm,0.9s					
YAK			pmax	pmax	
comp=E,4.0nm,1.1s					
YAK			pmax	pmax	
comp=N,11nm,1.3s					
YAK			smax	smax	
comp=E,40nm,1.3s					
YAK			smax	smax	
comp=N,30nm,1.1s					
XLT	**XiLinHaoTe**	**22.09 279**	⇓*i*P	**P**	**06 53 15.3 -1.5**
XLT			pmax	pmax	
comp=N,39nm,0.7s					
XLT			pmax	pmax	
comp=N,100nm,3.7s					
BJI	**Beijing**	**23.14 270**	P	**P**	**06 53 26.3 -0.6**
BJI			pmax	pmax	
comp=N,30nm,0.9s					
BJT	**Baijiatuau**	**23.15 270**	P	**P**	**06 53 26.4 -0.7**
BJT			IAmb	IAmb	06 53 27.4
comp=Z,22nm,0.7s					
BJT	**Baijiatuau**	**23.15 270**	P	**P**	**06 53 26.4 -0.7**
BJT			pmax	pmax	
comp=Z,22nm,0.7s					
JOW	**Kunigami**	**23.16 227**	P	**P**	**06 53 27.7 +0.5**
comp=Z,6.4nm,0.4s,baz=349,slow=7.9,SNR=5.5					
comp=Z,6.4nm,0.4s					
JOW	**Kunigami**	**23.16 227**	P	**P**	**06 53 25.8 -1.5**
JOW			IAmb	IAmb	06 53 30.2
comp=Z,25nm,1.2s					
TIA	**Tai'an**	**24.09 260**	⇓P	**P**	**06 53 36.0 +0.4**
TIA			pmax	pmax	
comp=Z,37nm,0.9s					
BOD	**Bodaibo**	**24.31 315**	*e*P	**P**	**06 53 34.1 -3.3**
BOD			pmax	pmax	
comp=Z,20nm,0.9s					
KIWB	**Kanaga Island**	**24.85 60**	P	**P**	**06 53 41.6 -0.8**
NJ2	**Nanjing**	**25.18 250**	*e*P	**P**	**06 53 45.3 -0.2**
NJ2			pmax	pmax	
comp=Z,9.0nm,0.5s					
HNS	**HongShan**	**25.25 265**	⇓P	**P**	**06 53 47.0 +0.8**
HNS			pmax	pmax	
comp=Z,30nm,1.3s					
BILL	**Bilibino**	**25.70 17**	⇓*e*P	**P**	**06 53 53.4 +3.5**
BILL			*e**PP	**pwP**	**06 54 18.7 0.0**
BILL			*SP	**sP**	**06 54 32.0 +2.7**
BILL					06 54 37.0
BILL			pmax	pmax	
comp=Z,25nm,2.4s					
BILL			MLR	MLR	
comp=Z,45nm,15.0s					
HHC	**Hu-ho-hao-te**	**26.15 275**	*e*P	**P**	**06 53 54.8 +0.4**
HHC			pmax	pmax	
comp=Z,91nm,0.9s					
HHC			pmax	pmax	
comp=Z,240nm,3.8s					
ULN	**Ulaanbaatar**	**27.63 291**	P	**P**	**06 54 07.3 -0.2**
ULN			IAmb	IAmb	06 54 08.7
comp=Z,10nm,0.7s					
ULN	**Ulaanbaatar**	**27.63 291**	P	**P**	**06 54 07.4 -0.2**
ULN			pmax	pmax	
comp=Z,10.0nm,0.7s					
ULN	**Ulaanbaatar**	**27.63 291**	P	**P**	**06 54 07.7 +0.1**
comp=Z,57nm,0.7s					
ULN	**Ulaanbaatar**	**27.63 291**	*e*P	**P**	**06 54 07.4 -0.2**
SONM	**Songino Array**	**28.07 291**	P	**P**	**06 54 11.2 -0.3**
comp=Z,8.6nm,0.7s,baz=82,slow=8.1,SNR=24					
SONM			LR	LR	07 07 27.2
comp=Z,28nm,18.1s,baz=150,slow=41					
comp=Z,8.6nm,0.7s					
SONM	**Songino Array**	**28.07 291**	P	**P**	**06 54 11.4 -0.1**
SONM			IAmb	IAmb	06 54 12.5
comp=Z,5.7nm,0.7s					
SONM	**Songino Array**	**28.07 291**	P	**P**	**06 54 11.4 -0.1**
SONM			pmax	pmax	
comp=Z,6.0nm,0.7s					
LYN	**LuoYang**	**28.21 261**	⇓*e*P	**P**	**06 54 13.8 +1.1**
LYN			pmax	pmax	
comp=Z,10.0nm,1.0s					
TIXI	**Tiksi**	**28.62 348**	*i* P	**P**	**06 54 12.5 -3.4**
TIXI			pmax	pmax	
comp=Z,6.0nm,1.3s					
WHN	**Wuhan**	**29.15 253**	⇓P	**P**	**06 54 25.0 +3.9**
WHN			pmax	pmax	
comp=Z,46nm,0.7s					
H11N2	**WAKE ISLAND Hy**	**29.74 140**	T	T	07 25 31.5
baz=330,slow=75,SNR=501					
H11N1	**WAKE ISLAND Hy**	**29.76 140**	T	T	07 25 31.6
baz=330,slow=75,SNR=568					
H11N3	**WAKE ISLAND Hy**	**29.76 140**	T	T	07 25 32.9
baz=330,slow=75,SNR=504					
ZAK	**Zakamensk**	**29.79 297**	*e*P	**P**	**06 54 25.1 -1.6**
ZAK			pmax	pmax	
comp=Z,4.0nm,1.0s					
H11S1	**WAKE ISLAND Hy**	**30.72 141**	T	T	07 26 38.3
baz=331,slow=76,SNR=890					
H11S3	**WAKE ISLAND Hy**	**30.73 141**	T	T	07 26 44.9
baz=331,slow=76,SNR=675					
H11S2	**WAKE ISLAND Hy**	**30.74 141**	T	T	07 26 44.5
baz=331,slow=76,SNR=733					
XAN	**Xi'an**	**30.99 264**	P	**P**	**06 54 37.5 +0.1**
XAN			pmax	pmax	
comp=Z,15nm,0.8s					
TNA	**Tin City**	**32.32 33**	P	**P**	**06 54 48.5 0.0**
baz=252					
ENH	**Enshi**	**32.68 257**	P	**P**	**06 54 51.4 -0.7**
LZH	**Lanzhou**	**33.62 271**	⇓P	**P**	**06 55 01.8 +1.4**
LZH			pP	pwP	06 55 28.5 -0.9
LZH			sP	sP	06 55 43.5 +3.1
LZH			pmax	pmax	
comp=Z,48nm,1.1s					
LZH			pmax	pmax	
comp=Z,120nm,4.9s					
GTA	**Gaotai**	**35.04 278**	⇓P	**P**	**06 55 13.5 +0.9**
GTA			pP	pP	06 55 38.0 -0.8
GTA			sP	sP	06 55 51.5 -1.1
GTA			pmax	pmax	
comp=Z,25nm,1.0s					
N16K	**Nishlik Lake**	**35.55 44**	P	**P**	**06 55 16.5 0.0**
baz=268					
O16K	**Kokwok River B**	**35.88 45**	P	**P**	**06 55 19.5 +0.2**
baz=270					
O17K	**Koliganek Bris**	**36.38 45**	P	**P**	**06 55 24.4 +0.8**
baz=271					
GCSA	**Galena City Sc**	**36.70 37**	P	**P**	**06 55 25.9 -0.3**
baz=264					
TTA	**Tatalina**	**36.95 40**	P	**P**	**06 55 30.2 +1.7**
TTA	**Tatalina**	**36.95 40**	P	**P**	**06 55 30.2 +1.7**
TTA			pmax	pmax	
comp=Z,4.0nm,0.8s					
TTA	**Tatalina**	**36.95 40**	P	**P**	**06 55 27.9 -0.6**
baz=268					
N18K	**Kilae Creek**	**36.97 43**	P	**P**	**06 55 30.3 +1.7**
N18K	**Kilae Creek**	**36.97 43**	P	**P**	**06 55 28.7 0.0**
baz=271					
Q17K	**Contact Creek**	**37.06 47**	P	**P**	**06 55 29.7 +0.2**
baz=274					
P18K	**Big Mountain,**	**37.34 46**	P	**P**	**06 55 32.1 +0.3**
baz=273					
Q18K	**Katmai Hardscr**	**37.50 47**	P	**P**	**06 55 33.4 +0.1**
baz=274					
N19K	**Bonanza Creek**	**37.66 43**	P	**P**	**06 55 34.6 0.0**
baz=272					
O19K	**Port Alsworth**	**37.76 44**	P	**P**	**06 55 35.3 +0.1**
baz=273					
J20K	**Nowinta River**	**37.84 38**	P	**P**	**06 55 37.4 +1.5**
J20K			IAmb	IAmb	06 55 38.3
comp=Z,5.7nm,0.7s					
J20K	**Nowinta River**	**37.84 38**	P	**P**	**06 55 36.6 +0.7**
baz=268					
K20K	**Telida**	**37.85 39**	P	**P**	**06 55 37.3 +1.3**
K20K	**Telida**	**37.85 39**	P	**P**	**06 55 36.3 +0.3**
baz=269					
L20K	**Farewell, AK**	**37.93 40**	P	**P**	**06 55 36.7 0.0**
baz=270					
A21K	**Barrow**	**37.95 26**	P	**P**	**06 55 35.2 -1.5**
baz=256					
IMAR	**Indian Mountai**	**38.12 35**	P	**P**	**06 55 38.9 +0.7**
G21K	**Allakaket**	**38.26 34**	P	**P**	**06 55 39.7 +0.3**
baz=265					
M20K	**Styx River**	**38.28 41**	P	**P**	**06 55 39.4 -0.3**
baz=271					
F21K	**Alatna River**	**38.34 33**	P	**P**	**06 55 40.3 +0.2**
baz=264					
H21K	**Melozitna Rive**	**38.49 35**	P	**P**	**06 55 42.1 +0.8**
H21K			IAmb	IAmb	06 55 42.6
comp=Z,4.6nm,0.7s					
H21K	**Melozitna Rive**	**38.49 35**	P	**P**	**06 55 41.9 +0.6**
baz=267					
NRIK	**Noril'sk**	**38.55 331**	*ce*P	**P**	**06 55 41.1 -0.6**
NRIK			pmax	pmax	
comp=Z,7.0nm,1.4s					
OHAK	**Old Harbor**	**38.55 49**	P	**P**	**06 55 42.5 +0.7**
PPLA	**Purkeypile**	**38.70 40**	P	**P**	**06 55 45.3 +2.0**
PPLA	**Purkeypile**	**38.70 40**	P	**P**	**06 55 43.9 +0.6**
baz=271					
CAST	**Castle Rocks**	**38.74 39**	P	**P**	**06 55 45.4 +1.9**
CAST			IAmb	IAmb	06 55 45.6
comp=Z,5.7nm,0.6s					
CAST	**Castle Rocks**	**38.74 39**	P	**P**	**06 55 44.5 +1.0**
baz=270					
I21K	**Tanana**	**38.81 36**	P	**P**	**06 55 45.4 +1.4**
I21K	**Tanana**	**38.81 36**	P	**P**	**06 55 43.9 -0.1**
baz=268					
KDAK	**Kodiak Island**	**38.86 48**	P	**P**	**06 55 45.2 +0.8**
comp=Z,8.4nm,0.5s,baz=288,slow=8.4,SNR=10					
comp=Z,8.4nm,0.5s					
KDAK	**Kodiak Island**	**38.86 48**	P	**P**	**06 55 45.2 +0.8**
KDAK	**Kodiak Island**	**38.86 48**	P	**P**	**06 55 45.3 +0.8**
KDAK			pmax	pmax	
comp=Z,69nm,1.5s					
KDAK	**Kodiak Island**	**38.86 48**	P	**P**	**06 55 44.8 +0.4**
baz=277					
F22K	**John River**	**38.87 32**	P	**P**	**06 55 44.3 -0.2**
baz=265					
G22K	**Bettles**	**39.09 33**	P	**P**	**06 55 46.5 +0.2**
baz=267					
H22K	**Ishtalitna Cre**	**39.09 35**	P	**P**	**06 55 47.1 +0.8**
baz=268					
HOM	**Homer**	**39.15 45**	P	**P**	**06 55 47.6 +0.8**
baz=275					
BPAW	**Bear Paw Mtn.**	**39.23 38**	P	**P**	**06 55 48.7 +1.2**
BPAW	**Bear Paw Mtn.**	**39.23 38**	P	**P**	**06 55 48.0 +0.5**
baz=271					
MLY	**Manley**	**39.34 36**	P	**P**	**06 55 48.2 -0.2**
baz=270					
BRLK	**Bradley Lake**	**39.52 45**	P	**P**	**06 55 50.8 +0.8**
TRF	**Thorofare Moun**	**39.55 39**	P	**P**	**06 55 50.1 -0.2**
baz=272					
COLD	**Coldfoot**	**39.61 33**	P	**P**	**06 55 50.7 +0.1**
baz=267					
G23K	**Bananza Creek**	**39.66 34**	P	**P**	**06 55 50.9 -0.2**
baz=268					
C23K	**Itkillik River**	**39.66 29**	P	**P**	**06 55 50.7 -0.3**
baz=264,SNR=10.0					
M22K	**Willow**	**39.72 42**	P	**P**	**06 55 51.0 -0.5**
baz=274					
H23K	**Yukon River**	**39.84 35**	P	**P**	**06 55 54.0 +1.5**
H23K			IAmb	IAmb	06 55 54.4
comp=Z,7.3nm,0.7s					
H23K	**Yukon River**	**39.84 35**	P	**P**	**06 55 53.8 +1.3**
baz=270					
E23K	**Chandalar**	**39.88 32**	P	**P**	**06 55 52.6 -0.3**
baz=267					
I23K	**Minto, Yukon-K**	**39.92 36**	P	**P**	**06 55 54.3 +1.1**
I23K	**Minto, Yukon-K**	**39.92 36**	P	**P**	**06 55 54.2 +1.0**
baz=271					
TOLK	**Toolik Lake Re**	**39.93 31**	P	**P**	**06 55 53.4 +0.1**
TOLK	**Toolik Lake Re**	**39.93 31**	P	**P**	**06 55 52.1 -1.1**
baz=266					
DGZ	**Jazzator, Alta**	**39.94 299**	*i* P	**P**	**06 55 53.2 -0.5**
DGZ			pmax	pmax	
comp=Z,7.0nm,0.8s					
RC01	**Rabbit Creek A**	**39.96 43**	P	**P**	**06 55 53.6 +0.1**
baz=275					
GOMU	**GeErMu**	**40.01 277**	P	**P**	**06 55 55.5 +0.7**
GOMU			pmax	pmax	
comp=Z,42nm,0.8s					
GOMU			pmax	pmax	
comp=Z,58nm,6.3s					
O22K	**Cooper Landing**	**40.02 43**	P	**P**	**06 55 54.9 +0.8**
MCK	**McKinley**	**40.15 38**	P	**P**	**06 55 55.9 +0.8**
MCK			IAmb	IAmb	06 56 10.0
comp=Z,9.1nm,1.2s					
MCK	**McKinley**	**40.15 38**	P	**P**	**06 55 55.9 +0.8**
MCK			pmax	pmax	
comp=Z,9.0nm,1.2s					
MCK	**McKinley**	**40.15 38**	P	**P**	**06 55 55.2 +0.1**
baz=273					
D24K	**Happy Valley**	**40.23 30**	P	**P**	**06 55 55.4 -0.3**
baz=266					
E24K	**Your Creek**	**40.30 32**	P	**P**	**06 55 56.3 -0.1**
baz=268,SNR=6.4					
C24K	**Franklin Bluff**	**40.31 29**	P	**P**	**06 55 55.8 -0.6**
baz=266					
PZH	**PanZhiHua**	**40.38 259**	P	**P**	**06 55 58.3 +0.7**
PZH			pmax	pmax	
comp=Z,10.0nm,0.9s					
PZH			pmax	pmax	
comp=Z,100nm,4.8s					
MDM	**Murphy Dome**	**40.40 36**	P	**P**	**06 55 58.5 +1.3**
ZALV	**Zalesovo Beam**	**40.45 306**	P	**P**	**06 55 58.2 +0.5**
comp=Z,1.7nm,0.3s,baz=92,slow=8.3,SNR=1.8					
ZALV			PcP	**PcP**	**06 57 58.7 +0.7**
comp=Z,4.5nm,0.3s,baz=90,slow=2.7,SNR=11					
ZALV			ScP	**ScP**	**07 01 36.2 +0.3**
comp=Z,1.3nm,0.7s,baz=34,slow=5.6,SNR=4.1					
comp=Z,1.7nm,0.3s					
F24K	**Squaw Lake**	**40.52 32**	P	**P**	**06 55 57.9 -0.2**
baz=269,SNR=7.6					
H24K	**Noodor Dome**	**40.53 35**	P	**P**	**06 55 59.7 +1.4**
H24K	**Noodor Dome**	**40.53 35**	P	**P**	**06 55 59.3 +1.0**
baz=271					
KNK	**Knik Glacier**	**40.54 42**	P	**P**	**06 55 58.4 0.0**
baz=276					
KMI	**Kunming**	**40.55 257**	⇑P	**P**	**06 56 00.0 +0.9**
KMI			pmax	pmax	
comp=Z,24nm,1.0s					
SML	**Sawmill**	**40.56 41**	P	**P**	**06 55 59.7 +1.1**
baz=276					
TCOL	**CIGO, UAF Yank**	**40.56 37**	P	**P**	**06 55 59.6 +1.1**
TCOL			IAmb	IAmb	06 56 00.1
comp=Z,10nm,0.7s					
TCOL	**CIGO, UAF Yank**	**40.56 37**	P	**P**	**06 55 59.0 +0.5**
baz=272					
COLA	**College**	**40.57 37**	P	**P**	**06 55 59.6 +1.1**
COLA			IAmb	IAmb	06 56 00.1
comp=Z,10nm,0.7s					
COLA	**College**	**40.57 37**	P	**P**	**06 55 59.6 +1.1**
COLA			pmax	pmax	
comp=Z,10.0nm,0.7s					
COLA	**College**	**40.57 37**	P	**P**	**06 55 58.9 +0.4**
baz=272					
PWL	**Port Wells**	**40.66 43**	P	**P**	**06 55 59.8 +0.5**
baz=277					
G24K	**Hadweenzic Riv**	**40.68 34**	P	**P**	**06 56 00.3 +0.8**
baz=271					
POKR	**Poker Plat Res**	**40.73 36**	P	**P**	**06 56 00.1 +0.1**
baz=272					
WAT6	**Susitna Watana**	**40.77 40**	P	**P**	**06 56 00.9 +0.5**
baz=275					
M23K	**Glacier View**	**40.85 41**	P	**P**	**06 56 02.3 +1.4**
baz=276					
DHY	**Denali Highway**	**40.89 39**	P	**P**	**06 56 01.8 +0.5**
baz=275					
HDA	**Harding Lake**	**40.98 37**	P	**P**	**06 56 02.1 +0.2**
baz=274					
ILAR	**Eielson Array**	**40.98 37**	P	**P**	**06 56 02.1 +0.2**
comp=Z,2.3nm,0.5s,baz=272,slow=9.6,SNR=26					
comp=Z,2.3nm,0.5s					
ILAR	**Eielson Array**	**40.98 37**	P	**P**	**06 56 02.8 +0.8**
ILAR	**Eielson Array**	**40.98 37**	P	**P**	**06 56 02.8 +0.8**
D25K	**Kavik River**	**41.11 30**	P	**P**	**06 56 02.8 -0.2**
baz=269					
GLI	**Glacier Island**	**41.26 43**	P	**P**	**06 56 04.2 -0.1**
baz=278					
H25K	**Birch Creek**	**41.35 34**	P	**P**	**06 56 05.8 +0.9**
baz=273					
F25K	**Christian Rive**	**41.38 32**	P	**P**	**06 56 05.8 +0.6**
baz=271					
E25K	**Arctic Village**	**41.40 32**	P	**P**	**06 56 05.7 +0.3**
baz=271					
PRP	**Porcupine Dome**	**41.51 36**	P	**P**	**06 56 07.5 +1.1**
PRP			IAmb	IAmb	06 56 08.0
comp=Z,7.5nm,0.6s					
PRP	**Porcupine Dome**	**41.51 36**	P	**P**	**06 56 06.5 +0.1**
baz=274					
K24K	**Donnelly Dome**	**41.54 38**	P	**P**	**06 56 06.3 -0.3**
baz=275					
M24K	**Tolsona, Glenn**	**41.54 41**	P	**P**	**06 56 06.3 -0.4**
baz=277					
J25K	**Salcha River,**	**41.65 37**	P	**P**	**06 56 06.8 -0.6**
baz=275					
WMQ	**Urumqi**	**41.70 291**	*e*P	**P**	**06 56 09.8 +1.6**
WMQ			pP	pwP	06 56 39.5 +1.8
WMQ			pmax	pmax	
comp=Z,42nm,0.7s					
KLU	**Klutina**	**41.74 42**	P	**P**	**06 56 07.8 -0.4**
baz=278					
F26K	**Sheenjek River**	**41.95 32**	P	**P**	**06 56 10.2 +0.4**
baz=272					
HARP	**HAARP**	**41.98 40**	P	**P**	**06 56 10.1 0.0**
baz=278					
C27K	**Jago River**	**42.05 29**	P	**P**	**06 56 10.5 -0.1**
baz=271,SNR=48					
G26K	**Porcupine Rive**	**42.13 33**	P	**P**	**06 56 10.8 -0.4**
baz=274,SNR=11					
SCRK	**Sand Creek**	**42.31 38**	P	**P**	**06 56 12.5 -0.4**
baz=277					
J26L	**Joseph Creek**	**42.43 37**	P	**P**	**06 56 14.2 +0.3**
J26L	**Joseph Creek**	**42.43 37**	P	**P**	**06 56 13.3 -0.6**
baz=276					
BMRM	**Bremner River**	**42.45 42**	P	**P**	**06 56 14.1 +0.1**
baz=280					
I26K	**Coal Creek Min**	**42.52 36**	P	**P**	**06 56 13.0 -1.4**
baz=276					
E27K	**Coleen River**	**42.88 31**	P	**P**	**06 56 16.9 -0.4**
baz=274					
M26K	**Nabesna, AK**	**42.97 40**	IAmb	IAmb	06 56 21.1
comp=Z,6.6nm,0.9s					
M26K	**Nabesna, AK**	**42.97 40**	P	**P**	**06 56 18.5 +0.3**
baz=279					
G27K	**Doyon Strip**	**42.98 33**	P	**P**	**06 56 18.7 +0.6**
baz=276					
H27K	**Steamboat Moun**	**43.09 34**	P	**P**	**06 56 19.3 +0.3**
baz=276					
I27K	**Kandik River**	**43.12 35**	P	**P**	**06 56 20.8 +1.4**
baz=277					
K27K	**Chicken**	**43.14 37**	IAmb	IAmb	06 56 21.2
comp=Z,4.5nm,0.7s					
K27K	**Chicken**	**43.14 37**	P	**P**	**06 56 20.5 +1.1**
baz=278					
L27K	**Beaver Creek,**	**43.40 39**	P	**P**	**06 56 22.4 +0.8**
baz=280					
EGAK	**Eagle**	**43.42 36**	P	**P**	**06 56 22.4 +0.7**
EGAK	**Eagle**	**43.42 36**	P	**P**	**06 56 21.3 -0.4**
baz=278					
M27K	**Edge Creek, AK**	**43.49 40**	P	**P**	**06 56 24.2 +1.7**
baz=280					
BVCY	**Beaver Creek**	**43.95 40**	P	**P**	**06 56 26.5 +0.5**
baz=281					
CTG	**Chitna Glacier**	**44.02 42**	P	**P**	**06 56 27.1 +0.4**
baz=282					
MK31	**Makanchi Array**	**44.13 297**	P	**P**	**06 56 28.2 +0.6**
MK31			IAmb	IAmb	06 56 29.0
comp=Z,15nm,0.7s					
MK31	**Makanchi Array**	**44.13 297**	P	**P**	**06 56 28.2 +0.6**
MK31			pmax	pmax	
comp=Z,15nm,0.7s					
MKAR	**Makanchi Array**	**44.13 297**	P	**P**	**06 56 27.1 -0.5**
comp=Z,14nm,0.7s,baz=78,slow=8.6,SNR=119					
MKAR			PcP	**PcP**	**06 58 11.1 +0.6**
comp=Z,1.8nm,0.5s,baz=70,slow=4.9,SNR=5.5					
MKAR			LR	LR	07 15 19.0
comp=Z,57nm,18.8s,baz=41,slow=36					
comp=Z,14nm,0.7s					
MKAR	**Makanchi Array**	**44.13 297**	P	**P**	**06 56 28.0 +0.4**
MKAR	**Makanchi Array**	**44.13 297**	*i* P	**P**	**06 56 28.0 +0.4**
MKAR			pmax	pmax	
comp=Z,14nm,0.7s					
MKAR	**Makanchi Array**	**44.13 297**	*e*P	**P**	**06 56 28.0 +0.4**
YUK3	**Moose Creek**	**44.26 41**	P	**P**	**06 56 28.8 0.0**
baz=282					
DAWY	**Dawson**	**44.30 37**	P	**P**	**06 56 29.3 +0.6**
baz=280					
MAKZ	**Makanchi**	**44.32 297**	P	**P**	**06 56 29.8 +0.6**
MAKZ			IAmb	IAmb	06 56 30.6
comp=Z,15nm,0.7s					
MAKZ	**Makanchi**	**44.32 297**	P	**P**	**06 56 29.8 +0.6**
MAKZ			pmax	pmax	
comp=Z,15nm,0.7s					
I29M	**Ogilvie Camp,**	**44.53 35**	P	**P**	**06 56 31.6 +1.1**
I29M			IAmb	IAmb	06 56 32.2
comp=Z,8.4nm,0.7s					
I29M	**Ogilvie Camp,**	**44.53 35**	P	**P**	**06 56 31.4 +0.8**
baz=280					
EPYK	**Eagle Plains**	**44.99 34**	P	**P**	**06 56 34.8 +0.6**
baz=280					
KURK	**Kurchatov**	**45.01 303**	P	**P**	**06 56 33.1 -1.3**
KURK			IAmb	IAmb	06 56 35.6
comp=Z,5.7nm,0.6s					
KURK	**Kurchatov**	**45.01 303**	P	**P**	**06 56 33.2 -1.3**
KURK			pmax	pmax	
comp=Z,6.0nm,0.6s					
M29M	**Somme Creek**	**45.04 39**	P	**P**	**06 56 33.6 -1.1**
baz=283					
L29M	**L29M**	**45.04 38**	P	**P**	**06 56 37.1 +2.4**
baz=282					
G30M	**tAoh Zraii Nji**	**45.08 33**	P	**P**	**06 56 35.2 +0.3**
baz=280					
K29M	**Barlow Dome**	**45.15 37**	P	**P**	**06 56 36.5 +0.9**
baz=282					
PNL	**Peninsula**	**45.26 43**	P	**P**	**06 56 39.4 +3.0**
baz=285					
M30M	**Minto, Yukon**	**45.76 39**	P	**P**	**06 56 41.8 +1.5**
baz=284					
INK	**Inuvik**	**45.84 31**	P	**P**	**06 56 41.0 +0.2**
comp=Z,5.9nm,0.3s,baz=281,slow=5.9,SNR=62					
comp=Z,5.9nm,0.3s					
INK	**Inuvik**	**45.84 31**	P	**P**	**06 56 41.0 +0.2**
INK			IAmb	IAmb	06 56 41.3
comp=Z,7.3nm,0.3s					
INK	**Inuvik**	**45.84 31**	P	**P**	**06 56 41.1 +0.2**
INK			pmax	pmax	
comp=Z,7.0nm,0.4s					
INK	**Inuvik**	**45.84 31**	P	**P**	**06 56 41.0 +0.2**
baz=281					
HYT	**Haines Junctio**	**45.87 41**	P	**P**	**06 56 43.6 +2.3**
HYT			IAmb	IAmb	06 56 44.5
comp=Z,7.6nm,0.9s					
HYT	**Haines Junctio**	**45.87 41**	P	**P**	**06 56 43.0 +1.7**
baz=285					
F31M	**Tsiigehtchic**	**45.94 32**	P	**P**	**06 56 41.4 -0.1**
baz=282					
P29M	**Windy Craggy**	**46.08 43**	P	**P**	**06 56 45.1 +2.3**
P29M			IAmb	IAmb	06 56 46.0
comp=Z,8.2nm,0.8s					
P29M	**Windy Craggy**	**46.08 43**	P	**P**	**06 56 44.6 +1.8**
baz=286					
P30M	**Million Dollar**	**46.32 42**	P	**P**	**06 56 46.3 +1.5**
baz=286					
N31M	**Braeburn, Yuko**	**46.50 40**	P	**P**	**06 56 47.1 +1.0**
baz=286					
M31M	**Drury Creek, Y**	**46.94 39**	P	**P**	**06 56 50.1 +0.6**
baz=286					
WHY	**Whitehorse**	**47.16 41**	P	**P**	**06 56 53.0 +1.6**
PDGK	**Podgornoye**	**47.34 294**	*i* P	**P**	**06 56 52.9 -0.2**
PDGK			pmax	pmax	
comp=Z,16nm,0.9s					
CHTO	**Chiang Mai**	**47.36 253**	P	**P**	**06 56 53.4 +0.1**
CHTO	**Chiang Mai**	**47.36 253**	P	**P**	**06 56 53.4 +0.1**
FARO	**Faro, Yukon**	**47.40 39**	P	**P**	**06 56 54.4 +1.3**
SHLS	**Shalkode**	**47.44 293**	*e*P	**P**	**06 56 51.0 -2.8**
SHLS			pmax	pmax	
comp=Z,6.0nm,0.8s					
SHLS	**Shalkode**	**47.44 293**	*e*P	**P**	**06 56 51.1 -2.8**
comp=Z,6.3nm,0.8s,baz=293					
CMAR	**Chiang Mai Arr**	**47.60 253**	P	**P**	**06 56 56.4 +1.2**
comp=Z,5.8nm,0.7s,baz=40,slow=6.9,SNR=23					
CMAR			LR	LR	07 16 29.0
comp=Z,7.8nm,20.9s,baz=235,slow=35					
comp=Z,5.8nm,0.7s					
CMAR	**Chiang Mai Arr**	**47.60 253**	P	**P**	**06 56 56.6 +1.4**
CMAR	**Chiang Mai Arr**	**47.60 253**	*i* P	**P**	**06 56 56.9 +1.7**
CMAR			pmax	pmax	
comp=Z,6.0nm,0.8s					
UZB	**Uzynbulak**	**47.73 294**	*e*P	**P**	**06 56 55.0 -1.1**
UZB	**Uzynbulak**	**47.73 294**	*e*P	**P**	**06 56 55.0 -1.1**
baz=294					
KPKS	**Kokpek**	**47.81 294**	*e*P	**P**	**06 56 55.6 -1.0**
KPKS			pmax	pmax	

comp=Z,11nm,0.7s
KPKS Kokpek 47.81 294 eP P 06 56 55.6 -1.0
comp=Z,11nm,0.7s,baz=294
SHL Shillong 47.94 266 P P 06 56 57.8 -0.2
SHL Shillong 47.94 266 P P 06 56 57.8 -0.2
SHL pmax pmax
comp=Z,19nm,0.8s
P33M Teslin, Yukon 48.27 41 P P 06 57 01.3 +1.4
baz=289
CHKK Chushkaly 48.74 295 eP P 06 57 02.9 -0.7
CHKK Chushkaly 48.74 295 eP P 06 57 03.0 -0.7
baz=295
BRZS Berezniki 48.82 304 eP P 06 57 03.1 -1.0
BRZS pmax pmax
comp=Z,3.0nm,0.3s
BRZS Berezniki 48.82 304 eP P 06 57 03.1 -1.0
comp=Z,2.9nm,0.3s,baz=304
C36M Paulatuk 48.90 28 P P 06 57 04.7 +0.3
baz=288
BRVK Borovoye 48.98 309 P P 06 57 04.7 -0.6
BRVK IAmb IAmb 06 57 06.6
comp=Z,4.6nm,0.8s
BRVK Borovoye 48.98 309 P P 06 57 04.7 -0.6
BRVK pmax pmax
comp=Z,5.0nm,0.8s
MDOK Medeo 49.02 294 eP P 06 57 04.9 -1.0
MDOK Medeo 49.02 294 eP P 06 57 05.0 -1.0
baz=294
TNSS Tian-Shan 49.14 294 eP P 06 57 07.2 +0.1
TNSS Tian-Shan 49.14 294 eP P 06 57 07.3 +0.1
baz=294
KUU Kurty 49.15 296 eP P 06 57 05.4 -1.3
KUU pmax pmax
comp=Z,12nm,0.7s
KUU Kurty 49.15 296 eP P 06 57 05.5 -1.3
comp=Z,12nm,0.7s,baz=296
U33K Whale Pass 49.56 46 P P 06 57 08.9 -0.8
baz=292
OTUK Ortayu 49.74 302 P P 06 57 10.9 -0.3
CRAG Craig 49.81 47 P P 06 57 13.4 +1.9
baz=293
ULHL Ulahol 49.97 294 P P 06 57 14.1 +0.8
SNR=14
TKM2 Tokmak 2 50.07 295 P P 06 57 14.9 +0.9
SNR=22
TKM2 Tokmak 2 50.07 295 i P P 06 57 14.7 +0.7
TKM2 pmax pmax
comp=Z,36nm,1.3s
BTLS Baital 50.09 298 eP P 06 57 12.3 -1.6
BTLS Baital 50.09 298 eP P 06 57 12.3 -1.6
baz=298
DLBC Dease Lake 50.23 43 LR LR 07 20 31.4
comp=Z,40nm,18.7s,baz=297,slow=38
DLBC Dease Lake 50.23 43 P P 06 57 16.4 +1.5
baz=292
SGDS Sogindy 50.45 296 eP P 06 57 15.4 -1.2
SGDS Sogindy 50.45 296 eP P 06 57 15.5 -1.2
baz=296
NRN Naryn 50.51 293 IAmb IAmb 06 57 33.6
comp=Z,6.4nm,1.1s
KBK Karagaybulak 50.62 295 P P 06 57 19.2 +1.1
SNR=11
USP Ospenovka 50.62 296 P P 06 57 18.5 +0.6
SNR=18
T35M Bob Quinn 50.69 45 P P 06 57 20.3 +2.1
baz=294
JIRN Jiri 50.76 272 eP P 06 57 20.4 +0.8
JIRN Jiri 50.76 272 eP P 06 57 20.4 +0.8
comp=Z,17nm,0.2s
GUN Gumba 50.84 273 eP P 06 57 20.8 +0.7
GUN Gumba 50.84 273 eP P 06 57 20.8 +0.7
comp=Z,26nm,0.3s
RAMN Ramite 50.89 271 eP P 06 57 20.9 +0.5
RAMN Ramite 50.89 271 eP P 06 57 20.9 +0.5
comp=Z,47nm,0.2s
AAK Ala-Archa 50.92 295 P P 06 57 21.0 +0.6
SNR=5.1
AAK Ala-Archa 50.92 295 P P 06 57 20.7 +0.4
AAK IAmb IAmb 06 57 22.0
comp=Z,15nm,1.1s
AAK Ala-Archa 50.92 295 P P 06 57 20.7 +0.4
AAK pmax pmax
comp=Z,15nm,1.2s
AAK Ala-Archa 50.92 295 eP P 06 57 20.7 +0.4
KKN Kakani 51.34 273 ePg P 06 57 24.3 +0.6
EKS2 Erkin-Say 51.37 295 P P 06 57 24.4 +0.7
SNR=14
PKI Pulchoki 51.38 273 eP P 06 57 24.5 +0.4
PKI Pulchoki 51.38 273 eP P 06 57 23.9 -0.2
comp=Z,35nm,0.8s
PKIN Phulchoki 51.38 273 eP P 06 57 24.6 +0.5
PKIN Phulchoki 51.38 273 eP P 06 57 24.3 +0.2
comp=Z,25nm,0.6s
KSH Kashi 51.47 291 P P 06 57 29.0 +4.6
KSH pmax pmax
comp=Z,17nm,0.8s
DMN Daman 51.57 273 eP P 06 57 26.2 +0.7
DMN Daman 51.57 273 eP P 06 57 26.0 +0.5
GKN Gorkha 51.67 273 eP P 06 57 26.7 +0.6
GKN Gorkha 51.67 273 eP P 06 57 26.5 +0.4
comp=Z,63nm,0.8s
AML Almayashu 51.68 295 P P 06 57 27.2 +0.9
SNR=11
DANN Dangsing 52.10 274 eP P 06 57 30.5 +1.1
DANN Dangsing 52.10 274 eP P 06 57 30.3 +0.9
comp=Z,104nm,0.6s
KK31 Karatay Array 53.25 297 P P 06 57 37.8 +0.4
KK31 Karatay Array 53.25 297 P P 06 57 37.8 +0.4
KK31 pmax pmax
comp=Z,15nm,0.9s
KKAR Karatay Array 53.25 297 P P 06 57 37.5 +0.1
KKAR Karatay Array 53.25 297 P P 06 57 37.5 +0.1
KKAR pmax pmax
comp=Z,15nm,0.9s
ARU Arti 53.72 316 LR LR 07 23 35.3
comp=Z,44nm,20.3s,baz=312,slow=39
ARU Arti 53.72 316 P P 06 57 39.2 -1.3
ARU IAmb IAmb 06 57 40.4
comp=Z,10nm,1.0s
ARU Arti 53.72 316 c i P P 06 57 39.3 -1.3
ARU 06 58 41.9
ARU S S 07 05 04.1 -0.9
ARU SS SKiKP 07 08 43.3 +2.0
ARU pmax pmax
comp=Z,10.0nm,1.0s
IUG Iuzhnay 54.04 296 eP P 06 57 42.9 -0.3
IUG Iuzhnay 54.04 296 eP P 06 57 43.0 -0.3
baz=296
BTK Batken 54.60 294 P P 06 57 47.6 +0.2
BTK Batken 54.60 294 P P 06 57 47.6 +0.2
BTK pmax pmax
comp=Z,17nm,1.1s
YKA Yellowknife Ar 55.27 34 P P 06 57 52.2 +0.6
comp=Z,2.3nm,0.7s,baz=298,slow=6.9,SNR=13
comp=Z,2.3nm,0.7s
YKA Yellowknife Ar 55.27 34 i P P 06 57 57.4 +5.7
YKA pmax pmax
comp=Z,1.0nm,0.7s
GAR Garm 55.49 293 P P 06 57 53.8 0.0
CHGR Chuyangaron 56.44 293 P P 06 58 00.8 +0.3
CHGR pmax pmax
comp=Z,89nm,0.9s
NIL Nilore 56.45 286 P P 06 58 01.5 +0.9
NIL Nilore 56.45 286 P P 06 58 01.5 +0.9
NIL pmax pmax
comp=Z,61nm,1.0s
AB31 Akbulak array 56.50 308 P P 06 58 00.2 -0.4
ABKAR Akbulak array 56.50 308 P P 06 58 00.7 0.0
ABKAR IAmb IAmb 06 58 01.4
comp=Z,8.7nm,0.8s
KIRV Kirov 56.94 322 ceP P 06 58 03.1 -0.4
ARCES ARCESS Array B 58.52 339 P P 06 58 12.3 -2.2
comp=Z,0.7nm,0.4s,baz=52,slow=7.5,SNR=12
comp=Z,0.7nm,0.4s
KBL Kabul 58.81 289 P P 06 58 16.8 -0.5
KBL Kabul 58.81 289 P P 06 58 16.8 -0.5
KBL pmax pmax
comp=Z,25nm,0.9s
MTN Manton Dam 58.84 198 P P 06 58 17.3 0.0
EDM Edmonton 60.96 43 P P 06 58 32.7 +1.2
EDM IAmb IAmb 06 58 33.1
comp=Z,6.5nm,0.6s
EDM Edmonton 60.96 43 P P 06 58 32.7 +1.2
EDM pmax pmax
comp=Z,7.0nm,0.6s
BELG Belogornoye 61.27 316 i P P 06 58 33.9 +0.4
BELG pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 61.95 49 P P 06 58 38.5 +0.3
baz=306
E09A Wood Farm, Sta 62.43 51 IAmb IAmb 06 58 43.6
comp=Z,11nm,1.4s
SUMG Summit 63.19 2 i P P 06 58 46.0 -0.5
GEYT Alibeck 63.97 298 P P 06 58 52.3 +0.6
comp=Z,15nm,0.7s,baz=38,slow=2.6,SNR=28
comp=Z,15nm,0.7s
GEYT Alibeck 63.97 298 P P 06 58 52.5 +0.8
FIA1 FINESS Array S 64.16 333 P P 06 58 51.7 -0.8
FINES FINESS Array B 64.16 333 P P 06 58 50.9 -1.6
comp=Z,4.9nm,0.6s,baz=45,slow=7.9,SNR=33
comp=Z,4.9nm,0.6s
FINES FINESS Array B 64.16 333 P P 06 58 51.1 -1.3
FINES FINESS Array B 64.16 333 P P 06 58 51.2 -1.3
PLID Pearl Lake 64.49 51 IAmb IAmb 06 58 57.1
comp=Z,11nm,1.4s
MSO Missoula 64.54 49 P P 06 58 54.4 -1.0
baz=309
OBN Obninsk 64.65 323 ⇓ eP P 06 58 55.4 -0.3
OBN *SP sP 06 59 41.0 +3.1
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,88nm,15.0s
OBN Obninsk 64.65 323 eP P 06 58 55.4 -0.3
WB0 Warramunga Arr 64.96 193 P P 06 58 58.4 +0.3
WB0 IAmb IAmb 06 58 58.9
comp=Z,8.8nm,0.7s
WR0 Warramunga Arr 65.12 193 IAmb IAmb 06 58 59.9
comp=Z,5.8nm,0.8s
WRAB Tennant Creek 65.13 193 P P 06 58 59.5 +0.3
WRAB IAmb IAmb 06 59 00.1
comp=Z,7.1nm,0.8s
WRAB Tennant Creek 65.13 193 P P 06 58 59.5 +0.3
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WB2 Warramunga Arr 65.14 193 P P 06 58 59.4 +0.1
WB2 IAmb IAmb 06 59 00.1
comp=Z,7.1nm,0.8s
WRA Warramunga Arr 65.14 193 P P 06 58 59.3 0.0
comp=Z,5.8nm,0.6s,baz=9.2,slow=6.7,SNR=104
comp=Z,5.8nm,0.6s
WRA Warramunga Arr 65.14 193 P P 06 58 58.9 -0.4
BEKR Beckworth 65.16 58 P P 06 59 00.7 +1.1
FFC Flin Flon 65.20 37 P P 06 59 00.5 +1.1
FFC IAmb IAmb 06 59 30.4
comp=Z,7.2nm,1.1s
FFC Flin Flon 65.20 37 P P 06 59 00.5 +1.1
FFC pmax pmax
comp=Z,7.0nm,1.1s
VCNR Virginia City 65.95 58 IAmb IAmb 06 59 07.1
comp=Z,3.8nm,0.8s
EGMT Eagleton 65.98 46 P P 06 59 06.0 +1.3
EGMT IAmb IAmb 06 59 06.6
comp=Z,5.1nm,0.8s
EGMT Eagleton 65.98 46 P P 06 59 04.1 -0.5
baz=310
HLID Hailey 66.33 52 P P 06 59 07.8 +0.7
baz=310
YERR Yerington 66.39 58 IAmb IAmb 06 59 09.9
comp=Z,9.2nm,1.0s
BOZ Bozeman (W) 66.56 49 P P 06 59 09.9 +1.4
BOZ IAmb IAmb 06 59 10.7
comp=Z,3.9nm,0.7s
BOZ Bozeman (W) 66.56 49 P P 06 59 09.9 +1.4
BOZ pmax pmax
comp=Z,4.0nm,0.7s
BOZ Bozeman (W) 66.56 49 P P 06 59 09.4 +1.0
baz=310
KVN Kaiserville 67.04 57 IAmb IAmb 06 59 14.0
comp=Z,4.9nm,0.9s
NVAR Mina Array Bea 67.31 58 P P 06 59 14.8 +1.4
comp=Z,3.1nm,0.8s,baz=283,slow=6.3,SNR=22
NVAR pP PcP 06 59 42.0 +1.8
comp=Z,1.3nm,0.6s,baz=296,slow=7.8,SNR=4.5
comp=Z,3.1nm,0.8s
H17A Grant Village 67.91 49 P P 06 59 19.3 +2.1
baz=311
AKT Akhty 68.01 307 eP P 06 59 17.7 +0.1
AKT e 06 59 42.1
AKT e*PP pP 06 59 46.1 -1.2
AKT pmax pmax
comp=Z,36nm,1.0s
RLMT Red Lodge 68.13 48 P P 06 59 19.8 +1.3
baz=312
DGMT Dagmar 68.45 43 P P 06 59 20.4 +0.2
baz=313
VES Vestal, Richgr 68.47 61 P P 06 59 18.3 -2.2
baz=310
SEKA Sheki 68.49 307 P P 06 59 20.3 -0.2
ZKTA Zakatala 68.54 308 P P 06 59 21.0 +0.2
DZM Mont Dzumac 68.58 161 P P 06 59 24.4 +3.2
comp=Z,9.7nm,0.8s,baz=36,slow=10,SNR=5.9
comp=Z,9.7nm,0.8s
PKM Mcpherson Peak 68.63 62 P P 06 59 22.2 +0.6
baz=310
MNK Minsk 68.64 327 i P P 06 59 15.0 -6.1
MNK i *PP pP 06 59 48.3 -2.2
MNK i 07 01 51.5
MNK i PPP PPP 07 03 32.3
MNK i S S 07 08 05.2 -8.5
MNK i *SS sS 07 09 03.9 +0.1
MNK i SS SS 07 12 39.9 +0.6
MNK pmax pmax
comp=Z,22nm,0.7s
MNK pmax pmax
comp=N,39nm,1.0s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK Minsk 68.64 327 i P P 06 59 15.0 -6.1
comp=E,4.0nm,0.9s
MNK i P P 06 59 15.0 -6.1
comp=N,39nm,1.0s
MNK i P P 06 59 15.0 -6.1
comp=Z,22nm,0.7s,baz=42
MNK i pP pP 06 59 48.4 -2.2
MNK i PP PP 07 01 51.5 -2.0
MNK i PPP PPP 07 03 32.4
MNK i S S 07 08 05.3 -8.5
MNK i sS sS 07 09 03.9 +0.1
MNK i SS SS 07 12 40.0 +0.6
MNK i SSS SSS 07 15 57.4
LAO LASA Array 68.66 45 P P 06 59 21.3 -0.3
baz=313
CWC Cottonwood Cre 68.72 60 P P 06 59 23.0 +0.8
baz=310
NACGM Naroch 68.76 328 ⇓ eP P 06 59 21.5 -0.4
baz=43
GRAC Grapevine Rang 68.80 59 IAmb IAmb 06 59 24.9
comp=Z,7.6nm,0.6s
GRAC Grapevine Rang 68.80 59 P P 06 59 23.2 +0.7
baz=310
ASAR Alice Springs 68.86 193 P P 06 59 23.6 +0.9
comp=Z,2.4nm,0.7s,baz=12,slow=6.3,SNR=26
ASAR pP pP 06 59 53.0 0.0
comp=Z,0.8nm,0.7s,baz=15,slow=5.6,SNR=2.5
comp=Z,2.4nm,0.7s
NOA NORSAR Array B 68.87 339 P P 06 59 21.5 -1.0
comp=Z,4.2nm,0.7s,baz=32,slow=6.2,SNR=12
comp=Z,4.2nm,0.7s
ISA Isabella, Lake 68.97 60 P P 06 59 23.1 -0.5
baz=310
R11A Troy Canyon, C 69.00 57 P P 06 59 24.4 +0.5
baz=311
KIV Kislovodsk 69.18 312 P P 06 59 26.0 +1.2
KIV Kislovodsk 69.18 312 eP P 06 59 26.4 +1.6
KIV pmax pmax
comp=Z,52nm,1.0s
KIV Kislovodsk 69.18 312 eP P 06 59 26.0 +1.2
LKRN Lenkeran, Azer 69.19 304 P P 06 59 25.2 +0.4
KBZ Khabaz 69.21 311 P P 06 59 26.3 +1.4
comp=Z,29nm,0.8s,baz=46,slow=3.7,SNR=47
KBZ LR LR 07 32 55.7
comp=Z,75nm,19.9s,baz=30,slow=39
KBZ Khabaz 69.21 311 ceP P 06 59 25.3 +0.5
KBZ pmax pmax
comp=Z,34nm,0.9s
KBZ Khabaz 69.21 311 eP P 06 59 25.4 +0.6
ZEI Tsey 69.30 310 eP P 06 59 25.2 -0.5
ZEI pmax pmax
comp=Z,26nm,0.9s
SCZ2 Santa Cruz Isl 69.31 62 P P 06 59 25.8 +0.1
baz=310
MPMC Manual Prospec 69.33 60 P P 06 59 26.4 +0.4
baz=311
GANJ Ganja 69.36 307 P P 06 59 26.1 +0.2
DUG Dugway, Tooele 69.42 54 P P 06 59 27.4 +1.0
baz=311
FURC Furnace Creek, 69.45 59 P P 06 59 27.2 +0.8
baz=311
TPNV Topopah Spring 69.51 58 P P 06 59 27.6 +0.6
baz=311
BW06 Boulder Array 69.54 50 P P 06 59 27.3 0.0
baz=312
PDAR Pinedale Array 69.54 50 P P 06 59 28.1 +0.8
comp=Z,1.2nm,0.6s,baz=318,slow=2.0,SNR=10
PDAR pP pP 06 59 56.5 -0.9
comp=Z,0.9nm,0.6s,baz=277,slow=1.1,SNR=4.3
comp=Z,1.2nm,0.6s
GWY Greenwater Val 69.75 59 IAmb IAmb 06 59 30.5
comp=Z,5.7nm,0.7s
QSM Queen of Sheba 69.77 59 IAmb IAmb 06 59 30.6
comp=Z,6.3nm,0.9s
EDW2 Edwards Air Fo 69.77 61 P P 06 59 29.0 +0.4
baz=311
MPU Maple Canyon 70.22 53 IAmb IAmb 06 59 34.0
comp=Z,9.0nm,1.4s
GSC Goldstone, Bar 70.24 60 P P 06 59 32.0 +0.6
baz=311
BFSC Mount Baldy Ra 70.40 61 P P 06 59 32.9 +0.3
baz=311
TUQ Turquoise Moun 70.69 59 P P 06 59 35.3 +1.0
baz=311
AKASG Malin Array Be 70.91 323 P P 06 59 34.4 -0.7
comp=Z,8.2nm,0.8s,baz=40,slow=6.5,SNR=34
comp=Z,8.2nm,0.8s
AKASG Malin Array Be 70.91 323 i P P 06 59 34.7 -0.4
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 70.91 323 IAmb IAmb 06 59 36.2
comp=Z,12nm,0.8s
AKBB Malin Array Si 70.91 323 ceP P 06 59 34.8 -0.3
RDMU Red Mountain 71.02 52 IAmb IAmb 06 59 38.2
comp=Z,5.3nm,0.6s
MURC Murrieta 71.11 61 P P 06 59 37.0 +0.3
baz=311
K22A Casper 71.26 48 P P 06 59 38.1 +0.5
baz=314
GMRC Granite Mounta 71.29 60 P P 06 59 38.2 +0.4
baz=312
SRU San Rafael Swe 71.46 53 IAmb IAmb 06 59 41.0
comp=Z,7.7nm,1.1s
RSSD Black Hills 71.55 46 P P 06 59 38.9 -0.5
baz=315
PFO Pinyon Flats O 71.56 61 P P 06 59 39.4 -0.1
baz=312
TPFO Pinon Flats 71.57 61 P P 06 59 40.0 +0.4
baz=312
BELC Belle Mtn. Jos 71.59 60 P P 06 59 40.3 +0.6
baz=312
IRM Iron Mountain 72.02 60 P P 06 59 43.0 +0.9
baz=312
O20A White River Ci 72.05 51 P P 06 59 43.1 +0.6
baz=314
MONP2 Monument Peak 72.06 61 P P 06 59 43.1 +0.5
baz=312
BC3 Big Chuckawall 72.16 60 P P 06 59 42.5 -0.6
baz=312
SWSC Sam W. Stewart 72.42 61 P P 06 59 43.8 -0.6
baz=312
IKP In-Ko-Pah, Jac 72.42 61 P P 06 59 44.4 -0.2
baz=312
PDMCI Parker Dam,Lak 72.54 59 P P 06 59 45.2 +0.1
baz=312
GEVA Gevas 72.79 307 IAmb IAmb 06 59 49.2
comp=Z,8.7nm,0.8s
PV13 Radium Mtn., P 73.08 53 IAmb IAmb 06 59 50.7
comp=Z,3.9nm,0.6s
LVV L'vov 73.75 326 eP P 06 59 52.2 +0.2
MVCO Mesa Verde 73.92 54 P P 06 59 54.0 +0.4
baz=314
S22A 4UR Ranch, Cre 74.50 52 P P 06 59 57.0 +0.1
baz=315
VASR Vaslui 74.59 321 ⇑P P 06 59 58.0 +1.1
214A Organ Pipe Nat 74.95 60 P P 06 59 59.8 +0.5
baz=313
BUR08 Bucovina Ar. S 74.95 323 P P 06 59 59.4 +0.2
BUR08 IAmb IAmb 07 00 00.5
comp=Z,14nm,0.9s
BURAR Bucovina Array 74.97 323 ⇑P P 06 59 59.8 +0.6
BURAR Bucovina Array 74.97 323 P P 06 59 59.4 +0.2
BURAR IAmb IAmb 07 00 00.8
comp=Z,13nm,0.8s
BURAR Bucovina Array 74.97 323 P P 06 59 59.8 +0.6
OJC Ojcow 75.09 328 IAmb IAmb 06 59 59.3
comp=Z,15nm,1.0s
STHS Stebnicka Huta 75.17 327 eP P 07 00 01.1 +0.8
STHS pmax pmax
comp=Z,10.0nm,1.0s
TESR Tescani 75.20 322 ⇑P P 07 00 01.2 +0.8
SDCO Great Sand Dun 75.25 51 P P 07 00 01.1 -0.2
baz=315
UZH Uzhgorod 75.38 326 eP P 07 00 04.3 +2.9
UZH e 07 00 13.2
CRVS Cervenica-Dubn 75.50 326 eP P 07 00 02.8 +0.7
CRVS pmax pmax
comp=Z,25nm,1.5s
ECSD EROS Data Cent 75.52 42 P P 07 00 01.5 -0.9
baz=319
CFR Carcaliu 75.55 320 ⇑P P 07 00 03.1 +0.6
VRI Vrincioaia 75.66 321 ⇑P P 07 00 04.3 +1.2
TPGR Topolog 75.67 320 ⇑P P 07 00 04.3 +1.1
TRPA Tarpa 75.68 325 ⇑P P 07 00 04.0 +0.9
PLOR Plostina 75.71 321 ⇑P P 07 00 04.3 +0.8
PLOR Plostina 75.71 321 P P 07 00 04.2 +0.8
TUC Tucson 75.95 59 P P 07 00 05.8 +0.7
baz=314
STKA Stephens Creek 76.15 185 P P 07 00 07.1 +1.4
comp=Z,2.1nm,0.8s,baz=6.1,slow=5.1,SNR=6.1
comp=Z,2.1nm,0.8s
DOPR Dopca 76.17 322 ⇑P P 07 00 06.8 +0.8
DPC Dobruska-Polom 76.26 330 eP P 07 00 07.0 +0.5
DPC Dobruska-Polom 76.26 330 eP P 07 00 07.0 +0.5
MORC Moravsky Berou 76.29 329 ⇑P P 07 00 07.6 +1.0
MORC Moravsky Berou 76.29 329 IAmb IAmb 07 00 08.3
comp=Z,18nm,1.2s
MORC Moravsky Berou 76.29 329 P P 07 00 07.7 +1.0
MORC Moravsky Berou 76.29 329 eP P 07 00 07.4 +0.7
MLR Muntele Rosu 76.30 322 ⇑P P 07 00 07.7 +0.8
MLR Muntele Rosu 76.30 322 IAmb IAmb 07 00 09.2
comp=Z,13nm,0.8s
MLR Muntele Rosu 76.30 322 P P 07 00 07.7 +0.8
KRLC Kraliky 76.33 330 eP P 07 00 11.3 +4.5
KRLC Kraliky 76.33 330 eP P 07 00 07.1 +0.3
ICOR Ion Corvin 76.52 320 ⇑P P 07 00 09.0 +1.1
CLL Collm 76.61 332 IAmb IAmb 07 00 09.1
comp=Z,20nm,1.1s
CLL Collm 76.61 332 ⇓ i P P 07 00 07.9 -0.4
CLL e S S 07 09 48.0 +3.7
CLL pmax pmax
comp=Z,16nm,0.9s
CLL Collm 76.61 332 ⇓ i P P 07 00 07.9 -0.4
comp=Z,16nm,0.9s
CLL i x x 07 00 11.5
CLL e PcP PcP 07 00 20.0 +0.7
CLL e S S 07 09 48.0 +3.7
ANMO Albuquerque 76.69 54 P P 07 00 09.1 -0.2
baz=315
VOIR 76.74 322 ⇑P P 07 00 10.6 +1.3
VOIR 76.74 322 P P 07 00 10.5 +1.3
VYHS Vyhne 76.86 327 eP P 07 00 10.7 +0.9
VYHS pmax pmax
comp=Z,14nm,1.4s
BR131 Keskin Array S 76.94 313 P P 07 00 11.3 +0.7
BR131 IAmb IAmb 07 00 12.3
comp=Z,12nm,0.8s
BR131 Keskin Array S 76.94 313 P P 07 00 11.4 +0.7
BR131 pmax pmax
comp=Z,12nm,0.8s
BRTR Keskin Array B 76.94 313 P P 07 00 11.1 +0.5
comp=Z,6.2nm,0.8s,baz=75,slow=4.2,SNR=27
comp=Z,6.2nm,0.8s
BRTR Keskin Array B 76.94 313 P P 07 00 11.3 +0.7
BRTR Keskin Array B 76.94 313 P P 07 00 11.3 +0.7
ARR Arges 76.97 322 ⇑P P 07 00 12.0 +1.4
SCHQ Schefferville 76.98 19 P P 07 00 10.6 +0.2
comp=Z,1.7nm,0.5s,baz=278,slow=8.4,SNR=5.8
comp=Z,1.7nm,0.5s
JAVC Velka Javorina 77.00 328 eP P 07 00 12.4 +1.7

VRAC	Vranov	77.03	329	⇑P	P	07 00 12.0 +1.2
VRAC	Vranov	77.03	329	LR	LR	07 40 12.7
	comp=Z,73nm,18.4s,baz=337,slow=40					
VRAC	Vranov	77.03	329	*e*P	P	07 00 12.0 +1.2
GOPC	GO Pecny, Ondr	77.17	331	*e*P	P	07 00 12.4 +0.8
GOPC	GO Pecny, Ondr	77.17	331	*e*P	P	07 00 12.4 +0.8
PRU	Pruhonice	77.19	331	*e*P	P	07 00 12.4 +0.7
PRU	Pruhonice	77.19	331	*e*P	P	07 00 12.4 +0.7
ANTO	Ankara	77.27	314	⇑P	P	07 00 14.1 +1.7
ANTO	Ankara	77.27	314	P	P	07 00 13.6 +1.2
ANTO	Ankara	77.27	314	P	P	07 00 13.6 +1.2
ANTO				pmax	pmax	
	comp=Z,29nm,0.8s					
KRUC	Moravsky	77.31	329	*e*P	P	07 00 13.2 +0.9
SMOL	Smolenice	77.38	328	*e*P	P	07 00 13.9 +1.2
SMOL				pmax	pmax	
	comp=Z,9.0nm,1.2s					
319A	Douglas	77.52	58	IAmb	IAmb	07 00 16.3
	comp=Z,6.1nm,0.7s					
SIRR	Siria	77.53	325	⇓P	P	07 00 14.5 +0.9
MODS	Modra-Piesok	77.55	328	*e*P	P	07 00 14.7 +1.0
MODS				pmax	pmax	
	comp=Z,33nm,1.1s					
MOX	Moxa	77.63	333	P	P	07 00 14.6 +0.5
MOX				pmax	pmax	
	comp=Z,10.0nm,1.8s					
GZR	Gura Zlata	77.76	323	⇑P	P	07 00 15.5 +0.5
BZS	Buzias	78.07	324	⇑P	P	07 00 17.0 +0.4
KHC	Kasperske Hory	78.26	331	IAmb	IAmb	07 00 19.2
	comp=Z,15nm,0.8s					
KHC	Kasperske Hory	78.26	331	*e*P	P	07 00 17.7 +0.1
KHC	Kasperske Hory	78.26	331	*e*P	P	07 00 17.7 +0.1
CKRC	Cesky Krumlov	78.26	330	*e*P	P	07 00 18.0 +0.4
HERR	Herculane	78.32	323	⇑P	P	07 00 18.3 +0.3
CONA	Conrad Observa	78.45	329	*e*P	P	07 00 20.0 +1.3
	comp=Z,11nm,0.8s					
GERES	GERESS Array B	78.45	331	P	P	07 00 18.9 +0.2
	comp=Z,2.9nm,0.6s,baz=35,slow=4.9,SNR=19					
	comp=Z,2.9nm,0.6s					
GERES	GERESS Array B	78.45	331	P	P	07 00 18.7 0.0
GERES	GERESS Array B	78.45	331	P	P	07 00 19.0 +0.2
BORA	Eskisehir	78.46	315	IAmb	IAmb	07 00 21.5
	comp=Z,18nm,1.2s					
RONA	Rosalia, Austr	78.48	328	*i* P	P	07 00 20.4 +1.6
	comp=Z,11nm,0.8s,SNR=6.0					
MDVR	Moldovita	78.70	324	⇑P	P	07 00 20.4 +0.2
MORH	Mrgy, Hungar	78.80	326	⇑P	P	07 00 20.9 +0.3
MOA	Molln	79.10	330	*e*P	P	07 00 23.4 +1.2
	comp=Z,5.5nm,0.8s					
FRGS	Fruska Gora	79.19	325	⇑P	P	07 00 23.5 +0.7
BLKB	Belogradchik	79.21	322	⇑P	P	07 00 22.6 -0.3
BTNL	Ternell	79.39	336	*d*P	P	07 00 24.1 +0.4
MEM	Membach	79.40	336	*d*P	P	07 00 22.8 -0.9
	comp=Z,11nm,0.9s					
BIOA	Bad Ischl, Aus	79.46	330	*e*P	P	07 00 25.3 +1.1
	comp=Z,12nm,0.9s					
BSTI	Sart Tilman	79.55	336	*d*P	P	07 00 25.0 +0.4
BOVS	Bovan	79.62	323	⇑P	P	07 00 24.9 -0.2
BHOU	Houvegnez	79.63	336	*d*P	P	07 00 25.5 +0.5
VTS	Vitosha	79.76	321	⇑P	P	07 00 26.0 -0.1
VTS	Vitosha	79.76	321	P	P	07 00 26.7 +0.6
VTS				IAmb	IAmb	07 00 28.1
	comp=Z,18nm,1.0s					
VTS	Vitosha	79.76	321	P	P	07 00 26.7 +0.6
VTS				pmax	pmax	
	comp=Z,18nm,1.0s					
BCLA	Clavier	79.77	336	*d*P	P	07 00 26.0 +0.2
SOKA	Soboth	79.80	329	*i* P	P	07 00 26.9 +0.8
	comp=Z,20nm,1.0s,SNR=5.4					
BGES	Gesves	79.87	336	*d*P	P	07 00 26.2 -0.1
DIVS	Divibare	79.98	324	IAmb	IAmb	07 00 28.1
	comp=Z,7.6nm,0.8s					
BMRD	Maredsous	80.03	336	*d*P	P	07 00 27.1 -0.1
	comp=Z,13nm,0.9s					
DOU	Dourbes	80.27	336	*d*P	P	07 00 28.6 +0.2
MYKA	Terra Mystica	80.36	329	*e*P	P	07 00 29.7 +0.6
	comp=Z,4.8nm,0.5s					
WTTA	Wattenberg	80.53	331	*e*P	P	07 00 31.1 +1.0
	comp=Z,19nm,1.0s					
RETA	Reutte	80.64	332	*e*P	P	07 00 31.5 +0.9
	comp=Z,11nm,0.9s					
MOTA	Moosalm	80.64	331	*i* P	P	07 00 31.5 +0.8
	comp=Z,24nm,0.9s,SNR=7.0					
BFO	Black Forest	80.70	333	P	P	07 00 30.5 -0.4
BFO				IAmb	IAmb	07 00 32.0
	comp=Z,10nm,1.0s					
BFO	Black Forest	80.70	333	P	P	07 00 30.5 -0.4
BFO				pmax	pmax	
	comp=Z,10.0nm,1.0s					
SQTA	Sankt Quirin	80.71	331	*e*P	P	07 00 31.9 +0.9
	comp=Z,14nm,0.9s					
DAVA	Damuels	81.11	332	*i* P	P	07 00 33.8 +0.6
	comp=Z,15nm,1.0s,SNR=5.2					
ECH	Echery	81.18	334	IAmb	IAmb	07 00 34.3
	comp=Z,9.9nm,0.9s					
FUORN	Ofenpass-Fuorn	81.56	331	IAmb	IAmb	07 00 37.3
	comp=Z,12nm,1.0s					
RAYN	Ar Rayn	81.57	295	P	P	07 00 36.3 +0.4
RAYN				IAmb	IAmb	07 00 37.8
	comp=Z,12nm,1.1s					
RAYN	Ar Rayn	81.57	295	P	P	07 00 36.3 +0.4
RAYN				pmax	pmax	
	comp=Z,12nm,1.2s					
PDG	Podgorica	81.65	324	⇑P	P	07 00 36.3 +0.4
TUL1	Leonard	81.86	47	P	P	07 00 37.5 +0.3
	baz=320					
SADO	Sadowa	82.16	31	LR	LR	07 41 32.9
	comp=Z,20nm,18.2s,baz=44,slow=39					
TX31	Lajitas Ar. Si	82.36	56	P	P	07 00 41.0 +1.0
TX31				IAmb	IAmb	07 00 42.8
	comp=Z,25nm,1.3s					
TX32	Lajitas Array	82.36	56	IAmb	IAmb	07 00 42.8
	comp=Z,8.6nm,1.3s					
TXAR	Lajitas Array	82.36	56	P	P	07 00 41.1 +1.1
	comp=Z,2.3nm,0.5s,baz=294,slow=3.9,SNR=85					
TXAR				pP	pP	07 01 10.0 -1.1
	comp=Z,0.8nm,0.6s,baz=290,slow=4.3,SNR=3.3					
	comp=Z,2.3nm,0.5s					
CCM	Cathedral Cave	82.48	43	P	P	07 00 39.7 -0.7
	baz=322					
SENIN	Lac Senin/Sane	82.77	333	P	P	07 00 41.8 -0.2
SENIN				IAmb	IAmb	07 00 43.1
	comp=Z,7.7nm,0.8s					
SSF	Saint Saulge	83.31	336	*e*P	P	07 00 44.4 -0.1
SSF				pmax	pmax	
	comp=Z,4.0nm,0.7s					
LPL	La Plagne	83.70	333	*e*P	P	07 00 47.2 +0.4
LPL				pmax	pmax	
	comp=Z,15nm,1.0s					
MIAR	Mount Ida	84.06	46	P	P	07 00 48.1 -0.4
	baz=321					
P49A	Miami Univ. Ec	84.30	38	P	P	07 00 48.2 -1.4
	baz=326					
MFF	Saint Martin d	84.76	338	*e*P	P	07 00 52.4 +0.6
MFF				pmax	pmax	
	comp=Z,14nm,0.9s					
O53A	New Philadelph	85.18	35	P	P	07 00 52.3 -1.8
	baz=328					
P52A	Corning	85.32	36	P	P	07 00 52.9 -1.9
	baz=327					
TIP	Timpagrande	85.40	323	⇑P	P	07 00 55.0 -0.3
BINY	Binghamton	85.53	31	P	P	07 00 52.4 -3.4
	baz=331					
WVT	Waverly	85.66	42	P	P	07 00 55.0 -1.4
	baz=324					
LFF	La Frestale	86.05	337	*e*P	P	07 00 59.1 +0.9
LFF				pmax	pmax	
	comp=Z,7.0nm,0.7s					
ESDC	Sonseca Array	92.23	338	P	P	07 01 27.5 0.0
	comp=Z,1.3nm,0.9s,baz=346,slow=3.9,SNR=7.0					
	comp=Z,1.3nm,0.9s					
TORD	Torodi Ar. Bea	114.53	322	PKP	PKiKP	07 06 57.1 -0.4
	comp=Z,0.2nm,0.3s,baz=25,slow=2.4,SNR=2.3					
VNDA	Vanda	122.08	176	PKP	PKiKP	07 07 10.3 +0.1
	comp=Z,0.7nm,0.5s,baz=295,slow=3.0,SNR=12					
BOSA	Boshof	131.56	269	SKPbc	SKPab	07 10 45.2 +0.6
	comp=Z,3.1nm,0.8s,baz=118,slow=6.5,SNR=5.0					
QSPA	South Pole Qui	134.21	180	PKP	PKiKP	07 07 34.4 -0.5
	comp=Z,1.7nm,0.7s,baz=338,slow=0.2,SNR=11					
QSPA				SKPbc	SKPbc	07 10 52.5 +0.9
	comp=Z,2.3nm,1.1s,baz=292,slow=2.9,SNR=3.7					
H03N2	Juan Fernandez	143.09	89	T	T	09 47 02.6
	baz=305,slow=77,SNR=7.3					
H03N3	Juan Fernandez	143.11	89	T	T	09 47 03.5
	baz=305,slow=77,SNR=14					
H03N1	Juan Fernandez	143.11	89	T	T	09 47 03.9
	baz=305,slow=77,SNR=15					
TROLL	Troll, Antarti	147.63	200	PKPbc	PKiKP	07 08 01.6 -0.8
BDFB	Brasilia	148.58	29	PKPbc	PKPbc	07 08 05.3 +0.8
	comp=Z,3.6nm,0.6s,baz=308,slow=3.8,SNR=6.1					
SNAA	Sanae	149.11	198	PKPbc	PKPbc	07 08 04.7 +0.5
VNA2	Neumayer--Watz	150.64	197	PKPbc	PKiKP	07 08 08.7 +0.3
	baz=125,slow=1.8					
VNA3	Neumayer Olymp	150.84	195	PKPbc	PKiKP	07 08 08.9 0.0
VNA1	Neumayer--Stat	151.04	197	PKPbc	PKiKP	07 08 09.6 +0.4
PLCA	Paso Flores	152.30	95	PKPbc	PKiKP	07 08 13.5 +0.6
	comp=Z,1.8nm,0.5s,baz=273,slow=1.8,SNR=16					
CPUP	Villa Florida	153.33	55	PKPbc	PKiKP	07 08 15.5 +0.2
	comp=Z,1.6nm,0.8s,baz=128,slow=2.2,SNR=3.0					

KRNET 27 06:48:52.3±0.1, 39°.11N×73°.89E, mb2.7, 6C-3D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	Aral	2.77	7	⇑*e*P	Pn	06 49 37.8	-0.2
	baz=7.0						
ARLS				⇑*i*S	Sn	06 50 10.9	-1.3
	baz=7.0						
GAR	Garm	2.78	269	⇑*e*P	Pn	06 49 37.9	-0.3
	baz=69						
GAR				⇑*i*S	Sn	06 50 11.5	-1.0
	baz=69						
UCH	Uchtor	3.15	8	⇓*i*P	Pn	06 49 43.4	-0.1
	baz=8.0						
UCH				⇓*i*S	Sn	06 50 20.8	-1.3
	baz=8.0						
KK31	Karatay Array	4.73	328	⇑Pg	Pn	06 50 09.4	+4.5
	0.3nm,0.5s,baz=148,slow=17						
KK31				⇓Sn	Sn	06 50 52.4	-8.1
	0.2nm,0.3s,baz=153,slow=26,SNR=4.2						
KK31				⇑Lg	Lg	06 51 10.3	
	1.1nm,0.7s,baz=109,slow=29						

*ROM **27** 07:12:07.9±0.1, 42°.866N±0°.003×13°.134E±0°.004, h8km, ML3.4/45, Error ellipse: s-maj=0.3km s-min=0.3km az=53.0*
*LDG **27** 07:12:08.1±0.2, 42°.86N×13°.11E, h8km, Ml3.1/4, Error ellipse: s-maj=6.2km s-min=3.7km az=49.0*
*PRU **27** 07:12:09.1±0.0, 42°.95N×13°.06E, h0km*
*BEO **27** 07:12:11.0±0.8, 42°.86N×13°.23E, h15km±7km, ML3.6/9*

ISC 27 07:12:07.7±0.7, 42°.89N±0°.01×13°.06E±0°.02, h12km±4km, n128, σ2°15/162, 16C-23D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.03	266	P	Pg	07 12 10.6	+0.7
T1216				S	Sg	07 12 12.3	+0.8
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	Monte Fema	0.07	354	P	Pg	07 12 11.1	+0.7
FEMA				S	Sg	07 12 12.9	+0.7
FEMA				AML	AML		
	comp=N,46050μm,0.6s						
FEMA				AML	AML		
	comp=E,58250μm,0.3s						
FEMA				AML	AML		
	comp=N,46100μm,0.5s						
FEMA				AML	AML		
	comp=E,58240μm,0.3s						
FEMA				AML	AML		
	comp=N,46082μm,0.6s						
NRCA	Norcia	0.07	146	⇑P	Pg	07 12 09.9	-0.4
NRCA				S	Sg	07 12 10.8	-1.3
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
MC2	Monte Cornacci	0.10	78	P	Pg	07 12 10.1	-0.6
MC2				S	Sg	07 12 11.4	-1.5
T1245	Castelsantange	0.10	111	P	Pg	07 12 09.9	-0.7
T1245				S	Sg	07 12 10.9	-1.9
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
CESI	CESI - Serrava	0.16	314	P	Pb	07 12 13.1	+0.4
CESI				S	Sg	07 12 16.5	+2.4
CESI				AML	AML		
	comp=N,35200μm,0.2s						
CESI				AML	AML		
	comp=E,21350μm,1.5s						
T1215	Vallo di Nera,	0.17	237	P	Pb	07 12 12.9	+0.1
T1215				S	Sg	07 12 16.4	+2.2
T1215				AML	AML		
	comp=E,24700μm,0.5s						
T1215				AML	AML		
	comp=N,10925μm,1.4s						
T1215				AML	AML		
	comp=N,12800μm,0.4s						
T1215				AML	AML		
	comp=E,23650μm,0.5s						
T1215				AML	AML		
	comp=E,24650μm,0.5s						
T1215				AML	AML		
	comp=N,10960μm,1.4s						
T1215				AML	AML		
	comp=N,9632μm,0.5s						
T1215				AML	AML		
	comp=N,7827μm,0.3s						
T1215				AML	AML		
	comp=E,23649μm,0.5s						
T1215				AML	AML		
	comp=E,24674μm,0.5s						
T1215				AML	AML		
	comp=N,12800μm,1.6s						
T1215				AML	AML		
	comp=E,23650μm,1.5s						
T1215				AML	AML		
	comp=E,24650μm,1.5s						
MMO1	Montemonaco	0.20	88	P	Pg	07 12 11.6	-0.4
MMO1				S	Sg	07 12 14.2	-0.8
T1217	Poggiodomo (PG	0.20	208	⇓P	Pb	07 12 13.2	-0.2
T1217				S	Sg	07 12 17.0	+1.8
T1217				AML	AML		
	comp=E,18850μm,0.6s						
T1217				AML	AML		
	comp=E,17750μm,0.6s						
T1217				AML	AML		
	comp=E,18800μm,0.6s						
T1217				AML	AML		
	comp=N,25250μm,0.4s						
T1217				AML	AML		
	comp=E,17750μm,0.6s						
T1217				AML	AML		
	comp=N,25250μm,0.4s						
T1217				AML	AML		
	comp=N,25221μm,0.4s						
T1217				AML	AML		
	comp=N,25250μm,1.6s						
T1217				AML	AML		
	comp=N,25250μm,1.6s						
T1217				AML	AML		
	comp=E,18830μm,0.6s						
T1217				AML	AML		
	comp=E,17733μm,0.6s						
T1217				AML	AML		
	comp=N,25254μm,0.4s						
AM05	Amandola Campo	0.23	68	⇑P	Pg	07 12 12.6	0.0
AM05				S	Sg	07 12 16.0	+0.1
AM05				AML	AML		
	comp=E,10895μm,0.2s						
AM05				AML	AML		
	comp=N,9220μm,0.5s						
AM05				AML	AML		
	comp=E,42700μm,0.2s						
AM05				AML	AML		
	comp=N,2400μm,0.8s						
AM05				AML	AML		
	comp=E,10900μm,0.2s						
AM05				AML	AML		
	comp=N,9225μm,0.5s						
AM05				AML	AML		
	comp=E,10910μm,0.2s						
AM05				AML	AML		
	comp=E,42693μm,0.2s						
AM05				AML	AML		
	comp=N,7162μm,0.1s						
AM05				AML	AML		
	comp=N,2288μm,0.1s						
AM05				AML	AML		
	comp=N,9225μm,1.5s						
GUMA	Gualdo di Mace	0.26	50	P	Pg	07 12 13.6	+0.4
GUMA				S	Sg	07 12 18.1	+1.2
T1241	Roccafluvione,	0.28	98	⇑P	Pg	07 12 12.6	-0.7
T1241				S	Sg	07 12 16.6	-0.5
T1241				AML	AML		
	comp=E,22350μm,0.5s						
T1241				AML	AML		
	comp=N,24700μm,0.7s						
T1241				AML	AML		
	comp=E,22300μm,0.5s						
T1204	Amatrice, Fraz	0.29	139	P	Pg	07 12 13.5	-0.1
T1204				S	Sg	07 12 17.6	0.0
T1204				AML	AML		
	comp=E,14700μm,0.5s						
T1204				AML	AML		
	comp=N,14350μm,0.4s						
T1204				AML	AML		
	comp=E,14716μm,0.5s						
T1204				AML	AML		
	comp=N,14332μm,0.4s						
LNSS	Leonessa	0.29	183	⇓P	Pg	07 12 14.1	+0.4
LNSS				AML	AML		
	comp=N,10180μm,0.7s						
LNSS				AML	AML		
	comp=E,9315μm,0.7s						
LNSS				AML	AML		
	comp=N,10185μm,0.7s						
LNSS				AML	AML		
	comp=N,10185μm,1.3s						
LNSS				AML	AML		
	comp=N,10187μm,0.7s						
LNSS				AML	AML		
	comp=E,9342μm,0.7s						
LNSS				AML	AML		
	comp=E,9315μm,1.3s						
SMA1	SAN MARTINO	0.33	142	P	Pg	07 12 14.2	-0.2
SMA1				AML	AML		
	comp=N,17150μm,0.7s						
SMA1				AML	AML		
	comp=E,19850μm,0.8s						
SMA1				AML	AML		
	comp=N,17179μm,0.7s						
SMA1				AML	AML		
	comp=E,19850μm,1.2s						
SMA1				AML	AML		
	comp=E,19825μm,0.8s						
T1243	Rocca Santa Ma	0.35	124	P	Pg	07 12 14.2	-0.5
T1243				S	Sg	07 12 19.1	-0.3
SNTG	Esanatoglia	0.37	346	P	Pg	07 12 15.7	+0.5
SNTG				S	Sb	07 12 22.9	+0.8
SNTG				AML	AML		
	comp=E,3980μm,0.6s						
SNTG				AML	AML		
	comp=N,4210μm,0.7s						
SNTG				AML	AML		
	comp=N,4090μm,0.7s						
SNTG				AML	AML		
	comp=N,4085μm,0.7s						
SNTG				AML	AML		
	comp=E,3935μm,0.6s						
SNTG				AML	AML		
	comp=N,4209μm,0.7s						
SNTG				AML	AML		
	comp=N,4086μm,0.7s						
SNTG				AML	AML		
	comp=E,3576μm,0.4s						
SNTG				AML	AML		
	comp=E,3499μm,0.4s						
MNTP	Montappone	0.39	51	P	Pb	07 12 16.2	-0.3
T1211	Morro Reatino	0.39	203	⇑P	Pg	07 12 16.1	+0.6
T1211				S	Sb	07 12 23.0	+0.4
T1211				AML	AML		
	comp=N,9535μm,0.7s						
T1211				AML	AML		
	comp=E,5640μm,0.7s						
T1211				AML	AML		
	comp=N,9330μm,0.7s						
T1211				AML	AML		
	comp=N,9540μm,0.7s						
T1211				AML	AML		
	comp=E,5730μm,0.7s						
T1211				AML	AML		
	comp=N,9300μm,0.5s						
T1211				AML	AML		
	comp=N,9145μm,0.5s						
T1211				AML	AML		
	comp=E,4640μm,0.4s						
T1211				AML	AML		
	comp=E,4430μm,0.5s						
T1211				AML	AML		
	comp=N,9300μm,0.7s						
RM33	Pellescritta (	0.40	163	⇓P	Pg	07 12 15.7	0.0
RM33				AML	AML		
	comp=N,5060μm,0.5s						
RM33				AML	AML		
	comp=N,5030μm,0.4s						
RM33				AML	AML		
	comp=E,7770μm,0.7s						
RM33				AML	AML		
	comp=N,5055μm,0.5s						
RM33				AML	AML		
	comp=E,7800μm,0.6s						
RM33				AML	AML		
	comp=E,7800μm,0.6s						
RM33				AML	AML		
	comp=E,7800μm,1.4s						
RM33				AML	AML		
	comp=E,7770μm,0.7s						
RM33				AML	AML		
	comp=E,7770μm,1.3s						
RM33				AML	AML		
	comp=N,5023μm,0.4s						
RM33				AML	AML		
	comp=N,5055μm,1.5s						
RM33				AML	AML		
	comp=N,5030μm,0.4s						
ATCC	AVT- Casa Cast	0.42	314	P	Pb	07 12 17.7	+0.5
ATCC				S	Sb	07 12 25.4	+1.8
ATCC				AML	AML		
	comp=N,7070μm,1.4s						
ATCC				AML	AML		
	comp=N,7075μm,1.4s						
ATCC				AML	AML		
	comp=E,7935μm,0.5s						
ATCC				AML	AML		
	comp=E,7782μm,0.4s						
ATCC				AML	AML		
	comp=N,7075μm,0.6s						
ATCC				AML	AML		
	comp=N,6380μm,0.3s						
EL6	Elcito	0.44	4	P	Pg	07 12 17.2	+0.8
EL6				S	Sb	07 12 24.8	+0.8
EL6				AML	AML		
	comp=E,7815μm,1.5s						
EL6				AML	AML		
	comp=N,9045μm,0.9s						
EL6				AML	AML		
	comp=E,7820μm,1.5s						
EL6				AML	AML		
	comp=N,9030μm,0.9s						
EL6				AML	AML		
	comp=N,8553μm,0.5s						
EL6				AML	AML		
	comp=E,7635μm,0.2s						
EL6				AML	AML		
	comp=E,7820μm,0.5s						
CAMP	Campotosto	0.44	144	⇓P	Pg	07 12 16.1	-0.3
CAMP				AML	AML		
	comp=E,3895μm,1.0s						
CAMP				AML	AML		

	comp=N,4895µm,0.9s						
CAMP				AML	AML		
	comp=N,4896µm,0.9s						
CAMP				AML	AML		
	comp=E,3895µm,1.0s						
CAMP				AML	AML		
	comp=E,3553µm,0.8s						
CESX	**Cesi**	**0.45**	**232**	⇓P	**Pb**	**07 12 17.6**	**0.0**
CESX				AML	AML		
	comp=E,7200µm,0.9s						
CESX				AML	AML		
	comp=E,7198µm,0.9s						
CESX				AML	AML		
	comp=N,9027µm,0.5s						
CESX				AML	AML		
	comp=N,9025µm,0.5s						
TRE1	**Treia**	**0.46**	**24**	P	**Pb**	**07 12 17.7**	**0.0**
OFFI	**Offida**	**0.46**	**85**	⇑P	**Pg**	**07 12 17.3**	**+0.6**
OFFI				AML	AML		
	comp=N,15700µm,0.6s						
OFFI				AML	AML		
	comp=E,16036µm,0.5s						
OFFI				AML	AML		
	comp=E,16050µm,0.7s						
OFFI				AML	AML		
	comp=N,15694µm,0.6s						
TERO	**Teramo**	**0.48**	**124**	P	**Pg**	**07 12 16.5**	**-0.7**
TERO				S	**Sg**	**07 12 23.3**	**-0.2**
TERO				AML	AML		
	comp=E,9670µm,0.3s						
TERO				AML	AML		
	comp=E,10180µm,0.3s						
TERO				AML	AML		
	comp=E,9675µm,0.3s						
TERO				AML	AML		
	comp=N,18250µm,0.5s						
TERO				AML	AML		
	comp=N,19050µm,0.5s						
TERO				AML	AML		
	comp=E,10170µm,0.3s						
TERO				AML	AML		
	comp=E,10180µm,1.7s						
TERO				AML	AML		
	comp=E,9663µm,0.3s						
TERO				AML	AML		
	comp=E,9675µm,1.7s						
TERO				AML	AML		
	comp=N,19056µm,0.5s						
TERO				AML	AML		
	comp=N,18261µm,0.5s						
TERO				AML	AML		
	comp=N,19050µm,1.5s						
TERO				AML	AML		
	comp=N,18250µm,1.5s						
T1247	**Pizzolo (AQ)**	**0.48**	**159**	⇑P	**Pg**	**07 12 17.2**	**0.0**
T1247				S	**Sb**	**07 12 26.0**	**+0.7**
T1247				AML	AML		
	comp=E,6565µm,0.5s						
T1247				AML	AML		
	comp=N,5810µm,0.8s						
T1247				AML	AML		
	comp=N,5810µm,1.2s						
T1247				AML	AML		
	comp=E,6565µm,0.5s						
T1247				AML	AML		
	comp=N,5805µm,0.7s						
MURB	**Monte Urbino**	**0.54**	**313**	P	**Pg**	**07 12 14.4**	**-3.8**
MURB				AML	AML		
	comp=N,7260µm,1.0s						
MURB				AML	AML		
	comp=E,8645µm,0.9s						
MURB				AML	AML		
	comp=E,9150µm,0.9s						
MURB				AML	AML		
	comp=N,7695µm,1.0s						
MURB				AML	AML		
	comp=N,6535µm,0.3s						
MURB				AML	AML		
	comp=N,7410µm,0.3s						
MURB				AML	AML		
	comp=E,7599µm,0.3s						
MURB				AML	AML		
	comp=N,7695µm,1.0s						
MURB				AML	AML		
	comp=N,7260µm,1.0s						
MURB				AML	AML		
	comp=E,7110µm,0.3s						
GIGS	**Gran Sasso**	**0.58**	**140**	P	**Pg**	**07 12 18.3**	**-0.7**
GIGS				AML	AML		
	comp=N,1280µm,0.7s						
GIGS				AML	AML		
	comp=E,1580µm,0.5s						
GIGS				AML	AML		
	comp=E,1581µm,0.5s						
GIGS				AML	AML		
	comp=N,1043µm,0.4s						
ATFO	**Monte Foce - G**	**0.59**	**323**	P	**Pb**	**07 12 20.6**	**+0.6**
ATTE	**AVT- Monte Tez**	**0.60**	**301**	S	**Sg**	**07 12 24.0**	**-3.4**
ARVD	**Arcevia**	**0.61**	**352**	⇑P	Pg	07 12 15.0	-4.6
ARVD				AML	AML		
	comp=E,2335µm,0.3s						
ARVD				AML	AML		
	comp=N,1705µm,0.8s						
ARVD				AML	AML		
	comp=E,2338µm,0.3s						
ARVD				AML	AML		
	comp=N,1436µm,0.4s						
FIAM	**Fiamignano**	**0.63**	**176**	⇓P	**Pg**	**07 12 19.7**	**-0.2**
FIAM				AML	AML		
	comp=N,1675µm,0.6s						
FIAM				AML	AML		
	comp=E,1805µm,1.5s						
FIAM				AML	AML		
	comp=N,1675µm,1.4s						
FIAM				AML	AML		
	comp=N,1676µm,0.6s						
FIAM				AML	AML		
	comp=E,1805µm,0.5s						
FIAM				AML	AML		
	comp=E,1750µm,0.7s						
PP3	**Marolino**	**0.63**	**39**	P	**Pb**	**07 12 21.0**	**+0.4**
TRTR	**Tortoreto Alta**	**0.63**	**97**	⇑P	**Pb**	**07 12 20.7**	**0.0**
TRTR				AML	AML		
	comp=E,13800µm,0.5s						
TRTR				AML	AML		
	comp=N,12350µm,0.5s						
TRTR				AML	AML		
	comp=E,13801µm,0.5s						
TRTR				AML	AML		
	comp=N,12326µm,0.5s						
FRON	**Frontone**	**0.67**	**339**	P	**Pg**	**07 12 16.4**	**-4.3**
FRON				AML	AML		
	comp=E,1610µm,0.6s						
FRON				AML	AML		
	comp=E,1605µm,0.6s						
FRON				AML	AML		
	comp=N,3030µm,0.4s						
FRON				AML	AML		
	comp=N,3031µm,0.4s						
FRON				AML	AML		
	comp=E,1487µm,0.2s						
ATVO	**AVT- Monte Val**	**0.68**	**316**	P	**Pb**	**07 12 22.2**	**+0.6**
MGAB	**Montegabbione**	**0.70**	**272**	⇓P	**Pb**	**07 12 22.6**	**+0.9**
MGAB				AML	AML		
	comp=E,4435µm,0.5s						
MGAB				AML	AML		
	comp=E,5305µm,0.6s						
MGAB				AML	AML		
	comp=N,4705µm,0.4s						
MGAB				AML	AML		
	comp=N,4915µm,1.0s						
MGAB				AML	AML		
	comp=N,4395µm,0.4s						
MGAB				AML	AML		
	comp=E,4435µm,0.5s						
MGAB				AML	AML		
	comp=E,5304µm,0.6s						
MGAB				AML	AML		
	comp=N,4705µm,1.6s						
MGAB				AML	AML		
	comp=N,4708µm,0.4s						
ATMI	**Monte Miggiano**	**0.73**	**308**	S	**Pg**	**07 12 25.0**	**+3.2**
FAGN	**Fagnano**	**0.74**	**148**	⇑P	**Pg**	**07 12 22.2**	**+0.3**
FAGN				AML	AML		
	comp=N,6065µm,0.5s						
FAGN				AML	AML		
	comp=E,4760µm,0.5s						
FAGN				AML	AML		
	comp=E,4760µm,0.5s						
FAGN				AML	AML		
	comp=N,6067µm,0.5s						
ATPI	**Pietralunga -**	**0.74**	**319**	S	**Pg**	**07 12 24.0**	**+2.0**
VCEL	**Villa Celiera**	**0.76**	**131**	P	**Pg**	**07 12 21.5**	**-0.9**
VCEL				AML	AML		
	comp=E,7930µm,0.9s						
VCEL				AML	AML		
	comp=N,6785µm,0.3s						
VCEL				AML	AML		
	comp=N,6785µm,0.3s						
VCEL				AML	AML		
	comp=N,6785µm,1.7s						
VCEL				AML	AML		
	comp=E,6902µm,0.3s						
VCEL				AML	AML		
	comp=E,7930µm,1.1s						
MPAG	**Monte Paganucc**	**0.77**	**343**	S	**Pg**	**07 12 24.0**	**+1.4**
SRES	**S.Oreste - Sor**	**0.77**	**212**	P	**Pb**	**07 12 23.2**	**+0.1**
SRES				AML	AML		
	comp=E,1350µm,1.4s						
SRES				AML	AML		
	comp=E,1182µm,0.9s						
SRES				AML	AML		
	comp=N,1295µm,0.7s						
SRES				AML	AML		
	comp=E,1350µm,0.6s						
SRES				AML	AML		
	comp=N,1297µm,0.7s						
FSSB	**Fossombrone**	**0.82**	**346**	S	**Pg**	**07 12 25.0**	**+1.4**
SACS	**San Casciano d**	**0.85**	**267**	P	**Pn**	**07 12 25.8**	**+0.2**
SACS				AML	AML		
	comp=E,2050µm,0.8s						
SACS				AML	AML		
	comp=E,2020µm,0.8s						
SACS				AML	AML		
	comp=N,2135µm,0.5s						
SACS				AML	AML		
	comp=N,2050µm,0.5s						
SACS				AML	AML		
	comp=E,2052µm,0.8s						
SACS				AML	AML		
	comp=E,2050µm,1.2s						
SACS				AML	AML		
	comp=E,2018µm,0.8s						
SACS				AML	AML		
	comp=E,2020µm,1.2s						
SACS				AML	AML		
	comp=N,2054µm,0.5s						
SACS				AML	AML		
	comp=N,2133µm,0.5s						
T0110	**Collepietro**	**0.85**	**141**	⇓P	**Pg**	**07 12 23.3**	**-0.8**
T0110				AML	AML		
	comp=N,4615µm,0.4s						
T0110				AML	AML		
	comp=E,4710µm,0.6s						
T0110				AML	AML		
	comp=N,4614µm,0.4s						
T0110				AML	AML		
	comp=E,4709µm,0.6s						
MTCE	**Montecelio**	**0.90**	**195**	⇑P	**Pn**	**07 12 27.0**	**+0.8**
MTCE				AML	AML		
	comp=E,1490µm,0.6s						
MTCE				AML	AML		
	comp=N,979µm,0.6s						
MTCE				AML	AML		
	comp=E,1494µm,0.6s						
MTCE				AML	AML		
	comp=N,979µm,1.4s						
MTCE				AML	AML		
	comp=N,981µm,0.6s						
MTCE				AML	AML		
	comp=E,1490µm,1.4s						
CERT	**Cerreto**	**0.94**	**184**	⇑P	**Pg**	**07 12 24.9**	**-0.9**
CERT				AML	AML		
	comp=E,1895µm,1.3s						
CERT				AML	AML		
	comp=N,1220µm,0.9s						
CERT				AML	AML		
	comp=E,1817µm,0.7s						
CERT				AML	AML		
	comp=E,1895µm,0.7s						
CERT				AML	AML		
	comp=N,1217µm,0.9s						
CERT				AML	AML		
	comp=N,1220µm,1.1s						
INTR	**Introdacqua**	**1.08**	**144**	⇓P	**Pb**	**07 12 26.8**	**-1.6**
INTR				AML	AML		
	comp=E,1µm,1.4s						
INTR				AML	AML		
	comp=N,3µm,1.2s						
INTR				AML	AML		
	comp=E,1150µm,1.4s						
INTR				AML	AML		
	comp=N,3885µm,1.2s						
INTR				AML	AML		
	comp=N,3885µm,0.8s						
INTR				AML	AML		
	comp=N,2µm,0.8s						
INTR				AML	AML		
	comp=E,1067µm,0.7s						
INTR				AML	AML		
	comp=E,1µm,0.8s						
INTR				AML	AML		
	comp=N,3µm,0.8s						
INTR				AML	AML		
	comp=E,1150µm,0.6s						
INTR				AML	AML		
	comp=E,1µm,0.6s						
RMP	**Rome, Mte Porz**	**1.11**	**194**	⇓P	**Pb**	**07 12 28.9**	**+0.1**
RMP				AML	AML		
	comp=N,1145µm,0.9s						
RMP				AML	AML		
	comp=E,1103µm,1.4s						
RMP				AML	AML		
	comp=E,1103µm,0.6s						
RMP				AML	AML		
	comp=N,1145µm,1.1s						
LPEL	**Lama dei Pelig**	**1.19**	**135**	⇑P	**Pb**	**07 12 30.0**	**-0.2**
LPEL				AML	AML		
	comp=E,1950µm,0.8s						
LPEL				AML	AML		
	comp=N,1275µm,1.3s						
LPEL				AML	AML		
	comp=E,1950µm,1.2s						
LPEL				AML	AML		
	comp=E,1833µm,0.5s						
LPEL				AML	AML		
	comp=N,1216µm,0.3s						
POFI	**Posta Fibreno**	**1.27**	**157**	⇓P	**Pg**	**07 12 34.4**	**+2.3**
POFI				AML	AML		
	comp=E,1046µm,0.7s						
POFI				AML	AML		
	comp=N,594µm,0.6s						
POFI				AML	AML		
	comp=N,626µm,0.6s						
POFI				AML	AML		
	comp=E,1038µm,0.7s						
POFI				AML	AML		
	comp=N,626µm,1.4s						
POFI				AML	AML		
	comp=E,1039µm,0.7s						
POFI				AML	AML		
	comp=E,1049µm,0.7s						
POFI				AML	AML		
	comp=E,1046µm,1.3s						
POFI				AML	AML		
	comp=E,1038µm,1.3s						
POFI				AML	AML		
	comp=N,594µm,1.4s						
POFI				AML	AML		
	comp=N,594µm,0.6s						
POFI				AML	AML		
	comp=N,626µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.34**	**174**	⇑P	**Pg**	**07 12 34.1**	**+0.7**
GIUL				AML	AML		
	comp=E,480µm,1.5s						
GIUL				AML	AML		
	comp=N,800µm,0.8s						
GIUL				AML	AML		
	comp=E,442µm,0.6s						
GIUL				AML	AML		
	comp=E,480µm,0.5s						
GIUL				AML	AML		
	comp=N,800µm,0.8s						
CERA	**Filignano**	**1.48**	**151**	⇓P	**Pg**	**07 12 37.8**	**+1.8**
CERA				AML	AML		
	comp=E,1045µm,0.7s						
CERA				AML	AML		
	comp=E,1052µm,0.7s						
CERA				AML	AML		
	comp=N,1010µm,0.5s						
CERA				AML	AML		
	comp=N,1044µm,0.5s						
CERA				AML	AML		
	comp=N,1010µm,1.5s						
CERA				AML	AML		
	comp=N,1044µm,1.5s						
CERA				AML	AML		
	comp=E,1045µm,0.7s						
CERA				AML	AML		
	comp=E,1050µm,0.7s						
CERA				AML	AML		
	comp=N,1041µm,0.5s						
CERA				AML	AML		
	comp=N,1011µm,0.5s						
FRES	**Fresagrandinar**	**1.50**	**127**	⇓P	**Pg**	**07 12 36.6**	**0.0**
FRES				AML	AML		
	comp=N,568µm,0.7s						
FRES				AML	AML		
	comp=E,1195µm,0.6s						
FRES				AML	AML		
	comp=E,1195µm,1.4s						
FRES				AML	AML		
	comp=E,1196µm,0.6s						
FRES				AML	AML		
	comp=N,568µm,0.7s						
MODR	**Mondragone**	**1.85**	**160**	S	**Sg**	**07 13 11.0**	**+3.9**
MELA	**Melanico ??? S**	**1.94**	**127**	⇓P	**Pb**	**07 12 42.6**	**-0.3**
MELA				AML	AML		
	comp=E,758µm,0.8s						
MELA				AML	AML		
	comp=N,1068µm,0.5s						
MELA				AML	AML		
	comp=E,737µm,0.8s						
MELA				AML	AML		
	comp=N,1039µm,0.5s						
MELA				AML	AML		
	comp=N,1070µm,0.5s						
MELA				AML	AML		
	comp=N,1041µm,0.5s						
PII	**Pisa**	**2.03**	**295**	P	**Pn**	**07 12 39.0**	**-2.6**
PII				AML	AML		
	comp=N,231µm,1.2s						
PII				AML	AML		
	comp=E,180µm,0.9s						
PII				AML	AML		
	comp=E,180µm,1.1s						
PAOL	**Paolisi**	**2.17**	**148**	S	**Sg**	**07 13 21.0**	**+3.5**
CARD	**Cardoso**	**2.19**	**302**	S	**Sn**	**07 13 07.0**	**-4.0**
SGRT	**San Giovanni R**	**2.29**	**119**	⇓P	**Pn**	**07 12 47.2**	**+1.8**
SGRT				S	**Sb**	**07 13 17.0**	**-0.3**
SGRT				AML	AML		
	comp=E,571µm,1.6s						
SGRT				AML	AML		
	comp=N,500µm,0.7s						
SGRT				AML	AML		
	comp=E,543µm,0.5s						
SGRT				AML	AML		
	comp=N,499µm,0.7s						
SGRT				AML	AML		
	comp=E,571µm,0.4s						
RIY	**Rijeka**	**2.64**	**22**	*e*Pn	**Pn**	**07 12 52.2**	**+2.1**
RIY				*e*Sn	**Sn**	**07 13 24.0**	**+2.0**
SBPO	**S.Benedetto Po**	**2.65**	**325**	S	**Sn**	**07 13 18.0**	**-4.3**
TEOL	**Teolo**	**2.66**	**338**	S	**Sb**	**07 13 27.0**	**-0.9**
PGF	**Pioggiola**	**3.01**	**265**	*e*P	**Pn**	**07 12 58.5**	**+3.2**
PGF				*e*Sn	**Sn**	**07 13 31.2**	**-0.2**
	comp=E,18nm,0.7s						
CGRP	**Cima Grappa**	**3.12**	**344**	⇓P	**Pb**	**07 13 01.0**	**-2.2**
DOSS	**Dosso del Somm**	**3.27**	**336**	⇑P	**Pb**	**07 13 03.1**	**-2.7**
AMUR	**Altamura**	**3.31**	**126**	⇓P	**Pn**	**07 13 01.4**	**+2.2**
AMUR				AML	AML		
	comp=N,153µm,0.5s						
AMUR				AML	AML		
	comp=E,167µm,0.4s						
AMUR				AML	AML		
	comp=N,153µm,1.5s						
LJU	**Ljubljana**	**3.32**	**18**	S	**Sn**	**07 13 42.0**	**+3.1**
LEOD	**Capriano del C**	**3.32**	**322**	⇓P	**Pn**	**07 12 59.8**	**+0.3**
LEOD				S	**Sn**	**07 13 33.0**	**-5.9**
STAL	**STALIGIAL**	**3.38**	**356**	⇓P	**Pn**	**07 13 02.4**	**+2.2**
STON	**Ston**	**3.41**	**89**	*e*Pn	**Pn**	**07 13 00.1**	**-0.5**
STON				*e*Sn	**Sn**	**07 13 39.8**	**-1.2**
STON	**Ston**	**3.41**	**89**	P	**Pn**	**07 12 59.9**	**-0.7**
STON				S	**Sn**	**07 13 41.0**	**0.0**
STON				AML	AML		
	comp=N,76µm,1.1s						
STON				AML	AML		
	comp=N,61µm,0.8s						
STON				AML	AML		
	comp=E,73µm,1.6s						
STON				AML	AML		
	comp=E,71µm,0.8s						
CIMO	**Cimolais**	**3.44**	**353**	⇓P	**Pn**	**07 13 03.6**	**+2.4**
BLY	**Banja Luka**	**3.51**	**57**	*e*Pn	**Pn**	**07 13 04.8**	**+2.7**
PTCC	**Patocco-Chiusa**	**3.52**	**3**	⇑P	**Pn**	**07 13 04.0**	**+1.7**
SARZ	**Sarezzano**	**3.59**	**305**	S	**Sn**	**07 13 42.0**	**-3.5**
MABI	**Malga Bissina**	**3.65**	**331**	⇓P	**Pn**	**07 13 08.4**	**+4.3**
EUCT	**Pavia**	**3.65**	**311**	S	**Sn**	**07 13 51.0**	**+4.0**
ACOM	**Acomizza, Ital**	**3.67**	**5**	⇓P	**Pn**	**07 13 07.0**	**+2.6**
MYKA	**Terra Mystica**	**3.76**	**6**	*e*Pn	**Pn**	**07 13 09.6**	**+4.1**
	comp=E,15nm,0.5s						
ORI	**Oriolo Calabro**	**3.80**	**137**	S	**Sb**	**07 13 60.0**	**-0.8**
ABTA	**Abfaltersbach**	**3.87**	**354**	*e*Pn	**Pn**	**07 13 10.5**	**+3.4**
	comp=E,10nm,0.3s						
TREB	**Trebinje**	**3.90**	**91**	*e*Pn	**Pn**	**07 13 09.1**	**+1.7**
RISI	**Rein**	**4.11**	**351**	⇑P	**Pn**	**07 13 14.2**	**+3.6**
KBA	**Koelnbreinsper**	**4.19**	**3**	*e*Pn	**Pn**	**07 13 14.8**	**+3.2**
	comp=E,8.4nm,0.3s						
SBF	**Sospel**	**4.21**	**285**	*e*Pn	**Pn**	**07 13 09.6**	**-2.2**
CELI	**Celico**	**4.35**	**142**	S	**Sn**	**07 14 03.0**	**-1.5**
FETA	**Feichten**	**4.45**	**339**	*e*Pn	Pn	07 13 20.7	+5.6
	comp=E,5.4nm,0.6s						
DAVOX	**Davos/Dischmat**	**4.50**	**331**	⇓P	Pn	07 13 21.4	+5.7
WATA	**Walderalm**	**4.56**	**347**	*e*Pn	Pb	07 13 22.9	-4.9
	comp=E,2.8nm,0.2s						
PDG	**Podgorica**	**4.59**	**94**	*e*Pn	**Pn**	**07 13 18.0**	**+1.1**
PDG				*e*Sn	**Sn**	**07 14 08.0**	**-2.1**
BBLS	**Lazići**	**4.73**	**76**	*e*Pn	**Pn**	**07 13 20.7**	**+1.9**
BBLS				*e*Sn	**Sn**	**07 14 11.6**	**-2.0**
BIOA	**Bad Ischl, Aus**	**4.82**	**5**	*e*Pn	**Pn**	**07 13 24.6**	**+4.6**
	comp=E,22nm,0.4s						
LMR	**La Mourre**	**4.82**	**277**	*e*P	**Pn**	**07 13 22.0**	**+2.0**
MBDF	**Montbardon**	**4.91**	**294**	*e*Pn	**Pn**	**07 13 22.5**	**+1.1**
MBDF	**Montbardon**	**4.91**	**294**	*e*P	**Pn**	**07 13 25.6**	**+4.2**
MBDF				*e*Sn	**Sn**	**07 14 13.1**	**-5.1**
	comp=E,17nm,0.9s						
DAVA	**Damuels**	**4.94**	**334**	*e*Pn	Pb	07 13 28.6	-5.5
	comp=E,6.8nm,0.4s						
MOA	**Molln**	**5.03**	**9**	*e*Pn	**Pn**	**07 13 25.7**	**+2.8**
MOA				*e*Sn	**Sn**	**07 14 22.8**	**+1.8**
SJES	**Sjenica**	**5.08**	**83**	*e*Pn	**Pn**	**07 13 24.2**	**+0.5**
SJES				*e*Sn	**Sn**	**07 14 20.3**	**-2.0**
DIVS	**Divibare**	**5.18**	**74**	*e*Pn	**Pn**	**07 13 26.1**	**+1.0**
DIVS				*e*Sn	**Sn**	**07 14 23.3**	**-1.6**
LPG	**La Plagne**	**5.23**	**302**	*e*Pn	**Pn**	**07 13 25.5**	**-0.4**
LPG	**La Plagne**	**5.23**	**302**	*e*P	**Pn**	**07 13 30.2**	**+4.3**
LPL	**La Plagne**	**5.25**	**302**	*e*Pn	**Pn**	**07 13 26.2**	**0.0**
LPL	**La Plagne**	**5.25**	**302**	*e*P	**Pn**	**07 13 30.6**	**+4.4**
LPL				*e*Sn	**Sn**	**07 14 24.0**	**-2.7**
	comp=E,6.1nm,0.5s						
TIR	**Tirane**	**5.29**	**105**	*e*Pn	**Pn**	**07 13 28.2**	**+1.7**
CONA	**Conrad Observa**	**5.41**	**20**	*e*Pn	**Pn**	**07 13 30.0**	**+1.8**
	comp=E,0.9nm,0.2s						
TRUS	**Trudelj**	**5.50**	**74**	*e*Pn	**Pn**	**07 13 31.2**	**+1.8**
SMRF	**Simiane la Rot**	**5.56**	**284**	*e*Pn	**Pn**	**07 13 30.2**	**0.0**
SMRF	**Simiane la Rot**	**5.56**	**284**	*e*P	**Pn**	**07 13 34.5**	**+4.3**
ORIF	**Oris-en-Rattie**	**5.57**	**294**	*e*Pn	**Pn**	**07 13 30.3**	**-0.1**
ORIF	**Oris-en-Rattie**	**5.57**	**294**	*e*P	**Pn**	**07 13 34.7**	**+4.3**
ORIF				*e*Sn	**Sn**	**07 14 30.7**	**-3.7**
	comp=E,5.5nm,0.6s						
GRUS	**Gruza**	**5.67**	**77**	*e*Pn	**Pn**	**07 13 32.5**	**+0.8**
SELS	**Selova**	**5.91**	**84**	*e*Pn	**Pn**	**07 13 35.0**	**-0.1**
CKRC	**Cesky Krumlov**	**5.99**	**8**	*e*SN	**Sn**	**07 14 44.7**	**0.0**
CABF	**La Chapelle**	**6.20**	**309**	*e*P	**Pn**	**07 13 43.1**	**+4.0**
KHC	**Kasperske Hory**	**6.25**	**3**	*e*PN	**Pn**	**07 13 40.5**	**+0.8**
KHC				*e*SN	**Sn**	**07 14 50.2**	**-0.9**
BARS	**Barje**	**6.44**	**88**	*e*Pn	**Pn**	**07 13 43.7**	**+1.4**
HINF	**Hinteralfeld**	**6.58**	**321**	*e*Pn	**Pn**	**07 13 44.1**	**-0.2**
HINF	**Hinteralfeld**	**6.58**	**321**	*e*P	**Pn**	**07 13 46.9**	**+2.6**

HINF			*e*Sn	**Sn**	**07 15 01.0**	**+1.7**
ZAGS	**Zajecar**	**6.75 79**	*e*Pn	**Pn**	**07 13 47.5**	**+1.0**
CDF	**Champ du Feu**	**6.85 326**	*e*Pn	**Pn**	**07 13 47.8**	**-0.1**
CDF	**Champ du Feu**	**6.85 326**	*e*P	**Pn**	**07 13 50.7**	**+2.8**
CDF			*e*Sn	**Sn**	**07 14 59.8**	**-6.0**
HAU	**Haudompre**	**6.96 320**	*e*Pn	**Pn**	**07 13 49.2**	**-0.2**
HAU	**Haudompre**	**6.96 320**	*e*P	**Pn**	**07 13 51.8**	**+2.4**
HAU			*e*Sn	**Sn**	**07 15 04.3**	**-4.1**
ZAPS	**Zavoj**	**7.02 84**	*e*Pn	**Pn**	**07 13 51.2**	**+0.9**
ZAPS			*e*Sn	**Sn**	**07 15 06.1**	**-4.0**

*ROM **27** 07:50:30.0±0.0, 42°.821N±0°.002×13°.139E±0°.004, h10km, ML3.5/6, Error ellipse: s-maj=0.3km s-min=0.1km az=245.0*
*LDG **27** 07:50:29.5±0.1, 42°.81N×13°.11E, h9km, Ml2.8/4, Error ellipse: s-maj=2.3km s-min=1.4km az=54.0*
*PRU **27** 07:50:34.8±0.0, 43°.02N×13°.58E, h0km*

ISC 27 07:50:29.6±0.8, 42°.81N±0°.02×13°.10E±0°.02, h13km±4km, n87, σ1§68/112, 2C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**19**	P	**Pg**	**07 50 32.0**	**-0.1**
NRCA				S	**Sg**	**07 50 32.9**	**-0.8**
T1245	**Castelsantange**	**0.08**	**53**	P	**Pg**	**07 50 32.3**	**-0.2**
T1245				S	**Sg**	**07 50 33.7**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.10**	**323**	P	**Pg**	**07 50 33.2**	**+0.5**
T1216				S	**Sg**	**07 50 35.4**	**+0.5**
T1216				AML	AML		
	comp=E,40700μm,0.4s						
T1216				AML	AML		
	comp=E,40750μm,0.4s						
T1216				AML	AML		
	comp=N,68650μm,1.2s						
T1216				AML	AML		
	comp=N,67529μm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**32**	P	**Pg**	**07 50 33.1**	**0.0**
MC2				S	**Sg**	**07 50 35.1**	**-0.4**
T1244	**Arquata del Tr**	**0.15**	**110**	P	**Pg**	**07 50 33.7**	**+0.4**
T1244				S	**Sg**	**07 50 36.4**	**+0.4**
FEMA	**Monte Fema**	**0.16**	**346**	P	**Pg**	**07 50 34.0**	**+0.5**
FEMA				S	**Sg**	**07 50 36.6**	**+0.4**
T1217	**Poggiodomo (PG**	**0.16**	**232**	⇑P	**Pb**	**07 50 34.6**	**+0.1**
T1217				S	**Sb**	**07 50 38.0**	**+0.3**
T1215	**Vallo di Nera,**	**0.17**	**267**	⇑P	**Pb**	**07 50 34.8**	**+0.1**
T1215				S	**Sb**	**07 50 38.3**	**+0.2**
MMO1	**Montemonaco**	**0.19**	**61**	P	**Pg**	**07 50 34.0**	**+0.1**
MMO1				S	**Sg**	**07 50 36.7**	**-0.1**
T1201	**Domo (RI)**	**0.19**	**144**	P	**Pb**	**07 50 34.8**	**-0.1**
T1204	**Amatrice, Fraz**	**0.21**	**130**	P	**Pg**	**07 50 34.8**	**+0.6**
T1204				S	**Sb**	**07 50 38.7**	**-0.4**
T1204				AML	AML		
	comp=E,8010μm,0.8s						
T1204				AML	AML		
	comp=N,12150μm,0.6s						
T1204				AML	AML		
	comp=E,8015μm,0.8s						
T1204				AML	AML		
	comp=N,12100μm,0.6s						
T1204				AML	AML		
	comp=E,6355μm,0.6s						
LNSS	**Leonessa**	**0.21**	**193**	P	**Pb**	**07 50 35.3**	**0.0**
LNSS				S	**Sb**	**07 50 39.6**	**+0.4**
FDMO	**Fiordimonte**	**0.23**	**357**	P	**Pg**	**07 50 35.1**	**+0.6**
FDMO				S	**Sg**	**07 50 38.5**	**+0.6**
FDMO				AML	AML		
	comp=E,10170μm,0.2s						
FDMO				AML	AML		
	comp=N,12650μm,1.6s						
FDMO				AML	AML		
	comp=N,10890μm,0.2s						
FDMO				AML	AML		
	comp=E,10173μm,0.2s						
CESI	**CESI - Serrava**	**0.24**	**323**	P	**Pb**	**07 50 35.7**	**-0.2**
CESI				S	**Sb**	**07 50 39.7**	**-0.4**
T1241	**Roccafluvione,**	**0.25**	**79**	AML	AML		
	comp=E,15450μm,0.8s						
T1241				AML	AML		
	comp=E,15400μm,0.8s						
T1241				AML	AML		
	comp=N,17600μm,0.7s						
T1241				AML	AML		
	comp=N,17550μm,0.7s						
T1241				AML	AML		
	comp=E,14439μm,0.4s						
SMA1	**SAN MARTINO**	**0.25**	**136**	P	**Pg**	**07 50 35.5**	**+0.7**
SMA1				S	**Sb**	**07 50 39.8**	**-0.5**
T1243	**Rocca Santa Ma**	**0.28**	**114**	P	**Pg**	**07 50 35.6**	**+0.2**
T1243				S	**Sg**	**07 50 40.1**	**+0.7**
CSP1	**Cessapalombo**	**0.29**	**15**	P	**Pg**	**07 50 36.0**	**+0.3**
CSP1				S	**Sb**	**07 50 40.6**	**-1.0**
GUMA	**Gualdo di Mace**	**0.30**	**34**	P	**Pb**	**07 50 36.5**	**-0.4**
GUMA				S	**Sb**	**07 50 41.4**	**-0.5**
RM33	**Pellescritta (**	**0.31**	**165**	P	**Pg**	**07 50 36.7**	**+0.7**
RM33				S	**Sb**	**07 50 42.0**	**-0.1**
T1211	**Morro Reatino**	**0.33**	**214**	P	**Pb**	**07 50 37.4**	**0.0**
T1211				S	**Sb**	**07 50 43.8**	**+1.1**
CAMP	**Campotosto**	**0.35**	**140**	P	**Pg**	**07 50 37.2**	**+0.4**
SEF1	**Sefro**	**0.36**	**341**	P	**Pb**	**07 50 37.5**	**-0.3**
SEF1				S	**Sb**	**07 50 43.1**	**-0.2**
T1246	**Crognaleto (TE**	**0.37**	**128**	P	**Pg**	**07 50 37.3**	**+0.3**
T1246				S	**Sb**	**07 50 42.9**	**-0.8**
PIO1	**Pioraco**	**0.38**	**347**	P	**Pb**	**07 50 37.9**	**-0.3**
MDAR	**Monte D'Aria**	**0.38**	**4**	P	**Pg**	**07 50 37.8**	**+0.5**
T1247	**Pizzolo (AQ)**	**0.40**	**159**	P	**Pb**	**07 50 38.8**	**+0.3**
FIU1	**Fiuminata**	**0.40**	**342**	P	**Pb**	**07 50 38.4**	**-0.1**
TERO	**Teramo**	**0.41**	**117**	P	**Pg**	**07 50 37.9**	**+0.1**
TERO				S	**Sb**	**07 50 44.2**	**-0.7**
SSM1	**San Severino M**	**0.42**	**7**	P	**Pg**	**07 50 38.5**	**+0.5**
MNTP	**Montappone**	**0.42**	**39**	P	**Pb**	**07 50 38.8**	**-0.1**
GAG1	**Gagliole**	**0.43**	**356**	P	**Pb**	**07 50 39.6**	**+0.6**
CESX	**Cesi**	**0.43**	**243**	P	**Pg**	**07 50 39.1**	**+0.9**
OFFI	**Offida**	**0.45**	**74**	P	**Pb**	**07 50 39.3**	**0.0**
SNTG	**Esanatoglia**	**0.46**	**345**	P	**Pb**	**07 50 39.4**	**-0.2**
GIGS	**Gran Sasso**	**0.50**	**136**	P	**Pg**	**07 50 39.6**	**+0.2**
AQU	**L'Aquila**	**0.51**	**154**	P	**Pb**	**07 50 41.1**	**+0.7**
ATCC	**AVT- Casa Cast**	**0.51**	**318**	P	**Pb**	**07 50 40.4**	**+0.1**
EL6	**Elcito**	**0.52**	**360**	P	**Pg**	**07 50 40.2**	**+0.4**
TRE1	**Treia**	**0.52**	**17**	P	**Pb**	**07 50 40.6**	**-0.1**
FIAM	**Fiamignano**	**0.54**	**179**	P	**Pg**	**07 50 40.7**	**+0.5**
CING	**Cingoli**	**0.57**	**7**	P	**Pg**	**07 50 40.9**	**+0.2**
TRTR	**Tortoreto Alta**	**0.60**	**90**	P	**Pb**	**07 50 42.2**	**+0.3**
MURB	**Monte Urbino**	**0.62**	**317**	P	**Pb**	**07 50 42.5**	**+0.2**
FAGN	**Fagnano**	**0.65**	**147**	P	**Pb**	**07 50 42.9**	**+0.1**
PP3	**Marolino**	**0.68**	**33**	P	**Pb**	**07 50 43.0**	**-0.2**
ATFO	**Monte Foce - G**	**0.68**	**325**	P	**Pb**	**07 50 43.5**	**+0.2**
VCEL	**Villa Celiera**	**0.69**	**127**	P	**Pg**	**07 50 43.0**	**+0.1**
ATSC	**Scheggia e Pas**	**0.69**	**334**	P	**Pg**	**07 50 43.2**	**+0.3**
ARVD	**Arcevia**	**0.70**	**350**	P	**Pb**	**07 50 43.5**	**-0.1**
ATLO	**AVT- Montelove**	**0.72**	**315**	P	**Pb**	**07 50 44.1**	**+0.1**
SRES	**S.Oreste - Sor**	**0.72**	**218**	P	**Pb**	**07 50 44.6**	**+0.6**
MGAB	**Montegabbione**	**0.74**	**278**	P	**Pb**	**07 50 44.8**	**+0.5**
FRON	**Frontone**	**0.76**	**339**	P	**Pg**	**07 50 44.0**	**-0.3**
ATVA	**AVT- Monte Val**	**0.76**	**308**	P	**Pb**	**07 50 45.0**	**+0.3**
ATVO	**AVT- Monte Val**	**0.77**	**318**	P	**Pg**	**07 50 44.7**	**+0.3**
T0110	**Collepietro**	**0.77**	**139**	P	**Pg**	**07 50 44.4**	**-0.1**
ATBU	**Serra di Buran**	**0.78**	**329**	P	**Pb**	**07 50 45.3**	**+0.2**
ATMI	**Monte Miggiano**	**0.81**	**311**	P	**Pb**	**07 50 46.2**	**+0.7**
ATPC	**Poggio Castell**	**0.82**	**325**	P	**Pb**	**07 50 46.0**	**+0.3**
ATPI	**Pietralunga -**	**0.82**	**322**	P	**Pg**	**07 50 45.8**	**+0.4**
AOI	**Ancona**	**0.82**	**26**	P	**Pg**	**07 50 45.5**	**-0.1**
PIEI	**Pieia**	**0.84**	**330**	P	**Pg**	**07 50 45.9**	**+0.1**
MPAG	**Monte Paganucc**	**0.86**	**343**	P	**Pg**	**07 50 46.0**	**-0.1**
CERT	**Cerreto**	**0.86**	**186**	P	**Pg**	**07 50 46.0**	**-0.3**
SACS	**San Casciano d**	**0.88**	**273**	P	**Pn**	**07 50 47.7**	**0.0**
FSSB	**Fossombrone**	**0.91**	**345**	P	**Pg**	**07 50 47.1**	**-0.1**
CAFI	**Castiglion Fio**	**0.98**	**302**	P	**Pg**	**07 50 49.1**	**+0.6**
INTR	**Introdacqua**	**0.99**	**143**	P	**Pb**	**07 50 48.0**	**-0.7**
MODR	**Mondragone**	**1.76**	**161**	AML	AML		
	comp=N,105μm,1.2s						
MODR				AML	AML		
	comp=E,88μm,1.5s						
PGF	**Pioggiola**	**3.04**	**266**	*e*P	**Pn**	**07 51 19.5**	**+2.1**
MYKA	**Terra Mystica**	**3.84**	**6**	*e*Pn	**Pn**	**07 51 32.5**	**+4.1**
	comp=E,4.1nm,0.3s						
SBF	**Sospel**	**4.27**	**286**	*e*Pn	**Pn**	**07 51 32.2**	**-2.1**
SBF	**Sospel**	**4.27**	**286**	*e*P	**Pn**	**07 51 36.2**	**+1.9**
SBF				*e*Sn	**Sn**	**07 52 19.6**	**-4.3**
	comp=E,4.0nm,0.4s						
KBA	**Koelnbreinsper**	**4.27**	**2**	*e*Pn	**Pn**	**07 51 38.2**	**+3.8**
	comp=E,7.7nm,0.4s						
LMR	**La Mourre**	**4.86**	**278**	*e*P	**Pn**	**07 51 44.6**	**+2.3**
LMR				*e*Sn	**Sn**	**07 52 33.6**	**-4.8**
	comp=E,1.1nm,0.2s						
MBDF	**Montbardon**	**4.97**	**295**	*e*P	**Pn**	**07 51 46.3**	**+2.3**
LPG	**La Plagne**	**5.30**	**303**	*e*P	**Pn**	**07 51 51.4**	**+2.7**
LPL	**La Plagne**	**5.32**	**303**	*e*P	**Pn**	**07 51 51.7**	**+2.8**
ORIF	**Oris-en-Rattie**	**5.63**	**294**	*e*P	**Pn**	**07 51 55.9**	**+2.9**
KHC	**Kasperske Hory**	**6.33**	**3**	*e*PN	**Pn**	**07 52 06.1**	**+3.5**
KHC				*e*SN	**Sn**	**07 53 13.8**	**-0.9**
HINF	**Hinteralfeld**	**6.67**	**321**	*e*P	**Pn**	**07 52 09.2**	**+2.0**
HINF				*e*Sn	**Sn**	**07 53 16.6**	**-6.4**
	comp=E,2.8nm,0.3s						
CDF	**Champ du Feu**	**6.93**	**326**	*e*Pn	**Pn**	**07 52 08.8**	**-2.1**
CDF	**Champ du Feu**	**6.93**	**326**	*e*P	**Pn**	**07 52 13.5**	**+2.6**
HAU	**Haudompre**	**7.04**	**320**	*e*P	**Pn**	**07 52 14.7**	**+2.4**
HAU				*e*Sn	**Sn**	**07 53 25.4**	**-6.8**
	comp=E,0.7nm,0.1s						
AVF	**Avril sur Loir**	**7.99**	**303**	*e*P	**Pn**	**07 52 28.8**	**+3.5**
CLL	**Collm**	**8.50**	**360**	*e*(Sg)	**Sg**	**07 55 08.0**	**+5.8**
CLL				ex	x	07 55 36.0	

*IDC **27** 07:56:09.9±2.8, 31°.13S×178°.18W, h111km±19km, mb3.3/3, mbtmp3.7/4, Error ellipse: s-maj=55.3km s-min=20.5km az=112.0*

ISC 27 07:56:09.6±1.8, 31°.2S±0°.1×178°.2W±0°.3, h100km, n6, σ1§28/8, mb3.6/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.96**	**8**	P	**Pn**	**07 56 42.6**	**+0.9**
	154nm,0.2s,baz=95,slow=23,SNR=2.0						
RAO				S	**Sn**	**07 57 05.9**	**-0.2**
	710nm,0.3s,baz=34,slow=22,SNR=8.1						
URZ	**Urewera**	**8.02**	**207**	P	**Pn**	**07 58 03.5**	**+0.1**
	2.5nm,0.3s,baz=234,slow=21,SNR=1.4						
URZ				S	**Sn**	**07 59 32.7**	**+0.3**
	7.2nm,0.3s,baz=284,slow=22,SNR=20						
STKA	**Stephens Creek**	**34.12**	**258**	P	**P**	**08 02 46.4**	**+1.5**
	1.2nm,0.6s,baz=117,slow=6.8,SNR=3.9						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**42.89**	**268**	P	**P**	**08 03 57.5**	**-0.9**
	0.2nm,0.5s,baz=104,slow=7.3,SNR=5.5						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**43.95**	**273**	P	**P**	**08 04 05.4**	**-1.6**
	0.3nm,0.3s,baz=111,slow=8.1,SNR=10						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.83**	**339**	PKPbc	**PKPdf**	**08 15 34.4**	**-1.4**
	1.4nm,0.5s,baz=55,slow=5.2,SNR=11						

ROM 27 08:01:32.4±0.1, 42°.885N±0°.004×13°.079E±0°.005, h11km, ML2.6/22, 8C-5D, Error ellipse: s-maj=0.4km s-min=0.4km az=347.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**277**	P	Pg	08 01 34.8	+0.3
T1216				S	Sg	08 01 36.3	+0.2
T1216				AML	AML		
	comp=E,32600μm,0.5s						
T1216				AML	AML		
	comp=N,42350μm,0.2s						
T1216				AML	AML		
	comp=E,32600μm,0.5s						
T1216				AML	AML		
	comp=N,42400μm,0.2s						
T1216				AML	AML		
	comp=E,27872μm,0.2s						
T1216				AML	AML		
	comp=N,42360μm,0.2s						
NRCA	**Norcia**	**0.06**	**153**	⇓P	Pg	08 01 34.9	+0.3
NRCA				S	Sg	08 01 36.4	0.0
NRCA				AML	AML		
	comp=E,28550μm,0.4s						
NRCA				AML	AML		
	comp=N,59150μm,0.1s						
NRCA				AML	AML		
	comp=E,30050μm,0.4s						
NRCA				AML	AML		
	comp=N,59200μm,0.2s						
NRCA				AML	AML		
	comp=N,66300μm,0.2s						
NRCA				AML	AML		
	comp=E,28550μm,0.5s						
NRCA				AML	AML		
	comp=N,59190μm,0.1s						
NRCA				AML	AML		
	comp=E,27588μm,0.1s						
NRCA				AML	AML		
	comp=E,27061μm,0.2s						
NRCA				AML	AML		
	comp=N,66328μm,0.2s						
FEMA	**Monte Fema**	**0.08**	**344**	⇓P	Pg	08 01 35.3	+0.3
FEMA				S	Sg	08 01 37.2	+0.4
FEMA				AML	AML		
	comp=N,21900μm,0.4s						
FEMA				AML	AML		
	comp=N,21900μm,0.4s						
FEMA				AML	AML		
	comp=E,19550μm,1.0s						
FEMA				AML	AML		
	comp=N,15908μm,0.1s						
FEMA				AML	AML		
	comp=E,18334μm,0.1s						
T1245	**Castelsantange**	**0.09**	**110**	⇓P	Pg	08 01 35.4	+0.3
T1245				S	Sg	08 01 37.3	+0.4
T1245				AML	AML		
	comp=N,23150μm,0.3s						
T1245				AML	AML		
	comp=N,22550μm,0.3s						
T1245				AML	AML		
	comp=E,24850μm,0.3s						
T1245				AML	AML		
	comp=E,24700μm,0.3s						
T1245				AML	AML		
	comp=N,22992μm,0.3s						
T1245				AML	AML		
	comp=N,21330μm,0.3s						
T1245				AML	AML		
	comp=E,15800μm,0.1s						
T1245				AML	AML		
	comp=E,15870μm,0.1s						
MC2	**Monte Cornacci**	**0.09**	**71**	P	Pg	08 01 35.4	+0.3
MC2				S	Sg	08 01 37.3	+0.2
FDMO	**Fiordimonte**	**0.15**	**2**	P	Pg	08 01 36.4	+0.5
FDMO				S	Sg	08 01 39.2	+0.9
FDMO				AML	AML		
	comp=E,5710μm,0.3s						
FDMO				AML	AML		
	comp=N,7660μm,0.3s						
FDMO				AML	AML		
	comp=E,5643μm,0.2s						
FDMO				AML	AML		
	comp=N,3909μm,1.5s						
CESI	**CESI - Serrava**	**0.17**	**313**	P	Pg	08 01 36.9	+0.6
CESI				S	Sg	08 01 40.1	+1.1
CESI				AML	AML		
	comp=E,4870μm,1.0s						
CESI				AML	AML		
	comp=N,8190μm,0.6s						
CESI				AML	AML		
	comp=E,4654μm,0.2s						
CESI				AML	AML		
	comp=N,7659μm,0.1s						
T1215	**Vallo di Nera,**	**0.18**	**242**	⇑P	Pg	08 01 36.8	+0.6
T1215				S	Sg	08 01 39.9	+1.0
T1215				AML	AML		
	comp=N,1270μm,0.6s						
T1215				AML	AML		
	comp=E,1619μm,1.1s						
T1215				AML	AML		
	comp=N,1312μm,0.6s						
T1215				AML	AML		
	comp=E,1619μm,1.1s						
T1215				AML	AML		
	comp=N,1320μm,0.6s						
T1215				AML	AML		
	comp=E,1620μm,1.1s						
T1215				AML	AML		
	comp=N,1326μm,0.6s						
T1215				AML	AML		
	comp=E,1580μm,1.1s						
T1215				AML	AML		
	comp=N,1321μm,0.6s						
T1215				AML	AML		
	comp=E,1365μm,0.2s						
T1215				AML	AML		
	comp=N,1010μm,0.2s						
T1215				AML	AML		
	comp=E,1316μm,0.2s						
T1215				AML	AML		
	comp=N,1012μm,0.1s						
MMO1	**Montemonaco**	**0.18**	**86**	⇑P	Pg	08 01 36.9	+0.5
MMO1				S	Sg	08 01 40.0	+0.9
AM05	**Amandola Campo**	**0.22**	**65**	⇑P	Pg	08 01 37.6	+0.6
AM05				S	Sg	08 01 41.3	+1.2
AM05				AML	AML		
	comp=E,1320μm,0.1s						
AM05				AML	AML		
	comp=N,546μm,0.1s						
AM05				AML	AML		
	comp=N,1790μm,1.0s						
AM05				AML	AML		
	comp=E,6015μm,0.1s						
AM05				AML	AML		
	comp=E,1320μm,0.1s						
AM05				AML	AML		
	comp=E,6014μm,0.1s						
AM05				AML	AML		
	comp=N,1759μm,0.1s						
AM05				AML	AML		
	comp=N,545μm,0.1s						
T1241	**Roccafluvione,**	**0.26**	**96**	⇑P	Pg	08 01 37.8	0.0
T1241				S	Sg	08 01 42.0	+0.7
T1241				AML	AML		
	comp=N,3115μm,0.2s						
T1241				AML	AML		
	comp=E,3655μm,0.3s						
T1241				AML	AML		
	comp=E,3660μm,0.3s						
T1241				AML	AML		
	comp=N,3120μm,0.2s						
T1204	**Amatrice, Fraz**	**0.27**	**140**	P	Pg	08 01 38.6	+0.6
T1204				AML	AML		
	comp=E,1155μm,0.4s						
T1204				AML	AML		
	comp=N,1014μm,0.6s						
T1204				AML	AML		
	comp=E,1046μm,0.2s						
T1204				AML	AML		
	comp=N,754μm,0.3s						
LNSS	**Leonessa**	**0.28**	**186**	P	Pg	08 01 38.5	+0.4
LNSS				S	Sb	08 01 43.2	-1.1
LNSS				AML	AML		
	comp=E,4860μm,0.3s						
LNSS				AML	AML		
	comp=E,4855μm,0.3s						
LNSS				AML	AML		
	comp=N,3990μm,1.0s						
LNSS				AML	AML		
	comp=N,3002μm,0.1s						
LNSS				AML	AML		
	comp=E,4462μm,0.1s						
SMA1	**SAN MARTINO**	**0.32**	**143**	P	Pb	08 01 40.0	-0.2
SMA1				S	Sb	08 01 44.4	-1.0
SMA1				AML	AML		
	comp=E,1605μm,1.3s						
SMA1				AML	AML		
	comp=E,1605μm,0.7s						
SMA1				AML	AML		
	comp=N,1282μm,7.1s						
SMA1				AML	AML		
	comp=E,1581μm,0.4s						
SMA1				AML	AML		
	comp=N,1385μm,0.5s						
T1243	**Rocca Santa Ma**	**0.33**	**125**	P	Pg	08 01 39.3	+0.3
T1243				S	Sg	08 01 44.5	+1.0
RM33	**Pellescritta (**	**0.39**	**165**	P	Pg	08 01 40.6	+0.5
RM33				S	Sb	08 01 46.8	-0.6
RM33				AML	AML		
	comp=E,1135μm,0.9s						
RM33				AML	AML		
	comp=N,893μm,1.3s						
RM33				AML	AML		
	comp=N,898μm,1.4s						
RM33				AML	AML		
	comp=E,1134μm,0.9s						
RM33				AML	AML		
	comp=E,1126μm,0.9s						
RM33				AML	AML		
	comp=N,898μm,1.4s						
RM33				AML	AML		
	comp=E,1135μm,0.9s						
RM33				AML	AML		
	comp=E,1125μm,0.9s						
RM33				AML	AML		
	comp=N,892μm,1.3s						
RM33				AML	AML		
	comp=E,882μm,0.1s						
RM33				AML	AML		
	comp=E,884μm,0.1s						
RM33				AML	AML		
	comp=N,816μm,0.1s						
RM33				AML	AML		
	comp=N,792μm,0.1s						
T1211	**Morro Reatino**	**0.39**	**205**	S	Sb	08 01 48.0	+0.6
EL6	**Elcito**	**0.44**	**2**	S	Sb	08 01 49.0	0.0
OFFI	**Offida**	**0.45**	**83**	P	Pb	08 01 42.4	+0.1
OFFI				AML	AML		
	comp=E,1061μm,0.9s						
OFFI				AML	AML		
	comp=N,1206μm,0.5s						
OFFI				AML	AML		
	comp=E,1061μm,1.1s						
OFFI				AML	AML		
	comp=N,1206μm,1.5s						
CESX	**Cesi**	**0.46**	**233**	P	Pg	08 01 40.6	-0.8
TERO	**Teramo**	**0.47**	**124**	P	Pg	08 01 41.6	+0.1
TERO				S	Sb	08 01 48.8	-0.8
TERO				AML	AML		
	comp=E,740μm,0.4s						
TERO				AML	AML		
	comp=N,748μm,0.9s						
TERO				AML	AML		
	comp=N,896μm,0.9s						
TERO				AML	AML		
	comp=E,856μm,0.4s						
TERO				AML	AML		
	comp=N,896μm,0.9s						
TERO				AML	AML		
	comp=E,672μm,0.1s						
TERO				AML	AML		
	comp=N,644μm,0.2s						
TERO				AML	AML		
	comp=N,721μm,0.2s						
TERO				AML	AML		
	comp=E,763μm,0.1s						
MURB	**Monte Urbino**	**0.56**	**313**	P	Pg	08 01 43.4	+0.2
MURB				AML	AML		
	comp=E,820μm,0.7s						
MURB				AML	AML		
	comp=N,844μm,0.2s						
MURB				AML	AML		
	comp=E,922μm,1.2s						
MURB				AML	AML		
	comp=N,1089μm,0.2s						
MURB				AML	AML		
	comp=E,820μm,0.7s						
MURB				AML	AML		
	comp=E,831μm,0.2s						
MURB				AML	AML		
	comp=E,750μm,0.2s						
MURB				AML	AML		
	comp=N,1087μm,0.2s						
MURB				AML	AML		
	comp=N,844μm,0.2s						
GIGS	**Gran Sasso**	**0.56**	**140**	P	Pg	08 01 43.5	+0.1
GIGS				AML	AML		
	comp=E,85μm,0.6s						
GIGS				AML	AML		
	comp=N,107μm,0.2s						
GIGS				AML	AML		
	comp=N,107μm,0.2s						
GIGS				AML	AML		
	comp=N,107μm,0.2s						
GIGS				AML	AML		

comp=E,82μm,0.7s
GIGS AML AML
comp=N,107μm,0.2s
ATFO Monte Foce - G 0.61 322 ⇑P Pb 08 01 45.1 0.0
ATFO AML AML
comp=E,219μm,0.4s
ATFO AML AML
comp=N,196μm,0.4s
ATFO AML AML
comp=N,196μm,0.4s
ATFO AML AML
comp=N,196μm,0.4s
ATFO AML AML
comp=E,219μm,0.4s
FIAM Fiamignano 0.62 177 P Pg 08 01 44.6 +0.2
FIAM S Sb 08 01 53.9 -0.1
FIAM AML AML
comp=N,443μm,0.3s
FIAM AML AML
comp=E,431μm,0.4s
FIAM AML AML
comp=N,442μm,0.3s
FIAM AML AML
comp=E,431μm,0.4s
FIAM AML AML
comp=N,443μm,0.3s
ARVD Arcevia 0.62 351 ⇑P Pg 08 01 44.2 -0.2
ARVD S Sb 08 01 55.0 +0.9
ARVD AML AML
comp=N,244μm,1.3s
ARVD AML AML
comp=E,293μm,0.6s
ARVD AML AML
comp=N,225μm,0.2s
ARVD AML AML
comp=E,231μm,0.2s
ATVO AVT- Monte Val 0.70 315 ⇑P Pb 08 01 47.3 +0.7
ATVO AML AML
comp=N,185μm,0.8s
ATVO AML AML
comp=E,158μm,0.9s
ATVO AML AML
comp=N,166μm,0.6s
ATVO AML AML
comp=E,141μm,0.6s
SRES S.Oreste - Sor 0.77 213 S Sn 08 02 01.0 +0.1
MPAG Monte Paganucc 0.78 343 ⇓P Pb 08 01 48.2 +0.2
MPAG AML AML
comp=E,206μm,1.6s
MPAG AML AML
comp=N,197μm,1.3s
MPAG AML AML
comp=E,207μm,1.6s
MPAG AML AML
comp=E,187μm,0.2s
MPAG AML AML
comp=N,186μm,0.3s
FSSB Fossombrone 0.84 345 S Sn 08 02 03.0 +0.5
T0110 Collepietro 0.84 142 ⇑P Pg 08 01 48.6 +0.1
T0110 AML AML
comp=N,411μm,0.4s
T0110 AML AML
comp=E,434μm,0.5s
T0110 AML AML
comp=E,434μm,0.5s
T0110 AML AML
comp=N,411μm,0.4s
CERT Cerreto 0.94 184 ⇓P Pn 08 01 51.8 +0.2
CERT AML AML
comp=N,234μm,1.1s
CERT AML AML
comp=E,378μm,0.5s
CERT AML AML
comp=N,228μm,0.4s
CERT AML AML
comp=E,378μm,0.5s
MODR Mondragone 1.84 161 P Pn 08 02 04.6 +0.7
PIGN Pignataro Magg 1.87 154 S Sb 08 02 31.0 +1.0
VBKN Vesuvio Bunker 2.29 153 S Sg 08 02 44.0 -1.9

NNC 27 08:01:48.9±0.8, 51°.03N×73°.66E, h0km, mb3.5, mpv3.2, 11C-6D, Error ellipse: s-maj=10.0km s-min=7.1km az=33.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.84**	**316**	⇑Pg	Pb	08 02 40.3	-0.2
	3.2nm,0.7s,baz=136,slow=15,SNR=18						
BVA0				⇓Lg	Lg	08 03 21.0	
	80nm,0.8s,baz=128,slow=27						
BRVK	**Borovoye**	**2.91**	**316**	⇑Pg	Pb	08 02 40.5	-1.2
	6.4nm,0.8s						
BRVK				⇑Lg	Lg	08 03 24.3	
	134nm,0.9s						
OTUK	**Ortayu**	**2.92**	**198**	⇑Pn	Pn	08 02 36.0	-0.7
	9.9nm,0.8s						
OTUK				⇑Lg	Lg	08 03 21.0	
	24nm,0.8s						
KURBB	**Kurchatov Arra**	**3.12**	**96**	Pn	Pn	08 02 40.3	+1.0
	19nm,0.8s						
KURBB				⇓Lg	Lg	08 03 27.8	
	174nm,0.9s						
KURK	**Kurchatov**	**3.16**	**94**	⇑Pn	Pn	08 02 40.7	+0.8
	6.2nm,0.6s						
KURK				⇑Lg	Lg	08 03 28.0	
	81nm,0.8s						
MAKZ	**Makanchi**	**6.92**	**124**	⇑Lg	Lg	08 05 26.0	
	19nm,1.1s						
MK31	**Makanchi Array**	**7.09**	**123**	⇓Lg	Lg	08 05 33.7	
	13nm,0.8s,baz=314,slow=25,SNR=7.2						
CHMS	**Chumysh**	**8.07**	**174**	⇓Lg	Lg	08 06 04.0	
	34nm,0.9s						
MDOK	**Medeo**	**8.20**	**162**	⇑Lg	Lg	08 06 09.3	
	25nm,0.8s						
KK31	**Karatay Array**	**8.22**	**196**	⇓Lg	Lg	08 06 10.0	
	7.3nm,0.8s,baz=8.8,slow=27,SNR=5.4						
TKM2	**Tokmak 2**	**8.22**	**170**	⇑Lg	Lg	08 06 09.5	
	26nm,1.1s						
PDGK	**Podgornoye**	**8.66**	**151**	⇓Lg	Lg	08 06 24.9	
	26nm,1.1s						
AB31	**Akbulak array**	**8.99**	**264**	⇑Lg	Lg	08 06 34.0	
	7.1nm,0.9s						

*ANF **27** 08:02:20.4±0.2, 32°.87N×100°.91W, h4km, ML4.1/12, Error ellipse: s-maj=3.9km s-min=2.4km az=46.0*
*NEIC **27** 08:02:21.1±1.4, 32°.88N±0°.05×100°.91W±0°.03, h4km±7km, mb_Lg2.9/76, Error ellipse: s-maj=8.2km s-min=1.8km az=202.0*
ISC 27 08:02:20.9±0.9, 32°.91N±0°.05×100°.89W±0°.05, h10km, n70, σ0°.81/48, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTX	**Abilene, Hawle**	**1.08**	**105**		**Pg**	**08 02 40.4**	**-1.3**
ABTX				Sg	**Sg**	**08 02 55.0**	**-0.8**
ABTX	**Abilene, Hawle**	**1.08**	**105**	P	**Pg**	**08 02 40.5**	**-1.3**
	baz=284						
MSTX	**Muleshoe**	**1.90**	**304**		**Pn**	**08 02 53.4**	**-0.1**
MSTX					**Sb**	**08 03 19.2**	**-0.4**
MSTX	**Muleshoe**	**1.90**	**304**	P	**Pn**	**08 02 53.5**	**0.0**
	baz=124						
MSTX				S	**Sb**	**08 03 18.9**	**-0.7**
	baz=124						
AMTX	**Amarillo**	**2.08**	**342**		**Pn**	**08 02 57.3**	**+1.4**
AMTX	**Amarillo**	**2.08**	**342**	P	**Pn**	**08 02 57.0**	**+1.1**
	baz=162						
AMTX				S	**Sb**	**08 03 25.8**	**+1.0**
	baz=162						
HTMS	**Hat Mesa**	**2.36**	**260**		**Pn**	**08 03 00.1**	**+0.3**
CPRX	**Cap Rock**	**2.51**	**274**		**Pn**	**08 03 02.7**	**+0.8**
CLN7	**Carlsbad 7**	**2.51**	**259**		**Pn**	**08 03 02.8**	**+0.9**
JCT	**Junction City**	**2.59**	**159**		**Pn**	**08 03 03.1**	**+0.1**
JCT	**Junction City**	**2.59**	**159**	P	**Pn**	**08 03 03.1**	**+0.1**
	baz=339						
JCT				S	**Sn**	**08 03 35.8**	**+1.3**
	baz=339						
CLNB	**Carlsbad**	**2.61**	**257**		**Pn**	**08 03 03.3**	**+0.1**
GDL2	**Guadalupe Moun**	**3.02**	**257**		**Pn**	**08 03 09.6**	**+0.7**
WHTX	**Lake Whitney,**	**3.04**	**107**		**Pn**	**08 03 09.2**	**+0.2**
WHTX	**Lake Whitney,**	**3.04**	**107**	P	**Pn**	**08 03 09.4**	**+0.3**
	baz=288						
X34A	**Smith Ranch, M**	**3.05**	**56**	Pn	**Pn**	**08 03 11.0**	**+1.7**
X34A				IAmb_Lg		08 04 03.9	
	comp=Z,55nm,0.7s						
Z35A	**Perchaven, San**	**3.08**	**81**		**Pn**	**08 03 10.0**	**+0.5**
Z35A	**Perchaven, San**	**3.08**	**81**	P	**Pn**	**08 03 10.4**	**+0.8**
	baz=263						
435B	**Jarrell**	**3.52**	**126**		**Pn**	**08 03 16.0**	**+0.4**
435B	**Jarrell**	**3.52**	**126**	P	**Pn**	**08 03 16.2**	**+0.5**
	baz=308						
435B				S	**Sn**	**08 03 58.8**	**+1.5**
	baz=308						
FNO	**Franklin**	**3.72**	**50**		**Pn**	**08 03 18.4**	**0.0**
U32A	**Winter Ranch,**	**3.79**	**24**	IAmb_Lg		08 04 30.1	
	comp=Z,32nm,0.8s						
U32A	**Winter Ranch,**	**3.79**	**24**	P	**Pn**	**08 03 20.2**	**+0.7**
	baz=205						
OK025	**Westminster Rd**	**3.97**	**47**		**Pn**	**08 03 21.8**	**-0.1**
OK025				IAmb_Lg		08 04 38.4	
	comp=Z,31nm,1.1s						
OK038	**West end E0370**	**3.98**	**26**		**Pn**	**08 03 21.4**	**-0.6**
OK029	**Liberty Lake**	**4.04**	**44**	IAmb_Lg		08 04 33.3	
	comp=Z,38nm,0.9s						
TX31	**Lajitas Ar. Si**	**4.29**	**215**		**Pn**	**08 03 24.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**4.29**	**215**	P	**Pn**	**08 03 25.6**	**-0.7**
	baz=33						
TXAR	**Lajitas Array**	**4.29**	**215**		**Pn**	**08 03 25.6**	**-0.7**
TX32	**Lajitas Array**	**4.29**	**215**		**Pn**	**08 03 25.4**	**-1.0**
237A	**Washetta, Mont**	**4.39**	**101**	P	**Pn**	**08 03 27.7**	**+0.1**
	baz=283						
OK031	**S. Brethren Rd**	**4.52**	**47**	IAmb_Lg		08 04 47.6	
	comp=Z,22nm,0.7s						
OK033	**Mehan**	**4.52**	**45**	IAmb_Lg		08 04 49.0	
	comp=Z,18nm,0.7s						
OK049	**E0420 Rd and N**	**4.57**	**39**	IAmb_Lg		08 04 51.1	
	comp=Z,16nm,0.7s						
OK034	**N. Norfolk Rd.**	**4.63**	**47**	IAmb_Lg		08 04 54.8	
	comp=Z,18nm,0.8s						
833A	**Chaparral WMA,**	**4.75**	**164**		**Pn**	**08 03 31.9**	**-0.6**
833A				IAmb_Lg		08 04 56.5	
	comp=Z,33nm,0.8s						
OK048	**Pawnee Station**	**4.78**	**42**	IAmb_Lg		08 05 05.3	
	comp=Z,16nm,0.8s						
735A	**Kenedy**	**4.83**	**146**	Pn	**Pn**	**08 03 34.9**	**+1.2**
735A	**Kenedy**	**4.83**	**146**	P	**Pn**	**08 03 34.8**	**+1.2**
	baz=327						
X37A	**Clayton**	**4.89**	**68**	IAmb_Lg		08 05 07.0	
	comp=Z,30nm,0.9s						
X37A	**Clayton**	**4.89**	**68**	P	**Pn**	**08 03 34.5**	**0.0**
	baz=251						
KAN13	**South Haven SW**	**4.96**	**33**	IAmb_Lg		08 05 03.1	
	comp=Z,18nm,1.1s						
Z38A	**Mt. Pleasant**	**4.97**	**84**	IAmb_Lg		08 05 12.8	
	comp=Z,27nm,0.8s						
ANMO	**Albuquerque**	**5.06**	**295**	IAmb_Lg		08 05 04.0	
	comp=Z,22nm,0.7s						
TUL1	**Leonard**	**5.17**	**53**	IAmb_Lg		08 05 15.5	
	comp=Z,22nm,0.9s						
HKT	**Hockley**	**5.23**	**123**	IAmb_Lg		08 05 14.0	
	comp=Z,15nm,1.0s						
T35A	**Sooner Cattle**	**5.38**	**41**	Pn	**Pn**	**08 03 41.7**	**+0.5**
R32A	**Long Quarter,**	**5.78**	**17**	IAmb_Lg		08 05 40.5	
	comp=Z,19nm,0.7s						
KSCO	**Kaye Shedlock'**	**6.25**	**347**	Pn	**Pn**	**08 03 53.1**	**-0.2**
MIAR	**Mount Ida**	**6.30**	**73**	IAmb_Lg		08 05 47.5	
	comp=Z,21nm,0.8s						
U38A	**Gravette**	**6.41**	**55**	IAmb_Lg		08 05 46.4	
	comp=Z,19nm,0.7s						
WLAR	**White Oak Lake**	**6.55**	**81**	Pn	**Pn**	**08 03 57.9**	**+0.6**
WLAR				IAmb_Lg		08 05 53.0	
	comp=Z,16nm,0.7s						
HHAR	**Hobbs**	**6.64**	**58**	IAmb_Lg		08 06 02.2	
	comp=Z,12nm,0.7s						
Q24A	**Divide**	**6.96**	**331**	IAmb_Lg		08 06 08.7	
	comp=Z,14nm,0.7s						
KSU1	**Kansas State U**	**7.08**	**28**	IAmb_Lg		08 06 22.6	
	comp=Z,14nm,0.9s						
HPIG		**7.25**	**216**	Pn	**Pn**	**08 04 06.7**	**-0.5**
319A	**Douglas**	**7.28**	**260**	IAmb_Lg		08 06 31.2	
	comp=Z,10nm,0.8s						
UALR	**University of**	**7.35**	**73**	IAmb_Lg		08 06 22.7	
	comp=Z,9.7nm,0.9s						
WHAR	**Wooly Hollow**	**7.52**	**69**	Pn	**Pn**	**08 04 10.2**	**-0.4**
WHAR				IAmb_Lg		08 06 20.4	
	comp=Z,8.8nm,0.7s						
MVCO	**Mesa Verde**	**7.57**	**307**	IAmb_Lg		08 06 38.4	
	comp=Z,14nm,1.1s						
X18A	**Snowflake**	**7.72**	**285**	Pn	**Pn**	**08 04 14.5**	**+0.9**
S39A	**Bolivar**	**7.81**	**50**	IAmb_Lg		08 06 33.6	
	comp=Z,10nm,0.9s						
FCAR	**Ozark Folk Cen**	**7.83**	**65**	Pn	**Pn**	**08 04 14.8**	**0.0**
FCAR				IAmb_Lg		08 06 31.9	
	comp=Z,11nm,0.9s						
OGNE	**Ogallala**	**8.07**	**354**	Pn	**Pn**	**08 04 18.1**	**-0.2**
BRIGG	**Briggsdale**	**8.14**	**341**	IAmb_Lg		08 06 56.5	
	comp=Z,16nm,0.8s						
MGMO	**Mountain Grove**	**8.24**	**57**	Pn	**Pn**	**08 04 21.0**	**+0.5**
MGMO				IAmb_Lg		08 06 50.3	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**8.83**	**50**	IAmb_Lg		08 07 14.2	
	comp=Z,9.7nm,0.8s						
N23A	**Red Feather La**	**8.94**	**335**	IAmb_Lg		08 07 11.9	
	comp=Z,16nm,0.8s						
P38A	**Dawn**	**8.95**	**39**	IAmb_Lg		08 07 20.6	
	comp=Z,7.6nm,0.8s						
CCM	**Cathedral Cave**	**9.39**	**54**	IAmb_Lg		08 07 25.2	
	comp=Z,12nm,0.8s						

ROM 27 08:02:32.1±0.2, 42°.972N±0°.009×13°.02E±0°.01, h17km±1km, Md1.8/2, ML2.4/10, 4C-2D, Error ellipse: s-maj=1.2km s-min=0.4km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.08**	**36**	AML	AML		
	comp=E,1915μm,0.9s						
FDMO				AML	AML		
	comp=N,2205μm,1.0s						
FDMO				AML	AML		
	comp=E,1624μm,0.2s						
FDMO				AML	AML		
	comp=N,1673μm,0.2s						
T1216	**Preci, Frazion**	**0.08**	**182**	P	Pg	08 02 36.5	+0.9
T1216				S	Sg	08 02 38.0	+0.2
T1216				AML	AML		
	comp=E,4290μm,0.2s						
T1216				AML	AML		
	comp=N,3400μm,0.9s						
T1216				AML	AML		
	comp=E,4295μm,0.2s						
T1216				AML	AML		
	comp=N,3395μm,0.9s						
T1216				AML	AML		
	comp=E,2815μm,0.2s						
T1216				AML	AML		
	comp=N,2839μm,0.3s						
CESI	**CESI - Serrava**	**0.09**	**291**	⇑P	Pg	08 02 35.8	+0.1
CESI				S	Sg	08 02 39.0	+0.9
CESI				AML	AML		
	comp=N,1425μm,0.4s						
CESI				AML	AML		
	comp=E,740μm,0.9s						
CESI				AML	AML		
	comp=N,436μm,0.3s						
CESI				AML	AML		
	comp=E,566μm,0.5s						
NRCA	**Norcia**	**0.15**	**154**	⇑P	Pb	08 02 36.8	+0.2
NRCA				S	Sb	08 02 39.4	-0.2
NRCA				AML	AML		
	comp=E,3295μm,0.2s						
NRCA				AML	AML		
	comp=E,3500μm,0.2s						
NRCA				AML	AML		
	comp=N,3395μm,0.1s						
NRCA				AML	AML		
	comp=N,3070μm,0.1s						
NRCA				AML	AML		
	comp=E,3461μm,0.1s						
NRCA				AML	AML		
	comp=N,3232μm,1.7s						
NRCA				AML	AML		
	comp=N,3632μm,1.7s						
NRCA				AML	AML		
	comp=E,3152μm,0.1s						
T1245	**Castelsantange**	**0.17**	**134**	P	Pg	08 02 36.5	-0.1
T1245				S	Sb	08 02 40.0	-0.1
T1245				AML	AML		
	comp=E,3190μm,0.6s						
T1245				AML	AML		
	comp=N,5055μm,0.2s						
T1245				AML	AML		
	comp=N,4575μm,0.1s						
T1245				AML	AML		
	comp=E,3150μm,0.6s						
T1245				AML	AML		
	comp=E,3185μm,0.6s						
T1245				AML	AML		
	comp=N,4574μm,0.1s						
T1245				AML	AML		
	comp=E,2805μm,0.3s						
T1245				AML	AML		
	comp=N,3163μm,0.2s						
T1245				AML	AML		
	comp=E,2485μm,0.2s						
T1215	**Vallo di Nera,**	**0.20**	**214**	⇓P	Pb	08 02 38.2	+0.7
T1215				S	Sb	08 02 40.9	-0.1
T1215				AML	AML		
	comp=E,410μm,1.0s						
T1215				AML	AML		
	comp=N,618μm,0.7s						
T1215				AML	AML		
	comp=N,569μm,0.1s						
T1215				AML	AML		
	comp=E,303μm,0.1s						
T1215				AML	AML		
	comp=N,563μm,0.1s						
T1215				AML	AML		
	comp=E,323μm,0.1s						
AM05	**Amandola Campo**	**0.24**	**89**	AML	AML		
	comp=E,119μm,0.2s						
AM05				AML	AML		
	comp=N,128μm,2.3s						
AM05				AML	AML		
	comp=N,29μm,0.3s						
AM05				AML	AML		
	comp=E,548μm,0.1s						
T1217	**Poggiodomo (PG**	**0.27**	**195**	P	Pb	08 02 38.7	+0.1
T1217				S	Sg	08 02 42.0	-0.2
T1217				AML	AML		
	comp=E,594μm,0.2s						
T1217				AML	AML		
	comp=N,732μm,0.2s						
T1217				AML	AML		
	comp=E,557μm,0.2s						
T1217				AML	AML		
	comp=E,593μm,0.2s						
T1217				AML	AML		
	comp=N,732μm,0.2s						
T1217				AML	AML		
	comp=N,712μm,0.2s						
T1217				END			
SNTG	**Esanatoglia**	**0.29**	**348**	P	Pg	08 02 38.2	-0.2
SNTG				S	Sg	08 02 42.7	-0.1
T1241	**Roccafluvione,**	**0.32**	**111**	P	Pb	08 02 40.0	+0.5
T1241				S	Sb	08 02 44.6	+0.2
T1241				AML	AML		
	comp=N,661μm,0.3s						
T1241				AML	AML		
	comp=E,416μm,0.3s						
T1241				AML	AML		
	comp=N,660μm,0.3s						
T1241				END			
EL6	**Elcito**	**0.36**	**9**	⇑P	Pg	08 02 37.5	-2.3
EL6				AML	AML		
	comp=E,195μm,0.1s						
LNSS	**Leonessa**	**0.37**	**178**	P	Pb	08 02 40.2	-0.1
LNSS				S	Sg	08 02 44.6	-0.5
LNSS				AML	AML		
	comp=E,598μm,1.4s						
LNSS				AML	AML		
	comp=N,743μm,0.8s						
LNSS				AML	AML		
	comp=E,503μm,0.3s						
LNSS				AML	AML		
	comp=N,553μm,0.2s						
T1243	**Rocca Santa Ma**	**0.42**	**131**	P	Pg	08 02 40.3	-0.3
T1243				S	Sb	08 02 46.9	-0.2
RM33	**Pellescritta (**	**0.48**	**163**	⇑P	Pb	08 02 42.1	-0.1
RM33				AML	AML		
	comp=E,144μm,0.2s						
RM33				AML	AML		
	comp=E,174μm,0.2s						
RM33				AML	AML		
	comp=N,173μm,0.3s						
RM33				AML	AML		
	comp=N,201μm,0.3s						
CESX	**Cesi**	**0.49**	**222**	P	Pb	08 02 43.1	+0.8
CESX				AML	AML		
	comp=E,126μm,0.4s						
CESX				AML	AML		
	comp=N,131μm,0.2s						
ARVD	**Arcevia**	**0.53**	**354**	⇓P	Pg	08 02 42.0	-0.7
ARVD				AML	AML		
	comp=E,51μm,0.1s						
ARVD				AML	AML		
	comp=N,49μm,0.1s						
TERO	**Teramo**	**0.55**	**129**	P	Pg	08 02 42.5	-0.7
TERO				AML	AML		
	comp=E,158μm,0.7s						
TERO				AML	AML		
	comp=N,208μm,1.5s						
TERO				AML	AML		
	comp=E,134μm,0.1s						
TERO				AML	AML		
	comp=N,155μm,0.2s						
TERO				AML	AML		
	comp=E,116μm,0.1s						
TERO				AML	AML		
	comp=N,147μm,0.1s						

*SSNC **27** 08:15:13.5±1.7, 19°.53N×72°.98W, h5km±86km, MD3.6, ML3.2, MW3.7*
*OSPL **27** 08:15:15.0±4.1, 19°.84N×72°.91W, h25km±24km, ML3.2*
ISC 27 08:15:09.5±1.6, 19°.90N±0°.06×72°.92W±0°.03, h10km±13km, n14, σ1°.31/23, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODA1	**ITESIL, Dajabo**	**1.19**	**107**	*i* P	**Pg**	**08 15 32.6**	**+0.2**
LODA1				*e*S	**Sb**	**08 15 45.9**	**-1.9**
PAPH	**Port-au-Prince**	**1.48**	**157**	*i* P	**Pg**	**08 15 37.9**	**-0.1**
PAPH				*e*S	**Sn**	**08 15 54.8**	**-1.0**
PAPH				IAML		08 15 57.3	
	comp=Z,346nm,0.5s						
SDDR	**Presa de Saban**	**1.78**	**120**	*i* P	**Pn**	**08 15 41.2**	**+0.8**
SDDR				*e*S	**Sn**	**08 16 01.1**	**-2.1**
SDDR				IAML		08 16 12.8	
	comp=Z,365nm,0.5s						
GTBY	**Guantanamo Bay**	**2.07**	**271**	*e*P	**Pb**	**08 15 46.9**	**-0.2**
GTBY				*e*S	**Sb**	**08 16 11.8**	**-1.1**
GTBY	**Guantanamo Bay**	**2.07**	**271**	*i* P	**Pb**	**08 15 47.4**	**+0.2**
GTBY				*e*S	**Sn**	**08 16 11.1**	**+1.0**
GTBY				IAML		08 16 14.1	
	comp=Z,33nm,0.4s						
SC01	**Santiago de lo**	**2.11**	**102**	*i* P	**Pb**	**08 15 48.1**	**+0.2**
SC01				*e*S	**Sb**	**08 16 14.4**	**+0.1**
SC01				IAML		08 16 16.5	
	comp=Z,290nm,1.1s						
LOPE2	**Hotel El Peder**	**2.16**	**149**	*i* P	**Pb**	**08 15 48.3**	**-0.4**
GRTK	**Grand Turk**	**2.32**	**46**	*i* P	**Pb**	**08 15 51.3**	**-0.1**
GRTK				IAML		08 16 25.0	
	comp=Z,84nm,0.5s						
RCC	**Rio Carpintero**	**2.62**	**273**	*e*P	**Pb**	**08 15 54.7**	**-1.8**
RCC				*e*S	**Sn**	**08 16 24.5**	**+0.7**
RCC				IAML		08 16 27.0	
	comp=N,58nm,0.2s						
RCC				IAML		08 16 27.9	
	comp=E,80nm,0.4s						
BANI	**BANI**	**2.84**	**121**	*i* P	**Pn**	**08 15 56.1**	**+1.0**
BANI				*e*S	**Sn**	**08 16 31.2**	**+1.7**
BANI				IAML		08 16 37.3	
	comp=Z,86nm,0.6s						
HLGC	**Holguin**	**3.11**	**289**	*e*P	**Pb**	**08 16 04.6**	**-0.4**
LMGC	**Las Mercedes**	**3.85**	**273**	*e*P	**Pn**	**08 16 11.5**	**+2.7**
LMGC				*e*S	**Sn**	**08 16 53.6**	**-0.6**
LMGC				IAML		08 17 01.3	
	comp=E,37nm,0.3s						
LMGC				IAML		08 17 01.4	
	comp=N,36nm,0.2s						
MTDJ	**Mount Denham**	**4.67**	**250**	*e*P	**Pn**	**08 16 22.1**	**+1.8**
CCCC	**Cccc**	**4.73**	**287**	*e*P	**Pn**	**08 16 19.5**	**-1.5**
CCCC				IAML		08 17 12.3	
	comp=E,8.0nm,0.2s						
CCCC				IAML		08 17 13.8	

comp=N,8.4nm,0.2s

MOS ***27*** *08:17:44.6±0.9, 1.°45N×125.°58E, h33km, mb6.1/79, MS5.1/21, Error ellipse: s-maj=7.4km s-min=3.8km az=116.7*

IDC ***27*** *08:17:46.0±1.9, 1.°28N×125.°49E, h33km±13km, mb5.5/43, mbtmp5.7/44, ML5.0/1, MS4.7/55, Error ellipse: s-maj=14.3km s-min=8.7km az=68.0*

BJI ***27*** *08:17:48.6±0.0, 1.°37N×125.°73E, h80km, mb5.5/87, mB5.6/65, Ms5.2/97, Ms7 5.1/92*

NEIC ***27*** *08:17:49.8, 1.°34N×125.°78E, h57km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.71; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-5.53; $M_{r\theta}$1.01; $M_{\theta\phi}$-1.38; $M_{\phi r}$2.85; Fault plane solution: $M_0$6.14000×10^{17} NP1:ϕ_s185.79000°, δ30.44000°, λ80.73000°. NP2:ϕ_s16.51000°, δ60.00000°, λ95.41000°. Principal axes: T 5.5392, Plg74.0000°, Azm301.0000°; N 1.0668, Plg5.0000°, Azm194.0000°; P -6.6060, Plg15.0000°, Azm103.0000°;*

NEIC ***27*** *08:17:50, 1.°40N×125.°82E, h80km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.82; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$-3.75; $M_{r\theta}$1.80; $M_{\theta\phi}$-1.88; $M_{\phi r}$2.96; Fault plane solution: $M_0$5.89000×10^{17} NP1: ϕ_s205.00000°, δ27.00000°, λ86.00000°. NP2:ϕ_s30.00000°, δ63.00000°, λ92.00000°. Principal axes: T 5.9477, Plg72.0000°, Azm304.0000°; N -0.1161, Plg2.0000°, Azm209.0000°; P -5.8316, Plg18.0000°, Azm118.0000°;*

NEIC ***27*** *08:17:50.2±2.0, 1.°37N±0.°06×125.°76E±0.°05, h61km±1km, mb6.0/167, Mwb5.8/49, Mww5.8 Error ellipse: s-maj=10.6km s-min=9.0km az=196.0*

DJA ***27*** *08:17:51.5±0.1, 1.°N±1.°×12.°6E±.°, h82km±2km, M5.8/102, mb5.9/102, mB6.2/90, MLv6.2/21, Mw(mB)5.9/90, MwMwp5.6/67, Mwp5.7/67*

GCMT ***27*** *08:17:52.2±0.1, 1.°40N×125.°88E, h68km, MW5.8/164, Moment Tensor Solution. s164,c334; s159,c449; Duration: 1s9 Moment tensor: Scale 10^{17}Nm; M_{rr}5.10±.04; $M_{\theta\theta}$-0.93±.04; $M_{\phi\phi}$-4.17±.04; $M_{r\theta}$0.58±.03; $M_{\theta\phi}$-2.37±.04; $M_{\phi r}$2.71±.04; Best double couple: $M_0$5.94900×10^{17} NP1:ϕ_s20.00000°, δ59.00000°, λ82.00000°. NP2:ϕ_s216.00000°, δ32.00000°, λ103.00000°. Principal axes: T 5.8350, Plg75.0000°, Azm268.0000°; N 0.2270, Plg7.0000°, Azm25.0000°; P -6.0640, Plg14.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 27 08:17:50.4±0.2, 1.°41N±0.°02×125.°71E±0.°03, h72km±1km, h72km:pP-P,n1640,σ1956/1847, mb5.8/243, 141C-23D, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.77**	**111**		**Pn**	**08 18 17.9**	**-1.2**
TNTI	**Ternate**	**1.77**	**111**	P	**Pn**	**08 18 18.8**	**-0.2**
TNTI				S	**Sn**	**08 18 44.2**	**+3.4**
TNTI	**Ternate**	**1.77**	**111**	P	**Pn**	**08 18 19.1**	**+0.1**
GAMI	**Galela, Maluku**	**2.12**	**78**	P	**Pn**	**08 18 22.7**	**-1.0**
GAMI				S	**Sn**	**08 18 47.8**	**-1.3**
SGSI	**Sangihe**	**2.27**	**355**	P	**Pn**	**08 18 27.3**	**+1.6**
SGSI				S	**Sn**	**08 18 53.6**	**+0.9**
LBMI	**Labuha**	**2.71**	**139**	P	**Pn**	**08 18 32.4**	**+0.7**
LBMI				S	**Sn**	**08 19 01.6**	**-1.9**
GTOI	**Gorontalo**	**2.81**	**254**	P	**Pn**	**08 18 36.5**	**+3.4**
GTOI				S	**Sn**	**08 19 10.8**	**+4.9**
SANI	**Sanana**	**3.45**	**175**	P	**Pn**	**08 18 41.1**	**-0.8**
SANI				S	**Sn**	**08 19 16.5**	**-5.0**
SANI	**Sanana**	**3.45**	**175**	P	**Pn**	**08 18 41.0**	**-0.8**
LUWI	**Luwuk**	**3.82**	**230**		**Pn**	**08 18 48.9**	**+2.0**
LUWI	**Luwuk**	**3.82**	**230**	P	**Pn**	**08 18 50.0**	**+3.1**
LUWI	**Luwuk**	**3.82**	**230**	P	**Pn**	**08 18 51.1**	**+4.2**
MRSI	**Marisa**	**3.89**	**256**	P	**Pn**	**08 18 50.8**	**+3.1**
APSI	**Ampana**	**4.67**	**240**	P	**Pn**	**08 19 02.8**	**+4.3**
GSPH	**General Santos**	**4.71**	**351**	*i* P	**Pn**	**08 19 00.6**	**+1.5**
GSPH				*i* S	**Sn**	**08 19 55.9**	**+3.5**
NLAI	**Namlea**	**4.82**	**163**	P	**Pn**	**08 18 59.2**	**-1.4**
TOLI2	**Tolitoli**	**4.94**	**267**	Pn	**Pn**	**08 19 03.2**	**+1.1**
TOLI2	**Tolitoli**	**4.94**	**267**	P	**Pn**	**08 19 04.0**	**+1.9**
KCP	**Kidapawan**	**5.59**	**354**	∥*e*P	**Pn**	**08 19 13.4**	**+2.2**
KCP				*i* S	**Sn**	**08 20 18.8**	**+4.6**
DAV	**Davao City (W)**	**5.62**	**359**	Pn	**Pn**	**08 19 15.6**	**+4.1**
DAV	129nm,0.3s,baz=169,slow=3.4,SNR=18			LR	LR	08 21 33.1	
	comp=Z,20μm,21.4s,baz=108,slow=40						
DAV	**Davao City (W)**	**5.62**	**359**		**Pn**	**08 19 14.6**	**+3.1**
DAV	**Davao City (W)**	**5.62**	**359**	P	Pn	08 19 17.9	+6.4
	28nm62μm44μm4μm,1.3s						
DAV	**Davao City (W)**	**5.62**	**359**	P	**Pn**	**08 19 13.6**	**+2.1**
AAI	**Ambon**	**5.64**	**154**	P	**Pn**	**08 19 11.5**	**-0.2**
	34nm43μm46μm4μm,1.0s						
MSAI	**Masohi**	**5.72**	**146**	P	**Pn**	**08 19 13.3**	**+0.5**
	5.6nm298nm23μm1μm,0.5s						
MPSI	**Mapaga**	**5.91**	**260**	P	**Pn**	**08 19 18.4**	**+3.0**
	9.9nm72μm40μm2μm,1.1s						
CTBH	**Cotabato--PC H**	**5.95**	**346**	∥*i*P	**Pn**	**08 19 18.8**	**+2.8**
SWI	**Sorong**	**5.99**	**112**	P	**Pn**	**08 19 15.9**	**-0.6**
	2.4nm52μm12μm731nm,1.4s						
SIJI	**Sorong**	**6.00**	**112**	Pn	**Pn**	**08 19 16.4**	**-0.3**
	34nm,0.3s,baz=301,slow=12,SNR=154						
SIJI				ScS	ScS	08 33 12.6	-0.2
	2.8nm,0.3s,baz=209,slow=21,SNR=9.9						
	375nm,0.9s						
SIJI	**Sorong**	**6.00**	**112**	P	**Pn**	**08 19 16.2**	**-0.4**
	2.1nm43μm10μm524nm,1.4s						
BUKP	**Musuan**	**6.46**	**354**	∥*e*P	**Pn**	**08 19 26.6**	**+3.6**
BUKP				*e*S	**Sn**	**08 20 34.3**	**-1.0**
ZCP	**Zamboanga City**	**6.58**	**327**	∥*e*P	**Pn**	**08 19 26.4**	**+1.9**
ZCP				*e*S	**Sn**	**08 20 44.5**	**+6.4**
BIPH	**Bislig**	**6.76**	**5**	∥*e*P	**Pn**	**08 19 27.4**	**+0.4**
BIPH				*e*S	**Sn**	**08 20 49.1**	**+6.6**
PAGZ	**Pagadian**	**6.80**	**340**	∥*e*P	**Pn**	**08 19 29.5**	**+1.9**
PAGZ				*e*S	**Sn**	**08 20 40.4**	**-3.3**
KKSI	**Kolaka, Sulawe**	**6.88**	**216**	P	**Pn**	**08 19 29.9**	**+1.3**
	5.5nm14μm1μm,0.8s						
CGP	**Cagayan de Oro**	**7.07**	**352**	∥*e*P	Pn	08 19 36.6	+5.4
BNDI	**Bandanaira**	**7.23**	**145**	P	**Pn**	**08 19 33.1**	**-0.4**
	16nm32μm54μm5μm,1.1s						
BNDI	**Bandanaira**	**7.23**	**145**	P	**Pn**	**08 19 33.5**	**0.0**
BBSI	**Bau Bau**	**7.54**	**205**	P	**Pn**	**08 19 39.0**	**+1.3**
	4.2nm8μm10μm909nm,0.8s						
FAKI	**Fak Fak**	**7.82**	**123**	Pn	**Pn**	**08 19 40.9**	**-0.7**
FAKI	**Fak Fak**	**7.82**	**123**	P	**Pn**	**08 19 41.4**	**-0.2**
	6.8nm38μm27μm2μm,1.4s						
FAKI	**Fak Fak**	**7.82**	**123**	P	**Pn**	**08 19 42.1**	**+0.5**
LSIP	**Lazi, Siquijor**	**7.94**	**345**	∥*e*P	**Pn**	**08 19 46.7**	**+3.5**
SPSI	**Sidrap Palu**	**7.99**	**228**	P	**Pn**	**08 19 45.4**	**+1.5**
	24μm22μm3μm,1.0s						
BNSI	**Bone**	**8.05**	**224**	P	**Pn**	**08 19 46.2**	**+1.6**
	6.6nm13μm11μm1μm,0.7s						
MYLDM	**Lahad Datu**	**8.12**	**298**	Pn	**Pn**	**08 19 49.1**	**+3.5**
MYLDM	**Lahad Datu**	**8.12**	**298**	P	**Pn**	**08 19 49.6**	**+4.0**
	65μm97μm7μm,1.6s						
SNPH	**Sibulan**	**8.26**	**343**	∥*e*P	**Pn**	**08 19 51.8**	**+4.3**
GHBP	**Garcia Hernand**	**8.28**	**350**	∥*e*P	**Pn**	**08 19 50.1**	**+2.3**
GHBP				*e*S	Sn	08 21 29.2	+9.3
PMSI	**Majene**	**8.37**	**234**	P	**Pn**	**08 19 51.8**	**+2.7**
	22μm31μm2μm,1.2s						
MWPI	**Manokwari, Pap**	**8.64**	**106**	P	**Pn**	**08 19 54.0**	**+1.2**
	24μm15μm1μm,1.3s						
SMKI	**Samarinda**	**8.70**	**258**	P	**Pn**	**08 19 57.4**	**+3.8**
	39μm1μm,1.1s						
BKSI	**Bulukumba**	**8.71**	**220**	P	**Pn**	**08 19 54.9**	**+1.1**
	3.7nm15μm11μm638nm,0.6s						
TABP	**Talibon, Bohol**	**8.73**	**351**	∥*e*P	**Pn**	**08 19 57.8**	**+3.8**
KAPI	**Kappang**	**8.73**	**223**	Pn	**Pn**	**08 19 55.4**	**+1.4**
	72nm,0.3s,baz=49,slow=4.9,SNR=92						
KAPI				LR	LR	08 23 23.5	
	comp=Z,10μm,20.3s,baz=42,slow=40						
KAPI	**Kappang**	**8.73**	**223**	P	**Pn**	**08 19 56.6**	**+2.6**
KAPI	**Kappang**	**8.73**	**223**	P	**Pn**	**08 19 55.3**	**+1.3**
	14μm12μm1μm,1.4s						
KAPI	**Kappang**	**8.73**	**223**	P	**Pn**	**08 19 56.9**	**+2.9**
CNOP	**Candoni, Negro**	**8.90**	**340**	∥*i*P	**Pn**	**08 19 59.8**	**+3.4**
CNOP				*e*S	Sn	08 20 47.0	-48
RKPI	**Ransiki, Papua**	**8.95**	**109**	P	**Pn**	**08 20 00.0**	**+3.0**
	28μm21μm655nm,1.0s						
LLP	**Lapu-Lapu**	**9.02**	**349**	∥*e*P	**Pn**	**08 19 59.8**	**+1.9**
LLP				*e*S	**Sn**	**08 21 43.9**	**+6.0**
BSSI	**Bau Bau, Buton**	**9.14**	**215**	P	**Pn**	**08 20 00.2**	**+0.6**
	12μm13μm1μm,0.7s						
BKB	**Balikpapan**	**9.21**	**253**		**Pn**	**08 20 02.1**	**+1.6**
BKB	**Balikpapan**	**9.21**	**253**	P	**Pn**	**08 20 02.8**	**+2.3**
	35μm18μm2μm,1.2s						
BKB	**Balikpapan**	**9.21**	**253**	P	**Pn**	**08 20 01.7**	**+1.2**
KKM	**Kota Kinabalu**	**10.54**	**296**	Pn	**Pn**	**08 20 20.8**	**+2.1**
KKM	**Kota Kinabalu**	**10.54**	**296**	P	**Pn**	**08 20 22.1**	**+3.4**
	30μm19μm1μm,1.4s						
KKM	**Kota Kinabalu**	**10.54**	**296**	P	**Pn**	**08 20 22.6**	**+3.9**
MMRI	**Maumere**	**10.57**	**199**	Pn	**Pn**	**08 20 20.1**	**+1.0**
MMRI	**Maumere**	**10.57**	**199**	P	**Pn**	**08 20 20.4**	**+1.3**
	8μm7μm402nm,1.0s						
MMRI	**Maumere**	**10.57**	**199**	P	**Pn**	**08 20 23.4**	**+4.3**
I39PW	**PALAU INFRASON**	**10.70**	**55**	I		09 20 10.0	
	baz=240,slow=276,SNR=0.9						
PPR	**Puerto Princes**	**10.83**	**320**	∥*i*P	**Pn**	**08 20 25.1**	**+2.5**
SAUI	**Saumlaki**	**10.87**	**149**	Pn	**Pn**	**08 20 21.3**	**-1.9**
SAUI	**Saumlaki**	**10.87**	**149**	P	**Pn**	**08 20 21.6**	**-1.6**
	27μm22μm3μm,1.0s						
SAUI	**Saumlaki**	**10.87**	**149**	P	**Pn**	**08 20 23.0**	**-0.2**
SRPI	**Serui, Papua**	**11.02**	**107**	P	**Pn**	**08 20 26.1**	**+0.9**
	15μm9μm256nm,0.9s						
MTKI	**Muara Teweh, K**	**11.07**	**258**	P	**Pn**	**08 20 28.9**	**+3.0**
	21μm22μm371nm,1.0s						
SOEI	**Soe**	**11.19**	**187**	Pn	**Pn**	**08 20 29.5**	**+1.8**
SOEI	**Soe**	**11.19**	**187**	P	Pn	08 20 33.8	+6.1
	11μm10μm1μm,0.9s						
BBKI	**Banjar Baru**	**11.90**	**246**	P	**Pn**	**08 20 40.6**	**+3.3**
	19μm13μm731nm,1.0s						
PLAI	**Plampang**	**12.89**	**218**	P	**Pn**	**08 20 51.8**	**+1.1**
	11μm16μm2μm,1.1s						
PLAI	**Plampang**	**12.89**	**218**	P	**Pn**	**08 20 54.5**	**+3.8**
JCNP	**Jose Panganiba**	**13.14**	**347**	∥*e*P	**P**	**08 20 57.9**	**-3.6**
LQP	**Lukban**	**13.28**	**342**	∥*e*P	**Pn**	**08 20 58.6**	**+2.5**
LUBP	**Lubang**	**13.38**	**336**	∥*e*P	**Pn**	**08 21 00.7**	**+3.3**
TWSI	**Taliwang, Sumb**	**13.39**	**221**	P	**Pn**	**08 20 58.0**	**+0.6**
	13μm21μm3μm,1.1s						
SMPI	**Sarmi**	**13.43**	**105**	P	**Pn**	**08 20 57.7**	**-0.2**
	19μm54μm708nm,1.4s						
SBUM	**Sibu**	**13.53**	**275**		**Pn**	**08 21 01.4**	**+2.2**
SBUM	**Sibu**	**13.53**	**275**	P	**P**	**08 21 02.8**	**-3.1**
	10μm4μm325nm,1.4s						
KLNI	**Mataram**	**13.69**	**224**	P	**Pn**	**08 21 02.7**	**+1.3**
	17μm1μm,1.5s						
SRBI	**Singaraja**	**14.10**	**228**	P	**Pn**	**08 21 08.3**	**+1.6**
	14μm10μm1μm,1.3s						
KMMI	**Kalianget**	**14.43**	**234**	P	**Pn**	**08 21 12.1**	**+1.1**
	14μm18μm1μm,1.2s						
DNP	**Denpasar**	**14.49**	**226**	P	**P**	**08 21 20.0**	**+3.4**
RTBI	**Rangdo, Negare**	**14.54**	**227**	P	**Pn**	**08 21 14.9**	**+2.3**
	26μm3μm,1.0s						
PBKI	**Pangkalan Bun**	**14.62**	**254**	P	**Pn**	**08 21 15.2**	**+1.6**
	8μm652nm,1.2s						
ABJI	**Asem Bagus**	**14.65**	**231**	P	**P**	**08 21 16.7**	**-1.7**
	16μm9μm611nm,1.1s						
PCPH	**Palayan**	**14.78**	**342**	∥*e*P	**P**	**08 21 19.4**	**-0.3**
BWJI	**Bawean**	**14.90**	**241**	P	**P**	**08 21 19.5**	**-1.7**
	16μm15μm928nm,1.4s						
GENI	**Genyem**	**14.99**	**105**	P	**Pn**	**08 21 17.5**	**-0.8**
	20μm29μm1μm,1.8s						
JAGI	**Jajag, Banyuwa**	**15.14**	**229**	Pn	**Pn**	**08 21 21.2**	**+0.9**
JAGI	**Jajag, Banyuwa**	**15.14**	**229**	P	**Pn**	**08 21 22.1**	**+1.8**
	13μm16μm2μm,1.1s						
JAGI	**Jajag, Banyuwa**	**15.14**	**229**	P	**P**	**08 21 23.8**	**-0.1**
MTN	**Manton Dam**	**15.15**	**159**	Pn	**Pn**	**08 21 17.3**	**-3.1**
MTN	**Manton Dam**	**15.15**	**159**	P	**Pn**	**08 21 18.4**	**-2.0**
KSM	**Kuching**	**15.40**	**270**	P	**P**	**08 21 25.5**	**-1.2**
KSM	**Kuching**	**15.40**	**270**	P	**P**	**08 21 26.2**	**-0.5**
	17μm16μm928nm,1.2s						
KSM	**Kuching**	**15.40**	**270**	P	**P**	**08 21 26.1**	**-0.6**
KRKI	**Karangkates**	**16.29**	**234**	P	**P**	**08 21 43.6**	**+7.0**
KNRA	**Kununurra**	**17.25**	**170**	P	**Pn**	**08 21 46.0**	**-0.6**
	baz=17,SNR=191						
KNRA	**Kununurra**	**17.25**	**170**	P	**Pn**	**08 21 45.1**	**-1.5**
KNRA	**Kununurra**	**17.25**	**170**	P	**Pn**	**08 21 46.8**	**+0.2**
PCJI	**Pacitan**	**17.36**	**236**	P	**Pn**	**08 21 48.1**	**+0.1**
	14μm12μm618nm,0.7s						
SMRI	**Semarang**	**17.41**	**241**	P	**Pn**	**08 21 49.0**	**+0.3**
SMRI	**Semarang**	**17.41**	**241**	P	**P**	**08 21 49.1**	**+0.1**
	16μm9μm471nm,1.0s						
SMRI	**Semarang**	**17.41**	**241**	P	**P**	**08 21 50.7**	**+1.7**
UGM	**Wanagama**	**17.76**	**238**	P	**Pn**	**08 21 53.7**	**+0.7**
UGM	**Wanagama**	**17.76**	**238**	P	**P**	**08 21 52.1**	**-0.8**
	15μm11μm503nm,1.0s						
UGM	**Wanagama**	**17.76**	**238**	P	**Pn**	**08 21 55.2**	**+2.2**
CICP	**Calayan Island**	**18.22**	**347**	∥*e*P	**Pn**	**08 22 05.5**	**+7.0**
CTJI	**Waduk Cacaban**	**18.50**	**243**	P	**P**	**08 21 59.5**	**-1.5**
	17μm7μm339nm,1.3s						
JCJI	**Jatiwangi**	**19.10**	**246**	P	**Pn**	**08 22 11.8**	**+2.7**
	20μm724nm,1.3s						
LEM	**Lembang**	**19.83**	**245**	P	**P**	**08 22 14.7**	**-1.0**
	95nm,0.8s,baz=69,slow=8.7,SNR=19						
PPBI	**Pangkal Pinang**	**19.89**	**260**	P	**P**	**08 22 16.5**	**+0.3**
	16μm199nm,1.4s						
BBJI	**Bungbulang**	**20.06**	**244**	P	**P**	**08 22 16.9**	**-1.2**
CNJI	**Cibinong**	**20.47**	**245**	P	**P**	**08 22 20.7**	**-1.7**
	4μm3μm212nm,1.2s						
SBJI	**Serang**	**20.94**	**249**	P	Pn	08 22 33.0	+2.3
	188nm,1.4s						
TPRI	**Tanjung Pinang**	**21.19**	**269**	P	**P**	**08 22 33.0**	**+2.8**
	14μm13μm822nm,1.3s						
DSRI	**Dabo**	**21.22**	**265**	P	**P**	**08 22 31.3**	**+0.8**
	13μm13μm976nm,1.1s						
PMBI	**Palembang**	**21.38**	**258**	P	**P**	**08 22 33.5**	**+1.3**
PMBI				IAmb	IAmb	08 22 53.6	
	comp=Z,1μm,1.1s						
PMBI	**Palembang**	**21.38**	**258**	P	**P**	**08 22 34.9**	**+2.7**
	comp=Z,20μmcomp=Z,26μmcomp=Z,3μm,1.1s						
PMBI	**Palembang**	**21.38**	**258**	P	**P**	**08 22 34.7**	**+2.5**
BLSI	**Bandar Lampung**	**21.53**	**252**	P	P	08 22 43.5	+10
TWGBT	**Beinan**	**21.75**	**348**	P	**P**	**08 22 36.8**	**+0.7**
KLI	**Kotabumi**	**21.75**	**253**	P	**P**	**08 22 37.5**	**+1.3**
	comp=Z,13μmcomp=Z,6μmcomp=Z,317nm,1.2s						
MYKOM	**Kota Tinggi**	**21.86**	**271**	P	**P**	**08 22 39.4**	**+2.0**
MYKOM				IAmb	IAmb	08 22 41.5	
	comp=Z,759nm,1.1s						
MYKOM	**Kota Tinggi**	**21.86**	**271**	P	**P**	**08 22 37.6**	**+0.2**
	comp=Z,14μmcomp=Z,11μmcomp=Z,716nm,1.5s						
MANU	**Manus Island**	**21.92**	**99**	P	**P**	**08 22 36.9**	**-1.1**
MANU	**Manus Island**	**21.92**	**99**	P	**P**	**08 22 37.3**	**-0.7**
	comp=Z,200nm,0.7s						
BTDF	**Bukit Timah Da**	**21.93**	**270**	P	**P**	**08 22 38.3**	**+0.1**
	comp=Z,9μmcomp=Z,6μmcomp=Z,382nm,1.2s						
YULB	**Yu-li**	**22.27**	**349**	P	**P**	**08 22 37.8**	**-3.9**
JMBI	**JAMBI**	**22.28**	**262**	P	**P**	**08 22 43.3**	**+1.4**
	comp=Z,12μmcomp=Z,491nm,1.2s						
KASI	**Kota Agung**	**22.28**	**252**	P	**P**	**08 22 41.3**	**-0.6**
	comp=Z,4μmcomp=Z,288nm,0.9s						
TPUB	**Ta-pu**	**22.31**	**348**	P	**P**	**08 22 39.0**	**-3.2**
TPUB				IAmb	IAmb	08 22 45.2	
	comp=Z,358nm,0.9s						
TPUB	**Ta-pu**	**22.31**	**348**	P	**P**	**08 22 40.4**	**-1.7**
GUMO	**Guam**	**22.49**	**57**	P	**P**	**08 22 44.3**	**+0.2**
	comp=Z,288nm,0.7s,baz=192,slow=10,SNR=16						
	comp=Z,288nm,0.7s						
GUMO	**Guam**	**22.49**	**57**	P	**P**	**08 22 43.5**	**-0.6**
GUMO				IAmb	IAmb	08 22 47.7	
	comp=Z,362nm,0.8s						
GUMO	**Guam**	**22.49**	**57**	P	**P**	**08 22 43.5**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,362nm,0.9s						
GUMO	**Guam**	**22.49**	**57**	P	**P**	**08 22 44.5**	**+0.4**
LWLI	**Liwa**	**22.56**	**253**	P	**P**	**08 22 44.9**	**-0.1**
	comp=Z,12μmcomp=Z,648nm,1.0s						
WB0	**Warramunga Arr**	**22.71**	**158**	P	**P**	**08 22 44.0**	**-2.4**
SSLB	**Suanglung**	**22.72**	**349**	P	**P**	**08 22 44.7**	**-1.8**
SSLB	**Suanglung**	**22.72**	**349**	P	**P**	**08 22 45.3**	**-1.2**
WRAB	**Tennant Creek**	**22.84**	**159**	P	**P**	**08 22 45.9**	**-1.9**
WRAB	**Tennant Creek**	**22.84**	**159**	*d*iP	**P**	**08 22 46.3**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,1μm,1.1s						
WRAB				MLR	MLR		
	comp=Z,3μm,20.0s						
WRAB	**Tennant Creek**	**22.84**	**159**	P	**P**	**08 22 46.8**	**-1.0**
WRA	**Warramunga Arr**	**22.85**	**159**	P	**P**	**08 22 46.1**	**-1.8**
	comp=Z,457nm,1.0s,baz=338,slow=10,SNR=304						
WRA				S	**S**	**08 26 47.0**	**-4.9**
	comp=Z,136nm,0.9s,baz=344,slow=16,SNR=15						
WRA				ScS	**ScS**	**08 33 51.9**	**-2.5**
	comp=Z,9.5nm,1.1s,baz=309,slow=4.1,SNR=5.7						
WRA				PKiKP	**PKiKP**	**08 34 21.3**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=316,slow=1.3,SNR=6.9						
WRA				P3KPbc		08 56 18.8	
	comp=Z,0.6nm,0.6s,baz=152,slow=4.2,SNR=9.1						
WRA	**Warramunga Arr**	**22.85**	**159**	P	**P**	**08 22 46.2**	**-1.6**
WRA	**Warramunga Arr**	**22.85**	**159**	P	**P**	**08 22 46.2**	**-1.6**
WRA				pmax	pmax		
	comp=Z,112nm,1.0s						
NACB	**Ninganchiao**	**22.98**	**350**	P	**P**	**08 22 46.8**	**-2.3**
NACB	**Ninganchiao**	**22.98**	**350**	P	**P**	**08 22 49.5**	**+0.4**
YOJ	**Yonaguni jima**	**23.06**	**354**	P	**P**	**08 22 49.6**	**-0.3**
YOJ	**Yonaguni jima**	**23.06**	**354**	P	**P**	**08 22 49.6**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,249nm,0.8s						
YOJ	**Yonaguni jima**	**23.06**	**354**	P	**P**	**08 22 51.0**	**+1.1**
COEN	**Coen**	**23.08**	**132**	P	**P**	**08 22 47.4**	**-2.8**
	baz=23,SNR=53						
COEN	**Coen**	**23.08**	**132**	P	**P**	**08 22 47.3**	**-2.9**
COEN	**Coen**	**23.08**	**132**	P	**P**	**08 22 48.0**	**-2.2**
XMI	**Christmas Isla**	**23.15**	**239**	P	**P**	**08 22 49.3**	**-1.6**
MBWA	**Marble Bar**	**23.18**	**194**	P	**P**	**08 22 49.7**	**-1.4**
MBWA	**Marble Bar**	**23.18**	**194**	P	**P**	**08 22 50.3**	**-0.8**
JMJ	**Miyako jima 2**	**23.27**	**359**	P	**P**	**08 22 51.8**	**-0.1**
QIZ	**Qiongzhong**	**23.42**	**319**	∥*i*P	**P**	**08 22 53.5**	**+0.1**
QIZ				pP	**pP**	**08 23 07.0**	**-1.8**
QIZ				S	**S**	**08 27 00.8**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,61nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,2μm,7.2s						
QIZ				LR	LR		
	comp=Z,6μm,18.4s						
QIZ				LR	LR		
	comp=Z,3μm,16.2s						
QIZ				LR	LR		
	comp=Z,8μm,26.6s						
QIZ	**Qiongzhong**	**23.42**	**319**	P	**P**	**08 22 54.3**	**+0.9**
MNAI	**Manna**	**23.45**	**256**	P	**P**	**08 22 53.0**	**-0.8**
MNAI				IAmb	IAmb	08 23 21.8	
	comp=Z,592nm,1.2s						
YHNB	**Yeheng**	**23.50**	**350**	P	**P**	**08 22 51.1**	**-3.0**
YHNB	**Yeheng**	**23.50**	**350**	P	**P**	**08 22 52.6**	**-1.5**
PSA00	**Pilbara Seismi**	**23.55**	**194**	P	**P**	**08 22 53.1**	**-1.5**
PSA00	**Pilbara Seismi**	**23.55**	**194**	P	**P**	**08 22 53.8**	**-0.8**
HKPS	**Hong Kong Po S**	**23.60**	**332**	P	**P**	**08 22 55.0**	**0.0**
HKPS	**Hong Kong Po S**	**23.60**	**332**	P	**P**	**08 22 56.5**	**+1.5**
KSI	**Kapahiang**	**23.65**	**258**	P	**P**	**08 22 56.4**	**+0.8**
	comp=Z,12μmcomp=Z,20μmcomp=Z,316nm,1.0s						
TATO	**Taipei**	**23.78**	**350**	P	**P**	**08 22 58.1**	**+1.6**
	comp=Z,114nm,0.8s						
MASI	**Maura Aman, Be**	**23.90**	**259**	P	**P**	**08 22 58.3**	**+0.5**
	comp=Z,5μmcomp=Z,6μmcomp=Z,432nm,1.2s						
PMG	**Port Moresby**	**23.91**	**117**	P	**P**	**08 22 56.6**	**-1.2**
	comp=Z,178nm,1.0s,baz=325,slow=9.4,SNR=28						
PMG				ScP	**ScP**	**08 30 14.0**	**+2.8**
	comp=Z,18nm,0.9s,baz=12,slow=7.7,SNR=5.5						
	comp=Z,178nm,1.0s						
PMG	**Port Moresby**	**23.91**	**117**	P	**P**	**08 22 57.0**	**-0.8**
PMG				IAmb	IAmb	08 23 01.1	
	comp=Z,690nm,1.4s						
PMG	**Port Moresby**	**23.91**	**117**	*ce*P	**P**	**08 22 56.7**	**-1.2**
PMG				pmax	pmax		
	comp=Z,703nm,1.7s						
PMG				MLR	MLR		
	comp=Z,4μm,20.0s						
PMG	**Port Moresby**	**23.91**	**117**	P	**P**	**08 22 57.3**	**-0.6**
	comp=Z,8μmcomp=Z,6μmcomp=Z,347nm,1.6s						
PMG	**Port Moresby**	**23.91**	**117**	P	**P**	**08 22 57.5**	**-0.4**
KNMB	**Chin-men Tao**	**23.99**	**343**	P	**P**	**08 22 57.5**	**-0.8**
**

RABL	**Rabaul**	**27.01 102**	P	**P**	**08 23 25.5 -0.5**
RABL			IAmb	IAmb	08 23 30.8
	comp=Z,267nm,0.7s				
RABL	**Rabaul**	**27.01 102**	P	**P**	**08 23 27.5 +1.5**
SURA	**Surathani**	**27.07 287**	P	**P**	**08 23 27.8 +1.3**
TSI	**Tuntungan**	**27.20 275**	P	**P**	**08 23 29.3 +1.6**
	comp=Z,8μmcomp=Z,8μmcomp=Z,257nm,1.4s				
NAYO	**Nakonayok**	**27.31 299**	P	**P**	**08 23 30.2 +1.6**
NONG	**Nongkai**	**27.66 308**	P	**P**	**08 23 32.5 +0.8**
GULI	**GuiLin**	**27.98 329**	⇑P	**P**	**08 23 31.5 -3.0**
GULI			S	**S**	**08 28 06.5 -7.1**
GULI			pmax	pmax	
	comp=Z,70nm,1.5s				
GULI			LR	LR	
	comp=Z,3μm,13.3s				
GULI			LR	LR	
	comp=Z,3μm,11.5s				
GULI			LR	LR	
	comp=Z,4μm,22.1s				
KCSI	**Kotacane, Aceh**	**27.99 275**	P	**P**	**08 23 33.0 -1.8**
	comp=Z,3μmcomp=Z,172nm,1.5s				
GSI	**Gunungsitoli**	**28.13 270**	P	**P**	**08 23 35.0 -1.0**
GSI			IAmb	IAmb	08 24 32.5
	comp=Z,510nm,1.4s				
GSI	**Gunungsitoli**	**28.13 270**	P	**P**	**08 23 33.7 -2.3**
	comp=Z,7μmcomp=Z,6μmcomp=Z,246nm,1.7s				
GSI	**Gunungsitoli**	**28.13 270**	P	**P**	**08 23 35.9 -0.1**
MEEK	**Meekatharra**	**28.72 193**	P	**P**	**08 23 41.1 +0.1**
LOEI	**Loei**	**28.87 305**	P	**P**	**08 23 41.1 -1.4**
LHMI	**Lhok Sumawe**	**28.96 278**	P	**P**	**08 23 43.6 +0.3**
LHMI			IAmb	IAmb	08 24 40.9
	comp=Z,436nm,1.2s				
TV1H	**Townsville Har**	**29.17 136**	P	**P**	**08 23 46.0 +0.9**
SRDT	**SRDT**	**29.26 297**	P	**P**	**08 23 46.8 +0.9**
CNSH	**ChangSha**	**29.29 336**	⇑P	**P**	**08 23 45.0 -1.1**
CNSH			S	**S**	**08 28 30.8 -3.3**
CNSH			LR	LR	
	comp=Z,2μm,16.4s				
CNSH			LR	LR	
	comp=Z,3μm,16.2s				
CNSH			LR	LR	
	comp=Z,3μm,25.3s				
CTA	**Charters Tower**	**29.36 138**	P	**P**	**08 23 46.9 0.0**
	comp=Z,43nm,1.1s,baz=320,slow=9.7,SNR=18				
CTA			S	**S**	**08 28 35.2 -0.3**
	comp=Z,16nm,1.0s,baz=101,slow=12,SNR=5.4				
CTA			ScP	**ScP**	**08 30 30.0 +2.6**
	comp=Z,42nm,1.1s,baz=233,slow=22,SNR=4.3				
CTA			LR	LR	08 36 59.5
	comp=Z,4μm,21.9s,baz=316,slow=39				
	comp=Z,43nm,1.1s				
CTA	**Charters Tower**	**29.36 138**	P	**P**	**08 23 47.9 +1.1**
CTAO	**Charters Tower**	**29.36 138**	P	**P**	**08 23 46.8 0.0**
CTAO	**Charters Tower**	**29.36 138**	P	**P**	**08 23 46.8 0.0**
CTAO			pmax	pmax	
	comp=Z,282nm,1.5s				
CTAO	**Charters Tower**	**29.36 138**	P	**P**	**08 23 47.7 +0.9**
MLSI	**Meulaboh, Aceh**	**29.41 276**	P	**P**	**08 23 46.7 -0.6**
	comp=Z,4μmcomp=Z,139nm,0.6s				
SSE	**Sheshan**	**29.83 352**	P	**P**	**08 23 53.0 +2.2**
SSE			S	**S**	**08 28 49.5 +7.0**
SSE			pmax	pmax	
	comp=Z,36nm,0.8s				
SSE			pmax	pmax	
	comp=Z,390nm,12.0s				
SSE			LR	LR	
	comp=Z,430nm,19.0s				
SSE			LR	LR	
	comp=Z,680nm,20.3s				
JCJ	**Chichijima**	**30.03 30**	P	**P**	**08 23 51.3 -1.3**
	comp=Z,156nm,0.4s,baz=284,slow=2.9,SNR=11				
JCJ	**Chichijima**	**30.03 30**	P	**P**	**08 23 51.5 -1.2**
JCJ			IAmb	IAmb	08 24 20.7
	comp=Z,296nm,0.7s				
JCJ	**Chichijima**	**30.03 30**	P	**P**	**08 23 52.5 -0.2**
PHRA	**Phrae**	**30.22 306**	P	**P**	**08 23 55.2 +0.8**
OOD	**Oodnadatta**	**30.58 162**	P	**P**	**08 23 57.5 0.0**
GYA	**Guiyang**	**30.91 325**	⇓*i*P	**P**	**08 24 01.5 +0.9**
GYA			PcP	**PcP**	**08 26 57.3 +1.5**
GYA			S	**S**	**08 29 02.3 +2.4**
GYA			pmax	pmax	
	comp=Z,98nm,0.7s				
GYA			pmax	pmax	
	comp=Z,810nm,7.0s				
GYA			LR	LR	
	comp=Z,2μm,17.9s				
GYA			LR	LR	
	comp=Z,1μm,14.6s				
GYA			LR	LR	
	comp=Z,2μm,18.8s				
WHN	**Wuhan**	**30.91 341**	⇑P	**P**	**08 24 00.5 +0.1**
WHN			S	**S**	**08 28 58.0 -1.5**
WHN			pmax	pmax	
	comp=Z,420nm,1.7s				
WHN			LR	LR	
	comp=Z,4μm,11.9s				
WHN			LR	LR	
	comp=Z,7μm,12.6s				
WHN			LR	LR	
	comp=Z,8μm,23.6s				
NJ2	**Nanjing**	**31.16 349**	*e*P	**P**	**08 24 02.5 0.0**
NJ2			S	**S**	**08 28 58.5 -4.7**
NJ2			pmax	pmax	
	comp=Z,21nm,0.6s				
NJ2			pmax	pmax	
	comp=Z,670nm,4.4s				
NJ2			LR	LR	
	comp=Z,2μm,21.0s				
NJ2			LR	LR	
	comp=Z,1μm,22.7s				
NJ2			LR	LR	
	comp=Z,4μm,22.8s				
CM31	**Chiang Mai Arr**	**31.25 304**	P	**P**	**08 24 04.7 +1.2**
CM31	**Chiang Mai Arr**	**31.25 304**	P	**P**	**08 24 04.2 +0.6**
	SNR=55				
CMAR	**Chiang Mai Arr**	**31.25 304**	P	**P**	**08 24 03.5 -0.1**
	comp=Z,24nm,1.0s,baz=125,slow=6.7,SNR=93				
CMAR			PcP	**PcP**	**08 26 57.8 +1.1**
	comp=Z,18nm,1.1s,baz=154,slow=1.4,SNR=5.6				
CMAR			ScP	**ScP**	**08 30 34.6 +1.1**
	comp=Z,3.9nm,0.8s,baz=123,slow=1.7,SNR=4.6				
CMAR			LR	LR	08 38 41.0
	comp=Z,2μm,18.3s,baz=115,slow=40				
	comp=Z,24nm,1.0s				
CMAR	**Chiang Mai Arr**	**31.25 304**	P	**P**	**08 24 04.3 +0.8**
CMAR	**Chiang Mai Arr**	**31.25 304**	*i* P	**P**	**08 24 04.5 +1.0**
CMAR			pmax	pmax	
	comp=Z,24nm,1.0s				
CHTO	**Chiang Mai**	**31.43 305**	P	**P**	**08 24 06.0 +0.9**
CHTO	**Chiang Mai**	**31.43 305**	P	**P**	**08 24 06.0 +0.9**
MORW	**Morawa**	**31.69 196**	P	**P**	**08 24 07.4 +0.2**
	baz=32,SNR=57				
MORW	**Morawa**	**31.69 196**	P	**P**	**08 24 06.9 -0.3**
MORW			IAmb	IAmb	08 24 08.7
	comp=Z,202nm,0.9s				
MORW	**Morawa**	**31.69 196**	P	**P**	**08 24 07.5 +0.2**
FORT	**Forrest**	**32.09 176**	P	**P**	**08 24 11.0 +0.2**
	baz=32,SNR=187				
FORT	**Forrest**	**32.09 176**	P	**P**	**08 24 10.8 +0.1**
FORT	**Forrest**	**32.09 176**	P	**P**	**08 24 11.2 +0.5**
KMI	**Kunming**	**32.36 319**	⇑P	**P**	**08 24 14.8 +1.3**
KMI			pP	pP	08 24 27.8 -2.4
KMI			S	**S**	**08 29 21.8 -1.0**
KMI			pmax	pmax	
	comp=Z,100nm,1.4s				
KMI			pmax	pmax	
	comp=Z,930nm,3.8s				
KMI			LR	LR	
	comp=Z,2μm,19.6s				
KMI			LR	LR	
	comp=Z,3μm,23.4s				
KMI			LR	LR	
	comp=Z,5μm,24.2s				
KMI	**Kunming**	**32.36 319**	P	**P**	**08 24 14.8 +1.3**
INKA	**Innaminka**	**32.39 155**	P	**P**	**08 24 13.8 +0.4**
MULG	**Mulgathing**	**32.51 166**	P	**P**	**08 24 14.5 +0.1**
ENH	**Enshi**	**32.58 333**	P	**P**	**08 24 14.8 -0.3**
ENH	**Enshi**	**32.58 333**	P	**P**	**08 24 14.7 -0.3**
ENH			sP	**pwP**	**08 24 35.2 +0.5**
PATS	**Pohnpei**	**32.94 80**	P	**P**	**08 24 15.0 -3.4**
	baz=33,SNR=3.4				
BLDU	**Ballidu**	**32.98 194**	P	**P**	**08 24 18.5 -0.1**
	baz=33,SNR=152				
BLDU	**Ballidu**	**32.98 194**	P	**P**	**08 24 18.7 +0.1**
JMN	**Monobe**	**33.05 13**	P	**P**	**08 24 19.8 +0.7**
JMN			IAmb	IAmb	08 24 23.4
	comp=Z,150nm,0.9s				
JMN	**Monobe**	**33.05 13**	P	**P**	**08 24 20.5 +1.4**
QLP	**Quilpie**	**33.08 149**	P	**P**	**08 24 19.0 -0.4**
	baz=33,SNR=25				
QLP	**Quilpie**	**33.08 149**	P	**P**	**08 24 19.1 -0.3**
KLBR	**Kellerberrin**	**33.68 192**	P	**P**	**08 24 24.8 +0.1**
	baz=34,SNR=136				
KLBR	**Kellerberrin**	**33.68 192**	P	**P**	**08 24 24.9 +0.3**
LCRK	**Leigh Creek**	**33.85 160**	P	**P**	**08 24 26.3 +0.2**
PZH	**PanZhiHua**	**33.96 319**	⇑P	**P**	**08 24 27.5 +0.2**
PZH			pP	**pwP**	**08 24 45.8 -0.6**
PZH			sP	**sP**	**08 24 51.3 -0.9**
PZH			S	**S**	**08 29 53.8 +6.5**
PZH			ScP	**ScP**	**08 30 42.3 -0.6**
PZH			pmax	pmax	
	comp=Z,70nm,1.0s				
PZH			pmax	pmax	
	comp=Z,230nm,6.1s				
PZH			LR	LR	
	comp=Z,9μm,20.4s				
PZH			LR	LR	
	comp=Z,9μm,19.8s				
PZH			LR	LR	
	comp=Z,9μm,20.6s				
JHS	**Saijyo**	**34.12 11**	P	**P**	**08 24 29.7 +1.3**
JHS			IAmb	IAmb	08 24 34.6
	comp=Z,122nm,1.0s				
JHS	**Saijyo**	**34.12 11**	P	**P**	**08 24 29.9 +1.5**
JHJ	**Hachijo jima 2**	**34.20 21**	LR	LR	08 37 20.7
	comp=Z,643nm,19.6s,baz=252,slow=34				
PBA	**Port Blair**	**34.26 289**	P	**P**	**08 24 28.6 -1.2**
PBA			IAmb	IAmb	08 25 12.4
	comp=Z,234nm,1.4s				
MUN	**Mundaring**	**34.41 194**	P	**P**	**08 24 31.1 +0.2**
	baz=35,SNR=34				
MUN	**Mundaring**	**34.41 194**	P	**P**	**08 24 30.9 0.0**
RK1H	**Rockhampton Ha**	**34.48 137**	P	**P**	**08 24 31.6 -0.1**
TJN	**Taejon**	**34.82 2**	P	**P**	**08 24 34.0 -0.4**
TJN	**Taejon**	**34.82 2**	P	**P**	**08 24 34.0 -0.4**
TJN			pmax	pmax	
	comp=Z,289nm,0.8s				
TJN	**Taejon**	**34.82 2**	P	**P**	**08 24 34.9 +0.5**
AUMOU	**Moura State Hi**	**34.95 139**	P	**P**	**08 24 36.3 +0.6**
NWAO	**Narrogin (SRO)**	**35.08 192**	P	**P**	**08 24 37.2 +0.5**
	baz=35,SNR=85				
NWAO			P	**P**	**08 24 37.2 +0.5**
	baz=35,SNR=85				
NWAO	**Narrogin (SRO)**	**35.08 192**	P	**P**	**08 24 36.6 -0.1**
NWAO			IAmb	IAmb	08 24 40.0
	comp=Z,282nm,1.1s				
NWAO	**Narrogin (SRO)**	**35.08 192**	P	**P**	**08 24 36.6 -0.1**
NWAO			pmax	pmax	
	comp=Z,282nm,1.1s				
NWAO	**Narrogin (SRO)**	**35.08 192**	P	**P**	**08 24 37.2 +0.5**
NWAO	**Narrogin (SRO)**	**35.08 192**	P	**P**	**08 24 37.1 +0.5**
NWAO			PcP	**PcP**	**08 27 08.2 +1.1**
NWAO			ScP	**ScP**	**08 30 47.1 +0.5**
LYN	**LuoYang**	**35.21 341**	⇓P	**P**	**08 24 38.5 +0.7**
LYN			PcP	**PcP**	**08 27 08.5 +1.0**
LYN			PcS	**PcS**	**08 30 56.3 +1.8**
LYN			pmax	pmax	
	comp=Z,70nm,0.6s				
LYN			LR	LR	
	comp=Z,1μm,32.8s				
LYN			LR	LR	
	comp=Z,1μm,16.0s				
LYN			LR	LR	
	comp=Z,2μm,27.8s				
GD1S	**Gladstone Soft**	**35.25 137**	P	**P**	**08 24 40.2 +2.0**
	comp=Z,37nm,0.4s				
MND	**Mandalay**	**35.34 308**	P	**P**	**08 24 39.3 +0.2**
INU	**Inuyama**	**35.37 16**	P	**P**	**08 24 39.5 +0.5**
INU			IAmb	IAmb	08 24 40.3
	comp=Z,120nm,0.8s				
INU	**Inuyama**	**35.37 16**	P	**P**	**08 24 39.8 +0.7**
INU	**Inuyama**	**35.37 16**	P	**P**	**08 24 39.6 +0.5**
INU			pP	**pP**	**08 24 55.1 -0.9**
INU			ScP	**ScP**	**08 30 47.8 +0.2**
BBOO	**Buckleboo**	**35.41 165**	P	**P**	**08 24 39.4 -0.2**
	baz=36,SNR=128				
BBOO	**Buckleboo**	**35.41 165**	P	**P**	**08 24 38.8 -0.8**
BBOO			IAmb	IAmb	08 24 41.2
	comp=Z,299nm,0.9s				
BBOO	**Buckleboo**	**35.41 165**	P	**P**	**08 24 39.5 -0.1**
TIA	**Tai'an**	**35.53 348**	⇑P	**P**	**08 24 39.3 -1.2**
TIA			S	**S**	**08 30 06.3 -4.7**
TIA			pmax	pmax	
	comp=Z,18nm,1.2s				
TIA			pmax	pmax	
	comp=Z,560nm,5.7s				
TIA			LR	LR	
	comp=Z,2μm,29.4s				
TIA			LR	LR	
	comp=Z,690nm,24.5s				
TIA			LR	LR	
	comp=Z,4μm,30.9s				
AUHAR	**St Anne's Scho**	**35.55 194**	P	**P**	**08 24 42.0 +1.3**
RMQ	**Roma**	**35.55 143**	P	**P**	**08 24 40.3 -0.5**
	baz=36,SNR=25				
RMQ	**Roma**	**35.55 143**	P	**P**	**08 24 41.6 +0.7**
JGF	**Kuroka**	**35.70 16**	P	**P**	**08 24 41.8 -0.2**
JGF			IAmb	IAmb	08 24 43.8
	comp=Z,100nm,0.7s				
JGF	**Kuroka**	**35.70 16**	P	**P**	**08 24 42.5 +0.5**
HNR	**Honiara**	**35.76 108**	LR	LR	08 41 13.6
	comp=Z,15μm,19.8s,baz=274,slow=39				
HNR	**Honiara**	**35.76 108**	P	**P**	**08 24 41.9 -0.9**
HNR	**Honiara**	**35.76 108**	P	**P**	**08 24 41.9 -0.9**
HNR			pmax	pmax	
	comp=Z,548nm,1.1s				
HNR	**Honiara**	**35.76 108**	P	**P**	**08 24 42.2 -0.6**
HNR	**Honiara**	**35.76 108**	P	**P**	**08 24 41.3 -1.4**
HNR			sP	**pwP**	**08 25 04.7 +2.3**
HNR			ScP	**ScP**	**08 30 50.0 +0.5**
INCN	**Inchon**	**35.90 1**	P	**P**	**08 24 44.0 +0.4**
INCN	**Inchon**	**35.90 1**	P	**P**	**08 24 44.1 +0.4**
INCN			pmax	pmax	
	comp=Z,58nm,0.8s				
INCN	**Inchon**	**35.90 1**	P	**P**	**08 24 44.8 +1.1**
INCN	**Inchon**	**35.90 1**	P	**P**	**08 24 44.9 +1.2**
INCN	**Inchon**	**35.90 1**	P	**P**	**08 24 44.9 +1.2**
INCN			PcP	**PcP**	**08 27 11.0 +1.5**
KSAR	**Wonju Array Be**	**35.91 3**	P	**P**	**08 24 44.2 +0.6**
KSAR	**Wonju Array Be**	**35.91 3**	P	**P**	**08 24 44.3 +0.6**
KSRS	**Korea Array**	**35.92 3**	P	**P**	**08 24 44.8 +1.0**
	comp=Z,67nm,0.8s,baz=181,slow=10.0,SNR=168				
KSRS			PcP	**PcP**	**08 27 10.7 +1.2**
	comp=Z,16nm,0.6s,baz=181,slow=2.8,SNR=16				
KSRS			ScP	**ScP**	**08 30 49.9 +0.3**
	comp=Z,2.3nm,0.7s,baz=173,slow=3.7,SNR=5.2				
KSRS			LR	LR	08 41 11.4
	comp=Z,652nm,20.0s,baz=185,slow=39				
	comp=Z,67nm,0.8s				
CD2	**Chengdu**	**35.96 327**	P	**P**	**08 24 43.8 -0.5**
CD2			pP	pP	08 24 58.5 -2.7
CD2			PP	**PnPn**	**08 26 05.0 -2.2**
CD2			S	**S**	**08 30 12.5 -5.3**
CD2			pmax	pmax	
	comp=Z,160nm,0.8s				
CD2			pmax	pmax	
	comp=Z,600nm,7.8s				
CD2			LR	LR	
	comp=Z,2μm,24.6s				
CD2			LR	LR	
	comp=Z,3μm,11.4s				
CD2			LR	LR	
	comp=Z,3μm,32.2s				
KS19	**Wonju Array Si**	**35.97 3**	P	**P**	**08 24 44.6 +0.4**
WHYH	**Whyalla**	**36.05 163**	P	**P**	**08 24 45.2 +0.3**
XAN	**Xi'an**	**36.06 336**	P	**P**	**08 24 44.3 -0.9**
XAN			PP	**PP**	**08 26 09.8 +1.3**
XAN			S	**S**	**08 30 11.5 -7.8**
XAN			SS	**SnSn**	**08 32 50.3 -0.7**
XAN			pmax	pmax	
	comp=Z,150nm,1.5s				
XAN			pmax	pmax	
	comp=Z,1μm,3.7s				
XAN			LR	LR	
	comp=Z,2μm,23.9s				
XAN			LR	LR	
	comp=Z,2μm,18.4s				
XAN			LR	LR	
	comp=Z,4μm,25.0s				
XAN	**Xi'an**	**36.06 336**	P	**P**	**08 24 44.0 -1.1**
XAN			pP	**pP**	**08 24 58.8 -3.1**
XAN			PcP	**PcP**	**08 27 10.4 +0.3**
XAN			ScP	**ScP**	**08 30 50.4 +0.2**
EIDS	**Eidsvold**	**36.22 139**	P	**P**	**08 24 46.3 -0.3**
	baz=36,SNR=24				
EIDS	**Eidsvold**	**36.22 139**	P	**P**	**08 24 45.6 -0.9**
EIDS			IAmb	IAmb	08 24 47.9
	comp=Z,150nm,1.1s				
EIDS	**Eidsvold**	**36.22 139**	P	**P**	**08 24 46.5 -0.1**
STKA	**Stephens Creek**	**36.37 157**	P	**P**	**08 24 48.1 +0.3**
	comp=Z,372nm,0.8s,baz=334,slow=8.5,SNR=292				
STKA			S	**S**	**08 30 21.6 -2.4**
	comp=Z,168nm,1.4s,baz=203,slow=21,SNR=13				
STKA			LR	LR	08 42 35.8
	comp=Z,2μm,19.3s,baz=337,slow=41				
	comp=Z,372nm,0.8s				
STKA	**Stephens Creek**	**36.37 157**	P	**P**	**08 24 47.9 +0.1**
	baz=36,SNR=382				
STKA	**Stephens Creek**	**36.37 157**	P	**P**	**08 24 47.5 -0.3**
STKA	**Stephens Creek**	**36.37 157**	P	**P**	**08 24 47.5 -0.3**
STKA			pmax	pmax	
	comp=Z,98nm,1.0s				
STKA	**Stephens Creek**	**36.37 157**	P	**P**	**08 24 48.0 +0.3**
HJU	**Haeju**	**36.45 0**	P	**P**	**08 24 49.5 +1.2**
RKGY	**Rocky Gully**	**36.76 192**	P	**P**	**08 24 52.9 +1.9**
	baz=37,SNR=25				
RKGY	**Rocky Gully**	**36.76 192**	P	**P**	**08 24 52.9 +1.9**
MAJO	**Matsushiro**	**36.82 17**	P	**P**	**08 24 50.6 -0.9**
MAJO	**Matsushiro**	**36.82 17**	P	**P**	**08 24 50.7 -0.9**
MAJO			pmax	pmax	
	comp=Z,1μm,2.0s				
MAJO	**Matsushiro**	**36.82 17**	P	**P**	**08 24 51.1 -0.4**
MAJO	**Matsushiro**	**36.82 17**	P	**P**	**08 24 50.6 -0.9**
MAJO			PcP	**PcP**	**08 27 13.9 +1.7**
MJAR	**Matsushiro Arr**	**36.82 17**	P	**P**	**08 24 50.9 -0.6**
	comp=Z,67nm,0.7s,baz=193,slow=8.6,SNR=130				
MJAR			PcP	**PcP**	**08 27 13.5 +1.2**
	comp=Z,14nm,0.7s,baz=177,slow=2.8,SNR=6.2				
MJAR			ScP	**ScP**	**08 30 53.5 +0.5**
	comp=Z,6.1nm,0.8s,baz=178,slow=3.7,SNR=4.6				
MJAR			LR	LR	08 43 50.8
	comp=Z,355nm,18.2s,baz=230,slow=42				
	comp=Z,67nm,0.7s				
MJB9	**Matsu-Tunnel**	**36.82 17**	P	**P**	**08 24 51.9 +0.4**
HTT	**Hallett**	**36.83 161**	P	**P**	**08 24 52.0 +0.3**
	baz=37,SNR=91				
HTT	**Hallett**	**36.83 161**	P	**P**	**08 24 52.1 +0.4**
AUALB	**St Joseph's Co**	**36.95 191**	P	**P**	**08 24 54.1 +1.4**
JYT	**Yasato**	**37.15 20**	P	**P**	**08 24 52.6 -1.7**
HNS	**HongShan**	**37.22 345**	⇑P	**P**	**08 24 54.3 -0.6**
HNS			pP	**pP**	**08 25 09.0 -2.7**
HNS			PcP	**PcP**	**08 27 14.8 +1.4**
HNS			S	**S**	**08 30 31.0 -5.7**
HNS			ScP	**ScP**	**08 30 55.0 +0.6**
HNS			pmax	pmax	
	comp=Z,36nm,1.1s				
HNS			pmax	pmax	
	comp=Z,570nm,8.5s				
HNS			LR	LR	
	comp=Z,1μm,17.5s				
HNS			LR	LR	
	comp=Z,560nm,13.5s				
HNS			LR	LR	
	comp=Z,3μm,24.7s				
AULRC	**Lightning Ridg**	**37.34 147**	P	**P**	**08 24 55.7 -0.3**
PYAG	**Pyongyang**	**37.46 0**	P	**P**	**08 24 58.6 +1.7**
PYAG			pP	**pwP**	**08 25 19.1 +2.5**
PYAG			S	**S**	**08 30 41.0 +0.8**
DL2	**Dalian**	**37.50 355**	P	**P**	**08 24 57.5 +0.3**
DL2			S	**S**	**08 30 39.8 -1.1**
DL2			pmax	pmax	
	comp=Z,93nm,0.7s				
DL2			pmax	pmax	
	comp=Z,640nm,6.3s				
DL2			LR	LR	
	comp=Z,900nm,21.6s				
DL2			LR	LR	
	comp=Z,2μm,15.1s				
DL2			LR	LR	
	comp=Z,2μm,24.1s				
CMSA	**Cobar Meteorol**	**37.86 152**	P	**P**	**08 25 00.8 +0.4**
	baz=38,SNR=63				
CMSA	**Cobar Meteorol**	**37.86 152**	P	**P**	**08 25 01.0 +0.6**
SAIH	**SAIHA**	**38.08 306**	⇑*i*P	**P**	**08 25 02.6 0.0**
GHSS	**Government Hou**	**38.11 163**	P	**P**	**08 25 03.9 +1.5**
TIY	**Taiyuan**	**38.14 343**	⇑P	**P**	**08 25 02.3 -0.4**
TIY			PP	**PP**	**08 26 30.5 -0.7**
TIY			S	S	08 30 39.5 -11
TIY			pmax	pmax	
	comp=Z,580nm,4.2s				
TIY			LR	LR	
	comp=Z,1μm,18.8s				
TIY			LR	LR	
	comp=Z,830nm,14.3s				
TIY			LR	LR	
	comp=Z,2μm,22.0s				
JSD	**Sado**	**38.23 16**	P	**P**	**08 25 02.9 -0.5**
JSD			IAmb	IAmb	08 25 06.8
	comp=Z,175nm,0.9s				
JSD	**Sado**	**38.23 16**	P	**P**	**08 25 03.4 0.0**
HHU	**Hamhung**	**38.37 2**	P	**P**	**08 25 06.3 +1.8**
HHU			sP	sP	08 25 38.3 +8.8
HHU			S	**S**	**08 30 53.2 -0.8**
IMP	**Imphal**	**38.51 310**	*e*P	**P**	**08 25 05.2 -0.9**
SUJ	**Sinuiju**	**38.53 358**	P	**P**	**08 25 06.6 +0.7**
SUJ			sP	**sP**	**08 25 36.7 +6.0**
SUJ			S	**S**	**08 30 54.4 -1.9**
JMM	**Marumori**	**38.84 19**	P	**P**	**08 25 08.6 +0.1**
JMM	**Marumori**	**38.84 19**	P	**P**	**08 25 09.4 +0.9**
KOHI	**KOHIMA**	**38.87 311**	⇑*i*P	**P**	**08 25 08.1 -1.0**
AUWSH	**Wavell State H**	**38.88 139**	P	**P**	**08 25 09.7 +0.7**
MOKO	**MOKOCHONG**	**38.90 312**	*e*P	**P**	**08 25 08.8 -0.6**
BRDH	**Bariadhala**	**39.27 305**	P	**P**	**08 25 13.2 +0.9**
	comp=Z,169nm,0.4s,baz=73,slow=9.6,SNR=18				
BRDH			LR	LR	08 41 53.6
	comp=Z,2μm,21.9s,baz=108,slow=37				
JORH	**JORHAT**	**39.33 313**	*e*P	**P**	**08 25 12.3 -0.5**
BJT	**Baijiatuau**	**39.40 348**	P	**P**	**08 25 12.5 -0.6**
BJT	**Baijiatuau**	**39.40 348**	P	**P**	**08 25 12.5 -0.6**
BJT			pP	**pP**	**08 25 27.9 -2.1**
BJT			PcP	**PcP**	**08 27 21.9 +1.7**
BJT			ScP	**ScP**	**08 31 03.4 +0.8**
BJI	**Beijing**	**39.41 348**	P	**P**	**08 25 12.5 -0.8**
BJI			PcP	**PcP**	**08 27 22.0 +1.8**
BJI			ScP	**ScP**	**08 31 03.0 +0.3**
BJI			PcS	**PcS**	**08 31 08.0 -2.0**
BJI			S	**S**	**08 31 09.0 -0.7**
BJI			pmax	pmax	
	comp=Z,57nm,0.7s				
BJI			pmax	pmax	
	comp=Z,680nm,7.0s				
BJI			LR	LR	
	comp=Z,300nm,26.3s				
BJI			LR	LR	
	comp=Z,790nm,28.3s				
BJI			LR	LR	
	comp=Z,3μm,28.3s				
GC1S	**Gold Coast 1 S**	**39.71 140**	P	**P**	**08 25 17.6 +1.7**
ITAN	**ITANAGAR**	**39.95 313**	⇑*i*P	**P**	**08 25 18.2 +0.3**
ITAN			IAmb	IAmb	08 25 26.5
	comp=Z,220nm,1.2s				
LZH	**Lanzhou**	**40.02 332**	⇑P	**P**	**08 25 19.0 +0.4**
LZH			pP	pwP	08 25 37.3 -1.2
LZH			sP	sP	08 25 45.8 +2.2
LZH			PcP	**PcP**	**08 27 23.8 +1.3**
LZH			ScP	**ScP**	**08 31 05.8 +0.4**
LZH			S	**S**	**08 31 17.5 -1.8**
LZH			pmax	pmax	
	comp=Z,200nm,1.6s				
LZH			pmax	pmax	
	comp=Z,1μm,5.2s				
LZH			LR	LR	
	comp=Z,4μm,16.5s				
LZH			LR	LR	
	comp=Z,3μm,13.7s				
LZH			LR	LR	
	comp=Z,3μm,19.3s				
ZIRO	**ZIRO**	**40.07 313**	⇑*i*P	**P**	**08 25 19.0 -0.2**
ARMA	**Armidale**	**40.15 144**	P	**P**	**08 25 20.7 +1.0**
	baz=40,SNR=85				
ARMA	**Armidale**	**40.15 144**	P	**P**	**08 25 20.4 +0.7**
ARMA			IAmb	IAmb	08 25 23.0
	comp=Z,279nm,0.9s				
ARMA	**Armidale**	**40.15 144**	P	**P**	**08 25 20.9 +1.2**

AUPHS	Peel High Scho	40.23 146	P	P	08 25 20.9 +0.7
SNY	Shenyang	40.28 358	⇑P	P	08 25 20.8 +0.4
SNY			S	S	08 31 19.5 -3.1
SNY			pmax	pmax	
	comp=Z,460nm,3.7s				
SNY			LR	LR	
	comp=Z,1μm,23.1s				
SNY			LR	LR	
	comp=Z,1μm,18.4s				
SNY			LR	LR	
	comp=Z,2μm,25.0s				
TEZP	TEZPUR	40.34 311	⇑*i*P	P	08 25 20.4 -0.8
SHL	Shillong	40.49 309	P	P	08 25 22.1 -0.6
SHL			IAmb	IAmb	08 25 23.6
	comp=Z,410nm,1.4s				
SHL	Shillong	40.49 309	P	P	08 25 22.1 -0.6
SHL			pmax	pmax	
	comp=Z,411nm,1.4s				
SHL	Shillong	40.49 309	P	P	08 25 22.3 -0.4
	SNR=88				
SHL	Shillong	40.49 309	⇑*i*P	P	08 25 22.1 -0.6
ARPS	Mount Arapiles	40.84 160	P	P	08 25 25.8 +0.7
	baz=41,SNR=225				
ARPS	Mount Arapiles	40.84 160	P	P	08 25 25.9 +0.7
MSHR	Mys Shultsa	41.27 6	*c*eP	P	08 25 29.9 +1.3
MSHR			pmax	pmax	
	comp=Z,46nm,0.6s				
HHC	Hu-ho-hao-te	41.30 344	*e*P	P	08 25 28.5 -0.5
HHC			sP	sP	08 25 55.0 +1.1
HHC			S	S	08 31 39.3 +1.3
HHC			pmax	pmax	
	comp=Z,46nm,0.8s				
HHC			pmax	pmax	
	comp=Z,800nm,9.1s				
HHC			LR	LR	
	comp=Z,2μm,17.5s				
HHC			LR	LR	
	comp=Z,1μm,14.5s				
HHC			LR	LR	
	comp=Z,4μm,19.6s				
AUMAG	Moama Anglican	41.32 156	P	P	08 25 30.7 +1.6
JTM	Tenmabayashi	41.59 18	P	P	08 25 31.9 +0.7
JTM			IAmb	IAmb	08 25 36.2
	comp=Z,433nm,1.1s				
JTM	Tenmabayashi	41.59 18	P	P	08 25 32.5 +1.3
SYDH	Sydney Hard Ro	42.18 148	P	P	08 25 37.1 +1.0
DHUB	DHUBRI	42.18 309	*e*P	P	08 25 35.5 -0.8
CN2	Changchun	42.21 360	*e*P	P	08 25 34.5 -1.7
CN2			*e*PP	PP	08 27 16.8 +1.5
CN2			*e*S	S	08 31 50.0 -1.2
CN2			*es*S	sS	08 32 22.0 +1.5
CN2			*e*SS	SS	08 34 55.0 -6.8
CN2			pmax	pmax	
	comp=Z,100nm,1.3s				
CN2			LR	LR	
	comp=Z,780nm,18.0s				
CN2			LR	LR	
	comp=Z,620nm,18.0s				
CN2			LR	LR	
	comp=Z,720nm,20.0s				
AUHPC	Hawkesdale P12	42.21 160	P	P	08 25 37.3 +1.0
BRAT	Ballarat	42.28 158	P	P	08 25 37.9 +1.0
RIV	Riverview	42.45 148	P	P	08 25 40.9 +2.6
CAN	Canberra	42.54 151	P	P	08 25 39.8 +0.7
CAN			IAmb	IAmb	08 25 42.5
	comp=Z,272nm,1.0s				
CAN	Canberra	42.54 151	P	P	08 25 39.8 +0.7
CAN			pmax	pmax	
	comp=Z,272nm,1.0s				
CAN	Canberra	42.54 151	P	P	08 25 40.4 +1.3
CAN	Canberra	42.54 151	P	P	08 25 40.4 +1.3
CAN			sP	sP	08 26 03.9 -0.5
CNB	Canberra Magne	42.71 151	P	P	08 25 41.7 +1.2
	baz=43,SNR=23				
CNB	Canberra Magne	42.71 151	P	P	08 25 41.7 +1.2
MLBS	Spotswood, Mel	42.89 158	P	P	08 25 44.0 +2.2
TOO	Toolangi	42.90 157	P	P	08 25 43.5 +1.6
	baz=43,SNR=36				
TOO	Toolangi	42.90 157	P	P	08 25 42.7 +0.8
TOO			IAmb	IAmb	08 25 45.8
	comp=Z,212nm,1.1s				
TOO	Toolangi	42.90 157	P	P	08 25 42.7 +0.8
TOO			pmax	pmax	
	comp=Z,212nm,1.1s				
TOO	Toolangi	42.90 157	P	P	08 25 43.5 +1.6
USA0B	Ussuriysk Arra	42.97 7	P	P	08 25 42.9 +0.5
USA0B			IAmb	IAmb	08 25 46.3
	comp=Z,543nm,1.8s				
USA0B	Ussuriysk Arra	42.97 7	P	P	08 25 42.9 +0.5
USA0B			pmax	pmax	
	comp=Z,543nm,1.8s				
USRK	Ussuriysk Ar.	42.97 7	P	P	08 25 43.2 +0.9
	comp=Z,78nm,0.6s,baz=191,slow=6.2,SNR=113				
	comp=Z,78nm,0.6s				
GEXS	Deakin Univers	42.99 158	P	P	08 25 43.6 +1.0
MDJ	Mudanjiang	43.16 4	P	P	08 25 45.1 +1.2
MDJ			IAmb	IAmb	08 25 46.9
	comp=Z,211nm,1.0s				
MDJ	Mudanjiang	43.16 4	P	P	08 25 45.3 +1.4
MDJ			PP	PcP	08 27 32.3 -0.1
MDJ			S	S	08 32 05.3 +0.2
MDJ			pmax	pmax	
	comp=Z,180nm,0.8s				
MDJ			pmax	pmax	
	comp=Z,2μm,5.4s				
MDJ			LR	LR	
	comp=Z,1μm,20.6s				
MDJ			LR	LR	
	comp=Z,830nm,24.5s				
MDJ			LR	LR	
	comp=Z,2μm,17.7s				
MDJ	Mudanjiang	43.16 4	P	P	08 25 45.1 +1.2
MDJ	Mudanjiang	43.16 4	P	P	08 25 44.8 +0.9
XLT	XiLinHaoTe	43.16 350	⇑*i*P	P	08 25 43.5 -0.6
XLT			pP	pP	08 26 01.0 -0.1
XLT			sP	sP	08 26 08.3 -0.8
XLT			PP	PcP	08 27 31.3 -1.2
XLT			PcS	PcS	08 31 23.0 -2.0
XLT			S	S	08 32 00.8 -4.6
XLT			sS	sS	08 32 35.8 +0.9
XLT			ScS	ScS	08 35 37.8 +0.2
XLT			pmax	pmax	
	comp=Z,87nm,0.7s				
XLT			pmax	pmax	
	comp=Z,850nm,6.6s				
XLT			LR	LR	
	comp=Z,860nm,22.4s				
XLT			LR	LR	
	comp=Z,1μm,21.3s				
LSA	Lhasa	43.25 314	P	P	08 25 47.2 +1.7
LSA	Lhasa	43.25 314	P	P	08 25 46.3 +0.8
LSA			LR	LR	
	comp=Z,3μm,36.7s				
LSA			LR	LR	
	comp=Z,2μm,33.5s				
LSA			LR	LR	
	comp=Z,5μm,36.7s				
LSA	Lhasa	43.25 314	P	P	08 25 47.2 +1.7
LSA			pmax	pmax	
	comp=Z,116nm,0.7s				
LSA	Lhasa	43.25 314	P	P	08 25 46.8 +1.3
LSA	Lhasa	43.25 314	P	P	08 25 46.0 +0.5
LSA	Lhasa	43.25 314	P	P	08 25 46.5 +1.0
LSA			PcP	PcP	08 27 35.4 +1.8
AUSMG	Snowy Mountain	43.25 153	P	P	08 25 46.5 +1.6
BWNR	Bhubaneshwar	43.26 299	⇑*i*P	P	08 25 44.8 -0.3
BWNR			*i*x	x	08 27 54.8
AUUHS	Ulladulla High	43.29 150	P	P	08 25 46.5 +1.4
ERM	Erimo	43.36 19	P	P	08 25 45.3 -0.2
ERM	Erimo	43.36 19	P	P	08 25 45.3 -0.2
ERM			pmax	pmax	
	comp=Z,132nm,1.0s				
ERM	Erimo	43.36 19	P	P	08 25 46.8 +1.3
JEM	Erimo	43.36 19	P	P	08 25 46.5 +0.9
JEW	Eniwo	43.59 17	P	P	08 25 48.4 +1.1
JEW	Eniwo	43.59 17	P	P	08 25 48.6 +1.2
H11S3	WAKE ISLAND Hy	43.61 64	T	T	09 12 46.0
	baz=252,slow=75,SNR=233				
KOUNC	Koumac, New Ca	43.62 122	P	P	08 25 48.9 +0.9
H11S2	WAKE ISLAND Hy	43.63 64	T	T	09 12 48.5
	baz=252,slow=75,SNR=389				
H11S1	WAKE ISLAND Hy	43.63 64	T	T	09 12 49.4
	baz=252,slow=75,SNR=413				
MILA	Mila	44.02 153	P	P	08 25 52.5 +1.5
	baz=44,SNR=5.7				
MILA	Mila	44.02 153	P	P	08 25 52.0 +0.9
BNX	BinXian	44.17 2	⇑P	P	08 25 51.8 -0.2
BNX			pP	pP	08 26 10.5 +1.4
BNX			sP	sP	08 26 18.8 +1.7
BNX			PP	PcP	08 27 35.8 0.0
BNX			S	S	08 32 19.3 -0.5
BNX			pmax	pmax	
	comp=Z,49nm,1.1s				
BNX			pmax	pmax	
	comp=Z,1μm,3.6s				
BNX			LR	LR	
	comp=Z,860nm,24.0s				
BNX			LR	LR	
	comp=Z,460nm,10.4s				
BNX			LR	LR	
	comp=Z,880nm,22.2s				
H11N1	WAKE ISLAND Hy	44.18 63	T	T	09 13 58.7
	baz=251,slow=75,SNR=82				
H11N2	WAKE ISLAND Hy	44.20 63	T	T	09 13 50.1
	baz=251,slow=75,SNR=30				
H11N3	WAKE ISLAND Hy	44.20 63	T	T	09 14 01.0
	baz=251,slow=75,SNR=94				
TEY	Ternei	44.49 11	⇑*e*P	P	08 25 55.7 +1.1
TEY			pmax	pmax	
	comp=N,90nm,0.7s				
TEY			pmax	pmax	
	comp=Z,170nm,0.7s				
TEY			pmax	pmax	
	comp=N,100nm,4.0s				
TEY			pmax	pmax	
	comp=Z,200nm,4.0s				
BOK	Bokaro	44.52 303	*e*P	P	08 25 53.9 -1.3
BOK			IAmb	IAmb	08 25 58.7
	comp=Z,217nm,1.7s				
GTA	Gaotai	44.59 331	⇑P	P	08 25 55.5 -0.1
GTA			pP	pP	08 26 11.0 -1.8
GTA			PcP	PcP	08 27 38.5 +1.0
GTA			ScP	ScP	08 31 24.0 +0.4
GTA			PcS	PcS	08 31 30.3 -0.8
GTA			S	S	08 32 19.5 -6.9
GTA			ScS	ScS	08 35 44.0 -2.9
GTA			pmax	pmax	
	comp=Z,76nm,1.6s				
GTA			pmax	pmax	
	comp=Z,640nm,7.3s				
GTA			LR	LR	
	comp=Z,2μm,19.3s				
GTA			LR	LR	
	comp=Z,2μm,18.2s				
GTA			LR	LR	
	comp=Z,2μm,23.6s				
ODAN	Odare	44.63 308	*e*P	P	08 25 56.7 +0.4
	comp=Z,86nm,1.5s				
ODAN	Odare	44.63 308	*e*P	P	08 25 55.2 -1.1
	comp=Z,82nm,1.4s				
GOMU	GeErMu	44.91 324	P	P	08 25 59.0 +0.5
GOMU			S	S	08 32 19.0 -13
GOMU			SS	ScS	08 35 40.8 -8.7
GOMU			pmax	pmax	
	comp=Z,74nm,1.5s				
GOMU			LR	LR	
	comp=Z,1μm,21.0s				
GOMU			LR	LR	
	comp=Z,850nm,19.8s				
GOMU			LR	LR	
	comp=Z,1μm,20.0s				
RAGD	RAYAGADA	45.00 296	⇑*i*P	P	08 25 59.4 +0.3
PALK	Pallekele	45.23 279	LR	LR	08 46 34.7
	comp=Z,2μm,20.4s,baz=206,slow=38				
PALK	Pallekele	45.23 279	P	P	08 26 00.1 -0.9
PALK			IAmb	IAmb	08 26 02.9
	comp=Z,338nm,1.8s				
PALK	Pallekele	45.23 279	P	P	08 26 00.1 -0.9
PALK			pmax	pmax	
	comp=Z,338nm,1.8s				
PALK	Pallekele	45.23 279	P	P	08 26 00.6 -0.4
PALK	Pallekele	45.23 279	P	P	08 26 01.2 +0.1
	comp=Z,3μmcomp=Z,2μmcomp=Z,80nm,1.6s				
PALK	Pallekele	45.23 279	P	P	08 25 59.7 -1.4
PALK			sP	pwP	08 26 22.4 +3.4
PALK			PcP	PcP	08 27 41.5 +1.3
PALK			ScP	ScP	08 31 27.3 +0.6
RAMN	Ramite	45.30 308	*e*P	P	08 26 01.3 -0.3
	comp=Z,2μm,1.5s				
RAMN	Ramite	45.30 308	*e*P	P	08 26 01.1 -0.5
LHI	Lord Howe Isla	45.54 139	P	P	08 26 03.5 +0.4
LHI			IAmb	IAmb	08 26 36.9
	comp=Z,163nm,1.2s				
JIRN	Jiri	45.95 308	*e*P	P	08 26 06.6 -0.3
	comp=Z,537nm,1.1s				
JIRN	Jiri	45.95 308	*e*P	P	08 26 06.7 -0.2
	comp=Z,1μm,1.5s				
NOUC	Port Laguerre	45.98 123	P	P	08 26 07.7 +0.9
NOUC	Port Laguerre	45.98 123	P	P	08 26 07.0 +0.2
NOUC			pP	pP	08 26 21.0 -3.1
YUK	Yuzh-Kuril'sk	46.06 20	*i*P	P	08 26 08.3 +1.3
DZM	Mont Dzumac	46.09 123	*e*P	P	08 26 06.1 -1.6
	comp=Z,376nm,1.4s				
DZM	Mont Dzumac	46.09 123	*e*SS	SS	08 36 14.5 0.0
DZM			*e*LR	LR	08 39 07.4
	comp=Z,4μm,24.6s				
DZM	Mont Dzumac	46.09 123	LR	LR	08 45 35.8
	comp=Z,1μm,21.4s,baz=290,slow=36				
DZM	Mont Dzumac	46.09 123	P	P	08 26 07.2 -0.5
DZM			IAmb	IAmb	08 26 11.0
	comp=Z,192nm,1.3s				
DZM	Mont Dzumac	46.09 123	P	P	08 26 08.6 +0.9
DZM	Mont Dzumac	46.09 123	P	P	08 26 08.6 +0.9
DZM			sP	sP	08 26 31.8 -1.3
ONTNC	Ouen Toro	46.20 123	P	P	08 26 08.9 +0.5
ONTNC			IAmb	IAmb	08 26 12.1
	comp=Z,153nm,1.2s				
ONTNC	Ouen Toro	46.20 123	P	P	08 26 09.3 +0.9
LIFNC	LIFOU	46.23 121	P	P	08 26 09.1 +0.3
LIFNC	LIFOU	46.23 121	P	P	08 26 09.6 +0.8
GUN	Gumba	46.31 308	*e*P	P	08 26 09.4 -0.3
	comp=Z,532nm,0.7s				
GUN	Gumba	46.31 308	*e*P	P	08 26 09.4 -0.3
	comp=Z,532nm,0.7s				
YATNC	Mamie plateau,	46.46 123	P	P	08 26 11.4 +0.9
MDRS	Chennai	46.47 287	*e*P	P	08 26 09.7 -1.0
PKI	Pulchoki	46.52 308	*e*P	P	08 26 10.5 -0.9
	comp=Z,248nm,1.0s				
PKI	Pulchoki	46.52 308	*e*P	P	08 26 10.5 -0.9
PKIN	Phulchoki	46.54 308	*e*P	P	08 26 11.1 -0.3
PKIN	Phulchoki	46.54 308	*e*P	P	08 26 10.6 -0.8
OUENC	Ouen Island, N	46.57 123	P	P	08 26 11.1 -0.2
OUENC	Ouen Island, N	46.57 123	P	P	08 26 12.4 +1.0
KKN	Kakani	46.73 308	*e*P	P	08 26 11.6 -1.2
	comp=Z,116nm,1.6s				
KKN	Kakani	46.73 308	*e*P	P	08 26 12.4 -0.4
AULHS	Lilydale High	46.75 158	P	P	08 26 13.8 +1.4
DMN	Daman	46.78 308	*e*P	P	08 26 12.7 -0.5
	comp=Z,910nm,1.4s				
DMN	Daman	46.78 308	*e*P	P	08 26 12.8 -0.5
	comp=Z,910nm,1.4s				
VJD	Vijayawada	46.82 291	⇑*i*P	P	08 26 13.0 -0.4
CORO	Coronation Par	46.89 158	P	P	08 26 15.0 +1.5
BLSP	Bilaspur	47.11 299	⇑*i*P	P	08 26 14.8 -0.8
MARNC	Mare, Loyalty	47.19 121	P	P	08 26 17.1 +0.9
TARA	Tarawa	47.19 89	P	P	08 26 17.3 +0.9
TARA			IAmb	IAmb	08 26 20.2
	comp=Z,231nm,1.6s				
GKN	Gorkha	47.33 308	*e*P	P	08 26 16.8 -0.6
	comp=Z,512nm,1.1s				
GKN	Gorkha	47.33 308	*e*P	P	08 26 16.6 -0.8
	comp=Z,933nm,1.4s				
VLK	Valmikinagar	47.64 307	⇑*i*P	P	08 26 19.9 +0.2
YSS	Yuzh-Sakhalins	47.73 16	P	P	08 26 20.2 +0.2
YSS			IAmb	IAmb	08 26 25.2
	comp=Z,437nm,1.6s				
YSS	Yuzh-Sakhalins	47.73 16	*ωe*P	P	08 26 20.6 +0.6
YSS			*e*		08 28 08.3
YSS			*e*S	S	08 33 10.9 0.0
YSS			pmax	pmax	
	comp=Z,1μm,4.4s				
YSS			pmax	pmax	
	comp=Z,170nm,1.1s				
YSS			MLR	MLR	
	comp=Z,1μm,18.0s				
YSS			MLR	MLR	
	comp=N,700nm,14.0s				
YSS	Yuzh-Sakhalins	47.73 16	P	P	08 26 21.2 +1.2
YSS	Yuzh-Sakhalins	47.73 16	P	P	08 26 20.5 +0.6
MOO	Moorlands	47.77 159	P	P	08 26 20.9 +0.5
	baz=48,SNR=7.9				
MOO	Moorlands	47.77 159	P	P	08 26 21.6 +1.2
KLR	Kul'dur	47.92 5	P	P	08 26 21.9 +0.4
	comp=N,66nm,0.7s,baz=202,slow=5.1,SNR=116				
	comp=N,66nm,0.7s				
KLR	Kul'dur	47.92 5	*c i*P	P	08 26 21.8 +0.4
KLR			pmax	pmax	
	comp=Z,284nm,1.8s				
HIA	Hailar	47.95 355	P	P	08 26 22.4 +0.7
HIA	Hailar	47.95 355	P	P	08 26 22.4 +0.7
HIA			pmax	pmax	
	comp=Z,854nm,1.9s				
HIA	Hailar	47.95 355	P	P	08 26 22.7 +1.0
HIA	Hailar	47.95 355	P	P	08 26 22.5 +0.7
DANN	Dangsing	48.18 308	*e*P	P	08 26 23.5 -0.7
	comp=Z,704nm,0.7s				
DANN	Dangsing	48.18 308	*e*P	P	08 26 23.5 -0.7
	comp=Z,704nm,0.7s				
SALM	Salem	48.21 284	⇑*i*P	P	08 26 23.5 -0.7
TAU	Tasmania Unive	48.22 159	P	P	08 26 24.5 +0.7
TAU			IAmb	IAmb	08 26 27.1
	comp=Z,121nm,1.1s				
TAU	Tasmania Unive	48.22 159	P	P	08 26 24.5 +0.7
TAU			pmax	pmax	
	comp=Z,121nm,1.2s				
TAU	Tasmania Unive	48.22 159	P	P	08 26 24.9 +1.1
TAU	Tasmania Unive	48.22 159	P	P	08 26 24.6 +0.7
TAU			x	x	08 26 33.8
TAU			pP	pP	08 26 40.7 -0.6
ALBI	Allahabad	48.52 303	*e*P	P	08 26 25.8 -0.7
ALBI			*i*x	x	08 28 47.6
HYB	Hyderabad	48.99 292	⇑*i*P	P	08 26 28.5 -1.7
HYB			IAmb	IAmb	08 26 34.0
	comp=Z,211nm,0.6s				
HYBB	Hyderabad (bro	48.99 292	*e*P	P	08 26 29.3 -0.9
HYBB			IVmB_BB		08 26 30.9
	comp=Z,2μm,1.5s				
HYBB			*es*P	sP	08 26 54.4 -1.7
HYBB			*e*PcP	PcP	08 27 53.3 -0.1
HYBB			*e*PP	PP	08 28 24.8 +0.5
HYBB			*e*PcS	PcS	08 31 50.2 +0.1
HYBB			*e*S	S	08 33 31.5 +1.9
HYBB			IVMs_BB	IVMs_BB	08 47 15.9
	comp=Z,273nm,21.4s				
ULN	Ulaanbaatar	49.01 343	P	P	08 26 29.3 -0.8
ULN	Ulaanbaatar	49.01 343	P	P	08 26 29.3 -0.8
ULN			pmax	pmax	
	comp=Z,139nm,1.5s				
ULN	Ulaanbaatar	49.01 343	P	P	08 26 30.0 -0.1
ULN			P	P	08 26 30.0 -0.1
ULN	Ulaanbaatar	49.01 343	P	P	08 26 29.7 -0.4
	comp=Z,13μmcomp=Z,4μmcomp=Z,192nm,1.4s				
ULN	Ulaanbaatar	49.01 343	P	P	08 26 29.9 -0.1
TRD	Trivandrum	49.04 280	*e*P	P	08 26 29.3 -1.3
SONM	Songino Array	49.18 343	P	P	08 26 30.9 -0.3
	comp=Z,15nm,0.6s,baz=163,slow=8.9,SNR=47				
SONM			PcP	PcP	08 27 54.4 +0.8
	comp=Z,12nm,0.7s,baz=165,slow=4.7,SNR=3.6				
SONM			LR	LR	08 49 45.7
	comp=Z,871nm,20.1s,baz=150,slow=39				
SONM			PKPPKP	P'P'df	08 57 27.2 -2.9
	comp=Z,1.9nm,1.0s,baz=132,slow=2.2,SNR=4.2				
	comp=Z,15nm,0.6s				
SONM	Songino Array	49.18 343	P	P	08 26 31.0 -0.3
SONM	Songino Array	49.18 343	P	P	08 26 31.0 -0.3
SONM			pmax	pmax	
	comp=Z,25nm,0.8s				
UGL	Uglegorsk	49.52 14	*e*P	P	08 26 35.0 +1.4
UGL			pmax	pmax	
	comp=Z,430nm,1.0s				
NGP	Nagpur	49.52 297	⇑*i*P	P	08 26 33.5 -0.8
PCHI	Peechi	49.86 283	⇑*e*P	P	08 26 35.4 -1.5
PCHI			*e*S	S	08 33 34.5 -7.4
GRNR	Gornyy	50.01 9	⇑*i*P	P	08 26 38.8 +1.4
GRNR			*e*S	S	08 33 46.4 +3.6
GRNR			pmax	pmax	
	comp=E,20nm,0.8s				
GRNR			pmax	pmax	
	comp=Z,110nm,0.8s				
GRNR			pmax	pmax	
	comp=N,40nm,1.0s				
GRNR			smax	smax	
	comp=N,7.0nm,0.6s				
GRNR			MLR	MLR	
	comp=E,610nm,15.0s				
GRNR			MLR	MLR	
	comp=N,320nm,18.0s				
NFK	Norfolk Island	50.48 130	P	P	08 26 42.6 +1.3
AKL	Akola	51.22 296	*e*P	P	08 26 46.2 -0.9
TYV	Tymovskoe	51.32 14	*e*P	P	08 26 48.4 +1.2
TYV			*e*S	S	08 34 02.8 +1.9
TYV			pmax	pmax	
	comp=Z,86nm,1.8s				
TYV			pmax	pmax	
	comp=Z,2μm,4.2s				
TYV			smax	smax	
	comp=N,900nm,4.1s				
TYV			smax	smax	
	comp=E,700nm,4.1s				
JHNI	Jhansi	51.34 302	⇑*i*P	P	08 26 45.3 -2.5
LGTI	Lohaghat	51.43 307	⇑*i*P	P	08 26 47.6 -0.8
CIT	Chita	51.45 350	*e*P	P	08 26 48.9 +0.6
CIT			*e*		08 27 02.0
CIT			pmax	pmax	
	comp=Z,518nm,1.8s				
PTH	Pithoragarh	51.49 307	⇑*i*P	P	08 26 47.4 -1.8
BHPL	Bhopal	51.58 299	⇑*i*P	P	08 26 47.7 -2.0
BHPL			IAmb	IAmb	08 26 53.1
	comp=Z,49nm,0.6s				
BHPL			*i* pP	pP	08 27 11.0 +3.3
ZEA	Zeya	52.17 1	*c e*P	P	08 26 53.7 +0.2
ZEA			*e*		08 28 56.2
ZEA			*e*S	S	08 34 12.6 +0.1
ZEA			*e*		08 36 37.9
ZEA			pmax	pmax	
	comp=N,300nm,3.7s				
ZEA			pmax	pmax	
	comp=Z,300nm,5.5s				
ZEA			pmax	pmax	
	comp=E,50nm,0.8s				
ZEA			pmax	pmax	
	comp=Z,100nm,1.0s				
ZEA			pmax	pmax	
	comp=Z,200nm,3.7s				
ZEA			smax	smax	
	comp=N,600nm,9.7s				
ZEA			MLR	MLR	
	comp=N,500nm,18.0s				
ZEA			MLR	MLR	
	comp=Z,600nm,18.0s				
ZAK	Zakamensk	52.38 342	*e*P	P	08 26 52.8 -2.5
ZAK			pmax	pmax	
	comp=Z,28nm,1.5s				
HMDM	Hanimaadhoo	52.64 277	P	P	08 26 58.2 +0.5
HMDM	Hanimaadhoo	52.64 277	P	P	08 26 58.8 +1.1
	comp=Z,115nm,1.6s				
MNCI	Minicoy	52.86 279	P	P	08 26 59.1 -0.2
MNCI			IAmb	IAmb	08 27 01.0
	comp=Z,290nm,1.2s				
KAD	Karad	53.03 291	⇑*i*P	P	08 26 57.7 -2.9
DDI	Dehra Dun	53.52 307	*i*P	P	08 27 03.1 -1.0
SONA	Sohna	53.53 305	*e*P	P	08 27 02.5 -1.5
IRK	Irkutsk	53.74 344	*e*P	P	08 27 04.4 -0.7
IRK			pmax	pmax	
	comp=Z,147nm,3.0s				
WMQ	Urumqi	54.06 327	*e*P	P	08 27 08.0 +0.3
WMQ			sP	sP	08 27 32.3 -0.9
WMQ			PcP	PcP	08 28 13.3 +1.5
WMQ			pmax	pmax	
	comp=Z,76nm,1.3s				
WMQ			pmax	pmax	
	comp=Z,820nm,4.9s				
WMQ			LR	LR	
	comp=Z,2μm,18.9s				
WMQ			LR	LR	
	comp=Z,1μm,21.3s				
WMQ			LR	LR	
	comp=Z,3μm,23.7s				
WMQ	Urumqi	54.06 327	P	P	08 27 07.7 0.0
WMQ			pP	pP	08 27 24.4 -0.9
FUNA	Funafuti	54.21 101	P	P	08 27 10.0 +0.8
FUNA	Funafuti	54.21 101	P	P	08 27 09.9 +0.7
MOY	Mondy	54.22 341	*e*P	P	08 27 09.0 +0.2
MOY			pmax	pmax	

comp=Z,200nm,1.9s
SMLA Simla 54.54 308 *i* P **P 08 27 10.9 -0.5**
SMLA IAmb IAmb 08 27 17.6
comp=Z,341nm,0.9s
MSVF Nonsavu 54.92 113 LR LR 08 50 32.2
comp=Z,1μm,21.0s,baz=297,slow=36
MSVF Nonsavu 54.92 113 P **P 08 27 16.5 +2.1**
MSVF IAmb IAmb 08 27 52.3
comp=Z,126nm,1.3s
MSVF Nonsavu 54.92 113 P **P 08 27 16.5 +2.1**
MSVF pmax pmax
comp=Z,126nm,1.3s
MSVF Nonsavu 54.92 113 P **P 08 27 15.7 +1.3**
MSVF Nonsavu 54.92 113 P **P 08 27 16.5 +2.1**
BHK Bhakra 55.24 308⇑ *i*P **P 08 27 15.8 -0.6**
SKR Severo-Kuril's 55.43 23 *e*P P 08 27 05.1 -12
SKR *e* 08 27 19.9
SKR pmax pmax
comp=Z,300nm,8.6s
THN Thein Dam 56.19 309 *i* P **P 08 27 21.7 -1.5**
JMU Jammu 56.93 309 *e*P **P 08 27 28.4 0.0**
BOD Bodaibo 57.01 353 *e*P **P 08 27 28.9 +0.4**
BOD pmax pmax
comp=Z,656nm,1.7s
OUZ Omahuta 57.66 134 P **P 08 27 35.7 +2.2**
OUZ Omahuta 57.66 134 P **P 08 27 35.9 +2.4**
ZSN Zaisan 57.91 328*c i*P **P 08 27 33.9 -1.2**
ZSN pmax pmax
comp=Z,120nm,3.5s
ZSN Zaisan 57.91 328⇑ *i*P **P 08 27 33.9 -1.2**
comp=Z,120nm,3.5s,baz=328
PEA0B Petropavlovsk- 57.94 22 P **P 08 27 36.1 +0.9**
PEA0B IAmb IAmb 08 27 38.5
comp=Z,156nm,1.2s
PEA0B Petropavlovsk- 57.94 22 P **P 08 27 36.1 +0.9**
PEA0B pmax pmax
comp=Z,156nm,1.2s
PETK Petropavlovsk- 57.94 22 P **P 08 27 36.0 +0.8**
comp=Z,78nm,0.8s,baz=211,slow=13,SNR=54
PETK LR LR 08 51 56.2
comp=Z,234nm,21.4s,baz=222,slow=35
comp=Z,78nm,0.8s
PETK Petropavlovsk- 57.94 22 P **P 08 27 36.0 +0.8**
PETK Petropavlovsk- 57.94 22 P **P 08 27 36.0 +0.8**
DGZ Jazzator, Alta 58.12 332*c i*P **P 08 27 36.3 -0.4**
DGZ pmax pmax
comp=Z,89nm,1.6s
PET Petropavlovsk 58.24 23 *e*P **P 08 27 37.8 +0.6**
PET *e*S **S 08 35 32.4 -1.2**
PET pmax pmax
comp=Z,82nm,1.6s
PET pmax pmax
comp=Z,1μm,4.4s
PET pmax pmax
comp=Z,700nm,14.9s
JASL Jaisalmer 58.30 301 *e*P **P 08 27 38.0 -0.2**
SHLS Shalkode 58.50 322*c i*P **P 08 27 37.0 -2.4**
SHLS pmax pmax
comp=Z,58nm,1.7s
SHLS Shalkode 58.50 322⇑ *i*P **P 08 27 37.0 -2.4**
comp=Z,58nm,1.7s,baz=322
NIL Nilore 58.56 309 P **P 08 27 39.0 -0.9**
NIL IAmb IAmb 08 27 42.0
comp=Z,233nm,1.2s
NIL Nilore 58.56 309 P **P 08 27 39.0 -0.9**
NIL pmax pmax
comp=Z,233nm,1.2s
NIL Nilore 58.56 309 P **P 08 27 39.8 -0.2**
NIL Nilore 58.56 309 P **P 08 27 39.1 -0.8**
UZB Uzynbulak 58.77 321 *e*P **P 08 27 40.6 -0.7**
UZB pmax pmax
comp=Z,22nm,1.8s
UZB Uzynbulak 58.77 321 *e*P **P 08 27 40.4 -0.9**
baz=322
MK31 Makanchi Array 58.89 327 P **P 08 27 40.8 -1.1**
MK31 IAmb IAmb 08 28 31.6
comp=Z,210nm,1.7s
MK31 Makanchi Array 58.89 327 P **P 08 27 40.8 -1.1**
MK31 pmax pmax
comp=Z,210nm,1.7s
MKAR Makanchi Array 58.89 327 P **P 08 27 41.5 -0.5**
comp=Z,56nm,0.6s,baz=122,slow=8.6,SNR=514
MKAR PcP **PcP 08 28 30.4 -0.2**
comp=Z,44nm,0.6s,baz=128,slow=4.5,SNR=9.0
MKAR PKPPKP P'P'df 08 57 02.2 -14
comp=Z,3.9nm,1.0s,baz=277,slow=3.1,SNR=15
MKAR P4KPbc 09 04 50.2
comp=Z,1.7nm,0.7s,baz=118,slow=4.7,SNR=20
comp=Z,56nm,0.6s
MKAR Makanchi Array 58.89 327 P **P 08 27 41.1 -0.8**
MKAR Makanchi Array 58.89 327 *i* P **P 08 27 41.5 -0.5**
MKAR pmax pmax
comp=Z,57nm,0.6s
KSH Kashi 58.98 316 P **P 08 27 43.5 +0.6**
KSH PcP **PcP 08 28 33.3 +2.0**
KSH S **S 08 35 43.5 -0.6**
KSH pmax pmax
comp=Z,51nm,0.9s
KSH LR LR
comp=Z,1μm,17.9s
KSH LR LR
comp=Z,1μm,17.9s
KSH LR LR
comp=Z,2μm,17.5s
MAKZ Makanchi 59.07 326 P **P 08 27 42.6 -0.7**
MAKZ IAmb IAmb 08 27 44.0
comp=Z,61nm,0.7s
MAKZ Makanchi 59.07 326 P **P 08 27 42.6 -0.7**
MAKZ pmax pmax
comp=Z,61nm,0.7s
MAKZ Makanchi 59.07 326 P **P 08 27 42.5 -0.7**
MAKZ pP **pP 08 27 57.2 -3.9**
MAKZ sP **pwP 08 28 05.6 +1.5**
AIS Amsterdam Isla 59.10 223 P **P 08 27 45.1 +1.6**
AIS Amsterdam Isla 59.10 223 P **P 08 27 45.4 +1.9**
AIS x x 08 27 51.4
AIS pP **pP 08 28 02.2 +0.7**
SATY Saty 59.10 321*c i*P **P 08 27 43.3 -0.3**
SATY pmax pmax
comp=Z,48nm,0.7s
SATY Saty 59.10 321⇑ *i*P **P 08 27 43.3 -0.3**
comp=Z,48nm,0.7s,baz=321
KPKS Kokpek 59.14 322*c i*P **P 08 27 43.2 -0.6**
KPKS pmax pmax
comp=Z,34nm,0.6s
KPKS Kokpek 59.14 322⇑ *i*P **P 08 27 43.2 -0.6**
comp=Z,34nm,0.6s,baz=322
MBAZ Motutapu North 59.33 135 P **P 08 27 49.3 +4.2**
DCZ Deep Cove 59.34 147 P **P 08 27 45.7 +0.8**
DCZ IAmb IAmb 08 28 24.7
comp=Z,135nm,1.3s
JCZ Jackson Bay 59.38 145 P **P 08 27 46.4 +1.0**
ETAZ East Tamaki Re 59.44 135 P **P 08 27 50.1 +4.2**
WIAZ Waiheke Island 59.51 135 P **P 08 27 47.4 +1.1**
FOZ Fox Glacier 59.65 144 P **P 08 27 47.3 +0.2**
FOZ IAmb IAmb 08 28 22.5
comp=Z,141nm,1.5s
MKAZ Moumakai 59.67 135 P **P 08 27 44.6 -2.8**
QRZ Quartz Range 59.79 140 P **P 08 27 47.9 -0.2**
MLZ Mavora Lakes 59.80 147 P **P 08 27 48.4 +0.1**
MLZ IAmb IAmb 08 28 01.5
comp=Z,116nm,1.5s
NRN Naryn 59.85 318 P **P 08 27 49.2 +0.1**
NRN IAmb IAmb 08 27 50.7
comp=Z,50nm,0.7s
NRN Naryn 59.85 318 P **P 08 27 49.2 +0.1**
NRN pmax pmax
comp=Z,50nm,0.7s
KUZ Kuaotunu 59.90 135 P **P 08 27 49.4 +0.4**
KUZ Kuaotunu 59.90 135 P **P 08 27 50.8 +1.8**
MDOK Medeo 60.01 321 *i* P **P 08 27 49.6 -0.3**
MDOK Medeo 60.01 321 *i* P **P 08 27 49.6 -0.3**
baz=321
TNSS Tian-Shan 60.02 320 *e*P **P 08 27 49.8 -0.4**
TNSS Tian-Shan 60.02 320 *e*P **P 08 27 49.9 -0.3**
baz=320
WHZ Wether Hill Ro 60.04 147 P **P 08 27 49.8 0.0**
WHZ IAmb IAmb 08 27 51.8
comp=Z,86nm,0.9s
ULHL Ulahol 60.08 319 P **P 08 27 50.3 -0.2**
SNR=35
AAA Alma-Ata 60.12 321 *e*P **P 08 27 49.9 -0.6**
AAA Alma-Ata 60.12 321 *e*P **P 08 27 50.0 -0.6**
baz=321
TDK Taldyqorghan 60.12 323 *e*P **P 08 27 49.5 -0.9**
TDK pmax pmax
comp=Z,42nm,0.4s
TDK Taldyqorghan 60.12 323 *e*P **P 08 27 49.6 -0.9**
comp=Z,42nm,0.4s,baz=323
TOZ Tahuroa Road 60.21 136 P **P 08 27 52.4 +1.3**
LBZ Lake Benmore 60.37 145 P **P 08 27 52.5 +0.4**
LBZ IAmb IAmb 08 27 54.9
comp=Z,159nm,0.9s
RPZ Rata Peaks 60.48 144 LR LR 08 53 42.6
comp=Z,833nm,21.6s,baz=301,slow=36
YAK Yakutsk 60.54 2 P **P 08 27 53.4 +0.5**
comp=Z,174nm,0.7s,baz=195,slow=0.4,SNR=56
YAK LR LR 08 55 05.2
comp=Z,1μm,21.5s,baz=188,slow=37
comp=Z,174nm,0.7s
YAK Yakutsk 60.54 2 P **P 08 27 53.1 +0.2**
YAK Yakutsk 60.54 2*c i*P **P 08 27 53.3 +0.4**
YAK *e* 08 28 35.2
YAK *e* 08 30 05.3
YAK *e*S **S 08 36 02.5 -0.5**
YAK *e*SS **sS 08 36 35.3 +1.8**
YAK *e* 08 37 33.1
YAK *e*SS **SS 08 40 10.9 +8.6**
YAK pmax pmax
comp=Z,266nm,0.8s
YAK pmax pmax
comp=N,88nm,1.1s
YAK pmax pmax
comp=E,17nm,0.9s
YAK pmax pmax
comp=Z,149nm,1.9s
YAK pmax pmax
comp=E,94nm,2.2s
YAK pmax pmax
comp=N,122nm,2.3s
YAK smax smax
comp=E,727nm,3.5s
YAK smax smax
comp=N,589nm,3.3s
YAK Yakutsk 60.54 2 P **P 08 27 53.4 +0.5**
YAK pP **pP 08 28 06.7 -4.2**
YAK sP **pwP 08 28 13.5 -0.2**
KUU Kurty 60.82 321*c i*P **P 08 27 54.6 -0.6**
KUU pmax pmax
comp=Z,87nm,0.6s
KUU Kurty 60.82 321⇑ *i*P **P 08 27 54.7 -0.6**
comp=Z,87nm,0.6s,baz=321
TKM2 Tokmak 2 60.82 320 P **P 08 27 55.1 -0.4**
SNR=64
TKM2 Tokmak 2 60.82 320 P **P 08 27 54.6 -0.9**
KBK Karagaybulak 61.12 319 P **P 08 27 57.2 -0.2**
SNR=28
MA2 Magadan 61.18 14 P **P 08 27 58.9 +1.6**
comp=Z,184nm,0.9s,baz=197,slow=6.1,SNR=59
comp=Z,184nm,0.9s
MA2 Magadan 61.18 14 P **P 08 27 58.4 +1.1**
MA2 Magadan 61.18 14*c i*P **P 08 27 58.9 +1.6**
MA2 pmax pmax
comp=Z,588nm,1.9s
MA2 Magadan 61.18 14 P **P 08 27 59.1 +1.8**
MA2 Magadan 61.18 14 P **P 08 27 58.9 +1.6**
MA2 pP **pP 08 28 12.6 -2.9**
MA2 sP **pwP 08 28 18.7 +0.7**
UCH Uchtor 61.21 319 P **P 08 27 58.5 +0.1**
SNR=98
AAK Ala-Archa 61.41 319 P **P 08 27 59.3 -0.1**
SNR=20
AAK Ala-Archa 61.41 319 P **P 08 27 59.9 +0.5**
AAK IAmb IAmb 08 28 42.6
comp=Z,304nm,2.0s
AAK Ala-Archa 61.41 319*c i*P **P 08 27 59.3 -0.1**
AAK pmax pmax
comp=Z,72nm,1.2s
AAK MLR MLR
comp=Z,1μm,20.0s
AAK Ala-Archa 61.41 319 P **P 08 27 59.7 +0.3**
AAK P **P 08 27 59.7 +0.3**
AAK Ala-Archa 61.41 319 *i* P **P 08 27 58.8 -0.6**
SNR=41
AAK Ala-Archa 61.41 319 P **P 08 27 59.3 -0.1**
CHMS Chumysh 61.41 320 P **P 08 27 58.6 -0.6**
SNR=12
MQZ McQueen's Vall 61.44 143 P **P 08 28 00.3 +1.0**
MQZ IAmb IAmb 08 28 33.7
comp=Z,260nm,1.9s
BKZ Black Stump Fm 61.58 137 P **P 08 28 00.3 -0.1**
BKZ IAmb IAmb 08 28 02.6
comp=Z,221nm,1.6s
BKZ Black Stump Fm 61.58 137 P **P 08 28 00.5 +0.1**
URZ Urewera 61.58 136 LR LR 08 56 30.0
comp=Z,599nm,19.2s,baz=38,slow=38
USP Ospenovka 61.70 320 P **P 08 28 00.8 -0.4**
SNR=43
SGDS Sogindy 61.70 320 *e*P **P 08 28 00.3 -0.9**
SGDS pmax pmax
comp=Z,103nm,3.3s
SGDS Sogindy 61.70 320 *e*P **P 08 27 60.0 -1.3**
baz=320
AML Almayashu 61.71 318 P **P 08 28 01.7 0.0**
SNR=117
RAO Raoul Island 61.84 124 LR LR 08 51 42.4
comp=Z,396nm,21.9s,baz=300,slow=33
DRK Karamyk 61.89 315 P **P 08 28 01.7 -1.2**
DRK IAmb IAmb 08 28 04.3
comp=Z,398nm,1.8s
EKS2 Erkin-Say 61.89 319 P **P 08 28 02.6 0.0**
SNR=28
MCQ Macquarie Isla 62.11 159 P **P 08 28 04.2 +0.7**
baz=62,SNR=7.4
MCQ Macquarie Isla 62.11 159 P **P 08 28 04.7 +1.1**
SEM Semipalatinsk 62.13 329 *e*P **P 08 28 02.0 -2.2**
SEM Semipalatinsk 62.13 329 *e*P **P 08 28 02.0 -2.2**
baz=329
BFZ Birch Farm 62.14 138 P **P 08 28 04.2 +0.1**
KBL Kabul 62.14 309 P **P 08 28 04.3 -0.2**
KBL IAmb IAmb 08 28 05.8
comp=Z,355nm,1.6s
KBL Kabul 62.14 309 P **P 08 28 04.4 -0.2**
KBL pmax pmax
comp=Z,355nm,1.6s
KBL Kabul 62.14 309 P **P 08 28 03.5 -1.0**
SNR=104
KBL P **P 08 28 03.5 -1.0**
SNR=104
ZAA0 Zalesovo Array 62.20 334 P **P 08 28 03.1 -1.1**
ZALV Zalesovo Beam 62.20 334 P **P 08 28 02.9 -1.3**
comp=Z,17nm,0.5s,baz=129,slow=6.9,SNR=32
ZALV LR LR 08 57 15.3
comp=Z,599nm,19.0s,baz=128,slow=38
ZALV PKP2bc 08 57 15.7
comp=Z,8.0nm,1.1s,baz=262,slow=4.3,SNR=5.7
comp=Z,17nm,0.5s
ZALV Zalesovo Beam 62.20 334 P **P 08 28 03.5 -0.8**
GAR Garm 62.76 314 P **P 08 28 08.1 -0.4**
BTK Batken 62.81 315 P **P 08 28 07.9 -0.9**
BTK IAmb IAmb 08 28 11.5
comp=Z,82nm,0.8s
BTK Batken 62.81 315 P **P 08 28 07.9 -0.9**
BTK pmax pmax
comp=Z,82nm,0.9s
BTLS Baital 62.81 321 *e*P **P 08 28 07.5 -1.0**
BTLS pmax pmax
comp=Z,21nm,1.3s
BTLS Baital 62.81 321⇑ *i*P **P 08 28 07.5 -1.0**
baz=321
KURBB Kurchatov Arra 63.15 328 P **P 08 28 09.7 -0.9**
KURK Kurchatov 63.16 329 P **P 08 28 10.2 -0.5**
KURK P **P 08 28 10.2 -0.5**
KURK Kurchatov 63.16 329 P **P 08 28 10.1 -0.6**
KURK pP **pP 08 28 24.5 -4.4**
CHGR Chuyangaron 63.47 313 P **P 08 28 12.6 -0.6**
CHGR Chuyangaron 63.47 313 P **P 08 28 12.6 -0.6**
CHGR pmax pmax
comp=Z,730nm,1.6s
SIMJ Simiganj 63.58 313 P **P 08 28 12.9 -1.1**
DZA Taraz 63.61 318 *e*P **P 08 28 12.4 -1.5**
DZA Taraz 63.61 318 *e*P **P 08 28 12.4 -1.5**
baz=318
AFI Afiamalu 63.75 106 LR LR 08 56 16.5
comp=Z,203nm,20.0s,baz=278,slow=36
AFI Afiamalu 63.75 106 P **P 08 28 16.5 +1.1**
AFI Afiamalu 63.75 106 P **P 08 28 16.1 +0.8**
IUG Iuzhnay 64.18 317*c i*P **P 08 28 17.2 -0.6**
IUG Iuzhnay 64.18 317⇑ *i*P **P 08 28 17.2 -0.6**
baz=317
KK31 Karatay Array 64.25 318 P **P 08 28 18.3 +0.2**
KK31 Karatay Array 64.25 318 P **P 08 28 18.3 +0.2**
KK31 pmax pmax
comp=Z,147nm,1.5s
KKAR Karatay Array 64.25 318 P **P 08 28 18.0 -0.1**
KKAR Karatay Array 64.25 318 P **P 08 28 18.0 -0.1**
KKAR pmax pmax
comp=Z,147nm,1.5s
SEY Seymchan 64.50 13 P **P 08 28 21.1 +1.7**
comp=Z,65nm,1.0s,baz=222,slow=6.1,SNR=52
comp=Z,65nm,1.0s
SEY Seymchan 64.50 13*c e*P **P 08 28 21.0 +1.7**
SEY pmax pmax
comp=Z,207nm,1.5s
ROCAM Rodrigues Isla 64.61 247 P **P 08 28 21.6 +0.8**
ROCAM Rodrigues Isla 64.61 247 P **P 08 28 21.9 +1.1**
SHEM Shemya Is, Ala 64.96 30 P **P 08 28 24.8 +2.4**
comp=Z,149nm,0.9s,baz=338,slow=2.0,SNR=6.1
comp=Z,149nm,0.9s
OTUK Ortayu 65.36 324 P **P 08 28 24.2 -1.0**
BRZS Berezniki 66.00 326*c i*P **P 08 28 28.4 -0.9**
BRZS pmax pmax
comp=Z,61nm,1.5s
BRZS Berezniki 66.00 326⇑ *i*P **P 08 28 28.4 -0.9**
comp=Z,61nm,1.5s,baz=326
NGCH Negor - Chabah 66.50 297 P **P 08 28 33.7 +0.8**
WBK Wadi Bani Khal 68.03 294 P **P 08 28 44.0 +1.2**
SNR=8.1
CASY Casey 68.41 187 P **P 08 28 45.4 +1.2**
CASY IAmb IAmb 08 28 46.3
comp=Z,290nm,1.2s
CASY Casey 68.41 187 P **P 08 28 45.0 +0.8**
WSAR Wadi Sarin 68.43 294 LR LR 08 58 39.8
comp=Z,950nm,21.6s,baz=96,slow=36
WSAR Wadi Sarin 68.43 294 P **P 08 28 43.9 -1.3**
SNR=13
DRV Dumont d'Urvil 68.69 174 P **P 08 28 46.0 +0.2**
DRV pP **pP 08 29 01.9 -2.6**
BVAR Borovoye Array 68.71 328 P **P 08 28 45.5 -0.9**
comp=Z,16nm,0.6s,baz=133,slow=10,SNR=57
BVAR LR LR 08 58 54.6
comp=Z,1μm,21.9s,baz=122,slow=36
comp=Z,16nm,0.6s
MHTO MHTO 68.75 292 P **P 08 28 46.0 -1.2**
SNR=26
MHTO P **P 08 28 46.0 -1.2**
SNR=26
BRVK Borovoye 68.78 328 P **P 08 28 46.5 -0.3**
BRVK Borovoye 68.78 328*c i*P **P 08 28 46.0 -0.8**
BRVK pmax pmax
comp=Z,125nm,1.5s
BRVK MLR MLR
comp=Z,1μm,22.0s
BRVK Borovoye 68.78 328 P **P 08 28 46.0 -0.8**
JMDO Jabal Madar 68.79 293 P **P 08 28 48.0 +0.5**
SNR=14
BIDO Bidbid 68.92 295 P **P 08 28 48.0 -0.3**
SNR=26
SMDO Samad 68.93 294 P **P 08 28 49.0 +0.5**
SNR=15
DQM DQM 69.02 291 P **P 08 28 48.0 -0.9**
SNR=31
PAF Port-aux-Franc 69.41 215 P **P 08 28 53.2 +2.5**
PAF pP **pP 08 29 09.2 +0.1**
BSY Bisya 69.67 294 P **P 08 28 53.0 +0.1**
SNR=16
HOQ Hoqain 69.68 295 P **P 08 28 53.0 +0.1**
SNR=26
HOQ P **P 08 28 53.0 +0.1**
SNR=26
TIXI Tiksi 70.16 1 P **P 08 28 54.4 -0.5**
comp=Z,71nm,0.5s,baz=270,slow=23,SNR=202
TIXI LR LR 09 01 48.7
comp=Z,653nm,20.7s,baz=1.0,slow=38
comp=Z,71nm,0.5s
TIXI Tiksi 70.16 1 P **P 08 28 54.8 0.0**
TIXI IAmb IAmb 08 28 57.7
comp=Z,389nm,1.6s
TIXI Tiksi 70.16 1*c i*P **P 08 28 54.2 -0.7**
TIXI pmax pmax
comp=Z,281nm,1.6s
TIXI Tiksi 70.16 1 P **P 08 28 54.3 -0.5**
ARQ Araqi 70.36 294 P **P 08 28 58.0 +0.8**
SNR=13
MSEY Mahe Island 70.43 265 P **P 08 28 57.0 -0.7**
MSEY Mahe Island 70.43 265 P **P 08 28 56.8 -1.0**
SOHO SOHO 70.45 295 *i* P **P 08 28 57.0 -0.7**
SNR=11
UOSS Minazif 70.86 296 P **P 08 28 57.6 -2.4**
UOSS sP **PcP 08 29 19.6 -0.7**
BANOM Banah 70.90 297 P **P 08 28 59.8 -0.6**
HATD Hatta, Dubai 70.91 296 *i* P **P 08 28 58.9 -1.5**
SNR=11
MSFE Esma-Masafi 70.95 296 *i* P **P 08 29 00.8 +0.1**
SNR=6.7
ASHO Ashiyiah 70.95 296 P **P 08 29 02.0 +1.2**
SNR=12
ASHO Ashiyiah 70.95 296 *i* P **P 08 28 59.2 -1.6**
SNR=9.8
MASF Masafi 70.95 296 P **P 08 29 00.8 +0.1**
SNR=7.7
SHME Shamm 71.06 297 P **P 08 29 01.0 -0.3**
ALNE Al Ain 71.15 295 P **P 08 29 01.7 -0.2**
SNR=50
ALNE Al Ain 71.15 295 *i* P **P 08 29 00.6 -1.3**
SNR=15
DMTO DMTO 71.26 288 P **P 08 29 04.0 +1.3**
SNR=7.8
NAZ Nazwa, Dubai 71.35 296 P **P 08 29 02.3 -0.8**
FAQ Al Faqa, Dubai 71.38 296 *i* P **P 08 29 02.7 -0.6**
SNR=5.7
UMZA Um Al Zommool 71.53 293 P **P 08 29 02.7 -1.5**
GEYT Alibeck 71.56 310 P **P 08 29 03.8 -0.4**
comp=Z,30nm,0.8s,baz=142,slow=5.1,SNR=36
GEYT LR LR 09 04 27.8
comp=Z,354nm,20.4s,baz=84,slow=39
comp=Z,30nm,0.8s
GEYT Alibeck 71.56 310 P **P 08 29 03.5 -0.7**
GYA0 ALIBECK ARRAY 71.56 310 P **P 08 29 03.7 -0.5**
GYA0 pmax pmax
comp=Z,65nm,1.0s
GYA0B ALIBECK ARRAY 71.56 310 P **P 08 29 03.7 -0.4**
ASUD Al Ashush, Dub 71.60 295 *i* P **P 08 29 03.1 -1.5**
SNR=15
RER Riviere de l'E 71.89 247 P **P 08 29 07.6 +1.1**
RER Riviere de l'E 71.89 247 P **P 08 29 08.1 +1.6**
SNR=10
RER Riviere de l'E 71.89 247 P **P 08 29 07.6 +1.1**
AJN Ajban 71.91 295 P **P 08 29 07.8 +1.4**
SNR=10
AJN Ajban 71.91 295 *i* P **P 08 29 05.1 -1.3**
SNR=11
RBK Rabkut 71.95 288 P **P 08 29 08.0 +1.1**
SNR=13
BILL Bilibino 72.04 15*d i*P **P 08 29 06.4 +0.1**
BILL *i* 08 29 20.1
BILL *e* 08 31 49.5
BILL *i* S **S 08 38 23.4 +1.2**
BILL pmax pmax
comp=Z,108nm,2.0s
BILL MLR MLR
comp=Z,189nm,18.0s
DOK Doka 72.11 289 P **P 08 29 06.0 -1.7**
SNR=35
WHFO Wadi Hawf 72.39 288 P **P 08 29 08.0 -1.5**
SNR=16
NRIK Noril'sk 72.43 347 P **P 08 29 09.2 +0.6**
comp=Z,166nm,0.7s,baz=128,slow=6.0,SNR=257
NRIK S **S 08 38 24.6 -2.0**
comp=Z,7.4nm,0.8s,baz=358,slow=22,SNR=21
NRIK LR LR 09 04 15.4
comp=Z,650nm,19.6s,baz=144,slow=38
comp=Z,166nm,0.7s
NRIK Noril'sk 72.43 347 P **P 08 29 09.5 +0.9**
NRIK IAmb IAmb 08 29 10.8
comp=Z,251nm,0.8s
NRIK Noril'sk 72.43 347*c i*P **P 08 29 09.2 +0.6**
NRIK pmax pmax
comp=Z,995nm,2.0s
ABTO Aybut 72.80 288 P **P 08 29 11.0 -1.0**
SNR=16
MZWR Madinat Zayed 72.82 294 P **P 08 29 10.8 -1.0**
MZR Muzera 73.11 294 P **P 08 29 14.3 +0.7**
SNR=14
AB31 Akbulak array 73.30 321 *i* P **P 08 29 13.2 -1.0**
ABKAR Akbulak array 73.30 321 P **P 08 29 13.7 -0.5**

NIKH	**Nikolski High**	74.28	35	P	P	08 29 20.8	+1.0
NIKH				IAmb	IAmb	08 29 48.8	
	comp=Z,147nm,0.9s						
NIKH	**Nikolski High**	74.28	35	P	P	08 29 20.8	+1.0
	baz=251						
SLWR	**Sila**	74.84	294	P	P	08 29 22.9	-0.8
SPIA	**Saint Paul Isl**	75.00	30	P	P	08 29 24.8	+0.9
	baz=248						
SVE	**Sverdlovsk**	75.40	329*d*	*i*P	P	08 29 25.9	-0.3
SVE				*e*S	S	08 39 00.1	-0.3
SVE				pmax	pmax		
	comp=Z,316nm,1.6s						
SVE				MLR	MLR		
	comp=Z,1μm,20.0s						
SHMA	**Al-Shehemyia**	75.67	296	P	P	08 29 27.2	-1.1
SMRA	**Abu-Samra**	75.69	295	P	P	08 29 26.8	-1.7
UNV	**Unalaska Valle**	75.89	34	P	P	08 29 30.4	+1.3
UNV				IAmb	IAmb	08 30 04.7	
	comp=Z,131nm,1.0s						
UNV	**Unalaska Valle**	75.89	34	P	P	08 29 29.9	+0.9
	baz=252						
UNV	**Unalaska Valle**	75.89	34	P	P	08 29 30.5	+1.4
SAKB	**Bahrain**	76.06	296	P	P	08 29 29.4	-1.2
RAR	**Rarotonga**	76.10	112	LR	LR	09 01 56.6	
	comp=Z,175nm,21.8s,baz=280,slow=35						
ARU	**Arti**	76.35	328	P	P	08 29 30.6	-1.0
	comp=Z,24nm,0.5s,baz=117,slow=3.5,SNR=33						
ARU				LR	LR	09 05 09.7	
	comp=Z,582nm,21.4s,baz=102,slow=37						
	comp=Z,24nm,0.5s						
ARU	**Arti**	76.35	328	P	P	08 29 31.1	-0.5
ARU				IAmb	IAmb	08 29 32.2	
	comp=Z,196nm,1.3s						
ARU	**Arti**	76.35	328*c*	*i*P	P	08 29 30.6	-1.0
ARU						08 29 40.9	
ARU						08 32 20.7	
ARU				S	S	08 39 10.6	-0.3
ARU				SS	SS	08 44 02.0	-4.4
ARU				pmax	pmax		
	comp=Z,215nm,1.4s						
ARU				MLR	MLR		
	comp=Z,1μm,20.0s						
AKUT	**Akutan**	76.39	34	P	P	08 29 32.8	+0.9
AKUT				IAmb	IAmb	08 29 56.3	
	comp=Z,274nm,1.0s						
SBV	**Sambava**	76.52	256	P	P	08 29 33.9	+0.5
	SNR=20						
GAMB	**Gambell**	76.91	24	P	P	08 29 36.2	+1.6
GAMB				IAmb	IAmb	08 29 37.5	
	comp=Z,84nm,0.8s						
GAMB	**Gambell**	76.91	24	P	P	08 29 35.5	+0.9
	baz=246						
FALS	**False Pass**	77.91	34	P	P	08 29 42.0	+1.6
FALS				IAmb	IAmb	08 30 05.1	
	comp=Z,193nm,0.8s						
FALS	**False Pass**	77.91	34	P	P	08 29 40.9	+0.5
	baz=255						
LKRN	**Lenkeran, Azer**	78.93	309	P	P	08 29 46.2	-0.2
TNA	**Tin City**	79.10	23	P	P	08 29 48.0	+1.3
	baz=249						
ABPO	**Ambohimpanom**	79.58	250	P	P	08 29 50.6	+0.1
ABPO				IAmb	IAmb	08 29 52.6	
	comp=Z,474nm,1.6s						
ABPO	**Ambohimpanom**	79.58	250	P	P	08 29 50.6	+0.1
ABPO				pmax	pmax		
	comp=Z,474nm,1.6s						
SDPT	**Sand Point**	79.67	34	P	P	08 29 50.7	+0.6
SDPT	**Sand Point**	79.67	34	P	P	08 29 50.8	+0.8
	baz=257,SNR=7.6						
ANM	**Nome**	79.78	24	P	P	08 29 51.9	+1.4
	baz=251						
CHNA	**Chernabura Isl**	80.06	35	P	P	08 29 52.8	+0.7
	baz=258						
AKT	**Akhty**	80.06	312	*e*P	P	08 29 52.3	-0.4
AKT				*e*		08 29 58.4	
AKT				pmax	pmax		
	comp=Z,206nm,1.6s						
VOI	**Vohitsoka**	80.25	248	P	P	08 29 54.2	+0.1
VOI	**Vohitsoka**	80.25	248	P	P	08 29 54.5	+0.5
	SNR=29						
VOI	**Vohitsoka**	80.25	248	P	P	08 29 54.0	0.0
MAK	**Makhachkala**	80.41	313	*e*P	P	08 29 54.4	+0.1
MAK				*e*		08 32 56.8	
MAK				*e*PPP	PPP	08 34 50.0	
MAK				*e*S	S	08 39 56.6	+1.7
MAK				*e*SS	SS	08 45 10.1	+2.1
MAK				*e*SSS	SSS	08 48 32.0	
MAK				pmax	pmax		
	comp=Z,811nm,2.1s						
SEKA	**Sheki**	80.43	311	P	P	08 29 53.8	-0.8
RAYN	**Ar Rayn**	80.46	293	P	P	08 29 54.6	-0.5
RAYN	**Ar Rayn**	80.46	293	P	P	08 29 54.6	-0.5
RAYN				pmax	pmax		
	comp=Z,37nm,0.7s						
RAYN	**Ar Rayn**	80.46	293	P	P	08 29 54.3	-0.8
RAYN	**Ar Rayn**	80.46	293	*i*P	P	08 29 54.3	-0.8
	SNR=41						
MNGR	**Mingechevir, A**	80.47	311	P	P	08 29 54.5	-0.2
ZKTA	**Zakatala**	80.91	312	P	P	08 29 56.7	-0.4
CHGN	**Chignik**	81.00	33	P	P	08 29 58.1	+0.9
	baz=259						
GANJ	**Ganja**	81.03	311	P	P	08 29 57.4	-0.4
MAW	**Mawson**	81.24	200	P	P	08 29 59.8	+1.6
	comp=Z,114nm,1.0s,baz=62,slow=6.0,SNR=138						
MAW				PKKPbc	**PKKPbc**	08 48 34.5	-2.1
	comp=Z,2.8nm,0.7s,baz=188,slow=3.3,SNR=14						
MAW				PKPPKP	**P'P'df**	08 56 36.8	-0.4
	comp=Z,3.2nm,1.1s,baz=259,slow=4.1,SNR=4.1						
MAW				LR	LR	09 02 42.0	
	comp=Z,340nm,20.9s,baz=50,slow=33						
MAW	**Mawson**	81.24	200	P	P	08 30 00.0	+1.8
	baz=81,SNR=89						
MAW	**Mawson**	81.24	200	P	P	08 29 59.5	+1.3
MAW	**Mawson**	81.24	200	P	P	08 29 59.5	+1.3
MAW				pmax	pmax		
	comp=Z,60nm,1.3s						
VNDA	**Vanda**	81.27	173	P	P	08 29 58.7	+0.5
	comp=Z,42nm,0.9s,baz=317,slow=6.1,SNR=278						
VNDA				PKKPbc	**PKKPbc**	08 48 34.6	-2.2
	comp=Z,1.3nm,0.8s,baz=254,slow=2.5,SNR=9.0						
VNDA				PKPPKP	**P'P'df**	08 56 36.5	-0.4
	comp=Z,0.8nm,1.0s,baz=34,slow=4.4,SNR=3.9						
VNDA				LR	LR	09 08 16.2	
	comp=Z,260nm,18.3s,baz=344,slow=37						
	comp=Z,42nm,0.9s						
VNDA	**Vanda**	81.27	173	P	P	08 29 58.7	+0.5
NAX	**Nakhchivan**	81.52	309	P	P	08 30 00.1	-0.4
BELG	**Belogornoye**	81.62	323	P	P	08 29 59.9	-0.6
	comp=Z,167nm,0.7s,baz=324,slow=0.9,SNR=35						
BELG				LR	LR	09 09 32.1	
	comp=Z,438nm,19.2s,baz=112,slow=38						
	comp=Z,167nm,0.7s						
N16K	**Nishlik Lake**	81.66	29	P	P	08 30 02.6	+2.0
	baz=258						
KIRV	**Kirov**	81.67	329	P	P	08 30 00.1	-0.5
	comp=Z,208nm,0.6s,baz=97,slow=5.4,SNR=62						
KIRV				LR	LR	09 09 30.1	
	comp=Z,596nm,21.6s,baz=104,slow=38						
	comp=Z,208nm,0.6s						
GROC	**Groznyy**	81.68	313	*e*P	P	08 30 00.8	-0.3
GROC				*e*S	S	08 40 05.7	-2.4
GROC				pmax	pmax		
	comp=Z,149nm,1.2s						
R16K	**Pilot Point**	81.69	32	P	P	08 30 01.2	+0.4
	baz=259						
P16K	**Nushagak River**	81.75	31	P	P	08 30 02.5	+1.4
	baz=259						
O16K	**Kokwok River B**	81.81	30	P	P	08 30 03.2	+1.8
	baz=259,SNR=24						
GNI	**Garni**	82.19	310	P	P	08 30 04.3	+0.3
	comp=Z,18nm,0.7s,baz=184,slow=3.9,SNR=13						
GNI				LR	LR	09 11 09.5	
	comp=Z,225nm,21.4s,baz=94,slow=39						
	comp=Z,18nm,0.7s						
GNI	**Garni**	82.19	310*c*	*i*P	P	08 30 04.6	+0.6
GNI				pmax	pmax		
	comp=Z,162nm,1.6s						
GNI	**Garni**	82.19	310	P	P	08 30 04.9	+0.9
GNI	**Garni**	82.19	310	P	P	08 30 04.0	0.0
SBA	**Scott Base**	82.20	172	P	P	08 30 04.4	+1.3
SBA	**Scott Base**	82.20	172	P	P	08 30 04.4	+1.3
SBA				pmax	pmax		
	comp=Z,148nm,1.6s						
O17K	**Koliganek Bris**	82.34	30	P	P	08 30 06.2	+2.0
	baz=260,SNR=13						
Q16K	**King Salmon**	82.37	31	P	P	08 30 05.3	+1.0
	baz=260						
CHIR	**Chirikof Islan**	82.47	34	P	P	08 30 06.3	+1.4
	baz=261						
Q17K	**Contact Creek**	82.70	31	P	P	08 30 06.6	+0.4
	baz=261,SNR=13						
ATD	**Arta Tunnel**	82.73	281	LR	LR	09 04 55.3	
	comp=Z,393nm,21.8s,baz=74,slow=34						
ATD	**Arta Tunnel**	82.73	281	P	P	08 30 08.6	+1.4
	SNR=6.3						
ZEI	**Tsey**	83.03	313	*e*P	P	08 30 03.1	-5.3
ZEI				pmax	pmax		
	comp=Z,261nm,1.4s						
N18K	**Kilae Creek**	83.09	29	P	P	08 30 09.2	+1.1
N18K	**Kilae Creek**	83.09	29	P	P	08 30 09.8	+1.7
	baz=260,SNR=17						
P18K	**Big Mountain,**	83.21	30	P	P	08 30 09.6	+0.8
	baz=261						
Q18K	**Katmai Hardscr**	83.22	31	P	P	08 30 09.4	+0.5
	baz=261,SNR=5.9						
AKH	**Akhalkalaki**	83.23	311	P	P	08 30 10.4	+1.0
O18K	**Koktuh Hills**	83.30	30	P	P	08 30 10.1	+0.9
O18K	**Koktuh Hills**	83.30	30	P	P	08 30 10.6	+1.5
	baz=261,SNR=12						
NCK	**Nalchik**	83.31	313*d*	*i*P	P	08 30 09.8	+0.2
NCK				pmax	pmax		
	comp=Z,119nm,0.8s						
ONI	**Oni**	83.34	313	P	P	08 30 10.9	+1.1
ONI				IAmb	IAmb	08 30 14.2	
	comp=Z,164nm,1.4s						
ONI	**Oni**	83.34	313	P	P	08 30 10.9	+1.1
ONI				pmax	pmax		
	comp=Z,164nm,1.4s						
GCSA	**Galena City Sc**	83.36	25	P	P	08 30 11.2	+1.9
	baz=259,SNR=111						
TTA	**Tatalina**	83.41	27	P	P	08 30 11.6	+1.9
TTA				IAmb	IAmb	08 30 12.4	
	comp=Z,125nm,0.8s						
TTA	**Tatalina**	83.41	27	P	P	08 30 11.6	+1.9
TTA				pmax	pmax		
	comp=Z,125nm,0.8s						
TTA	**Tatalina**	83.41	27	P	P	08 30 11.7	+1.9
	baz=260,SNR=77						
O19K	**Port Alsworth**	83.79	30	P	P	08 30 12.8	+1.2
	baz=262,SNR=16						
N19K	**Bonanza Creek**	83.79	29	P	P	08 30 14.0	+2.2
	baz=262,SNR=57						
L19K	**White Mountain**	83.82	28	P	P	08 30 13.8	+2.1
L19K	**White Mountain**	83.82	28	P	P	08 30 13.9	+2.1
	baz=261,SNR=42						
KBZ	**Khabaz**	83.83	314	P	P	08 30 11.9	-0.3
	comp=Z,15nm,0.7s,baz=92,slow=4.3,SNR=24						
KBZ				LR	LR	09 10 53.2	
	comp=Z,326nm,21.8s,baz=76,slow=38						
	comp=Z,15nm,0.7s						
KBZ	**Khabaz**	83.83	314*c*	*i*P	P	08 30 12.1	-0.1
KBZ				pmax	pmax		
	comp=Z,76nm,1.5s						
NEY	**Neytrino**	83.92	313	*i*P	P	08 30 13.9	+0.9
NEY				pmax	pmax		
	comp=Z,12nm,0.8s						
OHAK	**Old Harbor**	83.94	33	P	P	08 30 13.5	+1.1
OHAK				IAmb	IAmb	08 30 16.5	
	comp=Z,214nm,1.3s						
OHAK	**Old Harbor**	83.94	33	P	P	08 30 13.5	+1.1
	baz=263,SNR=7.7						
Q19K	**Cape Douglas,**	83.96	31	P	P	08 30 12.9	+0.4
	baz=263,SNR=5.0						
M19K	**Big River Lodg**	84.00	28	P	P	08 30 14.5	+1.8
	baz=262						
KIV	**Kislovodsk**	84.00	314	⇑P	P	08 30 13.7	+0.5
KIV	**Kislovodsk**	84.00	314	*e*P	P	08 30 13.0	-0.2
KIV				*e*S	S	08 40 26.8	-5.0
KIV				*e*SS	SS	08 46 00.0	-1.5
KIV				pmax	pmax		
	comp=Z,48nm,1.1s						
KIV	**Kislovodsk**	84.00	314	*i*P	P	08 30 11.5	-1.7
	SNR=12						
PRGR	**Permogore**	84.05	332	⇑*i*P	P	08 30 12.8	-0.1
PRGR				*e*S	S	08 40 24.6	-6.8
PRGR				pmax	pmax		
	comp=Z,480nm,0.8s						
P19K	**Oil Pt**	84.26	30	P	P	08 30 14.7	+0.6
	baz=263						
L20K	**Farewell, AK**	84.31	27	P	P	08 30 16.4	+2.0
	baz=262,SNR=21						
K20K	**Telida**	84.35	27	P	P	08 30 16.0	+1.5
K20K	**Telida**	84.35	27	P	P	08 30 16.5	+2.0
	baz=262,SNR=36						
KDAK	**Kodiak Island**	84.38	32	LR	LR	09 02 42.0	
	comp=Z,450nm,21.2s,baz=265,slow=32						
KDAK	**Kodiak Island**	84.38	32	P	P	08 30 16.1	+1.4
	baz=264						
J20K	**Nowinta River**	84.43	26	P	P	08 30 16.4	+1.6
J20K	**Nowinta River**	84.43	26	P	P	08 30 16.9	+2.0
	baz=262,SNR=40						
Q20K	**Shuyak Island**	84.57	31	P	P	08 30 16.4	+0.8
	baz=264						
M20K	**Styx River**	84.58	28	P	P	08 30 17.5	+1.7
	baz=263						
RSO	**Redoubt South**	84.59	29	P	P	08 30 16.9	+0.9
O20K	**Slope Mountain**	84.61	30	P	P	08 30 16.6	+0.7
	baz=263						
A21K	**Barrow**	84.72	18	P	P	08 30 18.2	+2.1
	baz=259						
N20K	**Mount Spurr**	84.94	29	P	P	08 30 17.9	+0.3
	baz=264,SNR=15						
SPCR	**Spurr Chakacha**	84.94	29	P	P	08 30 17.9	+0.3
	baz=264,SNR=13						
G21K	**Allakaket**	85.03	23	P	P	08 30 19.3	+1.5
	baz=262						
HOM	**Homer**	85.06	30	P	P	08 30 18.5	+0.4
	baz=264						
VRH	**Novokhopyorsk**	85.13	321	*e*P	P	08 30 17.6	-1.0
VRH				pmax	pmax		
	comp=Z,560nm,1.0s						
F21K	**Alatna River**	85.14	23	P	P	08 30 19.4	+1.0
	baz=262,SNR=9.2						
PPLA	**Purkeypile**	85.14	27	P	P	08 30 19.5	+0.9
	baz=264,SNR=12						
CHUM	**Lake Minchumin**	85.19	26	P	P	08 30 20.3	+1.6
	baz=263,SNR=8.2						
H21K	**Melozitna Rive**	85.20	24	P	P	08 30 20.4	+1.8
	baz=263,SNR=28						
CAST	**Castle Rocks**	85.25	27	P	P	08 30 19.8	+0.8
	baz=264,SNR=20						
CNPM	**China Poot**	85.25	31	P	P	08 30 19.8	+0.7
CNPM				IAmb	IAmb	08 30 22.1	
	comp=Z,148nm,0.8s						
SKT	**Skwentna**	85.35	28	P	P	08 30 18.9	-0.6
	baz=264,SNR=20						
PPT	**Papeete**	85.38	108	LR	LR	09 06 01.9	
	comp=Z,268nm,21.9s,baz=294,slow=34						
PPT2	**Papeete2**	85.38	108	*e*P	P	08 30 21.3	+0.7
	comp=Z,310nm,25.5s						
PPT2	**Papeete2**	85.38	108	*e*S	S	08 40 45.9	-0.5
	comp=Z,1μm,26.8s						
PPT2				*e*SS	SS	08 46 22.8	-0.2
PPT2	**Papeete2**	85.38	108	*e*LR	LR	08 57 20.2	
	comp=Z,1μm,34.5s						
PPT2				*e*LR	LR	08 57 20.8	
I21K	**Tanana**	85.48	25	P	P	08 30 21.8	+1.8
	baz=264,SNR=16						
BRSE	**Bradley Lake S**	85.52	30	P	P	08 30 20.6	+0.1
	baz=265,SNR=10						
SUA	**Susitna One**	85.67	29	P	P	08 30 21.5	+0.3
	baz=265,SNR=24						
F22K	**John River**	85.67	22	P	P	08 30 22.8	+1.8
	baz=263						
BPAW	**Bear Paw Mtn.**	85.80	26	P	P	08 30 22.3	+0.6
	baz=264,SNR=45						
TBI	**Tubuai**	85.80	113	*e*P	P	08 30 23.2	+0.7
	comp=Z,1μm,27.5s						
TBI	**Tubuai**	85.80	113	*e*S	S	08 40 50.3	+0.1
	comp=Z,5μm,27.5s						
TBI				*e*SS	SS	08 46 28.6	-0.2
	comp=Z,3μm,33.2s						
TBI	**Tubuai**	85.80	113	*e*LR	LR	08 57 30.7	
	comp=Z,17μm,36.8s						
TBI				*e*LR	LR	08 57 31.2	
	comp=Z,24μm,32.5s						
H22K	**Ishtalitna Cre**	85.81	24	P	P	08 30 23.4	+1.7
	baz=264,SNR=16						
G22K	**Bettles**	85.87	23	P	P	08 30 23.3	+1.4
	baz=264,SNR=47						
CUT	**Chulitna**	85.97	28	P	P	08 30 22.9	+0.4
	baz=265						
M22K	**Willow**	85.99	28	P	P	08 30 22.8	+0.2
	baz=265,SNR=10.0						
MLY	**Manley**	85.99	25	P	P	08 30 23.1	+0.4
	baz=265,SNR=34						
KTUT	**Trabzon**	86.02	311	⇑P	P	08 30 23.3	+0.1
TRF	**Thorofare Moun**	86.05	27	P	P	08 30 23.5	+0.4
	baz=265,SNR=7.6						
O22K	**Cooper Landing**	86.09	30	P	P	08 30 23.5	+0.3
	baz=266						
RC01	**Rabbit Creek A**	86.13	29	P	P	08 30 23.3	-0.1
	baz=266,SNR=17						
SOC	**Sochi**	86.13	313	*e*P	P	08 30 21.8	-1.9
SOC				*e*		08 33 41.3	
SOC				*e*PPP	PPP	08 35 36.7	
SOC				*e*S	SKSac	08 40 38.9	-4.7
SOC				*e*SSS	SSS	08 49 58.4	
SOC				pmax	pmax		
	comp=Z,143nm,0.8s						
SEW	**Seward**	86.20	30	P	P	08 30 23.8	+0.1
	baz=266						
D23K	**Nanushuk River**	86.39	21	P	P	08 30 26.4	+2.0
	baz=264,SNR=34						
COLD	**Coldfoot**	86.41	23	P	P	08 30 26.1	+1.4
COLD				IAmb	IAmb	08 30 27.3	
	comp=Z,94nm,0.6s						
COLD	**Coldfoot**	86.41	23	P	P	08 30 26.0	+1.4
	baz=265,SNR=62						
G23K	**Bananza Creek**	86.43	23	P	P	08 30 26.4	+1.6
	baz=265,SNR=63						
PMR	**Palmer**	86.45	29	P	P	08 30 25.1	+0.2
	baz=266,SNR=15						
C23K	**Itkillik River**	86.49	20	P	P	08 30 25.5	+0.6
	baz=264,SNR=30						
H23K	**Yukon River**	86.56	24	P	P	08 30 26.8	+1.4
	baz=266,SNR=30						
I23K	**Minto, Yukon-K**	86.58	25	P	P	08 30 26.6	+1.2
I23K				IAmb	IAmb	08 30 27.3	
	comp=Z,63nm,0.8s						
I23K	**Minto, Yukon-K**	86.58	25	P	P	08 30 26.1	+0.7
	baz=266,SNR=52						
NEA2	**Nenana**	86.67	26	P	P	08 30 26.0	0.0
	baz=266						
MCK	**McKinley**	86.68	26	P	P	08 30 26.2	+0.1
	baz=266,SNR=22						
E23K	**Chandalar**	86.70	22	P	P	08 30 27.6	+1.5
	baz=266,SNR=65						
VORR	**Voronezh**	86.73	321	*e*P	P	08 30 26.2	-0.3
VORR				pmax	pmax		
	comp=Z,600nm,0.8s						
VSR	**Storozhevoye**	86.74	321	*e*P	P	08 30 25.3	-1.2
VSR				pmax	pmax		
	comp=Z,1μm,1.8s						
TOLK	**Toolik Lake Re**	86.76	21	P	P	08 30 27.7	+1.3
	baz=266,SNR=30						
KNK	**Knik Glacier**	86.76	29	P	P	08 30 27.2	+0.7
KNK				IAmb	IAmb	08 30 30.3	
	comp=Z,71nm,0.6s						
KNK	**Knik Glacier**	86.76	29	P	P	08 30 27.3	+0.7
	baz=267,SNR=26						
AAE	**Adis Abeba**	86.77	279	*e*P	P	08 30 29.9	+2.0
AAE				*e*S	SKSac	08 40 50.7	+1.3
AAE	**Adis Abeba**	86.77	279	*e*P	P	08 30 29.9	+2.0
AAE				*e*S	SKSac	08 40 50.7	+1.3
PWL	**Port Wells**	86.80	29	P	P	08 30 27.2	+0.5
	baz=267,SNR=13						
WAT1	**Susitna Watana**	86.80	27	P	P	08 30 26.6	-0.1
	baz=267						
SML	**Sawmill**	86.84	28	P	P	08 30 27.6	+0.7
	baz=267,SNR=18						
FURI	**Furi**	86.86	279	*e*P	P	08 30 30.7	+2.4
FURI				*e*S	SKSac	08 40 46.7	-3.3
FURI	**Furi**	86.86	279	*e*P	P	08 30 30.7	+2.4
FURI				*e*S	SKSac	08 40 46.7	-3.3
KLMR	**Klimovskoe**	86.91	331*c*	*i*P	P	08 30 26.2	-0.9
KLMR				pmax	pmax		
	comp=Z,168nm,0.6s						
KLMR				MLR	MLR		
	comp=Z,1μm,21.0s						
KLMR	**Klimovskoe**	86.91	331	⇑*i*P	P	08 30 26.3	-0.9
KLMR				*e*P	P	08 30 26.3	-0.9
KLMR				*e*P	P	08 30 26.3	-0.9
KLMR				AMP		08 30 28.8	
	comp=Z,168nm,0.6s						
KLMR				LR	LR	09 06 12.9	
KLMR				AMP		09 09 42.1	
	comp=Z,1μm,21.0s						
LPSR	**Galich'ya Gora**	86.93	322	*e*P	P	08 30 26.7	-0.7
LPSR				pmax	pmax		
	comp=Z,480nm,1.0s						
D24K	**Happy Valley**	87.07	21	P	P	08 30 28.5	+0.7
	baz=266						
E24K	**Your Creek**	87.12	22	P	P	08 30 28.8	+0.6
	baz=266,SNR=33						
M23K	**Glacier View**	87.13	28	P	P	08 30 28.3	0.0
	baz=268,SNR=15						
C24K	**Franklin Bluff**	87.15	20	P	P	08 30 28.6	+0.4
	baz=266						
WAT6	**Susitna Watana**	87.16	28	P	P	08 30 29.0	+0.4
	baz=268,SNR=26						
TCOL	**CIGO, UAF Yank**	87.20	25	P	P	08 30 28.0	-0.5
	baz=267						
COLA	**College**	87.21	25	P	P	08 30 28.1	-0.4
COLA	**College**	87.21	25	P	P	08 30 28.1	-0.4
COLA				pmax	pmax		
	comp=Z,19nm,0.7s						
COLA	**College**	87.21	25	P	P	08 30 27.8	-0.7
	baz=267						
COLA	**College**	87.21	25	P	P	08 30 28.4	-0.1
H24K	**Noodor Dome**	87.24	24	P	P	08 30 29.8	+1.0
	baz=267,SNR=33						
F24K	**Squaw Lake**	87.32	23	P	P	08 30 30.3	+1.2
	baz=267,SNR=26						
SCM	**Sheep Creek Mo**	87.32	28	P	P	08 30 29.5	+0.3
	baz=268,SNR=11						
DHY	**Denali Highway**	87.34	27	P	P	08 30 29.6	+0.1
	baz=268,SNR=15						
POKR	**Poker Plat Res**	87.40	25	P	P	08 30 30.3	+0.8
	baz=268						
GLI	**Glacier Island**	87.40	29	P	P	08 30 29.7	+0.1
	baz=268						
G24K	**Hadweenzic Riv**	87.44	23	P	P	08 30 30.4	+0.7
	baz=268,SNR=28						
HDA	**Harding Lake**	87.58	26	P	P	08 30 29.6	-0.8
	baz=268,SNR=23						
ILAR	**Eielson Array**	87.62	25	P	P	08 30 29.3	-1.2
	comp=Z,10nm,0.6s,baz=241,slow=5.0,SNR=137						
ILAR				PP	PP	08 33 53.9	-2.5
	comp=Z,2.0nm,0.9s,baz=273,slow=6.0,SNR=2.8						
ILAR				PKPPKP	**P'P'df**	08 56 21.0	-5.2
	comp=Z,2.0nm,1.1s,baz=131,slow=0.7,SNR=7.1						
ILAR				LR	LR	09 07 28.4	
	comp=Z,230nm,21.9s,baz=260,slow=34						
FID	**Port Fidalgo**	87.70	29	P	P	08 30 31.7	+0.7
FID				IAmb	IAmb	08 30 58.6	
	comp=Z,180nm,2.0s						
KIBK	**Kibwezi**	87.73	268	P	P	08 30 33.0	+0.7
KIBK	**Kibwezi**	87.73	268	P	P	08 30 33.7	+1.5
	SNR=143						
MOS	**Moscow**	87.76	326	*e*P	P	08 30 26.8	-4.6
MOS				*e*		08 30 43.5	
MOS				*e*		08 33 52.6	
MOS				*e*S	SKSac	08 40 49.9	-3.2
MOS				pmax	pmax		
	comp=Z,350nm,0.7s						
MOS				pmax	pmax		
	comp=

F25K **Christian Rive** 88.18 23 P P 08 30 34.8 +1.6
baz=269,SNR=33
PRP **Porcupine Dome** 88.21 25 P P 08 30 33.2 -0.3
baz=269
PAX **Paxson** 88.21 27 P P 08 30 33.6 +0.1
baz=270,SNR=29
E25K **Arctic Village** 88.22 22 P P 08 30 35.0 +1.6
baz=269,SNR=51
ASF **Jabal al Asfar** 88.25 302 P P 08 30 35.3 +0.9
comp=Z,116nm,0.8s,baz=109,slow=2.1,SNR=119
ASF LR LR 09 15 08.7
comp=Z,583nm,20.9s,baz=105,slow=39
comp=Z,116nm,0.8s
MQOL **MQOL** 88.26 291⇑ *i*P P 08 30 34.0 -0.5
J25K **Salcha River,** 88.27 26 P P 08 30 33.2 -0.5
baz=270
HARP **HAARP** 88.35 28 P P 08 30 35.2 +1.1
baz=270,SNR=14
OBN **Obninsk** 88.36 325 ⇑P P 08 30 33.7 -0.4
OBN **Obninsk** 88.36 325 P P 08 30 33.6 -0.6
comp=Z,36nm,0.7s,baz=64,slow=2.3,SNR=47
OBN LR LR 09 12 46.8
comp=Z,158nm,21.5s,baz=90,slow=37
comp=Z,36nm,0.7s
OBN **Obninsk** 88.36 325*c* *i*P P 08 30 33.3 -0.9
OBN *i* 08 30 48.2
OBN *e**SS S 08 41 11.2 -2.4
OBN *i* 08 42 30.8
OBN *e*SSS SSS 08 50 44.9
OBN pmax pmax
comp=Z,745nm,1.8s
OBN MLR MLR
comp=Z,849nm,23.0s
C26K **Camden Bay** 88.47 20 P P 08 30 36.5 +2.1
baz=270,SNR=11
KMBO **Kilima Mbogo** 88.49 269 P P 08 30 37.5 +1.4
comp=Z,14nm,1.1s,baz=65,slow=22,SNR=203
KMBO LR LR 09 07 29.8
comp=Z,18nm,22.0s,baz=91,slow=34
KMBO **Kilima Mbogo** 88.49 269 P P 08 30 37.6 +1.4
KMBO **Kilima Mbogo** 88.49 269 P P 08 30 37.6 +1.5
KMBO pmax pmax
comp=Z,734nm,1.4s
KMBO **Kilima Mbogo** 88.49 269 *e*P P 08 30 37.4 +1.4
KMBO *e*S SKSac 08 40 58.6 -1.1
KMBO **Kilima Mbogo** 88.49 269 *e*P P 08 30 37.4 +1.4
KMBO *e*S SKSac 08 40 58.6 -1.1
KMBO **Kilima Mbogo** 88.49 269 *i* P P 08 30 37.5 +1.4
SNR=232
RIDG **Independent Ri** 88.49 26 P P 08 30 34.9 +0.1
baz=270,SNR=5.7
N25K **Chitina, Valde** 88.62 29 P P 08 30 36.9 +1.5
N25K **Chitina, Valde** 88.62 29 P P 08 30 35.9 +0.4
baz=270,SNR=16
BMRM **Bremner River** 88.62 29 P P 08 30 35.9 +0.5
baz=270
KAIM **Kayak Island** 88.72 30 P P 08 30 36.5 +0.6
baz=270
F26K **Sheenjek River** 88.76 22 P P 08 30 36.7 +0.8
baz=271,SNR=23
SCRK **Sand Creek** 88.87 26 P P 08 30 37.2 +0.5
baz=271,SNR=15
C27K **Jago River** 88.89 21 P P 08 30 37.8 +1.3
baz=271,SNR=61
G26K **Porcupine Rive** 88.91 23 P P 08 30 38.0 +1.4
baz=271,SNR=31
KSLA **Kassala** 88.94 285 *e*P P 08 30 33.1 -4.7
KSLA S S 08 41 13.8 -6.9
MENT **Mentasta** 89.01 27 P P 08 30 38.5 +1.3
MENT IAmb IAmb 08 30 39.1
comp=Z,37nm,0.6s
HWQ **Hawqa** 89.02 304 *e*P P 08 30 37.9 -0.1
J26L **Joseph Creek** 89.05 26 P P 08 30 38.0 +0.6
baz=271,SNR=46
LVZ **Lovozero** 89.10 338 *i* P P 08 30 36.8 -0.7
L26K **Log Cabin Wild** 89.18 27 P P 08 30 39.1 +1.1
baz=271,SNR=7.6
I26K **Coal Creek Min** 89.20 25 P P 08 30 38.4 +0.4
baz=272
QRWL **Qaraoun** 89.25 303 *e*P P 08 30 39.4 +0.3
BHL **Bhannes** 89.27 304 *e*P P 08 30 39.2 +0.1
M26K **Nabesna, AK** 89.36 28 P P 08 30 39.4 +0.5
baz=272,SNR=16
MCARA **McCarthy VSAT** 89.38 29 P P 08 30 39.9 +1.0
baz=272
DIKM **Dikmen** 89.41 311 ⇑P P 08 30 39.9 +0.4
MMAI **Mount Meron Ar** 89.50 303 P P 08 30 40.9 +0.7
comp=Z,74nm,0.8s,baz=94,slow=6.8,SNR=88
MMAI LR LR 09 15 55.9
comp=Z,470nm,20.6s,baz=312,slow=39
comp=Z,74nm,0.8s
APA **Apatity** 89.59 337⇓ *i*P P 08 30 36.6 -3.1
APA *i* S S 08 41 16.0 -8.7
APA *i* PS PS 08 42 41.0 +1.7
APA *i* SS SS 08 47 21.0 -0.8
APA pmax pmax
comp=Z,30nm,1.1s
E27K **Coleen River** 89.70 22 P P 08 30 41.8 +1.4
baz=273,SNR=55
K27K **Chicken** 89.71 26 P P 08 30 42.1 +1.7
baz=272
G27K **Doyon Strip** 89.75 23 P P 08 30 42.0 +1.4
baz=273,SNR=26
I27K **Kandik River** 89.83 25 P P 08 30 42.4 +1.4
baz=273,SNR=40
H27K **Steamboat Moun** 89.83 24 P P 08 30 42.6 +1.6
baz=273,SNR=26
L27K **Beaver Creek,** 89.87 27 P P 08 30 42.4 +1.2
L27K IAmb IAmb 08 30 43.8
comp=Z,44nm,0.7s
L27K **Beaver Creek,** 89.87 27 P P 08 30 42.5 +1.3
baz=273,SNR=11
M27K **Edge Creek, AK** 89.88 28 P P 08 30 42.7 +1.3
baz=273,SNR=15
MESA **MESA** 89.95 30 P P 08 30 43.0 +1.1
baz=273
EIL **Elat** 89.97 300 P P 08 30 42.6 +0.3
comp=Z,45nm,0.7s,baz=68,slow=0.8,SNR=44
EIL LR LR 09 14 10.4
comp=Z,847nm,21.7s,baz=92,slow=38
comp=Z,45nm,0.7s
EGAK **Eagle** 90.07 25 P P 08 30 42.6 +0.5
baz=273
SIM **Simferopol'** 90.15 315 *e*P P 08 30 42.5 -0.3
SIM *e*S S 08 41 32.9 +2.1
SIM pmax pmax
comp=Z,99nm,0.7s
CTG **Chitna Glacier** 90.21 29 P P 08 30 44.5 +1.5
baz=273
LODK **Lodwar** 90.27 273 *e*P P 08 30 44.8 +0.6
LODK *e*S S 08 41 34.5 +1.2
LODK **Lodwar** 90.27 273 *e*P P 08 30 44.8 +0.6
LODK *e*S S 08 41 34.5 +1.2
BVCY **Beaver Creek** 90.35 28 P P 08 30 44.8 +1.3
baz=274,SNR=10
YUK3 **Moose Creek** 90.58 28 P P 08 30 45.8 +1.0
baz=274,SNR=12
BR131 **Keskin Array S** 90.71 310*c* *i*P P 08 30 44.5 -1.3
BR131 **Keskin Array S** 90.71 310 P P 08 30 44.9 -0.9
SNR=18
BRTR **Keskin Array B** 90.71 310 P P 08 30 44.5 -1.3
comp=Z,11nm,0.8s,baz=116,slow=4.3,SNR=57
BRTR LR LR 09 18 48.2
comp=Z,352nm,19.5s,baz=93,slow=40
comp=Z,11nm,0.8s
BRTR **Keskin Array B** 90.71 310 *i* P P 08 30 44.7 -1.1
BRTR pmax pmax
comp=Z,12nm,0.8s
O28M **Mount Upton** 90.78 29 P P 08 30 47.4 +1.6
baz=274,SNR=13
PINM **Pinnacle** 90.80 30 P P 08 30 47.0 +1.4
baz=274,SNR=6.0
DAWY **Dawson** 90.89 26 P P 08 30 46.9 +0.9
DAWY IAmb IAmb 08 30 48.6
comp=Z,182nm,2.0s
DAWY **Dawson** 90.89 26 P P 08 30 47.1 +1.2
baz=275
YUK8 **Steele Glacier** 90.95 29 P P 08 30 48.1 +1.5
baz=274,SNR=17
CSS **Mathiatis** 91.16 305 P P 08 30 48.1 +0.3
I29M **Ogilvie Camp,** 91.23 25 P P 08 30 48.2 +0.8
baz=276
PNL **Peninsula** 91.27 30 P P 08 30 49.0 +1.2
baz=275
PNL **Peninsula** 91.27 30 P P 08 30 49.1 +1.3
QSPA **South Pole Qui** 91.33 180 LR LR 09 12 25.9
comp=Z,370nm,20.6s,baz=356,slow=36

ANTO **Ankara** 91.35 310 ⇑P P 08 30 48.8 +0.1
ANTO **Ankara** 91.35 310 ⇑P P 08 30 48.8 +0.1
ANTO **Ankara** 91.35 310 P P 08 30 47.8 -0.9
J29M **Klondike Camp** 91.36 26 P P 08 30 49.5 +1.4
baz=276
M29M **Somme Creek** 91.46 28 P P 08 30 50.4 +1.7
baz=276,SNR=49
YUK4 **Talbot Arm** 91.48 29 P P 08 30 50.6 +1.7
baz=276,SNR=14
PUL **Pulkovo** 91.51 330 *i* P P 08 30 48.5 -0.3
PUL pmax pmax
comp=Z,88nm,1.1s
L29M **L29M** 91.54 27 P P 08 30 51.1 +2.1
baz=276,SNR=13
O29M **Mount Kennedy** 91.62 30 P P 08 30 50.5 +0.9
baz=276
YUK6 **Outpost Mounta** 91.66 29 P P 08 30 50.7 +0.8
baz=276,SNR=6.1
K29M **Barlow Dome** 91.73 26 P P 08 30 51.0 +1.1
baz=277
EPYK **Eagle Plains** 91.76 24 P P 08 30 50.1 +0.2
baz=277
G30M **tAoh Zraii Nji** 91.87 23 P P 08 30 50.8 +0.3
baz=278
HYT **Haines Junctio** 92.09 29 P P 08 30 53.0 +1.3
HYT IAmb IAmb 08 30 54.7
comp=Z,190nm,1.9s
HYT **Haines Junctio** 92.09 29 P P 08 30 53.3 +1.6
baz=276,SNR=19
P29M **Windy Craggy** 92.11 30 P P 08 30 53.2 +1.5
baz=276,SNR=12
M30M **Minto, Yukon** 92.22 27 P P 08 30 53.5 +1.4
M30M **Minto, Yukon** 92.22 27 P P 08 30 53.8 +1.7
baz=277,SNR=13
N30M **Aishikik Lake** 92.22 28 P P 08 30 53.6 +1.4
baz=277
ARA0 **ARCESS Array S** 92.26 340 *e*P P 08 30 51.1 -1.0
ARA0 IAmb IAmb 08 30 51.6
comp=Z,54nm,0.9s
ARCES **ARCESS Array B** 92.26 340 P P 08 30 51.0 -1.1
comp=Z,23nm,0.6s,baz=78,slow=4.2,SNR=57
ARCES PKKPbc PKKPdf 08 48 07.5 +0.7
comp=Z,2.0nm,0.8s,baz=255,slow=3.6,SNR=8.9
comp=Z,23nm,0.6s
KDZE **Karadeniz Ereo** 92.29 311 ⇑P P 08 30 53.5 +0.6
P30M **Million Dollar** 92.44 30 P P 08 30 54.7 +1.5
baz=277
MAYO **Mayo, Yukon** 92.48 26 P P 08 30 54.7 +1.4
baz=278
SPB2 **Spitsbergen Ar** 92.54 349 P P 08 30 53.1 -0.2
SPA0 **Spitsbergen Ar** 92.54 349 *e*P P 08 30 53.0 -0.3
SPA0 IAmb IAmb 08 30 53.8
comp=Z,282nm,1.6s
SPITS **Spitsbergen Ar** 92.54 349 P P 08 30 52.6 -0.7
comp=Z,11nm,0.6s,baz=92,slow=8.6,SNR=10
SPITS LR LR 09 17 27.5
comp=Z,384nm,20.9s,baz=34,slow=39
comp=Z,11nm,0.6s
HAMF **Hammerfest** 92.66 341 *e*P P 08 30 52.7 -1.2
HAMF IAmb IAmb 08 30 53.1
comp=Z,67nm,0.9s
INK **Inuvik** 92.67 21 P P 08 30 54.3 +0.3
comp=Z,25nm,0.9s,baz=288,slow=4.3,SNR=46
INK PKiKP PKiKP 08 35 43.0 +1.1
comp=Z,3.0nm,0.6s,baz=318,slow=4.3,SNR=6.0
INK LR LR 09 18 43.9
comp=Z,87nm,18.7s,baz=259,slow=39
comp=Z,25nm,0.9s
INK **Inuvik** 92.67 21 P P 08 30 54.5 +0.4
baz=280
JAWL **J.Aulia** 92.74 285 *e*P P 08 30 55.4 -0.2
F31M **Tsiigehtchic** 92.75 22 P P 08 30 54.6 +0.2
baz=280
O30N **Mendenhall** 92.79 29 P P 08 30 56.3 +1.5
baz=278,SNR=11
PLBC **Pleasant Camp** 92.83 30 P P 08 30 55.9 +1.0
baz=277,SNR=6.3
N31M **Braeburn, Yuko** 92.83 28 P P 08 30 56.6 +1.6
baz=278,SNR=7.1
AKASG **Malin Array Be** 93.03 321 P P 08 30 54.8 -1.3
comp=Z,12nm,0.6s,baz=70,slow=4.4,SNR=133
AKASG LR LR 09 16 46.1
comp=Z,535nm,21.6s,baz=78,slow=38
comp=Z,12nm,0.6s
AKASG **Malin Array Be** 93.03 321 P P 08 30 55.2 -0.9
AKASG **Malin Array Be** 93.03 321 P P 08 30 55.2 -0.9
AKASG pmax pmax
comp=Z,458nm,1.8s
KBS **Kingsbay** 93.09 350 *e*P P 08 30 55.6 -0.2
S31K **Pelican** 93.09 32 P P 08 30 57.2 +1.1
baz=278
HSPB **Hornsund (broa** 93.11 348 *e*P P 08 30 55.3 -0.6
KTK1 **Kautokeino** 93.15 339 *e*P P 08 30 55.2 -1.1
KTK1 IAmb IAmb 08 30 56.7
comp=Z,26nm,0.7s
R31K **City Hall, Gus** 93.29 31 P P 08 30 58.6 +1.5
baz=278
SKAG **Skagway** 93.35 30 P P 08 30 58.6 +1.3
SKAG IAmb IAmb 08 30 59.6
comp=Z,40nm,0.9s
SKAG **Skagway** 93.35 30 P P 08 30 58.5 +1.2
baz=278,SNR=12
M31M **Drury Creek, Y** 93.38 28 P P 08 30 58.2 +0.7
M31M **Drury Creek, Y** 93.38 28 P P 08 30 58.5 +1.1
baz=279
FINES **FINESS Array B** 93.38 332 P P 08 30 56.1 -1.3
comp=Z,31nm,0.5s,baz=51,slow=5.9,SNR=43
FINES LR LR 09 14 35.6
comp=Z,644nm,21.6s,baz=86,slow=36
comp=Z,31nm,0.5s
FINES **FINESS Array B** 93.38 332 *i* P P 08 30 56.0 -1.4
FINES pmax pmax
comp=Z,31nm,0.5s
WHY **Whitehorse** 93.39 29 P P 08 30 59.1 +1.4
baz=279,SNR=55
MNK **Minsk** 93.41 325 *i* P P 08 30 57.7 0.0
MNK *i* 08 34 42.9
MNK *i* PPP PPP 08 36 43.6
MNK *i* S SKSac 08 41 24.0 -1.7
MNK *i* *SS ScS 08 42 06.8 +5.5
MNK *i* SS SS 08 48 18.4 +1.0
MNK *i* SSS SSS 08 51 59.5
MNK pmax pmax
comp=Z,229nm,1.4s
MNK pmax pmax
comp=E,26nm,1.4s
MNK pmax pmax
comp=N,96nm,1.3s
MNK MLR MLR
comp=Z,1μm,23.0s
MNK **Minsk** 93.41 325 *i* P P 08 30 57.7 0.0
comp=E,26nm,1.4s
MNK *i* P P 08 30 57.7 0.0
comp=N,96nm,1.3s
MNK *i* P P 08 30 57.7 0.0
comp=Z,229nm,1.4s,baz=82
MNK *i* pP pwP 08 31 21.8 +2.1
MNK *i* PP PP 08 34 43.0 +0.4
MNK *i* PPP PPP 08 36 43.7
MNK *i* SKS 08 40 31.6
MNK *i* S SKSac 08 41 24.0 -1.7
MNK *i* sS ScS 08 42 06.9 +5.5
MNK *i* SS SS 08 48 18.4 +1.0
MNK *i* SSS SSS 08 51 59.6
MNK *i* LQ LQ 09 07 22.3
MNK *i* LR LR 09 10 35.1
MNK *i* LRM MLR 09 13 40.4
MNK comp=E,207nm,28.5s
MNK *i* LRM MLR 09 13 59.6
MNK comp=N,653nm,30.7s
MNK *i* LRM MLR 09 14 05.2
comp=Z,1μm,23.4s
SIT **Sitka** 93.70 33 P P 08 31 00.6 +1.6
baz=278
FARO **Faro, Yukon** 93.85 27 P P 08 31 01.2 +1.6
FARO **Faro, Yukon** 93.85 27 P P 08 31 01.1 +1.4
baz=280
R32K **Eaglecrest** 93.95 31 P P 08 31 01.5 +1.3
baz=279
NACGM **Naroch** 93.99 325⇑ *e*P P 08 30 59.9 -0.5
baz=82
JETT **Jettan, Norway** 94.00 340 *e*P P 08 30 59.3 -0.9
JETT IAmb IAmb 08 31 00.9
comp=Z,91nm,0.7s
JIS **Juneau Island** 94.02 31 P P 08 31 01.9 +1.5
S32K **Killisnoo** 94.04 32 P P 08 31 01.4 +0.9

baz=279
P32M **Atlin** 94.14 30 P P 08 31 02.1 +1.1
baz=280
N32M **Quiet Lake** 94.17 28 P P 08 31 02.6 +1.4
baz=280
TPGR **Topolog** 94.19 315 ⇑P P 08 31 01.6 +0.1
TIRR **Tirgusor** 94.24 315 ⇑P P 08 31 01.8 +0.1
TIRR **Tirgusor** 94.24 315 ⇑P P 08 31 01.8 +0.1
TAOE **Nuku Hiva Isla** 94.30 99 *e*P P 08 31 03.0 +0.2
comp=Z,145nm,26.0s
TAOE **Nuku Hiva Isla** 94.30 99 *e*S S 08 42 06.6 -2.7
comp=Z,701nm,28.1s
TAOE **Nuku Hiva Isla** 94.30 99 *e*LR LR 09 01 28.0
comp=Z,1μm,24.1s
CFR **Carcaliu** 94.36 315 ⇑P P 08 31 02.4 +0.1
CFR **Carcaliu** 94.36 315 ⇑P P 08 31 02.4 +0.1
VASR **Vaslui** 94.43 317 ⇓P P 08 31 02.9 +0.3
P33M **Teslin, Yukon** 94.47 29 P P 08 31 03.8 +1.1
baz=281
TRO **Tromso** 94.48 340 *e*P P 08 31 00.1 -2.2
TRO IAmb IAmb 08 31 02.4
comp=Z,53nm,1.3s
A36M **Sachs Harbour** 94.48 17 P P 08 31 02.5 +0.2
baz=288
ICOR **Ion Corvin** 94.71 314 ⇑P P 08 31 04.5 +0.6
MMPY **Sheldon Lake,** 94.73 27 P P 08 31 05.1 +1.4
baz=282
Q32M **Nakina River** 94.98 31 P P 08 31 06.3 +1.1
baz=281
MBAR **Mbarara** 94.99 270 LR LR 09 11 18.4
comp=Z,440nm,21.5s,baz=67,slow=34
MBAR **Mbarara** 94.99 270 P P 08 31 06.2 +0.1
MBAR **Mbarara** 94.99 270 *e*P P 08 31 06.0 -0.1
MBAR *e*S SKSac 08 41 30.5 -5.8
MBAR **Mbarara** 94.99 270 *e*P P 08 31 06.0 -0.1
MBAR *e*S SKSac 08 41 30.5 -5.8
T33K **Petersburg** 95.02 33 P P 08 31 06.5 +1.4
baz=280
U33K **Whale Pass** 95.06 33 P P 08 31 06.5 +1.3
baz=280
PRD **Provadia** 95.11 313 *i* P P 08 31 05.3 -0.5
CRAG **Craig** 95.17 34 P P 08 31 07.1 +1.4
baz=280
TESR **Tescani** 95.22 317 ⇓P P 08 31 05.8 -0.5
VRI **Vrincioaia** 95.25 316 ⇑P P 08 31 06.1 -0.3
VRI **Vrincioaia** 95.25 316 ⇑P P 08 31 06.1 -0.3
PLOR **Plostina** 95.31 316 ⇑P P 08 31 06.5 -0.2
PLOR **Plostina** 95.31 316 ⇑P P 08 31 06.5 -0.2
WRAK **Wrangell Islan** 95.43 33 P P 08 31 08.4 +1.5
baz=281
BIZ **Bicaz** 95.54 317 ⇑P P 08 31 07.5 -0.2
R33M **Jennings River** 95.55 30 P P 08 31 08.9 +1.2
baz=282
NEHR **Nehoiu** 95.61 316 ⇑P P 08 31 08.5 +0.4
C36M **Paulatuk** 95.72 20 P P 08 31 08.1 +0.1
baz=289
S34M **Telegraph Cree** 95.78 31 P P 08 31 10.0 +1.5
baz=282
JMB **Yambol** 95.79 313 *i* P P 08 31 05.6 -3.3
MLR **Muntele Rosu** 95.85 316 ⇑P P 08 31 09.1 -0.2
MLR **Muntele Rosu** 95.85 316 P P 08 31 08.8 -0.5
comp=Z,30nm,0.9s,baz=13,slow=1.4,SNR=27
MLR LR LR 09 19 14.4
comp=Z,925nm,21.7s,baz=70,slow=38
comp=Z,30nm,0.9s
MLR **Muntele Rosu** 95.85 316 ⇑P P 08 31 09.1 -0.2
BURAR **Bucovina Array** 96.04 318 ⇑P P 08 31 10.4 +0.3
BURAR **Bucovina Array** 96.04 318 ⇑P P 08 31 10.4 +0.3
V35K **Ketchikan** 96.04 34 P P 08 31 11.9 +2.2
baz=281
SZH **Strazhica** 96.16 314 *i* P P 08 31 11.0 +0.4
DOPR **Dopca** 96.17 316 ⇑P P 08 31 10.4 -0.2
DLBC **Dease Lake** 96.24 31 LR LR 09 11 56.5
comp=Z,148nm,20.0s,baz=276,slow=34
DLBC **Dease Lake** 96.24 31 P P 08 31 12.3 +1.6
baz=283
STEI **Steigen** 96.28 339 *e*P P 08 31 09.2 -1.3
STEI IAmb IAmb 08 31 09.5
comp=Z,55nm,0.9s
TGTN **Hyland Airport** 96.35 28 P P 08 31 12.7 +1.6
baz=285
T35M **Bob Quinn** 96.44 32 P P 08 31 13.3 +1.7
baz=282
FAUS **Fauske** 96.45 339 *e*P P 08 31 10.1 -1.3
FAUS IAmb IAmb 08 31 10.2
comp=Z,48nm,0.9s
LVV **L'vov** 96.46 320 *e*P P 08 31 10.3 -1.5
WTLY **Watson Lake, Y** 96.46 29 P P 08 31 13.2 +1.5
baz=284
VOIR 96.48 316 ⇑P P 08 31 11.7 -0.4
VOIR 96.48 316 ⇑P P 08 31 11.7 -0.4
ARCR **ARCALIA** 96.70 318 ⇑P P 08 31 13.2 +0.2
KDZ **Kurdzhali** 96.76 312 *i* P P 08 31 12.2 -1.2
ARR **Arges** 96.78 316 ⇑P P 08 31 12.9 -0.5
VLAD **Vladila** 97.15 315 ⇑P P 08 31 14.5 -0.5
BMR **Baia Mare** 97.18 318 ⇑P P 08 31 14.7 -0.4
BMR **Baia Mare** 97.18 318 ⇑P P 08 31 14.7 -0.4
MOR8 **Moi Rana** 97.18 338 *e*P P 08 31 12.3 -2.4
MOR8 IAmb IAmb 08 31 13.8
comp=Z,20nm,0.6s
MATP **Matopo** 97.25 250 LR LR 09 12 10.8
comp=Z,825nm,20.6s,baz=62,slow=34
CJR **Cluj-Napoca** 97.27 317 ⇑P P 08 31 15.3 -0.3
CJR **Cluj-Napoca** 97.27 317 ⇑P P 08 31 15.3 -0.3
RZN **Rozhen** 97.27 312 *i* P P 08 31 14.7 -1.2
LOT **Lotru** 97.37 316 ⇑P P 08 31 15.5 -0.7
PGB **Panagyurishte** 97.55 313 *i* P P 08 31 16.1 -0.9
LSZ **Lusaka** 97.63 255 LR LR 09 12 16.6
comp=Z,484nm,20.4s,baz=102,slow=34
TRPA **Tarpa** 97.73 319 ⇓P P 08 31 17.4 -0.1
TRPA **Tarpa** 97.73 319 P P 08 31 17.2 -0.3
UZH **Uzhgorod** 97.79 319⇑ *i*P Pdif 08 31 18.0 +0.1
UZH *i* 08 31 28.7
DRGR 97.86 317 ⇑P P 08 31 17.7 -0.6
DRGR 97.86 317 ⇑P P 08 31 17.7 -0.6
DEV **Deva** 97.89 317 ⇑P P 08 31 18.0 -0.4
DEV **Deva** 97.89 317 ⇑P P 08 31 18.0 -0.4
LIRD **Liard River Hi** 97.96 29 P Pdif 08 31 19.7 +1.3
baz=286
WRGLY **Wrigley** 98.00 25 P Pdif 08 31 19.2 +0.8
baz=289
IDI **Anoyia** 98.02 306 ⇑P P 08 31 19.3 +0.1
IDI **Anoyia** 98.02 306 P P 08 31 18.6 -0.7
comp=Z,6.1nm,0.5s,baz=68,slow=5.0,SNR=5.0
comp=Z,6.1nm,0.5s
MMB **Musomiste** 98.02 312 *i* P P 08 31 17.5 -1.6
GZR **Gura Zlata** 98.07 316 ⇑P P 08 31 18.7 -0.6
GZR **Gura Zlata** 98.07 316 ⇑P P 08 31 18.7 -0.6
BEL **Belsk** 98.08 323 *e*P Pdif 08 31 19.8 +0.7
VTS **Vitosha** 98.22 313 ⇑P P 08 31 19.4 -0.7
VTS **Vitosha** 98.22 313 ⇑P P 08 31 19.4 -0.7
VTS **Vitosha** 98.22 313 *i* P P 08 31 18.9 -1.2
CRVS **Cervenica-Dubn** 98.28 320 *e*P Pdif 08 31 20.4 +0.3
STHS **Stebnicka Huta** 98.31 320 *e*P P 08 31 20.0 -0.2
DJES **Djerdap** 98.38 315 ⇑P Pdif 08 31 20.7 +0.1
HERR **Herculane** 98.41 316 ⇑P P 08 31 20.5 -0.2
BLKB **Belogradchik** 98.45 314 ⇑P P 08 31 20.4 -0.6
KKB **Krupnik** 98.45 313 *i* P P 08 31 19.5 -1.5
ABAH **Abaujker** 98.55 319 P Pdif 08 31 21.6 +0.3
SIRR **Siria** 98.67 317 ⇑P P 08 31 20.7 -1.1
KOTAN **Kotaneelee Air** 98.73 28 P Pdif 08 31 22.8 +1.0
baz=288
NSS **Namsos** 98.74 336 *e*P P 08 31 21.6 -0.1
BZS **Buzias** 98.83 316 ⇑P P 08 31 21.9 -0.6
BZS **Buzias** 98.83 316 ⇑P P 08 31 21.9 -0.6
MDVR **Moldovita** 98.92 316 ⇑P P 08 31 22.9 -0.2
FLDN **Fort Liard** 98.97 28 P Pdif 08 31 23.9 +1.0
baz=289
KECS **Kecovo** 99.00 319 *e*P Pdif 08 31 23.1 -0.2
NVL **N'lazarevskaya** 99.05 198 *e*P Pdif 08 31 23.1 +0.2
NVL *e*S SKSac 08 41 53.5 -1.0
NVL pmax pmax
comp=Z,30nm,1.0s
NVL MLR MLR
comp=Z,800nm,21.0s
OJC **Ojcow** 99.05 321 *e*P Pdif 08 31 21.7 -1.7
BOVS **Bovan** 99.14 314 ⇑P Pdif 08 31 22.7 -1.3
HFS **Hagfors** 99.58 332 P Pdif 08 31 24.2 -1.3
comp=Z,7.1nm,0.6s,baz=103,slow=5.3,SNR=22
HFS PKKPbc PKKPbc 08 47 47.7 -2.1
comp=Z,1.4nm,0.5s,baz=194,slow=5.4,SNR=4.4
HFS LR LR 09 20 32.3
comp=Z,632nm,21.6s,baz=68,slow=38
comp=Z,7.1nm,0.6s

LBTB Lobatse 99.77 245 LR LR 09 12 38.5
comp=Z,702nm,21.4s,baz=90,slow=33
GKP Gorka Klasztor 99.83 325 *e*P **Pdif 08 31 27.3 +0.5**
BOSA Boshof 99.86 241 P **Pdif 08 31 27.4 -0.3**
comp=Z,12nm,1.1s,baz=88,slow=3.2,SNR=6.1
BOSA LR LR 09 11 47.9
comp=Z,908nm,21.3s,baz=106,slow=33
comp=Z,12nm,1.1s
VYHS Vyhne 100.07 320 *e*P **Pdif 08 31 27.7 -0.3**
FRGS Fruska Gora 100.17 316 ⇑P **Pdif 08 31 27.9 -0.7**
BUD Budapest 100.18 319 P **Pdif 08 31 28.3 -0.2**
BUD Budapest 100.18 319 P **Pdif 08 31 29.7 +1.2**
NB2 NORSAR Subarra 100.39 333 PKPdf **Pdif 08 31 27.0 -2.2**
comp=Z,3.3nm,0.6s,baz=68,slow=1.9
NB2 NORSAR Subarra 100.39 333 PKPdf **Pdif 08 31 27.0 -2.2**
baz=68,slow=1.9
NOA NORSAR Array B 100.39 333 P **Pdif 08 31 27.5 -1.7**
comp=Z,4.7nm,0.6s,baz=69,slow=4.5,SNR=20
NOA PP **PP 08 35 34.7 -1.3**
comp=Z,0.6nm,0.6s,baz=71,slow=7.6,SNR=3.4
NOA PKKPbc **PKKPbc 08 47 46.1 -1.5**
comp=Z,1.5nm,0.8s,baz=69,slow=3.2,SNR=3.3
MAUC Maruska 100.50 321 *e*PDIFF **Pdif 08 31 30.7 +0.7**
MORC Moravsky Berou 100.57 321 *e*P **Pdif 08 31 29.9 -0.4**
BSD Bornholm Skovb 100.60 327 *e*P **Pdif 08 31 30.8 +0.6**
CSKK Cskako 100.71 319 P **Pdif 08 31 30.4 -0.5**
CSKK Cskako 100.71 319 P **Pdif 08 31 30.1 -0.8**
DEL Delary 100.72 328 *i* P **Pdif 08 31 30.0 -0.7**
JAVC Velka Javorina 100.72 320 *e*P **Pdif 08 31 31.8 +0.8**
MORH Mrgy, Hungar 100.73 318 ⇑P **Pdif 08 31 30.9 -0.1**
MORH Mrgy, Hungar 100.73 318 P **Pdif 08 31 29.8 -1.1**
MORH Mrgy, Hungar 100.73 318 P **Pdif 08 31 29.6 -1.4**
BORU Boraas 100.89 330 *e*P **Pdif 08 31 33.7 +2.3**
KRLC Kraliky 100.97 322 *i* P **Pdif 08 31 41.3 +9.2**
KRLC MLR MLR
comp=Z,1μm,23.4s
KRLC Kraliky 100.97 322 *e*PDIFF **Pdif 08 31 31.8 -0.3**
KSP Ksiaz 101.06 322 *e*P **Pdif 08 31 32.4 +0.1**
TIH Tihany 101.07 318 P **Pdif 08 31 31.5 -1.0**
MODS Modra-Piesok 101.10 320 *e*P **Pdif 08 31 32.4 -0.2**
PDG Podgorica 101.14 314 ⇑P **Pdif 08 31 31.8 -1.1**
TROLL Troll, Antarti 101.15 195 PKKP 08 47 43.5
TROLL Troll, Antarti 101.15 195 Pdiff **Pdif 08 31 33.8 +1.4**
DPC Dobruska-Polom 101.18 322 *i* P **Pdif 08 31 33.4 +0.4**
DPC Dobruska-Polom 101.18 322 *e*PDIFF **Pdif 08 31 33.4 +0.4**
OSTC Ostas 101.19 322 AMS AMS 09 19 20.0
comp=Z,700nm,18.0s
MPLH Magyarpolny 101.23 319 P **Pdif 08 31 32.9 -0.4**
MPLH Magyarpolny 101.23 319 P **Pdif 08 31 33.4 +0.1**
VRAC Vranov 101.29 321 ⇑P **Pdif 08 31 33.2 -0.3**
VRAC Vranov 101.29 321 ⇑P **Pdif 08 31 33.2 -0.3**
VRAC Vranov 101.29 321 *e*P **Pdif 08 31 33.8 +0.3**
BJUU Bjuv 101.30 328 *e*P **Pdif 08 31 33.2 -0.1**
UPC Upice 101.32 322 *i* P **Pdif 08 31 33.8 +0.2**
UPC MLR MLR
comp=Z,900nm,22.5s
UPC Upice 101.32 322 *e*PDIFF **Pdif 08 31 33.8 +0.2**
UPC AMS AMS 09 19 20.0
comp=Z,900nm,22.5s
ONAU Onsala 101.41 330 *e*P **Pdif 08 31 36.4 +2.7**
KRUC Moravsky 101.48 321 *e*P **Pdif 08 31 34.5 +0.2**
RONA Rosalia, Austr 101.91 319 *i* P **Pdif 08 31 36.5 +0.2**
SNR=5.4
YKA Yellowknife Ar 102.01 24 P **Pdif 08 31 37.1 +0.8**
comp=Z,5.6nm,0.7s,baz=297,slow=4.6,SNR=23
YKA PP **PP 08 35 49.3 +1.2**
comp=Z,1.3nm,0.9s,baz=301,slow=7.8,SNR=2.5
YKA PKiKP **PKiKP 08 35 58.6 +0.1**
comp=Z,2.5nm,0.6s,baz=289,slow=1.7,SNR=14
CONA Conrad Observa 102.13 320 *i* P **Pdif 08 31 37.7 +0.4**
comp=Z,30nm,1.5s,SNR=8.1
GOPC GO Pecny, Ondr 102.25 322 *i* P **Pdif 08 31 37.9 +0.2**
GOPC MLR MLR
comp=Z,800nm,20.2s
GOPC GO Pecny, Ondr 102.25 322 *e*PDIFF **Pdif 08 31 37.9 +0.2**
GOPC AMS AMS 09 21 00.0
comp=Z,800nm,20.2s
PRU Pruhonice 102.38 322 *i* P **Pdif 08 31 38.6 +0.4**
PRU MLR MLR
comp=Z,900nm,22.2s
PRU Pruhonice 102.38 322 *e*PDIFF **Pdif 08 31 38.6 +0.4**
PRU AMS AMS 09 20 50.0
comp=Z,900nm,22.2s
BRG Berggiesshubel 102.47 323 *i* P **Pdif 08 31 41.2 +2.5**
BRG pmax pmax
comp=Z,46nm,1.1s
BRG MLR MLR
comp=N,419nm,16.3s
BRG MLR MLR
comp=Z,1μm,23.3s
BRG MLR MLR
comp=E,846nm,23.4s
ARSA Arzberg 102.54 319 *i* P **Pdif 08 31 39.4 +0.3**
comp=E,29nm,1.4s,SNR=6.7
SNAA Sanae 102.73 195 PKKP 08 47 37.8
SNAA Sanae 102.73 195 PP **PKiKP 08 35 53.3 -6.5**
SNAA Sanae 102.73 195 Pdiff **Pdif 08 31 40.6 +1.2**
HOMB Homborsund 102.75 331 *e*P **Pdif 08 31 47.0 +7.3**
GROS Grobnik 102.77 318 *e*Pdiff **Pdif 08 31 39.6 -0.5**
GCIS Gornji Cirnik 102.85 318 *i* Pdiff **Pdif 08 31 40.7 +0.2**
CKRC Cesky Krumlov 102.87 321 *e*PDIFF **Pdif 08 31 40.8 +0.3**
CKRC AMS AMS 09 21 30.0
comp=E,600nm,21.4s
CLL Collm 102.90 324 *i* P **Pdif 08 31 39.9 -0.6**
CLL *e* 08 35 57.0
CLL pmax pmax
comp=Z,68nm,1.6s
CLL Collm 102.90 324 *i* Pdif **Pdif 08 31 39.9 -0.6**
comp=Z,68nm,1.6s
CLL *e*PP **PP 08 35 57.0 +1.9**
CLL *e*SKKSac SKKSac 08 42 48.0 -6.3
CLL *ex* x 08 44 36.0
CLL *e*PS **PS 08 45 06.0 +1.4**
CLL *e*PPS PPS 08 46 06.0
CLL *e*SS SS 08 50 42.0 +11
CLL *ex* x 08 53 18.0
CLL *e*(SSS) 08 55 06.0
CLL *ex* x 08 59 06.0
SOKA Soboth 103.02 319 *e*P **Pdif 08 31 41.5 +0.2**
comp=Z,27nm,1.4s
MOA Molln 103.19 320 *i* P **Pdif 08 31 42.6 +0.6**
comp=Z,48nm,1.4s,SNR=14
KHC Kasperske Hory 103.24 321 *i* P **Pdif 08 31 42.4 +0.2**
KHC MLR MLR
comp=Z,900nm,20.8s
KHC Kasperske Hory 103.24 321 *e*PDIFF **Pdif 08 31 42.4 +0.2**
KHC AMS AMS 09 22 10.0
comp=Z,900nm,20.8s
GERES GERESS Array B 103.25 321 Pdiff **Pdif 08 31 42.1 -0.2**
comp=Z,11nm,1.1s,baz=73,slow=5.9,SNR=24
GERES PP **PP 08 36 00.1 +2.1**
comp=Z,1.5nm,0.6s,baz=97,slow=5.5,SNR=5.2
OBKA Obir 103.39 319 *e*P **Pdif 08 31 42.5 -0.5**
comp=Z,29nm,1.6s
NKC Novy Kostel 103.58 323 *i* P **Pdif 08 31 44.2 +0.6**
NKC MLR MLR
comp=Z,800nm,20.2s
NKC Novy Kostel 103.58 323 *e*PDIFF **Pdif 08 31 44.2 +0.6**
NKC AMS AMS 09 19 20.0
comp=Z,800nm,20.2s
BIOA Bad Ischl, Aus 103.64 320 *e*P **Pdif 08 31 44.9 +0.9**
comp=Z,24nm,1.5s
VOJS Vojsko 103.97 318 *e*Pdiff **Pdif 08 31 44.7 -0.9**
VNA2 Neumayer--Watz 104.34 194 PKKP 08 47 31.9
baz=318,slow=4.7
VNA2 Neumayer--Watz 104.34 194 PP **PKiKP 08 36 04.4 +1.8**
baz=97,slow=1.3
VNA3 Neumayer Olymp 104.68 194 PKKP 08 47 32.9
VNA3 Neumayer Olymp 104.68 194 Pdiff **Pdif 08 31 51.7 +3.6**
VNA1 Neumayer--Stat 104.74 194 PKKP 08 47 33.0
VNA1 Neumayer--Stat 104.74 194 PP **PKiKP 08 36 06.0 +2.7**
VNA1 Neumayer--Stat 104.74 194 Pdiff **Pdif 08 31 50.4 +2.1**
WTTA Wattenberg 105.06 320 *i* P **Pdif 08 31 50.3 -0.2**
comp=Z,60nm,1.5s,SNR=11
WATA Walderalm 105.08 320 *i* P **Pdif 08 31 49.9 -0.6**
comp=Z,47nm,1.5s,SNR=8.5
SQTA Sankt Quirin 105.35 320 *i* P **Pdif 08 31 51.6 -0.1**
comp=Z,50nm,1.7s,SNR=7.4
MOTA Moosalm 105.38 320 *i* P **Pdif 08 31 51.2 -0.7**
comp=Z,44nm,1.5s,SNR=7.7
FETA Feichten 105.73 320 *i* P **Pdif 08 31 53.3 -0.1**
comp=Z,30nm,1.5s,SNR=8.8
NEW Newport 106.66 38 P **PKiKP 08 36 09.4 +1.8**
baz=292

SMMC Simmler 108.80 52 P **PKiKP 08 36 13.5 +1.5**
baz=286
PKM Mcpherson Peak 109.06 52 P **PKiKP 08 36 14.3 +1.6**
baz=286
NVAR Mina Array Bea 109.20 48 Pdiff **Pdif 08 32 10.9 +1.7**
comp=Z,0.7nm,0.8s,baz=269,slow=6.2,SNR=4.2
NVAR PKIKP **PKiKP 08 36 14.2 +1.3**
comp=Z,2.6nm,0.7s,baz=279,slow=1.7,SNR=9.9
NVAR PKKPbc **PKKPbc 08 47 20.9 +0.4**
comp=Z,3.0nm,1.1s,baz=142,slow=3.3,SNR=8.0
NVAR PKKPab **PKKPab 08 47 32.5 +0.2**
comp=Z,7.9nm,0.9s,baz=122,slow=4.7,SNR=21
MSO Missoula 109.21 39 P **PKiKP 08 36 13.7 +1.2**
baz=294
SBC Santa Barbara 109.26 53 P **PKiKP 08 36 13.6 +0.8**
baz=286
ARVC Arvin 109.77 52 P **PKiKP 08 36 14.8 +1.1**
baz=286
EKA Eskdalemuir Ar 109.78 332 PKKPbc PKKPbc 08 47 17.5 -1.3
comp=Z,1.0nm,0.6s,baz=240,slow=2.7,SNR=4.6
CWC Cottonwood Cre 109.97 50 P **PKiKP 08 36 15.4 +1.1**
baz=287
HLID Hailey 110.19 42 P **PKiKP 08 36 15.6 +1.1**
baz=292,SNR=13
KEST Kesra 110.30 309 PP **PP 08 36 49.1 -1.0**
comp=Z,11nm,0.9s,baz=337,slow=3.6,SNR=6.4
GRAC Grapevine Rang 110.35 50 P **PKiKP 08 36 15.8 +1.0**
baz=286
EDW2 Edwards Air Fo 110.49 52 P **PKiKP 08 36 16.7 +1.4**
baz=287
MPMC Manual Prospec 110.54 51 P **PKiKP 08 36 16.5 +1.1**
baz=288,SNR=5.5
LRMC Laurel Mtn Rad 110.56 51 P **PKiKP 08 36 16.1 +0.7**
baz=287
FURC Furnace Creek, 110.89 50 P **PKiKP 08 36 16.8 +1.1**
baz=288
BFSC Mount Baldy Ra 110.94 52 P **PKiKP 08 36 16.7 +0.5**
baz=287
BOZ Bozeman (W) 111.18 39 P **PKiKP 08 36 17.3 +0.9**
baz=295,SNR=9.5
TPNV Topopah Spring 111.21 49 P **PKiKP 08 36 17.7 +1.0**
baz=289
EGMT Eagleton 111.24 36 P **PKiKP 08 36 17.0 +0.8**
baz=298
R11A Troy Canyon, C 111.24 48 P **PKiKP 08 36 17.7 +1.0**
baz=290,SNR=12
GSC Goldstone, Bar 111.30 51 P **PKiKP 08 36 18.0 +1.2**
baz=288,SNR=6.3
MURC Murrieta 111.50 53 P **PKiKP 08 36 18.7 +1.6**
baz=287
SHOC Shoshone, Teco 111.52 50 P **PKiKP 08 36 18.5 +1.4**
baz=288
TUQ Turquoise Moun 111.94 51 P **PKiKP 08 36 19.7 +1.7**
baz=288
PFO Pinyon Flats O 112.08 53 PKKPab PKKPab 08 47 20.0 +0.6
comp=Z,9.5nm,1.2s,baz=56,slow=4.5,SNR=4.8
PFO Pinyon Flats O 112.08 53 P **PKiKP 08 36 19.3 +1.0**
baz=287,SNR=5.8
TPFO Pinon Flats 112.09 53 P **PKiKP 08 36 19.6 +1.2**
baz=287,SNR=5.5
MONP2 Monument Peak 112.33 54 P **PKiKP 08 36 20.0 +1.1**
baz=287
BELC Belle Mtn. Jos 112.33 52 P **PKiKP 08 36 20.8 +2.0**
baz=288,SNR=8.6
GMRC Granite Mounta 112.35 51 P **PKiKP 08 36 20.9 +2.0**
baz=288,SNR=7.5
H17A Grant Village 112.38 40 P **PKiKP 08 36 20.5 +1.8**
baz=296
DUG Dugway, Tooele 112.58 45 P **PKiKP 08 36 20.5 +1.3**
baz=292,SNR=14
IKP In-Ko-Pah, Jac 112.65 54 P **PKiKP 08 36 21.2 +1.8**
baz=287,SNR=5.9
SWSC Sam W. Stewart 112.81 53 P **PKiKP 08 36 20.9 +1.4**
baz=288,SNR=5.8
BC3 Big Chuckawall 112.87 52 P **PKiKP 08 36 21.3 +1.5**
baz=288,SNR=5.3
RLMT Red Lodge 112.88 39 P **PKiKP 08 36 21.1 +1.4**
baz=297
IRM Iron Mountain 112.95 52 P **PKiKP 08 36 21.3 +1.5**
baz=288,SNR=5.9
GLA Glamis 113.55 53 P **PKiKP 08 36 22.6 +1.5**
baz=288
PDMCI Parker Dam,Lak 113.69 51 P **PKiKP 08 36 22.6 +1.4**
baz=289
BW06 Boulder Array 113.75 41 P **PKiKP 08 36 22.3 +0.8**
baz=296
PDAR Pinedale Array 113.75 41 PKP **PKiKP 08 36 21.7 +0.3**
comp=Z,2.5nm,0.6s,baz=329,slow=0.9,SNR=20
PDAR PKKPbc **PKKPbc 08 47 03.4 -2.3**
comp=Z,3.9nm,0.9s,baz=116,slow=3.4,SNR=15
PDAR PKKPab **PKKPab 08 47 11.3 -0.8**
comp=Z,9.5nm,0.9s,baz=118,slow=5.2,SNR=21
LAO LASA Array 113.99 36 P **PKiKP 08 36 22.9 +1.4**
baz=300
LAO LASA Array 113.99 36 P **PKiKP 08 36 23.2 +1.7**
baz=300,SNR=17
DGMT Dagmar 114.22 34 P **PKiKP 08 36 22.5 +0.6**
baz=303
DGMT Dagmar 114.22 34 P **PKiKP 08 36 22.8 +0.9**
baz=303
214A Organ Pipe Nat 115.52 53 P **PKPdf 08 36 25.9 +1.0**
baz=289,SNR=5.7
K22A Casper 115.79 40 P **PKPdf 08 36 25.5 +0.2**
baz=299
K22A Casper 115.79 40 P **PKPdf 08 36 25.4 +0.1**
baz=299
O20A White River Ci 115.80 44 P **PKPdf 08 36 26.2 +0.8**
baz=296,SNR=22
RSSD Black Hills 116.63 38 P **PKiKP 08 36 27.1 +0.2**
baz=301
RSSD Black Hills 116.63 38 P **PKiKP 08 36 26.9 +0.1**
baz=301
W18A Petrified Fore 116.79 49 P **PKiKP 08 36 29.0 +1.6**
baz=293
MVCO Mesa Verde 116.87 47 P **PKiKP 08 36 29.2 +1.6**
baz=295
N23A Red Feather La 117.01 42 P **PKiKP 08 36 28.4 +0.6**
baz=298
TUC Tucson 117.02 52 P **PKiKP 08 36 29.2 +1.4**
baz=291
MDND Maddock 117.09 33 P **PKiKP 08 36 27.9 +0.5**
baz=307,SNR=21
MDND Maddock 117.09 33 P **PKiKP 08 36 27.6 +0.2**
baz=307,SNR=21
E28A Huff 117.24 34 P **PKiKP 08 36 28.4 +0.6**
baz=305
ULM Lac du Bonnet 117.47 29 PKP **PKPdf 08 36 27.9 -0.1**
comp=Z,26nm,0.6s,baz=329,slow=1.8,SNR=31
ULM PKKPbc **PKKPbc 08 46 51.2 -1.5**
comp=Z,2.9nm,0.5s,baz=83,slow=6.0,SNR=3.2
S22A 4UR Ranch, Cre 117.84 45 P **PKiKP 08 36 30.8 +1.3**
baz=296,SNR=18
Q24A Divide 118.46 43 P **PKiKP 08 36 31.2 +0.5**
baz=298
ESDC Sonseca Array 118.49 317 PKP **PKiKP 08 36 30.6 +0.2**
comp=Z,2.2nm,0.6s,baz=30,slow=2.8,SNR=13
ESDC PP **PP 08 37 51.0 +3.4**
comp=Z,5.7nm,1.1s,baz=55,slow=6.4,SNR=8.6
AGMN Agassiz Nation 118.76 30 P **PKPdf 08 36 30.1 -0.5**
baz=311
SDCO Great Sand Dun 118.78 45 P **PKiKP 08 36 32.6 +1.2**
baz=297,SNR=19
SDCO Great Sand Dun 118.78 45 P **PKiKP 08 36 32.6 +1.2**
baz=297,SNR=19
D32B Dogwood Acres, 118.91 32 P **PKPdf 08 36 30.8 0.0**
baz=309,SNR=6.6
PBRG Braganca 119.23 321 *e*PKPdf **PKiKP 08 36 32.6 +0.8**
121A Cookes Peak, D 119.29 51 P **PKiKP 08 36 34.2 +1.9**
baz=293
121A Cookes Peak, D 119.29 51 P **PKiKP 08 36 33.4 +1.0**
baz=293,SNR=8.3
ANMO Albuquerque 119.32 48 P **PKiKP 08 36 33.8 +1.5**
baz=295
ANMO Albuquerque 119.32 48 P **PKiKP 08 36 33.9 +1.5**
baz=295
Y22D IRIS PASSCAL I 119.34 49 P **PKiKP 08 36 33.7 +1.4**
baz=294
Y22F Passcal Instru 119.34 49 P **PKiKP 08 36 34.0 +1.6**
baz=294
Y22A Socorro 119.36 49 P **PKiKP 08 36 33.9 +1.5**
baz=294
SUSD Miller 119.48 35 P **PKiKP 08 36 32.6 +0.4**
baz=306
SUSD Miller 119.48 35 P **PKiKP 08 36 32.2 +0.1**
baz=306,SNR=5.4
MVO Moncorvo 119.75 320 *e*PKPdf **PKiKP 08 36 33.7 +0.8**
MVO Moncorvo 119.75 320 *e*LR LR 09 24 26.9
comp=Z,379nm,24.0s

B35A Bob, Littlefor 119.78 29 P **PKPdf 08 36 32.2 -0.3**
baz=313
T25A Trinidad 119.83 45 P **PKiKP 08 36 34.6 +1.2**
baz=298
PGAV Gavieira, Arco 120.09 322 *e*PKPdf **PKiKP 08 36 34.3 +0.8**
PGAV Gavieira, Arco 120.09 322 *e*LR LR 09 24 11.1
comp=Z,308nm,18.0s
F33A 5 Mile Ranch, 120.12 33 P **PKiKP 08 36 33.7 +0.4**
baz=309
POLO Lamas de Olo 120.12 321 *e*PKPdf **PKiKP 08 36 34.6 +1.0**
PVRL Vila Real 120.13 321 *e*PKPdf **PKiKP 08 36 34.7 +1.1**
KSCO Kaye Shedlock' 120.16 42 P **PKiKP 08 36 34.9 +1.1**
baz=300
KSCO Kaye Shedlock' 120.16 42 P **PKiKP 08 36 34.0 +0.2**
baz=300
MTE Manteigas 120.49 320 *e*PKPdf **PKiKP 08 36 35.3 +1.0**
MTE Manteigas 120.49 320 *e*LR LR 09 24 33.9
comp=Z,409nm,22.0s
PVIS Viseu 120.54 320 *e*PKPdf **PKiKP 08 36 35.1 +0.7**
K31A O'Neill 120.67 37 P **PKiKP 08 36 34.9 +0.4**
baz=306
PCBR Castelo Branco 120.74 319 *e*PKPdf **PKiKP 08 36 35.7 +1.0**
PMRV Marv??o 120.90 319 *e*PKPdf **PKiKP 08 36 35.9 +0.8**
PMRV Marv??o 120.90 319 *e*LR LR 09 19 03.4
comp=Z,252nm,22.0s
EYMN Ely 121.14 28 P **PKPdf 08 36 35.1 -0.1**
baz=315
ECSD EROS Data Cent 121.26 35 P **PKiKP 08 36 36.0 +0.3**
baz=308
ECSD EROS Data Cent 121.26 35 P **PKiKP 08 36 36.0 +0.3**
baz=308,SNR=60
PCAS Casmilo, Conde 121.29 320 *e*PKPdf **PKiKP 08 36 36.6 +0.8**
PBAR Barrancos 121.32 317 *e*PKPdf **PKiKP 08 36 36.8 +0.9**
PESTR Estremoz 121.33 318 *e*PKPdf **PKiKP 08 36 36.9 +1.0**
F36A Milaca 121.57 31 P **PKiKP 08 36 36.5 +0.3**
baz=312,SNR=72
PMTG Montargil 121.64 319 *e*PKPdf **PKiKP 08 36 37.1 +0.6**
BGNE Belgrade 121.74 38 P **PKPdf 08 36 36.6 +0.1**
baz=305,SNR=29
BGNE Belgrade 121.74 38 P **PKPdf 08 36 36.5 -0.1**
baz=305
EVO Evora 121.79 318 *e*PKPdf **PKiKP 08 36 37.9 +1.1**
E38A The Farm, Brul 122.06 30 P **PKiKP 08 36 37.2 +0.1**
baz=314
MDT Midelt 122.11 311 PKP **PKiKP 08 36 38.6 +0.9**
comp=Z,6.0nm,0.7s,baz=59,slow=4.3,SNR=11
CBKS Cedar Bluff 122.18 41 P **PKiKP 08 36 38.2 +0.5**
baz=303
CBKS Cedar Bluff 122.18 41 P **PKPdf 08 36 37.5 0.0**
baz=303
PCVE Castro Verde 122.28 317 *e*PKPdf **PKiKP 08 36 39.0 +1.2**
PNCL Nicolau / Gran 122.35 318 *e*PKPdf **PKiKP 08 36 38.8 +0.9**
SPMN Marine on St. 122.37 31 P **PKiKP 08 36 38.0 +0.2**
baz=312,SNR=20
SPMN Marine on St. 122.37 31 P **PKPdf 08 36 37.6 0.0**
baz=312
L34A Svendsen Farm, 122.47 36 P **PKiKP 08 36 38.1 0.0**
baz=307
MSTX Muleshoe 122.48 48 P **PKiKP 08 36 38.6 +0.1**
baz=297
MSTX Muleshoe 122.48 48 P **PKiKP 08 36 38.9 +0.5**
baz=297
N33B J Bar K, Exete 122.56 38 P **PKPdf 08 36 37.9 -0.2**
baz=306,SNR=12
TORD Torodi Ar. Bea 122.64 287 PKP **PKPdf 08 36 38.9 0.0**
comp=Z,29nm,0.6s,baz=54,slow=1.7,SNR=128
TORD PKKPab **PKKPab 08 46 34.2 +1.1**
comp=Z,2.5nm,0.6s,baz=285,slow=3.1,SNR=9.3
AMTX Amarillo 122.85 46 P **PKiKP 08 36 40.2 +1.0**
baz=299
AMTX Amarillo 122.85 46 P **PKiKP 08 36 39.6 +0.4**
baz=299
MORF Marmelete 122.86 317 *e*PKPdf **PKiKP 08 36 39.7 +0.6**
MORF Marmelete 122.86 317 *e*PKPdf **PKiKP 08 36 40.0 +1.0**
I37B Waseca 122.86 33 P **PKiKP 08 36 39.1 +0.3**
baz=311
SCHQ Schefferville 123.00 9 PKP **PKiKP 08 36 39.1 +0.4**
comp=Z,20nm,0.6s,baz=323,slow=2.0,SNR=38
SCHQ PKKPbc **PKKPab 08 46 30.1 -1.1**
comp=Z,7.0nm,0.8s,baz=213,slow=6.0,SNR=6.8
R32A Long Quarter, 123.07 41 P **PKiKP 08 36 39.7 +0.2**
baz=303
PFVI Vila Bisbo 123.07 317 *e*PKPdf **PKiKP 08 36 40.3 +0.9**
D41A Chassel 123.15 27 P **PKiKP 08 36 39.3 0.0**
baz=318
N35A Tabor 123.58 37 P **PKiKP 08 36 40.5 +0.2**
baz=308,SNR=12
COWI Conover 123.59 29 P **PKiKP 08 36 40.5 +0.3**
baz=317
G40A Rib Lake 123.67 30 P **PKiKP 08 36 40.7 +0.4**
baz=315
TX31 Lajitas Ar. Si 123.80 53 P **PKiKP 08 36 41.9 +0.7**
baz=294
TXAR Lajitas Array 123.80 53 PKP **PKiKP 08 36 41.6 +0.4**
comp=Z,6.0nm,0.8s,baz=224,slow=0.7,SNR=49
TXAR PKKPab **PKKPab 08 46 28.4 +0.2**
comp=Z,1.2nm,0.6s,baz=128,slow=5.3,SNR=18
U32A Winter Ranch, 123.97 43 P **PKiKP 08 36 41.9 +0.6**
baz=302,SNR=11
KSU1 Kansas State U 124.04 39 P **PKiKP 08 36 41.7 +0.5**
baz=306
KSU1 Kansas State U 124.04 39 P **PKiKP 08 36 41.5 +0.2**
baz=306
K38A Parkersburg 124.11 34 P **PKPdf 08 36 41.1 0.0**
baz=311
F42A Maple Grove Fa 124.32 28 P **PKiKP 08 36 41.9 +0.3**
baz=318
SCIA State Center 124.35 35 P **PKiKP 08 36 41.8 0.0**
baz=310
SCIA State Center 124.35 35 P **PKiKP 08 36 41.8 0.0**
baz=310,SNR=16
E43A Lone Tree Farm 124.38 27 P **PKiKP 08 36 42.1 +0.4**
baz=319
I40A Norwalk 124.42 31 P **PKPdf 08 36 41.6 0.0**
baz=314,SNR=11
N38A Joes South For 125.05 36 P **PKPdf 08 36 42.9 0.0**
baz=310,SNR=14
I42A Draeger Farm, 125.30 30 P **PKiKP 08 36 43.5 -0.1**
baz=316
JFWS Jewell Farm 125.30 32 P **PKPdf 08 36 43.2 -0.1**
baz=314
JFWS Jewell Farm 125.30 32 P **PKPdf 08 36 43.0 -0.3**
baz=314
T35B Sooner Cattle 125.36 41 P **PKiKP 08 36 44.5 +0.6**
baz=304,SNR=14
L40A Anamosa 125.36 33 P **PKPdf 08 36 43.0 -0.4**
baz=312
ABTX Abilene, Hawle 125.43 47 P **PKiKP 08 36 44.5 +0.3**
baz=299
ABTX Abilene, Hawle 125.43 47 P **PKiKP 08 36 44.6 +0.4**
baz=299
E46A Sault Ste Mari 125.57 25 P **PKiKP 08 36 44.0 -0.1**
baz=322
P38A Dawn 125.62 37 P **PKiKP 08 36 44.5 +0.1**
baz=309,SNR=23
L42A Oliver, Polo 126.24 32 P **PKPdf 08 36 45.1 0.0**
baz=314,SNR=11
JCT Junction City 126.33 50 P **PKiKP 08 36 46.5 +0.4**
baz=298
JCT Junction City 126.33 50 P **PKiKP 08 36 46.4 +0.3**
baz=298
TUL1 Leonard 126.40 42 P **PKiKP 08 36 46.4 +0.3**
baz=305,SNR=13
TUL1 Leonard 126.40 42 P **PKiKP 08 36 46.2 +0.1**
baz=305
N41A Harden Midland 126.47 34 P **PKiKP 08 36 46.0 -0.1**
baz=312,SNR=6.0
P40A Paris 126.56 36 P **PKiKP 08 36 46.3 0.0**
baz=310,SNR=26
GLMI Grayling 126.64 27 P **PKiKP 08 36 46.7 +0.4**
baz=321
S39A Bolivar 126.95 39 P **PKiKP 08 36 47.0 -0.2**
baz=308,SNR=57
U38A Gravette 127.02 41 P **PKPdf 08 36 47.1 +0.3**
baz=306,SNR=18
L44A Lake County Fo 127.04 31 P **PKPdf 08 36 46.6 0.0**
baz=316
R40A Maddies Statio 127.22 37 P **PKiKP 08 36 47.5 -0.1**
baz=309,SNR=62
WHTX Lake Whitney, 127.35 47 P **PKiKP 08 36 49.0 +0.9**
baz=301
WHTX Lake Whitney, 127.35 47 P **PKiKP 08 36 48.3 +0.3**
baz=301
HHAR Hobbs 127.41 40 P **PKPdf 08 36 47.8 +0.2**
baz=307
HDIL Hopedale 127.45 33 P **PKPdf 08 36 47.2 -0.3**
baz=314

HDIL	Hopedale	127.45	33	P	PKPdf	08 36 47.7	+0.2
	baz=314,SNR=16						
M44A	Midewin, Midew	127.54	32	P	PKPdf	08 36 47.9	+0.3
	baz=316						
833A	Chaparral WMA,	127.62	52	P	PKiKP	08 36 49.5	+0.8
	baz=297,SNR=24						
833A	Chaparral WMA,	127.62	52	P	PKiKP	08 36 49.4	+0.7
	baz=297,SNR=24						
J47A	Sumner	127.77	28	P	PKiKP	08 36 48.4	-0.2
	baz=320						
J47A				P	PKiKP	08 36 48.4	-0.2
	baz=320						
435B	Jarrell	127.86	48	P	PKiKP	08 36 49.0	-0.1
	baz=300						
P43A	Skaggs, Pawnee	127.95	34	P	PKiKP	08 36 49.0	0.0
	baz=313,SNR=6.6						
CCM	Cathedral Cave	127.99	37	P	PKPdf	08 36 48.9	+0.4
	baz=310,SNR=44						
CCM	Cathedral Cave	127.99	37	P	PKiKP	08 36 49.1	-0.1
	baz=310						
O44A	Mansfield	128.18	33	P	PKPdf	08 36 49.2	+0.3
	baz=314,SNR=8.1						
Z38A	Mt. Pleasant	128.44	44	P	PKiKP	08 36 51.2	+1.0
	baz=304						
FVM	French Village	128.53	37	P	PKPdf	08 36 49.9	+0.3
	baz=311,SNR=15						
735A	Kenedy	128.62	51	P	PKiKP	08 36 51.7	+1.1
	baz=298,SNR=9.8						
MIAR	Mount Ida	128.67	42	P	PKiKP	08 36 51.8	+1.1
	baz=306						
MIAR	Mount Ida	128.67	42	P	PKiKP	08 36 50.6	0.0
	baz=306,SNR=31						
Q44A	Meyer Farm, Va	128.74	35	P	PKiKP	08 36 50.5	-0.1
	baz=313,SNR=18						
SFIN	Lafayette	128.76	32	P	PKiKP	08 36 50.5	-0.1
	baz=316,SNR=7.4						
SFIN	Lafayette	128.76	32	P	PKiKP	08 36 50.4	-0.3
	baz=316,SNR=7.4						
L48A	N Adams	128.95	29	P	PKPdf	08 36 50.1	-0.2
	baz=320						
L48A				P	PKPdf	08 36 50.1	-0.2
	baz=320						
AAM	Ann Arbor	129.04	28	P	PKPdf	08 36 50.6	+0.2
	baz=321						
N47A	Urbana	129.12	31	P	PKiKP	08 36 51.4	0.0
	baz=318,SNR=7.5						
N47A				P	PKiKP	08 36 51.4	0.0
	baz=318,SNR=7.5						
P46A	Rosedale	129.24	33	P	PKiKP	08 36 51.9	+0.3
	baz=315,SNR=18						
LCAR	Lake Charles	129.32	39	P	PKPdf	08 36 51.4	+0.2
	baz=309						
OLIL	Olney	129.37	34	P	PKiKP	08 36 52.1	+0.2
	baz=314,SNR=28						
S44A	Carbondale	129.42	36	P	PKiKP	08 36 52.0	0.0
	baz=312,SNR=16						
HKT	Hockley	129.58	48	P	PKiKP	08 36 53.2	+0.7
	baz=301						
N49A	Columbus Grove	129.85	29	P	PKiKP	08 36 52.6	-0.2
	baz=320,SNR=12						
N49A				P	PKiKP	08 36 52.6	-0.2
	baz=320,SNR=12						
O48B	Farmland	129.86	31	P	PKiKP	08 36 52.6	-0.3
	baz=318,SNR=10						
O48B	Farmland	129.86	31	P	PKPdf	08 36 52.2	+0.1
	baz=318,SNR=10						
D62A	Allapoint, All	130.00	13	P	PKiKP	08 36 53.3	+0.4
	baz=340,SNR=5.2						
D62A				P	PKiKP	08 36 53.3	+0.4
	baz=340,SNR=5.2						
DBIC	Dimbokro	130.02	280	PKP	PKPdf	08 36 53.3	+0.2
	comp=Z,30nm,0.8s,baz=66,slow=1.7,SNR=18						
DBIC				SKPbc	SKPab	08 40 09.2	-0.2
	comp=Z,31nm,0.9s,baz=73,slow=4.8,SNR=12						
M50A	Fremont	130.03	28	P	PKiKP	08 36 52.9	-0.2
	baz=321,SNR=6.7						
M50A				P	PKiKP	08 36 52.9	-0.2
	baz=321,SNR=6.7						
T45B	Paducah	130.23	36	P	PKiKP	08 36 54.5	+0.8
	baz=312,SNR=15						
P48A	Milroy	130.31	32	P	PKPdf	08 36 53.2	+0.3
	baz=317,SNR=17						
P48A				P	PKPdf	08 36 53.2	+0.3
	baz=317,SNR=17						
O49A	Covington	130.33	30	P	PKPdf	08 36 53.2	+0.3
	baz=319,SNR=20						
O49A				P	PKPdf	08 36 53.2	+0.3
	baz=319,SNR=20						
BMNY	Brushton-Moira	130.56	19	P	PKPdf	08 36 53.1	-0.2
	baz=333,SNR=14						
P49A	Miami Univ. Ec	130.62	31	P	PKPdf	08 36 54.0	+0.4
	baz=318,SNR=12						
P49A	Miami Univ. Ec	130.62	31	P	PKPdf	08 36 53.7	+0.1
	baz=318,SNR=12						
N51A	Ashland	130.72	28	P	PKPdf	08 36 54.0	+0.3
	baz=322,SNR=7.9						
N51A				P	PKPdf	08 36 54.0	+0.3
	baz=322,SNR=7.9						
LONY	Lake Ozonia	130.73	19	P	PKPdf	08 36 54.0	+0.4
	baz=333						
WCI	Wyandotte Cave	130.73	33	P	PKiKP	08 36 54.4	-0.2
	baz=316,SNR=18						
WCI	Wyandotte Cave	130.73	33	P	PKPdf	08 36 54.2	+0.4
	baz=316						
E63A	Oxbow	130.76	13	P	PKiKP	08 36 54.3	-0.2
	baz=341,SNR=7.8						
E63A				P	PKiKP	08 36 54.3	-0.2
	baz=341,SNR=7.8						
ERPA	Erie	130.83	25	P	PKPdf	08 36 53.9	0.0
	baz=325						
F62A	Pittston Farm,	130.89	14	P	PKiKP	08 36 55.0	+0.2
	baz=339,SNR=5.0						
F62A				P	PKiKP	08 36 55.0	+0.2
	baz=339,SNR=5.0						
WCNY	West Carthage	130.93	20	P	PKiKP	08 36 54.6	-0.3
	baz=331,SNR=5.6						
ACSO	Alum Creek Sta	130.96	29	P	PKPdf	08 36 54.6	+0.5
	baz=320,SNR=15						
ACSO	Alum Creek Sta	130.96	29	P	PKPdf	08 36 54.7	+0.5
	baz=320,SNR=15						
M53A	WI Miller and	131.08	26	P	PKPdf	08 36 54.1	-0.2
	baz=324						
W45A	Hickory Valley	131.13	38	P	PKPdf	08 36 54.2	-0.5
	baz=311,SNR=11						
T47A	Sharon Grove	131.15	35	P	PKPdf	08 36 54.8	+0.2
	baz=314,SNR=15						
WVNY	West Valley, N	131.17	24	P	PKPdf	08 36 54.5	-0.1
	baz=327,SNR=5.2						
143A	Socs Landing,	131.22	43	P	PKiKP	08 36 55.4	-0.3
	baz=307,SNR=6.0						
R49A	Shelbyville	131.30	33	P	PKiKP	08 36 55.4	-0.4
	baz=317,SNR=11						
R49A				P	PKiKP	08 36 55.4	-0.4
	baz=317,SNR=11						
WVT	Waverly	131.31	37	P	PKPdf	08 36 55.4	+0.5
	baz=313						
WVT	Waverly	131.31	37	P	PKPdf	08 36 55.4	+0.5
	baz=313						
OXF	Oxford	131.41	39	P	PKPdf	08 36 55.3	+0.1
	baz=310						
OXF	Oxford	131.41	39	P	PKPdf	08 36 55.6	+0.4
	baz=310						
NCB	Newcomb	131.42	19	P	PKiKP	08 36 55.9	-0.1
	baz=333,SNR=9.5						
P51A	Williamsport	131.50	30	P	PKPdf	08 36 55.2	0.0
	baz=320,SNR=15						
P51A				P	PKPdf	08 36 55.2	0.0
	baz=320,SNR=15						
J58A	Remsen	131.60	20	P	PKiKP	08 36 56.0	-0.3
	baz=331,SNR=12						
J58A				P	PKiKP	08 36 56.0	-0.3
	baz=331,SNR=12						
O52A	Adamsville	131.60	28	P	PKPdf	08 36 55.8	+0.4
	baz=322,SNR=8.5						
O52A				P	PKPdf	08 36 55.8	+0.4
	baz=322,SNR=8.5						
PKME	Peaks-Kenny Pk	131.65	14	P	PKPdf	08 36 55.8	+0.5
	baz=340						
K57A	Scipio Center	131.70	22	P	PKiKP	08 36 56.2	-0.3
	baz=330,SNR=7.3						
Q51A	Peebles	131.71	30	P	PKPdf	08 36 55.7	+0.1
	baz=319,SNR=7.5						
Q51A				P	PKPdf	08 36 55.7	+0.1
	baz=319,SNR=7.5						
Y45A	Yeager Farm, C	131.73	40	P	PKiKP	08 36 57.1	+0.3
	baz=309						
R50A	Paris	131.76	32	P	PKPdf	08 36 56.1	+0.4
	baz=318,SNR=10						
R50A				P	PKPdf	08 36 56.1	+0.4
	baz=318,SNR=10						
J59A	Piesco	131.78	20	P	PKiKP	08 36 56.5	-0.1
	baz=332,SNR=12						
J59A				P	PKiKP	08 36 56.5	-0.1
	baz=332,SNR=12						
O53A	New Philadelph	131.79	28	P	PKPdf	08 36 56.3	+0.5
	baz=323,SNR=8.8						
L56A	Greenwood	131.81	23	P	PKiKP	08 36 56.7	-0.1
	baz=328,SNR=5.9						
L56A				P	PKiKP	08 36 56.7	-0.1
	baz=328,SNR=5.9						
MCVT	Middlebury Col	131.83	18	P	PKiKP	08 36 56.6	-0.1
	baz=334						
P52A	Corning	131.84	29	P	PKPdf	08 36 56.4	+0.5
	baz=321,SNR=13						
M55A	Ridgway	131.88	25	P	PKPdf	08 36 56.4	+0.5
	baz=326,SNR=12						
M55A				P	PKPdf	08 36 56.4	+0.5
	baz=326,SNR=12						
LBNH	Lisbon	131.89	17	P	PKiKP	08 36 56.5	-0.3
	baz=336						
VBMS	Vicksburg	132.11	42	P	PKiKP	08 36 57.1	-0.4
	baz=307						
G65A	Princeton	132.11	13	P	PKiKP	08 36 57.1	-0.1
	baz=342						
G65A				P	PKiKP	08 36 57.1	-0.1
	baz=342						
ACCN	Adirondack Com	132.13	19	P	PKPdf	08 36 56.4	+0.1
	baz=333,SNR=5.4						
UPAO	U. Pittsburgh	132.15	27	P	PKiKP	08 36 57.2	-0.3
	baz=324						
PSDB	Penn State Uni	132.17	25	P	PKPdf	08 36 56.7	+0.3
	baz=326						
V48A	Smith Brothers	132.18	36	P	PKPdf	08 36 56.2	-0.4
	baz=314						
WVL	Waterville	132.21	15	P	PKPdf	08 36 57.0	+0.6
	baz=339						
O54A	Avella	132.23	27	P	PKPdf	08 36 57.0	+0.5
	baz=324,SNR=6.9						
O54A				P	PKPdf	08 36 57.0	+0.5
	baz=324,SNR=6.9						
U49A	Red Boiling Sp	132.24	35	P	PKPdf	08 36 57.0	+0.3
	baz=315						
HNH	Hanover	132.27	18	P	PKPdf	08 36 57.0	+0.5
	baz=335,SNR=6.8						
Q52A	Bidwell	132.29	30	P	PKPdf	08 36 57.0	+0.2
	baz=321,SNR=14						
Q52A				P	PKPdf	08 36 57.0	+0.2
	baz=321,SNR=14						
P53A	Whipple	132.31	28	P	PKPdf	08 36 57.2	+0.5
	baz=322,SNR=13						
P53A				P	PKPdf	08 36 57.2	+0.5
	baz=322,SNR=13						
BINY	Binghamton	132.36	22	P	PKiKP	08 36 57.5	-0.4
	baz=330,SNR=6.5						
BINY	Binghamton	132.36	22	P	PKPdf	08 36 57.0	+0.2
	baz=330,SNR=6.5						
T50A	Nancy	132.40	33	P	PKPdf	08 36 57.3	+0.3
	baz=316						
T50A				P	PKPdf	08 36 57.3	+0.3
	baz=316						
HCNY	Howe Caverns	132.49	20	P	PKPdf	08 36 57.2	+0.2
	baz=332,SNR=8.7						
S51A	Beattyville	132.62	32	P	PKPdf	08 36 57.5	+0.2
	baz=318,SNR=10.0						
S51A				P	PKPdf	08 36 57.5	+0.2
	baz=318,SNR=10.0						
MCWV	Mont Chateau	132.89	27	P	PKPdf	08 36 58.1	+0.3
	baz=324						
R53A	Hurricane	132.94	30	P	PKiKP	08 36 58.6	-0.5
	baz=321,SNR=11						
R53A				P	PKiKP	08 36 58.6	-0.5
	baz=321,SNR=11						
SSPA	Standing Stone	132.94	25	P	PKPdf	08 36 58.4	+0.5
	baz=327,SNR=7.4						
SSPA	Standing Stone	132.94	25	P	PKPdf	08 36 58.4	+0.5
	baz=327						
Q54A	Coxs Mills	132.97	28	P	PKPdf	08 36 58.3	+0.3
	baz=322,SNR=13						
Q54A				P	PKPdf	08 36 58.3	+0.3
	baz=322,SNR=13						
K62A	Royalston	133.23	18	P	PKiKP	08 36 59.6	0.0
	baz=335						
K62A				P	PKiKP	08 36 59.6	0.0
	baz=335						
L61B	Northampton	133.28	19	P	PKPdf	08 36 59.0	+0.5
	baz=334						
W50A	Signal Mountai	133.44	36	P	PKPdf	08 36 59.7	+0.6
	baz=315						
TZTN	Tazewell	133.46	33	P	PKPdf	08 36 59.0	0.0
	baz=318						
TZTN	Tazewell	133.46	33	P	PKPdf	08 36 59.6	+0.6
	baz=318						
HRV	Adam Dziewonsk	133.58	18	P	PKPdf	08 36 59.7	+0.7
	baz=336						
S54A	Dingess, Beckl	133.67	30	P	PKPdf	08 36 59.8	+0.4
	baz=321						
S54A				P	PKPdf	08 36 59.8	+0.4
	baz=321						
LRAL	Lakeview Retre	133.89	39	P	PKPdf	08 37 00.1	+0.3
	baz=311						
LRAL	Lakeview Retre	133.89	39	P	PKPdf	08 37 00.2	+0.3
	baz=311						
V52A	Sevierville	133.95	34	P	PKPdf	08 36 60.0	0.0
	baz=317						
TKL	Tuckaleechee C	133.98	34	P	PKPdf	08 37 00.1	+0.1
	baz=317						
PAL	Palisades	134.16	21	P	PKPdf	08 37 00.7	+0.6
	baz=332						
W52A	Murphy	134.31	35	P	PKPdf	08 37 01.2	+0.6
	baz=316						
V53A	Saluda	134.50	33	P	PKPdf	08 37 01.2	+0.1
	baz=318						
V53A				P	PKPdf	08 37 01.2	+0.1
	baz=318						
BLA	Blacksburg	134.57	30	P	PKPdf	08 37 01.1	0.0
	baz=322						
BLA	Blacksburg	134.57	30	P	PKPdf	08 37 01.5	+0.4
	baz=322						
CASEE	Lake Jocassee	134.94	34	P	PKiKP	08 37 02.9	-0.4
	baz=317						
250A	Grady	135.05	40	P	PKPdf	08 37 02.2	+0.1
	baz=311						
BRAL	Brewton	135.07	41	P	PKiKP	08 37 03.2	-0.4
	baz=310						
Y52A	Lilburn	135.11	36	P	PKiKP	08 37 03.4	-0.2
	baz=315						
Y52A				P	PKiKP	08 37 03.4	-0.2
	baz=315						
CBN	Corbin Frederi	135.19	26	P	PKiKP	08 37 03.0	-0.7
	baz=326						
V55A	Taylorsville	135.22	31	P	PKPdf	08 37 02.7	+0.4
	baz=320						
V55A				P	PKPdf	08 37 02.7	+0.4
	baz=320						
U56A	King	135.26	30	P	PKPdf	08 37 03.2	+0.8
	baz=321						
U56A				P	PKPdf	08 37 03.2	+0.8
	baz=321						
PAULI	Pauline	135.68	33	P	PKPdf	08 37 03.9	+0.7
	baz=319						
KMSC	Kings Mountain	135.70	32	P	PKPdf	08 37 03.9	+0.6
	baz=319						
GOGA	Godfrey	135.78	36	P	PKPdf	08 37 04.0	+0.6
	baz=316						
HODGE	Hodges	135.87	34	P	PKPdf	08 37 04.2	+0.6
	baz=318						
352A	Blakely	136.23	39	P	PKPdf	08 37 04.6	+0.3
	baz=312						
BIRD	Birdtown, Kers	136.54	32	P	PKiKP	08 37 05.8	-0.8
	baz=320						
TIGA	Tifton	137.09	38	P	PKPdf	08 37 06.4	+0.6
	baz=314						
CNNC	Cliffs of the	137.37	29	P	PKPdf	08 37 06.9	+0.6
	baz=324						
NHSC	New Hope	137.86	33	P	PKiKP	08 37 08.4	-0.9
	baz=319						
PLCA	Paso Flores	138.18	161	PKP	PKiKP	08 37 09.3	-0.5
	comp=Z,80nm,1.2s,baz=223,slow=2.9,SNR=24						
PLCA				SKPbc	SKiKP	08 40 38.3	-1.5
	comp=Z,9.6nm,1.1s,baz=170,slow=5.6,SNR=3.3						
PLCA				SKPab	SKPab	08 40 46.2	+2.2
	comp=Z,10nm,1.2s,baz=180,slow=6.3,SNR=3.1						
DWPF	Disney Wildern	140.74	40	P	PKPdf	08 37 13.7	+1.0
	baz=314						
CRIN	San Cristobal	144.59	66	eP	PKPdf	08 37 21.7	+1.8
ACON	Acoyapa	146.56	66	eP	PKiKP	08 37 28.5	+0.9
JTS	Las Juntas de	147.34	68	eP	PKPdf	08 37 25.8	+1.2
MTDJ	Mount Denham	149.93	48	eP	PKPbc	08 37 34.0	+0.3
BRU2	Volcan	149.93	70	eP	PKPab	08 37 38.1	-1.6
MCJ	Malvern	150.00	49	i P	PKiKP	08 37 34.4	-0.3
STH	Stony Hill	150.56	48	i P	PKiKP	08 37 36.0	+0.2
GWJ	Greenwich	150.62	48	i P	PKiKP	08 37 36.1	+0.1
HOJ	Hope	150.65	48	i P	PKiKP	08 37 36.6	+0.6
BCIP	Isla Barro Col	152.46	67	eP	PKPdf	08 37 34.0	+1.4
AZU	Azuero	152.51	70	eP	PKPdf	08 37 34.0	+1.3
SDDR	Presa de Saban	153.73	39	eP	PKiKP	08 37 44.9	+2.6
CPUP	Villa Florida	155.05	174	PKP	PKPdf	08 37 37.2	+1.2
	comp=Z,31nm,1.1s,baz=138,slow=2.3,SNR=15						
CPUP				PKPbc	pPKPdf	08 37 46.4	-10
	comp=Z,44nm,1.1s,baz=165,slow=0.4,SNR=12						
CPUP				PKPab	sPKPdf	08 38 02.0	-1.4
	comp=Z,29nm,1.0s,baz=188,slow=3.0,SNR=5.8						
NNA	Nana	155.29	116	eP	PKPdf	08 37 39.5	+2.8
CMBC	Cumbal	156.35	84	eP	PKPdf	08 37 42.2	+3.6
SJCC	San Jacinto, C	156.36	61	eP	PKPdf	08 37 39.5	+1.3
TULM	Tulcn-Chalpat	156.41	85	eP	PKPdf	08 37 40.8	+2.1
BBAC	Balboa, Cauca	156.79	82	eP	PKPdf	08 37 40.8	+1.9
GCUF	Volcan Galeras	156.79	84	eP	PKPdf	08 37 39.5	+0.2
CBOC	Ciudad Bolivar	157.13	71	eP	PKPdf	08 37 40.8	+1.5
PLMC	San Jos del P	157.15	74	eP	PKPdf	08 37 40.8	+1.6
YOTC	Yotoco, Valle	157.31	76	eP	PKPdf	08 37 39.5	0.0
GUY2C	Guyana, Caldas	157.94	72	eP	PKPdf	08 37 42.2	+1.5
NORC	Norcasia	158.31	71	eP	PKPdf	08 37 39.5	-1.1
PTBC	PUERTO BERRIO	158.37	68	eP	PKPdf	08 37 40.8	+0.2
PRAC	Prado	158.79	76	eP	PKPdf	08 37 42.2	+1.0
BRRC	Barranca, Sant	158.85	66	eP	PKPdf	08 37 44.9	+3.8
SPBC	San Pablo de B	159.03	70	eP	PKPdf	08 37 42.2	+0.7
ROSC	El Rosal	159.04	73	PKP	PKPdf	08 37 43.1	+1.2
	comp=Z,45nm,0.7s,baz=317,slow=0.6,SNR=23						
ROSC	El Rosal	159.04	73	eP	PKPdf	08 37 44.9	+3.0
BOG	Bogota	159.35	73	eP	PKPdf	08 37 36.7	-5.5
CHIC	Chingaza	159.66	73	eP	PKPdf	08 37 42.2	-0.5
PAMC	Pamplona, Colo	159.68	64	eP	PKPdf	08 37 43.5	+0.8
LPAZ	La Paz	159.89	138	PKP	PKPdf	08 37 44.6	+1.6
	comp=Z,25nm,0.9s,baz=29,slow=0.8,SNR=59						
LPAZ	La Paz	159.89	138	eP	PKPdf	08 37 46.3	+3.3
PTGC	Puerto Gaitan,	161.31	73	eP	PKPdf	08 37 43.5	-0.4
BDFB	Brasilia	164.57	203	PKP	PKPdf	08 37 47.7	+0.6
	comp=Z,25nm,1.1s,baz=43,slow=1.5,SNR=15						
BDFB				PKPab	PKPab	08 38 43.0	+0.9
	comp=Z,52nm,1.2s,baz=90,slow=2.2,SNR=10						

MOS ***27*** *08:21:45.4±1.0, 42°.93N×13°.15E, h11km, mb4.6/8, Error ellipse: s-maj=6.2km s-min=3.8km az=80.5*

NEIC ***27*** *08:21:45.9±1.5, 42°.84N±0°.05×13°.06E±0°.08, h3km±3km, mb4.5/10, Mwr4.3/44, Mwr4.3(ROM), Error ellipse: s-maj=8.8km s-min=6.7km az=49.0*

PRU ***27*** *08:21:45.8±0.0, 42°.96N×12°.94E, h0km, M4.5*

ROM ***27*** *08:21:45.6±0.0, 42°.873N±0°.001×13°.097E±0°.003, h9km, ML4.4/127, Mw4.3, Error ellipse: s-maj=0.2km s-min=0.0km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr=3.22; Mθθ=0.03; Mφφ=3.20; Mrθ=0.50; Mθφ=-0.50; Mφr=-1.95; Fault plane solution: M0=3.82165×10^15 NP1:φs=174.00000°, δ=29.00000°, λ=-85.00000°. NP2:φs=348.00000°, δ=61.00000°, λ=-93.00000°.*

IDC ***27*** *08:21:46.2±0.8, 43°.00N×13°.00E, h0km, mb4.3/13, mbtmp4.2/21, ML3.9/8, MS3.8/13 Error ellipse: s-maj=13.5km s-min=11.6km az=80.0*

BNS ***27*** *08:21:46.7±0.4, 42°.89N×13°.24E, h10km, ML4.3*

PDG ***27*** *08:21:46.2±0.7, 42°.90N×13°.14E, h10km, ML4.3/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

MED_RC ***27*** *08:21:46.0±0.3, 42°.87N×13°.10E, h12km±1km, MW4.5/17, Moment Tensor Solution. Mantle waves: s17,c31; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr=6.08±.75; Mθθ=0.36±.42; Mφφ=6.44±.50; Mrθ=0.67±.61; Mθφ=0.46±.29; Mφr=0.96±.57; Best double couple: M0=6.39000×10^15 NP1:φs=3.00000°, δ=50.00000°, λ=-81.00000°. NP2:φs=169.00000°, δ=41.00000°, λ=-101.00000°. Principal axes: T 6.5400, Plg4.0000°, Azm87.0000°; N -0.3000, Plg7.0000°, Azm177.0000°; P -6.2400, Plg82.0000°, Azm326.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***27*** *08:21:46.2, 42°.85N×13°.06E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr=4.14; Mθθ=0.41; Mφφ=3.73; Mrθ=-0.07; Mθφ=-0.25; Mφr=0.13; Fault plane solution: M0=3.96000×10^15 NP1:φs=174.97000°, δ=45.95000°, λ=-91.01000°. NP2:φs=356.42000°, δ=44.06000°, λ=-88.96000°. Principal axes: T 3.7551, Plg1.0000°, Azm266.0000°; N 0.3907, Plg1.0000°, Azm176.0000°; P -4.1459, Plg89.0000°, Azm48.0000°;*

LDG ***27*** *08:21:47.3±0.2, 42°.82N×13°.11E, h9km, Md4.1/5, Ml4.2/35 Error ellipse: s-maj=6.5km s-min=3.9km az=42.0*

STR ***27*** *08:21:48.2±0.4, 43°N±6°×1°3E±°, h10km, MLv4.6/36, Error ellipse: s-maj=0.0km s-min=0.0km az=32.3, preliminary*

BEO ***27*** *08:21:49.4±0.7, 42°.88N×13°.23E, h19km±6km, ML4.4/15*

ISC 27 08:21:46.5±0.6, 42°.87N±0°.01×13°.08E±0°.01, h7km±3km, n651, σ1°.977/781, mb4.5/20, 77C-34D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.04	151	Pg	Pg	08 21 47.5	-0.6
NRCA	Norcia	0.04	151	⇓P	Pg	08 21 47.8	-0.3
NRCA				S	Sg	08 21 48.9	-0.4
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1216	Preci, Frazion	0.05	290	⇑P	Pg	08 21 48.0	-0.1
T1216				S	Sg	08 21 49.4	+0.1
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	Castelsantange	0.08	102	⇓P	Pg	08 21 48.1	-0.4
T1245				S	Sg	08 21 49.5	-0.6
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	Monte Cornacci	0.09	63	P	Pg	08 21 48.3	-0.5
MC2				S	Sg	08 21 49.8	-0.6
FEMA	Monte Fema	0.09	344	⇑P	Pg	08 21 48.5	-0.2
FEMA				S	Sg	08 21 50.3	-0.1
FDMO	Fiordimonte	0.16	1		Pg	08 21 49.7	-0.2
FDMO				Sg	Sg	08 21 52.2	0.0
FDMO	Fiordimonte	0.16	1	⇑P	Pg	08 21 49.7	-0.2
FDMO				S	Sg	08 21 52.2	0.0
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
T1215	Vallo di Nera,	0.17	246	⇑P	Pg	08 21 50.3	+0.3
T1215				S	Sg	08 21 53.4	+0.9
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
MMO1	Montemonaco	0.18	82

T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
AM05	**Amandola Campo**	**0.22**	**62**	AML	AML		
	comp=N,59050μm,1.5s						
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
	comp=E,62700μm,0.6s						
AM05				AML	AML		
AM05				AML	AML		
T1201	**Domo (RI)**	**0.25**	**150**	P	**Pg**	**08 21 51.5**	**+0.1**
T1201				S	**Sg**	**08 21 55.9**	**+1.2**
T1241	**Roccafluvione,**	**0.26**	**94**	AML	AML		
T1241				AML	AML		
T1204	**Amatrice, Fraz**	**0.26**	**139**	⇑P	**Pg**	**08 21 51.6**	**-0.1**
T1204				S	**Sg**	**08 21 55.8**	**+0.6**
T1204				AML	AML		
T1204				AML	AML		
GUMA	**Gualdo di Mace**	**0.26**	**44**	⇑P	**Pg**	**08 21 51.7**	**0.0**
GUMA				S	**Sg**	**08 21 56.1**	**+0.8**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
LNSS	**Leonessa**	**0.27**	**187**	⇓P	**Pg**	**08 21 51.9**	**0.0**
LNSS				S	**Sg**	**08 21 56.1**	**+0.7**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=N,94100μm,0.5s						
SEF1	**Sefro**	**0.29**	**340**	⇑P	**Pg**	**08 21 52.0**	**-0.2**
SEF1				S	**Sg**	**08 21 56.8**	**+0.7**
SEF1				AML	AML		
SEF1				AML	AML		
SMA1	**SAN MARTINO**	**0.30**	**143**	⇑P	**Pg**	**08 21 52.2**	**-0.3**
SMA1				S	**Sg**	**08 21 57.2**	**+0.7**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
PIO1	**Pioraco**	**0.31**	**346**	P	**Pg**	**08 21 52.3**	**-0.3**
PIO1				S	**Sg**	**08 21 57.6**	**+0.8**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
T1243	**Rocca Santa Ma**	**0.32**	**123**	⇑P	**Pg**	**08 21 52.3**	**-0.5**
T1243				S	**Sg**	**08 21 57.4**	**+0.4**
MDAR	**Monte D'Aria**	**0.32**	**8**	P	**Pg**	**08 21 52.4**	**-0.4**
MDAR				S	**Sg**	**08 21 57.6**	**+0.5**
MDAR				AML	AML		
MDAR				AML	AML		
FIU1	**Fiuminata**	**0.34**	**341**	P	**Pg**	**08 21 52.9**	**-0.2**
FIU1				S	**Sg**	**08 21 58.3**	**+0.8**
FIU1				AML	AML		
FIU1				AML	AML		
FIU1				AML	AML		
SSM1	**San Severino M**	**0.36**	**11**	P	**Pg**	**08 21 53.1**	**-0.5**
SSM1				S	**Sg**	**08 21 58.9**	**+0.6**
GAG1	**Gagliole**	**0.36**	**358**	⇓P	**Pg**	**08 21 53.5**	**-0.1**
GAG1				S	**Sg**	**08 21 59.7**	**+1.3**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
ARRO	**Arrone**	**0.38**	**219**	P	**Pg**	**08 21 53.8**	**0.0**
RM33	**Pellescritta (**	**0.38**	**165**	⇓P	**Pg**	**08 21 53.5**	**-0.3**
RM33				S	**Sg**	**08 21 59.4**	**+0.6**
RM33				AML	AML		
	comp=E,48000μm,0.2s						
RM33				AML	AML		
	comp=N,43850μm,1.5s						
RM33				AML	AML		
	comp=E,47550μm,0.9s						
RM33				AML	AML		
	comp=N,42700μm,1.5s						
RM33				AML	AML		
	comp=N,42650μm,1.5s						
RM33				AML	AML		
	comp=E,47950μm,0.2s						
RM33				AML	AML		
	comp=E,47500μm,0.9s						
T1211	**Morro Reatino**	**0.38**	**207**	P	**Pg**	**08 21 54.0**	**+0.1**
T1211				AML	AML		
	comp=N,84300μm,0.5s						
T1211				AML	AML		
	comp=E,50300μm,1.2s						
T1211				AML	AML		
	comp=N,82100μm,0.5s						
T1211				AML	AML		
	comp=E,50200μm,1.1s						
T1211				AML	AML		
	comp=N,82250μm,0.5s						
T1211				AML	AML		
	comp=N,82150μm,0.5s						
T1211				AML	AML		
	comp=N,84200μm,0.5s						
T1211				AML	AML		
	comp=E,49350μm,1.2s						
MNTP	**Montappone**	**0.39**	**47**	P	**Pg**	**08 21 54.1**	**+0.1**
MTL1	**Matelica**	**0.39**	**352**	P	**Pg**	**08 21 53.7**	**-0.3**
MTL1				AML	AML		
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.40**	**345**	⇑P	**Pg**	**08 21 53.8**	**-0.4**
SNTG				AML	AML		
	comp=E,96450μm,0.3s						
SNTG				AML	AML		
	comp=E,96400μm,0.3s						
SNTG				AML	AML		
	comp=N,85900μm,1.0s						
SNTG				AML	AML		
	comp=E,96550μm,0.3s						
SNTG				AML	AML		
	comp=N,95800μm,1.0s						
SNTG				AML	AML		
	comp=N,85950μm,1.0s						
SNTG				AML	AML		
	comp=E,95950μm,0.3s						
CAMP	**Campotosto**	**0.41**	**145**		**Pg**	**08 21 53.9**	**-0.6**
CAMP				Sg	**Sg**	**08 22 00.3**	**+0.4**
CAMP	**Campotosto**	**0.41**	**145**	⇑P	**Pg**	**08 21 54.0**	**-0.6**
CAMP				S	**Sg**	**08 22 00.4**	**+0.5**
CAMP				AML	AML		
	comp=N,27750μm,0.9s						
CAMP				AML	AML		
	comp=E,58050μm,0.2s						
T1246	**Crognaleto (TE**	**0.42**	**134**	⇑P	**Pg**	**08 21 54.0**	**-0.6**
T1246				S	**Sg**	**08 22 00.4**	**+0.3**
OFFI	**Offida**	**0.45**	**82**	⇑P	**Pg**	**08 21 55.4**	**+0.3**
OFFI				AML	AML		
	comp=E,98900μm,0.6s						
OFFI				AML	AML		
	comp=N,97950μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.45**	**314**	⇑P	**Pg**	**08 21 55.0**	**-0.2**
ATCC				S	**Sg**	**08 22 02.3**	**+1.2**
ATCC				AML	AML		
ATCC				AML	AML		
CESX	**Cesi**	**0.46**	**235**		**Pg**	**08 21 54.8**	**-0.5**
CESX				Sg	**Sg**	**08 21 58.9**	**-2.3**
CESX	**Cesi**	**0.46**	**235**	⇑P	**Pg**	**08 21 55.1**	**-0.2**
CESX				AML	AML		
	comp=E,61650μm,0.8s						
CESX				AML	AML		
	comp=N,55450μm,0.4s						
EL6	**Elcito**	**0.46**	**2**	⇑P	**Pg**	**08 21 54.8**	**-0.5**
EL6				AML	AML		
EL6				AML	AML		
TERO	**Teramo**	**0.46**	**123**	⇑P	**Pg**	**08 21 54.6**	**-0.7**
TERO				S	**Sg**	**08 22 01.6**	**+0.3**
TERO				AML	AML		
	comp=E,92700μm,0.3s						
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
	comp=E,92850μm,0.3s						
TERO				AML	AML		
	comp=E,97450μm,0.3s						
TERO				AML	AML		
	comp=E,92550μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.46**	**160**	⇓P	**Pg**	**08 21 54.9**	**-0.4**
T1247				S	**Sg**	**08 22 02.5**	**+1.1**
T1247				AML	AML		
	comp=N,43550μm,0.2s						
T1247				AML	AML		
	comp=E,53400μm,0.6s						
TRE1	**Treia**	**0.47**	**21**	P	**Pg**	**08 21 55.4**	**-0.1**
TRE1				AML	AML		
TRE1				AML	AML		
FOSV	**Fossato di Vic**	**0.48**	**331**	⇑P	**Pg**	**08 21 55.4**	**-0.4**
CING	**Cingoli**	**0.51**	**9**	P	**Pg**	**08 21 55.7**	**-0.6**
GIGS	**Gran Sasso**	**0.55**	**140**	⇑P	**Pg**	**08 21 56.1**	**-1.1**
GIGS				AML	AML		
	comp=E,13700μm,0.3s						
GIGS				AML	AML		
	comp=N,8350μm,0.7s						
MURB	**Monte Urbino**	**0.57**	**314**		**Pg**	**08 21 56.8**	**-0.6**
MURB	**Monte Urbino**	**0.57**	**314**	⇑P	**Pg**	**08 21 57.1**	**-0.3**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
AQU	**L'Aquila**	**0.57**	**156**		**Pg**	**08 21 56.4**	**-1.0**
AQU	**L'Aquila**	**0.57**	**156**	P	**Pg**	**08 21 56.4**	**-1.0**
AQU	**L'Aquila**	**0.57**	**156**	⇑P	**Pg**	**08 21 56.8**	**-0.6**
AQU				AML	AML		
	comp=N,21600μm,1.1s						
AQU				AML	AML		
	comp=E,23000μm,0.5s						
AQU				AML	AML		
	comp=N,21450μm,1.1s						
AQU				AML	AML		
	comp=E,23600μm,0.5s						
MMUR	**Monte Murano**	**0.57**	**354**	P	**Pg**	**08 21 57.1**	**-0.4**
MMUR				S	**Sb**	**08 22 06.2**	**-1.1**
CADA	**Capodarco di F**	**0.59**	**57**	P	**Pb**	**08 21 58.6**	**-0.5**
CADA				AML	AML		
CADA				AML	AML		
FIAM	**Fiamignano**	**0.60**	**178**	⇓P	**Pg**	**08 21 57.4**	**-0.7**
FIAM				AML	AML		
	comp=E,17500μm,0.6s						
FIAM				AML	AML		
	comp=N,12950μm,1.0s						
CIMA	**Civitanova Mar**	**0.61**	**45**	P	**Pg**	**08 21 58.5**	**+0.3**
CIMA				AML	AML		
CIMA				AML	AML		
TRTR	**Tortoreto Alta**	**0.61**	**96**	⇑P	**Pg**	**08 21 58.8**	**+0.5**
TRTR				AML	AML		
TRTR				AML	AML		
ATFO	**Monte Foce - G**	**0.62**	**323**	⇑P	**Pg**	**08 21 58.0**	**-0.5**
ATFO				AML	AML		
	comp=N,44550μm,0.8s						
ATFO				AML	AML		
	comp=E,55800μm,0.7s						
ATSC	**Scheggia e Pas**	**0.62**	**332**	P	**Pg**	**08 21 57.8**	**-0.7**
ATTE	**AVT- Monte Tez**	**0.63**	**301**	⇑P	**Pg**	**08 21 58.1**	**-0.4**
ATTE				AML	AML		
	comp=N,29950μm,0.9s						
ATTE				AML	AML		
	comp=E,27700μm,1.0s						
ARVD	**Arcevia**	**0.63**	**351**	P	**Pg**	**08 21 58.0**	**-0.7**
ARVD				S	**Sb**	**08 22 07.9**	**-1.0**
ARVD				AML	AML		
	comp=E,53050μm,0.2s						
ARVD				AML	AML		
	comp=N,46300μm,0.2s						
PP3	**Marolino**	**0.63**	**37**	⇑P	**Pg**	**08 21 58.9**	**+0.2**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
ATLO	**AVT- Montelove**	**0.66**	**312**	P	**Pg**	**08 21 58.7**	**-0.6**
FRON	**Frontone**	**0.70**	**338**	P	**Pg**	**08 21 59.1**	**-0.8**
FRON				S	**Sb**	**08 22 09.8**	**-0.9**
FRON				AML	AML		
	comp=E,35450μm,0.7s						
FRON				AML	AML		
	comp=N,57550μm,0.9s						
TB01	**Gubbio**	**0.70**	**317**	P	**Pg**	**08 21 59.2**	**-0.6**
TB02	**Pietralunga**	**0.70**	**315**	P	**Pg**	**08 21 59.0**	**-1.0**
ATVO	**AVT- Monte Val**	**0.71**	**316**	P	**Pg**	**08 21 59.4**	**-0.7**
ATVO				S	**Sg**	**08 22 10.2**	**+0.8**
ATVO				AML	AML		
	comp=E,30100μm,1.0s						
ATVO				AML	AML		
	comp=N,28950μm,1.1s						
ATVA	**AVT- Monte Val**	**0.71**	**305**	P	**Pg**	**08 21 59.6**	**-0.6**
MGAB	**Montegabbione**	**0.72**	**274**	P	**Pg**	**08 21 59.9**	**-0.3**
MGAB				AML	AML		
	comp=N,38050μm,0.4s						
MGAB				AML	AML		
	comp=N,32600μm,0.4s						
MGAB				AML	AML		
	comp=E,46200μm,0.8s						
MGAB				AML	AML		
	comp=E,43600μm,0.7s						
ATBU	**Serra di Buran**	**0.72**	**327**	P	**Pg**	**08 22 00.0**	**-0.3**
TB03	**Pietralunga**	**0.72**	**317**	P	**Pg**	**08 21 59.8**	**-0.6**
VCEL	**Villa Celiera**	**0.73**	**130**	⇑P	**Pg**	**08 21 59.8**	**-0.8**
VCEL				AML	AML		
	comp=E,29950μm,0.5s						
VCEL				AML	AML		
	comp=N,30300μm,0.4s						
ATMI	**Monte Miggiano**	**0.76**	**308**	P	**Pg**	**08 22 01.0**	**0.0**
ATMI				AML	AML		
	comp=E,58450μm,1.2s						
ATMI				AML	AML		
	comp=N,81200μm,1.5s						
ATPC	**Poggio Castell**	**0.76**	**323**	P	**Pg**	**08 22 00.1**	**-1.0**
ATPI	**Pietralunga -**	**0.76**	**319**	P	**Pg**	**08 22 00.5**	**-0.7**
ATPI				AML	AML		
	comp=E,39200μm,0.7s						
ATPI				AML	AML		
	comp=N,32100μm,0.5s						
ATPI				AML	AML		
	comp=N,32050μm,0.5s						
ATPI				AML	AML		
	comp=E,39250μm,0.7s						
SRES	**S.Oreste - Sor**	**0.76**	**214**	P	**Pg**	**08 22 00.7**	**-0.4**
SRES				AML	AML		
	comp=E,17950μm,1.3s						
SRES				AML	AML		
	comp=N,23250μm,0.5s						
AOI	**Ancona**	**0.78**	**29**	P	**Pg**	**08 22 00.5**	**-0.9**
AOI				AML	AML		
	comp=E,64200μm,0.5s						
AOI				AML	AML		
	comp=N,52700μm,0.3s						
PIEI	**Pieia**	**0.78**	**329**	P	**Pg**	**08 22 00.5**	**-0.8**
PIEI				AML	AML		
	comp=N,23700μm,1.1s						
PIEI				AML	AML		
	comp=E,25850μm,0.4s						
MPAG	**Monte Paganucc**	**0.79**	**343**	⇑P	**Pg**	**08 22 00.9**	**-0.8**
PCRO	**Pietralacroce**	**0.80**	**24**	P	**Pg**	**08 22 01.8**	**-0.1**
T0110	**Collepietro**	**0.82**	**141**	⇑P	**Pg**	**08 22 00.8**	**-1.5**
T0110				AML	AML		
	comp=E,24900μm,0.8s						
T0110				AML	AML		
	comp=N,31650μm,0.9s						
SENI	**Senigallia**	**0.84**	**7**	P	**Pg**	**08 22 02.8**	**+0.2**
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
	comp=E,69850μm,0.5s						
SENI				AML	AML		
	comp=N,49800μm,1.0s						
APEC	**Apecchio**	**0.84**	**325**	P	**Pg**	**08 22 01.8**	**-0.8**
APEC				AML	AML		
	comp=N,8345μm,0.5s						
APEC				AML	AML		
	comp=E,6820μm,1.0s						
FSSB	**Fossombrone**	**0.85**	**345**	P	**Pg**	**08 22 02.0**	**-0.8**
FSSB				AML	AML		
	comp=E,82800μm,0.3s						
FSSB				AML	AML		
SACS	**San Casciano d**	**0.86**	**269**	P	**Pg**	**08 22 02.7**	**-0.4**
SACS				AML	AML		
	comp=E,16550μm,1.0s						
SACS				AML	AML		
	comp=N,19150μm,1.4s						
SACS				AML	AML		
	comp=N,17900μm,1.3s						
SACS				AML	AML		
	comp=N,19100μm,1.4s						
SACS				AML	AML		
	comp=E,17600μm,0.9s						
ATMC	**Monte Cedrone**	**0.87**	**312**	P	**Pg**	**08 22 02.9**	**-0.3**
PTQR	**Pietraquaria**	**0.88**	**165**	P	**Pg**	**08 22 02.2**	**-1.2**
PTQR				AML	AML		
	comp=E,5865μm,1.2s						
PTQR				AML	AML		
	comp=N,8435μm,1.5s						
BADI	**Badiali**	**0.89**	**316**	AML	AML		
	comp=E,925μm,0.6s						
BADI				AML	AML		
	comp=E,924μm,0.6s						
BADI				AML	AML		
	comp=N,22450μm,0.9s						
BADI				AML	AML		
	comp=N,22500μm,0.9s						
MTCE	**Montecelio**	**0.89**	**197**	P	**Pg**	**08 22 02.2**	**-1.2**
MTCE				AML	AML		
	comp=N,9720μm,0.5s						
MTCE				AML	AML		
	comp=E,11355μm,0.7s						
CERT	**Cerreto**	**0.93**	**185**	P	**Pg**	**08 22 02.7**	**-1.6**
CERT				AML	AML		
	comp=E,18050μm,0.5s						
CERT				AML	AML		
	comp=N,9885μm,0.3s						
CAFI	**Castiglion Fio**	**0.94**	**299**	P	**Pg**	**08 22 03.7**	**-0.7**
CAFI				AML	AML		
	comp=E,17350μm,1.1s						
CAFI				AML	AML		
	comp=N,14700μm,1.2s						
CAFI				AML	AML		
	comp=E,17750μm,1.1s						
CAFI				AML	AML		
	comp=N,15400μm,1.2s						
LATE	**Laterza**	**0.98**	**255**		**Pg**	**08 22 05.0**	**-0.2**
LATE	**Laterza**	**0.98**	**255**	P	**Pg**	**08 22 05.2**	**0.0**
SSP9	**Sansepolcro**	**0.99**	**315**	P	**Pg**	**08 22 05.3**	**-0.1**
SSP9				AML	AML		
	comp=E,18050μm,1.2s						
SSP9				AML	AML		
	comp=N,27600μm,1.6s						
RCAV	**Rocca di Cave**	**1.03**	**186**	P	**Pg**	**08 22 05.8**	**-0.5**
RCAV				AML	AML		
	comp=E,12650μm,0.4s						
RCAV				AML	AML		
	comp=N,11320μm,0.7s						
MCIV	**Monte Civitell**	**1.04**	**265**	P	**Pg**	**08 22 06.0**	**-0.4**
INTR	**Introdacqua**	**1.05**	**145**		**Pg**	**08 22 04.4**	**-2.2**
INTR	**Introdacqua**	**1.05**	**145**	P	**Pg**	**08 22 04.5**	**-2.2**
INTR				AML	AML		
	comp=N,18μm,1.5s						
INTR				AML	AML		
	comp=N,26950μm,1.5s						
INTR				AML	AML		
	comp=E,12420μm,1.5s						
INTR				AML	AML		
	comp=E,12μm,1.5s						
VVLD	**Villa Vallelon**	**1.08**	**158**	P	**Pg**	**08 22 05.7**	**-1.5**
VVLD				AML	AML		
	comp=E,8000μm,1.4s						
VVLD				AML	AML		
	comp=N,8035μm,0.8s						
SF13	**Bagnolo**	**1.08**	**268**	P	**Pg**	**08 22 06.9**	**-0.2**
SF14	**Selvena**	**1.09**	**264**	P	**Pg**	**08 22 07.1**	**-0.2**
GUAR	**Guarcino**	**1.09**	**171**	P	**Pg**	**08 22 06.7**	**-0.7**
GUAR				AML	AML		
	comp=N,11200μm,0.6s						
GUAR				AML	AML		
	comp=E,10550μm,1.0s						
RMP	**Rome, Mte Porz**	**1.10**	**195**	P	**Pg**	**08 22 06.8**	**-0.7**
RMP				AML	AML		
	comp=E,10940μm,0.7s						
RMP				AML	AML		
	comp=N,15250μm,0.9s						
CRE	**Caprese Michel**	**1.11**	**312**	P	**Pg**	**08 22 07.2**	**-0.6**
CRE				AML	AML		
	comp=N,10710μm,0.8s						
CRE				AML	AML		
	comp=E,11600μm,1.1s						
SF01	**Poggio Pratacc**	**1.12**	**267**	AML	AML		
	comp=E,13900μm,0.5s						
SF01				AML	AML		
	comp=N,8065μm,0.4s						
CAFR	**Castel Frentan**	**1.13**	**124**	P	**Pg**	**08 22 06.2**	**-2.0**
CAFR				AML	AML		
	comp=E,7955μm,1.5s						
CAFR				AML	AML		
	comp=N,8655μm,0.7s						
TOLF	**Tolfa**	**1.14**	**225**	P	**Pg**	**08 22 07.2**	**-1.1**
TOLF				AML	AML		
	comp=E,9680μm,0.6s						
TOLF				AML	AML		
	comp=N,7060μm,0.5s						
MA9	**Marino**	**1.15**	**196**	P	**Pg**	**08 22 08.2**	**-0.2**
VIVA	**Pratoni del Vi**	**1.15**	**192**	P	**Pg**	**08 22 08.4**	**-0.1**
VIVA				AML	AML		
	comp=E,20900μm,1.6s						
VIVA				AML	AML		
	comp=N,23200μm,1.4s						
RDP	**Rocca di Papa**	**1.15**	**194**	P	**Pg**	**08 22 07.5**	**-0.9**
RDP				AML	AML		
	comp=N,23150μm,0.7s						
RDP				AML	AML		
	comp=E,25950μm,0.5s						
SAMA	**S.Maria delle**	**1.15**	**199**	P	**Pg**	**08 22 07.7**	**-0.8**
RSM	**Repubblica di**	**1.15**	**337**	P	**Pn**	**08 22 09.0**	**0.0**
LPEL	**Lama dei Pelig**	**1.16**	**135**	P	**Pg**	**08 22 06.5**	**-2.2**
LPEL				AML	AML		
	comp=N,9050μm,1.0s						
LPEL				AML	AML		
	comp=E,10460μm,1.0s						
ARCI	**Arcidosso**	**1.18**	**270**	P	**Pg**	**08 22 08.7**	**-0.4**
POFI	**Posta Fibreno**	**1.25**	**158**	P	**Pb**	**08 22 08.8**	**-1.5**
POFI				AML	AML		
	comp=N,3970μm,0.6s						
POFI				AML	AML		
	comp=E,5705μm,0.5s						
POFI				AML	AML		
	comp=N,3735μm,0.4s						
POFI				AML	AML		
	comp=E,5710μm,0.5s						
LRP	**Arpino**	**1.28**	**163**	P	**Pn**	**08 22 10.3**	**-0.5**
LRP				AML	AML		
	comp=N,5075μm,0.9s						
LRP				AML	AML		
	comp=E,3470μm,1.6s						
GIUL	**Giuliano Di Ro**	**1.32**	**174**	P	**Pn**	**08 22 10.7**	**-0.6**
GIUL				AML	AML		
	comp=E,3185μm,0.8s						
GIUL				AML	AML		
	comp=N,5675μm,1.5s						
ASQU	**Asqua**	**1.32**	**315**	P	**Pn**	**08 22 11.2**	**-0.2**
BLLA	**Bellaria**	**1.35**	**341**	P	**Pg**	**08 22 12.6**	**+0.4**
SFI	**Santa Sofia**	**1.37**	**319**	P	**Pn**	**08 22 11.8**	**-0.2**
SFI				AML	AML		
	comp=N,9045μm,1.1s						
SFI				AML	AML		
	comp=E,8125μm,0.8s						
LATB	**Latina**	**1.38**	**184**	P	**Pn**	**08 22 10.7**	**-1.4**
RNI2	**Rionero Sannit**	**1.41**	**146**	P	**Pn**	**08 22 12.6**	**-0.1**
RNI2				AML	AML		
	comp=E,10155μm,0.7s						
RNI2				AML	AML		
	comp=N,11545μm,1.5s						
RNI2				AML	AML		
	comp=N,11945μm,1.5s						
RNI2				AML	AML		
	comp=E,9745μm,0.7s						
A309A	**Martorano (FC)**	**1.43**	**335**	P	**Pg**	**08 22 14.9**	**+0.9**
CSNT	**Castellina Chi**	**1.44**	**295**	P	**Pn**	**08 22 12.3**	**-0.7**
CSNT				AML	AML		
	comp=E,3870μm,0.7s						
CSNT				AML	AML		
	comp=N,4030μm,0.8s						
CERA	**Filignano**	**1.45**	**151**	P	**Pn**	**08 22 12.1**	**-1.1**
FROS	**Frosini**	**1.45**	**284**	P	**Pn**	**08 22 12.6**	**-0.6**
FRES	**Fresagrandinar**	**1.48**	**127**	P	**Pb**	**08 22 14.1**	**-0.2**
OSSC	**Osservatorio P**	**1.49**	**296**		**Pn**	**08 22 12.8**	**-0.9**
OSSC	**Osservatorio P**	**1.49**	**296**	P	**Pn**	**08 22 12.7**	**-1.0**
OSSC				AML	AML		
	comp=E,6970μm,1.0s						
OSSC				AML	AML		
	comp=N,6850μm,1.0s						
OSSC				AML	AML		
	comp=E,4345μm,0.8s						

OSSC AML AML
comp=N,4385μm,0.8s
RUFI Rufina 1.50 311 P Pn 08 22 13.4 -0.4
RUFI AML AML
comp=N,9500μm,1.3s
RUFI AML AML
comp=E,8600μm,0.7s
MAON Monte Argentar 1.51 254 P Pn 08 22 13.1 -0.8
TRIV Trivento 1.55 135 P Pb 08 22 15.2 -0.2
TRIV AML AML
comp=N,6940μm,0.8s
TRIV AML AML
comp=E,7700μm,0.9s
LMD Lutirano 1.57 321 P Pn 08 22 15.1 +0.4
LMD AML AML
comp=N,7725μm,1.1s
LMD AML AML
comp=E,6060μm,1.0s
BRSN Barisano 1.59 333 P Pg 08 22 17.7 +0.8
TRIF Trifonti 1.62 279 P Pn 08 22 14.9 -0.5
TRIF AML AML
comp=E,2760μm,1.6s
TRIF AML AML
comp=N,2630μm,0.6s
CASP Castiglione de 1.63 268 Pn 08 22 15.0 -0.6
CASP Castiglione de 1.63 268 P Pn 08 22 14.6 -1.0
CASP AML AML
comp=N,1100μm,1.0s
CASP AML AML
comp=E,1490μm,1.3s
VAGA Valle Agricola 1.69 149 P Pb 08 22 17.8 0.0
BRIS BRISIGHELLA 1.71 319 P Pb 08 22 18.3 0.0
SEI Scarperia 1.73 314 P Pn 08 22 17.4 +0.5
BSSO Busso 1.74 139 P Pb 08 22 18.2 -0.5
IMOL Imola, Italy 1.78 327 P Pg 08 22 21.0 +0.5
CRMI Carmignano 1.79 301 P Pn 08 22 17.8 0.0
PTRJ Pietraroja 1.85 144 AML AML
comp=N,2870μm,0.7s
PTRJ AML AML
comp=E,3265μm,0.7s
PTRJ AML AML
comp=E,3715μm,0.7s
PTRJ AML AML
comp=N,2630μm,0.6s
MELA Melanico ??? S 1.91 127 P Pn 08 22 20.1 +0.7
MELA AML AML
comp=N,8700μm,0.9s
MELA AML AML
comp=N,8985μm,0.9s
MELA AML AML
comp=E,7300μm,0.6s
MELA AML AML
comp=E,7040μm,0.6s
TREM Isole Tremiti 1.94 112 P Pn 08 22 20.7 +0.8
TREM AML AML
comp=E,5020μm,0.9s
TREM AML AML
comp=N,7710μm,0.5s
PII Pisa 2.05 295 P Pn 08 22 21.6 +0.3
PII AML AML
comp=E,2330μm,1.4s
PII AML AML
comp=N,2290μm,0.5s
ZCCA Zocca 2.13 315 Pn 08 22 23.2 +0.8
PAOL Paolisi 2.15 148 Pn 08 22 23.3 +0.6
PAOL Paolisi 2.15 148 P Pn 08 22 23.6 +0.9
MAIM Mastiano 2.16 300 P Pn 08 22 22.3 -0.5
MAIM AML AML
comp=N,2120μm,0.8s
MAIM AML AML
comp=E,2865μm,0.8s
BDI Bagni Di Lucca 2.17 304 P Pn 08 22 22.1 -0.9
BDI AML AML
comp=E,1045μm,1.6s
BDI AML AML
comp=E,2730μm,0.8s
BDI AML AML
comp=N,2185μm,1.2s
BDI AML AML
comp=N,992μm,1.3s
CARD Cardoso 2.22 302 P Pn 08 22 23.0 -0.7
CARD AML AML
comp=N,1965μm,0.6s
CARD AML AML
comp=E,1900μm,0.6s
SGRT San Giovanni R 2.27 119 Pn 08 22 24.4 0.0
SGRT San Giovanni R 2.27 119 ⇑P Pn 08 22 24.7 +0.3
SGRT AML AML
comp=N,2775μm,0.5s
SGRT AML AML
comp=E,3210μm,0.9s
VLC Villacollemand 2.35 304 Pn 08 22 24.8 -0.7
VLC Villacollemand 2.35 304 P Pn 08 22 24.7 -0.7
VLC AML AML
comp=E,2310μm,1.2s
VLC AML AML
comp=N,1520μm,1.6s
VLC AML AML
comp=E,2375μm,1.2s
VLC AML AML
comp=N,1550μm,1.3s
RIY Rijeka 2.65 22 *e*Pn **Pn 08 22 29.3 -0.3**
RIY *e*Sn **Sn 08 23 02.7 +0.8**
CAPA Cerignola FG 2.66 129 P Pn 08 22 30.5 +0.8
CAPA AML AML
comp=E,3950μm,0.9s
CAPA AML AML
comp=N,2865μm,1.0s
TEOL Teolo 2.69 338 Pn 08 22 30.3 +0.2
TEOL Teolo 2.69 338 P Pn 08 22 30.9 +0.8
TEOL AML AML
comp=N,13150μm,0.8s
TEOL AML AML
comp=E,11400μm,0.7s
VULT Monte Vulture 2.69 135 P Pn 08 22 31.6 +1.3
VULT AML AML
comp=N,2615μm,0.4s
VULT AML AML
comp=E,2395μm,1.1s
VULT AML AML
comp=N,2520μm,0.4s
VULT AML AML
comp=E,2540μm,1.1s
GRAM Graiana 2.72 307 P Pn 08 22 31.2 +0.6
MORSI Morsiglia 2.73 273 P Pn 08 22 30.8 +0.1
SKDS Skadanscina 2.75 14 ⇑*i*Pn **Pn 08 22 30.0 -1.0**
SKDS Skadanscina 2.75 14 ⇑*i*Pn **Pn 08 22 30.1 -1.0**
SKDS *i* Sn **Sn 08 23 03.4 -1.2**
SKDS IAML 08 23 05.6
comp=Z,841nm,0.3s
PRMA PARMA 2.76 314 Pn 08 22 31.6 +0.6
PALZ Palazzo San Ge 2.88 131 P Pn 08 22 33.6 +0.8
PALZ AML AML
comp=E,3200μm,0.8s
PALZ AML AML
comp=N,3140μm,1.0s
SMPL Sampolo 2.92 256 P Pn 08 22 32.8 -0.4
SMPL AML AML
comp=E,158μm,1.6s
SMPL AML AML
comp=N,121μm,1.4s
MRVN Minervino Murg 2.94 127 P Pn 08 22 33.9 +0.3
MRVN AML AML
comp=E,701μm,0.8s
MRVN AML AML
comp=N,634μm,1.2s
MSSA Maissana 2.97 300 Pn 08 22 33.9 -0.1
PZUN Potenza 3.02 137 AML AML
comp=E,834μm,1.0s
PZUN AML AML
comp=N,1012μm,1.6s
PZUN AML AML
comp=N,991μm,1.0s
PZUN AML AML
comp=E,852μm,1.1s
CEY Cerknica 3.02 18 *e*Pn **Pn 08 22 33.1 -1.6**
PGF Pioggiola 3.03 265 *e*Pn **Pn 08 22 34.4 -0.5**
PGF *e*Sn **Sb 08 23 17.0 -0.9**
comp=E,108nm,0.7s
PGF Pioggiola 3.03 265 AML AML
comp=N,170μm,1.6s
PGF AML AML
comp=E,236μm,1.4s
PGF Pioggiola 3.03 265 P Pn 08 22 35.2 +0.3
BOJS Bojanci 3.06 30 *e*Pn **Pn 08 22 34.8 -0.4**
BOJS Bojanci 3.06 30 P Pn 08 22 35.2 +0.1

BOJS AML AML
comp=E,4705μm,1.1s
BOJS AML AML
comp=N,7005μm,1.0s
ROVR Rover Verones 3.13 333 P Pn 08 22 36.7 +0.5
ROVR AML AML
comp=N,2875μm,0.5s
ROVR AML AML
comp=E,873μm,0.8s
ROVR AML AML
comp=N,1138μm,0.5s
ROVR AML AML
comp=E,2185μm,0.5s
SABO M.te Sabotino 3.13 7 P Pn 08 22 35.6 -0.6
SABO AML AML
comp=E,6060μm,0.8s
SABO AML AML
comp=N,29350μm,0.8s
SABO AML AML
comp=E,25550μm,0.8s
SABO AML AML
comp=N,7600μm,0.8s
CGRP Cima Grappa 3.14 343 P Pn 08 22 36.5 0.0
CGRP AML AML
comp=N,4990μm,0.8s
CGRP AML AML
comp=E,3820μm,1.6s
CGRP AML AML
comp=E,3885μm,1.6s
CGRP AML AML
comp=N,5020μm,0.8s
VARN Col Varnada, M 3.20 348 P Pn 08 22 37.5 +0.3
VARN AML AML
comp=E,6185μm,0.7s
VARN AML AML
comp=N,4040μm,1.4s
VARN AML AML
comp=N,4005μm,1.4s
VARN AML AML
comp=E,6180μm,0.7s
SRKY Kupres RS 3.20 67 *e*Pn **Pn 08 22 37.5 +0.3**
GBAS Gorenja Brezov 3.21 17 *e*Sn **Sn 08 23 15.5 -0.3**
AMUR Altamura 3.28 126 P Pn 08 22 38.6 +0.4
AMUR AML AML
comp=E,746μm,0.5s
AMUR AML AML
comp=N,934μm,0.6s
MGRS Mrkonjic Grad 3.29 61 *e*Pn **Pn 08 22 39.4 +1.0**
DOSS Dosso del Somm 3.30 336 P Pn 08 22 39.2 +0.5
DOSS AML AML
comp=N,2990μm,0.6s
DOSS AML AML
comp=N,3330μm,0.6s
DOSS AML AML
comp=E,3300μm,0.6s
DOSS AML AML
comp=E,3040μm,0.6s
SALO Salr 3.30 327 Pn 08 22 40.0 +1.5
SALO Salr 3.30 327 P Pn 08 22 39.5 +0.9
SALO AML AML
comp=N,3470μm,0.9s
SALO AML AML
comp=E,3010μm,1.0s
SALO AML AML
comp=E,3020μm,1.0s
SALO AML AML
comp=N,3435μm,0.9s
LJU Ljubljana 3.33 18 P Pn 08 22 39.0 0.0
LJU AML AML
comp=E,16450μm,0.6s
LJU AML AML
comp=N,24300μm,0.7s
AJAC Base Areonaval 3.34 255 P Pn 08 22 39.9 +0.9
AJAC AML AML
comp=E,318μm,1.5s
AJAC AML AML
comp=N,354μm,0.9s
AJAC Base Areonaval 3.34 255 P Pn 08 22 39.7 +0.7
CTI Castel Tesino 3.34 343 Pn 08 22 39.8 +0.7
CTI Castel Tesino 3.34 343 P Pn 08 22 39.8 +0.7
CTI Castel Tesino 3.34 343 P Pn 08 22 39.6 +0.5
CTI AML AML
comp=E,3240μm,1.2s
CTI AML AML
comp=N,2935μm,1.0s
PRIJ Prijedor 3.36 50 *e*Pn **Pb 08 22 45.1 -1.2**
MPRI Monte Prat 3.37 359 P Pn 08 22 39.7 +0.2
MPRI AML AML
comp=E,3670μm,0.7s
MPRI AML AML
comp=E,4800μm,0.6s
MPRI AML AML
comp=N,4585μm,0.7s
MPRI AML AML
comp=N,6000μm,0.7s
MIGL Miglionico 3.38 131 P Pn 08 22 40.8 +1.1
MIGL AML AML
comp=E,3355μm,1.0s
MIGL AML AML
comp=N,3470μm,1.3s
CADS Cadrg 3.39 8 ⇑*i*Pn **Pn 08 22 39.0 -0.7**
CADS *e*Sn **Sn 08 23 18.9 -1.3**
CADS IAML 08 23 54.1
comp=Z,1μm,0.7s
STON Ston 3.39 88 ⇑*i*Pn **Pn 08 22 38.3 -1.4**
STON Ston 3.39 88 *e*Pn **Pn 08 22 38.7 -1.0**
STON *e*Sn **Sn 08 23 19.0 -1.2**
STON Ston 3.39 88 AML AML
comp=E,470μm,0.5s
STON AML AML
comp=N,488μm,0.7s
STAL STALIGIAL 3.40 356 Pn 08 22 40.2 +0.4
STAL STALIGIAL 3.40 356 P Pn 08 22 39.6 -0.3
STAL AML AML
comp=E,4435μm,0.8s
STAL AML AML
comp=N,4060μm,1.2s
STAL AML AML
comp=E,3390μm,0.8s
STAL AML AML
comp=N,3275μm,0.9s
RNCA Ronca, Sant'Ol 3.40 299 P Pn 08 22 40.0 +0.2
RNCA AML AML
comp=E,312μm,0.8s
RNCA AML AML
comp=N,312μm,1.2s
LUSI Trento, Gardas 3.45 334 P Pn 08 22 41.3 +0.7
LUSI AML AML
comp=N,2660μm,0.6s
LUSI AML AML
comp=E,2340μm,0.8s
CIMO Cimolais 3.47 353 P Pn 08 22 40.5 -0.3
CIMO AML AML
comp=E,1099μm,1.2s
CIMO AML AML
comp=N,1062μm,0.8s
CIMO AML AML
comp=N,1076μm,0.8s
CIMO AML AML
comp=E,1072μm,1.2s
SCHR S. Chirico Rap 3.49 139 P Pn 08 22 42.7 +1.5
SCHR AML AML
comp=N,260μm,1.1s
SCHR AML AML
comp=E,266μm,0.9s
A051A Mrakovica 3.49 51 ⇑*i*Pn **Pn 08 22 41.2 0.0**
BLY Banja Luka 3.51 56 *e*Pn **Pn 08 22 41.7 +0.3**
BLY Banja Luka 3.51 56 *e*Pn **Pn 08 22 42.0 +0.6**
CUC Castrocucco 3.54 144 Pn 08 22 40.2 -1.5
PTCC Patocco-Chiusa 3.54 3 P Pn 08 22 41.1 -0.7
PTCC AML AML
comp=E,1850μm,0.7s
PTCC AML AML
comp=N,1765μm,0.7s
GAGG Gaggia 3.55 335 P Pn 08 22 42.8 +0.7
GAGG AML AML
comp=E,4380μm,0.9s
GAGG AML AML
comp=N,2945μm,0.9s
GAGG AML AML
comp=E,2890μm,0.9s
GAGG AML AML
comp=N,4275μm,0.9s
PRED Cave del Predi 3.59 5 Pn 08 22 42.6 +0.2
CLUD Cludinico 3.59 358 Pn 08 22 42.3 -0.2
CLUD Cludinico 3.59 358 P Pn 08 22 42.6 +0.2

CLUD AML AML
comp=N,3530μm,0.9s
CLUD AML AML
comp=E,2480μm,1.4s
CLUD AML AML
comp=N,3525μm,0.9s
CLUD AML AML
comp=E,2480μm,1.4s
ZONE Zone 3.59 325 P Pn 08 22 43.9 +1.4
LTRZ Laterza 3.60 128 P Pn 08 22 43.4 +0.8
NOCI Noci 3.63 124 P Pn 08 22 43.5 +0.4
NOCI AML AML
comp=E,645μm,0.7s
NOCI AML AML
comp=N,776μm,0.8s
MABI Malga Bissina 3.67 331 P Pn 08 22 44.9 +1.0
MABI AML AML
comp=E,742μm,0.6s
MABI AML AML
comp=N,632μm,1.6s
ZOU Zoufplan 3.68 359 P Pn 08 22 43.8 -0.2
ZOU AML AML
comp=E,2370μm,0.7s
ZOU AML AML
comp=N,3530μm,1.3s
ZOU AML AML
comp=N,3535μm,1.3s
ZOU AML AML
comp=E,2420μm,0.7s
ACOM Acomizza, Ital 3.69 5 P Pn 08 22 43.9 -0.1
ACOM AML AML
comp=E,3940μm,1.4s
ACOM AML AML
comp=N,3765μm,0.6s
ACOM AML AML
comp=N,3665μm,0.6s
ACOM AML AML
comp=E,4075μm,0.8s
FVI Forni Avoltri 3.73 357 P Pn 08 22 44.7 +0.2
FVI AML AML
comp=N,2600μm,0.6s
FVI AML AML
comp=E,2205μm,1.4s
QLNO Quiliano 3.73 294 P Pn 08 22 44.4 -0.1
QLNO AML AML
comp=N,584μm,1.1s
QLNO AML AML
comp=E,254μm,1.5s
MYKA Terra Mystica 3.78 6 *i* Pn **Pn 08 22 45.4 +0.2**
comp=E,105nm,0.5s,SNR=40
OBKA Obir 3.78 16 *e*Pn **Pn 08 22 44.6 -0.6**
OBKA Obir 3.78 16 *e*Pn **Pn 08 22 45.0 -0.3**
comp=E,11nm,0.2s
OBKA Obir 3.78 16 *e*Pn **Pn 08 22 44.7 -0.5**
KOSI Kohlern 3.79 342 P Pn 08 22 46.6 +1.2
KOSI AML AML
comp=E,3240μm,0.8s
KOSI AML AML
comp=N,2340μm,0.8s
APPI Appiano 3.84 340 P Pn 08 22 47.0 +1.0
APPI AML AML
comp=E,1605μm,0.4s
APPI AML AML
comp=N,1765μm,1.4s
TREB Trebinje 3.88 91 *e*Pn **Pn 08 22 45.7 -0.7**
TREB Trebinje 3.88 91 *e*Pn **Pn 08 22 45.9 -0.5**
TREB *e*Sn **Sn 08 23 29.4 -2.8**
ABTA Abfaltersbach 3.90 354 *i* Pn **Pn 08 22 47.9 +1.1**
comp=N,279nm,0.7s,SNR=123
A052A Srbac 3.90 54 *e*Pn **Pn 08 22 46.4 -0.3**
BRY Bratogost 4.01 88 *e*Pn **Pn 08 22 48.4 +0.1**
BRY Bratogost 4.01 88 ⇑*i*Pn **Pn 08 22 48.5 +0.1**
BRY *i* Sn **Sn 08 23 35.7 +0.1**
HCY Herceg Novi 4.01 94 *e*Pn **Pn 08 22 48.8 +0.5**
HCY Herceg Novi 4.01 94 ⇑*i*Pn **Pn 08 22 48.5 +0.2**
HCY *i* Sn **Sn 08 23 35.9 +0.4**
SOKA Soboth 4.05 19 *i* Pn **Pn 08 22 48.9 0.0**
comp=N,4.8nm,0.3s,SNR=18
BRMO Bormio 4.09 333 P Pn 08 22 51.6 +2.1
RISI Rein 4.14 350 P Pn 08 22 51.3 +1.1
RISI AML AML
comp=N,3005μm,0.5s
RISI AML AML
comp=E,3815μm,0.6s
BERNI Berninapass 4.16 329 P Pn 08 22 51.9 +1.3
SAOF Saorge 4.18 287 P Pn 08 22 51.1 +0.5
KBA Koelnbreinsper 4.21 2 *i* Pn **Pn 08 22 51.8 +0.6**
comp=E,72nm,0.4s,SNR=32
KBA *e*Sn **Sn 08 23 39.6 -1.0**
comp=E,457nm,0.4s
KBA Koelnbreinsper 4.21 2 *e*Pn **Pn 08 22 51.7 +0.6**
KBA *e*Sn **Sn 08 23 38.7 -2.0**
ROSI Rosskopf 4.22 344 P Pn 08 22 52.7 +1.3
KOGS Kog 4.23 31 P Pn 08 22 50.1 -1.2
KOGS AML AML
comp=N,12550μm,1.2s
KOGS AML AML
comp=E,11650μm,0.8s
SBF Sospel 4.24 285 *e*Pn **Pn 08 22 51.3 -0.1**
SBF *e*Sn **Sn 08 23 38.8 -2.3**
comp=E,170nm,0.6s
FUORN Ofenpass-Fuorn 4.25 333 Pn 08 22 52.3 +0.5
UPM Unac-Piva 4.28 84 *e*Pn **Pn 08 22 53.9 +1.8**
UPM Unac-Piva 4.28 84 *e*Pn **Pn 08 22 52.2 +0.1**
UPM *i* Sn **Sn 08 23 42.3 -0.1**
TURF col de Turini 4.29 287 P Pn 08 22 52.6 +0.3
VARE Varese 4.30 316 P Pn 08 22 52.5 0.0
CEME Cevo 4.31 92 ⇓*i*Pn **Pn 08 22 52.6 +0.2**
CEME *i* Sn **Sn 08 23 43.1 +0.1**
NKME Niksic 4.32 89 *e*Pn **Pn 08 22 52.7 +0.2**
NKME *i* Sn **Sn 08 23 43.2 +0.1**
BUM Brajici-Budva 4.33 96 *e*Pn **Pn 08 22 52.9 +0.2**
BUM *i* Sn **Sn 08 23 43.4 0.0**
VSL Villasalto 4.38 221 P Pn 08 22 52.9 -0.5
STV Sant Anna di V 4.40 290 P Pn 08 22 55.2 +1.5
HAPS Han Pijesak,Bl 4.44 72 ⇑*i*Pn **Pn 08 22 54.6 +0.4**
BEHE Becsehely 4.46 35 P Pn 08 22 58.0 +3.6
FETA Feichten 4.47 339 *i* Pn **Pn 08 22 56.4 +1.6**
comp=E,34nm,0.6s,SNR=37
TUE Stuetta 4.48 325 Pn 08 22 55.8 +0.9
WTTA Wattenberg 4.51 347 *i* Pn **Pn 08 22 57.6 +2.3**
comp=E,21nm,0.3s,SNR=31
WTTA Wattenberg 4.51 347 *e*Pn **Pn 08 22 57.2 +1.9**
WTTA *e*Sn **Sn 08 23 49.7 +1.7**
WTTA Wattenberg 4.51 347 P Pn 08 22 57.1 +1.9
DAVOX Davos/Dischmat 4.52 331 Pn **Pn 08 22 57.4 +1.9**
comp=E,24nm,0.3s,baz=161,slow=15,SNR=64
DAVOX Sn **Sn 08 23 49.1 +0.8**
comp=E,11nm,0.3s,baz=285,slow=20,SNR=11
DAVOX LR LR 08 25 13.3
comp=E,878nm,18.8s,baz=141,slow=47
DAVOX Davos/Dischmat 4.52 331 P Pn 08 22 58.1 +2.6
DAVOX Davos/Dischmat 4.52 331 P Pn 08 22 58.1 +2.6
CGL Cagliari Serpe 4.53 220 P Pn 08 22 56.5 +1.0
SQTA Sankt Quirin 4.55 344 *i* Pn **Pn 08 22 58.1 +2.3**
comp=E,46nm,0.5s,SNR=34
DRME Dracevica, Mon 4.56 97 ⇑*i*Pn **Pn 08 22 56.3 +0.5**
DRME Dracevica, Mon 4.56 97 *e*Pn **Pn 08 22 56.1 +0.3**
DRME *i* Sn **Sn 08 23 49.0 0.0**
PDG Podgorica 4.57 93 ⇓P **Pn 08 22 56.3 +0.3**
PDG Podgorica 4.57 93 Pn 08 22 56.1 +0.1
PDG Podgorica 4.57 93 *e*Pn **Pn 08 22 56.9 +0.9**
PDG *e*Sn **Sn 08 23 45.5 -3.8**
TTG Podgorica 4.57 93 ⇓*i*Pn **Pn 08 22 56.3 +0.3**
TTG *i* Sn **Sn 08 23 49.5 +0.2**
CALF Calern 4.58 283 P Pn 08 22 56.2 0.0
WATA Walderalm 4.59 347 *i* Pn **Pn 08 22 58.5 +2.2**
comp=E,16nm,0.2s,SNR=33
WATA *e*Sn **Sn 08 23 53.5 +3.5**
comp=E,256nm,0.4s
TIP Timpagrande 4.62 142 ⇑P **Pn 08 22 59.6 +2.9**
PLE Pljevlja 4.64 82 ⇓*i*Pn **Pn 08 22 57.1 +0.1**
PLE *i* Sn **Sn 08 23 50.9 -0.2**
ULC Ulcinj 4.65 99 ⇓*i*Pn **Pn 08 22 57.3 +0.2**
ULC *i* Sn **Sn 08 23 50.5 -0.8**
RUDO Rudo 4.65 79 ⇑*i*Pn **Pn 08 22 57.4 +0.3**
TRAV Traversella 4.66 306 P Pn 08 22 56.2 -1.0
TRAV AML AML
comp=E,346μm,1.0s
TRAV AML AML
comp=N,334μm,1.6s
MOTA Moosalm 4.69 343 *i* Pn **Pn 08 23 00.4 +2.8**
comp=N,135nm,0.8s,SNR=52
MOTA *e*Sn **Sn 08 23 56.9 +4.5**

comp=N,226nm,0.5s
ARSA Arzberg 4.71 21 *i* Pn **Pn 08 22 57.3 -0.6**
comp=N,9.9nm,0.3s,SNR=22
ARSA *e*Sn **Sn 08 23 50.2 -2.4**
comp=N,144nm,0.4s
ARSA Arzberg 4.71 21 *e*Pn **Pn 08 22 57.3 -0.6**
ARSA *e*Sn **Sn 08 23 50.4 -2.3**
ARSA Arzberg 4.71 21 P **Pn 08 22 57.1 -0.8**
BBLS Lazići 4.71 76 ⇑*i*Pn **Pn 08 22 58.4 +0.4**
BBLS Lazići 4.71 76 *e*Pn **Pn 08 22 58.3 +0.3**
KOME Kolasin 4.73 88 *e*Pn **Pn 08 22 58.4 +0.2**
KOME *i*Sn **Sn 08 23 53.1 -0.2**
FUSIO Fusio 4.77 320 P **Pn 08 22 59.2 +0.3**
FUSIO AML AML
comp=N,894µm,0.9s
FUSIO AML AML
comp=E,978µm,0.7s
KOVH Kovagotottos 4.82 46 P **Pn 08 22 58.1 -1.2**
KOVH S **Sn 08 23 53.1 -2.2**
SURF Saint Ours 4.82 292 P **Pn 08 23 00.0 +0.4**
BIOA Bad Ischl, Aus 4.83 4 *i* Pn **Pn 08 22 59.9 +0.3**
comp=E,41nm,0.4s,SNR=58
LMR La Mourre 4.84 278 *e*Pn **Pn 08 22 59.0 -0.6**
LMR *e*Sn **Sn 08 23 54.3 -1.5**
comp=E,20nm,0.5s
MMK Mattmark 4.85 313 P **Pn 08 23 00.5 +0.4**
JAUF Jausiers 4.85 291 P **Pn 08 23 01.1 +1.1**
BLJ Bijeljina 4.86 65 *e*Pn **Pn 08 22 58.2 -1.7**
RJOB Jochberg 4.87 358 *e*Pn **Pn 08 23 01.3 +1.2**
RJOB *e*Sn **Sn 08 23 57.6 +0.9**
RETA Reutte 4.90 341 *i* Pn **Pn 08 23 02.6 +2.1**
comp=E,21nm,0.5s,SNR=25
SCTE Santa Cesarea 4.92 123 **Pn 08 22 59.2 -1.5**
MBDF Montbardon 4.93 294 *e*Pn **Pn 08 23 00.7 -0.3**
MBDF *e*Sn **Sn 08 23 57.9 -0.5**
comp=E,119nm,0.7s
PLONS Plons/SG 4.93 329 *e*Pn **Pn 08 23 04.1 +3.1**
PLONS *e*Sn **Sn 08 24 00.1 +1.7**
PLONS Plons/SG 4.93 329 P **Pn 08 23 03.6 +2.6**
TRIGF Trigance 4.95 282 P **Pn 08 23 02.2 +1.0**
DAVA Damuels 4.96 334 *i* Pn **Pn 08 23 04.6 +3.1**
comp=E,86nm,0.7s,SNR=44
DAVA Damuels 4.96 334 *e*Pn **Pn 08 23 04.4 +3.0**
DAVA *e*Sn **Sn 08 24 01.9 +2.8**
TEKS Tekeris 4.96 68 *e*Pn **Pn 08 23 00.2 -1.2**
CREF Crivoux 4.97 292 P **Pn 08 23 04.3 +2.7**
LSD Lago del Serru 5.00 303 P **Pn 08 23 01.1 -1.0**
OGAG Argentiere 5.00 291 P **Pn 08 23 04.9 +2.9**
IVA Berane 5.00 88 *e*Pn **Pn 08 23 02.2 +0.2**
IVA *i*Sn **Sn 08 23 59.8 -0.3**
FLAF Flassans-sur-I 5.02 278 P **Pn 08 23 01.7 -0.5**
EMBD Embd, Matterta 5.03 313 P **Pn 08 23 05.4 +3.1**
MOA Molln 5.05 9 *e*Pn **Pn 08 23 02.6 +0.1**
MOA *e*Sn **Sn 08 24 00.0 -1.0**
MOA Molln 5.05 9 *i* Pn **Pn 08 23 02.7 +0.1**
comp=E,11nm,0.3s,SNR=34
MOA *e*Sn **Sn 08 24 01.6 +0.6**
comp=E,175nm,0.5s
MOA Molln 5.05 9 *e*Pn **Pn 08 23 02.6 +0.1**
SJES Sjenica 5.06 83 *e*Pn **Pn 08 23 03.3 +0.5**
SJES *e*Sn **Sn 08 23 57.6 -4.0**
PVY Plav 5.07 91 *e*Pn **Pn 08 23 03.2 +0.2**
PVY *i*Sn **Sn 08 24 01.5 -0.3**
DIVS Divibare 5.17 74 P **Pn 08 23 04.1 -0.2**
DIVS Divibare 5.17 74 *e*Pn **Pn 08 23 04.0 -0.3**
DIVS Divibare 5.17 74 *e*Pn **Pn 08 23 04.5 +0.2**
DIVS *e*Sn **Sn 08 24 00.5 -3.8**
DIX Grande Dixence 5.17 310 P **Pn 08 23 06.7 +2.2**
DIX Grande Dixence 5.17 310 P **Pn 08 23 05.9 +1.4**
BNALP Bannalp 5.19 322 P **Pn 08 23 06.3 +1.7**
MORH Mrgy, Hungar 5.19 48 ⇑P **Pg 08 23 24.3 -1.5**
MORH Mrgy, Hungar 5.19 48 P **Pn 08 23 03.7 -0.7**
UBR Ueberruh 5.25 337 *e*Pn **Pn 08 23 07.5 +2.2**
UBR *e*Sn **Sn 08 24 05.4 -0.6**
LPG La Plagne 5.25 302 *e*Pn **Pn 08 23 06.2 +0.6**
LPG *e*Sn **Sn 08 24 02.4 -4.2**
comp=E,145nm,0.7s
TIR Tirane 5.27 105 ⇓P **Pn 08 23 06.3 +0.8**
TIR Tirane 5.27 105 **Pn 08 23 05.6 +0.1**
TIR Tirane 5.27 105 P **Pn 08 23 05.8 +0.3**
TIR Tirane 5.27 105 *e*Pn **Pn 08 23 06.1 +0.6**
TIR *e*Sn **Sn 08 24 02.6 -3.9**
TIR Tirane 5.27 105 P **Pn 08 23 05.6 +0.1**
TIR S **Sn 08 24 06.1 -0.4**
LPL La Plagne 5.28 302 *e*Pn **Pn 08 23 06.6 +0.7**
LPL *e*Sn **Sn 08 24 02.3 -4.7**
comp=E,78nm,0.6s
LPL La Plagne 5.28 302 P **Pn 08 23 07.2 +1.3**
TIH Tihany 5.28 39 P **Pn 08 23 09.4 +3.8**
MPLH Magyarpolny 5.33 35 P **Pn 08 23 01.8 -4.6**
RONA Rosalia, Austr 5.33 24 *i* Pn **Pn 08 23 06.2 -0.2**
comp=E,5.0nm,0.2s,SNR=17
FRGS Fruska Gora 5.36 62 ⇑*i*Pn **Pn 08 23 06.0 -0.8**
FRGS Fruska Gora 5.36 62 *e*Pn **Pn 08 23 06.4 -0.4**
VLO Vlora 5.37 114 **Pn 08 23 06.9 0.0**
VLO Vlora 5.37 114 P **Pn 08 23 06.9 0.0**
SOP Sopron 5.40 26 P **Pn 08 23 06.8 -0.5**
SOP S **Sn 08 24 06.9 -2.7**
SENIN Lac Senin/Sane 5.41 312 Pn **Pn 08 23 09.3 +1.7**
WILA Wila 5.42 328 *e*Pn **Pn 08 23 09.8 +2.2**
WILA *e*Sn **Sn 08 24 09.9 -0.3**
CONA Conrad Observa 5.42 20 *i* Pn **Pn 08 23 07.3 -0.4**
comp=E,15nm,0.3s,SNR=22
CONA *e*Sn **Sn 08 24 08.1 -2.2**
comp=E,117nm,0.6s
RSL Roselend 5.42 303 P **Pn 08 23 09.1 +1.3**
MLYF Mely 5.44 284 P **Pn 08 23 09.7 +1.7**
EGYH Egyhazaskeszo 5.45 32 P **Pn 08 23 10.5 +2.5**
TRUS Trudelj 5.49 73 *e*Pn **Pn 08 23 08.8 +0.2**
BSTF la Bastide-des 5.51 283 P **Pn 08 23 11.1 +2.2**
GDM Grand'Maison 5.54 297 P **Pn 08 23 12.6 +3.3**
OGSI Sixt 5.54 307 P **Pn 08 23 12.4 +3.0**
SMRF Simiane la Rot 5.58 284 *e*Pn **Pn 08 23 11.4 +1.6**
SMRF *e*Sn **Sn 08 24 12.7 -1.5**
comp=E,94nm,1.0s
AIGLE Aigle 5.58 310 P **Pn 08 23 12.2 +2.3**
PHP Peshkopia 5.58 100 P **Pn 08 23 10.8 +0.9**
ORIF Oris-en-Rattie 5.59 294 *e*Pn **Pn 08 23 12.9 +2.8**
ORIF *e*Sn **Sn 08 24 13.1 -1.5**
comp=E,74nm,0.6s
ORIF Oris-en-Rattie 5.59 294 P **Pn 08 23 12.6 +2.6**
WALHA Wallhausen, DE 5.62 332 *e*Pn **Pn 08 23 12.5 +2.1**
RUSF Rustrel 5.64 283 P **Pn 08 23 12.6 +2.0**
GRUS Gruza 5.65 77 *e*Pn **Pn 08 23 11.1 +0.3**
GRUS *e*Sn **Sn 08 24 12.0 -4.0**
SULZ Cheisacher 5.83 325 *e*Pn **Pn 08 23 14.8 +1.5**
SULZ *e*Sn **Sn 08 24 20.2 -0.1**
SULZ Cheisacher 5.83 325 P **Pn 08 23 14.8 +1.5**
TORNY Torny/Romont 5.85 314 P **Pn 08 23 15.9 +2.4**
SLE Schleitheim 5.87 328 *e*Pn **Pn 08 23 14.8 +1.0**
SLE *e*Sn **Sn 08 24 18.6 -2.6**
SLE Schleitheim 5.87 328 P **Pn 08 23 14.9 +1.1**
BALST Balsthal 5.87 321 *e*Pn **Pn 08 23 14.8 +0.9**
BALST *e*Sn **Sn 08 24 20.6 -0.8**
BALST Balsthal 5.87 321 P **Pn 08 23 14.6 +0.8**
BALST Balsthal 5.87 321 S **Sn 08 24 20.6 -0.8**
SELS Selova 5.90 84 *e*Pn **Pn 08 23 14.4 +0.2**
SELS *e*Sn **Sn 08 24 17.7 -4.3**
GUT Gutenstein 5.90 333 P **Pn 08 23 17.4 +3.2**
METMA Mettma DE 5.92 327 *e*Pn **Pn 08 23 15.2 +0.8**
METMA *e*Sn **Sn 08 24 20.2 -2.3**
KEK Kerkira 5.96 120 **Pn 08 23 15.2 +0.1**
KEK Kerkira 5.96 120 P **Pn 08 23 14.9 -0.2**
OGSM Saint Maurice 5.97 300 P **Pn 08 23 18.0 +2.8**
GEC2 GERESS Array S 5.99 4 **Pn 08 23 14.6 -0.9**
GEC2 GERESS Array S 5.99 4 *e*Pn **Pn 08 23 14.6 -0.9**
GEC2 *e*Sn **Sn 08 24 22.2 -2.1**
GERES GERESS Array B 5.99 4 Pn **Pn 08 23 14.7 -0.9**
comp=E,9.7nm,0.3s,baz=178,slow=12,SNR=78
GERES Sn **Sn 08 24 21.6 -2.8**
comp=E,38nm,0.3s,baz=173,slow=24,SNR=13
GERES LR LR 08 26 10.6
comp=E,372nm,19.3s,baz=196,slow=45
comp=E,8.6nm,0.3s
GERES GERESS Array B 5.99 4 **Pn 08 23 14.2 -1.4**
SRN Sarande 6.00 118 P **Pn 08 23 16.6 +1.0**
CKRC Cesky Krumlov 6.01 8 *e*PN **Pn 08 23 14.7 -1.0**
CKRC *e*SN **Sn 08 24 22.2 -2.5**
OHR Ohrid 6.01 104 *i* Pn **Pn 08 23 17.1 +1.3**
ZST Bratislava 6.02 27 *e*P **Pn 08 23 14.9 -1.0**
ZST *e* 08 24 20.8
BERGE Lenzkirch (DE) 6.08 327 *e*Pn **Pn 08 23 17.4 +0.8**

BERGE *e*Sn **Sn 08 24 23.3 -3.2**
GIMEL St. Georges / 6.08 309 P **Pn 08 23 18.8 +2.0**
BOURR Bourrignon 6.13 320 P **Pn 08 23 18.1 +0.7**
FELD Feldberg im Sc 6.15 326 P **Pn 08 23 18.0 +0.2**
SRO Srobarova 6.16 35 *e*P **Pn 08 23 16.4 -1.4**
SRO *e* 08 24 26.3
BRANT Les Verrieres 6.21 313 P **Pn 08 23 20.2 +1.7**
CABF La Chapelle 6.23 309 *e*Pn **Pn 08 23 19.8 +1.0**
CABF *e*Sn **Sn 08 24 27.7 -2.5**
comp=E,96nm,0.7s
MODS Modra-Piesok 6.24 27 *e*P **Pn 08 23 17.5 -1.3**
MODS *e* 08 24 27.8
OG35 Corcelles 6.24 303 P **Pn 08 23 19.5 +0.6**
KIZ Kirchzarten 6.25 326 P **Pn 08 23 19.8 +0.8**
SKO Skopje 6.25 95 *i* Pn **Pn 08 23 19.8 +0.8**
LSK Leskovik 6.26 113 P **Pn 08 23 20.2 +0.9**
KHC Kasperske Hory 6.27 3 **Pn 08 23 19.4 +0.1**
KHC Kasperske Hory 6.27 3 *e*P **Pn 08 23 18.4 -0.9**
KHC *e* 08 24 27.5
KHC Kasperske Hory 6.27 3 *e*PN **Pn 08 23 18.4 -0.9**
KHC *e*SN **Sn 08 24 27.5 -3.7**
WET Wettzell 6.27 359 *e*Pn **Pn 08 23 18.5 -0.9**
WET *e*Sn **Sn 08 24 26.7 -4.6**
BOVS Bovan 6.34 80 ⇑P **Pn 08 23 20.3 0.0**
BOVS Bovan 6.34 80 *e*Pn **Pn 08 23 19.7 -0.6**
BOVS *e*Sn **Sn 08 24 27.4 -5.5**
BFO Black Forest 6.39 330 Pn **Pn 08 23 21.4 +0.4**
BFO Black Forest 6.39 330 P **Pn 08 23 21.4 +0.4**
BFO Black Forest 6.39 330 *e*Pn **Pn 08 23 22.1 +1.1**
BFO *e*Sn **Sn 08 24 32.2 -2.0**
VIVF Saint-Julien-l 6.39 291 *e*Pn **Pn 08 23 22.6 +1.6**
VIVF *e*Sn **Sn 08 24 29.6 -4.7**
comp=E,54nm,0.9s
IGT Igoumenitsa 6.40 119 P **Pn 08 23 22.5 +1.4**
RIVEL MONT RIVEL 6.41 310 P **Pn 08 23 22.9 +1.7**
RIVEL S **Sn 08 24 32.9 -1.6**
SMOL Smolenice 6.41 27 *e*P **Pn 08 23 20.3 -0.9**
SMOL *e* 08 24 33.0
BARS Barje 6.42 88 *e*Pn **Pn 08 23 21.5 +0.1**
VOGT Vogtsburg - To 6.45 326 P **Pn 08 23 22.5 +0.8**
NEST Nestorio 6.45 110 P **Pn 08 23 23.8 +1.9**
STU Stuttgart 6.49 337 **Pn 08 23 21.4 -1.0**
STU Stuttgart 6.49 337 P **Pn 08 23 21.4 -1.0**
MOF Molkenrain 6.51 322 P **Pn 08 23 23.2 +0.5**
MDVR Moldovita 6.53 70 ⇑P **Pn 08 23 22.8 0.0**
KRUC Moravsky 6.61 19 *e*PN **Pn 08 23 22.2 -1.7**
KRUC *e*SN **Sn 08 24 34.8 -4.6**
SSB Saint Sauveur 6.61 294 **Pn 08 23 23.5 -0.4**
SSB Saint Sauveur 6.61 294 P **Pn 08 23 23.5 -0.4**
SSB Saint Sauveur 6.61 294 P **Pn 08 23 24.9 +0.9**
PENT Pentalofos 6.61 111 P **Pn 08 23 25.6 +1.6**
HINF Hinteralfeld 6.61 321 *e*Pn **Pn 08 23 23.5 -0.5**
HINF *e*Sn **Sn 08 24 37.3 -2.3**
comp=E,418nm,0.7s
RONF Ronchamp 6.63 319 P **Pn 08 23 25.1 +0.9**
BZS Buzias 6.71 63 ⇑P **Pn 08 23 25.2 -0.2**
BZS Buzias 6.71 63 ⇑P **Pn 08 23 25.2 -0.2**
ZAGS Zajecar 6.74 79 *e*Pn **Pn 08 23 25.6 -0.1**
ECH Echery 6.77 324 Pn **Pn 08 23 26.4 +0.2**
ECH Echery 6.77 324 P **Pn 08 23 26.4 +0.2**
ECH Echery 6.77 324 *e*Pn **Pn 08 23 25.8 -0.3**
ECH *e*Sn **Sn 08 24 38.8 -4.7**
ECH Echery 6.77 324 P **Pn 08 23 25.9 -0.3**
JAVC Velka Javorina 6.79 27 *e*PN **Pn 08 23 25.0 -1.4**
LASF Ste Croix 6.82 283 *e*Pn **Pn 08 23 27.3 +0.4**
LASF *e*Sn **Sn 08 24 39.0 -5.7**
comp=E,35nm,1.0s
WLS Welschbruch 6.84 326 P **Pn 08 23 27.8 +0.7**
STIP Stip 6.85 97 *i* Pn **Pn 08 23 29.6 +2.3**
CDF Champ du Feu 6.87 326 *e*Pn **Pn 08 23 27.3 -0.3**
CDF *e*Sn **Sn 08 24 42.3 -3.8**
comp=E,104nm,0.6s
VRAC Vranov 6.88 20 ⇑P **Pn 08 23 27.2 -0.5**
VRAC Vranov 6.88 20 Pn **Pn 08 23 27.8 +0.1**
comp=E,1.3nm,0.3s,baz=225,slow=9.9,SNR=5.9
VRAC LR LR 08 26 46.3
comp=E,303nm,19.4s,baz=210,slow=44
comp=E,5.6nm,0.5s
VRAC Vranov 6.88 20 ⇑P **Pn 08 23 27.2 -0.5**
VRAC Vranov 6.88 20 *e*PN **Pn 08 23 26.0 -1.7**
VRAC *e*SN **Sn 08 24 40.9 -5.3**
VYHS Vyhne 6.91 34 *e*P **Pn 08 23 29.4 +1.3**
GRA1 Grafenberg Arr 6.94 350 **Pn 08 23 29.4 +1.0**
GRF Grafenberg Arr 6.94 350 P **Pn 08 23 29.5 +1.0**
GRF Grafenberg Arr 6.94 350 *e*Sn **Sn 08 24 43.3 -4.4**
GRFO Grafenberg 6.94 350 **Pn 08 23 29.3 +0.8**
GRFO Grafenberg 6.94 350 P **Pn 08 23 29.3 +0.8**
HAU Haudompre 6.98 320 *e*Pn **Pn 08 23 28.4 -0.7**
HAU *e*Sn **Sn 08 24 44.8 -3.9**
comp=E,516nm,0.6s
KZN Kozani 7.00 109 P **Pn 08 23 33.2 +3.8**
SIRR Siria 7.00 58 ⇑P **Pn 08 23 29.1 -0.2**
ZAPS Zavoj 7.00 83 *e*Pn **Pn 08 23 29.6 +0.2**
ZAPS *e*Sn **Sn 08 24 43.1 -6.2**
TSLK Tsoukalades, L 7.02 123 P **Pn 08 23 30.5 +0.9**
HERR Herculane 7.04 70 ⇑P **Pn 08 23 30.2 +0.4**
LKD2 Lefkada island 7.04 123 P **Pn 08 23 30.4 +0.5**
BLKB Belogradchik 7.04 81 ⇑P **Pn 08 23 30.2 +0.2**
DRAG Dragano-Lefkad 7.06 124 P **Pn 08 23 30.5 +0.4**
DJES Djerdap 7.06 72 ⇑P **Pn 08 23 30.6 +0.4**
NYDR Nydri-Lefkada 7.11 123 P **Pn 08 23 31.8 +0.9**
GOPC GO Pecny, Ondr 7.14 9 *e*SN **Sn 08 24 48.7 -3.9**
EVGI Lefkada island 7.15 124 P **Pn 08 23 32.8 +1.5**
MANZ Manzenberg 7.15 355 *e*Pn **Pn 08 23 30.2 -1.2**
MANZ *e*Sn **Sn 08 24 46.5 -6.3**
CIEL Dossenheim-sur 7.17 328 P **Pn 08 23 32.2 +0.5**
PRU Pruhonice 7.19 8 *e*P **Pn 08 23 30.2 -1.7**
PRU *e* 08 24 49.7
PRU Pruhonice 7.19 8 *e*PN **Pn 08 23 30.2 -1.7**
PRU *e*SN **Sn 08 24 49.7 -4.0**
PLYF Puligny Montra 7.19 307 P **Pn 08 23 33.5 +1.6**
VAY Valandovo 7.22 99 *i* Pn **Pn 08 23 33.4 +1.0**
DMLN Damoulianata-K 7.22 127 P **Pn 08 23 32.1 -0.3**
KEF3 Kipouria, Keph 7.23 128 P **Pn 08 23 33.6 +1.1**
MAUC Maruska 7.28 25 *e*PN **Pn 08 23 33.7 +0.5**
PUNG Punghina 7.29 76 ⇑P **Pn 08 23 35.0 +1.7**
NKC Novy Kostel 7.38 357 *e*P **Pn 08 23 34.7 +0.2**
NKC *e* 08 24 53.5
NKC Novy Kostel 7.38 357 *e*PN **Pn 08 23 34.7 +0.2**
NKC *e*SN **Sn 08 24 53.5 -4.9**
VLS Valsamata 7.39 127 P **Pn 08 23 34.5 -0.2**
GZR Gura Zlata 7.41 67 ⇑P **Pn 08 23 35.0 -0.1**
PSDA Pessada-Kefalo 7.43 127 P **Pn 08 23 33.4 -1.8**
VTS Vitosha 7.48 89 ⇑P **Pn 08 23 37.2 +1.2**
VTS Vitosha 7.48 89 **Pn 08 23 36.4 +0.4**
VTS Vitosha 7.48 89 ⇑P **Pn 08 23 37.2 +1.2**
THL Klokotos Trika 7.50 113 P **Pn 08 23 37.1 +1.0**
KNT Kendrikon 7.50 100 P **Pn 08 23 36.4 +0.1**
SRE Strehaia 7.54 73 ⇑P **Pn 08 23 40.2 +3.5**
MORC Moravsky Berou 7.56 23 ⇑P **Pn 08 23 36.9 -0.1**
MORC Moravsky Berou 7.56 23 **Pn 08 23 36.2 -0.9**
MORC Moravsky Berou 7.56 23 ⇑P **Pn 08 23 36.9 -0.1**
SMF Signal de Mont 7.58 303 *e*Pn **Pn 08 23 36.6 -0.7**
SMF *e*Sn **Sn 08 24 59.6 -3.8**
comp=E,41nm,0.6s
KECS Kecovo 7.63 40 *e*P **Pn 08 23 42.3 +4.3**
KECS *e* 08 25 03.4
KRLC Kraliky 7.64 18 *e*P **Pn 08 23 39.7 +1.6**
KRLC Kraliky 7.64 18 *e*PN **Pn 08 23 39.1 +1.0**
DEV Deva 7.65 63 ⇑P **Pn 08 23 40.0 +1.7**
PAGF Fort de Pagny 7.67 320 *e*Pn **Pn 08 23 37.6 -0.8**
PAGF *e*Sn **Sn 08 25 01.4 -4.1**
comp=E,211nm,0.7s
KEST Kesra 7.70 203 Pn **Pn** 08 23 43.9 +4.9
comp=E,1.6nm,0.3s,baz=259,slow=3.0,SNR=9.0
KEST LR LR 08 26 49.0
comp=E,636nm,18.6s,baz=354,slow=39
EVR Evrytania 7.70 118 P **Pn 08 23 41.5 +2.5**
SFTF Sexfontaines 7.76 316 *e*Pn **Pn 08 23 39.6 -0.2**
baz=122
SFTF *e*Sn **Sn 08 25 00.5 -7.4**
comp=E,125nm,0.7s
DPC Dobruska-Polom 7.80 15 *e*P **Pn 08 23 40.9 +0.5**
DPC Dobruska-Polom 7.80 15 *e*PN **Pn 08 23 40.9 +0.5**
MOX Moxa 7.84 353 P **Pn 08 23 42.2 +1.4**
MAKR Makrakomi, Fth 7.86 116 P **Pn 08 23 43.1 +2.0**
LOR Lormes 7.87 307 *e*Pn **Pn 08 23 40.7 -0.6**
baz=129
LOR *e*Sn **Sn 08 25 08.5 -2.0**
comp=E,91nm,0.7s
LOR Lormes 7.87 307 P **Pn 08 23 40.3 -0.9**

UPC Upice 7.90 14 *e*P **Pn 08 23 42.5 +0.9**
UPC Upice 7.90 14 *e*PN **Pn 08 23 42.5 +0.9**
AVF Avril sur Loir 7.95 303 *e*Pn **Pn 08 23 42.4 +0.1**
AVF *e*Sg **Sn 08 25 07.2 -5.2**
comp=E,31nm,0.8s
MEZF Maizieres J'vi 7.95 318 *e*Pn **Pn 08 23 42.0 -0.4**
baz=119
MEZF *e*Sn **Sn 08 25 07.7 -4.8**
comp=E,117nm,0.7s
MTLF Montolieu 7.97 277 *e*Pn **Pn 08 23 44.7 +2.1**
MTLF Montolieu 7.97 277 P **Pn 08 23 43.5 +0.9**
SSF Saint Saulge 7.98 305 *e*Pn **Pn 08 23 42.3 -0.5**
SSF *e*Sn **Sn 08 25 09.2 -3.9**
comp=E,41nm,0.6s
SSF Saint Saulge 7.98 305 P **Pn 08 23 42.2 -0.5**
SSF SN **Sn 08 25 09.3 -3.9**
CHVC Chvalec 7.98 14 *e*PN **Pn 08 23 42.2 -0.6**
ABH Alteburg 7.99 333 P **Pn 08 23 44.2 +1.4**
SAVF Savonnieres en 8.00 319 *e*Pn **Pn 08 23 44.4 +1.5**
SAVF *e*Sn **Sn 08 25 07.0 -6.6**
comp=E,98nm,0.7s
TNS Taunus Mts 8.01 338 *e*Pn **Pn 08 23 45.6 +2.4**
TNS *e*Sn **Sn 08 25 10.4 -3.7**
SRS Serrai 8.02 99 P **Pn 08 23 44.0 +0.7**
BRG Berggiesshubel 8.03 4 *e*P **Pn 08 23 44.3 +1.0**
BRG *e* 08 25 11.4
BRG pmax pmax
comp=Z,20nm,0.8s
BRG MLR MLR
comp=Z,394nm,9.8s
BRG MLR MLR
comp=N,359nm,11.8s
BRG MLR MLR
comp=E,646nm,9.7s
FNEB Nbias 8.06 274 P **Pn 08 23 44.1 +0.2**
LOT Lotru 8.10 68 ⇑P **Pn 08 23 46.1 +1.5**
NVR Nevrokopi 8.16 97 P **Pn 08 23 45.5 +0.3**
BGF Bois d'Agland 8.17 300 *e*Pn **Pn 08 23 44.5 -0.8**
BGF *e*Sn **Sn 08 25 15.0 -2.8**
comp=E,66nm,0.6s
CAF Calviac 8.22 288 *e*Pn **Pn 08 23 47.0 +0.9**
CAF *e*Sn **Sn 08 25 12.0 -7.2**
comp=E,4.0nm,0.5s
WLF Walferdange 8.31 327 **Pn 08 23 48.0 +0.7**
WLF Walferdange 8.31 327 P **Pn 08 23 48.0 +0.7**
WLF S **Sn 08 25 22.4 +1.0**
WLF Walferdange 8.31 327 *d*P **Pn 08 23 49.0 +1.6**
WLF *d*S **Sn 08 25 21.0 -0.4**
BGG Burgeitz 8.33 334 *e*Pn **Pn 08 23 47.4 -0.2**
AXAR Agios Charalam 8.34 116 P **Pn 08 23 51.0 +3.3**
CRVS Cervenica-Dubn 8.39 41 *e*P **Pn 08 23 53.0 +4.6**
KOE Koeppel 8.40 336 *e*Pn **Pn 08 23 47.9 -0.6**
KLV Kalavryta, Ach 8.43 122 P **Pn 08 23 50.6 +1.7**
CLL Collm 8.44 360 Pn **Pn 08 23 49.2 +0.2**
CLL Collm 8.44 360 *e*P **Pn 08 23 48.0 -1.0**
CLL Collm 8.44 360 *e*Pn **Pn 08 23 48.0 -1.0**
CLL *e*x x 08 24 03.0
CLL *e*Pg Pg 08 24 23.0 -4.9
CLL *e*Sn Sn 08 25 13.0 -11
CLL *e*x x 08 25 21.0
CLL *e*Sg **Sg 08 26 12.0 -5.1**
CLL *e*Sgmax 08 26 22.0
comp=Z,126nm,0.9s
CLL Lmax 08 27 00.0
TRPA Tarpa 8.47 48 ⇑P **Pn 08 23 50.7 +1.3**
TRPA Tarpa 8.47 48 P **Pn 08 23 52.2 +2.8**
TCF Toulx Ste Croi 8.48 297 *e*Pn **Pn 08 23 50.4 +0.8**
TCF *e*Sn **Sn 08 25 23.0 -2.5**
comp=Z,22nm,0.7s
PAIG Paliouri 8.49 107 P **Pn 08 23 49.5 -0.2**
HYF Humbligny 8.60 304 *e*Pn **Pn 08 23 51.9 +0.7**
HYF *e*Sn **Sn 08 25 25.1 -3.3**
UZH Uzhgorod 8.63 45 *e*P **Pn 08 23 56.0 +4.3**
STHS Stebnicka Huta 8.65 38 *e*P **Pn 08 23 53.2 +1.2**
RJF Les Rejaudoux 8.67 290 *e*Pn **Pn 08 23 54.2 +1.9**
RJF *e*Sn **Sn 08 25 24.5 -5.8**
comp=Z,15nm,0.8s
ARR Arges 8.68 69 ⇑P **Pn 08 23 53.5 +1.1**
MONQ Montcuq 8.75 284 P **Pn 08 23 55.7 +2.3**
HUMR Humele 8.78 75 ⇑P **Pn 08 23 54.9 +1.3**
STB Steinbach 8.83 333 *e*Pn **Pn 08 23 54.3 -0.1**
STB *e*Sn **Sn 08 25 30.5 -3.6**
comp=Z,24nm,1.1s
BHOU Houvegnez 8.93 329 *d*S **Sn 08 25 31.6 -4.8**
VOIR 8.98 69 ⇑P **Pn 08 23 57.7 +1.2**
VOIR 8.98 69 ⇑P **Pn 08 23 58.6 +2.1**
HOBG Hohbusch 9.01 336 *e*Pn **Pn 08 23 56.4 -0.5**
KLL Kalltalsperre 9.05 332 *e*Pn **Pn 08 23 56.6 -0.9**
BTNL Ternell 9.07 331 *d*P **Pn 08 24 00.9 +3.2**
RCHB Rochefort 9.07 326 *d*P **Pn 08 23 59.7 +2.0**
RCHB *d*S **Sn 08 25 34.3 -5.7**
VILL Villia 9.10 118 P **Pn 08 23 58.4 +0.3**
DREG Dreilaegerbach 9.10 331 *e*Pn **Pn 08 23 57.6 -0.4**
MEM Membach 9.13 330 *d*P **Pn 08 24 01.9 +3.3**
MEM *d*S **Sn 08 25 40.0 -1.5**
LFF La Frestale 9.15 287 *e*Pn **Pn 08 24 00.4 +1.6**
GIVF Givet 9.20 325 *e*Pn **Pn 08 24 01.8 +2.3**
GIVF *e*Sn **Sn 08 25 34.9 -8.3**
comp=Z,115nm,0.8s
BCLA Clavier 9.25 327 *d*P **Pn 08 24 02.7 +2.6**
BCLA *d*S **Sn 08 25 39.8 -4.5**
BSTI Sart Tilman 9.28 329 *d*S **Sn 08 25 40.8 -4.2**
DOU Dourbes 9.29 324 *d*PP Pn 08 24 11.1 +10
DOU *d*S **Sn 08 25 41.1 -4.3**
BGES Gesves 9.31 327 *d*P **Pn 08 24 03.5 +2.5**
BGES *d*PP **PnPn 08 24 09.8 +1.3**
BGES *d*S **Sn 08 25 37.5 -8.3**
BMRD Maredsous 9.38 325 *d*S **Sn 08 25 44.0 -3.4**
RDO Rodhopi 9.43 96 Pn **Pn 08 24 02.4 -0.3**
RDO Rodhopi 9.43 96 P **Pn 08 24 03.2 +0.6**
BAIF Baives 9.44 323 *e*Pn **Pn 08 24 03.2 +0.5**
BAIF *e*Sn **Sn 08 25 43.8 -5.2**
comp=Z,63nm,0.8s
VLY Voula,Athens 9.59 118 P **Pn 08 24 06.2 +1.4**
MLR Muntele Rosu 9.60 70 ⇑P **Pn 08 24 06.7 +1.6**
MLR Muntele Rosu 9.60 70 Pn **Pn 08 24 07.3 +2.2**
comp=Z,0.7nm,0.3s,baz=143,slow=12,SNR=19
MLR LR LR 08 28 39.5
comp=Z,1µm,19.8s,baz=265,slow=43
comp=Z,17nm,0.7s
MLR Muntele Rosu 9.60 70 Pn **Pn 08 24 06.2 +1.1**
MLR Muntele Rosu 9.60 70 P **Pn 08 24 06.2 +1.1**
SNF Seneffe 9.73 325 *d*P **Pn 08 24 09.1 +2.3**
VLI Veliai 9.76 126 P **Pn 08 24 07.9 +0.8**
BURAR Bucovina Array 9.78 57 ⇑P **Pn 08 24 08.8 +1.3**
BURAR Bucovina Array 9.78 57 Pn **Pn 08 24 09.0 +1.5**
BURAR Bucovina Array 9.78 57 ⇑P **Pn 08 24 08.8 +1.3**
BUR08 Bucovina Ar. S 9.78 57 Pn **Pn 08 24 09.0 +1.5**
COVR Voineasa-Covas 9.86 68 ⇑P **Pn 08 24 10.0 +1.5**
ETSF Etsaut 10.02 275 *e*Pn **Pn 08 24 13.3 +2.5**
KTHR Kythira 10.11 127 P **Pn 08 24 15.0 +3.1**
MFF Saint Martin d 10.12 296 *e*Pn **Pn 08 24 13.2 +1.1**
MFF *e*Sn **Sn 08 26 00.5 -5.4**
comp=Z,10nm,0.7s
KTHA Kythira Island 10.14 127 P **Pn 08 24 15.0 +2.6**
VRI Vrincioaia 10.22 68 ⇓P **Pn 08 24 14.6 +1.2**
VRI Vrincioaia 10.22 68 ⇓P **Pn 08 24 14.6 +1.2**
LVV L'vov 10.27 44 *e*P **Pn 08 24 18.2 +4.1**
LVV MLR MLR
comp=Z,900nm,10.0s
SJPF Ste Jean 10.49 276 *e*Pn **Pn 08 24 19.8 +2.6**
LDF La Druitiere 10.85 306 *e*Pn **Pn 08 24 23.4 +1.3**
RODP Rodopos 11.03 128 P **Pn 08 24 24.8 +0.2**
FLN La Foliniere 11.14 307 *e*Pn **Pn 08 24 25.2 -0.9**
APE Apeiranthos 11.17 117 *i* P **Pn 08 24 26.5 0.0**
GRR Gorron 11.21 304 *e*Pn **Pn 08 24 28.0 +1.1**
SGMF Saint Gilles 12.21 302 *e*Pn **Pn 08 24 40.8 +0.2**
QUIF Quistinic 12.48 299 *e*Pn **Pn 08 24 45.5 +1.2**
QUIF *e*Sn **Sn 08 26 57.0 -6.5**
comp=Z,4.3nm,0.4s
ROSF Rostrenen 12.68 301 *e*Pn **Pn 08 24 47.2 +0.1**
ESDC Sonseca Array 13.22 262 Pn **Pn 08 24 55.8 +1.3**
comp=Z,0.1nm,0.3s,baz=71,slow=13,SNR=7.6
ESDC LR LR 08 29 53.7
comp=Z,410nm,19.7s,baz=54,slow=37
comp=Z,1.0nm,0.7s
**AKASG

MDUB	Mudurnu	13.75	94	Pn	Pn	08 25 01.2	-0.7
NACGM	Naroch	15.00	32⇑	*e*P	Pn	08 25 19.2	+0.5
	baz=222						
BRTR	Keskin Array B	15.76	95	Pn	P	08 25 32.8	-0.1
	comp=Z,0.1nm,0.3s,baz=302,slow=12,SNR=3.8						
BRTR				LR	LR	08 32 49.8	
	comp=Z,362nm,19.8s,baz=308,slow=42						
	comp=Z,1.3nm,1.0s						
BRTR	Keskin Array B	15.76	95		Pn	08 25 27.9	-1.0
BRTR	Keskin Array B	15.76	95	P	Pn	08 25 27.9	-1.0
EKA	Eskdalemuir Ar	16.34	325	Pn	P	08 25 39.2	+0.2
	baz=132,slow=14						
EKA				LR	LR	08 32 54.6	
	comp=Z,245nm,18.5s,baz=104,slow=41						
MDT	Midelt	17.18	240	LR	LR	08 31 27.0	
	comp=Z,102nm,18.6s,baz=334,slow=34						
HFS	Hagfors	17.29	1	P	P	08 25 49.2	-0.4
	comp=Z,0.2nm,0.3s,baz=151,slow=9.2,SNR=2.6						
HFS				LR	LR	08 33 37.2	
	comp=Z,258nm,20.0s,baz=237,slow=41						
	comp=Z,4.5nm,0.7s						
ANN	Anapa	17.66	75	*e*P	Pn	08 25 50.1	-2.6
ANN				pmax	pmax		
	comp=Z,54nm,1.0s						
PFVI	Vila Bisbo	17.72	258	P	Pn	08 25 50.5	-3.0
VSU	Vasula	17.79	24	*i* P	Pn	08 25 53.2	-1.0
NB2	NORSAR Subarra	18.23	357	P	P	08 26 00.3	+0.3
	comp=Z,15nm,1.1s,baz=175,slow=12						
NOA	NORSAR Array B	18.23	357	P	P	08 25 59.9	-0.1
	baz=173,slow=12,SNR=4.6						
NOA				LR	LR	08 34 43.2	
	comp=Z,162nm,18.1s,baz=75,slow=43						
	comp=Z,5.1nm,1.1s						
NC405	NORSAR Array S	18.29	358	P	P	08 26 00.7	+0.1
NC405				IAmb	IAmb	08 26 26.0	
	comp=Z,71nm,1.4s						
NC204	NORSAR Array S	18.48	356	P	P	08 26 02.5	-0.3
NC204				IAmb	IAmb	08 26 17.5	
	comp=Z,31nm,1.1s						
VSR	Storozhevoye	19.55	56	*e*P	P	08 26 12.6	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN	Obninsk	19.57	43	P	Pn	08 26 15.4	-0.5
OBN				IAmb	IAmb	08 26 20.4	
	comp=Z,18nm,0.7s						
OBN	Obninsk	19.57	43⇓	*e*P	P	08 26 14.7	+0.1
OBN				pmax	pmax		
	comp=Z,11nm,0.7s						
OBN				MLR	MLR		
	comp=Z,92nm,10.0s						
VORR	Voronezh	19.70	54	*e*P	P	08 26 15.4	-0.7
VORR				pmax	pmax		
	comp=Z,70nm,0.4s						
LPSR	Galich'ya Gora	19.82	52	*e*P	P	08 26 14.6	-2.8
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MMAI	Mount Meron Ar	20.11	112	P	Pn	08 26 24.1	+1.5
	comp=Z,8.3nm,0.7s,baz=324,slow=9.7,SNR=9.5						
	comp=Z,8.3nm,0.7s						
FINES	FINESS Array B	20.16	18	P	P	08 26 21.4	+0.4
	comp=Z,6.5nm,0.7s,baz=203,slow=9.7,SNR=19						
	comp=Z,6.5nm,0.7s						
FINES	FINESS Array B	20.16	18		P	08 26 20.4	-0.7
FIA1	FINESS Array S	20.16	18		P	08 26 20.1	-1.0
FIA1				IAmb	IAmb	08 26 27.7	
	comp=Z,20nm,0.9s						
MOS	Moscow	20.40	42	*e*P	P	08 26 21.9	-1.8
VRH	Novokhopyorsk	21.11	57	*e*P	P	08 26 31.3	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	Kislovodsk	21.48	77	P	P	08 26 35.3	-0.3
KIV				IAmb	IAmb	08 26 41.2	
	comp=Z,28nm,1.0s						
KIV	Kislovodsk	21.48	77	*e*P	P	08 26 36.2	+0.6
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV				MLR	MLR		
	comp=Z,120nm,14.0s						
SHA1	Shidzhatmaz	21.49	78	*i* P	P	08 26 35.2	-0.6
NEY	Neytrino	21.61	79	*i* P	P	08 26 37.3	+0.2
NEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASF	Jabal al Asfar	21.63	112	P	P	08 26 42.0	+4.8
	comp=Z,7.0nm,0.8s,baz=280,slow=3.1,SNR=8.5						
KBZ	Khabaz	21.66	77	P	P	08 26 38.7	+1.3
	comp=Z,15nm,0.9s,baz=269,slow=11,SNR=13						
	comp=Z,15nm,0.9s						
KBZ	Khabaz	21.66	77	*i* P	P	08 26 37.5	+0.1
KBZ				pmax	pmax		
	comp=Z,18nm,1.0s						
ZEI	Tsey	22.54	80	*e*P	P	08 26 50.2	+3.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GNI	Garni	23.79	86	*i* P	P	08 27 00.0	+0.2
GNI				pmax	pmax		
	comp=Z,17nm,1.3s						
BELG	Belogornoye	24.93	56	P	P	08 27 12.9	+3.0
	comp=Z,17nm,0.5s,baz=156,slow=5.1,SNR=5.4						
ARCES	ARCESS Array B	27.49	9	P	P	08 27 33.8	+0.8
	comp=Z,2.4nm,0.8s,baz=3.8,slow=7.3,SNR=3.8						
	comp=Z,2.4nm,0.8s						
TORD	Torodi Ar. Bea	31.21	202	P	P	08 28 06.7	+0.3
	comp=Z,2.9nm,0.7s,baz=18,slow=9.3,SNR=16						
	comp=Z,2.9nm,0.7s						
ARU	Arti	31.78	49	P	P	08 28 10.4	-0.8
	comp=Z,8.1nm,0.2s,baz=259,slow=9.2,SNR=10						
	comp=Z,8.1nm,0.2s						
ARU	Arti	31.78	49	P	P	08 28 10.3	-0.8
ARU	Arti	31.78	49*c*	*i*P	P	08 28 11.4	+0.3
ARU						08 29 13.1	
ARU				S	S	08 33 24.1	+2.9
ARU				SS	SnSn	08 35 11.7	+3.8
ARU				pmax	pmax		
	comp=Z,14nm,0.9s						
GEYT	Alibeck	34.33	83	P	P	08 28 34.1	+0.5
	comp=Z,4.8nm,0.8s,baz=271,slow=6.7,SNR=10						
	comp=Z,4.8nm,0.8s						
GEYT	Alibeck	34.33	83	P	P	08 28 32.9	-0.7
GYA0	ALIBECK ARRAY	34.33	83	P	P	08 28 32.5	-1.1
GYA0				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA0B	ALIBECK ARRAY	34.33	83	P	P	08 28 32.5	-1.1
GYA0B				IAmb	IAmb	08 28 36.9	
	comp=Z,5.0nm,0.8s						
MZR	Muzera	38.80	108	*i* P	P	08 29 12.4	+0.5
	SNR=17						
SCHQ	Schefferville	51.14	313	P	P	08 30 49.3	-0.3
	comp=Z,5.1nm,0.8s,baz=78,slow=5.5,SNR=4.3						
	comp=Z,5.1nm,0.8s						
WMQ	Urumqi	52.48	62	*e*P	P	08 31 02.5	+2.6
SONM	Songino Array	61.81	50	P	P	08 32 08.0	+2.0
	comp=Z,3.8nm,0.9s,baz=282,slow=6.6,SNR=3.6						
	comp=Z,3.8nm,0.9s						
SONM	Songino Array	61.81	50	P	P	08 32 08.0	+2.0
YKA	Yellowknife Ar	66.94	336	P	P	08 32 39.1	+0.1
	comp=Z,3.4nm,0.9s,baz=38,slow=5.8,SNR=5.2						
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	66.94	336	*i* P	P	08 32 39.7	+0.7
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZEA	Zeya	68.50	36	*e*P	P	08 32 43.3	-5.7
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	68.93	54	*e*P	P	08 32 51.0	-1.1
PZH	PanZhiHua	71.56	71	P	P	08 33 08.8	+0.3
CMAR	Chiang Mai Arr	74.71	79	P	P	08 33 28.3	+1.2
	comp=Z,4.5nm,0.7s,baz=306,slow=7.0,SNR=13						
	comp=Z,4.5nm,0.7s						
KSRS	Korea Array	80.52	47	P	P	08 34 01.8	+2.6
	comp=Z,1.8nm,0.8s,baz=312,slow=5.3,SNR=3.4						
	comp=Z,1.8nm,0.8s						
YBH	Yreka Blue Hor	86.84	328	LR	LR	09 15 09.8	
	comp=Z,383nm,19.6s,baz=291,slow=37						
TXAR	Lajitas Array	87.62	309	P	P	08 34 37.5	+1.8
	comp=Z,0.5nm,0.8s,baz=36,slow=0.4,SNR=4.0						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	128.02	88	PKP	PKPdf	08 40 52.5	-0.8
	comp=Z,0.3nm,0.6s,baz=316,slow=1.4,SNR=4.8						

PRU ***27*** *08:34:46.6±0.0,51°.31N×19°.10E,h0km,Belchatow*
ISC 27 08:34:46.5±3.2,51°.3N±0°.1×19°.17E±0°.07,h10km,n10,σ0°98/13,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	1.13	159	*e*Pg	Pb	08 35 08.1	-0.1
OJC				*e*Sg	Sb	08 35 23.3	+0.4
MORC	Moravsky Berou	1.83	215	*e*PN	Pb	08 35 20.7	+0.7
MORC				*e*SG	Sb	08 35 44.5	+1.5
KRLC	Kraliky	1.94	233	*e*PG	Pb	08 35 21.9	0.0
KRLC				*e*SG	Sb	08 35 47.3	+1.1
	comp=Z,14nm,0.4s						
DPC	Dobruska-Polom	2.03	244	*e*PG	Pb	08 35 23.1	-0.4
DPC				*e*SG	Sb	08 35 49.5	+0.7
	comp=Z,6.0nm,0.5s						
DPC	Dobruska-Polom	2.03	244	*e*		08 35 49.5	
CHVC	Chvalec	2.09	252	*e*PG	Pb	08 35 24.6	+0.1
VRAC	Vranov	2.57	221	*e*SG	Sg	08 36 07.8	-1.3
KRUC	Moravsky	2.85	220	*e*SG	Sg	08 36 16.8	-1.1
CKRC	Cesky Krumlov	3.98	234	*e*SG	Sg	08 36 53.0	-1.3
KHC	Kasperske Hory	4.19	241	*e*SG	Sg	08 37 00.4	-0.4

IDC 27 08:42:44.6±4.4,23°.08S×173°.77E,h0km,mb4.2/3,
mbtmp4.1/4,ML5.2/1,Error ellipse: s-maj=149.9km
s-min=32.1km az=142.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.66	38	Pn	Pn	08 44 24.1	+0.1
	1.5nm,0.3s,baz=248,slow=22,SNR=7.7						
	5.5nm,0.5s						
STKA	Stephens Creek	29.77	246	P	P	08 48 53.9	+0.8
	1.2nm,0.4s,baz=78,slow=9.3,SNR=6.3						
	1.2nm,0.4s						
ASAR	Alice Springs	36.52	261	P	P	08 49 51.5	-0.6
	2.2nm,0.8s,baz=101,slow=6.8,SNR=25						
	2.2nm,0.8s						
WRA	Warramunga Arr	36.74	267	P	P	08 49 53.7	-0.3
	1.7nm,0.4s,baz=102,slow=8.2,SNR=67						
	1.7nm,0.4s						

LDG ***27*** *08:45:12.0±0.2,42°.98N×13°.14E,h10km,Ml3.2/7,Error ellipse: s-maj=8.3km s-min=4.4km az=50.0*
ROM ***27*** *08:45:12.2±0.1,42°.999N±0°.003×13°.118E±0°.005, h10km,Md1.5/4,ML3.3/37,Error ellipse: s-maj=0.4km s-min=0.2km az=256.0*
PRU ***27*** *08:45:15.8±0.0,43°.18N×13°.72E,h0km*
IDC ***27*** *08:45:15.1±1.7,43°.19N×13°.27E,h0km,mb3.3/2, mbtmp3.3/4,ML3.4/2,Error ellipse: s-maj=36.9km s-min=17.0km az=92.0*
ISC 27 08:45:11.5±0.8,43°.01N±0°.02×13°.09E±0°.02,h15km±4km, n81,σ1°86/115,17C-12D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.02	352	P	Pg	08 45 14.0	-0.2
FDMO				S	Sg	08 45 15.3	-0.8
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				END			
FEMA	Monte Fema	0.06	211	⇑P	Pg	08 45 14.5	0.0
FEMA				S	Sg	08 45 16.2	-0.4
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,94550μm,0.4s						
FEMA				AML	AML		
	comp=N,94900μm,0.4s						
FEMA				AML	AML		
	comp=N,94646μm,0.4s						
FEMA				AML	AML		
FEMA				END			
MC2	Monte Cornacci	0.12	144	P	Pg	08 45 15.3	+0.1
MC2				S	Sg	08 45 17.4	-0.4
MC2				END			
T1216	Preci, Frazion	0.13	204	⇑P	Pg	08 45 15.8	+0.5
T1216				S	Sg	08 45 18.3	+0.7
T1216				AML	AML		
	comp=N,83700μm,0.2s						
T1216				AML	AML		
	comp=E,81350μm,0.3s						
T1216				AML	AML		
	comp=N,83700μm,0.2s						
T1216				AML	AML		
	comp=N,83600μm,0.2s						
T1216				AML	AML		
	comp=E,81300μm,0.3s						
T1216				AML	AML		
	comp=N,83682μm,0.2s						
T1216				AML	AML		
	comp=E,81323μm,0.3s						
T1216				END			
SEF1	Sefro	0.17	322	P	Pb	08 45 17.0	+0.7
SEF1				S	Sb	08 45 20.6	+1.0
SEF1				AML	AML		
	comp=E,18900μm,0.7s						
SEF1				AML	AML		
	comp=N,20300μm,0.3s						
SEF1				AML	AML		
	comp=N,20300μm,0.3s						
SEF1				AML	AML		
	comp=E,18850μm,0.7s						
SEF1				AML	AML		
	comp=N,20330μm,0.3s						
SEF1				AML	AML		
	comp=E,14189μm,0.3s						
T1245	Castelsantange	0.17	156	⇑P	Pg	08 45 16.1	+0.2
T1245				S	Sg	08 45 19.0	+0.3
T1245				AML	AML		
	comp=N,29450μm,0.3s						
T1245				AML	AML		
	comp=N,29500μm,0.3s						
T1245				AML	AML		
	comp=E,25000μm,0.4s						
T1245				AML	AML		
	comp=E,25000μm,0.4s						
T1245				AML	AML		
	comp=N,29700μm,0.3s						
T1245				AML	AML		
	comp=E,24950μm,0.4s						
T1245				AML	AML		
	comp=N,29735μm,0.3s						
T1245				AML	AML		
	comp=N,29486μm,0.3s						
T1245				AML	AML		
	comp=E,24965μm,0.4s						
T1245				AML	AML		
	comp=E,24979μm,0.4s						
NRCA	Norcia	0.18	175	P	Pg	08 45 16.3	+0.4
NRCA				S	Sb	08 45 19.9	-0.1
NRCA				AML	AML		
	comp=E,22800μm,0.4s						
NRCA				AML	AML		
	comp=N,22300μm,1.5s						
NRCA				AML	AML		
	comp=E,24500μm,0.4s						
NRCA				AML	AML		
	comp=N,23250μm,1.5s						
NRCA				AML	AML		
	comp=E,22850μm,0.4s						
NRCA				AML	AML		
	comp=N,22350μm,1.5s						
NRCA				AML	AML		
	comp=N,19791μm,0.2s						
NRCA				AML	AML		
	comp=E,22549μm,0.4s						
NRCA				AML	AML		
	comp=E,21183μm,0.4s						
NRCA				AML	AML		
	comp=N,20594μm,0.2s						
MDAR	Monte D'Aria	0.18	12	P	Pb	08 45 16.9	+0.3
MDAR				S	Sb	08 45 20.3	+0.3
MDAR				AML	AML		
	comp=E,10300μm,0.5s						
MDAR				AML	AML		
	comp=E,10250μm,0.5s						
MDAR				AML	AML		
	comp=N,13800μm,0.6s						
MDAR				AML	AML		
	comp=E,10274μm,0.5s						
MDAR				AML	AML		
	comp=N,13761μm,0.6s						
PIO1	Pioraco	0.18	334	P	Pb	08 45 17.3	+0.7
PIO1				AML	AML		
	comp=E,8955μm,0.6s						
PIO1				AML	AML		
	comp=N,13200μm,1.4s						
PIO1				AML	AML		
	comp=E,8960μm,0.6s						
PIO1				AML	AML		
	comp=N,13250μm,1.4s						
PIO1				AML	AML		
	comp=N,12214μm,0.7s						
PIO1				AML	AML		
	comp=E,8958μm,0.6s						
GUMA	Gualdo di Mace	0.18	75	⇑P	Pb	08 45 16.8	+0.1
GUMA				S	Sb	08 45 20.3	+0.3
GUMA				AML	AML		
	comp=E,91050μm,0.6s						
GUMA				AML	AML		
	comp=N,63000μm,0.4s						
GUMA				AML	AML		
	comp=N,90750μm,0.4s						
GUMA				AML	AML		
	comp=E,90750μm,0.6s						
GUMA				AML	AML		
	comp=N,63000μm,0.4s						
GUMA				AML	AML		
	comp=E,72850μm,0.5s						
GUMA				AML	AML		
	comp=N,62978μm,0.4s						
GUMA				AML	AML		
	comp=E,90967μm,0.6s						
GUMA				AML	AML		
	comp=N,90662μm,0.4s						
GUMA				AML	AML		
	comp=E,72848μm,0.5s						
MMO1	Montemonaco	0.21	123	P	Pg	08 45 16.5	+0.2
MMO1				S	Sg	08 45 19.8	+0.2
GAG1	Gagliole	0.23	355	P	Pb	08 45 18.0	+0.7
GAG1				S	Sb	08 45 22.4	+1.2
GAG1				AML	AML		
	comp=E,24450μm,0.4s						
GAG1				AML	AML		
	comp=N,22900μm,0.3s						
GAG1				AML	AML		
	comp=E,24450μm,0.4s						
GAG1				AML	AML		
	comp=N,22950μm,0.3s						
GAG1				AML	AML		
	comp=E,24455μm,0.4s						
GAG1				AML	AML		
	comp=N,22942μm,0.3s						
SNTG	Esanatoglia	0.27	335	P	Pb	08 45 18.5	+0.5
SNTG				S	Sb	08 45 23.6	+1.2
T1215	Vallo di Nera,	0.27	218	P	Pb	08 45 18.2	+0.2
T1215				S	Sb	08 45 23.0	+0.6
T1215				AML	AML		
	comp=E,7630μm,0.4s						
T1215				AML	AML		
	comp=N,8340μm,0.3s						
T1215				AML	AML		
	comp=E,8330μm,0.4s						
T1215				AML	AML		
	comp=N,7675μm,0.3s						
T1215				AML	AML		
	comp=N,8335μm,0.3s						
T1215				AML	AML		
	comp=N,7690μm,0.3s						
T1215				AML	AML		
	comp=E,7635μm,0.4s						
T1215				AML	AML		
	comp=E,8345μm,0.4s						
T1215				AML	AML		
	comp=E,7518μm,0.4s						
T1215				AML	AML		
	comp=E,8330μm,0.4s						
T1215				AML	AML		
	comp=N,7675μm,0.3s						
T1215				AML	AML		
	comp=N,8338μm,0.3s						
T1241	Roccafluvione,	0.29	122	P	Pg	08 45 17.8	+0.1
T1241				S	Sg	08 45 22.3	+0.4
EL6	Elcito	0.32	1	⇑P	Pb	08 45 19.3	+0.4
EL6				AML	AML		
	comp=E,10260μm,1.5s						
EL6				AML	AML		
	comp=N,14050μm,0.3s						
EL6				AML	AML		
	comp=E,10265μm,1.5s						
EL6				AML	AML		
	comp=E,10038μm,0.3s						
EL6				AML	AML		
	comp=N,14056μm,0.3s						
T1217	Poggiodomo (PG	0.32	201	⇓P	Pb	08 45 19.2	+0.2
T1217				S	Sb	08 45 24.6	+0.5
T1217				AML	AML		
	comp=E,12650μm,0.5s						
T1217				AML	AML		
	comp=N,8365μm,0.5s						
T1217				AML	AML		
	comp=N,8335μm,0.5s						
T1217				AML	AML		
	comp=E,12600μm,0.5s						
T1217				AML	AML		
	comp=N,8390μm,0.5s						
T1217				AML	AML		
	comp=E,12300μm,0.5s						
T1217				AML	AML		
	comp=N,8320μm,0.5s						
T1217				AML	AML		
	comp=N,8380μm,0.5s						
T1217				AML	AML		
	comp=E,12350μm,0.5s						
T1217				AML	AML		
	comp=N,8355μm,0.5s						
T1217				AML	AML		
	comp=E,12313μm,0.5s						
T1217				AML	AML		
	comp=N,8332μm,0.5s						
T1217				AML	AML		
	comp=N,8388μm,0.5s						
T1217				AML	AML		
	comp=E,12622μm,0.5s						
TRE1	Treia	0.34	28	P	Pn	08 45 20.5	-1.4
TRE1				AML	AML		
	comp=E,17100μm,0.4s						
TRE1				AML	AML		
	comp=N,15850μm,0.3s						
TRE1				AML	AML		
	comp=E,17050μm,0.4s						
TRE1				AML	AML		
	comp=E,17077μm,0.4s						
TRE1				AML	AML		
	comp=N,15858μm,0.3s						
ATCC	AVT- Casa Cast	0.37	298	P	Pb	08 45 20.6	+0.8
ATCC				AML	AML		
	comp=E,16200μm,0.2s						
ATCC				AML	AML		
	comp=E,16250μm,0.2s						
ATCC				AML	AML		
	comp=N,8905μm,1.6s						
ATCC				AML	AML		
	comp=E,16235μm,0.2s						
ATCC				AML	AML		
	comp=N,7558μm,0.3s						
T1204	Amatrice, Fraz	0.38	154	P	Pg	08 45 19.7	+0.6
T1204				S	Sb	08 45 25.7	+0.1
T1204				AML	AML		
	comp=E,8565μm,1.2s						
T1204				AML	AML		
	comp=N,7385μm,0.5s						
T1204				AML	AML		
	comp=N,7380μm,0.5s						
T1204				AML	AML		
	comp=E,8550μm,1.2s						
T1204				AML	AML		
	comp=E,8330μm,0.3s						
T1204				AML	AML		
	comp=N,7383μm,0.5s						
T1243	Rocca Santa Ma	0.41	140	P	Pg	08 45 20.2	+0.4
T1243				S	Sb	08 45 26.5	-0.1
LNSS	Leonessa	0.41	185	P	Pb	08 45 20.5	0.0
LNSS				S	Sb	08 45 27.2	+0.6
LNSS				AML	AML		
	comp=E,6795μm,0.5s						
LNSS				AML	AML		
	comp=E,6800μm,0.5s						
LNSS				AML	AML		
	comp=N,5385μm,1.2s						
LNSS				AML	AML		
	comp=N,5390μm,1.2s						

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LNSS                                AML   AML
        comp=N,5747µm,4.2s
LNSS                                AML   AML
        comp=E,6269µm,0.2s
SMA1  SAN MARTINO      0.42 155  P     Pg    08 45 20.4 +0.4
SMA1                              S     Sb    08 45 27.1 +0.1
SMA1                              AML   AML
        comp=E,6290µm,0.6s
SMA1                              AML   AML
        comp=N,8895µm,0.5s
SMA1                              AML   AML
        comp=N,8892µm,0.5s
SMA1                              AML   AML
        comp=E,6291µm,0.6s
OFFI  Offida           0.44 100 ⇑P     Pn    08 45 22.1 -1.2
OFFI                              AML   AML
        comp=N,9060µm,0.4s
OFFI                              AML   AML
        comp=E,6310µm,0.6s
OFFI                              AML   AML
        comp=N,9035µm,0.4s
OFFI                              AML   AML
        comp=E,6306µm,0.6s
MURB  Monte Urbino     0.48 301 ⇑P     Pb    08 45 22.7 +1.0
MURB                              S     Sn    08 45 32.0 -0.2
MURB                              AML   AML
        comp=N,8850µm,1.0s
MURB                              AML   AML
        comp=E,14250µm,0.3s
MURB                              AML   AML
        comp=E,14550µm,0.4s
MURB                              AML   AML
        comp=N,9795µm,0.5s
MURB                              AML   AML
        comp=N,8855µm,1.0s
MURB                              AML   AML
        comp=N,8406µm,0.5s
MURB                              AML   AML
        comp=E,14251µm,0.3s
MURB                              AML   AML
        comp=E,14551µm,0.4s
MURB                              AML   AML
        comp=N,7426µm,0.3s
ARVD  Arcevia          0.50 347 ⇑P     Pb    08 45 22.7 +0.8
ARVD                              S     Sn    08 45 32.0 -0.4
ARVD                              AML   AML
        comp=N,1975µm,0.5s
ARVD                              AML   AML
        comp=E,3240µm,0.7s
ARVD                              AML   AML
        comp=N,1763µm,0.2s
ARVD                              AML   AML
        comp=E,3071µm,0.4s
T1211 Morro Reatino    0.51 200 ⇑P     Pb    08 45 22.5 +0.3
T1211                             S     Sb    08 45 31.0 +1.5
T1211                             AML   AML
        comp=E,16450µm,0.6s
T1211                             AML   AML
        comp=N,28150µm,1.6s
T1211                             AML   AML
T1211                             AML   AML
RM33  Pellescritta (   0.51 170  P     Pg    08 45 21.9 +0.3
RM33                              S     Sb    08 45 30.2 +0.7
RM33                              AML   AML
        comp=E,2290µm,0.5s
RM33                              AML   AML
        comp=N,2500µm,1.0s
RM33                              AML   AML
        comp=E,2295µm,0.5s
RM33                              AML   AML
        comp=E,2225µm,0.5s
RM33                              AML   AML
        comp=N,2305µm,0.4s
RM33                              AML   AML
        comp=E,2227µm,0.5s
RM33                              AML   AML
        comp=N,2477µm,0.4s
RM33                              AML   AML
        comp=E,2293µm,0.5s
RM33                              AML   AML
        comp=N,2305µm,0.4s
ATFO  Monte Foce - G   0.52 313 ⇓P     Pb    08 45 23.3 +1.0
ATFO                              AML   AML
        comp=E,2815µm,1.1s
ATFO                              AML   AML
        comp=N,2650µm,0.7s
CAMP  Campotosto       0.53 154  P     Pg    08 45 22.2 +0.2
CAMP                              S     Sb    08 45 30.4 +0.3
CAMP                              AML   AML
        comp=E,1745µm,0.6s
CAMP                              AML   AML
        comp=N,2465µm,0.6s
CAMP                              AML   AML
        comp=N,2467µm,0.6s
CAMP                              AML   AML
        comp=E,1710µm,0.5s
TERO  Teramo           0.54 136 ⇓P     Pg    08 45 22.3 +0.1
TERO                              S     Sb    08 45 31.0 +0.7
TERO                              AML   AML
        comp=E,3505µm,0.5s
TERO                              AML   AML
        comp=N,3520µm,0.3s
TERO                              AML   AML
        comp=N,3685µm,0.3s
TERO                              AML   AML
        comp=E,3615µm,0.8s
TERO                              AML   AML
        comp=E,3504µm,0.5s
TERO                              AML   AML
        comp=E,2898µm,0.3s
TERO                              AML   AML
        comp=N,3522µm,0.3s
TERO                              AML   AML
        comp=N,3681µm,0.3s
CESX  Cesi             0.55 223 ⇑P     Pb    08 45 23.2 +0.4
CESX                              S     Sn    08 45 33.0 -0.7
CESX                              AML   AML
        comp=E,6420µm,0.4s
CESX                              AML   AML
        comp=N,7595µm,0.7s
CESX                              AML   AML
        comp=N,7596µm,0.7s
CESX                              AML   AML
        comp=E,6421µm,0.4s
ATTE  AVT- Monte Tez   0.57 289  P     Pg    08 45 23.2 +0.4
ATTE                              AML   AML
        comp=E,1425µm,0.4s
ATTE                              AML   AML
        comp=N,1675µm,0.4s
ATTE                              AML   AML
        comp=N,1677µm,0.4s
ATTE                              AML   AML
        comp=E,1430µm,0.4s
FRON  Frontone         0.57 332 ⇓P     Pb    08 45 24.0 +0.8
FRON                              AML   AML
        comp=E,1665µm,0.4s
FRON                              AML   AML
        comp=N,3615µm,0.3s
FRON                              AML   AML
        comp=N,3610µm,0.3s
FRON                              AML   AML
        comp=E,1544µm,0.5s
FRON                              AML   AML
        comp=N,3612µm,0.3s
ATVO  AVT- Monte Val   0.62 307 ⇑P     Pb    08 45 25.0 +0.9
ATVO                              AML   AML
        comp=E,1490µm,0.4s
ATVO                              AML   AML
        comp=N,1570µm,0.4s
ATVO                              AML   AML
        comp=E,1490µm,0.4s
ATVO                              AML   AML
        comp=N,1570µm,0.4s
TRTR  Tortoreto Alta   0.64 109 ⇑P     Pn    08 45 25.8 -0.2
TRTR                              AML   AML
        comp=E,7045µm,0.5s
TRTR                              AML   AML
        comp=N,7150µm,0.5s
AOI   Ancona           0.65  35  S     Sn    08 45 37.0 +0.7
MPAG  Monte Paganucc   0.66 339 ⇓P     Pn    08 45 25.9 -0.5
MPAG                              S     Sn    08 45 38.0 +1.4
MPAG                              AML   AML
        comp=E,2170µm,0.8s
MPAG                              AML   AML
        comp=N,1975µm,0.4s
MPAG                              AML   AML
        comp=E,1702µm,0.5s
MPAG                              AML   AML
        comp=N,1972µm,0.4s
PIEI  Pieia            0.66 322 ⇓P     Pn    08 45 25.8 -0.6
PIEI                              S     Sn    08 45 37.0 +0.5
PIEI                              AML   AML
        comp=N,1790µm,0.4s
PIEI                              AML   AML
        comp=E,1390µm,0.4s
PIEI                              AML   AML
        comp=N,1785µm,0.4s
PIEI                              AML   AML
        comp=E,1392µm,0.4s
PIEI                              AML   AML
        comp=N,1441µm,0.5s
GIGS  Gran Sasso       0.66 148 ⇓P     Pg    08 45 24.5  0.0
GIGS                              AML   AML
        comp=E,530µm,1.1s
GIGS                              AML   AML
        comp=N,634µm,0.6s
GIGS                              AML   AML
        comp=N,634µm,0.6s
GIGS                              AML   AML
        comp=E,483µm,0.5s
GIGS                              AML   AML
        comp=N,566µm,0.2s
ATPI  Pietralunga -    0.67 311 ⇑P     Pn    08 45 25.9 -0.5
ATPI                              AML   AML
        comp=N,1455µm,0.6s
ATPI                              AML   AML
        comp=E,2160µm,0.5s
ATPI                              AML   AML
        comp=N,1460µm,0.6s
ATPI                              AML   AML
        comp=E,2160µm,0.5s
ATPI                              AML   AML
        comp=N,1456µm,0.6s
FSSB  Fossombrone      0.72 341 ⇑P     Pn    08 45 26.8 -0.3
FSSB                              AML   AML
        comp=E,5975µm,0.5s
FSSB                              AML   AML
        comp=N,8765µm,0.4s
FSSB                              AML   AML
        comp=E,5849µm,0.5s
FSSB                              AML   AML
        comp=N,8789µm,0.4s
MGAB  Montegabbione    0.73 262  P     Pn    08 45 26.9 -0.4
MGAB                              S     Sn    08 45 40.0 +1.9
MGAB                              AML   AML
        comp=E,2375µm,1.2s
MGAB                              AML   AML
        comp=N,4355µm,1.3s
MGAB                              AML   AML
        comp=N,4135µm,1.3s
MGAB                              AML   AML
        comp=E,3010µm,1.2s
MGAB                              AML   AML
        comp=E,2301µm,0.6s
MGAB                              AML   AML
        comp=N,3637µm,0.3s
MGAB                              AML   AML
        comp=N,3937µm,0.3s
MGAB                              AML   AML
        comp=E,2837µm,0.5s
APEC  Apecchio         0.73 318  S     Sn    08 45 41.0 +2.7
FIAM  Fiamignano       0.74 179 ⇓P     Pg    08 45 26.0  0.0
FIAM                              AML   AML
        comp=N,972µm,1.4s
FIAM                              AML   AML
        comp=N,972µm,1.4s
FIAM                              AML   AML
        comp=E,1520µm,0.7s
FIAM                              AML   AML
        comp=E,1516µm,0.7s
FIAM                              AML   AML
        comp=N,925µm,0.5s
BADI  Badiali          0.79 309 ⇓P     Pn    08 45 28.3 +0.2
BADI                              AML   AML
        comp=N,1144µm,0.5s
VCEL  Villa Celiera    0.83 138 ⇓P     Pb    08 45 27.7 +0.1
VCEL                              AML   AML
        comp=E,2550µm,0.5s
VCEL                              AML   AML
        comp=N,2730µm,0.4s
VCEL                              AML   AML
        comp=E,2555µm,0.5s
VCEL                              AML   AML
        comp=E,2552µm,0.5s
VCEL                              AML   AML
        comp=N,2733µm,0.4s
FAGN  Fagnano          0.83 154 ⇓P     Pb    08 45 27.7 +0.1
FAGN                              AML   AML
        comp=N,2530µm,0.5s
FAGN                              AML   AML
        comp=E,2865µm,0.4s
FAGN                              AML   AML
        comp=N,2532µm,0.5s
FAGN                              AML   AML
        comp=E,2866µm,0.4s
CAFI  Castiglion Fio   0.88 291  P     Pn    08 45 29.9 +0.5
CAFI                              AML   AML
        comp=E,1405µm,1.1s
CAFI                              AML   AML
        comp=N,982µm,1.2s
CAFI                              AML   AML
        comp=E,1376µm,1.1s
CAFI                              AML   AML
        comp=E,1406µm,1.1s
CAFI                              AML   AML
        comp=N,858µm,0.6s
CAFI                              AML   AML
        comp=N,905µm,0.4s
SRES  S.Oreste - Sor   0.89 209 ⇑P     Pg    08 45 29.3 +0.6
SRES                              AML   AML
        comp=E,1865µm,0.8s
SRES                              AML   AML
        comp=N,1315µm,0.6s
SRES                              AML   AML
        comp=E,1863µm,0.8s
SRES                              AML   AML
        comp=N,1315µm,0.6s
T0110 Collepietro      0.94 147 ⇓P     Pb    08 45 29.1 -0.3
T0110                             AML   AML
        comp=E,2280µm,0.8s
T0110                             AML   AML
        comp=N,2385µm,0.5s
T0110                             AML   AML
        comp=N,2385µm,0.5s
T0110                             AML   AML
        comp=E,2048µm,0.5s
INTR  Introdacqua      1.17 149  P     Pn    08 45 32.8 -0.6
INTR                              AML   AML
        comp=E,818µm,1.2s
INTR                              AML   AML
        comp=E,818µm,1.2s
INTR                              AML   AML
        comp=N,1480µm,0.8s
INTR                              AML   AML
        comp=N,1480µm,0.8s
TOLF  Tolfa            1.25 221 ⇑P     Pg    08 45 36.4 +1.0
TOLF                              AML   AML
        comp=E,701µm,0.5s
TOLF                              AML   AML
        comp=N,592µm,0.6s
TOLF                              AML   AML
        comp=E,701µm,0.5s
TOLF                              AML   AML
        comp=N,592µm,0.6s
MELA  Melanico ??? S   2.00 130 ⇑P     Pg    08 45 49.0 -0.7
MELA                              S     Sg    08 46 16.0 +0.4
PII   Pisa             2.00 292  P     Pb    08 45 48.4 +0.9
PGF   Pioggiola        3.05 263  ePn   Pn    08 46 00.6 +1.4
MYKA  Terra Mystica    3.64   6  ePn   Pn    08 46 09.9 +2.7
        comp=N,5.5nm,0.3s
ABTA  Abfaltersbach    3.76 354  ePn   Pn    08 46 12.9 +4.0
        comp=N,19nm,0.5s
WTTA  Wattenberg       4.37 347  ePn   Pb    08 46 23.9 -4.2
        comp=N,2.1nm,0.3s
DAVOX Davos/Dischmat   4.40 330  Pn    Pb    08 46 23.4 -5.2
        comp=N,2.0nm,0.3s,baz=153,slow=15,SNR=9.5
DAVOX                             Sn    Sb    08 47 15.3 -6.3
        comp=N,1.3nm,0.3s,baz=138,slow=23,SNR=2.2
        comp=N,5.9nm,0.4s
SQTA  Sankt Quirin     4.41 343  ePn   Pn    08 46 19.9 +1.9
        comp=N,2.7nm,0.2s
WATA  Walderalm        4.45 347  ePn   Pn    08 46 23.9 +5.4
        comp=N,4.5nm,0.4s
ARSA  Arzberg          4.57  21  ePn   Pn    08 46 23.5 +3.4
        comp=N,1.6nm,0.3s
BIOA  Bad Ischl, Aus   4.69   5  ePn   Pn    08 46 26.8 +5.1
        comp=N,5.8nm,0.3s
RETA  Reutte           4.77 341  ePn   Pn    08 46 28.0 +5.2
        comp=N,2.5nm,0.3s
LMR   La Mourre        4.83 276  ePn   Pn    08 46 22.0 -1.5
MBDF  Montbardon       4.88 293  ePn   Pn    08 46 27.6 +3.2
MOA   Molln            4.91   9  ePn   Pn    08 46 28.7 +4.1
        comp=N,2.4nm,0.3s
LPG   La Plagne        5.19 301  ePn   Pn    08 46 31.9 +3.1
LPG                               eSn   Sn    08 47 23.7 -4.7
        comp=N,5.5nm,0.5s
LPL   La Plagne        5.21 301  ePn   Pn    08 46 33.2 +4.2
LPL                               eSn   Sn    08 47 24.5 -4.4
        comp=N,7.7nm,0.5s
CONA  Conrad Observa   5.29  21  ePn   Pn    08 46 33.3 +3.4
        comp=N,1.6nm,0.3s
ORIF  Oris-en-Rattie   5.54 293  ePn   Pn    08 46 36.9 +3.4
ORIF                              eSn   Sn    08 47 32.3 -4.6
        comp=N,5.0nm,0.6s
GERES GERESS Array B   5.85   4  Pn    Pn    08 46 40.0 +2.3
        comp=N,0.7nm,0.3s,baz=176,slow=14,SNR=8.3
GERES                             Sn    Sn    08 47 46.8 +2.4
        comp=N,1.8nm,0.3s,baz=185,slow=28,SNR=8.6
        comp=N,0.8nm,0.3s
KHC   Kasperske Hory   6.13   3  ePN   Pn    08 46 44.7 +3.3
KHC                               eSN   Sn    08 47 51.0 -0.3
CABF  La Chapelle      6.14 308  ePn   Pn    08 46 42.5 +0.8
CABF                              eSn   Sn    08 47 48.0 -3.7
        comp=N,7.0nm,0.7s
HINF  Hinteralfeld     6.51 320  ePn   Pn    08 46 48.3 +1.7
HINF                              eSn   Sn    08 47 57.0 -3.6
        comp=N,8.0nm,0.5s
CDF   Champ du Feu     6.76 325  ePn   Pn    08 46 51.7 +1.5
CDF                               eSn   Sn    08 48 03.1 -3.8
        comp=N,6.2nm,0.5s
HAU   Haudompre        6.88 319  ePn   Pn    08 46 53.6 +1.8
HAU                               eSn   Sn    08 48 04.4 -5.4
        comp=N,20nm,0.5s
SFTF  Sexfontaines     7.67 315  ePn   Pn    08 47 02.0 -0.5
TORD  Torodi Ar. Bea  31.35 202  P     P     08 51 39.3 +7.9
        comp=N,0.2nm,0.4s,baz=46,slow=10,SNR=1.1
        comp=N,0.2nm,0.4s
MKAR  Makanchi Array  47.71  60  P     P     08 53 52.4 +5.0
        comp=N,0.3nm,0.7s,baz=276,slow=3.9,SNR=2.4
        comp=N,0.3nm,0.7s
```

ROM 27 09:05:28.5±0.1, 42°.855N±0°.004×13°.227E±0°.005,
h8km, ML2.5/15, 3C-5D, Error ellipse: s-maj=0.3km
s-min=0.3km az=339.0, Central Italy

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Code  Station Name     Δ°   AZ°   Phase ID        Time      Res
                                  Op    ISC       h m s     ISC
T1245 Castelsantange   0.03 273 ⇑P    Pg        09 05 29.8 -0.4
T1245                            S     Sg        09 05 30.4 -1.0
NRCA  Norcia           0.09 255  P     Pg        09 05 31.0 +0.3
NRCA                             S     Sg        09 05 32.7 +0.5
NRCA                             AML   AML
        comp=N,26500µm,0.2s
NRCA                             AML   AML
        comp=N,28500µm,0.2s
NRCA                             AML   AML
        comp=E,22700µm,0.4s
NRCA                             AML   AML
        comp=N,26500µm,0.1s
NRCA                             AML   AML
        comp=E,23900µm,0.4s
NRCA                             AML   AML
        comp=N,28550µm,0.2s
NRCA                             AML   AML
        comp=E,23950µm,0.4s
MMO1  Montemonaco      0.09  59  P     Pg        09 05 30.9 +0.2
MMO1                             S     Sg        09 05 32.6 +0.3
T1241 Roccafluvione,   0.15  90  P     Pg        09 05 32.0 +0.3
T1241                            S     Sg        09 05 34.9 +1.0
AM05  Amandola Campo   0.15  37  P     Pg        09 05 32.3 +0.6
AM05                             S     Sg        09 05 35.1 +1.2
AM05                             AML   AML
        comp=E,1135µm,0.1s
AM05                             AML   AML
        comp=N,1200µm,0.9s
AM05                             AML   AML
        comp=E,4445µm,0.4s
AM05                             AML   AML
        comp=N,326µm,0.2s
AM05                             AML   AML
        comp=N,1200µm,0.9s
AM05                             AML   AML
        comp=E,1140µm,0.1s
AM05                             AML   AML
        comp=N,326µm,0.2s
T1216 Preci, Frazion   0.16 283  P     Pg        09 05 32.4 +0.6
T1216                            S     Sg        09 05 35.6 +1.6
T1216                            AML   AML
        comp=N,8320µm,0.3s
T1216                            AML   AML
        comp=E,10900µm,0.4s
T1216                            AML   AML
        comp=N,8330µm,0.3s
T1216                            AML   AML
        comp=E,10900µm,0.4s
T1216                            AML   AML
        comp=N,8330µm,0.3s
T1204 Amatrice, Fraz   0.19 160  P     Pg        09 05 33.2 +0.8
T1204                            S     Sg        09 05 37.6 +2.5
T1204                            AML   AML
        comp=E,2288µm,1.3s
T1204                            AML   AML
        comp=N,1441µm,0.7s
GUMA  Gualdo di Mace   0.22  21  P     Pg        09 05 33.8 +0.9
GUMA                             S     Sg        09 05 38.1 +2.1
GUMA                             AML   AML
        comp=E,7485µm,1.1s
GUMA                             AML   AML
        comp=N,10145µm,0.4s
GUMA                             AML   AML
        comp=E,11050µm,0.4s
GUMA                             AML   AML
        comp=N,10175µm,0.4s
GUMA                             AML   AML
        comp=N,8680µm,0.6s
GUMA                             AML   AML
        comp=E,7480µm,1.1s
T1243 Rocca Santa Ma   0.23 134  P     Pg        09 05 33.7 +0.6
T1243                            S     Sg        09 05 38.0 +1.8
SMA1  SAN MARTINO      0.24 160  P     Pg        09 05 33.9 +0.7
SMA1                             AML   AML
        comp=E,1760µm,0.7s
SMA1                             AML   AML
        comp=N,1645µm,0.5s
T1217 Poggiodomo (PG   0.26 237  P     Pg        09 05 34.3 +0.6
T1217                            S     Sb        09 05 39.0 -1.2
T1215 Vallo di Nera,   0.27 259  P     Pg        09 05 34.4 +0.5
T1215                            S     Sb        09 05 39.1 -1.2
T1215                            AML   AML
        comp=E,894µm,1.2s
T1215                            AML   AML
        comp=N,872µm,1.5s
T1215                            AML   AML
        comp=E,894µm,1.2s
T1215                            AML   AML
        comp=N,872µm,1.5s
T1215                            AML   AML
        comp=E,896µm,1.2s
LNSS  Leonessa         0.29 209  P     Pg        09 05 34.9 +0.7
LNSS                             S     Sb        09 05 40.2 -0.7
LNSS                             AML   AML
        comp=E,2340µm,0.3s
LNSS                             AML   AML
        comp=N,2010µm,0.2s
MNTP  Montappone       0.33  32 ⇓P    Pb        09 05 36.4 -0.2
MNTP                             AML   AML
        comp=E,1570µm,0.3s
MNTP                             AML   AML
        comp=N,1620µm,0.5s
MNTP                             AML   AML
        comp=E,2165µm,1.6s
MNTP                             AML   AML
        comp=N,1850µm,0.7s
MNTP                             AML   AML
        comp=E,2160µm,1.6s
MNTP                             AML   AML
        comp=N,1855µm,0.7s
CAMP  Campotosto       0.35 157  P     Pg        09 05 35.8 +0.5
CAMP                             S     Sb        09 05 41.7 -0.9
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CAMP                                AML   AML
      comp=E,574µm,0.3s
CAMP                                AML   AML
      comp=E,574µm,0.3s
CAMP                                AML   AML
      comp=N,554µm,1.2s
RM33  Pellescritta (        0.35 181  P     Pg    09 05 36.0 +0.7
RM33                                  S     Sb    09 05 42.1  -0.5
RM33                                AML   AML
      comp=E,777µm,1.0s
RM33                                AML   AML
      comp=N,733µm,0.9s
RM33                                AML   AML
      comp=E,750µm,0.8s
RM33                                AML   AML
      comp=N,701µm,0.8s
OFFI  Offida                0.35  77 ⇓P     Pb    09 05 37.1 +0.2
OFFI                                AML   AML
      comp=E,1550µm,0.5s
OFFI                                AML   AML
      comp=N,2140µm,1.2s
TERO  Teramo                0.36 130  P     Pg    09 05 36.1 +0.5
TERO                                  S     Sb    09 05 42.2  -0.9
TERO                                AML   AML
      comp=E,931µm,1.4s
TERO                                AML   AML
      comp=N,1097µm,0.4s
TERO                                AML   AML
      comp=N,1096µm,0.4s
TERO                                AML   AML
      comp=N,1135µm,0.4s
TERO                                AML   AML
      comp=E,950µm,0.8s
T1211 Morro Reatino         0.42 221  P     Pb    09 05 38.1  -0.2
T1211                               AML   AML
      comp=E,458µm,1.6s
T1211                               AML   AML
      comp=N,817µm,0.4s
SNTG  Esanatoglia           0.45 332  P     Pg    09 05 37.5 +0.3
SNTG                                  S     Sb    09 05 45.4  -0.3
SNTG                                AML   AML
      comp=E,797µm,0.3s
SNTG                                AML   AML
      comp=N,722µm,0.5s
SNTG                                AML   AML
      comp=E,826µm,0.3s
SNTG                                AML   AML
      comp=N,722µm,0.5s
SNTG                                AML   AML
      comp=N,821µm,0.5s
SNTG                                AML   AML
      comp=N,722µm,0.5s
GIGS  Gran Sasso            0.48 148  P     Pg    09 05 38.1 +0.4
GIGS                                AML   AML
      comp=N,180µm,1.0s
GIGS                                AML   AML
      comp=E,138µm,0.5s
EL6   Elcito                0.48 349 ⇓P     Pg    09 05 38.2 +0.3
EL6                                   S     Sb    09 05 47.0 +0.4
EL6                                 AML   AML
      comp=E,2260µm,0.2s
EL6                                 AML   AML
      comp=N,2051µm,1.5s
ATCC  AVT- Casa Cast        0.54 308 ⇓P     Pg    09 05 39.4 +0.5
ATCC                                AML   AML
      comp=E,3510µm,0.3s
ATCC                                AML   AML
      comp=N,2305µm,1.1s
ARVD  Arcevia               0.68 342 ⇑P     Pg    09 05 41.6 +0.2
ARVD                                  S     Sb    09 05 53.0 +0.9
ARVD                                AML   AML
      comp=E,603µm,0.2s
ARVD                                AML   AML
      comp=E,602µm,0.2s
ARVD                                AML   AML
      comp=N,370µm,1.0s
ARVD                                AML   AML
      comp=E,262µm,3.6s
ARVD                                AML   AML
      comp=N,148µm,3.2s
MGAB  Montegabbione         0.82 274 ⇓P     Pn    09 05 47.1 +0.7
FSSB  Fossombrone           0.90 339 ⇑P     Pb    09 05 46.2  -0.2
FSSB                                AML   AML
      comp=E,906µm,0.3s
FSSB                                AML   AML
      comp=N,1410µm,0.4s
FSSB                                AML   AML
      comp=E,905µm,0.3s
LATB  Latina                1.37 188  S     Sb    09 06 12.0  -0.1
MELA  Melanico ??? S        1.82 129  S     Sn    09 06 23.0  -0.3
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ROM 27 09:05:58.5±0.1, 43°.021N±0°.004×13°.132E±0°.006, h10km, ML2.5/4, 10C-2D, Error ellipse: s-maj=0.6km s-min=0.1km az=239.0, Central Italy

```
Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC       h m s     ISC
FDMO  Fiordimonte           0.04 295  P     Pg    09 06 00.6 +0.2
FDMO                                  S     Sg    09 06 00.7  -1.1
MC2   Monte Cornacci        0.12 158 ⇑P     Pg    09 06 01.8 +0.3
MC2                                   S     Sg    09 06 04.3 +0.7
T1216 Preci, Frazion        0.15 212  P     Pg    09 06 02.5 +0.5
T1216                                 S     Sg    09 06 05.5 +1.2
T1216                               AML   AML
      comp=E,6510µm,0.3s
T1216                               AML   AML
      comp=N,7080µm,1.3s
AM05  Amandola Campo        0.17 105 ⇑P     Pg    09 06 03.1 +0.9
AM05                                  S     Sg    09 06 06.0 +1.3
AM05                                AML   AML
      comp=E,2795µm,0.2s
AM05                                AML   AML
      comp=N,853µm,1.6s
AM05                                AML   AML
      comp=E,2800µm,0.2s
AM05                                AML   AML
      comp=E,710µm,1.0s
AM05                                AML   AML
      comp=N,242µm,0.6s
T1245 Castelsantange        0.17 166 ⇑P     Pg    09 06 02.7 +0.4
T1245                                 S     Sg    09 06 06.3 +1.4
T1245                               AML   AML
      comp=E,7440µm,0.4s
T1245                               AML   AML
      comp=E,6345µm,0.4s
T1245                               AML   AML
      comp=N,8430µm,0.1s
T1245                               AML   AML
      comp=E,7440µm,0.4s
T1245                               AML   AML
      comp=E,6350µm,0.4s
T1245                               AML   AML
      comp=N,8425µm,0.1s
T1245                               AML   AML
      comp=N,7610µm,0.1s
SEF1  Sefro                 0.18 313 ⇑P     Pg    09 06 03.1 +0.6
SEF1                                  S     Sg    09 06 06.5 +1.4
SEF1                                AML   AML
      comp=E,9910µm,0.4s
SEF1                                AML   AML
      comp=N,6885µm,1.1s
MMO1  Montemonaco           0.19 130 ⇓P     Pg    09 06 03.1 +0.5
MMO1                                  S     Sg    09 06 06.5 +1.2
GAG1  Gagliole              0.22 348 ⇓P     Pg    09 06 03.9 +0.7
GAG1                                  S     Sg    09 06 08.2 +1.9
SNTG  Esanatoglia           0.27 329 ⇑P     Pg    09 06 04.5 +0.5
SNTG                                  S     Sb    09 06 09.5  -0.8
SNTG                                AML   AML
      comp=E,826µm,0.3s
SNTG                                AML   AML
      comp=N,822µm,0.5s
SNTG                                AML   AML
      comp=E,797µm,0.3s
SNTG                                AML   AML
      comp=N,722µm,0.5s
SNTG                                AML   AML
      comp=N,722µm,0.5s
SNTG                                AML   AML
      comp=N,821µm,0.5s
T1241 Roccafluvione,        0.28 127  P     Pg    09 06 04.3 +0.3
T1241                                 S     Sb    09 06 09.4  -0.9
T1215 Vallo di Nera,        0.29 222 ⇑P     Pg    09 06 05.0 +0.6
T1215                                 S     Sb    09 06 10.1  -0.8
EL6   Elcito                0.31 356 ⇑P     Pg    09 06 05.1 +0.3
EL6                                   S     Sb    09 06 10.5  -0.9
T1217 Poggiodomo (PG        0.34 206  P     Pb    09 06 06.3  -0.5
ATCC  AVT- Casa Cast        0.40 295  S     Sb    09 06 15.0 +1.2
T1243 Rocca Santa Ma        0.40 144  P     Pg    09 06 07.0 +0.6
SMA1  SAN MARTINO           0.42 159 ⇑P     Pg    09 06 07.3 +0.5
LNSS  Leonessa              0.42 189 ⇑P     Pg    09 06 07.5 +0.7
ARVD  Arcevia               0.50 344  S     Sb    09 06 17.0 +0.3
MURB  Monte Urbino          0.51 299  S     Sb    09 06 18.0 +0.9
TERO  Teramo                0.53 139 ⇑P     Pg    09 06 09.1 +0.3
MPAG  Monte Paganucc        0.67 336  S     Sn    09 06 24.0  -0.7
PIEI  Pieia                 0.67 320  S     Sn    09 06 24.0  -0.9
NARO  Abbazia di Nar        0.71 326  S     Sn    09 06 25.0  -0.8
FSSB  Fossombrone           0.72 339  S     Sn    09 06 26.0 +0.1
```

*IDC **27** 10:00:60.0±3.2, 64°.69N×31°.56E, h0km, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=46.6km s-min=10.6km az=100.0*
*HEL **27** 10:01:00.1±0.2, 64°.66N×30°.61E, h0km, ML2.3, Explosion*
*UPP **27** 10:01:04.4±3.1, 64°.75N×30°.04E, h0km, ML2.1, Suspected explosion*

ISC 27 10:01:00.6±1.0, 64°.75N±0°.02×30°.56E±0°.06, h0km, n36, σ1§97/56, Finland-Karelia border region

```
Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC       h m s     ISC
RMF   Romuvaara             0.60 207  PG    Pg    10 01 09.9  -2.1
RMF                                   SG    Sg    10 01 15.7  -4.0
KU6   Riekki                1.31 348  PB    Pg    10 01 24.7  -1.0
      baz=167
KU6                                   MSG         10 01 42.4
      comp=Z,19nm,0.2s
KU6                                   SG    Sn    10 01 44.9 +0.5
OLKF  Oulanka, Finla        1.65 344  PG    Pn    10 01 30.7  -0.1
OLKF                                  SG    Sg    10 01 55.5 +1.9
JOF   Joensuu               1.87 169  PG    Pn    10 01 31.9  -1.8
OUL   Oulu                  2.02 282  PG    Pn    10 01 36.6 +0.8
      baz=95
OUL                                   SG    Sn    10 02 03.9 +2.2
OBF4  Vikkela, Lumij        2.34 274  PB    Pn    10 01 41.0 +0.8
      baz=90
OBF4                                  SG    Sb    10 02 14.6 +1.7
OUF   Merijarvi             2.55 264  PB    Pn    10 01 43.9 +0.8
OUF                                   MSG         10 02 15.5
      comp=Z,29nm,0.2s
OUF                                   SG    Sb    10 02 19.2 +0.3
RNF   Rovaniemi             2.65 317  PB    Pb    10 01 48.4  -0.5
RNF                                   SB    Sb    10 02 23.3 +1.3
OBF0  Syolatti, Pyha        2.74 268  PB    Pn    10 01 47.4 +1.7
TOF   Tornio                2.93 300  PB    Pb    10 01 52.2  -1.4
TOF                                   MSG         10 02 27.9
      comp=Z,12nm,0.2s
TOF                                   SB    Sb    10 02 29.4  -0.6
VRF   Varrio                3.04 353  MSG         10 02 32.1
      comp=Z,7.2nm,0.2s
VRF                                   SG    Sg    10 02 37.7  -0.4
OBF8  Ulkokalla             3.10 265  PB    Pn    10 01 52.5 +1.8
SGF   Sodankyl              3.17 331  PB    Pb    10 01 58.2 +0.5
SGF                                   SB    Sb    10 02 36.8 +0.1
KALU  Kalix                 3.23 294  PN    Pn    10 01 54.5 +2.1
KALU                                  SG    Sb    10 02 40.5 +2.2
KAF   Kangasniemi           3.26 218  PG    Pn    10 01 56.1 +3.2
KAF                                   MSG         10 02 34.1
      comp=Z,5.0nm,0.2s
KAF                                   SB    Sn    10 02 34.9 +2.5
LVZ   Lovozero              3.57  26  SG    Sg    10 02 52.4  -2.7
KEF   Keuruu                3.64 227  PB    Pn    10 02 00.4 +2.3
KEF                                   SB    Sn    10 02 44.3 +2.7
KLF   Kolari                3.67 316  PN    Pn    10 01 58.5  0.0
PAJU  Pajala                3.82 310  PN    Pn    10 02 03.4 +2.8
SJUU  Sjulsmark             3.86 285  P     Pn    10 02 02.5 +1.4
SJUU                                  S     Sn    10 02 41.5  -5.6
VAF   Ylistaro              3.88 247  PB    Pn    10 02 04.7 +3.3
      baz=63
VAF                                   SB    Sn    10 02 51.9 +4.2
FIA0  FINESS Array S        3.89 214  PG    Pb    10 02 09.3  -0.7
      baz=33
FIA0                                  SG    Sb    10 02 56.3  -1.3
FINES FINESS Array B        3.89 214  Pn    Pn    10 02 02.5 +1.0
      comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=6.1
FINES                                 Pg    Pb    10 02 12.1 +2.1
      comp=Z,0.9nm,0.3s,baz=36,slow=14,SNR=16
FINES                                 Lg    Lg    10 03 00.4
      comp=Z,1.8nm,0.3s,baz=37,slow=28,SNR=11
      comp=Z,0.7nm,0.3s
ERTU  Ertsjaerv             3.91 301  P     Pn    10 02 01.4  -0.5
ERTU  Ertsjaerv             3.91 301  PN    Pn    10 02 01.8  -0.1
BURU  Burvik                3.95 272  P     Pn    10 02 02.9 +0.6
BURU  Burvik                3.95 272  PN    Pn    10 02 03.0 +0.7
      baz=84
BURU                                  SN    Sn    10 02 50.2 +0.9
HARU  Harads                4.25 294  P     Pn    10 02 08.0 +1.6
ODEU  Stanfors              4.26 270  P     Pn    10 02 06.8 +0.2
UMAU  Umeaa                 4.39 263  P     Pn    10 02 07.8  -0.5
UMAU  Umeaa                 4.39 263  PN    Pn    10 02 08.9 +0.6
UMAU                                  SN    Sn    10 02 59.5  -0.6
LILU  Lilltraesk            4.58 282  P     Pn    10 02 12.2 +1.3
HEF   Hetta                 4.59 326  PG    Pb    10 02 24.2 +2.3
HEF                                   SG    Sg    10 03 23.5  -4.4
ARCES ARCESS Array B        5.20 340  Pn    Pn    10 02 19.3  -0.1
      comp=Z,0.3nm,0.3s,baz=154,slow=14,SNR=30
ARCES                                 Sn    Sn    10 03 20.3 +0.3
      comp=Z,0.4nm,0.3s,baz=154,slow=25,SNR=1.6
ARCES                                 Lg    Lg    10 03 40.0
      comp=Z,0.6nm,0.3s,baz=156,slow=30,SNR=3.8
      comp=Z,0.8nm,0.3s
HFS   Hagfors               9.07 247  Pn    Pn    10 03 12.9 +0.4
      comp=Z,0.4nm,0.3s,baz=60,slow=12,SNR=7.0
      comp=Z,1.0nm,0.3s
NOA   NORSAR Array B        9.56 256  Pn    Pn    10 03 18.8  -0.5
      baz=55,slow=9.1,SNR=1.5
      comp=Z,1.0nm,0.8s
```

*SOME **27** 10:02:05.9, 44°.65N×82°.05E, h5km*
*NNC **27** 10:02:12.0±0.9, 44°.76N×81°.87E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=13.2km s-min=3.3km az=118.0*

ISC 27 10:02:07.0±1.7, 44°.68N±0°.07×82°.2E±0°.1, h10km, n10, σ1§01/20, 4C-2D, Northern Xinjiang

```
Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC       h m s     ISC
DJR   Jarkent               1.75 259  eP    Pb    10 02 38.5  -0.8
      5.2nm,0.2s
DJR                                   eS    Sg    10 03 02.3  -1.1
      8.1nm,0.4s
MK31  Makanchi Array        2.11   2 ⇑Pn    Pg    10 02 47.5  0.0
      2.7nm,0.4s,baz=190,slow=15,SNR=60
MK31                                ⇑Sn    Sg    10 03 15.3 +0.5
      3.7nm,0.5s,baz=189,slow=25,SNR=17
MAKZ  Makanchi              2.13 356 ⇑Pn    Pg    10 02 47.5  -0.3
      1.7nm,0.3s
MAKZ                                ⇑Sn    Sg    10 03 15.3  -0.1
      2.1nm,0.3s
PDGK  Podgornoye            2.37 236 ⇓Pn    Pb    10 02 49.8  -0.1
      2.0nm,0.6s
PDGK                                ⇓Sn    Sb    10 03 20.1 +0.8
      6.9nm,0.9s
SHLS  Shalkode              2.49 233  eP    Pn    10 02 47.8  0.0
      2.9nm,0.4s
SHLS                                eS    Sn    10 03 18.2  0.0
      13nm,0.4s
BLB   Baldybastay           2.73 259  eP    Pb    10 02 55.3  -0.6
      5.3nm,0.2s
BLB                                 eS    Sb    10 03 30.9 +1.5
      12nm,0.2s
UZB   Uzynbulak             2.76 237  eP    Pb    10 02 55.7  -0.8
      1.1nm,0.1s
UZB                                 eS    Sb    10 03 32.2 +1.9
      2.5nm,0.2s
KPKS  Kokpek                2.81 246  eP    Pb    10 02 56.8  -0.4
      2.7nm,0.2s
KPKS                                eS    Sb    10 03 33.6 +1.9
      7.8nm,0.2s
ARXS  Arharly               3.16 263  eP    Pb    10 03 02.3  -1.0
      2.3nm,0.4s
ARXS                                eS    Sb    10 03 43.0 +1.1
      3.5nm,0.2s
SATY  Saty                  3.18 241  eP    Pb    10 03 02.4  -1.3
      1.1nm,0.1s
SATY                                eS    Sb    10 03 43.0 +0.4
      4.5nm,0.2s
```

IDC 27 10:06:04.2±1.1, 15°.39S×175°.01W, h0km, mb3.9/6, mbtmp3.9/6, MS3.7/15, Error ellipse: s-maj=48.6km s-min=25.1km az=146.0, Tonga Islands

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Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC       h m s     ISC
AFI   Afiamalu              3.46  65  Pn    Pn    10 06 52.9  -6.6
      9.8nm,0.3s,baz=1.1,slow=3.8,SNR=13
AFI                                   LR    LR    10 07 59.9
      comp=Z,266nm,18.5s,baz=230,slow=33
RAO   Raoul Island         14.05 191  LR    LR    10 13 54.4
      comp=Z,427nm,19.6s,baz=46,slow=34
RAR   Rarotonga            15.58 114  LR    LR    10 13 58.0
      comp=Z,299nm,20.8s,baz=278,slow=30
URZ   Urewera              23.82 195  LR    LR    10 19 06.9
      comp=Z,169nm,21.2s,baz=106,slow=33
PPT   Papeete              24.48  99  LR    LR    10 18 14.0
      comp=Z,93nm,20.1s,baz=298,slow=30
RPZ   Rata Peaks           30.63 200  LR    LR    10 23 07.3
      comp=Z,196nm,20.4s,baz=60,slow=33
CTA   Charters Tower       37.13 257  LR    LR    10 26 11.6
      comp=Z,123nm,18.4s,baz=78,slow=32
PMG   Port Moresby         37.38 275  LR    LR    10 26 55.5
      comp=Z,117nm,20.3s,baz=67,slow=34
H11S2 WAKE ISLAND Hy 38.18 331  T     T     10 54 19.0
      baz=150,slow=75,SNR=78
H11S3 WAKE ISLAND Hy 38.19 331  T     T     10 54 23.6
      baz=150,slow=75,SNR=33
H11S1 WAKE ISLAND Hy 38.20 331  T     T     10 54 18.6
      baz=150,slow=75,SNR=57
H11N3 WAKE ISLAND Hy 39.16 332  T     T     10 55 28.0
      baz=151,slow=76,SNR=74
H11N1 WAKE ISLAND Hy 39.16 332  T     T     10 55 28.4
      baz=151,slow=76,SNR=92
H11N2 WAKE ISLAND Hy 39.17 332  T     T     10 55 29.0
      baz=151,slow=76,SNR=99
STKA  Stephens Creek       42.70 240  P     P     10 14 03.0  -0.1
      2.2nm,0.7s,baz=79,slow=9.9,SNR=3.4
      2.2nm,0.7s
WRA   Warramunga Arr       48.33 257  P     P     10 14 47.9  -0.1
      0.8nm,0.8s,baz=92,slow=7.0,SNR=11
WRA                                   LR    LR    10 32 34.2
      comp=Z,95nm,21.6s,baz=65,slow=33
      0.8nm,0.8s
ASAR  Alice Springs        48.64 252  P     P     10 14 50.2  -0.1
      4.3nm,0.7s,baz=86,slow=8.0,SNR=38
ASAR                                  LR    LR    10 34 03.7
      comp=Z,172nm,18.5s,baz=138,slow=34
      4.3nm,0.7s
SIJI  Sorong               54.92 280  LR    LR    10 38 27.8
      comp=Z,61nm,19.7s,baz=97,slow=35
VNDA  Vanda                63.23 185  P     P     10 16 34.0  0.0
      1.5nm,1.0s,baz=357,slow=6.9,SNR=7.1
      1.5nm,1.0s
SHEM  Shemya Is, Ala       68.49 353  LR    LR    10 42 12.3
      comp=Z,59nm,21.2s,baz=168,slow=32
NVAR  Mina Array Bea       75.37  43  P     P     10 17 50.0  -0.1
      0.5nm,0.8s,baz=221,slow=9.5,SNR=2.4
      0.5nm,0.8s
BBB   Bella Bella          78.58  27  LR    LR    10 45 50.2
      comp=Z,74nm,19.8s,baz=137,slow=30
PDAR  Pinedale Array       83.30  42  P     P     10 18 33.5 +0.2
      0.7nm,0.9s,baz=145,slow=3.6,SNR=3.7
      0.7nm,0.9s
H03S2 Juan Fernandez       86.50 124  T     T     11 53 52.9
      baz=252,slow=75,SNR=29
H03S1 Juan Fernandez       86.51 124  T     T     11 53 54.4
      baz=252,slow=75,SNR=24
H03S3 Juan Fernandez       86.52 124  T     T     11 53 54.6
      baz=252,slow=75,SNR=18
MAW   Mawson               87.30 199  LR    LR    10 56 05.0
      comp=Z,54nm,19.0s,baz=230,slow=34
LVC   Limon Verde          98.42 116  LR    LR    10 53 60.0
      comp=Z,36nm,20.3s,baz=302,slow=29
```

ROM 27 10:10:25.6±0.0, 42°.879N±0°.003×13°.062E±0°.004, h11km, ML3.0/40, 24C-10D, Error ellipse: s-maj=0.3km s-min=0.3km az=281.0, Central Italy

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Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC       h m s     ISC
T1216 Preci, Frazion        0.03 291  P     Pg    10 10 27.9 +0.3
T1216                                 S     Sg    10 10 29.3 +0.1
T1216                               AML   AML
T1216                               AML   AML
T1216                               AML   AML
T1216                               AML   AML
NRCA  Norcia                0.06 139  P     Pg    10 10 28.2 +0.3
NRCA                                  S     Sg    10 10 29.8 +0.2
NRCA                                AML   AML
      comp=E,42250µm,0.4s
NRCA                                AML   AML
      comp=E,42250µm,0.5s
NRCA                                AML   AML
NRCA                                AML   AML
      comp=E,42300µm,0.5s
NRCA                                AML   AML
      comp=E,46150µm,0.5s
NRCA                                AML   AML
NRCA                                AML   AML
FEMA  Monte Fema            0.08 354  P     Pg    10 10 28.6 +0.3
FEMA                                  S     Sg    10 10 30.4 +0.2
FEMA                                AML   AML
      comp=E,56750µm,0.4s
FEMA                                AML   AML
      comp=N,36100µm,1.6s
FEMA                                AML   AML
      comp=E,56800µm,0.4s
FEMA                                AML   AML
      comp=N,41700µm,0.3s
T1245 Castelsantange        0.10 103 ⇓P     Pg    10 10 28.8 +0.4
T1245                                 S     Sg    10 10 30.8 +0.4
T1245                               AML   AML
      comp=N,66200µm,0.3s
T1245                               AML   AML
      comp=N,71150µm,0.2s
T1245                               AML   AML
      comp=N,66200µm,0.2s
T1245                               AML   AML
      comp=E,49000µm,0.3s
T1245                               AML   AML
      comp=E,49550µm,0.3s
T1245                               AML   AML
      comp=E,49050µm,0.3s
MC2   Monte Cornacci        0.10  70 ⇑P     Pg    10 10 28.9 +0.4
MC2                                   S     Sg    10 10 31.1 +0.5
FDMO  Fiordimonte           0.16   7  P     Pg    10 10 29.8 +0.5
T1215 Vallo di Nera,        0.16 242  P     Pg    10 10 29.8 +0.5
T1215                                 S     Sg    10 10 33.0 +1.2
T1215                               AML   AML
      comp=E,5840µm,0.6s
T1215                               AML   AML
      comp=N,6840µm,1.4s
T1215                               AML   AML
      comp=E,6215µm,0.6s
T1215                               AML   AML
      comp=N,6760µm,1.4s
T1215                               AML   AML
      comp=E,5845µm,0.6s
T1215                               AML   AML
      comp=N,6840µm,1.4s
T1215                               AML   AML
      comp=E,6225µm,0.6s
T1215                               AML   AML
      comp=N,6770µm,1.4s
T1215                               AML   AML
      comp=E,5840µm,0.6s
T1215                               AML   AML
      comp=E,6225µm,0.6s
T1215                               AML   AML
      comp=N,6765µm,1.4s
T1215                               AML   AML
      comp=E,6235µm,0.6s
T1215                               AML   AML
      comp=N,6760µm,1.4s
T1215                               AML   AML
      comp=N,6845µm,1.4s
CESI  CESI - Serrava        0.17 318  P     Pg    10 10 30.0 +0.6
CESI                                  S     Sg    10 10 33.0 +0.9
CESI                                AML   AML
      comp=N,34450µm,0.2s
CESI                                AML   AML
      comp=E,28300µm,1.6s
T1217 Poggiodomo (PG        0.19 210  P     Pg    10 10 30.3 +0.5
T1217                                 S     Sg    10 10 33.7 +1.0
T1217                               AML   AML
      comp=N,12250µm,0.8s
T1217                               AML   AML
```

```
     comp=E,7920µm,1.1s
T1217                    AML   AML
     comp=N,12050µm,0.8s
T1217                    AML   AML
     comp=E,7930µm,1.1s
T1217                    AML   AML
     comp=N,12250µm,0.8s
T1217                    AML   AML
     comp=E,7935µm,1.1s
T1217                    AML   AML
     comp=N,12000µm,0.8s
T1217                    AML   AML
     comp=E,7935µm,1.1s
T1217                    AML   AML
     comp=N,12000µm,0.8s
MMO1 Montemonaco     0.20  84 ⇑P    Pg    10 10 30.3 +0.5
MMO1                         S     Sg    10 10 33.7 +0.9
AM05 Amandola Campo  0.23  65 P     Pg    10 10 31.1 +0.6
AM05                         S     Sg    10 10 35.0 +1.1
AM05                         AML   AML
     comp=N,1054µm,0.7s
AM05                         AML   AML
     comp=E,4500µm,0.2s
AM05                         AML   AML
     comp=N,4200µm,0.7s
AM05                         AML   AML
     comp=E,19100µm,0.2s
AM05                         AML   AML
     comp=N,1056µm,0.7s
CSP1 Cessapalombo    0.24  26 P     Pg    10 10 31.1 +0.5
CSP1                         S     Sg    10 10 35.2 +1.2
CSP1                         AML   AML
     comp=N,29250µm,0.3s
CSP1                         AML   AML
     comp=E,22250µm,1.6s
GUMA Gualdo di Mace  0.27  47 ⇑P    Pb    10 10 31.9 -0.6
GUMA                         S     Sb    10 10 36.8 -0.4
GUMA                         AML   AML
     comp=E,32000µm,0.7s
GUMA                         AML   AML
     comp=N,32350µm,0.7s
GUMA                         AML   AML
     comp=N,32300µm,0.7s
GUMA                         AML   AML
     comp=N,39200µm,0.6s
GUMA                         AML   AML
     comp=E,32000µm,0.8s
GUMA                         AML   AML
     comp=E,26100µm,0.3s
T1241 Roccafluvione,     0.27  95 P     Pg    10 10 31.1  0.0
T1241                        S     Sg    10 10 35.7 +0.8
LNSS Leonessa        0.28 183 P     Pg    10 10 31.7 +0.4
LNSS                         S     Sb    10 10 36.5 -0.8
LNSS                         AML   AML
     comp=E,8040µm,0.1s
LNSS                         AML   AML
     comp=N,7700µm,0.5s
T1204 Amatrice, Fraz 0.28 137 P     Pg    10 10 31.9 +0.6
T1204                        S     Sb    10 10 36.5 -1.0
T1204                        AML   AML
     comp=E,4710µm,0.4s
T1204                        AML   AML
     comp=E,4715µm,0.4s
T1204                        AML   AML
     comp=N,3640µm,0.2s
T1204                        AML   AML
     comp=N,3638µm,0.2s
SEF1 Sefro           0.28 343 P     Pg    10 10 31.8 +0.5
SEF1                         S     Sb    10 10 36.5 -1.0
SEF1                         AML   AML
     comp=E,11750µm,0.2s
SEF1                         AML   AML
     comp=N,12950µm,0.3s
SEF1                         AML   AML
     comp=E,11700µm,0.2s
MDAR Monte D'Aria    0.32  11 ⇑P    Pg    10 10 32.5 +0.4
MDAR                         AML   AML
     comp=E,4240µm,0.6s
MDAR                         AML   AML
     comp=N,4615µm,0.4s
MDAR                         AML   AML
     comp=E,4245µm,0.6s
SMA1 SAN MARTINO     0.32 141 P     Pg    10 10 32.5 +0.4
SMA1                         S     Sb    10 10 38.0 -0.6
SMA1                         AML   AML
     comp=N,3605µm,0.6s
SMA1                         AML   AML
     comp=E,2750µm,0.5s
T1243 Rocca Santa Ma 0.34 122 P     Pg    10 10 32.7 +0.3
T1243                        S     Sb    10 10 38.2 -1.0
GAG1 Gagliole        0.36   1 ⇑P    Pb    10 10 33.8 -0.2
GAG1                         AML   AML
     comp=N,9225µm,1.3s
GAG1                         AML   AML
     comp=E,8245µm,0.9s
GAG1                         AML   AML
     comp=N,9260µm,1.3s
T1211 Morro Reatino  0.38 204 ⇑P    Pg    10 10 33.5 +0.3
T1211                        S     Sb    10 10 40.0 -0.3
T1211                        AML   AML
     comp=E,3505µm,1.6s
T1211                        AML   AML
     comp=N,5445µm,0.2s
T1211                        AML   AML
     comp=E,3526µm,1.6s
T1211                        AML   AML
     comp=N,5360µm,0.2s
T1211                        AML   AML
     comp=E,3558µm,1.6s
T1211                        AML   AML
     comp=N,5360µm,0.2s
T1211                        AML   AML
     comp=N,5365µm,0.2s
T1211                        AML   AML
     comp=E,3520µm,1.6s
RM33 Pellescritta (  0.39 163 ⇑P    Pg    10 10 33.5 +0.2
RM33                         AML   AML
     comp=E,1930µm,0.2s
RM33                         AML   AML
     comp=N,2075µm,0.2s
RM33                         AML   AML
     comp=E,1800µm,0.2s
RM33                         AML   AML
     comp=N,2075µm,0.2s
RM33                         AML   AML
     comp=N,2175µm,0.2s
RM33                         AML   AML
     comp=E,1930µm,0.2s
SNTG Esanatoglia     0.39 347 ⇓P    Pg    10 10 33.6 +0.3
SNTG                         AML   AML
     comp=N,2600µm,0.7s
SNTG                         AML   AML
     comp=E,2415µm,0.6s
SNTG                         AML   AML
     comp=N,2795µm,0.7s
SNTG                         AML   AML
     comp=E,2565µm,0.6s
SNTG                         AML   AML
     comp=N,2605µm,0.7s
CAMP Campotosto      0.43 143 ⇓P    Pg    10 10 34.3 +0.2
CAMP                         AML   AML
     comp=N,979µm,0.6s
CAMP                         AML   AML
     comp=N,978µm,0.6s
CAMP                         AML   AML
     comp=E,987µm,0.2s
ATCC AVT- Casa Cast  0.43 315 ⇑P    Pg    10 10 34.6 +0.4
ATCC                         AML   AML
     comp=E,5940µm,0.2s
ATCC                         AML   AML
     comp=N,3690µm,0.8s
CESX Cesi            0.45 233 ⇑P    Pg    10 10 34.5 +0.2
CESX                         AML   AML
     comp=E,2045µm,1.5s
CESX                         AML   AML
     comp=N,2630µm,0.7s
EL6  Elcito          0.45   4 ⇑P    Pg    10 10 34.8 +0.3
EL6                          AML   AML
     comp=N,4945µm,0.2s
EL6                          AML   AML
     comp=E,5985µm,0.2s
EL6                          AML   AML
     comp=N,4955µm,0.2s
EL6                          AML   AML
     comp=E,5980µm,0.2s
EL6                          AML   AML
     comp=N,4950µm,0.2s
OFFI Offida          0.46  83 P     Pb    10 10 35.7 -0.1
OFFI                         AML   AML
     comp=E,2835µm,0.8s
OFFI                         AML   AML
     comp=N,4420µm,0.6s
T1247 Pizzolo (AQ)   0.47 158 ⇑P    Pb    10 10 35.4 -0.5
T1247                        AML   AML
     comp=N,1575µm,1.0s
T1247                        AML   AML
     comp=E,1560µm,0.7s
TERO Teramo          0.47 122 P     Pg    10 10 34.9  0.0
TERO                         AML   AML
     comp=E,2105µm,0.5s
TERO                         AML   AML
     comp=N,2290µm,1.2s
TERO                         AML   AML
     comp=N,2400µm,1.2s
TERO                         AML   AML
     comp=E,2285µm,0.5s
TERO                         AML   AML
     comp=N,2405µm,1.2s
MURB Monte Urbino    0.55 314 P     Pb    10 10 36.9 -0.4
MURB                         S     Sb    10 10 46.0 +0.7
MURB                         AML   AML
     comp=E,5845µm,1.6s
MURB                         AML   AML
     comp=N,3695µm,0.9s
MURB                         AML   AML
     comp=E,5850µm,1.6s
MURB                         AML   AML
     comp=N,3985µm,0.9s
MURB                         AML   AML
     comp=N,3700µm,0.9s
MURB                         AML   AML
     comp=E,6300µm,0.3s
GIGS Gran Sasso      0.57 139 ⇓P    Pg    10 10 36.6 -0.1
GIGS                         AML   AML
     comp=E,324µm,0.8s
GIGS                         AML   AML
     comp=N,372µm,0.6s
ATFO Monte Foce - G  0.61 324 P     Pg    10 10 37.3 -0.1
ATFO                         AML   AML
     comp=N,1112µm,0.5s
ATFO                         AML   AML
     comp=E,1080µm,0.8s
FIAM Fiamignano      0.61 176 ⇓P    Pg    10 10 37.5  0.0
FIAM                         S     Sb    10 10 48.0 +1.0
FIAM                         AML   AML
     comp=E,830µm,0.3s
FIAM                         AML   AML
     comp=N,605µm,0.2s
FIAM                         AML   AML
     comp=E,830µm,0.3s
ARVD Arcevia         0.62 352 P     Pb    10 10 38.2 -0.3
ARVD                         S     Sn    10 10 49.0 -1.5
ARVD                         AML   AML
     comp=E,1515µm,0.6s
ARVD                         AML   AML
     comp=N,1056µm,1.0s
ARVD                         AML   AML
     comp=E,403µm,2.3s
ARVD                         AML   AML
     comp=N,325µm,0.2s
TRTR Tortoreto Alta  0.63  96 ⇑P    Pb    10 10 39.0 +0.3
TRTR                         AML   AML
     comp=E,3755µm,1.4s
TRTR                         AML   AML
     comp=N,3130µm,1.1s
PP3  Marolino        0.64  39 ⇑P    Pb    10 10 39.0 +0.2
PP3                          AML   AML
     comp=E,3020µm,0.5s
PP3                          AML   AML
     comp=N,3130µm,0.7s
PP3                          AML   AML
     comp=E,3185µm,0.6s
PP3                          AML   AML
     comp=E,3015µm,0.5s
PP3                          AML   AML
     comp=N,3235µm,0.7s
PP3                          AML   AML
     comp=N,3135µm,0.8s
ATVO AVT- Monte Val  0.69 317 ⇓P    Pg    10 10 39.1  0.0
ATVO                         S     Sn    10 10 52.0 -0.3
ATVO                         AML   AML
     comp=E,754µm,1.4s
ATVO                         AML   AML
     comp=N,638µm,0.4s
ATVO                         AML   AML
     comp=N,535µm,0.4s
ATVO                         AML   AML
     comp=E,487µm,0.5s
MGAB Montegabbione   0.70 273 ⇓P    Pb    10 10 40.2 +0.4
MGAB                         AML   AML
     comp=N,1780µm,1.4s
MGAB                         AML   AML
     comp=E,1520µm,0.3s
MGAB                         AML   AML
     comp=E,1325µm,1.1s
MGAB                         AML   AML
     comp=N,1880µm,1.4s
FAGN Fagnano         0.72 148 ⇑P    Pg    10 10 39.9 +0.3
FAGN                         AML   AML
     comp=E,1335µm,0.5s
FAGN                         AML   AML
     comp=N,1290µm,0.5s
VCEL Villa Celiera   0.75 130 ⇑P    Pb    10 10 41.0 +0.2
VCEL                         AML   AML
     comp=N,1160µm,0.7s
VCEL                         AML   AML
     comp=E,1310µm,0.5s
SRES S.Oreste - Sor  0.76 213 ⇑P    Pg    10 10 40.0 -0.3
SRES                         AML   AML
     comp=E,796µm,0.3s
SRES                         AML   AML
     comp=N,758µm,0.4s
PIEI Pieia           0.76 330 ⇑P    Pg    10 10 40.5 +0.2
PIEI                         AML   AML
     comp=E,714µm,0.4s
PIEI                         AML   AML
     comp=N,700µm,0.5s
MPAG Monte Paganucc  0.78 344 ⇓P    Pb    10 10 41.2 -0.1
FSSB Fossombrone     0.84 346 ⇑P    Pn    10 10 43.0 -0.4
FSSB                         S     Sn    10 10 56.0 +0.2
FSSB                         AML   AML
     comp=N,4395µm,0.3s
FSSB                         AML   AML
     comp=E,2355µm,0.5s
T0110 Collepietro    0.84 141 ⇑P    Pg    10 10 41.6 -0.2
T0110                        AML   AML
     comp=E,886µm,0.8s
T0110                        AML   AML
     comp=N,1120µm,1.6s
T0110                        AML   AML
     comp=E,886µm,0.8s
SACS San Casciano d  0.85 268 ⇓P    Pb    10 10 42.2 -0.1
SACS                         AML   AML
     comp=E,526µm,0.4s
SACS                         AML   AML
     comp=N,864µm,0.6s
SACS                         AML   AML
     comp=E,526µm,0.4s
MTCE Montecelio      0.89 196 S     Sn    10 10 56.0 -0.9
CAFI Castiglion Fio  0.92 300 ⇑P    Pb    10 10 44.0 +0.4
CAFI                         AML   AML
     comp=N,402µm,0.4s
CAFI                         AML   AML
     comp=N,402µm,0.4s
CAFI                         AML   AML
     comp=E,511µm,1.6s
CERT Cerreto         0.93 184 ⇑P    Pg    10 10 43.1 -0.4
CERT                         S     Sn    10 10 59.0 +0.9
CERT                         AML   AML
     comp=E,844µm,0.5s
CERT                         AML   AML
     comp=N,524µm,0.3s
INTR Introdacqua     1.07 144 P     Pg    10 10 44.6 -1.5
INTR                         AML   AML
     comp=E,487µm,1.2s
INTR                         AML   AML
     comp=N,572µm,0.9s
INTR                         AML   AML
     comp=E,488µm,1.2s
ARCI Arcidosso       1.17 269 P     Pb    10 10 45.7 -2.2
LPEL Lama dei Pelig  1.18 135 ⇓P    Pn    10 10 48.1  0.0
LPEL                         AML   AML
     comp=N,365µm,0.7s
LPEL                         AML   AML
     comp=E,417µm,0.3s
CSNT Castellina Chi  1.43 295 ⇑P    Pg    10 10 53.0 +0.1
PTRJ Pietraroja      1.87 144 S     Sn    10 11 21.0 -0.2
VBKN Vesuvio Bunker  2.29 153 ⇑P    Pn    10 11 05.0 +1.6
VBKN                         S     Sb    10 11 37.0 +1.7
CAVE Cavezzo         2.48 324 ⇑P    Pb    10 11 11.2 +1.0
NDIM Novi di Modena  2.54 323 P     Pn    10 11 06.0 -0.8
NDIM                         S     Sn    10 11 40.0 +2.2
```

ROM 27 10:10:49.4±0.1, 42°.997N±0°.004×13°.130E±0°.010, h9km, ML3.2/12, 12C-7D, Error ellipse: s-maj=0.8km s-min=0.4km az=69.0, Central Italy

```
Code Station Name    Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
FDMO Fiordimonte     0.05 322  ⇑P    Pg    10 10 51.3  0.0
FDMO                           S     Sg    10 10 52.6 -0.1
FDMO                           AML   AML
     comp=E,71550µm,0.2s
FDMO                           AML   AML
     comp=N,72950µm,0.3s
MC2  Monte Cornacci  0.10 152  P     Pg    10 10 52.1 +0.1
MC2                            S     Sg    10 10 54.0 +0.1
CSP1 Cessapalombo    0.11  30  P     Pg    10 10 52.5 +0.4
CSP1                           S     Sg    10 10 54.6 +0.5
CSP1                           AML   AML
     comp=N,29250µm,0.3s
CSP1                           AML   AML
     comp=E,22250µm,1.6s
T1216 Preci, Frazion 0.13 217  ⇑P    Pg    10 10 52.9 +0.5
T1216                          S     Sg    10 10 55.4 +0.9
T1245 Castelsantange 0.15 163  ⇑P    Pg    10 10 54.0 +1.3
T1245                          S     Sg    10 10 55.8 +0.8
T1245                          AML   AML
T1245                          AML   AML
     comp=N,97650µm,0.3s
T1245                          AML   AML
T1245                          AML   AML
     comp=N,95550µm,0.3s
GUMA Gualdo di Mace  0.16  66  ⇓P    Pg    10 10 54.1 +1.2
GUMA                           AML   AML
     comp=N,32300µm,0.7s
GUMA                           AML   AML
     comp=E,26100µm,0.3s
GUMA                           AML   AML
     comp=N,39200µm,0.6s
GUMA                           AML   AML
     comp=N,32350µm,0.7s
GUMA                           AML   AML
     comp=E,32000µm,0.7s
AM05 Amandola Campo  0.17  97  ⇓P    Pg    10 10 53.3 +0.4
AM05                           AML   AML
     comp=E,4500µm,0.2s
AM05                           AML   AML
     comp=N,4200µm,0.7s
CESI CESI - Serrava  0.17 273  ⇑P    Pg    10 10 53.7 +0.7
CESI                           AML   AML
     comp=N,34450µm,0.2s
CESI                           AML   AML
     comp=E,28300µm,1.6s
MMO1 Montemonaco     0.17 124  ⇑P    Pg    10 10 52.8 -0.3
MDAR Monte D'Aria    0.20   3  ⇑P    Pg    10 10 54.4 +0.9
SEF1 Sefro           0.20 318  ⇑P    Pg    10 10 54.3 +0.8
SEF1                           S     Sg    10 10 58.1 +1.7
SEF1                           AML   AML
     comp=E,11750µm,0.2s
SEF1                           AML   AML
     comp=N,12950µm,0.3s
SEF1                           AML   AML
     comp=E,11700µm,0.2s
GAG1 Gagliole        0.24 349  ⇑P    Pg    10 10 55.6 +1.2
GAG1                           AML   AML
     comp=E,8250µm,0.9s
GAG1                           AML   AML
     comp=N,9240µm,1.3s
GAG1                           AML   AML
     comp=N,9265µm,1.3s
GAG1                           AML   AML
     comp=E,8245µm,0.9s
GAG1                           AML   AML
     comp=N,9260µm,1.3s
T1241 Roccafluvione,     0.26 122  ⇓P    Pg    10 10 54.7  0.0
MNTP Montappone      0.29  61  ⇓P    Pb    10 10 56.8 +0.1
MNTP                           AML   AML
     comp=N,7040µm,0.5s
MNTP                           AML   AML
     comp=N,7045µm,0.5s
MNTP                           AML   AML
     comp=E,7875µm,1.0s
SNTG Esanatoglia     0.29 332  P     Pb    10 10 56.1 -0.8
SNTG                           AML   AML
     comp=N,2600µm,0.7s
SNTG                           AML   AML
     comp=E,2565µm,0.6s
SNTG                           AML   AML
     comp=N,2605µm,0.7s
SNTG                           AML   AML
     comp=E,2570µm,0.6s
SNTG                           AML   AML
     comp=E,2415µm,0.6s
SNTG                           AML   AML
     comp=N,2795µm,0.7s
T1217 Poggiodomo (PG 0.32 207  ⇑P    Pg    10 10 56.4 +0.6
T1217                          S     Sb    10 11 01.7 -0.9
EL6  Elcito          0.33 356  S     Sb    10 11 03.0 -0.1
T1204 Amatrice, Fraz 0.35 157  ⇑P    Pg    10 10 56.9 +0.5
T1204                          S     Sb    10 11 02.6 -0.9
T1243 Rocca Santa Ma 0.38 142  ⇓P    Pg    10 10 57.3 +0.4
ATCC AVT- Casa Cast  0.41 298  ⇓P    Pg    10 10 57.9 +0.5
ATCC                           AML   AML
     comp=N,3690µm,0.8s
ATCC                           AML   AML
     comp=E,5940µm,0.2s
RM33 Pellescritta (  0.49 173  S     Sb    10 11 08.0 +0.4
CAMP Campotosto      0.51 156  ⇑P    Pg    10 10 59.4 +0.2
CAMP                           AML   AML
     comp=N,979µm,0.6s
CAMP                           AML   AML
     comp=N,978µm,0.6s
CAMP                           AML   AML
     comp=E,987µm,0.2s
TERO Teramo          0.51 137  ⇑P    Pg    10 10 59.5 +0.2
TERO                           S     Sb    10 11 09.0 +0.9
MURB Monte Urbino    0.52 301  S     Sb    10 11 09.0 +0.7
ARVD Arcevia         0.52 345  S     Sb    10 11 10.0 +1.6
ATFO Monte Foce - G  0.55 312  ⇓P    Pb    10 11 00.8 -0.5
ATFO                           AML   AML
     comp=E,1080µm,0.8s
ATFO                           AML   AML
     comp=N,1112µm,0.5s
AOI  Ancona          0.65  32  S     Sn    10 11 15.0 -0.3
ATVO AVT- Monte Val  0.65 306  P     Pg    10 11 02.2 +0.2
MCIV Monte Civitell  1.09 259  P     Pg    10 11 09.7 -0.6
ABTA Abfaltersbach   3.78 354  ePn   Pn    10 11 50.2 +2.4
     comp=N,11nm,0.4s
SQTA Sankt Quirin    4.44 343  ePn   Pn    10 12 01.6 +4.6
     comp=N,4.4nm,0.3s
```

IDC 27 10:12:05.8±3.5, 54°.32N×86°.74E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=30.0km s-min=17.8km az=45.0, Southwestern Siberia

```
Code Station Name    Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
I46RU ZALESOVO INFRA 1.19 253  I                 10 19 00.0
     baz=71,slow=347,SNR=8.6
ZALV Zalesovo Beam   1.19 253  Pg    Pg    10 12 26.9 -1.7
     1.4nm,0.3s,baz=74,slow=17,SNR=12
ZALV                           Lg    Lg    10 12 45.3
     1.7nm,0.3s,baz=79,slow=28,SNR=8.1
KURBB Kurchatov Arra 6.23 237  Pn    Pn    10 13 40.1 +1.2
     0.1nm,0.3s,baz=53,slow=13,SNR=3.0
     1.2nm,0.2s
MKAR Makanchi Array  8.05 202  Pn    Pn    10 14 05.0 +1.1
     0.1nm,0.3s,baz=22,slow=13,SNR=6.3
     0.2nm,0.3s
```

*IDC **27** 10:12:48.0±1.0, 40°.57N×50°.65E, h0km, mb3.9/12, mbtmp4.0/17, ML3.6/4, MS3.2/2, Error ellipse: s-maj=23.3km s-min=12.7km az=173.0*
*TEH **27** 10:12:52.5, 40°.61N×50°.89E, h60km, ML4.0*
*AZER **27** 10:12:52.8±0.0, 40°.46N×50°.83E, h55km±1km, Error*

ellipse: s-maj=0.6km s-min=0.4km az=235.0
*MOS **27** 10:12:52.0±1.1, 40°.60N×50°.86E, h48km, mb4.2/7, Error ellipse: s-maj=7.7km s-min=5.2km az=32.1*
*NEIC **27** 10:12:54.0±2.6, 40°.68N±0°.08×50°.84E±0°.07, h41km±12km, mb4.1/13, Error ellipse: s-maj=12.0km s-min=6.7km az=162.0*
*NNC **27** 10:12:60.0±1.7, 40°.97N×52°.11E, h0km, mb4.3, Error ellipse: s-maj=15.9km s-min=5.3km az=79.0*
ISC 27 10:12:53.5±0.7, 40°.60N±0°.03×50°.93E±0°.04, h58km±8km, n196, σ2§04/241, mb4.1/21, 16C-8D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**0.62**	**253**	*e*Pn	**Pn**	**10 13 08.0**	**+1.3**
GALA	**Gala**	**0.62**	**253**	P	**Pn**	**10 13 08.0**	**+1.3**
	SNR=8.7						
GALA				S	**Sn**	**10 13 16.1**	**-0.2**
NDR	**Nardaran**	**0.72**	**269**	*e*Pn	**Pn**	**10 13 09.1**	**+1.3**
NDR	**Nardaran**	**0.72**	**269**	P	**Pn**	**10 13 09.1**	**+1.3**
	SNR=21						
NDR				S	**Sn**	**10 13 20.6**	**+2.3**
GOBA	**Gobu**	**0.93**	**258**	*e*Pn	**Pn**	**10 13 12.6**	**+2.0**
GOBA	**Gobu**	**0.93**	**258**	P	**Pn**	**10 13 12.5**	**+1.9**
	SNR=35						
GOBA				S	**Sn**	**10 13 25.8**	**+2.6**
GBS	**Qobustan**	**1.51**	**268**	*e*Pn	**Pn**	**10 13 19.5**	**+1.1**
GBS	**Qobustan**	**1.51**	**268**	Pg	**Pn**	**10 13 19.7**	**+1.3**
	SNR=18						
GBS				Sg	**Sn**	**10 13 40.3**	**+3.2**
ATGJ	**Altiaghaj**	**1.54**	**281**	*e*Pn	**Pn**	**10 13 18.9**	**+0.2**
ATGJ	**Altiaghaj**	**1.54**	**281**	Pn	**Pn**	**10 13 19.0**	**+0.2**
	SNR=21						
ATGJ				Sn	**Sn**	**10 13 37.7**	**0.0**
ALIB	**Äli-Bayra**	**1.60**	**247**	*e*Pn	**Pn**	**10 13 21.2**	**+1.7**
ALIB	**Äli-Bayra**	**1.60**	**247**	Pg	**Pn**	**10 13 21.4**	**+1.8**
	SNR=4.5						
ALIB				Sg	**Sn**	**10 13 43.2**	**+4.1**
SIZA	**Siyzn**	**1.61**	**288**	*e*Pn	**Pn**	**10 13 20.9**	**+1.2**
SIZA	**Siyzn**	**1.61**	**288**	Pn	**Pn**	**10 13 21.0**	**+1.2**
	SNR=18						
SIZA				Sn	**Sn**	**10 13 41.5**	**+1.9**
PQL	**Pirkuli**	**1.79**	**277**	*e*Pn	**Pn**	**10 13 22.5**	**+0.3**
PQL	**Pirkuli**	**1.79**	**277**	Pn	**Pn**	**10 13 22.5**	**+0.3**
	SNR=14						
PQL				Sn	**Sn**	**10 13 44.6**	**+0.7**
QUBA	**Quba, Azerbaij**	**1.99**	**293**	Pn	**Pn**	**10 13 25.9**	**+1.0**
	SNR=9.1						
QUBA				Sn	**Sn**	**10 13 48.9**	**+0.2**
QUB	**Quba**	**2.10**	**293**	*e*Pn	**Pn**	**10 13 25.9**	**-0.4**
KDMR	**Kurdemir**	**2.10**	**265**	Sn	**Sn**	**10 13 51.1**	**-0.3**
XNQ	**Khinaliq**	**2.19**	**286**	*e*Pn	**Pn**	**10 13 27.7**	**0.0**
XNQ	**Khinaliq**	**2.19**	**286**	Pn	**Pn**	**10 13 27.8**	**0.0**
	SNR=41						
XNQ				Sn	**Sn**	**10 13 52.8**	**-1.1**
QSAR	**Qusar**	**2.21**	**295**	*e*Pn	**Pn**	**10 13 28.6**	**+0.7**
QSAR	**Qusar**	**2.21**	**295**	Pn	**Pn**	**10 13 28.6**	**+0.7**
	SNR=67						
QSAR				Sn	**Sn**	**10 13 53.9**	**-0.3**
GLBA	**Clilabad**	**2.37**	**236**	*e*Pn	**Pn**	**10 13 30.0**	**0.0**
GLBA	**Clilabad**	**2.37**	**236**	Pn	**Pn**	**10 13 29.5**	**-0.5**
	SNR=14						
GLBA				Sn	**Sn**	**10 13 55.7**	**-2.3**
QBL	**Gabala**	**2.37**	**279**	*e*Pn	**Pn**	**10 13 29.5**	**-0.6**
QBL	**Gabala**	**2.37**	**279**	Pn	**Pn**	**10 13 29.5**	**-0.6**
	SNR=22						
QBL				Sn	**Sn**	**10 13 56.6**	**-1.4**
ZRD	**Zardab**	**2.50**	**264**	Pn	**Pn**	**10 13 31.2**	**-0.5**
ZRD				Sn	**Sn**	**10 14 00.3**	**-0.6**
LKRN	**Lenkeran, Azer**	**2.51**	**222**	Pn	**Pn**	**10 13 31.6**	**-0.4**
LKRN				Sn	**Sn**	**10 13 59.2**	**-2.1**
AKT	**Akhty**	**2.57**	**291**	⇓*i*P	**Pn**	**10 13 32.9**	**0.0**
AKT				*e*S	**Sn**	**10 14 01.2**	**-1.9**
AKT				pmax	pmax		
	comp=Z,131nm,0.4s						
AKT				smax	smax		
	comp=N,627nm,0.4s						
AKT				smax	smax		
	comp=E,695nm,0.4s						
AKT				smax	smax		
	comp=E,605nm,0.4s						
AKT				MLR	MLR		
	comp=Z,117nm,2.0s						
ASTR	**Astara**	**2.62**	**220**	Pn	**Pn**	**10 13 32.6**	**-0.8**
	SNR=4.6						
ASTR				Sn	**Sn**	**10 14 01.2**	**-2.9**
YRD	**Yardimli**	**2.67**	**232**	*e*Pn	**Pn**	**10 13 33.9**	**-0.3**
YRD	**Yardimli**	**2.67**	**232**	Pn	**Pn**	**10 13 33.1**	**-1.1**
	SNR=12						
YRD				Sn	**Sn**	**10 14 01.4**	**-4.1**
BLQ	**Beylaqan**	**2.73**	**252**	Pn	**Pn**	**10 13 35.1**	**+0.2**
BLQ				Sn	**Sn**	**10 14 02.9**	**-3.7**
LRK	**Lerik**	**2.79**	**227**	*e*Pn	**Pn**	**10 13 35.9**	**-0.1**
LRK	**Lerik**	**2.79**	**227**	Pn	**Pn**	**10 13 35.7**	**-0.2**
	SNR=11						
LRK				Sn	**Sn**	**10 14 05.2**	**-3.3**
BRDA	**Brd**	**2.88**	**265**	Pn	**Pn**	**10 13 36.8**	**-0.2**
BRDA				Sn	**Sn**	**10 14 10.6**	**+0.2**
SEKA	**Sheki**	**2.89**	**283**	*e*Pn	**Pn**	**10 13 36.9**	**-0.3**
SEKA	**Sheki**	**2.89**	**283**	P	**Pn**	**10 13 36.9**	**-0.3**
SEKA	**Sheki**	**2.89**	**283**	Pn	**Pn**	**10 13 37.0**	**-0.3**
	SNR=175						
SEKA				Sn	**Sn**	**10 14 09.3**	**-1.5**
MNGR	**Mingechevir, A**	**2.93**	**275**	Pn	**Pn**	**10 13 37.4**	**-0.1**
MNGR				Sn	**Sn**	**10 14 10.8**	**-0.8**
AGDM	**Agdam**	**2.96**	**262**	Pn	**Pn**	**10 13 36.7**	**-1.4**
	SNR=4.3						
AGDM				Sn	**Sn**	**10 14 09.7**	**-2.7**
QRD	**Qoradiz**	**2.99**	**249**	Sn	**Sn**	**10 14 09.4**	**-3.8**
ZKTA	**Zakatala**	**3.42**	**289**	P	**Pn**	**10 13 44.2**	**-0.1**
ZKTA	**Zakatala**	**3.42**	**289**	Pn	**Pn**	**10 13 44.2**	**-0.1**
	SNR=22						
ZKTA				Sn	**Sn**	**10 14 23.1**	**-0.5**
GNBR	**Gunib**	**3.47**	**302**	*i* P	**Pn**	**10 13 46.3**	**+1.2**
MAK	**Makhachkala**	**3.48**	**314**	*e*P	**Pn**	**10 13 43.8**	**-1.4**
MAK				*e*S	**Sn**	**10 14 25.8**	**+0.7**
MAK				pmax	pmax		
	comp=Z,136nm,0.3s						
MAK				smax	smax		
	comp=N,354nm,0.4s						
MAK				smax	smax		
	comp=N,404nm,0.5s						
MAK				MLR	MLR		
	comp=Z,199nm,8.0s						
GANJ	**Ganja**	**3.51**	**272**	*e*Pn	**Pn**	**10 13 43.6**	**-1.9**
GANJ	**Ganja**	**3.51**	**272**	P	**Pn**	**10 13 43.6**	**-1.9**
GANJ	**Ganja**	**3.51**	**272**	Pn	**Pn**	**10 13 43.7**	**-1.9**
	SNR=11						
GANJ				Sn	**Sn**	**10 14 22.6**	**-3.2**
LGD	**Lagodekhi**	**3.74**	**291**	P	**Pn**	**10 13 48.8**	**0.0**
LGD				S	**Sn**	**10 14 29.1**	**-2.5**
LGD	**Lagodekhi**	**3.74**	**291**	P	**Pn**	**10 13 48.8**	**0.0**
LGD				S	**Sn**	**10 14 29.1**	**-2.5**
ISRB	**Sarab**	**3.75**	**223**	*e*Pn	**Pn**	**10 13 49.5**	**+0.4**
DBC	**Dubki**	**3.90**	**310**	*i* P	**Pn**	**10 13 52.1**	**+1.1**
GDB	**GEDABAY**	**3.94**	**273**	Pn	**Pn**	**10 13 49.7**	**-1.9**
	SNR=17						
GDB				Sn	**Sn**	**10 14 31.6**	**-5.0**
JIR1	**Jirandeh**	**3.98**	**193**	*e*Pn	**Pn**	**10 13 50.9**	**-1.3**
KLST	**Kelardasht - M**	**4.08**	**179**	*e*Pn	**Pn**	**10 13 53.4**	**-0.2**
ORD	**Ordubad**	**4.15**	**248**	Pn	**Pn**	**10 13 54.3**	**-0.2**
	SNR=7.4						
ORD				Sn	**Sn**	**10 14 38.1**	**-3.7**
QZX	**Qazax, Azerbai**	**4.24**	**278**	Pn	**Pn**	**10 13 54.2**	**-1.4**
	SNR=28						
QZX				Sn	**Sn**	**10 14 41.0**	**-2.8**
IGZV	**Ghazvin**	**4.24**	**188**	*e*Pn	**Pn**	**10 13 55.9**	**0.0**
IBST	**Bostanabad**	**4.27**	**229**	*e*Pn	**Pn**	**10 13 55.8**	**-0.4**
IBST				*e*		10 14 45.9	
	comp=Z,690nm,0.3s						
DGRG	**David-gareji**	**4.29**	**283**	P	**Pn**	**10 13 55.1**	**-1.2**
DGRG				S	**Sn**	**10 14 42.4**	**-2.7**
DGRG	**David-gareji**	**4.29**	**283**	P	**Pn**	**10 13 55.1**	**-1.2**
DGRG				S	**Sn**	**10 14 42.3**	**-2.7**
DVE	**Vedeno**	**4.29**	**305**	*i* P	**Pn**	**10 13 58.5**	**+2.1**
SBZ	**Shahbuz**	**4.30**	**256**	Pn	**Pn**	**10 13 56.1**	**-0.4**
SBZ				Sn	**Sn**	**10 14 43.8**	**-1.6**
QSDN	**Sirdan**	**4.31**	**199**	*e*Pn	**Pn**	**10 13 55.8**	**-1.0**
IHSH	**Hashtrud**	**4.36**	**222**	*e*Pn	**Pn**	**10 13 56.9**	**-0.6**
IHSH				*e*		10 14 51.6	
	comp=Z,3μm,0.3s						
ITBZ	**Tabriz**	**4.39**	**239**	*e*Pn	**Pn**	**10 13 57.9**	**+0.1**
ITBZ				*e*		10 14 46.0	
	comp=Z,830nm,0.3s						
NAX	**Nakhchivan**	**4.41**	**253**	Sn	**Sn**	**10 14 46.5**	**-1.7**
IMRD	**Marand**	**4.45**	**247**	*e*Pn	**Pn**	**10 13 58.6**	**0.0**
IMRD				*e*		10 14 51.3	
	comp=Z,3μm,0.6s						
IPRN	**Peran**	**4.49**	**165**	*e*Pn	**Pn**	**10 13 59.5**	**+0.4**
IGLO	**Ghaloghah**	**4.68**	**150**	*e*Pn	**Pn**	**10 14 02.7**	**+0.9**
ISHB	**Shabestar**	**4.72**	**242**	*e*Pn	**Pn**	**10 14 00.8**	**-1.5**
ISHB				*e*		10 14 56.8	
	comp=Z,461nm,0.4s						
HYR	**Heyderabad**	**4.74**	**261**	Sn	**Sn**	**10 14 55.1**	**-1.0**
GNI	**Garni**	**4.75**	**267**	Pn	**Pn**	**10 14 01.1**	**-1.5**
GNI	**Garni**	**4.75**	**267**	*e*P	**Pn**	**10 14 03.1**	**+0.4**
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
SHTL	**Shatili**	**4.79**	**297**	P	**Pn**	**10 14 03.3**	**0.0**
SHTL	**Shatili**	**4.79**	**297**	P	**Pn**	**10 14 03.3**	**0.0**
IMND	**Minoodasht**	**4.83**	**132**	*e*Pn	**Pn**	**10 14 05.3**	**+1.6**
IMHD	**Mahdasht**	**4.91**	**182**	*e*Pn	**Pn**	**10 14 06.1**	**+1.2**
MRVT	**Maraveh tapeh**	**4.97**	**125**	*e*Pn	**Pn**	**10 14 07.7**	**+2.0**
MRVT				*e*		10 15 08.0	
	comp=Z,99nm,0.2s						
QABG	**Abgarm-Qazvin**	**5.00**	**193**	*e*	**Sn**	**10 15 02.5**	**-0.2**
	comp=Z,2μm,0.6s						
IDMV	**Damavand**	**5.09**	**170**	*e*Pn	**Pn**	**10 14 09.5**	**+2.0**
ISHM	**Shahmirzad**	**5.13**	**158**	*e*Pn	**Pn**	**10 14 10.1**	**+2.0**
PNSH	**Pansheti**	**5.15**	**295**	P	**Pn**	**10 14 08.0**	**-0.2**
PNSH	**Pansheti**	**5.15**	**295**	P	**Pn**	**10 14 08.0**	**-0.2**
IFIR	**Firoozkooh**	**5.15**	**163**	*e*Pn	**Pn**	**10 14 10.5**	**+2.1**
IHSB	**Hasanabad**	**5.16**	**177**	*e*Pn	**Pn**	**10 14 10.0**	**+1.7**
IRAZ	**Razeghan**	**5.24**	**189**	*e*Pn	**Pn**	**10 14 10.0**	**+0.4**
ILAS	**Lasjerd**	**5.45**	**162**	*e*Pn	**Pn**	**10 14 13.4**	**+1.0**
IVRN	**Varamin**	**5.63**	**173**	*e*Pn	**Pn**	**10 14 16.0**	**+1.3**
IANJ	**Anjilo**	**5.64**	**154**	*e*Pn	**Pn**	**10 14 17.2**	**+2.2**
ALIG	**Mtskhetisjvari**	**5.68**	**288**	P	**Pn**	**10 14 14.3**	**-1.1**
ALIG				S	**Sn**	**10 15 15.4**	**-3.8**
ALIG	**Mtskhetisjvari**	**5.68**	**288**	P	**Pn**	**10 14 14.3**	**-1.1**
ALIG				S	**Sn**	**10 15 15.4**	**-3.8**
ZEI	**Tsey**	**5.70**	**295**	*e*P	Pn	10 14 23.5	+7.8
HAGD	**Aghdareh**	**5.94**	**194**	*e*Pn	**Pn**	**10 14 19.4**	**+0.3**
ONI	**Oni**	**5.95**	**292**	Pn	**Pn**	**10 14 19.2**	**+0.2**
ONI	**Oni**	**5.95**	**292**	P	**Pn**	**10 14 19.2**	**+0.2**
GEYT	**Alibeck**	**6.18**	**113**	Pn	**Pn**	**10 14 23.7**	**+1.5**
	comp=Z,1.6nm,0.3s,baz=35,slow=29,SNR=23						
GEYT				Sn	**Sn**	**10 15 31.3**	**-0.2**
	comp=Z,7.3nm,0.3s,baz=306,slow=26,SNR=5.7						
	comp=Z,2.8nm,0.3s						
GYA0	**ALIBECK ARRAY**	**6.18**	**113**	P	**Pn**	**10 14 23.4**	**+1.2**
GYA0						10 15 29.1	
GYA0B	**ALIBECK ARRAY**	**6.18**	**113**		**Pn**	**10 14 23.7**	**+1.4**
GYA0B	**ALIBECK ARRAY**	**6.18**	**113**	⇓P	**Pn**	**10 14 23.5**	**+1.2**
GYA0B				⇑S	**Sn**	**10 15 29.6**	**-2.0**
ISFB	**Sefidab**	**6.32**	**170**	*e*Pn	**Pn**	**10 14 25.7**	**+1.5**
KRSH	**Karshahi**	**6.69**	**171**	*e*Pn	**Pn**	**10 14 31.7**	**+2.4**
KBZ	**Khabaz**	**6.74**	**300**	Pn	**Pn**	**10 14 29.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=66,slow=5.2,SNR=12						
KBZ				Sn	**Sn**	**10 15 38.4**	**-6.6**
	comp=Z,1.0nm,0.3s,baz=295,slow=14,SNR=1.8						
	comp=Z,2.1nm,0.4s						
KBZ	**Khabaz**	**6.74**	**300**	*i* P	**Pn**	**10 14 30.3**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IEMG	**Emamgholi**	**6.80**	**115**	*e*Pn	**Pn**	**10 14 32.4**	**+1.4**
IEMG				*e*		10 15 54.5	
	comp=Z,897nm,0.2s						
SHA1	**Shidzhatmaz**	**6.90**	**300**	*i* P	**Pn**	**10 14 31.3**	**-0.9**
KIV	**Kislovodsk**	**6.97**	**301**	Pn	**Pn**	**10 14 32.9**	**-0.1**
KIV	**Kislovodsk**	**6.97**	**301**	*e*P	**Pn**	**10 14 32.1**	**-1.0**
KIV				*e*S	**Sn**	**10 15 50.6**	**-0.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
IKRD	**Kardeh**	**7.72**	**117**	*e*Pn	**Pn**	**10 14 46.6**	**+3.1**
TNSJ	**Nastanj**	**8.02**	**144**	*e*Pn	**Pn**	**10 14 49.8**	**+2.3**
IMYA	**Miami**	**8.36**	**118**	*e*Pn	**Pn**	**10 14 53.6**	**+1.5**
TKDS	**Koohdasht(Taba**	**8.55**	**143**	*e*Pn	**Pn**	**10 14 57.0**	**+2.3**
JRKH	**Jarkhoshk**	**8.76**	**119**	*e*Pn	**Pn**	**10 14 59.5**	**+1.8**
TPRV	**Parvadeh(Tabas**	**8.85**	**147**	*e*Pn	**Pn**	**10 15 00.9**	**+2.1**
ITEG	**Tejag**	**9.92**	**138**	*e*Pn	**Pn**	**10 15 15.7**	**+2.2**
AB31	**Akbulak array**	**10.75**	**33**	*e*Pn	**Pn**	**10 15 24.0**	**-0.6**
AB31	**Akbulak array**	**10.75**	**33**	P	**Pn**	**10 15 24.2**	**-0.4**
AB31						10 17 20.1	
AB31	**Akbulak array**	**10.75**	**33**	⇓P	**Pn**	**10 15 23.6**	**-1.0**
	comp=Z,2.2nm,0.3s,baz=210,slow=12,SNR=80						
AB31				⇑S	**Sn**	**10 17 18.3**	**-5.0**
	comp=Z,4.4nm,0.2s,baz=216,slow=20,SNR=15						
ABKAR	**Akbulak array**	**10.75**	**33**	Pn	**Pn**	**10 15 23.6**	**-1.0**
ABKAR	**Akbulak array**	**10.75**	**33**		**Pn**	**10 15 24.6**	**0.0**
BELG	**Belogornoye**	**12.02**	**350**	LR	LR	10 21 34.6	
	comp=Z,131nm,21.8s,baz=178,slow=44						
BRTR	**Keskin Array B**	**13.26**	**272**	Pn	**Pn**	**10 15 58.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=90,slow=15,SNR=2.9						
	comp=Z,0.8nm,0.7s						
VORR	**Voronezh**	**13.71**	**328**	*e*P	**Pn**	**10 16 00.3**	**-4.7**
VORR				pmax	pmax		
	comp=Z,90nm,0.4s						
KK31	**Karatay Array**	**14.81**	**74**		**Pn**	**10 16 20.5**	**+1.0**
KK31	**Karatay Array**	**14.81**	**74**	P	**Pn**	**10 16 20.5**	**+1.0**
KK31	**Karatay Array**	**14.81**	**74**	⇑P	**Pn**	**10 16 19.3**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=309,slow=9.9,SNR=28						
KKAR	**Karatay Array**	**14.81**	**74**	Pn	**Pn**	**10 16 20.6**	**+1.1**
KKAR	**Karatay Array**	**14.81**	**74**		**Pn**	**10 16 20.4**	**+0.9**
KKAR	**Karatay Array**	**14.81**	**74**	P	**Pn**	**10 16 20.6**	**+1.1**
ARU	**Arti**	**16.61**	**15**	Sn	Sn	10 19 33.6	-12
	baz=271,slow=8.1,SNR=1.5						
ARU	**Arti**	**16.61**	**15**	P	**Pn**	**10 16 42.7**	**+0.4**
ARU				IAmb	IAmb	10 17 07.0	
	comp=Z,6.6nm,0.6s						
ARU	**Arti**	**16.61**	**15**	P	**Pn**	**10 16 41.1**	**-1.2**
ARU				S	**Sn**	**10 19 45.5**	**-0.2**
OTUK	**Ortayu**	**17.06**	**56**	P	**P**	**10 16 48.7**	**-0.3**
OTUK						10 19 48.2	
OTUK	**Ortayu**	**17.06**	**56**	⇑P	**P**	**10 16 48.7**	**-0.3**
	comp=Z,3.4nm,0.5s						
OTUK				⇓S	**Sn**	**10 19 47.0**	**-10**
	comp=Z,7.8nm,0.6s						
RAYN	**Ar Rayn**	**17.63**	**197**	Pn	**Pn**	**10 16 54.1**	**-0.9**
RAYN	**Ar Rayn**	**17.63**	**197**	P	**Pn**	**10 16 54.2**	**-0.9**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**18.11**	**40**	P	**Pn**	**10 17 02.4**	**+1.6**
BRVK	**Borovoye**	**18.11**	**40**	P	**Pn**	**10 17 01.9**	**+1.2**
BRVK						10 20 15.1	
BRVK	**Borovoye**	**18.11**	**40**	⇓P	**Pn**	**10 17 02.0**	**+1.2**
	comp=Z,4.9nm,0.7s						
BRVK				⇓S	**Sn**	**10 20 15.6**	**-6.3**
	comp=Z,3.2nm,0.6s						
BVA0	**Borovoye Array**	**18.14**	**40**	*e*P	**Pn**	**10 17 02.7**	**+1.5**
BVA0				*i*		10 20 16.0	
BVA0	**Borovoye Array**	**18.14**	**40**	⇓P	**Pn**	**10 17 03.0**	**+1.8**
	comp=Z,5.6nm,0.7s,baz=232,slow=15,SNR=17						
BVA0				⇑S	**Sn**	**10 20 16.1**	**-6.7**
	comp=Z,12nm,1.2s,baz=236,slow=24,SNR=12						
BVAR	**Borovoye Array**	**18.14**	**40**	P	**Pn**	**10 17 03.0**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=231,slow=14,SNR=12						
BVAR				S	**Sn**	**10 20 16.3**	**-6.5**
	comp=Z,2.6nm,0.5s,baz=232,slow=24,SNR=7.1						
BVAR				LR	LR	10 25 42.9	
	comp=Z,77nm,19.4s,baz=259,slow=42						
	comp=Z,2.1nm,0.4s						
BVAR	**Borovoye Array**	**18.14**	**40**	P	**Pn**	**10 17 02.0**	**+0.8**
BVAR				SN	**Sn**	**10 20 16.0**	**-6.8**
AKASG	**Malin Array Be**	**18.16**	**311**	P	**P**	**10 16 59.3**	**-1.8**
	comp=Z,13nm,0.4s,baz=119,slow=11,SNR=62						
AKASG	**Malin Array Be**	**18.16**	**311**	P	**P**	**10 16 59.4**	**-1.6**
AKASG	**Malin Array Be**	**18.16**	**311**	P	**P**	**10 16 59.4**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,46nm,1.2s						
AKBB	**Malin Array Si**	**18.16**	**311**	P	**P**	**10 17 00.4**	**-0.7**
AKBB	**Malin Array Si**	**18.16**	**311**	*e*P	**Pn**	**10 17 01.4**	**0.0**
AKBB				pmax	pmax		
	comp=Z,18nm,0.3s						
BISRR	**Bisoca**	**18.34**	**294**	⇑P	**P**	**10 17 03.4**	**+0.2**
VOIR		**19.49**	**293**	⇑P	**P**	**10 17 16.1**	**+0.3**
VOIR		**19.49**	**293**	P	**P**	**10 17 16.1**	**+0.3**
BURAR	**Bucovina Array**	**19.69**	**299**	⇓P	**P**	**10 17 18.1**	**+0.1**
BURAR	**Bucovina Array**	**19.69**	**299**	P	**P**	**10 17 18.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**19.71**	**300**	P	**P**	**10 17 17.7**	**-0.5**
VTS	**Vitosha**	**20.77**	**285**	⇑P	**P**	**10 17 30.0**	**+0.2**
VTS	**Vitosha**	**20.77**	**285**	P	**P**	**10 17 30.3**	**+0.5**
VTS				IAmb	IAmb	10 17 31.1	
	comp=Z,5.5nm,0.6s						
VTS	**Vitosha**	**20.77**	**285**	P	**P**	**10 17 30.3**	**+0.5**
VTS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GZR	**Gura Zlata**	**21.09**	**292**	⇑P	**P**	**10 17 33.0**	**0.0**
BLKB	**Belogradchik**	**21.14**	**288**	⇑P	**P**	**10 17 33.9**	**+0.4**
IDI	**Anoyia**	**21.17**	**264**	P	**P**	**10 17 33.3**	**-0.7**
	comp=Z,3.6nm,0.3s,baz=9.5,slow=4.4,SNR=12						
	comp=Z,3.6nm,0.3s						
IDI	**Anoyia**	**21.17**	**264**	P	**P**	**10 17 34.7**	**+0.8**
IDI				IAmb	IAmb	10 18 04.9	
	comp=Z,14nm,1.1s						
KLMR	**Klimovskoe**	**21.47**	**345**	*e*P	**P**	**10 17 34.7**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KLMR	**Klimovskoe**	**21.47**	**345**	*e*P	**P**	**10 17 34.7**	**-2.1**
KLMR				AMP		10 17 43.5	
	comp=Z,18nm,1.5s						
KURBB	**Kurchatov Arra**	**21.64**	**53**	P	**P**	**10 17 42.0**	**+3.3**
	comp=Z,1.3nm,0.6s,baz=256,slow=11,SNR=6.4						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**21.72**	**53**	P	**P**	**10 17 42.7**	**+3.1**
KURK				IAmb	IAmb	10 18 01.2	
	comp=Z,6.2nm,0.8s						
KURK	**Kurchatov**	**21.72**	**53**	P	**P**	**10 17 42.7**	**+3.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BZS	**Buzias**	**21.91**	**293**	⇑P	**P**	**10 17 42.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**22.40**	**302**	*e*P	**P**	**10 17 50.2**	**+3.2**
MAKZ	**Makanchi**	**23.19**	**64**	P	**P**	**10 17 59.3**	**+4.2**
MAKZ				IAmb	IAmb	10 18 00.2	
	comp=Z,3.7nm,0.5s						
MAKZ	**Makanchi**	**23.19**	**64**	P	**P**	**10 17 59.3**	**+4.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MK31	**Makanchi Array**	**23.41**	**64**	P	**P**	**10 18 00.1**	**+2.9**
MK31				IAmb	IAmb	10 18 17.9	
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**23.41**	**64**	P	**P**	**10 18 00.1**	**+2.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**23.41**	**64**	P	**P**	**10 18 00.8**	**+3.6**
	comp=Z,1.8nm,0.5s,baz=262,slow=8.7,SNR=24						
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**23.41**	**64**	P	**P**	**10 18 01.0**	**+3.8**
MKAR	**Makanchi Array**	**23.41**	**64**	P	**P**	**10 18 01.0**	**+3.8**
MODS	**Modra-Piesok**	**25.08**	**299**	*e*P	**P**	**10 18 14.9**	**+2.5**
MODS				pmax	pmax		
	comp=Z,21nm,0.9s						
FIA1	**FINESS Array S**	**25.78**	**332**	P	**P**	**10 18 19.3**	**+0.7**
FINES	**FINESS Array B**	**25.78**	**332**	P	**P**	**10 18 19.2**	**+0.6**
	comp=Z,2.9nm,0.4s,baz=147,slow=11,SNR=24						
	comp=Z,2.9nm,0.4s						
FINES	**FINESS Array B**	**25.78**	**332**	P	**P**	**10 18 19.4**	**+0.9**
FINES	**FINESS Array B**	**25.78**	**332**	P	**P**	**10 18 19.4**	**+0.9**
TIP	**Timpagrande**	**26.16**	**278**	P	**P**	**10 18 24.3**	**+1.9**
TIP				IAmb	IAmb	10 18 39.2	
	comp=Z,16nm,1.3s						
ZALV	**Zalesovo Beam**	**26.30**	**48**	P	**P**	**10 18 26.2**	**+2.8**
	comp=Z,0.7nm,0.4s,baz=279,slow=8.9,SNR=3.7						
	comp=Z,0.7nm,0.4s						
GERES	**GERESS Array B**	**27.48**	**300**	P	**P**	**10 18 35.1**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=90,slow=12,SNR=5.0						
	comp=Z,0.5nm,0.4s						
NB2	**NORSAR Subarra**	**31.64**	**324**	P	**P**	**10 19 10.9**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=116,slow=8.6						
NOA	**NORSAR Array B**	**31.64**	**324**	P	**P**	**10 19 11

ZEI				*e*S	**Sg**	**10 26 05.3**	**-0.5**
LACR	**Lac**	**1.57**	**12**	*i* Pg	**Pn**	**10 25 46.0**	**+0.7**
LACR				*e*Sg	**Sn**	**10 26 06.1**	**+0.6**
LACR	**Lac**	**1.57**	**12**	*e*PG	**Pb**	**10 25 46.4**	**-0.2**
LACR				*e*S	**Sb**	**10 26 07.3**	**+0.9**
DIGR	**Digorskoe uzhe**	**1.62**	**353**	*e*Pg	**Pg**	**10 25 49.0**	**+0.3**
DIGR				*e*Sg	**Sg**	**10 26 09.7**	**0.0**
DIGR	**Digorskoe uzhe**	**1.62**	**353**	*e*PN	**Pb**	**10 25 47.7**	**+0.2**
DIGR				*e*S	**Sg**	**10 26 09.2**	**-0.5**
DIGR				pmax	pmax		
	comp=Z,14nm,0.3s						
DDEM	**Demirkent**	**1.64**	**257**	P	**Pb**	**10 25 47.0**	**-0.8**
DDEM				S	**Sg**	**10 26 09.4**	**-1.1**
DDEM				*i* AML	AML	10 26 10.0	
	comp=Z,279nm,0.3s						
DDEM				*i* AML	AML	10 26 12.0	
	comp=Z,398nm,0.3s						
DBOC	**Borcka**	**1.65**	**273**	P	**Pb**	**10 25 47.8**	**-0.1**
DBOC				S	**Sg**	**10 26 10.1**	**-0.7**
DBOC				*i* AML	AML	10 26 12.0	
	comp=Z,59nm,0.3s						
BATM	**Batumi**	**1.66**	**282**	P	**Pb**	**10 25 48.0**	**-0.1**
BATM				S	**Sg**	**10 26 09.9**	**-1.0**
BATM	**Batumi**	**1.66**	**282**	*e*PN	**Pb**	**10 25 47.9**	**-0.1**
DBAD	**Bademkaya**	**1.66**	**261**	P	**Pb**	**10 25 47.6**	**-0.5**
DBAD				S	**Sg**	**10 26 10.6**	**-0.3**
DBAD				*i* AML	AML	10 26 11.0	
	comp=Z,145nm,0.7s						
DBAD				*i* AML	AML	10 26 11.0	
	comp=Z,80nm,0.3s						
SHTL	**Shatili**	**1.67**	**35**	P	**Pn**	**10 25 47.6**	**+0.8**
SHTL				S	**Sb**	**10 26 09.2**	**-0.1**
SHTL	**Shatili**	**1.67**	**35**	PN	**Pn**	**10 25 47.5**	**+0.8**
SHTL				S	**Sb**	**10 26 09.2**	**-0.1**
KORR	**Kora**	**1.80**	**5**	*e*Pg	**Pg**	**10 25 51.4**	**-0.7**
KORR				*e*Sg	**Sg**	**10 26 16.5**	**+1.0**
KORR	**Kora**	**1.80**	**5**	*e*PN	**Pg**	**10 25 51.5**	**-0.7**
KORR				*e*S	**Sg**	**10 26 16.5**	**+1.0**
VLKR	**Vladikavkaz**	**1.85**	**19**	*e*Pg	**Pg**	**10 25 52.9**	**-0.3**
VLKR				*e*Sg	**Sg**	**10 26 18.0**	**+0.7**
VLKR	**Vladikavkaz**	**1.85**	**19**	*e*PN	**Pg**	**10 25 52.9**	**-0.3**
VLKR				*e*S	**Sg**	**10 26 18.1**	**+0.8**
LGD	**Lagodekhi**	**1.87**	**72**	P	**Pb**	**10 25 50.8**	**-0.9**
LGD				S	**Sg**	**10 26 16.6**	**-1.2**
LGD	**Lagodekhi**	**1.87**	**72**	PN	**Pb**	**10 25 50.7**	**-0.9**
LGD				S	**Sg**	**10 26 16.5**	**-1.2**
ARNR	**Ardon**	**1.91**	**9**	*e*Pg	**Pg**	**10 25 53.7**	**-0.6**
ARNR				*e*Sg	**Sg**	**10 26 19.2**	**+0.1**
ARNR	**Ardon**	**1.91**	**9**	*e*PN	**Pg**	**10 25 53.4**	**-0.9**
ARNR				*e*S	**Sg**	**10 26 19.4**	**+0.3**
KMGR	**Komgaron**	**1.92**	**23**	*e*Pg	**Pg**	**10 25 54.0**	**-0.4**
KMGR				*e*Sg	**Sg**	**10 26 18.7**	**-0.5**
KMGR	**Komgaron**	**1.92**	**23**	*e*PN	**Pb**	**10 25 53.1**	**+0.6**
KMGR				*e*S	**Sg**	**10 26 19.8**	**+0.6**
GANJ	**Ganja**	**1.98**	**108**	PN	**Pb**	**10 25 52.3**	**-1.2**
LSNR	**Lesken**	**1.98**	**359**	*e*Pg	**Pb**	**10 25 54.0**	**+0.3**
LSNR				*e*Sg	**Sg**	**10 26 20.7**	**-0.7**
LSNR	**Lesken**	**1.98**	**359**	*e*PN	**Pb**	**10 25 53.8**	**+0.2**
LSNR				*e*S	**Sg**	**10 26 22.2**	**+0.8**
LSNR				pmax	pmax		
	comp=Z,19nm,0.5s						
STDR	**Stavd-Durt**	**2.08**	**4**	*e*Pg	**Pg**	**10 25 56.4**	**-1.1**
STDR				*e*Sg	**Sg**	**10 26 23.3**	**-1.1**
STDR	**Stavd-Durt**	**2.08**	**4**	*e*PN	**Pg**	**10 25 57.5**	**0.0**
STDR				*e*S	**Sg**	**10 26 26.1**	**+1.6**
ZKTA	**Zakatala**	**2.11**	**80**	PN	**Pb**	**10 25 54.6**	**-1.1**
NEY	**Neytrino**	**2.13**	**337**	*e*Pg	**Pb**	**10 25 56.7**	**+0.5**
NEY				*e*Sg	**Sb**	**10 26 23.3**	**+0.7**
NEY	**Neytrino**	**2.13**	**337**	*e*PN	**Pb**	**10 25 56.3**	**+0.1**
NEY				*e*S	**Sb**	**10 26 23.3**	**+0.7**
BTKR	**Batakoyurt**	**2.14**	**13**	*i* Pg	**Pb**	**10 25 57.3**	**+1.0**
BTKR				*e*Sg	**Sb**	**10 26 23.1**	**+0.4**
NCK	**Nalchik**	**2.21**	**355**	*e*PN	**Pb**	**10 25 56.6**	**-0.9**
BTLR	**Botlikh**	**2.23**	**51**	*e*Pg	**Pb**	**10 25 58.3**	**+0.5**
BTLR				*i* Sg	**Sb**	**10 26 26.3**	**+0.9**
BTLR	**Botlikh**	**2.23**	**51**	*e*PN	**Pb**	**10 25 57.2**	**-0.7**
CHOM	**Cayeli-Rize**	**2.34**	**266**	PN	**Pn**	**10 25 57.7**	**+1.8**
CHOM				SN	**Sb**	**10 26 26.9**	**-1.8**
DVE	**Vedeno**	**2.37**	**45**	*e*Pn	**Pb**	**10 26 01.0**	**+0.8**
DVE				*e*Sn	**Sb**	**10 26 30.1**	**+0.7**
GROC	**Groznyy**	**2.39**	**36**	*e*Pn	**Pg**	**10 26 03.6**	**+0.2**
GROC				*i* Sn	**Sg**	**10 26 33.4**	**-0.9**
GROC	**Groznyy**	**2.39**	**36**	*e*PN	**Pb**	**10 25 59.5**	**-1.0**
GROC				*e*S	**Sg**	**10 26 33.5**	**-0.9**
GROC				pmax	pmax		
	comp=Z,33nm,0.3s						
GROC				smax	smax		
	comp=N,45nm,0.3s						
GROC				smax	smax		
	comp=E,119nm,0.7s						
GROC				smax	smax		
	comp=E,109nm,0.6s						
GROC				MLR	MLR		
	comp=Z,64nm,2.0s						
XNZR	**Khunzakh**	**2.46**	**59**	*e*Pn	**Pb**	**10 26 02.6**	**+0.8**
XNZR				*i* Sn	**Sb**	**10 26 33.3**	**+1.1**
SEKA	**Sheki**	**2.52**	**91**	PN	**Pn**	**10 26 00.0**	**+1.6**
KBZ	**Khabaz**	**2.54**	**344**	*e*Pn	**Pb**	**10 26 02.7**	**-0.3**
KBZ				*e*Sn	**Sb**	**10 26 34.1**	**+0.1**
GNBR	**Gunib**	**2.57**	**64**	*e*Pn	**Pb**	**10 26 04.6**	**+1.0**
GNBR				*i* Sn	**Sb**	**10 26 35.3**	**+0.2**
DOMR	**Dombai**	**2.59**	**321**	*i* PN	**Pn**	**10 26 01.2**	**+1.7**
SHA1	**Shidzhatmaz**	**2.60**	**340**	*i* Pn	**Pb**	**10 26 04.2**	**-0.1**
SHA1				*e*Sn	**Sb**	**10 26 35.3**	**-0.9**
KIV	**Kislovodsk**	**2.80**	**342**	*e*Pn	**Pg**	**10 26 11.4**	**+0.2**
KIV				*i* Sn	**Sb**	**10 26 44.6**	**+2.8**
KIV	**Kislovodsk**	**2.80**	**342**	*e*PN	**Pb**	**10 26 05.2**	**-2.3**
KIV				*e*S	**Sb**	**10 26 40.4**	**-1.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKT	**Akhty**	**2.92**	**85**	*e*Pn	**Pb**	**10 26 08.6**	**-1.0**
AKT				*e*Sn	**Sb**	**10 26 44.2**	**-1.1**
GUZR	**Guzeripl'**	**3.86**	**316**	*e*Pn	**Pb**	**10 26 21.4**	**-4.3**

ROM 27 10:57:04.6±0.1, 42°.868N±0'.005×13°.061E±0'.007,
h10km, ML2.5/15, 8C-6D, Error ellipse: s-maj=0.7km
s-min=0.5km az=227.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**307**	P		Pg	10 57 06.5	-0.1
T1216				S		Sg	10 57 08.5	+0.4
T1216				AML		AML		
	comp=E,9520μm,0.5s							
T1216				AML		AML		
	comp=N,11450μm,0.3s							
NRCA	**Norcia**	**0.05**	**131**	P		Pg	10 57 06.7	-0.1
NRCA				S		Sg	10 57 08.9	+0.6
T1245	**Castelsantange**	**0.09**	**97**	P		Pg	10 57 07.7	+0.4
T1245				S		Sg	10 57 09.8	+0.6
T1245				AML		AML		
	comp=E,4075μm,0.4s							
T1245				AML		AML		
	comp=N,5255μm,0.7s							
T1245				AML		AML		
	comp=E,4085μm,0.4s							
T1245				AML		AML		
	comp=N,5460μm,0.7s							
T1245				AML		AML		
	comp=N,5255μm,0.8s							
T1245				AML		AML		
	comp=E,4080μm,0.4s							
T1245				AML		AML		
	comp=N,25800μm,0.2s							
T1245				AML		AML		
	comp=N,25700μm,0.6s							
T1245				AML		AML		
	comp=E,26450μm,0.2s							
T1245				AML		AML		
	comp=E,26800μm,0.2s							
FEMA	**Monte Fema**	**0.10**	**355**	P		Pg	10 57 07.5	+0.2
FEMA				S		Sg	10 57 09.9	+0.6
FEMA				AML		AML		
	comp=E,14000μm,0.5s							
FEMA				AML		AML		
	comp=N,8740μm,0.4s							
FEMA				AML		AML		
	comp=E,28650μm,0.3s							
FEMA				AML		AML		
	comp=N,36350μm,0.3s							
MC2	**Monte Cornacci**	**0.10**	**65**	P		Pg	10 57 07.6	+0.1
MC2				S		Sg	10 57 10.1	+0.5
T1215	**Vallo di Nera,**	**0.16**	**245**	⇑P		Pg	10 57 07.3	-0.8
T1215				AML		AML		
	comp=E,406μm,0.4s							
T1215				AML		AML		
	comp=E,406μm,0.5s							
T1215				AML		AML		
	comp=N,658μm,0.2s							
T1215				AML		AML		
	comp=E,1275μm,0.4s							
T1215				AML		AML		
	comp=N,1340μm,0.7s							
FDMO	**Fiordimonte**	**0.17**	**7**	P		Pb	10 57 09.6	-0.3
FDMO				S		Sg	10 57 11.6	+0.6
FDMO				AML		AML		
	comp=E,9225μm,0.1s							
FDMO				AML		AML		
	comp=N,6880μm,0.7s							
FDMO				AML		AML		
	comp=N,7530μm,0.3s							
CESI	**CESI - Serrava**	**0.18**	**320**	P		Pg	10 57 09.0	+0.5
CESI				S		Sg	10 57 12.2	+1.0
CESI				AML		AML		
	comp=E,3840μm,0.3s							
CESI				AML		AML		
	comp=E,4520μm,0.5s							
CESI				AML		AML		
	comp=N,7585μm,0.3s							
T1217	**Poggiodomo (PG**	**0.18**	**212**	P		Pb	10 57 09.3	-0.7
T1217				AML		AML		
	comp=E,2288μm,0.2s							
T1217				AML		AML		
	comp=N,6575μm,0.8s							
MMO1	**Montemonaco**	**0.20**	**81**	P		Pg	10 57 09.3	+0.5
MMO1				S		Sg	10 57 12.9	+1.1
AM05	**Amandola Campo**	**0.24**	**63**	⇓P		Pg	10 57 10.2	+0.6
AM05				AML		AML		
	comp=N,1162μm,0.4s							
AM05				AML		AML		
	comp=N,256μm,0.2s							
AM05				AML		AML		
	comp=E,1355μm,1.6s							
AM05				AML		AML		
	comp=E,4665μm,1.5s							
CSP1	**Cessapalombo**	**0.25**	**25**	P		Pb	10 57 11.0	-0.2
CSP1				S		Sg	10 57 14.3	+1.1
CSP1				AML		AML		
	comp=E,4550μm,0.1s							
CSP1				AML		AML		
	comp=N,3880μm,0.2s							
LNSS	**Leonessa**	**0.27**	**183**	⇑P		Pb	10 57 11.4	-0.1
LNSS				AML		AML		
	comp=E,2040μm,0.2s							
LNSS				AML		AML		
	comp=N,1775μm,0.8s							
T1241	**Roccafluvione,**	**0.27**	**92**	⇑P		Pg	10 57 10.2	0.0
T1241				S		Sg	10 57 14.7	+0.9
T1241				AML		AML		
	comp=N,2520μm,0.7s							
T1241				AML		AML		
	comp=E,2305μm,0.3s							
GUMA	**Gualdo di Mace**	**0.28**	**46**	P		Pg	10 57 11.0	+0.7
GUMA				S		Sb	10 57 16.1	-0.4
GUMA				AML		AML		
	comp=E,2255μm,0.5s							
GUMA				AML		AML		
	comp=N,2565μm,0.3s							
GUMA				AML		AML		
	comp=E,2245μm,0.5s							
GUMA				AML		AML		
	comp=N,3060μm,0.3s							
GUMA				AML		AML		
	comp=E,8825μm,0.5s							
GUMA				AML		AML		
	comp=N,8780μm,0.5s							
GUMA				AML		AML		
	comp=N,10730μm,0.5s							
GUMA				AML		AML		
	comp=E,8260μm,0.5s							
SEF1	**Sefro**	**0.29**	**343**	⇑P		Pb	10 57 12.4	+0.5
SMA1	**SAN MARTINO**	**0.31**	**139**	⇑P		Pb	10 57 11.7	-0.6
SMA1				AML		AML		
	comp=E,1420μm,0.5s							
SMA1				AML		AML		
	comp=N,1270μm,0.3s							
MDAR	**Monte D'Aria**	**0.33**	**10**	⇓P		Pb	10 57 12.0	-0.6
T1243	**Rocca Santa Ma**	**0.33**	**121**	P		Pg	10 57 11.8	+0.5
T1243				S		Sb	10 57 17.4	-0.7
SNTG	**Esanatoglia**	**0.40**	**347**	⇓P		Pb	10 57 13.3	-0.4
SNTG				AML		AML		
	comp=E,504μm,1.1s							
SNTG				AML		AML		
	comp=N,583μm,1.4s							
SNTG				AML		AML		
	comp=E,462μm,1.1s							
SNTG				AML		AML		
	comp=N,518μm,0.8s							
SNTG				AML		AML		
	comp=E,996μm,0.6s							
SNTG				AML		AML		
	comp=E,916μm,0.6s							
SNTG				AML		AML		
	comp=N,982μm,0.5s							
SNTG				AML		AML		
	comp=N,952μm,0.5s							
EL6	**Elcito**	**0.46**	**4**	⇓P		Pg	10 57 13.8	+0.1
TERO	**Teramo**	**0.47**	**121**	⇓P		Pg	10 57 14.1	+0.3
TERO				AML		AML		
	comp=N,788μm,0.7s							
TERO				AML		AML		
	comp=E,898μm,0.2s							
FOSV	**Fossato di Vic**	**0.48**	**333**	P		Pb	10 57 15.3	+0.2
FOSV				AML		AML		
	comp=E,386μm,0.3s							
FOSV				AML		AML		
	comp=N,495μm,0.5s							
FOSV				AML		AML		
	comp=N,782μm,0.4s							
FOSV				AML		AML		
	comp=E,625μm,1.2s							
ATFO	**Monte Foce - G**	**0.61**	**324**	P		Pg	10 57 15.6	-0.9
ATFO				AML		AML		
	comp=E,206μm,1.0s							
ATFO				AML		AML		
	comp=N,151μm,1.6s							
ATFO				AML		AML		
	comp=E,324μm,0.4s							
ATFO				AML		AML		
	comp=N,246μm,1.6s							
ARVD	**Arcevia**	**0.64**	**352**	⇑P		Pb	10 57 18.3	+0.5
ARVD				S		Sb	10 57 27.0	+0.2
ARVD				AML		AML		
	comp=E,226μm,0.6s							
ARVD				AML		AML		
	comp=N,143μm,1.0s							
ARVD				AML		AML		
	comp=E,396μm,0.6s							
ARVD				AML		AML		
	comp=N,230μm,0.4s							
ATVO	**AVT- Monte Val**	**0.70**	**317**	P		Pb	10 57 19.4	+0.4
ATVO				AML		AML		
	comp=E,270μm,0.4s							
ATVO				AML		AML		
	comp=N,177μm,0.8s							
PIEI	**Pieia**	**0.77**	**330**	S		Sn	10 57 32.0	-1.2
NARO	**Abbazia di Nar**	**0.82**	**335**	⇓P		Pb	10 57 21.5	+0.6
NARO				S		Sn	10 57 34.0	-0.4
NARO				AML		AML		
	comp=E,85μm,1.6s							
NARO				AML		AML		
	comp=N,94μm,1.6s							
NARO				AML		AML		
	comp=E,125μm,0.7s							
NARO				AML		AML		
	comp=N,94μm,1.6s							
FSSB	**Fossombrone**	**0.85**	**346**	⇑P		Pn	10 57 22.7	+0.1
FSSB				AML		AML		
	comp=E,279μm,1.4s							
FSSB				AML		AML		
	comp=N,380μm,0.3s							
FSSB				AML		AML		
	comp=N,1705μm,0.4s							
FSSB				AML		AML		
	comp=E,906μm,0.4s							
MODR	**Mondragone**	**1.82**	**160**	P		Pn	10 57 36.6	+0.6
PIGN	**Pignataro Magg**	**1.86**	**153**	⇑P		Pg	10 57 41.0	+0.7
PIGN				S		Sg	10 58 05.0	+0.5

ROM 27 10:58:02.9±0.1, 42°.945N±0'.004×13°.140E±0'.005,
h8km, ML2.5/26, 10C-7D, Error ellipse: s-maj=0.5km
s-min=0.1km az=6.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**131**	⇓P		Pg	10 58 04.9	0.0
MC2				S		Sg	10 58 06.3	0.0
FEMA	**Monte Fema**	**0.07**	**285**	⇑P		Pg	10 58 05.0	0.0
FEMA				AML		AML		
	comp=E,28650μm,0.3s							
FEMA				AML		AML		
	comp=N,36350μm,0.3s							
FEMA				AML		AML		
	comp=E,28650μm,0.3s							
T1245	**Castelsantange**	**0.10**	**158**	⇑P		Pg	10 58 05.8	+0.5
T1245				S		Sg	10 58 08.0	+0.8
T1245				AML		AML		
	comp=E,26800μm,0.2s							
T1245				AML		AML		
	comp=N,25750μm,0.6s							
T1245				AML		AML		
	comp=E,26450μm,0.2s							
T1245				AML		AML		
	comp=E,26800μm,0.2s							
T1245				AML		AML		
	comp=N,25700μm,0.6s							
T1245				AML		AML		
	comp=N,25800μm,0.2s							
T1216	**Preci, Frazion**	**0.10**	**239**	P		Pg	10 58 05.8	+0.4
T1216				S		Sg	10 58 07.9	+0.8
T1216				AML		AML		
	comp=E,6615μm,1.0s							
T1216				AML		AML		
	comp=N,13250μm,0.3s							
T1216				AML		AML		
	comp=N,13250μm,0.3s							
T1216				AML		AML		
	comp=E,6620μm,1.0s							
NRCA	**Norcia**	**0.11**	**189**	P		Pg	10 58 06.1	+0.5
NRCA				S		Sg	10 58 08.6	+1.2
NRCA				AML		AML		
	comp=N,22600μm,1.3s							
NRCA				AML		AML		
	comp=N,24350μm,1.3s							
NRCA				AML		AML		
	comp=E,25350μm,0.5s							
NRCA				AML		AML		
	comp=E,25400μm,0.5s							
NRCA				AML		AML		
	comp=N,22600μm,1.3s							
NRCA				AML		AML		
	comp=E,27100μm,0.5s							
MMO1	**Montemonaco**	**0.14**	**108**	P		Pg	10 58 06.5	+0.5
MMO1				S		Sg	10 58 09.2	+0.9
AM05	**Amandola Campo**	**0.16**	**78**	P		Pg	10 58 07.0	+0.7
AM05				S		Sg	10 58 09.8	+1.1
AM05				AML		AML		
	comp=N,1162μm,0.4s							
AM05				AML		AML		
	comp=E,4665μm,1.5s							
AM05				AML		AML		
	comp=E,1355μm,1.6s							
AM05				AML		AML		
	comp=N,1161μm,0.4s							
AM05				AML		AML		
	comp=N,1162μm,0.4s							
AM05				AML		AML		
	comp=N,256μm,0.2s							
CESI	**CESI - Serrava**	**0.18**	**289**	⇑P		Pg	10 58 07.2	+0.5
CESI				S		Sg	10 58 10.6	+1.3
CESI				AML		AML		
	comp=N,5670μm,0.5s							
CESI				AML		AML		
	comp=E,4520μm,0.5s							
GUMA	**Gualdo di Mace**	**0.19**	**51**	P		Pg	10 58 07.5	+0.7
GUMA				S		Sg	10 58 11.1	+1.7
GUMA				AML		AML		
	comp=E,8820μm,0.5s							
GUMA				AML		AML		
	comp=E,8850μm,0.5s							
GUMA				AML		AML		
	comp=N,8780μm,0.5s							
GUMA				AML		AML		
	comp=E,8260μm,0.5s							
GUMA				AML		AML		
	comp=N,10730μm,0.5s							
T1241	**Roccafluvione,**	**0.23**	**112**	P		Pg	10 58 07.7	+0.1
T1241				S		Sg	10 58 11.8	+1.0
T1215	**Vallo di Nera,**	**0.24**	**234**	P		Pg	10 58 08.4	+0.6
T1215				S		Sg	10 58 12.7	+1.6
T1215				AML		AML		
	comp=N,1345μm,0.7s							
T1215				AML		AML		
	comp=E,1258μm,0.4s							
T1215				AML		AML		
	comp=N,1359μm,1.0s							
T1215				AML		AML		
	comp=E,1275μm,0.4s							
T1215				AML		AML		
	comp=E,1260μm,0.5s							
T1215				AML		AML		
	comp=N,1360μm,1.0s							
T1215				AML		AML		
	comp=N,1340μm,0.7s							
T1217	**Poggiodomo (PG**	**0.28**	**213**	P		Pg	10 58 09.3	+0.8
T1217				S		Sb	10 58 14.2	-0.8
T1217				AML		AML		
	comp=E,2290μm,0.2s							
T1217				AML		AML		
	comp=E,2300μm,0.2s							
T1217				AML		AML		
	comp=N,6440μm,0.8s							
T1217				AML		AML		
	comp=N,6570μm,0.8s							
T1217				AML		AML		
	comp=E,2295μm,0.2s							
T1217				AML		AML		
	comp=E,2290μm,0.2s							
T1217				AML		AML		
	comp=N,6450μm,0.8s							
T1217				AML		AML		
	comp=E,2300μm,0.2s							
T1217				AML		AML		
	comp=N,6575μm,0.8s							
T1204	**Amatrice, Fraz**	**0.30**	**154**	P		Pg	10 58 09.4	+0.6
T1204				S		Sb	10 58 15.0	-0.6
T1243	**Rocca Santa Ma**	**0.34**	**137**	P		Pg	10 58 09.9	+0.4
T1243				S		Sb	10 58 15.9	-0.8
SNTG	**Esanatoglia**	**0.34**	**335**	P		Pg	10 58 09.9	+0.3
SNTG				AML		AML		
	comp=E,997μm,0.6s							
SNTG				AML		AML		
	comp=N,951μm,0.5s							
SNTG				AML		AML		
	comp=E,913μm,0.6s							
SNTG				AML		AML		
	comp=N,980μm,0.5s							
SNTG				AML		AML		
	comp=E,996μm,0.6s							
SNTG				AML		AML		
	comp=N,948μm,0.5s							
SNTG				AML		AML		
	comp=N,982μm,0.5s							
SNTG				AML		AML		
	comp=E,916μm,0.6s							
SMA1	**SAN MARTINO**	**0.35**	**155**	P		Pg	10 58 10.2	+0.5
SMA1				S		Sb	10 58 16.3	-0.7
SMA1				AML		AML		
	comp=E,1795μm,1.5s							
SMA1				AML		AML		
	comp=N,1270μm,0.3s							
LNSS	**Leonessa**	**0.35**	**192**	P		Pb	10 58 10.5	+0.7
LNSS				S		Sb	10 58 16.5	-0.5
LNSS				AML		AML		
	comp=N,1775μm,0.8s							
LNSS				AML		AML		
	comp=E,2040μm,0.2s							
EL6	**Elcito**	**0.39**	**356**	⇑P		Pg	10 58 10.6	+0.1
EL6				AML		AML		
	comp=E,1180μm,0.6s							
EL6				AML		AML		
	comp=N,1450μm,0.4s							
OFFI	**Offida**	**0.40**	**91**	P		Pb	10 58 12.4	+0.2
OFFI				S		Sb	10 58 20.4	+1.9
OFFI				AML		AML		

	comp=N,1670μm,0.4s						
OFFI				AML	AML		
	comp=E,1305μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.44 303**		P	Pg	10 58 11.9	+0.5
ATCC				S	Sb	10 58 19.3	-0.2
ATCC				AML	AML		
	comp=E,1260μm,0.7s						
ATCC				AML	AML		
	comp=N,1130μm,0.4s						
ATCC				AML	AML		
	comp=N,1135μm,0.4s						
CAMP	**Campotosto**	**0.45 154**	⇓	P	Pg	10 58 12.0	+0.3
CAMP				S	Sb	10 58 19.4	-0.7
CAMP				AML	AML		
	comp=E,1420μm,0.2s						
CAMP				AML	AML		
	comp=N,539μm,0.2s						
ARRO	**Arrone**	**0.46 217**		P	Pb	10 58 12.5	-0.6
ARRO				AML	AML		
	comp=E,910μm,0.7s						
ARRO				AML	AML		
	comp=E,909μm,0.7s						
ARRO				AML	AML		
	comp=N,726μm,0.2s						
TERO	**Teramo**	**0.47 133**		P	Pg	10 58 12.2	+0.2
TERO				S	Sb	10 58 20.2	-0.2
TERO				AML	AML		
	comp=E,898μm,0.2s						
TERO				AML	AML		
	comp=N,788μm,0.7s						
TERO				AML	AML		
	comp=E,898μm,0.2s						
TERO				AML	AML		
	comp=N,788μm,0.7s						
CESX	**Cesi**	**0.53 231**	⇓	P	Pg	10 58 13.6	+0.5
CESX				S	Sb	10 58 23.0	+0.8
CESX				AML	AML		
	comp=E,814μm,1.5s						
CESX				AML	AML		
	comp=N,868μm,0.3s						
MURB	**Monte Urbino**	**0.55 305**		S	Sb	10 58 24.0	+1.1
ARVD	**Arcevia**	**0.57 345**	⇓	P	Pg	10 58 14.0	+0.1
ARVD				S	Sb	10 58 24.0	+0.6
ARVD				AML	AML		
	comp=E,396μm,0.6s						
ARVD				AML	AML		
	comp=E,396μm,0.6s						
ARVD				AML	AML		
	comp=N,230μm,0.4s						
GIGS	**Gran Sasso**	**0.59 147**	⇑	P	Pg	10 58 14.4	+0.2
GIGS				AML	AML		
	comp=N,131μm,0.5s						
GIGS				AML	AML		
	comp=E,118μm,0.8s						
ATFO	**Monte Foce - G**	**0.59 316**	⇑	P	Pg	10 58 14.5	+0.2
ATFO				AML	AML		
	comp=E,324μm,0.4s						
ATFO				AML	AML		
	comp=N,278μm,0.5s						
ATFO				AML	AML		
	comp=N,279μm,0.5s						
ATFO				AML	AML		
	comp=E,324μm,0.4s						
FIAM	**Fiamignano**	**0.68 181**	⇑	P	Pg	10 58 15.9	0.0
FIAM				S	Sb	10 58 27.0	+0.5
FIAM				AML	AML		
	comp=E,378μm,1.4s						
FIAM				AML	AML		
	comp=N,252μm,1.4s						
ATVO	**AVT- Monte Val**	**0.69 309**	⇑	P	Pg	10 58 16.2	0.0
ATVO				AML	AML		
	comp=N,202μm,0.6s						
ATVO				AML	AML		
	comp=E,270μm,0.4s						
MPAG	**Monte Paganucc**	**0.74 338**		P	Pb	10 58 17.6	-0.4
MPAG				AML	AML		
	comp=N,308μm,0.4s						
MPAG				AML	AML		
	comp=N,308μm,0.4s						
MPAG				AML	AML		
	comp=E,328μm,0.6s						
PIEI	**Pieia**	**0.74 323**	⇓	P	Pg	10 58 17.2	+0.1
PIEI				AML	AML		
	comp=E,240μm,0.4s						
PIEI				AML	AML		
	comp=N,173μm,0.8s						
FAGN	**Fagnano**	**0.75 154**	⇓	P	Pb	10 58 18.2	-0.1
FAGN				AML	AML		
	comp=E,575μm,0.4s						
FAGN				AML	AML		
	comp=N,706μm,0.4s						
VCEL	**Villa Celiera**	**0.76 137**	⇑	P	Pg	10 58 17.8	+0.3
VCEL				AML	AML		
	comp=N,346μm,1.4s						
VCEL				AML	AML		
	comp=E,434μm,0.5s						
NARO	**Abbazia di Nar**	**0.78 329**		P	Pg	10 58 17.8	-0.1
NARO				AML	AML		
	comp=N,142μm,0.7s						
NARO				AML	AML		
	comp=E,181μm,0.9s						
FSSB	**Fossombrone**	**0.79 341**		P	Pb	10 58 18.8	-0.1
FSSB				AML	AML		
	comp=E,906μm,0.4s						
FSSB				AML	AML		
	comp=N,1705μm,0.4s						
T0110	**Collepietro**	**0.86 146**	⇓	P	Pg	10 58 19.0	-0.4
T0110				AML	AML		
	comp=N,432μm,0.4s						
T0110				AML	AML		
	comp=E,386μm,0.4s						
CAFI	**Castiglion Fio**	**0.94 295**		P	Pg	10 58 20.3	-0.7
CAFI				AML	AML		
	comp=E,150μm,0.7s						
CAFI				AML	AML		
	comp=N,175μm,0.9s						
BRSN	**Barisano**	**1.54 330**		S	Sg	10 58 54.0	+1.4
PAOL	**Paolisi**	**2.19 150**		S	Sb	10 59 09.0	-1.0
VBKN	**Vesuvio Bunker**	**2.32 155**	⇑	P	Pn	10 58 42.2	+0.8
VBKN				AML	AML		
	comp=N,1165μm,0.9s						
VBKN				AML	AML		
	comp=E,1385μm,1.0s						
MCRV	**Calabrutti - M**	**2.64 144**		S	Sg	10 59 27.0	-0.6
MNTV	**Mantova**	**2.78 323**		S	Sg	10 59 33.0	+0.9

ROM 27 10:58:43.4±0.1, 42°.865N±0°.006×13°.167E±0°.005, h9km, ML2.4/2, 1C, Error ellipse: s-maj=0.7km s-min=0.4km az=341.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**118**	⇑ P	Pg	10 58 45.3	0.0
T1245				S	Sg	10 58 46.4	-0.3
T1245				AML	AML		
	comp=E,8430μm,0.6s						
T1245				AML	AML		
	comp=N,8915μm,0.7s						
T1245				AML	AML		
	comp=E,8440μm,0.7s						
T1245				AML	AML		
	comp=N,8925μm,0.7s						
T1245				AML	AML		
	comp=E,8420μm,0.7s						
T1245				AML	AML		
	comp=N,8630μm,0.7s						
NRCA	**Norcia**	**0.05**	**231**	P	Pg	10 58 45.7	+0.3
NRCA				S	Sg	10 58 46.7	-0.1
NRCA				AML	AML		
	comp=N,5765μm,0.2s						
NRCA				AML	AML		
	comp=N,5350μm,0.2s						
NRCA				AML	AML		
	comp=E,4540μm,0.1s						
NRCA				AML	AML		
	comp=E,4115μm,0.1s						
MC2	**Monte Cornacci**	**0.05**	**20**	P	Pg	10 58 45.8	+0.2
MC2				S	Sg	10 58 47.2	+0.1
T1216	**Preci, Frazion**	**0.11**	**283**	P	Pg	10 58 46.5	+0.3
T1216				S	Sg	10 58 48.7	+0.7
T1216				AML	AML		
	comp=N,1720μm,0.2s						
T1216				AML	AML		
	comp=E,1854μm,0.2s						
MMO1	**Montemonaco**	**0.12**	**74**	P	Pg	10 58 47.0	+0.7
MMO1				S	Sg	10 58 49.2	+0.9
T1241	**Roccafluvione,**	**0.19**	**92**	P	Pg	10 58 47.8	+0.3
T1241				S	Sg	10 58 51.3	+1.1
T1204	**Amatrice, Fraz**	**0.22**	**150**	P	Pg	10 58 48.7	+0.8
T1204				S	Sg	10 58 52.9	+1.9
T1217	**Poggiodomo (PG**	**0.23**	**229**	P	Pg	10 58 49.1	+1.0
T1217				S	Sg	10 58 52.8	+1.5
T1243	**Rocca Santa Ma**	**0.27**	**129**	P	Pg	10 58 49.2	+0.4
T1243				S	Sb	10 58 54.0	-1.1
TERO	**Teramo**	**0.40**	**127**	P	Pg	10 58 51.8	+0.5
TERO				S	Sb	10 58 58.3	-0.6

IDC ***27*** *11:16:58.6±1.7, 2°.78S×136°.48E, h0km, mb3.9/3, mbtmp4.0/5, ML4.1/2, MS3.5/2, Error ellipse: s-maj=62.4km s-min=24.8km az=66.0*
DJA ***27*** *11:17:04.4±0.6, 3°.5S±5°×13°.6E±°, h73km±9km, M4.2/5, MLv4.2/5*
NEIC ***27*** *11:17:04.2±2.8, 3°.0S±0°.1×136°.3E±0°.1, h45km±13km, mb4.1/10, Error ellipse: s-maj=20.9km s-min=8.9km az=48.0*
ISC 27 11:17:02.7±0.8, 2°.96S±0°.06×136°.40E±0°.07, h35km, n35, σ2°.36/40, mb3.8/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.09**	**352**	P	**Pn**	**11 17 20.3**	**-1.1**
SRPI				S	**Sn**	**11 17 33.7**	**-1.6**
RKPI	**Ransiki, Papua**	**2.64**	**303**	P	**Pn**	**11 17 40.8**	**-2.0**
GENI	**Genyem**	**3.78**	**85**	P	**Pn**	**11 18 02.5**	**+4.0**
GENI	**Genyem**	**3.78**	**85**	P	Pn	11 18 09.8	+11
FAKI	**Fak Fak**	**4.14**	**270**	Pn	**Pn**	**11 18 04.1**	**+0.6**
FAKI	**Fak Fak**	**4.14**	**270**	P	**Pn**	**11 18 03.4**	**-0.1**
FAKI	**Fak Fak**	**4.14**	**270**	P	**Pn**	**11 18 04.4**	**+0.9**
SIJI	**Sorong**	**5.53**	**292**	Pn	**Pn**	**11 18 23.1**	**+0.6**
	2.6nm,0.3s,baz=211,slow=22,SNR=8.6						
SIJI				Sn	**Sn**	**11 19 24.0**	**-1.0**
	1.7nm,0.3s,baz=237,slow=22,SNR=1.5						
	5.8nm,0.3s						
KDU	**Kakadu**	**10.42**	**202**	P	**Pn**	**11 19 31.5**	**+1.8**
MTN	**Manton Dam**	**11.12**	**208**	Pn	**Pn**	**11 19 41.0**	**+1.8**
MTN	**Manton Dam**	**11.12**	**208**	P	**Pn**	**11 19 42.0**	**+2.7**
COEN	**Coen**	**12.82**	**149**	Pn	**Pn**	**11 20 03.6**	**+1.0**
KNRA	**Kununurra**	**14.71**	**210**	Pn	**Pn**	**11 20 28.5**	**+0.3**
KNRA					**Sn**	**11 23 07.2**	**-2.9**
KNRA	**Kununurra**	**14.71**	**210**	P	**Pn**	**11 20 28.7**	**+0.4**
KAPI	**Kappang**	**16.73**	**262**	Pn	**Pn**	**11 20 53.0**	**-1.4**
KAPI				IAmb	IAmb	11 21 16.3	
	comp=Z,13nm,0.3s						
WB0	**Warramunga Arr**	**16.82**	**187**	Pn	**Pn**	**11 20 53.4**	**-2.3**
WB0				IAmb	IAmb	11 21 00.7	
	comp=Z,7.2nm,0.6s						
WRAB	**Tennant Creek**	**16.99**	**187**	Pn	**Pn**	**11 20 56.4**	**-1.4**
WRAB				IAmb	IAmb	11 21 16.7	
	comp=Z,9.9nm,0.9s						
WR0	**Warramunga Arr**	**17.00**	**186**	Pn	**Pn**	**11 20 56.9**	**-0.9**
WR0					**Sn**	**11 24 02.9**	**-3.0**
WB2	**Warramunga Arr**	**17.00**	**187**	Pn	**Pn**	**11 20 55.6**	**-2.3**
WB2				IAmb	IAmb	11 21 08.6	
	comp=Z,9.8nm,0.8s						
WRA	**Warramunga Arr**	**17.00**	**187**	P	**Pn**	**11 20 55.5**	**-2.4**
	comp=Z,1.8nm,0.4s,baz=14,slow=13,SNR=46						
WRA				S	**Sn**	**11 23 56.5**	**-9.5**
	comp=Z,2.9nm,0.7s,baz=10.0,slow=22,SNR=5.8						
WRA				LR	LR	11 28 15.1	
	comp=Z,161nm,21.6s,baz=355,slow=39						
WRA	**Warramunga Arr**	**17.00**	**187**	P	**Pn**	**11 20 54.1**	**-3.8**
QIS	**Mount Isa**	**17.77**	**170**	P	**Pn**	**11 21 08.6**	**+1.1**
CTA	**Charters Tower**	**19.56**	**151**	P	**Pn**	**11 21 30.3**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=324,slow=12,SNR=2.2						
	comp=Z,5.3nm,0.7s						
AS01	**Alice Springs**	**20.72**	**186**	P	**P**	**11 21 42.3**	**+2.0**
AS31	**Alice Springs**	**20.73**	**186**		**P**	**11 21 42.0**	**+1.6**
AS31				IAmb	IAmb	11 21 45.0	
	comp=Z,7.7nm,0.8s						
ASAR	**Alice Springs**	**20.73**	**186**	P	**P**	**11 21 42.2**	**+1.8**
	comp=Z,14nm,0.7s,baz=13,slow=11,SNR=138						
ASAR				S	**S**	**11 25 30.3**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=6.1,slow=27,SNR=5.6						
ASAR				LR	LR	11 30 22.4	
	comp=Z,155nm,20.5s,baz=338,slow=38						
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs**	**20.73**	**186**	Pn	**P**	**11 21 42.5**	**+2.2**
WRKA	**Warakurna**	**23.30**	**199**	P	**P**	**11 22 08.3**	**+0.7**
MBWA	**Marble Bar**	**24.30**	**221**	P	**P**	**11 22 17.3**	**+0.3**
MBWA				IAmb	IAmb	11 22 19.9	
	comp=Z,7.1nm,0.6s						
PSA00	**Pilbara Seismi**	**24.53**	**220**	P	**P**	**11 22 19.4**	**+0.3**
PSA00	**Pilbara Seismi**	**24.53**	**220**	P	**P**	**11 22 20.5**	**+1.4**
OOD	**Oodnadatta**	**24.71**	**182**	P	**P**	**11 22 21.7**	**+1.0**
FORT	**Forrest**	**28.78**	**195**	P	**P**	**11 22 58.0**	**+0.7**
MKAR	**Makanchi Array**	**68.59**	**323**	P	**P**	**11 28 03.2**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=121,slow=5.1,SNR=6.4						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**71.00**	**331**	P	**P**	**11 28 16.7**	**0.0**
	comp=Z,0.4nm,0.4s,baz=124,slow=6.6,SNR=2.1						
	comp=Z,0.4nm,0.4s						

ATH 27 11:25:14.6, 38°.44N×21°.85E, h10km±3km, ML0.9/2, Error ellipse: s-maj=3.3km s-min=1.1km az=70.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.05**	**104**	P	Pg	11 25 16.2	-0.3
EFP				S	Sg	11 25 17.8	-0.1
EFP				AML	AML	11 25 18.3	
	comp=N,669μm,0.1s						
EFP				AML	AML	11 25 18.4	
	comp=E,324μm,0.1s						
ANX	**Ano Chora**	**0.17**	**21**	P	Pg	11 25 18.0	-0.2
ANX				S	Sg	11 25 21.1	+0.3
ANX				AML	AML	11 25 21.3	
	comp=N,67μm,0.2s						
ANX				AML	AML	11 25 21.3	
	comp=E,76μm,0.2s						
SERG	**Sergoula**	**0.17**	**99**	P	Pg	11 25 18.1	-0.1
SERG				S	Sg	11 25 20.9	+0.2
LAKA	**Lakka**	**0.22**	**152**	P	Pg	11 25 19.1	-0.1
KLV	**Kalavryta, Ach**	**0.46**	**149**	P	Pg	11 25 23.0	-0.5
KLV				S	Sg	11 25 30.1	+0.4
DRO	**Drossia**	**0.50**	**192**	P	Pg	11 25 24.0	-0.3
DRO				S	Sg	11 25 31.3	+0.5

THE 27 11:25:24.2, 38°.73N×20°.63E, h8km±1km, ML0.5/4, Error ellipse: s-maj=1.2km s-min=0.4km az=75.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.05**	**107**	P	Pg	11 25 25.6	-0.3
NYDR				S	Sg	11 25 27.0	-0.1
	68nm,0.1s						
LKD2	**Lefkada island**	**0.06**	**17**	P	Pg	11 25 25.8	-0.3
LKD2				S	Sg	11 25 27.3	-0.1
	38nm,0.2s						
DRAG	**Dragano-Lefkad**	**0.07**	**226**	P	Pg	11 25 25.8	-0.3
DRAG				S	Sg	11 25 27.4	0.0
TSLK	**Tsoukalades, L**	**0.10**	**10**	P	Pg	11 25 26.4	-0.1
TSLK				S	Sg	11 25 28.6	+0.5
	45nm,0.2s						
EVGI	**Lefkada island**	**0.11**	**171**	P	Pg	11 25 26.7	0.0
EVGI				S	Sg	11 25 28.8	+0.4
	102nm,0.1s						
FSK	**Fiskardo**	**0.28**	**192**	P	Pg	11 25 29.5	-0.1
FSK				S	Sg	11 25 33.8	+0.5

BJI ***27*** *11:53:14.3±0.0, 53°.76N×163°.71W, h3km, mb5.6/89, mB5.8/79, Ms6.0/98, Ms7 6.0/88*
MOS ***27*** *11:53:15.2±1.0, 53°.71N×163°.35W, h10km, mb5.9/89, MS5.7/52, Error ellipse: s-maj=8.2km s-min=4.4km az=102.0*
IDC ***27*** *11:53:17.9±2.0, 53°.71N×163°.35W, h17km±12km, mb5.2/44, mbtmp5.3/47, ML4.6/3, MS5.5/84, Error ellipse: s-maj=12.2km s-min=8.1km az=171.0*
AEIC ***27*** *11:53:17±2.2, 53°.46N±0°.07×163°.19W±0°.08, h26km±4km, Error ellipse: s-maj=10.7km s-min=6.6km az=159.0*
NEIC ***27*** *11:53:17.2±2.0, 53°.59N±0°.08×163°.27W±0°.08, h14km±3km, mb5.7/657, ML5.3/10, Ms_20 5.6/312, Mwb5.7/112, Mww5.9, ML5.2(AEIC), Error ellipse: s-maj=12.5km s-min=6.5km az=165.0*
NEIC ***27*** *11:53:17.7, 53°.64N×163°.30W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr2.62; Mθθ-3.37; Mφφ0.75; Mrθ2.74; Mrφ-1.37; Mθφ1.27; Fault plane solution: Mo4.52000×10^17^ NP1:φs265.01000°, δ24.25000°, λ107.75000°. NP2:φs65.67000°, δ66.97000°, λ82.18000°. Principal axes: T 3.8637, Plg67.0000°, Azm321.0000°; N 1.1062, Plg7.0000°, Azm69.0000°; P -4.9699, Plg22.0000°, Azm162.0000°;*
GCMT ***27*** *11:53:22.2±0.1, 53°.55N±0°.01×163°.11W±0°.01, h17km, MW5.9/164, Moment Tensor Solution. s156,c323; s164,c509; Duration: 29s1 Moment tensor: Scale 10^17^ Nm; Mrr4.74±.05; Mθθ-3.65±.04; Mφφ-1.09±.04; Mrθ5.59±.15; Mφφ-2.53±.03; Mφr2.20±.11; Best double couple: Mo7.80300×10^17^ NP1:φs66.00000°, δ70.00000°, λ96.00000°. NP2:φs229.00000°, δ21.00000°, λ74.00000°. Principal axes: T 7.6220, Plg64.0000°, Azm346.0000°; N 0.3610, Plg6.0000°, Azm244.0000°; P -7.9830, Plg25.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***27*** *11:53:23, 53°.42N×163°.78W, h16km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^17^Nm; Mrr4.07; Mθθ-3.85; Mφφ-0.22; Mrθ7.37; Mθφ-1.74; Mφr4.74; Fault plane solution: Mo9.77000×10^17^ NP1: φs260.00000°, δ14.00000°, λ111.00000°. NP2: φs58.00000°, δ77.00000°, λ85.00000°. Principal axes: T 9.6006, Plg58.0000°, Azm322.0000°; N 0.3377, Plg5.0000°, Azm59.0000°; P -9.9382, Plg32.0000°, Azm152.0000°;*
ISC 27 11:53:17.7±0.3, 53°.61N±0°.03×163°.27W±0°.02, h17km±1km, h17km:pP-P, n1921, σ1°.92/2004, mb5.7/512, MS5.6/303, 126C-25D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.25**	**356**		**Pb**	**11 53 40.9**	**0.0**
FALS	**False Pass**	**1.25**	**356**	P	**Pn**	**11 53 40.6**	**+0.2**
	baz=175,SNR=979						
AKUT	**Akutan**	**1.57**	**291**	Pn	**Pn**	**11 53 45.2**	**+0.3**
AKUT				IAML		11 54 28.8	
	comp=N,16μm,1.8s						
UNV	**Unalaska Valle**	**1.94**	**278**	Pn	**Pn**	**11 53 50.0**	**+0.1**
UNV	**Unalaska Valle**	**1.94**	**278**	P	**Pn**	**11 53 49.4**	**-0.4**
	baz=99,SNR=154						
SDPT	**Sand Point**	**2.38**	**42**	Pn	**Pn**	**11 53 56.6**	**+0.6**
SDPT				IAML		11 54 55.7	
	comp=E,25μm,1.8s						
SDPT	**Sand Point**	**2.38**	**42**	P	**Pn**	**11 53 56.3**	**+0.3**
	baz=221,SNR=114						
CNBA	**Chernabura Isl**	**2.48**	**59**	Pn	**Pn**	**11 53 57.0**	**-0.3**
CNBA				IAML		11 54 59.4	
	comp=N,6μm,2.3s						
CHNA	**Chernabura Isl**	**2.48**	**59**	P	**Pn**	**11 53 56.5**	**-0.8**
	baz=239,SNR=24						
NIKH	**Nikolski High**	**3.41**	**261**	Pn	**Pn**	**11 54 10.1**	**0.0**
NIKH	**Nikolski High**	**3.41**	**261**	P	**Pn**	**11 54 09.7**	**-0.4**
	baz=79,SNR=30						
NIKH	**Nikolski High**	**3.41**	**261**	P	**Pn**	**11 54 11.0**	**+0.9**
CHGN	**Chignik**	**3.89**	**44**		**Pn**	**11 54 17.0**	**+0.4**
CHGN				IAML		11 55 25.4	
	comp=E,9μm,1.1s						
CHGN				IAML		11 55 34.6	
	comp=N,4μm,0.9s						
CHGN	**Chignik**	**3.89**	**44**	P	**Pn**	**11 54 17.8**	**+1.2**
	baz=226,SNR=52						
CHIR	**Chirikof Islan**	**4.96**	**60**	Pn	**Pn**	**11 54 30.2**	**-1.1**
CHIR				IAML		11 56 15.6	
	comp=N,4μm,1.4s						
CHIR	**Chirikof Islan**	**4.96**	**60**	P	**Pn**	**11 54 31.1**	**-0.2**
	baz=245,SNR=7.5						
R16K	**Pilot Point**	**5.11**	**37**	P	**Pn**	**11 54 33.4**	**0.0**
	baz=220						
SPIA	**Saint Paul Isl**	**5.35**	**315**	Pn	**Pn**	**11 54 38.2**	**+1.6**
SPIA	**Saint Paul Isl**	**5.35**	**315**	P	**Pn**	**11 54 37.3**	**+0.6**
	baz=130						
SPIA	**Saint Paul Isl**	**5.35**	**315**	P	**Pn**	**11 54 38.5**	**+1.8**
SII	**Sitkinak Islan**	**5.99**	**57**	Pn	**Pn**	**11 54 44.5**	**-1.0**
SII	**Sitkinak Islan**	**5.99**	**57**	P	**Pn**	**11 54 45.1**	**-0.5**
	baz=243,SNR=5.8						
SII	**Sitkinak Islan**	**5.99**	**57**	P	**Pn**	**11 54 45.3**	**-0.3**
P16K	**Nushagak River**	**6.18**	**26**	P	**Pn**	**11 54 48.8**	**+0.7**
	baz=210,SNR=15						
Q17K	**Contact Creek**	**6.24**	**39**	P	**Pn**	**11 54 49.5**	**+0.5**
	baz=224,SNR=40						
Q16K	**King Salmon**	**6.28**	**33**	P	**Pn**	**11 54 50.7**	**+1.3**
	baz=218,SNR=24						
O16K	**Kokwok River B**	**6.64**	**23**	P	**Pn**	**11 54 55.4**	**+0.9**
	baz=207,SNR=43						
OHAK	**Old Harbor**	**6.74**	**53**	Pn	**Pn**	**11 54 54.5**	**-1.2**
OHAK	**Old Harbor**	**6.74**	**53**	P	**Pn**	**11 54 53.5**	**-2.2**
	baz=241,SNR=14						
P17K	**Kvichak River**	**6.76**	**31**	P	**Pn**	**11 54 57.4**	**+1.4**
	baz=216						
Q18K	**Katmai Hardscr**	**6.84**	**39**	P	**Pn**	**11 54 57.6**	**+0.3**
	baz=225,SNR=37						
O17K	**Koliganek Bris**	**7.05**	**26**	P	**Pn**	**11 55 00.6**	**+0.6**
	baz=211,SNR=33						
P18K	**Big Mountain,**	**7.30**	**34**		**Pn**	**11 55 04.7**	**+1.2**
P18K	**Big Mountain,**	**7.30**	**34**	P	**Pn**	**11 55 04.3**	**+0.7**
	baz=220						
N16K	**Nishlik Lake**	**7.30**	**18**	P	**Pn**	**11 55 04.7**	**+1.1**
	baz=201,SNR=105						
KDAK	**Kodiak Island**	**7.34**	**51**	Pn	**Pn**	**11 55 02.5**	**-1.6**
	comp=N,19nm,0.3s,baz=212,slow=4.2,SNR=63						
KDAK				Sn	**Sn**	**11 56 20.8**	**-6.1**
	comp=N,14nm,0.3s,baz=14,slow=22,SNR=8.4						
	comp=N,50nm,0.5s						
KDAK	**Kodiak Island**	**7.34**	**51**		**Pn**	**11 55 02.8**	**-1.2**
KDAK	**Kodiak Island**	**7.34**	**51**	P	**Pn**	**11 55 02.8**	**-1.2**
KDAK	**Kodiak Island**	**7.34**	**51**	P	**Pn**	**11 55 02.9**	**-1.2**
	baz=239						
Q19K	**Cape Douglas,**	**7.55**	**41**	Pn	**Pn**	**11 55 07.7**	**+0.7**
Q19K	**Cape Douglas,**	**7.55**	**41**	P	**Pn**	**11 55 06.3**	**-0.6**
	baz=228,SNR=18						
O18K	**Koktuh Hills**	**7.67**	**32**		**Pn**	**11 55 09.9**	**+1.4**
O18K	**Koktuh Hills**	**7.67**	**32**	P	**Pn**	**11 55 09.0**	**+0.5**
	baz=218,SNR=36						
Q20K	**Shuyak Island**	**7.87**	**46**	P	**Pn**	**11 55 10.1**	**-1.2**
	baz=234						
GSTR	**Great Sitkin T**	**7.89**	**264**		**Pn**	**11 55 12.2**	**+0.5**
N18K	**Kilae Creek**	**8.14**	**27**	P	**Pn**	**11 55 16.0**	**+0.9**
	baz=212,SNR=17						
P19K	**Oil Pt**	**8.20**	**38**	Pn	**Pn**	**11 55 17.2**	**+1.4**
P19K	**Oil Pt**	**8.20**	**38**	P	**Pn**	**11 55 16.2**	**+0.4**
	baz=226						
O19K	**Port Alsworth**	**8.21**	**33**	P	**Pn**	**11 55 16.8**	**+0.9**
	baz=220,SNR=26						
ADK	**Adak**	**8.32**	**263**	Pn	**Pn**	**11 55 18.6**	**+1.1**
ADK	**Adak**	**8.32**	**263**	P	**Pn**	**11 55 18.6**	**+1.1**
ADK	**Adak**	**8.32**	**263**	P	**Pn**	**11 55 18.9**	**+1.4**
N19K	**Bonanza Creek**	**8.64**	**30**	P	**Pn**	**11 55 23.1**	**+1.1**
	baz=217,SNR=36						
O20K	**Slope Mountain**	**8.71**	**38**	P	**Pn**	**11 55 23.9**	**+1.0**
	baz=226						
HOM	**Homer**	**8.81**	**42**	P	**Pn**	**11 55 24.7**	**+0.6**
	baz=231						
CNPM	**China Poot**	**8.89**	**43**	Pn	**Pn**	**11 55 25.6**	**+0.2**
RSO	**Redoubt South**	**8.94**	**36**		**Pn**	**11 55 28.1**	**+2.0**
BRSE	**Bradley Lake S**	**9.22**	**43**	P	**Pn**	**11 55 29.9**	**0.0**
	baz=233						
M19K	**Big River Lodg**	**9.56**	**26**	P	**Pn**	**11 55 34.3**	**-0.2**
	baz=213,SNR=41						
N20K	**Mount Spurr**	**9.66**	**34**	P	**Pn**	**11 55 36.0**	**+0.1**
	baz=222,SNR=34						
SPCR	**Spurr Chakacha**	**9.66**	**34**	P	**Pn**	**11 55 36.4**	**+0.6**
	baz=222,SNR=29						
L19K	**White Mountain**	**9.68**	**24**	P	**Pn**	**11 55 37.5**	**+1.4**
	baz=211,SNR=83						
CAPN	**Captain Cook N**	**9.72**	**38**	P	**Pn**	**11 55 38.4**	**+1.8**
	baz=227

	baz=225,SNR=16						
RC01	Rabbit Creek A	10.45	39	P	Pn	11 55 45.9	-0.7
	baz=230						
SKT	Skwentna	10.45	32	P	Pn	11 55 47.2	+0.5
	baz=221,SNR=23						
M22K	Willow	10.76	35	P	Pn	11 55 50.5	-0.2
	baz=226,SNR=10						
PWL	Port Wells	10.85	42	Pn	Pn	11 55 50.5	-1.7
PWL	Port Wells	10.85	42	P	Pn	11 55 51.0	-1.1
	baz=234,SNR=33						
AMKA	Amchitka	10.86	265		Pn	11 55 52.5	+0.2
K20K	Telida	10.88	22	P	Pn	11 55 54.4	+1.9
	baz=210,SNR=44						
PPLA	Purkeypile	10.97	28	P	Pn	11 55 55.4	+1.5
	baz=216,SNR=18						
Q23K	Middleton Isla	11.00	51	P	Pn	11 55 53.6	-0.4
	baz=245						
PMR	Palmer	11.00	38		Pn	11 55 52.4	-1.7
PMR	Palmer	11.00	38	P	Pn	11 55 52.4	-1.7
PMR	Palmer	11.00	38	P	Pn	11 55 53.6	-0.5
	baz=229,SNR=13						
ANM	Nome	11.04	355	P	Pn	11 55 56.6	+1.9
	baz=173						
GAMB	Gambell	11.09	340	P	Pn	11 55 56.1	+0.9
	baz=153						
KNK	Knik Glacier	11.14	40	P	Pn	11 55 55.6	-0.4
	baz=231,SNR=16						
CUT	Chulitna	11.17	33	P	Pn	11 55 56.1	-0.3
	baz=223,SNR=12						
GLI	Glacier Island	11.37	44	P	Pn	11 55 57.5	-1.7
	baz=237						
CAST	Castle Rocks	11.42	26	P	Pn	11 56 01.0	+1.1
	baz=215,SNR=32						
SML	Sawmill	11.43	38	P	Pn	11 55 58.5	-1.6
	baz=230,SNR=8.1						
J20K	Nowinta River	11.58	20		Pn	11 56 02.5	+0.4
J20K	Nowinta River	11.58	20	P	Pn	11 56 03.9	+1.8
	baz=208,SNR=54						
GCSA	Galena City Sc	11.63	14	P	Pn	11 56 04.6	+1.9
	baz=199,SNR=14						
M23K	Glacier View	11.65	39	P	Pn	11 56 01.0	-2.0
	baz=232,SNR=62						
CHUM	Lake Minchumin	11.74	24	P	Pn	11 56 05.8	+1.5
	baz=213,SNR=5.9						
EYAK	Cordova Ski Ar	11.77	47	P	Pn	11 56 03.2	-1.4
	baz=241,SNR=19						
EYAK	Cordova Ski Ar	11.77	47	P	Pn	11 56 02.5	-2.1
SCM	Sheep Creek Mo	11.82	39	P	Pn	11 56 03.3	-2.1
	baz=232,SNR=28						
TRF	Thorofare Moun	11.94	29	P	Pn	11 56 08.0	+0.9
	baz=220,SNR=32						
WAT1	Susitna Watana	12.03	34	P	Pn	11 56 05.9	-2.4
	baz=226						
KAIM	Kayak Island	12.09	51		Pn	11 56 08.1	-1.0
KAIM	Kayak Island	12.09	51	P	Pn	11 56 10.0	+1.0
	baz=246,SNR=7.7						
WAT6	Susitna Watana	12.14	36	P	Pn	11 56 07.2	-2.7
	baz=229,SNR=27						
KLU	Klutina	12.18	43	P	Pn	11 56 08.5	-1.8
	baz=237,SNR=68						
TNA	Tin City	12.21	351	P	Pn	11 56 11.6	+0.9
	baz=167						
BPAW	Bear Paw Mtn.	12.26	26	P	Pn	11 56 11.7	+0.4
	baz=216,SNR=22						
M24K	Tolsona, Glenn	12.42	40	P	Pn	11 56 11.8	-1.8
	baz=234,SNR=44						
BMRM	Bremner River	12.46	46	P	Pn	11 56 12.7	-1.5
	baz=242,SNR=9.9						
MCK	McKinley	12.56	30	P	Pn	11 56 15.3	-0.1
	baz=222,SNR=12						
DHY	Denali Highway	12.60	35	P	Pn	11 56 14.6	-1.5
	baz=228,SNR=35						
BGLC	Bering Glacier	12.70	51	P	Pn	11 56 13.8	-3.5
	baz=247						
N25K	Chitina, Valde	12.78	44	P	Pn	11 56 17.3	-1.2
	baz=239,SNR=23						
I21K	Tanana	12.92	22	P	Pn	11 56 19.7	-0.7
	baz=211,SNR=20						
HARP	HAARP	12.98	40	P	Pn	11 56 19.4	-1.8
	baz=235,SNR=32						
MLY	Manley	13.08	24		Pn	11 56 22.6	0.0
MLY	Manley	13.08	24	P	Pn	11 56 22.2	-0.4
	baz=214,SNR=39						
H21K	Melozitna Rive	13.16	19	P	Pn	11 56 24.9	+1.3
	baz=208,SNR=31						
NEA2	Nenana	13.17	28	P	Pn	11 56 23.6	-0.1
	baz=220,SNR=5.8						
PAX	Paxson	13.20	38	P	Pn	11 56 23.1	-1.1
	baz=232,SNR=96						
MCARA	McCarthy VSAT	13.34	46	P	Pn	11 56 25.2	-0.8
	baz=243						
MESA	MESA	13.34	52	P	Pn	11 56 25.6	-0.6
	baz=249,SNR=9.9						
I23K	Minto, Yukon-K	13.52	26	P	Pn	11 56 28.8	+0.3
	baz=217						
SHEM	Shemya Is, Ala	13.60	275	Pn	Pn	11 56 33.2	+3.6
	comp=N,8.7nm,0.3s,baz=64,slow=2.7,SNR=6.7						
SHEM				LR	LR	12 01 29.7	
	comp=N,25μm,21.2s,baz=106,slow=36						
K24K	Donnelly Dome	13.62	35	P	Pn	11 56 28.1	-1.8
	baz=229,SNR=41						
HDA	Harding Lake	13.65	31	P	Pn	11 56 28.3	-2.0
	baz=225,SNR=24						
H22K	Ishtalitna Cre	13.66	21	P	Pn	11 56 30.8	+0.3
	baz=211,SNR=42						
TCOL	CIGO, UAF Yank	13.72	29	P	Pn	11 56 32.3	+1.1
	baz=221						
COLA	College	13.72	29		Pn	11 56 28.9	-2.3
COLA	College	13.72	29	P	Pn	11 56 28.9	-2.3
COLA	College	13.72	29	P	Pn	11 56 30.9	-0.4
	baz=221						
COLA	College	13.72	29	P	Pn	11 56 30.1	-1.1
G21K	Allakaket	13.80	17	P	Pn	11 56 31.3	-1.1
	baz=205,SNR=28						
M26K	Nabesna, AK	13.83	42	P	Pn	11 56 31.7	-1.1
	baz=239,SNR=47						
RIDG	Independent Ri	13.90	36	P	Pn	11 56 31.5	-2.2
	baz=231,SNR=6.7						
CTG	Chitna Glacier	13.90	49	P	Pn	11 56 33.0	-0.9
	baz=247						
ILAR	Eielson Array	13.93	30	Pn	Pn	11 56 30.1	-4.0
	comp=N,1.5nm,0.3s,baz=225,slow=13,SNR=48						
ILAR				LR	LR	12 02 30.6	
	comp=N,73μm,18.3s,baz=217,slow=40						
	comp=N,3.5nm,0.4s						
H23K	Yukon River	14.02	24	P	Pn	11 56 35.6	+0.2
	baz=215,SNR=28						
POKR	Poker Plat Res	14.02	28	P	Pn	11 56 34.0	-1.4
	baz=222						
L26K	Log Cabin Wild	14.03	40	P	Pn	11 56 34.3	-1.1
	baz=236,SNR=18						
PINM	Pinnacle	14.12	53	P	Pn	11 56 36.0	-0.8
	baz=252,SNR=10						
M27K	Edge Creek, AK	14.27	44	P	Pn	11 56 37.2	-1.7
	baz=241,SNR=29						
SCRK	Sand Creek	14.34	36	P	Pn	11 56 38.6	-1.3
	baz=232,SNR=22						
O28M	Mount Upton	14.36	51	P	Pn	11 56 39.5	-0.8
	baz=250,SNR=36						
PNL	Peninsula	14.41	56	P	Pn	11 56 40.8	0.0
	baz=255,SNR=23						
PNL	Peninsula	14.41	56	P	Pn	11 56 40.8	0.0
H24K	Noodor Dome	14.45	26	P	Pn	11 56 39.0	-2.3
	baz=219,SNR=21						
F21K	Alatna River	14.46	15	P	Pn	11 56 40.5	-0.8
	baz=204,SNR=38						
G22K	Bettles	14.53	19	P	Pn	11 56 41.4	-0.8
	baz=209						
YUK3	Moose Creek	14.61	47	P	Pn	11 56 41.6	-2.1
	baz=246,SNR=25						
YUK3				S	S	11 59 44.7	+0.4
	baz=246						
L27K	Beaver Creek,	14.63	41	P	Pn	11 56 42.1	-1.7
	baz=239,SNR=43						
L27K				S	S	11 59 44.9	+0.6
	baz=239						
G23K	Bananza Creek	14.65	21	P	Pn	11 56 42.4	-1.5
	baz=212,SNR=51						
BVCY	Beaver Creek	14.71	44	P	Pn	11 56 42.6	-2.3
	baz=243,SNR=17						
YUK8	Steele Glacier	14.73	49	P	Pn	11 56 42.9	-2.5
	baz=249,SNR=29						
YUK8				S	S	11 59 48.5	+1.7
	baz=249						
J26L	Joseph Creek	14.81	35	P	Pn	11 56 43.6	-2.6
	baz=231,SNR=30						
PRP	Porcupine Dome	14.87	30	P	Pn	11 56 44.9	-2.1
	baz=225,SNR=26						
PRP				S	S	11 59 50.8	+1.6
	baz=225						
F22K	John River	14.93	17	P	Pn	11 56 46.1	-1.6
	baz=206						
O29M	Mount Kennedy	14.98	54	P	Pn	11 56 47.7	-0.8
	baz=254,SNR=36						
O29M				S	S	11 59 52.8	+1.2
	baz=254						
COLD	Coldfoot	15.05	20	IAmb	IAmb	11 56 56.7	
	comp=Z,192nm,0.8s						
COLD	Coldfoot	15.05	20	P	Pn	11 56 50.0	+0.7
	baz=211,SNR=124						
K27K	Chicken	15.06	38	P	Pn	11 56 44.8	-4.7
	baz=236						
G24K	Hadweenzic Riv	15.23	24	P	Pn	11 56 46.0	-5.7
	baz=218,SNR=16						
P29M	Windy Craggy	15.23	56	P	Pn	11 56 47.7	-4.0
	baz=257,SNR=29						
P29M				S	S	11 59 57.9	+1.4
	baz=257						
YUK4	Talbot Arm	15.26	50	P	Pn	11 56 51.3	-1.1
	baz=250,SNR=16						
YUK6	Outpost Mounta	15.26	51	P	Pn	11 56 49.6	-2.8
	baz=252,SNR=11						
YUK6				S	S	11 59 58.8	+1.2
	baz=252						
H25K	Birch Creek	15.32	27	P	Pn	11 56 46.9	-6.0
	baz=222,SNR=6.3						
I26K	Coal Creek Min	15.46	33	P	Pn	11 56 50.4	-4.3
	baz=230						
G25K	Bearman Lake	15.62	26	P	Pn	11 56 52.6	-4.3
	baz=220,SNR=12						
HYT	Haines Junctio	15.63	52	P	Pn	11 56 57.2	+0.1
	baz=254,SNR=13						
HYT				S	S	12 00 07.2	+2.3
	baz=254						
P30M	Million Dollar	15.72	55	P	Pn	11 56 55.5	-2.7
	baz=257						
P30M				S	S	12 00 08.7	+2.2
	baz=257						
M29M	Somme Creek	15.74	46	P	Pn	11 56 56.5	-2.0
	baz=247,SNR=268						
M29M				S	S	12 00 09.0	+1.9
	baz=247						
S31K	Pelican	15.76	63	P	Pn	11 56 55.8	-2.9
	baz=265,SNR=9.5						
S31K				S	S	12 00 10.7	+3.4
	baz=265						
F24K	Squaw Lake	15.79	22	P	Pn	11 56 54.7	-4.3
	baz=215,SNR=30						
EGAK	Eagle	15.81	36	P	Pn	11 56 56.5	-2.7
	baz=235,SNR=25						
PLBC	Pleasant Camp	15.88	58	P	Pn	11 56 59.4	-0.8
	baz=260,SNR=22						
PLBC				S	S	12 00 13.5	+3.8
	baz=260						
E23K	Chandalar	15.88	19	P	Pn	11 56 59.8	-0.5
	baz=211,SNR=92						
N30M	Aishikik Lake	16.01	50	P	Pn	11 56 58.9	-3.0
	baz=252,SNR=21						
N30M				S	S	12 00 14.7	+2.2
	baz=252						
R31K	City Hall, Gus	16.06	62	P	Pn	11 57 01.7	-0.8
	baz=264,SNR=6.8						
R31K				S	S	12 00 16.3	+2.9
	baz=264						
DAWY	Dawson	16.08	40	P	Pn	11 56 59.5	-3.3
	baz=240,SNR=32						
E24K	Your Creek	16.12	20	P	Pn	11 57 01.4	-1.9
	baz=213,SNR=155						
I27K	Kandik River	16.14	33	P	Pn	11 56 59.2	-4.4
	baz=232,SNR=37						
L29M	L29M	16.15	44	P	Pn	11 57 02.7	-1.0
	baz=245,SNR=15						
L29M				S	S	12 00 18.3	+3.0
	baz=245						
SIT	Sitka	16.21	66	P	Pn	11 57 01.2	-3.2
	baz=269						
SIT				S	S	12 00 20.5	+4.0
	baz=269						
O30N	Mendenhall	16.29	53	P	Pn	11 57 03.5	-1.9
	baz=256,SNR=46						
O30N				S	S	12 00 21.0	+2.8
	baz=256						
F25K	Christian Rive	16.38	24	P	Pn	11 57 04.7	-1.9
	baz=219,SNR=17						
G26K	Porcupine Rive	16.38	28	P	Pn	11 57 05.5	-1.1
	baz=224,SNR=20						
TOLK	Toolik Lake Re	16.39	18	P	Pn	11 57 03.5	-3.3
	baz=210,SNR=106						
SKAG	Skagway	16.40	58	P	Pn	11 57 05.0	-1.9
	baz=261,SNR=23						
SKAG				S	S	12 00 22.0	+1.6
	baz=261						
D23K	Nanushuk River	16.49	16	P	Pn	11 57 07.2	-0.8
	baz=207,SNR=23						
M30M	Minto, Yukon	16.51	47	P	Pn	11 57 04.9	-3.3
	baz=249,SNR=40						
M30M				S	S	12 00 23.8	+1.1
	baz=249						
H27K	Steamboat Moun	16.57	32	P	Pn	11 57 05.3	-3.7
	baz=230,SNR=25						
N31M	Braeburn, Yuko	16.62	51	P	Pn	11 57 08.8	-0.9
	baz=254,SNR=26						
N31M				S	S	12 00 27.9	+3.0
	baz=254						
S32K	Killisnoo	16.63	65	P	Pn	11 57 10.7	+1.0
	baz=268,SNR=9.8						
S32K				S	S	12 00 28.9	+3.9
	baz=268						
R32K	Eaglecrest	16.69	62	P	Pn	11 57 09.7	-0.8
	baz=266						
R32K				S	S	12 00 30.2	+3.8
	baz=266						
K29M	Barlow Dome	16.71	42	P	Pn	11 57 09.8	-1.1
	baz=244,SNR=109						
J29M	Klondike Camp	16.72	40	IAmb	IAmb	11 57 20.7	
	comp=Z,227nm,0.6s						
J29M	Klondike Camp	16.72	40	P	Pn	11 57 07.9	-3.0
	baz=241,SNR=28						
JIS	Juneau Island	16.76	62	P	P	11 57 13.8	+0.2
E25K	Arctic Village	16.80	23	P	Pn	11 57 07.9	-4.0
	baz=218,SNR=22						
F26K	Sheenjek River	16.83	26	P	Pn	11 57 09.0	-3.3
	baz=222,SNR=34						
WHY	Whitehorse	16.84	54	P	Pn	11 57 09.8	-2.7
	baz=257,SNR=55						
WHY				S	S	12 00 32.5	+2.9
	baz=257						
G27K	Doyon Strip	16.90	30	P	Pn	11 57 09.9	-3.3
	baz=229,SNR=18						
D24K	Happy Valley	16.98	18	P	Pn	11 57 12.2	-1.8
	baz=210,SNR=60						
I29M	Ogilvie Camp,	17.14	37	P	Pn	11 57 13.2	-3.0
	baz=238,SNR=80						
P32M	Atlin	17.24	58	P	Pn	11 57 15.8	-1.6
	baz=262,SNR=20						
P32M				S	S	12 00 39.2	+1.7
	baz=262						
MAYO	Mayo, Yukon	17.27	44	IAmb	IAmb	11 57 25.1	
	comp=Z,888nm,1.2s						
MAYO	Mayo, Yukon	17.27	44	P	Pn	11 57 16.6	-1.2
	baz=247,SNR=96						
C23K	Itkillik River	17.28	15	P	Pn	11 57 16.4	-1.5
	baz=206,SNR=30						
M31M	Drury Creek, Y	17.45	49	P	P	11 57 20.9	-0.3
M31M				IAmb	IAmb	11 57 27.2	
	comp=Z,2μm,1.9s						
M31M	Drury Creek, Y	17.45	49	P	Pn	11 57 20.6	+0.5
	baz=253,SNR=103						
M31M				S	S	12 00 44.1	+2.3
	baz=253						
U33K	Whale Pass	17.46	70	P	Pn	11 57 18.0	-2.2
	baz=274,SNR=6.5						
U33K				S	S	12 00 44.8	+2.7
	baz=274						
C24K	Franklin Bluff	17.49	17	P	Pn	11 57 19.0	-1.5
	baz=210						
T33K	Petersburg	17.52	67	P	Pn	11 57 19.3	-1.5
	baz=272						
T33K				S	S	12 00 47.2	+4.1
	baz=272						
CRAG	Craig	17.52	72	P	Pn	11 57 19.4	-1.5
	baz=276						
CRAG				S	S	12 00 46.4	+3.1
	baz=276						
D25K	Kavik River	17.59	20	P	Pn	11 57 19.9	-1.9
	baz=215,SNR=45						
P33M	Teslin, Yukon	17.77	56	P	P	11 57 24.9	+0.1
P33M	Teslin, Yukon	17.77	56	P	P	11 57 25.2	+0.4
	baz=261,SNR=162						
P33M				S	S	12 00 50.7	+2.3
	baz=261						
N32M	Quiet Lake	17.80	53	P	Pn	11 57 21.4	-3.1
	baz=258						
N32M				S	S	12 00 52.5	+3.5
	baz=258						
E27K	Coleen River	17.85	27	P	Pn	11 57 18.2	-6.9
	baz=226						
WRAK	Wrangell Islan	17.87	68	P	Pn	11 57 20.9	-4.4
	baz=274,SNR=13						
WRAK				S	S	12 00 53.4	+3.1
	baz=274						
Q32M	Nakina River	17.91	60	P	Pn	11 57 22.1	-3.9
	baz=266,SNR=27						
Q32M				S	S	12 00 54.3	+2.8
	baz=266						
FARO	Faro, Yukon	17.93	49	P	Pn	11 57 25.1	-0.9
	baz=254,SNR=192						
FARO				S	S	12 00 52.2	+0.7
	baz=254						
A21K	Barrow	18.02	7	P	Pn	11 57 25.2	-1.8
	baz=193						
EPYK	Eagle Plains	18.23	35	P	Pn	11 57 26.3	-3.4
	baz=238,SNR=58						
H02S1	DAWSON INLET T	18.30	79	P	P	11 57 31.5	+1.0
	SNR=28						
H02S1				T	T	12 16 27.6	
	SNR=5.8						
C26K	Camden Bay	18.38	20	P	P	11 57 29.9	-1.5
	baz=216,SNR=39						
V35K	Ketchikan	18.40	72	P	P	11 57 30.5	-1.1
	baz=277,SNR=11						
V35K				S	S	12 01 06.6	+5.6
	baz=277						
C27K	Jago River	18.40	22	P	P	11 57 29.5	-2.2
	baz=219,SNR=44						
S34M	Telegraph Cree	18.48	64	P	Pn	11 57 33.5	+0.8
	baz=270,SNR=36						
S34M				S	S	12 01 07.9	+5.3
	baz=270						
R33M	Jennings River	18.61	59	P	Pn	11 57 36.4	+2.0
	baz=266,SNR=47						
R33M				S	S	12 01 11.2	+5.6
	baz=266						
G30M	tAoh Zraii Nji	18.72	34	P	P	11 57 31.9	-3.3
	baz=237,SNR=43						
MMPY	Sheldon Lake,	18.96	49	P	P	11 57 37.7	-0.2
	baz=256,SNR=163						
T35M	Bob Quinn	18.99	66	P	Pn	11 57 40.2	+1.2
	baz=273,SNR=20						
T35M				S	S	12 01 18.5	+5.4
	baz=273						
DLBC	Dease Lake	19.06	62	P	Pn	11 57 39.9	0.0
	comp=Z,0.8nm,0.3s,baz=270,slow=11,SNR=49						
DLBC				LR	LR	12 03 09.7	
	comp=Z,4μm,21.5s,baz=290,slow=31						
	comp=Z,47nm,0.9s						
DLBC	Dease Lake	19.06	62	P	P	11 57 39.2	+0.1
	baz=269,SNR=35						
DLBC				S	S	12 01 18.8	+4.2
	baz=269						
HG4B	Hotspring	19.29	81	P	Pn	11 57 42.0	-0.5
WTLY	Watson Lake, Y	19.76	57	IAmb	IAmb	11 57 57.6	
	comp=Z,729nm,1.8s						
WTLY	Watson Lake, Y	19.76	57	P	Pn	11 57 48.2	+0.1
	baz=266,SNR=37						
WTLY				S	Sn	12 01 31.7	+2.3
	baz=266						
F31M	Tsiigehtchic	19.79	34	P	P	11 57 44.8	-1.9
	baz=240,SNR=21						
TGTN	Hyland Airport	20.15	53	P	P	11 57 51.4	+0.5
	baz=262,SNR=135						
TGTN				S	S	12 01 36.9	+0.6
	baz=262						
INK	Inuvik	20.30	32	P	P	11 57 49.7	-2.7
	comp=Z,45nm,0.6s,baz=210,slow=9.2,SNR=92						
INK				LR	LR	12 05 57.3	
	comp=Z,18μm,19.0s,baz=224,slow=38						
INK	Inuvik	20.30	32	P	P	11 57 49.3	-3.0
INK	Inuvik	20.30	32	P	P	11 57 49.3	-3.0
INK				pmax	pmax		
	comp=Z,131nm,1.0s						
INK	Inuvik	20.30	32	P	P	11 57 48.1	-4.3
	baz=238,SNR=46						
BILL	Bilibino	20.40	327	P	P	11 57 53.3	-0.1
BILL	Bilibino	20.40	327	*d iP*	P	11 57 53.5	+0.1
BILL				*e*		11 57 58.5	
BILL				*e*PPP	PPP	11 58 18.1	
BILL				*i*		11 58 27.5	
BILL				*i*		12 02 05.4	
BILL				*i* SSS	SSS	12 02 09.6	
BILL				pmax	pmax		
	comp=Z,137nm,1.1s						
BILL				MLR	MLR		
	comp=Z,44μm,17.0s						
LIRD	Liard River Hi	21.10	59	P	P	11 58 01.6	+0.5
	baz=270,SNR=21						
LIRD				S	Sn	12 01 58.4	-3.3
	baz=270						
BBB	Bella Bella	21.13	80	P	P	11 58 04.6	+3.2
	comp=Z,12nm,0.8s,baz=293,slow=12,SNR=4.2						
BBB				LR	LR	12 04 30.6	
	comp=Z,5μm,21.8s,baz=290,slow=32						
BBB	Bella Bella	21.13	80	IAmb	IAmb	11 58 20.1	
	comp=Z,313nm,1.5s						
KOTAN	Kotaneelee Air	22.13	57	P	P	11 58 12.3	+0.1
	baz=270,SNR=17						
KOTAN				S	S	12 02 18.8	+3.7
	baz=270						
FLDN	Fort Liard	22.42	57	P	P	11 58 16.0	+0.8
	baz=270,SNR=13						
FLDN				S	S	12 02 23.2	+2.8
	baz=270						
PET	Petropavlovsk	22.58	284	IAMs_20	IAMs_20	12 06 45.0	
	comp=Z,17μm,20.0s						
PET	Petropavlovsk	22.58	284	*ce*P	P	11 58 14.7	-2.3
PET				*e*S	S	12 02 16.1	-7.4
PET				pmax	pmax		
	comp=Z,3μm,6.2s						
PET				pmax	pmax		
	comp=Z,3μm,11.9s						
PET				MLR	MLR		
	comp=Z,24μm,21.0s						
PET	Petropavlovsk	22.58	284	P	P	11 58 17.4	+0.4
WRGLY	Wrigley	22.59	49	P	P	11 58 17.1	+0.1
	baz=263,SNR=39						
WRGLY				S	S	12 02 25.0	+1.5
	baz=263						
PEA0B	Petropavlovsk-	23.11	285	*ce*P	P	11 58 21.9	-0.6
PETK	Petropavlovsk-	23.11	285	P	P	11 58 22.0	-0.5
	comp=Z,68nm,0.5s,baz=84,slow=12,SNR=16						
PETK				LR	LR	12 07 14.0	
	comp=Z,16μm,20.6s,baz=84,slow=36						
	comp=Z,68nm,0.5s						
C36M	Paulatuk	23.84	34	P	P	11 58 27.8	-1.7
C36M				IAmb	IAmb	11 58 41.6	
	comp=Z,321nm,1.5s						
C36M	Paulatuk	23.84	34	P	P	11 58 27.1	-2.4
	baz=248,SNR=8.0						
C36M				S	S	12 02 43.2	-1.1
	baz=248						
A36M	Sachs Harbour	24.59	27	P	P	11 58 36.7	+0.2
A36M				IAMs_20	IAMs_20	12 09 23.5	
	comp=Z,24μm,21.0s						
A36M	Sachs Harbour	24.59	27	P	P	11 58 36.1	-0.4
	baz=242						
SEY	Seymchan	24.63	310	P	P	11 58 36.0	-0.9
	comp=Z,23nm,0.7s,baz=102,slow=9.7,SNR=23						
SEY				PcP	PcP	12 02 14.7	+0.9
	comp=Z,19nm,0.8s,baz=89,slow=3.6,SNR=11						
SEY				LR	LR	12 09 57.4	
	comp=Z,16μm,18.7s,baz=114,slow=41						
	comp=Z,23nm,0.7s						
SEY	Seymchan	24.63	310	*ce*P	P	11 58 35.8	-1.1
SEY				pmax	pmax		
	comp=Z,73nm,1.4s						
SEY				MLR	MLR		
	comp=Z,31μm,16.0s						
SEY	Seymchan	24.63	310	*i* P	P	11 58 36.0	-0.9
SKR	Severo-Kuril's	24.86	280	*e*P	P	11 58 38.1	-0.9
SKR				*e*S	S	12 03 00.2	-0.7
SKR				pmax	pmax		
	comp=Z,274nm,0.9s						
SKR				pmax	pmax		

comp=Z,2µm,12.9s
SKR MLR MLR
comp=Z,3µm,13.0s
LLLB Lilloet 25.34 80 P P 11 58 44.7 +1.3
WAPA Wapiti River 25.36 69 P P 11 58 43.4 -0.3
WAPA IAmb IAmb 11 59 03.1
comp=Z,311nm,1.5s
B04A Port Angeles 25.47 86 IAmb IAmb 11 59 00.6
comp=Z,209nm,1.4s
NLWA Neilton Lookou 25.56 88 IAmb IAmb 11 59 02.5
comp=Z,185nm,1.2s
MA2 Magadan 25.57 302 P P 11 58 44.8 -0.6
comp=Z,33nm,0.6s,baz=86,slow=12,SNR=19
comp=Z,33nm,0.6s
MA2 Magadan 25.57 302 *i* P **P 11 58 45.0 -0.4**
MA2 pmax pmax
comp=Z,222nm,3.0s
MA2 MLR MLR
comp=Z,17µm,17.0s
MA2 Magadan 25.57 302 P P 11 58 46.1 +0.7
HILA High Level 25.85 60 P P 11 58 48.8 +0.8
A05A Maple Falls 25.88 83 P P 11 58 49.0 +0.6
A05A IAmb IAmb 11 59 20.8
comp=Z,171nm,1.2s
E03A Lebam 26.16 89 P P 11 58 52.4 +1.5
E03A IAmb IAmb 11 59 13.8
comp=Z,184nm,1.0s
YKA Yellowknife Ar 26.62 51 P P 11 58 55.2 +0.3
comp=Z,52nm,0.8s,baz=270,slow=8.6,SNR=98
YKA LR LR 12 10 30.5
comp=Z,24µm,19.2s,baz=273,slow=39
comp=Z,52nm,0.8s
BRLDA Berland Lookou 26.70 70 IAmb IAmb 11 59 11.0
comp=Z,267nm,1.4s
BUCK Buck Mountain 27.76 93 IAmb IAmb 11 59 28.9
comp=Z,172nm,1.3s
HOOD Mount Hood Mea 27.94 90 IAmb IAmb 11 59 30.3
comp=Z,128nm,1.1s
H04A Detroit Lake 27.97 92 P P 11 59 08.0 +0.7
H04A IAmb IAmb 11 59 22.9
comp=Z,126nm,1.0s
HAWA Hanford 28.64 87 P P 11 59 13.9 +0.8
HAWA IAmb IAmb 11 59 27.7
comp=Z,97nm,0.8s
F07A Phinny Hill Vi 28.66 88 IAmb IAmb 11 59 27.4
comp=Z,101nm,1.1s
C09A Chrisman Ranch 28.69 83 IAmb IAmb 11 59 31.9
comp=Z,165nm,1.6s
HUMO Hull Mountain 28.70 96 IAms_20 IAms_20 12 07 34.7
comp=Z,9µm,20.0s
NEW Newport 29.15 82 P P 11 59 18.9 +1.1
comp=Z,20nm,0.8s,baz=300,slow=7.6,SNR=32
NEW LR LR 12 08 45.3
comp=Z,6µm,21.2s,baz=301,slow=32
comp=Z,20nm,0.8s
NEW Newport 29.15 82 P **P 11 59 17.1 -0.6**
baz=298,SNR=20
NEW S **S 12 04 08.9 -0.1**
baz=298
PINE Pine Mountain 29.21 92 IAmb IAmb 11 59 33.0
comp=Z,188nm,1.7s
YBH Yreka Blue Hor 29.38 97 P P 11 59 21.8 +1.9
comp=Z,6.8nm,0.8s,baz=308,slow=3.9,SNR=12
YBH LR LR 12 08 16.4
comp=Z,9µm,20.0s,baz=305,slow=30
comp=Z,6.8nm,0.8s
E09A Wood Farm, Sta 29.40 85 IAmb IAmb 11 59 34.0
comp=Z,83nm,1.0s
K05A Summer Lake 29.86 94 P P 11 59 25.6 +1.4
K05A IAmb IAmb 11 59 51.4
comp=Z,252nm,1.5s
I07A Izee 29.90 91 IAmb IAmb 11 59 39.2
comp=Z,85nm,1.1s
MOD Modoc Plateau 30.70 95 IAmb IAmb 11 59 46.7
comp=Z,113nm,1.4s
BMO Blue Mountains 30.78 88 IAmb IAmb 11 59 47.7
comp=Z,222nm,1.9s
BMO IAms_20 IAms_20 12 09 22.6
comp=Z,8µm,20.0s
J08A Circle Bar Ran 30.93 91 IAmb IAmb 11 59 48.3
comp=Z,99nm,1.2s
WVOR Wild Horse Val 31.37 92 IAmb IAmb 12 00 00.4
comp=Z,97nm,1.2s
MSO Missoula 31.73 82 P P 11 59 39.9 -0.7
baz=301,SNR=17
AFDM Forest Hills D 32.17 100 IAmb IAmb 12 00 04.3
comp=Z,102nm,1.6s
KUR Kuril'sk 32.30 275 *i* P **P 11 59 46.2 +0.7**
KIP Kipapa 32.38 171 IAms_20 IAms_20 12 13 15.0
comp=Z,9µm,18.0s
MFID Camas Ranch 32.47 89 IAmb IAmb 12 00 08.9
comp=Z,104nm,1.1s
TYV Tymovskoe 32.57 288 *e*P P 11 59 57.8 +10
TYV pmax pmax
comp=Z,800nm,3.7s
TYV pmax pmax
comp=Z,42nm,1.4s
PAHR Pah Rah Range 32.61 97 IAmb IAmb 12 00 11.3
comp=Z,86nm,1.2s
VCNR Virginia City 32.72 98 IAmb IAmb 12 00 09.9
comp=Z,196nm,1.5s
PNTR Pine Nut 32.89 98 IAmb IAmb 12 00 06.0
comp=Z,98nm,0.8s
YERR Yerington 33.16 98 IAmb IAmb 12 00 16.5
comp=Z,101nm,1.2s
HLID Hailey 33.23 87 IAmb IAmb 12 00 15.8
comp=Z,73nm,1.0s
HLID IAms_20 IAms_20 12 10 50.2
comp=Z,7µm,20.0s
HLID Hailey 33.23 87 P P 11 59 53.0 -0.8
baz=305,SNR=45
HLID S **S 12 05 12.6 -0.4**
baz=305
SAO San Andreas Ge 33.36 103 IAms_20 IAms_20 12 11 37.2
comp=Z,8µm,19.0s
WAKR Walker 33.37 99 IAmb IAmb 12 00 15.6
comp=Z,154nm,1.5s
EGMT Eagleton 33.58 77 P P 11 59 55.2 -1.5
baz=300,SNR=12
EGMT S **S 12 05 20.4 +2.2**
baz=300
TIXI Tiksi 33.61 328 P P 11 59 56.0 -0.6
comp=Z,31nm,0.8s,baz=270,slow=23,SNR=61
TIXI PcP **PcP 12 02 35.8 -0.5**
comp=Z,20nm,0.9s,baz=90,slow=22,SNR=4.5
TIXI ScP **ScP 12 06 20.5 +0.7**
comp=Z,1.1nm,0.5s,baz=270,slow=23,SNR=4.9
TIXI LR LR 12 15 26.2
comp=Z,22µm,18.6s,baz=90,slow=40
comp=Z,31nm,0.8s
TIXI Tiksi 33.61 328 P **P 11 59 55.9 -0.6**
TIXI Tiksi 33.61 328 *c i*P **P 11 59 55.6 -1.0**
TIXI pmax pmax
comp=Z,37nm,0.8s
TIXI MLR MLR
comp=Z,22µm,16.0s
RES Resolute Bay 33.63 26 P **P 11 59 56.4 -0.4**
comp=Z,14nm,0.6s,baz=284,slow=10,SNR=46
RES LR LR 12 15 18.4
comp=Z,21µm,18.6s,baz=260,slow=39
comp=Z,14nm,0.6s
BOZ Bozeman (W) 33.75 82 P P 11 59 57.4 -0.9
baz=303,SNR=22
BOZ S **S 12 05 21.5 +0.5**
baz=303
KVN Kaiserville 33.80 97 IAmb IAmb 12 00 13.6
comp=Z,115nm,1.5s
RYN Ryan 33.82 98 IAmb IAmb 12 00 19.2
comp=Z,73nm,1.1s
LHV Little Huntoon 34.08 98 IAmb IAmb 12 00 21.8
comp=Z,152nm,1.5s
NVAR Mina Array Bea 34.08 98 P P 12 00 02.5 +1.1
comp=Z,16nm,0.9s,baz=298,slow=8.2,SNR=57
NVAR ScP **ScP 12 06 22.3 -0.1**
comp=Z,3.6nm,1.1s,baz=315,slow=3.4,SNR=4.6
NVAR LR LR 12 11 00.1
comp=Z,5µm,21.3s,baz=317,slow=31
comp=Z,16nm,0.9s
YUK Yuzh-Kuril'sk 34.16 275 *e*P P 11 59 46.6 -15
YUK 12 01 12.2
YUK pmax pmax
comp=Z,457nm,1.4s
NV11 Mina Array Sit 34.17 98 IAmb IAmb 12 00 22.2
comp=Z,91nm,1.4s
MLAC Mammoth, Mammo 34.30 100 P **P 12 00 00.8 -2.5**
baz=312
POHA Pohakuloa 34.31 167 IAms_20 IAms_20 12 15 41.0
comp=Z,9µm,19.0s

YSS Yuzh-Sakhalins 34.40 281 P **P 12 00 02.7 -1.0**
YSS IAmb IAmb 12 00 21.0
comp=Z,89nm,0.9s
YSS IAMs_20 IAMs_20 12 16 04.3
comp=Z,7µm,19.0s
YSS Yuzh-Sakhalins 34.40 281 *e*P **P 12 00 04.2 +0.5**
YSS *e* 12 01 22.2
YSS *e*S **S 12 05 29.3 -1.4**
YSS *e*SS **SS 12 08 04.8 +5.3**
YSS pmax pmax
comp=Z,80nm,0.8s
YSS pmax pmax
comp=Z,1µm,5.8s
YSS smax smax
comp=N,1µm,6.2s
YSS Yuzh-Sakhalins 34.40 281 P **P 12 00 04.1 +0.4**
ELK Elko 34.42 92 LR LR 12 11 47.2
comp=N,8µm,20.5s,baz=312,slow=32
ELK Elko 34.42 92 IAMs_20 IAMs_20 12 11 35.9
comp=Z,8µm,19.0s
Q09A Carvers 34.48 96 IAmb IAmb 12 00 19.8
comp=Z,104nm,1.0s
YMR Madison River 34.65 83 IAmb IAmb 12 00 35.4
comp=Z,69nm,1.0s
VOG Valley Oaks Go 34.87 102 P **P 12 00 06.5 -1.4**
baz=314
FFC Flin Flon 34.90 63 P **P 12 00 07.7 -0.2**
FFC IAmb IAmb 12 00 22.5
comp=Z,165nm,1.4s
FFC Flin Flon 34.90 63 IAMs_20 IAMs_20 12 14 36.6
comp=Z,10µm,22.0s
FFC Flin Flon 34.90 63 P **P 12 00 07.7 -0.2**
FFC pmax pmax
comp=Z,165nm,1.5s
FFC MLR MLR
comp=Z,10µm,22.0s
H17A Grant Village 35.03 83 P **P 12 00 08.9 -0.7**
baz=304,SNR=15
H17A S **S 12 05 47.4 +6.4**
baz=304
TIN Tinemaha, Big 35.05 100 P **P 12 00 09.7 +0.1**
baz=313
TIN S **S 12 05 47.4 +6.4**
baz=313
YAK Yakutsk 35.14 311 P **P 12 00 08.4 -1.6**
YAK IAmb IAmb 12 00 10.3
comp=Z,60nm,0.6s
YAK Yakutsk 35.14 311 *e*P **P 12 00 07.8 -2.1**
YAK *e**PP **pP 12 00 13.6 -0.6**
YAK *e* 12 01 27.5
YAK *e* 12 02 40.6
YAK *e*S **S 12 05 41.5 -0.2**
YAK *e* 12 10 30.3
YAK pmax pmax
comp=Z,49nm,1.0s
YAK pmax pmax
comp=E,30nm,1.2s
YAK pmax pmax
comp=Z,745nm,4.7s
YAK pmax pmax
comp=N,294nm,4.5s
YAK pmax pmax
comp=E,414nm,4.4s
YAK smax smax
comp=E,5µm,24.9s
YAK smax smax
comp=N,2µm,25.7s
YAK MLR MLR
comp=Z,26µm,16.0s
YAK MLR MLR
comp=N,2µm,17.0s
YAK MLR MLR
comp=E,22µm,19.0s
SMMC Simmler 35.22 104 P **P 12 00 11.3 +0.3**
baz=315,SNR=5.6
SMMC S **S 12 05 49.9 +6.3**
baz=315
HVU Hansel Valley 35.26 89 IAmb IAmb 12 00 27.0
comp=Z,108nm,1.3s
LCH Last Change Ra 35.27 99 IAmb IAmb 12 00 32.0
comp=Z,176nm,1.6s
VES Vestal, Richgr 35.38 102 P **P 12 00 10.1 -2.1**
baz=314,SNR=12
VES S **S 12 05 49.5 +3.5**
baz=314
RLMT Red Lodge 35.40 81 P **P 12 00 09.9 -2.8**
baz=304,SNR=26
RLMT S **S 12 05 47.4 +0.8**
baz=304
REDW Red Top Meadow 35.46 85 IAmb IAmb 12 00 44.2
comp=Z,96nm,1.4s
CWC Cottonwood Cre 35.55 100 P **P 12 00 14.1 +0.1**
baz=313
CWC S **S 12 05 53.6 +4.7**
baz=313
GRAC Grapevine Rang 35.59 99 IAmb IAmb 12 00 34.9
comp=Z,162nm,1.3s
GRAC Grapevine Rang 35.59 99 P **P 12 00 12.3 -1.9**
baz=313
GRAC S **S 12 05 52.6 +3.2**
baz=313
PKM Mcpherson Peak 35.62 104 P **P 12 00 13.4 -1.3**
baz=315
PKM S **S 12 05 54.8 +4.6**
baz=315
BGU Big Grassy Mou 35.62 90 IAmb IAmb 12 00 29.9
comp=Z,113nm,1.3s
AHID Auburn Hatcher 35.66 86 IAmb IAmb 12 00 37.0
comp=Z,76nm,1.1s
AHID IAMs_20 IAMs_20 12 12 40.6
comp=Z,6µm,19.0s
SPUT South Promonto 35.73 89 IAmb IAmb 12 00 32.3
comp=Z,123nm,1.7s
R11A Troy Canyon, C 35.74 96 IAmb IAmb 12 00 37.2
comp=Z,94nm,1.1s
R11A Troy Canyon, C 35.74 96 P **P 12 00 16.3 +0.7**
baz=311,SNR=55
R11A S **S 12 05 54.2 +2.3**
baz=311
ISA Isabella, Lake 35.86 102 IAmb IAmb 12 00 36.3
comp=Z,112nm,1.4s
ISA Isabella, Lake 35.86 102 P **P 12 00 17.1 +0.6**
baz=314
ISA S **S 12 05 55.8 +2.3**
baz=314
SBC Santa Barbara 36.00 104 P **P 12 00 18.3 +0.7**
baz=316
ARVC Arvin 36.02 103 P **P 12 00 18.9 +1.0**
baz=315
GRNR Gornyy 36.12 291 ⇑ *i*P **P 12 00 17.8 -0.7**
GRNR *e* 12 01 33.9
GRNR *e*S **S 12 05 59.1 +2.0**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=E,30nm,0.9s
GRNR pmax pmax
comp=Z,70nm,0.7s
GRNR smax smax
comp=E,3.0nm,0.6s
MPMC Manual Prospec 36.16 100 P **P 12 00 20.3 +1.1**
baz=314,SNR=12
MPMC S **S 12 06 00.2 +1.8**
baz=314
DUG Dugway, Tooele 36.21 91 IAmb IAmb 12 00 34.0
comp=Z,143nm,1.2s
DUG Dugway, Tooele 36.21 91 P **P 12 00 21.4 +1.8**
baz=309,SNR=47
DUG S **S 12 06 02.1 +3.2**
baz=309
FURC Furnace Creek, 36.25 99 P **P 12 00 22.4 +2.7**
baz=313,SNR=16
FURC S **S 12 06 02.2 +3.0**
baz=313
TPNV Topopah Spring 36.28 98 IAmb IAmb 12 00 40.5
comp=Z,134nm,1.1s
TPNV IAMs_20 IAMs_20 12 13 50.3
comp=Z,6µm,18.0s
TPNV Topopah Spring 36.28 98 P **P 12 00 22.2 +2.0**
baz=312,SNR=79
TPNV S **S 12 06 02.9 +2.8**
baz=312
LAO LASA Array 36.33 77 IAmb IAmb 12 00 36.4
comp=Z,114nm,1.5s
LAO LASA Array 36.33 77 P **P 12 00 20.5 0.0**
baz=302,SNR=10
LAO S **S 12 06 01.3 +0.8**
baz=302
LAO LASA Array 36.33 77 P **P 12 00 19.9 -0.5**
baz=302,SNR=10
LAO S **S 12 06 02.5 +2.0**
baz=302
SCZ2 Santa Cruz Isl 36.36 105 P **P 12 00 22.2 +1.4**
baz=316
SCZ2 S **S 12 06 03.4 +2.2**
baz=316
LRMC Laurel Mtn Rad 36.45 101 P **P 12 00 22.5 +0.8**
baz=314
LRMC S **S 12 06 05.3 +2.7**
baz=314
OSI Osito Audit: C 36.45 103 P **P 12 00 21.5 -0.1**
baz=315
OSI S **S 12 06 05.8 +3.3**
baz=315
TCUT Toone Canyon 36.47 88 IAmb IAmb 12 00 37.9
comp=Z,96nm,1.1s
GWY Greenwater Val 36.55 99 IAmb IAmb 12 00 42.5
comp=Z,169nm,1.3s
DGMT Dagmar 36.56 73 IAmb IAmb 12 00 37.6
comp=Z,135nm,1.1s
DGMT Dagmar 36.56 73 IAMs_20 IAMs_20 12 13 54.9
comp=Z,7µm,21.0s
DGMT Dagmar 36.56 73 P **P 12 00 23.1 +0.7**
baz=301,SNR=22
DGMT S **S 12 06 03.5 -0.4**
baz=301
DGMT Dagmar 36.56 73 P **P 12 00 21.8 -0.6**
baz=301,SNR=22
DGMT S **S 12 06 04.4 +0.5**
baz=301
BW06 Boulder Array 36.58 85 P **P 12 00 20.7 -2.1**
baz=306,SNR=32
BW06 S **S 12 06 05.2 +0.5**
baz=306
PDAR Pinedale Array 36.58 85 P **P 12 00 23.0 +0.2**
comp=Z,7.4nm,0.9s,baz=308,slow=5.5,SNR=34
PDAR ScP **ScP 12 06 30.3 -1.1**
comp=Z,3.3nm,1.1s,baz=338,slow=3.2,SNR=4.9
PDAR LR LR 12 13 34.8
comp=Z,4µm,18.5s,baz=312,slow=33
PDAR P3KPbc 12 30 54.0
comp=Z,1.2nm,0.9s,baz=124,slow=7.4,SNR=5.4
comp=Z,7.4nm,0.9s
PRN Pahroc Range 36.68 96 IAmb IAmb 12 00 38.4
comp=Z,96nm,0.9s
EDW2 Edwards Air Fo 36.69 102 P **P 12 00 25.9 +2.3**
baz=315
ERM Erimo 36.95 274 P **P 12 00 24.5 -1.1**
ERM IAmb IAmb 12 00 28.1
comp=Z,161nm,0.8s
ERM Erimo 36.95 274 IAMs_20 IAMs_20 12 14 41.5
comp=Z,9µm,21.0s
ERM Erimo 36.95 274 P **P 12 00 24.5 -1.1**
ERM pmax pmax
comp=Z,161nm,0.8s
ERM MLR MLR
comp=Z,9µm,21.0s
ERM Erimo 36.95 274 P **P 12 00 26.3 +0.7**
JEM Erimo 36.95 274 P **P 12 00 26.3 +0.7**
SHOC Shoshone, Teco 36.98 99 P **P 12 00 28.4 +2.3**
baz=314,SNR=13
SHOC S **S 12 06 13.9 +3.3**
baz=314
GSC Goldstone, Bar 37.09 100 IAmb IAmb 12 00 47.1
comp=Z,128nm,1.4s
GSC Goldstone, Bar 37.09 100 P **P 12 00 27.5 +0.5**
baz=314,SNR=10
GSC S **S 12 06 13.9 +1.6**
baz=314
JOHN Johnston Islan 37.12 190 IAMs_20 IAMs_20 12 13 45.5
comp=Z,7µm,20.0s
BFSC Mount Baldy Ra 37.33 103 P **P 12 00 29.3 +0.1**
baz=315
BFSC S **S 12 06 19.6 +3.5**
baz=315
TCRU Three Creeks R 37.44 93 IAmb IAmb 12 00 47.5
comp=Z,80nm,1.0s
CIS Catalina Islan 37.49 104 P **P 12 00 29.3 -1.1**
baz=316
TUQ Turquoise Moun 37.51 99 P **P 12 00 32.2 +1.6**
baz=314,SNR=16
TUQ S **S 12 06 21.9 +3.2**
baz=314
CCUT Cedar City 37.59 95 IAmb IAmb 12 00 49.3
comp=Z,152nm,1.4s
MVU Marysvale 37.65 92 IAmb IAmb 12 00 59.7
comp=Z,166nm,1.1s
HEC Hector,Ludlow 37.69 101 P **P 12 00 35.1 +3.0**
baz=314
HEC S **S 12 06 24.4 +3.0**
baz=314
SCI2 San Clemente I 37.72 105 P **P 12 00 31.6 -0.7**
baz=317
TMUT Trail Mountain 37.73 91 IAmb IAmb 12 00 47.2
comp=Z,119nm,1.1s
BBRC Big Bear Solar 37.75 102 P **P 12 00 32.8 0.0**
baz=315
BBRC S **S 12 06 25.9 +3.3**
baz=315
ELS Elsinore Mount 37.89 103 IAmb IAmb 12 00 53.7
comp=Z,141nm,1.4s
P17A Butcher Ranch, 37.90 90 IAmb IAmb 12 00 49.4
comp=Z,353nm,2.0s
RDMU Red Mountain 37.91 88 IAmb IAmb 12 00 48.2
comp=Z,103nm,1.0s
V12A Nelson 37.94 98 IAmb IAmb 12 00 54.6
comp=Z,124nm,1.2s
MTPU Mount Pierson 37.97 93 IAmb IAmb 12 00 50.6
comp=Z,226nm,1.9s
Q16A Castle Valley 38.00 91 IAmb IAmb 12 00 49.5
comp=Z,236nm,1.3s
LCMT Little Creek M 38.02 95 IAmb IAmb 12 00 49.8
comp=Z,125nm,1.3s
MURC Murrieta 38.06 103 P **P 12 00 34.1 -1.1**
baz=316
P18A Preston Nutter 38.10 89 IAmb IAmb 12 00 50.2
comp=Z,109nm,1.0s
GMRC Granite Mounta 38.12 100 P **P 12 00 37.9 +2.1**
baz=314,SNR=9.1
GMRC S **S 12 06 30.5 +2.5**
baz=314
SRU San Rafael Swe 38.26 90 IAmb IAmb 12 00 51.5
comp=Z,283nm,1.6s
KNB Kanab 38.27 95 IAmb IAmb 12 00 51.2
comp=Z,191nm,1.7s
PKCU Pink Cliffs 38.28 94 IAmb IAmb 12 01 06.2
comp=Z,206nm,1.6s
K22A Casper 38.45 83 P **P 12 00 38.2 -0.3**
baz=307,SNR=10
K22A S **S 12 06 32.6 -0.3**
baz=307
K22A Casper 38.45 83 P **P 12 00 37.5 -1.0**
baz=307,SNR=10
K22A S **S 12 06 32.5 -0.3**
baz=307
BELC Belle Mtn. Jos 38.47 101 P **P 12 00 40.4 +1.6**
baz=315,SNR=15
BELC S **S 12 06 35.6 +2.2**
baz=315
PFO Pinyon Flats O 38.48 102 LR LR 12 13 34.1
comp=Z,7µm,18.4s,baz=298,slow=32
PFO Pinyon Flats O 38.48 102 P **P 12 00 39.0 +0.1**
PFO Pinyon Flats O 38.48 102 IAMs_20 IAMs_20 12 13 48.7
comp=Z,8µm,19.0s
PFO Pinyon Flats O 38.48 102 P **P 12 00 39.0 +0.1**
PFO pmax pmax
comp=Z,104nm,1.5s
PFO Pinyon Flats O 38.48 102 P **P 12 00 38.3 -0.6**
baz=316,SNR=6.2
PFO S **S 12 06 36.0 +2.5**
baz=316
TPFO Pinon Flats 38.49 102 P **P 12 00 37.3 -1.6**
baz=316,SNR=7.3
TPFO S **S 12 06 35.1 +1.5**
baz=316
109C Camp Elliot, M 38.62 104 P **P 12 00 40.6 +0.7**
baz=316
109C S **S 12 06 39.3 +3.9**
baz=316
NEE2 Needles Airpor 38.74 99 P **P 12 00 42.2 +1.3**
baz=314
NEE2 S **S 12 06 41.4 +4.2**
baz=314
IRM Iron Mountain 38.86 100 P **P 12 00 42.5 +0.6**
baz=315,SNR=30

IRM				S	S	12 06 40.9	+1.9
	baz=315							
JTM	**Tenmabayashi**	**38.94**	**274**	P	**P**	**12 00 41.9**	**-0.6**
O20A	**White River Ci**	**38.97**	**87**	IAmb	IAmb	12 00 58.5	
	comp=Z,162nm,1.0s						
O20A	**White River Ci**	**38.97**	**87**	P	**P**	**12 00 42.4**	**-0.6**
	baz=309,SNR=83						
O20A				S	**S**	**12 06 41.2**	**+0.3**
	baz=309						
U15A	**North Rim**	**38.98**	**95**	IAmb	IAmb	12 00 58.9	
	comp=Z,265nm,1.7s						
MONP2	**Monument Peak**	**39.02**	**103**	P	**P**	**12 00 45.3**	**+1.8**
	baz=316,SNR=10						
BC3	**Big Chuckawall**	**39.03**	**101**	P	**P**	**12 00 45.4**	**+1.9**
	baz=315,SNR=9.2						
BC3				S	**S**	**12 06 42.7**	**+0.9**
	baz=315						
TEY	**Ternei**	**39.04**	**283**	*e*P	**P**	**12 00 40.8**	**-2.4**
TEY				*e*		12 06 48.9	
RSSD	**Black Hills**	**39.04**	**79**	P	**P**	**12 00 43.5**	**-0.1**
RSSD	**Black Hills**	**39.04**	**79**	IAMs_20	IAMs_20	12 19 26.8	
	comp=Z,6μm,18.0s						
RSSD	**Black Hills**	**39.04**	**79**	P	**P**	**12 00 43.5**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,31nm,0.8s						
RSSD				MLR	MLR		
	comp=Z,6μm,18.0s						
RSSD	**Black Hills**	**39.04**	**79**	P	**P**	**12 00 43.8**	**+0.2**
	baz=306,SNR=19						
RSSD				S	**S**	**12 06 41.3**	**-0.6**
	baz=306						
RSSD	**Black Hills**	**39.04**	**79**	P	**P**	**12 00 42.5**	**-1.1**
	baz=306						
RSSD				S	**S**	**12 06 41.4**	**-0.6**
	baz=306						
SWSC	**Sam W. Stewart**	**39.34**	**102**	P	**P**	**12 00 49.0**	**+3.1**
	baz=316,SNR=7.2						
PDMCI	**Parker Dam,Lak**	**39.35**	**99**	P	**P**	**12 00 44.4**	**-1.5**
	baz=315						
PDMCI				S	**S**	**12 06 48.9**	**+2.6**
	baz=315						
IKP	**In-Ko-Pah, Jac**	**39.37**	**103**	P	**P**	**12 00 46.9**	**+0.6**
	baz=316						
KLR	**Kul'dur**	**39.50**	**291**	P	**P**	**12 00 45.9**	**-1.2**
	comp=Z,44nm,1.0s,baz=45,slow=8.4,SNR=32						
KLR				LR	LR	12 19 08.3	
	comp=Z,6μm,18.1s,baz=63,slow=39						
	comp=Z,44nm,1.0s						
KLR	**Kul'dur**	**39.50**	**291**	*c i*P	**P**	**12 00 45.8**	**-1.2**
KLR				pmax	pmax		
	comp=Z,68nm,1.2s						
KLR				MLR	MLR		
	comp=Z,7μm,15.0s						
MDND	**Maddock**	**39.50**	**72**	P	**P**	**12 00 48.4**	**+1.3**
	baz=303,SNR=90						
MDND				S	**S**	**12 06 48.5**	**+0.2**
	baz=303						
MDND	**Maddock**	**39.50**	**72**	P	**P**	**12 00 51.1**	**+4.0**
	baz=303,SNR=90						
MDND				S	**S**	**12 06 49.8**	**+1.5**
	baz=303						
BLYC	**Blythe**	**39.51**	**100**	IAmb	IAmb	12 01 07.3	
	comp=Z,226nm,1.6s						
E28A	**Huff**	**39.58**	**74**	P	**P**	**12 00 49.0**	**+1.2**
	baz=304,SNR=39						
E28A				S	**S**	**12 06 49.5**	**-0.1**
	baz=304						
PV10	**Paradox Valley**	**39.62**	**90**	IAmb	IAmb	12 01 07.6	
	comp=Z,99nm,1.0s						
ZEA	**Zeya**	**39.64**	**299**	*ce*P	**P**	**12 00 47.1**	**-1.1**
ZEA				*e*		12 02 22.1	
ZEA				*e*S	**S**	**12 06 44.1**	**-6.2**
ZEA				*e*SS	SnSn	12 10 11.9	+25
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.0s						
ZEA				pmax	pmax		
	comp=E,200nm,2.9s						
ZEA				pmax	pmax		
	comp=N,200nm,5.1s						
ZEA				pmax	pmax		
	comp=Z,400nm,4.0s						
ZEA				pmax	pmax		
	comp=E,500nm,6.6s						
ZEA				pmax	pmax		
	comp=N,300nm,9.1s						
ZEA				pmax	pmax		
	comp=Z,600nm,6.7s						
ZEA				smax	smax		
	comp=N,800nm,11.9s						
ZEA				smax	smax		
	comp=E,900nm,14.4s						
ZEA				MLR	MLR		
	comp=N,4μm,16.0s						
ZEA				MLR	MLR		
	comp=E,6μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,8μm,16.0s						
TULEG	**Thule**	**39.65**	**21**	IAMs_20	IAMs_20	12 19 16.4	
	comp=Z,10μm,18.0s						
PV11	**David Mesa, Pa**	**39.77**	**90**	IAmb	IAmb	12 01 05.2	
	comp=Z,120nm,1.0s						
GLA	**Glamis**	**39.83**	**101**	P	**P**	**12 00 51.0**	**+0.9**
	baz=316,SNR=6.9						
GLA				S	**S**	**12 06 57.5**	**+3.8**
	baz=316						
N23A	**Red Feather La**	**39.86**	**85**	P	**P**	**12 00 52.9**	**+2.4**
	baz=308						
N23A				S	**S**	**12 06 55.5**	**+1.1**
	baz=308						
PV13	**Radium Mtn., P**	**39.89**	**90**	IAmb	IAmb	12 01 04.3	
	comp=Z,182nm,1.0s						
PV15	**Paradox Valley**	**39.98**	**90**	IAmb	IAmb	12 01 09.4	
	comp=Z,102nm,1.0s						
WUAZ	**Wupatki**	**40.14**	**95**	IAMs_20	IAMs_20	12 14 47.0	
	comp=Z,6μm,20.0s						
WUAZ	**Wupatki**	**40.14**	**95**	P	**P**	**12 00 54.5**	**+1.7**
	baz=313						
WUAZ				S	**S**	**12 07 02.3**	**+3.8**
	baz=313						
ULM	**Lac du Bonnet**	**40.29**	**66**	P	**P**	**12 00 53.5**	**-0.1**
	comp=Z,43nm,0.8s,baz=302,slow=9.2,SNR=43						
ULM				LR	LR	12 18 19.9	
	comp=Z,4μm,18.8s,baz=308,slow=37						
	comp=Z,43nm,0.8s						
ULM	**Lac du Bonnet**	**40.29**	**66**	IAmb	IAmb	12 01 08.0	
	comp=Z,324nm,1.6s						
MVCO	**Mesa Verde**	**40.71**	**91**	P	**P**	**12 00 56.7**	**-0.9**
	baz=312,SNR=24						
MVCO				S	**S**	**12 07 09.6**	**+2.5**
	baz=312						
ISCO	**Idaho Springs**	**40.74**	**86**	S	**S**	**12 07 08.9**	**+1.2**
	baz=310						
ISCO	**Idaho Springs**	**40.74**	**86**	S	**S**	**12 07 09.1**	**+1.4**
	baz=309						
H11N2	**WAKE ISLAND Hy**	**40.85**	**226**	T	T	12 44 42.5	
	baz=26,slow=76,SNR=241						
H11N3	**WAKE ISLAND Hy**	**40.86**	**226**	T	T	12 45 12.8	
	baz=26,slow=76,SNR=273						
H11N1	**WAKE ISLAND Hy**	**40.87**	**226**	T	T	12 44 43.7	
	baz=26,slow=76,SNR=169						
JMM	**Marumori**	**40.98**	**271**	IAmb	IAmb	12 01 01.4	
	comp=Z,128nm,1.1s						
JMM	**Marumori**	**40.98**	**271**	P	**P**	**12 00 59.4**	**0.0**
S22A	**4UR Ranch, Cre**	**41.35**	**89**	P	**P**	**12 01 03.9**	**+1.0**
	baz=311,SNR=36						
S22A				S	**S**	**12 07 19.0**	**+2.2**
	baz=311						
AGMN	**Agassiz Nation**	**41.35**	**69**	IAMs_20	IAMs_20	12 17 04.5	
	comp=Z,7μm,21.0s						
AGMN	**Agassiz Nation**	**41.35**	**69**	P	**P**	**12 01 02.0**	**-0.3**
	baz=304,SNR=41						
AGMN				S	**S**	**12 07 14.9**	**-1.1**
	baz=304						
AGMN	**Agassiz Nation**	**41.35**	**69**	P	**P**	**12 01 02.1**	**-0.3**
	baz=304,SNR=41						
AGMN				S	**S**	**12 07 15.3**	**-0.7**
	baz=304						
WAKE	**Wake Island**	**41.35**	**226**	IAMs_20	IAMs_20	12 14 59.0	
	comp=Z,5μm,20.0s						
D32A	**Dogwood Acres,**	**41.35**	**71**	IAmb	IAmb	12 01 16.6	
	comp=Z,345nm,1.6s						
D32B	**Dogwood Acres,**	**41.35**	**71**	P	**P**	**12 01 02.6**	**+0.2**
	baz=304,SNR=8.8						
D32B				S	**S**	**12 07 13.3**	**-2.7**
	baz=304						
W18A	**Petrified Fore**	**41.39**	**94**	IAmb	IAmb	12 01 17.5	
	comp=Z,173nm,1.6s						
W18A	**Petrified Fore**	**41.39**	**94**	P	**P**	**12 01 02.6**	**-0.5**
	baz=314,SNR=11						
W18A				S	**S**	**12 07 17.9**	**+0.8**
	baz=314						
Q24A	**Divide**	**41.56**	**86**	P	**P**	**12 01 04.5**	**-0.1**
	baz=310						
Q24A				S	**S**	**12 07 21.2**	**+1.4**
	baz=310						
X18A	**Snowflake**	**41.67**	**95**	IAmb	IAmb	12 01 20.1	
	comp=Z,176nm,1.6s						
214A	**Organ Pipe Nat**	**41.80**	**100**	IAmb	IAmb	12 01 26.1	
	comp=Z,140nm,1.5s						
214A	**Organ Pipe Nat**	**41.80**	**100**	P	**P**	**12 01 07.9**	**+1.6**
	baz=316,SNR=10.0						
214A				S	**S**	**12 07 26.3**	**+3.3**
	baz=316						
SUSD	**Miller**	**41.81**	**76**	IAmb	IAmb	12 01 08.2	
	comp=Z,194nm,0.9s						
SUSD	**Miller**	**41.81**	**76**	P	**P**	**12 01 06.4**	**+0.2**
	baz=306,SNR=14						
SUSD				S	**S**	**12 07 20.9**	**-1.9**
	baz=306						
SUSD	**Miller**	**41.81**	**76**	P	**P**	**12 01 05.6**	**-0.6**
	baz=306,SNR=14						
SUSD				S	**S**	**12 07 21.5**	**-1.3**
	baz=306						
H11S1	**WAKE ISLAND Hy**	**42.02**	**225**	T	T	12 46 12.0	
	baz=26,slow=76,SNR=414						
H11S2	**WAKE ISLAND Hy**	**42.03**	**225**	T	T	12 46 17.8	
	baz=26,slow=76,SNR=349						
H11S3	**WAKE ISLAND Hy**	**42.04**	**225**	T	T	12 46 13.3	
	baz=26,slow=76,SNR=256						
SDCO	**Great Sand Dun**	**42.14**	**88**	P	**P**	**12 01 10.0**	**+0.7**
	baz=311,SNR=30						
SDCO				S	**S**	**12 07 30.4**	**+2.0**
	baz=311						
SDCO	**Great Sand Dun**	**42.14**	**88**	P	**P**	**12 01 09.0**	**-0.4**
	baz=311,SNR=30						
SDCO				S	**S**	**12 07 30.5**	**+2.0**
	baz=311						
OGNE	**Ogallala**	**42.14**	**82**	P	**P**	**12 01 10.2**	**+1.1**
	baz=309						
OGNE				S	**S**	**12 07 28.4**	**+0.4**
	baz=309						
OGNE	**Ogallala**	**42.14**	**82**	P	**P**	**12 01 09.2**	**+0.1**
	baz=309						
OGNE				S	**S**	**12 07 29.2**	**+1.2**
	baz=309						
USRK	**Ussuriysk Ar.**	**42.20**	**284**	P	**P**	**12 01 07.7**	**-1.7**
	comp=Z,4.0nm,0.5s,baz=58,slow=7.6,SNR=7.2						
USRK				PcP	**PcP**	**12 03 03.5**	**+0.3**
	comp=Z,9.7nm,0.9s,baz=32,slow=1.4,SNR=4.7						
USRK				LR	LR	12 18 49.2	
	comp=Z,5μm,21.0s,baz=50,slow=36						
	comp=Z,4.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**42.20**	**284**	P	**P**	**12 01 07.3**	**-2.1**
JSD	**Sado**	**42.37**	**273**	P	**P**	**12 01 11.2**	**+0.4**
JYT	**Yasato**	**42.42**	**269**	IAmb	IAmb	12 01 13.7	
	comp=Z,105nm,0.9s						
JYT	**Yasato**	**42.42**	**269**	P	**P**	**12 01 11.8**	**+0.6**
B35A	**Bob, Littlefor**	**42.50**	**68**	IAmb	IAmb	12 01 25.9	
	comp=Z,110nm,1.1s						
B35A	**Bob, Littlefor**	**42.50**	**68**	P	**P**	**12 01 11.5**	**-0.3**
	baz=304,SNR=21						
B35A				S	**S**	**12 07 31.0**	**-1.9**
	baz=304						
F33A	**5 Mile Ranch,**	**42.51**	**72**	IAmb	IAmb	12 01 26.1	
	comp=Z,266nm,1.6s						
F33A	**5 Mile Ranch,**	**42.51**	**72**	P	**P**	**12 01 11.3**	**-0.5**
	baz=306,SNR=17						
F33A				S	**S**	**12 07 30.6**	**-2.5**
	baz=306						
TUC	**Tucson**	**42.74**	**98**	P	**P**	**12 01 14.3**	**+0.3**
TUC	**Tucson**	**42.74**	**98**	P	**P**	**12 01 14.3**	**+0.3**
TUC				pmax	pmax		
	comp=Z,69nm,1.3s						
TUC	**Tucson**	**42.74**	**98**	P	**P**	**12 01 13.4**	**-0.6**
	baz=316						
TUC				S	**S**	**12 07 40.1**	**+3.3**
	baz=316						
NEEM	**North Greenlan**	**42.75**	**17⇑**	*i*P	**P**	**12 01 13.3**	**-0.5**
NEEM				IAmb	IAmb	12 01 15.6	
	comp=Z,111nm,1.0s						
K31A	**O'Neill**	**43.02**	**78**	IAmb	IAmb	12 01 35.2	
	comp=Z,114nm,1.1s						
K31A	**O'Neill**	**43.02**	**78**	P	**P**	**12 01 16.5**	**+0.4**
	baz=308,SNR=6.3						
K31A				S	**S**	**12 07 40.0**	**-0.7**
	baz=308						
KSCO	**Kaye Shedlock'**	**43.02**	**84**	P	**P**	**12 01 17.8**	**+1.5**
	baz=311						
KSCO				S	**S**	**12 07 42.9**	**+1.9**
	baz=311						
KSCO	**Kaye Shedlock'**	**43.02**	**84**	P	**P**	**12 01 14.3**	**-2.0**
	baz=310						
KSCO				S	**S**	**12 07 43.0**	**+1.9**
	baz=310						
KULLO	**Kullorsuaq**	**43.14**	**22**	*i* P	**P**	**12 01 16.8**	**+0.2**
T25A	**Trinidad**	**43.19**	**88**	IAmb	IAmb	12 01 33.6	
	comp=Z,134nm,1.2s						
T25A	**Trinidad**	**43.19**	**88**	P	**P**	**12 01 18.6**	**+0.8**
	baz=312,SNR=39						
T25A				S	**S**	**12 07 46.5**	**+2.8**
	baz=312						
MDJ	**Mudanjiang**	**43.33**	**286**	IAMs_20	IAMs_20	12 17 47.9	
	comp=Z,9μm,22.0s						
MDJ	**Mudanjiang**	**43.33**	**286**	P	**P**	**12 01 17.3**	**-1.2**
MDJ				PP	**PP**	**12 02 59.8**	**+0.7**
MDJ				S	**S**	**12 07 48.8**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,27nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,910nm,8.8s						
MDJ				LR	LR		
	comp=Z,7μm,18.1s						
MDJ				LR	LR		
	comp=Z,10μm,20.6s						
MDJ				LR	LR		
	comp=Z,11μm,15.7s						
MDJ	**Mudanjiang**	**43.33**	**286**	P	**P**	**12 01 17.6**	**-0.9**
MAJO	**Matsushiro**	**43.39**	**271**	P	**P**	**12 01 19.3**	**+0.1**
MAJO				IAmb	IAmb	12 01 21.8	
	comp=Z,174nm,0.8s						
MAJO	**Matsushiro**	**43.39**	**271**	IAMs_20	IAMs_20	12 16 43.8	
	comp=Z,7μm,22.0s						
MAJO	**Matsushiro**	**43.39**	**271**	P	**P**	**12 01 19.3**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,174nm,0.9s						
MAJO	**Matsushiro**	**43.39**	**271**	P	**P**	**12 01 19.8**	**+0.6**
	comp=Z,227nm,1.0s						
MJAR	**Matsushiro Arr**	**43.39**	**271**	P	**P**	**12 01 18.9**	**-0.2**
	comp=Z,66nm,1.0s,baz=36,slow=6.8,SNR=52						
MJAR				LR	LR	12 17 30.0	
	comp=Z,6μm,21.9s,baz=56,slow=34						
	comp=Z,66nm,1.0s						
MJAR	**Matsushiro Arr**	**43.39**	**271**	P	**P**	**12 01 19.0**	**-0.2**
MJB9	**Matsu-Tunnel**	**43.39**	**271**	P	**P**	**12 01 20.2**	**+1.0**
MJB9				IAmb	IAmb	12 01 22.8	
	comp=Z,176nm,0.9s						
ANMO	**Albuquerque**	**43.46**	**92**	LR	LR	12 17 58.8	
	comp=Z,4μm,18.2s,baz=313,slow=34						
ANMO	**Albuquerque**	**43.46**	**92**	P	**P**	**12 01 19.2**	**-0.7**
ANMO	**Albuquerque**	**43.46**	**92**	P	**P**	**12 01 19.2**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,52nm,1.2s						
ANMO	**Albuquerque**	**43.46**	**92**	P	**P**	**12 01 20.6**	**+0.7**
	baz=314,SNR=25						
ANMO				S	**S**	**12 07 47.2**	**-0.5**
	baz=314						
ANMO	**Albuquerque**	**43.46**	**92**	P	**P**	**12 01 18.7**	**-1.2**
	baz=314						
ANMO				S	**S**	**12 07 49.1**	**+1.5**
	baz=314						
ECSD	**EROS Data Cent**	**43.58**	**75**	P	**P**	**12 01 19.5**	**-1.1**
ECSD				IAmb	IAmb	12 01 34.7	
	comp=Z,134nm,1.6s						
ECSD	**EROS Data Cent**	**43.58**	**75**	IAMs_20	IAMs_20	12 17 50.7	
	comp=Z,6μm,22.0s						
ECSD	**EROS Data Cent**	**43.58**	**75**	P	**P**	**12 01 20.3**	**-0.3**
	baz=308,SNR=35						
ECSD				S	**S**	**12 07 46.7**	**-2.2**
	baz=308						
ECSD	**EROS Data Cent**	**43.58**	**75**	P	**P**	**12 01 18.6**	**-2.0**
	baz=307,SNR=35						
ECSD				S	**S**	**12 07 47.0**	**-1.9**
	baz=307						
MSHR	**Mys Shultsa**	**43.67**	**283**	*c i*P	**P**	**12 01 20.9**	**-0.3**
MSHR				pmax	pmax		
	comp=Z,86nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,2μm,17.0s						
Y22D	**IRIS PASSCAL I**	**43.78**	**93**	IAmb	IAmb	12 01 59.7	
	comp=Z,221nm,1.3s						
Y22D				IAMs_20	IAMs_20	12 17 19.7	
	comp=Z,5μm,20.0s						
Y22D	**IRIS PASSCAL I**	**43.78**	**93**	P	**P**	**12 01 22.5**	**0.0**
	baz=314						
Y22D				S	**S**	**12 07 57.8**	**+5.4**
	baz=314						
Y22F	**Passcal Instru**	**43.78**	**93**	P	**P**	**12 01 21.9**	**-0.6**
	baz=314						
Y22F				S	**S**	**12 07 57.5**	**+5.1**
	baz=314						
NOR	**Nord**	**43.84**	**7⇑**	*i*P	**P**	**12 01 21.8**	**-0.5**
NOR				IAmb	IAmb	12 01 32.6	
	comp=Z,344nm,2.0s						
Y22A	**Socorro**	**43.85**	**93**	P	**P**	**12 01 24.1**	**+1.1**
	baz=314,SNR=46						
Y22A				S	**S**	**12 07 58.0**	**+4.6**
	baz=314						
BNX	**BinXian**	**43.90**	**289**	⇓P	**P**	**12 01 22.3**	**-0.8**
BNX				pP	**pP**	**12 01 26.8**	**-0.8**
BNX				sP	**sP**	**12 01 28.0**	**-1.3**
BNX				PP	**PP**	**12 03 06.5**	**+1.4**
BNX				S	**S**	**12 07 54.8**	**+1.4**
BNX				sS	**pS**	**12 07 59.8**	**+0.8**
BNX				pmax	pmax		
	comp=Z,26nm,1.1s						
BNX				pmax	pmax		
	comp=Z,830nm,8.7s						
BNX				LR	LR		
	comp=Z,4μm,14.9s						
BNX				LR	LR		
	comp=Z,8μm,15.6s						
BNX				LR	LR		
	comp=Z,5μm,15.4s						
EYMN	**Ely**	**43.96**	**67**	P	**P**	**12 01 22.6**	**-1.1**
EYMN				IAmb	IAmb	12 01 38.5	
	comp=Z,248nm,1.4s						
EYMN	**Ely**	**43.96**	**67**	IAMs_20	IAMs_20	12 20 44.5	
	comp=Z,5μm,19.0s						
EYMN	**Ely**	**43.96**	**67**	P	**P**	**12 01 23.8**	**+0.2**
	baz=306,SNR=10						
EYMN				S	**S**	**12 07 52.8**	**-1.5**
	baz=306						
EYMN	**Ely**	**43.96**	**67**	P	**P**	**12 01 23.6**	**0.0**
	baz=305,SNR=10						
EYMN				S	**S**	**12 07 52.6**	**-1.8**
	baz=305						
BOD	**Bodaibo**	**44.05**	**310**	*e*P	**P**	**12 01 22.9**	**-1.2**
BOD				pmax	pmax		
	comp=Z,102nm,1.9s						
F36A	**Milaca**	**44.06**	**71**	IAmb	IAmb	12 01 39.5	
	comp=Z,208nm,1.4s						
F36A	**Milaca**	**44.06**	**71**	P	**P**	**12 01 24.5**	**+0.1**
	baz=307,SNR=20						
F36A				S	**S**	**12 07 54.5**	**-1.3**
	baz=307						
BGNE	**Belgrade**	**44.13**	**79**	IAmb	IAmb	12 01 41.3	
	comp=Z,138nm,0.9s						
BGNE	**Belgrade**	**44.13**	**79**	P	**P**	**12 01 25.4**	**+0.3**
	baz=309,SNR=7.5						
BGNE				S	**S**	**12 07 56.1**	**-0.9**
	baz=309						
BGNE	**Belgrade**	**44.13**	**79**	P	**P**	**12 01 24.6**	**-0.5**
	baz=309,SNR=7.5						
BGNE				S	**S**	**12 07 55.7**	**-1.3**
	baz=309						
121A	**Cookes Peak, D**	**44.35**	**95**	P	**P**	**12 01 27.8**	**+0.7**
	baz=316,SNR=19						
121A	**Cookes Peak, D**	**44.35**	**95**	P	**P**	**12 01 27.2**	**+0.1**
	baz=315,SNR=19						
JGF	**Kuroka**	**44.54**	**271**	IAmb	IAmb	12 01 46.2	
	comp=Z,100nm,0.9s						
JGF	**Kuroka**	**44.54**	**271**	P	**P**	**12 01 29.2**	**+0.8**
E38A	**The Farm, Brul**	**44.72**	**68**	P	**P**	**12 01 29.6**	**-0.1**
	baz=307,SNR=17						
E38A				S	**S**	**12 08 03.2**	**-2.1**
	baz=307						
JHJ	**Hachijo jima 2**	**44.81**	**266**	LR	LR	12 17 57.1	
	comp=Z,3μm,21.9s,baz=62,slow=33						
L34A	**Svendsen Farm,**	**44.81**	**77**	IAmb	IAmb	12 01 43.0	
	comp=Z,122nm,0.8s						
L34A	**Svendsen Farm,**	**44.81**	**77**	P	**P**	**12 01 30.1**	**-0.4**
	baz=309,SNR=18						
L34A				S	**S**	**12 08 05.3**	**-1.6**
	baz=309						
SPMN	**Marine on St.**	**44.85**	**71**	P	**P**	**12 01 30.6**	**-0.1**
	baz=307,SNR=9.0						
SPMN				S	**S**	**12 08 06.5**	**-0.7**
	baz=307						
SPMN	**Marine on St.**	**44.85**	**71**	P	**P**	**12 01 30.2**	**-0.4**
	baz=307,SNR=9.0						
SPMN				S	**S**	**12 08 06.6**	**-0.6**
	baz=307						
CBKS	**Cedar Bluff**	**44.86**	**82**	IAmb	IAmb	12 01 51.9	
	comp=Z,110nm,1.1s						
CBKS	**Cedar Bluff**	**44.86**	**82**	P	**P**	**12 01 31.5**	**+0.6**
	baz=311						
CBKS				S	**S**	**12 08 07.2**	**-0.6**
	baz=311						
CBKS	**Cedar Bluff**	**44.86**	**82**	P	**P**	**12 01 30.8**	**-0.2**
	baz=311						
CBKS				S	**S**	**12 08 10.0**	**+2.3**
	baz=311						
INU	**Inuyama**	**44.91**	**271**	P	**P**	**12 01 30.3**	**-1.0**
INU	**Inuyama**	**44.91**	**271**	P	**P**	**12 01 31.5**	**+0.2**
N33B	**J Bar K, Exete**	**44.96**	**79**	P	**P**	**12 01 31.3**	**-0.4**
	baz=310,SNR=6.3						
N33B				S	**S**	**12 08 08.1**	**-0.9**
	baz=310						
I37B	**Waseca**	**45.25**	**73**	P	**P**	**12 01 33.8**	**-0.1**
	baz=308,SNR=38						
I37B				S	**S**	**12 08 11.9**	**-1.2**
	baz=308						
EPT	**El Paso**	**45.65**	**95**	IAMs_20	IAMs_20	12 18 05.3	
	comp=Z,4μm,20.0s						
KIDD	**KIDD Seismic O**	**45.65**	**95**	P	**P**	**12 01 39.1**	**+1.7**
	baz=316,SNR=5.5						
R32A	**Long Quarter,**	**45.73**	**82**	IAmb	IAmb	12 01 58.2	
	comp=Z,111nm,1.3s						
R32A	**Long Quarter,**	**45.73**	**82**	P	**P**	**12 01 37.5**	**-0.3**
	baz=311,SNR=5.7						
R32A				S	**S**	**12 08 20.5**	**+0.3**
	baz=311						
FRB	**Frobisher Bay**	**45.77**	**38**	LR	LR	12 23 33.8	
	comp=Z,26μm,18.4s,baz=302,slow=40						
N35A	**Tabor**	**45.94**	**77**	P	**P**	**12 01 39.6**	**+0.2**
	baz=310,SNR=18						
N35A				S	**S**	**12 08 19.9**	**-3.2**
	baz=310						
HIA	**Hailar**	**46.00**	**297**	P	**P**	**12 01 39.2**	**-0.6**
D41A	**Chassel**	**46.09**	**66**	S	**S**	**12 08 23.8**	**-1.3**
	baz=307						
CN2	**Changchun**	**46.18**	**288**	*e*P	**P**	**12 01 39.5**	**-1.8**
CN2				*e*PP	**PP**	**12 03 26.5**	**-3.0**
CN2				*e*S	**S**	**12 08 22.5**	**-4.0**
CN2				*es*S	pS	12 08 29.8	-1.9
CN2				*e*SS	**ScS**	**12 11 39.3**	**+3.7**
CN2				pmax	pmax		
	comp=Z,90nm,1.2s						
CN2				pmax	pmax		
	comp=Z,1μm,4.5s						
CN2				LR	LR		
	comp=Z,6μm,17.0s						
CN2				LR	LR		
	comp=Z,5μm,17.0s						
CN2				LR	LR		
	comp=Z,6μm,18.0s						
G40A	**Rib Lake**	**46.28**	**69**	P	**P**	**12 01 42.0**	**-0.1**
	baz=308,SNR=14						
G40A				S	**S**	**12 08 25.9**	**-2.0**
	baz=308						
MSTX	**Muleshoe**	**46.33**	**90**	IAmb	IAmb	12 01 56.1	
	comp=Z,79nm,1.4s						
MSTX	**Muleshoe**	**46.33**	**90**	P	**P**	**12 01 42.2**	**-0.5**
	baz=314,SNR=9.3						
MSTX				S	**S**	**12 08 28.2**	**-0.9**
	baz=314						
**

baz=314
AMTX Amarillo 46.34 88 IAMs_20 IAMs_20 12 19 00.4
comp=Z,5μm,19.0s
AMTX Amarillo 46.34 88 P **P** **12 01 42.7 -0.1**
baz=314,SNR=13
AMTX S **S** **12 08 29.9 +0.6**
baz=314
AMTX Amarillo 46.34 88 P **P** **12 01 42.0 -0.8**
baz=314
AMTX S **S** **12 08 29.7 +0.4**
baz=314
COWI Conover 46.36 68 IAmb IAmb 12 01 56.4
comp=Z,185nm,1.6s
COWI IAMs_20 IAMs_20 12 20 44.9
comp=Z,6μm,22.0s
COWI Conover 46.36 68 P **P** **12 01 42.2 -0.5**
baz=308
COWI S **S** **12 08 26.2 -2.8**
baz=308
K38A Parkersburg 46.46 74 IAmb IAmb 12 01 56.7
comp=Z,131nm,1.3s
K38A Parkersburg 46.46 74 P **P** **12 01 43.3 -0.2**
baz=309,SNR=7.0
K38A S **S** **12 08 26.9 -3.6**
baz=309
KSU1 Kansas State U 46.52 80 P **P** **12 01 42.9 -1.0**
KSU1 IAmb IAmb 12 02 04.3
comp=Z,62nm,1.2s
KSU1 Kansas State U 46.52 80 IAMs_20 IAMs_20 12 25 03.6
comp=Z,7μm,19.0s
KSU1 Kansas State U 46.52 80 P **P** **12 01 43.5 -0.5**
baz=311
KSU1 S **S** **12 08 28.3 -3.1**
baz=311
KSU1 Kansas State U 46.52 80 P **P** **12 01 43.0 -1.0**
baz=311
KSU1 S **S** **12 08 29.0 -2.4**
baz=311
SCIA State Center 46.67 75 IAmb IAmb 12 02 03.8
comp=Z,87nm,1.1s
SCIA IAMs_20 IAMs_20 12 19 36.6
comp=Z,7μm,22.0s
SCIA State Center 46.67 75 P **P** **12 01 45.1 -0.1**
baz=310,SNR=12
SCIA S **S** **12 08 31.3 -2.3**
baz=310
SCIA State Center 46.67 75 P **P** **12 01 44.8 -0.4**
baz=310,SNR=12
SCIA S **S** **12 08 30.7 -2.9**
baz=310
I40A Norwalk 46.90 71 P **P** **12 01 46.4 -0.5**
baz=309,SNR=16
I40A S **S** **12 08 34.6 -2.2**
baz=309
U32A Winter Ranch, 46.92 84 **P** **12 01 46.4 -0.8**
U32A IAmb IAmb 12 02 19.1
comp=Z,69nm,1.1s
U32A Winter Ranch, 46.92 84 P **P** **12 01 46.3 -0.8**
baz=313
U32A S **S** **12 08 37.5 +0.2**
baz=313
KAN08 Anthony NE Sta 46.96 83 IAmb IAmb 12 02 06.7
comp=Z,58nm,1.3s
OK038 West end E0370 47.00 84 IAmb IAmb 12 02 18.1
comp=Z,56nm,1.2s
NRIK Noril'sk 47.05 333 P **P** **12 01 47.3 -0.5**
NRIK LR LR 12 24 07.5
comp=Z,47nm,1.0s,baz=59,slow=7.3,SNR=36
comp=Z,8μm,18.3s,baz=68,slow=39
comp=Z,47nm,1.0s
NRIK Noril'sk 47.05 333 P **P** **12 01 47.5 -0.3**
NRIK IAmb IAmb 12 01 49.0
comp=Z,59nm,1.0s
NRIK Noril'sk 47.05 333 *c i*P **P** **12 01 46.6 -1.2**
NRIK pmax pmax
comp=Z,86nm,1.2s
OK032 Salt Plains WL 47.10 83 IAmb IAmb 12 02 03.1
comp=Z,69nm,1.3s
OK032 IAMs_20 IAMs_20 12 24 26.8
comp=Z,4μm,18.0s
F42A Maple Grove Fa 47.12 67 P **P** **12 01 48.7 +0.1**
baz=308,SNR=9.0
KS20 Mayfield South 47.20 83 IAmb IAmb 12 02 09.3
comp=Z,121nm,1.3s
KAN09 Caldwell North 47.23 83 IAmb IAmb 12 02 09.5
comp=Z,73nm,1.1s
E43A Lone Tree Farm 47.36 66 IAmb IAmb 12 02 04.5
comp=Z,53nm,0.9s
E43A Lone Tree Farm 47.36 66 S **S** **12 08 41.1 -2.2**
baz=308
N38A Joes South For 47.38 76 P **P** **12 01 50.0 -0.7**
baz=311,SNR=18
N38A S **S** **12 08 36.9 -6.9**
baz=311
KAN13 South Haven SW 47.39 83 IAmb IAmb 12 02 10.7
comp=Z,117nm,1.3s
HHU Hamhung 47.46 283 P **P** **12 01 50.9 -0.4**
HHU pP **pwP** **12 02 01.4 +2.2**
HHU S **S** **12 08 46.6 +1.8**
JHS Saijyo 47.47 274 IAmb IAmb 12 01 53.4
comp=Z,102nm,1.0s
JHS Saijyo 47.47 274 P **P** **12 01 52.8 +1.3**
CIT Chita 47.54 304 *e*P **P** **12 01 51.2 -0.6**
CIT *e* 12 03 29.9
CIT pmax pmax
comp=Z,210nm,2.5s
KBS Kingsbay 47.69 1 P **P** **12 01 52.9 +0.3**
KBS Kingsbay 47.69 1 IAMs_20 IAMs_20 12 21 13.6
comp=Z,7μm,21.0s
KBS Kingsbay 47.69 1 P **P** **12 01 52.9 +0.3**
KBS pmax pmax
comp=Z,173nm,1.2s
KBS MLR MLR
comp=Z,6μm,21.0s
KBS Kingsbay 47.69 1 *e*P **P** **12 01 53.4 +0.8**
KBS IVmB_BB 12 01 54.6
comp=Z,1μm,0.6s
KBS Kingsbay 47.69 1 *i*P **P** **12 01 52.9 +0.3**
L40A Anamosa 47.72 73 P **P** **12 01 52.3 -1.0**
baz=310
L40A S **S** **12 08 45.1 -3.3**
baz=310
JFWS Jewell Farm 47.72 72 IAmb IAmb 12 01 53.6
comp=Z,81nm,0.9s
JFWS Jewell Farm 47.72 72 IAMs_20 IAMs_20 12 20 54.3
comp=Z,5μm,21.0s
JFWS Jewell Farm 47.72 72 P **P** **12 01 52.6 -0.7**
baz=310,SNR=13
JFWS S **S** **12 08 45.7 -2.9**
baz=310
JFWS Jewell Farm 47.72 72 P **P** **12 01 52.1 -1.2**
baz=310,SNR=13
JFWS S **S** **12 08 45.8 -2.9**
baz=310
JCJ Chichijima 47.78 259 P **P** **12 01 54.0 +0.1**
comp=Z,368nm,1.2s,baz=259,slow=19,SNR=5.7
JCJ LR LR 12 19 53.1
comp=Z,4μm,21.8s,baz=42,slow=33
comp=Z,368nm,1.2s
JCJ Chichijima 47.78 259 P **P** **12 01 54.8 +0.8**
I42A Draeger Farm, 47.85 70 P **P** **12 01 53.7 -0.6**
baz=309,SNR=9.3
I42A S **S** **12 08 48.0 -2.4**
baz=309
OK049 E0420 Rd and N 47.90 83 IAmb IAmb 12 02 15.0
comp=Z,119nm,1.2s
DAG Danmarks Havn 47.96 10 *i*P **P** **12 01 54.5 -0.2**
DAG IAmb IAmb 12 01 56.3
comp=Z,134nm,0.8s
P38A Dawn 47.97 77 P **P** **12 01 54.6 -0.6**
baz=311,SNR=19
P38A S **S** **12 08 48.5 -3.6**
baz=311
T35A Sooner Cattle 48.03 82 IAmb IAmb 12 02 15.6
comp=Z,78nm,1.2s
T35B Sooner Cattle 48.03 82 S **S** **12 08 50.5 -2.6**
baz=313
OK045 Pawnee Station 48.10 83 IAmb IAmb 12 02 16.3
comp=Z,77nm,1.3s
OK050 Pawnee Station 48.10 83 IAmb IAmb 12 02 16.3
comp=Z,135nm,1.5s
OK048 Pawnee Station 48.11 83 IAmb IAmb 12 02 16.4
comp=Z,68nm,1.2s
OK048 IAMs_20 IAMs_20 12 23 45.9
comp=Z,4μm,18.0s
OK051 E0350 and S346 48.11 83 IAmb IAmb 12 02 17.0
comp=Z,92nm,1.3s
H43A Windswept, Lux 48.13 69 IAmb IAmb 12 01 56.8
comp=Z,72nm,0.8s
H43A Windswept, Lux 48.13 69 P **P** **12 01 55.9 -0.5**
baz=309,SNR=5.1
H43A S **S** **12 08 52.5 -1.7**
baz=309
OK046 Pawnee Station 48.15 83 IAmb IAmb 12 02 16.6
comp=Z,82nm,1.2s
OK046 IAMs_20 IAMs_20 12 23 47.8
comp=Z,4μm,18.0s
WMOK Wichita Mounta 48.17 86 P **P** **12 01 56.9 0.0**
baz=314
WMOK S **S** **12 08 56.0 +0.9**
baz=314
WMOK Wichita Mounta 48.17 86 P **P** **12 01 56.2 -0.7**
baz=314
WMOK S **S** **12 08 55.6 +0.4**
baz=314
OK044 Pawnee Station 48.23 83 IAmb IAmb 12 02 29.4
comp=Z,83nm,1.3s
OK044 IAMs_20 IAMs_20 12 23 50.0
comp=Z,3μm,18.0s
OK029 Liberty Lake 48.23 84 IAmb IAmb 12 02 11.9
comp=Z,60nm,1.2s
OK029 IAMs_20 IAMs_20 12 23 33.1
comp=Z,4μm,18.0s
OK033 Mehan 48.37 83 IAmb IAmb 12 02 18.3
comp=Z,107nm,1.2s
SUMG Summit 48.45 19 *i*P **P** **12 01 59.8 +0.8**
SUMG IAmb IAmb 12 02 02.3
comp=Z,343nm,1.3s
SPA0 Spitsbergen Ar 48.47 0 *e*P **P** **12 01 58.0 -0.7**
SPA0 IVmBBB 12 01 59.2
comp=Z,1μm,1.4s
SPITS Spitsbergen Ar 48.47 0 LR LR 12 23 16.8
comp=Z,7μm,19.2s,baz=334,slow=37
SPB2 Spitsbergen Ar 48.48 0 IAmb IAmb 12 02 14.2
comp=Z,56nm,0.9s
SNY Shenyang 48.50 287 ⇓P **P** **12 02 00.0 +0.7**
SNY pmax pmax
comp=Z,150nm,1.1s
SNY pmax pmax
comp=Z,2μm,6.0s
SNY LR LR
comp=Z,6μm,16.9s
SNY LR LR
comp=Z,7μm,19.6s
SNY LR LR
comp=Z,9μm,20.1s
OK034 N. Norfolk Rd. 48.52 83 IAmb IAmb 12 02 19.5
comp=Z,51nm,1.0s
L42A Oliver, Polo 48.64 72 P **P** **12 01 59.5 -0.9**
baz=310,SNR=7.4
L42A S **S** **12 08 57.1 -4.4**
baz=310
N41A Harden Midland 48.80 74 P **P** **12 02 00.9 -0.8**
baz=311,SNR=16
N41A S **S** **12 09 00.1 -3.8**
baz=311
E46A Sault Ste Mari 48.82 65 S **S** **12 09 02.7 -1.3**
baz=309
X34A Smith Ranch, M 48.83 85 IAmb IAmb 12 02 29.1
comp=Z,80nm,1.4s
KS19 Wonju Array Si 48.88 280 IAmb IAmb 12 02 04.4
comp=Z,67nm,0.9s
KSRS Korea Array 48.88 280 P **P** **12 02 02.4 +0.2**
comp=Z,54nm,0.9s,baz=57,slow=7.1,SNR=98
KSRS LR LR 12 24 39.5
comp=Z,3μm,18.5s,baz=50,slow=38
comp=Z,54nm,0.9s
P40A Paris 48.89 76 P **P** **12 02 01.8 -0.6**
baz=312,SNR=37
P40A S **S** **12 09 01.1 -4.1**
baz=312
G45A Suttons Bay 48.93 67 S **S** **12 09 04.4 -1.2**
baz=310
G45A S **S** **12 09 04.4 -1.2**
baz=310
K43A Burlington 48.94 71 P **P** **12 02 01.7 -1.0**
baz=310
K43A S **S** **12 09 03.2 -2.5**
baz=310
PYAG Pyongyang 49.07 283 P **P** **12 02 03.8 +0.1**
PYAG pP **pwP** **12 02 15.0 +3.3**
PYAG S **S** **12 09 08.9 +1.3**
TX31 Lajitas Ar. Si 49.10 95 P **P** **12 02 04.6 +0.4**
baz=317,SNR=50
TX31 S **S** **12 09 09.2 +0.7**
baz=317
TX32 Lajitas Array 49.10 95 IAmb IAmb 12 02 32.1
comp=Z,66nm,1.1s
TXAR Lajitas Array 49.10 95 P **P** **12 02 04.2 0.0**
comp=Z,8.0nm,0.5s,baz=300,slow=5.4,SNR=145
TXAR ScP **ScP** **12 07 20.8 -0.9**
comp=Z,1.8nm,0.9s,baz=287,slow=2.7,SNR=3.4
TXAR LR LR 12 21 56.8
comp=Z,4μm,19.1s,baz=314,slow=35
comp=Z,8.0nm,0.5s
SUJ Sinuiju 49.10 285 P **P** **12 02 03.4 -0.6**
SUJ pP **pwP** **12 02 14.2 +2.3**
SUJ S **S** **12 09 09.6 +1.5**
ABTX Abilene, Hawle 49.13 89 IAmb IAmb 12 02 19.4
comp=Z,106nm,1.3s
ABTX Abilene, Hawle 49.13 89 P **P** **12 02 04.5 +0.1**
baz=315,SNR=24
ABTX S **S** **12 09 07.6 -1.2**
baz=315
ABTX Abilene, Hawle 49.13 89 P **P** **12 02 03.6 -0.7**
baz=315,SNR=24
ABTX S **S** **12 09 08.8 0.0**
baz=315
TUL1 Leonard 49.14 83 IAmb IAmb 12 02 24.3
comp=Z,77nm,1.1s
TUL1 Leonard 49.14 83 P **P** **12 02 04.0 -0.3**
baz=313,SNR=6.2
TUL1 S **S** **12 09 03.6 -5.0**
baz=313
TUL1 Leonard 49.14 83 P **P** **12 02 03.5 -0.8**
baz=313,SNR=6.2
TUL1 S **S** **12 09 05.9 -2.7**
baz=313
LPIG La Paz 49.15 105 LR LR 12 20 11.1
comp=Z,2μm,19.4s,baz=320,slow=33
I45A Fountain 49.25 68 S **S** **12 09 08.8 -1.3**
baz=310
I45A S **S** **12 09 08.8 -1.3**
baz=310
S39A Bolivar 49.38 79 P **P** **12 02 03.6 -2.5**
baz=313
L44A Lake County Fo 49.52 71 IAMs_20 IAMs_20 12 21 47.7
comp=Z,8μm,22.0s
L44A Lake County Fo 49.52 71 S **S** **12 09 10.9 -3.0**
baz=311
L44A Lake County Fo 49.52 71 P **P** **12 02 05.6 -1.5**
baz=311
L44A S **S** **12 09 11.2 -2.6**
baz=311
SFJD Kangerlussuaq 49.59 28 LR LR 12 26 47.4
comp=Z,6μm,18.1s,baz=316,slow=41
SFJD Kangerlussuaq 49.59 28 P **P** **12 02 08.0 +0.7**
SFJD Kangerlussuaq 49.59 28 IAMs_20 IAMs_20 12 27 01.9
comp=Z,8μm,19.0s
SFJD Kangerlussuaq 49.59 28 P **P** **12 02 08.0 +0.7**
SFJD pmax pmax
comp=Z,162nm,1.3s
SFJD MLR MLR
comp=Z,8μm,19.0s
SFJD Kangerlussuaq 49.59 28 *i*P **P** **12 02 07.4 +0.1**
SFJD IAmb IAmb 12 02 08.5
comp=Z,101nm,1.1s
R40A Maddies Statio 49.59 78 IAmb IAmb 12 02 22.3
comp=Z,40nm,0.7s
R40A Maddies Statio 49.59 78 P **P** **12 02 06.2 -1.6**
baz=312,SNR=40
U38A Gravette 49.60 81 IAmb IAmb 12 03 41.9
comp=Z,70nm,0.8s
U38A Gravette 49.60 81 P **P** **12 02 07.0 -0.9**
baz=313,SNR=14
U38A S **S** **12 09 12.3 -2.9**
baz=313
INCN Inchon 49.61 281 P **P** **12 02 08.1 +0.2**
INCN IAmb IAmb 12 02 24.1
comp=Z,142nm,1.3s
INCN Inchon 49.61 281 P **P** **12 02 08.1 +0.2**
INCN pmax pmax
comp=Z,142nm,1.3s
INCN Inchon 49.61 281 P **P** **12 02 08.4 +0.5**
INCN Inchon 49.61 281 P **P** **12 02 08.9 +1.0**
GLMI Grayling 49.63 66 IAMs_20 IAMs_20 12 24 36.6
comp=Z,5μm,19.0s
GLMI Grayling 49.63 66 P **P** **12 02 07.0 -1.0**
baz=310
HJU Haeju 49.76 282 P **P** **12 02 09.6 +0.5**
HDIL Hopedale 49.80 73 IAMs_20 IAMs_20 12 22 06.2
comp=Z,5μm,19.0s
HDIL Hopedale 49.80 73 P **P** **12 02 08.5 -0.8**
baz=312,SNR=42
HDIL S **S** **12 09 15.0 -2.8**
baz=312
HDIL Hopedale 49.80 73 P **P** **12 02 08.5 -0.8**
baz=311,SNR=42
HDIL S **S** **12 09 15.5 -2.3**
baz=311
TJN Taejon 49.93 279 *ce*P **P** **12 02 10.7 +0.3**
TJN Taejon 49.93 279 P **P** **12 02 11.2 +0.8**
M44A Midewin, Midew 49.96 72 P **P** **12 02 10.2 -0.3**
baz=311,SNR=7.4
M44A S **S** **12 09 17.0 -3.1**
baz=311
DBG Daneborg 49.97 12 *e*P **P** **12 02 10.3 +0.1**
DBG IAmb IAmb 12 02 11.9
comp=Z,90nm,0.7s
HHAR Hobbs 49.98 81 P **P** **12 02 09.1 -1.6**
baz=313
HHAR S **S** **12 09 16.5 -3.9**
baz=313
Z35A Perchaven, San 50.06 86 IAmb IAmb 12 02 31.0
comp=Z,161nm,1.5s
Z35A Perchaven, San 50.06 86 P **P** **12 02 11.7 +0.3**
baz=315
Z35A S **S** **12 09 19.5 -2.2**
baz=315
P43A Skaggs, Pawnee 50.28 75 P **P** **12 02 12.5 -0.4**
baz=312,SNR=24
X37A Clayton 50.30 83 IAmb IAmb 12 02 14.9
comp=Z,50nm,0.9s
X37A Clayton 50.30 83 P **P** **12 02 13.3 +0.2**
baz=314,SNR=24
X37A S **S** **12 09 22.6 -2.3**
baz=314
CCM Cathedral Cave 50.34 77 P **P** **12 02 11.4 -2.0**
CCM Cathedral Cave 50.34 77 P **P** **12 02 11.4 -2.0**
CCM pmax pmax
comp=Z,42nm,1.1s
CCM Cathedral Cave 50.34 77 P **P** **12 02 11.9 -1.5**
baz=313,SNR=12
CCM S **S** **12 09 19.8 -5.7**
baz=313
CCM Cathedral Cave 50.34 77 P **P** **12 02 11.3 -2.2**
baz=312
CCM S **S** **12 09 20.1 -5.4**
baz=312
L46A Eue Claire 50.53 70 IAmb IAmb 12 02 28.5
comp=Z,151nm,1.1s
L46A Eue Claire 50.53 70 P **P** **12 02 14.3 -0.5**
baz=311
L46A P **P** **12 02 14.3 -0.5**
baz=311
L46A S **S** **12 09 25.4 -2.7**
baz=311
L46A S **S** **12 09 25.4 -2.7**
baz=311
O44A Mansfield 50.54 73 P **P** **12 02 14.0 -0.9**
baz=312,SNR=11
O44A S **S** **12 09 25.7 -2.4**
baz=312
SLM Saint Louis 50.54 76 P **P** **12 02 13.9 -1.0**
baz=313,SNR=5.7
SLM S **S** **12 09 25.8 -2.3**
baz=313
J47A Sunmer 50.55 68 IAmb IAmb 12 02 28.8
comp=Z,196nm,1.6s
J47A Sunmer 50.55 68 S **S** **12 09 26.3 -2.0**
baz=311
J47A S **S** **12 09 26.3 -2.0**
baz=311
JCT Junction City 50.57 91 IAmb IAmb 12 02 45.6
comp=Z,82nm,1.1s
JCT Junction City 50.57 91 P **P** **12 02 14.9 -0.4**
baz=316,SNR=21
JCT S **S** **12 09 27.6 -1.3**
baz=316
JCT Junction City 50.57 91 P **P** **12 02 14.9 -0.4**
baz=316,SNR=21
JCT S **S** **12 09 28.5 -0.4**
baz=316
ICESG Greenland Ices 50.87 23 *e*P **P** **12 02 17.7 +0.3**
ICESG IAmb IAmb 12 02 19.7
comp=Z,116nm,0.7s
FVM French Village 50.87 77 P **P** **12 02 16.4 -1.1**
baz=313,SNR=5.8
FVM S **S** **12 09 28.3 -4.5**
baz=313
WHTX Lake Whitney, 50.88 87 IAmb IAmb 12 02 37.0
comp=Z,126nm,1.2s
WHTX Lake Whitney, 50.88 87 P **P** **12 02 17.8 +0.2**
baz=316,SNR=21
WHTX S **S** **12 09 28.8 -4.4**
baz=316
WHTX Lake Whitney, 50.88 87 P **P** **12 02 17.3 -0.3**
baz=316,SNR=21
WHTX S **S** **12 09 31.4 -1.8**
baz=316
Q44A Meyer Farm, Va 51.06 75 IAmb IAmb 12 02 34.5
comp=Z,143nm,1.2s
Q44A Meyer Farm, Va 51.06 75 P **P** **12 02 18.2 -0.7**
baz=313,SNR=13
Q44A S **S** **12 09 33.0 -2.4**
baz=313
SFIN Lafayette 51.17 72 P **P** **12 02 19.4 -0.2**
baz=312,SNR=14
SFIN S **S** **12 09 33.4 -3.4**
baz=312
SFIN Lafayette 51.17 72 P **P** **12 02 18.7 -0.9**
baz=312,SNR=14
SFIN S **S** **12 09 34.0 -2.9**
baz=312
DY2G Dye2 51.18 27 *e*P **P** **12 02 19.6 0.0**
DY2G IAmb IAmb 12 02 22.2
comp=Z,370nm,1.7s
I49A Point Hope 51.19 66 S **S** **12 09 35.9 -1.1**
baz=311
I49A S **S** **12 09 35.9 -1.1**
baz=311
VLDQ Val d'Or 51.30 59 IAmb IAmb 12 02 33.0
comp=Z,132nm,1.3s
FCAR Ozark Folk Cen 51.31 80 IAmb IAmb 12 02 35.8
comp=Z,68nm,0.9s
XLT XiLinHaoTe 51.33 294 ⇑*i*P **P** **12 02 20.8 -0.1**
XLT sP sP 12 02 27.5 +0.3
XLT PP **PP** **12 04 17.0 -0.6**
XLT S **S** **12 09 38.8 -0.4**
XLT sS sS 12 09 47.8 +1.3
XLT ScS **ScS** **12 12 10.3 -0.1**
XLT pmax pmax
comp=Z,190nm,1.1s
XLT pmax pmax
comp=Z,1μm,6.0s
XLT LR LR
comp=Z,810nm,15.8s
XLT LR LR
comp=Z,5μm,15.8s
XLT LR LR
comp=Z,9μm,17.2s
MIAR Mount Ida 51.39 82 P **P** **12 02 21.1 -0.3**
baz=314,SNR=25
MIAR S **S** **12 09 38.1 -1.9**
baz=314
MIAR Mount Ida 51.39 82 P **P** **12 02 20.5 -0.9**
baz=314,SNR=25
MIAR S **S** **12 09 37.7 -2.3**
baz=314
Z38A Mt. Pleasant 51.46 84 S **S** **12 09 39.5 -1.5**
baz=315
JSU Suzuyama 51.51 272 P **P** **12 02 23.3 +1.0**
DL2 Dalian 51.55 286 P **P** **12 02 20.8 -1.7**
DL2 S **S** **12 09 39.0 -3.1**
DL2 ScS **ScS** **12 12 04.5 -7.3**
DL2 pmax pmax
comp=Z,85nm,0.6s
DL2 pmax pmax
comp=Z,780nm,7.7s
DL2 LR LR
comp=Z,3μm,16.6s
DL2 LR LR
comp=Z,7μm,18.6s

DL2				LR	LR		
	comp=Z,6µm,24.7s						
L48A	**N Adams**	**51.62**	**69**	P	**P**	**12 02 22.2**	**-0.9**
	baz=312						
L48A				P	**P**	**12 02 22.2**	**-0.9**
	baz=312						
L48A				S	**S**	**12 09 40.0**	**-3.1**
	baz=312						
L48A				S	**S**	**12 09 40.0**	**-3.1**
	baz=312						
N47A	**Urbana**	**51.62**	**71**	IAmb	IAmb	12 02 23.1	
	comp=Z,97nm,0.8s						
N47A	**Urbana**	**51.62**	**71**	P	**P**	**12 02 22.0**	**-1.0**
	baz=312,SNR=15						
N47A				P	**P**	**12 02 22.0**	**-1.0**
	baz=312,SNR=15						
N47A				S	**S**	**12 09 38.5**	**-4.7**
	baz=312						
N47A				S	**S**	**12 09 38.5**	**-4.7**
	baz=312						
WHAR	**Wooly Hollow**	**51.63**	**81**	IAmb	IAmb	12 02 36.5	
	comp=Z,143nm,2.0s						
435B	**Jarrell**	**51.67**	**89**	IAmb	IAmb	12 02 37.9	
	comp=Z,163nm,1.7s						
435B				IAMs_20	IAMs_20	12 22 08.5	
	comp=Z,4µm,21.0s						
435B	**Jarrell**	**51.67**	**89**	S	**S**	**12 09 43.9**	**-0.1**
	baz=316						
435B	**Jarrell**	**51.67**	**89**	P	**P**	**12 02 23.7**	**+0.1**
	baz=316						
435B				S	**S**	**12 09 44.2**	**+0.2**
	baz=316						
OLIL	**Olney**	**51.70**	**74**	P	**P**	**12 02 22.9**	**-0.8**
	baz=313,SNR=19						
OLIL				S	**S**	**12 09 41.3**	**-2.9**
	baz=313						
S44A	**Carbondale**	**51.74**	**76**	IAmb	IAmb	12 02 37.6	
	comp=Z,108nm,1.4s						
S44A	**Carbondale**	**51.74**	**76**	P	**P**	**12 02 22.8**	**-1.2**
	baz=313,SNR=12						
S44A				S	**S**	**12 09 40.3**	**-4.5**
	baz=313						
LCAR	**Lake Charles**	**51.76**	**79**	P	**P**	**12 02 22.0**	**-2.1**
	baz=314,SNR=13						
LCAR				S	**S**	**12 09 39.7**	**-5.4**
	baz=314						
AAM	**Ann Arbor**	**51.81**	**68**	IAMs_20	IAMs_20	12 24 04.3	
	comp=Z,4µm,21.0s						
AAM	**Ann Arbor**	**51.81**	**68**	S	**S**	**12 09 43.9**	**-1.8**
	baz=312						
AAM	**Ann Arbor**	**51.81**	**68**	P	**P**	**12 02 23.0**	**-1.5**
	baz=312						
AAM				S	**S**	**12 09 43.5**	**-2.2**
	baz=312						
237A	**Washetta, Mont**	**51.86**	**86**	IAmb	IAmb	12 02 50.8	
	comp=Z,116nm,1.6s						
237A	**Washetta, Mont**	**51.86**	**86**	S	**S**	**12 09 45.5**	**-1.0**
	baz=316						
IRK	**Irkutsk**	**51.86**	**309**	*e*P	**P**	**12 02 22.8**	**-1.9**
IRK				pmax	pmax		
	comp=Z,206nm,2.2s						
SCHQ	**Schefferville**	**51.95**	**47**	P	**P**	**12 02 25.4**	**+0.1**
	comp=Z,48nm,0.9s,baz=319,slow=8.1,SNR=25						
SCHQ				LR	LR	12 27 06.6	
	comp=Z,11µm,19.1s,baz=317,slow=39						
	comp=Z,48nm,0.9s						
WLAR	**White Oak Lake**	**52.26**	**83**	IAmb	IAmb	12 02 29.0	
	comp=Z,85nm,0.9s						
BLO	**Bloomington**	**52.31**	**73**	IAmb	IAmb	12 02 29.0	
	comp=Z,98nm,1.1s						
O48B	**Farmland**	**52.35**	**71**	P	**P**	**12 02 27.1**	**-1.4**
	baz=313,SNR=29						
O48B				S	**S**	**12 09 48.7**	**-4.3**
	baz=313						
O48B	**Farmland**	**52.35**	**71**	P	**P**	**12 02 26.6**	**-1.8**
	baz=312,SNR=29						
O48B				S	**S**	**12 09 49.6**	**-3.4**
	baz=312						
833A	**Chaparral WMA,**	**52.38**	**92**	IAmb	IAmb	12 02 43.4	
	comp=Z,156nm,1.3s						
833A	**Chaparral WMA,**	**52.38**	**92**	P	**P**	**12 02 28.5**	**-0.3**
	baz=318,SNR=20						
833A				S	**S**	**12 09 53.4**	**-0.4**
	baz=318						
833A	**Chaparral WMA,**	**52.38**	**92**	P	**P**	**12 02 28.5**	**-0.3**
	baz=318,SNR=20						
833A				S	**S**	**12 09 53.8**	**0.0**
	baz=318						
N49A	**Columbus Grove**	**52.45**	**70**	P	**P**	**12 02 27.9**	**-1.2**
	baz=313,SNR=6.4						
N49A				P	**P**	**12 02 27.9**	**-1.2**
	baz=313,SNR=6.4						
N49A				S	**S**	**12 09 46.5**	**-7.9**
	baz=313						
N49A				S	**S**	**12 09 46.5**	**-7.9**
	baz=313						
T45B	**Paducah**	**52.56**	**76**	S	**S**	**12 09 52.9**	**-3.1**
	baz=314						
SADO	**Sadowa**	**52.62**	**63**	LR	LR	12 25 57.7	
	comp=Z,5µm,19.0s,baz=354,slow=37						
NATX	**Nacogdoches**	**52.71**	**85**	IAmb	IAmb	12 02 46.3	
	comp=Z,130nm,1.4s						
NATX				IAMs_20	IAMs_20	12 23 23.9	
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	**52.71**	**85**	P	**P**	**12 02 31.6**	**+0.3**
	baz=316,SNR=6.1						
NATX	**Nacogdoches**	**52.71**	**85**	P	**P**	**12 02 30.9**	**-0.3**
	baz=316,SNR=6.1						
NATX				S	**S**	**12 09 57.3**	**-1.0**
	baz=316						
P48A	**Milroy**	**52.73**	**72**	P	**P**	**12 02 30.0**	**-1.3**
	baz=313,SNR=15						
P48A				P	**P**	**12 02 30.0**	**-1.3**
	baz=313,SNR=15						
P48A				S	**S**	**12 09 53.3**	**-5.1**
	baz=313						
P48A				S	**S**	**12 09 53.3**	**-5.1**
	baz=313						
O49A	**Covington**	**52.85**	**71**	IAmb	IAmb	12 02 44.4	
	comp=Z,134nm,1.5s						
O49A	**Covington**	**52.85**	**71**	P	**P**	**12 02 30.8**	**-1.4**
	baz=313,SNR=7.7						
O49A				P	**P**	**12 02 30.8**	**-1.4**
	baz=313,SNR=7.7						
O49A				S	**S**	**12 09 55.5**	**-4.5**
	baz=313						
O49A				S	**S**	**12 09 55.5**	**-4.5**
	baz=313						
CCAR	**Cane Creek**	**52.89**	**81**	S	**S**	**12 10 00.1**	**-0.5**
	baz=315						
735A	**Kenedy**	**52.94**	**90**	IAmb	IAmb	12 03 05.5	
	comp=Z,144nm,1.4s						
735A	**Kenedy**	**52.94**	**90**	S	**S**	**12 10 03.2**	**+1.8**
	baz=317						
WCI	**Wyandotte Cave**	**53.08**	**74**	P	**P**	**12 02 32.9**	**-1.0**
WCI				IAmb	IAmb	12 02 47.4	
	comp=Z,156nm,1.8s						
WCI	**Wyandotte Cave**	**53.08**	**74**	IAMs_20	IAMs_20	12 29 08.2	
	comp=Z,6µm,19.0s						
WCI	**Wyandotte Cave**	**53.08**	**74**	P	**P**	**12 02 32.9**	**-1.0**
WCI				pmax	pmax		
	comp=Z,156nm,1.8s						
WCI				MLR	MLR		
	comp=Z,6µm,19.0s						
WCI	**Wyandotte Cave**	**53.08**	**74**	P	**P**	**12 02 32.7**	**-1.2**
	baz=314,SNR=5.9						
WCI				S	**S**	**12 09 59.7**	**-3.5**
	baz=314						
WCI	**Wyandotte Cave**	**53.08**	**74**	P	**P**	**12 02 32.4**	**-1.5**
	baz=313						
WCI				S	**S**	**12 09 59.6**	**-3.5**
	baz=313						
P49A	**Miami Univ. Ec**	**53.09**	**71**	IAmb	IAmb	12 02 34.0	
	comp=Z,69nm,0.8s						
P49A				IAMs_20	IAMs_20	12 24 09.1	
	comp=Z,6µm,22.0s						
P49A	**Miami Univ. Ec**	**53.09**	**71**	P	**P**	**12 02 32.5**	**-1.4**
	baz=313,SNR=15						
P49A				S	**S**	**12 09 58.3**	**-4.9**
	baz=313						
P49A	**Miami Univ. Ec**	**53.09**	**71**	P	**P**	**12 02 31.9**	**-2.0**
	baz=313,SNR=15						
P49A				S	**S**	**12 09 58.4**	**-4.8**
	baz=313						
HKT	**Hockley**	**53.32**	**88**	P	**P**	**12 02 35.9**	**+0.2**
HKT				IAmb	IAmb	12 02 56.3	
	comp=Z,170nm,1.6s						
HKT	**Hockley**	**53.32**	**88**	IAMs_20	IAMs_20	12 23 20.6	
	comp=Z,6µm,20.0s						
HKT	**Hockley**	**53.32**	**88**	P	**P**	**12 02 35.9**	**+0.2**
HKT				pmax	pmax		
	comp=Z,170nm,1.6s						
HKT	**Hockley**	**53.32**	**88**	P	**P**	**12 02 35.8**	**+0.2**
	baz=317						
HKT				S	**S**	**12 10 07.2**	**+0.8**
	baz=317						
SOEG	**Soedalen**	**53.39**	**20**	*e*P	**P**	**12 02 36.3**	**+0.6**
SOEG				IAmb	IAmb	12 02 37.1	
	comp=Z,123nm,1.2s						
ULN	**Ulaanbaatar**	**53.42**	**303**	P	**P**	**12 02 35.7**	**-0.8**
ULN				IAmb	IAmb	12 02 38.5	
	comp=Z,78nm,0.9s						
ULN	**Ulaanbaatar**	**53.42**	**303**	P	**P**	**12 02 35.7**	**-0.8**
ULN				pmax	pmax		
	comp=Z,78nm,0.9s						
ULN				MLR	MLR		
	comp=Z,16µm,18.0s						
ULN	**Ulaanbaatar**	**53.42**	**303**	P	**P**	**12 02 36.1**	**-0.3**
N51A	**Ashland**	**53.45**	**69**	IAmb	IAmb	12 02 49.8	
	comp=Z,190nm,1.5s						
N51A	**Ashland**	**53.45**	**69**	P	**P**	**12 02 35.7**	**-0.9**
	baz=313						
N51A				P	**P**	**12 02 35.7**	**-0.9**
	baz=313						
N51A				S	**S**	**12 10 04.5**	**-3.7**
	baz=313						
N51A				S	**S**	**12 10 04.5**	**-3.7**
	baz=313						
T47A	**Sharon Grove**	**53.47**	**75**	P	**P**	**12 02 36.2**	**-0.5**
	baz=314,SNR=32						
T47A				S	**S**	**12 10 06.4**	**-2.1**
	baz=314						
W45A	**Hickory Valley**	**53.54**	**78**	IAmb	IAmb	12 02 57.6	
	comp=Z,122nm,1.1s						
W45A	**Hickory Valley**	**53.54**	**78**	P	**P**	**12 02 36.5**	**-0.9**
	baz=315						
W45A				S	**S**	**12 10 06.4**	**-3.0**
	baz=315						
ZAK	**Zakamensk**	**53.56**	**307**	*e*P	**P**	**12 02 36.9**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,27nm,1.2s						
ACSO	**Alum Creek Sta**	**53.58**	**70**	IAmb	IAmb	12 03 05.6	
	comp=Z,103nm,1.4s						
ACSO				IAMs_20	IAMs_20	12 24 23.3	
	comp=Z,6µm,22.0s						
ACSO	**Alum Creek Sta**	**53.58**	**70**	P	**P**	**12 02 35.8**	**-1.7**
	baz=313						
ACSO				S	**S**	**12 10 06.5**	**-3.4**
	baz=313						
DELO	**Deloro Mine**	**53.59**	**62**	IAmb	IAmb	12 02 51.4	
	comp=Z,145nm,1.4s						
WVT	**Waverly**	**53.65**	**77**	P	**P**	**12 02 37.0**	**-1.1**
WVT				IAmb	IAmb	12 02 42.7	
	comp=Z,77nm,0.7s						
WVT	**Waverly**	**53.65**	**77**	P	**P**	**12 02 37.0**	**-1.1**
WVT				pmax	pmax		
	comp=Z,77nm,0.7s						
WVT				MLR	MLR		
	comp=Z,3µm,21.0s						
WVT	**Waverly**	**53.65**	**77**	P	**P**	**12 02 36.9**	**-1.2**
	baz=314,SNR=52						
WVT				S	**S**	**12 10 08.8**	**-2.1**
	baz=314						
WVT	**Waverly**	**53.65**	**77**	P	**P**	**12 02 36.9**	**-1.2**
	baz=314						
WVT				S	**S**	**12 10 09.0**	**-1.9**
	baz=314						
R49A	**Shelbyville**	**53.68**	**73**	S	**S**	**12 10 05.7**	**-5.6**
	baz=314						
R49A				S	**S**	**12 10 05.7**	**-5.6**
	baz=314						
MOY	**Mondy**	**53.76**	**310**	*e*P	**P**	**12 02 38.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,157nm,3.1s						
SONM	**Songino Array**	**53.77**	**303**	P	**P**	**12 02 38.6**	**-0.4**
	comp=Z,45nm,0.9s,baz=49,slow=6.6,SNR=140						
SONM				PcP	**PcP**	**12 03 45.4**	**+0.6**
	comp=Z,15nm,0.6s,baz=68,slow=2.0,SNR=8.2						
	comp=Z,45nm,0.9s						
SONM	**Songino Array**	**53.77**	**303**	IAmb	IAmb	12 02 40.5	
	comp=Z,122nm,1.3s						
OXF	**Oxford**	**53.86**	**79**	IAMs_20	IAMs_20	12 28 55.0	
	comp=Z,7µm,18.0s						
OXF	**Oxford**	**53.86**	**79**	P	**P**	**12 02 39.0**	**-0.6**
	baz=315,SNR=25						
OXF	**Oxford**	**53.86**	**79**	P	**P**	**12 02 38.5**	**-1.1**
	baz=315,SNR=25						
OXF				S	**S**	**12 10 11.5**	**-2.3**
	baz=315						
BJI	**Beijing**	**53.87**	**290**	P	**P**	**12 02 39.5**	**-0.1**
BJI				S	**S**	**12 10 12.0**	**-1.7**
BJI				pmax	pmax		
	comp=Z,47nm,1.0s						
BJI				pmax	pmax		
	comp=Z,1µm,8.9s						
BJI				LR	LR		
	comp=Z,2µm,20.6s						
BJI				LR	LR		
	comp=Z,5µm,20.2s						
BJI				LR	LR		
	comp=Z,7µm,16.8s						
BJT	**Baijiatuau**	**53.89**	**290**	IAmb	IAmb	12 02 42.0	
	comp=Z,78nm,1.3s						
BJT	**Baijiatuau**	**53.89**	**290**	IAMs_20	IAMs_20	12 25 56.2	
	comp=Z,5µm,19.0s						
BJT	**Baijiatuau**	**53.89**	**290**	P	**P**	**12 02 40.4**	**+0.6**
ERPA	**Erie**	**53.95**	**66**	P	**P**	**12 02 38.8**	**-1.4**
	baz=313						
ERPA				S	**S**	**12 10 10.9**	**-3.9**
	baz=313						
M53A	**WI Miller and**	**54.04**	**67**	IAmb	IAmb	12 02 54.3	
	comp=Z,119nm,1.3s						
M53A				IAMs_20	IAMs_20	12 27 46.1	
	comp=Z,5µm,18.0s						
M53A	**WI Miller and**	**54.04**	**67**	P	**P**	**12 02 39.7**	**-1.2**
	baz=313						
M53A				S	**S**	**12 10 11.9**	**-4.2**
	baz=313						
P51A	**Williamsport**	**54.05**	**70**	IAmb	IAmb	12 02 54.2	
	comp=Z,165nm,1.5s						
P51A	**Williamsport**	**54.05**	**70**	P	**P**	**12 02 40.0**	**-1.1**
	baz=314						
P51A				P	**P**	**12 02 40.0**	**-1.1**
	baz=314						
ANGG	**Ammassalik, Gr**	**54.09**	**25**	IAmb	IAmb	12 03 01.1	
	comp=Z,113nm,1.1s						
ANGG	**Ammassalik, Gr**	**54.09**	**25**	*e*P	**P**	**12 02 40.3**	**-0.5**
ANGG				IAmb	IAmb	12 02 43.4	
	comp=Z,73nm,0.9s						
R50A	**Paris**	**54.17**	**72**	IAmb	IAmb	12 02 42.7	
	comp=Z,56nm,0.8s						
R50A	**Paris**	**54.17**	**72**	P	**P**	**12 02 41.0**	**-0.9**
	baz=314,SNR=23						
R50A				P	**P**	**12 02 41.0**	**-0.9**
	baz=314,SNR=23						
ALLY	**Alegheny Colle**	**54.19**	**67**	P	**P**	**12 02 41.1**	**-0.8**
	baz=313						
Q51A	**Peebles**	**54.21**	**71**	P	**P**	**12 02 41.0**	**-1.1**
	baz=314,SNR=37						
Q51A				P	**P**	**12 02 41.0**	**-1.1**
	baz=314,SNR=37						
Y45A	**Yeager Farm, C**	**54.24**	**80**	IAmb	IAmb	12 03 02.7	
	comp=Z,75nm,0.9s						
Y45A	**Yeager Farm, C**	**54.24**	**80**	P	**P**	**12 02 41.8**	**-0.7**
	baz=315,SNR=8.3						
O52A	**Adamsville**	**54.30**	**69**	P	**P**	**12 02 41.7**	**-1.1**
	baz=314,SNR=10						
O52A				P	**P**	**12 02 41.7**	**-1.1**
	baz=314,SNR=10						
PLAL	**Pickwick Lake**	**54.31**	**78**	IAMs_20	IAMs_20	12 28 56.7	
	comp=Z,5µm,18.0s						
N53A	**Lisbon**	**54.38**	**68**	IAmb	IAmb	12 02 56.6	
	comp=Z,100nm,1.4s						
N53A	**Lisbon**	**54.38**	**68**	P	**P**	**12 02 42.0**	**-1.4**
	baz=314,SNR=6.0						
N53A				P	**P**	**12 02 42.0**	**-1.4**
	baz=314,SNR=6.0						
P52A	**Corning**	**54.47**	**70**	IAmb	IAmb	12 02 57.0	
	comp=Z,105nm,1.6s						
P52A				IAMs_20	IAMs_20	12 29 40.6	
	comp=Z,6µm,18.0s						
P52A	**Corning**	**54.47**	**70**	P	**P**	**12 02 42.3**	**-1.7**
	baz=314						
P52A				S	**S**	**12 10 17.5**	**-4.4**
	baz=314						
WVNY	**West Valley, N**	**54.50**	**65**	IAmb	IAmb	12 03 06.2	
	comp=Z,108nm,1.2s						
V48A	**Smith Brothers**	**54.51**	**76**	IAmb	IAmb	12 03 01.7	
	comp=Z,66nm,1.4s						
V48A	**Smith Brothers**	**54.51**	**76**	P	**P**	**12 02 43.3**	**-1.1**
	baz=315,SNR=12						
IVI	**Ivigtut**	**54.53**	**33**	P	**P**	**12 02 43.8**	**-0.3**
IVI	**Ivigtut**	**54.53**	**33**	*e*P	**P**	**12 02 45.6**	**+1.5**
IVI				IAmb	IAmb	12 02 46.7	
	comp=Z,125nm,0.9s						
O53A	**New Philadelph**	**54.56**	**69**	IAmb	IAmb	12 02 57.8	
	comp=Z,129nm,1.4s						
O53A				IAMs_20	IAMs_20	12 27 12.8	
	comp=Z,6µm,19.0s						
O53A	**New Philadelph**	**54.56**	**69**	P	**P**	**12 02 42.9**	**-1.8**
	baz=314						
O53A				S	**S**	**12 10 17.8**	**-5.3**
	baz=314						
U49A	**Red Boiling Sp**	**54.57**	**75**	P	**P**	**12 02 44.0**	**-0.8**
	baz=315,SNR=16						
T50A	**Nancy**	**54.75**	**74**	P	**P**	**12 02 45.3**	**-0.8**
	baz=314						
T50A				P	**P**	**12 02 45.3**	**-0.8**
	baz=314						
VBMS	**Vicksburg**	**54.84**	**82**	IAmb	IAmb	12 03 07.0	
	comp=Z,127nm,1.2s						
VBMS				IAMs_20	IAMs_20	12 30 39.0	
	comp=Z,4µm,18.0s						
VBMS	**Vicksburg**	**54.84**	**82**	P	**P**	**12 02 46.1**	**-0.7**
	baz=316						
VBMS	**Vicksburg**	**54.84**	**82**	P	**P**	**12 02 45.8**	**-1.0**
	baz=316						
VBMS				S	**S**	**12 10 25.6**	**-1.3**
	baz=316						
Q52A	**Bidwell**	**54.86**	**70**	IAmb	IAmb	12 02 60.0	
	comp=Z,73nm,1.2s						
Q52A	**Bidwell**	**54.86**	**70**	P	**P**	**12 02 45.6**	**-1.2**
	baz=314,SNR=6.2						
Q52A				P	**P**	**12 02 45.6**	**-1.2**
	baz=314,SNR=6.2						
P53A	**Whipple**	**54.98**	**69**	IAmb	IAmb	12 03 01.0	
	comp=Z,77nm,1.3s						
P53A	**Whipple**	**54.98**	**69**	P	**P**	**12 02 46.5**	**-1.3**
	baz=314,SNR=5.6						
P53A				P	**P**	**12 02 46.5**	**-1.3**
	baz=314,SNR=5.6						
WCNY	**West Carthage**	**54.99**	**62**	P	**P**	**12 02 47.0**	**-0.8**
	baz=314						
S51A	**Beattyville**	**55.03**	**72**	IAmb	IAmb	12 02 48.9	
	comp=Z,77nm,1.1s						
S51A	**Beattyville**	**55.03**	**72**	P	**P**	**12 02 47.2**	**-1.0**
	baz=314,SNR=15						
S51A				P	**P**	**12 02 47.2**	**-1.0**
	baz=314,SNR=15						
UPAO	**U. Pittsburgh**	**55.05**	**68**	P	**P**	**12 02 47.3**	**-1.0**
	baz=314						
M55A	**Ridgway**	**55.06**	**66**	P	**P**	**12 02 47.5**	**-0.9**
	baz=314,SNR=10						
M55A				P	**P**	**12 02 47.5**	**-0.9**
	baz=314,SNR=10						
O54A	**Avella**	**55.06**	**68**	P	**P**	**12 02 47.5**	**-0.9**
	baz=314,SNR=12						
O54A				P	**P**	**12 02 47.5**	**-0.9**
	baz=314,SNR=12						
LONY	**Lake Ozonia**	**55.12**	**60**	IAmb	IAmb	12 03 01.7	
	comp=Z,98nm,1.4s						
LONY	**Lake Ozonia**	**55.12**	**60**	P	**P**	**12 02 47.3**	**-1.4**
	baz=313						
LONY				S	**S**	**12 10 27.4**	**-3.1**
	baz=313						
J57A	**Williamstown**	**55.21**	**62**	P	**P**	**12 02 48.3**	**-1.0**
	baz=314						
J57A				P	**P**	**12 02 48.3**	**-1.0**
	baz=314						
L56A	**Greenwood**	**55.25**	**65**	IAmb	IAmb	12 03 09.7	
	comp=Z,108nm,1.1s						
L56A	**Greenwood**	**55.25**	**65**	P	**P**	**12 02 48.6**	**-1.1**
	baz=314,SNR=5.9						
L56A				P	**P**	**12 02 48.6**	**-1.1**
	baz=314,SNR=5.9						
L56A				S	**S**	**12 10 29.1**	**-3.3**
	baz=314						
L56A				S	**S**	**12 10 29.1**	**-3.3**
	baz=314						
344A	**Westbrook Farm**	**55.26**	**83**	IAmb	IAmb	12 02 51.8	
	comp=Z,81nm,0.8s						
344A	**Westbrook Farm**	**55.26**	**83**	P	**P**	**12 02 48.5**	**-1.3**
	baz=316,SNR=8.8						
344A				S	**S**	**12 10 31.3**	**-1.3**
	baz=316						
X48A	**Hartselle**	**55.28**	**78**	IAmb	IAmb	12 03 05.2	
	comp=Z,136nm,1.8s						
X48A	**Hartselle**	**55.28**	**78**	P	**P**	**12 02 48.3**	**-1.7**
	baz=315,SNR=12						
X48A				S	**S**	**12 10 28.9**	**-4.0**
	baz=315						
PSDB	**Penn State Uni**	**55.30**	**66**	P	**P**	**12 02 49.3**	**-0.8**
	baz=314						
SWET	**Sewanee**	**55.39**	**76**	IAmb	IAmb	12 03 03.0	
	comp=Z,82nm,1.5s						
146A	**Union**	**55.40**	**81**	P	**P**	**12 02 50.2**	**-0.7**
	baz=316,SNR=8.3						
K57A	**Scipio Center**	**55.40**	**63**	P	**P**	**12 02 49.8**	**-1.0**
	baz=314						
K57A				S	**S**	**12 10 32.9**	**-1.4**
	baz=314						
NRS	**Narsarsuaq**	**55.43**	**31**	IAmb	IAmb	12 02 53.2	
	comp=Z,110nm,1.1s						
NRS	**Narsarsuaq**	**55.43**	**31**	*e*P	**P**	**12 02 51.2**	**+0.6**
NRS				IAmb	IAmb	12 02 53.0	
	comp=Z,110nm,1.1s						
R53A	**Hurricane**	**55.48**	**71**	P	**P**	**12 02 50.6**	**-0.7**
	baz=314,SNR=12						
R53A				P	**P**	**12 02 50.6**	**-0.7**
	baz=314,SNR=12						
R53A				S	**S**	**12 10 33.1**	**-2.4**
	baz=314						
R53A				S	**S**	**12 10 33.1**	**-2.4**
	baz=314						
Z47A	**Carrollton**	**55.58**	**79**	IAmb	IAmb	12 03 04.7	
	comp=Z,67nm,0.9s						
Z47A	**Carrollton**	**55.58**	**79**	P	**P**	**12 02 51.1**	**-1.0**
	baz=316,SNR=10						
Z47A				S	**S**	**12 10 33.2**	**-3.6**
	baz=316						
J58A	**Remsen**	**55.62**	**62**	P	**P**	**12 02 51.9**	**-0.4**
	baz=314,SNR=5.8						
J58A				P	**P**	**12 02 51.9**	**-0.4**
	baz=314,SNR=5.8						
J58A				S	**S**	**12 10 35.5**	**-1.7**
	baz=314						
J58A				S	**S**	**12 10 35.5**	**-1.7**
	baz=314						
Q54A	**Coxs Mills**	**55.65**	**69**	P	**P**	**12 02 51.2**	**-1.4**
	baz=314,SNR=9.5						
Q54A				P	**P**	**12 02 51.2**	**-1.4**
	baz=314,SNR=9.5						
Q54A				S	**S**	**12 10 34.0**	**-3.7**
	baz=314						
Q54A				S	**S**	**12 10 34.0**	**-3.7**
	baz=314						
TARA	**Tarawa**	**55.68**	**209**	IAMs_20	IAMs_20	12 22 46.2	
	comp=Z,4µm,18.0s						
MCWV	**Mont Chateau**	**55.72**	**68**	P	**P**	**12 02 51.9**	**-1.2**
	baz=314,SNR=6.3						
MCWV	**Mont Chateau**	**55.72**	**68**	P	**P**	**12 02 51.6**	**-1.5**
	baz=314,SNR=6.3						
MCWV				S	**S**	**12 10 34.0**	**-4.7**
	baz=314						
NCB	**Newcomb**	**55.75**	**61**	P	**P**	**12 02 51.9**	**-1.3**
	baz=314						
NCB				S	**S**	**12 10 37.0**	**-2.0**
	baz=314						
W50A	**Signal Mountai**	**55.76**	**76**	IAmb	IAmb	12 03 08.9	
	comp=Z,82nm,1.1s						
W50A	**Signal Mountai**	**55.76**	**76**	P	**P**	**12 02 52.1**	**-1.3**
	baz=315,SNR=18						
W50A				S	**S**	**12 10 33.9**	**-5.5**
	baz=315						
TZTN	**Tazewell**	**55.82**	**73**	P	**P**	**12 02 53.2**	**-0.7**
	baz=315,SNR=12						
TZTN				S	**S**	**12 10 35.1**	**-5.0**
	baz=315						
TZTN	**Tazewell**	**55.82**	**73**	P	**P**	**12 02 52.6**	**-1.3**
	baz=315,SNR=12						
TZTN				S	**S**	**12 10 37.0**	**-3.2**
	baz=315						
HHC	**Hu-ho-hao-te**	**55.85**	**294**	⇑P	**P**	**12 02 54.8**	**+0.6**
HHC				sP	pwP	12 03 05.5	+3.3

HHC				S	S	12 10 43.5	+2.9
HHC				pmax	pmax		
	comp=Z,130nm,1.2s						
HHC				pmax	pmax		
	comp=Z,2μm,6.0s						
HHC				LR	LR		
	comp=Z,13μm,16.2s						
HHC				LR	LR		
	comp=Z,11μm,15.3s						
HHC				LR	LR		
	comp=Z,17μm,17.2s						
V51A	**Loudon**	**55.88**	**74**	P	**P**	**12 02 52.7**	**-1.6**
	baz=315,SNR=9.3						
V51A				S	**S**	**12 10 35.0**	**-5.9**
	baz=315						
J59A	**Piesco**	**55.95**	**61**	IAmb	IAmb	12 03 08.2	
	comp=Z,132nm,1.4s						
J59A	**Piesco**	**55.95**	**61**	P	**P**	**12 02 53.6**	**-1.1**
	baz=314,SNR=5.1						
J59A				P	**P**	**12 02 53.6**	**-1.1**
	baz=314,SNR=5.1						
J59A				S	**S**	**12 10 40.1**	**-1.7**
	baz=314						
J59A				S	**S**	**12 10 40.1**	**-1.7**
	baz=314						
TIA	**Tai'an**	**55.99**	**286**	⇑P	**P**	**12 02 54.5**	**-0.6**
TIA				pmax	pmax		
	comp=Z,44nm,1.6s						
TIA				pmax	pmax		
	comp=Z,1μm,11.8s						
TIA				LR	LR		
	comp=Z,4μm,21.1s						
TIA				LR	LR		
	comp=Z,4μm,23.0s						
TIA				LR	LR		
	comp=Z,8μm,22.6s						
M57A	**Sunshine Farm,**	**56.04**	**65**	P	**P**	**12 02 54.0**	**-1.4**
	baz=314						
M57A				P	**P**	**12 02 54.0**	**-1.4**
	baz=314						
M57A				S	**S**	**12 10 39.4**	**-3.4**
	baz=314						
M57A				S	**S**	**12 10 39.4**	**-3.4**
	baz=314						
PATS	**Pohnpei**	**56.05**	**228**	IAMs_20	IAMs_20	12 23 34.7	
	comp=Z,5μm,19.0s						
BINY	**Binghamton**	**56.05**	**63**	IAMs_20	IAMs_20	12 29 37.2	
	comp=Z,6μm,19.0s						
BINY	**Binghamton**	**56.05**	**63**	P	**P**	**12 02 54.7**	**-0.8**
	baz=314						
BINY				S	**S**	**12 10 41.7**	**-1.4**
	baz=314						
FPAL	**Fort Paine**	**56.05**	**76**	IAmb	IAmb	12 02 55.9	
	comp=Z,58nm,0.7s						
Y49A	**Blount Mountai**	**56.07**	**78**	IAmb	IAmb	12 02 55.3	
	comp=Z,32nm,0.7s						
Y49A	**Blount Mountai**	**56.07**	**78**	P	**P**	**12 02 54.1**	**-1.6**
	baz=316,SNR=17						
Y49A				S	**S**	**12 10 38.4**	**-5.2**
	baz=316						
SSPA	**Standing Stone**	**56.12**	**66**	P	**P**	**12 02 54.5**	**-1.4**
SSPA	**Standing Stone**	**56.12**	**66**	P	**P**	**12 02 55.0**	**-0.9**
	baz=314,SNR=12						
SSPA				S	**S**	**12 10 40.8**	**-3.1**
	baz=314						
SSPA	**Standing Stone**	**56.12**	**66**	P	**P**	**12 02 54.5**	**-1.4**
	baz=314						
SSPA				S	**S**	**12 10 41.3**	**-2.6**
	baz=314						
D62A	**Allapoint, All**	**56.20**	**55**	P	**P**	**12 02 55.5**	**-0.9**
	baz=314,SNR=6.9						
D62A				P	**P**	**12 02 55.5**	**-0.9**
	baz=314,SNR=6.9						
S54A	**Dingess, Beckl**	**56.21**	**71**	IAmb	IAmb	12 03 11.4	
	comp=Z,66nm,1.1s						
S54A	**Dingess, Beckl**	**56.21**	**71**	P	**P**	**12 02 55.9**	**-0.8**
	baz=315,SNR=9.2						
S54A				P	**P**	**12 02 55.9**	**-0.8**
	baz=315,SNR=9.2						
S54A				S	**S**	**12 10 42.4**	**-2.9**
	baz=315						
S54A				S	**S**	**12 10 42.4**	**-2.9**
	baz=315						
JOW	**Kunigami**	**56.22**	**270**	P	**P**	**12 02 56.8**	**+0.1**
	comp=Z,70nm,1.1s,baz=48,slow=5.8,SNR=19						
JOW				LR	LR	12 24 51.2	
	comp=Z,1μm,21.7s,baz=64,slow=34						
	comp=Z,70nm,1.1s						
JOW	**Kunigami**	**56.22**	**270**	P	**P**	**12 02 57.7**	**+0.9**
VT1	**Waterbury**	**56.26**	**60**	IAmb	IAmb	12 03 10.8	
	comp=Z,140nm,1.4s						
VT1	**Waterbury**	**56.26**	**60**	P	**P**	**12 02 56.3**	**-0.6**
	baz=314						
E62A	**Clayton Lake**	**56.29**	**56**	IAmb	IAmb	12 03 09.9	
	comp=Z,153nm,1.4s						
E62A	**Clayton Lake**	**56.29**	**56**	P	**P**	**12 02 55.8**	**-1.2**
	baz=314,SNR=6.2						
E62A				P	**P**	**12 02 55.8**	**-1.2**
	baz=314,SNR=6.2						
V52A	**Sevierville**	**56.29**	**74**	IAmb	IAmb	12 03 09.9	
	comp=Z,100nm,1.2s						
V52A	**Sevierville**	**56.29**	**74**	P	**P**	**12 02 56.1**	**-1.1**
	baz=315,SNR=13						
V52A				S	**S**	**12 10 43.1**	**-3.3**
	baz=315						
TKL	**Tuckaleechee C**	**56.32**	**74**	LR	LR	12 26 02.1	
	comp=Z,4μm,22.0s,baz=326,slow=35						
TKL	**Tuckaleechee C**	**56.32**	**74**	IAmb	IAmb	12 03 10.6	
	comp=Z,90nm,1.2s						
TKL	**Tuckaleechee C**	**56.32**	**74**	P	**P**	**12 02 56.2**	**-1.2**
	baz=315,SNR=11						
TKL				S	**S**	**12 10 40.3**	**-6.4**
	baz=315						
LRAL	**Lakeview Retre**	**56.32**	**79**	IAMs_20	IAMs_20	12 30 10.0	
	comp=Z,5μm,19.0s						
LRAL	**Lakeview Retre**	**56.32**	**79**	P	**P**	**12 02 55.4**	**-2.1**
	baz=316,SNR=8.7						
LRAL				S	**S**	**12 10 42.1**	**-4.7**
	baz=316						
LRAL	**Lakeview Retre**	**56.32**	**79**	P	**P**	**12 02 55.8**	**-1.7**
	baz=316,SNR=8.7						
LRAL				S	**S**	**12 10 41.9**	**-4.9**
	baz=316						
ACCN	**Adirondack Com**	**56.45**	**61**	P	**P**	**12 02 57.7**	**-0.5**
	baz=314,SNR=5.7						
X51A	**Calhoun**	**56.47**	**76**	IAmb	IAmb	12 03 10.9	
	comp=Z,188nm,1.6s						
X51A	**Calhoun**	**56.47**	**76**	P	**P**	**12 02 57.1**	**-1.4**
	baz=316,SNR=5.3						
X51A				P	**P**	**12 02 57.1**	**-1.4**
	baz=316,SNR=5.3						
X51A				S	**S**	**12 10 44.7**	**-4.0**
	baz=316						
X51A				S	**S**	**12 10 44.7**	**-4.0**
	baz=316						
Q56A	**Snyder Ridge,**	**56.52**	**68**	IAmb	IAmb	12 03 12.5	
	comp=Z,53nm,1.1s						
Q56A	**Snyder Ridge,**	**56.52**	**68**	P	**P**	**12 02 57.6**	**-1.2**
	baz=315,SNR=6.1						
Q56A				P	**P**	**12 02 57.6**	**-1.2**
	baz=315,SNR=6.1						
HNS	**HongShan**	**56.53**	**289**	⇑P	**P**	**12 02 59.3**	**+0.5**
HNS				sP	**pwP**	**12 03 09.0**	**+2.1**
HNS				S	**S**	**12 10 49.8**	**+0.4**
HNS				ScS	**ScS**	**12 12 46.0**	**-1.1**
HNS				pmax	pmax		
	comp=Z,160nm,0.8s						
HNS				pmax	pmax		
	comp=Z,1μm,7.7s						
HNS				LR	LR		
	comp=Z,2μm,20.7s						
HNS				LR	LR		
	comp=Z,8μm,20.8s						
HNS				LR	LR		
	comp=Z,7μm,15.2s						
R55A	**Marlinton**	**56.53**	**69**	IAmb	IAmb	12 03 12.8	
	comp=Z,119nm,1.4s						
R55A	**Marlinton**	**56.53**	**69**	S	**S**	**12 10 46.3**	**-3.3**
	baz=315						
R55A				S	**S**	**12 10 46.3**	**-3.3**
	baz=315						
HCNY	**Howe Caverns**	**56.55**	**62**	P	**P**	**12 02 58.8**	**-0.2**
	baz=315,SNR=5.8						
HCNY				S	**S**	**12 10 45.7**	**-3.9**
	baz=315						
L59A	**Walton**	**56.56**	**63**	IAmb	IAmb	12 03 13.1	
	comp=Z,102nm,1.2s						
L59A	**Walton**	**56.56**	**63**	P	**P**	**12 02 58.6**	**-0.5**
	baz=315,SNR=5.6						
L59A				P	**P**	**12 02 58.6**	**-0.5**
	baz=315,SNR=5.6						
L59A				S	**S**	**12 10 49.1**	**-0.8**
	baz=315						
L59A				S	**S**	**12 10 49.1**	**-0.8**
	baz=315						
F62A	**Pittston Farm,**	**56.58**	**57**	IAmb	IAmb	12 03 12.1	
	comp=Z,123nm,1.4s						
F62A	**Pittston Farm,**	**56.58**	**57**	P	**P**	**12 02 57.8**	**-1.3**
	baz=315,SNR=5.3						
F62A				P	**P**	**12 02 57.8**	**-1.3**
	baz=315,SNR=5.3						
F62A				S	**S**	**12 10 49.6**	**-0.3**
	baz=315						
F62A				S	**S**	**12 10 49.6**	**-0.3**
	baz=315						
N58A	**Sunbury**	**56.61**	**65**	IAmb	IAmb	12 03 18.6	
	comp=Z,96nm,1.2s						
N58A	**Sunbury**	**56.61**	**65**	P	**P**	**12 02 59.2**	**-0.2**
	baz=315						
N58A				P	**P**	**12 02 59.2**	**-0.2**
	baz=315						
N58A				S	**S**	**12 10 46.0**	**-4.5**
	baz=315						
N58A				S	**S**	**12 10 46.0**	**-4.5**
	baz=315						
KSPA	**Keystone Colle**	**56.62**	**64**	IAmb	IAmb	12 03 13.2	
	comp=Z,208nm,2.0s						
KSPA	**Keystone Colle**	**56.62**	**64**	P	**P**	**12 02 58.9**	**-0.6**
	baz=315						
KSPA				S	**S**	**12 10 48.1**	**-2.4**
	baz=315						
W52A	**Murphy**	**56.63**	**75**	IAmb	IAmb	12 03 14.2	
	comp=Z,120nm,1.6s						
W52A	**Murphy**	**56.63**	**75**	P	**P**	**12 02 58.4**	**-1.2**
	baz=316,SNR=8.3						
KEV	**Kevo**	**56.72**	**356**	P	**P**	**12 02 58.6**	**-1.1**
KEV				IAmb	IAmb	12 03 01.0	
	comp=Z,63nm,0.7s						
KEV	**Kevo**	**56.72**	**356**	P	**P**	**12 02 58.6**	**-1.1**
KEV				pmax	pmax		
	comp=Z,63nm,0.7s						
KEV				MLR	MLR		
	comp=Z,7μm,18.0s						
LBNH	**Lisbon**	**56.75**	**59**	P	**P**	**12 02 59.4**	**-0.9**
	baz=314						
LBNH				S	**S**	**12 10 49.8**	**-2.4**
	baz=314						
G62A	**West of Eustis**	**56.77**	**58**	IAmb	IAmb	12 03 13.8	
	comp=Z,152nm,1.3s						
G62A	**West of Eustis**	**56.77**	**58**	P	**P**	**12 02 59.8**	**-0.7**
	baz=315						
G62A				P	**P**	**12 02 59.8**	**-0.7**
	baz=315						
U54A	**Nelsons Funny**	**56.82**	**72**	P	**P**	**12 03 00.4**	**-0.6**
	baz=315,SNR=13						
U54A				P	**P**	**12 03 00.4**	**-0.6**
	baz=315,SNR=13						
U54A				S	**S**	**12 10 51.2**	**-2.3**
	baz=315						
U54A				S	**S**	**12 10 51.2**	**-2.3**
	baz=315						
P57A	**Homestead Farm**	**56.86**	**67**	P	**P**	**12 03 00.1**	**-1.1**
	baz=315,SNR=7.7						
P57A				P	**P**	**12 03 00.1**	**-1.1**
	baz=315,SNR=7.7						
BTO	**Baotou**	**56.86**	**295**	*e*P	**P**	**12 03 01.0**	**-0.3**
BTO				LR	LR		
	comp=Z,27μm,16.1s						
BTO				LR	LR		
	comp=Z,22μm,14.9s						
V53A	**Saluda**	**56.86**	**74**	P	**P**	**12 03 00.3**	**-1.1**
	baz=316,SNR=16						
V53A				P	**P**	**12 03 00.3**	**-1.1**
	baz=316,SNR=16						
V53A				S	**S**	**12 10 51.2**	**-2.8**
	baz=316						
V53A				S	**S**	**12 10 51.2**	**-2.8**
	baz=316						
GUMO	**Guam**	**56.96**	**246**	LR	LR	12 25 55.0	
	comp=Z,990nm,19.5s,baz=65,slow=34						
E63A	**Oxbow**	**56.97**	**55**	P	**P**	**12 03 00.4**	**-1.5**
	baz=315						
E63A				P	**P**	**12 03 00.4**	**-1.5**
	baz=315						
ARA0	**ARCESS Array S**	**57.00**	**356**	*e*P	**P**	**12 03 01.3**	**-0.5**
ARA0				IVmBBB		12 03 08.2	
	comp=Z,1μm,3.8s						
ARA0				*e*S	**S**	**12 11 01.9**	**+7.0**
ARCES	**ARCESS Array B**	**57.00**	**356**	P	**P**	**12 03 01.1**	**-0.7**
	comp=Z,40nm,1.0s,baz=13,slow=7.6,SNR=58						
ARCES				LR	LR	12 29 43.5	
	comp=Z,8μm,18.6s,baz=350,slow=38						
	comp=Z,40nm,1.0s						
ARCES	**ARCESS Array B**	**57.00**	**356**	IAmb	IAmb	12 03 13.7	
	comp=Z,98nm,1.2s						
J61A	**Chester**	**57.05**	**60**	IAmb	IAmb	12 03 17.1	
	comp=Z,166nm,1.6s						
J61A	**Chester**	**57.05**	**60**	S	**S**	**12 10 55.5**	**-0.7**
	baz=315						
J61A				S	**S**	**12 10 55.5**	**-0.7**
	baz=315						
TRO	**Tromso**	**57.06**	**359**	*e*P	**P**	**12 03 02.4**	**+0.3**
TRO				*e*S	**S**	**12 10 58.7**	**+3.2**
JETT	**Jettan, Norway**	**57.12**	**358**	*e*P	**P**	**12 03 03.3**	**+0.6**
JETT				IVmBBB		12 03 04.6	
	comp=Z,573nm,0.6s						
JETT				*e*S	**S**	**12 11 00.4**	**+4.0**
BLA	**Blacksburg**	**57.12**	**71**	IAmb	IAmb	12 03 04.2	
	comp=Z,53nm,0.8s						
BLA				IAMs_20	IAMs_20	12 26 32.9	
	comp=Z,5μm,22.0s						
BLA	**Blacksburg**	**57.12**	**71**	P	**P**	**12 03 02.4**	**-0.8**
	baz=315,SNR=13						
BLA	**Blacksburg**	**57.12**	**71**	P	**P**	**12 03 01.9**	**-1.3**
	baz=315,SNR=13						
BLA				S	**S**	**12 10 54.9**	**-2.5**
	baz=315						
F63A	**Nahmakanta, Br**	**57.14**	**56**	IAmb	IAmb	12 03 16.0	
	comp=Z,111nm,1.4s						
Z51A	**Franklin**	**57.18**	**77**	IAmb	IAmb	12 03 03.3	
	comp=Z,34nm,0.7s						
Z51A	**Franklin**	**57.18**	**77**	P	**P**	**12 03 01.4**	**-2.2**
	baz=316,SNR=7.2						
BG3	**Lake Jocassee**	**57.27**	**74**	IAmb	IAmb	12 03 16.8	
	comp=Z,75nm,1.2s						
CASEE	**Lake Jocassee**	**57.27**	**74**	P	**P**	**12 03 03.0**	**-1.3**
	baz=316,SNR=10						
CASEE				S	**S**	**12 10 56.1**	**-3.3**
	baz=316						
SSE	**Sheshan**	**57.30**	**279**	P	**P**	**12 03 04.3**	**-0.1**
SSE				S	**S**	**12 11 01.5**	**+1.8**
SSE				pmax	pmax		
	comp=Z,61nm,1.3s						
SSE				pmax	pmax		
	comp=Z,730nm,10.2s						
SSE				LR	LR		
	comp=Z,1μm,16.1s						
SSE				LR	LR		
	comp=Z,1μm,16.6s						
I62A	**Tamworth**	**57.31**	**59**	P	**P**	**12 03 02.4**	**-1.9**
	baz=315						
I62A				P	**P**	**12 03 02.4**	**-1.9**
	baz=315						
NPNY	**Mohonk Preserv**	**57.34**	**63**	P	**P**	**12 03 02.7**	**-1.9**
	baz=315						
NPNY				S	**S**	**12 10 58.7**	**-1.4**
	baz=315						
PKME	**Peaks-Kenny Pk**	**57.36**	**57**	P	**P**	**12 03 03.0**	**-1.6**
	baz=315,SNR=5.5						
PKME	**Peaks-Kenny Pk**	**57.36**	**57**	P	**P**	**12 03 03.0**	**-1.6**
	baz=315						
PKME				S	**S**	**12 10 55.9**	**-4.2**
	baz=315						
F64A	**Sherman**	**57.40**	**56**	P	**P**	**12 03 03.4**	**-1.5**
	baz=315,SNR=5.1						
F64A				P	**P**	**12 03 03.4**	**-1.5**
	baz=315,SNR=5.1						
MVL	**Millersville**	**57.40**	**66**	IAmb	IAmb	12 03 18.5	
	comp=Z,83nm,1.6s						
Y52A	**Lilburn**	**57.43**	**76**	IAmb	IAmb	12 03 17.7	
	comp=Z,107nm,1.6s						
Y52A	**Lilburn**	**57.43**	**76**	P	**P**	**12 03 04.0**	**-1.4**
	baz=316						
Y52A				P	**P**	**12 03 04.0**	**-1.4**
	baz=316						
Y52A				S	**S**	**12 10 57.0**	**-4.5**
	baz=316						
Y52A				S	**S**	**12 10 57.0**	**-4.5**
	baz=316						
LUPA	**Lehigh Univers**	**57.50**	**64**	IAmb	IAmb	12 03 19.4	
	comp=Z,168nm,1.5s						
BATG	**Bathurst New B**	**57.50**	**53**	IAmb	IAmb	12 03 19.6	
	comp=Z,113nm,1.2s						
250A	**Grady**	**57.51**	**79**	IAmb	IAmb	12 03 27.9	
	comp=Z,92nm,0.9s						
250A	**Grady**	**57.51**	**79**	P	**P**	**12 03 04.5**	**-1.4**
	baz=317,SNR=5.6						
SDMD	**Soldier's Deli**	**57.55**	**66**	P	**P**	**12 03 05.6**	**-0.5**
	baz=315						
SDMD				S	**S**	**12 11 00.5**	**-2.3**
	baz=315						
S57A	**Dark Hollow, R**	**57.55**	**69**	IAmb	IAmb	12 03 20.1	
	comp=Z,137nm,1.4s						
S57A	**Dark Hollow, R**	**57.55**	**69**	P	**P**	**12 03 05.2**	**-0.9**
	baz=316,SNR=10						
S57A				P	**P**	**12 03 05.2**	**-0.9**
	baz=316,SNR=10						
S57A				S	**S**	**12 11 02.0**	**-1.0**
	baz=316						
S57A				S	**S**	**12 11 02.0**	**-1.0**
	baz=316						
ODNJ	**Ogdensburg**	**57.57**	**64**	IAmb	IAmb	12 03 19.8	
	comp=Z,113nm,1.5s						
ODNJ	**Ogdensburg**	**57.57**	**64**	P	**P**	**12 03 05.5**	**-0.7**
	baz=315						
ODNJ				S	**S**	**12 11 02.5**	**-0.6**
	baz=315						
TIY	**Taiyuan**	**57.58**	**291**	⇑P	**P**	**12 03 06.5**	**+0.1**
TIY				S	**S**	**12 11 04.8**	**+1.3**
TIY				SS	**SS**	**12 14 55.5**	**+2.5**
TIY				pmax	pmax		
	comp=Z,43nm,0.8s						
TIY				pmax	pmax		
	comp=Z,980nm,7.5s						
TIY				LR	LR		
	comp=Z,2μm,16.5s						
TIY				LR	LR		
	comp=Z,4μm,16.5s						
TIY				LR	LR		
	comp=Z,5μm,18.6s						
KTK1	**Kautokeino**	**57.60**	**357**	*e*P	**P**	**12 03 06.0**	**0.0**
KTK1				IVmBBB		12 03 17.3	
	comp=Z,1μm,2.0s						
KTK1				*e*S	**S**	**12 11 05.5**	**+2.8**
L61B	**Northampton**	**57.62**	**61**	S	**S**	**12 11 03.6**	**-0.1**
	baz=315						
L61B	**Northampton**	**57.62**	**61**	P	**P**	**12 03 04.8**	**-1.8**
	baz=315						
L61B				S	**S**	**12 11 03.9**	**+0.2**
	baz=315						
BRAL	**Brewton**	**57.64**	**80**	IAMs_20	IAMs_20	12 32 23.0	
	comp=Z,5μm,18.0s						
BRAL	**Brewton**	**57.64**	**80**	P	**P**	**12 03 05.4**	**-1.4**
	baz=317						
BRAL				S	**S**	**12 11 02.4**	**-1.8**
	baz=317						
V55A	**Taylorsville**	**57.64**	**72**	IAmb	IAmb	12 03 20.4	
	comp=Z,51nm,1.1s						
V55A	**Taylorsville**	**57.64**	**72**	P	**P**	**12 03 05.9**	**-0.9**
	baz=316,SNR=14						
V55A				P	**P**	**12 03 05.9**	**-0.9**
	baz=316,SNR=14						
BRNY	**Black Rk. Fore**	**57.65**	**63**	P	**P**	**12 03 06.1**	**-0.7**
	baz=315						
BRNY				S	**S**	**12 11 03.9**	**-0.3**
	baz=315						
K62A	**Royalston**	**57.70**	**61**	IAmb	IAmb	12 03 21.6	
	comp=Z,149nm,1.4s						
TRNY	**Table Rock, Ra**	**57.73**	**63**	IAmb	IAmb	12 03 21.0	
	comp=Z,62nm,1.2s						
U56A	**King**	**57.76**	**71**	IAmb	IAmb	12 03 21.2	
	comp=Z,95nm,1.2s						
U56A	**King**	**57.76**	**71**	P	**P**	**12 03 06.9**	**-0.7**
	baz=316,SNR=5.6						
U56A				P	**P**	**12 03 06.9**	**-0.7**
	baz=316,SNR=5.6						
U56A				S	**S**	**12 11 03.5**	**-2.2**
	baz=316						
U56A				S	**S**	**12 11 03.5**	**-2.2**
	baz=316						
BRNJ	**Basking Ridge**	**57.88**	**64**	P	**P**	**12 03 07.8**	**-0.6**
	baz=315						
BRNJ				S	**S**	**12 11 06.3**	**-0.8**
	baz=315						
TUPA	**Temple Univers**	**57.91**	**65**	P	**P**	**12 03 07.7**	**-0.9**
	baz=316						
152A	**Waverly Hall**	**57.91**	**77**	P	**P**	**12 03 06.3**	**-2.4**
	baz=317,SNR=5.5						
GEDE	**Greenville**	**57.92**	**65**	S	**S**	**12 11 04.7**	**-2.9**
	baz=316						
T57A	**Hurt**	**57.93**	**70**	P	**P**	**12 03 07.6**	**-1.1**
	baz=316,SNR=8.3						
T57A				P	**P**	**12 03 07.6**	**-1.1**
	baz=316,SNR=8.3						
T57A				S	**S**	**12 11 05.5**	**-2.4**
	baz=316						
T57A				S	**S**	**12 11 05.5**	**-2.4**
	baz=316						
NJ2	**Nanjing**	**57.97**	**282**	⇑P	**P**	**12 03 08.0**	**-1.1**
NJ2				sP	**pwP**	**12 03 19.8**	**+2.7**
NJ2				S	**S**	**12 11 06.5**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,66nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1μm,4.9s						
NJ2				LR	LR		
	comp=Z,3μm,17.5s						
NJ2				LR	LR		
	comp=Z,4μm,15.6s						
NJ2				LR	LR		
	comp=Z,5μm,15.2s						
PAL	**Palisades**	**58.00**	**63**	S	**S**	**12 11 04.7**	**-4.0**
	baz=316						
PAL	**Palisades**	**58.00**	**63**	P	**P**	**12 03 08.2**	**-1.0**
	baz=315						
PAL				S	**S**	**12 11 07.2**	**-1.5**
	baz=315						
R58B	**Mineral**	**58.01**	**68**	IAmb	IAmb	12 03 23.3	
	comp=Z,186nm,1.6s						
R58B	**Mineral**	**58.01**	**68**	P	**P**	**12 03 08.6**	**-0.7**
	baz=316,SNR=10						
R58B				P	**P**	**12 03 08.6**	**-0.7**
	baz=316,SNR=10						
R58B				S	**S**	**12 11 06.5**	**-2.3**
	baz=316						
R58B				S	**S**	**12 11 06.5**	**-2.3**
	baz=316						
PAULI	**Pauline**	**58.04**	**74**	IAmb	IAmb	12 03 21.9	
	comp=Z,131nm,1.7s						
PAULI	**Pauline**	**58.04**	**74**	P	**P**	**12 03 08.0**	**-1.6**
	baz=316,SNR=6.6						
LVZ	**Lovozero**	**58.08**	**352**	P	**P**	**12 03 08.7**	**-0.7**
LVZ				IAmb	IAmb	12 03 11.4	
	comp=Z,104nm,0.9s						
LVZ	**Lovozero**	**58.08**	**352**	*ce*P	**P**	**12 03 08.3**	**-1.1**
LVZ				pmax	pmax		
	comp=Z,101nm,0.8s						
LVZ				MLR	MLR		
	comp=Z,9μm,18.0s						
KMSC	**Kings Mountain**	**58.08**	**73**	IAmb	IAmb	12 03 22.3	
	comp=Z,162nm,1.6s						
KMSC	**Kings Mountain**	**58.08**	**73**	P	**P**	**12 03 08.9**	**-1.0**
	baz=316,SNR=14						
KMSC	**Kings Mountain**	**58.08**	**73**	P	**P**	**12 03 08.1**	**-1.7**
	baz=316,SNR=14						
KMSC				S	**S**	**12 11 06.2**	**-3.7**
	baz=316						
GOGA	**Godfrey**	**58.10**	**76**	IAmb	IAmb	12 03 24.0	
	comp=Z,181nm,1.9s						
GOGA	**Godfrey**	**58.10**	**76**	IAMs_20	IAMs_20	12 26 20.1	
	comp=Z,5μm,21.0s						
GOGA	**Godfrey**	**58.10**	**76**	P	**P**	**12 03 08.3**	**-1.7**
	baz=316,SNR=7.1						
GOGA				S	**S**	**12 11 03.9**	**-6.4**
	baz=316						
GOGA	**Godfrey**	**58.10**	**76**	P	**P**	**12 03 07.5**	**-2.5**
	baz=316,SNR=7.1						
GOGA				S	**S**	**12 11 04.7**	**-5.6**
	baz=316						
UNH	**University of**	**58.10**	**60**	S	**S**	**12 11 08.3**	**-1.6**
	baz=316						
FOR	**Fordham**	**58.11**	**63**	S	**S**	**12 11 09.8**	**-0.3**
	baz=316						
CBN	**Corbin Frederi**	**58.11**	**68**	S	**S**	**12 11 07.8**	**-2.4**

	baz=316							
HRV	**Adam Dziewonsk**	**58.16**	**60**	IAMs_20	IAMs_20	12 30 07.9		
	comp=Z,5μm,18.0s							
HRV	**Adam Dziewonsk**	**58.16**	**60**	P	**P**	**12 03 08.6**	**-1.7**	
	baz=315							
HRV				S	**S**	**12 11 09.2**	**-1.6**	
	baz=315							
HODGE	**Hodges**	**58.21**	**74**	P	**P**	**12 03 09.5**	**-1.3**	
	baz=316,SNR=7.8							
WES	**Weston**	**58.37**	**60**	IAmb	IAmb	12 03 25.1		
	comp=Z,122nm,1.2s							
WES				IAMs_20	IAMs_20	12 29 30.5		
	comp=Z,6μm,19.0s							
BORG	**Borgarnes**	**58.39**	**18**	LR	LR	12 30 36.3		
	comp=Z,5μm,19.6s,baz=335,slow=38							
APA	**Apatity**	**58.50**	**353**	⇓*i*P	**P**	**12 03 11.4**	**-0.9**	
APA				pmax	pmax			
	comp=Z,15nm,0.8s							
APA				MLR	MLR			
	comp=Z,8μm,17.0s							
BRYW	**Bryant College**	**58.59**	**61**	IAMs_20	IAMs_20	12 29 38.4		
	comp=Z,6μm,18.0s							
352A	**Blakely**	**58.65**	**78**	IAmb	IAmb	12 03 13.9		
	comp=Z,70nm,0.8s							
352A	**Blakely**	**58.65**	**78**	P	**P**	**12 03 12.7**	**-1.2**	
	baz=317,SNR=7.7							
M63A	**Gales Ferry**	**58.70**	**62**	S	**S**	**12 11 16.1**	**-1.7**	
	baz=316							
M63A				S	**S**	**12 11 16.1**	**-1.7**	
	baz=316							
JSC	**Jenkinsville**	**58.74**	**74**	IAmb	IAmb	12 03 26.9		
	comp=Z,151nm,1.8s							
JSC	**Jenkinsville**	**58.74**	**74**	P	**P**	**12 03 13.4**	**-1.0**	
	baz=316,SNR=6.6							
STEI	**Steigen**	**58.77**	**1**	*e*P	**P**	**12 03 13.3**	**-0.8**	
STEI				IVmBBB		12 03 23.8		
	comp=Z,2μm,2.5s							
STEI				*e*S	**S**	**12 11 24.3**	**+6.3**	
W57A	**Gilead**	**58.84**	**72**	IAmb	IAmb	12 03 28.4		
	comp=Z,109nm,1.6s							
W57A	**Gilead**	**58.84**	**72**	P	**P**	**12 03 13.8**	**-1.4**	
	baz=316,SNR=6.8							
W57A				P	**P**	**12 03 13.8**	**-1.4**	
	baz=316,SNR=6.8							
W57A				S	**S**	**12 11 15.9**	**-3.8**	
	baz=316							
W57A				S	**S**	**12 11 15.9**	**-3.8**	
	baz=316							
V58A	**Windy Hill, Pi**	**58.87**	**71**	P	**P**	**12 03 14.5**	**-0.8**	
	baz=316,SNR=14							
V58A				P	**P**	**12 03 14.5**	**-0.8**	
	baz=316,SNR=14							
V58A				S	**S**	**12 11 17.2**	**-2.9**	
	baz=316							
V58A				S	**S**	**12 11 17.2**	**-2.9**	
	baz=316							
154A	**Montrose**	**58.89**	**76**	IAmb	IAmb	12 03 14.2		
	comp=Z,52nm,0.8s							
T59A	**Double "B" Far**	**58.90**	**69**	P	**P**	**12 03 15.0**	**-0.5**	
	baz=316,SNR=18							
T59A				P	**P**	**12 03 15.0**	**-0.5**	
	baz=316,SNR=18							
T59A				S	**S**	**12 11 18.7**	**-1.7**	
	baz=316							
T59A				S	**S**	**12 11 18.7**	**-1.7**	
	baz=316							
ZALV	**Zalesovo Beam**	**58.91**	**320**	P	**P**	**12 03 14.5**	**-0.9**	
	comp=Z,14nm,0.6s,baz=39,slow=6.1,SNR=50							
ZALV				PcP	**PcP**	**12 04 04.9**	**+0.4**	
	comp=Z,10nm,0.9s,baz=34,slow=5.6,SNR=3.6							
ZALV				LR	LR	12 31 22.9		
	comp=Z,11μm,18.2s,baz=34,slow=39							
	comp=Z,14nm,0.6s							
BIRD	**Birdtown, Kers**	**58.94**	**73**	IAmb	IAmb	12 03 30.5		
	comp=Z,84nm,1.5s							
HAW	**Hawthorne Fire**	**59.21**	**75**	S	**S**	**12 11 19.2**	**-5.5**	
	baz=317							
U59A	**Littleton**	**59.21**	**70**	IAmb	IAmb	12 03 31.6		
	comp=Z,97nm,1.4s							
U59A	**Littleton**	**59.21**	**70**	P	**P**	**12 03 17.2**	**-0.5**	
	baz=316,SNR=11							
U59A				P	**P**	**12 03 17.2**	**-0.5**	
	baz=316,SNR=11							
U59A				S	**S**	**12 11 22.8**	**-1.7**	
	baz=316							
U59A				S	**S**	**12 11 22.8**	**-1.7**	
	baz=316							
T60A	**Surry**	**59.23**	**68**	S	**S**	**12 11 23.5**	**-1.3**	
	baz=316							
T60A				S	**S**	**12 11 23.5**	**-1.3**	
	baz=316							
FAUS	**Fauske**	**59.33**	**1**	*e*P	**P**	**12 03 18.4**	**+0.4**	
X58A	**Rowland**	**59.64**	**72**	IAmb	IAmb	12 03 33.5		
	comp=Z,158nm,1.8s							
LYN	**LuoYang**	**59.83**	**288**	⇑*i*P	**P**	**12 03 22.0**	**0.0**	
LYN				sP	pwP	12 03 33.0	+2.9	
LYN				PP	**PP**	**12 05 32.0**	**-1.8**	
LYN				S	**S**	**12 11 34.3**	**+1.6**	
LYN				pmax	pmax			
	comp=Z,60nm,0.6s							
LYN				pmax	pmax			
	comp=Z,1μm,9.4s							
LYN				LR	LR			
	comp=Z,6μm,20.0s							
LYN				LR	LR			
	comp=Z,4μm,20.6s							
LYN				LR	LR			
	comp=Z,6μm,22.6s							
CNNC	**Cliffs of the**	**59.96**	**70**	IAMs_20	IAMs_20	12 30 26.0		
	comp=Z,6μm,18.0s							
KONS	**Konsvik**	**60.19**	**2**	*e*P	**P**	**12 03 24.6**	**+0.6**	
NHSC	**New Hope**	**60.21**	**74**	IAMs_20	IAMs_20	12 27 59.9		
	comp=Z,6μm,22.0s							
NHSC	**New Hope**	**60.21**	**74**	P	**P**	**12 03 23.3**	**-1.4**	
	baz=317							
MOR8	**Moi Rana**	**60.53**	**1**	*e*P	**P**	**12 03 25.1**	**-1.3**	
MOR8				IVmB_BB		12 03 36.8		
	comp=Z,1μm,4.2s							
TLIG	**Tlapa**	**61.07**	**100**	IAmb	IAmb	12 03 43.5		
	comp=Z,56nm,1.2s							
YOJ	**Yonaguni jima**	**61.12**	**273**	IAmb	IAmb	12 03 43.0		
	comp=Z,76nm,1.0s							
YOJ	**Yonaguni jima**	**61.12**	**273**	P	**P**	**12 03 30.4**	**-0.6**	
DGZ	**Jazzator, Alta**	**61.13**	**316**	*c i*P	**P**	**12 03 30.4**	**-0.5**	
DGZ				pmax	pmax			
	comp=Z,58nm,1.0s							
DGZ				MLR	MLR			
	comp=Z,13μm,18.0s							
TATO	**Taipei**	**61.64**	**274**	IAMs_20	IAMs_20	12 29 07.3		
	comp=Z,3μm,20.0s							
WHN	**Wuhan**	**61.69**	**284**	⇑P	**P**	**12 03 34.8**	**+0.1**	
WHN				S	**S**	**12 11 52.5**	**-3.9**	
WHN				pmax	pmax			
	comp=Z,120nm,1.0s							
WHN				LR	LR			
	comp=Z,3μm,12.6s							
WHN				LR	LR			
	comp=Z,12μm,15.9s							
WHN				LR	LR			
	comp=Z,9μm,16.6s							
YHNB	**Yeheng**	**61.94**	**274**	IAmb	IAmb	12 03 49.8		
	comp=Z,48nm,1.2s							
YHNB				IAMs_20	IAMs_20	12 28 11.2		
	comp=Z,4μm,21.0s							
YHNB	**Yeheng**	**61.94**	**274**	P	**P**	**12 03 36.3**	**-0.3**	
NSS	**Namsos**	**62.14**	**2**	*e*P	**P**	**12 03 36.7**	**-0.5**	
NACB	**Ninganchiao**	**62.19**	**274**	IAmb	IAmb	12 03 53.2		
	comp=Z,48nm,0.9s							
NACB				IAMs_20	IAMs_20	12 28 09.7		
	comp=Z,3μm,22.0s							
NACB	**Ninganchiao**	**62.19**	**274**	P	**P**	**12 03 38.2**	**+0.1**	
XAN	**Xi'an**	**62.20**	**290**	P	**P**	**12 03 38.3**	**+0.1**	
XAN				pP	pwP	12 03 48.8	+2.5	
XAN				S	**S**	**12 11 54.0**	**-9.0**	
XAN				pmax	pmax			
	comp=Z,72nm,1.4s							
XAN				pmax	pmax			
	comp=Z,1μm,6.9s							
XAN				LR	LR			
	comp=Z,6μm,15.4s							
XAN				LR	LR			
	comp=Z,7μm,15.9s							
XAN				LR	LR			
	comp=Z,9μm,15.7s							
PRGR	**Permogore**	**62.84**	**345**	*e*P	**P**	**12 03 41.1**	**-0.8**	
PRGR				pmax	pmax			
	comp=Z,253nm,1.8s							

SSLB	**Suanglung**	**62.86**	**274**	IAMs_20	IAMs_20	12 28 52.6		
	comp=Z,3μm,21.0s							
SSLB	**Suanglung**	**62.86**	**274**	P	**P**	**12 03 42.8**	**+0.1**	
YULB	**Yu-li**	**62.95**	**273**	IAMs_20	IAMs_20	12 29 31.1		
	comp=Z,4μm,22.0s							
YULB	**Yu-li**	**62.95**	**273**	P	**P**	**12 03 43.3**	**0.0**	
GTA	**Gaotai**	**63.12**	**300**	⇑P	**P**	**12 03 43.5**	**-0.8**	
GTA				pP	pP	12 03 46.8	-2.1	
GTA				sP	sP	12 03 49.5	-1.2	
GTA				PP	**PP**	**12 06 03.8**	**+1.1**	
GTA				ScP		12 08 24.5		
GTA				PcS		12 08 27.5		
GTA				S	**S**	**12 12 11.5**	**-3.0**	
GTA				sS	sS	12 12 23.5	+1.5	
GTA				ScS	**ScS**	**12 13 33.3**	**-3.1**	
GTA				pmax	pmax			
	comp=Z,56nm,1.3s							
GTA				pmax	pmax			
	comp=Z,930nm,6.1s							
GTA				LR	LR			
	comp=Z,7μm,15.6s							
GTA				LR	LR			
	comp=Z,11μm,15.3s							
GTA				LR	LR			
	comp=Z,15μm,16.4s							
DWPF	**Disney Wildern**	**63.18**	**78**	IAMs_20	IAMs_20	12 33 39.7		
	comp=Z,4μm,18.0s							
TBLU	**Trondheim**	**63.37**	**3**	*e*P	**P**	**12 03 44.2**	**-1.3**	
QZH	**Quanzhou**	**63.39**	**276**	⇑*i*P	**P**	**12 03 45.8**	**-0.3**	
QZH				sP	**pwP**	**12 03 55.5**	**+1.4**	
QZH				PP	**PP**	**12 06 05.3**	**0.0**	
QZH				S	**S**	**12 12 17.5**	**-0.4**	
QZH				pmax	pmax			
	comp=Z,54nm,1.0s							
QZH				pmax	pmax			
	comp=Z,860nm,5.4s							
QZH				LR	LR			
	comp=Z,1μm,15.6s							
QZH				LR	LR			
	comp=Z,3μm,16.1s							
QZH				LR	LR			
	comp=Z,1μm,21.3s							
TPUB	**Ta-pu**	**63.42**	**274**	P	**P**	**12 03 45.7**	**-0.7**	
TPUB				IAmb	IAmb	12 03 59.1		
	comp=Z,83nm,1.3s							
TPUB				IAMs_20	IAMs_20	12 30 53.5		
	comp=Z,3μm,20.0s							
TPUB	**Ta-pu**	**63.42**	**274**	P	**P**	**12 03 46.4**	**0.0**	
LZH	**Lanzhou**	**63.47**	**295**	⇑P	**P**	**12 03 46.8**	**0.0**	
LZH				sP	sP	12 03 53.5	+0.3	
LZH				PP	**PP**	**12 06 03.0**	**-3.0**	
LZH				S	**S**	**12 12 19.0**	**-0.1**	
LZH				SS	**SS**	**12 16 22.5**	**-3.0**	
LZH				pmax	pmax			
	comp=Z,130nm,1.4s							
LZH				pmax	pmax			
	comp=Z,1μm,4.8s							
LZH				LR	LR			
	comp=Z,8μm,16.1s							
LZH				LR	LR			
	comp=Z,10μm,18.6s							
LZH				LR	LR			
	comp=Z,11μm,19.5s							
TWG	**Pinlang**	**63.52**	**273**	IAMs_20	IAMs_20	12 29 04.1		
	comp=Z,3μm,21.0s							
KURK	**Kurchatov**	**63.81**	**321**	P	**P**	**12 03 48.4**	**-0.1**	
KURK	**Kurchatov**	**63.81**	**321**	P	**P**	**12 03 48.4**	**-0.1**	
KURK				pmax	pmax			
	comp=Z,141nm,1.0s							
KURK				MLR	MLR			
	comp=Z,8μm,19.0s							
KURK	**Kurchatov**	**63.81**	**321**	P	**P**	**12 03 48.6**	**+0.1**	
KURK	**Kurchatov**	**63.81**	**321**	P	**P**	**12 03 48.9**	**+0.4**	
KURBB	**Kurchatov Arra**	**63.91**	**321**	P	**P**	**12 03 48.6**	**-0.6**	
	comp=Z,114nm,1.1s,baz=32,slow=6.7,SNR=200							
KURBB				PKP2bc		12 32 46.6		
	comp=Z,0.5nm,0.2s,baz=229,slow=3.2,SNR=6.5							
KURBB				LR	LR	12 34 11.7		
	comp=Z,8μm,19.7s,baz=43,slow=38							
	comp=Z,114nm,1.1s							
KURBB	**Kurchatov Arra**	**63.91**	**321**	P	**P**	**12 03 48.5**	**-0.7**	
MOL	**Molde**	**63.94**	**5**	*e*P	**P**	**12 03 49.0**	**-0.2**	
ZSN	**Zaisan**	**63.95**	**315**	*c i*P	**P**	**12 03 49.2**	**-0.3**	
ZSN				pmax	pmax			
	comp=Z,46nm,0.8s							
ZSN	**Zaisan**	**63.95**	**315**	⇑*i*P	**P**	**12 03 49.3**	**-0.3**	
	comp=Z,46nm,0.8s,baz=315							
SVE	**Sverdlovsk**	**64.23**	**335**	*de*P	**P**	**12 03 51.4**	**+0.2**	
SVE				*e*S	**S**	**12 12 28.3**	**+0.8**	
SVE				pmax	pmax			
	comp=Z,126nm,1.0s							
SVE				MLR	MLR			
	comp=E,6μm,17.0s							
SVE				MLR	MLR			
	comp=Z,10μm,16.0s							
SVE				MLR	MLR			
	comp=N,4μm,16.0s							
CNSH	**ChangSha**	**64.27**	**283**	⇑P	**P**	**12 03 51.5**	**-0.4**	
CNSH				S	**S**	**12 12 28.0**	**-0.8**	
CNSH				pmax	pmax			
	comp=N,140nm,1.1s							
CNSH				LR	LR			
	comp=N,4μm,16.6s							
CNSH				LR	LR			
	comp=N,4μm,14.8s							
CNSH				LR	LR			
	comp=N,5μm,15.6s							
AKN	**Aaknes**	**64.30**	**5**	*e*P	**P**	**12 03 52.1**	**+0.5**	
AKN				IVmB_BB		12 04 02.3		
	comp=Z,3μm,1.9s							
KLMR	**Klimovskoe**	**64.45**	**348**	*e*P	**P**	**12 03 50.9**	**-1.6**	
KLMR						12 06 10.7		
KLMR				S	**S**	**12 12 31.5**	**+1.4**	
KLMR				pmax	pmax			
	comp=Z,171nm,1.4s							
KLMR	**Klimovskoe**	**64.45**	**348**	*e*P	**P**	**12 03 51.0**	**-1.6**	
KLMR				*e*P	**P**	**12 03 51.0**	**-1.6**	
KLMR				*e*P	**P**	**12 03 51.0**	**-1.6**	
KLMR				AMP		12 04 05.0		
	comp=Z,171nm,1.4s							
KLMR				PP	**PP**	**12 06 10.7**	**-3.0**	
KLMR				S	**S**	**12 12 31.5**	**+1.4**	
KLMR				S	**S**	**12 12 31.5**	**+1.4**	
KLMR				SS	SS	12 17 10.0	+31	
KLMR				SS	SS	12 17 10.0	+31	
KLMR				LQ	LQ	12 28 51.8		
KLMR				LQ	LQ	12 28 51.8		
KLMR				LR	LR	12 32 50.9		
KLMR				AMP		12 39 43.8		
	comp=Z,4μm,13.9s							
DOMB	**Dombas**	**64.53**	**4**	*e*P	**P**	**12 03 53.1**	**0.0**	
ENH	**Enshi**	**64.69**	**287**	IAMs_20	IAMs_20	12 32 59.1		
	comp=Z,4μm,20.0s							
ENH	**Enshi**	**64.69**	**287**	P	**P**	**12 03 54.9**	**+0.2**	
BVAR	**Borovoye Array**	**64.74**	**327**	LR	LR	12 36 46.3		
	comp=Z,4μm,18.9s,baz=42,slow=40							
BVA2	**Borovoye Array**	**64.75**	**327**	P	**P**	**12 03 55.1**	**+0.4**	
BRVK	**Borovoye**	**64.75**	**328**	P	**P**	**12 03 54.1**	**-0.6**	
BRVK	**Borovoye**	**64.75**	**328**	P	**P**	**12 03 54.1**	**-0.6**	
BRVK				pmax	pmax			
	comp=Z,103nm,0.8s							
BRVK				MLR	MLR			
	comp=Z,5μm,18.0s							
BRVK	**Borovoye**	**64.75**	**328**	P	**P**	**12 03 55.2**	**+0.6**	
FINES	**FINESS Array B**	**65.05**	**355**	P	**P**	**12 03 55.2**	**-1.3**	
	comp=Z,75nm,0.9s,baz=18,slow=6.6,SNR=72							
FINES				LR	LR	12 35 51.6		
	comp=Z,4μm,18.1s,baz=13,slow=39							
	comp=Z,75nm,0.9s							
FINES	**FINESS Array B**	**65.05**	**355**	*i* P	**P**	**12 03 56.0**	**-0.5**	
FINES				pmax	pmax			
	comp=Z,75nm,0.9s							
KIRV	**Kirov**	**65.08**	**342**	LR	LR	12 37 44.3		
	comp=Z,12μm,18.2s,baz=31,slow=41							
KIRV	**Kirov**	**65.08**	**342**	*ce*P	**P**	**12 03 56.4**	**-0.3**	
ARU	**Arti**	**65.10**	**336**	LR	LR	12 36 35.9		
	comp=Z,7μm,18.9s,baz=36,slow=40							
ARU	**Arti**	**65.10**	**336**	P	**P**	**12 03 55.7**	**-1.2**	
ARU	**Arti**	**65.10**	**336**	*c i*P	**P**	**12 03 56.2**	**-0.7**	
ARU						12 04 30.9		
ARU				S	**S**	**12 12 39.4**	**+1.2**	
ARU						12 13 52.6		
ARU				pmax	pmax			
	comp=Z,153nm,1.3s							
ARU				MLR	MLR			

	comp=Z,9μm,17.0s							
TAOE	**Nuku Hiva Isla**	**65.24**	**155**	*e*P	**P**	**12 04 00.7**	**+2.3**	
	comp=Z,337nm,23.2s							
TAOE				*e*S	**S**	**12 12 42.6**	**+1.6**	
	comp=Z,2μm,23.9s							
TAOE				*e*SS	**SS**	**12 16 56.0**	**+1.8**	
	comp=Z,1μm,24.8s							
TAOE				*e*LR	LR	12 23 32.2		
	comp=Z,4μm,26.3s							
TAOE	**Nuku Hiva Isla**	**65.24**	**155**	*e*T	T	13 15 30.3		
	comp=Z,38nm,0.2s							
MK31	**Makanchi Array**	**65.54**	**317**	IAmb	IAmb	12 04 11.6		
	comp=Z,38nm,1.1s							
MK31	**Makanchi Array**	**65.54**	**317**	*i* P	**P**	**12 03 59.2**	**-0.7**	
MK31				pmax	pmax			
	comp=Z,18nm,0.6s							
MKAR	**Makanchi Array**	**65.54**	**317**	P	**P**	**12 03 58.5**	**-1.4**	
	comp=Z,15nm,0.7s,baz=50,slow=6.5,SNR=82							
MKAR				PKP2bc		12 32 45.1		
	comp=Z,0.8nm,0.9s,baz=242,slow=2.6,SNR=4.4							
MKAR				LR	LR	12 35 58.1		
	comp=Z,6μm,18.2s,baz=37,slow=39							
	comp=Z,15nm,0.7s							
WMQ	**Urumqi**	**65.58**	**311**	*e*P	**P**	**12 04 01.0**	**+0.7**	
WMQ				sP	pwP	12 04 12.0	+3.5	
WMQ				S	**S**	**12 12 44.5**	**-0.2**	
WMQ				sS	sS	12 12 56.8	+4.6	
WMQ				ScS	**SKSac**	**12 13 52.3**	**-2.5**	
WMQ				pmax	pmax			
	comp=Z,70nm,1.3s							
WMQ				pmax	pmax			
	comp=Z,1μm,5.3s							
WMQ				LR	LR			
	comp=Z,10μm,16.9s							
WMQ				LR	LR			
	comp=Z,7μm,19.1s							
WMQ				LR	LR			
	comp=Z,3μm,20.3s							
NB2	**NORSAR Subarra**	**65.61**	**3**	P	**P**	**12 04 00.0**	**-0.2**	
	comp=Z,150nm,1.4s,baz=357,slow=6.5							
NB2	**NORSAR Subarra**	**65.61**	**3**	P	**P**	**12 04 00.0**	**-0.2**	
	baz=357,slow=6.5							
NOA	**NORSAR Array B**	**65.61**	**3**	P	**P**	**12 03 59.7**	**-0.5**	
	comp=Z,34nm,0.9s,baz=357,slow=6.5,SNR=51							
NOA				LR	LR	12 34 17.1		
	comp=Z,2μm,19.1s,baz=0.0,slow=38							
	comp=Z,34nm,0.9s							
RAF	**Rauma**	**65.64**	**357**	*e*P	**P**	**12 04 00.3**	**0.0**	
MAKZ	**Makanchi**	**65.65**	**317**	P	**P**	**12 04 00.1**	**-0.6**	
MAKZ				IAmb	IAmb	12 04 01.5		
	comp=Z,123nm,1.6s							
MAKZ	**Makanchi**	**65.65**	**317**	P	**P**	**12 04 00.1**	**-0.6**	
MAKZ				pmax	pmax			
	comp=Z,123nm,1.6s							
MAKZ				MLR	MLR			
	comp=Z,6μm,20.0s							
ASK	**Askoy**	**65.88**	**6**	*e*P	**P**	**12 04 02.6**	**+0.8**	
NC602	**NORSAR Array S**	**65.93**	**3**	*e*P	**P**	**12 04 02.7**	**+0.6**	
NC602				*e*S	**S**	**12 12 51.3**	**+3.1**	
SOR	**Soroa**	**66.27**	**83**	P	**P**	**12 04 04.8**	**-0.2**	
SOR				IAmb	IAmb	12 04 06.8		
	comp=Z,112nm,1.4s							
SOR	**Soroa**	**66.27**	**83**	P	**P**	**12 04 04.8**	**-0.2**	
SOR				pmax	pmax			
	comp=Z,113nm,1.4s							
MEF	**Metsahovi**	**66.36**	**356**	*e*P	**P**	**12 04 04.5**	**-0.5**	
PUL	**Pulkovo**	**66.44**	**353**	*ce*P	**P**	**12 04 06.3**	**+0.8**	
PUL				pmax	pmax			
	comp=Z,138nm,0.8s							
PUL				MLR	MLR			
	comp=Z,5μm,18.0s							
AAL	**Aland**	**66.53**	**358**	*e*P	**P**	**12 04 06.0**	**0.0**	
ODD1	**Odda**	**66.54**	**6**	*e*P	**P**	**12 04 06.9**	**+0.7**	
ODD1				IVmBBB		12 04 07.1		
	comp=Z,3μm,2.7s							
BRZS	**Berezniki**	**66.55**	**324**	*c i*P	**P**	**12 04 05.5**	**-0.9**	
BRZS				*e*S	**S**	**12 13 02.9**	**+6.7**	
BRZS				pmax	pmax			
	comp=Z,63nm,1.6s							
BRZS	**Berezniki**	**66.55**	**324**	⇑*i*P	**P**	**12 04 05.5**	**-0.9**	
	comp=Z,63nm,1.6s,baz=324							
BRZS				*e*S	**S**	**12 13 03.0**	**+6.7**	
	baz=324							
OSL	**Oslo**	**66.70**	**3**	*e*P	**P**	**12 04 08.0**	**+0.8**	
UPP	**Uppsala**	**66.88**	**360**	*e*P	**P**	**12 04 07.9**	**-0.4**	
KONO	**Kongsberg**	**66.95**	**4**	P	**P**	**12 04 08.3**	**-0.4**	
KONO	**Kongsberg**	**66.95**	**4**	P	**P**	**12 04 08.3**	**-0.4**	
KONO				pmax	pmax			
	comp=Z,105nm,1.1s							
KONO	**Kongsberg**	**66.95**	**4**	*e*P	**P**	**12 04 09.3**	**+0.6**	
BLS5	**Blasjo**	**67.02**	**6**	*e*P	**P**	**12 04 09.8**	**+0.6**	
BLS5				IVmB_BB		12 04 16.9		
	comp=Z,4μm,3.7s							
CD2	**Chengdu**	**67.42**	**292**	P	**P**	**12 04 13.0**	**+0.7**	
CD2				S	**S**	**12 13 05.3**	**-2.0**	
CD2				sS	sS	12 13 15.8	+0.8	
CD2				SS	**SS**	**12 17 20.5**	**-6.4**	
CD2				pmax	pmax			
	comp=Z,160nm,1.0s							
CD2				pmax	pmax			
	comp=Z,1μm,8.8s							
CD2				LR	LR			
	comp=Z,4μm,22.7s							
CD2				LR	LR			
	comp=Z,4μm,18.0s							
CD2				LR	LR			
	comp=Z,4μm,15.2s							
AFI	**Afiamalu**	**67.64**	**189**	LR	LR	12 29 47.6		
	comp=Z,2μm,18.7s,baz=356,slow=32							
AFI	**Afiamalu**	**67.64**	**189**	IAMs_20	IAMs_20	12 29 55.3		
	comp=Z,3μm,20.0s							
MTSE	**Matsula**	**67.89**	**356**	*e*P	**P**	**12 04 14.9**	**+0.3**	
GZH	**Guangzhou**	**67.90**	**279**	⇑*i*P	P	12 04 09.3	-5.9	
GZH				S	**S**	**12 13 04.5**	**-8.5**	
GZH				ScS	**SKiKP**	**12 14 07.3**	**-3.3**	
GZH				pmax	pmax			
	comp=Z,850nm,6.9s							
GZH				LR	LR			
	comp=Z,2μm,19.5s							
GZH				LR	LR			
	comp=Z,1μm,19.7s							
GULI	**GuiLin**	**67.95**	**283**	P	**P**	**12 04 13.0**	**-2.6**	
GULI				S	**S**	**12 13 08.5**	**-5.2**	
GULI				pmax	pmax			
	comp=Z,70nm,1.4s							
GULI				LR	LR			
	comp=Z,3μm,17.1s							
GULI				LR	LR			
	comp=Z,2μm,16.7s							
GULI				LR	LR			
	comp=Z,3μm,18.4s							
VSU	**Vasula**	**67.99**	**354**	*e*P	**P**	**12 04 16.2**	**+1.0**	
VSU	**Vasula**	**67.99**	**354**	*c i*P	**P**	**12 04 15.2**	**-0.1**	
VSU				pmax	pmax			
	comp=Z,384nm,1.0s							
VSU				MLR	MLR			
	comp=Z,15μm,18.0s							
HKPS	**Hong Kong Po S**	**68.05**	**278**	IAmb	IAmb	12 04 18.3		
	comp=Z,57nm,0.9s							
HKPS	**Hong Kong Po S**	**68.05**	**278**	IAMs_20	IAMs_20	12 33 42.8		
	comp=Z,2μm,20.0s							
HKPS	**Hong Kong Po S**	**68.05**	**278**	P	**P**	**12 04 17.7**	**+1.5**	
GOMU	**GeErMu**	**68.12**	**301**	P	**P**	**12 04 16.5**	**-0.5**	
GOMU				pP	pP	12 04 20.8	-0.8	
GOMU				sP	sP	12 04 22.5	-0.9	
GOMU				S	**S**	**12 13 16.0**	**-0.2**	
GOMU				sS	sS	12 13 28.0	+4.2	
GOMU				pmax	pmax			

TDK					MLR	MLR	
	comp=Z,7μm,18.0s						
TDK	**Taldyqorghan**	**68.57**	**318**	⇑*i*P	**P**	**P**	**12 04 18.6 -0.7**
	comp=Z,380nm,2.4s,baz=318						
TDK				*e*LR	LR	LR	12 35 46.5
	comp=Z,7μm,17.6s,baz=318						
TJOU	**Tjoern**	**68.64**	**3**	*e*P	**P**	**P**	**12 04 19.6 +0.3**
MANU	**Manus Island**	**68.94**	**234**	P	**P**	**P**	**12 04 21.7 -0.1**
MANU	**Manus Island**	**68.94**	**234**	P	**P**	**P**	**12 04 21.7 -0.1**
SLIT	**Siltere, Latvi**	**69.03**	**357**	*e*P	**P**	**P**	**12 04 22.5 +0.8**
BORU	**Boraas**	**69.07**	**2**	*e*P	**P**	**P**	**12 04 21.4 -0.7**
GYA	**Guiyang**	**69.19**	**286**	⇓*i*P	**P**	**P**	**12 04 24.5 +1.0**
GYA				PP	**PP**	**PP**	**12 07 00.0 +3.9**
GYA				S	**S**	**S**	**12 13 29.0 +0.3**
GYA				SS	**SS**	**SS**	**12 17 51.5 -3.0**
GYA				pmax	pmax		
	comp=Z,130nm,1.2s						
GYA				pmax	pmax		
	comp=Z,1μm,10.1s						
GYA				LR	LR		
	comp=Z,2μm,20.1s						
GYA				LR	LR		
	comp=Z,2μm,24.2s						
GYA				LR	LR		
	comp=Z,3μm,25.3s						
ONAU	**Onsala**	**69.28**	**3**	*e*P	**P**	**P**	**12 04 22.6 -0.8**
BBSR	**BB Station**	**69.34**	**63**	IAMs_20	IAMs_20		12 36 29.0
	comp=Z,3μm,20.0s						
ARXS	**Arharly**	**69.45**	**318**	*e*P	**P**	**P**	**12 04 24.2 -0.6**
PDGK	**Podgornoye**	**69.51**	**316**	*i* P	**P**	**P**	**12 04 25.0 -0.2**
PDGK				pmax	pmax		
	comp=Z,124nm,1.3s						
GOET	**G??ttrup**	**69.55**	**4**	*e*P	**P**	**P**	**12 04 27.5 +2.5**
GOET				IAmb	IAmb		12 04 27.7
	comp=Z,222nm,1.3s						
SHLS	**Shalkode**	**69.66**	**316**	⇑*i*P	**P**	**P**	**12 04 25.0 -1.1**
SHLS				pmax	pmax		
	comp=Z,118nm,1.8s						
SHLS	**Shalkode**	**69.66**	**316**	⇑*i*P	**P**	**P**	**12 04 25.1 -1.1**
	comp=Z,118nm,1.8s,baz=316						
MOS	**Moscow**	**69.67**	**348**	*e*P	**P**	**P**	**12 04 23.6 -2.2**
MOS				*e*			12 04 44.0
MOS				*e*			12 07 01.4
MOS				*e*S	**S**	**S**	**12 13 37.4 +4.3**
MOS				pmax	pmax		
	comp=Z,109nm,0.7s						
FABU	**Falkenberg**	**69.70**	**2**	*e*P	**P**	**P**	**12 04 25.6 -0.4**
KPKS	**Kokpek**	**69.73**	**317**	*c i*P	**P**	**P**	**12 04 25.4 -1.1**
KPKS				pmax	pmax		
	comp=Z,39nm,0.7s						
KPKS	**Kokpek**	**69.73**	**317**	⇑*i*P	**P**	**P**	**12 04 25.4 -1.1**
	comp=Z,39nm,0.7s,baz=317						
UZB	**Uzynbulak**	**69.85**	**316**	*e*P	**P**	**P**	**12 04 26.3 -1.1**
UZB	**Uzynbulak**	**69.85**	**316**	*e*P	**P**	**P**	**12 04 26.3 -1.1**
	baz=316						
UZB				*e*S	**S**	**S**	**12 13 44.4 +8.3**
	baz=316						
VAH	**Vaihoa**	**69.87**	**164**	*e*T	T	T	13 21 06.0
	comp=Z,5.1nm,0.3s						
CHKK	**Chushkaly**	**70.09**	**318**	*e*P	**P**	**P**	**12 04 27.3 -1.3**
CHKK	**Chushkaly**	**70.09**	**318**	*e*P	**P**	**P**	**12 04 27.3 -1.3**
	baz=318						
MUD	**Monsted U'grnd**	**70.12**	**4**	*i* P	**P**	**P**	**12 04 30.0 +1.5**
MUD				IAmb	IAmb	IAmb	12 04 31.1
	comp=Z,141nm,1.4s						
EKA	**Eskdalemuir Ar**	**70.19**	**12**	LR	LR	LR	12 36 39.9
	comp=Z,3μm,18.9s,baz=335,slow=37						
ESK	**Eskdalemuir**	**70.20**	**12**	P	**P**	**P**	**12 04 29.2 +0.1**
ESK				IAmb	IAmb	IAmb	12 04 31.6
	comp=Z,74nm,0.8s						
ESK	**Eskdalemuir**	**70.20**	**12**	P	**P**	**P**	**12 04 29.2 +0.1**
ESK				pmax	pmax		
	comp=Z,74nm,0.9s						
BTLS	**Baital**	**70.23**	**321**	*d i*P	**P**	**P**	**12 04 28.8 -0.6**
BTLS				*e*S	**S**	**S**	**12 13 40.6 +0.5**
BTLS				pmax	pmax		
	comp=Z,44nm,0.6s						
BTLS	**Baital**	**70.23**	**321**	⇓*i*P	**P**	**P**	**12 04 28.9 -0.6**
	comp=Z,44nm,0.6s,baz=321						
BTLS				*e*S	**S**	**S**	**12 13 40.7 +0.5**
	baz=321						
DEL	**Delary**	**70.26**	**2**	*e*P	**P**	**P**	**12 04 29.6 +0.2**
DEL	**Delary**	**70.26**	**2**	*i* P	**P**	**P**	**12 04 29.0 -0.4**
KUU	**Kurty**	**70.31**	**319**	*c i*P	**P**	**P**	**12 04 28.7 -1.3**
KUU				*e*S	**S**	**S**	**12 13 41.1 -0.1**
KUU				pmax	pmax		
	comp=Z,352nm,2.7s						
KUU	**Kurty**	**70.31**	**319**	⇑*i*P	**P**	**P**	**12 04 28.8 -1.3**
	comp=Z,352nm,2.7s,baz=318						
KUU				*e*S	**S**	**S**	**12 13 41.1 -0.1**
	baz=318						
OBN	**Obninsk**	**70.41**	**348**	LR	LR	LR	12 38 32.1
	comp=Z,926nm,19.3s,baz=8.5,slow=39						
OBN	**Obninsk**	**70.41**	**348**	P	**P**	**P**	**12 04 29.9 -0.4**
OBN	**Obninsk**	**70.41**	**348**	*c i*P	**P**	**P**	**12 04 29.5 -0.8**
OBN				*i* *PP	**pP**	**pP**	**12 04 32.7 -2.2**
OBN				*e**SP	**sP**	**sP**	**12 04 34.1 -2.6**
OBN							12 04 50.0
OBN				*e*S	**S**	**S**	**12 13 43.4 +1.6**
OBN				*e*			12 14 33.1
OBN				*e*SSS	SSS		12 21 15.7
OBN				pmax	pmax		
	comp=Z,103nm,0.8s						
BLEU	**Blekinge**	**70.45**	**1**	*e*P	**P**	**P**	**12 04 29.8 -0.8**
VSVD	**Vaisvydziai**	**70.61**	**356**	*e*P	**P**	**P**	**12 04 32.2 +0.7**
BJUU	**Bjuv**	**70.64**	**2**	*e*P	**P**	**P**	**12 04 31.6 -0.1**
MDOK	**Medeo**	**70.64**	**318**	*i* P	**P**	**P**	**12 04 31.8 -0.4**
MDOK				MLR	MLR		
	comp=Z,4μm,17.0s						
MDOK	**Medeo**	**70.64**	**318**	*i* P	**P**	**P**	**12 04 31.9 -0.4**
	baz=318						
MDOK				*e*LR	LR	LR	12 37 10.5
	comp=Z,4μm,16.7s,baz=318						
TNSS	**Tian-Shan**	**70.79**	**318**	*e*P	**P**	**P**	**12 04 32.4 -1.0**
TNSS	**Tian-Shan**	**70.79**	**318**	*e*P	**P**	**P**	**12 04 32.5 -1.0**
	baz=318						
ISAL	**Salakas**	**70.91**	**354**	*e*P	**P**	**P**	**12 04 34.9 +1.5**
COP	**Copenhagen**	**71.01**	**3**	*e*P	**P**	**P**	**12 04 35.1 +1.2**
COP				IAmb	IAmb	IAmb	12 04 36.2
	comp=Z,141nm,0.9s						
PABE	**Paberze**	**71.09**	**356**	*e*P	**P**	**P**	**12 04 35.4 +0.9**
LUNU	**Lund**	**71.09**	**2**	*e*P	**P**	**P**	**12 04 34.5 +0.1**
AB31	**Akbulak array**	**71.21**	**332**	P	**P**	**P**	**12 04 35.8 +0.5**
BELG	**Belogornoye**	**71.26**	**341**	LR	LR	LR	12 40 49.9
	comp=Z,8μm,18.9s,baz=30,slow=40						
BELG	**Belogornoye**	**71.26**	**341**	*c i*P	**P**	**P**	**12 04 35.2 -0.3**
BELG				pmax	pmax		
	comp=Z,38nm,0.9s						
BELG				MLR	MLR		
	comp=Z,1μm,19.0s						
SGDS	**Sogindy**	**71.35**	**319**	*c i*P	**P**	**P**	**12 04 36.1 -0.3**
SGDS				pmax	pmax		
	comp=Z,29nm,0.6s						
SGDS	**Sogindy**	**71.35**	**319**	⇑*i*P	**P**	**P**	**12 04 36.2 -0.3**
	comp=Z,29nm,0.6s,baz=319						
TKM2	**Tokmak 2**	**71.42**	**318**	P	**P**	**P**	**12 04 37.2 +0.1**
	SNR=72						
TKM2	**Tokmak 2**	**71.42**	**318**	*i* P	**P**	**P**	**12 04 37.3 +0.3**
TKM2				pmax	pmax		
	comp=Z,52nm,0.8s						
NACGM	**Naroch**	**71.53**	**354**	⇓*e*P	**P**	**P**	**12 04 37.7 +0.6**
	baz=6.3						
USP	**Ospenovka**	**71.56**	**319**	P	**P**	**P**	**12 04 38.6 +0.9**
	SNR=70						
CHMS	**Chumysh**	**71.69**	**319**	P	**P**	**P**	**12 04 39.3 +0.9**
	SNR=35						
CHMS	**Chumysh**	**71.69**	**319**	*i* P	**P**	**P**	**12 04 38.5 +0.1**
CHMS				pmax	pmax		
	comp=Z,159nm,1.5s						
ULHL	**Ulahol**	**71.73**	**318**	P	**P**	**P**	**12 04 39.5 +0.6**
	SNR=23						
MNK	**Minsk**	**71.86**	**353**	*i* P	**P**	**P**	**12 04 39.7 +0.6**
MNK				*i*			12 07 20.2
MNK				*i* PPP	PPP		12 09 04.2
MNK				*i* S	**S**	**S**	**12 14 01.2 +2.6**
MNK				*i* SS	**SS**	**SS**	**12 18 42.5 +8.9**
MNK				pmax	pmax		
	comp=Z,209nm,0.9s						
MNK				pmax	pmax		
	comp=N,104nm,0.9s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,569nm,20.0s						
MNK				MLR	MLR		
	comp=Z,6μm,18.0s						
MNK				MLR	MLR		
	comp=N,3μm,16.0s						
MNK	**Minsk**	**71.86**	**353**	*i* P	**P**	**P**	**12 04 39.8 +0.6**
	comp=E,8.0nm,0.8s						
MNK				*i* P	**P**	**P**	**12 04 39.8 +0.6**
	comp=N,104nm,0.8s						
MNK				*i* P	**P**	**P**	**12 04 39.8 +0.6**
	comp=Z,209nm,0.9s,baz=6.7						
MNK				*i* PP	**PP**	**PP**	**12 07 20.2 +2.3**
MNK				*i* PPP	PPP		12 09 04.2
MNK				*i* S	**S**	**S**	**12 14 01.3 +2.6**
MNK				*i* SS	**SS**	**SS**	**12 18 42.5 +8.9**
MNK				*i* SSS	SSS		12 22 02.6
MNK				*i* LQ	LQ		12 31 31.0
MNK				*i* LR	LR		12 34 11.3
MNK				*i* LRM	MLR		12 39 15.4
	comp=E,569nm,19.8s						
MNK				*i* LRM	MLR		12 39 51.2
	comp=Z,6μm,17.6s						
MNK				*i* LRM	MLR		12 40 07.8
	comp=N,3μm,16.3s						
PPT2	**Papeete2**	**71.88**	**166**	*e*P	**P**	**P**	**12 04 41.9 +2.2**
	comp=N,344nm,22.8s						
PPT2				*e*S	**S**	**S**	**12 14 01.4 +1.7**
	comp=N,2μm,25.2s						
PPT2	**Papeete2**	**71.88**	**166**	*e*LR	LR	LR	12 26 36.9
	comp=N,3μm,24.8s						
PPT2				*e*LR	LR	LR	12 26 37.2
	comp=N,4μm,22.8s						
TIAR	**Tiarei**	**71.88**	**166**	*e*T	T	T	13 23 58.6
	comp=N,3.0nm,0.2s						
KBK	**Karagaybulak**	**71.90**	**319**	P	**P**	**P**	**12 04 40.8 +1.0**
	SNR=64						
PZH	**PanZhiHua**	**71.94**	**290**	⇑P	**P**	**P**	**12 04 39.8 -0.5**
PZH				pP	**sP**	**sP**	**12 04 46.5 -0.2**
PZH				sP	**pwP**	**pwP**	**12 04 51.0 +2.6**
PZH				S	**S**	**S**	**12 14 00.0 -0.7**
PZH				sS	**SKiKP**	**SKiKP**	**12 14 13.3 -3.4**
PZH				ScS	**ScS**	**ScS**	**12 14 46.3 +0.9**
PZH				SS	**SS**	**SS**	**12 18 38.5 +1.8**
PZH				pmax	pmax		
	comp=N,100nm,1.0s						
PZH				pmax	pmax		
	comp=N,240nm,5.5s						
PZH				LR	LR		
	comp=N,10μm,22.3s						
PZH				LR	LR		
	comp=N,9μm,20.9s						
PZH				LR	LR		
	comp=N,9μm,21.7s						
AAK	**Ala-Archa**	**72.09**	**319**	P	**P**	**P**	**12 04 41.8 +0.8**
	SNR=66						
AAK	**Ala-Archa**	**72.09**	**319**	P	**P**	**P**	**12 04 41.2 +0.2**
	comp=N,44nm,0.6s,baz=84,slow=2.2,SNR=92						
AAK				LR	LR	LR	12 39 27.1
	comp=N,13μm,18.1s,baz=33,slow=38						
	comp=N,44nm,0.6s						
AAK	**Ala-Archa**	**72.09**	**319**	P	**P**	**P**	**12 04 41.4 +0.4**
AAK	**Ala-Archa**	**72.09**	**319**	P	**P**	**P**	**12 04 41.4 +0.4**
AAK				pmax	pmax		
	comp=Z,124nm,1.2s						
AAK				MLR	MLR		
	comp=Z,12μm,18.0s						
AAK	**Ala-Archa**	**72.09**	**319**	P	**P**	**P**	**12 04 42.3 +1.2**
AAK	**Ala-Archa**	**72.09**	**319**	*i* P	**P**	**P**	**12 04 41.2 +0.2**
	SNR=33						
EKS2	**Erkin-Say**	**72.35**	**319**	P	**P**	**P**	**12 04 43.6 +1.1**
	SNR=69						
UCH	**Uchtor**	**72.44**	**319**	P	**P**	**P**	**12 04 44.4 +1.0**
	SNR=20						
KMI	**Kunming**	**72.45**	**288**	⇑P	**P**	**P**	**12 04 43.5 0.0**
KMI				sP	pwP		12 04 52.3 +0.7
KMI				PP	**PP**	**PP**	**12 07 24.3 +0.1**
KMI				S	**S**	**S**	**12 14 08.5 +1.7**
KMI				SS	**SS**	**SS**	**12 18 41.5 -3.3**
KMI				pmax	pmax		
	comp=Z,35nm,1.1s						
KMI				pmax	pmax		
	comp=Z,890nm,8.0s						
KMI				LR	LR		
	comp=Z,4μm,20.5s						
KMI				LR	LR		
	comp=Z,4μm,18.8s						
KMI				LR	LR		
	comp=Z,4μm,21.5s						
LPSR	**Galich'ya Gora**	**72.55**	**346**	*e*P	**P**	**P**	**12 04 42.6 -0.7**
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,4μm,20.0s						
BOAB	**BOACO BROADBAND**	**72.72**	**92**	IAMs_20	IAMs_20		12 41 37.3
	comp=Z,4μm,20.0s						
AML	**Almayashu**	**72.84**	**319**	P	**P**	**P**	**12 04 47.0 +1.3**
	SNR=7.0						
MSVF	**Nonsavu**	**72.85**	**199**	LR	LR	LR	12 32 09.7
	comp=Z,3μm,19.6s,baz=14,slow=32						
MSVF	**Nonsavu**	**72.85**	**199**	IAMs_20	IAMs_20		12 31 58.6
	comp=Z,3μm,20.0s						
MTDJ	**Mount Denham**	**73.03**	**82**	IAMs_20	IAMs_20		12 42 12.0
	comp=Z,4μm,20.0s						
DZA	**Taraz**	**73.09**	**321**	*e*P	**P**	**P**	**12 04 46.3 -0.4**
DZA	**Taraz**	**73.09**	**321**	*e*P	**P**	**P**	**12 04 46.4 -0.4**
	baz=321						
QIZ	**Qiongzhong**	**73.09**	**279**	IAmb	IAmb		12 04 49.1
	comp=Z,60nm,1.1s						
QIZ	**Qiongzhong**	**73.09**	**279**	IAMs_20	IAMs_20		12 42 08.3
	comp=Z,2μm,18.0s						
QIZ	**Qiongzhong**	**73.09**	**279**	P	**P**	**P**	**12 04 47.5 +0.5**
QIZ				PcP	**PcP**	**PcP**	**12 05 04.5 +0.8**
QIZ				PP	**PP**	**PP**	**12 07 30.5 +0.9**
QIZ				SS	SS	SS	12 18 56.8 +2.4
QIZ				pmax	pmax		
	comp=Z,49nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,940nm,10.4s						
QIZ				LR	LR		
	comp=Z,2μm,16.2s						
QIZ				LR	LR		
	comp=Z,2μm,15.2s						
QIZ				LR	LR		
	comp=Z,3μm,16.4s						
QIZ	**Qiongzhong**	**73.09**	**279**	P	**P**	**P**	**12 04 48.2 +1.2**
DAV	**Davao City (W)**	**73.19**	**259**	LR	LR	LR	12 33 18.7
	comp=Z,5μm,21.7s,baz=62,slow=33						
KK31	**Karatay Array**	**73.21**	**322**	IAmb	IAmb		12 04 60.0
	comp=Z,134nm,1.4s						
KK31	**Karatay Array**	**73.21**	**322**	*i* P	**P**	**P**	**12 04 46.8 -0.6**
KKAR	**Karatay Array**	**73.21**	**322**	IAmb	IAmb		12 04 60.0
	comp=Z,134nm,1.4s						
VORR	**Voronezh**	**73.41**	**346**	*e*P	**P**	**P**	**12 04 47.6 -0.8**
VORR				pmax	pmax		
	comp=Z,60nm,1.1s						
VRH	**Novokhopyorsk**	**73.47**	**344**	*e*P	**P**	**P**	**12 04 47.4 -1.4**
VRH				pmax	pmax		
	comp=Z,70nm,0.9s						
VRH				MLR	MLR		
	comp=Z,5μm,21.0s						
VSR	**Storozhevoye**	**73.86**	**346**	*e*P	**P**	**P**	**12 04 49.7 -1.4**
VSR				pmax	pmax		
	comp=Z,80nm,0.5s						
VSR				MLR	MLR		
	comp=Z,5μm,20.0s						
KSH	**Kashi**	**74.14**	**316**	P	**P**	**P**	**12 04 56.5 +3.4**
KSH				PcP	**PcP**	**PcP**	**12 05 08.8 +0.7**
KSH				S	**S**	**S**	**12 14 28.5 +3.1**
KSH				pmax	pmax		
	comp=Z,48nm,0.6s						
KSH				LR	LR		
	comp=Z,8μm,15.8s						
KSH				LR	LR		
	comp=Z,6μm,17.9s						
KSH				LR	LR		
	comp=Z,15μm,18.5s						
GRTK	**Grand Turk**	**74.21**	**75**	IAMs_20	IAMs_20		12 39 48.7
	comp=Z,4μm,20.0s						
IUG	**Iuzhnay**	**74.21**	**322**	*c i*P	**P**	**P**	**12 04 53.0 -0.4**
IUG	**Iuzhnay**	**74.21**	**322**	⇑*i*P	**P**	**P**	**12 04 53.0 -0.4**
	baz=322						
RUE	**Ruedersdorf**	**74.25**	**2**	*e*P	**P**	**P**	**12 04 54.5 +1.2**
ORTG	**Ortega, Santa**	**74.49**	**94**	P	**P**	**P**	**12 04 54.0 -1.4**
LKP	**Lekhapani**	**74.53**	**295**	*e*P	**P**	**P**	**12 04 56.0 +0.6**
RAR	**Rarotonga**	**74.57**	**177**	LR	LR	LR	12 34 48.4
	comp=Z,2μm,18.1s,baz=357,slow=33						
JTS	**Las Juntas de**	**74.85**	**93**	IAMs_20	IAMs_20		12 43 53.8
	comp=Z,2μm,19.0s						
BEL	**Belsk**	**74.87**	**357**	*e*P	**P**	**P**	**12 04 58.0 +1.0**
LSA	**Lhasa**	**75.13**	**300**	IAmb	IAmb		12 05 02.7
	comp=Z,86nm,0.8s						
LSA	**Lhasa**	**75.13**	**300**	P	**P**	**P**	**12 05 00.3 +0.9**
LSA				pmax	pmax		
	comp=Z,120nm,0.8s						
LSA	**Lhasa**	**75.13**	**300**	P	**P**	**P**	**12 04 59.8 +0.4**
LSA	**Lhasa**	**75.13**	**300**	P	**P**	**P**	**12 04 59.6 +0.2**
CLL	**Collm**	**75.41**	**2**	IAmb	IAmb		12 05 01.5
	comp=Z,76nm,1.1s						
CLL				IAMs_20	IAMs_20		12 38 44.7
	comp=Z,2μm,20.0s						
CLL	**Collm**	**75.41**	**2**	⇑*i*P	**P**	**P**	**12 05 00.2 +0.2**
CLL				*e*			12 05 10.0
CLL				*e*S	**S**	**S**	**12 14 39.0 +0.2**
CLL				pmax	pmax		
	comp=Z,81nm,1.2s						
CLL				MLR	MLR		
	comp=Z,2μm,19.4s						
CLL	**Collm**	**75.41**	**2**	⇑*i*P	**P**	**P**	**12 05 00.2 +0.2**
	comp=Z,81nm,1.2s						
CLL				*e*Pmax			12 05 00.0
CLL				*e*Plp			12 05 02.0
	comp=Z,700nm,20.5s						
CLL				*ex*	x		12 05 10.0
CLL				*e*PP	**PP**	**PP**	**12 07 51.0 +2.8**
CLL				*e*(PPP)			12 09 24.0
CLL				*e*S	**S**	**S**	**12 14 39.0 +0.2**
CLL				*e*PS	**PnS**	**PnS**	**12 15 17.0 +2.3**
CLL				*e*SS	**SS**	**SS**	**12 19 30.0 +2.3**
CLL				*e*SSS	SSS		12 22 48.0
CLL				LmV			12 44 00.0
	comp=Z,2μm,19.4s						
ZIRO	**ZIRO**	**75.45**	**297**	*e*P	**P**	**P**	**12 05 00.1 -0.8**
PMG	**Port Moresby**	**75.47**	**231**	P	**P**	**P**	**12 05 00.7 -0.1**
	comp=Z,29nm,0.7s,baz=30,slow=12,SNR=6.4						
PMG				LR	LR	LR	12 35 15.7
	comp=Z,1μm,19.7s,baz=24,slow=33						
	comp=Z,29nm,0.7s						
PMG	**Port Moresby**	**75.47**	**231**	P	**P**	**P**	**12 05 00.5 -0.3**
PMG				IAmb	IAmb	IAmb	12 05 21.2
	comp=Z,106nm,1.1s						
PMG	**Port Moresby**	**75.47**	**231**	IAMs_20	IAMs_20		12 35 04.6
	comp=Z,2μm,20.0s						
PMG	**Port Moresby**	**75.47**	**231**	P	**P**	**P**	**12 05 00.5 -0.3**
PMG				pmax	pmax		
	comp=Z,106nm,1.1s						
PMG	**Port Moresby**	**75.47**	**231**	P	**P**	**P**	**12 05 01.5 +0.7**
	comp=Z,102nm,1.2s						
PMG	**Port Moresby**	**75.47**	**231**	P	**P**	**P**	**12 05 01.2 +0.4**
AKASG	**Malin Array Be**	**75.53**	**352**	P	**P**	**P**	**12 04 59.6 -1.2**
	comp=Z,48nm,0.6s,baz=12,slow=5.8,SNR=67						
AKASG				LR	LR	LR	12 43 09.8
	comp=Z,5μm,18.1s,baz=12,slow=40						
	comp=Z,48nm,0.6s						
AKASG	**Malin Array Be**	**75.53**	**352**	*i* P	**P**	**P**	**12 05 00.2 -0.6**
AKASG				pmax	pmax		
	comp=Z,45nm,0.6s						
BEBN	**Eben Emael**	**75.55**	**7**	*d*P	**P**	**P**	**12 05 00.4 -0.5**
SNF	**Seneffe**	**75.73**	**8**	*d*P	**P**	**P**	**12 05 02.5 +0.6**
	comp=Z,39nm,1.0s						
BSTI	**Sart Tilman**	**75.75**	**7**	*d*P	**P**	**P**	**12 05 02.8 +0.7**
	comp=Z,24nm,0.7s						
MEM	**Membach**	**75.76**	**7**	*d*P	**P**	**P**	**12 05 01.5 -0.6**
	comp=Z,63nm,0.8s						
BTNL	**Ternell**	**75.79**	**7**	*d*P	**P**	**P**	**12 05 03.0 +0.7**
	comp=Z,48nm,1.0s						
ITAN	**ITANAGAR**	**75.82**	**296**	*e*P	**P**	**P**	**12 05 03.6 +0.8**
JORH	**JORHAT**	**75.86**	**296**	*e*P	**P**	**P**	**12 05 03.2 +0.2**
BRG	**Berggiesshubel**	**75.86**	**2**	*i* P	**P**	**P**	**12 05 05.7 +3.0**
BRG				*e*			12 05 20.4
BRG				pmax	pmax		
	comp=Z,62nm,1.1s						
BCLA	**Clavier**	**75.90**	**8**	*d*P	**P**	**P**	**12 05 03.5 +0.7**
	comp=Z,34nm,1.0s						
BGES	**Gesves**	**75.92**	**8**	*d*P	**P**	**P**	**12 05 03.1 +0.1**
KSP	**Ksiaz**	**75.92**	**0**	*e*P	**P**	**P**	**12 05 03.3 +0.3**
BMRD	**Maredsous**	**75.97**	**8**	*d*P	**P**	**P**	**12 05 03.0 -0.3**
	comp=Z,44nm,0.9s						
BHOU	**Houvegnez**	**76.02**	**7**	*d*P	**P**	**P**	**12 05 03.9 +0.3**
	comp=Z,31nm,0.9s						
MOKO	**MOKOCHONG**	**76.06**	**295**	*e*P	**P**	**P**	**12 05 04.1 -0.3**
SDDR	**Presa de Saban**	**76.10**	**77**	IAmb	IAmb		12 05 20.4
	comp=Z,158nm,1.6s						
SDDR				IAMs_20	IAMs_20		12 38 28.9
	comp=Z,3μm,22.0s						
SDDR	**Presa de Saban**	**76.10**	**77**	*e*P	**P**	**P**	**12 05 03.9 -0.7**
RCHB	**Rochefort**	**76.15**	**8**	*d*P	**P**	**P**	**12 05 04.3 0.0**
	comp=Z,58nm,0.9s						
DOU	**Dourbes**	**76.16**	**8**	*d*P	**P**	**P**	**12 05 04.4 0.0**
	comp=Z,29nm,0.9s						
CHVC	**Chvalec**	**76.17**	**0**	*e*P	**P**	**P**	**12 05 05.1 +0.6**
CHVC				AMS	AMS		12 47 30.0
	comp=Z,2μm,17.9s						
OSTC	**Ostas**	**76.21**	**0**	*e*P	**P**	**P**	**12 05 05.4 +0.7**
OSTC				*e*S	S		12 14 59.2 +11
OSTC				AMS	AMS		12 50 40.0
	comp=Z,2μm,14.6s						
PVCC	**Panska Ves**	**76.22**	**1**	*e*P	**P**	**P**	**12 05 05.5 +0.8**
PVCC				MLR	MLR		
	comp=Z,4μm,16.7s						
PVCC	**Panska Ves**	**76.22**	**1**	*e*P	**P**	**P**	**12 05 05.5 +0.8**
PVCC				AMS	AMS		12 48 10.0
	comp=Z,4μm,16.7s						
UPC	**Upice**	**76.25**	**0**	*e*P	**P**	**P**	**12 05 05.6 +0.7**
UPC				*e*			12 05 11.1
UPC				MLR	MLR		
	comp=Z,3μm,18.0s						
UPC	**Upice**	**76.25**	**0**	*e*P	**P**	**P**	**12 05 05.6 +0.7**
UPC				*e*pP	**sP**	**sP**	**12 05 11.1 -0.2**
UPC				*e*S	S		12 14 58.6 +10
UPC				AMS	AMS		12 48 00.0
	comp=Z,3μm,18.0s						
SIJI	**Sorong**	**76.39**	**249**	P	**P**	**P**	**12 05 05.9 -0.2**
	comp=Z,70nm,0.8s,baz=24,slow=6.2,SNR=40						
SIJI				LR	LR	LR	12 34 04.0
	comp=Z,2μm,21.7s,baz=43,slow=32						
	comp=Z,70nm,0.8s						
DPC	**Dobruska-Polom**	**76.41**	**0**	*e*P	**P**	**P**	**12 05 06.9 +1.0**
DPC				MLR	MLR		
	comp=Z,2μm,19.3s						
DPC	**Dobruska-Polom**	**76.41**	**0**	*e*P	**P**	**P**	**12 05 06.9 +1.0**
DPC				AMS	AMS		12 47 30.0
	comp=Z,2μm,19.3s						
NKC	**Novy Kostel**	**76.47**	**3**	*e*P	**P**	**P**	**12 05 06.9 +0

GOPC MLR MLR
comp=Z,4μm,17.4s
GOPC GO Pecny, Ondr 76.84 1 *e*P **P 12 05 08.9 +0.6**
GOPC *e*S S 12 15 05.0 +10
GOPC AMS AMS 12 48 40.0
comp=Z,4μm,17.4s
OKC Ostrava-Krasne 76.92 359 *e*P **P 12 05 09.5 +0.8**
OKC MLR MLR
comp=Z,3μm,17.0s
OKC Ostrava-Krasne 76.92 359 *e*P **P 12 05 09.5 +0.8**
OKC AMS AMS 12 51 10.0
comp=Z,3μm,17.0s
GRA1 Grafenberg Arr 76.97 4 IAmb IAmb 12 05 32.8
comp=Z,113nm,1.2s
GRA1 IAMs_20 IAMs_20 12 43 50.0
comp=Z,2μm,19.0s
GRFO Grafenberg 76.97 4 P **P 12 05 09.5 +0.5**
GRFO IAmb IAmb 12 05 32.8
comp=Z,109nm,1.2s
GRFO IAMs_20 IAMs_20 12 43 50.0
comp=Z,2μm,19.0s
GRFO Grafenberg 76.97 4 P **P 12 05 09.5 +0.5**
GRFO pmax pmax
comp=Z,109nm,1.2s
GRFO MLR MLR
comp=Z,2μm,19.0s
MORC Moravsky Berou 76.98 359 ⇑P **P 12 05 09.8 +0.7**
MORC Moravsky Berou 76.98 359 P **P 12 05 09.8 +0.7**
MORC Moravsky Berou 76.98 359 *e*P **P 12 05 09.7 +0.6**
TNTI Ternate 77.25 254 P **P 12 05 12.9 +1.9**
STHS Stebnicka Huta 77.28 357 *e*P **P 12 05 11.2 +0.5**
STHS pmax pmax
comp=Z,101nm,0.7s
MAUC Maruska 77.39 359 *e*P **P 12 05 12.4 +1.0**
MAUC AMS AMS 12 44 50.0
comp=Z,4μm,15.5s
VRAC Vranov 77.46 0 ⇑P **P 12 05 12.8 +1.1**
VRAC Vranov 77.46 0 *e*P **P 12 05 12.5 +0.8**
TREC Trest 77.47 1 *e*P **P 12 05 12.4 +0.6**
TREC MLR MLR
comp=Z,4μm,15.8s
TREC Trest 77.47 1 *e*P **P 12 05 12.4 +0.6**
TREC AMS AMS 12 48 10.0
comp=Z,4μm,15.8s
FAKI Fak Fak 77.54 247 P **P 12 05 11.7 -0.9**
FAKI IAmb IAmb 12 05 13.9
comp=Z,46nm,0.9s
FAKI IAMs_20 IAMs_20 12 33 37.9
comp=Z,2μm,21.0s
FAKI Fak Fak 77.54 247 P **P 12 05 13.3 +0.7**
TBI Tubuai 77.56 167 *e*P **P 12 05 14.8 +2.4**
comp=Z,2μm,26.8s
TBI *e*S **S 12 15 03.4 +0.6**
comp=Z,6μm,30.8s
TBI *e*SS **SS 12 20 04.4 +1.4**
comp=Z,4μm,26.2s
TBI *e*LR LR 12 29 14.2
comp=Z,13μm,26.0s
TBI *e*LR LR 12 29 14.4
comp=Z,58μm,21.5s
KHC Kasperske Hory 77.60 2 IAmb IAmb 12 05 15.0
comp=Z,111nm,1.3s
KHC Kasperske Hory 77.60 2 *e*P **P 12 05 13.6 +1.0**
KHC *e*S **S 12 15 05.7 +2.7**
KHC MLR MLR
comp=Z,4μm,17.5s
KHC Kasperske Hory 77.60 2 *e*P **P 12 05 13.6 +1.0**
KHC *e*S **S 12 15 05.7 +2.7**
KHC AMS AMS 12 49 10.0
comp=Z,4μm,17.5s
KRUC Moravsky 77.70 0 *e*P **P 12 05 13.8 +0.7**
NONG Nongkai 77.76 284 P **P 12 05 14.2 +0.4**
CRVS Cervenica-Dubn 77.78 357 *e*P **P 12 05 14.5 +0.9**
STU Stuttgart 77.79 5 IAMs_20 IAMs_20 12 45 56.9
comp=Z,3μm,18.0s
GERES GERESS Array B 77.89 2 P **P 12 05 14.1 -0.1**
comp=Z,16nm,0.6s,baz=19,slow=4.5,SNR=76
comp=Z,16nm,0.6s
JAVC Velka Javorina 77.90 359 *e*P **P 12 05 16.2 +1.9**
CKRC Cesky Krumlov 77.92 2 *e*P **P 12 05 14.8 +0.4**
CKRC *e*x x 12 05 20.4
CKRC AMS AMS 12 49 10.0
comp=Z,4μm,17.4s
UZH Uzhgorod 78.03 356⇑*e*P **P 12 05 14.2 -0.7**
UZH *i* 12 05 25.9
UZH *e*PP **PP 12 08 14.3 +4.1**
UZH *e*PPP PPP 12 10 03.9
UZH *e*S **S 12 15 05.3 -2.2**
SHL Shillong 78.07 297 IAmb IAmb 12 05 17.0
comp=Z,55nm,0.8s
SHL Shillong 78.07 297 P **P 12 05 14.9 -0.8**
SNR=22
BFO Black Forest 78.19 6 P **P 12 05 15.5 -0.3**
BFO IAmb IAmb 12 05 32.4
comp=Z,136nm,1.6s
BFO IAMs_20 IAMs_20 12 44 10.2
comp=Z,2μm,19.0s
BFO Black Forest 78.19 6 P **P 12 05 15.5 -0.3**
SILR SILCHAR 78.21 296 *e*P **P 12 05 16.5 +0.3**
ECH Echery 78.22 7 IAmb IAmb 12 05 18.6
comp=Z,60nm,0.9s
ECH IAMs_20 IAMs_20 12 42 58.3
comp=Z,3μm,21.0s
KECS Kecovo 78.23 357 *e*P **P 12 05 17.1 +1.1**
KECS pmax pmax
comp=Z,68nm,0.7s
SMOL Smolenice 78.25 360 *e*P **P 12 05 17.6 +1.5**
SMOL pmax pmax
comp=Z,32nm,0.9s
VYHS Vyhne 78.26 359 *e*P **P 12 05 17.2 +1.0**
VYHS pmax pmax
comp=Z,66nm,1.0s
LBMI Labuha 78.32 253 P **P 12 05 21.5 +4.5**
LIFNC LIFOU 78.34 208 IAMs_20 IAMs_20 12 34 07.6
comp=Z,2μm,20.0s
GTK Tadong 78.37 300 IAmb IAmb 12 05 20.1
comp=Z,45nm,1.0s
MODS Modra-Piesok 78.39 360 *e*P **P 12 05 18.3 +1.4**
MODS pmax pmax
comp=Z,159nm,1.1s
ABAH Abaujker 78.40 357 P **P 12 05 18.2 +1.3**
TRPA Tarpa 78.52 356 ⇑P **P 12 05 18.8 +1.2**
TRPA Tarpa 78.52 356 P **P 12 05 18.8 +1.2**
ZST Bratislava 78.57 360 *e*P **P 12 05 19.5 +1.6**
ZST pmax pmax
comp=Z,288nm,1.4s
UBPT Khong Chiam 78.60 280 IAmb IAmb 12 05 21.3
comp=Z,98nm,1.2s
UBPT Khong Chiam 78.60 280 P **P 12 05 19.0 +0.5**
comp=Z,2μmcomp=Z,93nm,1.1s
UBPT Khong Chiam 78.60 280 P **P 12 05 19.0 +0.5**
MND Mandalay 78.61 292 P **P 12 05 17.9 -0.6**
CONA Conrad Observa 78.83 1 *i*P **P 12 05 20.2 +0.7**
comp=Z,68nm,1.1s,SNR=27
BUR08 Bucovina Ar. S 78.87 354 IAmb IAmb 12 05 22.2
comp=Z,45nm,0.8s
MYLDM Lahad Datu 78.87 264 IAmb IAmb 12 06 09.7
comp=Z,137nm,1.3s
MYLDM Lahad Datu 78.87 264 P **P 12 05 22.0 +2.0**
comp=Z,2μmcomp=Z,65nm,1.2s
BURAR Bucovina Array 78.89 354 ⇓P **P 12 05 20.2 +0.3**
BURAR Bucovina Array 78.89 354 IAmb IAmb 12 05 22.3
comp=Z,58nm,0.8s
BURAR Bucovina Array 78.89 354 P **P 12 05 20.1 +0.3**
MOA Molln 78.89 2 *i*P **P 12 05 20.6 +0.8**
comp=Z,33nm,1.4s,SNR=16
SRO Srobarova 78.94 359 *e*P **P 12 05 21.6 +1.7**
BIOA Bad Ischl, Aus 79.04 2 *i*P **P 12 05 21.6 +1.1**
comp=Z,19nm,0.7s,SNR=7.9
RONA Rosalia, Austr 79.07 0 *i*P **P 12 05 22.2 +1.5**
comp=Z,44nm,1.2s,SNR=16
SOP Sopron 79.08 0 P **P 12 05 21.5 +0.7**
MFF Saint Martin d 79.13 12 *e*P **P 12 05 21.4 +0.4**
MFF pmax pmax
comp=Z,70nm,1.0s
RETA Reutte 79.15 4 *i*P **P 12 05 22.4 +1.2**
comp=Z,31nm,0.9s,SNR=9.8
GOF Gofitskoye 79.17 341⇑*e*P P 12 05 36.7 +15
KIS Kishinev 79.24 352*ce*P **P 12 05 21.0 -0.6**
KIS *e* 12 05 30.0
KIS pmax pmax
comp=Z,70nm,0.5s
KIS MLR MLR
comp=Z,2μm,18.0s
BUD Budapest 79.26 358 P **P 12 05 22.7 +1.0**

GUN Gumba 79.27 303 *e*P **P 12 05 22.5 0.0**
comp=Z,739nm,0.9s
MOTA Moosalm 79.31 4 *i*P **P 12 05 23.2 +1.0**
comp=Z,101nm,1.1s,SNR=22
DAVA Damuels 79.31 5 *e*P **P 12 05 23.0 +0.8**
comp=Z,20nm,0.8s
JIRN Jiri 79.32 302 *e*P **P 12 05 22.8 0.0**
comp=Z,444nm,0.7s
MILM Milestii Mici 79.32 352 ⇑P **P 12 05 22.3 +0.3**
MILM Milestii Mici 79.32 352⇑*i*P **P 12 05 21.0 -1.0**
comp=Z,200nm,0.9s
MILM Milestii Mici 79.32 352 LRM MLR 12 44 53.0
comp=Z,4μm,18.5s
MILM Milestii Mici 79.32 352*c i*P **P 12 05 21.0 -1.0**
MILM *e* 12 05 29.0
MILM *e* 12 15 33.0
MILM pmax pmax
comp=Z,200nm,1.0s
MILM MLR MLR
comp=Z,4μm,18.5s
MILM Milestii Mici 79.32 352 *e*PS 12 16 22.0
MILM Milestii Mici 79.32 352 *e*PS 12 16 22.0
MILM Milestii Mici 79.32 352 *e*L L 12 36 28.0
WATA Walderalm 79.33 4 *i*P **P 12 05 23.1 +0.8**
comp=Z,98nm,1.3s,SNR=18
EGYH Egyhazaskeszo 79.35 360 P **P 12 05 23.7 +1.5**
ODAN Odare 79.36 301 *e*P **P 12 05 22.2 -0.7**
comp=Z,15nm,1.0s
CSKK Cskako 79.39 359 P **P 12 05 23.3 +0.9**
WTTA Wattenberg 79.41 4 *i*P **P 12 05 24.0 +1.2**
comp=Z,70nm,0.7s,SNR=26
BSZH Besenyszg 79.42 358 P **P 12 05 23.9 +1.3**
SQTA Sankt Quirin 79.44 4 *i*P **P 12 05 24.0 +1.2**
comp=Z,147nm,1.2s,SNR=20
ARCR ARCALIA 79.47 355 ⇑P **P 12 05 23.9 +1.1**
BICZ Bicaz 79.51 353 ⇓P **P 12 05 23.7 +0.6**
ARSA Arzberg 79.51 1 *i*P **P 12 05 24.6 +1.5**
comp=Z,53nm,1.1s,SNR=16
CELP Cerrillos 79.53 74 P **P 12 05 23.0 -0.6**
CELP IAmb IAmb 12 05 39.6
comp=Z,120nm,1.2s
KKM Kota Kinabalu 79.54 266 IAmb IAmb 12 05 26.7
comp=Z,91nm,1.2s
KKM Kota Kinabalu 79.54 266 P **P 12 05 25.0 +1.2**
CHTO Chiang Mai 79.58 287 P **P 12 05 23.6 -0.3**
CHTO Chiang Mai 79.58 287 P **P 12 05 23.6 -0.3**
CHTO pmax pmax
comp=Z,50nm,1.2s
CHTO MLR MLR
comp=Z,100nm,19.0s
MPLH Magyarpolny 79.59 359 P **P 12 05 24.8 +1.3**
FETA Feichten 79.61 4 *i*P **P 12 05 25.1 +1.2**
comp=Z,83nm,0.8s,SNR=38
GCPR Guaynabo City 79.63 73 IAmb IAmb 12 05 40.6
comp=Z,96nm,1.1s
KBA Koelnbreinsper 79.65 2 *i*P **P 12 05 25.7 +1.6**
comp=Z,74nm,0.7s,SNR=15
KKN Kakani 79.67 303 *e*P **P 12 05 24.0 -0.5**
VASR Vaslui 79.68 352 ⇑P **P 12 05 24.8 +0.8**
RAMN Ramite 79.69 302 *e*P **P 12 05 24.3 -0.4**
comp=Z,480nm,1.0s
MSAI Masohi 79.74 250 P **P 12 05 26.6 +1.9**
comp=Z,731nmcomp=Z,7.2nm,0.6s
SJG San Juan 79.75 74 IAMs_20 IAMs_20 12 44 19.4
comp=Z,3μm,20.0s
PKI Pulchoki 79.78 303 *e*P **P 12 05 25.4 +0.1**
comp=Z,411nm,1.1s
PKIN Phulchoki 79.78 303 *e*P **P 12 05 24.9 -0.3**
comp=Z,409nm,1.1s
DZM Mont Dzumac 79.79 208 *e*P **P 12 05 23.4 -1.4**
comp=Z,90nm,1.4s
DZM Mont Dzumac 79.79 208 *e*S **S 12 15 28.2 +1.3**
comp=Z,885nm,24.8s
DZM *e*SS **SS 12 20 38.2 +1.5**
comp=Z,1μm,24.3s
DZM *e*LR LR 12 30 16.4
comp=Z,4μm,22.0s
GKN Gorkha 79.81 304 *e*P **P 12 05 24.9 -0.3**
comp=Z,554nm,1.1s
DRGR 79.85 356 ⇑P **P 12 05 25.6 +0.6**
CM31 Chiang Mai Arr 79.86 287 IAmb IAmb 12 05 28.0
comp=Z,111nm,1.1s
CM31 Chiang Mai Arr 79.86 287 P **P 12 05 25.9 +0.5**
SNR=56
CMAR Chiang Mai Arr 79.86 287 P **P 12 05 25.0 -0.4**
comp=Z,75nm,1.0s,baz=17,slow=5.3,SNR=157
CMAR LR LR 12 42 39.0
comp=Z,2μm,20.9s,baz=35,slow=37
comp=Z,75nm,1.0s
TIH Tihany 79.86 359 P **P 12 05 26.3 +1.3**
HUMP Col San Antoni 79.90 73 IAmb IAmb 12 05 41.6
comp=Z,165nm,1.4s
TESR Tescani 79.90 353 ⇑P **P 12 05 25.4 +0.2**
DMN Daman 79.90 303 *e*P **P 12 05 26.1 +0.2**
comp=Z,446nm,1.1s
SAIH SAIHA 79.95 294 *e*P **P 12 05 25.1 -0.9**
SAIH IAmb IAmb 12 05 28.5
comp=Z,130nm,1.4s
ABTA Abfaltersbach 79.95 3 *i*P **P 12 05 25.9 +0.3**
comp=Z,60nm,1.0s,SNR=20
DANN Dangsing 79.96 305 *e*P **P 12 05 26.1 -0.1**
comp=Z,732nm,0.8s
FUORN Ofenpass-Fuorn 80.00 5 IAMs_20 IAMs_20 12 45 38.1
comp=Z,2μm,20.0s
SOKA Soboth 80.08 1 *i*P **P 12 05 27.7 +1.4**
comp=Z,124nm,1.2s,SNR=32
TUE Stuetta 80.10 5 IAMs_20 IAMs_20 12 42 18.8
comp=Z,3μm,21.0s
MYKA Terra Mystica 80.10 2 *i*P **P 12 05 27.4 +1.0**
comp=Z,20nm,0.7s,SNR=8.0
MTP Monte Pirata 80.10 73 P **P 12 05 26.1 -0.7**
PERS Pernice 80.12 1 *i*P **P 12 05 26.8 +0.4**
OBKA Obir 80.24 2⇑*i*P **P 12 05 27.0 -0.2**
OBKA Obir 80.24 2 *i*P **P 12 05 28.3 +1.2**
comp=Z,100nm,0.7s,SNR=19
MAK Makhachkala 80.24 338 *e*P **P 12 05 23.9 -3.2**
MAK *e* 12 08 23.4
MAK *e*PPP PPP 12 10 15.6
MAK *e*S **S 12 15 26.8 -4.5**
MAK *e*SS **SS 12 20 38.3 -2.5**
MAK *e*SSS SSS 12 24 05.4
MAK pmax pmax
comp=Z,603nm,1.7s
THN Thein Dam 80.27 313 *e*P **P 12 05 26.5 -0.9**
NIL Nilore 80.29 315 P **P 12 05 27.4 -0.1**
NIL Nilore 80.29 315 P **P 12 05 27.4 -0.1**
NIL pmax pmax
comp=Z,418nm,1.4s
NIL MLR MLR
comp=Z,6μm,22.0s
NIL Nilore 80.29 315 P **P 12 05 28.2 +0.7**
PRED Cave del Predi 80.29 2 IAmb IAmb 12 05 30.3
comp=Z,116nm,1.6s
GHRR 80.29 352 ⇑P **P 12 05 28.1 +0.8**
KVAR Kislovodsk Arr 80.30 341 LR LR 12 46 38.0
comp=Z,3μm,18.3s,baz=280,slow=40
BEHE Becsehely 80.30 360 P **P 12 05 28.5 +1.1**
KIV Kislovodsk 80.30 341 ⇑P **P 12 05 28.7 +1.2**
KIV Kislovodsk 80.30 341 P **P 12 05 28.1 +0.6**
KIV IAmb IAmb 12 05 30.5
comp=Z,72nm,0.9s
KIV IAMs_20 IAMs_20 12 46 46.1
comp=Z,3μm,18.0s
KIV Kislovodsk 80.30 341 *e*P **P 12 05 28.5 +1.0**
KIV *e*S **S 12 15 34.1 +2.0**
KIV pmax pmax
comp=Z,91nm,1.1s
KIV pmax pmax
comp=Z,320nm,3.8s
KIV Kislovodsk 80.30 341 P **P 12 05 28.8 +1.2**
KIV Kislovodsk 80.30 341 *i*P **P 12 05 27.9 +0.3**
SNR=14
SANI Sanana 80.34 253 P **P 12 05 27.3 -0.6**
comp=Z,2μmcomp=Z,2μmcomp=Z,71nm,1.2s
SANI Sanana 80.34 253 P **P 12 05 27.9 0.0**
OZUR 80.37 354 ⇑P **P 12 05 28.7 +0.9**
ANN Anapa 80.38 345*c i*P **P 12 05 26.1 -1.7**
ANN *e*S **S 12 15 26.6 -6.0**
ANN pmax pmax
comp=Z,129nm,1.5s
GROC Groznyy 80.39 339 *e*P **P 12 05 27.8 -0.1**
GROC *e* 12 05 35.6
GROC *e* 12 08 32.2
GROC pmax pmax
comp=Z,115nm,1.0s
SIRR Siria 80.41 357 ⇑P **P 12 05 28.9 +0.9**

GORS Gorjuse 80.42 2 *i*P **P 12 05 27.9 -0.3**
GORS *e*S S 12 15 44.7 +11
AAI Ambon 80.43 250 P **P 12 05 29.5 +1.1**
comp=Z,2μmcomp=Z,68nm,1.2s
VLDR Vladesti 80.45 352 ⇑P **P 12 05 29.3 +1.1**
KBZ Khabaz 80.48 341 P **P 12 05 29.5 +1.2**
comp=Z,62nm,0.9s,baz=337,slow=2.8,SNR=73
KBZ LR LR 12 47 06.5
comp=Z,5μm,18.1s,baz=17,slow=40
comp=Z,62nm,0.9s
KBZ Khabaz 80.48 341*c i*P **P 12 05 29.1 +0.8**
KBZ pmax pmax
comp=Z,88nm,1.0s
KBZ MLR MLR
comp=Z,5μm,19.0s
PAYG Puerto Ayora 80.50 104 IAMs_20 IAMs_20 12 33 11.5
comp=Z,2μm,20.0s
DOPR Dopca 80.53 354 ⇑P **P 12 05 29.9 +1.2**
BRDH Bariadhala 80.53 295 P **P 12 05 30.2 +1.3**
comp=Z,161nm,0.4s,baz=72,slow=7.6,SNR=7.8
BRDH LR LR 12 43 48.8
comp=Z,3μm,18.5s,baz=34,slow=38
VRI Vrincioaia 80.53 353 ⇑P **P 12 05 29.7 +1.0**
MORH Mrgy, Hungar 80.54 359 ⇑P **P 12 05 29.1 +0.5**
MORH Mrgy, Hungar 80.54 359 P **P 12 05 28.6 0.0**
PLOR Plostina 80.56 353 ⇑P **P 12 05 30.1 +1.3**
COVR Voineasa-Covas 80.59 353 ⇑P **P 12 05 30.7 +1.7**
ODBI Odobesti 80.61 353 ⇑P **P 12 05 30.4 +1.4**
MRSI Marisa 80.62 258 P **P 12 05 29.3 -0.2**
comp=Z,2μmcomp=Z,2μmcomp=Z,71nm,1.3s
CTI Castel Tesino 80.62 4 IAmb IAmb 12 05 45.5
comp=Z,169nm,1.7s
PTH Pithoragarh 80.66 308 *e*P **P 12 05 28.8 -1.1**
KOVH Kovagotottos 80.67 359 P **P 12 05 29.8 +0.5**
NLAI Namlea 80.68 252 P **P 12 05 31.2 +1.4**
comp=Z,33nm,1.0s
SIM Simferopol' 80.70 348 *e*P **P 12 05 30.1 +0.6**
SIM *e* 12 05 36.7
SIM *e*S **S 12 15 38.2 +2.2**
SIM pmax pmax
comp=Z,63nm,0.9s
SIM smax smax
comp=N,483nm,16.8s
LJU Ljubljana 80.70 2 *i*P **P 12 05 29.2 -0.4**
LGTI Lohaghat 80.73 308⇑*i*P **P 12 05 30.2 +0.3**
VLK Valmikinagar 80.76 304 *e*P **P 12 05 29.6 -0.6**
IZVR Izvoarele 80.78 352 ⇑P **P 12 05 31.2 +1.3**
TOLI2 Tolitoli 80.79 259 P **P 12 05 29.5 -0.9**
TOLI2 IAmb IAmb 12 05 32.9
comp=Z,66nm,1.4s
TOLI2 Tolitoli 80.79 259 P **P 12 05 30.1 -0.3**
CDVI St. Croix 80.83 73 *e* **P 12 05 26.4 -4.1**
BHK Bhakra 80.83 312⇑*i*P **P 12 05 30.3 -0.2**
BHK *i*pP **pwP 12 05 41.8 +3.1**
LFF La Frestale 80.88 11 *e*P **P 12 05 30.8 +0.3**
LFF pmax pmax
comp=Z,21nm,0.6s
SSB Saint Sauveur 80.94 9 IAmb IAmb 12 05 45.4
comp=Z,98nm,1.5s
MLR Muntele Rosu 80.96 353 ⇑P **P 12 05 31.8 +0.6**
MLR Muntele Rosu 80.96 353 LR LR 12 44 40.6
comp=Z,5μm,18.1s,baz=21,slow=38
MLR Muntele Rosu 80.96 353 IAmb IAmb 12 05 53.2
comp=Z,100nm,1.6s
SALO Salr 81.01 4 IAmb IAmb 12 05 33.5
comp=Z,60nm,0.8s
CEY Cerknica 81.01 2⇑*i*P **P 12 05 31.0 -0.2**
BZS Buzias 81.06 357 ⇑P **P 12 05 32.1 +0.7**
VOIR 81.07 354 ⇑P **P 12 05 32.5 +0.9**
CFR Carcaliu 81.11 352 ⇑P **P 12 05 32.0 +0.3**
LOT Lotru 81.14 355 ⇑P **P 12 05 32.7 +0.7**
ARR Arges 81.17 354 ⇑P **P 12 05 33.1 +1.0**
ZEI Tsey 81.18 340 *e*P **P 12 05 32.4 0.0**
ZEI pmax pmax
comp=Z,52nm,1.0s
SKDS Skadanscina 81.19 2⇑*i*P **P 12 05 28.9 -3.3**
SOC Sochi 81.20 343 *e*P **P 12 05 30.3 -1.9**
SOC *e* 12 08 43.5
SOC *e*PPP PPP 12 10 29.2
SOC *e*S **S 12 15 40.2 -1.0**
SOC pmax pmax
comp=Z,98nm,0.7s
KBL Kabul 81.23 319 P **P 12 05 32.0 -0.8**
KBL IAmb IAmb 12 05 44.7
comp=Z,69nm,0.9s
KBL Kabul 81.23 319 P **P 12 05 32.0 -0.8**
KBL pmax pmax
comp=Z,69nm,1.0s
KBL Kabul 81.23 319 P **P 12 05 32.1 -0.8**
SNR=46
GZR Gura Zlata 81.24 356 ⇑P **P 12 05 33.2 +0.7**
BOJS Bojanci 81.25 1⇑*i*P **P 12 05 32.1 -0.4**
COEN Coen 81.31 232 P **P 12 05 32.5 -0.5**
COEN Coen 81.31 232 P **P 12 05 32.8 -0.2**
BANR Banloc 81.31 357 ⇑P **P 12 05 34.1 +1.3**
LUWI Luwuk 81.37 256 P **P 12 05 32.8 -0.7**
comp=Z,5μmcomp=Z,147nm,1.1s
LUWI Luwuk 81.37 256 P **P 12 05 33.1 -0.4**
TPGR Topolog 81.40 352 ⇑P **P 12 05 33.6 +0.3**
SECR 81.41 353 ⇑P **P 12 05 34.2 +0.9**
CRJC Cerrejon, Guaj 81.45 83 *e*P P 12 05 27.9 -6.2
ONI Oni 81.46 340 IAmb IAmb 12 05 47.9
comp=Z,81nm,1.2s
SMRT St. Maarten 81.55 71 IAMs_20 IAMs_20 12 41 19.8
comp=Z,3μm,22.0s
SMRT St. Maarten 81.55 71 *e* **P 12 05 30.0 -4.5**
FRGS Fruska Gora 81.57 358 ⇑P **P 12 05 35.6 +1.4**
FRGS Fruska Gora 81.57 358⇑*i*P **P 12 05 34.1 -0.1**
AKT Akhty 81.60 337 *e*P **P 12 05 35.5 +1.0**
AKT *e* 12 05 40.5
AKT pmax pmax
comp=Z,157nm,1.0s
ZKTA Zakatala 81.70 338 P **P 12 05 34.5 -0.5**
TLBR Topalu 81.74 352 ⇑P **P 12 05 36.1 +1.0**
SULR 81.75 353 ⇑P **P 12 05 35.6 +0.6**
A051A Mrakovica 81.75 360⇑*i*P **P 12 05 35.6 +0.4**
HERR Herculane 81.77 356 ⇑P **P 12 05 35.6 +0.4**
NAYO Nakonayok 81.79 283 P **P 12 05 36.3 +0.6**
TIRR Tirgusor 81.80 352 ⇑P **P 12 05 36.4 +1.0**
TIRR Tirgusor 81.80 352 ⇑P **P 12 05 36.4 +1.0**
MDVR Moldovita 81.89 356 ⇑P **P 12 05 36.5 +0.5**
APSI Ampana 81.91 257 P **P 12 05 37.4 +1.1**
MPSI Mapaga 81.93 260 P **P 12 05 36.4 0.0**
comp=Z,3μmcomp=Z,1μmcomp=Z,77nm,1.2s
SRE Strehaia 81.95 355 ⇑P **P 12 05 37.0 +0.8**
DJES Djerdap 81.98 356 ⇑P **P 12 05 36.7 +0.3**
SEKA Sheki 81.98 337 P **P 12 05 34.6 -1.9**
BLY Banja Luka 82.02 360⇑*i*P **P 12 05 35.3 -1.2**
SEUS St. Eustatius 82.05 71 IAMs_20 IAMs_20 12 44 37.0
comp=Z,3μm,21.0s
SEUS St. Eustatius 82.05 71 *e* **P 12 05 38.4 +1.4**
GEYT Alibeck 82.06 328 P **P 12 05 37.2 +0.2**
comp=Z,62nm,0.9s,baz=323,slow=4.4,SNR=87
GEYT LR LR 12 47 03.2
comp=Z,4μm,19.0s,baz=52,slow=39
comp=Z,62nm,0.9s
TEKS Tekeris 82.19 358⇑*i*P **P 12 05 36.6 -0.9**
MSSA Maissana 82.25 5 IAmb IAmb 12 06 01.5
comp=Z,113nm,1.3s
SAUI Saumlaki 82.27 245 IAMs_20 IAMs_20 12 38 49.2
comp=Z,3μm,20.0s
MGRS Mrkonjic Grad 82.35 360 *e*P **P 12 05 38.7 +0.4**
COPA Copaceanca 82.36 354 ⇓P **P 12 05 38.2 -0.1**
PGAV Gavieira, Arco 82.40 19 *e*P **P 12 05 39.6 +0.9**
comp=Z,253nm,1.8s
PGAV Gavieira, Arco 82.40 19 *e*S S 12 16 06.8 +13
PGAV Gavieira, Arco 82.40 19 *e*LR LR 12 38 47.2
comp=Z,4μm,16.0s
VLC Villacollemand 82.46 5 IAMs_20 IAMs_20 12 44 01.2
comp=Z,3μm,22.0s
ANWB Willy Bob 82.58 70 IAMs_20 IAMs_20 12 44 31.1
comp=Z,3μm,20.0s
ANWB Willy Bob 82.58 70 *e* **P 12 05 40.1 +0.3**
DIVS Divibare 82.63 358 IAmb IAmb 12 05 42.5
comp=Z,45nm,0.9s
DIVS Divibare 82.63 358⇑*i*P **P 12 05 39.7 -0.2**
PCAB Cabril 82.69 18 *e*P **P 12 05 41.2 +1.0**
comp=Z,192nm,1.9s
SRKY Kupres RS 82.70 360 *e*P **P 12 05 39.8 -0.4**
GANJ Ganja 82.71 338 P **P 12 05 38.7 -1.6**
PBRG Braganca 82.84 17 *e*P **P 12 05 41.8 +0.9**
comp=Z,147nm,1.9s
PBRG Braganca 82.84 17 *e*S **S 12 16 07.0 +8.7**
RAZG Razgrad 82.84 353 ⇑P **P 12 05 41.3 +0.4**

HATO Hato, Curacao 82.84 79 IAMs_20 IAMs_20 12 46 54.7
comp=Z,2µm,20.0s
BBLS Lazići 82.87 358⇑*i*P **P** **12 05 42.0 +0.9**
BLKB Belogradchik 83.01 356 ⇑P **P** **12 05 41.8 0.0**
SRDT SRDT 83.03 285 P **P** **12 05 41.7 -0.5**
comp=Z,61nm,1.1s
BOVS Bovan 83.04 356 ⇓*i*P **P** **12 05 42.4 +0.5**
POLO Lamas de Olo 83.06 18 *e*P **P** **12 05 43.2 +1.0**
comp=Z,95nm,2.0s
POLO Lamas de Olo 83.06 18 *e*S **S** **12 16 04.2 +3.5**
ANBD Bethesda, Anti 83.09 71 *e* **P** **12 05 41.8 -0.7**
RUDO Rudo 83.12 358⇑*i*P **P** **12 05 42.7 +0.4**
OSSC Osservatorio P 83.13 4 IAmb IAmb 12 05 56.2
comp=Z,47nm,0.9s
PRD Provadia 83.13 352 *i*P **P** **12 05 42.0 -0.3**
PTO Porto 83.13 19 *e*P **P** **12 05 43.7 +1.3**
comp=Z,292nm,1.6s
PVRL Vila Real 83.17 18 *e*P **P** **12 05 44.0 +1.3**
comp=Z,275nm,1.9s
SZH Strazhica 83.18 353 *i*P **P** **12 05 42.1 -0.5**
MVO Moncorvo 83.41 18 *e*P **P** **12 05 44.6 +0.7**
comp=Z,183nm,1.9s
MVO Moncorvo 83.41 18 *e*S **S** **12 16 09.4 +5.2**
MVO Moncorvo 83.41 18 *e*LR LR 12 37 39.4
comp=Z,4µm,20.0s
PLE Pljevlja 83.41 358 *e*P **P** **12 05 44.1 +0.2**
ALBI Allahabad 83.45 304⇑*i*P **P** **12 05 42.9 -1.3**
GNI Garni 83.54 339 LR LR 12 48 59.7
comp=Z,5µm,18.7s,baz=16,slow=40
GNI Garni 83.54 339 P **P** **12 05 46.5 +1.8**
GNI Garni 83.54 339 P **P** **12 05 46.5 +1.8**
GNI pmax pmax
comp=Z,234nm,1.3s
GNI Garni 83.54 339 P **P** **12 05 46.8 +2.1**
GNI Garni 83.54 339 P **P** **12 05 45.6 +0.9**
UPM Unac-Piva 83.55 358 *e*P **P** **12 05 43.8 -0.9**
UPM Unac-Piva 83.55 358 *e*P **P** **12 05 44.5 -0.2**
PVIS Viseu 83.68 19 *e*P **P** **12 05 46.5 +1.2**
comp=Z,251nm,1.8s
ABD La Joyeuse, An 83.71 71 IAMs_20 IAMs_20 12 47 45.0
comp=Z,3µm,18.0s
ABD La Joyeuse, An 83.71 71 *e* **P** **12 05 44.9 -0.7**
KTUT Trabzon 83.71 343 ⇑P **P** **12 05 47.1 +1.8**
GDHS Morne Mazeau, 83.71 71 IAMs_20 IAMs_20 12 45 32.2
comp=Z,3µm,20.0s
DIKM Dikmen 83.78 346 ⇑P **P** **12 05 47.5 +1.8**
BRY Bratogost 83.85 359 *e*P **P** **12 05 45.9 -0.3**
BRY Bratogost 83.85 359 *e*P **P** **12 05 46.0 -0.3**
IVA Berane 83.86 358 *e*P **P** **12 05 46.0 -0.2**
KOME Kolasin 83.89 358 *e*P **P** **12 05 46.5 +0.1**
STON Ston 83.89 359⇑*i*P **P** **12 05 44.5 -1.7**
JMB Yambol 83.92 353 *i*P **P** **12 05 42.9 -3.5**
CBE Ff, Capester 83.97 71 IAMs_20 IAMs_20 12 45 30.9
comp=Z,3µm,20.0s
CBE Ff, Capester 83.97 71 *e* **P** **12 05 42.4 -4.7**
NKME Niksic 83.98 358 *e*P **P** **12 05 46.4 -0.4**
VTS Vitosha 83.98 355 ⇑P **P** **12 05 47.3 +0.3**
VTS Vitosha 83.98 355 IAmb IAmb 12 05 49.0
comp=Z,36nm,0.9s
VTS Vitosha 83.98 355 *i*P **P** **12 05 46.7 -0.3**
PGB Panagyurishte 84.00 354 *i*P **P** **12 05 47.0 +0.1**
MTE Manteigas 84.05 18 *e*P **P** **12 05 48.0 +0.8**
comp=Z,193nm,1.9s
MTE Manteigas 84.05 18 *e*S **S** **12 16 14.3 +3.6**
MTE Manteigas 84.05 18 *e*LR LR 12 38 19.1
comp=Z,2µm,20.0s
MTE Manteigas 84.05 18 IAmb IAmb 12 06 04.4
comp=Z,88nm,1.2s
MTE IAMs_20 IAMs_20 12 42 11.8
comp=Z,3µm,21.0s
COI Coimbra 84.07 19 *e*P **P** **12 05 47.6 +0.4**
comp=Z,276nm,1.8s
COI Coimbra 84.07 19 *e*S **S** **12 16 16.4 +5.7**
BRRC Barranca, Sant 84.07 86 *e*P **P** **12 05 46.5 -1.1**
GDSD La Dsirade Is 84.07 71 IAMs_20 IAMs_20 12 45 37.7
comp=Z,3µm,21.0s
PTBC PUERTO BERRIO, 84.08 87 *e*P **P** **12 05 45.8 -1.8**
TDBA Terre de Bas, 84.13 71 IAMs_20 IAMs_20 12 45 35.0
comp=Z,3µm,20.0s
CEME Cevo 84.20 358 *e*P **P** **12 05 47.6 -0.3**
PCAS Casmilo, Conde 84.20 19 *e*P **P** **12 05 49.0 +1.1**
comp=Z,277nm,1.8s
PCAS Casmilo, Conde 84.20 19 *e*S **S** **12 16 16.1 +4.0**
MAGL Barre de l'ile 84.25 71 IAMs_20 IAMs_20 12 48 48.3
comp=Z,3µm,20.0s
MAGL Barre de l'ile 84.25 71 *e* **P** **12 05 45.8 -2.6**
NAX Nakhchivan 84.31 338 P **P** **12 05 46.9 -1.7**
HCY Herceg Novi 84.31 359⇑*i*P **P** **12 05 48.0 -0.4**
HCY Herceg Novi 84.31 359 *e*P **P** **12 05 48.4 0.0**
PDG Podgorica 84.31 358 ⇑P **P** **12 05 49.5 +1.1**
PDG Podgorica 84.31 358 IAMs_20 IAMs_20 12 43 23.2
comp=Z,3µm,21.0s
TTG Podgorica 84.31 358 *e*P **P** **12 05 48.3 -0.1**
AQU L'Aquila 84.37 2 IAMs_20 IAMs_20 12 49 12.8
comp=Z,2µm,20.0s
MTSU Mount Surprise 84.42 229 P **P** **12 05 49.6 +0.4**
comp=Z,19nm,0.9s
BUM Brajici-Budva 84.45 358 *e*P **P** **12 05 48.6 -0.6**
SDV Santo Domingo 84.48 83 P **P** **12 05 48.9 -1.0**
SDV IAmb IAmb 12 06 08.1
comp=Z,53nm,1.4s
PAMC Pamplona, Colo 84.49 85 *e*P **P** **12 05 49.4 -0.8**
EDRB Edirne 84.53 353 P **P** **12 05 48.8 -0.7**
KKSI Kolaka, Sulawe 84.55 255 P **P** **12 05 51.0 +1.1**
comp=Z,1µmcomp=Z,56nm,1.6s
DRME Dracevica, Mon 84.56 358⇑*i*P **P** **12 05 49.6 -0.1**
DRME Dracevica, Mon 84.56 358 *e*P **P** **12 05 49.7 0.0**
DSLB Salisbury 84.58 71 *e* **P** **12 05 48.5 -1.6**
GUY2C Guyana, Caldas 84.58 89 *e*P **P** **12 05 50.5 -0.3**
PCBR Castelo Branco 84.61 18 *e*P **P** **12 05 50.6 +0.7**
comp=Z,108nm,1.8s
NORC Norcasia 84.61 88 *e*P **P** **12 05 49.0 -1.4**
PSBE So Bento 84.66 20 *e*P **P** **12 05 51.4 +1.1**
comp=Z,307nm,1.8s
PSBE So Bento 84.66 20 *e*S **S** **12 16 16.8 0.0**
MDN Morne-Daniel 84.69 72 *e* **P** **12 05 52.3 +1.6**
SKO Skopje 84.71 356 *i*P **P** **12 05 51.3 +0.8**
KKB Krupnik 84.74 355 *i*P **P** **12 05 51.2 +0.6**
ULC Ulcinj 84.78 358 *e*P **P** **12 05 51.0 +0.2**
BARC Barichara 84.80 86 *e*P **P** **12 05 50.9 -0.6**
KDZ Kurdzhali 84.82 353 *i*P **P** **12 05 51.6 +0.6**
RZN Rozhen 84.83 354 *i*P **P** **12 05 51.5 +0.2**
UCM Universidad Co 84.88 15 P **P** **12 05 48.2 -3.1**
UCM S **S** **12 16 20.6 +1.7**
JHNI Jhansi 84.90 307 *e*P **P** **12 05 50.8 -0.9**
STIP Stip 84.95 356 *i*P **P** **12 05 51.5 -0.1**
BKB Balikpapan 84.98 261 P **P** **12 05 54.3 +2.2**
comp=Z,2µmcomp=Z,112nm,1.1s
BKB Balikpapan 84.98 261 P **P** **12 05 53.7 +1.6**
MMB Musomiste 84.98 355 *i*P **P** **12 05 52.5 +0.6**
PMRV Marv??o 85.02 19 *e*P **P** **12 05 53.4 +1.3**
comp=Z,92nm,1.8s
PMRV Marv??o 85.02 19 *e*S **S** **12 16 16.4 -3.9**
PMRV Marv??o 85.02 19 *e*LR LR 12 39 45.7
comp=Z,2µm,16.0s
PHP Peshkopia 85.03 357 P **P** **12 05 52.2 +0.1**
PMAFR Mafra 85.11 20 *e*P **P** **12 05 53.6 +1.1**
comp=Z,366nm,1.9s
PMAFR Mafra 85.11 20 *e*S **S** **12 16 23.6 +2.5**
SVN Savane Anatole 85.20 72 IAMs_20 IAMs_20 12 42 18.7
comp=Z,3µm,22.0s
PMTG Montargil 85.21 19 *e*P **P** **12 05 53.8 +0.8**
comp=Z,98nm,1.8s
NVR Nevrokopi 85.22 355 P **P** **12 05 53.2 +0.2**
CTA Charters Tower 85.28 227 P **P** **12 05 53.4 0.0**
comp=Z,12nm,0.8s,baz=25,slow=6.9,SNR=12
CTA LR LR 12 43 37.7
comp=Z,476nm,18.3s,baz=18,slow=35
comp=Z,12nm,0.8s
CTA Charters Tower 85.28 227 P **P** **12 05 53.2 -0.2**
CTAO Charters Tower 85.28 227 P **P** **12 05 53.0 -0.4**
CTAO Charters Tower 85.28 227 P **P** **12 05 53.0 -0.4**
CTAO pmax pmax
comp=Z,30nm,1.2s
CTAO Charters Tower 85.28 227 P **P** **12 05 53.1 -0.3**
FDF Fort de France 85.30 72 IAMs_20 IAMs_20 12 46 23.3
comp=Z,2µm,20.0s
FDF Fort de France 85.30 72 *e* **P** **12 05 53.3 -0.5**
VAY Valandovo 85.31 356 *i*P **P** **12 05 54.4 +0.9**
RDO Rodhopi 85.31 353 P **P** **12 05 53.7 +0.2**
LIS Lisbon 85.36 20 *e*P **P** **12 05 54.0 +0.3**
LIS *e*SKSac **SKSac** **12 16 17.9 0.0**
LIS IAMs_20 IAMs_20 12 47 23.7
comp=E,4µm,14.9s

LIS Lisbon 85.36 20 *e*P **P** **12 05 54.1 +0.3**
LIS *e* 12 16 17.9
TIR Tirane 85.38 358⇑P **P** **12 05 55.1 +1.3**
TIR Tirane 85.38 358 P **P** **12 05 54.0 +0.2**
ESBB Sonseca Array 85.38 16 IAmb IAmb 12 06 07.6
comp=Z,47nm,1.1s
ESDC Sonseca Array 85.39 16 P **P** **12 05 53.8 -0.1**
comp=Z,10nm,0.9s,baz=344,slow=5.0,SNR=32
ESDC LR LR 12 47 38.1
comp=Z,2µm,18.1s,baz=340,slow=38
comp=Z,10nm,0.9s
ESDC Sonseca Array 85.39 16 IAmb IAmb 12 06 07.7
comp=Z,71nm,1.4s
RUSC La Rusia 85.41 86 *e*P **P** **12 05 54.6 -0.3**
ILAM Ilet Lapin Mar 85.42 71 IAMs_20 IAMs_20 12 42 01.5
comp=Z,3µm,22.0s
PAB San Pablo 85.45 16 P **P** **12 05 55.6 +1.3**
PAB San Pablo 85.45 16 P **P** **12 05 55.6 +1.3**
PAB pmax pmax
comp=Z,36nm,1.3s
PAB MLR MLR
comp=Z,4µm,18.0s
KNT Kendrikon 85.45 355 P **P** **12 05 54.0 -0.2**
SRS Serrai 85.46 355 P **P** **12 05 54.5 +0.2**
SPSI Sidrap Palu 85.47 257 P **P** **12 05 57.9 +3.3**
comp=Z,3µmcomp=Z,922nmcomp=Z,37nm,1.1s
BIM Bigot 85.52 72 IAMs_20 IAMs_20 12 41 54.1
comp=Z,4µm,22.0s
BIM Bigot 85.52 72 *e* **P** **12 05 51.5 -3.4**
PESTR Estremoz 85.53 19 *e*P **P** **12 05 55.5 +0.9**
comp=Z,98nm,1.7s
PESTR Estremoz 85.53 19 *e*S **S** **12 16 22.7 -2.6**
KDU Kakadu 85.57 242 P **P** **12 05 54.7 -0.2**
BWNR Bhubaneshwar 85.58 298 *e*P **P** **12 05 55.6 +0.6**
OHR Ohrid 85.59 357 *i*P **P** **12 05 55.6 +0.7**
BNSI Bone 85.63 257 P **P** **12 05 56.1 +0.8**
comp=Z,1µmcomp=Z,610nmcomp=Z,24nm,1.2s
MPOM Morne Pois Mar 85.70 72 IAMs_20 IAMs_20 12 42 09.8
comp=Z,4µm,22.0s
MPOM Morne Pois Mar 85.70 72 *e* P 12 05 49.7 -6.0
EVO Evora 85.77 19 P P 12 05 47.0 -8.8
EVO S **S** **12 16 32.6 +4.9**
SOH Sokhos 85.77 355 P **P** **12 05 55.9 +0.1**
ANTO Ankara 85.87 348 ⇑P **P** **12 05 57.2 +0.8**
ANTO Ankara 85.87 348 P **P** **12 05 57.2 +0.8**
ANTO Ankara 85.87 348 P **P** **12 05 57.2 +0.8**
ANTO pmax pmax
comp=Z,87nm,0.9s
ANTO Ankara 85.87 348 P **P** **12 05 58.0 +1.7**
BR131 Keskin Array S 85.90 347 P **P** **12 05 57.6 +1.0**
SNR=34
BRTR Keskin Array B 85.90 347 P **P** **12 05 56.4 -0.2**
comp=Z,68nm,1.1s,baz=38,slow=2.2,SNR=97
BRTR LR LR 12 48 06.9
comp=Z,4µm,19.6s,baz=20,slow=38
comp=Z,68nm,1.1s
BRTR Keskin Array B 85.90 347 *i*P **P** **12 05 57.5 +0.9**
BRTR pmax pmax
comp=Z,68nm,1.0s
MTKI Muara Teweh, K 85.90 263 P **P** **12 05 57.1 +0.4**
comp=Z,60nm,1.3s
BLSP Bilaspur 85.94 302 *e*P **P** **12 05 56.3 -0.6**
BAUV El Baul 85.96 81 *e* **P** **12 05 58.1 +1.1**
SLBI Saint Lucia, B 85.97 72 *e* P 12 05 49.7 -7.4
HORT Hortiatis 86.01 355 P **P** **12 05 56.5 -0.5**
CHIC Chingaza 86.03 88 *e*P **P** **12 05 59.1 +1.2**
PNCL Nicolau / Gran 86.07 20 *e*P **P** **12 05 57.5 +0.2**
comp=Z,98nm,1.7s
PNCL Nicolau / Gran 86.07 20 *e*S **S** **12 16 24.7 -5.9**
BORA Eskisehir 86.13 349 IAmb IAmb 12 06 11.0
comp=Z,87nm,1.1s
MCLT Moule a Chique 86.24 72 *e* P 12 05 50.4 -8.1
MAHO Mahon 86.25 10 P **P** **12 05 55.3 -2.8**
MAHO S **S** **12 16 29.3 -2.9**
MAHO Mahon 86.25 10 IAMs_20 IAMs_20 12 48 41.6
comp=Z,2µm,18.0s
NEST Nestorio 86.28 357 P **P** **12 05 58.8 +0.4**
PBAR Barrancos 86.30 19 *e*P **P** **12 05 59.5 +1.1**
comp=Z,95nm,1.8s
PBAR Barrancos 86.30 19 *e*S **S** **12 16 31.6 -1.2**
KAPI Kappang 86.33 257 P **P** **12 05 58.8 0.0**
comp=Z,77nm,1.1s,baz=10,slow=0.3,SNR=27
comp=Z,77nm,1.1s
KAPI Kappang 86.33 257 P **P** **12 05 58.6 -0.2**
KAPI Kappang 86.33 257 P **P** **12 05 58.6 -0.2**
KAPI pmax pmax
comp=Z,139nm,1.3s
KAPI Kappang 86.33 257 P **P** **12 05 59.9 +1.1**
KAPI Kappang 86.33 257 P **P** **12 05 59.7 +0.9**
KZN Kozani 86.36 356 P **P** **12 05 58.4 -0.4**
BKSI Bulukumba 86.36 256 P **P** **12 05 58.2 -0.8**
comp=Z,872nmcomp=Z,65nm,1.4s
MTN Manton Dam 86.41 243 IAmb IAmb 12 05 59.7
comp=Z,55nm,0.8s
MTN Manton Dam 86.41 243 P **P** **12 05 59.3 +0.2**
SVB Belmont 86.42 73 *e* **P** **12 05 57.9 -1.4**
RK1H Rockhampton Ha 86.46 222 P **P** **12 05 59.9 +0.8**
LSK Leskovik 86.56 357 P **P** **12 06 01.4 +1.6**
EZN Ezine 86.57 353 P **P** **12 05 58.5 -1.2**
GCUF Volcan Galeras 86.59 93 *e*P **P** **12 06 02.2 +1.5**
PCVE Castro Verde 86.63 19 *e*S **SKSac** **12 16 25.8 -0.1**
KSM Kuching 86.69 268 P **P** **12 06 01.7 +1.0**
CUC Castrocucco 86.77 1 IAmb IAmb 12 06 13.9
comp=Z,64nm,1.2s
BSSI Bau Bau, Buton 86.82 255 P **P** **12 06 00.2 -1.0**
comp=Z,1µmcomp=Z,84nm,1.2s
MORF Marmelete 86.83 20 *e*P **P** **12 06 01.2 +0.1**
MORF *e*SKSac **SKSac** **12 16 27.2 0.0**
MORF IAMs_20 IAMs_20 12 47 39.8
comp=Z,6µm,21.2s
MORF Marmelete 86.83 20 *e*S **S** **12 16 40.2 +2.1**
MORF Marmelete 86.83 20 *e*P **P** **12 06 01.2 +0.1**
MORF *e* 12 16 27.2
SRN Sarande 86.84 357 P **P** **12 06 01.2 +0.2**
SURA Surathani 86.89 281 P **P** **12 06 02.8 +1.2**
PFVI Vila Bisbo 86.95 20 *e*S **S** **12 16 46.2 +7.0**
GCMP Grenada, Carri 86.96 73 *e* P 12 05 55.5 -6.4
PCRV Puerto La Cruz 86.97 77 LR LR 12 43 07.8
comp=Z,2µm,21.7s,slow=34
KEK Kerkira 87.01 358 P **P** **12 06 01.7 -0.2**
THL Klokotos Trika 87.09 356 P **P** **12 05 59.6 -2.6**
GRGR Grenville 87.11 74 IAMs_20 IAMs_20 12 44 22.4
comp=Z,2µm,21.0s
GRGR Grenville 87.11 74 *e* P 12 05 56.7 -6.0
STKI Sintang 87.12 266 P **P** **12 06 03.1 +0.4**
comp=Z,11µmcomp=Z,43nm,0.8s
PRK Paraskevi 87.15 353 P **P** **12 06 04.1 +1.6**
IGT Igoumenitsa 87.18 357 P **P** **12 06 02.6 -0.1**
SIGR SIGRI 87.22 353 P **P** **12 06 02.4 -0.5**
SRIT Nakonsritamara 87.36 281 P **P** **12 06 04.9 +1.0**
comp=Z,59nm,1.5s
ARNO Arenosillo 87.40 19 P **P** **12 06 01.8 -2.0**
ARNO S S 12 17 01.1 +18
TIP Timpagrande 87.58 360 ⇑P **P** **12 06 05.1 +0.4**
TIP Timpagrande 87.58 360 IAMs_20 IAMs_20 12 51 03.8
comp=Z,3µm,22.0s
SOEI Soe 87.61 250 IAmb IAmb 12 06 52.9
comp=Z,59nm,1.2s
SOEI IAMs_20 IAMs_20 12 40 46.6
comp=Z,2µm,21.0s
SOEI Soe 87.61 250 P **P** **12 06 07.1 +2.0**
MAKR Makrakomi, Fth 87.63 356 P **P** **12 06 04.8 -0.1**
RAGD RAYAGADA 87.67 300 *e*P **P** **12 06 04.9 -0.5**
EVR Evrytania 87.74 356 P **P** **12 06 06.5 +0.9**
CART Cartagena 87.88 14 P **P** **12 06 02.2 -3.9**
CART S **S** **12 16 54.9 +6.8**
SKLT Songkhla 87.90 279 P **P** **12 06 07.5 +1.0**
LKD2 Lefkada island 87.91 357 P **P** **12 06 05.0 -1.3**
BLCB Balcova 87.94 352 P **P** **12 06 06.0 -0.4**
LKR Lokris 87.95 355 P **P** **12 06 03.5 -2.9**
EIDS Eidsvold 88.02 220 IAmb IAmb 12 06 29.7
comp=Z,75nm,1.9s
EIDS Eidsvold 88.02 220 P **P** **12 06 07.0 +0.4**
EVGI Lefkada island 88.08 357 P **P** **12 06 06.7 -0.3**
ISP Isparta 88.16 349 IAMs_20 IAMs_20 12 47 38.6
comp=Z,2µm,22.0s
FSK Fiskardo 88.24 357 P **P** **12 06 06.6 -1.2**
BATI Baumata 88.31 250 LR LR 12 42 55.8
comp=Z,460nm,20.7s,baz=44,slow=34
TRN Trinidad (W) 88.45 74 *e* P 12 05 59.3 -10
DION Dionisos Attik 88.47 354 P **P** 12 06 01.4 -7.5
PSDA Pessada-Kefalo 88.59 357 P **P** **12 06 09.3 -0.1**
KLV Kalavryta, Ach 88.60 356 P **P** **12 06 08.2 -1.4**
LOUT Loutraki 88.61 355 P **P** **12 06 07.0 -2.6**

SMG Samos 88.63 352 P **P** **12 06 08.5 -1.2**
QIS Mount Isa 88.70 232 P **P** **12 06 09.0 -1.0**
CEU Ceuta 88.82 18 P **P** **12 06 07.4 -3.2**
CEU S **S** **12 17 02.1 +5.1**
PBA Port Blair 88.85 288 P **P** **12 06 13.4 +2.5**
PMOZ Porto Moniz, M 89.03 28 *e*LR LR 12 38 51.8
comp=Z,3µm,20.0s
YER Yerkesik 89.07 351 P **P** **12 06 11.4 -0.4**
TRIP Tripoli 89.11 356 P **P** 12 06 04.0 -8.0
KRND KRANIDI 89.21 355 P **P** **12 06 11.5 -0.9**
BODT Bodrum 89.23 352 P **P** **12 06 11.7 -0.8**
AKL Akola 89.67 306 *e*P **P** **12 06 13.4 -1.4**
PVLZ Peæn de 89.72 17 P **P** **12 06 12.9 -1.9**
PVLZ S **S** **12 17 07.7 +2.3**
WMELI Melilla 89.81 16 P **P** **12 06 11.7 -3.5**
WMELI S **S** **12 17 08.1 +1.8**
IPM Ipoh 89.81 277 IAMs_20 IAMs_20 12 50 44.7
comp=Z,2µm,20.0s
IPM Ipoh 89.81 277 P **P** **12 06 15.7 +0.2**
RMQ Roma 89.93 222 P **P** **12 06 17.1 +1.5**
CHAS Isla Isabel II 90.02 16 P **P** **12 06 11.6 -4.6**
CHAS S SKSac 12 16 57.8 +12
SANT Santorini 90.07 353 IAMs_20 IAMs_20 12 50 30.6
comp=Z,2µm,20.0s
MYKOM Kota Tinggi 90.29 273 IAMs_20 IAMs_20 12 48 54.5
comp=Z,2µm,20.0s
WRAB Tennant Creek 90.70 236 P **P** **12 06 18.2 -1.1**
WRAB Tennant Creek 90.70 236 IAMs_20 IAMs_20 12 44 56.0
comp=Z,2µm,19.0s
WRAB Tennant Creek 90.70 236 P **P** **12 06 18.3 -1.1**
WRAB pmax pmax
comp=Z,26nm,1.3s
WRAB Tennant Creek 90.70 236 P **P** **12 06 18.8 -0.6**
WRA Warramunga Arr 90.72 236 P **P** **12 06 18.5 -1.0**
comp=Z,12nm,1.2s,baz=34,slow=5.7,SNR=32
WRA PP **PP** **12 09 57.1 +1.9**
comp=Z,3.0nm,1.0s,baz=30,slow=7.7,SNR=5.1
WRA PKiKP **PKiKP** **12 11 12.1 -1.4**
comp=Z,0.9nm,1.0s,baz=357,slow=1.6,SNR=5.0
WRA LR LR 12 44 13.2
comp=Z,1µm,20.3s,baz=15,slow=34
comp=Z,12nm,1.2s
KARP Karpathos 90.75 352 IAMs_20 IAMs_20 12 46 54.6
comp=Z,2µm,21.0s
KEST Kesra 90.80 6 P **P** **12 06 20.1 +0.2**
comp=Z,2.8nm,0.5s,baz=218,slow=2.6,SNR=4.4
comp=Z,2.8nm,0.5s
KEST Kesra 90.80 6 IAmb IAmb 12 06 32.6
comp=Z,76nm,1.6s
KEST Kesra 90.80 6 P **P** **12 06 20.4 +0.5**
AVE Averroes 90.95 20 P **P** **12 06 19.2 -1.4**
AVE S **S** **12 17 17.6 +0.7**
IFR Ifrane 91.18 18 P **P** **12 06 20.2 -1.7**
IFR S **S** **12 17 25.8 +6.3**
IDI Anoyia 91.19 353 LR LR 12 51 26.1
comp=Z,1µm,20.1s,baz=335,slow=38
ZKR Zakros 91.26 352 P **P** **12 06 20.2 -1.8**
VJD Vijayawada 91.40 300 *e*P **P** **12 06 22.5 -0.4**
DSRI Dabo 91.67 271 P **P** **12 06 25.9 +1.8**
HYBB Hyderabad (bro 91.70 303 *e*P **P** **12 06 24.1 -0.2**
HYBB IVmB_BB 12 06 24.7
comp=Z,434nm,1.2s
HYBB *e*PcP **PcP** **12 06 24.8 -0.4**
HYBB *e*pP **pP** **12 06 29.1 -0.1**
HYBB *e*PP **PP** **12 10 02.5 +0.1**
HYBB *e*SKSac **SKSac** **12 16 55.9 -0.5**
HYBB *e*SKKSac **SKKSac** **12 17 11.5 -1.1**
HYBB IVMs_BB IVMs_BB 12 51 26.3
comp=Z,1µm,16.0s
QLP Quilpie 91.87 225 P **P** **12 06 25.7 +1.1**
MDT Midelt 91.96 18 LR LR 12 50 57.0
comp=Z,1µm,18.3s,baz=0.5,slow=38
MMAI Mount Meron Ar 92.22 344 LR LR 12 53 09.8
comp=Z,1µm,18.6s,baz=258,slow=39
ARMA Armidale 92.36 218 P **P** **12 06 28.5 +1.5**
PSI Prapat 92.40 278 P **P** **12 06 29.2 +1.6**
comp=Z,12nm,0.6s,baz=1.4,slow=3.8,SNR=9.5
PSI LR LR 12 49 13.8
comp=Z,785nm,20.3s,baz=2.5,slow=36
comp=Z,12nm,0.6s
PSI Prapat 92.40 278 P **P** **12 06 27.8 +0.1**
RPSI Rantau Prapat 92.48 278 IAmb IAmb 12 06 44.7
comp=Z,37nm,1.2s
ASF Jabal al Asfar 92.80 343 LR LR 12 56 42.9
comp=Z,2µm,18.0s,baz=43,slow=41
AULRC Lightning Ridg 92.86 221 P **P** **12 06 30.3 +1.2**
RPN Rapa Nui 92.96 134 LR LR 12 41 01.4
comp=Z,2µm,18.7s,baz=332,slow=31
URZ Urewera 93.06 195 LR LR 12 41 18.9
comp=Z,989nm,20.1s,baz=113,slow=31
URZ Urewera 93.06 195 IAMs_20 IAMs_20 12 51 45.6
comp=Z,2µm,19.0s
URZ Urewera 93.06 195 P **P** **12 06 31.1 +1.3**
JASK Jask - Hormozg 93.20 324 P **P** **12 06 32.1 +1.0**
AUPHS Peel High Scho 93.25 218 P **P** **12 06 32.0 +1.1**
SHME Shamm 93.64 325 P **P** **12 06 32.7 -0.4**
SHME Shamm 93.64 325 P **P** **12 06 31.4 -1.7**
HIZ Hauiti 93.68 197 IAMs_20 IAMs_20 12 47 32.0
comp=Z,2µm,19.0s
BANOM Banah 93.70 325 P **P** **12 06 33.2 -0.2**
BANOM Banah 93.70 325 P **P** **12 06 32.3 -1.1**
GHAJ Ghor Haditha 93.87 344 IAMs_20 IAMs_20 12 51 22.4
comp=Z,2µm,22.0s
BKZ Black Stump Fm 94.04 196 IAMs_20 IAMs_20 12 46 46.6
comp=Z,2µm,20.0s
AS01 Alice Springs 94.05 235 P **P** **12 06 34.2 -0.6**
ASAR Alice Springs 94.08 235 P **P** **12 06 34.3 -0.7**
comp=Z,7.4nm,1.0s,baz=27,slow=3.6,SNR=36
ASAR PKiKP **PKiKP** **12 11 18.1 -1.0**
comp=Z,0.4nm,0.9s,baz=16,slow=2.2,SNR=4.4
ASAR PKKP **PKKPbc** **12 23 36.0 +0.8**
comp=Z,0.4nm,0.5s,baz=203,slow=1.8,SNR=8.8
ASAR LR LR 12 46 32.5
comp=Z,1µm,19.4s,baz=32,slow=34
comp=Z,7.4nm,1.0s
MASF Masafi 94.25 325 P **P** **12 06 35.6 -0.4**
MSFE Esma-Masafi 94.26 325 P **P** **12 06 34.5 -1.5**
INKA Innaminka 94.38 227 P **P** **12 06 37.3 +1.1**
GSI Gunungsitoli 94.40 278 IAMs_20 IAMs_20 12 47 09.0
comp=Z,2µm,20.0s
HATD Hatta, Dubai 94.77 325 *i*P **P** **12 06 36.9 -1.4**
SNR=7.8
NAZ Nazwa, Dubai 94.78 325 P **P** **12 06 37.0 -1.4**
LEM Lembang 94.92 265 LR LR 12 45 31.1
comp=Z,874nm,21.9s,baz=30,slow=33
ASHO Ashiyiah 94.92 325 P **P** **12 06 38.5 -0.5**
SNR=8.8
ASHO Ashiyiah 94.92 325 *i*P **P** **12 06 37.3 -1.8**
SNR=10
FAQ Al Faqa, Dubai 95.03 325 P **P** **12 06 37.5 -1.9**
ASUD Al Ashush, Dub 95.22 325 *i*P **P** **12 06 39.1 -1.3**
SNR=7.4
SOHO SOHO 95.26 324 P **P** **12 06 40.8 +0.2**
SOHO SOHO 95.26 324 *i*P **P** **12 06 38.8 -1.8**
SNR=9.0
WSAR Wadi Sarin 95.33 322 LR LR 12 56 48.3
comp=Z,2µm,18.9s,baz=48,slow=40
WSAR Wadi Sarin 95.33 322 P **P** **12 06 40.7 -0.3**
SNR=8.7
SHMA Al-Shehemyia 95.48 329 P **P** **12 06 40.1 -1.5**
HOQ Hoqain 95.49 323 P **P** **12 06 41.7 0.0**
SNR=6.2
EIL Elat 95.57 344 LR LR 12 54 08.2
comp=Z,2µm,20.4s,baz=53,slow=38
ALNE Al Ain 95.61 325 *i*P **P** **12 06 41.1 -1.1**
SNR=7.8
CMSA Cobar Meteorol 95.63 222 P **P** **12 06 43.0 +1.2**
SMDO Samad 95.71 322 P **P** **12 06 42.7 -0.1**
SNR=8.1
JRN Qarnain Island 95.75 327 P **P** **12 06 43.0 +0.2**
WBK Wadi Bani Khal 95.78 321 P **P** **12 06 43.6 +0.6**
ARQ Araqi 96.00 324 P **P** **12 06 44.0 0.0**
SNR=14
BSY Bisya 96.30 323 P **P** **12 06 44.8 -0.6**
SNR=12
JMDO Jabal Madar 96.32 322 P **P** **12 06 45.5 +0.1**
SNZO South Karori 96.43 197 IAMs_20 IAMs_20 12 50 56.8
comp=Z,2µm,18.0s
NNZ Nelson 96.57 198 IAMs_20 IAMs_20 12 56 39.5
comp=Z,3µm,19.0s
UMZA Um Al Zommool 97.05 325 P Pdif 12 06 49.2 +0.4
MZR Muzera 97.35 326 P **P** **12 06 49.1 -1.0**
STKA Stephens Creek 97.60 225 P Pdif 12 06 51.2 +0.3
comp=Z,4.1nm,1.0s,baz=349,slow=10,SNR=5.4
STKA LR LR 12 47 51.8

comp=Z,1μm,19.2s,baz=22,slow=34
comp=Z,4.1nm,1.0s
STKA Stephens Creek 97.60 225 P Pdif 12 06 51.5 +0.7
MHTO MHTO 97.63 322 P P 12 06 50.6 -0.7
SNR=8.3
MDP Montagnes des 97.94 70 LR LR 12 53 19.1
comp=Z,2μm,19.0s,baz=317,slow=37
PCHI Peechi 98.66 301 eP P 12 06 53.3 -2.8
PCHI eS SKSac 12 17 32.3 -1.2
DQM DQM 98.76 322 P P 12 06 54.4 -2.1
PALK Pallekele 99.12 295 LR LR 13 00 07.8
comp=Z,2μm,18.0s,baz=126,slow=40
PALK Pallekele 99.12 295 IAMs_20 IAMs_20 13 00 04.9
comp=Z,2μm,19.0s
PALK Pallekele 99.12 295 P Pdif 12 06 59.1 +0.9
RAYN Ar Rayn 99.25 333 Pdif 12 06 58.6 -0.1
RAYN IAmb IAmb 12 07 11.8
comp=Z,35nm,1.3s
RAYN Ar Rayn 99.25 333 P Pdif 12 06 58.6 -0.1
RAYN pmax pmax
comp=Z,35nm,1.3s
RAYN Ar Rayn 99.25 333 P Pdif 12 06 57.2 -1.4
RAYN Ar Rayn 99.25 333 i P Pdif 12 06 58.3 -0.4
SNR=7.6
RPZ Rata Peaks 99.42 199 LR LR 12 49 51.8
comp=Z,2μm,18.4s,baz=6.5,slow=34
DOK Doka 101.19 324 P Pdif 12 07 08.0 +0.7
WHFO Wadi Hawf 101.96 324 P Pdif 12 07 10.1 -0.7
ABTO Aybut 102.65 324 P Pdif 12 07 14.3 +0.4
TAM Tamanrasset 103.30 11 IAMs_20 IAMs_20 12 56 40.3
comp=Z,3μm,21.0s
ATD Arta Tunnel 111.40 332 IAMs_20 IAMs_20 13 05 40.2
comp=Z,2μm,21.0s
TORD Torodi Ar. Bea 112.28 16 PKiKP PKiKP 12 11 50.8 -1.9
comp=Z,1.5nm,1.0s,baz=331,slow=4.5,SNR=4.2
TORD PKKPbc PKKPbc 12 22 40.3 -0.5
comp=Z,1.1nm,0.6s,baz=163,slow=1.6,SNR=8.8
H03N2 Juan Fernandez 113.03 115 T T 14 15 08.3
baz=323,slow=78,SNR=106
H03N1 Juan Fernandez 113.05 115 T T 14 15 12.2
baz=323,slow=78,SNR=76
H03N3 Juan Fernandez 113.05 115 T T 14 15 10.9
baz=323,slow=78,SNR=99
AAE Adis Abeba 114.86 336 eP PKPdf 12 11 59.6 +1.6
AAE Adis Abeba 114.86 336 eP PKPdf 12 11 59.6 +1.6
FURI Furi 115.01 336 eP PKiKP 12 11 55.6 -2.7
FURI Furi 115.01 336 eP PKiKP 12 11 55.6 -2.7
RCBR Riachuelo 116.15 62 IAMs_20 IAMs_20 13 02 24.3
comp=Z,2μm,19.0s
CPUP Villa Florida 120.07 94 PKP PKPdf 12 12 05.8 -1.4
comp=Z,2.6nm,0.6s,baz=267,slow=2.7,SNR=4.0
LODK Lodwar 121.07 338 IAMs_20 IAMs_20 13 10 16.1
comp=Z,2μm,21.0s
PLCA Paso Flores 122.92 115 PKP PKPdf 12 12 11.7 -0.6
comp=Z,7.4nm,1.0s,baz=312,slow=4.2,SNR=6.8
PLCA Paso Flores 122.92 115 PKPdf PKPdf 12 12 11.6 -0.7
LL02 Futaleuf 123.95 118 PKPdf 12 12 13.1 -1.0
AY01 Puyuhuapi 124.39 120 PKPdf PKPdf 12 12 13.6 -1.2
KMBO Kilima Mbogo 125.00 335 PKP PKiKP 12 12 18.6 +0.8
comp=Z,0.4nm,0.7s,baz=39,slow=22,SNR=7.3
KMBO Kilima Mbogo 125.00 335 PKPdf PKiKP 12 12 18.0 +0.3
KMBO Kilima Mbogo 125.00 335 IAMs_20 IAMs_20 13 15 06.6
comp=Z,1μm,20.0s
KMBO Kilima Mbogo 125.00 335 PKIKP PKiKP 12 12 18.0 +0.3
KMBO Kilima Mbogo 125.00 335 eP PKPdf 12 12 17.6 +0.1
KMBO Kilima Mbogo 125.00 335 eP PKPdf 12 12 17.6 +0.1
KMBO Kilima Mbogo 125.00 335 P PKPdf 12 12 17.5 +0.1
TRQA Tornquist 125.81 107 IAMs_20 IAMs_20 13 19 13.2
comp=Z,999nm,19.0s
MBAR Mbarara 125.91 343 IAMs_20 IAMs_20 13 17 15.3
comp=Z,2μm,19.0s
MBAR Mbarara 125.91 343 eP PKPpre 12 12 07.6
MBAR Mbarara 125.91 343 eP PKPpre 12 12 07.6
KIBK Kibwezi 125.96 333 IAMs_20 IAMs_20 13 17 11.5
comp=Z,2μm,19.0s
SBA Scott Base 132.50 188 PKPdf PKPdf 12 12 28.4 -0.9
SBA Scott Base 132.50 188 PKIKP PKPdf 12 12 28.4 -0.9
SBA MLR MLR
comp=Z,2μm,18.0s
VNDA Vanda 132.65 190 PKP PKPdf 12 12 30.2 +0.6
comp=Z,1.3nm,1.1s,baz=291,slow=4.0,SNR=4.5
VNDA SKPbc SKPbc 12 15 54.9 -0.8
comp=Z,4.9nm,1.1s,baz=333,slow=3.0,SNR=7.6
CASY Casey 135.93 215 IAMs_20 IAMs_20 13 05 55.9
comp=Z,899nm,20.0s
LSZ Lusaka 140.71 342 PKIKP PKPdf 12 12 41.2 -5.4
VOI Vohitsoka 140.97 312 PKPdf PKPdf 12 12 46.7 -0.2
VOI Vohitsoka 140.97 312 PKP PKiKP 12 12 50.1 +0.5
QSPA South Pole Qui 143.38 180 PKPpre 12 12 46.1
QSPA South Pole Qui 143.38 180 IAMs_20 IAMs_20 13 11 03.0
comp=Z,1μm,19.0s
TSUM Tsumeb 145.65 359 PKPdf PKPdf 12 12 54.9 -0.3
MAW Mawson 154.16 219 PKP PKPdf 12 13 06.7 -0.1
comp=Z,2.9nm,1.0s,baz=67,slow=3.6,SNR=5.0
MAW PKPbc PKiKP 12 13 15.4 +0.4
comp=Z,9.6nm,0.9s,baz=146,slow=2.0,SNR=19
MAW PKPab PKPab 12 13 30.2 +1.3
comp=Z,30nm,1.0s,baz=98,slow=4.5,SNR=16
BOSA Boshof 154.25 343 PKP PKPdf 12 13 08.4 -0.1
comp=Z,9.2nm,1.0s,baz=8.4,slow=3.3,SNR=8.9
BOSA PKPbc PKiKP 12 13 16.9 +0.2
comp=Z,20nm,1.0s,baz=12,slow=1.2,SNR=17
VNA3 Neumayer Olymp 158.84 157 PKPab PKPab 12 13 48.2 -0.8
VNA3 Neumayer Olymp 158.84 157 PKPdf PKPdf 12 13 10.1 -2.8
VNA1 Neumayer--Stat 159.58 156 PKPab PKPab 12 13 52.2 0.0
VNA1 Neumayer--Stat 159.58 156 PKPdf PKPdf 12 13 11.1 -2.6
VNA2 Neumayer--Watz 159.59 157 PKPab PKPab 12 13 52.4 +0.1
baz=244,slow=2.5
VNA2 Neumayer--Watz 159.59 157 PKPdf PKPdf 12 13 11.4 -2.4
baz=299,slow=3.7
SNAA Sanae 159.96 162 PKPab PKPab 12 13 52.8 -1.2
SNAA Sanae 159.96 162 PKPdf PKPdf 12 13 11.7 -2.6
TROLL Troll, Antarti 160.53 167 PKPab PKPab 12 13 55.9 -0.7
TROLL Troll, Antarti 160.53 167 PKPdf PKPdf 12 13 13.0 -2.0
NVL N'lazarevskaya 162.64 175 ePKIKP PKPdf 12 13 18.8 +1.8

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*KRSC **27** 11:55:30.2±1.7, 48°.82N×155°.58E, h107km±29km, ML4.8*
*MOS **27** 11:55:32.5±1.0, 49°.28N×154°.55E, h133km, mb4.4/1, Error ellipse: s-maj=18.6km s-min=4.9km az=66.3*
*IDC **27** 11:55:35.8±3.1, 49°.56N×154°.30E, h134km±27km, mb3.6/9, mbtmp4.0/11, Error ellipse: s-maj=36.9km s-min=17.0km az=156.0*
ISC 27 11:55:30.8±1.2, 48°.9N±0°.1×155°.3E±0°.1, h150km, n79, σ1$84/84, mb3.8/9, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.87	17	↓i PN	Pn	11 56 03.9	-0.4
SKR				eS	Sn	11 56 27.0	-3.2
SKR				pmax	pmax		
comp=Z,961nm,0.6s							
SKR				smax	smax		
comp=N,994nm,0.4s							
SKR				smax	smax		
comp=E,1μm,0.6s							
SKR	Severo-Kuril's	1.87	17	eP	Pn	11 56 03.8	-0.5
SKR				eS	Sn	11 56 27.4	-2.8
PAU	Pauzhetka	2.76	21	PN	Pn	11 56 15.0	0.0
PAU				S	Sn	11 56 47.3	-2.0
PAU	Pauzhetka	2.76	21	eP	Pn	11 56 15.0	0.0
PAU				eS	Sn	11 56 47.3	-2.0
KDTR	Khodutka, Kamc	3.43	31	PN	Pn	11 56 23.2	-0.3
KDTR				S	Sn	11 57 01.5	-3.0
KDTR	Khodutka, Kamc	3.43	31	eP	Pn	11 56 23.2	-0.3
KDTR				eS	Sn	11 57 01.5	-3.0
ASAK	Asacha	3.88	25	PN	Pn	11 56 30.6	+1.2
ASAK	Asacha	3.88	25	eP	Pn	11 56 30.6	+1.2
MTVR	Mutnovka	4.04	26	PN	Pn	11 56 32.5	+0.9
MTVR				S	Sn	11 57 17.9	-1.1
MTVR	Mutnovka	4.04	26	eP	Pn	11 56 32.5	+0.9
MTVR				eS	Sn	11 57 17.9	-1.1
GRL	Gorelyy	4.08	25	PN	Pn	11 56 33.6	+1.6
GRL				S	Sn	11 57 19.4	-0.3
GRL	Gorelyy	4.08	25	eP	Pn	11 56 33.6	+1.6
GRL				eS	Sn	11 57 19.4	-0.3
RUS	Russkaya	4.10	29	PN	Pn	11 56 32.0	-0.2
RUS				S	Sn	11 57 16.6	-3.5
RUS	Russkaya	4.10	29	eP	Pn	11 56 32.0	-0.2
RUS				eS	Sn	11 57 16.6	-3.5
APC	Apacha	4.21	16	PN	Pn	11 56 33.5	-0.1
APC	Apacha	4.21	16	eP	Pn	11 56 33.5	-0.1
KRMR	Karymshinskiy	4.34	24	PN	Pn	11 56 36.8	+1.5
KRMR	Karymshinskiy	4.34	24	eP	Pn	11 56 36.8	+1.5
PEA0B	Petropavlovsk-	4.49	19	i PN	Pn	11 56 38.0	+0.6
PETK	Petropavlovsk-	4.49	19	P	Pn	11 56 37.7	+0.3
comp=E,66nm,0.8s,baz=186,slow=11,SNR=123							
PET	Petropavlovsk	4.66	26	PN	Pn	11 56 41.5	+2.0
PET				S	Sn	11 57 33.2	+0.1
PET	Petropavlovsk	4.66	26	eP	Pn	11 56 41.5	+2.0
PET				eS	Sn	11 57 33.2	+0.1
DALK	Dalny	4.69	27	PN	Pn	11 56 41.0	+1.0
DALK				S	Sn	11 57 33.1	-0.9
DALK	Dalny	4.69	27	eP	Pn	11 56 41.0	+1.0
DALK				eS	Sn	11 57 33.1	-0.9
UGLR	Uglovaya	4.87	26	PN	Pn	11 56 44.1	+1.7
UGLR	Uglovaya	4.87	26	eP	Pn	11 56 44.1	+1.7
KOK	Koryaka	4.89	25	PN	Pn	11 56 44.6	+1.9
KOK	Koryaka	4.89	25	eP	Pn	11 56 44.6	+1.9
AVH	Avacha	4.89	25	PN	Pn	11 56 45.0	+2.3
AVH	Avacha	4.89	25	eP	Pn	11 56 45.0	+2.3
SMAR	Somma	4.91	26	PN	Pn	11 56 44.5	+1.4
SMAR	Somma	4.91	26	eP	Pn	11 56 44.5	+1.4
KRER	Koryakskii	4.93	25	PN	Pn	11 56 45.6	+2.2
KRER	Koryakskii	4.93	25	eP	Pn	11 56 45.6	+2.2
SDLR	Sedlovina	4.95	26	PN	Pn	11 56 44.5	+1.0
SDLR	Sedlovina	4.95	26	eP	Pn	11 56 44.5	+1.0
KRX	Arik	4.95	24	PN	Pn	11 56 45.0	+1.4
KRX	Arik	4.95	24	eP	Pn	11 56 45.0	+1.4
GNL	Ganaly	5.09	18	PN	Pn	11 56 46.8	+1.4
GNL	Ganaly	5.09	18	eP	Pn	11 56 46.8	+1.4
SPN	Mys Shipunski	5.17	34	PN	Pn	11 56 47.1	+0.8
SPN				S	Sn	11 57 42.4	-3.0
SPN	Mys Shipunski	5.17	34	eP	Pn	11 56 47.1	+0.8
SPN				eS	Sn	11 57 42.4	-3.0
KUR	Kuril'sk	6.23	237	i PN	Pn	11 57 02.4	+1.9
MKZ	Mys Kozlova	6.95	33	PN	Pn	11 57 09.3	-0.6
MKZ	Mys Kozlova	6.95	33	eP	Pn	11 57 09.3	-0.6
TUMR	Tumrok	7.07	23	PN	Pn	11 57 13.3	+1.6
TUMR	Tumrok	7.07	23	eP	Pn	11 57 13.3	+1.6
YUK	Yuzh-Kuril'sk	8.10	237	ePN	Pn	11 57 24.4	-1.0
YUK				S	Sn	11 58 50.4	-5.1
YUK				pmax	pmax		
comp=N,70nm,0.2s							
YUK				pmax	pmax		
comp=Z,202nm,0.2s							
RUSJ	Misakicho	8.40	239	PN	Pn	11 57 30.4	+1.0
NMR	Nemuro--Hokkai	8.62	234	↑i PN	Pn	11 57 29.2	-3.1
YSS	Yuzh-Sakhalins	8.62	262	i PN	Pn	11 57 46.4	+14
ERM	Erimo	10.92	235	P	Pn	11 58 03.3	+0.5
JEM	Erimo	10.92	235	P	Pn	11 58 03.1	+0.3
MA2	Magadan	11.01	348	i PN	Pn	11 58 08.9	+5.0
JTM	Tenmabayashi	12.91	236	P	Pn	11 58 25.4	-3.3
JMM	Marumori	15.20	229	P	P	11 59 00.8	+1.7
KLR	Kul'dur	15.40	280	P	P	11 59 00.6	-0.6
comp=Z,3.3nm,0.7s,baz=73,slow=10,SNR=9.3							
USRK	Ussuriysk Ar.	16.65	262	P	P	11 59 15.3	+0.2
comp=Z,1.5nm,0.5s,baz=63,slow=13,SNR=2.8							
MJAR	Matsushiro Arr	17.54	232	P	Pn	11 59 26.5	+0.5
comp=Z,3.0nm,0.6s,baz=26,slow=12,SNR=7.9							
JGF	Kuroka	18.70	231	P	Pn	11 59 45.3	+5.6
KSRS	Korea Array	22.85	250	P	P	12 00 23.5	+2.6
comp=Z,1.1nm,0.5s,baz=48,slow=10,SNR=6.0							
comp=Z,1.1nm,0.5s							
H11N2	WAKE ISLAND Hy	30.57	158	T	T	12 33 59.7	
baz=344,slow=76,SNR=21							
H11N1	WAKE ISLAND Hy	30.59	158	T	T	12 33 49.6	
baz=344,slow=76,SNR=31							
H11N3	WAKE ISLAND Hy	30.59	158	T	T	12 33 54.2	
baz=344,slow=76,SNR=22							
H11S1	WAKE ISLAND Hy	31.70	159	T	T	12 35 12.4	
baz=345,slow=76,SNR=252							
H11S3	WAKE ISLAND Hy	31.71	159	T	T	12 35 08.9	
baz=345,slow=76,SNR=357							
H11S2	WAKE ISLAND Hy	31.72	159	T	T	12 35 13.1	
baz=345,slow=76,SNR=223							
SONM	Songino Array	32.03	287	P	P	12 01 43.0	0.0
comp=Z,0.3nm,0.3s,baz=50,slow=9.9,SNR=2.7							
comp=Z,0.3nm,0.3s							
SONM	Songino Array	32.03	287	P	P	12 01 43.0	0.0
ZALV	Zalesovo Beam	42.55	305	P	P	12 03 09.8	-1.5
comp=Z,0.7nm,0.4s,baz=64,slow=6.6,SNR=5.0							
comp=Z,0.7nm,0.4s							
MKAR	Makanchi Array	47.25	297	P	P	12 03 48.1	-0.4
comp=Z,1.9nm,0.6s,baz=66,slow=8.1,SNR=22							
comp=Z,1.9nm,0.6s							
CMAR	Chiang Mai Arr	54.27	257	P	P	12 04 45.4	+4.0
comp=Z,2.4nm,0.9s,baz=29,slow=7.6,SNR=14							
comp=Z,2.4nm,0.9s							
PDAR	Pinedale Array	62.33	56	P	P	12 05 44.9	+7.7
comp=Z,1.2nm,0.9s,baz=354,slow=1.8,SNR=3.2							
comp=Z,1.2nm,0.9s							
FINES	FINESS Array B	62.70	335	P	P	12 05 40.1	+1.1
comp=Z,9.0nm,0.9s,baz=31,slow=6.7,SNR=1.6							
comp=Z,9.0nm,0.9s							
TXAR	Lajitas Array	75.20	62	P	P	12 07 04.5	+7.6
comp=Z,0.7nm,0.6s,baz=295,slow=4.3,SNR=3.1							
comp=Z,0.7nm,0.6s							
GERES	GERESS Array B	77.13	335	P	P	12 07 10.1	+2.6
comp=Z,1.2nm,0.5s,baz=32,slow=5.8,SNR=2.0							
comp=Z,1.2nm,0.5s							
H03N2	Juan Fernandez	137.31	90	T	T	14 47 27.3	
baz=316							
H03N1	Juan Fernandez	137.32	90	T	T	14 47 28.5	
baz=316,slow=74,SNR=6.6							
H03N3	Juan Fernandez	137.32	90	T	T	14 47 20.8	
baz=316,slow=74,SNR=6.7							

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*NEIC **27** 11:56:40.3±2.2, 53°.6N±0°.1×163°.2W±0°.1, h37km±70km, Error ellipse: s-maj=19.1km s-min=7.6km az=151.0*
AEIC 27 11:56:39±1.9, 53°.5N±0°.1×163°.2W±0°.1, h25km±6km, ML3.8, Error ellipse: s-maj=18.6km s-min=6.7km az=149.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.41	355	Pn	Pn	11 57 01.9	-1.1
AKUT	Akutan	1.66	295	Pn	Pn	11 57 06.6	+0.2
UNV	Unalaska Valle	2.00	283	Pn	Pn	11 57 12.2	+1.1
SDPT	Sand Point	2.48	39	Pn	Pn	11 57 18.4	+0.7
CNBA	Chernabura Isl	2.53	56	Pn	Pn	11 57 18.7	+0.3
NIKH	Nikolski High	3.43	264	Pn	Pn	11 57 30.5	-0.2
CHGN	Chignik	3.98	42	Pn	Pn	11 57 36.8	-1.4
CHIR	Chirikof Islan	5.00	59	Pn	Pn	11 57 52.0	-0.4
ADK	Adak	8.34	265	Pn	Pn	11 58 40.9	+2.7
KIWB	Kanaga Island	8.63	265	Pn	Pn	11 58 41.2	-0.9
HIN	Hinchinbrook I	11.45	46	Pn	Pn	11 59 19.9	-0.8
EYAK	Cordova Ski Ar	11.85	46	Pn	Pn	11 59 24.8	-1.3
SCM	Sheep Creek Mo	11.92	39	Pn	Pn	11 59 24.9	-2.3
KAIM	Kayak Island	12.17	50	Pn	Pn	11 59 30.2	-0.3
KLU	Klutina	12.27	42	Pn	Pn	11 59 30.1	-1.9
M24K	Tolsona, Glenn	12.52	39	Pn	Pn	11 59 33.8	-1.5
WAX	Waxell Ridge	13.09	50	Pn	Pn	11 59 41.4	-1.8
ISLE	Juniper Island	13.39	49	Pn	Pn	11 59 46.0	-1.3

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*AEIC **27** 12:00:01±2.8, 53°.42N±0°.08×163°.15W±0°.10, h5km±6km, ML3.6, Error ellipse: s-maj=13.5km s-min=6.2km az=150.0*
*NEIC **27** 12:00:03.3±1.9, 53°.55N±0°.10×163°.2W±0°.1, h6km±14km, Error ellipse: s-maj=16.2km s-min=6.3km az=149.0*
*IDC **27** 12:00:10.5±1.9, 53°.80N×163°.15W, h0km, mb3.8/2, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=41.3km s-min=24.9km az=163.0*
ISC 27 12:00:04.8±1.7, 53°.6N±0°.1×163°.20W±0°.07, h10km, n10, σ1$55/10, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.27	354	Pn	Pn	12 00 27.5	-1.1
FALS				Sn	Sg	12 00 46.5	+0.9
AKUT	Akutan	1.61	291	Pn	Pn	12 00 32.3	-1.0
AKUT				Sn	Sn	12 00 53.0	-1.1
UNV	Unalaska Valle	1.98	279	Pn	Pn	12 00 37.3	-1.0
SDPT	Sand Point	2.37	41	Sn	Sb	12 01 16.2	-0.6
CNBA	Chernabura Isl	2.45	59	Sn	Sn	12 01 12.1	-2.7
NIKH	Nikolski High	3.45	262	Pn	Pn	12 00 58.8	+0.3
KDAK	Kodiak Island	7.32	51	Pn	Pn	12 01 57.4	+5.8
1.1nm,0.3s,baz=136,slow=18,SNR=0.7							
KDAK				Sn	Sn	12 03 15.4	+0.8
0.9nm,0.3s,baz=337,slow=22,SNR=6.5							
2.6nm,0.3s							
ILAR	Eielson Array	13.92	30	Pn	Pn	12 03 23.8	+1.9
0.9nm,0.8s,baz=220,slow=12,SNR=1.1							
PETK	Petropavlovsk-	23.15	285	P	P	12 05 17.9	+6.9
2.3nm,0.6s,baz=88,slow=12,SNR=5.1							
2.3nm,0.6s							
TXAR	Lajitas Array	49.06	95	P	P	12 08 59.1	+7.0
0.6nm,0.5s,baz=296,slow=5.3,SNR=7.5							
0.6nm,0.5s							

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*IDC **27** 12:01:45.4±1.4, 53°.81N×163°.37W, h0km, mb4.1/13, mbtmp4.0/15, ML3.6/2, Error ellipse: s-maj=35.4km s-min=16.6km az=163.0*
*NEIC **27** 12:01:45.0±1.8, 53°.5N±0°.1×163°.1W±0°.1, h2km±9km, Error ellipse: s-maj=21.7km s-min=5.6km az=152.0*
*AEIC **27** 12:01:47±1.8, 53°.5N±0°.1×163°.14W±0°.10, h20km±7km, ML3.8, ML3.9/10(NEIC), Error ellipse: s-maj=19.1km s-min=7.0km az=165.0*
ISC 27 12:01:48.9±0.8, 53°.6N±0°.1×163°.08W±0°.07, h32km, n82, σ1$28/78, mb4.1/12, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.28	351		Pn	12 02 10.3	-0.1
AKUT	Akutan	1.69	290		Pn	12 02 15.3	-0.7
AKUT				IAML		12 02 37.9	
comp=E,695nm,0.6s							
UNV	Unalaska Valle	2.05	278		Pn	12 02 19.6	-1.5
SDPT	Sand Point	2.32	40		Pn	12 02 25.4	+0.7
SDPT				IAML		12 03 09.6	
comp=E,717nm,2.3s							
SDPT				IAML		12 03 23.0	
comp=N,689nm,1.1s							
CNBA	Chernabura Isl	2.39	58	Pn	Pn	12 02 25.3	-0.4
CNBA				IAML		12 03 33.3	
comp=E,389nm,4.5s							
NIKH	Nikolski High	3.52	262	Pn	Pn	12 02 39.9	-1.4
CHGN	Chignik	3.82	43	Pn	Pn	12 02 47.2	+1.9
CHGN				IAML		12 03 56.6	
comp=E,239nm,1.8s							
CHGN				IAML		12 04 02.1	
comp=N,221nm,2.3s							
CHIR	Chirikof Islan	4.86	60	Pn	Pn	12 02 58.4	-1.3
SII	Sitkinak Islan	5.91	56	Pn	Pn	12 03 13.9	-0.2
OHAK	Old Harbor	6.65	53	Pn	Pn	12 03 24.6	+0.3
P18K	Big Mountain,	7.25	34	Pn	Pn	12 03 34.4	+2.0
KDAK	Kodiak Island	7.26	51	Pn	Pn	12 03 32.2	-0.4
comp=N,1.7nm,0.3s,baz=199,slow=5.4,SNR=6.3							
KDAK				Sn	Sn	12 04 50.6	-3.2
baz=284,slow=23							
comp=N,4.1nm,0.3s							
KDAK	Kodiak Island	7.26	51	Pn	Pn	12 03 32.8	+0.2
Q19K	Cape Douglas,	7.49	41	Pn	Pn	12 03 35.9	+0.2
O18K	Koktuh Hills	7.62	31	Pn	Pn	12 03 39.5	+2.0
N18K	Kilae Creek	8.10	26	Pn	Pn	12 03 44.6	+0.5
ADK	Adak	8.44	264	Pn	Pn	12 03 48.7	0.0
N19K	Bonanza Creek	8.60	29	Pn	Pn	12 03 52.8	+1.8
KIWB	Kanaga Island	8.72	264	Pn	Pn	12 03 52.7	0.0
CNPM	China Poot	8.82	43	Pn	Pn	12 03 54.3	+0.3
BRLK	Bradley Lake	9.11	42	Pn	Pn	12 03 58.1	+0.1
M19K	Big River Lodg	9.52	26	Pn	Pn	12 04 04.7	+1.1
SPU	Mount Spurr	9.64	34	Pn	Pn	12 04 06.2	+1.0
L19K	White Mountain	9.65	24	Pn	Pn	12 04 06.0	+0.7
M20K	Styx River	9.85	29	Pn	Pn	12 04 10.3	+2.2
SEW	Seward	9.89	43	Pn	Pn	12 04 08.3	-0.3
O22K	Cooper Landing	10.01	41	Pn	Pn	12 04 10.8	+0.5
TTA	Tatalina	10.06	19	Pn	Pn	12 04 11.6	+0.5
RC01	Rabbit Creek A	10.39	38	Pn	Pn	12 04 15.9	+0.4
SKT	Skwentna	10.40	32	Pn	Pn	12 04 17.4	+1.7
PWL	Port Wells	10.79	42	Pn	Pn	12 04 20.1	-0.8
K20K	Telida	10.85	22	Pn	Pn	12 04 22.2	+0.4
PPLA	Purkeypile	10.93	27	Pn	Pn	12 04 25.0	+2.1
PMR	Palmer	10.94	37	Pn	Pn	12 04 21.9	-1.1
KNK	Knik Glacier	11.07	39	Pn	Pn	12 04 24.8	0.0
GHO	Glory Hole Cre	11.13	37	Pn	Pn	12 04 23.9	-1.7
HIN	Hinchinbrook I	11.29	46	Pn	Pn	12 04 27.0	-0.8
SML	Sawmill	11.37	38	Pn	Pn	12 04 26.9	-2.0
CAST	Castle Rocks	11.38	26	Pn	Pn	12 04 29.0	0.0
FID	Port Fidalgo	11.48	45	Pn	Pn	12 04 28.0	-2.4
J20K	Nowinta River	11.55	20	Pn	Pn	12 04 32.1	+0.8
EYAK	Cordova Ski Ar	11.69	47	Pn	Pn	12 04 32.1	-1.1
SCM	Sheep Creek Mo	11.76	39	Pn	Pn	12 04 32.8	-1.4
KTH	Kantishna Hill	11.80	27	Pn	Pn	12 04 35.1	+0.4
TRF	Thorofare Moun	11.90	29	Pn	Pn	12 04 36.5	+0.3
KLU	Klutina	12.11	42		Pn	12 04 38.4	-0.7
BPAW	Bear Paw Mtn.	12.22	26	Pn	Pn	12 04 41.5	+1.0
HMT	Hamilton	12.26	49	Pn	Pn	12 04 41.2	+0.2
M24K	Tolsona, Glenn	12.36	40	Pn	Pn	12 04 41.7	-0.7
BERG	Berg Lake	12.53	49	Pn	Pn	12 04 44.5	-0.2
DHY	Denali Highway	12.54	35	Pn	Pn	12 04 42.5	-2.4
N25K	Chitina, Valde	12.71	44	Pn	Pn	12 04 47.1	-0.1
WAX	Waxell Ridge	12.94	50	Pn	Pn	12 04 50.0	-0.3
GLB	Gilahina Butte	12.95	45	Pn	Pn	12 04 48.9	-1.6
VRDI	Verde Repeater	13.01	46	Pn	Pn	12 04 51.0	-0.4
MLY	Manley	13.05	24	Pn	Pn	12 04 52.5	+0.7
TGL	Tana Glacier	13.07	49	Pn	Pn	12 04 51.7	-0.5
H21K	Melozitna Rive	13.14	19	Pn	Pn	12 04 54.1	+1.2
PAX	Paxson	13.14	37	Pn	Pn	12 04 50.7	-2.4
ISLE	Juniper Island	13.23	50	Pn	Pn	12 04 54.0	-0.4
BARN	Barnard Glacie	13.72	48	Pn	Pn	12 05 03.5	+2.4
M26K	Nabesna, AK	13.77	42	Pn	Pn	12 04 59.8	-1.8
ILAR	Eielson Array	13.88	30	Pn	Pn	12 04 59.8	-3.2
comp=N,0.2nm,0.3s,baz=219,slow=13,SNR=1.7							
comp=N,0.2nm,0.3s							
INK	Inuvik	20.25	32	P	P	12 06 20.3	-0.7
comp=N,2.3nm,0.7s,baz=232,slow=15,SNR=6.4							
comp=N,2.3nm,0.7s							
PETK	Petropavlovsk-	23.22	285	P	P	12 06 51.2	-1.7
comp=N,3.9nm,0.5s,baz=83,slow=12,SNR=20							
comp=N,3.9nm,0.5s				

σ1§61/28, mb3.8/11, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.21	355		Pn	12 04 53.5	+1.1
AKUT	Akutan	1.57	289		Pn	12 04 57.3	-0.1
AKUT				IAML		12 05 20.5	
	comp=E,576nm,0.5s						
UNV	Unalaska Valle	1.95	277	Pn	Pn	12 05 00.9	-1.7
SDPT	Sand Point	2.34	42	Pn	Pn	12 05 08.2	+0.3
SDPT				IAML		12 05 49.2	
	comp=N,501nm,2.8s						
CNBA	Chernabura Isl	2.44	60	Pn	Pn	12 05 08.7	-0.6
CNBA				IAML		12 05 56.0	
	comp=E,287nm,4.2s						
NIKH	Nikolski High	3.44	261	Pn	Pn	12 05 21.8	-1.2
CHGN	Chignik	3.84	44	Pn	Pn	12 05 29.2	+0.7
CHGN				IAML		12 07 42.3	
	comp=N,150nm,0.1s						
OHAK	Old Harbor	6.69	54	Pn	Pn	12 06 07.1	-0.6
KDAK	Kodiak Island	7.30	51	Pn	Pn	12 06 14.8	-1.2
	comp=N,0.9nm,0.3s,baz=134,slow=7.3,SNR=2.1						
KDAK				Sn	Sn	12 07 32.0	-5.5
	comp=N,0.5nm,0.3s,baz=33,slow=23,SNR=8.6						
	comp=N,26nm,1.1s						
KDAK	Kodiak Island	7.30	51	Pn	Pn	12 06 16.8	+0.8
O18K	Koktuh Hills	7.62	32	Pn	Pn	12 06 22.3	+1.9
ADK	Adak	8.35	263	Pn	Pn	12 06 30.1	-0.3
K20K	Telida	10.83	22	Pn	Pn	12 07 05.4	+1.1
AMKA	Amchitka	10.88	265	Pn	Pn	12 07 04.5	-0.6
ILAR	Eielson Array	13.88	30	Pn	Pn	12 07 43.5	-2.4
	baz=230,slow=12,SNR=1.9						
	comp=N,0.7nm,0.9s						
INK	Inuvik	20.25	32	P	P	12 09 03.8	-0.1
	comp=N,2.1nm,1.0s,baz=235,slow=12,SNR=1.5						
	comp=N,2.1nm,1.0s						
PETK	Petropavlovsk-	23.11	285	P	P	12 09 33.7	-0.9
	comp=N,1.5nm,0.6s,baz=86,slow=12,SNR=5.0						
	comp=N,1.5nm,0.6s						
YKA	Yellowknife Ar	26.58	51	P	P	12 10 08.9	+2.5
	comp=N,0.8nm,0.6s,baz=268,slow=9.2,SNR=4.4						
	comp=N,0.8nm,0.6s						
NVAR	Mina Array Bea	34.07	98	P	P	12 11 14.9	+1.8
	comp=N,0.4nm,0.5s,baz=303,slow=8.5,SNR=3.1						
	comp=N,0.4nm,0.5s						
KSRS	Korea Array	48.88	280	P	P	12 13 13.1	-1.0
	comp=N,1.1nm,0.7s,baz=56,slow=7.8,SNR=3.2						
	comp=N,1.1nm,0.7s						
TXAR	Lajitas Array	49.09	95	P	P	12 13 16.5	+0.6
	comp=N,0.8nm,0.5s,baz=301,slow=5.4,SNR=14						
	comp=N,0.8nm,0.5s						
SONM	Songino Array	53.75	303	P	P	12 13 51.2	+0.6
	comp=N,0.6nm,0.6s,baz=44,slow=6.8,SNR=3.2						
	comp=N,0.6nm,0.6s						
ZALV	Zalesovo Beam	58.89	320	P	P	12 14 26.7	-0.2
	comp=N,0.3nm,0.3s,baz=55,slow=12,SNR=1.8						
	comp=N,0.3nm,0.3s						
MKAR	Makanchi Array	65.51	317	P	P	12 15 11.2	-0.2
	comp=N,0.5nm,0.7s,baz=33,slow=5.1,SNR=2.1						
	comp=N,0.5nm,0.7s						
AKASG	Malin Array Be	75.49	352	P	P	12 16 12.4	+0.3
	comp=N,0.8nm,0.4s,baz=12,slow=5.8,SNR=4.9						
	comp=N,0.8nm,0.4s						
GERES	GERESS Array B	77.84	2	P	P	12 16 26.8	+1.2
	comp=N,0.4nm,0.2s,baz=28,slow=6.0,SNR=3.7						
	comp=N,0.4nm,0.2s						
CMAR	Chiang Mai Arr	79.86	287	P	P	12 16 37.6	+0.6
	comp=N,0.9nm,0.7s,baz=17,slow=4.6,SNR=5.3						
	comp=N,0.9nm,0.7s						

ROM 27 12:07:18.1±0.1, 42°.855N±0°.004×13°.097E±0°.004, h10km, ML2.7/23, 15C-8D, Error ellipse: s-maj=0.4km s-min=0.3km az=326.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.03	149	⇓P	Pg	12 07 20.4	+0.2
NRCA				S	Sg	12 07 21.5	-0.1
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1245	Castelsantange	0.07	88	P	Pg	12 07 21.0	+0.4
T1245				S	Sg	12 07 22.6	+0.3
T1245				AML	AML		
	comp=N,60850μm,0.2s						
T1245				AML	AML		
	comp=N,64000μm,0.2s						
T1245				AML	AML		
	comp=E,53950μm,0.2s						
T1245				AML	AML		
	comp=N,60800μm,0.2s						
T1245				AML	AML		
	comp=E,54550μm,1.1s						
T1216	Preci, Frazion	0.07	302	⇓P	Pg	12 07 20.8	+0.4
T1216				S	Sg	12 07 22.4	+0.2
T1216				AML	AML		
	comp=N,60100μm,0.2s						
T1216				AML	AML		
	comp=E,43400μm,0.5s						
T1216				AML	AML		
	comp=N,60150μm,0.2s						
T1216				AML	AML		
	comp=E,43400μm,0.5s						
MC2	Monte Cornacci	0.09	50	P	Pg	12 07 21.3	+0.4
MC2				S	Sg	12 07 23.4	+0.5
FEMA	Monte Fema	0.11	342	⇓P	Pg	12 07 21.6	+0.5
FEMA				S	Sg	12 07 23.8	+0.5
FEMA				AML	AML		
	comp=E,12500μm,0.6s						
FEMA				AML	AML		
	comp=N,14600μm,0.6s						
FEMA				AML	AML		
	comp=E,12550μm,0.6s						
FEMA				AML	AML		
	comp=N,14600μm,1.4s						
MMO1	Montemonaco	0.17	75	⇑P	Pg	12 07 22.6	+0.6
MMO1				S	Sg	12 07 25.9	+1.2
T1215	Vallo di Nera,	0.18	253	⇑P	Pg	12 07 22.6	+0.6
T1215				S	Sg	12 07 25.8	+1.1
T1215				AML	AML		
	comp=E,2510μm,1.2s						
T1215				AML	AML		
	comp=E,2605μm,1.1s						
T1215				AML	AML		
	comp=E,2605μm,1.1s						
T1215				AML	AML		
	comp=N,3425μm,0.3s						
T1215				AML	AML		
	comp=E,2612μm,1.1s						
T1215				AML	AML		
	comp=E,2510μm,1.1s						
T1215				AML	AML		
	comp=N,3475μm,0.3s						
T1215				AML	AML		
	comp=N,3420μm,0.3s						
T1215				AML	AML		
	comp=E,2510μm,0.9s						
T1215				AML	AML		
	comp=E,2605μm,0.9s						
T1215				AML	AML		
	comp=N,3420μm,1.7s						
T1215				AML	AML		
	comp=N,3475μm,1.7s						
FDMO	Fiordimonte	0.18	358	⇓P	Pg	12 07 22.5	+0.4
FDMO				S	Sg	12 07 26.1	+1.2
FDMO				AML	AML		
	comp=E,10350μm,0.2s						
FDMO				AML	AML		
	comp=N,13250μm,0.2s						
T1217	Poggiodomo (PG	0.19	221	⇑P	Pg	12 07 22.8	+0.6
T1217				S	Sg	12 07 26.1	+1.1
T1217				AML	AML		
	comp=E,2690μm,0.7s						
T1217				AML	AML		
	comp=E,2690μm,0.7s						
T1217				AML	AML		
	comp=E,2635μm,0.7s						
T1217				AML	AML		
	comp=N,4015μm,0.5s						
T1217				AML	AML		
	comp=N,3820μm,0.1s						
AM05	Amandola Campo	0.23	57	⇑P	Pb	12 07 23.6	-0.7
AM05				S	Sg	12 07 27.4	+1.4
AM05				AML	AML		
	comp=N,594μm,0.1s						
AM05				AML	AML		
	comp=N,1535μm,0.3s						
AM05				AML	AML		
	comp=E,7335μm,0.5s						
AM05				AML	AML		
	comp=N,594μm,0.1s						
AM05				AML	AML		
	comp=E,1890μm,0.6s						
AM05				AML	AML		
	comp=E,7340μm,0.5s						
AM05				AML	AML		
	comp=N,1540μm,0.3s						
T1204	Amatrice, Fraz	0.24	138	⇑P	Pg	12 07 23.9	+0.7
T1204				S	Sg	12 07 28.0	+1.4
T1204				AML	AML		
	comp=N,2715μm,1.0s						
T1204				AML	AML		
	comp=E,3960μm,0.3s						
T1204				AML	AML		
	comp=N,2720μm,1.0s						
T1241	Roccafluvione,	0.25	90	⇑P	Pg	12 07 23.3	0.0
T1241				S	Sg	12 07 27.5	+0.8
LNSS	Leonessa	0.26	189	P	Pg	12 07 23.9	+0.5
LNSS				S	Sg	12 07 28.1	+1.2
LNSS				AML	AML		
	comp=E,2585μm,0.3s						
LNSS				AML	AML		
	comp=N,3055μm,0.5s						
LNSS				AML	AML		
	comp=E,2585μm,1.7s						
GUMA	Gualdo di Mace	0.27	40	AML	AML		
	comp=E,6200μm,0.3s						
GUMA				AML	AML		
	comp=N,5965μm,0.3s						
GUMA				AML	AML		
	comp=E,6420μm,0.5s						
GUMA				AML	AML		
	comp=N,5400μm,0.4s						
SMA1	SAN MARTINO	0.28	142	P	Pg	12 07 24.4	+0.5
SMA1				S	Sb	12 07 29.2	-1.0
T1243	Rocca Santa Ma	0.30	121	P	Pg	12 07 24.7	+0.4
T1243				S	Sb	12 07 29.8	-1.0
SEF1	Sefro	0.31	340	⇑P	Pg	12 07 25.1	+0.6
SEF1				AML	AML		
	comp=E,4410μm,0.2s						
SEF1				AML	AML		
	comp=N,3110μm,1.4s						
SEF1				AML	AML		
	comp=E,4415μm,0.2s						
SEF1				AML	AML		
	comp=E,4415μm,1.8s						
SEF1				AML	AML		
	comp=N,3110μm,0.6s						
RM33	Pellescritta (	0.36	166	P	Pg	12 07 25.6	+0.3
RM33				S	Sb	12 07 31.6	-0.6
RM33				AML	AML		
	comp=E,831μm,1.5s						
RM33				AML	AML		
	comp=N,737μm,0.2s						
RM33				AML	AML		
	comp=N,736μm,0.2s						
RM33				AML	AML		
	comp=E,831μm,0.5s						
ARRO	Arrone	0.37	222	⇑P	Pg	12 07 25.9	+0.4
ARRO				AML	AML		
	comp=N,1087μm,0.6s						
ARRO				AML	AML		
	comp=E,1135μm,0.2s						
ARRO				AML	AML		
	comp=N,1085μm,0.6s						
T1211	Morro Reatino	0.37	209	P	Pg	12 07 25.9	+0.4
T1211				S	Sb	12 07 32.3	-0.2
T1211				AML	AML		
	comp=N,2060μm,0.5s						
T1211				AML	AML		
	comp=N,2005μm,0.5s						
T1211				AML	AML		
	comp=E,1465μm,1.2s						
T1211				AML	AML		
	comp=N,2065μm,0.5s						
T1211				AML	AML		
	comp=E,1460μm,1.2s						
T1211				AML	AML		
	comp=E,1452μm,1.2s						
T1211				AML	AML		
	comp=N,2005μm,1.5s						
T1211				AML	AML		
	comp=E,1465μm,0.8s						
T1211				AML	AML		
	comp=E,1452μm,0.8s						
T1211				AML	AML		
	comp=N,2060μm,1.5s						
CAMP	Campotosto	0.39	144	P	Pg	12 07 26.2	+0.3
CAMP				S	Sb	12 07 32.4	-1.0
CAMP				AML	AML		
	comp=N,777μm,0.2s						
CAMP				AML	AML		
	comp=E,878μm,0.2s						
CAMP				AML	AML		
	comp=N,776μm,0.2s						
CAMP				AML	AML		
	comp=E,877μm,0.2s						
SNTG	Esanatoglia	0.42	344	P	Pg	12 07 26.8	+0.4
SNTG				AML	AML		
	comp=E,544μm,1.4s						
SNTG				AML	AML		
	comp=E,534μm,0.8s						
SNTG				AML	AML		
	comp=N,611μm,0.2s						
SNTG				AML	AML		
	comp=E,545μm,1.4s						
SNTG				AML	AML		
	comp=N,599μm,0.9s						
SNTG				AML	AML		
	comp=N,598μm,0.9s						
SNTG				AML	AML		
	comp=E,544μm,0.6s						
SNTG				AML	AML		
	comp=N,611μm,1.8s						
T1247	Pizzolo (AQ)	0.44	160	⇑P	Pb	12 07 27.6	-0.4
T1247				AML	AML		
	comp=E,1109μm,1.4s						
T1247				AML	AML		
	comp=E,1109μm,0.6s						
T1247				AML	AML		
	comp=N,801μm,0.2s						
OFFI	Offida	0.44	79	⇓P	Pg	12 07 26.4	-0.3
TERO	Teramo	0.44	122	⇑P	Pg	12 07 27.0	+0.2
TERO				AML	AML		
	comp=E,1385μm,0.7s						
TERO				AML	AML		
	comp=N,1670μm,1.3s						
CESX	Cesi	0.45	237	⇑P	Pg	12 07 27.2	+0.2
CESX				AML	AML		
	comp=E,565μm,0.3s						
CESX				AML	AML		
	comp=N,665μm,0.3s						
CESX				AML	AML		
	comp=N,666μm,0.3s						
CESX				AML	AML		
	comp=E,565μm,1.7s						
ATCC	AVT- Casa Cast	0.47	315	AML	AML		
	comp=E,1635μm,1.5s						
ATCC				AML	AML		
	comp=N,1610μm,0.2s						
FOSV	Fossato di Vic	0.50	331	⇓P	Pg	12 07 28.3	+0.3
FOSV				AML	AML		
	comp=E,564μm,1.4s						
FOSV				AML	AML		
	comp=N,717μm,0.3s						
FOSV				AML	AML		
	comp=E,564μm,1.4s						
FOSV				AML	AML		
	comp=E,564μm,0.6s						
GIGS	Gran Sasso	0.53	139	P	Pg	12 07 28.4	-0.1
GIGS				AML	AML		
	comp=E,156μm,1.0s						
GIGS				AML	AML		
	comp=N,142μm,0.1s						
MURB	Monte Urbino	0.58	314	AML	AML		
	comp=E,1370μm,0.2s						
MURB				AML	AML		
	comp=N,1860μm,0.3s						
FIAM	Fiamignano	0.59	179	P	Pg	12 07 29.7	+0.2
TRTR	Tortoreto Alta	0.60	94	⇑P	Pb	12 07 31.1	+0.4
ATFO	Monte Foce - G	0.64	323	AML	AML		
	comp=E,384μm,1.2s						
ATFO				AML	AML		
	comp=N,280μm,1.1s						
ARVD	Arcevia	0.65	350	⇑P	Pb	12 07 31.5	-0.1
ARVD				AML	AML		
	comp=E,348μm,0.7s						
ARVD				AML	AML		
	comp=N,251μm,1.0s						
FRON	Frontone	0.72	338	AML	AML		
	comp=N,398μm,0.5s						
FRON				AML	AML		
	comp=E,232μm,0.1s						
VCEL	Villa Celiera	0.72	130	⇓P	Pg	12 07 32.0	-0.1
VCEL				AML	AML		
	comp=E,774μm,0.4s						
VCEL				AML	AML		
	comp=N,600μm,1.1s						
VCEL				AML	AML		
	comp=E,774μm,0.4s						
VCEL				AML	AML		
	comp=N,601μm,1.1s						
VCEL				AML	AML		
	comp=N,601μm,0.9s						
MGAB	Montegabbione	0.73	275	⇑P	Pn	12 07 34.8	+0.4
T0110	Collepietro	0.81	141	⇑P	Pg	12 07 33.3	-0.4
CAFI	Castiglion Fio	0.95	300	AML	AML		
	comp=N,173μm,0.7s						
CAFI				AML	AML		
	comp=E,178μm,0.6s						
INTR	Introdacqua	1.03	144	⇓P	Pg	12 07 36.7	-1.3

ROM 27 12:08:03.1±0.1, 42°.837N±0°.003×13°.179E±0°.004, h6km, ML2.2/2, 8C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.02	19	⇓P	Pg	12 08 04.5	-0.1
T1245				S	Sg	12 08 05.2	-0.4
T1245				AML	AML		
	comp=E,53850μm,1.1s						
T1245				AML	AML		
	comp=N,54850μm,0.4s						
T1245				AML	AML		
	comp=E,54550μm,1.1s						
T1245				AML	AML		
	comp=N,50150μm,0.4s						
T1245				AML	AML		
	comp=N,44566μm,0.2s						
T1245				AML	AML		
	comp=E,51190μm,0.2s						
T1245				AML	AML		
	comp=N,45686μm,0.2s						
T1245				AML	AML		
	comp=E,52600μm,0.2s						
NRCA	Norcia	0.05	266	P	Pg	12 08 04.8	+0.2
NRCA				S	Sg	12 08 05.9	+0.1
NRCA				AML	AML		
	comp=E,22350μm,0.2s						
NRCA				AML	AML		
	comp=N,20750μm,0.4s						
NRCA				AML	AML		
	comp=E,23650μm,0.2s						
NRCA				AML	AML		
	comp=N,18900μm,0.4s						
NRCA				AML	AML		
	comp=E,23622μm,0.2s						
NRCA				AML	AML		
	comp=E,22340μm,0.2s						
NRCA				AML	AML		
	comp=N,15674μm,0.1s						
NRCA				AML	AML		
	comp=N,17422μm,0.2s						
MC2	Monte Cornacci	0.08	6	⇑P	Pg	12 08 05.4	+0.2
MC2				S	Sg	12 08 07.1	+0.5
MMO1	Montemonaco	0.12	60	⇑P	Pg	12 08 06.3	+0.5
MMO1				S	Sg	12 08 08.7	+1.0
T1216	Preci, Frazion	0.13	295	⇑P	Pg	12 08 06.2	+0.4
T1216				AML	AML		
	comp=E,1256μm,0.2s						
T1216				AML	AML		
	comp=N,1656μm,1.1s						
T1241	Roccafluvione,	0.19	84	P	Pg	12 08 07.3	+0.4
T1241				S	Sg	12 08 10.4	+1.0
AM05	Amandola Campo	0.19	42	⇑P	Pg	12 08 07.6	+0.6
AM05				AML	AML		
	comp=E,840μm,0.1s						
AM05				AML	AML		
	comp=N,30μm,0.2s						
AM05				AML	AML		
	comp=N,371μm,0.2s						
T1204	Amatrice, Fraz	0.19	148	⇓P	Pg	12 08 07.5	+0.5
FDMO	Fiordimonte	0.21	341	⇓P	Pg	12 08 07.7	+0.4
FDMO				S	Sg	12 08 11.2	+1.0
FDMO				AML	AML		
	comp=N,780μm,0.2s						
FDMO				AML	AML		
	comp=E,910μm,0.3s						
FDMO				AML	AML		
	comp=E,911μm,0.3s						
FDMO				AML	AML		
	comp=N,742μm,0.2s						
T1217	Poggiodomo (PG	0.22	236	⇑P	Pg	12 08 08.1	+0.6
T1217				S	Sg	12 08 12.2	+1.7
T1217				AML	AML		
	comp=N,529μm,0.2s						
T1217				AML	AML		
	comp=E,307μm,0.2s						
T1217				AML	AML		
	comp=N,566μm,0.2s						
T1217				AML	AML		
	comp=E,301μm,0.2s						
T1215	Vallo di Nera,	0.23	261	P	Pg	12 08 08.1	+0.4
T1215				AML	AML		
	comp=N,394μm,0.1s						
T1215				AML	AML		
	comp=E,300μm,0.2s						
T1215				AML	AML		
	comp=E,293μm,0.2s						
T1215				AML	AML		
	comp=N,395μm,0.1s						
T1243	Rocca Santa Ma	0.24	125	⇑P	Pg	12 08 08.5	+0.6
T1243				S	Sg	12 08 12.8	+1.6
LNSS	Leonessa	0.26	204	⇑P	Pg	12 08 08.9	+0.7
LNSS				S	Sb	12 08 13.2	-1.7
LNSS				AML	AML		
	comp=E,990μm,0.4s						
LNSS				AML	AML		
	comp=N,933μm,0.4s						
LNSS				AML	AML		
	comp=E,988μm,0.4s						
LNSS				AML	AML		
	comp=N,893μm,0.2s						
RM33	Pellescritta (	0.33	175	P	Pg	12 08 10.1	+0.5
RM33				AML	AML		
	comp=N,308μm,0.3s						
RM33				AML	AML		
	comp=E,353μm,0.3s						
RM33				AML	AML		
	comp=E,242μm,0.3s						
RM33				AML	AML		
	comp=N,224μm,0.4s						
TERO	Teramo	0.38	124	⇑P	Pg	12 08 10.9	+0.4
T1211	Morro Reatino	0.39	218	S	Sb	12 08 18.0	-0.7
SNTG	Esanatoglia	0.45	337	P	Pg	12 08 12.6	+0.6
SNTG				AML	AML		
	comp=E,118μm,0.2s						
SNTG				AML	AML		
	comp=N,166μm,0.2s						
SNTG				AML	AML		
	comp=N,180μm,0.2s						
SNTG				AML	AML		
	comp=E,152μm,0.4s						
EL6	Elcito	0.50	353	S	Sb	12 08 22.0	+0.1
ARVD	Arcevia	0.68	345	S	Sb	12 08 28.0	+0.8
LAV9	Lanuvio	1.21	197	⇓P	Pb	12 08 26.5	0.0

*IDC **27** 12:08:27.8±4.6, 5°.00N×125°.71E, h62km±51km, mb3.4/4, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=111.5km s-min=17.4km az=69.0*

ISC 27 12:08:25.6±1.0, 5°.50N±0°.09×127°.0E±0°.1, h50km, n10, σ1§83/16, mb3.6/4, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.10**	**318**	P	**Pn**	**12 08 59.2**	**+0.9**
	85nm,0.3s,baz=280,slow=0.5,SNR=5.6						
DAV				S	**Sn**	**12 09 25.9**	**+2.6**
	380nm,0.5s,baz=38,slow=21,SNR=3.5						
	314nm,0.4s						
GSPH	**General Santos**	**2.11**	**286**	⇑*e*P	**Pn**	**12 08 57.4**	**-1.1**
GSPH				*i* S	**Sn**	**12 09 23.1**	**-0.6**
KCP	**Kidapawan**	**2.41**	**309**	⇓*e*P	**Pn**	**12 09 02.5**	**-0.1**
KCP				*i* S	**Sn**	**12 09 34.6**	**+3.6**
CTBH	**Cotabato--PC H**	**3.22**	**302**	⇑*i*P	**Pn**	**12 09 14.8**	**+1.2**
CGP	**Cagayan de Oro**	**3.72**	**322**	⇓*e*P	**Pn**	**12 09 22.1**	**+1.6**
CGP				*e*S	**Sn**	**12 10 00.3**	**-2.7**
TABP	**Talibon, Bohol**	**5.27**	**330**	⇓*e*P	**Pn**	**12 09 42.1**	**+0.3**
TABP				*e*S	**Sn**	**12 10 38.8**	**-2.4**
WRA	**Warramunga Arr**	**26.29**	**164**	P	**P**	**12 13 56.1**	**-0.6**
	0.7nm,0.5s,baz=342,slow=9.9,SNR=8.5						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**29.76**	**167**	P	**P**	**12 14 28.6**	**+1.0**
	0.2nm,0.5s,baz=344,slow=7.1,SNR=8.0						
ASAR				PcP	**PcP**	**12 17 30.4**	**-0.2**
	0.3nm,0.6s,baz=353,slow=2.2,SNR=4.6						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**39.69**	**160**	P	**P**	**12 15 53.5**	**+0.5**
	0.8nm,0.6s,baz=332,slow=10,SNR=3.6						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**56.27**	**324**	P	**P**	**12 17 59.4**	**-1.6**
	0.8nm,0.3s,baz=115,slow=7.2,SNR=16						
	0.8nm,0.3s						

*NEIC **27** 12:08:44.5±2.1, 53.5°N±0.1°×163.3°W±0.1°, h22km±20km,*
Error ellipse: s-maj=17.0km s-min=7.7km az=162.0
AEIC 27 12:08:44±1.6, 53.47°N±0.10°×163.2°W±0.1°, h21km±9km,
ML3.2, ML3.5/6(NEIC), Error ellipse: s-maj=14.7km
s-min=7.8km az=161.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.39**	**355**	Pn	Pn	12 09 08.7	+0.5
AKUT	**Akutan**	**1.67**	**295**	Pn	Pn	12 09 12.9	+1.0
AKUT				IAML		12 10 10.9	
	comp=N,175nm,3.4s						
UNV	**Unalaska Valle**	**2.00**	**282**	Pn	Pn	12 09 16.9	+0.3
SDPT	**Sand Point**	**2.46**	**39**	Pn	Pn	12 09 23.6	+0.7
SDPT				IAML		12 10 00.4	
	comp=N,258nm,3.2s						
CNBA	**Chernabura Isl**	**2.52**	**56**	Pn	Pn	12 09 25.0	+1.5
CNBA				IAML		12 09 52.5	
	comp=E,240nm,4.6s						
CNBA				IAML		12 09 56.0	
	comp=N,300nm,4.1s						
NIKH	**Nikolski High**	**3.44**	**264**	Pn	Pn	12 09 35.4	-0.9
CHGN	**Chignik**	**3.96**	**42**	Pn	Pn	12 09 44.2	+0.9
OHAK	**Old Harbor**	**6.78**	**52**	Pn	Pn	12 10 21.5	-0.7
SCM	**Sheep Creek Mo**	**11.90**	**39**	Pn	Pn	12 11 32.1	-0.2
M24K	**Tolsona, Glenn**	**12.50**	**39**	Pn	Pn	12 11 40.2	-0.3

*KRNET **27** 12:09:28.7±0.1, 43.71°N×69.77°E, mb3.0*
*SOME **27** 12:09:28.2, 43.75°N×69.58°E, h15km*
*NNC **27** 12:09:30.1±1.1, 43.68°N×69.82°E, h0km, mb3.7, mpv3.2,*
Error ellipse: s-maj=6.2km s-min=4.2km az=108.0,
Suspected Mining explosion.
ISC 27 12:09:29.8±2.0, 43.71°N±0.06°×69.69°E±0.09, h10km, n30,
σ2265/50, 7C-9D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.85**	**135**	⇓P	**Pg**	**12 09 44.3**	**-2.0**
	1.4nm,0.3s,baz=322,slow=16,SNR=98						
KK31				⇑S	**Sg**	**12 09 55.7**	**-1.7**
	115nm,0.8s,baz=322,slow=24,SNR=90						
KKAR	**Karatay Array**	**0.85**	**135**	⇑*i*P	**Pg**	**12 09 44.4**	**-1.9**
	baz=38						
KKAR				⇑*i*S	**Sg**	**12 09 56.0**	**-1.4**
	baz=38						
IUG	**Iuzhnay**	**1.58**	**171**	*e*P	**Pn**	**12 09 57.9**	**-0.1**
	255nm,0.4s						
IUG				*e*S	**Sb**	**12 10 20.2**	**+0.8**
	81nm,0.4s						
TRKS	**Terek-Say**	**2.43**	**153**	⇑*i*P	**Pb**	**12 10 12.7**	**-1.0**
	baz=55						
TRKS				⇑*i*S	**Sb**	**12 10 44.5**	**+0.8**
	baz=55						
ARK	**Arkit**	**2.54**	**138**	⇓*i*P	**Pn**	**12 10 13.1**	**+1.9**
	baz=39						
ARK				⇓*i*S	**Sn**	**12 10 45.2**	**+2.9**
	baz=39						
MRKS	**Merke**	**2.76**	**109**	*e*P	**Pb**	**12 10 19.0**	**-0.2**
	5.6nm,0.5s						
MRKS				*e*S	**Sb**	**12 10 55.9**	**+2.7**
	18nm,0.5s						
MRKS	**Merke**	**2.76**	**109**	Pg	**Pb**	**12 10 19.0**	**-0.2**
	5.6nm,0.5s						
MRKS				Lg	Lg	12 10 55.9	
	18nm,0.5s						
EKS2	**Erkin-Say**	**3.17**	**108**	⇓*i*P	**Pn**	**12 10 21.5**	**+1.7**
	baz=8.0						
EKS2				⇓*i*S	**Sn**	**12 10 59.9**	**+2.1**
	baz=8.0						
BTLS	**Baital**	**3.40**	**65**	*e*P	**Pg**	**12 10 31.7**	**-3.2**
	17nm,0.5s						
BTLS				*e*S	**Sg**	**12 11 17.1**	**-1.7**
	7.2nm,0.6s						
BTLS	**Baital**	**3.40**	**65**	Pg	**Pg**	**12 10 31.7**	**-3.2**
	17nm,0.5s						
BTLS				Lg	Lg	12 11 17.1	
	7.2nm,0.6s						
CHMS	**Chumysh**	**3.76**	**99**	⇑Pg	**Pb**	**12 10 36.5**	**+0.2**
	4.0nm,0.6s						
CHMS				⇓Lg	Lg	12 11 27.4	
	5.1nm,0.5s						
UCH	**Uchtor**	**3.84**	**111**	⇓*e*P	**Pn**	**12 10 30.9**	**+1.5**
	baz=11						
UCH				⇓*i*S	**Sn**	**12 11 16.5**	**+1.7**
	baz=11						
KRBS	**Karabastau**	**4.34**	**88**	*e*P	**Pb**	**12 10 47.7**	**+1.5**
	3.6nm,0.3s						
KRBS				*e*S	**Sg**	**12 11 45.5**	**-3.7**
	13nm,0.6s						
KRBS	**Karabastau**	**4.34**	**88**	Pg	**Pb**	**12 10 47.7**	**+1.5**
	3.6nm,0.3s						
KRBS				Lg	Lg	12 11 45.5	
	13nm,0.6s						
TKM2	**Tokmak 2**	**4.38**	**98**	⇓Pg	**Pb**	**12 10 49.0**	**+1.9**
	3.3nm,0.7s						
TKM2				⇑Lg	Lg	12 11 48.0	
	7.1nm,0.8s						
DGS	**Degeres**	**4.45**	**94**	*e*P	**Pb**	**12 10 50.5**	**+2.4**
	1.6nm,0.3s						
DGS				*e*S	**Sg**	**12 11 49.4**	**-3.4**
	12nm,0.7s						
KST	**Kastek**	**4.62**	**96**	*e*P	**Pb**	**12 10 53.8**	**+2.7**
	2.8nm,0.7s						
KST				*e*S	**Sg**	**12 11 55.4**	**-2.8**
	13nm,0.5s						
KST	**Kastek**	**4.62**	**96**	Pg	**Pb**	**12 10 53.8**	**+2.7**
	2.8nm,0.7s						
KST				Lg	Lg	12 11 55.4	
	13nm,0.5s						
KUU	**Kurty**	**4.82**	**86**	*e*P	**Pb**	**12 10 56.8**	**+2.5**
	1.5nm,0.5s						
KUU				*e*S	**Sg**	**12 12 00.6**	**-3.8**
	22nm,0.4s						
KUU	**Kurty**	**4.82**	**86**	Pg	**Pb**	**12 10 56.8**	**+2.5**
	1.5nm,0.5s						
KUU				Lg	Lg	12 12 00.6	
	22nm,0.4s						
MTBS	**Maitube**	**4.95**	**94**	*e*P	**Pg**	**12 11 00.9**	**-3.6**
	3.3nm,0.3s						
MTBS				*e*S	**Sg**	**12 12 07.4**	**-1.1**
	12nm,0.4s						
MTBS	**Maitube**	**4.95**	**94**	Pg	**Pg**	**12 11 00.9**	**-3.6**
	3.3nm,0.3s						
MTBS				Lg	Lg	12 12 07.4	
	12nm,0.4s						
KTBS	**Karatobe**	**5.07**	**88**	*e*P	**Pb**	**12 11 02.1**	**+3.4**
	1.9nm,0.5s						
KTBS				*e*S	**Sg**	**12 12 09.6**	**-2.9**
	24nm,0.4s						
KTBS	**Karatobe**	**5.07**	**88**	Pg	**Pb**	**12 11 02.1**	**+3.4**
	1.9nm,0.5s						
KTBS				Lg	Lg	12 12 09.6	
	24nm,0.4s						
CHKK	**Chushkaly**	**5.29**	**86**	*e*P	**Pg**	**12 11 07.1**	**-3.9**
	1.1nm,0.1s						
CHKK				*e*S	**Sg**	**12 12 17.8**	**-1.7**
	9.2nm,0.4s						
TNSS	**Tian-Shan**	**5.33**	**95**	*e*P	**Pb**	**12 11 07.0**	**+3.6**
	1.6nm,0.5s						
TNSS				*e*S	**Sg**	**12 12 17.7**	**-3.4**
	3.5nm,0.5s						
TNSS	**Tian-Shan**	**5.33**	**95**	Pg	**Pb**	**12 11 07.0**	**+3.6**
	1.6nm,0.5s						
TNSS				Lg	Lg	12 12 17.7	
	3.5nm,0.5s						
MDOK	**Medeo**	**5.39**	**93**	*e*P	**Pb**	**12 11 07.2**	**+3.1**
	2.5nm,0.5s						
MDOK				*e*S	**Sg**	**12 12 18.4**	**-4.4**
	5.3nm,0.5s						
MDOK	**Medeo**	**5.39**	**93**	Pg	**Pb**	**12 11 07.2**	**+3.1**
	2.5nm,0.5s						
MDOK				Pg	**Pg**	**12 11 09.6**	**-3.4**
	7.3nm,1.2s						
MDOK				Lg	Lg	12 12 18.4	
	5.3nm,0.5s						
MDOK				Lg	Lg	12 12 20.0	
	6.1nm,0.6s						
KOTS	**Kotyrbulak**	**5.42**	**92**	*e*P	**Pg**	**12 11 12.0**	**-1.6**
	1.7nm,0.4s						
KOTS				*e*S	**Sg**	**12 12 26.2**	**+2.2**
	11nm,0.7s						

*NEIC **27** 12:09:35.7±4.0, 53.6°N±0.1°×163.1°W±0.1°, h25km±20km,*
Error ellipse: s-maj=22.2km s-min=4.0km az=151.0
AEIC 27 12:09:32±2.4, 53.45°N±0.09°×163.2°W±0.1°, h22km±8km,
ML3.4, ML3.6/6(NEIC), Error ellipse: s-maj=13.5km
s-min=8.3km az=155.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.41**	**355**	Pn	Pn	12 09 56.5	+0.2
AKUT	**Akutan**	**1.68**	**295**	Pn	Pn	12 10 00.6	+0.6
AKUT				IAML		12 10 23.2	
	comp=E,322nm,0.5s						
UNV	**Unalaska Valle**	**2.01**	**283**	Pn	Pb	12 10 06.5	-1.4
SDPT	**Sand Point**	**2.47**	**39**	Pn	Pn	12 10 13.0	+2.1
SDPT				IAML		12 10 42.2	
	comp=N,240nm,0.3s						
SDPT				IAML		12 10 46.9	
	comp=E,312nm,2.2s						
CHGN	**Chignik**	**3.97**	**42**	Pn	Pn	12 10 28.5	-2.9
CHGN				IAML		12 11 09.8	
	comp=E,120nm,2.3s						
OHAK	**Old Harbor**	**6.79**	**52**	Pn	Pn	12 11 10.4	+0.2
O18K	**Koktuh Hills**	**7.77**	**31**	Pn	Pn	12 11 25.6	+1.9
N18K	**Kilae Creek**	**8.26**	**26**	Pn	Pn	12 11 31.6	+1.3
ADK	**Adak**	**8.36**	**265**	Pn	Pn	12 11 34.1	+2.5
N19K	**Bonanza Creek**	**8.76**	**29**	Pn	Pn	12 11 38.6	+1.4
M19K	**Big River Lodg**	**9.68**	**25**	Pn	Pn	12 11 51.8	+2.0
L19K	**White Mountain**	**9.81**	**24**	Pn	Pn	12 11 52.0	+0.6
M20K	**Styx River**	**10.01**	**28**	Pn	Pn	12 11 56.7	+2.4
SUA	**Susitna One**	**10.44**	**35**	Pn	Pn	12 11 59.3	-0.9
RC01	**Rabbit Creek A**	**10.54**	**38**	Pn	Pn	12 12 02.3	+0.8
SKT	**Skwentna**	**10.56**	**31**	Pn	Pn	12 12 04.2	+2.4

IDC 27 12:09:45.7±8.9, 9.56N×104.46W, h0km, mb3.8/4,
mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=219.9km
s-min=101.2km az=119.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**19.68**	**2**	P	P	12 14 17.0	+0.4
	baz=182,slow=11,SNR=10						
	1.8nm,1.0s						
NVAR	**Mina Array Bea**	**31.32**	**339**	P	P	12 16 08.2	+0.2
	0.3nm,0.6s,baz=179,slow=8.1,SNR=3.1						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**33.37**	**353**	P	P	12 16 25.3	-0.7
	0.9nm,1.0s,baz=169,slow=10,SNR=4.7						
	0.9nm,1.0s						
H03N2	**Juan Fernandez**	**49.18**	**152**	T	T	13 11 57.5	
	baz=329,slow=78,SNR=9.5						
H03N1	**Juan Fernandez**	**49.20**	**152**	T	T	13 12 02.3	
	baz=329,slow=78,SNR=9.4						
H03N3	**Juan Fernandez**	**49.20**	**152**	T	T	13 11 54.8	
	baz=329,slow=78,SNR=9.2						
INK	**Inuvik**	**61.72**	**348**	P	P	12 20 05.8	+0.4
	2.0nm,0.9s,baz=130,slow=8.1,SNR=2.4						
	2.0nm,0.9s						
ILAR	**Eielson Array**	**62.54**	**341**	P	P	12 20 10.9	-0.1
	1.5nm,0.9s,baz=147,slow=4.7,SNR=9.5						
	1.5nm,0.9s						

ROM 27 12:18:39.6±0.1, 43.027°N±0.004°×13.138°E±0.006,
h7km, Md1.2/3, 10C-4D, Error ellipse: s-maj=0.5km
s-min=0.4km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSP1	**Cessapalombo**	**0.08**	**37**	⇑P	Pg	12 18 42.3	+0.5
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
	comp=E,6404μm,0.2s						
CSP1				AML	AML		
	comp=N,6283μm,0.3s						
CSP1				END			
FEMA	**Monte Fema**	**0.09**	**225**	⇑P	Pg	12 18 42.4	+0.5
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,6086μm,0.2s						
FEMA				AML	AML		
	comp=N,5366μm,0.3s						
FEMA				END			
T1216	**Preci, Frazion**	**0.16**	**213**	⇑P	Pg	12 18 43.6	+0.6
T1216				S	Sg	12 18 46.6	+1.3
T1216				AML	AML		
	comp=E,73250μm,0.4s						
T1216				AML	AML		
	comp=N,96550μm,1.2s						
T1216				AML	AML		
	comp=E,75100μm,0.7s						
T1216				AML	AML		
	comp=N,96650μm,1.2s						
T1216				AML	AML		
	comp=E,75150μm,0.7s						
T1216				AML	AML		
	comp=N,96600μm,1.2s						
T1216				AML	AML		
	comp=E,3068μm,0.4s						
T1216				AML	AML		
	comp=N,2957μm,0.3s						
AM05	**Amandola Campo**	**0.17**	**107**	P	Pg	12 18 43.9	+0.9
AM05				S	Sg	12 18 46.8	+1.4
AM05				AML	AML		
	comp=N,8155μm,0.9s						
AM05				AML	AML		
	comp=E,19750μm,1.5s						
AM05				AML	AML		
	comp=N,1360μm,0.5s						
AM05				AML	AML		
	comp=E,5435μm,1.5s						
AM05				AML	AML		
	comp=N,8170μm,0.9s						
AM05				AML	AML		
	comp=N,1362μm,0.5s						
AM05				AML	AML		
	comp=E,712μm,0.2s						
AM05				AML	AML		
	comp=N,81μm,0.1s						
AM05				AML	AML		
	comp=E,187μm,0.2s						
AM05				AML	AML		
	comp=N,277μm,0.1s						
CESI	**CESI - Serrava**	**0.17**	**263**	⇑P	Pg	12 18 43.9	+0.7
CESI				S	Sg	12 18 46.8	+1.1
CESI				AML	AML		
	comp=E,76850μm,0.5s						
CESI				AML	AML		
	comp=N,66850μm,0.5s						
CESI				AML	AML		
	comp=E,2915μm,0.2s						
CESI				AML	AML		
	comp=N,2774μm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.17**	**168**	P	Pg	12 18 43.7	+0.4
T1245				S	Sg	12 18 46.9	+1.2
T1245				AML	AML		
	comp=N,52250μm,1.1s						
T1245				AML	AML		
	comp=N,52700μm,1.1s						
T1245				AML	AML		
	comp=E,39900μm,0.2s						
T1245				AML	AML		
	comp=E,39950μm,0.2s						
T1245				AML	AML		
	comp=E,35450μm,0.2s						
T1245				AML	AML		
	comp=E,1502μm,0.2s						
T1245				AML	AML		
	comp=N,1963μm,0.3s						
T1245				AML	AML		
	comp=E,1457μm,0.2s						
T1245				AML	AML		
	comp=N,1871μm,0.3s						
SEF1	**Sefro**	**0.18**	**311**	P	Pg	12 18 43.9	+0.5
SEF1				S	Sg	12 18 47.3	+1.3
SEF1				AML	AML		
	comp=E,88400μm,0.3s						
SEF1				AML	AML		
	comp=N,70250μm,0.4s						
SEF1				AML	AML		
	comp=E,88400μm,0.3s						
SEF1				AML	AML		
	comp=N,70250μm,0.3s						
SEF1				AML	AML		
	comp=N,3573μm,0.2s						
SEF1				AML	AML		
	comp=E,5737μm,0.2s						
MMO1	**Montemonaco**	**0.19**	**133**	⇓P	Pg	12 18 44.2	+0.8
MMO1				S	Sg	12 18 47.3	+1.2
NRCA	**Norcia**	**0.19**	**185**	⇑P	Pg	12 18 43.0	-0.6
NRCA				AML	AML		
	comp=E,55600μm,1.1s						
NRCA				AML	AML		
	comp=N,35550μm,0.5s						
NRCA				AML	AML		
	comp=E,57650μm,1.1s						
NRCA				AML	AML		
	comp=E,55600μm,1.1s						
NRCA				AML	AML		
	comp=N,35550μm,0.4s						
NRCA				AML	AML		
	comp=N,37350μm,0.5s						
NRCA				AML	AML		
	comp=E,2071μm,0.2s						
NRCA				AML	AML		
	comp=E,1915μm,0.2s						
NRCA				AML	AML		
	comp=N,1829μm,0.2s						
NRCA				AML	AML		
	comp=N,1899μm,0.2s						
SNTG	**Esanatoglia**	**0.27**	**328**	P	Pg	12 18 45.5	+0.5
SNTG				AML	AML		
	comp=E,6110μm,0.6s						
SNTG				AML	AML		
	comp=N,7880μm,0.3s						
SNTG				AML	AML		
	comp=E,6160μm,0.6s						
SNTG				AML	AML		
	comp=N,7975μm,0.3s						
SNTG				AML	AML		
	comp=E,6115μm,0.6s						
SNTG				AML	AML		
	comp=E,6165μm,0.6s						
SNTG				AML	AML		
	comp=N,458μm,0.3s						
SNTG				AML	AML		
	comp=E,450μm,0.1s						
SNTG				AML	AML		
	comp=N,423μm,0.3s						
SNTG				AML	AML		
	comp=E,437μm,0.1s						
T1241	**Roccafluvione,**	**0.27**	**128**	P	Pg	12 18 45.3	+0.3
T1241				AML	AML		
	comp=E,13250μm,0.5s						
T1241				AML	AML		
	comp=N,9360μm,0.6s						
T1241				AML	AML		
	comp=N,358μm,0.2s						
T1241				AML	AML		
	comp=E,419μm,0.3s						
T1215	**Vallo di Nera,**	**0.30**	**222**	P	Pg	12 18 46.1	+0.6
T1215				AML	AML		
	comp=E,13250μm,1.2s						
T1215				AML	AML		
	comp=N,11000μm,1.1s						
T1215				AML	AML		
	comp=E,13950μm,1.1s						
T1215				AML	AML		
	comp=N,10900μm,1.1s						
T1215				AML	AML		
	comp=E,13250μm,1.1s						
T1215				AML	AML		
	comp=N,11000μm,1.1s						
T1215				AML	AML		
	comp=E,13900μm,1.1s						
T1215				AML	AML		
	comp=N,10875μm,1.1s						
T1215				AML	AML		
	comp=N,395μm,0.3s						
T1215				AML	AML		
	comp=N,398μm,0.3s						
EL6	**Elcito**	**0.30**	**355**	P	Pg	12 18 46.2	+0.6
EL6				END			
T1217	**Poggiodomo (PG**	**0.35**	**206**	S	Sb	12 18 54.0	0.0
CING	**Cingoli**	**0.35**	**7**	P	Pg	12 18 47.4	+0.8
CING				S	Sb	12 18 53.2	-0.8
FOSV	**Fossato di Vic**	**0.39**	**314**	P	Pg	12 18 47.6	+0.4
FOSV				S	Sb	12 18 54.1	-0.9
FOSV				AML	AML		
	comp=E,11195μm,0.3s						
FOSV				AML	AML		
	comp=E,11220μm,0.3s						
FOSV				AML	AML		
	comp=N,26400μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.40**	**294**	P	Pg	12 18 48.0	+0.6
ATCC				S	Sb	12 18 54.8	-0.6
ATCC				AML	AML		
	comp=N,29950μm,1.2s						
ATCC				AML	AML		
	comp=E,41250μm,0.3s						
T1243	**Rocca Santa Ma**	**0.40**	**145**	P	Pg	12 18 48.2	+0.7
LNSS	**Leonessa**	**0.43**	**190**	⇓P	Pg	12 18 48.5	+0.5
LNSS				AML	AML		
	comp=N,13400μm,1.2s						
LNSS				AML	AML		
	comp=E,13850μm,0.6s						
ARVD	**Arcevia**	**0.49**	**343**	⇑P	Pg	12 18 49.7	+0.5
ARVD				S	Sb	12 18 58.0	-0.1
ARVD				AML	AML		
	comp=E,4045μm,1.5s						
ARVD				AML	AML		
	comp=N,3130μm,0.6s						
MURB	**Monte Urbino**	**0.51**	**298**	P	Pg	12 18 50.1	+0.7
MURB				S	Sb	12 18 59.0	+0.5
MURB				AML	AML		
	comp=E,23050μm,0.3s						
MURB				AML	AML		
	comp=N,13650μm,1.1s						
MURB				AML	AML		
	comp=E,25150μm,0.3s						
MURB				AML	AML		
	comp=N,15250μm,1.0s						
MURB				AML	AML		
	comp=N,13600μm,1.1s						
TERO	**Teramo**	**0.53**	**140**	⇑P	Pg	12 18 50.3	+0.5
TERO				S	Sb	12 18 60.0	+0.9
TERO				AML	AML		
	comp=E,5405μm,0.8s						
TERO				AML	AML		
	comp=N,5180μm,0.5s						
TERO				AML	AML		
	comp=N,5385μm,0.5s						
TERO				AML	AML		
	comp=E,5635μm,0.8s						
ATFO	**Monte Foce - G**	**0.54**	**310**	P	Pg	12 18 50.5	+0.5
ATFO				AML	AML		
	comp=E,6160μm,0.9s						
ATFO				AML	AML		
	comp=N,4555μm,0.7s						
FRON	**Frontone**	**0.58**	**329**	⇓P	Pg	12 18 51.0	+0.3

FRON			AML	AML	
	comp=E,3800μm,1.5s				
FRON			AML	AML	
	comp=N,6290μm,0.4s				
FRON			AML	AML	
	comp=E,3795μm,1.5s				
CESX	**Cesi**	**0.58 225**	S	Sb	12 19 01.0 +0.3
GIGS	**Gran Sasso**	**0.66 151**	⇓P	Pg	12 18 52.8 +0.5
GIGS			AML	AML	
	comp=E,1495μm,0.8s				
GIGS			AML	AML	
	comp=N,1150μm,0.5s				
MPAG	**Monte Paganucc**	**0.66 335**	⇑P	Pb	12 18 53.2 -0.4
MPAG			S	Sn	12 19 05.0 -1.2
MPAG			AML	AML	
	comp=N,2925μm,0.6s				
MPAG			AML	AML	
	comp=E,4120μm,0.7s				
PIEI	**Pieia**	**0.67 319**	⇑P	Pg	12 18 52.9 +0.3
PIEI			S	Sn	12 19 05.0 -1.4
PIEI			AML	AML	
	comp=N,2480μm,0.8s				
PIEI			AML	AML	
	comp=E,2120μm,0.7s				
ATPI	**Pietralunga -**	**0.69 308**	P	Pb	12 18 53.5 -0.4
ATPI			AML	AML	
	comp=E,3690μm,0.6s				
ATPI			AML	AML	
	comp=N,2475μm,0.4s				
FSSB	**Fossombrone**	**0.71 339**	⇑P	Pb	12 18 54.1 -0.3
FSSB			AML	AML	
	comp=N,17000μm,0.4s				
FSSB			AML	AML	
	comp=E,9565μm,0.6s				
BRIS	**BRISIGHELLA**	**1.63 314**	S	Sg	12 19 33.0 +1.0

PRU ***27*** *12:18:59.1±0.0,43°.01N×13°.13E,h0km*
LDG ***27*** *12:18:59.7±0.1,43°.01N×13°.18E,h10km,Ml3.5/9,Error ellipse: s-maj=4.9km s-min=2.4km az=55.0*
ROM ***27*** *12:19:00.4±0.1,43°.022N±0°.003×13°.126E±0°.005, h8km,ML3.5/54,Error ellipse: s-maj=0.4km s-min=0.1km az=67.0*

ISC 27 12:19:00.5±0.7,**43°.01N**±0°.01×**13°.09E**±0°.02,**h11**km±4km, **n143**,σ1$**85**/193,**6C**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**355**	⇑P	**Pg**	**12 19 01.6**	**-1.0**
FDMO				S	**Sg**	**12 19 02.4**	**-1.8**
FEMA	**Monte Fema**	**0.06**	**213**	⇑P	**Pg**	**12 19 03.0**	**0.0**
FEMA				S	**Sg**	**12 19 05.0**	**+0.3**
FEMA				AML	AML		
FEMA				AML	AML		
CSP1	**Cessapalombo**	**0.12**	**45**	⇑P	**Pg**	**12 19 02.9**	**-0.8**
CSP1				S	**Sg**	**12 19 04.7**	**-1.2**
CSP1				AML	AML		
CSP1				AML	AML		
MC2	**Monte Cornacci**	**0.12**	**143**	P	**Pg**	**12 19 03.6**	**-0.2**
MC2				S	**Sg**	**12 19 06.1**	**+0.1**
T1216	**Preci, Frazion**	**0.13**	**204**	⇑P	**Pg**	**12 19 04.3**	**+0.5**
T1216				S	**Sg**	**12 19 07.3**	**+1.3**
T1216				AML	AML		
	comp=N,96550μm,1.2s						
T1216				AML	AML		
	comp=N,96650μm,1.2s						
T1216				AML	AML		
	comp=E,75150μm,0.7s						
T1216				AML	AML		
	comp=N,96600μm,1.2s						
T1216				AML	AML		
	comp=E,75100μm,0.7s						
CESI	**CESI - Serrava**	**0.14**	**268**	⇑P	**Pg**	**12 19 04.5**	**+0.7**
CESI				S	**Sg**	**12 19 07.7**	**+1.5**
CESI				AML	AML		
	comp=E,76850μm,0.5s						
CESI				AML	AML		
	comp=N,66850μm,0.5s						
T1245	**Castelsantange**	**0.17**	**155**	P	**Pg**	**12 19 04.5**	**0.0**
T1245				S	**Sg**	**12 19 07.9**	**+0.7**
T1245				AML	AML		
	comp=E,35450μm,0.2s						
T1245				AML	AML		
	comp=N,52700μm,1.1s						
T1245				AML	AML		
	comp=E,39900μm,0.2s						
T1245				AML	AML		
	comp=N,52250μm,1.1s						
SEF1	**Sefro**	**0.17**	**323**	P	**Pg**	**12 19 04.6**	**+0.2**
SEF1				S	**Sg**	**12 19 08.3**	**+1.2**
SEF1				AML	AML		
	comp=E,88400μm,0.3s						
SEF1				AML	AML		
	comp=N,70250μm,0.3s						
NRCA	**Norcia**	**0.18**	**174**	P	**Pg**	**12 19 05.0**	**+0.5**
NRCA				AML	AML		
	comp=E,55600μm,1.1s						
NRCA				AML	AML		
	comp=N,35550μm,0.5s						
NRCA				AML	AML		
	comp=E,55600μm,1.1s						
NRCA				AML	AML		
	comp=N,37350μm,0.5s						
NRCA				AML	AML		
	comp=N,35550μm,0.4s						
NRCA				AML	AML		
	comp=E,57650μm,1.1s						
PIO1	**Pioraco**	**0.19**	**335**	P	**Pg**	**12 19 04.7**	**0.0**
PIO1				S	**Sg**	**12 19 08.1**	**+0.7**
PIO1				AML	AML		
	comp=E,18650μm,1.3s						
PIO1				AML	AML		
	comp=N,36450μm,1.0s						
GUMA	**Gualdo di Mace**	**0.19**	**73**	P	**Pg**	**12 19 04.5**	**-0.1**
GUMA				S	**Sg**	**12 19 07.8**	**+0.3**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
MDAR	**Monte D'Aria**	**0.19**	**12**	P	**Pg**	**12 19 04.3**	**-0.4**
MDAR				S	**Sg**	**12 19 07.5**	**0.0**
MDAR				AML	AML		
	comp=E,22350μm,1.5s						
MDAR				AML	AML		
	comp=N,25650μm,1.2s						
AM05	**Amandola Campo**	**0.20**	**99**	AML	AML		
	comp=E,5435μm,1.5s						
AM05				AML	AML		
	comp=N,8160μm,0.9s						
AM05				AML	AML		
	comp=E,19750μm,1.5s						
AM05				AML	AML		
	comp=N,1364μm,0.5s						
AM05				AML	AML		
	comp=N,8155μm,0.9s						
AM05				AML	AML		
	comp=N,1360μm,0.5s						
AM05				AML	AML		
	comp=N,1362μm,0.5s						
AM05				AML	AML		
	comp=N,8170μm,0.9s						
MMO1	**Montemonaco**	**0.20**	**122**	P	**Pg**	**12 19 04.8**	**-0.1**
MMO1				S	**Sg**	**12 19 08.3**	**+0.2**
FIU1	**Fiuminata**	**0.21**	**327**	P	**Pg**	**12 19 05.2**	**+0.1**
FIU1				S	**Sg**	**12 19 09.2**	**+1.0**
FIU1				AML	AML		
	comp=N,12340μm,0.5s						
FIU1				AML	AML		
	comp=E,14300μm,1.3s						
SSM1	**San Severino M**	**0.23**	**16**	P	**Pg**	**12 19 05.2**	**-0.2**
GAG1	**Gagliole**	**0.23**	**356**	P	**Pg**	**12 19 05.5**	**+0.1**
GAG1				S	**Sg**	**12 19 09.7**	**+1.0**
GAG1				AML	AML		
	comp=E,55750μm,0.5s						
GAG1				AML	AML		
	comp=N,38350μm,0.9s						
MTL1	**Matelica**	**0.25**	**347**	P	**Pg**	**12 19 06.0**	**+0.1**
MTL1				S	**Sb**	**12 19 11.0**	**-0.6**
MTL1				AML	AML		
	comp=E,41950μm,0.5s						
MTL1				AML	AML		
	comp=N,58650μm,0.9s						
T1215	**Vallo di Nera,**	**0.26**	**218**	⇑P	**Pb**	**12 19 06.8**	**-0.5**
T1215				S	**Sb**	**12 19 11.9**	**+0.1**
T1215				AML	AML		
	comp=E,13300μm,1.2s						
T1215				AML	AML		
	comp=N,11000μm,1.1s						
T1215				AML	AML		
	comp=E,13900μm,1.1s						
T1215				AML	AML		
	comp=N,10900μm,1.1s						
T1215				AML	AML		
	comp=E,13250μm,1.2s						
T1215				AML	AML		
	comp=N,11050μm,1.1s						
T1215				AML	AML		
	comp=E,13950μm,1.1s						
T1215				AML	AML		
	comp=N,11050μm,1.1s						
T1215				AML	AML		
	comp=N,10875μm,1.1s						
T1215				AML	AML		
	comp=E,13250μm,1.1s						
T1215				AML	AML		
	comp=E,13950μm,1.1s						
SNTG	**Esanatoglia**	**0.27**	**336**	P	**Pg**	**12 19 06.1**	**0.0**
SNTG				S	**Sb**	**12 19 11.1**	**-0.9**
SNTG				AML	AML		
	comp=N,7880μm,0.3s						
SNTG				AML	AML		
	comp=E,6165μm,0.6s						
SNTG				AML	AML		
	comp=N,7975μm,0.3s						
SNTG				AML	AML		
	comp=E,6160μm,0.6s						
SNTG				AML	AML		
	comp=E,6115μm,0.6s						
T1241	**Roccafluvione,**	**0.29**	**121**	AML	AML		
	comp=N,9360μm,0.6s						
T1241				AML	AML		
	comp=E,13250μm,0.5s						
T1244	**Arquata del Tr**	**0.29**	**149**	P	**Pg**	**12 19 06.9**	**+0.3**
T1244				S	**Sb**	**12 19 12.3**	**-0.4**
MNTP	**Montappone**	**0.31**	**65**	P	**Pg**	**12 19 07.2**	**+0.5**
T1217	**Poggiodomo (PG**	**0.32**	**202**	P	**Pg**	**12 19 07.6**	**+0.6**
T1217				S	**Sb**	**12 19 13.6**	**+0.1**
T1217				AML	AML		
	comp=N,12150μm,0.4s						
T1217				AML	AML		
	comp=E,9715μm,0.8s						
T1217				AML	AML		
	comp=E,9500μm,0.8s						
T1217				AML	AML		
	comp=N,12150μm,0.4s						
T1217				AML	AML		
	comp=E,9710μm,0.8s						
T1217				AML	AML		
	comp=N,12200μm,0.4s						
T1217				AML	AML		
	comp=E,9495μm,0.8s						
T1217				AML	AML		
	comp=N,12160μm,0.4s						
T1217				AML	AML		
	comp=N,12250μm,0.4s						
T1217				AML	AML		
	comp=E,9685μm,0.8s						
EL6	**Elcito**	**0.32**	**1**	P	**Pg**	**12 19 06.9**	**-0.1**
EL6				S	**Sg**	**12 19 12.2**	**+0.8**
TRE1	**Treia**	**0.34**	**28**	P	**Pg**	**12 19 08.0**	**+0.6**
TRE1				AML	AML		
	comp=N,33850μm,0.6s						
TRE1				AML	AML		
	comp=E,25150μm,0.6s						
T1201	**Domo (RI)**	**0.37**	**161**	P	**Pg**	**12 19 08.4**	**+0.4**
T1201				S	**Sb**	**12 19 15.2**	**+0.3**
T1204	**Amatrice, Fraz**	**0.37**	**153**	P	**Pg**	**12 19 08.2**	**+0.2**
T1204				S	**Sb**	**12 19 14.7**	**-0.4**
T1204				AML	AML		
	comp=E,14550μm,1.3s						
T1204				AML	AML		
	comp=N,10980μm,0.9s						
T1204				AML	AML		
	comp=N,10955μm,0.9s						
T1204				AML	AML		
	comp=E,14500μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.37**	**298**	P	**Pg**	**12 19 08.1**	**0.0**
ATCC				S	**Sb**	**12 19 15.5**	**+0.4**
ATCC				AML	AML		
	comp=E,41250μm,0.3s						
ATCC				AML	AML		
	comp=N,29950μm,1.2s						
CING	**Cingoli**	**0.37**	**12**	P	**Pg**	**12 19 07.8**	**-0.2**
FOSV	**Fossato di Vic**	**0.37**	**320**	P	**Pg**	**12 19 08.3**	**+0.3**
FOSV				S	**Sb**	**12 19 14.9**	**-0.2**
FOSV				AML	AML		
	comp=N,26400μm,0.3s						
FOSV				AML	AML		
	comp=E,11220μm,0.3s						
LNSS	**Leonessa**	**0.41**	**185**	P	**Pg**	**12 19 08.8**	**+0.1**
LNSS				S	**Sb**	**12 19 16.5**	**+0.4**
LNSS				AML	AML		
	comp=N,13400μm,1.2s						
LNSS				AML	AML		
	comp=E,13850μm,0.6s						
T1243	**Rocca Santa Ma**	**0.41**	**140**	P	**Pg**	**12 19 08.7**	**0.0**
T1243				S	**Sb**	**12 19 15.7**	**-0.4**
SMA1	**SAN MARTINO**	**0.42**	**154**	P	**Pg**	**12 19 08.7**	**-0.1**
SMA1				S	**Sb**	**12 19 15.8**	**-0.5**
SMA1				AML	AML		
	comp=E,14900μm,1.1s						
SMA1				AML	AML		
	comp=E,14850μm,1.1s						
SMA1				AML	AML		
	comp=N,11650μm,0.7s						
MMUR	**Monte Murano**	**0.44**	**351**	P	**Pg**	**12 19 09.1**	**-0.1**
MMUR				S	**Sb**	**12 19 16.6**	**-0.3**
OFFI	**Offida**	**0.44**	**99**	P	**Pb**	**12 19 10.2**	**-0.2**
MURB	**Monte Urbino**	**0.49**	**302**	P	**Pg**	**12 19 10.7**	**+0.6**
MURB				AML	AML		
	comp=E,25150μm,0.3s						
MURB				AML	AML		
	comp=E,23050μm,0.3s						
MURB				AML	AML		
	comp=N,13600μm,1.1s						
MURB				AML	AML		
	comp=N,15250μm,1.0s						
ARRO	**Arrone**	**0.49**	**209**	P	**Pg**	**12 19 10.4**	**+0.2**
ARRO				AML	AML		
	comp=E,3920μm,0.7s						
ARRO				AML	AML		
	comp=N,3145μm,0.7s						
ARVD	**Arcevia**	**0.50**	**347**	P	**Pg**	**12 19 10.0**	**-0.3**
ARVD				S	**Sb**	**12 19 18.6**	**-0.1**
ARVD				AML	AML		
	comp=N,3130μm,0.6s						
ARVD				AML	AML		
	comp=E,4045μm,1.5s						
T1211	**Morro Reatino**	**0.51**	**200**	P	**Pb**	**12 19 11.6**	**+0.1**
T1211				AML	AML		
	comp=E,5465μm,1.1s						
T1211				AML	AML		
	comp=N,9190μm,0.6s						
T1211				AML	AML		
	comp=E,5705μm,1.5s						
T1211				AML	AML		
	comp=N,8710μm,0.8s						
T1211				AML	AML		
	comp=E,5460μm,1.1s						
T1211				AML	AML		
	comp=N,9180μm,0.6s						
T1211				AML	AML		
	comp=E,5700μm,1.5s						
T1211				AML	AML		
	comp=N,8705μm,0.8s						
RM33	**Pellescritta (**	**0.51**	**170**	P	**Pg**	**12 19 10.3**	**-0.2**
RM33				AML	AML		
	comp=E,5145μm,1.3s						
RM33				AML	AML		
	comp=N,5040μm,1.5s						
RM33				AML	AML		
	comp=E,5010μm,1.3s						
RM33				AML	AML		
	comp=E,5140μm,1.3s						
RM33				AML	AML		
	comp=N,5040μm,1.5s						
RM33				AML	AML		
	comp=N,5070μm,1.5s						
T1246	**Crognaleto (TE**	**0.52**	**145**	P	**Pg**	**12 19 10.7**	**0.0**
T1246				S	**Sb**	**12 19 18.9**	**-0.3**
ATFO	**Monte Foce - G**	**0.52**	**313**	P	**Pg**	**12 19 10.9**	**+0.1**
ATFO				S	**Sb**	**12 19 19.4**	**+0.1**
ATFO				AML	AML		
	comp=N,4555μm,0.7s						
ATFO				AML	AML		
	comp=E,6160μm,0.9s						
CADA	**Capodarco di F**	**0.53**	**69**	P	**Pb**	**12 19 12.3**	**+0.5**
CAMP	**Campotosto**	**0.53**	**154**	P	**Pg**	**12 19 10.7**	**-0.2**
CAMP				S	**Sb**	**12 19 19.2**	**-0.3**
CAMP				AML	AML		
	comp=E,4680μm,0.3s						
CAMP				AML	AML		
	comp=N,4400μm,0.7s						
PP3	**Marolino**	**0.53**	**46**	P	**Pg**	**12 19 11.3**	**+0.4**
PP3				AML	AML		
	comp=E,13600μm,1.1s						
PP3				AML	AML		
	comp=N,14500μm,1.5s						
PP3				AML	AML		
	comp=E,13650μm,1.1s						
PP3				AML	AML		
	comp=N,14300μm,1.5s						
TERO	**Teramo**	**0.54**	**135**	P	**Pg**	**12 19 10.8**	**-0.2**
TERO				S	**Sb**	**12 19 19.6**	**-0.2**
TERO				AML	AML		
	comp=E,5405μm,0.8s						
TERO				AML	AML		
	comp=N,5385μm,0.5s						
TERO				AML	AML		
	comp=E,5635μm,0.8s						
TERO				AML	AML		
	comp=N,5180μm,0.5s						
CESX	**Cesi**	**0.55**	**223**	P	**Pg**	**12 19 11.4**	**+0.2**
CESX				S	**Sb**	**12 19 20.9**	**+0.9**
CESX				AML	AML		
	comp=E,11100μm,0.4s						
CESX				AML	AML		
	comp=N,9905μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.57**	**290**	P	**Pb**	**12 19 12.4**	**-0.2**
ATTE				AML	AML		
	comp=E,3530μm,0.8s						
ATTE				AML	AML		
	comp=N,3385μm,0.7s						
FRON	**Frontone**	**0.57**	**332**	P	**Pg**	**12 19 11.3**	**-0.4**
FRON				AML	AML		
	comp=N,6290μm,0.4s						
FRON				AML	AML		
	comp=E,3795μm,1.5s						
T1247	**Pizzolo (AQ)**	**0.59**	**165**	P	**Pg**	**12 19 12.0**	**0.0**
T1247				AML	AML		
	comp=N,5575μm,0.5s						
T1247				AML	AML		
	comp=E,6600μm,1.3s						
ATVO	**AVT- Monte Val**	**0.62**	**307**	P	**Pg**	**12 19 12.8**	**+0.2**
ATVO				AML	AML		
	comp=E,3250μm,1.0s						
ATVO				AML	AML		
	comp=N,3645μm,0.3s						
TRTR	**Tortoreto Alta**	**0.64**	**108**	P	**Pb**	**12 19 13.5**	**-0.2**
TRTR				AML	AML		
	comp=E,13500μm,1.4s						
TRTR				AML	AML		
	comp=N,13850μm,0.8s						
ATVA	**AVT- Monte Val**	**0.65**	**295**	P	**Pb**	**12 19 13.8**	**0.0**
AOI	**Ancona**	**0.66**	**34**	P	**Pg**	**12 19 13.1**	**-0.2**
AOI				AML	AML		
	comp=E,2480μm,0.6s						
AOI				AML	AML		
	comp=N,2170μm,0.8s						
GIGS	**Gran Sasso**	**0.66**	**148**	P	**Pg**	**12 19 12.9**	**-0.4**
GIGS				S	**Sb**	**12 19 23.1**	**-0.2**
GIGS				AML	AML		
	comp=E,1495μm,0.8s						
GIGS				AML	AML		
	comp=N,1150μm,0.5s						
MPAG	**Monte Paganucc**	**0.67**	**339**	P	**Pg**	**12 19 13.1**	**-0.4**
MPAG				AML	AML		
	comp=N,2925μm,0.6s						
MPAG				AML	AML		
	comp=E,4120μm,0.7s						
PIEI	**Pieia**	**0.67**	**323**	P	**Pg**	**12 19 12.9**	**-0.5**
PIEI				S	**Sb**	**12 19 24.2**	**+0.8**
PIEI				AML	AML		
	comp=N,2480μm,0.8s						
PIEI				AML	AML		
	comp=E,2120μm,0.7s						
ATPI	**Pietralunga -**	**0.67**	**311**	P	**Pg**	**12 19 13.6**	**0.0**
ATPI				AML	AML		
	comp=N,2475μm,0.4s						
ATPI				AML	AML		
	comp=E,3690μm,0.6s						
ATMI	**Monte Miggiano**	**0.68**	**299**	P	**Pg**	**12 19 14.3**	**+0.5**
FSSB	**Fossombrone**	**0.72**	**342**	P	**Pg**	**12 19 14.4**	**-0.1**
FSSB				AML	AML		
	comp=N,17000μm,0.4s						
FSSB				AML	AML		
	comp=E,9565μm,0.6s						
MGAB	**Montegabbione**	**0.72**	**263**	P	**Pb**	**12 19 15.3**	**+0.1**
MGAB				AML	AML		
	comp=N,8670μm,1.3s						
MGAB				AML	AML		
	comp=E,4565μm,0.5s						
APEC	**Apecchio**	**0.74**	**318**	P	**Pg**	**12 19 14.7**	**-0.1**
FIAM	**Fiamignano**	**0.74**	**178**	P	**Pg**	**12 19 14.1**	**-0.8**
FIAM				AML	AML		
	comp=N,2135μm,0.7s						
FIAM				AML	AML		
	comp=E,3115μm,0.7s						
ATMC	**Monte Cedrone**	**0.79**	**304**	P	**Pb**	**12 19 16.7**	**+0.4**
VCEL	**Villa Celiera**	**0.83**	**138**	P	**Pg**	**12 19 15.7**	**-0.9**
VCEL				AML	AML		
	comp=N,3760μm,0.8s						
VCEL				AML	AML		
	comp=E,3900μm,0.9s						
FAGN	**Fagnano**	**0.83**	**154**	P	**Pg**	**12 19 15.4**	**-1.1**
FAGN				AML	AML		
	comp=N,3640μm,0.4s						
FAGN				AML	AML		
	comp=E,4520μm,0.4s						
SACS	**San Casciano d**	**0.88**	**260**	P	**Pb**	**12 19 18.6**	**+0.7**
CAFI	**Castiglion Fio**	**0.88**	**292**	P	**Pg**	**12 19 17.5**	**-0.1**
CAFI				AML	AML		
	comp=E,2605μm,0.6s						
CAFI				AML	AML		
	comp=N,2395μm,1.2s						
CAFI				AML	AML		
	comp=N,2505μm,1.2s						
CAFI				AML	AML		
	comp=E,2660μm,0.6s						
SRES	**S.Oreste - Sor**	**0.88**	**209**	P	**Pg**	**12 19 17.2**	**-0.4**
SRES				AML	AML		
	comp=N,2390μm,0.7s						
SRES				AML	AML		
	comp=E,3495μm,1.1s						
T0110	**Collepietro**	**0.93**	**147**	P	**Pg**	**12 19 16.9**	**-1.6**
T0110				AML	AML		
	comp=E,5525μm,0.7s						
T0110				AML	AML		
	comp=N,3795μm,0.7s						
CRE	**Caprese Michel**	**1.03**	**307**	P	**Pn**	**12 19 21.7**	**+0.6**
MCIV	**Monte Civitell**	**1.06**	**258**	AML	AML		
	comp=E,800μm,1.0s						
MCIV				AML	AML		
	comp=E,801μm,1.0s						
MCIV				AML	AML		
	comp=N,1107μm,0.6s						
MCIV				AML	AML		
	comp=N,1106μm,0.6s						
INTR	**Introdacqua**	**1.17**	**149**	AML	AML		
	comp=N,4020μm,0.8s						
INTR				AML	AML		
	comp=E,2μm,0.8s						
INTR				AML	AML		
	comp=E,2450μm,0.8s						
INTR				AML	AML		
	comp=N,3μm,0.8s						
VVLD	**Villa Vallelon**	**1.20**	**161**	P	**Pb**	**12 19 23.4**	**+0.1**
RMP	**Rome, Mte Porz**	**1.23**	**194**	P	**Pg**	**12 19 25.3**	**+1.1**
ASQU	**Asqua**	**1.23**	**310**	P	**Pg**	**12 19 24.9**	**+0.7**
SFI	**Santa Sofia**	**1.27**	**315**	P	**Pg**	**12 19 25.6**	**+0.6**
POFI	**Posta Fibreno**	**1.37**	**160**	P	**Pg**	**12 19 27.3**	**+0.4**
CSNT	**Castellina Chi**	**1.39**	**290**	P	**Pg**	**12 19 27.2**	**-0.1**
FROS	**Frosini**	**1.43**	**279**	P	**Pb**	**12 19 27.3**	**+0.1**
OSSC	**Osservatorio P**	**1.44**	**292**	P	**Pn**	**12 19 26.9**	**+0.3**
GIUL	**Giuliano Di Ro**	**1.46**	**175**	P	**Pg**	**12 19 28.8**	**+0.4**
LMD	**Lutirano**	**1.47**	**317**	P	**Pg**	**12 19 28.6**	**-0.2**
RNI2	**Rionero Sannit**	**1.52**	**149**	P	**Pg**	**12 19 30.5**	**+0.7**

CERA	**Filignano**	**1.57**	**154**	P	**Pg**	**12 19 30.8**	**+0.1**
TRIF	**Trifonti**	**1.61**	**275**	P	**Pn**	**12 19 29.0**	**+0.1**
TRIV	**Trivento**	**1.65**	**138**	P	**Pg**	**12 19 32.2**	**+0.1**
BSSO	**Busso**	**1.84**	**142**	P	**Pg**	**12 19 35.1**	**-0.7**
SKDS	**Skadanscina**	**2.62**	**14**	*e*Pn	**Pn**	**12 19 42.5**	**-0.3**
CEY	**Cerknica**	**2.89**	**19**	*e*Pn	**Pn**	**12 19 46.7**	**+0.2**
BOJS	**Bojanci**	**2.94**	**31**	*e*Pn	**Pn**	**12 19 48.9**	**+1.8**
PGF	**Pioggiola**	**3.05**	**263**	*e*P	**Pn**	**12 19 51.3**	**+2.6**
SRKY	**Kupres RS**	**3.15**	**69**	*e*Pn	**Pn**	**12 19 52.8**	**+2.7**
MGRS	**Mrkonjic Grad**	**3.22**	**63**	*e*Pn	**Pn**	**12 19 52.5**	**+1.5**
STON	**Ston**	**3.39**	**91**	*e*Pn	**Pn**	**12 19 53.0**	**-0.3**
A051A	**Mrakovica**	**3.40**	**53**	*e*Pn	**Pn**	**12 19 55.0**	**+1.4**
BLY	**Banja Luka**	**3.43**	**58**	*e*Pn	**Pn**	**12 19 56.8**	**+2.9**
MYKA	**Terra Mystica**	**3.64**	**6**	Pn	**Pn**	**12 19 58.3**	**+1.4**
	comp=N,7.8nm,0.3s,SNR=10						
OBKA	**Obir**	**3.65**	**16**	*e*Pn	**Pn**	**12 19 58.2**	**+1.2**
OBKA	**Obir**	**3.65**	**16**	*e*Sn	**Sg**	**12 21 00.9**	**+3.2**
	comp=N,38nm,0.5s						
ABTA	**Abfaltersbach**	**3.76**	**354**	Pn	**Pn**	**12 20 00.4**	**+1.9**
	comp=N,66nm,0.5s,SNR=25						
ABTA				*e*Sn	**Sn**	**12 20 46.9**	**+4.0**
	comp=N,14nm,0.5s						
SOKA	**Soboth**	**3.92**	**20**	*e*Pn	**Pn**	**12 20 01.8**	**+1.1**
	comp=N,2.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.07**	**2**	*e*Pn	**Pn**	**12 20 04.5**	**+1.6**
	comp=N,11nm,0.5s						
KBA				*e*Sn	**Sn**	**12 20 50.9**	**+0.3**
	comp=N,22nm,0.5s						
SBF	**Sospel**	**4.21**	**284**	*e*P	**Pn**	**12 20 08.4**	**+3.8**
SBF				*e*Sn	**Sn**	**12 20 50.4**	**-3.4**
	comp=N,23nm,0.5s						
FETA	**Feichten**	**4.35**	**338**	Pn	**Pn**	**12 20 09.6**	**+3.0**
	comp=N,14nm,0.7s,SNR=10						
WTTA	**Wattenberg**	**4.38**	**347**	Pn	**Pn**	**12 20 09.9**	**+2.8**
	comp=N,16nm,0.6s,SNR=6.4						
SQTA	**Sankt Quirin**	**4.42**	**343**	Pn	**Pn**	**12 20 10.4**	**+2.9**
	comp=N,23nm,0.4s,SNR=11						
WATA	**Walderalm**	**4.46**	**347**	Pn	**Pn**	**12 20 10.4**	**+2.2**
	comp=N,20nm,0.4s,SNR=12						
WATA				*e*Sn	**Sn**	**12 21 02.1**	**+2.1**
	comp=N,31nm,0.6s						
MOTA	**Moosalm**	**4.56**	**343**	Pn	**Pn**	**12 20 12.9**	**+3.4**
	comp=N,14nm,0.7s,SNR=9.3						
MOTA				*e*Sn	**Sn**	**12 21 06.7**	**+4.2**
	comp=N,28nm,0.6s						
DRME	**Dracevica, Mon**	**4.57**	**98**	*e*Pn	**Pn**	**12 20 11.5**	**+1.9**
ARSA	**Arzberg**	**4.58**	**21**	*e*Pn	**Pn**	**12 20 10.3**	**+0.6**
	comp=N,5.1nm,0.6s						
BBLS	**Lazići**	**4.68**	**77**	*e*Pn	**Pn**	**12 20 13.2**	**+2.1**
BIOA	**Bad Ischl, Aus**	**4.70**	**5**	Pn	**Pn**	**12 20 13.3**	**+2.0**
	comp=N,15nm,0.4s,SNR=5.6						
BIOA				*e*Sn	**Sn**	**12 21 09.9**	**+4.1**
	comp=N,26nm,0.5s						
RETA	**Reutte**	**4.77**	**341**	*e*Pn	**Pn**	**12 20 15.8**	**+3.4**
	comp=N,2.2nm,0.2s						
LMR	**La Mourre**	**4.83**	**276**	*e*P	**Pn**	**12 20 15.3**	**+2.2**
DAVA	**Damuels**	**4.84**	**333**	*e*Pn	**Pn**	**12 20 17.2**	**+3.7**
	comp=N,4.0nm,0.3s,SNR=8.5						
MBDF	**Montbardon**	**4.88**	**293**	*e*Pn	**Pn**	**12 20 13.0**	**-1.0**
MBDF	**Montbardon**	**4.88**	**293**	*e*P	**Pn**	**12 20 17.2**	**+3.2**
MBDF				*e*Sn	**Sn**	**12 21 07.0**	**-3.5**
	comp=N,40nm,1.1s						
MOA	**Molln**	**4.91**	**9**	*e*Pn	**Pn**	**12 20 15.9**	**+1.7**
	comp=N,3.8nm,0.3s						
DIVS	**Divibare**	**5.13**	**75**	*e*Pn	**Pn**	**12 20 19.1**	**+1.7**
LPG	**La Plagne**	**5.19**	**301**	*e*P	**Pn**	**12 20 21.3**	**+3.0**
LPG				*e*Sn	**Sn**	**12 21 14.1**	**-4.2**
	comp=N,20nm,0.8s						
RONA	**Rosalia, Austr**	**5.21**	**25**	*e*Pn	**Pn**	**12 20 19.4**	**+1.0**
	comp=N,2.7nm,0.3s						
LPL	**La Plagne**	**5.21**	**301**	*e*P	**Pn**	**12 20 20.9**	**+2.4**
LPL				*e*Sn	**Sn**	**12 21 14.4**	**-4.3**
	comp=N,30nm,1.0s						
CONA	**Conrad Observa**	**5.29**	**21**	*i* Pn	**Pn**	**12 20 19.5**	**0.0**
	comp=N,2.7nm,0.3s,SNR=4.6						
CONA				*e*Sn	**Sn**	**12 21 22.1**	**+1.6**
	comp=N,5.9nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.54**	**293**	*e*P	**Pn**	**12 20 26.1**	**+3.1**
SMRF	**Simiane la Rot**	**5.55**	**283**	*e*P	**Pn**	**12 20 26.0**	**+2.9**
CKRC	**Cesky Krumlov**	**5.87**	**8**	*e*PN	**Pn**	**12 20 27.2**	**-0.3**
CKRC				*e*SN	**Sn**	**12 21 33.0**	**-1.8**
KHC	**Kasperske Hory**	**6.13**	**3**	*e*PN	**Pn**	**12 20 31.0**	**-0.1**
KHC				*e*SN	**Sn**	**12 21 39.3**	**-1.9**
CABF	**La Chapelle**	**6.15**	**308**	*e*P	**Pn**	**12 20 33.8**	**+2.5**
VIVF	**Saint-Julien-l**	**6.35**	**290**	*e*P	**Pn**	**12 20 37.1**	**+3.0**
HINF	**Hinteralfeld**	**6.51**	**320**	*e*Pn	**Pn**	**12 20 34.3**	**-1.9**
HINF	**Hinteralfeld**	**6.51**	**320**	*e*P	**Pn**	**12 20 37.1**	**+0.9**
HINF				*e*Sn	**Sn**	**12 21 44.2**	**-6.2**
	comp=N,14nm,0.4s						
CDF	**Champ du Feu**	**6.76**	**325**	*e*P	**Pn**	**12 20 40.1**	**+0.3**
HAU	**Haudompre**	**6.88**	**319**	*e*Pn	**Pn**	**12 20 39.1**	**-2.2**
HAU	**Haudompre**	**6.88**	**319**	*e*P	**Pn**	**12 20 42.5**	**+1.2**
HAU				*e*Sn	**Sn**	**12 21 53.4**	**-6.2**
	comp=N,25nm,0.4s						
SMF	**Signal de Mont**	**7.51**	**302**	*e*P	**Pn**	**12 20 52.8**	**+2.8**
PAGF	**Fort de Pagny**	**7.56**	**320**	*e*P	**Pn**	**12 20 51.8**	**+1.1**
PAGF				*e*Sn	**Sn**	**12 22 09.9**	**-6.5**
	comp=N,14nm,0.6s,baz=121						
SFTF	**Sexfontaines**	**7.67**	**315**	*e*P	**Pn**	**12 20 54.2**	**+2.1**
	baz=139						
LOR	**Lormes**	**7.79**	**306**	*e*P	**Pn**	**12 20 57.0**	**+3.2**
	baz=126						
LOR				*e*Sn	**Sn**	**12 22 15.5**	**-6.5**
	comp=N,4.5nm,0.4s						
AVF	**Avril sur Loir**	**7.88**	**302**	*e*P	**Pn**	**12 20 57.5**	**+2.5**
AVF				*e*Sn	**Sn**	**12 22 17.1**	**-7.0**
	comp=N,6.7nm,0.7s						
SSF	**Saint Saulge**	**7.90**	**304**	*e*P	**Pn**	**12 20 57.7**	**+2.4**
CLL	**Collm**	**8.30**	**360**	*e*Pn	**Pn**	**12 21 01.0**	**+0.2**
CLL				*e*Sn	Sn	12 22 22.0	-12
CLL				*e*x	x	12 22 31.0	
CLL				*e*x	x	12 22 56.0	
CLL				*e*x	x	12 23 19.0	
CLL				*e*Sg	**Sg**	**12 23 23.0**	**-3.8**
	comp=Z,17nm,1.3s						

ROM 27 12:22:42.2±0.1, 42°.864N±0°.004×13°.161E±0°.004, h8km, Md1.3/11, 5C-4D, Error ellipse: s-maj=0.4km s-min=0.2km az=6.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**112**	P	Pg	12 22 43.9	0.0
T1245				S	Sg	12 22 44.7	-0.4
T1245				AML	AML		
	comp=E,25500μm,0.2s						
T1245				AML	AML		
	comp=N,21100μm,0.1s						
T1245				AML	AML		
	comp=E,25250μm,0.1s						
T1245				AML	AML		
	comp=N,21450μm,0.1s						
T1245				AML	AML		
	comp=E,40450μm,0.6s						
T1245				AML	AML		
	comp=N,75200μm,1.0s						
T1245				AML	AML		
	comp=E,39600μm,0.8s						
T1245				AML	AML		
	comp=N,73900μm,1.0s						
T1245				AML	AML		
	comp=N,21092μm,0.1s						
T1245				AML	AML		
	comp=E,25264μm,0.1s						
T1245				AML	AML		
	comp=N,21410μm,0.1s						
T1245				AML	AML		
	comp=E,25484μm,0.2s						
T1245				END			
NRCA	**Norcia**	**0.05**	**228**	⇑P	Pg	12 22 44.2	+0.2
NRCA				AML	AML		
	comp=E,7910μm,0.2s						
NRCA				AML	AML		
	comp=N,12300μm,0.1s						
NRCA				AML	AML		
	comp=E,8135μm,0.2s						
NRCA				AML	AML		
	comp=N,13200μm,0.1s						
NRCA				AML	AML		
	comp=E,41250μm,1.1s						
NRCA				AML	AML		
	comp=N,24700μm,0.7s						
NRCA				AML	AML		
	comp=E,42650μm,1.1s						
NRCA				AML	AML		
	comp=N,26700μm,0.7s						
NRCA				AML	AML		
	comp=E,7911μm,0.2s						
NRCA				AML	AML		
	comp=N,12291μm,0.1s						
NRCA				AML	AML		
	comp=N,13243μm,0.1s						
NRCA				AML	AML		
	comp=E,8135μm,0.2s						
NRCA				END			
MC2	**Monte Cornacci**	**0.05**	**24**	⇑P	Pg	12 22 44.3	+0.1
MC2				S	Sg	12 22 45.7	0.0
MC2				END			
T1216	**Preci, Frazion**	**0.11**	**284**	P	Pg	12 22 45.3	+0.6
T1216				AML	AML		
	comp=E,2795μm,0.4s						
T1216				AML	AML		
	comp=N,1873μm,0.6s						
T1216				AML	AML		
	comp=E,66600μm,0.6s						
T1216				AML	AML		
	comp=N,62050μm,1.6s						
T1216				AML	AML		
	comp=E,2805μm,0.4s						
T1216				END			
FEMA	**Monte Fema**	**0.13**	**320**	⇑P	Pg	12 22 45.7	+0.6
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,991μm,0.2s						
FEMA				AML	AML		
	comp=N,1143μm,0.2s						
MMO1	**Montemonaco**	**0.13**	**74**	⇓P	Pg	12 22 45.8	+0.7
MMO1				S	Sg	12 22 47.9	+0.9
MMO1				END			
T1241	**Roccafluvione,**	**0.20**	**92**	P	Pg	12 22 46.5	+0.3
T1241				S	Sg	12 22 50.0	+0.9
T1241				AML	AML		
	comp=E,646μm,0.4s						
T1241				AML	AML		
	comp=N,872μm,0.7s						
T1241				AML	AML		
	comp=E,18150μm,0.6s						
T1241				AML	AML		
	comp=N,16350μm,0.6s						
T1241				AML	AML		
	comp=N,734μm,0.2s						
T1241				AML	AML		
	comp=E,646μm,0.4s						
T1241				END			
T1215	**Vallo di Nera,**	**0.22**	**254**	P	Pg	12 22 47.3	+0.6
T1215				S	Sg	12 22 51.3	+1.5
T1215				AML	AML		
	comp=E,8065μm,1.4s						
T1215				AML	AML		
	comp=N,7935μm,1.1s						
T1215				AML	AML		
	comp=E,8385μm,1.5s						
T1215				AML	AML		
	comp=N,7505μm,1.2s						
T1215				AML	AML		
	comp=N,295μm,0.2s						
T1215				AML	AML		
	comp=E,231μm,0.1s						
T1215				AML	AML		
	comp=N,269μm,0.2s						
T1215				AML	AML		
	comp=E,233μm,0.1s						
T1215				END			
T1217	**Poggiodomo (PG**	**0.23**	**228**	P	Pg	12 22 47.5	+0.7
T1217				S	Sg	12 22 51.8	+1.8
T1217				AML	AML		
	comp=E,10285μm,0.8s						
T1217				AML	AML		
	comp=N,10395μm,1.2s						
T1217				AML	AML		
	comp=E,10000μm,0.8s						
T1217				AML	AML		
	comp=N,10305μm,1.1s						
T1217				END			
CESI	**CESI - Serrava**	**0.23**	**307**	⇓P	Pg	12 22 47.5	+0.6
CESI				S	Sg	12 22 51.5	+1.3
CESI				AML	AML		
	comp=E,1106μm,0.2s						
CESI				AML	AML		
	comp=N,1154μm,0.2s						
CESI				AML	AML		
	comp=E,46600μm,0.5s						
CESI				AML	AML		
	comp=N,47900μm,0.4s						
CESI				AML	AML		
	comp=N,1154μm,0.2s						
CESI				AML	AML		
	comp=E,699μm,0.2s						
SMA1	**SAN MARTINO**	**0.27**	**151**	⇓P	Pg	12 22 48.3	+0.8
SMA1				AML	AML		
	comp=E,6895μm,1.5s						
SMA1				AML	AML		
	comp=N,6975μm,0.9s						
T1243	**Rocca Santa Ma**	**0.27**	**128**	P	Pg	12 22 48.2	+0.7
T1243				S	Sb	12 22 53.5	-0.6
T1243				END			
LNSS	**Leonessa**	**0.28**	**199**	P	Pg	12 22 48.5	+0.8
LNSS				S	Sb	12 22 53.0	-1.2
LNSS				AML	AML		
	comp=E,7295μm,1.3s						
LNSS				AML	AML		
	comp=N,6695μm,1.4s						
LNSS				END			
CAMP	**Campotosto**	**0.38**	**151**	P	Pg	12 22 50.1	+0.5
CAMP				AML	AML		
	comp=E,5680μm,0.4s						
CAMP				AML	AML		
	comp=N,4540μm,0.8s						
TERO	**Teramo**	**0.41**	**126**	P	Pg	12 22 50.6	+0.5
TERO				S	Sb	12 22 57.8	-0.2
TERO				AML	AML		
	comp=E,5180μm,1.4s						
TERO				AML	AML		
	comp=N,6080μm,0.5s						
TERO				AML	AML		
	comp=E,5400μm,1.4s						
TERO				AML	AML		
	comp=N,6360μm,0.4s						
TERO				END			
ARRO	**Arrone**	**0.41**	**226**	P	Pg	12 22 50.8	+0.7
ARRO				S	Sb	12 22 57.6	-0.4
ARRO				AML	AML		
	comp=E,2410μm,1.2s						
ARRO				AML	AML		
	comp=N,2300μm,1.2s						
SNTG	**Esanatoglia**	**0.42**	**338**	P	Pg	12 22 50.9	+0.5
SNTG				AML	AML		
	comp=E,6255μm,0.2s						
SNTG				AML	AML		
	comp=N,7085μm,0.4s						
SNTG				AML	AML		
	comp=E,5970μm,0.1s						
SNTG				AML	AML		
	comp=N,7370μm,0.4s						
EL6	**Elcito**	**0.47**	**355**	P	Pg	12 22 51.5	+0.3
EL6				S	Sb	12 22 60.0	+0.2
EL6				AML	AML		
	comp=E,12925μm,0.3s						
EL6				AML	AML		
	comp=N,16650μm,0.9s						
CESX	**Cesi**	**0.50**	**240**	P	Pg	12 22 52.1	+0.3
CESX				S	Sb	12 23 00.2	-0.3
CESX				AML	AML		
	comp=E,8520μm,0.6s						
CESX				AML	AML		
	comp=N,6920μm,1.2s						
GIGS	**Gran Sasso**	**0.51**	**144**	P	Pg	12 22 52.5	+0.4
GIGS				S	Sb	12 23 00.5	-0.6
GIGS				AML	AML		
	comp=E,1350μm,0.5s						
GIGS				AML	AML		
	comp=N,1032μm,0.3s						
FOSV	**Fossato di Vic**	**0.52**	**326**	⇑P	Pg	12 22 52.6	+0.4
FOSV				AML	AML		
	comp=E,9715μm,0.3s						
FOSV				AML	AML		
	comp=N,17250μm,0.3s						
ARVD	**Arcevia**	**0.65**	**346**	⇓P	Pg	12 22 54.9	+0.1
ARVD				S	Sb	12 23 06.0	+0.9
ARVD				AML	AML		
	comp=E,4055μm,0.2s						
ARVD				AML	AML		
	comp=N,2515μm,0.6s						
TOLF	**Tolfa**	**1.17**	**227**	S	Sb	12 23 20.0	0.0
LAV9	**Lanuvio**	**1.23**	**196**	P	Pg	12 23 07.4	+1.6
MODR	**Mondragone**	**1.80**	**162**	⇑P	Pg	12 23 16.6	0.0

*PRU **27** 12:23:38.0±0.0, 42°.98N×13°.55E, h0km*
VIE 27 12:23:43.7±1.6, 43°.26N×13°.12E, h10km, mb3.1/15, ml3.1/16, Error ellipse: s-maj=15.5km s-min=12.3km az=26.0 90 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica**	**3.39**	**6**	*e*Pn	Pn	12 24 35.6	-1.2
	2.9nm,0.3s						
ABTA	**Abfaltersbach**	**3.52**	**353**	Pn	Pn	12 24 37.7	-0.8
	23nm,0.4s,SNR=14						
KBA	**Koelnbreinsper**	**3.83**	**2**	*e*Pn	Pn	12 24 42.0	-0.8
	7.1nm,0.4s						
FETA	**Feichten**	**4.13**	**337**	*i* Pn	Pn	12 24 46.8	-0.2
	SNR=7.7						
WTTA	**Wattenberg**	**4.14**	**346**	*e*Pn	Pn	12 24 47.5	+0.4
	6.8nm,0.5s						
SQTA	**Sankt Quirin**	**4.19**	**342**	Pn	Pn	12 24 48.3	+0.6
	16nm,0.3s,SNR=6.0						
WATA	**Walderalm**	**4.22**	**346**	Pn	Pn	12 24 48.5	+0.3
	9.4nm,0.5s,SNR=5.1						
MOTA	**Moosalm**	**4.33**	**342**	Pn	Pn	12 24 50.8	+1.1
	7.4nm,0.6s,SNR=5.3						
ARSA	**Arzberg**	**4.34**	**22**	*e*Pn	Pn	12 24 53.1	+3.4
	1.4nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.45**	**5**	*e*Pn	Pn	12 24 52.1	+0.8
	6.0nm,0.3s						
DAVA	**Damuels**	**4.63**	**332**	*e*Pn	Pn	12 24 54.6	+0.7
	4.0nm,0.3s						
MOA	**Molln**	**4.66**	**10**	*e*Pn	Pn	12 24 53.6	-0.6
	2.2nm,0.3s						
RONA	**Rosalia, Austr**	**4.97**	**26**	*e*Pn	Pn	12 24 57.5	-0.9
	0.4nm,0.2s						
CONA	**Conrad Observa**	**5.05**	**21**	*e*Pn	Pn	12 24 58.2	-1.4
	0.8nm,0.2s						
KHC	**Kasperske Hory**	**5.88**	**3**	*e*PN	Pn	12 25 08.4	-2.5
KHC				*e*SN	Sn	12 26 18.0	-0.4

*NEIC **27** 12:29:22.0±1.6, 53°.5N±0°.1×163°.1W±0°.1, h30km±17km, Error ellipse: s-maj=18.2km s-min=6.1km az=153.0*
AEIC 27 12:29:21±1.5, 53°.5N±0°.1×163°.21W±0°.10, h26km±6km, ML2.9, ML3.5/8(NEIC), Error ellipse: s-maj=15.8km s-min=6.0km az=157.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.37**	**355**	Pn	Pn	12 29 45.0	+0.6
AKUT	**Akutan**	**1.65**	**294**	Pn	Pn	12 29 49.4	+1.1
AKUT				Sn	Sb	12 30 10.4	-0.6
UNV	**Unalaska Valle**	**1.99**	**281**	Pn	Pn	12 29 54.0	+1.0
SDPT	**Sand Point**	**2.45**	**40**	Pn	Pn	12 29 59.7	+0.4
SDPT				IAML		12 30 24.1	
	comp=E,212nm,3.5s						
SDPT				Sn	Sn	12 30 28.4	+0.1
SDPT				IAML		12 30 48.8	
	comp=N,258nm,4.9s						
CNBA	**Chernabura Isl**	**2.51**	**57**	Pn	Pn	12 30 01.3	+1.2
CNBA				Sn	Sn	12 30 27.7	-2.1
CNBA				IAML		12 30 28.8	
	comp=E,265nm,4.9s						
CNBA				IAML		12 30 34.1	
	comp=N,213nm,3.7s						
NIKH	**Nikolski High**	**3.43**	**264**	Pn	Pn	12 30 12.7	-0.1
CHGN	**Chignik**	**3.95**	**43**	Pn	Pn	12 30 20.6	+0.8
CHGN				Sn	Sn	12 31 03.1	-2.0
O18K	**Koktuh Hills**	**7.75**	**31**	Pn	Pn	12 31 13.8	+1.8

ROM 27 12:39:57.5±0.1, 42°.973N±0°.004×13°.073E±0°.006, h12km, Md1.1/8, 3C-2D, Error ellipse: s-maj=0.4km s-min=0.4km az=97.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**237**	P	Pg	12 40 00.1	+0.2
FEMA				S	Sg	12 40 01.8	+0.1
FEMA				AML	AML		
	comp=E,11600μm,0.2s						
FEMA				AML	AML		
	comp=N,10195μm,0.4s						
FEMA				END			
FDMO	**Fiordimonte**	**0.06**	**10**	⇓P	Pg	12 40 00.3	+0.2
FDMO				S	Sg	12 40 02.1	+0.1
FDMO				AML	AML		
	comp=E,1380μm,0.2s						
FDMO				AML	AML		
	comp=N,545μm,0.5s						
FDMO				AML	AML		
	comp=E,3890μm,0.4s						
FDMO				AML	AML		
	comp=N,5840μm,0.3s						
FDMO				END			
T1216	**Preci, Frazion**	**0.09**	**206**	P	Pg	12 40 00.7	+0.3
T1216				S	Sg	12 40 02.7	+0.3
T1216				AML	AML		
	comp=E,16300μm,0.3s						
T1216				AML	AML		
	comp=N,14950μm,0.6s						
T1216				END			
MC2	**Monte Cornacci**	**0.10**	**125**	P	Pg	12 40 01.1	+0.4
MC2				END			
NRCA	**Norcia**	**0.14**	**168**	P	Pg	12 40 01.5	+0.4
NRCA				S	Sg	12 40 04.2	+0.6
NRCA				END			
T1245	**Castelsantange**	**0.14**	**144**	P	Pg	12 40 01.3	+0.1
T1245				S	Sg	12 40 04.4	+0.6
T1245				END			
CSP1	**Cessapalombo**	**0.15**	**39**	⇑P	Pg	12 40 01.7	+0.4
CSP1				S	Sg	12 40 04.6	+0.6
CSP1				AML	AML		
	comp=E,5415μm,0.3s						
CSP1				AML	AML		
	comp=N,9055μm,0.3s						
CSP1				END			
MMO1	**Montemonaco**	**0.20**	**112**	⇑P	Pg	12 40 02.5	+0.5
MMO1				END			
T1215	**Vallo di Nera,**	**0.23**	**221**	⇓P	Pg	12 40 02.8	+0.4
T1215				AML	AML		
	comp=E,611μm,1.3s						
T1215				AML	AML		
	comp=N,413μm,0.5s						
T1215				AML	AML		
	comp=E,648μm,1.3s						
T1215				AML	AML		
	comp=N,393μm,0.5s						
T1215				AML	AML		
	comp=E,1645μm,0.2s						
T1215				AML	AML		
	comp=N,2355μm,0.9s						
T1217	**Poggiodomo (PG**	**0.28**	**202**	P	Pg	12 40 03.9	+0.5
T1217				AML	AML		
	comp=E,672μm,0.5s						
T1217				AML	AML		
	comp=N,727μm,0.9s						
T1217				AML	AML		
	comp=E,2305μm,0.3s						
T1217				AML	AML		
	comp=N,2490μm,1.0s						
T1217				AML	AML		
	comp=E,2225μm,0.3s						
T1217				AML	AML		
	comp=N,2525μm,1.0s						
T1241	**Roccafluvione,**	**0.29**	**114**	⇑P	Pg	12 40 03.5	0.0
T1241				AML	AML		
	comp=E,6700μm,0.4s						
T1241				AML	AML		
	comp=N,6275μm,0.3s						
SNTG	**Esanatoglia**	**0.30**	**341**	P	Pb	12 40 04.3	-0.6
SNTG				AML	AML		
	comp=E,805μm,0.2s						
SNTG				AML	AML		
	comp=N,802μm,1.0s						
SNTG				AML	AML		
	comp=E,801μm,0.2s						
SNTG				AML	AML		
	comp=N,817μm,0.3s						

EL6	**Elcito**	**0.36 3**	P	Pg	12 40 05.0	+0.2
EL6			AML	AML		
	comp=E,3280μm,0.2s					
EL6			AML	AML		
	comp=N,3475μm,0.4s					
T1243	**Rocca Santa Ma**	**0.39 135**	P	Pb	12 40 06.0	-0.4
T1211	**Morro Reatino**	**0.47 200**	S	Sb	12 40 15.0	+0.4

ROM 27 12:40:22.9±0.1, 42°.864N±0°.004×13°.180E±0°.005, h7km, ML2.7/38, 20C-17D, Error ellipse: s-maj=0.4km s-min=0.3km az=226.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.01**	**139**	P	Pg	12 40 24.4	0.0
T1245				S	Sg	12 40 24.9	-0.5
MC2	**Monte Cornacci**	**0.05**	**9**	⇑P	Pg	12 40 24.7	0.0
NRCA	**Norcia**	**0.06**	**238**	⇑P	Pg	12 40 25.1	+0.5
NRCA				S	Sg	12 40 26.4	+0.6
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,96450μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,96400μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,96400μm,0.2s						
MMO1	**Montemonaco**	**0.11**	**72**	⇑P	Pg	12 40 26.1	+0.6
MMO1				S	Sg	12 40 27.9	+0.6
T1216	**Preci, Frazion**	**0.12**	**283**	P	Pg	12 40 26.1	+0.5
T1216				S	Sg	12 40 28.3	+0.9
T1216				AML	AML		
	comp=E,16300μm,0.4s						
T1216				AML	AML		
	comp=E,16300μm,0.3s						
T1216				AML	AML		
	comp=N,14950μm,0.6s						
T1216				AML	AML		
	comp=N,14950μm,0.6s						
FEMA	**Monte Fema**	**0.14**	**316**	P	Pg	12 40 26.4	+0.5
FEMA				S	Sg	12 40 28.6	+0.6
FEMA				AML	AML		
	comp=E,11600μm,0.2s						
FEMA				AML	AML		
	comp=N,10190μm,0.4s						
FEMA				AML	AML		
	comp=E,11600μm,0.2s						
FEMA				AML	AML		
	comp=N,10195μm,0.4s						
AM05	**Amandola Campo**	**0.17**	**48**	P	Pg	12 40 27.2	+0.8
AM05				S	Sg	12 40 29.9	+1.1
AM05				AML	AML		
	comp=E,2415μm,0.1s						
AM05				AML	AML		
	comp=E,14300μm,0.2s						
AM05				AML	AML		
	comp=N,917μm,0.1s						
AM05				AML	AML		
	comp=N,918μm,0.1s						
AM05				AML	AML		
	comp=N,5790μm,0.2s						
AM05				AML	AML		
	comp=N,919μm,0.1s						
AM05				AML	AML		
	comp=N,5785μm,0.2s						
T1241	**Roccafluvione,**	**0.18**	**92**	⇓P	Pg	12 40 27.0	+0.3
T1241				S	Sg	12 40 30.3	+1.0
T1241				AML	AML		
	comp=E,6700μm,0.4s						
T1241				AML	AML		
	comp=N,6275μm,0.3s						
T1241				AML	AML		
	comp=E,6695μm,0.4s						
FDMO	**Fiordimonte**	**0.19**	**339**	P	Pg	12 40 27.2	+0.5
FDMO				AML	AML		
	comp=E,3890μm,0.4s						
FDMO				AML	AML		
	comp=N,5840μm,0.3s						
FDMO				AML	AML		
	comp=E,8350μm,0.2s						
T1204	**Amatrice, Fraz**	**0.21**	**152**	P	Pg	12 40 28.3	+1.1
T1204				AML	AML		
	comp=E,3731μm,1.2s						
T1204				AML	AML		
	comp=N,2635μm,0.2s						
T1204				AML	AML		
	comp=E,3735μm,1.2s						
T1204				AML	AML		
	comp=N,2636μm,0.2s						
CSP1	**Cessapalombo**	**0.23**	**5**	S	Sg	12 40 32.0	+1.3
GUMA	**Gualdo di Mace**	**0.23**	**30**	P	Pg	12 40 28.5	+1.0
GUMA				AML	AML		
	comp=E,17250μm,0.3s						
GUMA				AML	AML		
	comp=N,19300μm,0.3s						
GUMA				AML	AML		
	comp=N,14150μm,0.3s						
GUMA				AML	AML		
	comp=E,15050μm,0.3s						
T1215	**Vallo di Nera,**	**0.24**	**255**	P	Pg	12 40 28.4	+0.7
T1215				S	Sg	12 40 32.4	+1.5
T1215				AML	AML		
	comp=N,2360μm,0.9s						
T1215				AML	AML		
	comp=E,1705μm,0.2s						
T1215				AML	AML		
	comp=N,2300μm,0.9s						
T1215				AML	AML		
	comp=E,1645μm,0.2s						
T1215				AML	AML		
	comp=N,2360μm,0.9s						
T1215				AML	AML		
	comp=E,1705μm,0.2s						
T1215				AML	AML		
	comp=N,2300μm,0.9s						
T1215				AML	AML		
	comp=N,2355μm,0.9s						
T1215				AML	AML		
	comp=E,1640μm,0.2s						
T1217	**Poggiodomo (PG**	**0.24**	**230**	⇑P	Pg	12 40 28.5	+0.9
T1217				S	Sg	12 40 32.4	+1.6
T1217				AML	AML		
	comp=E,2305μm,0.3s						
T1217				AML	AML		
	comp=N,2495μm,1.0s						
T1217				AML	AML		
	comp=E,2225μm,0.3s						
T1217				AML	AML		
	comp=N,2515μm,1.0s						
T1217				AML	AML		
	comp=E,2305μm,0.3s						
T1217				AML	AML		
	comp=E,2225μm,0.3s						
T1217				AML	AML		
	comp=N,2520μm,1.0s						
T1217				AML	AML		
	comp=N,2490μm,1.0s						
T1217				AML	AML		
	comp=N,2525μm,1.0s						
T1217				AML	AML		
	comp=N,2530μm,1.0s						
T1243	**Rocca Santa Ma**	**0.26**	**130**	P	Pg	12 40 28.9	+0.8
SMA1	**SAN MARTINO**	**0.26**	**154**	⇑P	Pb	12 40 29.1	-0.9
LNSS	**Leonessa**	**0.28**	**202**	⇑P	Pg	12 40 29.3	+0.8
LNSS				AML	AML		
	comp=E,4010μm,0.2s						
LNSS				AML	AML		
	comp=N,5140μm,0.4s						
SEF1	**Sefro**	**0.33**	**329**	⇑P	Pg	12 40 29.9	+0.5
MNTP	**Montappone**	**0.35**	**38**	⇑P	Pb	12 40 31.1	-0.3
MNTP				AML	AML		
	comp=E,3840μm,1.5s						
MNTP				AML	AML		
	comp=N,4825μm,0.2s						
RM33	**Pellescritta (**	**0.35**	**176**	⇓P	Pg	12 40 30.8	+0.9
RM33				AML	AML		
	comp=E,1945μm,0.9s						
RM33				AML	AML		
	comp=N,1635μm,0.3s						
RM33				AML	AML		
	comp=N,1595μm,0.3s						
RM33				AML	AML		
	comp=E,1940μm,0.9s						
RM33				AML	AML		
	comp=N,1640μm,0.3s						
RM33				AML	AML		
	comp=N,1635μm,0.3s						
RM33				AML	AML		
	comp=E,1935μm,0.9s						
CAMP	**Campotosto**	**0.37**	**153**	⇑P	Pg	12 40 30.9	+0.8
CAMP				AML	AML		
	comp=E,1635μm,0.2s						
CAMP				AML	AML		
	comp=N,672μm,0.2s						
OFFI	**Offida**	**0.38**	**79**	⇑P	Pb	12 40 32.1	+0.1
OFFI				AML	AML		
	comp=N,2870μm,0.4s						
OFFI				AML	AML		
	comp=E,2470μm,0.7s						
TERO	**Teramo**	**0.39**	**127**	⇓P	Pg	12 40 31.2	+0.6
TERO				AML	AML		
	comp=E,1485μm,0.2s						
TERO				AML	AML		
	comp=E,1490μm,0.2s						
TERO				AML	AML		
	comp=N,1475μm,0.5s						
TERO				AML	AML		
	comp=N,1415μm,0.5s						
TERO				AML	AML		
	comp=E,1560μm,0.2s						
T1211	**Morro Reatino**	**0.41**	**216**	⇓P	Pg	12 40 31.6	+0.7
T1211				AML	AML		
	comp=E,1695μm,1.3s						
T1211				AML	AML		
	comp=E,1615μm,1.3s						
T1211				AML	AML		
	comp=N,3325μm,0.3s						
T1211				AML	AML		
	comp=E,1700μm,1.3s						
T1211				AML	AML		
	comp=E,1610μm,1.3s						
T1211				AML	AML		
	comp=N,3335μm,0.3s						
ARRO	**Arrone**	**0.42**	**227**	⇑P	Pg	12 40 31.7	+0.6
ARRO				AML	AML		
	comp=E,922μm,1.6s						
ARRO				AML	AML		
	comp=N,970μm,0.8s						
ARRO				AML	AML		
	comp=E,921μm,1.6s						
ARRO				AML	AML		
	comp=N,973μm,0.8s						
SNTG	**Esanatoglia**	**0.43**	**336**	S	Sb	12 40 39.0	-0.6
T1247	**Pizzolo (AQ)**	**0.43**	**168**	P	Pb	12 40 32.2	-0.8
T1247				AML	AML		
	comp=N,2205μm,0.3s						
T1247				AML	AML		
	comp=E,1930μm,0.4s						
EL6	**Elcito**	**0.47**	**353**	⇑P	Pg	12 40 32.3	+0.3
EL6				S	Sb	12 40 41.0	+0.2
EL6				AML	AML		
	comp=E,3280μm,0.2s						
EL6				AML	AML		
	comp=N,3475μm,0.4s						
GIGS	**Gran Sasso**	**0.50**	**145**	P	Pg	12 40 33.3	+0.6
GIGS				AML	AML		
	comp=N,240μm,0.6s						
GIGS				AML	AML		
	comp=E,204μm,0.2s						
GIGS				AML	AML		
	comp=N,240μm,0.6s						
CESX	**Cesi**	**0.51**	**240**	⇑P	Pg	12 40 33.1	+0.3
CESX				AML	AML		
	comp=N,960μm,0.6s						
CESX				AML	AML		
	comp=E,948μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.51**	**309**	⇓P	Pg	12 40 33.2	+0.4
ATCC				S	Sb	12 40 42.0	+0.1
ATCC				AML	AML		
	comp=N,1200μm,0.5s						
ATCC				AML	AML		
	comp=E,1515μm,1.0s						
CING	**Cingoli**	**0.51**	**1**	⇓P	Pg	12 40 33.1	+0.3
FOSV	**Fossato di Vic**	**0.53**	**325**	⇑P	Pg	12 40 33.4	+0.3
FOSV				S	Sb	12 40 42.0	-0.5
FOSV				AML	AML		
	comp=N,1835μm,0.4s						
FOSV				AML	AML		
	comp=E,876μm,1.1s						
MMUR	**Monte Murano**	**0.59**	**347**	S	Sb	12 40 44.0	-0.4
FIAM	**Fiamignano**	**0.60**	**184**	⇓P	Pg	12 40 35.0	+0.5
FIAM				S	Sb	12 40 45.0	+0.5
FIAM				AML	AML		
	comp=N,446μm,0.8s						
FIAM				AML	AML		
	comp=E,516μm,0.3s						
MURB	**Monte Urbino**	**0.62**	**310**	⇓P	Pg	12 40 35.3	+0.3
MURB				S	Sb	12 40 46.0	+0.7
MURB				AML	AML		
	comp=E,2260μm,0.3s						
MURB				AML	AML		
	comp=N,2215μm,0.3s						
MURB				AML	AML		
	comp=N,2335μm,1.3s						
MURB				AML	AML		
	comp=E,2630μm,0.2s						
ARVD	**Arcevia**	**0.66**	**345**	⇑P	Pg	12 40 35.6	0.0
ARVD				S	Sb	12 40 47.0	+0.8
ARVD				AML	AML		
	comp=E,532μm,0.7s						
ARVD				AML	AML		
	comp=N,301μm,0.7s						
ARVD				AML	AML		
	comp=E,532μm,0.7s						
ARVD				AML	AML		
	comp=N,302μm,0.7s						
FAGN	**Fagnano**	**0.67**	**153**	⇓P	Pb	12 40 36.5	-0.5
FAGN				AML	AML		
	comp=N,1105μm,0.3s						
FAGN				AML	AML		
	comp=E,1460μm,0.4s						
ATFO	**Monte Foce - G**	**0.67**	**319**	⇓P	Pg	12 40 36.1	+0.2
ATFO				AML	AML		
	comp=N,514μm,0.4s						
ATFO				AML	AML		
	comp=E,617μm,1.1s						
VCEL	**Villa Celiera**	**0.68**	**134**	⇓P	Pb	12 40 36.9	-0.2
VCEL				AML	AML		
	comp=E,780μm,0.4s						
VCEL				AML	AML		
	comp=N,812μm,1.5s						
FRON	**Frontone**	**0.73**	**333**	⇓P	Pg	12 40 37.0	-0.1
FRON				AML	AML		
	comp=N,720μm,0.5s						
FRON				AML	AML		
	comp=E,398μm,1.5s						
ATVO	**AVT- Monte Val**	**0.77**	**313**	⇓P	Pg	12 40 37.8	0.0
ATVO				AML	AML		
	comp=E,504μm,0.4s						
ATVO				AML	AML		
	comp=N,483μm,0.4s						
T0110	**Collepietro**	**0.78**	**145**	⇑P	Pg	12 40 38.0	+0.1
T0110				AML	AML		
	comp=N,865μm,0.3s						
T0110				AML	AML		
	comp=E,866μm,0.4s						
T0110				AML	AML		
	comp=N,864μm,0.3s						
ATPI	**Pietralunga -**	**0.82**	**316**	⇑P	Pb	12 40 39.2	-0.3
ATPI				AML	AML		
	comp=E,342μm,0.6s						
ATPI				AML	AML		
	comp=N,266μm,1.3s						
PIEI	**Pieia**	**0.82**	**325**	⇓P	Pg	12 40 38.5	-0.2
PIEI				AML	AML		
	comp=N,229μm,0.3s						
PIEI				AML	AML		
	comp=E,336μm,0.4s						
PIEI				AML	AML		
	comp=N,230μm,0.3s						
MPAG	**Monte Paganucc**	**0.82**	**338**	⇓P	Pg	12 40 39.0	+0.2
MPAG				S	Sn	12 40 53.0	-0.6
MPAG				AML	AML		
	comp=E,350μm,0.4s						
MPAG				AML	AML		
	comp=N,446μm,1.3s						
NARO	**Abbazia di Nar**	**0.87**	**330**	⇓P	Pg	12 40 39.4	-0.2
NARO				AML	AML		
	comp=N,184μm,0.8s						
NARO				AML	AML		
	comp=E,232μm,1.1s						
FSSB	**Fossombrone**	**0.88**	**341**	⇑P	Pg	12 40 37.3	-2.5
BADI	**Badiali**	**0.94**	**314**	P	Pg	12 40 41.3	+0.3
CAFI	**Castiglion Fio**	**1.00**	**298**	⇑P	Pn	12 40 43.9	+0.4
INTR	**Introdacqua**	**1.01**	**148**	⇑P	Pg	12 40 41.5	-0.8
INTR				AML	AML		
	comp=E,249μm,0.5s						
INTR				AML	AML		
	comp=N,479μm,0.8s						
LPEL	**Lama dei Pelig**	**1.10**	**137**	P	Pg	12 40 42.5	-1.6
LPEL				S	Sn	12 40 60.0	-0.4
TOLF	**Tolfa**	**1.18**	**228**	P	Pn	12 40 46.1	+0.2
TOLF				AML	AML		
	comp=E,129μm,0.8s						
TOLF				AML	AML		
	comp=N,143μm,0.4s						
ZCCA	**Zocca**	**2.18**	**314**	P	Pg	12 41 05.2	+0.4
NDIM	**Novi di Modena**	**2.61**	**322**	⇓P	Pb	12 41 09.1	-0.9
PRMA	**PARMA**	**2.81**	**313**	S	Sn	12 41 42.0	-0.5

*MOS **27** 12:44:57.7±1.0, 53°.76N×163°.53W, h14km, mb5.4/75, MS4.7/6, Error ellipse: s-maj=10.4km s-min=4.9km az=101.7*

*IDC **27** 12:44:59.1±2.3, 53°.70N×163°.39W, h16km±13km, mb4.7/32, mbtmp4.7/35, ML4.1/3, MS4.6/52, Error ellipse: s-maj=16.9km s-min=9.3km az=180.0*

*AEIC **27** 12:44:59±2.2, 53°.49N±0°.09×163°.22W±0°.09, h29km±4km, Error ellipse: s-maj=13.3km s-min=6.8km az=166.0*

*NEIC **27** 12:44:59.9±2.4, 53°.65N±0°.09×163°.30W±0°.09, h19km±3km, mb5.1/332, ML4.5/8, Mww5.1, ML4.4(AEIC), Error ellipse: s-maj=13.5km s-min=6.6km az=165.0*

*GCMT **27** 12:45:01.8±0.2, 53°.50N±0°.01×163°.17W±0°.03, h21km, MW5.2/121, Moment Tensor Solution. s57, c70; s121, c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.10±.26; $M_{\theta\theta}$-4.32±.17; $M_{\phi\phi}$-0.77±.14; $M_{r\theta}$5.15±.32; $M_{\theta\phi}$-1.74±.09; $M_{\phi r}$1.22±.24; Best double couple: $M_0$7.32500×10^{16} NP1:ϕ_s74.00000°, δ68.00000°, λ95.00000°. NP2:ϕ_s242.00000°, δ22.00000°, λ79.00000°. Principal axes: T 7.3910, Plg66.0000°, Azm352.0000°; N -0.1230, Plg4.0000°, Azm252.0000°; P -7.2600, Plg23.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 12:45:06, 53°.43N×163°.31W, h18km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.06; $M_{\theta\theta}$-3.47; $M_{\phi\phi}$0.41; $M_{r\theta}$4.26; $M_{\theta\phi}$-1.75; $M_{\phi r}$1.80; Fault plane solution: $M_0$5.94000×10^{16} NP1: ϕ_s252.00000°, δ19.00000°, λ94.00000°. NP2:ϕ_s67.00000°, δ71.00000°, λ88.00000°. Principal axes: T 5.3221, Plg64.0000°, Azm335.0000°; N 1.0781, Plg1.0000°, Azm68.0000°; P -6.4002, Plg26.0000°, Azm158.0000°;*

ISC 27 12:44:58.8±0.6, 53°.67N±0°.05×163°.30W±0°.04, h15km±3km, n881, σ1§16/727, mb5.1/302, MS4.7/65, 73C-18D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.19**	**357**		**Pg**	**12 45 22.6**	**+0.9**
FALS	**False Pass**	**1.19**	**357**	P	**Pg**	**12 45 22.3**	**+0.6**
	baz=175,SNR=63						
AKUT	**Akutan**	**1.53**	**289**		**Pb**	**12 45 26.6**	**-0.3**
AKUT				IAML		12 46 06.9	
	comp=N,4μm,1.4s						
UNV	**Unalaska Valle**	**1.91**	**277**	Pn	**Pn**	**12 45 31.1**	**+0.4**
UNV	**Unalaska Valle**	**1.91**	**277**	P	**Pn**	**12 45 30.2**	**-0.5**
	baz=99,SNR=28						
SDPT	**Sand Point**	**2.35**	**43**		**Pn**	**12 45 38.0**	**+1.2**
SDPT	**Sand Point**	**2.35**	**43**	P	**Pn**	**12 45 37.1**	**+0.3**
	baz=222,SNR=34						
CNBA	**Chernabura Isl**	**2.47**	**61**		**Pn**	**12 45 38.6**	**+0.3**
CNBA				IAML		12 46 08.5	
	comp=E,1μm,0.8s						
CHNA	**Chernabura Isl**	**2.47**	**60**	P	**Pn**	**12 45 38.5**	**+0.1**
	baz=239,SNR=11						
NIKH	**Nikolski High**	**3.40**	**260**		**Pn**	**12 45 51.3**	**+0.1**
NIKH	**Nikolski High**	**3.40**	**260**	P	**Pn**	**12 45 50.9**	**-0.3**
	baz=79,SNR=7.5						
NIKH	**Nikolski High**	**3.40**	**260**	P	**Pn**	**12 45 51.4**	**+0.2**
CHGN	**Chignik**	**3.86**	**45**		**Pn**	**12 45 58.5**	**+1.0**
CHGN				IAML		12 46 58.2	
	comp=N,1μm,1.2s						
CHGN				IAML		12 47 13.2	
	comp=E,1μm,1.4s						
CHGN	**Chignik**	**3.86**	**45**	P	**Pn**	**12 45 57.9**	**+0.5**
	baz=227,SNR=17						
CHIR	**Chirikof Islan**	**4.95**	**61**	P	**Pn**	**12 46 13.0**	**+0.6**
	baz=245						
R16K	**Pilot Point**	**5.08**	**37**	P	**Pn**	**12 46 14.8**	**+0.6**
	baz=220						
SII	**Sitkinak Islan**	**5.98**	**57**	P	**Pn**	**12 46 25.8**	**-0.8**
	baz=243						
P16K	**Nushagak River**	**6.13**	**27**	P	**Pn**	**12 46 28.3**	**-0.4**
	baz=210						
Q17K	**Contact Creek**	**6.21**	**39**	P	**Pn**	**12 46 30.4**	**+0.5**
	baz=224,SNR=6.7						
Q16K	**King Salmon**	**6.24**	**34**	P	**Pn**	**12 46 31.8**	**+1.6**
	baz=218,SNR=9.8						
O16K	**Kokwok River B**	**6.59**	**24**	P	**Pn**	**12 46 35.8**	**+0.7**
	baz=207,SNR=13						
OHAK	**Old Harbor**	**6.72**	**54**	Pn	**Pn**	**12 46 35.6**	**-1.1**
OHAK	**Old Harbor**	**6.72**	**54**	P	**Pn**	**12 46 35.8**	**-0.9**
	baz=241						
P17K	**Kvichak River**	**6.72**	**32**	P	**Pn**	**12 46 38.2**	**+1.5**
	baz=216						
Q18K	**Katmai Hardscr**	**6.80**	**40**	P	**Pn**	**12 46 38.6**	**+0.5**
	baz=225,SNR=7.1						
O17K	**Koliganek Bris**	**7.00**	**27**	P	**Pn**	**12 46 41.9**	**+1.3**
	baz=211,SNR=14						
N16K	**Nishlik Lake**	**7.25**	**18**	P	**Pn**	**12 46 44.9**	**+0.8**
	baz=201,SNR=23						
P18K	**Big Mountain,**	**7.26**	**35**	Pn	**Pn**	**12 46 45.7**	**+1.4**
P18K	**Big Mountain,**	**7.26**	**35**	P	**Pn**	**12 46 46.0**	**+1.7**
	baz=220						
KDAK	**Kodiak Island**	**7.32**	**51**	Pn	**Pn**	**12 46 44.2**	**-0.8**
	comp=E,6.9nm,0.3s,baz=226,slow=7.7,SNR=22						
KDAK				Sn	**Sn**	**12 48 02.7**	**-5.0**
	comp=E,2.6nm,0.3s,baz=288,slow=15,SNR=6.6						
	comp=E,26nm,0.5s						
KDAK	**Kodiak Island**	**7.32**	**51**	Pn	**Pn**	**12 46 45.0**	**0.0**
KDAK	**Kodiak Island**	**7.32**	**51**	*i* P	**Pn**	**12 46 45.2**	**+0.2**
KDAK	**Kodiak Island**	**7.32**	**51**	P	**Pn**	**12 46 45.3**	**+0.2**
	baz=239						
Q19K	**Cape Douglas,**	**7.52**	**42**	Pn	**Pn**	**12 46 48.9**	**+1.1**
Q19K	**Cape Douglas,**	**7.52**	**42**	P	**Pn**	**12 46 48.0**	**+0.2**
	baz=228						
O18K	**Koktuh Hills**	**7.62**	**32**		**Pn**	**12 46 51.0**	**+1.8**
O18K	**Koktuh Hills**	**7.62**	**32**	P	**Pn**	**12 46 50.2**	**+0.9**
	baz=218,SNR=16						
N18K	**Kilae Creek**	**8.10**	**27**	Pn	**Pn**	**12 46 57.7**	**+2.1**
N18K	**Kilae Creek**	**8.10**	**27**	P	**Pn**	**12 46 56.6**	**+1.0**
	baz=212,SNR=9.7						
O19K	**Port Alsworth**	**8.17**	**33**		**Pn**	**12 46 58.8**	**+2.1**
O19K	**Port Alsworth**	**8.17**	**33**	P	**Pn**	**12 46 57.8**	**+1.1**
	baz=220,SNR=11						
ADK	**Adak**	**8.31**	**263**		**Pn**	**12 46 59.7**	**+1.1**
ADK	**Adak**	**8.31**	**263**	P	**Pn**	**12 46 59.7**	**+1.1**
ADK	**Adak**	**8.31**	**263**	P	**Pn**	**12 47 00.2**	**+1.6**
N19K	**Bonanza Creek**	**8.60**	**30**	Pn	**Pn**	**12 47 05.2**	**+2.5**
N19K	**Bonanza Creek**	**8.60**	**30**	P	**Pn**	**12 47 03.9**	**+1.2**
	baz=217,SNR=19						
BRSE	**Bradley Lake S**	**9.20**	**44**	P	**Pn**	**12 47 10.7**	**0.0**
	baz=233						
M19K	**Big River Lodg**	**9.52**	**26**	P	**Pn**	**12 47 15.4**	**+0.2**
	baz=213						
N20K	**Mount Spurr**	**9.62**	**34**	P	**Pn**	**12 47 17.0**	**+0.5**
	baz=222,SNR=7.9						
SPCR	**Spurr Chakacha**	**9.62**	**34**	P	**Pn**	**12 47 17.5**	**+0.9**
	baz=222						
L19K	**White Mountain**	**9.63**	**24**	P	**Pn**	**12 47 17.4**	**+0.7**
	baz=211						
M20K	**Styx River**	**9.85**	**29**	P	**Pn**	**12 47 21.6**	**+1.8**
	baz=217						
SEW	**Seward**	**9.94**	**44**		**Pn**	**12 47 20.6**	**-0.2**
SEW	**Seward**	**9.94**	**44**	P	**Pn**	**12 47 20.7**	**-0.1**
	baz=235						
TTA	**Tatalina**	**10.04**	**19**	Pn	**Pn**	**12 47 23.4**	**+1.2**
TTA	**Tatalina**	**10.04**	**19**	P	**Pn**	**12 47 23.5**	**+1.2**
TTA	**Tatalina**	**10.04**	**19**	P	**Pn**	**12 47 23.2**	**+0.9**
	baz=205,SNR=6.9						

O22K	Cooper Landing	10.05	42	P	Pn	12 47 22.5	+0.1
	baz=232,SNR=11						
L20K	Farewell, AK	10.13	26	P	Pn	12 47 25.1	+1.6
	baz=213,SNR=13						
SUA	Susitna One	10.30	36		Pn	12 47 26.1	+0.1
SUA	Susitna One	10.30	36	P	Pn	12 47 26.6	+0.6
	baz=226,SNR=8.2						
SKT	Skwentna	10.41	32	Pn	Pn	12 47 28.5	+1.1
SKT	Skwentna	10.41	32	P	Pn	12 47 27.9	+0.5
	baz=221,SNR=12						
RC01	Rabbit Creek A	10.42	39	P	Pn	12 47 28.1	+0.7
	baz=230						
M22K	Willow	10.72	36	P	Pn	12 47 31.9	+0.4
	baz=226						
PWL	Port Wells	10.82	42		Pn	12 47 32.1	-0.9
PWL	Port Wells	10.82	42	P	Pn	12 47 32.5	-0.5
	baz=234,SNR=9.5						
K20K	Telida	10.83	23	P	Pn	12 47 34.2	+1.1
	baz=210,SNR=15						
AMKA	Amchitka	10.84	265	Pn	Pn	12 47 32.8	-0.5
PPLA	Purkeypile	10.93	28	P	Pn	12 47 35.1	+0.6
	baz=217,SNR=8.9						
PMR	Palmer	10.97	38	P	Pn	12 47 34.7	-0.2
	baz=229						
Q23K	Middleton Isla	10.98	52	P	Pn	12 47 36.1	+1.1
	baz=245						
KNK	Knik Glacier	11.10	40	P	Pn	12 47 37.2	+0.4
	baz=232,SNR=6.3						
CUT	Chulitna	11.13	33	P	Pn	12 47 37.9	+0.8
	baz=223,SNR=6.5						
GLI	Glacier Island	11.34	44	P	Pn	12 47 39.0	-1.0
	baz=237						
HIN	Hinchinbrook I	11.34	47	Pn	Pn	12 47 39.0	-1.1
CAST	Castle Rocks	11.38	26	P	Pn	12 47 40.6	0.0
	baz=215,SNR=12						
SML	Sawmill	11.40	38	P	Pn	12 47 39.1	-1.8
	baz=230						
J20K	Nowinta River	11.53	20	P	Pn	12 47 42.0	-0.7
	baz=209						
GCSA	Galena City Sc	11.58	14	P	Pn	12 47 42.9	-0.3
	baz=199,SNR=13						
M23K	Glacier View	11.61	39	P	Pn	12 47 43.2	-0.6
	baz=232,SNR=9.8						
CHUM	Lake Minchumin	11.70	25	P	Pn	12 47 44.5	-0.4
	baz=213,SNR=7.8						
EYAK	Cordova Ski Ar	11.74	47	P	Pn	12 47 44.6	-0.9
	baz=241						
EYAK	Cordova Ski Ar	11.74	47	P	Pn	12 47 44.3	-1.2
SCM	Sheep Creek Mo	11.79	40	P	Pn	12 47 45.5	-0.8
	baz=232,SNR=9.7						
TRF	Thorofare Moun	11.90	29	P	Pn	12 47 47.2	-0.6
	baz=220						
WAT1	Susitna Watana	11.99	34	P	Pn	12 47 47.6	-1.4
	baz=226						
KAIM	Kayak Island	12.07	51	Pn	Pn	12 47 49.7	-0.4
KAIM	Kayak Island	12.07	51	P	Pn	12 47 48.2	-1.9
	baz=246						
WAT6	Susitna Watana	12.11	36	P	Pn	12 47 47.8	-2.8
	baz=229,SNR=9.5						
KLU	Klutina	12.15	43	P	Pn	12 47 50.3	-0.8
	baz=237,SNR=23						
TNA	Tin City	12.15	351	P	Pn	12 47 50.7	-0.3
	baz=167						
BPAW	Bear Paw Mtn.	12.21	26	P	Pn	12 47 51.8	-0.2
	baz=216,SNR=8.8						
M24K	Tolsona, Glenn	12.39	40	P	Pn	12 47 53.6	-0.8
	baz=234,SNR=10						
BMRM	Bremner River	12.44	47	P	Pn	12 47 53.8	-1.2
	baz=242						
MCK	McKinley	12.51	31	P	Pn	12 47 55.0	-1.1
	baz=222						
DHY	Denali Highway	12.56	35	P	Pn	12 47 55.1	-1.7
	baz=228,SNR=11						
N25K	Chitina, Valde	12.75	44	P	Pn	12 47 58.2	-1.1
	baz=239,SNR=8.4						
I21K	Tanana	12.87	22	P	Pn	12 48 01.9	+1.0
	baz=211,SNR=19						
HARP	HAARP	12.95	40	P	Pn	12 48 01.9	-0.1
	baz=235,SNR=12						
MLY	Manley	13.04	24	P	Pn	12 48 03.7	+0.5
	baz=214,SNR=26						
H21K	Melozitna Rive	13.11	19	P	Pn	12 48 05.3	+1.0
	baz=208,SNR=22						
NEA2	Nenana	13.12	28	P	Pn	12 48 04.4	+0.1
	baz=220						
PAX	Paxson	13.17	38	P	Pn	12 48 03.9	-1.1
	baz=232,SNR=36						
MCARA	McCarthy VSAT	13.31	46	P	Pn	12 48 05.6	-1.3
	baz=243						
MESA	MESA	13.32	52	P	Pn	12 48 05.5	-1.7
	baz=249						
I23K	Minto, Yukon-K	13.48	26	P	Pn	12 48 09.0	-0.1
	baz=217						
SHEM	Shemya Is, Ala	13.57	275	LR	LR	12 53 09.9	
	comp=E,2µm,21.4s,baz=109,slow=36						
K24K	Donnelly Dome	13.58	35	P	Pn	12 48 09.1	-1.5
	baz=229,SNR=12						
HDA	Harding Lake	13.61	31	P	Pn	12 48 09.7	-1.3
	baz=225						
H22K	Ishtalitna Cre	13.61	21	P	Pn	12 48 11.2	+0.1
	baz=211,SNR=18						
COLA	College	13.68	29		Pn	12 48 12.7	+0.8
COLA	College	13.68	29	P	Pn	12 48 12.7	+0.8
G21K	Allakaket	13.75	17	P	Pn	12 48 12.5	-0.4
	baz=205,SNR=22						
M26K	Nabesna, AK	13.80	43	P	Pn	12 48 12.8	-0.9
	baz=239,SNR=24						
RIDG	Independent Ri	13.86	36	P	Pn	12 48 13.4	-1.1
	baz=231						
CTG	Chitna Glacier	13.88	50	P	Pn	12 48 14.0	-0.8
	baz=247						
ILAR	Eielson Array	13.89	30	Pn	Pn	12 48 12.0	-2.8
	comp=E,0.4nm,0.3s,baz=221,slow=13,SNR=18						
ILAR				LR	LR	12 54 12.0	
	comp=E,6µm,18.9s,baz=220,slow=40						
	comp=E,2.8nm,0.6s						
H23K	Yukon River	13.97	24	P	Pn	12 48 15.4	-0.6
	baz=215,SNR=19						
POKR	Poker Plat Res	13.98	29	P	Pn	12 48 15.7	-0.3
	baz=222						
L26K	Log Cabin Wild	13.99	40	P	Pn	12 48 15.6	-0.7
	baz=236						
PINM	Pinnacle	14.10	54	P	Pn	12 48 16.9	-0.9
	baz=252						
M27K	Edge Creek, AK	14.24	44	P	Pn	12 48 19.3	-0.4
	baz=241,SNR=10						
SCRK	Sand Creek	14.31	36	P	Pn	12 48 19.3	-1.3
	baz=232,SNR=13						
O28M	Mount Upton	14.34	51	P	Pn	12 48 19.4	-1.9
	baz=250,SNR=9.1						
PNL	Peninsula	14.40	56	P	Pn	12 48 20.2	-1.6
	baz=255						
PNL	Peninsula	14.40	56	P	Pn	12 48 22.0	+0.2
F21K	Alatna River	14.40	15	P	Pn	12 48 21.8	-0.1
	baz=204,SNR=26						
H24K	Noodor Dome	14.40	26	P	Pn	12 48 20.9	-1.0
	baz=219,SNR=6.5						
G22K	Bettles	14.48	19	P	Pn	12 48 23.5	+0.7
	baz=209						
YUK3	Moose Creek	14.59	47	P	Pn	12 48 23.7	-0.9
	baz=246,SNR=11						
G23K	Bananza Creek	14.60	21	P	Pn	12 48 24.3	-0.2
	baz=212,SNR=30						
L27K	Beaver Creek,	14.60	41	P	Pn	12 48 23.6	-1.0
	baz=239,SNR=19						
BVCY	Beaver Creek	14.69	45	P	Pn	12 48 25.0	-0.8
	baz=243,SNR=7.1						
YUK8	Steele Glacier	14.71	49	P	Pn	12 48 25.5	-0.8
	baz=249						
J26L	Joseph Creek	14.77	35	P	Pn	12 48 25.7	-1.3
	baz=231,SNR=29						
PRP	Porcupine Dome	14.82	30	P	Pn	12 48 28.1	+0.4
	baz=225,SNR=11						
F22K	John River	14.88	17	P	Pn	12 48 29.7	+1.4
	baz=206,SNR=28						
O29M	Mount Kennedy	14.96	54	P	Pn	12 48 29.9	+0.3
	baz=254,SNR=9.1						
COLD	Coldfoot	15.00	20	IAmb	IAmb	12 48 37.1	
	comp=Z,100nm,0.9s						
COLD	Coldfoot	15.00	20	P	Pn	12 48 31.0	+1.1
	baz=211,SNR=56						
K27K	Chicken	15.02	38	P	Pn	12 48 28.5	-1.8
	baz=236,SNR=16						
G24K	Hadweenzic Riv	15.18	24	P	Pn	12 48 30.2	-2.1
	baz=218,SNR=6.5						
P29M	Windy Craggy	15.21	57	IAmb	IAmb	12 48 41.1	
	comp=Z,118nm,1.6s						
P29M	Windy Craggy	15.21	57	P	Pn	12 48 32.0	-0.8
	baz=258,SNR=5.9						
YUK4	Talbot Arm	15.24	50	P	Pn	12 48 34.5	+1.1
	baz=250,SNR=10						
YUK6	Outpost Mounta	15.24	52	P	Pn	12 48 32.5	-0.9
	baz=252,SNR=5.9						
I26K	Coal Creek Min	15.42	33	P	Pn	12 48 35.3	-0.2
	baz=230,SNR=17						
HYT	Haines Junctio	15.61	52	P	Pn	12 48 38.8	+0.6
	baz=254,SNR=8.3						
P30M	Million Dollar	15.70	55	P	Pn	12 48 39.2	0.0
	baz=257,SNR=15						
M29M	Somme Creek	15.71	46	P	Pn	12 48 39.0	-0.5
	baz=247,SNR=65						
F24K	Squaw Lake	15.74	22	P	Pn	12 48 38.6	-1.0
	baz=215						
S31K	Pelican	15.76	63	P	Pn	12 48 39.6	-0.2
	baz=265						
EGAK	Eagle	15.77	36	P	Pn	12 48 38.6	-1.5
	baz=235,SNR=25						
E23K	Chandalar	15.83	19	P	Pn	12 48 41.8	+0.9
	baz=211,SNR=52						
PLBC	Pleasant Camp	15.87	58	P	Pn	12 48 40.7	-0.5
	baz=260,SNR=8.3						
N30M	Aishikik Lake	15.99	50	P	Pn	12 48 42.5	-0.4
	baz=252,SNR=10						
DAWY	Dawson	16.05	40	P	Pn	12 48 42.6	-1.1
	baz=240,SNR=27						
E24K	Your Creek	16.07	20	P	Pn	12 48 43.8	-0.1
	baz=213,SNR=92						
I27K	Kandik River	16.11	34	P	Pn	12 48 44.5	+0.1
	baz=232,SNR=36						
L29M	L29M	16.12	44	P	Pn	12 48 44.1	-0.5
	baz=245,SNR=9.1						
O30N	Mendenhall	16.27	53	P	Pn	12 48 45.5	-1.0
	baz=256,SNR=20						
F25K	Christian Rive	16.33	24	P	Pn	12 48 45.6	-1.6
	baz=220,SNR=11						
G26K	Porcupine Rive	16.34	28	P	Pn	12 48 44.1	-3.2
	baz=224						
TOLK	Toolik Lake Re	16.34	18	IAmb	IAmb	12 48 54.1	
	comp=Z,169nm,1.2s						
TOLK	Toolik Lake Re	16.34	18	P	Pn	12 48 46.4	-1.0
	baz=210,SNR=30						
SKAG	Skagway	16.39	58	P	Pn	12 48 47.2	-0.7
	baz=261,SNR=11						
D23K	Nanushuk River	16.44	16	P	Pn	12 48 48.4	-0.2
	baz=207,SNR=6.4						
M30M	Minto, Yukon	16.48	47	P	Pn	12 48 49.4	+0.2
	baz=249,SNR=13						
H27K	Steamboat Moun	16.52	32	P	Pn	12 48 49.6	-0.1
	baz=230,SNR=15						
N31M	Braeburn, Yuko	16.60	51	P	Pn	12 48 50.5	-0.2
	baz=254,SNR=11						
S32K	Killisnoo	16.62	65	P	Pn	12 48 50.5	-0.3
	baz=266						
K29M	Barlow Dome	16.68	42	P	Pn	12 48 51.4	-0.4
	baz=244,SNR=82						
R32K	Eaglecrest	16.68	62	P	Pn	12 48 51.9	+0.2
	baz=266						
E25K	Arctic Village	16.75	23	P	Pn	12 48 51.9	-0.7
	baz=218						
JIS	Juneau Island	16.75	62	P	P	12 48 54.8	0.0
F26K	Sheenjek River	16.78	26	P	Pn	12 48 53.4	+0.4
	baz=222,SNR=18						
WHY	Whitehorse	16.82	54	P	Pn	12 48 53.2	-0.4
	baz=258,SNR=25						
G27K	Doyon Strip	16.86	30	P	Pn	12 48 54.1	+0.1
	baz=229,SNR=5.3						
D24K	Happy Valley	16.93	18	P	Pn	12 48 54.4	-0.3
	baz=210						
I29M	Ogilvie Camp,	17.11	37	P	Pn	12 48 57.1	+0.1
	baz=238,SNR=27						
P32M	Atlin	17.22	58	P	Pn	12 48 57.9	-0.6
	baz=262,SNR=12						
C23K	Itkillik River	17.23	15	P	Pn	12 48 58.9	+0.4
	baz=206,SNR=26						
MAYO	Mayo, Yukon	17.24	44	P	Pn	12 48 58.4	-0.3
	baz=247,SNR=46						
M31M	Drury Creek, Y	17.43	49	IAmb	IAmb	12 49 07.2	
	comp=Z,146nm,1.1s						
M31M	Drury Creek, Y	17.43	49	P	Pn	12 49 01.6	+0.5
	baz=253,SNR=58						
C24K	Franklin Bluff	17.44	17	P	P	12 49 01.8	-0.5
	baz=210						
D25K	Kavik River	17.54	20	P	Pn	12 49 02.2	-0.3
	baz=215,SNR=19						
P33M	Teslin, Yukon	17.75	56	IAmb	IAmb	12 49 11.8	
	comp=Z,92nm,0.9s						
P33M	Teslin, Yukon	17.75	56	P	Pn	12 49 03.8	-1.3
	baz=261,SNR=79						
N32M	Quiet Lake	17.78	53	P	Pn	12 49 04.0	-1.5
	baz=258						
E27K	Coleen River	17.81	27	P	Pn	12 49 03.6	-2.1
	baz=226						
WRAK	Wrangell Islan	17.87	69	P	Pn	12 49 03.8	-2.7
	baz=274						
Q32M	Nakina River	17.90	60	P	Pn	12 49 04.8	-2.3
	baz=266						
FARO	Faro, Yukon	17.91	50	P	Pn	12 49 05.4	-1.6
	baz=255,SNR=69						
A21K	Barrow	17.96	7	P	Pn	12 49 07.7	+0.2
	baz=193						
EPYK	Eagle Plains	18.19	35	P	Pn	12 49 08.9	-1.5
	baz=238,SNR=32						
C26K	Camden Bay	18.33	20	P	Pn	12 49 11.2	-0.8
	baz=216,SNR=32						
C27K	Jago River	18.35	22	P	Pn	12 49 11.6	-0.8
	baz=219,SNR=28						
S34M	Telegraph Cree	18.47	64	P	P	12 49 13.8	0.0
	baz=270,SNR=12						
R33M	Jennings River	18.60	59	P	P	12 49 14.4	-0.9
	baz=266,SNR=28						
G30M	tAoh Zraii Nji	18.68	34	P	P	12 49 15.1	-1.0
	baz=237,SNR=16						
MMPY	Sheldon Lake,	18.94	49	P	P	12 49 18.7	-0.3
	baz=256,SNR=45						
T35M	Bob Quinn	18.99	67	P	P	12 49 18.6	-0.9
	baz=273						
DLBC	Dease Lake	19.05	62	P	Pn	12 49 22.7	+1.7
	comp=Z,0.4nm,0.3s,baz=274,slow=11,SNR=22						
	comp=Z,14nm,0.9s						
DLBC	Dease Lake	19.05	62	P	P	12 49 19.9	-0.3
	baz=269,SNR=10						
WTLY	Watson Lake, Y	19.74	57	IAmb	IAmb	12 49 41.6	
	comp=Z,98nm,1.3s						
WTLY	Watson Lake, Y	19.74	57	P	P	12 49 28.0	+0.3
	baz=266,SNR=19						
F31M	Tsiigehtchic	19.75	34	P	P	12 49 27.1	-0.5
	baz=240,SNR=8.9						
TGTN	Hyland Airport	20.13	53	P	P	12 49 31.8	-0.1
	baz=262,SNR=51						
INK	Inuvik	20.26	32	P	P	12 49 31.6	-1.6
	comp=Z,21nm,0.8s,baz=240,slow=9.6,SNR=29						
INK				LR	LR	12 57 38.8	
	comp=Z,2µm,18.4s,baz=230,slow=38						
	comp=Z,21nm,0.8s						
INK	Inuvik	20.26	32	P	P	12 49 31.1	-2.1
INK	Inuvik	20.26	32	P	P	12 49 31.1	-2.1
INK				pmax	pmax		
	comp=Z,35nm,0.9s						
INK	Inuvik	20.26	32	P	P	12 49 31.4	-1.8
	baz=238,SNR=15						
BILL	Bilibino	20.33	327	P	P	12 49 34.4	+0.4
BILL	Bilibino	20.33	327	*d* P	P	12 49 34.4	+0.4
BILL				*i*		12 49 37.0	
BILL				*e* PPP	PPP	12 50 01.1	
BILL				S	S	12 53 08.0	-13
BILL				SS	SnSn	12 53 40.0	+1.2
BILL				SSS	SSS	12 53 58.0	
BILL				pmax	pmax		
	comp=Z,24nm,0.9s						
BILL				MLR	MLR		
	comp=Z,4µm,17.0s						
LIRD	Liard River Hi	21.09	59	P	P	12 49 43.0	+0.7
	baz=270,SNR=7.7						
BBB	Bella Bella	21.14	80	LR	LR	12 56 20.4	
	comp=Z,883nm,18.4s,baz=307,slow=32						
KOTAN	Kotaneelee Air	22.12	57	P	P	12 49 53.9	+0.6
	baz=270,SNR=12						
FLDN	Fort Liard	22.40	57	P	P	12 49 57.0	+0.7
	baz=270,SNR=5.9						
PET	Petropavlovsk	22.55	284	P	P	12 49 58.6	+0.7
WRGLY	Wrigley	22.56	49	P	P	12 49 58.7	+0.7
	baz=263,SNR=22						
PEA0B	Petropavlovsk-	23.07	285	*ce* P	P	12 50 04.0	+0.6
PETK	Petropavlovsk-	23.07	285	P	P	12 50 02.6	-0.9
	comp=Z,17nm,0.6s,baz=78,slow=12,SNR=39						
PETK				LR	LR	12 59 04.5	
	comp=Z,2µm,20.0s,baz=82,slow=37						
	comp=Z,17nm,0.6s						
PETK	Petropavlovsk-	23.07	285	P	P	12 50 03.7	+0.3
PETK	Petropavlovsk-	23.07	285	P	P	12 50 03.7	+0.3
C36M	Paulatuk	23.80	34	P	P	12 50 15.8	+5.4
C36M	Paulatuk	23.80	34	P	P	12 50 11.0	+0.5
	baz=248						
A36M	Sachs Harbour	24.55	27	P	P	12 50 17.5	+0.1
A36M	Sachs Harbour	24.55	27	P	P	12 50 17.2	-0.2
	baz=242						
SEY	Seymchan	24.57	310	P	P	12 50 17.2	-0.4
	comp=Z,9.1nm,0.8s,baz=92,slow=7.0,SNR=11						
SEY				PcP	PcP	12 53 55.2	+0.2
	comp=Z,4.2nm,0.8s,baz=117,slow=6.6,SNR=5.4						
SEY				ScP	ScP	12 57 33.5	+0.6
	comp=Z,2.7nm,0.8s,baz=62,slow=7.5,SNR=3.6						
	comp=Z,9.1nm,0.8s						
SEY	Seymchan	24.57	310	*ce* P	P	12 50 16.6	-1.1
SEY				pmax	pmax		
	comp=Z,30nm,1.2s						
LLLB	Lillooet	25.35	80	P	P	12 50 29.6	+4.7
WAPA	Wapiti River	25.36	69	IAmb	IAmb	12 50 33.1	
	comp=Z,67nm,1.4s						
MA2	Magadan	25.51	302	P	P	12 50 26.9	+0.6
	comp=Z,5.7nm,0.7s,baz=78,slow=14,SNR=4.6						
	comp=Z,5.7nm,0.7s						
YKA	Yellowknife Ar	26.60	51	P	P	12 50 36.8	+0.8
	comp=Z,21nm,0.9s,baz=271,slow=9.3,SNR=36						
	comp=Z,21nm,0.9s						
YKA	Yellowknife Ar	26.60	51	P	P	12 50 36.5	+0.5
YKA	Yellowknife Ar	26.60	51	*i* P	P	12 50 37.0	+1.0
YKA				pmax	pmax		
	comp=Z,21nm,0.9s						
BRLDA	Berland Lookou	26.70	70	P	P	12 50 38.5	+1.3
D05A	Enumclaw	26.80	87	P	P	12 50 40.7	+2.7
B08A	Colville Reser	27.82	83	IAmb	IAmb	12 51 07.0	
	comp=Z,26nm,1.1s						
HOOD	Mount Hood Mea	27.96	90	IAmb	IAmb	12 51 03.5	
	comp=Z,39nm,1.0s						
H04A	Detroit Lake	27.99	92	P	P	12 50 49.5	+0.8
H04A				IAmb	IAmb	12 51 07.4	
	comp=Z,53nm,1.2s						
HAWA	Hanford	28.66	87	P	P	12 50 56.2	+1.6
HAWA				IAmb	IAmb	12 51 03.0	
	comp=Z,24nm,0.8s						
F07A	Phinny Hill Vi	28.68	88	IAmb	IAmb	12 51 03.8	
	comp=Z,44nm,1.4s						
E08A	Dider Farm, El	28.89	86	IAmb	IAmb	12 51 04.8	
	comp=Z,35nm,1.3s						
NEW	Newport	29.16	82	P	P	12 50 60.0	+0.8
	comp=Z,3.2nm,0.7s,baz=287,slow=5.0,SNR=6.6						
NEW				ScP	ScP	12 57 46.4	-0.5
	comp=Z,0.4nm,0.3s,baz=323,slow=5.1,SNR=4.3						
NEW				LR	LR	13 00 04.0	
	comp=Z,691nm,21.4s,baz=311,slow=31						
	comp=Z,3.2nm,0.7s						
NEW	Newport	29.16	82	IAmb	IAmb	12 51 18.8	
	comp=Z,24nm,1.0s						
NEW	Newport	29.16	82	P	P	12 50 58.4	-0.8
	baz=298						
PINE	Pine Mountain	29.23	92	IAmb	IAmb	12 51 08.0	
	comp=Z,59nm,1.6s						
YBH	Yreka Blue Hor	29.41	97	P	P	12 51 03.3	+1.8
	comp=Z,2.9nm,0.9s,baz=300,slow=13,SNR=3.6						
YBH				LR	LR	12 59 36.3	
	comp=Z,1µm,21.4s,baz=287,slow=30						
	comp=Z,2.9nm,0.9s						
E09A	Wood Farm, Sta	29.42	85	IAmb	IAmb	12 51 09.8	
	comp=Z,29nm,1.1s						
K05A	Summer Lake	29.88	94	IAmb	IAmb	12 51 31.4	
	comp=Z,33nm,1.2s						
I07A	Izee	29.92	91	IAmb	IAmb	12 51 25.3	
	comp=Z,19nm,1.0s						
MOD	Modoc Plateau	30.73	95	IAmb	IAmb	12 51 26.1	
	comp=Z,26nm,1.2s						
J08A	Circle Bar Ran	30.95	91	IAmb	IAmb	12 51 21.9	
	comp=Z,26nm,1.2s						
WVOR	Wild Horse Val	31.40	93	IAmb	IAmb	12 51 37.2	
	comp=Z,19nm,1.0s						
MSO	Missoula	31.75	82	IAmb	IAmb	12 51 42.6	
	comp=Z,16nm,1.1s						
MSO	Missoula	31.75	82	P	P	12 51 22.4	+0.3
	baz=301						
MFID	Camas Ranch	32.49	89	IAmb	IAmb	12 51 37.0	
	comp=Z,19nm,0.8s						
TYV	Tymovskoe	32.53	287	*e* P	P	12 51 27.4	-1.3
TYV				*e* S	S	12 56 44.0	+1.0
TYV				pmax	pmax		
	comp=Z,500nm,4.2s						
TYV				pmax	pmax		
	comp=Z,25nm,1.1s						
TYV				smax	smax		
	comp=N,600nm,6.8s						
TYV				smax	smax		
	comp=E,2µm,6.8s						
PAHR	Pah Rah Range	32.64	97	IAmb	IAmb	12 51 37.2	
	comp=Z,23nm,1.2s						
PNTR	Pine Nut	32.92	98	IAmb	IAmb	12 52 06.3	
	comp=Z,18nm,1.0s						
YERR	Yerington	33.20	98	IAmb	IAmb	12 51 50.6	
	comp=Z,51nm,1.7s						
HLID	Hailey	33.25	87	IAmb	IAmb	12 51 43.4	
	comp=Z,18nm,1.1s						
HLID	Hailey	33.25	87	P	P	12 51 35.4	+0.1
	baz=305,SNR=20						
DLMT	Dillon	33.32	83	IAmb	IAmb	12 52 03.7	
	comp=Z,18nm,1.2s						
WAKR	Walker	33.40	99	IAmb	IAmb	12 52 13.0	
	comp=Z,26nm,1.4s						
BMN	Battle Mountai	33.46	94	IAmb	IAmb	12 52 08.7	
	comp=Z,38nm,1.8s						
TIXI	Tiksi	33.54	328	P	P	12 51 36.7	-0.6
	comp=Z,6.8nm,0.5s,baz=90,slow=23,SNR=24						
TIXI				PcP	PcP	12 54 17.7	+0.2
	comp=Z,7.9nm,0.9s,baz=90,slow=22,SNR=7.4						
TIXI				LR	LR	13 07 07.0	
	comp=Z,2µm,18.8s,baz=96,slow=40						
	comp=Z,6.8nm,0.5s						
TIXI	Tiksi	33.54	328	P	P	12 51 36.5	-0.8
TIXI				IAmb	IAmb	12 51 38.0	
	comp=Z,21nm,1.1s						
TIXI	Tiksi	33.54	328	*c i* P	P	12 51 36.6	-0.8
TIXI				pmax	pmax		
	comp=Z,20nm,1.1s						
EGMT	Eagleton	33.59	77	P	P	12 51 37.7	-0.4
	baz=300						
RES	Resolute Bay	33.59	27	LR	LR	13 06 50.6	
	comp=Z,2µm,18.3s,baz=247,slow=39						
RES	Resolute Bay	33.59	27	IAmb	IAmb	12 51 38.7	
	comp=Z,28nm,1.6s						
BOZ	Bozeman (W)	33.76	82	P	P	12 51 38.5	-1.3
	baz=303						
RYN	Ryan	33.85	98	IAmb	IAmb	12 51 56.9	
	comp=Z,24nm,1.4s						
LHV	Little Huntoon	34.11	98	IAmb	IAmb	12 51 59.5	
	comp=Z,38nm,1.5s						
NVAR	Mina Array Bea	34.11	98	P	P	12 51 44.0	+1.0
	comp=Z,2.6nm,0.7s,baz=303,slow=8.8,SNR=16						
NVAR				ScP	ScP	12 58 03.6	-0.5

YAK	Yakutsk	35.08	311	eP	P	12 51 49.1	-1.6
YAK				e*PP	pwP	12 51 57.3	-0.1
YAK				e		12 53 04.2	
YAK				e		12 54 21.9	
YAK				eS	S	12 57 19.3	-3.0
YAK				eSS	SnSn	12 59 30.8	-7.5
YAK				e		13 02 09.0	
YAK				pmax	pmax		
	comp=Z,24nm,1.5s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,18nm,1.5s						
YAK				pmax	pmax		
	comp=Z,173nm,3.3s						
YAK				pmax	pmax		
	comp=N,140nm,2.8s						
YAK				pmax	pmax		
	comp=E,119nm,3.2s						
YAK				smax	smax		
	comp=N,200nm,3.6s						
YAK				smax	smax		
	comp=E,187nm,3.5s						
YAK				MLR	MLR		
	comp=Z,2µm,15.0s						
YAK				MLR	MLR		
	comp=N,777nm,15.0s						
YAK				MLR	MLR		
	comp=E,2µm,16.0s						
IMW	Indian Meadow	35.12	84	IAmb	IAmb	12 52 11.4	
	comp=Z,16nm,1.1s						
FLWY	Flagg Ranch	35.15	84	IAmb	IAmb	12 52 16.1	
	comp=Z,41nm,1.6s						
SMMC	Simmler	35.25	104	P	P	12 51 52.8	+0.2
	baz=315						
HVU	Hansel Valley	35.27	89	IAmb	IAmb	12 52 07.2	
	comp=Z,17nm,0.8s						
LCH	Last Change Ra	35.30	99	IAmb	IAmb	12 52 09.7	
	comp=Z,28nm,1.6s						
TPAW	Teton Pass	35.34	85	IAmb	IAmb	12 52 12.8	
	comp=Z,27nm,1.4s						
RLMT	Red Lodge	35.41	81	P	P	12 51 53.9	-0.2
	baz=304						
VES	Vestal, Richgr	35.41	102	P	P	12 51 54.2	+0.3
	baz=314						
REDW	Red Top Meadow	35.48	85	IAmb	IAmb	12 52 14.7	
	comp=Z,22nm,1.1s						
CWC	Cottonwood Cre	35.58	100	P	P	12 51 55.2	-0.4
	baz=313						
GRAC	Grapevine Rang	35.62	99	IAmb	IAmb	12 52 12.6	
	comp=Z,34nm,1.4s						
GRAC	Grapevine Rang	35.62	99	P	P	12 51 55.7	0.0
	baz=313						
BGU	Big Grassy Mou	35.65	90	IAmb	IAmb	12 52 11.0	
	comp=Z,19nm,0.9s						
PKM	Mcpherson Peak	35.66	104	P	P	12 51 55.5	-0.8
	baz=315						
AHID	Auburn Hatcher	35.68	86	IAmb	IAmb	12 52 19.0	
	comp=Z,22nm,1.0s						
R11A	Troy Canyon, C	35.77	96	IAmb	IAmb	12 52 09.5	
	comp=Z,23nm,1.3s						
R11A	Troy Canyon, C	35.77	96	P	P	12 51 57.1	-0.1
	baz=311,SNR=21						
ISA	Isabella, Lake	35.89	102	P	P	12 51 58.1	0.0
	baz=314						
SBC	Santa Barbara	36.04	104	P	P	12 51 59.8	+0.6
	baz=316						
GRNR	Gornyy	36.08	291⇑	iP	P	12 51 58.8	-0.7
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
GRNR				MLR	MLR		
	comp=E,770nm,18.0s						
GRNR				MLR	MLR		
	comp=N,150nm,12.0s						
GRNR				MLR	MLR		
	comp=Z,840nm,12.0s						
MPMC	Manual Prospec	36.19	100	P	P	12 52 00.9	0.0
	baz=314,SNR=6.1						
DUG	Dugway, Tooele	36.23	91	IAmb	IAmb	12 52 14.1	
	comp=Z,36nm,1.1s						
DUG	Dugway, Tooele	36.23	91	P	P	12 52 00.1	-0.9
	baz=309,SNR=17						
FURC	Furnace Creek,	36.28	99	P	P	12 52 01.2	0.0
	baz=313						
TPNV	Topopah Spring	36.31	98	IAmb	IAmb	12 52 21.8	
	comp=Z,19nm,1.0s						
TPNV	Topopah Spring	36.31	98	P	P	12 52 01.2	-0.6
	baz=312,SNR=8.5						
LAO	LASA Array	36.34	77	IAmb	IAmb	12 52 17.3	
	comp=Z,84nm,2.0s						
LAO	LASA Array	36.34	77	P	P	12 52 01.2	-0.6
	baz=302						
LRMC	Laurel Mtn Rad	36.48	101	P	P	12 52 03.5	+0.2
	baz=314						
TCUT	Toone Canyon	36.49	89	IAmb	IAmb	12 52 28.1	
	comp=Z,14nm,0.8s						
DGMT	Dagmar	36.56	73	IAmb	IAmb	12 52 18.5	
	comp=Z,42nm,1.2s						
DGMT	Dagmar	36.56	73	P	P	12 52 03.9	+0.2
	baz=301						
BW06	Boulder Array	36.59	85	P	P	12 52 04.6	+0.4
	baz=306						
PDAR	Pinedale Array	36.59	85	P	P	12 52 04.5	+0.3
	comp=Z,2.2nm,0.8s,baz=310,slow=5.1,SNR=14						
PDAR				ScP	ScP	12 58 12.2	-0.8
	comp=Z,1.2nm,1.0s,baz=300,slow=2.9,SNR=5.2						
	comp=Z,2.2nm,0.8s						
PRN	Pahroc Range	36.71	96	IAmb	IAmb	12 52 34.1	
	comp=Z,39nm,1.3s						
EDW2	Edwards Air Fo	36.72	102	P	P	12 52 05.2	0.0
	baz=315						
JLU	Jordanelle	36.79	89	IAmb	IAmb	12 52 12.7	
	comp=Z,51nm,1.9s						
NLU	North Lily Min	36.82	91	IAmb	IAmb	12 52 13.2	
	comp=Z,51nm,1.9s						
ERM	Erimo	36.92	274	P	P	12 52 07.0	+0.3
SHOC	Shoshone, Teco	37.01	99	P	P	12 52 08.1	+0.4
	baz=314						
GSC	Goldstone, Bar	37.12	101	P	P	12 52 08.9	+0.3
	baz=314						
BFSC	Mount Baldy Ra	37.37	103	P	P	12 52 11.2	+0.4
	baz=315						
FMP	Fort Macarthur	37.38	104	P	P	12 52 10.6	-0.1
	baz=316						
TUQ	Turquoise Moun	37.54	100	P	P	12 52 12.6	+0.3
	baz=314						
CCUT	Cedar City	37.62	95	IAmb	IAmb	12 52 29.4	
	comp=Z,32nm,1.5s						
HEC	Hector,Ludlow	37.72	101	P	P	12 52 13.9	+0.2
	baz=315						
TMUT	Trail Mountain	37.76	91	IAmb	IAmb	12 52 28.1	
	comp=Z,20nm,0.8s						
BBRC	Big Bear Solar	37.78	102	P	P	12 52 14.2	-0.2
	baz=315						
RDMU	Red Mountain	37.93	88	IAmb	IAmb	12 52 36.0	
	comp=Z,62nm,1.4s						
Q16A	Castle Valley	38.02	91	IAmb	IAmb	12 52 29.7	
	comp=Z,30nm,1.1s						
LCMT	Little Creek M	38.05	95	IAmb	IAmb	12 52 33.0	
	comp=Z,68nm,1.9s						
P18A	Preston Nutter	38.12	90	IAmb	IAmb	12 52 38.5	
	comp=Z,31nm,1.1s						
GMRC	Granite Mounta	38.15	100	P	P	12 52 17.4	0.0
	baz=314						
SRU	San Rafael Swe	38.28	90	IAmb	IAmb	12 52 39.8	
	comp=Z,23nm,0.8s						
KNB	Kanab	38.29	95	IAmb	IAmb	12 52 35.1	
	comp=Z,53nm,1.8s						
K22A	Casper	38.46	83	P	P	12 52 19.2	-0.7
	baz=307						
BELC	Belle Mtn. Jos	38.51	101	P	P	12 52 20.4	0.0
	baz=315,SNR=5.4						
PFO	Pinyon Flats O	38.51	102	LR	LR	13 05 24.9	
	comp=Z,1µm,18.4s,baz=344,slow=32						
PFO	Pinyon Flats O	38.51	102	P	P	12 52 20.0	-0.4
	baz=316						
TPFO	Pinon Flats	38.52	102	P	P	12 52 20.8	+0.2
	baz=316						
NEE2	Needles Airpor	38.77	99	P	P	12 52 23.2	+0.7
	baz=314						
IRM	Iron Mountain	38.89	100	P	P	12 52 23.6	+0.1
	baz=315						
O20A	White River Ci	38.99	87	IAmb	IAmb	12 52 43.3	
	comp=Z,72nm,1.1s						
O20A	White River Ci	38.99	87	P	P	12 52 24.9	+0.4
	baz=309,SNR=29						
U15A	North Rim	39.01	95	IAmb	IAmb	12 52 45.0	
	comp=Z,71nm,1.9s						
MONP2	Monument Peak	39.05	103	P	P	12 52 25.3	+0.3
	baz=316						
RSSD	Black Hills	39.05	79	P	P	12 52 25.9	+0.9
RSSD	Black Hills	39.05	79	P	P	12 52 25.9	+0.9
RSSD				pmax	pmax		
	comp=Z,13nm,1.2s						
RSSD	Black Hills	39.05	79	P	P	12 52 25.3	+0.3
	baz=306						
BC3	Big Chuckawall	39.07	101	P	P	12 52 25.1	0.0
	baz=315						
SWSC	Sam W. Stewart	39.38	102	P	P	12 52 28.0	+0.5
	baz=316						
PDMCI	Parker Dam,Lak	39.38	99	P	P	12 52 27.9	+0.4
	baz=315						
IKP	In-Ko-Pah, Jac	39.41	103	P	P	12 52 28.2	+0.3
	baz=316						
KLR	Kul'dur	39.46	291	LR	LR	13 08 47.6	
	comp=Z,873nm,19.3s,baz=54,slow=36						
KLR	Kul'dur	39.46	291	ceP	P	12 52 26.7	-1.3
KLR				pmax	pmax		
	comp=Z,31nm,1.3s						
MDND	Maddock	39.50	72	P	P	12 52 28.6	+0.2
	baz=303,SNR=14						
E28A	Huff	39.58	74	IAmb	IAmb	12 52 41.8	
	comp=Z,50nm,0.8s						
ZEA	Zeya	39.59	299	eP	P	12 52 28.2	-0.9
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=E,500nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,16.0s						
ZEA				MLR	MLR		
	comp=N,400nm,12.0s						
PV10	Paradox Valley	39.64	90	IAmb	IAmb	12 52 42.0	
	comp=Z,42nm,1.3s						
PV11	David Mesa, Pa	39.79	90	IAmb	IAmb	12 52 49.1	
	comp=Z,20nm,0.7s						
GLA	Glamis	39.87	101	P	P	12 52 31.5	-0.1
	baz=316						
N23A	Red Feather La	39.88	85	P	P	12 52 31.4	-0.5
	baz=308						
PV13	Radium Mtn., P	39.91	90	IAmb	IAmb	12 52 45.4	
	comp=Z,34nm,0.8s						
WUAZ	Wupatki	40.17	95	P	P	12 52 34.6	+0.3
	baz=313						
ULM	Lac du Bonnet	40.28	66	P	P	12 52 35.1	+0.2
	comp=Z,10nm,0.8s,baz=299,slow=8.9,SNR=9.4						
ULM				LR	LR	13 08 44.3	
	comp=Z,596nm,19.7s,baz=290,slow=35						
	comp=Z,10nm,0.8s						
ULM	Lac du Bonnet	40.28	66	P	P	12 52 34.9	0.0
ULM				IAmb	IAmb	12 52 49.5	
	comp=Z,26nm,1.0s						
ULM	Lac du Bonnet	40.28	66	P	P	12 52 34.9	0.0
ULM				pmax	pmax		
	comp=Z,26nm,1.0s						
MVCO	Mesa Verde	40.73	91	IAmb	IAmb	12 53 27.3	
	comp=Z,53nm,1.9s						
MVCO	Mesa Verde	40.73	91	P	P	12 52 39.5	+0.5
	baz=312						
ISCO	Idaho Springs	40.76	86	P	P	12 52 38.2	-1.1
	baz=310						
H11N2	WAKE ISLAND Hy	40.88	226	T	T	13 36 22.5	
	baz=26,slow=76,SNR=220						
H11N3	WAKE ISLAND Hy	40.88	226	T	T	13 36 37.8	
	baz=26,slow=76,SNR=159						
H11N1	WAKE ISLAND Hy	40.90	226	T	T	13 36 38.5	
	baz=26,slow=76,SNR=214						
JMM	Marumori	40.95	271	IAmb	IAmb	12 52 55.4	
	comp=Z,90nm,1.4s						
AGMN	Agassiz Nation	41.35	69	IAmb	IAmb	12 52 58.3	
	comp=Z,63nm,1.3s						
AGMN	Agassiz Nation	41.35	69	P	P	12 52 44.0	+0.4
	baz=304,SNR=8.3						
S22A	4UR Ranch, Cre	41.37	89	P	P	12 52 44.1	-0.3
	baz=311,SNR=11						
X18A	Snowflake	41.70	95	IAmb	IAmb	12 53 04.3	
	comp=Z,68nm,2.0s						
214A	Organ Pipe Nat	41.83	100	P	P	12 52 48.2	+0.3
	baz=316						
H11S1	WAKE ISLAND Hy	42.05	225	T	T	13 38 06.1	
	baz=26,slow=76,SNR=256						
H11S2	WAKE ISLAND Hy	42.06	225	T	T	13 37 58.0	
	baz=26,slow=76,SNR=139						
H11S3	WAKE ISLAND Hy	42.06	225	T	T	13 38 07.9	
	baz=26,slow=76,SNR=179						
SDCO	Great Sand Dun	42.16	88	P	P	12 52 50.5	-0.3
	baz=311						
USRK	Ussuriysk Ar.	42.16	284	P	P	12 52 48.9	-1.5
	comp=Z,2.3nm,0.7s,baz=70,slow=6.4,SNR=3.5						
USRK				LR	LR	13 11 54.0	
	comp=Z,607nm,19.0s,baz=56,slow=38						
	comp=Z,2.3nm,0.7s						
JSD	Sado	42.34	273	P	P	12 52 51.7	-0.3
B35A	Bob, Littlefor	42.49	68	IAmb	IAmb	12 53 06.5	
	comp=Z,58nm,1.6s						
NEEM	North Greenlan	42.69	17	eP	P	12 52 54.8	+0.1
NEEM				IAmb	IAmb	12 52 55.8	
	comp=Z,44nm,0.9s						
TUC	Tucson	42.77	98	P	P	12 52 56.2	+0.7
TUC	Tucson	42.77	98	P	P	12 52 56.2	+0.7
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TUC	Tucson	42.77	98	P	P	12 52 55.7	+0.1
	baz=316						
T25A	Trinidad	43.21	88	IAmb	IAmb	12 53 18.1	
	comp=Z,26nm,0.9s						
T25A	Trinidad	43.21	88	P	P	12 52 59.0	-0.3
	baz=312						
MDJ	Mudanjiang	43.29	286	P	P	12 52 57.6	-1.9
MJAR	Matsushiro Arr	43.37	271	P	P	12 53 00.1	-0.2
	comp=Z,19nm,1.0s,baz=36,slow=6.7,SNR=26						
MJAR				LR	LR	13 11 46.0	
	comp=Z,604nm,19.2s,baz=55,slow=37						
	comp=Z,19nm,1.0s						
MAJO	Matsushiro	43.37	271	P	P	12 53 00.3	0.0
MAJO	Matsushiro	43.37	271	P	P	12 53 00.3	0.0
MAJO				pmax	pmax		
	comp=Z,65nm,0.9s						
MAJO	Matsushiro	43.37	271	P	P	12 53 00.9	+0.6
ANMO	Albuquerque	43.48	92	LR	LR	13 09 02.8	
	comp=Z,620nm,18.9s,baz=318,slow=33						
ANMO	Albuquerque	43.48	92	P	P	12 53 03.1	+1.7
ANMO	Albuquerque	43.48	92	ceP	P	12 53 04.7	+3.3
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	Albuquerque	43.48	92	P	P	12 53 01.1	-0.3
	baz=314						
ECSD	EROS Data Cent	43.59	75	P	P	12 53 01.7	-0.3
	baz=307						
MSHR	Mys Shultsa	43.63	283	c iP	P	12 53 02.5	+0.2
MSHR				pmax	pmax		
	comp=Z,33nm,0.9s						
NOR	Nord	43.79	7	eP	P	12 53 03.5	+0.4
NOR				IAmb	IAmb	12 53 04.2	
	comp=Z,32nm,1.1s						
EYMN	Ely	43.96	67	IAmb	IAmb	12 53 19.2	
	comp=Z,46nm,1.3s						
EYMN	Ely	43.96	67	P	P	12 53 04.0	-0.9
	baz=305						
BOD	Bodaibo	43.99	310	eP	P	12 53 03.9	-1.1
BOD				pmax	pmax		
	comp=Z,43nm,1.3s						
F36A	Milaca	44.06	71	IAmb	IAmb	12 53 17.8	
	comp=Z,17nm,0.9s						
BGNE	Belgrade	44.14	79	P	P	12 53 05.8	-0.6
	baz=309						
121A	Cookes Peak, D	44.38	95	P	P	12 53 09.0	+0.3
	baz=315						
JGF	Kuroka	44.51	271	P	P	12 53 09.2	-0.3
E38A	The Farm, Brul	44.71	69	IAmb	IAmb	12 53 25.8	
	comp=Z,42nm,1.1s						
JHJ	Hachijo jima 2	44.79	266	LR	LR	13 09 14.3	
	comp=Z,420nm,21.5s,baz=83,slow=32						
L34A	Svendsen Farm,	44.82	77	IAmb	IAmb	12 53 39.7	
	comp=Z,27nm,0.7s						
SPMN	Marine on St.	44.85	71	IAmb	IAmb	12 53 26.1	
	comp=Z,37nm,1.3s						
SPMN	Marine on St.	44.85	71	P	P	12 53 11.6	-0.4
	baz=307						
FRB	Frobisher Bay	45.74	38	LR	LR	13 15 24.3	
	comp=Z,2µm,18.2s,baz=304,slow=40						
N35A	Tabor	45.95	77	IAmb	IAmb	12 53 38.0	
	comp=Z,28nm,0.8s						
HIA	Hailar	45.95	297	IAmb	IAmb	12 53 21.0	
	comp=Z,21nm,1.0s						
CN2	Changchun	46.14	288	eP	P	12 53 19.8	-2.5
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
G40A	Rib Lake	46.28	69	IAmb	IAmb	12 53 23.8	
	comp=Z,24nm,1.1s						
MSTX	Muleshoe	46.35	90	P	P	12 53 23.9	-0.3
	baz=314						
AMTX	Amarillo	46.37	88	IAmb	IAmb	12 53 46.4	
	comp=Z,21nm,1.2s						
AMTX	Amarillo	46.37	88	P	P	12 53 23.5	-0.7
	baz=314						
NRIK	Noril'sk	46.99	333	P	P	12 53 28.8	+0.3
	comp=Z,22nm,1.1s,baz=65,slow=5.5,SNR=18						
NRIK				LR	LR	13 14 32.9	
	comp=Z,1µm,18.8s,baz=40,slow=38						
	comp=Z,22nm,1.1s						
NRIK	Noril'sk	46.99	333	c iP	P	12 53 28.6	0.0
NRIK				pmax	pmax		
	comp=Z,50nm,1.3s						
KAN09	Caldwell North	47.24	83	IAmb	IAmb	12 53 35.0	
	comp=Z,14nm,1.2s						
KAN13	South Haven SW	47.41	83	IAmb	IAmb	12 53 38.4	
	comp=Z,19nm,1.1s						
KBS	Kingsbay	47.63	1	ceP	P	12 53 35.5	+2.0
KBS				pmax	pmax		
	comp=Z,32nm,0.8s						
KBS	Kingsbay	47.63	1	eP	P	12 53 23.1	-10
L40A	Anamosa	47.72	73	IAmb	IAmb	12 53 48.6	
	comp=Z,26nm,0.9s						
JFWS	Jewell Farm	47.73	72	P	P	12 53 33.6	-1.1
	baz=310						
JCJ	Chichijima	47.77	259	LR	LR	13 11 44.0	
	comp=Z,252nm,21.7s,baz=66,slow=34						
DAG	Danmarks Havn	47.91	10	eP	P	12 53 32.4	-3.2
WMOK	Wichita Mounta	48.19	86	IAmb	IAmb	12 53 57.4	
	comp=Z,12nm,1.1s						
WMOK	Wichita Mounta	48.19	86	P	P	12 53 38.6	+0.3
	baz=314						
SUMG	Summit	48.40	19	eP	P	12 53 41.0	+1.1
SUMG				IAmb	IAmb	12 53 42.0	
	comp=Z,51nm,0.9s						
SPITS	Spitsbergen Ar	48.41	0	LR	LR	13 15 17.2	
	comp=Z,873nm,19.8s,baz=38,slow=38						
SNY	Shenyang	48.46	287	⇓P	P	12 53 41.0	+0.7
SNY				pmax	pmax		
	comp=Z,63nm,1.3s						
N41A	Harden Midland	48.81	74	IAmb	IAmb	12 54 03.4	
	comp=Z,34nm,1.1s						
KSRS	Korea Array	48.84	280	P	P	12 53 43.7	+0.4
	comp=Z,21nm,0.9s,baz=54,slow=7.1,SNR=47						
KSRS				LR	LR	13 16 29.2	
	comp=Z,297nm,18.4s,baz=35,slow=39						
	comp=Z,21nm,0.9s						
KS19	Wonju Array Si	48.84	280	P	P	12 53 44.3	+1.0
KSAR	Wonju Array Be	48.87	280	P	P	12 53 43.5	-0.1
KSAR	Wonju Array Be	48.87	280	P	P	12 53 43.5	-0.1
P40A	Paris	48.90	76	IAmb	IAmb	12 54 00.0	
	comp=Z,20nm,0.8s						
TX31	Lajitas Ar. Si	49.13	95	IAmb	IAmb	12 54 17.5	
	comp=Z,26nm,0.9s						
TXAR	Lajitas Array	49.13	95	P	P	12 53 46.4	+0.6
	comp=Z,5.2nm,0.8s,baz=301,slow=5.4,SNR=34						
TXAR				ScP	ScP	12 59 02.7	-0.7
	comp=Z,1.1nm,0.9s,baz=295,slow=3.3,SNR=6.5						
	comp=Z,5.2nm,0.8s						
ABTX	Abilene, Hawle	49.16	89	IAmb	IAmb	12 53 55.0	
	comp=Z,18nm,1.1s						
ABTX	Abilene, Hawle	49.16	89	P	P	12 53 46.7	+0.9
	baz=315						
SFJD	Kangerlussuaq	49.54	28	LR	LR	13 18 46.1	
	comp=Z,563nm,18.2s,baz=314,slow=41						
SFJD	Kangerlussuaq	49.54	28	P	P	12 53 48.5	+0.2
SFJD	Kangerlussuaq	49.54	28	P	P	12 53 48.5	+0.2
SFJD				pmax	pmax		
	comp=Z,59nm,1.2s						
SFJD	Kangerlussuaq	49.54	28	eP	P	12 53 49.6	+1.3
SFJD				IAmb	IAmb	12 53 50.2	
	comp=Z,67nm,1.2s						
R40A	Maddies Statio	49.60	78	IAmb	IAmb	12 53 51.6	
	comp=Z,10nm,0.7s						
U38A	Gravette	49.62	81	P	P	12 53 48.0	-1.3
U38A				IAmb	IAmb	12 54 10.9	
	comp=Z,15nm,1.2s						
HDIL	Hopedale	49.80	74	P	P	12 53 50.2	-0.4
	baz=311,SNR=8.7						
TJN	Taejon	49.90	279	ceP	P	12 53 52.2	+0.8
DBG	Daneborg	49.92	12	eP	P	12 53 51.8	+0.7
DBG				IAmb	IAmb	12 53 52.9	
	comp=Z,32nm,0.9s						
HHAR	Hobbs	49.99	81	IAmb	IAmb	12 54 14.5	
	comp=Z,39nm,1.8s						
X37A	Clayton	50.31	83	IAmb	IAmb	12 54 03.2	
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	50.35	77	P	P	12 53 55.1	+0.3
CCM				IAmb	IAmb	12 53 59.9	
	comp=Z,33nm,1.6s						
CCM	Cathedral Cave	50.35	77	P	P	12 53 55.1	+0.3
CCM				pmax	pmax		
	comp=Z,33nm,1.6s						
CCM	Cathedral Cave	50.35	77	P	P	12 53 53.3	-1.5
	baz=313						
MGMO	Mountain Grove	50.37	79	IAmb	IAmb	12 54 10.2	
	comp=Z,14nm,1.1s						
JCT	Junction City	50.59	91	IAmb	IAmb	12 54 03.6	
	comp=Z,16nm,1.0s						
JCT	Junction City	50.59	91	P	P	12 53 56.8	0.0
	baz=316						
ICESG	Greenland Ices	50.82	23	eP	P	12 53 59.0	+0.6
ICESG				IAmb	IAmb	12 53 59.5	
	comp=Z,107nm,1.3s						
WHTX	Lake Whitney,	50.91	87	IAmb	IAmb	12 54 27.4	
	comp=Z,33nm,1.2s						
WHTX	Lake Whitney,	50.91	87	P	P	12 53 58.0	-1.1
	baz=316						
DY2G	Dye2	51.13	27	eP	P	12 54 01.0	+0.4
SFIN	Lafayette	51.17	72	P	P	12 53 59.9	-1.1
	baz=312						
XLT	XiLinHaoTe	51.28	294⇑	iP	P	12 54 02.0	+0.1
XLT				pP	pP	12 54 07.0	+0.9
XLT				pmax	pmax		
	comp=Z,43nm,0.9s						
XLT				pmax	pmax		
	comp=Z,490nm,7.3s						
FCAR	Ozark Folk Cen	51.32	80	IAmb	IAmb	12 54 05.4	
	comp=Z,32nm,1.4s						
MIAR	Mount Ida	51.40	82	IAmb	IAmb	12 54 08.1	
	comp=Z,56nm,1.9s						
MIAR	Mount Ida	51.40	82	P	P	12 54 01.7	-1.1
	baz=314						
N47A	Urbana	51.62	71	IAmb	IAmb	12 54 03.8	
	comp=Z,35nm,0.9s						
IRK	Irkutsk	51.80	309	eP	P	12 54 04.6	-1.0
IRK				pmax	pmax		
	comp=Z,54nm,1.3s						
SCHQ	Schefferville	51.92	47	P	P	12 54 06.5	+0.1
	comp=Z,16nm,0.9s,baz=327,slow=7.6,SNR=7.2						
SCHQ				LR	LR	13 18 57.3	
	comp=Z,1µm,19.0s,baz=310,slow=39						
	comp=Z,16nm,0.9s						
SCHQ	Schefferville	51.92	47	IAmb	IAmb	12 54 27.0	
	comp=Z,59nm,1.5s						
O48B	Farmland	52.35	71	P	P	12 54 08.1	-1.7
	baz=312						
833A	Chaparral WMA,	52.41	92	IAmb	IAmb	12 54 22.4	
	comp=Z,26nm,1.1s						
833A	Chaparral WMA,	52.41	92	P	P	12 54 10.0	-0.3
	baz=318						
SADO	Sadowa	52.61	63	LR	LR	13 16 00.1	
	comp=Z,423nm,19.7s,baz=350,slow=35						
P48A	Milroy	52.74	72	IAmb	IAmb	12 54 17.0	
	comp=Z,36nm,1.2s						
WCI	Wyandotte Cave	53.09	74	P	P	12 54 13.8	-1.4
	baz=313						
P49A	Miami Univ. Ec	53.09	71	IAmb	IAmb	12 54 19.3	
	comp=Z,26nm,0.9s						
P49A	Miami Univ. Ec	53.09	71	P	P	12 54 13.6	-1.7
	baz=313						
ULN	Ulaanbaatar	53.37	303	P	P	12 54 15

comp=Z,11nm,1.2s
WVT Waverly 53.66 77 P **P 12 54 18.3 -1.2**
WVT Waverly 53.66 77 P **P 12 54 18.3 -1.2**
WVT pmax pmax
comp=Z,99nm,1.7s
WVT Waverly 53.66 77 P **P 12 54 18.4 -1.0**
baz=314
MOY Mondy 53.70 310 *e*P **P 12 54 20.3 +0.6**
MOY pmax pmax
comp=Z,43nm,2.2s
SONM Songino Array 53.71 303 P **P 12 54 20.0 +0.1**
comp=Z,16nm,0.9s,baz=48,slow=7.2,SNR=68
SONM PcP **PcP 12 55 26.1 +0.2**
comp=Z,6.9nm,0.9s,baz=53,slow=2.5,SNR=4.7
comp=Z,16nm,0.9s
SONM Songino Array 53.71 303 P **P 12 54 19.4 -0.5**
SONM IAmb IAmb 12 54 21.5
comp=Z,37nm,1.1s
SONM Songino Array 53.71 303 P **P 12 54 19.4 -0.5**
SONM pmax pmax
comp=Z,37nm,1.1s
BJI Beijing 53.83 290 P **P 12 54 21.0 +0.4**
BJI pmax pmax
comp=Z,17nm,1.0s
BJT Baijiatuau 53.84 290 IAmb IAmb 12 54 22.0
comp=Z,26nm,1.2s
OXF Oxford 53.87 79 P **P 12 54 20.4 -0.6**
baz=315
ERPA Erie 53.95 66 P **P 12 54 20.9 -0.6**
baz=313
R50A Paris 54.17 72 IAmb IAmb 12 54 43.3
comp=Z,13nm,0.8s
O52A Adamsville 54.30 69 IAmb IAmb 12 54 40.1
comp=Z,39nm,1.2s
IVI Ivigtut 54.49 33 P **P 12 54 25.9 +0.7**
V48A Smith Brothers 54.51 76 IAmb IAmb 12 54 30.0
comp=Z,10.0nm,0.8s
O53A New Philadelph 54.55 69 P **P 12 54 24.7 -1.3**
baz=314
U49A Red Boiling Sp 54.57 75 IAmb IAmb 12 54 32.0
comp=Z,27nm,1.4s
T50A Nancy 54.76 74 IAmb IAmb 12 54 43.9
comp=Z,34nm,1.4s
VBMS Vicksburg 54.85 82 P **P 12 54 27.6 -0.6**
baz=316
LONY Lake Ozonia 55.10 61 P **P 12 54 29.5 -0.4**
baz=313
R53A Hurricane 55.48 71 IAmb IAmb 12 54 37.0
comp=Z,22nm,0.9s
MCWV Mont Chateau 55.72 68 P **P 12 54 34.3 -0.1**
baz=314
W50A Signal Mountai 55.77 76 IAmb IAmb 12 54 38.9
comp=Z,28nm,1.3s
HHC Hu-ho-hao-te 55.81 294 ⇑P **P 12 54 36.0 +0.8**
HHC pmax pmax
comp=Z,62nm,0.9s
HHC pmax pmax
comp=Z,880nm,7.8s
HHC LR LR
comp=Z,2μm,14.4s
HHC LR LR
comp=Z,920nm,14.7s
HHC LR LR
comp=Z,2μm,16.1s
TZTN Tazewell 55.83 73 IAmb IAmb 12 54 55.5
comp=Z,22nm,1.0s
TZTN Tazewell 55.83 73 P **P 12 54 34.4 -0.9**
baz=315
V51A Loudon 55.89 74 IAmb IAmb 12 54 48.7
comp=Z,16nm,1.1s
TIA Tai'an 55.96 286 ⇑P **P 12 54 35.8 -0.3**
TIA pmax pmax
comp=Z,22nm,1.1s
BINY Binghamton 56.04 63 P **P 12 54 35.3 -1.4**
baz=314
SSPA Standing Stone 56.11 66 P **P 12 54 35.8 -1.3**
SSPA IAmb IAmb 12 54 56.2
comp=Z,23nm,0.9s
SSPA Standing Stone 56.11 66 P **P 12 54 36.4 -0.8**
baz=314
JOW Kunigami 56.19 270 IAmb IAmb 12 54 39.7
comp=Z,34nm,1.1s
TKL Tuckaleechee C 56.32 74 LR LR 13 17 33.6
comp=Z,764nm,18.6s,baz=333,slow=35
LRAL Lakeview Retre 56.33 79 P **P 12 54 37.3 -1.6**
baz=316
HNS HongShan 56.49 289 ⇑P **P 12 54 40.8 +0.9**
HNS pmax pmax
comp=Z,62nm,1.0s
V53A Saluda 56.87 74 IAmb IAmb 12 54 47.0
comp=Z,20nm,1.2s
ARCES ARCESS Array B 56.94 356 P **P 12 54 42.4 -0.2**
comp=Z,16nm,1.0s,baz=18,slow=7.4,SNR=11
ARCES LR LR 13 21 23.3
comp=Z,875nm,18.2s,baz=64,slow=38
comp=Z,16nm,1.0s
ARCES ARCESS Array B 56.94 356 P **P 12 54 41.2 -1.4**
ARCES ARCESS Array B 56.94 356 P **P 12 54 41.2 -1.4**
ARCES pmax pmax
comp=Z,75nm,1.8s
GUMO Guam 56.96 246 LR LR 13 14 11.0
comp=Z,118nm,20.8s,baz=64,slow=31
BLA Blacksburg 57.12 71 IAmb IAmb 12 54 57.8
comp=Z,21nm,1.0s
BLA Blacksburg 57.12 71 P **P 12 54 43.8 -0.7**
baz=315
BG3 Lake Jocassee 57.28 74 IAmb IAmb 12 54 58.8
comp=Z,45nm,1.7s
V55A Taylorsville 57.64 72 IAmb IAmb 12 54 52.3
comp=Z,25nm,1.3s
NJ2 Nanjing 57.94 282 ⇓P **P 12 54 50.3 +0.1**
NJ2 pmax pmax
comp=Z,28nm,0.8s
LVZ Lovozero 58.01 352 P **P 12 54 49.7 -0.6**
LVZ Lovozero 58.01 352 *ce*P **P 12 54 49.9 -0.4**
LVZ pmax pmax
comp=Z,29nm,0.8s
KMSC Kings Mountain 58.09 73 IAmb IAmb 12 54 50.8
comp=Z,20nm,1.1s
KMSC Kings Mountain 58.09 73 P **P 12 54 50.5 -0.7**
baz=316
GOGA Godfrey 58.11 76 P **P 12 54 51.1 -0.3**
baz=316
BORG Borgarnes 58.34 18 LR LR 13 22 08.1
comp=Z,583nm,20.2s,baz=2.1,slow=38
ZAA0 Zalesovo Array 58.85 320 IAmb IAmb 12 54 57.3
comp=Z,10nm,0.9s
ZALV Zalesovo Beam 58.85 320 P **P 12 54 56.0 -0.3**
comp=Z,9.1nm,0.8s,baz=38,slow=7.5,SNR=35
ZALV PcP **PcP 12 55 46.1 +0.6**
comp=Z,4.3nm,0.8s,baz=27,slow=1.7,SNR=5.1
ZALV LR LR 13 23 03.3
comp=Z,1μm,18.3s,baz=332,slow=39
comp=Z,9.1nm,0.8s
ZALV Zalesovo Beam 58.85 320 P **P 12 54 55.6 -0.7**
ZALV Zalesovo Beam 58.85 320 *i* P **P 12 54 56.4 +0.1**
ZALV pmax pmax
comp=Z,9.0nm,0.9s
V58A Windy Hill, Pi 58.87 71 IAmb IAmb 12 55 07.3
comp=Z,13nm,0.8s
T59A Double "B" Far 58.90 69 IAmb IAmb 12 55 13.4
comp=Z,15nm,0.9s
LYN LuoYang 59.79 288 ⇑*i*P **P 12 55 03.3 +0.2**
LYN pmax pmax
comp=Z,20nm,1.3s
LYN LR LR
comp=Z,760nm,16.9s
LYN LR LR
comp=Z,410nm,14.3s
LYN LR LR
comp=Z,670nm,21.4s
DGZ Jazzator, Alta 61.07 316 *c i*P **P 12 55 12.2 +0.4**
DGZ pmax pmax
comp=Z,28nm,1.1s
XAN Xi'an 62.16 290 P **P 12 55 19.5 +0.3**
XAN pP pwP 12 55 31.5 +5.6
XAN pmax pmax
comp=Z,28nm,1.0s
PRGR Permogore 62.78 345 *e*P **P 12 55 20.9 -1.9**
PRGR pmax pmax
comp=Z,31nm,0.9s
GTA Gaotai 63.06 300 ⇑P **P 12 55 25.0 -0.3**
GTA PP **PP 12 57 43.0 -0.6**
GTA ScS **ScS 13 05 18.3 +0.7**
GTA pmax pmax
comp=Z,25nm,1.5s
GTA LR LR
comp=Z,780nm,15.3s
GTA LR LR
comp=Z,1μm,15.3s
GTA LR LR
comp=Z,1μm,16.4s
LZH Lanzhou 63.43 295 *e*P **P 12 55 28.3 +0.5**
LZH pmax pmax
comp=Z,59nm,1.5s
LZH LR LR
comp=Z,780nm,15.3s
LZH LR LR
comp=Z,1μm,15.3s
LZH LR LR
comp=Z,1μm,16.4s
KURK Kurchatov 63.74 321 P **P 12 55 29.3 -0.1**
KURK Kurchatov 63.74 321 *c i*P **P 12 55 29.6 +0.2**
KURK pmax pmax
comp=Z,62nm,1.1s
KURBB Kurchatov Arra 63.85 321 P **P 12 55 30.0 -0.1**
ZSN Zaisan 63.89 315 *c i*P **P 12 55 30.4 -0.1**
ZSN pmax pmax
comp=Z,15nm,0.8s
ZSN Zaisan 63.89 315 ⇑*i*P **P 12 55 30.4 -0.1**
comp=Z,15nm,0.8s,baz=315
SVE Sverdlovsk 64.16 335 *de*P **P 12 55 32.6 +0.5**
SVE pmax pmax
comp=Z,63nm,1.1s
CNSH ChangSha 64.24 283 ⇑P **P 12 55 32.8 -0.2**
CNSH pmax pmax
comp=Z,50nm,1.0s
KLMR Klimovskoe 64.38 348 *e*P **P 12 55 32.0 -1.4**
KLMR pmax pmax
comp=Z,46nm,1.3s
KLMR Klimovskoe 64.38 348 *e*P **P 12 55 32.1 -1.4**
KLMR AMP 12 55 34.4
comp=Z,46nm,1.3s
BVA0 Borovoye Array 64.68 327 *i* P **P 12 55 35.5 0.0**
BVAR Borovoye Array 64.68 327 LR LR 13 28 44.4
comp=Z,693nm,18.1s,baz=17,slow=41
BRVK Borovoye 64.68 327 P **P 12 55 36.0 +0.4**
BRVK Borovoye 64.68 327 P **P 12 55 36.0 +0.4**
BRVK pmax pmax
comp=Z,48nm,0.9s
FINES FINESS Array B 64.99 355 P **P 12 55 37.0 -0.4**
comp=Z,28nm,0.9s,baz=35,slow=7.0,SNR=32
comp=Z,28nm,0.9s
FINES FINESS Array B 64.99 355 *i* P **P 12 55 38.0 +0.6**
FINES pmax pmax
comp=Z,29nm,0.9s
KIRV Kirov 65.01 342 LR LR 13 29 15.8
comp=Z,855nm,18.2s,baz=59,slow=41
KIRV Kirov 65.01 342 *ce*P **P 12 55 36.5 -1.1**
ARU Arti 65.03 336 LR LR 13 27 25.1
comp=Z,588nm,18.7s,baz=357,slow=39
ARU Arti 65.03 336 P **P 12 55 38.2 +0.5**
ARU Arti 65.03 336 *c i*P **P 12 55 37.6 -0.2**
ARU 12 56 12.3
ARU 12 57 57.0
ARU S **S 13 04 21.8 +2.9**
ARU SS **SS 13 08 29.5 -0.4**
ARU pmax pmax
comp=Z,57nm,1.0s
TAOE Nuku Hiva Isla 65.31 155 *e*LR LR 13 15 13.6
comp=Z,422nm,21.8s
TAOE Nuku Hiva Isla 65.31 155 *e*T T 14 07 09.4
comp=Z,17nm,0.2s
MK31 Makanchi Array 65.48 317 IAmb IAmb 12 55 41.6
comp=Z,13nm,1.0s
MK31 Makanchi Array 65.48 317 *i* P **P 12 55 40.0 -0.9**
MK31 pmax pmax
comp=Z,11nm,0.7s
MKAR Makanchi Array 65.48 317 P **P 12 55 40.2 -0.6**
comp=Z,7.7nm,0.8s,baz=44,slow=5.8,SNR=67
MKAR LR LR 13 27 38.4
comp=Z,593nm,18.0s,baz=11,slow=39
comp=Z,7.7nm,0.8s
WMQ Urumqi 65.52 311 *e*P **P 12 55 42.0 +0.7**
WMQ pP sP 12 55 47.0 -0.2
WMQ PcP **PcP 12 56 14.0 +1.1**
WMQ pmax pmax
comp=Z,53nm,0.7s
WMQ LR LR
comp=Z,1μm,18.9s
WMQ LR LR
comp=Z,1μm,15.9s
WMQ LR LR
comp=Z,430nm,21.9s
NB2 NORSAR Subarra 65.55 3 P **P 12 55 41.1 -0.1**
comp=Z,5.6nm,0.8s,baz=358,slow=6.5
NOA NORSAR Array B 65.55 3 P **P 12 55 41.6 +0.5**
comp=Z,18nm,0.9s,baz=357,slow=6.5,SNR=21
NOA LR LR 13 25 48.7
comp=Z,284nm,18.5s,baz=345,slow=37
comp=Z,18nm,0.9s
RAF Rauma 65.58 357 *e*P **P 12 55 41.4 +0.2**
MAKZ Makanchi 65.59 317 P **P 12 55 40.9 -0.7**
MAKZ IAmb IAmb 12 55 42.4
comp=Z,30nm,1.2s
MAKZ Makanchi 65.59 317 P **P 12 55 40.9 -0.7**
MAKZ pmax pmax
comp=Z,30nm,1.3s
BRZS Berezniki 66.49 324 *c i*P **P 12 55 46.8 -0.5**
BRZS pmax pmax
comp=Z,14nm,0.8s
BRZS Berezniki 66.49 324 ⇑*i*P **P 12 55 46.8 -0.5**
comp=Z,14nm,0.8s,baz=324
UPP Uppsala 66.82 359 *e*P **P 12 55 49.1 -0.1**
KONO Kongsberg 66.89 4 P **P 12 55 50.8 +1.1**
KONO Kongsberg 66.89 4 P **P 12 55 50.8 +1.1**
KONO pmax pmax
comp=Z,45nm,1.1s
VSU Vasula 67.93 354 *e*P **P 12 55 56.7 +0.5**
GOMU GeErMu 68.07 301 P **P 12 55 58.0 0.0**
GOMU pmax pmax
comp=Z,19nm,0.9s
OTUK Ortayu 68.08 324 P **P 12 55 56.8 -0.6**
VIKU Vikbolandet 68.18 360 *e*P **P 12 55 58.2 +0.4**
SLIT Slitere, Latvi 68.97 357 *e*P **P 12 56 02.9 +0.2**
GYA Guiyang 69.15 286 ⇓*i*P **P 12 56 05.5 +0.9**
GYA pmax pmax
comp=Z,64nm,1.1s
PDGK Podgornoye 69.45 316 *i* P **P 12 56 05.7 -0.5**
PDGK pmax pmax
comp=Z,51nm,1.1s
MOS Moscow 69.60 348 *e*P **P 12 56 05.9 -0.8**
MOS pmax pmax
comp=Z,50nm,0.6s
SHLS Shalkode 69.60 316 *c i*P **P 12 56 06.3 -0.8**
SHLS pmax pmax
comp=Z,42nm,1.5s
SHLS Shalkode 69.60 316 ⇑*i*P **P 12 56 06.4 -0.8**
comp=Z,42nm,1.5s,baz=316
KPKS Kokpek 69.67 317 *e*P **P 12 56 07.7 +0.2**
KPKS pmax pmax
comp=Z,36nm,1.4s
KPKS Kokpek 69.67 317 *e*P **P 12 56 07.7 +0.2**
comp=Z,36nm,1.4s,baz=317
UZB Uzynbulak 69.79 316 *e*P **P 12 56 06.5 -1.8**
UZB Uzynbulak 69.79 316 *e*P **P 12 56 06.6 -1.8**
baz=316
ESK Eskdalemuir 70.14 12 P **P 12 56 10.9 +0.9**
ESK Eskdalemuir 70.14 12 P **P 12 56 11.0 +0.9**
ESK pmax pmax
comp=Z,36nm,1.0s
BTLS Baital 70.17 321 *c i*P **P 12 56 10.5 +0.1**
BTLS pmax pmax
comp=Z,25nm,1.3s
BTLS Baital 70.17 321 ⇑*i*P **P 12 56 10.6 +0.1**
comp=Z,25nm,1.3s,baz=320
DEL Delary 70.20 2 *e*P **P 12 56 11.0 +0.6**
KUU Kurty 70.25 318 *e*P **P 12 56 09.1 -1.9**
KUU Kurty 70.25 318 *e*P **P 12 56 09.2 -1.8**
baz=318
OBN Obninsk 70.35 348 *de*P **P 12 56 11.3 0.0**
OBN *PP **sP 12 56 17.0 -0.1**
OBN 12 56 33.0
OBN S **S 13 05 22.0 -0.6**
OBN pmax pmax
comp=Z,32nm,0.8s
OBN MLR MLR
comp=Z,479nm,17.0s
MDOK Medeo 70.58 318 *e*P **P 12 56 11.4 -1.7**
MDOK Medeo 70.58 318 *e*P **P 12 56 11.4 -1.7**
baz=317
ISAL Salakas 70.84 354 *e*P **P 12 56 15.9 +1.5**
PABE Paberze 71.02 356 *e*P **P 12 56 15.9 +0.5**
AB31 Akbulak array 71.14 332 P **P 12 56 16.2 -0.1**
BELG Belogornoye 71.19 341 LR LR 13 31 40.2
comp=Z,789nm,18.5s,baz=354,slow=39
BELG Belogornoye 71.19 341 *i* P **P 12 56 16.8 +0.3**
BELG pmax pmax
comp=Z,18nm,0.9s
SGDS Sogindy 71.29 319 *e*P **P 12 56 16.9 -0.5**
SGDS pmax pmax
comp=Z,13nm,0.8s
SGDS Sogindy 71.29 319 *e*P **P 12 56 16.9 -0.5**
comp=Z,13nm,0.8s,baz=319
TKM2 Tokmak 2 71.36 318 P **P 12 56 18.8 +0.8**
SNR=9.8
TKM2 Tokmak 2 71.36 318 *i* P **P 12 56 18.2 +0.2**
TKM2 pmax pmax
comp=Z,48nm,1.4s
NACGM Naroch 71.47 354 ⇓*e*P **P 12 56 18.7 +0.6**
baz=6.3
USP Ospenovka 71.50 319 P **P 12 56 19.6 +1.0**
SNR=12
CHMS Chumysh 71.63 319 P **P 12 56 20.6 +1.2**
SNR=12
CHMS Chumysh 71.63 319 *i* P **P 12 56 19.8 +0.4**
CHMS pmax pmax
comp=Z,68nm,1.3s
ULHL Ulahol 71.67 318 P **P 12 56 21.0 +1.2**
SNR=8.8
MNK Minsk 71.80 353 *i* P **P 12 56 21.2 +1.1**
MNK *i* PPP PPP 13 00 44.7
MNK *i* S **S 13 05 42.0 +2.6**
MNK *i* SS **SS 13 10 20.3 +6.2**
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=Z,89nm,0.9s
MNK pmax pmax
comp=N,53nm,0.8s
MNK Minsk 71.80 353 *i* P **P 12 56 21.2 +1.1**
comp=E,3.0nm,0.9s
MNK *i* P **P 12 56 21.2 +1.1**
comp=N,53nm,0.8s
MNK *i* P **P 12 56 21.2 +1.1**
comp=Z,89nm,0.9s,baz=6.6
MNK *i* PP PP 12 59 09.6 +11
MNK *i* PPP PPP 13 00 44.7
MNK *i* S **S 13 05 42.1 +2.6**
MNK *i* SS **SS 13 10 20.3 +6.2**
MNK *i* SSS SSS 13 13 40.0
KBK Karagaybulak 71.84 319 P **P 12 56 21.8 +1.0**
SNR=16
PZH PanZhiHua 71.90 290 P **P 12 56 22.8 +1.5**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.7s
PPT Papeete 71.92 166 LR LR 13 21 12.2
comp=Z,392nm,21.8s,baz=356,slow=30
PPT2 Papeete2 71.95 166 *e*LR LR 13 18 17.8
comp=Z,351nm,21.8s
PPT2 *e*LR LR 13 18 18.4
comp=Z,416nm,21.5s
AAK Ala-Archa 72.03 319 P **P 12 56 23.3 +1.3**
SNR=18
AAK Ala-Archa 72.03 319 LR LR 13 31 44.0
comp=Z,606nm,19.4s,baz=7.5,slow=39
AAK Ala-Archa 72.03 319 P **P 12 56 22.9 +1.0**
AAK Ala-Archa 72.03 319 *ce*P **P 12 56 23.0 +1.0**
AAK pmax pmax
comp=Z,52nm,1.7s
EKS2 Erkin-Say 72.29 319 P **P 12 56 24.3 +0.9**
SNR=20
UCH Uchtor 72.38 319 P **P 12 56 25.3 +0.9**
SNR=9.3
KMI Kunming 72.41 288 ⇑P **P 12 56 27.3 +2.7**
KMI pmax pmax
comp=Z,16nm,0.8s
LPSR Galich'ya Gora 72.48 346 *e*P **P 12 56 23.1 -1.1**
LPSR pmax pmax
comp=Z,60nm,1.0s
AML Almayashu 72.78 319 P **P 12 56 27.9 +1.2**
SNR=23
MSVF Nonsavu 72.90 199 LR LR 13 23 09.2
comp=Z,332nm,20.2s,baz=17,slow=31
KK31 Karatay Array 73.14 322 *i* P **P 12 56 28.3 -0.1**
VORR Voronezh 73.35 346 *e*P **P 12 56 28.7 -0.7**
VORR pmax pmax
comp=Z,54nm,1.7s
VRH Novokhopyorsk 73.41 344 *e*P **P 12 56 28.2 -1.5**
VRH pmax pmax
comp=Z,40nm,1.0s
VSR Storozhevoye 73.80 346 *e*P **P 12 56 30.6 -1.4**
VSR pmax pmax
comp=Z,60nm,1.2s
KSH Kashi 74.08 316 P **P 12 56 38.3 +4.2**
KSH sP PcP 12 56 46.5 -2.7
KSH pmax pmax
comp=Z,26nm,1.2s
IUG Iuzhnay 74.15 322 *e*P **P 12 56 33.3 -1.1**
IUG Iuzhnay 74.15 322 *e*P **P 12 56 33.4 -1.1**
baz=322
RUE Ruedersdorf 74.19 2 *e*P **P 12 56 35.6 +1.4**
RAR Rarotonga 74.63 177 LR LR 13 25 25.4
comp=Z,216nm,19.7s,baz=6.5,slow=32
LSA Lhasa 75.08 300 P **P 12 56 41.5 +1.0**
LSA pmax pmax
comp=Z,52nm,0.9s
CLL Collm 75.35 2 ⇑*i*P **P 12 56 41.6 +0.6**
CLL pmax pmax
comp=Z,36nm,1.1s
CLL Collm 75.35 2 ⇑*i*P **P 12 56 41.6 +0.6**
comp=Z,36nm,1.1s
AKASG Malin Array Be 75.47 352 P **P 12 56 41.2 -0.5**
comp=Z,27nm,0.8s,baz=12,slow=5.8,SNR=78
AKASG LR LR 13 31 45.4
comp=Z,608nm,19.4s,baz=30,slow=37
comp=Z,27nm,0.8s
AKASG Malin Array Be 75.47 352 *i* P **P 12 56 41.2 -0.5**
AKASG pmax pmax
comp=Z,35nm,0.9s
PMG Port Moresby 75.49 231 LR LR 13 24 05.8
comp=Z,223nm,19.9s,baz=331,slow=31
SNF Seneffe 75.67 8 *dP* **P 12 56 43.8 +0.9**
BSTI Sart Tilman 75.70 7 *dP* **P 12 56 44.2 +1.2**
MEM Membach 75.70 7 *dP* **P 12 56 43.8 +0.7**
comp=Z,26nm,0.9s
BTNL Ternell 75.74 7 *dP* **P 12 56 44.2 +0.9**
comp=Z,21nm,1.1s
BRG Berggiesshubel 75.80 2 *eP* **P 12 56 46.8 +3.1**
BRG *e* 12 56 57.0
BRG pmax pmax
comp=Z,33nm,1.2s
BCLA Clavier 75.84 7 *dP* **P 12 56 44.9 +1.1**
BGES Gesves 75.86 8 *dP* **P 12 56 44.2 +0.3**
comp=Z,11nm,0.9s
KSP Ksiaz 75.86 0 *eP* **P 12 56 44.8 +0.8**
BMRD Maredsous 75.91 8 *dP* **P 12 56 45.2 +1.0**
comp=Z,17nm,1.1s
BHOU Houvegnez 75.96 7 *dP* **P 12 56 45.9 +1.3**
comp=Z,10nm,0.9s
RCHB Rochefort 76.10 8 *dP* **P 12 56 47.0 +0.3**
comp=Z,21nm,1.0s
DOU Dourbes 76.11 8 *dP* **P 12 56 45.8 +0.4**
comp=Z,13nm,1.1s
CHVC Chvalec 76.11 0 *eP* **P 12 56 46.4 +0.9**
GAMI Galela, Maluku 76.14 254 P **P 12 56 45.4 -0.6**
comp=Z,39nm,1.3s
OSTC Ostas 76.14 0 *eP* **P 12 56 46.3 +0.6**
PVCC Panska Ves 76.16 1 *eP* **P 12 56 46.8 +1.1**
PVCC Panska Ves 76.16 1 *eP* **P 12 56 46.8 +1.1**
UPC Upice 76.19 0 *eP* **P 12 56 46.7 +0.8**
UPC Upice 76.19 0 *eP* **P 12 56 46.7 +0.8**
DPC Dobruska-Polom 76.35 0 *eP* **P 12 56 47.9 +1.0**
DPC Dobruska-Polom 76.35 0 *eP* **P 12 56 47.9 +1.0**
SIJI Sorong 76.39 249 P **P 12 56 46.8 -0.7**
comp=Z,30nm,0.9s
NKC Novy Kostel 76.41 3 *eP* **P 12 56 48.4 +1.2**
NKC Novy Kostel 76.41 3 *eP* **P 12 56 48.4 +1.2**
OJC Ojcow 76.45 358 *eP* **P 12 56 46.4 -1.0**
OJC Ojcow 76.45 358 IAmb IAmb 12 56 47.2
comp=Z,17nm,1.0s
KRLC Kraliky 76.63 360 *eP* **P 12 56 49.5 +1.1**
KRLC Kraliky 76.63 360 *eP* **P 12 56 49.5 +1.1**
WLF Walferdange 76.66 7 *dP* **P 12 56 49.2 +0.7**
comp=Z,18nm,1.1s
LVV L'vov 76.70 355 *eP* **P 12 56 49.0 +0.2**
PRU Pruhonice 76.70 1 *eP* **P 12 56 49.7 +0.9**

PRU	Pruhonice	76.70	1	eP	P	12 56 49.7 +0.9
GOPC	GO Pecny, Ondr	76.78	1	eP	P	12 56 50.1 +0.9
GOPC	GO Pecny, Ondr	76.78	1	eP	P	12 56 50.1 +0.9
OKC	Ostrava-Krasne	76.86	359	eP	P	12 56 50.2 +0.5
OKC	Ostrava-Krasne	76.86	359	eP	P	12 56 50.2 +0.5
GRFO	Grafenberg	76.91	4	P	P	12 56 51.6 +1.6
GRFO	Grafenberg	76.91	4	P	P	12 56 51.6 +1.6
GRFO				pmax	pmax	
	comp=Z,45nm,1.2s					
MORC	Moravsky Berou	76.92	359	⇑P	P	12 56 50.5 +0.4
MORC	Moravsky Berou	76.92	359	IAmb	IAmb	12 56 51.9
	comp=Z,16nm,0.9s					
MORC	Moravsky Berou	76.92	359	P	P	12 56 50.5 +0.4
MORC	Moravsky Berou	76.92	359	eP	P	12 56 50.5 +0.4
STHS	Stebnicka Huta	77.22	357	eP	P	12 56 52.4 +0.7
STHS				pmax	pmax	
	comp=Z,41nm,1.1s					
MAUC	Maruska	77.33	359	eP	P	12 56 53.8 +1.4
VRAC	Vranov	77.39	0	⇑P	P	12 56 53.3 +0.6
VRAC	Vranov	77.39	0	eP	P	12 56 53.3 +0.6
KHC	Kasperske Hory	77.54	2	eP	P	12 56 54.7 +1.1
KHC				e		12 57 00.0
KHC	Kasperske Hory	77.54	2	eP	P	12 56 54.7 +1.1
KHC				epP	sP	12 57 00.0 +0.6
FAKI	Fak Fak	77.55	247	P	P	12 56 53.2 -0.8
	comp=Z,25nm,1.3s					
TBI	Tubuai	77.63	167	eLR	LR	13 20 56.0
	comp=Z,1μm,21.2s					
TBI				eLR	LR	13 20 56.6
	comp=Z,8μm,20.8s					
KRUC	Moravsky	77.64	0	eP	P	12 56 54.7 +0.6
CRVS	Cervenica-Dubn	77.72	357	eP	P	12 56 55.5 +0.9
CRVS				pmax	pmax	
	comp=Z,280nm,2.4s					
GEC2	GERESS Array S	77.83	2	IAmb	IAmb	12 56 57.0
	comp=Z,14nm,0.9s					
GERES	GERESS Array B	77.83	2	P	P	12 56 55.9 +0.6
	comp=Z,11nm,0.9s,baz=6.9,slow=4.4,SNR=41					
	comp=Z,11nm,0.9s					
JAVC	Velka Javorina	77.84	359	eP	P	12 56 57.1 +1.8
CKRC	Cesky Krumlov	77.86	2	eP	P	12 56 56.4 +1.0
UZH	Uzhgorod	77.96	356	eP	P	12 56 56.0 +0.2
UZH				e		12 56 59.2
UZH				i		12 57 05.7
BFO	Black Forest	78.13	6	P	P	12 56 57.5 +0.7
BFO				IAmb	IAmb	12 56 58.6
	comp=Z,20nm,1.2s					
BFO	Black Forest	78.13	6	P	P	12 56 57.5 +0.7
BFO				pmax	pmax	
	comp=Z,20nm,1.2s					
ECH	Echery	78.17	7	IAmb	IAmb	12 56 58.8
	comp=Z,24nm,0.9s					
KECS	Kecovo	78.17	357	eP	P	12 56 58.1 +1.1
SMOL	Smolenice	78.19	360	eP	P	12 56 58.6 +1.5
SMOL				pmax	pmax	
	comp=Z,12nm,1.0s					
VYHS	Vyhne	78.19	359	eP	P	12 56 58.1 +0.9
VYHS				pmax	pmax	
	comp=Z,37nm,1.2s					
LBMI	Labuha	78.32	253	P	P	12 56 58.1 -0.2
	comp=Z,30nm,1.1s					
MODS	Modra-Piesok	78.33	360	eP	P	12 56 59.3 +1.4
MODS				pmax	pmax	
	comp=Z,84nm,1.1s					
ABAH	Abaujker	78.33	357	P	P	12 56 59.1 +1.2
TRPA	Tarpa	78.45	356	⇑P	P	12 56 60.0 +1.4
TRPA	Tarpa	78.45	356	P	P	12 56 59.6 +1.0
ZST	Bratislava	78.51	360	eP	P	12 57 00.5 +1.6
ZST				pmax	pmax	
	comp=Z,92nm,1.1s					
UBPT	Khong Chiam	78.57	280	P	P	12 56 59.8 +0.1
	comp=Z,40nm,1.3s					
CONA	Conrad Observa	78.77	1	iP	P	12 57 01.7 +1.2
	comp=Z,35nm,1.2s,SNR=12					
BUR08	Bucovina Ar. S	78.80	354	IAmb	IAmb	12 57 02.4
	comp=Z,20nm,1.0s					
BURAR	Bucovina Array	78.83	354	⇑P	P	12 57 01.5 +0.6
BURAR	Bucovina Array	78.83	354	IAmb	IAmb	12 57 02.9
	comp=Z,22nm,0.9s					
MOA	Molln	78.83	2	eP	P	12 57 01.7 +1.0
	comp=Z,14nm,1.0s					
MYLDM	Lahad Datu	78.85	264	P	P	12 57 00.9 -0.3
	comp=Z,20nm,1.0s					
BIOA	Bad Ischl, Aus	78.98	2	eP	P	12 57 02.7 +1.1
	comp=Z,14nm,1.3s					
RONA	Rosalia, Austr	79.00	0	iP	P	12 57 03.1 +1.4
	comp=Z,19nm,1.2s,SNR=5.4					
MFF	Saint Martin d	79.08	12	eP	P	12 57 02.4 +0.3
MFF				pmax	pmax	
	comp=Z,59nm,1.4s					
RETA	Reutte	79.09	4	eP	P	12 57 03.3 +1.1
	comp=Z,14nm,0.9s					
GUN	Gumba	79.22	303	eP	P	12 57 04.1 +0.5
	comp=Z,242nm,1.0s					
MOTA	Moosalm	79.25	4	iP	P	12 57 04.0 +0.9
	comp=Z,44nm,1.1s,SNR=14					
DAVA	Damuels	79.25	5	eP	P	12 57 04.6 +1.4
	comp=Z,4.2nm,0.6s					
JIRN	Jiri	79.27	302	eP	P	12 57 04.3 +0.4
	comp=Z,179nm,0.8s					
WATA	Walderalm	79.28	4	iP	P	12 57 04.4 +1.1
	comp=Z,37nm,1.1s,SNR=8.8					
CSKK	Cskako	79.33	359	P	P	12 57 04.9 +1.5
WTTA	Wattenberg	79.35	4	iP	P	12 57 05.1 +1.4
	comp=Z,37nm,0.8s,SNR=10					
SQTA	Sankt Quirin	79.38	4	iP	P	12 57 05.1 +1.3
	comp=Z,48nm,0.9s,SNR=8.5					
ARCR	ARCALIA	79.41	355	⇑P	P	12 57 04.4 +0.5
BIZ	Bicaz	79.45	353	⇑P	P	12 57 04.9 +0.8
ARSA	Arzberg	79.45	1	iP	P	12 57 05.6 +1.5
	comp=Z,25nm,1.0s,SNR=7.9					
MPLH	Magyarpolny	79.53	359	P	P	12 57 05.7 +1.1
CHTO	Chiang Mai	79.54	287	P	P	12 57 03.2 -1.8
CHTO	Chiang Mai	79.54	287	P	P	12 57 03.2 -1.8
CHTO				pmax	pmax	
	comp=Z,13nm,1.1s					
FETA	Feichten	79.56	4	iP	P	12 57 06.1 +1.3
	comp=Z,40nm,1.0s,SNR=16					
KBA	Koelnbreinsper	79.59	2	iP	P	12 57 06.8 +1.8
	comp=Z,46nm,0.8s,SNR=8.3					
KKN	Kakani	79.61	303	eP	P	12 57 05.8 +0.2
	comp=Z,19nm,1.4s					
RAMN	Ramite	79.64	302	eP	P	12 57 06.1 +0.3
	comp=Z,152nm,0.9s					
PKI	Pulchoki	79.73	303	eP	P	12 57 06.2 -0.1
	comp=Z,131nm,1.1s					
PKIN	Phulchoki	79.73	303	eP	P	12 57 06.0 -0.3
	comp=Z,120nm,1.2s					
GKN	Gorkha	79.76	304	eP	P	12 57 06.4 +0.1
	comp=Z,170nm,1.1s					
DRGR		79.78	356	⇑P	P	12 57 06.4 +0.3
DRGR		79.78	356	P	P	12 57 06.3 +0.3
CJR	Cluj-Napoca	79.82	355	⇑P	P	12 57 07.0 +0.8
CM31	Chiang Mai Arr	79.82	287	IAmb	IAmb	12 57 07.9
	comp=Z,31nm,1.1s					
CMAR	Chiang Mai Arr	79.82	287	P	P	12 57 06.4 -0.1
	comp=Z,18nm,0.9s,baz=16,slow=5.4,SNR=101					
CMAR				LR	LR	13 36 37.8
	comp=Z,307nm,18.1s,baz=50,slow=39					
	comp=Z,18nm,0.9s					
CMAR	Chiang Mai Arr	79.82	287	iP	P	12 57 06.8 +0.3
CMAR				pmax	pmax	
	comp=Z,22nm,1.0s					
DZM	Mont Dzumac	79.83	208	eLR	LR	13 21 57.3
	comp=Z,564nm,22.9s					
TESR	Tescani	79.83	353	⇑P	P	12 57 05.9 -0.3
DMN	Daman	79.85	303	eP	P	12 57 07.0 +0.1
	comp=Z,105nm,1.0s					
ABTA	Abfaltersbach	79.89	3	iP	P	12 57 07.6 +1.0
	comp=Z,31nm,1.1s,SNR=7.5					
DANN	Dangsing	79.90	304	eP	P	12 57 07.6 +0.4
	comp=Z,289nm,0.9s					
FUORN	Ofenpass-Fuorn	79.94	4	IAmb	IAmb	12 57 09.6
	comp=Z,28nm,1.1s					
SOKA	Soboth	80.02	1	iP	P	12 57 08.4 +1.1
	comp=Z,60nm,1.2s,SNR=13					
MYKA	Terra Mystica	80.04	2	eP	P	12 57 08.9 +1.5
	comp=Z,11nm,0.9s					
MAK	Makhachkala	80.18	338	eP	P	12 57 03.9 -4.2
MAK				eS	S	13 07 05.2 -6.9
MAK				eSSS	SSS	13 15 42.1
MAK				pmax	pmax	
	comp=Z,292nm,1.3s					
OBKA	Obir	80.18	2	iP	P	12 57 09.6 +1.4
	comp=Z,63nm,0.9s,SNR=8.7					
CLUD	Cludinico	80.20	3	IAmb	IAmb	12 57 11.0
	comp=Z,12nm,0.8s					
NIL	Nilore	80.23	315	P	P	12 57 09.5 +0.9
NIL	Nilore	80.23	315	P	P	12 57 09.5 +0.9
NIL				pmax	pmax	
	comp=Z,43nm,1.0s					
PRED	Cave del Predi	80.23	2	IAmb	IAmb	12 57 09.9
	comp=Z,18nm,1.1s					
KVAR	Kislovodsk Arr	80.23	341	LR	LR	13 36 55.4
	comp=Z,355nm,18.4s,baz=261,slow=39					
KIV	Kislovodsk	80.23	341	⇑P	P	12 57 07.8 -0.7
KIV	Kislovodsk	80.23	341	P	P	12 57 09.3 +0.8
KIV	Kislovodsk	80.23	341	eP	P	12 57 09.4 +0.9
KIV				pmax	pmax	
	comp=Z,38nm,1.0s					
GROS	Grobnik	80.24	1	iP	P	12 57 08.9 +0.4
OZUR		80.31	354	⇑P	P	12 57 09.4 +0.6
GROC	Groznyy	80.32	339	eP	P	12 57 10.0 +1.1
GROC				e		12 57 16.7
SANI	Sanana	80.33	253	P	P	12 57 07.9 -1.4
	comp=Z,20nm,1.1s					
SIRR	Siria	80.35	357	⇑P	P	12 57 09.8 +0.8
KBZ	Khabaz	80.41	341	P	P	12 57 11.1 +1.8
	comp=Z,21nm,0.9s,baz=335,slow=2.4,SNR=32					
KBZ				LR	LR	13 36 59.2
	comp=Z,431nm,19.1s,baz=10,slow=39					
	comp=Z,21nm,0.9s					
KBZ	Khabaz	80.41	341	ceP	P	12 57 10.9 +1.6
KBZ				pmax	pmax	
	comp=Z,25nm,0.9s					
DOPR	Dopca	80.46	354	⇑P	P	12 57 10.5 +0.9
VRI	Vrincioaia	80.47	353	⇑P	P	12 57 10.3 +0.6
VRI	Vrincioaia	80.47	353	P	P	12 57 10.2 +0.6
MORH	Mrgy, Hungar	80.48	359	⇑P	P	12 57 10.1 +0.5
MORH	Mrgy, Hungar	80.48	359	P	P	12 57 09.6 0.0
PLOR	Plostina	80.49	353	⇑P	P	12 57 10.2 +0.4
COVR	Voineasa-Covas	80.53	353	⇑P	P	12 57 10.9 +0.9
KOVH	Kovagotottos	80.61	359	P	P	12 57 11.0 +0.7
LPL	La Plagne	80.82	7	eP	P	12 57 12.9 +1.1
LPL				pmax	pmax	
	comp=Z,15nm,1.2s					
MLR	Muntele Rosu	80.90	353	⇑P	P	12 57 12.9 +0.8
MLR	Muntele Rosu	80.90	353	LR	LR	13 36 13.0
	comp=Z,591nm,18.0s,baz=15,slow=38					
MLR	Muntele Rosu	80.90	353	IAmb	IAmb	12 57 14.3
	comp=Z,17nm,1.2s					
CAF	Calviac	80.99	10	eP	P	12 57 12.7 +0.2
CAF				pmax	pmax	
	comp=Z,15nm,1.2s					
BZS	Buzias	81.00	357	⇑P	P	12 57 12.9 +0.4
VOIR		81.01	354	⇑P	P	12 57 13.1 +0.5
CFR	Carcaliu	81.04	352	⇑P	P	12 57 13.3 +0.7
LOT	Lotru	81.07	355	⇑P	P	12 57 12.9 -0.1
ARR	Arges	81.11	354	⇑P	P	12 57 14.2 +1.1
ZEI	Tsey	81.12	340	eP	P	12 57 13.3 -0.1
ZEI				pmax	pmax	
	comp=Z,14nm,0.8s					
SOC	Sochi	81.13	343	eP	P	12 57 13.2 0.0
SOC				e		13 00 22.6
SOC				eS	S	13 07 24.3 +2.2
SOC				eSSS	SSS	13 16 04.7
SOC				pmax	pmax	
	comp=Z,42nm,0.8s					
SOC				MLR	MLR	
	comp=Z,311nm,20.0s					
KBL	Kabul	81.17	319	P	P	12 57 12.9 -0.9
KBL				IAmb	IAmb	12 57 15.3
	comp=Z,19nm,1.0s					
KBL	Kabul	81.17	319	P	P	12 57 12.9 -0.9
KBL				pmax	pmax	
	comp=Z,19nm,1.0s					
GZR	Gura Zlata	81.18	356	⇑P	P	12 57 14.1 +0.6
ISR	Istrita	81.23	353	⇑P	P	12 57 14.4 +0.7
TPGR	Topolog	81.34	352	⇑P	P	12 57 14.1 -0.2
ONI	Oni	81.40	340	IAmb	IAmb	12 57 18.7
	comp=Z,12nm,1.0s					
AKT	Akhty	81.53	337	eP	P	12 57 15.5 0.0
AKT				e		12 57 20.9
AKT				pmax	pmax	
	comp=Z,52nm,0.9s					
HERR	Herculane	81.70	356	⇑P	P	12 57 16.6 +0.4
TIRR	Tirgusor	81.73	352	⇑P	P	12 57 16.4 +0.1
MDVR	Moldovita	81.83	356	⇑P	P	12 57 17.1 +0.2
DJES	Djerdap	81.91	356	⇑P	P	12 57 17.7 +0.4
GEYT	Alibeck	82.00	328	P	P	12 57 18.6 +0.6
	comp=Z,21nm,0.9s,baz=319,slow=4.3,SNR=44					
GEYT				PP	PP	13 00 25.5 +0.6
	comp=Z,0.8nm,0.5s,baz=328,slow=5.3,SNR=3.6					
GEYT				LR	LR	13 35 33.2
	comp=Z,371nm,19.9s,baz=44,slow=37					
	comp=Z,21nm,0.9s					
GEYT	Alibeck	82.00	328	IAmb	IAmb	12 57 20.8
	comp=Z,25nm,0.9s					
GYA0B	ALIBECK ARRAY	82.00	328	IAmb	IAmb	12 57 20.7
	comp=Z,22nm,0.9s					
DIVS	Divibare	82.57	358	IAmb	IAmb	12 57 22.6
	comp=Z,23nm,1.0s					
BLKB	Belogradchik	82.95	356	⇑P	P	12 57 22.7 -0.1
GNI	Garni	83.47	339	LR	LR	13 40 30.2
	comp=Z,372nm,18.6s,baz=11,slow=40					
GNI	Garni	83.47	339	ceP	P	12 57 26.7 +1.0
GNI				pmax	pmax	
	comp=Z,60nm,1.3s					
DIKM	Dikmen	83.72	346	⇑P	P	12 57 28.2 +1.4
VTS	Vitosha	83.92	355	⇑P	P	12 57 28.4 +0.4
VTS	Vitosha	83.92	355	IAmb	IAmb	12 57 29.1
	comp=Z,11nm,0.9s					
PDG	Podgorica	84.25	358	⇑P	P	12 57 30.2 +0.8
SDV	Santo Domingo	84.50	83	LR	LR	13 38 09.1
	comp=Z,154nm,18.0s,baz=12,slow=38					
SKO	Skopje	84.64	356	iP	P	12 57 32.5 +1.1
SBUM	Sibu	84.76	267	P	P	12 57 32.2 -0.1
SBUM				IAmb	IAmb	12 57 34.3
	comp=Z,6.9nm,0.9s					
STIP	Stip	84.89	356	iP	P	12 57 32.3 -0.4
VAY	Valandovo	85.25	356	iP	P	12 57 35.3 +0.8
ESDC	Sonseca Array	85.33	16	P	P	12 57 35.4 +0.4
	comp=Z,4.2nm,1.0s,baz=346,slow=5.1,SNR=12					
ESDC				PP	PP	13 00 52.6 +0.7
	comp=Z,1.6nm,1.0s,baz=339,slow=6.4,SNR=4.2					
ESDC				LR	LR	13 39 19.8
	comp=Z,307nm,18.3s,baz=0.0,slow=38					
	comp=Z,4.2nm,1.0s					
ESDC	Sonseca Array	85.33	16	IAmb	IAmb	12 57 48.3
	comp=Z,28nm,1.4s					
ANTO	Ankara	85.80	348	P	P	12 57 38.5 +1.1
ANTO	Ankara	85.80	348	P	P	12 57 38.5 +1.1
ANTO				pmax	pmax	
	comp=Z,35nm,1.0s					
BRTR	Keskin Array B	85.83	347	P	P	12 57 37.9 +0.2
	comp=Z,18nm,1.0s,baz=45,slow=2.4,SNR=47					
BRTR				PP	PP	13 00 58.6 +2.4
	comp=Z,0.5nm,0.6s,baz=3.4,slow=4.9,SNR=3.6					
	comp=Z,18nm,1.0s					
BRTR	Keskin Array B	85.83	347	iP	P	12 57 38.2 +0.6
BRTR				pmax	pmax	
	comp=Z,18nm,1.0s					
BAUV	El Baul	85.97	80	P	P	12 57 37.2 -1.2
KAPI	Kappang	86.32	257	P	P	12 57 38.8 -1.3
KAPI	Kappang	86.32	257	P	P	12 57 38.8 -1.3
KAPI				pmax	pmax	
	comp=Z,32nm,1.3s					
KAPI	Kappang	86.32	257	P	P	12 57 39.4 -0.7
	comp=Z,19nm,1.3s					
BKSI	Bulukumba	86.36	256	P	P	12 57 39.4 -0.9
	comp=Z,17nm,1.3s					
MTN	Manton Dam	86.41	243	P	P	12 57 39.4 -1.1
MTN				IAmb	IAmb	12 57 40.8
	comp=Z,14nm,0.8s					
WRAB	Tennant Creek	90.72	236	ceP	P	12 58 01.1 +0.3
WRAB				pmax	pmax	
	comp=Z,10.0nm,2.5s					
WRA	Warramunga Arr	90.73	236	P	P	12 57 59.5 -1.4
	comp=Z,1.6nm,1.1s,baz=38,slow=5.6,SNR=7.5					
	comp=Z,1.6nm,1.1s					
WRA	Warramunga Arr	90.73	236	iP	P	12 58 00.1 -0.8
WRA				pmax	pmax	
	comp=Z,2.0nm,1.1s					
MDT	Midelt	91.91	18	LR	LR	13 39 28.5
	comp=Z,226nm,21.5s,baz=50,slow=36					
ASAR	Alice Springs	94.09	235	P	P	12 58 15.4 -1.0
	comp=Z,1.8nm,1.0s,baz=40,slow=4.9,SNR=10.0					
ASAR				PP	PP	13 02 06.1 +2.9
	comp=Z,0.5nm,0.8s,baz=36,slow=12,SNR=4.1					
ASAR				PKKPbc	PKKPbc	13 15 16.8 +0.3
	comp=Z,0.3nm,0.8s,baz=220,slow=1.8,SNR=4.3					
	comp=Z,1.8nm,1.0s					
WSAR	Wadi Sarin	95.27	322	LR	LR	13 45 45.8
	comp=Z,273nm,18.6s,baz=234,slow=38					
H03N2	Juan Fernandez	113.08	115	T	T	15 07 03.0
	baz=322,slow=77,SNR=21					
H03N1	Juan Fernandez	113.09	115	T	T	15 07 04.4
	baz=322,slow=77,SNR=20					
H03N3	Juan Fernandez	113.10	115	T	T	15 07 02.6
	baz=322,slow=77,SNR=31					
KMBO	Kilima Mbogo	124.94	335	PKPdf	PKPdf	13 03 58.6 0.0
KMBO	Kilima Mbogo	124.94	335	PKIKP	PKPdf	13 03 58.6 0.0
TSUM	Tsumeb	145.59	359	PKPdf	PKPdf	13 04 35.9 -0.5
BELA	Belgrano 2	149.79	161	PKPdf	PKPdf	13 04 42.7 +1.2
POGA	Pongola	151.46	331		PKPbc	13 04 51.6 -0.1
BOSA	Boshof	154.19	343	PKPbc	PKiKP	13 04 58.0 +0.1
	comp=Z,7.5nm,0.9s,baz=24,slow=2.2,SNR=8.0					
MAW	Mawson	154.19	219	PKPbc	PKPbc	13 04 56.4 0.0
	comp=Z,2.1nm,0.8s,baz=207,slow=7.0,SNR=3.5					
MAW	Mawson	154.19	219		PKPab	13 05 10.4 0.0
MAW	Mawson	154.19	219	PKP2	PKPab	13 05 10.4 0.0
SNAA	Sanae	160.03	162		PKPab	13 05 36.5 +0.9
SNAA	Sanae	160.03	162	PKP2	PKPab	13 05 36.5 +0.9

ROM 27 12:54:34.9±0.1, 43°.040N±0°.004×13°.112E±0°.005, h9km, ML2.3/15, 8C-8D, Error ellipse: s-maj=0.5km s-min=0.3km az=351.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.02	258	P	Pg	12 54 36.2	-0.4
FDMO				S	Sg	12 54 36.6	-1.2
CSP1	Cessapalombo	0.09	53	⇑P	Pg	12 54 37.7	+0.3
CSP1				S	Sg	12 54 39.5	+0.4
CSP1				AML	AML		
	comp=E,2210μm,0.3s						
CSP1				AML	AML		
	comp=N,4305μm,0.6s						
FEMA	Monte Fema	0.09	210	P	Pg	12 54 37.6	+0.2
FEMA				S	Sg	12 54 39.5	+0.4
MC2	Monte Cornacci	0.14	156	P	Pg	12 54 38.5	+0.3
MC2				S	Sg	12 54 41.1	+0.7
CESI	CESI - Serrava	0.16	257	⇑P	Pg	12 54 39.1	+0.7
CESI				S	Sg	12 54 42.0	+1.3
CESI				AML	AML		
	comp=N,4585μm,0.2s						
CESI				AML	AML		
	comp=E,3040μm,0.2s						
CESI				AML	AML		
	comp=N,4590μm,0.2s						
SEF1	Sefro	0.16	312	⇓P	Pg	12 54 39.2	+0.8
T1216	Preci, Frazion	0.16	205	⇑P	Pg	12 54 39.0	+0.6
T1216				AML	AML		
	comp=N,20600μm,0.3s						
T1216				AML	AML		
	comp=E,15950μm,0.3s						
T1216				AML	AML		
	comp=E,15950μm,0.2s						
AM05	Amandola Campo	0.19	109	P	Pg	12 54 39.6	+0.7
AM05				S	Sg	12 54 43.0	+1.4
AM05				AML	AML		
	comp=N,159μm,0.4s						
AM05				AML	AML		
	comp=E,318μm,0.7s						
AM05				AML	AML		
	comp=N,418μm,0.1s						
AM05				AML	AML		
	comp=N,159μm,0.4s						
AM05				AML	AML		
	comp=E,1770μm,0.1s						
T1245	Castelsantange	0.19	163	⇓P	Pg	12 54 39.5	+0.5
T1245				S	Sg	12 54 43.1	+1.4
T1245				AML	AML		
	comp=E,7330μm,0.6s						
T1245				AML	AML		
	comp=N,9080μm,0.3s						
T1245				AML	AML		
	comp=N,9530μm,0.3s						
T1245				AML	AML		
	comp=E,7330μm,0.6s						
T1245				AML	AML		
	comp=E,6880μm,0.6s						
T1245				AML	AML		
	comp=N,9095μm,0.3s						
NRCA	Norcia	0.21	179	⇓P	Pg	12 54 39.9	+0.7
NRCA				AML	AML		
	comp=E,9320μm,0.8s						
NRCA				AML	AML		
	comp=N,12650μm,0.1s						
NRCA				AML	AML		
	comp=N,13550μm,0.1s						
NRCA				AML	AML		
	comp=E,9295μm,0.8s						
NRCA				AML	AML		
	comp=N,12600μm,0.1s						
NRCA				AML	AML		
	comp=E,10065μm,0.8s						
SNTG	Esanatoglia	0.25	330	⇓P	Pg	12 54 40.6	+0.7
SNTG				AML	AML		
	comp=E,300μm,1.6s						
SNTG				AML	AML		
	comp=N,361μm,0.8s						
SNTG				AML	AML		
	comp=N,290μm,0.7s						
SNTG				AML	AML		
	comp=E,284μm,0.7s						
SNTG				AML	AML		
	comp=N,290μm,0.7s						
SNTG				AML	AML		
	comp=N,361μm,0.8s						
SNTG				AML	AML		
	comp=E,301μm,1.6s						
EL6	Elcito	0.29	359	⇓P	Pg	12 54 41.5	+0.7
T1215	Vallo di Nera,	0.30	217	P	Pg	12 54 41.5	+0.6
T1215				S	Sb	12 54 46.5	-0.9
T1215				AML	AML		
	comp=E,910μm,0.5s						
T1215				AML	AML		
	comp=E,908μm,0.5s						
T1215				AML	AML		
	comp=N,1845μm,0.1s						
T1215				AML	AML		
	comp=E,906μm,0.5s						
T1215				AML	AML		
	comp=E,904μm,0.5s						
T1215				AML	AML		
	comp=E,906μm,0.5s						
T1215				AML	AML		
	comp=E,910μm,0.5s						
T1215				AML	AML		
	comp=N,1840μm,0.1s						
T1215				AML	AML		
	comp=N,1765μm,0.1s						
T1241	Roccafluvione,	0.30	128	P	Pg	12 54 41.0	+0.1
T1217	Poggiodomo (PG	0.35	202	P	Pg	12 54 42.4	+0.5
T1217				S	Sb	12 54 48.6	-0.6
ATCC	AVT- Casa Cast	0.38	293	⇓P	Pb	12 54 43.1	-0.6
ATCC				AML	AML		
	comp=E,980μm,0.2s						
ATCC				AML	AML		
	comp=N,1042μm,1.3s						
ATCC				AML	AML		
	comp=N,1046μm,1.3s						
ATCC				AML	AML		
	comp=E,978μm,0.2s						
T1243	Rocca Santa Ma	0.42	144	P	Pg	12 54 43.7	+0.5
T1243				S	Sb	12 54 50.6	-0.6
SMA1	SAN MARTINO	0.44	158	P	Pg	12 54 43.9	+0.4
SMA1				AML	AML		
	comp=E,388μm,0.3s						
SMA1				AML	AML		
	comp=N,332μm,0.4s						
SMA1				AML	AML		
	comp=N,400μm,0.3s						
SMA1				AML	AML		
	comp=E,389μm,0.3s						
SMA1				AML	AML		
	comp=N,400μm,0.3s						
ARVD	Arcevia	0.47	345	⇑P	Pb	12 54 44.8	-0.6
ARVD				S	Sb	12 54 54.0	+

CAMP	**Campotosto**	**0.55**	**156**	P	Pg	12 54 45.7 +0.1
CAMP				AML	AML	
	comp=E,158μm,1.3s					
CAMP				AML	AML	
	comp=N,148μm,0.3s					
TERO	**Teramo**	**0.55**	**139**	⇑P	Pg	12 54 45.9 +0.3
TERO				AML	AML	
	comp=E,240μm,0.6s					
TERO				AML	AML	
	comp=E,240μm,0.6s					
TERO				AML	AML	
	comp=N,272μm,0.9s					
TERO				AML	AML	
	comp=N,272μm,0.9s					
FRON	**Frontone**	**0.55**	**330**	⇓P	Pg	12 54 46.1 +0.5
FRON				AML	AML	
	comp=E,180μm,0.2s					
FRON				AML	AML	
	comp=N,212μm,1.4s					
CESX	**Cesi**	**0.58**	**222**	S	Sb	12 54 56.0 +0.4
MPAG	**Monte Paganucc**	**0.64**	**337**	⇑P	Pb	12 54 48.3 -0.1
PIEI	**Pieia**	**0.65**	**320**	⇓P	Pg	12 54 47.8 +0.3
PIEI				AML	AML	
	comp=E,93μm,1.4s					
PIEI				AML	AML	
	comp=N,88μm,1.4s					
PIEI				AML	AML	
	comp=E,93μm,1.4s					
ATPI	**Pietralunga -**	**0.66**	**309**	S	Sn	12 54 60.0 -1.1
FSSB	**Fossombrone**	**0.70**	**340**	AML	AML	
	comp=E,296μm,0.4s					
FSSB				AML	AML	
	comp=N,554μm,0.2s					
APEC	**Apecchio**	**0.72**	**316**	P	Pb	12 54 49.5 -0.2
VIVA	**Pratoni del Vi**	**1.31**	**191**	⇑P	Pn	12 54 56.8 -2.6
SAMA	**S.Maria delle**	**1.32**	**197**	S	Sb	12 55 16.0 -0.7
MODR	**Mondragone**	**1.98**	**163**	S	Sg	12 55 39.0 +0.6
CARD	**Cardoso**	**2.15**	**298**	⇑P	Pg	12 55 16.7 +0.5
CARD				S	Sb	12 55 42.0 +1.2

ROM 27 12:54:54.4±0.1, 42°.899N±0°.004×13°.058E±0°.004,
h11km, ML2.7/6, 3C-3D, Error ellipse: s-maj=0.4km
s-min=0.3km az=3.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**255**	⇓P	Pg	12 54 56.9	+0.3
T1216				S	Sg	12 54 58.2	+0.2
T1216				AML	AML		
	comp=E,15950μm,0.2s						
T1216				AML	AML		
	comp=N,20600μm,0.3s						
FEMA	**Monte Fema**	**0.06**	**354**	⇓P	Pg	12 54 57.3	+0.4
FEMA				S	Sg	12 54 59.0	+0.2
NRCA	**Norcia**	**0.08**	**148**	P	Pg	12 54 57.3	+0.3
NRCA				S	Sg	12 54 59.0	+0.2
NRCA				AML	AML		
	comp=E,10065μm,0.8s						
NRCA				AML	AML		
	comp=N,13550μm,0.1s						
NRCA				AML	AML		
	comp=N,12650μm,0.1s						
NRCA				AML	AML		
	comp=E,9295μm,0.8s						
MC2	**Monte Cornacci**	**0.10**	**82**	P	Pg	12 54 57.7	+0.4
MC2				S	Sg	12 54 60.0	+0.5
T1245	**Castelsantange**	**0.10**	**114**	⇑P	Pg	12 54 57.8	+0.4
T1245				S	Sg	12 54 59.9	+0.4
T1245				AML	AML		
	comp=E,7330μm,0.6s						
T1245				AML	AML		
	comp=N,9095μm,0.3s						
T1245				AML	AML		
	comp=N,9530μm,0.3s						
T1245				AML	AML		
	comp=E,6880μm,0.6s						
FDMO	**Fiordimonte**	**0.14**	**9**	P	Pg	12 54 58.4	+0.6
FDMO				S	Sg	12 55 00.9	+0.8
CESI	**CESI - Serrava**	**0.15**	**313**	⇑P	Pg	12 54 58.7	+0.6
CESI				S	Sg	12 55 01.5	+0.9
CESI				AML	AML		
	comp=E,3040μm,0.2s						
CESI				AML	AML		
	comp=N,4590μm,0.2s						
CESI				AML	AML		
	comp=N,4585μm,0.2s						
T1215	**Vallo di Nera,**	**0.17**	**235**	P	Pg	12 54 58.8	+0.6
T1215				S	Sg	12 55 01.7	+0.8
T1215				AML	AML		
	comp=E,908μm,0.5s						
T1215				AML	AML		
	comp=E,907μm,0.5s						
T1215				AML	AML		
	comp=N,1845μm,0.1s						
T1215				AML	AML		
	comp=N,1765μm,0.1s						
T1215				AML	AML		
	comp=E,904μm,0.5s						
MMO1	**Montemonaco**	**0.20**	**90**	P	Pg	12 54 59.2	+0.5
MMO1				S	Sg	12 55 02.7	+1.0
T1217	**Poggiodomo (PG**	**0.21**	**207**	P	Pg	12 54 59.5	+0.5
T1217				S	Sg	12 55 03.0	+1.0
T1241	**Roccafluvione,**	**0.28**	**99**	⇑P	Pg	12 55 00.1	0.0
T1241				S	Sg	12 55 04.6	+0.7
LNSS	**Leonessa**	**0.30**	**183**	P	Pg	12 55 01.0	+0.5
LNSS				S	Sb	12 55 05.8	-0.9
LNSS				AML	AML		
	comp=N,818μm,0.4s						
LNSS				AML	AML		
	comp=E,656μm,1.1s						
T1243	**Rocca Santa Ma**	**0.35**	**125**	P	Pg	12 55 01.8	+0.3
T1243				S	Sb	12 55 07.7	-0.7
SNTG	**Esanatoglia**	**0.37**	**346**	⇓P	Pg	12 55 02.1	+0.4
ARRO	**Arrone**	**0.39**	**214**	S	Sb	12 55 09.0	-0.2
EL6	**Elcito**	**0.43**	**4**	S	Sb	12 55 11.0	+0.3
CESX	**Cesi**	**0.46**	**231**	S	Sb	12 55 11.0	-0.2
TERO	**Teramo**	**0.49**	**124**	P	Pg	12 55 04.1	+0.1
ARVD	**Arcevia**	**0.60**	**352**	S	Sb	12 55 17.0	+1.4
LPEL	**Lama dei Pelig**	**1.19**	**135**	AML	AML		
	comp=E,128μm,1.6s						
LPEL				AML	AML		
	comp=N,153μm,0.1s						

ROM 27 12:59:50.0±0.0, 42°.902N±0°.002×13°.012E±0°.004,
h11km, ML2.2/6, 2C-3D, Error ellipse: s-maj=0.3km
s-min=0.2km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.01**	**155**	P	Pg	12 59 52.3	+0.3
T1216				S	Sg	12 59 53.7	+0.3
FEMA	**Monte Fema**	**0.07**	**25**	P	Pg	12 59 52.8	+0.3
FEMA				S	Sg	12 59 54.5	+0.2
NRCA	**Norcia**	**0.10**	**132**	⇓P	Pg	12 59 53.2	+0.4
NRCA				S	Sg	12 59 55.2	+0.3
NRCA				AML	AML		
	comp=E,2720μm,0.1s						
NRCA				AML	AML		
	comp=N,3540μm,0.5s						
NRCA				AML	AML		
	comp=E,3480μm,0.7s						
NRCA				AML	AML		
	comp=N,4760μm,0.4s						
NRCA				AML	AML		
	comp=E,3485μm,0.7s						
CESI	**CESI - Serrava**	**0.13**	**323**	P	Pg	12 59 53.7	+0.5
CESI				S	Sg	12 59 56.4	+0.9
CESI				AML	AML		
	comp=E,4390μm,0.9s						
CESI				AML	AML		
	comp=N,4595μm,0.9s						
CESI				AML	AML		
	comp=N,560μm,0.2s						
CESI				AML	AML		
	comp=E,384μm,0.1s						
MC2	**Monte Cornacci**	**0.13**	**85**	P	Pg	12 59 53.6	+0.3
MC2				S	Sg	12 59 56.5	+0.8
T1245	**Castelsantange**	**0.14**	**109**	⇓P	Pg	12 59 53.8	+0.4
T1245				S	Sg	12 59 56.4	+0.6
T1245				AML	AML		
	comp=E,3325μm,0.3s						
T1245				AML	AML		
	comp=N,6000μm,0.7s						
T1245				AML	AML		
	comp=N,5900μm,0.7s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
T1245				AML	AML		
	comp=N,5900μm,0.7s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
FDMO	**Fiordimonte**	**0.14**	**22**	S	Sg	12 59 54.0	-1.8
T1215	**Vallo di Nera,**	**0.14**	**226**	P	Pg	12 59 54.0	+0.5
T1215				S	Sg	12 59 56.6	+0.8
T1217	**Poggiodomo (PG**	**0.20**	**197**	⇑P	Pg	12 59 54.9	+0.5
T1217				S	Sg	12 59 58.4	+1.1
MMO1	**Montemonaco**	**0.23**	**91**	P	Pg	12 59 55.3	+0.4
MMO1				S	Sg	12 59 59.1	+1.0
SEF1	**Sefro**	**0.25**	**349**	P	Pg	12 59 55.6	+0.4
SEF1				S	Sg	12 59 59.8	+1.1
SNTG	**Esanatoglia**	**0.36**	**352**	P	Pg	12 59 57.5	+0.3
SNTG				S	Sb	13 00 03.2	-1.0
SMA1	**SAN MARTINO**	**0.36**	**139**	P	Pb	12 59 58.0	-0.6
SMA1				S	Sb	13 00 03.6	-0.7
SMA1				AML	AML		
	comp=E,856μm,0.5s						
SMA1				AML	AML		
	comp=N,684μm,1.6s						
ARRO	**Arrone**	**0.37**	**209**	P	Pg	12 59 57.7	+0.3
T1243	**Rocca Santa Ma**	**0.38**	**122**	P	Pg	12 59 57.8	+0.2
T1243				S	Sb	13 00 04.1	-0.8
T1211	**Morro Reatino**	**0.39**	**197**	⇓P	Pg	12 59 58.2	+0.5
T1211				S	Sb	13 00 04.3	-0.7
ATCC	**AVT- Casa Cast**	**0.39**	**316**	S	Sg	12 59 59.0	-4.1
RM33	**Pellescritta (**	**0.42**	**159**	P	Pg	12 59 58.8	+0.4
RM33				S	Sb	13 00 05.0	-0.9
RM33				AML	AML		
	comp=N,284μm,1.2s						
RM33				AML	AML		
	comp=E,348μm,0.8s						
RM33				AML	AML		
	comp=N,234μm,1.5s						
RM33				AML	AML		
	comp=E,348μm,0.8s						
RM33				AML	AML		
	comp=N,235μm,1.5s						
RM33				AML	AML		
	comp=E,434μm,0.6s						
RM33				AML	AML		
	comp=N,285μm,1.2s						
CESX	**Cesi**	**0.43**	**228**	P	Pg	12 59 58.8	+0.2
CESX				S	Sb	13 00 05.4	-0.8
CESX				AML	AML		
	comp=E,450μm,0.5s						
CESX				AML	AML		
	comp=N,494μm,1.1s						
CESX				AML	AML		
	comp=N,100μm,16.4s						
EL6	**Elcito**	**0.43**	**9**	P	Pg	12 59 58.8	+0.2
EL6				S	Sb	13 00 05.9	-0.4
TERO	**Teramo**	**0.52**	**122**	P	Pg	13 00 00.1	-0.1
TERO				S	Sb	13 00 08.1	-0.6
TERO				AML	AML		
	comp=E,550μm,0.3s						
TERO				AML	AML		
	comp=N,399μm,1.5s						
TERO				AML	AML		
	comp=N,400μm,1.5s						
TERO				AML	AML		
	comp=N,431μm,1.5s						
TERO				AML	AML		
	comp=E,581μm,0.3s						
GIGS	**Gran Sasso**	**0.61**	**138**	⇑P	Pg	13 00 02.1	+0.1
GIGS				AML	AML		
	comp=E,92μm,0.7s						
GIGS				AML	AML		
	comp=N,94μm,0.2s						
GIGS				AML	AML		
	comp=N,39μm,2.9s						
GIGS				AML	AML		

ROM 27 13:00:27.9±0.1, 43°.026N±0°.004×13°.109E±0°.005,
h10km, ML2.5/28, 12C-16D, Error ellipse: s-maj=0.4km
s-min=0.4km az=179.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**214**	⇓P	Pg	13 00 30.5	+0.1
FEMA				AML	AML		
	comp=E,14095μm,0.4s						
FEMA				AML	AML		
	comp=N,10210μm,0.4s						
FEMA				AML	AML		
	comp=E,14100μm,0.4s						
FEMA				AML	AML		
	comp=N,10255μm,0.4s						
CSP1	**Cessapalombo**	**0.10**	**47**	P	Pg	13 00 30.5	-0.1
MC2	**Monte Cornacci**	**0.13**	**152**	⇓P	Pg	13 00 31.4	+0.3
MC2				S	Sg	13 00 33.7	+0.4
CESI	**CESI - Serrava**	**0.15**	**262**	⇑P	Pg	13 00 31.9	+0.5
CESI				S	Sg	13 00 34.8	+1.1
CESI				AML	AML		
	comp=E,4390μm,0.9s						
CESI				AML	AML		
	comp=N,4595μm,0.9s						
T1216	**Preci, Frazion**	**0.15**	**206**	⇑P	Pg	13 00 31.9	+0.6
T1216				S	Sg	13 00 34.9	+1.2
T1216				AML	AML		
	comp=N,3085μm,0.9s						
T1216				AML	AML		
	comp=E,5560μm,1.0s						
T1216				AML	AML		
	comp=E,5570μm,1.0s						
T1216				AML	AML		
	comp=N,3085μm,0.9s						
SEF1	**Sefro**	**0.17**	**316**	⇑P	Pg	13 00 32.0	+0.4
SEF1				S	Sg	13 00 35.4	+1.2
SEF1				AML	AML		
	comp=E,4460μm,0.2s						
SEF1				AML	AML		
	comp=N,4095μm,0.3s						
SEF1				AML	AML		
	comp=E,4455μm,0.2s						
SEF1				AML	AML		
	comp=N,4100μm,0.4s						
GUMA	**Gualdo di Mace**	**0.17**	**78**	⇑P	Pg	13 00 32.4	+0.7
GUMA				S	Sg	13 00 35.8	+1.6
GUMA				AML	AML		
	comp=E,8300μm,0.5s						
GUMA				AML	AML		
	comp=N,9265μm,0.5s						
GUMA				AML	AML		
	comp=E,8295μm,0.5s						
GUMA				AML	AML		
	comp=N,9270μm,0.5s						
GUMA				AML	AML		
	comp=N,7235μm,0.4s						
GUMA				AML	AML		
	comp=E,8895μm,0.4s						
T1245	**Castelsantange**	**0.18**	**161**	P	Pg	13 00 32.3	+0.5
T1245				S	Sg	13 00 35.9	+1.4
T1245				AML	AML		
	comp=E,3320μm,0.3s						
T1245				AML	AML		
	comp=N,6000μm,0.7s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
T1245				AML	AML		
	comp=N,5900μm,0.7s						
T1245				AML	AML		
	comp=E,3325μm,0.3s						
AM05	**Amandola Campo**	**0.18**	**105**	⇑P	Pg	13 00 32.5	+0.6
AM05				S	Sg	13 00 36.0	+1.4
AM05				AML	AML		
	comp=E,844μm,0.7s						
AM05				AML	AML		
	comp=N,753μm,0.5s						
AM05				AML	AML		
	comp=E,2995μm,0.4s						
AM05				AML	AML		
	comp=N,180μm,0.6s						
AM05				AML	AML		
	comp=N,752μm,0.5s						
AM05				AML	AML		
	comp=N,179μm,0.6s						
AM05				AML	AML		
	comp=E,844μm,0.7s						
NRCA	**Norcia**	**0.19**	**179**	P	Pg	13 00 32.7	+0.7
NRCA				AML	AML		
	comp=E,3385μm,0.7s						
NRCA				AML	AML		
	comp=N,4765μm,0.4s						
NRCA				AML	AML		
	comp=N,4460μm,0.4s						
NRCA				AML	AML		
	comp=E,3480μm,0.7s						
NRCA				AML	AML		
	comp=N,4760μm,0.4s						
NRCA				AML	AML		
	comp=E,3485μm,0.7s						
MMO1	**Montemonaco**	**0.20**	**128**	P	Pg	13 00 32.8	+0.5
MMO1				S	Sg	13 00 36.3	+1.1
GAG1	**Gagliole**	**0.21**	**352**	P	Pg	13 00 33.0	+0.6
GAG1				AML	AML		
	comp=E,6435μm,1.1s						
GAG1				AML	AML		
	comp=E,6440μm,1.1s						
GAG1				AML	AML		
	comp=N,4330μm,0.3s						
SNTG	**Esanatoglia**	**0.26**	**332**	⇓P	Pg	13 00 33.5	+0.2
SNTG				S	Sb	13 00 38.3	-1.0
SNTG				AML	AML		
	comp=E,794μm,0.6s						
SNTG				AML	AML		
	comp=N,872μm,0.8s						
SNTG				AML	AML		
	comp=E,825μm,0.6s						
SNTG				AML	AML		
	comp=N,936μm,0.8s						
SNTG				AML	AML		
	comp=N,872μm,0.8s						
T1215	**Vallo di Nera,**	**0.28**	**218**	⇓P	Pb	13 00 34.7	-0.5
T1215				AML	AML		
	comp=N,698μm,0.3s						
T1215				AML	AML		
	comp=E,534μm,0.8s						
T1215				AML	AML		
	comp=N,698μm,0.3s						
EL6	**Elcito**	**0.30**	**359**	⇓P	Pg	13 00 34.4	+0.3
EL6				S	Sb	13 00 39.9	-0.7
EL6				AML	AML		
	comp=N,2395μm,0.3s						
EL6				AML	AML		
	comp=E,2240μm,0.6s						
EL6				AML	AML		
	comp=N,2394μm,0.3s						
T1217	**Poggiodomo (PG**	**0.34**	**203**	⇓P	Pg	13 00 35.4	+0.7
FOSV	**Fossato di Vic**	**0.37**	**317**	⇓P	Pg	13 00 35.6	+0.3
FOSV				S	Sb	13 00 42.0	-0.4
FOSV				AML	AML		
	comp=E,678μm,0.8s						
FOSV				AML	AML		
	comp=N,1485μm,0.3s						
FOSV				AML	AML		
	comp=E,678μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.38**	**295**	⇓P	Pg	13 00 36.0	+0.5
ATCC				AML	AML		
	comp=E,1985μm,0.3s						
ATCC				AML	AML		
	comp=N,1890μm,1.1s						
ATCC				AML	AML		
	comp=N,1895μm,1.1s						
ATCC				AML	AML		
	comp=E,1990μm,0.3s						
T1204	**Amatrice, Fraz**	**0.38**	**156**	⇓P	Pg	13 00 35.2	-0.3
T1243	**Rocca Santa Ma**	**0.41**	**143**	⇑P	Pg	13 00 36.4	+0.3
SMA1	**SAN MARTINO**	**0.43**	**157**	⇓P	Pg	13 00 36.7	+0.3
SMA1				AML	AML		
	comp=E,858μm,0.5s						
SMA1				AML	AML		
	comp=N,684μm,1.6s						
SMA1				AML	AML		
	comp=E,856μm,0.5s						
OFFI	**Offida**	**0.43**	**102**	P	Pg	13 00 36.5	+0.1
OFFI				AML	AML		
	comp=E,1335μm,1.3s						
OFFI				AML	AML		
	comp=N,1550μm,0.5s						
ARVD	**Arcevia**	**0.49**	**346**	⇓P	Pg	13 00 37.1	-0.4
ARVD				S	Sb	13 00 46.0	+0.2
ARVD				AML	AML		
	comp=N,311μm,0.1s						
ARVD				AML	AML		
	comp=E,486μm,0.9s						
MURB	**Monte Urbino**	**0.49**	**299**	⇓P	Pg	13 00 37.9	+0.5
MURB				AML	AML		
	comp=E,1235μm,0.2s						
MURB				AML	AML		
	comp=N,992μm,0.9s						
MURB				AML	AML		
	comp=N,992μm,0.9s						
ARRO	**Arrone**	**0.51**	**210**	S	Sb	13 00 48.0	+1.5
ATFO	**Monte Foce - G**	**0.52**	**311**	P	Pg	13 00 38.3	+0.2
ATFO				AML	AML		
	comp=E,316μm,0.8s						
ATFO				AML	AML		
	comp=E,317μm,0.8s						
ATFO				AML	AML		
	comp=N,324μm,0.8s						
RM33	**Pellescritta (**	**0.52**	**171**	P	Pg	13 00 38.5	+0.4
RM33				S	Sb	13 00 48.0	+1.1
RM33				AML	AML		
	comp=E,434μm,0.6s						
RM33				AML	AML		
	comp=N,285μm,1.2s						
RM33				AML	AML		
	comp=N,284μm,1.2s						
RM33				AML	AML		
	comp=E,348μm,0.8s						
RM33				AML	AML		
	comp=N,234μm,1.5s						
RM33				AML	AML		
	comp=E,348μm,0.8s						
RM33				AML	AML		
	comp=N,235μm,1.5s						
T1211	**Morro Reatino**	**0.53**	**201**	⇑P	Pb	13 00 39.8	+0.5
T1211				AML	AML		
	comp=E,314μm,1.6s						
T1211				AML	AML		
	comp=N,627μm,0.5s						
T1211				AML	AML		
	comp=E,314μm,1.6s						
T1211				AML	AML		
	comp=N,628μm,0.5s						
CAMP	**Campotosto**	**0.54**	**156**	⇑P	Pg	13 00 38.5	+0.1
CAMP				AML	AML		
	comp=N,317μm,0.3s						
CAMP				AML	AML		
	comp=E,300μm,0.7s						
TERO	**Teramo**	**0.54**	**138**	⇑P	Pg	13 00 38.6	+0.1
TERO				AML	AML		
	comp=E,550μm,0.3s						
TERO				AML	AML		
	comp=N,400μm,1.5s						
TERO				AML	AML		
	comp=E,580μm,0.3s						
TERO				AML	AML		
	comp=N,399μm,1.5s						
TERO				AML	AML		
	comp=E,581μm,0.3s						
TERO				AML	AML		
	comp=N,431μm,1.5s						
FRON	**Frontone**	**0.57**	**330**	⇓P	Pg	13 00 39.0	+0.1
FRON				AML	AML		
	comp=N,500μm,0.5s						
FRON				AML	AML		
	comp=E,344μm,0.8s						
ATVO	**AVT- Monte Val**	**0.62**	**305**	⇓P	Pg	13 00 40.2	+0.2
ATVO				AML	AML		
	comp=E,181μm,0.4s						
ATVO				AML	AML		
	comp=N,232μm,0.4s						
MPAG	**Monte Paganucc**	**0.65**	**337**	⇓P	Pg	13 00 41.0	+0.4
MPAG				S	Sn	13 00 53.0	-0.8
MPAG				AML	AML		
	comp=E,310μm,0.6s						
MPAG				AML	AML		
	comp=N,333μm,0.6s						
PIEI	**Pieia**	**0.66**	**321**	S	Sb	13 00 52.0	+1.2
GIGS	**Gran Sasso**	**0.67**	**149**	⇑P	Pg	13 00 40.8	0.0
GIGS				AML	AML		
	comp=N,94μm,0.2s						
GIGS				AML	AML		
	comp=N,94μm,0.2s						
GIGS				AML	AML		

comp=N,94μm,0.2s
GIGS AML AML
comp=E,92μm,0.7s
FSSB Fossombrone 0.71 340 ⇓P Pg 13 00 41.9 +0.3
FSSB AML AML
comp=E,680μm,1.2s
FSSB AML AML
comp=N,1055μm,0.3s
BADI Badiali 0.80 308 P Pg 13 00 43.5 +0.2
VCEL Villa Celiera 0.83 139 ⇑P Pg 13 00 44.0 +0.1
T0110 Collepietro 0.94 148 ⇑P Pg 13 00 46.1 +0.1
T0110 AML AML
comp=N,226μm,0.6s
T0110 AML AML
comp=E,249μm,0.7s
IMOL Imola, Italy 1.66 324 S Sg 13 01 22.0 +0.7
VAGA Valle Agricola 1.81 152 S Sn 13 01 23.0 +0.7
PTRJ Pietraroja 1.97 147 S Sg 13 01 30.0 -1.2
CARD Cardoso 2.16 299 P Pb 13 01 06.3 -0.7
NDIM Novi di Modena 2.45 320 S Sg 13 01 46.0 -0.7
CAFE Carife 2.55 141 P Pg 13 01 16.3 -0.5

ROM 27 13:17:04.9±0.1, 43°.025N±0°.008×13°.152E±0°.006, h9km, ML2.8/28, 10C-9D, Error ellipse: s-maj=0.9km s-min=0.4km az=7.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**283**	⇑P	Pg	13 17 06.9	+0.1
FDMO				S	Sg	13 17 08.1	-0.2
FDMO				AML	AML		
comp=N,13400μm,0.5s							
FDMO				AML	AML		
comp=E,10550μm,0.5s							
MC2	**Monte Cornacci**	**0.12**	**166**	⇓P	Pg	13 17 08.1	+0.3
MC2				S	Sg	13 17 10.3	+0.4
GUMA	**Gualdo di Mace**	**0.14**	**74**	P	Pg	13 17 09.2	+1.2
GUMA				AML	AML		
comp=E,13550μm,0.4s							
GUMA				AML	AML		
comp=N,17850μm,0.5s							
GUMA				AML	AML		
comp=E,13900μm,0.3s							
GUMA				AML	AML		
comp=N,20100μm,0.5s							
AM05	**Amandola Campo**	**0.15**	**108**	P	Pg	13 17 09.2	+0.9
AM05				S	Sg	13 17 11.9	+1.3
AM05				AML	AML		
comp=E,1970μm,0.6s							
AM05				AML	AML		
comp=N,533μm,0.6s							
AM05				AML	AML		
comp=N,1905μm,0.2s							
AM05				AML	AML		
comp=N,1910μm,0.2s							
AM05				AML	AML		
comp=E,8050μm,0.2s							
AM05				AML	AML		
comp=N,532μm,0.6s							
T1216	**Preci, Frazion**	**0.17**	**216**	⇑P	Pg	13 17 09.1	+0.7
T1216				S	Sg	13 17 12.0	+1.1
T1216				AML	AML		
comp=E,10620μm,0.3s							
T1216				AML	AML		
comp=E,10550μm,0.3s							
T1216				AML	AML		
comp=N,17600μm,0.4s							
T1216				AML	AML		
comp=E,10600μm,0.3s							
T1245	**Castelsantange**	**0.17**	**171**	P	Pg	13 17 09.0	+0.4
T1245				AML	AML		
comp=E,28200μm,0.6s							
T1245				AML	AML		
comp=N,29700μm,0.3s							
T1245				AML	AML		
comp=E,27250μm,0.6s							
T1245				AML	AML		
comp=N,29650μm,0.3s							
T1245				AML	AML		
comp=N,29750μm,0.3s							
T1245				AML	AML		
comp=E,28250μm,0.6s							
MMO1	**Montemonaco**	**0.18**	**134**	P	Pg	13 17 09.3	+0.5
MMO1				S	Sg	13 17 12.4	+1.0
CESI	**CESI - Serrava**	**0.18**	**264**	⇓P	Pg	13 17 09.7	+0.9
CESI				S	Sg	13 17 12.9	+1.5
CESI				AML	AML		
comp=N,6360μm,0.5s							
CESI				AML	AML		
comp=E,5890μm,0.5s							
SEF1	**Sefro**	**0.19**	**309**	⇑P	Pg	13 17 10.2	+1.3
GAG1	**Gagliole**	**0.22**	**344**	⇓P	Pg	13 17 10.9	+1.4
GAG1				AML	AML		
comp=E,4985μm,0.4s							
GAG1				AML	AML		
comp=N,5545μm,1.0s							
T1241	**Roccafluvione,**	**0.27**	**129**	P	Pg	13 17 10.3	0.0
T1241				S	Sg	13 17 15.0	+1.2
T1241				AML	AML		
comp=E,4210μm,0.4s							
T1241				AML	AML		
comp=N,3975μm,0.5s							
T1241				AML	AML		
comp=N,3980μm,0.5s							
T1241				AML	AML		
comp=E,4215μm,0.4s							
SNTG	**Esanatoglia**	**0.28**	**326**	⇑P	Pb	13 17 11.5	-0.5
SNTG				AML	AML		
comp=E,970μm,0.6s							
SNTG				AML	AML		
comp=E,972μm,0.6s							
SNTG				AML	AML		
comp=E,928μm,0.6s							
SNTG				AML	AML		
comp=N,1300μm,0.5s							
SNTG				AML	AML		
comp=E,969μm,0.6s							
SNTG				AML	AML		
comp=N,1150μm,0.5s							
SNTG				AML	AML		
comp=E,928μm,0.6s							
T1215	**Vallo di Nera,**	**0.30**	**223**	P	Pg	13 17 11.7	+0.7
T1215				S	Sb	13 17 16.7	-0.9
T1215				AML	AML		
comp=E,1930μm,0.4s							
T1215				AML	AML		
comp=N,2030μm,0.5s							
T1215				AML	AML		
comp=E,2030μm,0.4s							
T1215				AML	AML		
comp=N,1880μm,0.5s							
T1215				AML	AML		
comp=N,2035μm,0.5s							
T1215				AML	AML		
comp=E,2035μm,0.4s							
T1215				AML	AML		
comp=N,1876μm,0.5s							
T1215				AML	AML		
comp=E,1930μm,0.4s							
T1215				AML	AML		
comp=N,2030μm,0.5s							
EL6	**Elcito**	**0.31**	**353**	⇑P	Pb	13 17 12.0	-0.6
EL6				AML	AML		
comp=E,1985μm,1.3s							
EL6				AML	AML		
comp=N,2300μm,0.3s							
T1217	**Poggiodomo (PG**	**0.35**	**207**	⇑P	Pg	13 17 12.5	+0.6
T1217				S	Sb	13 17 18.2	-0.8
T1217				AML	AML		
comp=E,3165μm,0.4s							
T1217				AML	AML		
comp=N,4390μm,1.5s							
T1217				AML	AML		
comp=E,3105μm,0.4s							
T1217				AML	AML		
comp=N,4215μm,1.5s							
T1217				AML	AML		
comp=E,3165μm,0.4s							
T1217				AML	AML		
comp=E,3095μm,0.4s							
T1217				AML	AML		
comp=N,4195μm,1.5s							
T1217				AML	AML		
comp=E,3160μm,0.4s							
T1217				AML	AML		
comp=N,4385μm,1.5s							
T1217				AML	AML		
comp=N,4200μm,1.5s							
T1217				AML	AML		
comp=N,4185μm,1.5s							
T1204	**Amatrice, Fraz**	**0.37**	**161**	P	Pg	13 17 12.7	+0.5
T1204				S	Sb	13 17 19.0	-0.6
T1204				AML	AML		
comp=N,1900μm,0.2s							
T1204				AML	AML		
comp=N,1902μm,0.2s							
T1204				AML	AML		
comp=E,3055μm,1.2s							
FOSV	**Fossato di Vic**	**0.39**	**313**	P	Pb	13 17 13.6	-0.4
FOSV				AML	AML		
comp=N,1500μm,0.3s							
FOSV				AML	AML		
comp=E,1055μm,1.4s							
T1243	**Rocca Santa Ma**	**0.39**	**146**	P	Pg	13 17 13.1	+0.4
T1243				S	Sb	13 17 20.0	-0.2
SMA1	**SAN MARTINO**	**0.42**	**161**	P	Pg	13 17 13.4	+0.3
SMA1				S	Sb	13 17 20.3	-0.6
SMA1				AML	AML		
comp=E,2330μm,1.5s							
SMA1				AML	AML		
comp=N,1880μm,0.6s							
SMA1				AML	AML		
comp=E,2335μm,1.5s							
LNSS	**Leonessa**	**0.43**	**191**	P	Pg	13 17 13.7	+0.4
LNSS				S	Sb	13 17 20.9	-0.4
LNSS				AML	AML		
comp=N,2030μm,0.4s							
LNSS				AML	AML		
comp=E,2190μm,0.2s							
ARVD	**Arcevia**	**0.50**	**342**	⇓P	Pb	13 17 15.9	+0.1
ARVD				S	Sb	13 17 25.0	+1.8
ARVD				AML	AML		
comp=E,468μm,0.3s							
ARVD				AML	AML		
comp=N,318μm,1.2s							
ARVD				AML	AML		
comp=E,468μm,0.3s							
ARVD				AML	AML		
comp=N,319μm,1.2s							
RM33	**Pellescritta (**	**0.52**	**175**	P	Pg	13 17 15.5	+0.5
RM33				S	Sb	13 17 24.0	+0.2
RM33				AML	AML		
comp=E,1095μm,1.5s							
RM33				AML	AML		
comp=N,1220μm,0.3s							
RM33				AML	AML		
comp=E,1090μm,1.5s							
RM33				AML	AML		
comp=N,1180μm,0.3s							
RM33				AML	AML		
comp=N,1220μm,0.3s							
RM33				AML	AML		
comp=N,1175μm,0.3s							
RM33				AML	AML		
comp=E,1090μm,1.5s							
TERO	**Teramo**	**0.52**	**140**	⇑P	Pg	13 17 15.3	+0.3
TERO				S	Sb	13 17 25.0	+1.1
TERO				AML	AML		
comp=E,2880μm,0.2s							
TERO				AML	AML		
comp=N,1735μm,1.5s							
TERO				AML	AML		
comp=E,3065μm,0.2s							
TERO				AML	AML		
comp=N,1740μm,1.5s							
TERO				AML	AML		
comp=E,2885μm,0.2s							
TERO				AML	AML		
comp=N,1795μm,1.5s							
CAMP	**Campotosto**	**0.53**	**159**	⇑P	Pg	13 17 15.3	+0.2
CAMP				AML	AML		
comp=N,946μm,0.2s							
CAMP				AML	AML		
comp=E,1234μm,0.4s							
ARRO	**Arrone**	**0.53**	**213**	⇑P	Pb	13 17 16.1	-0.2
ARRO				AML	AML		
comp=N,594μm,1.4s							
ARRO				AML	AML		
comp=N,595μm,1.4s							
ARRO				AML	AML		
comp=E,590μm,1.2s							
T1211	**Morro Reatino**	**0.54**	**204**	S	Sb	13 17 26.0	+1.6
ATFO	**Monte Foce - G**	**0.55**	**309**	⇓P	Pb	13 17 16.6	0.0
ATFO				AML	AML		
comp=N,376μm,1.6s							
ATFO				AML	AML		
comp=N,375μm,1.6s							
ATFO				AML	AML		
comp=E,514μm,0.5s							
FRON	**Frontone**	**0.58**	**328**	⇓P	Pb	13 17 17.2	0.0
FRON				AML	AML		
comp=E,496μm,0.8s							
FRON				AML	AML		
comp=N,1171μm,0.5s							
CESX	**Cesi**	**0.59**	**226**	⇓P	Pg	13 17 16.6	+0.2
CESX				S	Sb	13 17 26.0	+0.2
CESX				AML	AML		
comp=E,832μm,1.1s							
CESX				AML	AML		
comp=N,838μm,0.5s							
ATVO	**AVT- Monte Val**	**0.65**	**303**	P	Pb	13 17 18.1	-0.4
ATVO				AML	AML		
comp=N,368μm,0.7s							
ATVO				AML	AML		
comp=E,392μm,0.5s							
GIGS	**Gran Sasso**	**0.65**	**152**	⇑P	Pg	13 17 17.6	+0.1
GIGS				AML	AML		
comp=E,185μm,1.4s							
GIGS				AML	AML		
comp=N,258μm,0.4s							
PIEI	**Pieia**	**0.68**	**319**	P	Pg	13 17 18.4	+0.4
PIEI				S	Sn	13 17 31.0	-0.5
PIEI				AML	AML		
comp=E,281μm,0.3s							
PIEI				AML	AML		
comp=E,282μm,0.3s							
PIEI				AML	AML		
comp=N,222μm,1.4s							
FSSB	**Fossombrone**	**0.72**	**338**	⇓P	Pb	13 17 20.3	+0.7
FSSB				AML	AML		
comp=E,990μm,1.5s							
FSSB				AML	AML		
comp=N,1855μm,0.4s							
MGAB	**Montegabbione**	**0.77**	**262**	⇓P	Pn	13 17 22.9	+1.0
T0110	**Collepietro**	**0.92**	**150**	S	Sn	13 17 38.0	+0.5
PTRJ	**Pietraroja**	**1.95**	**148**	P	Pn	13 17 38.3	+0.1
PTRJ				S	Sn	13 18 02.0	-0.8
PTRJ				AML	AML		
comp=E,3670μm,0.3s							
PTRJ				AML	AML		
comp=N,4795μm,0.7s							
PTRJ				AML	AML		
comp=E,3465μm,0.8s							
PTRJ				AML	AML		
comp=N,5825μm,0.7s							
MODR	**Mondragone**	**1.95**	**164**	S	Sg	13 18 08.0	+0.3

ROM 27 13:17:26.5±0.1, 42°.942N±0°.004×13°.152E±0°.004, h9km, ML3.0/10, 9C-8D, Error ellipse: s-maj=0.4km s-min=0.3km az=356.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**137**	⇓P	Pg	13 17 28.3	-0.2
FEMA	**Monte Fema**	**0.08**	**285**	⇓P	Pg	13 17 29.0	+0.2
FEMA				S	Sg	13 17 30.7	+0.2
T1245	**Castelsantange**	**0.09**	**163**	P	Pg	13 17 29.1	+0.1
T1245				S	Sg	13 17 31.3	+0.5
T1245				AML	AML		
comp=N,29700μm,0.3s							
T1245				AML	AML		
comp=E,27250μm,0.6s							
T1245				AML	AML		
comp=N,29650μm,0.3s							
T1245				AML	AML		
comp=E,28250μm,0.6s							
FDMO	**Fiordimonte**	**0.11**	**333**	⇑P	Pg	13 17 29.3	+0.2
FDMO				S	Sg	13 17 31.2	+0.2
T1216	**Preci, Frazion**	**0.11**	**242**	⇑P	Pg	13 17 29.6	+0.5
NRCA	**Norcia**	**0.11**	**194**	⇑P	Pg	13 17 29.8	+0.5
NRCA				S	Sg	13 17 32.2	+1.0
NRCA				AML	AML		
comp=N,22350μm,0.2s							
NRCA				AML	AML		
comp=E,29900μm,0.2s							
NRCA				AML	AML		
comp=N,24300μm,0.2s							
NRCA				AML	AML		
comp=E,28450μm,0.2s							
MMO1	**Montemonaco**	**0.14**	**108**	⇓P	Pg	13 17 30.1	+0.5
MMO1				S	Sg	13 17 32.6	+0.9
AM05	**Amandola Campo**	**0.15**	**77**	⇑P	Pg	13 17 30.5	+0.7
AM05				S	Sg	13 17 33.1	+1.0
AM05				AML	AML		
comp=E,8050μm,0.2s							
AM05				AML	AML		
comp=N,533μm,0.6s							
AM05				AML	AML		
comp=N,532μm,0.6s							
GUMA	**Gualdo di Mace**	**0.18**	**48**	⇑P	Pg	13 17 31.2	+0.9
GUMA				S	Sg	13 17 34.8	+1.8
GUMA				AML	AML		
comp=E,13900μm,0.3s							
GUMA				AML	AML		
comp=N,20100μm,0.5s							
CESI	**CESI - Serrava**	**0.19**	**289**	⇑P	Pg	13 17 31.1	+0.6
CESI				S	Sg	13 17 34.9	+1.6
T1241	**Roccafluvione,**	**0.22**	**113**	⇓P	Pg	13 17 31.1	0.0
T1241				S	Sg	13 17 35.2	+1.0
T1241				AML	AML		
comp=N,3975μm,0.5s							
T1241				AML	AML		
comp=E,4215μm,0.4s							
T1241				AML	AML		
comp=N,3980μm,0.5s							
T1215	**Vallo di Nera,**	**0.25**	**236**	⇑P	Pg	13 17 32.3	+0.7
T1215				S	Sb	13 17 36.7	-1.1
T1217	**Poggiodomo (PG**	**0.28**	**215**	⇓P	Pg	13 17 32.9	+0.8
T1217				S	Sb	13 17 37.8	-0.8
T1217				AML	AML		
comp=E,3165μm,0.4s							
T1217				AML	AML		
comp=N,4390μm,1.5s							
T1217				AML	AML		
comp=E,3105μm,0.4s							
T1217				AML	AML		
comp=N,4215μm,1.5s							
T1217				AML	AML		
comp=E,3160μm,0.4s							
T1217				AML	AML		
comp=N,4200μm,1.5s							
T1217				AML	AML		
comp=N,4185μm,1.5s							
T1217				AML	AML		
comp=N,4385μm,1.5s							
T1217				AML	AML		
comp=E,3165μm,0.4s							
T1217				AML	AML		
comp=E,3095μm,0.4s							
T1204	**Amatrice, Fraz**	**0.29**	**156**	P	Pg	13 17 33.0	+0.6
T1204				S	Sb	13 17 38.4	-0.6
T1243	**Rocca Santa Ma**	**0.33**	**138**	⇓P	Pg	13 17 33.7	+0.6
LNSS	**Leonessa**	**0.35**	**194**	⇓P	Pb	13 17 34.3	-0.7
LNSS				AML	AML		
comp=E,2190μm,0.2s							
LNSS				AML	AML		
comp=N,2030μm,0.4s							
SNTG	**Esanatoglia**	**0.35**	**334**	⇓P	Pg	13 17 34.0	+0.5
SNTG				AML	AML		
comp=E,972μm,0.6s							
SNTG				AML	AML		
comp=N,1150μm,0.5s							
SNTG				AML	AML		
comp=E,928μm,0.6s							
SNTG				AML	AML		
comp=N,1300μm,0.5s							
SNTG				AML	AML		
comp=E,969μm,0.6s							
SNTG				AML	AML		
comp=E,928μm,0.6s							
CAMP	**Campotosto**	**0.45**	**155**	⇑P	Pg	13 17 35.6	+0.3
CAMP				S	Sb	13 17 43.1	-0.4
CAMP				AML	AML		
comp=N,946μm,0.2s							
CAMP				AML	AML		
comp=E,1234μm,0.4s							
FOSV	**Fossato di Vic**	**0.45**	**321**	S	Sb	13 17 44.0	+0.4
ARRO	**Arrone**	**0.46**	**218**	S	Sb	13 17 44.0	+0.2
TERO	**Teramo**	**0.46**	**134**	⇑P	Pg	13 17 35.8	+0.3
TERO				S	Sb	13 17 43.5	-0.3
TERO				AML	AML		
comp=E,2880μm,0.2s							
TERO				AML	AML		
comp=N,1735μm,1.5s							
TERO				AML	AML		
comp=N,1795μm,1.5s							
TERO				AML	AML		
comp=N,1740μm,1.5s							
TERO				AML	AML		
comp=E,3065μm,0.2s							
TERO				AML	AML		
comp=E,2885μm,0.2s							
CESX	**Cesi**	**0.54**	**232**	S	Sb	13 17 46.0	+0.1
ARVD	**Arcevia**	**0.58**	**345**	S	Sb	13 17 48.0	+0.9
MPAG	**Monte Paganucc**	**0.74**	**337**	S	Sn	13 17 54.0	-0.8
PIEI	**Pieia**	**0.74**	**323**	S	Sn	13 17 54.0	-0.8
APEC	**Apecchio**	**0.82**	**319**	S	Sn	13 17 56.0	-0.5
CRE	**Caprese Michel**	**1.11**	**308**	S	Sn	13 18 06.0	+2.2

IDC 27 13:31:34.4±2.1, 0°.97S×135°.47E, h0km, mb3.3/2, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=46.2km s-min=26.7km az=65.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.20**	**271**	Pn	Pn	13 32 39.9	+0.1
1.3nm,0.3s,baz=107,slow=23,SNR=4.8							
SIJI				Sn	Sn	13 33 31.7	+2.0
0.3nm,0.3s,baz=120,slow=23,SNR=1.3							
2.3nm,0.3s							
WRA	**Warramunga Arr**	**18.89**	**183**	P	Pn	13 35 57.4	+0.2
0.1nm,0.3s,baz=0.8,slow=11,SNR=9.9							
0.4nm,0.7s							
ASAR	**Alice Springs**	**22.62**	**184**	P	P	13 36 36.4	-0.7
0.4nm,0.6s,baz=5.6,slow=12,SNR=9.2							
0.4nm,0.6s							
MKAR	**Makanchi Array**	**66.45**	**323**	P	P	13 42 25.8	+0.1
0.3nm,0.5s,baz=108,slow=9.0,SNR=4.3							
0.3nm,0.5s							

IDC 27 13:31:43.3±2.0, 17°.14S×179°.27W, h554km±19km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=89.1km s-min=18.1km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.63**	**257**	P	P	13 32 56.6	0.0
5.9nm,0.6s,baz=138,slow=14,SNR=6.7							
STKA	**Stephens Creek**	**38.29**	**240**	P	P	13 38 16.8	-0.2
1.8nm,0.5s,baz=96,slow=11,SNR=6.1							
1.8nm,0.5s							
WRA	**Warramunga Arr**	**43.97**	**259**	P	P	13 39 01.8	-0.4
0.5nm,0.6s,baz=96,slow=7.4,SNR=15							
0.5nm,0.6s							
ASAR	**Alice Springs**	**44.22**	**254**	P	P	13 39 04.0	0.0
6.0nm,0.6s,baz=89,slow=7.9,SNR=171							
6.0nm,0.6s							
NVAR	**Mina Array Bea**	**79.44**	**44**	P	P	13 42 52.8	-0.1
0.5nm,0.7s,baz=220,slow=9.2,SNR=5.0							
0.5nm,0.7s							
ILAR	**Eielson Array**	**85.33**	**13**	P	P	13 43 21.8	+0.1
0.2nm,0.4s,baz=222,slow=5.5,SNR=4.9							
0.2nm,0.4s							
TXAR	**Lajitas Array**	**86.28**	**58**	P	P	13 43 27.1	-0.1
0.4nm,0.8s,baz=208,slow=5.1,SNR=4.9							
0.4nm,0.8s							

*IDC **27** 13:41:05.8±2.7, 53°.80N×163°.43W, h0km, mb3.9/10, mbtmp3.9/12, ML3.2/2, Error ellipse: s-maj=70.4km s-min=17.7km az=157.0*
*AEIC **27** 13:41:06±3.0, 53°.45N±0°.10×163°.2W±0°.1, h27km±9km, ML3.5, ML3.6/8(NEIC), Error ellipse: s-maj=15.7km s-min=8.1km az=152.0*
*NEIC **27** 13:41:08.2±2.5, 53°.5N±0°.1×163°.4W±0°.1, h32km±19km,*

Error ellipse: s-maj=21.4km s-min=3.1km az=148.0
ISC 27 13:41:08.3±1.6, 53.4N±0.2×163.1W±0.1, h35km, n28, σ1999/22, mb4.0/9, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.45**	**352**		**Pn**	**13 41 30.5**	**-1.5**
AKUT	**Akutan**	**1.75**	**295**		**Pn**	**13 41 34.8**	**-1.3**
UNV	**Unalaska Valle**	**2.09**	**283**		**Pn**	**13 41 38.9**	**-1.9**
SDPT	**Sand Point**	**2.46**	**37**		**Pn**	**13 41 46.2**	**+0.3**
SDPT				IAML		13 42 33.1	
	comp=N,339nm,1.8s						
CNBA	**Chernabura Isl**	**2.48**	**54**	Pn	**Pn**	**13 41 46.4**	**+0.2**
CNBA				IAML		13 42 29.7	
	comp=E,214nm,4.3s						
CNBA				IAML		13 43 00.5	
	comp=N,224nm,3.6s						
NIKH	**Nikolski High**	**3.51**	**265**	Pn	**Pn**	**13 41 55.5**	**-4.8**
CHGN	**Chignik**	**3.95**	**41**	Pn	**Pn**	**13 42 07.0**	**+0.7**
CHGN				IAML		13 43 02.6	
	comp=E,86nm,1.0s						
KDAK	**Kodiak Island**	**7.37**	**49**	Pn	**Pn**	**13 42 52.4**	**-0.9**
	comp=E,0.9nm,0.3s,baz=211,slow=5.0,SNR=10						
KDAK				Sn	**Sn**	**13 44 10.5**	**-5.1**
	comp=E,0.3nm,0.3s,baz=317,slow=17,SNR=1.5						
	comp=E,11nm,0.9s						
O18K	**Koktuh Hills**	**7.76**	**31**	Pn	**Pn**	**13 42 59.8**	**+1.1**
ADK	**Adak**	**8.42**	**265**	Pn	**Pn**	**13 43 07.9**	**+0.2**
N19K	**Bonanza Creek**	**8.75**	**29**	Pn	**Pn**	**13 43 14.1**	**+1.8**
ILAR	**Eielson Array**	**14.03**	**30**	Pn	Pn	13 44 20.1	-4.2
	baz=225,slow=14,SNR=1.6						
	comp=E,0.2nm,0.4s						
INK	**Inuvik**	**20.40**	**32**	P	**P**	**13 45 40.5**	**-1.3**
	comp=E,1.3nm,0.8s,baz=236,slow=12,SNR=5.1						
	comp=E,1.3nm,0.8s						
PETK	**Petropavlovsk-**	**23.27**	**285**	P	**P**	**13 46 11.7**	**-0.7**
	comp=E,2.3nm,0.7s,baz=87,slow=12,SNR=9.6						
	comp=E,2.3nm,0.7s						
YKA	**Yellowknife Ar**	**26.65**	**51**	P	**P**	**13 46 46.3**	**+3.0**
	comp=E,1.9nm,0.8s,baz=268,slow=9.2,SNR=4.8						
	comp=E,1.9nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**40.80**	**226**	T	T	14 32 36.8	
	baz=26,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**40.81**	**226**	T	T	14 33 00.8	
	baz=26,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**40.82**	**226**	T	T	14 33 02.8	
	baz=26,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**41.97**	**226**	T	T	14 34 16.0	
	baz=26,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**41.98**	**226**	T	T	14 34 15.1	
	baz=26,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**41.99**	**226**	T	T	14 34 09.8	
	baz=26,slow=76,SNR=36						
KSRS	**Korea Array**	**49.02**	**280**	P	**P**	**13 49 51.3**	**-0.1**
	comp=E,1.5nm,0.8s,baz=60,slow=7.2,SNR=4.8						
	comp=E,1.5nm,0.8s						
SONM	**Songino Array**	**53.97**	**304**	P	**P**	**13 50 28.7**	**+0.3**
	comp=E,0.7nm,0.4s,baz=34,slow=10.0,SNR=4.2						
	comp=E,0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**64.13**	**321**	P	**P**	**13 51 38.8**	**+0.2**
	comp=E,0.5nm,0.5s,baz=34,slow=6.8,SNR=5.7						
	comp=E,0.5nm,0.5s						
BVAR	**Borovoye Array**	**64.96**	**328**	P	**P**	**13 51 44.5**	**+0.5**
	comp=E,1.3nm,0.7s,baz=43,slow=6.9,SNR=9.0						
	comp=E,1.3nm,0.7s						
FINES	**FINESS Array B**	**65.25**	**355**	P	**P**	**13 51 45.9**	**+0.2**
	comp=E,4.2nm,0.9s,baz=340,slow=12,SNR=2.7						
	comp=E,4.2nm,0.9s						
GERES	**GERESS Array B**	**78.07**	**2**	P	**P**	**13 53 04.2**	**+1.0**
	comp=E,0.5nm,0.7s,baz=29,slow=3.0,SNR=4.3						
	comp=E,0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**80.03**	**287**	P	**P**	**13 53 15.2**	**+1.0**
	comp=E,0.6nm,0.4s,baz=17,slow=4.3,SNR=7.8						
	comp=E,0.6nm,0.4s						

*IDC **27** 13:43:39.9±1.7, 38.83N×22.15E, h0km, mb3.7/4, mbtmp3.6/5, ML3.0/1, Error ellipse: s-maj=98.5km s-min=26.8km az=141.0*
*ATH **27** 13:43:40.9, 39.11N×21.72E, h12km±1km, ML3.0/11, Error ellipse: s-maj=1.7km s-min=1.1km az=71.0*
*THE **27** 13:43:40.9, 39.11N×21.72E, h9km±1km, ML3.1/10, Error ellipse: s-maj=1.2km s-min=0.4km az=140.0*
ISC 27 13:43:39.9±1.1, 39.12N±0.02×21.79E±0.02, h14km±8km, n55, σ0998/71, mb3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.20**	**176**	P	**Pb**	**13 43 45.0**	**-0.5**
EVR				S	**Sb**	**13 43 48.8**	**-0.4**
	12μm,0.3s						
EVR	**Evrytania**	**0.20**	**176**	P	**Pb**	**13 43 45.1**	**-0.5**
EVR				S	**Sb**	**13 43 48.5**	**-0.7**
EVR				AML	AML	13 43 48.9	
	comp=N,26095μm,0.3s						
EVR				AML	AML	13 43 49.3	
	comp=E,22894μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.29**	**112**	P	**Pn**	**13 43 47.7**	**-2.1**
MAKR				S	**Sn**	**13 43 53.2**	**-2.7**
	comp=E,8μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.29**	**112**	P	**Pn**	**13 43 47.7**	**-2.1**
MAKR				S	**Sn**	**13 43 52.8**	**-3.0**
MAKR				AML	AML	13 43 53.5	
	comp=E,15137μm,0.4s						
MAKR				AML	AML	13 43 53.9	
	comp=N,17214μm,0.3s						
AGG	**Agios Georgios**	**0.43**	**103**	P	**Pn**	**13 43 50.0**	**-1.7**
THL	**Klokotos Trika**	**0.48**	**21**	P	**Pb**	**13 43 50.4**	**+0.3**
THL				S	**Sn**	**13 43 58.6**	**-2.0**
	comp=N,1μm,0.4s						
THL	**Klokotos Trika**	**0.48**	**21**	P	**Pb**	**13 43 50.3**	**+0.2**
THL				S	**Sn**	**13 43 58.5**	**-2.0**
THL				AML	AML	13 43 59.6	
	comp=N,2847μm,0.5s						
THL				AML	AML	13 44 04.7	
	comp=E,2573μm,0.2s						
ANX	**Ano Chora**	**0.54**	**169**	P	**Pb**	**13 43 50.7**	**-0.5**
ANX				S	**Sb**	**13 43 59.6**	**+0.8**
	comp=E,4μm,0.4s						
PVO	**Paravola**	**0.54**	**202**	P	**Pg**	**13 43 50.4**	**-0.2**
PVO				S	**Sb**	**13 43 58.5**	**-0.4**
	comp=E,2μm,0.5s						
EFP	**Efpalio**	**0.70**	**173**	P	**Pb**	**13 43 53.6**	**-0.3**
EFP				S	**Sn**	**13 44 04.8**	**-1.1**
	comp=E,4μm,0.3s						
SERG	**Sergoula**	**0.74**	**164**	P	**Pb**	**13 43 54.1**	**-0.4**
SERG				S	**Sn**	**13 44 06.1**	**-0.8**
	comp=E,3μm,0.3s						
AXAR	**Agios Charalam**	**0.76**	**117**	P	**Pn**	**13 43 55.9**	**-0.4**
AXAR				S	**Sn**	**13 44 07.5**	**-0.1**
	comp=E,2μm,0.3s						
AXAR	**Agios Charalam**	**0.76**	**117**	P	**Pn**	**13 43 56.0**	**-0.4**
AXAR				S	**Sn**	**13 44 07.1**	**-0.5**
AXAR				AML	AML	13 44 11.1	
	comp=N,3921μm,0.3s						
AXAR				AML	AML	13 44 14.5	
	comp=E,3204μm,0.3s						
DLFA	**Delphi**	**0.84**	**139**	P	**Pn**	**13 43 56.8**	**-0.6**
LAKA	**Lakka**	**0.89**	**170**	P	**Pn**	**13 43 57.4**	**-0.7**
LAKA				S	**Sn**	**13 44 10.2**	**-0.6**
ALIK	**Aliki, Aigiali**	**0.89**	**164**	P	**Pn**	**13 43 57.5**	**-0.6**
KPRO	**Kipourio**	**0.90**	**339**	P	**Pg**	**13 43 57.0**	**-0.3**
KPRO	**Kipourio**	**0.90**	**339**	P	**Pg**	**13 43 57.2**	**-0.1**
KPRO				AML	AML	13 44 14.4	
	comp=N,2697μm,0.3s						
KPRO				AML	AML	13 44 15.4	
	comp=E,2009μm,0.4s						
JAN	**Janina**	**0.90**	**307**	P	**Pb**	**13 43 56.7**	**-0.7**
JAN				S	**Sg**	**13 44 09.7**	**+0.4**
	comp=E,415nm,0.2s						
JAN	**Janina**	**0.90**	**307**	P	**Pb**	**13 43 56.7**	**-0.7**
JAN				AML	AML	13 44 12.5	
	comp=N,899μm,0.4s						
JAN				AML	AML	13 44 13.8	
	comp=E,1159μm,0.3s						
TSLK	**Tsoukalades, L**	**0.93**	**252**	P	**Pg**	**13 43 57.9**	**0.0**
TSLK				S	**Sg**	**13 44 10.5**	**+0.3**
	comp=E,752nm,0.8s						
TSLK	**Tsoukalades, L**	**0.93**	**252**	P	**Pb**	**13 43 57.8**	**-0.1**
TSLK				AML	AML	13 44 17.5	
	comp=N,1544μm,0.8s						
TSLK				AML	AML	13 44 17.7	
	comp=E,1403μm,0.6s						
NYDR	**Nydri-Lefkada**	**0.94**	**245**	P	**Pb**	**13 43 57.6**	**-0.4**
EVGI	**Lefkada island**	**1.02**	**241**	P	**Pb**	**13 43 58.9**	**-0.4**
EVGI	**Lefkada island**	**1.02**	**241**	P	**Pb**	**13 43 58.9**	**-0.4**
DRAG	**Dragano-Lefkad**	**1.04**	**246**	P	**Pb**	**13 43 59.2**	**-0.6**
LKR	**Lokris**	**1.05**	**116**	P	**Pg**	**13 44 00.7**	**+0.5**
RLS	**Riolos of Patr**	**1.09**	**194**	P	**Pg**	**13 44 01.2**	**+0.3**
RLS	**Riolos of Patr**	**1.09**	**194**	P	**Pg**	**13 44 01.1**	**+0.1**
KLV	**Kalavryta, Ach**	**1.11**	**165**	P	**Pg**	**13 44 01.3**	**0.0**
KLV	**Kalavryta, Ach**	**1.11**	**165**	P	**Pg**	**13 44 01.2**	**-0.2**
KLV				S	**Sg**	**13 44 16.0**	**+0.1**
KLV				AML	AML	13 44 19.4	
	comp=E,1344μm,0.7s						
KLV				AML	AML	13 44 21.8	
	comp=N,964μm,0.6s						
XOR	**Xorichti**	**1.12**	**77**	P	**Pg**	**13 44 02.1**	**+0.7**
NEO	**Neokhori**	**1.13**	**80**	P	**Pg**	**13 44 02.8**	**+1.1**
NEO				AML	AML	13 44 22.3	
	comp=E,1038μm,0.2s						
NEO				AML	AML	13 44 25.4	
	comp=N,1753μm,0.3s						
FSK	**Fiskardo**	**1.17**	**236**	P	**Pn**	**13 44 01.1**	**-0.7**
DRO	**Drossia**	**1.17**	**183**	P	**Pg**	**13 44 02.4**	**0.0**
KZN	**Kozani**	**1.19**	**359**	P	**Pg**	**13 44 02.6**	**-0.2**
PENT	**Pentalofos**	**1.19**	**335**	P	**Pg**	**13 44 02.7**	**-0.1**
IGT	**Igoumenitsa**	**1.20**	**290**	P	**Pb**	**13 44 02.3**	**-0.2**
THAL	**Thalero**	**1.28**	**147**	P	**Pg**	**13 44 04.2**	**-0.4**
THAL				AML	AML	13 44 26.8	
	comp=N,1691μm,0.3s						
THAL				AML	AML	13 44 27.4	
	comp=E,2218μm,0.5s						
KTI	**Kastanea**	**1.30**	**11**	P	**Pg**	**13 44 05.4**	**+0.5**
VLS	**Valsamata**	**1.33**	**225**	P	**Pb**	**13 44 04.1**	**-0.6**
PSDA	**Pessada-Kefalo**	**1.38**	**224**	P	**Pn**	**13 44 04.7**	**0.0**
LSK	**Leskovik**	**1.38**	**319**	P	**Pg**	**13 44 06.0**	**-0.5**
NEST	**Nestorio**	**1.41**	**336**	P	**Pb**	**13 44 06.1**	**0.0**
DMLN	**Damoulianata-K**	**1.42**	**232**	P	**Pb**	**13 44 05.4**	**-0.7**
KEF3	**Kipouria, Keph**	**1.45**	**231**	P	**Pn**	**13 44 05.8**	**0.0**
VIL2	**Platees**	**1.47**	**128**	P	**Pg**	**13 44 08.2**	**+0.1**
VIL2				AML	AML	13 44 39.0	
	comp=E,636μm,0.5s						
VIL2				AML	AML	13 44 41.6	
	comp=N,433μm,0.5s						
VILL	**Villia**	**1.53**	**128**	P	**Pg**	**13 44 08.3**	**-1.0**
OHR	**Ohrid**	**2.13**	**339**	*i* Pn	**Pg**	**13 44 20.9**	**+0.1**
STIP	**Stip**	**2.59**	**7**	*i* Pn	**Pb**	**13 44 24.0**	**-2.1**
BRTR	**Keskin Array B**	**9.19**	**82**	Pn	**Pn**	**13 45 52.7**	**+0.5**
	comp=N,0.1nm,0.3s,baz=273,slow=14,SNR=2.2						
	comp=N,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**31.39**	**220**	P	**P**	**13 50 02.1**	**+1.6**
	comp=N,0.2nm,0.4s,baz=39,slow=9.1,SNR=1.9						
	comp=N,0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**40.87**	**54**	P	**P**	**13 51 22.7**	**+1.5**
	comp=N,0.4nm,0.6s,baz=281,slow=10.0,SNR=2.0						
	comp=N,0.4nm,0.6s						
MKAR	**Makanchi Array**	**43.96**	**59**	P	**P**	**13 51 48.3**	**+1.8**
	comp=N,0.7nm,0.5s,baz=270,slow=7.9,SNR=10						
	comp=N,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**44.32**	**49**	P	**P**	**13 51 50.7**	**+1.5**
	comp=N,1.6nm,0.5s,baz=274,slow=8.2,SNR=6.5						
	comp=N,1.6nm,0.5s						

IDC 27 13:45:11.2±1.1, 29.14S×178.76W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=93.5km s-min=13.4km az=5.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.74**	**99**	Pn	Pn	13 45 29.1	+0.1
	166nm,0.3s,baz=62,slow=18,SNR=11						
RAO				Sn	Sn	13 45 41.8	+0.8
	268nm,0.3s,baz=32,slow=24,SNR=16						
STKA	**Stephens Creek**	**34.14**	**255**	P	P	13 51 58.5	+0.5
	2.0nm,0.6s,baz=103,slow=10,SNR=7.3						
	2.0nm,0.6s						
ASAR	**Alice Springs**	**42.53**	**266**	P	P	13 53 08.3	-0.5
	0.7nm,0.5s,baz=105,slow=7.3,SNR=40						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.40**	**271**	P	P	13 53 15.6	-0.2
	1.5nm,0.4s,baz=110,slow=8.1,SNR=60						
	1.5nm,0.4s						
FINES	**FINESS Array B**	**143.74**	**340**	PKhKP	PKPpre	14 04 41.8	
	2.7nm,0.5s,baz=61,slow=4.0,SNR=13						
AKASG	**Malin Array Be**	**149.90**	**323**	PKPbc	PKPbc	14 05 02.5	-0.6
	0.3nm,0.4s,baz=44,slow=2.6,SNR=5.4						

HEL 27 13:48:28.9, 64.88N×20.24E, h0km, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LILU	**Lilltraesk**	**0.44**	**338**	*i* P	Pb	13 48 39.3	-0.3
ODEU	**Stanfors**	**0.51**	**156**	*i* P	Pb	13 48 40.4	-0.4
BURU	**Burvik**	**0.57**	**120**	*e*P	Pg	13 48 39.5	-0.3
SJUU	**Sjulsmark**	**0.86**	**42**	*i* P	Pg	13 48 43.8	-1.5
UMAU	**Umeaa**	**1.01**	**169**	*e*PB	Pn	13 48 50.2	-0.2
UMAU				*e*SB	Sn	13 49 04.5	-0.8
BREU	**Bredtraesk**	**1.23**	**217**	*e*P	Pn	13 48 55.7	+2.5
HARU	**Harads**	**1.33**	**13**	*e*P	Pg	13 48 53.5	-0.8
KALU	**Kalix**	**1.64**	**52**	*e*PG	Pn	13 48 58.1	-0.8
OBF0	**Syolatti, Pyha**	**1.76**	**101**	*e*PN	Pn	13 49 00.7	+0.1
ERTU	**Ertsjaerv**	**1.87**	**25**	*e*PG	Pn	13 49 02.3	+0.2
OBF4	**Vikkela, Lumij**	**2.08**	**90**	*e*PG	Pn	13 49 05.5	+0.5
PAJU	**Pajala**	**2.46**	**27**	*e*P	Pn	13 49 10.2	0.0
KEF	**Keuruu**	**3.42**	**141**	*e*S	Sn	13 50 02.7	-1.9
SGF	**Sodankyl**	**3.63**	**42**	*e*SB	Sn	13 50 13.6	+3.9

*NEIC **27** 13:51:06.1±2.0, 53.5N±0.1×163.1W±0.1, h25km±18km, Error ellipse: s-maj=16.1km s-min=7.8km az=155.0*
AEIC 27 13:51:05±1.9, 53.50N±0.09×163.2W±0.1, h23km±9km, ML3.3, ML3.5/8(NEIC), Error ellipse: s-maj=14.6km s-min=7.7km az=156.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.37**	**354**		Pn	13 51 28.7	+0.1
AKUT	**Akutan**	**1.67**	**293**		Pn	13 51 33.5	+0.7
UNV	**Unalaska Valle**	**2.02**	**281**		Pn	13 51 38.0	+0.4
SDPT	**Sand Point**	**2.43**	**39**		Pn	13 51 44.0	+0.8
SDPT				IAML		13 52 10.1	
	comp=N,254nm,4.2s						
CNBA	**Chernabura Isl**	**2.48**	**56**	Pn	Pn	13 51 44.3	+0.4
CNBA				IAML		13 52 26.8	
	comp=N,239nm,4.1s						
CNBA				IAML		13 52 41.1	
	comp=E,218nm,4.8s						
NIKH	**Nikolski High**	**3.46**	**263**	Pn	Pn	13 51 56.9	-0.5
CHGN	**Chignik**	**3.92**	**42**	Pn	Pn	13 52 05.2	+1.6
CHGN				IAML		13 52 57.5	
	comp=N,68nm,1.4s						
OHAK	**Old Harbor**	**6.75**	**53**	Pn	Pn	13 52 41.5	-1.0
KDAK	**Kodiak Island**	**7.36**	**50**	Pn	Pn	13 52 52.1	+1.2
Q19K	**Cape Douglas,**	**7.59**	**40**	Pn	Pn	13 52 55.1	+0.9
O18K	**Koktuh Hills**	**7.72**	**31**	Pn	Pn	13 52 57.6	+1.7
ADK	**Adak**	**8.38**	**264**	Pn	Pn	13 53 06.9	+2.1
N19K	**Bonanza Creek**	**8.71**	**29**	Pn	Pn	13 53 11.2	+1.7

*IDC **27** 13:53:52.8±0.9, 29.76N×42.71W, h0km, mb3.9/12, mbtmp3.9/12, MS3.8/14, Error ellipse: s-maj=30.3km s-min=20.3km az=179.0*
ISC 27 13:53:54.9±0.9, 29.8N±0.2×42.7W±0.1, h14km, n29, σ0872/12, mb4.0/12, MS3.8/14, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**30.48**	**332**	LR	LR	14 11 19.9	
	comp=Z,96nm,18.9s,baz=70,slow=34						
SADO	**Sadowa**	**32.35**	**308**	LR	LR	14 12 03.2	
	comp=Z,125nm,18.6s,baz=152,slow=34						
TKL	**Tuckaleechee C**	**34.88**	**291**	LR	LR	14 11 41.3	
	comp=Z,150nm,19.8s,baz=93,slow=31						
FRB	**Frobisher Bay**	**37.79**	**342**	LR	LR	14 16 07.6	
	comp=Z,140nm,18.6s,baz=160,slow=35						
TORD	**Torodi Ar. Bea**	**44.19**	**102**	P	**P**	**14 02 03.4**	**-0.4**
	2.2nm,1.1s,baz=306,slow=8.9,SNR=5.2						
	2.2nm,1.1s						
ULM	**Lac du Bonnet**	**44.51**	**313**	LR	LR	14 18 51.6	
	comp=Z,108nm,20.5s,baz=69,slow=34						
H10N2	**ASCENSION HYDR**	**46.17**	**140**	T	T	14 51 31.2	
	baz=325,slow=76,SNR=1295						
H10N3	**ASCENSION HYDR**	**46.17**	**140**	T	T	14 51 31.4	
	baz=325,slow=76,SNR=880						
H10N1	**ASCENSION HYDR**	**46.19**	**140**	T	T	14 51 32.6	
	baz=325,slow=76,SNR=1036						
H10S3	**ASCENSION HYDR**	**46.99**	**141**	T	T	14 52 31.7	
	baz=255,slow=74,SNR=496						
H10S2	**ASCENSION HYDR**	**47.01**	**141**	T	T	14 52 31.7	
	baz=325,slow=74,SNR=170						
LPAZ	**La Paz**	**51.94**	**212**	P	**P**	**14 03 04.3**	**+0.1**
	2.5nm,1.0s,baz=20,slow=7.4,SNR=5.3						
	2.5nm,1.0s						
TXAR	**Lajitas Array**	**52.48**	**286**	P	**P**	**14 03 07.9**	**+0.2**
	0.4nm,0.7s,baz=119,slow=9.4,SNR=2.8						
TXAR				LR	LR	14 24 18.0	
	comp=Z,76nm,20.1s,baz=62,slow=35						
	0.4nm,0.7s						
ANMO	**Albuquerque**	**53.32**	**293**	LR	LR	14 23 37.5	
	comp=Z,92nm,21.1s,baz=96,slow=34						
PDAR	**Pinedale Array**	**54.16**	**303**	P	**P**	**14 03 19.6**	**-0.4**
	1.4nm,0.9s,baz=81,slow=9.6,SNR=7.1						
PDAR				LR	LR	14 25 20.9	
	comp=Z,150nm,19.2s,baz=75,slow=35						
	1.4nm,0.9s						
AKASG	**Malin Array Be**	**56.45**	**46**	P	**P**	**14 03 35.1**	**-1.0**
	0.7nm,0.5s,baz=275,slow=6.5,SNR=3.0						
	0.7nm,0.5s						
NEW	**Newport**	**58.45**	**311**	LR	LR	14 27 22.7	
	comp=Z,80nm,20.3s,baz=86,slow=34						
ELK	**Elko**	**58.73**	**302**	LR	LR	14 27 22.3	
	comp=Z,78nm,19.6s,baz=63,slow=34						
NVAR	**Mina Array Bea**	**61.62**	**300**	P	**P**	**14 04 12.3**	**-0.2**
	0.2nm,0.3s,baz=68,slow=9.8,SNR=2.0						
	0.2nm,0.3s						
PFO	**Pinyon Flats O**	**61.65**	**294**	LR	LR	14 28 33.7	
	comp=Z,126nm,20.1s,baz=128,slow=34						
BRTR	**Keskin Array B**	**61.78**	**58**	P	**P**	**14 04 14.2**	**+0.7**
	1.5nm,1.1s,baz=225,slow=3.3,SNR=4.3						
	1.5nm,1.1s						
INK	**Inuvik**	**63.02**	**335**	P	**P**	**14 04 20.9**	**-0.2**
	2.3nm,0.9s,baz=68,slow=7.3,SNR=4.2						
	2.3nm,0.9s						
DLBC	**Dease Lake**	**63.82**	**324**	LR	LR	14 30 58.4	
	comp=Z,136nm,20.5s,baz=97,slow=35						
YBH	**Yreka Blue Hor**	**63.88**	**305**	LR	LR	14 30 48.2	
	comp=Z,60nm,19.6s,baz=90,slow=35						
KBZ	**Khabaz**	**67.13**	**52**	P	**P**	**14 04 49.8**	**+1.6**
	3.2nm,1.0s,baz=283,slow=7.5,SNR=4.2						
	3.2nm,1.0s						
ILAR	**Eielson Array**	**69.23**	**334**	P	**P**	**14 05 01.3**	**+0.3**
	1.1nm,1.0s,baz=61,slow=3.2,SNR=5.3						
	1.1nm,1.0s						
ZALV	**Zalesovo Beam**	**85.11**	**28**	P	**P**	**14 06 30.4**	**+0.1**
	1.3nm,0.8s,baz=258,slow=10,SNR=4.0						
	1.3nm,0.8s						
YAK	**Yakutsk**	**88.33**	**4**	LR	LR	14 44 48.6	
	comp=Z,60nm,18.8s,baz=258,slow=35						
MKAR	**Makanchi Array**	**89.07**	**34**	P	**P**	**14 06 49.6**	**-0.2**
	0.6nm,0.9s,baz=310,slow=6.8,SNR=3.3						
	0.6nm,0.9s						

*MEX **27** 13:54:08.1±0.7, 30.00N×113.77W, h16km±13km, MD3.5*
*ECX **27** 13:54:13.3±0.7, 29.71N×113.67W, h20km±20km, MD3.4, ML3.5*
ISC 27 13:54:05.3±1.4, 30.07N±0.04×113.80W±0.03, h16km±12km, n19, σ2963/24, 5C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGB	**San Luis Gonza**	**0.58**	**246**	⇓*i*P	Pn	13 54 24.2	+5.3
SLGB				*e*S	**Sn**	**13 54 34.3**	**+6.2**
SLGB				IAML		13 54 37.0	
	comp=E,1μm,0.7s						
PLIB	**Puerto Liberta**	**0.97**	**99**	⇑*e*P	**Pn**	**13 54 28.4**	**+4.1**
PLIB				*e*S	**Sn**	**13 54 40.4**	**+2.6**
PLIB				⇓*e*		13 54 42.2	
PLIB				IAML		13 54 42.2	
	comp=N,1μm,0.3s						
PLIB				IAML		13 54 42.8	
	comp=E,2μm,0.3s						
PLIB				⇑*e*		13 54 42.8	
BAHB	**Baha de los**	**1.14**	**170**	*e*P	**Pb**	**13 54 24.1**	**-2.5**
BAHB				*i* S	**Sb**	**13 54 37.6**	**-3.7**
BAHB	**Baha de los**	**1.14**	**170**	*e*P	**Pn**	**13 54 27.4**	**+0.8**
BAHB				*e*S	**Sb**	**13 54 37.5**	**-3.7**
SFX	**San Felipe**	**1.33**	**317**	*e*P	**Pn**	**13 54 28.8**	**-0.4**
SFX				*e*S	**Sb**	**13 54 44.7**	**-1.9**
SFX	**San Felipe**	**1.33**	**317**	⇑*e*		13 54 59.6	
SFX				IAML		13 54 59.6	
	comp=N,386nm,0.7s						
SFX				IAML		13 55 00.4	
	comp=E,560nm,0.7s						
SFX				⇓*e*		13 55 00.4	
LAPR	**La Primavera**	**1.35**	**71**	*e*P	**Pn**	**13 54 28.8**	**-0.8**
LAPR				*e*S	**Sb**	**13 54 44.4**	**-2.8**
LAPR	**La Primavera**	**1.35**	**71**	*e*P	Pg	13 54 37.3	+6.0
PIX	**Pinacate**	**1.51**	**11**	*e*P	**Pg**	**13 54 34.1**	**-0.3**
PIX				*e*S	**Sg**	**13 54 57.5**	**+3.4**
PIX				IAML		13 55 02.2	
	comp=E,408nm,1.2s						
PIX				⇑*e*		13 55 02.2	
SPIG	**San Pedro Mart**	**1.74**	**304**	*e*P	**Pn**	**13 54 36.2**	**+1.0**
SPIG				*e*S	**Sn**	**13 54 55.7**	**-1.5**
SPIG	**San Pedro Mart**	**1.74**	**304**	*e*P	**Pg**	**13 54 38.5**	**-0.2**
SFQB	**San Francisqui**	**1.85**	**154**	*e*P	**Pb**	**13 54 37.4**	**-1.3**
SQX	**San Quintin**	**1.87**	**286**	⇑*e*P	**Pg**	**13 54 41.4**	**+0.2**
214A	**Organ Pipe Nat**	**2.06**	**24**	*e*P	**P

T1245				S	Sg	14 09 09.3	+0.2
MC2	**Monte Cornacci**	**0.12**	**11**	P	Pg	14 09 09.1	+0.6
MC2				S	Sg	14 09 11.8	+1.3
T1216	**Preci, Frazion**	**0.14**	**314**	P	Pg	14 09 09.3	+0.6
T1216				S	Sg	14 09 11.9	+1.1
T1201	**Domo (RI)**	**0.15**	**153**	P	Pg	14 09 09.7	+0.8
T1201				S	Sg	14 09 12.6	+1.6
MMO1	**Montemonaco**	**0.16**	**49**	P	Pg	14 09 09.6	+0.5
MMO1				S	Sg	14 09 12.3	+0.8
T1204	**Amatrice, Fraz**	**0.16**	**135**	P	Pg	14 09 09.6	+0.5
T1204				S	Sg	14 09 12.5	+1.0
T1217	**Poggiodomo (PG**	**0.19**	**245**	P	Pg	14 09 10.1	+0.7
T1217				S	Sg	14 09 13.5	+1.4
FEMA	**Monte Fema**	**0.19**	**335**	P	Pg	14 09 10.2	+0.6
FEMA				S	Sg	14 09 13.3	+1.1
SMA1	**SAN MARTINO**	**0.21**	**141**	P	Pg	14 09 10.2	+0.4
SMA1				S	Sg	14 09 13.7	+1.1
LNSS	**Leonessa**	**0.21**	**205**	P	Pg	14 09 10.5	+0.6
LNSS				S	Sg	14 09 14.1	+1.4
T1241	**Roccafluvione,**	**0.21**	**72**	P	Pg	14 09 09.7	-0.2
T1241				S	Sg	14 09 13.2	+0.5
T1215	**Vallo di Nera,**	**0.21**	**273**	P	Pg	14 09 10.6	+0.7
T1215				S	Sg	14 09 14.3	+1.4
T1243	**Rocca Santa Ma**	**0.23**	**114**	P	Pg	14 09 10.6	+0.3
T1243				S	Sg	14 09 14.1	+0.6
AM05	**Amandola Campo**	**0.23**	**37**	P	Pg	14 09 11.3	+1.0
AM05				S	Sg	14 09 14.8	+1.3
FDMO	**Fiordimonte**	**0.25**	**348**	P	Pg	14 09 11.3	+0.7
FDMO				S	Sb	14 09 15.6	-1.5
FDMO				AML	AML		
	comp=E,14150µm,0.8s						
FDMO				AML	AML		
	comp=N,11250µm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**319**	P	Pg	14 09 11.9	+0.6
CESI				S	Sg	14 09 16.6	+1.5
GUMA	**Gualdo di Mace**	**0.30**	**25**	P	Pg	14 09 12.4	+0.9
GUMA				S	Sb	14 09 17.6	-0.9
CSP1	**Cessapalombo**	**0.30**	**6**	P	Pg	14 09 12.3	+0.6
CSP1				S	Sb	14 09 17.3	-1.4
SEF1	**Sefro**	**0.39**	**336**	P	Pg	14 09 13.8	+0.5
SEF1				S	Sb	14 09 20.0	-1.0
MDAR	**Monte D'Aria**	**0.40**	**358**	P	Pg	14 09 14.0	+0.5
MDAR				S	Sb	14 09 20.4	-1.1
PIO1	**Pioraco**	**0.41**	**342**	P	Pg	14 09 14.1	+0.5
PIO1				S	Sb	14 09 21.0	-0.6
PIO1				AML	AML		
	comp=E,4955µm,1.1s						
PIO1				AML	AML		
	comp=N,7450µm,1.1s						
MNTP	**Montappone**	**0.41**	**33**	P	Pb	14 09 14.9	-0.4
MNTP				S	Sb	14 09 22.6	+0.8
FIU1	**Fiuminata**	**0.43**	**337**	P	Pg	14 09 14.8	+0.7
FIU1				S	Sb	14 09 21.4	-0.8
SSM1	**San Severino M**	**0.44**	**2**	P	Pg	14 09 14.6	+0.4
SSM1				S	Sb	14 09 21.7	-0.7
GAG1	**Gagliole**	**0.45**	**351**	P	Pg	14 09 15.0	+0.6
GAG1				S	Sb	14 09 22.4	-0.5
CESX	**Cesi**	**0.46**	**247**	P	Pg	14 09 14.8	+0.2
CESX				S	Sb	14 09 22.3	-0.8
MTL1	**Matelica**	**0.48**	**347**	P	Pg	14 09 15.4	+0.5
MTL1				S	Sb	14 09 23.3	-0.3
SNTG	**Esanatoglia**	**0.49**	**341**	P	Pg	14 09 15.6	+0.5
SNTG				S	Sb	14 09 23.4	-0.6
EL6	**Elcito**	**0.54**	**355**	P	Pg	14 09 16.5	+0.4
EL6				S	Sb	14 09 25.2	-0.3
ATCC	**AVT- Casa Cast**	**0.55**	**316**	P	Pg	14 09 16.8	+0.5
ATCC				S	Sb	14 09 25.0	-0.6
TRTR	**Tortoreto Alta**	**0.56**	**88**	P	Pb	14 09 17.6	0.0
TRTR				AML	AML		
	comp=E,11600µm,0.4s						
TRTR				AML	AML		
	comp=N,9745µm,0.5s						
FOSV	**Fossato di Vic**	**0.58**	**330**	P	Pg	14 09 17.0	+0.1
FOSV				S	Sb	14 09 26.3	-0.3
MMUR	**Monte Murano**	**0.66**	**350**	P	Pg	14 09 18.6	+0.2
MMUR				S	Sb	14 09 29.3	+0.4
MURB	**Monte Urbino**	**0.66**	**316**	P	Pg	14 09 18.5	+0.1
MURB				S	Sb	14 09 30.0	+1.0
MURB				AML	AML		
	comp=E,11985µm,0.2s						
MURB				AML	AML		
	comp=N,14600µm,1.1s						
MURB				AML	AML		
	comp=E,13150µm,0.3s						
MURB				AML	AML		
	comp=N,15400µm,1.1s						
PP3	**Marolino**	**0.67**	**29**	P	Pb	14 09 20.0	+0.3
PP3				S	Sn	14 09 32.0	-0.2
ARVD	**Arcevia**	**0.72**	**347**	P	Pg	14 09 19.7	+0.1
ARVD				S	Sb	14 09 31.1	+0.4
SRES	**S.Oreste - Sor**	**0.73**	**221**	⇑P	Pg	14 09 19.9	+0.2
SRES				AML	AML		
	comp=E,1285µm,0.7s						
SRES				AML	AML		
	comp=N,1020µm,0.5s						
MGAB	**Montegabbione**	**0.78**	**279**	AML	AML		
	comp=E,3505µm,0.4s						
MGAB				AML	AML		
	comp=E,3035µm,0.5s						
MGAB				AML	AML		
	comp=N,4440µm,0.3s						
MGAB				AML	AML		
	comp=N,4450µm,0.3s						
ATVO	**AVT- Monte Val**	**0.81**	**317**	P	Pg	14 09 21.0	-0.2
ATVO				S	Sb	14 09 33.6	+0.4
AOI	**Ancona**	**0.82**	**23**	P	Pb	14 09 22.0	-0.3
MTCE	**Montecelio**	**0.83**	**202**	⇓P	Pg	14 09 21.0	-0.5
MTCE				AML	AML		
	comp=E,1585µm,0.4s						
MTCE				AML	AML		
	comp=N,886µm,0.9s						
MTCE				AML	AML		
	comp=E,1590µm,0.4s						
MTCE				AML	AML		
	comp=N,885µm,0.9s						
CERT	**Cerreto**	**0.85**	**189**	⇓P	Pb	14 09 22.5	-0.3
CERT				AML	AML		
	comp=N,1098µm,0.4s						
CERT				AML	AML		
	comp=E,1570µm,0.5s						
CERT				AML	AML		
	comp=N,1099µm,0.4s						
PIEI	**Pieia**	**0.87**	**329**	P	Pg	14 09 22.1	-0.4
PIEI				AML	AML		
	comp=E,1720µm,1.0s						
PIEI				AML	AML		
	comp=N,1310µm,0.3s						
MPAG	**Monte Paganucc**	**0.89**	**341**	P	Pg	14 09 22.6	-0.1
MPAG				AML	AML		
	comp=E,2190µm,0.3s						
MPAG				AML	AML		
	comp=N,1395µm,0.9s						
SACS	**San Casciano d**	**0.92**	**274**	P	Pg	14 09 22.6	-0.7
SACS				AML	AML		
	comp=E,1160µm,1.4s						
SACS				AML	AML		
	comp=E,1110µm,1.4s						
SACS				AML	AML		
	comp=N,1103µm,0.6s						
SACS				AML	AML		
	comp=E,1160µm,1.4s						
SACS				AML	AML		
	comp=N,1124µm,1.6s						
SACS				AML	AML		
	comp=N,1122µm,1.6s						
SACS				AML	AML		
	comp=E,1158µm,1.4s						
APEC	**Apecchio**	**0.94**	**325**	P	Pg	14 09 23.8	+0.2
FSSB	**Fossombrone**	**0.94**	**343**	P	Pg	14 09 23.7	0.0
FSSB				AML	AML		
	comp=E,5915µm,1.3s						
FSSB				AML	AML		
	comp=N,6315µm,0.4s						
RCAV	**Rocca di Cave**	**0.96**	**190**	S	Sn	14 09 41.0	+1.6
BADI	**Badiali**	**0.98**	**317**	P	Pg	14 09 24.4	-0.1
GUAR	**Guarcino**	**1.00**	**173**	⇑P	Pn	14 09 27.6	+1.5
GUAR				AML	AML		
	comp=E,1064µm,0.7s						
GUAR				AML	AML		
	comp=N,1112µm,0.6s						
PE3	**Peglio**	**1.03**	**332**	⇓P	Pb	14 09 25.8	+0.1
CAFI	**Castiglion Fio**	**1.03**	**302**	⇓P	Pg	14 09 25.3	-0.1
CAFI				S	Sn	14 09 42.0	+0.9
CAFI				AML	AML		
	comp=N,916µm,1.1s						
CAFI				AML	AML		
	comp=N,962µm,1.1s						
CAFI				AML	AML		
	comp=E,988µm,0.5s						
CAFI				AML	AML		
	comp=N,962µm,1.1s						
CAFI				AML	AML		
	comp=N,918µm,1.1s						
CAFI				AML	AML		
	comp=E,1036µm,0.6s						
MCIV	**Monte Civitell**	**1.09**	**270**	⇓P	Pg	14 09 25.7	-0.8
MCIV				AML	AML		
	comp=E,486µm,0.2s						
MCIV				AML	AML		
	comp=N,441µm,0.6s						
MCIV				AML	AML		
	comp=E,487µm,0.3s						
MCIV				AML	AML		
	comp=N,440µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.23**	**177**	⇓P	Pb	14 09 29.2	-0.1
GIUL				AML	AML		
	comp=N,512µm,1.0s						
GIUL				AML	AML		
	comp=E,357µm,0.7s						
ARCI	**Arcidosso**	**1.24**	**273**	P	Pb	14 09 28.5	-0.9
ARCI				AML	AML		
	comp=E,176µm,1.3s						
ARCI				AML	AML		
	comp=N,220µm,0.3s						
CSNT	**Castellina Chi**	**1.53**	**297**	⇑P	Pb	14 09 34.1	-0.2
CSNT				AML	AML		
	comp=N,142µm,0.8s						
CSNT				AML	AML		
	comp=E,212µm,0.6s						
RUFI	**Rufina**	**1.60**	**312**	⇑P	Pn	14 09 34.7	+0.5
LMD	**Lutirano**	**1.67**	**321**	⇑P	Pb	14 09 36.9	+0.3
LMD				AML	AML		
	comp=N,274µm,0.7s						
LMD				AML	AML		
	comp=N,274µm,0.7s						
LMD				AML	AML		
	comp=E,234µm,0.4s						
TRIF	**Trifonti**	**1.69**	**282**	⇓P	Pb	14 09 36.3	-0.7
TRIF				AML	AML		
	comp=E,196µm,0.4s						
TRIF				AML	AML		
	comp=N,176µm,1.5s						
ZCCA	**Zocca**	**2.22**	**315**	P	Pn	14 09 43.4	+0.5
ZCCA				AML	AML		
	comp=E,168µm,1.4s						
ZCCA				AML	AML		
	comp=N,130µm,1.3s						
CARD	**Cardoso**	**2.31**	**303**	S	Sg	14 10 19.0	-0.8
CAFE	**Carife**	**2.35**	**138**	P	Pg	14 09 52.4	+1.8
OPPE	**Oppeano**	**2.90**	**331**	S	Sn	14 10 28.0	+0.9
PZUN	**Potenza**	**2.92**	**136**	⇑P	Pn	14 09 49.4	-3.0
SABO	**M.te Sabotino**	**3.20**	**6**	⇑P	Pn	14 09 57.1	+0.8
SABO				AML	AML		
	comp=E,688µm,1.5s						
SABO				AML	AML		
	comp=N,862µm,0.6s						
SABO				AML	AML		
	comp=E,172µm,0.7s						
SABO				AML	AML		
	comp=N,218µm,0.6s						
CGRP	**Cima Grappa**	**3.24**	**343**	⇓P	Pn	14 09 58.4	+1.5
CGRP				AML	AML		
	comp=N,173µm,0.7s						
CGRP				AML	AML		
	comp=E,152µm,1.2s						
VARN	**Col Varnada, M**	**3.29**	**347**	S	Sn	14 10 40.0	+3.1
GORR	**Gorreto**	**3.34**	**304**	⇑P	Pn	14 09 56.7	-1.5
GORR				AML	AML		
	comp=N,66µm,1.2s						
GORR				AML	AML		
	comp=E,60µm,1.6s						
STON	**Ston**	**3.34**	**87**	⇑P	Pn	14 09 57.9	-0.2
CTI	**Castel Tesino**	**3.43**	**342**	⇓P	Pn	14 10 01.6	+2.1
CTI				AML	AML		
	comp=E,132µm,0.3s						
CTI				AML	AML		
	comp=N,130µm,0.9s						
VOBA	**Vobarno**	**3.43**	**327**	P	Pn	14 09 58.8	-0.6
VOBA				AML	AML		
	comp=E,468µm,0.1s						
VOBA				AML	AML		
	comp=N,384µm,0.1s						
STAL	**STALIGIAL**	**3.48**	**355**	⇑P	Pn	14 10 01.3	+1.1
STAL				AML	AML		
	comp=N,124µm,0.3s						
STAL				AML	AML		
	comp=E,142µm,0.3s						
LUSI	**Trento, Gardas**	**3.54**	**334**	⇑P	Pn	14 10 03.5	+2.4
LUSI				AML	AML		
	comp=N,120µm,0.2s						
LUSI				AML	AML		
	comp=E,78µm,0.8s						
CIMO	**Cimolais**	**3.56**	**352**	⇑P	Pn	14 10 02.8	+1.6
CIMO				AML	AML		
	comp=N,30µm,1.1s						
CIMO				AML	AML		
	comp=E,38µm,0.5s						
SARZ	**Sarezzano**	**3.71**	**305**	P	Pn	14 10 04.3	+1.0
ACOM	**Acomizza, Ital**	**3.76**	**4**	⇑P	Pn	14 10 05.9	+1.7
ACOM				AML	AML		
	comp=E,150µm,1.5s						
ACOM				AML	AML		
	comp=N,91µm,0.6s						
ACOM				AML	AML		
	comp=E,94µm,1.4s						
ACOM				AML	AML		
	comp=N,100µm,0.6s						
ZOU	**Zoufplan**	**3.77**	**358**	⇓P	Pn	14 10 05.8	+1.5
ZOU				AML	AML		
	comp=E,70µm,1.6s						
ZOU				AML	AML		
	comp=N,82µm,1.1s						
EUCT	**Pavia**	**3.77**	**311**	S	Sn	14 10 50.0	+1.3
QLNO	**Quiliano**	**3.82**	**295**	P	Pb	14 10 13.3	0.0
MYKA	**Terra Mystica**	**3.85**	**5**	*e*Pn	Pn	14 10 07.4	+2.1
	comp=N,2.1nm,0.2s						
KOSI	**Kohlern**	**3.88**	**342**	⇑P	Pn	14 10 08.8	+3.0
MILN	**Milano**	**3.90**	**315**	P	Pb	14 10 15.5	+0.9
ABTA	**Abfaltersbach**	**3.98**	**354**	*e*Pn	Pn	14 10 09.0	+1.9
	comp=N,3.8nm,0.2s						
CELI	**Celico**	**4.23**	**142**	P	Pn	14 10 09.2	-1.3
KBA	**Koelnbreinsper**	**4.29**	**2**	*e*Pn	Pn	14 10 13.4	+2.0
	comp=N,3.4nm,0.2s						
FETA	**Feichten**	**4.57**	**339**	*e*Pn	Pb	14 10 21.2	-5.0
	comp=N,3.0nm,0.4s						
WTTA	**Wattenberg**	**4.60**	**347**	*e*Pn	Pn	14 10 19.8	+4.1
	comp=N,3.0nm,0.3s						
WATA	**Walderalm**	**4.68**	**347**	*e*Pn	Pn	14 10 20.9	+4.1
	comp=N,2.4nm,0.2s						
ARSA	**Arzberg**	**4.76**	**20**	*e*Pn	Pn	14 10 18.7	+0.9
	comp=N,1.1nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.91**	**4**	*e*Pn	Pn	14 10 24.1	+4.3
	comp=N,8.7nm,0.3s						
RETA	**Reutte**	**4.99**	**341**	*e*Pn	Pn	14 10 25.5	+4.5
	comp=N,2.0nm,0.2s						
DAVA	**Damuels**	**5.06**	**334**	*e*Pn	Pn	14 10 25.6	+3.6
	comp=N,3.0nm,0.2s						
MOA	**Molln**	**5.12**	**8**	*e*Pn	Pn	14 10 19.7	-2.9
	comp=N,9.7nm,0.3s						
CONA	**Conrad Observa**	**5.48**	**19**	*e*Pn	Pn	14 10 28.8	+1.1
	comp=N,1.4nm,0.3s						
KHC	**Kasperske Hory**	**6.35**	**2**	*e*PN	Pn	14 10 40.8	+1.3
KHC				*e*SN	Sn	14 11 50.7	-1.5

ROM 27 14:14:55.1±0.1, 42°.869N±0°.003×13°.062E±0°.003, h10km, Md1.1/6, 3C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**305**	P	Pg	14 14 57.4	+0.3
T1216				S	Sg	14 14 58.7	+0.1
T1216				AML	AML		
	comp=E,1895µm,0.4s						
T1216				AML	AML		
	comp=N,1616µm,0.3s						
T1216				AML	AML		
	comp=E,9770µm,0.3s						
T1216				AML	AML		
	comp=N,14150µm,0.3s						
T1216				AML	AML		
	comp=E,724µm,0.3s						
T1216				AML	AML		
	comp=N,853µm,0.3s						
T1216	**Preci, Frazion**	**0.04**	**305**	P	Pg	14 14 57.5	+0.4
T1216				S	Sg	14 14 58.8	+0.2
T1216				AML	AML		
	comp=E,1895µm,0.4s						
T1216				AML	AML		
	comp=N,1616µm,0.3s						
T1216				AML	AML		
	comp=E,9790µm,0.3s						
T1216				AML	AML		
	comp=N,14150µm,0.3s						
T1216				END			
NRCA	**Norcia**	**0.05**	**132**	⇓P	Pg	14 14 57.6	+0.4
NRCA				S	Sg	14 14 59.0	+0.2
NRCA				AML	AML		
	comp=E,1209µm,0.1s						
NRCA				AML	AML		
	comp=N,1130µm,0.1s						
NRCA				AML	AML		
	comp=E,4390µm,0.1s						
NRCA				AML	AML		
	comp=N,8295µm,0.1s						
NRCA				AML	AML		
	comp=N,1128µm,0.1s						
NRCA				AML	AML		
	comp=E,544µm,0.1s						
NRCA				AML	AML		
	comp=E,462µm,0.2s						
NRCA				AML	AML		
	comp=N,1042µm,0.1s						
NRCA	**Norcia**	**0.05**	**132**	P	Pg	14 14 57.6	+0.3
NRCA				S	Sg	14 14 59.0	+0.2
NRCA				AML	AML		
	comp=E,1209µm,0.1s						
NRCA				AML	AML		
	comp=N,1130µm,0.1s						
NRCA				AML	AML		
	comp=E,4390µm,0.1s						
NRCA				AML	AML		
	comp=N,8295µm,0.1s						
NRCA				AML	AML		
	comp=N,1128µm,0.1s						
NRCA				AML	AML		
	comp=E,544µm,0.1s						
NRCA				AML	AML		
	comp=E,462µm,0.2s						
NRCA				AML	AML		
	comp=N,1042µm,0.1s						
NRCA				END			
T1245	**Castelsantange**	**0.09**	**97**	⇓P	Pg	14 14 58.3	+0.5
T1245				S	Sg	14 15 00.4	+0.6
T1245				AML	AML		
	comp=E,1100µm,0.1s						
T1245				AML	AML		
	comp=N,952µm,1.5s						
T1245				AML	AML		
	comp=E,1056µm,0.6s						
T1245				AML	AML		
	comp=N,850µm,0.1s						
T1245				AML	AML		
	comp=E,4475µm,1.4s						
T1245				AML	AML		
	comp=N,3175µm,1.2s						
T1245				AML	AML		
	comp=N,512µm,0.1s						
T1245				AML	AML		
	comp=E,333µm,0.3s						
T1245	**Castelsantange**	**0.09**	**97**	S	Sg	14 15 00.3	+0.5
T1245				AML	AML		
	comp=E,1100µm,0.1s						
T1245				AML	AML		
	comp=N,952µm,1.5s						
T1245				AML	AML		
	comp=E,1056µm,0.6s						
T1245				AML	AML		
	comp=N,850µm,0.1s						
T1245				AML	AML		
	comp=E,4475µm,1.4s						
T1245				AML	AML		
	comp=N,3175µm,1.2s						
T1245				END			
T1215	**Vallo di Nera,**	**0.16**	**245**	P	Pg	14 14 59.3	+0.7
T1215	**Vallo di Nera,**	**0.16**	**245**	S	Sg	14 15 01.9	+0.9
T1215				END			
FDMO	**Fiordimonte**	**0.17**	**6**	⇑P	Pg	14 14 57.8	-1.1
FDMO				S	Sg	14 14 59.0	-2.4
CESI	**CESI - Serrava**	**0.18**	**320**	⇓P	Pg	14 14 59.7	+0.7
CESI				AML	AML		
	comp=E,662µm,0.9s						
CESI				AML	AML		
	comp=N,764µm,0.4s						
CESI				AML	AML		
	comp=E,1215µm,1.0s						
CESI				AML	AML		
	comp=N,1955µm,0.4s						
CESI	**CESI - Serrava**	**0.18**	**320**	P	Pg	14 14 59.6	+0.6
CESI				S	Sg	14 15 02.8	+1.0
CESI				AML	AML		
	comp=E,662µm,0.9s						
CESI				AML	AML		
	comp=N,764µm,0.4s						
CESI				AML	AML		
	comp=E,1215µm,1.0s						
CESI				AML	AML		
	comp=N,1955µm,0.4s						
CESI				END			
T1256	**Bolognola (MC)**	**0.18**	**41**	⇑P	Pg	14 14 59.7	+0.6
T1256				AML	AML		
	comp=E,1395µm,1.4s						
T1256				AML	AML		
	comp=N,1350µm,1.4s						
T1256				AML	AML		
	comp=E,44µm,0.1s						
T1256				AML	AML		
	comp=N,54µm,0.2s						
T1256				AML	AML		
	comp=E,1172µm,0.3s						
T1217	**Poggiodomo (PG**	**0.18**	**212**	P	Pb	14 15 00.6	0.0
T1217	**Poggiodomo (PG**	**0.18**	**212**	P	Pg	14 14 59.5	+0.5
T1217				S	Sg	14 15 03.0	+1.2
MMO1	**Montemonaco**	**0.20**	**81**	P	Pg	14 14 59.7	+0.4
MMO1	**Montemonaco**	**0.20**	**81**	S	Sg	14 15 03.2	+1.0
MMO1				END			
CSP1	**Cessapalombo**	**0.25**	**25**	⇑P	Pb	14 15 01.3	-0.4
CSP1				AML	AML		
	comp=E,1975µm,0.3s						
CSP1				AML	AML		
	comp=N,1304µm,1.1s						
T1243	**Rocca Santa Ma**	**0.33**	**121**	P	Pg	14 15 02.2	+0.5
T1243	**Rocca Santa Ma**	**0.33**	**121**	S	Sb	14 15 07.4	-1.1
SNTG	**Esanatoglia**	**0.40**	**347**	S	Sb	14 15 10.0	-0.4
TERO	**Teramo**	**0.47**	**121**	P	Pg	14 15 04.5	+0.3
TERO				AML	AML		
	comp=E,150µm,1.2s						
TERO				AML	AML		
	comp=N,173µm,1.6s						
TERO	**Teramo**	**0.47**	**121**	S	Sb	14 15 11.7	-0.7
TERO				AML	AML		
	comp=E,150µm,1.2s						
TERO				AML	AML		
	comp=N,173µm,1.6s						

*STR **27** 14:54:09.5±1.0, 48°.N±5°.×°.±°., h10km±30km, MLv1.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=146.0, preliminary*

ZUR 27 14:54:08.9, 47°.64N×8°.99E, h12km, MLh1.0/8, 6C-3D, Error ellipse: s-maj=1.7km s-min=0.8km az=181.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEIN	**Stein am Rhein**	**0.08**	**288**	⇑Pg	Pg	14 54 11.8	+0.2
STEIN				Sg	Sg	14 54 13.7	+0.2
WEIN	**Weingarten**	**0.12**	**180**	⇓Pg	Pg	14 54 12.3	+0.3
WEIN				Sg	Sg	14 54 14.6	+0.4
WALHA	**Wallhausen, DE**	**0.14**	**40**	Sg	Sg	14 54 15.2	+0.4
WILA	**Wila**	**0.23**	**193**	⇓Pg	Pg	14 54 14.4	+0.5
WILA				Sg	Sg	14 54 18.2	+0.9
EMING	**Emmingen-Lipti**	**0.27**	**339**	⇓Pg	Pg	14 54 14.8	+0.3
SLE	**Schleitheim**	**0.35**	**290**	⇑Pg	Pg	14 54 16.3	+0.3
SLE				Sg	Sg	14 54 21.1	+0.3
SLE	**Schleitheim**	**0.35**	**290**	⇑Pg	Pg	14 54 16.3	+0.2
GUT	**Gutenstein**	**0.44**	**12**	Pg	Pg	14 54 17.7	+0.2
GUT				Sg	Sg	14 54 23.8	+0.5
GUT	**Gutenstein**	**0.44**	**12**	⇑Pg	Pg	14 54 17.6	+0.1
METMA	**Mettma DE**	**0.50**	**278**	⇑Pg	Pg	14 54 18.9	+0.2
SULZ	**Cheisacher**	**0.60**	**259**	Pg	Pb	14 54 21.6	+0.1

FELD	**Feldberg im Sc**	**0.70 290**	Pg	Pg	14 54 22.7	+0.2
FELD	**Feldberg im Sc**	**0.70 290**	Sg	Sg	14 54 32.0	+0.2
FELD	**Feldberg im Sc**	**0.70 290**	⇑Pg	Pg	14 54 22.6	+0.1
KIZ	**Kirchzarten**	**0.78 294**	Pg	Pg	14 54 23.7	-0.4
KIZ	**Kirchzarten**	**0.78 294**	Sg	Sg	14 54 34.2	-0.1
OPP	**Oppenau**	**1.01 328**	Pg	Pb	14 54 28.1	-0.2

ROM 27 14:55:57.9±0.1, 42°.879N±0°.004×13°.193E±0°.009, h8km±1km, ML1.8/4, 4C-2D, Error ellipse: s-maj=0.6km s-min=0.5km az=297.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**357**	⇑P	Pg	14 55 59.3	-0.4
T1216	**Preci, Frazion**	**0.13**	**275**	P	Pg	14 56 01.2	+0.4
T1216				S	Sg	14 56 03.7	+1.0
T1216				AML	AML		
	comp=E,2405μm,0.4s						
T1216				AML	AML		
	comp=N,1284μm,1.0s						
T1216				AML	AML		
	comp=E,2400μm,0.4s						
T1216				AML	AML		
	comp=N,1284μm,1.0s						
CSP1	**Cessapalombo**	**0.21**	**2**	P	Pg	14 56 03.0	+0.7
CSP1				S	Sg	14 56 06.9	+1.7
CESI	**CESI - Serrava**	**0.25**	**301**	P	Pg	14 56 03.3	+0.5
CESI				S	Sg	14 56 07.7	+1.5
CESI				AML	AML		
	comp=N,326μm,1.0s						
CESI				AML	AML		
	comp=N,326μm,1.0s						
CESI				AML	AML		
	comp=E,180μm,0.3s						
T1215	**Vallo di Nera,**	**0.25**	**252**	P	Pg	14 56 03.6	+0.7
T1215				S	Sg	14 56 07.8	+1.5
LNSS	**Leonessa**	**0.30**	**202**	P	Pg	14 56 04.7	+0.8
LNSS				S	Sb	14 56 10.1	-0.7
LNSS				AML	AML		
	comp=N,270μm,0.2s						
LNSS				AML	AML		
	comp=N,270μm,0.2s						
LNSS				AML	AML		
	comp=E,362μm,0.2s						
TERO	**Teramo**	**0.40**	**130**	P	Pg	14 56 06.2	+0.6
TERO				S	Sb	14 56 13.2	-0.4
TERO				AML	AML		
	comp=N,151μm,1.4s						
TERO				AML	AML		
	comp=E,152μm,0.1s						
TERO				AML	AML		
	comp=N,152μm,1.4s						
T1211	**Morro Reatino**	**0.43**	**216**	S	Sb	14 56 15.0	+0.6
EL6	**Elcito**	**0.46**	**352**	⇓P	Pg	14 56 07.0	+0.2
EL6				S	Sb	14 56 16.0	+0.7
CING	**Cingoli**	**0.50**	**0**	⇑P	Pb	14 56 08.3	-0.7
ARVD	**Arcevia**	**0.65**	**344**	S	Sb	14 56 22.0	+1.3
MCIV	**Monte Civitell**	**1.12**	**265**	P	Pn	14 56 22.3	+2.3
SAMA	**S.Maria delle**	**1.19**	**202**	P	Pn	14 56 21.5	+0.7
LMD	**Lutirano**	**1.61**	**318**	P	Pn	14 56 25.5	-1.3
PTRJ	**Pietraroja**	**1.81**	**146**	P	Pn	14 56 28.5	-1.0
PTRJ				AML	AML		
	comp=E,3815μm,0.6s						
PTRJ				AML	AML		
	comp=N,5890μm,0.3s						
PTRJ				AML	AML		
	comp=N,7425μm,0.1s						
PTRJ				AML	AML		
	comp=E,4315μm,0.6s						
VITU	**Vitulano (BN)**	**2.00**	**147**	S	Sn	14 56 57.0	-0.5
CAVE	**Cavezzo**	**2.54**	**322**	S	Sb	14 57 17.0	+1.8
STON	**Ston**	**3.31**	**89**	S	Sn	14 57 29.0	-0.6
SIRI	**Monte Sirino -**	**3.36**	**142**	⇑P	Pn	14 56 53.4	+2.6
ZONE	**Zone**	**3.63**	**324**	S	Sg	14 57 53.0	-1.5
EUCT	**Pavia**	**3.74**	**310**	S	Sb	14 57 53.0	+3.4
ERC	**Erice**	**4.86**	**186**	P	Pn	14 57 08.8	-2.6
ERC				⇑P	Pb	14 57 24.5	+1.2
CRJA	**Costa Raja**	**5.07**	**182**	⇓P	Pn	14 57 19.8	+5.5
PETRA	**Petralia Sopra**	**5.09**	**172**	S	Sn	14 58 15.0	+1.3

IDC 27 15:01:18.5±3.1, 5°.97S×150°.91E, h0km, mb3.5/2, mbtmp3.6/3, ML0.8/1, Error ellipse: s-maj=122.5km s-min=38.9km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.05**	**227**	Pn	Pn	15 02 37.0	+1.4
	0.2nm,0.3s,baz=207,slow=18,SNR=3.0						
PMG				Sn	Sn	15 03 35.1	+0.5
	0.8nm,0.3s,baz=147,slow=18,SNR=1.6						
	18nm,1.0s						
WRA	**Warramunga Arr**	**21.27**	**228**	P	P	15 06 06.3	-0.3
	1.0nm,0.8s,baz=53,slow=11,SNR=15						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**24.03**	**221**	P	P	15 06 35.2	-0.2
	1.1nm,0.5s,baz=57,slow=9.0,SNR=65						
	1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**148.84**	**286**	PKPbc	PKPbc	15 21 08.9	-0.4
	0.3nm,0.5s,baz=71,slow=4.2,SNR=2.3						

*IDC **27** 15:08:45.7±0.9, 5°.45S×148°.50E, h0km, mb3.9/8, mbtmp3.9/10, ML4.0/1, MS3.0/1, Error ellipse: s-maj=28.7km s-min=14.7km az=105.0*
*NEIC **27** 15:08:49.9±2.4, 5°.27S±0°.09×148°.3E±0°.1, h35km±5km, mb4.2/17, Error ellipse: s-maj=16.1km s-min=10.9km az=120.0*
ISC 27 15:08:49.8±0.6, 5°.26S±0°.07×148°.34E±0°.09, h35km, n37, σ2s03/38, mb4.2/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.96**	**75**	**Pn**	**Pn**	**15 09 47.9**	**-0.2**
RABL	**Rabaul**	**3.96**	**75**	**P**	**Pn**	**15 09 48.2**	**+0.1**
PMG	**Port Moresby**	**4.29**	**196**	Pn	**Pn**	**15 09 52.2**	**-0.3**
	30nm,0.7s,baz=276,slow=20,SNR=4.0						
PMG				Sn	**Sn**	**15 10 42.5**	**+1.1**
	1.4nm,0.3s,baz=300,slow=7.3,SNR=3.3						
PMG				LR	LR	15 11 36.4	
	comp=Z,195nm,20.2s,baz=102,slow=41						
PMG	**Port Moresby**	**4.29**	**196**		**Pn**	**15 09 53.0**	**+0.4**
COEN	**Coen**	**10.03**	**210**	Pn	**Pn**	**15 11 08.7**	**-2.9**
FAKI	**Fak Fak**	**16.21**	**278**	Pn	**Pn**	**15 12 33.1**	**-2.0**
FAKI				IAmb	IAmb	15 13 12.8	
	comp=Z,17nm,1.2s						
MTN	**Manton Dam**	**18.58**	**245**		**P**	**15 13 02.8**	**-1.3**
MTN				IAmb	IAmb	15 13 18.1	
	comp=Z,8.7nm,0.9s						
WB0	**Warramunga Arr**	**19.81**	**222**		**P**	**15 13 15.2**	**-2.3**
WB0				IAmb	IAmb	15 13 31.7	
	comp=Z,9.7nm,1.4s						
WR0	**Warramunga Arr**	**19.85**	**221**	P	**P**	**15 13 17.4**	**-0.6**
WRAB	**Tennant Creek**	**19.95**	**222**	P	**P**	**15 13 18.3**	**-0.8**
WRAB				IAmb	IAmb	15 13 34.4	
	comp=Z,8.5nm,1.2s						
WB2	**Warramunga Arr**	**19.96**	**222**	P	**P**	**15 13 18.4**	**-0.8**
WRA	**Warramunga Arr**	**19.97**	**222**	P	**P**	**15 13 18.1**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=42,slow=12,SNR=38						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**19.97**	**222**		**P**	**15 13 17.2**	**-2.0**
RMQ	**Roma**	**21.12**	**179**	P	**P**	**15 13 32.4**	**+0.8**
QLP	**Quilpie**	**21.57**	**190**	P	**P**	**15 13 39.0**	**+2.6**
KNRA	**Kununurra**	**21.84**	**240**	P	**P**	**15 13 33.8**	**-5.6**
KNRA				IAmb	IAmb	15 14 04.5	
	comp=Z,17nm,1.2s						
AS01	**Alice Springs**	**22.96**	**216**	P	**P**	**15 13 50.9**	**-0.5**
AS31	**Alice Springs**	**22.99**	**216**	P	**P**	**15 13 50.8**	**-0.9**
ASAR	**Alice Springs**	**22.99**	**216**	P	**P**	**15 13 50.9**	**-0.8**
	comp=Z,4.9nm,0.8s,baz=50,slow=8.7,SNR=91						
ASAR				PcP	**PcP**	**15 17 41.5**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=48,slow=3.2,SNR=4.1						
ASAR				S	**S**	**15 18 05.2**	**+5.3**
	comp=Z,1.1nm,1.1s,baz=40,slow=20,SNR=4.6						
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**22.99**	**216**	P	**P**	**15 13 50.5**	**-1.2**
INKA	**Innaminka**	**23.50**	**197**	P	**P**	**15 13 56.9**	**+0.3**
DZM	**Mont Dzumac**	**24.22**	**135**	P	**P**	**15 14 02.7**	**-0.9**
	comp=Z,7.6nm,0.9s,baz=129,slow=11,SNR=3.6						
	comp=Z,7.6nm,0.9s						
STKA	**Stephens Creek**	**27.23**	**193**	P	**P**	**15 14 29.2**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=28,slow=16,SNR=5.7						
	comp=Z,2.0nm,0.7s						
FORT	**Forrest**	**31.76**	**215**	P	**P**	**15 15 10.0**	**-0.8**
YULB	**Yu-li**	**38.83**	**318**	P	**P**	**15 16 13.4**	**+1.7**
YULB				IAmb	IAmb	15 16 51.4	
	comp=Z,9.2nm,1.2s						
NACB	**Ninganchiao**	**39.18**	**319**	P	**P**	**15 16 14.6**	**0.0**
TPUB	**Ta-pu**	**39.21**	**317**	P	**P**	**15 16 13.5**	**-1.4**
TPUB				IAmb	IAmb	15 16 44.0	
	comp=Z,10nm,0.9s						
SSLB	**Suanglung**	**39.33**	**318**	P	**P**	**15 16 13.6**	**-2.4**
SSLB				IAmb	IAmb	15 16 28.4	
	comp=Z,7.9nm,1.2s						
YHNB	**Yeheng**	**39.67**	**320**	P	**P**	**15 16 16.4**	**-2.4**
CMAR	**Chiang Mai Arr**	**54.09**	**297**	P	**P**	**15 18 14.1**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=113,slow=5.0,SNR=4.8						
	comp=Z,0.5nm,0.8s						
SONM	**Songino Array**	**64.42**	**330**	P	P	15 19 27.1	+4.5
	comp=Z,0.5nm,0.5s,baz=133,slow=6.1,SNR=3.3						
	comp=Z,0.5nm,0.5s						
CASY	**Casey**	**66.33**	**196**	P	**P**	**15 19 33.5**	**-1.0**
MKAR	**Makanchi Array**	**77.78**	**320**	P	**P**	**15 20 46.6**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=104,slow=4.8,SNR=2.0						
	comp=Z,0.2nm,0.5s						
MAKZ	**Makanchi**	**77.99**	**320**	P	P	15 20 48.7	+4.0
MAKZ				IAmb	IAmb	15 20 54.7	
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**79.10**	**327**	P	**P**	**15 20 53.0**	**+2.4**
	comp=Z,0.8nm,0.6s,baz=105,slow=9.3,SNR=4.2						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**84.28**	**23**	P	**P**	**15 21 19.9**	**+2.2**
	comp=Z,1.8nm,0.8s,baz=247,slow=5.0,SNR=8.6						
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**146.19**	**286**	PKPbc	**PKPab**	**15 28 27.4**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=81,slow=5.0,SNR=2.5						

*IDC **27** 15:15:16.8±6.8, 24°.36N×124°.78E, h0km, mb3.2/3, mbtmp3.2/3, MS3.5/1, Error ellipse: s-maj=413.3km s-min=31.5km az=61.0*
*JMA **27** 15:15:20.4±0.1, 24°.8N±0°.7×125°.4E±0°.6, h49km, MV2.9/11, NEAR MIYAKOJIMA ISLAND*
ISC 27 15:15:21.0±1.1, 24°.8N±0°.1×125°.37E±0°.07, h44km±7km, n14, σ0s47/21, mb3.3/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.04**	**125**	*i* P	**Pn**	**15 15 27.9**	**-0.1**
JOGS				S	**Sn**	**15 15 33.4**	**+0.5**
JMJ2	**Miyako jima3**	**0.06**	**223**	*i* P	**Pn**	**15 15 27.9**	**-0.1**
JMJ2				S	**Sn**	**15 15 33.4**	**+0.4**
JIKM	**Ikemajima**	**0.18**	**321**	*i* P	**Pn**	**15 15 28.2**	**-0.4**
JIKM				S	**Sn**	**15 15 34.2**	**+0.2**
JIRB	**Irabujima**	**0.18**	**284**	*i* P	**Pn**	**15 15 28.2**	**-0.4**
JIRB				S	**Sn**	**15 15 33.9**	**-0.2**
JTJ	**Tarama**	**0.62**	**257**	*i* P	**Pn**	**15 15 33.5**	**-0.1**
JTJ				S	**Sn**	**15 15 42.5**	**-0.1**
JISG	**Ishigakijimahi**	**0.98**	**259**	P	**Pn**	**15 15 37.8**	**-0.7**
JISG				S	**Sn**	**15 15 51.3**	**+0.1**
JIJ	**Ishigaki jima**	**1.19**	**250**	*i* P	**Pn**	**15 15 41.0**	**-0.3**
JIJ				S	**Sn**	**15 15 56.5**	**+0.2**
JKRS	**Kuro-shima**	**1.35**	**247**	P	**Pn**	**15 15 44.0**	**+0.5**
IRIF	**Iriomote-Funau**	**1.56**	**254**	P	**Pn**	**15 15 45.9**	**-0.4**
IRIF				*e*S	**Sn**	**15 16 05.6**	**+0.3**
HATJ	**Hateruma jima**	**1.60**	**243**	*e*S	**Sn**	**15 16 06.8**	**+0.5**
KLR	**Kul'dur**	**24.91**	**10**	LR	LR	15 29 54.4	
	comp=Z,100nm,18.7s,baz=52,slow=34						
MKAR	**Makanchi Array**	**40.62**	**314**	P	**P**	**15 22 57.5**	**+0.9**
	0.3nm,0.5s,baz=104,slow=10,SNR=2.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**45.31**	**168**	P	**P**	**15 23 34.2**	**-0.5**
	0.3nm,0.9s,baz=348,slow=8.6,SNR=2.4						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**48.87**	**170**	P	**P**	**15 24 01.7**	**-0.8**
	0.2nm,0.7s,baz=359,slow=7.3,SNR=4.4						
	0.2nm,0.7s						

*AEIC **27** 15:27:23±2.6, 55°.35N±0°.08×162°.4W±0°.1, h156km±7km, Error ellipse: s-maj=12.4km s-min=7.9km az=146.0*
NEIC 27 15:27:20.7±1.7, 55°.31N±0°.09×162°.3W±0°.1, h176km±13km, ML3.5/14, ML3.2(AEIC), Error ellipse: s-maj=12.7km s-min=8.5km az=161.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.79**	**235**	Pn	Pn	15 27 46.6	+0.1
SDPT	**Sand Point**	**1.04**	**87**	Pn	Pn	15 27 48.9	+0.7
SDPT				Sn	Sn	15 28 09.1	-0.4
CNBA	**Chernabura Isl**	**1.63**	**106**	Pn	Pn	15 27 53.1	-0.5
CNBA				Sn	Sn	15 28 18.0	-1.0
CNBA				IAML		15 28 28.9	
	comp=E,251nm,4.3s						
CNBA				IAML		15 28 43.7	
	comp=N,201nm,4.7s						
AKUT	**Akutan**	**2.33**	**241**	Pn	Pn	15 28 00.4	-0.8
AKUT				Sn	Sn	15 28 32.1	-0.5
AKUT				IAML		15 28 49.7	
	comp=N,82nm,4.2s						
CHGN	**Chignik**	**2.41**	**64**	Pn	Pn	15 28 03.0	+1.1
CHGN				Sn	Sn	15 28 33.3	-0.7
CHGN				IAML		15 29 13.8	
	comp=E,97nm,0.1s						
CHGN				IAML		15 29 15.5	
	comp=N,84nm,1.3s						
UNV	**Unalaska Valle**	**2.86**	**241**	Pn	Pn	15 28 08.5	+1.1
CHIR	**Chirikof Islan**	**3.82**	**80**	Pn	Pn	15 28 20.5	+1.1
CHIR				IAML		15 30 34.4	
	comp=E,388nm,4.8s						
NIKH	**Nikolski High**	**4.51**	**241**	Pn	Pn	15 28 29.8	+1.6
SII	**Sitkinak Islan**	**4.73**	**71**	Pn	Pn	15 28 33.1	+2.1
OHAK	**Old Harbor**	**5.37**	**65**	Pn	Pn	15 28 39.6	+0.3
OHAK				IAML		15 29 50.4	
	comp=E,99nm,4.0s						
OHAK				IAML		15 31 37.0	
	comp=N,119nm,3.7s						
P18K	**Big Mountain,**	**5.60**	**40**	Pn	Pn	15 28 42.3	0.0
KDAK	**Kodiak Island**	**5.92**	**61**	Pn	Pn	15 28 46.4	0.0
Q19K	**Cape Douglas,**	**5.94**	**49**	Pn	Pn	15 28 46.6	-0.2
CNPM	**China Poot**	**7.31**	**50**	Pn	Pn	15 29 05.1	+0.3
BRLK	**Bradley Lake**	**7.59**	**49**	Pn	Pn	15 29 08.0	-0.4
PWL	**Port Wells**	**9.24**	**47**	Pn	Pn	15 29 29.4	-0.8
SML	**Sawmill**	**9.76**	**43**	Pn	Pn	15 29 38.1	+1.1
J20K	**Nowinta River**	**9.79**	**21**	Pn	Pn	15 29 36.6	-0.6
HIN	**Hinchinbrook I**	**9.83**	**52**	Pn	Pn	15 29 36.7	-1.1
FID	**Port Fidalgo**	**9.99**	**51**	Pn	Pn	15 29 38.2	-1.7
SCM	**Sheep Creek Mo**	**10.17**	**44**	Pn	Pn	15 29 42.4	0.0

*IDC **27** 15:33:48.9±65.0, 16°.71S×177°.63W, h562km±24km, mb2.8/3, mbtmp3.8/4, Error ellipse: s-maj=1147.0km s-min=136.6km az=78.0*
*NEIC **27** 15:33:55.1±1.3, 16°.7S±0°.2×178°.5W±0°.2, h551km±15km, mb4.3/9, Error ellipse: s-maj=36.0km s-min=22.1km az=190.0*
ISC 27 15:33:54.7±1.0, 16°.7S±0°.2×178°.6W±0°.1, h550km, n17, σ0s67/17, mb4.1/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.40**	**252**	P	**P**	**15 35 13.6**	**+1.2**
	22nm,0.8s,baz=110,slow=2.7,SNR=14						
MSVF	**Nonsavu**	**3.40**	**252**	P	**P**	**15 35 13.1**	**+0.7**
AFI	**Afiamalu**	**7.11**	**68**	P	**P**	**15 35 43.9**	**-0.1**
BFZ	**Birch Farm**	**24.33**	**190**	P	**P**	**15 38 30.0**	**+0.5**
CTAO	**Charters Tower**	**33.52**	**259**	P	**P**	**15 39 50.0**	**+0.6**
STKA	**Stephens Creek**	**39.10**	**240**	P	**P**	**15 40 34.3**	**-0.9**
	0.4nm,0.3s,baz=61,slow=13,SNR=3.5						
	0.4nm,0.3s						
BBOO	**Buckleboo**	**43.88**	**240**	P	**P**	**15 41 11.9**	**-1.0**
WR0	**Warramunga Arr**	**44.53**	**258**	P	**P**	**15 41 18.9**	**+0.7**
WR0				IAmb	IAmb	15 41 49.1	
	comp=Z,17nm,1.8s						
WB0	**Warramunga Arr**	**44.68**	**259**	P	**P**	**15 41 18.9**	**-0.4**
WB0				IAmb	IAmb	15 43 05.4	
	comp=Z,5.8nm,1.3s						
WB2	**Warramunga Arr**	**44.71**	**258**	P	**P**	**15 41 19.4**	**-0.2**
WB2				IAmb	IAmb	15 41 40.3	
	comp=Z,20nm,1.9s						
WRA	**Warramunga Arr**	**44.72**	**258**	P	**P**	**15 41 19.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=85,slow=8.0,SNR=15						
	comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.72**	**258**	P	**P**	**15 41 19.1**	**-0.5**
AS31	**Alice Springs**	**44.99**	**253**	P	**P**	**15 41 21.8**	**+0.1**
ASAR	**Alice Springs**	**44.99**	**253**	P	**P**	**15 41 21.7**	**0.0**
	comp=Z,1.5nm,0.4s,baz=88,slow=8.2,SNR=61						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**44.99**	**253**	P	**P**	**15 41 21.0**	**-0.7**
MBWA	**Marble Bar**	**58.23**	**255**	P	**P**	**15 42 56.8**	**-0.4**
MBWA				IAmb	IAmb	15 44 53.8	
	comp=Z,46nm,1.9s						
QSPA	**South Pole Qui**	**73.37**	**180**	P	**P**	**15 44 30.6**	**-0.1**
QSPA				IAmb	IAmb	15 47 09.9	
	comp=Z,16nm,1.8s						

ROM 27 15:35:15.4±0.1, 42°.852N±0°.004×13°.118E±0°.006, h10km, ML2.5/15, 7C-6D, Error ellipse: s-maj=0.5km s-min=0.4km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.08**	**41**	⇑P	Pg	15 35 18.2	+0.2
MC2				S	Sg	15 35 20.0	+0.1
T1216	**Preci, Frazion**	**0.08**	**298**	P	Pg	15 35 18.0	+0.2
T1216				S	Sg	15 35 19.8	+0.2
T1216				AML	AML		
	comp=E,7780μm,0.4s						
T1216				AML	AML		
	comp=N,7460μm,0.2s						
T1216				AML	AML		
	comp=E,7775μm,0.5s						
T1216				AML	AML		
	comp=N,7460μm,0.2s						
T1216				AML	AML		
	comp=E,7785μm,0.4s						
FEMA	**Monte Fema**	**0.12**	**336**	⇓P	Pg	15 35 19.8	+1.4
FEMA				S	Sg	15 35 21.3	+0.7
FEMA				AML	AML		
	comp=N,30950μm,0.2s						
FEMA				AML	AML		
	comp=E,29850μm,1.4s						
FEMA				AML	AML		
	comp=E,4131μm,0.2s						
FEMA				AML	AML		
	comp=N,2421μm,0.1s						
FDMO	**Fiordimonte**	**0.19**	**353**	P	Pg	15 35 20.1	+0.7
FDMO				S	Sg	15 35 23.4	+1.3
FDMO				AML	AML		
	comp=E,74550μm,0.1s						
FDMO				AML	AML		
	comp=N,30100μm,0.3s						
T1215	**Vallo di Nera,**	**0.19**	**255**	⇑P	Pg	15 35 20.1	+0.7
T1215				AML	AML		
	comp=E,1760μm,0.5s						
T1215				AML	AML		
	comp=N,1295μm,0.5s						
T1215				AML	AML		
	comp=E,1755μm,0.5s						
T1215				AML	AML		
	comp=N,1680μm,0.2s						
T1215				AML	AML		
	comp=E,1755μm,1.5s						
T1215				AML	AML		
	comp=N,1079μm,0.3s						
T1215				AML	AML		
	comp=N,1294μm,0.5s						
T1217	**Poggiodomo (PG**	**0.20**	**225**	P	Pg	15 35 20.1	+0.6
T1217				S	Sg	15 35 23.7	+1.3
T1217				AML	AML		
	comp=E,788μm,0.4s						
T1217				AML	AML		
	comp=N,1405μm,0.5s						
T1217				AML	AML		
	comp=N,1328μm,0.5s						
T1217				AML	AML		
	comp=E,788μm,0.4s						
AM05	**Amandola Campo**	**0.21**	**54**	P	Pg	15 35 20.5	+0.7
AM05				AML	AML		
	comp=E,732μm,0.9s						
AM05				AML	AML		
	comp=N,692μm,0.7s						
AM05				AML	AML		
	comp=E,2730μm,0.2s						
AM05				AML	AML		
	comp=N,179μm,0.1s						
AM05				AML	AML		
	comp=E,4035μm,0.2s						
AM05				AML	AML		
	comp=N,430μm,0.3s						
AM05				AML	AML		
	comp=N,1865μm,0.3s						
AM05				AML	AML		
	comp=E,916μm,1.0s						
AM05				AML	AML		
	comp=E,2728μm,0.2s						
AM05				AML	AML		
	comp=N,581μm,0.1s						
CESI	**CESI - Serrava**	**0.22**	**314**	⇑P	Pg	15 35 20.7	+0.7
CESI				S	Sg	15 35 24.4	+1.3
CESI				AML	AML		
	comp=N,7410μm,0.2s						
CESI				AML	AML		
	comp=E,5755μm,0.4s						
CESI				AML	AML		
	comp=N,7410μm,0.2s						
T1204	**Amatrice, Fraz**	**0.23**	**140**	P	Pg	15 35 20.6	+0.5
T1204				S	Sg	15 35 24.9	+1.5
T1241	**Roccafluvione,**	**0.23**	**89**	⇑P	Pg	15 35 20.0	-0.2
CSP1	**Cessapalombo**	**0.25**	**15**	⇑P	Pg	15 35 21.1	+0.6
CSP1				AML	AML		
	comp=N,11900μm,0.3s						
CSP1				AML	AML		
	comp=E,10330μm,1.1s						
LNSS	**Leonessa**	**0.26**	**193**	P	Pb	15 35 21.5	-0.7
LNSS				S	Sb	15 35 26.1	-0.6
LNSS				AML	AML		
	comp=E,560μm,1.3s						
LNSS				AML	AML		
	comp=N,607μm,0.4s						
LNSS				AML	AML		
	comp=N,1285μm,0.7s						
LNSS				AML	AML		
	comp=E,1495μm,0.2s						
LNSS				AML	AML		
	comp=N,607μm,0.4s						
SMA1	**SAN MARTINO**	**0.27**	**144**	P	Pg	15 35 21.4	+0.4
SMA1				S	Sb	15 35 26.1	-1.1
SMA1				AML	AML		
	comp=E,808μm,0.5s						
SMA1				AML	AML		
	comp=E,808μm,0.5s						
SMA1				AML	AML		
	comp=N,842μm,1.3s						
CAMP	**Campotosto**	**0.38**	**146**	⇓P	Pg	15 35 23.4	+0.4
CAMP				AML	AML		
	comp=E,248μm,0.2s						
CAMP				AML	AML		
	comp=N,240μm,0.3s						
CAMP				AML	AML		
	comp=N,180μm,0.5s						
CAMP				AML	AML		
	comp=E,178μm,0.4s						
OFFI	**Offida**	**0.42**	**79**	⇓P	Pb	15 35 25.3	+0.2
OFFI				AML	AML		
	comp=N,786μm,0.8s						
OFFI				AML	AML		
	comp=E,832μm,0.5s						
OFFI				AML	AML		
	comp=N,786μm,1.2s						
TERO	**Teramo**	**0.42**	**122**	⇓P	Pg	15 35 23.9	+0.2
TERO				AML	AML		
	comp=E,365μm,0.4s						
TERO				AML	AML		
	comp=N,621μm,0.5s						
TERO				AML	AML		
	comp=N,622μm,0.5s						
TERO				AML	AML		
	comp=N,622μm,1.5s						
TERO				AML	AML		
	comp=E,364μm,0.4s						
EL6	**Elcito**	**0.48**	**359**	S	Sb	15 35 34.0	+0.9

comp=N,68μm,1.1s
GIGS AML AML
comp=E,62μm,0.6s
ARVD Arcevia 0.66 349 S Sn 15 35 40.0 -1.3
T0110 Collepietro 0.79 142 ⇓P Pg 15 35 30.6 -0.1
T0110 AML AML
comp=E,230μm,0.4s
T0110 AML AML
comp=N,290μm,0.4s
T0110 AML AML
comp=E,230μm,1.6s
PIEI Pieia 0.81 328 S Sn 15 35 44.0 -1.0
FSSB Fossombrone 0.88 344 S Sn 15 35 47.0 +0.3
LMD Lutirano 1.60 321 ⇑P Pb 15 35 45.4 +0.4

ROM 27 15:35:53.8±0.1, 43°.009N±0°.004×13°.089E±0°.005, h10km, ML2.6/19, 15C-11D, Error ellipse: s-maj=0.4km s-min=0.2km az=43.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**358**	P	Pg	15 35 55.7	0.0
FDMO				S	Sg	15 35 56.6	-0.4
FDMO				AML	AML		
	comp=E,74550μm,0.1s						
FDMO				AML	AML		
	comp=N,30100μm,0.3s						
FDMO				AML	AML		
	comp=N,27776μm,0.1s						
FDMO				AML	AML		
	comp=E,74543μm,0.1s						
FEMA	**Monte Fema**	**0.06**	**212**	⇑P	Pg	15 35 56.2	+0.2
FEMA				S	Sg	15 35 57.7	+0.1
FEMA				AML	AML		
	comp=N,31000μm,0.2s						
FEMA				AML	AML		
	comp=N,31000μm,0.2s						
FEMA				AML	AML		
	comp=E,29850μm,1.4s						
FEMA				AML	AML		
	comp=E,27619μm,0.1s						
FEMA				AML	AML		
	comp=N,30988μm,0.2s						
CSP1	**Cessapalombo**	**0.12**	**46**	P	Pg	15 35 57.3	+0.5
CSP1				S	Sg	15 35 59.6	+0.7
CSP1				AML	AML		
	comp=E,10330μm,1.1s						
CSP1				AML	AML		
	comp=N,11900μm,0.3s						
CSP1				AML	AML		
	comp=N,10503μm,0.2s						
CSP1				AML	AML		
	comp=E,8738μm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**142**	P	Pg	15 35 57.5	+0.6
T1216	**Preci, Frazion**	**0.13**	**203**	⇑P	Pg	15 35 57.4	+0.6
T1216				S	Sg	15 35 59.9	+0.9
T1216				AML	AML		
	comp=N,5945μm,0.3s						
T1216				AML	AML		
	comp=E,5670μm,0.9s						
T1216				AML	AML		
	comp=N,5950μm,0.3s						
T1216				AML	AML		
	comp=N,5945μm,0.4s						
T1216				AML	AML		
	comp=E,5655μm,0.9s						
T1216				AML	AML		
	comp=N,5947μm,0.4s						
T1216				AML	AML		
	comp=E,5551μm,0.2s						
CESI	**CESI - Serrava**	**0.14**	**268**	⇑P	Pg	15 35 57.6	+0.6
CESI				S	Sg	15 36 00.1	+0.9
CESI				AML	AML		
	comp=N,5645μm,0.4s						
CESI				AML	AML		
	comp=E,5755μm,0.4s						
CESI				AML	AML		
	comp=E,5199μm,0.2s						
CESI				AML	AML		
	comp=N,5428μm,0.3s						
SEF1	**Sefro**	**0.17**	**323**	⇓P	Pg	15 35 58.2	+0.7
SEF1				S	Sg	15 36 01.3	+1.2
SEF1				AML	AML		
	comp=E,10000μm,0.2s						
SEF1				AML	AML		
	comp=N,8460μm,1.1s						
SEF1				AML	AML		
	comp=N,8460μm,1.1s						
SEF1				AML	AML		
	comp=N,7821μm,0.3s						
SEF1				AML	AML		
	comp=E,9985μm,0.2s						
PIO1	**Pioraco**	**0.19**	**336**	⇓P	Pg	15 35 58.4	+0.6
PIO1				S	Sg	15 36 01.9	+1.3
PIO1				AML	AML		
	comp=N,6304μm,0.3s						
PIO1				AML	AML		
	comp=E,2891μm,0.2s						
MDAR	**Monte D'Aria**	**0.19**	**12**	P	Pg	15 35 58.5	+0.6
MDAR				S	Sg	15 36 01.8	+1.2
MDAR				AML	AML		
	comp=E,1229μm,0.2s						
MDAR				AML	AML		
	comp=N,1802μm,0.3s						
AM05	**Amandola Campo**	**0.20**	**99**	⇑P	Pg	15 35 58.9	+0.9
AM05				S	Sg	15 36 02.3	+1.6
AM05				AML	AML		
	comp=E,915μm,1.0s						
AM05				AML	AML		
	comp=N,1865μm,0.3s						
AM05				AML	AML		
	comp=E,916μm,1.0s						
AM05				AML	AML		
	comp=E,4030μm,0.2s						
AM05				AML	AML		
	comp=E,916μm,1.0s						
AM05				AML	AML		
	comp=N,430μm,0.3s						
AM05				AML	AML		
	comp=N,1870μm,0.3s						
AM05				AML	AML		
	comp=E,914μm,1.0s						
AM05				AML	AML		
	comp=E,819μm,0.1s						
AM05				AML	AML		
	comp=N,383μm,0.1s						
AM05				AML	AML		
	comp=N,1405μm,0.1s						
AM05				AML	AML		
	comp=E,4030μm,0.2s						
FIU1	**Fiuminata**	**0.21**	**327**	P	Pg	15 35 58.9	+0.7
FIU1				S	Sg	15 36 02.7	+1.4
FIU1				AML	AML		
	comp=N,1953μm,0.1s						
FIU1				AML	AML		
	comp=E,1694μm,0.2s						
GAG1	**Gagliole**	**0.23**	**356**	P	Pg	15 35 59.4	+0.9
T1241	**Roccafluvione,**	**0.29**	**121**	⇓P	Pg	15 35 59.8	+0.1
T1241				S	Sb	15 36 04.9	-1.2
T1241				AML	AML		
	comp=N,12970μm,0.6s						
T1241				AML	AML		
	comp=E,798μm,0.7s						
T1241				AML	AML		
	comp=E,704μm,0.3s						
MNTP	**Montappone**	**0.31**	**65**	⇑P	Pb	15 36 01.4	0.0
MNTP				AML	AML		
	comp=E,1715μm,0.8s						
MNTP				AML	AML		
	comp=E,1715μm,0.8s						
MNTP				AML	AML		
	comp=N,1730μm,1.2s						
MNTP				AML	AML		
	comp=E,1505μm,0.2s						
MNTP				AML	AML		
	comp=N,1367μm,0.1s						
T1217	**Poggiodomo (PG**	**0.32**	**201**	⇑P	Pg	15 36 00.9	+0.7
T1217				AML	AML		
	comp=E,1515μm,0.2s						
T1217				AML	AML		
	comp=N,1390μm,0.3s						
T1217				AML	AML		
	comp=E,1563μm,0.2s						
T1217				AML	AML		
	comp=N,1351μm,0.3s						
T1217				AML	AML		
	comp=E,1514μm,0.2s						
T1217				AML	AML		
	comp=N,1390μm,0.4s						
EL6	**Elcito**	**0.32**	**2**	⇑P	Pg	15 36 00.8	+0.6
EL6				AML	AML		
	comp=E,2355μm,0.2s						
EL6				AML	AML		
	comp=N,2685μm,0.3s						
EL6				AML	AML		
	comp=E,2354μm,0.2s						
EL6				AML	AML		
	comp=N,2687μm,0.3s						
TRE1	**Treia**	**0.34**	**28**	P	Pb	15 36 01.9	-0.1
TRE1				AML	AML		
	comp=N,1288μm,0.6s						
TRE1				AML	AML		
	comp=E,1216μm,0.5s						
T1204	**Amatrice, Fraz**	**0.37**	**153**	⇓P	Pb	15 36 01.9	-0.6
T1204				AML	AML		
	comp=N,840μm,0.2s						
T1204				AML	AML		
	comp=E,1632μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.37**	**298**	P	Pg	15 36 00.5	-0.7
FOSV	**Fossato di Vic**	**0.37**	**320**	P	Pb	15 36 01.9	-0.7
FOSV				AML	AML		
	comp=E,1265μm,0.9s						
FOSV				AML	AML		
	comp=N,1675μm,0.3s						
FOSV				AML	AML		
	comp=E,1001μm,0.1s						
FOSV				AML	AML		
	comp=N,1673μm,0.3s						
LNSS	**Leonessa**	**0.41**	**185**	⇑P	Pg	15 36 02.3	+0.5
LNSS				AML	AML		
	comp=E,1490μm,0.2s						
LNSS				AML	AML		
	comp=N,1285μm,0.7s						
LNSS				AML	AML		
	comp=E,1495μm,0.2s						
LNSS				AML	AML		
	comp=E,1494μm,0.2s						
LNSS				AML	AML		
	comp=N,1184μm,0.2s						
T1243	**Rocca Santa Ma**	**0.41**	**140**	⇑P	Pg	15 36 02.5	+0.6
SMA1	**SAN MARTINO**	**0.42**	**154**	⇑P	Pg	15 36 02.6	+0.5
SMA1				AML	AML		
	comp=E,682μm,0.6s						
SMA1				AML	AML		
	comp=N,720μm,0.3s						
SMA1				AML	AML		
	comp=E,683μm,0.6s						
SMA1				AML	AML		
	comp=N,719μm,0.3s						
OFFI	**Offida**	**0.44**	**99**	⇑P	Pb	15 36 04.1	+0.4
OFFI				AML	AML		
	comp=N,714μm,0.4s						
OFFI				AML	AML		
	comp=E,748μm,0.3s						
ARRO	**Arrone**	**0.49**	**209**	⇓P	Pb	15 36 04.0	-0.5
ARVD	**Arcevia**	**0.50**	**348**	P	Pg	15 36 04.0	+0.4
ARVD				S	Sb	15 36 13.0	+0.9
ARVD				AML	AML		
	comp=E,724μm,1.1s						
ARVD				AML	AML		
	comp=N,478μm,0.8s						
ARVD				AML	AML		
	comp=N,471μm,0.1s						
ARVD				AML	AML		
	comp=E,706μm,0.1s						
T1211	**Morro Reatino**	**0.51**	**200**	⇓P	Pg	15 36 04.2	+0.5
T1211				S	Sb	15 36 13.0	+0.7
T1211				AML	AML		
	comp=E,602μm,0.5s						
T1211				AML	AML		
	comp=N,813μm,0.3s						
T1211				AML	AML		
	comp=E,599μm,0.2s						
T1211				AML	AML		
	comp=N,755μm,0.3s						
T1211				AML	AML		
	comp=E,604μm,0.1s						
T1211				AML	AML		
	comp=N,813μm,0.3s						
RM33	**Pellescritta (**	**0.51**	**169**	⇓P	Pg	15 36 04.2	+0.5
RM33				AML	AML		
	comp=E,446μm,0.7s						
RM33				AML	AML		
	comp=N,406μm,1.0s						
RM33				AML	AML		
	comp=E,446μm,0.7s						
RM33				AML	AML		
	comp=N,406μm,1.0s						
RM33				AML	AML		
	comp=E,417μm,0.3s						
RM33				AML	AML		
	comp=N,317μm,0.1s						
CAMP	**Campotosto**	**0.53**	**153**	⇓P	Pg	15 36 04.4	+0.3
CAMP				AML	AML		
	comp=N,240μm,0.3s						
CAMP				AML	AML		
	comp=E,248μm,0.2s						
CAMP				AML	AML		
	comp=N,239μm,0.3s						
CAMP				AML	AML		
	comp=E,248μm,0.2s						
TERO	**Teramo**	**0.54**	**135**	P	Pg	15 36 04.7	+0.4
TERO				S	Sb	15 36 14.0	+0.8
TERO				AML	AML		
	comp=E,247μm,0.1s						
TERO				AML	AML		
	comp=E,279μm,0.1s						
TERO				AML	AML		
	comp=N,288μm,0.2s						
TERO				AML	AML		
	comp=N,318μm,0.2s						
CESX	**Cesi**	**0.55**	**223**	⇑P	Pg	15 36 04.7	+0.3
CESX				S	Sb	15 36 14.0	+0.6
CESX				AML	AML		
	comp=E,1018μm,1.2s						
CESX				AML	AML		
	comp=N,1204μm,0.4s						
CESX				AML	AML		
	comp=N,1203μm,0.5s						
CESX				AML	AML		
	comp=E,989μm,0.4s						
FRON	**Frontone**	**0.57**	**333**	P	Pg	15 36 05.3	+0.4
FRON				AML	AML		
	comp=N,504μm,0.6s						
FRON				AML	AML		
	comp=E,422μm,0.5s						
FRON				AML	AML		
	comp=E,386μm,0.1s						
FRON				AML	AML		
	comp=N,463μm,0.1s						
ATVO	**AVT- Monte Val**	**0.62**	**307**	⇑P	Pg	15 36 06.2	+0.3
ATVO				AML	AML		
	comp=E,232μm,0.3s						
ATVO				AML	AML		
	comp=N,138μm,0.5s						
AOI	**Ancona**	**0.66**	**35**	⇓P	Pb	15 36 07.2	-0.1
AOI				AML	AML		
	comp=E,253μm,0.3s						
AOI				AML	AML		
	comp=N,228μm,0.8s						
GIGS	**Gran Sasso**	**0.66**	**147**	⇓P	Pg	15 36 06.8	+0.2
GIGS				AML	AML		
	comp=N,48μm,0.1s						
GIGS				AML	AML		
	comp=E,80μm,0.4s						
PIEI	**Pieia**	**0.66**	**323**	⇓P	Pg	15 36 07.0	+0.3
PIEI				S	Sb	15 36 18.0	+1.2
PIEI				AML	AML		
	comp=N,240μm,0.4s						
PIEI				AML	AML		
	comp=E,324μm,0.2s						
PIEI				AML	AML		
	comp=N,237μm,0.2s						
PIEI				AML	AML		
	comp=E,266μm,0.1s						
ATPI	**Pietralunga -**	**0.67**	**312**	⇑P	Pb	15 36 07.3	-0.3
ATPI				AML	AML		
	comp=N,147μm,0.5s						
ATPI				AML	AML		
	comp=E,157μm,0.5s						
ATMI	**Monte Miggiano**	**0.68**	**299**	S	Sn	15 36 20.0	-0.3
FSSB	**Fossombrone**	**0.72**	**342**	P	Pb	15 36 08.2	-0.3
FSSB				AML	AML		
	comp=E,866μm,0.1s						
FSSB				AML	AML		
	comp=N,1535μm,0.3s						
FSSB				AML	AML		
	comp=E,866μm,0.1s						
FSSB				AML	AML		
	comp=N,1295μm,0.5s						
FIAM	**Fiamignano**	**0.74**	**178**	P	Pg	15 36 08.2	+0.2
FIAM				S	Sb	15 36 20.0	+1.0
FIAM				AML	AML		
	comp=E,124μm,0.5s						
PE3	**Peglio**	**0.81**	**328**	P	Pn	15 36 10.8	-0.6
T0110	**Collepietro**	**0.93**	**147**	⇑P	Pg	15 36 11.8	0.0
T0110				AML	AML		
	comp=E,230μm,0.4s						
T0110				AML	AML		
	comp=N,289μm,0.5s						
PTRJ	**Pietraroja**	**1.96**	**146**	P	Pn	15 36 26.9	-0.3
POPM	**Popiglio**	**1.99**	**302**	S	Sg	15 36 58.0	+0.4
VBKN	**Vesuvio Bunker**	**2.40**	**155**	P	Pn	15 36 34.1	+1.0

ISK 27 15:38:18.7, 33°.66N×34°.86E, h10km, ML3.8/13
JSO 27 15:38:19.7±0.7, 34°.N±4°.×3°.5E±°, h4km±4km, MLv4.1/20
GRAL 27 15:38:21.1±0.5, 33°.65N×34°.82E, h25km±5km, MD3.8
NIC 27 15:38:21.5±0.0, 33°.62N×34°.89E, h32km±46km, Ml3.8/10
GII 27 15:38:22.1±0.0, 33°.55N×34°.95E, h14km, MD3.1/7, Mm3.0/11

ISC 27 15:38:19.7±1.2, 33°.64N±0°.02×34°.84E±0°.03, h13km±9km, n93, σ0s.84/124, 2C-1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYL	**Beirut**	**0.59**	**66**	*e*P	**Pb**	**15 38 32.1**	**+0.2**
DQRL	**Deir Qamar**	**0.61**	**83**	*e*P	**Pb**	**15 38 32.7**	**+0.4**
DQRL				*e*S	**Sb**	**15 38 41.0**	**+0.1**
HNTI	**Hanita**	**0.62**	**153**	P	**Pb**	**15 38 32.6**	**+0.3**
HNTI	**Hanita**	**0.62**	**153**	Pg	**Pg**	**15 38 32.4**	**+0.6**
HNTI				Sg	**Sg**	**15 38 39.9**	**-0.1**
QRWL	**Qaraoun**	**0.71**	**97**	*e*P	**Pb**	**15 38 34.2**	**+0.3**
BHL	**Bhannes**	**0.73**	**68**	*e*P	**Pb**	**15 38 34.0**	**-0.3**
MMA0	**Mount Meron ar**	**0.78**	**143**	Pg	**Pg**	**15 38 34.8**	**0.0**
MMA0				Sg	**Sg**	**15 38 44.3**	**-0.7**
SHBL	**Chebaa**	**0.81**	**111**	*e*P	**Pg**	**15 38 35.6**	**+0.2**
SHBL				*e*S	**Sb**	**15 38 46.7**	**+0.2**
GEM	**Giv'at Ha'Em**	**0.81**	**121**	P	**Pg**	**15 38 35.6**	**+0.2**
GEM	**Giv'at Ha'Em**	**0.81**	**121**	Pg	**Pg**	**15 38 35.7**	**+0.3**
GEM				Sg	**Sg**	**15 38 45.5**	**-0.5**
NATI	**Neve Ativ**	**0.84**	**116**	P	**Pg**	**15 38 35.9**	**0.0**
NATI	**Neve Ativ**	**0.84**	**116**	Pg	**Pg**	**15 38 35.9**	**0.0**
NATI				Sg	**Sg**	**15 38 46.3**	**-0.6**
RCY	**Rachaya**	**0.84**	**99**	*e*P	**Pb**	**15 38 36.4**	**+0.2**
ZAHL	**Zahle**	**0.90**	**75**	*e*P	**Pb**	**15 38 37.3**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.95**	**162**	P	**Pb**	**15 38 38.1**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.95**	**162**	Pg	**Pb**	**15 38 38.0**	**+0.1**
BLGI				Sg	**Sg**	**15 38 50.1**	**-0.3**
OFRI	**`Ofer**	**1.02**	**173**	P	**Pb**	**15 38 39.3**	**0.0**
OFRI	**`Ofer**	**1.02**	**173**	Pg	**Pb**	**15 38 39.2**	**0.0**
OFRI				Sg	**Sb**	**15 38 52.5**	**0.0**
KSHT	**Keshet**	**1.04**	**129**	Pg	**Pb**	**15 38 39.6**	**0.0**
KSHT				Sg	**Sb**	**15 38 52.4**	**-0.8**
HWQ	**Hawqa**	**1.12**	**55**	*e*P	**Pb**	**15 38 40.5**	**-0.5**
SHMJ	**Saham**	**1.19**	**139**	P	**Pn**	**15 38 41.9**	**-0.2**
MMLI	**Mount Malkishu**	**1.29**	**158**	PN	**Pn**	**15 38 43.4**	**0.0**
MMLI	**Mount Malkishu**	**1.29**	**158**	⇑P	**Pn**	**15 38 43.0**	**-0.4**
MMLI				S	**Sb**	**15 38 58.8**	**-1.5**
MMLI				AML	AML	15 38 60.0	
	2.6nm,0.2s						
MMLI				AML	AML	15 38 60.0	
	2.6nm,0.2s						
MMLI				AML	AML	15 39 00.4	
	1.7nm,0.2s						
MMLI				AML	AML	15 39 00.4	
	1.7nm,0.2s						
MMLI	**Mount Malkishu**	**1.29**	**158**	Pg	**Pn**	**15 38 43.2**	**-0.2**
MMLI				Sg	**Sb**	**15 38 59.5**	**-0.8**
SLTI	**Sal'it**	**1.40**	**173**	P	**Pn**	**15 38 45.6**	**+0.7**
SLTI	**Sal'it**	**1.40**	**173**	Pn	**Pn**	**15 38 44.8**	**-0.1**
SLTI				Sn	**Sn**	**15 39 02.8**	**-0.5**
HMDT	**Nahal Hemdat**	**1.49**	**157**	P	**Pn**	**15 38 46.7**	**+0.5**
HMDT	**Nahal Hemdat**	**1.49**	**157**	Pn	**Pn**	**15 38 46.5**	**+0.3**
HMDT				Sn	**Sn**	**15 39 05.0**	**-0.5**
PARAL	**Paralimni**	**1.51**	**334**	P	**Pn**	**15 38 46.4**	**0.0**
PARAL				S	**Sn**	**15 39 04.5**	**-1.4**
PARAL				AML	AML	15 39 06.3	
	1.5nm,0.5s						
PARAL				AML	AML	15 39 06.3	
	1.5nm,0.5s						
PARAL				AML	AML	15 39 06.7	
	1.2nm,0.5s						
PARAL				AML	AML	15 39 06.7	
	1.2nm,0.5s						
SALP	**Salfit**	**1.59**	**169**	Pn	**Pn**	**15 38 48.1**	**+0.5**
SALP				Sn	**Sn**	**15 39 08.2**	**+0.2**
MVOU	**Mavrovouni**	**1.70**	**324**	P	**Pn**	**15 38 48.8**	**-0.2**
MVOU				S	**Sn**	**15 39 07.8**	**-2.8**
MVOU				AML	AML	15 39 08.8	
	1.0nm,0.2s						
MVOU				AML	AML	15 39 08.8	
	1.0nm,0.2s						
MVOU				AML	AML	15 39 08.9	
	1.2nm,0.2s						
MVOU				AML	AML	15 39 08.9	
	1.2nm,0.2s						
ASGA	**Asgata**	**1.75**	**311**	P	**Pn**	**15 38 49.5**	**-0.2**
ASGA				S	**Sn**	**15 39 11.7**	**-0.2**
ASGA				AML	AML	15 39 13.5	
	0.9nm,0.3s						
ASGA				AML	AML	15 39 13.5	
	0.9nm,0.3s						
ASGA				AML	AML	15 39 18.0	
	0.6nm,0.6s						
ASGA				AML	AML	15 39 18.0	
	0.6nm,0.6s						
UJAP	**Al Uja**	**1.76**	**162**	PN	**Pn**	**15 38 50.4**	**+0.6**
UJAP				SN	**Sn**	**15 39 13.5**	**+1.5**
UJAP	**Al Uja**	**1.76**	**162**	P	**Pn**	**15 38 50.9**	**+1.1**
UJAP	**Al Uja**	**1.76**	**162**	Pn	**Pn**	**15 38 50.7**	**+0.9**
UJAP				Sn	**Sn**	**15 39 11.9**	**-0.1**
CSS	**Mathiatis**	**1.82**	**317**	PN	**Pn**	**15 38 51.1**	**+0.3**
CSS	**Mathiatis**	**1.82**	**317**	P	**Pn**	**15 38 51.4**	**+0.7**
CSS	**Mathiatis**	**1.82**	**317**	P	**Pn**	**15 38 51.0**	**+0.3**
CSS	**Mathiatis**	**1.82**	**317**	Pn	**Pn**	**15 38 50.9**	**+0.2**
HSUJ	**Al Zarqa**	**1.90**	**143**	P	**Pn**	**15 38 53.5**	**+1.6**
ATHAL	**Athalassa**	**1.92**	**322**	P	**Pn**	**15 38 52.2**	**+0.1**
ATHAL				S	**Sn**	**15 39 16.2**	**+0.2**
ATHAL				AML	AML	15 39 21.9	
	2.1nm,0.9s						
ATHAL				AML	AML	15 39 21.9	
	2.1nm,0.9s						
ATHAL				AML	AML	15 39 22.4	
	2.6nm,0.5s						
ATHAL				AML	AML	15 39 22.4	
	2.6nm,0.5s						
EREN	**Erenkoy**	**1.97**	**344**	PN	**Pn**	**15 38 52.8**	**+0.1**
EREN				SN	**Sn**	**15 39 17.7**	**+0.5**
SZAC	**Souni**	**1.97**	**305**	⇓*i*P	**Pn**	**15 38 53.4**	**+0.6**
SZAC				S	**Sn**	**15 39 18.8**	**+1.5**
SZAC				AML	AML	15 39 21.1	
	2.6nm,0.3s						
SZAC				AML	AML	15 39 21.1	
	2.6nm,0.3s						
SZAC				AML	AML	15 39 21.4	
	1.8nm,0.2s						
SZAC				AML	AML	15 39 21.4	
	1.8nm,0.2s						
AMAZ	**Amatzia**	**2.10**	**178**	P	**Pn**	**15 38 54.6**	**0.0**
AMAZ				S	**Sn**	**15 39 19.5**	**-1.0**
AMAZ				AML	AML	15 39 21.7	
	2.0nm,0.5s						
AMAZ				AML	AML	15 39 21.7	
	2.0nm,0.5s						
AMAZ				AML	AML	15 39 24.2	
	1.9nm,0.4s						
AMAZ				AML	AML	15 39 24.2	
	1.9nm,0.4s						
AMAZ	**Amatzia**	**2.10**	**178**	Pn	**Pn**	**15 38 55.4**	**+0.9**
AMAZ				Sn	**Sn**	**15 39 20.4**	**-0.1**
DSI	**Dead Sea**	**2.11**	**167**	P	**Pb**	**15 38 57.5**	**-0.3**
DSI	**Dead Sea**	**2.11**	**167**	Pn	**Pn**	**15 38 55.0**	**+0.3**
LEF	**Lefka**	**2.19**	**313**	PN	**Pn**	**15 38 57.0**	**+1.2**
NATA	**Nata**	**2.20**	**302**	P	**Pn**	**15 38 57.3**	**+1.3**
NATA				S	**Sn**	**15 39 23.7**	**+0.7**

NATA AML AML 15 39 28.0
1.7nm,0.4s
NATA AML AML 15 39 28.0
1.7nm,0.4s
NATA AML AML 15 39 28.7
2.7nm,0.3s
NATA AML AML 15 39 28.7
2.7nm,0.3s
WALJ Wala 2.22 158 P **Pn 15 38 57.5 +1.3**
OSC2 CSNet OBS 4 2.23 256 P Pn 15 38 51.2 -5.0
OSC2 S **Sn 15 39 19.6 -4.0**
ASF Jabal al Asfar 2.26 130 P **Pn 15 38 57.2 +0.3**
AKDN Akdeniz- Kıbrı 2.27 317 PN **Pn 15 38 56.8 0.0**
YTIR Yattir 2.28 174 P **Pn 15 38 57.8 +0.7**
YTIR Yattir 2.28 174 Pn **Pn 15 38 57.8 +0.7**
YTIR Sn **Sn 15 39 25.0 0.0**
MDBI Mazsada 2.36 169 P **Pn 15 38 58.4 +0.4**
MDBI Mazsada 2.36 169 Pn **Pn 15 38 58.7 +0.7**
MDBI Sn **Sn 15 39 26.1 -0.7**
ALFC Alefka 2.40 310⇑ *iP* **Pn 15 38 59.6 +1.0**
ALFC S **Sn 15 39 28.2 +0.3**
ALFC AML AML 15 39 30.4
1.6nm,0.4s
ALFC AML AML 15 39 30.4
1.6nm,0.4s
ALFC AML AML 15 39 32.8
1.7nm,0.3s
ALFC AML AML 15 39 32.8
1.7nm,0.3s
GHAJ Ghor Haditha 2.41 165 P **Pn 15 39 00.2 +1.5**
GHAJ Ghor Haditha 2.41 165 Pn **Pn 15 38 59.2 +0.5**
LISJ El Lisan 2.45 167 P **Pn 15 39 00.7 +1.4**
AKMS Akamas 2.49 304 P **Pn 15 39 01.1 +1.2**
AKMS S **Sn 15 39 31.7 +1.5**
AKMS AML AML 15 39 33.5
1.1nm,0.2s
AKMS AML AML 15 39 33.5
1.1nm,0.2s
AKMS AML AML 15 39 33.8
0.9nm,0.3s
AKMS AML AML 15 39 33.8
0.9nm,0.3s
DAMI2 DAM2 2.51 168 Pn **Pn 15 39 01.5 +1.4**
SWQJ Swaqa 2.60 156 P **Pn 15 39 00.3 -1.2**
YAYL Yayladag 2.61 23 PN **Pn 15 39 01.4 -0.3**
TISA Tisan-Mersin 2.69 340 PN **Pn 15 39 02.9 +0.2**
AKK2 Akkuyu-Mersin 2.71 337 PN **Pn 15 39 02.9 0.0**
AKK1 Akkuyu-Mersin 2.72 337 PN **Pn 15 39 03.9 +0.9**
KARG Kargicak-Mersi 2.73 340 PN **Pn 15 39 03.2 +0.1**
AKKU Akkuyu-Mersin 2.73 338 PN **Pn 15 39 03.3 +0.1**
YESI Yesilovacik-Me 2.74 339 PN **Pn 15 39 03.3 0.0**
KZIT Kziot 2.75 188 P **Pn 15 39 04.4 +1.0**
KZIT S **Sn 15 39 36.3 -0.2**
KZIT Kziot 2.75 188 Pn **Pn 15 39 04.3 +0.8**
IKL Isikli 2.77 340 PN **Pn 15 39 03.9 +0.2**
YORU Yoruktepe-Mers 2.77 335 PN **Pn 15 39 04.9 +1.1**
TEPK Tepekoy-MERSIN 2.79 338 PN **Pn 15 39 04.3 +0.2**
OREN Orenkoy-Mersin 2.81 336 PN **Pn 15 39 04.9 +0.7**
SILI Silifke-Mersin 2.83 345 PN **Pn 15 39 04.6 +0.1**
TEKE Tekeli-Mersin 2.88 331 PN **Pn 15 39 06.1 +0.9**
KIZK Mersin 2.90 349 PN **Pn 15 39 06.3 +0.8**
TAHT Tahtakopru-Hat 2.95 22 PN **Pn 15 39 07.2 +1.0**
KEBE Keben-Mersin 2.95 342 PN **Pn 15 39 07.2 +0.9**
OSC1 CSNet OBS 1 2.98 268 P **Pn 15 39 06.6 0.0**
OSC1 S **Sn 15 39 42.4 +0.2**
BERE Bereket-Mersin 3.01 334 PN **Pn 15 39 07.9 +0.7**
TEVE Tevekalti-Mers 3.02 338 PN **Pn 15 39 07.5 +0.2**
MERS Mersin 3.23 355 PN **Pn 15 39 11.4 +1.2**
PRNI Paran 3.28 178 P **Pn 15 39 11.6 +0.8**
PRNI Paran 3.28 178 Pn **Pn 15 39 11.5 +0.8**
HRFI Mount Harif 3.59 177 Pn **Pn 15 39 15.9 +0.8**
MBRI Mt Berech 3.83 179 P **Pn 15 39 19.9 +1.5**
MBRI Mt Berech 3.83 179 Pn **Pn 15 39 18.9 +0.5**
AQBJ Aqaba 3.90 177 P **Pn 15 39 21.0 +1.7**
EIL Elat 3.96 179 Pn **Pn 15 39 21.1 +1.0**

*IDC **27** 15:50:09.6± 1.3, 27.˚57N× 143.˚53E, h0km, mb4.3/8, mbtmp4.3/12, ML3.5/4, MS2.9/8, Error ellipse: s-maj=36.3km s-min=15.2km az=82.0*
*NEIC **27** 15:50:13.7± 2.4, 27.˚68N± 0.˚08× 143.˚3E± 0.˚1, h26km± 6km, mb4.4/17, Error ellipse: s-maj=15.3km s-min=9.0km az=120.0*
*JMA **27** 15:50:15.1± 0.2, 28.˚8N± 1.˚1× 14.˚3E± .˚1, h78km, MV4.3/29, NEAR CHICHIJIMA ISLAND*
ISC 27 15:50:13.9± 0.8, 27.˚75N± 0.˚05× 143.˚38E± 0.˚10, h35km, n59, σ1§84/57, mb4.5/15, MS3.5/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.24 239**		P	**Pn**	**15 50 34.9**	**+0.1**
CBIJ				S	**Sn**	**15 50 49.6**	**-0.6**
CBIJ	**Chichi jima**	**1.24 239**		A	A	15 50 34.9	
comp=E,4.0nm,0.5s,comp=E,6.0nm,19.6s							
JCJ	**Chichijima**	**1.24 239**		Pn	**Pn**	**15 50 34.5**	**-0.3**
86nm,0.3s,baz=293,slow=23,SNR=509							
JCJ				Sn	**Sn**	**15 50 49.2**	**-1.1**
398nm,0.3s,baz=289,slow=22,SNR=16							
JCJ	**Chichijima**	**1.24 239**			**Pn**	**15 50 34.9**	**+0.1**
JCJ				Sn	**Sn**	**15 50 49.9**	**-0.4**
JHH2	**Haha-jima-NKT2**	**1.54 224**		*eP*	**Pn**	**15 50 38.9**	**+0.1**
JHH2				*eS*	**Sn**	**15 50 56.7**	**-0.9**
JHH2	**Haha-jima-NKT2**	**1.54 224**		A	A	15 50 38.9	
comp=E,4.0nm,0.4s,comp=E,4.0nm,6.3s							
JHJ	**Hachijo jima 2**	**6.19 331**		Pn	**Pn**	**15 51 43.2**	**+0.5**
7.4nm,0.3s,baz=72,slow=20,SNR=1.0							
JHJ				Sn	**Sn**	**15 52 49.3**	**-2.9**
14nm,0.3s,baz=255,slow=22,SNR=1.6							
81nm,0.6s							
BSO1	**Boso 1**	**7.18 344**		P	**Pn**	**15 51 55.1**	**-0.8**
BSO1				S	**Sn**	**15 53 13.7**	**-2.2**
BSO3	**Boso 3**	**7.45 341**		P	**Pn**	**15 52 00.2**	**+0.4**
JOD2	**Odawara 2**	**8.34 335**		*eP*	**Pn**	**15 52 12.7**	**+0.4**
JHU	**Hanno**	**8.80 338**		*eP*	**Pn**	**15 52 18.7**	**+0.2**
JHU				S	**Sn**	**15 53 52.7**	**-3.7**
JYT	**Yasato**	**8.88 343**			**Pn**	**15 52 20.1**	**+0.5**
JYT	**Yasato**	**8.88 343**		*eP*	**Pn**	**15 52 20.5**	**+0.9**
JYT				S	**Sn**	**15 53 51.4**	**-7.0**
JRY	**Ryogami san**	**9.08 336**		*eP*	**Pn**	**15 52 22.9**	**+0.4**
JRY				S	**Sn**	**15 54 01.3**	**-2.1**
JHO	**Hitachi**	**9.15 346**		*eP*	**Pn**	**15 52 22.0**	**-1.4**
JAG	**Ashikaga**	**9.27 340**		P	**Pn**	**15 52 24.6**	**-0.4**
INU	**Inuyama**	**9.32 326**		Pn	Pn	15 52 29.1	+3.5
JGF	**Kuroka**	**9.36 328**		Pn	Pn	15 52 31.1	+4.9
MJAR	**Matsushiro Arr**	**9.80 335**		Pn	**Pn**	**15 52 32.8**	**+0.6**
0.5nm,0.3s,baz=156,slow=10,SNR=22							
MJAR				Sn	**Sn**	**15 54 21.2**	**+0.1**
0.1nm,0.3s,baz=165,slow=24,SNR=2.8							
MJAR				LR	LR	15 57 41.5	
comp=Z,33nm,19.5s,baz=150,slow=45							
6.3nm,0.7s							
MAJO	**Matsushiro**	**9.80 335**			**Pn**	**15 52 32.9**	**+0.6**
MJB9	**Matsu-Tunnel**	**9.80 335**			**Pn**	**15 52 34.0**	**+1.6**
JMM	**Marumori**	**10.32 349**			**Pn**	**15 52 37.2**	**-2.2**
JOW	**Kunigami**	**13.46 270**		LR	LR	15 57 45.9	
comp=Z,74nm,19.4s,baz=122,slow=34							
GUMO	**Guam**	**14.16 174**		LR	LR	15 57 26.8	
comp=Z,19nm,21.5s,baz=96,slow=31							
KSRS	**Korea Array**	**16.21 311**		Pn	**P**	**15 54 02.9**	**+1.3**
0.2nm,0.3s,baz=121,slow=11,SNR=7.1							
KSRS				LR	LR	16 00 06.9	
comp=Z,29nm,18.2s,baz=50,slow=36							
1.3nm,0.6s							
USA0B	**Ussuriysk Arra**	**18.80 334**		P	**P**	**15 54 28.4**	**-1.8**
USRK	**Ussuriysk Ar.**	**18.80 334**		P	**Pn**	**15 54 34.0**	**+3.1**
0.6nm,0.3s,baz=144,slow=8.5,SNR=8.1							
USRK				LR	LR	16 02 15.7	
comp=Z,33nm,21.0s,baz=179,slow=38							
3.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**18.80 334**			**P**	**15 54 28.5**	**-1.7**
NACB	**Ninganchiao**	**19.90 265**		P	**P**	**15 54 38.6**	**-3.9**
NACB				IAmb	IAmb	15 54 41.2	
comp=Z,14nm,0.8s							
YHNB	**Yeheng**	**19.97 266**		P	**P**	**15 54 39.6**	**-3.7**
YHNB				IAmb	IAmb	15 54 47.9	
comp=Z,22nm,1.5s							
YULB	**Yu-li**	**20.38 263**		P	**P**	**15 54 45.5**	**-2.1**
KLR	**Kul'dur**	**23.25 340**		P	**P**	**15 55 20.6**	**+2.6**
comp=Z,1.5nm,0.7s,baz=234,slow=4.7,SNR=2.7							
comp=Z,1.5nm,0.7s							
SIJI	**Sorong**	**30.74 204**		P	**P**	**15 56 26.2**	**+0.3**
comp=Z,7.7nm,0.7s,baz=193,slow=22,SNR=4.3							
comp=Z,7.7nm,0.7s							

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**32.32 201**		P	**P**	**15 56 39.1**	**-0.7**
FAKI				IAmb	IAmb	15 57 12.2	
comp=Z,12nm,1.0s							
RABL	**Rabaul**	**32.87 164**		P	**P**	**15 56 42.6**	**-2.0**
HNR	**Honiara**	**40.29 154**		LR	LR	16 13 34.1	
comp=Z,387nm,18.4s,baz=45,slow=35							
SOEI	**Soe**	**41.62 209**		P	**P**	**15 58 00.1**	**+1.1**
SOEI				IAmb	IAmb	15 58 18.7	
comp=Z,12nm,1.0s							
CMAR	**Chiang Mai Arr**	**41.72 267**		LR	LR	16 13 58.3	
comp=Z,14nm,20.9s,baz=15,slow=34							
BATI	**Baumata**	**42.29 210**		P	**P**	**15 58 04.3**	**+0.1**
comp=Z,16nm,0.5s,baz=58,slow=1.1,SNR=2.5							
comp=Z,16nm,0.5s							
CTA	**Charters Tower**	**47.64 176**		LR	LR	16 18 43.4	
comp=Z,57nm,18.0s,baz=270,slow=36							
WB0	**Warramunga Arr**	**48.03 191**		P	**P**	**15 58 49.5**	**-0.2**
WRAB	**Tennant Creek**	**48.20 191**		P	**P**	**15 58 50.7**	**-0.3**
WB2	**Warramunga Arr**	**48.21 191**		P	**P**	**15 58 50.8**	**-0.3**
WRA	**Warramunga Arr**	**48.21 191**		P	**P**	**15 58 50.9**	**-0.3**
comp=Z,5.7nm,0.8s,baz=12,slow=8.5,SNR=66							
comp=Z,5.7nm,0.8s							
WRA	**Warramunga Arr**	**48.21 191**		P	**P**	**15 58 50.3**	**-0.8**
ZALV	**Zalesovo Beam**	**49.70 319**		P	P	15 59 05.5	+3.2
comp=Z,0.5nm,0.4s,baz=90,slow=7.6,SNR=4.5							
comp=Z,0.5nm,0.4s							
AS31	**Alice Springs**	**51.92 191**		P	**P**	**15 59 19.0**	**-0.3**
ASAR	**Alice Springs**	**51.93 191**		P	**P**	**15 59 19.1**	**-0.3**
comp=Z,0.5nm,0.4s,baz=5.4,slow=7.2,SNR=23							
comp=Z,0.5nm,0.4s							
ASAR	**Alice Springs**	**51.93 191**		P	**P**	**15 59 18.9**	**-0.4**
KURK	**Kurchatov**	**53.29 314**		P	**P**	**15 59 31.0**	**+1.8**
KURK				IAmb	IAmb	15 59 50.6	
comp=Z,4.1nm,1.1s							
K20K	**Telida**	**53.30 30**		P	P	15 59 32.7	+3.6
K20K				IAmb	IAmb	15 59 38.0	
comp=Z,6.8nm,1.3s							
STKA	**Stephens Creek**	**59.32 182**		P	**P**	**16 00 11.6**	**-0.6**
comp=Z,0.8nm,0.4s,baz=332,slow=10,SNR=3.7							
comp=Z,0.8nm,0.4s							
KK31	**Karatay Array**	**59.56 306**		P	**P**	**16 00 15.8**	**+1.8**
KK31				IAmb	IAmb	16 00 17.0	
comp=Z,2.6nm,0.7s							
KKAR	**Karatay Array**	**59.56 306**		P	**P**	**16 00 16.0**	**+2.0**
KKAR	**Karatay Array**	**59.56 306**		P	**P**	**16 00 16.5**	**+2.4**
KKAR				IAmb	IAmb	16 00 17.0	
comp=Z,2.6nm,0.7s							
DLBC	**Dease Lake**	**65.07 35**		LR	LR	16 34 05.8	
comp=Z,25nm,18.0s,baz=200,slow=40							
ABKAR	**Akbulak array**	**65.40 314**		P	**P**	**16 00 53.0**	**+0.1**
ABKAR	**Akbulak array**	**65.40 314**		P	**P**	**16 00 53.9**	**+1.1**
ABKAR				IAmb	IAmb	16 00 58.5	
comp=Z,4.1nm,1.4s							
FINES	**FINESS Array B**	**77.83 334**		P	**P**	**16 02 09.6**	**+2.2**
comp=Z,4.9nm,1.0s,baz=76,slow=5.9,SNR=1.7							
comp=Z,4.9nm,1.0s							

*SJA **27** 15:50:37.2± 0.8, 30.˚09S× 66.˚65W, h24km± 3km, ML4.6, MW4.5*
*NEIC **27** 15:50:37.9± 2.0, 30.˚06S± 0.˚05× 66.˚54W± 0.˚08, h26km± 2km, mb4.6/25, Md4.4(SJA), Error ellipse: s-maj=9.6km s-min=8.0km az=99.0*
*IDC **27** 15:50:37.8± 0.6, 30.˚05S× 66.˚65W, h24km± 3km, mb4.0/11, mbtmp4.1/16, ML4.2/5, MS3.5/9, Error ellipse: s-maj=22.7km s-min=14.8km az=78.0*
ISC 27 15:50:37.6± 0.6, 30.˚06S± 0.˚03× 66.˚70W± 0.˚03, h23km± 4km, n139, σ1§93/157, mb4.4/20, MS3.7/7, 1C-1D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APLL	**PUNTA DE LOS L**	**0.36 156**		*eP*	**Pb**	**15 50 45.1**	**-0.5**
CYA	**Choya**	**1.80 26**		↓*iP*	**Pb**	**15 51 08.9**	**-1.0**
CYA				*eS*	**Sb**	**15 51 35.4**	**+3.4**
CYA				IAML		15 51 38.9	
comp=E,5μm,0.4s							
CYA	**Choya**	**1.80 26**		*eP*	**Pb**	**15 51 08.8**	**-1.0**
CYA				*eS*	**Sb**	**15 51 36.5**	**+4.5**
CYA				IAML		15 51 38.0	
comp=Z,5μm,0.3s							
RTLL	**Cerro Vilicun**	**1.98 230**		*eP*	**Pn**	**15 51 10.3**	**+0.5**
RTLL				*eS*	**Sb**	**15 51 37.9**	**+0.6**
RTLL				*eS*	**Sn**	**15 51 38.4**	**+4.5**
ACDV	**Cuesta del Vie**	**2.10 266**		*eP*	**Pn**	**15 51 14.0**	**+2.5**
ACDV				*eS*	**Sb**	**15 51 41.4**	**+0.6**
ACDV				IAML		15 51 44.0	
comp=Z,4μm,0.6s							
ACCO	**Cerro Coronel**	**2.11 255**		*eP*	**Pn**	**15 51 13.5**	**+1.8**
ACCO				*eS*	**Sb**	**15 51 40.9**	**-0.4**
ZON	**Zonda**	**2.25 229**			**Pn**	**15 51 14.8**	**+1.3**
ZON				Sn	**Sn**	**15 51 43.7**	**+3.1**
ZON	**Zonda**	**2.25 229**		*eP*	**Pn**	**15 51 15.2**	**+1.7**
ZON				*eS*	**Sb**	**15 51 45.2**	**0.0**
ZON				IAML		15 51 47.4	
comp=Z,3μm,0.4s							
RTCV	**Cerro Valdivia**	**2.39 221**		*eP*	**Pb**	**15 51 20.8**	**+0.9**
MRA	**San Martin**	**2.49 161**		*eP*	**Pn**	**15 51 17.7**	**+0.8**
MRA				*eS*	**Sn**	**15 51 48.9**	**+2.3**
MRA				*eS*	**Sb**	**15 51 56.4**	**+4.3**
MRA				IAML		15 51 56.6	
comp=Z,5μm,0.6s							
RTLS	**Leoncito**	**2.82 232**		*eP*	**Pn**	**15 51 23.8**	**+2.3**
RTLS				*eS*	**Sb**	**15 52 01.8**	**0.0**
RTLS				IAML		15 52 08.1	
comp=Z,1μm,0.5s							
CO01	**Juntas del Tor**	**2.94 271**			**Pn**	**15 51 26.2**	**+3.1**
CO01	**Juntas del Tor**	**2.94 271**		*eP*	**Pn**	**15 51 26.3**	**+3.1**
CO01				*eS*	**Sb**	**15 52 05.0**	**-0.2**
CO01				IAML		15 52 07.4	
comp=N,2μm,0.3s							
CO01	**Juntas del Tor**	**2.94 271**		*eP*	**Pn**	**15 51 26.4**	**+3.2**
CO01				*eS*	**Sn**	**15 52 00.9**	**+3.0**
CO01				IAML		15 52 09.7	
comp=Z,1μm,0.7s							
AC05	**El Transito**	**3.35 291**			**Pn**	**15 51 32.1**	**+3.5**
AC05	**El Transito**	**3.35 291**		*eP*	**Pn**	**15 51 32.1**	**+3.5**
AC05				*eP*	Pb	15 51 32.3	-4.0
AC05				*eS*	**Sn**	**15 52 12.4**	**+4.7**
AC05				IAML		15 52 25.5	
comp=Z,1μm,0.7s							
CO03	**El Pedregal**	**3.53 256**			**Pn**	**15 51 33.8**	**+2.7**
CO03	**El Pedregal**	**3.53 256**		*eP*	**Pn**	**15 51 33.7**	**+2.7**
CO03				IAML		15 52 21.8	
comp=N,3μm,0.3s							
CO03	**El Pedregal**	**3.53 256**		*eP*	**Pn**	**15 51 33.8**	**+2.7**
CO03				*eS*	**Sn**	**15 52 16.4**	**+4.3**
CO03				IAML		15 52 22.2	
comp=Z,1μm,0.6s							
GO04	**Tololo Observa**	**3.55 267**			**Pn**	**15 51 34.6**	**+3.0**
GO04	**Tololo Observa**	**3.55 267**		⇑*iP*	**Pn**	**15 51 34.0**	**+2.5**
GO04				*eS*	**Sn**	**15 52 17.1**	**+4.2**
GO04				IAML		15 52 26.0	
comp=N,7μm,0.4s							
LCO	**Las Campanas**	**3.64 286**		Pn	**Pn**	**15 51 35.2**	**+2.5**
LCO	**Las Campanas**	**3.64 286**		*eP*	**Pn**	**15 51 35.3**	**+2.5**
AC02	**Maricunga**	**3.86 326**			**Pn**	**15 51 40.1**	**+4.1**
AC02	**Maricunga**	**3.86 326**		*eP*	**Pn**	**15 51 40.0**	**+4.0**
CO02	**Combarbal**	**3.88 252**			**Pn**	**15 51 37.8**	**+1.9**
CO02	**Combarbal**	**3.88 252**		*eP*	**Pn**	**15 51 38.0**	**+2.1**
CO02				*eS*	**Sb**	**15 52 30.4**	**-1.5**
CO02				IAML		15 52 43.9	
comp=Z,2μm,1.1s							
CO05	**La Serena**	**3.94 271**			**Pn**	**15 51 38.0**	**+1.4**
GO03	**Copiap**	**3.96 308**			**Pn**	**15 51 38.9**	**+1.9**
FSA	**Cafayete**	**3.99 9**		*eP*	**Pn**	**15 51 40.2**	**+2.7**
FSA				*eS*	**Sb**	**15 52 38.4**	**+3.2**
AC06	**Mina Casimiro**	**4.19 309**			**Pn**	**15 51 41.5**	**+1.3**
AC04	**Llanos de Chal**	**4.25 295**			**Pn**	**15 51 42.0**	**+1.1**
AC04	**Llanos de Chal**	**4.25 295**		*eP*	Pn	15 51 32.3	-8.6
AC04				*eS*	**Sb**	**15 52 39.9**	**-2.6**
AC04				IAML		15 52 54.0	
comp=Z,401nm,0.5s							
VA03	**San Esteban**	**4.25 230**			**Pn**	**15 51 43.4**	**+2.4**
VA03	**San Esteban**	**4.25 230**		*eP*	**Pn**	**15 51 38.4**	**-2.6**
VA03				*eP*	Pb	15 51 43.9	-7.8
VA03				IAML		15 52 55.1	
comp=Z,485nm,0.6s							
CO06	**Fray Jorge**	**4.31 261**			**Pn**	**15 51 41.9**	**+0.2**
PEL	**Peldehue**	**4.58 227**		*eP*	**Pn**	**15 51 48.7**	**+3.3**
PEL				*eS*	**Sb**	**15 52 56.4**	**+4.3**
VA06	**Catapilco**	**4.66 237**			**Pn**	**15 51 47.3**	**+0.9**
ROC1	**El Roble**	**4.69 231**			**Pn**	**15 51 48.1**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROC1	**El Roble**	**4.69 231**		*eP*	**Pn**	**15 51 48.0**	**+0.9**
MT03	**Universidad Ad**	**4.71 223**		Pn	**Pn**	**15 51 49.6**	**+2.3**
MT03	**Universidad Ad**	**4.71 223**		*eP*	**Pn**	**15 51 51.0**	**+3.7**
MT05	**Renca**	**4.78 225**			**Pn**	**15 51 50.3**	**+2.1**
MT05	**Renca**	**4.78 225**		*eP*	**Pn**	**15 51 51.2**	**+3.0**
LMEL	**Las Melosas**	**4.81 217**			**Pn**	**15 51 50.8**	**+2.2**
MT02	**Curacav**	**4.95 229**			**Pn**	**15 51 51.0**	**+0.5**
MT02	**Curacav**	**4.95 229**		*eP*	**Pn**	**15 51 46.4**	**-4.0**
BO04	**La Punta**	**5.13 219**			**Pn**	**15 51 54.8**	**+1.8**
MT09	**Talagante**	**5.20 223**			**Pn**	**15 51 55.0**	**+1.0**
AC01	**Pan de Azucar**	**5.20 318**		Pn	**Pn**	**15 51 55.0**	**+1.0**
AC01	**Pan de Azucar**	**5.20 318**		*eP*	**Pn**	**15 51 55.3**	**+1.3**
AC01				*eS*	**Sb**	**15 53 13.4**	**+3.5**
MT01	**Popeta**	**5.41 224**		Pn	**Pn**	**15 51 57.4**	**+0.5**
VA05	**Santo Domingo**	**5.50 228**			**Pn**	**15 51 59.5**	**+1.4**
GO02	**Mina Guanaco**	**5.51 332**		Pn	**Pn**	**15 51 60.0**	**+1.4**
BO01	**Tunca**	**5.69 220**		Pn	**Pn**	**15 52 00.5**	**-0.2**
BO02	**Sierra Bellavi**	**5.84 215**		Pn	**Pn**	**15 52 03.1**	**+0.3**
PB14	**IPOC Station P**	**6.34 328**		Pn	**Pn**	**15 52 10.9**	**+1.0**
GO05	**Huala**	**6.62 220**			**Pn**	**15 52 13.0**	**-0.5**
ML02	**Panimavida**	**6.93 214**		Pn	**Pn**	**15 52 17.4**	**-0.2**
PB15	**IPOC Station P**	**7.26 339**			**Pn**	**15 52 22.6**	**+0.1**
LVC	**Limon Verde**	**7.68 345**		Pn	**Pn**	**15 52 30.3**	**+1.9**
comp=Z,4.0nm,0.3s,baz=188,slow=8.2,SNR=18							
LVC				Lg	Lg	15 54 47.8	
comp=Z,1.8nm,0.3s,baz=130,slow=19,SNR=1.9							
comp=Z,11nm,0.5s							
LVC	**Limon Verde**	**7.68 345**		Pn	**Pn**	**15 52 29.2**	**+0.8**
PB06	**IPOC Station P**	**7.77 340**			**Pn**	**15 52 30.1**	**+0.8**
PB04	**IPOC Station P**	**8.30 337**		Pn	**Pn**	**15 52 37.0**	**+0.3**
PB03	**IPOC Station P**	**8.44 340**			**Pn**	**15 52 39.1**	**+0.5**
PB09	**IPOC Station P**	**8.54 344**			**Pn**	**15 52 41.1**	**+1.0**
ITQB	**Itaqui**	**8.76 90**		Pn	**Pn**	**15 52 42.2**	**-0.5**
PB07	**IPOC Station P**	**8.78 340**			**Pn**	**15 52 42.6**	**-0.7**
CPUP	**Villa Florida**	**9.06 68**		Pn	**Pn**	**15 52 45.9**	**-1.1**
comp=Z,5.1nm,0.3s,baz=246,slow=11,SNR=64							
CPUP				Lg	Lg	15 55 26.6	
comp=Z,5.2nm,0.3s,baz=304,slow=16,SNR=2.9							
CPUP				LR	LR	15 57 04.0	
comp=Z,198nm,18.5s,baz=226,slow=43							
comp=Z,9.5nm,0.3s							
CPUP	**Villa Florida**	**9.06 68**		Pn	**Pn**	**15 52 45.7**	**-1.3**
PB02	**IPOC Station P**	**9.17 341**			**Pn**	**15 52 48.1**	**-0.5**
PB01	**IPOC Station P**	**9.33 344**			**Pn**	**15 52 50.3**	**-0.4**
PATCX	**Punta Patache**	**9.72 340**		Pn	**Pn**	**15 52 54.4**	**-1.6**
PB08	**IPOC Station P**	**10.13 347**		Pn	**Pn**	**15 53 02.8**	**+0.9**
GO06	**Curarrehue**	**10.27 201**		Pn	**Pn**	**15 53 02.6**	**-1.1**
GO01	**Chusmiza**	**10.59 347**		Pn	**Pn**	**15 53 07.0**	**-1.5**
PB11	**IPOC Station P**	**10.60 345**		Pn	**Pn**	**15 53 07.2**	**-1.1**
PLCA	**Paso Flores**	**11.10 195**		Pn	**Pn**	**15 53 16.1**	**+1.3**
comp=Z,0.2nm,0.3s,baz=13,slow=14,SNR=7.6							
PLCA				Lg	Lg	15 56 26.6	
comp=Z,0.9nm,0.3s,baz=93,slow=19,SNR=6.0							
PLCA				LR	LR	15 57 48.4	
comp=Z,219nm,19.4s,baz=14,slow=39							
comp=Z,2.4nm,0.9s							
PLCA	**Paso Flores**	**11.10 195**		Pn	**Pn**	**15 53 14.1**	**-0.8**
PLTB	**Pedras Altas**	**11.38 102**		Pn	**Pn**	**15 53 16.6**	**-2.0**
LL04	**Puerto Octay**	**11.78 202**		Pn	**Pn**	**15 53 20.8**	**-3.3**
PB12	**IPOC Station P**	**11.87 343**		Pn	**Pn**	**15 53 22.2**	**-3.3**
PB16	**IPOC Station P**	**11.95 347**		Pn	**Pn**	**15 53 24.2**	**-2.9**
ITAB	**Concordia**	**13.10 81**		Pn	**Pn**	**15 53 39.8**	**-2.5**
LPAZ	**La Paz**	**13.78 354**		Pn	**Pn**	**15 53 53.4**	**+1.4**
comp=Z,0.2nm,0.3s,baz=214,slow=7.3,SNR=2.9							
comp=Z,0.8nm,0.4s							
LPAZ	**La Paz**	**13.78 354**		Pn	**Pn**	**15 53 52.3**	**+0.2**
AQDB	**Aquidauana**	**13.78 49**		Pn	**Pn**	**15 53 50.4**	**-1.1**
SIV	**San Ignacio**	**14.93 21**		Pn	**Pn**	**15 54 08.6**	**+1.4**
baz=214,slow=11,SNR=4.7							
comp=Z,1.0nm,0.5s							
NNA	**Nana**	**20.30 330**		LR	LR	16 01 35.8	
comp=Z,36nm,19.5s,baz=132,slow=32							
BDFB	**Brasilia**	**22.37 54**		P	**P**	**15 55 33.3**	**-1.0**
comp=Z,2.5nm,0.5s,baz=231,slow=7.3,SNR=4.0							
comp=Z,2.5nm,0.5s							
BDFB	**Brasilia**	**22.37 54**		P	**P**	**15 55 33.0**	**-1.3**
EFI	**East Falkland**	**22.52 166**		P	**P**	**15 55 35.2**	**-0.3**
RPN	**Rapa Nui**	**37.39 264**		LR	LR	16 09 08.3	
comp=Z,85nm,19.1s,baz=126,slow=30							
RCBR	**Riachuelo**	**37.71 56**		LR	LR	16 14 47.3	
comp=Z,159nm,20.2s,baz=22,slow=38							
SMAI	**San Martin Ant**	**38.10 180**		P	**P**	**15

comp=Z,2.0nm,0.7s
ASAR Alice Springs 123.03 203 PKP PKPdf 16 09 31.2 -1.5
comp=Z,0.3nm,0.6s,baz=136,slow=1.7,SNR=9.8
ASAR pPKP **pPKPdf 16 09 39.4 -1.3**
comp=Z,0.5nm,0.7s,baz=138,slow=2.1,SNR=4.4
WRA Warramunga Arr 126.31 205 PKP PKPdf 16 09 38.1 -0.9
comp=Z,1.1nm,0.5s,baz=164,slow=1.7,SNR=46
WRA pPKP **pPKPdf 16 09 45.9 -1.1**
comp=Z,0.8nm,0.5s,baz=161,slow=1.9,SNR=5.9
KAPI Kappang 144.58 191 PKP PKPbc 16 10 11.9 +0.3
comp=Z,4.1nm,0.5s,baz=152,slow=2.4,SNR=4.0
SIJI Sorong 144.79 212 PKP PKPab 16 10 12.2 0.0
comp=Z,7.7nm,0.7s,baz=54,slow=6.4,SNR=4.7
KSH Kashi 148.12 63 PKPbc **PKPbc 16 10 22.0 +0.5**
KSH pPKP sPKPdf 16 10 29.0 -0.1
ZALV Zalesovo Beam 148.48 33 PKPbc **PKPbc 16 10 22.3 +0.5**
comp=Z,1.6nm,0.6s,baz=297,slow=4.7,SNR=11
ZALV pPKPbc **pPKPbc 16 10 30.0 +0.2**
comp=Z,2.8nm,0.8s,baz=282,slow=4.2,SNR=6.0
MKAR Makanchi Array 150.77 46 PKPbc **PKPbc 16 10 27.9 +0.1**
comp=Z,4.3nm,0.7s,baz=302,slow=2.2,SNR=7.1
MKAR pPKPbc **pPKPbc 16 10 35.5 -0.3**
comp=Z,4.2nm,0.7s,baz=297,slow=2.6,SNR=20
PZH PanZhiHua 169.21 106 PKP **PKPdf 16 10 41.5 -1.9**

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*NEIC **27** 15:53:54.8±1.6, 17°.76S±0°.09×178°.1W±0°.1, h568km±9km, mb4.2/26, Error ellipse: s-maj=17.1km s-min=13.4km az=91.0*
*NOU **27** 15:53:55.5, 17°.87S×178°.19W, h569km, mb4.1/13, Fiji Islands Region*
*IDC **27** 15:53:55.5±1.1, 18°.06S×178°.35W, h560km±14km, mb3.4/11, mbtmp4.3/14, Error ellipse: s-maj=18.9km s-min=12.6km az=137.0*
ISC 27 15:53:54.3±0.5, 17°.84S±0°.08×178°.24W±0°.07, h550km, n60, σ1§49/63, mb4.2/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.51**	**2**	P	**P**	**15 55 15.2**	**+2.4**
MSVF	**Nonsavu**	**3.54**	**271**	P	**P**	**15 55 15.5**	**+2.5**
56nm,0.7s,baz=103,slow=4.3,SNR=46							
MSVF	**Nonsavu**	**3.54**	**271**	P	**P**	**15 55 15.3**	**+2.3**
MSVF	**Nonsavu**	**3.54**	**271**	P	**P**	**15 55 15.5**	**+2.5**
AFI	**Afiamalu**	**7.34**	**59**	P	**P**	**15 55 47.8**	**+2.0**
20nm,0.6s,baz=283,slow=10,SNR=5.5							
AFI				S	**S**	**15 57 14.4**	**-2.5**
9.8nm,0.4s,baz=120,slow=19,SNR=2.3							
AFI	**Afiamalu**	**7.34**	**59**	P	**P**	**15 55 45.4**	**-0.4**
AFI				S	**S**	**15 57 15.6**	**-1.4**
AFI	**Afiamalu**	**7.34**	**59**	P	**P**	**15 55 47.0**	**+1.2**
40nm,1.1s							
NIUE	**Niue**	**7.98**	**100**	P	**P**	**15 55 54.0**	**+2.1**
NIUE	**Niue**	**7.98**	**100**	P	**P**	**15 55 54.3**	**+2.4**
97nm,0.9s							
RAO	**Raoul Island**	**11.36**	**179**	P	**P**	**15 56 24.6**	**-1.5**
264nm,0.3s,baz=245,slow=23,SNR=4.4							
DZM	**Mont Dzumac**	**15.00**	**251**	P	**P**	**15 57 03.8**	**-0.1**
6.1nm,0.9s,baz=135,slow=14,SNR=7.8							
DZM	**Mont Dzumac**	**15.00**	**251**	P	**P**	**15 57 06.2**	**+2.2**
DZM				IAmb	IAmb	15 57 15.8	
comp=Z,18nm,1.2s							
NOUC	**Port Laguerre**	**15.14**	**251**	P	**P**	**15 57 07.7**	**+2.5**
comp=Z,16nm,2.2s							
KOUNC	**Koumac, New Ca**	**16.73**	**258**	P	**P**	**15 57 20.7**	**+0.1**
KOUNC	**Koumac, New Ca**	**16.73**	**258**	P	**P**	**15 57 20.5**	**-0.1**
comp=Z,26nm,1.7s							
OUZ	**Omahuta**	**18.77**	**201**	P	**P**	**15 57 41.7**	**+2.6**
URZ	**Urewera**	**20.75**	**190**	P	**P**	**15 57 54.5**	**-2.4**
comp=Z,5.5nm,0.4s,baz=8.2,slow=2.6,SNR=14							
comp=Z,5.5nm,0.4s							
URZ	**Urewera**	**20.75**	**190**	P	**P**	**15 57 55.8**	**-1.2**
comp=Z,11nm,0.7s							
BKZ	**Black Stump Fm**	**21.74**	**191**	P	**P**	**15 58 06.8**	**+0.8**
comp=Z,14nm,2.4s							
QRZ	**Quartz Range**	**24.25**	**197**	P	**P**	**15 58 28.3**	**+0.1**
QRZ	**Quartz Range**	**24.25**	**197**	P	**P**	**15 58 28.6**	**+0.4**
comp=Z,36nm,1.9s							
THZ	**Tophouse**	**25.02**	**196**	P	**P**	**15 58 34.3**	**-0.8**
KHZ	**Kahutara**	**25.48**	**194**	P	**P**	**15 58 37.1**	**-2.0**
comp=Z,20nm,2.9s							
RPZ	**Rata Peaks**	**27.34**	**197**	P	**P**	**15 58 54.0**	**-1.4**
comp=Z,3.8nm,0.6s,baz=84,slow=19,SNR=1.7							
comp=Z,3.8nm,0.6s							
LBZ	**Lake Benmore**	**28.20**	**198**	P	**P**	**15 59 01.2**	**-1.8**
WHZ	**Wether Hill Ro**	**30.24**	**199**	P	**P**	**15 59 20.3**	**-0.3**
WHZ				IAmb	IAmb	15 59 22.2	
comp=Z,8.5nm,0.8s							
CNB	**Canberra Magne**	**33.60**	**232**	P	**P**	**15 59 50.2**	**+0.8**
comp=Z,25nm,1.9s							
CTA	**Charters Tower**	**33.62**	**260**	P	**P**	**15 59 49.0**	**-0.7**
comp=Z,2.1nm,0.7s,baz=68,slow=6.9,SNR=5.5							
comp=Z,2.1nm,0.7s							
CTA	**Charters Tower**	**33.62**	**260**	P	**P**	**15 59 49.2**	**-0.6**
comp=Z,9.5nm,1.7s							
CTAO	**Charters Tower**	**33.62**	**260**	P	**P**	**15 59 49.0**	**-0.7**
CTAO				IAmb	IAmb	16 00 02.0	
comp=Z,11nm,1.3s							
COEN	**Coen**	**37.27**	**270**	P	**P**	**16 00 20.0**	**-0.1**
TOO	**Toolangi**	**37.34**	**231**	P	**P**	**16 00 21.0**	**+0.6**
TOO				IAmb	IAmb	16 00 21.7	
comp=Z,7.3nm,0.8s							
TOO	**Toolangi**	**37.34**	**231**	P	**P**	**16 00 21.6**	**+1.2**
comp=Z,16nm,2.2s							
STKA	**Stephens Creek**	**38.80**	**241**	P	**P**	**16 00 31.5**	**-0.9**
comp=Z,1.6nm,0.5s,baz=68,slow=10,SNR=4.3							
comp=Z,1.6nm,0.5s							
BBOO	**Buckleboo**	**43.58**	**241**	P	**P**	**16 01 09.6**	**-0.6**
BBOO				IAmb	IAmb	16 01 31.3	
comp=Z,8.0nm,1.1s							
WR0	**Warramunga Arr**	**44.61**	**259**	P	**P**	**16 01 17.1**	**-1.2**
WB0	**Warramunga Arr**	**44.77**	**260**	P	**P**	**16 01 18.1**	**-1.4**
WB2	**Warramunga Arr**	**44.79**	**259**	P	**P**	**16 01 18.5**	**-1.2**
WB2				IAmb	IAmb	16 01 23.2	
comp=Z,5.6nm,1.3s							
WRA	**Warramunga Arr**	**44.80**	**259**	P	**P**	**16 01 18.9**	**-0.9**
comp=Z,1.4nm,0.5s,baz=96,slow=7.0,SNR=32							
comp=Z,1.4nm,0.5s							
WRA	**Warramunga Arr**	**44.80**	**259**	P	**P**	**16 01 18.6**	**-1.2**
AS31	**Alice Springs**	**44.96**	**254**	P	**P**	**16 01 20.6**	**-0.4**
AS31				IAmb	IAmb	16 01 21.5	
comp=Z,3.5nm,0.7s							
ASAR	**Alice Springs**	**44.97**	**254**	P	**P**	**16 01 20.7**	**-0.3**
comp=Z,13nm,0.4s,baz=89,slow=7.8,SNR=345							
ASAR				S	**S**	**16 07 16.6**	**-3.1**
comp=Z,0.9nm,0.9s,baz=91,slow=15,SNR=6.9							
comp=Z,13nm,0.4s							
ASAR	**Alice Springs**	**44.97**	**254**	P	**P**	**16 01 20.6**	**-0.5**
FORT	**Forrest**	**50.18**	**245**	P	**P**	**16 01 59.1**	**-0.9**
KNRA	**Kununurra**	**50.66**	**264**	P	**P**	**16 02 02.7**	**-0.8**
KNRA				IAmb	IAmb	16 02 05.2	
comp=Z,24nm,1.4s							
MBWA	**Marble Bar**	**58.25**	**256**	P	**P**	**16 02 55.5**	**-1.3**
MBWA				IAmb	IAmb	16 03 32.6	
comp=Z,11nm,1.2s							
SBA	**Scott Base**	**60.50**	**184**	P	**P**	**16 03 11.7**	**+0.9**
VNDA	**Vanda**	**60.53**	**185**	P	**P**	**16 03 11.9**	**+0.9**
GIRL	**Giralia**	**63.07**	**253**	P	**P**	**16 03 29.1**	**+0.6**
CASY	**Casey**	**66.27**	**205**	P	**P**	**16 03 47.6**	**-0.2**
CASY				IAmb	IAmb	16 04 02.5	
comp=Z,19nm,1.4s							
QSPA	**South Pole Qui**	**72.21**	**180**	P	**P**	**16 04 24.0**	**+0.3**
QSPA				IAmb	IAmb	16 04 25.7	
comp=Z,5.9nm,0.9s							
PETK	**Petropavlovsk-**	**73.66**	**345**	P	**P**	**16 04 32.4**	**+0.5**
comp=Z,8.2nm,1.1s,baz=224,slow=7.7,SNR=5.3							
comp=Z,8.2nm,1.1s							
S11A	**Rachel**	**80.56**	**46**	P	**P**	**16 05 06.7**	**-3.2**
S11A				IAmb	IAmb	16 05 07.2	
comp=Z,11nm,0.7s							
BELA	**Belgrano 2**	**82.21**	**173**	P	**P**	**16 05 16.4**	**-1.2**
BELA				IAmb	IAmb	16 05 19.2	
comp=Z,3.7nm,0.7s							
SEY	**Seymchan**	**83.75**	**347**	P	**P**	**16 05 25.6**	**+0.3**
comp=Z,1.2nm,0.3s,baz=143,slow=5.0,SNR=5.8							
comp=Z,1.2nm,0.3s							
MAW	**Mawson**	**83.98**	**200**	P	**P**	**16 05 27.0**	**+0.5**
comp=Z,1.1nm,0.7s,baz=120,slow=8.1,SNR=2.1							
comp=Z,1.1nm,0.7s							
ILAR	**Eielson Array**	**85.78**	**13**	P	**P**	**16 05 35.8**	**+0.6**
comp=Z,0.3nm,0.4s,baz=221,slow=5.3,SNR=9.9							
comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**85.82**	**58**	P	**P**	**16 05 38.6**	**+2.3**
comp=Z,0.7nm,0.8s,baz=208,slow=7.4,SNR=5.9							
comp=Z,0.7nm,0.8s							
BRTR	**Keskin Array B**	**144.85**	**315**	PKP	**PKPab**	**16 12 30.6**	**0.0**
comp=Z,0.3nm,0.4s,baz=118,slow=2.7,SNR=4.0							
GERES	**GERESS Array B**	**147.59**	**345**	PKPbc	**PKiKP**	**16 12 38.2**	**-0.4**
comp=Z,0.4nm,0.4s,baz=29,slow=3.0,SNR=4.4							

NEIC 27 15:54:40.6±1.9, 53°.47N±0°.07×163°.07W±0°.03, h10km±2km, mb3.7/6, Error ellipse: s-maj=11.6km s-min=3.4km az=175.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.40**	**352**		Pb	15 55 06.7	-0.2
FALS				Sn	Sn	15 55 23.9	-0.8
AKUT	**Akutan**	**1.73**	**294**	Pn	Pn	15 55 10.9	+0.2
AKUT				Sn	Sn	15 55 31.3	-1.6
UNV	**Unalaska Valle**	**2.08**	**282**		Pn	15 55 15.0	-0.4
SDPT	**Sand Point**	**2.42**	**38**	Pn	Pb	15 55 22.1	-2.0
CNBA	**Chernabura Isl**	**2.46**	**55**	Pn	Pn	15 55 20.8	+0.2
NIKH	**Nikolski High**	**3.51**	**264**	Pn	Pn	15 55 35.2	+0.1
NIKH				Sn	Sn	15 56 14.3	-2.4
CHGN	**Chignik**	**3.91**	**42**	Pn	Pn	15 55 43.0	+2.4
CHGN				Sn	Sn	15 56 23.1	-3.3
SII	**Sitkinak Islan**	**5.98**	**55**	Pn	Pn	15 56 08.3	-0.7
OHAK	**Old Harbor**	**6.73**	**52**	Pn	Pn	15 56 19.1	-0.1
KDAK	**Kodiak Island**	**7.34**	**50**	Pn	Pn	15 56 28.1	+0.5
P18K	**Big Mountain,**	**7.35**	**33**	Pn	Pn	15 56 29.8	+1.9
Q19K	**Cape Douglas,**	**7.58**	**40**	Pn	Pn	15 56 32.4	+1.4
O18K	**Koktuh Hills**	**7.72**	**31**	Pn	Pn	15 56 35.9	+3.0
N18K	**Kilae Creek**	**8.21**	**26**	Pn	Pn	15 56 41.0	+1.3
ADK	**Adak**	**8.43**	**265**	Pn	Pn	15 56 42.8	+0.3
N19K	**Bonanza Creek**	**8.71**	**29**	Pn	Pn	15 56 47.5	+1.0
KIWB	**Kanaga Island**	**8.71**	**265**	Pn	Pn	15 56 48.1	+1.6
CNPM	**China Poot**	**8.92**	**42**	Pn	Pn	15 56 51.0	+1.7
BRLK	**Bradley Lake**	**9.20**	**42**	Pn	Pn	15 56 53.7	+0.5
M19K	**Big River Lodg**	**9.64**	**25**	Pn	Pn	15 56 59.8	+0.6
L19K	**White Mountain**	**9.76**	**23**	Pn	Pn	15 56 59.9	-1.0
M20K	**Styx River**	**9.96**	**28**	Pn	Pn	15 57 02.9	-0.7
SEW	**Seward**	**9.99**	**43**	Pn	Pn	15 57 04.0	+0.1
O22K	**Cooper Landing**	**10.11**	**41**	Pn	Pn	15 57 04.3	-1.2
SUA	**Susitna One**	**10.39**	**35**	Pn	Pn	15 57 09.2	-0.3
RC01	**Rabbit Creek A**	**10.49**	**38**	Pn	Pn	15 57 10.5	-0.3
SKT	**Skwentna**	**10.51**	**31**	Pn	Pn	15 57 10.6	-0.5
PWL	**Port Wells**	**10.88**	**41**	Pn	Pn	15 57 16.0	-0.2
K20K	**Telida**	**10.96**	**22**	Pn	Pn	15 57 17.1	-0.2
GHO	**Glory Hole Cre**	**11.23**	**37**	Pn	Pn	15 57 21.8	+0.7
GAMB	**Gambell**	**11.26**	**340**	Pn	Pn	15 57 20.6	-0.6
HIN	**Hinchinbrook I**	**11.38**	**46**	Pn	Pn	15 57 23.4	+0.3
FID	**Port Fidalgo**	**11.57**	**44**	Pn	Pn	15 57 24.5	-1.1
J20K	**Nowinta River**	**11.67**	**20**	Pn	Pn	15 57 26.9	-0.1
EYAK	**Cordova Ski Ar**	**11.78**	**46**	Pn	Pn	15 57 26.0	-2.5
SCM	**Sheep Creek Mo**	**11.86**	**39**	Pn	Pn	15 57 27.9	-1.7
KLU	**Klutina**	**12.20**	**42**	Pn	Pn	15 57 33.7	-0.6
HMT	**Hamilton**	**12.34**	**49**	Pn	Pn	15 57 37.0	+0.9
M24K	**Tolsona, Glenn**	**12.46**	**39**	Pn	Pn	15 57 37.9	+0.1
BERG	**Berg Lake**	**12.61**	**49**	Pn	Pn	15 57 40.0	+0.2
DHY	**Denali Highway**	**12.64**	**34**	Pn	Pn	15 57 39.6	-0.8
N25K	**Chitina, Valde**	**12.80**	**43**	Pn	Pn	15 57 42.9	+0.4
WAX	**Waxell Ridge**	**13.02**	**50**	Pn	Pn	15 57 45.0	-0.5
GLB	**Gilahina Butte**	**13.04**	**45**	Pn	Pn	15 57 45.5	-0.2
VRDI	**Verde Repeater**	**13.09**	**46**	Pn	Pn	15 57 46.6	0.0
MLY	**Manley**	**13.16**	**23**	Pn	Pn	15 57 48.3	+1.0
ISLE	**Juniper Island**	**13.31**	**49**		Pn	15 57 47.4	-2.1
IMAR	**Indian Mountai**	**13.38**	**17**	Pn	Pn	15 57 48.6	-1.6
TABL	**Table Mountain**	**13.80**	**51**	Pn	Pn	15 57 56.9	+0.6
M26K	**Nabesna, AK**	**13.86**	**42**	Pn	Pn	15 57 57.0	+0.1
IL31		**13.99**	**30**	Pn	Pn	15 57 57.6	-0.9
M27K	**Edge Creek, AK**	**14.29**	**43**	Pn	Pn	15 58 01.4	-1.4
J25K	**Salcha River,**	**14.34**	**32**	Pn	Pn	15 58 02.2	-1.3
SCRK	**Sand Creek**	**14.39**	**35**	Pn	Pn	15 58 03.6	-0.6
L27K	**Beaver Creek,**	**14.66**	**41**	Pn	Pn	15 58 06.9	-1.0
BCAR	**Beaver Creek A**	**14.68**	**41**	Pn	Pn	15 58 08.1	0.0
J26L	**Joseph Creek**	**14.86**	**34**	Pn	Pn	15 58 09.8	-0.8
COLD	**Coldfoot**	**15.14**	**19**	Pn	Pn	15 58 11.2	-3.0
COLD				IAmb	IAmb	15 58 20.6	
comp=Z,2.8nm,1.0s							
P29M	**Windy Craggy**	**15.21**	**56**	Pn	Pn	15 58 13.5	-1.6
P29M				IAmb	IAmb	15 58 22.3	
comp=Z,5.7nm,1.0s							
I26K	**Coal Creek Min**	**15.51**	**32**	Pn	Pn	15 58 17.1	-2.0
I26K				IAmb	IAmb	15 58 35.9	
comp=Z,6.0nm,1.4s							
TOLK	**Toolik Lake Re**	**16.49**	**18**	Pn	Pn	15 58 30.6	-1.1
BMAR	**Burnt Mountain**	**16.59**	**25**	Pn	Pn	15 58 30.0	-3.1
P33M	**Teslin, Yukon**	**17.75**	**56**	Pn	Pn	15 58 46.0	-1.6
P33M				IAmb	IAmb	15 58 55.1	
comp=Z,4.0nm,0.9s							
INK	**Inuvik**	**20.36**	**32**		P	15 59 14.2	-2.6

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*AEIC **27** 15:54:42±2.4, 53°.46N±0°.09×163°.18W±0°.08, h26km±8km, Error ellipse: s-maj=13.8km s-min=4.2km az=154.0*
*IDC **27** 15:55:08.9±1.8, 53°.52N×163°.36W, h0km, mb3.8/6, mbtmp3.8/8, ML3.1/2, MS3.3/3, Error ellipse: s-maj=40.6km s-min=23.7km az=170.0*
*NEIC **27** 15:55:11.6±1.8, 53°.41N±0°.09×163°.13W±0°.08, h30km±11km, mb3.8/12, ML3.6/10, Error ellipse: s-maj=13.6km s-min=6.2km az=167.0*
ISC 27 15:55:13.1±0.9, 53°.57N±0°.08×163°.17W±0°.05, h32km, n101, σ1§26/100, mb3.9/5, MS3.2/3, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.30**	**354**	Pn	**Pn**	**15 55 35.5**	**+0.5**
FALS				Sn	**Sb**	**15 55 53.5**	**+0.3**
AKUT	**Akutan**	**1.64**	**291**	Pn	**Pn**	**15 55 39.8**	**+0.1**
AKUT				Sn	**Sn**	**15 55 59.3**	**-0.4**
UNV	**Unalaska Valle**	**2.00**	**279**	Pn	**Pn**	**15 55 43.3**	**-1.4**
SDPT	**Sand Point**	**2.38**	**40**	Pn	**Pn**	**15 55 51.3**	**+1.6**
SDPT				Sn	**Sn**	**15 56 18.1**	**+0.4**
SDPT				IAML		15 56 35.6	
comp=E,318nm,1.6s							
SDPT				IAML		15 56 40.3	
comp=N,368nm,1.0s							
CNBA	**Chernabura Isl**	**2.45**	**58**	Pn	**Pn**	**15 55 50.9**	**+0.2**
CNBA				IAML		15 56 18.2	
comp=N,231nm,4.5s							
CNBA				Sn	**Sn**	**15 56 18.3**	**-1.2**
CNBA				IAML		15 56 27.3	
comp=E,247nm,3.6s							
NIKH	**Nikolski High**	**3.47**	**262**	Pn	**Pn**	**15 56 04.3**	**-0.5**
CHGN	**Chignik**	**3.87**	**43**	Pn	**Pn**	**15 56 11.9**	**+1.6**
CHGN				Sn	**Sn**	**15 56 53.2**	**-1.5**
CHGN				IAML		15 57 12.2	
comp=N,88nm,1.6s							
CHGN				IAML		15 57 14.4	
comp=E,106nm,0.8s							
SII	**Sitkinak Islan**	**5.97**	**56**	Pn	**Pn**	**15 56 38.2**	**-0.9**
OHAK	**Old Harbor**	**6.71**	**53**	Pn	**Pn**	**15 56 48.9**	**-0.4**
P18K	**Big Mountain,**	**7.30**	**34**	Pn	**Pn**	**15 56 58.2**	**+0.8**
KDAK	**Kodiak Island**	**7.32**	**51**	Pn	**Pn**	**15 56 56.7**	**-0.9**
comp=E,0.7nm,0.3s,baz=247,slow=6.6,SNR=5.3							
KDAK				Sn	**Sn**	**15 58 17.0**	**-2.5**
comp=E,0.8nm,0.3s,baz=348,slow=23,SNR=5.6							
comp=E,25nm,1.2s							
KDAK	**Kodiak Island**	**7.32**	**51**	Pn	**Pn**	**15 56 57.2**	**-0.4**
Q19K	**Cape Douglas,**	**7.54**	**41**	Pn	**Pn**	**15 57 01.6**	**+0.8**
O18K	**Koktuh Hills**	**7.67**	**32**	Pn	**Pn**	**15 57 04.1**	**+1.6**
GSTR	**Great Sitkin T**	**7.95**	**264**	Pn	**Pn**	**15 57 06.7**	**+0.4**
ADK	**Adak**	**8.38**	**264**	Pn	**Pn**	**15 57 12.4**	**+0.2**
N19K	**Bonanza Creek**	**8.65**	**29**	Pn	**Pn**	**15 57 16.8**	**+0.8**
KIWB	**Kanaga Island**	**8.66**	**264**	Pn	**Pn**	**15 57 14.6**	**-1.5**
HOM	**Homer**	**8.80**	**42**	Pn	**Pn**	**15 57 18.4**	**+0.5**
CNPM	**China Poot**	**8.88**	**43**	Pn	**Pn**	**15 57 19.3**	**+0.2**
RSO	**Redoubt South**	**8.93**	**35**	Pn	**Pn**	**15 57 20.7**	**+0.8**
BRLK	**Bradley Lake**	**9.17**	**43**	Pn	**Pn**	**15 57 22.7**	**-0.3**
M19K	**Big River Lodg**	**9.57**	**26**	Pn	**Pn**	**15 57 29.5**	**+1.0**
L19K	**White Mountain**	**9.69**	**24**	Pn	**Pn**	**15 57 30.9**	**+0.7**
M20K	**Styx River**	**9.90**	**29**	Pn	**Pn**	**15 57 35.1**	**+2.0**
SEW	**Seward**	**9.95**	**43**	Pn	**Pn**	**15 57 33.6**	**0.0**
O22K	**Cooper Landing**	**10.07**	**41**	Pn	**Pn**	**15 57 33.3**	**-2.0**
SUA	**Susitna One**	**10.34**	**35**	Pn	**Pn**	**15 57 39.2**	**+0.1**
RC01	**Rabbit Creek A**	**10.45**	**39**	Pn	**Pn**	**15 57 41.0**	**+0.6**
SKT	**Skwentna**	**10.45**	**32**	Pn	**Pn**	**15 57 40.9**	**+0.3**
PWL	**Port Wells**	**10.84**	**42**	Pn	**Pn**	**15 57 45.2**	**-0.7**
K20K	**Telida**	**10.89**	**22**	Pn	**Pn**	**15 57 47.3**	**+0.7**
AMKA	**Amchitka**	**10.92**	**265**	Pn	**Pn**	**15 57 46.2**	**-0.7**
PPLA	**Purkeypile**	**10.98**	**27**	Pn	**Pn**	**15 57 49.0**	**+1.2**
KNK	**Knik Glacier**	**11.13**	**39**	Pn	**Pn**	**15 57 50.2**	**+0.4**
CUT	**Chulitna**	**11.17**	**32**	Pn	**Pn**	**15 57 50.5**	**+0.2**
GHO	**Glory Hole Cre**	**11.19**	**37**	Pn	**Pn**	**15 57 51.1**	**+0.5**
HIN	**Hinchinbrook I**	**11.35**	**46**	Pn	**Pn**	**15 57 52.5**	**-0.4**
GLI	**Glacier Island**	**11.35**	**43**	Pn	**Pn**	**15 57 53.1**	**+0.2**
SML	**Sawmill**	**11.42**	**38**	Pn	**Pn**	**15 57 52.1**	**-1.8**
FID	**Port Fidalgo**	**11.54**	**45**	Pn	**Pn**	**15 57 53.8**	**-1.6**
J20K	**Nowinta River**	**11.60**	**20**	Pn	**Pn**	**15 57 57.2**	**+1.1**
EYAK	**Cordova Ski Ar**	**11.75**	**47**	Pn	**Pn**	**15 57 57.9**	**-0.4**
SCM	**Sheep Creek Mo**	**11.81**	**39**	Pn	**Pn**	**15 57 58.3**	**-0.9**
TRF	**Thorofare Moun**	**11.95**	**29**	Pn	**Pn**	**15 58 01.1**	**0.0**
KLU	**Klutina**	**12.16**	**42**	Pn	**Pn**	**15 58 03.2**	**-0.8**
TNA	**Tin City**	**12.26**	**351**	Pn	**Pn**	**15 58 05.5**	**+0.3**
HMT	**Hamilton**	**12.31**	**49**	Pn	**Pn**	**15 58 05.1**	**-0.9**
M24K	**Tolsona, Glenn**	**12.41**	**40**	Pn	**Pn**	**15 58 07.4**	**0.0**
SUCK	**Suckling Hills**	**12.43**	**51**	Pn	**Pn**	**15 58 08.1**	**+0.5**
DHY	**Denali Highway**	**12.59**	**35**	Pn	**Pn**	**15 58 08.9**	**-1.1**
N25K	**Chitina, Valde**	**12.76**	**44**	Pn	**Pn**	**15 58 12.1**	**-0.1**
SNH	**Sunshine Point**	**12.90**	**51**	Pn	**Pn**	**15 58 14.1**	**+0.1**
I21K	**Tanana**	**12.93**	**21**		**Pn**	**15 58 12.7**	**-1.7**
WAX	**Waxell Ridge**	**13.00**	**50**	Pn	**Pn**	**15 58 13.3**	**-2.1**
VRDI	**Verde Repeater**	**13.06**	**46**	Pn	**Pn**	**15 58 14.9**	**-1.5**
MLY	**Manley**	**13.09**	**24**	Pn	**Pn**	**15 58 14.4**	**-2.2**
PAX	**Paxson**	**13.19**	**37**	Pn	**Pn**	**15 58 16.8**	**-1.3**
ISLE	**Juniper Island**	**13.29**	**50**	Pn	**Pn**	**15 58 18.2**	**-1.2**
IMAR	**Indian Mountai**	**13.30**	**17**	Pn	**Pn**	**15 58 18.8**	**-0.6**
CCB	**Clear Creek Bu**	**13.57**	**29**	Pn	**Pn**	**15 58 22.4**	**-0.7**
TABL	**Table Mountain**	**13.78**	**51**	Pn	**Pn**	**15 58 26.4**	**+0.1**
M26K	**Nabesna, AK**	**13.82**	**42**	Pn	**Pn**	**15 58 25.8**	**-0.8**
MENT	**Mentasta**	**13.83**	**40**	Pn	**Pn**	**15 58 26.6**	**-0.1**
ILAR	**Eielson Array**	**13.93**	**30**	Pn	**Pn**	**15 58 28.4**	**+0.3**
baz=226,slow=12,SNR=1.3							
comp=E,0.2nm,0.5s							
POKR	**Poker Plat Res**	**14.03**	**28**	Pn	**Pn**	**15 58 27.8**	**-1.5**
H23K	**Yukon River**	**14.03**	**24**	Pn	**Pn**	**15 58 27.6**	**-1.8**
DOT	**Dot Lake**	**14.11**	**37**	Pn	**Pn**	**15 58 27.4**	**-3.2**
M27K	**Edge Creek, AK**	**14.25**	**43**	Pn	**Pn**	**15 58 29.1**	**-3.5**
SCRK	**Sand Creek**	**14.34**	**36**	Pn	**Pn**	**15 58 30.9**	**-2.8**
H24K	**Noodor Dome**	**14.46**	**26**	Pn	**Pn**	**15 58 32.3**	**-2.9**
L27K	**Beaver Creek,**	**14.62**	**41**	Pn	**Pn**	**15 58 36.9**	**-0.6**
BCAR	**Beaver Creek A**	**14.64**	**41**	Pn	**Pn**	**15 58 36.6**	**-1.1**
J26L	**Joseph Creek**	**14.81**	**35**		**Pn**	**15 58 40.7**	**+0.7**
COLD	**Coldfoot**	**15.07**	**20**	Pn	**Pn**	**15 58 43.9**	**+0.5**
COLD				IAmb	IAmb	15 58 50.5	
comp=Z,4.8nm,0.9s							
P29M	**Windy Craggy**	**15.20**	**56**	Pn	**Pn**	**15 58 45.3**	**+0.1**
I26K	**Coal Creek Min**	**15.46**	**33**	Pn	**Pn**	**15 58 48.2**	**-0.3**
I26K				IAmb	IAmb	15 59 03.2	
comp=Z,9.8nm,1.5s							
FYU	**Fort Yukon**	**15.71**	**27**	Pn	**Pn**	**15 58 51.7**	**0.0**
DAWY	**Dawson**	**16.07**	**40**	Pn	**Pn**	**15 58 56.2**	**-0.3**
TOLK	**Toolik Lake Re**	**16.41**	**18**	Pn	**P**	**15 59 01.8**	**-1.5**
TOLK				IAmb	IAmb	15 59 43.3	
comp=Z,12nm,1.3s							
M30M	**Min

Md1.7/9, 4C-5D, Error ellipse: s-maj=1.2km s-min=0.9km az=212.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.07**	**149**	⇓P	Pg	16 13 59.2	+0.1
MC2				S	Sg	16 14 00.6	-0.3
MC2				END			
T1216	**Preci, Frazion**	**0.12**	**226**	⇑P	Pg	16 14 00.1	+0.5
T1216				S	Sg	16 14 02.5	+0.8
T1216				AML	AML		
	comp=E,4180μm,0.4s						
T1216				AML	AML		
	comp=N,4770μm,0.3s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,50300μm,0.3s						
T1216				END			
CESI	**CESI - Serrava**	**0.17**	**280**	⇑P	Pg	16 14 01.1	+0.6
CESI				S	Sg	16 14 04.1	+1.0
CESI				AML	AML		
	comp=E,1365μm,0.5s						
CESI				AML	AML		
	comp=N,1805μm,0.2s						
CESI				AML	AML		
	comp=E,66200μm,0.4s						
CESI				AML	AML		
CESI				END			
T1215	**Vallo di Nera,**	**0.26**	**229**	⇑P	Pb	16 14 03.0	-0.5
T1215				S	Sg	16 14 06.3	+0.7
T1215				AML	AML		
	comp=E,394μm,0.4s						
T1215				AML	AML		
	comp=N,396μm,0.4s						
T1215				AML	AML		
	comp=E,11060μm,0.1s						
T1215				AML	AML		
	comp=N,21050μm,0.1s						
T1215				AML	AML		
	comp=E,11195μm,0.1s						
T1215				AML	AML		
	comp=N,21550μm,0.1s						
T1215				END			
T1217	**Poggiodomo (PG**	**0.30**	**210**	⇓P	Pb	16 14 03.6	-0.7
T1217				S	Sg	16 14 07.0	+0.1
T1217				AML	AML		
	comp=E,8630μm,1.6s						
T1217				AML	AML		
	comp=N,19250μm,0.4s						
T1217				AML	AML		
	comp=E,8455μm,1.6s						
T1217				AML	AML		
	comp=N,19250μm,0.4s						
T1217				END			
T1204	**Amatrice, Fraz**	**0.33**	**156**	P	Pg	16 14 04.0	+0.7
T1204				AML	AML		
	comp=E,6245μm,1.6s						
T1204				AML	AML		
	comp=N,4255μm,1.0s						
T1204				END			
EL6	**Elcito**	**0.35**	**356**	⇓P	Pg	16 14 04.0	+0.2
EL6				AML	AML		
	comp=E,11415μm,0.3s						
EL6				AML	AML		
	comp=N,16600μm,0.4s						
EL6				END			
SMA1	**SAN MARTINO**	**0.37**	**157**	P	Pg	16 14 04.7	+0.6
SMA1				AML	AML		
	comp=E,5125μm,0.4s						
SMA1				AML	AML		
	comp=N,4575μm,0.5s						
SMA1				END			
LNSS	**Leonessa**	**0.38**	**191**	⇓P	Pg	16 14 04.8	+0.6
LNSS				AML	AML		
	comp=E,341μm,0.7s						
LNSS				AML	AML		
	comp=N,376μm,0.6s						
LNSS				AML	AML		
	comp=E,7800μm,1.1s						
LNSS				AML	AML		
	comp=N,7990μm,1.0s						
LNSS				END			
RM33	**Pellescritta (**	**0.47**	**173**	P	Pg	16 14 06.3	+0.5
RM33				AML	AML		
	comp=E,2310μm,1.3s						
RM33				AML	AML		
	comp=N,2045μm,0.9s						
RM33				AML	AML		
	comp=E,2310μm,1.3s						
RM33				AML	AML		
	comp=N,1970μm,0.4s						
ARRO	**Arrone**	**0.48**	**215**	P	Pb	16 14 07.2	0.0
ARRO				S	Sb	16 14 14.7	+0.4
TERO	**Teramo**	**0.49**	**136**	P	Pg	16 14 06.5	+0.3
TERO				AML	AML		
	comp=E,134μm,1.5s						
TERO				AML	AML		
	comp=N,150μm,0.5s						
TERO				AML	AML		
	comp=E,3835μm,1.1s						
TERO				AML	AML		
	comp=N,5935μm,0.5s						
TERO				AML	AML		
	comp=E,4085μm,1.1s						
TERO				AML	AML		
	comp=N,6275μm,0.5s						
ARVD	**Arcevia**	**0.54**	**345**	S	Sb	16 14 17.0	+0.8
CRE	**Caprese Michel**	**1.08**	**307**	⇑P	Pn	16 14 18.8	+0.8
CRE				AML	AML		
	comp=E,619μm,0.4s						
CRE				AML	AML		
	comp=N,871μm,0.6s						
VIVA	**Pratoni del Vi**	**1.25**	**193**	S	Sg	16 14 37.0	0.0
MODR	**Mondragone**	**1.91**	**163**	S	Sb	16 14 55.0	-0.5
VITU	**Vitulano (BN)**	**2.11**	**148**	P	Pn	16 14 31.8	-0.2
VITU				AML	AML		
	comp=E,121μm,1.5s						
VITU				AML	AML		
	comp=N,134μm,0.8s						
PAOL	**Paolisi**	**2.22**	**151**	S	Sg	16 15 09.0	+1.1
GRAM	**Graiana**	**2.69**	**305**	⇓P	Pg	16 14 50.1	+1.9
LTRZ	**Laterza**	**3.63**	**130**	S	Sn	16 15 36.0	+0.1
MESG	**Mesagne**	**4.25**	**123**	S	Sn	16 15 49.0	-2.2
RESU	**Resuttano**	**5.37**	**172**	P	Pb	16 15 25.7	-4.9

*ROM **27** 16:14:50.2±0.1, 42°.954N±0°.002×13°.068E±0°.005, h10km, ML3.3/54, Error ellipse: s-maj=0.3km s-min=0.2km az=271.0*
*PRU **27** 16:14:52.7±0.0, 43°.04N×13°.54E, h0km*
*STR **27** 16:14:56.4±2.0, 43°N±13°×1°3E±2°2, h10km, MLv3.4/9, Error ellipse: s-maj=0.0km s-min=0.0km az=67.8, preliminary*

ISC 27 16:14:50.6±0.8, 42°.94N±0°.01×13°.08E±0°.02, h10km±4km, n116, σ1§33/151, 34C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**307**	⇑P	**Pg**	**16 14 52.4**	**-0.2**
FEMA				S	**Sg**	**16 14 53.6**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.07**	**221**	P	**Pg**	**16 14 52.9**	**+0.1**
T1216				S	**Sg**	**16 14 54.7**	**+0.3**
T1216				AML	AML		
T1216				AML	AML		
	comp=N,50350μm,0.3s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,50300μm,0.3s						
MC2	**Monte Cornacci**	**0.09**	**112**	⇑P	**Pg**	**16 14 53.3**	**+0.1**
MC2				S	**Sg**	**16 14 55.3**	**+0.3**
FDMO	**Fiordimonte**	**0.09**	**2**	⇓P	**Pg**	**16 14 53.0**	**-0.1**
FDMO				S	**Sg**	**16 14 54.6**	**-0.3**
FDMO				AML	AML		
	comp=N,93850μm,0.2s						
FDMO				AML	AML		
CESI	**CESI - Serrava**	**0.14**	**295**	P	**Pg**	**16 14 54.0**	**+0.1**
CESI				S	**Sg**	**16 14 56.5**	**+0.3**
CESI				AML	AML		
CESI				AML	AML		
	comp=E,66200μm,0.4s						
AM05	**Amandola Campo**	**0.20**	**80**	⇑P	**Pg**	**16 14 55.2**	**+0.4**
AM05				S	**Sg**	**16 14 58.6**	**+0.9**
AM05				AML	AML		
	comp=E,4675μm,1.1s						
AM05				AML	AML		
	comp=N,4825μm,1.3s						
AM05				AML	AML		
	comp=N,1620μm,1.4s						
AM05				AML	AML		
	comp=E,18600μm,1.1s						
AM05				AML	AML		
	comp=N,4830μm,1.3s						
AM05				AML	AML		
	comp=E,4680μm,1.1s						
T1215	**Vallo di Nera,**	**0.21**	**228**	P	**Pg**	**16 14 55.4**	**+0.3**
T1215				S	**Sg**	**16 14 58.9**	**+0.9**
T1215				AML	AML		
	comp=E,11090μm,0.1s						
T1215				AML	AML		
	comp=N,21050μm,0.1s						
T1215				AML	AML		
	comp=E,11195μm,0.1s						
T1215				AML	AML		
	comp=E,11080μm,0.1s						
T1215				AML	AML		
	comp=E,11230μm,0.1s						
T1215				AML	AML		
	comp=N,21500μm,0.1s						
T1215				AML	AML		
	comp=E,11060μm,0.1s						
T1215				AML	AML		
	comp=E,11195μm,0.1s						
T1215				AML	AML		
	comp=E,11070μm,0.1s						
T1215				AML	AML		
	comp=E,11225μm,0.1s						
T1215				AML	AML		
	comp=N,21050μm,0.1s						
T1215				AML	AML		
	comp=N,21550μm,0.1s						
PIO1	**Pioraco**	**0.24**	**343**	P	**Pg**	**16 14 55.5**	**-0.1**
PIO1				S	**Sg**	**16 14 59.4**	**+0.4**
PIO1				AML	AML		
	comp=N,12550μm,0.5s						
PIO1				AML	AML		
	comp=E,7930μm,1.6s						
MDAR	**Monte D'Aria**	**0.25**	**10**	P	**Pg**	**16 14 55.7**	**-0.1**
MDAR				S	**Sg**	**16 14 59.7**	**+0.5**
MDAR				AML	AML		
	comp=E,26750μm,0.2s						
MDAR				AML	AML		
	comp=N,36350μm,0.2s						
MDAR				AML	AML		
	comp=N,36300μm,0.2s						
T1217	**Poggiodomo (PG**	**0.26**	**206**	⇑P	**Pg**	**16 14 56.2**	**+0.4**
T1217				S	**Sb**	**16 15 00.6**	**-1.4**
T1217				AML	AML		
	comp=E,8475μm,1.6s						
T1217				AML	AML		
	comp=N,19250μm,0.4s						
T1217				AML	AML		
	comp=E,8625μm,1.6s						
T1217				AML	AML		
	comp=N,19200μm,0.4s						
T1217				AML	AML		
	comp=E,8485μm,1.6s						
T1217				AML	AML		
	comp=E,8615μm,1.6s						
T1217				AML	AML		
	comp=E,8455μm,1.6s						
T1217				AML	AML		
	comp=N,19300μm,0.4s						
T1217				AML	AML		
	comp=E,8505μm,1.6s						
T1217				AML	AML		
	comp=N,19250μm,0.4s						
FIU1	**Fiuminata**	**0.27**	**336**	P	**Pg**	**16 14 56.0**	**-0.1**
FIU1				S	**Sg**	**16 15 00.2**	**+0.5**
FIU1				AML	AML		
	comp=E,9745μm,1.3s						
FIU1				AML	AML		
	comp=E,9775μm,1.2s						
FIU1				AML	AML		
	comp=N,8145μm,0.9s						
MTL1	**Matelica**	**0.32**	**350**	P	**Pg**	**16 14 57.1**	**+0.1**
MTL1				S	**Sb**	**16 15 02.1**	**-1.6**
T1204	**Amatrice, Fraz**	**0.32**	**147**	P	**Pg**	**16 14 57.4**	**+0.3**
T1204				S	**Sb**	**16 15 02.8**	**-1.0**
T1204				AML	AML		
	comp=E,6215μm,1.6s						
T1204				AML	AML		
	comp=E,6245μm,1.6s						
T1204				AML	AML		
	comp=N,4255μm,1.0s						
T1204				AML	AML		
	comp=N,4250μm,1.0s						
T1204				AML	AML		
	comp=E,6220μm,1.6s						
LNSS	**Leonessa**	**0.34**	**185**	⇓P	**Pg**	**16 14 57.6**	**+0.2**
LNSS				S	**Sb**	**16 15 03.3**	**-1.2**
LNSS				AML	AML		
	comp=E,7800μm,1.1s						
LNSS				AML	AML		
	comp=N,7990μm,1.0s						
MNTP	**Montappone**	**0.34**	**56**	⇑P	**Pb**	**16 14 58.1**	**-0.8**
MNTP				S	**Sb**	**16 15 04.2**	**-0.2**
MNTP				AML	AML		
	comp=E,16000μm,1.2s						
MNTP				AML	AML		
	comp=N,13650μm,0.3s						
SMA1	**SAN MARTINO**	**0.36**	**149**	P	**Pg**	**16 14 58.1**	**+0.2**
SMA1				S	**Sb**	**16 15 04.0**	**-1.1**
SMA1				AML	AML		
	comp=E,5120μm,0.4s						
SMA1				AML	AML		
	comp=N,4570μm,0.5s						
SMA1				AML	AML		
	comp=E,5125μm,0.4s						
SMA1				AML	AML		
	comp=N,4575μm,0.5s						
EL6	**Elcito**	**0.39**	**2**	⇑P	**Pg**	**16 14 58.0**	**-0.2**
EL6				S	**Sb**	**16 15 04.3**	**-1.5**
EL6				AML	AML		
	comp=E,11415μm,0.3s						
EL6				AML	AML		
	comp=N,16600μm,0.4s						
EL6				AML	AML		
	comp=N,16650μm,0.4s						
EL6				AML	AML		
	comp=E,11390μm,0.3s						
ARRO	**Arrone**	**0.43**	**213**	P	**Pg**	**16 14 59.3**	**+0.2**
ARRO				S	**Sb**	**16 15 06.1**	**-0.9**
ARRO				AML	AML		
	comp=E,2830μm,0.2s						
ARRO				AML	AML		
	comp=N,2970μm,0.6s						
OFFI	**Offida**	**0.44**	**91**	⇑P	**Pb**	**16 15 00.3**	**-0.3**
OFFI				AML	AML		
	comp=E,7455μm,0.7s						
OFFI				AML	AML		
	comp=N,13200μm,0.6s						
T1211	**Morro Reatino**	**0.44**	**202**	P	**Pg**	**16 14 59.4**	**+0.1**
T1211				S	**Sb**	**16 15 06.6**	**-0.8**
T1211				AML	AML		
	comp=N,7160μm,0.6s						
T1211				AML	AML		
	comp=E,3615μm,0.9s						
T1211				AML	AML		
	comp=N,6935μm,0.6s						
T1211				AML	AML		
	comp=E,3610μm,0.9s						
T1211				AML	AML		
	comp=N,6940μm,0.6s						
T1211				AML	AML		
	comp=E,3625μm,0.9s						
RM33	**Pellescritta (**	**0.45**	**167**	⇓P	**Pg**	**16 14 59.4**	**0.0**
RM33				S	**Sb**	**16 15 06.5**	**-0.9**
RM33				AML	AML		
	comp=E,2310μm,1.3s						
RM33				AML	AML		
	comp=N,1965μm,0.4s						
RM33				AML	AML		
	comp=E,2310μm,1.3s						
RM33				AML	AML		
	comp=E,2305μm,1.3s						
RM33				AML	AML		
	comp=E,2315μm,1.3s						
RM33				AML	AML		
	comp=N,2045μm,0.8s						
RM33				AML	AML		
	comp=N,1970μm,0.4s						
CAMP	**Campotosto**	**0.47**	**149**	⇑P	**Pg**	**16 14 59.9**	**0.0**
CAMP				S	**Sg**	**16 15 07.0**	**+0.9**
CAMP				AML	AML		
	comp=E,1690μm,0.8s						
CAMP				AML	AML		
	comp=N,1735μm,0.6s						
CESX	**Cesi**	**0.50**	**228**	⇑P	**Pg**	**16 15 00.1**	**-0.2**
CESX				S	**Sb**	**16 15 07.8**	**-1.0**
CESX				AML	AML		
	comp=E,5270μm,0.3s						
CESX				AML	AML		
	comp=N,5825μm,0.4s						
TERO	**Teramo**	**0.50**	**130**	P	**Pg**	**16 15 00.2**	**-0.1**
TERO				S	**Sb**	**16 15 08.0**	**-0.9**
TERO				AML	AML		
	comp=E,3835μm,1.1s						
TERO				AML	AML		
	comp=N,5930μm,0.5s						
TERO				AML	AML		
	comp=N,6275μm,0.5s						
TERO				AML	AML		
	comp=N,5935μm,0.5s						
TERO				AML	AML		
	comp=E,4085μm,1.1s						
TERO				AML	AML		
	comp=E,3840μm,1.1s						
T1247	**Pizzolo (AQ)**	**0.53**	**162**	P	**Pg**	**16 15 00.9**	**0.0**
T1247				S	**Sb**	**16 15 09.7**	**-0.1**
T1247				AML	AML		
	comp=N,2510μm,1.2s						
T1247				AML	AML		
	comp=E,2625μm,0.6s						
ARVD	**Arcevia**	**0.56**	**350**	⇑P	**Pg**	**16 15 01.2**	**-0.3**
ARVD				S	**Sb**	**16 15 11.0**	**+0.2**
ARVD				AML	AML		
	comp=N,2110μm,0.8s						
ARVD				AML	AML		
	comp=E,2275μm,0.1s						
GIGS	**Gran Sasso**	**0.61**	**144**	P	**Pg**	**16 15 02.0**	**-0.5**
GIGS				S	**Sb**	**16 15 11.3**	**-0.8**
GIGS				AML	AML		
	comp=E,616μm,0.3s						
GIGS				AML	AML		
	comp=N,436μm,1.4s						
GIGS				AML	AML		
	comp=E,616μm,0.3s						
TRTR	**Tortoreto Alta**	**0.63**	**102**	⇑P	**Pb**	**16 15 03.9**	**+0.2**
TRTR				AML	AML		
	comp=N,8480μm,0.4s						
TRTR				AML	AML		
	comp=E,6875μm,0.5s						
FRON	**Frontone**	**0.63**	**336**	P	**Pg**	**16 15 02.4**	**-0.5**
FRON				AML	AML		
	comp=N,3585μm,0.1s						
FRON				AML	AML		
	comp=E,2450μm,0.2s						
FIAM	**Fiamignano**	**0.68**	**178**	⇑P	**Pg**	**16 15 03.5**	**-0.2**
FIAM				AML	AML		
	comp=N,1225μm,0.7s						
FIAM				AML	AML		
	comp=E,1214μm,0.5s						
ATPI	**Pietralunga -**	**0.71**	**316**	⇑P	**Pg**	**16 15 03.8**	**-0.5**
ATPI				S	**Sb**	**16 15 15.0**	**0.0**
ATPI				AML	AML		
	comp=E,2010μm,0.4s						
ATPI				AML	AML		
	comp=N,1675μm,0.4s						
ATMI	**Monte Miggiano**	**0.71**	**303**	⇓P	**Pg**	**16 15 04.1**	**-0.3**
ATMI				S	**Sn**	**16 15 16.0**	**-1.9**
ATMI				AML	AML		
	comp=E,4215μm,0.4s						
ATMI				AML	AML		
	comp=N,5310μm,0.5s						
MGAB	**Montegabbione**	**0.71**	**268**	⇑P	**Pg**	**16 15 04.0**	**-0.4**
MGAB				AML	AML		
	comp=E,3895μm,0.5s						
MGAB				AML	AML		
	comp=N,6085μm,0.5s						
MGAB				AML	AML		
	comp=N,5625μm,0.5s						
MGAB				AML	AML		
	comp=E,4110μm,0.6s						
PIEI	**Pieia**	**0.71**	**326**	⇑P	**Pg**	**16 15 03.7**	**-0.8**
PIEI				S	**Sb**	**16 15 15.0**	**-0.1**
PIEI				AML	AML		
	comp=E,1910μm,0.8s						
PIEI				AML	AML		
	comp=N,1560μm,1.5s						
AOI	**Ancona**	**0.71**	**32**	⇑P	**Pg**	**16 15 04.3**	**-0.1**
AOI				S	**Sb**	**16 15 16.0**	**+0.8**
AOI				AML	AML		
	comp=E,2610μm,1.2s						
AOI				AML	AML		
	comp=N,2025μm,0.5s						
FAGN	**Fagnano**	**0.77**	**151**	⇑P	**Pb**	**16 15 05.8**	**-0.4**
FAGN				AML	AML		
	comp=N,2310μm,0.5s						
FAGN				AML	AML		
	comp=E,4025μm,0.8s						
FSSB	**Fossombrone**	**0.78**	**344**	⇓P	**Pg**	**16 15 05.3**	**-0.4**
FSSB				S	**Sn**	**16 15 19.0**	**-0.6**
FSSB				AML	AML		
	comp=E,4850μm,0.4s						
FSSB				AML	AML		
	comp=E,4855μm,0.4s						
FSSB				AML	AML		
	comp=N,6620μm,0.3s						
VCEL	**Villa Celiera**	**0.78**	**134**	⇑P	**Pg**	**16 15 05.6**	**-0.2**
VCEL				AML	AML		
	comp=E,2235μm,0.5s						
VCEL				AML	AML		
	comp=N,2200μm,0.7s						
VCEL				AML	AML		
	comp=N,2205μm,0.7s						
SRES	**S.Oreste - Sor**	**0.82**	**211**	⇓P	**Pn**	**16 15 07.5**	**-0.8**
SRES				AML	AML		
	comp=E,1600μm,0.9s						
SRES				AML	AML		
	comp=N,1140μm,1.0s						
BADI	**Badiali**	**0.83**	**313**	P	**Pg**	**16 15 06.2**	**-0.5**
PE3	**Peglio**	**0.86**	**331**	⇓P	**Pg**	**16 15 06.7**	**-0.6**
PE3				AML	AML		
	comp=N,27μm,0.1s						
PE3				AML	AML		
	comp=E,22μm,1.0s						
T0110	**Collepietro**	**0.88**	**144**	⇓P	**Pg**	**16 15 07.1**	**-0.6**
T0110				AML	AML		
	comp=E,2225μm,0.6s						
T0110				AML	AML		
	comp=N,2255μm,0.4s						
CAFI	**Castiglion Fio**	**0.90**	**296**	⇑P	**Pg**	**16 15 07.4**	**-0.6**
CAFI				AML	AML		
	comp=E,1105μm,1.0s						
CAFI				AML	AML		
	comp=N,1325μm,1.1s						
SSP9	**Sansepolcro**	**0.94**	**313**	⇑P	**Pb**	**16 15 08.2**	**-0.8**
CERT	**Cerreto**	**1.00**	**184**	⇑P	**Pn**	**16 15 10.3**	**-0.5**
CERT				AML	AML		
	comp=E,1042μm,0.7s						
CERT				AML	AML		
	comp=N,838μm,0.4s						
SF04	**Casetta**	**1.05**	**265**	⇑P	**Pn**	**16 15 10.8**	**-0.7**
SF04				AML	AML		
	comp=E,839μm,1.6s						
SF04				AML	AML		
	comp=N,775μm,0.3s						
CRE	**Caprese Michel**	**1.07**	**310**	⇑P	**Pn**	**16 15 12.4**	**+0.6**
CRE				AML	AML		
	comp=E,619μm,0.4s						
CRE				AML	AML		
	comp=E,618μm,0.4s						
CRE				AML	AML		
	comp=N,871μm,0.6s						
INTR	**Introdacqua**	**1.11**	**147**	⇓P	**Pb**	**16 15 10.3**	**-1.8**
INTR				AML	AML		
	comp=N,2055μm,1.2s						
INTR				AML	AML		
	comp=E,1560μm,0.9s						
SFI	**Santa Sofia**	**1.32**	**317**	⇑P	**Pg**	**16 15 16.9**	**+1.0**
LATB	**Latina**	**1.45**	**184**	P	**Pg**	**16 15 19.5**	**+1.1**
RUFI	**Rufina**	**1.45**	**309**	⇓P	**Pb**	**16 15 17.0**	**-0.8**
RUFI				AML	AML		
	comp=E,340μm,0.5s						
RUFI				AML	AML		
	comp=N,337μm,0.4s						

LMD	Lutirano	1.51	319	⇓P	Pg	16 15 19.8	+0.2
TRIF	Trifonti	1.61	277	⇑P	Pb	16 15 19.4	-1.0
TRIF				AML	AML		
	comp=E,215μm,0.8s						
TRIF				AML	AML		
	comp=N,172μm,0.8s						
MODR	Mondragone	1.89	161	S	Sn	16 15 46.0	-1.0
PTRJ	Pietraroja	1.91	145	⇑P	Pb	16 15 25.6	-0.1
BRJN	Brijuni	2.02	14	⇑P	Pn	16 15 25.0	+0.3
VITU	Vitulano (BN)	2.10	146	P	Pb	16 15 28.0	-0.9
APRC	Apricena	2.18	122	⇓P	Pb	16 15 30.5	+0.4
GSCL	Gusciola	2.29	309	S	Sb	16 15 60.0	-0.6
VLC	Villacollemand	2.31	303	⇑P	Pn	16 15 29.6	+0.8
VLC				AML	AML		
	comp=N,68μm,1.4s						
VLC				AML	AML		
	comp=E,76μm,1.4s						
BOJS	Bojanci	3.00	31	⇓P	Pn	16 15 38.6	+0.4
BOJS				AML	AML		
	comp=E,172μm,1.0s						
BOJS				AML	AML		
	comp=N,217μm,0.4s						
PGF	Pioggiola	3.03	264	P	Pn	16 15 39.7	+0.9
SABO	M.te Sabotino	3.06	7	⇓P	Pn	16 15 39.2	+0.1
SABO				AML	AML		
	comp=N,848μm,1.3s						
SABO				AML	AML		
	comp=E,212μm,1.4s						
SABO				AML	AML		
	comp=N,220μm,0.6s						
SABO				AML	AML		
	comp=E,888μm,1.6s						
CGRP	Cima Grappa	3.08	343	⇓P	Pn	16 15 40.7	+1.3
SALO	Salr	3.24	326	⇓P	Pn	16 15 44.2	+2.5
LJU	Ljubljana	3.27	18	⇓P	Pn	16 15 42.7	+0.8
LJU				AML	AML		
	comp=N,816μm,0.7s						
LJU				AML	AML		
	comp=E,703μm,0.6s						
CTI	Castel Tesino	3.27	342	P	Pn	16 15 43.9	+1.9
LEOD	Capriano del C	3.29	321	S	Sg	16 16 38.0	+1.7
STAL	STALIGIAL	3.33	356	P	Pn	16 15 44.1	+1.3
STAL				S	Sn	16 16 23.0	+0.6
STAL				AML	AML		
	comp=N,141μm,0.3s						
STAL				AML	AML		
	comp=E,192μm,0.7s						
LUSI	Trento, Gardas	3.38	334	P	Pn	16 15 45.0	+1.4
CIMO	Cimolais	3.40	352	⇑P	Pn	16 15 44.2	+0.5
PTCC	Patocco-Chiusa	3.47	3	⇑P	Pn	16 15 45.0	+0.3
PTCC				S	Sn	16 16 26.0	+0.1
PTCC				AML	AML		
	comp=N,59μm,0.9s						
PTCC				AML	AML		
	comp=E,103μm,0.3s						
MABI	Malga Bissina	3.61	330	⇓P	Pn	16 15 49.0	+2.2
ZOU	Zoufplan	3.61	359	⇑P	Pn	16 15 47.6	+0.7
ZOU				AML	AML		
	comp=E,80μm,1.1s						
ZOU				AML	AML		
	comp=N,71μm,1.6s						
ACOM	Acomizza, Ital	3.62	5	⇓P	Pn	16 15 48.0	+1.1
ACOM				AML	AML		
	comp=N,113μm,0.6s						
ACOM				AML	AML		
	comp=E,160μm,1.6s						
EUCT	Pavia	3.63	310	⇓P	Pn	16 15 46.4	-0.5
EUCT				AML	AML		
	comp=N,3260μm,0.1s						
EUCT				AML	AML		
	comp=E,1980μm,0.1s						
MYKA	Terra Mystica	3.71	6	*e*Pn	Pn	16 15 49.1	+1.1
	comp=E,3.9nm,0.2s						
OBKA	Obir	3.71	16	*e*Pn	Pn	16 15 49.2	+1.1
	comp=E,3.5nm,0.2s						
KOSI	Kohlern	3.72	342	⇓P	Pn	16 15 51.0	+2.7
ABTA	Abfaltersbach	3.82	354	*e*Pn	Pn	16 15 51.4	+1.7
	comp=E,7.7nm,0.4s						
ORI	Oriolo Calabro	3.83	138	S	Sn	16 16 37.0	+2.2
SALB	San Lorenzo Be	3.93	140	P	Pn	16 15 52.1	+1.0
SOKA	Soboth	3.98	20	*e*Pn	Pn	16 15 52.8	+1.0
	comp=E,2.0nm,0.3s						
RISI	Rein	4.07	350	⇑P	Pn	16 15 54.6	+1.5
KBA	Koelnbreinsper	4.14	2	*e*Pn	Pn	16 15 55.6	+1.6
	comp=E,4.3nm,0.2s						
ROSI	Rosskopf	4.16	344	⇑P	Pn	16 15 57.0	+2.6
FETA	Feichten	4.41	339	*e*Pn	Pn	16 16 01.5	+3.8
	comp=E,2.0nm,0.3s						
WTTA	Wattenberg	4.44	347	*e*Pn	Pn	16 16 01.1	+2.9
	comp=E,2.9nm,0.2s						
SQTA	Sankt Quirin	4.48	343	*e*Pn	Pn	16 16 02.2	+3.5
	comp=E,2.2nm,0.1s						
WATA	Walderalm	4.52	347	*e*Pn	Pn	16 16 02.3	+3.1
	comp=E,2.7nm,0.2s						
ARSA	Arzberg	4.64	21	*e*Pn	Pn	16 16 01.1	+0.3
	comp=E,3.0nm,0.3s						
BIOA	Bad Ischl, Aus	4.76	5	*e*Pn	Pn	16 16 03.6	+1.1
	comp=E,12nm,0.3s						
SURF	Saint Ours	4.80	291	P	Pn	16 16 04.2	+1.0
JAUF	Jausiers	4.83	290	P	Pn	16 16 05.8	+2.3
RETA	Reutte	4.83	341	*e*Pn	Pn	16 16 06.8	+3.3
	comp=E,2.3nm,0.3s						
DAVA	Damuels	4.90	334	*e*Pn	Pn	16 16 06.8	+2.3
	comp=E,3.6nm,0.4s						
TRIGF	Trigance	4.93	282	P	Pn	16 16 07.2	+2.2
CREF	Crivoux	4.95	291	P	Pn	16 16 09.0	+3.8
MOA	Molln	4.98	9	*e*Pn	Pn	16 16 06.5	+1.0
	comp=E,1.9nm,0.2s						
DIX	Grande Dixence	5.13	310	S	Sn	16 17 10.3	+3.2
DIX	Grande Dixence	5.13	310	P	Pn	16 16 10.1	+2.3
MFNL	Monte Finestre	5.15	181	⇑P	Pn	16 16 10.2	+2.3
RONA	Rosalia, Austr	5.27	24	*e*Pn	Pn	16 16 10.3	+0.8
	comp=E,1.4nm,0.3s						
CONA	Conrad Observa	5.35	20	*e*Pn	Pn	16 16 10.8	+0.1
	comp=E,1.4nm,0.3s						
RSL	Roselend	5.38	303	P	Pn	16 16 13.8	+2.6
GDM	Grand'Maison	5.50	297	P	Pn	16 16 17.7	+4.9
HAGA	Augusta	5.87	164	P	Pn	16 16 19.4	+1.7
CKRC	Cesky Krumlov	5.94	8	*e*SN	Sn	16 17 24.0	-2.7
FELD	Feldberg im Sc	6.09	326	P	Pn	16 16 21.8	+0.9
FELD	Feldberg im Sc	6.09	326	S	Sn	16 17 29.0	-1.7
KIZ	Kirchzarten	6.19	326	S	Sn	16 17 29.7	-3.2
KIZ	Kirchzarten	6.19	326	P	Pn	16 16 22.9	+0.9
KHC	Kasperske Hory	6.20	3	*e*PN	Pn	16 16 22.1	-0.1
KHC				*e*SN	Sn	16 17 30.1	-3.0
VOGT	Vogtsburg - To	6.39	325	P	Pn	16 16 26.2	+1.4
MOF	Molkenrain	6.45	322	P	Pn	16 16 26.6	+0.8
MOF				S	Sn	16 17 38.2	-1.3
ECH	Echery	6.71	324	P	Pn	16 16 30.1	+0.8
ECH				S	Sn	16 17 43.9	-1.9

*IDC **27** 16:19:34.7±4.9, 9°.96S×125°.33E, h57km±59km, mb3.0/1, mbtmp3.3/3, ML3.5/2, Error ellipse: s-maj=63.2km s-min=15.7km az=25.0*
*DJA **27** 16:19:35.8±1.1, 10°S±6°×12°5E±°, h17km±10km, M3.9/6, mb4.3/5, MLv3.7/6*
ISC 27 16:19:33.0±1.2, 9°.9S±0°.1×125°.38E±0°.09, h35km, n11, σ1$54/14, Timer region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.10	277	P	Pn	16 19 52.3	+0.3
SOEI				S	Sn	16 20 03.5	-2.6
BATI	Baumata	1.72	259	P	Pn	16 20 00.8	+0.3
	13nm,0.3s,baz=294,slow=3.3,SNR=17						
BATI				S	Sn	16 20 21.9	+0.8
	47nm,0.3s,baz=13,slow=21,SNR=17						
BATI	Baumata	1.72	259	P	Pn	16 20 01.4	+1.0
MMRI	Maumere	3.34	292	P	Pn	16 20 23.4	+0.7
SAUI	Saumlaki	6.15	73	P	Pn	16 21 10.2	+8.8
	1.0nm247nm,1.0s						
PLAI	Plampang	7.57	277	P	Pn	16 21 21.6	+0.6
	0.1nm11nm,1.2s						
TWSI	Taliwang, Sumb	8.46	277	P	Pn	16 21 34.0	+0.9
	7.6nm,1.1s						
RTBI	Rangdo, Negare	10.40	277	P	Pn	16 22 00.4	+0.6
WRA	Warramunga Arr	13.22	140	P	Pn	16 22 40.9	+2.5
	0.3nm,0.3s,baz=319,slow=14,SNR=14						
WRA				S	Sn	16 25 01.8	-2.5
	0.4nm,0.4s,baz=320,slow=24,SNR=7.0						
	0.3nm,0.4s						
ASAR	Alice Springs	15.94	150	P	P	16 23 16.8	-1.3
	0.2nm,0.3s,baz=319,slow=12,SNR=13						
ASAR				S	Sn	16 26 09.5	-1.1
	0.1nm,0.3s,baz=324,slow=18,SNR=5.3						
	0.3nm,0.4s						
MKAR	Makanchi Array	68.25	330	P	P	16 30 29.7	-0.6
	0.1nm,0.5s,baz=143,slow=4.2,SNR=1.6						
	0.1nm,0.5s						

*NEIC **27** 16:24:19.7±2.4, 53°.5N±0°.1×163°.25W±0°.02, h8km±5km, mb4.3/37, ML4.0/12, ML3.9(AEIC), Error ellipse: s-maj=15.0km s-min=1.4km az=174.0*
*IDC **27** 16:24:19.4±0.8, 53°.70N×163°.37W, h0km, mb4.0/25, mbtmp4.0/28, ML3.7/3, MS3.4/7, Error ellipse: s-maj=21.4km s-min=13.3km az=172.0*
*AEIC **27** 16:24:21±2.4, 53°.48N±0°.08×163°.17W±0°.07, h25km±5km, Error ellipse: s-maj=11.1km s-min=5.7km az=171.0*
ISC 27 16:24:24.0±0.6, 53°.64N±0°.09×163°.23W±0°.05, h35km, n274, σ1$32/267, mb4.3/39, MS3.3/5, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.23	355		Pn	16 24 45.4	+0.8
FALS	False Pass	1.23	355	P	Pn	16 24 45.6	+1.0
	baz=174,SNR=52						
AKUT	Akutan	1.59	289		Pn	16 24 49.3	-0.2
AKUT				Sn	Sn	16 25 07.6	-1.2
AKUT				IAML		16 25 12.7	
	comp=E,2μm,0.7s						
AKUT				IAML		16 25 15.2	
	comp=N,1μm,0.5s						
UNV	Unalaska Valle	1.96	278		Pn	16 24 53.5	-1.1
UNV	Unalaska Valle	1.96	278	P	Pn	16 24 53.8	-0.8
	baz=99						
SDPT	Sand Point	2.35	42	Pn	Pn	16 25 00.7	+0.6
SDPT				Sn	Sn	16 25 28.6	+1.0
SDPT				IAML		16 25 34.9	
	comp=E,579nm,1.5s						
SDPT				IAML		16 25 50.0	
	comp=N,557nm,1.0s						
SDPT	Sand Point	2.35	42	P	Pn	16 25 00.9	+0.9
	baz=221						
CNBA	Chernabura Isl	2.44	59	Pn	Pn	16 25 00.8	-0.5
CNBA				Sn	Sn	16 25 28.4	-1.5
CHNA	Chernabura Isl	2.45	59	P	Pn	16 25 01.1	-0.2
	baz=239						
NIKH	Nikolski High	3.44	261		Pn	16 25 12.8	-2.2
NIKH	Nikolski High	3.44	261	P	Pn	16 25 14.4	-0.6
	baz=79						
CHGN	Chignik	3.85	44		Pn	16 25 20.8	+0.2
CHGN				IAML		16 26 29.1	
	comp=E,177nm,1.1s						
CHGN	Chignik	3.85	44	P	Pn	16 25 21.3	+0.7
	baz=226						
CHIR	Chirikof Islan	4.92	61	Pn	Pn	16 25 34.4	-0.9
SII	Sitkinak Islan	5.96	57	Pn	Pn	16 25 48.9	-0.8
P16K	Nushagak River	6.14	26	P	Pn	16 25 52.0	0.0
	baz=210						
Q17K	Contact Creek	6.21	39	P	Pn	16 25 53.2	+0.2
	baz=224						
O16K	Kokwok River B	6.61	23	P	Pn	16 25 57.5	-1.0
	baz=207						
OHAK	Old Harbor	6.70	54	Pn	Pn	16 25 58.7	-1.1
OHAK	Old Harbor	6.70	54	P	Pn	16 25 58.9	-0.9
	baz=240						
Q18K	Katmai Hardscr	6.80	39	P	Pn	16 26 00.8	-0.5
	baz=225						
O17K	Koliganek Bris	7.02	26	P	Pn	16 26 04.0	0.0
	baz=211						
P18K	Big Mountain,	7.27	34	Pn	Pn	16 26 09.1	+1.5
P18K	Big Mountain,	7.27	34	P	Pn	16 26 08.5	+1.0
	baz=220						
N16K	Nishlik Lake	7.27	18	P	Pn	16 26 08.0	+0.4
	baz=201						
KDAK	Kodiak Island	7.31	51	Pn	Pn	16 26 07.1	-0.9
	comp=E,2.0nm,0.3s,baz=219,slow=4.6,SNR=12						
KDAK				Sn	Sn	16 27 24.0	-5.6
	comp=E,1.5nm,0.3s,baz=345,slow=22,SNR=8.1						
	comp=E,5.2nm,0.3s						
KDAK	Kodiak Island	7.31	51	Pn	Pn	16 26 06.3	-1.7
KDAK	Kodiak Island	7.31	51	P	Pn	16 26 08.4	+0.3
	baz=239						
Q19K	Cape Douglas,	7.52	41	Pn	Pn	16 26 11.6	+0.7
Q19K	Cape Douglas,	7.52	41	P	Pn	16 26 11.7	+0.7
	baz=228						
O18K	Koktuh Hills	7.63	32	Pn	Pn	16 26 13.9	+1.4
O18K	Koktuh Hills	7.63	32	P	Pn	16 26 13.3	+0.7
	baz=218						
GSTR	Great Sitkin T	7.92	264	Pn	Pn	16 26 15.0	-1.5
N18K	Kilae Creek	8.11	26	Pn	Pn	16 26 19.1	0.0
ADK	Adak	8.35	263	Pn	Pn	16 26 20.3	-2.1
N19K	Bonanza Creek	8.61	30	Pn	Pn	16 26 25.8	-0.2
N19K	Bonanza Creek	8.61	30	P	Pn	16 26 26.7	+0.7
	baz=216						
KIWB	Kanaga Island	8.64	264	Pn	Pn	16 26 26.2	-0.1
CNPM	China Poot	8.86	43	Pn	Pn	16 26 30.0	+0.6
BRLK	Bradley Lake	9.15	43	Pn	Pn	16 26 32.5	-0.8
N20K	Mount Spurr	9.62	34	P	Pn	16 26 40.6	+0.8
	baz=222						
L19K	White Mountain	9.65	24	Pn	Pn	16 26 40.7	+0.5
L19K	White Mountain	9.65	24	P	Pn	16 26 40.0	-0.2
	baz=211						
M20K	Styx River	9.86	29	Pn	Pn	16 26 44.3	+1.2
SEW	Seward	9.93	44	Pn	Pn	16 26 43.0	-0.9
SEW	Seward	9.93	44	P	Pn	16 26 42.9	-1.0
	baz=234						
O22K	Cooper Landing	10.04	42	Pn	Pn	16 26 45.2	-0.3
TTA	Tatalina	10.06	19	Pn	Pn	16 26 45.2	-0.5
SUA	Susitna One	10.30	35	Pn	Pn	16 26 49.0	-0.2
SUA	Susitna One	10.30	35	P	Pn	16 26 48.3	-0.9
	baz=225						
RC01	Rabbit Creek A	10.42	39	Pn	Pn	16 26 49.9	-0.7
SKT	Skwentna	10.42	32	Pn	Pn	16 26 51.6	+0.9
SKT	Skwentna	10.42	32	P	Pn	16 26 50.5	-0.2
	baz=221						
M22K	Willow	10.72	35	P	Pn	16 26 52.5	-2.2
	baz=226						
PWL	Port Wells	10.82	42	Pn	Pn	16 26 54.8	-1.4
PWL	Port Wells	10.82	42	P	Pn	16 26 55.2	-0.9
	baz=234						
K20K	Telida	10.85	22	Pn	Pn	16 26 57.0	+0.5
K20K	Telida	10.85	22	P	Pn	16 26 56.3	-0.2
	baz=210						
AMKA	Amchitka	10.89	265	Pn	Pn	16 26 56.3	-0.7
PPLA	Purkeypile	10.94	28	Pn	Pn	16 26 57.5	-0.4
KNK	Knik Glacier	11.10	40	Pn	Pn	16 26 58.3	-1.8
KNK	Knik Glacier	11.10	40	P	Pn	16 26 58.9	-1.2
	baz=231						
GHO	Glory Hole Cre	11.16	37	Pn	Pn	16 26 58.4	-2.4
GLI	Glacier Island	11.33	44	Pn	Pn	16 27 02.8	-0.4
GLI	Glacier Island	11.33	44	P	Pn	16 27 02.2	-0.9
	baz=237						
HIN	Hinchinbrook I	11.33	47	Pn	Pn	16 27 01.6	-1.6
CAST	Castle Rocks	11.39	26	Pn	Pn	16 27 01.8	-2.1
SML	Sawmill	11.40	38	Pn	Pn	16 27 01.9	-2.1
FID	Port Fidalgo	11.52	45	Pn	Pn	16 27 03.6	-2.1
J20K	Nowinta River	11.55	20	Pn	Pn	16 27 04.2	-1.9
J20K	Nowinta River	11.55	20	P	Pn	16 27 04.8	-1.3
	baz=208						
M23K	Glacier View	11.61	39	P	Pn	16 27 05.4	-1.6
	baz=232						
EYAK	Cordova Ski Ar	11.73	47	Pn	Pn	16 27 06.1	-2.5
EYAK	Cordova Ski Ar	11.73	47	P	Pn	16 27 07.4	-1.2
	baz=241						
SCM	Sheep Creek Mo	11.79	40	Pn	Pn	16 27 07.6	-1.8
SCM	Sheep Creek Mo	11.79	40	P	Pn	16 27 07.6	-1.8
	baz=232						
KTH	Kantishna Hill	11.81	28	Pn	Pn	16 27 09.5	-0.2
TRF	Thorofare Moun	11.91	29	Pn	Pn	16 27 10.9	-0.2
WAT1	Susitna Watana	12.00	34	P	Pn	16 27 10.2	-2.0
	baz=226						
DIV	Divide	12.01	44	Pn	Pn	16 27 11.1	-1.4
KAIM	Kayak Island	12.06	51	Pn	Pn	16 27 12.4	-0.7
WAT6	Susitna Watana	12.11	36	P	Pn	16 27 12.0	-1.9
	baz=229						
RAGM	Ragged Mountai	12.13	49	Pn	Pn	16 27 13.8	-0.4
KLU	Klutina	12.14	43		Pn	16 27 12.6	-1.7
KLU	Klutina	12.14	43	P	Pn	16 27 13.3	-1.0
	baz=237						
BPAW	Bear Paw Mtn.	12.23	26	Pn	Pn	16 27 16.0	+0.6
HMT	Hamilton	12.30	49	Pn	Pn	16 27 15.2	-1.2
M24K	Tolsona, Glenn	12.39	40	Pn	Pn	16 27 16.0	-1.6
M24K	Tolsona, Glenn	12.39	40	P	Pn	16 27 16.4	-1.3
	baz=234						
BMRM	Bremner River	12.43	46	Pn	Pn	16 27 16.8	-1.3
MCK	McKinley	12.52	30	Pn	Pn	16 27 18.6	-0.8
DHY	Denali Highway	12.56	35	Pn	Pn	16 27 17.1	-2.9
DHY	Denali Highway	12.56	35	P	Pn	16 27 18.6	-1.5
	baz=228						
BERG	Berg Lake	12.58	50	Pn	Pn	16 27 18.8	-1.4
BGLC	Bering Glacier	12.66	51	P	Pn	16 27 18.2	-3.1
	baz=247						
N25K	Chitina, Valde	12.74	44	Pn	Pn	16 27 20.4	-2.1
N25K	Chitina, Valde	12.74	44	P	Pn	16 27 21.0	-1.5
	baz=239						
SNH	Sunshine Point	12.89	51	Pn	Pn	16 27 23.1	-1.3
HARP	HAARP	12.95	40	P	Pn	16 27 24.5	-0.7
	baz=235						
WAX	Waxell Ridge	12.99	50	Pn	Pn	16 27 24.7	-1.1
VRDI	Verde Repeater	13.05	46	Pn	Pn	16 27 24.9	-1.8
MLY	Manley	13.05	24	Pn	Pn	16 27 27.8	+1.2
MLY	Manley	13.05	24	P	Pn	16 27 25.6	-1.0
	baz=214,SNR=7.0						
TGL	Tana Glacier	13.12	49	Pn	Pn	16 27 25.4	-2.2
H21K	Melozitna Rive	13.13	19	Pn	Pn	16 27 27.5	-0.2
H21K	Melozitna Rive	13.13	19	P	Pn	16 27 26.6	-1.1
	baz=208						
PAX	Paxson	13.17	38		Pn	16 27 25.8	-2.4
PAX	Paxson	13.17	38	P	Pn	16 27 27.4	-0.9
	baz=232						
ISLE	Juniper Island	13.28	50	Pn	Pn	16 27 29.0	-0.8
K24K	Donnelly Dome	13.58	35	P	Pn	16 27 32.9	-1.0
	baz=229						
HDA	Harding Lake	13.62	31	Pn	Pn	16 27 32.1	-2.2
HDA	Harding Lake	13.62	31	P	Pn	16 27 32.8	-1.5
	baz=225						
SHEM	Shemya Is, Ala	13.62	275	LR	LR	16 32 33.9	
	comp=E,126nm,19.2s,baz=158,slow=37						
SMY	Shemya	13.62	275	Pn	Pn	16 27 33.5	-0.9
H22K	Ishtalitna Cre	13.63	21	P	Pn	16 27 33.2	-1.3
	baz=211						
BARN	Barnard Glacie	13.76	49	Pn	Pn	16 27 33.6	-2.9
TABL	Table Mountain	13.77	52	Pn	Pn	16 27 36.3	-0.3
G21K	Allakaket	13.77	17	P	Pn	16 27 35.0	-1.4
	baz=205,SNR=5.2						
M26K	Nabesna, AK	13.80	42		Pn	16 27 34.2	-2.7
M26K	Nabesna, AK	13.80	42	P	Pn	16 27 36.0	-0.8
	baz=239						
RIDG	Independent Ri	13.86	36	P	Pn	16 27 36.6	-1.1
	baz=231						
CTG	Chitna Glacier	13.87	49	P	Pn	16 27 36.9	-1.0
	baz=247						
CTGM	Chitina Glacie	13.87	49	Pn	Pn	16 27 36.7	-1.2
ILAR	Eielson Array	13.89	30	Pn	Pn	16 27 34.4	-3.7
	comp=E,0.1nm,0.3s,baz=220,slow=13,SNR=7.1						
ILAR				LR	LR	16 33 19.7	
	comp=E,102nm,21.5s,baz=242,slow=39						
	comp=E,0.3nm,0.5s						
LOGN	Logan Glacier	13.97	50	Pn	Pn	16 27 38.0	-1.3
H23K	Yukon River	13.99	24	P	Pn	16 27 39.0	-0.4
	baz=215						
L26K	Log Cabin Wild	13.99	40	P	Pn	16 27 37.3	-2.1
	baz=236						
M27K	Edge Creek, AK	14.23	44		Pn	16 27 42.0	-0.9
M27K	Edge Creek, AK	14.23	44	P	Pn	16 27 41.6	-1.3
	baz=241						
SCRK	Sand Creek	14.31	36	Pn	Pn	16 27 42.3	-1.6
SCRK	Sand Creek	14.31	36	P	Pn	16 27 41.3	-2.6
	baz=232,SNR=8.9						
O28M	Mount Upton	14.33	51	P	Pn	16 27 43.3	-0.9
	baz=250						
PNL	Peninsula	14.38	56	P	Pn	16 27 43.7	-1.1
	baz=255						
H24K	Noodor Dome	14.42	26	P	Pn	16 27 42.6	-2.7
	baz=219						
F21K	Alatna River	14.42	15	P	Pn	16 27 43.3	-2.0
	baz=204						
YUK3	Moose Creek	14.58	47	P	Pn	16 27 44.9	-2.7
	baz=246,SNR=7.8						
L27K	Beaver Creek,	14.60	41		Pn	16 27 46.3	-1.4
L27K	Beaver Creek,	14.60	41	P	Pn	16 27 46.4	-1.3
	baz=239						
G23K	Bananza Creek	14.62	21	P	Pn	16 27 46.4	-1.5
	baz=212						
BVCY	Beaver Creek	14.68	44	P	Pn	16 27 47.4	-1.4
	baz=243						
J26L	Joseph Creek	14.78	35	P	Pn	16 27 48.6	-1.6
	baz=231,SNR=7.9						
PRP	Porcupine Dome	14.83	30	P	Pn	16 27 49.3	-1.7
	baz=225						
O29M	Mount Kennedy	14.95	54	P	Pn	16 27 51.7	-0.7
	baz=254						
COLD	Coldfoot	15.02	20	P	Pn	16 27 52.4	-0.9
	baz=211						
P29M	Windy Craggy	15.19	57	P	Pn	16 27 54.8	-0.8
	baz=257						
G24K	Hadweenzic Riv	15.20	24	P	Pn	16 27 54.8	-0.8
	baz=218						
H25K	Birch Creek	15.29	27	P	Pn	16 27 55.6	-1.2
	baz=222,SNR=9.4						
HYT	Haines Junctio	15.60	52	P	Pn	16 27 59.4	-1.6
	baz=254						
P30M	Million Dollar	15.68	55	P	Pn	16 28 00.3	-1.8
	baz=257						
M29M	Somme Creek	15.71	46	P	Pn	16 28 01.6	-0.8
	baz=247,SNR=5.4						
EGAK	Eagle	15.78	36	P	Pn	16 28 00.7	-2.4
	baz=235						
E23K	Chandalar	15.85	19	P	Pn	16 28 02.7	-1.5
	baz=211						
DAWY	Dawson	16.05	40	Pn	Pn	16 28 04.8	-1.9
DAWY				P	P	16 28 11.1	+1.3
DAWY				IAmb	IAmb	16 28 13.9	
	comp=Z,8.0nm,0.7s						
DAWY	Dawson	16.05	40	P	Pn	16 28 04.8	-1.9
	baz=240,SNR=9.2						
E24K	Your Creek	16.09	20	P	Pn	16 28 05.4	-1.8
	baz=213,SNR=11						
I27K	Kandik River	16.11	33	P	Pn	16 28 05.4	-2.0
	baz=232						
L29M	L29M	16.11	44	P	Pn	16 28 05.8	-1.8
	baz=245,SNR=22						
O30N	Mendenhall	16.25	53	P	Pn	16 28 07.7	-1.6
	baz=256						
F25K	Christian Rive	16.34	24	P	Pn	16 28 09.8	-0.6
	baz=219						
TOLK	Toolik Lake Re	16.36	18		Pn	16 28 08.4	-2.3
TOLK				P	P	16 28 14.6	+1.3
TOLK	Toolik Lake Re	16.36	18	P	Pn	16 28 10.8	+0.2
	baz=210						
SK

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WRAK Wrangell Islan   17.84 69 P    Pn   16 28 28.6 -0.5
     baz=274
FARO Faro, Yukon      17.89 49 P    P    16 28 32.3 +2.2
FARO Faro, Yukon      17.89 49 P    Pn   16 28 27.6 -2.2
     baz=254
EPYK Eagle Plains     18.20 35 P    P    16 28 34.0 +0.5
EPYK Eagle Plains     18.20 35 P    Pn   16 28 32.1 -1.3
     baz=238
C26K Camden Bay       18.34 20 P    P    16 28 34.1 -0.9
     baz=216
C27K Jago River       18.37 22 P    P    16 28 34.4 -0.9
     baz=219
S34M Telegraph Cree   18.45 64 P    Pn   16 28 36.7 +0.2
     baz=270
R33M Jennings River   18.58 59 P    Pn   16 28 38.3 +0.1
     baz=266
G30M tAoh Zraii Nji   18.69 34 P    Pn   16 28 39.4  0.0
     baz=237
MMPY Sheldon Lake,    18.93 49 P    Pn   16 28 42.7 +0.3
     baz=256
DLBC Dease Lake       19.03 62 P    Pn   16 28 44.8 +1.1
     comp=Z,0.1nm,0.3s,baz=279,slow=12,SNR=5.9
     comp=Z,2.8nm,0.8s
DLBC Dease Lake       19.03 62 P    Pn   16 28 42.9 -0.7
     baz=269
WTLY Watson Lake, Y   19.72 57 P    P    16 28 50.4 +0.1
     baz=266
TGTN Hyland Airport   20.12 53 P    Pn   16 28 55.7 -0.8
     baz=262
INK  Inuvik           20.27 32 P    P    16 28 55.0 -0.9
     comp=Z,2.0nm,0.7s,baz=241,slow=11,SNR=4.5
     comp=Z,2.0nm,0.7s
INK  Inuvik           20.27 32 P    P    16 28 54.5 -1.5
KOTAN Kotaneelee Air  22.10 57 P    P    16 29 15.0 -0.8
     baz=270
PEA0B Petropavlovsk-  23.12 285 P   P    16 29 26.1 -0.5
PETK Petropavlovsk-   23.12 285 P   P    16 29 25.8 -0.9
     comp=Z,2.6nm,0.6s,baz=84,slow=13,SNR=16
PETK                  LR          LR   16 38 37.5
     comp=Z,69nm,18.6s,baz=72,slow=37
     comp=Z,2.6nm,0.6s
YKA  Yellowknife Ar   26.59 51 P    P    16 29 59.9 +1.6
     comp=Z,2.3nm,0.7s,baz=269,slow=8.4,SNR=9.7
YKA                   LR          LR   16 41 55.5
     comp=Z,77nm,19.1s,baz=296,slow=40
     comp=Z,2.3nm,0.7s
YKA  Yellowknife Ar   26.59 51 P    P    16 29 57.8 -0.6
HAWA Hanford          28.62 87 P    P    16 30 15.3 -1.4
HAWA                  IAmb        IAmb 16 30 19.8
     comp=Z,7.0nm,0.8s
NEW  Newport          29.12 82 P    P    16 30 21.1 -0.2
     baz=298
HLID Hailey           33.20 87 P    P    16 30 57.9 +0.5
     baz=305
EGMT Eagleton         33.55 77 P    P    16 31 00.8 +0.5
     baz=300
TIXI Tiksi            33.60 328 P   P    16 30 59.2 -1.1
     comp=Z,0.7nm,0.4s,baz=90,slow=10,SNR=1.8
     comp=Z,0.7nm,0.4s
TIXI Tiksi            33.60 328 P   P    16 30 59.9 -0.3
TIXI                  IAmb        IAmb 16 31 39.2
     comp=Z,4.9nm,1.4s
RES  Resolute Bay     33.60 27 P    P    16 31 00.3 +0.1
     comp=Z,1.7nm,0.7s,baz=218,slow=15,SNR=1.2
RES                   LR          LR   16 46 24.1
     comp=Z,114nm,18.0s,baz=0.5,slow=39
     comp=Z,1.7nm,0.7s
RES  Resolute Bay     33.60 27 P    P    16 31 00.5 +0.2
RES                   IAmb        IAmb 16 31 36.3
     comp=Z,12nm,1.2s
NVAR Mina Array Bea   34.06 98 P    P    16 31 06.2 +1.3
     comp=Z,0.7nm,0.7s,baz=301,slow=9.8,SNR=3.9
     comp=Z,0.7nm,0.7s
ELK  Elko             34.40 92 LR   LR   16 43 45.8
     comp=Z,42nm,18.1s,baz=2.0,slow=34
LKWY Lake             35.02 83 P    P    16 31 11.3 -1.8
LKWY                  IAmb        IAmb 16 31 18.4
     comp=Z,6.6nm,1.0s
HVU  Hansel Valley    35.23 89 P    P    16 31 15.4 +0.5
HVU                   IAmb        IAmb 16 31 17.3
     comp=Z,3.3nm,0.7s
EUNU Eureka           35.44 17 P    P    16 31 16.8 +0.6
EUNU                  IAmb        IAmb 16 31 23.0
     comp=Z,8.9nm,1.4s
GRAC Grapevine Rang   35.57 99 P    P    16 31 17.8  0.0
     baz=313
R11A Troy Canyon, C   35.72 96 P    P    16 31 19.1 -0.1
     baz=311
DUG  Dugway, Tooele   36.19 91 P    P    16 31 22.7 -0.4
DUG                   IAmb        IAmb 16 31 25.9
     comp=Z,7.1nm,1.1s
DUG  Dugway, Tooele   36.19 91 P    P    16 31 23.3 +0.2
     baz=309,SNR=5.2
TPNV Topopah Spring   36.26 98 P    P    16 31 24.3 +0.5
TPNV                  IAmb        IAmb 16 31 26.1
     comp=Z,2.8nm,0.8s
PDAR Pinedale Array   36.55 85 P    P    16 31 27.1 +0.7
     comp=Z,0.4nm,0.6s,baz=280,slow=5.3,SNR=4.0
     comp=Z,0.4nm,0.6s
PDAR Pinedale Array   36.55 85 P    P    16 31 26.0 -0.4
PSUT Pine Spring      36.63 94 P    P    16 31 25.7 -1.3
PSUT                  IAmb        IAmb 16 31 29.5
     comp=Z,5.9nm,1.2s
MSU  Marysvale        37.64 93 P    P    16 31 33.5 -2.1
Q16A Castle Valley    37.98 91 P    P    16 31 37.8 -0.6
Q16A                  IAmb        IAmb 16 31 42.0
     comp=Z,4.7nm,1.1s
SRU  San Rafael Swe   38.24 90 P    P    16 31 39.6 -1.0
SRU                   IAmb        IAmb 16 31 43.3
     comp=Z,4.2nm,0.8s
U15A North Rim        38.96 95 P    P    16 31 47.6 +0.9
MDND Maddock          39.47 72 P    P    16 31 50.8 +0.2
PV13 Radium Mtn., P   39.87 90 P    P    16 31 54.8 +0.5
PV13                  IAmb        IAmb 16 31 56.2
     comp=Z,9.1nm,0.7s
H11N2 WAKE ISLAND Hy 40.88 226 T    T    17 15 44.8
     baz=26,slow=76,SNR=30
H11N3 WAKE ISLAND Hy 40.89 226 T    T    17 15 44.8
     baz=26,slow=76,SNR=40
H11N1 WAKE ISLAND Hy 40.90 226 T    T    17 15 45.7
     baz=26,slow=76,SNR=30
AGMN Agassiz Nation   41.32 69 P    P    16 32 06.1 +0.3
AGMN                  IAmb        IAmb 16 32 07.4
     comp=Z,9.0nm,1.1s
H11S1 WAKE ISLAND Hy 42.05 225 T    T    17 17 11.8
     baz=26,slow=76,SNR=40
H11S2 WAKE ISLAND Hy 42.07 225 T    T    17 17 14.5
     baz=26,slow=76,SNR=58
H11S3 WAKE ISLAND Hy 42.07 225 T    T    17 17 13.0
     baz=26,slow=76,SNR=49
SBM  South Baldy      43.68 93 P    P    16 32 28.1 +2.5
BNM  Barren Site      43.88 93 P    P    16 32 27.4 +0.3
CRNM Carthage         43.96 93 P    P    16 32 27.8 +0.1
I37A Lemond, Waseca   45.22 73 P    P    16 32 37.8 +0.4
JCJ  Chichijima       47.81 259 P   P    16 32 56.3 -1.5
P40A Paris            48.86 76 P    P    16 33 05.2 -0.7
KSRS Korea Array      48.89 280 P   P    16 33 06.2 +0.1
     comp=Z,1.4nm,0.9s,baz=49,slow=7.1,SNR=3.7
     comp=Z,1.4nm,0.9s
TXAR Lajitas Array    49.08 95 P    P    16 33 08.9 +1.1
     comp=Z,1.1nm,0.5s,baz=296,slow=5.5,SNR=16
     comp=Z,1.1nm,0.5s
WVT  Waverly          53.62 77 P    P    16 33 41.6 +0.1
SONM Songino Array    53.77 303 P   P    16 33 43.3 +0.7
     comp=Z,0.6nm,0.7s,baz=41,slow=6.3,SNR=3.8
     comp=Z,0.6nm,0.7s
ARCES ARCESS Array B  56.98 356 P   P    16 34 04.4 -0.8
     comp=Z,3.0nm,0.8s,baz=15,slow=8.1,SNR=7.2
     comp=Z,3.0nm,0.8s
FINES FINESS Array B  65.03 355 P   P    16 34 59.7 -0.2
     comp=Z,2.2nm,0.8s,baz=72,slow=6.6,SNR=5.7
     comp=Z,2.2nm,0.8s
KIRV Kirov            65.06 342 LR  LR   17 08 41.2
     comp=Z,77nm,18.4s,baz=310,slow=41
ARU  Arti             65.08 336 P   P    16 35 00.1 -0.2
     comp=Z,2.4nm,0.4s,baz=16,slow=7.4,SNR=4.1
     comp=Z,2.4nm,0.4s
MKAR Makanchi Array   65.53 317 P   P    16 35 03.6 +0.1
     comp=Z,0.5nm,0.5s,baz=36,slow=6.7,SNR=8.4
     comp=Z,0.5nm,0.5s
HFS  Hagfors          66.56  2 P   P    16 35 10.6 +0.8
     comp=Z,2.8nm,0.4s,baz=35,slow=5.4,SNR=17
     comp=Z,2.8nm,0.4s
EKA  Eskdalemuir Ar   70.16 12 P    P    16 35 33.3 +0.9
     comp=Z,1.4nm,0.5s,baz=347,slow=4.2,SNR=8.3
     comp=Z,1.4nm,0.5s
ABKAR Akbulak array   71.20 332 P   P    16 35 39.5 +0.7
ABKAR Akbulak array   71.20 332 P   P    16 35 40.0 +1.1
ABKAR                 IAmb        IAmb 16 35 41.2
     comp=Z,4.4nm,0.8s
BELG Belogornoye      71.24 341 P   P    16 35 38.9 -0.1
     comp=Z,4.8nm,0.6s,baz=276,slow=11,SNR=2.2
     comp=Z,4.8nm,0.6s
AAK  Ala-Archa        72.09 319 P   P    16 35 45.4 +0.8
AAK                   IAmb        IAmb 16 35 47.1
     comp=Z,2.1nm,0.6s
KK31 Karatay Array    73.20 322 P   P    16 35 51.5 +0.6
KK31                  IAmb        IAmb 16 36 05.5
     comp=Z,1.4nm,0.9s
KKAR Karatay Array    73.20 322 P   P    16 35 51.2 +0.2
KKAR                  IAmb        IAmb 16 36 05.5
     comp=Z,1.4nm,0.9s
AKASG Malin Array Be  75.51 352 P   P    16 36 04.2  0.0
     comp=Z,2.2nm,0.5s,baz=8.9,slow=5.5,SNR=8.2
     comp=Z,2.2nm,0.5s
CHGR Chuyangaron      77.57 321 P   P    16 36 17.0 +0.8
GERES GERESS Array B  77.86  2 P   P    16 36 18.6 +1.0
     comp=Z,1.1nm,0.6s,baz=5.7,slow=4.0,SNR=7.4
     comp=Z,1.1nm,0.6s
CMAR Chiang Mai Arr   79.87 287 P   P    16 36 29.9 +0.9
     comp=Z,1.0nm,0.7s,baz=9.6,slow=6.0,SNR=9.6
     comp=Z,1.0nm,0.7s
KBZ  Khabaz           80.46 341 P   P    16 36 33.5 +1.8
     comp=Z,1.7nm,0.9s,baz=275,slow=12,SNR=4.3
     comp=Z,1.7nm,0.9s
GEYT Alibeck          82.06 328 P   P    16 36 41.7 +1.3
     comp=Z,1.2nm,0.6s,baz=343,slow=9.5,SNR=4.0
     comp=Z,1.2nm,0.6s
BRTR Keskin Array B   85.88 347 P   P    16 37 01.8 +1.8
     comp=Z,0.7nm,0.6s,baz=90,slow=2.5,SNR=4.9
     comp=Z,0.7nm,0.6s
WRA  Warramunga Arr   90.75 237 P   P    16 37 22.7 -0.4
     comp=Z,0.2nm,0.8s,baz=42,slow=6.4,SNR=2.2
     comp=Z,0.2nm,0.8s
ASAR Alice Springs    94.11 235 P   P    16 37 38.1 -0.5
     comp=Z,0.2nm,0.8s,baz=28,slow=4.8,SNR=2.0
     comp=Z,0.2nm,0.8s
H03N2 Juan Fernandez 113.03 115 T   T    18 46 19.4
     baz=323,slow=78,SNR=4.7
H03N1 Juan Fernandez 113.04 115 T   T    18 46 22.0
     baz=323,slow=78,SNR=3.9
H03N3 Juan Fernandez 113.04 115 T   T    18 46 21.6
     baz=323,slow=78,SNR=4.1
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ROM 27 16:33:17.7±0.1, 42°.859N±0°.008×13°.159E±0°.005, h11km±1km, ML1.9/8, 1C-1D, Error ellipse: s-maj=0.9km s-min=0.4km az=2.0, Central Italy

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Code Station Name     Δ°  AZ°  Phase ID  Time        Res
                                Op  ISC  h m s       ISC
AM05 Amandola Campo   0.18  50 ⇑P  Pb   16 33 22.5  -0.7
AM05                           S   Sg   16 33 25.8  +1.3
AM05                           AML AML
     comp=E,962μm,0.5s
AM05                           AML AML
     comp=N,95μm,0.9s
AM05                           AML AML
     comp=E,2315μm,1.4s
AM05                           AML AML
     comp=N,2420μm,0.2s
AM05                           AML AML
     comp=E,9410μm,0.1s
AM05                           AML AML
     comp=N,966μm,0.2s
AM05                           AML AML
     comp=E,190μm,0.2s
AM05                           AML AML
     comp=E,856μm,0.2s
AM05                           AML AML
     comp=N,161μm,0.1s
AM05                           AML AML
     comp=N,58μm,0.1s
T1201 Domo (RI)       0.21 161 P   Pg   16 33 22.9 +0.7
T1204 Amatrice, Fraz  0.22 148 P   Pg   16 33 22.9 +0.5
T1204                          S   Sg   16 33 26.7 +1.2
T1204                          AML AML
     comp=E,3490μm,1.0s
T1204                          AML AML
     comp=N,2995μm,1.0s
T1204                          AML AML
     comp=N,342μm,0.2s
T1204                          AML AML
     comp=E,471μm,0.3s
T1217 Poggiodomo (PG  0.22 229 P   Pg   16 33 23.1 +0.7
T1217                          S   Sg   16 33 26.9 +1.3
T1217                          AML AML
     comp=E,6530μm,0.2s
T1217                          AML AML
     comp=N,6040μm,0.2s
T1217                          AML AML
     comp=E,6440μm,0.2s
T1217                          AML AML
     comp=N,5985μm,0.2s
T1217                          AML AML
     comp=N,500μm,0.4s
T1217                          AML AML
     comp=N,540μm,0.4s
T1217                          AML AML
     comp=E,441μm,0.3s
T1217                          AML AML
     comp=E,391μm,0.3s
LNSS Leonessa         0.27 199 P   Pg   16 33 23.8 +0.5
LNSS                           S   Sg   16 33 28.1 +1.1
LNSS                           AML AML
     comp=E,1047μm,0.2s
LNSS                           AML AML
     comp=N,1114μm,0.3s
LNSS                           AML AML
     comp=E,4735μm,0.2s
LNSS                           AML AML
     comp=N,3810μm,0.8s
LNSS                           AML AML
     comp=E,1045μm,0.2s
LNSS                           AML AML
     comp=N,1116μm,0.3s
RM33 Pellescritta (   0.35 173 P   Pg   16 33 25.0 +0.3
RM33                           S   Sg   16 33 30.6 +1.1
RM33                           AML AML
     comp=E,302μm,0.4s
RM33                           AML AML
     comp=N,280μm,1.1s
RM33                           AML AML
     comp=E,1302μm,1.0s
RM33                           AML AML
     comp=N,1615μm,0.3s
RM33                           AML AML
     comp=E,1240μm,1.0s
RM33                           AML AML
     comp=N,1605μm,0.3s
RM33                           AML AML
     comp=N,233μm,0.2s
RM33                           AML AML
     comp=N,219μm,0.2s
RM33                           AML AML
     comp=E,261μm,0.4s
RM33                           AML AML
     comp=E,302μm,0.4s
T1246 Crognaleto (TE  0.37 138 P   Pg   16 33 25.4 +0.2
T1246                          S   Sb   16 33 31.1  -1.1
CAMP Campotosto       0.37 150 P   Pg   16 33 25.4 +0.2
CAMP                           S   Sb   16 33 31.2  -1.1
T1211 Morro Reatino   0.40 215 P   Pb   16 33 26.2  -0.6
T1211                          S   Sb   16 33 32.1  -0.9
T1211                          AML AML
     comp=E,244μm,1.6s
T1211                          AML AML
     comp=N,644μm,0.2s
T1211                          AML AML
     comp=E,2880μm,1.6s
T1211                          AML AML
     comp=N,3430μm,0.9s
T1211                          AML AML
     comp=E,2818μm,1.6s
T1211                          AML AML
     comp=N,3490μm,0.9s
T1211                          AML AML
     comp=N,650μm,0.2s
T1211                          AML AML
     comp=N,643μm,0.2s
T1211                          AML AML
     comp=E,217μm,0.1s
T1211                          AML AML
     comp=E,207μm,0.1s
TERO Teramo           0.40 126 P   Pg   16 33 26.0 +0.3
TERO                           S   Sb   16 33 32.2  -0.9
TERO                           AML AML
     comp=E,265μm,0.3s
TERO                           AML AML
     comp=N,230μm,0.2s
TERO                           AML AML
     comp=E,1955μm,0.9s
TERO                           AML AML
     comp=N,1810μm,0.8s
TERO                           AML AML
     comp=N,230μm,0.2s
TERO                           AML AML
     comp=E,241μm,0.2s
TERO                           AML AML
     comp=N,215μm,0.2s
T1247 Pizzolo (AQ)    0.43 166 P   Pg   16 33 26.6 +0.4
T1247                          S   Sb   16 33 33.5  -0.5
EL6  Elcito           0.47 355 ⇓P  Pb   16 33 27.6  -0.5
EL6                            AML AML
     comp=E,2845μm,0.2s
EL6                            AML AML
     comp=N,3505μm,0.7s
EL6                            AML AML
     comp=N,559μm,0.2s
EL6                            AML AML
     comp=E,384μm,0.2s
CESX Cesi             0.49 240 P   Pg   16 33 27.3  -0.1
ARCI Arcidosso        1.24 270 S   Sn   16 34 01.0  +3.1
PAOL Paolisi          2.11 150 S   Sg   16 34 25.0  -0.4
```

PRU 27 16:34:05.2±0.0, 42°.80N×13°.04E, h0km

ROM 27 16:34:06.8±0.0, 42°.888N±0°.002×13°.052E±0°.004, h10km, ML2.9/38, 21C-15D, Error ellipse: s-maj=0.2km s-min=0.2km az=278.0, Central Italy

```
Code Station Name     Δ°  AZ°  Phase ID  Time        Res
                                Op  ISC  h m s       ISC
T1216 Preci, Frazion  0.02 278 P   Pg   16 34 09.1 +0.3
T1216                          S   Sg   16 34 10.4 +0.3
T1216                          AML AML
     comp=E,67250μm,0.3s
T1216                          AML AML
     comp=N,84450μm,0.3s
T1216                          AML AML
     comp=E,67250μm,0.3s
T1216                          AML AML
     comp=N,84450μm,0.3s
FEMA Monte Fema       0.07 359 ⇓P  Pg   16 34 09.7 +0.4
FEMA                           S   Sg   16 34 11.4 +0.3
FEMA                           AML AML
     comp=E,58100μm,0.2s
FEMA                           AML AML
     comp=N,41400μm,0.6s
MC2  Monte Cornacci   0.10  76 ⇑P  Pg   16 34 10.1 +0.4
FDMO Fiordimonte      0.15  10 P   Pg   16 34 10.8 +0.5
FDMO                           S   Sg   16 34 13.5 +0.8
CESI CESI - Serrava   0.16 317 ⇓P  Pg   16 34 11.1 +0.6
CESI                           S   Sg   16 34 14.0 +1.0
CESI                           AML AML
     comp=E,23800μm,1.0s
CESI                           AML AML
     comp=N,40400μm,0.4s
T1215 Vallo di Nera,  0.16 238 P   Pg   16 34 11.0 +0.6
T1215                          S   Sg   16 34 13.9 +1.0
T1215                          AML AML
     comp=E,10060μm,0.5s
T1215                          AML AML
     comp=N,5995μm,1.2s
T1215                          AML AML
     comp=N,6425μm,0.4s
T1215                          AML AML
     comp=E,10070μm,0.5s
T1215                          AML AML
     comp=N,5990μm,1.2s
T1215                          AML AML
     comp=E,10095μm,0.5s
T1215                          AML AML
     comp=N,5990μm,1.2s
T1215                          AML AML
     comp=E,9665μm,0.5s
T1215                          AML AML
     comp=N,6425μm,0.4s
T1217 Poggiodomo (PG  0.20 207 ⇑P  Pg   16 34 11.6 +0.6
T1217                          S   Sg   16 34 15.0 +1.1
T1217                          AML AML
     comp=E,6535μm,0.3s
T1217                          AML AML
     comp=N,5990μm,0.2s
T1217                          AML AML
     comp=E,6530μm,0.3s
T1217                          AML AML
     comp=N,5985μm,0.2s
T1217                          AML AML
     comp=E,6530μm,0.2s
T1217                          AML AML
     comp=N,6040μm,0.2s
T1217                          AML AML
     comp=E,6440μm,0.2s
T1217                          AML AML
     comp=N,6045μm,0.2s
AM05 Amandola Campo   0.24  68 ⇑P  Pg   16 34 12.3 +0.6
AM05                           S   Sg   16 34 16.3 +1.2
AM05                           AML AML
     comp=N,966μm,0.2s
AM05                           AML AML
     comp=E,2310μm,1.4s
AM05                           AML AML
     comp=E,9400μm,0.1s
AM05                           AML AML
     comp=E,9410μm,0.1s
AM05                           AML AML
     comp=N,966μm,0.2s
AM05                           AML AML
     comp=E,2315μm,1.4s
AM05                           AML AML
     comp=E,9390μm,0.1s
AM05                           AML AML
     comp=N,2420μm,0.2s
SEF1 Sefro            0.27 344 P   Pg   16 34 12.8 +0.5
SEF1                           S   Sb   16 34 17.3  -1.1
SEF1                           AML AML
     comp=N,8275μm,0.2s
SEF1                           AML AML
     comp=E,7205μm,1.2s
LNSS Leonessa         0.28 182 ⇑P  Pg   16 34 13.1 +0.5
LNSS                           S   Sb   16 34 17.9  -1.0
LNSS                           AML AML
     comp=E,4735μm,0.2s
LNSS                           AML AML
     comp=N,3810μm,0.8s
T1204 Amatrice, Fraz  0.29 137 P   Pg   16 34 13.1 +0.4
T1204                          S   Sb   16 34 17.9  -1.1
T1204                          AML AML
     comp=E,3495μm,1.0s
T1204                          AML AML
     comp=N,3010μm,1.0s
T1204                          AML AML
     comp=E,3490μm,1.0s
T1204                          AML AML
     comp=N,2995μm,1.0s
T1204                          AML AML
     comp=N,3005μm,1.0s
T1204                          AML AML
     comp=E,3505μm,1.1s
PIO1 Pioraco          0.29 350 P   Pg   16 34 13.3 +0.5
PIO1                           S   Sb   16 34 18.3  -0.8
MDAR Monte D'Aria     0.31  12 ⇓P  Pg   16 34 13.6 +0.4
MDAR                           AML AML
     comp=E,4570μm,0.6s
MDAR                           AML AML
     comp=N,7510μm,0.4s
FIU1 Fiuminata        0.31 344 P   Pb   16 34 13.8  -0.7
SMA1 SAN MARTINO      0.33 141 P   Pg   16 34 14.0 +0.5
SMA1                           S   Sb   16 34 19.5  -0.7
SMA1                           AML AML
     comp=E,3510μm,0.6s
SMA1                           AML AML
     comp=N,3005μm,0.6s
GAG1 Gagliole         0.35  2 ⇓P  Pb   16 34 14.6  -0.6
GAG1                           AML AML
     comp=E,6525μm,0.3s
GAG1                           AML AML
     comp=N,5750μm,0.4s
ARRO Arrone           0.37 214 ⇑P  Pg   16 34 14.7 +0.5
ARRO                           AML AML
     comp=E,1935μm,0.2s
```

ARRO				AML	AML	
	comp=N,1445μm,0.2s					
T1211	**Morro Reatino**	**0.38**	**202**	⇓P	Pg	16 34 15.0 +0.6
T1211				AML	AML	
	comp=E,2880μm,1.6s					
T1211				AML	AML	
	comp=N,3425μm,0.9s					
T1211				AML	AML	
	comp=E,2820μm,1.6s					
T1211				AML	AML	
	comp=N,3495μm,0.9s					
T1211				AML	AML	
	comp=N,3430μm,0.9s					
T1211				AML	AML	
	comp=E,2816μm,1.6s					
T1211				AML	AML	
	comp=N,3490μm,0.9s					
T1211				AML	AML	
	comp=E,2880μm,1.6s					
T1211				AML	AML	
	comp=N,3430μm,0.9s					
T1211				AML	AML	
	comp=E,2825μm,1.6s					
RM33	**Pellescritta (**	**0.40**	**162**	⇓P	Pg	16 34 15.1 +0.4
RM33				AML	AML	
	comp=E,1300μm,1.0s					
RM33				AML	AML	
	comp=E,1245μm,1.0s					
RM33				AML	AML	
	comp=N,1615μm,0.3s					
RM33				AML	AML	
	comp=N,1605μm,0.3s					
RM33				AML	AML	
	comp=N,1610μm,0.3s					
RM33				AML	AML	
	comp=E,1240μm,1.0s					
CAMP	**Campotosto**	**0.44**	**143**	⇑P	Pg	16 34 15.6 +0.2
CAMP				AML	AML	
	comp=N,786μm,0.5s					
CAMP				AML	AML	
	comp=E,680μm,1.2s					
CAMP				AML	AML	
	comp=N,786μm,0.5s					
EL6	**Elcito**	**0.44**	**5**	⇑P	Pg	16 34 15.8 +0.3
EL6				AML	AML	
	comp=E,2845μm,0.2s					
EL6				AML	AML	
	comp=N,3505μm,0.7s					
EL6				AML	AML	
	comp=E,2844μm,0.2s					
EL6				AML	AML	
	comp=N,3510μm,0.7s					
CESX	**Cesi**	**0.44**	**232**	⇑P	Pg	16 34 15.8 +0.3
CESX				AML	AML	
	comp=E,1615μm,1.5s					
CESX				AML	AML	
	comp=N,1950μm,0.3s					
OFFI	**Offida**	**0.47**	**84**	⇑P	Pb	16 34 17.1 -0.1
OFFI				AML	AML	
	comp=E,3300μm,0.8s					
OFFI				AML	AML	
	comp=N,3215μm,0.9s					
T1247	**Pizzolo (AQ)**	**0.48**	**158**	⇓P	Pb	16 34 16.9 -0.4
T1247				AML	AML	
	comp=E,1545μm,0.2s					
T1247				AML	AML	
	comp=N,1255μm,1.5s					
TERO	**Teramo**	**0.48**	**123**	⇑P	Pg	16 34 16.3 0.0
TERO				AML	AML	
	comp=N,1810μm,0.8s					
TERO				AML	AML	
	comp=E,1955μm,0.9s					
GIGS	**Gran Sasso**	**0.58**	**139**	⇑P	Pg	16 34 17.9 -0.2
GIGS				AML	AML	
	comp=N,264μm,0.9s					
GIGS				AML	AML	
	comp=E,247μm,0.3s					
ARVD	**Arcevia**	**0.62**	**353**	⇓P	Pg	16 34 18.9 +0.1
ARVD				S	Sn	16 34 30.0 -1.5
ARVD				AML	AML	
	comp=E,721μm,1.1s					
ARVD				AML	AML	
	comp=N,449μm,1.5s					
FIAM	**Fiamignano**	**0.62**	**175**	⇓P	Pg	16 34 18.9 +0.1
FIAM				S	Sb	16 34 29.0 +0.5
FIAM				AML	AML	
	comp=E,844μm,1.1s					
FIAM				AML	AML	
	comp=N,727μm,1.3s					
FIAM				AML	AML	
	comp=E,844μm,1.1s					
TRTR	**Tortoreto Alta**	**0.64**	**97**	⇑P	Pb	16 34 20.4 +0.4
TRTR				AML	AML	
	comp=N,2770μm,0.4s					
TRTR				AML	AML	
	comp=E,2590μm,1.4s					
FRON	**Frontone**	**0.67**	**339**	⇓P	Pg	16 34 20.0 +0.2
FRON				AML	AML	
	comp=N,716μm,0.3s					
FRON				AML	AML	
	comp=E,449μm,0.9s					
MGAB	**Montegabbione**	**0.69**	**272**	⇑P	Pg	16 34 20.4 +0.2
MGAB				AML	AML	
	comp=E,997μm,1.3s					
MGAB				AML	AML	
	comp=N,1880μm,1.2s					
MGAB				AML	AML	
	comp=E,1260μm,0.6s					
MGAB				AML	AML	
	comp=N,1940μm,0.6s					
MGAB				AML	AML	
	comp=E,999μm,1.3s					
MGAB				AML	AML	
	comp=N,1935μm,0.6s					
ATMI	**Monte Miggiano**	**0.73**	**308**	⇓P	Pb	16 34 21.7 +0.1
ATMI				AML	AML	
	comp=E,1970μm,0.4s					
ATMI				AML	AML	
	comp=N,1470μm,0.4s					
FAGN	**Fagnano**	**0.73**	**147**	⇑P	Pb	16 34 21.6 -0.1
FAGN				AML	AML	
	comp=E,1630μm,0.6s					
FAGN				AML	AML	
	comp=N,928μm,0.4s					
FAGN				AML	AML	
	comp=N,928μm,0.4s					
ATPI	**Pietralunga -**	**0.74**	**320**	⇑P	Pg	16 34 21.1 0.0
ATPI				AML	AML	
	comp=E,516μm,0.8s					
ATPI				AML	AML	
	comp=N,413μm,1.4s					
PIEI	**Pieia**	**0.75**	**330**	⇓P	Pg	16 34 21.6 +0.3
PIEI				S	Sn	16 34 34.0 -0.9
PIEI				AML	AML	
	comp=E,426μm,0.3s					
PIEI				AML	AML	
	comp=N,374μm,1.0s					
VCEL	**Villa Celiera**	**0.76**	**130**	⇑P	Pg	16 34 21.3 -0.2
VCEL				AML	AML	
	comp=E,1110μm,0.4s					
VCEL				AML	AML	
	comp=N,962μm,1.5s					
VCEL				AML	AML	
	comp=N,962μm,1.5s					
VCEL				AML	AML	
	comp=E,1115μm,0.4s					
AOI	**Ancona**	**0.78**	**31**	⇑P	Pb	16 34 22.6 +0.2
AOI				S	Sn	16 34 36.0 +0.5
AOI				AML	AML	
	comp=N,678μm,0.4s					
AOI				AML	AML	
	comp=E,771μm,1.5s					
SENI	**Senigallia**	**0.83**	**9**	S	Sn	16 34 36.0 -0.7
FSSB	**Fossombrone**	**0.83**	**346**	⇑P	Pg	16 34 23.0 +0.2
FSSB				AML	AML	
	comp=N,1765μm,0.3s					
FSSB				AML	AML	
	comp=N,1760μm,0.3s					
FSSB				AML	AML	
	comp=E,1555μm,0.4s					
SACS	**San Casciano d**	**0.84**	**268**	P	Pb	16 34 23.5 0.0
SACS				AML	AML	
	comp=E,423μm,1.4s					
SACS				AML	AML	
	comp=N,490μm,0.8s					
T0110	**Collepietro**	**0.85**	**141**	⇓P	Pg	16 34 23.0 -0.2
T0110				AML	AML	
	comp=E,1080μm,0.4s					
T0110				AML	AML	
	comp=N,840μm,0.3s					
T0110				AML	AML	
	comp=N,841μm,0.3s					
BADI	**Badiali**	**0.86**	**317**	⇑P	Pb	16 34 23.7 -0.1
CAFI	**Castiglion Fio**	**0.91**	**299**	P	Pg	16 34 24.3 0.0
CAFI				AML	AML	
	comp=E,362μm,0.7s					
CAFI				AML	AML	
	comp=N,418μm,0.6s					
CAFI				AML	AML	
	comp=E,362μm,0.7s					
MCIV	**Monte Civitell**	**1.02**	**264**	⇓P	Pn	16 34 27.0 -0.1
MCIV				AML	AML	
	comp=E,184μm,1.5s					
MCIV				AML	AML	
	comp=N,236μm,1.2s					
MCIV				AML	AML	
	comp=E,184μm,1.5s					
MCIV				AML	AML	
	comp=N,236μm,1.2s					
INTR	**Introdacqua**	**1.08**	**144**	⇓P	Pg	16 34 25.8 -1.8
RUFI	**Rufina**	**1.47**	**311**	P	Pb	16 34 34.3 +0.1
TRIF	**Trifonti**	**1.59**	**279**	⇑P	Pn	16 34 35.5 +0.5
PTRJ	**Pietraroja**	**1.88**	**144**	P	Pb	16 34 41.6 +0.5
VITU	**Vitulano (BN)**	**2.07**	**145**	S	Sb	16 35 10.0 -0.2
MNTV	**Mantova**	**2.79**	**325**	S	Sn	16 35 27.0 +2.0
PZUN	**Potenza**	**3.04**	**136**	P	Pn	16 34 54.1 -0.7
CGRP	**Cima Grappa**	**3.12**	**344**	⇑P	Pn	16 34 58.3 +2.1
ABTA	**Abfaltersbach**	**3.88**	**355**	*e*Pn	Pn	16 35 09.2 +2.7
	comp=N,2.7nm,0.4s					
FETA	**Feichten**	**4.45**	**339**	*e*Pn	Pb	16 35 20.0 -5.0
	comp=N,0.5nm,0.3s					
WATA	**Walderalm**	**4.57**	**347**	*e*Pn	Pn	16 35 20.6 +4.6
	comp=N,0.6nm,0.2s					
KHC	**Kasperske Hory**	**6.25**	**3**	*e*PN	Pn	16 35 38.9 -0.2
KHC				*e*SN	Sn	16 36 49.9 -0.7

ROM 27 16:34:46.9±0.3, 43°.009N±0°.009×13°.127E±0°.006, h6km±2km, Md1.6/1, ML2.1/4, 1C, Error ellipse: s-maj=0.8km s-min=0.5km az=180.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**314**	P	Pg	16 34 48.2	-0.1
FEMA	**Monte Fema**	**0.07**	**230**	P	Pg	16 34 49.2	+0.4
FEMA				AML	AML		
	comp=N,2517μm,0.1s						
FEMA				AML	AML		
	comp=E,2414μm,0.5s						
MC2	**Monte Cornacci**	**0.11**	**154**	P	Pg	16 34 49.7	+0.3
T1216	**Preci, Frazion**	**0.14**	**214**	⇑P	Pg	16 34 50.5	+0.6
T1216				S	Sg	16 34 53.0	+1.2
T1216				AML	AML		
	comp=E,3605μm,0.2s						
T1216				AML	AML		
	comp=N,3330μm,0.2s						
T1216				AML	AML		
	comp=E,1282μm,0.4s						
T1216				AML	AML		
	comp=N,1274μm,0.3s						
CESI	**CESI - Serrava**	**0.16**	**269**	P	Pg	16 34 50.8	+0.6
CESI				S	Sg	16 34 53.7	+1.2
CESI				AML	AML		
	comp=E,931μm,0.2s						
CESI				AML	AML		
	comp=N,1124μm,0.3s						
AM05	**Amandola Campo**	**0.17**	**101**	P	Pg	16 34 50.8	+0.4
AM05				S	Sg	16 34 53.6	+0.9
AM05				AML	AML		
	comp=E,1506μm,0.2s						
AM05				AML	AML		
	comp=N,357μm,0.1s						
T1215	**Vallo di Nera,**	**0.28**	**223**	P	Pg	16 34 53.2	+0.8
T1215				S	Sg	16 34 57.2	+1.0
T1204	**Amatrice, Fraz**	**0.36**	**157**	P	Pb	16 34 55.3	-0.6
T1204				END			
ARVD	**Arcevia**	**0.51**	**345**	S	Sb	16 35 06.0	0.0

IDC 27 16:49:43.0±2.8, 9°.87S×120°.51E, h0km, mb3.3/1, mbtmp3.4/3, ML3.4/2, MS3.4/1, Error ellipse: s-maj=232.3km s-min=30.8km az=51.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.68**	**128**	Pn	Pn	16 53 39.0	+0.6
	0.1nm,0.3s,baz=302,slow=13,SNR=12						
WRA				Sn	Sn	16 56 42.4	-2.0
	baz=298,slow=19,SNR=1.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**18.75**	**139**	P	P	16 54 03.8	0.0
	0.1nm,0.3s,baz=318,slow=11,SNR=20						
ASAR				Sn	Sn	16 57 27.9	-6.8
	baz=303,slow=22,SNR=1.8						
	0.8nm,0.6s						
CTA	**Charters Tower**	**26.82**	**115**	LR	LR	17 07 46.5	
	comp=Z,79nm,20.0s,baz=234,slow=40						
MKAR	**Makanchi Array**	**65.91**	**332**	P	P	17 00 30.6	-0.2
	0.2nm,0.6s,baz=152,slow=7.1,SNR=1.9						
	0.2nm,0.6s						

UPA ***27*** *17:11:14.0±0.4, 8°.41N×82°.87W, h22km±4km, MW3.3*
UCR ***27*** *17:11:14.5±1.5, 8°.41N×82°.93W, h24km±3km, MW3.6*
ISC 27 17:11:13.8±1.1, 8°.39N±0°.04×82°.89W±0°.03, h27km±7km, n18, σ0°.53/33, 2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.09**	**282**	*e*P	**Pb**	**17 11 18.2**	**-0.5**
CCOL				*e*S	**Sb**	**17 11 22.5**	**+0.5**
CDITO	**Canoas**	**0.18**	**5**	*e*P	**Pb**	**17 11 19.2**	**-0.4**
CDITO				*e*S	**Sb**	**17 11 22.9**	**-0.6**
LIMO3	**Limones**	**0.29**	**175**	*e*P	**Pb**	**17 11 21.0**	**+0.1**
LIMO3				*e*S	**Sb**	**17 11 26.1**	**+0.5**
DVD	**David**	**0.43**	**84**	*e*P	**Pb**	**17 11 22.8**	**-0.3**
DVD				*e*S	**Sb**	**17 11 29.3**	**-0.1**
PIRO	**Carate, Puerto**	**0.44**	**272**	*e*P	**Pb**	**17 11 22.7**	**-0.5**
BRU2	**Volcan**	**0.45**	**26**	*e*P	**Pb**	**17 11 23.4**	**0.0**
BRU2				*e*S	**Sb**	**17 11 31.1**	**+1.2**
BRU2	**Volcan**	**0.45**	**26**	⇓*e*P	**Pb**	**17 11 23.4**	**0.0**
BRU2				*e*S	**Sn**	**17 11 31.2**	**-0.6**
BCO2	**Palmira**	**0.48**	**47**	⇓*i*P	**Pb**	**17 11 23.8**	**-0.2**
BCO2				*e*S	**Sb**	**17 11 31.3**	**+0.4**
PTAR3	**Potrerillos Ar**	**0.49**	**52**	*e*P	**Pb**	**17 11 23.9**	**-0.1**
PTAR3				*e*S	**Sb**	**17 11 30.9**	**-0.2**
BC3P	**Paso Ancho**	**0.51**	**33**	*e*P	**Pb**	**17 11 25.2**	**+0.8**
BC3P				*e*S	**Sb**	**17 11 31.3**	**-0.2**
CHIR3	**Chiriqui UPA,**	**0.55**	**89**	*e*P	**Pb**	**17 11 24.1**	**-1.0**
CHIR3				*e*S	**Sb**	**17 11 32.4**	**-0.2**
GUAL3	**Gualaca, Chiri**	**0.60**	**76**	*e*P	**Pb**	**17 11 25.4**	**-0.4**
GUAL3				*e*S	**Sb**	**17 11 33.8**	**-0.2**
POTG	**Potrero Grande**	**0.70**	**341**	*e*P	**Pb**	**17 11 27.3**	**-0.2**
POTG				*e*S	**Sn**	**17 11 37.7**	**-0.3**
EDPN	**Palmar Norte**	**0.80**	**315**	*e*P	**Pb**	**17 11 29.3**	**+0.1**
EDPN				*e*S	**Sb**	**17 11 39.7**	**0.0**
SRBA	**San Rafael, Bu**	**0.96**	**331**	*e*P	**Pb**	**17 11 30.9**	**-1.0**
SRBA				*e*S	**Sb**	**17 11 43.9**	**-0.4**
CDM	**Cerro de Muert**	**1.44**	**323**	*e*P	**Pn**	**17 11 38.7**	**+0.1**
MRVA	**Moravia de Chi**	**1.53**	**339**	*e*P	**Pn**	**17 11 40.1**	**+0.6**
MRVA				*e*S	**Sb**	**17 12 00.5**	**-0.1**
RIMA	**Rio Macho**	**1.67**	**325**	*e*P	**Pn**	**17 11 42.5**	**+1.0**

IDC 27 17:11:56.4±8.1, 31°.09S×179°.84E, h450km±100km, mb2.6/2, mbtmp3.8/3, Error ellipse: s-maj=98.5km s-min=44.9km az=8.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.50**	**197**	P	P	17 13 47.2	+1.0
	15nm,0.3s,baz=348,slow=2.1,SNR=49						
URZ				S	S	17 15 15.4	-0.9
	5.6nm,0.4s,baz=168,slow=22,SNR=7.0						
ASAR	**Alice Springs**	**41.22**	**269**	P	P	17 19 00.8	0.0
	0.3nm,0.6s,baz=108,slow=7.6,SNR=8.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**42.28**	**274**	P	P	17 19 09.0	-0.2
	0.4nm,0.4s,baz=112,slow=8.0,SNR=22						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**145.12**	**338**	PKPbc	PKPdf	17 30 40.5	-0.5
	3.1nm,1.0s,baz=23,slow=4.5,SNR=3.6						

ROM 27 17:13:39.4±0.1, 43°.051N±0°.004×13°.097E±0°.005, h8km, ML2.6/21, 12C-4D, Error ellipse: s-maj=0.5km s-min=0.4km az=17.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.10**	**201**	P	Pg	17 13 42.2	+0.4
FEMA				S	Sg	17 13 44.0	+0.6
FEMA				AML	AML		
	comp=N,13700μm,0.3s						
FEMA				AML	AML		
	comp=E,21050μm,0.6s						
FEMA				AML	AML		
	comp=N,13650μm,0.3s						
SEF1	**Sefro**	**0.15**	**311**	P	Pg	17 13 43.1	+0.6
SEF1				S	Sg	17 13 45.9	+1.2
SEF1				AML	AML		
	comp=E,5925μm,0.2s						
SEF1				AML	AML		
	comp=N,5330μm,0.4s						
SEF1				AML	AML		
	comp=N,5325μm,0.4s						
CESI	**CESI - Serrava**	**0.15**	**252**	⇑P	Pg	17 13 43.3	+0.7
CESI				S	Sg	17 13 45.8	+1.0
CESI				AML	AML		
	comp=E,6675μm,0.5s						
CESI				AML	AML		
	comp=N,5860μm,0.2s						
CESI				AML	AML		
	comp=N,5855μm,0.2s						
MC2	**Monte Cornacci**	**0.15**	**153**	P	Pg	17 13 42.2	-0.5
MC2				S	Sg	17 13 45.9	+0.9
T1216	**Preci, Frazion**	**0.17**	**200**	P	Pg	17 13 43.5	+0.6
T1216				S	Sg	17 13 46.8	+1.4
T1216				AML	AML		
	comp=E,11440μm,1.1s						
T1216				AML	AML		
	comp=N,10740μm,0.3s						
T1216				AML	AML		
	comp=E,11475μm,1.1s						
T1216				AML	AML		
	comp=N,10735μm,0.3s						
T1216				AML	AML		
	comp=E,11445μm,1.1s						
T1216				AML	AML		
	comp=N,10775μm,0.3s						
AM05	**Amandola Campo**	**0.20**	**111**	P	Pg	17 13 44.4	+0.9
AM05				S	Sg	17 13 47.8	+1.6
EL6	**Elcito**	**0.28**	**1**	P	Pg	17 13 45.7	+0.7
EL6				AML	AML		
	comp=E,3035μm,0.4s						
EL6				AML	AML		
	comp=N,3580μm,0.7s						
EL6				AML	AML		
	comp=E,3030μm,0.4s						
EL6				AML	AML		
	comp=N,3575μm,0.7s						
T1215	**Vallo di Nera,**	**0.30**	**214**	P	Pg	17 13 46.0	+0.7
T1215				S	Sb	17 13 50.9	-1.2
T1215				AML	AML		
	comp=E,1094μm,0.5s						
T1215				AML	AML		
	comp=N,1845μm,0.3s						
T1215				AML	AML		
	comp=E,1152μm,0.5s						
T1215				AML	AML		
	comp=N,1840μm,0.3s						
T1215				AML	AML		
	comp=E,1091μm,0.5s						
T1215				AML	AML		
	comp=N,1845μm,0.3s						
T1215				AML	AML		
	comp=E,1156μm,0.5s						
T1215				AML	AML		
	comp=E,1152μm,0.5s						
T1215				AML	AML		
	comp=N,1845μm,0.3s						
T1215				AML	AML		
	comp=E,1094μm,0.5s						
CING	**Cingoli**	**0.33**	**12**	⇑P	Pg	17 13 46.7	+0.8
T1217	**Poggiodomo (PG**	**0.36**	**200**	P	Pg	17 13 47.0	+0.6
T1217				S	Sb	17 13 53.1	-0.7
T1217				AML	AML		
	comp=N,4200μm,0.3s						
T1217				AML	AML		
	comp=N,4205μm,0.3s						
T1217				AML	AML		
	comp=E,2110μm,0.2s						
T1217				AML	AML		
	comp=N,4325μm,0.3s						
T1217				AML	AML		
	comp=E,2125μm,0.2s						
T1204	**Amatrice, Fraz**	**0.41**	**157**	P	Pg	17 13 48.0	+0.6
T1204				S	Sb	17 13 54.6	-0.7
T1204				AML	AML		
	comp=E,2395μm,1.3s						
T1204				AML	AML		
	comp=N,1450μm,0.2s						
LNSS	**Leonessa**	**0.45**	**185**	P	Pg	17 13 48.5	+0.4
LNSS				S	Sb	17 13 55.8	-0.6
LNSS				AML	AML		
	comp=N,1540μm,0.5s						
LNSS				AML	AML		
	comp=N,1545μm,0.5s						
LNSS				AML	AML		
	comp=E,1960μm,1.3s						
SMA1	**SAN MARTINO**	**0.46**	**157**	P	Pg	17 13 48.5	+0.3
SMA1				S	Sb	17 13 56.1	-0.5
SMA1				AML	AML		
	comp=E,1335μm,1.2s						
SMA1				AML	AML		
	comp=N,1635μm,0.4s						
ARVD	**Arcevia**	**0.46**	**346**	S	Sb	17 13 57.0	+0.2
ARRO	**Arrone**	**0.53**	**207**	P	Pg	17 13 50.1	+0.5
ARRO				S	Sb	17 13 58.5	-0.2
FRON	**Frontone**	**0.54**	**330**	⇑P	Pg	17 13 50.3	+0.5
FRON				AML	AML		
	comp=N,1044μm,0.3s						
FRON				AML	AML		
	comp=E,779μm,0.2s						
T1211	**Morro Reatino**	**0.55**	**199**	P	Pg	17 13 50.3	+0.4
T1211				S	Sb	17 13 59.2	-0.1
T1211				AML	AML		
	comp=E,1120μm,0.8s						
T1211				AML	AML		
	comp=N,1240μm,0.6s						
RM33	**Pellescritta (**	**0.55**	**171**	⇑P	Pg	17 13 50.2	+0.3
RM33				S	Sb	17 13 59.0	-0.3
RM33				AML	AML		
	comp=E,611μm,1.0s						
RM33				AML	AML		
	comp=E,618μm,0.3s						
RM33				AML	AML		
	comp=N,514μm,0.3s						
CAMP	**Campotosto**	**0.56**	**156**	P	Pg	17 13 50.4	+0.1
CAMP				S	Sb	17 13 59.2	-0.5
CAMP				AML	AML		
	comp=E,872μm,0.2s						
CAMP				AML	AML		
	comp=N,620μm,0.3s						
TERO	**Teramo**	**0.57**	**139**	⇑P	Pb	17 13 51.0	-0.6
TERO				S	Sb	17 13 59.5	-0.3
TERO				AML	AML		
	comp=E,989μm,0.4s						
TERO				AML	AML		
	comp=N,621μm,0.3s						
CESX	**Cesi**	**0.58**	**221**	P	Pg	17 13 50.8	+0.2
CESX				S	Sb	17 13 59.6	-0.5
CESX				AML	AML		
	comp=E,835μm,1.5s						
CESX				AML	AML		
	comp=N,883μm,0.9s						
PIEI	**Pieia**	**0.64**	**320**	⇓P	Pg	17 13 52.0	+0.4
PIEI				S	Sb	17 14 03.0	+1.2
PIEI				AML	AML		
	comp=N,294μm,0.2s						
PIEI				AML	AML		
	comp=E,414μm,1.4s						
ATPI	**Pietralunga -**	**0.65**	**308**	⇑P	Pg	17 13 52.1	+0.2
ATPI				S	Sn	17 14 04.0	-1.3
ATPI				AML	AML		
	comp=N,262μm,0.8s						
ATPI				AML	AML		
	comp=E,298μm,0.5s						
ATMI	**Monte Miggiano**	**0.67**	**295**	P	Pn	17 13 55.5	+0.4

ATMI				AML	AML	
	comp=N,496μm,0.4s					
ATMI				AML	AML	
	comp=E,507μm,0.6s					
FSSB	**Fossombrone**	**0.68 340**	⇑P		Pb	17 13 53.2 -0.3
FSSB			S		Sn	17 14 05.0 -1.2
FSSB				AML	AML	
	comp=N,2645μm,0.3s					
FSSB				AML	AML	
	comp=E,1290μm,0.4s					
FSSB				AML	AML	
	comp=N,2640μm,0.3s					
GIGS	**Gran Sasso**	**0.69 150**	P		Pg	17 13 52.6 -0.2
GIGS			S		Sb	17 14 03.0 -0.4
GIGS				AML	AML	
	comp=N,132μm,0.6s					
GIGS				AML	AML	
	comp=N,132μm,0.6s					
GIGS				AML	AML	
	comp=E,194μm,0.7s					
MGAB	**Montegabbione**	**0.74 260**	⇓P		Pn	17 13 55.8 -0.3
MGAB				AML	AML	
	comp=E,416μm,0.4s					
MGAB				AML	AML	
	comp=E,476μm,0.4s					
MGAB				AML	AML	
	comp=N,736μm,0.3s					
MGAB				AML	AML	
	comp=E,476μm,0.4s					
MGAB				AML	AML	
	comp=N,707μm,1.3s					
PE3	**Peglio**	**0.78 326**	⇑P		Pb	17 13 55.4 +0.2
PE3			S		Sn	17 14 10.0 +1.4
FIAM	**Fiamignano**	**0.78 179**	S		Sb	17 14 07.0 +1.0
VCEL	**Villa Celiera**	**0.85 140**	P		Pg	17 13 55.9 +0.2
VCEL			S		Sb	17 14 08.6 +0.5
FAGN	**Fagnano**	**0.86 155**	⇑P		Pb	17 13 56.6 0.0
FAGN				AML	AML	
	comp=N,752μm,0.5s					
FAGN				AML	AML	
	comp=E,820μm,0.4s					
FAGN				AML	AML	
	comp=N,752μm,0.5s					
SRES	**S.Oreste - Sor**	**0.92 208**	S		Sn	17 14 12.0 0.0
T0110	**Collepietro**	**0.96 148**	⇑P		Pg	17 13 57.9 0.0
T0110				AML	AML	
	comp=N,720μm,0.4s					
T0110				AML	AML	
	comp=E,431μm,0.6s					
INTR	**Introdacqua**	**1.20 150**	⇓P		Pn	17 14 03.6 +1.1
INTR				AML	AML	
	comp=E,142μm,1.1s					
INTR				AML	AML	
	comp=N,268μm,0.6s					
ARCI	**Arcidosso**	**1.21 261**	S		Sn	17 14 20.0 +0.8
PTRJ	**Pietraroja**	**1.99 147**	S		Sn	17 14 37.0 -1.6
VITU	**Vitulano (BN)**	**2.19 148**	⇑P		Pn	17 14 14.6 -1.5
VITU				AML	AML	
	comp=E,87μm,0.3s					
VITU				AML	AML	
	comp=N,76μm,0.3s					
VITU				AML	AML	
	comp=N,466μm,0.9s					
VITU				AML	AML	
	comp=E,214μm,1.0s					
VARP	**Vesuvio Array**	**2.44 156**	S		Sb	17 14 52.0 -1.6
MCRV	**Calabrutti - M**	**2.74 145**	P		Pg	17 14 31.6 -0.3
PZUN	**Potenza**	**3.14 139**	⇓P		Pb	17 14 36.4 +1.0
CTI	**Castel Tesino**	**3.17 341**	P		Pn	17 14 30.2 +0.6
RNCA	**Ronca, Sant'Ol**	**3.32 297**	S		Sg	17 15 30.0 +4.0
STON	**Ston**	**3.38 91**	S		Sg	17 15 26.0 -2.0
EUCT	**Pavia**	**3.57 308**	S		Sn	17 15 19.0 +1.6
SALB	**San Lorenzo Be**	**4.00 141**	S		Sb	17 15 42.0 +3.3
TDS	**Terranova Siba**	**4.17 143**	S		Sn	17 15 27.0 -5.3
FETA	**Feichten**	**4.31 338**	*e*Pn		Pb	17 14 51.1 -4.3
	comp=E,0.6nm,0.3s					
SQTA	**Sankt Quirin**	**4.38 343**	*e*Pn		Pn	17 14 50.7 +4.5
	comp=E,1.1nm,0.2s					
IST3	**Stromboli F**	**4.54 158**	⇑P		Pn	17 14 53.0 +4.6
CGL	**Cagliari Serpe**	**4.67 219**	P		Pn	17 14 53.3 +3.2
MILZ	**Milazzo**	**5.04 161**	P		Pb	17 15 08.8 +1.0

ROM 27 17:14:20.8±0.1, 42°.890N±0°.004×13°.179E±0°.005, h7km, ML2.5/6, 6C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=267.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.03**	**21**	P	Pg	17 14 22.1	-0.3
MC2				S	Sg	17 14 22.9	-0.6
NRCA	**Norcia**	**0.07**	**220**	P	Pg	17 14 23.1	+0.3
NRCA				S	Sg	17 14 24.9	+0.8
NRCA				AML	AML		
	comp=N,25950μm,0.2s						
NRCA				AML	AML		
	comp=E,29250μm,0.2s						
NRCA				AML	AML		
	comp=E,31150μm,0.1s						
NRCA				AML	AML		
	comp=N,26000μm,0.2s						
NRCA				AML	AML		
	comp=N,27750μm,0.2s						
T1216	**Preci, Frazion**	**0.12**	**271**	P	Pg	17 14 23.9	+0.5
T1216				S	Sg	17 14 26.1	+1.0
T1216				AML	AML		
	comp=E,7515μm,0.3s						
T1216				AML	AML		
	comp=N,4860μm,0.6s						
T1216				AML	AML		
	comp=N,4875μm,0.5s						
T1216				AML	AML		
	comp=E,7525μm,0.3s						
AM05	**Amandola Campo**	**0.15**	**55**	⇑P	Pg	17 14 24.7	+0.6
AM05				S	Sg	17 14 27.6	+1.4
AM05				AML	AML		
	comp=N,1095μm,0.2s						
AM05				AML	AML		
	comp=N,312μm,0.1s						
AM05				AML	AML		
	comp=E,3080μm,0.4s						
AM05				AML	AML		
	comp=E,733μm,0.1s						
CESI	**CESI - Serrava**	**0.23**	**300**	P	Pg	17 14 26.1	+0.6
CESI				S	Sg	17 14 30.0	+1.4
CESI				AML	AML		
	comp=E,897μm,0.5s						
CESI				AML	AML		
	comp=N,1170μm,0.1s						
T1204	**Amatrice, Fraz**	**0.24**	**154**	P	Pg	17 14 26.4	+0.8
T1204				S	Sg	17 14 30.5	+1.8
T1215	**Vallo di Nera,**	**0.24**	**249**	⇑P	Pg	17 14 26.4	+0.8
T1215				AML	AML		
	comp=E,934μm,1.5s						
T1215				AML	AML		
	comp=N,822μm,0.4s						
T1215				AML	AML		
	comp=E,1350μm,1.2s						
T1215				AML	AML		
	comp=N,1360μm,1.2s						
T1217	**Poggiodomo (PG**	**0.25**	**226**	P	Pg	17 14 26.4	+0.6
T1217				S	Sb	17 14 31.0	-1.6
SMA1	**SAN MARTINO**	**0.28**	**156**	P	Pg	17 14 27.0	+0.6
SMA1				S	Sb	17 14 31.8	-1.5
LNSS	**Leonessa**	**0.30**	**200**	P	Pg	17 14 27.5	+0.6
LNSS				S	Sb	17 14 32.7	-1.2
RM33	**Pellescritta (**	**0.38**	**176**	⇓P	Pg	17 14 28.8	+0.6
CAMP	**Campotosto**	**0.39**	**154**	⇑P	Pg	17 14 29.0	+0.5
TERO	**Teramo**	**0.41**	**130**	⇑P	Pg	17 14 29.2	+0.4
T1211	**Morro Reatino**	**0.43**	**214**	⇑P	Pb	17 14 30.2	-0.6
ARRO	**Arrone**	**0.43**	**225**	⇓P	Pg	17 14 29.6	+0.3
EL6	**Elcito**	**0.44**	**353**	⇑P	Pg	17 14 29.8	+0.3
EL6				AML	AML		
	comp=E,950μm,1.5s						
EL6				AML	AML		
	comp=N,995μm,0.2s						
EL6				AML	AML		
	comp=E,950μm,1.5s						
T1247	**Pizzolo (AQ)**	**0.46**	**169**	S	Sb	17 14 38.0	-0.3
CESX	**Cesi**	**0.52**	**238**	S	Sb	17 14 40.0	-0.2
GIGS	**Gran Sasso**	**0.53**	**147**	⇓P	Pg	17 14 31.3	+0.3
FIAM	**Fiamignano**	**0.62**	**184**	S	Sb	17 14 43.0	-0.1

*ROM **27** 17:22:22.9±0.0, 42°.839N±0°.001×13°.099E±0°.003, h9km, ML4.2/112, Mw4.2, Error ellipse: s-maj=0.2km s-min=0.0km az=253.0, Moment Tensor Solution. Moment tensor: Scale 1015Nm; Mrr=2.17; Mθθ0.01; Mφφ2.16; Mrθ=0.24; Mφθ0.12; Mφr=1.72; Fault plane solution: M0 2.77730×1015 NP1:φs180.00000°, δ26.00000°, λ=95.00000°. NP2:φs6.00000°, δ64.00000°, λ=87.00000°.*

*MOS **27** 17:22:23.0±1.1, 42°.83N×13°.08E, h13km, mb4.7/27 Error ellipse: s-maj=5.6km s-min=3.7km az=79.0*

*IDC **27** 17:22:23.4±0.8, 42°.87N×13°.03E, h0km, mb4.2/14, mbtmp4.1/24, ML3.8/10, MS3.5/22, Error ellipse: s-maj=13.5km s-min=11.0km az=73.0*

*LDG **27** 17:22:23.1±0.1, 42°.84N×13°.07E, h9km, Md4.0/5, Ml4.0/19, Error ellipse: s-maj=3.0km s-min=1.8km az=41.0*

*PDG **27** 17:22:23.5±0.8, 42°.83N×13°.12E, h9km, ML4.3/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*MED_RC **27** 17:22:23.0±0.4, 42°.84N×13°.10E, h10km, MW4.4/12, Moment Tensor Solution. Mantle waves: s12, c13; Duration: 1s0 Moment tensor: Scale 1015Nm; Mrr=2.13±.52; Mθθ=1.91±.56; Mφφ4.04±.21; Mθ=2.64±1.78; Mφφ1.24±.43; Mφr=1.99±.85; Best double couple: M0 4.95000×1015 NP1:φs44.00000°, δ74.00000°, λ=53.00000°. NP2:φs155.00000°, δ40.00000°, λ=154.00000°. Principal axes: T 5.2000, Plg20.0000°, Azm108.0000°; N -0.5000, Plg35.0000°, Azm213.0000°; P -4.7100, Plg48.0000°, Azm354.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **27** 17:22:24.2±2.1, 42°.80N±0°.05×13°.08E±0°.07, h10km±1km Error ellipse: s-maj=9.4km s-min=7.3km az=224.0*

*BEO **27** 17:22:24.8±0.6, 42°.86N×13°.21E, h0km, ML4.3/14*

*NEIC **27** 17:22:24, 42°.81N×13°.11E, h3km, Moment Tensor Solution. Moment tensor: Scale 1015Nm; Mrr=2.35; Mθθ0.23; Mφφ2.12; Mrθ=0.88; Mφφ=0.21; Mφr1.26; Fault plane solution: M0 2.72000×1015 NP1:φs159.26000°, δ61.99000°, λ=102.57000°. NP2:φs4.65000°, δ30.50000°, λ=67.75000°. Principal axes: T 2.5284, Plg16.0000°, Azm258.0000°; N 0.3534, Plg11.0000°, Azm165.0000°; P -2.8818, Plg70.0000°, Azm42.0000°;*

*PRU **27** 17:22:25.2±0.0, 42°.86N×13°.34E, h0km, M4.5*

*STR **27** 17:22:26.0±0.4, 43°N±7°×1°.3E±°, h10km, MLv4.3/33, Error ellipse: s-maj=0.0km s-min=0.0km az=32.1, preliminary*

ISC 27 17:22:23.4±0.7, 42°.84N±0°.01×13°.07E±0°.01, h5km±4km, n625, σ1s90/717, mb4.5/39, MS3.4/11, 65C-23D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**101**	Pg	**Pg**	**17 22 23.8**	**-0.8**
NRCA				Sg	**Sg**	**17 22 25.0**	**-0.5**
NRCA	**Norcia**	**0.03**	**101**	⇓P	**Pg**	**17 22 24.4**	**-0.2**
NRCA				S	**Sg**	**17 22 25.5**	**0.0**
T1216	**Preci, Frazion**	**0.06**	**324**	P	**Pg**	**17 22 25.3**	**+0.3**
T1216				S	**Sg**	**17 22 27.3**	**+1.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.09**	**79**	P	**Pg**	**17 22 25.2**	**-0.3**
T1245				S	**Sg**	**17 22 26.9**	**0.0**
MC2	**Monte Cornacci**	**0.12**	**51**	⇑P	**Pg**	**17 22 25.7**	**-0.2**
MC2				S	**Sg**	**17 22 28.1**	**+0.5**
FEMA	**Monte Fema**	**0.12**	**353**	⇑P	**Pg**	**17 22 26.6**	**+0.5**
FEMA				S	**Sg**	**17 22 28.6**	**+0.8**
FEMA				AML	AML		
FEMA				AML	AML		
T1215	**Vallo di Nera,**	**0.15**	**256**	⇑P	**Pg**	**17 22 27.3**	**+0.8**
T1215				S	**Sg**	**17 22 30.3**	**+1.7**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1217	**Poggiodomo (PG**	**0.16**	**218**	⇑P	**Pg**	**17 22 27.5**	**+0.8**
T1217				S	**Sg**	**17 22 30.5**	**+1.6**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
FDMO	**Fiordimonte**	**0.20**	**4**	P	**Pg**	**17 22 27.5**	**+0.2**
FDMO				Sg	**Sg**	**17 22 29.2**	**-0.8**
FDMO	**Fiordimonte**	**0.20**	**4**	P	**Pg**	**17 22 27.7**	**+0.4**
FDMO				AML	AML		
	comp=E,53200μm,1.3s						
FDMO				AML	AML		
	comp=N,67400μm,1.1s						
CESI	**CESI - Serrava**	**0.20**	**324**	P	**Pg**	**17 22 27.9**	**+0.4**
CESI				S	**Sg**	**17 22 31.8**	**+1.6**
CESI				AML	AML		
	comp=E,69500μm,0.9s						
CESI				AML	AML		
T1201	**Domo (RI)**	**0.23**	**144**	⇑P	**Pg**	**17 22 28.3**	**+0.4**
T1201				S	**Sg**	**17 22 32.3**	**+1.4**
LNSS	**Leonessa**	**0.24**	**185**	P	**Pg**	**17 22 28.6**	**+0.5**
LNSS				S	**Sg**	**17 22 32.6**	**+1.4**
T1204	**Amatrice, Fraz**	**0.24**	**132**	P	**Pg**	**17 22 28.4**	**+0.2**
T1204				S	**Sg**	**17 22 32.5**	**+1.0**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
AM05	**Amandola Campo**	**0.25**	**56**	P	**Pg**	**17 22 28.2**	**-0.2**
AM05				S	**Sg**	**17 22 32.3**	**+0.7**
AM05				AML	AML		
	comp=N,16000μm,0.5s						
AM05				AML	AML		
	comp=E,84600μm,0.6s						
AM05				AML	AML		
	comp=N,5865μm,0.1s						
AM05				AML	AML		
	comp=E,22900μm,0.9s						
CSP1	**Cessapalombo**	**0.27**	**22**	P	**Pg**	**17 22 28.6**	**-0.1**
CSP1				S	**Sg**	**17 22 33.3**	**+0.9**
SMA1	**SAN MARTINO**	**0.29**	**137**	⇑P	**Pg**	**17 22 29.1**	**+0.1**
SMA1				S	**Sg**	**17 22 33.7**	**+0.9**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
T1243	**Rocca Santa Ma**	**0.31**	**117**	⇑P	**Pg**	**17 22 29.4**	**-0.2**
T1243				S	**Sg**	**17 22 34.1**	**+0.4**
SEF1	**Sefro**	**0.32**	**344**	P	**Pg**	**17 22 30.1**	**+0.4**
SEF1				AML	AML		
	comp=N,45600μm,0.9s						
SEF1				AML	AML		
	comp=E,50550μm,1.3s						
ARRO	**Arrone**	**0.34**	**221**	⇓P	**Pg**	**17 22 30.7**	**+0.6**
ARRO				S	**Sb**	**17 22 36.8**	**-1.0**
ARRO				AML	AML		
ARRO				AML	AML		
PIO1	**Pioraco**	**0.34**	**350**	P	**Pg**	**17 22 30.4**	**+0.2**
PIO1				S	**Sg**	**17 22 36.2**	**+1.5**
PIO1				AML	AML		
	comp=E,30600μm,1.1s						
PIO1				AML	AML		
	comp=N,40400μm,0.8s						
T1211	**Morro Reatino**	**0.34**	**207**	P	**Pg**	**17 22 30.6**	**+0.5**
T1211				S	**Sg**	**17 22 36.4**	**+1.7**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
RM33	**Pellescritta (**	**0.35**	**162**	⇑P	**Pg**	**17 22 30.3**	**+0.1**
RM33				S	**Sg**	**17 22 35.7**	**+0.9**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
MDAR	**Monte D'Aria**	**0.36**	**9**	P	**Pg**	**17 22 30.5**	**+0.1**
MDAR				S	**Sg**	**17 22 36.1**	**+1.0**
MDAR				AML	AML		
	comp=E,23350μm,1.3s						
MDAR				AML	AML		
	comp=N,25000μm,1.4s						
FIU1	**Fiuminata**	**0.36**	**344**	P	**Pg**	**17 22 30.8**	**+0.3**
FIU1				S	**Sg**	**17 22 36.8**	**+1.5**
FIU1				AML	AML		
	comp=E,18500μm,0.8s						
FIU1				AML	AML		
	comp=N,20050μm,1.3s						
CAMP	**Campotosto**	**0.39**	**140**		**Pg**	**17 22 30.9**	**-0.2**
CAMP				Sg	**Sg**	**17 22 37.1**	**+0.8**
CAMP	**Campotosto**	**0.39**	**140**	⇑P	**Pg**	**17 22 30.9**	**-0.2**
CAMP				S	**Sg**	**17 22 36.9**	**+0.6**
CAMP				AML	AML		
CAMP				AML	AML		
GAG1	**Gagliole**	**0.40**	**360**	P	**Pg**	**17 22 31.5**	**+0.3**
GAG1				S	**Sb**	**17 22 38.2**	**-1.2**
GAG1				AML	AML		
	comp=N,84450μm,0.7s						
GAG1				AML	AML		
	comp=E,62200μm,0.8s						
T1246	**Crognaleto (TE**	**0.40**	**129**	⇑P	**Pg**	**17 22 31.0**	**-0.2**
T1246				S	**Sg**	**17 22 37.1**	**+0.5**
MNTP	**Montappone**	**0.42**	**44**	P	**Pg**	**17 22 31.9**	**+0.4**
MNTP				AML	AML		
	comp=N,43950μm,1.5s						
MNTP				AML	AML		
	comp=E,56600μm,0.7s						
MTL1	**Matelica**	**0.42**	**354**	P	**Pg**	**17 22 31.9**	**+0.3**
MTL1				S	**Sb**	**17 22 38.7**	**-1.3**
MTL1				AML	AML		
	comp=E,68000μm,0.7s						
MTL1				AML	AML		
	comp=N,79000μm,1.1s						
CESX	**Cesi**	**0.43**	**238**		**Pg**	**17 22 31.9**	**+0.2**
CESX				Sg	**Sg**	**17 22 38.3**	**+1.0**
CESX	**Cesi**	**0.43**	**238**	P	**Pg**	**17 22 32.0**	**+0.4**
CESX				AML	AML		
	comp=N,55400μm,1.1s						
CESX				AML	AML		
	comp=E,68950μm,0.9s						
T1247	**Pizzolo (AQ)**	**0.43**	**157**	⇑P	**Pg**	**17 22 31.8**	**0.0**
T1247				AML	AML		
T1247				AML	AML		
TERO	**Teramo**	**0.45**	**119**	P	**Pg**	**17 22 31.7**	**-0.4**
TERO				S	**Sg**	**17 22 38.3**	**+0.3**
TERO				AML	AML		
TERO				AML	AML		
	comp=E,85850μm,0.7s						
TERO				AML	AML		
TERO				AML	AML		
	comp=E,89150μm,0.7s						
OFFI	**Offida**	**0.46**	**78**	⇑P	**Pg**	**17 22 32.8**	**+0.4**
OFFI				AML	AML		
	comp=N,91200μm,0.7s						
OFFI				AML	AML		
	comp=E,74500μm,0.6s						
EL6	**Elcito**	**0.49**	**3**	P	**Pg**	**17 22 32.9**	**0.0**
EL6				AML	AML		
	comp=E,28150μm,1.4s						
EL6				AML	AML		
	comp=N,28300μm,1.4s						
TRE1	**Treia**	**0.50**	**21**	P	**Pg**	**17 22 33.5**	**+0.4**
FOSV	**Fossato di Vic**	**0.51**	**334**	P	**Pg**	**17 22 33.4**	**+0.1**
GIGS	**Gran Sasso**	**0.54**	**136**	⇑P	**Pg**	**17 22 33.1**	**-0.7**
GIGS				S	**Sg**	**17 22 40.9**	**+0.2**
GIGS				AML	AML		
	comp=E,22450μm,1.3s						
GIGS				AML	AML		
	comp=N,19400μm,0.6s						
CING	**Cingoli**	**0.54**	**10**	P	**Pg**	**17 22 33.4**	**-0.5**
AQU	**L'Aquila**	**0.54**	**153**		**Pg**	**17 22 33.4**	**-0.5**
AQU				Sg	**Sg**	**17 22 39.6**	**-1.4**
AQU	**L'Aquila**	**0.54**	**153**	P	**Pg**	**17 22 33.4**	**-0.5**
AQU				SG	**Sg**	**17 22 39.6**	**-1.4**
AQU	**L'Aquila**	**0.54**	**153**	⇑P	**Pg**	**17 22 33.5**	**-0.4**
AQU				AML	AML		
	comp=N,66850μm,1.5s						
AQU				AML	AML		
AQU				AML	AML		
	comp=N,63550μm,1.5s						
AQU				AML	AML		
FIAM	**Fiamignano**	**0.57**	**176**	P	**Pg**	**17 22 34.3**	**-0.1**
FIAM				S	**Sg**	**17 22 42.9**	**+1.0**
FIAM				AML	AML		
	comp=N,62850μm,1.1s						
FIAM				AML	AML		
MURB	**Monte Urbino**	**0.58**	**317**		**Pg**	**17 22 34.0**	**-0.7**
MURB	**Monte Urbino**	**0.58**	**317**	P	**Pg**	**17 22 34.8**	**+0.1**
CADA	**Capodarco di F**	**0.62**	**55**	P	**Pb**	**17 22 36.5**	**-0.2**
TRTR	**Tortoreto Alta**	**0.62**	**93**	P	**Pb**	**17 22 36.1**	**-0.6**
TRTR				AML	AML		
TRTR				AML	AML		
	comp=E,86250μm,0.7s						
ARVD	**Arcevia**	**0.67**	**352**	P	**Pg**	**17 22 36.1**	**-0.1**
ARVD				S	**Sb**	**17 22 46.7**	**-0.4**
ARVD				AML	AML		
	comp=E,8295μm,0.7s						
ARVD				AML	AML		
	comp=N,7915μm,0.9s						
ATLO	**AVT- Montelove**	**0.68**	**315**	P	**Pg**	**17 22 36.4**	**-0.1**
FAGN	**Fagnano**	**0.69**	**146**	P	**Pg**	**17 22 35.9**	**-0.7**
FAGN				AML	AML		
FAGN				AML	AML		
MGAB	**Montegabbione**	**0.71**	**276**	P	**Pg**	**17 22 37.2**	**+0.2**
MGAB				AML	AML		
	comp=N,29750μm,0.7s						
MGAB				AML	AML		
	comp=E,28400μm,1.6s						
MGAB				AML	AML		
	comp=E,27250μm,0.6s						
MGAB				AML	AML		
	comp=N,28400μm,0.5s						
ATVA	**AVT- Monte Val**	**0.72**	**308**	P	**Pg**	**17 22 37.4**	**+0.1**
FRON	**Frontone**	**0.72**	**340**	P	**Pg**	**17 22 36.7**	**-0.6**
FRON				AML	AML		
	comp=N,15350μm,0.5s						
FRON				AML	AML		
	comp=E,8710μm,0.9s						
VCEL	**Villa Celiera**	**0.72**	**128**	AML	AML		
	comp=E,71750μm,1.6s						
VCEL				AML	AML		
	comp=N,74650μm,0.5s						
SRES	**S.Oreste - Sor**	**0.73**	**215**	P	**Pg**	**17 22 37.3**	**-0.2**
SRES				AML	AML		
	comp=E,22600μm,0.4s						
SRES				AML	AML		
	comp=N,26950μm,0.9s						
ATMI	**Monte Miggiano**	**0.77**	**310**	P	**Pg**	**17 22 38.3**	**+0.1**
ATMI				AML	AML		
	comp=N,29650μm,0.5s						
ATMI				AML	AML		
	comp=E,23000μm,0.8s						
ATPI	**Pietralunga -**	**0.78**	**322**	P	**Pg**	**17 22 37.9**	**-0.5**
ATPI				AML	AML		
	comp=E,11455μm,1.6s						
ATPI				AML	AML		
	comp=N,10515μm,0.9s						
PIEI	**Pieia**	**0.80**	**331**	P	**Pg**	**17 22 38.1**	**-0.7**
PIEI				AML	AML		
	comp=E,5620μm,1.3s						
PIEI				AML	AML		
	comp=N,6260μm,1.6s						
T0110	**Collepietro**	**0.81**	**139**	⇑P	**Pg**	**17 22 37.6**	**-1.3**
T0110				AML	AML		
	comp=E,92300μm,0.6s						
T0110				AML	AML		
	comp=N,66950μm,0.5s						
AOI	**Ancona**	**0.81**	**29**	P	**Pg**	**17 22 38.7**	**-0.3**
AOI				AML	AML		
	comp=E,9675μm,0.8s						
AOI				AML	AML		
	comp=N,6180μm,1.2s						
NARO	**Abbazia di Nar**	**0.85**	**335**	P	**Pg**	**17 22 39.2**	**-0.5**
NARO				AML	AML		
	comp=N,5625μm,1.5s						
NARO				AML	AML		
	comp=E,5785μm,1.5s						
MTCE	**Montecelio**	**0.85**	**197**	P	**Pg**	**17 22 39.2**	**-0.6**
MTCE				AML	AML		
	comp=N,27100μm,1.4s						
MTCE				AML	AML		
	comp=E,46750μm,0.4s						
PTQR	**Pietraquaria**	**0.85**	**163**	P	**Pg**	**17 22 38.8**	**-1.0**
PTQR				AML	AML		
	comp=E,22350μm,0.5s						
PTQR				AML	AML		
	comp=N,20650μm,0.5s						
SACS	**San Casciano d**	**0.85**	**271**	P	**Pg**	**17 22 39.8**	**0.0**
SACS				AML	AML		
	comp=E,15950μm,1.0s						

SACS AML AML
comp=E,15100µm,1.0s
SACS AML AML
comp=N,14400µm,1.0s
SACS AML AML
comp=N,14700µm,1.1s
FSSB Fossombrone 0.88 346 P **Pg 17 22 39.8 -0.5**
FSSB AML AML
comp=N,22800µm,0.4s
FSSB AML AML
comp=E,24200µm,0.4s
CERT Cerreto 0.89 184 P **Pg 17 22 39.9 -0.7**
CERT AML AML
comp=E,72600µm,0.5s
CERT AML AML
comp=N,42800µm,0.8s
CAFI Castiglion Fio 0.94 302 P **Pg 17 22 40.7 -0.9**
CAFI AML AML
comp=N,7735µm,1.6s
CAFI AML AML
comp=N,8020µm,1.6s
CAFI AML AML
comp=E,5285µm,1.4s
CAFI AML AML
comp=N,8025µm,1.6s
CAFI AML AML
comp=N,7755µm,1.6s
CAFI AML AML
comp=E,5365µm,1.4s
PE3 Peglio 0.95 334 P **Pg 17 22 41.2 -0.6**
PE3 AML AML
comp=E,34µm,0.5s
PE3 AML AML
comp=N,34µm,0.5s
LATE Laterza 0.96 257 **Pg 17 22 42.0 +0.2**
RCAV Rocca di Cave 1.00 185 P **Pg 17 22 42.5 -0.1**
RCAV AML AML
comp=E,37600µm,1.1s
RCAV AML AML
comp=N,56800µm,1.1s
SSP9 Sansepolcro 1.00 317 P **Pg 17 22 42.5 -0.2**
SSP9 AML AML
comp=E,11750µm,1.3s
SSP9 AML AML
comp=N,12495µm,1.5s
MCIV Monte Civitell 1.03 267 AML AML
comp=N,5940µm,1.0s
MCIV AML AML
comp=E,7210µm,0.9s
INTR Introdacqua 1.03 143 **Pg 17 22 40.7 -2.5**
INTR Sg **Sg 17 22 55.7 -0.9**
INTR Introdacqua 1.03 143 AML AML
comp=E,31150µm,1.2s
INTR AML AML
comp=E,32µm,1.2s
INTR AML AML
comp=N,44µm,1.3s
INTR AML AML
comp=N,63550µm,1.3s
VVLD Villa Vallelon 1.05 157 P **Pg 17 22 42.1 -1.5**
VVLD AML AML
comp=N,22950µm,0.6s
VVLD AML AML
comp=E,18350µm,0.5s
GUAR Guarcino 1.06 170 P **Pg 17 22 42.8 -0.9**
GUAR AML AML
comp=E,33900µm,0.8s
GUAR AML AML
comp=N,46650µm,1.2s
RMP Rome, Mte Porz 1.06 195 P **Pg 17 22 43.3 -0.5**
RMP AML AML
comp=N,41750µm,0.6s
RMP AML AML
comp=E,32400µm,0.5s
TOLF Tolfa 1.11 226 AML AML
comp=E,17850µm,1.5s
TOLF AML AML
comp=N,20700µm,0.8s
VIVA Pratoni del Vi 1.11 192 AML AML
comp=E,50050µm,0.4s
VIVA AML AML
comp=N,56200µm,0.6s
RDP Rocca di Papa 1.11 194 P **Pg 17 22 44.6 -0.1**
RDP AML AML
comp=N,67550µm,0.6s
RDP AML AML
comp=E,81600µm,0.5s
CAFR Castel Frentan 1.13 123 P **Pg 17 22 43.2 -1.8**
CAFR AML AML
comp=E,15300µm,0.7s
CAFR AML AML
comp=N,13750µm,0.7s
LPEL Lama dei Peligi 1.14 133 P **Pg 17 22 43.0 -2.3**
LPEL AML AML
comp=E,25600µm,0.7s
LPEL AML AML
comp=N,25000µm,0.7s
ARCI Arcidosso 1.17 271 P **Pb 17 22 46.0 -0.2**
ARCI AML AML
comp=E,3290µm,1.0s
ARCI AML AML
comp=N,2850µm,1.0s
LRP Arpino 1.25 162 P **Pn 17 22 46.5 -1.0**
LRP AML AML
comp=E,10295µm,0.4s
LRP AML AML
comp=N,16300µm,0.5s
GIUL Giuliano Di Ro 1.29 174 P **Pn 17 22 47.6 -0.5**
GIUL AML AML
comp=N,14450µm,0.6s
GIUL AML AML
comp=E,11800µm,0.7s
LATB Latina 1.35 183 P **Pn 17 22 47.5 -1.3**
LATB AML AML
comp=N,4535µm,0.6s
LATB AML AML
comp=E,4605µm,0.7s
SFI Santa Sofia 1.39 320 P **Pn 17 22 49.5 0.0**
SFI AML AML
comp=N,3595µm,1.1s
SFI AML AML
comp=N,3655µm,1.1s
SFI AML AML
comp=E,3950µm,1.4s
SFI AML AML
comp=E,3860µm,1.4s
RNI2 Rionero Sannit 1.39 144 P **Pn 17 22 49.1 -0.4**
RNI2 AML AML
comp=N,19600µm,1.6s
RNI2 AML AML
comp=N,19100µm,1.6s
RNI2 AML AML
comp=E,17100µm,0.9s
RNI2 AML AML
comp=E,16700µm,0.9s
CERA Filignano 1.43 150 P **Pn 17 22 48.7 -1.3**
CERA AML AML
comp=E,17600µm,0.7s
CERA AML AML
comp=N,15650µm,0.6s
CERA AML AML
comp=N,16150µm,0.7s
CERA AML AML
comp=E,18000µm,0.7s
CSNT Castellina Chi 1.45 297 P **Pn 17 22 49.7 -0.6**
CSNT AML AML
comp=E,1564µm,0.9s
CSNT AML AML
comp=N,2460µm,1.5s
FROS Frosini 1.45 285 P **Pn 17 22 49.4 -0.9**
FROS AML AML
comp=E,4170µm,1.5s
FROS AML AML
comp=N,3200µm,1.1s
OSSC Osservatorio P 1.50 298 Pn **Pb 17 22 51.5 -0.3**
OSSC Osservatorio P 1.50 298 P **Pn 17 22 50.9 -0.1**
OSSC AML AML
comp=E,2210µm,1.1s
OSSC AML AML
comp=N,2510µm,1.6s
OSSC AML AML
comp=N,2310µm,1.1s
OSSC AML AML
comp=E,2510µm,1.6s
RUFI Rufina 1.51 312 P **Pn 17 22 50.3 -0.9**
RUFI AML AML
comp=N,2995µm,1.6s
RUFI AML AML
comp=E,2660µm,0.7s
TRIV Trivento 1.54 134 P **Pn 17 22 51.3 -0.2**
TRIV AML AML
comp=N,14000µm,0.8s
TRIV AML AML
comp=E,13800µm,1.5s
LMD Lutirano 1.59 322 P **Pn 17 22 52.3 +0.1**
LMD AML AML
comp=E,2400µm,1.2s
LMD AML AML
comp=N,2970µm,0.8s
TRIF Trifonti 1.61 281 P **Pn 17 22 51.7 -0.9**
TRIF AML AML
comp=N,1720µm,0.9s
TRIF AML AML
comp=E,1830µm,0.6s
CASP Castiglione de 1.62 269 Pn **Pn 17 22 51.9 -0.8**
CASP Castiglione de 1.62 269 P **Pn 17 22 52.2 -0.5**
CASP AML AML
comp=E,1570µm,0.9s
CASP AML AML
comp=N,1310µm,1.2s
BSSO Busso 1.72 138 P **Pn 17 22 54.0 -0.1**
BSSO AML AML
comp=E,7885µm,1.0s
BSSO AML AML
comp=E,3045µm,1.0s
BSSO AML AML
comp=N,7215µm,1.1s
BSSO AML AML
comp=N,3050µm,1.1s
MODR Mondragone 1.80 160 AML AML
comp=E,3495µm,1.3s
MODR AML AML
comp=N,3840µm,0.7s
CIGN Sant'Elia a Pi 1.81 130 P **Pn 17 22 54.8 -0.4**
CIGN AML AML
comp=N,4270µm,0.8s
CIGN AML AML
comp=E,4760µm,1.0s
PIGN Pignataro Magg 1.84 153 P **Pn 17 22 55.0 -0.6**
PIGN AML AML
comp=E,5045µm,0.9s
PIGN AML AML
comp=E,4285µm,0.8s
PIGN AML AML
comp=N,3830µm,1.1s
PIGN AML AML
comp=N,3530µm,1.0s
MELA Melanico ??? S 1.90 126 P **Pn 17 22 56.4 -0.1**
MELA AML AML
comp=E,11050µm,1.3s
MELA AML AML
comp=N,14050µm,0.8s
MELA AML AML
comp=E,11455µm,1.3s
MELA AML AML
comp=N,13550µm,0.8s
CELB S.Piero in Cam 2.11 268 P **Pn 17 22 58.9 -0.5**
CELB AML AML
comp=E,562µm,1.1s
CELB AML AML
comp=N,584µm,1.6s
PAOL Paolisi 2.12 148 **Pn 17 22 59.8 +0.2**
APRC Apricena 2.13 120 P **Pn 17 22 59.4 -0.3**
APRC AML AML
comp=N,6675µm,0.6s
APRC AML AML
comp=E,4175µm,0.5s
MOCO Biccari - m.te 2.14 133 P **Pn 17 22 59.2 -0.7**
MOCO AML AML
comp=E,2615µm,1.5s
MOCO AML AML
comp=N,1728µm,0.9s
MOCO AML AML
comp=E,2680µm,1.5s
MOCO AML AML
comp=N,1760µm,0.9s
ZCCA Zocca 2.14 316 **Pb 17 23 01.3 -1.5**
MAIM Mastiano 2.17 301 P **Pn 17 22 59.9 -0.3**
MAIM AML AML
comp=E,1019µm,0.9s
MAIM AML AML
comp=N,742µm,0.8s
BDI Bagni Di Lucca 2.18 305 P **Pn 17 22 59.6 -0.8**
BDI AML AML
comp=E,1680µm,1.1s
BDI AML AML
comp=E,616µm,1.1s
BDI AML AML
comp=N,501µm,1.0s
BDI AML AML
comp=N,1034µm,1.2s
SGRT San Giovanni R 2.26 118 Pn **Pn 17 23 01.6 0.0**
SGRT San Giovanni R 2.26 118 P **Pn 17 23 01.5 0.0**
SGRT AML AML
comp=N,6425µm,0.7s
SGRT AML AML
comp=E,4850µm,0.6s
VLC Villacollemand 2.36 305 **Pn 17 23 02.3 -0.5**
PLMA Palmaria, Port 2.64 298 P **Pn 17 23 06.2 -0.4**
PLMA AML AML
comp=E,449µm,1.6s
PLMA AML AML
comp=N,428µm,1.3s
CAPA Cerignola FG 2.65 128 P **Pn 17 23 06.9 +0.2**
CAPA AML AML
comp=E,7535µm,1.0s
CAPA AML AML
comp=N,6080µm,1.0s
RIY Rijeka 2.69 22 *e*Pn **Pn 17 23 07.3 0.0**
RIY *e*Sn **Sn 17 23 41.5 +1.4**
TEOL Teolo 2.71 339 Pn **Pn 17 23 08.6 +0.9**
MORSI Morsiglia 2.73 274 P **Pn 17 23 08.4 +0.6**
MORSI S Sg 17 24 28.7 +38
PRMA PARMA 2.77 315 **Pn 17 23 09.4 +0.9**
SKDS Skadanscina 2.79 14 ⇑*i*Pn **Pn 17 23 07.9 -0.9**
SKDS Skadanscina 2.79 14 *i* Pn **Pn 17 23 08.4 -0.3**
PALZ Palazzo San Ge 2.87 130 P **Pn 17 23 10.0 +0.1**
PALZ AML AML
comp=N,4110µm,1.4s
PALZ AML AML
comp=E,4805µm,1.0s
MRVN Minervino Murg 2.93 126 P **Pn 17 23 10.0 -0.7**
MRVN AML AML
comp=E,963µm,1.1s
MRVN AML AML
comp=N,1040µm,1.2s
MSSA Maissana 2.97 301 Pn **Pn 17 23 11.3 +0.1**
MSSA Maissana 2.97 301 P **Pn 17 23 11.4 +0.1**
MSSA AML AML
comp=E,422µm,1.4s
MSSA AML AML
comp=N,622µm,0.8s
PGF Pioggiola 3.01 266 *e*P **Pn 17 23 12.4 +0.5**
PGF *e*Sn **Sn 17 23 43.7 -4.7**
comp=N,332nm,1.1s
PGF Pioggiola 3.01 266 AML AML
comp=E,290µm,1.4s
PGF AML AML
comp=N,167µm,0.9s
PGF Pioggiola 3.01 266 S Sg 17 24 33.5 +33
PGF Pioggiola 3.01 266 P **Pn 17 23 12.4 +0.5**
CEY Cerknica 3.06 18 ⇑*i*Pn **Pn 17 23 12.7 +0.3**
BOJS Bojanci 3.09 30 ⇑*i*Pn **Pn 17 23 13.0 +0.1**
BOJS Bojanci 3.09 30 AML AML
comp=N,1425µm,0.8s
BOJS AML AML
comp=E,1380µm,1.3s
ROVR Rover Verones 3.15 334 P **Pn 17 23 13.6 -0.2**
ROVR AML AML
comp=N,485µm,0.7s
ROVR AML AML
comp=E,275µm,1.0s
SABO M.te Sabotino 3.16 7 P **Pn 17 23 13.0 -0.8**
SABO AML AML
comp=N,8045µm,0.8s
SABO AML AML
comp=E,5845µm,1.4s
SABO AML AML
comp=E,1405µm,1.4s
SABO AML AML
comp=N,1985µm,0.8s
CGRP Cima Grappa 3.17 344 P **Pn 17 23 14.3 +0.2**
CGRP AML AML
comp=E,1770µm,0.6s
CGRP AML AML
comp=N,1510µm,0.6s
CGRP AML AML
comp=N,1500µm,0.6s
CGRP AML AML
comp=E,1735µm,0.6s
SRKY Kupres RS 3.23 66 *e*Pn **Pn 17 23 15.9 +1.1**
GBAS Gorenja Brezov 3.25 17 *i* Pn **Pn 17 23 15.2 +0.2**
MTSN Montesano sull 3.27 141 P **Pn 17 23 15.2 -0.1**
MTSN AML AML
comp=N,657µm,1.1s
MTSN AML AML
comp=E,740µm,0.8s
AMUR Altamura 3.27 125 P **Pn 17 23 15.5 +0.2**
AMUR AML AML
comp=N,1331µm,1.2s
AMUR AML AML
comp=E,1855µm,0.9s
MGRS Mrkonjic Grad 3.31 60 ⇑*i*Pn **Pn 17 23 17.0 +1.1**
AJAC Base Areonaval 3.32 256 AML AML
comp=N,601µm,1.5s
AJAC AML AML
comp=E,430µm,0.6s
SALO Salr 3.33 328 Pn **Pn 17 23 16.6 +0.5**
SALO Salr 3.33 328 P **Pn 17 23 16.7 +0.5**
SALO AML AML
comp=E,1100µm,1.6s
SALO AML AML
comp=N,1735µm,1.0s
SALO AML AML
comp=N,1780µm,1.0s
SALO AML AML
comp=E,1090µm,1.6s
CTI Castel Tesino 3.37 343 Pn **Pn 17 23 17.3 +0.6**
CTI Castel Tesino 3.37 343 P **Pn 17 23 17.3 +0.6**
CTI Castel Tesino 3.37 343 P **Pn 17 23 17.4 +0.7**
CTI AML AML
comp=N,781µm,1.1s
CTI AML AML
comp=E,709µm,0.6s
LJU Ljubljana 3.37 18 AML AML
comp=N,5095µm,1.5s
LJU AML AML
comp=E,4190µm,0.8s
SIRI Monte Sirino - 3.39 141 P **Pn 17 23 16.6 -0.4**
SIRI AML AML
comp=E,476µm,1.2s
SIRI AML AML
comp=N,520µm,1.0s
SIRI AML AML
comp=N,508µm,1.6s
SIRI AML AML
comp=E,480µm,1.2s
STON Ston 3.41 88 ⇑*i*Pn **Pn 17 23 15.9 -1.2**
STON Ston 3.41 88 *e*Pn **Pn 17 23 16.2 -0.9**
STON *e*Sn **Sn 17 23 56.1 -1.8**
CADS Cadrg 3.42 8 *i* Pn **Pn 17 23 17.3 -0.1**
STAL STALIGIAL 3.43 356 **Pn 17 23 17.6 +0.1**
STAL STALIGIAL 3.43 356 P **Pn 17 23 17.4 -0.2**
STAL AML AML
comp=N,930µm,1.2s
STAL AML AML
comp=E,1070µm,0.8s
STAL AML AML
comp=E,796µm,0.8s
STAL AML AML
comp=N,860µm,1.3s
LUSI Trento, Gardas 3.47 335 P **Pn 17 23 18.6 +0.4**
LUSI AML AML
comp=E,660µm,1.2s
LUSI AML AML
comp=N,622µm,1.1s
MATE Matera 3.49 128 ⇑P **Pn 17 23 18.9 +0.6**
MATE ⇑S **Sn 17 24 01.2 +1.2**
MATE Matera 3.49 128 P **Pn 17 23 18.4 +0.1**
MATE AML AML
comp=E,1215µm,1.0s
MATE AML AML
comp=N,1164µm,0.7s
CIMO Cimolais 3.50 353 P **Pn 17 23 17.9 -0.5**
CIMO AML AML
comp=N,340µm,0.7s
CIMO AML AML
comp=N,349µm,0.8s
CIMO AML AML
comp=E,365µm,1.0s
CIMO AML AML
comp=E,360µm,1.0s
CUC Castrocucco 3.52 143 Pn **Pn 17 23 19.9 +1.1**
A051A Mrakovica 3.52 51 *e*Pn **Pn 17 23 19.6 +0.8**
BLY Banja Luka 3.54 56 *e*Pn **Pn 17 23 19.4 +0.4**
BLY Banja Luka 3.54 56 *e*Pn **Pn 17 23 19.9 +0.9**
BLY *e*Sn **Sn 17 24 01.0 -0.2**
PTCC Patocco-Chiusa 3.57 3 P **Pn 17 23 18.5 -1.0**
PTCC AML AML
comp=E,473µm,0.8s
PTCC AML AML
comp=N,498µm,0.8s
GAGG Gaggia 3.58 336 P **Pn 17 23 20.2 +0.5**
GAGG AML AML
comp=N,1565µm,1.0s
GAGG AML AML
comp=E,1645µm,1.0s
GAGG AML AML
comp=N,736µm,1.4s
GAGG AML AML
comp=E,852µm,1.4s
LTRZ Laterza 3.59 127 P **Pn 17 23 20.2 +0.5**
ZONE Zone 3.61 325 AML AML
comp=E,345µm,1.2s
ZONE AML AML
comp=N,487µm,1.0s
CLUD Cludinico 3.62 358 **Pn 17 23 20.2 +0.1**
CLUD Cludinico 3.62 358 P **Pn 17 23 19.9 -0.2**
CLUD AML AML
comp=N,648µm,1.4s
CLUD AML AML
comp=E,960µm,1.6s
CLUD AML AML
comp=N,692µm,1.3s
CLUD AML AML
comp=E,975µm,1.6s
PRED Cave del Predi 3.62 5 **Pn 17 23 20.5 +0.3**
NOCI Noci 3.62 123 P **Pn 17 23 20.2 0.0**
NOCI AML AML
comp=E,1004µm,0.5s
NOCI AML AML
comp=N,1335µm,0.8s
MABI Malga Bissina 3.70 331 P **Pn 17 23 21.9 +0.5**
MABI AML AML
comp=E,226µm,1.6s
MABI AML AML
comp=N,273µm,0.9s
ZOU Zoufplan 3.72 359 P **Pn 17 23 21.9 +0.2**
ZOU AML AML
comp=N,938µm,1.5s
ZOU AML AML
comp=E,807µm,0.9s
ZOU AML AML
comp=N,922µm,1.5s
ZOU AML AML
comp=E,849µm,1.6s
ACOM Acomizza, Ital 3.72 5 P **Pn 17 23 22.4 +0.7**
ACOM AML AML
comp=E,1110µm,1.3s
ACOM AML AML
comp=N,926µm,0.9s
ACOM AML AML
comp=E,1059µm,1.3s
ACOM AML AML
comp=N,1023µm,0.9s
FVI Forni Avoltri 3.76 357 P **Pn 17 23 22.8 +0.6**
FVI AML AML
comp=N,654µm,1.1s
FVI AML AML
comp=E,612µm,1.2s
MYKA Terra Mystica 3.81 6 *i* Pn **Pn 17 23 24.3 +1.5**
comp=E,34nm,0.5s,SNR=18
MYKA *e*Sn **Sb 17 24 13.7 -4.0**
comp=E,59nm,0.4s
KOSI Kohlern 3.82 342 P **Pn 17 23 22.9 -0.1**
KOSI AML AML
comp=N,700µm,1.6s
KOSI AML AML
comp=E,990µm,1.2s

OBKA Obir 3.82 16 *e*Pn Pn 17 23 22.4 -0.5
OBKA Obir 3.82 16 *i* Pn Pn 17 23 23.9 +1.0
comp=E,2.1nm,0.2s
OBKA Obir 3.82 16 *e*Pn Pn 17 23 22.9 0.0
APPI Appiano 3.87 341 P Pn 17 23 24.4 +0.7
APPI AML AML
comp=N,510µm,0.9s
APPI AML AML
comp=E,402µm,0.8s
TREB Trebinje 3.89 90 *e*Pn Pn 17 23 24.3 +0.5
TREB *e*Sn Sn 17 24 09.2 -0.7
TAR1 Taranto 3.91 125 AML AML
comp=E,1250µm,0.6s
TAR1 AML AML
comp=N,989µm,0.6s
A052A Srbac 3.92 53 *e*Pn Pn 17 23 22.4 -1.9
ABTA Abfaltersbach 3.93 354 *i* Pn Pn 17 23 25.6 +1.1
comp=N,27nm,0.5s,SNR=40
ABTA *e*Sn Sb 17 24 15.6 -5.4
comp=N,195nm,0.8s
BRY Bratogost 4.02 87 *e*Pn Pn 17 23 26.0 +0.2
BRY Bratogost 4.02 87⇑*i*Pn Pn 17 23 26.0 +0.2
BRY *i* Sn Sn 17 24 13.5 +0.2
HCY Herceg Novi 4.02 94 *e*Pn Pn 17 23 25.3 -0.3
HCY Herceg Novi 4.02 94⇑*i*Pn Pn 17 23 26.0 +0.4
HCY *i* Sn Sn 17 24 13.4 +0.3
SOKA Soboth 4.08 19 *e*Pn Pn 17 23 26.8 +0.2
comp=N,3.7nm,0.5s
RISI Rein 4.17 351 P Pn 17 23 27.7 -0.1
RISI AML AML
comp=N,838µm,0.4s
RISI AML AML
comp=E,1112µm,0.4s
SAOF Saorge 4.18 288 P Pn 17 23 29.3 +1.5
MUGIO Muggio 4.22 318 P Pn 17 23 27.9 -0.5
MUGIO AML AML
comp=N,196µm,1.4s
MUGIO AML AML
comp=E,214µm,0.8s
SBF Sospel 4.23 286 *e*P Pn 17 23 29.0 +0.4
KBA Koelnbreinsper 4.24 3 *i* Pn Pn 17 23 30.6 +1.8
comp=E,52nm,0.4s,SNR=14
KBA *e*Sn Sn 17 24 23.6 +4.8
comp=E,137nm,0.6s
KBA Koelnbreinsper 4.24 3 *e*Pn Pn 17 23 30.4 +1.6
ROSI Rosskopf 4.25 345 P Pn 17 23 28.7 -0.3
ROSI AML AML
comp=E,959µm,1.0s
ROSI AML AML
comp=N,710µm,0.8s
FUORN Ofenpass-Fuorn 4.28 333 Pn 17 23 31.1 +1.8
TURF col de Turini 4.29 287 P Pn 17 23 30.0 +0.5
UPM Unac-Piva 4.29 83 *e*Pn Pn 17 23 30.3 +0.7
UPM Unac-Piva 4.29 83 *e*Pn Pn 17 23 29.9 +0.3
UPM *i* Sn Sn 17 24 20.2 +0.1
VARE Varese 4.32 316 P Pn 17 23 29.8 0.0
CEME Cevo 4.32 92⇓*i*Pn Pn 17 23 30.2 +0.4
CEME *i* Sn Sn 17 24 20.8 +0.2
NKME Niksic 4.33 89⇑*i*Pn Pn 17 23 30.3 +0.4
NKME *i* Sn Sn 17 24 20.9 +0.1
BUM Brajici-Budva 4.33 95⇓*i*Pn Pn 17 23 30.4 +0.4
BUM *i* Sn Sn 17 24 21.0 0.0
VSL Villasalto 4.35 221 P Pn 17 23 29.8 -0.4
BEHE Becsehely 4.49 35 P Pn 17 23 36.1 +4.0
FETA Feichten 4.50 339 *i* Pn Pn 17 23 35.4 +3.0
comp=N,17nm,0.7s,SNR=24
TUE Stuetta 4.50 325 Pn Pn 17 23 34.0 +1.6
WTTA Wattenberg 4.54 348 *i* Pn Pn 17 23 35.4 +2.5
comp=N,12nm,0.4s,SNR=17
WTTA *e*Sn Sb 17 24 33.7 -5.0
comp=N,160nm,0.7s
WTTA Wattenberg 4.54 348 *e*Pn Pn 17 23 35.2 +2.3
DAVOX Davos/Dischmat 4.55 331 Pn Pn 17 23 35.1 +2.1
comp=N,6.5nm,0.3s,baz=136,slow=12,SNR=98
DAVOX Sn Sn 17 24 29.7 +3.4
comp=N,7.2nm,0.3s,baz=105,slow=24,SNR=8.4
DAVOX LR LR 17 25 51.8
comp=N,902nm,19.0s,baz=142,slow=46
comp=N,37nm,0.5s
DRME Dracevica, Mon 4.57 96⇑*i*Pn Pn 17 23 33.8 +0.7
DRME Dracevica, Mon 4.57 96⇑*i*Pn Pn 17 23 33.5 +0.4
DRME *i* Sn Sn 17 24 26.7 +0.1
SQTA Sankt Quirin 4.58 344 Pn 17 23 35.5 +2.2
SQTA Sb 17 24 33.0 -6.7
SQTA Sankt Quirin 4.58 344 *i* Pn Pn 17 23 35.5 +2.2
comp=N,11nm,0.2s,SNR=19
SQTA *e*Sn Sb 17 24 33.0 -6.7
comp=N,81nm,0.6s
CALF Calern 4.58 284 P Pn 17 23 33.9 +0.5
PDG Podgorica 4.58 93 ⇑P Pn 17 23 34.1 +0.8
PDG Podgorica 4.58 93 Pn 17 23 33.7 +0.4
PDG Podgorica 4.58 93 *e*Pn Pn 17 23 34.1 +0.8
PDG *e*Sn Sn 17 24 24.2 -2.7
PDG Podgorica 4.58 93 P Pn 17 23 33.8 +0.4
PDG AML AML
comp=N,852µm,1.4s
PDG AML AML
comp=N,634µm,1.3s
PDG AML AML
comp=E,372µm,0.8s
PDG AML AML
comp=E,466µm,0.8s
TTG Podgorica 4.58 93⇓*i*Pn Pn 17 23 33.8 +0.4
TTG *i* Sn Sn 17 24 27.0 +0.1
TIP Timpagrande 4.60 141 ⇑P Pn 17 23 36.1 +2.4
TIP Timpagrande 4.60 141 Pn 17 23 34.5 +0.8
WATA Walderalm 4.62 347 Pn 17 23 36.5 +2.6
WATA Walderalm 4.62 347 P Pn 17 23 36.6 +2.6
WATA Walderalm 4.62 347 *i* Pn Pn 17 23 36.5 +2.6
comp=E,2.7nm,0.2s,SNR=13
PLE Pljevlja 4.66 82⇑*i*Pn Pn 17 23 34.8 +0.3
PLE *i* Sn Sn 17 24 28.8 -0.1
ULC Ulcinj 4.66 99⇓*i*Pn Pn 17 23 34.8 +0.4
ULC *i* Sn Sn 17 24 28.8 0.0
RUDO Rudo 4.67 78 *e*Pn Pn 17 23 34.9 +0.3
MOTA Moosalm 4.71 344 Pn 17 23 37.0 +1.7
MOTA Sb 17 24 38.2 -5.5
MOTA Moosalm 4.71 344 *i* Pn Pn 17 23 37.0 +1.7
comp=E,20nm,0.7s,SNR=17
MOTA *e*Sn Sb 17 24 38.2 -5.5
comp=E,74nm,0.6s
BBLS Lazići 4.73 75 *e*Pn Pn 17 23 36.2 +0.7
BBLS Lazići 4.73 75 *e*Pn Pn 17 23 36.5 +1.0
BBLS *e*Sn Sn 17 24 28.3 -2.5
KOME Kolasin 4.74 88 *e*Pn Pn 17 23 36.0 +0.4
KOME *i* Sn Sn 17 24 30.9 -0.1
ARSA Arzberg 4.74 21 *e*Pn Pn 17 23 35.6 +0.1
comp=E,9.3nm,0.3s
ARSA *e*Sn Sn 17 24 29.3 -1.6
comp=E,20nm,0.4s
ARSA Arzberg 4.74 21 *e*Pn Pn 17 23 35.7 +0.1
FUSIO Fusio 4.79 320 P Pn 17 23 36.6 +0.3
SURF Saint Ours 4.83 292 P Pn 17 23 38.0 +1.2
LMR La Mourre 4.83 278 *e*P Pn 17 23 36.5 -0.2
LMR *e*Sn Sn 17 24 27.1 -5.9
comp=E,139nm,1.4s
LMR *e*Sg Sg 17 24 55.1 -3.4
comp=E,57nm,1.0s
KOVH Kovagotottos 4.85 46 P Pn 17 23 35.6 -1.4
JAUF Jausiers 4.85 291 P Pn 17 23 38.6 +1.3
BIOA Bad Ischl, Aus 4.87 5 Pn 17 23 39.0 +1.7
BIOA Sn 17 24 40.2 +6.2
BIOA Bad Ischl, Aus 4.87 5 *i* Pn Pn 17 23 39.0 +1.7
comp=E,31nm,0.3s,SNR=39
BIOA *e*Sn Sn 17 24 40.2 +6.2
comp=E,146nm,0.6s
RJOB Jochberg 4.90 358 *e*Pn Pn 17 23 39.8 +2.1
RJOB *e*Sn Sn 17 24 39.9 +5.0
SCTE Santa Cesarea 4.91 122 Pn Pn 17 23 38.1 +0.3
RETA Reutte 4.92 341 *i* Pn Pn 17 23 41.1 +3.0
comp=E,10nm,0.4s,SNR=15
RETA *e*Sn Sb 17 24 43.6 -6.1
comp=E,48nm,0.5s
MBDF Montbardon 4.93 295 *e*P Pn 17 23 39.6 +1.3
MBDF *e*Sn Sn 17 24 29.8 -6.0
comp=E,77nm,0.8s
TRIGF Trigance 4.95 283 P Pn 17 23 39.7 +1.3
PLONS Plons/SG 4.96 329 *e*Pn Pn 17 23 41.7 +3.1
PLONS *e*Sn Sn 17 24 41.4 +5.2
CREF Crivoux 4.98 292 P Pn 17 23 41.0 +2.0
TEKS Tekeris 4.99 68 *e*Pn Pn 17 23 37.2 -1.7
DAVA Damuels 4.99 334 *i* Pn Pn 17 23 41.8 +2.8
comp=E,9.0nm,0.4s,SNR=21
DAVA *e*Sn Sb 17 24 48.4 -3.2
comp=E,71nm,0.7s
DAVA Damuels 4.99 334 *e*Pn Pn 17 23 41.8 +2.8
DAVA *e*Sn Sn 17 24 43.0 +5.9
OGAG Argentiere 5.00 291 P Pn 17 23 42.9 +3.7
IVA Berane 5.02 87 *e*Pn Pn 17 23 39.8 +0.4
IVA *i* Sn Sn 17 24 37.4 -0.4
FLAF Flassans-sur-I 5.02 279 P Pn 17 23 38.5 -0.8
CEL Celeste 5.06 154 Pn Pn 17 23 40.4 +0.5
SJES Sjenica 5.08 83 *e*Pn Pn 17 23 40.0 -0.3
SJES *e*Sn Sn 17 24 37.0 -2.3
MOA Molln 5.08 9 *e*Pn Pn 17 23 40.5 +0.3
MOA *e*Sn Sn 17 24 38.4 -0.8
MOA Molln 5.08 9 *e*Pn Pn 17 23 36.4 -3.8
comp=E,13nm,0.4s
MOA *e*Sn Sn 17 24 42.5 +3.3
comp=E,27nm,0.5s
MOA Molln 5.08 9 *e*Pn Pn 17 23 35.7 -4.5
PVY Plav 5.08 90 *e*Pn Pn 17 23 40.7 +0.4
PVY *i* Sn Sn 17 24 39.1 -0.3
DIX Grande Dixence 5.19 311 P Pn 17 23 42.8 +0.9
DIVS Divibare 5.19 74 Pn 17 23 41.1 -0.7
DIVS Divibare 5.19 74 *e*Pn Pn 17 23 41.4 -0.4
DIVS Divibare 5.19 74 *e*Pn Pn 17 23 42.0 +0.2
MORH Mrgy, Hungar 5.22 48 ⇑P Pn 17 23 44.1 +2.0
MORH Mrgy, Hungar 5.22 48 P Pn 17 23 45.3 +3.2
CLTB Caltabellotta 5.26 179 Pn Pn 17 23 41.4 -1.3
LPG La Plagne 5.26 302 *e*P Pn 17 23 44.6 +1.6
TIR Tirane 5.27 104 ⇑P Pn 17 23 43.6 +0.8
TIR Sn ⇓S Sn 17 24 43.5 -0.5
TIR Tirane 5.27 104 Pn 17 23 42.0 -0.8
TIR Tirane 5.27 104 P Pn 17 23 43.4 +0.6
TIR Tirane 5.27 104 *e*Pn Pn 17 23 43.4 +0.6
TIR *e*Sn Sn 17 24 40.8 -3.1
TIR Tirane 5.27 104 P Pn 17 23 42.0 -0.8
TIR SN Sn 17 24 43.4 -0.5
UBR Ueberruh 5.27 338 *e*Pn Pn 17 23 45.5 +2.6
LPL La Plagne 5.28 303 *e*P Pn 17 23 44.8 +1.6
LPL La Plagne 5.28 303 P Pn 17 23 43.8 +0.6
TIH Tihany 5.31 39 Pn 17 23 46.7 +3.4
ARTF Artigues 5.36 280 P Pn 17 23 45.3 +1.2
MPLH Magyarpolny 5.37 35 P Pn 17 23 45.7 +1.6
VLO Vlora 5.37 114 Pn 17 23 44.8 +0.7
VLO Vlora 5.37 114 P Pn 17 23 44.8 +0.7
RONA Rosalia, Austr 5.37 24 Pn 17 23 44.3 +0.1
RONA Rosalia, Austr 5.37 24 *i* Pn Pn 17 23 44.3 +0.1
comp=E,10nm,0.4s,SNR=6.2
FRGS Fruska Gora 5.39 62⇑*i*Pn Pn 17 23 43.8 -0.6
FRGS Fruska Gora 5.39 62 *e*Pn Pn 17 23 43.9 -0.5
SENIN Lac Senin/Sane 5.42 313 Pn 17 23 44.9 -0.2
RSL Roselend 5.43 304 P Pn 17 23 47.1 +1.9
SOP Sopron 5.43 26 P Pn 17 23 46.1 +1.1
WILA Wila 5.44 329 *e*Pn Pn 17 23 47.2 +2.0
VAE Valguarnera 5.45 169 Pn Pn 17 23 50.0 +4.7
comp=E,0.3nm,0.3s,baz=260,slow=24,SNR=1.7
CONA Conrad Observa 5.46 20 *i* Pn Pn 17 23 45.5 +0.1
comp=E,6.0nm,0.3s,SNR=8.1
CONA *e*Sn Sn 17 24 49.5 +0.9
comp=E,31nm,0.5s
EGYH Egyhazaskeszo 5.48 32 P Pn 17 23 51.0 +5.3
TRUS Trudelj 5.51 73 *e*Pn Pn 17 23 46.5 +0.4
BSTF la Bastide-des 5.51 283 P Pn 17 23 47.6 +1.5
ZUR Degenried 5.53 327 P Pn 17 23 48.5 +2.1
GDM Grand'Maison 5.54 298 P Pn 17 23 49.9 +3.2
OGSI Sixt 5.55 308 P Pn 17 23 49.4 +2.6
SMRF Simiane la Rot 5.58 284 *e*P Pn 17 23 48.3 +1.3
PHP Peshkopia 5.59 99 P Pn 17 23 48.5 +1.2
ORIF Oris-en-Rattie 5.60 294 *e*P Pn 17 23 49.1 +1.7
ORIF *e*Sn Sn 17 24 45.4 -6.7
comp=E,55nm,0.8s
ORIF Oris-en-Rattie 5.60 294 P Pn 17 23 49.1 +1.7
ORIF Oris-en-Rattie 5.60 294 P Pn 17 23 49.7 +2.3
AIGLE Aigle 5.60 311 P Pn 17 23 49.2 +1.8
RUSF Rustrel 5.64 284 P Pn 17 23 50.8 +2.9
WALHA Wallhausen, DE 5.65 332 *e*Pn Pn 17 23 49.7 +1.8
GRUS Gruza 5.67 77 *e*Pn Pn 17 23 48.6 +0.3
GRUS *e*Sn Sn 17 24 51.0 -2.8
RAFF Raffo Rosso 5.70 170 Pn 17 23 48.9 +0.2
GRN Grenoble 5.80 297 P Pn 17 23 52.7 +2.5
SULZ Cheisacher 5.85 325 *e*Pn Pn 17 23 52.3 +1.5
SULZ *e*Sn Sn 17 25 00.5 +2.2
SULZ Cheisacher 5.85 325 P Pn 17 23 52.0 +1.2
TORNY Torny/Romont 5.86 314 P Pn 17 23 53.0 +2.0
SLE Schleitheim 5.89 328 *e*Pn Pn 17 23 52.3 +1.0
SLE Schleitheim 5.89 328 P Pn 17 23 52.1 +0.8
BALST Balsthal 5.89 322 *e*Pn Pn 17 23 52.8 +1.4
BALST Balsthal 5.89 322 P Pn 17 23 52.3 +0.9
SELS Selova 5.91 84 *e*Pn Pn 17 23 51.8 +0.1
SELS *e*Sn Sn 17 24 57.4 -2.4
GUT Gutenstein 5.92 333 P Pn 17 23 53.0 +1.2
METMA Mettma DE 5.94 327 *e*Pn Pn 17 23 53.0 +1.0
KEK Kerkira 5.95 119 Pn 17 23 52.6 +0.4
KEK Kerkira 5.95 119 P Pn 17 23 53.1 +0.9
OGSM Saint Maurice 5.98 300 P Pn 17 23 54.5 +2.0
SRN Sarande 6.00 117 P Pn 17 23 53.5 +0.8
OHR Ohrid 6.01 104 *i* Pn Pn 17 23 54.5 +1.4
GEC2 GERESS Array S 6.02 4 Pn 17 23 52.5 -0.7
GEC2 GERESS Array S 6.02 4 *e*Pn Pn 17 23 53.4 +0.3
GEC2 *e*Sn Sn 17 25 01.8 -0.7
GERES GERESS Array B 6.02 4 Pn Pn 17 23 53.5 +0.3
comp=E,1.7nm,0.3s,baz=168,slow=9.6,SNR=35
GERES Sn Sn 17 25 02.0 -0.6
comp=E,3.8nm,0.3s,baz=178,slow=26,SNR=2.9
GERES LR LR 17 25 58.8
comp=E,72nm,18.5s,baz=206,slow=36
comp=E,6.4nm,0.6s
GERES GERESS Array B 6.02 4 Pn 17 23 52.7 -0.5
CKRC Cesky Krumlov 6.04 8 *e*PN Pn 17 23 52.9 -0.5
ZST Bratislava 6.06 26 *e*P Pn 17 23 54.6 +1.0
ZST *e* 17 24 59.0
GIMEL St. Georges / 6.09 310 P Pn 17 23 56.2 +2.0
BERGE Lenzkirch (DE) 6.10 327 *e*Pn Pn 17 23 55.1 +0.8
BERGE *e*Sn Sn 17 25 05.6 +1.2
BOURR Bourrignon 6.15 320 P Pn 17 23 53.5 -1.4
FELD Feldberg im Sc 6.17 326 P Pn 17 23 55.3 0.0
KBN Korca 6.18 108 Pn 17 23 54.2 -1.2
KBN Korca 6.18 108 P Pn 17 23 54.2 -1.2
BRANT Les Verrieres 6.22 313 P Pn 17 23 51.8 -4.1
CABF La Chapelle 6.24 310 *e*P Pn 17 23 57.5 +1.3
OG35 Corcelles 6.25 303 P Pn 17 23 58.5 +2.2
SKO Skopje 6.26 95 *i* Pn Pn 17 23 57.3 +0.9
LSK Leskovik 6.26 113 P Pn 17 23 57.5 +1.0
KIZ Kirchzarten 6.27 326 P Pn 17 23 56.2 -0.4
MODS Modra-Piesok 6.27 27 *e*P Pn 17 23 59.5 +2.9
MODS *e* 17 25 07.3
KHC Kasperske Hory 6.30 3 Pn 17 23 56.5 -0.5
KHC Kasperske Hory 6.30 3 *e*P Pn 17 23 57.0 0.0
KHC *e* 17 25 08.5
KHC Kasperske Hory 6.30 3 *e*PN Pn 17 23 57.0 0.0
KHC *e*SN Sn 17 25 08.5 -0.9
WET Wettzell 6.31 359 *e*Pn Pn 17 23 57.7 +0.6
WET *e*Sn Sn 17 25 07.0 -2.4
CHMF Charmoille 6.33 316 P Pn 17 23 58.4 +1.0
BOVS Bovan 6.36 80 ⇑P Pn 17 23 57.7 -0.1
BOVS Bovan 6.36 80 *e*Pn Pn 17 23 57.5 -0.2
BOVS *e*Sn Sn 17 25 07.1 -3.6
IGT Igoumenitsa 6.40 119 P Pn 17 23 59.4 +1.1
VIVF Saint-Julien-l 6.40 291 *e*P Pn 17 24 00.2 +1.9
VIVF *e*Sn Sn 17 25 04.5 -7.2
comp=E,24nm,1.1s
BFO Black Forest 6.42 330 Pn 17 23 58.4 -0.2
BFO Black Forest 6.42 330 P Pn 17 23 58.4 -0.2
BFO Black Forest 6.42 330 *e*Pn Pn 17 23 58.4 -0.2
RIVEL MONT RIVEL 6.42 310 P Pn 17 23 58.9 +0.3
BARS Barje 6.43 87 *e*Pn Pn 17 23 58.8 0.0
SMOL Smolenice 6.44 27 *e*P Pn 17 24 01.8 +2.9
SMOL *e* 17 25 11.6
NEST Nestorio 6.45 109 P Pn 17 24 00.5 +1.4
VOGT Vogtsburg - To 6.47 326 P Pn 17 24 00.1 +0.8
MOF Molkenrain 6.53 322 P Pn 17 24 00.6 +0.4
MDVR Moldovita 6.55 70 ⇑P Pn 17 24 00.6 +0.2
SSB Saint Sauveur 6.61 295 Pn 17 24 02.7 +1.4
SSB Saint Sauveur 6.61 295 P Pn 17 24 02.7 +1.4
HINF Hinteralfeld 6.63 321 *e*P Pn 17 24 02.2 +0.7
HINF *e*Sn Sn 17 25 09.9 -7.5
comp=E,157nm,0.9s
KRUC Moravsky 6.64 19 *e*PN Pn 17 24 01.3 -0.3
KRUC *e*SN Sn 17 25 15.0 -2.6
RONF Ronchamp 6.65 319 P Pn 17 24 01.9 +0.2
JAN Janina 6.67 116 P Pn 17 24 02.7 +0.6
BZS Buzias 6.74 63 ⇑P Pn 17 24 04.6 +1.6
ZAGS Zajecar 6.75 79 *e*Pn Pn 17 24 02.9 -0.3
ECH Echery 6.79 324 Pn 17 24 03.3 -0.4
ECH Echery 6.79 324 P Pn 17 24 03.3 -0.4
ECH Echery 6.79 324 *e*Pn Pn 17 24 03.6 -0.1
ECH *e*Sn Sn 17 25 20.6 -0.7
ECH Echery 6.79 324 P Pn 17 24 03.5 -0.1
LASF Ste Croix 6.82 284 *e*P Pn 17 24 06.2 +2.1
JAVC Velka Javorina 6.82 26 *e*PN Pn 17 24 04.8 +0.6
STIP Stip 6.86 97 *i* Pn Pn 17 24 06.9 +2.3
WLS Welschbruch 6.86 326 P Pn 17 24 05.3 +0.6
KPRO Kipourio 6.87 112 P Pn 17 24 07.3 +2.5
CDF Champ du Feu 6.89 326 *e*P Pn 17 24 05.0 -0.2
CDF *e*Sn Sn 17 25 16.3 -7.7
comp=E,71nm,0.4s
VRAC Vranov 6.92 20 ⇑P Pn 17 24 07.5 +2.1
VRAC Vranov 6.92 20 Pn Pn 17 24 06.6 +1.2
comp=E,0.7nm,0.3s,baz=197,slow=14,SNR=5.3
VRAC LR LR 17 27 26.7
comp=E,202nm,18.7s,baz=216,slow=44
comp=E,2.8nm,0.4s
VRAC Vranov 6.92 20 *e*PN Pn 17 24 06.9 +1.5
VYHS Vyhne 6.95 34 *e*P Pn 17 24 10.1 +4.3
VYHS *e* 17 25 23.5
ROTZ Rotzenmuhle 6.96 355 *e*Pn Pn 17 24 06.3 +0.4
ROTZ *e*Sn Sn 17 25 21.8 -3.6
GRFO Grafenberg 6.97 350 Pn 17 24 06.5 +0.4
GRFO Grafenberg 6.97 350 P Pn 17 24 06.5 +0.4
GRA1 Grafenberg Arr 6.97 350 Pn 17 24 06.0 -0.2
GRF Grafenberg Arr 6.97 350 P Pn 17 24 06.0 -0.2
GRF Grafenberg Arr 6.97 350 *e*Pn Pn 17 24 08.8 +2.6
GRF *e*Sn Sn 17 25 23.1 -2.7
HAU Haudompre 7.00 320 *e*P Pn 17 24 06.4 -0.2
HAU *e*Sn Sn 17 25 18.5 -8.0
comp=E,274nm,1.0s
TSLK Tsoukalades, L 7.01 122 P Pn 17 24 07.7 +1.0
SIRR Siria 7.03 58 ⇑P Pn 17 24 07.6 +0.6
DRAG Dragano-Lefkad 7.05 124 P Pn 17 24 08.4 +1.2
HERR Herculane 7.06 70 ⇑P Pn 17 24 07.7 +0.4
BLKB Belogradchik 7.06 80 ⇑P Pn 17 24 08.2 +0.7
DJES Djerdap 7.08 72 ⇑P Pn 17 24 08.5 +0.8
NYDR Nydri-Lefkada 7.11 123 P Pn 17 24 09.0 +1.0
EVGI Lefkada island 7.14 124 P Pn 17 24 09.4 +1.0
GOPC GO Pecny, Ondr 7.17 9 *e*P Pn 17 24 09.6 +0.6
GOPC GO Pecny, Ondr 7.17 9 *e*PN Pn 17 24 09.6 +0.6
CIEL Dossenheim-sur 7.20 328 P Pn 17 24 10.4 +1.1
GRG Griva 7.21 102 P Pn 17 24 09.7 +0.2
DMLN Damoulianata-K 7.21 127 P Pn 17 24 11.0 +1.5
PRU Pruhonice 7.22 8 *e*P Pn 17 24 09.6 0.0
PRU *e* 17 25 29.7
PRU Pruhonice 7.22 8 *e*PN Pn 17 24 09.6 0.0
PRU *e*SN Sn 17 25 29.7 -2.2
VAY Valandovo 7.23 99 *i* Pn Pn 17 24 10.5 +0.8
MAHO Mahon 7.24 249 Pn Pn 17 24 10.3 +0.4
NKC Novy Kostel 7.41 357 *e*P Pn 17 24 13.8 +1.6
NKC *e* 17 25 35.6
NKC Novy Kostel 7.41 357 *e*PN Pn 17 24 13.8 +1.6
NKC *e*SN Sn 17 25 35.6 -0.9
PSDA Pessada-Kefalo 7.42 127 P Pn 17 24 13.6 +1.3
GZR Gura Zlata 7.44 67 ⇓P Pn 17 24 14.1 +1.5
KKR Krupnik 7.48 94 *i* P Pn 17 24 13.4 +0.2
VTS Vitosha 7.49 88 ⇑P Pn 17 24 14.3 +0.8
VTS Vitosha 7.49 88 Pn 17 24 13.3 0.0
VTS Vitosha 7.49 88 P Pn 17 24 13.4 0.0
VTS Vitosha 7.49 88 *i* P Pn 17 24 13.4 0.0
THL Klokotos Trika 7.50 113 P Pn 17 24 15.0 +1.7
KNT Kendrikon 7.51 100 P Pn 17 24 13.8 +0.2
SMF Signal de Mont 7.59 303 *e*P Pn 17 24 16.6 +1.9
SMF *e*Sn Sn 17 25 34.5 -6.5
comp=E,23nm,0.7s
MORC Moravsky Berou 7.60 22 ⇑P Pn 17 24 18.0 +3.3
MORC Moravsky Berou 7.60 22 Pn 17 24 15.3 +0.6
MORC Moravsky Berou 7.60 22 P Pn 17 24 15.4 +0.6
MORC Moravsky Berou 7.60 22 *e*PN Pn 17 24 17.2 +2.4
KEST Kesra 7.66 203 Pn Pn 17 24 17.0 +1.3
comp=E,1.9nm,0.3s,baz=314,slow=2.9,SNR=16
KEST LR LR 17 27 24.9
comp=E,308nm,19.2s,baz=346,slow=39
comp=E,9.7nm,0.7s
KEST Kesra 7.66 203 Pn 17 24 16.5 +0.8
KRLC Kraliky 7.68 18 *e*P Pn 17 24 17.6 +1.7
KRLC Kraliky 7.68 18 *e*PN Pn 17 24 16.5 +0.6
PAGF Fort de Pagny 7.69 321 *e*P Pn 17 24 16.9 +1.0
PAGF *e*Sn Sn 17 25 35.5 -7.8
comp=E,55nm,0.7s
EVR Evrytania 7.69 118 P Pn 17 24 18.5 +2.3
FILF Fillols 7.75 271 P Pn 17 24 17.1 +0.2
SFTF Sexfontaines 7.78 316 *e*P Pn 17 24 18.2 +0.9
baz=133
SFTF *e*Sn Sn 17 25 37.5 -8.2
comp=E,34nm,0.5s
MPEP Malo Peshtene 7.83 83 P Pn 17 24 19.2 +1.3
DPC Dobruska-Polom 7.84 15 *e*P Pn 17 24 18.3 +0.2
DPC Dobruska-Polom 7.84 15 *e*PN Pn 17 24 18.3 +0.2
MAKR Makrakomi, Fth 7.85 116 P Pn 17 24 21.1 +2.8
MOX Moxa 7.87 353 P Pn 17 24 19.2 +0.7
MOX Moxa 7.87 353 *e*Pn Pn 17 24 19.3 +0.7
MOX *e*Sn Sn 17 25 44.1 -3.8
LOR Lormes 7.88 307 *e*P Pn 17 24 20.1 +1.5
baz=119
LOR *e*Sn Sn 17 25 40.1 -8.1
comp=E,78nm,1.4s
DRGR 7.91 57 ⇑P Pn 17 24 20.9 +1.8
AVF Avril sur Loir 7.96 303 *e*P Pn 17 24 22.1 +2.5
MTLF Montolieu 7.96 277 *e*P Pn 17 24 22.1 +2.4
MTLF *e*Sn Sn 17 25 42.0 -8.1
comp=E,52nm,1.4s
MTLF Montolieu 7.96 277 P Pn 17 24 21.8 +2.0
MEZF Maizieres J'vi 7.97 318 *e*P Pn 17 24 20.9 +1.1
baz=135
MEZF *e*Sn Sn 17 25 40.9 -9.4
comp=E,77nm,1.0s
SSF Saint Saulge 7.99 305 *e*P Pn 17 24 22.5 +2.4
ABH Alteburg 8.01 333 P Pn 17 24 21.6 +1.2
MMB Musomiste 8.01 95 *i* P Pn 17 24 21.2 +0.7
SAVF Savonnieres en 8.01 319 *e*P Pn 17 24 22.8 +2.4
SAVF *e*Sn Sn 17 25 42.9 -8.5
comp=E,18nm,0.4s
CHVC Chvalec 8.02 14 *e*PN Pn 17 24 21.1 +0.6
BRG Berggiesshubel 8.06 4 *e*P Pn 17 24 23.9 +2.9
BRG *e* 17 25 53.0
BRG pmax pmax
comp=Z,3.0nm,0.5s
BRG MLR MLR
comp=N,628nm,8.8s
BRG MLR MLR
comp=E,360nm,9.2s
BRG MLR MLR
comp=Z,871nm,6.9s
LOT Lotru 8.12 68 ⇑P Pn 17 24 24.2 +2.1
NVR Nevrokopi 8.16 97 P Pn 17 24 23.0 +0.4
BGF Bois d'Agland 8.18 301 *e*P Pn 17 24 25.1 +2.4
PGB Panagyurishte 8.18 88 P Pn 17 24 23.8 +1.0
CAF Calviac 8.22 288 *e*P Pn 17 24 25.7 +2.4
CAF *e*Sn Sn 17 25 47.8 -8.7
comp=Z,26nm,1.1s
CAF Calviac 8.22 288 P Pn 17 24 24.9 +1.6
MESR Meseseni 8.22 55 ⇑P Pn 17 24 25.2 +2.0
WLF Walferdange 8.34 327 Pn 17 24 25.6 +0.7
WLF Walferdange 8.34 327 P Pn 17 24 25.6 +0.7
WLF Walferdange 8.34 327 *d*pP Pn 17 24 26.4 +1.6
WLF *d*sP Pb 17 24 27.3 -21
WLF *d*PP PnPn 17 24 31.6 -0.8
WLF *d*x x 17 24 33.1
WLF Walferdange 8.34 327 P Pn 17 24 27.1 +2.2
KLV Kalavryta, Ach 8.42 122 P Pn 17 24 28.3 +2.2
CRVS Cervenica-Dubn 8.43 41 *e*P Pn 17 24 29.9 +3.8
CLL Collm 8.47 360 Pn Pn 17 24 26.7 0.0
CLL Collm 8.47 360 *e*P Pn 17 24 22.0 -4.7
CLL Collm 8.47 360 *e*Pn Pn 17 24 22.0 -4.7
CLL *e*x x 17 24 28.0
CLL *e*x x 17 24 39.0
CLL *e*(Pg) Pg 17 25 00.0 -5.6
CLL *e*Sn Sn 17 25 45.0 -18
CLL *e*x x 17 26 02.0
CLL *e*x x 17 26 17.0
CLL *e*x x 17 26 48.0
CLL *e*Sg Sg 17 26 52.0 -3.2
comp=Z,62nm,1.3s
TCF Toulx Ste Croi 8.48 298 *e*P Pn 17 24 29.5 +2.6
TRPA Tarpa 8.50 48 ⇑P Pn 17 24 29.6 +2.5
TRPA Tarpa 8.50 48 P Pn 17 24 29.8 +2.8
HYF Humbligny 8.61 305 *e*P Pn 17 24 31.1 +2.5
UZH Uzhgorod 8.66 45 *e*P Pn 17 24 33.0 +3.6

RJF	Les Rejaudoux	8.68	290	*e*P	Pn	17 24 32.1	+2.6
STHS	Stebnicka Huta	8.68	38	*e*P	Pn	17 24 33.4	+3.7
ARR	Arges	8.70	69	⇑P	Pn	17 24 31.3	+1.4
MONQ	Montcuq	8.75	284	P	Pn	17 24 33.3	+2.7
HUMR	Humele	8.80	75	⇑P	Pn	17 24 32.5	+1.4
ITM	Ithomi	8.84	127	Pn	Pn	17 24 31.2	-0.6
VOIR		9.00	69	⇑P	Pn	17 24 35.4	+1.4
BTNL	Ternell	9.09	331	*d*PP	Pn	17 24 42.8	+7.6
RCHB	Rochefort	9.09	326	*d*P	Pn	17 24 37.3	+2.1
RCHB				*d*S	Sn	17 26 14.4	-3.5
LFF	La Frestale	9.15	287	*e*P	Pn	17 24 38.6	+2.6
MEM	Membach	9.16	331	*d*P	Pn	17 24 36.8	+0.7
GIVF	Givet	9.22	325	*e*P	Pn	17 24 39.2	+2.2
BCLA	Clavier	9.27	328	*d*PP	Pn	17 24 44.5	+6.9
DOU	Dourbes	9.31	324	*d*P	Pn	17 24 39.7	+1.5
DOU				*d*PP	PnPn	17 24 44.5	-1.3
BGES	Gesves	9.33	327	*d*P	Pn	17 24 38.0	-0.5
BGES				*d*PP	PnPn	17 24 44.7	-1.3
EPF	Esparros	9.34	275	*e*P	Pn	17 24 41.3	+2.6
DOPR	Dopca	9.36	66	⇑P	Pn	17 24 39.8	+1.0
BMRD	Maredsous	9.40	325	*d*x	x	17 24 55.0	
SZH	Strazhica	9.43	83	P	Pn	17 24 40.1	+0.2
RDO	Rodhopi	9.44	96		Pn	17 24 39.7	-0.2
BAIF	Baives	9.46	323	*e*P	Pn	17 24 42.3	+2.1
VIEF	Viey	9.58	275	P	Pn	17 24 48.8	+6.7
MLR	Muntele Rosu	9.63	70	⇑P	Pn	17 24 44.1	+1.5
MLR	Muntele Rosu	9.63	70	Pn	Pn	17 24 44.3	+1.6
	comp=Z,0.4nm,0.3s,baz=151,slow=7.5,SNR=10.0						
MLR				LR	LR	17 29 16.9	
	comp=Z,820nm,19.1s,baz=267,slow=43						
	comp=Z,4.5nm,0.7s						
MLR	Muntele Rosu	9.63	70	Pn	Pn	17 24 42.1	-0.6
MLR	Muntele Rosu	9.63	70	P	Pn	17 24 42.1	-0.6
BURAR	Bucovina Array	9.81	57	⇑P	Pn	17 24 46.8	+1.6
BURAR	Bucovina Array	9.81	57	Pn	Pn	17 24 43.9	-1.2
BURAR	Bucovina Array	9.81	57	P	Pn	17 24 43.9	-1.2
BUR08	Bucovina Ar. S	9.81	57	Pn	Pn	17 24 44.0	-1.2
COVR	Voineasa-Covas	9.88	68	⇑P	Pn	17 24 46.4	+0.3
CANF	Canfranc	9.99	274	P	Pn	17 24 51.7	+4.1
ETSF	Etsaut	10.01	275	*e*P	Pn	17 24 50.6	+2.7
MFF	Saint Martin d	10.13	296	*e*P	Pn	17 24 54.1	+4.7
PLOR	Plostina	10.18	68	⇑P	Pn	17 24 50.8	+0.5
PLOR	Plostina	10.18	68	P	Pn	17 24 50.7	+0.5
VRI	Vrincioaia	10.24	68	⇑P	Pn	17 24 52.5	+1.5
LVV	L'vov	10.30	44	*e*P	Pn	17 24 57.4	+5.7
SJPF	Ste Jean	10.48	276	*e*P	Pn	17 24 57.1	+2.8
LDF	La Druitiere	10.87	307	*e*P	Pn	17 25 02.2	+2.7
CFR	Carcaliu	11.10	73	⇑P	Pn	17 25 03.3	+0.6
APE	Apeiranthos	11.16	117	*i*P	Pn	17 25 04.3	+0.6
GRR	Gorron	11.22	304	*e*P	Pn	17 25 07.0	+2.7
IDI	Anoyia	11.88	125	Pn	Pn	17 25 14.4	+0.9
	comp=Z,0.4nm,0.3s,baz=125,slow=6.7,SNR=1.7						
IDI				Sn	Sn	17 27 24.5	-1.9
	comp=Z,0.9nm,0.3s,baz=328,slow=22,SNR=5.4						
IDI				LR	LR	17 30 59.6	
	comp=Z,88nm,20.2s,baz=306,slow=43						
	comp=Z,5.9nm,0.5s						
IDI	Anoyia	11.88	125	Pn	Pn	17 25 12.5	-0.9
KARP	Karpathos	13.12	119	Pn	Pn	17 25 30.1	-0.4
ESDC	Sonseca Array	13.20	262	Pn	Pn	17 25 30.4	-1.1
	comp=Z,0.1nm,0.3s,baz=70,slow=13,SNR=11						
ESDC				LR	LR	17 30 40.3	
	comp=Z,290nm,18.7s,baz=70,slow=38						
	comp=Z,2.3nm,0.8s						
AKASG	Malin Array Be	13.56	49	Pn	Pn	17 25 36.7	+0.5
	comp=Z,0.2nm,0.3s,baz=241,slow=12,SNR=2.1						
AKASG				LR	LR	17 31 55.9	
	comp=Z,208nm,19.6s,baz=256,slow=42						
AKBB	Malin Array Si	13.56	49	Pn	Pn	17 25 35.8	-0.5
AKBB	Malin Array Si	13.56	49	P	Pn	17 25 35.8	-0.5
MDUB	Mudurnu	13.76	94		Pn	17 25 37.8	-1.4
ELL	Elmali	14.29	110		Pn	17 25 47.1	+0.5
ELL	Elmali	14.29	110	P	Pn	17 25 47.1	+0.5
MTE	Manteigas	15.61	268	P	Pn	17 26 05.6	+1.5
MTE				IAmb	IAmb	17 26 12.7	
	comp=Z,45nm,1.5s						
BR131	Keskin Array S	15.77	94	P	Pn	17 26 05.9	-0.4
BR131	Keskin Array S	15.77	94	P	Pn	17 26 05.9	-0.4
BR131				pmax	pmax		
	comp=Z,13nm,1.2s						
BRTR	Keskin Array B	15.77	94	Pn	P	17 26 08.2	-2.1
	baz=292,slow=7.6,SNR=3.5						
BRTR				LR	LR	17 33 27.3	
	comp=Z,396nm,18.0s,baz=297,slow=42						
	comp=Z,1.1nm,0.9s						
BRTR	Keskin Array B	15.77	94	P	Pn	17 26 06.3	0.0
BRTR	Keskin Array B	15.77	94	P	Pn	17 26 06.3	0.0
EKA	Eskdalemuir Ar	16.36	325	Pn	Pn	17 26 14.2	+0.6
	baz=138,slow=14						
	comp=Z,0.7nm,0.5s						
MDT	Midelt	17.15	240	LR	LR	17 32 42.5	
	comp=Z,99nm,18.3s,baz=40,slow=36						
HFS	Hagfors	17.32	1	LR	LR	17 34 05.5	
	comp=Z,291nm,21.5s,baz=214,slow=41						
VSU	Vasula	17.82	24	*i*P	P	17 26 32.9	+0.2
NOA	NORSAR Array B	18.26	357	P	P	17 26 38.4	+0.8
	comp=Z,1.5nm,0.9s,baz=168,slow=10,SNR=3.4						
NOA				LR	LR	17 34 12.8	
	comp=Z,80nm,21.3s,baz=350,slow=39						
VSR	Storozhevoye	19.58	56	*e*P	Pn	17 26 52.9	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	19.60	43	*i*P	P	17 26 51.5	-0.7
OBN				*e*S	Sn	17 30 36.1	+2.4
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN				MLR	MLR		
	comp=Z,89nm,11.0s						
VORR	Voronezh	19.73	54	*e*P	Pn	17 26 54.1	-1.0
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
LPSR	Galich'ya Gora	19.85	52	*e*P	P	17 26 54.5	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,1.8s						
FINES	FINESS Array B	20.20	18	P	Pn	17 27 00.3	-0.2
	comp=Z,3.8nm,0.7s,baz=191,slow=8.4,SNR=10						
FINES				LR	LR	17 34 53.6	
	comp=Z,180nm,19.2s,baz=242,slow=37						
	comp=Z,3.8nm,0.7s						
MOS	Moscow	20.43	42	*e*P	P	17 26 58.1	-3.2
MOS				*e*		17 27 16.9	
MOS				pmax	pmax		
	comp=Z,40nm,0.7s						
KOPT	Kop Dagi	20.72	88		P	17 27 03.1	-1.9
KOPT				IAmb	IAmb	17 27 16.6	
	comp=Z,37nm,1.3s						
TAM	Tamanrasset	20.96	200	P	P	17 27 08.0	+0.6
TAM	Tamanrasset	20.96	200	P	P	17 27 08.0	+0.6
TAM				pmax	pmax		
	comp=Z,20nm,1.4s						
VRH	Novokhopyorsk	21.14	57	*e*P	P	17 27 09.2	+0.2
VRH				pmax	pmax		
	comp=Z,50nm,1.4s						
KIV	Kislovodsk	21.50	77	P	P	17 27 13.3	+0.2
KIV	Kislovodsk	21.50	77	*e*P	P	17 27 13.7	+0.6
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
KIV				MLR	MLR		
	comp=Z,66nm,14.0s						
KVAR	Kislovodsk Arr	21.51	77	P	P	17 27 15.1	+2.0
	comp=Z,7.3nm,0.9s,baz=276,slow=23,SNR=8.3						
	comp=Z,7.3nm,0.9s						
SHA1	Shidzhatmaz	21.51	77	*i*P	P	17 27 15.0	+1.7
ASF	Jabal al Asfar	21.63	112	P	P	17 27 17.1	+2.6
	comp=Z,18nm,1.3s,baz=320,slow=8.6,SNR=5.8						
ASF				LR	LR	17 37 56.3	
	comp=Z,146nm,18.0s,baz=291,slow=43						
	comp=Z,18nm,1.3s						
NEY	Neytrino	21.63	79	*i*P	P	17 27 15.8	+1.2
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	21.68	77	P	P	17 27 16.1	+1.2
	comp=Z,15nm,1.1s,baz=290,slow=7.9,SNR=14						
KBZ				LR	LR	17 37 45.3	
	comp=Z,97nm,19.1s,baz=288,slow=42						
	comp=Z,15nm,1.1s						
KBZ	Khabaz	21.68	77	*ce*P	P	17 27 15.1	+0.2
KBZ				pmax	pmax		
	comp=Z,31nm,1.3s						
MARD	Mardin	21.86	95	P	P	17 27 17.4	+0.4
NCK	Nalchik	22.22	78	*i*P	P	17 27 21.3	+0.6
NCK				pmax	pmax		
	comp=Z,5.0nm,0.2s						
ONI	Oni	22.27	80	P	P	17 27 21.7	+0.3
ONI				IAmb	IAmb	17 27 42.4	
	comp=Z,28nm,1.4s						
ONI	Oni	22.27	80	P	P	17 27 21.7	+0.3
ONI				pmax	pmax		
	comp=Z,28nm,1.4s						
GURO	Guroymak-BITLI	22.32	91	P	P	17 27 21.4	-0.6
GURO				IAmb	IAmb	17 27 32.7	
	comp=Z,32nm,1.3s						
GNI	Garni	23.80	86	LR	LR	17 40 16.5	
	comp=Z,83nm,18.0s,baz=286,slow=45						
KLMR	Klimovskoe	24.06	32	*e*P	P	17 27 35.7	-3.5
KLMR				pmax	pmax		
	comp=Z,32nm,1.3s						
KLMR	Klimovskoe	24.06	32	*e*P	P	17 27 35.8	-3.5
KLMR				AMP		17 27 42.0	
	comp=Z,32nm,1.3s						
BELG	Belogornoye	24.96	55	P	P	17 27 49.5	+2.0
	comp=Z,19nm,1.1s,baz=69,slow=7.6,SNR=7.2						
BELG				LR	LR	17 39 44.7	
	comp=Z,164nm,19.1s,baz=152,slow=42						
	comp=Z,19nm,1.1s						
BELG	Belogornoye	24.96	55	*i*P	P	17 27 49.9	+2.4
BELG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIRV	Kirov	27.45	42	LR	LR	17 39 36.9	
	comp=Z,128nm,18.5s,baz=246,slow=38						
KIRV	Kirov	27.45	42	*ce*P	P	17 28 11.2	+1.3
TORD	Torodi Ar. Bea	31.18	202	P	P	17 28 43.9	+0.5
	comp=Z,4.6nm,0.9s,baz=13,slow=7.8,SNR=21						
	comp=Z,4.6nm,0.9s						
ARU	Arti	31.81	49	P	P	17 28 48.0	-0.7
ARU				IAmb	IAmb	17 28 54.7	
	comp=Z,13nm,1.1s						
ARU	Arti	31.81	49	*d*P	P	17 28 49.9	+1.2
ARU						17 29 56.6	
ARU				S	S	17 34 01.6	+2.4
ARU				SS	SnSn	17 35 43.8	-2.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ABKAR	Akbulak array	32.73	62	P	P	17 28 57.0	+0.3
ABKAR	Akbulak array	32.73	62	P	P	17 28 55.8	-1.0
SVE	Sverdlovsk	32.99	48	*e*P	P	17 28 59.6	+0.6
GEYT	Alibeck	34.35	83	P	P	17 29 11.8	+0.7
	comp=Z,4.5nm,0.9s,baz=285,slow=7.5,SNR=10						
GEYT				LR	LR	17 47 09.5	
	comp=Z,47nm,19.4s,baz=271,slow=43						
	comp=Z,4.5nm,0.9s						
GEYT	Alibeck	34.35	83	P	P	17 29 10.6	-0.5
GEYT				IAmb	IAmb	17 29 13.9	
	comp=Z,5.7nm,1.0s						
BBTS	Babate	37.87	231	LR	LR	17 45 55.8	
	comp=Z,96nm,18.5s,baz=37,slow=37						
BRVK	Borovoye	38.69	54	P	P	17 29 48.4	+0.5
BRVK				IAmb	IAmb	17 29 52.0	
	comp=Z,9.1nm,0.8s						
BRVK	Borovoye	38.69	54	*ce*P	P	17 29 49.6	+1.7
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
BVAR	Borovoye Array	38.76	54	LR	LR	17 47 07.7	
	comp=Z,102nm,20.3s,baz=281,slow=38						
KK31	Karatay Array	41.31	69	P	P	17 30 09.1	-0.7
KK31	Karatay Array	41.31	69	P	P	17 30 09.1	-0.7
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	41.31	69	P	P	17 30 09.6	-0.2
KKAR	Karatay Array	41.31	69	P	P	17 30 09.1	-0.7
KKAR				IAmb	IAmb	17 30 14.5	
	comp=Z,6.4nm,1.0s						
KKAR	Karatay Array	41.31	69	P	P	17 30 09.1	-0.7
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHGR	Chuyangaron	42.03	76	P	P	17 30 16.4	+0.6
CHGR				IAmb	IAmb	17 30 19.2	
	comp=Z,17nm,1.1s						
CHGR	Chuyangaron	42.03	76	P	P	17 30 16.5	+0.6
CHGR				pmax	pmax		
	comp=Z,17nm,1.1s						
GAR	Garm	42.72	75	P	P	17 30 21.6	+0.1
GAR				IAmb	IAmb	17 30 26.4	
	comp=Z,19nm,1.1s						
AAK	Ala-Archa	44.21	68	P	P	17 30 34.6	+1.1
AAK				IAmb	IAmb	17 30 37.4	
	comp=Z,7.1nm,1.2s						
AAK	Ala-Archa	44.21	68	*ce*P	P	17 30 35.1	+1.6
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	Kurchatov	44.23	56	P	P	17 30 33.2	-0.2
KURK				IAmb	IAmb	17 30 36.0	
	comp=Z,7.7nm,1.1s						
KURK	Kurchatov	44.23	56	*ce*P	P	17 30 33.6	+0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NRIK	Noril'sk	45.31	29	*ce*P	P	17 30 42.1	+0.3
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAA0	Zalesovo Array	46.95	50	P	P	17 30 54.7	-0.2
ZAA0				IAmb	IAmb	17 30 57.7	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	46.95	50	P	P	17 30 55.5	+0.7
	comp=Z,1.5nm,0.8s,baz=268,slow=7.3,SNR=8.0						
	comp=Z,1.5nm,0.8s						
ZALV	Zalesovo Beam	46.95	50	P	P	17 30 54.9	+0.1
ZALV	Zalesovo Beam	46.95	50	*i*P	P	17 30 56.0	+1.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NIL	Nilore	47.26	80	P	P	17 30 57.0	-0.6
NIL	Nilore	47.26	80	P	P	17 30 57.0	-0.6
NIL				pmax	pmax		
	comp=Z,15nm,1.2s						
MK31	Makanchi Array	47.81	60	P	P	17 31 01.5	-0.2
MK31				IAmb	IAmb	17 31 04.5	
	comp=Z,4.7nm,1.1s						
MK31	Makanchi Array	47.81	60	P	P	17 31 01.5	-0.2
MK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MKAR	Makanchi Array	47.81	60	P	P	17 31 02.2	+0.5
	comp=Z,4.1nm,0.9s,baz=293,slow=6.3,SNR=15						
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	47.81	60	P	P	17 31 01.9	+0.1
DGZ	Jazzator, Alta	49.91	55	*i*P	P	17 31 18.7	+0.8
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMQ	Urumqi	52.51	62	*e*P	P	17 31 39.5	+2.1
TIXI	Tiksi	57.23	20	*ce*P	P	17 32 13.8	+2.7
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
SONM	Songino Array	61.84	50	P	P	17 32 45.2	+1.8
	comp=Z,4.8nm,1.0s,baz=288,slow=7.8,SNR=20						
	comp=Z,4.8nm,1.0s						
ULN	Ulaanbaatar	62.19	49	*i*P	P	17 32 47.1	+1.2
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YAK	Yakutsk	63.76	28	*ce*P	P	17 32 57.0	+1.2
YAK				pmax	pmax		
	comp=Z,15nm,1.7s						
INK	Inuvik	66.38	347	P	P	17 33 12.8	+0.1
	comp=Z,1.2nm,0.5s,baz=51,slow=6.5,SNR=2.9						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	66.96	336	P	P	17 33 16.6	0.0
	comp=Z,0.9nm,0.8s,baz=37,slow=8.3,SNR=2.1						
YKA				LR	LR	18 03 41.4	
	comp=Z,61nm,18.6s,baz=296,slow=37						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	66.96	336	*i*P	P	17 33 22.2	+5.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HHC	Hu-ho-hao-te	68.96	54	*e*P	P	17 33 30.3	+0.7
SEY	Seymchan	69.68	19	*i*P	P	17 33 36.0	+2.5
SEY				pmax	pmax		
	comp=Z,20nm,1.8s						
H21K	Melozitna Rive	71.28	354	P	P	17 33 44.0	+0.6
ILAR	Eielson Array	71.58	351	P	P	17 33 46.8	+1.7
	comp=Z,0.5nm,0.8s,baz=9.4,slow=5.4,SNR=4.4						
	comp=Z,0.5nm,0.8s						
PZH	PanZhiHua	71.58	71	P	P	17 33 46.5	+0.6
DHY	Denali Highway	73.28	351	P	P	17 33 56.5	+1.0
CHTO	Chiang Mai	74.50	79	P	P	17 34 02.4	-0.7
CHTO				IAmb	IAmb	17 34 05.4	
	comp=Z,5.2nm,1.1s						
CHTO	Chiang Mai	74.50	79	P	P	17 34 02.4	-0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CMAR	Chiang Mai Arr	74.73	79	P	P	17 34 04.8	+0.4
	comp=Z,2.4nm,0.9s,baz=303,slow=7.3,SNR=19						
	comp=Z,2.4nm,0.9s						
CMAR	Chiang Mai Arr	74.73	79	P	P	17 34 04.2	-0.3
BMO	Blue Mountains	82.11	327	P	P	17 34 44.8	-0.2
BMO	Blue Mountains	82.11	327	P	P	17 34 44.8	-0.2
BMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ASAR	Alice Springs	128.03	88	PKP	PKiKP	17 41 30.8	-0.4
	comp=Z,0.2nm,0.6s,baz=313,slow=1.3,SNR=1.7						

*IDC **27** 17:23:42.9±1.2, 42°.83N×13°.07E, h0km, mb3.9/8, mbtmp4.0/10, ML4.0/2, MS3.7/3, Error ellipse: s-maj=27.5km s-min=26.9km az=31.0*
*ROM **27** 17:23:43.3±0.0, 42°.847N±0°.002×13°.109E±0°.004, h9km, ML3.9/3, Error ellipse: s-maj=0.3km s-min=0.1km az=72.0*

ISC 27 17:23:43.8±0.7, 42°.84N±0°.01×13°.11E±0°.02, h7km±4km, n65, σ0=91/96, mb4.0/7, MS3.5/3, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.01	145	P	Pg	17 23 45.2	0.0
NRCA				S	Sg	17 23 46.0	-0.1
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1216	Preci, Frazion	0.08	307	P	Pg	17 23 45.6	-0.1
T1216				S	Sg	17 23 47.5	+0.3
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MC2	Monte Cornacci	0.09	42	P	Pg	17 23 46.0	-0.1
MC2				S	Sg	17 23 48.0	+0.2
FEMA	Monte Fema	0.12	341	P	Pg	17 23 46.7	+0.1
FEMA				S	Sg	17 23 48.9	+0.4
MMO1	Montemonaco	0.17	71	P	Pg	17 23 47.4	0.0
MMO1				S	Sg	17 23 50.4	+0.6
T1215	Vallo di Nera,	0.18	257	P	Pg	17 23 47.7	+0.2
T1215				S	Sg	17 23 50.9	+1.0
T1215				AML	AML		
	comp=N,47650μm,0.4s						
T1215				AML	AML		
	comp=E,97300μm,0.4s						
T1215				AML	AML		
	comp=N,39550μm,1.2s						
T1215				AML	AML		
	comp=E,94950μm,0.4s						
T1215				AML	AML		
	comp=N,47650μm,0.4s						
T1215				AML	AML		
	comp=N,39500μm,1.2s						
T1215				AML	AML		
	comp=E,97400μm,0.4s						
T1215				AML	AML		
	comp=N,39500μm,1.2s						
T1215				AML	AML		
	comp=N,37896μm,1.0s						
T1215				AML	AML		
	comp=E,94950μm,0.4s						
T1217	Poggiodomo (PG	0.18	224	P	Pg	17 23 47.9	+0.4
T1217				S	Sg	17 23 51.3	+1.2
FDMO	Fiordimonte	0.19	356	P	Pg	17 23 48.1	+0.4
FDMO				S	Sg	17 23 51.2	+0.8
FDMO				AML	AML		
	comp=E,32650μm,0.3s						
FDMO				AML	AML		
	comp=N,29750μm,0.8s						
FDMO				AML	AML		
	comp=N,26984μm,1.0s						
FDMO				AML	AML		
	comp=E,37552μm,0.0s						
T1201	Domo (RI)	0.21	150	P	Pg	17 23 48.6	+0.5
T1201				S	Sg	17 23 52.8	+1.8
CESI	CESI - Serrava	0.22	318	P	Pg	17 23 48.2	+0.1
CESI				S	Sg	17 23 51.9	+0.8
AM05	Amandola Campo	0.23	54	P	Pg	17 23 48.4	+0.1
AM05				S	Sg	17 23 52.3	+1.0
T1204	Amatrice, Fraz	0.23	137	P	Pg	17 23 48.6	+0.2
T1204				S	Sg	17 23 52.9	+1.4
LNSS	Leonessa	0.24	191	P	Pg	17 23 48.9	+0.2
LNSS				S	Sg	17 23 53.2	+1.3
CSP1	Cessapalombo	0.26	16	P	Pg	17 23 49.1	+0.1
CSP1				S	Sg	17 23 53.4	+0.9
SMA1	SAN MARTINO	0.27	141	P	Pg	17 23 49.4	+0.2
SMA1				S	Sb	17 23 54.3	-1.7
GUMA	Gualdo di Mace	0.28	38	P	Pg	17 23 49.6	+0.3
GUMA				S	Sb	17 23 54.6	-1.5
T1243	Rocca Santa Ma	0.29	120	P	Pg	17 23 49.4	-0.2
T1243				S	Sg	17 23 54.5	+1.0
SEF1	Sefro	0.32	339	P	Pg	17 23 50.1	0.0
SEF1				S	Sb	17 23 55.6	-1.8
RM33	Pellescritta (	0.34	166	P	Pb	17 23 50.9	-1.4
RM33				S	Sb	17 23 56.4	-1.6
PIO1	Pioraco	0.35	345	P	Pg	17 23 50.6	0.0
PIO1				S	Sb	17 23 56.4	-1.7
MDAR	Monte D'Aria	0.35	5	P	Pg	17 23 50.7	0.0
MDAR				S	Sg	17 23 56.2	+0.9
T1211	Morro Reatino	0.36	211	P	Pb	17 23 51.3	-1.3
T1211				S	Sb	17 23 57.3	-1.2
ARRO	Arrone	0.36	224	P	Pb	17 23 51.2	-1.4
ARRO				S	Sb	17 23 57.1	-1.4
FIU1	Fiuminata	0.37	340	P	Pg	17 23 51.0	+0.1
FIU1				S	Sb	17 23 57.1	-1.6
CAMP	Campotosto	0.38	144	P	Pg	17 23 51.1	-0.2
CAMP				S	Sb	17 23 57.6	-1.5
T1246	Crognaleto (TE	0.39	132	P	Pg	17 23 51.0	-0.3
T1246				S	Sb	17 23 57.6	-1.6
GAG1	Gagliole	0.40	356	P	Pg	17 23 51.7	+0.2
GAG1				S	Sb	17 23 58.4	-1.0
MNTP	Montappone	0.40	42	P	Pb	17 23 52.0	-1.2
MTL1	Matelica	0.42	350	P	Pg	17 23 51.9	0.0
MTL1				S	Sb	17 23 58.8	-1.4
T1247	Pizzolo (AQ)	0.43	160	P	Pb	17 23 52.3	-1.4
T1247				S	Sb	17 23 59.5	-0.8
TERO	Teramo	0.43	121	P	Pg	17 23 51.7	-0.4
TERO				S	Sb	17 23 58.8	-1.6
OFFI	Offida	0.44	78	P	Pb	17 23 53.0	-0.8
CESX	Cesi	0.45	239	P	Pg	17 23 52.4	-0.1
CESX				S	Sb	17 23 59.9	-1.1
ATCC	AVT- Casa Cast	0.48	315	P	Pg	17 23 53.0	-0.1
EL6	Elcito	0.49	360	P	Pg	17 23 53.1	-0.2
FOSV	Fossato di Vic	0.52	331	P	Pg	17 23 53.

comp=E,0.8nm,0.6s,baz=276,slow=6.4,SNR=2.0
comp=E,0.8nm,0.6s
SCHQ Schefferville 51.17 313 P **P 17 32 46.4 -0.9**
comp=E,7.6nm,1.1s,baz=34,slow=7.3,SNR=2.4
comp=E,7.6nm,1.1s
SONM Songino Array 61.82 50 P **P 17 34 03.4 0.0**
comp=E,2.8nm,1.1s,baz=285,slow=7.9,SNR=5.5
comp=E,2.8nm,1.1s
RCBR Riachuelo 65.69 235 LR LR 18 02 29.0
comp=E,116nm,18.7s,baz=140,slow=35
INK Inuvik 66.38 347 P **P 17 34 32.8 -0.1**
comp=E,2.4nm,1.0s,baz=9.3,slow=3.8,SNR=3.0
comp=E,2.4nm,1.0s
BRDH Bariadhala 66.75 80 LR LR 18 09 49.4
comp=E,31nm,19.5s,baz=266,slow=41
CMAR Chiang Mai Arr 74.70 79 P **P 17 35 24.9 +0.5**
comp=E,0.6nm,0.6s,baz=304,slow=7.7,SNR=4.7
comp=E,0.6nm,0.6s

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*IDC **27** 17:25:25.4±1.4, 17.°88S×178.°54W, h601km±14km, mb3.2/10, mbtmp4.2/13, Error ellipse: s-maj=38.1km s-min=14.1km az=147.0*
*NEIC **27** 17:25:27.0±0.8, 18.°5S±0.°2×178.°63W±0.°09, h597km±12km, mb4.3/21, Error ellipse: s-maj=22.5km s-min=12.0km az=164.0*
ISC 27 17:25:24.6±0.5, 18.°1S±0.°1×178.°45W±0.°08, h600km, n49, σ1§18/53, mb4.0/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.35**	**275**	P		**P**		**17 26 47.5**	**+1.5**
	72nm,0.8s,baz=136,slow=3.1,SNR=41								
MSVF	**Nonsavu**	**3.35**	**275**	P		**P**		**17 26 47.0**	**+1.1**
AFI	**Afiamalu**	**7.62**	**58**	P		**P**		**17 27 19.7**	**-0.9**
	26nm,0.6s,baz=170,slow=22,SNR=3.9								
AFI				S		**S**		**17 28 53.2**	**-2.2**
	16nm,0.6s,baz=132,slow=23,SNR=2.3								
AFI	**Afiamalu**	**7.62**	**58**	P		**P**		**17 27 21.4**	**+0.8**
AFI				S		**S**		**17 28 54.6**	**-0.8**
NIUE	**Niue**	**8.15**	**99**	P		**P**		**17 27 28.2**	**+2.8**
MARNC	**Mare, Loyalty**	**13.18**	**253**	P		**P**		**17 28 14.6**	**-0.6**
LIFNC	**LIFOU**	**13.77**	**256**	P		**P**		**17 28 20.5**	**-0.8**
DZM	**Mont Dzumac**	**14.75**	**252**	P		**P**		**17 28 30.5**	**-0.1**
	6.1nm,0.8s,baz=314,slow=21,SNR=10								
KOUNC	**Koumac, New Ca**	**16.49**	**259**	P		**P**		**17 28 43.5**	**-3.0**
KOUNC				IAmb		IAmb		17 29 04.0	
	comp=Z,20nm,0.9s								
OUZ	**Omahuta**	**18.51**	**201**	P		**P**		**17 29 04.0**	**-0.7**
OUZ				IAmb		IAmb		17 29 22.5	
	comp=Z,16nm,1.4s								
HIZ	**Hauiti**	**21.21**	**195**	P		**P**		**17 29 26.5**	**-2.6**
KHZ	**Kahutara**	**25.23**	**194**	P		**P**		**17 30 02.7**	**-1.9**
CTAO	**Charters Tower**	**33.39**	**261**	P		**P**		**17 31 15.6**	**+0.4**
CTAO				IAmb		IAmb		17 31 24.7	
	comp=Z,16nm,1.5s								
COEN	**Coen**	**37.07**	**271**	P		**P**		**17 31 46.8**	**+1.1**
STKA	**Stephens Creek**	**38.53**	**241**	P		**P**		**17 31 57.8**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=99,slow=7.0,SNR=3.9								
	comp=Z,1.5nm,0.7s								
STKA	**Stephens Creek**	**38.53**	**241**	P		**P**		**17 31 56.6**	**-0.8**
BBOO	**Buckleboo**	**43.30**	**241**	P		**P**		**17 32 33.7**	**-1.4**
BBOO				IAmb		IAmb		17 33 02.7	
	comp=Z,19nm,1.5s								
WB0	**Warramunga Arr**	**44.54**	**260**	P		**P**		**17 32 44.8**	**0.0**
WB0				IAmb		IAmb		17 33 13.4	
	comp=Z,6.4nm,1.4s								
WB2	**Warramunga Arr**	**44.56**	**260**	P		**P**		**17 32 44.4**	**-0.5**
WB2				IAmb		IAmb		17 32 52.1	
	comp=Z,8.1nm,1.5s								
WRA	**Warramunga Arr**	**44.57**	**260**	P		**P**		**17 32 44.5**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=94,slow=7.1,SNR=46								
WRA				PcP		**PcP**		**17 34 14.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=89,slow=3.7,SNR=8.9								
	comp=Z,0.7nm,0.4s								
WRA	**Warramunga Arr**	**44.57**	**260**	P		**P**		**17 32 44.7**	**-0.3**
AS31	**Alice Springs**	**44.72**	**254**	P		**P**		**17 32 46.4**	**+0.3**
ASAR	**Alice Springs**	**44.72**	**254**	P		**P**		**17 32 46.4**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=88,slow=8.9,SNR=65								
ASAR				PcP		**PcP**		**17 34 15.3**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=102,slow=3.6,SNR=8.5								
	comp=Z,2.9nm,0.5s								
ASAR	**Alice Springs**	**44.72**	**254**	P		**P**		**17 32 45.6**	**-0.5**
GUMO	**Guam**	**47.94**	**309**	P		**P**		**17 33 13.1**	**+2.8**
MTN	**Manton Dam**	**48.76**	**269**	P		**P**		**17 33 16.3**	**-0.2**
MTN				IAmb		IAmb		17 33 44.6	
	comp=Z,12nm,1.2s								
FORT	**Forrest**	**49.91**	**245**	P		**P**		**17 33 23.5**	**-1.3**
FORT				IAmb		IAmb		17 33 41.2	
	comp=Z,16nm,0.9s								
KNRA	**Kununurra**	**50.44**	**264**	P		**P**		**17 33 27.5**	**-1.3**
KNRA				IAmb		IAmb		17 34 09.1	
	comp=Z,18nm,1.2s								
PSA00	**Pilbara Seismi**	**57.84**	**256**	P		**P**		**17 34 20.6**	**0.0**
MBWA	**Marble Bar**	**58.00**	**256**	P		**P**		**17 34 21.6**	**-0.1**
MBWA				IAmb		IAmb		17 34 25.6	
	comp=Z,13nm,1.1s								
TOLI2	**Tolitoli**	**62.71**	**281**	P		**P**		**17 34 53.9**	**+1.2**
TOLI2				IAmb		IAmb		17 35 03.1	
	comp=Z,11nm,1.3s								
MJAR	**Matsushiro Arr**	**68.00**	**323**	P		**P**		**17 35 24.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=164,slow=6.4,SNR=5.5								
	comp=Z,2.5nm,0.7s								
UGM	**Wanagama**	**69.61**	**268**	P		**P**		**17 35 35.6**	**+0.2**
QSPA	**South Pole Qui**	**72.00**	**180**	P		**P**		**17 35 49.3**	**+0.6**
PETK	**Petropavlovsk-**	**73.81**	**345**	P		**P**		**17 35 58.4**	**-0.5**
	comp=Z,7.7nm,1.0s,baz=138,slow=7.3,SNR=6.4								
	comp=Z,7.7nm,1.0s								
NVAR	**Mina Array Bea**	**79.55**	**44**	P		**P**		**17 36 31.8**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=210,slow=7.9,SNR=4.0								
	comp=Z,0.6nm,0.6s								
ILAR	**Eielson Array**	**86.03**	**13**	P		**P**		**17 37 01.4**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=219,slow=4.8,SNR=15								
	comp=Z,0.9nm,0.4s								
TXAR	**Lajitas Array**	**86.10**	**58**	P		**P**		**17 37 05.0**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=211,slow=7.1,SNR=5.1								
	comp=Z,0.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**88.90**	**290**	P		**P**		**17 37 17.8**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=109,slow=2.8,SNR=6.4								
	comp=Z,1.0nm,0.9s								
INK	**Inuvik**	**92.03**	**15**	P		**P**		**17 37 29.1**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=180,slow=4.9,SNR=3.7								
	comp=Z,0.6nm,0.5s								
MKAR	**Makanchi Array**	**109.21**	**314**	PKiKP		**PKiKP**		**17 42 46.6**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=142,slow=1.0,SNR=5.5								
ARCES	**ARCESS Array B**	**126.45**	**350**	PKP		**PKPdf**		**17 43 19.2**	**-0.5**
	comp=Z,3.5nm,1.0s,baz=341,slow=2.6,SNR=4.6								
FINES	**FINESS Array B**	**133.31**	**344**	PKP		**PKPdf**		**17 43 32.4**	**-0.5**
	comp=Z,3.9nm,1.0s,baz=215,slow=6.3,SNR=4.4								
AKASG	**Malin Array Be**	**140.67**	**332**	PKhKP		PKPpre		17 43 39.9	
	comp=Z,0.3nm,0.3s,baz=40,slow=3.4,SNR=4.8								
AKASG				PKP		**PKiKP**		**17 43 48.2**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=46,slow=1.9,SNR=2.2								
BRTR	**Keskin Array B**	**144.86**	**315**	PKP		**PKPab**		**17 43 55.4**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=92,slow=2.4,SNR=9.1								
CLL	**Collm**	**145.59**	**347**			**PKPab**		**17 43 57.4**	**-1.2**
CLL	**Collm**	**145.59**	**347**	*i* PKPbc		**PKPbc**		**17 43 57.0**	**+0.1**
	comp=Z,10.0nm,0.7s								
KHC	**Kasperske Hory**	**147.50**	**345**	*e*PKP		**PKiKP**		**17 44 03.0**	**-0.8**
GERES	**GERESS Array B**	**147.74**	**345**	PKPbc		**PKPbc**		**17 44 02.6**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=30,slow=3.4,SNR=19								

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*ROM **27** 17:27:33.8±0.1, 43.°011N±0.°004×13.°120E±0.°006, h9km, ML3.4/59, Error ellipse: s-maj=0.4km s-min=0.4km az=287.0*
*IDC **27** 17:27:33.7±1.6, 43.°07N×13.°51E, h0km, mb3.5/2, mbtmp3.6/5, ML3.9/3, MS2.9/1, Error ellipse: s-maj=37.7km s-min=17.0km az=92.0*
*LDG **27** 17:27:35.6±0.1, 42.°88N×13.°17E, h10km, Ml3.4/11, Error ellipse: s-maj=4.8km s-min=2.9km az=53.0*
*PRU **27** 17:27:36.8±0.0, 43.°17N×13.°45E, h0km*
*STR **27** 17:27:39.0±1.4, 43.°N±7.°×1.°3E±1.°2, h10km, MLv3.6/31, Error ellipse: s-maj=0.0km s-min=0.0km az=84.9, preliminary*
ISC 27 17:27:34.4±0.8, 42.°99N±0.°01×13.°12E±0.°02, h9km±5km, n183, σ1§59/215, 36C-35D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**244**	⇑P		**Pg**		**17 27 36.3**	**-0.2**
FEMA				S		**Sg**		**17 27 38.1**	**0.0**
FEMA				AML		AML			
FEMA				AML		AML			
MC2	**Monte Cornacci**	**0.09**	**146**	P		**Pg**		**17 27 36.8**	**-0.1**
T1216	**Preci, Frazion**	**0.12**	**218**	⇓P		**Pg**		**17 27 37.5**	**+0.3**
T1216				S		**Sg**		**17 27 40.3**	**+1.0**
T1216				AML		AML			
	comp=N,84750μm,1.1s								
T1216				AML		AML			
	comp=E,75050μm,0.3s								
T1216				AML		AML			
	comp=N,84800μm,1.1s								
AM05	**Amandola Campo**	**0.17**	**93**	⇑P		**Pg**		**17 27 38.0**	**0.0**
AM05				S		**Sg**		**17 27 41.0**	**+0.5**
AM05				AML		AML			
	comp=E,24900μm,0.6s								
AM05				AML		AML			
	comp=N,1855μm,0.1s								
AM05				AML		AML			
	comp=E,6560μm,1.0s								
AM05				AML		AML			
	comp=N,8155μm,0.3s								
SEF1	**Sefro**	**0.20**	**321**	P		**Pg**		**17 27 38.1**	**-0.5**
SEF1				S		**Sg**		**17 27 41.8**	**+0.3**
SEF1				AML		AML			
	comp=E,82600μm,0.2s								
SEF1				AML		AML			
	comp=N,66050μm,0.3s								
MDAR	**Monte D'Aria**	**0.20**	**4**	P		**Pg**		**17 27 38.0**	**-0.7**
MDAR				S		**Sg**		**17 27 41.2**	**-0.4**
MDAR				AML		AML			
	comp=N,30900μm,0.4s								
MDAR				AML		AML			
	comp=E,40600μm,0.6s								
PIO1	**Pioraco**	**0.22**	**332**	P		**Pg**		**17 27 38.3**	**-0.6**
PIO1				S		**Sg**		**17 27 42.2**	**+0.3**
PIO1				AML		AML			
	comp=N,22100μm,0.4s								
PIO1				AML		AML			
	comp=E,20500μm,1.4s								
PIO1				AML		AML			
	comp=N,22050μm,0.4s								
PIO1				AML		AML			
	comp=E,20450μm,1.4s								
PIO1				AML		AML			
	comp=N,22050μm,0.4s								
FIU1	**Fiuminata**	**0.24**	**325**	P		**Pg**		**17 27 38.9**	**-0.5**
FIU1				S		**Sg**		**17 27 42.8**	**+0.1**
FIU1				AML		AML			
	comp=E,11820μm,0.3s								
FIU1				AML		AML			
	comp=N,13850μm,1.2s								
FIU1				AML		AML			
	comp=E,11795μm,0.3s								
GAG1	**Gagliole**	**0.25**	**351**	⇑P		**Pg**		**17 27 39.2**	**-0.3**
GAG1				AML		AML			
	comp=N,50200μm,0.8s								
GAG1				AML		AML			
	comp=E,61000μm,0.6s								
T1215	**Vallo di Nera,**	**0.26**	**225**	P		**Pg**		**17 27 40.1**	**+0.4**
T1215				S		**Sb**		**17 27 44.9**	**-1.0**
T1215				AML		AML			
	comp=N,11700μm,0.3s								
T1215				AML		AML			
	comp=N,10630μm,0.3s								
T1215				AML		AML			
	comp=E,11265μm,0.4s								
T1215				AML		AML			
	comp=N,11650μm,0.3s								
T1215				AML		AML			
	comp=E,12300μm,0.4s								
T1215				AML		AML			
	comp=N,10650μm,0.3s								
T1215				AML		AML			
	comp=E,11295μm,0.4s								
T1215				AML		AML			
	comp=N,11650μm,0.3s								
T1215				AML		AML			
	comp=N,10650μm,0.3s								
T1215				AML		AML			
	comp=E,11260μm,0.4s								
T1215				AML		AML			
	comp=E,12250μm,0.4s								
MTL1	**Matelica**	**0.28**	**343**	P		**Pg**		**17 27 39.5**	**-0.5**
MNTP	**Montappone**	**0.29**	**59**	P		**Pg**		**17 27 40.6**	**+0.3**
MNTP				S		**Sb**		**17 27 46.4**	**-0.4**
MNTP				AML		AML			
	comp=N,21400μm,1.5s								
MNTP				AML		AML			
	comp=E,30050μm,0.6s								
T1217	**Poggiodomo (PG**	**0.31**	**207**	⇓P		**Pg**		**17 27 40.9**	**+0.4**
T1217				S		**Sb**		**17 27 46.8**	**-0.5**
T1217				AML		AML			
	comp=E,10900μm,0.6s								
T1217				AML		AML			
	comp=E,11150μm,1.4s								
T1217				AML		AML			
	comp=E,10870μm,0.6s								
T1217				AML		AML			
	comp=E,11160μm,1.4s								
T1217				AML		AML			
	comp=N,18750μm,0.5s								
T1217				AML		AML			
	comp=E,10870μm,0.5s								
T1217				AML		AML			
	comp=N,19050μm,0.5s								
T1217				AML		AML			
	comp=E,11140μm,1.4s								
T1217				AML		AML			
	comp=N,18800μm,0.5s								
T1217				AML		AML			
	comp=E,10875μm,0.5s								
T1217				AML		AML			
	comp=E,11130μm,1.4s								
EL6	**Elcito**	**0.34**	**357**	⇑P		**Pg**		**17 27 40.5**	**-0.7**
EL6				AML		AML			
	comp=E,32450μm,0.2s								
EL6				AML		AML			
	comp=N,27450μm,0.3s								
T1204	**Amatrice, Fraz**	**0.34**	**155**	P		**Pg**		**17 27 41.4**	**+0.2**
T1204				S		**Sb**		**17 27 47.7**	**-0.6**
T1204				AML		AML			
	comp=E,11455μm,0.2s								
T1204				AML		AML			
	comp=N,6890μm,0.3s								
TRE1	**Treia**	**0.35**	**23**	⇓P		**Pg**		**17 27 41.8**	**+0.4**
TRE1				AML		AML			
	comp=N,37600μm,0.4s								
TRE1				AML		AML			
	comp=E,43700μm,0.4s								
LNSS	**Leonessa**	**0.39**	**189**	⇑P		**Pg**		**17 27 42.4**	**+0.3**
LNSS				AML		AML			
	comp=E,8925μm,0.4s								
LNSS				AML		AML			
	comp=N,9710μm,0.6s								
SMA1	**SAN MARTINO**	**0.39**	**156**	⇓P		**Pg**		**17 27 42.1**	**+0.1**
SMA1				AML		AML			
	comp=E,10700μm,0.5s								
SMA1				AML		AML			
	comp=N,8660μm,0.7s								
OFFI	**Offida**	**0.42**	**97**	⇑P		**Pg**		**17 27 43.4**	**+0.8**
OFFI				AML		AML			
	comp=N,15750μm,0.6s								
OFFI				AML		AML			
	comp=E,9620μm,0.5s								
RM33	**Pellescritta (**	**0.48**	**172**	⇓P		**Pg**		**17 27 43.8**	**0.0**
RM33				AML		AML			
	comp=E,3605μm,1.1s								
RM33				AML		AML			
	comp=N,3210μm,0.4s								
RM33				AML		AML			
	comp=N,3250μm,0.4s								
RM33				AML		AML			
	comp=E,3810μm,1.1s								
ARRO	**Arrone**	**0.49**	**213**	⇓P		**Pg**		**17 27 44.0**	**+0.2**
ARRO				S		**Sb**		**17 27 53.0**	**+0.7**
ARRO				AML		AML			
	comp=E,3275μm,1.2s								
ARRO				AML		AML			
	comp=N,3395μm,1.0s								
T1211	**Morro Reatino**	**0.49**	**204**	⇑P		**Pg**		**17 27 44.3**	**+0.3**
T1211				AML		AML			
	comp=N,7015μm,1.4s								
T1211				AML		AML			
	comp=E,4325μm,1.6s								
T1211				AML		AML			
	comp=N,7000μm,1.4s								
T1211				AML		AML			
	comp=E,4360μm,0.5s								
CAMP	**Campotosto**	**0.50**	**155**	⇓P		**Pg**		**17 27 43.9**	**-0.2**
CAMP				S		**Sb**		**17 27 52.2**	**-0.5**
CAMP				AML		AML			
	comp=N,3080μm,0.4s								
CAMP				AML		AML			
	comp=E,2475μm,0.6s								
TERO	**Teramo**	**0.51**	**136**	⇑P		**Pg**		**17 27 44.9**	**+0.7**
TERO				AML		AML			
	comp=E,4875μm,0.7s								
TERO				AML		AML			
	comp=E,5025μm,0.7s								
TERO				AML		AML			
	comp=E,4870μm,0.7s								
TERO				AML		AML			
	comp=N,5310μm,0.6s								
TERO				AML		AML			
	comp=N,5575μm,0.6s								
ARVD	**Arcevia**	**0.53**	**346**	⇓P		**Pg**		**17 27 43.9**	**-0.7**
ARVD				S		**Sb**		**17 27 53.0**	**-0.5**
ARVD				AML		AML			
	comp=N,4615μm,0.3s								
ARVD				AML		AML			
	comp=E,6530μm,0.5s								
CESX	**Cesi**	**0.55**	**227**	⇓P		**Pg**		**17 27 45.0**	**-0.1**
CESX				AML		AML			
	comp=E,8670μm,0.6s								
CESX				AML		AML			
	comp=N,10150μm,0.4s								
T1247	**Pizzolo (AQ)**	**0.56**	**167**	⇓P		**Pg**		**17 27 45.2**	**-0.1**
T1247				AML		AML			
	comp=E,5865μm,0.5s								
T1247				AML		AML			
	comp=N,4140μm,0.4s								
FRON	**Frontone**	**0.60**	**331**	⇓P		**Pg**		**17 27 45.2**	**-0.8**
FRON				AML		AML			
	comp=N,7765μm,0.2s								
FRON				AML		AML			
	comp=E,4180μm,1.5s								
TRTR	**Tortoreto Alta**	**0.61**	**107**	⇓P		**Pb**		**17 27 47.3**	**+0.2**
TRTR				AML		AML			
	comp=N,10950μm,0.4s								
TRTR				AML		AML			
	comp=E,12550μm,0.8s								
GIGS	**Gran Sasso**	**0.63**	**148**	⇑P		**Pg**		**17 27 45.9**	**-0.7**
GIGS				AML		AML			
	comp=E,985μm,0.6s								
GIGS				AML		AML			
	comp=N,957μm,0.4s								
AOI	**Ancona**	**0.66**	**32**	⇓P		**Pg**		**17 27 46.9**	**-0.3**
AOI				AML		AML			
	comp=N,2815μm,0.3s								
AOI				AML		AML			
	comp=E,2945μm,0.3s								
AQU	**L'Aquila**	**0.67**	**162**	⇑P		**Pb**		**17 27 48.2**	**0.0**
AQU				AML		AML			
	comp=E,2215μm,0.4s								
AQU				AML		AML			
	comp=E,2140μm,0.4s								
AQU				AML		AML			
	comp=N,2620μm,1.2s								
AQU				AML		AML			
	comp=N,2470μm,1.2s								
PIEI	**Pieia**	**0.70**	**322**	⇓P		**Pg**		**17 27 46.8**	**-1.0**
PIEI				S		**Sb**		**17 27 59.0**	**+0.6**
PIEI				AML		AML			
	comp=E,3665μm,0.3s								
PIEI				AML		AML			
	comp=N,2805μm,0.5s								
ATPI	**Pietralunga -**	**0.70**	**312**	⇓P		**Pg**		**17 27 47.2**	**-0.7**
ATPI				AML		AML			
	comp=N,2385μm,0.4s								
ATPI				AML		AML			
	comp=E,2815μm,0.5s								
ATMI	**Monte Miggiano**	**0.71**	**299**	⇓P		**Pg**		**17 27 48.0**	**-0.2**
ATMI				AML		AML			
	comp=E,5070μm,1.1s								
ATMI				AML		AML			
	comp=N,6065μm,0.5s								
FIAM	**Fiamignano**	**0.72**	**180**	⇑P		**Pg**		**17 27 47.8**	**-0.4**
FIAM				AML		AML			
	comp=E,1870μm,1.4s								
FIAM				AML		AML			
	comp=N,1575μm,0.6s								
SENI	**Senigallia**	**0.72**	**6**	⇓P		**Pb**		**17 27 49.0**	**0.0**
MGAB	**Montegabbione**	**0.75**	**265**	⇑P		**Pg**		**17 27 48.5**	**-0.2**
MGAB				AML		AML			
	comp=E,4990μm,0.4s								
MGAB				AML		AML			
	comp=E,5905μm,0.4s								
MGAB				AML		AML			
	comp=N,6805μm,1.3s								
MGAB				AML		AML			
	comp=N,7140μm,0.5s								
FSSB	**Fossombrone**	**0.75**	**340**	P		**Pg**		**17 27 47.6**	**-1.2**
FSSB				S		**Sb**		**17 28 01.0**	**+1.1**
FSSB				AML		AML			
	comp=N,35550μm,0.3s								
FSSB				AML		AML			
	comp=E,11800μm,0.3s								
VCEL	**Villa Celiera**	**0.80**	**138**	⇑P		**Pg**		**17 27 49.6**	**-0.1**
VCEL				AML		AML			
	comp=E,3145μm,0.8s								
VCEL				AML		AML			
	comp=N,3280μm,0.5s								
VCEL				AML		AML			
	comp=N,3275μm,0.5s								
FAGN	**Fagnano**	**0.80**	**155**	⇑P		**Pg**		**17 27 49.5**	**-0.2**
FAGN				AML		AML			
	comp=E,4825μm,0.6s								
FAGN				AML		AML			
	comp=N,4240μm,0.4s								
BADI	**Badiali**	**0.83**	**309**	P		**Pg**		**17 27 49.3**	**-1.0**
PE3	**Peglio**	**0.84**	**327**	⇑P		**Pg**		**17 27 50.0**	**-0.6**
SRES	**S.Oreste - Sor**	**0.88**	**211**	⇑P		**Pg**		**17 27 51.0**	**-0.2**
SRES				S		**Sn**		**17 28 06.0**	**+0.3**
SRES				AML		AML			
	comp=N,1715μm,0.5s								
SRES				AML		AML			
	comp=E,1765μm,1.2s								
SACS	**San Casciano d**	**0.90**	**262**	⇓P		**Pb**		**17 27 52.2**	**0.0**
SACS				AML		AML			
	comp=E,1514μm,0.6s								
SACS				AML		AML			
	comp=N,2490μm,0.8s								
SACS				AML		AML			
	comp=E,1365μm,1.3s								
SACS				AML		AML			
	comp=N,2415μm,0.8s								
T0110	**Collepietro**	**0.90**	**147**	⇑P		**Pg**		**17 27 51.0**	**-0.8**
T0110				AML		AML			
	comp=N,4620μm,0.5s								
T0110				AML		AML			
	comp=E,3335μm,0.5s								
CAFI	**Castiglion Fio**	**0.91**	**292**	⇑P		**Pg**		**17 27 51.3**	**-0.6**
CAFI				AML		AML			
	comp=E,1800μm,0.6s								
CAFI				AML		AML			
	comp=N,1825μm,0.5s								
SSP9	**Sansepolcro**	**0.93**	**309**	⇑P		**Pg**		**17 27 51.7**	**-0.6**
CERT	**Cerreto**	**1.04**	**186**	⇓P		**Pn**		**17 27 55.2**	**+0.1**
CERT				AML		AML			
	comp=E,2400μm,0.5s								
CERT				AML		AML			
	comp=N,1445μm,1.5s								
CRE	**Caprese Michel**	**1.06**	**307**	⇓P		**Pn**		**17 27 55.3**	**-0.2**
CRE				AML		AML			
	comp=E,819μm,1.5s								
CRE				AML		AML			
	comp=N,1390μm,0.9s								
INTR	**Introdacqua**	**1.13**	**149**	⇑P		**Pb**		**17 27 54.1**	**-2.1**
INTR				AML		AML			
	comp=E,960nm,1.6s								
INTR				AML		AML			
	comp=N,3μm,0.6s								
INTR				AML		AML			
	comp=E,940μm,1.6s								
INTR				AML		AML			
	comp=N,3805μm,0.6s								
INTR				AML		AML			
	comp=E,939μm,1.6s								
SF01	**Poggio Pratacc**	**1.16**	**262**	⇑P		**Pg**		**17 27 56.7**	**+0.1**
SF01				AML		AML			
	comp=E,863μm,0.7s								
SF01				AML		AML

VVLD AML AML
comp=E,1300μm,0.6s
ARCI Arcidosso 1.22 264 P **Pg 17 27 59.5 +1.7**
LPEL Lama dei Pelig 1.23 140 ⇑P **Pn 17 27 56.8 -0.9**
LPEL AML AML
comp=E,1470μm,0.5s
LPEL AML AML
comp=N,792μm,0.8s
TOLF Tolfa 1.24 222 ⇓P **Pn 17 27 54.9 -3.0**
TOLF AML AML
comp=E,728μm,1.1s
TOLF AML AML
comp=N,764μm,1.2s
SFI Santa Sofia 1.30 315 AML AML
comp=E,702μm,1.4s
SFI AML AML
comp=N,669μm,1.2s
SFI AML AML
comp=E,778μm,1.4s
SFI AML AML
comp=N,658μm,0.7s
LAV9 Lanuvio 1.35 194 S **Sb 17 28 17.0 0.0**
RUFI Rufina 1.45 306 ⇑P **Pn 17 28 00.9 +0.2**
FROS Frosini 1.46 279 ⇓P **Pn 17 28 00.5 -0.3**
FROS AML AML
comp=E,642μm,1.5s
FROS AML AML
comp=N,638μm,0.4s
LMD Lutirano 1.50 317 ⇓P **Pg 17 28 04.6 +1.5**
TRIV Trivento 1.61 139 ⇓P **Pg 17 28 05.8 +0.5**
TRIF Trifonti 1.63 275 P **Pn 17 28 02.9 -0.4**
TRIF AML AML
comp=E,331μm,0.3s
TRIF AML AML
comp=N,334μm,0.6s
TRIF AML AML
comp=N,335μm,0.6s
TRIF AML AML
comp=E,332μm,0.4s
PTRJ Pietraroja 1.93 147 S **Sn 17 28 31.0 -0.8**
BRJN Brijuni 1.97 13 ⇑P **Pn 17 28 08.4 +0.6**
MAIM Mastiano 2.13 297 ⇑P **Pn 17 28 11.4 +1.4**
SBPO S.Benedetto Po 2.60 323 ⇑P **Pn 17 28 16.6 0.0**
PLMA Palmaria, Port 2.61 295 ⇑P **Pn 17 28 16.9 +0.3**
PLMA AML AML
comp=E,97μm,0.7s
PLMA AML AML
comp=N,87μm,1.1s
MORSI Morsiglia 2.76 271 P **Pn 17 28 19.1 +0.4**
SMPL Sampolo 2.97 254 P **Pn 17 28 23.7 +2.0**
SABO M.te Sabotino 3.01 6 ⇑P **Pn 17 28 22.3 +0.1**
SABO AML AML
comp=E,1525μm,1.2s
SABO AML AML
comp=E,393μm,1.5s
SABO AML AML
comp=N,1800μm,0.6s
SABO AML AML
comp=N,481μm,0.5s
CGRP Cima Grappa 3.04 342 ⇓P **Pn 17 28 23.4 +0.6**
CGRP S **Sn 17 28 60.0 +0.6**
CGRP AML AML
comp=N,566μm,0.6s
CGRP AML AML
comp=E,483μm,0.7s
PGF Pioggiola 3.07 263 *e*Pn **Pn 17 28 23.6 +0.5**
PGF Pioggiola 3.07 263 P **Pn 17 28 23.8 +0.7**
VARN Col Varnada, M 3.09 347 ⇑P **Pn 17 28 23.6 +0.2**
VARN AML AML
comp=N,326μm,0.7s
VARN AML AML
comp=E,386μm,0.7s
LJU Ljubljana 3.22 18 P **Pn 17 28 25.7 +0.7**
LJU AML AML
comp=E,1200μm,0.7s
LJU AML AML
comp=N,1690μm,0.6s
SALO Salr 3.22 326 ⇑P **Pn 17 28 26.4 +1.3**
CTI Castel Tesino 3.24 342 ⇑P **Pn 17 28 26.0 +0.7**
CTI AML AML
comp=N,243μm,1.6s
CTI AML AML
comp=E,260μm,0.9s
MPRI Monte Prat 3.25 358 ⇓P **Pn 17 28 26.9 +1.3**
STAL STALIGIAL 3.29 355 P **Pn 17 28 25.4 -0.6**
STAL AML AML
comp=E,278μm,0.4s
STAL AML AML
comp=N,245μm,1.5s
CIMO Cimolais 3.36 352 ⇓P **Pn 17 28 26.8 -0.1**
CIMO AML AML
comp=E,62μm,1.0s
CIMO AML AML
comp=N,78μm,0.7s
PTCC Patocco-Chiusa 3.42 3 ⇓P **Pn 17 28 27.5 -0.3**
PTCC S **Sn 17 29 09.0 +0.5**
PTCC AML AML
comp=N,150μm,1.1s
PTCC AML AML
comp=E,136μm,0.6s
ZOU Zoufplan 3.57 358 ⇑P **Pn 17 28 30.4 +0.3**
ZOU AML AML
comp=E,168μm,0.7s
ZOU AML AML
comp=E,146μm,1.3s
ZOU AML AML
comp=N,239μm,1.2s
ZOU AML AML
comp=N,237μm,1.2s
ACOM Acomizza, Ital 3.57 4 ⇑P **Pn 17 28 31.2 +1.2**
MABI Malga Bissina 3.59 330 ⇑P **Pn 17 28 31.3 +1.0**
MYKA Terra Mystica 3.66 6 Pn **Pn 17 28 32.7 +1.5**
comp=N,4.7nm,0.2s,SNR=4.8
OBKA Obir 3.67 16 *e*Pn **Pn 17 28 32.7 +1.4**
comp=N,3.0nm,0.2s
KOSI Kohlern 3.69 341 ⇓P **Pn 17 28 32.9 +1.2**
APPI Appiano 3.74 340 ⇓P **Pn 17 28 33.2 +0.9**
ABTA Abfaltersbach 3.78 354 *i* Pn **Pn 17 28 34.0 +1.1**
comp=N,39nm,0.5s,SNR=32
BRES Bressanone 3.84 346 ⇑P **Pn 17 28 34.9 +1.1**
SALB San Lorenzo Be 3.94 141 S **Sn 17 29 23.0 +1.5**
RISI Rein 4.03 350 ⇓P **Pn 17 28 37.6 +1.3**
KBA Koelnbreinsper 4.09 2 *e*Pn **Pn 17 28 38.6 +1.4**
comp=N,3.5nm,0.2s
TDS Terranova Siba 4.11 143 S **Sg 17 29 45.0 -1.4**
ROSI Rosskopf 4.12 343 ⇓P **Pn 17 28 38.7 +1.1**
MUGIO Muggio 4.14 317 ⇓P **Pn 17 28 38.3 +0.6**
SAOF Saorge 4.17 286 P **Pn 17 28 40.4 +2.3**
SBF Sospel 4.23 284 *e*Pn **Pn 17 28 39.1 0.0**
SBF Sospel 4.23 284 *e*P **Pn 17 28 42.7 +3.6**
VARE Varese 4.24 314 ⇑P **Pn 17 28 40.5 +1.2**
TURF col de Turini 4.29 285 P **Pn 17 28 43.3 +3.5**
FETA Feichten 4.38 338 *e*Pn **Pn 17 28 43.1 +2.0**
comp=N,6.6nm,0.3s
WTTA Wattenberg 4.40 347 *e*Pn **Pn 17 28 43.6 +2.2**
comp=N,4.8nm,0.3s
WTTA Wattenberg 4.40 347 ⇓P **Pn 17 28 43.2 +1.7**
SPIF crte de Spivo 4.41 286 P **Pn 17 28 44.5 +2.9**
SPS2 Spezzano della 4.42 146 ⇓P **Pb 17 28 50.9 -1.2**
DAVOX Davos/Dischmat 4.44 330 Pn **Pn 17 28 44.1 +2.1**
comp=N,8.8nm,0.3s,baz=328,slow=13,SNR=16
comp=N,24nm,0.3s
SQTA Sankt Quirin 4.44 343 *i* Pn **Pn 17 28 44.0 +2.0**
comp=N,16nm,0.3s,SNR=14
WATA Walderalm 4.48 346 Pn **Pn 17 28 44.9 +2.3**
comp=N,6.5nm,0.3s,SNR=9.7
CALF Calern 4.58 282 P **Pn 17 28 44.8 +0.8**
MOTA Moosalm 4.58 343 *e*Pn **Pn 17 28 46.5 +2.5**
comp=N,5.1nm,0.3s
ARSA Arzberg 4.59 21 *e*Pn **Pn 17 28 44.0 +0.1**
comp=N,2.1nm,0.2s
BIOA Bad Ischl, Aus 4.72 4 Pn **Pn 17 28 47.2 +1.5**
comp=N,5.5nm,0.3s,SNR=5.3
SURF Saint Ours 4.81 290 P **Pn 17 28 47.8 +0.7**
JAUF Jausiers 4.84 289 P **Pn 17 28 47.5 +0.1**
LMR La Mourre 4.85 276 *e*Pn **Pn 17 28 47.2 -0.2**
DAVA Damuels 4.87 333 *e*Pn **Pn 17 28 50.2 +2.3**
comp=N,11nm,0.5s,SNR=4.6
MBDF Montbardon 4.91 293 *e*Pn **Pn 17 28 50.4 +2.0**
MBDF *e*Sn **Sn 17 29 44.6 -0.8**
comp=N,18nm,0.9s
MOA Molln 4.93 9 Pn **Pn 17 28 49.7 +1.2**
comp=N,2.5nm,0.2s,SNR=6.8
TRIGF Trigance 4.95 281 P **Pn 17 28 49.9 +1.0**
CREF Crivoux 4.96 291 P **Pn 17 28 52.8 +3.7**
RRL Rocca Remolon 4.96 295 P **Pn 17 28 53.6 +4.4**
OGAG Argentiere 4.99 289 P Pn 17 28 55.1 +5.6
FLAF Flassans-sur-I 5.04 277 P **Pn 17 28 50.4 +0.4**
OGDI Digne 5.08 285 P **Pn 17 28 54.3 +3.6**
DIX Grande Dixence 5.12 309 P **Pn 17 28 53.5 +2.0**
RONA Rosalia, Austr 5.22 24 *e*Pn **Pn 17 28 53.4 +0.9**
comp=N,2.0nm,0.2s
LPG La Plagne 5.22 301 *e*Pn **Pn 17 28 54.2 +1.4**
LPG *e*Sn **Sn 17 29 51.0 -2.2**
comp=N,1.6nm,0.2s
LPL La Plagne 5.24 301 *e*Pn **Pn 17 28 53.7 +0.7**
LPL La Plagne 5.24 301 *e*P **Pn 17 28 56.9 +3.9**
LPL *e*Sn **Sn 17 29 51.2 -2.4**
comp=N,4.3nm,0.4s
CONA Conrad Observa 5.30 20 Pn **Pn 17 28 54.0 +0.2**
comp=N,3.0nm,0.3s,SNR=5.0
RSL Roselend 5.38 302 P **Pn 17 28 57.5 +2.5**
OGSI Sixt 5.50 306 P **Pn 17 28 58.6 +2.3**
GDM Grand'Maison 5.51 296 P **Pn 17 29 01.1 +4.4**
AIGLE Aigle 5.53 309 P **Pn 17 28 58.9 +2.0**
ORIF Oris-en-Rattie 5.57 293 *e*Pn **Pn 17 28 59.7 +2.2**
ORIF *e*Sn **Sn 17 29 58.6 -3.0**
comp=N,21nm,0.9s
ORIF Oris-en-Rattie 5.57 293 P **Pn 17 29 00.3 +2.9**
SMRF Simiane la Rot 5.58 283 *e*Pn **Pn 17 28 59.3 +1.8**
RUSF Rustrel 5.64 282 P **Pn 17 29 00.3 +2.0**
SLE Schleitheim 5.78 327 P **Pn 17 29 01.0 +0.7**
TORNY Torny/Romont 5.79 313 P **Pn 17 29 02.1 +1.7**
BALST Balsthal 5.80 320 P **Pn 17 29 01.5 +0.9**
GERES GERESS Array B 5.87 4 Pn **Pn 17 29 01.0 -0.5**
comp=N,1.3nm,0.3s,baz=172,slow=13,SNR=14
GERES Sn **Sn 17 30 06.9 -2.1**
comp=N,3.4nm,0.3s,baz=180,slow=27,SNR=8.9
comp=N,1.6nm,0.3s
CKRC Cesky Krumlov 5.89 8 *e*PN **Pn 17 29 01.7 -0.1**
CKRC *e*SN **Sn 17 30 06.1 -3.3**
OGSM Saint Maurice 5.94 299 P **Pn 17 29 04.5 +2.1**
GIMEL St. Georges / 6.03 308 P **Pn 17 29 05.2 +1.5**
BOURR Bourrignon 6.06 319 P **Pn 17 29 04.8 +0.6**
FELD Feldberg im Sc 6.07 325 P **Pn 17 29 04.6 +0.2**
KHC Kasperske Hory 6.15 3 *e*PN **Pn 17 29 04.7 -0.7**
KHC *e*SN **Sn 17 30 11.9 -3.9**
KIZ Kirchzarten 6.17 325 P **Pn 17 29 06.0 +0.5**
CABF La Chapelle 6.18 308 *e*Pn **Pn 17 29 06.8 +1.0**
OG35 Corcelles 6.20 302 P **Pn 17 29 07.2 +1.1**
CHMF Charmoille 6.25 315 P **Pn 17 29 07.4 +0.6**
CHMF S **Sn 17 30 17.4 -0.9**
RIVEL MONT RIVEL 6.35 309 P **Pn 17 29 09.8 +1.6**
VOGT Vogtsburg - To 6.37 325 P **Pn 17 29 09.0 +0.7**
VOGT Vogtsburg - To 6.37 325 S **Sn 17 30 19.8 -1.4**
VIVF Saint-Julien-I 6.38 290 *e*Pn **Pn 17 29 09.9 +1.4**
MOF Molkenrain 6.43 321 P **Pn 17 29 09.7 +0.4**
HINF Hinteralfeld 6.54 320 *e*Pn **Pn 17 29 10.3 -0.4**
HINF *e*Sn **Sn 17 30 22.2 -3.2**
comp=N,61nm,1.0s
RONF Ronchamp 6.56 318 P **Pn 17 29 11.3 +0.3**
RONF S **Sn 17 30 25.0 -0.9**
ECH Echery 6.69 323 P **Pn 17 29 13.0 +0.2**
ECH S **Sn 17 30 27.6 -1.6**
WLS Welschbruch 6.76 325 P **Pn 17 29 14.1 +0.4**
CDF Champ du Feu 6.79 325 *e*Pn **Pn 17 29 14.5 +0.3**
LASF Ste Croix 6.82 282 *e*P **Pn 17 29 17.8 +3.2**
HAU Haudompre 6.92 319 *e*Pn **Pn 17 29 16.6 +0.8**
HAU *e*Sn **Sn 17 30 30.9 -3.7**
comp=N,14nm,0.3s
CIEL Dossenheim-sur 7.09 328 P **Pn 17 29 19.1 +0.9**
NKC Novy Kostel 7.26 357 *e*SN **Sn 17 30 39.6 -3.5**
SMF Signal de Mont 7.54 302 *e*Pn **Pn 17 29 24.9 +0.5**
SMF *e*Sn **Sn 17 30 47.0 -3.0**
comp=N,7.1nm,0.7s
SFTF Sexfontaines 7.70 315 *e*Pn **Pn 17 29 26.8 +0.2**
baz=126
SFTF *e*Sn **Sn 17 30 50.4 -3.5**
comp=N,8.3nm,0.6s
LOR Lormes 7.82 306 *e*Pn **Pn 17 29 28.5 +0.2**
baz=127
LOR *e*Sn **Sn 17 30 52.6 -4.3**
comp=N,7.3nm,0.5s
LOR Lormes 7.82 306 P **Pn 17 29 29.0 +0.7**
MEZF Maizieres J'vi 7.89 317 *e*Pn **Pn 17 29 29.3 +0.2**
baz=138
AVF Avril sur Loir 7.91 302 *e*Pn **Pn 17 29 30.2 +0.8**
SSF Saint Saulge 7.94 304 *e*Pn **Pn 17 29 30.3 +0.5**
SSF *e*Sn **Sn 17 30 55.9 -3.7**
comp=N,2.7nm,0.4s
MTLF Montolieu 7.98 276 *e*P **Pn 17 29 33.7 +3.3**
BGF Bois d'Agland 8.13 300 *e*Pn **Pn 17 29 33.5 +1.0**
CAF Calviac 8.21 287 *e*P **Pn 17 29 36.5 +2.9**
CLL Collm 8.32 359 *ex* x 17 31 06.0
CLL *ex* x 17 31 51.0
CLL *e*Sg **Sg 17 32 08.0 +6.7**
EKA Eskdalemuir Ar 16.26 325 Pn **P 17 31 25.4 -0.4**
baz=135,slow=13
comp=N,0.5nm,0.5s
EIL Elat 21.96 120 LR LR 17 42 40.4
comp=N,28nm,19.6s,baz=302,slow=42
TORD Torodi Ar. Bea 31.33 202 P **P 17 33 57.0 +1.9**
comp=N,0.2nm,0.4s,baz=18,slow=9.9,SNR=2.6
comp=N,0.2nm,0.4s
MKAR Makanchi Array 47.71 60 P **P 17 36 10.0 -1.1**
comp=N,0.5nm,0.7s,baz=291,slow=6.2,SNR=3.3
comp=N,0.5nm,0.7s

ROM 27 17:28:32.5±0.1, 43°.016N±0°.004×13°.137E±0°.010, h5km, ML2.8/3, 4C, Error ellipse: s-maj=0.7km s-min=0.4km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**300**	P	Pg	17 28 33.8	+0.1
FDMO				S	Sg	17 28 34.5	-0.1
FDMO				AML	AML		
comp=E,31200μm,0.6s							
FDMO				AML	AML		
comp=N,33650μm,0.6s							
FEMA	**Monte Fema**	**0.08**	**230**	P	Pg	17 28 34.8	+0.4
FEMA				S	Sg	17 28 36.2	+0.5
FEMA				AML	AML		
comp=N,11755μm,0.3s							
FEMA				AML	AML		
comp=E,11550μm,0.2s							
MC2	**Monte Cornacci**	**0.11**	**159**	⇑P	Pg	17 28 35.6	+0.7
MC2				S	Sg	17 28 37.4	+0.9
T1216	**Preci, Frazion**	**0.15**	**215**	⇑P	Pg	17 28 36.2	+0.6
T1216				S	Sg	17 28 38.7	+1.1
T1216				AML	AML		
comp=E,5055μm,1.0s							
T1216				AML	AML		
comp=N,6985μm,0.3s							
CESI	**CESI - Serrava**	**0.17**	**266**	⇑P	Pg	17 28 36.5	+0.6
CESI				S	Sg	17 28 39.3	+1.2
CESI				AML	AML		
comp=E,4830μm,0.2s							
CESI				AML	AML		
comp=N,6810μm,1.6s							
MDAR	**Monte D'Aria**	**0.18**	**1**	P	Pg	17 28 36.6	+0.6
MDAR				S	Sg	17 28 39.5	+1.1
SEF1	**Sefro**	**0.19**	**313**	P	Pg	17 28 36.9	+0.6
SEF1				S	Sg	17 28 40.0	+1.2
SEF1				AML	AML		
comp=E,4025μm,1.6s							
SEF1				AML	AML		
comp=N,3930μm,0.2s							
T1215	**Vallo di Nera,**	**0.29**	**223**	P	Pg	17 28 39.0	+0.9
T1215				S	Sg	17 28 43.2	+1.2
T1215				AML	AML		
comp=E,1026μm,1.4s							
T1215				AML	AML		
comp=N,971μm,0.3s							
EL6	**Elcito**	**0.31**	**355**	P	Pg	17 28 39.3	+0.7
EL6				S	Sg	17 28 44.4	+1.6
T1204	**Amatrice, Fraz**	**0.36**	**159**	⇑P	Pg	17 28 40.1	+0.5
T1204				S	Sb	17 28 46.3	-1.3
ARVD	**Arcevia**	**0.50**	**344**	P	Pg	17 28 42.9	+0.7
ARVD				S	Sb	17 28 50.8	-0.8
CESX	**Cesi**	**0.58**	**225**	P	Pg	17 28 43.8	+0.2
CESX				S	Sb	17 28 53.0	-0.6
PIEI	**Pieia**	**0.68**	**320**	P	Pb	17 28 46.3	-0.6
PIEI				S	Sb	17 28 57.0	+0.3
FSSB	**Fossombrone**	**0.72**	**339**	P	Pb	17 28 47.7	0.0
FSSB				S	Sn	17 28 60.0	-1.0

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*IDC **27** 17:29:53.4±3.8, 14°.99S×174°.33W, h93km±51km, mb3.6/3, mbtmp4.0/4, Error ellipse: s-maj=50.3km s-min=30.6km az=124.0*
*NEIC **27** 17:29:54.4±1.1, 15°.3S±0°.1×174°.2W±0°.1, h102km±10km, mb4.2/6, Error ellipse: s-maj=23.6km s-min=15.8km az=138.0*

ISC 27 17:29:53.7±1.0, **15°.2S**±0°.1×**174°.2W**±0°.1, **h100**km, **n17**, σ1§**16**/16, **mb4.1/7, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.70**	**61**	P	**Pn**	**17 30 36.5**	**+1.0**
87nm,0.3s,baz=141,slow=1.3,SNR=33							
AFI				S	**Sn**	**17 31 07.1**	**-0.6**
102nm,0.3s,baz=355,slow=19,SNR=8.2							
AFI	**Afiamalu**	**2.70**	**61**		**Pn**	**17 30 36.4**	**+0.8**
AFI				Sn	**Sn**	**17 31 06.5**	**-1.2**
NIUE	**Niue**	**5.60**	**134**	Pn	**Pn**	**17 31 14.2**	**-0.3**
URZ	**Urewera**	**24.18**	**197**	P	**P**	**17 35 03.1**	**+2.4**
2.6nm,0.4s,baz=359,slow=4.0,SNR=9.1							
2.6nm,0.4s							
WR0	**Warramunga Arr**	**48.93**	**257**	P	**P**	**17 38 28.4**	**-1.8**
WR0				IAmb	IAmb	17 39 00.4	
comp=Z,5.9nm,1.4s							
WB0	**Warramunga Arr**	**49.08**	**257**	P	**P**	**17 38 29.4**	**-2.0**
WB0				IAmb	IAmb	17 39 07.3	
comp=Z,4.5nm,1.1s							
WB2	**Warramunga Arr**	**49.11**	**257**	P	**P**	**17 38 31.5**	**-0.1**
WB2				IAmb	IAmb	17 39 13.3	
comp=Z,6.9nm,1.4s							
WRA	**Warramunga Arr**	**49.12**	**257**	P	**P**	**17 38 31.1**	**-0.6**
comp=Z,0.2nm,0.3s,baz=95,slow=7.8,SNR=20							
comp=Z,0.2nm,0.3s							
WRA	**Warramunga Arr**	**49.12**	**257**	P	**P**	**17 38 31.1**	**-0.6**
AS31	**Alice Springs**	**49.42**	**252**	P	**P**	**17 38 33.7**	**-0.2**
AS31				IAmb	IAmb	17 38 39.7	
comp=Z,0.8nm,1.1s							
ASAR	**Alice Springs**	**49.42**	**252**	P	**P**	**17 38 33.9**	**0.0**
comp=Z,0.8nm,0.4s,baz=88,slow=8.0,SNR=17							
comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**49.42**	**252**	P	**P**	**17 38 33.4**	**-0.5**
KMRM	**Mail Ridge**	**72.41**	**38**	P	**P**	**17 41 09.2**	**-0.1**
CUSE	**Cuicocha Este**	**95.69**	**91**	*e*P	P	17 42 59.2	-10
GCUF	**Volcan Galeras**	**96.94**	**91**	*e*P	P	17 43 04.9	-10
BBAC	**Balboa, Cauca**	**97.24**	**90**	*e*P	Pdjf	17 43 23.9	+7.5
BRTR	**Keskin Array B**	**145.54**	**320**	PKPbc	**PKPdf**	**17 49 20.2**	**-0.5**
comp=Z,0.7nm,0.6s,baz=79,slow=2.7,SNR=5.2							

DJA 27 17:35:55.1±0.4, **3°S**±4°×**12°7E**±°, **h10**km, **M3.4**/10, **mb3.8**/4, **MLv3.3**/10, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.69**	**312**	P	Pg	17 36 08.3	-0.2
NLAI	**Namlea**	**0.93**	**140**	P	Pg	17 36 13.1	0.0
LBMI	**Labuha**	**2.12**	**28**	P	Pn	17 36 31.5	+0.9
TNTI	**Ternate**	**3.38**	**15**	P	Pn	17 36 46.5	-1.5
BNDI	**Bandanaira**	**3.94**	**120**	P	Pn	17 36 55.4	-0.2
LUWI	**Luwuk**	**4.00**	**291**	P	Pn	17 36 56.3	-0.3
SIJI	**Sorong**	**5.04**	**71**	P	Pn	17 37 11.1	+0.3
0.0nm4.3nm,1.6s							
APSI	**Ampana**	**5.11**	**288**	P	Pn	17 37 12.4	+0.7
0.1nm20nm,1.1s							
FAKI	**Fak Fak**	**5.76**	**94**	P	Pn	17 37 20.8	+0.1

DJA 27 17:50:28.4±0.4, **9°S**±4°×**11°1E**±°, **h10**km, **M3.5**/11, **mb3.5**/1, **MLv3.5**/11, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.47**	**327**	P	Pg	17 50 37.7	+0.2
PWJI	**Pagerwojo**	**0.68**	**33**	P	Pg	17 50 41.8	+0.3
PWJI				S	Sb	17 50 51.1	-0.6
KRKI	**Karangkates**	**1.10**	**67**	P	Pb	17 50 49.3	-0.2
KRKI				S	Sn	17 51 04.9	-0.2
UGM	**Wanagama**	**1.12**	**307**	P	Pb	17 50 49.0	-0.9
NGJI	**Ngawi**	**1.22**	**1**	P	Pb	17 50 51.5	0.0
YOGI	**Yogyakarta**	**1.36**	**304**	P	Pn	17 50 52.5	-1.0
SMRI	**Semarang**	**1.82**	**327**	P	Pn	17 50 59.6	-0.2
GMJI	**Gumukmas**	**2.02**	**81**	P	Pn	17 51 01.7	-0.8
JAGI	**Jajag, Banyuwa**	**2.69**	**88**	P	Pn	17 51 11.5	-0.4
CTJI	**Waduk Cacaban**	**2.73**	**305**	P	Pn	17 51 12.9	+0.6
RTBI	**Rangdo, Negare**	**3.48**	**88**	P	Pn	17 51 22.6	0.0
CNJI	**Cibinong**	**4.45**	**286**	P	Pn	17 51 35.5	-0.4
KLNI	**Mataram**	**4.62**	**88**	P	Pn	17 51 38.2	-0.1
TWSI	**Taliwang, Sumb**	**5.39**	**92**	P	Pn	17 51 49.5	+0.5

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*TEH **27** 17:51:50.5, 38°.21N×49°.12E, h20km, ML3.3*
*AZER **27** 17:51:52.5±0.0, 38°.27N×48°.82E, h21km, Error ellipse: s-maj=0.2km s-min=0.1km az=268.0*

ISC 27 17:51:50.8±1.1, **38°.11N**±0°.03×**48°.92E**±0°.04, **h7**km±9km, **n47**, σ1§**22**/74, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAS1	**Astara - Iran**	**0.28**	**347**	*e*Pg	**Pg**	**17 51 57.2**	**+0.8**
GAS1				*e*Sg	**Sg**	**17 52 01.3**	**+1.2**
ASTR	**Astara**	**0.46**	**347**	P	**Pg**	**17 52 00.1**	**+0.4**
SNR=75							
ASTR				S	**Sg**	**17 52 06.5**	**+0.7**
CSN1	**Caspian**	**0.56**	**166**	*e*Sg	**Sb**	**17 52 12.7**	**+1.6**
CSN1				*e*Pg	**Pb**	**17 52 04.0**	**+1.1**
CSN1				*e*		17 52 19.4	
comp=Z,32μm,0.5s							
LKRN	**Lenkeran, Azer**	**0.61**	**349**	P	**Pg**	**17 52 02.4**	**-0.2**
LKRN				S	**Sg**	**17 52 10.2**	**-0.3**
LRK	**Lerik**	**0.70**	**320**	P	**Pg**	**17 52 04.3**	**-0.1**
SNR=28							
LRK				S	**Sg**	**17 52 13.5**	**+0.1**
YRD	**Yardimli**	**0.97**	**327**	P	**Pg**	**17 52 08.9**	**-0.5**
SNR=110							
YRD				S	**Sg**	**17 52 21.8**	**-0.2**
GLBA	**Clilabad**	**1.21**	**340**	P	**Pg**	**17 52 12.9**	**-0.9**
SNR=28							
GLBA				S	**Sg**	**17 52 28.5**	**-1.1**
LHJ2	**Lahijan - Gila**	**1.30**	**136**	*e*Pg	**Pn**	**17 52 14.3**	**-1.1**
LHJ2				*e*		17 52 33.9	
comp=Z,6μm,0.3s							
GIDE	**GILAN DEYLAMAN**	**1.42**	**146**	*e*Pg	**Pn**	**17 52 16.6**	**-0.6**
ZNJK	**Zanjan**	**1.45**	**188**	*e*Pg	**Pg**	**17 52 18.7**	**+0.2**
JIR1	**Jirandeh**	**1.56**	**153**	*e*Pg	**Pn**	**17 52 19.1**	**-0.1**
JIR1				*e*		17 52 48.2	
comp=Z,8μm,0.3s							
QSDN	**Sirdan**	**1.61**	**173**	*e*Pn	**Pb**	**17 52 20.6**	**-0.5**
QSDN				*e*		17 52 42.7	
comp=Z,3μm,0.3s							
TVRZ	**Varzaqan**	**1.82**	**283**	*e*Pn	**Pb**	**17 52 24.1**	**-0.4**
QRD	**Qoradiz**	**1.84**	**318**	P	**Pn**	**17 52 23.3**	**+0.5**
SNR=16							
QRD				S	**Sn**	**17 52 46.2**	**-0.3**
BLQ	**Beylaqan**	**1.93**	**327**	P	**Pn**	**17 52 24.4**	**+0.3**
SNR=7.3							
BLQ				S	**Sn**	**17 52 49.1**	**+0.5**
IGZV	**Ghazvin**	**2.01**	**149**	*e*Pn	**Pn**	**17 52 25.5**	**+0.2**
IGZV				*e*		17 52 59.6	
comp=Z,1μm,0.3s							
QALM	**Alamut, Qazvin**	**2.17**	**140**	*e*Pn	**Pn**	**17 52 27.0**	**-0.5**
QALM				*e*		17 53 10.9	
comp=Z,835nm,0.4s							
KLST	**Kelardasht - M**	**2.33**	**132**	*e*Pn	**Pn**	**17 52 27.7**	**-2.1**
KLST				*e*		17 52 59.3	
comp=Z,972nm,0.4s							
KDMR	**Kurdemir**	**2.34**	**346**	P	**Pn**	**17 52 30.7**	**+1.1**
KDMR				S	**Sn**	**17 52 59.4**	**+0.8**
IAZR	**Azarshahr**	**2.37**	**260**	*e*Pn	**Pb**	**17 52 32.6**	**-1.3**
IAZR				*e*		17 53 11.7	
comp=Z,2μm,0.4s							
ZRD	**Zardab**	**2.37**	**336**	P	**Pn**	**17 52 30.8**	**+0.8**
ZRD				S	**Sn**	**17 52 59.6**	**+0.1**
ORD	**Ordubad**	**2.44**	**291**	P	**Pn**	**17 52 32.9**	**+1.7**
SNR=17							
ORD				S	**Sb**	**17 53 03.7**	**-1.6**
AGDM	**Agdam**	**2.44**	**325**	P	**Pn**	**17 52 31.8**	**+0.6**
AGDM				S	**Sn**	**17 53 02.0**	**+0.7**
QABG	**Abgarm-Qazvin**	**2.45**	**167**	*e*Pn	**Pn**	**17 52 31.1**	**-0.4**
BRDA	**Brd**	**2.54**	**328**	P	**Pn**	**17 52 33.6**	**+1.2**
BRDA				S	**Sn**	**17 53 04.0**	**+0.4**
PQL	**Pirkuli**	**2.69**	**355**	P	**Pn**	**17 52 35.6**	**+0.9**
PQL				S	**Sn**	**17 53 10.1**	**+2.5**
ATGJ	**Altiaghaj**	**2.75**	**0**	P	**Pn**	**17 52 36.6**	**+1.2**

ATGJ			S	Sn	17 53 10.1	+1.1
CHTH	**Charan**	**2.82 141**	*e*Pn	**Pn**	**17 52 35.6**	**-0.9**
IRAZ	**Razeghan**	**2.82 163**	*e*Pn	**Pn**	**17 52 37.7**	**+1.2**
NAX	**Nakhchivan**	**2.89 293**	P	**Pb**	**17 52 40.7**	**-2.0**
NAX			S	**Sb**	**17 53 15.6**	**-2.6**
SBZ	**Shahbuz**	**2.93 297**	P	**Pn**	**17 52 39.6**	**+1.7**
SBZ			S	**Sn**	**17 53 15.0**	**+1.6**
QBL	**Gabala**	**2.96 344**	P	**Pn**	**17 52 39.8**	**+1.6**
QBL			S	**Sn**	**17 53 16.0**	**+2.0**
SIZA	**Siyzn**	**2.96 360**	P	**Pn**	**17 52 41.2**	**+2.8**
SIZA			S	**Sn**	**17 53 17.0**	**+2.8**
XNQ	**Khinaliq**	**3.12 349**	P	**Pn**	**17 52 41.4**	**+0.8**
XNQ			S	**Sn**	**17 53 18.5**	**+0.3**
GANJ	**Ganja**	**3.24 322**	P	**Pn**	**17 52 42.6**	**+0.5**
GANJ			S	**Sn**	**17 53 22.3**	**+1.4**
SNGE	**Sanandaj**	**3.27 203**	*e*Pn	**Pn**	**17 52 44.5**	**+1.9**
IPRN	**Peran**	**3.30 123**	*e*Pn	**Pn**	**17 52 41.8**	**-1.3**
IPRN			*e*		17 53 23.1	
	comp=Z,1μm,0.4s					
SEKA	**Sheki**	**3.37 337**	P	**Pn**	**17 52 44.7**	**+0.8**
SEKA			S	**Sn**	**17 53 23.6**	**-0.6**
MAKU	**Maku**	**3.54 292**	*e*Pn	**Pn**	**17 52 47.1**	**+0.7**
MAKU			*e*Pn	Pb	17 52 47.8	-6.1
HYR	**Heyderabad**	**3.56 298**	P	**Pn**	**17 52 47.7**	**+1.2**
HYR			S	**Sn**	**17 53 28.0**	**-0.9**
GDB	**GEDABAY**	**3.58 318**	P	**Pn**	**17 52 46.4**	**-0.5**
GDB			S	**Sn**	**17 53 29.8**	**+0.2**
ASAO	**Ashtian**	**3.66 166**	*e*Pn	**Pn**	**17 52 49.2**	**+1.1**
HSAM	**Samen**	**3.90 184**	*e*Pn	**Pn**	**17 52 52.9**	**+1.5**
ZKTA	**Zakatala**	**3.94 334**	P	**Pn**	**17 52 53.0**	**+1.2**
ZKTA			S	**Sn**	**17 53 37.4**	**-0.9**
QZX	**Qazax, Azerbai**	**4.03 318**	P	**Pn**	**17 52 54.2**	**+1.3**
QZX			S	**Sn**	**17 53 40.2**	**-0.1**
IGLO	**Ghaloghah**	**4.23 111**	*e*Pn	**Pn**	**17 52 54.9**	**-1.0**
MRVT	**Maraveh tapeh**	**5.69 92**	*e*Pn	**Pn**	**17 53 13.7**	**-2.1**

ROM 27 17:54:46.5±0.1, 42°.852N±0°.003×13°.084E±0°.005, h10km, ML2.5/18, 13C-7D, Error ellipse: s-maj=0.4km s-min=0.3km az=284.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03 129**		⇓P	Pg	17 54 48.6	+0.2
NRCA				S	Sg	17 54 49.9	0.0
T1216	**Preci, Frazion**	**0.06 309**		P	Pg	17 54 49.1	+0.4
T1216				S	Sg	17 54 50.7	+0.4
T1216				AML	AML		
	comp=N,42800μm,0.2s						
T1216				AML	AML		
	comp=E,30400μm,0.3s						
T1216				AML	AML		
	comp=N,42750μm,0.2s						
MC2	**Monte Cornacci**	**0.10 52**		⇑P	Pg	17 54 49.7	+0.4
MC2				S	Sg	17 54 51.8	+0.4
FEMA	**Monte Fema**	**0.11 347**		P	Pg	17 54 50.0	+0.5
FEMA				S	Sg	17 54 52.1	+0.6
FEMA				AML	AML		
	comp=E,10920μm,1.0s						
FEMA				AML	AML		
	comp=N,15800μm,1.2s						
T1215	**Vallo di Nera,**	**0.17 253**		⇑P	Pg	17 54 50.7	+0.5
T1215				AML	AML		
	comp=E,1670μm,0.5s						
T1215				AML	AML		
	comp=N,1800μm,0.3s						
T1215				AML	AML		
	comp=N,1725μm,0.3s						
T1215				AML	AML		
	comp=E,1670μm,0.5s						
T1215				AML	AML		
	comp=N,1800μm,0.3s						
T1215				AML	AML		
	comp=E,1755μm,0.5s						
T1215				AML	AML		
	comp=N,1720μm,0.3s						
T1215				AML	AML		
	comp=N,1805μm,0.3s						
T1215				AML	AML		
	comp=E,1665μm,0.5s						
T1217	**Poggiodomo (PG**	**0.18 219**		P	Pg	17 54 50.8	+0.5
T1217				S	Sg	17 54 54.2	+1.1
T1217				AML	AML		
	comp=E,1510μm,1.2s						
T1217				AML	AML		
	comp=E,1530μm,0.3s						
T1217				AML	AML		
	comp=N,2375μm,0.5s						
T1217				AML	AML		
	comp=E,1515μm,1.2s						
T1217				AML	AML		
	comp=N,2445μm,0.5s						
FDMO	**Fiordimonte**	**0.18 1**		P	Pg	17 54 51.0	+0.6
FDMO				S	Sg	17 54 54.2	+1.0
CESI	**CESI - Serrava**	**0.20 319**		⇑P	Pg	17 54 51.4	+0.7
CESI				S	Sg	17 54 55.0	+1.2
CESI				AML	AML		
	comp=N,3635μm,0.2s						
CESI				AML	AML		
	comp=E,2515μm,0.1s						
AM05	**Amandola Campo**	**0.23 57**		P	Pg	17 54 51.9	+0.6
AM05				S	Sg	17 54 55.8	+1.2
AM05				AML	AML		
	comp=E,6870μm,0.5s						
AM05				AML	AML		
	comp=N,860μm,0.1s						
AM05				AML	AML		
	comp=E,1660μm,0.4s						
AM05				AML	AML		
	comp=E,6875μm,0.5s						
AM05				AML	AML		
	comp=N,859μm,0.1s						
AM05				AML	AML		
	comp=N,2160μm,0.3s						
T1204	**Amatrice, Fraz**	**0.24 136**		P	Pg	17 54 52.0	+0.5
T1204				S	Sg	17 54 56.4	+1.4
T1204				AML	AML		
	comp=E,1681μm,0.2s						
T1204				AML	AML		
	comp=N,1395μm,0.8s						
LNSS	**Leonessa**	**0.25 187**		⇑P	Pg	17 54 52.0	+0.4
LNSS				AML	AML		
	comp=E,2410μm,1.4s						
LNSS				AML	AML		
	comp=N,2195μm,1.0s						
LNSS				AML	AML		
	comp=E,2415μm,1.4s						
LNSS				AML	AML		
	comp=N,2190μm,1.0s						
SMA1	**SAN MARTINO**	**0.29 140**		P	Pb	17 54 53.6	-0.1
SMA1				AML	AML		
	comp=E,1585μm,0.6s						
SMA1				AML	AML		
	comp=N,1225μm,0.4s						
SMA1				AML	AML		
	comp=E,1590μm,0.6s						
SMA1				AML	AML		
	comp=N,1228μm,0.4s						
SEF1	**Sefro**	**0.31 341**		⇓P	Pg	17 54 53.4	+0.6
MDAR	**Monte D'Aria**	**0.34 7**		P	Pg	17 54 54.0	+0.6
RM33	**Pellescritta (**	**0.36 164**		P	Pg	17 54 53.9	+0.3
RM33				AML	AML		
	comp=E,530μm,1.3s						
RM33				AML	AML		
	comp=E,529μm,1.3s						
RM33				AML	AML		
	comp=N,486μm,0.3s						
RM33				AML	AML		
	comp=N,485μm,0.3s						
CAMP	**Campotosto**	**0.40 143**		⇑P	Pb	17 54 55.1	-0.5
CAMP				AML	AML		
	comp=E,264μm,0.3s						
CAMP				AML	AML		
	comp=N,280μm,0.7s						
CESX	**Cesi**	**0.44 237**		S	Sb	17 55 03.0	0.0
TERO	**Teramo**	**0.45 121**		⇓P	Pg	17 54 55.4	+0.2
TERO				AML	AML		
	comp=E,717μm,0.7s						
TERO				AML	AML		
	comp=N,537μm,0.6s						
OFFI	**Offida**	**0.45 79**		⇑P	Pb	17 54 56.5	0.0
OFFI				AML	AML		
	comp=E,1088μm,0.4s						
OFFI				AML	AML		
	comp=N,1500μm,0.5s						
EL6	**Elcito**	**0.48 2**		⇑P	Pg	17 54 54.1	-1.7
EL6				S	Sb	17 55 05.0	+0.9
CING	**Cingoli**	**0.53 9**		⇓P	Pg	17 54 57.2	+0.4
FIAM	**Fiamignano**	**0.58 178**		S	Sb	17 55 07.0	-0.1
ARVD	**Arcevia**	**0.66 351**		⇑P	Pg	17 54 59.2	+0.1
ARVD				S	Sb	17 55 10.0	+0.8
ARVD				AML	AML		
	comp=N,265μm,1.1s						
ARVD				AML	AML		
	comp=E,395μm,1.4s						
FAGN	**Fagnano**	**0.69 148**		⇑P	Pb	17 55 00.4	-0.2
FAGN				AML	AML		
	comp=E,481μm,0.4s						
FAGN				AML	AML		
	comp=N,332μm,1.6s						
MGAB	**Montegabbione**	**0.72 275**		⇓P	Pn	17 55 03.1	+0.5
MGAB				AML	AML		
	comp=N,790μm,1.6s						
MGAB				AML	AML		
	comp=E,654μm,0.6s						
MGAB				AML	AML		
	comp=N,798μm,0.4s						
MGAB				AML	AML		
	comp=E,600μm,0.3s						
MGAB				AML	AML		
	comp=N,790μm,1.6s						
SRES	**S.Oreste - Sor**	**0.75 215**		⇑P	Pg	17 55 01.1	+0.3
SRES				AML	AML		
	comp=N,428μm,0.4s						
SRES				AML	AML		
	comp=E,384μm,1.0s						
PIEI	**Pieia**	**0.79 330**		⇓P	Pg	17 55 01.9	+0.1
PIEI				S	Sn	17 55 15.0	-0.7
PIEI				AML	AML		
	comp=N,156μm,1.5s						
PIEI				AML	AML		
	comp=E,216μm,0.3s						
FSSB	**Fossombrone**	**0.87 345**		⇑P	Pg	17 55 03.3	0.0
FSSB				S	Sn	17 55 18.0	+0.5
FSSB				AML	AML		
	comp=N,965μm,0.3s						
FSSB				AML	AML		
	comp=E,560μm,1.3s						
FSSB				AML	AML		
	comp=N,966μm,0.3s						
CAFI	**Castiglion Fio**	**0.95 301**		⇑P	Pb	17 55 05.3	+0.3
CAFI				AML	AML		
	comp=E,204μm,0.5s						
CAFI				AML	AML		
	comp=N,150μm,0.7s						
CAFI				AML	AML		
	comp=E,204μm,0.5s						
SEI	**Scarperia**	**1.74 314**		P	Pn	17 55 15.7	-1.0
SEI				AML	AML		
	comp=E,72μm,0.4s						
SEI				AML	AML		
	comp=N,75μm,1.0s						
MODR	**Mondragone**	**1.80 161**		P	Pb	17 55 19.0	-0.6
MODR				S	Sg	17 55 45.0	+0.6
VITU	**Vitulano (BN)**	**2.03 145**		P	Pb	17 55 24.0	+0.7
APRC	**Apricena**	**2.13 120**		S	Sb	17 55 51.0	-0.5
VENL	**Venezia Lido**	**2.62 349**		⇓P	Pb	17 55 34.5	+1.2
CORF	**Corte**	**2.96 261**		S	Sn	17 56 10.0	+1.1
STAL	**STALIGIAL**	**3.42 356**		S	Sb	17 56 31.0	+2.3
EUCT	**Pavia**	**3.69 311**		⇑P	Pg	17 55 55.1	-2.1
EUCT				S	Sg	17 56 46.0	+1.0
SALB	**San Lorenzo Be**	**3.85 139**		S	Sn	17 56 33.0	+1.8
SALB				S	Sb	17 56 44.0	+2.7
BOSI	**Bolzano**	**3.85 342**		S	Sb	17 56 45.0	+3.8
TDS	**Terranova Siba**	**4.02 141**		S	Sg	17 56 52.0	-3.6
SERS	**Sersale**	**4.69 143**		S	Sn	17 56 53.0	+1.2
VPL	**Vulcano Piano**	**4.70 161**		P	Pg	17 56 13.6	-2.8
CRJA	**Costa Raja**	**5.04 181**		S	Sn	17 57 04.0	+3.5
VLO	**Vlora**	**5.36 114**		S	Sn	17 57 07.0	-1.1

ROM 27 17:55:37.7±0.1, 43°.021N±0°.004×13°.096E±0°.010, h7km, ML2.1/4, 6C, Error ellipse: s-maj=0.7km s-min=0.4km az=277.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.13 147**		P	Pg	17 55 40.2	-0.3
CESI	**CESI - Serrava**	**0.14 263**		⇑P	Pg	17 55 41.4	+0.7
CESI				S	Sg	17 55 43.7	+0.9
CESI				AML	AML		
	comp=E,772μm,0.7s						
CESI				AML	AML		
	comp=N,834μm,0.1s						
CESI				AML	AML		
	comp=N,999μm,0.2s						
CESI				AML	AML		
	comp=E,773μm,0.7s						
CESI				AML	AML		
	comp=N,834μm,0.1s						
T1216	**Preci, Frazion**	**0.14 203**		⇑P	Pg	17 55 41.7	+1.0
T1216				S	Sg	17 55 43.8	+1.0
T1216				AML	AML		
	comp=E,1448μm,0.5s						
T1216				AML	AML		
	comp=N,1508μm,1.0s						
T1216				AML	AML		
	comp=N,1359μm,0.4s						
T1216				AML	AML		
	comp=E,1030μm,0.2s						
SEF1	**Sefro**	**0.17 319**		P	Pg	17 55 41.6	+0.5
SEF1				S	Sg	17 55 44.2	+0.8
MDAR	**Monte D'Aria**	**0.17 11**		P	Pg	17 55 42.0	+0.7
MDAR				S	Sg	17 55 45.0	+1.3
NRCA	**Norcia**	**0.19 176**		P	Pg	17 55 42.6	+1.2
NRCA				AML	AML		
	comp=E,1705μm,0.7s						
NRCA				AML	AML		
	comp=N,1200μm,0.7s						
NRCA				AML	AML		
	comp=E,2575μm,0.2s						
NRCA				AML	AML		
	comp=E,2795μm,0.2s						
NRCA				AML	AML		
	comp=N,2205μm,0.1s						
NRCA				AML	AML		
	comp=N,2040μm,0.1s						
NRCA				AML	AML		
	comp=E,1442μm,0.1s						
NRCA				AML	AML		
	comp=E,1598μm,0.1s						
NRCA				AML	AML		
	comp=N,993μm,0.1s						
GAG1	**Gagliole**	**0.22 355**		P	Pg	17 55 42.9	+0.8
GAG1				S	Sg	17 55 46.6	+1.6
T1215	**Vallo di Nera,**	**0.28 217**		⇑P	Pg	17 55 43.9	+0.8
T1215				S	Sb	17 55 48.4	-1.5
EL6	**Elcito**	**0.31 1**		⇑P	Pg	17 55 44.3	+0.5
EL6				S	Sg	17 55 48.9	+1.0
T1217	**Poggiodomo (PG**	**0.33 201**		⇑P	Pg	17 55 45.1	+0.9
T1217				S	Sb	17 55 50.4	-1.1
T1217				AML	AML		
	comp=E,296μm,0.2s						
T1217				AML	AML		
	comp=N,498μm,0.7s						
T1217				AML	AML		
	comp=N,396μm,0.1s						
LNSS	**Leonessa**	**0.42 186**		⇑P	Pb	17 55 46.7	-0.8
LNSS				S	Sb	17 55 53.3	-0.7
ARVD	**Arcevia**	**0.49 347**		P	Pg	17 55 47.4	+0.2
ARRO	**Arrone**	**0.50 209**		P	Pg	17 55 47.9	+0.5
ARRO				S	Sb	17 55 55.6	-0.8
TERO	**Teramo**	**0.55 137**		P	Pb	17 55 49.2	-0.4
TERO				S	Sb	17 55 57.3	-0.3
FSSB	**Fossombrone**	**0.71 341**		P	Pb	17 55 52.0	-0.4
FSSB				S	Sb	17 56 03.1	+0.7

ISC 27 18:00:22.0±1.8, 60°.37N±0°.05×142°.0W±0°.1, h10km, n6, σ0°92/9, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESA	**MESA**	**0.19 175**		P	**Pg**	**18 00 26.0**	**-0.1**
	baz=354,SNR=116						
MESA				S	**Sg**	**18 00 27.8**	**-1.1**
	baz=354						
CTG	**Chitna Glacier**	**0.68 27**		P	**Pg**	**18 00 35.0**	**-0.1**
	baz=209						
CTG				S	**Sg**	**18 00 44.4**	**+0.4**
	baz=209						
O28M	**Mount Upton**	**0.97 65**		P	**Pg**	**18 00 39.5**	**-1.2**
	baz=248,SNR=6.6						
YUK8	**Steele Glacier**	**1.42 49**		P	**Pn**	**18 00 48.1**	**-0.1**
	baz=232,SNR=18						
YUK3	**Moose Creek**	**1.60 27**		S	**Sg**	**18 01 12.7**	**-0.5**
	baz=209						
O29M	**Mount Kennedy**	**1.70 91**		Pg	**Pn**	**18 00 52.8**	**+1.1**
	baz=274,SNR=12						
O29M				S	**Sb**	**18 01 15.6**	**+0.9**
	baz=274						

*DJA **27** 18:02:21.3±0.7, 6°.S±4°.×12°.8E±°, h408km±12km, M3.7/12, mb3.6/7, mB4.3/2, MLv3.7/12, Mw(mB)3.5/2*
*IDC **27** 18:02:22.1±1.1, 5°.64S×127°.81E, h371km±17km, mb2.6/1, mbtmp3.8/5, Error ellipse: s-maj=26.6km s-min=13.5km az=118.0*

ISC 27 18:02:22.3±0.9, 5°.63S±0°.07×127°.82E±0°.08, h400km, n17, σ1°36/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.35 62**		P	**Pn**	**18 03 19.9**	**-0.7**
KRAI	**Karang Ratu**	**2.37 14**		P	**Pn**	**18 03 20.4**	**-0.4**
NLAI	**Namlea**	**2.48 343**		P	**Pn**	**18 03 21.7**	**+0.2**
MSAI	**Masohi**	**2.53 26**		P	**Pn**	**18 03 21.3**	**-0.6**
SANI	**Sanana**	**4.00 333**		P	**Pn**	**18 03 33.6**	**-0.8**
SAUI	**Saumlaki**	**4.17 124**		P	**Pn**	**18 03 35.9**	**-0.1**
FAKI	**Fak Fak**	**5.18 59**		P	**Pn**	**18 03 45.6**	**-0.6**
	0.1nm674nm16nm,0.8s						
SOEI	**Soe**	**5.40 220**		P	**Pn**	**18 03 48.3**	**-0.3**
	0.2nm39nm,1.1s						
SIJI	**Sorong**	**5.85 36**		P	**Pn**	**18 03 53.0**	**-0.3**
	3.3nm,0.3s,baz=220,slow=23,SNR=11						
SIJI				S	**S**	**18 05 04.9**	**-2.6**
	5.9nm,0.2s,baz=239,slow=24,SNR=9.6						
SIJI	**Sorong**	**5.85 36**		P	**Pn**	**18 03 52.6**	**-0.8**
	0.1nm697nm7.4nm,1.0s						
BATI	**Baumata**	**6.13 222**		P	**Pn**	**18 03 56.5**	**+0.1**
	20nm,0.4s,baz=69,slow=3.6,SNR=19						
BATI				S	**S**	**18 05 09.7**	**-3.3**
	31nm,0.5s,baz=20,slow=8.5,SNR=10						
BATI	**Baumata**	**6.13 222**		P	**Pn**	**18 03 55.9**	**-0.5**
	0.1nm25nm,1.0s						
MMRI	**Maumere**	**6.29 241**		P	**Pn**	**18 03 57.2**	**-0.9**
	0.1nm24nm,1.1s						
GTOI	**Gorontalo**	**7.86 322**		P	**P**	**18 04 16.8**	**+0.6**
WRA	**Warramunga Arr**	**15.57 157**		P	**P**	**18 05 42.2**	**+1.2**
	1.5nm,0.5s,baz=335,slow=11,SNR=46						
ASAR	**Alice Springs**	**18.86 162**		P	**P**	**18 06 16.9**	**+1.0**
	1.0nm,0.4s,baz=342,slow=12,SNR=33						
MKAR	**Makanchi Array**	**65.91 328**		P	**P**	**18 12 29.2**	**+2.3**
	0.2nm,0.6s,baz=120,slow=8.3,SNR=1.9						
	0.2nm,0.6s						

IDC 27 18:02:22.6±40.0, 18°.79S×178°.88W, h650km±325km, mb3.1/5, mbtmp4.2/5, Error ellipse: s-maj=418.2km s-min=85.7km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.87 262**		P	P	18 08 06.5	+0.3
	4.2nm,0.9s,baz=63,slow=11,SNR=2.1						
	4.2nm,0.9s						
STKA	**Stephens Creek**	**37.82 242**		P	P	18 08 46.8	+0.1
	0.7nm,0.3s,baz=59,slow=12,SNR=3.9						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**44.04 260**		P	P	18 09 35.7	0.0
	1.2nm,0.4s,baz=98,slow=7.3,SNR=20						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**44.13 255**		P	P	18 09 36.5	+0.1
	1.9nm,0.5s,baz=91,slow=7.6,SNR=61						
	1.9nm,0.5s						
SIJI	**Sorong**	**52.01 284**		P	P	18 10 34.5	-0.1
	6.7nm,0.8s,baz=126,slow=19,SNR=2.6						
	6.7nm,0.8s						

*IDC **27** 18:07:57.0±8.9, 1°.96N×126°.03E, h0km, mb3.8/3, mbtmp3.9/3, Error ellipse: s-maj=178.8km s-min=137.9km az=70.0*
*DJA **27** 18:08:08.9±1.4, 1°.N±3°.×12°.6E±°, h26km±15km, M3.4/13, mb3.4/1, MLv3.5/13*

ISC 27 18:08:09.6±1.2, 1°.29N±0°.06×125°.82E±0°.05, h54km, n15, σ1°07/16, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.63 108**		P	**Pn**	**18 08 36.5**	**+0.5**
TNTI				S	**Sn**	**18 08 57.5**	**+1.6**
GAMI	**Galela, Maluku**	**2.04 75**		P	**Pn**	**18 08 42.3**	**+0.7**
SGSI	**Sangihe**	**2.40 353**		P	**Pn**	**18 08 46.1**	**-0.3**
LBMI	**Labuha**	**2.55 139**		P	**Pn**	**18 08 48.9**	**+0.4**
GTOI	**Gorontalo**	**2.88 257**		P	**Pn**	**18 08 54.6**	**+1.5**
SANI	**Sanana**	**3.32 177**		P	**Pn**	**18 08 58.4**	**-0.7**
LUWI	**Luwuk**	**3.83 233**		P	**Pn**	**18 09 06.8**	**+0.7**
MRSI	**Marisa**	**3.96 258**		P	**Pn**	**18 09 08.1**	**+0.2**
NLAI	**Namlea**	**4.68 164**		P	**Pn**	**18 09 17.7**	**0.0**
APSI	**Ampana**	**4.71 242**		P	**Pn**	**18 09 19.1**	**+0.9**
KRAI	**Karang Ratu**	**5.25 151**		P	**Pn**	**18 09 26.6**	**+1.0**
AAI	**Ambon**	**5.49 154**		P	**Pn**	**18 09 29.4**	**+0.6**
WRA	**Warramunga Arr**	**22.70 159**		P	**P**	**18 13 04.6**	**-2.3**
	1.4nm,0.5s,baz=339,slow=10,SNR=14						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**26.02 163**		P	**P**	**18 13 37.9**	**0.0**
	1.1nm,0.4s,baz=334,slow=8.3,SNR=41						
	1.1nm,0.4s						
STKA	**Stephens Creek**	**36.22 157**		P	**P**	**18 15 06.9**	**-0.6**
	0.3nm,0.3s,baz=332,slow=15,SNR=1.3						
	0.3nm,0.3s						

*NEIC **27** 18:17:40.3±2.4, 53°.1N±0°.1×163°.0W±0°.1, h10km±2km, mb3.8/11, ML3.6/8, ML3.5(AEIC), Error ellipse: s-maj=26.0km s-min=9.4km az=158.0*
*IDC **27** 18:17:43.5±1.7, 53°.74N×163°.29W, h0km, mb3.8/9, mbtmp3.8/12, ML3.6/3, MS3.5/1, Error ellipse: s-maj=38.4km s-min=22.7km az=178.0*
*AEIC **27** 18:17:45±2.2, 53°.5N±0°.1×163°.1W±0°.1, h25km±8km, Error ellipse: s-maj=19.0km s-min=6.6km az=148.0*

ISC 27 18:17:46.5±1.0, 53°.5N±0°.1×163°.16W±0°.08, h32km, n81, σ1°70/74, mb3.8/8, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.38 354**			**Pn**	**18 18 09.0**	**-0.5**
AKUT	**Akutan**	**1.68 294**			**Pn**	**18 18 13.5**	**-0.1**
AKUT				IAML		18 18 37.5	
	comp=E,487nm,0.6s						
AKUT				IAML		18 18 40.3	
	comp=N,513nm,0.5s						
UNV	**Unalaska Valle**	**2.02 282**			**Pn**	**18 18 17.1**	**-1.2**
SDPT	**Sand Point**	**2.44 39**			**Pn**	**18 18 24.2**	**+0.2**
SDPT				IAML		18 19 14.3	
	comp=E,218nm,0.9s						
SDPT				IAML		18 19 17.7	
	comp=N,275nm,0.9s						
CNBA	**Chernabura Isl**	**2.49 56**		Pn	**Pn**	**18 18 23.7**	**-1.1**
NIKH	**Nikolski High**	**3.46 264**		Pn	**Pn**	**18 18 37.2**	**-0.9**
CHGN	**Chignik**	**3.93 42**		Pn	**Pn**	**18 18 44.6**	**+0.1**
OHAK	**Old Harbor**	**6.76 52**		Pn	**Pn**	**18 19 21.6**	**-1.8**
P18K	**Big Mountain,**	**7.37 33**		Pn	**Pn**	**18 19 32.5**	**+0.7**
KDAK	**Kodiak Island**	**7.37 50**		Pn	**Pn**	**18 19 30.5**	**-1.2**
	comp=N,0.8nm,0.3s,baz=228,slow=11,SNR=5.2						
	comp=N,13nm,0.9s						
KDAK	**Kodiak Island**	**7.37 50**		Pn	**Pn**	**18 19 30.1**	**-1.7**
Q19K	**Cape Douglas,**	**7.60 40**		Pn	**Pn**	**18 19 34.9**	**-0.1**
Q18K	**Koktub Hills**	**7.74 31**		Pn	**Pn**	**18 19 37.8**	**+1.0**
N18K	**Kilae Creek**	**8.22 26**		Pn	**Pn**	**18 19 43.6**	**+0.1**
N19K	**Bonanza Creek**	**8.72 29**		Pn	**Pn**	**18 19 51.9**	**+1.5**
CNPM	**China Poot**	**8.94 43**		Pn	**Pn**	**18 19 53.6**	**+0.3**
M19K	**Big River Lodg**	**9.64 26**		Pn	**Pn**	**18 20 02.9**	**-0.1**
L19K	**White Mountain**	**9.77 24**		Pn	**Pn**	**18 20 03.5**	**-1.1**
M20K	**Styx River**	**9.97 28**		Pn	**Pn**	**18 20 09.1**	**+1.7**
SEW	**Seward**	**10.01 43**		Pn	**Pn**	**18 20 06.4**	**-1.5**
SUA	**Susitna One**	**10.40 35**		Pn	**Pn**	**18 20 13.0**	**-0.4**
SKT	**Skwentna**	**10.52 31**		Pn	**Pn**	**18 20 14.6**	**-0.3**
PWL	**Port Wells**	**10.90 41**		Pn	**Pn**	**18 20 18.5**	**-1.7**
PPLA	**Purkeypile**	**11.05 27**		Pn	**Pn**	**18 20 23.9**	**+1.6**
KNK	**Knik Glacier**	**11.19 39**		Pn	**Pn**	**18 20 22.0**	**-2.1**
HIN	**Hinchinbrook I**	**11.41 46**		Pn	**Pn**	**18 20 25.9**	**-1.1**
SML	**Sawmill**	**11.49 38**		Pn	**Pn**	**18 20 27.1**	**-1.1**

FID	Port Fidalgo	11.60	45	Pn	Pn	18 20 27.9	-1.8
J20K	Nowinta River	11.68	20	Pn	Pn	18 20 30.2	-0.5
EYAK	Cordova Ski Ar	11.81	46	Pn	Pn	18 20 30.9	-1.6
SCM	Sheep Creek Mo	11.88	39	Pn	Pn	18 20 30.4	-3.1
TRF	Thorofare Moun	12.02	29	Pn	Pn	18 20 34.4	-1.2
RAGM	Ragged Mountai	12.20	48	Pn	Pn	18 20 37.7	-0.2
KLU	Klutina	12.22	42	Pn	Pn	18 20 36.7	-1.5
HMT	Hamilton	12.37	49	Pn	Pn	18 20 37.5	-2.6
M24K	Tolsona, Glenn	12.48	39	Pn	Pn	18 20 40.5	-1.2
BERG	Berg Lake	12.64	49	Pn	Pn	18 20 42.7	-1.2
DHY	Denali Highway	12.66	34	Pn	Pn	18 20 41.3	-3.0
N25K	Chitina, Valde	12.82	43	Pn	Pn	18 20 45.1	-1.3
GLB	Gilahina Butte	13.07	45	Pn	Pn	18 20 47.1	-2.6
VRDI	Verde Repeater	13.12	46	Pn	Pn	18 20 48.9	-1.7
MLY	Manley	13.17	24	Pn	Pn	18 20 49.5	-1.5
TGL	Tana Glacier	13.18	48	Pn	Pn	18 20 49.3	-2.1
H21K	Melozitna Rive	13.26	19	Pn	Pn	18 20 51.4	-0.9
PAX	Paxson	13.26	37	Pn	Pn	18 20 50.0	-2.4
ISLE	Juniper Island	13.34	49	Pn	Pn	18 20 52.7	-0.9
YAH	Yahtse	13.53	51	Pn	Pn	18 20 54.1	-2.0
M26K	Nabesna, AK	13.88	42	Pn	Pn	18 20 59.1	-1.7
ILAR	Eielson Array	14.00	30	Pn	Pn	18 20 58.4	-4.0
	comp=N,0.1nm,0.3s,baz=217,slow=13,SNR=5.2						
	comp=N,0.2nm,0.5s						
SCRK	Sand Creek	14.40	36	Pn	Pn	18 21 05.4	-2.6
H24K	Noodor Dome	14.53	26	Pn	Pn	18 21 06.6	-3.1
L27K	Beaver Creek,	14.68	41	Pn	Pn	18 21 09.8	-1.9
BCAR	Beaver Creek A	14.70	41	Pn	Pn	18 21 09.9	-2.1
J26L	Joseph Creek	14.88	34	Pn	Pn	18 21 12.8	-1.6
J26L				IAmb	IAmb	18 21 49.6	
	comp=Z,4.6nm,1.1s						
K27K	Chicken	15.12	37	Pn	Pn	18 21 18.5	+1.1
K27K				IAmb	IAmb	18 21 35.4	
	comp=Z,6.0nm,1.1s						
COLD	Coldfoot	15.14	20		Pn	18 21 17.7	-0.2
COLD				IAmb	IAmb	18 21 23.4	
	comp=Z,8.3nm,1.0s						
P29M	Windy Craggy	15.24	56		Pn	18 21 19.8	+0.7
I26K	Coal Creek Min	15.52	32	Pn	Pn	18 21 20.7	-2.1
I26K				IAmb	IAmb	18 21 27.1	
	comp=Z,8.6nm,1.4s						
HYT	Haines Junctio	15.66	52	Pn	Pn	18 21 19.6	-5.1
HYT				IAmb	IAmb	18 21 37.0	
	comp=Z,10nm,1.4s						
I29M	Ogilvie Camp,	17.20	37		Pn	18 21 43.8	-0.3
M31M	Drury Creek, Y	17.48	49		Pn	18 21 46.6	-1.0
M31M				IAmb	IAmb	18 21 53.4	
	comp=Z,6.4nm,0.8s						
FARO	Faro, Yukon	17.96	49		Pn	18 21 51.1	-2.4
EPYK	Eagle Plains	18.29	35	P	P	18 21 56.1	-1.3
EPYK				IAmb	IAmb	18 22 03.9	
	comp=Z,10nm,1.4s						
DLBC	Dease Lake	19.07	62	P	P	18 22 05.5	-0.5
	comp=Z,0.2nm,0.3s,baz=323,slow=20,SNR=1.6						
	comp=Z,1.5nm,0.2s						
INK	Inuvik	20.37	32	P	P	18 22 18.6	-1.4
	comp=Z,1.5nm,0.8s,baz=241,slow=11,SNR=7.2						
	comp=Z,1.5nm,0.8s						
INK	Inuvik	20.37	32	P	P	18 22 18.3	-1.8
YKA	Yellowknife Ar	26.64	51	P	P	18 23 24.2	+2.4
	comp=Z,1.2nm,0.7s,baz=271,slow=9.5,SNR=4.7						
	comp=Z,1.2nm,0.7s						
H11N2	WAKE ISLAND Hy	40.81	226	T	T	19 09 16.3	
	baz=26,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	40.82	226	T	T	19 09 17.2	
	baz=26,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	40.83	226	T	T	19 09 09.6	
	baz=26,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	41.98	225	T	T	19 10 56.0	
	baz=26,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	41.99	225	T	T	19 10 55.6	
	baz=26,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	42.00	225	T	T	19 10 56.3	
	baz=26,slow=76,SNR=27						
FRB	Frobisher Bay	45.83	38	LR	LR	18 44 25.3	
	comp=Z,46nm,18.5s,baz=4.0,slow=35						
TXAR	Lajitas Array	49.03	95	P	P	18 26 32.6	+2.2
	comp=Z,0.4nm,0.5s,baz=305,slow=6.0,SNR=7.5						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	64.88	328	P	P	18 28 22.9	+0.8
	comp=Z,0.6nm,0.7s,baz=43,slow=6.7,SNR=7.5						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	65.67	317	P	P	18 28 27.5	+0.1
	comp=Z,0.3nm,0.7s,baz=33,slow=6.7,SNR=4.7						
	comp=Z,0.3nm,0.7s						
HFS	Hagfors	66.70	2	P	P	18 28 34.0	+0.3
	comp=Z,2.1nm,0.6s,baz=0.0,slow=3.3,SNR=6.2						
	comp=Z,2.1nm,0.6s						
EKA	Eskdalemuir Ar	70.30	12	P	P	18 28 57.0	+0.7
	comp=Z,2.7nm,0.9s,baz=355,slow=4.2,SNR=4.0						
	comp=Z,2.7nm,0.9s						
AKASG	Malin Array Be	75.66	352	P	P	18 29 27.6	-0.5
	comp=Z,0.6nm,0.5s,baz=12,slow=5.9,SNR=2.3						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	78.01	2	P	P	18 29 42.4	+0.9
	comp=Z,0.2nm,0.3s,baz=324,slow=4.8,SNR=3.7						
	comp=Z,0.2nm,0.3s						

ROM 27 18:29:16.4±0.1, 42°.875N±0°.003×13°.069E±0°.005, h10km, Md1.7/9, 7C-5D, Error ellipse: s-maj=0.4km s-min=0.3km az=302.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.04	293	P	Pg	18 29 18.9	+0.4
T1216				S	Sg	18 29 20.2	+0.3
T1216				AML	AML		
	comp=E,13500μm,0.1s						
T1216				AML	AML		
	comp=N,19600μm,0.3s						
T1216				AML	AML		
	comp=E,31000μm,0.3s						
T1216				AML	AML		
	comp=N,20850μm,0.4s						
NRCA	Norcia	0.05	141	⇓P	Pg	18 29 19.0	+0.4
NRCA				S	Sg	18 29 20.4	+0.2
NRCA				AML	AML		
	comp=E,4860μm,0.7s						
NRCA				AML	AML		
	comp=N,9115μm,0.2s						
NRCA				AML	AML		
	comp=E,5170μm,0.2s						
NRCA				AML	AML		
	comp=N,9805μm,0.2s						
NRCA				AML	AML		
	comp=E,36850μm,1.2s						
NRCA				AML	AML		
	comp=N,23600μm,0.2s						
NRCA				AML	AML		
	comp=E,39350μm,1.2s						
NRCA				AML	AML		
	comp=N,25900μm,0.2s						
NRCA				END			
FDMO	Fiordimonte	0.16	5	P	Pg	18 29 20.7	+0.7
FDMO				S	Sg	18 29 23.2	+0.6
FDMO				AML	AML		
	comp=E,3675μm,0.1s						
FDMO				AML	AML		
	comp=N,3385μm,0.1s						
FDMO				AML	AML		
	comp=E,3930μm,0.2s						
FDMO				AML	AML		
	comp=N,4375μm,0.6s						
FDMO				END			
T1215	Vallo di Nera,	0.17	244	⇑P	Pg	18 29 20.7	+0.7
T1215				S	Sg	18 29 23.6	+1.0
T1215				AML	AML		
	comp=E,596μm,0.7s						
T1215				AML	AML		
	comp=N,463μm,1.3s						
T1215				AML	AML		
	comp=E,2000μm,0.4s						
T1215				AML	AML		
	comp=N,1615μm,0.5s						
T1215				AML	AML		
	comp=E,2095μm,0.4s						
T1215				AML	AML		
	comp=N,1568μm,0.7s						
T1215				END			
CESI	CESI - Serrava	0.18	317	⇓P	Pg	18 29 21.0	+0.7
CESI				S	Sg	18 29 24.0	+1.0
CESI				AML	AML		
	comp=E,2780μm,0.6s						
CESI				AML	AML		
	comp=N,4375μm,0.2s						
CESI				END			
T1217	Poggiodomo (PG	0.19	212	⇑P	Pg	18 29 21.2	+0.7
T1217				S	Sg	18 29 24.4	+1.0
T1217				AML	AML		
	comp=E,1396μm,1.4s						
T1217				AML	AML		
	comp=N,2435μm,1.1s						
T1217				AML	AML		
	comp=E,1485μm,1.4s						
T1217				AML	AML		
	comp=N,2505μm,1.1s						
T1217				END			
AM05	Amandola Campo	0.23	64	⇑P	Pg	18 29 21.9	+0.7
AM05				S	Sg	18 29 25.8	+1.3
AM05				AML	AML		
	comp=E,1395μm,0.4s						
AM05				AML	AML		
	comp=N,1660μm,0.1s						
AM05				AML	AML		
	comp=E,6205μm,0.4s						
AM05				AML	AML		
	comp=N,366μm,0.1s						
AM05				END			
LNSS	Leonessa	0.27	185	⇑P	Pg	18 29 22.6	+0.5
LNSS				S	Sg	18 29 26.6	+0.8
LNSS				AML	AML		
	comp=E,722μm,1.3s						
LNSS				AML	AML		
	comp=N,499μm,0.4s						
LNSS				AML	AML		
	comp=E,3195μm,0.2s						
LNSS				AML	AML		
	comp=N,4040μm,0.2s						
LNSS				END			
SMA1	SAN MARTINO	0.31	141	P	Pb	18 29 23.5	-0.7
SMA1				AML	AML		
	comp=E,2320μm,0.9s						
SMA1				AML	AML		
	comp=N,1690μm,0.8s						
SMA1				END			
ARRO	Arrone	0.37	217	P	Pg	18 29 24.4	+0.6
ARRO				AML	AML		
	comp=E,836μm,0.2s						
ARRO				AML	AML		
	comp=N,602μm,1.3s						
ARRO				END			
T1211	Morro Reatino	0.38	205	⇑P	Pb	18 29 24.9	-0.4
T1211				AML	AML		
	comp=E,872μm,1.6s						
T1211				AML	AML		
	comp=N,1406μm,1.3s						
RM33	Pellescritta (	0.38	164	P	Pg	18 29 24.4	+0.4
RM33				AML	AML		
	comp=E,982μm,1.1s						
RM33				AML	AML		
	comp=N,981μm,1.6s						
RM33				AML	AML		
	comp=E,937μm,1.1s						
RM33				AML	AML		
	comp=N,955μm,0.4s						
CESX	Cesi	0.45	234	⇑P	Pg	18 29 25.5	+0.3
CESX				S	Sb	18 29 32.2	-0.9
CESX				AML	AML		
	comp=E,158μm,0.3s						
CESX				AML	AML		
	comp=N,204μm,0.4s						
CESX				AML	AML		
	comp=E,690μm,0.3s						
CESX				AML	AML		
	comp=N,656μm,0.7s						
EL6	Elcito	0.46	3	⇓P	Pg	18 29 25.8	+0.4
EL6				AML	AML		
	comp=E,1975μm,1.4s						
EL6				AML	AML		
	comp=N,2242μm,1.4s						
TERO	Teramo	0.47	122	⇑P	Pg	18 29 25.8	+0.2
TERO				AML	AML		
	comp=E,754μm,0.4s						
TERO				AML	AML		
	comp=N,976μm,0.5s						
TERO				AML	AML		
	comp=E,838μm,1.6s						
TERO				AML	AML		
	comp=N,1060μm,0.5s						
ARVD	Arcevia	0.63	352	⇓P	Pb	18 29 29.2	-0.3
ARVD				S	Sb	18 29 39.0	+0.6
ARVD				AML	AML		
	comp=E,436μm,0.7s						
ARVD				AML	AML		
	comp=N,271μm,1.1s						
PIEI	Pieia	0.77	330	S	Sn	18 29 44.0	-1.0
FSSB	Fossombrone	0.84	345	⇓P	Pb	18 29 33.3	+0.1
FSSB				AML	AML		
	comp=E,882μm,0.3s						
FSSB				AML	AML		
	comp=N,1325μm,0.4s						

ROM 27 18:30:05.4±0.1, 42°.893N±0°.004×13°.162E±0°.005, h8km, ML2.6/23, 7C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=98.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.07	211	⇑P	Pg	18 30 07.8	+0.3
NRCA				S	Sg	18 30 09.4	+0.5
NRCA				AML	AML		
	comp=E,36850μm,1.2s						
NRCA				AML	AML		
	comp=E,36800μm,1.2s						
NRCA				AML	AML		
	comp=N,23550μm,0.2s						
NRCA				AML	AML		
	comp=N,23600μm,0.2s						
NRCA				AML	AML		
	comp=N,25900μm,0.2s						
NRCA				AML	AML		
	comp=E,36850μm,1.2s						
NRCA				AML	AML		
	comp=E,39350μm,1.2s						
NRCA				AML	AML		
	comp=N,23600μm,0.2s						
T1216	Preci, Frazion	0.10	269	P	Pg	18 30 08.4	+0.5
T1216				S	Sg	18 30 10.5	+0.8
T1216				AML	AML		
	comp=E,31000μm,0.3s						
T1216				AML	AML		
	comp=N,20850μm,0.4s						
T1216				AML	AML		
	comp=E,31050μm,0.3s						
T1216				AML	AML		
	comp=N,20800μm,0.4s						
FDMO	Fiordimonte	0.15	339	P	Pg	18 30 08.9	+0.2
FDMO				S	Sg	18 30 11.6	+0.6
FDMO				AML	AML		
	comp=E,6190μm,0.2s						
FDMO				AML	AML		
	comp=N,6025μm,0.2s						
AM05	Amandola Campo	0.16	59	P	Pg	18 30 09.4	+0.5
AM05				S	Sg	18 30 12.2	+1.0
AM05				AML	AML		
	comp=N,366μm,0.1s						
AM05				AML	AML		
	comp=E,1395μm,0.4s						
AM05				AML	AML		
	comp=E,6205μm,0.4s						
AM05				AML	AML		
	comp=N,366μm,0.1s						
AM05				AML	AML		
	comp=E,6210μm,0.4s						
AM05				AML	AML		
	comp=N,1660μm,0.1s						
T1215	Vallo di Nera,	0.23	247	P	Pg	18 30 10.8	+0.7
T1215				S	Sg	18 30 14.9	+1.6
T1215				AML	AML		
	comp=E,2000μm,0.4s						
T1215				AML	AML		
	comp=N,1615μm,0.5s						
T1215				AML	AML		
	comp=E,1995μm,0.4s						
T1215				AML	AML		
	comp=N,1620μm,0.5s						
T1204	Amatrice, Fraz	0.24	152	P	Pg	18 30 11.2	+0.8
T1204				S	Sg	18 30 15.5	+1.8
T1204				AML	AML		
	comp=N,1178μm,0.9s						
T1204				AML	AML		
	comp=E,2715μm,0.2s						
T1204				AML	AML		
	comp=N,1182μm,0.9s						
T1204				AML	AML		
	comp=E,2710μm,0.2s						
T1204				AML	AML		
	comp=N,1189μm,0.9s						
SMA1	SAN MARTINO	0.29	154	P	Pg	18 30 11.8	+0.6
SMA1				S	Sb	18 30 17.0	-1.0
SMA1				AML	AML		
	comp=E,2325μm,0.9s						
SMA1				AML	AML		
	comp=N,1690μm,0.8s						
SMA1				AML	AML		
	comp=E,2320μm,0.9s						
LNSS	Leonessa	0.30	197	⇑P	Pg	18 30 12.1	+0.6
LNSS				S	Sb	18 30 17.5	-0.9
LNSS				AML	AML		
	comp=E,3190μm,0.2s						
LNSS				AML	AML		
	comp=N,4040μm,0.2s						
LNSS				AML	AML		
	comp=E,3195μm,0.2s						
LNSS				AML	AML		
	comp=N,4045μm,0.2s						
MNTP	Montappone	0.33	43	P	Pb	18 30 13.0	-0.6
MNTP				S	Sb	18 30 19.5	+0.4
MNTP				AML	AML		
	comp=E,3010μm,0.9s						
MNTP				AML	AML		
	comp=N,2590μm,0.1s						
RM33	Pellescritta (	0.39	174	⇑P	Pg	18 30 13.6	+0.6
RM33				S	Sb	18 30 20.1	-0.6
RM33				AML	AML		
	comp=E,980μm,1.1s						
RM33				AML	AML		
	comp=N,980μm,1.6s						
RM33				AML	AML		
	comp=E,936μm,1.1s						
RM33				AML	AML		
	comp=N,982μm,1.6s						
RM33				AML	AML		
	comp=E,936μm,1.1s						
RM33				AML	AML		
	comp=N,981μm,1.6s						
RM33				AML	AML		
	comp=E,937μm,1.1s						
RM33				AML	AML		
	comp=N,955μm,0.4s						
RM33				AML	AML		
	comp=N,978μm,1.6s						
RM33				AML	AML		
	comp=E,981μm,1.1s						
RM33				AML	AML		
	comp=N,953μm,0.4s						
OFFI	Offida	0.39	84	⇑P	Pb	18 30 14.3	-0.2
OFFI				AML	AML		
	comp=N,1500μm,0.4s						
OFFI				AML	AML		
	comp=E,1385μm,1.4s						
CAMP	Campotosto	0.40	153	P	Pg	18 30 13.6	+0.3
CAMP				S	Sb	18 30 20.3	-0.8
CAMP				AML	AML		
	comp=E,602μm,0.2s						
CAMP				AML	AML		
	comp=N,1030μm,0.2s						
TERO	Teramo	0.42	130	P	Pb	18 30 15.1	-0.1
TERO				AML	AML		
	comp=N,972μm,0.5s						
TERO				AML	AML		
	comp=E,838μm,1.6s						
TERO				AML	AML		
	comp=N,1060μm,0.5s						
TERO				AML	AML		
	comp=N,976μm,0.5s						
TERO				AML	AML		
	comp=E,754μm,0.4s						
TERO				AML	AML		
	comp=N,972μm,0.5s						
T1211	Morro Reatino	0.42	212	P	Pg	18 30 14.4	+0.6
T1211				S	Sb	18 30 21.6	-0.2
T1211				AML	AML		
	comp=E,800μm,1.1s						
T1211				AML	AML		
	comp=N,1318μm,1.3s						
T1211				AML	AML		
	comp=E,805μm,1.1s						
T1211				AML	AML		
	comp=N,1320μm,1.3s						
ARRO	Arrone	0.43	223	P	Pg	18 30 14.2	+0.4
ARRO				S	Sb	18 30 21.9	+0.1
ARRO				AML	AML		
	comp=E,836μm,0.2s						
ARRO				AML	AML		
	comp=E,837μm,0.2s						
ARRO				AML	AML		
	comp=N,602μm,1.3s						
FIAM	Fiamignano	0.62	183	⇓P	Pg	18 30 17.7	+0.2
FIAM				S	Sb	18 30 28.0	+0.4
FIAM				AML	AML		
	comp=E,322μm,1.2s						
FIAM				AML	AML		
	comp=N,280μm,1.5s						
FAGN	Fagnano	0.70	153	⇑P	Pb	18 30 19.7	-0.2
FAGN				AML	AML		
	comp=N,674μm,0.4s						
FAGN				AML	AML		
	comp=E,664μm,0.3s						
VCEL	Villa Celiera	0.71	135	⇓P	Pb	18 30 19.5	-0.5
VCEL				S	Sn	18 30 32.0	-0.9
VCEL				AML	AML		
	comp=E,424μm,1.0s						
VCEL				AML	AML		
	comp=N,546μm,1.5s						
VCEL				AML	AML		
	comp=E,425μm,1.0s						
T0110	Collepietro	0.81	145	⇑P	Pg	18 30 21.3	+0.3
T0110				AML	AML		
	comp=E,346μm,1.2s						
T0110				AML	AML		
	comp=N,473μm,0.3s						
T0110				AML	AML		
	comp=N,474μm,0.3s						
T0110				AML	AML		
	comp=E,347μm,1.2s						
SRES	S.Oreste - Sor	0.81	217	⇑P	Pg	18 30 20.8	-0.3
SRES				AML	AML		
	comp=E,225μm,1.3s						
SRES				AML	AML		
	comp=N,254μm,0.4s						
PTQR	Pietraquaria	0.89	168	P	Pn	18 30 24.5	+0.3
PTQR				AML	AML		
	comp=E,118μm,0.4s						
PTQR				AML	AML		
	comp=N,116μm,1.6s						
INTR	Introdacqua	1.04	148	P	Pg	18 30 24.1	-1.2
INTR				AML	AML		
	comp=N,278μm,0.5s						
INTR				AML	AML		
	comp=E,134μm,0.8s						
LATB	Latina	1.41	186	⇓P	Pn	18 30 31.6	+0.3
LATB				AML	AML		
	comp=E,97μm,1.6s						
LATB				AML	AML		
	comp=N,81μm,1.6s						
MODR	Mondragone	1.82	163	P	Pn	18 30 37.1	0.0
PTRJ	Pietraroja	1.83	146	S	Sn	18 31 01.0	+0.2
ABTA	Abfaltersbach	3.88	353	*e*Pn	Pn	18 31 07.4	+1.9
	comp=N,5.1nm,0.5s						
FETA	Feichten	4.47	338	*e*Pn	Pn	18 31 18.6	+4.9
	comp=N,1.4nm,0.6s						
MOTA	Moosalm	4.68	343	*e*Pn	Pb	18 31 23.8	-4.0
	comp=N,0.6nm,0.2s						

ATH 27 18:47:45.8, 38°.09N×22°.89E, h14km±5km, ML1.4/2, Error ellipse: s-maj=6.7km s-min=1.1km az=171.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOUT	Loutraki	0.12	147	P	Pg	18 47 48.8	-0.4
LOUT				S	Sg	18 47 51.1	-0.4
LOUT				AML	AML	18 47 52.0	
	comp=E,238μm,0.2s						
LOUT				AML	AML	18 47 52.0	
	comp=N,206μm,0.1s						

THAL	**Thalero**	**0.19 255**	P	Pg	18 47 50.3	+0.1
THAL			S	Sg	18 47 53.5	+0.4
THAL			AML	AML	18 47 54.0	
	comp=N,745μm,0.3s					
THAL			AML	AML	18 47 55.1	
	comp=E,476μm,0.2s					
VIL2	**Platees**	**0.32 67**	P	Pg	18 47 52.9	+0.4
VIL2			S	Sb	18 47 57.8	-0.6
KLV	**Kalavryta, Ach**	**0.59 266**	P	Pg	18 47 57.2	-0.2
KLV			S	Sg	18 48 05.2	-0.1
AXAR	**Agios Charalam**	**0.70 345**	P	Pg	18 47 58.8	-0.8

THE 27 18:47:50.3, 38°.15N×20°.38E, h15km±1km, ML1.4/5, Error ellipse: s-maj=1.7km s-min=0.6km az=22.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.06**	**331**	P	Pg	18 47 53.1	-0.1
KEF3				S	Sg	18 47 55.4	+0.3
	558nm,0.1s						
DMLN	**Damoulianata-K**	**0.09**	**355**	P	Pg	18 47 53.2	-0.3
DMLN				S	Sg	18 47 55.5	-0.1
	72nm,0.1s						
KEF4	**Livadi, Kephal**	**0.11**	**17**	P	Pg	18 47 53.9	+0.2
KEF4				S	Sb	18 47 56.3	-0.3
	405nm,0.1s						
PSDA	**Pessada-Kefalo**	**0.16**	**104**	P	Pg	18 47 54.4	0.0
PSDA				S	Sg	18 47 57.5	+0.4
	130nm,0.1s						
VLS	**Valsamata**	**0.16**	**82**	P	Pg	18 47 54.2	-0.3
VLS				S	Sg	18 47 57.4	+0.2
	128nm,0.1s						

DJA 27 18:49:07.1±0.4, 3°.5S±6°.×13°.9E±°, h98km±12km, M3.8/7, mb3.9/4, MLv3.7/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.20**	**6**	P	Pn	18 49 29.5	-0.1
SMPI				S	Sn	18 49 47.3	+0.7
GENI	**Genyem**	**1.68**	**69**	P	Pn	18 49 36.1	+0.5
GENI				S	Sn	18 49 57.5	+0.3
SRPI	**Serui, Papua**	**2.69**	**299**	P	Pn	18 49 48.4	-0.3
RKPI	**Ransiki, Papua**	**4.71**	**291**	P	Pn	18 50 16.1	+0.1
FAKI	**Fak Fak**	**6.34**	**272**	P	Pn	18 50 37.9	-0.1
	0.1nm11nm,1.1s						

*SOME **27** 19:04:02.3, 39°.17N×72°.60E, h0km*
*NNC **27** 19:04:04.1±3.5, 38°.86N×73°.24E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=25.3km s-min=15.2km az=0.0*
ISC 27 19:04:12.1±4.1, 38°.5N±0°.2×71°.89E±0°.09, h35km, n14, σ2°.20/23, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.90**	**339**	*e*P	**Pn**	**19 05 09.0**	**-0.6**
	71nm,0.3s						
IUG				*e*S	**Sn**	**19 05 57.6**	**+3.5**
	29nm,0.6s						
MRKS	**Merke**	**4.35**	**13**	*e*P	Pn	19 05 10.5	-5.3
	3.5nm,0.3s						
MRKS				*e*S	**Sn**	**19 05 59.8**	**-5.5**
	9.7nm,0.5s						
KK31	**Karatay Array**	**4.70**	**348**	⇓Pn	Pn	19 05 15.4	-5.1
	0.9nm,0.3s,baz=159,slow=12,SNR=33						
KK31				⇑Sn	**Sn**	**19 06 13.6**	**-0.3**
	5.2nm,0.6s,baz=164,slow=26,SNR=3.6						
KK31				⇓Lg	Lg	19 06 32.3	
	4.1nm,0.5s						
CHMS	**Chumysh**	**4.98**	**25**	⇑Pg	**Pn**	**19 05 22.4**	**-2.0**
	5.2nm,0.8s						
CHMS				⇓Lg	Lg	19 06 18.7	
	7.0nm,0.9s						
TKM2	**Tokmak 2**	**5.23**	**31**	⇓Pg	**Pn**	**19 05 26.6**	**-1.4**
	3.0nm,0.6s						
TKM2				⇓Lg	Lg	19 06 23.9	
	8.9nm,0.9s						
KST	**Kastek**	**5.48**	**33**	*e*P	**Pn**	**19 05 29.6**	**-1.8**
	1.9nm,0.6s						
KST				*e*S	**Sn**	**19 06 33.0**	**-0.2**
	8.9nm,0.7s						
DGS	**Degeres**	**5.57**	**31**	*e*P	**Pn**	**19 05 30.5**	**-2.0**
	3.3nm,0.6s						
DGS				*e*S	**Sn**	**19 06 34.3**	**-0.9**
	5.4nm,0.9s						
KRBS	**Karabastau**	**5.92**	**28**	*e*P	**Pn**	**19 05 36.7**	**-0.5**
	0.8nm,0.5s						
KRBS				*e*S	**Sn**	**19 06 45.5**	**+1.7**
	4.0nm,0.6s						
MDOK	**Medeo**	**6.07**	**38**	*e*P	**Pn**	**19 05 38.5**	**-1.0**
	2.9nm,0.4s						
MDOK				*e*S	**Sn**	**19 06 48.5**	**+0.7**
	6.5nm,1.2s						
MDOK	**Medeo**	**6.07**	**38**	Pg	**Pn**	**19 05 38.2**	**-1.3**
	5.0nm,0.8s						
MDOK				Lg	Lg	19 06 46.7	
	13nm,1.4s						
KOTS	**Kotyrbulak**	**6.16**	**38**	*e*P	**Pn**	**19 05 39.9**	**-0.8**
	3.2nm,0.7s						
KOTS				*e*S	**Sn**	**19 06 50.1**	**+0.2**
	9.2nm,0.7s						
KTBS	**Karatobe**	**6.33**	**33**	*e*P	**Pn**	**19 05 43.5**	**+0.5**
	1.6nm,0.6s						
KTBS				*e*S	**Sn**	**19 06 56.7**	**+2.7**
	5.3nm,0.7s						
KUU	**Kurty**	**6.34**	**31**	*e*P	**Pn**	**19 05 44.5**	**+1.5**
	1.3nm,0.6s						
KUU				*e*S	**Sn**	**19 06 57.9**	**+3.8**
	4.9nm,0.7s						
CHKK	**Chushkaly**	**6.58**	**34**	*e*P	**Pn**	**19 05 47.4**	**+1.1**
	0.9nm,0.1s						
CHKK				*e*S	**Sn**	**19 07 02.9**	**+2.8**
	2.2nm,0.2s						

IDC 27 19:16:43.8±7.1, 6°.22S×149°.42E, h62km±57km, mb3.5/2, mbtmp4.0/3, ML2.2/1, Error ellipse: s-maj=116.1km s-min=47.3km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.88**	**215**	P	Pn	19 17 42.1	+1.1
	14nm,0.3s,baz=32,slow=6.2,SNR=39						
PMG				S	Sn	19 18 25.4	+0.1
	29nm,0.3s,baz=84,slow=6.8,SNR=2.9						
	33nm,0.3s						
WRA	**Warramunga Arr**	**20.02**	**226**	P	P	19 21 11.3	-0.4
	2.4nm,0.3s,baz=51,slow=11,SNR=22						
	2.4nm,0.3s						
ASAR	**Alice Springs**	**22.89**	**219**	P	P	19 21 42.5	+0.1
	1.4nm,0.6s,baz=54,slow=9.2,SNR=35						
	1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.47**	**285**	PKPbc	PKPbc	19 36 21.2	-0.6
	0.2nm,0.4s,baz=86,slow=3.2,SNR=4.4						

IDC 27 19:37:21.0±6.0, 7°.66S×149°.29E, h153km±37km, mb2.3/1, mbtmp2.9/3, Error ellipse: s-maj=101.5km s-min=52.0km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.73**	**230**	P	Pn	19 38 04.4	-0.7
	6.4nm,0.3s,baz=40,slow=10,SNR=10						
PMG				S	Sn	19 38 40.2	+0.9
	18nm,0.3s,baz=200,slow=20,SNR=13						
WRA	**Warramunga Arr**	**18.95**	**228**	P	P	19 41 29.3	-1.2
	0.3nm,0.9s,baz=54,slow=10,SNR=1.9						
ASAR	**Alice Springs**	**21.71**	**221**	P	P	19 42 00.2	0.0
	0.1nm,0.4s,baz=51,slow=9.2,SNR=2.1						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**147.69**	**282**	PKPbc	PKPbc	19 56 48.5	-0.2
	0.5nm,0.5s,baz=81,slow=3.7,SNR=5.4						

DJA 27 19:40:12.1±0.5, 5°.5S±4°.×13°.0E±°, h201km±9km, M3.5/12, mb3.6/6, mB4.9/1, MLv3.4/12, Mw(mB)4.2/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.76**	**358**	P	Pn	19 40 41.2	+0.6
MSAI	**Masohi**	**2.17**	**333**	P	Pn	19 40 52.4	-0.1
AAI	**Ambon**	**2.35**	**313**	P	Pn	19 40 54.3	-0.1
KRAI	**Karang Ratu**	**2.49**	**322**	P	Pn	19 40 56.5	+0.6
SAUI	**Saumlaki**	**3.00**	**153**	P	Pn	19 41 01.5	-0.3
FAKI	**Fak Fak**	**3.30**	**45**	P	Pn	19 41 05.9	+0.5
NLAI	**Namlea**	**3.48**	**306**	P	Pn	19 41 08.7	+1.1
SIJI	**Sorong**	**4.59**	**17**	P	Pn	19 41 21.4	0.0
SANI	**Sanana**	**5.08**	**309**	P	Pn	19 41 27.1	-0.5
	0.0nm8.7nm,0.7s						
LBMI	**Labuha**	**5.22**	**332**	P	Pn	19 41 29.3	-0.1
	0.1nm6.7nm,0.5s						
BBSI	**Bau Bau**	**7.33**	**268**	P	Pn	19 41 57.1	+0.4
	0.0nm6.1nm,1.1s						

JMA 27 19:48:09.0±0.4, 27°N±3°.×12°6E±°, h215km, MV3.5/26, EAST CHINA SEA REGION, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.37**	**130**	P	Pn	19 48 43.7	+0.6
JAGN	**Aguni-jima**	**1.58**	**113**	P	Pn	19 48 45.3	+0.6
JAGN				*e*S	S	19 49 12.1	-0.2
JIH	**Iheya**	**2.10**	**94**	P	Pn	19 48 50.0	+0.4
JIH				*e*S	S	19 49 19.6	-1.4
JJT3	**Tamagusuku3**	**2.21**	**118**	P	Pn	19 48 51.9	+1.0
JNTH	**Nagotoyohara**	**2.26**	**107**	P	Pn	19 48 51.7	+0.5
JNTH				*e*S	S	19 49 22.4	-1.6
JIKM	**Ikemajima**	**2.31**	**188**	*e*S	S	19 49 23.9	-1.1
JOW	**Kunigami**	**2.40**	**99**	P	Pn	19 48 52.9	+0.1
JOW				S	S	19 49 24.4	-2.3
JIRB	**Irabujima**	**2.41**	**190**	*e*P	Pn	19 48 53.6	+0.6
JIRB				S	S	19 49 25.6	-1.4
JOGS	**Gusukube**	**2.46**	**185**	S	S	19 49 27.4	-0.4
JYRO	**Yoronjima**	**2.53**	**94**	*i* P	Pn	19 48 54.1	-0.1
JYRO				S	S	19 49 26.4	-2.7
JOKE	**Okinoerabujima**	**2.63**	**86**	*i* P	Pn	19 48 54.8	-0.5
JOKE				*e*S	S	19 49 28.2	-2.9
JTJ	**Tarama**	**2.70**	**198**	P	Pn	19 48 56.1	+0.1
JTJ				S	S	19 49 30.9	-1.6
JISG	**Ishigakijimahi**	**2.87**	**205**	*i* P	Pn	19 48 57.9	-0.1
JISG				S	S	19 49 34.4	-1.7
JTK	**Tokunoshima**	**3.01**	**78**	P	Pn	19 48 58.9	-0.7
JTK				S	S	19 49 35.4	-3.5
JIJ	**Ishigaki jima**	**3.14**	**205**	*i* P	Pn	19 49 00.3	-0.8
JIJ				S	S	19 49 38.5	-3.1
JAMN	**Amaminishikomi**	**3.31**	**71**	P	Pn	19 49 02.2	-0.9
JAMN				*e*S	S	19 49 41.5	-3.6
HATJ	**Hateruma jima**	**3.55**	**208**	S	S	19 49 48.5	-1.9
YOJ	**Yonaguni jima**	**3.61**	**221**	P	Pn	19 49 06.8	+0.1
JAM	**Amami Oshima**	**3.73**	**70**	S	S	19 49 50.0	-4.1
JMZ	**Minamidaito 2**	**5.21**	**104**	P	Pn	19 49 26.2	-0.3
JMZ				S	S	19 50 22.4	-5.0
JMTN	**Minamitane**	**5.61**	**54**	*e*P	Pn	19 49 31.3	-0.2
JTN	**Tanegashima 3**	**5.81**	**53**	*e*P	Pn	19 49 33.4	-0.7

*PRU **27** 20:02:02.6±0.0, 43°.30N×13°.32E, h0km*
ROM 27 20:01:56.0±0.1, 42°.992N±0°.003×13°.059E±0°.005, h10km, ML3.2/37, 17C-11D, Error ellipse: s-maj=0.4km s-min=0.2km az=278.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**192**	⇓P	Pg	20 01 58.3	+0.3
FEMA				S	Sg	20 01 59.8	+0.4
FDMO	**Fiordimonte**	**0.05**	**25**	⇓P	Pg	20 01 58.3	+0.3
FDMO				S	Sg	20 01 59.6	+0.2
FDMO				AML	AML		
	comp=E,29900μm,0.2s						
FDMO				AML	AML		
	comp=N,27000μm,0.7s						
FDMO				AML	AML		
	comp=N,34350μm,0.7s						
FDMO				AML	AML		
	comp=E,45000μm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**196**	⇑P	Pg	20 01 59.2	+0.5
T1216				S	Sg	20 02 01.4	+0.8
T1216				AML	AML		
	comp=E,76150μm,0.4s						
T1216				AML	AML		
	comp=N,54900μm,0.9s						
T1216				AML	AML		
	comp=E,60400μm,0.4s						
T1216				AML	AML		
	comp=E,76150μm,0.4s						
T1216				AML	AML		
	comp=N,54950μm,0.9s						
CESI	**CESI - Serrava**	**0.11**	**277**	⇑P	Pg	20 01 59.4	+0.6
CESI				S	Sg	20 02 01.8	+1.0
CESI				AML	AML		
	comp=E,29200μm,0.5s						
CESI				AML	AML		
	comp=N,42250μm,0.4s						
MC2	**Monte Cornacci**	**0.12**	**129**	⇑P	Pg	20 01 59.5	+0.4
MC2				S	Sg	20 02 01.9	+0.7
NRCA	**Norcia**	**0.16**	**165**	⇑P	Pg	20 02 00.1	+0.6
NRCA				S	Sg	20 02 02.9	+0.8
NRCA				AML	AML		
	comp=E,35550μm,0.1s						
NRCA				AML	AML		
	comp=N,47300μm,0.2s						
NRCA				AML	AML		
	comp=N,50400μm,0.2s						
NRCA				AML	AML		
	comp=E,38950μm,0.1s						
NRCA				AML	AML		
	comp=N,47250μm,0.2s						
SEF1	**Sefro**	**0.17**	**332**	P	Pg	20 02 00.3	+0.6
SEF1				S	Sg	20 02 03.4	+1.0
SEF1				AML	AML		
	comp=N,9075μm,0.8s						
SEF1				AML	AML		
	comp=E,9475μm,1.1s						
MDAR	**Monte D'Aria**	**0.21**	**17**	P	Pg	20 02 00.9	+0.5
MDAR				S	Sg	20 02 04.4	+1.0
MDAR				AML	AML		
	comp=E,6375μm,0.4s						
MDAR				AML	AML		
	comp=N,6580μm,0.7s						
AM05	**Amandola Campo**	**0.22**	**94**	P	Pg	20 02 01.0	+0.5
AM05				S	Sg	20 02 04.5	+1.1
AM05				AML	AML		
	comp=N,3725μm,1.1s						
AM05				AML	AML		
	comp=E,3095μm,1.2s						
AM05				AML	AML		
	comp=N,780μm,0.6s						
AM05				AML	AML		
	comp=N,3730μm,1.1s						
AM05				AML	AML		
	comp=N,781μm,0.6s						
AM05				AML	AML		
	comp=E,14450μm,1.2s						
FIU1	**Fiuminata**	**0.22**	**335**	P	Pg	20 02 01.2	+0.7
FIU1				S	Sg	20 02 04.6	+1.1
T1215	**Vallo di Nera,**	**0.24**	**216**	⇑P	Pg	20 02 01.4	+0.7
T1215				S	Sg	20 02 05.4	+1.3
T1215				AML	AML		
	comp=E,13700μm,1.1s						
T1215				AML	AML		
	comp=N,16400μm,0.4s						
T1215				AML	AML		
	comp=E,13250μm,1.1s						
T1215				AML	AML		
	comp=N,17250μm,0.4s						
T1215				AML	AML		
	comp=E,13750μm,1.1s						
T1215				AML	AML		
	comp=N,16450μm,0.4s						
T1215				AML	AML		
	comp=E,13250μm,1.0s						
T1215				AML	AML		
	comp=E,13300μm,1.0s						
T1215				AML	AML		
	comp=N,17250μm,0.4s						
T1215				AML	AML		
	comp=N,16400μm,0.4s						
T1215				AML	AML		
	comp=E,13750μm,1.0s						
GAG1	**Gagliole**	**0.25**	**2**	P	Pg	20 02 01.8	+0.8
GAG1				S	Sg	20 02 06.1	+1.7
GAG1				AML	AML		
	comp=N,9765μm,0.9s						
GAG1				AML	AML		
	comp=E,9350μm,0.6s						
T1217	**Poggiodomo (PG**	**0.29**	**199**	P	Pg	20 02 02.5	+0.6
T1217				S	Sb	20 02 07.3	-1.1
T1217				AML	AML		
	comp=N,18500μm,0.4s						
T1217				AML	AML		
	comp=E,12700μm,0.2s						
T1217				AML	AML		
	comp=N,18450μm,0.4s						
T1217				AML	AML		
	comp=E,12450μm,0.2s						
T1217				AML	AML		
	comp=N,18550μm,0.4s						
T1217				AML	AML		
	comp=E,12500μm,0.2s						
T1217				AML	AML		
	comp=N,18550μm,0.4s						
T1217				AML	AML		
	comp=N,18450μm,0.4s						
MNTP	**Montappone**	**0.33**	**64**	P	Pb	20 02 03.5	-0.5
MNTP				S	Sb	20 02 09.9	+0.4
MNTP				AML	AML		
	comp=E,8305μm,0.8s						
MNTP				AML	AML		
	comp=N,5380μm,1.4s						
EL6	**Elcito**	**0.34**	**5**	⇑P	Pg	20 02 03.1	+0.4
EL6				S	Sb	20 02 08.6	-1.1
EL6				AML	AML		
	comp=E,4000μm,1.6s						
EL6				AML	AML		
	comp=N,4650μm,0.5s						
T1204	**Amatrice, Fraz**	**0.37**	**149**	⇑P	Pg	20 02 03.7	+0.4
T1204				S	Sb	20 02 09.5	-1.1
T1204				AML	AML		
	comp=E,18600μm,0.2s						
T1204				AML	AML		
	comp=N,11950μm,1.2s						
T1204				AML	AML		
	comp=E,18650μm,0.2s						
T1204				AML	AML		
	comp=N,12000μm,1.2s						
LNSS	**Leonessa**	**0.39**	**182**	⇓P	Pg	20 02 04.0	+0.4
LNSS				S	Sb	20 02 10.1	-1.0
LNSS				AML	AML		
	comp=N,11700μm,0.1s						
LNSS				AML	AML		
	comp=E,11500μm,1.1s						
CING	**Cingoli**	**0.40**	**15**	⇑P	Pg	20 02 04.2	+0.4
CING				AML	AML		
	comp=N,1360μm,0.3s						
CING				AML	AML		
	comp=E,1635μm,0.8s						
SMA1	**SAN MARTINO**	**0.41**	**150**	⇑P	Pg	20 02 04.3	+0.2
SMA1				S	Sb	20 02 10.8	-1.0
SMA1				AML	AML		
	comp=E,6225μm,0.5s						
SMA1				AML	AML		
	comp=N,8545μm,0.6s						
OFFI	**Offida**	**0.46**	**97**	P	Pb	20 02 06.1	-0.1
OFFI				AML	AML		
	comp=E,7925μm,0.4s						
OFFI				AML	AML		
	comp=N,7260μm,0.5s						
ARRO	**Arrone**	**0.47**	**208**	⇑P	Pg	20 02 05.4	+0.4
ARRO				S	Sb	20 02 12.8	-0.4
ARRO				AML	AML		
	comp=E,8230μm,0.2s						
ARRO				AML	AML		
	comp=N,5210μm,0.2s						
T1211	**Morro Reatino**	**0.48**	**198**	⇓P	Pg	20 02 05.9	+0.5
T1211				S	Sb	20 02 13.2	-0.6
T1211				AML	AML		
	comp=E,5815μm,0.1s						
T1211				AML	AML		
	comp=N,6080μm,1.6s						
T1211				AML	AML		
	comp=E,5870μm,0.1s						
T1211				AML	AML		
	comp=N,6145μm,1.6s						
T1211				AML	AML		
	comp=E,5815μm,0.1s						
T1211				AML	AML		
	comp=N,6085μm,1.6s						
T1211				AML	AML		
	comp=E,5870μm,0.1s						
T1211				AML	AML		
	comp=N,6140μm,1.6s						
RM33	**Pellescritta (**	**0.50**	**167**	P	Pg	20 02 05.8	+0.2
RM33				S	Sb	20 02 13.4	-0.8
RM33				AML	AML		
	comp=N,4110μm,1.1s						
RM33				AML	AML		
	comp=N,3955μm,1.0s						
RM33				AML	AML		
	comp=E,3905μm,0.1s						
RM33				AML	AML		
	comp=N,4110μm,1.0s						
RM33				AML	AML		
	comp=E,3760μm,0.1s						
ARVD	**Arcevia**	**0.51**	**350**	⇑P	Pg	20 02 06.2	+0.3
ARVD				S	Sb	20 02 15.0	+0.3
ARVD				AML	AML		
	comp=E,1098μm,0.6s						
ARVD				AML	AML		
	comp=E,1098μm,0.6s						
ARVD				AML	AML		
	comp=N,748μm,0.8s						
CESX	**Cesi**	**0.52**	**223**	⇑P	Pg	20 02 06.2	+0.2
CESX				S	Sb	20 02 14.4	-0.4
CESX				AML	AML		
	comp=E,7220μm,0.4s						
CESX				AML	AML		
	comp=N,8395μm,0.8s						
CAMP	**Campotosto**	**0.52**	**150**	P	Pg	20 02 06.1	0.0
CAMP				S	Sg	20 02 13.8	+0.7
CAMP				AML	AML		
	comp=N,1710μm,0.4s						
CAMP				AML	AML		
	comp=E,3370μm,0.2s						
TERO	**Teramo**	**0.55**	**132**	⇑P	Pg	20 02 06.4	-0.1
TERO				S	Sb	20 02 15.0	-0.5
TERO				AML	AML		
	comp=E,7915μm,0.3s						
TERO				AML	AML		
	comp=N,10900μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.58**	**162**	P	Pg	20 02 07.4	+0.2
T1247				S	Sb	20 02 16.3	-0.2
T1247				AML	AML		
	comp=N,3990μm,0.6s						
T1247				AML	AML		
	comp=E,4005μm,0.1s						
FRON	**Frontone**	**0.58**	**335**	⇓P	Pg	20 02 07.4	+0.2
FRON				AML	AML		
	comp=E,817μm,0.3s						
FRON				AML	AML		
	comp=N,1365μm,0.8s						
TRTR	**Tortoreto Alta**	**0.66**	**106**	P	Pb	20 02 09.7	+0.2
TRTR				AML	AML		
	comp=E,7840μm,0.5s						
TRTR				AML	AML		
	comp=N,7210μm,1.1s						
GIGS	**Gran Sasso**	**0.66**	**145**	P	Pg	20 02 08.3	-0.5
GIGS				S	Sg	20 02 17.7	+0.4
GIGS				AML	AML		
	comp=E,946μm,0.4s						
GIGS				AML	AML		
	comp=N,569μm,1.5s						
GIGS				AML	AML		
	comp=E,947μm,0.4s						
GIGS				AML	AML		
	comp=N,570μm,1.5s						
ATPI	**Pietralunga -**	**0.66**	**314**	⇑P	Pg	20 02 09.0	+0.2
ATPI				AML	AML		
	comp=E,1150μm,0.7s						
ATPI				AML	AML		
	comp=N,846μm,0.8s						
PIEI	**Pieia**	**0.67**	**325**	⇓P	Pg	20 02 08.9	+0.1
PIEI				S	Sb	20 02 20.0	+0.9
PIEI				AML	AML		
	comp=N,514μm,0.9s						
PIEI				AML	AML		
	comp=N,513μm,0.9s						
PIEI				AML	AML		
	comp=E,712μm,1.2s						
AQU	**L'Aquila**	**0.69**	**158**	P	Pg	20 02 09.2	0.0
AQU				S	Sb	20 02 19.6	0.0
AQU				AML	AML		
	comp=E,1235μm,1.0s						
AQU				AML	AML		
	comp=N,1400μm,1.1s						

AQU			AML	AML		
	comp=E,1240μm,1.0s					
AQU			AML	AML		
	comp=N,1395μm,1.1s					
AQU			AML	AML		
	comp=N,1365μm,1.1s					
MGAB	**Montegabbione**	**0.70 264**	P	Pg	20 02 09.8	+0.3
MGAB			AML	AML		
	comp=E,1665μm,0.3s					
MGAB			AML	AML		
	comp=N,2760μm,0.7s					
MGAB			AML	AML		
	comp=E,2070μm,0.3s					
MGAB			AML	AML		
	comp=N,2755μm,0.7s					
NARO	**Abbazia di Nar**	**0.71 331**	P	Pg	20 02 09.7	+0.1
NARO			S	Sn	20 02 22.0	-1.1
NARO			AML	AML		
	comp=E,538μm,0.6s					
NARO			AML	AML		
	comp=N,421μm,0.9s					
FIAM	**Fiamignano**	**0.72 177**	P	Pg	20 02 09.8	-0.1
FIAM			S	Sb	20 02 21.0	+0.2
FIAM			AML	AML		
	comp=E,1104μm,0.5s					
FIAM			AML	AML		
	comp=N,1046μm,1.2s					
FIAM			AML	AML		
	comp=E,1104μm,0.5s					
FIAM			AML	AML		
	comp=N,1048μm,1.2s					
FSSB	**Fossombrone**	**0.73 344**	P	Pg	20 02 10.2	+0.2
FSSB			AML	AML		
	comp=E,2045μm,0.4s					
FSSB			AML	AML		
	comp=E,2050μm,0.4s					
FSSB			AML	AML		
	comp=N,2845μm,0.4s					
FAGN	**Fagnano**	**0.82 152**	⇑P	Pg	20 02 11.6	-0.2
FAGN			AML	AML		
	comp=E,3515μm,0.4s					
FAGN			AML	AML		
	comp=N,3135μm,0.4s					
VCEL	**Villa Celiera**	**0.83 136**	P	Pg	20 02 11.7	-0.3
VCEL			S	Sb	20 02 23.4	-0.4
SACS	**San Casciano d**	**0.86 261**	⇓P	Pb	20 02 13.3	+0.3
SACS			AML	AML		
	comp=E,758μm,0.5s					
SACS			AML	AML		
	comp=N,662μm,0.7s					
SRES	**S.Oreste - Sor**	**0.86 208**	S	Sn	20 02 26.0	-0.7
CAFI	**Castiglion Fio**	**0.87 293**	⇓P	Pb	20 02 13.0	-0.2
CAFI			AML	AML		
	comp=E,708μm,0.8s					
CAFI			AML	AML		
	comp=N,396μm,0.8s					
CAFI			AML	AML		
	comp=N,396μm,0.8s					
CAFI			AML	AML		
	comp=E,707μm,0.8s					
SSP9	**Sansepolcro**	**0.89 311**	⇓P	Pn	20 02 15.3	+0.7
T0110	**Collepietro**	**0.93 145**	⇓P	Pg	20 02 13.4	-0.5
T0110			AML	AML		
	comp=E,2580μm,0.5s					
T0110			AML	AML		
	comp=N,3075μm,0.4s					
MTCE	**Montecelio**	**1.00 194**	⇑P	Pn	20 02 16.0	0.0
MTCE			AML	AML		
	comp=N,606μm,1.2s					
MTCE			AML	AML		
	comp=E,830μm,1.0s					
CERT	**Cerreto**	**1.04 183**	⇓P	Pn	20 02 16.9	+0.2
CERT			AML	AML		
	comp=N,632μm,0.3s					
CERT			AML	AML		
	comp=E,849μm,0.5s					
INTR	**Introdacqua**	**1.16 147**	P	Pb	20 02 16.3	-1.9
INTR			AML	AML		
	comp=N,25μm,1.6s					
INTR			AML	AML		
	comp=E,1065μm,0.8s					
INTR			AML	AML		
	comp=N,2160μm,0.8s					
INTR			AML	AML		
	comp=E,1μm,0.8s					
GIUL	**Giuliano Di Ro**	**1.44 174**	⇑P	Pg	20 02 24.7	+1.1
MODR	**Mondragone**	**1.94 161**	S	Sg	20 02 59.0	+0.6
VITU	**Vitulano (BN)**	**2.15 147**	S	Sb	20 03 01.0	-0.9
SGRT	**San Giovanni R**	**2.34 121**	S	Sn	20 03 05.0	+1.5
MNTV	**Mantova**	**2.71 324**	S	Sg	20 03 22.0	-0.9
MYKA	**Terra Mystica**	**3.66 6**	*e*Pn	Pn	20 02 55.9	+3.1
	comp=E,4.2nm,0.4s					
OBKA	**Obir**	**3.67 16**	*e*Pn	Pb	20 02 57.5	-3.6
	comp=E,0.6nm,0.2s					
ABTA	**Abfaltersbach**	**3.77 354**	*e*Pn	Pn	20 02 56.4	+2.1
	comp=E,4.5nm,0.4s					
KBA	**Koelnbreinsper**	**4.09 3**	*e*Pn	Pn	20 03 00.5	+1.7
	comp=E,3.5nm,0.5s					
FETA	**Feichten**	**4.35 339**	*e*Pn	Pn	20 03 07.3	+4.9
	comp=E,2.1nm,0.4s					
SQTA	**Sankt Quirin**	**4.43 343**	*e*Pn	Pn	20 03 08.0	+4.7
	comp=E,1.8nm,0.2s					
WATA	**Walderalm**	**4.47 347**	*e*Pn	Pb	20 03 09.3	-5.3
	comp=E,1.2nm,0.3s					
ARSA	**Arzberg**	**4.60 21**	*e*Pn	Pn	20 03 10.0	+4.4
	comp=E,1.6nm,0.4s					
DAVA	**Damuels**	**4.85 333**	*e*Pn	Pn	20 03 14.3	+5.2
	comp=E,2.1nm,0.4s					
CONA	**Conrad Observa**	**5.32 21**	*e*Pn	Pn	20 03 18.1	+2.6
	comp=E,0.9nm,0.2s					
KHC	**Kasperske Hory**	**6.15 3**	*e*PN	Pn	20 03 29.1	+2.2
KHC			*e*SN	Sn	20 04 35.0	-2.3

ROM 27 20:02:59.4±0.1, 42°.896N±0°.003×13°.135E±0°.004, h8km, ML1.9/2, 1C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=151.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**67**	⇓P	Pg	20 03 01.3	0.0
MC2				S	Sg	20 03 02.3	-0.3
NRCA	**Norcia**	**0.06**	**194**	P	Pg	20 03 01.7	+0.4
NRCA				S	Sg	20 03 02.9	+0.2
NRCA				AML	AML		
	comp=E,3015μm,1.1s						
NRCA				AML	AML		
	comp=N,2110μm,0.1s						
T1216	**Preci, Frazion**	**0.09**	**267**	⇑P	Pg	20 03 02.1	+0.5
T1216				S	Sg	20 03 03.8	+0.7
T1216				AML	AML		
	comp=E,4770μm,0.3s						
T1216				AML	AML		
	comp=N,1849μm,0.3s						
AM05	**Amandola Campo**	**0.18**	**63**	P	Pg	20 03 03.8	+0.6
AM05				S	Sg	20 03 06.6	+1.0
AM05				AML	AML		
	comp=E,369μm,0.1s						
AM05				AML	AML		
	comp=N,402μm,0.7s						
AM05				AML	AML		
	comp=N,105μm,0.4s						
AM05				AML	AML		
	comp=N,105μm,0.4s						
AM05				AML	AML		
	comp=E,1425μm,0.2s						
CESI	**CESI - Serrava**	**0.20**	**303**	P	Pg	20 03 04.1	+0.6
T1215	**Vallo di Nera,**	**0.22**	**245**	P	Pg	20 03 04.5	+0.7
T1215				S	Sg	20 03 08.1	+1.3
T1217	**Poggiodomo (PG**	**0.24**	**219**	P	Pg	20 03 04.8	+0.6
T1217				S	Sg	20 03 08.7	+1.3
T1204	**Amatrice, Fraz**	**0.26**	**149**	*e*P	Pb	20 03 05.6	-0.8
T1204				S	Sb	20 03 09.7	-1.4
ARRO	**Arrone**	**0.42**	**221**	P	Pg	20 03 08.1	+0.6
ARRO				S	Sb	20 03 15.0	-0.6
ARVD	**Arcevia**	**0.62**	**347**	S	Sb	20 03 22.0	+0.6

ROM 27 20:03:52.2±0.0, 42°.982N±0°.002×13°.116E±0°.005, h9km, ML2.0/3, 4C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.05**	**248**	P	Pg	20 03 54.6	+0.3
FEMA				S	Sg	20 03 55.9	+0.1
FEMA				AML	AML		
	comp=E,3060μm,0.6s						
FEMA				AML	AML		
	comp=N,2200μm,0.2s						
FDMO	**Fiordimonte**	**0.06**	**339**	⇑P	Pg	20 03 54.5	+0.3
FDMO				S	Sg	20 03 55.7	0.0
FDMO				AML	AML		
	comp=E,1215μm,0.2s						
FDMO				AML	AML		
	comp=N,2100μm,0.2s						
MC2	**Monte Cornacci**	**0.09**	**141**	P	Pg	20 03 55.2	+0.5
MC2				S	Sg	20 03 56.9	+0.3
T1216	**Preci, Frazion**	**0.12**	**218**	P	Pg	20 03 55.6	+0.6
T1216				S	Sg	20 03 57.7	+0.8
NRCA	**Norcia**	**0.15**	**180**	P	Pg	20 03 56.1	+0.6
NRCA				S	Sg	20 03 58.2	+0.5
CESI	**CESI - Serrava**	**0.16**	**279**	⇑P	Pg	20 03 56.5	+0.8
CESI				S	Sg	20 03 59.0	+1.0
CESI				AML	AML		
	comp=N,714μm,0.2s						
CESI				AML	AML		
	comp=E,394μm,1.6s						
CESI				AML	AML		
	comp=N,715μm,0.2s						
T1215	**Vallo di Nera,**	**0.26**	**225**	P	Pg	20 03 58.1	+0.7
T1215				S	Sb	20 04 02.4	-1.1
GAG1	**Gagliole**	**0.26**	**352**	⇑P	Pb	20 03 59.3	+0.2
T1217	**Poggiodomo (PG**	**0.30**	**207**	⇑P	Pg	20 03 59.0	+0.7
T1217				S	Sb	20 04 03.6	-1.2
EL6	**Elcito**	**0.35**	**358**	P	Pg	20 03 59.6	+0.5
EL6				S	Sb	20 04 05.1	-1.2
SMA1	**SAN MARTINO**	**0.39**	**155**	P	Pg	20 04 00.2	+0.4
SMA1				S	Sb	20 04 06.5	-0.8
CING	**Cingoli**	**0.40**	**8**	P	Pg	20 04 00.6	+0.6
CING				S	Sb	20 04 07.0	-0.6
RM33	**Pellescritta (**	**0.48**	**171**	P	Pg	20 04 01.9	+0.4
RM33				S	Sb	20 04 09.2	-0.7
T1211	**Morro Reatino**	**0.49**	**203**	⇓P	Pb	20 04 02.3	-0.6
T1211				S	Sb	20 04 09.6	-0.6
TERO	**Teramo**	**0.51**	**135**	P	Pg	20 04 02.5	+0.5
TERO				S	Sb	20 04 10.2	-0.6
SAMA	**S.Maria delle**	**1.26**	**198**	⇓P	Pg	20 04 16.7	+0.3
POFI	**Posta Fibreno**	**1.34**	**161**	P	Pn	20 04 16.7	-0.3

ROM 27 20:04:22.6±0.1, 42°.872N±0°.004×13°.156E±0°.006, h8km, ML1.8/6, 2C, Error ellipse: s-maj=0.5km s-min=0.3km az=30.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.10**	**281**	P	Pg	20 04 25.4	+0.2
T1216				S	Sg	20 04 27.2	+0.4
T1216				AML	AML		
	comp=E,1532μm,0.3s						
T1216				AML	AML		
	comp=N,1125μm,0.3s						
FDMO	**Fiordimonte**	**0.17**	**343**	⇑P	Pg	20 04 26.9	+0.7
FDMO				AML	AML		
	comp=E,790μm,0.1s						
FDMO				AML	AML		
	comp=N,994μm,0.1s						
AM05	**Amandola Campo**	**0.18**	**54**	P	Pg	20 04 26.7	+0.3
AM05				AML	AML		
	comp=E,540μm,0.8s						
AM05				AML	AML		
	comp=N,55μm,0.1s						
T1215	**Vallo di Nera,**	**0.22**	**252**	P	Pg	20 04 27.8	+0.6
T1215				S	Sg	20 04 31.5	+1.3
CESI	**CESI - Serrava**	**0.23**	**306**	⇑P	Pg	20 04 27.3	+0.1
CESI				AML	AML		
	comp=N,360μm,1.1s						
CESI				AML	AML		
	comp=N,359μm,1.1s						
CESI				AML	AML		
	comp=E,312μm,0.6s						
T1204	**Amatrice, Fraz**	**0.23**	**149**	P	Pg	20 04 28.3	+1.0
T1204				S	Sg	20 04 32.4	+1.9
T1217	**Poggiodomo (PG**	**0.23**	**226**	P	Pg	20 04 28.1	+0.8
T1217				S	Sg	20 04 32.1	+1.7
SMA1	**SAN MARTINO**	**0.28**	**151**	P	Pg	20 04 29.1	-0.8
SMA1				S	Sb	20 04 33.7	-1.0
SMA1				AML	AML		
	comp=N,155μm,0.6s						
SMA1				AML	AML		
	comp=E,196μm,1.5s						
LNSS	**Leonessa**	**0.28**	**198**	P	Pb	20 04 29.4	-0.7
LNSS				S	Sb	20 04 34.0	-0.9
LNSS				AML	AML		
	comp=N,401μm,0.4s						
LNSS				AML	AML		
	comp=E,547μm,0.1s						
LNSS				AML	AML		
	comp=N,400μm,0.4s						
RM33	**Pellescritta (**	**0.36**	**173**	P	Pg	20 04 30.5	+0.6
RM33				S	Sb	20 04 36.6	-0.7
CAMP	**Campotosto**	**0.38**	**151**	P	Pg	20 04 30.6	+0.4
CAMP				S	Sb	20 04 37.0	-0.9
T1211	**Morro Reatino**	**0.41**	**213**	P	Pb	20 04 31.5	-0.6
T1211				S	Sb	20 04 38.0	-0.5
ARRO	**Arrone**	**0.41**	**225**	P	Pb	20 04 31.4	-0.7
ARRO				S	Sb	20 04 37.5	-1.0
TERO	**Teramo**	**0.41**	**127**	P	Pg	20 04 31.1	+0.4
TERO				S	Sb	20 04 37.6	-1.0
EL6	**Elcito**	**0.46**	**355**	P	Pb	20 04 33.4	+0.4
EL6				S	Sb	20 04 40.0	-0.1
FIAM	**Fiamignano**	**0.60**	**183**	P	Pg	20 04 34.5	+0.2
FIAM				S	Sb	20 04 44.0	-0.2

*IDC **27** 20:08:11.0±32.0, 31°.28N×47°.45E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=625.9km s-min=50.6km az=13.0*
*TEH **27** 20:08:21.8, 32°.47N×47°.91E, h8km, ML3.1*
*ISN **27** 20:08:22.0±1.2, 32°.54N×47°.95E, h14km±7km, ML3.2*
ISC 27 20:08:23.3±0.9, 32°.48N±0°.05×47°.91E±0°.04, h15km, n52, σ1§52/56, mb3.6/4, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.57**	**291**	*e*Pg	**Pg**	**20 08 33.4**	**-1.2**
IKFM	**Kafar-mosalman**	**1.05**	**357**	*e*Pg	**Pb**	**20 08 41.8**	**-1.4**
IKFM				*e*		20 09 03.4	
	comp=Z,32μm,0.4s						
IKMR	**Kamar-syah**	**1.11**	**21**	*e*Pn	**Pb**	**20 08 42.4**	**-1.8**
IKMR				*e*		20 09 05.1	
	comp=Z,18μm,0.3s						
IDOB	**Doab**	**1.33**	**10**	*e*Pn	**Pn**	**20 08 47.5**	**0.0**
AMIS	**Naft Sefid**	**1.42**	**124**	*e*Pg	**Pn**	**20 08 49.3**	**+0.7**
AMIS				*e*		20 09 15.6	
	comp=Z,8μm,0.3s						
RAFI	**Al-Rafai**	**1.70**	**244**	*e*Pg	**Pn**	**20 08 54.0**	**+1.5**
RAFI				*e*Sg	**Sb**	**20 09 18.0**	**+2.5**
RAFI				AML	AML	20 09 24.0	
	comp=E,179nm,0.4s						
IKOM	**Komasi**	**1.73**	**349**	*e*Pn	**Pn**	**20 08 54.1**	**+1.1**
IKOM				*e*		20 09 25.4	
	comp=Z,7μm,0.4s						
IBDR	**Badra**	**1.79**	**291**	*e*Pg	**Pn**	**20 08 54.0**	**+0.4**
IBDR				*e*Sg	**Sn**	**20 09 18.0**	**+1.9**
HSAM	**Samen**	**1.82**	**18**	*e*Pn	**Pn**	**20 08 55.7**	**+1.3**
HSAM				*e*		20 09 00.0	
	comp=Z,3μm,0.6s						
KCHF	**Cheshme Sefid,**	**1.94**	**338**	*e*Pn	**Pn**	**20 08 56.8**	**+0.9**
KCHF				*e*		20 09 30.5	
	comp=Z,4μm,0.4s						
IBZA	**Bozab**	**1.99**	**359**	*e*Pn	**Pn**	**20 08 58.1**	**+1.4**
IBZA				*e*		20 09 33.9	
	comp=Z,3μm,1.0s						
KER	**Kermanshah**	**2.01**	**341**	*e*Pn	**Pn**	**20 08 57.9**	**+1.0**
KHMZ	**Khomeyn**	**2.13**	**53**	*e*Pn	**Pn**	**20 09 01.2**	**+2.6**
IGHG	**Ghaleghazi**	**2.17**	**329**	*e*Pn	**Pn**	**20 09 00.2**	**+1.1**
IGHG				*e*		20 09 52.5	
	comp=Z,3μm,0.8s						
SHK1	**Shahrekord**	**2.52**	**93**	*e*Pn	**Pn**	**20 09 05.0**	**+1.1**
SHK1				*e*		20 09 55.7	
	comp=Z,2μm,0.7s						
IPIR	**Pirpir**	**2.52**	**84**	*e*		20 09 46.8	
	comp=Z,2μm,0.5s						
IPIR				*e*Pn	**Pn**	**20 09 06.1**	**+2.1**
HAGD	**Aghdareh**	**2.55**	**23**	*e*		20 09 52.3	
	comp=Z,2μm,0.6s						
HAGD				*e*Pn	**Pn**	**20 09 06.0**	**+1.6**
IDHR	**Dehrash**	**2.56**	**331**	*e*Pn	**Pn**	**20 09 06.1**	**+1.6**
ILIN	**Lien**	**2.56**	**342**	*e*		20 09 50.0	
	comp=Z,2μm,0.6s						
ILIN				*e*Pn	**Pn**	**20 09 05.9**	**+1.3**
SNGE	**Sanandaj**	**2.65**	**350**	*e*Pn	**Pn**	**20 09 08.2**	**+2.4**
IBRJ	**Brojen**	**2.89**	**100**	*e*Pn	**Pn**	**20 09 10.2**	**+1.1**
BHD	**Baghdad**	**3.08**	**286**	*e*Pn	**Pn**	**20 09 12.0**	**+0.6**
BHD				*e*Sn	**Sn**	**20 09 49.0**	**+1.1**
BHD				AML	AML	20 09 52.3	
	comp=E,177nm,0.4s						
QAMS	**Qamsar**	**3.18**	**66**	*e*Pn	**Pn**	**20 09 15.6**	**+2.5**
QAMS				*e*		20 10 08.6	
	comp=Z,1μm,0.5s						
IKLH	**Kolahrood**	**3.19**	**74**	*e*Pn	**Pn**	**20 09 14.8**	**+1.5**
IKLH				*e*		20 10 20.9	
	comp=Z,862nm,0.6s						
IRAZ	**Razeghan**	**3.37**	**29**	*e*Pn	**Pn**	**20 09 17.5**	**+1.9**
IRAZ				*e*		20 09 22.1	
	comp=Z,2μm,0.5s						
KLNJ	**Kolanjah**	**3.46**	**114**	*e*Pn	**Pn**	**20 09 18.0**	**+1.0**
KLNJ				*e*		20 10 15.7	
	comp=Z,669nm,0.4s						
GHVR	**GHOM**	**3.46**	**54**	*e*Pn	**Pn**	**20 09 19.3**	**+2.5**
IGAR	**Gharneh**	**3.49**	**90**	*e*Pn	**Pn**	**20 09 18.2**	**+0.9**
IGAR				*e*		20 10 15.7	
	comp=Z,381nm,0.5s						
QABG	**Abgarm-Qazvin**	**3.51**	**23**	*e*Pn	**Pn**	**20 09 19.0**	**+1.4**
IQOM	**Qom**	**3.54**	**47**	*e*Pn	**Pn**	**20 09 19.8**	**+1.9**
IQOM				*e*		20 09 28.6	
	comp=Z,737nm,0.5s						
IZEF	**Zefreh**	**3.75**	**82**	*e*Pn	**Pn**	**20 09 22.3**	**+1.5**
IZEF				*e*		20 09 23.3	
	comp=Z,355nm,0.3s						
KRSH	**Karshahi**	**3.84**	**66**	*e*Pn	**Pn**	**20 09 23.3**	**+1.3**
KRSH				*e*		20 10 40.2	
	comp=Z,471nm,0.7s						
IRAM	**Ramesheh**	**3.85**	**99**	*e*Pn	**Pn**	**20 09 22.8**	**+0.6**
IRAM				*e*		20 10 43.0	
	comp=Z,332nm,0.7s						
IVRN	**Varamin**	**4.05**	**51**	*e*Pn	**Pn**	**20 09 26.5**	**+1.6**
ISFB	**Sefidab**	**4.07**	**61**	*e*Pn	**Pn**	**20 09 25.9**	**+0.7**
ISFB				*e*		20 10 41.4	
	comp=Z,210nm,0.8s						
NASN	**Na'in**	**4.14**	**84**	*e*Pn	**Pn**	**20 09 27.7**	**+1.4**
QSDN	**Sirdan**	**4.15**	**14**	*e*Pn	**Pn**	**20 09 28.2**	**+1.8**
IKRK	**Kirkuk**	**4.16**	**315**	*e*Pn	**Pn**	**20 09 27.0**	**+0.7**
IKRK				*e*Sn	**Sn**	**20 10 15.0**	**+0.3**
ZNJK	**Zanjan**	**4.23**	**8**	*e*Pn	**Pn**	**20 09 29.7**	**+2.2**
CHTH	**Charan**	**4.34**	**37**	*e*Pn	**Pn**	**20 09 31.5**	**+2.6**
IGZV	**Ghazvin**	**4.34**	**25**	*e*Pn	**Pn**	**20 09 30.0**	**+1.0**
QALM	**Alamut, Qazvin**	**4.55**	**29**	*e*Pn	**Pn**	**20 09 34.1**	**+2.3**
DAMV	**Damavand**	**4.61**	**46**	*e*Pn	**Pn**	**20 09 34.2**	**+1.5**
IDMV	**Damavand**	**4.61**	**47**	*e*Pn	**Pn**	**20 09 33.7**	**+0.9**
ISAD	**Sadrabad**	**4.92**	**95**	*e*Pn	**Pn**	**20 09 37.3**	**+0.2**
ANAR	**Anarak**	**4.95**	**80**	*e*Pn	**Pn**	**20 09 38.1**	**+0.9**
ILAS	**Lasjerd**	**5.10**	**54**	*e*Pn	**Pn**	**20 09 40.1**	**+0.7**
IFIR	**Firoozkooh**	**5.11**	**51**	*e*Pn	**Pn**	**20 09 41.2**	**+1.6**
KURBB	**Kurchatov Arra**	**28.92**	**42**	P	**P**	**20 14 21.7**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=245,slow=9.5,SNR=4.0						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**29.82**	**51**	P	**P**	**20 14 29.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=253,slow=10,SNR=3.3						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**32.26**	**340**	P	**P**	**20 14 49.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=150,slow=11,SNR=4.1						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**33.84**	**40**	P	**P**	**20 15 05.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=234,slow=7.7,SNR=6.9						
	comp=Z,0.9nm,0.5s						

*IDC **27** 20:32:55.4±0.4, 33°.83S×72°.09W, h0km, mb4.8/30, mbtmp4.8/32, ML4.8/2, MS5.8/48, Error ellipse: s-maj=16.5km s-min=11.2km az=79.0*
*MOS **27** 20:32:55.9±2.2, 33°.61S×72°.43W, h10km, mb5.8/40, MS5.9/32, Error ellipse: s-maj=10.2km s-min=6.3km az=90.1*
*NEIC **27** 20:32:55.8±2.1, 33°.78S±0°.04×72°.53W±0°.04, h13km±2km, mb5.6/353, Ms_20 5.9/409, Mwb5.9/25, Mww6.0, Mwr6.0(GUC), Error ellipse: s-maj=5.9km s-min=5.1km az=172.0*
*BJI **27** 20:32:55.7±0.0, 33°.25S×72°.81W, h14km, mB5.8/31, Ms6.2/48, Ms7 6.1/48*
*NEIC **27** 20:32:55.6, 33°.76S×72°.54W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.01; $M_{\theta\theta}$0.88; $M_{\phi\phi}$-5.89; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.64; $M_{\phi r}$-7.77; Fault plane solution: $M_0$9.55000×10^{17} NP1:ϕ_s178.07000°, δ72.57000°, λ84.74000°. NP2:ϕ_s15.15000°, δ18.18000°, λ106.28000°. Principal axes: T 9.1007, Plg62.0000°, Azm80.0000°; N 0.8412, Plg5.0000°, Azm180.0000°; P -9.9420, Plg27.0000°, Azm272.0000°;*
*SJA **27** 20:32:55.0±1.9, 33°.76S×72°.61W, h40km, MW6.0(GUC)*
*GUC **27** 20:32:55.6±0.7, 33°.76S×72°.61W, h40km±2km, ML5.3*
*GCMT **27** 20:33:01.8±0.1, 33°.83S±0°.01×72°.75W, h12km, MW6.0/164, Moment Tensor Solution. s153,c309; s164,c515; Duration: 2§4 Moment tensor: Scale 10^{18} Nm; M_{rr}0.65±.00; $M_{\theta\theta}$-0.00±.00; $M_{\phi\phi}$-0.64±.00; $M_{r\theta}$-0.17±.01; $M_{\theta\phi}$-0.12±.00; $M_{\phi r}$-0.93±.01; Best double couple: $M_0$1.15000×10^{18} NP1:ϕ_s190.00000°, δ73.00000°, λ90.00000°. NP2:ϕ_s11.00000°, δ17.00000°, λ90.00000°. Principal axes: T 1.1390, Plg62.0000°, Azm100.0000°; N 0.0210, Plg0.0000°, Azm190.0000°; P -1.1600, Plg28.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **27** 20:33:03, 33°.86S×72°.53W, h16km, Moment Tensor Solution. Duration: 16§0 Moment tensor: Scale 10^{18}Nm; M_{rr}0.86; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.89; $M_{r\theta}$-0.04; $M_{\theta\phi}$-0.15; $M_{\phi r}$-1.10; Fault plane solution: $M_0$1.41000×10^{18} NP1:ϕ_s15.00000°, δ20.00000°, λ101.00000°. NP2:ϕ_s184.00000°, δ71.00000°, λ86.00000°. Principal axes: T 1.3926, Plg64.0000°, Azm87.0000°; N 0.0401, Plg4.0000°, Azm185.0000°; P -1.4327, Plg25.0000°, Azm277.0000°;*
ISC 27 20:32:55.8±0.5, 33°.81S±0°.03×72°.60W±0°.03, h9km±2km, h10km:pP-P, n1244, σ2§06/1082, mb5.6/213, MS5.9/277, 28C-8D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.83**	**80**		**Pg**	**20 33 11.4**	**-0.4**
VA05	**Santo Domingo**	**0.83**	**80**	⇓*i*P	**Pg**	**20 33 11.4**	**-0.4**
VA05				*i* S	**Sg**	**20 33 22.6**	**0.0**
BO03	**Pichilemu**	**0.87**	**143**	⇓*i*P	**Pg**	**20 33 12.4**	**-0.1**
BO03				*i* S	**Sb**	**20 33 24.9**	**+0.2**
MT01	**Popeta**	**1.12**	**93**		**Pb**	**20 33 15.4**	**-1.9**
MT01				Sg	**Sg**	**20 33 28.3**	**-3.5**
MT01	**Popeta**	**1.12**	**93**	⇑*i*P	**Pb**	**20 33 15.6**	**-1.7**
MT01				*i* S	**Sg**	**20 33 30.9**	**-1.0**
MT01	**Popeta**	**1.12**	**93**	*i* P	**Pb**	**20 33 15.6**	**-1.7**
GO05	**Huala**	**1.32**	**156**		**Pn**	**20 33 18.8**	**-1.7**
GO05	**Huala**	**1.32**	**156**	⇑*i*P	**Pn**	**20 33 19.2**	**-1.3**
GO05				*i* S	**Sb**	**20 33 37.6**	**-0.2**
GO05	**Huala**	**1.32**	**156**	*i* P	**Pn**	**20 33 19.6**	**-0.9**
MT02	**Curacav**	**1.33**	**66**	Pn	**Pn**	**20 33 18.6**	**-2.0**
MT02	**Curacav**	**1.33**	**66**	⇑*i*P	**Pn**	**20 33 18.6**	**-2.0**
MT02				*i* S	**Sb**	**20 33 36.6**	**-1.5**
MT02	**Curacav**	**1.33**	**66**	*i* P	**Pg**	**20 33 21.2**	**-0.2**
MT09	**Talagante**	**1.34**	**89**		**Pn**	**20 33 18.8**	**-2.0**
MT09	**Talagante**	**1.34**	**89**	⇑*i*P	**Pn**	**20 33 18.7**

VA06 Catapilco 1.65 42⇑ iP Pn 20 33 23.0 -2.0
VA06 i S Sn 20 33 41.8 -4.4
VA06 IAML 20 33 59.9
comp=E,42µm,0.4s
BO04 La Punta 1.66 97 Pn 20 33 24.0 -1.1
BO04 La Punta 1.66 97⇑ iP Pn 20 33 24.0 -1.1
BO04 i S Sn 20 33 45.4 -1.2
PEL Peldehue 1.73 68 P Pn 20 33 25.0 -1.0
PEL Peldehue 1.73 68⇑ iP Pn 20 33 25.0 -1.0
PEL i S Sn 20 33 46.8 -1.4
PEL Peldehue 1.73 68 i P Pn 20 33 25.2 -0.8
MT03 Universidad Ad 1.77 80 Pn 20 33 25.4 -1.2
MT03 Universidad Ad 1.77 80⇑ iP Pn 20 33 25.4 -1.2
MT03 Universidad Ad 1.77 80 i P Pn 20 33 25.4 -1.2
BO02 Sierra Bellavi 1.79 124 Pn 20 33 26.4 -0.6
BO02 Sierra Bellavi 1.79 124⇑ iP Pn 20 33 26.1 -1.0
BO02 i S Sn 20 33 49.9 -0.1
BO02 Sierra Bellavi 1.79 124 i P Pn 20 33 27.1 +0.1
LMEL Las Melosas 1.99 92 Pn 20 33 29.1 -0.7
LMEL Las Melosas 1.99 92⇑ iP Pn 20 33 28.8 -1.0
LMEL i S Sn 20 33 54.2 -0.7
VA03 San Esteban 2.00 59 Pn 20 33 29.0 -0.9
VA03 San Esteban 2.00 59⇑ iP Pn 20 33 28.8 -1.1
VA03 i S Sn 20 33 53.5 -1.6
VA03 IAML 20 34 13.1
comp=E,70µm,0.4s
VA03 San Esteban 2.00 59 i P Pn 20 33 29.0 -0.9
ML02 Panimavida 2.18 154 Pn 20 33 32.3 0.0
CO02 Combarbal 2.92 28 Pn 20 33 41.5 -1.0
CO02 Combarbal 2.92 28⇑ iP Pn 20 33 41.4 -1.2
CO02 i S Sn 20 34 15.5 -2.4
CO02 IAML 20 34 44.8
comp=E,9µm,0.4s
CO02 Combarbal 2.92 28 i P Pn 20 33 41.4 -1.2
BI05 Punta Hualpn 2.98 189 Pn Pn 20 33 42.5 -0.7
BI05 Punta Hualpn 2.98 189 eP Pn 20 33 42.5 -0.7
BI05 i S Sn 20 34 15.5 -3.5
CO06 Fray Jorge 3.23 15 Pn Pn 20 33 44.7 -1.9
CO06 Fray Jorge 3.23 15⇑ iP Pn 20 33 44.6 -2.0
CO06 i S Sn 20 34 21.9 -3.2
CO03 El Pedregal 3.37 29 Pn 20 33 47.7 -1.0
CO03 El Pedregal 3.37 29⇑ iP Pn 20 33 47.1 -1.6
CO03 i S Sn 20 34 26.3 -2.5
CO03 El Pedregal 3.37 29 i P Pn 20 33 47.6 -1.0
RFA San Rafael 3.55 107 IAML 20 35 07.0
comp=Z,5µm,2.7s
GO04 Tololo Observa 3.93 23 Pn 20 33 55.2 -1.3
ZON Zonda 4.00 57 Pn 20 33 58.5 +1.2
ZON Zonda 4.00 57 P Pn 20 33 58.5 +1.2
ZON Zonda 4.00 57 i P Pn 20 33 58.1 +0.8
ZON IAML 20 35 18.4
comp=Z,3µm,2.2s
CO05 La Serena 4.04 17 Pn 20 33 56.1 -1.8
RTLL Cerro Villicun 4.26 56 i P Pn 20 34 01.3 +0.3
RTLL IAML 20 35 34.0
comp=Z,3µm,2.7s
CO01 Juntas del Tor 4.37 30 Pn 20 34 02.0 -0.6
CO01 Juntas del Tor 4.37 30 i P Pn 20 34 02.1 -0.5
ACCO Cerro Coronel 4.39 44 i P Pn 20 34 04.0 +1.1
ACCO IAML 20 35 32.4
comp=Z,2µm,1.1s
AROD Rodeo 4.49 37 i P Pn 20 34 05.1 +0.7
LC02 Puerto Saavedr 5.02 187 Pn 20 34 10.4 -0.8
LCO Las Campanas 5.05 19 Pn 20 34 08.6 -3.3
LCO Las Campanas 5.05 19 eP Pn 20 34 10.3 -1.6
LCO Las Campanas 5.05 19 i P Pn 20 34 10.0 -1.9
LCO IAML 20 35 53.0
comp=Z,7µm,1.3s
VA04 Juan Fernndez 5.20 270 Pn 20 34 13.7 0.0
H03S1 Juan Fernandez 5.25 268 Pn **Pn 20 34 14.0 -0.2**
baz=85,slow=18
H03S1 Sn **Sn 20 35 06.5 -8.3**
H03S1 T T 20 40 05.5
baz=96,slow=74,SNR=1829
H03S3 Juan Fernandez 5.26 268 Pn **Pn 20 34 14.5 +0.2**
baz=85,slow=18
H03S3 Sn **Sn 20 35 06.8 -8.1**
H03S3 T T 20 40 26.2
baz=84,slow=74,SNR=733
H03S2 Juan Fernandez 5.27 268 Pn **Pn 20 34 14.3 -0.1**
baz=85,slow=18
H03S2 Sn **Sn 20 35 06.6 -8.6**
H03S2 T T 20 39 31.0
SNR=692
H03N1 Juan Fernandez 5.28 272 Pn **Pn 20 34 16.3 +1.6**
baz=275,slow=74
H03N1 T T 20 40 08.0
baz=89,slow=74,SNR=52
H03N3 Juan Fernandez 5.29 272 Pn **Pn 20 34 15.9 +1.1**
baz=114,slow=74
H03N3 T T 20 40 11.7
baz=89,slow=74,SNR=61
H03N2 Juan Fernandez 5.30 272 Pn **Pn 20 34 16.5 +1.7**
H03N2 T T 20 40 13.0
baz=89,slow=74,SNR=68
AC05 El Transito 5.34 22 Pn 20 34 15.1 -0.7
AC05 El Transito 5.34 22 i P Pn 20 34 14.8 -1.0
AVFE Valle Fertil 5.37 56 i P Pn 20 34 16.3 +0.2
AVFE IAML 20 35 50.8
comp=Z,2µm,1.1s
AC04 Llanos de Chal 5.73 14 Pn 20 34 18.7 -2.4
LR03 Panguipulli 5.82 178 Pn 20 34 21.5 -0.7
GO06 Curarrehue 5.84 171 Pn 20 34 22.3 -0.3
LR04 Corral 6.10 186 Pn 20 34 25.1 -1.0
GO03 Copiap 6.52 19 Pn 20 34 29.7 -2.2
AC06 Mina Casimiro 6.71 17 Pn 20 34 32.1 -2.4
LL04 Puerto Octay 7.09 179 Pn 20 34 38.4 -1.3
PLCA Paso Flores 7.10 167 Pn **Pn 20 34 39.5 -0.5**
comp=Z,5.4nm,0.3s,baz=339,slow=11,SNR=124
PLCA LR LR 20 37 33.6
comp=Z,64µm,20.8s,baz=349,slow=40
comp=Z,17nm,0.4s
PLCA Paso Flores 7.10 167 Pn 20 34 40.1 +0.1
PLCA Paso Flores 7.10 167 eP Pn 20 34 40.1 +0.1
AC02 Maricunga 7.56 24 Pn 20 34 44.8 -1.9
LL05 Los Muermos 7.62 185 Pn 20 34 42.8 -4.2
AC01 Pan de Azucar 7.83 13 Pn 20 34 45.7 -4.1
GO02 Mina Guanaco 9.00 18 Pn 20 35 01.3 -4.9
LL07 Hotel Espejo d 9.04 184 Pn **Pn 20 35 03.6 -2.8**
GO07 Milladeo Hill, 9.33 185 Pn 20 35 07.8 -2.6
PB14 IPOC Station P 9.34 12 Pn 20 35 06.6 -4.4
LL02 Futaleuf 9.39 177 Pn 20 35 12.1 +0.8
TRQA Tornquist 9.60 119 Pn **Pn 20 35 12.6 -1.5**
TRQA Tornquist 9.60 119 P **Pn 20 35 12.6 -1.5**
PB10 IPOC Station P 10.41 10 Pn **Pn 20 35 22.7 -2.6**
AY01 Puyuhuapi 10.60 180 Pn 20 35 25.9 -1.9
PB15 IPOC Station P 10.91 15 Pn 20 35 28.6 -3.7
PB06 IPOC Station P 11.37 14 Pn 20 35 32.6 -6.0
AF01 San Pedro de A 11.49 21 Pn **Pn 20 35 37.5 -2.8**
LVC Limon Verde 11.62 17 Pn Pn 20 35 36.2 -5.9
comp=Z,0.7nm,0.3s,baz=170,slow=7.0,SNR=2.4
LVC LR LR 20 40 49.2
comp=Z,80µm,19.0s,baz=221,slow=41
LVC Limon Verde 11.62 17 Pn 20 35 36.4 -5.7
LVC Limon Verde 11.62 17 P Pn 20 35 36.4 -5.7
PB04 IPOC Station P 11.63 11 Pn 20 35 38.5 -3.7
COYC Coyhaique 11.76 178 Pn 20 35 43.8 +0.2
PB03 IPOC Station P 11.98 13 Pn 20 35 43.2 -3.7
PB07 IPOC Station P 12.27 12 Pn 20 35 49.4 -1.5
PB09 IPOC Station P 12.32 15 Pn 20 35 50.0 -1.7
PB02 IPOC Station P 12.66 12 Pn 20 35 55.1 -1.1
PB01 IPOC Station P 13.01 13 Pn 20 35 58.8 -2.1
PATCX Punta Patache 13.11 10 Pn **Pn 20 35 59.0 -3.4**
TA01 Diego Aracena 13.36 10 Pn **Pn 20 36 02.4 -3.3**
TA02 Huaiquique 13.66 10 Pn **Pn 20 36 07.3 -2.4**
PB08 IPOC Station P 13.95 14 Pn 20 36 11.6 -2.5
ITQB Itaqui 14.20 77 Pn 20 36 13.1 -4.0
PB11 IPOC Station P 14.23 11 Pn 20 36 14.8 -2.9
GO01 Chusmiza 14.40 13 Pn 20 36 16.7 -3.7
CPUP Villa Florida 15.16 65 Pn **Pn 20 36 29.6 -0.5**
comp=Z,0.4nm,0.3s,baz=240,slow=14,SNR=4.5
CPUP LR LR 20 42 07.4
comp=Z,21µm,21.9s,baz=243,slow=37
CPUP Villa Florida 15.16 65 Pn 20 36 25.6 -4.5
CPUP Villa Florida 15.16 65 P **Pn 20 36 25.6 -4.5**
CPUP pmax pmax
comp=Z,21nm,1.3s
PB12 IPOC Station P 15.26 8 Pn 20 36 25.9 -5.7
PB16 IPOC Station P 15.65 11 P **Pn 20 36 30.6 -6.6**
PLTB Pedras Altas 16.10 88 P **Pn 20 36 36.1 -6.3**
GO09 Cerro Castillo 17.46 179 Pn **Pn 20 36 56.8 -2.6**
MG05 Puerto Natales 17.86 180 Pn 20 37 03.8 -0.6

LPAZ La Paz 17.90 14 P **Pn 20 37 05.7 0.0**
comp=Z,1.1nm,0.3s,baz=186,slow=7.7,SNR=40
comp=Z,25nm,0.8s
LPAZ La Paz 17.90 14 P **Pn 20 37 04.8 -0.8**
ITAB Concordia 18.79 75 P **P 20 37 11.1 -4.3**
ITAB IAmb IAmb 20 37 22.5
comp=Z,524nm,1.4s
AQDB Aquidauana 20.02 53 P **P 20 37 25.1 -3.8**
AQDB IAmb IAmb 20 37 38.9
comp=Z,306nm,1.3s
SIV San Ignacio 20.56 33 P **P 20 37 33.2 -1.7**
comp=Z,33nm,0.9s,baz=216,slow=10,SNR=50
SIV LR LR 20 47 13.4
comp=Z,79µm,18.4s,baz=230,slow=42
comp=Z,33nm,0.9s
TRCB Terra Rica 20.68 63 P **P 20 37 33.9 -2.3**
EFI East Falkland 20.74 154 P **P 20 37 34.0 -2.4**
EFI IAmb IAmb 20 37 50.4
comp=Z,822nm,2.0s
EFI East Falkland 20.74 154 IAMs_20 IAMs_20 20 46 56.8
comp=Z,52µm,18.0s
EFI East Falkland 20.74 154 P **P 20 37 34.1 -2.4**
EFI pmax pmax
comp=Z,822nm,2.0s
EFI MLR MLR
comp=Z,52µm,18.0s
USHA Ushuaia 21.23 173 LR LR 20 45 38.4
comp=Z,38µm,20.1s,baz=350,slow=36
MG01 Puerto William 21.41 172 P **P 20 37 42.0 -1.7**
MG01 IAmb IAmb 20 37 55.9
comp=Z,181nm,0.9s
NNA Nana 22.06 349 P **P 20 37 53.8 +2.8**
comp=Z,13nm,0.4s,baz=186,slow=9.9,SNR=6.8
NNA LR LR 20 44 34.8
comp=Z,36µm,20.2s,baz=174,slow=32
comp=Z,13nm,0.4s
NNA Nana 22.06 349 P **P 20 37 50.4 -0.7**
NNA IAmb IAmb 20 38 09.9
comp=Z,253nm,1.2s
NNA Nana 22.06 349 P **P 20 37 50.4 -0.7**
NNA pmax pmax
comp=Z,253nm,1.3s
NNA MLR MLR
comp=Z,36µm,20.0s
ATAH Atahualpa 27.08 347 P **P 20 38 42.1 +2.9**
comp=Z,2.1nm,0.4s,baz=110,slow=10,SNR=2.9
ATAH LR LR 20 47 58.4
comp=Z,19µm,20.0s,baz=192,slow=33
comp=Z,2.1nm,0.4s
BDFB Brasilia 28.61 57 P **P 20 38 50.5 -2.2**
comp=Z,18nm,0.6s,baz=221,slow=9.1,SNR=14
BDFB LR LR 20 51 48.9
comp=Z,50µm,18.4s,baz=229,slow=40
comp=Z,18nm,0.6s
BDFB Brasilia 28.61 57 P **P 20 38 48.8 -3.9**
BDFB Brasilia 28.61 57 P **P 20 38 48.8 -3.9**
BDFB pmax pmax
comp=Z,86nm,1.1s
TBTG Tabatinga, AM 29.57 5 eP **P 20 39 04.0 +3.0**
BOSC San Juan Bosco 30.99 349 P P 20 39 08.9 -4.9
BOSC IAmb IAmb 20 39 31.0
comp=Z,105nm,1.7s
PMSA Palmer Station 31.44 173 P **P 20 39 17.5 +0.4**
comp=Z,20nm,1.1s,baz=335,slow=5.5,SNR=7.5
PMSA LR LR 20 51 58.7
comp=Z,31µm,18.6s,baz=348,slow=36
comp=Z,20nm,1.1s
PMSA Palmer Station 31.44 173 P **P 20 39 13.3 -3.7**
COHC Cochancay 31.79 347 P **P 20 39 18.5 -2.2**
COHC Cochancay 31.79 347 eP **P 20 39 24.4 +3.8**
RPN Rapa Nui 32.24 272 LR LR 20 49 04.8
comp=Z,26µm,18.2s,baz=88,slow=30
RPN Rapa Nui 32.24 272 IAMs_20 IAMs_20 20 48 51.9
comp=Z,27µm,19.0s
HOPE Hope Point 32.54 140 IAMs_20 IAMs_20 20 52 57.3
comp=Z,31µm,18.0s
SLOR San Lorenzo - 33.37 349 P **P 20 39 32.9 -2.1**
FLF1 Flavio Alfaro- 33.96 347 eP P 20 39 48.0 +8.4
SMAI San Martin Ant 34.51 176 P **P 20 39 43.9 0.0**
SMAI IAmb IAmb 20 40 03.0
comp=Z,107nm,1.4s
TULM Tulcn-Chalpat 34.68 351 P 20 39 47.0 +0.5
GCUF Volcan Galeras 35.13 352 eP P 20 39 55.3 +5.0
FLOC Florencia 35.32 355 eP P 20 39 59.9 +8.5
BBAC Balboa, Cauca 35.90 352 eP **P 20 40 01.1 +4.4**
PAYG Puerto Ayora 36.90 330 P **P 20 40 05.2 +0.3**
PAYG IAmb IAmb 20 40 23.9
comp=Z,136nm,1.2s
PAYG Puerto Ayora 36.90 330 IAMs_20 IAMs_20 20 51 46.2
comp=Z,20µm,19.0s
PRAC Prado 37.38 356 eP **P 20 40 09.8 +0.8**
ORTC Ortega, Tolima 37.59 356 eP **P 20 40 14.4 +3.5**
YOTC Yotoco, Valle 37.75 354 eP **P 20 40 16.2 +3.9**
PTGC Puerto Gaitan, 37.80 1 eP P 20 40 22.1 +10
ANIL Santa Ana 38.18 355 eP **P 20 40 20.3 +4.2**
CHIC Chingaza 38.24 358 eP **P 20 40 20.3 +3.5**
ROSC El Rosal 38.47 357 P **P 20 40 16.0 -2.6**
ROSC El Rosal 38.47 357 eP **P 20 40 22.5 +3.9**
ROSC El Rosal 38.47 357 P **P 20 40 16.0 -2.6**
ROSC pmax pmax
comp=Z,77nm,1.4s
PLMC San Jos del P 38.66 354 eP **P 20 40 24.4 +4.5**
GUY2C Guyana, Caldas 38.91 356 eP P 20 40 27.6 +5.3
NORC Norcasia 39.21 356 eP **P 20 40 27.0 +2.5**
SPBC San Pablo de B 39.27 358 eP P 20 40 36.2 +11
RUSC La Rusia 39.48 359 eP **P 20 40 26.7 -0.6**
CBOC Ciudad Bolivar 39.59 355 eP P 20 40 33.8 +6.1
HELC Santa Helena 39.87 355 eP P 20 40 35.5 +5.1
TAMC Tame, Arauca 40.03 1 eP **P 20 40 31.9 +0.7**
PTBC PUERTO BERRIO, 40.16 357 eP **P 20 40 33.9 +1.5**
PTAC Punta Ardita, 41.03 352 eP P 20 40 45.7 +6.3
AZU Azuero 42.01 349 eP **P 20 40 50.0 +2.5**
SDV Santo Domingo 42.50 3 P **P 20 40 54.4 +2.7**
comp=Z,3.5nm,0.4s,baz=186,slow=9.7,SNR=7.6
SDV LR LR 20 59 35.8
comp=Z,16µm,20.4s,baz=202,slow=38
comp=Z,3.5nm,0.4s
SDV Santo Domingo 42.50 3 P **P 20 40 50.1 -1.6**
SDV Santo Domingo 42.50 3 IAMs_20 IAMs_20 20 59 14.0
comp=Z,15µm,20.0s
PNME Penonome 42.69 349 eP P 20 40 59.9 +6.8
BAUV El Baul 42.73 7 P **P 20 40 51.1 -2.3**
BAUV IAmb IAmb 20 41 17.7
comp=Z,126nm,1.1s
BAUV El Baul 42.73 7 eP **P 20 40 55.6 +2.2**
MDP Montagnes des 43.05 30 P **P 20 40 54.9 -1.2**
comp=Z,60nm,1.1s,baz=205,slow=7.8,SNR=14
MDP LR LR 21 00 16.6
comp=Z,32µm,19.5s,baz=198,slow=38
comp=Z,60nm,1.1s
BCIP Isla Barro Col 43.28 350 P **P 20 40 56.7 -1.2**
BCIP IAmb IAmb 20 41 19.8
comp=Z,135nm,1.6s
BCIP Isla Barro Col 43.28 350 eP **P 20 41 01.6 +3.7**
BCIP Isla Barro Col 43.28 350 P **P 20 40 56.7 -1.2**
BCIP pmax pmax
comp=Z,135nm,1.6s
BRU2 Volcan 43.44 345 P **P 20 40 59.1 -0.2**
BRU2 IAmb IAmb 20 41 23.8
comp=Z,134nm,1.1s
BRU2 Volcan 43.44 345 eP P 20 41 06.9 +7.6
ARGC Ariguani, Magd 43.45 358 eP P 20 41 04.6 +5.4
SJCC San Jacinto, C 43.53 356 eP **P 20 41 02.5 +2.6**
RCBR Riachuelo 43.94 59 P **P 20 41 00.4 -2.9**
comp=Z,12nm,1.0s,baz=261,slow=15,SNR=1.6
RCBR LR LR 21 01 54.5
comp=Z,16µm,18.1s,baz=7.0,slow=40
comp=Z,12nm,1.0s
RCBR Riachuelo 43.94 59 P **P 20 41 00.3 -3.0**
RCBR Riachuelo 43.94 59 P **P 20 41 00.3 -3.0**
RCBR pmax pmax
comp=Z,109nm,1.6s
RCBR MLR MLR
comp=Z,40µm,18.0s
SRBA San Rafael, Bu 44.01 345 P **P 20 41 03.0 -0.9**
PEZE Perez Zeledon, 44.22 344 P **P 20 41 04.2 -1.4**
PCRV Puerto La Cruz 44.39 11 P **P 20 41 08.4 +1.6**
comp=Z,30nm,1.1s,baz=352,slow=4.3,SNR=5.3
PCRV LR LR 21 02 01.1
comp=Z,31µm,18.3s,slow=39
comp=Z,30nm,1.1s
CRJC Cerrejon, Guaj 44.58 360 eP **P 20 41 11.2 +2.8**
RIMA Rio Macho 44.63 344 P P 20 41 14.3 +5.3
RIMA IAmb IAmb 20 41 29.1
comp=Z,94nm,1.4s

CVTR Volcan Turrial 44.86 344 P **P 20 41 14.7 +3.7**
CVTR IAmb IAmb 20 41 41.5
comp=Z,121nm,1.3s
URIC Uribia, Colomb 45.26 1 eP **P 20 41 15.1 +1.4**
DUNO Dulce Nombre, 45.33 342 P **P 20 41 18.7 +4.4**
DUNO IAmb IAmb 20 41 36.3
comp=Z,126nm,1.4s
JTS Las Juntas de 45.40 343 P **P 20 41 18.0 +3.1**
comp=Z,6.4nm,0.9s,baz=309,slow=20,SNR=2.6
comp=Z,6.4nm,0.9s
JTS Las Juntas de 45.40 343 eP P 20 41 21.5 +6.7
JTS Las Juntas de 45.40 343 P **P 20 41 16.0 +1.1**
JTS pmax pmax
comp=Z,134nm,1.7s
JTS MLR MLR
comp=Z,8µm,19.0s
TRN Trinidad (W) 45.47 16 eP P 20 41 23.0 +7.7
ORTG Ortega, Santa 45.59 342 P **P 20 41 15.7 -0.8**
ORTG IAmb IAmb 20 41 38.6
comp=Z,87nm,1.2s
HATO Hato, Curacao 45.86 5 IAMs_20 IAMs_20 21 03 14.1
comp=Z,19µm,19.0s
TOSP Speyside 46.30 16 P **P 20 41 20.7 -1.2**
TOSP Speyside 46.30 16 eP **P 20 41 23.0 +1.1**
GRGR Grenville 46.85 15 P **P 20 41 25.1 -1.1**
GRGR IAMs_20 IAMs_20 21 04 34.2
comp=Z,15µm,19.0s
GRGR Grenville 46.85 15 eP P 20 41 33.0 +6.8
ACON Acoyapa 47.07 343 eP P 20 41 34.2 +6.2
BELA Belgrano 2 47.15 170 P **P 20 41 28.4 +0.5**
GCMP Grenada, Carri 47.25 15 eP **P 20 41 26.6 -2.7**
BOAB BOACO BROADBAN 47.65 343 P P 20 41 37.9 +5.4
SVB Belmont 48.05 15 P **P 20 41 33.5 -2.1**
SVB IAmb IAmb 20 41 40.7
comp=Z,56nm,0.9s
SVB Belmont 48.05 15 eP **P 20 41 37.7 +2.2**
CRIN San Cristobal 48.25 341 eP P 20 41 44.3 +7.1
BBSP Saint Philip 48.30 17 eP **P 20 41 33.3 -4.1**
BBGH Gun Hill 48.31 17 eP P 20 41 31.4 -6.1
MCLT Moule a Chique 48.54 15 P **P 20 41 38.5 -0.9**
MCLT Moule a Chique 48.54 15 eP **P 20 41 37.7 -1.7**
MPOM Morne Pois Mar 49.27 15 P **P 20 41 42.6 -2.3**
MPOM IAMs_20 IAMs_20 21 03 44.2
comp=Z,16µm,20.0s
MPOM Morne Pois Mar 49.27 15 eP P 20 41 34.0 -11
BIM Bigot 49.29 15 P **P 20 41 44.9 -0.2**
BIM Bigot 49.29 15 eP P 20 41 54.1 +8.9
FDF Fort de France 49.48 15 P **P 20 41 47.1 +0.5**
FDF Fort de France 49.48 15 P **P 20 41 47.1 +0.5**
FDF pmax pmax
comp=Z,134nm,1.4s
FDF MLR MLR
comp=Z,27µm,19.0s
FDF Fort de France 49.48 15 eP **P 20 41 42.0 -4.7**
ILAM Ilet Lapin Mar 49.58 15 eP P 20 41 42.3 -5.0
TGUH Tegucigalpa,Un 49.61 341 P **P 20 41 46.9 -0.8**
TGUH Tegucigalpa,Un 49.61 341 eP P 20 41 54.4 +6.7
VNA3 Neumayer Olymp 49.71 158 P **P 20 41 48.4 +0.6**
VNA1 Neumayer--Stat 50.03 157 P **P 20 41 49.7 -0.5**
DLPL La Plaine 50.05 14 eP **P 20 41 50.5 -0.4**
DSLB Salisbury 50.11 14 eP P 20 41 44.0 -7.4
VNA2 Neumayer--Watz 50.37 157 P **P 20 41 53.3 +0.6**
baz=283,slow=7.9
TDBA Terre de Bas, 50.47 14 eP **P 20 41 51.4 -2.6**
MTO3 Montecristo 50.53 339 P **P 20 41 52.5 -2.3**
MTO3 IAmb IAmb 20 42 37.4
comp=Z,49nm,0.8s
MAGL Barre de l'ile 50.64 14 eP **P 20 41 53.9 -1.4**
CBE Ff, Capester 50.69 14 eP **P 20 41 56.4 +0.6**
GDSD La Dsirade Is 51.04 14 P **P 20 41 56.1 -2.2**
GDSD IAmb IAmb 20 42 08.5
comp=Z,73nm,1.0s
ABD La Joyeuse, An 51.11 14 eP **P 20 41 56.3 -2.6**
ANBD Bethesda, Anti 51.61 13 eP **P 20 41 59.7 -2.9**
MLPR Magueyes Islan 51.76 7 P **P 20 42 02.0 -1.6**
MLPR IAmb IAmb 20 42 15.1
comp=Z,62nm,0.9s
CRPR Cabo Rojo, PR 51.79 7 P **P 20 42 02.8 -1.1**
CRPR IAmb IAmb 20 42 14.8
comp=Z,83nm,1.1s
CDVI St. Croix 51.81 10 eP **P 20 42 04.4 +0.3**
SEUS St. Eustatius 51.83 12 P **P 20 42 01.1 -3.1**
SEUS St. Eustatius 51.83 12 eP **P 20 42 04.6 +0.4**
CELP Cerrillos 51.91 7 P **P 20 42 03.2 -1.7**
CELP IAmb IAmb 20 42 16.4
comp=Z,65nm,1.1s
SNAA Sanae 51.94 158 P **P 20 42 05.2 +0.5**
SNAA Sanae 51.94 158 LR LR 21 04 31.0
comp=Z,11µm,18.1s,baz=290,slow=37
SNAA Sanae 51.94 158 P **P 20 42 03.5 -1.1**
SNAA IAMs_20 IAMs_20 21 04 55.2
comp=Z,11µm,18.0s
SNAA Sanae 51.94 158 eP **P 20 42 04.6 -0.1**
SNAA Sanae 51.94 158 P **P 20 42 03.6 -1.1**
SNAA pmax pmax
comp=Z,251nm,1.4s
SNAA MLR MLR
comp=Z,11µm,18.0s
SJG San Juan 51.99 8 P **P 20 42 04.7 -0.8**
comp=Z,20nm,0.8s,baz=246,slow=5.6,SNR=7.0
comp=Z,20nm,0.8s
SJG San Juan 51.99 8 P **P 20 42 03.2 -2.2**
SJG San Juan 51.99 8 P **P 20 42 03.2 -2.2**
SJG pmax pmax
comp=Z,64nm,1.4s
SJG MLR MLR
comp=Z,17µm,19.0s
SJG San Juan 51.99 8 eP P 20 42 10.6 +5.1
SDD Santo Domingo 52.03 3 P **P 20 42 03.4 -2.3**
MTP Monte Pirata 52.05 9 P **P 20 42 02.7 -3.1**
HUMP Col San Antoni 52.05 8 P **P 20 42 04.7 -1.2**
CBYP Canovanas 52.18 8 P **P 20 42 03.1 -3.9**
CBYP IAmb IAmb 20 42 17.1
comp=Z,79nm,1.2s
ANWB Willy Bob 52.21 13 P **P 20 42 04.1 -3.0**
ANWB IAMs_20 IAMs_20 21 08 09.3
comp=Z,13µm,18.0s
ANWB Willy Bob 52.21 13 eP **P 20 42 07.4 +0.3**
ANWB Willy Bob 52.21 13 eP **P 20 42 07.3 +0.2**
SMRT St. Maarten 52.36 11 eP **P 20 42 10.2 +2.0**
SDDR Presa de Saban 52.51 2 IAMs_20 IAMs_20 21 07 24.3
comp=Z,8µm,18.0s
CCIG Comitan 53.18 336 P **P 20 42 13.9 -0.6**
GTBY Guantanamo Bay 53.48 357 IAMs_20 IAMs_20 21 09 28.4
comp=Z,8µm,18.0s
TROLL Troll, Antarti 53.64 158 P **P 20 42 17.9 +0.6**
CMIG Matias Romero 54.89 334 P **P 20 42 30.5 +3.7**
comp=Z,1.9nm,0.3s,baz=166,slow=4.7,SNR=4.1
CMIG LR LR 21 01 18.5
comp=Z,6µm,18.0s,baz=145,slow=31
comp=Z,1.9nm,0.3s
GRTK Grand Turk 55.02 2 IAMs_20 IAMs_20 21 09 03.1
comp=Z,9µm,18.0s
TEIG Tepich 55.77 342 eP **P 20 42 37.6 +4.5**
QSPA South Pole Qui 56.43 180 LR LR 21 05 32.9
comp=Z,10µm,19.2s,baz=168,slow=35
QSPA South Pole Qui 56.43 180 P **P 20 42 37.0 -0.6**
QSPA South Pole Qui 56.43 180 IAMs_20 IAMs_20 21 05 12.3
comp=Z,10µm,20.0s
NVL N'lazarevskaya 56.68 157 eP **P 20 42 41.2 +2.2**
NVL e 20 44 47.3
NVL eS **S 20 50 25.2 -6.0**
NVL eSS **SS 20 54 19.4 +1.2**
NVL pmax pmax
comp=Z,50nm,1.2s
TLIG Tlapa 56.77 330 P **P 20 42 42.0 +1.6**
TLIG IAmb IAmb 20 43 02.1
comp=Z,85nm,1.4s
ZAIG Zacatecas 63.09 329 P **P 20 43 23.1 -0.9**
ZAIG IAmb IAmb 20 43 46.2
comp=Z,57nm,1.7s
SBA Scott Base 63.17 192 P **P 20 43 23.2 -0.3**
SBA Scott Base 63.17 192 IAMs_20 IAMs_20 21 08 42.8
comp=Z,6µm,19.0s
SBA Scott Base 63.17 192 P **P 20 43 23.2 -0.3**
SBA pmax pmax
comp=Z,101nm,1.6s
SBA MLR MLR
comp=Z,6µm,19.0s
VNDA Vanda 64.20 191 P **P 20 43 32.4 +2.0**
comp=Z,1.4nm,0.9s,baz=125,slow=6.4,SNR=8.6
comp=Z,1.4nm,0.9s
VNDA Vanda 64.20 191 P **P 20 43 29.8 -0.6**
VNDA IAmb IAmb 20 44 36.0

comp=Z,85nm,1.8s
VNDA Vanda 64.20 191 P P 20 43 29.8 -0.6
VNDA pmax pmax
comp=Z,85nm,1.8s
TIGA Tifton 65.72 350 P P 20 43 38.3 -2.4
baz=170
BRAL Brewton 66.05 346 P P 20 43 41.6 -1.2
baz=167
TAOE Nuku Hiva Isla 66.49 275 *e*P **P 20 43 46.8 +0.5**
comp=Z,854nm,24.3s
TAOE *e*S **S 20 52 35.9 -1.4**
comp=Z,4μm,23.0s
TAOE *e*SS **SS 20 56 54.0 -0.3**
comp=Z,9μm,27.7s
TAOE *e*LR LR 21 03 45.5
comp=Z,10μm,22.1s
735A Kenedy 66.74 336 P P 20 43 47.3 0.0
833A Chaparral WMA, 66.81 334 P **P 20 43 47.3 -0.4**
833A Chaparral WMA, 66.81 334 P **P 20 43 48.3 +0.6**
baz=156
TBI Tubuai 66.91 257 *e*P **P 20 43 49.3 +0.6**
comp=Z,3μm,26.0s
TBI *e*S **S 20 52 40.8 -1.2**
comp=Z,14μm,24.2s
TBI Tubuai 66.91 257 *e*LR LR 21 03 56.5
comp=Z,297μm,24.8s
TBI *e*LR LR 21 03 57.0
comp=Z,84μm,26.5s
152A Waverly Hall 67.10 349 P P 20 43 48.4 -1.2
152A IAmb IAmb 20 44 20.7
comp=Z,43nm,1.3s
HKT Hockley 67.11 338 P P 20 43 47.8 -1.7
HKT Hockley 67.11 338 IAMs_20 IAMs_20 21 12 54.6
comp=Z,5μm,19.0s
HKT Hockley 67.11 338 P P 20 43 47.8 -1.7
HKT pmax pmax
comp=Z,104nm,1.5s
HKT MLR MLR
comp=Z,6μm,19.0s
SLBS Sierra La Lagu 67.32 323 P P 20 43 50.6 -0.6
SLBS IAmb IAmb 20 44 41.9
comp=Z,58nm,1.3s
GOGA Godfrey 67.64 350 P P 20 43 52.6 -0.3
baz=170
Z51A Franklin 67.81 349 P P 20 43 53.8 -0.2
Z51A IAmb IAmb 20 44 15.4
comp=Z,63nm,1.5s
VBMS Vicksburg 67.81 344 P P 20 43 54.5 +0.5
VBMS IAmb IAmb 20 44 14.8
comp=Z,56nm,0.9s
VBMS Vicksburg 67.81 344 P P 20 43 54.8 +0.8
baz=164
LPIG La Paz 67.85 323 LR LR 21 07 29.4
comp=Z,2μm,18.7s,baz=139,slow=30
LRAL Lakeview Retre 67.85 347 P P 20 43 53.9 -0.4
LRAL IAmb IAmb 20 44 14.6
comp=Z,64nm,1.5s
LRAL Lakeview Retre 67.85 347 P P 20 43 53.9 -0.4
baz=167
146A Union 67.88 345 P P 20 43 53.6 -0.9
HPIG 68.07 328 P P 20 43 55.6 -0.5
HPIG IAmb IAmb 20 44 42.3
comp=Z,30nm,0.9s
Y52A Lilburn 68.17 350 P P 20 43 55.1 -1.1
Y52A IAmb IAmb 20 44 08.6
comp=Z,56nm,1.2s
Z47A Carrollton 68.22 346 P P 20 43 54.8 -1.8
HODGE Hodges 68.28 351 P P 20 43 56.0 -1.0
HODGE IAmb IAmb 20 44 08.5
comp=Z,61nm,1.6s
HODGE Hodges 68.28 351 P P 20 43 58.6 +1.7
baz=171
435B Jarrell 68.44 337 P P 20 43 58.0 0.0
435B IAmb IAmb 20 44 19.3
comp=Z,81nm,1.4s
435B Jarrell 68.44 337 P P 20 43 56.7 -1.3
baz=158
NATX Nacogdoches 68.45 340 P P 20 43 57.4 -0.6
NATX Nacogdoches 68.45 340 P P 20 43 58.0 0.0
baz=160
PAULI Pauline 68.81 352 P P 20 43 58.6 -1.6
PAULI IAmb IAmb 20 44 53.6
comp=Z,72nm,1.4s
JCT Junction City 68.91 335 P P 20 44 01.7 +0.7
JCT Junction City 68.91 335 P P 20 44 01.7 +0.7
JCT pmax pmax
comp=Z,175nm,1.4s
JCT MLR MLR
comp=Z,2μm,21.0s
JCT Junction City 68.91 335 P P 20 44 03.6 +2.6
baz=156
JCT Junction City 68.91 335 P P 20 44 02.4 +1.4
baz=156
W57A Gilead 68.95 354 P P 20 43 59.6 -1.4
W57A IAmb IAmb 20 44 29.2
comp=Z,43nm,1.3s
X51A Calhoun 68.98 349 P P 20 43 59.0 -2.3
X51A IAmb IAmb 20 44 27.3
comp=Z,61nm,1.1s
X51A Calhoun 68.98 349 P P 20 44 02.2 +0.9
baz=169
X51A P **P 20 44 02.2 +0.9**
baz=169
237A Washetta, Mont 69.02 339 P P 20 44 00.5 -1.1
FPAL Fort Paine 69.08 349 P P 20 43 59.8 -2.1
FPAL IAmb IAmb 20 44 33.4
comp=Z,44nm,1.3s
KMSC Kings Mountain 69.08 352 P P 20 43 59.6 -2.3
KMSC IAmb IAmb 20 44 55.1
comp=Z,41nm,1.2s
KMSC Kings Mountain 69.08 352 P P 20 44 01.0 -0.9
baz=172
BG3 Lake Jocassee 69.12 351 P P 20 44 01.7 -0.5
BG3 IAmb IAmb 20 44 55.7
comp=Z,81nm,1.3s
CASEE Lake Jocassee 69.12 351 P P 20 44 05.4 +3.2
baz=171
Y45A Yeager Farm, C 69.17 345 P P 20 44 01.9 -0.6
X48A Hartselle 69.24 347 P P 20 44 03.2 +0.3
X48A IAmb IAmb 20 44 34.9
comp=Z,73nm,1.2s
X48A Hartselle 69.24 347 P P 20 44 06.3 +3.4
baz=167
TX32 Lajitas Array 69.34 331 P P 20 44 04.4 +0.6
TXAR Lajitas Array 69.34 331 P P 20 44 05.0 +1.2
comp=Z,1.4nm,0.6s,baz=155,slow=9.7,SNR=7.8
TXAR LR LR 21 10 19.2
comp=Z,11μm,18.1s,baz=144,slow=32
comp=Z,1.4nm,0.6s
TXAR Lajitas Array 69.34 331 P P 20 44 03.9 +0.1
TX31 Lajitas Ar. Si 69.34 331 P P 20 44 04.6 +0.8
TX31 Lajitas Ar. Si 69.34 331 P P 20 44 05.6 +1.8
baz=153
W52A Murphy 69.36 350 P P 20 44 04.4 +0.7
W52A IAmb IAmb 20 44 16.4
comp=Z,55nm,1.2s
W52A Murphy 69.36 350 P P 20 44 05.6 +1.9
baz=170
V58A Windy Hill, Pi 69.51 354 P P 20 44 03.2 -1.3
WHTX Lake Whitney, 69.51 338 P P 20 44 04.7 +0.1
WHTX Lake Whitney, 69.51 338 P P 20 44 04.2 -0.5
baz=158
W50A Signal Mountai 69.67 349 P P 20 44 04.7 -0.9
W50A IAmb IAmb 20 44 18.2
comp=Z,56nm,1.0s
W50A Signal Mountai 69.67 349 P P 20 44 05.9 +0.3
baz=169,SNR=5.3
CCAR Cane Creek 69.73 343 P P 20 44 03.2 -2.7
V55A Taylorsville 69.76 353 P P 20 44 04.1 -2.0
V55A IAmb IAmb 20 44 59.5
comp=Z,81nm,1.5s
V55A Taylorsville 69.76 353 P P 20 44 06.2 +0.1
baz=172,SNR=5.7
V55A P **P 20 44 06.2 +0.1**
baz=172,SNR=5.7
OXF Oxford 69.77 345 P P 20 44 07.4 +1.3
OXF Oxford 69.77 345 P P 20 44 07.4 +1.3
OXF pmax pmax
comp=Z,115nm,1.1s
OXF MLR MLR
comp=Z,3μm,19.0s
OXF Oxford 69.77 345 P P 20 44 06.2 +0.1
baz=165
V53A Saluda 69.77 351 P P 20 44 05.2 -1.0
V53A Saluda 69.77 351 P P 20 44 06.2 -0.1
baz=171,SNR=5.8
V53A P **P 20 44 06.2 -0.1**
baz=171,SNR=5.8
SWET Sewanee 69.79 348 P **P 20 44 05.8 -0.5**
SWET IAmb IAmb 20 44 18.9
comp=Z,76nm,1.2s
CPCT Cooper Cave 69.79 350 P P 20 44 04.8 -1.6
CPCT IAmb IAmb 20 44 18.8
comp=Z,51nm,1.2s
PPTF Pamatai, Papee 69.79 262 IAMs_20 IAMs_20 21 07 08.8
comp=Z,8μm,19.0s
PPT2 Papeete2 69.80 262 *e*P **P 20 44 07.4 +0.4**
comp=Z,834nm,24.2s
PPT2 *e*S **S 20 53 15.3 -1.5**
comp=Z,6μm,22.2s
PPT2 Papeete2 69.80 262 *e*LR LR 21 05 16.9
comp=Z,15μm,27.5s
PPT2 *e*LR LR 21 05 17.0
comp=Z,10μm,29.5s
PPT Papeete 69.81 262 LR LR 21 07 48.6
comp=Z,7μm,18.3s,baz=150,slow=30
WLAR White Oak Lake 69.85 342 P **P 20 44 07.9 +1.3**
TKL Tuckaleechee C 69.89 350 P **P 20 44 07.5 +0.6**
comp=Z,14nm,1.0s,baz=162,slow=7.5,SNR=6.3
comp=Z,14nm,1.0s
TKL Tuckaleechee C 69.89 350 P P 20 44 06.1 -0.8
TKL IAmb IAmb 20 44 59.9
comp=Z,60nm,1.3s
TKL Tuckaleechee C 69.89 350 P P 20 44 06.1 -0.8
TKL pmax pmax
comp=Z,60nm,1.3s
TKL Tuckaleechee C 69.89 350 P P 20 44 06.6 -0.3
baz=170
PLAL Pickwick Lake 69.95 347 P P 20 44 05.5 -1.8
PLAL IAmb IAmb 20 44 19.6
comp=Z,58nm,1.2s
Z38A Mt. Pleasant 69.95 340 P P 20 44 06.7 -0.6
Z38A IAmb IAmb 20 44 28.6
comp=Z,96nm,1.4s
U59A Littleton 69.97 356 P P 20 44 05.2 -2.1
U59A IAmb IAmb 20 45 01.4
comp=Z,96nm,1.5s
V52A Sevierville 70.05 351 P P 20 44 05.7 -2.2
V52A IAmb IAmb 20 44 20.0
comp=Z,53nm,1.2s
V51A Loudon 70.12 350 P P 20 44 06.8 -1.4
V51A IAmb IAmb 20 44 19.7
comp=Z,106nm,1.9s
U56A King 70.17 353 P P 20 44 07.0 -1.6
U56A IAmb IAmb 20 45 02.1
comp=Z,71nm,1.5s
W45A Hickory Valley 70.34 346 P P 20 44 11.6 +2.0
V48A Smith Brothers 70.45 348 P P 20 44 09.5 -0.8
V48A Smith Brothers 70.45 348 P P 20 44 10.8 +0.5
baz=167,SNR=15
U54A Nelsons Funny 70.49 352 P P 20 44 09.4 -1.3
U54A IAmb IAmb 20 45 03.7
comp=Z,99nm,1.6s
T59A Double "B" Far 70.57 356 P P 20 44 10.8 -0.1
T59A Double "B" Far 70.57 356 P P 20 44 11.4 +0.4
baz=176,SNR=7.3
T59A P **P 20 44 11.4 +0.4**
baz=176,SNR=7.3
UALR University of 70.69 343 P P 20 44 10.0 -1.8
Z35A Perchaven, San 70.69 338 P P 20 44 09.8 -2.0
CLTN Cedars of Leba 70.71 348 P P 20 44 11.3 -0.6
CLTN IAmb IAmb 20 44 24.5
comp=Z,63nm,1.1s
T57A Hurt 70.71 354 P P 20 44 11.1 -0.9
TZTN Tazewell 70.73 351 P P 20 44 11.4 -0.6
TZTN IAmb IAmb 20 45 05.9
comp=Z,77nm,1.4s
TZTN IAMs_20 IAMs_20 21 20 40.7
comp=Z,6μm,18.0s
TZTN Tazewell 70.73 351 P P 20 44 11.9 -0.1
baz=170
MIAR Mount Ida 70.78 342 P P 20 44 13.2 +0.8
MIAR IAmb IAmb 20 44 32.3
comp=Z,51nm,1.2s
MIAR Mount Ida 70.78 342 P P 20 44 13.2 +0.8
MIAR pmax pmax
comp=Z,51nm,1.3s
MIAR Mount Ida 70.78 342 P P 20 44 14.3 +1.9
baz=162
MIAR Mount Ida 70.78 342 P P 20 44 12.4 0.0
baz=162
ABTX Abilene, Hawle 70.81 336 P P 20 44 12.9 +0.3
ABTX Abilene, Hawle 70.81 336 P P 20 44 13.2 +0.6
baz=156
ABTX Abilene, Hawle 70.81 336 P P 20 44 13.1 +0.4
baz=156
WVT Waverly 71.02 347 P P 20 44 13.1 -0.6
WVT Waverly 71.02 347 P P 20 44 13.1 -0.6
WVT pmax pmax
comp=Z,139nm,1.1s
WVT MLR MLR
comp=Z,3μm,19.0s
WVT Waverly 71.02 347 P P 20 44 13.8 0.0
baz=167,SNR=24
WVT Waverly 71.02 347 P P 20 44 14.0 +0.3
baz=167
BLA Blacksburg 71.03 353 P P 20 44 13.2 -0.7
baz=173
U49A Red Boiling Sp 71.03 349 P P 20 44 12.9 -0.9
U49A IAmb IAmb 20 44 26.3
comp=Z,61nm,1.4s
U49A Red Boiling Sp 71.03 349 P P 20 44 12.4 -1.4
baz=168
WHAR Wooly Hollow 71.17 343 P P 20 44 14.8 +0.1
GNAR Gosnell 71.30 345 P P 20 44 15.1 -0.3
JSRW J. Sargeant Re 71.31 356 P P 20 44 14.2 -1.3
X37A Clayton 71.31 340 P P 20 44 15.0 -0.6
X37A IAmb IAmb 20 44 58.8
comp=Z,59nm,1.3s
T50A Nancy 71.38 350 P P 20 44 15.1 -0.8
S57A Dark Hollow, R 71.45 355 P P 20 44 14.8 -1.5
R58B Mineral 71.57 356 P P 20 44 14.2 -2.9
R58B IAmb IAmb 20 45 11.4
comp=Z,117nm,1.6s
LCAR Lake Charles 71.64 344 P P 20 44 15.8 -1.7
LCAR IAmb IAmb 20 45 10.5
comp=Z,58nm,1.1s
LCAR Lake Charles 71.64 344 P P 20 44 17.7 +0.1
baz=164,SNR=9.4
HICK Hickman 71.69 346 P P 20 44 18.6 +0.8
FCAR Ozark Folk Cen 71.70 343 P P 20 44 17.1 -0.8
S54A Dingess, Beckl 71.70 353 P P 20 44 16.6 -1.4
T47A Sharon Grove 71.72 348 P P 20 44 16.7 -1.3
T47A Sharon Grove 71.72 348 P P 20 44 18.1 +0.1
baz=167
CBN Corbin Frederi 71.78 356 IAMs_20 IAMs_20 21 19 19.3
comp=Z,6μm,19.0s
CBN Corbin Frederi 71.78 356 P P 20 44 16.3 -2.0
baz=176
BBTS Babate 71.90 58 P P 20 44 19.4 -0.2
comp=Z,37nm,0.8s,baz=321,slow=22,SNR=3.0
BBTS LR LR 21 16 26.8
comp=Z,10μm,18.2s,baz=236,slow=36
comp=Z,37nm,0.8s
CLNB Carlsbad 72.02 332 P **P 20 44 18.4 -1.7**
X34A Smith Ranch, M 72.05 338 P 20 44 19.0 -1.1
R55A Marlinton 72.06 354 P **P 20 44 18.1 -2.1**
R55A IAmb IAmb 20 44 33.0
comp=Z,42nm,1.0s
HTMS Hat Mesa 72.11 333 P P 20 44 21.5 +0.9
CLN7 Carlsbad 7 72.13 333 P P 20 44 21.8 +1.1
GDL2 Guadalupe Moun 72.15 332 P P 20 44 21.3 +0.4
HSIG 72.27 325 P P 20 44 22.2 +0.8
HSIG IAmb IAmb 20 44 38.6
comp=Z,80nm,1.5s
WMOK Wichita Mounta 72.47 338 P 20 44 22.2 -0.4
WMOK IAmb IAmb 20 44 43.0
comp=Z,93nm,1.4s
WMOK Wichita Mounta 72.47 338 P P 20 44 22.2 -0.4
WMOK pmax pmax
comp=Z,93nm,1.5s
WMOK MLR MLR
comp=Z,3μm,20.0s
WMOK Wichita Mounta 72.47 338 P P 20 44 23.6 +1.0
baz=157
WMOK Wichita Mounta 72.47 338 P P 20 44 22.5 -0.1
baz=157
HHAR Hobbs 72.52 342 P P 20 44 20.9 -2.0
FNO Franklin 72.52 339 P 20 44 21.6 -1.3
R50A Paris 72.55 350 P P 20 44 21.6 -1.3
T42A Van Buren 72.55 345 P P 20 44 22.0 -1.0
T42A Van Buren 72.55 345 P P 20 44 22.8 -0.2
baz=164
EPT El Paso 72.64 330 IAMs_20 IAMs_20 21 11 47.0
comp=Z,8μm,20.0s
TUL1 Leonard 72.67 340 P P 20 44 22.7 -1.0
TUL1 IAmb IAmb 20 44 44.1
comp=Z,62nm,1.1s
TUL1 Leonard 72.67 340 P P 20 44 23.3 -0.4
baz=160
R49A Shelbyville 72.68 350 P P 20 44 24.1 +0.4
R49A IAmb IAmb 20 44 35.7
comp=Z,63nm,1.4s
CPRX Cap Rock 72.70 333 P P 20 44 24.3 +0.2
Q56A Snyder Ridge, 72.74 355 P P 20 44 21.1 -2.9
Q56A IAmb IAmb 20 45 18.2
comp=Z,79nm,1.6s
U38A Gravette 72.78 342 P P 20 44 23.1 -1.3
WCI Wyandotte Cave 72.79 349 P P 20 44 22.0 -2.4
WCI Wyandotte Cave 72.79 349 IAMs_20 IAMs_20 21 21 27.3
comp=Z,5μm,18.0s
WCI Wyandotte Cave 72.79 349 P P 20 44 22.0 -2.4
WCI pmax pmax
comp=Z,33nm,1.3s
WCI MLR MLR
comp=Z,5μm,18.0s
WCI Wyandotte Cave 72.79 349 P P 20 44 25.4 +1.0
baz=168
OK025 Westminster Rd 72.81 339 P P 20 44 21.4 -3.1
S44A Carbondale 72.81 346 P P 20 44 24.3 -0.2
baz=166
SIUC Southern Illin 72.82 346 P P 20 44 22.8 -1.7
SIUC IAmb IAmb 20 44 36.8
comp=Z,55nm,1.1s
MGMO Mountain Grove 72.94 344 P P 20 44 27.1 +1.7
Q52A Bidwell 72.95 352 P P 20 44 23.4 -2.0
Q52A IAmb IAmb 20 44 37.5
comp=Z,68nm,1.1s
SDMD Soldier's Deli 72.95 357 P P 20 44 24.5 -0.8
OK031 S. Brethren Rd 73.00 340 P 20 44 24.7 -1.0
OK034 N. Norfolk Rd. 73.02 340 P 20 44 24.1 -1.7
OK029 Liberty Lake 73.04 339 P P 20 44 25.4 -0.6
P57A Homestead Farm 73.09 356 P P 20 44 24.2 -2.0
P57A IAmb IAmb 20 44 55.5
comp=Z,73nm,1.3s
OK033 Mehan 73.12 340 P P 20 44 22.3 -4.1
MSTX Muleshoe 73.13 334 P P 20 44 24.3 -2.4
MSTX IAmb IAmb 20 44 47.3
comp=Z,61nm,1.1s
MSTX Muleshoe 73.13 334 P P 20 44 27.7 +1.0
baz=154,SNR=12
MSTX Muleshoe 73.13 334 P P 20 44 26.8 +0.1
baz=154
Q51A Peebles 73.15 351 P P 20 44 24.3 -2.2
Q51A IAmb IAmb 20 44 38.6
comp=Z,51nm,1.1s
FVM French Village 73.33 345 P P 20 44 25.6 -2.0
FVM French Village 73.33 345 P P 20 44 25.6 -2.0
FVM pmax pmax
comp=Z,233nm,1.9s
OK044 Pawnee Station 73.38 340 P 20 44 27.4 -0.6
MCWV Mont Chateau 73.40 354 P P 20 44 28.5 +0.5
baz=174
WUPA West Chester U 73.42 358 P P 20 44 28.7 +0.6
OK046 Pawnee Station 73.44 340 P P 20 44 27.2 -1.0
OK046 IAmb IAmb 20 45 10.6
comp=Z,81nm,1.1s
OK050 Pawnee Station 73.46 340 P P 20 44 27.4 -1.0
OK050 IAmb IAmb 20 44 41.2
comp=Z,83nm,1.1s
OK048 Pawnee Station 73.47 340 P 20 44 27.2 -1.3
OK048 IAmb IAmb 20 44 49.1
comp=Z,73nm,1.0s
319A Douglas 73.49 328 P P 20 44 27.9 -1.0
319A IAmb IAmb 20 45 01.0
comp=Z,74nm,1.3s
OK045 Pawnee Station 73.49 340 P P 20 44 28.5 -0.1
MAW Mawson 73.50 164 P P 20 44 29.3 +1.0
comp=Z,13nm,1.0s,baz=211,slow=6.3,SNR=15
MAW LR LR 21 18 33.4
comp=Z,19μm,18.4s,baz=230,slow=37
comp=Z,13nm,1.0s
MAW Mawson 73.50 164 P P 20 44 28.4 +0.1
MAW Mawson 73.50 164 P P 20 44 28.4 +0.1
MAW pmax pmax
comp=Z,26nm,1.5s
OK051 E0350 and S346 73.52 340 P 20 44 28.2 -0.6
MVL Millersville 73.52 357 P P 20 44 28.8 +0.2
P51A Williamsport 73.56 352 P P 20 44 27.4 -1.5
P51A IAmb IAmb 20 44 40.9
comp=Z,63nm,1.1s
AMTX Amarillo 73.56 335 P P 20 44 27.3 -1.9
AMTX Amarillo 73.56 335 P P 20 44 31.7 +2.5
baz=155
AMTX Amarillo 73.56 335 P P 20 44 30.2 +1.0
baz=155
CCM Cathedral Cave 73.57 345 P P 20 44 28.4 -0.5
CCM IAmb IAmb 20 45 16.0
comp=Z,51nm,0.8s
CCM Cathedral Cave 73.57 345 P P 20 44 28.5 -0.5
CCM pmax pmax
comp=Z,51nm,0.9s
CCM MLR MLR
comp=Z,3μm,21.0s
CCM Cathedral Cave 73.57 345 P P 20 44 29.8 +0.9
baz=164,SNR=10.0
CCM Cathedral Cave 73.57 345 P P 20 44 29.5 +0.6
baz=164
OLIL Olney 73.59 347 P P 20 44 26.7 -2.4
OLIL IAmb IAmb 20 44 43.3
comp=Z,126nm,1.7s
P52A Corning 73.60 352 P P 20 44 29.5 +0.4
baz=172
S39A Bolivar 73.70 343 P P 20 44 29.7 -0.1
S39A Bolivar 73.70 343 P P 20 44 31.5 +1.7
baz=162
CER Ceres 73.73 119 *e*P **P 20 44 31.1 +0.7**
CER IAmb IAmb 20 44 58.6
comp=Z,394nm,2.4s
T35A Sooner Cattle 73.81 340 P P 20 44 30.8 +0.4
T35A IAmb IAmb 20 44 51.3
comp=Z,90nm,1.2s
T35B Sooner Cattle 73.81 340 P P 20 44 33.4 +3.0
baz=159,SNR=9.7
P49A Miami Univ. Ec 73.83 350 P P 20 44 31.0 +0.5
baz=170
121A Cookes Peak, D 73.83 330 P P 20 44 33.4 +2.4
121A IAmb IAmb 20 44 51.4
comp=Z,88nm,1.3s
121A Cookes Peak, D 73.83 330 P P 20 44 30.4 -0.5
baz=150
P48A Milroy 73.86 350 P P 20 44 30.1 -0.5
P48A IAmb IAmb 20 44 42.3
comp=Z,89nm,1.2s
P48A Milroy 73.86 350 P P 20 44 32.7 +2.0
baz=169,SNR=5.4
P48A P **P 20 44 32.7 +2.0**
baz=169,SNR=5.4
SLM Saint Louis 73.91 346 P P 20 44 29.1 -1.9
SLM IAmb IAmb 20 44 43.5
comp=Z,79nm,1.1s
SLM Saint Louis 73.91 346 P P 20 44 29.1 -1.9
SLM pmax pmax
comp=Z,79nm,1.2s
R40A Maddies Statio 74.02 344 P P 20 44 31.1 -0.5
R40A IAmb IAmb 20 44 44.2
comp=Z,81nm,1.2s
R40A Maddies Statio 74.02 344 P P 20 44 32.1 +0.5
baz=163,SNR=11
O52A Adamsville 74.05 353 P P 20 44 30.0 -1.7
O52A IAmb IAmb 20 44 46.1
comp=Z,108nm,1.6s
U32A Winter Ranch, 74.05 338 P 20 44 30.6 -1.3
U32A IAmb IAmb 20 44 52.8
comp=Z,72nm,1.0s
OK038 West end E0370 74.06 338 P 20 44 31.6 -0.3
OK038 IAmb IAmb 20 44 51.8
comp=Z,91nm,1.1s
O53A New Philadelph 74.12 353 P P 20 44 33.1 +0.9
baz=172
KAN13 South Haven SW 74.18 340 P P 20 44 32.3 -0.3
OK032 Salt Plains WL 74.20 339 P 20 44 30.8 -2.0
OK032 IAmb IAmb 20 44 53.6
comp=Z,102nm,1.3s
SSPA Standing Stone 74.23 356 P P 20 44 33.9 +1.1
SSPA Standing Stone 74.23 356 P P 20 44 33.4 +0.6
baz=175
OK035 E0210 Rd and N 74.26 338 P P 20 44 35.3 +2.2

OK035 IAmb IAmb 20 44 54.1
comp=Z,70nm,0.8s
KAN14 Manchester OK 74.27 339 P **P** **20 44 33.0 -0.1**
KAN14 IAmb IAmb 20 44 53.9
comp=Z,83nm,1.3s
KAN17 Caldwell West 74.29 339 P **P** **20 44 32.5 -0.8**
KAN17 IAmb IAmb 20 44 54.1
comp=Z,79nm,1.2s
ACSO Alum Creek Sta 74.29 352 P **P** **20 44 31.9 -1.2**
ACSO IAmb IAmb 20 44 45.3
comp=Z,76nm,1.1s
ACSO Alum Creek Sta 74.29 352 P **P** **20 44 33.1 0.0**
baz=171
ACSO Alum Creek Sta 74.29 352 P **P** **20 44 33.6 +0.5**
baz=171
P46A Rosedale 74.30 348 P **P** **20 44 31.5 -1.7**
N58A Sunbury 74.37 357 P **P** **20 44 30.7 -2.9**
N58A IAmb IAmb 20 44 45.9
comp=Z,133nm,1.9s
KAN01 Argonia South 74.39 339 P **P** **20 44 33.7 -0.1**
KAN01 IAmb IAmb 20 44 54.8
comp=Z,101nm,1.2s
KS20 Mayfield South 74.40 340 P **P** **20 44 32.9 -1.0**
KS20 IAmb IAmb 20 44 54.8
comp=Z,101nm,1.2s
O49A Covington 74.42 351 P **P** **20 44 33.9 -0.1**
O49A IAmb IAmb 20 44 45.9
comp=Z,55nm,1.1s
PAL Palisades 74.45 359 P **P** **20 44 33.2 -0.8**
baz=179
KAN06 Argonia West S 74.51 339 P **P** **20 44 34.9 +0.4**
KAN08 Anthony NE Sta 74.52 339 P **P** **20 44 34.5 -0.1**
KAN16 Harper SW Stat 74.55 339 P **P** **20 44 33.5 -1.3**
KAN12 Harper NE Stat 74.59 339 P **P** **20 44 34.9 -0.1**
O48B Farmland 74.60 350 P **P** **20 44 33.8 -1.2**
baz=169
CRNM Carthage 74.63 331 P **P** **20 44 34.2 -1.3**
YLE Yale 74.75 360 IAms_20 IAms_20 21 18 18.0
comp=Z,6μm,21.0s
BNM Barren Site 74.76 331 P **P** **20 44 35.0 -1.3**
Y22D IRIS PASSCAL I 74.81 331 IAms_20 IAms_20 21 13 26.6
comp=Z,8μm,19.0s
SBM South Baldy 74.83 331 P **P** **20 44 36.8 -0.1**
M57A Sunshine Farm, 74.89 356 P **P** **20 44 36.8 +0.2**
M57A IAmb IAmb 20 45 17.6
comp=Z,79nm,1.6s
LENM Lemitar 74.92 331 P **P** **20 44 38.5 +1.3**
TUC Tucson 74.95 327 P **P** **20 44 40.8 +3.5**
TUC IAmb IAmb 20 44 54.6
comp=Z,92nm,1.8s
TUC Tucson 74.95 327 P **P** **20 44 40.8 +3.5**
TUC pmax pmax
comp=Z,92nm,1.8s
TUC MLR MLR
comp=Z,5μm,22.0s
TUC Tucson 74.95 327 P **P** **20 44 36.9 -0.4**
baz=148
CVNA Calvinia 75.02 118 *e*P **P** **20 44 39.5 +1.5**
CVNA IAmb IAmb 20 45 10.5
comp=Z,266nm,2.1s
SFIN Lafayette 75.02 349 P **P** **20 44 37.1 -0.3**
SFIN Lafayette 75.02 349 P **P** **20 44 37.8 +0.4**
baz=168
O44A Mansfield 75.04 347 P **P** **20 44 37.0 -0.5**
O44A IAmb IAmb 20 44 49.1
comp=Z,82nm,1.4s
N49A Columbus Grove 75.12 351 P **P** **20 44 37.5 -0.5**
N49A IAmb IAmb 20 44 50.0
comp=Z,71nm,1.1s
N49A Columbus Grove 75.12 351 P **P** **20 44 37.8 -0.2**
baz=170
N49A P **P** **20 44 37.8 -0.2**
baz=170
LIC Lamto 75.15 72⇑ *i*P **P** **20 44 41.2 +2.4**
comp=Z,44nm,0.6s
P40A Paris 75.16 345 P **P** **20 44 37.9 -0.3**
P40A Paris 75.16 345 P **P** **20 44 38.4 +0.2**
baz=163,SNR=10
M53A WI Miller and 75.24 354 P **P** **20 44 38.1 -0.6**
baz=173
N47A Urbana 75.29 350 P **P** **20 44 37.3 -1.7**
N47A IAmb IAmb 20 44 50.4
comp=Z,49nm,1.1s
SUR Sutherland 75.33 119 IAms_20 IAms_20 21 16 11.4
comp=Z,6μm,20.0s
BRYW Bryant College 75.36 1 P **P** **20 44 36.6 -2.7**
BRYW IAmb IAmb 20 45 00.7
comp=Z,74nm,1.5s
BRYW IAms_20 IAms_20 21 17 13.9
comp=Z,5μm,20.0s
ANMO Albuquerque 75.39 332 P **P** **20 44 42.8 +2.8**
comp=Z,6.3nm,0.9s,baz=166,slow=7.6,SNR=10
ANMO LR LR 21 13 56.7
comp=Z,9μm,18.2s,baz=149,slow=33
comp=Z,6.3nm,0.9s
ANMO Albuquerque 75.39 332 P **P** **20 44 40.8 +0.9**
ANMO Albuquerque 75.39 332 P **P** **20 44 40.8 +0.9**
ANMO pmax pmax
comp=Z,49nm,1.4s
ANMO MLR MLR
comp=Z,10μm,20.0s
ANMO Albuquerque 75.39 332 P **P** **20 44 40.8 +0.9**
baz=151,SNR=14
ANMO Albuquerque 75.39 332 P **P** **20 44 40.3 +0.4**
baz=151
TIC Toumodi 75.41 72⇑ *i*P **P** **20 44 42.7 +2.4**
comp=Z,24nm,0.6s
KIC Kosan Boka 75.46 72⇑ *i*P **P** **20 44 39.9 -0.7**
comp=Z,12nm,0.6s
DBIC Dimbokro 75.56 72 P **P** **20 44 40.4 -0.7**
comp=Z,20nm,0.9s,baz=158,slow=4.8,SNR=9.9
DBIC LR LR 21 16 36.3
comp=Z,4μm,18.1s,baz=212,slow=35
comp=Z,20nm,0.9s
DBIC Dimbokro 75.56 72 **P** **20 44 40.1 -1.0**
DBIC Dimbokro 75.56 72 P **P** **20 44 39.6 -1.5**
DBIC Dimbokro 75.56 72⇑ *i*P **P** **20 44 42.5 +1.4**
PIX Pinacate 75.58 325 P **P** **20 44 42.6 +1.8**
HDIL Hopedale 75.58 347 P **P** **20 44 39.4 -1.2**
HDIL IAmb IAmb 20 45 00.6
comp=Z,88nm,1.2s
HDIL IAms_20 IAms_20 21 24 34.2
comp=Z,5μm,19.0s
HDIL Hopedale 75.58 347 P **P** **20 44 40.3 -0.3**
baz=166
P38A Dawn 75.59 343 P **P** **20 44 39.5 -1.2**
P38A IAmb IAmb 20 44 53.0
comp=Z,55nm,1.1s
P38A Dawn 75.59 343 P **P** **20 44 41.1 +0.4**
baz=162,SNR=5.6
214A Organ Pipe Nat 75.59 325 P **P** **20 44 42.0 +1.0**
214A Organ Pipe Nat 75.59 325 P **P** **20 44 41.1 +0.2**
baz=146
BINY Binghamton 75.70 357 IAms_20 IAms_20 21 22 36.0
comp=Z,5μm,19.0s
BINY Binghamton 75.70 357 P **P** **20 44 41.9 +0.6**
baz=177
L56A Greenwood 75.71 356 P **P** **20 44 42.7 +1.3**
L56A IAmb IAmb 20 44 54.1
comp=Z,79nm,1.2s
L56A Greenwood 75.71 356 P **P** **20 44 41.0 -0.4**
baz=176,SNR=7.2
L56A P **P** **20 44 41.0 -0.4**
baz=176,SNR=7.2
SFX San Felipe 75.83 323 P **P** **20 44 40.0 -2.2**
R32A Long Quarter, 75.85 339 P **P** **20 44 41.7 -0.6**
R32A IAmb IAmb 20 44 56.9
comp=Z,96nm,1.3s
ERPA Erie 75.86 354 IAms_20 IAms_20 21 21 54.3
comp=Z,5μm,19.0s
ERPA Erie 75.86 354 P **P** **20 44 40.6 -1.6**
baz=174
KSU1 Kansas State U 75.88 341 P **P** **20 44 41.6 -0.7**
KSU1 Kansas State U 75.88 341 P **P** **20 44 42.9 +0.5**
baz=160
L61B Northampton 75.89 360 P **P** **20 44 43.2 +0.9**
baz=180
HRV Adam Dziewonsk 75.95 1 P **P** **20 44 43.5 +0.9**
baz=181
FRAZ Fraserburg 75.99 119 *e*P **P** **20 44 44.8 +1.2**
FRAZ IAmb IAmb 20 44 57.9
comp=Z,397nm,2.3s
N41A Harden Midland 76.03 346 P **P** **20 44 44.1 +0.9**
N41A IAmb IAmb 20 44 55.3
comp=Z,66nm,1.2s
N41A Harden Midland 76.03 346 P **P** **20 44 45.7 +2.5**
baz=164
L48A N Adams 76.16 351 P **P** **20 44 43.3 -0.6**
L48A IAmb IAmb 20 44 55.5
comp=Z,40nm,0.9s
TRY Troy 76.17 359 IAms_20 IAms_20 21 19 01.4
comp=Z,6μm,21.0s
RAR Rarotonga 76.26 254 LR LR 21 10 44.0
comp=Z,5μm,18.1s,baz=140,slow=30
RAR Rarotonga 76.26 254 IAms_20 IAms_20 21 10 03.8
comp=Z,7μm,20.0s
MMNY Mt. Morris Dam 76.32 356 P **P** **20 44 45.2 +0.4**
MMNY IAmb IAmb 20 44 48.9
comp=Z,47nm,1.0s
GRAN Grantham 76.35 120 *e*P **P** **20 44 45.8 +0.2**
GRAN IAmb IAmb 20 44 56.7
comp=Z,12nm,0.8s
AAM Ann Arbor 76.41 352 IAms_20 IAms_20 21 16 12.1
comp=Z,6μm,21.0s
X18A Snowflake 76.47 329 P **P** **20 44 45.0 -1.0**
X18A IAmb IAmb 20 45 06.6
comp=Z,80nm,1.5s
CBKS Cedar Bluff 76.52 338 P **P** **20 44 43.9 -2.2**
CBKS IAmb IAmb 20 44 59.4
comp=Z,79nm,1.1s
CBKS Cedar Bluff 76.52 338 P **P** **20 44 43.9 -2.2**
CBKS pmax pmax
comp=Z,79nm,1.1s
CBKS MLR MLR
comp=Z,2μm,22.0s
CBKS Cedar Bluff 76.52 338 P **P** **20 44 44.4 -1.7**
baz=157
T25A Trinidad 76.56 334 P **P** **20 44 46.7 +0.1**
T25A Trinidad 76.56 334 P **P** **20 44 46.1 -0.4**
baz=153
N38A Joes South For 76.63 344 P **P** **20 44 45.4 -1.2**
113A Mohawk Valley, 76.72 325 P **P** **20 44 51.9 +4.6**
113A IAmb IAmb 20 45 06.9
comp=Z,95nm,2.0s
W18A Petrified Fore 76.88 329 P **P** **20 44 50.9 +2.5**
W18A Petrified Fore 76.88 329 P **P** **20 44 47.9 -0.5**
baz=149
J57A Williamstown 76.91 357 P **P** **20 44 49.5 +1.4**
J57A IAmb IAmb 20 45 08.7
comp=Z,69nm,1.4s
FFD Franklin Falls 76.91 1 IAms_20 IAms_20 21 17 59.9
comp=Z,5μm,21.0s
L44A Lake County Fo 76.91 348 IAms_20 IAms_20 21 24 14.3
comp=Z,5μm,19.0s
L44A Lake County Fo 76.91 348 P **P** **20 44 49.6 +1.4**
baz=167
AUGR Augrabies 76.93 116 *e*P **P** **20 44 46.7 -2.2**
AUGR IAmb IAmb 20 45 02.5
comp=Z,566nm,2.8s
L42A Oliver, Polo 77.05 347 P **P** **20 44 50.6 +1.6**
L42A IAmb IAmb 20 45 01.0
comp=Z,53nm,1.1s
L42A Oliver, Polo 77.05 347 P **P** **20 44 48.6 -0.3**
baz=166,SNR=6.1
BRAK Brakfontein 77.15 120 *e*P **P** **20 44 48.7 -1.4**
BRAK IAmb IAmb 20 45 10.1
comp=Z,253nm,2.0s
ESJX Sierra Juarez 77.16 323 P **P** **20 44 48.0 -2.0**
CPBX Cerro Prieto 77.17 324 P **P** **20 44 51.2 +1.3**
N35A Tabor 77.28 342 P **P** **20 44 51.2 +0.9**
N35A IAmb IAmb 20 45 03.1
comp=Z,81nm,1.1s
Y14A Wickenburg 77.33 326 P **P** **20 44 53.9 +3.1**
KEIM Keimoes 77.34 116 *e*P **P** **20 44 50.7 -0.5**
KEIM IAmb IAmb 20 45 16.2
comp=Z,202nm,2.2s
L40A Anamosa 77.41 346 P **P** **20 44 49.6 -1.4**
L40A IAmb IAmb 20 45 03.0
comp=Z,69nm,1.1s
L40A Anamosa 77.41 346 P **P** **20 44 50.8 -0.1**
baz=164,SNR=7.3
GLA Glamis 77.46 325 P **P** **20 44 52.9 +1.4**
GLA IAmb IAmb 20 45 08.2
comp=Z,90nm,1.6s
GLA Glamis 77.46 325 P **P** **20 44 52.9 +1.4**
GLA pmax pmax
comp=Z,90nm,1.7s
GLA Glamis 77.46 325 P **P** **20 44 53.1 +1.6**
baz=145
J47A Sunmer 77.48 351 P **P** **20 44 49.7 -1.6**
J47A IAmb IAmb 20 45 45.0
comp=Z,79nm,1.4s
SDCO Great Sand Dun 77.49 334 P **P** **20 44 50.3 -1.6**
SDCO IAms_20 IAms_20 21 15 02.3
comp=Z,5μm,20.0s
SDCO Great Sand Dun 77.49 334 P **P** **20 44 52.0 +0.1**
baz=152,SNR=24
SDCO Great Sand Dun 77.49 334 P **P** **20 44 54.2 +2.4**
baz=152
I63A Otisfield 77.51 1 P **P** **20 44 51.6 +0.2**
I63A IAmb IAmb 20 45 13.4
comp=Z,125nm,1.6s
KSCO Kaye Shedlock' 77.62 336 P **P** **20 44 50.5 -1.8**
KSCO Kaye Shedlock' 77.62 336 P **P** **20 44 56.0 +3.7**
baz=155
N33A J Bar K, Exete 77.64 341 P **P** **20 44 52.2 0.0**
YUH Yuha Desert 77.66 324 P **P** **20 44 55.5 +2.9**
YUH IAmb IAmb 20 45 09.4
comp=Z,88nm,1.6s
LBNH Lisbon 77.68 0 P **P** **20 44 51.2 -1.2**
LBNH Lisbon 77.68 0 P **P** **20 44 51.2 -1.2**
LBNH pmax pmax
comp=Z,60nm,1.6s
LBNH MLR MLR
comp=Z,4μm,19.0s
LBNH Lisbon 77.68 0 P **P** **20 44 53.4 +1.0**
baz=180
LBNH Lisbon 77.68 0 P **P** **20 44 54.5 +2.1**
baz=180
SCIA State Center 77.69 344 P **P** **20 44 53.9 +1.4**
baz=162
RMX La Rumorosa 77.70 324 P **P** **20 44 51.9 -1.1**
RMX IAmb IAmb 20 45 51.0
comp=Z,66nm,1.6s
BFON Badfontein, M 77.71 120 *e*P **P** **20 44 52.7 -0.7**
BFON IAmb IAmb 20 45 26.9
comp=Z,268nm,1.9s
IKP In-Ko-Pah, Jac 77.76 324 P **P** **20 44 54.3 +1.1**
baz=144
SWSC Sam W. Stewart 77.84 324 P **P** **20 44 54.8 +1.2**
baz=144
BLYC Blythe 77.88 325 P **P** **20 44 57.2 +3.4**
WUAZ Wupatki 77.92 328 P **P** **20 44 54.1 0.0**
WUAZ IAms_20 IAms_20 21 16 12.9
comp=Z,5μm,18.0s
WUAZ Wupatki 77.92 328 P **P** **20 44 54.9 +0.7**
baz=148
S22A 4UR Ranch, Cre 77.99 333 P **P** **20 44 56.4 +1.7**
S22A 4UR Ranch, Cre 77.99 333 P **P** **20 44 55.7 +1.1**
baz=151
JFWS Jewell Farm 78.04 347 P **P** **20 44 50.5 -4.0**
JFWS IAmb IAmb 20 45 06.9
comp=Z,60nm,1.1s
JFWS Jewell Farm 78.04 347 IAms_20 IAms_20 21 25 59.3
comp=Z,6μm,18.0s
JFWS Jewell Farm 78.04 347 P **P** **20 44 50.5 -4.0**
JFWS pmax pmax
comp=Z,60nm,1.1s
JFWS MLR MLR
comp=Z,6μm,18.0s
JFWS Jewell Farm 78.04 347 P **P** **20 44 55.3 +0.8**
baz=165
WVL Waterville 78.05 2 P **P** **20 44 52.5 -1.9**
WVL IAmb IAmb 20 45 16.1
comp=Z,65nm,1.3s
WVL IAms_20 IAms_20 21 21 31.9
comp=Z,5μm,20.0s
BAR Barrett 78.06 323 P **P** **20 44 57.3 +2.4**
LONY Lake Ozonia 78.08 359 P **P** **20 44 56.9 +2.2**
LONY Lake Ozonia 78.08 359 P **P** **20 44 54.7 0.0**
baz=178
MONP2 Monument Peak 78.11 323 P **P** **20 44 56.3 +0.9**
baz=144
PDMCI Parker Dam,Lak 78.16 326 P **P** **20 44 55.4 +0.1**
baz=146
MVCO Mesa Verde 78.17 331 P **P** **20 44 53.6 -2.0**
MVCO Mesa Verde 78.17 331 P **P** **20 44 55.1 -0.6**
baz=150
BC3 Big Chuckawall 78.25 325 P **P** **20 44 58.1 +2.1**
baz=145,SNR=11
EMMW East Machias 78.28 4 IAms_20 IAms_20 21 17 34.1
comp=Z,6μm,21.0s
EMMW East Machias 78.28 4 P **P** **20 44 57.2 +1.5**
baz=184
SADO Sadowa 78.43 355 P **P** **20 44 59.1 +2.6**
comp=Z,19nm,0.9s,baz=186,slow=1.3,SNR=4.3
SADO LR LR 21 21 45.8
comp=Z,4μm,20.1s,baz=178,slow=37
comp=Z,19nm,0.9s
Q24A Divide 78.44 335 P **P** **20 44 57.9 +0.7**
Q24A IAmb IAmb 20 45 18.8
comp=Z,61nm,1.2s
Q24A Divide 78.44 335 P **P** **20 44 58.9 +1.7**
baz=153
109C Camp Elliot, M 78.44 323 IAms_20 IAms_20 21 13 04.0
comp=Z,5μm,20.0s
BGNE Belgrade 78.45 341 P **P** **20 44 56.0 -0.8**
BGNE Belgrade 78.45 341 P **P** **20 44 56.9 +0.1**
baz=158
L34A Svendsen Farm, 78.50 342 P **P** **20 44 55.8 -1.2**
L34A IAmb IAmb 20 45 09.2
comp=Z,48nm,0.9s
IRM Iron Mountain 78.51 325 P **P** **20 44 58.1 +0.8**
baz=145
G62A West of Eustis 78.68 1 P **P** **20 44 56.5 -1.4**
G62A IAmb IAmb 20 45 19.4
comp=Z,85nm,1.3s
G62A West of Eustis 78.68 1 P **P** **20 44 58.9 +0.9**
baz=182,SNR=7.4
G62A P **P** **20 44 58.9 +0.9**
baz=182,SNR=7.4
W13A Hualapai Mount 78.70 327 P **P** **20 44 58.9 +0.4**
TPFO Pinon Flats 78.70 324 P **P** **20 45 00.5 +2.0**
baz=144,SNR=9.0
PFO Pinyon Flats O 78.70 324 P **P** **20 45 02.2 +3.7**
comp=Z,8.0nm,0.9s,baz=128,slow=3.2,SNR=9.2
PFO LR LR 21 12 57.8
comp=Z,5μm,21.0s,baz=140,slow=30
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 78.70 324 P **P** **20 44 58.7 +0.2**
PFO IAmb IAmb 20 45 16.4
comp=Z,92nm,1.6s
PFO Pinyon Flats O 78.70 324 IAms_20 IAms_20 21 12 33.8
comp=Z,6μm,20.0s
PFO Pinyon Flats O 78.70 324 P **P** **20 44 58.7 +0.2**
PFO pmax pmax
comp=Z,92nm,1.6s
PFO MLR MLR
comp=Z,6μm,20.0s
PFO Pinyon Flats O 78.70 324 P **P** **20 45 00.4 +1.9**
baz=144,SNR=9.8
I42A Draeger Farm, 78.75 348 P **P** **20 44 56.0 -2.3**
I42A IAmb IAmb 20 45 10.6
comp=Z,47nm,1.1s
PKME Peaks-Kenny Pk 78.76 2 P **P** **20 44 54.9 -3.5**
PKME IAmb IAmb 20 45 19.7
comp=Z,68nm,1.3s
PKME IAms_20 IAms_20 21 19 39.7
comp=Z,5μm,21.0s
PKME Peaks-Kenny Pk 78.76 2 P **P** **20 44 59.1 +0.8**
baz=183
BELC Belle Mtn. Jos 78.80 324 P **P** **20 44 59.3 +0.2**
baz=144
GRHM Grahamstown, E 78.83 122 *e*P **P** **20 44 58.9 -0.5**
PV01 Paradox Valley 79.00 332 P **P** **20 45 01.9 +1.7**
PV01 IAmb IAmb 20 45 19.6
comp=Z,101nm,1.8s
GLMI Grayling 79.02 351 IAms_20 IAms_20 21 17 41.0
comp=Z,6μm,20.0s
GLMI Grayling 79.02 351 P **P** **20 45 00.7 +0.9**
baz=170
I40A Norwalk 79.06 347 P **P** **20 44 58.8 -1.2**
I40A IAmb IAmb 20 45 19.3
comp=Z,70nm,1.4s
MURC Murrieta 79.06 323 P **P** **20 45 00.6 +0.2**
baz=144
U15A North Rim 79.09 328 P **P** **20 45 00.0 -0.7**
PV13 Radium Mtn., P 79.12 332 P **P** **20 45 00.9 +0.1**
PV13 IAmb IAmb 20 46 00.2
comp=Z,86nm,1.6s
PV02 Paradox Valley 79.13 332 P **P** **20 44 60.0 -0.9**
PV02 IAmb IAmb 20 45 17.1
comp=Z,76nm,1.6s
PV15 Paradox Valley 79.14 332 P **P** **20 45 00.3 -0.7**
PV15 IAmb IAmb 20 45 17.6
comp=Z,129nm,1.9s
PV05 Paradox Valley 79.16 331 P **P** **20 44 60.0 -1.1**
F63A Nahmakanta, Br 79.20 2 P **P** **20 45 00.5 -0.3**
F63A IAmb IAmb 20 45 22.4
comp=Z,78nm,1.4s
PV03 Paradox Valley 79.21 332 P **P** **20 45 01.1 -0.2**
PV03 IAmb IAmb 20 46 11.9
comp=Z,75nm,1.7s
ELS Elsinore Mount 79.21 323 P **P** **20 44 58.9 -2.4**
ELS IAmb IAmb 20 45 18.0
comp=Z,93nm,1.8s
PV18 Skein Mesa, Pa 79.23 332 P **P** **20 45 00.1 -1.3**
SCI2 San Clemente I 79.25 322 P **P** **20 45 02.3 +0.9**
baz=142
PV12 Saucer Basin, 79.25 332 P **P** **20 45 00.7 -0.9**
PV11 David Mesa, Pa 79.26 332 P **P** **20 44 59.3 -2.2**
GMRC Granite Mounta 79.27 325 P **P** **20 45 02.5 +1.0**
baz=145
PV16 Nyswonger Mesa 79.29 332 P **P** **20 44 59.2 -2.5**
PV16 IAmb IAmb 20 45 23.1
comp=Z,128nm,1.8s
PV07 Paradox Valley 79.29 332 P **P** **20 45 00.7 -1.1**
SMCO Snowmass 79.30 333 P **P** **20 45 00.2 -1.8**
SMCO IAmb IAmb 20 45 27.0
comp=Z,79nm,1.2s
SMCO IAms_20 IAms_20 21 17 29.1
comp=Z,4μm,18.0s
PV19 Morning Glory 79.31 332 P **P** **20 45 01.0 -0.9**
F62A Pittston Farm, 79.37 2 P **P** **20 45 01.8 +0.2**
F62A IAmb IAmb 20 45 23.3
comp=Z,78nm,1.3s
F62A Pittston Farm, 79.37 2 P **P** **20 45 03.0 +1.3**
baz=182
F62A P **P** **20 45 03.0 +1.3**
baz=182
PV14 Lion Creek, Pa 79.38 332 P **P** **20 45 00.5 -1.8**
F64A Sherman 79.39 3 P **P** **20 44 59.4 -2.4**
PV10 Paradox Valley 79.39 332 P **P** **20 44 59.9 -2.5**
PV22 Blue Mesa, Par 79.43 332 P **P** **20 45 03.0 +0.6**
PV22 IAmb IAmb 20 45 24.0
comp=Z,98nm,1.8s
PV23 Carpenter Ridg 79.45 332 P **P** **20 45 02.0 -0.7**
CIS Catalina Islan 79.52 322 P **P** **20 45 03.1 +0.3**
baz=143
BRIGG Briggsdale 79.60 336 P **P** **20 45 02.1 -1.2**
BRIGG IAmb IAmb 20 45 20.6
comp=Z,118nm,1.6s
HEC Hector,Ludlow 79.63 325 P **P** **20 45 04.0 +0.5**
baz=144
V12A Nelson 79.66 326 P **P** **20 45 04.5 +0.9**
HVD Gariep Dam 79.66 120 *e*P **P** **20 45 04.2 0.0**
HVD IAmb IAmb 20 45 09.5
comp=Z,156nm,1.7s
TRQ Mont Tremblant 79.68 359 P **P** **20 45 03.3 -0.1**
TSUM Tsumeb 79.71 106 LR LR 21 16 20.0
comp=Z,7μm,19.3s,baz=240,slow=33
TSUM Tsumeb 79.71 106 P **P** **20 45 02.9 -1.7**
TSUM Tsumeb 79.71 106 *e*P **P** **20 45 06.0 +1.5**
TSUM IAmb IAmb 20 45 24.6
comp=Z,46nm,1.2s
I37A Lemond, Waseca 79.74 345 P **P** **20 45 03.0 -0.7**
I37A IAmb IAmb 20 45 24.0
comp=Z,108nm,1.3s
I37B Waseca 79.74 345 P **P** **20 45 03.8 0.0**
baz=162
K31A O'Neill 79.75 341 P **P** **20 45 03.6 -0.3**
BFSC Mount Baldy Ra 79.80 323 P **P** **20 45 05.1 +0.6**
baz=143
KNB Kanab 79.81 328 P **P** **20 45 05.6 +1.0**
KNB IAmb IAmb 20 45 26.7
comp=Z,108nm,1.3s
KNB Kanab 79.81 328 P **P** **20 45 05.6 +1.0**
KNB pmax pmax
comp=Z,108nm,1.3s
TUQ Turquoise Moun 79.92 325 P **P** **20 45 06.6 +1.5**
baz=145
PKCU Pink Cliffs 79.95 329 P **P** **20 45 04.5 -1.0**
PKCU IAmb IAmb 20 46 18.7
comp=Z,99nm,1.6s
SNCC San Nicolas Is 79.96 322 P **P** **20 45 05.8 +0.6**
baz=142
ECSD EROS Data Cent 80.22 343 P **P** **20 45 05.7 -0.8**
ECSD IAmb IAmb 20 45 19.1

comp=Z,67nm,1.1s
ECSD EROS Data Cent 80.22 343 P P 20 45 06.5 +0.1
baz=160,SNR=17
ECSD EROS Data Cent 80.22 343 P P 20 45 07.8 +1.4
baz=160
GSC Goldstone, Bar 80.24 325 P P 20 45 06.7 -0.1
baz=144
N23A Red Feather La 80.44 335 P P 20 45 08.9 +0.9
baz=152
SHPR Sheep Range 80.44 326 P P 20 45 09.2 +1.3
EDW2 Edwards Air Fo 80.48 324 P P 20 45 09.2 +1.1
baz=143
E46A Sault Ste Mari 80.50 352 P P 20 45 07.8 0.0
baz=170,SNR=6.3
BOSA Boshof 80.57 118 P P 20 45 08.4 -0.6
comp=Z,17nm,1.0s,baz=260,slow=3.3,SNR=12
BOSA LR LR 21 16 02.9
comp=Z,3μm,21.1s,baz=232,slow=32
comp=Z,17nm,1.0s
BOSA Boshof 80.57 118 P P 20 45 07.3 -1.7
BOSA IAmb IAmb 20 45 13.1
comp=Z,120nm,1.7s
BOSA Boshof 80.57 118 *e*P **P 20 45 07.7 -1.3**
BOSA IAmb IAmb 20 45 11.5
comp=Z,202nm,2.1s
BOSA Boshof 80.57 118 *i* P **P 20 45 07.6 -1.4**
BOSA Boshof 80.57 118 P **P 20 45 07.3 -1.7**
BOSA pmax pmax
comp=Z,120nm,1.7s
BOSA Boshof 80.57 118 *i* P **P 20 45 07.6 -1.4**
D62A Allapoint, All 80.58 2 P **P 20 45 08.9 +0.7**
D62A IAmb IAmb 20 45 29.3
comp=Z,105nm,1.4s
SCZ2 Santa Cruz Isl 80.61 322 P **P 20 45 09.8 +1.1**
baz=142
O20A White River Ci 80.61 333 P **P 20 45 10.0 +1.2**
baz=151
SRU San Rafael Swe 80.62 331 P **P 20 45 08.8 -0.1**
SRU San Rafael Swe 80.62 331 P **P 20 45 08.8 -0.1**
SRU pmax pmax
comp=Z,26nm,1.0s
OSI Osito Audit: C 80.63 323 P **P 20 45 09.2 +0.3**
baz=143
SPMN Marine on St. 80.77 346 P **P 20 45 07.6 -1.6**
SPMN Marine on St. 80.77 346 P **P 20 45 10.3 +1.0**
baz=163
LRMC Laurel Mtn Rad 80.80 324 P **P 20 45 11.0 +1.1**
baz=143
E43A Lone Tree Farm 80.86 350 P **P 20 45 08.8 -0.9**
E43A Lone Tree Farm 80.86 350 P **P 20 45 10.0 +0.2**
baz=168,SNR=5.8
COWI Conover 80.93 348 P **P 20 45 11.0 +0.9**
baz=166
P18A Preston Nutter 80.95 331 P **P 20 45 08.7 -2.1**
P18A IAmb IAmb 20 45 32.4
comp=Z,93nm,1.2s
SBC Santa Barbara 81.00 322 P **P 20 45 11.9 +1.2**
baz=142
MPMC Manual Prospec 81.17 325 P **P 20 45 14.5 +2.5**
baz=144
FURC Furnace Creek, 81.20 325 P **P 20 45 13.2 +1.4**
baz=144
TPNV Topopah Spring 81.31 326 IAMs_20 IAMs_20 21 15 29.6
comp=Z,4μm,19.0s
TPNV Topopah Spring 81.31 326 P **P 20 45 14.0 +1.4**
baz=144,SNR=10
ISA Isabella, Lake 81.34 324 P **P 20 45 14.1 +1.4**
baz=143,SNR=9.3
PKM Mcpherson Peak 81.40 322 P **P 20 45 14.2 +1.1**
baz=142
SWZ Schweizer 81.41 117 *e*P **P 20 45 11.6 -2.0**
SWZ IAmb IAmb 20 45 49.6
comp=Z,221nm,2.3s
SUSD Miller 81.49 341 P **P 20 45 14.6 +1.5**
baz=158
RDMU Red Mountain 81.49 332 P **P 20 45 14.1 +0.6**
RDMU IAmb IAmb 20 45 34.7
comp=Z,107nm,1.6s
F36A Milaca 81.53 345 P **P 20 45 11.9 -1.4**
F36A Milaca 81.53 345 P **P 20 45 13.2 0.0**
baz=162,SNR=6.6
PSUT Pine Spring 81.53 328 P **P 20 45 15.0 +1.3**
CWC Cottonwood Cre 81.77 324 P **P 20 45 15.2 +0.2**
baz=143
D41A Chassel 81.77 349 P **P 20 45 13.9 -0.7**
D41A Chassel 81.77 349 P **P 20 45 14.9 +0.4**
baz=167
SMMC Simmler 81.82 323 P **P 20 45 16.3 +1.1**
baz=142
GRAC Grapevine Rang 81.87 325 P **P 20 45 18.7 +3.3**
baz=144
GMN Gold Mountain 82.06 326 P **P 20 45 14.6 -2.1**
R11A Troy Canyon, C 82.14 327 P **P 20 45 18.6 +1.7**
baz=145,SNR=13
K22A Casper 82.19 335 P **P 20 45 18.3 +1.2**
baz=152
K22A Casper 82.19 335 P **P 20 45 20.1 +3.0**
baz=152
TIN Tinemaha, Big 82.33 325 P **P 20 45 21.8 +3.9**
baz=143
BFZ Birch Farm 82.47 226 IAMs_20 IAMs_20 21 13 44.4
comp=Z,5μm,20.0s
DUG Dugway, Tooele 82.47 330 IAMs_20 IAMs_20 21 17 38.3
comp=Z,5μm,20.0s
DUG Dugway, Tooele 82.47 330 P **P 20 45 22.0 +3.4**
baz=147
SNKL Senekal, Frees 82.60 119 *e*P **P 20 45 21.1 +1.3**
SNKL IAmb IAmb 20 45 39.3
comp=Z,82nm,1.2s
MQZ McQueen's Vall 82.62 222 IAMs_20 IAMs_20 21 13 55.9
comp=Z,6μm,19.0s
RSSD Black Hills 82.68 338 P **P 20 45 21.5 +1.8**
baz=154
LBTB Lobatse 82.81 115 LR LR 21 19 48.5
comp=Z,4μm,18.0s,baz=230,slow=34
KHZ Kahutara 82.95 223 IAMs_20 IAMs_20 21 12 24.9
comp=Z,5μm,22.0s
SNZO South Karori 82.99 224 IAMs_20 IAMs_20 21 13 30.9
comp=Z,4μm,20.0s
PRYS Parys 83.06 118 *e*P **P 20 45 22.0 -0.2**
PRYS IAmb IAmb 20 45 44.0
comp=Z,70nm,1.5s
EYMN Ely 83.13 347 P **P 20 45 20.7 -1.0**
baz=164
MXZ Matakaoa Point 83.13 229 IAMs_20 IAMs_20 21 13 39.9
comp=Z,5μm,21.0s
OXZ Oxford 83.21 222 IAMs_20 IAMs_20 21 14 14.4
comp=Z,6μm,21.0s
SPUT South Promonto 83.26 331 P **P 20 45 22.4 -0.3**
KSR Koster 83.31 117 *e*P **P 20 45 26.3 +2.8**
KSR IAmb IAmb 20 45 48.2
comp=Z,54nm,1.1s
BW06 Boulder Array 83.38 334 P **P 20 45 25.2 +1.8**
baz=150
PDAR Pinedale Array 83.38 334 P **P 20 45 24.6 +1.2**
comp=Z,2.7nm,0.8s,baz=152,slow=6.6,SNR=14
PDAR LR LR 21 18 59.6
comp=Z,7μm,19.0s,baz=144,slow=33
comp=Z,2.7nm,0.8s
LTZ Lake Taylor 83.43 222 IAMs_20 IAMs_20 21 14 03.4
comp=Z,4μm,20.0s
URZ Urewera 83.45 228 LR LR 21 13 40.1
comp=Z,6μm,21.0s,baz=224,slow=29
URZ Urewera 83.45 228 IAMs_20 IAMs_20 21 13 59.3
comp=Z,6μm,20.0s
NVAR Mina Array Bea 83.46 326 P **P 20 45 25.4 +1.6**
comp=Z,5.3nm,0.9s,baz=154,slow=6.9,SNR=14
NVAR LR LR 21 15 47.0
comp=Z,2μm,21.8s,baz=136,slow=31
comp=Z,5.3nm,0.9s
NVAR Mina Array Bea 83.46 326 P **P 20 45 22.8 -1.1**
RPZ Rata Peaks 83.49 221 LR LR 21 14 32.6
comp=Z,6μm,20.0s,baz=144,slow=30
RPZ Rata Peaks 83.49 221 IAMs_20 IAMs_20 21 14 00.9
comp=Z,6μm,20.0s
HVU Hansel Valley 83.79 331 P **P 20 45 24.4 -1.0**
HVU IAmb IAmb 20 45 38.4
comp=Z,33nm,1.0s
HVU Hansel Valley 83.79 331 P **P 20 45 24.4 -1.0**
HVU pmax pmax
comp=Z,33nm,1.0s
KVN Kaiserville 83.86 326 P **P 20 45 25.5 -0.4**
KVN Kaiserville 83.86 326 P **P 20 45 25.5 -0.4**
KVN pmax pmax
comp=Z,31nm,1.1s
E28A Huff 83.93 341 P **P 20 45 26.7 +0.9**
E28A IAmb IAmb 20 45 38.8
comp=Z,54nm,0.9s
E28A Huff 83.93 341 P **P 20 45 26.1 +0.3**
baz=157
MLZ Mavora Lakes 83.94 218 IAMs_20 IAMs_20 21 14 52.5
comp=Z,7μm,20.0s
B35A Bob, Littlefor 83.95 346 P **P 20 45 25.0 -0.9**
B35A IAmb IAmb 20 45 45.8
comp=Z,84nm,1.6s
B35A Bob, Littlefor 83.95 346 P **P 20 45 25.9 +0.1**
baz=162,SNR=7.4
ELK Elko 83.96 329 P **P 20 45 28.8 +2.4**
comp=Z,10.0nm,0.9s,baz=137,slow=2.9,SNR=28
ELK LR LR 21 19 57.8
comp=Z,4μm,18.6s,baz=137,slow=34
comp=Z,10.0nm,0.9s
ELK Elko 83.96 329 P **P 20 45 26.2 -0.2**
ELK IAMs_20 IAMs_20 21 20 03.6
comp=Z,5μm,18.0s
ELK Elko 83.96 329 P **P 20 45 26.2 -0.2**
ELK pmax pmax
comp=Z,25nm,1.0s
ELK MLR MLR
comp=Z,5μm,18.0s
AHID Auburn Hatcher 83.96 333 IAMs_20 IAMs_20 21 18 59.6
comp=Z,6μm,19.0s
PYZ Puysegur Point 84.11 217 IAMs_20 IAMs_20 21 14 40.1
comp=Z,5μm,19.0s
PMOZ Porto Moniz, M 84.30 44 *e*P **P 20 45 30.9 +2.8**
PMOZ Porto Moniz, M 84.30 44 *e*LR LR 21 15 28.9
comp=Z,5μm,20.0s
AGMN Agassiz Nation 84.34 345 P **P 20 45 27.0 -0.9**
AGMN Agassiz Nation 84.34 345 P **P 20 45 28.0 +0.2**
baz=161
AGMN Agassiz Nation 84.34 345 P **P 20 45 26.5 -1.3**
baz=161
REDW Red Top Meadow 84.38 333 IAMs_20 IAMs_20 21 18 35.6
comp=Z,6μm,21.0s
SLR Silverton 84.41 117 *e*P **P 20 45 31.3 +2.2**
SLR IAmb IAmb 20 45 41.2
comp=Z,32nm,1.1s
SNOW Snow King Moun 84.43 333 IAMs_20 IAMs_20 21 18 48.8
comp=Z,7μm,21.0s
TPAW Teton Pass 84.52 333 IAMs_20 IAMs_20 21 18 41.5
comp=Z,6μm,21.0s
TORD Torodi Ar. Bea 84.58 70 P **P 20 45 29.1 -0.7**
comp=Z,24nm,1.1s,baz=258,slow=3.9,SNR=36
TORD LR LR 21 22 04.7
comp=Z,5μm,18.9s,baz=228,slow=35
comp=Z,24nm,1.1s
HIZ Hauiti 84.67 227 IAMs_20 IAMs_20 21 15 00.5
comp=Z,5μm,20.0s
FXWY Fox Creek 84.68 333 IAMs_20 IAMs_20 21 18 36.6
comp=Z,5μm,21.0s
IMW Indian Meadow 84.87 333 IAMs_20 IAMs_20 21 18 54.5
comp=Z,6μm,21.0s
FLWY Flagg Ranch 84.94 333 P **P 20 45 31.2 0.0**
FLWY IAmb IAmb 20 45 44.6
comp=Z,39nm,1.1s
PAHR Pah Rah Range 84.98 326 P **P 20 45 29.9 -1.6**
LEPH Lephalale, Lim 85.11 115 *e*P **P 20 45 32.2 -0.4**
LEPH IAmb IAmb 20 45 45.0
comp=Z,48nm,1.1s
H17A Grant Village 85.16 334 P **P 20 45 33.5 +1.1**
baz=149
RLMT Red Lodge 85.31 335 P **P 20 45 32.8 -0.3**
RLMT IAmb IAmb 20 45 53.1
comp=Z,57nm,1.4s
RLMT Red Lodge 85.31 335 P **P 20 45 32.7 -0.3**
baz=150,SNR=9.0
BEKR Beckworth 85.57 325 P **P 20 45 34.3 -0.1**
RAO Raoul Island 85.59 238 LR LR 21 14 09.4
comp=Z,2μm,21.3s,baz=108,slow=29
LAO LASA Array 85.67 338 P **P 20 45 35.3 +0.7**
baz=152,SNR=7.7
LAO LASA Array 85.67 338 P **P 20 45 35.3 +0.7**
baz=152,SNR=7.7
CRZF Crozet Islands 85.75 145 IAMs_20 IAMs_20 21 22 12.4
comp=Z,4μm,19.0s
ORV Oroville 85.88 324 IAMs_20 IAMs_20 21 16 56.7
comp=Z,4μm,19.0s
HLID Hailey 85.94 331 P **P 20 45 36.7 +0.5**
HLID IAmb IAmb 20 45 57.9
comp=Z,68nm,1.4s
HLID Hailey 85.94 331 P **P 20 45 37.5 +1.3**
baz=146,SNR=19
POGA Pongola 85.98 120 *e*P **P 20 45 37.4 +0.5**
POGA IAmb IAmb 20 45 55.6
comp=Z,122nm,2.0s
GCMT Greycliff 86.03 335 P **P 20 45 36.6 +0.1**
BCYI Bear Canyon 86.16 332 P **P 20 45 37.1 -0.3**
ULM Lac du Bonnet 86.19 345 P **P 20 45 38.6 +1.6**
comp=Z,15nm,0.9s,baz=153,slow=3.5,SNR=10.0
comp=Z,15nm,0.9s
ULM Lac du Bonnet 86.19 345 P **P 20 45 37.1 +0.2**
ULM IAmb IAmb 20 45 56.9
comp=Z,72nm,1.5s
ULM Lac du Bonnet 86.19 345 P **P 20 45 37.2 +0.2**
ULM pmax pmax
comp=Z,72nm,1.5s
HOPS Hopland Field 86.22 323 IAMs_20 IAMs_20 21 20 00.9
comp=Z,3μm,18.0s
MCMT McKenzie Canyo 86.38 333 P **P 20 45 39.3 +0.9**
BOZ Bozeman (W) 86.57 334 IAMs_20 IAMs_20 21 20 02.7
comp=Z,5μm,21.0s
BOZ Bozeman (W) 86.57 334 P **P 20 45 40.3 +1.1**
baz=148
DGMT Dagmar 86.64 340 P **P 20 45 38.7 -0.7**
DGMT Dagmar 86.64 340 P **P 20 45 40.1 +0.8**
baz=154,SNR=6.2
DGMT Dagmar 86.64 340 P **P 20 45 39.7 +0.4**
baz=154,SNR=6.2
WVOR Wild Horse Val 86.81 328 IAMs_20 IAMs_20 21 21 50.3
comp=Z,4μm,18.0s
MOD Modoc Plateau 87.15 326 IAMs_20 IAMs_20 21 19 34.2
comp=Z,4μm,18.0s
J08A Circle Bar Ran 87.48 328 P **P 20 45 44.7 +1.0**
MUSN Musina, Limpop 87.56 115 *e*P **P 20 45 45.4 +0.7**
MUSN IAmb IAmb 20 45 56.5
comp=Z,58nm,1.4s
MUSN Musina, Limpop 87.56 115 *i* P **P 20 45 45.8 +1.1**
MUSN Musina, Limpop 87.56 115 *i* P **P 20 45 45.8 +1.1**
MATP Matopo 87.60 113 LR LR 21 22 20.4
comp=Z,5μm,18.8s,baz=236,slow=34
MATP Matopo 87.60 113 *i* P **P 20 45 42.2 -2.8**
MATP Matopo 87.60 113 *i* P **P 20 45 42.2 -2.8**
PLID Pearl Lake 87.84 331 P **P 20 45 45.7 +0.2**
EGMT Eagleton 87.99 336 P **P 20 45 46.8 +0.8**
baz=150
MOPA Mopani 88.00 117 *e*P **P 20 45 49.0 +2.3**
MOPA IAmb IAmb 20 45 54.0
comp=Z,2.2nm,1.3s
MOPA Mopani 88.00 117 *i* P P 20 45 53.8 +7.1
MOPA Mopani 88.00 117 *i* P P 20 45 53.8 +7.1
YBH Yreka Blue Hor 88.14 325 P **P 20 45 47.7 +0.8**
comp=Z,12nm,0.9s,baz=100,slow=5.2,SNR=17
YBH LR LR 21 19 43.0
comp=Z,3μm,20.6s,baz=138,slow=32
comp=Z,12nm,0.9s
SCHQ Schefferville 88.42 3 P **P 20 45 47.9 +0.2**
comp=Z,20nm,1.2s,baz=130,slow=1.7,SNR=3.8
SCHQ LR LR 21 27 45.8
comp=Z,2μm,19.3s,baz=180,slow=37
comp=Z,20nm,1.2s
SCHQ Schefferville 88.42 3 P **P 20 45 48.8 +1.1**
MSO Missoula 88.48 333 IAMs_20 IAMs_20 21 21 38.0
comp=Z,5μm,20.0s
MSO Missoula 88.48 333 P **P 20 45 49.0 +0.6**
baz=147
AFI Afiamalu 89.81 253 LR LR 21 17 03.4
comp=Z,7μm,19.6s,baz=125,slow=29
LSZ Lusaka 90.31 109 LR LR 21 22 50.6
comp=Z,8μm,19.6s,baz=235,slow=33
LSZ Lusaka 90.31 109 *e*P **P 20 46 01.7 +3.9**
LSZ IAmb IAmb 20 46 11.5
comp=Z,39nm,1.2s
LSZ Lusaka 90.31 109 P **P 20 45 58.2 +0.4**
LSZ pmax pmax
comp=Z,38nm,1.2s
LSZ MLR MLR
comp=Z,9μm,19.0s
HAWA Hanford 90.36 330 IAMs_20 IAMs_20 21 22 25.9
comp=Z,4μm,19.0s
AVE Averroes 90.57 49 P **P 20 45 57.6 -0.7**
AVE S **SKSac 20 56 33.9 +3.9**
COR Corvallis 90.61 326 IAMs_20 IAMs_20 21 24 48.9
comp=Z,3μm,18.0s
NEW Newport 90.88 332 LR LR 21 24 07.3
comp=Z,4μm,18.7s,baz=136,slow=34
NEW Newport 90.88 332 IAMs_20 IAMs_20 21 23 36.7
comp=Z,4μm,20.0s
NEW Newport 90.88 332 P **P 20 46 00.6 +1.2**
baz=144
FFC Flin Flon 91.73 343 IAMs_20 IAMs_20 21 29 37.6
comp=Z,3μm,18.0s
MDT Midelt 92.06 51 LR LR 21 27 13.1
comp=Z,12μm,19.9s,baz=246,slow=36
IFR Ifrane 92.17 51 P **P 20 46 09.0 +3.0**
IFR S **SKSac 20 56 42.9 +3.4**
PFVI Vila Bisbo 92.22 46 *e*P **P 20 46 08.2 +2.3**
PFVI Vila Bisbo 92.22 46 *e*PP **PP 20 49 48.5 +1.9**
PFVI *e*SKSac **SKSac 20 56 46.4 +7.2**
MORF Marmelete 92.44 46 *e*P **P 20 46 05.7 -1.2**
MORF *e*SKSac **SKSac 20 56 38.3 -2.2**
MORF IAMs_20 IAMs_20 21 28 22.4
comp=Z,13μm,20.5s
MORF Marmelete 92.44 46 *e*P **P 20 46 06.8 -0.1**
MORF Marmelete 92.44 46 *e*SKSac **SKSac 20 56 46.0 +5.5**
MORF Marmelete 92.44 46 *e*P **P 20 46 05.7 -1.2**
MORF *e* 20 56 38.3
NLWA Neilton Lookou 93.00 328 IAMs_20 IAMs_20 21 24 31.1
comp=Z,3μm,19.0s
PCVE Castro Verde 93.02 46 *e*P **P 20 46 09.8 +0.2**
PCVE Castro Verde 93.02 46 *e*PP **PP 20 49 54.9 +2.0**
PCVE *e*SKSac **SKSac 20 56 47.7 +4.1**
PNCL Nicolau / Gran 93.05 45 *e*P **P 20 46 10.7 +1.1**
PNCL Nicolau / Gran 93.05 45 *e*PP **PP 20 49 53.7 +0.6**
PNCL *e*SKSac **SKSac 20 56 46.1 +2.4**
PVAQ Vaqueiros 93.06 46 *e*P **P 20 46 13.0 +3.2**
PVAQ Vaqueiros 93.06 46 *e*PP **PP 20 49 56.0 +2.7**
PVAQ *e*SKSac **SKSac 20 56 45.6 +1.7**
PVAQ Vaqueiros 93.06 46 *e*LQ LQ 21 15 49.5
PVAQ *e*LR LR 21 21 11.5
comp=Z,13μm,18.0s
LIS Lisbon 93.08 44 *e*P **P 20 46 08.7 -1.1**
LIS *e*SKSac **SKSac 20 56 41.7 -2.1**
LIS IAMs_20 IAMs_20 21 26 30.9
comp=Z,4μm,26.4s
LIS Lisbon 93.08 44 *e*P **P 20 46 08.7 -1.1**
LIS *e* 20 56 41.7
TAM Tamanrasset 93.16 65 P **P 20 46 09.3 -1.5**
TAM Tamanrasset 93.16 65 P **P 20 46 09.3 -1.5**
TAM pmax pmax
comp=Z,17nm,1.2s
TAM MLR MLR
comp=Z,10μm,18.0s
PMAFR Mafra 93.16 44 *e*P **P 20 46 11.0 +0.8**
PMAFR Mafra 93.16 44 *e*PP **PP 20 49 55.3 +1.2**
PMAFR *e*SKSac **SKSac 20 56 48.9 +4.5**
ARNO Arenosillo 93.46 47 P **P 20 46 14.5 +3.0**
ARNO S **SKSac 20 56 49.7 +3.7**
CEU Ceuta 93.53 49 P **P 20 46 09.9 -2.0**
CEU S **SKSac 20 56 48.2 +1.8**
EVO Evora 93.63 45 P **P 20 46 11.0 -1.4**
EVO S **SKSac 20 56 50.5 +3.6**
PVLZ Peæn de 93.74 50 P **P 20 46 11.3 -1.7**
PVLZ S **SKSac 20 56 46.9 -0.7**
PSBE So Bento 93.82 44 *e*P **P 20 46 13.2 0.0**
PSBE So Bento 93.82 44 *e*PP **PP 20 50 01.6 +2.4**
PSBE *e*SKSac **SKSac 20 56 53.9 +5.9**
PMTG Montargil 93.86 45 *e*P **P 20 46 13.3 -0.1**
PMTG Montargil 93.86 45 *e*PP **PP 20 49 59.4 -0.1**
PMTG *e*SKSac **SKSac 20 56 56.5 +8.4**
PBAR Barrancos 93.97 46 *e*P **P 20 46 14.4 +0.5**
PBAR Barrancos 93.97 46 *e*PP **PP 20 50 03.0 +2.6**
PBAR *e*SKSac **SKSac 20 56 56.4 +7.6**
PESTR Estremoz 94.10 45 *e*P **P 20 46 15.8 +1.3**
PESTR Estremoz 94.10 45 *e*PP **PP 20 50 03.1 +1.7**
PESTR *e*SKSac **SKSac 20 56 55.5 +6.0**
PCAS Casmilo, Conde 94.34 44 *e*P **P 20 46 17.5 +1.9**
PCAS Casmilo, Conde 94.34 44 *e*PP **PP 20 50 05.9 +2.6**
PCAS *e*SKSac **SKSac 20 56 52.2 +1.4**
PMRV Marv??o 94.58 45 *e*P **P 20 46 16.1 -0.6**
PMRV Marv??o 94.58 45 *e*PP **PP 20 50 05.4 +0.3**
PMRV *e*SKSac **SKSac 20 56 55.6 +3.5**
PMRV Marv??o 94.58 45 *e*LR LR 21 18 13.8
comp=Z,4μm,22.0s
WMELI Melilla 94.69 50 P **P 20 46 20.7 +3.4**
WMELI S SKSac 20 57 05.0 +12
CHAS Isla Isabel II 94.95 51 P **P 20 46 22.3 +3.8**
MTE Manteigas 95.12 44 *e*P **P 20 46 21.3 +2.0**
MTE Manteigas 95.12 44 *e*PP **PP 20 50 12.1 +2.7**
MTE *e*SKSac **SKSac 20 56 57.4 +2.3**
MTE Manteigas 95.12 44 *e*LQ LQ 21 16 41.2
MTE *e*LR LR 21 20 40.9
comp=Z,6μm,18.0s
TAU Tasmania Unive 95.37 208 IAMs_20 IAMs_20 21 18 54.2
comp=Z,4μm,20.0s
MSVF Nonsavu 95.47 245 LR LR 21 19 36.6
comp=Z,2μm,22.0s,baz=137,slow=29
POLO Lamas de Olo 95.61 43 *e*P **P 20 46 22.9 +1.4**
POLO Lamas de Olo 95.61 43 *e*PP **PP 20 50 14.1 +0.8**
POLO *e*SKSac **SKSac 20 56 59.2 +1.5**
PGAV Gavieira, Arco 95.73 42 *e*P **P 20 46 24.7 +2.7**
PGAV Gavieira, Arco 95.73 42 *e*PP **PP 20 50 19.8 +5.6**
PGAV *e*SKSac **SKSac 20 57 00.2 +1.9**
PGAV Gavieira, Arco 95.73 42 *e*LQ LQ 21 18 05.0
PGAV *e*LR LR 21 21 01.4
comp=Z,8μm,20.0s
MVO Moncorvo 95.92 44 *e*P **P 20 46 23.5 +0.6**
MVO Moncorvo 95.92 44 *e*PP **PP 20 50 17.2 +1.6**
MVO *e*SKSac **SKSac 20 57 07.3 +8.0**
MVO Moncorvo 95.92 44 *e*LQ LQ 21 17 12.9
MVO *e*LR LR 21 20 34.3
comp=Z,6μm,20.0s
PBRG Braganca 96.50 43 *e*P **P 20 46 24.9 -0.6**
PBRG Braganca 96.50 43 *e*PP **PP 20 50 20.7 +0.7**
PBRG *e*SKSac **SKSac 20 57 05.5 +3.3**
ESDC Sonseca Array 96.78 46 P **P 20 46 26.6 -0.2**
comp=Z,2.3nm,1.0s,baz=239,slow=4.1,SNR=8.4
ESDC LR LR 21 30 19.2
comp=Z,10μm,18.3s,baz=235,slow=36
comp=Z,2.3nm,1.0s
FRB Frobisher Bay 97.27 2 LR LR 21 31 05.6
comp=Z,4μm,20.1s,baz=166,slow=36
CART Cartagena 97.33 49 P P 20 46 24.5 -4.8
CART S **SKSac 20 57 12.2 +5.7**
UCM Universidad Co 97.60 46 P **P 20 46 27.9 -2.6**
UCM S **SKSac 20 57 11.9 +3.9**
BBB Bella Bella 98.40 329 LR LR 21 28 12.0
comp=Z,1μm,18.6s,baz=123,slow=34
VOI Vohitsoka 100.02 125 IAMs_20 IAMs_20 21 30 41.5
comp=Z,5μm,19.0s
DZM Mont Dzumac 100.98 234 *e*P **Pdif 20 46 46.0 -0.2**
comp=Z,123nm,25.3s
DZM Mont Dzumac 100.98 234 *e*PP **PP 20 50 52.7 -1.2**
comp=Z,292nm,24.1s
DZM Mont Dzumac 100.98 234 *e*SS SS 21 05 23.3 +0.6
comp=Z,2μm,23.6s
DZM Mont Dzumac 100.98 234 *e*LR LR 21 19 44.2
comp=Z,5μm,21.8s
CAN Canberra 100.98 214 IAMs_20 IAMs_20 21 22 43.3
comp=Z,4μm,21.0s
YKA Yellowknife Ar 101.73 341 P **Pdif 20 46 50.8 +2.6**
comp=Z,1.3nm,0.9s,baz=137,slow=4.7,SNR=4.3
YKA PP **PKiKP 20 51 11.7 +0.2**
comp=Z,1.5nm,1.0s,baz=126,slow=7.0,SNR=4.2
MAHO Mahon 102.02 50 P **Pdif 20 46 52.8 +2.7**
MAHO S **SKSac 20 57 33.3 +3.7**
MAHO Mahon 102.02 50 IAMs_20 IAMs_20 21 34 43.2
comp=Z,3μm,18.0s
ABPO Ambohimpanom 102.26 123 IAMs_20 IAMs_20 21 35 06.7
comp=Z,4μm,18.0s
KOUNC Koumac, New Ca 103.48 234 IAMs_20 IAMs_20 21 24 09.3
comp=Z,3μm,21.0s
JIS Juneau Island 105.20 331 IAMs_20 IAMs_20 21 44 30.5
comp=Z,3μm,19.0s
KMBO Kilima Mbogo 105.77 102 IAMs_20 IAMs_20 21 38 19.7
comp=Z,4μm,18.0s
KMBO Kilima Mbogo 105.77 102 *e*P **PKiKP 20 51 17.4 -3.4**
KMBO *e*S **SP 21 00 49.5 +3.1**
KMBO Kilima Mbogo 105.77 102 *e*P **PP 20 51 26.2 -4.3**
P33M Teslin, Yukon 105.86 333 IAMs_20 IAMs_20 21 33 15.9
comp=Z,4μm,18.0s
LODK Lodwar 106.80 97 *e*P **PP 20 51 33.3 -4.7**
LODK *e*S **SKSac 20 57 58.0 +5.0**
LODK Lodwar 106.80 97 *e*P PP 20 51 30.1 -7.9
P29M Windy Craggy 107.41 331 IAMs_20 IAMs_20 21 32 46.8
comp=Z,3μm,20.0s
M31M Drury Creek, Y 107.74 334 IAMs_20 IAMs_20 21 33 45.4
comp=Z,5μm,20.0s

N31M	**Braeburn, Yuko**	**107.80**	**333**	IAMs_20	IAMs_20	21 34 26.0	
	comp=Z,3μm,18.0s						
VLC	**Villacollemand**	**108.13**	**49**	IAMs_20	IAMs_20	21 38 13.1	
	comp=Z,4μm,19.0s						
BCPM	**Bancas Point**	**108.37**	**331**	IAMs_20	IAMs_20	21 44 06.3	
	comp=Z,3μm,19.0s						
M30M	**Minto, Yukon**	**108.85**	**334**	IAMs_20	IAMs_20	21 46 39.7	
	comp=Z,4μm,18.0s						
FUORN	**Ofenpass-Fuorn**	**109.26**	**46**	IAMs_20	IAMs_20	21 37 46.8	
	comp=Z,3μm,20.0s						
TABL	**Table Mountain**	**109.26**	**331**	IAMs_20	IAMs_20	21 44 45.0	
	comp=Z,3μm,19.0s						
MESA	**MESA**	**109.45**	**330**	IAMs_20	IAMs_20	21 47 31.8	
	comp=Z,3μm,18.0s						
YAH	**Yahtse**	**109.47**	**330**	IAMs_20	IAMs_20	21 34 24.3	
	comp=Z,3μm,20.0s						
C36M	**Paulatuk**	**109.50**	**343**	IAMs_20	IAMs_20	21 46 06.3	
	comp=Z,3μm,19.0s						
CTGM	**Chitina Glacie**	**109.64**	**331**	IAMs_20	IAMs_20	21 41 38.0	
	comp=Z,3μm,18.0s						
ISLE	**Juniper Island**	**109.84**	**331**	IAMs_20	IAMs_20	21 35 34.3	
	comp=Z,3μm,19.0s						
WAX	**Waxell Ridge**	**109.97**	**330**	IAMs_20	IAMs_20	21 40 04.7	
	comp=Z,3μm,19.0s						
TULEG	**Thule**	**110.10**	**1**	IAMs_20	IAMs_20	21 39 26.5	
	comp=Z,4μm,20.0s						
TGL	**Tana Glacier**	**110.13**	**331**	IAMs_20	IAMs_20	21 35 41.9	
	comp=Z,3μm,19.0s						
SUCK	**Suckling Hills**	**110.15**	**330**	IAMs_20	IAMs_20	21 40 25.5	
	comp=Z,3μm,18.0s						
HMT	**Hamilton**	**110.50**	**330**	IAMs_20	IAMs_20	21 46 27.6	
	comp=Z,3μm,19.0s						
MCARA	**McCarthy VSAT**	**110.56**	**331**	IAMs_20	IAMs_20	21 45 33.1	
	comp=Z,3μm,19.0s						
M27K	**Edge Creek, AK**	**110.64**	**332**	IAMs_20	IAMs_20	21 47 53.2	
	comp=Z,4μm,18.0s						
VRDI	**Verde Repeater**	**110.64**	**331**	IAMs_20	IAMs_20	21 48 00.4	
	comp=Z,3μm,19.0s						
RAGM	**Ragged Mountai**	**110.70**	**330**	IAMs_20	IAMs_20	21 41 47.9	
	comp=Z,4μm,18.0s						
GLB	**Gilahina Butte**	**110.91**	**331**	IAMs_20	IAMs_20	21 48 32.3	
	comp=Z,3μm,18.0s						
TARA	**Tarawa**	**110.98**	**257**	IAMs_20	IAMs_20	21 38 59.9	
	comp=Z,3μm,18.0s						
L27K	**Beaver Creek,**	**111.01**	**333**	IAMs_20	IAMs_20	21 36 37.0	
	comp=Z,4μm,18.0s						
I29M	**Ogilvie Camp,**	**111.05**	**336**	IAMs_20	IAMs_20	21 36 20.8	
	comp=Z,4μm,21.0s						
M26K	**Nabesna, AK**	**111.10**	**332**	IAMs_20	IAMs_20	21 48 10.4	
	comp=Z,3μm,19.0s						
EPYK	**Eagle Plains**	**111.12**	**337**	IAMs_20	IAMs_20	21 36 18.6	
	comp=Z,5μm,20.0s						
N25K	**Chitina, Valde**	**111.31**	**331**	IAMs_20	IAMs_20	21 35 45.1	
	comp=Z,3μm,21.0s						
HIN	**Hinchinbrook I**	**111.48**	**329**	IAMs_20	IAMs_20	21 45 27.6	
	comp=Z,4μm,20.0s						
K27K	**Chicken**	**111.64**	**334**	IAMs_20	IAMs_20	21 46 50.3	
	comp=Z,3μm,18.0s						
FID	**Port Fidalgo**	**111.65**	**329**	IAMs_20	IAMs_20	21 49 28.1	
	comp=Z,3μm,18.0s						
A36M	**Sachs Harbour**	**111.66**	**345**	IAMs_20	IAMs_20	21 40 30.4	
	comp=Z,4μm,19.0s						
EGAK	**Eagle**	**111.72**	**335**	IAMs_20	IAMs_20	21 44 02.4	
	comp=Z,3μm,20.0s						
KLU	**Klutina**	**111.80**	**330**	IAMs_20	IAMs_20	21 35 37.9	
	comp=Z,3μm,20.0s						
GLI	**Glacier Island**	**111.97**	**329**	IAMs_20	IAMs_20	21 46 21.7	
	comp=Z,3μm,20.0s						
ROCAM	**Rodrigues Isla**	**112.19**	**135**	IAMs_20	IAMs_20	21 37 38.0	
	comp=Z,4μm,19.0s						
NKC	**Novy Kostel**	**112.23**	**44**	AMS	AMS	21 38 10.0	
	comp=Z,8μm,19.5s						
SCRK	**Sand Creek**	**112.32**	**333**	IAMs_20	IAMs_20	21 36 59.6	
	comp=Z,3μm,19.0s						
GERES	**GERESS Array B**	**112.35**	**45**	PKiKP	**PKiKP**	**20 51 33.8 +2.0**	
	comp=Z,0.6nm,0.8s,baz=191,slow=2.7,SNR=5.8						
KHC	**Kasperske Hory**	**112.40**	**45**	*e*SDIF		21 00 04.2	
KHC				*e*SP	**SP**	**21 01 52.4 +2.2**	
KHC				*e*SS	**SS**	**21 08 00.2 +1.7**	
KHC				AMS	AMS	21 40 10.0	
	comp=Z,4μm,19.3s						
PWL	**Port Wells**	**112.49**	**329**	IAMs_20	IAMs_20	21 46 29.4	
	comp=Z,3μm,21.0s						
RIDG	**Independent Ri**	**112.52**	**333**	IAMs_20	IAMs_20	21 37 33.0	
	comp=Z,4μm,18.0s						
SCM	**Sheep Creek Mo**	**112.55**	**330**	IAMs_20	IAMs_20	21 49 54.8	
	comp=Z,3μm,18.0s						
CKRC	**Cesky Krumlov**	**112.70**	**46**	*e*SP	SP	21 01 57.0 +4.0	
CKRC				AMS	AMS	21 39 50.0	
	comp=Z,7μm,18.6s						
I26K	**Coal Creek Min**	**112.71**	**335**	IAMs_20	IAMs_20	21 37 34.7	
	comp=Z,3μm,22.0s						
O22K	**Cooper Landing**	**112.91**	**328**	IAMs_20	IAMs_20	21 50 10.5	
	comp=Z,4μm,19.0s						
SML	**Sawmill**	**112.95**	**330**	IAMs_20	IAMs_20	21 49 33.5	
	comp=Z,2μm,18.0s						
KDAK	**Kodiak Island**	**112.96**	**325**	IAMs_20	IAMs_20	21 30 22.6	
	comp=Z,3μm,21.0s						
PDG	**Podgorica**	**113.09**	**54**	IAMs_20	IAMs_20	21 43 28.5	
	comp=Z,4μm,19.0s						
J25K	**Salcha River,**	**113.17**	**333**	IAMs_20	IAMs_20	21 37 43.9	
	comp=Z,3μm,19.0s						
DHY	**Denali Highway**	**113.18**	**331**	IAMs_20	IAMs_20	21 49 43.3	
	comp=Z,3μm,20.0s						
GHO	**Glory Hole Cre**	**113.18**	**330**	IAMs_20	IAMs_20	21 48 09.6	
	comp=Z,2μm,19.0s						
RC01	**Rabbit Creek A**	**113.20**	**329**	IAMs_20	IAMs_20	21 46 41.2	
	comp=Z,2μm,19.0s						
PRU	**Pruhonice**	**113.34**	**45**	AMS	AMS	21 39 40.0	
	comp=Z,6μm,19.1s						
GOPC	**GO Pecny, Ondr**	**113.45**	**45**	AMS	AMS	21 40 20.0	
	comp=Z,5μm,19.0s						
PVCC	**Panska Ves**	**113.58**	**44**	AMS	AMS	21 38 20.0	
	comp=Z,8μm,19.7s						
TREC	**Trest**	**113.60**	**46**	AMS	AMS	21 40 20.0	
	comp=Z,6μm,19.1s						
HDA	**Harding Lake**	**113.66**	**333**	IAMs_20	IAMs_20	21 38 35.0	
	comp=Z,3μm,18.0s						
M22K	**Willow**	**113.67**	**330**	IAMs_20	IAMs_20	21 48 32.6	
	comp=Z,3μm,20.0s						
PRP	**Porcupine Dome**	**113.67**	**334**	IAMs_20	IAMs_20	21 37 53.3	
	comp=Z,3μm,20.0s						
SUA	**Susitna One**	**113.81**	**329**	IAMs_20	IAMs_20	21 50 21.2	
	comp=Z,3μm,20.0s						
ILAR	**Eielson Array**	**113.81**	**333**	PP	PP	20 52 37.7 +10	
	comp=Z,2.5nm,1.2s,baz=125,slow=4.1,SNR=4.3						
RND	**Reindeer**	**113.92**	**331**	IAMs_20	IAMs_20	21 47 07.1	
	comp=Z,3μm,20.0s						
IDI	**Anoyia**	**114.03**	**63**	IAMs_20	IAMs_20	21 45 33.6	
	comp=Z,3μm,18.0s						
CUT	**Chulitna**	**114.04**	**330**	IAMs_20	IAMs_20	21 50 16.1	
	comp=Z,3μm,20.0s						
FYU	**Fort Yukon**	**114.09**	**335**	IAMs_20	IAMs_20	21 38 05.2	
	comp=Z,4μm,20.0s						
CCB	**Clear Creek Bu**	**114.10**	**333**	IAMs_20	IAMs_20	21 38 47.6	
	comp=Z,4μm,18.0s						
MCK	**McKinley**	**114.11**	**332**	IAMs_20	IAMs_20	21 50 40.9	
	comp=Z,3μm,19.0s						
WRH	**Wood River Hil**	**114.12**	**333**	IAMs_20	IAMs_20	21 38 50.3	
	comp=Z,4μm,19.0s						
HNR	**Honiara**	**114.17**	**239**	IAMs_20	IAMs_20	21 38 06.1	
	comp=Z,2μm,18.0s						
POKR	**Poker Plat Res**	**114.18**	**333**	IAMs_20	IAMs_20	21 38 24.8	
	comp=Z,4μm,19.0s						
COLA	**College**	**114.22**	**333**	IAMs_20	IAMs_20	21 38 17.0	
	comp=Z,3μm,20.0s						
TCOL	**CIGO, UAF Yank**	**114.23**	**333**	IAMs_20	IAMs_20	21 38 18.0	
	comp=Z,3μm,20.0s						
SKT	**Skwentna**	**114.37**	**329**	IAMs_20	IAMs_20	21 50 38.1	
	comp=Z,2μm,19.0s						
MDM	**Murphy Dome**	**114.41**	**333**	IAMs_20	IAMs_20	21 38 22.7	
	comp=Z,3μm,19.0s						
UPC	**Upice**	**114.41**	**45**	*e*SP	SP	21 02 15.2 +6.7	
UPC				AMS	AMS	21 38 40.0	
	comp=Z,7μm,20.4s						
CHVC	**Chvalec**	**114.47**	**44**	AMS	AMS	21 38 40.0	
	comp=Z,7μm,19.3s						
BWN	**Browne**	**114.52**	**332**	IAMs_20	IAMs_20	21 38 19.0	
	comp=Z,3μm,19.0s						
TRF	**Thorofare Moun**	**114.52**	**331**	IAMs_20	IAMs_20	21 50 50.8	
	comp=Z,4μm,18.0s						
DPC	**Dobruska-Polom**	**114.53**	**45**	AMS	AMS	21 38 50.0	
	comp=Z,4μm,18.5s						
OSTC	**Ostas**	**114.55**	**45**	AMS	AMS	21 38 40.0	
	comp=Z,7μm,20.3s						
NEA2	**Nenana**	**114.56**	**333**	IAMs_20	IAMs_20	21 39 12.7	
	comp=Z,4μm,18.0s						
H24K	**Noodor Dome**	**114.69**	**334**	IAMs_20	IAMs_20	21 48 25.0	
	comp=Z,2μm,18.0s						
KRLC	**Kraliky**	**114.69**	**45**	*e*SP	SP	21 02 16.7 +5.6	
KRLC				AMS	AMS	21 40 40.0	
	comp=Z,4μm,18.8s						
KTH	**Kantishna Hill**	**114.82**	**331**	IAMs_20	IAMs_20	21 50 51.8	
	comp=Z,3μm,19.0s						
O19K	**Port Alsworth**	**114.83**	**327**	IAMs_20	IAMs_20	21 50 42.3	
	comp=Z,2μm,20.0s						
CTAO	**Charters Tower**	**114.86**	**221**	IAMs_20	IAMs_20	21 35 32.5	
	comp=Z,3μm,19.0s						
SANT	**Santorini**	**114.91**	**62**	IAMs_20	IAMs_20	21 48 05.8	
	comp=Z,3μm,18.0s						
I23K	**Minto, Yukon-K**	**114.92**	**333**	IAMs_20	IAMs_20	21 38 48.3	
	comp=Z,3μm,19.0s						
M20K	**Styx River**	**115.01**	**329**	IAMs_20	IAMs_20	21 49 26.9	
	comp=Z,3μm,18.0s						
BPAW	**Bear Paw Mtn.**	**115.08**	**332**	IAMs_20	IAMs_20	21 51 34.7	
	comp=Z,2μm,18.0s						
O18K	**Koktuh Hills**	**115.09**	**326**	IAMs_20	IAMs_20	21 35 39.4	
	comp=Z,2μm,19.0s						
N19K	**Bonanza Creek**	**115.16**	**328**	IAMs_20	IAMs_20	21 51 44.0	
	comp=Z,4μm,20.0s						
CAST	**Castle Rocks**	**115.23**	**331**	IAMs_20	IAMs_20	21 48 02.7	
	comp=Z,3μm,20.0s						
H23K	**Yukon River**	**115.29**	**334**	IAMs_20	IAMs_20	21 39 19.0	
	comp=Z,3μm,21.0s						
VYHS	**Vyhne**	**115.30**	**47**	*e*PKiKP	**PKiKP**	**20 51 38.5 +1.1**	
MLY	**Manley**	**115.39**	**333**	IAMs_20	IAMs_20	21 39 47.9	
	comp=Z,3μm,18.0s						
OKC	**Ostrava-Krasne**	**115.41**	**46**	AMS	AMS	21 42 00.0	
	comp=Z,4μm,19.1s						
M19K	**Big River Lodg**	**115.57**	**329**	IAMs_20	IAMs_20	21 50 38.8	
	comp=Z,3μm,19.0s						
N18K	**Kilae Creek**	**115.74**	**327**	IAMs_20	IAMs_20	21 52 06.3	
	comp=Z,3μm,20.0s						
L19K	**White Mountain**	**115.88**	**329**	IAMs_20	IAMs_20	21 51 53.9	
	comp=Z,2μm,18.0s						
I21K	**Tanana**	**115.93**	**333**	IAMs_20	IAMs_20	21 40 05.1	
	comp=Z,4μm,18.0s						
K20K	**Telida**	**116.02**	**330**	IAMs_20	IAMs_20	21 51 53.6	
	comp=Z,3μm,19.0s						
J20K	**Nowinta River**	**116.38**	**331**	IAMs_20	IAMs_20	21 43 50.0	
	comp=Z,2μm,18.0s						
H21K	**Melozitna Rive**	**116.44**	**333**	IAMs_20	IAMs_20	21 39 45.5	
	comp=Z,3μm,20.0s						
TOLK	**Toolik Lake Re**	**116.52**	**336**	IAMs_20	IAMs_20	21 39 41.4	
	comp=Z,4μm,20.0s						
UZH	**Uzhgorod**	**117.48**	**48**	*e*PKiKP	**PKiKP**	**20 51 44.0 +2.5**	
UZH				*e*		20 51 49.7	
ASAR	**Alice Springs**	**117.53**	**207**	PKP	**PKPdf**	**20 51 41.7 -0.9**	
	comp=Z,0.8nm,1.0s,baz=141,slow=1.6,SNR=4.7						
ASAR				PP	**PP**	**20 53 00.8 +7.5**	
	comp=Z,2.2nm,1.1s,baz=135,slow=5.0,SNR=5.4						
ASAR				PKKPbc	**PKKPbc**	**21 02 06.5 +2.2**	
	comp=Z,1.2nm,1.1s,baz=1.1,slow=2.7,SNR=4.4						
ISP	**Isparta**	**119.20**	**62**	IAMs_20	IAMs_20	21 44 18.3	
	comp=Z,2μm,20.0s						
KWAJ	**Kwajalein Atol**	**119.54**	**260**	IAMs_20	IAMs_20	21 33 43.2	
	comp=Z,3μm,19.0s						
A21K	**Barrow**	**119.76**	**338**	IAMs_20	IAMs_20	21 44 51.7	
	comp=Z,3μm,20.0s						
CSS	**Mathiatis**	**120.23**	**66**	IAMs_20	IAMs_20	21 44 16.0	
	comp=Z,2μm,21.0s						
WRA	**Warramunga Arr**	**120.70**	**210**	PKP	**PKPdf**	**20 51 48.3 -0.5**	
	comp=Z,1.7nm,0.9s,baz=158,slow=1.7,SNR=30						
MILM	**Milestii Mici**	**121.07**	**52**	‖ *i*PS	PS	21 03 20.0 +10	
ANM	**Nome**	**121.13**	**330**	IAMs_20	IAMs_20	21 39 29.6	
	comp=Z,2μm,19.0s						
KBS	**Kingsbay**	**121.87**	**13**	IAMs_20	IAMs_20	21 44 49.2	
	comp=Z,3μm,19.0s						
NACGM	**Naroch**	**122.04**	**42**	⇑ *e*PKP	**PKiKP**	**20 51 50.5 +0.3**	
	comp=Z,15nm,0.8s,baz=256						
BRTR	**Keskin Array B**	**122.14**	**61**	PKP	**PKPdf**	**20 51 50.0 -0.9**	
	comp=Z,2.4nm,1.0s,baz=185,slow=4.8,SNR=7.3						
AKASG	**Malin Array Be**	**122.40**	**47**	PKP	**PKPdf**	**20 51 50.4 -0.5**	
	comp=Z,1.4nm,0.6s,baz=275,slow=2.0,SNR=8.2						
AKBB	**Malin Array Si**	**122.40**	**47**	*i* PKiKP	**PKPdf**	**20 51 50.7 -0.2**	
MNK	**Minsk**	**122.56**	**43**	*i* PKiKP	**PKPdf**	**20 51 50.7 -0.3**	
MNK				*i*		20 53 29.1	
MNK				*i* PPP	PPP	20 56 03.6	
MNK				*i*		20 59 02.7	
MNK				*i* PS	**PS**	**21 03 22.5 -0.9**	
MNK				pmax	pmax		
	comp=Z,22nm,1.3s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.4s						
MNK				pmax	pmax		
	comp=N,33nm,1.0s						
MNK	**Minsk**	**122.56**	**43**	*i* PKP	**PKPdf**	**20 51 50.8 -0.3**	
	comp=E,6.0nm,1.4s						
MNK				*i* PKP	**PKPdf**	**20 51 50.8 -0.3**	
	comp=N,33nm,1.0s						
MNK				*i* PKP	**PKPdf**	**20 51 50.8 -0.3**	
	comp=Z,22nm,1.3s,baz=256						
MNK				*i* PP	**PP**	**20 53 29.2 +0.6**	
MNK				*i* SKP		20 55 26.6	
MNK				*i* PPP	PPP	20 56 03.6	
MNK				*i* SKS	**SKSdf**	**20 59 02.8 -0.1**	
MNK				*i* PS	**PS**	**21 03 22.6 -0.9**	
MNK				*i* SS	**SS**	**21 10 17.9 +7.7**	
MNK				*i* SSS	SSS	21 14 48.7	
MNK				*i* LQ	LQ	21 37 47.6	
MNK				*i* LR	LR	21 41 49.8	
MNK				*i* LRM	MLR	21 46 18.1	
	comp=Z,5μm,19.4s						
MNK				*i* LRM	MLR	21 46 30.3	
	comp=E,505nm,17.1s						
MNK				*i* LRM	MLR	21 47 15.6	
	comp=N,1μm,18.0s						
PMG	**Port Moresby**	**122.80**	**229**	IAMs_20	IAMs_20	21 38 56.8	
	comp=Z,2μm,20.0s						
GAMB	**Gambell**	**123.69**	**328**	IAMs_20	IAMs_20	21 56 02.5	
	comp=Z,3μm,20.0s						
H11S2	**WAKE ISLAND Hyl**	**125.31**	**270**	T	T	23 10 56.5	
	baz=118,slow=74,SNR=16						
H11S1	**WAKE ISLAND Hyl**	**125.32**	**270**	T	T	23 11 07.5	
	baz=118,slow=74,SNR=9.7						
H11S3	**WAKE ISLAND Hyl**	**125.33**	**270**	T	T	23 11 01.4	
	baz=118,slow=74,SNR=5.3						
RAYN	**Ar Rayn**	**125.43**	**84**	PKPdf	**PKPdf**	**20 51 55.4 -2.2**	
RAYN	**Ar Rayn**	**125.43**	**84**	PKiKP	**PKPdf**	**20 51 55.4 -2.2**	
RAYN				MLR	MLR		
	comp=Z,6μm,18.0s						
PATS	**Pohnpei**	**125.94**	**252**	IAMs_20	IAMs_20	21 34 57.0	
	comp=Z,3μm,20.0s						
APA	**Apatity**	**126.83**	**27**	‖ *i* PKiKP	**PKPdf**	**20 51 59.0 +0.1**	
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,5μm,18.0s						
LVZ	**Lovozero**	**127.30**	**27**	IAMs_20	IAMs_20	21 44 46.1	
	comp=Z,4μm,20.0s						
SOC	**Sochi**	**127.60**	**58**	*i* PKiKP	**PKiKP**	**20 52 01.4 -0.3**	
SOC				*e*		20 54 02.9	
SOC				*e*PS	**PS**	**21 04 04.6 -3.7**	
SOC				*e*SS	SS	21 11 06.3 -8.0	
OBN	**Obninsk**	**127.61**	**43**	PKP	**PKiKP**	**20 52 02.6 +1.4**	
	comp=Z,2.1nm,0.4s,baz=249,slow=9.6,SNR=3.7						
OBN	**Obninsk**	**127.61**	**43**	‖ *i* PKiKP	**PKiKP**	**20 52 00.9 -0.4**	
OBN				*e*		20 52 04.1	
OBN				*i*		20 54 05.8	
OBN				*i* PPP	PPP	20 56 41.9	
OBN				*e*		20 59 13.6	
OBN				*e*PS	**PS**	**21 04 01.8 -6.1**	
OBN				*e*		21 05 40.4	
OBN				pmax	pmax		
	comp=Z,25nm,1.1s						
MOS	**Moscow**	**128.28**	**43**	*i* PKiKP	**PKiKP**	**20 52 04.3 +1.7**	
MOS				pmax	pmax		
	comp=Z,59nm,1.8s						
VSR	**Storozhevoye**	**128.66**	**48**	*e*PKiKP	**PKiKP**	**20 52 06.2 +2.7**	
VSR				pmax	pmax		
	comp=Z,30nm,1.6s						
LPSR	**Galich'ya Gora**	**128.69**	**47**	*e*PKiKP	**PKiKP**	**20 52 04.3 +0.8**	
LPSR				pmax	pmax		
	comp=Z,20nm,1.5s						
VORR	**Voronezh**	**128.75**	**48**	*e*PKiKP	**PKiKP**	**20 52 05.8 +2.1**	
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KLMR	**Klimovskoe**	**129.52**	**36**	*e*PKiKP	**PKPdf**	**20 52 03.6 -0.6**	
KLMR				pmax	pmax		
	comp=Z,93nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,4μm,20.0s						
KLMR	**Klimovskoe**	**129.52**	**36**	*e*PKPdf	**PKPdf**	**20 52 03.6 -0.6**	
KLMR				AMP		20 52 17.4	
	comp=Z,93nm,1.3s						
KLMR				LQ	LQ	21 34 08.8	
KLMR				LQ	LQ	21 34 08.8	
KLMR				LR	LR	21 39 02.2	
KLMR				AMP		21 47 26.5	
	comp=Z,4μm,19.7s						
KIV	**Kislovodsk**	**129.78**	**58**	*i* PKIKP	**PKiKP**	**20 52 06.0 -0.2**	
KIV				*e*		20 54 14.7	
KIV				*e*PS	**PS**	**21 04 25.0 -2.5**	
KIV				*e*SS	SS	21 11 38.7 -2.8	
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KBZ	**Khabaz**	**129.88**	**59**	PKP	**PKiKP**	**20 52 06.3 +0.1**	
	comp=Z,5.1nm,1.1s,baz=307,slow=2.3,SNR=4.9						
GOF	**Gofitskoye**	**130.24**	**57**	⇑ *e*PKIKP	**PKiKP**	**20 52 10.0 +3.1**	
VRH	**Novokhopyorsk**	**130.25**	**49**	*e*PKIKP	**PKiKP**	**20 52 07.9 +1.2**	
VRH				pmax	pmax		
	comp=Z,30nm,1.3s						
GNI	**Garni**	**130.45**	**63**	IAMs_20	IAMs_20	21 57 09.2	
	comp=Z,3μm,18.0s						
GROC	**Groznyy**	**131.86**	**60**	*i* PKIKP	**PKiKP**	**20 52 12.4 +2.2**	
GROC				pmax	pmax		
	comp=Z,38nm,1.1s						
PRGR	**Permogore**	**132.42**	**35**	*e*PKIKP	**PKiKP**	**20 52 10.5 -0.2**	
PRGR				pmax	pmax		
	comp=Z,61nm,1.6s						
BILL	**Bilibino**	**132.46**	**334**	IAMs_20	IAMs_20	21 51 44.8	
	comp=Z,2μm,18.0s						
MAK	**Makhachkala**	**133.05**	**60**	*i* P	**Pdif**	**20 49 03.9 -4.1**	
MAK				*i*		20 52 09.1	
MAK				*e*		20 54 35.4	
MAK				*e*		20 59 17.3	
MAK				pmax	pmax		
	comp=Z,155nm,1.2s						
BELG	**Belogornoye**	**133.98**	**47**	PKP	**PKiKP**	**20 52 13.7 -0.5**	
	comp=Z,8.2nm,0.9s,baz=283,slow=3.4,SNR=3.9						
BELG	**Belogornoye**	**133.98**	**47**	*i* PKIKP	**PKPdf**	**20 52 12.9 0.0**	
MMRI	**Maumere**	**135.50**	**201**	IAMs_20	IAMs_20	21 59 28.6	
	comp=Z,3μm,18.0s						
JAGI	**Jajag, Banyuwa**	**137.47**	**190**	IAMs_20	IAMs_20	21 49 54.0	
	comp=Z,3μm,20.0s						
SEY	**Seymchan**	**139.63**	**330**	*i* PKIKP	**PKiKP**	**20 52 24.3 -1.1**	
ARU	**Arti**	**139.90**	**40**	PKP	**PKiKP**	**20 52 25.1 -1.0**	
	comp=Z,4.1nm,1.0s,baz=115,slow=12,SNR=3.2						
ARU	**Arti**	**139.90**	**40**	*i* PKIKP	**PKPdf**	**20 52 22.8 -0.9**	
ARU				MLR	MLR		
	comp=Z,6μm,20.0s						
GEYT	**Alibeck**	**140.22**	**70**	PKhKP	PKPpre	20 52 18.7	
	comp=Z,0.5nm,0.3s,baz=248,slow=7.8,SNR=5.3						
GEYT				PKP	**PKPdf**	**20 52 25.6 +0.6**	
	comp=Z,4.7nm,0.9s,baz=235,slow=5.2,SNR=9.0						
GEYT	**Alibeck**	**140.22**	**70**		PKPpre	20 52 18.0	
GYA0B	**ALIBECK ARRAY**	**140.22**	**70**	PKPdf	**PKPdf**	**20 52 21.2 -3.8**	
TIXI	**Tiksi**	**140.42**	**350**	PKPdf	**PKPdf**	**20 52 22.4 -1.8**	
TIXI				IAMs_20	IAMs_20	21 55 25.9	
	comp=Z,2μm,20.0s						
TIXI	**Tiksi**	**140.42**	**350**	PKIKP	**PKPdf**	**20 52 22.4 -1.8**	
TIXI				MLR	MLR		
	comp=Z,2μm,20.0s						
GUMO	**Guam**	**140.53**	**248**	IAMs_20	IAMs_20	21 53 59.6	
	comp=Z,2μm,19.0s						
SVE	**Sverdlovsk**	**140.91**	**39**	*i* PKIKP	**PKiKP**	**20 52 33.9 +5.7**	
SVE				pmax	pmax		
	comp=Z,21nm,1.7s						
SVE				MLR	MLR		
	comp=E,3μm,18.0s						
SVE				MLR	MLR		
	comp=Z,5μm,19.0s						
MA2	**Magadan**	**141.70**	**326**	IAMs_20	IAMs_20	22 09 46.0	
	comp=Z,3μm,18.0s						
ABKAR	**Akbulak array**	**141.93**	**52**		PKPpre	20 52 21.5	
ABKAR	**Akbulak array**	**141.93**	**52**		PKPpre	20 52 21.1	
LUWI	**Luwuk**	**142.44**	**206**	IAMs_20	IAMs_20	21 55 53.0	
	comp=Z,2μm,20.0s						
NRIK	**Noril'sk**	**142.72**	**11**	PKP	**PKPdf**	**20 52 29.0 +0.6**	
	comp=Z,2.9nm,0.8s,baz=265,slow=4.8,SNR=3.6						
NRIK	**Noril'sk**	**142.72**	**11**	*i* PKIKP	**PKPdf**	**20 52 28.6 +0.2**	
PCHI	**Peechi**	**143.32**	**122**	‖ *e*P	**PKPdf**	**20 52 31.1 -0.1**	
PCHI				*ex*	x	21 02 42.1	
PALK	**Pallekele**	**143.86**	**131**	PKP	**PKPdf**	**20 52 32.7 +0.5**	
	comp=Z,24nm,1.1s,baz=247,slow=2.4,SNR=6.1						
TOLI2	**Tolitoli**	**145.14**	**204**	IAMs_20	IAMs_20	21 59 21.4	
	comp=Z,2μm,20.0s						
BRVK	**Borovoye**	**147.38**	**43**		**PKPdf**	**20 52 37.5 +0.6**	
BRVK	**Borovoye**	**147.38**	**43**	PKIKP	**PKPdf**	**20 52 37.5 +0.6**	
BRVK				MLR	MLR		
	comp=Z,5μm,20.0s						
BVAR	**Borovoye Array**	**147.45**	**43**	PKPbc	**PKPbc**	**20 52 40.0 +0.4**	
	comp=Z,7.8nm,0.8s,baz=291,slow=4.1,SNR=33						
KSM	**Kuching**	**147.72**	**185**		**PKPbc**	**20 52 40.3 -1.2**	
MDRS

NIL	Nilore	151.67	81	IAMs_20	IAMs_20	22 05 54.6	
	comp=Z,3μm,20.0s						
NIL	Nilore	151.67	81	PKIKP	PKPdf	20 52 47.3	+2.8
NIL				MLR	MLR		
	comp=Z,3μm,20.0s						
BHPL	Bhopal	151.73	104	eP	PKPdf	20 52 47.4	+2.5
BTLS	Baital	152.08	56	ePKIKP	PKPbc	20 52 51.0	-0.3
BTLS	Baital	152.08	56	ePKP	PKPbc	20 52 51.0	-0.3
	baz=56						
SGDS	Sogindy	152.79	60	ePKIKP	PKPdf	20 52 46.8	+0.9
SGDS	Sogindy	152.79	60	ePKP	PKPdf	20 52 46.8	+0.9
	baz=60						
AAK	Ala-Archa	152.82	61	PKPdf	PKPdf	20 52 47.6	+1.5
AAK	Ala-Archa	152.82	61	PKIKP	PKPdf	20 52 47.6	+1.5
AAK				MLR	MLR		
	comp=Z,4μm,20.0s						
GRNR	Gornyy	152.90	317	ePKIKP	PKiKP	20 52 53.4	+0.3
KURBB	Kurchatov Arra	153.04	43	PKP	PKPdf	20 52 46.8	+0.9
	comp=Z,2.0nm,0.6s,baz=302,slow=2.8,SNR=13						
KURBB				PKPbc	PKPbc	20 52 52.4	-0.8
	comp=Z,14nm,1.0s,baz=306,slow=2.9,SNR=27						
KURBB				PP	PP	20 56 45.7	+7.6
	comp=Z,14nm,1.3s,baz=295,slow=6.2,SNR=4.3						
KURK	Kurchatov	153.05	42		PKPdf	20 52 48.0	+2.1
KURK	Kurchatov	153.05	42	PKIKP	PKPdf	20 52 46.8	+0.9
KURK						20 52 52.4	
KSH	Kashi	154.23	68	PKPbc	PKPdf	20 52 52.0	+3.9
KSH				PP	PP	20 56 45.0	-0.7
ZALV	Zalesovo Beam	154.31	32	PKP	PKPdf	20 52 48.0	+0.4
	comp=Z,7.5nm,1.1s,baz=270,slow=3.0,SNR=20						
ZALV				PKPbc	PKPbc	20 52 55.1	-0.7
	comp=Z,19nm,0.9s,baz=314,slow=3.1,SNR=19						
ZALV				PKPab	PKPab	20 53 09.9	0.0
	comp=Z,18nm,0.9s,baz=305,slow=2.7,SNR=5.0						
ZALV	Zalesovo Beam	154.31	32	PKPdf	PKPdf	20 52 46.3	-1.3
SMLA	Simla	154.39	88	eP	PKPdf	20 52 50.0	+1.6
SMLA				i x	x	20 56 44.8	
MDOK	Medeo	154.58	59	ePKIKP	PKPdf	20 52 50.3	+1.8
MDOK	Medeo	154.58	59	ePKP	PKPdf	20 52 50.4	+1.8
	baz=60						
MJAR	Matsushiro Arr	154.72	285	PKPbc	PKiKP	20 52 59.4	+2.0
	comp=Z,2.9nm,0.8s,baz=181,slow=1.6,SNR=6.1						
MJAR				PKPab	sPKPab	20 53 16.0	+0.8
	comp=Z,4.1nm,0.9s,baz=111,slow=1.2,SNR=4.8						
MAJO	Matsushiro	154.73	285	IAMs_20	IAMs_20	22 15 45.0	
	comp=Z,2μm,20.0s						
DDI	Dehra Dun	154.93	90	eP	PKPdf	20 52 53.0	+3.7
DDI				i x	x	20 56 49.2	
TEY	Ternei	154.94	305	ePKIKP	PKPdf	20 52 50.9	+2.2
INU	Inuyama	155.61	282	IAMs_20	IAMs_20	22 17 23.0	
	comp=Z,2μm,21.0s						
KPKS	Kokpek	155.68	58	ePKIKP	PKPdf	20 52 51.6	+1.7
KPKS	Kokpek	155.68	58	ePKP	PKPdf	20 52 51.7	+1.7
	baz=58						
SHLS	Shalkode	156.31	59	ePKIKP	PKPdf	20 52 53.8	+2.9
SHLS	Shalkode	156.31	59	ePKP	PKPdf	20 52 53.8	+2.9
	baz=58						
MKAR	Makanchi Array	156.98	48	PKP	PKPdf	20 52 53.1	+1.7
	comp=Z,2.5nm,1.0s,baz=296,slow=3.9,SNR=7.3						
MKAR				PKPab	PKPab	20 53 20.8	-0.9
	comp=Z,6.4nm,0.8s,baz=286,slow=2.9,SNR=17						
MKAR				PP	PP	20 57 00.6	+0.2
	comp=Z,3.5nm,1.1s,baz=252,slow=2.4,SNR=4.0						
ZSN	Zaisan	158.23	45	ePKIKP	PKPdf	20 52 54.6	+1.6
ZSN	Zaisan	158.23	45	ePKP	PKPdf	20 52 54.6	+1.6
	baz=45						
USRK	Ussuriysk Ar.	158.33	306	PKPab	PKPab	20 53 29.6	+2.1
	comp=Z,2.2nm,0.8s,baz=281,slow=3.7,SNR=3.1						
BOK	Bokaro	158.70	112	eP	PKPdf	20 52 53.8	-0.5
BOK				i x	x	20 57 08.4	
MDJ	Mudanjiang	159.76	309	IAMs_20	IAMs_20	22 13 10.9	
	comp=Z,2μm,21.0s						
MDJ	Mudanjiang	159.76	309	PKP	PKPdf	20 52 54.0	-0.8
MDJ				PP	PP	20 57 13.5	-2.2
MDJ				LR	LR		
	comp=Z,1μm,18.1s						
MDJ				LR	LR		
	comp=Z,2μm,18.1s						
MDJ				LR	LR		
	comp=Z,2μm,19.6s						
CIT	Chita	161.26	348	ePKP2	PKPab	20 53 42.8	+2.8
CIT				pmax	pmax		
	comp=Z,60nm,2.6s						
WMQ	Urumqi	161.71	51	ePKP	PKPdf	20 52 56.0	-1.1
WMQ				PP	PP	20 57 23.8	-2.4
WMQ				SKKS		21 04 16.3	
WMQ				AMB	AMB		
	comp=Z,1μm,11.7s						
WMQ				LR	LR		
	comp=Z,3μm,19.1s						
WMQ				LR	LR		
	comp=Z,5μm,21.9s						
WMQ				LR	LR		
	comp=Z,4μm,21.9s						
GTK	Tadong	162.57	107	eP	PKPdf	20 53 01.0	+2.4
GTK				i x	x	20 57 30.4	
CN2	Changchun	162.79	311	ePKP	PKPdf	20 52 54.8	-3.3
CN2				ePP	PP	20 57 31.3	-0.5
CN2				SKS	SKSdf	20 59 58.3	-4.5
CN2				eSS	SS	21 17 53.3	-2.1
CN2				AMB	AMB		
	comp=Z,420nm,15.0s						
CN2				LR	LR		
	comp=Z,1μm,20.0s						
CN2				LR	LR		
	comp=Z,2μm,20.0s						
CN2				LR	LR		
	comp=Z,3μm,21.0s						
KSRS	Korea Array	162.93	288	PKP	PKPdf	20 52 59.1	+0.7
	comp=Z,1.1nm,0.6s,baz=109,slow=0.9,SNR=4.3						
KSRS				PKPab	sPKPab	20 53 51.6	+0.9
	comp=Z,4.0nm,1.0s,baz=111,slow=5.5,SNR=5.0						
CMAR	Chiang Mai Arr	162.94	152	PKP	PKPdf	20 52 60.0	+1.0
	comp=Z,1.2nm,0.4s,baz=250,slow=2.5,SNR=16						
CMAR				PKPab	PKPab	20 53 48.0	-0.2
	comp=Z,1.0nm,0.5s,baz=245,slow=1.9,SNR=1.4						
SAIH	SAIHA	163.03	128	eP	PKPdf	20 53 03.5	+4.3
SAIH				i x	x	20 57 41.5	
ZAK	Zakamensk	163.16	9	ePKP2	PKPab	20 53 51.4	+3.0
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
SHL	Shillong	164.22	117	eP	PKPdf	20 53 05.2	+4.9
SHL				i x	x	20 57 38.0	
SNY	Shenyang	164.93	307	⇑PKP	PKPdf	20 53 13.3	+13
SNY				PP	PP	20 57 50.8	+7.6
QIZ	Qiongzhong	165.12	189	PKP	PKPdf	20 53 05.8	+4.8
QIZ				PP	PP	20 57 52.0	+8.9
TEZP	TEZPUR	165.49	116	eP	PKPdf	20 53 01.0	-0.1
TEZP				i x	x	20 57 45.2	
LSA	Lhasa	165.58	102	PKP	PKPdf	20 53 04.3	+2.6
SONM	Songino Array	165.96	3	PKP	PKPdf	20 53 00.7	-0.3
	comp=Z,1.4nm,0.9s,baz=160,slow=2.4,SNR=7.2						
SONM				PKPab	PKPab	20 54 01.8	+0.9
	comp=Z,4.5nm,1.0s,baz=330,slow=3.1,SNR=8.0						
ITAN	ITANAGAR	166.47	116	eP	PKPdf	20 53 04.7	+2.9
MOKO	MOKOCHONG	166.58	120	eP	PKPdf	20 53 05.9	+3.8
JORH	JORHAT	166.64	118	eP	PKPdf	20 53 04.7	+2.7
QZH	Quanzhou	166.85	231	i PKP	PKPdf	20 53 05.5	+3.3
QZH				PP	PP	20 57 55.5	+2.4
QZH				SKKS		21 04 43.5	
QZH				AMB	AMB		
	comp=Z,630nm,11.3s						
QZH				LR	LR		
	comp=Z,2μm,18.0s						
QZH				LR	LR		
	comp=Z,610nm,18.0s						
QZH				LR	LR		
	comp=Z,2μm,16.6s						
XLT	XiLinHaoTe	167.87	329	ePKP	PKPdf	20 53 04.0	+1.5
XLT				AMB	AMB		
	comp=Z,990nm,10.7s						
XLT				LR	LR		
	comp=Z,200nm,19.1s						
XLT				LR	LR		
	comp=Z,1μm,18.3s						
XLT				LR	LR		
	comp=Z,2μm,20.5s						
SSE	Sheshan	168.05	261	PKP	PKPdf	20 52 57.3	-5.5
SSE				PP	PP	20 58 02.5	+2.6
SSE				AMB	AMB		
	comp=Z,290nm,10.5s						
SSE				LR	LR		
	comp=Z,880nm,21.5s						
SSE				LR	LR		
	comp=Z,600nm,22.2s						
GOMU	GeErMu	169.40	73	PKP	PKPdf	20 53 05.8	+1.7
GOMU				PP	PP	20 58 08.0	+0.8
GOMU				AMB	AMB		
	comp=Z,620nm,6.9s						
GOMU				LR	LR		
	comp=Z,2μm,18.5s						
GOMU				LR	LR		
	comp=Z,1μm,18.8s						
GOMU				LR	LR		
	comp=Z,1μm,19.5s						
NJ2	Nanjing	170.22	263	ePKP	PKPdf	20 53 07.3	+3.1
NJ2				PP	PP	20 58 11.5	+0.6
NJ2				AMB	AMB		
	comp=Z,1μm,13.7s						
NJ2				LR	LR		
	comp=Z,2μm,19.4s						
NJ2				LR	LR		
	comp=Z,2μm,16.1s						
NJ2				LR	LR		
	comp=Z,4μm,18.5s						
KMI	Kunming	170.44	154	⇑PKP	PKPdf	20 53 05.0	+0.2
BJI	Beijing	170.62	314	PKP	PKPdf	20 53 02.3	-1.8
BJI				LR	LR		
	comp=Z,480nm,21.0s						
BJI				LR	LR		
	comp=Z,2μm,20.1s						
BJI				LR	LR		
	comp=Z,3μm,18.4s						
GULI	GuiLin	171.13	198	PKP	PKPdf	20 53 09.5	+4.6
GULI				PP	PP	20 58 21.8	+8.0
PZH	PanZhiHua	171.23	145	PKP	PKPdf	20 53 03.3	-1.8
PZH				pPKP	sPKPdf	20 53 08.5	+0.6
PZH				SKKS		21 05 00.0	
PZH				AMB	AMB		
	comp=Z,850nm,8.2s						
PZH				LR	LR		
	comp=Z,2μm,19.8s						
PZH				LR	LR		
	comp=Z,1μm,17.8s						
PZH				LR	LR		
	comp=Z,2μm,18.7s						
TIA	Tai'an	171.67	289	PKP	PKPdf	20 53 07.0	+2.2
TIA				PP	PP	20 58 17.8	-0.2
TIA				AMB	AMB		
	comp=Z,770nm,11.3s						
TIA				LR	LR		
	comp=Z,2μm,18.1s						
TIA				LR	LR		
	comp=Z,2μm,19.1s						
TIA				LR	LR		
	comp=Z,3μm,22.6s						
GTA	Gaotai	171.72	45	ePKP	PKPdf	20 53 08.3	+3.4
GTA				PKPab	sPKPab	20 54 30.0	0.0
GTA				PP	PP	20 58 22.0	+4.3
GTA				SKKS		21 05 06.0	
GTA				SS	SS	21 19 22.0	-3.6
GTA				AMB	AMB		
	comp=Z,1μm,12.6s						
GTA				LR	LR		
	comp=Z,2μm,20.7s						
GTA				LR	LR		
	comp=Z,2μm,21.4s						
GTA				LR	LR		
	comp=Z,3μm,21.4s						
HHC	Hu-ho-hao-te	172.23	336	ePKP	PKPdf	20 53 09.3	+4.2
HHC				PP	PP	20 58 35.5	+16
GYA	Guiyang	172.65	175	⇓PKP	PKPdf	20 53 07.0	+1.3
GYA				PKPab	sPKPab	20 54 34.3	+0.6
GYA				PP	PP	20 58 24.3	+3.0
GYA				AMB	AMB		
	comp=Z,770nm,13.2s						
GYA				LR	LR		
	comp=Z,1μm,16.4s						
GYA				LR	LR		
	comp=Z,1μm,19.7s						
GYA				LR	LR		
	comp=Z,2μm,23.9s						
HNS	HongShan	173.06	303	⇑PKP	PKPdf	20 53 06.0	+0.6
HNS				SKKS		21 05 10.8	
HNS				AMB	AMB		
	comp=Z,940nm,8.0s						
HNS				LR	LR		
	comp=Z,2μm,17.9s						
HNS				LR	LR		
	comp=Z,2μm,17.8s						
HNS				LR	LR		
	comp=Z,4μm,18.6s						
WHN	Wuhan	173.28	243	⇑PKP	PKPdf	20 53 09.0	+3.3
WHN				PP	PP	20 58 31.3	+5.6
WHN				LR	LR		
	comp=Z,7μm,18.5s						
WHN				LR	LR		
	comp=Z,4μm,21.3s						
WHN				LR	LR		
	comp=Z,7μm,19.0s						
TIY	Taiyuan	174.35	315	⇓PKP	PKPdf	20 53 10.8	+4.8
TIY				PP	PP	20 58 49.8	+19
LYN	LuoYang	175.74	281	⇑PKP	PKPdf	20 53 13.0	+6.7
LYN				PKPab	sPKPab	20 54 52.5	+4.9
LYN				PP	PP	20 58 48.0	+10
CD2	Chengdu	175.77	132	PKP	PKPdf	20 53 06.3	-0.2
CD2				SKS	SKSdf	21 00 03.5	-6.3
CD2				SKKS	SKKSac	21 05 21.8	-2.4
CD2				AMB	AMB		
	comp=Z,1μm,8.1s						
CD2				LR	LR		
	comp=Z,3μm,15.2s						
CD2				LR	LR		
	comp=Z,3μm,18.6s						
CD2				LR	LR		
	comp=Z,2μm,22.7s						
LZH	Lanzhou	176.29	51	PKP	PKPdf	20 53 10.5	+3.8
LZH				SKKS		21 05 25.8	
LZH				AMB	AMB		
	comp=Z,2μm,13.7s						
LZH				LR	LR		
	comp=Z,1μm,19.2s						
LZH				LR	LR		
	comp=Z,2μm,19.9s						
LZH				LR	LR		
	comp=Z,2μm,20.0s						
XAN	Xi'an	178.72	281	PKP	PKPdf	20 53 09.5	+2.6
XAN				SKKS		21 05 39.0	
XAN				AMB	AMB		
	comp=Z,4μm,16.4s						
XAN				LR	LR		
	comp=Z,3μm,20.8s						
XAN				LR	LR		
	comp=Z,1μm,20.5s						
XAN				LR	LR		
	comp=Z,5μm,20.8s						

*NOU **27** 20:38:21.0, 37°.19S×179°.79E, h0km, MLv4.2/9, Off E. Coast of N. Island, N.Z.*
*WEL **27** 20:38:29.8±1.9, 37°.S±7°.×17°.9E±1°.0, h18km±12km, M3.5/33, ML3.8/36, MLv3.5/33, Error ellipse: s-maj=0.0km s-min=0.0km az=69.8*

ISC 27 20:38:28.4±2.6, 37°.26S±0°.09×179°.2E±0°.1, h10km, n81, σ0§99/84, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.74	246	P	Pb	20 38 43.3	-0.1
MXZ				S	Sg	20 38 52.1	-0.4
MXZ	Matakaoa Point	0.74	246	P	Pb	20 38 43.3	-0.1
WMGZ	Waiomatatini S	0.81	227	P	Pn	20 38 46.7	+0.8
PKGZ	Pakihiroa	1.06	234	P	Pn	20 38 49.9	+0.4
PKGZ				S	Sn	20 39 04.1	-0.2
PUZ	Puketiti	1.08	221	P	Pn	20 38 50.5	+0.9
HAZ	Te Kaha	1.20	245	P	Pb	20 38 50.4	-0.9
HAZ				S	Sn	20 39 07.3	-0.3
TWGZ	Tauwhareparae	1.31	225	P	Pg	20 38 54.0	+0.5
RUGZ	Raukumara Rang	1.37	239	P	Pb	20 38 54.5	+0.3
CNGZ	Carnagh Statio	1.43	211	P	Pb	20 38 56.2	+1.0
TKGZ	Te Karaka	1.57	221	P	Pn	20 38 57.1	+0.8
WIZ	White Island	1.59	260	P	Pn	20 38 56.7	+0.1
MWZ	Matawai	1.68	230	P	Pn	20 38 58.8	+0.9
RIGZ	Rimuhau	1.82	217	P	Pn	20 39 00.6	+0.9
WHRZ	Whale Island	1.83	250	P	Pn	20 39 00.4	+0.4
RAGZ	Rawiri	1.85	228	P	Pn	20 39 01.5	+1.2
URZ	Urewera	1.91	238	P	Pn	20 39 01.6	+0.7
URZ	Urewera	1.91	238	P	Pn	20 39 01.8	+0.9
KNZ	Kokohu	2.11	213	P	Pn	20 39 03.7	-0.1
MHGZ	Mahia Peninsul	2.13	207	P	Pn	20 39 04.9	+0.8
OPRZ	Ohinepanea	2.15	254	P	Pn	20 39 04.0	-0.3
RTZ	Ruatahuna	2.19	231	P	Pn	20 39 05.6	+0.7
MUGZ	Murupara	2.25	237	P	Pn	20 39 06.0	+0.3
TARZ	Mount Tarawera	2.32	244	P	Pn	20 39 07.6	+0.9
RAHZ	Arahi	2.33	224	P	Pn	20 39 07.6	+0.8
MYRZ	Mayor Island	2.33	269	P	Pn	20 39 06.7	-0.1
WHHZ	Waihua	2.36	219	P	Pn	20 39 08.0	+0.7
OMRZ	Omania	2.37	248	P	Pn	20 39 08.4	+1.1
MTHZ	Maungataniwha	2.42	228	P	Pn	20 39 08.9	+0.8
HLRZ	Highlands Stat	2.44	245	P	Pn	20 39 08.7	+0.4
NMHZ	Naumai	2.61	225	P	Pn	20 39 11.5	+0.8
ARHZ	Aropaoanui	2.62	220	P	Pn	20 39 11.5	+0.6
MRHZ	Matea Rd	2.67	233	P	Pn	20 39 12.0	+0.4
KUZ	Kuaotunu	2.80	280	P	Pn	20 39 11.6	-1.6
KUZ	Kuaotunu	2.80	280	P	Pn	20 39 12.7	-0.5
BKZ	Black Stump Fm	2.83	227	P	Pn	20 39 14.0	+0.2
BKZ	Black Stump Fm	2.83	227	P	Pn	20 39 14.0	+0.2
CKHZ	Cape Kidnapper	2.90	214	P	Pn	20 39 14.2	-0.4
MCHZ	McNeill Hill	2.92	221	P	Pn	20 39 14.9	0.0
TOZ	Tahuroa Road	2.95	260	P	Pn	20 39 14.9	-0.4
KWHZ	Kaweka Forest	3.05	224	P	Pn	20 39 17.0	+0.3
KAHZ	Kahuranaki	3.10	215	P	Pn	20 39 16.7	-0.7
RITZ	Rihia Road	3.12	236	P	Pn	20 39 18.2	+0.6
GRZ	Great Barrier	3.14	288	P	Pn	20 39 17.6	-0.3
MKAZ	Moumakai	3.20	272	P	Pn	20 39 17.6	-1.1
TMVZ	Te Maari	3.29	235	P	Pn	20 39 20.0	-0.2
BHHZ	Black Hill Sta	3.30	227	P	Pn	20 39 20.3	+0.2
PXZ	Pawanui	3.30	212	P	Pn	20 39 18.8	-1.3
ETVZ	East Tongariro	3.30	234	P	Pn	20 39 20.1	-0.1
OTVZ	Oturere	3.34	234	P	Pn	20 39 21.0	+0.1
NNVZ	North Ngauruho	3.36	235	P	Pn	20 39 21.5	+0.4
WTVZ	West Tongariro	3.37	236	P	Pn	20 39 21.5	+0.3
SNVZ	South Ngauruho	3.37	234	P	Pn	20 39 21.4	+0.1
NGZ	Ngauruhoe	3.39	235	P	Pn	20 39 21.4	-0.1
TUVZ	Tukino	3.41	233	P	Pn	20 39 21.8	+0.1
MOVZ	Moawhango	3.43	230	P	Pn	20 39 21.9	-0.1
TWVZ	Taurewa	3.44	237	P	Pn	20 39 22.5	+0.3
MBAZ	Motutapu North	3.45	277	P	Pn	20 39 22.4	+0.3
FWVZ	Far West T-bar	3.47	234	P	Pn	20 39 22.8	+0.1
WNVZ	Wahianoa	3.48	233	P	Pn	20 39 22.7	0.0
PNHZ	Pukenui	3.52	220	P	Pn	20 39 22.3	-0.9
PRHZ	Porangahau	3.59	213	P	Pn	20 39 23.0	-1.1
AWAZ	Awhitu Peninsu	3.61	272	P	Pn	20 39 24.2	-0.2
HIZ	Hauiti	3.63	249	P	Pn	20 39 25.7	+1.1
HIZ	Hauiti	3.63	249	P	Pn	20 39 26.0	+1.4
TSZ	Takapari Road	3.75	221	P	Pn	20 39 25.0	-1.4
VRZ	Vera Road	3.93	240	P	Pn	20 39 29.8	+1.0
WCZ	Waipu Caves	4.09	287	P	Pn	20 39 31.3	+0.3
WAZ	Wanganui	4.11	231	P	Pn	20 39 31.9	+0.6
MRZ	Mangatainoka R	4.39	218	P	Pn	20 39 33.1	-2.0
NEZ	North Egmont	4.46	242	P	Pn	20 39 38.2	+2.0
PKE	Pukeiti	4.51	243	P	Pn	20 39 39.1	+2.4
KHEZ	Kahui Hut	4.53	242	P	Pn	20 39 39.1	+2.0
KHEZ	Kahui Hut	4.53	242	P	Pn	20 39 39.1	+2.0
	261nm,1.9s						
OGWZ	Otaki Gorge	4.72	220	P	Pn	20 39 37.7	-1.9
OUZ	Omahuta	4.94	293	P	Pn	20 39 42.6	+0.1
OUZ	Omahuta	4.94	293	P	Pn	20 39 42.7	+0.1
TKNZ	Takaka Hill	6.12	230	P	Pn	20 39 56.8	-2.1
QRZ	Quartz Range	6.27	233	P	Pn	20 39 58.7	-2.2
QRZ	Quartz Range	6.27	233	P	Pn	20 39 59.2	-1.7
KHZ	Kahutara	6.72	218	P	Pn	20 40 05.1	-2.0
CTZ	Chatham Island	7.22	155	P	Pn	20 40 16.4	+2.5

*IDC **27** 20:38:58.4±1.1, 33°.78S×72°.55W, h0km, mb3.9/4, mbtmp4.1/6, ML3.9/2, Error ellipse: s-maj=61.0km s-min=24.0km az=86.0*
*GUC **27** 20:39:00.4±0.8, 33°.74S×72°.67W, h33km±3km, ML3.9*

ISC 27 20:39:00.7±0.8, 33°.79S±0°.04×72°.49W±0°.06, h17km, n31, σ1§22/36, mb4.1/4, 7C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	Santo Domingo	0.74	80	⇑iP	Pn	20 39 16.6	+0.3
VA05				i S	Sn	20 39 28.0	+0.8
VA05				IAML		20 39 32.4	
	comp=N,11μm,0.4s						
BO03	Pichilemu	0.83	149	eP	Pn	20 39 16.8	-0.9
BO03				i S	Sn	20 39 29.5	0.0
BO03				IAML		20 39 30.5	
	comp=E,5μm,0.4s						
MT01	Popeta	1.03	95	⇑iP	Pg	20 39 20.6	-0.1
MT01				i S	Sg	20 39 35.6	+1.3
MT01				IAML		20 39 36.4	
	comp=N,4μm,0.6s						
MT02	Curacav	1.24	65	eP	Pg	20 39 23.5	-1.2
MT09	Talagante	1.25	90	⇑iP	Pg	20 39 23.7	-1.1
MT09				IAML		20 39 42.5	
	comp=N,3μm,0.6s						
GO05	Huala	1.31	159	eP	Pg	20 39 26.3	+0.4
GO05				IAML		20 39 52.7	
	comp=E,3μm,0.3s						
BO01	Tunca	1.31	118	eP	Pg	20 39 24.4	-1.6
ROCH	El Roble	1.48	57	eP	Pb	20 39 26.9	-0.9
ROCH				eP	Pb	20 39 26.9	-0.9
MT05	Renca	1.51	75	⇑eP	Pg	20 39 28.3	-1.5
BO04	La Punta	1.57	98	⇑iP	Pb	20 39 29.0	-0.4
BO04				i S	Sg	20 39 51.0	-0.6
BO04				IAML		20 40 10.0	
	comp=E,1μm,0.9s						
MT03	Universidad Ad	1.67	81	eP	Pb	20 39 30.2	-0.9
BO02	Sierra Bellavi	1.73	126	⇑eP	Pb	20 39 31.6	-0.6
FCH	Farellones	1.89	77	eP	Pb	20 39 33.8	-1.1
LMEL	Las Melosas	1.90	93	⇑eP	Pb	20 39 33.8	-1.3
VA03	San Esteban	1.92	58	eP	Pb	20 39 33.2	-2.0
ML02	Panimavida	2.16	156	eP	Pb	20 39 36.5	-2.9
BI05	Punta Hualpn	3.01	191	eP	Pn	20 39 46.0	-1.6
PLCA	Paso Flores	7.11	168	Pn	Pn	20 40 44.7	+0.8
	comp=E,0.4nm,0.3s,baz=305,slow=23,SNR=2.3						
	comp=E,30nm,1.0s						
LPAZ	La Paz	17.86	14	P	P	20 43 09.4	-0.3
	comp=E,0.3nm,0.3s,baz=182,slow=5.1,SNR=6.6						
	comp=E,6.3nm,0.7s						
VNA3	Neumayer Olymp	49.70	158	P	P	20 47 53.3	+1.9
VNA2	Neumayer--Watz	50.35	157	P	P	20 47 58.1	+1.8
	baz=273,slow=7.8						
SNAA	Sanae	51.92	158	P	P	20 48 09.9	+1.8
SNAA	Sanae	51.92	158	P	P	20 48 08.1	0.0
	comp=E,3.5nm,1.1s,baz=259,slow=10,SNR=2.9						
	comp=E,3.5nm,1.1s						
TROLL	Troll, Antarti	53.63	158	P	P	20 48 22.6	+1.8
QSPA	South Pole Qui	56.45	180	P	P	20 48 41.8	+0.5
	comp=E,2.5nm,1.0s,baz=180,slow=6.1,SNR=2.1						
	comp=E,2.5nm,1.0s						
TXAR	Lajitas Array	69.37	331	P	P	20 50 07.7	+0.2
	comp=E,0.3nm,0.7s,baz=148,slow=5.3,SNR=2.6						
	comp=E,0.3nm,0.7s						
TORD	Torodi Ar. Bea	84.49	70	P	P	20 51 33.3	+0.4
	comp=E,0.8nm,0.8s,baz=247,slow=4.5,SNR=2.8						
	comp=E,0.8nm,0.8s						
BVAR	Borovoye Array	147.38

KOUNC **Koumac, New Ca 5.32 219** P **Pn 21 00 24.3 +1.5**
DZM Mont Dzumac 5.77 193 Pn **Pn 21 00 29.6 +0.5**
55nm,0.3s,baz=35,slow=15,SNR=318
DZM Sn **Sn 21 01 36.1 +1.8**
15nm,0.3s,baz=269,slow=20,SNR=4.9
119nm,0.3s
DZM Mont Dzumac 5.77 193 Pn **Pn 21 00 29.1 0.0**
DZM Sn **Sn 21 01 31.7 -2.5**
DZM Mont Dzumac 5.77 193 P **Pn 21 00 30.2 +1.0**
NOUC Port Laguerre 5.83 194 P **Pn 21 00 31.1 +1.2**
MSVF Nonsavu 9.84 99 Pn Pn 21 01 30.5 +5.5
EIDS Eidsvold 18.01 238 P **Pn 21 03 11.8 -1.7**
CTA Charters Tower 20.83 257 P **P 21 03 44.5 -0.2**
5.1nm,0.7s,baz=87,slow=12,SNR=7.3
5.1nm,0.7s
CTAO Charters Tower 20.83 257 **P 21 03 45.8 +1.1**
CTAO IAmb IAmb 21 03 53.3
comp=Z,15nm,0.8s
BFZ Birch Farm 25.24 165 P **P 21 04 28.3 -0.3**
STKA Stephens Creek 28.37 232 P **P 21 04 57.2 +0.3**
comp=Z,3.2nm,1.0s,baz=80,slow=5.1,SNR=5.9
comp=Z,3.2nm,1.0s
STKA Stephens Creek 28.37 232 P **P 21 04 56.7 -0.1**
WB0 Warramunga Arr 31.95 259 P **P 21 05 27.9 -0.8**
WB0 IAmb IAmb 21 05 37.0
comp=Z,4.7nm,0.8s
WB2 Warramunga Arr 31.99 259 P **P 21 05 28.4 -0.7**
WB2 IAmb IAmb 21 05 43.5
comp=Z,7.2nm,1.1s
WRAB Tennant Creek 31.99 259 P **P 21 05 27.7 -1.4**
WRAB IAmb IAmb 21 05 41.0
comp=Z,5.4nm,0.9s
WRA Warramunga Arr 32.00 259 P **P 21 05 27.9 -1.2**
comp=Z,2.8nm,0.8s,baz=85,slow=8.8,SNR=24
comp=Z,2.8nm,0.8s
AS31 Alice Springs 32.64 252 P **P 21 05 34.7 0.0**
AS31 IAmb IAmb 21 05 35.9
comp=Z,5.0nm,0.8s
ASAR Alice Springs 32.64 252 P **P 21 05 34.7 0.0**
comp=Z,14nm,0.8s,baz=78,slow=9.1,SNR=128
comp=Z,14nm,0.8s
ASAR Alice Springs 32.64 252 P **P 21 05 33.9 -0.8**
KNRA Kununurra 37.54 266 P **P 21 06 16.4 -0.5**
FORT Forrest 38.95 241 P **P 21 06 28.3 -0.4**
FORT IAmb IAmb 21 06 47.6
comp=Z,20nm,0.8s
VNDA Vanda 61.19 181 P **P 21 09 18.2 +1.7**
comp=Z,0.2nm,0.5s,baz=15,slow=8.0,SNR=1.5
comp=Z,0.2nm,0.5s
QSPA South Pole Qui 73.61 180 P **P 21 10 36.7 +1.2**
QSPA IAmb IAmb 21 10 48.3
comp=Z,6.4nm,1.1s
CMAR Chiang Mai Arr 76.15 294 P **P 21 10 51.4 +0.5**
comp=Z,0.8nm,0.3s,baz=116,slow=4.1,SNR=1.7
comp=Z,0.8nm,0.3s
SONM Songino Array 84.19 323 P **P 21 11 32.8 -0.9**
comp=Z,0.7nm,0.8s,baz=130,slow=4.6,SNR=4.7
comp=Z,0.7nm,0.8s
NVAR Mina Array Bea 87.95 49 P **P 21 11 52.9 +0.3**
comp=Z,0.2nm,0.3s,baz=263,slow=6.3,SNR=1.7
comp=Z,0.2nm,0.3s
ILAR Eielson Array 87.96 18 P **P 21 11 51.3 -0.4**
comp=Z,0.4nm,0.6s,baz=230,slow=5.3,SNR=5.0
comp=Z,0.4nm,0.6s

IDC 27 21:06:22.0±4.1, 6°.85S×153°.97E, h0km, mb3.1/2, mbtmp3.1/2, MS3.8/1, Error ellipse: s-maj=204.0km s-min=53.3km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.14**	**209**	LR	LR	21 14 51.6	
	comp=Z,339nm,20.8s,baz=151,slow=34						
WRA	**Warramunga Arr**	**23.07**	**234**	P	P	21 11 29.5	+0.1
	0.4nm,0.9s,baz=57,slow=9.8,SNR=2.4						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**25.52**	**227**	P	P	21 11 52.1	-0.4
	0.5nm,0.7s,baz=60,slow=8.8,SNR=7.2						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**152.00**	**285**	PKPbc	PKPbc	21 26 20.4	+0.1
	0.4nm,0.8s,baz=74,slow=2.6,SNR=3.7						

IDC 27 21:12:59.0±8.3, 6°.30S×149°.37E, h49km±66km, mb2.6/1, mbtmp3.3/3, ML3.7/1, Error ellipse: s-maj=131.9km s-min=59.3km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.78**	**215**	P	Pn	21 13 56.0	+1.2
	25nm,0.5s,baz=29,slow=4.1,SNR=3.7						
PMG				S	Sn	21 14 38.5	+0.4
	66nm,0.7s,baz=62,slow=21,SNR=7.0						
WRA	**Warramunga Arr**	**19.93**	**226**	P	P	21 17 26.2	-0.7
	0.2nm,0.3s,baz=51,slow=11,SNR=13						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**22.79**	**219**	P	P	21 17 58.0	+0.3
	0.2nm,0.6s,baz=57,slow=8.9,SNR=4.7						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.45**	**285**	PKPbc	PKPbc	21 32 38.1	-0.5
	0.2nm,0.6s,baz=93,slow=3.2,SNR=2.4						

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*HVO **27** 21:49:58.9±0.6, 19°.34N±0°.04×155°.15W±0°.02, h6km±2km, ML2.7/26, ML2.6/40(NEIC), Error ellipse: s-maj=5.6km s-min=1.1km az=153.0*

NEIC 27 21:49:59.2±0.5, 19°.34N±0°.04×155°.15W±0°.02, h6km±1km, Error ellipse: s-maj=5.9km s-min=1.4km az=155.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHH	**Kane Nui o Ham**	**0.04**	**333**		Pg	21 50 00.9	+0.1
JCUZ	**Jacuzzi**	**0.06**	**44**	Pg	Pg	21 50 00.6	-0.3
NPOC	**North of Pu'u**	**0.06**	**34**	Pg	Pg	21 50 00.7	-0.2
NPOC				Sg	Sg	21 50 02.5	+0.4
PUH	**Pauahi**	**0.07**	**298**	Pg	Pg	21 50 01.1	0.0
KKO	**Keanakako`i**	**0.13**	**297**		Pg	21 50 02.1	+0.2
KKO					Sg	21 50 04.4	+0.6
KKO	**Keanakako`i**	**0.13**	**297**	IAML		21 50 04.6	
	comp=E,2μm,0.5s						
KKO				IAML		21 50 04.9	
	comp=N,3μm,0.7s						
BYL	**Byron's Ledge**	**0.13**	**304**		Pg	21 50 01.9	0.0
BYL	**Byron's Ledge**	**0.13**	**304**		Sg	21 50 04.4	+0.6
BYL				IAML		21 50 04.6	
	comp=E,2μm,0.2s						
BYL				IAML		21 50 04.7	
	comp=N,2μm,0.4s						
RIM	**Rim**	**0.13**	**295**		Pg	21 50 02.1	+0.1
RIM					Sg	21 50 04.5	+0.5
RIM	**Rim**	**0.13**	**295**	IAML		21 50 05.0	
	comp=N,4μm,0.4s						
RIM				IAML		21 50 05.0	
	comp=E,3μm,0.5s						
HATHI	**Halema'uma'u T**	**0.14**	**308**		Pg	21 50 02.0	-0.1
HATHI				IAML		21 50 05.3	
	comp=N,2μm,0.5s						
HATHI				IAML		21 50 05.3	
	comp=E,2μm,0.3s						
HATHI	**Halema'uma'u T**	**0.14**	**308**		Sg	21 50 04.6	+0.5
SBLHI	**Steaming Bluff**	**0.14**	**307**		Pg	21 50 02.1	-0.1
SBLHI					Sg	21 50 04.7	+0.4
SBLHI				IAML		21 50 05.3	
	comp=N,2μm,0.4s						
NPH	**North Pit**	**0.14**	**300**	Sg	Sg	21 50 04.2	-0.2
SDHHI	**Sand Hill**	**0.15**	**290**		Pg	21 50 02.3	0.0
SDHHI				IAML		21 50 05.3	
	comp=E,2μm,0.3s						
SDHHI				IAML		21 50 06.5	
	comp=N,2μm,0.4s						
SDHHI	**Sand Hill**	**0.15**	**290**		Sg	21 50 04.9	+0.5
UWB	**Uwekahuna B**	**0.15**	**305**		Pg	21 50 02.1	-0.2
UWB				IAML		21 50 05.2	
	comp=N,1μm,0.4s						
UWB	**Uwekahuna B**	**0.15**	**305**		Sg	21 50 04.8	+0.3
OBL	**Observatory Le**	**0.15**	**301**	Pg	Pg	21 50 02.0	-0.3
OBL				IAML		21 50 06.1	
	comp=E,2μm,0.7s						
HLP	**Hilina Pali**	**0.16**	**254**		Pg	21 50 02.6	+0.2
HLP				IAML		21 50 05.8	
	comp=E,3μm,0.2s						
HLP				IAML		21 50 07.7	
	comp=N,1μm,0.3s						
HLP	**Hilina Pali**	**0.16**	**254**		Sg	21 50 05.4	+0.7

WRMHI	**West Rim**	**0.16**	**295**		Pg	21 50 02.5	0.0
WRMHI					Sg	21 50 05.3	+0.6
UWE	**Uwekahuna**	**0.16**	**301**		Pg	21 50 02.5	0.0
UWE				IAML		21 50 07.3	
	comp=E,1μm,0.6s						
RSD	**Rainshed**	**0.17**	**315**		Pg	21 50 02.9	+0.1
HTC	**Hot Caves**	**0.26**	**247**		Pg	21 50 04.5	+0.2
MLH	**Mauna Loa**	**0.27**	**304**		Pg	21 50 04.5	-0.1
MLH					Sg	21 50 09.7	+1.4
MLH	**Mauna Loa**	**0.27**	**304**	IAML		21 50 10.0	
	comp=E,556nm,0.4s						
MLH				IAML		21 50 10.3	
	comp=N,518nm,0.3s						
PHO	**Puu Honuaula**	**0.28**	**60**		Pg	21 50 04.9	+0.2
AIN	**Ainahou**	**0.29**	**276**		Pg	21 50 05.7	+0.6
AIN	**Ainahou**	**0.29**	**276**		Sb	21 50 10.9	-1.2
AIN				IAML		21 50 11.4	
	comp=E,4μm,0.3s						
AIN				IAML		21 50 11.8	
	comp=N,7μm,0.3s						
HMH	**Humu'ula Sheep**	**0.41**	**310**		Pg	21 50 07.2	-0.1
HMH	**Humu'ula Sheep**	**0.41**	**310**		Sg	21 50 13.9	+1.2
MWH	**Moku'aweowe**	**0.45**	**289**		Pg	21 50 07.8	-0.2
MWH					Sg	21 50 14.9	+1.0
MLOA	**Mauna Loa Obse**	**0.45**	**296**		Pg	21 50 07.8	-0.2
MLOA					Sg	21 50 14.9	+1.0
MLOA				IAML		21 50 15.6	
	comp=E,840nm,0.4s						
KHU	**Kahuku**	**0.45**	**258**		Pg	21 50 07.5	-0.5
KHU	**Kahuku**	**0.45**	**258**		Sg	21 50 14.8	+0.8
KHU				IAML		21 50 19.9	
	comp=N,437nm,0.9s						
KHU				IAML		21 50 20.0	
	comp=E,350nm,1.1s						
POHA	**Pohakuloa**	**0.55**	**319**		Pg	21 50 09.4	-0.5
HUH	**Hualalai**	**0.73**	**298**		Pg	21 50 13.3	-0.1
HPAH	**Hawaii Prepara**	**0.86**	**323**	Pg	Pg	21 50 15.3	-0.4

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*IDC **27** 21:53:58.3±2.0, 13°.22S×167°.11E, h202km±17km, mb4.1/17, mbtmp4.6/19, MS4.5/2, Error ellipse: s-maj=15.5km s-min=10.9km az=79.0*
*NEIC **27** 21:54:00.5±1.6, 13°.24S±0°.10×167°.12E±0°.06, h219km±6km, mb4.6/124, Error ellipse: s-maj=14.4km s-min=7.9km az=188.0*
*NOU **27** 21:54:13.6, 14°.28S×167°.56E, h172km, MLv4.4/7, Vanuatu Islands*

ISC 27 21:53:56.0±0.4, 13°.16S±0°.06×167°.11E±0°.07, h180km, n220, σ1$09/225, mb4.6/76, 1C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**4.66**	**167**	P	**Pn**	**21 55 08.2**	**+2.7**
LIFNC	**LIFOU**	**7.58**	**179**	Pn	**Pn**	**21 55 45.1**	**+1.4**
LIFNC	**LIFOU**	**7.58**	**179**	P	**Pn**	**21 55 44.9**	**+1.2**
	118nm,0.9s						
KOUNC	**Koumac, New Ca**	**7.83**	**200**	Pn	**Pn**	**21 55 51.0**	**+4.0**
MARNC	**Mare, Loyalty**	**8.32**	**174**		**Pn**	**21 55 55.0**	**+1.5**
MARNC	**Mare, Loyalty**	**8.32**	**174**	P	**Pn**	**21 55 55.3**	**+1.8**
	1.7nm,0.7s						
DZM	**Mont Dzumac**	**8.89**	**184**	P	**Pn**	**21 56 03.7**	**+2.6**
	10nm,0.5s,baz=12,slow=16,SNR=22						
DZM	**Mont Dzumac**	**8.89**	**184**	P	Pn	21 56 06.1	+5.1
MSVF	**Nonsavu**	**11.49**	**115**	P	**P**	**21 56 41.5**	**+0.2**
	25nm,0.9s,baz=280,slow=9.3,SNR=11						
EIDS	**Eidsvold**	**19.38**	**229**	P	**P**	**21 58 09.4**	**+1.3**
EIDS				IAmb	IAmb	21 58 10.8	
	comp=Z,33nm,1.3s						
PMG	**Port Moresby**	**19.91**	**279**	P	**P**	**21 58 15.7**	**+1.7**
	comp=Z,12nm,0.5s,baz=34,slow=10,SNR=4.1						
CTA	**Charters Tower**	**21.12**	**248**	P	**P**	**21 58 27.6**	**+0.7**
	comp=Z,21nm,0.8s,baz=76,slow=11,SNR=14						
CTA				LR	LR	22 06 55.6	
	comp=Z,506nm,18.1s,baz=296,slow=37						
	comp=Z,21nm,0.8s						
CTAO	**Charters Tower**	**21.12**	**248**	P	**P**	**21 58 27.8**	**+0.8**
CTAO				IAmb	IAmb	21 58 29.8	
	comp=Z,24nm,0.8s						
ARMA	**Armidale**	**22.35**	**217**	P	**P**	**21 58 40.3**	**+1.0**
ARMA				IAmb	IAmb	21 58 41.4	
	comp=Z,37nm,1.4s						
OUZ	**Omahuta**	**22.73**	**166**	P	**P**	**21 58 44.3**	**+1.7**
OUZ				IAmb	IAmb	21 58 46.6	
	comp=Z,18nm,1.0s						
COEN	**Coen**	**23.28**	**265**	P	**P**	**21 58 49.0**	**+1.2**
COEN				IAmb	IAmb	21 58 50.7	
	comp=Z,23nm,1.3s						
MKAZ	**Moumakai**	**24.91**	**165**	P	**P**	**21 59 03.9**	**+1.5**
HIZ	**Hauiti**	**26.17**	**166**	P	**P**	**21 59 15.0**	**+1.3**
MXZ	**Matakaoa Point**	**26.28**	**160**	P	**P**	**21 59 15.1**	**+0.4**
HAZ	**Te Kaha**	**26.28**	**161**	P	**P**	**21 59 15.9**	**+1.2**
RUGZ	**Raukumara Rang**	**26.44**	**161**	P	**P**	**21 59 16.4**	**+0.1**
PKGZ	**Pakihiroa**	**26.50**	**160**	P	**P**	**21 59 17.0**	**+0.2**
URZ	**Urewera**	**26.54**	**162**	P	**P**	**21 59 16.8**	**-0.2**
	comp=Z,5.7nm,0.3s,baz=355,slow=2.9,SNR=9.2						
	comp=Z,5.7nm,0.3s						
URZ	**Urewera**	**26.54**	**162**	P	**P**	**21 59 17.2**	**+0.2**
URZ				IAmb	IAmb	21 59 21.1	
	comp=Z,12nm,1.0s						
URZ	**Urewera**	**26.54**	**162**	P	**P**	**21 59 16.9**	**-0.2**
MUGZ	**Murupara**	**26.64**	**163**	P	**P**	**21 59 19.0**	**+1.1**
TWGZ	**Tauwhareparae**	**26.73**	**161**	P	**P**	**21 59 18.8**	**+0.1**
MWZ	**Matawai**	**26.73**	**162**	P	**P**	**21 59 19.0**	**+0.2**
WTVZ	**West Tongariro**	**26.92**	**165**	P	**P**	**21 59 23.5**	**+2.9**
TMVZ	**Te Maari**	**26.95**	**165**	P	**P**	**21 59 23.2**	**+2.4**
ETVZ	**East Tongariro**	**26.97**	**165**	P	**P**	**21 59 23.9**	**+2.9**
NGZ	**Ngauruhoe**	**26.98**	**165**	P	**P**	**21 59 24.2**	**+3.0**
SNVZ	**South Ngauruho**	**27.00**	**165**	P	**P**	**21 59 24.6**	**+3.2**
CNGZ	**Carnagh Statio**	**27.08**	**161**	P	**P**	**21 59 21.4**	**-0.5**
TUVZ	**Tukino**	**27.08**	**165**	P	**P**	**21 59 24.2**	**+2.1**
WNVZ	**Wahianoa**	**27.12**	**165**	P	**P**	**21 59 25.0**	**+2.6**
BKZ	**Black Stump Fm**	**27.20**	**164**	P	**P**	**21 59 23.4**	**+0.4**
BKZ				IAmb	IAmb	21 59 25.4	
	comp=Z,23nm,1.0s						
BKZ	**Black Stump Fm**	**27.20**	**164**	P	**P**	**21 59 23.4**	**+0.4**
BHHZ	**Black Hill Sta**	**27.39**	**165**	P	**P**	**21 59 25.2**	**+0.4**
CAN	**Canberra**	**27.46**	**213**	P	**P**	**21 59 25.8**	**+0.4**
CAN				IAmb	IAmb	21 59 53.9	
	comp=Z,26nm,1.4s						
QRZ	**Quartz Range**	**27.97**	**171**	P	**P**	**21 59 31.4**	**+1.7**
NNZ	**Nelson**	**28.49**	**170**	P	**P**	**21 59 35.8**	**+1.5**
SNZO	**South Karori**	**28.82**	**168**	P	**P**	**21 59 38.2**	**+1.0**
THZ	**Tophouse**	**28.94**	**171**	P	**P**	**21 59 39.4**	**+1.0**
THZ				IAmb	IAmb	21 59 40.4	
	comp=Z,18nm,0.9s						
MSWZ	**Moikau Station**	**29.04**	**167**	P	**P**	**21 59 39.7**	**+0.5**
BSWZ	**Blackbirch Sta**	**29.06**	**170**	P	**P**	**21 59 40.2**	**+0.8**
PLWZ	**Palliser**	**29.18**	**167**	P	**P**	**21 59 40.5**	**0.0**
KHZ	**Kahutara**	**29.68**	**170**	P	**P**	**21 59 44.5**	**-0.3**
LTZ	**Lake Taylor**	**29.85**	**172**	P	**P**	**21 59 47.0**	**+0.6**
LTZ				IAmb	IAmb	21 59 47.6	
	comp=Z,21nm,1.2s						
STKA	**Stephens Creek**	**29.91**	**227**	P	**P**	**21 59 47.6**	**+0.6**
	comp=Z,9.5nm,0.5s,baz=50,slow=9.4,SNR=27						
STKA				PcP	**PcP**	**22 02 45.1**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=51,slow=1.7,SNR=7.4						
	comp=Z,9.5nm,0.5s						
STKA	**Stephens Creek**	**29.91**	**227**	P	**P**	**21 59 47.7**	**+0.6**
FOZ	**Fox Glacier**	**30.36**	**176**	P	**P**	**21 59 51.0**	**+0.3**
OXZ	**Oxford**	**30.36**	**173**	P	**P**	**21 59 51.5**	**+0.7**
RPZ	**Rata Peaks**	**30.64**	**174**	P	**P**	**21 59 54.0**	**+0.7**
	comp=Z,12nm,0.6s,baz=318,slow=5.2,SNR=5.9						
	comp=Z,12nm,0.6s						
RPZ	**Rata Peaks**	**30.64**	**174**	P	**P**	**21 59 53.8**	**+0.5**
MQZ	**McQueen's Vall**	**30.81**	**172**	P	**P**	**21 59 55.0**	**+0.3**
TOO	**Toolangi**	**31.03**	**215**	P	**P**	**21 59 57.3**	**+0.4**
TOO				IAmb	IAmb	21 59 58.0	
	comp=Z,8.9nm,0.7s						
LBZ	**Lake Benmore**	**31.23**	**176**	P	**P**	**21 59 58.7**	**+0.2**
WKZ	**Wanaka**	**31.60**	**177**	P	**P**	**22 00 01.9**	**+0.1**
WR0	**Warramunga Arr**	**31.90**	**253**	P	**P**	**22 00 03.9**	**-0.8**
ODZ	**Otahua Downs**	**31.92**	**175**	P	**P**	**22 00 04.9**	**+0.4**
ODZ				IAmb	IAmb	22 00 32.1	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**32.02**	**254**	P	**P**	**22 00 05.3**	**-0.4**
WB0				IAmb	IAmb	22 00 05.7	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**32.08**	**253**	P	**P**	**22 00 05.7**	**-0.6**
WRA	**Warramunga Arr**	**32.09**	**253**	P	**P**	**22 00 05.4**	**-1.0**
	comp=Z,5.3nm,0.8s,baz=86,slow=9.1,SNR=49						
WRA				PcP	**PcP**	**22 02 50.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=88,slow=3.2,SNR=4.4						
WRA				S	**S**	**22 05 04.0**	**-1.4**
	comp=Z,0.9nm,1.1s,baz=82,slow=14,SNR=4.7						
WRA				ScP	**ScP**	**22 06 15.8**	**-2.4**
	comp=Z,3.1nm,0.9s,baz=82,slow=3.7,SNR=18						
	comp=Z,5.3nm,0.8s						
AS31	**Alice Springs**	**33.11**	**247**	P	**P**	**22 00 14.7**	**-0.5**
ASAR	**Alice Springs**	**33.12**	**247**	P	**P**	**22 00 14.2**	**-1.1**
	comp=Z,9.3nm,0.6s,baz=75,slow=9.1,SNR=144						
ASAR				PcP	**PcP**	**22 02 53.3**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=84,slow=2.5,SNR=6.5						
ASAR				S	**S**	**22 05 16.6**	**-4.7**
	comp=Z,1.0nm,1.0s,baz=71,slow=14,SNR=5.9						
ASAR				ScP	**ScP**	**22 06 20.1**	**-1.6**
	comp=Z,4.6nm,0.8s,baz=82,slow=3.3,SNR=28						
	comp=Z,9.3nm,0.6s						
ASAR	**Alice Springs**	**33.12**	**247**	P	**P**	**22 00 14.6**	**-0.7**
BBOO	**Buckleboo**	**34.44**	**230**		**P**	**22 00 26.3**	**-0.2**
BBOO				IAmb	IAmb	22 00 44.4	
	comp=Z,15nm,1.3s						
MTN	**Manton Dam**	**35.04**	**266**	P	**P**	**22 00 32.6**	**+0.7**
MTN				IAmb	IAmb	22 00 38.5	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**37.19**	**261**	P	**P**	**22 00 50.3**	**+0.2**
KNRA				IAmb	IAmb	22 00 50.9	
	comp=Z,24nm,1.1s						
FORT	**Forrest**	**39.98**	**238**	P	**P**	**22 01 12.9**	**-0.3**
PSA00	**Pilbara Seismi**	**45.73**	**253**	P	**P**	**22 01 59.8**	**+0.2**
MBWA	**Marble Bar**	**45.83**	**253**	P	**P**	**22 02 00.8**	**+0.5**
TOLI2	**Tolitoli**	**48.08**	**284**	P	**P**	**22 02 17.1**	**-0.7**
NWAO	**Narrogin (SRO)**	**49.43**	**238**	P	**P**	**22 02 27.1**	**-0.8**
NWAO				IAmb	IAmb	22 02 51.3	
	comp=Z,19nm,1.3s						
MORW	**Morawa**	**49.82**	**243**	P	**P**	**22 02 30.7**	**-0.2**
GIRL	**Giralia**	**50.97**	**251**	P	**P**	**22 02 40.5**	**+0.9**
JOW	**Kunigami**	**54.80**	**317**	P	**P**	**22 03 08.6**	**+1.1**
JOW				IAmb	IAmb	22 03 13.1	
	comp=Z,25nm,1.5s						
UGM	**Wanagama**	**55.78**	**269**	P	**P**	**22 03 14.9**	**0.0**
JGF	**Kuroka**	**56.08**	**331**	P	**P**	**22 03 16.8**	**+0.3**
JGF				IAmb	IAmb	22 03 54.2	
	comp=Z,30nm,1.5s						
JMN	**Monobe**	**56.35**	**327**	P	**P**	**22 03 18.4**	**-0.1**
MJAR	**Matsushiro Arr**	**56.45**	**332**	P	**P**	**22 03 19.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=168,slow=7.5,SNR=7.8						
	comp=Z,3.6nm,0.9s						
JHS	**Saijyo**	**57.73**	**327**	P	**P**	**22 03 28.9**	**+0.8**
YHNB	**Yeheng**	**58.35**	**310**	P	**P**	**22 03 32.1**	**-0.6**
YHNB				IAmb	IAmb	22 03 39.5	
	comp=Z,22nm,1.4s						
KSRS	**Korea Array**	**62.36**	**325**	P	**P**	**22 04 00.3**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=135,slow=7.1,SNR=4.5						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**64.42**	**181**	P	**P**	**22 04 11.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=356,slow=6.9,SNR=22						
	comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**64.42**	**181**	P	**P**	**22 04 12.4**	**-0.1**
CASY	**Casey**	**64.92**	**202**	P	**P**	**22 04 15.1**	**-0.8**
CASY				IAmb	IAmb	22 04 40.4	
	comp=Z,24nm,1.4s						
USRK	**Ussuriysk Ar.**	**65.42**	**333**	P	**P**	**22 04 20.9**	**+1.5**
	comp=Z,3.2nm,0.8s,baz=121,slow=6.2,SNR=5.6						
	comp=Z,3.2nm,0.8s						
PEA0B	**Petropavlovsk-**	**66.49**	**354**	P	**P**	**22 04 27.1**	**+1.1**
PETK	**Petropavlovsk-**	**66.49**	**354**	P	**P**	**22 04 27.1**	**+1.0**
	comp=Z,7.2nm,0.8s,baz=177,slow=12,SNR=5.7						
	comp=Z,7.2nm,0.8s						
PETK	**Petropavlovsk-**	**66.49**	**354**	P	**P**	**22 04 27.4**	**+1.3**
KMI	**Kunming**	**73.35**	**301**	⇑P	**P**	**22 05 10.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**74.17**	**294**	P	**P**	**22 05 14.2**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=122,slow=4.4,SNR=15						
	comp=Z,1.5nm,0.3s						
HHC	**Hu-ho-hao-te**	**74.30**	**319**	*e*P	**P**	**22 05 14.0**	**+0.3**
PZH	**PanZhiHua**	**74.73**	**302**	P	**P**	**22 05 18.8**	**+2.2**
SEY	**Seymchan**	**76.71**	**353**	LR	LR	22 34 38.9	
	comp=Z,724nm,21.1s,baz=326,slow=32						
QSPA	**South Pole Qui**	**76.86**	**180**	P	**P**	**22 05 27.9**	**-0.1**
QSPA				IAmb	IAmb	22 05 28.5	
	comp=Z,15nm,0.9s						
LZH	**Lanzhou**	**77.16**	**312**	*e*P	P	22 05 38.0	+7.8
LZH				pP	pP	22 06 06.0	-7.3
O18K	**Koktuh Hills**	**78.82**	**18**	P	**P**	**22 05 39.7**	**+1.1**
O18K				IAmb	IAmb	22 06 13.2	
	comp=Z,25nm,1.5s						
N18K	**Kilae Creek**	**79.28**	**18**	P	**P**	**22 05 42.7**	**+1.6**
N18K				IAmb	IAmb	22 06 20.3	
	comp=Z,14nm,1.2s						
P19K	**Oil Pt**	**79.29**	**19**	P	**P**	**22 05 40.7**	**-0.4**
N19K	**Bonanza Creek**	**79.81**	**18**	P	**P**	**22 05 45.5**	**+1.5**
N19K				IAmb	IAmb	22 05 50.5	
	comp=Z,19nm,1.5s						
CNPM	**China Poot**	**79.84**	**20**	P	**P**	**22 05 44.5**	**+0.3**
BRLK	**Bradley Lake**	**80.14**	**20**	P	**P**	**22 05 46.0**	**+0.2**
YAK	**Yakutsk**	**80.49**	**343**	P	**P**	**22 05 46.5**	**-0.9**
M19K	**Big River Lodg**	**80.70**	**17**	P	**P**	**22 05 49.9**	**+1.2**
M19K				IAmb	IAmb	22 05 50.1	
	comp=Z,22nm,1.5s						
L19K	**White Mountain**	**80.78**	**17**	P	**P**	**22 05 49.9**	**+0.8**
ULN	**Ulaanbaatar**	**80.78**	**324**	P	**P**	**22 05 49.3**	**-0.3**
SONM	**Songino Array**	**81.15**	**324**	P	**P**	**22 05 51.3**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=142,slow=4.8,SNR=8.0						
	comp=Z,1.5nm,0.9s						
SONM	**Songino Array**	**81.15**	**324**	P	**P**	**22 05 51.4**	**-0.1**
SUA	**Susitna One**	**81.47**	**19**	P	**P**	**22 05 52.9**	**+0.1**
SUA				IAmb	IAmb	22 05 55.1	
	comp=Z,20nm,1.2s						
GTA	**Gaotai**	**81.47**	**314**	*e*P	**P**	**22 05 54

```
     comp=Z,9.0nm,1.3s
GLB  Gilahina Butte    83.79  21  P     P     22 06 04.7  -0.1
I21K Tanana            83.93  16  IAmb  IAmb  22 06 06.6
     comp=Z,9.1nm,0.8s
H21K Melozitna Rive    84.08  16  P     P     22 06 07.4 +1.3
IMAR Indian Mountai    84.10  15  P     P     22 06 06.9 +0.7
TABL Table Mountain    84.11  23  P     P     22 06 07.2 +0.6
TABL                               IAmb  IAmb  22 06 28.2
     comp=Z,14nm,1.1s
MLY  Manley            84.16  17  P     P     22 06 06.5  -0.1
PCA  Pinnacle          84.23  24  P     P     22 06 07.1   0.0
BARN Barnard Glacie    84.32  22  P     P     22 06 08.5 +0.9
BARN                               IAmb  IAmb  22 06 09.1
     comp=Z,18nm,1.4s
CTGM Chitina Glacie    84.38  23  P     P     22 06 08.1 +0.2
CTGM                               IAmb  IAmb  22 06 08.6
     comp=Z,7.2nm,0.8s
LOGN Logan Glacier     84.41  23  P     P     22 06 08.4 +0.4
LOGN                               IAmb  IAmb  22 06 08.7
     comp=Z,7.5nm,0.8s
WRH  Wood River Hil    84.51  18  P     P     22 06 07.8  -0.5
WRH                               IAmb  IAmb  22 06 08.4
     comp=Z,7.7nm,0.8s
I23K Minto, Yukon-K    84.64  17  P     P     22 06 09.0 +0.1
M26K Nabesna, AK       84.72  21  P     P     22 06 09.7 +0.2
CCB  Clear Creek Bu    84.72  18  P     P     22 06 08.6  -0.7
CCB                               IAmb  IAmb  22 06 09.2
     comp=Z,6.4nm,0.7s
HDA  Harding Lake      84.81  18  P     P     22 06 09.8   0.0
HDA                               IAmb  IAmb  22 06 10.3
     comp=Z,12nm,0.7s
MDM  Murphy Dome       84.83  17  P     P     22 06 09.6  -0.2
MDM                               IAmb  IAmb  22 06 09.9
     comp=Z,7.2nm,0.8s
P29M Windy Craggy      84.95  25  P     P     22 06 10.8 +0.2
P29M                              IAmb  IAmb  22 06 47.5
     comp=Z,25nm,1.5s
M27K Edge Creek, AK    85.08  21  P     P     22 06 12.0 +0.7
IL31                   85.09  18  P     P     22 06 10.7  -0.4
IL31                              IAmb  IAmb  22 06 11.5
     comp=Z,6.6nm,0.7s
ILAR Eielson Array     85.09  18  P     P     22 06 10.1  -1.1
     comp=Z,5.3nm,0.6s,baz=240,slow=5.1,SNR=81
ILAR                              pP    pwP   22 06 59.6 +2.2
     comp=Z,4.1nm,1.0s,baz=227,slow=6.0,SNR=9.7
     comp=Z,5.3nm,0.6s
ILAR Eielson Array     85.09  18  P     P     22 06 10.7  -0.5
DOT  Dot Lake          85.20  20  P     P     22 06 11.8 +0.1
J25K Salcha River,     85.44  19  P     P     22 06 13.2 +0.2
J25K                              IAmb  IAmb  22 06 13.7
     comp=Z,8.1nm,0.6s
SCRK Sand Creek        85.44  19  P     P     22 06 13.7 +0.6
SCRK                              IAmb  IAmb  22 06 14.3
     comp=Z,4.1nm,0.6s
L27K Beaver Creek,     85.56  21  P     P     22 06 14.2 +0.7
BCAR Beaver Creek A    85.58  21  P     P     22 06 14.3 +0.6
J26L Joseph Creek      85.94  19  P     P     22 06 16.8 +1.4
COLD Coldfoot          85.97  15  P     P     22 06 16.2 +0.8
PRP  Porcupine Dome    86.03  18  P     P     22 06 15.0  -0.9
K27K Chicken           86.11  20  P     P     22 06 17.2 +1.1
K27K                              IAmb  IAmb  22 06 23.6
     comp=Z,13nm,1.5s
I26K Coal Creek Min    86.61  19  P     P     22 06 19.5 +0.9
I26K                              IAmb  IAmb  22 06 36.5
     comp=Z,13nm,1.5s
EGAK Eagle             86.90  20  P     P     22 06 21.1 +1.0
TOLK Toolik Lake Re    87.18  15  P     P     22 06 22.4 +1.0
TOLK                              IAmb  IAmb  22 06 54.9
     comp=Z,18nm,1.4s
BMAR Burnt Mountain    87.63  17  P     P     22 06 25.5 +2.0
BELA Belgrano 2        88.29 176  P     P     22 06 25.3  -1.3
BELA                              IAmb  IAmb  22 06 26.2
     comp=Z,8.6nm,0.8s
R11A Troy Canyon, C    88.36  50  P     P     22 06 26.7  -1.1
U15A North Rim         90.31  53  P     P     22 06 35.8  -1.3
WMQ  Urumqi            91.52 315  eP    P     22 06 44.8 +2.5
PV13 Radium Mtn., P    93.43  52  P     P     22 06 53.7 +2.2
TROLL Troll, Antarti   94.41 185  P     P     22 06 54.3  -0.9
S22A 4UR Ranch, Cre    94.87  53  P     P     22 06 56.8  -1.3
S22A                              IAmb  IAmb  22 06 59.7
     comp=Z,3.3nm,0.7s
SNAA Sanae             95.10 183  P     P     22 06 56.9  -1.4
SNAA Sanae             95.10 183        P     22 06 58.5 +0.3
SNAA                              IAmb  IAmb  22 07 10.8
     comp=Z,4.2nm,1.2s
VNA3 Neumayer Olymp    95.77 181  P     P     22 06 59.8  -1.5
MK31 Makanchi Array    95.96 317  P     P     22 07 03.0 +0.5
MK31                              IAmb  IAmb  22 07 03.1
     comp=Z,2.0nm,0.8s
MKAR Makanchi Array    95.96 317  P     P     22 07 02.5  -0.1
     comp=Z,2.0nm,0.6s,baz=92,slow=6.0,SNR=24
     comp=Z,2.0nm,0.6s
MKAR Makanchi Array    95.96 317  P     P     22 07 02.7 +0.1
VNA2 Neumayer--Watz    96.04 182  P     P     22 07 01.4  -1.0
     baz=173,slow=2.8
ZALV Zalesovo Beam     96.04 324  P     P     22 07 01.9  -0.8
     comp=Z,1.7nm,0.6s,baz=93,slow=3.0,SNR=8.1
     comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam     96.04 324  P     P     22 07 02.0  -0.6
BELG Belogornoye      118.20 323  PKP   PKPdf 22 12 21.1  -0.5
     comp=Z,12nm,0.9s,baz=275,slow=4.3,SNR=4.9
ARCES ARCESS Array B 118.70 346  PKP   PKPdf 22 12 21.1  -0.9
     comp=Z,3.8nm,0.3s,baz=76,slow=2.0,SNR=54
FINES FINESS Array B 124.21 339  PKP   PKPdf 22 12 32.3  -0.5
     comp=Z,1.6nm,0.3s,baz=76,slow=1.8,SNR=27
SIV  San Ignacio     124.25 120  PKP   PKPdf 22 12 33.2  -1.1
     comp=Z,0.7nm,0.5s,baz=12,slow=2.9,SNR=4.3
BOSA Boshof          124.45 221  PKP   PKPdf 22 12 33.5  -1.1
     comp=Z,4.6nm,1.0s,baz=184,slow=5.5,SNR=4.7
NB2  NORSAR Subarra129.07 345  PKPdf PKPdf 22 12 41.7  -0.5
     comp=Z,2.8nm,0.6s,baz=27,slow=1.8
NOA  NORSAR Array B129.07 345  PKP   PKPdf 22 12 41.4  -0.9
     comp=Z,1.9nm,0.7s,baz=32,slow=2.0,SNR=4.4
AKASG Malin Array Be 129.35 327  PKP   PKPdf 22 12 42.0  -1.0
     comp=Z,1.0nm,0.5s,baz=46,slow=2.0,SNR=4.5
BRTR Keskin Array B  131.36 312  PKP   PKPdf 22 12 47.6 +0.2
     comp=Z,0.4nm,0.5s,baz=142,slow=4.5,SNR=2.4
GERES GERESS Array B 138.18 334  PKhKP PKPpre 22 12 51.6
     comp=Z,0.2nm,0.4s,baz=202,slow=2.9,SNR=4.5
GERES                             PKP   PKPdf 22 13 00.1 +0.4
     comp=Z,1.0nm,0.7s,baz=77,slow=2.9,SNR=7.7
MEM  Membach         139.60 341  dPKiKP PKiKP 22 13 04.4  -0.1
BMRD Maredsous       140.25 342  dPKiKP PKiKP 22 13 05.6  -0.2
DOU  Dourbes         140.48 342  dPKiKP PKiKP 22 13 06.3   0.0
DAVOX Davos/Dischmat 141.40 335  PKP   PKPdf 22 13 05.7  -0.1
     comp=Z,3.2nm,0.7s,baz=105,slow=7.8,SNR=5.4
KEST Kesra           149.89 322  PKPbc PKPbc 22 13 24.4  -1.1
     comp=Z,13nm,0.8s,baz=313,slow=2.2,SNR=7.7
PBRG Braganca        150.96 351  ePKPbc PKPbc 22 13 27.5  -0.2
PGAV Gavieira, Arco  151.02 353  ePKPbc PKPbc 22 13 27.7  -0.2
PCAB Cabril          151.24 352  ePKPbc PKPbc 22 13 28.5 +0.1
POLO Lamas de Olo    151.54 352  ePKPbc PKPbc 22 13 28.7  -0.4
PVRL Vila Real       151.62 352  ePKPbc PKPbc 22 13 29.6 +0.3
MVO  Moncorvo        151.63 351  ePKPbc PKPbc 22 13 29.6 +0.3
PTO  Porto           151.87 353  ePKPbc PKPbc 22 13 30.0 +0.3
PVIS Viseu           152.20 352  ePKPbc PKPbc 22 13 30.4  -0.2
ESDC Sonseca Array   152.44 345  PKPbc PKPbc 22 13 31.1  -0.1
     comp=Z,5.4nm,0.8s,baz=14,slow=2.7,SNR=33
MTE  Manteigas       152.46 351  ePKPbc PKPbc 22 13 31.2   0.0
PCAS Casmilo, Conde  152.93 353  ePKPbc PKPbc 22 13 32.0  -0.2
PCBR Castelo Branco  153.00 351  ePKPbc PKPbc 22 13 32.2  -0.1
PMRV Marv??o         153.39 350  ePKPbc PKPbc 22 13 33.1  -0.1
PMTG Montargil       153.86 352  ePKPbc PKPbc 22 13 34.0  -0.2
TORD Torodi Ar. Bea  165.79 272  PKP   PKPdf 22 13 37.9  -2.3
     comp=Z,1.7nm,0.9s,baz=20,slow=2.1,SNR=7.6
TORD                             PKPab PKPab 22 14 40.4  -0.3
     comp=Z,0.5nm,0.6s,baz=80,slow=3.8,SNR=3.7
```

PRU 27 21:54:28.8±0.0,43°.01N×13°.82E,h0km
ROM 27 21:54:25.6±0.1,42°.875N±0°.003×13°.035E±0°.005,
h10km,ML2.8/37,20C-13D,Error ellipse: s-maj=0.4km
s-min=0.2km az=273.0,Central Italy

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Code Station Name      Δ°   AZ°   Phase ID  Time       Res
                                  Op    ISC  h m  s     ISC
NRCA Norcia           0.07 125   P     Pg   21 54 28.3 +0.4
NRCA                             S     Sg   21 54 29.9 +0.3
NRCA                             AML   AML
     comp=E,45050μm,0.7s
NRCA                             AML   AML
     comp=N,59600μm,0.2s
NRCA                             AML   AML
     comp=E,49850μm,0.7s
NRCA                             AML   AML
     comp=N,59550μm,0.2s
NRCA                             AML   AML
     comp=N,63850μm,0.2s
NRCA                             AML   AML
     comp=E,45100μm,0.7s
FEMA Monte Fema       0.09   7  ⇓P    Pg   21 54 28.6 +0.4
FEMA                             S     Sg   21 54 30.5 +0.4
FEMA                             AML   AML
     comp=E,48100μm,0.8s
FEMA                             AML   AML
     comp=N,56300μm,0.4s
FEMA                             AML   AML
     comp=N,56300μm,0.4s
FEMA                             AML   AML
     comp=E,48050μm,0.8s
FEMA                             AML   AML
     comp=E,48050μm,1.2s
FEMA                             AML   AML
     comp=N,56300μm,1.6s
MC2  Monte Cornacci   0.12  72  P     Pg   21 54 29.1 +0.4
MC2                              S     Sg   21 54 31.5 +0.6
T1215 Vallo di Nera,  0.14 239   P     Pg   21 54 29.4 +0.6
T1215                            S     Sg   21 54 32.0 +0.9
T1215                            AML   AML
     comp=N,7055μm,0.8s
T1215                            AML   AML
     comp=N,7540μm,0.8s
T1215                            AML   AML
     comp=N,7065μm,0.8s
T1215                            AML   AML
     comp=E,4215μm,0.3s
T1215                            AML   AML
     comp=N,7565μm,0.8s
T1215                            AML   AML
     comp=N,7570μm,0.8s
T1215                            AML   AML
     comp=N,7060μm,0.8s
T1215                            AML   AML
     comp=E,4410μm,0.3s
CESI CESI - Serrava   0.16 324  ⇑P    Pg   21 54 29.8 +0.6
CESI                             S     Sg   21 54 32.7 +1.0
CESI                             AML   AML
     comp=E,16000μm,0.6s
CESI                             AML   AML
     comp=N,42850μm,0.3s
CESI                             AML   AML
     comp=N,42850μm,1.7s
FDMO Fiordimonte      0.17  13  P     Pg   21 54 28.9 -0.3
FDMO                             S     Sg   21 54 32.7 +0.9
FDMO                             AML   AML
     comp=E,43800μm,0.2s
FDMO                             AML   AML
     comp=N,16500μm,0.3s
T1217 Poggiodomo (PG  0.18 205  ⇑P    Pg   21 54 30.1 +0.7
T1217                            S     Sg   21 54 33.3 +1.1
T1217                            AML   AML
     comp=E,6030μm,0.1s
T1217                            AML   AML
     comp=N,5975μm,0.1s
T1217                            AML   AML
     comp=E,5960μm,0.1s
T1217                            AML   AML
     comp=N,5940μm,0.2s
T1217                            AML   AML
     comp=N,5975μm,0.1s
T1217                            AML   AML
     comp=N,5940μm,0.2s
T1217                            AML   AML
     comp=N,5945μm,0.2s
T1217                            AML   AML
     comp=E,6035μm,0.1s
T1217                            AML   AML
     comp=E,5960μm,0.1s
AM05 Amandola Campo   0.26  66  ⇑P    Pg   21 54 31.4 +0.6
AM05                             S     Sg   21 54 35.5 +1.2
AM05                             AML   AML
     comp=E,2285μm,1.0s
AM05                             AML   AML
     comp=E,11115μm,1.0s
AM05                             AML   AML
     comp=N,872μm,0.1s
AM05                             AML   AML
     comp=N,2385μm,0.8s
AM05                             AML   AML
     comp=N,872μm,0.1s
AM05                             AML   AML
     comp=N,2380μm,0.8s
AM05                             AML   AML
     comp=E,11130μm,1.0s
AM05                             AML   AML
     comp=N,2380μm,1.2s
LNSS Leonessa         0.27 179  ⇑P    Pg   21 54 31.6 +0.5
LNSS                             S     Sb   21 54 36.2 -1.2
LNSS                             AML   AML
     comp=E,3735μm,0.2s
LNSS                             AML   AML
     comp=E,3740μm,0.2s
LNSS                             AML   AML
     comp=N,2995μm,0.4s
SEF1 Sefro            0.28 347  ⇑P    Pb   21 54 32.1 -0.6
SEF1                             S     Sg   21 54 36.2 +1.1
SEF1                             AML   AML
     comp=E,10650μm,0.2s
SEF1                             AML   AML
     comp=N,7700μm,0.3s
T1204 Amatrice, Fraz  0.29 134  ⇑P    Pg   21 54 32.0 +0.5
T1204                            S     Sb   21 54 36.9 -0.9
T1204                            AML   AML
     comp=E,3565μm,0.3s
T1204                            AML   AML
     comp=N,2590μm,0.3s
T1204                            AML   AML
     comp=E,3570μm,0.3s
T1204                            AML   AML
     comp=N,2595μm,0.3s
FIU1 Fiuminata        0.32 346  ⇑P    Pb   21 54 32.8 -0.6
FIU1                             S     Sb   21 54 37.7 -1.0
SMA1 SAN MARTINO      0.33 138  P     Pg   21 54 32.5 +0.3
SMA1                             S     Sb   21 54 38.8 -0.2
SMA1                             AML   AML
     comp=E,1955μm,0.5s
SMA1                             AML   AML
     comp=E,1950μm,0.5s
SMA1                             AML   AML
     comp=N,2315μm,1.6s
SMA1                             AML   AML
     comp=N,2315μm,0.4s
ARRO Arrone           0.36 214  ⇑P    Pg   21 54 33.1 +0.5
ARRO                             S     Sb   21 54 38.8 -0.9
ARRO                             AML   AML
     comp=E,1935μm,0.2s
ARRO                             AML   AML
     comp=N,1855μm,0.6s
ARRO                             AML   AML
     comp=N,1860μm,0.6s
ARRO                             AML   AML
     comp=E,1930μm,0.2s
GAG1 Gagliole         0.36   4  P     Pg   21 54 33.5 +0.6
GAG1                             S     Sb   21 54 39.6 -0.3
GAG1                             AML   AML
     comp=E,7835μm,0.2s
GAG1                             AML   AML
     comp=N,7790μm,0.3s
T1211 Morro Reatino   0.37 201  ⇑P    Pg   21 54 33.3 +0.4
T1211                            S     Sb   21 54 39.6 -0.5
T1211                            AML   AML
     comp=E,1655μm,1.6s
T1211                            AML   AML
     comp=E,1645μm,1.5s
T1211                            AML   AML
     comp=N,2770μm,1.4s
T1211                            AML   AML
     comp=N,2685μm,1.4s
T1211                            AML   AML
     comp=N,2775μm,1.4s
T1211                            AML   AML
     comp=E,1654μm,1.5s
T1211                            AML   AML
     comp=E,1655μm,1.5s
T1211                            AML   AML
     comp=E,1655μm,0.5s
T1211                            AML   AML
     comp=E,1654μm,0.5s
RM33 Pellescritta (   0.39 160   P     Pg   21 54 33.5 +0.3
RM33                             AML   AML
     comp=E,1046μm,0.3s
RM33                             AML   AML
     comp=N,948μm,1.3s
RM33                             AML   AML
     comp=E,1075μm,0.3s
RM33                             AML   AML
     comp=N,884μm,1.1s
RM33                             AML   AML
     comp=E,1044μm,0.3s
RM33                             AML   AML
     comp=N,952μm,1.3s
RM33                             AML   AML
     comp=E,1070μm,0.3s
RM33                             AML   AML
     comp=N,884μm,1.1s
CESX Cesi             0.43 232  ⇑P    Pg   21 54 34.2 +0.3
CESX                             AML   AML
     comp=E,2035μm,0.3s
CESX                             AML   AML
     comp=N,2270μm,0.3s
CAMP Campotosto       0.44 141  ⇑P    Pg   21 54 34.3 +0.1
CAMP                             S     Sb   21 54 41.1 -1.0
CAMP                             AML   AML
     comp=N,568μm,0.6s
CAMP                             AML   AML
     comp=E,528μm,1.4s
CAMP                             AML   AML
     comp=N,568μm,0.6s
T1247 Pizzolo (AQ)    0.47 156   P     Pg   21 54 35.2 +0.4
T1247                            AML   AML
     comp=E,1109μm,0.5s
T1247                            AML   AML
     comp=E,1110μm,0.5s
T1247                            AML   AML
     comp=N,1160μm,0.4s
OFFI Offida           0.48  83  ⇑P    Pb   21 54 36.1 -0.1
OFFI                             AML   AML
     comp=N,2570μm,0.6s
OFFI                             AML   AML
     comp=E,2200μm,0.4s
TERO Teramo           0.49 121   P     Pg   21 54 33.7 -1.5
CING Cingoli          0.51  13  ⇑P    Pg   21 54 34.0 -1.6
GIGS Gran Sasso       0.58 137  ⇓P    Pg   21 54 36.5 -0.3
GIGS                             AML   AML
     comp=E,335μm,1.3s
GIGS                             AML   AML
     comp=N,186μm,0.3s
GIGS                             AML   AML
     comp=E,335μm,0.7s
FIAM Fiamignano       0.61 174  ⇓P    Pg   21 54 37.7 +0.3
FIAM                             S     Sb   21 54 48.0 +1.0
FIAM                             AML   AML
     comp=N,428μm,0.9s
FIAM                             AML   AML
     comp=E,791μm,0.4s
FIAM                             AML   AML
     comp=N,428μm,0.9s
FIAM                             AML   AML
     comp=N,428μm,1.1s
ARVD Arcevia          0.63 354  ⇓P    Pg   21 54 37.8 +0.1
ARVD                             S     Sb   21 54 48.0 +0.5
ARVD                             AML   AML
     comp=E,914μm,1.2s
ARVD                             AML   AML
     comp=E,914μm,1.2s
ARVD                             AML   AML
     comp=N,676μm,1.0s
ARVD                             AML   AML
     comp=E,914μm,0.8s
TRTR Tortoreto Alta   0.65  96  ⇓P    Pb   21 54 39.5 +0.5
TRTR                             AML   AML
     comp=E,2585μm,0.8s
TRTR                             AML   AML
     comp=N,1865μm,1.2s
TRTR                             AML   AML
     comp=N,1865μm,0.8s
TRTR                             AML   AML
     comp=E,2585μm,1.2s
MGAB Montegabbione    0.68 273   P     Pg   21 54 38.9 +0.2
MGAB                             AML   AML
     comp=N,2230μm,0.4s
MGAB                             AML   AML
     comp=E,1510μm,0.5s
MGAB                             AML   AML
     comp=N,2240μm,0.4s
MGAB                             AML   AML
     comp=E,1575μm,0.7s
MGAB                             AML   AML
     comp=E,1510μm,1.5s
MGAB                             AML   AML
     comp=N,2230μm,1.6s
MGAB                             AML   AML
     comp=N,2240μm,1.6s
MGAB                             AML   AML
     comp=E,1575μm,1.3s
FRON Frontone         0.68 341  ⇑P    Pg   21 54 38.8 +0.1
FRON                             AML   AML
     comp=E,508μm,0.7s
FRON                             AML   AML
     comp=N,862μm,0.5s
FRON                             AML   AML
     comp=E,508μm,1.3s
ATMI Monte Miggiano   0.72 310  ⇑P    Pb   21 54 40.3   0.0
ATMI                             AML   AML
     comp=E,2160μm,0.7s
ATMI                             AML   AML
     comp=N,1955μm,0.7s
ATMI                             AML   AML
     comp=E,2160μm,1.3s
ATMI                             AML   AML
     comp=N,1955μm,1.3s
FAGN Fagnano          0.73 146  ⇓P    Pg   21 54 40.0 +0.3
FAGN                             AML   AML
     comp=E,825μm,0.6s
FAGN                             AML   AML
     comp=E,826μm,0.6s
FAGN                             AML   AML
     comp=N,991μm,0.5s
ATPI Pietralunga -    0.74 321  ⇑P    Pg   21 54 39.8   0.0
ATPI                             S     Sb   21 54 52.0 +1.3
ATPI                             AML   AML
     comp=E,518μm,1.2s
ATPI                             AML   AML
     comp=N,346μm,0.5s
ATPI                             AML   AML
     comp=E,518μm,0.8s
SRES S.Oreste - Sor   0.75 211  ⇑P    Pb   21 54 40.3  -0.3
SRES                             AML   AML
     comp=E,656μm,0.8s
SRES                             AML   AML
     comp=N,628μm,0.5s
SRES                             AML   AML
     comp=E,656μm,0.8s
SRES                             AML   AML
     comp=N,628μm,1.5s
PIEI Pieia            0.76 331  ⇑P    Pg   21 54 40.2   0.0
PIEI                             S     Sn   21 54 53.0  -0.8
PIEI                             AML   AML
     comp=E,524μm,0.4s
PIEI                             AML   AML
     comp=N,362μm,0.2s
VCEL Villa Celiera    0.76 129  ⇓P    Pg   21 54 40.4 +0.1
VCEL                             AML   AML
     comp=E,1004μm,0.5s
VCEL                             AML   AML
     comp=N,804μm,1.5s
VCEL                             AML   AML
     comp=E,1002μm,0.5s
VCEL                             AML   AML
     comp=N,804μm,0.5s
AOI  Ancona           0.79  31  P     Pb   21 54 41.8 +0.3
AOI                              AML   AML
     comp=N,678μm,1.5s
AOI                              AML   AML
     comp=E,879μm,0.4s
AOI                              AML   AML
     comp=N,678μm,0.5s
AOI                              AML   AML
     comp=E,879μm,1.6s
FSSB Fossombrone      0.84 347  ⇓P    Pg   21 54 41.8 +0.1
FSSB                             S     Sn   21 54 56.0 +0.1
FSSB                             AML   AML
     comp=E,1380μm,0.9s
FSSB                             AML   AML
     comp=N,1805μm,0.4s
T0110 Collepietro     0.85 139  ⇓P    Pg   21 54 41.6  -0.3
T0110                            AML   AML
     comp=N,1024μm,1.6s
T0110                            AML   AML
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```
     comp=E,826µm,0.4s
T0110                          AML     AML
     comp=N,1024µm,0.4s
BADI Badiali          0.86 318 P       Pb      21 54 42.5 -0.1
MTCE Montecelio       0.88 194 ⇓P      Pg      21 54 42.7 +0.2
MTCE                           AML     AML
     comp=E,360µm,0.4s
MTCE                           AML     AML
     comp=N,247µm,1.2s
MTCE                           AML     AML
     comp=E,360µm,1.6s
CAFI Castiglion Fio   0.91 300 ⇓P      Pg      21 54 43.1 +0.2
CAFI                           AML     AML
     comp=N,459µm,0.5s
CAFI                           AML     AML
     comp=E,587µm,0.7s
CAFI                           AML     AML
     comp=N,458µm,0.5s
CAFI                           AML     AML
     comp=N,486µm,6.6s
CAFI                           AML     AML
     comp=E,599µm,0.7s
PE3  Peglio           0.91 335 ⇑P      Pb      21 54 43.9 +0.5
CERT Cerreto          0.93 182 ⇑P      Pg      21 54 43.4 -0.1
CERT                           AML     AML
     comp=N,338µm,1.3s
CERT                           AML     AML
     comp=E,620µm,0.6s
CERT                           AML     AML
     comp=N,338µm,0.7s
INTR Introdacqua      1.08 143 ⇓P      Pg      21 54 45.1 -1.1
INTR                           AML     AML
     comp=E,311µm,0.8s
INTR                           AML     AML
     comp=N,530µm,0.5s
INTR                           AML     AML
     comp=E,311µm,1.2s
TOLF Tolfa            1.11 224 ⇓P      Pb      21 54 44.3 -2.6
PTRJ Pietraroja       1.88 143 P       Pn      21 54 56.8 -0.9
PTRJ                           AML     AML
     comp=N,9265µm,0.1s
PTRJ                           AML     AML
     comp=E,4355µm,0.3s
PTRJ                           AML     AML
     comp=N,12300µm,0.1s
PTRJ                           AML     AML
     comp=E,4060µm,0.1s
MYKA Terra Mystica    3.78   6 ePn      Pn      21 55 25.7 +1.7
     comp=E,2.3nm,0.4s
OBKA Obir             3.79  16 ePn      Pn      21 55 24.8 +0.7
     comp=E,0.4nm,0.2s
ABTA Abfaltersbach    3.89 355 ePn      Pn      21 55 27.8 +2.3
     comp=E,0.7nm,0.2s
ABTA                           eSn     Sn      21 56 12.7 +1.5
     comp=E,4.5nm,0.7s
WTTA Wattenberg       4.50 348 i Pn     Pn      21 55 37.3 +3.4
     comp=E,0.4nm,0.1s
SQTA Sankt Quirin     4.53 344 ePn      Pn      21 55 38.0 +3.6
     comp=E,1.0nm,0.2s
WATA Walderalm        4.58 347 ePn      Pn      21 55 38.4 +3.5
     comp=E,0.8nm,0.1s
MOTA Moosalm          4.67 344 ePn      Pn      21 55 38.3 +2.0
     comp=E,0.9nm,0.4s
MOTA                           eSn     Sn      21 56 36.9 +6.3
     comp=E,3.7nm,0.5s
RETA Reutte           4.88 342 i Pn     Pn      21 55 42.7 +3.7
     comp=E,0.9nm,0.3s
MOA  Molln            5.05   9 ePn      Pn      21 55 42.9 +1.6
     comp=E,0.3nm,0.1s
CONA Conrad Observa   5.43  21 ePn      Pn      21 55 47.5 +0.9
     comp=E,0.8nm,0.3s
CKRC Cesky Krumlov    6.01   8 eSN      Sn      21 57 00.9 -2.5
KHC  Kasperske Hory   6.27   3 ePN      Pn      21 55 58.8 +0.7
KHC                            eSN     Sn      21 57 08.0 -1.7
```

*IDC **27** 22:03:11.3±3.4, 31.°11S×177.°83W, h44km±24km, mb3.7/3, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=46.2km s-min=17.3km az=108.0*

ISC 27 22:03:10.5±1.8, 31.°2S±0.°1×177.°8W±0.°3, h35km, n8, σ0.95/10, mb3.8/3, Kermadec Islands region

```
Code Station Name        Δ°   AZ°  Phase ID          Time     Res
                                   Op    ISC       h m s    ISC
RAO  Raoul Island     1.92 357     P     Pn        22 03 41.2 +0.5
     92nm,0.3s,baz=102,slow=23,SNR=1.4
RAO                                S     Sn        22 04 03.1 -0.6
     324nm,0.3s,baz=27,slow=23,SNR=7.5
URZ  Urewera          8.20 209     P     Pn        22 05 08.0 +1.1
     1.0nm,0.3s,baz=322,slow=7.8,SNR=2.1
URZ                                S     Sn        22 06 37.1 -1.3
     6.8nm,0.4s,baz=146,slow=23,SNR=7.3
     2.8nm,0.3s
CTA  Charters Tower  34.08 280     P     P         22 09 52.8 +1.0
     3.9nm,1.0s,baz=101,slow=10,SNR=3.2
     3.9nm,1.0s
ASAR Alice Springs   43.23 268     P     P         22 11 08.2 -0.4
     0.4nm,0.5s,baz=103,slow=7.3,SNR=8.5
     0.4nm,0.5s
WRA  Warramunga Arr  44.29 273     P     P         22 11 16.4 -0.7
     0.9nm,0.5s,baz=114,slow=7.6,SNR=13
     0.9nm,0.5s
ARCES ARCESS Array B 139.38 348    PKP   PKPdf     22 22 33.3 +0.2
     3.4nm,0.9s,baz=12,slow=4.8,SNR=3.8
FINES FINESS Array B 145.93 340    PKPbc PKPdf     22 22 44.6 -0.3
     6.2nm,0.7s,baz=59,slow=4.6,SNR=27
AKASG Malin Array Be 152.01 322    PKPbc PKPbc     22 23 00.4 -1.1
     0.2nm,0.3s,baz=54,slow=2.4,SNR=4.4
```

*HVO **27** 22:08:34.7±0.6, 19.°42N±0.°01×155.°33W±0.°01, h8km±2km, ML3.7/28, ML3.6/46(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=213.0*

NEIC 27 22:08:33.9±1.0, 19.°45N±0.°01×155.°33W±0.°02, h16km±2km, Error ellipse: s-maj=2.1km s-min=1.7km az=70.0, Hawaiian Islands

```
Code Station Name        Δ°   AZ°  Phase ID          Time     Res
                                   Op    ISC       h m s    ISC
UWE  Uwekahuna        0.04 133     Pg              22 08 36.6 -0.4
UWE                                Sg      Sg      22 08 37.9 -1.0
RSD  Rainshed         0.05  74     Pg              22 08 36.9 -0.1
RSD                                Sg      Sg      22 08 38.4 -0.6
RSD                                IAML            22 08 38.8
     comp=N,30µm,0.6s
WRMHI West Rim        0.05 151     Pg              22 08 37.8 +0.8
OBL  Observatory Le   0.05 129     Pg              22 08 36.6 -0.4
OBL                                Sg      Sg      22 08 38.1 -0.9
UWB  Uwekahuna B      0.05 119     Pg              22 08 36.7 -0.3
UWB                                Sg      Sg      22 08 37.9 -1.1
UWB                                IAML            22 08 38.1
     comp=E,32µm,0.3s
UWB                                IAML            22 08 38.1
     comp=N,47µm,0.3s
NPH  North Pit        0.06 132     Pg              22 08 36.6 -0.4
NPH                                Sg      Sg      22 08 37.6 -1.5
NPH                                IAML            22 08 38.1
     comp=N,48µm,0.3s
SBLHI Steaming Bluff  0.06 113     Pg              22 08 36.7 -0.3
SBLHI                              Sg      Sg      22 08 38.1 -1.0
SBLHI                              IAML            22 08 38.4
     comp=E,48µm,0.4s
SBLHI                              IAML            22 08 38.5
     comp=N,64µm,0.3s
HATHI Halema'uma'u T  0.07 114     Pg              22 08 36.9 -0.2
HATHI                              Sg      Sg      22 08 38.1 -1.0
HATHI                              IAML            22 08 38.6
     comp=N,35µm,0.2s
HATHI                              IAML            22 08 39.4
     comp=E,36µm,0.6s
SDHHI Sand Hill       0.07 153     Pg              22 08 36.7 -0.4
SDHHI                              Sg      Sg      22 08 37.9 -1.3
MLH  Mauna Loa        0.07 308     Pg              22 08 37.4 +0.1
MLH                                Sg      Sg      22 08 39.5  0.0
BYL  Byron's Ledge    0.07 121     Pg              22 08 37.0 -0.2
BYL                                Sg      Sg      22 08 38.4 -0.8
BYL                                IAML            22 08 39.3
     comp=E,25µm,0.8s
RIM  Rim              0.07 138     Pg              22 08 36.9 -0.2
RIM                                Sg      Sg      22 08 38.0 -1.2
RIM                                IAML            22 08 38.6
     comp=E,34µm,0.5s
KKO  Keanakako`i      0.08 133     Pg              22 08 37.0 -0.2
KKO                                Sg      Sg      22 08 38.4 -0.9
KKO                                IAML            22 08 38.8
     comp=E,46µm,0.3s
KKO                                IAML            22 08 39.4
     comp=N,26µm,0.6s
PUH  Pauahi           0.13 126     Pg              22 08 37.6 -0.1
PUH                                Sg      Sg      22 08 39.7 -0.5
AIN  Ainahou          0.15 238     Pg              22 08 38.2 -0.2
AIN                                Sg      Sg      22 08 40.7  0.0
AIN                                IAML            22 08 42.3
     comp=E,33µm,0.4s
HLP  Hilina Pali      0.15 174     Pg              22 08 38.1 +0.1
HLP                                Sg      Sg      22 08 40.5 -0.2
HLP                                IAML            22 08 40.6
     comp=N,31µm,0.6s
HLP                                IAML            22 08 40.7
     comp=E,32µm,0.2s
KNHH Kane Nui o Ham   0.16 115     Pg              22 08 38.4 +0.2
HMH  Humu'ula Sheep   0.21 316     Pb              22 08 39.9 +0.3
HMH                                Sg      Sb      22 08 43.6 +0.2
NPOC North of Pu'u    0.21 106     Pg              22 08 39.1 +0.3
NPOC                               Sg      Sg      22 08 42.3 +0.2
HTC  Hot Caves        0.22 198     Pg              22 08 39.1 +0.1
JCUZ Jacuzzi          0.22 107     Pg              22 08 39.2 +0.3
JCUZ                               Sg      Sg      22 08 42.5 +0.1
MLOA Mauna Loa Obse   0.25 290     Pb              22 08 40.3 -0.1
MLOA                               Sg      Sb      22 08 44.2 -0.5
MLOA                               IAML            22 08 48.4
     comp=E,13µm,0.3s
MLOA                               IAML            22 08 48.9
     comp=N,13µm,0.6s
MWH  Moku'aweowe      0.26 278     Pb              22 08 40.2 -0.3
MWH                                Sg      Sg      22 08 42.9 -1.1
MWH                                IAML            22 08 44.1
     comp=N,9µm,0.4s
MWH                                IAML            22 08 44.2
     comp=E,13µm,0.3s
KHU  Kahuku           0.34 233     Pg              22 08 41.1 +0.1
KHU                                Sg      Sg      22 08 45.8 -0.2
KHU                                IAML            22 08 50.5
     comp=E,6µm,0.5s
POHA Pohakuloa        0.36 328     IAML            22 08 49.4
     comp=E,6µm,0.1s
POHA                               IAML            22 08 49.4
     comp=E,5µm,0.1s
POHA Pohakuloa        0.36 328     Pb              22 08 42.0 -0.2
POHA                               Sg      Sb      22 08 49.1 +1.4
HUH  Hualalai         0.53 296     Pb              22 08 45.4 +0.3
HUH                                Sg      Sn      22 08 54.7 -1.3
KHLU Kahalu`u         0.55 285     Pb              22 08 45.2 -0.1
KHLU                               Sb              22 08 53.5 +0.5
CPH  Captain Cook     0.56 274     Pg              22 08 44.9 -0.1
HPAH Hawaii Prepara   0.68 329     Pg              22 08 47.0 -0.1
HPAH                               Sg      Sg      22 08 56.0 -0.1
HLK  Haleakala        1.56 327     Pn      Pn      22 09 00.6 -0.7
HON  Honolulu         3.13 307     Pn      Pn      22 09 22.6 +0.1
KIP  Kipapa           3.19 308     IAML            22 09 56.8
     comp=E,122nm,3.4s
KIP                                IAML            22 11 06.5
     comp=E,120nm,3.0s
KIP  Kipapa           3.19 308     Pn      Pn      22 09 23.5  0.0
OPA  Opana            3.36 312     Pn      Pn      22 09 26.7 +0.9
KEKH Kekaha           4.82 302     Pn      Pn      22 09 46.4 +0.6
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*SJA **27** 22:09:28.2±0.8, 33.°76S×72.°65W, h23km±3km, ML4.4, MW4.6*

*NEIC **27** 22:09:29.7±1.7, 33.°77S±0.°04×72.°62W±0.°06, h15km±5km, mb4.2/6, Mwr4.3/53, ML4.2(GUC), Error ellipse: s-maj=7.2km s-min=4.9km az=116.0*

*NEIC **27** 22:09:30.3, 33.°75S×72.°63W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.88; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-3.06; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.57; $M_{\phi r}$-1.36; Fault plane solution: $M_0$3.37000×10^{15} NP1:ϕ_s175.46000°, δ57.85000°, λ73.67000°. NP2:ϕ_s24.30000°, δ35.66000°, λ114.11000°. Principal axes: T 3.3273, Plg72.0000°, Azm46.0000°; N 0.0809, Plg14.0000°, Azm184.0000°; P -3.4082, Plg11.0000°, Azm277.0000°;*

*IDC **27** 22:09:31.3±1.0, 33.°85S×71.°71W, h0km, mb4.1/7, mbtmp4.0/9, ML3.8/2 Error ellipse: s-maj=41.1km s-min=19.8km az=97.0*

*GUC **27** 22:09:31.2±0.7, 33.°75S×72.°60W, h33km±9km, ML4.2*

ISC 27 22:09:29.5±1.7, 33.°76S±0.°02×72.°61W±0.°04, h10km±10km, n103, σ1.31/130, mb4.2/6, 8C, Off coast of central Chile

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Code Station Name        Δ°   AZ°  Phase ID          Time     Res
                                   Op    ISC       h m s    ISC
VA05 Santo Domingo    0.83  83     Pb              22 09 46.3 +0.2
VA05                               Sn      Sb      22 09 58.2 +0.9
VA05 Santo Domingo    0.83  83     ePb             22 09 46.1 +0.1
VA05                               i S     Sb      22 09 57.8 +0.4
VA05                               IAML            22 09 59.5
     comp=E,22µm,0.6s
BO03 Pichilemu        0.91 144     ePb             22 09 47.2 -0.2
BO03                               i S     Sg      22 09 59.4 +0.5
BO03                               IAML            22 10 02.7
     comp=E,11µm,0.7s
MT01 Popeta           1.13  96     Pb              22 09 50.3 -0.9
MT01                               Sn      Sb      22 10 05.9 -0.1
MT01 Popeta           1.13  96⇑iP    Pb              22 09 50.3 -0.9
MT01                               i S     Sb      22 10 04.7 -1.3
MT01                               IAML            22 10 09.2
     comp=N,7µm,0.2s
MT01 Popeta           1.13  96     eP      Pb      22 09 50.4 -0.9
MT01                               eS      Sn      22 10 06.7 -0.5
MT01                               IAML            22 10 08.8
     comp=Z,6µm,0.6s
MT02 Curacav          1.32  68     Pn              22 09 53.2 -0.8
MT02                               Sn      Sg      22 10 12.8 +0.7
MT02 Curacav          1.32  68     eP      Pn      22 09 53.3 -0.8
MT02                               i S     Sg      22 10 12.6 +0.5
MT02                               IAML            22 10 20.5
     comp=E,3µm,0.4s
MT02 Curacav          1.32  68     eP      Pn      22 09 53.4 -0.7
MT02                               eS      Sg      22 10 13.0 +0.9
MT02                               IAML            22 10 16.6
     comp=Z,3µm,0.4s
MT09 Talagante        1.35  91     Pn              22 09 53.5 -1.1
MT09                               Sn      Sn      22 10 10.7 -1.9
MT09 Talagante        1.35  91⇑iP    Pn              22 09 53.5 -1.1
MT09                               i S     Sn      22 10 10.5 -2.1
MT09                               IAML            22 10 16.7
     comp=N,11µm,0.5s
GO05 Huala            1.37 156     Pn              22 09 54.0 -0.7
GO05                               Sn      Sn      22 10 11.0 -2.0
GO05 Huala            1.37 156     eP      Pn      22 09 53.9 -0.9
GO05                               IAML            22 10 18.5
     comp=E,6µm,0.6s
GO05 Huala            1.37 156     eP      Pn      22 09 54.1 -0.6
GO05                               eS      Sg      22 10 16.3 +2.7
BO01 Tunca            1.41 117     Pn              22 09 54.1 -1.2
BO01                               Sn      Sb      22 10 14.5 +0.5
BO01 Tunca            1.41 117     i P     Pn      22 09 54.1 -1.2
BO01                               i S     Sb      22 10 14.1 +0.1
BO01                               IAML            22 10 16.2
     comp=N,3µm,0.6s
BO01 Tunca            1.41 117     eP      Pn      22 09 54.1 -1.2
BO01                               eP      Pb      22 09 54.4 -1.5
BO01                               eS      Sb      22 10 14.6 +0.5
BO01                               eS      Sg      22 10 14.7 -0.3
ROC1 El Roble         1.54  60     Pn              22 09 56.4 -0.9
ROC1 El Roble         1.54  60     eP      Pn      22 09 57.2 -0.1
ROC1                               eS      Sg      22 10 21.7 +2.6
ROCH El Roble         1.55  60⇑iP    Pn              22 09 57.0 -0.3
ROCH                               IAML            22 10 28.7
     comp=N,7µm,0.3s
MT05 Renca            1.60  77     Pn              22 09 57.8 -0.1
MT05 Renca            1.60  77     eP      Pn      22 09 58.1 +0.2
MT05                               IAML            22 10 27.4
     comp=E,4µm,0.5s
MT05 Renca            1.60  77     eP      Pn      22 09 58.1 +0.2
MT05                               eS      Sb      22 10 19.7 +0.1
MT05                               IAML            22 10 24.8
     comp=Z,3µm,0.7s
VA06 Catapilco        1.62  43     Pn      Pn      22 09 57.8 -0.3
VA06 Catapilco        1.62  43⇑iP    Pn              22 09 57.8 -0.3
VA06                               IAML            22 10 29.4
     comp=N,6µm,0.3s
BO04 La Punta         1.68  99     Pn              22 09 58.9 -0.2
BO04 La Punta         1.68  99⇑iP    Pn              22 09 58.8 -0.2
BO04                               IAML            22 10 28.7
     comp=N,3µm,0.4s
PEL  Peldehue         1.72  70⇑iP    Pn              22 09 59.9 +0.3
PEL                                i S     Sg      22 10 24.3 -0.5
PEL                                IAML            22 10 33.1
     comp=N,5µm,0.8s
PEL  Peldehue         1.72  70     eS      Sg      22 10 28.8 +4.1
MT03 Universidad Ad   1.77  82     Pn              22 10 00.2 -0.1
MT03 Universidad Ad   1.77  82     eP      Pn      22 10 00.0 -0.3
MT03                               i S     Sb      22 10 25.6 +1.2
MT03                               IAML            22 10 32.9
     comp=E,4µm,0.3s
MT03 Universidad Ad   1.77  82     eP      Pn      22 10 00.1 -0.1
MT03                               eS      Sn      22 10 23.2 +0.3
MT03                               IAML            22 10 35.9
     comp=Z,5µm,0.8s
BO02 Sierra Bellavi   1.83 125     Pn              22 10 00.3 -0.8
BO02 Sierra Bellavi   1.83 125     eP      Pn      22 10 01.0 -0.1
BO02                               i S     Sg      22 10 28.2 -0.2
BO02                               IAML            22 10 36.1
     comp=N,7µm,0.6s
BO02 Sierra Bellavi   1.83 125     eP      Pn      22 10 01.0 -0.1
BO02                               IAML            22 10 32.7
     comp=Z,3µm,0.4s
FCH  Farellones       1.98  78⇑iP    Pn              22 10 03.5 +0.1
FCH                                IAML            22 10 38.0
     comp=N,2µm,0.3s
VA03 San Esteban      1.99  61     Pn              22 10 02.1 -1.2
VA03 San Esteban      1.99  61⇑iP    Pn              22 10 03.5 +0.3
VA03                               IAML            22 10 44.6
     comp=E,5µm,0.4s
VA03 San Esteban      1.99  61     eP      Pn      22 10 03.6 +0.3
VA03                               eS      Sg      22 10 33.2 -0.1
VA03                               IAML            22 10 38.8
     comp=Z,4µm,0.8s
LMEL Las Melosas      2.00  93     Pn              22 10 03.5 -0.1
LMEL Las Melosas      2.00  93     eP      Pn      22 10 03.5 -0.1
LMEL                               IAML            22 10 37.0
     comp=N,3µm,0.3s
ML02 Panimavida       2.23 154     Pn              22 10 06.6 +0.1
CO02 Combarbal        2.88  29     Pn              22 10 15.9 +0.3
CO02 Combarbal        2.88  29     eP      Pn      22 10 15.9 +0.3
CO02                               eS      Sn      22 10 50.9 +0.4
CO02                               IAML            22 11 09.4
     comp=Z,1µm,2.0s
BI05 Punta Hualpn     3.02 189     Pn      Pn      22 10 17.3 -0.1
CO06 Fray Jorge       3.18  15     Pn      Pn      22 10 19.6 -0.1
EDS3 Malargue         3.32 128     eP      Pn      22 10 20.7 -1.0
EDS3                               eS      Sg      22 11 21.4 +5.3
CO03 El Pedregal      3.33  30     Pn              22 10 22.3 +0.5
CO03 El Pedregal      3.33  30     eP      Pn      22 10 22.3 +0.5
CO03                               eS      Sb      22 11 12.7 +3.3
CO03                               eS      Sg      22 11 14.7 -1.8
CO03                               IAML            22 11 34.8
     comp=Z,515nm,0.9s
RTLS Leoncito         3.40  56     eP      Pn      22 10 25.9 +2.9
RTLS                               eS      Sg      22 11 16.7 -2.1
RTLS                               IAML            22 11 24.4
     comp=Z,666nm,0.9s
RFA  San Rafael       3.58 108     eP      Pn      22 10 21.7 -3.4
RFA                                eP      Pb      22 10 26.7 -6.2
RFA                                eS      Sg      22 11 21.7 -2.6
RFA                                IAML            22 11 30.3
     comp=Z,488nm,0.9s
GO04 Tololo Observa   3.89  24     Pn              22 10 29.6 +0.1
GO04 Tololo Observa   3.89  24     eP      Pn      22 10 30.0 +0.4
GO04                               eS      Sn      22 11 14.7 -0.8
ZON  Zonda            3.98  57     Pn      Pn      22 10 30.7 +0.1
CO05 La Serena        4.00  17     Pn              22 10 30.8 -0.1
RTLL Cerro Villicun   4.25  56     eP      Pn      22 10 36.8 +2.5
CO01 Juntas del Tor   4.33  30     Pn              22 10 35.8 +0.1
CO01 Juntas del Tor   4.33  30     eP      Pn      22 10 37.0 +1.3
CO01                               eS      Sn      22 11 27.1 +0.8
CO01                               IAML            22 11 54.7
     comp=Z,408nm,0.9s
LCO  Las Campanas     5.00  20     Pn      Pn      22 10 44.8 -0.1
LCO  Las Campanas     5.00  20     Pn              22 10 44.9  0.0
LCO  Las Campanas     5.00  20     eP      Pn      22 10 45.4 +0.5
LCO                                eS      Sn      22 11 42.4 -0.6
LCO                                IAML            22 12 23.4
     comp=Z,1µm,0.9s
LC02 Puerto Saavedr   5.06 187     Pn      Pn      22 10 44.6 -0.8
VA04 Juan Fernndez    5.19 270     Pn      Pn      22 10 48.3 +1.1
H03S1 Juan Fernandez  5.25 267     T       T       22 17 05.5
     baz=98,slow=78,SNR=739
H03S3 Juan Fernandez  5.25 267     T       T       22 17 06.9
     baz=98,slow=78,SNR=747
H03S2 Juan Fernandez  5.26 267     T       T       22 17 06.7
     baz=98,slow=78,SNR=912
H03N1 Juan Fernandez  5.27 272     T       T       22 16 45.9
     baz=98,slow=74,SNR=44
H03N3 Juan Fernandez  5.28 272     T       T       22 16 22.4
     baz=98,slow=74,SNR=14
H03N2 Juan Fernandez  5.29 272     T       T       22 16 23.4
     baz=98,slow=74,SNR=55
AC05 El Transito      5.29  23     Pn      Pn      22 10 49.0 +0.2
AC05 El Transito      5.29  23     eP      Pn      22 10 49.9 +1.1
AC05                               IAML            22 12 25.8
     comp=Z,427nm,1.2s
AC04 Llanos de Chal   5.69  14     Pn      Pn      22 10 53.5 -0.6
LR03 Panguipulli      5.87 178     Pn      Pn      22 10 55.9 -0.6
GO06 Curarrehue       5.89 171     Pn      Pn      22 10 57.3 +0.4
LR04 Corral           6.15 186     Pn      Pn      22 11 00.4  0.0
GO03 Copiap           6.47  19     Pn      Pn      22 11 03.9 -1.0
LL04 Puerto Octay     7.14 179     Pn      Pn      22 11 12.7 -1.3
PLCA Paso Flores      7.16 167     Pn      Pn      22 11 15.1 +0.9
     comp=Z,0.5nm,0.3s,baz=337,slow=12,SNR=11
     comp=Z,2.0nm,0.5s
PLCA Paso Flores      7.16 167     Pn      Pn      22 11 14.1 -0.1
AC02 Maricunga        7.52  24     Pn      Pn      22 11 19.2 -0.6
LL05 Los Muermos      7.67 185     Pn      Pn      22 11 20.0 -1.2
AC01 Pan de Azucar    7.78  13     Pn      Pn      22 11 20.4 -2.4
LVC  Limon Verde     11.57  17     Pn      Pn      22 12 12.3 -2.8
     comp=Z,0.2nm,0.3s,baz=280,slow=1.7,SNR=1.8
PB16 IPOC Station P   15.61  11     P       P       22 13 13.1 -1.3
PB16                               IAmb    IAmb    22 13 20.9
     comp=Z,7.0nm,0.8s
LPAZ La Paz           17.86  14     P       P       22 13 39.8 +0.4
     comp=Z,0.1nm,0.3s,baz=192,slow=7.1,SNR=8.8
     comp=Z,2.6nm,0.8s
LPAZ La Paz           17.86  14     Pn              22 13 36.9 -1.8
SIV  San Ignacio      20.52  33     P       P       22 14 07.1 -1.0
     comp=Z,5.3nm,0.8s,baz=209,slow=10,SNR=16
     comp=Z,5.3nm,0.8s
BDFB Brasília         28.59  57     P       P       22 15 24.8 -1.3
     comp=Z,2.5nm,0.6s,baz=204,slow=15,SNR=3.8
     comp=Z,2.5nm,0.6s
VNA3 Neumayer Olymp   49.76 158     P       P       22 18 23.8 +2.0
VNA2 Neumayer--Watz   50.42 157     P       P       22 18 28.6 +1.9
     baz=280,slow=7.8
SNAA Sanae            51.99 158     P       P       22 18 39.9 +1.3
SNAA Sanae            51.99 158     P       P       22 18 39.5 +0.9
     comp=Z,2.8nm,0.7s,baz=274,slow=9.3,SNR=11
     comp=Z,2.8nm,0.7s
SNAA Sanae            51.99 158     P       P       22 18 39.5 +0.9
SNAA                               IAmb    IAmb    22 18 50.7
     comp=Z,3.5nm,0.9s
TROLL Troll, Antarti  53.69 158     P       P       22 18 53.2 +1.9
QSPA South Pole Qui   56.48 180     P       P       22 19 13.3 +1.8
     comp=Z,0.6nm,0.3s,baz=173,slow=3.1,SNR=3.8
     comp=Z,0.6nm,0.3s
TXAR Lajitas Array    69.29 331     P       P       22 20 45.0 +7.9
     comp=Z,0.5nm,1.0s,baz=161,slow=11,SNR=3.2
     comp=Z,0.5nm,1.0s
DBIC Dimbokro         75.55  72     P       P       22 21 15.8 +1.2
     comp=Z,2.1nm,0.7s,baz=202,slow=6.9,SNR=2.0
     comp=Z,2.1nm,0.7s
TORD Torodi Ar. Bea   84.57  70     P       P       22 22 03.5 +0.1
     comp=Z,1.2nm,0.8s,baz=257,slow=3.8,SNR=10
     comp=Z,1.2nm,0.8s
BVAR Borovoye Array  147.42  42     PKPbc   PKiKP   22 29 15.1 -0.3
     comp=Z,0.7nm,0.8s,baz=305,slow=5.2,SNR=6.9
AAK  Ala-Archa       152.81  61     PKPbc   PKiKP   22 29 28.5 +1.5
     comp=Z,0.8nm,0.5s,baz=174,slow=5.8,SNR=4.4
KURBB Kurchatov Arra 153.01  43     PKPbc   PKiKP   22 29 28.1 +1.2
     comp=Z,0.3nm,0.3s,baz=304,slow=3.0,SNR=1.9
ZALV Zalesovo Beam   154.27  32     PKPbc   PKiKP   22 29 30.7 +1.3
     comp=Z,1.6nm,0.6s,baz=307,slow=3.1,SNR=8.5
PZH  PanZhiHua       171.27 144     PKP     PKPdf   22 29 36.3 -2.4
```

*IDC **27** 22:25:02.0±2.0, 24.°18S×179.°91W, h498km±20km, mb3.3/4, mbtmp4.2/7, Error ellipse: s-maj=31.5km s-min=21.0km az=147.0*

*NEIC **27** 22:25:03.6±1.4, 24.°2S±0.°1×179.°9W±0.°1, h521km±11km, mb4.1/23, Error ellipse: s-maj=20.5km s-min=18.0km az=161.0*

ISC 27 22:25:03.4±0.6, 24°20'S±0'.09×179°34'W±0'.09, h518km, n37, σ1§10/39, mb4.1/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.71**	**343**	P	**P**	**22 26 45.7**	**-1.9**
	5.0nm,0.4s,baz=250,slow=22,SNR=11						
MSVF	**Nonsavu**	**6.71**	**343**	P	**P**	**22 26 45.9**	**-1.7**
NIUE	**Niue**	**10.62**	**63**	P	**P**	**22 27 29.2**	**+1.7**
DZM	**Mont Dzumac**	**12.70**	**277**	P	**P**	**22 27 49.8**	**+0.2**
	7.8nm,0.9s,baz=51,slow=12,SNR=3.6						
MXZ	**Matakaoa Point**	**13.40**	**186**	P	**P**	**22 27 57.0**	**+0.6**
URZ	**Urewera**	**14.24**	**189**	P	**P**	**22 28 05.4**	**+0.2**
	3.2nm,0.4s,baz=0.2,slow=2.1,SNR=13						
URZ				S	**S**	**22 30 33.5**	**-1.6**
	10nm,0.5s,baz=327,slow=20,SNR=8.3						
URZ	**Urewera**	**14.24**	**189**	P	**P**	**22 28 04.9**	**-0.3**
BKZ	**Black Stump Fm**	**15.22**	**191**	P	**P**	**22 28 15.9**	**+0.3**
BKZ				IAmb	IAmb	22 28 19.2	
	comp=Z,6.1nm,1.1s						
QRZ	**Quartz Range**	**17.74**	**199**	P	**P**	**22 28 39.8**	**-0.5**
THZ	**Tophouse**	**18.50**	**197**	P	**P**	**22 28 46.5**	**-0.8**
THZ				IAmb	IAmb	22 29 00.8	
	comp=Z,12nm,1.1s						
KHZ	**Kahutara**	**18.95**	**195**	P	**P**	**22 28 50.1**	**-1.2**
LTZ	**Lake Taylor**	**19.62**	**197**	P	**P**	**22 28 57.1**	**-0.4**
LTZ				IAmb	IAmb	22 29 05.0	
	comp=Z,8.8nm,0.9s						
EIDS	**Eidsvold**	**26.31**	**261**	P	**P**	**22 29 58.6**	**+1.0**
EIDS				IAmb	IAmb	22 29 59.5	
	comp=Z,7.2nm,1.1s						
CTAO	**Charters Tower**	**31.53**	**271**	P	**P**	**22 30 44.0**	**+0.9**
STKA	**Stephens Creek**	**34.66**	**249**	P	**P**	**22 31 09.9**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=88,slow=13,SNR=3.5						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**34.66**	**249**	P	**P**	**22 31 10.2**	**+0.8**
COEN	**Coen**	**36.22**	**280**	P	**P**	**22 31 23.3**	**+0.8**
COEN				IAmb	IAmb	22 31 31.6	
	comp=Z,5.7nm,1.1s						
BBOO	**Buckleboo**	**39.38**	**247**	P	**P**	**22 31 47.7**	**-0.5**
BBOO				IAmb	IAmb	22 31 51.3	
	comp=Z,5.6nm,1.1s						
AS31	**Alice Springs**	**42.04**	**261**	P	**P**	**22 32 09.1**	**-0.5**
ASAR	**Alice Springs**	**42.04**	**261**	P	**P**	**22 32 09.6**	**0.0**
	comp=Z,2.1nm,0.8s,baz=96,slow=7.9,SNR=20						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**42.04**	**261**	P	**P**	**22 32 08.6**	**-1.0**
WR0	**Warramunga Arr**	**42.25**	**266**	P	**P**	**22 32 10.8**	**-0.4**
WR0				IAmb	IAmb	22 32 11.4	
	comp=Z,3.0nm,0.7s						
WB2	**Warramunga Arr**	**42.43**	**266**	P	**P**	**22 32 12.4**	**-0.3**
WB2				IAmb	IAmb	22 32 12.5	
	comp=Z,5.3nm,0.5s						
WB0	**Warramunga Arr**	**42.43**	**267**	P	**P**	**22 32 12.3**	**-0.4**
WB0				IAmb	IAmb	22 32 12.8	
	comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**42.44**	**266**	P	**P**	**22 32 12.2**	**-0.6**
	comp=Z,4.3nm,0.6s,baz=103,slow=8.0,SNR=22						
WRA				ScP	**ScP**	**22 36 59.0**	**+3.7**
	comp=Z,1.7nm,0.9s,baz=98,slow=4.0,SNR=9.3						
	comp=Z,4.3nm,0.6s						
FORT	**Forrest**	**46.26**	**250**	P	**P**	**22 32 41.7**	**-0.4**
KNRA	**Kununurra**	**48.74**	**270**	P	**P**	**22 33 01.0**	**+0.1**
KNRA				IAmb	IAmb	22 33 01.7	
	comp=Z,7.3nm,0.8s						
QSPA	**South Pole Qui**	**65.88**	**180**	P	**P**	**22 34 57.8**	**+0.3**
SMAI	**San Martin Ant**	**75.81**	**159**	P	**P**	**22 35 56.0**	**+0.3**
SMAI				IAmb	IAmb	22 35 56.9	
	comp=Z,3.7nm,0.9s						
BELA	**Belgrano 2**	**76.13**	**173**	P	**P**	**22 35 56.9**	**-0.5**
BELA				IAmb	IAmb	22 35 57.0	
	comp=Z,1.5nm,0.7s						
MG05	**Puerto Natales**	**81.45**	**143**	P	**P**	**22 36 25.7**	**-0.4**
SLBS	**Sierra La Lagu**	**82.91**	**60**	P	**P**	**22 36 33.9**	**-0.2**
SLBS				IAmb	IAmb	22 36 34.5	
	comp=Z,4.4nm,0.8s						
TX31	**Lajitas Ar. Si**	**90.55**	**58**	P	**P**	**22 37 09.8**	**-0.7**
TX32	**Lajitas Array**	**90.55**	**58**	P	**P**	**22 37 08.8**	**-1.6**
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	**22 37 10.3**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=212,slow=6.1,SNR=16						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	**22 37 09.3**	**-1.1**
BNM	**Barren Site**	**90.59**	**53**	P	**P**	**22 37 08.7**	**-2.0**

*TIF **27** 22:25:58.3, 42°.12N×46°.01E, h15km±2km*
*NORS **27** 22:25:58.8±0.0, 42°.02N×46°.43E, h26km, MPVA3.2*
*MOS **27** 22:25:59.9±0.0, 42°.13N×46°.14E, h6km, MPVA3.4*
*DRS **27** 22:26:01.8±0.0, 42°.07N×46°.03E, h16km*

ISC 27 22:26:00.6±1.0, 42°.05N±0°.03×46°.06E±0°.02, h19km±3km, n33, σ1§54/61, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.25**	**147**	P	**Pg**	**22 26 06.0**	**-0.6**
LGD				S	**Sg**	**22 26 10.4**	**-0.1**
BTLR	**Botlikh**	**0.63**	**11**	*i* Pg	**Pg**	**22 26 12.0**	**-1.2**
BTLR				*i* Sg	**Sg**	**22 26 21.1**	**-0.6**
XNZR	**Khunzakh**	**0.69**	**44**	*i* Pg	**Pg**	**22 26 14.0**	**-0.4**
XNZR				*e*Sg	**Sg**	**22 26 23.8**	**+0.1**
GNBR	**Gunib**	**0.76**	**63**	*i* Pg	**Pg**	**22 26 15.1**	**-0.4**
GNBR				*e*Sg	**Sb**	**22 26 25.9**	**+0.7**
KMKR	**Kumukh**	**0.78**	**83**	*e*Pg	**Pg**	**22 26 15.6**	**-0.4**
KMKR				*e*Sg	**Sg**	**22 26 26.3**	**-0.1**
DGRG	**David-gareji**	**0.78**	**221**	P	**Pg**	**22 26 14.3**	**-1.7**
DGRG				S	**Sb**	**22 26 27.1**	**+1.2**
UNCR	**Uncukul**	**0.86**	**39**	*e*Pg	**Pb**	**22 26 16.7**	**-0.3**
UNCR				*e*Sg	**Sb**	**22 26 28.2**	**0.0**
ARKR	**Arakani**	**0.89**	**51**	*e*Pg	**Pb**	**22 26 17.6**	**+0.1**
ARKR				*e*Sg	**Sb**	**22 26 29.5**	**+0.5**
SHTL	**Shatili**	**0.91**	**313**	P	**Pb**	**22 26 15.4**	**-2.4**
SHTL				S	**Sb**	**22 26 26.6**	**-3.0**
DVE	**Vedeno**	**0.91**	**3**	*i* Pg	**Pb**	**22 26 17.0**	**-0.8**
DVE				*e*Sg	**Sg**	**22 26 30.6**	**+0.1**
KRNR	**Karanay**	**1.00**	**39**	*e*Pg	**Pb**	**22 26 19.1**	**-0.3**
KRNR				*e*Sg	**Sb**	**22 26 32.3**	**0.0**
BTNK	**Botanikuri**	**1.01**	**249**	P	Pb	22 26 10.6	-8.8
BUJR	**Buynaksk**	**1.10**	**45**	*e*Pg	**Pb**	**22 26 21.1**	**0.0**
BUJR				*e*Sg	**Sg**	**22 26 36.3**	**-0.2**
DLMR	**Dylym**	**1.11**	**22**	*e*Pg	**Pb**	**22 26 20.7**	**-0.5**
DLMR				*e*Sg	**Sb**	**22 26 36.3**	**+1.1**
DBC	**Dubki**	**1.13**	**30**	*e*Pg	**Pb**	**22 26 21.3**	**-0.3**
DBC				*e*Sg	**Sb**	**22 26 36.5**	**+0.6**
GROC	**Groznyy**	**1.17**	**351**	*e*Pg	**Pn**	**22 26 22.5**	**+0.6**
GROC				*i* Sg	**Sg**	**22 26 40.0**	**+1.3**
URKR	**Urkarakh**	**1.18**	**84**	*e*Pg	**Pg**	**22 26 23.3**	**-0.2**
URKR				*e*Sg	**Sg**	**22 26 39.8**	**+0.8**
PNSH	**Pansheti**	**1.22**	**299**	P	**Pn**	**22 26 22.0**	**-0.8**
KMGR	**Komgaron**	**1.34**	**319**	*e*Pg	**Pg**	**22 26 26.9**	**+0.4**
KMGR				*e*Sg	**Sg**	**22 26 46.5**	**+2.5**
AKT	**Akhty**	**1.38**	**114**	*e*Pg	**Pg**	**22 26 27.2**	**0.0**
AKT				*e*Sg	**Sg**	**22 26 47.2**	**+2.0**
DMNI	**Dmanisi**	**1.57**	**243**	P	**Pn**	**22 26 26.3**	**-1.3**
DMNI				S	**Sn**	**22 26 46.8**	**-0.6**
DRN	**Derbent**	**1.69**	**90**	*e*Pg	**Pg**	**22 26 32.6**	**-0.6**
DRN				*e*Sg	**Sg**	**22 26 55.9**	**+0.6**
ARNR	**Ardon**	**1.73**	**312**	*i* Pg	Pn	22 26 19.3	-10
ARNR				*e*Sg	**Sn**	**22 26 43.8**	**-7.4**
BTKR	**Batakoyurt**	**1.73**	**320**	*e*Pg	**Pg**	**22 26 33.9**	**0.0**
BTKR				*e*Sg	**Sg**	**22 26 58.9**	**+2.4**
ALIG	**Mtskhetisjvari**	**1.79**	**273**	P	**Pn**	**22 26 30.4**	**-0.2**
ALIG				S	**Sn**	**22 26 53.7**	**+0.8**
KORR	**Kora**	**1.80**	**306**	*e*Pg	**Pg**	**22 26 34.8**	**-0.5**
KORR				*e*Sg	**Sg**	**22 27 01.8**	**+3.1**
BKRG	**Bakuriani**	**1.91**	**262**	P	**Pn**	**22 26 32.6**	**+0.2**
BKRG				S	**Sb**	**22 26 58.4**	**-0.2**
ONI	**Oni**	**2.00**	**287**	P	**Pn**	**22 26 34.9**	**+1.4**
ONI				S	**Sn**	**22 27 00.4**	**+2.3**
DIGR	**Digorskoe uzhe**	**2.02**	**296**	*e*Pg	**Pb**	**22 26 36.6**	**-0.2**
DIGR				*e*Sg	**Sg**	**22 27 05.5**	**-0.3**
LSNR	**Lesken**	**2.05**	**308**	*e*Pg	**Pg**	**22 26 39.5**	**-0.6**
LSNR				*e*Sg	**Sg**	**22 27 07.3**	**+0.5**
TKB	**Tkibuli**	**2.29**	**279**	P	**Pn**	**22 26 39.0**	**+1.6**
TKB				S	**Sn**	**22 27 08.0**	**+2.8**
ABS	**Abastumani**	**2.44**	**264**	P	**Pn**	**22 26 39.6**	**+0.1**
KBZ	**Khabaz**	**2.87**	**307**	*e*Pn	**Pb**	**22 26 51.5**	**+0.4**
KBZ				*e*Sn	**Sb**	**22 27 28.0**	**+2.3**

*NNC **27** 22:28:00.4±2.1, 42°.25N×81°.26E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=15.2km s-min=11.5km az=162.0
*SOME **27** 22:28:01.9, 42°.48N×81°.18E, h0km*

ISC 27 22:28:00.7±1.8, 42°.33N±0°.07×81°.22E±0°.04, h10km±12km, n34, σ1§97/54, 3C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.53**	**303**	*e*P	**Pn**	**22 28 26.6**	**-1.6**
	12nm,0.3s						
SHLS				*e*S	**Sn**	**22 28 44.4**	**-3.8**
	15nm,0.2s						
PDGK	**Podgornoye**	**1.61**	**309**	⇓Pn	**Pb**	**22 28 31.1**	**+0.5**
	3.0nm,0.4s						
PDGK				⇑Sn	**Sg**	**22 28 56.1**	**+3.6**
	7.3nm,0.4s						
UZB	**Uzynbulak**	**1.81**	**297**	*e*P	**Pg**	**22 28 35.6**	**+0.2**
	7.1nm,0.4s						
UZB				*e*S	**Sg**	**22 29 00.6**	**+1.7**
	15nm,0.2s						
KPKS	**Kokpek**	**2.18**	**302**	*e*P	**Pg**	**22 28 41.6**	**-0.8**
	22nm,0.3s						
KPKS				*e*S	**Sg**	**22 29 10.7**	**0.0**
	32nm,0.2s						
KPKS	**Kokpek**	**2.18**	**302**	Pg	**Pg**	**22 28 41.6**	**-0.8**
	22nm,0.3s						
KPKS				Lg	Lg	22 29 10.7	
	32nm,0.2s						
ZHN	**Zhinishke**	**2.21**	**293**	*e*P	**Pg**	**22 28 43.0**	**0.0**
	40nm,0.3s						
ZHN				*e*S	**Sg**	**22 29 12.9**	**+1.1**
	42nm,0.2s						
DJR	**Jarkent**	**2.25**	**333**	*e*P	**Pg**	**22 28 43.6**	**-0.2**
	2.5nm,0.2s						
DJR				*e*S	**Sg**	**22 29 13.7**	**+0.6**
	39nm,0.3s						
DJR	**Jarkent**	**2.25**	**333**	Pg	**Pg**	**22 28 43.6**	**-0.2**
	2.5nm,0.2s						
DJR				Lg	Lg	22 29 13.7	
	39nm,0.3s						
KURS	**Kuram**	**2.52**	**298**	*e*P	**Pg**	**22 28 47.9**	**-1.1**
	3.9nm,0.5s						
KURS				*e*S	**Sg**	**22 29 21.2**	**-0.4**
	7.4nm,0.5s						
KURS	**Kuram**	**2.52**	**298**	Pg	**Pg**	**22 28 47.9**	**-1.1**
	3.9nm,0.5s						
KURS				Lg	Lg	22 29 21.2	
	7.4nm,0.5s						
BLB	**Baldybastay**	**2.67**	**312**	*e*P	**Pb**	**22 28 50.2**	**+1.6**
	5.6nm,0.1s						
BLB				*e*S	**Sg**	**22 29 25.3**	**-1.1**
	27nm,0.2s						
BLB	**Baldybastay**	**2.67**	**312**	Pg	**Pb**	**22 28 50.2**	**+1.6**
	5.6nm,0.1s						
BLB				Lg	Lg	22 29 25.3	
	27nm,0.2s						
ARXS	**Arharly**	**3.11**	**308**	*e*P	**Pb**	**22 28 56.3**	**+0.3**
	4.0nm,0.2s						
ARXS				*e*S	**Sb**	**22 29 35.6**	**+1.6**
	6.5nm,0.2s						
KOTS	**Kotyrbulak**	**3.15**	**288**	*e*P	**Pb**	**22 28 58.0**	**+1.1**
	3.0nm,0.2s						
KOTS				*e*S	**Sb**	**22 29 39.0**	**+3.6**
	19nm,0.6s						
KOTS	**Kotyrbulak**	**3.15**	**288**	Pg	**Pb**	**22 28 58.0**	**+1.1**
	3.0nm,0.2s						
KOTS				Lg	Lg	22 29 39.0	
	19nm,0.6s						
MDOK	**Medeo**	**3.18**	**287**	*e*P	**Pb**	**22 28 58.6**	**+1.3**
	4.1nm,0.4s						
MDOK				*e*S	**Sb**	**22 29 39.9**	**+3.7**
	5.1nm,0.3s						
MDOK	**Medeo**	**3.18**	**287**	⇓Pg	**Pb**	**22 28 58.5**	**+1.1**
	2.7nm,0.5s						
MDOK				Pg	**Pb**	**22 28 58.6**	**+1.3**
	4.1nm,0.4s						
MDOK				Lg	Lg	22 29 39.9	
	5.1nm,0.3s						
MDOK				Lg	Lg	22 29 40.7	
	3.0nm,0.5s						
TNSS	**Tian-Shan**	**3.23**	**284**	*e*P	**Pb**	**22 28 59.8**	**+1.6**
	4.2nm,0.3s						
TNSS				*e*S	**Sg**	**22 29 42.0**	**-2.3**
	3.5nm,0.5s						
TNSS	**Tian-Shan**	**3.23**	**284**	Pg	**Pb**	**22 28 59.8**	**+1.6**
	4.2nm,0.3s						
TNSS				Lg	Lg	22 29 42.0	
	3.5nm,0.5s						
TDK	**Taldyqorghan**	**3.36**	**324**	*e*P	**Pb**	**22 29 01.5**	**+1.2**
	6.9nm,0.2s						
TDK				*e*S	**Sb**	**22 29 44.2**	**+3.0**
	34nm,0.4s						
CHKK	**Chushkaly**	**3.45**	**298**	*e*P	**Pb**	**22 29 03.4**	**+1.6**
	0.8nm,0.1s						
CHKK				*e*S	**Sb**	**22 29 47.5**	**+3.7**
	5.9nm,0.3s						
CHKK	**Chushkaly**	**3.45**	**298**	Pg	**Pb**	**22 29 03.4**	**+1.6**
	0.8nm,0.1s						
CHKK				Lg	Lg	22 29 47.5	
	5.9nm,0.3s						
KTBS	**Karatobe**	**3.60**	**294**	*e*P	**Pg**	**22 29 07.4**	**-2.2**
	1.0nm,0.2s						
KTBS				*e*S	**Sg**	**22 29 54.5**	**-1.8**
	9.5nm,0.2s						
KTBS	**Karatobe**	**3.60**	**294**	Pg	**Pg**	**22 29 07.4**	**-2.2**
	1.0nm,0.2s						
KTBS				Lg	Lg	22 29 54.5	
	9.5nm,0.2s						
KST	**Kastek**	**3.94**	**282**	*e*P	**Pg**	**22 29 14.1**	**-2.0**
	1.1nm,0.3s						
KST				*e*S	**Sg**	**22 30 05.9**	**-1.2**
	5.5nm,0.8s						
KST	**Kastek**	**3.94**	**282**	Pg	**Pg**	**22 29 14.1**	**-2.0**
	1.1nm,0.3s						
KST				Lg	Lg	22 30 05.9	
	5.5nm,0.8s						
DGS	**Degeres**	**4.11**	**285**	*e*P	**Pb**	**22 29 16.1**	**+3.0**
	1.7nm,0.4s						
DGS				*e*S	**Sg**	**22 30 09.5**	**-3.1**
	1.7nm,0.5s						
DGS	**Degeres**	**4.11**	**285**	Pg	**Pb**	**22 29 16.1**	**+3.0**
	1.7nm,0.4s						
DGS				Lg	Lg	22 30 09.5	
	1.7nm,0.5s						
TKM2	**Tokmak 2**	**4.19**	**280**	⇓Pg	**Pg**	**22 29 20.6**	**-0.3**
	1.9nm,0.8s						
TKM2				⇓Lg	Lg	22 30 13.9	
	1.1nm,0.4s						
KRBS	**Karabastau**	**4.29**	**290**	*e*P	**Pg**	**22 29 19.9**	**-2.8**
	2.0nm,0.5s						
KRBS				*e*S	**Sg**	**22 30 15.9**	**-2.4**
	2.1nm,0.2s						
MAKZ	**Makanchi**	**4.51**	**7**	⇑Pg	**Pb**	**22 29 19.3**	**-0.6**
	2.9nm,0.6s						
MAKZ				⇑Lg	Lg	22 30 23.0	
	5.0nm,0.9s						
MK31	**Makanchi Array**	**4.53**	**9**	Pg	**Pg**	**22 29 25.8**	**-1.6**
	0.5nm,0.4s,baz=188,slow=16,SNR=4.1						
MK31				Lg	Lg	22 30 24.1	
	0.8nm,0.3s,baz=191,slow=28,SNR=7.5						
SGDS	**Sogindy**	**4.97**	**285**	*e*P	**Pg**	**22 29 34.6**	**-1.2**
	2.8nm,0.2s						
SGDS				*e*S	**Sg**	**22 30 40.9**	**+0.8**
	27nm,0.3s						
WMQ	**Urumqi**	**4.97**	**70**	*e*P	**Pb**	**22 29 30.0**	**+2.2**

*MOS **27** 22:46:23.1±1.1, 53°.73N×163°.33W, h11km, mb4.8/29,*
Error ellipse: s-maj=11.8km s-min=6.5km az=90.7
*IDC **27** 22:46:23.1±0.8, 53°.83N×163°.44W, h0km, mb4.2/24,*
mbtmp4.1/27, ML3.3/3, MS4.1/13, Error ellipse:
s-maj=22.7km s-min=12.2km az=178.0
*NEIC **27** 22:46:24.4±2.3, 53°.60N±0°.07×163°.3W±0°.1, h10km±3km,*
mb4.2/33, ML4.1/12, ML3.9(AEIC), Error ellipse:
s-maj=12.6km s-min=5.3km az=142.0
*AEIC **27** 22:46:24±2.3, 53°.5N±0°.1×163°.2W±0°.1, h25km±5km, Error*
ellipse: s-maj=15.7km s-min=7.5km az=159.0

ISC 27 22:46:23.9±0.5, 53°.58N±0°.07×163°.22W±0°.05, h10km, n391, σ1§24/388, mb4.5/62, MS4.2/13, 11C-4D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.29**	**355**		**Pg**	**22 46 48.3**	**-0.3**
FALS	**False Pass**	**1.29**	**355**	P	**Pg**	**22 46 48.5**	**-0.2**
	baz=175,SNR=56						
FALS	**False Pass**	**1.29**	**355**	P	**Pg**	**22 46 48.4**	**-0.2**
AKUT	**Akutan**	**1.61**	**291**		**Pn**	**22 46 52.2**	**-0.1**
AKUT				IAML		22 47 27.2	
	comp=E,1μm,0.7s						
UNV	**Unalaska Valle**	**1.97**	**279**		**Pn**	**22 46 56.6**	**-0.7**
UNV	**Unalaska Valle**	**1.97**	**279**	P	**Pn**	**22 46 57.2**	**-0.1**
	baz=100,SNR=14						
UNV	**Unalaska Valle**	**1.97**	**279**	P	**Pn**	**22 46 57.1**	**-0.2**
SDPT	**Sand Point**	**2.39**	**41**		**Pn**	**22 47 04.0**	**+0.8**
SDPT				IAML		22 47 51.5	
	comp=E,1μm,1.1s						
SDPT				IAML		22 47 57.0	
	comp=N,1μm,1.0s						
SDPT	**Sand Point**	**2.39**	**41**	P	**Pn**	**22 47 04.0**	**+0.8**
	baz=221,SNR=19						
CNBA	**Chernabura Isl**	**2.47**	**58**		**Pn**	**22 47 04.3**	**+0.1**
CNBA				Sn	**Sn**	**22 47 33.8**	**-0.6**
CHNA	**Chernabura Isl**	**2.48**	**58**	P	**Pn**	**22 47 04.2**	**-0.1**
	baz=238						
NIKH	**Nikolski High**	**3.44**	**262**		**Pn**	**22 47 16.8**	**-0.7**
NIKH	**Nikolski High**	**3.44**	**262**	P	**Pn**	**22 47 16.7**	**-0.7**
	baz=80						
NIKH	**Nikolski High**	**3.44**	**262**	P	**Pn**	**22 47 17.4**	**-0.1**
CHGN	**Chignik**	**3.89**	**44**		**Pn**	**22 47 24.6**	**+0.9**
CHGN				IAML		22 48 35.8	
	comp=E,234nm,1.0s						
CHGN				IAML		22 48 44.1	
	comp=N,227nm,1.1s						
CHGN	**Chignik**	**3.89**	**44**	P	**Pn**	**22 47 25.3**	**+1.6**
	baz=226						
CHIR	**Chirikof Islan**	**4.95**	**60**	Pn	**Pn**	**22 47 39.1**	**+0.8**
R16K	**Pilot Point**	**5.12**	**36**	P	**Pn**	**22 47 42.1**	**+1.4**
	baz=220						
SPIA	**Saint Paul Isl**	**5.39**	**315**	Pn	**Pn**	**22 47 44.9**	**+0.6**
SPIA	**Saint Paul Isl**	**5.39**	**315**	P	**Pn**	**22 47 45.7**	**+1.4**
	baz=130						
SII	**Sitkinak Islan**	**5.99**	**56**	Pn	**Pn**	**22 47 53.2**	**+0.6**
SII	**Sitkinak Islan**	**5.99**	**56**	P	**Pn**	**22 47 53.5**	**+0.9**
Q17K	**Contact Creek**	**6.25**	**38**	P	**Pn**	**22 47 57.0**	**+0.8**
	baz=224						
Q16K	**King Salmon**	**6.29**	**33**	P	**Pn**	**22 47 58.5**	**+1.9**
	baz=218						
O16K	**Kokwok River B**	**6.66**	**23**	P	**Pn**	**22 48 02.5**	**+0.8**
	baz=207						
OHAK	**Old Harbor**	**6.73**	**53**	Pn	**Pn**	**22 48 02.8**	**0.0**
P17K	**Kvichak River**	**6.77**	**31**	P	**Pn**	**22 48 05.3**	**+2.0**
	baz=216						
Q18K	**Katmai Hardscr**	**6.85**	**39**	P	**Pn**	**22 48 05.3**	**+0.9**
	baz=225						
O17K	**Koliganek Bris**	**7.07**	**26**	P	**Pn**	**22 48 09.0**	**+1.7**
	baz=211						
P18K	**Big Mountain,**	**7.32**	**34**		**Pn**	**22 48 12.6**	**+1.8**
P18K	**Big Mountain,**	**7.32**	**34**	P	**Pn**	**22 48 11.4**	**+0.7**
	baz=220						
N16K	**Nishlik Lake**	**7.33**	**18**	P	**Pn**	**22 48 12.9**	**+1.9**
	baz=201						
KDAK	**Kodiak Island**	**7.34**	**51**	Pn	**Pn**	**22 48 09.8**	**-1.2**
	comp=N,1.2nm,0.3s,baz=213,slow=7.2,SNR=11						
KDAK				Sn	**Sn**	**22 49 28.4**	**-5.9**
	comp=N,0.8nm,0.3s,baz=197,slow=21,SNR=1.4						
	comp=N,12nm,0.8s						
KDAK	**Kodiak Island**	**7.34**	**51**	Pn	**Pn**	**22 48 10.8**	**-0.3**
KDAK	**Kodiak Island**	**7.34**	**51**	P	**Pn**	**22 48 10.8**	**-0.3**
Q19K	**Cape Douglas,**	**7.56**	**41**	Pn	**Pn**	**22 48 15.2**	**+1.1**
Q19K	**Cape Douglas,**	**7.56**	**41**	P	**Pn**	**22 48 15.7**	**+1.6**
	baz=228						
O18K	**Koktuh Hills**	**7.68**	**32**		**Pn**	**22 48 17.7**	**+1.9**
O18K	**Koktuh Hills**	**7.68**	**32**	P	**Pn**	**22 48 17.3**	**+1.6**
	baz=218						
N18K	**Kilae Creek**	**8.16**	**26**	Pn	**Pn**	**22 48 25.0**	**+2.7**
N18K	**Kilae Creek**	**8.16**	**26**	P	**Pn**	**22 48 23.9**	**+1.6**
	baz=212						
P19K	**Oil Pt**	**8.21**	**38**	Pn	**Pn**	**22 48 24.1**	**+1.2**
ADK	**Adak**	**8.35**	**264**	Pn	**Pn**	**22 48 26.6**	**+1.8**
ADK	**Adak**	**8.35**	**264**	P	**Pn**	**22 48 26.7**	**+1.8**
ADK	**Adak**	**8.35**	**264**	P	**Pn**	**22 48 26.3**	**+1.4**
N19K	**Bonanza Creek**	**8.66**	**30**	Pn	**Pn**	**22 48 31.6**	**+2.4**
N19K	**Bonanza Creek**	**8.66**	**30**	P	**Pn**	**22 48 31.7**	**+2.4**
	baz=216						
CNPM	**China Poot**	**8.90**	**43**	Pn	**Pn**	**22 48 33.0**	**+0.6**
RSO	**Redoubt South**	**8.95**	**35**		**Pn**	**22 48 33.2**	**0.0**
BRLK	**Bradley Lake**	**9.19**	**43**	Pn	**Pn**	**22 48 36.1**	**-0.3**
M19K	**Big River Lodg**	**9.58**	**26**		**Pn**	**22 48 43.6**	**+1.9**
M19K	**Big River Lodg**	**9.58**	**26**	P	**Pn**	**22 48 42.9**	**+1.1**
	baz=213						
N20K	**Mount Spurr**	**9.67**	**33**	P	**Pn**	**22 48 44.4**	**+1.3**
	baz=222						
L19K	**White Mountain**	**9.70**	**24**	Pn	**Pn**	**22 48 44.2**	**+0.8**
L19K	**White Mountain**	**9.70**	**24**	P	**Pn**	**22 48 43.4**	**0.0**
	baz=211						
SPU	**Mount Spurr**	**9.71**	**34**	Pn	**Pn**	**22 48 44.9**	**+1.4**
M20K	**Styx River**	**9.91**	**29**		**Pn**	**22 48 49.3**	**+2.9**
M20K	**Styx River**	**9.91**	**29**	P	**Pn**	**22 48 49.8**	**+3.5**
	baz=217						
SEW	**Seward**	**9.97**	**44**	Pn	**Pn**	**22 48 46.9**	**-0.1**
O22K	**Cooper Landing**	**10.09**	**41**		**Pn**	**22 48 49.2**	**+0.6**
O22K	**Cooper Landing**	**10.09**	**41**	P	**Pn**	**22 48 49.2**	**+0.6**
	baz=232						
TTA	**Tatalina**	**10.11**	**19**	Pn

MCK	McKinley	12.57	30	Pn	Pn	22 49 23.7	+1.1
MCK	McKinley	12.57	30	P	Pn	22 49 23.7	+1.1
DHY	Denali Highway	12.61	35		Pn	22 49 22.2	-1.1
DHY	Denali Highway	12.61	35	P	Pn	22 49 21.4	-1.8
	baz=228						
BERG	Berg Lake	12.61	49	Pn	Pn	22 49 23.2	0.0
N25K	Chitina, Valde	12.78	44	Pn	Pn	22 49 25.4	-0.2
N25K	Chitina, Valde	12.78	44	P	Pn	22 49 25.0	-0.6
	baz=239						
SNH	Sunshine Point	12.93	51	Pn	Pn	22 49 27.5	0.0
I21K	Tanana	12.94	22		Pn	22 49 29.3	+1.6
I21K	Tanana	12.94	22	P	Pn	22 49 27.5	-0.1
	baz=211						
HARP	HAARP	12.99	40	P	Pn	22 49 28.0	-0.4
	baz=235						
WAX	Waxell Ridge	13.02	50	Pn	Pn	22 49 28.1	-0.8
GLB	Gilahina Butte	13.03	45	Pn	Pn	22 49 28.6	-0.4
VRDI	Verde Repeater	13.08	46	Pn	Pn	22 49 29.2	-0.6
MLY	Manley	13.10	24	Pn	Pn	22 49 31.7	+1.8
MLY	Manley	13.10	24	P	Pn	22 49 30.8	+0.9
	baz=214						
TGL	Tana Glacier	13.15	49	Pn	Pn	22 49 30.3	-0.4
H21K	Melozitna Rive	13.19	19		Pn	22 49 31.9	+0.9
H21K	Melozitna Rive	13.19	19	P	Pn	22 49 32.7	+1.7
	baz=208						
PAX	Paxson	13.21	38		Pn	22 49 30.7	-0.8
PAX	Paxson	13.21	38	P	Pn	22 49 30.7	-0.8
PAX	Paxson	13.21	38	P	Pn	22 49 30.1	-1.4
	baz=232,SNR=5.7						
IMAR	Indian Mountai	13.30	17	Pn	Pn	22 49 34.2	+1.6
ISLE	Juniper Island	13.31	50	Pn	Pn	22 49 32.8	-0.1
MCARA	McCarthy VSAT	13.34	46	Pn	Pn	22 49 33.9	+0.8
MCARA	McCarthy VSAT	13.34	46	P	Pn	22 49 33.7	+0.6
	baz=243						
YAH	Yahtse	13.50	51	Pn	Pn	22 49 35.9	+0.4
I23K	Minto, Yukon-K	13.54	26		Pn	22 49 36.7	+1.0
I23K	Minto, Yukon-K	13.54	26	P	Pn	22 49 36.5	+0.7
	baz=217						
CCB	Clear Creek Bu	13.58	29		Pn	22 49 34.9	-1.4
SHEM	Shemya Is, Ala	13.63	276	LR	LR	22 54 13.5	
	comp=N,660nm,21.3s,baz=117,slow=35						
K24K	Donnelly Dome	13.63	34	P	Pn	22 49 37.2	+0.1
	baz=229						
HDA	Harding Lake	13.66	31	Pn	Pn	22 49 36.0	-1.6
H22K	Ishtalitna Cre	13.68	21	P	Pn	22 49 39.2	+1.4
	baz=211						
MDM	Murphy Dome	13.70	28	Pn	Pn	22 49 38.0	+0.1
BARN	Barnard Glacie	13.80	49	Pn	Pn	22 49 40.7	+1.1
TABL	Table Mountain	13.81	51		Pn	22 49 40.4	+0.7
G21K	Allakaket	13.83	16	P	Pn	22 49 38.8	-0.9
	baz=205,SNR=7.7						
M26K	Nabesna, AK	13.84	42	P	Pn	22 49 38.9	-1.1
	baz=239						
CTGM	Chitina Glacie	13.91	49	Pn	Pn	22 49 42.6	+1.6
IL31		13.94	30		Pn	22 49 40.8	-0.5
ILAR	Eielson Array	13.94	30	Pn	Pn	22 49 37.5	-3.9
	comp=N,0.1nm,0.3s,baz=217,slow=14,SNR=7.3						
	comp=N,0.4nm,0.5s						
ILAR	Eielson Array	13.94	30	Pn	Pn	22 49 40.3	-1.0
ILAR	Eielson Array	13.94	30	P	Pn	22 49 40.3	-1.0
LOGN	Logan Glacier	14.01	50	Pn	Pn	22 49 43.4	+1.1
L26K	Log Cabin Wild	14.03	40	P	Pn	22 49 43.0	+0.4
	baz=236						
H23K	Yukon River	14.04	24	P	Pn	22 49 42.8	+0.1
	baz=215						
PCA	Pinnacle	14.11	53	Pn	Pn	22 49 44.7	+0.9
PINM	Pinnacle	14.12	53	P	Pn	22 49 44.5	+0.7
	baz=252						
DOT	Dot Lake	14.13	37	Pn	Pn	22 49 44.6	+0.7
DOT				P	P	22 49 52.0	+0.4
M27K	Edge Creek, AK	14.27	44	Pn	Pn	22 49 45.5	-0.5
M27K					P	22 49 55.7	+2.4
M27K	Edge Creek, AK	14.27	44	P	Pn	22 49 46.8	+0.8
	baz=241,SNR=7.6						
J25K	Salcha River,	14.30	32		Pn	22 49 43.8	-2.5
J25K	Salcha River,	14.30	32	P	Pn	22 49 44.3	-2.0
	baz=227						
SCRK	Sand Creek	14.35	36		P	22 49 54.0	-0.2
SCRK	Sand Creek	14.35	36	P	Pn	22 49 46.2	-0.9
	baz=232,SNR=8.0						
O28M	Mount Upton	14.36	51	P	Pn	22 49 46.9	-0.4
	baz=250						
BCPM	Bancas Point	14.37	54	Pn	Pn	22 49 47.7	+0.5
PNL	Peninsula	14.41	55	P	Pn	22 49 48.8	+1.0
H24K	Noodor Dome	14.47	26	Pn	Pn	22 49 49.3	+0.8
H24K	Noodor Dome	14.47	26	P	Pn	22 49 47.0	-1.5
	baz=219						
F21K	Alatna River	14.48	15	P	Pn	22 49 49.8	+1.2
	baz=204						
G22K	Bettles	14.55	19	P	Pn	22 49 50.0	+0.4
	baz=209						
YUK3	Moose Creek	14.62	47	P	Pn	22 49 51.0	+0.3
	baz=246						
L27K	Beaver Creek,	14.64	41		Pn	22 49 50.0	-0.9
L27K	Beaver Creek,	14.64	41	P	Pn	22 49 50.0	-0.9
	baz=239						
BCAR	Beaver Creek A	14.66	41	Pn	Pn	22 49 49.6	-1.6
G23K	Bananza Creek	14.67	21	P	Pn	22 49 51.6	+0.4
	baz=212						
BVCY	Beaver Creek	14.72	44	P	Pn	22 49 50.2	-1.8
	baz=243						
YUK8	Steele Glacier	14.73	49	P	Pn	22 49 50.7	-1.7
	baz=248						
J26L	Joseph Creek	14.82	35		Pn	22 49 52.6	-0.8
J26L				P	P	22 49 59.6	+0.3
J26L	Joseph Creek	14.82	35	P	Pn	22 49 52.6	-0.8
	baz=231,SNR=13						
PRP	Porcupine Dome	14.88	30		P	22 49 57.3	-2.7
PRP	Porcupine Dome	14.88	30	P	Pn	22 49 54.8	+0.6
	baz=225						
F22K	John River	14.95	17	P	Pn	22 49 55.5	+0.4
	baz=206						
O29M	Mount Kennedy	14.98	53	P	Pn	22 49 55.9	+0.3
	baz=254						
K27K	Chicken	15.07	38	Pn	Pn	22 49 55.3	-1.2
K27K	Chicken	15.07	38	P	Pn	22 49 55.4	-1.2
	baz=236						
COLD	Coldfoot	15.07	20	Pn	Pn	22 49 58.0	+1.3
COLD				IAmb	IAmb	22 50 03.3	
	comp=Z,14nm,1.0s						
COLD	Coldfoot	15.07	20	P	Pn	22 49 57.0	+0.3
	baz=211,SNR=5.5						
P29M	Windy Craggy	15.22	56	Pn	Pn	22 50 00.2	+1.5
P29M				IAmb	IAmb	22 50 19.5	
	comp=Z,9.4nm,0.8s						
P29M	Windy Craggy	15.22	56	P	Pn	22 49 57.4	-1.3
	baz=257						
G24K	Hadweenzic Riv	15.25	24	P	Pn	22 49 59.2	+0.3
	baz=218						
H25K	Birch Creek	15.34	27	P	Pn	22 50 01.1	+0.9
	baz=222						
I26K	Coal Creek Min	15.47	33	IAmb	IAmb	22 50 23.4	
	comp=Z,7.0nm,0.7s						
I26K	Coal Creek Min	15.47	33	P	Pn	22 50 02.1	+0.2
	baz=230						
HYT	Haines Junctio	15.63	52	P	P	22 50 09.1	+0.7
FYU	Fort Yukon	15.72	27	Pn	Pn	22 50 04.9	-0.3
M29M	Somme Creek	15.74	46	P	Pn	22 50 05.8	+0.2
	baz=247,SNR=9.2						
F24K	Squaw Lake	15.81	22	P	Pn	22 50 05.2	-1.2
	baz=215						
EGAK	Eagle	15.82	36	IAmb	IAmb	22 50 27.6	
	comp=Z,12nm,0.8s						
EGAK	Eagle	15.82	36	P	Pn	22 50 05.7	-0.7
	baz=235						
PLBC	Pleasant Camp	15.88	58	P	Pn	22 50 06.2	-1.0
	baz=260						
E23K	Chandalar	15.90	19	P	Pn	22 50 06.9	-0.8
	baz=211,SNR=6.7						
DAWY	Dawson	16.09	40		Pn	22 50 10.7	+0.7
DAWY	Dawson	16.09	40	P	Pn	22 50 08.9	-1.1
	baz=240,SNR=9.0						
E24K	Your Creek	16.14	20	P	Pn	22 50 10.1	-0.6
	baz=213						
L29M	L29M	16.15	44	P	Pn	22 50 11.9	+1.0
	baz=245,SNR=35						
F25K	Christian Rive	16.39	24	P	Pn	22 50 13.4	-0.5
	baz=219						
TOLK	Toolik Lake Re	16.42	18	IAmb	IAmb	22 50 34.4	
	comp=Z,15nm,0.9s						
TOLK	Toolik Lake Re	16.42	18	P	Pn	22 50 14.0	-0.1
	baz=210,SNR=7.0						
M30M	Minto, Yukon	16.51	46	P	P	22 50 19.8	+1.7
M30M	Minto, Yukon	16.51	46	P	Pn	22 50 14.9	-0.5
	baz=249						
BMAR	Burnt Mountain	16.54	26	Pn	Pn	22 50 16.1	+0.4
H27K	Steamboat Moun	16.58	32	P	Pn	22 50 14.5	-1.7
	baz=230						
N31M	Braeburn, Yuko	16.62	51		Pn	22 50 16.4	-0.3
N31M				IAmb	IAmb	22 50 33.8	
	comp=Z,22nm,1.0s						
N31M	Braeburn, Yuko	16.62	51	P	Pn	22 50 16.5	-0.3
	baz=254						
K29M	Barlow Dome	16.72	42	P	Pn	22 50 18.9	+0.8
	baz=244						
WHY	Whitehorse	16.84	54	P	P	22 50 23.9	+2.1
WHY				IAmb	IAmb	22 50 31.1	
	comp=Z,17nm,1.1s						
WHY	Whitehorse	16.84	54	P	Pn	22 50 19.4	-0.2
	baz=257						
F26K	Sheenjek River	16.85	26	P	Pn	22 50 19.8	+0.2
	baz=222						
D24K	Happy Valley	17.00	18	P	Pn	22 50 21.4	-0.1
	baz=210						
I29M	Ogilvie Camp,	17.15	37	P	Pn	22 50 24.1	+0.7
I29M	Ogilvie Camp,	17.15	37	P	Pn	22 50 23.4	0.0
	baz=238,SNR=7.4						
MAYO	Mayo, Yukon	17.27	44		Pn	22 50 25.7	+0.7
C23K	Itkillik River	17.31	15	P	Pn	22 50 25.5	+0.2
	baz=206						
M31M	Drury Creek, Y	17.45	49	P	P	22 50 28.8	+0.4
M31M				IAmb	IAmb	22 50 43.6	
	comp=Z,15nm,0.8s						
M31M	Drury Creek, Y	17.45	49	P	Pn	22 50 26.9	-0.3
	baz=253,SNR=8.5						
C24K	Franklin Bluff	17.51	17	P	Pn	22 50 27.6	-0.2
	baz=210						
P33M	Teslin, Yukon	17.77	56		Pn	22 50 31.0	-0.1
P33M				IAmb	IAmb	22 50 38.5	
	comp=Z,17nm,0.9s						
P33M	Teslin, Yukon	17.77	56	P	Pn	22 50 30.2	-1.0
	baz=261,SNR=11						
N32M	Quiet Lake	17.80	53	P	Pn	22 50 30.9	-0.6
	baz=258						
FARO	Faro, Yukon	17.93	49	P	Pn	22 50 33.1	0.0
FARO				IAmb	IAmb	22 50 47.4	
	comp=Z,12nm,0.9s						
FARO	Faro, Yukon	17.93	49	P	Pn	22 50 33.3	+0.2
	baz=254,SNR=7.5						
EPYK	Eagle Plains	18.24	35	P	P	22 50 37.9	+0.8
EPYK	Eagle Plains	18.24	35	P	Pn	22 50 36.0	-0.8
	baz=238						
C26K	Camden Bay	18.40	20	P	Pn	22 50 38.5	-0.3
	baz=216,SNR=5.9						
C27K	Jago River	18.42	22	P	P	22 50 38.1	-0.9
	baz=219						
S34M	Telegraph Cree	18.47	64	P	Pn	22 50 40.3	+0.6
	baz=270						
R33M	Jennings River	18.61	59	P	P	22 50 40.2	-1.0
	baz=266						
G30M	tAoh Zraii Nji	18.73	34	P	P	22 50 41.6	-1.0
	baz=237						
MMPY	Sheldon Lake,	18.97	49	P	P	22 50 45.1	0.0
	baz=256,SNR=11						
DLBC	Dease Lake	19.06	62	P	P	22 50 46.2	+0.1
	baz=198,slow=20,SNR=1.2						
	comp=Z,3.7nm,1.0s						
TGTN	Hyland Airport	20.15	53	P	P	22 50 58.0	0.0
	baz=262						
INK	Inuvik	20.32	32	P	P	22 50 57.8	-1.9
	comp=Z,1.4nm,0.3s,baz=247,slow=9.2,SNR=10						
	comp=Z,1.4nm,0.3s						
INK	Inuvik	20.32	32	P	P	22 50 59.0	-0.7
INK	Inuvik	20.32	32	P	P	22 50 59.0	-0.7
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	Inuvik	20.32	32	P	P	22 50 58.8	-0.9
	baz=238						
BILL	Bilibino	20.44	327	⇓*e*P	P	22 51 01.0	0.0
BILL				*e*		22 51 04.8	
BILL				*e*PPP	PPP	22 51 23.6	
BILL				*e*		22 51 35.4	
BILL				S	S	22 54 46.0	-3.5
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,552nm,16.0s						
KOTAN	Kotaneelee Air	22.13	57	P	P	22 51 18.8	-0.5
	baz=270						
WRGLY	Wrigley	22.59	49	P	P	22 51 24.3	+0.1
	baz=263						
PETK	Petropavlovsk-	23.14	285	P	P	22 51 27.9	-2.2
	comp=Z,3.4nm,0.5s,baz=87,slow=12,SNR=4.8						
PETK				LR	LR	23 00 30.0	
	comp=Z,246nm,20.6s,baz=94,slow=37						
	comp=Z,3.4nm,0.5s						
C36M	Paulatuk	23.85	34	P	P	22 51 37.4	+0.5
C36M				IAmb	IAmb	22 51 46.0	
	comp=Z,9.2nm,0.8s						
SEY	Seymchan	24.67	310	*i* P	P	22 51 43.3	-1.2
SEY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YKA	Yellowknife Ar	26.62	51	P	P	22 52 03.9	+1.8
	comp=Z,1.2nm,0.5s,baz=270,slow=9.1,SNR=9.5						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	26.62	51	P	P	22 52 04.8	+2.6
YKA	Yellowknife Ar	26.62	51	P	P	22 52 04.8	+2.6
YBH	Yreka Blue Hor	29.35	97	P	P	22 52 28.7	+1.9
	comp=Z,0.4nm,0.4s,baz=307,slow=5.1,SNR=1.7						
	comp=Z,0.4nm,0.4s						
TIXI	Tiksi	33.65	328	P	P	22 53 01.8	-2.4
	comp=Z,1.2nm,0.4s,baz=270,slow=23,SNR=5.3						
	comp=Z,1.2nm,0.4s						
TIXI	Tiksi	33.65	328	*ce*P	P	22 53 04.3	+0.1
TIXI				pmax	pmax		
	comp=Z,11nm,2.5s						
NVAR	Mina Array Bea	34.05	98	P	P	22 53 10.2	+1.8
	comp=Z,0.7nm,0.8s,baz=283,slow=8.2,SNR=2.5						
	comp=Z,0.7nm,0.8s						
R11A	Troy Canyon, C	35.72	96	P	P	22 53 20.8	-1.8
	baz=311						
DUG	Dugway, Tooele	36.18	91	P	P	22 53 28.9	+2.3
DUG	Dugway, Tooele	36.18	91	P	P	22 53 28.9	+2.3
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PDAR	Pinedale Array	36.55	85	P	P	22 53 31.7	+1.8
	comp=Z,0.2nm,0.3s,baz=304,slow=12,SNR=1.9						
	comp=Z,0.2nm,0.3s						
TMUT	Trail Mountain	37.71	91	IAmb	IAmb	22 54 01.9	
	comp=Z,5.6nm,0.9s						
PKCU	Pink Cliffs	38.26	94	P	P	22 53 42.6	-1.9
O20A	White River Ci	38.95	87	P	P	22 53 50.9	+0.9
O20A				IAmb	IAmb	22 54 09.8	
	comp=Z,10.0nm,0.8s						
O20A	White River Ci	38.95	87	P	P	22 53 49.9	-0.1
	baz=309						
KLR	Kul'dur	39.53	291	*ce*P	P	22 53 54.2	-0.4
KLR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZEA	Zeya	39.68	299	*e*P	P	22 53 54.7	-1.1
PV13	Radium Mtn., P	39.87	90	P	P	22 53 59.2	+1.4
PV13				IAmb	IAmb	22 54 11.4	
	comp=Z,6.5nm,0.8s						
H11N2	WAKE ISLAND Hy	40.85	226	T	T	23 38 00.1	
	baz=26,slow=76,SNR=47						
H11N3	WAKE ISLAND Hy	40.85	226	T	T	23 38 00.7	
	baz=26,slow=76,SNR=40						
H11N1	WAKE ISLAND Hy	40.86	226	T	T	23 38 16.2	
	baz=26,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	42.02	225	T	T	23 39 09.2	
	baz=26,slow=76,SNR=71						
H11S2	WAKE ISLAND Hy	42.03	225	T	T	23 39 13.8	
	baz=26,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	42.03	225	T	T	23 39 08.2	
	baz=26,slow=76,SNR=64						
MAJO	Matsushiro	43.42	271	P	P	22 54 25.6	-1.1
MAJO	Matsushiro	43.42	271	P	P	22 54 25.6	-1.1
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s						
MJAR	Matsushiro Arr	43.42	271	P	P	22 54 25.6	-1.0
	comp=Z,5.5nm,1.1s,baz=23,slow=6.1,SNR=7.2						
MJAR				LR	LR	23 13 01.9	
	comp=Z,176nm,19.9s,baz=83,slow=37						
	comp=Z,5.5nm,1.1s						
MJB9	Matsu-Tunnel	43.42	271	P	P	22 54 26.2	-0.5
NRIK	Noril'sk	47.09	333	P	P	22 54 53.0	-2.4
	comp=Z,1.6nm,0.4s,baz=186,slow=11,SNR=2.3						
	comp=Z,1.6nm,0.4s						
NRIK	Noril'sk	47.09	333	*ce*P	P	22 54 56.5	+1.1
SUMG	Summit	48.47	19	*i* P	P	22 55 06.0	-0.5
KSRS	Korea Array	48.91	280	P	P	22 55 08.6	-1.2
	comp=Z,3.9nm,0.8s,baz=48,slow=7.5,SNR=8.6						
	comp=Z,3.9nm,0.8s						
KSAR	Wonju Array Be	48.94	280	P	P	22 55 10.5	+0.5
KSAR	Wonju Array Be	48.94	280	P	P	22 55 10.5	+0.5
TX31	Lajitas Ar. Si	49.07	95	P	P	22 55 11.8	+0.5
TX32	Lajitas Array	49.07	95	P	P	22 55 11.7	+0.4
TX32				IAmb	IAmb	22 55 24.3	
	comp=Z,1.6nm,0.7s						
TXAR	Lajitas Array	49.07	95	P	P	22 55 12.3	+1.0
	comp=Z,0.5nm,0.5s,baz=294,slow=5.0,SNR=10						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	49.07	95		P	22 55 11.5	+0.2
HDIL	Hopedale	49.78	73	P	P	22 55 15.1	-1.4
	baz=311						
XLT	XiLinHaoTe	51.36	294	*e*P	P	22 55 28.8	+0.3
XLT				sP	pwP	22 55 38.3	+4.3
ULN	Ulaanbaatar	53.46	303	P	P	22 55 43.5	-0.6
ULN				IAmb	IAmb	22 55 49.5	
	comp=Z,4.7nm,0.8s						
ULN	Ulaanbaatar	53.46	303	*ce*P	P	22 55 44.2	+0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVT	Waverly	53.63	77	P	P	22 55 45.4	+0.2
WVT	Waverly	53.63	77	P	P	22 55 45.4	+0.2
WVT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WVT	Waverly	53.63	77	P	P	22 55 42.9	-2.4
	baz=314						
SONM	Songino Array	53.81	303	P	P	22 55 45.9	-0.6
	comp=Z,3.2nm,0.8s,baz=35,slow=7.5,SNR=16						
SONM				LR	LR	23 19 41.6	
	comp=Z,140nm,18.2s,baz=142,slow=37						
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	53.81	303	P	P	22 55 46.0	-0.6
SONM	Songino Array	53.81	303	P	P	22 55 46.0	-0.6
SONM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
OXF	Oxford	53.84	79	P	P	22 55 46.2	-0.6
	baz=315						
HHC	Hu-ho-hao-te	55.89	294	*e*P	P	22 56 01.3	-0.4
HNS	HongShan	56.56	289	⇓P	P	22 56 07.5	+1.1
ARCES	ARCESS Array B	57.03	356	P	P	22 56 07.4	-1.9
	comp=Z,2.5nm,0.7s,baz=11,slow=7.3,SNR=8.2						
ARCES				LR	LR	23 20 07.8	
	comp=Z,193nm,19.3s,baz=48,slow=36						
	comp=Z,2.5nm,0.7s						
LVZ	Lovozero	58.11	352	*ce*P	P	22 56 18.9	+1.9
LVZ				pmax	pmax		
	comp=Z,50nm,2.5s						
ZALV	Zalesovo Beam	58.96	320	P	P	22 56 22.6	-0.3
	comp=Z,1.6nm,0.6s,baz=54,slow=7.5,SNR=7.7						
ZALV				LR	LR	23 24 30.3	
	comp=Z,184nm,18.3s,baz=34,slow=39						
	comp=Z,1.6nm,0.6s						
DGZ	Jazzator, Alta	61.17	316	*i* P	P	22 56 38.3	-0.1
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA	Gaotai	63.15	300	⇓P	P	22 56 51.8	-0.1
GTA				pP	sP	22 56 56.3	+1.0
GTA				sP	pwP	22 56 59.0	+1.5
LZH	Lanzhou	63.51	295	*e*P	P	22 56 55.0	+0.7
LZH				sP	pwP	22 57 05.8	+5.9
KURK	Kurchatov	63.85	321	*i* P	P	22 56 55.3	-0.8
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
SVE	Sverdlovsk	64.27	335	*e*P	P	22 56 59.1	+0.3
SVE				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	64.79	328	*ce*P	P	22 57 02.6	+0.4
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
FINES	FINESS Array B	65.09	355	P	P	22 57 02.6	-1.4
	comp=Z,7.3nm,0.9s,baz=21,slow=8.2,SNR=14						
	comp=Z,7.3nm,0.9s						
FINES	FINESS Array B	65.09	355	*i* P	P	22 57 04.0	0.0
FINES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIRV	Kirov	65.11	342	LR	LR	23 30 32.4	
	comp=Z,179nm,18.2s,baz=61,slow=41						
ARU	Arti	65.14	336	LR	LR	23 29 31.3	
	comp=Z,127nm,18.3s,baz=22,slow=40						
ARU	Arti	65.14	336	*d i* P	P	22 57 04.2	-0.2
ARU						22 57 34.3	
ARU				S	S	23 05 48.9	+2.1
ARU				SS	SS	23 09 59.9	+1.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	Makanchi Array	65.58	317	*i* P	P	22 57 06.3	-1.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	65.58	317	P	P	22 57 06.4	-1.1
	comp=Z,2.2nm,0.8s,baz=36,slow=5.8,SNR=12						
MKAR				LR	LR	23 29 04.6	
	comp=Z,143nm,19.0s,baz=16,slow=39						
	comp=Z,2.2nm,0.8s						
WMQ	Urumqi	65.62	311	*e*P	P	22 57 10.3	+2.4
NB2	NORSAR Subarra	65.64	3	P	P	22 57 07.9	+0.2
	comp=Z,3.1nm,0.8s,baz=352,slow=6.9						
NOA	NORSAR Array B	65.64	3	P	P	22 57 06.3	-1.4
	comp=Z,2.7nm,0.9s,baz=355,slow=6.6,SNR=4.2						
NOA				LR	LR	23 27 57.1	
	comp=Z,51nm,18.0s,baz=340,slow=38						
	comp=Z,2.7nm,0.9s						
OTUK	Ortayu	68.18	324	*i* P	P	22 57 23.6	-0.5
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PDGK	Podgornoye	69.55	316	*i* P	P	22 57 32.5	-0.3
PDGK				pmax	pmax		
	comp=Z,12nm,1.4s						
AB31	Akbulak array	71.25	332	*i* P	P	22 57 42.9	0.0
AB31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BELG	Belogornoye	71.30	341	LR	LR	23 31 01.6	
	comp=Z,131nm,19.2s,baz=71,slow=38						
TKM2	Tokmak 2	71.46	318	P	P	22 57 45.1	+0.5
	SNR=5.9						
TKM2	Tokmak 2	71.46	318	*i* P	P	22 57 44.7	+0.1
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
USP	Ospenovka	71.60	319	P	P	22 57 45.8	+0.6
	SNR=8.7						
MNK	Minsk	71.89	353	*i* P	P	22 57 47.5	+0.9
MNK				*i* S	S	23 07 10.6	+3.5
MNK				pmax	pmax		
	comp=Z,14nm,0.9s						
MNK				pmax	pmax		
	comp=E,7.0nm,1.6s						
MNK				p

comp=Z,5.4nm,0.7s,baz=9.4,slow=5.5,SNR=12
AKASG LR LR 23 34 27.5
comp=Z,118nm,18.4s,baz=16,slow=38
comp=Z,5.4nm,0.7s
AKASG Malin Array Be 75.57 352 *ce*P **P 22 58 07.9 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 75.57 352 *ce*P **P 22 58 07.4 -0.9**
AKBB pmax pmax
comp=Z,7.0nm,0.5s
PVCC Panska Ves 76.25 1 *e*P **P 22 58 12.9 +0.7**
PVCC Panska Ves 76.25 1 *e*P **P 22 58 12.9 +0.7**
DPC Dobruska-Polom 76.44 0 *e*P **P 22 58 13.1 -0.3**
DPC Dobruska-Polom 76.44 0 *e*P **P 22 58 13.1 -0.3**
KRLC Kraliky 76.72 360 *e*P **P 22 58 15.2 +0.2**
KRLC Kraliky 76.72 360 *e*P **P 22 58 15.2 +0.2**
STHS Stebnicka Huta 77.31 357 *e*P **P 22 58 18.5 +0.2**
STHS pmax pmax
comp=Z,8.0nm,0.7s
MAUC Maruska 77.43 359 *e*P **P 22 58 20.0 +1.1**
KHC Kasperske Hory 77.63 2 *e*P **P 22 58 20.4 +0.3**
KHC Kasperske Hory 77.63 2 *e*P **P 22 58 20.4 +0.3**
GERES GERESS Array B 77.92 2 P **P 22 58 21.9 +0.1**
comp=Z,1.4nm,0.6s,baz=15,slow=5.5,SNR=13
comp=Z,1.4nm,0.6s
CKRC Cesky Krumlov 77.96 2 *e*P **P 22 58 21.8 -0.1**
VYHS Vyhne 78.29 359 *e*P **P 22 58 24.5 +0.8**
ZST Bratislava 78.60 360 *e*P **P 22 58 26.8 +1.4**
ZST pmax pmax
comp=Z,27nm,1.2s
CONA Conrad Observa 78.87 1 *e*Pn **P 22 58 28.2 +1.2**
comp=Z,4.3nm,0.8s
GUN Gumba 79.31 303 *e*P **P 22 58 29.9 -0.2**
comp=Z,37nm,0.9s
MOTA Moosalm 79.34 4 *e*P **P 22 58 29.7 0.0**
comp=Z,8.0nm,1.1s
JIRN Jiri 79.36 302 *e*P **P 22 58 30.2 -0.2**
comp=Z,43nm,0.7s
WATA Walderalm 79.37 4 *e*P **P 22 58 30.6 +0.8**
comp=Z,3.0nm,0.6s
WTTA Wattenberg 79.44 4 *e*P **P 22 58 30.9 +0.6**
comp=Z,5.2nm,0.6s
SQTA Sankt Quirin 79.47 4 *e*P **P 22 58 30.9 +0.6**
comp=Z,2.7nm,0.7s
ARSA Arzberg 79.54 1 *e*P **P 22 58 32.1 +1.4**
comp=Z,6.1nm,0.9s
FETA Feichten 79.65 4 *e*P **P 22 58 32.4 +1.0**
comp=Z,5.2nm,0.9s
RAMN Ramite 79.73 302 *e*P **P 22 58 31.7 -0.6**
comp=Z,36nm,0.9s
PKI Pulchoki 79.82 303 *e*P **P 22 58 32.7 -0.1**
PKIN Phulchoki 79.82 303 *e*P **P 22 58 32.5 -0.3**
comp=Z,7.9nm,0.5s
GKN Gorkha 79.85 304 *e*P **P 22 58 32.7 -0.1**
comp=Z,43nm,1.1s
CMAR Chiang Mai Arr 79.89 287 P **P 22 58 33.2 +0.3**
comp=Z,1.9nm,0.4s,baz=16,slow=5.7,SNR=22
comp=Z,1.9nm,0.4s
DMN Daman 79.94 303 *e*P **P 22 58 33.6 +0.2**
DANN Dangsing 80.00 305 *e*P **P 22 58 33.7 0.0**
comp=Z,59nm,0.8s
OBKA Obir 80.27 2 *e*P **P 22 58 36.3 +1.6**
comp=Z,15nm,0.9s
KIV Kislovodsk 80.34 341 *e*P **P 22 58 35.3 +0.2**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KBZ Khabaz 80.52 341 P **P 22 58 36.2 +0.3**
comp=Z,3.2nm,0.9s,baz=321,slow=4.7,SNR=7.1
KBZ LR LR 23 39 43.8
comp=Z,129nm,18.0s,baz=24,slow=40
comp=Z,3.2nm,0.9s
KBZ Khabaz 80.52 341 *ce*P **P 22 58 36.8 +0.9**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
KOLN Koldanda 80.56 304 *e*P **P 22 58 36.4 -0.3**
comp=Z,5.6nm,1.8s
PYUN Piuthan 80.58 305 *e*P **P 22 58 36.4 -0.4**
comp=Z,54nm,1.0s
GEYT Alibeck 82.11 328 P **P 22 58 44.5 0.0**
comp=Z,3.0nm,0.8s,baz=347,slow=4.6,SNR=9.0
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 85.41 16 P **P 22 59 01.7 +0.2**
comp=Z,0.7nm,0.9s,baz=331,slow=4.4,SNR=3.7
comp=Z,0.7nm,0.9s
BRTR Keskin Array B 85.94 347 P **P 22 59 03.3 -0.8**
comp=Z,2.4nm,0.8s,baz=26,slow=3.1,SNR=10
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 85.94 347 *ce*P **P 22 59 05.0 +0.9**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
H03N2 Juan Fernandez 113.00 115 T T 01 08 18.9
baz=323,slow=77,SNR=4.4
H03N1 Juan Fernandez 113.01 115 T T 01 08 23.3
baz=323,slow=77,SNR=3.2
H03N3 Juan Fernandez 113.01 115 T T 01 08 18.1
baz=323,slow=77,SNR=4.5

TAP 27 23:06:13.5, 24.°57N×121.°80E, h5km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.06**	**44**	P	Pg	23 06 15.3	+0.4
TWC	baz=51			S	Sg	23 06 16.4	+0.4
TWE	**Neicheng**	**0.20**	**321**	*e*P	Pg	23 06 18.2	+0.8
TWE	baz=323			*e*S	Sg	23 06 20.6	+0.6
ENTT	**Nioudou**	**0.23**	**289**	*e*P	Pg	23 06 18.8	+0.8
ENTT	baz=290			*e*S	Sg	23 06 21.8	+0.8
LATG	**Datong**	**0.26**	**263**	P	Pg	23 06 19.3	+0.8
LATG	baz=265			S	Sg	23 06 23.1	+1.2
FUSB	**Fushanzhiwuyua**	**0.28**	**314**	*e*P	Pg	23 06 19.9	+1.0
FUSB	baz=313			*e*S	Sb	23 06 24.3	-1.7
TIPB	**Shuangxi**	**0.40**	**3**	*e*P	Pb	23 06 22.7	-0.5
TIPB	baz=347			*e*S	Sg	23 06 27.1	+0.4
NNSB	**Datong**	**0.41**	**250**	*e*P	Pg	23 06 21.9	+0.5
NNSB	baz=252			*e*S	Sb	23 06 28.6	-1.2
NSK	**Sanguang**	**0.42**	**285**	*e*P	Pb	23 06 22.6	-0.8
NSK	baz=293			*e*S	Sg	23 06 27.6	+0.4
NACB	**Ninganchiao**	**0.44**	**206**	*e*P	Pb	23 06 22.9	-0.7
NACB	baz=209			*e*S	Sg	23 06 28.7	+1.1
ETLH	**Xiulin Townshi**	**0.46**	**219**	*e*P	Pg	23 06 23.0	+0.6
ETLH	baz=222			*e*S	Sb	23 06 31.1	-0.3

JMA 27 23:06:54.0±0.2, 24.°9N±0.°8×123.°4E±0.°3, h24km, MV2.6/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.54**	**219**	P	Pb	23 07 04.5	-0.3
YOJ				*e*S	Sb	23 07 11.7	-0.5
JYNG	**Yonagunijimaku**	**0.59**	**223**	*e*P	Pb	23 07 05.4	-0.2
JYNG				*e*S	Sb	23 07 12.9	-0.6
IRIF	**Iriomote-Funau**	**0.63**	**150**	P	Pb	23 07 06.1	-0.3
IRIF				S	Sb	23 07 14.8	+0.1
JKRS	**Kuro-shima**	**0.86**	**138**	P	Pb	23 07 09.9	-0.3
JKRS				S	Sb	23 07 21.3	+0.1
JIJ	**Ishigaki jima**	**0.86**	**127**	P	Pb	23 07 09.6	-0.6
JIJ				S	Sb	23 07 20.4	-1.0
JISG	**Ishigakijimahi**	**0.89**	**109**	P	Pb	23 07 10.3	-0.5
JISG				*e*S	Sb	23 07 21.9	-0.4
HATJ	**Hateruma jima**	**0.91**	**155**	P	Pb	23 07 10.8	-0.2
HATJ				S	Sb	23 07 22.5	-0.2
JTJ	**Tarama**	**1.22**	**101**	P	Pb	23 07 16.1	-0.2

VIE 27 23:08:12.4±2.1, 50.°60N×15.°29E, h0km, ml1.9/1, Error ellipse: s-maj=14.5km s-min=5.3km az=120.0 26 km SSE of Liberec Suspected Mining induced.
IPEC 27 23:08:17.5±0.0, 50.°63N×15.°38E, h10km, ML1.1/18, Error ellipse: s-maj=0.3km s-min=0.1km az=179.0
PRU 27 23:08:17.8±0.0, 50.°57N×15.°37E, h0km, Semily
ISC 27 23:08:17.3±1.1, 50.°54N±0.°05×15.°39E±0.°02, h13km±9km, n24, σ1.°17/30, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPC	**Upice**	**0.40**	**95**	*e*SG	**Sg**	**23 08 30.6**	**-0.1**
	comp=Z,4.2nm,0.2s						
CHVC	**Chvalec**	**0.43**	**84**	*e*PG	**Pg**	**23 08 25.4**	**-0.4**
CHVC				*e*SG	**Sg**	**23 08 31.5**	**-0.1**
PVCC	**Panska Ves**	**0.52**	**269**	*e*PG	**Pg**	**23 08 27.4**	**-0.1**
PVCC				*e*SG	**Sg**	**23 08 34.5**	**+0.1**
	comp=Z,38nm,0.1s						
OSTC	**Ostas**	**0.53**	**88**	*e*PG	**Pg**	**23 08 28.0**	**+0.3**
DPC	**Dobruska-Polom**	**0.63**	**107**	*e*SG	**Sb**	**23 08 39.0**	**+0.1**
GOPC	**GO Pecny, Ondr**	**0.74**	**212**	*e*SG	**Sb**	**23 08 42.7**	**+0.7**
	comp=Z,7.0nm,0.2s						
PRU	**Pruhonice**	**0.78**	**225**	*e*SG	**Sg**	**23 08 41.8**	**-0.6**
	comp=Z,4.5nm,0.2s						
KRLC	**Kraliky**	**1.01**	**117**	*e*SG	**Sn**	**23 08 51.4**	**+0.1**
LIPC	**Lipinka**	**1.28**	**123**	*e*Sg	**Sb**	**23 08 54.4**	**-3.1**
	1.4nm,0.1s,baz=126						
LIPC	**Lipinka**	**1.28**	**123**	*e*Sg	**Sg**	**23 08 58.6**	**+0.2**
	2.1nm,0.1s,baz=126						
LUKC	**Luka**	**1.36**	**130**	*e*Sg	**Sb**	**23 09 00.6**	**+0.8**
	1.0nm,0.2s,baz=134						
ANAC	**Anensky vrch**	**1.36**	**109**	*e*Pg	**Pb**	**23 08 42.6**	**0.0**
ANAC	baz=113			*e*Sg	**Sn**	**23 09 00.1**	**+0.1**
	1.5nm,0.1s,baz=113						
MUVC	**Mutkov**	**1.43**	**121**	*e*Sg	**Sn**	**23 09 01.8**	**+0.2**
	1.4nm,0.1s,baz=124						
VRAC	**Vranov**	**1.46**	**147**	*e*SG	**Sn**	**23 08 59.3**	**-3.1**
VRAC	**Vranov**	**1.46**	**147**	*e*SG	**Sb**	**23 09 03.5**	**+0.7**
VRAC	**Vranov**	**1.46**	**147**	*e*Sg	**Sn**	**23 08 59.2**	**-3.1**
	0.4nm,0.2s,baz=149						
VRAC	**Vranov**	**1.46**	**147**	*e*Sg	**Sb**	**23 09 03.5**	**+0.7**
	0.9nm,0.2s,baz=150						
MORC	**Moravsky Berou**	**1.59**	**118**	*e*PG	**Pn**	**23 08 45.8**	**+0.6**
MORC				*e*SG	**Sn**	**23 09 05.8**	**+0.3**
MORC	**Moravsky Berou**	**1.59**	**118**	*e*Pg	**Pn**	**23 08 45.7**	**+0.6**
	baz=121						
MORC				*e*Sg	**Sn**	**23 09 05.7**	**+0.3**
	1.5nm,0.2s,baz=121						
KRUC	**Moravsky**	**1.62**	**156**	*e*SG	**Sn**	**23 09 07.1**	**+0.8**
KRUC	**Moravsky**	**1.62**	**156**	*e*Sg	**Sn**	**23 09 07.1**	**+0.8**
	1.2nm,0.1s,baz=158						
CLL	**Collm**	**1.69**	**298**	*e*(Pg)	**Pn**	**23 08 47.0**	**+0.5**
CLL				*ex*	x	23 09 05.0	
CLL				*e*Sg	**Sb**	**23 09 09.0**	**-0.4**
KHC	**Kasperske Hory**	**1.83**	**220**	*e*SG	**Sg**	**23 09 15.9**	**-0.3**
CONA	**Conrad Observa**	**2.64**	**173**	*e*Sg	**Sg**	**23 09 42.3**	**+0.5**
	1.3nm,0.4s						

IDC 27 23:28:19.0±3.9, 56.°86S×26.°26W, h0km, mb4.2/2, mbtmp4.2/2, MS3.8/2, Error ellipse: s-maj=135.6km s-min=49.9km az=168.0
NEIC 27 23:28:30.0±1.4, 56.°4S±0.°1×26.°5W±0.°2, h66km±3km, mb4.3/12, Error ellipse: s-maj=22.4km s-min=13.9km az=211.0
ISC 27 23:28:31.9±0.7, 56.°5S±0.°1×26.°7W±0.°1, h88km, n26, σ0.°93/20, mb4.2/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.00**	**287**	Pn	**Pn**	**23 29 56.2**	**-1.8**
HOPE				Sn	**Sn**	**23 31 05.0**	**-0.2**
VNA1	**Neumayer--Stat**	**16.30**	**158**	P	**P**	**23 32 15.5**	**-1.0**
VNA3	**Neumayer Olymp**	**16.50**	**161**	P	**P**	**23 32 18.5**	**-0.2**
VNA2	**Neumayer--Watz**	**16.70**	**158**	P	**P**	**23 32 19.7**	**-1.2**
	baz=320,slow=13						
SNAA	**Sanae**	**18.24**	**156**	P	**Pn**	**23 32 38.0**	**-0.9**
SNAA	**Sanae**	**18.24**	**156**	P	**P**	**23 32 37.5**	**-0.5**
BELA	**Belgrano 2**	**21.68**	**185**	P	**P**	**23 33 14.4**	**-0.5**
QSPA	**South Pole Qui**	**33.78**	**180**	P	**P**	**23 35 06.1**	**+1.1**
QSPA				IAmb	IAmb	23 35 14.4	
	comp=Z,4.0nm,1.1s						
ITQB	**Itaqui**	**34.08**	**309**	P	**P**	**23 35 09.4**	**+1.7**
BDFB	**Brasilia**	**43.87**	**330**	LR	LR	23 53 29.6	
	comp=Z,108nm,18.1s,baz=168,slow=34						
GO02	**Mina Guanaco**	**43.94**	**297**	P	**P**	**23 36 30.0**	**-0.3**
GO02				IAmb	IAmb	23 36 31.7	
	comp=Z,8.9nm,1.2s						
PB14	**IPOC Station P**	**44.78**	**297**	P	**P**	**23 36 37.4**	**+0.3**
PB14				IAmb	IAmb	23 36 57.0	
	comp=Z,18nm,1.5s						
VNDA	**Vanda**	**46.17**	**183**	P	**P**	**23 36 48.3**	**+1.4**
VNDA				IAmb	IAmb	23 37 13.4	
	comp=Z,4.1nm,1.4s						
PATCX	**Punta Patache**	**47.88**	**300**	P	**P**	**23 37 01.4**	**+0.4**
H10S2	**ASCENSION HYDR**	**48.32**	**16**	T	T	00 29 33.7	
	baz=31,slow=74,SNR=2.8						
H10S3	**ASCENSION HYDR**	**48.33**	**16**	T	T	00 29 33.3	
	baz=189,slow=74,SNR=14						
LBTB	**Lobatse**	**48.86**	**72**	P	**P**	**23 37 08.0**	**-0.6**
H10N1	**ASCENSION HYDR**	**49.44**	**16**	T	T	00 30 50.2	
	baz=191,slow=71,SNR=2.7						
H10N3	**ASCENSION HYDR**	**49.44**	**16**	T	T	00 30 50.0	
	baz=191,slow=71,SNR=17						
H10N2	**ASCENSION HYDR**	**49.46**	**16**	T	T	00 31 01.3	
	baz=191,slow=71,SNR=6.6						
LPAZ	**La Paz**	**50.85**	**305**	P	**P**	**23 37 25.1**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=157,slow=5.0,SNR=3.4						
	comp=Z,1.7nm,0.5s						
LPAZ	**La Paz**	**50.85**	**305**	P	**P**	**23 37 24.6**	**+0.3**
LPAZ				IAmb	IAmb	23 37 27.5	
	comp=Z,1.7nm,0.8s						
MBAR	**Mbarara**	**72.09**	**62**	LR	LR	00 07 24.8	
	comp=Z,69nm,19.4s,baz=238,slow=33						
TOA0	**Torodi Ar. Sit**	**73.28**	**29**	P	**P**	**23 39 53.1**	**-0.4**
TOA0				IAmb	IAmb	23 39 57.5	
	comp=Z,5.5nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.28**	**29**	P	**P**	**23 39 53.4**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=202,slow=6.5,SNR=15						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**150.60**	**311**	PKPbc	**PKPbc**	**23 48 12.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=116,slow=2.1,SNR=5.9						

PRU 27 23:35:53.7±0.0, 42.°98N×13.°64E, h0km
ROM 27 23:35:51.0±0.0, 42.°868N±0.°002×13.°155E±0.°004, h9km, ML3.1/36, 20C-19D, Error ellipse: s-maj=0.3km s-min=0.1km az=262.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**221**	⇑P	Pg	23 35 53.0	+0.1
NRCA				S	Sg	23 35 54.2	0.0
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,84050μm,0.8s						
NRCA				AML	AML		
	comp=N,84000μm,0.8s						
NRCA				AML	AML		
	comp=N,88150μm,0.8s						
NRCA				AML	AML		
NRCA				AML	AML		
MC2	**Monte Cornacci**	**0.05**	**30**	P	Pg	23 35 53.0	0.0
MC2				S	Sg	23 35 54.4	-0.1
T1216	**Preci, Frazion**	**0.10**	**283**	⇑P	Pg	23 35 53.9	+0.5
T1216				AML	AML		
	comp=N,47500μm,1.2s						
T1216				AML	AML		
	comp=E,54050μm,0.3s						
T1216				AML	AML		
	comp=N,47450μm,1.2s						
T1216				AML	AML		
	comp=E,54000μm,0.3s						
T1216				AML	AML		
	comp=E,54000μm,1.7s						
FDMO	**Fiordimonte**	**0.17**	**344**	⇑P	Pg	23 35 55.3	+0.6
FDMO				S	Sg	23 35 58.2	+1.1
FDMO				AML	AML		
	comp=N,17850μm,1.5s						
FDMO				AML	AML		
	comp=E,16850μm,1.6s						
FDMO				AML	AML		
	comp=N,17850μm,0.5s						
FDMO				AML	AML		
	comp=E,16850μm,0.4s						
AM05	**Amandola Campo**	**0.18**	**53**	⇑P	Pg	23 35 55.5	+0.8
AM05				S	Sg	23 35 58.7	+1.3
AM05				AML	AML		
	comp=E,5570μm,0.5s						
AM05				AML	AML		
	comp=N,4480μm,0.4s						
AM05				AML	AML		
	comp=E,21800μm,0.5s						
AM05				AML	AML		
	comp=N,690μm,0.2s						
AM05				AML	AML		
	comp=N,4475μm,0.4s						
AM05				AML	AML		
	comp=N,690μm,0.2s						
AM05				AML	AML		
	comp=E,5575μm,0.5s						
AM05				AML	AML		
	comp=N,4480μm,1.6s						
AM05				AML	AML		
	comp=E,5575μm,1.5s						
AM05				AML	AML		
	comp=E,21800μm,1.5s						
T1215	**Vallo di Nera,**	**0.22**	**253**	⇑P	Pg	23 35 56.2	+0.7
T1215				S	Sg	23 36 00.0	+1.5
T1215				AML	AML		
	comp=E,4500μm,0.5s						
T1215				AML	AML		
	comp=N,7360μm,1.0s						
T1215				AML	AML		
	comp=N,7385μm,1.0s						
T1215				AML	AML		
	comp=E,4495μm,0.5s						
T1215				AML	AML		
	comp=N,7360μm,1.1s						
T1215				AML	AML		
	comp=N,7365μm,1.1s						
T1215				AML	AML		
	comp=N,7345μm,1.1s						
T1215				AML	AML		
	comp=E,4615μm,0.5s						
T1215				AML	AML		
	comp=N,7385μm,1.0s						
T1215				AML	AML		
	comp=N,7345μm,0.9s						
T1204	**Amatrice, Fraz**	**0.23**	**148**	P	Pg	23 35 56.5	+0.9
T1204				S	Sg	23 36 00.4	+1.7
T1204				AML	AML		
	comp=E,7740μm,0.9s						
T1204				AML	AML		
	comp=N,6190μm,1.2s						
T1204				AML	AML		
	comp=N,6180μm,1.2s						
T1204				AML	AML		
	comp=E,7745μm,0.9s						
T1217	**Poggiodomo (PG**	**0.23**	**227**	⇑P	Pg	23 35 56.3	+0.8
T1217				S	Sg	23 36 00.4	+1.7
T1217				AML	AML		
	comp=E,5615μm,0.5s						
T1217				AML	AML		
	comp=N,8365μm,0.4s						
T1217				AML	AML		
	comp=E,5405μm,0.5s						
T1217				AML	AML		
	comp=N,8335μm,0.4s						
T1217				AML	AML		
	comp=E,5410μm,0.5s						
T1217				AML	AML		
	comp=N,8365μm,0.4s						
T1217				AML	AML		
	comp=E,5415μm,0.5s						
T1217				AML	AML		
	comp=E,5610μm,0.5s						
CESI	**CESI - Serrava**	**0.23**	**307**	⇓P	Pg	23 35 56.3	+0.7
CESI				S	Sg	23 36 00.2	+1.4
CESI				AML	AML		
	comp=E,17200μm,0.5s						
CESI				AML	AML		
	comp=N,25050μm,0.3s						
SMA1	**SAN MARTINO**	**0.27**	**151**	⇓P	Pg	23 35 57.1	+0.7
SMA1				AML	AML		
	comp=E,7765μm,0.5s						
SMA1				AML	AML		
	comp=E,7760μm,0.5s						
SMA1				AML	AML		
	comp=N,8275μm,0.9s						
LNSS	**Leonessa**	**0.28**	**198**	⇑P	Pg	23 35 57.2	+0.7
LNSS				S	Sb	23 36 01.8	-1.2
LNSS				AML	AML		
	comp=E,6590μm,1.1s						
LNSS				AML	AML		
	comp=N,11540μm,0.6s						
LNSS				AML	AML		
	comp=E,6585μm,1.1s						
LNSS				AML	AML		
	comp=E,6585μm,0.9s						
LNSS				AML	AML		
	comp=N,11540μm,1.4s						
SEF1	**Sefro**	**0.32**	**331**	P	Pg	23 35 57.9	+0.6
SEF1				S	Sb	23 36 03.6	-0.6
SEF1				AML	AML		
	comp=N,12300μm,0.2s						
SEF1				AML	AML		
	comp=N,12300μm,0.2s						
SEF1				AML	AML		
	comp=E,13250μm,0.3s						
SEF1				AML	AML		
	comp=N,12300μm,1.8s						
MDAR	**Monte D'Aria**	**0.32**	**358**	P	Pg	23 35 58.0	+0.6
MDAR				S	Sb	23 36 03.3	-1.1
MDAR				AML	AML		
	comp=N,7825μm,0.7s						
MDAR				AML	AML		
	comp=E,9580μm,0.5s						
MDAR				AML	AML		
	comp=E,9580μm,1.5s						
MDAR				AML	AML		
	comp=N,7825μm,1.3s						
MNTP	**Montappone**	**0.35**	**40**	⇑P	Pb	23 35 59.3	-0.2
RM33	**Pellescritta (**	**0.36**	**173**	⇓P	Pg	23 35 58.8	+0.7
RM33				S	Sb	23 36 04.6	-0.8
RM33				AML	AML		
	comp=E,4415μm,0.7s						
RM33				AML	AML		
	comp=N,3095μm,1.6s						
RM33				AML	AML		
	comp=N,3120μm,1.6s						
RM33				AML	AML		
	comp=E,4405μm,0.7s						
RM33				AML	AML		
	comp=N,3095μm,1.6s						
RM33				AML	AML		
	comp=E,4415μm,1.3s						
RM33				AML	AML		
	comp=E,4405μm,1.3s						
RM33				AML	AML		
	comp=N,3095μm,0.4s						
RM33				AML	AML		
	comp=N,3120μm,0.4s						
GAG1	**Gagliole**	**0.38**	**350**	P	Pg	23 35 59.1	+0.7
GAG1				S	Sb	23 36 05.4	-0.5
GAG1				AML	AML		
	comp=N,15800μm,0.4s						
GAG1				AML	AML		
	comp=E,18350μm,0.4s						
CAMP	**Campotosto**	**0.38**	**151**	⇓P	Pg	23 35 59.0	+0.5
CAMP				S	Sb	23 36 05.2	-0.9
CAMP				AML	AML		
	comp=E,2150μm,0.6s						
CAMP				AML	AML		
	comp=N,2265μm,0.5s						
CAMP				AML	AML		
	comp=N,2265μm,1.5s						
CAMP				AML	AML		
	comp=E,2150μm,1.4s						
OFFI	**Offida**	**0.40**	**80**	⇓P	Pg	23 35 59.2	+0.5
OFFI				AML	AML		
	comp=N,9710μm,0.5s						
OFFI				AML	AML		
	comp=E,7700μm,1.4s						
T1211	**Morro Reatino**	**0.40**	**214**	⇑P	Pg	23 35 59.3	+0.5
T1211				S	Sb	23 36 06.4	-0.2
T1211				AML	AML		
	comp=E,2055μm,0.8s						
T1211				AML	AML		
	comp=N,4930μm,0.3s						

T1211				AML	AML		
	comp=E,2185μm,0.6s						
T1211				AML	AML		
	comp=N,4850μm,0.4s						
T1211				AML	AML		
	comp=E,2190μm,0.6s						
T1211				AML	AML		
	comp=N,4850μm,0.4s						
T1211				AML	AML		
	comp=N,4930μm,0.4s						
T1211				AML	AML		
	comp=E,2050μm,0.8s						
TERO	**Teramo**	**0.41**	**126**	⇓P	Pg	23 35 59.4	+0.4
TERO				S	Sb	23 36 06.2	-0.7
TERO				AML	AML		
	comp=E,3230μm,0.4s						
TERO				AML	AML		
	comp=N,3965μm,0.6s						
TERO				AML	AML		
	comp=N,3845μm,0.6s						
TERO				AML	AML		
	comp=E,3405μm,0.3s						
TERO				AML	AML		
	comp=E,3235μm,0.4s						
TERO				AML	AML		
	comp=N,3965μm,1.4s						
TERO				AML	AML		
	comp=N,3845μm,1.4s						
T1247	**Pizzolo (AQ)**	**0.44**	**166**	⇓P	Pg	23 36 00.1	+0.6
T1247				AML	AML		
	comp=E,4540μm,0.6s						
T1247				AML	AML		
	comp=N,5500μm,0.5s						
T1247				AML	AML		
	comp=E,4540μm,1.4s						
EL6	**Elcito**	**0.46**	**355**	⇑P	Pg	23 36 00.4	+0.4
EL6				S	Sb	23 36 09.0	+0.6
CESX	**Cesi**	**0.50**	**239**	⇑P	Pg	23 36 00.9	+0.3
CESX				S	Sb	23 36 10.0	+0.7
CESX				AML	AML		
	comp=N,2500μm,1.1s						
CESX				AML	AML		
	comp=E,2690μm,0.7s						
CESX				AML	AML		
	comp=N,2500μm,0.9s						
CING	**Cingoli**	**0.51**	**3**	⇑P	Pg	23 36 01.2	+0.3
CING				AML	AML		
	comp=E,3620μm,0.2s						
CING				AML	AML		
	comp=N,2785μm,0.4s						
CING				AML	AML		
	comp=N,2780μm,0.4s						
CING				AML	AML		
	comp=N,2780μm,1.6s						
GIGS	**Gran Sasso**	**0.52**	**144**	⇓P	Pg	23 36 01.1	+0.1
GIGS				S	Sb	23 36 09.8	-0.2
GIGS				AML	AML		
	comp=E,440μm,1.4s						
GIGS				AML	AML		
	comp=N,456μm,0.5s						
AQU	**L'Aquila**	**0.55**	**160**	⇓P	Pg	23 36 02.0	+0.5
AQU				AML	AML		
	comp=E,2240μm,0.9s						
AQU				AML	AML		
	comp=N,2875μm,1.3s						
AQU				AML	AML		
	comp=N,2870μm,1.3s						
AQU				AML	AML		
	comp=E,2115μm,0.9s						
AQU				AML	AML		
	comp=N,2625μm,1.3s						
AQU				AML	AML		
	comp=E,2245μm,0.9s						
TRTR	**Tortoreto Alta**	**0.56**	**96**	⇑P	Pb	23 36 03.8	+0.8
FIAM	**Fiamignano**	**0.60**	**183**	⇓P	Pg	23 36 02.9	+0.4
FIAM				S	Sb	23 36 13.0	+0.6
FIAM				AML	AML		
	comp=N,1355μm,0.5s						
FIAM				AML	AML		
	comp=E,2065μm,0.7s						
FIAM				AML	AML		
	comp=N,1355μm,1.5s						
ARVD	**Arcevia**	**0.65**	**346**	⇑P	Pg	23 36 03.9	+0.4
ARVD				S	Sb	23 36 15.0	+1.3
ARVD				AML	AML		
	comp=E,1850μm,1.2s						
ARVD				AML	AML		
	comp=N,1200μm,1.4s						
ARVD				AML	AML		
	comp=N,1200μm,0.6s						
ARVD				AML	AML		
	comp=E,1850μm,0.8s						
FAGN	**Fagnano**	**0.68**	**152**	⇓P	Pg	23 36 04.0	-0.1
FAGN				AML	AML		
	comp=E,2655μm,0.5s						
FAGN				AML	AML		
	comp=N,1800μm,0.3s						
VCEL	**Villa Celiera**	**0.69**	**133**	⇓P	Pb	23 36 04.8	-0.5
VCEL				AML	AML		
	comp=E,1915μm,0.7s						
VCEL				AML	AML		
	comp=N,2190μm,1.2s						
VCEL				AML	AML		
	comp=E,1920μm,0.7s						
VCEL				AML	AML		
	comp=E,1920μm,1.3s						
VCEL				AML	AML		
	comp=N,2190μm,0.8s						
FRON	**Frontone**	**0.72**	**334**	P	Pg	23 36 05.0	+0.1
FRON				AML	AML		
	comp=E,1305μm,0.3s						
FRON				AML	AML		
	comp=N,2365μm,0.2s						
FRON				AML	AML		
	comp=E,1300μm,0.3s						
AOI	**Ancona**	**0.76**	**25**	⇓P	Pb	23 36 06.2	-0.1
AOI				AML	AML		
	comp=E,1109μm,0.3s						
AOI				AML	AML		
	comp=N,1225μm,0.4s						
MGAB	**Montegabbione**	**0.77**	**274**	⇑P	Pg	23 36 06.0	+0.3
MGAB				AML	AML		
	comp=E,1565μm,0.9s						
MGAB				AML	AML		
	comp=N,1870μm,1.0s						
MGAB				AML	AML		
	comp=N,2060μm,0.7s						
MGAB				AML	AML		
	comp=E,1840μm,0.8s						
MGAB				AML	AML		
	comp=E,1570μm,0.9s						
MGAB				AML	AML		
	comp=N,2060μm,1.3s						
MGAB				AML	AML		
	comp=N,1865μm,1.0s						
T0110	**Collepietro**	**0.79**	**144**	⇓P	Pg	23 36 06.1	-0.1
T0110				AML	AML		
	comp=N,1925μm,0.6s						
T0110				AML	AML		
	comp=E,1585μm,0.9s						
T0110				AML	AML		
	comp=N,1925μm,1.4s						
ATMI	**Monte Miggiano**	**0.80**	**306**	⇑P	Pn	23 36 08.2	-0.3
ATMI				AML	AML		
	comp=N,2120μm,0.4s						
ATMI				AML	AML		
	comp=E,2045μm,0.4s						
ATPI	**Pietralunga -**	**0.80**	**317**	P	Pg	23 36 06.5	+0.2
ATPI				AML	AML		
	comp=N,702μm,1.3s						
ATPI				AML	AML		
	comp=E,997μm,0.9s						
ATPI				AML	AML		
	comp=N,702μm,0.7s						
PIEI	**Pieia**	**0.81**	**326**	⇓P	Pg	23 36 06.6	+0.1
PIEI				S	Sn	23 36 20.0	-0.8
PIEI				AML	AML		
	comp=E,814μm,1.4s						
PIEI				AML	AML		
	comp=N,588μm,1.2s						
PIEI				AML	AML		
	comp=E,814μm,1.4s						
FSSB	**Fossombrone**	**0.87**	**342**	⇓P	Pg	23 36 07.9	+0.2
FSSB				S	Sn	23 36 23.0	+0.7
FSSB				AML	AML		
	comp=E,2825μm,0.3s						
FSSB				AML	AML		
	comp=E,2820μm,0.3s						
FSSB				AML	AML		
	comp=N,3895μm,0.3s						
SACS	**San Casciano d**	**0.92**	**269**	⇓P	Pb	23 36 09.1	0.0
SACS				AML	AML		
	comp=E,666μm,0.9s						
SACS				AML	AML		
	comp=N,806μm,0.8s						
SACS				AML	AML		
	comp=E,666μm,1.1s						
SACS				AML	AML		
	comp=N,806μm,1.2s						
PE3	**Peglio**	**0.96**	**330**	⇑P	Pn	23 36 11.1	+0.4
CAFI	**Castiglion Fio**	**0.98**	**298**	⇓P	Pb	23 36 10.6	+0.4
CAFI				AML	AML		
	comp=E,642μm,0.7s						
CAFI				AML	AML		
	comp=N,633μm,0.6s						
INTR	**Introdacqua**	**1.02**	**147**	⇑P	Pg	23 36 08.8	-1.7
CSNT	**Castellina Chi**	**1.49**	**295**	⇓P	Pg	23 36 19.6	0.0
TRIV	**Trivento**	**1.51**	**136**	⇑P	Pg	23 36 21.1	+1.2
RUFI	**Rufina**	**1.54**	**310**	⇑P	Pg	23 36 20.5	-0.1
PTRJ	**Pietraroja**	**1.82**	**145**	P	Pg	23 36 26.5	+0.7
PAOL	**Paolisi**	**2.12**	**150**	S	Sn	23 36 54.0	+0.9
OBKA	**Obir**	**3.77**	**15**	*e*Pn	Pg	23 37 05.0	+1.8
	comp=N,8.5nm,0.6s						
MYKA	**Terra Mystica**	**3.78**	**5**	*e*Pn	Pn	23 36 51.3	+1.8
	comp=N,4.3nm,0.5s						
ABTA	**Abfaltersbach**	**3.91**	**353**	*e*Pn	Pn	23 36 53.0	+1.8
	comp=N,6.3nm,0.3s						
ABTA				*e*Sn	Sn	23 37 39.1	+1.9
	comp=N,10nm,0.6s						
FETA	**Feichten**	**4.50**	**338**	*e*Pn	Pn	23 37 03.8	+4.4
	comp=N,3.3nm,0.5s						
WTTA	**Wattenberg**	**4.53**	**347**	*e*Pn	Pn	23 37 03.0	+3.2
	comp=N,0.8nm,0.2s						
SQTA	**Sankt Quirin**	**4.56**	**343**	*e*Pn	Pn	23 37 03.8	+3.5
	comp=N,2.5nm,0.3s						
WATA	**Walderalm**	**4.61**	**347**	*e*Pn	Pn	23 37 04.6	+3.7
	comp=N,3.1nm,0.5s						
ARSA	**Arzberg**	**4.69**	**20**	*e*Pn	Pn	23 37 03.9	+1.9
	comp=N,0.6nm,0.3s						
MOTA	**Moosalm**	**4.71**	**343**	*e*Pn	Pn	23 37 06.1	+3.8
	comp=N,4.2nm,0.7s						
BIOA	**Bad Ischl, Aus**	**4.83**	**4**	*e*Pn	Pn	23 37 06.3	+2.3
	comp=N,2.4nm,0.3s						
RETA	**Reutte**	**4.92**	**341**	*e*Pn	Pn	23 37 08.3	+3.2
	comp=N,1.8nm,0.4s						
DAVA	**Damuels**	**4.99**	**333**	*e*Pn	Pn	23 37 11.1	+4.9
	comp=N,5.0nm,0.5s						
MOA	**Molln**	**5.04**	**9**	*e*Pn	Pn	23 37 08.8	+2.0
	comp=N,0.5nm,0.3s						
CONA	**Conrad Observa**	**5.41**	**20**	*e*Pn	Pn	23 37 13.0	+1.2
	comp=N,0.8nm,0.2s						
CONA				*e*Sn	Sn	23 38 15.0	+0.7
	comp=N,3.1nm,0.4s						
CKRC	**Cesky Krumlov**	**6.01**	**7**	*e*SN	Sn	23 38 27.4	-1.5
KHC	**Kasperske Hory**	**6.27**	**3**	*e*PN	Pn	23 37 23.9	+0.2
KHC				*e*SN	Sn	23 38 33.3	-2.2

ROM 27 23:36:42.9±0.1, 42°.913N±0°.004×13°.038E±0°.005, h11km, ML2.3/3, 4C-2D, Error ellipse: s-maj=0.5km s-min=0.3km az=309.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**211**	P	Pg	23 36 45.3	+0.3
T1216				S	Sg	23 36 46.7	+0.3
T1216				AML	AML		
	comp=E,9315μm,0.3s						
T1216				AML	AML		
	comp=N,9490μm,0.3s						
T1216				AML	AML		
	comp=E,9305μm,0.3s						
FEMA	**Monte Fema**	**0.05**	**10**	P	Pg	23 36 45.6	+0.3
FEMA				S	Sg	23 36 47.1	+0.2
NRCA	**Norcia**	**0.10**	**145**	⇓P	Pg	23 36 46.0	+0.3
NRCA				S	Sg	23 36 47.9	+0.2
NRCA				AML	AML		
	comp=E,5560μm,1.1s						
NRCA				AML	AML		
	comp=N,8745μm,0.2s						
NRCA				AML	AML		
	comp=E,5980μm,1.1s						
NRCA				AML	AML		
	comp=E,5555μm,1.1s						
NRCA				AML	AML		
	comp=N,9545μm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**90**	⇑P	Pg	23 36 46.2	+0.2
MC2				S	Sg	23 36 48.9	+0.7
FDMO	**Fiordimonte**	**0.13**	**16**	P	Pg	23 36 46.5	+0.4
FDMO				S	Sg	23 36 49.0	+0.6
FDMO				AML	AML		
	comp=N,1465μm,0.9s						
FDMO				AML	AML		
	comp=E,1625μm,0.2s						
T1215	**Vallo di Nera,**	**0.17**	**228**	P	Pg	23 36 47.3	+0.6
T1215				S	Sg	23 36 50.0	+0.7
T1217	**Poggiodomo (PG**	**0.22**	**201**	⇑P	Pg	23 36 48.0	+0.5
T1217				S	Sg	23 36 51.7	+1.0
AM05	**Amandola Campo**	**0.24**	**74**	⇑P	Pg	23 36 48.4	+0.5
AM05				S	Sg	23 36 52.2	+0.9
AM05				AML	AML		
	comp=N,184μm,0.1s						
AM05				AML	AML		
	comp=E,696μm,0.1s						
AM05				AML	AML		
	comp=E,2955μm,0.1s						
AM05				AML	AML		
	comp=N,532μm,0.1s						
LNSS	**Leonessa**	**0.31**	**180**	⇓P	Pg	23 36 49.6	+0.4
LNSS				S	Sb	23 36 54.8	-0.8
TERO	**Teramo**	**0.51**	**125**	⇑P	Pg	23 36 52.8	0.0

NIED ***27*** *23:44:31.7, 40°.16N×142°.42E, h34km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.21; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-3.95; $M_{r\theta}$0.38; $M_{\theta\phi}$-0.58; $M_{\phi r}$2.22; Fault plane solution: $M_0$4.26000×10^{14} NP1: ϕ_s184.00000°, δ29.00000°, λ86.00000°. NP2:ϕ_s9.00000°, δ61.00000°, λ92.00000°.*

JMA 27 23:44:31.7±0.1, 40°.2N±0°.3×142°.4E±0°.7, h34km±1km, MV3.7/40, 16D, NE OFF IWATE PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.48**	**243**	⇓P	Pb	23 44 42.0	-0.1
JTH				⇓S	Sn	23 44 49.3	0.0
JKEN	**Kujiedanarisaw**	**0.55**	**275**	⇓P	Pn	23 44 42.7	-0.3
JKEN				⇓S	Sb	23 44 50.3	-0.7
JANG	**Nango**	**0.73**	**288**	⇓*i*P	Pn	23 44 45.3	-0.3
JANG				⇓S	Sn	23 44 54.7	-0.7
MIYJ	**Miyakonagasawa**	**0.74**	**219**	⇓*i*P	Pn	23 44 45.4	-0.4
MIYJ				⇓S	Sn	23 44 55.1	-0.7
JKZ	**Kuzumaki**	**0.85**	**259**	⇓*i*P	Pn	23 44 47.6	+0.3
JKZ				⇓S	Sn	23 44 59.0	+0.4
JOM	**Ohasama**	**1.11**	**232**	⇓*i*P	Pn	23 44 51.4	+0.7
JOM				⇓*e*S	Sb	23 45 06.0	-0.5
JARK	**Aomorirokkasho**	**1.17**	**317**	⇓*i*P	Pn	23 44 52.0	+0.4
JARK				⇓*e*S	Sn	23 45 06.8	+0.5
JTM	**Tenmabayashi**	**1.21**	**302**	⇓*i*P	Pn	23 44 52.8	+0.6
JTM				⇓S	Sb	23 45 08.5	-0.9
OFUJ	**Ofunato**	**1.22**	**209**	P	Pn	23 44 52.8	+0.4
OFUJ				*e*S	Sn	23 45 08.0	+0.4
JAH	**Hinai**	**1.37**	**272**	*i* P	Pn	23 44 55.3	+0.9
JAH				*e*S	Sn	23 45 12.5	+1.2
JMK	**Ichinoseki**	**1.52**	**218**	*i* P	Pn	23 44 57.4	+1.0
JMK				S	Sb	23 45 17.1	-1.2

IDC ***27*** *23:48:16.9±1.1, 1°.04N×126°.34E, h0km, mb4.2/6, mbtmp4.2/7, ML4.1/1, MS3.5/3, Error ellipse: s-maj=55.5km s-min=18.3km az=69.0*

DJA ***27*** *23:48:21.0±0.2, 1°.N±3°.×12°.6E±°, h10km, M4.4/14, mb4.6/7, mB4.8/3, MLv4.3/14, Mw(mB)4.1/3*

NEIC ***27*** *23:48:24.8±2.6, 0°.80N±0°.09×126°.21E±0°.04, h47km±11km, mb4.5/16, Error ellipse: s-maj=13.6km s-min=5.8km az=180.0*

ISC 27 23:48:23.9±0.6, 0°.81N±0°.07×126°.13E±0°.06, h44km, n65, σ1§18/63, mb4.5/14, MS3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**92**		**Pn**	**23 48 43.9**	**-0.8**
TNTI				Sn	**Sn**	**23 49 02.1**	**+1.9**
TNTI	**Ternate**	**1.24**	**92**	P	**Pn**	**23 48 44.1**	**-0.6**
TNTI	**Ternate**	**1.24**	**92**	P	**Pn**	**23 48 44.2**	**-0.5**
GAMI	**Galela, Maluku**	**1.94**	**58**	P	**Pn**	**23 48 54.2**	**-0.2**
LBMI	**Labuha**	**1.99**	**136**	P	**Pn**	**23 48 55.0**	**0.0**
SANI	**Sanana**	**2.85**	**183**	P	**Pn**	**23 49 05.8**	**-1.0**
SANI	**Sanana**	**2.85**	**183**	P	**Pn**	**23 49 06.1**	**-0.7**
SGSI	**Sangihe**	**2.92**	**348**	P	**Pn**	**23 49 07.1**	**-0.7**
GTOI	**Gorontalo**	**3.12**	**267**	P	**Pn**	**23 49 11.6**	**+1.0**
LUWI	**Luwuk**	**3.83**	**241**		**Pn**	**23 49 22.3**	**+2.0**
LUWI	**Luwuk**	**3.83**	**241**	P	**Pn**	**23 49 20.0**	**-0.3**
LUWI	**Luwuk**	**3.83**	**241**	P	**Pn**	**23 49 23.4**	**+3.1**
NLAI	**Namlea**	**4.14**	**166**	P	**Pn**	**23 49 24.6**	**0.0**
MRSI	**Marisa**	**4.20**	**265**	P	**Pn**	**23 49 25.2**	**-0.2**
KRAI	**Karang Ratu**	**4.69**	**151**	P	**Pn**	**23 49 32.4**	**+0.3**
APSI	**Ampana**	**4.80**	**249**	P	**Pn**	**23 49 33.9**	**+0.3**
TOLI2	**Tolitoli**	**5.36**	**273**		**Pn**	**23 49 42.2**	**+0.9**
TOLI2	**Tolitoli**	**5.36**	**273**	P	Pn	23 49 46.4	+5.1
MPSI	**Mapaga**	**6.25**	**266**	P	**Pn**	**23 49 53.2**	**-0.4**
	0.1nm405nm17nm,0.6s						
FAKI	**Fak Fak**	**7.15**	**121**	Pn	**Pn**	**23 50 03.0**	**-3.0**
SPSI	**Sidrap Palu**	**7.93**	**233**	P	**Pn**	**23 50 16.9**	**+0.2**
	0.2nm1μm44nm,0.5s						
BNSI	**Bone**	**7.94**	**229**	P	**Pn**	**23 50 16.7**	**-0.1**
	0.1nm21nm,0.7s						
MWPI	**Manokwari, Pap**	**8.10**	**102**	P	**Pn**	**23 50 19.3**	**+0.4**
	59nm,0.5s						
BKSI	**Bulukumba**	**8.55**	**224**	P	**Pn**	**23 50 25.0**	**-0.2**
	350nm21nm,0.5s						
KAPI	**Kappang**	**8.61**	**228**	Pn	**Pn**	**23 50 27.5**	**+1.5**
	2.1nm,0.3s,baz=136,slow=8.2,SNR=3.8						
	9.3nm,0.4s						
KAPI	**Kappang**	**8.61**	**228**		**Pn**	**23 50 27.6**	**+1.7**
KAPI	**Kappang**	**8.61**	**228**	P	**Pn**	**23 50 26.0**	**0.0**
	16nm,1.3s						
KAPI	**Kappang**	**8.61**	**228**	P	**Pn**	**23 50 27.8**	**+1.8**
MYLDM	**Lahad Datu**	**8.77**	**300**		**Pn**	**23 50 30.8**	**+2.7**
MYLDM	**Lahad Datu**	**8.77**	**300**	P	**Pn**	**23 50 27.5**	**-0.6**
	52nm,0.9s						
BSSI	**Bau Bau, Buton**	**8.91**	**219**	P	**Pn**	**23 50 30.0**	**-0.1**
MTN	**Manton Dam**	**14.45**	**160**	Pn	**Pn**	**23 51 45.6**	**-0.1**
KDU	**Kakadu**	**14.81**	**155**	P	**Pn**	**23 51 48.4**	**-2.2**
KNRA	**Kununurra**	**16.59**	**171**		**Pn**	**23 52 13.2**	**-0.2**
KNRA	**Kununurra**	**16.59**	**171**	P	**Pn**	**23 52 13.3**	**-0.2**
WB0	**Warramunga Arr**	**22.00**	**159**	P	**P**	**23 53 13.7**	**-0.8**
WB0				IAmb	IAmb	23 53 19.3	
	comp=Z,21nm,0.7s						
WRAB	**Tennant Creek**	**22.14**	**159**	P	**P**	**23 53 15.4**	**-0.6**
WRAB	**Tennant Creek**	**22.14**	**159**	P	**P**	**23 53 15.6**	**-0.4**
WRA	**Warramunga Arr**	**22.14**	**159**	P	**P**	**23 53 14.8**	**-1.2**
	comp=Z,12nm,0.5s,baz=339,slow=11,SNR=109						
	comp=Z,12nm,0.5s						
WB2	**Warramunga Arr**	**22.15**	**159**	P	**P**	**23 53 15.3**	**-0.7**
WR0	**Warramunga Arr**	**22.23**	**159**	P	**P**	**23 53 16.0**	**-0.9**
WR0				IAmb	IAmb	23 53 16.8	
	comp=Z,11nm,0.5s						
COEN	**Coen**	**22.37**	**132**	P	**P**	**23 53 19.1**	**+0.6**
COEN				IAmb	IAmb	23 53 25.9	
	comp=Z,18nm,0.8s						
COEN	**Coen**	**22.37**	**132**	P	**P**	**23 53 19.7**	**+1.2**
MBWA	**Marble Bar**	**22.72**	**196**	P	**P**	**23 53 20.7**	**-1.4**
PSA00	**Pilbara Seismi**	**23.08**	**195**	P	**P**	**23 53 24.7**	**-1.2**
PSA00				IAmb	IAmb	23 53 48.5	
	comp=Z,18nm,1.3s						
QIS	**Mount Isa**	**25.00**	**149**	P	**P**	**23 53 45.1**	**+1.3**
AS31	**Alice Springs**	**25.48**	**163**	P	**P**	**23 53 49.7**	**+1.6**
ASAR	**Alice Springs**	**25.48**	**163**	P	**P**	**23 53 48.0**	**-0.1**
	comp=Z,3.5nm,0.3s,baz=342,slow=9.9,SNR=78						
	comp=Z,3.5nm,0.3s						
ASAR	**Alice Springs**	**25.48**	**163**	P	**P**	**23 53 49.2**	**+1.1**
AS01	**Alice Springs**	**25.49**	**163**	P	**P**	**23 53 50.0**	**+1.8**
WRKA	**Warakurna**	**25.78**	**175**	P	**P**	**23 53 51.6**	**+0.7**
MORW	**Morawa**	**31.24**	**197**	P	**P**	**23 54 40.9**	**+1.4**
MORW				IAmb	IAmb	23 54 43.8	
	comp=Z,18nm,1.3s						
FORT	**Forrest**	**31.47**	**177**	P	**P**	**23 54 41.9**	**+0.5**
BBOO	**Buckleboo**	**34.73**	**165**	P	**P**	**23 55 10.3**	**+0.4**
STKA	**Stephens Creek**	**35.66**	**157**	P	**P**	**23 55 18.6**	**+0.7**
	comp=Z,6.1nm,0.9s,baz=323,slow=6.6,SNR=8.6						
	comp=Z,6.1nm,0.9s						
STKA	**Stephens Creek**	**35.66**	**157**	P	**P**	**23 55 17.3**	**-0.6**
STKA	**Stephens Creek**	**35.66**	**157**	P	**P**	**23 55 18.6**	**+0.7**
SONM	**Songino Array**	**49.87**	**343**	P	**P**	**23 57 11.7**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=161,slow=6.8,SNR=4.1						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**59.62**	**327**	P	**P**	**23 58 21.7**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=121,slow=7.5,SNR=20						
MKAR				LR	LR	00 25 52.2	
	comp=Z,47nm,18.4s,baz=116,slow=38						
	comp=Z,0.8nm,0.4s						
MA2	**Magadan**	**61.66**	**14**	LR	LR	00 29 41.2	
	comp=Z,17nm,18.0s,baz=257,slow=40						
KURK	**Kurchatov**	**63.88**	**329**	P	**P**	**23 58 50.6**	**-1.3**
KURK				IAmb	IAmb	23 59 00.7	
	comp=Z,3.4nm,0.8s						
VNDA	**Vanda**	**80.63**	**173**	P	**P**	**00 00 32.9**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=323,slow=6.6,SNR=5.1						
	comp=Z,0.8nm,0.6s						
GURO	**Guroymak-BITLI**	**84.87**	**308**	P	**P**	**00 00 55.2**	**+0.7**
GURO				IAmb	IAmb	00 01 01.2	
	comp=Z,3.3nm,1.0s						
QSPA	**South Pole Qui**	**90.74**	**180**	P	**P**	**00 01 21.2**	**-0.8**
QSPA				IAmb	IAmb	00 01 57.4	
	comp=Z,4.2nm,1.2s						
ARCES	**ARCESS Array B**	**92.96**	**340**	LR	LR	00 49 49.5	
	comp=Z,38nm,18.1s,baz=263,slow=40						

IDC ***27*** *23:55:21.3±1.0, 8°.32N×82°.46W, h0km, mb3.6/6, mbtmp3.7/7, ML4.2/1, MS3.4/7, Error ellipse: s-maj=47.5km s-min=20.5km az=51.0*

NEIC ***27*** *23:55:23.9±1.8, 8°.14N±0°.05×82°.64W±0°.05, h10km±1km, mb4.4/11, Md4.7(UCR), Error ellipse: s-maj=10.6km s-min=6.0km az=221.0*

INET ***27*** *23:55:25.1±1.9, 8°.09N×82°.66W, h11km, MW3.8*

UPA ***27*** *23:55:26.2±1.5, 8°.26N×82°.66W, h20km±3km, MW4.4*

ISC 27 23:55:25.0±0.6, 8°.23N±0°.03×82°.63W±0°.02, h24km±4km, n100, σ1§51/117, mb3.9/10, MS3.4/4, 2C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.27**	**40**	⇓*i*P	**Pn**	**23 55 32.5**	**-1.0**
DVD				*e*S	**Sn**	**23 55 37.7**	**-1.1**
LIMO3	**Limones**	**0.27**	**241**	*e*P	**Pn**	**23 55 33.0**	**-0.5**
LIMO3				*e*S	**Sb**	**23 55 37.1**	**+1.2**
CHIR3	**Chiriqui UPA,**	**0.34**	**61**	⇓*e*P	**Pn**	**23 55 35.2**	**+0.8**
CHIR3				*e*S	**Sn**	**23 55 40.0**	**-0.5**
CDITO	**Canoas**	**0.42**	**324**	Pg	**Pb**	**23 55 34.0**	**+0.2**
CDITO	**Canoas**	**0.42**	**324**	*e*P	**Pb**	**23 55 34.2**	**+0.4**
CDITO				*e*S	**Sb**	**23 55 40.5**	**+0.7**
PTAR3	**Potrerillos Ar**	**0.48**	**16**	*e*P	**Pb**	**23 55 35.2**	**+0.3**
PTAR3				*e*S	**Sn**	**23 55 42.7**	**-1.4**
BCO2	**Palmira**	**0.49**	**11**	*e*P	**Pb**	**23 55 35.6**	**+0.4**
BCO2				*e*S	**Sn**	**23 55 43.2**	**-1.4**
BRU2	**Volcan**	**0.56**	**353**	Pg	**Pb**	**23 55 36.4**	**+0.1**
BRU2	**Volcan**	**0.56**	**353**	⇑*i*P	**Pb**	**23 55 36.4**	**+0.1**
BRU2				*e*S	**Sb**	**23 55 44.8**	**+0.7**
BRU2	**Volcan**	**0.56**	**353**	⇑*i*P	**Pb**	**23 55 36.5**	**+0.1**
BRU2				*e*S	**Sn**	**23 55 45.1**	**-1.2**
BC3P	**Paso Ancho**	**0.58**	**2**	*e*P	**Pn**	**23 55 38.0**	**0.0**
BC3P				*e*S	**Sn**	**23 55 46.9**	**+0.1**
REME3	**Remedios, Chir**	**0.79**	**90**	⇓*i*P	**Pb**	**23 55 39.5**	**-0.5**
REME3				*e*S	**Sn**	**23 55 52.5**	**+0.9**
CNI2	**El Empalme, Bo**	**1.20**	**

BATAN				eS	Sb	23 56 24.2	-0.9
CVTR	**Volcan Turrial**	**2.10**	**328**	Pn	**Pn**	**23 56 00.2**	**+1.1**
CHIT3	**Chitre**	**2.20**	**97**	eP	**Pn**	**23 56 00.9**	**+0.8**
CHIT3				eS	Sb	23 56 30.0	-1.0
HDC3	**Heredia 3**	**2.29**	**320**	eP	**Pb**	**23 56 03.9**	**-1.9**
HDC	**Heredia**	**2.29**	**320**	Pn	**Pn**	**23 56 03.0**	**+1.5**
HDC	**Heredia**	**2.29**	**320**	eP	**Pn**	**23 56 03.3**	**+1.8**
HDC				eS	Sn	23 56 31.0	+2.0
TOSI3	**Tonosi**	**2.31**	**111**	eP	**Pn**	**23 56 04.0**	**+2.3**
TOSI3				eS	Sb	23 56 32.6	-1.6
AZU	**Azuero**	**2.37**	**100**	eP	**Pn**	**23 56 03.1**	**+0.7**
AZU	**Azuero**	**2.37**	**100⇓**	eP	**Pn**	**23 56 04.1**	**+1.7**
AZU				eS	Sb	23 56 34.2	-1.7
JACO	**JACO, Garabito**	**2.46**	**305**	Pn	**Pn**	**23 56 04.4**	**+0.7**
JACO	**JACO, Garabito**	**2.46**	**305**	eP	**Pn**	**23 56 04.3**	**+0.7**
VTON	**El Valle, Cocl**	**2.52**	**81**	eP	**Pb**	**23 56 07.5**	**-2.0**
VTON				eS	Sb	23 56 44.9	+4.8
ACHO3	**Achotines, Los**	**2.56**	**108**	eP	**Pn**	**23 56 06.8**	**+1.8**
ACHO3				eS	Sb	23 56 39.3	-2.1
BCIP	**Isla Barro Col**	**2.91**	**71**	Pn	**Pn**	**23 56 10.1**	**+0.2**
BCIP	**Isla Barro Col**	**2.91**	**71**	eP	**Pn**	**23 56 10.4**	**+0.5**
BCIP	**Isla Barro Col**	**2.91**	**71**	eP	**Pn**	**23 56 11.6**	**+1.8**
BCIP				eS	Sn	23 56 47.8	+3.7
BCIP	**Isla Barro Col**	**2.91**	**71**	eP	**Pn**	**23 56 10.7**	**+0.9**
COVE	**Coope Vega, Sa**	**3.03**	**325**	Pn	**Pn**	**23 56 13.3**	**+1.8**
JTS	**Las Juntas de**	**3.08**	**312**	Pn	**Pn**	**23 56 12.9**	**+0.8**
	31nm,0.3s,baz=227,slow=3.7,SNR=99						
JTS				Sn	**Sn**	**23 56 50.7**	**+2.4**
	28nm,0.3s,baz=236,slow=23,SNR=8.6						
JTS				LR	LR	23 57 34.7	
	comp=Z,351nm,20.9s,baz=198,slow=42						
	166nm,0.4s						
JTS	**Las Juntas de**	**3.08**	**312**	eP	**Pb**	**23 56 16.1**	**-3.0**
JTS	**Las Juntas de**	**3.08**	**312**	eP	**Pn**	**23 56 13.9**	**+1.7**
JTS				eS	Sn	23 56 50.0	+1.8
JTS	**Las Juntas de**	**3.08**	**312**	eP	**Pn**	**23 56 13.6**	**+1.5**
UPA	**Univ. de Panam**	**3.15**	**76**	eP	**Pb**	**23 56 18.1**	**-2.1**
UPA	**Univ. de Panam**	**3.15**	**76**	eP	**Pn**	**23 56 15.5**	**+2.4**
UPA				eS	Sn	23 56 52.7	+2.8
DUNO	**Dulce Nombre,**	**3.38**	**303**	Pn	**Pn**	**23 56 17.9**	**+1.7**
ORTG	**Ortega, Santa**	**3.51**	**307**	Pn	**Pn**	**23 56 19.3**	**+1.2**
ORTG	**Ortega, Santa**	**3.51**	**307**	eP	**Pn**	**23 56 19.6**	**+1.5**
ESPN	**Las Esperanzas**	**4.27**	**337**	Pn	**Pn**	**23 56 30.4**	**+1.9**
ESPN	**Las Esperanzas**	**4.27**	**337**	eP	**Pn**	**23 56 31.0**	**+2.4**
ACON	**Acoyapa**	**4.48**	**326**	Pn	**Pn**	**23 56 31.9**	**+0.4**
ACON	**Acoyapa**	**4.48**	**326**	eP	**Pn**	**23 56 33.2**	**+1.8**
ACON	**Acoyapa**	**4.48**	**326**	eP	**Pn**	**23 56 33.6**	**+2.1**
PTAC	**Punta Ardita,**	**4.89**	**102**	eP	**Pn**	**23 56 36.4**	**-0.8**
BOAB	**BOACO BROADBAN**	**5.15**	**325**	Pn	**Pn**	**23 56 41.9**	**+1.2**
PRVC	**Isla de Provid**	**5.26**	**14**	eP	**Pn**	**23 56 41.4**	**-0.8**
MATN	**Matagalpa**	**5.69**	**325**	Pn	**Pn**	**23 56 50.3**	**+2.2**
PLMC	**San Jos del P**	**7.12**	**117**	eP	**Pn**	**23 57 08.4**	**+0.6**
HELC	**Santa Helena**	**7.33**	**106**	eP	**Pn**	**23 57 13.3**	**+2.4**
YOTC	**Yotoco, Valle**	**7.54**	**124**	eP	**Pn**	**23 57 14.0**	**+0.4**
SJCC	**San Jacinto, C**	**7.54**	**77**	eP	**Pn**	**23 57 15.2**	**+1.7**
GUY2C	**Guyana, Caldas**	**7.80**	**112**	eP	**Pn**	**23 57 20.3**	**+2.7**
ANIL	**Santa Ana**	**8.08**	**117**	eP	**Pn**	**23 57 24.0**	**+2.8**
NORC	**Norcasia**	**8.14**	**108**	eP	**Pn**	**23 57 24.8**	**+3.0**
ORTC	**Ortega, Tolima**	**8.50**	**120**	eP	**Pn**	**23 57 30.2**	**+3.5**
ROSC	**El Rosal**	**8.91**	**112**	LR	LR	00 00 34.1	
	comp=Z,214nm,21.3s,baz=263,slow=36						
FLOC	**Florencia**	**9.58**	**133**	eP	**Pn**	**23 57 44.1**	**+2.5**
VILC	**Villavicencio,**	**9.78**	**114**	eP	Pn	23 57 49.4	+5.1
PAMC	**Pamplona, Colo**	**9.88**	**94**	eP	**Pn**	**23 57 49.0**	**+2.9**
MTDJ	**Mount Denham**	**11.10**	**26**	Pn	**Pn**	**23 58 02.6**	**+0.1**
BAUV	**El Baul**	**14.44**	**86**	Pn	**Pn**	**23 58 49.7**	**+1.7**
SDDR	**Presa de Saban**	**15.34**	**45**	Pn	**Pn**	**23 58 59.7**	**-0.5**
SDDR				IAmb	IAmb	23 59 13.0	
	comp=Z,18nm,0.9s						
ATAH	**Atahualpa**	**15.84**	**164**	LR	LR	00 04 37.8	
	comp=Z,138nm,19.5s,baz=14,slow=35						
PCDR	**Punta Cana, DR**	**17.20**	**52**		**Pn**	**23 59 24.0**	**+0.1**
CBYP	**Canovanas**	**19.11**	**57**		**Pn**	**23 59 47.5**	**+0.1**
CBYP				IAmb	IAmb	23 59 50.8	
	comp=Z,24nm,1.2s						
MTP	**Monte Pirata**	**19.28**	**58**	Pn	**Pn**	**23 59 50.2**	**+0.8**
TKL	**Tuckaleechee C**	**27.32**	**358**	LR	LR	00 11 58.6	
	comp=Z,75nm,18.3s,baz=134,slow=37						
LCAR	**Lake Charles**	**28.78**	**346**	P	**P**	**00 01 19.2**	**-1.9**
LCAR				IAmb	IAmb	00 01 50.8	
	comp=Z,6.6nm,0.9s						
TXAR	**Lajitas Array**	**28.84**	**319**	P	**P**	**00 01 21.4**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=126,slow=9.2,SNR=1.5						
TXAR				PcP	**PcP**	**00 04 32.3**	**+1.1**
	comp=Z,0.1nm,0.7s,baz=148,slow=4.7,SNR=3.6						
TXAR				pPcP		00 04 41.7	
	comp=Z,0.5nm,0.6s,baz=156,slow=6.0,SNR=6.5						
TXAR				LR	LR	00 14 17.9	
	comp=Z,42nm,20.2s,baz=127,slow=39						
	comp=Z,0.1nm,0.5s						
PB16	**IPOC Station P**	**29.40**	**154**	P	**P**	**00 01 26.5**	**-0.9**
PB16				IAmb	IAmb	00 01 52.3	
	comp=Z,4.9nm,1.1s						
PB11	**IPOC Station P**	**30.61**	**155**	P	**P**	**00 01 38.0**	**+0.4**
PFO	**Pinyon Flats O**	**40.14**	**314**	LR	LR	00 20 33.2	
	comp=Z,73nm,19.8s,baz=136,slow=38						
H03N2	**Juan Fernandez**	**41.59**	**175**	T	T	00 46 60.0	
	baz=354,slow=76,SNR=4.6						
H03N1	**Juan Fernandez**	**41.59**	**175**	T	T	00 46 55.1	
	baz=354,slow=76,SNR=4.5						
H03N3	**Juan Fernandez**	**41.60**	**175**	T	T	00 47 24.2	
	baz=354,slow=76,SNR=5.1						
PDAR	**Pinedale Array**	**41.75**	**330**	pP	pP	00 03 20.9	+1.0
	comp=Z,0.3nm,0.6s,baz=137,slow=6.9,SNR=2.9						
RPN	**Rapa Nui**	**43.65**	**215**	LR	LR	00 16 35.0	
	comp=Z,61nm,21.1s,baz=154,slow=29						
NVAR	**Mina Array Bea**	**43.98**	**319**	P	**P**	**00 03 31.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=142,slow=7.8,SNR=1.7						
NVAR				pP	**sP**	**00 03 40.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=127,slow=7.0,SNR=4.6						
	comp=Z,0.2nm,0.5s						
PLCA	**Paso Flores**	**49.98**	**168**	P	**P**	**00 04 17.5**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=332,slow=6.7,SNR=9.8						
	comp=Z,2.8nm,0.9s						
PLCA	**Paso Flores**	**49.98**	**168**	P	**P**	**00 04 17.3**	**0.0**
PLCA				IAmb	IAmb	00 04 21.4	
	comp=Z,7.0nm,1.3s						
YKA	**Yellowknife Ar**	**58.95**	**343**	P	**P**	**00 05 21.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=144,slow=7.7,SNR=3.1						
	comp=Z,0.6nm,0.7s						
BCAR	**Beaver Creek A**	**69.04**	**335**	P	**P**	**00 06 28.9**	**+0.3**
J25K	**Salcha River,**	**71.11**	**336**	P	**P**	**00 06 40.5**	**-0.8**
J25K				IAmb	IAmb	00 06 52.6	
	comp=Z,3.6nm,0.9s						
ILAR	**Eielson Array**	**71.78**	**336**	P	**P**	**00 06 44.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=125,slow=4.8,SNR=6.7						
ILAR				pP	**sP**	**00 06 54.2**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=110,slow=4.4,SNR=8.3						
	comp=Z,0.8nm,0.8s						
BMAR	**Burnt Mountain**	**71.89**	**339**	P	**P**	**00 06 45.9**	**0.0**
TORD	**Torodi Ar. Bea**	**82.67**	**78**	P	**P**	**00 07 46.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=294,slow=4.4,SNR=7.4						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**141.82**	**242**	PKP	**PKPdf**	**00 14 54.6**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=131,slow=0.9,SNR=2.0						
WRA	**Warramunga Arr**	**142.40**	**248**	PKhKP	PKPpre	00 14 51.5	
	comp=Z,0.3nm,0.6s,baz=93,slow=3.2,SNR=2.5						
PZH	**PanZhiHua**	**145.21**	**353**	PKPbc	**PKPbc**	**00 15 00.3**	**-0.9**

*NEIC **28** 00:01:31.0±2.2,5°.9S±0°.1×147°.6E±0°.3,h103km±14km, mb4.0/8,Error ellipse: s-maj=40.3km s-min=5.2km az=111.0*
*IDC **28** 00:01:32.0±3.0,6°.36S×148°.29E,h140km±21km,mb4.0/1, mbtmp4.2/3,Error ellipse: s-maj=87.8km s-min=24.4km az=113.0*

ISC 28 00:01:31.1±1.9,6°.0S±0°.1×147°.4E±0°.2,h100km,n21, σ0°.96/21,mb4.0/4,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.43**	**184**	P	**Pn**	**00 02 22.9**	**+0.4**
	20nm,0.3s,baz=32,slow=12,SNR=11						
PMG				S	**Sn**	**00 03 01.1**	**-1.3**
	84nm,0.4s,baz=15,slow=22,SNR=9.3						
PMG	**Port Moresby**	**3.43**	**184**	P	Pn	00 02 28.2	+5.6
PMG	**Port Moresby**	**3.43**	**184**	P	Pn	00 02 28.1	+5.5
COEN	**Coen**	**8.97**	**207**	Pn	**Pn**	**00 03 38.7**	**+0.8**
KDU	**Kakadu**	**16.19**	**245**	P	**Pn**	**00 05 12.1**	**-0.7**
QIS	**Mount Isa**	**16.37**	**207**	P	**Pn**	**00 05 16.1**	**+1.0**
MTN	**Manton Dam**	**17.46**	**246**	P	**P**	**00 05 28.4**	**+0.2**
MTN				IAmb	IAmb	00 05 45.6	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**18.68**	**222**	P	**P**	**00 05 42.5**	**+1.0**
WR0	**Warramunga Arr**	**18.72**	**221**	P	**P**	**00 05 43.1**	**+1.2**
WB2	**Warramunga Arr**	**18.83**	**221**	P	**P**	**00 05 43.2**	**+0.1**
WRA	**Warramunga Arr**	**18.84**	**221**	P	**P**	**00 05 43.0**	**-0.3**
	comp=Z,3.3nm,0.5s,baz=50,slow=10,SNR=49						
KNRA	**Kununurra**	**20.70**	**241**	P	**P**	**00 06 02.9**	**-0.5**
AS01	**Alice Springs**	**21.86**	**215**	P	**P**	**00 06 16.6**	**+0.8**
AS31	**Alice Springs**	**21.89**	**215**	P	**P**	**00 06 17.1**	**+1.0**
AS31				IAmb	IAmb	00 06 18.7	
	comp=Z,5.0nm,0.7s						
ASAR	**Alice Springs**	**21.89**	**215**	P	**P**	**00 06 16.6**	**+0.4**
	comp=Z,9.3nm,0.6s,baz=55,slow=9.0,SNR=113						
ASAR				S	**S**	**00 10 10.9**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=34,slow=20,SNR=4.5						
	comp=Z,9.3nm,0.6s						
ASAR	**Alice Springs**	**21.89**	**215**	P	**P**	**00 06 16.8**	**+0.7**
OOD	**Oodnadatta**	**24.40**	**206**	P	**P**	**00 06 41.1**	**+0.8**
LCRK	**Leigh Creek**	**25.85**	**198**	P	**P**	**00 06 54.9**	**+1.6**
BBOO	**Buckleboo**	**28.73**	**200**	P	**P**	**00 07 20.1**	**+1.0**
BBOO				IAmb	IAmb	00 07 21.1	
	comp=Z,4.1nm,0.8s						
QSPA	**South Pole Qui**	**84.00**	**180**	P	**P**	**00 13 49.9**	**-0.3**
QSPA				IAmb	IAmb	00 14 06.2	
	comp=Z,1.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**145.50**	**284**	PKPbc	**PKPdf**	**00 20 57.3**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=54,slow=3.9,SNR=2.3						

*NNC **28** 00:08:42.8±1.7,41°.61N×83°.49E,h33km±11km,mb4.2, mpv3.9,Error ellipse: s-maj=12.6km s-min=9.0km az=158.0*
*SOME **28** 00:08:44.2,41°.80N×83°.53E,h5km*

ISC 28 00:08:36.4±2.2,41°.50N±0°.10×83°.67E±0°.07,h10km,n47, σ2°.23/71,11C-13D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.53**	**299**	eP	**Pb**	**00 09 39.0**	**+0.1**
	29nm,0.3s						
SHLS				eS	**Sb**	**00 10 18.5**	**-3.4**
	140nm,0.3s						
SHLS	**Shalkode**	**3.53**	**299**	Pg	**Pb**	**00 09 39.0**	**+0.1**
	29nm,0.3s						
SHLS				Lg	Lg	00 10 18.5	
	140nm,0.3s						
PDGK	**Podgornoye**	**3.59**	**302**	Pg	**Pg**	**00 09 44.9**	**-0.3**
	18nm,0.5s						
PDGK				Lg	Lg	00 10 27.2	
	31nm,0.3s						
PDGK	**Podgornoye**	**3.59**	**302**	⇑Pn	**Pn**	**00 09 32.2**	**0.0**
	3.4nm,0.4s						
PDGK				⇓Pg	**Pb**	**00 09 43.5**	**+3.5**
	32nm,0.7s						
PDGK				⇓Sn	**Sn**	**00 10 15.3**	**+0.6**
	22nm,0.4s						
PDGK				⇓Lg	Lg	00 10 31.8	
	100nm,0.8s						
UZB	**Uzynbulak**	**3.82**	**297**	eP	**Pg**	**00 09 49.3**	**-0.2**
	7.8nm,0.3s						
UZB				eS	**Sg**	**00 10 35.6**	**-3.3**
	69nm,0.4s						
UZB	**Uzynbulak**	**3.82**	**297**	Pg	**Pg**	**00 09 49.3**	**-0.2**
	7.8nm,0.3s						
UZB				Lg	Lg	00 10 35.7	
	69nm,0.4s						
DJR	**Jarkent**	**4.01**	**316**	eP	**Pg**	**00 09 56.3**	**+3.1**
	10.0nm,0.4s						
DJR				eS	**Sg**	**00 10 47.8**	**+2.5**
	37nm,0.4s						
DJR	**Jarkent**	**4.01**	**316**	Pg	**Pg**	**00 09 56.3**	**+3.1**
	10.0nm,0.4s						
DJR				Lg	Lg	00 10 47.8	
	37nm,0.4s						
KPKS	**Kokpek**	**4.17**	**300**	eP	**Pg**	**00 09 55.0**	**-1.3**
	21nm,0.5s						
KPKS				eS	**Sg**	**00 10 45.5**	**-4.9**
	112nm,0.3s						
KPKS	**Kokpek**	**4.17**	**300**	Pg	**Pg**	**00 09 55.0**	**-1.3**
	21nm,0.5s						
KPKS				Lg	Lg	00 10 45.5	
	112nm,0.3s						
ZHN	**Zhinishke**	**4.22**	**295**	eP	**Pg**	**00 10 00.9**	**+3.7**
	19nm,0.2s						
ZHN				eS	**Sg**	**00 10 55.6**	**+3.8**
	82nm,0.2s						
ZHN	**Zhinishke**	**4.22**	**295**	Pg	**Pg**	**00 10 00.9**	**+3.7**
	19nm,0.2s						
ZHN				Lg	Lg	00 10 55.6	
	82nm,0.2s						
KURS	**Kuram**	**4.52**	**298**	eP	**Pg**	**00 10 06.2**	**+3.2**
	24nm,0.7s						
KURS				eS	**Sg**	**00 11 06.6**	**+5.0**
	18nm,0.8s						
KURS	**Kuram**	**4.52**	**298**	Pg	**Pg**	**00 10 06.2**	**+3.2**
	24nm,0.7s						
KURS				Lg	Lg	00 11 06.6	
	18nm,0.8s						
BLB	**Baldybastay**	**4.62**	**306**	eP	**Pg**	**00 10 03.4**	**-1.4**
	41nm,0.4s						
BLB				eS	**Sg**	**00 11 01.8**	**-2.7**
	46nm,0.4s						
BLB	**Baldybastay**	**4.62**	**306**	Pg	**Pg**	**00 10 03.4**	**-1.4**
	41nm,0.4s						
BLB				Lg	Lg	00 11 01.8	
	46nm,0.4s						
ARXS	**Arharly**	**5.08**	**304**	eP	**Pg**	**00 10 14.8**	**+1.3**
	16nm,0.5s						
ARXS				eS	**Sg**	**00 11 20.5**	**+1.2**
	27nm,0.6s						
ARXS	**Arharly**	**5.08**	**304**	Pg	**Pg**	**00 10 14.8**	**+1.3**
	16nm,0.5s						
ARXS				Lg	Lg	00 11 20.5	
	27nm,0.6s						
KOTS	**Kotyrbulak**	**5.16**	**292**	eP	**Pg**	**00 10 15.1**	**0.0**
	13nm,0.4s						
KOTS				eS	**Sg**	**00 11 20.9**	**-0.9**
	52nm,0.5s						
KOTS	**Kotyrbulak**	**5.16**	**292**	Pg	**Pg**	**00 10 15.1**	**0.0**
	13nm,0.4s						
KOTS				Lg	Lg	00 11 20.9	
	52nm,0.5s						
MDOK	**Medeo**	**5.18**	**291**	eP	**Pg**	**00 10 18.4**	**+2.8**
	8.5nm,0.4s						
MDOK				eS	**Sg**	**00 11 25.9**	**+3.2**
	35nm,0.5s						
MDOK	**Medeo**	**5.18**	**291**	⇑Pn	**Pn**	**00 09 54.6**	**+0.5**
	4.4nm,0.5s						
MDOK				Pg	Pb	00 10 13.6	+6.5
	7.6nm,0.6s						
MDOK				Pg	**Pg**	**00 10 18.4**	**+2.8**
	8.5nm,0.4s						
MDOK				⇓Lg	Lg	00 11 23.8	
	45nm,0.7s						
MDOK				Lg	Lg	00 11 25.9	
	35nm,0.5s						
TDK	**Taldyqorghan**	**5.20**	**314**	eP	**Pg**	**00 10 16.2**	**+0.3**
	17nm,0.2s						
TDK				eS	**Sg**	**00 11 21.8**	**-1.3**
	79nm,0.4s						
TDK	**Taldyqorghan**	**5.20**	**314**	Pg	**Pg**	**00 10 16.2**	**+0.3**
	17nm,0.2s						
TDK				Lg	Lg	00 11 21.8	
	79nm,0.4s						
TNSS	**Tian-Shan**	**5.22**	**289**	eP	**Pg**	**00 10 14.9**	**-1.4**
	6.1nm,0.3s						
TNSS				eS	**Sg**	**00 11 19.6**	**-4.3**
	14nm,0.6s						
TNSS	**Tian-Shan**	**5.22**	**289**	Pg	**Pg**	**00 10 14.9**	**-1.4**
	6.1nm,0.3s						
TNSS				Lg	Lg	00 11 19.6	
	14nm,0.6s						
MK31	**Makanchi Array**	**5.38**	**350**	⇓Pn	**Pn**	**00 09 58.1**	**+1.3**
	0.3nm,0.2s,baz=155,slow=13,SNR=79						
MK31				⇓Pg	**Pg**	**00 10 17.1**	**-2.4**
	3.3nm,0.6s,baz=174,slow=15,SNR=3.2						
MK31				⇑Sn	**Sn**	**00 10 59.6**	**+0.8**
	5.7nm,0.4s,baz=180,slow=25,SNR=5.1						
MK31				⇑Lg	Lg	00 11 30.0	
	29nm,0.6s,baz=173,slow=31,SNR=4.3						
MAKZ	**Makanchi**	**5.45**	**348**	⇓Pn	**Pn**	**00 09 58.8**	**+1.2**
	0.8nm,0.5s						
MAKZ				⇓Pg	**Pg**	**00 10 18.5**	**-2.2**
	3.2nm,0.5s						
MAKZ				⇑Sn	**Sn**	**00 11 01.6**	**+1.3**
	6.4nm,0.5s						
MAKZ				⇑Lg	Lg	00 11 32.1	
	14nm,0.6s						
CHKK	**Chushkaly**	**5.46**	**298**	eP	**Pg**	**00 10 21.4**	**+0.6**
	4.9nm,0.3s						
CHKK				eS	**Sg**	**00 11 31.2**	**-0.2**
	26nm,0.5s						
CHKK	**Chushkaly**	**5.46**	**298**	Pg	**Pg**	**00 10 21.4**	**+0.6**
	4.9nm,0.3s						
CHKK				Lg	Lg	00 11 31.2	
	26nm,0.5s						
MTBS	**Maitube**	**5.61**	**289**	eP	**Pg**	**00 10 22.0**	**-1.8**
	8.0nm,0.2s						
MTBS				eS	**Sg**	**00 11 31.7**	**-4.7**
	21nm,0.4s						
MTBS	**Maitube**	**5.61**	**289**	Pg	**Pg**	**00 10 22.0**	**-1.8**
	8.0nm,0.2s						
MTBS				Lg	Lg	00 11 31.7	
	21nm,0.4s						
KTBS	**Karatobe**	**5.61**	**296**	eP	**Pg**	**00 10 22.2**	**-1.5**
	6.5nm,0.4s						
KTBS				eS	**Sg**	**00 11 32.1**	**-4.2**
	48nm,0.5s						
KTBS	**Karatobe**	**5.61**	**296**	Pg	**Pg**	**00 10 22.2**	**-1.5**
	6.5nm,0.4s						
KTBS				Lg	Lg	00 11 32.1	
	48nm,0.5s						
KUU	**Kurty**	**5.90**	**296**	eP	**Pg**	**00 10 29.0**	**-0.4**
	3.9nm,0.5s						
KUU				eS	**Sg**	**00 11 43.8**	**-2.1**
	11nm,0.4s						
KUU	**Kurty**	**5.90**	**296**	Pg	**Pg**	**00 10 29.0**	**-0.4**
	3.9nm,0.5s						
KUU				Lg	Lg	00 11 43.8	
	11nm,0.4s						
KST	**Kastek**	**5.92**	**288**	eP	**Pg**	**00 10 30.9**	**+1.2**
	8.4nm,0.6s						
KST				eS	**Sg**	**00 11 46.9**	**+0.6**
	52nm,0.7s						
KST	**Kastek**	**5.92**	**288**	Pg	**Pg**	**00 10 30.9**	**+1.2**
	8.4nm,0.6s						
KST				Lg	Lg	00 11 46.9	
	52nm,0.7s						
ZSN	**Zaisan**	**6.01**	**8**	eP	**Pg**	**00 10 31.0**	**-0.5**
	3.2nm,0.4s						
ZSN				eS	**Sg**	**00 11 47.1**	**-2.2**
	22nm,0.6s						
ZSN	**Zaisan**	**6.01**	**8**	Pg	**Pg**	**00 10 31.0**	**-0.5**
	3.2nm,0.4s						
ZSN				Lg	Lg	00 11 47.1	
	22nm,0.6s						
DGS	**Degeres**	**6.10**	**289**	Pg	**Pg**	**00 10 32.1**	**-1.1**
	9.0nm,0.5s						
DGS				Lg	Lg	00 11 49.6	
	14nm,0.5s						
TKM2	**Tokmak 2**	**6.16**	**286**	⇓Pn	**Pn**	**00 10 07.6**	**+0.1**
	2.5nm,0.5s						
TKM2				⇑Pg	**Pg**	**00 10 33.3**	**-1.0**
	4.7nm,0.6s						
TKM2				⇑Lg	Lg	00 11 53.4	
	19nm,0.6s						
KRBS	**Karabastau**	**6.29**	**293**	Pg	**Pg**	**00 10 34.0**	**-2.8**
	4.2nm,0.3s						
KRBS				Lg	Lg	00 11 52.3	
	9.6nm,0.5s						
CHMS	**Chumysh**	**6.78**	**286**	⇑Pg	**Pg**	**00 10 44.0**	**-2.2**
	3.3nm,0.7s						
CHMS				⇑Lg	Lg	00 12 13.8	
	14nm,0.7s						
KURBB	**Kurchatov Arra**	**9.79**	**340**	⇓Pn	**Pn**	**00 10 58.5**	**+1.4**
	1.2nm,0.5s						
KURBB				⇓Lg	Lg	00 13 48.4	
	15nm,0.6s						
KK31	**Karatay Array**	**9.88**	**284**	⇓Pg	Pg	00 11 39.7	
	0.7nm,0.7s,baz=88,slow=17,SNR=3.0						
KK31				⇓Lg	Lg	00 13 54.4	
	2.2nm,0.7s,baz=90,slow=23,SNR=4.9						
OTUK	**Ortayu**	**10.49**	**314**	⇑Lg	Lg	00 14 10.2	
	6.6nm,1.0s						

*ROM **28** 00:14:03.3±0.0,42°.964N±0°.003×13°.069E±0°.005, h10km,ML3.3/53,Error ellipse: s-maj=0.3km s-min=0.3km az=288.0*
*PRU **28** 00:14:04.9±0.0,43°.01N×13°.65E,h0km*
*BEO **28** 00:14:05.5±0.7,42°.96N×13°.12E,h12km±3km,ML3.5/11*

ISC 28 00:14:03.6±0.7,42°.94N±0°.01×13°.09E±0°.02,h11km±4km, n119,σ1°.24/165,39C-22D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**308**	⇓P	**Pg**	**00 14 05.4**	**-0.5**
FEMA				S	**Sg**	**00 14 06.5**	**-1.0**
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.07**	**224**	P	**Pg**	**00 14 06.1**	**0.0**
T1216				S	**Sg**	**00 14 07.9**	**0.0**
T1216				AML	AML		
	comp=N,74150μm,0.1s						
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.08**	**110**	⇑P	**Pg**	**00 14 06.3**	**-0.1**
MC2				S	**Sg**	**00 14 08.9**	**+0.5**
FDMO	**Fiordimonte**	**0.10**	**0**	P	**Pg**	**00 14 05.8**	**-0.6**
FDMO				S	**Sg**	**00 14 07.4**	**-1.0**
FDMO				AML	AML		
	comp=N,58350μm,0.7s						
FDMO				AML	AML		
	comp=N,58350μm,1.3s						
FDMO				AML	AML		
	comp=E,45800μm,0.1s						
NRCA	**Norcia**	**0.11**	**169**	P	**Pg**	**00 14 06.9**	**+0.3**
NRCA				S

	comp=N,7800μm,0.5s					
PIO1				AML	AML	
	comp=E,7490μm,0.5s					
PIO1				AML	AML	
	comp=N,7800μm,1.5s					
MDAR	**Monte D'Aria**	**0.26**	**9**	P	**Pg**	**00 14 08.6 -0.4**
MDAR				S	**Sg**	**00 14 12.6 0.0**
MDAR				AML	AML	
	comp=E,14150μm,0.4s					
MDAR				AML	AML	
	comp=N,13650μm,0.3s					
T1217	**Poggiodomo (PG**	**0.26**	**206**	P	**Pg**	**00 14 09.4 +0.4**
T1217				S	**Sb**	**00 14 14.0 -0.7**
T1217				AML	AML	
	comp=E,17350μm,0.7s					
T1217				AML	AML	
	comp=N,35850μm,0.2s					
T1217				AML	AML	
	comp=E,17400μm,0.7s					
T1217				AML	AML	
	comp=E,17100μm,0.7s					
T1217				AML	AML	
	comp=N,34750μm,0.2s					
T1217				AML	AML	
	comp=N,35900μm,0.2s					
T1217				AML	AML	
	comp=E,17100μm,0.8s					
T1217				AML	AML	
	comp=E,17150μm,0.8s					
T1217				AML	AML	
	comp=E,17350μm,0.8s					
FIU1	**Fiuminata**	**0.27**	**335**	⇓P	**Pg**	**00 14 09.1 -0.2**
FIU1				AML	AML	
	comp=E,4080μm,1.6s					
FIU1				AML	AML	
	comp=N,4075μm,0.4s					
FIU1				AML	AML	
	comp=E,4080μm,0.4s					
GAG1	**Gagliole**	**0.30**	**357**	⇓P	**Pg**	**00 14 09.6 -0.1**
T1204	**Amatrice, Fraz**	**0.32**	**147**	⇓P	**Pg**	**00 14 10.5 +0.5**
T1204				S	**Sb**	**00 14 16.2 -0.4**
T1204				AML	AML	
	comp=E,10565μm,0.1s					
T1204				AML	AML	
	comp=N,6380μm,0.1s					
T1204				AML	AML	
	comp=E,10580μm,0.1s					
MTL1	**Matelica**	**0.32**	**350**	⇑P	**Pg**	**00 14 10.1 0.0**
LNSS	**Leonessa**	**0.34**	**186**	P	**Pg**	**00 14 10.9 +0.4**
LNSS				S	**Sb**	**00 14 16.7 -0.5**
LNSS				AML	AML	
	comp=N,19650μm,0.2s					
LNSS				AML	AML	
	comp=E,19900μm,1.1s					
MNTP	**Montappone**	**0.34**	**55**	⇑P	**Pg**	**00 14 11.1 +0.5**
MNTP				AML	AML	
	comp=N,8165μm,1.2s					
MNTP				AML	AML	
	comp=E,8260μm,1.5s					
MNTP				AML	AML	
	comp=N,8165μm,0.8s					
SMA1	**SAN MARTINO**	**0.36**	**149**	⇓P	**Pg**	**00 14 11.2 +0.3**
SMA1				S	**Sb**	**00 14 17.4 -0.4**
SMA1				AML	AML	
	comp=N,7565μm,0.3s					
SMA1				AML	AML	
	comp=E,8060μm,0.5s					
SMA1				AML	AML	
	comp=N,7560μm,0.3s					
EL6	**Elcito**	**0.39**	**2**	⇑P	**Pg**	**00 14 11.0 -0.4**
EL6				AML	AML	
	comp=E,5785μm,1.3s					
EL6				AML	AML	
	comp=N,7160μm,0.3s					
EL6				AML	AML	
	comp=E,5785μm,0.7s					
TRE1	**Treia**	**0.41**	**24**	P	**Pg**	**00 14 11.9 +0.2**
TRE1				AML	AML	
	comp=E,7460μm,1.5s					
TRE1				AML	AML	
	comp=N,8360μm,0.4s					
TRE1				AML	AML	
	comp=E,7460μm,0.5s					
ARRO	**Arrone**	**0.43**	**213**	⇑P	**Pg**	**00 14 12.4 +0.3**
ARRO				AML	AML	
	comp=N,6170μm,0.7s					
ARRO				AML	AML	
	comp=E,8135μm,0.2s					
OFFI	**Offida**	**0.44**	**91**	⇑P	**Pb**	**00 14 13.3 -0.1**
OFFI				AML	AML	
	comp=E,11200μm,0.3s					
OFFI				AML	AML	
	comp=N,14350μm,0.4s					
CING	**Cingoli**	**0.44**	**10**	⇑P	**Pg**	**00 14 11.9 -0.4**
CING				S	**Sg**	**00 14 18.9 +0.7**
RM33	**Pellescritta (**	**0.44**	**168**	P	**Pg**	**00 14 12.7 +0.4**
RM33				S	**Sb**	**00 14 20.4 +0.3**
RM33				AML	AML	
	comp=N,4360μm,1.1s					
RM33				AML	AML	
	comp=E,4970μm,0.6s					
RM33				AML	AML	
	comp=N,4355μm,1.1s					
RM33				AML	AML	
	comp=E,4910μm,0.6s					
RM33				AML	AML	
	comp=N,4265μm,1.1s					
RM33				AML	AML	
	comp=E,4970μm,0.6s					
RM33				AML	AML	
	comp=N,4265μm,0.9s					
RM33				AML	AML	
	comp=N,4360μm,0.9s					
T1211	**Morro Reatino**	**0.44**	**203**	⇑P	**Pg**	**00 14 12.6 +0.2**
T1211				S	**Sb**	**00 14 20.0 -0.2**
T1211				AML	AML	
	comp=E,8325μm,0.4s					
T1211				AML	AML	
	comp=N,9020μm,0.2s					
T1211				AML	AML	
	comp=E,8205μm,0.4s					
T1211				AML	AML	
	comp=N,9015μm,0.2s					
T1211				AML	AML	
	comp=N,9145μm,0.2s					
T1211				AML	AML	
	comp=E,8205μm,1.6s					
T1211				AML	AML	
	comp=E,8330μm,0.4s					
CAMP	**Campotosto**	**0.47**	**149**	⇓P	**Pg**	**00 14 12.9 +0.1**
CAMP				S	**Sb**	**00 14 20.7 -0.2**
CAMP				AML	AML	
	comp=N,1865μm,0.3s					
CAMP				AML	AML	
	comp=E,2335μm,0.9s					
TERO	**Teramo**	**0.50**	**130**	⇑P	**Pg**	**00 14 13.3 0.0**
TERO				S	**Sb**	**00 14 21.5 -0.2**
TERO				AML	AML	
	comp=E,5590μm,1.4s					
TERO				AML	AML	
	comp=N,9200μm,0.3s					
TERO				AML	AML	
	comp=E,6425μm,1.4s					
TERO				AML	AML	
	comp=N,9780μm,0.3s					
TERO				AML	AML	
	comp=N,9775μm,0.3s					
TERO				AML	AML	
	comp=N,9245μm,0.3s					
TERO				AML	AML	
	comp=E,6425μm,0.6s					
TERO				AML	AML	
	comp=E,5590μm,0.6s					
CESX	**Cesi**	**0.50**	**229**	⇑P	**Pg**	**00 14 13.3 -0.1**
CESX				S	**Sb**	**00 14 21.2 -0.5**
CESX				AML	AML	
	comp=E,7715μm,0.3s					
CESX				AML	AML	
	comp=N,7930μm,0.4s					
T1247	**Pizzolo (AQ)**	**0.52**	**163**	P	**Pg**	**00 14 14.0 +0.1**
T1247				AML	AML	
	comp=E,5610μm,1.5s					
T1247				AML	AML	
	comp=N,5550μm,0.2s					
T1247				AML	AML	
	comp=E,5615μm,1.5s					
ARVD	**Arcevia**	**0.57**	**349**	⇑P	**Pg**	**00 14 14.1 -0.6**
ARVD				S	**Sb**	**00 14 24.0 +0.3**
ARVD				AML	AML	
	comp=E,994μm,0.4s					
ARVD				AML	AML	
	comp=N,886μm,0.8s					
ARVD				AML	AML	
	comp=N,886μm,1.2s					
GIGS	**Gran Sasso**	**0.61**	**144**	⇑P	**Pg**	**00 14 15.1 -0.3**
GIGS				S	**Sb**	**00 14 25.3 +0.5**
GIGS				AML	AML	
	comp=E,1132μm,0.9s					
GIGS				AML	AML	
	comp=N,962μm,0.5s					
TRTR	**Tortoreto Alta**	**0.62**	**102**	⇑P	**Pb**	**00 14 16.9 +0.4**
TRTR				AML	AML	
	comp=E,8740μm,0.4s					
TRTR				AML	AML	
	comp=N,7820μm,0.5s					
TRTR				AML	AML	
	comp=N,7820μm,1.5s					
AQU	**L'Aquila**	**0.63**	**158**	⇑P	**Pg**	**00 14 15.9 -0.1**
AQU				AML	AML	
	comp=E,1690μm,0.6s					
AQU				AML	AML	
	comp=N,1465μm,0.7s					
AQU				AML	AML	
	comp=E,1640μm,1.1s					
AQU				AML	AML	
	comp=N,1465μm,1.3s					
AQU				AML	AML	
	comp=E,1640μm,0.9s					
AQU				AML	AML	
	comp=N,1480μm,1.1s					
FRON	**Frontone**	**0.63**	**336**	⇑P	**Pg**	**00 14 15.4 -0.6**
FRON				AML	AML	
	comp=E,1220μm,0.4s					
FRON				AML	AML	
	comp=N,1465μm,0.9s					
FRON				AML	AML	
	comp=E,1220μm,1.6s					
FRON				AML	AML	
	comp=N,1465μm,1.1s					
FIAM	**Fiamignano**	**0.67**	**178**	⇑P	**Pg**	**00 14 16.6 -0.2**
FIAM				S	**Sb**	**00 14 27.8 +1.0**
FIAM				AML	AML	
	comp=E,2165μm,0.7s					
FIAM				AML	AML	
	comp=E,2170μm,0.7s					
FIAM				AML	AML	
	comp=E,2170μm,1.3s					
FIAM				AML	AML	
	comp=N,1585μm,0.4s					
ATPI	**Pietralunga -**	**0.71**	**316**	⇓P	**Pg**	**00 14 16.9 -0.6**
ATPI				AML	AML	
	comp=N,846μm,0.4s					
ATPI				AML	AML	
	comp=E,922μm,0.9s					
AOI	**Ancona**	**0.72**	**32**	⇑P	**Pg**	**00 14 17.2 -0.3**
AOI				S	**Sn**	**00 14 30.0 -0.7**
AOI				AML	AML	
	comp=E,1600μm,0.3s					
AOI				AML	AML	
	comp=N,1405μm,0.3s					
ATMI	**Monte Miggiano**	**0.72**	**304**	⇑P	**Pg**	**00 14 17.3 -0.2**
ATMI				AML	AML	
	comp=E,3095μm,0.4s					
ATMI				AML	AML	
	comp=N,3150μm,0.5s					
MGAB	**Montegabbione**	**0.72**	**268**	⇑P	**Pg**	**00 14 17.1 -0.4**
MGAB				AML	AML	
	comp=E,2300μm,0.8s					
MGAB				AML	AML	
	comp=E,2295μm,0.8s					
MGAB				AML	AML	
	comp=N,3920μm,0.5s					
MGAB				AML	AML	
	comp=N,4065μm,0.4s					
MGAB				AML	AML	
	comp=N,4065μm,1.6s					
MGAB				AML	AML	
	comp=E,2900μm,0.7s					
PIEI	**Pieia**	**0.72**	**326**	⇓P	**Pg**	**00 14 16.8 -0.8**
PIEI				AML	AML	
	comp=E,924μm,0.3s					
PIEI				AML	AML	
	comp=N,876μm,0.3s					
PIEI				AML	AML	
	comp=E,924μm,0.3s					
FAGN	**Fagnano**	**0.77**	**151**	P	**Pb**	**00 14 18.9 -0.1**
FAGN				AML	AML	
	comp=N,3495μm,0.4s					
FAGN				AML	AML	
	comp=E,3865μm,0.4s					
VCEL	**Villa Celiera**	**0.78**	**134**	⇓P	**Pg**	**00 14 18.7 -0.1**
VCEL				AML	AML	
	comp=E,3970μm,0.5s					
VCEL				AML	AML	
	comp=N,2965μm,1.1s					
VCEL				AML	AML	
	comp=N,2970μm,1.1s					
FSSB	**Fossombrone**	**0.78**	**343**	⇓P	**Pg**	**00 14 17.7 -1.2**
FSSB				AML	AML	
	comp=N,3375μm,0.4s					
FSSB				AML	AML	
	comp=E,2535μm,0.4s					
SRES	**S.Oreste - Sor**	**0.82**	**211**	⇑P	**Pg**	**00 14 19.2 -0.3**
SRES				S	**Sn**	**00 14 32.6 -0.7**
SRES				AML	AML	
	comp=N,1100μm,0.8s					
SRES				AML	AML	
	comp=E,1695μm,1.2s					
SACS	**San Casciano d**	**0.87**	**264**	P	**Pg**	**00 14 19.2 -1.2**
SACS				AML	AML	
	comp=E,990μm,0.4s					
SACS				AML	AML	
	comp=E,988μm,0.7s					
SACS				AML	AML	
	comp=E,994μm,0.4s					
SACS				AML	AML	
	comp=E,988μm,1.3s					
SACS				AML	AML	
	comp=N,1135μm,0.8s					
SACS				AML	AML	
	comp=N,1125μm,0.8s					
T0110	**Collepietro**	**0.88**	**144**	P	**Pg**	**00 14 20.3 -0.3**
T0110				AML	AML	
	comp=N,2885μm,0.5s					
T0110				AML	AML	
	comp=E,2990μm,0.5s					
T0110				AML	AML	
	comp=N,2885μm,1.5s					
CAFI	**Castiglion Fio**	**0.91**	**296**	⇓P	**Pg**	**00 14 20.6 -0.5**
CAFI				AML	AML	
	comp=E,952μm,0.7s					
CAFI				AML	AML	
	comp=N,682μm,0.7s					
SSP9	**Sansepolcro**	**0.94**	**313**	⇑P	**Pb**	**00 14 22.1 +0.2**
MTCE	**Montecelio**	**0.95**	**196**	⇑P	**Pg**	**00 14 21.5 -0.5**
MTCE				AML	AML	
	comp=N,776μm,0.8s					
MTCE				AML	AML	
	comp=E,1470μm,0.5s					
MTCE				AML	AML	
	comp=N,777μm,0.8s					
MTCE				AML	AML	
	comp=N,777μm,1.2s					
CERT	**Cerreto**	**0.99**	**184**	P	**Pg**	**00 14 19.5 -3.3**
MCIV	**Monte Civitell**	**1.05**	**262**	⇑P	**Pb**	**00 14 24.1 +0.3**
MCIV				AML	AML	
	comp=E,657μm,0.9s					
MCIV				AML	AML	
	comp=N,490μm,0.7s					
MCIV				AML	AML	
	comp=E,657μm,1.1s					
INTR	**Introdacqua**	**1.11**	**147**	⇓P	**Pb**	**00 14 22.9 -2.0**
INTR				AML	AML	
	comp=N,1885μm,0.6s					
INTR				AML	AML	
	comp=E,1090μm,0.8s					
INTR				AML	AML	
	comp=N,1880μm,0.6s					
RMP	**Rome, Mte Porz**	**1.17**	**194**	⇓P	**Pb**	**00 14 25.7 -0.1**
RMP				AML	AML	
	comp=E,1360μm,1.3s					
RMP				AML	AML	
	comp=N,1850μm,0.4s					
ARCI	**Arcidosso**	**1.19**	**266**	P	**Pg**	**00 14 27.0 +0.5**
ARCI				AML	AML	
	comp=E,229μm,0.9s					
ARCI				AML	AML	
	comp=N,134μm,1.4s					
ARCI				AML	AML	
	comp=E,229μm,1.1s					
LPEL	**Lama dei Pelig**	**1.21**	**137**	⇓P	**Pn**	**00 14 26.2 -0.2**
LPEL				AML	AML	
	comp=E,961μm,1.5s					
LPEL				AML	AML	
	comp=N,786μm,1.1s					
LPEL				AML	AML	
	comp=N,786μm,0.9s					
LPEL				AML	AML	
	comp=E,961μm,0.5s					
MA9	**Marino**	**1.21**	**195**	P	**Pg**	**00 14 27.7 +0.8**
MA9				AML	AML	
	comp=E,1480μm,0.5s					
MA9				AML	AML	
	comp=N,1515μm,0.4s					
MA9				AML	AML	
	comp=E,1480μm,1.5s					
GIUL	**Giuliano Di Ro**	**1.39**	**175**	⇓P	**Pg**	**00 14 30.9 +0.6**
CSNT	**Castellina Chi**	**1.42**	**293**	⇑P	**Pg**	**00 14 30.8 0.0**
RUFI	**Rufina**	**1.46**	**309**	⇓P	**Pn**	**00 14 30.1 +0.3**
TRIF	**Trifonti**	**1.61**	**277**	⇑P	**Pn**	**00 14 32.8 +0.7**
TRIF				AML	AML	
	comp=N,132μm,1.3s					
TRIF				AML	AML	
	comp=E,176μm,0.6s					
MODR	**Mondragone**	**1.89**	**162**	P	**Pg**	**00 14 39.6 -0.2**
MODR				S	**Sn**	**00 14 60.0 +0.4**
GROG	**Isola di Gorgo**	**2.39**	**283**	S	**Sb**	**00 15 16.0 0.0**
RIY	**Rijeka**	**2.59**	**22**	*e*Pn	**Pn**	**00 14 46.1 +0.7**
RIY				*e*Sn	**Sn**	**00 15 17.8 +1.0**
PGF	**Pioggiola**	**3.04**	**264**	P	**Pb**	**00 14 59.3 +1.5**
PGF	**Pioggiola**	**3.04**	**264**	S	**Pg**	**00 14 58.8 -3.0**
PGF	**Pioggiola**	**3.04**	**264**	*e*Sn	**Pg**	**00 14 58.5 -3.3**
	comp=E,80nm,0.3s					
SABO	**M.te Sabotino**	**3.06**	**7**	⇓P	**Pn**	**00 14 52.2 +0.3**
SABO				AML	AML	
	comp=N,676μm,0.8s					
SABO				AML	AML	
	comp=N,168μm,0.7s					
SABO				AML	AML	
	comp=E,677μm,1.6s					
SABO				AML	AML	
	comp=E,152μm,1.4s					
SABO				AML	AML	
	comp=E,677μm,0.4s					
SABO				AML	AML	
	comp=E,152μm,0.6s					
CGRP	**Cima Grappa**	**3.08**	**343**	⇑P	**Pn**	**00 14 53.5 +1.2**
SALO	**Salr**	**3.25**	**326**	⇑P	**Pn**	**00 14 57.6 +3.0**
LJU	**Ljubljana**	**3.27**	**18**	⇑P	**Pn**	**00 14 55.6 +0.8**
LJU				AML	AML	
	comp=N,780μm,0.4s					
LJU				AML	AML	
	comp=E,490μm,0.6s					
LJU				AML	AML	
	comp=E,490μm,1.4s					
CTI	**Castel Tesino**	**3.27**	**342**	P	**Pn**	**00 14 56.2 +1.3**
STAL	**STALIGIAL**	**3.33**	**356**	⇑P	**Pn**	**00 14 56.1 +0.5**
STAL				AML	AML	
	comp=E,96μm,0.7s					
STAL				AML	AML	
	comp=N,90μm,1.4s					
STAL				AML	AML	
	comp=E,96μm,1.3s					
RNCA	**Ronca, Sant'Ol**	**3.37**	**298**	S	**Sn**	**00 15 38.0 +2.0**
LUSI	**Trento, Gardas**	**3.38**	**334**	⇑P	**Pn**	**00 14 58.6 +2.1**
STON	**Ston**	**3.39**	**90**	*e*Pn	**Pn**	**00 14 56.6 +0.2**
STON				*e*Sn	**Sn**	**00 15 37.4 +0.8**
BLY	**Banja Luka**	**3.47**	**57**	*e*Pn	**Pn**	**00 14 59.0 +1.4**
BLY				*e*Sn	**Sn**	**00 15 39.2 +0.6**
ZONE	**Zone**	**3.54**	**324**	⇑P	**Pn**	**00 15 00.8 +2.3**
MABI	**Malga Bissina**	**3.62**	**330**	⇑P	**Pn**	**00 15 02.2 +2.5**
ZOU	**Zoufplan**	**3.62**	**359**	⇓P	**Pn**	**00 15 00.5 +0.8**
ACOM	**Acomizza, Ital**	**3.62**	**5**	⇓P	**Pn**	**00 15 01.0 +1.2**
PCP	**Piancastagn**	**3.66**	**297**	⇑P	**Pn**	**00 15 03.1 +2.9**
DGI	**Dorgali Grotta**	**3.70**	**226**	⇓P	**Pb**	**00 15 08.4 -0.5**
MYKA	**Terra Mystica**	**3.71**	**6**	*i* Pn	**Pn**	**00 15 01.9 +1.0**
	comp=E,3.1nm,0.2s					
ABTA	**Abfaltersbach**	**3.83**	**354**	*i* Pn	**Pn**	**00 15 03.8 +1.3**
	comp=E,9.5nm,0.4s,SNR=8.1					
ABTA				*e*Sn	**Sn**	**00 15 49.6 +2.1**
	comp=E,17nm,0.6s					
TREB	**Trebinje**	**3.88**	**92**	*e*Pn	**Pn**	**00 15 03.9 +0.7**
TREB				*e*Sn	**Sn**	**00 15 48.5 -0.2**
RISI	**Rein**	**4.07**	**350**	⇓P	**Pn**	**00 15 09.3 +3.3**
KBA	**Koelnbreinsper**	**4.14**	**2**	*e*Pn	**Pn**	**00 15 08.5 +1.6**
	comp=E,14nm,0.6s					
MUGIO	**Muggio**	**4.16**	**317**	⇑P	**Pn**	**00 15 08.7 +1.6**
SAOF	**Saorge**	**4.16**	**286**	⇑P	**Pg**	**00 15 21.2 -2.2**
SAOF	**Saorge**	**4.16**	**286**	S	**Pg**	**00 15 21.1 -2.2**
ROSI	**Rosskopf**	**4.16**	**344**	⇑P	**Pn**	**00 15 08.3 +1.1**
SPS2	**Spezzano della**	**4.39**	**145**	S	**Sn**	**00 15 60.0 -1.5**
FETA	**Feichten**	**4.41**	**339**	*e*Pn	**Pn**	**00 15 13.9 +3.3**
	comp=E,1.0nm,0.2s					
SQTA	**Sankt Quirin**	**4.48**	**343**	*i* Pn	**Pn**	**00 15 14.0 +2.4**
	comp=E,11nm,0.5s					
SQTA				*e*Sn	**Sn**	**00 16 05.7 +2.0**
	comp=E,3.6nm,0.2s					
PDG	**Podgorica**	**4.58**	**94**	*e*Pn	**Pn**	**00 15 13.6 +0.9**
PDG				*e*Sn	**Sn**	**00 16 05.4 -0.4**
MOTA	**Moosalm**	**4.62**	**343**	*i* Pn	**Pn**	**00 15 16.6 +3.1**
	comp=E,2.9nm,0.4s					
MOTA				*e*Sn	**Sn**	**00 16 08.9 +1.7**
	comp=E,6.3nm,0.4s					
ARSA	**Arzberg**	**4.64**	**21**	*i* Pn	**Pn**	**00 15 13.4 -0.2**
	comp=E,1.4nm,0.3s					
ARSA				*e*Sn	**Sn**	**00 16 06.1 -1.5**
	comp=E,3.0nm,0.3s					
BBLS	**Lazići**	**4.70**	**76**	*e*Pn	**Pn**	**00 15 15.6 +1.1**
BIOA	**Bad Ischl, Aus**	**4.77**	**4**	*e*Pn	**Pn**	**00 15 16.5 +1.1**
	comp=E,7.8nm,0.3s,SNR=5.1					
BIOA				*i* Sn	**Sn**	**00 16 09.8 -0.8**
	comp=E,12nm,0.4s					
RETA	**Reutte**	**4.83**	**341**	*e*Pn	**Pn**	**00 15 19.1 +2.8**
	comp=E,1.9nm,0.2s,SNR=8.2					
RETA				*e*Sn	**Sn**	**00 16 14.7 +2.4**
	comp=E,1.3nm,0.2s					
DAVA	**Damuels**	**4.90**	**334**	*i* Pn	**Pn**	**00 15 19.8 +2.4**
	comp=E,2.1nm,0.3s					
DAVA				*e*Sn	**Sn**	**00 16 14.7 +0.6**
	comp=E,5.4nm,0.5s					
MOA	**Molln**	**4.98**	**9**	*e*Pn	**Pn**	**00 15 19.0 +0.7**
MOA				*e*Sn	**Sn**	**00 16 15.5 -0.3**
MOA	**Molln**	**4.98**	**9**	*e*Pn	**Pn**	**00 15 19.0 +0.7**
	comp=E,1.0nm,0.2s,SNR=7.5					
MOA				*e*Sn	**Sn**	**00 16 15.4 -0.4**
	comp=E,3.5nm,0.3s					
SJES	**Sjenica**	**5.05**	**84**	*e*Pn	**Pn**	**00 15 21.2 +1.8**
SJES				*e*Sn	**Sn**	**00 16 17.0 -0.8**
CRJA	**Costa Raja**	**5.13**	**181**	⇓P	**Pb**	**00 15 32.3 -1.2**
DIVS	**Divibare**	**5.15**	**75**	*e*Pn	**Pn**	**00 15 21.7 +1.0**
IVAS	**Ivanjica**	**5.20**	**81**	*e*Pn	**Pn**	**00 15 22.5 +1.1**
IVAS				*e*Sn	**Sn**	**00 16 20.5 -0.8**
TIR	**Tirane**	**5.29**	**105**	*e*Pn	**Pn**	**00 15 24.0 +1.5**
TIR				*e*Sn	**Sn**	**00 16 22.5 -0.8**
CONA	**Conrad Observa**	**5.36**	**20**	*e*Pn	**Pn**	**00 15 24.1 +0.5**
	comp=E,0.8nm,0.2s,SNR=5.2					
CONA				*i* Sn	**Sn**	**00 16 23.9 -1.3**
	comp=E,1.9nm,0.3s					
TRUS	**Trudelj**	**5.47**	**74**	*e*Pn	**Pn**	**00 15 26.5 +1.5**
GRUS	**Gruza**	**5.64**	**78**	*e*Pn	**Pn**	**00 15 28.6 +1.3**
SELS	**Selova**	**5.89**	**85**	*e*Pn	**Pn**	**00 15 31.7 +0.9**
CKRC	**Cesky Krumlov**	**5.94**	**8**	*e*PN	**Pn**	**00 15 31.2 -0.3**
CKRC				*e*SN	**Sn**	**00 16 37.4 -2.1**
KHC	**Kasperske Hory**	**6.20**	**3**	*e*PN	**Pn**	**00 15 35.3 +0.2**
KHC				*e*SN	**Sn**	**00 16 43.9 -2.0**
BARS	**Barje**	**6.42**	**88**	*e*Pn	**Pn**	**00 15 38.9 +0.9**
BARS				*e*Sn	**Sn**	**00 16 48.3 -2.9**
ZAGS	**Zajecar**	**6.72**	**79**	*e*Pn	**Pn**	**00 15 43.0 +0.8**
ZAPS	**Zavoj**	**7.00**	**84**	*e*Sn	**Pn**	**00 15 46.4 +0.4**
ZAPS	**Zavoj**	**7.00**	**84**	*e*Pn	**Sn**	**00 17 02.4 -3.1**

*LDG **28** 00:14:16.6±0.2, 41°.72N×7°.62E, h5km, Ml2.9/14, Error ellipse: s-maj=5.6km s-min=2.3km az=4.0*

STR 28 00:14:17.2±0.8, 42°N±8°×°±°, h8km±7km, MLv2.9/33, Error ellipse: s-maj=0.0km s-min=0.0km az=178.5, preliminary, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJAC	**Base Areonaval**	**0.85**	**81**	P	Pg	00 14 32.7	-0.8
AJAC				S	Sg	00 14 44.9	+0.4
CORF	**Corte**	**1.23**	**66**	P	Pb	00 14 39.6	-1.1
CORF				S	Sb	00 14 56.7	0.0
PGF	**Pioggiola**	**1.25**	**53**	*e*Pn	Pn	00 14 40.9	-0.2
PGF	**Pioggiola**	**1.25**	**53**	P	Pn	00 14 40.8	-0.3
SMPL	**Sampolo**	**1.26**	**76**	P	Pn	00 14 39.4	-1.8
SMPL				S	Sb	00 14 56.7	-0.9
MORSI	**Morsiglia**	**1.71**	**47**	P	Pn	00 14 48.0	+0.6
MORSI				S	Sb	00 15 10.5	-0.2
LMR	**La Mourre**	**1.74**	**332**	*e*Pn	Pn	00 14 47.2	-0.6
LMR				*e*Sn	Sn	00 15 08.2	-2.0
	12nm,0.2s						
FLAF	**Flassans-sur-I**	**1.88**	**327**	P	Pn	00 14 49.6	-0.1
FLAF				S	Sn	00 15 14.1	+0.5
CALF	**Calern**	**2.02**	**345**	P	Pn	00 14 52.0	+0.4
ESCA	**l'Escarene**	**2.04**	**355**	P	Pn	00 14 52.2	+0.4
ESCA				S	Sn	00 15 17.6	+0.2
SBF	**Sospel**	**2.06**	**356**	*e*Pn	Pn	00 14 51.5	-0.7
SBF				*e*Sn	Sn	00 15 16.5	-1.7
	22nm,0.2s						
MVIF	**Mont Vial**	**2.12**	**350**	P	Pn	00 14 53.9	+0.7
MVIF				S	Sn	00 15 20.4	+0.7
TRIGF	**Trigance**	**2.14**	**335**	P	Pn	00 14 53.7	+0.4
TRIGF				S	Sn	00 15 21.1	+0.8
TURF	**col de Turini**	**2.18**	**355**	P	Pn	00 14 54.0	+0.1
TURF				S	Sn	00 15 21.0	-0.2
SAOF	**Saorge**	**2.18**	**358**	P	Pn	00 14 54.1	+0.2
ARTF	**Artigues**	**2.24**	**323**	P	Pn	00 14 54.9	+0.3
ARTF				S	Sn	00 15 23.2	+0.8
SPIF	**crte de Spivo**	**2.27**	**353**	P	Pn	00 14 55.2	+0.1
SPIF				S	Sn	00 15 23.7	+0.3
BLAF	**les Blancs**	**2.44**	**332**	P	Pn	00 14 57.9	+0.4
BLAF				S	Sn	00 15 28.7	+1.1
OGDI	**Digne**	**2.51**	**337**	P	Pn	00 14 59.6	+1.2
BSTF	**la Bastide-des**	**2.54**	**325**	P	Pn	00 14 58.1	-0.7
BSTF				S	Sn	00 15 29.8	-0.1
SMRF	**Simiane la Rot**	**2.65**	**326**	*e*Pn	Pn	00 15 00.9	+0.6
SMRF				*e*Sn	Sn	00 15 29.3	-3.3
	3.0nm,0.2s						
RUSF	**Rustrel**	**2.66**	**324**	P	Pn	00 15 00.9	+0.5
JAUF	**Jausiers**	**2.70**	**346**	P	Pn	00 15 02.8	+1.6
SURF	**Saint Ours**	**2.74**	**347**	P	Pn	00 15 03.5	+1.8
SURF				S	Sb	00 15 37.9	-2.6
CREF	**Crivoux**	**2.84**	**345**	P	Pn	00 15 05.2	+2.1
MBDF	**Montbardon**	**2.99**	**348**	*e*Pn	Pn	00 15 04.5	-0.6
MBDF				*e*Sn	Sn	00 15 38.4	-2.8
	3.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.37**	**338**	*e*Pn	Pn	00 15 09.3	-0.9
LASF	**Ste Croix**	**3.59**	**311**	*e*Pn	Pn	00 15 11.0	-2.2
LASF				*e*Sn	Sn	00 15 50.9	-4.8
	3.0nm,0.2s						
SJAF	**Saint Jean de**	**3.60**	**282**	P	Pn	00 15 08.1	-5.3
SJAF				S	Sn	00 15 47.3	-8.9
CLAF	**Gruissan**	**3.62**	**293**	P	Pn	00 15 10.9	-2.7
CLAF				S	Sn	00 15 49.7	-6.8
VIVF	**Saint-Julien-l**	**3.74**	**326**	*e*Pn	Pn	00 15 14.1	-1.2
VIVF				*e*Sn	Sn	00 15 55.6	-3.9
	1.3nm,0.3s						
LPG	**La Plagne**	**3.75**	**350**	*e*Pn	Pn	00 15 15.1	-0.5
LPL	**La Plagne**	**3.77**	**350**	*e*Pn	Pn	00 15 14.9	-0.9
FILF	**Fillols**	**3.85**	**283**	P	Pn	00 15 13.3	-3.5
FILF				S	Sn	00 15 56.2	-6.1
OGSM	**Saint Maurice**	**4.06**	**340**	P	Pn	00 15 20.9	+1.3
OGSM				S	Sn	00 16 08.2	+0.9
FNEB	**Nbias**	**4.25**	**287**	P	Pn	00 15 18.7	-3.5
MTLF	**Montolieu**	**4.29**	**293**	*e*Pn	Pn	00 15 19.1	-3.7
MTLF				*e*Sn	Sn	00 16 06.1	-6.9
	7.9nm,0.3s						
MTLF	**Montolieu**	**4.29**	**293**	P	Pn	00 15 19.2	-3.5
MTLF	**Montolieu**	**4.29**	**293**	S	Sn	00 16 06.9	-6.1
AIGLE	**Aigle**	**4.56**	**354**	P	Pn	00 15 28.9	+2.3
PAND	**Andorre**	**4.59**	**281**	P	Pn	00 15 23.2	-3.9
PAND				S	Sn	00 16 13.3	-7.3
MLS	**Moulis**	**4.99**	**286**	P	Pn	00 15 29.4	-3.0
CAF	**Calviac**	**5.12**	**309**	*e*Pn	Pn	00 15 32.3	-2.0
CAF				*e*Sn	Sn	00 16 28.5	-5.1
MONQ	**Montcuq**	**5.37**	**301**	P	Pn	00 15 35.1	-2.6
MONQ				S	Sn	00 16 34.4	-5.2
BALST	**Balsthal**	**5.53**	**0**	P	Pn	00 15 32.1	-7.7
EPF	**Esparros**	**5.54**	**285**	*e*Pn	Pn	00 15 38.2	-1.8
EPF				*e*Sn	Sn	00 16 39.1	-4.8
BOURR	**Bourrignon**	**5.60**	**357**	P	Pn	00 15 35.4	-5.4
LFF	**La Frestale**	**5.93**	**304**	*e*Pn	Pn	00 15 43.4	-1.8
LFF				*e*Sn	Sn	00 16 47.5	-5.8
	0.6nm,0.2s						
HINF	**Hinteralfeld**	**6.04**	**355**	*e*Pn	Pn	00 15 41.7	-5.1
HINF				*e*Sn	Sn	00 16 51.7	-4.4
	3.4nm,0.3s						
FELD	**Feldberg im Sc**	**6.08**	**2**	P	Pn	00 15 34.8	-13
KIZ	**Kirchzarten**	**6.15**	**2**	P	Pn	00 15 36.7	-12
ETSF	**Etsaut**	**6.17**	**283**	*e*Pn	Pn	00 15 47.3	-1.4
ETSF				*e*Sn	Sn	00 16 53.9	-5.6
HAU	**Haudompre**	**6.27**	**352**	*e*Pn	Pn	00 15 46.7	-3.3
HAU				*e*Sn	Sn	00 16 57.3	-4.5
	8.2nm,0.4s						
VOGT	**Vogtsburg - To**	**6.28**	**0**	P	Pn	00 15 39.0	-11
ECH	**Echery**	**6.42**	**357**	P	Pn	00 15 43.5	-8.6
ECH				S	Sn	00 16 57.7	-7.8
CDF	**Champ du Feu**	**6.61**	**358**	*e*Sn	Sn	00 17 05.0	-5.3
	1.2nm,0.3s						
SJPF	**Ste Jean**	**6.69**	**284**	*e*Pn	Pn	00 15 53.3	-2.4

*NNC **28** 00:19:21.0±0.4, 44.96N×80.60E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=5.8km s-min=2.3km az=126.0
*SOME **28** 00:19:23.3, 44.95N×80.58E, h20km*
ISC 28 00:19:19.8±1.3, 44.85N±0.04×80.83E±0.04, h0km±11km, n50, σ1.9 03/77, 8C-9D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.91**	**236**	*e*P	**Pg**	**00 19 37.8**	**+0.7**
	14nm,0.1s						
DJR				*e*S	**Sg**	**00 19 48.7**	**-0.2**
	98nm,0.3s						
DJR	**Jarkent**	**0.91**	**236**	P	**Pg**	**00 19 37.8**	**+0.7**
	14nm,0.1s						
DJR				S	**Sg**	**00 19 48.7**	**-0.2**
	98nm,0.3s						
TDK	**Taldyqorghan**	**1.73**	**276**	*e*P	**Pn**	**00 19 51.8**	**+0.6**
	28nm,0.2s						
TDK				*e*S	**Sn**	**00 20 12.2**	**-1.8**
	181nm,0.2s						
TDK	**Taldyqorghan**	**1.73**	**276**	P	**Pn**	**00 19 51.8**	**+0.6**
	28nm,0.2s						
TDK				S	**Sn**	**00 20 12.2**	**-1.8**
	181nm,0.2s						
PDGK	**Podgornoye**	**1.80**	**213**	P	**Pg**	**00 19 55.3**	**+1.1**
	3.6nm,0.2s						
PDGK				S	**Sg**	**00 20 18.0**	**+0.4**
	95nm,0.3s						
PDGK	**Podgornoye**	**1.80**	**213**	⇑Pn	**Pb**	**00 19 53.2**	**-0.5**
	14nm,0.8s						
PDGK				⇓Sn	**Sg**	**00 20 17.8**	**+0.2**
	109nm,0.5s						
BLB	**Baldybastay**	**1.84**	**247**	*e*P	**Pn**	**00 19 53.7**	**+0.9**
	73nm,0.3s						
BLB				*e*S	**Sn**	**00 20 15.8**	**-1.1**
	80nm,0.2s						
BLB	**Baldybastay**	**1.84**	**247**	P	**Pn**	**00 19 53.7**	**+0.9**
	73nm,0.3s						
BLB				S	**Sn**	**00 20 15.8**	**-1.1**
	80nm,0.2s						
SHLS	**Shalkode**	**1.96**	**211**	*e*P	**Pb**	**00 19 55.6**	**-0.8**
	21nm,0.3s						
SHLS				*e*S	**Sb**	**00 20 19.5**	**-1.8**
	104nm,0.3s						
SHLS	**Shalkode**	**1.96**	**211**	P	**Pb**	**00 19 55.6**	**-0.8**
	21nm,0.3s						
SHLS				S	**Sb**	**00 20 19.5**	**-1.8**
	104nm,0.3s						
KPKS	**Kokpek**	**2.07**	**229**	*e*P	**Pb**	**00 19 59.0**	**+0.7**
	11nm,0.2s						
KPKS				*e*S	**Sb**	**00 20 24.9**	**+0.3**
	247nm,0.3s						
KPKS	**Kokpek**	**2.07**	**229**	P	**Pb**	**00 19 59.0**	**+0.7**
	11nm,0.2s						
KPKS				S	**Sb**	**00 20 24.9**	**+0.3**
	247nm,0.3s						
MAKZ	**Makanchi**	**2.12**	**22**	⇑Pn	**Pn**	**00 19 57.3**	**+0.8**
	1.5nm,0.2s						
MAKZ				⇑Sn	**Sn**	**00 20 24.5**	**+1.0**
	17nm,0.5s						
UZB	**Uzynbulak**	**2.14**	**218**	*e*P	**Pb**	**00 19 59.6**	**+0.1**
	3.5nm,0.2s						
UZB				*e*S	**Sb**	**00 20 25.5**	**-1.2**
	33nm,0.2s						
UZB	**Uzynbulak**	**2.14**	**218**	Pg	**Pb**	**00 19 59.6**	**+0.1**
	3.5nm,0.2s						
UZB				Lg	Lg	00 20 25.5	
	33nm,0.2s						
MK31	**Makanchi Array**	**2.20**	**27**	⇑Pn	**Pn**	**00 19 58.8**	**+1.1**
	1.5nm,0.2s,baz=210,slow=11,SNR=164						
MK31				⇓Sn	**Sn**	**00 20 26.4**	**+0.8**
	4.8nm,0.2s,baz=210,slow=23,SNR=21						
ARXS	**Arharly**	**2.24**	**255**	*e*P	**Pb**	**00 20 00.7**	**-0.5**
	11nm,0.5s						
ARXS				*e*S	**Sn**	**00 20 27.9**	**+1.3**
	59nm,0.4s						
ARXS	**Arharly**	**2.24**	**255**	Pg	**Pb**	**00 20 00.7**	**-0.5**
	11nm,0.5s						
ARXS				Lg	Lg	00 20 27.9	
	59nm,0.4s						
KURS	**Kuram**	**2.35**	**236**	*e*P	**Pb**	**00 20 02.9**	**-0.1**
	7.3nm,0.7s						
KURS				*e*S	**Sb**	**00 20 31.4**	**-1.2**
	20nm,0.4s						
KURS	**Kuram**	**2.35**	**236**	Pg	**Pb**	**00 20 02.9**	**-0.1**
	7.3nm,0.7s						
KURS				Lg	Lg	00 20 31.4	
	20nm,0.4s						
ZHN	**Zhinishke**	**2.41**	**227**	*e*P	**Pg**	**00 20 05.2**	**-0.8**
	6.9nm,0.2s						
ZHN				*e*S	**Sb**	**00 20 35.0**	**+0.7**
	143nm,0.2s						
ZHN	**Zhinishke**	**2.41**	**227**	Pg	**Pg**	**00 20 05.2**	**-0.8**
	6.9nm,0.2s						
ZHN				Lg	Lg	00 20 35.0	
	143nm,0.2s						
CHKK	**Chushkaly**	**2.93**	**252**	*e*P	**Pb**	**00 20 13.0**	**+0.1**
	1.4nm,0.1s						
CHKK				*e*S	**Sb**	**00 20 48.8**	**-0.5**
	24nm,0.2s						
CHKK	**Chushkaly**	**2.93**	**252**	Pg	**Pb**	**00 20 13.0**	**+0.1**
	1.4nm,0.1s						
CHKK				Lg	Lg	00 20 48.8	
	24nm,0.2s						
KOTS	**Kotyrbulak**	**3.13**	**240**	*e*P	**Pb**	**00 20 16.8**	**+0.4**
	3.9nm,0.4s						
KOTS				*e*S	**Sb**	**00 20 55.2**	**0.0**
	20nm,0.4s						
KOTS	**Kotyrbulak**	**3.13**	**240**	Pg	**Pb**	**00 20 16.8**	**+0.4**
	3.9nm,0.4s						
KOTS				Lg	Lg	00 20 55.2	
	20nm,0.4s						
KTBS	**Karatobe**	**3.19**	**251**	*e*P	**Pb**	**00 20 17.6**	**+0.3**
	2.1nm,0.2s						
KTBS				*e*S	**Sb**	**00 20 56.5**	**-0.2**
	40nm,0.3s						
KTBS	**Karatobe**	**3.19**	**251**	Pg	**Pb**	**00 20 17.6**	**+0.3**
	2.1nm,0.2s						
KTBS				Lg	Lg	00 20 56.5	
	40nm,0.3s						
MDOK	**Medeo**	**3.21**	**240**	*e*P	**Pb**	**00 20 17.8**	**+0.1**
	2.6nm,0.4s						
MDOK				*e*S	**Sb**	**00 20 56.8**	**-0.6**
	13nm,0.6s						
MDOK	**Medeo**	**3.21**	**240**	Pg	**Pb**	**00 20 17.8**	**+0.1**
	2.6nm,0.4s						
MDOK				⇓Pg	**Pg**	**00 20 18.4**	**-2.8**
	4.6nm,0.4s						
MDOK				Lg	Lg	00 20 56.8	
	13nm,0.6s						
MDOK				⇓Lg	Lg	00 20 59.2	
	16nm,0.6s						
TNSS	**Tian-Shan**	**3.34**	**239**	*e*P	**Pb**	**00 20 21.4**	**+1.3**
	3.5nm,0.4s						
TNSS				*e*S	**Sb**	**00 21 03.0**	**+1.6**
	3.8nm,0.3s						
TNSS	**Tian-Shan**	**3.34**	**239**	Pg	**Pb**	**00 20 21.4**	**+1.3**
	3.5nm,0.4s						
TNSS				Lg	Lg	00 21 03.0	
	3.8nm,0.3s						
KUU	**Kurty**	**3.36**	**255**	*e*P	**Pb**	**00 20 20.7**	**+0.5**
	2.2nm,0.2s						
KUU				*e*S	**Sb**	**00 21 01.9**	**+0.2**
	13nm,0.3s						
KUU	**Kurty**	**3.36**	**255**	Pg	**Pb**	**00 20 20.7**	**+0.5**
	2.2nm,0.2s						
KUU				Lg	Lg	00 21 01.9	
	13nm,0.3s						
MTBS	**Maitube**	**3.61**	**243**	*e*P	**Pb**	**00 20 25.2**	**+0.7**
	2.1nm,0.1s						
MTBS				*e*S	**Sb**	**00 21 09.6**	**+0.6**
	39nm,0.3s						
MTBS	**Maitube**	**3.61**	**243**	Pg	**Pb**	**00 20 25.2**	**+0.7**
	2.1nm,0.1s						
MTBS				Lg	Lg	00 21 09.6	
	39nm,0.3s						
ZSN	**Zaisan**	**3.83**	**46**	*e*P	**Pg**	**00 20 32.6**	**-0.6**
	5.4nm,0.3s						
ZSN				*e*S	**Sg**	**00 21 22.0**	**-0.7**
	23nm,0.6s						
ZSN	**Zaisan**	**3.83**	**46**	Pg	**Pg**	**00 20 32.6**	**-0.6**
	5.4nm,0.3s						
ZSN				Lg	Lg	00 21 22.0	
	23nm,0.6s						
KRBS	**Karabastau**	**3.88**	**255**	*e*P	**Pb**	**00 20 29.7**	**+0.6**
	1.4nm,0.4s						
KRBS				*e*S	**Sb**	**00 21 17.2**	**+0.6**
	5.2nm,0.4s						
KRBS	**Karabastau**	**3.88**	**255**	Pg	**Pb**	**00 20 29.7**	**+0.6**
	1.4nm,0.4s						
KRBS				Lg	Lg	00 21 17.2	
	5.2nm,0.4s						
KST	**Kastek**	**3.95**	**245**	*e*P	**Pb**	**00 20 32.0**	**+1.7**
	2.2nm,0.2s						
KST				*e*S	**Sb**	**00 21 21.8**	**+3.0**
	12nm,0.5s						
KST	**Kastek**	**3.95**	**245**	Pg	**Pb**	**00 20 32.0**	**+1.7**
	2.2nm,0.2s						
KST				Lg	Lg	00 21 21.8	
	12nm,0.5s						
DGS	**Degeres**	**3.99**	**248**	*e*P	**Pb**	**00 20 31.2**	**+0.2**
	2.9nm,0.4s						
DGS				*e*S	**Sb**	**00 21 19.8**	**+0.1**
	7.7nm,0.5s						
DGS	**Degeres**	**3.99**	**248**	Pg	**Pb**	**00 20 31.2**	**+0.2**
	2.9nm,0.4s						
DGS				Lg	Lg	00 21 19.8	
	7.7nm,0.5s						
TKM2	**Tokmak 2**	**4.25**	**245**	⇑Pg	**Pb**	**00 20 36.6**	**+1.2**
	2.1nm,0.5s						
TKM2				⇑Lg	Lg	00 21 31.8	
	4.4nm,0.5s						
CHMS	**Chumysh**	**4.77**	**249**	⇑Pg	**Pb**	**00 20 45.4**	**+1.2**
	3.0nm,0.8s						
CHMS				⇓Lg	Lg	00 21 48.7	
	6.2nm,1.0s						
KURBB	**Kurchatov Arra**	**5.99**	**346**	⇑Sn	**Sn**	**00 21 56.1**	**-2.7**
	3.8nm,0.4s						
KURBB				⇓Lg	Lg	00 22 26.7	
	14nm,0.6s						
OTUK	**Ortayu**	**6.77**	**303**	⇓Lg	Lg	00 22 49.3	
	3.9nm,0.8s						
KK31	**Karatay Array**	**7.65**	**260**	⇓Lg	Lg	00 23 19.2	
	0.7nm,0.4s,baz=71,slow=29,SNR=6.8						
BVA0	**Borovoye Array**	**10.68**	**324**	⇓Lg	Lg	00 24 53.7	

ROM 28 00:28:28.5±0.1, 42.977N±0.005×13.065E±0.006, h9km, ML2.4/11, 2C-5D, Error ellipse: s-maj=0.6km s-min=0.5km az=12.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.06**	**16**	P	Pg	00 28 30.9	+0.2
FDMO				S	Sg	00 28 32.3	+0.1
FDMO				AML	AML		
	comp=E,1585μm,0.4s						
FDMO				AML	AML		
	comp=N,2560μm,0.2s						
FDMO				AML	AML		
	comp=N,17200μm,0.2s						
FDMO				AML	AML		
	comp=E,10140μm,0.7s						
FDMO				AML	AML		
	comp=N,2562μm,0.2s						
FDMO				AML	AML		
	comp=E,1507μm,0.2s						
T1216	**Preci, Frazion**	**0.09**	**201**	P	Pg	00 28 31.4	+0.4
T1216				S	Sg	00 28 33.4	+0.6
T1216				AML	AML		
	comp=E,2930μm,0.2s						
T1216				AML	AML		
	comp=N,2355μm,1.2s						
T1216				AML	AML		
	comp=E,5695μm,1.4s						
T1216				AML	AML		
	comp=N,8110μm,0.3s						
T1216				AML	AML		
	comp=N,1778μm,0.1s						
T1216				AML	AML		
	comp=E,1758μm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**125**	P	Pg	00 28 31.9	+0.5
MC2				S	Sg	00 28 34.1	+0.6
CESI	**CESI - Serrava**	**0.12**	**283**	⇑P	Pg	00 28 31.9	+0.4
CESI				S	Sg	00 28 34.3	+0.8
CESI				AML	AML		
	comp=E,2975μm,0.5s						
CESI				AML	AML		
	comp=N,3765μm,0.8s						
CESI				AML	AML		
	comp=N,1374μm,0.2s						
CESI				AML	AML		
	comp=E,888μm,0.2s						
NRCA	**Norcia**	**0.15**	**166**	⇓P	Pg	00 28 32.4	+0.5
NRCA				S	Sg	00 28 35.1	+1.0
NRCA				AML	AML		
	comp=N,4875μm,0.2s						
NRCA				AML	AML		
	comp=N,5295μm,0.2s						
NRCA				AML	AML		
	comp=E,6030μm,0.2s						
NRCA				AML	AML		
	comp=E,6295μm,0.2s						
NRCA				AML	AML		
	comp=E,1954μm,0.1s						
NRCA				AML	AML		
	comp=E,2111μm,0.1s						
NRCA				AML	AML		
	comp=N,1923μm,0.1s						
NRCA				AML	AML		
	comp=N,2128μm,0.1s						
T1215	**Vallo di Nera,**	**0.23**	**220**	⇑P	Pg	00 28 33.7	+0.5
T1215				S	Sg	00 28 37.4	+1.0
T1215				AML	AML		
	comp=E,740μm,0.4s						
T1215				AML	AML		
	comp=N,635μm,0.5s						
T1215				AML	AML		
	comp=N,623μm,0.1s						
T1215				AML	AML		
	comp=N,649μm,0.1s						
T1215				AML	AML		
	comp=E,330μm,0.1s						
T1215				AML	AML		
	comp=E,345μm,0.1s						
T1217	**Poggiodomo (PG**	**0.28**	**200**	⇓P	Pg	00 28 34.8	+0.5
T1217				S	Sb	00 28 39.5	-1.2
T1217				AML	AML		
	comp=E,986μm,0.5s						
T1217				AML	AML		
	comp=N,1062μm,0.7s						
T1217				AML	AML		
	comp=E,355μm,0.2s						
T1217				AML	AML		
	comp=E,350μm,0.2s						
T1217				AML	AML		
	comp=N,484μm,0.3s						
T1217				AML	AML		
	comp=N,495μm,0.2s						
EL6	**Elcito**	**0.35**	**4**	⇓P	Pg	00 28 36.0	+0.4
EL6				AML	AML		
	comp=E,174μm,0.3s						
EL6				AML	AML		
	comp=N,230μm,0.4s						
T1204	**Amatrice, Fraz**	**0.35**	**148**	P	Pg	00 28 36.0	+0.4
T1204				S	Sb	00 28 41.5	-1.2
LNSS	**Leonessa**	**0.38**	**183**	⇓P	Pg	00 28 36.3	+0.4
LNSS				S	Sb	00 28 42.5	-0.9
LNSS				AML	AML		
	comp=N,670μm,1.2s						
LNSS				AML	AML		
	comp=E,727μm,1.0s						
LNSS				AML	AML		
	comp=E,213μm,0.1s						
LNSS				AML	AML		
	comp=N,362μm,0.1s						
SMA1	**SAN MARTINO**	**0.40**	**150**	P	Pg	00 28 36.8	+0.4
SMA1				S	Sb	00 28 43.2	-0.9
ARRO	**Arrone**	**0.46**	**209**	P	Pb	00 28 38.7	0.0
ARRO				S	Sb	00 28 44.9	-0.6
ARRO				AML	AML		
	comp=E,276μm,0.6s						
ARRO				AML	AML		
	comp=N,246μm,0.5s						
ARRO				AML	AML		
	comp=E,181μm,0.2s						
ARRO				AML	AML		
	comp=N,138μm,0.1s						
T1211	**Morro Reatino**	**0.47**	**199**	⇓P	Pg	00 28 38.2	+0.5
T1211				S	Sb	00 28 45.5	-0.6
T1211				AML	AML		
	comp=E,365μm,0.6s						
T1211				AML	AML		
	comp=N,515μm,1.0s						
T1211				AML	AML		
	comp=E,193μm,0.1s						
T1211				AML	AML		
	comp=E,187μm,0.1s						
T1211				AML	AML		
	comp=N,214μm,0.2s						
T1211				AML	AML		
	comp=N,235μm,0.2s						
RM33	**Pellescritta (**	**0.48**	**167**	P	Pg	00 28 38.4	+0.5
RM33				S	Sb	00 28 46.3	-0.1
RM33				AML	AML		
	comp=N,278μm,0.4s						
RM33				AML	AML		
	comp=E,326μm,0.7s						
RM33				AML	AML		
	comp=E,281μm,1.4s						
RM33				AML	AML		
	comp=N,268μm,0.4s						
RM33				AML	AML		
	comp=N,131μm,0.5s						
RM33				AML	AML		
	comp=E,161μm,0.6s						
RM33				AML	AML		
	comp=E,106μm,0.1s						
RM33				AML	AML		
	comp=N,77μm,0.2s						
CESX	**Cesi**	**0.51**	**224**	P	Pg	00 28 38.7	+0.2
CESX				AML	AML		
	comp=E,220μm,0.5s						
CESX				AML	AML		
	comp=N,242μm,0.3s						
CESX				AML	AML		
	comp=E,516μm,0.5s						
CESX				AML	AML		
	comp=N,554μm,0.8s						
CESX				AML	AML		
	comp=E,220μm,0.5s						
CESX				AML	AML		
	comp=N,243μm,0.3s						
ARVD	**Arcevia**	**0.53**	**350**	S	Sb	00 28 48.0	+0.3

ROM 28 00:29:26.1±0.1, 43.005N±0.008×13.145E±0.005, h10km, ML2.5/11, 5C-3D, Error ellipse: s-maj=0.8km s-min=0.4km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**307**	P	Pg	00 29 28.5	+0.3
FDMO				S	Sg	00 29 29.8	+0.2
FDMO				AML	AML		
	comp=N,17200μm,0.2s						
FDMO				AML	AML		
	comp=E,10140μm,0.7s						
FDMO				AML	AML		
	comp=E,10140μm,1.3s						
FEMA	**Monte Fema**	**0.08**	**239**	P	Pg	00 29 28.9	+0.3

FEMA			S	Sg	00 29 30.6	+0.3
FEMA			AML	AML		
	comp=N,11300μm,0.8s					
FEMA			AML	AML		
	comp=N,11300μm,1.2s					
FEMA			AML	AML		
	comp=E,14250μm,0.3s					
MC2	**Monte Cornacci**	**0.10 160**	P	Pg	00 29 28.9	+0.1
T1216	**Preci, Frazion**	**0.15 219**	P	Pg	00 29 29.9	+0.5
T1216			S	Sg	00 29 32.4	+0.7
T1216			AML	AML		
	comp=E,5685μm,1.4s					
T1216			AML	AML		
	comp=N,8100μm,0.3s					
T1216			AML	AML		
	comp=E,5700μm,1.4s					
T1216			AML	AML		
	comp=N,8105μm,0.3s					
T1216			AML	AML		
	comp=E,5710μm,1.4s					
T1216			AML	AML		
	comp=E,5710μm,0.6s					
T1216			AML	AML		
	comp=N,8110μm,0.3s					
AM05	**Amandola Campo**	**0.15 100**	⇑P	Pg	00 29 30.4	+0.9
AM05			S	Sg	00 29 33.2	+1.3
AM05			AML	AML		
	comp=E,1168μm,1.6s					
AM05			AML	AML		
	comp=E,3915μm,1.6s					
AM05			AML	AML		
	comp=N,208μm,0.4s					
AM05			AML	AML		
	comp=E,3910μm,1.6s					
AM05			AML	AML		
	comp=E,1170μm,1.6s					
AM05			AML	AML		
	comp=N,756μm,0.7s					
AM05			AML	AML		
	comp=E,1170μm,0.4s					
AM05			AML	AML		
	comp=E,3910μm,0.4s					
NRCA	**Norcia**	**0.17 187**	P	Pg	00 29 30.2	+0.4
NRCA			AML	AML		
	comp=E,6030μm,0.2s					
NRCA			AML	AML		
	comp=N,4880μm,0.1s					
NRCA			AML	AML		
	comp=E,6035μm,0.2s					
NRCA			AML	AML		
	comp=N,4880μm,0.2s					
NRCA			AML	AML		
	comp=N,4875μm,0.2s					
NRCA			AML	AML		
	comp=E,6295μm,0.2s					
NRCA			AML	AML		
	comp=E,6030μm,0.2s					
NRCA			AML	AML		
	comp=N,5295μm,0.2s					
CESI	**CESI - Serrava**	**0.18 270**	⇑P	Pg	00 29 30.9	+1.0
CESI			S	Sg	00 29 34.0	+1.5
CESI			AML	AML		
	comp=N,3765μm,0.8s					
CESI			AML	AML		
	comp=E,2975μm,0.5s					
T1215	**Vallo di Nera,**	**0.29 225**	P	Pg	00 29 32.6	+0.7
T1215			S	Sb	00 29 37.0	-1.2
EL6	**Elcito**	**0.33 354**	⇓P	Pb	00 29 33.9	-0.2
T1217	**Poggiodomo (PG**	**0.33 208**	P	Pg	00 29 33.2	+0.5
T1217			S	Sb	00 29 38.7	-0.9
T1204	**Amatrice, Fraz**	**0.35 159**	P	Pg	00 29 33.5	+0.4
T1204			S	Sb	00 29 39.2	-1.0
CING	**Cingoli**	**0.37 6**	⇓P	Pb	00 29 34.7	-0.1
CING			AML	AML		
	comp=N,464μm,0.3s					
CING			AML	AML		
	comp=E,794μm,0.5s					
SMA1	**SAN MARTINO**	**0.40 159**	P	Pg	00 29 34.2	+0.2
SMA1			S	Sb	00 29 40.9	-0.7
OFFI	**Offida**	**0.40 100**	⇑P	Pg	00 29 34.4	+0.4
LNSS	**Leonessa**	**0.41 191**	P	Pg	00 29 34.4	+0.2
LNSS			S	Sb	00 29 41.2	-0.6
RM33	**Pellescritta (**	**0.50 174**	P	Pg	00 29 35.9	+0.1
RM33			S	Sb	00 29 44.0	-0.4
CAMP	**Campotosto**	**0.51 157**	P	Pg	00 29 36.1	+0.1
CAMP			S	Sb	00 29 43.8	-0.8
ARRO	**Arrone**	**0.51 213**	P	Pg	00 29 36.3	+0.3
ARRO			S	Sb	00 29 44.5	-0.1
TERO	**Teramo**	**0.51 138**	P	Pg	00 29 36.2	+0.2
TERO			S	Sb	00 29 44.3	-0.3
ARVD	**Arcevia**	**0.52 343**	⇑P	Pb	00 29 37.2	0.0
ARVD			S	Sn	00 29 47.0	-1.5
ARVD			AML	AML		
	comp=N,246μm,0.5s					
ARVD			AML	AML		
	comp=E,374μm,1.6s					
ARVD			AML	AML		
	comp=N,246μm,1.5s					
ARVD			AML	AML		
	comp=E,374μm,0.4s					
T1211	**Morro Reatino**	**0.52 204**	P	Pg	00 29 36.4	+0.3
T1211			S	Sb	00 29 45.1	+0.2
CESX	**Cesi**	**0.57 227**	S	Sg	00 29 38.0	-6.7
T1247	**Pizzolo (AQ)**	**0.57 169**	P	Pg	00 29 37.3	0.0
FRON	**Frontone**	**0.60 329**	⇓P	Pb	00 29 38.8	+0.1
FRON			AML	AML		
	comp=N,694μm,1.4s					
FRON			AML	AML		
	comp=E,326μm,0.4s					
GIGS	**Gran Sasso**	**0.64 150**	P	Pg	00 29 38.5	+0.1
GIGS			S	Sb	00 29 48.3	-0.1
AQU	**L'Aquila**	**0.68 164**	P	Pg	00 29 39.0	-0.2
PIEI	**Pieia**	**0.69 320**	P	Pb	00 29 40.6	+0.2
PIEI			S	Sn	00 29 53.0	+0.1
PIEI			AML	AML		
	comp=E,180μm,0.7s					
PIEI			AML	AML		
	comp=N,157μm,0.9s					
PIEI			AML	AML		
	comp=E,180μm,0.7s					
PIEI			AML	AML		
	comp=N,158μm,0.9s					
PIEI			AML	AML		
	comp=N,158μm,0.9s					
PIEI			AML	AML		
	comp=E,180μm,0.7s					
PIEI			AML	AML		
	comp=N,158μm,0.9s					
PIEI			AML	AML		
	comp=E,180μm,1.3s					
ATPI	**Pietralunga -**	**0.70 310**	⇑P	Pb	00 29 41.0	+0.5
ATPI			AML	AML		
	comp=E,170μm,0.6s					
ATPI			AML	AML		
	comp=N,159μm,0.7s					
ATPI			AML	AML		
	comp=N,159μm,0.7s					
ATPI			AML	AML		
	comp=E,170μm,0.6s					
ATPI			AML	AML		
	comp=N,159μm,0.7s					
ATPI			AML	AML		
	comp=E,170μm,1.4s					

NEIC ***28*** *00:41:11.9±2.2,53.7N±0.1×164.7W±0.08,h18km±11km, ML3.7/8,ML3.3(AEIC),Error ellipse: s-maj=21.2km s-min=5.6km az=169.0*
IDC ***28*** *00:41:12.4±22.0,53.22N×164.03W,h0km,mb3.5/2, mbtmp3.3/3,ML2.9/1,MS4.5/1,Error ellipse: s-maj=435.6km s-min=45.4km az=86.0*
AEIC ***28*** *00:41:13±3.3,53.70N±0.06×164.77W±0.08,h39km±10km, Error ellipse: s-maj=10.4km s-min=2.5km az=219.0*
ISC 28 00:41:13.3±1.3,53.7N±0.1×164.78W±0.07,h27km,n40, σ1§52/31,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**0.75**	**309**		**Pb**	**00 41 26.7**	**-1.1**
AKUT				Sn	**Sb**	**00 41 38.1**	**+0.4**
UNV	**Unalaska Valle**	**1.04**	**281**		**Pn**	**00 41 30.5**	**-1.6**
FALS	**False Pass**	**1.44**	**33**		**Pn**	**00 41 35.5**	**-2.0**
NIKH	**Nikolski High**	**2.54**	**256**	Pn	**Pn**	**00 41 52.5**	**-0.2**
SDPT	**Sand Point**	**3.02**	**54**	Pn	**Pn**	**00 41 59.0**	**-0.4**
SDPT				IAML		00 42 38.7	
	comp=N,209nm,4.4s						
CNBA	**Chernabura Isl**	**3.26**	**67**	Pn	**Pn**	**00 42 01.4**	**-1.1**
CNBA				IAML		00 42 29.7	
	comp=N,159nm,3.9s						
CNBA				IAML		00 42 44.8	
	comp=E,146nm,4.7s						
CHGN	**Chignik**	**4.52**	**52**	Pn	**Pn**	**00 42 19.8**	**-0.1**
CHGN				IAML		00 45 05.5	
	comp=N,70nm,2.0s						
P18K	**Big Mountain,**	**7.79**	**39**	Pn	**Pn**	**00 43 06.2**	**+1.4**
O18K	**Koktuh Hills**	**8.13**	**36**	Pn	**Pn**	**00 43 10.7**	**+1.3**
Q19K	**Cape Douglas,**	**8.13**	**45**	Pn	**Pn**	**00 43 10.2**	**+0.8**
N18K	**Kilae Creek**	**8.52**	**31**	Pn	**Pn**	**00 43 14.7**	**-0.2**
N19K	**Bonanza Creek**	**9.07**	**34**	Pn	**Pn**	**00 43 23.9**	**+1.5**
CNPM	**China Poot**	**9.49**	**46**	Pn	**Pn**	**00 43 27.7**	**-0.4**
M19K	**Big River Lodg**	**9.94**	**30**	Pn	**Pn**	**00 43 33.5**	**-0.7**
L19K	**White Mountain**	**10.03**	**28**	Pn	**Pn**	**00 43 34.7**	**-0.7**
SPU	**Mount Spurr**	**10.17**	**37**	Pn	**Pn**	**00 43 35.2**	**-2.3**
M20K	**Styx River**	**10.30**	**32**	Pn	**Pn**	**00 43 40.9**	**+1.6**
SUA	**Susitna One**	**10.84**	**38**	Pn	**Pn**	**00 43 45.5**	**-1.1**
SKT	**Skwentna**	**10.90**	**35**	Pn	**Pn**	**00 43 48.4**	**+1.0**
K20K	**Telida**	**11.20**	**26**	Pn	**Pn**	**00 43 51.0**	**-0.4**
PPLA	**Purkeypile**	**11.36**	**30**	Pn	**Pn**	**00 43 51.8**	**-2.0**
PWL	**Port Wells**	**11.43**	**44**	Pn	**Pn**	**00 43 54.4**	**-0.2**
CAST	**Castle Rocks**	**11.79**	**29**	Pn	**Pn**	**00 43 58.4**	**-1.1**
J20K	**Nowinta River**	**11.86**	**23**	Pn	**Pn**	**00 43 59.9**	**-0.6**
HIN	**Hinchinbrook I**	**12.00**	**49**	Pn	**Pn**	**00 44 00.3**	**-2.1**
SCM	**Sheep Creek Mo**	**12.37**	**42**	Pn	**Pn**	**00 44 05.7**	**-1.7**
BPAW	**Bear Paw Mtn.**	**12.62**	**29**	Pn	**Pn**	**00 44 08.1**	**-2.8**
ILAR	**Eielson Array**	**14.35**	**32**	Pn	**Pn**	**00 44 37.5**	**+3.1**
	baz=223,slow=12,SNR=1.9						
	comp=N,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**27.28**	**51**	P	**P**	**00 46 57.8**	**+2.7**
	comp=N,0.4nm,0.6s,baz=272,slow=9.7,SNR=4.5						
	comp=N,0.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**40.26**	**224**	T	T	01 31 48.3	
	baz=26,slow=76,SNR=49						
H11N3	**WAKE ISLAND Hy**	**40.26**	**224**	T	T	01 31 51.1	
	baz=26,slow=76,SNR=55						
H11N1	**WAKE ISLAND Hy**	**40.27**	**224**	T	T	01 32 00.8	
	baz=26,slow=76,SNR=41						
H11S1	**WAKE ISLAND Hy**	**41.43**	**223**	T	T	01 33 16.7	
	baz=25,slow=76,SNR=51						
H11S2	**WAKE ISLAND Hy**	**41.45**	**223**	T	T	01 33 26.8	
	baz=25,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**41.45**	**223**	T	T	01 33 19.6	
	baz=25,slow=76,SNR=56						
MJAR	**Matsushiro Arr**	**42.49**	**270**	LR	LR	01 07 45.1	
	comp=N,528nm,19.8s,baz=162,slow=37						
TXAR	**Lajitas Array**	**50.00**	**94**	P	**P**	**00 50 04.5**	**-0.7**
	comp=N,0.3nm,0.6s,baz=296,slow=5.4,SNR=5.3						
	comp=N,0.3nm,0.6s						
H03N2	**Juan Fernandez**	**113.88**	**114**	T	T	03 03 40.8	
	baz=322,slow=77,SNR=45						
H03N1	**Juan Fernandez**	**113.89**	**114**	T	T	03 03 45.8	
	baz=322,slow=77,SNR=54						
H03N3	**Juan Fernandez**	**113.89**	**114**	T	T	03 03 45.1	
	baz=322,slow=77,SNR=46						

MOS ***28*** *00:41:55.7±1.0,2.27S×140.11E,h9km,mb5.5/59,Error ellipse: s-maj=8.9km s-min=4.7km az=114.5*
IDC ***28*** *00:41:55.8±0.4,2.34S×140.24E,h0km,mb4.8/22, mbtmp4.8/24,ML4.9/2,MS4.7/49,Error ellipse: s-maj=18.4km s-min=11.1km az=78.0*
BJI ***28*** *00:41:56.0±0.0,2.41S×140.54E,h24km,mb5.1/77, mB5.4/59,Ms5.0/78,Ms7 4.8/74*
NEIC ***28*** *00:41:58.3±1.6,2.24S±0.07×140.19E±0.06,h10km±1km, mb5.3/247,Error ellipse: s-maj=12.6km s-min=10.7km az=187.0*
DJA ***28*** *00:42:01.4±0.3,2.3S±2.×14.0E±.,h46km±2km,M5.2/92, mB5.7/58,mb5.3/92,MLv5.6/7,Mw(mB)5.2/58, MwMwp5.1/19,Mwp5.4/19*
GCMT ***28*** *00:42:01.3±0.1,2.28S±0.01×140.35E±0.01,h20km, MW5.3/138,Moment Tensor Solution. s101,c152; s138,c228; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.79±.02; Mθθ-0.24±.01; Mφφ-0.55±.01; Mrθ0.18±.03; Mθφ0.67±.01; Mφr0.39±.03; Best double couple: M01.05800×10^17 NP1:φs346.00000°,δ57.00000°, λ123.00000°. NP2:φs116.00000°,δ46.00000°,λ50.00000°. Principal axes: T 1.0090, Plg62.0000°, Azm312.0000°; N 0.0990, Plg28.0000°, Azm146.0000°; P -1.1080, Plg6.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM ***28*** *00:42:04.2,25S×140.37E,h53km,mb5.4*
ISC 28 00:42:00.1±0.2,2.35S±0.03×140.16E±0.04,h25km,n898, σ1§40/871,mb5.3/221,MS4.8/76,22C-6D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.24**	**177**	P	**Pb**	**00 42 05.6**	**-0.7**
GENI	**Genyem**	**0.24**	**177**	P	**Pb**	**00 42 05.6**	**-0.7**
SMPI	**Sarmi**	**1.49**	**284**	P	**Pn**	**00 42 26.3**	**+1.0**
WAMI	**Wamena**	**2.10**	**223**	P	**Pn**	**00 42 35.6**	**+2.0**
SRPI	**Serui, Papua**	**3.94**	**277**	P	**Pn**	**00 43 00.6**	**+1.5**
RKPI	**Ransiki, Papua**	**6.03**	**278**	P	**Pn**	**00 43 28.9**	**+1.1**
	2.0nm6μm5μm423nm,1.4s						
MWPI	**Manokwari, Pap**	**6.28**	**283**	P	**Pn**	**00 43 32.6**	**+1.5**
	1.6nm5μm293nm,1.2s						
MANU	**Manus Island**	**7.21**	**88**		**Pn**	**00 43 43.3**	**-0.7**
MANU	**Manus Island**	**7.21**	**88**	P	**Pn**	**00 43 44.8**	**+0.8**
FAKI	**Fak Fak**	**7.92**	**266**	Pn	**Pn**	**00 43 53.4**	**-0.4**
FAKI	**Fak Fak**	**7.92**	**266**	P	**Pn**	**00 43 55.0**	**+1.3**
	0.8nm8μm2μm262nm,1.0s						
FAKI	**Fak Fak**	**7.92**	**266**	P	**Pn**	**00 43 56.7**	**+3.0**
SIJI	**Sorong**	**9.01**	**279**	LR	LR	00 48 00.9	
	comp=Z,5μm,18.1s,baz=94,slow=40						
SIJI	**Sorong**	**9.01**	**279**	P	**Pn**	**00 44 09.7**	**+1.0**
	94nm,1.2s						
SWI	**Sorong**	**9.02**	**279**	P	**Pn**	**00 44 11.2**	**+2.4**
	3μm2μm137nm,1.1s						
PMG	**Port Moresby**	**9.88**	**135**	Pn	**Pn**	**00 44 22.6**	**+2.0**
	1.7nm,0.3s,baz=320,slow=11,SNR=12						
PMG				LR	LR	00 49 11.9	
	comp=Z,6μm,20.0s,baz=326,slow=44						
PMG	**Port Moresby**	**9.88**	**135**	*ce*P	**Pn**	**00 44 22.4**	**+1.8**
PMG				pmax	pmax		
	comp=Z,168nm,1.3s						
PMG	**Port Moresby**	**9.88**	**135**	P	**Pn**	**00 44 21.2**	**+0.6**
	comp=Z,2μmcomp=Z,133nm,1.1s						
PMG	**Port Moresby**	**9.88**	**135**	P	**Pn**	**00 44 23.4**	**+2.8**
SAUI	**Saumlaki**	**10.44**	**237**	Pn	**Pn**	**00 44 28.9**	**+0.5**
SAUI	**Saumlaki**	**10.44**	**237**	P	**Pn**	**00 44 29.9**	**+1.6**
	comp=Z,9μmcomp=Z,8μmcomp=Z,637nm,1.4s						
SAUI	**Saumlaki**	**10.44**	**237**	P	**Pn**	**00 44 31.3**	**+3.0**
BNDI	**Bandanaira**	**10.46**	**258**	P	**Pn**	**00 44 29.6**	**+1.0**
	comp=Z,7μmcomp=Z,11μmcomp=Z,498nm,1.6s						
BNDI	**Bandanaira**	**10.46**	**258**	P	**Pn**	**00 44 31.3**	**+2.7**
MSAI	**Masohi**	**11.26**	**265**	P	**Pn**	**00 44 41.1**	**+1.6**
	comp=Z,946nmcomp=Z,25nm,1.2s						
KRAI	**Karang Ratu**	**11.79**	**265**	P	**Pn**	**00 44 48.5**	**+1.7**
	comp=Z,4μmcomp=Z,106nm,0.9s						
COEN	**Coen**	**11.91**	**166**	P	**Pn**	**00 44 49.6**	**+1.2**
	baz=12,SNR=11						
COEN	**Coen**	**11.91**	**166**	Pn	**Pn**	**00 44 50.2**	**+1.7**
COEN	**Coen**	**11.91**	**166**	P	**Pn**	**00 44 50.2**	**+1.7**
AAI	**Ambon**	**12.02**	**263**	P	**Pn**	**00 44 51.2**	**+1.3**
	comp=Z,3μmcomp=Z,196nm,1.2s						
RABL	**Rabaul**	**12.13**	**99**	Pn	**Pn**	**00 44 55.5**	**+4.1**
LBMI	**Labuha**	**12.77**	**277**	P	**Pn**	**00 45 01.9**	**+1.7**
	comp=Z,4μmcomp=Z,334nm,1.0s						
KDU	**Kakadu**	**12.78**	**216**	P	**Pn**	**00 44 58.5**	**-1.8**
	baz=13,SNR=87						
KDU	**Kakadu**	**12.78**	**216**	P	**Pn**	**00 44 59.8**	**-0.5**
GAMI	**Galela, Maluku**	**13.05**	**289**	P	**Pn**	**00 45 05.9**	**+1.9**
	comp=Z,4μmcomp=Z,3μmcomp=Z,158nm,0.9s						
NLAI	**Namlea**	**13.07**	**266**	P	**Pn**	**00 45 05.3**	**+1.0**
	comp=Z,81nm,0.9s						
TNTI	**Ternate**	**13.16**	**284**		**Pn**	**00 45 05.7**	**+0.2**
TNTI	**Ternate**	**13.16**	**284**	P	**Pn**	**00 45 07.5**	**+2.0**
	comp=Z,2μmcomp=Z,3μmcomp=Z,120nm,0.9s						
MTN	**Manton Dam**	**13.73**	**220**	Pn	**Pn**	**00 45 11.9**	**-1.4**
MTN	**Manton Dam**	**13.73**	**220**	P	**Pn**	**00 45 12.7**	**-0.6**
	comp=Z,198nm,0.9s						
SANI	**Sanana**	**14.16**	**271**	P	**Pn**	**00 45 19.2**	**0.0**
	comp=Z,4μmcomp=Z,7μmcomp=Z,292nm,1.5s						
SGSI	**Sangihe**	**15.80**	**292**	P	**Pn**	**00 45 41.8**	**+0.7**
	comp=Z,150nm,0.7s						
MTSU	**Mount Surprise**	**16.20**	**166**	P	**P**	**00 45 48.6**	**-0.7**
	baz=16,SNR=23						
MTSU	**Mount Surprise**	**16.20**	**166**	P	**P**	**00 45 50.6**	**+1.3**
GUMO	**Guam**	**16.52**	**16**	LR	LR	00 52 01.4	
	comp=Z,3μm,18.7s,baz=206,slow=37						
DAV	**Davao City (W)**	**17.30**	**303**	P	**P**	**00 46 02.8**	**+1.4**
	comp=Z,161nm,0.4s,baz=131,slow=9.3,SNR=1.3						
DAV				LR	LR	00 52 26.1	
	comp=Z,1μm,20.1s,baz=122,slow=36						
DAV	**Davao City (W)**	**17.30**	**303**		**P**	**00 46 03.6**	**+2.2**
DAV				IAmb	IAmb	00 46 13.7	
	comp=Z,352nm,1.2s						
KNRA	**Kununurra**	**17.36**	**220**	P	**Pn**	**00 46 00.7**	**-0.1**
	baz=17,SNR=59						
KNRA	**Kununurra**	**17.36**	**220**	Pn	**Pn**	**00 46 00.2**	**-0.6**
KNRA				IAmb	IAmb	00 46 11.0	
	comp=Z,425nm,1.4s						
KNRA	**Kununurra**	**17.36**	**220**	P	**Pn**	**00 46 01.1**	**+0.3**
GTOI	**Gorontalo**	**17.40**	**280**	P	**P**	**00 46 02.8**	**+0.3**
	comp=Z,1μmcomp=Z,81nm,1.2s						
SOEI	**Soe**	**17.42**	**244**	P	**P**	**00 46 02.6**	**-0.2**
SOEI	**Soe**	**17.42**	**244**	P	**P**	**00 46 02.8**	**0.0**
	comp=Z,4μmcomp=Z,8μmcomp=Z,937nm,1.2s						
SOEI	**Soe**	**17.42**	**244**	P	**P**	**00 46 04.4**	**+1.6**
LUWI	**Luwuk**	**17.43**	**274**	P	**Pn**	**00 46 02.4**	**+0.7**
LUWI				IAmb	IAmb	00 46 25.0	
	comp=Z,465nm,1.3s						
LUWI	**Luwuk**	**17.43**	**274**	P	**Pn**	**00 46 02.0**	**+0.3**
	comp=Z,3μmcomp=Z,6μmcomp=Z,285nm,1.8s						
LUWI	**Luwuk**	**17.43**	**274**	P	**P**	**00 46 02.6**	**-0.2**
BBSI	**Bau Bau**	**17.82**	**259**	P	**P**	**00 46 07.6**	**+0.5**
	comp=Z,3μmcomp=Z,8μmcomp=Z,442nm,2.1s						
TV1H	**Townsville Har**	**18.02**	**159**	P	**P**	**00 46 11.8**	**+2.6**
QIS	**Mount Isa**	**18.10**	**182**	P	**Pn**	**00 46 09.4**	**-0.6**
	baz=18,SNR=24						
QIS	**Mount Isa**	**18.10**	**182**	P	**Pn**	**00 46 08.2**	**-1.8**
BATI	**Baumata**	**18.14**	**244**	P	**Pn**	**00 46 09.5**	**-1.1**
	comp=Z,5.0nm,0.3s,baz=152,slow=1.7,SNR=3.7						
BATI				S	**S**	**00 49 39.2**	**+1.6**
	comp=Z,32nm,0.6s,baz=110,slow=22,SNR=2.1						
	comp=Z,45nm,0.6s						
BATI	**Baumata**	**18.14**	**244**	P	**P**	**00 46 11.2**	**+0.4**
	comp=Z,3μmcomp=Z,5μmcomp=Z,483nm,0.8s						
WB0	**Warramunga Arr**	**18.20**	**198**	P	**Pn**	**00 46 08.7**	**-2.5**
WR0	**Warramunga Arr**	**18.34**	**197**	P	**P**	**00 46 10.4**	**-2.5**
WRAB	**Tennant Creek**	**18.37**	**198**	P	**P**	**00 46 11.7**	**-1.5**
WRAB				IAmb	IAmb	00 46 34.1	
	comp=Z,106nm,0.7s						
WRAB	**Tennant Creek**	**18.37**	**198**	P	**P**	**00 46 11.7**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,106nm,0.7s						
WRAB	**Tennant Creek**	**18.37**	**198**	P	**P**	**00 46 12.1**	**-1.1**
WB2	**Warramunga Arr**	**18.38**	**198**	P	**P**	**00 46 11.5**	**-1.7**
WRA	**Warramunga Arr**	**18.38**	**198**	P	**P**	**00 46 11.0**	**-2.3**
	comp=Z,3.2nm,0.3s,baz=19,slow=12,SNR=74						
WRA				S	**Sn**	**00 49 28.4**	**-10**
	comp=Z,12nm,0.8s,baz=18,slow=22,SNR=4.6						
WRA				LR	LR	00 53 54.3	
	comp=Z,5μm,21.1s,baz=14,slow=39						
	comp=Z,53nm,0.9s						
WRA	**Warramunga Arr**	**18.38**	**198**	P	**P**	**00 46 11.6**	**-1.7**
WRA	**Warramunga Arr**	**18.38**	**198**	P	**P**	**00 46 11.6**	**-1.7**
WRA				pmax	pmax		
	comp=Z,13nm,1.0s						
MRSI	**Marisa**	**18.43**	**279**	P	**P**	**00 46 13.9**	**+0.1**
	comp=Z,3μmcomp=Z,2μmcomp=Z,101nm,1.1s						
APSI	**Ampana**	**18.55**	**274**	P	**Pn**	**00 46 16.6**	**+1.0**
	comp=Z,5μmcomp=Z,365nm,1.2s						
KKSI	**Kolaka, Sulawe**	**18.56**	**264**	P	**P**	**00 46 15.4**	**+0.1**
	comp=Z,3μmcomp=Z,142nm,1.4s						
CTA	**Charters Tower**	**18.61**	**162**	P	**Pn**	**00 46 18.2**	**+2.1**
	comp=Z,28nm,0.9s,baz=329,slow=12,SNR=16						
CTA				LR	LR	00 53 49.7	
	comp=Z,3μm,20.9s,baz=347,slow=38						
CTA	**Charters Tower**	**18.61**	**162**	P	**Pn**	**00 46 18.6**	**+2.5**
CTAO	**Charters Tower**	**18.61**	**162**		**Pn**	**00 46 17.6**	**+1.4**
CTAO	**Charters Tower**	**18.61**	**162**	P	**Pn**	**00 46 17.6**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,42nm,1.0s						
CTAO	**Charters Tower**	**18.61**	**162**	P	**Pn**	**00 46 18.6**	**+2.5**
MMRI	**Maumere**	**18.89**	**250**	P	**P**	**00 46 19.2**	**+0.3**
MMRI				IAmb	IAmb	00 46 29.6	
	comp=Z,93nm,0.7s						
MMRI	**Maumere**	**18.89**	**250**	P	**Pn**	**00 46 20.1**	**+0.5**
	comp=Z,4μmcomp=Z,177nm,1.2s						
MMRI	**Maumere**	**18.89**	**250**	P	**Pn**	**00 46 24.0**	**+4.4**
TOLI2	**Tolitoli**	**19.67**	**280**	P	**P**	**00 46 27.9**	**+0.4**
TOLI2	**Tolitoli**	**19.67**	**280**	P	**Pn**	**00 46 29.6**	**+0.5**
BSSI	**Bau Bau, Buton**	**19.97**	**259**	P	**P**	**00 46 30.7**	**0.0**
	comp=Z,4μmcomp=Z,6μmcomp=Z,386nm,1.3s						
BNSI	**Bone**	**20.12**	**264**	P	**P**	**00 46 33.1**	**+0.7**
	comp=Z,2μmcomp=Z,2μmcomp=Z,124nm,1.1s						
BKSI	**Bulukumba**	**20.20**	**261**	P	**P**	**00 46 33.5**	**+0.2**
	comp=Z,2μmcomp=Z,123nm,1.7s						
PATS	**Pohnpei**	**20.29**	**63**	P	Pn	00 46 35.9	-0.5
	baz=20,SNR=3.7						
PATS	**Pohnpei**	**20.29**	**63**	P	**P**	**00 46 33.4**	**-0.9**
PATS	**Pohnpei**	**20.29**	**63**	P	Pn	00 46 35.4	-0.9
SPSI	**Sidrap Palu**	**20.42**	**265**	P	**P**	**00 46 35.8**	**+0.2**
	comp=Z,3μmcomp=Z,140nm,1.7s						
MPSI	**Mapaga**	**20.43**	**277**	P	**P**	**00 46 36.1**	**+0.3**
	comp=Z,2μmcomp=Z,117nm,1.7s						
KAPI	**Kappang**	**20.53**	**262**	P	Pn	00 46 38.4	-0.7
	comp=Z,18nm,0.8s,baz=70,slow=7.8,SNR=18						
	comp=Z,18nm,0.8s						
KAPI	**Kappang**	**20.53**	**262**	P	**P**	**00 46 36.3**	**-0.6**
KAPI				IAmb	IAmb	00 46 46.5	
	comp=Z,176nm,1.4s						
KAPI	**Kappang**	**20.53**	**262**	P	**P**	**00 46 36.3**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,176nm,1.4s						
KAPI	**Kappang**	**20.53**	**262**	P	Pn	00 46 40.8	+1.6
KAPI				P	Pn	00 46 40.8	+1.6
KAPI	**Kappang**	**20.53**	**262**	P	**P**	**00 46 37.1**	**+0.2**
	comp=Z,1μmcomp=Z,82nm,1.6s						
KAPI	**Kappang**	**20.53**	**262**	P	Pn	00 46 41.7	+2.5
HNR	**Honiara**	**20.89**	**110**	P	**P**	**00 46 39.6**	**-1.2**
	comp=Z,938nm,0.4s,baz=126,slow=5.6,SNR=4.6						
HNR				LR	LR	00 54 57.0	
	comp=Z,24μm,20.9s,baz=293,slow=38						
HNR	**Honiara**	**20.89**	**110**	P	**P

KKM IAmb IAmb 00 47 28.6
comp=Z,122nm,1.0s
KKM Kota Kinabalu 25.32 289 P **P 00 47 24.8 -0.5**
comp=Z,2μmcomp=Z,125nm,1.3s
KKM Kota Kinabalu 25.32 289 P **P 00 47 27.9 +2.6**
RMQ Roma 25.38 162 P **P 00 47 26.4 +0.9**
baz=25,SNR=26
RMQ Roma 25.38 162 P **P 00 47 29.0 +3.5**
SRBI Singaraja 25.47 256 P **P 00 47 25.6 -0.9**
comp=Z,61nm,1.0s
OOD Oodnadatta 25.66 189 P **P 00 47 28.5 +0.5**
RTBI Rangdo, Negare 25.81 255 P **P 00 47 29.2 -0.4**
comp=Z,2μmcomp=Z,50nm,1.1s
KMMI Kalianget 26.51 259 P **P 00 47 35.4 -0.5**
comp=Z,3μmcomp=Z,218nm,1.0s
JAGI Jajag, Banyuwa 26.58 256 P **P 00 47 36.2 -0.3**
JAGI IAmb IAmb 00 47 48.3
comp=Z,85nm,1.2s
JAGI Jajag, Banyuwa 26.58 256 P **P 00 47 34.8 -1.8**
comp=Z,51nm,1.3s
JAGI Jajag, Banyuwa 26.58 256 P **P 00 47 38.2 +1.6**
MBWA Marble Bar 27.30 225 P **P 00 47 42.8 -0.1**
MBWA IAmb IAmb 00 47 46.5
comp=Z,58nm,1.0s
MBWA Marble Bar 27.30 225 P **P 00 47 44.1 +1.2**
MBWA Marble Bar 27.30 225 P **P 00 47 42.6 -0.4**
PSA00 Pilbara Seismi 27.49 224 IAmb IAmb 00 47 48.0
comp=Z,76nm,1.2s
PSA00 Pilbara Seismi 27.49 224 IAmb IAmb 00 47 56.1
comp=Z,16nm,0.9s
PSA00 Pilbara Seismi 27.49 224 P **P 00 47 45.6 +0.9**
AUWSH Wavell State H 27.79 155 P **P 00 47 52.8 +5.5**
LCRK Leigh Creek 28.00 184 P **P 00 47 49.5 +0.4**
SBUM Sibu 28.33 280 P **P 00 47 52.7 +0.4**
SBUM Sibu 28.33 280 P **P 00 47 52.0 -0.3**
comp=Z,233nmcomp=Z,10nm,1.8s
MULG Mulgathing 28.37 191 P **P 00 47 52.6 +0.2**
JCJ Chichijima 29.34 4 LR LR 00 58 19.9
comp=Z,1μm,18.4s,baz=151,slow=34
STKA Stephens Creek 29.40 178 P **P 00 48 01.0 -0.5**
comp=Z,5.0nm,0.8s,baz=350,slow=8.8,SNR=11
STKA LR LR 01 01 27.3
comp=Z,7μm,18.1s,baz=353,slow=40
comp=Z,5.0nm,0.8s
STKA Stephens Creek 29.40 178 P **P 00 48 00.9 -0.6**
baz=29,SNR=9.6
STKA Stephens Creek 29.40 178 P **P 00 48 00.9 -0.6**
STKA Stephens Creek 29.40 178 P **P 00 48 00.9 -0.6**
STKA pmax pmax
comp=Z,7.0nm,1.4s
STKA Stephens Creek 29.40 178 P **P 00 48 01.1 -0.5**
PCJI Pacitan 29.42 258 P **P 00 48 01.0 -1.0**
comp=Z,58nm,1.3s
CMSA Cobar Meteorol 29.50 170 P **P 00 48 03.6 +1.3**
baz=30,SNR=12
CMSA Cobar Meteorol 29.50 170 P **P 00 48 03.2 +0.8**
KOUNC Koumac, New Ca 29.68 129 P **P 00 48 04.0 -0.2**
ARMA Armidale 29.95 160 P **P 00 48 08.0 +1.4**
baz=30,SNR=6.5
ARMA Armidale 29.95 160 P **P 00 48 08.4 +1.8**
ARMA IAmb IAmb 00 48 14.6
comp=Z,67nm,1.1s
ARMA Armidale 29.95 160 P **P 00 48 10.3 +3.7**
KSM Kuching 30.08 277 P **P 00 48 06.4 -1.4**
KSM IAmb IAmb 00 48 14.3
comp=Z,38nm,1.1s
KSM Kuching 30.08 277 P **P 00 48 07.1 -0.7**
comp=Z,539nmcomp=Z,35nm,1.1s
KSM Kuching 30.08 277 P **P 00 48 09.0 +1.2**
KSM Kuching 30.08 277 P **P 00 48 09.2 +1.4**
FORT Forrest 30.50 201 P **P 00 48 11.3 0.0**
baz=30,SNR=9.5
FORT Forrest 30.50 201 P **P 00 48 12.2 +0.8**
FORT IAmb IAmb 00 48 17.7
comp=Z,60nm,0.9s
FORT Forrest 30.50 201 P **P 00 48 12.1 +0.8**
BBOO Buckleboo 30.54 187 P **P 00 48 11.0 -0.6**
baz=31,SNR=11
BBOO Buckleboo 30.54 187 IAmb IAmb 00 48 16.7
comp=Z,47nm,1.1s
BBOO Buckleboo 30.54 187 P **P 00 48 11.5 -0.1**
WHYH Whyalla 30.62 184 P **P 00 48 14.9 +2.6**
HTT Hallett 30.94 182 P **P 00 48 15.0 -0.1**
baz=31,SNR=7.0
HTT Hallett 30.94 182 P **P 00 48 15.1 -0.1**
JOW Kunigami 31.20 339 P **P 00 48 17.3 -0.3**
comp=Z,27nm,1.0s,baz=160,slow=8.7,SNR=13
JOW LR LR 00 58 09.3
comp=Z,2μm,21.5s,baz=126,slow=31
comp=Z,27nm,1.0s
JOW Kunigami 31.20 339 P **P 00 48 16.5 -1.0**
JOW Kunigami 31.20 339 P **P 00 48 17.2 -0.3**
SCJI Gunung Srandil 31.31 259 P **P 00 48 18.0 -0.6**
YOJ Yonaguni jima 31.43 329 P **P 00 48 17.6 -1.9**
YOJ IAmb IAmb 00 48 20.8
comp=Z,60nm,1.2s
YOJ Yonaguni jima 31.43 329 P **P 00 48 17.7 -1.9**
YOJ pmax pmax
comp=Z,60nm,1.2s
YULB Yu-li 31.50 325 P **P 00 48 18.9 -1.4**
YULB IAmb IAmb 00 48 30.9
comp=Z,26nm,0.9s
YULB Yu-li 31.50 325 P **P 00 48 21.1 +0.9**
TPUB Ta-pu 31.81 324 P **P 00 48 20.9 -2.1**
TPUB IAmb IAmb 00 48 22.3
comp=Z,90nm,1.5s
TPUB Ta-pu 31.81 324 P **P 00 48 22.0 -1.0**
NACB Ninganchiao 31.95 327 P **P 00 48 23.1 -1.1**
NACB IAmb IAmb 00 48 25.1
comp=Z,85nm,1.2s
NACB Ninganchiao 31.95 327 P **P 00 48 24.6 +0.4**
SSLB Suanglung 32.01 325 P **P 00 48 28.0 +3.3**
LIFNC LIFOU 32.13 127 P **P 00 48 24.1 -1.7**
DZM Mont Dzumac 32.20 130 *e*P **P 00 48 27.0 +0.5**
DZM *e*S **S 00 53 41.1 +2.8**
comp=Z,597nm,29.3s
DZM *e*LR LR 00 56 57.0
comp=Z,2μm,26.4s
DZM Mont Dzumac 32.20 130 P **P 00 48 26.9 +0.3**
comp=Z,12nm,1.0s,baz=292,slow=13,SNR=3.5
comp=Z,12nm,1.0s
DZM Mont Dzumac 32.20 130 P **P 00 48 27.6 +1.1**
DZM Mont Dzumac 32.20 130 P **P 00 48 28.3 +1.8**
GIRL Giralia 32.24 229 P **P 00 48 27.7 +0.9**
baz=32,SNR=6.6
GIRL Giralia 32.24 229 P **P 00 48 28.2 +1.4**
YHNB Yeheng 32.47 327 P **P 00 48 26.3 -2.5**
YHNB IAmb IAmb 00 48 31.2
comp=Z,42nm,1.0s
YHNB Yeheng 32.47 327 P **P 00 48 30.7 +1.9**
TATO Taipei 32.65 327 P **P 00 48 28.7 -1.6**
TATO Taipei 32.65 327 P **P 00 48 29.1 -1.1**
BBJI Bungbulang 32.77 260 P **P 00 48 31.2 -0.4**
TARA Tarawa 32.97 84 P **P 00 48 31.9 -1.3**
TARA IAmb IAmb 00 48 52.9
comp=Z,70nm,1.3s
MARNC Mare, Loyalty 33.13 127 P **P 00 48 35.1 +0.6**
H11S3 WAKE ISLAND Hy 33.33 50 T T 01 23 45.7
baz=231,slow=75,SNR=110
H11S2 WAKE ISLAND Hy 33.34 51 T T 01 23 41.8
baz=231,slow=75,SNR=138
H11S1 WAKE ISLAND Hy 33.35 50 T T 01 23 42.2
baz=231,slow=75,SNR=140
CAN Canberra 33.81 167 P **P 00 48 42.7 +2.3**
CAN IAmb IAmb 00 48 47.2
comp=Z,75nm,1.3s
CAN Canberra 33.81 167 P **P 00 48 42.7 +2.3**
CAN pmax pmax
comp=Z,75nm,1.3s
CAN Canberra 33.81 167 P **P 00 48 44.1 +3.7**
CNB Canberra Magne 33.89 166 P **P 00 48 42.2 +1.0**
baz=34,SNR=10
CNB Canberra Magne 33.89 166 P **P 00 48 44.0 +2.9**
PPBI Pangkal Pinang 33.99 270 P **P 00 48 41.0 -1.2**
KNMB Chin-men Tao 34.03 323 P **P 00 48 42.1 -0.1**
KNMB IAmb IAmb 00 49 01.1
comp=Z,48nm,0.8s
LHI Lord Howe Isla 34.06 150 P **P 00 48 41.4 -1.0**
H11N1 WAKE ISLAND Hy 34.21 49 T T 01 24 44.2
baz=229,slow=77,SNR=84
H11N2 WAKE ISLAND Hy 34.22 49 T T 01 24 49.2
baz=229,slow=77,SNR=76
H11N3 WAKE ISLAND Hy 34.22 49 T T 01 24 46.9
baz=229,slow=77,SNR=73
QZH Quanzhou 34.26 324 ⇑*i*P **P 00 48 44.0 -0.3**
QZH S S 00 54 19.3 +9.2
QZH LR LR
comp=Z,530nm,19.9s
QZH LR LR
comp=Z,560nm,17.1s
QZH LR LR
comp=Z,800nm,17.1s
ARPS Mount Arapiles 34.28 178 P **P 00 48 44.5 +0.2**
baz=34,SNR=8.3
ARPS Mount Arapiles 34.28 178 P **P 00 48 44.7 +0.3**
MORW Morawa 35.11 218 P **P 00 48 51.2 -0.5**
baz=35,SNR=14
MORW Morawa 35.11 218 IAmb IAmb 00 48 54.2
comp=Z,82nm,1.1s
MORW Morawa 35.11 218 P **P 00 48 51.4 -0.3**
BRAT Ballarat 35.20 175 P **P 00 48 56.5 +4.3**
HKPS Hong Kong Po S 35.28 315 P **P 00 48 51.7 -1.5**
HKPS IAmb IAmb 00 48 59.5
comp=Z,30nm,0.9s
JHJ Hachijo jima 2 35.28 359 LR LR 01 00 26.4
comp=Z,3μm,19.9s,baz=246,slow=32
TOO Toolangi 35.39 173 P **P 00 48 57.0 +3.0**
baz=36,SNR=5.5
TOO Toolangi 35.39 173 P **P 00 48 55.6 +1.6**
TOO Toolangi 35.39 173 P **P 00 48 55.6 +1.6**
TOO pmax pmax
comp=Z,17nm,0.9s
TOO Toolangi 35.39 173 P **P 00 48 56.4 +2.4**
DSRI Dabo 35.61 272 P **P 00 48 55.4 -0.8**
comp=Z,23nm,1.0s
KASI Kota Agung 35.71 264 P **P 00 48 55.8 -1.2**
BLDU Ballidu 35.81 216 P **P 00 48 57.4 -0.3**
baz=36,SNR=14
BLDU Ballidu 35.81 216 P **P 00 48 57.6 -0.1**
KLBR Kellerberrin 35.95 214 P **P 00 48 58.4 -0.4**
baz=36,SNR=7.9
KLBR Kellerberrin 35.95 214 P **P 00 48 58.6 -0.2**
GZH Guangzhou 36.36 316 *e*P **P 00 49 04.0 +1.5**
JMN Monobe 36.37 351 P **P 00 49 01.1 -1.4**
JMN IAmb IAmb 00 49 03.8
comp=Z,80nm,1.2s
JMN Monobe 36.37 351 P **P 00 49 02.7 +0.3**
MYKOM Kota Tinggi 36.53 276 P **P 00 49 04.1 +0.1**
MYKOM IAmb IAmb 00 49 10.3
comp=Z,50nm,1.2s
MYKOM Kota Tinggi 36.53 276 P **P 00 49 03.4 -0.6**
QIZ Qiongzhong 36.60 307 P **P 00 49 04.6 +0.1**
QIZ IAmb IAmb 00 49 05.8
comp=Z,104nm,1.1s
QIZ Qiongzhong 36.60 307 P **P 00 49 04.5 -0.1**
QIZ PP **PP 00 50 28.0 -0.2**
QIZ S **S 00 54 49.3 +3.1**
QIZ pmax pmax
comp=Z,45nm,0.9s
QIZ LR LR
comp=Z,520nm,16.7s
QIZ LR LR
comp=Z,570nm,21.8s
QIZ LR LR
comp=Z,860nm,19.4s
MNAI Manna 37.19 266 P **P 00 49 08.8 -0.9**
comp=Z,233nm,1.3s
NWAO Narrogin (SRO) 37.25 213 LR LR 01 05 59.0
comp=Z,5μm,18.4s,baz=267,slow=39
NWAO Narrogin (SRO) 37.25 213 P **P 00 49 09.8 0.0**
baz=37,SNR=4.1
NWAO P **P 00 49 09.8 0.0**
baz=37,SNR=4.1
NWAO Narrogin (SRO) 37.25 213 P **P 00 49 10.3 +0.4**
NWAO IAmb IAmb 00 49 13.3
comp=Z,79nm,1.4s
NWAO Narrogin (SRO) 37.25 213 P **P 00 49 10.3 +0.4**
NWAO pmax pmax
comp=Z,79nm,1.4s
NWAO Narrogin (SRO) 37.25 213 P **P 00 49 11.3 +1.4**
NWAO Narrogin (SRO) 37.25 213 P **P 00 49 09.6 -0.3**
INU Inuyama 37.62 356 P **P 00 49 11.2 -1.8**
JWT Wachi 37.70 354 P **P 00 49 11.8 -1.9**
JHS Saijyo 37.74 351 P **P 00 49 11.5 -2.5**
JGF Kuroka 37.85 356 P **P 00 49 12.6 -2.4**
JGF IAmb IAmb 00 49 15.0
comp=Z,61nm,1.5s
SSE Sheshan 37.85 333 P **P 00 49 14.5 -0.5**
SSE S **S 00 55 06.3 +1.5**
SSE pmax pmax
comp=Z,15nm,0.7s
SSE pmax pmax
comp=Z,190nm,4.3s
SSE LR LR
comp=Z,440nm,17.5s
SSE LR LR
comp=Z,440nm,17.7s
MASI Maura Aman, Be 37.88 268 P **P 00 49 14.5 -1.1**
comp=Z,53nm,1.5s
JYT Yasato 38.38 0 P **P 00 49 17.5 -1.9**
JYT IAmb IAmb 00 49 29.9
comp=Z,43nm,0.6s
UBPT Khong Chiam 38.53 298 P **P 00 49 20.6 -0.3**
UBPT IAmb IAmb 00 49 22.5
comp=Z,81nm,1.2s
UBPT Khong Chiam 38.53 298 P **P 00 49 19.9 -1.1**
comp=Z,1μmcomp=Z,66nm,2.1s
UBPT Khong Chiam 38.53 298 P **P 00 49 21.4 +0.4**
SDSI Sungai Dareh 38.74 271 P **P 00 49 21.2 -1.5**
comp=Z,46nm,1.0s
MJAR Matsushiro Arr 38.74 357 P **P 00 49 20.4 -2.0**
comp=Z,1.0nm,0.3s,baz=176,slow=8.2,SNR=7.4
comp=Z,1.0nm,0.3s
MAJO Matsushiro 38.74 357 P **P 00 49 21.1 -1.3**
MAJO Matsushiro 38.74 357 P **P 00 49 21.1 -1.3**
MAJO pmax pmax
comp=Z,46nm,1.4s
MAJO Matsushiro 38.74 357 P **P 00 49 24.0 +1.6**
comp=Z,22nm,1.6s
MJB9 Matsu-Tunnel 38.74 357 P **P 00 49 21.1 -1.3**
GLAD Gladstone 39.10 171 P **P 00 49 28.4 +3.0**
BKNI Bangkinang 39.20 273 P **P 00 49 26.1 -0.5**
BKNI IAmb IAmb 00 49 31.5
comp=Z,84nm,0.7s
BKNI Bangkinang 39.20 273 P **P 00 49 25.8 -0.8**
BKNI Bangkinang 39.20 273 P **P 00 49 27.6 +1.0**
AULHS Lilydale High 39.24 172 P **P 00 49 30.2 +3.7**
IPM Ipoh 39.69 280 P **P 00 49 29.6 -1.1**
IPM Ipoh 39.69 280 P **P 00 49 29.7 -1.0**
comp=Z,28nm,1.4s
NJ2 Nanjing 39.74 331 ⇑P **P 00 49 31.3 +0.5**
NJ2 pmax pmax
comp=Z,41nm,0.8s
NJ2 LR LR
comp=Z,1μm,16.6s
NJ2 LR LR
comp=Z,1μm,15.6s
NJ2 LR LR
comp=Z,2μm,18.4s
JMM Marumori 40.02 1 P **P 00 49 31.1 -1.9**
JMM IAmb IAmb 00 49 53.1
comp=Z,48nm,1.0s
JMM Marumori 40.02 1 P **P 00 49 33.1 0.0**
CNSH ChangSha 40.08 321 ⇓P **P 00 49 35.3 +1.6**
CNSH S **S 00 55 44.3 +5.8**
CNSH pmax pmax
comp=Z,23nm,1.4s
CNSH LR LR
comp=Z,630nm,18.2s
CNSH LR LR
comp=Z,980nm,21.4s
CNSH LR LR
comp=Z,1μm,21.2s
KULM Kulim 40.19 281 P **P 00 49 33.9 -1.0**
KULM Kulim 40.19 281 P **P 00 49 33.7 -1.1**
comp=Z,468nmcomp=Z,38nm,1.2s
KULM Kulim 40.19 281 P **P 00 49 35.0 +0.2**
MSVF Nonsavu 40.20 115 LR LR 01 06 20.7
comp=Z,1μm,18.2s,baz=264,slow=36
MSVF Nonsavu 40.20 115 P **P 00 49 36.1 +1.2**
MSVF Nonsavu 40.20 115 P **P 00 49 36.1 +1.2**
MSVF pmax pmax
comp=Z,44nm,1.4s
JSD Sado 40.23 358 P **P 00 49 32.5 -2.2**
JSD Sado 40.23 358 P **P 00 49 34.6 -0.2**
TJN Taejon 40.34 344 P **P 00 49 34.6 -1.1**
TJN Taejon 40.34 344 P **P 00 49 34.6 -1.1**
TJN pmax pmax
comp=Z,151nm,1.1s
SKLT Songkhla 40.57 284 P **P 00 49 37.6 -0.4**
comp=Z,821nmcomp=Z,50nm,1.1s
SKLT Songkhla 40.57 284 P **P 00 49 38.9 +0.9**
MNSI Mandailing Nat 40.69 274 P **P 00 49 37.0 -2.0**
comp=Z,47nm,0.6s
WHN Wuhan 40.94 325 ⇑P **P 00 49 41.5 +0.7**
WHN S **S 00 55 47.5 -3.8**
WHN pmax pmax
comp=Z,450nm,2.1s
WHN LR LR
comp=Z,460nm,14.1s
WHN LR LR
comp=Z,2μm,18.1s
WHN LR LR
comp=Z,2μm,18.5s
SISI Saibi 41.06 271 P **P 00 49 39.8 -2.2**
comp=Z,143nm,0.9s
KSAR Wonju Array Be 41.20 345 P **P 00 49 41.7 -1.1**
KSAR Wonju Array Be 41.20 345 P **P 00 49 41.7 -1.1**
KSRS Korea Array 41.20 345 P **P 00 49 42.5 -0.3**
comp=Z,3.6nm,0.6s,baz=162,slow=9.6,SNR=11
KSRS PcP **PcP 00 51 42.8 +1.2**
comp=Z,2.8nm,0.8s,baz=152,slow=5.0,SNR=5.0
KSRS LR LR 01 05 23.3
comp=Z,1μm,19.0s,baz=160,slow=34
comp=Z,3.6nm,0.6s
RPSI Rantau Prapat 41.52 277 P **P 00 49 45.4 -0.4**
RPSI IAmb IAmb 00 49 51.8
comp=Z,71nm,1.0s
PSI Prapat 41.53 277 LR LR 01 09 16.1
comp=Z,504nm,21.6s,baz=122,slow=39
PSI Prapat 41.53 277 P **P 00 49 45.4 -0.7**
PSI pmax pmax
comp=Z,71nm,1.0s
PSI Prapat 41.53 277 P pP 00 49 44.5 -9.2
comp=Z,533nmcomp=Z,48nm,1.2s,comp=Z,778nm,1.2s,
comp=Z,78nm,1.2s
PSI P **P 00 49 44.4 -1.7**
comp=Z,533nmcomp=Z,48nm,1.2s,comp=Z,778nm,1.2s,
comp=Z,78nm,1.2s
PSI Prapat 41.53 277 P **P 00 49 46.0 -0.1**
INCN Inchon 41.58 344 P **P 00 49 44.1 -1.8**
INCN IAmb IAmb 00 49 47.3
comp=Z,48nm,0.9s
INCN Inchon 41.58 344 P **P 00 49 44.1 -1.8**
INCN pmax pmax
comp=Z,48nm,1.0s
NONG Nongkai 41.72 301 P **P 00 49 48.3 +0.9**
SRIT Nakonsritamara 41.87 286 P **P 00 49 48.0 -0.6**
SRIT IAmb IAmb 00 50 04.5
comp=Z,47nm,1.0s
SRIT Nakonsritamara 41.87 286 P **P 00 49 50.1 +1.4**
NAYO Nakonayok 41.89 294 P **P 00 49 50.3 +1.5**
PBSI Pulau Batu 41.93 273 P **P 00 49 47.8 -1.4**
comp=Z,154nm,1.2s
SURA Surathani 41.97 286 P **P 00 49 50.7 +1.2**
GSI Gunungsitoli 42.73 274 P **P 00 49 54.2 -1.5**
GSI IAmb IAmb 00 49 57.6
comp=Z,64nm,0.6s
GSI Gunungsitoli 42.73 274 P **P 00 49 53.4 -2.3**
comp=Z,39nm,1.0s
GSI Gunungsitoli 42.73 274 P **P 00 49 54.6 -1.1**
KCSI Kotacane, Aceh 42.76 278 P **P 00 49 55.0 -1.0**
comp=Z,38nm,1.2s
JTM Tenmabayashi 42.94 1 P **P 00 49 56.1 -0.8**
JTM IAmb IAmb 00 50 17.2
comp=Z,122nm,1.4s
GYA Guiyang 43.21 314 ⇓*i*P **P 00 50 01.3 +1.8**
GYA S **S 00 56 26.8 +1.6**
GYA pmax pmax
comp=Z,27nm,1.3s
GYA pmax pmax
comp=Z,440nm,11.7s
GYA LR LR
comp=Z,460nm,18.0s
GYA LR LR
comp=Z,250nm,18.0s
GYA LR LR
comp=Z,550nm,18.6s
ENH Enshi 43.70 320 P **P 00 50 02.6 -0.7**
SRDT SRDT 43.91 293 P **P 00 50 03.6 -1.6**
comp=Z,1μmcomp=Z,37nm,1.5s
SRDT SRDT 43.91 293 P **P 00 50 04.9 -0.3**
TIA Tai'an 43.97 333 ⇓P **P 00 50 05.5 +0.1**
TIA pmax pmax
comp=Z,45nm,2.0s
TIA LR LR
comp=Z,810nm,15.7s
TIA LR LR
comp=Z,160nm,6.1s
TIA LR LR
comp=Z,930nm,15.7s
MLSI Meulaboh, Aceh 44.21 279 P **P 00 50 06.5 -1.2**
comp=Z,40nm,0.8s
PHRA Phrae 44.42 300 P **P 00 50 09.5 +0.3**
LYN LuoYang 44.99 327 ⇑P **P 00 50 13.8 +0.3**
LYN S S 00 56 59.8 +9.1
LYN pmax pmax
comp=Z,30nm,1.7s
LYN pmax pmax
comp=Z,370nm,4.8s
LYN LR LR
comp=Z,480nm,21.9s
LYN LR LR
comp=Z,370nm,18.3s
LYN LR LR
comp=Z,670nm,20.4s
OUZ Omahuta 45.08 140 P **P 00 50 16.3 +2.0**
OUZ IAmb IAmb 00 50 20.3
comp=Z,77nm,1.2s
KMI Kunming 45.40 309 ⇑P **P 00 50 18.5 +1.3**
KMI PP **PP 00 52 07.3 +3.5**
KMI S **S 00 57 05.0 +7.6**
KMI pmax pmax
comp=Z,51nm,1.1s
KMI pmax pmax
comp=Z,250nm,3.5s
KMI LR LR
comp=Z,350nm,18.8s
KMI LR LR
comp=Z,690nm,24.3s
KMI LR LR
comp=Z,1μm,22.2s
CM31 Chiang Mai Arr 45.52 299 P **P 00 50 18.6 +0.5**
CM31 Chiang Mai Arr 45.52 299 P **P 00 50 18.2 +0.2**
SNR=27
CMAR Chiang Mai Arr 45.52 299 P **P 00 50 18.3 +0.3**
comp=Z,40nm,0.9s,baz=119,slow=6.3,SNR=170
CMAR LR LR 01 09 22.2
comp=Z,229nm,21.6s,baz=120,slow=36
comp=Z,40nm,0.9s
CMAR Chiang Mai Arr 45.52 299 P **P 00 50 18.6 +0.5**
CMAR Chiang Mai Arr 45.52 299*ce*P **P 00 50 18.6 +0.5**
CMAR pmax pmax
comp=Z,42nm,0.9s
CHTO Chiang Mai 45.66 299 P **P 00 50 19.4 +0.2**
CHTO Chiang Mai 45.66 299 P **P 00 50 19.4 +0.2**
CHTO pmax pmax
comp=Z,74nm,1.2s
HNS HongShan 46.06 332 ⇑P **P 00 50 22.0 0.0**
HNS PP **PP 00 52 07.8 -2.6**
HNS S **S 00 57 14.8 +8.7**
HNS pmax pmax
comp=Z,42nm,2.0s
HNS pmax pmax
comp=Z,450nm,3.6s
HNS LR LR
comp=Z,820nm,21.5s
HNS LR LR
comp=Z,950nm,19.1s
HNS LR LR
comp=Z,1μm,17.8s
XAN Xi'an 46.63 324 P **P 00 50 26.8 +0.2**
XAN pP sP 00 50 39.0 +1.8
XAN PP **PP 00 52 15.3 -1.3**
XAN pmax pmax
comp=Z,44nm,1.5s
XAN pmax pmax
comp=Z,620nm,3.5s
XAN LR LR
comp=Z,450nm,23.0s
XAN LR LR
comp=Z,560nm,23.3s
XAN LR LR
comp=Z,880nm,23.8s
PZH PanZhiHua 46.89 310 P **P 00 50 28.5 -0.3**
PZH PP **PP 00 52 18.3 -1.1**

PZH S **S** **00 57 19.8 +1.3**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,180nm,5.3s
PZH LR LR
comp=Z,1μm,18.2s
PZH LR LR
comp=Z,2μm,19.2s
PZH LR LR
comp=Z,1μm,18.9s
USA0B Ussuriysk Arra 46.92 352 P **P** **00 50 28.1 -0.5**
USA0B IAmb IAmb 00 50 48.9
comp=Z,20nm,1.1s
USA0B Ussuriysk Arra 46.92 352 P **P** **00 50 28.1 -0.5**
USA0B pmax pmax
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 46.92 352 P **P** **00 50 28.5 -0.1**
comp=Z,8.2nm,0.9s,baz=165,slow=7.9,SNR=13
USRK LR LR 01 06 49.2
comp=Z,2μm,21.5s,baz=155,slow=32
comp=Z,8.2nm,0.9s
KUZ Kuaotunu 47.38 141 P **P** **00 50 34.8 +2.5**
TIY Taiyuan 47.42 330 *e*P **P** **00 50 34.0 +1.3**
TIY S **S** **00 57 30.3 +4.6**
TIY pmax pmax
comp=Z,230nm,3.7s
TIY LR LR
comp=Z,720nm,19.9s
TIY LR LR
comp=Z,700nm,21.3s
TIY LR LR
comp=Z,1μm,22.7s
BJT Baijiatuau 47.55 335 P **P** **00 50 33.4 -0.2**
BJT IAmb IAmb 00 50 37.1
comp=Z,29nm,1.2s
BJT Baijiatuau 47.55 335 P **P** **00 50 33.4 -0.2**
BJT pmax pmax
comp=Z,29nm,1.2s
BJI Beijing 47.57 335 P **P** **00 50 32.5 -1.2**
BJI pmax pmax
comp=Z,28nm,2.3s
BJI LR LR
comp=Z,240nm,17.1s
BJI LR LR
comp=Z,630nm,18.3s
BJI LR LR
comp=Z,1μm,18.1s
MDJ Mudanjiang 47.71 350 P **P** **00 50 34.5 -0.2**
MDJ pmax pmax
comp=Z,15nm,0.9s
MDJ pmax pmax
comp=Z,340nm,7.3s
MDJ LR LR
comp=Z,980nm,19.5s
MDJ LR LR
comp=Z,750nm,19.5s
MDJ LR LR
comp=Z,1μm,19.4s
CN2 Changchun 47.81 346 *e*P **P** **00 50 35.5 0.0**
CN2 *es*P pP 00 50 42.0 -1.2
CN2 *e*S **S** **00 57 31.3 +0.5**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=Z,900nm,18.0s
CN2 LR LR
comp=Z,600nm,18.0s
CN2 LR LR
comp=Z,1μm,19.0s
CD2 Chengdu 47.90 317 P **P** **00 50 37.0 +0.4**
CD2 PP **PP** **00 52 30.3 +1.6**
CD2 S **S** **00 57 33.5 +0.8**
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,300nm,4.2s
CD2 LR LR
comp=Z,480nm,18.9s
CD2 LR LR
comp=Z,880nm,18.9s
CD2 LR LR
comp=Z,800nm,18.9s
HIZ Hauiti 47.95 143 P **P** **00 50 39.7 +2.9**
RAO Raoul Island 47.98 128 LR LR 01 09 24.8
comp=Z,422nm,21.4s,baz=294,slow=34
AFI Afiamalu 48.84 106 LR LR 01 09 26.6
comp=Z,680nm,21.9s,baz=276,slow=34
AFI Afiamalu 48.84 106 P **P** **00 50 44.5 +0.4**
AFI Afiamalu 48.84 106 P **P** **00 50 44.5 +0.4**
AFI pmax pmax
comp=Z,110nm,1.4s
YSS Yuzh-Sakhalins 49.15 2 *e*P P 00 50 50.7 +4.9
YSS pmax pmax
comp=Z,40nm,0.7s
YSS MLR MLR
comp=Z,700nm,17.0s
URZ Urewera 49.18 141 LR LR 01 11 27.9
comp=Z,685nm,19.4s,baz=31,slow=36
URZ Urewera 49.18 141 P **P** **00 50 46.9 +0.7**
URZ IAmb IAmb 00 51 09.0
comp=Z,34nm,1.2s
BNX BinXian 49.20 348 ⇓P **P** **00 50 46.3 +0.1**
BNX PP **PP** **00 52 41.0 +0.7**
BNX S **S** **00 57 47.3 -3.2**
BNX pmax pmax
comp=Z,40nm,1.6s
BNX pmax pmax
comp=Z,480nm,3.5s
BNX LR LR
comp=Z,160nm,4.9s
BNX LR LR
comp=Z,710nm,19.5s
BKZ Black Stump Fm 49.35 143 IAmb IAmb 00 50 54.1
comp=Z,24nm,0.9s
BKZ Black Stump Fm 49.35 143 P **P** **00 50 49.5 +1.9**
MND Mandalay 49.36 302 P **P** **00 50 48.5 +0.6**
MLZ Mavora Lakes 49.38 154 P **P** **00 50 47.9 +0.3**
MLZ IAmb IAmb 00 51 05.5
comp=Z,36nm,1.0s
LTZ Lake Taylor 49.41 149 P **P** **00 50 49.7 +1.8**
LTZ IAmb IAmb 00 50 53.3
comp=Z,53nm,1.2s
RPZ Rata Peaks 49.48 151 LR LR 01 12 08.5
comp=Z,1μm,18.6s,baz=315,slow=37
RPZ Rata Peaks 49.48 151 P **P** **00 50 50.0 +1.5**
BSWZ Blackbirch Sta 49.52 147 P **P** **00 50 49.5 +0.8**
LBZ Lake Benmore 49.56 152 P **P** **00 50 50.7 +1.7**
LBZ IAmb IAmb 00 51 18.2
comp=Z,84nm,1.4s
HHC Hu-ho-hao-te 50.29 332 *e*P **P** **00 50 54.8 +0.1**
HHC S **S** **00 58 04.8 -1.2**
HHC pmax pmax
comp=Z,34nm,1.3s
HHC pmax pmax
comp=Z,470nm,5.8s
HHC LR LR
comp=Z,2μm,18.4s
HHC LR LR
comp=Z,1μm,17.8s
HHC LR LR
comp=Z,3μm,18.4s
BTO Baotou 50.84 330 *e*P **P** **00 51 00.5 +1.6**
BTO LR LR
comp=Z,4μm,20.8s
BTO LR LR
comp=Z,3μm,19.4s
XLT XiLinHaoTe 50.86 338⇑*i*P **P** **00 50 58.0 -1.0**
XLT pP pP 00 51 03.0 -3.7
XLT sP sP 00 51 05.5 -4.2
XLT S **S** **00 58 16.8 +3.0**
XLT pmax pmax
comp=Z,18nm,1.7s
XLT pmax pmax
comp=Z,310nm,3.9s
XLT LR LR
comp=Z,610nm,17.8s
XLT LR LR
comp=Z,760nm,19.2s
LZH Lanzhou 51.08 322 *e*P **P** **00 51 02.3 +1.4**
LZH pP pP 00 51 05.3 -3.3
LZH S **S** **00 58 17.3 0.0**
LZH pmax pmax
comp=Z,79nm,1.2s
LZH pmax pmax
comp=Z,550nm,5.0s
LZH LR LR
comp=Z,560nm,14.6s
LZH LR LR
comp=Z,650nm,14.6s
LZH LR LR
comp=Z,1μm,19.4s
KLR Kul'dur 51.89 353 P **P** **00 51 06.2 -0.3**
comp=Z,9.8nm,0.7s,baz=158,slow=5.7,SNR=19
KLR LR LR 01 09 26.9
comp=Z,968nm,21.9s,baz=187,slow=32
comp=Z,9.8nm,0.7s
KLR Kul'dur 51.89 353*ce*P **P** **00 51 05.8 -0.7**
KLR pmax pmax
comp=Z,74nm,1.8s
GRNR Gornyy 53.02 357⇓*i*P **P** **00 51 14.2 -0.6**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
BRDH Bariadhala 53.44 301 LR LR 01 15 24.7
comp=Z,174nm,21.3s,baz=94,slow=38
SHL Shillong 54.33 304 P **P** **00 51 24.6 -0.4**
SHL Shillong 54.33 304 P **P** **00 51 24.7 -0.4**
SHL pmax pmax
comp=Z,132nm,1.5s
SHL Shillong 54.33 304 P **P** **00 51 25.6 +0.4**
SNR=21
HIA Hailar 54.37 344 P **P** **00 51 23.5 -1.3**
HIA Hailar 54.37 344 P **P** **00 51 23.5 -1.3**
HIA pmax pmax
comp=Z,13nm,1.0s
GTA Gaotai 55.65 323 *e*P **P** **00 51 35.3 +0.9**
GTA pP pP 00 51 39.3 -2.9
GTA sP sP 00 51 42.5 -2.6
GTA S **S** **00 59 22.8 +3.5**
GTA pmax pmax
comp=Z,42nm,1.3s
GTA pmax pmax
comp=Z,330nm,5.0s
GTA LR LR
comp=Z,190nm,17.5s
GTA LR LR
comp=Z,370nm,17.8s
GTA LR LR
comp=Z,530nm,17.8s
LSA Lhasa 56.62 308 P **P** **00 51 42.1 +0.2**
LSA IAmb IAmb 00 51 44.7
comp=Z,32nm,1.0s
LSA Lhasa 56.62 308 P **P** **00 51 43.3 +1.4**
LSA pmax pmax
comp=Z,39nm,0.9s
LSA Lhasa 56.62 308 P **P** **00 51 42.1 +0.2**
LSA pmax pmax
comp=Z,33nm,1.0s
LSA Lhasa 56.62 308 P **P** **00 51 43.0 +1.1**
ZEA Zeya 56.92 351 *e*P **P** **00 51 43.0 0.0**
ZEA *e*S **S** **00 59 40.2 +4.8**
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA pmax pmax
comp=Z,100nm,4.0s
ZEA smax smax
comp=E,200nm,7.6s
GOMU GeErMu 57.04 317 P **P** **00 51 45.3 +0.7**
GOMU pP pP 00 51 49.0 -3.4
GOMU S **S** **00 59 41.3 +3.0**
GOMU sS sS 00 59 49.8 -1.0
GOMU pmax pmax
comp=E,12nm,1.0s
GOMU pmax pmax
comp=E,170nm,7.7s
GOMU LR LR
comp=E,260nm,18.4s
GOMU LR LR
comp=E,390nm,17.3s
GOMU LR LR
comp=E,470nm,19.2s
PETK Petropavlovsk- 57.19 12 LR LR 01 16 38.1
comp=E,355nm,19.2s,baz=198,slow=36
PETK Petropavlovsk- 57.19 12 P **P** **00 51 43.9 -1.0**
PETK Petropavlovsk- 57.19 12 P **P** **00 51 43.9 -1.0**
PET Petropavlovsk 57.33 13 *e*P P 00 51 50.4 +4.6
PET *e* 00 53 49.4
PET *e*S **S** **00 59 42.5 +1.9**
PET *e*SS **SS** **01 03 37.1 +6.7**
PET pmax pmax
comp=Z,200nm,14.2s
ULN Ulaanbaatar 57.76 334 P **P** **00 51 49.0 -0.3**
ULN Ulaanbaatar 57.76 334*ce*P **P** **00 51 49.5 +0.2**
ULN pmax pmax
comp=Z,52nm,2.4s
ULN Ulaanbaatar 57.76 334 P **P** **00 51 49.7 +0.4**
ULN Ulaanbaatar 57.76 334 P **P** **00 51 48.3 -1.0**
comp=Z,2μmcomp=Z,60nm,1.5s
SONM Songino Array 58.03 334 P **P** **00 51 51.1 -0.1**
comp=Z,2.7nm,0.7s,baz=151,slow=6.7,SNR=13
SONM PP **PP** **00 53 55.0 -4.9**
comp=Z,2.0nm,0.9s,baz=161,slow=11,SNR=2.9
SONM LR LR 01 17 36.3
comp=Z,1μm,18.7s,baz=132,slow=37
comp=Z,2.7nm,0.7s
SONM Songino Array 58.03 334 P **P** **00 51 51.0 -0.1**
SONM Songino Array 58.03 334 P **P** **00 51 51.0 -0.1**
SONM pmax pmax
comp=Z,5.0nm,1.0s
ODAN Odare 58.55 304 *e*P **P** **00 51 54.7 -0.6**
RAMN Ramite 59.24 303 *e*P **P** **00 52 00.2 +0.1**
comp=Z,181nm,1.3s
JIRN Jiri 59.83 304 *e*P **P** **00 52 04.5 +0.2**
comp=Z,102nm,1.1s
GUN Gumba 60.18 304 *e*P **P** **00 52 07.1 +0.4**
comp=Z,179nm,1.1s
PKI Pulchoki 60.45 304 *e*P **P** **00 52 08.4 -0.1**
PKIN Phulchoki 60.46 304 *e*P **P** **00 52 08.3 -0.2**
KKN Kakani 60.63 304 *e*P **P** **00 52 10.0 +0.4**
DMN Daman 60.72 303 *e*P **P** **00 52 10.5 +0.3**
comp=Z,168nm,1.1s
GKN Gorkha 61.24 304 *e*P **P** **00 52 13.5 -0.2**
comp=Z,316nm,1.2s
ZAK Zakamensk 61.29 334 *e*P **P** **00 52 13.7 +0.2**
ZAK pmax pmax
comp=Z,30nm,1.8s
RAR Rarotonga 61.33 113 LR LR 01 16 26.6
comp=Z,253nm,21.1s,baz=262,slow=34
KOLN Koldanda 62.03 303 *e*P **P** **00 52 18.4 -0.6**
DANN Dangsing 62.09 304 *e*P **P** **00 52 19.6 +0.1**
comp=Z,162nm,1.1s
MA2 Magadan 62.31 6 LR LR 01 16 39.7
comp=Z,238nm,21.9s,baz=180,slow=34
PYUN Piuthan 62.65 303 *e*P **P** **00 52 23.5 +0.3**
comp=Z,323nm,0.9s
BOD Bodaibo 63.54 345 *e*P **P** **00 52 27.9 -0.3**
BOD pmax pmax
comp=Z,44nm,2.0s
HYBB Hyderabad (bro 63.80 291 *e*P **P** **00 52 30.2 -0.6**
HYBB *ep*P **pP** **00 52 33.7 -4.8**
HYBB *e*PP **PP** **00 54 51.7 +0.3**
YAK Yakutsk 64.71 355 LR LR 01 16 60.0
comp=Z,602nm,21.7s,slow=32
YAK Yakutsk 64.71 355 P **P** **00 52 35.5 -0.3**
YAK Yakutsk 64.71 355 *e*P **P** **00 52 34.8 -1.0**
PCHI Peechi 64.77 283 *e*P **P** **00 52 37.7 +0.5**
PCHI *e*S **S** **01 01 15.8 -1.1**
ADK Adak 65.18 28 P **P** **00 52 39.1 0.0**
ADK Adak 65.18 28 P **P** **00 52 39.1 0.0**
ADK pmax pmax
comp=Z,150nm,1.4s
WMQ Urumqi 65.64 321 ⇓P **P** **00 52 43.3 +1.0**
WMQ sP pP 00 52 51.5 +1.3
WMQ pmax pmax
comp=Z,86nm,1.3s
WMQ pmax pmax
comp=Z,350nm,4.3s
WMQ LR LR
comp=Z,330nm,20.3s
WMQ LR LR
comp=Z,240nm,21.9s
SEY Seymchan 65.77 6 P **P** **00 52 42.7 0.0**
comp=Z,1.2nm,0.3s,baz=214,slow=7.1,SNR=4.5
comp=Z,1.2nm,0.3s
SEY Seymchan 65.77 6*ce*P **P** **00 52 42.5 -0.2**
SEY pmax pmax
comp=Z,11nm,1.7s
HLK Haleakala 66.33 66 P **P** **00 52 46.3 -1.2**
POO Poona 68.40 291 *e*P P 00 52 54.0 -6.4
DGZ Jazzator, Alta 68.78 326*c i*P **P** **00 53 02.7 +0.4**
DGZ pmax pmax
comp=Z,57nm,1.0s
ZSN Zaisan 69.13 323 *e*P **P** **00 53 02.7 -1.6**
ZSN Zaisan 69.13 323 *e*P **P** **00 53 02.7 -1.6**
baz=323
MK31 Makanchi Array 70.40 322 P **P** **00 53 12.2 0.0**
MK31 Makanchi Array 70.40 322 *i* P **P** **00 53 12.4 +0.3**
MK31 pmax pmax
comp=Z,47nm,0.9s
MKAR Makanchi Array 70.40 322 P **P** **00 53 12.3 +0.1**
comp=Z,37nm,0.9s,baz=112,slow=7.4,SNR=128
MKAR LR LR 01 25 43.5
comp=Z,164nm,18.7s,baz=99,slow=37
comp=Z,37nm,0.9s
MKAR Makanchi Array 70.40 322 *i* P **P** **00 53 12.5 +0.4**
MKAR pmax pmax
comp=Z,37nm,0.9s
PPT Papeete 70.49 108 LR LR 01 21 07.5
comp=Z,214nm,20.0s,baz=274,slow=33
PPT2 Papeete2 70.49 108 *e*P **P** **00 53 14.5 +1.2**
comp=Z,60nm,22.8s
PPT2 *e*S **S** **01 02 26.8 +1.3**
comp=Z,234nm,25.0s
PPT2 *e*SS **SS** **01 06 59.0 +1.9**
comp=Z,136nm,26.2s
PPT2 *e*LR LR 01 14 39.4
comp=Z,663nm,25.8s
MAKZ Makanchi 70.60 322 P **P** **00 53 13.3 -0.1**
MAKZ Makanchi 70.60 322 P **P** **00 53 13.3 -0.1**
MAKZ pmax pmax
comp=Z,82nm,1.0s
SHLS Shalkode 70.73 317 *e*P **P** **00 53 11.7 -2.6**
SHLS pmax pmax
comp=Z,19nm,0.9s
SHLS Shalkode 70.73 317 *e*P **P** **00 53 11.8 -2.6**
comp=Z,19nm,0.9s,baz=318
PDGK Podgornoye 70.77 318 *i* P **P** **00 53 14.5 -0.2**
PDGK pmax pmax
comp=Z,43nm,1.1s
UZB Uzynbulak 71.02 317 *e*P **P** **00 53 14.3 -1.9**
UZB Uzynbulak 71.02 317 *e*P **P** **00 53 14.3 -1.9**
baz=317
KPKS Kokpek 71.37 318 *e*P **P** **00 53 17.5 -0.7**
KPKS pmax pmax
comp=Z,103nm,2.6s
KPKS Kokpek 71.37 318 *e*P **P** **00 53 17.6 -0.7**
comp=Z,103nm,2.6s,baz=318
ZHN Zhinishke 71.43 317 *e*P **P** **00 53 16.7 -1.9**
ZHN Zhinishke 71.43 317 *e*P **P** **00 53 16.7 -1.9**
baz=317
KSH Kashi 71.90 313 P **P** **00 53 23.5 +2.0**
KSH sP PcP 00 53 36.5 -3.7
KSH pmax pmax
comp=Z,52nm,1.2s
KSH LR LR
comp=Z,290nm,12.7s
KSH LR LR
comp=Z,460nm,19.2s
KSH LR LR
comp=Z,620nm,16.5s
TDK Taldyqorghan 72.14 319 *e*P **P** **00 53 22.1 -0.6**
TDK pmax pmax
comp=Z,58nm,0.8s
TDK Taldyqorghan 72.14 319 *e*P **P** **00 53 22.1 -0.6**
comp=Z,58nm,0.8s,baz=319
ARXS Arharly 72.22 318 *i* P **P** **00 53 23.1 -0.2**
NIL Nilore 72.28 306 P **P** **00 53 24.1 +0.3**
NIL Nilore 72.28 306 P **P** **00 53 24.1 +0.3**
NIL pmax pmax
comp=Z,85nm,1.1s
ZAA0 Zalesovo Array 72.36 329 IAmb IAmb 00 53 24.4
comp=Z,27nm,1.0s
ZALV Zalesovo Beam 72.36 329 P **P** **00 53 22.9 -0.9**
comp=Z,14nm,0.7s,baz=110,slow=5.9,SNR=78
ZALV LR LR 01 24 35.4
comp=Z,559nm,20.3s,baz=104,slow=35
comp=Z,14nm,0.7s
ZALV Zalesovo Beam 72.36 329 P **P** **00 53 23.2 -0.6**
ZALV Zalesovo Beam 72.36 329 *i* P **P** **00 53 22.8 -1.0**
ZALV pmax pmax
comp=Z,14nm,0.7s
MDOK Medeo 72.37 317 *e*P **P** **00 53 23.3 -1.0**
MDOK Medeo 72.37 317 *e*P **P** **00 53 23.3 -1.0**
baz=317
AAA Alma-Ata 72.48 317 *e*P **P** **00 53 24.2 -0.6**
AAA Alma-Ata 72.48 317 *e*P **P** **00 53 24.3 -0.6**
baz=317
BILL Bilibino 72.56 10 *e*P **P** **00 53 25.4 +0.7**
BILL *e* 00 53 44.3
BILL *e* 00 56 06.0
BILL pmax pmax
comp=Z,4.0nm,1.0s
CHKK Chushkaly 72.66 317 *e*P **P** **00 53 24.7 -1.1**
CHKK Chushkaly 72.66 317 *e*P **P** **00 53 24.8 -1.1**
baz=318
KUU Kurty 73.11 317 *e*P **P** **00 53 28.0 -0.5**
KUU pmax pmax
comp=Z,141nm,1.5s
KUU Kurty 73.11 317 *e*P **P** **00 53 28.1 -0.5**
comp=Z,141nm,1.5s,baz=317
TKM2 Tokmak 2 73.28 316 P **P** **00 53 30.3 +0.5**
SNR=22
TKM2 Tokmak 2 73.28 316 *i* P **P** **00 53 29.8 0.0**
TKM2 pmax pmax
comp=Z,27nm,1.0s
KBK Karagaybulak 73.65 316 P **P** **00 53 33.3 +1.4**
SNR=14
UCH Uchtor 73.81 315 P **P** **00 53 34.3 +1.0**
SNR=27
CHMS Chumysh 73.90 316 P **P** **00 53 33.6 +0.4**
SNR=16
CHMS Chumysh 73.90 316 *i* P **P** **00 53 33.2 0.0**
CHMS pmax pmax
comp=Z,52nm,1.2s
AAK Ala-Archa 73.96 316 P **P** **00 53 35.0 +1.3**
SNR=11
AAK Ala-Archa 73.96 316 LR LR 01 26 08.8
comp=Z,236nm,20.8s,baz=88,slow=36
AAK Ala-Archa 73.96 316 P **P** **00 53 33.2 -0.5**
AAK Ala-Archa 73.96 316*ce*P **P** **00 53 34.7 +1.0**
AAK pmax pmax
comp=Z,41nm,1.7s
AAK Ala-Archa 73.96 316 P **P** **00 53 34.1 +0.3**
AAK Ala-Archa 73.96 316 *i* P **P** **00 53 34.0 +0.3**
SNR=7.4
SGDS Sogindy 74.13 316 *e*P **P** **00 53 32.4 -2.2**
SGDS Sogindy 74.13 316 *e*P **P** **00 53 32.4 -2.2**
baz=316
USP Ospenovka 74.16 316 P **P** **00 53 35.2 +0.5**
SNR=44
TIXI Tiksi 74.24 356 LR LR 01 25 09.9
comp=Z,444nm,20.0s,baz=1.0,slow=35
TIXI Tiksi 74.24 356 P **P** **00 53 33.2 -1.3**
TIXI Tiksi 74.24 356*ce*P **P** **00 53 33.2 -1.3**
TIXI pmax pmax
comp=Z,43nm,2.5s
KURK Kurchatov 74.26 325 P **P** **00 53 34.9 -0.2**
KURK IAmb IAmb 00 53 36.5
comp=Z,57nm,1.1s
KURK Kurchatov 74.26 325*ce*P **P** **00 53 35.3 +0.2**
KURK pmax pmax
comp=Z,104nm,1.7s
KURK Kurchatov 74.26 325 P **P** **00 53 34.9 -0.2**
KURBB Kurchatov Arra 74.28 324 P **P** **00 53 34.8 -0.4**
AML Almayashu 74.36 315 P **P** **00 53 37.2 +0.9**
SNR=32
EKS2 Erkin-Say 74.47 315 P **P** **00 53 37.6 +0.9**
SNR=19
BTLS Baital 75.04 318 *e*P **P** **00 53 38.1 -1.6**
BTLS pmax pmax
comp=Z,44nm,1.6s
BTLS Baital 75.04 318 *e*P **P** **00 53 38.1 -1.6**
comp=Z,44nm,1.6s,baz=318
SDPT Sand Point 75.09 31 P **P** **00 53 38.7 -1.0**
SDPT Sand Point 75.09 31 P **P** **00 53 39.9 +0.1**
baz=243
CHNA Chernabura Isl 75.31 31 P **P** **00 53 41.6 +0.5**
baz=244
KBL Kabul 75.88 306 P **P** **00 53 44.6 -0.5**
KBL IAmb IAmb 00 53 46.0
comp=Z,22nm,0.9s
KBL Kabul 75.88 306 P **P** **00 53 44.6 -0.5**
KBL pmax pmax
comp=Z,22nm,1.0s
KBL Kabul 75.88 306 P **P** **00 53 44.8 -0.2**
SNR=22

GAR	Garm	75.95	311	P	P	00 53 45.0	-0.3
VNDA	Vanda	76.01	175	P	P	00 53 44.3	-0.4
	comp=Z,4.5nm,0.8s,baz=324,slow=7.0,SNR=35						
VNDA				LR	LR	01 27 40.7	
	comp=Z,1µm,18.6s,baz=350,slow=36						
	comp=Z,4.5nm,0.8s						
VNDA	Vanda	76.01	175	P	P	00 53 44.8	+0.1
VNDA	Vanda	76.01	175	P	P	00 53 44.8	+0.1
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DZA	Taraz	76.26	315	eP	P	00 53 45.9	-0.9
DZA	Taraz	76.26	315	eP	P	00 53 45.9	-0.9
	baz=315						
CHGR	Chuyangaron	76.74	310	P	P	00 53 49.8	+0.1
CHGR	Chuyangaron	76.74	310	P	P	00 53 49.8	+0.1
CHGR				pmax	pmax		
	comp=Z,128nm,1.1s						
SBA	Scott Base	76.75	174	P	P	00 53 50.1	+1.2
SBA				IAmb	IAmb	00 54 08.3	
	comp=Z,38nm,1.4s						
SBA	Scott Base	76.75	174	P	P	00 53 50.1	+1.2
SBA				pmax	pmax		
	comp=Z,38nm,1.4s						
KK31	Karatay Array	76.89	315	P	P	00 53 50.3	-0.1
KK31				IAmb	IAmb	00 54 12.7	
	comp=Z,28nm,1.4s						
KK31	Karatay Array	76.89	315	P	P	00 53 50.3	-0.1
KK31				pmax	pmax		
	comp=Z,28nm,1.5s						
KKAR	Karatay Array	76.89	315	P	P	00 53 50.5	+0.1
KKAR				IAmb	IAmb	00 54 12.7	
	comp=Z,28nm,1.4s						
KKAR	Karatay Array	76.89	315	P	P	00 53 50.5	+0.1
KKAR				pmax	pmax		
	comp=Z,28nm,1.5s						
IUG	luzhnay	76.98	314	eP	P	00 53 49.5	-1.5
IUG	luzhnay	76.98	314	eP	P	00 53 49.6	-1.5
	baz=314						
OTUK	Ortayu	77.18	321	P	P	00 53 52.0	+0.1
TAS	Tashkent	77.30	313	P	P	00 53 53.2	+0.5
TAS	Tashkent	77.30	313	P	P	00 53 53.2	+0.5
TAS				pmax	pmax		
	comp=Z,111nm,1.4s						
BRZS	Berezniki	77.53	322	eP	P	00 53 53.0	-0.8
BRZS				pmax	pmax		
	comp=Z,31nm,1.7s						
BRZS	Berezniki	77.53	322	eP	P	00 53 53.1	-0.8
	comp=Z,31nm,1.7s,baz=322						
O16K	Kokwok River B	78.14	27	P	P	00 53 57.2	+0.2
	baz=244,SNR=5.7						
N16K	Nishlik Lake	78.23	26	P	P	00 53 58.0	+0.5
	baz=243,SNR=5.6						
Q17K	Contact Creek	78.62	29	P	P	00 54 00.4	+0.6
	baz=246						
O17K	Koliganek Bris	78.68	27	P	P	00 53 59.9	0.0
	baz=245						
Q18K	Katmai Hardscr	79.20	29	P	P	00 54 03.1	+0.1
	baz=247						
P18K	Big Mountain,	79.39	28	P	P	00 54 02.5	-1.4
	baz=247						
TAOE	Nuku Hiva Isla	79.46	99	eLR	LR	01 18 48.3	
	comp=Z,441nm,21.8s						
OHAK	Old Harbor	79.51	30	P	P	00 54 05.2	+0.7
	baz=249						
O18K	Koktuh Hills	79.58	28	P	P	00 54 04.5	-0.4
	baz=247						
N18K	Kilae Creek	79.61	27	P	P	00 54 05.3	+0.3
N18K	Kilae Creek	79.61	27	P	P	00 54 05.4	+0.3
	baz=246						
NRIK	Noril'sk	79.79	343	P	P	00 54 05.2	-0.6
	comp=Z,23nm,1.1s,baz=126,slow=5.9,SNR=20						
NRIK				LR	LR	01 30 23.7	
	comp=Z,482nm,18.1s,baz=118,slow=36						
	comp=Z,23nm,1.1s						
NRIK	Noril'sk	79.79	343	IAmb	IAmb	00 54 07.0	
	comp=Z,59nm,1.2s						
NRIK	Noril'sk	79.79	343	ceP	P	00 54 05.9	+0.1
BVA0	Borovoye Array	79.85	325	P	P	00 54 06.3	-0.2
BRVK	Borovoye	79.92	325	P	P	00 54 06.9	0.0
BRVK				IAmb	IAmb	00 54 08.5	
	comp=Z,48nm,1.1s						
BRVK	Borovoye	79.92	325	P	P	00 54 06.9	0.0
BRVK				pmax	pmax		
	comp=Z,48nm,1.1s						
BRVK	Borovoye	79.92	325	P	P	00 54 06.9	0.0
Q19K	Cape Douglas,	79.97	29	P	P	00 54 06.7	-0.4
Q19K				IAmb	IAmb	00 54 33.1	
	comp=Z,53nm,1.0s						
KDAK	Kodiak Island	80.07	30	P	P	00 54 07.8	+0.3
KDAK				IAmb	IAmb	00 54 09.4	
	comp=Z,78nm,1.4s						
KDAK	Kodiak Island	80.07	30	P	P	00 54 07.8	+0.3
KDAK				pmax	pmax		
	comp=Z,79nm,1.4s						
KDAK	Kodiak Island	80.07	30	P	P	00 54 08.6	+1.1
	baz=249						
N19K	Bonanza Creek	80.29	27	P	P	00 54 08.7	-0.1
N19K				IAmb	IAmb	00 54 11.2	
	comp=Z,44nm,1.3s						
N19K	Bonanza Creek	80.29	27	P	P	00 54 08.8	-0.1
	baz=247,SNR=9.0						
P19K	Oil Pt	80.43	28	P	P	00 54 04.1	-5.5
P19K				IAmb	IAmb	00 54 05.0	
	comp=Z,44nm,1.0s						
Q20K	Shuyak Island	80.46	29	P	P	00 54 09.3	-0.3
	baz=249						
TTA	Tatalina	80.48	25	P	P	00 54 09.6	-0.2
TTA	Tatalina	80.48	25	P	P	00 54 09.6	-0.2
TTA				pmax	pmax		
	comp=Z,21nm,1.2s						
TTA	Tatalina	80.48	25	P	P	00 54 09.6	-0.2
	baz=245						
L19K	White Mountain	80.67	26	IAmb	IAmb	00 54 12.2	
	comp=Z,48nm,1.4s						
L19K	White Mountain	80.67	26	P	P	00 54 10.7	-0.1
	baz=247,SNR=8.5						
M19K	Big River Lodg	80.76	26	P	P	00 54 11.2	0.0
	baz=247						
O20K	Slope Mountain	80.87	28	P	P	00 54 10.6	-1.3
	baz=249						
GCSA	Galena City Sc	80.91	23	P	P	00 54 11.6	-0.2
	baz=244						
RSO	Redoubt South	80.95	28	P	P	00 54 11.7	-0.8
NGCH	Negor - Chabah	81.09	296	P	P	00 54 14.9	+1.1
L20K	Farewell, AK	81.20	25	P	P	00 54 13.5	-0.1
	baz=247,SNR=8.3						
M20K	Styx River	81.30	26	IAmb	IAmb	00 54 15.5	
	comp=Z,40nm,1.4s						
M20K	Styx River	81.30	26	P	P	00 54 14.1	-0.1
	baz=248						
CNPM	China Poot	81.33	29	IAmb	IAmb	00 54 39.3	
	comp=Z,69nm,1.4s						
HRA	Herat	81.37	305	IAmb	IAmb	00 54 22.3	
	comp=Z,35nm,1.5s						
K20K	Telida	81.46	25	IAmb	IAmb	00 54 17.5	
	comp=Z,47nm,1.4s						
K20K	Telida	81.46	25	P	P	00 54 15.0	+0.1
	baz=247,SNR=10.0						
SPU	Mount Spurr	81.53	27	P	P	00 54 14.4	-1.0
BRSE	Bradley Lake S	81.64	29	P	P	00 54 15.2	-0.8
	baz=251						
J20K	Nowinta River	81.75	24	IAmb	IAmb	00 54 19.0	
	comp=Z,37nm,1.1s						
J20K	Nowinta River	81.75	24	P	P	00 54 15.5	-0.9
	baz=247,SNR=17						
CAPN	Captain Cook N	81.80	28	P	P	00 54 17.8	+1.1
SKT	Skwentna	82.04	26	IAmb	IAmb	00 54 18.5	
	comp=Z,30nm,1.4s						
SKT	Skwentna	82.04	26	P	P	00 54 15.9	-2.2
	baz=250						
PPLA	Purkeypile	82.08	25	P	P	00 54 17.9	-0.4
PPLA	Purkeypile	82.08	25	P	P	00 54 17.5	-0.9
	baz=249						
SUA	Susitna One	82.22	27	IAmb	IAmb	00 54 21.9	
	comp=Z,17nm,0.9s						
SUA	Susitna One	82.22	27	P	P	00 54 17.8	-1.3
	baz=250						
CAST	Castle Rocks	82.32	25	P	P	00 54 18.5	-0.9
	baz=249,SNR=9.2						
O22K	Cooper Landing	82.37	28	P	P	00 54 19.1	-0.5
O22K				IAmb	IAmb	00 54 32.5	
	comp=Z,26nm,0.7s						
SEW	Seward	82.38	28	P	P	00 54 19.0	-0.7
SEW				IAmb	IAmb	00 54 36.5	
	comp=Z,30nm,1.2s						
SEW	Seward	82.38	28	P	P	00 54 18.8	-1.0
	baz=252						
CHUM	Lake Minchumin	82.39	24	P	P	00 54 19.5	-0.2
	baz=249,SNR=22						
RC01	Rabbit Creek A	82.56	27	P	P	00 54 19.9	-0.8
RC01				IAmb	IAmb	00 54 44.3	
	comp=Z,18nm,0.8s						
RC01	Rabbit Creek A	82.56	27	P	P	00 54 19.6	-1.1
	baz=251						
M22K	Willow	82.60	27	P	P	00 54 19.9	-0.9
M22K				IAmb	IAmb	00 54 37.6	
	comp=Z,40nm,0.9s						
CUT	Chulitna	82.75	26	P	P	00 54 20.8	-0.8
WBK	Wadi Bani Khal	82.77	293	P	P	00 54 24.0	+1.3
	SNR=7.0						
H21K	Melozitna Rive	82.85	23	P	P	00 54 21.7	-0.4
H21K	Melozitna Rive	82.85	23	P	P	00 54 22.0	-0.2
	baz=248,SNR=6.4						
KTH	Kantishna Hill	82.85	25	IAmb	IAmb	00 54 23.2	
	comp=Z,26nm,1.2s						
G21K	Allakaket	82.92	22	P	P	00 54 22.1	-0.3
	baz=247						
PMR	Palmer	82.99	27	P	P	00 54 22.1	-0.8
PMR				IAmb	IAmb	00 54 23.9	
	comp=Z,16nm,0.9s						
PMR	Palmer	82.99	27	P	P	00 54 22.1	-0.8
PMR				pmax	pmax		
	comp=Z,16nm,0.9s						
PMR	Palmer	82.99	27	P	P	00 54 21.5	-1.4
	baz=252						
I21K	Tanana	83.00	23	P	P	00 54 22.5	-0.4
I21K				IAmb	IAmb	00 54 28.0	
	comp=Z,33nm,1.4s						
I21K	Tanana	83.00	23	P	P	00 54 22.6	-0.2
	baz=249,SNR=10						
MAW	Mawson	83.00	202	P	P	00 54 22.3	-0.5
	comp=Z,3.7nm,0.7s,baz=92,slow=6.6,SNR=5.2						
	comp=Z,3.7nm,0.7s						
MAW	Mawson	83.00	202	P	P	00 54 23.6	+0.8
MAW	Mawson	83.00	202	P	P	00 54 23.7	+0.8
BPAW	Bear Paw Mtn.	83.01	24	P	P	00 54 22.7	-0.3
BPAW	Bear Paw Mtn.	83.01	24	P	P	00 54 22.2	-0.9
	baz=250,SNR=6.9						
TRF	Thorofare Moun	83.08	25	P	P	00 54 22.2	-1.4
	baz=251,SNR=5.5						
PWL	Port Wells	83.14	28	P	P	00 54 22.4	-1.3
	baz=253,SNR=6.6						
WSAR	Wadi Sarin	83.14	294	P	P	00 54 25.7	+1.1
	SNR=6.7						
GHO	Glory Hole Cre	83.14	27	P	P	00 54 22.8	-1.0
GHO				IAmb	IAmb	00 54 25.0	
	comp=Z,32nm,1.2s						
KNK	Knik Glacier	83.24	27	P	P	00 54 23.7	-0.6
KNK				IAmb	IAmb	00 54 45.0	
	comp=Z,34nm,1.1s						
KNK	Knik Glacier	83.24	27	P	P	00 54 23.2	-1.1
	baz=252,SNR=6.7						
SML	Sawmill	83.42	27	P	P	00 54 24.5	-0.8
	baz=252,SNR=8.2						
MLY	Manley	83.44	24	IAmb	IAmb	00 54 27.9	
	comp=Z,42nm,1.3s						
MLY	Manley	83.44	24	P	P	00 54 24.7	-0.6
	baz=250,SNR=14						
H22K	Ishtalitna Cre	83.49	23	P	P	00 54 25.1	-0.4
	baz=249						
JMDO	Jabal Madar	83.54	293	P	P	00 54 26.3	-0.3
	SNR=7.3						
MHTO	MHTO	83.55	291	P	P	00 54 26.7	0.0
	SNR=15						
BIDO	Bidbid	83.63	294	P	P	00 54 27.5	+0.4
	SNR=21						
WAT1	Susitna Watana	83.63	26	P	P	00 54 24.8	-1.5
	baz=252						
SMDO	Samad	83.66	293	P	P	00 54 27.1	-0.2
	SNR=7.7						
RND	Reindeer	83.68	25	IAmb	IAmb	00 54 30.3	
	comp=Z,13nm,0.8s						
M23K	Glacier View	83.69	27	P	P	00 54 25.4	-1.2
	baz=253						
GLI	Glacier Island	83.72	28	P	P	00 54 26.1	-0.6
GLI				IAmb	IAmb	00 54 27.1	
	comp=Z,24nm,1.1s						
MCK	McKinley	83.75	25	P	P	00 54 25.2	-1.6
	baz=252,SNR=8.9						
F22K	John River	83.77	21	P	P	00 54 26.8	-0.1
	baz=248						
G22K	Bettles	83.80	22	P	P	00 54 26.3	-0.7
	baz=249						
DQM	DQM	83.86	290	P	P	00 54 28.1	-0.2
SCM	Sheep Creek Mo	83.88	27	P	P	00 54 26.4	-1.3
	baz=253,SNR=6.8						
WAT6	Susitna Watana	83.92	26	P	P	00 54 27.3	-0.6
	baz=253,SNR=10						
RER	Riviere de l'E	83.94	249	P	P	00 54 29.2	+0.4
RER	Riviere de l'E	83.94	249	P	P	00 54 31.0	+2.2
NEA2	Nenana	83.97	24	P	P	00 54 27.0	-0.9
NEA2				IAmb	IAmb	00 54 28.0	
	comp=Z,15nm,1.2s						
NEA2	Nenana	83.97	24	P	P	00 54 26.2	-1.7
	baz=252						
FID	Port Fidalgo	83.98	28	P	P	00 54 27.7	-0.3
I23K	Minto, Yukon-K	84.03	24	IAmb	IAmb	00 54 29.9	
	comp=Z,28nm,1.1s						
I23K	Minto, Yukon-K	84.03	24	P	P	00 54 27.0	-1.2
	baz=251,SNR=18						
H23K	Yukon River	84.17	23	P	P	00 54 28.6	-0.4
H23K				IAmb	IAmb	00 54 49.1	
	comp=Z,18nm,1.2s						
H23K	Yukon River	84.17	23	P	P	00 54 28.4	-0.6
	baz=251						
DHY	Denali Highway	84.22	26	P	P	00 54 28.2	-1.2
	baz=253,SNR=14						
EYAK	Cordova Ski Ar	84.27	29	P	P	00 54 27.5	-2.0
EYAK				IAmb	IAmb	00 54 33.3	
	comp=Z,20nm,1.1s						
G23K	Bananza Creek	84.28	22	P	P	00 54 29.0	-0.6
	baz=250,SNR=7.6						
WRH	Wood River Hil	84.33	24	IAmb	IAmb	00 54 30.4	
	comp=Z,29nm,1.2s						
HOQ	Hoqain	84.38	294	P	P	00 54 31.5	+0.5
	SNR=32						
COLD	Coldfoot	84.39	22	P	P	00 54 29.3	-0.7
COLD	Coldfoot	84.39	22	P	P	00 54 29.8	-0.2
	baz=250						
BSY	Bisya	84.41	293	P	P	00 54 31.2	+0.1
	SNR=11						
DIV	Divide	84.41	28	P	P	00 54 29.5	-0.8
KLU	Klutina	84.44	28	P	P	00 54 29.4	-1.1
KLU				IAmb	IAmb	00 54 51.3	
	comp=Z,39nm,1.4s						
KLU	Klutina	84.44	28	P	P	00 54 29.8	-0.7
	baz=255						
M24K	Tolsona, Glenn	84.48	27	P	P	00 54 29.2	-1.5
M24K	Tolsona, Glenn	84.48	27	P	P	00 54 30.3	-0.3
	baz=254						
CCB	Clear Creek Bu	84.50	24	IAmb	IAmb	00 54 33.1	
	comp=Z,16nm,0.8s						
MSEY	Mahe Island	84.51	266	P	P	00 54 33.8	+2.0
TCOL	CIGO, UAF Yank	84.55	24	IAmb	IAmb	00 54 35.2	
	comp=Z,13nm,0.9s						
COLA	College	84.55	24	P	P	00 54 29.6	-1.2
COLA				IAmb	IAmb	00 54 34.2	
	comp=Z,11nm,0.7s						
COLA	College	84.55	24	P	P	00 54 29.6	-1.2
HDA	Harding Lake	84.78	25	P	P	00 54 30.1	-1.9
	baz=254						
D23K	Nanushuk River	84.82	20	P	P	00 54 32.2	+0.1
	baz=250,SNR=10						
H24K	Noodor Dome	84.83	23	IAmb	IAmb	00 54 33.2	
	comp=Z,30nm,1.4s						
H24K	Noodor Dome	84.83	23	P	P	00 54 31.5	-0.8
	baz=252,SNR=7.5						
E23K	Chandalar	84.88	21	P	P	00 54 32.6	+0.1
	baz=251,SNR=6.3						
IL31		84.91	24	IAmb	IAmb	00 54 34.6	
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	84.91	24	P	P	00 54 30.6	-2.1
	comp=Z,9.4nm,0.7s,baz=258,slow=4.6,SNR=43						
ILAR				LR	LR	01 29 10.0	
	comp=Z,202nm,20.4s,baz=236,slow=33						
	comp=Z,9.4nm,0.7s						
ILAR	Eielson Array	84.91	24	P	P	00 54 31.2	-1.5
ILAR	Eielson Array	84.91	24	P	P	00 54 31.2	-1.5
BMRM	Bremner River	84.92	28	P	P	00 54 32.8	-0.1
BMRM	Bremner River	84.92	28	P	P	00 54 31.8	-1.0
	baz=256						
HMT	Hamilton	84.93	29	P	P	00 54 32.7	-0.2
HARP	HAARP	85.02	27	P	P	00 54 32.5	-0.8
	baz=255						
PAX	Paxson	85.03	26	P	P	00 54 32.5	-0.9
	baz=255,SNR=6.6						
N25K	Chitina, Valde	85.08	28	P	P	00 54 33.0	-0.7
N25K	Chitina, Valde	85.08	28	P	P	00 54 32.7	-1.0
	baz=256						
ARQ	Araqi	85.08	294	P	P	00 54 34.3	-0.2
	SNR=16						
TOLK	Toolik Lake Re	85.09	20	P	P	00 54 34.0	+0.4
TOLK				IAmb	IAmb	00 54 50.9	
	comp=Z,37nm,1.4s						
TOLK	Toolik Lake Re	85.09	20	P	P	00 54 33.1	-0.5
	baz=251,SNR=5.4						
K24K	Donnelly Dome	85.11	25	P	P	00 54 32.7	-1.1
	baz=255						
C23K	Itkillik River	85.15	19	P	P	00 54 32.8	-0.9
	baz=250,SNR=7.4						
GEYT	Alibeck	85.16	308	P	P	00 54 35.1	+0.6
	comp=Z,27nm,1.0s,baz=126,slow=2.0,SNR=70						
GEYT				LR	LR	01 34 48.3	
	comp=Z,483nm,21.3s,baz=88,slow=37						
	comp=Z,27nm,1.0s						
BERG	Berg Lake	85.21	29	P	P	00 54 34.1	-0.2
G24K	Hadweenzic Riv	85.24	22	P	P	00 54 33.9	-0.4
	baz=253,SNR=5.3						
E24K	Your Creek	85.29	21	P	P	00 54 34.2	-0.4
	baz=252						
F24K	Squaw Lake	85.33	22	P	P	00 54 34.8	0.0
	baz=252						
AB31	Akbulak array	85.39	320	P	P	00 54 35.5	+0.1
ABKAR	Akbulak array	85.39	320	P	P	00 54 35.4	0.0
ABKAR	Akbulak array	85.39	320	P	P	00 54 35.2	-0.1
ABKAR				IAmb	IAmb	00 54 36.5	
	comp=Z,13nm,1.0s						
GLB	Gilahina Butte	85.41	28	P	P	00 54 34.5	-0.8
GLB				IAmb	IAmb	00 54 49.0	
	comp=Z,21nm,1.1s						
BANOM	Banah	85.49	296	P	P	00 54 36.9	+0.4
	SNR=10						
BANOM	Banah	85.49	296	iP	P	00 54 36.5	0.0
	SNR=17						
RIDG	Independent Ri	85.50	26	P	P	00 54 34.2	-1.5
RIDG				IAmb	IAmb	00 54 57.5	
	comp=Z,18nm,0.9s						
J25K	Salcha River,	85.50	25	IAmb	IAmb	00 54 35.6	
	comp=Z,36nm,1.5s						
J25K	Salcha River,	85.50	25	P	P	00 54 34.1	-1.6
	baz=255,SNR=8.0						
D24K	Happy Valley	85.51	20	P	P	00 54 35.6	0.0
	baz=251						
VRDI	Verde Repeater	85.52	28	P	P	00 54 35.8	-0.2
HATD	Hatta, Dubai	85.56	295	iP	P	00 54 36.5	-0.3
	SNR=17						
MSFE	Esma-Masafi	85.57	296	iP	P	00 54 36.7	-0.2
	SNR=12						
MASF	Masafi	85.58	296	P	P	00 54 37.0	+0.1
	SNR=15						
ASHO	Ashiyiah	85.61	295	P	P	00 54 36.9	-0.2
	SNR=11						
ASHO	Ashiyiah	85.61	295	iP	P	00 54 36.4	-0.7
	SNR=10						
WAX	Waxell Ridge	85.64	29	P	P	00 54 35.1	-1.4
WAX				IAmb	IAmb	00 54 38.6	
	comp=Z,35nm,1.2s						
SHME	Shamm	85.65	296	P	P	00 54 37.0	-0.2
	SNR=8.6						
SHME	Shamm	85.65	296	iP	P	00 54 36.7	-0.5
	SNR=15						
PRP	Porcupine Dome	85.67	24	P	P	00 54 35.6	-1.1
	baz=255						
TGL	Tana Glacier	85.72	29	P	P	00 54 36.5	-0.4
TGL				IAmb	IAmb	00 54 37.8	
	comp=Z,46nm,1.4s						
C24K	Franklin Bluff	85.73	19	P	P	00 54 36.7	0.0
	baz=252						
H25K	Birch Creek	85.76	23	P	P	00 54 36.5	-0.3
	baz=254						
MCARA	McCarthy VSAT	85.76	28	P	P	00 54 36.7	-0.3
MCARA				IAmb	IAmb	00 54 50.9	
	comp=Z,24nm,1.1s						
MCARA	McCarthy VSAT	85.76	28	P	P	00 54 36.5	-0.5
	baz=257						
G25K	Bearman Lake	85.78	22	P	P	00 54 36.9	-0.1
	baz=254						
MENT	Mentasta	85.80	26	P	P	00 54 36.6	-0.6
ALNE	Al Ain	85.84	294	P	P	00 54 38.1	-0.1
	SNR=22						
ALNE	Al Ain	85.84	294	iP	P	00 54 37.9	-0.4
	SNR=12						
ISLE	Juniper Island	85.92	29	P	P	00 54 37.9	-0.1
ISLE				IAmb	IAmb	00 54 39.8	
	comp=Z,40nm,1.3s						
SCRK	Sand Creek	85.92	25	P	P	00 54 37.3	-0.7
	baz=256						
L26K	Log Cabin Wild	85.98	26	P	P	00 54 37.8	-0.3
	baz=257						
NAZ	Nazwa, Dubai	85.99	295	iP	P	00 54 38.0	-0.9
	SNR=7.0						
M26K	Nabesna, AK	86.00	27	P	P	00 54 37.7	-0.5
M26K	Nabesna, AK	86.00	27	P	P	00 54 37.8	-0.5
	baz=257						
MESA	MESA	86.02	29	P	P	00 54 38.0	-0.6
UMQ	Umm Al-Quwin	86.03	296	P	P	00 54 39.6	+0.5
FAQ	Al Faqa, Dubai	86.04	295	iP	P	00 54 38.8	-0.4
	SNR=10						
FYU	Fort Yukon	86.06	23	P	P	00 54 37.9	-0.5
DMTO	DMTO	86.15	288	P	P	00 54 38.9	-0.9
F25K	Christian Rive	86.18	22	P	P	00 54 39.5	+0.5
	baz=254,SNR=7.3						
SVE	Sverdlovsk	86.22	327	eP	P	00 54 39.4	0.0
SVE				pmax	pmax		
	comp=Z,27nm,1.8s						
J26L	Joseph Creek	86.23	25	P	P	00 54 38.6	-0.7
	baz=257,SNR=6.1						
ASUD	Al Ashush, Dub	86.27	295	iP	P	00 54 39.9	-0.4
	SNR=7.9						
UMZA	Um Al Zommool	86.28	293	P	P	00 54 39.5	-0.9
BARN	Barnard Glacie	86.34	28	P	P	00 54 39.6	-0.5
BARN				IAmb	IAmb	00 54 59.7	
	comp=Z,16nm,1.0s						
E25K	Arctic Village	86.35	21	P	P	00 54 39.7	-0.1
	baz=254,SNR=17						
D25K	Kavik River	86.40	20	P	P	00 54 39.3	-0.7
	baz=254,SNR=9.1						
TABL	Table Mountain	86.47	29	P	P	00 54 40.6	-0.2
TABL				IAmb	IAmb	00 54 57.5	
	comp=Z,36nm,1.3s						
CTG	Chitna Glacier	86.47	29	P	P	00 54 40.3	-0.4
	baz=259,SNR=7.2						
M27K	Edge Creek, AK	86.50	27	IAmb	IAmb	00 54 43.0	
	comp=Z,16nm,0.9s						
M27K	Edge Creek, AK	86.50	27	P	P	00 54 39.9	-0.9
	baz=258,SNR=10						
AJN	Ajban	86.58	295	P	P	00 54 41.9	+0.1
I26K	Coal Creek Min	86.58	24	P	P	00 54 41.2	+0.2
I26K	Coal Creek Min	86.58	24	P	P	00 54 41.5	+0.6
	baz=257						
L27K	Beaver Creek,	86.67	27	IAmb	IAmb	00 54 43.7	
	comp=Z,16nm,1.1s						
L27K	Beaver Creek,	86.67	27	P	P	00 54 41.2	-0.2
	baz=258,SNR=7.8						
G26K	Porcupine Rive	86.72	23	P	P	00 54 41.1	-0.4
	baz=256,SNR=20						
K27K	Chicken	86.76	26	IAmb	IAmb	00 54 45.5	
	comp=Z,23nm,1.1s						
K27K	Chicken	86.76	26	P	P	00 54 42.1	+0.2
	baz=258,SNR=16						
F26K	Sheenjek River	86.76	22	P	P	00 54 42.0	+0.2
	baz=256,SNR=28						
PCA	Pinnacle	86.84	30	P	P	00 54 42.0	-0.4
PC

baz=258,SNR=15
WHFO Wadi Hawf 87.28 288 P P 00 54 44.6 -0.8
YUK8 Steele Glacier 87.28 28 P P 00 54 44.5 -0.3
baz=260
ARU Arti 87.29 327 LR LR 01 34 58.3
comp=Z,322nm,20.2s,baz=90,slow=36
ARU Arti 87.29 327 P **P 00 54 43.3 -1.2**
ARU IAmb IAmb 00 54 52.8
comp=Z,14nm,1.0s
ARU Arti 87.29 327 *c iP* **P 00 54 43.4 -1.2**
ARU 00 58 04.1
ARU PPP PPP 01 00 02.3
ARU S **SKSac 01 05 11.0 +0.5**
ARU SS **SS 01 11 03.8 -3.9**
ARU pmax pmax
comp=Z,14nm,1.1s
EGAK Eagle 87.30 25 IAmb IAmb 00 54 47.2
comp=Z,19nm,1.2s
EGAK Eagle 87.30 25 P **P 00 54 44.1 -0.4**
baz=259,SNR=9.8
C27K Jago River 87.38 20 P **P 00 54 45.0 +0.2**
baz=256,SNR=8.6
H27K Steamboat Moun 87.44 23 P **P 00 54 45.5 +0.3**
baz=258,SNR=39
G27K Doyon Strip 87.50 23 P **P 00 54 45.8 +0.3**
baz=258,SNR=12
MZWR Madinat Zayed 87.53 294 P **P 00 54 46.6 +0.1**
QSPA South Pole Qui 87.59 180 P **P 00 54 45.2 -0.8**
comp=Z,13nm,0.9s,baz=242,slow=0.9,SNR=11
QSPA LR LR 01 32 54.5
comp=Z,1µm,22.0s,baz=10.0,slow=35
comp=Z,13nm,0.9s
QSPA South Pole Qui 87.59 180 P **P 00 54 45.9 -0.1**
QSPA IAmb IAmb 00 55 01.1
comp=Z,16nm,0.8s
ABTO Aybut 87.70 287 P **P 00 54 47.2 -0.3**
SNR=5.9
O29M Mount Kennedy 87.70 30 P **P 00 54 46.6 -0.1**
baz=261
E27K Coleen River 87.81 21 P **P 00 54 47.1 +0.2**
baz=258,SNR=14
YUK4 Talbot Arm 87.82 28 P **P 00 54 47.2 -0.2**
baz=261
MZR Muzera 87.85 293 P **P 00 54 47.6 -0.4**
SNR=5.5
MZR Muzera 87.85 293 *i P* **P 00 54 47.6 -0.4**
SNR=9.9
YUK6 Outpost Mounta 87.90 29 P **P 00 54 47.1 -0.7**
baz=261
DAWY Dawson 87.92 26 P **P 00 54 47.2 -0.3**
DAWY Dawson 87.92 26 P **P 00 54 47.3 -0.3**
baz=260,SNR=20
P29M Windy Craggy 88.02 30 P **P 00 54 47.4 -0.6**
P29M IAmb IAmb 00 54 51.3
comp=Z,20nm,1.1s
P29M Windy Craggy 88.02 30 P **P 00 54 47.8 -0.3**
baz=262
M29M Somme Creek 88.08 27 P **P 00 54 48.1 -0.3**
baz=261,SNR=10
HYT Haines Junctio 88.30 29 P **P 00 54 49.2 -0.3**
HYT Haines Junctio 88.30 29 P **P 00 54 49.2 -0.3**
baz=262,SNR=6.3
L29M L29M 88.33 27 P **P 00 54 49.6 +0.1**
baz=262,SNR=14
J29M Klondike Camp 88.49 25 P **P 00 54 50.2 0.0**
N30M Aishikik Lake 88.58 28 P **P 00 54 50.5 -0.2**
baz=262,SNR=6.9
I29M Ogilvie Camp, 88.59 25 P **P 00 54 49.9 -0.8**
baz=261
PLBC Pleasant Camp 88.69 31 P **P 00 54 50.6 -0.6**
baz=263
K29M Barlow Dome 88.71 26 P **P 00 54 51.1 -0.3**
baz=262,SNR=22
M30M Minto, Yukon 88.86 27 P **P 00 54 52.0 0.0**
M30M IAmb IAmb 00 54 52.5
comp=Z,27nm,1.5s
M30M Minto, Yukon 88.86 27 P **P 00 54 51.8 -0.2**
baz=263,SNR=7.2
SIT Sitka 88.97 33 P **P 00 54 52.0 -0.5**
baz=264
O30N Mendenhall 88.98 29 P **P 00 54 52.2 -0.4**
baz=263
N31M Braeburn, Yuko 89.21 29 P **P 00 54 53.1 -0.6**
N31M IAmb IAmb 00 54 56.0
comp=Z,16nm,0.9s
N31M Braeburn, Yuko 89.21 29 P **P 00 54 53.3 -0.3**
baz=264,SNR=6.1
SKAG Skagway 89.22 31 P **P 00 54 53.5 -0.1**
SKAG IAmb IAmb 00 54 55.9
comp=Z,26nm,1.2s
SKAG Skagway 89.22 31 P **P 00 54 53.6 0.0**
baz=264
BESE Bessie Mountai 89.37 31 P **P 00 54 52.0 -2.5**
BESE IAmb IAmb 00 54 57.4
comp=Z,18nm,1.0s
EPYK Eagle Plains 89.38 24 IAmb IAmb 00 54 56.1
comp=Z,24nm,1.1s
EPYK Eagle Plains 89.38 24 P **P 00 54 53.3 -1.0**
baz=263,SNR=6.9
MAYO Mayo, Yukon 89.39 26 P **P 00 54 54.6 +0.2**
SLWR Sila 89.55 294 P **P 00 54 55.5 -0.4**
WHY Whitehorse 89.56 29 P **P 00 54 54.4 -1.0**
WHY Whitehorse 89.56 29 P **P 00 54 54.7 -0.7**
baz=264
G30M tAoh Zraii Nji 89.65 23 P **P 00 54 54.7 -0.9**
baz=263
M31M Drury Creek, Y 89.94 28 P **P 00 54 56.4 -0.6**
M31M Drury Creek, Y 89.94 28 P **P 00 54 55.9 -1.1**
baz=265
P32M Atlin 90.05 31 P **P 00 54 56.7 -0.9**
baz=266
FARO Faro, Yukon 90.43 28 P **P 00 54 58.8 -0.6**
FARO IAmb IAmb 00 55 00.0
comp=Z,30nm,1.4s
FARO Faro, Yukon 90.43 28 P **P 00 54 58.7 -0.6**
baz=266
N32M Quiet Lake 90.48 29 P **P 00 54 59.1 -0.5**
baz=266
P33M Teslin, Yukon 90.54 30 P **P 00 54 59.6 -0.4**
P33M Teslin, Yukon 90.54 30 P **P 00 54 58.9 -1.1**
baz=266
WRAK Wrangell Islan 90.55 34 P **P 00 54 59.3 -0.7**
baz=267
F31M Tsiigehtchic 90.66 23 P **P 00 54 58.5 -1.6**
baz=266
INK Inuvik 90.80 22 P **P 00 55 00.0 -0.9**
comp=Z,4.7nm,1.0s,baz=259,slow=7.2,SNR=7.3
INK LR LR 01 30 32.2
comp=Z,253nm,21.9s,baz=246,slow=32
comp=Z,4.7nm,1.0s
INK Inuvik 90.80 22 P **P 00 54 59.8 -1.1**
INK IAmb IAmb 00 55 00.9
comp=Z,20nm,1.4s
INK Inuvik 90.80 22 P **P 00 54 59.8 -1.1**
INK pmax pmax
comp=Z,19nm,1.4s
INK Inuvik 90.80 22 P **P 00 54 59.7 -1.1**
baz=266
MMPY Sheldon Lake, 91.42 28 P **P 00 55 03.5 -0.5**
baz=268
R33M Jennings River 91.43 31 P **P 00 55 03.7 -0.5**
baz=268
DLBC Dease Lake 91.89 32 LR LR 01 32 00.3
comp=Z,325nm,20.3s,baz=280,slow=33
DLBC Dease Lake 91.89 32 P **P 00 55 05.3 -1.0**
DLBC Dease Lake 91.89 32 P **P 00 55 05.3 -1.0**
baz=269
VOI Vohitsoka 92.25 248 P **P 00 55 09.5 +0.7**
KIRV Kirov 92.38 328 LR LR 01 37 30.6
comp=Z,631nm,20.7s,baz=81,slow=36
WTLY Watson Lake, Y 92.55 30 P **P 00 55 08.7 -0.5**
WTLY IAmb IAmb 00 55 11.1
comp=Z,22nm,1.3s
WTLY Watson Lake, Y 92.55 30 P **P 00 55 07.9 -1.3**
baz=270
TGTN Hyland Airport 92.81 29 P **P 00 55 09.8 -0.6**
baz=270
BBB Bella Bella 92.91 38 LR LR 01 30 35.0
comp=Z,369nm,19.9s,baz=276,slow=31
BBB Bella Bella 92.91 38 P **P 00 55 11.3 +0.4**
BELG Belogornoye 93.40 322 LR LR 01 38 50.4
comp=Z,411nm,21.9s,baz=117,slow=36
KOTAN Kotaneelee Air 94.92 30 P **P 00 55 18.9 -1.2**
baz=274
RAYN Ar Rayn 95.20 293 P **P 00 55 21.6 -0.6**
RAYN IAmb IAmb 00 55 34.0
comp=Z,9.0nm,1.1s
RAYN Ar Rayn 95.20 293 P **P 00 55 21.6 -0.6**
RAYN pmax pmax
comp=Z,9.0nm,1.1s
RAYN Ar Rayn 95.20 293 P **P 00 55 20.7 -1.5**
SNR=12
GNI Garni 95.65 310 LR LR 01 44 00.4
comp=Z,86nm,19.1s,baz=72,slow=39
KIV Kislovodsk 97.01 314 *eP* **P 00 55 26.9 -3.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
ATD Arta Tunnel 97.62 281 LR LR 01 39 28.7
comp=Z,53nm,20.3s,baz=53,slow=35
GURO Guroymak-BITLI 97.82 308 P **P 00 55 33.3 -0.6**
ORV Oroville 97.93 51 P **P 00 55 31.5 -2.7**
ORV IAmb IAmb 00 55 33.9
comp=Z,7.8nm,1.4s
ORV Oroville 97.93 51 P **P 00 55 31.5 -2.7**
ORV pmax pmax
comp=Z,8.0nm,1.4s
AFDM Forest Hills D 98.38 51 P **P 00 55 35.1 -1.1**
AFDM IAmb IAmb 00 55 50.6
comp=Z,9.6nm,1.3s
VORR Voronezh 98.63 322 *eP* **P 00 55 34.2 -2.8**
MOD Modoc Plateau 98.67 48 P **P 00 55 36.6 -1.1**
BEKR Beckworth 98.79 50 P **P 00 55 37.5 -0.8**
SPITS Spitsbergen Ar 98.89 350 LR LR 01 39 54.6
comp=Z,590nm,20.1s,baz=9.5,slow=35
KOPT Kop Dagi 98.91 310 P **P 00 55 37.9 -1.0**
KOPT IAmb IAmb 00 55 46.7
comp=Z,15nm,1.2s
YKA Yellowknife Ar 99.09 27 P **Pdif 00 55 36.5 -2.4**
comp=Z,1.0nm,0.7s,baz=282,slow=4.3,SNR=4.5
YKA LR LR 01 36 08.0
comp=Z,444nm,21.8s,baz=274,slow=33
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 99.09 27 P **Pdif 00 55 37.8 -1.1**
YKA Yellowknife Ar 99.09 27 P **Pdif 00 55 37.8 -1.1**
SOC Sochi 99.18 314 *eP* **Pdif 00 55 36.2 -3.5**
SOC *eS* **SKSac 01 06 14.4 -2.3**
SOC *e*SS **SS 01 13 56.7 -1.8**
SOC *e*SSS SSS 01 17 48.9
VCNR Virginia City 99.38 51 P **Pdif 00 55 40.4 -0.6**
VCNR IAmb IAmb 00 55 49.1
comp=Z,6.9nm,1.3s
OBN Obninsk 99.69 325 LR LR 01 44 26.1
comp=Z,69nm,19.5s,baz=29,slow=38
OBN Obninsk 99.69 325 *eP* **Pdif 00 55 38.1 -3.5**
OBN *e* 00 59 43.6
OBN pmax pmax
comp=Z,7.0nm,1.3s
WVOR Wild Horse Val 99.86 47 Pdif 00 55 42.1 -0.8
WVOR Wild Horse Val 99.86 47 P **Pdif 00 55 42.1 -0.8**
WVOR pmax pmax
comp=Z,9.0nm,1.4s
NVAR Mina Array Bea 100.50 52 P **Pdif 00 55 43.9 -2.1**
comp=Z,0.9nm,0.8s,baz=248,slow=9.4,SNR=3.9
ELK Elko 102.59 49 P **Pdif 00 55 55.2 -0.1**
comp=Z,0.2nm,0.3s,baz=129,slow=2.9,SNR=4.0
MNK Minsk 104.72 326 *i* P **Pdif 00 56 01.9 -2.1**
MNK *i* 01 00 20.9
MNK *i* 01 07 27.9
MNK *i* SS SS 01 15 14.2 -0.1
MNK *i* SSS SSS 01 19 13.7
MNK pmax pmax
comp=N,31nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=Z,7.0nm,1.0s
MNK MLR MLR
comp=Z,279nm,15.0s
MNK MLR MLR
comp=E,25nm,17.0s
MNK Minsk 104.72 326 *i* P **Pdif 00 56 01.9 -2.1**
comp=E,1.0nm,0.8s
MNK *i* P **Pdif 00 56 01.9 -2.1**
comp=N,31nm,0.9s
MNK *i* P **Pdif 00 56 01.9 -2.1**
comp=Z,7.0nm,1.0s,baz=73
MNK *i* PP **PKiKP 01 00 21.0 +1.5**
MNK *i* PPP PPP 01 02 31.5
MNK *i* SKS 01 07 27.9
MNK *i* SS **SS 01 15 14.3 0.0**
MNK *i* SSS SSS 01 19 13.7
MNK *i* LQ LQ 01 37 11.8
MNK *i* LR LR 01 39 37.5
MNK *i* LRM MLR 01 46 04.6
comp=Z,279nm,14.7s
MNK *i* LRM MLR 01 46 09.7
comp=E,25nm,17.2s
MNK *i* LRM MLR 01 47 11.1
NACGM Naroch 105.20 327⇑ *e*PKP **PKiKP 01 00 19.9 -0.5**
comp=Z,15nm,0.8s,baz=72
TXAR Lajitas Array 113.88 59 PKiKP **PKiKP 01 00 36.6 -1.1**
comp=Z,0.3nm,0.5s,baz=187,slow=3.6,SNR=7.8
TXAR PKKPab **PKKPab 01 11 27.1 +0.3**
comp=Z,0.3nm,0.7s,baz=108,slow=8.0,SNR=4.5
GERES GERESS Array B 115.01 324 PKP PKPdf 01 00 39.4 +0.1
comp=Z,0.3nm,0.4s,baz=90,slow=2.7,SNR=5.5
ECSD EROS Data Cent 115.15 42 P **PKiKP 01 00 38.3 -1.2**
baz=293
EYMN Ely 116.55 36 P **PKPdf 01 00 40.5 -1.6**
baz=299
FDMO Fiordimonte 117.99 319 PKPdf 01 00 43.8 -1.2
R40A Maddies Statio 120.31 46 PKPdf 01 00 48.8 -0.8
MIAR Mount Ida 120.72 51 P **PKPdf 01 00 49.2 -1.3**
baz=291
CCM Cathedral Cave 121.14 46 PKPdf 01 00 50.5 -0.7
CCM Cathedral Cave 121.14 46 PKIKP **PKPdf 01 00 50.5 -0.7**
CCM Cathedral Cave 121.14 46 P **PKPdf 01 00 49.0 -2.2**
baz=294
HDIL Hopedale 121.42 43 P **PKPdf 01 00 50.8 -0.9**
baz=297
L44A Lake County Fo 121.57 40 P **PKPdf 01 00 51.1 -0.8**
baz=299
L48A N Adams 123.92 39 PKPdf **PKPdf 01 00 55.2 -1.3**
O48B Farmland 124.33 41 P **PKPdf 01 00 55.4 -1.9**
baz=301
WVT Waverly 124.43 47 P **PKPdf 01 00 56.1 -1.5**
baz=296
P49A Miami Univ. Ec 124.99 42 P **PKPdf 01 00 56.5 -2.1**
baz=301
ACSO Alum Creek Sta 125.76 40 P **PKPdf 01 00 57.8 -2.3**
baz=303
LRAL Lakeview Retre 126.36 50 P **PKPdf 01 00 59.7 -1.7**
baz=295
P52A Corning 126.64 40 P **PKPdf 01 00 59.8 -1.9**
baz=303
O53A New Philadelph 126.88 39 P **PKPdf 01 01 00.9 -1.3**
baz=304
PLCA Paso Flores 128.78 150 PKP **PKiKP 01 01 07.1 +0.5**
comp=Z,1.4nm,0.8s,baz=300,slow=6.0,SNR=3.5
BLA Blacksburg 129.08 42 P **PKPdf 01 01 04.9 -1.7**
baz=303
ESDC Sonseca Array 130.60 323 PP **PP 01 03 22.6 -1.0**
comp=Z,1.6nm,1.1s,baz=46,slow=9.2,SNR=5.3
ESDC Sonseca Array 130.60 323 PKiKP 01 01 10.2 0.0
NHSC New Hope 131.41 46 P **PKPdf 01 01 09.4 -1.6**
baz=301
TORD Torodi Ar. Bea 137.54 287 PKhKP PKPpre 01 01 12.4
comp=Z,0.9nm,0.9s,baz=153,slow=1.1,SNR=3.8
TORD PKP **PKPdf 01 01 22.3 -0.6**
comp=Z,4.8nm,0.7s,baz=55,slow=1.9,SNR=19
TORD PP **PP 01 04 11.4 +2.3**
comp=Z,1.8nm,1.0s,baz=48,slow=2.9,SNR=3.9
ATAH Atahualpa 140.39 104 PKP **PKPdf 01 01 28.2 -0.5**
comp=Z,2.2nm,0.7s,baz=284,slow=14,SNR=2.3
CBOC Ciudad Bolivar 143.76 83 *eP* **Pdif 00 58 54.6 -4.2**
CBOC Ciudad Bolivar 143.76 83 *eP* **PKPdf 01 01 34.2 -0.2**
BETC Betania 144.44 89 *eP* **PKPab 01 01 33.3 -0.4**
ANIL Santa Ana 144.44 86 *eP* **PKPab 01 01 33.3 -0.8**
GUY2C Guyana, Caldas 144.45 84 *eP* **PKPab 01 01 34.2 0.0**
KIC Kosan Boka 144.78 278⇑ *i*PKP1 PKPbc 01 01 35.5 +0.5
comp=Z,14nm,0.5s
DBIC Dimbokro 144.87 278 PKP **PKPab 01 01 34.6 -0.6**
comp=Z,36nm,0.8s,baz=73,slow=3.0,SNR=40
DBIC Dimbokro 144.87 278 PKPdf **PKPab 01 01 35.0 -0.2**
DBIC Dimbokro 144.87 278 PKIKP **PKPab 01 01 35.0 -0.2**
NORC Norcasia 144.92 84 *eP* **PKPdf 01 01 38.1 +1.8**
TIC Toumodi 145.03 278⇑ *i*PKP1 **PKPdf 01 01 36.4 -0.1**
comp=Z,14nm,0.3s
LIC Lamto 145.08 277⇑ *e*PKP1 **PKPbc 01 01 35.4 -0.6**
comp=Z,120nm,0.8s
ROSC El Rosal 145.51 85 PKPbc **PKPdf 01 01 37.4 -0.4**
comp=Z,11nm,0.6s,baz=83,slow=5.4,SNR=10
ROSC El Rosal 145.51 85 PKPdf 01 01 37.6 -0.1
ROSC El Rosal 145.51 85 PKIKP **PKPdf 01 01 37.7 -0.1**
LPAZ La Paz 146.47 125 PKPbc **PKPbc 01 01 40.5 -0.4**
comp=Z,27nm,1.1s,baz=311,slow=2.0,SNR=15
CPUP Villa Florida 146.85 150 PKPbc **PKPbc 01 01 40.5 -0.5**
comp=Z,7.3nm,0.7s,baz=234,slow=2.6,SNR=19
CPUP Villa Florida 146.85 150 PKPab **PKPbc 01 01 41.0 0.0**
CPUP Villa Florida 146.85 150 PKP2 **PKPbc 01 01 41.0 0.0**
SDV Santo Domingo 148.70 77 PKPdf 01 01 43.4 +0.6
CRPR Cabo Rojo, PR 149.06 58 PKPdf 01 01 44.1 +1.0
CELP Cerrillos 149.48 57 PKPbc 01 01 46.2 -2.0
GCPR Guaynabo City 149.78 57 PKPbc 01 01 46.9 -2.0
SJG San Juan 149.82 57 PKPbc 01 01 47.9 -1.1
SJG San Juan 149.82 57 PKP2 **PKPbc 01 01 47.9 -1.1**

ROM 28 00:42:15.6±0.0,**42°942N**±0°002×**13°035E**±0°005,**h11**km,
ML2.4/13,**3C-8D**,**Error ellipse: s-maj=0.4km**
s-min=0.1km az=276.0,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**28**		P	Pg	00 42 18.2	+0.3
FEMA					S	Sg	00 42 19.7	+0.4
T1216	**Preci, Frazion**	**0.05**	**193**		P	Pg	00 42 18.2	+0.4
T1216					S	Sg	00 42 19.8	+0.3
FDMO	**Fiordimonte**	**0.10**	**22**		P	Pg	00 42 18.9	+0.4
FDMO					S	Sg	00 42 20.9	+0.4
CESI	**CESI - Serrava**	**0.12**	**303**		P	Pg	00 42 19.0	+0.4
CESI					S	Sg	00 42 21.7	+0.9
CESI					AML	AML		
	comp=E,15300µm,0.2s							
CESI					AML	AML		
	comp=N,22900µm,0.3s							
CESI					AML	AML		
	comp=N,2824µm,0.1s							
CESI					AML	AML		
	comp=E,1680µm,0.1s							
MC2	**Monte Cornacci**	**0.12**	**104**		S	Sg	00 42 20.0	-1.1
NRCA	**Norcia**	**0.12**	**152**		P	Pg	00 42 19.1	+0.4
NRCA					S	Sg	00 42 21.4	+0.5
NRCA					AML	AML		
	comp=E,1140µm,0.9s							
NRCA					AML	AML		
	comp=N,1890µm,0.1s							
NRCA					AML	AML		
	comp=E,10205µm,0.4s							
NRCA					AML	AML		
	comp=N,10815µm,0.4s							
NRCA					AML	AML		
	comp=E,10865µm,0.4s							
NRCA					AML	AML		
	comp=N,11700µm,0.4s							
NRCA					AML	AML		
	comp=N,10800µm,0.4s							
NRCA					AML	AML		
	comp=E,10190µm,0.4s							
NRCA					AML	AML		
	comp=E,989µm,0.1s							
NRCA					AML	AML		
	comp=N,1733µm,0.1s							
NRCA					AML	AML		
	comp=N,1892µm,0.1s							
NRCA					AML	AML		
	comp=E,1116µm,0.1s							
T1215	**Vallo di Nera,**	**0.19**	**221**	⇑	P	Pg	00 42 20.2	+0.5
T1215					S	Sg	00 42 23.4	+0.9
T1215					AML	AML		
	comp=E,1610µm,0.3s							
T1215					AML	AML		
	comp=N,2085µm,0.4s							
T1215					AML	AML		
	comp=E,1507µm,0.3s							
T1215					AML	AML		
	comp=N,2060µm,0.4s							
T1215					AML	AML		
	comp=N,2080µm,0.4s							
T1215					AML	AML		
	comp=E,211µm,0.1s							
T1215					AML	AML		
	comp=N,229µm,0.1s							
T1215					AML	AML		
	comp=N,236µm,0.1s							
T1215					AML	AML		
	comp=E,212µm,0.1s							
SEF1	**Sefro**	**0.21**	**343**	⇓	P	Pg	00 42 20.7	+0.5
SEF1					S	Sg	00 42 24.4	+1.1
SEF1					AML	AML		
	comp=E,5800µm,0.2s							
SEF1					AML	AML		
	comp=N,4300µm,0.3s							
SEF1					AML	AML		
	comp=E,1245µm,0.9s							
SEF1					AML	AML		
	comp=N,1180µm,0.7s							
AM05	**Amandola Campo**	**0.24**	**81**		P	Pg	00 42 21.0	+0.5
T1217	**Poggiodomo (PG**	**0.24**	**198**	⇑	P	Pg	00 42 21.1	+0.4
T1217					S	Sg	00 42 25.2	+1.1
T1217					AML	AML		
	comp=E,1805µm,0.3s							
T1217					AML	AML		
	comp=N,1318µm,1.0s							
T1217					AML	AML		
	comp=E,1775µm,0.3s							
T1217					AML	AML		
	comp=N,1306µm,0.5s							
T1217					AML	AML		
	comp=E,1805µm,0.3s							
T1217					AML	AML		
	comp=N,1320µm,1.0s							
T1217					AML	AML		
	comp=E,1810µm,0.3s							
T1217					AML	AML		
	comp=N,191µm,0.2s							
T1217					AML	AML		
	comp=N,233µm,0.8s							
T1217					AML	AML		
	comp=E,218µm,0.2s							
T1217					AML	AML		
	comp=E,174µm,0.1s							
MDAR	**Monte D'Aria**	**0.26**	**17**		P	Pg	00 42 21.6	+0.6
MDAR					S	Sg	00 42 25.8	+1.0
MDAR					AML	AML		
	comp=E,3215µm,0.5s							
MDAR					AML	AML		
	comp=N,2960µm,0.2s							
MDAR					AML	AML		
	comp=N,500µm,0.1s							
MDAR					AML	AML		
	comp=E,351µm,0.1s							
LNSS	**Leonessa**	**0.34**	**179**	⇓	P	Pg	00 42 22.7	+0.2
LNSS					S	Sb	00 42 28.5	-0.7
LNSS					AML	AML		
	comp=E,1575µm,0.3s							
LNSS					AML	AML		
	comp=N,1625µm,1.0s							
LNSS					AML	AML		
	comp=N,1630µm,1.0s							
LNSS					AML	AML		
	comp=N,357µm,0.3s							
LNSS					AML	AML		
	comp=E,521µm,0.3s							
SMA1	**SAN MARTINO**	**0.38**	**145**	⇑	P	Pg	00 42 23.5	+0.2
SMA1					AML	AML		
	comp=E,946µm,0.5s							
SMA1					AML	AML		
	comp=N,805µm,1.2s							
SMA1					AML	AML		
	comp=N,804µm,1.2s							
SMA1					AML	AML		
	comp=E,946µm,0.5s							
SMA1					AML	AML		
	comp=E,82µm,0.3s							
SMA1					AML	AML		
	comp=N,69µm,0.5s							
EL6	**Elcito**	**0.39**	**7**	⇓	P	Pg	00 42 23.7	+0.3
EL6					AML	AML		
	comp=N,1875µm,1.0s							
EL6					AML	AML		
	comp=N,1877µm,1.0s							
EL6					AML	AML		
	comp=E,1825µm,0.2s							
EL6					AML	AML		
	comp=E,303µm,0.3s							
EL6					AML	AML		
	comp=N,381µm,0.2s							

ARRO	**Arrone**	**0.41 209**	⇓P	Pg	00 42 24.0	+0.2
ARRO			AML	AML		
	comp=E,1115μm,0.2s					
ARRO			AML	AML		
	comp=N,712μm,0.6s					
ARRO			AML	AML		
	comp=N,713μm,0.6s					
ARRO			AML	AML		
	comp=E,1113μm,0.2s					
ARRO			AML	AML		
	comp=N,271μm,0.2s					
ARRO			AML	AML		
	comp=E,185μm,0.2s					
T1211	**Morro Reatino**	**0.43 198**	⇓P	Pg	00 42 24.5	+0.4
T1211			AML	AML		
	comp=E,687μm,0.3s					
T1211			AML	AML		
	comp=N,1048μm,0.3s					
T1211			AML	AML		
	comp=N,1051μm,0.3s					
T1211			AML	AML		
	comp=N,204μm,0.2s					
T1211			AML	AML		
	comp=E,146μm,0.1s					
T1211			AML	AML		
	comp=N,202μm,0.1s					
T1211			AML	AML		
	comp=E,154μm,0.2s					
CING	**Cingoli**	**0.45 15**	⇓P	Pg	00 42 24.7	+0.3
CING			AML	AML		
	comp=E,552μm,0.5s					
CING			AML	AML		
	comp=N,639μm,0.4s					
CING			AML	AML		
	comp=N,116μm,0.1s					
CING			AML	AML		
	comp=E,116μm,0.1s					
RM33	**Pellescritta (**	**0.45 163**	P	Pg	00 42 24.7	+0.2
RM33			AML	AML		
	comp=E,304μm,0.7s					
RM33			AML	AML		
	comp=N,302μm,0.4s					
RM33			AML	AML		
	comp=E,182μm,0.2s					
RM33			AML	AML		
	comp=N,274μm,0.4s					
RM33			AML	AML		
	comp=E,381μm,1.0s					
RM33			AML	AML		
	comp=N,342μm,0.8s					
RM33			AML	AML		
	comp=N,343μm,0.8s					
RM33			AML	AML		
	comp=N,123μm,0.6s					
RM33			AML	AML		
	comp=N,61μm,0.2s					
RM33			AML	AML		
	comp=E,83μm,0.3s					
RM33			AML	AML		
	comp=E,136μm,0.3s					
CESX	**Cesi**	**0.47 225**	P	Pg	00 42 24.9	0.0
CESX			AML	AML		
	comp=E,482μm,1.6s					
CESX			AML	AML		
	comp=N,605μm,0.3s					
CESX			AML	AML		
	comp=E,93μm,0.4s					
CESX			AML	AML		
	comp=N,109μm,0.2s					
TERO	**Teramo**	**0.53 127**	⇓P	Pg	00 42 25.8	-0.1
TERO			AML	AML		
	comp=E,537μm,1.0s					
TERO			AML	AML		
	comp=N,553μm,1.6s					
TERO			AML	AML		
	comp=E,103μm,0.3s					
TERO			AML	AML		
	comp=N,88μm,0.1s					
TERO			AML	AML		
	comp=N,73μm,0.1s					
TERO			AML	AML		
	comp=E,95μm,0.2s					
ARVD	**Arcevia**	**0.56 353**	⇓P	Pg	00 42 26.6	+0.1
ARVD			S	Sb	00 42 36.0	+0.5
ARVD			AML	AML		
	comp=E,230μm,0.9s					
ARVD			AML	AML		
	comp=N,188μm,1.2s					
ARVD			AML	AML		
	comp=E,88μm,0.1s					
ARVD			AML	AML		
	comp=N,51μm,0.1s					

ROM 28 00:42:36.8±0.1, 42°.988N±0°.003×13°.050E±0°.004, h12km, ML2.5/30, 19C-20D, Error ellipse: s-maj=0.3km s-min=0.2km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**180**	⇓P	Pg	00 42 39.4	+0.3
FEMA				S	Sg	00 42 41.1	+0.3
FEMA				AML	AML		
	comp=E,19600μm,0.2s						
FEMA				AML	AML		
	comp=N,16900μm,1.3s						
FEMA				AML	AML		
	comp=N,16900μm,1.2s						
FEMA				AML	AML		
	comp=E,19650μm,0.2s						
FDMO	**Fiordimonte**	**0.06**	**30**	⇓P	Pg	00 42 39.4	+0.2
FDMO				S	Sg	00 42 41.4	+0.3
FDMO				AML	AML		
	comp=N,17750μm,0.2s						
FDMO				AML	AML		
	comp=E,30800μm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**193**	⇑P	Pg	00 42 40.0	+0.3
T1216				S	Sg	00 42 42.2	+0.4
T1216				AML	AML		
	comp=E,14050μm,0.7s						
T1216				AML	AML		
	comp=N,14310μm,0.3s						
T1216				AML	AML		
	comp=E,14100μm,0.7s						
T1216				AML	AML		
	comp=N,14350μm,0.3s						
T1216				AML	AML		
	comp=E,14100μm,0.7s						
CESI	**CESI - Serrava**	**0.11**	**279**	⇓P	Pg	00 42 40.3	+0.5
CESI				S	Sg	00 42 42.8	+0.7
CESI				AML	AML		
	comp=E,15300μm,0.2s						
CESI				AML	AML		
	comp=N,22900μm,0.3s						
CESI				AML	AML		
	comp=N,22900μm,1.7s						
MC2	**Monte Cornacci**	**0.13**	**126**	⇑P	Pg	00 42 40.5	+0.3
MC2				S	Sg	00 42 42.9	+0.2
NRCA	**Norcia**	**0.16**	**163**	⇓P	Pg	00 42 40.9	+0.3
NRCA				S	Sg	00 42 43.8	+0.5
NRCA				AML	AML		
	comp=E,10195μm,0.4s						
NRCA				AML	AML		
	comp=N,10800μm,0.4s						
NRCA				AML	AML		
	comp=E,10870μm,0.4s						
NRCA				AML	AML		
	comp=N,10785μm,0.4s						
NRCA				AML	AML		
	comp=E,10865μm,0.4s						
NRCA				AML	AML		
	comp=E,10205μm,0.4s						
NRCA				AML	AML		
	comp=N,10815μm,0.4s						
NRCA				AML	AML		
	comp=E,10190μm,0.4s						
NRCA				AML	AML		
	comp=N,11700μm,0.4s						
SEF1	**Sefro**	**0.18**	**335**	⇓P	Pg	00 42 41.3	+0.5
SEF1				S	Sg	00 42 44.6	+1.0
PIO1	**Pioraco**	**0.20**	**346**	⇑P	Pg	00 42 41.8	+0.6
FIU1	**Fiuminata**	**0.22**	**337**	⇑P	Pb	00 42 42.2	-0.6
AM05	**Amandola Campo**	**0.22**	**93**	⇑P	Pg	00 42 42.1	+0.5
AM05				S	Sg	00 42 45.8	+1.0
AM05				AML	AML		
	comp=E,840μm,0.4s						
AM05				AML	AML		
	comp=N,1007μm,0.7s						
AM05				AML	AML		
	comp=N,342μm,0.1s						
AM05				AML	AML		
	comp=N,1008μm,0.7s						
AM05				AML	AML		
	comp=E,3370μm,1.3s						
AM05				AML	AML		
	comp=N,343μm,0.1s						
AM05				AML	AML		
	comp=E,842μm,0.4s						
AM05				AML	AML		
	comp=E,3365μm,1.3s						
AM05				AML	AML		
	comp=E,3365μm,0.7s						
AM05				AML	AML		
	comp=N,1007μm,1.3s						
T1215	**Vallo di Nera,**	**0.23**	**216**	⇑P	Pg	00 42 42.0	+0.3
T1215				S	Sg	00 42 45.8	+0.8
T1215				AML	AML		
	comp=E,1610μm,0.3s						
T1215				AML	AML		
	comp=N,2085μm,0.4s						
T1215				AML	AML		
	comp=E,1507μm,0.3s						
T1215				AML	AML		
	comp=N,2060μm,0.4s						
T1215				AML	AML		
	comp=N,2080μm,0.4s						
T1215				AML	AML		
	comp=N,2080μm,1.6s						
T1217	**Poggiodomo (PG**	**0.29**	**198**	⇑P	Pg	00 42 43.0	+0.2
T1217				S	Sg	00 42 47.6	+0.8
T1217				AML	AML		
	comp=N,1321μm,1.0s						
T1217				AML	AML		
	comp=E,1775μm,0.3s						
T1217				AML	AML		
	comp=N,1306μm,0.5s						
T1217				AML	AML		
	comp=E,1805μm,0.3s						
T1217				AML	AML		
	comp=N,1320μm,1.0s						
T1217				AML	AML		
	comp=N,1319μm,1.0s						
T1217				AML	AML		
	comp=N,1320μm,1.0s						
T1217				AML	AML		
	comp=E,1810μm,0.3s						
T1217				AML	AML		
	comp=N,1320μm,1.0s						
EL6	**Elcito**	**0.34**	**6**	⇑P	Pg	00 42 44.3	+0.5
EL6				AML	AML		
	comp=N,1870μm,1.0s						
EL6				AML	AML		
	comp=N,1875μm,1.0s						
EL6				AML	AML		
	comp=N,1877μm,1.0s						
EL6				AML	AML		
	comp=E,1825μm,0.2s						
T1204	**Amatrice, Fraz**	**0.37**	**148**	⇑P	Pg	00 42 44.6	+0.3
T1204				S	Sb	00 42 50.3	-0.8
LNSS	**Leonessa**	**0.39**	**181**	⇓P	Pg	00 42 44.6	+0.1
LNSS				S	Sg	00 42 50.5	+0.8
LNSS				AML	AML		
	comp=E,1575μm,0.3s						
LNSS				AML	AML		
	comp=N,1625μm,1.0s						
LNSS				AML	AML		
	comp=N,1630μm,1.0s						
CING	**Cingoli**	**0.40**	**15**	P	Pg	00 42 45.3	+0.5
CING				AML	AML		
	comp=N,639μm,0.4s						
CING				AML	AML		
	comp=E,552μm,0.5s						
CING				AML	AML		
	comp=N,639μm,1.6s						
SMA1	**SAN MARTINO**	**0.41**	**149**	P	Pg	00 42 45.3	+0.2
SMA1				S	Sb	00 42 51.9	-0.5
SMA1				AML	AML		
	comp=E,947μm,0.5s						
SMA1				AML	AML		
	comp=N,804μm,1.2s						
SMA1				AML	AML		
	comp=E,946μm,0.5s						
SMA1				AML	AML		
	comp=N,805μm,1.2s						
SMA1				AML	AML		
	comp=E,946μm,0.5s						
SMA1				AML	AML		
	comp=N,804μm,0.8s						
ARRO	**Arrone**	**0.46**	**207**	⇑P	Pg	00 42 45.9	0.0
ARRO				S	Sb	00 42 53.2	-0.4
ARRO				AML	AML		
	comp=E,1115μm,0.2s						
ARRO				AML	AML		
	comp=N,712μm,0.6s						
ARRO				AML	AML		
	comp=N,713μm,0.6s						
ARRO				AML	AML		
	comp=E,1113μm,0.2s						
OFFI	**Offida**	**0.47**	**96**	⇓P	Pb	00 42 47.3	+0.2
T1211	**Morro Reatino**	**0.48**	**198**	⇓P	Pg	00 42 46.3	+0.1
T1211				S	Sb	00 42 53.7	-0.5
T1211				AML	AML		
	comp=E,687μm,0.3s						
T1211				AML	AML		
	comp=N,1051μm,0.3s						
T1211				AML	AML		
	comp=N,1048μm,0.3s						
T1211				AML	AML		
	comp=N,1051μm,1.7s						
RM33	**Pellescritta (**	**0.49**	**166**	⇓P	Pg	00 42 46.5	0.0
RM33				S	Sb	00 42 54.6	-0.1
RM33				AML	AML		
	comp=E,380μm,1.0s						
RM33				AML	AML		
	comp=N,343μm,0.8s						
RM33				AML	AML		
	comp=E,381μm,1.0s						
RM33				AML	AML		
	comp=N,342μm,0.8s						
CESX	**Cesi**	**0.51**	**223**	⇑P	Pg	00 42 46.7	-0.2
CESX				AML	AML		
	comp=E,482μm,1.6s						
CESX				AML	AML		
	comp=N,605μm,0.3s						
ARVD	**Arcevia**	**0.52**	**351**	⇑P	Pg	00 42 47.2	+0.2
ARVD				S	Sb	00 42 56.0	+0.7
CAMP	**Campotosto**	**0.52**	**150**	⇑P	Pg	00 42 47.1	0.0
CAMP				S	Sb	00 42 55.1	-0.5
CAMP				AML	AML		
	comp=N,318μm,0.4s						
CAMP				AML	AML		
	comp=N,318μm,1.6s						
CAMP				AML	AML		
	comp=E,265μm,0.7s						
TERO	**Teramo**	**0.55**	**132**	⇑P	Pg	00 42 47.4	-0.1
TERO				AML	AML		
	comp=N,553μm,1.6s						
TERO				AML	AML		
	comp=N,553μm,0.4s						
TERO				AML	AML		
	comp=E,537μm,1.0s						
T1247	**Pizzolo (AQ)**	**0.58**	**161**	⇓P	Pg	00 42 48.0	0.0
T1247				AML	AML		
	comp=E,480μm,0.9s						
T1247				AML	AML		
	comp=N,536μm,0.7s						
T1247				AML	AML		
	comp=N,537μm,0.7s						
T1247				AML	AML		
	comp=E,480μm,0.9s						
T1247				AML	AML		
	comp=N,537μm,1.3s						
T1247				AML	AML		
	comp=E,480μm,1.1s						
FRON	**Frontone**	**0.58**	**336**	⇑P	Pg	00 42 48.2	0.0
FRON				AML	AML		
	comp=N,348μm,0.7s						
FRON				AML	AML		
	comp=E,242μm,1.4s						
FRON				AML	AML		
	comp=N,348μm,1.3s						
GIGS	**Gran Sasso**	**0.66**	**144**	⇑P	Pg	00 42 49.5	-0.2
ATPI	**Pietralunga -**	**0.66**	**315**	⇑P	Pg	00 42 49.8	+0.1
PIEI	**Pieia**	**0.67**	**326**	⇓P	Pg	00 42 49.9	+0.2
PIEI				AML	AML		
	comp=N,149μm,0.5s						
PIEI				AML	AML		
	comp=E,220μm,0.9s						
PIEI				AML	AML		
	comp=N,150μm,0.5s						
PIEI				AML	AML		
	comp=E,220μm,1.1s						
MGAB	**Montegabbione**	**0.69**	**264**	⇓P	Pb	00 42 51.0	+0.2
MGAB				AML	AML		
	comp=E,316μm,0.6s						
MGAB				AML	AML		
	comp=N,329μm,0.4s						
MGAB				AML	AML		
	comp=N,348μm,0.4s						
MGAB				AML	AML		
	comp=N,349μm,0.4s						
MGAB				AML	AML		
	comp=E,334μm,0.6s						
MGAB				AML	AML		
	comp=E,334μm,1.4s						
FIAM	**Fiamignano**	**0.72**	**176**	⇓P	Pg	00 42 50.8	0.0
FIAM				AML	AML		
	comp=E,178μm,0.5s						
FIAM				AML	AML		
	comp=N,186μm,0.9s						
FIAM				AML	AML		
	comp=E,178μm,1.5s						
FSSB	**Fossombrone**	**0.73**	**344**	⇓P	Pb	00 42 51.5	0.0
FSSB				AML	AML		
	comp=E,387μm,0.3s						
FSSB				AML	AML		
	comp=N,624μm,1.3s						
FSSB				AML	AML		
	comp=N,624μm,1.3s						
FSSB				AML	AML		
	comp=E,388μm,0.3s						
FSSB				AML	AML		
	comp=N,624μm,0.7s						
FAGN	**Fagnano**	**0.82**	**151**	⇓P	Pg	00 42 52.7	0.0
FAGN				AML	AML		
	comp=E,364μm,0.6s						
FAGN				AML	AML		
	comp=N,360μm,1.6s						
FAGN				AML	AML		
	comp=N,360μm,0.4s						
VCEL	**Villa Celiera**	**0.83**	**135**	⇓P	Pg	00 42 52.8	-0.1
VCEL				AML	AML		
	comp=E,382μm,0.4s						
VCEL				AML	AML		
	comp=N,392μm,1.5s						
VCEL				AML	AML		
	comp=E,382μm,1.6s						
VCEL				AML	AML		
	comp=N,392μm,0.5s						
SACS	**San Casciano d**	**0.85**	**261**	⇓P	Pb	00 42 53.9	+0.4
SRES	**S.Oreste - Sor**	**0.85**	**208**	⇓P	Pg	00 42 52.9	-0.4
SRES				S	Sn	00 43 07.0	0.0
SRES				AML	AML		
	comp=E,139μm,0.5s						
SRES				AML	AML		
	comp=N,122μm,1.3s						
SRES				AML	AML		
	comp=E,140μm,0.5s						
SRES				AML	AML		
	comp=N,122μm,0.7s						
CAFI	**Castiglion Fio**	**0.86**	**294**	⇑P	Pb	00 42 54.1	+0.3
CAFI				AML	AML		
	comp=E,105μm,0.7s						
CAFI				AML	AML		
	comp=N,101μm,0.5s						
CAFI				AML	AML		
	comp=N,101μm,0.5s						
CAFI				AML	AML		
	comp=E,105μm,0.7s						
CAFI				AML	AML		
	comp=N,101μm,1.5s						
CAFI				AML	AML		
	comp=E,105μm,1.3s						
T0110	**Collepietro**	**0.93**	**144**	⇓P	Pg	00 42 54.3	-0.5
T0110				AML	AML		
	comp=E,376μm,0.5s						
T0110				AML	AML		
	comp=E,376μm,0.5s						
T0110				AML	AML		
	comp=N,243μm,0.4s						
MTCE	**Montecelio**	**0.99**	**193**	⇑P	Pg	00 42 55.5	-0.4
MTCE				AML	AML		
	comp=E,104μm,1.6s						
MTCE				AML	AML		
	comp=N,93μm,1.6s						
MTCE				AML	AML		
	comp=E,104μm,1.6s						
MTCE				AML	AML		
	comp=N,93μm,1.6s						
MTCE				AML	AML		
	comp=N,93μm,0.4s						
MTCE				AML	AML		
	comp=E,104μm,0.4s						
ASQU	**Asqua**	**1.22**	**312**	S	Sn	00 43 17.0	+0.6
LPEL	**Lama dei Pelig**	**1.26**	**138**	⇓P	Pb	00 43 00.5	-0.1
MODR	**Mondragone**	**1.94**	**161**	P	Pg	00 43 13.5	-0.5
PII	**Pisa**	**1.98**	**293**	S	Sg	00 43 40.0	-0.5
VITU	**Vitulano (BN)**	**2.15**	**146**	S	Sn	00 43 40.0	+0.7

SJA ***28*** *00:44:05.6±0.8, 29°.99S×66°.72W, h11km±4km, ML4.4, MW4.0*

IDC ***28*** *00:44:07.2±0.7, 30°.08S×66°.59W, h22km±4km, mb4.0/8, mbtmp4.0/12, ML3.9/4, MS3.3/5, Error ellipse: s-maj=22.2km s-min=16.8km az=79.0*

NEIC ***28*** *00:44:08.3±2.4, 30°.05S±0°.05×66°.59W±0°.05, h24km±4km, mb4.5/45, Mwr4.0/56, Md4.2(SJA), Error ellipse: s-maj=7.8km s-min=6.0km az=192.0*

NEIC ***28*** *00:44:09.2, 30°.09S×66°.55W, h27km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.58; $M_{\theta\theta}$=0.17; $M_{\phi\phi}$=0.41; $M_{r\theta}$=0.06; $M_{\theta\phi}$=-0.74; $M_{\phi r}$=0.63; Fault plane solution: M_0=1.11000×10^{15} NP1:ϕ_s=285.39000°, δ=42.91000°, λ=-148.11000°. NP2:ϕ_s=170.89000°, δ=68.92000°, λ=-51.72000°. Principal axes: T 1.1624, Plg=15.0000°, Azm=234.0000°; N -0.1245, Plg=35.0000°, Azm=335.0000°; P -1.0380, Plg=51.0000°, Azm=124.0000°;*

VAO ***28*** *00:44:14.2±0.4, 30°.16S×66°.17W, h41km, mb4.5*

ISC 28 00:44:07.5±0.6, 30°.05S±0°.03×66°.61W±0°.03, h25km±4km, n172, σ1=79/204, mb4.6/28, 5C, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	**PUNTA DE LOS L**	**0.35**	**168**	*e*P	**Pb**	**00 44 15.0**	**-0.4**
ACLC	**CERRO LA CRUZ**	**0.69**	**335**	*e*P	**Pb**	**00 44 17.2**	**-3.8**
ACLC				*e*S	**Sb**	**00 44 31.9**	**+1.7**
ACLC				IAML		00 44 35.9	
	comp=Z,6μm,0.2s						
CYA	**Choya**	**1.75**	**24**	⇑*e*P	**Pb**	**00 44 38.8**	**-0.3**
CYA				*e*S	**Sb**	**00 45 01.4**	**+0.7**
CYA				IAML		00 45 06.8	
	comp=E,6μm,0.3s						
CYA	**Choya**	**1.75**	**24**	*e*P	**Pn**	**00 44 38.0**	**+1.6**
CYA				*e*S	**Sb**	**00 45 01.1**	**+0.4**
CYA				IAML		00 45 07.7	
	comp=Z,3μm,0.2s						
RTLL	**Cerro Villicun**	**2.05**	**231**	*e*P	**Pn**	**00 44 41.7**	**+1.2**
TCA	**Tanti**	**2.16**	**127**	*e*P	**Pb**	**00 44 45.7**	**-0.3**
TCA				*e*S	**Sb**	**00 45 12.1**	**-0.4**
TCA				IAML		00 45 17.6	
	comp=Z,3μm,0.4s						
ZON	**Zonda**	**2.32**	**229**	Pn	**Pn**	**00 44 44.7**	**+0.5**
ZON				Sn	**Sn**	**00 45 14.7**	**+2.7**
ZON	**Zonda**	**2.32**	**229**	*e*P	**Pn**	**00 44 44.9**	**+0.7**
ZON				*e*S	**Sb**	**00 45 16.0**	**-1.0**
ZON				IAML		00 45 17.1	
	comp=Z,2μm,0.2s						
RTCV	**Cerro Valdivia**	**2.45**	**222**	*e*P	**Pn**	**00 44 47.5**	**+1.4**
MRA	**San Martin**	**2.48**	**162**	*e*P	**Pn**	**00 44 49.6**	**+3.0**
MRA				*e*S	**Sn**	**00 45 19.1**	**+2.9**
MRA				IAML		00 45 29.1	
	comp=Z,3μm,0.5s						
RTLS	**Leoncito**	**2.89**	**232**	*e*P	**Pn**	**00 44 54.5**	**+2.2**
RTLS				*e*S	**Sb**	**00 45 35.2**	**+1.5**
RTLS				IAML		00 45 39.6	
	comp=Z,396nm,0.6s						
CO01	**Juntas del Tor**	**3.02**	**271**		**Pn**	**00 44 56.2**	**+2.2**
CO01	**Juntas del Tor**	**3.02**	**271**	⇑*e*P	**Pn**	**00 44 56.7**	**+2.7**

CO01			*i* S		**Sn**	00 45 33.3 +3.8
CO01			IAML			00 45 37.2
comp=N,1μm,0.5s						
CO01	**Juntas del Tor**	**3.02 271**	*e*P		**Pn**	**00 44 55.2 +1.2**
CO01			*e*S		**Sn**	**00 45 30.6 +1.0**
CO01			IAML			00 45 36.0
comp=Z,733nm,1.2s						
AC05	**El Transito**	**3.41 290**	Pn		**Pn**	**00 45 02.1 +2.8**
AC05	**El Transito**	**3.41 290**	*e*P		**Pn**	**00 45 00.6 +1.2**
AC05			*e*S		**Sb**	**00 45 45.6 -2.9**
AC05			IAML			00 45 54.8
comp=Z,825nm,0.8s						
CO03	**El Pedregal**	**3.61 256**			**Pn**	**00 45 03.5 +1.6**
CO03	**El Pedregal**	**3.61 256⇑**	*e*P		**Pn**	**00 45 03.6 +1.7**
CO03			*e*S		**Sn**	**00 45 45.5 +1.7**
CO03			IAML			00 46 01.6
comp=E,1μm,0.7s						
CO03	**El Pedregal**	**3.61 256**	*e*P		**Pn**	**00 45 03.9 +1.9**
CO03			*e*S		**Sb**	**00 45 51.6 -2.4**
CO03			IAML			00 45 57.5
comp=Z,981nm,0.7s						
GO04	**Tololo Observa**	**3.63 267**			**Pn**	**00 45 04.2 +1.8**
GO04	**Tololo Observa**	**3.63 267**	*e*P		**Pn**	**00 45 04.2 +1.8**
GO04			*e*S		**Sn**	**00 45 46.8 +2.2**
LCO	**Las Campanas**	**3.71 285**	Pn		**Pn**	**00 45 05.4 +1.9**
LCO	**Las Campanas**	**3.71 285**	*e*P		**Pn**	**00 45 05.0 +1.5**
LCO			IAML			00 46 16.5
comp=Z,715nm,0.8s						
AC02	**Maricunga**	**3.89 325**	Pn		**Pn**	**00 45 08.3 +2.1**
CO02	**Combarbal**	**3.95 252**	Pn		**Pn**	**00 45 08.2 +1.5**
CO02	**Combarbal**	**3.95 252**	*e*P		**Pn**	**00 45 08.5 +1.8**
CO02			IAML			00 46 20.9
comp=Z,958nm,0.6s						
GO03	**Copiap**	**4.01 307**			**Pn**	**00 45 09.0 +1.5**
CO05	**La Serena**	**4.01 271**			**Pn**	**00 45 08.2 +0.8**
CO05	**La Serena**	**4.01 271⇑**	*e*P		**Pn**	**00 45 08.5 +1.0**
CO05			*e*S		**Sn**	**00 45 54.4 +0.6**
AC06	**Mina Casimiro**	**4.24 308**	Pn		**Pn**	**00 45 11.9 +1.3**
AC04	**Llanos de Chal**	**4.31 294**	Pn		**Pn**	**00 45 13.1 +1.5**
AC04	**Llanos de Chal**	**4.31 294**	*e*P		**Pn**	**00 45 13.5 +1.9**
AC04			*e*S		**Sb**	**00 46 12.1 -2.2**
AC04			IAML			00 46 29.8
comp=Z,191nm,0.8s						
VA03	**San Esteban**	**4.32 230**			**Pn**	**00 45 13.5 +1.8**
VA03	**San Esteban**	**4.32 230**	*e*P		**Pn**	**00 45 13.9 +2.2**
VA03			*e*S		**Sn**	**00 46 03.8 +2.4**
VA03	**San Esteban**	**4.32 230**	*e*P		**Pn**	**00 45 14.0 +2.2**
VA03			IAML			00 46 31.9
comp=Z,788nm,0.8s						
CO06	**Fray Jorge**	**4.38 261**	Pn		**Pn**	**00 45 11.9 -0.7**
FCH	**Farellones**	**4.53 223**	*e*P		**Pn**	**00 45 17.3 +2.5**
FCH			*e*S		**Sn**	**00 46 08.4 +1.6**
PEL	**Peldehue**	**4.64 227**	*e*P		**Pn**	**00 45 18.6 +2.4**
VA06	**Catapilco**	**4.72 237**			**Pn**	**00 45 17.6 +0.3**
VA06	**Catapilco**	**4.72 237**	*e*P		**Pn**	**00 45 17.1 -0.1**
VA06			*e*S		**Sn**	**00 46 05.6 -5.7**
ROC1	**El Roble**	**4.76 231**	*e*P		**Pn**	**00 45 20.6 +2.6**
MT03	**Universidad Ad**	**4.77 223**			**Pn**	**00 45 20.4 +2.3**
MT03	**Universidad Ad**	**4.77 223**	*e*P		**Pn**	**00 45 20.6 +2.6**
MT03			IAML			00 46 42.0
comp=Z,475nm,1.2s						
MT05	**Renca**	**4.84 225**			**Pn**	**00 45 21.0 +2.0**
MT05	**Renca**	**4.84 225⇑**	*e*P		**Pn**	**00 45 21.6 +2.7**
MT05			*e*S		**Sn**	**00 46 16.1 +1.9**
MT05	**Renca**	**4.84 225**	*e*P		**Pn**	**00 45 21.6 +2.7**
MT05			IAML			00 47 02.0
comp=Z,360nm,1.2s						
LMEL	**Las Melosas**	**4.86 218**			**Pn**	**00 45 21.2 +2.0**
MT02	**Curacav**	**5.01 229**	*e*P		**Pn**	**00 45 23.6 +2.4**
BO04	**La Punta**	**5.19 220**			**Pn**	**00 45 25.1 +1.5**
AC01	**Pan de Azucar**	**5.24 317**			**Pn**	**00 45 27.0 +2.6**
AC01	**Pan de Azucar**	**5.24 317**	*e*P		**Pn**	**00 45 26.5 +2.0**
AC01			*e*S		**Sb**	**00 46 45.6 +4.5**
AC01			IAML			00 46 51.0
comp=Z,121nm,0.4s						
MT09	**Talagante**	**5.26 224**			**Pn**	**00 45 25.1 +0.4**
MT01	**Popeta**	**5.47 225**	Pn		**Pn**	**00 45 27.3 -0.3**
GO02	**Mina Guanaco**	**5.54 331**	Pn		**Pn**	**00 45 31.6 +2.9**
VA05	**Santo Domingo**	**5.57 229**			**Pn**	**00 45 30.4 +1.5**
BO01	**Tunca**	**5.75 220**	Pn		**Pn**	**00 45 31.3 -0.1**
PB14	**IPOC Station P**	**6.37 327**			**Pn**	**00 45 42.3 +2.1**
GO05	**Huala**	**6.68 221**			**Pn**	**00 45 43.5 -0.6**
ML02	**Panimavida**	**6.98 214**			**Pn**	**00 45 49.0 +0.7**
AF01	**San Pedro de A**	**7.21 348**			**Pn**	**00 45 53.5 +1.9**
PB15	**IPOC Station P**	**7.28 339**			**Pn**	**00 45 54.5 +1.9**
PB10	**IPOC Station P**	**7.40 331**	Pn		**Pn**	**00 45 55.8 +1.8**
LVC	**Limon Verde**	**7.69 344**	Pn		**Pn**	**00 46 00.6 +2.2**
comp=Z,1.8nm,0.3s,baz=183,slow=6.4,SNR=16						
LVC			LR		LR	00 49 26.8
comp=Z,80nm,21.6s,baz=176,slow=41						
comp=Z,4.1nm,0.4s						
PB06	**IPOC Station P**	**7.78 339**			**Pn**	**00 46 00.7 +1.3**
PB04	**IPOC Station P**	**8.31 337**	Pn		**Pn**	**00 46 06.9 +0.2**
PB03	**IPOC Station P**	**8.45 340**			**Pn**	**00 46 09.2 +0.5**
PB09	**IPOC Station P**	**8.55 343**	Pn		**Pn**	**00 46 11.6 +1.6**
BI05	**Punta Hualpn**	**8.65 218**	Pn		**Pn**	**00 46 09.9 -1.2**
ITQB	**Itaqui**	**8.68 90**			**Pn**	**00 46 13.0 +1.4**
ITQB	**Itaqui**	**8.68 90**	*e*P		**Pn**	**00 46 12.7 +1.1**
ITQB			*e*S		**Sn**	**00 47 46.0 -2.8**
PB07	**IPOC Station P**	**8.80 340**			**Pn**	**00 46 14.3 +0.9**
TRQA	**Tornquist**	**8.86 156**	Pn		**Pn**	**00 46 13.6 -0.5**
CPUP	**Villa Florida**	**8.99 68**	Pn		**Pn**	**00 46 16.4 +0.5**
comp=Z,1.3nm,0.3s,baz=244,slow=11,SNR=25						
CPUP			Lg		Lg	00 49 03.5
comp=Z,7.5nm,0.3s,baz=348,slow=20,SNR=3.0						
CPUP			LR		LR	00 50 30.1
comp=Z,177nm,18.4s,baz=256,slow=43						
comp=Z,2.9nm,0.3s						
CPUP	**Villa Florida**	**8.99 68**			**Pn**	**00 46 16.5 +0.7**
CPUP	**Villa Florida**	**8.99 68**	*e*P		**Pn**	**00 46 16.3 +0.5**
CPUP			*e*S		**Sn**	**00 47 50.1 -6.2**
PB02	**IPOC Station P**	**9.18 340**			**Pn**	**00 46 18.8 +0.2**
PB01	**IPOC Station P**	**9.34 343**			**Pn**	**00 46 21.6 +0.9**
AZCA	**Azaras, Argent**	**9.51 81**	*e*P		**Pn**	**00 46 24.3 +1.3**
AZCA			*e*S		**Sn**	**00 48 07.1 -1.9**
PATCX	**Punta Patache**	**9.73 340**	Pn		**Pn**	**00 46 27.7 +1.7**
RODS	**Rosario do Sul**	**9.88 95**	*e*P		**Pn**	**00 46 29.4 +1.3**
RODS			*e*S		**Sn**	**00 48 15.3 -3.0**
TA01	**Diego Aracena**	**9.98 340**	Pn		**Pn**	**00 46 31.7 +2.3**
UNIS	**Unistalda (Bra**	**10.10 87**	*e*P		**Pn**	**00 46 31.9 +0.9**
UNIS			*e*S		**Sn**	**00 48 21.0 -2.6**
PB08	**IPOC Station P**	**10.13 346**	Pn		**Pn**	**00 46 32.2 +0.4**
GO06	**Curarrehue**	**10.31 201**	Pn		**Pn**	**00 46 33.8 -0.2**
PB11	**IPOC Station P**	**10.61 344**	Pn		**Pn**	**00 46 38.5 +0.3**
PLCA	**Paso Flores**	**11.13 196**	Pn		**Pn**	**00 46 45.6 +0.4**
comp=Z,0.1nm,0.3s,baz=33,slow=9.2,SNR=4.6						
PLCA			Lg		Lg	00 49 53.3
comp=Z,0.7nm,0.3s,baz=106,slow=21,SNR=4.2						
PLCA			LR		LR	00 50 49.5
comp=Z,76nm,18.8s,baz=20,slow=36						
comp=Z,1.1nm,0.6s						
PLCA	**Paso Flores**	**11.13 196**	*e*P		**Pn**	**00 46 49.1 +3.9**
LR04	**Corral**	**11.28 208**	Pn		**Pn**	**00 46 44.3 -2.9**
PLTB	**Pedras Altas**	**11.30 102**	Pn		**Pn**	**00 46 47.0 -0.6**
PLTB	**Pedras Altas**	**11.30 102**	*e*P		**Pn**	**00 46 46.8 -0.8**
CRSM	**Crissiumal (Br**	**11.32 80**	*e*P		**Pn**	**00 46 48.9 +1.1**
CRSM			*e*S		**Sn**	**00 48 49.2 -4.3**
CPSB	**Cacapava Do Su**	**11.40 95**	*e*P		**Pn**	**00 46 48.2 -0.7**
CPSB			*e*S		**Sn**	**00 48 49.2 -6.2**
LL04	**Puerto Octay**	**11.81 202**			**Pn**	**00 46 51.7 -2.8**
ALGR	**Alto Alegre (B**	**11.91 87**	*e*P		**Pn**	**00 46 56.3 +0.4**
ALGR			*e*S		**Sn**	**00 49 04.7 -3.4**
ANTJ	**Antonio Joao (**	**12.45 52**	*e*P		**Pn**	**00 47 05.0 +1.7**
FRBT	**Francisco Belt**	**12.64 75**	*e*P		**Pn**	**00 47 06.8 +0.9**
ITAB	**Concordia**	**13.03 81**	*e*P		**Pn**	**00 47 11.7 +0.6**
BBRB	**Robore, Bolivi**	**13.26 29**	*e*P		**Pn**	**00 47 18.3 +4.0**
AQDB	**Aquidauana**	**13.72 48**	*e*P		**P**	**00 47 25.8 -3.2**
CNLB	**Canela**	**13.72 91**	*e*P		**Pn**	**00 47 20.4 -0.2**
LPAZ	**La Paz**	**13.77 354**	*e*P		**P**	**00 47 29.1 -1.1**
BBSD	**Serra de San D**	**13.93 25**	*e*P		**Pn**	**00 47 25.3 +1.8**
PTGB	**Pitanga**	**13.97 71**	*e*P		**Pn**	**00 47 25.1 +1.0**
SIV	**San Ignacio**	**14.89 21**	Pn		**Pn**	**00 47 38.4 +1.8**
baz=221,slow=12,SNR=3.5						
SIV			LR		LR	00 54 31.6
comp=Z,108nm,19.4s,baz=268,slow=42						
comp=Z,0.7nm,0.4s						
RPRD	**Ribas do Rio P**	**15.06 54**	*e*P		**P**	**00 47 45.2 +1.3**
AY01	**Puyuhuapi**	**15.12 197**	Pn		**Pn**	**00 47 37.4 -2.1**
TER01	**Tubaro-SC**	**15.33 89**	*e*P		**Pn**	**00 47 44.4 +2.0**
PTLB	**Pontes e Lacer**	**16.08 27**	*e*P		**P**	**00 47 56.2 +1.0**
PCMB	**Pacaembu**	**16.17 62**	*e*P		**P**	**00 47 57.5 +1.3**
ARAG	**Araguaiana, MT**	**19.71 47**	*e*P		**P**	**00 48 36.0 +0.7**
GO09	**Cerro Castillo**	**21.63 190**	P		**P**	**00 48 53.2 -2.5**
GO09			IAmb		IAmb	00 48 53.5
comp=Z,15nm,1.1s						
BDFB	**Brasilia**	**22.30 54**	P		**P**	**00 49 03.4 0.0**
comp=Z,3.1nm,0.5s,baz=229,slow=11,SNR=6.9						
comp=Z,3.1nm,0.5s						
BDFB	**Brasilia**	**22.30 54**	P		**P**	**00 49 02.4 -1.0**
BDFB			IAmb		IAmb	00 49 11.6
comp=Z,12nm,1.1s						
MG02	**Cerro Sombrero**	**22.79 184**	P		**P**	**00 49 07.6 -0.6**
GO10	**Punta Arenas**	**23.31 187**	P		**P**	**00 49 13.2 -0.4**
RCBR	**Riachuelo**	**37.64 56**	LR		LR	01 07 49.1
comp=Z,234nm,21.6s,baz=120,slow=38						
SMAI	**San Martin Ant**	**38.12 180**	P		**P**	**00 51 25.7 +1.6**
SMAI			IAmb		IAmb	00 51 40.8
comp=Z,5.0nm,1.0s						
TOSP	**Speyside**	**41.52 9**	P		**P**	**00 51 54.0 +1.0**
FDF	**Fort de France**	**44.83 8**	P		**P**	**00 52 19.1 -0.7**
MLPR	**Magueyes Islan**	**47.74 359**	P		**P**	**00 52 42.5 0.0**
MLPR			IAmb		IAmb	00 53 00.5
comp=Z,8.0nm,0.9s						
CELP	**Cerrillos**	**47.84 0**	P		**P**	**00 52 42.7 -0.7**
MTP	**Monte Pirata**	**47.88 1**	P		**P**	**00 52 41.7 -1.9**
MTP			IAmb		IAmb	00 52 42.3
comp=Z,5.5nm,0.9s						
VNA3	**Neumayer Olymp**	**51.36 160**	P		**P**	**00 53 09.9 +0.2**
VNA2	**Neumayer--Watz**	**51.95 159**	P		**P**	**00 53 13.8 -0.2**
baz=303,slow=8.3						
SNAA	**Sanae**	**53.57 159**	P		**P**	**00 53 27.6 +1.6**
SNAA	**Sanae**	**53.57 159**	P		**P**	**00 53 26.1 0.0**
comp=Z,1.3nm,0.6s,baz=270,slow=11,SNR=16						
comp=Z,1.3nm,0.6s						
SNAA	**Sanae**	**53.57 159**	P		**P**	**00 53 27.7 +1.6**
TROLL	**Troll, Antarti**	**55.28 159**	P		**P**	**00 53 38.0 -0.6**
QSPA	**South Pole Qui**	**60.18 180**	P		**P**	**00 54 13.6 +0.5**
comp=Z,5.6nm,0.7s,baz=160,slow=2.1,SNR=18						
comp=Z,5.6nm,0.7s						
QSPA	**South Pole Qui**	**60.18 180**	P		**P**	**00 54 13.6 +0.5**
W57A	**Gilead**	**66.07 348**	P		**P**	**00 54 52.3 0.0**
CPCT	**Cooper Cave**	**67.30 344**	P		**P**	**00 55 00.3 +0.2**
CPCT			IAmb		IAmb	00 55 12.0
comp=Z,3.8nm,0.9s						
TKL	**Tuckaleechee C**	**67.33 345**	P		**P**	**00 54 59.4 -0.9**
TKL			IAmb		IAmb	00 55 00.7
comp=Z,5.1nm,1.1s						
V52A	**Sevierville**	**67.46 345**	P		**P**	**00 55 00.9 -0.3**
V52A			IAmb		IAmb	00 55 15.7
comp=Z,7.4nm,1.1s						
WVT	**Waverly**	**68.78 342**	P		**P**	**00 55 08.7 -0.8**
WVT			IAmb		IAmb	00 55 09.6
comp=Z,4.6nm,0.7s						
TXAR	**Lajitas Array**	**68.81 326**	P		**P**	**00 55 10.2 +0.3**
comp=Z,0.3nm,0.5s,baz=156,slow=6.8,SNR=7.2						
TXAR			pP		**pP**	**00 55 17.5 -0.4**
comp=Z,0.6nm,0.6s,baz=144,slow=7.8,SNR=6.5						
comp=Z,0.3nm,0.5s						
TX31	**Lajitas Ar. Si**	**68.82 326**	P		**P**	**00 55 10.0 +0.1**
TX32	**Lajitas Array**	**68.82 326**	P		**P**	**00 55 10.2 +0.3**
R55A	**Marlinton**	**69.14 349**	P		**P**	**00 55 13.3 +1.7**
DBIC	**Dimbokro**	**69.51 69**	P		**P**	**00 55 13.3 -1.1**
DBIC			IAmb		IAmb	00 55 29.9
comp=Z,3.3nm,1.1s						
Q56A	**Snyder Ridge,**	**69.73 350**	P		**P**	**00 55 15.9 +0.7**
Q56A			IAmb		IAmb	00 55 26.8
comp=Z,4.2nm,0.8s						
Q54A	**Coxs Mills**	**69.95 348**	P		**P**	**00 55 16.4 -0.1**
Q54A			IAmb		IAmb	00 55 35.2
comp=Z,4.7nm,1.0s						
P52A	**Corning**	**70.82 347**	P		**P**	**00 55 21.5 -0.3**
SUR	**Sutherland**	**72.63 118**	P		**P**	**00 55 34.1 +0.7**
HDIL	**Hopedale**	**73.33 342**	P		**P**	**00 55 36.6 -0.3**
HDIL			IAmb		IAmb	00 55 37.2
comp=Z,6.5nm,0.8s						
L40A	**Anamosa**	**75.26 341**	P		**P**	**00 55 47.8 -0.3**
E62A	**Clayton Lake**	**76.36 358**	P		**P**	**00 55 55.5 +1.2**
E62A			IAmb		IAmb	00 56 13.5
comp=Z,7.8nm,1.0s						
I42A	**Draeger Farm,**	**76.36 344**	P		**P**	**00 55 54.2 -0.2**
I42A			IAmb		IAmb	00 56 10.4
comp=Z,7.4nm,0.9s						
SDCO	**Great Sand Dun**	**76.63 329**	P		**P**	**00 55 57.2 +0.8**
D62A	**Allapoint, All**	**76.81 358**	P		**P**	**00 55 57.8 +1.1**
D62A			IAmb		IAmb	00 55 58.6
comp=Z,5.9nm,0.8s						
E46A	**Sault Ste Mari**	**77.73 348**	P		**P**	**00 56 01.7 -0.3**
E46A			IAmb		IAmb	00 56 13.9
comp=Z,7.9nm,1.1s						
BOSA	**Boshof**	**77.73 116**	P		**P**	**00 56 02.6 -0.2**
comp=Z,4.2nm,0.7s,baz=279,slow=3.6,SNR=10						
comp=Z,4.2nm,0.7s						
BOSA	**Boshof**	**77.73 116**	P		**P**	**00 56 02.6 -0.2**
BOSA			IAmb		IAmb	00 56 03.1
comp=Z,4.0nm,0.8s						
SMCO	**Snowmass**	**78.46 329**	P		**P**	**00 56 05.0 -1.7**
SMCO			IAmb		IAmb	00 56 06.6
comp=Z,5.5nm,0.7s						
TOA0	**Torodi Ar. Sit**	**78.49 67**	P		**P**	**00 56 06.2 -0.7**
TORD	**Torodi Ar. Bea**	**78.49 67**	P		**P**	**00 56 06.3 -0.6**
comp=Z,1.0nm,0.8s,baz=283,slow=6.2,SNR=9.3						
comp=Z,1.0nm,0.8s						
DUG	**Dugway, Tooele**	**81.99 326**	P		**P**	**00 56 26.7 +1.2**
BW06	**Boulder Array**	**82.51 330**	P		**P**	**00 56 28.2 0.0**
BW06			IAmb		IAmb	00 56 37.6
comp=Z,2.8nm,1.1s						
PD31	**Pinedale Array**	**82.51 330**	P		**P**	**00 56 28.2 0.0**
PD31			IAmb		IAmb	00 56 37.7
comp=Z,2.6nm,1.1s						
PDAR	**Pinedale Array**	**82.51 330**	P		**P**	**00 56 27.2 -1.0**
comp=Z,1.2nm,0.8s,baz=131,slow=7.7,SNR=8.7						
PDAR			pP		**pP**	**00 56 36.1 -0.2**
comp=Z,1.3nm,0.7s,baz=128,slow=5.2,SNR=7.2						
comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**82.51 330**	P		**P**	**00 56 27.8 -0.4**
ELK	**Elko**	**83.60 325**	P		**P**	**00 56 34.3 +0.4**
comp=Z,1.5nm,0.8s,baz=158,slow=4.2,SNR=6.1						
ELK			pP		**pP**	**00 56 41.8 -0.2**
comp=Z,1.3nm,0.7s,baz=162,slow=1.9,SNR=4.3						
comp=Z,1.5nm,0.8s						
YHH	**Holmes Hill**	**84.69 330**	P		**P**	**00 56 39.9 +0.5**
YHH			IAmb		IAmb	00 56 48.7
comp=Z,1.8nm,0.8s						
PLID	**Pearl Lake**	**87.24 327**	P		**P**	**00 56 52.1 +0.2**
PLID			IAmb		IAmb	00 56 52.9
comp=Z,3.0nm,0.8s						
K05A	**Summer Lake**	**87.93 323**	P		**P**	**00 56 56.0 +0.8**
DBO	**Dodson Butte**	**89.43 322**	P		**P**	**00 57 02.7 +0.5**
ASAR	**Alice Springs**	**123.07 203**	PKP		**PKPdf**	**01 03 01.2 -1.4**
comp=Z,0.3nm,0.4s,baz=165,slow=2.4,SNR=4.4						
WRA	**Warramunga Arr**	**126.36 205**	PKP		**PKPdf**	**01 03 07.9 -1.0**
comp=Z,1.0nm,0.6s,baz=162,slow=1.7,SNR=23						
KSH	**Kashi**	**148.05 63**	PKPbc		**PKPbc**	**01 03 51.8 +0.7**
KSH			pPKP		pPKPbc	01 04 00.5 +1.0
ZALV	**Zalesovo Beam**	**148.43 33**	PKPbc		**PKPbc**	**01 03 52.1 +0.6**
comp=Z,2.5nm,0.7s,baz=295,slow=3.2,SNR=13						
MKAR	**Makanchi Array**	**150.71 46**	PKPbc		**PKPbc**	**01 03 57.9 +0.5**
comp=Z,4.3nm,0.6s,baz=296,slow=2.0,SNR=26						
MKAR			pPKPbc		**sPKPdf**	**01 04 03.8 +0.7**
comp=Z,1.8nm,0.7s,baz=246,slow=1.5,SNR=6.0						
PZH	**PanZhiHua**	**169.15 106**	PKP		**PKPdf**	**01 04 12.8 -0.4**

NOU 28 01:12:48.1, 16°.17S×167°.81E, h19km, MLv4.5/10,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.59**	**167**	P	Pb	01 13 16.5	-0.4
RTV	**Rentapao**	**1.72**	**160**	P	Pn	01 13 16.3	-0.7
LIFNC	**LIFOU**	**4.61**	**187**	P	Pn	01 13 55.7	-1.2
MARNC	**Mare, Loyalty**	**5.29**	**178**	P	Pn	01 14 05.8	-0.3
0.9nm,0.7s							
DZM	**Mont Dzumac**	**6.01**	**192**	P	Pn	01 14 16.2	+0.1
NOUC	**Port Laguerre**	**6.07**	**193**	P	Pn	01 14 17.6	+0.7
19nm,0.5s							

ROM 28 01:15:41.8±0.0, 42°.922N±0°.003×13°.053E±0°.004,
h11km, ML2.5/26, 6C-3D, Error ellipse: s-maj=0.3km
s-min=0.3km az=312.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.04**	**357**	P	Pg	01 15 44.2	+0.3
FEMA				S	Sg	01 15 45.9	+0.3
FEMA				AML	AML		
comp=E,23400μm,1.0s							
FEMA				AML	AML		
comp=N,21650μm,0.5s							
FEMA				AML	AML		
comp=N,10900μm,0.1s							
FEMA				AML	AML		
comp=E,17878μm,0.2s							
T1216	**Preci, Frazion**	**0.04**	**219**	P	Pg	01 15 44.2	+0.4
T1216				S	Sg	01 15 45.7	+0.4
T1216				AML	AML		
comp=N,15750μm,1.0s							
T1216				AML	AML		
comp=E,15300μm,0.3s							
T1216				AML	AML		
comp=E,12993μm,0.1s							
T1216				AML	AML		
comp=N,15692μm,0.2s							
NRCA	**Norcia**	**0.10**	**153**	P	Pg	01 15 44.9	+0.4
NRCA				S	Sg	01 15 46.9	+0.4
NRCA				AML	AML		
comp=E,15550μm,0.1s							
NRCA				AML	AML		
comp=N,9870μm,0.2s							
NRCA				AML	AML		
comp=N,9860μm,0.1s							
NRCA				AML	AML		
comp=E,17150μm,1.1s							
NRCA				AML	AML		
comp=N,9830μm,0.1s							
NRCA				AML	AML		
comp=N,11025μm,0.2s							
NRCA				AML	AML		
comp=E,15600μm,0.1s							
NRCA				AML	AML		
comp=N,8819μm,0.1s							
NRCA				AML	AML		
comp=N,10353μm,0.1s							
NRCA				AML	AML		
comp=E,16948μm,0.1s							
NRCA				AML	AML		
comp=E,15584μm,0.1s							
MC2	**Monte Cornacci**	**0.10**	**95**	⇑P	Pg	01 15 45.0	+0.3
MC2				S	Sg	01 15 47.2	+0.5
FDMO	**Fiordimonte**	**0.12**	**12**	⇑P	Pg	01 15 45.1	+0.4
FDMO				S	Sg	01 15 47.2	+0.4
FDMO				AML	AML		
FDMO				AML	AML		
comp=N,99100μm,0.3s							
FDMO				AML	AML		
comp=N,5533μm,0.2s							
FDMO				AML	AML		
comp=E,4169μm,0.2s							
CESI	**CESI - Serrava**	**0.14**	**307**	P	Pg	01 15 45.5	+0.5
CESI				S	Sg	01 15 48.2	+0.8
CESI				AML	AML		
comp=N,11910μm,0.3s							
CESI				AML	AML		
comp=E,10705μm,0.4s							
CESI				AML	AML		
comp=N,11905μm,0.3s							
CESI				AML	AML		
comp=E,5466μm,0.2s							
CESI				AML	AML		
comp=N,7519μm,0.2s							
T1215	**Vallo di Nera,**	**0.18**	**229**	⇑P	Pg	01 15 46.3	+0.6
T1215				S	Sg	01 15 49.2	+0.8
T1215				AML	AML		
comp=E,2280μm,0.5s							
T1215				AML	AML		
comp=E,2280μm,0.5s							
T1215				AML	AML		
comp=N,2490μm,0.1s							
T1215				AML	AML		
comp=N,2215μm,0.1s							
T1215				AML	AML		
comp=E,2278μm,0.5s							
T1215				AML	AML		
comp=N,2490μm,0.1s							
T1215				AML	AML		
comp=N,2220μm,0.1s							
T1215				AML	AML		
comp=E,2284μm,0.5s							
T1215				AML	AML		
comp=N,2491μm,0.1s							
T1215				AML	AML		
comp=E,1922μm,0.1s							
T1215				AML	AML		
comp=E,1756μm,0.1s							
T1215				AML	AML		
comp=N,2220μm,0.1s							
AM05	**Amandola Campo**	**0.23**	**76**	⇑P	Pg	01 15 46.9	+0.4
AM05				S	Sg	01 15 50.6	+0.9
AM05				AML	AML		
comp=E,1535μm,0.4s							
AM05				AML	AML		
comp=E,5690μm,0.2s							
AM05				AML	AML		
comp=N,206μm,0.2s							
AM05				AML	AML		
comp=N,1205μm,1.4s							
AM05				AML	AML		
comp=E,5685μm,0.2s							
AM05				AML	AML		
comp=N,1210μm,1.4s							
AM05				AML	AML		
comp=N,165μm,0.1s							
AM05				AML	AML		
comp=E,1891μm,0.1s							
AM05				AML	AML		
comp=E,545μm,0.1s							
AM05				AML	AML		
comp=N,393μm,0.1s							
T1217	**Poggiodomo (PG**	**0.23**	**203**	⇑P	Pg	01 15 47.1	+0.5
T1217				S	Sg	01 15 50.9	+1.1
T1217				AML	AML		
comp=E,1335μm,0.2s							
T1217				AML	AML		
comp=N,1430μm,0.2s							
T1217				AML	AML		
comp=E,1295μm,0.2s			

SMA1			S	Sg	01 15 54.6	+0.9
SMA1			AML	AML		
	comp=N,1380μm,0.5s					
SMA1			AML	AML		
	comp=E,1325μm,0.9s					
SMA1			AML	AML		
	comp=N,459μm,0.1s					
SMA1			AML	AML		
	comp=E,441μm,0.3s					
ARRO	**Arrone**	**0.40 212**	P	Pg	01 15 50.0	+0.3
ARRO			S	Sb	01 15 56.7	-0.4
T1211	**Morro Reatino**	**0.41 201**	⇓P	Pg	01 15 50.4	+0.4
T1211			S	Sb	01 15 56.9	-0.7
T1211			AML	AML		
	comp=E,966μm,0.1s					
T1211			AML	AML		
	comp=N,1023μm,0.8s					
T1211			AML	AML		
	comp=E,994μm,0.1s					
T1211			AML	AML		
	comp=N,962μm,1.4s					
T1211			AML	AML		
	comp=E,968μm,0.1s					
T1211			AML	AML		
	comp=N,1520μm,0.5s					
T1211			AML	AML		
	comp=E,999μm,0.1s					
T1211			AML	AML		
	comp=N,1486μm,0.6s					
T1211			AML	AML		
	comp=E,966μm,0.1s					
T1211			AML	AML		
	comp=N,1520μm,0.6s					
T1211			AML	AML		
	comp=N,1493μm,0.6s					
T1211			AML	AML		
	comp=N,858μm,0.2s					
T1211			AML	AML		
	comp=N,839μm,0.2s					
T1211			AML	AML		
	comp=E,996μm,0.1s					
T1211			AML	AML		
	comp=E,966μm,0.1s					
T1211			AML	AML		
	comp=E,996μm,0.1s					
RM33	**Pellescritta (**	**0.43 164**	P	Pg	01 15 50.6	+0.3
RM33			S	Sb	01 15 57.3	-0.7
RM33			AML	AML		
	comp=E,492μm,1.6s					
RM33			AML	AML		
	comp=N,403μm,1.5s					
RM33			AML	AML		
	comp=E,492μm,1.6s					
RM33			AML	AML		
	comp=E,492μm,0.2s					
RM33			AML	AML		
	comp=N,296μm,0.1s					
RM33			AML	AML		
	comp=E,366μm,0.1s					
RM33			AML	AML		
	comp=N,274μm,0.1s					
CING	**Cingoli**	**0.47 13**	P	Pg	01 15 51.0	+0.1
CING			S	Sb	01 15 58.2	-0.8
CING			AML	AML		
	comp=E,2265μm,0.3s					
CING			AML	AML		
	comp=N,2180μm,0.8s					
CING			AML	AML		
	comp=E,221μm,0.4s					
CING			AML	AML		
	comp=N,232μm,0.2s					
OFFI	**Offida**	**0.47 88**	P	Pb	01 15 51.9	-0.1
OFFI			AML	AML		
	comp=N,2280μm,0.8s					
OFFI			AML	AML		
	comp=E,1965μm,0.6s					
OFFI			AML	AML		
	comp=N,604μm,0.7s					
OFFI			AML	AML		
	comp=E,561μm,0.7s					
CAMP	**Campotosto**	**0.47 146**	P	Pg	01 15 51.0	0.0
CAMP			S	Sg	01 15 58.0	+0.9
CAMP			AML	AML		
	comp=N,387μm,0.6s					
CAMP			AML	AML		
	comp=E,410μm,0.9s					
CAMP			AML	AML		
	comp=E,180μm,0.2s					
CAMP			AML	AML		
	comp=N,157μm,0.7s					
CAMP			AML	AML		
	comp=N,138μm,0.2s					
CESX	**Cesi**	**0.47 228**	P	Pg	01 15 51.0	+0.1
CESX			S	Sb	01 15 58.3	-0.7
CESX			AML	AML		
	comp=E,1450μm,0.5s					
CESX			AML	AML		
	comp=N,1290μm,0.6s					
CESX			AML	AML		
	comp=N,455μm,0.4s					
CESX			AML	AML		
	comp=E,578μm,0.3s					
CESX			AML	AML		
	comp=N,432μm,0.4s					
TERO	**Teramo**	**0.50 126**	⇓P	Pg	01 15 51.6	0.0
TERO			S	Sb	01 15 59.3	-0.8
TERO			AML	AML		
	comp=E,791μm,1.0s					
TERO			AML	AML		
	comp=N,610μm,0.5s					
TERO			AML	AML		
	comp=E,792μm,1.0s					
TERO			AML	AML		
	comp=E,455μm,0.5s					
TERO			AML	AML		
	comp=N,414μm,0.1s					
TERO			AML	AML		
	comp=E,386μm,0.1s					
TERO			AML	AML		
	comp=E,333μm,0.1s					
TERO			AML	AML		
	comp=N,356μm,0.1s					
T1247	**Pizzolo (AQ)**	**0.51 159**	P	Pg	01 15 52.1	+0.4
T1247			AML	AML		
	comp=N,762μm,1.0s					
T1247			AML	AML		
	comp=E,884μm,0.5s					
T1247			AML	AML		
	comp=N,762μm,1.0s					
T1247			AML	AML		
	comp=E,357μm,0.3s					
T1247			AML	AML		
	comp=E,332μm,0.1s					
T1247			AML	AML		
	comp=N,263μm,0.2s					
ARVD	**Arcevia**	**0.58 352**	P	Pg	01 15 53.2	+0.1
ARVD			S	Sb	01 16 02.2	-0.2
ARVD			AML	AML		
	comp=E,1630μm,1.4s					
ARVD			AML	AML		
	comp=N,1090μm,0.6s					
ARVD			AML	AML		
	comp=E,187μm,0.2s					
ARVD			AML	AML		
	comp=N,107μm,1.0s					
ARVD			AML	AML		
	comp=N,857μm,0.2s					
ARVD			AML	AML		
	comp=E,1540μm,0.2s					
GIGS	**Gran Sasso**	**0.61 141**	P	Pg	01 15 53.5	0.0
GIGS			S	Sb	01 16 02.5	-0.5
GIGS			AML	AML		
	comp=N,130μm,0.6s					
GIGS			AML	AML		
	comp=E,154μm,1.5s					
GIGS			AML	AML		
	comp=N,130μm,0.6s					
GIGS			AML	AML		
	comp=E,77μm,0.3s					
GIGS			AML	AML		
	comp=N,73μm,0.1s					
GIGS			AML	AML		
	comp=E,67μm,0.1s					
FIAM	**Fiamignano**	**0.66 176**	P	Pg	01 15 54.4	0.0
FIAM			S	Sb	01 16 04.1	-0.4
FIAM			AML	AML		
	comp=E,298μm,0.6s					
FIAM			AML	AML		
	comp=N,237μm,0.8s					
FIAM			AML	AML		
	comp=N,236μm,0.8s					
FIAM			AML	AML		
	comp=E,297μm,0.6s					
FIAM			AML	AML		
	comp=N,96μm,0.4s					
FIAM			AML	AML		
	comp=E,123μm,0.2s					
FIAM			AML	AML		
	comp=N,97μm,0.6s					
FAGN	**Fagnano**	**0.76 149**	⇑P	Pb	01 15 57.0	-0.2
FAGN			AML	AML		
	comp=E,550μm,0.6s					
FAGN			AML	AML		
	comp=N,530μm,1.5s					
FAGN			AML	AML		
	comp=E,551μm,0.6s					
FAGN			AML	AML		
	comp=N,440μm,0.6s					
FAGN			AML	AML		
	comp=E,343μm,0.6s					
VCEL	**Villa Celiera**	**0.78 132**	P	Pb	01 15 57.3	-0.3
VCEL			AML	AML		
	comp=E,568μm,1.5s					
VCEL			AML	AML		
	comp=N,524μm,0.9s					
VCEL			AML	AML		
	comp=E,568μm,1.5s					
VCEL			AML	AML		
	comp=N,525μm,0.9s					
VCEL			AML	AML		
	comp=E,271μm,0.5s					
VCEL			AML	AML		
	comp=N,303μm,0.7s					
SRES	**S.Oreste - Sor**	**0.79 211**	⇓P	Pg	01 15 57.1	0.0
SRES			AML	AML		
	comp=E,271μm,0.9s					
SRES			AML	AML		
	comp=N,308μm,0.8s					
SRES			AML	AML		
	comp=E,100μm,0.6s					
SRES			AML	AML		
	comp=N,125μm,0.7s					
T0110	**Collepietro**	**0.88 142**	P	Pg	01 15 58.2	-0.5
T0110			AML	AML		
	comp=E,554μm,0.5s					
T0110			AML	AML		
	comp=N,483μm,0.5s					
T0110			AML	AML		
	comp=N,482μm,0.5s					
T0110			AML	AML		
	comp=E,554μm,0.5s					
T0110			AML	AML		
	comp=E,188μm,0.5s					
T0110			AML	AML		
	comp=N,196μm,0.3s					
CERT	**Cerreto**	**0.97 183**	P	Pg	01 16 00.4	-0.1
CERT			AML	AML		
	comp=E,239μm,0.6s					
CERT			AML	AML		
	comp=N,144μm,0.7s					
CERT			AML	AML		
	comp=E,240μm,0.6s					
CERT			AML	AML		
	comp=N,144μm,0.7s					
CERT			AML	AML		
	comp=E,146μm,0.6s					
CERT			AML	AML		
	comp=N,88μm,0.4s					
TOLF	**Tolfa**	**1.16 223**	P	Pb	01 16 02.6	-1.2
TOLF			AML	AML		
	comp=N,128μm,0.4s					
TOLF			AML	AML		
	comp=E,178μm,1.5s					
TOLF			AML	AML		
	comp=E,148μm,0.4s					
TOLF			AML	AML		
	comp=N,128μm,0.4s					
MODR	**Mondragone**	**1.88 161**	P	Pn	01 16 12.2	-1.6
MODR			AML	AML		
	comp=N,69μm,0.9s					
MODR			AML	AML		
	comp=E,66μm,0.1s					
ABTA	**Abfaltersbach**	**3.84 354**	*i* Pn	Pg	01 17 01.6	+6.2
	comp=E,5.8nm,0.4s					
FETA	**Feichten**	**4.42 339**	*i* Pn	Pg	01 17 09.7	+3.3
	comp=E,2.2nm,0.4s					
WTTA	**Wattenberg**	**4.46 347**	*i* Pn	Pg	01 17 11.3	+4.2
	comp=E,0.8nm,0.2s					
SQTA	**Sankt Quirin**	**4.49 344**	*i* Pn	Pg	01 17 11.4	+3.6
	comp=E,1.3nm,0.2s					
SQTA			*i* Sn	Sg	01 18 03.1	-2.9
	comp=E,206nm,0.0s					
WATA	**Walderalm**	**4.54 347**	*i* Pn	Pg	01 17 11.9	+3.3
	comp=E,1.3nm,0.2s					
WATA			*i* Sn	Sg	01 18 03.0	-4.4
	comp=E,4.2nm,0.3s					
MOTA	**Moosalm**	**4.63 343**	*i* Pn	Pg	01 17 14.1	+3.6
	comp=E,1.6nm,0.3s					
MOTA			*e*Sn	Sg	01 18 07.5	-3.0
	comp=E,0.5nm,0.1s					
RETA	**Reutte**	**4.84 341**	*i* Pn	Pg	01 17 16.8	+2.3
	comp=E,0.8nm,0.3s					
MOA	**Molln**	**5.00 9**	*i* Pn	Pg	01 17 15.8	-1.7
	comp=E,1.3nm,0.3s					
MOA			*i* Sn	Sb	01 18 14.0	+4.5
	comp=E,1.1nm,0.2s					
CONA	**Conrad Observa**	**5.38 21**	*i* Pn	Pg	01 17 21.5	-3.3
	comp=E,0.3nm,0.1s					
CONA			*i* Sn	Sb	01 18 22.3	+1.8
	comp=E,1.4nm,0.3s					

ROM 28 01:16:01.4±0.0, 43°.007N±0°.002×13°.143E±0°.004, h7km, ML2.8/12, 4C, Error ellipse: s-maj=0.2km s-min=0.2km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**306**	⇑P	Pg	01 16 03.1	+0.1
FDMO				S	Sg	01 16 04.1	-0.1
FDMO				AML	AML		
FDMO				AML	AML		
	comp=N,99100μm,0.3s						
FEMA	**Monte Fema**	**0.08**	**237**	⇑P	Pg	01 16 03.8	+0.3
FEMA				S	Sg	01 16 05.4	+0.4
FEMA				AML	AML		
	comp=E,80700μm,0.4s						
FEMA				AML	AML		
	comp=N,55650μm,0.5s						
FEMA				AML	AML		
	comp=N,21468μm,0.0s						
FEMA				AML	AML		
	comp=E,19615μm,0.3s						
MC2	**Monte Cornacci**	**0.10**	**160**	P	Pg	01 16 04.2	+0.3
MC2				S	Sg	01 16 05.9	+0.3
T1216	**Preci, Frazion**	**0.15**	**218**	P	Pg	01 16 04.9	+0.4
T1216				S	Sg	01 16 07.7	+1.1
AM05	**Amandola Campo**	**0.16**	**101**	⇑P	Pg	01 16 05.2	+0.6
AM05				S	Sg	01 16 08.1	+1.3
AM05				AML	AML		
	comp=E,1535μm,0.4s						
AM05				AML	AML		
	comp=N,1210μm,1.4s						
AM05				AML	AML		
	comp=N,1440μm,1.4s						
AM05				AML	AML		
	comp=E,5685μm,0.2s						
AM05				AML	AML		
	comp=N,302μm,0.3s						
AM05				AML	AML		
	comp=N,1062μm,0.4s						
AM05				AML	AML		
	comp=E,5690μm,0.2s						
AM05				AML	AML		
	comp=N,177μm,0.1s						
CESI	**CESI - Serrava**	**0.17**	**269**	⇑P	Pg	01 16 05.6	+0.6
CESI				S	Sg	01 16 08.6	+1.2
CESI				AML	AML		
	comp=E,10705μm,0.4s						
CESI				AML	AML		
	comp=N,11910μm,0.3s						
CESI				AML	AML		
	comp=E,15750μm,0.5s						
CESI				AML	AML		
	comp=N,16300μm,0.2s						
CESI				AML	AML		
	comp=N,11739μm,0.3s						
CESI				AML	AML		
	comp=E,10114μm,0.0s						
CESI				AML	AML		
	comp=N,11739μm,1.7s						
NRCA	**Norcia**	**0.17**	**187**	P	Pg	01 16 05.7	+0.7
MDAR	**Monte D'Aria**	**0.19**	**360**	P	Pg	01 16 05.8	+0.7
MDAR				S	Sg	01 16 09.1	+1.3
MDAR				AML	AML		
	comp=E,16150μm,0.3s						
MDAR				AML	AML		
	comp=N,20650μm,0.2s						
MDAR				AML	AML		
	comp=E,2964μm,0.1s						
MDAR				AML	AML		
	comp=N,5255μm,0.0s						
SEF1	**Sefro**	**0.20**	**314**	P	Pg	01 16 06.1	+0.7
SEF1				S	Sg	01 16 09.5	+1.3
SEF1				AML	AML		
	comp=E,12650μm,0.4s						
SEF1				AML	AML		
	comp=N,8285μm,0.3s						
SEF1				AML	AML		
	comp=E,10053μm,0.0s						
PIO1	**Pioraco**	**0.21**	**326**	P	Pg	01 16 06.6	+1.0
PIO1				S	Sg	01 16 09.9	+1.5
GAG1	**Gagliole**	**0.24**	**347**	P	Pg	01 16 06.9	+0.8
GAG1				S	Sg	01 16 11.1	+1.7
FIU1	**Fiuminata**	**0.24**	**320**	P	Pg	01 16 07.0	+0.9
FIU1				S	Sg	01 16 10.6	+1.3
MTL1	**Matelica**	**0.27**	**339**	P	Pg	01 16 07.4	+0.7
MTL1				S	Sb	01 16 12.3	-1.1
T1215	**Vallo di Nera,**	**0.29**	**225**	P	Pg	01 16 07.7	+0.7
T1215				S	Sg	01 16 12.2	+1.4
EL6	**Elcito**	**0.32**	**355**	P	Pg	01 16 08.4	+0.6
EL6				S	Sb	01 16 13.8	-1.2
EL6				AML	AML		
	comp=E,8405μm,0.4s						
EL6				AML	AML		
	comp=N,8050μm,0.5s						
EL6				AML	AML		
	comp=N,5279μm,0.2s						
EL6				AML	AML		
	comp=E,3844μm,0.2s						
CING	**Cingoli**	**0.37**	**6**	P	Pg	01 16 09.2	+0.6
CING				S	Sb	01 16 15.3	-1.0
CING				AML	AML		
	comp=E,4455μm,0.1s						
CING				AML	AML		
	comp=N,3925μm,0.1s						
CING				AML	AML		
	comp=E,2108μm,0.1s						
CING				AML	AML		
	comp=N,1824μm,0.2s						
ARVD	**Arcevia**	**0.51**	**343**	P	Pg	01 16 11.7	+0.4
ARVD				S	Sb	01 16 20.1	-0.2
ARVD				AML	AML		
	comp=E,1630μm,1.4s						
ARVD				AML	AML		
	comp=N,1090μm,0.6s						
ARVD				AML	AML		
	comp=N,1225μm,0.2s						
ARVD				AML	AML		
	comp=N,857μm,0.2s						
ARVD				AML	AML		
	comp=E,1630μm,0.6s						
T1211	**Morro Reatino**	**0.52**	**204**	P	Pb	01 16 12.2	-0.7
T1211				S	Sb	01 16 20.5	-0.1
FRON	**Frontone**	**0.59**	**329**	P	Pg	01 16 13.4	+0.6
FRON				S	Sb	01 16 22.5	-0.2
FRON				AML	AML		
	comp=N,1175μm,0.6s						
FRON				AML	AML		
	comp=N,1143μm,0.4s						
FRON				AML	AML		
	comp=E,1100μm,0.2s						
PIEI	**Pieia**	**0.69**	**320**	P	Pg	01 16 14.9	+0.2
PIEI				S	Sb	01 16 25.6	+0.1
PIEI				AML	AML		
	comp=N,470μm,1.5s						
PIEI				AML	AML		
	comp=E,642μm,0.3s						
PIEI				AML	AML		
	comp=N,371μm,0.2s						
ATPI	**Pietralunga -**	**0.70**	**310**	P	Pg	01 16 15.3	+0.5
ATPI				S	Sb	01 16 25.7	-0.1
ATPI				AML	AML		
	comp=N,406μm,0.4s						
ATPI				AML	AML		
	comp=E,624μm,0.4s						
ATPI				AML	AML		
	comp=E,624μm,1.6s						
FSSB	**Fossombrone**	**0.73**	**339**	P	Pb	01 16 16.0	-0.5
FSSB				AML	AML		
	comp=E,2085μm,1.2s						
FSSB				AML	AML		
	comp=N,4675μm,0.4s						

VAO 28 01:29:45.9±1.3, 8°.345S×73°.12W, h132km±7km, mbR3.9, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**0.73**	**34**	*e*P	Pn	01 30 07.2	+0.4
TBTG	**Tabatinga, AM**	**5.21**	**38**	*e*P	Pn	01 31 02.7	+0.8
ETMB	**Extrema**	**6.97**	**103**	*e*P	Pn	01 31 26.4	+0.8
LPAZ	**La Paz**	**9.28**	**149**	*e*P	Pn	01 31 57.3	+0.1
SGCB	**S£o Gabriel d**	**10.17**	**37**	*e*P	Pn	01 32 08.0	-0.5
MACA	**Manacapuru-AM**	**13.39**	**68**	*e*P	Pn	01 32 49.9	-1.0
VILB	**Vilhena**	**13.50**	**111**	*e*P	Pn	01 32 51.9	-0.3
PTLB	**Pontes e Lacer**	**15.39**	**119**	*e*P	Pn	01 33 15.2	-0.9
PDRB	**Porto dos Gac**	**16.46**	**103**	*e*P	P	01 33 29.7	0.0
BOAV	**Boa Vista**	**16.47**	**50**	*e*P	P	01 33 29.7	0.0
CLDB	**Colider**	**17.26**	**100**	*e*P	P	01 33 37.8	-0.7
NPRB	**Novo Progresso**	**17.65**	**87**	*e*P	P	01 33 42.2	-0.5
ITTB	**Itaituba**	**17.72**	**78**	*e*P	Pn	01 33 44.4	-0.2
MALB	**Monte Alegre**	**19.84**	**72**	*e*P	P	01 34 07.5	+0.9
MCPB	**Macapa, AP**	**22.43**	**70**	*e*P	P	01 34 33.7	-0.3

BJI ***28*** *01:31:24.7±0.0, 51°.85N×173°.71W, h19km, mb5.1/60, mB5.1/33, Ms4.7/24, Ms7 4.4/24*

AEIC ***28*** *01:31:27±2.2, 51°.6N±0°.1×173°.47W±0°.09, h62km±4km, Error ellipse: s-maj=16.2km s-min=7.6km az=168.0*

GCMT ***28*** *01:31:27.0±0.3, 51°.49N±0°.02×173°.49W±0°.04, h19km±1km, MW5.0/93, Moment Tensor Solution. s42,c48; s93,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.72±.18; $M_{\theta\theta}$-2.37±.12; $M_{\phi\phi}$-0.34±.10; $M_{r\theta}$2.08±.23; $M_{\theta\phi}$-0.87±.06; $M_{\phi r}$0.78±.22; Best double couple: $M_0$3.50100×10^{16} NP1:ϕ_s70.00000°, δ65.00000°, λ90.00000°. NP2: ϕ_s250.00000°, δ25.00000°, λ90.00000°. Principal axes: T 3.5160, Plg70.0000°, Azm339.0000°; N -0.0290, Plg0.0000°, Azm70.0000°; P -3.4860, Plg20.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***28*** *01:31:28.2±0.9, 51°.66N×173°.51W, h49km, mb5.0/65 Error ellipse: s-maj=8.7km s-min=5.1km az=108.2*

NEIC ***28*** *01:31:29.0±1.6, 51°.7N±0°.1×173°.53W±0°.09, h39km±5km, mb5.0/486, ML4.6/6, ML4.5(AEIC), Error ellipse: s-maj=15.9km s-min=7.5km az=167.0*

IDC ***28*** *01:31:29.8±0.4, 51°.67N×173°.50W, h45km±3km, mb4.4/35, mbtmp4.7/36, MS4.0/53, Error ellipse: s-maj=13.3km s-min=8.6km az=169.0*

ISC 28 01:31:28.6±0.3, 51°.63N±0°.06×173°.48W±0°.04, h39km±4km, h41km:pP-P, n1073, σ0:97/955, mb5.0/316, MS4.0/67, 43C-14D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.66**	**287**		**Pn**	**01 31 54.6**	**-0.6**
ADK	**Adak**	**2.01**	**279**	Pn	**Pn**	**01 31 59.1**	**-0.8**
ADK				IAML		01 32 32.2	
	3μm,0.9s						
ADK	**Adak**	**2.01**	**279**	P	**Pn**	**01 31 59.1**	**-0.8**
ADK	**Adak**	**2.01**	**279**	P	**Pn**	**01 32 00.4**	**+0.6**
KIWB	**Kanaga Island**	**2.29**	**277**		**Pn**	**01 32 03.8**	**0.0**
NIKH	**Nikolski High**	**3.14**	**63**	Pn	**Pn**	**01 32 16.0**	**+0.5**

NIKH	Nikolski High	3.14	63	P	Pn	01 32 15.7	+0.3
	baz=246						
NIKH	Nikolski High	3.14	63	P	Pn	01 32 16.0	+0.5
AMKA	Amchitka	4.51	270		Pn	01 32 33.3	-1.0
UNV	Unalaska Valle	4.79	60	Pn	Pn	01 32 39.2	+1.2
UNV	Unalaska Valle	4.79	60	P	Pn	01 32 39.1	+1.1
	baz=245,SNR=10						
UNV	Unalaska Valle	4.79	60	P	Pn	01 32 40.0	+2.0
AKUT	Akutan	5.30	59	Pn	Pn	01 32 45.5	+0.5
AKUT				IAML		01 34 23.0	
	comp=N,258nm,2.1s						
AKUT				IAML		01 34 23.8	
	comp=E,295nm,1.6s						
FALS	False Pass	6.85	58	Pn	Pn	01 33 05.8	-0.5
FALS	False Pass	6.85	58	P	Pn	01 33 08.8	+2.4
	baz=246						
SHEM	Shemya Is, Ala	7.72	283	LR	LR	01 36 11.0	
	comp=E,1µm,21.9s,baz=106,slow=36						
SDPT	Sand Point	8.60	59	P	Pn	01 33 30.6	+0.2
	baz=249						
P16K	Nushagak River	11.50	44	P	Pn	01 34 11.9	+1.9
	baz=236,SNR=7.8						
O16K	Kokwok River B	11.78	41	P	Pn	01 34 14.5	+0.7
	baz=234						
Q16K	King Salmon	11.91	47	P	Pn	01 34 16.2	+0.6
	baz=241						
N16K	Nishlik Lake	12.06	37	P	Pn	01 34 19.1	+1.4
	baz=229						
Q17K	Contact Creek	12.08	50	P	Pn	01 34 19.6	+1.6
	baz=244						
P17K	Kvichak River	12.27	45	P	Pn	01 34 19.9	-0.6
	baz=239						
O17K	Koliganek Bris	12.30	42	P	Pn	01 34 21.0	+0.2
	baz=236						
SII	Sitkinak Islan	12.34	59	P	Pn	01 34 22.0	+0.5
Q18K	Katmai Hardscr	12.66	49	P	Pn	01 34 25.7	-0.2
	baz=244						
P18K	Big Mountain,	12.91	46		Pn	01 34 26.9	-2.3
P18K	Big Mountain,	12.91	46	P	Pn	01 34 29.3	+0.1
	baz=241						
O18K	Koktuh Hills	13.15	44		Pn	01 34 32.4	-0.1
O18K	Koktuh Hills	13.15	44	P	Pn	01 34 32.8	+0.3
	baz=239						
N18K	Kilae Creek	13.31	40	P	Pn	01 34 33.9	-0.8
	baz=235						
Q19K	Cape Douglas,	13.43	49		Pn	01 34 34.4	-1.9
Q19K	Cape Douglas,	13.43	49	P	Pn	01 34 35.7	-0.6
	baz=246						
KDAK	Kodiak Island	13.53	55	*i* P	Pn	01 34 34.6	-3.1
KDAK	Kodiak Island	13.53	55	P	Pn	01 34 36.3	-1.4
	baz=252						
P19K	Oil Pt	13.93	47	P	Pn	01 34 44.8	+1.7
	baz=244						
N19K	Bonanza Creek	13.96	41	Pn	Pn	01 34 43.8	+0.2
N19K	Bonanza Creek	13.96	41	P	Pn	01 34 43.4	-0.2
	baz=237,SNR=11						
O20K	Slope Mountain	14.40	46	P	Pn	01 34 49.0	-0.5
	baz=243						
L19K	White Mountain	14.61	36	Pn	Pn	01 34 53.6	+1.3
L19K	White Mountain	14.61	36	P	Pn	01 34 52.7	+0.4
	baz=232,SNR=7.6						
M19K	Big River Lodg	14.62	38	P	Pn	01 34 52.5	+0.2
	baz=234						
TTA	Tatalina	14.68	33	Pn	Pn	01 34 54.7	+1.3
TTA	Tatalina	14.68	33	P	Pn	01 34 54.7	+1.3
TTA	Tatalina	14.68	33	P	Pn	01 34 53.3	0.0
	baz=227,SNR=16						
CNPM	China Poot	14.80	49	Pn	Pn	01 34 54.6	-0.3
BRLK	Bradley Lake	15.06	48	Pn	Pn	01 34 57.8	-0.5
BRLK				IAmb	IAmb	01 35 17.1	
	comp=Z,78nm,1.4s						
M20K	Styx River	15.09	39	IAmb	IAmb	01 35 28.1	
	comp=Z,74nm,1.4s						
M20K	Styx River	15.09	39	P	Pn	01 34 58.5	-0.3
	baz=236						
N20K	Mount Spurr	15.11	42	P	Pn	01 34 59.0	0.0
	baz=240						
L20K	Farewell, AK	15.15	37	P	Pn	01 34 59.7	+0.2
	baz=233,SNR=9.7						
K20K	Telida	15.63	34	P	Pn	01 35 05.7	0.0
	baz=230						
GCSA	Galena City Sc	15.72	27	P	Pn	01 35 06.1	-0.7
	baz=221						
SKT	Skwentna	15.78	40	Pn	Pn	01 35 08.8	+1.1
SKT	Skwentna	15.78	40	P	Pn	01 35 06.7	-1.0
	baz=239						
SUA	Susitna One	15.85	43	P	Pn	01 35 09.0	+0.3
	baz=242						
SEW	Seward	15.86	48	Pn	Pn	01 35 06.9	-1.7
SEW	Seward	15.86	48	P	Pn	01 35 06.6	-2.0
	baz=248						
O22K	Cooper Landing	15.88	47	P	Pn	01 35 09.6	+0.7
	baz=246,SNR=6.6						
PPLA	Purkeypile	16.03	37	IAmb	IAmb	01 35 40.9	
	comp=Z,76nm,1.2s						
PPLA	Purkeypile	16.03	37	P	Pn	01 35 11.7	+0.7
	baz=235						
RC01	Rabbit Creek A	16.12	45	P	Pn	01 35 11.8	-0.1
	baz=244						
J20K	Nowinta River	16.14	31	P	Pn	01 35 13.0	+0.8
	baz=228,SNR=20						
CAST	Castle Rocks	16.37	36	Pn	Pn	01 35 15.6	+0.4
CAST	Castle Rocks	16.37	36	P	Pn	01 35 16.0	+0.9
	baz=234,SNR=28						
CHUM	Lake Minchumin	16.57	34	P	Pn	01 35 18.3	+0.6
	baz=232,SNR=10						
PWL	Port Wells	16.65	47	P	Pn	01 35 17.1	-1.6
	baz=247						
KNK	Knik Glacier	16.82	45	P	Pn	01 35 19.9	-0.9
	baz=246,SNR=5.5						
KTH	Kantishna Hill	16.88	36		P	01 35 22.5	-0.8
SML	Sawmill	17.04	44	P	Pn	01 35 22.4	-1.2
	baz=245						
PET	Petropavlovsk	17.05	286	*ce* P	P	01 35 26.2	+1.1
PET				pmax	pmax		
	comp=Z,107nm,2.5s						
TRF	Thorofare Moun	17.05	37	P	Pn	01 35 24.1	+0.2
	baz=237						
BPAW	Bear Paw Mtn.	17.17	35	P	P	01 35 25.9	-0.6
	baz=234,SNR=20						
GLI	Glacier Island	17.22	47	P	Pn	01 35 24.4	-1.4
	baz=249						
M23K	Glacier View	17.29	44	P	Pn	01 35 26.6	-0.1
	baz=246,SNR=7.6						
WAT1	Susitna Watana	17.41	40	P	Pn	01 35 27.5	-0.7
	baz=241						
SCM	Sheep Creek Mo	17.48	44	P	Pn	01 35 28.1	-1.0
	baz=246,SNR=6.3						
I21K	Tanana	17.51	31	P	Pn	01 35 28.3	-1.0
	baz=229,SNR=19						
IMAR	Indian Mountai	17.52	27	Pn	Pn	01 35 28.3	-1.2
H21K	Melozitna Rive	17.57	29	P	Pn	01 35 29.2	-0.9
	baz=227,SNR=13						
PEA0B	Petropavlovsk-	17.61	286	*i* P	P	01 35 31.1	-0.3
PETK	Petropavlovsk-	17.61	286	P	P	01 35 32.1	+0.8
	comp=Z,18nm,0.7s,baz=94,slow=15,SNR=15						
PETK				LR	LR	01 42 06.6	
	comp=Z,183nm,19.0s,baz=95,slow=36						
WAT6	Susitna Watana	17.63	42	P	Pn	01 35 30.1	-0.8
	baz=243						
MCK	McKinley	17.72	37	P	Pn	01 35 30.9	-1.0
	baz=238,SNR=11						
EYAK	Cordova Ski Ar	17.74	49	P	Pn	01 35 32.1	0.0
	baz=252						
EYAK	Cordova Ski Ar	17.74	49	P	P	01 35 35.0	+2.3
	comp=Z,25nm,2.4s						
BWN	Browne	17.76	36	IAmb	IAmb	01 35 57.4	
	comp=Z,57nm,0.7s						
MLY	Manley	17.82	32	P	P	01 35 33.8	+0.2
	baz=232,SNR=20						
KLU	Klutina	17.97	46	P	Pn	01 35 34.2	-1.0
	baz=249						
G21K	Allakaket	17.98	26	P	Pn	01 35 34.8	-0.3
	baz=224,SNR=9.8						
DHY	Denali Highway	18.00	40	P	Pn	01 35 35.0	-0.6
	baz=242						
M24K	Tolsona, Glenn	18.09	44	Pn	Pn	01 35 34.4	-2.2
M24K	Tolsona, Glenn	18.09	44	P	Pn	01 35 35.9	-0.7
	baz=247						
NEA2	Nenana	18.14	35	P	Pn	01 35 36.1	-1.0
	baz=236,SNR=12						
H22K	Ishtalitna Cre	18.17	30	P	Pn	01 35 38.0	+0.5
	baz=229,SNR=18						
I23K	Minto, Yukon-K	18.36	33	IAmb	IAmb	01 35 55.3	
	comp=Z,46nm,0.6s						
I23K	Minto, Yukon-K	18.36	33	P	Pn	01 35 40.3	+0.6
	baz=234,SNR=35						
BMRM	Bremner River	18.40	48	P	Pn	01 35 40.7	+0.3
	baz=252						
F21K	Alatna River	18.50	25	P	Pn	01 35 41.2	-0.3
	baz=222,SNR=5.1						
N25K	Chitina, Valde	18.61	46	P	P	01 35 41.5	-0.8
	baz=250,SNR=8.1						
HARP	HAARP	18.64	44	P	P	01 35 41.5	-1.2
	baz=248						
BERG	Berg Lake	18.67	50	IAmb	IAmb	01 35 59.6	
	comp=Z,50nm,0.6s						
H23K	Yukon River	18.70	31	P	Pn	01 35 43.7	-0.2
	baz=232,SNR=16						
TCOL	CIGO, UAF Yank	18.73	35	P	P	01 35 42.7	-0.8
	baz=237						
COLA	College	18.73	35	P	Pn	01 35 44.2	0.0
COLA	College	18.73	35	P	Pn	01 35 44.2	0.0
COLA				pmax	pmax		
	comp=Z,22nm,0.8s						
COLA	College	18.73	35	P	P	01 35 43.2	-0.3
	baz=237						
PAX	Paxson	18.74	42	P	P	01 35 42.8	-0.9
	baz=246						
HDA	Harding Lake	18.82	37	IAmb	IAmb	01 35 46.3	
	comp=Z,42nm,0.6s						
HDA	Harding Lake	18.82	37	P	P	01 35 43.4	-1.1
	baz=240,SNR=26						
G22K	Bettles	18.82	27	P	Pn	01 35 44.9	-0.5
	baz=226						
K24K	Donnelly Dome	18.98	39	P	P	01 35 45.8	-0.6
	baz=243,SNR=20						
POKR	Poker Plat Res	19.01	35	P	P	01 35 45.4	-1.3
	baz=237						
IL31		19.02	36	P	P	01 35 44.9	-1.9
ILAR	Eielson Array	19.02	36	P	P	01 35 44.6	-2.2
	comp=Z,18nm,0.6s,baz=235,slow=10,SNR=122						
ILAR				LR	LR	01 43 50.1	
	comp=Z,560nm,19.0s,baz=236,slow=39						
SNH	Sunshine Point	19.04	51	IAmb	IAmb	01 36 10.3	
	comp=Z,49nm,0.8s						
F22K	John River	19.06	25	P	Pn	01 35 47.7	-0.4
	baz=224						
WAX	Waxell Ridge	19.09	51	IAmb	IAmb	01 36 03.9	
	comp=Z,42nm,0.7s						
G23K	Bananza Creek	19.12	29	P	Pn	01 35 48.8	-0.1
	baz=229,SNR=27						
BILL	Bilibino	19.18	337	P	P	01 35 48.4	0.0
BILL	Bilibino	19.18	337	*de* P	Pn	01 35 49.5	-0.1
BILL				pmax	pmax		
	comp=Z,53nm,1.1s						
BILL				MLR	MLR		
	comp=Z,398nm,14.0s						
MCARA	McCarthy VSAT	19.26	48	P	P	01 35 49.9	+0.6
	baz=253						
H24K	Noodor Dome	19.26	33	IAmb	IAmb	01 36 07.3	
	comp=Z,84nm,1.1s						
H24K	Noodor Dome	19.26	33	P	P	01 35 49.6	+0.1
	baz=235,SNR=70						
RIDG	Independent Ri	19.32	40	IAmb	IAmb	01 36 14.5	
	comp=Z,30nm,0.6s						
COLD	Coldfoot	19.41	28	P	P	01 35 51.5	+0.5
	baz=228,SNR=7.5						
MESA	MESA	19.47	52	P	P	01 35 51.6	-0.3
MESA				IAmb	IAmb	01 35 57.4	
	comp=Z,44nm,0.8s						
MESA	MESA	19.47	52	P	P	01 35 51.8	-0.1
	baz=258						
J25K	Salcha River,	19.51	37	IAmb	IAmb	01 36 05.1	
	comp=Z,90nm,0.7s						
J25K	Salcha River,	19.51	37	P	P	01 35 50.9	-1.3
	baz=241,SNR=98						
M26K	Nabesna, AK	19.59	45	P	P	01 35 53.3	+0.3
	baz=250,SNR=9.3						
L26K	Log Cabin Wild	19.65	43	P	P	01 35 53.0	-0.7
	baz=248,SNR=24						
SCRK	Sand Creek	19.77	40	IAmb	IAmb	01 35 56.5	
	comp=Z,31nm,0.6s						
SCRK	Sand Creek	19.77	40	P	P	01 35 53.5	-1.5
	baz=245,SNR=36						
G24K	Hadweenzic Riv	19.90	31	P	P	01 35 56.6	+0.2
	baz=233,SNR=31						
PRP	Porcupine Dome	19.90	35	P	P	01 35 56.4	-0.2
	baz=239,SNR=23						
TABL	Table Mountain	19.92	51	P	P	01 35 57.6	+0.8
TABL				IAmb	IAmb	01 36 05.1	
	comp=Z,76nm,1.2s						
CTG	Chitna Glacier	19.94	50	P	P	01 35 55.8	-1.1
	baz=256,SNR=6.7						
CTGM	Chitina Glacie	19.94	50	IAmb	IAmb	01 36 20.2	
	comp=Z,36nm,0.8s						
LOGN	Logan Glacier	20.07	50	IAmb	IAmb	01 36 17.0	
	comp=Z,35nm,0.8s						
M27K	Edge Creek, AK	20.07	45	P	P	01 35 58.0	-0.3
	baz=252						
E23K	Chandalar	20.14	26	P	P	01 35 59.6	+0.6
	baz=227						
J26L	Joseph Creek	20.16	39	P	P	01 35 58.0	-1.2
	baz=244,SNR=120						
H25K	Birch Creek	20.20	33	P	P	01 35 59.8	+0.3
	baz=237,SNR=32						
F24K	Squaw Lake	20.28	29	P	P	01 36 00.8	+0.3
	baz=231,SNR=8.1						
PCA	Pinnacle	20.29	52	IAmb	IAmb	01 36 19.0	
	comp=Z,46nm,0.7s						
PINM	Pinnacle	20.29	52	P	P	01 36 00.2	-0.5
	baz=260,SNR=8.6						
L27K	Beaver Creek,	20.31	44	P	P	01 36 00.9	0.0
	baz=250,SNR=19						
G25K	Bearman Lake	20.39	32	P	P	01 36 01.8	+0.3
	baz=235,SNR=7.5						
O28M	Mount Upton	20.44	50	P	P	01 36 02.1	-0.4
	baz=258,SNR=9.2						
E24K	Your Creek	20.46	27	P	P	01 36 01.7	-0.8
	baz=229						
D23K	Nanushuk River	20.50	24	P	P	01 36 03.0	+0.2
	baz=224						
BVCY	Beaver Creek	20.54	46	P	P	01 36 03.3	0.0
	baz=253,SNR=14						
YUK3	Moose Creek	20.54	48	P	P	01 36 02.4	-1.2
	baz=255						
TOLK	Toolik Lake Re	20.55	25	P	P	01 36 03.8	+0.3
TOLK				IAmb	IAmb	01 36 17.8	
	comp=Z,48nm,0.9s						
TOLK	Toolik Lake Re	20.55	25	P	P	01 36 03.7	+0.3
	baz=226,SNR=11						
K27K	Chicken	20.56	41	P	P	01 36 02.7	-0.8
	baz=248						
FYU	Fort Yukon	20.56	33	IAmb	IAmb	01 36 09.7	
	comp=Z,33nm,0.8s						
BCPM	Bancas Point	20.57	53	IAmb	IAmb	01 36 22.9	
	comp=Z,44nm,0.6s						
PNL	Peninsula	20.65	54	P	P	01 36 03.5	-1.0
	baz=262						
PNL	Peninsula	20.65	54	P	P	01 36 05.5	+1.0
I26K	Coal Creek Min	20.67	37	IAmb	IAmb	01 36 04.9	
	comp=Z,65nm,0.8s						
I26K	Coal Creek Min	20.67	37	P	P	01 36 03.6	-1.1
	baz=243						
YUK8	Steele Glacier	20.75	49	P	P	01 36 05.1	-0.8
	baz=257						
F25K	Christian Rive	21.01	30	P	P	01 36 08.2	-0.1
	baz=234,SNR=16						
D24K	Happy Valley	21.11	25	P	P	01 36 09.2	-0.1
	baz=226						
O29M	Mount Kennedy	21.15	52	P	P	01 36 10.0	0.0
	baz=261,SNR=10						
C23K	Itkillik River	21.16	22	P	P	01 36 09.5	-0.4
	baz=222,SNR=9.2						
EGAK	Eagle	21.21	39	P	P	01 36 10.5	0.0
	baz=247,SNR=176						
BMAR	Burnt Mountain	21.25	31	P	P	01 36 11.6	+0.7
G26K	Porcupine Rive	21.25	33	P	P	01 36 11.1	+0.2
	baz=238,SNR=18						
YUK4	Talbot Arm	21.29	49	P	P	01 36 12.2	+0.5
	baz=258						
E25K	Arctic Village	21.35	29	P	P	01 36 12.4	+0.4
	baz=233,SNR=9.4						
SEY	Seymchan	21.35	315	P	P	01 36 13.3	+1.3
	comp=Z,6.8nm,0.6s,baz=110,slow=9.6,SNR=11						
	comp=Z,6.8nm,0.6s						
SEY	Seymchan	21.35	315	*ce* P	P	01 36 12.6	+0.6
SEY				pmax	pmax		
	comp=Z,30nm,0.9s						
YUK6	Outpost Mounta	21.35	50	P	P	01 36 11.6	-0.7
	baz=260						
I27K	Kandik River	21.38	37	P	P	01 36 12.0	-0.4
	baz=244,SNR=44						
MA2	Magadan	21.48	306	LR	LR	01 44 34.1	
	comp=Z,540nm,18.1s,baz=100,slow=37						
P29M	Windy Craggy	21.48	54	IAmb	IAmb	01 36 37.6	
	comp=Z,74nm,0.8s						
P29M	Windy Craggy	21.48	54	P	P	01 36 13.8	+0.4
	baz=264,SNR=8.5						
C24K	Franklin Bluff	21.53	23	P	P	01 36 13.8	-0.1
	baz=225						
F26K	Sheenjek River	21.54	31	P	P	01 36 13.7	-0.3
	baz=236,SNR=29						
M29M	Somme Creek	21.62	46	P	P	01 36 13.8	-1.2
	baz=256						
DAWY	Dawson	21.68	42	IAmb	IAmb	01 36 32.3	
	comp=Z,44nm,1.3s						
DAWY	Dawson	21.68	42	P	P	01 36 14.4	-1.1
	baz=251,SNR=25						
H27K	Steamboat Moun	21.69	35	P	P	01 36 14.2	-1.5
	baz=243,SNR=12						
HYT	Haines Junctio	21.75	51	IAmb	IAmb	01 36 33.1	
	comp=Z,51nm,1.4s						
HYT	Haines Junctio	21.75	51	P	P	01 36 15.0	-1.4
	baz=261						
D25K	Kavik River	21.87	26	P	P	01 36 16.8	-0.7
	baz=230						
G27K	Doyon Strip	21.91	34	P	P	01 36 16.7	-1.4
	baz=242,SNR=7.3						
P30M	Million Dollar	21.92	53	P	P	01 36 17.5	-0.8
	baz=263						
L29M	L29M	21.93	45	P	P	01 36 17.5	-0.9
	baz=255,SNR=18						
N30M	Aishikik Lake	22.05	49	P	P	01 36 18.4	-1.2
	baz=260						
PLBC	Pleasant Camp	22.16	55	P	P	01 36 19.7	-1.0
	baz=266						
S31K	Pelican	22.17	59	P	P	01 36 20.4	-0.4
	baz=270						
J29M	Klondike Camp	22.29	41	IAmb	IAmb	01 36 40.3	
	comp=Z,43nm,0.6s						
J29M	Klondike Camp	22.29	41	P	P	01 36 21.9	-0.3
	baz=252						
K29M	Barlow Dome	22.40	43	P	P	01 36 22.6	-0.7
	baz=254,SNR=28						
M30M	Minto, Yukon	22.40	47	P	P	01 36 23.2	-0.2
M30M	Minto, Yukon	22.40	47	P	P	01 36 22.6	-0.8
	baz=258						
O30N	Mendenhall	22.43	51	P	P	01 36 22.5	-1.2
	baz=263						
I29M	Ogilvie Camp,	22.55	39	P	P	01 36 23.7	-1.2
	baz=249						
E27K	Coleen River	22.62	31	P	P	01 36 23.7	-1.9
	baz=239,SNR=20						
C26K	Camden Bay	22.64	25	P	P	01 36 24.0	-1.8
	baz=231,SNR=5.7						
SIT	Sitka	22.67	61	P	P	01 36 25.7	-0.5
	baz=272						
N31M	Braeburn, Yuko	22.68	50	P	P	01 36 25.1	-1.2
	baz=261						
SKAG	Skagway	22.69	55	IAmb	IAmb	01 36 55.0	
	comp=Z,24nm,0.8s						
SKAG	Skagway	22.69	55	P	P	01 36 25.6	-0.7
	baz=267,SNR=6.7						
C27K	Jago River	22.79	27	P	P	01 36 25.8	-1.6
	baz=233						
WHY	Whitehorse	23.01	52	P	P	01 36 30.2	+0.4
WHY	Whitehorse	23.01	52	P	P	01 36 28.8	-1.0
	baz=264						
S32K	Killisnoo	23.06	60	P	P	01 36 28.5	-1.7
	baz=272						
R32K	Eaglecrest	23.08	58	P	P	01 36 28.5	-1.9
	baz=270						
M31M	Drury Creek, Y	23.44	48	P	P	01 36 33.0	-0.9
	baz=261						
P32M	Atlin	23.52	55	P	P	01 36 35.0	+0.2
	baz=268						
EPYK	Eagle Plains	23.52	37	IAmb	IAmb	01 36 49.2	
	comp=Z,17nm,0.6s						
EPYK	Eagle Plains	23.52	37	P	P	01 36 33.3	-1.4
	baz=249,SNR=8.9						
FARO	Faro, Yukon	23.92	48	P	P	01 36 37.9	-0.6
	baz=262						
N32M	Quiet Lake	23.93	51	P	P	01 36 38.8	+0.2
	baz=265						
G30M	tAoh Zraii Nji	23.93	36	P	P	01 36 37.0	-1.5
	baz=248,SNR=11						
P33M	Teslin, Yukon	23.99	53	P	P	01 36 40.1	+0.9
P33M	Teslin, Yukon	23.99	53	P	P	01 36 39.1	-0.2
	baz=267,SNR=6.3						
Q32M	Nakina River	24.25	56	P	P	01 36 41.5	-0.2
	baz=270,SNR=7.8						
WRAK	Wrangell Islan	24.36	62	P	P	01 36 42.7	+0.3
	baz=276						
S34M	Telegraph Cree	24.89	59	P	P	01 36 48.3	+1.0
	baz=274,SNR=10						
V35K	Ketchikan	24.91	65	P	P	01 36 48.5	+1.0
	baz=279						
R33M	Jennings River	24.91	55	P	P	01 36 48.1	+0.4
	baz=271						
MMPY	Sheldon Lake,	24.93	47	P	P	01 36 47.3	-0.4
	baz=263,SNR=11						
F31M	Tsiigehtchic	25.00	36	P	P	01 36 47.3	-0.9
	baz=250,SNR=11						
INK	Inuvik	25.37	34	P	P	01 36 51.2	-0.4
	comp=Z,30nm,0.8s,baz=228,slow=10,SNR=25						
	comp=Z,30nm,0.8s						
INK	Inuvik	25.37	34	P	P	01 36 51.3	-0.2
INK				IAmb	IAmb	01 36 53.6	
	comp=Z,29nm,0.8s						
INK	Inuvik	25.37	34	P	P	01 36 51.3	-0.2
INK				pmax	pmax		
	comp=Z,29nm,0.8s						
INK	Inuvik	25.37	34	P	P	01 36 51.0	-0.5
	baz=249,SNR=25						
DLBC	Dease Lake	25.44	57	P	P	01 36 54.7	+2.3
	comp=Z,26nm,1.0s,baz=273,slow=9.9,SNR=23						
DLBC				LR	LR	01 47 07.8	
	comp=Z,513nm,19.7s,baz=266,slow=37						
	comp=Z,26nm,1.0s						
DLBC	Dease Lake	25.44	57	IAmb	IAmb	01 37 12.9	
	comp=Z,22nm,0.8s						
DLBC	Dease Lake	25.44	57	P	P	01 36 53.4	+1.0
	baz=274,SNR=12						
T35M	Bob Quinn	25.45	61	P	P	01 36 53.5	+1.1
	baz=276,SNR=6.3						
GRNB	Grenville Isla	26.14	68	IAmb	IAmb	01 37 24.6	
	comp=Z,32nm,1.1s						
TGTN	Hyland Airport	26.26	50	P	P	01 36 59.6	-0.2
	baz=268,SNR=6.1						
LIRD	Liard River Hi	27.40	55	P	P	01 37 10.1	+0.1
	baz=275						
BBB	Bella Bella	27.65	71	LR	LR	01 46 37.0	
	comp=Z,206nm,19.8s,baz=286,slow=33						
KOTAN	Kotaneelee Air	28.37	53	P	P	01 37 18.2	-0.4
	baz=275						
YSS	Yuzh-Sakhalins	28.59	278	P	P	01 37 21.9	+1.2
YSS	Yuzh-Sakhalins	28.59	278	*e* P	P	01 37 22.2	+1.5
YSS				*e*		01 37 35.0	
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
A36M	Sachs Harbour	29.27	28	P	P	01 37 25.9	-0.5
	baz=252						
YAK	Yakutsk	31.75	311	LR	LR	01 50 56.5	
	comp=Z,644nm,18.6s,baz=89,slow=37						
YAK	Yakutsk	31.75	311	*i* P	P	01 37 48.5	+0.1
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
LLLB	Lillooet	31.86	71	IAmb	IAmb	01 38 08.4	
	comp=Z,9.1nm,0.8s						
TIXI	Tiksi	32.08	330	P	P	01 37 51.5	+0.4
	comp=Z,4.1nm,0.5s,baz=270,slow=23,SNR=8.0						
TIXI				PcP	PcP	01 40 40.1

YKA				LR	LR	01 53 25.3		
	comp=Z,351nm,18.8s,baz=270,slow=40							
	comp=Z,4.1nm,0.7s							
YKA	**Yellowknife Ar**	**32.63**	**47**	P	**P**	**01 37 56.1**	**0.0**	
YKA	**Yellowknife Ar**	**32.63**	**47**	*ce*P	**P**	**01 37 56.0**	**-0.2**	
YKA				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BRLDA	**Berland Lookou**	**33.20**	**63**	IAmb	IAmb	01 38 22.8		
	comp=Z,15nm,1.0s							
D05A	**Enumclaw**	**33.22**	**77**	IAmb	IAmb	01 38 05.0		
	comp=Z,51nm,1.3s							
LON	**Longmire**	**33.53**	**78**	IAmb	IAmb	01 38 19.7		
	comp=Z,8.0nm,0.7s							
KLR	**Kul'dur**	**34.29**	**288**	P	**P**	**01 38 10.4**	**-0.3**	
	comp=Z,3.9nm,0.5s,baz=71,slow=8.5,SNR=12							
	comp=Z,3.9nm,0.5s							
KLR	**Kul'dur**	**34.29**	**288**	*ce*P	**P**	**01 38 09.5**	**-1.2**	
KLR				pmax	pmax			
	comp=Z,4.0nm,0.6s							
B08A	**Colville Reser**	**34.30**	**74**	IAmb	IAmb	01 38 13.0		
	comp=Z,14nm,0.9s							
HAWA	**Hanford**	**35.09**	**77**	IAmb	IAmb	01 38 32.1		
	comp=Z,14nm,0.8s							
ZEA	**Zeya**	**35.09**	**297**	*e*P	**P**	**01 38 17.3**	**-0.3**	
ZEA				*e*		01 39 40.3		
ZEA				*e*S	**S**	**01 43 41.5**	**-5.7**	
ZEA				pmax	pmax			
	comp=E,10.0nm,0.4s							
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ZEA				pmax	pmax			
	comp=Z,200nm,4.6s							
ZEA				smax	smax			
	comp=N,200nm,9.0s							
ZEA				MLR	MLR			
	comp=E,200nm,17.0s							
ZEA				MLR	MLR			
	comp=Z,200nm,17.0s							
C09A	**Chrisman Ranch**	**35.18**	**74**	IAmb	IAmb	01 38 20.2		
	comp=Z,15nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**35.36**	**213**	T	T	02 16 31.2		
	baz=21,slow=76,SNR=72							
H11N3	**WAKE ISLAND Hy**	**35.37**	**213**	T	T	02 16 27.4		
	baz=21,slow=76,SNR=82							
H11N1	**WAKE ISLAND Hy**	**35.38**	**213**	T	T	02 16 28.1		
	baz=21,slow=76,SNR=49							
PINE	**Pine Mountain**	**35.53**	**82**	P	**P**	**01 38 22.9**	**+1.1**	
PINE				IAmb	IAmb	01 38 38.1		
	comp=Z,14nm,1.1s							
YBH	**Yreka Blue Hor**	**35.55**	**86**	LR	LR	01 49 18.3		
	comp=Z,171nm,20.5s,baz=309,slow=30							
YBH	**Yreka Blue Hor**	**35.55**	**86**	IAmb	IAmb	01 38 37.8		
	comp=Z,12nm,0.9s							
NEW	**Newport**	**35.66**	**73**	LR	LR	01 53 05.2		
	comp=Z,138nm,18.6s,baz=297,slow=36							
NEW	**Newport**	**35.66**	**73**	IAmb	IAmb	01 38 36.6		
	comp=Z,14nm,0.7s							
NEW	**Newport**	**35.66**	**73**	P	**P**	**01 38 22.4**	**-0.2**	
	baz=297,SNR=17							
E09A	**Wood Farm, Sta**	**35.87**	**76**	IAmb	IAmb	01 38 48.7		
	comp=Z,26nm,1.4s							
K05A	**Summer Lake**	**36.13**	**83**	P	**P**	**01 38 28.2**	**+1.3**	
K05A				IAmb	IAmb	01 38 42.2		
	comp=Z,25nm,0.9s							
I07A	**Izee**	**36.27**	**80**	IAmb	IAmb	01 38 42.5		
	comp=Z,8.3nm,0.7s							
USA0B	**Ussuriysk Arra**	**36.54**	**280**	P	**P**	**01 38 29.2**	**-0.9**	
USA0B				IAmb	IAmb	01 38 32.4		
	comp=Z,18nm,0.8s							
USA0B	**Ussuriysk Arra**	**36.54**	**280**	P	**P**	**01 38 29.2**	**-0.9**	
USA0B				pmax	pmax			
	comp=Z,18nm,0.9s							
USRK	**Ussuriysk Ar.**	**36.54**	**280**	P	**P**	**01 38 30.2**	**+0.1**	
	comp=Z,19nm,0.8s,baz=58,slow=8.0,SNR=13							
USRK				pP	**pwP**	**01 38 43.6**	**+0.6**	
	comp=Z,7.5nm,0.5s,baz=51,slow=10,SNR=4.7							
USRK				LR	LR	01 52 30.2		
	comp=Z,305nm,21.2s,baz=49,slow=34							
	comp=Z,19nm,0.8s							
USRK	**Ussuriysk Ar.**	**36.54**	**280**	P	**P**	**01 38 29.9**	**-0.2**	
H11S1	**WAKE ISLAND Hy**	**36.56**	**213**	T	T	02 17 42.5		
	baz=20,slow=76,SNR=82							
H11S2	**WAKE ISLAND Hy**	**36.58**	**213**	T	T	02 17 43.7		
	baz=20,slow=76,SNR=57							
H11S3	**WAKE ISLAND Hy**	**36.58**	**213**	T	T	02 17 46.5		
	baz=20,slow=76,SNR=25							
MOD	**Modoc Plateau**	**36.95**	**84**	IAmb	IAmb	01 38 49.3		
	comp=Z,18nm,1.1s							
MAJO	**Matsushiro**	**37.11**	**265**	P	**P**	**01 38 35.4**	**+0.3**	
MAJO				IAmb	IAmb	01 38 37.1		
	comp=Z,17nm,0.8s							
MAJO	**Matsushiro**	**37.11**	**265**	*i* P	**P**	**01 38 35.9**	**+0.8**	
MAJO				pmax	pmax			
	comp=Z,21nm,0.9s							
MAJO	**Matsushiro**	**37.11**	**265**	P	**P**	**01 38 35.7**	**+0.6**	
MJAR	**Matsushiro Arr**	**37.11**	**265**	P	**P**	**01 38 35.9**	**+0.8**	
	comp=Z,4.3nm,0.7s,baz=48,slow=7.6,SNR=10							
MJAR				LR	LR	01 53 03.1		
	comp=Z,191nm,20.5s,baz=60,slow=35							
	comp=Z,4.3nm,0.7s							
MJB9	**Matsu-Tunnel**	**37.11**	**265**	IAmb	IAmb	01 38 38.0		
	comp=Z,18nm,0.9s							
WALA	**Waterton Lakes**	**37.19**	**70**	IAmb	IAmb	01 38 38.2		
	comp=Z,16nm,0.9s							
J08A	**Circle Bar Ran**	**37.28**	**81**	IAmb	IAmb	01 38 51.1		
	comp=Z,8.5nm,0.6s							
WVOR	**Wild Horse Val**	**37.69**	**82**	IAmb	IAmb	01 38 54.6		
	comp=Z,11nm,0.9s							
MSHR	**Mys Shultsa**	**37.92**	**279**	*ce*P	**P**	**01 38 42.1**	**+0.3**	
MSHR				pmax	pmax			
	comp=Z,47nm,0.8s							
BEKR	**Beckworth**	**38.08**	**87**	P	**P**	**01 38 44.2**	**+0.7**	
BEKR				IAmb	IAmb	01 38 58.5		
	comp=Z,12nm,0.9s							
RES	**Resolute Bay**	**38.13**	**25**	PcP	**PcP**	**01 40 58.4**	**+1.2**	
	comp=Z,2.8nm,0.6s,baz=270,slow=4.0,SNR=4.4							
RES				pPcP		01 41 11.4		
	comp=Z,2.9nm,0.7s,baz=306,slow=2.6,SNR=5.3							
RES				LR	LR	01 58 34.9		
	comp=Z,256nm,18.3s,baz=305,slow=43							
MSO	**Missoula**	**38.24**	**73**	IAmb	IAmb	01 38 46.1		
	comp=Z,13nm,1.1s							
MSO	**Missoula**	**38.24**	**73**	P	**P**	**01 38 44.6**	**-0.1**	
	baz=300,SNR=11							
JGF	**Kuroka**	**38.24**	**265**	P	**P**	**01 38 45.5**	**+0.8**	
JGF				IAmb	IAmb	01 39 14.4		
	comp=Z,43nm,1.4s							
BNX	**BinXian**	**38.53**	**285**	⇑P	**P**	**01 38 46.8**	**-0.1**	
BNX				pmax	pmax			
	comp=Z,12nm,0.7s							
BNX				pmax	pmax			
	comp=Z,170nm,3.7s							
PAHR	**Pah Rah Range**	**38.78**	**86**	IAmb	IAmb	01 39 04.4		
	comp=Z,32nm,1.1s							
VCNR	**Virginia City**	**38.86**	**87**	IAmb	IAmb	01 39 05.5		
	comp=Z,38nm,1.2s							
PNTR	**Pine Nut**	**39.02**	**87**	P	**P**	**01 38 52.1**	**+0.8**	
PNTR				IAmb	IAmb	01 39 09.2		
	comp=Z,30nm,0.8s							
YERR	**Yerington**	**39.30**	**87**	IAmb	IAmb	01 39 09.0		
	comp=Z,18nm,0.9s							
WAKR	**Walker**	**39.47**	**88**	IAmb	IAmb	01 39 10.6		
	comp=Z,18nm,1.0s							
HLID	**Hailey**	**39.66**	**78**	P	**P**	**01 38 56.8**	**+0.2**	
	baz=303,SNR=8.7							
RYN	**Ryan**	**39.96**	**87**	P	**P**	**01 38 59.0**	**-0.2**	
EGMT	**Eagleton**	**40.11**	**69**	IAmb	IAmb	01 39 02.4		
	comp=Z,37nm,0.8s							
EGMT	**Eagleton**	**40.11**	**69**	P	**P**	**01 39 00.3**	**+0.1**	
	baz=300,SNR=21							
NVAR	**Mina Array Bea**	**40.22**	**87**	P	**P**	**01 39 02.4**	**+1.0**	
	comp=Z,2.9nm,0.8s,baz=293,slow=8.0,SNR=14							
NVAR				pP	**sP**	**01 39 15.5**	**+0.3**	
	comp=Z,8.3nm,0.9s,baz=295,slow=8.5,SNR=13							
NVAR				pPcP		01 41 19.1		
	comp=Z,1.7nm,0.7s,baz=289,slow=2.0,SNR=3.6							
NVAR				LR	LR	01 51 57.2		
	comp=Z,232nm,20.4s,baz=277,slow=30							
	comp=Z,2.9nm,0.8s							
MDPB	**Devils Postpil**	**40.23**	**88**	IAmb	IAmb	01 39 17.0		
	comp=Z,29nm,1.3s							
BOZ	**Bozeman (W)**	**40.25**	**73**	IAmb	IAmb	01 39 02.9		
	comp=Z,12nm,0.9s							
BOZ	**Bozeman (W)**	**40.25**	**73**	P	**P**	**01 39 01.0**	**-0.4**	
	baz=302,SNR=12							
OMMB	**Old Mammoth Mi**	**40.29**	**88**	IAmb	IAmb	01 39 17.6		
	comp=Z,19nm,1.1s							
BOD	**Bodaibo**	**40.47**	**308**	*eP*	**P**	**01 39 02.5**	**-0.4**	
BOD				pmax	pmax			
	comp=Z,10.0nm,1.1s							
CN2	**Changchun**	**40.74**	**284**	*eP*	**P**	**01 39 05.8**	**+0.5**	
CN2				*es*P	pwP	01 39 18.5	-0.7	
CN2				*eS*	**S**	**01 45 13.0**	**+0.1**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=Z,400nm,15.0s							
CN2				LR	LR			
	comp=Z,300nm,15.0s							
CN2				LR	LR			
	comp=Z,600nm,16.0s							
ELK	**Elko**	**40.74**	**82**	LR	LR	01 55 20.2		
	comp=Z,179nm,19.1s,baz=310,slow=35							
YHL	**Hebgen Lake**	**40.91**	**74**	IAmb	IAmb	01 39 09.2		
	comp=Z,21nm,1.2s							
YHH	**Holmes Hill**	**41.14**	**74**	IAmb	IAmb	01 39 11.0		
	comp=Z,23nm,1.1s							
HIA	**Hailar**	**41.25**	**294**	P	**P**	**01 39 09.0**	**-0.5**	
HIA				IAmb	IAmb	01 39 10.5		
	comp=Z,16nm,0.9s							
HIA	**Hailar**	**41.25**	**294**	P	**P**	**01 39 09.0**	**-0.5**	
HIA				pmax	pmax			
	comp=Z,16nm,0.9s							
JCJ	**Chichijima**	**41.26**	**251**	LR	LR	01 55 00.1		
	comp=Z,82nm,19.4s,baz=100,slow=34							
FFC	**Flin Flon**	**41.27**	**57**	P	**P**	**01 39 09.5**	**-0.1**	
FFC				IAmb	IAmb	01 39 23.2		
	comp=Z,14nm,0.7s							
FFC	**Flin Flon**	**41.27**	**57**	P	**P**	**01 39 09.5**	**-0.1**	
FFC				pmax	pmax			
	comp=Z,14nm,0.7s							
FFC	**Flin Flon**	**41.27**	**57**	P	**P**	**01 39 09.3**	**-0.3**	
FFC				pP	**pwP**	**01 39 22.2**	**-2.3**	
YNR	**Norris Junctio**	**41.29**	**74**	IAmb	IAmb	01 39 12.3		
	comp=Z,16nm,0.9s							
VES	**Vestal, Richgr**	**41.35**	**91**	P	**P**	**01 39 10.8**	**+0.4**	
	baz=310							
LCH	**Last Change Ra**	**41.37**	**88**	IAmb	IAmb	01 39 26.0		
	comp=Z,19nm,1.1s							
PKM	**Mcpherson Peak**	**41.51**	**92**	P	**P**	**01 39 12.0**	**0.0**	
	baz=311							
H17A	**Grant Village**	**41.52**	**74**	P	**P**	**01 39 11.5**	**-0.6**	
	baz=303,SNR=7.4							
YMP	**Mirror Lake Pl**	**41.59**	**74**	P	**P**	**01 39 13.3**	**+0.6**	
CWC	**Cottonwood Cre**	**41.60**	**89**	P	**P**	**01 39 12.0**	**-0.7**	
	baz=310							
GRAC	**Grapevine Rang**	**41.69**	**88**	IAmb	IAmb	01 39 28.1		
	comp=Z,24nm,1.2s							
GRAC	**Grapevine Rang**	**41.69**	**88**	P	**P**	**01 39 12.7**	**-0.6**	
	baz=309							
ALE	**Alert**	**41.78**	**11**	P	**P**	**01 39 13.2**	**-0.2**	
ALE				pP	**pP**	**01 39 26.2**	**+2.6**	
ISA	**Isabella, Lake**	**41.85**	**90**	P	**P**	**01 39 13.9**	**-0.7**	
	baz=310							
RLMT	**Red Lodge**	**41.91**	**73**	IAmb	IAmb	01 39 17.7		
	comp=Z,28nm,1.0s							
RLMT	**Red Lodge**	**41.91**	**73**	P	**P**	**01 39 15.0**	**-0.2**	
	baz=303,SNR=24							
R11A	**Troy Canyon, C**	**41.96**	**85**	P	**P**	**01 39 15.6**	**0.0**	
	baz=308,SNR=10							
AHID	**Auburn Hatcher**	**42.11**	**77**	P	**P**	**01 39 16.6**	**-0.3**	
MPMC	**Manual Prospec**	**42.21**	**89**	P	**P**	**01 39 17.4**	**-0.3**	
	baz=310							
FURC	**Furnace Creek,**	**42.34**	**88**	P	**P**	**01 39 18.6**	**+0.2**	
	baz=310							
TPNV	**Topopah Spring**	**42.41**	**87**	IAmb	IAmb	01 39 34.2		
	comp=Z,22nm,1.0s							
TPNV	**Topopah Spring**	**42.41**	**87**	P	**P**	**01 39 19.2**	**-0.1**	
	baz=309,SNR=8.5							
LRMC	**Laurel Mtn Rad**	**42.46**	**90**	P	**P**	**01 39 19.9**	**+0.3**	
	baz=310							
DUG	**Dugway, Tooele**	**42.56**	**81**	P	**P**	**01 39 20.6**	**+0.1**	
	baz=307,SNR=7.9							
GWY	**Greenwater Val**	**42.64**	**88**	IAmb	IAmb	01 39 35.7		
	comp=Z,23nm,1.4s							
EDW2	**Edwards Air Fo**	**42.65**	**91**	P	**P**	**01 39 21.3**	**+0.2**	
	baz=311							
QSM	**Queen of Sheba**	**42.65**	**89**	IAmb	IAmb	01 39 35.8		
	comp=Z,22nm,1.3s							
LAO	**LASA Array**	**42.86**	**69**	IAmb	IAmb	01 39 24.6		
	comp=Z,17nm,0.9s							
LAO	**LASA Array**	**42.86**	**69**	P	**P**	**01 39 23.8**	**+1.1**	
	baz=302,SNR=10.0							
LAO	**LASA Array**	**42.86**	**69**	P	**P**	**01 39 23.0**	**+0.3**	
	baz=302,SNR=10.0							
PRN	**Pahroc Range**	**42.87**	**86**	IAmb	IAmb	01 39 38.6		
	comp=Z,35nm,1.0s							
KSRS	**Korea Array**	**42.95**	**274**	P	**P**	**01 39 24.4**	**+1.0**	
	comp=Z,19nm,0.9s,baz=57,slow=7.6,SNR=37							
KSRS				pP	**sP**	**01 39 37.4**	**+0.1**	
	comp=Z,7.8nm,0.8s,baz=57,slow=7.5,SNR=3.8							
KSRS				LR	LR	01 56 33.3		
	comp=Z,106nm,20.6s,baz=65,slow=35							
	comp=Z,19nm,0.9s							
KS19	**Wonju Array Si**	**42.95**	**275**	P	**P**	**01 39 23.8**	**+0.3**	
KS19				IAmb	IAmb	01 39 46.3		
	comp=Z,64nm,1.4s							
KSAR	**Wonju Array Be**	**42.98**	**274**	P	**P**	**01 39 24.0**	**+0.3**	
KSAR	**Wonju Array Be**	**42.98**	**274**	P	**P**	**01 39 24.0**	**+0.3**	
BW06	**Boulder Array**	**43.05**	**76**	IAmb	IAmb	01 39 40.6		
	comp=Z,15nm,0.8s							
BW06	**Boulder Array**	**43.05**	**76**	P	**P**	**01 39 24.3**	**-0.2**	
	baz=305,SNR=22							
PD31	**Pinedale Array**	**43.05**	**76**	IAmb	IAmb	01 39 40.6		
	comp=Z,14nm,0.8s							
PDAR	**Pinedale Array**	**43.05**	**76**	P	**P**	**01 39 24.9**	**+0.5**	
	comp=Z,19nm,1.1s,baz=305,slow=5.2,SNR=58							
PDAR				pP	**sP**	**01 39 37.5**	**-1.0**	
	comp=Z,11nm,0.7s,baz=303,slow=5.8,SNR=13							
PDAR				LR	LR	01 54 55.2		
	comp=Z,165nm,18.6s,baz=318,slow=33							
	comp=Z,19nm,1.1s							
SHOC	**Shoshone, Teco**	**43.06**	**88**	P	**P**	**01 39 24.8**	**+0.4**	
	baz=310							
DGMT	**Dagmar**	**43.08**	**66**	IAmb	IAmb	01 39 26.0		
	comp=Z,35nm,1.1s							
DGMT	**Dagmar**	**43.08**	**66**	P	**P**	**01 39 25.1**	**+0.7**	
	baz=302,SNR=6.8							
DGMT	**Dagmar**	**43.08**	**66**	P	**P**	**01 39 24.3**	**-0.2**	
	baz=301,SNR=6.8							
GSC	**Geone, Bar**	**43.12**	**89**	IAmb	IAmb	01 39 39.7		
	comp=Z,37nm,1.1s							
GSC	**Goldstone, Bar**	**43.12**	**89**	P	**P**	**01 39 25.3**	**+0.3**	
	baz=310,SNR=14							
BFSC	**Mount Baldy Ra**	**43.28**	**91**	P	**P**	**01 39 26.7**	**+0.3**	
	baz=311,SNR=5.9							
FCC	**Fort Churchill**	**43.35**	**48**	P	**P**	**01 39 26.5**	**+0.1**	
FCC				IAmb	IAmb	01 39 40.4		
	comp=Z,19nm,0.7s							
FCC	**Fort Churchill**	**43.35**	**48**	P	**P**	**01 39 26.5**	**+0.1**	
FCC				pmax	pmax			
	comp=Z,19nm,0.7s							
TUQ	**Turquoise Moun**	**43.58**	**89**	P	**P**	**01 39 28.5**	**-0.2**	
	baz=310							
TJN	**Taejon**	**43.97**	**274**	*ce*P	**P**	**01 39 32.5**	**+0.8**	
MURC	**Murrieta**	**43.99**	**92**	P	**P**	**01 39 31.8**	**-0.1**	
	baz=312							
V12A	**Nelson**	**44.06**	**87**	P	**P**	**01 39 33.0**	**+0.5**	
V12A				IAmb	IAmb	01 39 47.6		
	comp=Z,15nm,1.1s							
TMUT	**Trail Mountain**	**44.09**	**81**	IAmb	IAmb	01 39 47.8		
	comp=Z,16nm,0.9s							
GMRC	**Granite Mounta**	**44.17**	**89**	P	**P**	**01 39 33.7**	**+0.3**	
	baz=311,SNR=6.4							
LCMT	**Little Creek M**	**44.24**	**85**	IAmb	IAmb	01 39 48.5		
	comp=Z,28nm,1.4s							
RDMU	**Red Mountain**	**44.32**	**78**	IAmb	IAmb	01 39 48.9		
	comp=Z,19nm,0.8s							
Q16A	**Castle Valley**	**44.34**	**81**	IAmb	IAmb	01 39 49.9		
	comp=Z,20nm,1.0s							
PFO	**Pinyon Flats O**	**44.44**	**91**	LR	LR	01 57 10.3		
	comp=Z,169nm,18.6s,baz=288,slow=35							
PFO	**Pinyon Flats O**	**44.44**	**91**	P	**P**	**01 39 36.9**	**+1.3**	
PFO				IAmb	IAmb	01 39 50.0		
	comp=Z,16nm,1.2s							
PFO	**Pinyon Flats O**	**44.44**	**91**	P	**P**	**01 39 36.9**	**+1.3**	
PFO				pmax	pmax			
	comp=Z,16nm,1.3s							
PFO	**Pinyon Flats O**	**44.44**	**91**	P	**P**	**01 39 35.4**	**-0.2**	
	baz=312							
PFO	**Pinyon Flats O**	**44.44**	**91**	P	**P**	**01 39 35.7**	**0.0**	
PFO				x	x	01 39 44.8		
PFO				pP	**sP**	**01 39 48.6**	**-1.0**	
PFO				sP	**pwP**	**01 39 53.8**	**+2.8**	
TPFO	**Pinon Flats**	**44.45**	**91**	P	**P**	**01 39 35.2**	**-0.5**	
	baz=312							
BELC	**Belle Mtn. Jos**	**44.47**	**90**	P	**P**	**01 39 34.9**	**-1.0**	
	baz=312							
P18A	**Preston Nutter**	**44.48**	**80**	IAmb	IAmb	01 39 50.5		
	comp=Z,14nm,0.9s							
KNB	**Kanab**	**44.50**	**85**	IAmb	IAmb	01 39 55.3		
	comp=Z,19nm,1.2s							
SRU	**San Rafael Swe**	**44.62**	**81**	IAmb	IAmb	01 39 53.0		
	comp=Z,13nm,0.8s							
IRM	**Iron Mountain**	**44.90**	**89**	P	**P**	**01 39 38.3**	**-0.9**	
	baz=311							
BAR	**Barrett**	**44.93**	**92**	IAmb	IAmb	01 39 54.0		
	comp=Z,16nm,1.0s							
K22A	**Casper**	**44.94**	**74**	IAmb	IAmb	01 39 52.9		
	comp=Z,9.9nm,0.8s							
K22A	**Casper**	**44.94**	**74**	P	**P**	**01 39 39.6**	**+0.1**	
	baz=306							
K22A	**Casper**	**44.94**	**74**	P	**P**	**01 39 37.5**	**-2.1**	
	baz=306							
MONP2	**Monument Peak**	**44.94**	**92**	P	**P**	**01 39 40.0**	**+0.2**	
	baz=312							
BC3	**Big Chuckawall**	**45.04**	**90**	P	**P**	**01 39 39.0**	**-1.4**	
	baz=312							
CBX	**Cerro Bola**	**45.18**	**92**	P	**P**	**01 39 42.3**	**+0.7**	
U15A	**North Rim**	**45.20**	**85**	IAmb	IAmb	01 40 05.3		
	comp=Z,25nm,1.1s							
IKP	**In-Ko-Pah, Jac**	**45.30**	**92**	P	**P**	**01 39 41.1**	**-1.3**	
	baz=312							
O20A	**White River Ci**	**45.40**	**78**	IAmb	IAmb	01 39 56.9		
	comp=Z,20nm,0.7s							
O20A	**White River Ci**	**45.40**	**78**	P	**P**	**01 39 43.7**	**+0.4**	
	baz=307,SNR=9.2							
YUH	**Yuha Desert**	**45.42**	**92**	IAmb	IAmb	01 39 57.6		
	comp=Z,12nm,1.1s							
PDMCI	**Parker Dam,Lak**	**45.43**	**88**	P	**P**	**01 39 44.0**	**+0.7**	
	baz=311							
BLYC	**Blythe**	**45.55**	**89**	IAmb	IAmb	01 39 58.7		
	comp=Z,18nm,0.9s							
RSSD	**Black Hills**	**45.56**	**71**	P	**P**	**01 39 44.8**	**+0.2**	
RSSD				IAmb	IAmb	01 39 46.2		
	comp=Z,10nm,0.6s							
RSSD	**Black Hills**	**45.56**	**71**	P	**P**	**01 39 44.8**	**+0.2**	
RSSD				pmax	pmax			
	comp=Z,10.0nm,0.6s							
RSSD	**Black Hills**	**45.56**	**71**	P	**P**	**01 39 44.5**	**-0.1**	
	baz=305,SNR=12							
RSSD	**Black Hills**	**45.56**	**71**	P	**P**	**01 39 44.5**	**-0.1**	
	baz=305							
RSSD	**Black Hills**	**45.56**	**71**	P	**P**	**01 39 44.1**	**-0.5**	
RSSD				pP	**pwP**	**01 39 57.6**	**-1.5**	
RSSD				sP	**sP**	**01 40 02.9**	**+3.5**	
GLA	**Glamis**	**45.83**	**90**	P	**P**	**01 39 46.7**	**+0.1**	
	baz=312							
ESJX	**Sierra Juarez**	**45.84**	**92**	IAmb	IAmb	01 40 01.0		
	comp=Z,24nm,1.4s							
NRIK	**Noril'sk**	**45.85**	**331**	P	**P**	**01 39 46.5**	**+0.3**	
	comp=Z,14nm,0.8s,baz=81,slow=8.2,SNR=17							
NRIK				LR	LR	02 01 03.7		
	comp=Z,102nm,18.9s,baz=42,slow=39							
	comp=Z,14nm,0.8s							
NRIK	**Noril'sk**	**45.85**	**331**	P	**P**	**01 39 45.5**	**-0.7**	
NRIK				IAmb	IAmb	01 39 47.4		
	comp=Z,14nm,0.8s							
NRIK	**Noril'sk**	**45.85**	**331**	*ce*P	**P**	**01 39 46.1**	**-0.1**	
NRIK				pmax	pmax			
	comp=Z,12nm,0.7s							
PV23	**Carpenter Ridg**	**45.96**	**80**	IAmb	IAmb	01 40 11.6		
	comp=Z,12nm,0.8s							
PV10	**Paradox Valley**	**45.99**	**80**	IAmb	IAmb	01 40 06.4		
	comp=Z,21nm,0.9s							
MDND	**Maddock**	**46.01**	**64**	P	**P**	**01 39 48.3**	**+0.5**	
	baz=304							
MDND	**Maddock**	**46.01**	**64**	P	**P**	**01 39 47.8**	**0.0**	
	baz=304							
E28A	**Huff**	**46.10**	**66**	IAmb	IAmb	01 39 50.1		
	comp=Z,29nm,0.9s							
E28A	**Huff**	**46.10**	**66**	P	**P**	**01 39 48.8**	**+0.2**	
	baz=304							
XLT	**XiLinHaoTe**	**46.27**	**290**	⇓*i*P	**P**	**01 39 50.8**	**+0.8**	
XLT				pP	pP	01 39 59.5	-0.9	
XLT				sP	sP	01 40 05.3	0.0	
XLT				PP	**PP**	**01 41 39.3**	**+0.5**	
XLT				pmax	pmax			
	comp=Z,15nm,1.2s							
XLT				pmax	pmax			
	comp=Z,120nm,4.2s							
XLT				LR	LR			
	comp=Z,460nm,18.8s							
XLT				LR	LR			
	comp=Z,220nm,20.2s							
N23A	**Red Feather La**	**46.33**	**76**	IAmb	IAmb	01 40 04.8		
	comp=Z,10nm,0.9s							
N23A	**Red Feather La**	**46.33**	**76**	P	**P**	**01 39 50.4**	**-0.3**	
	baz=307,SNR=7.2							
WUAZ	**Wupatki**	**46.36**	**85**	IAmb	IAmb	01 40 14.2		
	comp=Z,24nm,1.1s							
WUAZ	**Wupatki**	**46.36**	**85**	P	**P**	**01 39 50.6**	**-0.2**	
	baz=310,SNR=5.8							
NEEM	**North Greenlan**	**46.38**	**15**	*i* P	**P**	**01 39 49.4**	**-1.3**	
NEEM				IAmb	IAmb	01 39 50.9		
	comp=Z,23nm,0.7s							
NOR	**Nord**	**46.43**	**5**	*i* P	**P**	**01 39 50.0**	**-0.6**	
NOR				IAmb	IAmb	01 39 51.1		
	comp=Z,1.8n

ULN	Ulaanbaatar	49.09	299	P	P	01 40 11.8	0.0
ULN				IAmb	IAmb	01 40 13.7	
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	49.09	299	*ce*P	P	01 40 12.2	+0.3
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	49.09	299	P	P	01 40 11.8	0.0
SONM	Songino Array	49.47	299	P	P	01 40 15.4	+0.7
	comp=Z,9.9nm,0.6s,baz=44,slow=8.1,SNR=22						
	comp=Z,9.9nm,0.6s						
SONM	Songino Array	49.47	299	P	P	01 40 14.7	0.0
SONM				IAmb	IAmb	01 40 16.3	
	comp=Z,8.7nm,0.7s						
SONM	Songino Array	49.47	299	P	P	01 40 14.7	0.0
SONM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSCO	Kaye Shedlock'	49.50	75	P	P	01 40 16.5	+1.4
	baz=309						
KSCO	Kaye Shedlock'	49.50	75	P	P	01 40 14.9	-0.1
	baz=309						
T25A	Trinidad	49.61	79	IAmb	IAmb	01 40 30.9	
	comp=Z,29nm,0.9s						
T25A	Trinidad	49.61	79	P	P	01 40 16.3	+0.3
	baz=310,SNR=7.2						
ZAK	Zakamensk	49.63	303	*e*P	P	01 40 15.7	-0.2
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s						
ANMO	Albuquerque	49.78	82	LR	LR	01 59 25.6	
	comp=Z,154nm,18.7s,baz=322,slow=34						
ANMO	Albuquerque	49.78	82	P	P	01 40 17.8	+0.5
ANMO	Albuquerque	49.78	82	P	P	01 40 17.8	+0.5
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANMO	Albuquerque	49.78	82	P	P	01 40 16.8	-0.6
	baz=311						
ANMO	Albuquerque	49.78	82	P	P	01 40 20.3	+3.0
ANMO				x	x	01 40 30.5	
ANMO				pP	pwP	01 40 33.7	+0.8
ANMO				sP	sP	01 40 39.7	+7.9
JOW	Kunigami	49.89	263	P	P	01 40 18.8	+0.8
ECSD	EROS Data Cent	50.11	67	IAmb	IAmb	01 40 19.7	
	comp=Z,22nm,1.1s						
ECSD	EROS Data Cent	50.11	67	P	P	01 40 18.9	-0.6
	baz=308,SNR=15						
ECSD	EROS Data Cent	50.11	67	P	P	01 40 18.5	-1.0
	baz=308,SNR=15						
Y22A	Socorro	50.13	83	P	P	01 40 20.7	+0.7
	baz=312,SNR=5.8						
SPITS	Spitsbergen Ar	50.32	357	LR	LR	02 01 28.6	
	comp=Z,135nm,20.0s,baz=342,slow=36						
TIA	Tai'an	50.41	281	⇓P	P	01 40 22.5	+0.7
TIA				pmax	pmax		
	comp=Z,28nm,0.9s						
EYMN	Ely	50.41	60	IAmb	IAmb	01 40 23.1	
	comp=Z,20nm,1.0s						
EYMN	Ely	50.41	60	P	P	01 40 21.6	-0.1
	baz=307						
EYMN	Ely	50.41	60	P	P	01 40 21.7	-0.1
	baz=307						
F36A	Milaca	50.56	63	IAmb	IAmb	01 40 23.3	
	comp=Z,10nm,0.8s						
F36A	Milaca	50.56	63	P	P	01 40 22.4	-0.4
	baz=308,SNR=9.4						
121A	Cookes Peak, D	50.56	85	IAmb	IAmb	01 40 46.3	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	50.56	85	P	P	01 40 23.0	-0.3
	baz=313						
121A	Cookes Peak, D	50.56	85	P	P	01 40 23.3	0.0
	baz=313						
BGNE	Belgrade	50.66	70	P	P	01 40 23.4	-0.3
BGNE	Belgrade	50.66	70	P	P	01 40 23.5	-0.3
	baz=309						
HHC	Hu-ho-hao-te	50.78	289	*e*P	P	01 40 25.0	+0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,290nm,6.1s						
HHC				LR	LR		
	comp=Z,400nm,13.3s						
HHC				LR	LR		
	comp=Z,330nm,14.6s						
HHC				LR	LR		
	comp=Z,220nm,14.6s						
HNS	HongShan	51.11	284	⇑P	P	01 40 28.5	+1.5
HNS				sP	sP	01 40 41.5	-0.2
HNS				PP	PP	01 42 24.8	+1.1
HNS				*e*S	S	01 47 40.8	-1.1
HNS				pmax	pmax		
	comp=Z,70nm,1.0s						
HNS				LR	LR		
	comp=Z,330nm,17.9s						
HNS				LR	LR		
	comp=Z,320nm,22.4s						
E38A	The Farm, Brul	51.19	61	IAmb	IAmb	01 40 28.1	
	comp=Z,17nm,0.8s						
E38A	The Farm, Brul	51.19	61	P	P	01 40 27.2	-0.4
	baz=308,SNR=7.2						
L34A	Svendsen Farm,	51.34	69	P	P	01 40 28.5	-0.3
	baz=309						
SPMN	Marine on St.	51.35	63	P	P	01 40 28.1	-0.7
	baz=308						
CBKS	Cedar Bluff	51.36	74	IAmb	IAmb	01 40 42.9	
	comp=Z,30nm,0.9s						
CBKS	Cedar Bluff	51.36	74	P	P	01 40 28.0	-1.1
	baz=310						
I37B	Waseca	51.76	65	P	P	01 40 32.2	+0.3
	baz=309,SNR=10						
BTO	Baotou	51.85	290	*e*P	P	01 40 33.5	+0.8
BTO				LR	LR		
	comp=Z,790nm,15.3s						
BTO				LR	LR		
	comp=Z,1μm,19.0s						
NJ2	Nanjing	52.11	276	*e*P	P	01 40 33.0	-1.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
SUMG	Summit	52.21	16	*i* P	P	01 40 34.4	-0.9
SUMG				IAmb	IAmb	01 40 35.8	
	comp=Z,5.8nm,0.5s						
R32A	Long Quarter,	52.23	74	IAmb	IAmb	01 40 48.8	
	comp=Z,19nm,0.7s						
R32A	Long Quarter,	52.23	74	P	P	01 40 35.5	0.0
	baz=311,SNR=6.0						
TIY	Taiyuan	52.27	285	*e*P	P	01 40 37.8	+1.9
TIY				pmax	pmax		
	comp=Z,20nm,0.5s						
N35A	Tabor	52.47	69	P	P	01 40 37.7	+0.5
	baz=310,SNR=7.6						
MSTX	Muleshoe	52.70	80	IAmb	IAmb	01 40 53.1	
	comp=Z,30nm,1.1s						
MSTX	Muleshoe	52.70	80	P	P	01 40 38.9	-0.2
	baz=312						
AMTX	Amarillo	52.76	79	P	P	01 40 39.6	+0.1
AMTX				IAmb	IAmb	01 40 57.1	
	comp=Z,14nm,0.9s						
AMTX	Amarillo	52.76	79	P	P	01 40 39.8	+0.3
	baz=312						
G40A	Rib Lake	52.76	62	IAmb	IAmb	01 40 40.5	
	comp=Z,20nm,1.1s						
G40A	Rib Lake	52.76	62	P	P	01 40 39.4	+0.1
	baz=309,SNR=8.4						
COWI	Conover	52.82	60	IAmb	IAmb	01 40 40.2	
	comp=Z,10nm,0.8s						
COWI	Conover	52.82	60	P	P	01 40 38.3	-1.5
	baz=309						
K38A	Parkersburg	52.98	66	IAmb	IAmb	01 40 41.6	
	comp=Z,25nm,1.0s						
KSU1	Kansas State U	53.03	72	P	P	01 40 40.9	-0.5
	baz=311,SNR=5.5						
KSU1	Kansas State U	53.03	72	P	P	01 40 40.7	-0.7
	baz=311,SNR=5.5						
SCIA	State Center	53.20	67	P	P	01 40 41.9	-0.7
	baz=310						
U32A	Winter Ranch,	53.39	76	IAmb	IAmb	01 40 57.9	
	comp=Z,21nm,0.8s						
I40A	Norwalk	53.40	63	IAmb	IAmb	01 40 44.6	
	comp=Z,20nm,1.1s						
F42A	Maple Grove Fa	53.58	60	P	P	01 40 45.9	+0.5
F42A				IAmb	IAmb	01 40 46.3	
	comp=Z,24nm,0.8s						
F42A	Maple Grove Fa	53.58	60	P	P	01 40 45.8	+0.5
	baz=310						
E43A	Lone Tree Farm	53.80	59	P	P	01 40 47.0	+0.1
	baz=310						
SFJD	Kangerlussuaq	54.12	24	LR	LR	02 09 20.4	
	comp=Z,86nm,18.2s,baz=330,slow=42						
JFWS	Jewell Farm	54.23	64	P	P	01 40 48.9	-1.2
	baz=310						
L40A	Anamosa	54.24	65	IAmb	IAmb	01 40 51.1	
	comp=Z,17nm,0.9s						
L40A	Anamosa	54.24	65	P	P	01 40 49.8	-0.3
	baz=311,SNR=6.3						
I42A	Draeger Farm,	54.35	62	IAmb	IAmb	01 40 52.1	
	comp=Z,25nm,0.9s						
I42A	Draeger Farm,	54.35	62	P	P	01 40 50.3	-0.6
	baz=310,SNR=7.8						
LYN	LuoYang	54.35	282	⇑*i*P	P	01 40 52.0	+0.9
LYN				pmax	pmax		
	comp=Z,30nm,0.7s						
LYN				pmax	pmax		
	comp=Z,140nm,4.0s						
LYN				LR	LR		
	comp=Z,150nm,13.3s						
LYN				LR	LR		
	comp=Z,160nm,23.9s						
P38A	Dawn	54.50	69	P	P	01 40 51.4	-0.7
	baz=311,SNR=22						
T35A	Sooner Cattle	54.53	73	IAmb	IAmb	01 41 05.7	
	comp=Z,15nm,0.8s						
T35B	Sooner Cattle	54.53	73	P	P	01 40 51.8	-0.6
	baz=312,SNR=5.7						
H43A	Windswept, Lux	54.60	61	IAmb	IAmb	01 40 53.4	
	comp=Z,24nm,0.8s						
H43A	Windswept, Lux	54.60	61	P	P	01 40 52.4	-0.4
	baz=310						
WMOK	Wichita Mounta	54.62	77		P	01 40 53.4	+0.3
WMOK				IAmb	IAmb	01 41 07.1	
	comp=Z,13nm,0.8s						
WMOK	Wichita Mounta	54.62	77	P	P	01 40 53.4	+0.3
WMOK				pmax	pmax		
	comp=Z,13nm,0.9s						
WMOK	Wichita Mounta	54.62	77	P	P	01 40 53.4	+0.3
	baz=313						
WMOK	Wichita Mounta	54.62	77	P	P	01 40 53.1	0.0
	baz=313						
OK046	Pawnee Station	54.64	74	IAmb	IAmb	01 41 06.6	
	comp=Z,23nm,0.9s						
ICESG	Greenland Ices	54.91	18	*i* P	P	01 40 53.4	-1.7
ICESG				IAmb	IAmb	01 40 54.8	
	comp=Z,11nm,0.6s						
OK031	S. Brethren Rd	54.98	75	IAmb	IAmb	01 41 09.2	
	comp=Z,25nm,0.8s						
L42A	Oliver, Polo	55.15	65	IAmb	IAmb	01 40 56.8	
	comp=Z,33nm,1.1s						
TX31	Lajitas Ar. Si	55.32	85	P	P	01 40 57.6	-0.7
TX31	Lajitas Ar. Si	55.32	85	P	P	01 40 58.2	-0.1
	baz=315,SNR=12						
TX32	Lajitas Array	55.32	85	IAmb	IAmb	01 41 11.8	
	comp=Z,15nm,1.2s						
TXAR	Lajitas Array	55.33	85	P	P	01 40 58.1	-0.2
	comp=Z,3.0nm,0.7s,baz=301,slow=4.8,SNR=37						
	comp=Z,3.0nm,0.7s						
N41A	Harden Midland	55.33	66	IAmb	IAmb	01 41 00.1	
	comp=Z,21nm,0.8s						
N41A	Harden Midland	55.33	66	P	P	01 40 57.4	-0.7
	baz=311						
P40A	Paris	55.42	68	P	P	01 40 58.1	-0.7
	baz=312,SNR=30						
ABTX	Abilene, Hawle	55.53	79	IAmb	IAmb	01 41 13.7	
	comp=Z,23nm,1.1s						
ABTX	Abilene, Hawle	55.53	79	P	P	01 40 59.6	-0.1
	baz=314						
TUL1	Leonard	55.63	74	IAmb	IAmb	01 41 13.5	
	comp=Z,19nm,0.8s						
TUL1	Leonard	55.63	74	P	P	01 40 59.8	-0.5
	baz=312						
L44A	Lake County Fo	56.02	63	P	P	01 41 01.1	-1.9
	baz=312						
GLMI	Grayling	56.07	59	P	P	01 41 02.5	-0.9
	baz=311						
U38A	Gravette	56.12	73	IAmb	IAmb	01 41 16.3	
	comp=Z,13nm,0.8s						
U38A	Gravette	56.12	73	P	P	01 41 02.9	-0.8
	baz=313,SNR=12						
R40A	Maddies Statio	56.12	70	P	P	01 41 02.4	-1.4
	baz=312,SNR=20						
ZAA0	Zalesovo Array	56.22	316	P	P	01 41 05.6	+1.3
ZALV	Zalesovo Beam	56.22	316	P	P	01 41 04.0	-0.2
	comp=Z,0.7nm,0.4s,baz=31,slow=8.6,SNR=2.5						
ZALV				PcP	PcP	01 42 02.2	+0.7
	comp=Z,3.9nm,0.8s,baz=34,slow=5.6,SNR=8.6						
ZALV				pPcP		01 42 15.2	
	comp=Z,4.9nm,0.7s,baz=30,slow=3.1,SNR=7.3						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	56.22	316	P	P	01 41 04.2	0.0
ZALV	Zalesovo Beam	56.22	316	*i* P	P	01 41 09.0	+4.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HDIL	Hopedale	56.32	66	P	P	01 41 04.2	-1.0
	baz=312,SNR=7.9						
HDIL	Hopedale	56.32	66	P	P	01 41 04.5	-0.7
	baz=312,SNR=7.9						
HHAR	Hobbs	56.49	72	IAmb	IAmb	01 41 18.8	
	comp=Z,11nm,0.7s						
HHAR	Hobbs	56.49	72	P	P	01 41 05.5	-0.9
	baz=313						
SSLB	Suanglung	56.64	267	P	P	01 41 08.0	+0.3
YULB	Yu-li	56.72	266	IAmb	IAmb	01 41 26.7	
	comp=Z,14nm,0.9s						
X37A	Clayton	56.78	75	IAmb	IAmb	01 41 22.2	
	comp=Z,20nm,0.8s						
X37A	Clayton	56.78	75	P	P	01 41 08.6	+0.1
	baz=313,SNR=10						
P43A	Skaggs, Pawnee	56.80	67	P	P	01 41 07.6	-1.0
	baz=312,SNR=8.5						
XAN	Xi'an	56.85	284	P	P	01 41 09.5	+0.4
XAN				pP	pwP	01 41 22.0	-1.2
XAN				pmax	pmax		
	comp=Z,31nm,1.1s						
XAN	Xi'an	56.85	284	P	P	01 41 09.1	0.0
XAN				pP	pwP	01 41 22.1	-1.1
CCM	Cathedral Cave	56.88	69	P	P	01 41 07.8	-1.4
CCM				IAmb	IAmb	01 41 08.7	
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	56.88	69	P	P	01 41 07.8	-1.4
CCM				pmax	pmax		
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	56.88	69	P	P	01 41 07.7	-1.4
	baz=313,SNR=9.4						
CCM	Cathedral Cave	56.88	69	P	P	01 41 07.7	-1.4
	baz=313						
CCM	Cathedral Cave	56.88	69	P	P	01 41 07.0	-2.2
MGMO	Mountain Grove	56.88	71	IAmb	IAmb	01 41 09.0	
	comp=Z,27nm,1.1s						
JCT	Junction City	56.92	81	IAmb	IAmb	01 41 22.9	
	comp=Z,13nm,1.1s						
JCT	Junction City	56.92	81	P	P	01 41 09.8	+0.2
	baz=315						
O44A	Mansfield	57.06	65	IAmb	IAmb	01 41 10.9	
	comp=Z,30nm,1.2s						
TPUB	Ta-pu	57.20	267	P	P	01 41 12.1	+0.5
TPUB				IAmb	IAmb	01 41 27.5	
	comp=Z,28nm,1.0s						
WHTX	Lake Whitney,	57.30	78	IAmb	IAmb	01 41 26.5	
	comp=Z,23nm,0.8s						
WHTX	Lake Whitney,	57.30	78	P	P	01 41 12.2	-0.1
	baz=314						
FVM	French Village	57.40	69	P	P	01 41 12.1	-0.7
	baz=313,SNR=8.1						
VLDQ	Val d'Or	57.55	52	IAmb	IAmb	01 41 13.2	
	comp=Z,22nm,0.9s						
Q44A	Meyer Farm, Va	57.59	67	P	P	01 41 13.3	-0.8
	baz=313,SNR=8.3						
T42A	Van Buren	57.66	70	IAmb	IAmb	01 41 13.7	
	comp=Z,11nm,0.7s						
T42A	Van Buren	57.66	70	P	P	01 41 12.8	-1.9
	baz=313						
SCHQ	Schefferville	57.69	41	P	P	01 41 14.9	+0.2
	comp=Z,5.4nm,0.6s,baz=324,slow=5.0,SNR=7.5						
SCHQ				pP	pwP	01 41 27.8	-2.3
	comp=Z,7.4nm,0.7s,baz=336,slow=9.0,SNR=4.2						
	comp=Z,5.4nm,0.6s						
MIAR	Mount Ida	57.89	74	P	P	01 41 15.9	-0.4
	baz=314,SNR=20						
MIAR	Mount Ida	57.89	74	P	P	01 41 15.6	-0.7
	baz=314,SNR=20						
DGZ	Jazzator, Alta	57.94	311	*i* P	P	01 41 17.1	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
N47A	Urbana	58.13	63	P	P	01 41 17.3	-0.6
	baz=313,SNR=5.3						
N47A				P	P	01 41 17.3	-0.6
	baz=313,SNR=5.3						
P46A	Rosedale	58.14	65	IAmb	IAmb	01 41 18.7	
	comp=Z,19nm,0.9s						
P46A	Rosedale	58.14	65	P	P	01 41 17.7	-0.2
	baz=313						
WHAR	Wooly Hollow	58.14	72	P	P	01 41 17.9	-0.3
WHAR				IAmb	IAmb	01 41 32.8	
	comp=Z,14nm,0.9s						
S44A	Carbondale	58.27	68	P	P	01 41 18.4	-0.6
	baz=313,SNR=9.6						
LCAR	Lake Charles	58.28	71	IAmb	IAmb	01 41 18.4	
	comp=Z,9.8nm,0.9s						
LCAR	Lake Charles	58.28	71	P	P	01 41 17.6	-1.4
	baz=314,SNR=7.0						
ARA0	ARCESS Array S	58.35	352	*e*P	P	01 41 19.4	+0.3
ARCES	ARCESS Array B	58.35	352	P	P	01 41 19.3	+0.2
	comp=Z,2.0nm,0.5s,baz=8.0,slow=7.8,SNR=15						
ARCES				PcP	PcP	01 42 10.1	+0.5
	comp=Z,11nm,0.8s,baz=12,slow=6.2,SNR=7.2						
ARCES				pPcP		01 42 23.6	
	comp=Z,8.9nm,1.0s,baz=35,slow=4.4,SNR=4.3						
ARCES				LR	LR	02 06 08.4	
	comp=Z,104nm,21.7s,baz=352,slow=36						
	comp=Z,2.0nm,0.5s						
UALR	University of	58.47	73	IAmb	IAmb	01 41 42.6	
	comp=Z,14nm,0.9s						
LZH	Lanzhou	58.47	290	*e*P	P	01 41 21.5	+0.9
LZH				pP	pP	01 41 32.0	+0.8
LZH				pmax	pmax		
	comp=Z,60nm,1.0s						
LZH				LR	LR		
	comp=Z,260nm,14.4s						
LZH				LR	LR		
	comp=Z,380nm,15.1s						
LZH				LR	LR		
	comp=Z,370nm,17.2s						
GTA	Gaotai	58.52	295	*e*P	P	01 41 21.0	+0.1
GTA				pP	pP	01 41 28.5	-2.8
GTA				sP	pwP	01 41 33.5	-2.0
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,8.1s						
GTA				LR	LR		
	comp=Z,110nm,18.5s						
GTA				LR	LR		
	comp=Z,280nm,15.3s						
GTA				LR	LR		
	comp=Z,280nm,17.4s						
833A	Chaparral WMA,	58.69	83	P	P	01 41 21.6	-0.4
	baz=316						
JETT	Jettan, Norway	58.70	354	*e*P	P	01 41 22.7	+1.1
TRO	Tromso	58.71	355	*e*P	P	01 41 21.7	+0.2
O48B	Farmland	58.85	63	P	P	01 41 22.2	-0.8
	baz=314,SNR=9.2						
O48B	Farmland	58.85	63	P	P	01 41 21.4	-1.6
	baz=313,SNR=9.2						
KTK1	Kautokeino	59.05	353	*e*P	P	01 41 23.9	0.0
ENH	Enshi	59.12	281	P	P	01 41 24.3	-0.7
ENH				IAmb	IAmb	01 41 27.1	
	comp=Z,12nm,0.7s						
ENH	Enshi	59.12	281	P	P	01 41 24.8	-0.2
P48A	Milroy	59.25	64	P	P	01 41 24.8	-0.9
	baz=314,SNR=7.5						
P48A				P	P	01 41 24.8	-0.9
	baz=314,SNR=7.5						
P49A	Miami Univ. Ec	59.59	64	P	P	01 41 27.4	-0.8
	baz=314,SNR=7.3						
P49A	Miami Univ. Ec	59.59	64	P	P	01 41 26.6	-1.5
	baz=314,SNR=7.3						
WCI	Wyandotte Cave	59.61	66	P	P	01 41 26.9	-1.3
WCI	Wyandotte Cave	59.61	66	P	P	01 41 26.9	-1.3
WCI				pmax	pmax		
	comp=Z,31nm,0.9s						
WCI	Wyandotte Cave	59.61	66	P	P	01 41 27.8	-0.4
	baz=314,SNR=7.5						
WCI	Wyandotte Cave	59.61	66	P	P	01 41 26.7	-1.5
	baz=314						
WCI	Wyandotte Cave	59.61	66	P	P	01 41 27.7	-0.6
WCI				pP	pwP	01 41 41.4	-1.7
T47A	Sharon Grove	60.00	67	P	P	01 41 30.8	-0.2
	baz=314,SNR=14						
ACSO	Alum Creek Sta	60.07	62	P	P	01 41 30.4	-1.0
	baz=314						
WVT	Waverly	60.18	69	P	P	01 41 30.8	-1.4
WVT				IAmb	IAmb	01 41 33.0	
	comp=Z,14nm,0.8s						
WVT	Waverly	60.18	69	P	P	01 41 30.8	-1.4
WVT				pmax	pmax		
	comp=Z,14nm,0.8s						
WVT	Waverly	60.18	69	P	P	01 41 31.9	-0.3
	baz=314,SNR=10						
WVT	Waverly	60.18	69	P	P	01 41 31.9	-0.3
	baz=314						
WVT	Waverly	60.18	69	P	P	01 41 31.8	-0.4
WVT				pP	pP	01 41 43.9	+1.3
R49A	Shelbyville	60.20	65	IAmb	IAmb	01 41 32.5	
	comp=Z,5.9nm,0.8s						
TRQ	Mont Tremblant	60.29	52	P	P	01 41 31.8	-1.1
ERPA	Erie	60.38	59	P	P	01 41 32.5	-1.0
	baz=314						
OXF	Oxford	60.38	71	P	P	01 41 33.1	-0.5
	baz=315						
OXF	Oxford	60.38	71	P	P	01 41 32.6	-1.0
	baz=315						
M53A	WI Miller and	60.49	60	P	P	01 41 33.7	-0.5
	baz=314						
STEI	Steigen	60.59	356	*e*P	P	01 41 34.0	-0.4
R50A	Paris	60.68	64	IAmb	IAmb	01 41 36.6	
	comp=Z,24nm,1.1s						
R50A	Paris	60.68	64	P	P	01 41 35.7	+0.1
	baz=315,SNR=7.7						
R50A				P	P	01 41 35.7	+0.1
	baz=315,SNR=7.7						
Q51A	Peebles	60.71	63	P	P	01 41 35.6	-0.2
	baz=315,SNR=10						
Q51A				P	P	01 41 35.6	-0.2
	baz=315,SNR=10						
ZSN	Zaisan	60.73	310	*e*P	P	01 41 34.7	-1.1
ZSN	Zaisan	60.73	310	*e*P	P	01 41 34.7	-1.1
	baz=310						
Y45A	Yeager Farm, C	60.76	71	P	P	01 41 35.8	-0.4
Y45A	Yeager Farm, C	60.76	71	P	P	01 41 36.4	+0.3
	baz=315						
O52A	Adamsville	60.78	61	P	P	01 41 36.2	-0.1
	baz=315,SNR=8.5						
O52A				P	P	01 41 36.2	-0.1
	baz=315,SNR=8.5						
N53A	Lisbon	60.84	60	P	P	01 41 36.6	0.0
	baz=315						
N53A				P	P	01 41 36.6	0.0
	baz=315						
P52A	Corning	60.96	62	P	P	01 41 36.4	-1.0
	baz=315						
O53A	New Philadelph	61.03	61	P	P	01 41 36.6	-1.3
	baz=315						
V48A	Smith Brothers	61.04	68	IAmb	IAmb	01 41 38.5	
	comp=Z,15nm,0.8s						
V48A	Smith Brothers	61.04	68	P	P	01 41 37.3	-0.8
	baz=315,SNR=8.6						
U49A	Red Boiling Sp	61.09	67	IAmb	IAmb	01 41 38.6	
	comp=Z,9.6nm,0.7s						
U49A	Red Boiling Sp	61.09	67	P	P	01 41 38.1	-0.3
	baz=315,SNR=6.4						
KURK	Kurchatov	61.20	316	P	P	01 41 38.5	-0.3
KURK				IAmb	IAmb	01 41 54.6	
	comp=Z,8.0nm,0.7s						
KURK	Kurchatov	61.20	316	*ce*P	P	01 41 39.0	+0.1
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	Kurchatov	61.20	316	P	P	01 41 38.6	-0.3
KURK				pP	pwP	01 41 52.4	-2.0
T50A	Nancy	61.27	66	IAmb	IAmb	01 41 40.5	
	comp=Z,14nm,0.9s						
T50A	Nancy	61.27	66	P	P	01 41 39.6	0.0
	baz=315						
T50A				P	P	01 41 39.6	0.0
	baz=315						
KURBB	Kurchatov Arra	61.30	316	P	P	01 41 38.5	-1.1
VBMS	Vicksburg	61.34	73	P	P	01 41 39.8	-0.3
	baz=315						
Q52A	Bidwell	61.35	63	IAmb	IAmb	01 41 40.8	
	comp=Z,24nm,1.1s						
LONY	Lake Ozonia	61.41	53	P	P	01 41 41.2	+0.7
LONY	Lake Ozonia	61.41	53	P	P	01 41 39.0	-1.5
	baz=316						
P53A	Whipple	61

baz=315,SNR=5.9
M55A P **P** **01 41 41.7 +0.7**
baz=315,SNR=5.9
UPAO U. Pittsburgh 61.51 60 P **P** **01 41 41.4 +0.2**
baz=315
O54A Avella 61.53 60 P **P** **01 41 41.6 +0.3**
baz=315,SNR=7.0
O54A P **P** **01 41 41.6 +0.3**
baz=315,SNR=7.0
S51A Beattyville 61.55 65 P **P** **01 41 41.2 -0.3**
baz=315,SNR=6.8
S51A P **P** **01 41 41.2 -0.3**
baz=315,SNR=6.8
L56A Greenwood 61.65 57 P **P** **01 41 42.6 +0.4**
baz=315,SNR=5.2
L56A P **P** **01 41 42.6 +0.4**
baz=315,SNR=5.2
PSDB Penn State Uni 61.74 59 P **P** **01 41 43.2 +0.5**
baz=315
X48A Hartselle 61.81 69 IAmb IAmb 01 41 55.8
comp=Z,16nm,0.8s
X48A Hartselle 61.81 69 P **P** **01 41 42.5 -0.8**
baz=315
SWET Sewanee 61.92 68 P **P** **01 41 43.5 -0.5**
SWET IAmb IAmb 01 41 44.1
comp=Z,9.0nm,0.9s
WMQ Urumqi 61.94 306 *e*P **P** **01 41 45.0 +0.9**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,260nm,21.5s
WMQ LR LR
comp=Z,250nm,19.9s
WMQ LR LR
comp=Z,190nm,23.1s
J58A Remsen 61.96 55 P **P** **01 41 44.8 +0.7**
baz=316,SNR=6.1
J58A P **P** **01 41 44.8 +0.7**
baz=316,SNR=6.1
R53A Hurricane 61.98 63 P **P** **01 41 44.5 +0.2**
baz=315,SNR=9.3
R53A P **P** **01 41 44.5 +0.2**
baz=315,SNR=9.3
Z47A Carrollton 62.10 71 P **P** **01 41 44.6 -0.6**
baz=316
Q54A Coxs Mills 62.13 62 P **P** **01 41 45.8 +0.4**
baz=315,SNR=7.6
Q54A P **P** **01 41 45.8 +0.4**
baz=315,SNR=7.6
MCWV Mont Chateau 62.19 61 P **P** **01 41 46.0 +0.3**
baz=316,SNR=7.1
MCWV Mont Chateau 62.19 61 P **P** **01 41 44.7 -1.0**
baz=315,SNR=7.1
W50A Signal Mountai 62.29 68 IAmb IAmb 01 41 47.1
comp=Z,22nm,0.9s
W50A Signal Mountai 62.29 68 P **P** **01 41 46.0 -0.5**
baz=316,SNR=6.0
D62A Allapoint, All 62.31 48 P **P** **01 41 46.0 -0.4**
baz=317,SNR=9.0
D62A P **P** **01 41 46.0 -0.4**
baz=317,SNR=9.0
TZTN Tazewell 62.34 65 IAmb IAmb 01 41 47.9
comp=Z,18nm,0.8s
TZTN Tazewell 62.34 65 P **P** **01 41 47.1 +0.2**
baz=316,SNR=6.4
TZTN Tazewell 62.34 65 P **P** **01 41 45.6 -1.2**
baz=315,SNR=6.4
V51A Loudon 62.41 66 IAmb IAmb 01 41 47.7
comp=Z,32nm,1.4s
MK31 Makanchi Array 62.42 311 P **P** **01 41 46.8 -0.5**
MK31 Makanchi Array 62.42 311 P **P** **01 41 46.8 -0.5**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 62.42 311 P **P** **01 41 46.9 -0.4**
comp=Z,5.6nm,0.7s,baz=53,slow=6.1,SNR=31
comp=Z,5.6nm,0.7s
MKAR Makanchi Array 62.42 311 *ce*P **P** **01 41 47.2 -0.1**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
BINY Binghamton 62.43 56 P **P** **01 41 47.8 +0.5**
baz=316
BINY Binghamton 62.43 56 P **P** **01 41 46.9 -0.5**
baz=316
E62A Clayton Lake 62.43 49 IAmb IAmb 01 42 00.5
comp=Z,14nm,0.8s
E62A Clayton Lake 62.43 49 P **P** **01 41 46.8 -0.5**
baz=317
E62A P **P** **01 41 46.8 -0.5**
baz=317
SSPA Standing Stone 62.55 59 P **P** **01 41 47.8 -0.3**
SSPA Standing Stone 62.55 59 P **P** **01 41 48.3 +0.2**
baz=316,SNR=7.2
SSPA Standing Stone 62.55 59 P **P** **01 41 47.2 -0.9**
baz=316
SSPA Standing Stone 62.55 59 P **P** **01 41 46.6 -1.6**
SSPA pP **pP** **01 41 58.2 -0.4**
MAKZ Makanchi 62.56 311 P **P** **01 41 48.1 -0.1**
MAKZ IAmb IAmb 01 42 05.5
comp=Z,16nm,1.4s
MAKZ Makanchi 62.56 311 P **P** **01 41 48.1 -0.1**
MAKZ pmax pmax
comp=Z,16nm,1.4s
MAKZ Makanchi 62.56 311 P **P** **01 41 48.0 -0.2**
MAKZ pP **pP** **01 42 00.3 +1.8**
MCVT Middlebury Col 62.69 53 P **P** **01 41 48.8 -0.3**
baz=317
S54A Dingess, Beckl 62.71 63 P **P** **01 41 49.2 -0.1**
baz=316,SNR=7.7
S54A P **P** **01 41 49.2 -0.1**
baz=316,SNR=7.7
F62A Pittston Farm, 62.75 50 P **P** **01 41 49.0 -0.3**
baz=317,SNR=6.5
F62A P **P** **01 41 49.0 -0.3**
baz=317,SNR=6.5
BVAR Borovoye Array 62.78 322 LR LR 02 12 36.3
comp=Z,404nm,18.4s,baz=45,slow=39
BRVK Borovoye 62.80 323 P **P** **01 41 49.2 -0.4**
BRVK IAmb IAmb 01 41 50.5
comp=Z,11nm,0.7s
BRVK Borovoye 62.80 323 *ce*P **P** **01 41 50.1 +0.5**
BRVK pmax pmax
comp=Z,19nm,1.3s
BRVK Borovoye 62.80 323 P **P** **01 41 49.7 +0.2**
BRVK pP **pwP** **01 42 02.0 -3.2**
V52A Sevierville 62.82 66 IAmb IAmb 01 41 50.8
comp=Z,13nm,0.8s
V52A Sevierville 62.82 66 P **P** **01 41 49.6 -0.5**
baz=316,SNR=6.8
TKL Tuckaleechee C 62.84 66 IAmb IAmb 01 41 50.8
comp=Z,24nm,1.1s
TKL Tuckaleechee C 62.84 66 P **P** **01 41 49.9 -0.3**
baz=316,SNR=6.1
LRAL Lakeview Retre 62.85 70 IAmb IAmb 01 42 03.1
comp=Z,11nm,0.8s
LRAL Lakeview Retre 62.85 70 P **P** **01 41 49.8 -0.5**
baz=316,SNR=5.4
LRAL Lakeview Retre 62.85 70 P **P** **01 41 49.2 -1.0**
baz=316,SNR=5.4
PRGR Permogore 62.87 340 *e*P **P** **01 41 47.3 -2.6**
PRGR *e* 01 42 27.4
PRGR pmax pmax
comp=Z,27nm,1.4s
HCNY Howe Caverns 62.88 55 P **P** **01 41 50.9 +0.6**
baz=316,SNR=11
L59A Walton 62.92 56 P **P** **01 41 49.5 -1.2**
baz=316,SNR=8.7
L59A P **P** **01 41 49.5 -1.2**
baz=316,SNR=8.7
G62A West of Eustis 62.97 51 P **P** **01 41 50.9 0.0**
baz=317,SNR=7.2
G62A P **P** **01 41 50.9 0.0**
baz=317,SNR=7.2
KSPA Keystone Colle 63.00 57 P **P** **01 41 51.9 +0.8**
KSPA IAmb IAmb 01 42 05.7
comp=Z,15nm,0.6s
LBNH Lisbon 63.01 52 P **P** **01 41 49.9 -1.2**
baz=317
R55A Marlinton 63.02 62 P **P** **01 41 51.4 0.0**
baz=316,SNR=6.4
R55A P **P** **01 41 51.4 0.0**
baz=316,SNR=6.4
E63A Oxbow 63.09 49 P **P** **01 41 51.3 -0.3**
baz=318,SNR=5.9
E63A P **P** **01 41 51.3 -0.3**
baz=318,SNR=5.9
SVE Sverdlovsk 63.10 330 *e*P **P** **01 41 52.2 +0.6**
SVE pmax pmax
comp=Z,15nm,0.9s
H62A Milan 63.14 52 P **P** **01 41 51.9 -0.1**
baz=317,SNR=8.2
H62A P **P** **01 41 51.9 -0.1**
baz=317,SNR=8.2
W52A Murphy 63.16 67 IAmb IAmb 01 41 52.8
comp=Z,14nm,0.8s
W52A Murphy 63.16 67 P **P** **01 41 52.1 -0.2**
baz=316,SNR=5.5
F63A Nahmakanta, Br 63.30 49 IAmb IAmb 01 41 53.9
comp=Z,19nm,0.9s
P57A Homestead Farm 63.31 60 IAmb IAmb 01 41 54.5
comp=Z,22nm,1.0s
P57A Homestead Farm 63.31 60 P **P** **01 41 53.6 +0.5**
baz=316,SNR=5.7
P57A P **P** **01 41 53.6 +0.5**
baz=316,SNR=5.7
U54A Nelsons Funny 63.34 64 P **P** **01 41 53.1 -0.4**
baz=316,SNR=6.5
U54A P **P** **01 41 53.1 -0.4**
baz=316,SNR=6.5
V53A Saluda 63.38 66 P **P** **01 41 53.5 -0.3**
V53A IAmb IAmb 01 41 54.9
comp=Z,28nm,1.2s
V53A Saluda 63.38 66 P **P** **01 41 53.8 0.0**
baz=316,SNR=8.5
V53A P **P** **01 41 53.8 0.0**
baz=316,SNR=8.5
PKME Peaks-Kenny Pk 63.53 50 P **P** **01 41 53.6 -0.9**
baz=318
F64A Sherman 63.53 49 IAmb IAmb 01 41 55.4
comp=Z,22nm,0.8s
GYA Guiyang 63.58 280 ||P **P** **01 41 56.3 +1.0**
GYA pmax pmax
comp=Z,25nm,1.1s
GOMU GeErMu 63.59 295 P **P** **01 41 55.8 +0.2**
GOMU pP pP 01 41 59.5 -6.7
GOMU pmax pmax
comp=Z,11nm,1.1s
GOMU pmax pmax
comp=Z,83nm,4.9s
GOMU LR LR
comp=Z,140nm,15.5s
GOMU LR LR
comp=Z,180nm,14.9s
GOMU LR LR
comp=Z,210nm,13.9s
BLA Blacksburg 63.62 63 P **P** **01 41 55.8 +0.5**
baz=316,SNR=7.5
BLA Blacksburg 63.62 63 P **P** **01 41 54.7 -0.7**
baz=316,SNR=7.5
Z51A Franklin 63.71 69 IAmb IAmb 01 42 08.5
comp=Z,18nm,0.8s
Z51A Franklin 63.71 69 P **P** **01 41 55.1 -0.8**
baz=316,SNR=5.3
BG3 Lake Jocassee 63.80 66 IAmb IAmb 01 41 57.4
comp=Z,20nm,1.0s
CASEE Lake Jocassee 63.80 66 P **P** **01 41 56.7 +0.2**
baz=316,SNR=7.8
MVL Millersville 63.82 58 IAmb IAmb 01 41 57.8
comp=Z,15nm,0.8s
L61B Northampton 63.94 54 P **P** **01 41 56.9 -0.4**
baz=317
Y52A Lilburn 63.96 68 IAmb IAmb 01 42 11.2
comp=Z,20nm,0.8s
Y52A Lilburn 63.96 68 P **P** **01 41 57.4 -0.2**
baz=316,SNR=5.5
Y52A P **P** **01 41 57.4 -0.2**
baz=316,SNR=5.5
SDMD Soldier's Deli 63.99 59 IAmb IAmb 01 41 59.3
comp=Z,12nm,0.8s
SDMD Soldier's Deli 63.99 59 P **P** **01 41 57.9 +0.2**
baz=317,SNR=5.9
K62A Royalston 64.00 54 P **P** **01 41 58.4 +0.6**
baz=317,SNR=5.2
K62A P **P** **01 41 58.4 +0.6**
baz=317,SNR=5.2
S57A Dark Hollow, R 64.03 61 IAmb IAmb 01 41 59.6
comp=Z,17nm,0.9s
S57A Dark Hollow, R 64.03 61 P **P** **01 41 59.0 +0.9**
baz=316,SNR=6.3
S57A P **P** **01 41 59.0 +0.9**
baz=316,SNR=6.3
ARU Arti 64.08 331 LR LR 02 13 51.4
comp=Z,231nm,18.2s,baz=41,slow=40
ARU Arti 64.08 331 P **P** **01 41 56.7 -1.3**
ARU IAmb IAmb 01 41 58.5
comp=Z,14nm,0.6s
ARU Arti 64.08 331 *d i*P **P** **01 41 57.8 -0.2**
ARU 01 42 32.3
ARU S **S** **01 50 32.9 +1.5**
ARU 01 51 46.6
ARU SS **SS** **01 54 38.2 -1.4**
ARU pmax pmax
comp=Z,12nm,0.6s
ARU MLR MLR
comp=Z,475nm,19.0s
ARU Arti 64.08 331 P **P** **01 41 57.7 -0.2**
ARU pP **pwP** **01 42 11.0 -0.1**
ARU sP **sP** **01 42 15.6 +2.1**
BRAL Brewton 64.15 72 P **P** **01 41 59.0 +0.2**
baz=316
V55A Taylorsville 64.16 64 IAmb IAmb 01 42 00.1
comp=Z,22nm,0.9s
V55A Taylorsville 64.16 64 P **P** **01 41 59.0 +0.1**
baz=316,SNR=8.7
V55A P **P** **01 41 59.0 +0.1**
baz=316,SNR=8.7
BRZS Berezniki 64.24 319 *e*P **P** **01 41 57.7 -1.5**
BRZS Berezniki 64.24 319 *e*P **P** **01 41 57.8 -1.5**
baz=319
U56A King 64.27 63 P **P** **01 41 59.7 +0.1**
baz=316
U56A P **P** **01 41 59.7 +0.1**
baz=316
PAL Palisades 64.36 56 P **P** **01 41 59.6 -0.5**
baz=317
T57A Hurt 64.42 62 IAmb IAmb 01 42 01.7
comp=Z,18nm,0.8s
T57A Hurt 64.42 62 P **P** **01 42 00.8 +0.2**
baz=317,SNR=8.0
T57A P **P** **01 42 00.8 +0.2**
baz=317,SNR=8.0
152A Waverly Hall 64.44 69 IAmb IAmb 01 42 13.4
comp=Z,15nm,0.8s
152A Waverly Hall 64.44 69 P **P** **01 41 59.7 -1.1**
baz=316
HRV Adam Dziewonsk 64.46 53 P **P** **01 42 00.9 +0.2**
baz=318
R58B Mineral 64.47 61 IAmb IAmb 01 42 02.0
comp=Z,12nm,0.8s
PAULI Pauline 64.56 66 IAmb IAmb 01 42 02.4
comp=Z,24nm,0.9s
PAULI Pauline 64.56 66 P **P** **01 42 01.5 0.0**
baz=317,SNR=5.6
CBN Corbin Frederi 64.57 60 P **P** **01 42 00.5 -1.0**
baz=317
KMSC Kings Mountain 64.60 65 P **P** **01 42 02.0 +0.3**
baz=317,SNR=15
KMSC Kings Mountain 64.60 65 P **P** **01 42 01.5 -0.3**
baz=316,SNR=15
GOGA Godfrey 64.63 68 P **P** **01 42 01.3 -0.6**
baz=317,SNR=8.9
GOGA Godfrey 64.63 68 P **P** **01 42 00.9 -1.0**
baz=316,SNR=8.9
KIRV Kirov 64.73 337 LR LR 02 14 10.3
comp=Z,96nm,18.5s,baz=38,slow=40
KIRV Kirov 64.73 337 *ce*P **P** **01 42 02.9 +0.8**
HODGE Hodges 64.73 66 P **P** **01 42 02.8 +0.2**
HODGE IAmb IAmb 01 42 03.3
comp=Z,23nm,0.9s
HODGE Hodges 64.73 66 P **P** **01 42 02.3 -0.3**
baz=317,SNR=8.2
JSC Jenkinsville 65.27 66 IAmb IAmb 01 42 07.2
comp=Z,26nm,1.0s
JSC Jenkinsville 65.27 66 P **P** **01 42 06.4 +0.3**
baz=317,SNR=8.9
W57A Gilead 65.35 64 P **P** **01 42 06.9 +0.3**
baz=317
W57A P **P** **01 42 06.9 +0.3**
baz=317
V58A Windy Hill, Pi 65.37 63 IAmb IAmb 01 42 08.1
comp=Z,20nm,0.9s
V58A Windy Hill, Pi 65.37 63 P **P** **01 42 07.3 +0.6**
baz=317,SNR=5.0
V58A P **P** **01 42 07.3 +0.6**
baz=317,SNR=5.0
T59A Double "B" Far 65.37 61 P **P** **01 42 07.1 +0.4**
baz=317,SNR=8.5
T59A P **P** **01 42 07.1 +0.4**
baz=317,SNR=8.5
BIRD Birdtown, Kers 65.45 65 IAmb IAmb 01 42 08.4
comp=Z,21nm,0.8s
BIRD Birdtown, Kers 65.45 65 P **P** **01 42 07.5 +0.2**
baz=317,SNR=5.6
U59A Littleton 65.69 62 IAmb IAmb 01 42 12.4
comp=Z,11nm,0.9s
U59A Littleton 65.69 62 P **P** **01 42 09.7 +0.8**
baz=317
U59A P **P** **01 42 09.7 +0.8**
baz=317
HAW Hawthorne Fire 65.74 67 P **P** **01 42 09.2 +0.1**
baz=317,SNR=5.5
OTUK Ortayu 65.74 318 P **P** **01 42 07.9 -1.1**
Y57A Sumter 65.95 65 P **P** **01 42 10.6 +0.1**
baz=317
Y57A P **P** **01 42 10.6 +0.1**
baz=317
X58A Rowland 66.15 64 IAmb IAmb 01 42 13.7
comp=Z,20nm,0.9s
FINES FINESS Array B 66.20 350 P **P** **01 42 11.5 -0.1**
comp=Z,3.3nm,0.6s,baz=13,slow=7.7,SNR=17
FINES LR LR 02 13 39.2
comp=Z,82nm,19.1s,baz=34,slow=38
comp=Z,3.3nm,0.6s
SHLS Shalkode 66.47 310 *e*P **P** **01 42 12.3 -1.6**
SHLS Shalkode 66.47 310 *e*P **P** **01 42 12.4 -1.6**
baz=310
PZH PanZhiHua 66.55 283 P **P** **01 42 15.5 +0.9**
PZH pmax pmax
comp=Z,50nm,1.2s
PZH pmax pmax
comp=Z,130nm,6.1s
KPKS Kokpek 66.61 311 *e*P **P** **01 42 13.4 -1.3**
KPKS Kokpek 66.61 311 *e*P **P** **01 42 13.4 -1.3**
baz=311
TAOE Nuku Hiva Isla 66.73 144 *e*LR LR 02 02 24.9
comp=Z,199nm,25.3s
NHSC New Hope 66.74 66 P **P** **01 42 16.5 +1.0**
baz=318
NHSC New Hope 66.74 66 P **P** **01 42 14.7 -0.9**
baz=318
KMI Kunming 66.96 282 ||P **P** **01 42 18.5 +1.2**
KMI pmax pmax
comp=Z,21nm,0.8s
KUU Kurty 67.37 313 *e*P **P** **01 42 18.2 -1.2**
KUU Kurty 67.37 313 *e*P **P** **01 42 18.2 -1.2**
baz=313
MDOK Medeo 67.61 312 *e*P **P** **01 42 19.8 -1.3**
MDOK Medeo 67.61 312 *e*P **P** **01 42 19.9 -1.3**
baz=312
NB2 NORSAR Subarra 67.62 358 P **P** **01 42 20.3 -0.5**
comp=Z,8.8nm,1.0s,baz=4.9,slow=6.9
NB2 NORSAR Subarra 67.62 358 P **P** **01 42 20.3 -0.5**
baz=4.9,slow=6.9
NOA NORSAR Array B 67.62 358 P **P** **01 42 20.6 -0.1**
comp=Z,1.8nm,0.7s,baz=3.7,slow=6.5,SNR=6.7
NOA LR LR 02 13 27.2
comp=Z,59nm,18.5s,baz=5.0,slow=37
comp=Z,1.8nm,0.7s
HFS Hagfors 68.44 356 LR LR 02 11 24.2
comp=Z,78nm,21.5s,baz=24,slow=35
TKM2 Tokmak 2 68.46 312 P **P** **01 42 27.4 +0.8**
SNR=14
TKM2 Tokmak 2 68.46 312 P **P** **01 42 26.6 0.0**
SGDS Sogindy 68.49 313 *e*P **P** **01 42 26.1 -0.5**
SGDS Sogindy 68.49 313 *e*P **P** **01 42 26.1 -0.5**
baz=314
USP Ospenovka 68.69 313 P **P** **01 42 28.7 +0.9**
SNR=16
KBK Karagaybulak 68.97 313 P **P** **01 42 31.0 +1.3**
SNR=8.9
KONO Kongsberg 69.05 358 P **P** **01 42 31.0 +1.4**
KONO Kongsberg 69.05 358 P **P** **01 42 31.0 +1.4**
KONO pmax pmax
comp=Z,66nm,1.6s
AAK Ala-Archa 69.19 313 P **P** **01 42 31.8 +0.8**
SNR=15
AAK Ala-Archa 69.19 313 LR LR 02 15 45.6
comp=Z,160nm,18.2s,baz=29,slow=38
AAK Ala-Archa 69.19 313 P **P** **01 42 31.9 +0.8**
AAK IAmb IAmb 01 42 33.1
comp=Z,21nm,1.1s
AAK Ala-Archa 69.19 313 *ce*P **P** **01 42 32.0 +1.0**
AAK pmax pmax
comp=Z,23nm,1.3s
AAK Ala-Archa 69.19 313 P **P** **01 42 31.3 +0.3**
EKS2 Erkin-Say 69.50 313 P **P** **01 42 34.0 +1.1**
SNR=8.3
UCH Uchtor 69.50 313 P **P** **01 42 34.1 +0.8**
SNR=7.6
AB31 Akbulak array 69.67 326 *i*P **P** **01 42 34.1 +0.4**
ABKAR Akbulak array 69.67 326 P **P** **01 42 34.0 +0.3**
CMIG Matias Romero 69.74 88 LR LR 02 08 28.0
comp=Z,100nm,21.7s,baz=312,slow=32
AML Almayashu 69.95 313 P **P** **01 42 37.3 +1.2**
SNR=11
LSA Lhasa 70.44 293 P **P** **01 42 39.9 +0.6**
LSA Lhasa 70.44 293 P **P** **01 42 41.0 +1.7**
LSA pmax pmax
comp=Z,110nm,0.8s
LSA Lhasa 70.44 293 P **P** **01 42 39.9 +0.6**
LSA pmax pmax
comp=Z,68nm,0.8s
LSA Lhasa 70.44 293 P **P** **01 42 41.1 +1.7**
ZIRO ZIRO 70.50 290 *e*P **P** **01 42 40.7 +1.3**
ZIRO IAmb IAmb 01 42 42.1
comp=Z,50nm,0.8s
KK31 Karatay Array 70.59 316 P **P** **01 42 39.8 +0.3**
KK31 IAmb IAmb 01 42 40.9
comp=Z,21nm,1.4s
KK31 Karatay Array 70.59 316 P **P** **01 42 39.8 +0.3**
KK31 pmax pmax
comp=Z,21nm,1.5s
KKAR Karatay Array 70.59 316 P **P** **01 42 39.8 +0.3**
KKAR IAmb IAmb 01 42 40.9
comp=Z,21nm,1.4s
KKAR Karatay Array 70.59 316 P **P** **01 42 39.8 +0.3**
KKAR pmax pmax
comp=Z,21nm,1.5s
BELG Belogornoye 70.72 335 LR LR 02 16 22.0
comp=Z,98nm,21.4s,baz=242,slow=38
BELG Belogornoye 70.72 335 *i* P **P** **01 42 39.2 -0.8**
BELG pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 70.73 342 LR LR 02 18 27.4
comp=Z,20nm,19.5s,baz=356,slow=40
OBN Obninsk 70.73 342 P **P** **01 42 39.7 -0.3**
OBN Obninsk 70.73 342 *e*P **P** **01 42 39.5 -0.5**
OBN *e* 01 42 59.8
OBN *e* 01 45 17.2
OBN *e*PPP PPP 01 47 00.1
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,132nm,20.0s
ITAN ITANAGAR 70.87 290 *e*P **P** **01 42 43.3 +1.9**
KSH Kashi 70.95 310 P **P** **01 42 46.0 +4.2**
KSH sP pwP 01 42 59.5 +2.4
KSH pmax pmax
comp=Z,37nm,1.1s
MOKO MOKOCHONG 71.02 288 *e*P **P** **01 42 44.3 +1.8**
MOKO IAmb IAmb 01 42 45.4
comp=Z,75nm,1.0s
IUG Iuzhnay 71.58 315 *e*P **P** **01 42 44.7 -0.8**
IUG Iuzhnay 71.58 315 *e*P **P** **01 42 44.8 -0.8**
baz=316
TEZP TEZPUR 71.80 290 *e*P **P** **01 42 47.7 +0.7**
TEZP IAmb IAmb 01 42 49.7
comp=Z,8.5nm,0.6s
PPT2 Papeete2 72.02 156 *e*LR LR 02 04 52.0
comp=Z,150nm,22.8s
PPT2 *e*LR LR 02 04 52.5
comp=Z,166nm,25.2s
PABE Paberze 72.25 350 P **P** **01 42 48.1 -1.0**
NACGM Naroch 72.50 348 ||*e*P **P** **01 42 50.5 -0.2**
comp=Z,18nm,0.9s,baz=13
LPSR Galich'ya Gora 72.62 340 *e*P **P** **01 42 49.8 -1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
SHL Shillong 73.13 290 P **P** **01 42 54.5 -0.7**
SHL Shillong 73.13 290 P **P** **01 42 54.5 -0.7**
SHL pmax pmax
comp=Z,145nm,1.5s

SHL	**Shillong**	**73.13 290**	*e*P	**P**	**01 42 55.1**	**0.0**
SHL			*e*P	pP	01 42 56.4	-10
VORR	**Voronezh**	**73.43 339**	*e*P	**P**	**01 42 56.4**	**+0.1**
VORR			pmax	pmax		
comp=Z,10.0nm,0.4s						
PHRA	**Phrae**	**73.45 279**	P	**P**	**01 42 56.9**	**0.0**
GTK	**Tadong**	**73.70 293**	IAmb	IAmb	01 43 03.4	
comp=Z,24nm,1.0s						
VSR	**Storozhevoye**	**73.87 339**	*e*P	**P**	**01 42 58.1**	**-0.7**
VSR			pmax	pmax		
comp=Z,50nm,1.4s						
CHTO	**Chiang Mai**	**74.00 280**	P	**P**	**01 42 59.8**	**-0.3**
CHTO	**Chiang Mai**	**74.00 280**	P	**P**	**01 42 59.8**	**-0.3**
CHTO			pmax	pmax		
comp=Z,9.0nm,1.1s						
TOLI2	**Tolitoli**	**74.27 251**	P	**P**	**01 43 00.8**	**-0.8**
TOLI2			IAmb	IAmb	01 43 02.2	
comp=Z,19nm,1.1s						
CMAR	**Chiang Mai Arr**	**74.27 280**	P	**P**	**01 43 02.2**	**+0.5**
comp=Z,2.1nm,0.4s,baz=27,slow=6.5,SNR=18						
CMAR			pP	**PcP**	**01 43 15.6**	**-0.9**
comp=Z,7.1nm,0.8s,baz=26,slow=6.9,SNR=5.4						
CMAR			LR	LR	02 19 46.2	
comp=Z,56nm,18.7s,baz=50,slow=39						
comp=Z,2.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**74.27 280**	P	**P**	**01 43 02.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**74.27 280**	*ce*P	**P**	**01 43 02.4**	**+0.7**
CMAR			pmax	pmax		
comp=Z,2.0nm,0.4s						
ODAN	**Odare**	**74.75 294**	*e*P	**P**	**01 43 05.5**	**+0.8**
GUN	**Gumba**	**74.80 296**	*e*P	**P**	**01 43 06.2**	**+1.1**
JIRN	**Jiri**	**74.81 295**	*e*P	**P**	**01 43 06.3**	**+1.1**
comp=Z,225nm,0.7s						
SAIH	**SAIHA**	**74.82 287**	*e*P	**P**	**01 43 05.8**	**+0.8**
LUWI	**Luwuk**	**74.84 248**	P	**P**	**01 43 04.4**	**-0.5**
GKP	**Gorka Klasztor**	**75.09 353**	*e*P	**P**	**01 43 06.2**	**+0.3**
RAMN	**Ramite**	**75.13 295**	*e*P	**P**	**01 43 07.7**	**+0.8**
comp=Z,232nm,0.7s						
KKN	**Kakani**	**75.22 296**	*e*P	**P**	**01 43 08.4**	**+1.0**
PKI	**Pulchoki**	**75.32 296**	*e*P	**P**	**01 43 08.6**	**+0.5**
comp=Z,139nm,1.0s						
PKIN	**Phulchoki**	**75.32 296**	*e*P	**P**	**01 43 08.6**	**+0.6**
comp=Z,132nm,1.1s						
GKN	**Gorkha**	**75.42 297**	*e*P	**P**	**01 43 09.1**	**+0.7**
comp=Z,101nm,0.7s						
DMN	**Daman**	**75.46 296**	*e*P	**P**	**01 43 09.7**	**+0.9**
comp=Z,246nm,1.3s						
DZM	**Mont Dzumac**	**75.47 199**	*e*LR	LR	02 06 26.8	
comp=Z,303nm,24.8s						
BRDH	**Bariadhala**	**75.47 288**	LR	LR	02 20 49.3	
comp=Z,103nm,18.1s,baz=69,slow=39						
DANN	**Dangsing**	**75.64 297**	*e*P	**P**	**01 43 10.8**	**+1.0**
comp=Z,218nm,0.7s						
KOLN	**Koldanda**	**76.18 297**	*e*P	**P**	**01 43 13.5**	**+0.7**
AKASG	**Malin Array Be**	**76.24 345**	P	**P**	**01 43 11.7**	**-0.9**
comp=Z,5.0nm,0.5s,baz=17,slow=6.0,SNR=20						
AKASG			pP	**PcP**	**01 43 24.6**	**+0.2**
comp=Z,3.2nm,0.5s,baz=13,slow=5.0,SNR=6.4						
AKASG			LR	LR	02 21 10.6	
comp=Z,78nm,20.3s,baz=5.0,slow=39						
comp=Z,5.0nm,0.5s						
AKBB	**Malin Array Si**	**76.24 345**	IAmb	IAmb	01 43 12.5	
comp=Z,37nm,1.6s						
AKBB	**Malin Array Si**	**76.24 345**	*ce*P	**P**	**01 43 11.3**	**-1.2**
AKBB			pmax	pmax		
comp=Z,7.0nm,0.6s						
PYUN	**Piuthan**	**76.26 298**	*e*P	**P**	**01 43 13.9**	**+0.6**
comp=Z,189nm,1.0s						
AK05	**Malin Array Si**	**76.32 345**	P	**P**	**01 43 12.1**	**-0.8**
AK05			IAmb	IAmb	01 43 16.9	
comp=Z,13nm,1.2s						
PTH	**Pithoragarh**	**76.63 301**	*e*P	**P**	**01 43 15.0**	**-0.3**
THN	**Thein Dam**	**76.69 306**	*e*P	**P**	**01 43 16.0**	**+0.7**
NIL	**Nilore**	**76.94 308**	P	**P**	**01 43 17.3**	**+0.4**
NIL	**Nilore**	**76.94 308**	P	**P**	**01 43 17.3**	**+0.4**
NIL			pmax	pmax		
comp=Z,70nm,0.9s						
CLL	**Collm**	**77.29 356**	*i* P	**P**	**01 43 18.4**	**0.0**
CLL			*e**SP	**pP**	**01 43 31.0**	**+2.0**
CLL			pmax	pmax		
comp=Z,30nm,1.7s						
CLL	**Collm**	**77.29 356**	*i* P	**P**	**01 43 18.4**	**0.0**
comp=Z,30nm,1.7s						
CLL			*ep*P	**pP**	**01 43 31.0**	**+2.0**
TBI	**Tubuai**	**77.58 157**	*e*LR	LR	02 07 26.7	
comp=Z,5μm,27.0s						
TBI			*e*LR	LR	02 07 26.8	
comp=Z,2μm,29.5s						
BRG	**Berggiesshubel**	**77.68 355**	*i* P	**P**	**01 43 21.1**	**+0.5**
BRG			*i*		01 43 33.9	
BRG			pmax	pmax		
comp=Z,13nm,0.9s						
CHVC	**Chvalec**	**77.84 354**	*e*P	**P**	**01 43 22.0**	**+0.4**
OSTC	**Ostas**	**77.86 354**	*e*P	**P**	**01 43 22.1**	**+0.4**
OSTC			*ep*P	**sP**	**01 43 35.6**	**-1.8**
OJC	**Ojcow**	**77.90 351**	P	**P**	**01 43 20.2**	**-1.7**
OJC			IAmb	IAmb	01 43 20.9	
comp=Z,22nm,1.5s						
OJC	**Ojcow**	**77.90 351**	P	**P**	**01 43 20.2**	**-1.7**
OJC			pmax	pmax		
comp=Z,22nm,1.5s						
BOK	**Bokaro**	**77.97 293**	*e*P	**P**	**01 43 23.9**	**+1.2**
PVCC	**Panska Ves**	**77.99 355**	*e*P	**P**	**01 43 22.9**	**+0.6**
PVCC	**Panska Ves**	**77.99 355**	*e*P	**P**	**01 43 22.9**	**+0.6**
DPC	**Dobruska-Polom**	**78.06 354**	*e*P	**P**	**01 43 23.5**	**+0.7**
DPC			*e*		01 43 36.1	
DPC	**Dobruska-Polom**	**78.06 354**	*e*P	**P**	**01 43 23.5**	**+0.7**
DPC			*ep*P	**sP**	**01 43 36.1**	**-2.4**
KBL	**Kabul**	**78.23 312**	P	**P**	**01 43 24.0**	**-0.2**
KBL	**Kabul**	**78.23 312**	P	**P**	**01 43 24.0**	**-0.2**
KBL			pmax	pmax		
comp=Z,25nm,0.8s						
KRLC	**Kraliky**	**78.30 353**	*e*P	**P**	**01 43 24.5**	**+0.4**
KRLC			*e*		01 43 37.8	
KRLC	**Kraliky**	**78.30 353**	*e*P	**P**	**01 43 24.5**	**+0.4**
KRLC			*ep*P	**sP**	**01 43 37.8**	**-2.0**
NKC	**Novy Kostel**	**78.39 356**	*e*P	**P**	**01 43 25.2**	**+0.6**
NKC			*e*		01 43 38.1	
NKC	**Novy Kostel**	**78.39 356**	*e*P	**P**	**01 43 25.2**	**+0.6**
NKC			*ep*P	**sP**	**01 43 38.1**	**-2.2**
OKC	**Ostrava-Krasne**	**78.43 352**	*e*P	**P**	**01 43 25.4**	**+0.6**
OKC	**Ostrava-Krasne**	**78.43 352**	*e*P	**P**	**01 43 25.4**	**+0.6**
BMRD	**Maredsous**	**78.44 1**	*d*P	**P**	**01 43 24.4**	**-0.4**
comp=Z,6.2nm,1.1s						
PRU	**Pruhonice**	**78.53 355**	*e*P	**P**	**01 43 25.7**	**+0.4**
PRU			*e*		01 43 39.0	
PRU	**Pruhonice**	**78.53 355**	*e*P	**P**	**01 43 25.7**	**+0.4**
PRU			*ep*P	**sP**	**01 43 39.0**	**-2.1**
MORC	**Moravsky Berou**	**78.54 353**	⇑P	**P**	**01 43 25.5**	**0.0**
MORC	**Moravsky Berou**	**78.54 353**	*e*P	**P**	**01 43 25.5**	**0.0**
MORC			*e*		01 43 38.7	
STHS	**Stebnicka Huta**	**78.55 350**	*e*P	**P**	**01 43 25.6**	**+0.1**
GOPC	**GO Pecny, Ondr**	**78.59 355**	*e*P	**P**	**01 43 26.0**	**+0.3**
GOPC	**GO Pecny, Ondr**	**78.59 355**	*e*P	**P**	**01 43 26.0**	**+0.3**
DOU	**Dourbes**	**78.64 1**	*d*P	**P**	**01 43 26.2**	**+0.2**
comp=Z,7.2nm,1.4s						
GOF	**Gofitskoye**	**78.66 335**	⇑*e*P	**P**	**01 43 26.8**	**+0.6**
MAUC	**Maruska**	**78.92 352**	*e*P	**P**	**01 43 28.2**	**+0.6**
GRA1	**Grafenberg Arr**	**78.98 357**	IAmb	IAmb	01 43 42.6	
comp=Z,20nm,0.9s						
GRFO	**Grafenberg**	**78.98 357**	P	**P**	**01 43 28.5**	**+0.7**
GRFO			IAmb	IAmb	01 43 42.5	
comp=Z,20nm,0.9s						
GRFO	**Grafenberg**	**78.98 357**	P	**P**	**01 43 28.5**	**+0.7**
GRFO			pmax	pmax		
comp=Z,20nm,0.9s						
CRVS	**Cervenica-Dubn**	**79.04 350**	*e*P	**P**	**01 43 28.4**	**+0.2**
CRVS			pmax	pmax		
comp=Z,9.0nm,1.0s						
VRAC	**Vranov**	**79.08 353**	⇑P	**P**	**01 43 29.0**	**+0.6**
VRAC	**Vranov**	**79.08 353**	P	**P**	**01 43 28.9**	**+0.6**
comp=Z,15nm,0.9s,baz=8.2,slow=5.0,SNR=22						
VRAC			pP	**pwP**	**01 43 42.1**	**-2.1**
comp=Z,9.8nm,0.8s,baz=3.5,slow=5.8,SNR=11						
VRAC			LR	LR	02 20 35.4	
comp=Z,53nm,19.4s,baz=358,slow=37						
comp=Z,15nm,0.9s						
VRAC	**Vranov**	**79.08 353**	*e*P	**P**	**01 43 28.8**	**+0.4**
VRAC			*e*		01 43 41.9	
ALBI	**Allahabad**	**79.09 297**	*e*P	**P**	**01 43 28.7**	**-0.1**
TREC	**Trest**	**79.17 354**	*e*P	**P**	**01 43 29.2**	**+0.3**
TREC	**Trest**	**79.17 354**	*e*P	**P**	**01 43 29.2**	**+0.3**
UZH	**Uzhgorod**	**79.21 349**	⇓*i*P	**P**	**01 43 28.2**	**-0.9**
UZH			*e*		01 43 36.4	
UZH			*e*		01 43 45.0	
KRUC	**Moravsky**	**79.33 353**	*e*P	**P**	**01 43 29.9**	**+0.1**
KRUC			*e*		01 43 43.2	
JAVC	**Velka Javorina**	**79.44 353**	*e*P	**P**	**01 43 31.5**	**+1.1**
JAVC			*e*		01 43 44.9	
KHC	**Kasperske Hory**	**79.44 355**	IAmb	IAmb	01 43 32.2	
comp=Z,24nm,1.3s						
KHC	**Kasperske Hory**	**79.44 355**	*e*P	**P**	**01 43 30.7**	**+0.3**
KHC			*e*		01 43 44.1	
KHC	**Kasperske Hory**	**79.44 355**	*e*P	**P**	**01 43 30.7**	**+0.3**
KHC			*ep*P	**pwP**	**01 43 44.1**	**-2.1**
CTAO	**Charters Tower**	**79.62 218**	P	**P**	**01 43 31.9**	**+0.4**
CTAO			IAmb	IAmb	01 43 45.8	
comp=Z,16nm,1.1s						
CTAO	**Charters Tower**	**79.62 218**	P	**P**	**01 43 32.0**	**+0.4**
CTAO			pmax	pmax		
comp=Z,16nm,1.1s						
TRPA	**Tarpa**	**79.68 349**	⇑P	**P**	**01 43 32.1**	**+0.5**
VYHS	**Vyhne**	**79.70 352**	*e*P	**P**	**01 43 32.0**	**+0.2**
VYHS			pmax	pmax		
comp=Z,8.0nm,1.2s						
CKRC	**Cesky Krumlov**	**79.71 355**	*e*P	**P**	**01 43 32.2**	**+0.4**
GERES	**GERESS Array B**	**79.72 355**	P	**P**	**01 43 32.1**	**+0.1**
comp=Z,3.7nm,0.8s,baz=20,slow=4.3,SNR=24						
GERES			pP	**pwP**	**01 43 45.3**	**-2.5**
comp=Z,3.9nm,0.8s,baz=20,slow=4.7,SNR=11						
comp=Z,3.7nm,0.8s						
GERES	**GERESS Array B**	**79.72 355**	P	**P**	**01 43 31.2**	**-0.7**
KVAR	**Kislovodsk Arr**	**79.78 334**	LR	LR	02 22 30.7	
comp=Z,83nm,22.0s,baz=253,slow=38						
KIV	**Kislovodsk**	**79.78 334**	⇑P	**P**	**01 43 32.7**	**+0.3**
KIV	**Kislovodsk**	**79.78 334**	P	**P**	**01 43 31.9**	**-0.6**
KIV			IAmb	IAmb	01 43 33.9	
comp=Z,11nm,0.8s						
KIV	**Kislovodsk**	**79.78 334**	*e*P	**P**	**01 43 33.0**	**+0.6**
KIV			pmax	pmax		
comp=Z,15nm,1.1s						
KAPI	**Kappang**	**79.80 248**	P	**P**	**01 43 33.7**	**+1.0**
comp=Z,2.7nm,0.3s,baz=94,slow=5.9,SNR=5.7						
comp=Z,2.7nm,0.3s						
KAPI	**Kappang**	**79.80 248**	P	**P**	**01 43 33.0**	**+0.3**
KAPI			IAmb	IAmb	01 43 48.9	
comp=Z,8.3nm,0.8s						
KAPI	**Kappang**	**79.80 248**	P	**P**	**01 43 33.0**	**+0.3**
KAPI			pmax	pmax		
comp=Z,8.0nm,0.9s						
SMOL	**Smolenice**	**79.80 353**	*e*P	**P**	**01 43 33.4**	**+1.1**
SMOL			pmax	pmax		
comp=Z,4.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**79.82 347**	IAmb	IAmb	01 43 34.3	
comp=Z,19nm,1.6s						
BURAR	**Bucovina Array**	**79.84 347**	⇓P	**P**	**01 43 33.0**	**+0.3**
BURAR	**Bucovina Array**	**79.84 347**	IAmb	IAmb	01 43 33.7	
comp=Z,7.7nm,0.7s						
KBZ	**Khabaz**	**79.93 334**	P	**P**	**01 43 34.2**	**+1.1**
comp=Z,7.7nm,0.8s,baz=69,slow=3.0,SNR=18						
KBZ			LR	LR	02 25 29.2	
comp=Z,108nm,18.1s,baz=18,slow=40						
comp=Z,7.7nm,0.8s						
KBZ	**Khabaz**	**79.93 334**	*ce*P	**P**	**01 43 33.4**	**+0.3**
KBZ			pmax	pmax		
comp=Z,9.0nm,0.8s						
MODS	**Modra-Piesok**	**79.95 353**	*e*P	**P**	**01 43 34.6**	**+1.4**
MODS			pmax	pmax		
comp=Z,31nm,1.2s						
NCK	**Nalchik**	**79.96 334**	*i* P	**P**	**01 43 34.1**	**+0.8**
NCK			pmax	pmax		
comp=Z,32nm,0.9s						
MILM	**Milestii Mici**	**79.98 345**	⇓P	**P**	**01 43 33.4**	**+0.1**
MILM	**Milestii Mici**	**79.98 345**	*e*P	**P**	**01 43 33.0**	**-0.3**
comp=Z,50nm,1.2s						
MTN	**Manton Dam**	**80.06 235**	P	**P**	**01 43 34.1**	**+0.1**
MTN			IAmb	IAmb	01 43 47.7	
comp=Z,24nm,0.8s						
GEYT	**Alibeck**	**80.07 321**	P	**P**	**01 43 34.7**	**+0.7**
comp=Z,12nm,1.0s,baz=332,slow=5.0,SNR=26						
GEYT			LR	LR	02 23 04.2	
comp=Z,215nm,18.1s,baz=23,slow=39						
comp=Z,12nm,1.0s						
GEYT	**Alibeck**	**80.07 321**	P	**P**	**01 43 34.5**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**80.07 321**	IAmb	IAmb	01 43 35.9	
comp=Z,14nm,1.0s						
ZST	**Bratislava**	**80.14 353**	*e*P	**P**	**01 43 35.4**	**+1.2**
ZST			pmax	pmax		
comp=Z,49nm,1.4s						
KSM	**Kuching**	**80.30 260**	P	**P**	**01 43 35.6**	**+0.1**
KSM			IAmb	IAmb	01 43 37.2	
comp=Z,23nm,1.3s						
BFO	**Black Forest**	**80.41 359**	P	**P**	**01 43 36.0**	**+0.4**
BFO			IAmb	IAmb	01 43 54.8	
comp=Z,9.9nm,1.1s						
BFO	**Black Forest**	**80.41 359**	P	**P**	**01 43 36.0**	**+0.4**
BFO			pmax	pmax		
comp=Z,10.0nm,1.1s						
ARCR	**ARCALIA**	**80.48 348**	⇑P	**P**	**01 43 37.0**	**+1.0**
CONA	**Conrad Observa**	**80.50 354**	*i* P	**P**	**01 43 37.1**	**+0.9**
comp=Z,14nm,1.4s						
CONA			*i* S	**pP**	**01 43 49.8**	**+3.0**
comp=Z,13nm,1.0s						
ECH	**Echery**	**80.53 360**	IAmb	IAmb	01 43 51.1	
comp=Z,11nm,0.9s						
AKT	**Akhty**	**80.58 330**	*e*P	**P**	**01 43 37.5**	**+0.7**
AKT			pmax	pmax		
comp=Z,29nm,0.9s						
RAO	**Raoul Island**	**80.62 184**	LR	LR	02 12 14.7	
comp=Z,146nm,19.9s,baz=154,slow=30						
RONA	**Rosalia, Austr**	**80.70 353**	*i* P	**P**	**01 43 37.4**	**+0.1**
comp=Z,7.8nm,1.1s						
RONA			*i* S	**pP**	**01 43 51.3**	**+3.5**
comp=Z,6.3nm,1.0s						
JHNI	**Jhansi**	**80.77 299**	*e*P	**P**	**01 43 33.3**	**-4.5**
ZKTA	**Zakatala**	**80.78 331**	P	**P**	**01 43 38.4**	**+0.7**
BIOA	**Bad Ischl, Aus**	**80.87 355**	*i* P	**P**	**01 43 38.2**	**+0.1**
comp=Z,8.4nm,1.0s						
BIOA			*i* S	**pP**	**01 43 51.8**	**+3.0**
comp=Z,9.8nm,1.1s						
DRGR		**80.98 349**	⇓P	**P**	**01 43 38.5**	**-0.2**
DRGR		**80.98 349**	P	**P**	**01 43 38.5**	**-0.2**
SEKA	**Sheki**	**80.99 330**	P	**P**	**01 43 39.0**	**+0.1**
VLDR	**Vladesti**	**81.14 345**	⇑P	**P**	**01 43 40.4**	**+0.9**
ARSA	**Arzberg**	**81.20 354**	*e*P	**P**	**01 43 40.6**	**+0.7**
comp=Z,5.2nm,0.8s						
ARSA			*i* S	**pP**	**01 43 54.0**	**+3.4**
comp=Z,6.5nm,0.9s						
RETA	**Reutte**	**81.20 357**	*e*P	**P**	**01 43 40.5**	**+0.6**
comp=Z,10nm,1.4s,SNR=4.4						
RETA			*i* S	**pP**	**01 43 53.6**	**+3.1**
comp=Z,8.1nm,1.2s						
OZUR		**81.25 347**	⇑P	**P**	**01 43 40.8**	**+0.6**
WATA	**Walderalm**	**81.32 357**	*e*P	**P**	**01 43 41.1**	**+0.5**
comp=Z,18nm,1.3s						
WATA			*e*S	**pP**	**01 43 54.3**	**+3.0**
comp=Z,15nm,1.2s						
MOTA	**Moosalm**	**81.33 357**	*i* P	**P**	**01 43 41.2**	**+0.5**
comp=Z,11nm,1.1s,SNR=5.6						
MOTA			*e*S	**pP**	**01 43 54.2**	**+2.8**
comp=Z,16nm,1.1s						
VRI	**Vrincioaia**	**81.34 346**	⇑P	**P**	**01 43 40.6**	**0.0**
WTTA	**Wattenberg**	**81.39 356**	*i* P	**P**	**01 43 41.4**	**+0.3**
comp=Z,19nm,1.4s						
WTTA			*i* S	**pP**	**01 43 54.6**	**+2.9**
comp=Z,14nm,1.0s						
HRA	**Herat**	**81.41 316**	IAmb	IAmb	01 43 43.2	
comp=Z,22nm,0.8s						
BLSP	**Bilaspur**	**81.42 295**	*e*P	**P**	**01 43 41.8**	**+0.3**
BLSP			*i* x	x	01 43 55.4	
DAVA	**Damuels**	**81.42 358**	*i* P	**P**	**01 43 42.0**	**+0.8**
comp=Z,9.9nm,1.0s						
DAVA			*i* S	**pP**	**01 43 54.2**	**+2.3**
comp=Z,7.2nm,1.4s						
MNGR	**Mingechevir, A**	**81.43 330**	P	**P**	**01 43 41.4**	**+0.3**
DOPR	**Dopca**	**81.43 347**	⇑P	**P**	**01 43 42.1**	**+1.0**
COVR	**Voineasa-Covia**	**81.43 346**	⇑P	**P**	**01 43 42.2**	**+1.0**
SQTA	**Sankt Quirin**	**81.45 357**	*i* P	**P**	**01 43 41.2**	**-0.1**
comp=Z,11nm,0.8s,SNR=6.2						
SQTA			*i* S	**pP**	**01 43 55.1**	**+3.2**
comp=Z,13nm,0.9s						
KBA	**Koelnbreinsper**	**81.50 355**	*i* P	**P**	**01 43 42.8**	**+1.1**
comp=Z,17nm,0.7s						
SIRR	**Siria**	**81.62 349**	⇑P	**P**	**01 43 42.2**	**+0.1**
FETA	**Feichten**	**81.66 357**	*i* P	**P**	**01 43 42.7**	**+0.2**
comp=Z,13nm,1.0s						
FETA			*e*S	**pP**	**01 43 56.3**	**+3.2**
comp=Z,16nm,0.9s						
GANJ	**Ganja**	**81.78 331**	P	**P**	**01 43 43.0**	**-0.1**
CFR	**Carcaliu**	**81.78 345**	⇑P	**P**	**01 43 43.9**	**+1.0**
SOKA	**Soboth**	**81.80 354**	*i* P	**P**	**01 43 43.6**	**+0.5**
comp=Z,19nm,1.2s						
SOKA			*i* S	**pP**	**01 43 56.7**	**+2.9**
comp=Z,16nm,1.1s						
MLR	**Muntele Rosu**	**81.82 346**	⇑P	**P**	**01 43 44.7**	**+1.4**
MLR	**Muntele Rosu**	**81.82 346**	P	**P**	**01 43 44.6**	**+1.3**
comp=Z,4.5nm,0.6s,baz=0.3,slow=2.8,SNR=7.7						
MLR			LR	LR	02 26 02.7	
comp=Z,40nm,18.3s,baz=355,slow=40						
comp=Z,4.5nm,0.6s						
MLR	**Muntele Rosu**	**81.82 346**	IAmb	IAmb	01 43 52.7	
comp=Z,17nm,1.4s						
ABTA	**Abfaltersbach**	**81.87 356**	*i* P	**P**	**01 43 43.6**	**+0.1**
comp=Z,8.3nm,1.0s						
DAVOX	**Davos/Dischmat**	**81.93 358**	P	**P**	**01 43 44.8**	**+0.9**
comp=Z,7.0nm,0.7s,baz=7.7,slow=3.8,SNR=18						
DAVOX			pP	**pwP**	**01 43 58.1**	**-1.6**
comp=Z,8.5nm,0.8s,baz=352,slow=11,SNR=7.2						
comp=Z,7.0nm,0.7s						
MFF	**Saint Martin d**	**81.98 5**	*e*P	**P**	**01 43 43.9**	**-0.1**
MFF			pmax	pmax		
comp=Z,9.0nm,0.8s						
VOIR		**82.00 347**	⇓P	**P**	**01 43 45.3**	**+1.1**
ARR	**Arges**	**82.13 347**	⇑P	**P**	**01 43 44.8**	**-0.1**
BZS	**Buzias**	**82.26 349**	⇑P	**P**	**01 43 44.6**	**-0.8**
HARR	**Harsova**	**82.29 345**	⇑P	**P**	**01 43 46.0**	**+0.4**
GZR	**Gura Zlata**	**82.34 349**	⇑P	**P**	**01 43 46.1**	**+0.1**
GNI	**Garni**	**82.71 331**	LR	LR	02 26 58.4	
comp=Z,84nm,18.1s,baz=9.0,slow=40						
EIDS	**Eidsvold**	**82.75 212**	P	**P**	**01 43 48.8**	**+0.8**
EIDS			IAmb	IAmb	01 44 03.2	
comp=Z,15nm,1.4s						
LKRN	**Lenkeran, Azer**	**82.76 328**	P	**P**	**01 43 48.4**	**+0.3**
RAGD	**RAYAGADA**	**82.93 292**	*e*P	**P**	**01 43 50.3**	**+1.0**
BHPL	**Bhopal**	**83.15 299**	*e*P	**P**	**01 43 48.6**	**-1.9**
LPG	**La Plagne**	**83.25 360**	*e*P	**P**	**01 43 53.6**	**+2.6**
LPG			pmax	pmax		
comp=Z,9.0nm,1.0s						
NAX	**Nakhchivan**	**83.38 331**	P	**P**	**01 43 51.7**	**+0.2**
LFF	**La Frestale**	**83.68 4**	*e*P	**P**	**01 43 52.8**	**0.0**
NGP	**Nagpur**	**83.92 296**	*e*P	**P**	**01 43 54.1**	**-0.4**
NGP			*i* pP	**sP**	**01 44 08.0**	**-1.2**
BLKB	**Belogradchik**	**84.10 348**	⇑P	**P**	**01 43 55.3**	**+0.2**
BOVS	**Bovan**	**84.21 349**	⇑P	**P**	**01 43 55.1**	**-0.4**
WB0	**Warramunga Arr**	**84.40 228**	P	**P**	**01 43 56.7**	**0.0**
WB0			IAmb	IAmb	01 44 09.3	
comp=Z,6.1nm,0.9s						
WRAB	**Tennant Creek**	**84.57 228**	*ce*P	**P**	**01 43 57.5**	**0.0**
WRAB			pmax	pmax		
comp=Z,13nm,2.5s						
WB2	**Warramunga Arr**	**84.57 228**	IAmb	IAmb	01 44 12.5	
comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**84.58 228**	P	**P**	**01 43 56.7**	**-0.8**
comp=Z,2.6nm,0.6s,baz=32,slow=5.7,SNR=46						
comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**84.58 228**	P	**P**	**01 43 56.8**	**-0.8**
GURO	**Guroymak-BITLI**	**84.98 333**	IAmb	IAmb	01 44 02.1	
comp=Z,16nm,1.5s						
VTS	**Vitosha**	**85.02 348**	⇑P	**P**	**01 44 00.5**	**+0.7**
VTS	**Vitosha**	**85.02 348**	IAmb	IAmb	01 44 01.1	
comp=Z,12nm,1.3s						
BR131	**Keskin Array S**	**85.99 339**	IAmb	IAmb	01 44 06.2	
comp=Z,8.4nm,0.9s						
BRTR	**Keskin Array B**	**85.99 339**	P	**P**	**01 44 05.0**	**+0.3**
comp=Z,3.6nm,0.9s,baz=44,slow=2.9,SNR=16						
BRTR			LR	LR	02 29 33.7	
comp=Z,69nm,18.7s,baz=8.0,slow=40						
comp=Z,3.6nm,0.9s						
BRTR	**Keskin Array B**	**85.99 339**	P	**P**	**01 44 04.6**	**-0.1**
BRTR	**Keskin Array B**	**85.99 339**	*ce*P	**P**	**01 44 05.9**	**+1.2**
BRTR			pmax	pmax		
comp=Z,4.0nm,0.9s						
PSI	**Prapat**	**86.33 270**	LR	LR	02 23 29.4	
comp=Z,81nm,19.9s,baz=146,slow=36						
MARD	**Mardin**	**86.49 333**	P	**P**	**01 44 07.6**	**+0.4**
AS31	**Alice Springs**	**88.00 227**	P	**P**	**01 44 14.6**	**+0.3**
ASAR	**Alice Springs**	**88.00 227**	P	**P**	**01 44 14.7**	**+0.3**
comp=Z,7.9nm,0.8s,baz=31,slow=4.6,SNR=75						
ASAR			pP	**sP**	**01 44 27.6**	**-1.1**
comp=Z,11nm,0.8s,baz=32,slow=4.7,SNR=19						
comp=Z,7.9nm,0.8s						
ESDC	**Sonseca Array**	**88.61 8**	P	**P**	**01 44 17.1**	**-0.1**
comp=Z,2.0nm,0.8s,baz=345,slow=4.4,SNR=12						
ESDC			pP	**pP**	**01 44 30.1**	**+2.0**
comp=Z,3.1nm,0.9s,baz=342,slow=4.9,SNR=9.4						
comp=Z,2.0nm,0.8s						
ESDC	**Sonseca Array**	**88.61 8**	P	**P**	**01 44 17.4**	**+0.1**
SDV	**Santo Domingo**	**90.97 74**	P	**P**	**01 44 27.8**	**-1.0**
SDV			IAmb	IAmb	01 44 43.5	
comp=Z,15nm,1.4s						
STKA	**Stephens Creek**	**92.03 217**	P	**P**	**01 44 33.5**	**+0.6**
comp=Z,6.6nm,0.8s,baz=

KCSI	**Kotacane, Aceh**	**2.00**	**81**	P	**Pn**	**01 42 55.9 +0.5**
LHMI	**Lhok Sumawe**	**2.31**	**30**	Pn	**Pn**	**01 43 01.6 +1.9**
LHMI	**Lhok Sumawe**	**2.31**	**30**	P	**Pn**	**01 43 00.0 +0.3**
LHMI	**Lhok Sumawe**	**2.31**	**30**	P	**Pn**	**01 43 01.9 +2.2**
GSI	**Gunungsitoli**	**2.60**	**137**	Pn	**Pn**	**01 43 00.7 -3.1**
GSI	**Gunungsitoli**	**2.60**	**137**	P	**Pn**	**01 43 05.7 +1.9**
GSI	**Gunungsitoli**	**2.60**	**137**	P	Pn	01 43 09.1 +5.3
TSI	**Tuntungan**	**2.78**	**84**	P	**Pn**	**01 43 06.6 +0.4**
PSI	**Prapat**	**3.15**	**97**	Pn	**Pn**	**01 43 13.1 +1.7**
	3.5nm,0.3s,baz=268,slow=3.3,SNR=13					
	8.4nm,0.3s					
PSI	**Prapat**	**3.15**	**97**	P	**Pn**	**01 43 12.3 +0.9**
PSI				P	**Pn**	**01 43 12.4 +1.0**
PSI	**Prapat**	**3.15**	**97**	P	Pn	01 43 15.8 +4.4
RPSI	**Rantau Prapat**	**3.17**	**99**		**Pn**	**01 43 11.9 +0.4**
RPSI	**Rantau Prapat**	**3.17**	**99**		**Pn**	**01 43 13.1 +1.6**
TRSI	**Tarutung**	**3.37**	**110**	P	**Pn**	**01 43 15.2 +0.7**
PBSI	**Pulau Batu**	**4.09**	**143**	P	**Pn**	**01 43 26.1 +1.9**
MNSI	**Mandailing Nat**	**4.48**	**122**	P	**Pn**	**01 43 31.3 +1.7**
KULM	**Kulim**	**5.26**	**67**	Pn	**Pn**	**01 43 40.5 +0.2**
KULM	**Kulim**	**5.26**	**67**	P	**Pn**	**01 43 40.0 -0.4**
	0.2nm36nm,0.8s					
IPM	**Ipoh**	**5.37**	**76**	Pn	**Pn**	**01 43 42.0 +0.2**
IPM	**Ipoh**	**5.37**	**76**	P	**Pn**	**01 43 42.0 +0.2**
	0.1nm39nm,0.9s					
IPM	**Ipoh**	**5.37**	**76**	P	Pn	01 43 45.7 +3.9
SISI	**Saibi**	**5.58**	**144**	P	**Pn**	**01 43 47.2 +2.4**
	0.2nm37nm,1.0s					
SKLT	**Songkhla**	**6.21**	**51**	P	**Pn**	**01 43 53.0 -0.3**
	0.2nm771nm40nm,1.2s					
SRIT	**Nakonsritamara**	**6.55**	**35**	Pn	**Pn**	**01 44 01.4 +3.3**
SRIT	**Nakonsritamara**	**6.55**	**35**	P	**Pn**	**01 43 59.6 +1.5**
SURA	**Surathani**	**7.04**	**33**	P	**Pn**	**01 44 04.8 +0.1**
PPSI	**Pulau Pagai**	**7.28**	**145**	P	**Pn**	**01 44 10.4 +2.3**
	0.7nm169nm,1.5s					
CMAR	**Chiang Mai Arr**	**15.46**	**11**	Pn	**P**	**01 46 03.4 -0.5**
	baz=199,slow=12					
CMAR				LR	LR	01 52 13.2
	comp=Z,33nm,19.8s,baz=200,slow=38					
H08S2	**Diego Garcia H**	**25.63**	**245**	T	T	02 14 13.6
	baz=61,slow=74					
H08S3	**Diego Garcia H**	**25.63**	**245**	T	T	02 14 18.3
	baz=61,slow=74					
H08S1	**Diego Garcia H**	**25.65**	**245**	T	T	02 14 28.9
	baz=61					
H01W3	**Cape Leeuwin H**	**41.63**	**157**	T	T	02 33 56.8
	baz=332,slow=76,SNR=6.5					
H01W2	**Cape Leeuwin H**	**41.64**	**157**	T	T	02 33 57.7
	baz=332,slow=76,SNR=8.4					
H01W1	**Cape Leeuwin H**	**41.65**	**157**	T	T	02 33 57.0
	baz=332,slow=76,SNR=6.7					
WRA	**Warramunga Arr**	**44.29**	**123**	P	**P**	**01 50 31.1 +0.1**
	1.4nm,0.6s,baz=300,slow=9.3,SNR=30					
	1.4nm,0.6s					
WB2	**Warramunga Arr**	**44.30**	**123**	P	**P**	**01 50 28.1 -2.9**
WB2				IAmb	IAmb	01 50 53.7
	comp=Z,6.5nm,1.2s					
MKAR	**Makanchi Array**	**44.97**	**347**	P	**P**	**01 50 35.8 -0.2**
	comp=Z,0.8nm,0.4s,baz=156,slow=9.4,SNR=14					
	comp=Z,0.8nm,0.4s					
MKAR	**Makanchi Array**	**44.97**	**347**	P	**P**	**01 50 35.6 -0.4**
MK31	**Makanchi Array**	**44.97**	**347**	P	**P**	**01 50 36.1 +0.1**
MK31				IAmb	IAmb	01 50 36.5
	comp=Z,4.7nm,1.2s					
SONM	**Songino Array**	**45.38**	**10**	P	**P**	**01 50 38.3 -1.0**
	comp=Z,0.6nm,0.5s,baz=188,slow=8.8,SNR=3.8					
	comp=Z,0.6nm,0.5s					
ASAR	**Alice Springs**	**45.73**	**128**	P	**P**	**01 50 42.6 +0.3**
	comp=Z,0.8nm,0.5s,baz=303,slow=7.9,SNR=10					
	comp=Z,0.8nm,0.5s					
KURK	**Kurchatov**	**49.50**	**346**	P	**P**	**01 51 11.8 +0.7**
ZAA0	**Zalesovo Array**	**51.37**	**352**	P	**P**	**01 51 25.1 -0.1**
ZAA0				IAmb	IAmb	01 51 25.8
	comp=Z,2.9nm,0.9s					
ZALV	**Zalesovo Beam**	**51.37**	**352**	P	**P**	**01 51 25.1 0.0**
	comp=Z,2.2nm,0.8s,baz=175,slow=5.4,SNR=8.8					
	comp=Z,2.2nm,0.8s					
ZALV	**Zalesovo Beam**	**51.37**	**352**	P	**P**	**01 51 25.8 +0.6**
ABKAR	**Akbulak array**	**55.09**	**332**	P	**P**	**01 51 53.2 +0.6**

PRU **28** *01:45:41.6±0.0, 51°.40N×16°.19E, h0km,* **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.56**	**173**	*e*Pg	Pg	01 45 52.1	-0.3
KSP				*e*Sg	Sg	01 45 59.7	+0.1
CHVC	**Chvalec**	**0.82**	**186**	*e*PG	Pg	01 45 57.2	0.0
CHVC				*e*SG	Sg	01 46 08.3	+0.5
OSTC	**Ostas**	**0.84**	**179**	*e*PG	Pg	01 45 57.7	-0.1
OSTC				*e*SG	Sg	01 46 09.3	+0.6
UPC	**Upice**	**0.90**	**187**	*e*PG	Pg	01 45 58.5	-0.3
UPC				*e*SG	Sg	01 46 10.9	+0.4
	comp=Z,18nm,0.3s						
DPC	**Dobruska-Polom**	**1.05**	**175**	*e*PG	Pg	01 46 01.0	-0.8
DPC				*e*SG	Sg	01 46 15.2	-0.2
	comp=Z,4.9nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**230**	*e*PG	Pg	01 46 07.4	0.0
PVCC				*e*SG	Sb	01 46 25.8	+0.4
	comp=Z,24nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**230**	*e*	Sb	01 46 25.8	+0.4
KRLC	**Kraliky**	**1.38**	**164**	*e*PG	Pg	01 46 06.5	-1.5
KRLC				*e*SG	Sg	01 46 24.7	-1.1
	comp=Z,7.7nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.73**	**212**	*e*PG	Pn	01 46 13.5	+0.5
PRU	**Pruhonice**	**1.76**	**217**	*e*PG	Pn	01 46 13.9	+0.6
PRU				*e*SG	Sb	01 46 37.6	+0.3
	comp=Z,3.7nm,0.3s						
MORC	**Moravsky Berou**	**1.84**	**152**	*e*PN	Pn	01 46 12.6	-1.9
MORC				*e*SG	Sn	01 46 39.0	+0.5
CLL	**Collm**	**2.00**	**269**	*e*Pg	Pb	01 46 18.0	-0.8
CLL				*e*Sg	Sg	01 46 46.0	+0.2
VRAC	**Vranov**	**2.11**	**173**	*e*PN	Pn	01 46 17.9	-0.3
VRAC				*e*SG	Sb	01 46 47.9	+0.5
KRUC	**Moravsky**	**2.34**	**177**	*e*PN	Pn	01 46 20.6	-0.8
KRUC				*e*SG	Sg	01 46 57.7	+0.8
NKC	**Novy Kostel**	**2.65**	**245**	*e*PG	Pg	01 46 31.4	-0.9
NKC				*e*SG	Sg	01 47 06.4	-0.1
KHC	**Kasperske Hory**	**2.82**	**217**	*e*PN	Pn	01 46 27.5	-0.5
KHC				*e*PG	Pb	01 46 32.4	-0.5
KHC				*e*SN	Sn	01 47 00.4	-2.3
KHC				*e*SG	Sg	01 47 10.7	-1.5
CKRC	**Cesky Krumlov**	**2.85**	**206**	*e*SG	Sg	01 47 11.3	-1.9

IDC **28** *02:04:15.2±1.8, 14°.97S×174°.81W, h0km, mb3.7/3, mbtmp3.7/4, ML3.8/1, MS3.6/18,* **Error ellipse: s-maj=181.1km s-min=29.7km az=160.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.12**	**71**	Pn	Pn	02 05 05.7	0.0
	11nm,0.3s,baz=252,slow=18,SNR=6.0						
AFI				LR	LR	02 06 14.9	
	comp=Z,520nm,18.9s,baz=206,slow=38						
AFI				T	T	02 08 42.6	
	104nm,0.5s,baz=273,slow=22,SNR=3.5						
	37nm,0.5s						
MSVF	**Nonsavu**	**7.38**	**247**	LR	LR	02 08 00.1	
	comp=Z,116nm,20.8s,baz=187,slow=30						
DZM	**Mont Dzumac**	**19.11**	**246**	LR	LR	02 14 23.2	
	comp=Z,214nm,20.1s,baz=102,slow=32						
PPT	**Papeete**	**24.36**	**100**	LR	LR	02 16 26.0	
	comp=Z,95nm,20.6s,baz=263,slow=30						
RPZ	**Rata Peaks**	**31.09**	**200**	LR	LR	02 22 53.2	
	comp=Z,256nm,18.2s,baz=34,slow=36						
CTA	**Charters Tower**	**37.41**	**256**	LR	LR	02 24 24.2	
	comp=Z,93nm,19.1s,baz=80,slow=32						
PMG	**Port Moresby**	**37.54**	**274**	LR	LR	02 24 49.6	
	comp=Z,80nm,20.7s,baz=78,slow=33						
H11S2	**WAKE ISLAND Hy**	**37.90**	**331**	T	T	02 52 34.4	
	baz=150,slow=76,SNR=83						
H11S3	**WAKE ISLAND Hy**	**37.92**	**331**	T	T	02 52 36.5	
	baz=150,slow=76,SNR=43						
H11S1	**WAKE ISLAND Hy**	**37.92**	**331**	T	T	02 52 32.2	
	baz=150,slow=76,SNR=83						
H11N3	**WAKE ISLAND Hy**	**38.87**	**332**	T	T	02 53 42.1	
	baz=152,slow=76,SNR=165						
H11N1	**WAKE ISLAND Hy**	**38.88**	**332**	T	T	02 53 45.7	
	baz=152,slow=76,SNR=238						
H11N2	**WAKE ISLAND Hy**	**38.89**	**332**	T	T	02 53 43.4	
	baz=152,slow=76,SNR=146						
STKA	**Stephens Creek**	**43.08**	**239**	P	P	02 12 17.5	+0.4
	0.4nm,0.3s,baz=111,slow=8.6,SNR=1.8						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**48.62**	**256**	P	P	02 13 00.4	-0.7
	0.3nm,0.8s,baz=95,slow=7.3,SNR=2.2						
WRA				LR	LR	02 31 58.5	
	comp=Z,29nm,20.8s,baz=84,slow=34						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**48.95**	**252**	P	P	02 13 03.6	0.0
	1.6nm,0.7s,baz=87,slow=8.4,SNR=14						
ASAR				LR	LR	02 31 25.7	
	comp=Z,150nm,21.8s,baz=142,slow=33						
	1.6nm,0.7s						
SIJI	**Sorong**	**55.04**	**280**	LR	LR	02 36 50.8	
	comp=Z,44nm,18.5s,baz=34,slow=36						
VNDA	**Vanda**	**63.67**	**186**	LR	LR	02 37 24.1	
	comp=Z,24nm,20.7s,baz=351,slow=31						
SHEM	**Shemya Is, Ala**	**68.09**	**353**	LR	LR	02 39 47.1	
	comp=Z,61nm,21.9s,baz=146,slow=31						
PETK	**Petropavlovsk-**	**71.81**	**343**	LR	LR	02 41 35.2	
	comp=Z,31nm,21.1s,baz=113,slow=31						
KDAK	**Kodiak Island**	**74.78**	**12**	LR	LR	02 42 53.1	
	comp=Z,76nm,19.2s,baz=146,slow=31						
MA2	**Magadan**	**79.34**	**343**	LR	LR	02 51 19.7	
	comp=Z,18nm,19.3s,baz=127,slow=36						
TXAR	**Lajitas Array**	**81.51**	**57**	LR	LR	02 46 35.3	
	comp=Z,35nm,19.1s,baz=48,slow=31						
H03S2	**Juan Fernandez**	**86.58**	**124**	T	T	03 52 04.4	
	baz=252,slow=75,SNR=15						
H03S1	**Juan Fernandez**	**86.59**	**124**	T	T	03 52 05.2	
	baz=252,slow=75,SNR=12						
H03S3	**Juan Fernandez**	**86.59**	**124**	T	T	03 52 03.0	
	baz=252,slow=75,SNR=11						
CMAR	**Chiang Mai Arr**	**91.18**	**289**	LR	LR	02 56 22.6	
	comp=Z,9.9nm,19.6s,baz=190,slow=34						
ATAH	**Atahualpa**	**94.33**	**99**	LR	LR	02 50 34.2	
	comp=Z,100nm,19.7s,baz=22,slow=30						

IDC **28** *02:11:33.5±0.8, 7°.18S×116°.02E, h0km, mb4.1/8, mbtmp4.1/9, ML3.9/1, MS3.0/1, Error ellipse: s-maj=21.8km s-min=16.3km az=54.0*

NEIC **28** *02:11:35.1±1.6, 7°.26S±0°.07×115°.94E±0°.06, h10km±1km, mb4.5/18, Error ellipse: s-maj=12.3km s-min=10.3km az=159.0*

DJA **28** *02:11:36.7±1.8, 7°.S±2°×11°.6E±°, h28km±20km, M4.7/19, mb4.8/9, mB5.3/5, MLv4.6/19, Mw(mB)4.7/5*

ISC 28 02:11:34.6±0.5, 7°.27S±0°.04×115°.96E±0°.05, h10km, n68, σ0°69/70, mb4.3/17, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**1.09**	**222**	P	**Pb**	**02 11 55.7**	**0.0**
SRBI				S	**Sg**	**02 12 10.5**	**+0.5**
KLNI	**Mataram**	**1.15**	**173**	P	**Pb**	**02 11 57.1**	**+0.4**
RTBI	**Rangdo, Negare**	**1.55**	**220**	P	**Pn**	**02 12 02.7**	**+0.3**
RTBI				S	**Sn**	**02 12 22.6**	**0.0**
DNP	**Denpasar**	**1.58**	**208**	P	**Pn**	**02 12 03.8**	**+1.1**
TWSI	**Taliwang, Sumb**	**1.72**	**148**	P	**Pn**	**02 12 05.1**	**+0.4**
IGBI	**Denpasar**	**1.73**	**208**	P	**Pn**	**02 12 05.2**	**+0.4**
ABJI	**Asem Bagus**	**1.79**	**253**	P	**Pn**	**02 12 05.9**	**+0.4**
KMMI	**Kalianget**	**1.99**	**276**	P	**Pn**	**02 12 09.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**2.15**	**236**		**Pn**	**02 12 11.0**	**+0.4**
JAGI	**Jajag, Banyuwa**	**2.15**	**236**	P	**Pn**	**02 12 10.6**	**0.0**
PLAI	**Plampang**	**2.38**	**131**	P	**Pn**	**02 12 14.0**	**+0.3**
GMJI	**Gumukmas**	**2.68**	**248**	P	**Pn**	**02 12 17.9**	**0.0**
BWJI	**Bawean**	**3.57**	**293**	P	**Pn**	**02 12 30.2**	**+0.1**
BBKI	**Banjar Baru**	**3.94**	**344**	P	**Pn**	**02 12 35.8**	**+0.6**
KAPI	**Kappang**	**4.39**	**60**	Pn	**Pn**	**02 12 41.6**	**+0.2**
	6.7nm,0.3s,baz=227,slow=3.8,SNR=9.8						
KAPI				Sn	**Sn**	**02 13 31.7**	**-0.9**
	19nm,0.3s,baz=325,slow=18,SNR=8.4						
KAPI				Lg	Lg	02 13 49.0	
	21nm,0.3s,baz=45,slow=20,SNR=4.0						
KAPI				LR	LR	02 14 21.5	
	comp=Z,174nm,19.3s,baz=282,slow=39						
	17nm,0.3s						
KAPI	**Kappang**	**4.39**	**60**		**Pn**	**02 12 41.3**	**-0.1**
KAPI	**Kappang**	**4.39**	**60**	P	**Pn**	**02 12 41.3**	**-0.1**
NGJI	**Ngawi**	**4.46**	**268**	P	**Pn**	**02 12 42.8**	**+0.4**
BKSI	**Bulukumba**	**4.57**	**65**	P	**Pn**	**02 12 43.5**	**-0.4**
BSSI	**Bau Bau, Buton**	**4.64**	**76**	P	**Pn**	**02 12 44.3**	**-0.5**
PMSI	**Majene**	**4.76**	**38**	P	**Pn**	**02 12 46.2**	**-0.4**
PCJI	**Pacitan**	**4.83**	**259**	P	**Pn**	**02 12 47.5**	**+0.1**
BNSI	**Bone**	**5.02**	**56**	P	**Pn**	**02 12 50.6**	**+0.6**
	0.6nm1μm94nm,0.8s						
SPSI	**Sidrap Palu**	**5.02**	**49**	P	**Pn**	**02 12 50.2**	**+0.2**
	0.5nm1μm61nm,0.6s						
SMRI	**Semarang**	**5.48**	**272**	Pn	**Pn**	**02 12 56.7**	**+0.3**
SMRI	**Semarang**	**5.48**	**272**	P	**Pn**	**02 12 56.1**	**-0.3**
	0.5nm105nm,0.6s						
BKB	**Balikpapan**	**6.04**	**9**	Pn	**Pn**	**02 13 04.7**	**+0.5**
BKB	**Balikpapan**	**6.04**	**9**	P	**Pn**	**02 13 05.8**	**+1.7**
MMRI	**Maumere**	**6.37**	**103**		**Pn**	**02 13 07.6**	**-1.0**
MMRI	**Maumere**	**6.37**	**103**	P	**Pn**	**02 13 08.6**	**0.0**
	0.4nm2μm121nm,0.6s						
MTKI	**Muara Teweh, K**	**6.38**	**350**	P	**Pn**	**02 13 08.3**	**-0.4**
	0.9nm70nm,0.4s						
KKSI	**Kolaka, Sulawe**	**6.45**	**62**	P	**Pn**	**02 13 10.1**	**+0.4**
	0.4nm69nm,0.6s						
SOEI	**Soe**	**8.58**	**107**		**Pn**	**02 13 40.7**	**+1.6**
SOEI	**Soe**	**8.58**	**107**	P	**Pn**	**02 13 39.9**	**+0.8**
	3μm81nm,0.7s						
KSM	**Kuching**	**10.35**	**327**	Pn	Pn	02 14 01.8	-1.5
MBWA	**Marble Bar**	**14.28**	**166**	Pn	**Pn**	**02 14 55.6**	**-1.5**
KNRA	**Kununurra**	**15.07**	**125**	Pn	**Pn**	**02 15 06.4**	**-1.4**
KNRA				IAmb	IAmb	02 15 19.8	
	comp=Z,33nm,1.3s						
MTN	**Manton Dam**	**15.93**	**112**		**Pn**	**02 15 17.8**	**-1.2**
WRA	**Warramunga Arr**	**21.83**	**127**	P	**P**	**02 16 27.3**	**0.0**
	comp=Z,16nm,0.8s,baz=301,slow=12,SNR=106						
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**21.83**	**127**	P	**P**	**02 16 26.4**	**-1.0**
WB2	**Warramunga Arr**	**21.84**	**127**	P	**P**	**02 16 27.0**	**-0.4**
WB2				IAmb	IAmb	02 16 28.5	
	comp=Z,17nm,0.8s						
WR0	**Warramunga Arr**	**22.00**	**127**	P	**P**	**02 16 28.7**	**-0.4**
WR0				IAmb	IAmb	02 16 30.8	
	comp=Z,23nm,0.8s						
AS31	**Alice Springs**	**23.72**	**135**	P	**P**	**02 16 47.2**	**+0.2**
ASAR	**Alice Springs**	**23.72**	**135**	P	**P**	**02 16 47.4**	**+0.3**
	comp=Z,7.5nm,0.7s,baz=308,slow=8.7,SNR=83						
	comp=Z,7.5nm,0.7s						
ASAR	**Alice Springs**	**23.72**	**135**	P	**P**	**02 16 47.5**	**+0.4**
FORT	**Forrest**	**25.99**	**156**	P	**P**	**02 17 08.0**	**+0.2**
BBOO	**Buckleboo**	**31.53**	**146**	P	**P**	**02 17 57.8**	**+0.7**
STKA	**Stephens Creek**	**34.21**	**139**	P	**P**	**02 18 21.4**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=324,slow=9.7,SNR=9.2						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**34.21**	**139**	P	**P**	**02 18 20.4**	**-0.2**
SHL	**Shillong**	**40.17**	**325**	P	**P**	**02 19 11.1**	**-0.3**
SHL				IAmb	IAmb	02 19 20.4	
	comp=Z,5.2nm,0.5s						
TOO	**Toolangi**	**40.34**	**143**	P	**P**	**02 19 13.5**	**+0.9**
TOO				IAmb	IAmb	02 19 16.1	
	comp=Z,14nm,1.2s						
LSA	**Lhasa**	**43.82**	**328**	P	**P**	**02 19 41.8**	**+0.2**
LZH	**Lanzhou**	**44.60**	**346**	*e*P	**P**	**02 19 48.8**	**+1.4**
LZH				pP	sP	02 20 09.3	+18
LZH				sP	pP	02 20 16.0	+26
USA0B	**Ussuriysk Arra**	**53.24**	**14**	P	**P**	**02 20 54.3**	**+1.0**
USA0B				IAmb	IAmb	02 21 20.4	
	comp=Z,6.3nm,1.1s						
USRK	**Ussuriysk Ar.**	**53.24**	**14**	P	**P**	**02 20 52.7**	**-0.6**
SONM	**Songino Array**	**55.51**	**352**	P	**P**	**02 21 09.9**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=163,slow=8.3,SNR=7.1						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**61.58**	**334**	P	**P**	**02 21 52.4**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=138,slow=7.5,SNR=7.7						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**61.58**	**334**	P	**P**	**02 21 52.5**	**+0.3**
AAK	**Ala-Archa**	**62.37**	**327**	P	**P**	**02 21 57.9**	**+0.1**
AAK				IAmb	IAmb	02 21 59.4	
	comp=Z,4.1nm,1.1s						
GAR	**Garm**	**62.51**	**321**	P	**P**	**02 21 57.7**	**-1.0**
KK31	**Karatay Array**	**64.90**	**325**	P	**P**	**02 22 14.3**	**0.0**
KK31				IAmb	IAmb	02 22 15.4	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	**64.90**	**325**	P	**P**	**02 22 14.0**	**-0.3**
KKAR				IAmb	IAmb	02 22 15.4	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**66.39**	**341**	P	**P**	**02 22 23.0**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=147,slow=3.0,SNR=4.6						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**66.39**	**341**	P	**P**	**02 22 22.6**	**-1.0**
GEYT	**Alibeck**	**70.08**	**315**	P	**P**	**02 22 48.1**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=160,slow=4.7,SNR=4.0						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**74.16**	**171**	P	**P**	**02 23 12.2**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=315,slow=5.9,SNR=8.1						
	comp=Z,0.4nm,0.5s						
ABKAR	**Akbulak array**	**74.43**	**326**	P	**P**	**02 23 12.0**	**-0.9**
LSZ	**Lusaka**	**85.97**	**255**	P	**P**	**02 24 15.7**	**-0.5**
LSZ				IAmb	IAmb	02 24 20.9	
	comp=Z,3.8nm,0.8s						

ROM **28** *02:13:19.3±0.0, 43°.030N±0°.002×13°.119E±0°.003, h8km, ML3.5/64, Error ellipse: s-maj=0.2km s-min=0.1km az=66.0*

PRU **28** *02:13:19.8±0.0, 43°.00N×13°.42E, h0km*

ISC 28 02:13:19.9±0.7, 43°.04N±0°.01×13°.18E±0°.02, h9km±4km, n168, σ1°40/221, 7C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.04**	**133**	⇑P	**Pg**	**02 13 21.4**	**-0.5**
T1256				S	**Sg**	**02 13 23.5**	**+0.1**
CSP1	**Cessapalombo**	**0.06**	**15**	⇑P	**Pg**	**02 13 21.7**	**-0.4**
CSP1				S	**Sg**	**02 13 23.9**	**+0.3**
FDMO	**Fiordimonte**	**0.07**	**271**	⇑P	**Pg**	**02 13 20.4**	**-1.7**
FDMO				S	**Sg**	**02 13 21.1**	**-2.6**
FDMO				AML	AML		
FDMO				AML	AML		
GUMA	**Gualdo di Mace**	**0.11**	**76**	P	**Pg**	**02 13 23.4**	**+0.7**
GUMA				S	**Sg**	**02 13 27.1**	**+2.4**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,98000μm,0.5s						
GUMA				AML	AML		
FEMA	**Monte Fema**	**0.12**	**234**	⇑P	**Pg**	**02 13 21.8**	**-1.1**
FEMA				S	**Sg**	**02 13 24.2**	**-0.7**
FEMA				AML	AML		
FEMA				AML	AML		
MC2	**Monte Cornacci**	**0.12**	**178**	P	**Pg**	**02 13 22.5**	**-0.4**
MC2				S	**Sg**	**02 13 25.7**	**+0.7**
AM05	**Amandola Campo**	**0.14**	**115**	P	**Pg**	**02 13 23.7**	**+0.7**
AM05				S	**Sg**	**02 13 27.0**	**+1.8**
AM05				AML	AML		
	comp=N,8125μm,0.5s						
AM05				AML	AML		
	comp=E,28150μm,0.4s						
AM05				AML	AML		
	comp=N,1204μm,0.1s						
AM05				AML	AML		
	comp=N,8130μm,0.5s						
AM05				AML	AML		
	comp=E,7575μm,0.3s						
AM05				AML	AML		
	comp=E,28100μm,0.4s						
AM05				AML	AML		
	comp=N,1206μm,0.1s						
MDAR	**Monte D'Aria**	**0.16**	**349**	P	**Pg**	**02 13 23.0**	**-0.4**
MDAR				S	**Sg**	**02 13 26.2**	**+0.3**
MDAR				AML	AML		
	comp=E,30900μm,1.1s						
MDAR				AML	AML		
	comp=N,28200μm,0.6s						
MDAR				AML	AML		
	comp=N,28250μm,0.6s						
MMO1	**Montemonaco**	**0.17**	**142**	⇑P	**Pg**	**02 13 23.7**	**+0.1**
MMO1				S	**Sg**	**02 13 27.7**	**+1.5**
T1245	**Castelsantange**	**0.18**	**179**	P	**Pg**	**02 13 23.5**	**-0.3**
T1245				S	**Sg**	**02 13 26.9**	**+0.5**
T1245				AML	AML		
	comp=N,53000μm,0.9s						
T1245				AML	AML		
	comp=E,33400μm,0.5s						
T1245				AML	AML		
	comp=N,54050μm,0.9s						
T1245				AML	AML		
	comp=E,33350μm,0.5s						
T1245				AML	AML		
	comp=E,33200μm,0.9s						
T1245				AML	AML		
	comp=N,54000μm,0.9s						
T1216	**Preci, Frazion**	**0.19**	**220**	⇑P	**Pg**	**02 13 23.1**	**-0.8**
T1216				S	**Sg**	**02 13 26.6**	**0.0**
T1216				AML	AML		
	comp=E,71200μm,0.5s						
T1216				AML	AML		
	comp=E,71300μm,0.5s						
T1216				AML	AML		
	comp=N,45400μm,1.2s						
T1216				AML	AML		
	comp=E,71300μm,0.5s						
T1216				AML	AML		
	comp=N,45400μm,1.2s						
SSM1	**San Severino M**	**0.19**	**359**	P	**Pg**	**02 13 23.9**	**-0.1**
SSM1				S	**Sg**	**02 13 28.1**	**+1.4**
PIO1	**Pioraco**	**0.20**	**314**	P	**Pg**	**02 13 23.5**	**-0.7**
PIO1				S	**Sg**	**02 13 26.8**	**-0.3**
PIO1				AML	AML		
	comp=N,33200μm,1.3s						
PIO1				AML	AML		
	comp=E,22150μm,1.0s						
SEF1	**Sefro**	**0.21**	**

TRE1				AML	AML		
	comp=N,27150µm,0.7s						
TRE1				AML	AML		
	comp=E,29800µm,0.5s						
TRE1				AML	AML		
	comp=N,27100µm,0.7s						
EL6	**Elcito**	**0.30**	**348**	P	**Pb**	**02 13 25.7**	**-1.9**
EL6				S	**Sb**	**02 13 31.2**	**-1.4**
T1215	**Vallo di Nera,**	**0.33**	**225**	P	**Pg**	**02 13 26.0**	**-0.5**
T1215				S	**Sg**	**02 13 30.7**	**-0.1**
T1215				AML	AML		
	comp=E,8125µm,1.0s						
T1215				AML	AML		
	comp=N,9645µm,0.9s						
T1215				AML	AML		
	comp=N,10085µm,0.9s						
T1215				AML	AML		
	comp=E,8120µm,1.0s						
T1215				AML	AML		
	comp=N,9650µm,0.9s						
T1215				AML	AML		
	comp=E,7965µm,1.2s						
T1215				AML	AML		
	comp=N,10060µm,0.9s						
T1215				AML	AML		
	comp=N,9635µm,0.9s						
T1215				AML	AML		
	comp=E,8125µm,1.0s						
T1215				AML	AML		
	comp=E,7960µm,1.2s						
T1215				AML	AML		
	comp=N,9655µm,0.9s						
CING	**Cingoli**	**0.34**	**1**	P	**Pb**	**02 13 26.6**	**-1.7**
CING				S	**Sb**	**02 13 32.7**	**-1.1**
CING				AML	AML		
	comp=N,6000µm,0.4s						
CING				AML	AML		
	comp=E,13150µm,1.2s						
T1204	**Amatrice, Fraz**	**0.37**	**165**	P	**Pb**	**02 13 27.3**	**-1.5**
T1204				S	**Sb**	**02 13 34.1**	**-0.6**
T1204				AML	AML		
	comp=N,8480µm,0.9s						
T1204				AML	AML		
	comp=E,12350µm,0.5s						
T1204				AML	AML		
	comp=N,8475µm,0.9s						
T1217	**Poggiodomo (PG**	**0.37**	**210**	P	**Pg**	**02 13 26.8**	**-0.5**
T1217				S	**Sg**	**02 13 32.9**	**+0.7**
T1217				AML	AML		
	comp=E,13800µm,0.6s						
T1217				AML	AML		
	comp=N,11850µm,0.4s						
T1217				AML	AML		
	comp=N,11850µm,0.4s						
T1217				AML	AML		
	comp=E,13500µm,0.6s						
T1217				AML	AML		
	comp=N,11850µm,1.6s						
T1217				AML	AML		
	comp=E,13550µm,0.6s						
T1217				AML	AML		
	comp=N,11835µm,1.6s						
T1217				AML	AML		
	comp=E,13850µm,0.6s						
T1217				AML	AML		
	comp=N,11800µm,0.4s						
T1217				AML	AML		
	comp=E,13550µm,0.6s						
OFFI	**Offida**	**0.38**	**105**	P	**Pn**	**02 13 29.1**	**-2.5**
T1201	**Domo (RI)**	**0.38**	**173**	P	**Pb**	**02 13 27.8**	**-1.1**
T1201				S	**Sb**	**02 13 34.5**	**-0.5**
T1243	**Rocca Santa Ma**	**0.39**	**150**	P	**Pb**	**02 13 27.8**	**-1.3**
T1243				S	**Sb**	**02 13 34.7**	**-0.5**
FOSV	**Fossato di Vic**	**0.40**	**310**	P	**Pg**	**02 13 27.2**	**-0.7**
FOSV				S	**Sg**	**02 13 33.5**	**+0.3**
FOSV				AML	AML		
	comp=E,9160µm,0.4s						
FOSV				AML	AML		
	comp=N,26400µm,0.3s						
FOSV				AML	AML		
	comp=E,9155µm,0.4s						
SMA1	**SAN MARTINO**	**0.42**	**165**	⇑P	**Pb**	**02 13 28.2**	**-1.3**
SMA1				S	**Sb**	**02 13 35.3**	**-0.7**
SMA1				AML	AML		
	comp=E,9355µm,1.4s						
SMA1				AML	AML		
	comp=N,9325µm,1.0s						
SMA1				AML	AML		
	comp=E,9370µm,1.4s						
SMA1				AML	AML		
	comp=N,9315µm,1.0s						
ATCC	**AVT- Casa Cast**	**0.43**	**291**	⇓P	**Pg**	**02 13 27.6**	**-0.7**
ATCC				S	**Sg**	**02 13 34.3**	**+0.4**
ATCC				AML	AML		
	comp=E,40200µm,0.3s						
ATCC				AML	AML		
	comp=N,28800µm,0.3s						
MMUR	**Monte Murano**	**0.43**	**342**	P	**Pb**	**02 13 28.2**	**-1.6**
MMUR				AML	AML		
	comp=E,14700µm,0.3s						
MMUR				AML	AML		
	comp=N,14000µm,0.4s						
MMUR				AML	AML		
	comp=E,14650µm,0.3s						
MMUR				AML	AML		
	comp=N,13950µm,0.4s						
LNSS	**Leonessa**	**0.44**	**194**	P	**Pg**	**02 13 28.3**	**-0.3**
LNSS				AML	AML		
	comp=N,8695µm,1.1s						
LNSS				AML	AML		
	comp=E,8305µm,1.3s						
LNSS				AML	AML		
	comp=N,8700µm,1.1s						
CIMA	**Civitanova Mar**	**0.45**	**53**	P	**Pn**	**02 13 30.1**	**-2.4**
CADA	**Capodarco di F**	**0.45**	**69**	P	**Pn**	**02 13 31.1**	**-1.5**
PP3	**Marolino**	**0.46**	**42**	P	**Pn**	**02 13 30.2**	**-2.6**
PP3				AML	AML		
	comp=E,11340µm,1.0s						
PP3				AML	AML		
	comp=N,10600µm,1.3s						
PP3				AML	AML		
	comp=E,12250µm,1.0s						
PP3				AML	AML		
	comp=N,10455µm,1.1s						
ARVD	**Arcevia**	**0.50**	**339**	P	**Pb**	**02 13 29.1**	**-1.7**
ARVD				S	**Sb**	**02 13 37.3**	**-0.9**
ARVD				AML	AML		
	comp=E,5600µm,0.6s						
ARVD				AML	AML		
	comp=N,3375µm,0.6s						
T1246	**Crognaleto (TE**	**0.51**	**153**	P	**Pb**	**02 13 29.5**	**-1.5**
T1246				S	**Sb**	**02 13 38.3**	**-0.2**
TERO	**Teramo**	**0.52**	**143**	P	**Pb**	**02 13 29.9**	**-1.3**
TERO				S	**Sb**	**02 13 38.7**	**0.0**
TERO				AML	AML		
	comp=E,5395µm,0.9s						
TERO				AML	AML		
	comp=N,4890µm,0.4s						
TERO				AML	AML		
	comp=N,4725µm,0.4s						
TERO				AML	AML		
	comp=E,5565µm,0.8s						
CAMP	**Campotosto**	**0.53**	**162**	P	**Pb**	**02 13 29.8**	**-1.6**
CAMP				S	**Sb**	**02 13 38.5**	**-0.6**
CAMP				AML	AML		
	comp=E,2735µm,0.7s						
CAMP				AML	AML		
	comp=N,4310µm,0.7s						
RM33	**Pellescritta (**	**0.53**	**178**	P	**Pg**	**02 13 29.8**	**-0.4**
RM33				S	**Sb**	**02 13 38.6**	**-0.5**
RM33				AML	AML		
	comp=E,4190µm,1.5s						
RM33				AML	AML		
	comp=N,3150µm,1.3s						
RM33				AML	AML		
	comp=E,4245µm,1.4s						
RM33				AML	AML		
	comp=N,3185µm,0.9s						
RM33				AML	AML		
	comp=N,3185µm,0.9s						
RM33				AML	AML		
	comp=E,4245µm,1.5s						
RM33				AML	AML		
	comp=N,3145µm,1.3s						
ATSC	**Scheggia e Pas**	**0.53**	**317**	P	**Pg**	**02 13 29.4**	**-0.9**
ATSC				S	**Sg**	**02 13 38.0**	**+0.7**
MURB	**Monte Urbino**	**0.53**	**296**	P	**Pg**	**02 13 29.6**	**-0.7**
MURB				S	**Sg**	**02 13 38.0**	**+0.6**
ARRO	**Arrone**	**0.55**	**214**	P	**Pg**	**02 13 29.9**	**-0.7**
ARRO				S	**Sg**	**02 13 38.3**	**+0.5**
ARRO				AML	AML		
	comp=N,2975µm,1.1s						
ARRO				AML	AML		
	comp=E,2995µm,0.5s						
ATFO	**Monte Foce - G**	**0.56**	**307**	⇓P	**Pg**	**02 13 29.9**	**-0.9**
ATFO				S	**Sg**	**02 13 38.0**	**-0.1**
ATFO				AML	AML		
	comp=E,5990µm,0.5s						
ATFO				AML	AML		
	comp=N,4325µm,0.4s						
T1211	**Morro Reatino**	**0.56**	**206**	P	**Pg**	**02 13 30.4**	**-0.4**
T1211				AML	AML		
	comp=E,4315µm,1.5s						
T1211				AML	AML		
	comp=N,5980µm,0.6s						
T1211				AML	AML		
	comp=E,4430µm,1.2s						
T1211				AML	AML		
	comp=N,5980µm,0.6s						
T1211				AML	AML		
	comp=E,4310µm,1.5s						
T1211				AML	AML		
	comp=N,5980µm,0.6s						
TRTR	**Tortoreto Alta**	**0.58**	**113**	P	**Pn**	**02 13 31.9**	**-2.5**
TRTR				AML	AML		
	comp=N,13350µm,0.6s						
TRTR				AML	AML		
	comp=E,16750µm,0.5s						
FRON	**Frontone**	**0.59**	**325**	P	**Pg**	**02 13 30.5**	**-0.9**
FRON				AML	AML		
	comp=E,4530µm,0.4s						
FRON				AML	AML		
	comp=N,6740µm,0.5s						
AOI	**Ancona**	**0.60**	**31**	P	**Pn**	**02 13 32.1**	**-2.6**
AOI				AML	AML		
	comp=E,2630µm,0.3s						
AOI				AML	AML		
	comp=N,2655µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.60**	**172**	P	**Pb**	**02 13 31.0**	**-1.6**
T1247				AML	AML		
	comp=E,4840µm,0.5s						
T1247				AML	AML		
	comp=N,5555µm,0.8s						
CESX	**Cesi**	**0.61**	**227**	P	**Pg**	**02 13 30.9**	**-0.9**
CESX				S	**Sg**	**02 13 40.0**	**+0.2**
CESX				AML	AML		
	comp=N,7985µm,0.5s						
CESX				AML	AML		
	comp=E,8070µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.63**	**285**	P	**Pg**	**02 13 31.1**	**-1.0**
ATTE				AML	AML		
	comp=N,4265µm,1.5s						
ATTE				AML	AML		
	comp=E,4330µm,0.5s						
ATLO	**AVT- Montelove**	**0.63**	**297**	P	**Pg**	**02 13 31.1**	**-1.1**
ATLO				S	**Sg**	**02 13 40.9**	**+0.4**
ATBU	**Serra di Buran**	**0.64**	**314**	P	**Pg**	**02 13 31.5**	**-0.8**
TB01	**Gubbio**	**0.65**	**303**	P	**Pg**	**02 13 31.4**	**-1.1**
TB01				S	**Sg**	**02 13 41.4**	**+0.4**
GIGS	**Gran Sasso**	**0.65**	**154**	P	**Pb**	**02 13 32.1**	**-1.4**
GIGS				S	**Sb**	**02 13 42.5**	**-0.1**
GIGS				AML	AML		
	comp=N,988µm,0.8s						
GIGS				AML	AML		
	comp=E,1295µm,0.5s						
TB02	**Pietralunga**	**0.66**	**301**	⇓P	**Pg**	**02 13 31.6**	**-1.0**
TB02				S	**Sg**	**02 13 41.7**	**+0.4**
ATVO	**AVT- Monte Val**	**0.67**	**302**	P	**Pg**	**02 13 31.8**	**-1.1**
ATVO				S	**Sg**	**02 13 41.5**	**0.0**
ATVO				AML	AML		
	comp=E,3260µm,0.3s						
ATVO				AML	AML		
	comp=N,3975µm,0.8s						
MPAG	**Monte Paganucc**	**0.67**	**333**	P	**Pg**	**02 13 32.1**	**-0.8**
TB03	**Pietralunga**	**0.67**	**303**	⇓P	**Pg**	**02 13 31.9**	**-1.0**
PIEI	**Pieia**	**0.69**	**317**	⇓P	**Pg**	**02 13 32.1**	**-1.1**
PIEI				AML	AML		
	comp=N,2745µm,0.4s						
PIEI				AML	AML		
	comp=E,2300µm,0.3s						
ATPC	**Poggio Castell**	**0.69**	**310**	P	**Pg**	**02 13 32.3**	**-1.0**
AQU	**L'Aquila**	**0.70**	**167**	⇓P	**Pb**	**02 13 32.8**	**-1.5**
AQU				AML	AML		
	comp=N,2740µm,1.5s						
AQU				AML	AML		
	comp=N,3100µm,1.6s						
AQU				AML	AML		
	comp=E,3015µm,1.2s						
AQU				AML	AML		
	comp=E,2995µm,1.6s						
ATVA	**AVT- Monte Val**	**0.70**	**291**	P	**Pg**	**02 13 32.2**	**-1.3**
ATPI	**Pietralunga -**	**0.71**	**306**	⇓P	**Pg**	**02 13 32.6**	**-1.0**
ATPI				AML	AML		
	comp=N,2685µm,0.6s						
ATPI				AML	AML		
	comp=E,2630µm,0.6s						
FSSB	**Fossombrone**	**0.72**	**336**	⇓P	**Pg**	**02 13 33.2**	**-0.7**
FSSB				AML	AML		
	comp=N,9570µm,0.4s						
FSSB				AML	AML		
	comp=E,6435µm,1.5s						
NARO	**Abbazia di Nar**	**0.72**	**323**	P	**Pg**	**02 13 32.8**	**-1.1**
ATMI	**Monte Miggiano**	**0.73**	**294**	P	**Pg**	**02 13 33.3**	**-0.8**
ATMI				AML	AML		
	comp=E,7065µm,0.4s						
ATMI				AML	AML		
	comp=N,7695µm,0.5s						
APEC	**Apecchio**	**0.77**	**313**	P	**Pg**	**02 13 33.8**	**-0.9**
APEC				AML	AML		
	comp=E,616µm,0.9s						
APEC				AML	AML		
	comp=N,858µm,0.5s						
FIAM	**Fiamignano**	**0.77**	**184**	P	**Pg**	**02 13 34.1**	**-0.6**
FIAM				AML	AML		
	comp=E,1835µm,0.7s						
FIAM				AML	AML		
	comp=N,1580µm,0.9s						
MGAB	**Montegabbione**	**0.80**	**262**	⇓P	**Pg**	**02 13 34.1**	**-1.2**
MGAB				AML	AML		
	comp=N,6420µm,0.4s						
MGAB				AML	AML		
	comp=N,6415µm,0.4s						
MGAB				AML	AML		
	comp=N,6165µm,0.4s						
MGAB				AML	AML		
	comp=E,3365µm,1.0s						
MGAB				AML	AML		
	comp=E,4010µm,1.0s						
VCEL	**Villa Celiera**	**0.80**	**143**	P	**Pn**	**02 13 35.4**	**-2.1**
VCEL				AML	AML		
	comp=E,3255µm,1.0s						
VCEL				AML	AML		
	comp=E,3260µm,1.0s						
VCEL				AML	AML		
	comp=N,3230µm,0.7s						
FAGN	**Fagnano**	**0.82**	**159**	P	**Pb**	**02 13 35.4**	**-1.1**
FAGN				AML	AML		
	comp=E,3785µm,0.4s						
FAGN				AML	AML		
	comp=N,3735µm,1.6s						
PE3	**Peglio**	**0.83**	**323**	⇓P	**Pg**	**02 13 35.2**	**-0.7**
PE3				AML	AML		
	comp=N,15µm,0.1s						
PE3				AML	AML		
	comp=E,16µm,0.5s						
ATMC	**Monte Cedrone**	**0.83**	**300**	P	**Pg**	**02 13 34.6**	**-1.4**
T0110	**Collepietro**	**0.92**	**151**	⇓P	**Pb**	**02 13 36.8**	**-1.3**
T0110				AML	AML		
	comp=E,4465µm,0.7s						
T0110				AML	AML		
	comp=N,2960µm,0.5s						
CAFI	**Castiglion Fio**	**0.94**	**289**	⇓P	**Pg**	**02 13 36.7**	**-1.3**
SSP9	**Sansepolcro**	**0.94**	**305**	P	**Pg**	**02 13 36.9**	**-1.1**
SSP9				AML	AML		
	comp=E,2208µm,1.6s						
SSP9				AML	AML		
	comp=N,2770µm,0.5s						
SRES	**S.Oreste - Sor**	**0.94**	**212**	P	**Pg**	**02 13 36.7**	**-1.3**
SRES				AML	AML		
	comp=E,2295µm,1.1s						
SRES				AML	AML		
	comp=N,1480µm,1.4s						
SACS	**San Casciano d**	**0.95**	**259**	P	**Pg**	**02 13 37.0**	**-1.2**
SACS				AML	AML		
	comp=E,2025µm,0.5s						
SACS				AML	AML		
	comp=N,2590µm,0.7s						
SACS				AML	AML		
	comp=E,1920µm,0.5s						
SACS				AML	AML		
	comp=N,2760µm,0.7s						
CPGN	**Carpegna, Ital**	**0.99**	**321**	P	**Pg**	**02 13 38.0**	**-1.0**
CPGN				AML	AML		
	comp=N,2295µm,0.9s						
CPGN				AML	AML		
	comp=E,2651µm,0.9s						
CPGN				AML	AML		
	comp=E,2575µm,0.9s						
CPGN				AML	AML		
	comp=N,2675µm,1.0s						
PTQR	**Pietraquaria**	**1.02**	**171**	P	**Pb**	**02 13 38.6**	**-1.3**
RSM	**Repubblica di**	**1.04**	**329**	P	**Pg**	**02 13 39.0**	**-1.0**
MTCE	**Montecelio**	**1.06**	**198**	P	**Pg**	**02 13 39.1**	**-1.3**
MTCE				AML	AML		
	comp=E,1270µm,0.6s						
MTCE				AML	AML		
	comp=N,884µm,0.8s						
MTCE				AML	AML		
	comp=N,884µm,0.8s						
CRE	**Caprese Michel**	**1.07**	**303**	P	**Pg**	**02 13 39.2**	**-1.3**
CERT	**Cerreto**	**1.09**	**188**	P	**Pg**	**02 13 39.9**	**-1.1**
CERT				AML	AML		
	comp=E,1345µm,0.7s						
CERT				AML	AML		
	comp=N,1114µm,0.8s						
SF11	**Podere del Sol**	**1.12**	**262**	P	**Pg**	**02 13 39.9**	**-1.5**
MCIV	**Monte Civitell**	**1.14**	**257**	P	**Pg**	**02 13 40.2**	**-1.6**
INTR	**Introdacqua**	**1.15**	**152**	AML	AML		
	comp=N,2860µm,1.0s						
INTR				AML	AML		
	comp=E,1µm,0.9s						
INTR				AML	AML		
	comp=N,2µm,0.8s						
INTR				AML	AML		
	comp=E,1385µm,0.9s						
SF13	**Bagnolo**	**1.17**	**260**	P	**Pn**	**02 13 40.5**	**-2.0**
CAFR	**Castel Frentan**	**1.18**	**133**	P	**Pn**	**02 13 41.9**	**-0.7**
SF14	**Selvena**	**1.19**	**257**	P	**Pn**	**02 13 41.0**	**-1.7**
RCAV	**Rocca di Cave**	**1.20**	**189**	P	**Pb**	**02 13 42.1**	**-0.8**
VVLD	**Villa Vallelon**	**1.21**	**164**	P	**Pn**	**02 13 41.9**	**-1.2**
LPEL	**Lama dei Pelig**	**1.23**	**143**	P	**Pn**	**02 13 42.4**	**-1.0**
LPEL				AML	AML		
	comp=E,1260µm,0.9s						
LPEL				AML	AML		
	comp=N,1068µm,0.9s						
GUAR	**Guarcino**	**1.24**	**176**	P	**Pg**	**02 13 43.3**	**-0.5**
ARCI	**Arcidosso**	**1.27**	**262**	P	**Pn**	**02 13 43.1**	**-0.8**
SFI	**Santa Sofia**	**1.30**	**312**	P	**Pn**	**02 13 43.3**	**-1.0**
TOLF	**Tolfa**	**1.31**	**222**	P	**Pn**	**02 13 42.9**	**-1.4**
TOLF				AML	AML		
	comp=N,640µm,1.0s						
TOLF				AML	AML		
	comp=E,756µm,1.1s						
RDP	**Rocca di Papa**	**1.32**	**195**	P	**Pn**	**02 13 43.6**	**-1.0**
A309A	**Martorano (FC)**	**1.32**	**329**	P	**Pb**	**02 13 44.0**	**-0.9**
POFI	**Posta Fibreno**	**1.37**	**163**	P	**Pg**	**02 13 44.8**	**-1.5**
LAV9	**Lanuio**	**1.40**	**195**	P	**Pn**	**02 13 45.2**	**-0.5**
LRP	**Arpino**	**1.42**	**168**	P	**Pb**	**02 13 45.5**	**-1.0**
CSNT	**Castellina Chi**	**1.45**	**288**	P	**Pn**	**02 13 45.8**	**-0.6**
RUFI	**Rufina**	**1.46**	**304**	P	**Pn**	**02 13 45.7**	**-0.8**
GIUL	**Giuliano Di Ro**	**1.48**	**178**	P	**Pb**	**02 13 46.9**	**-0.7**
FROS	**Frosini**	**1.50**	**277**	P	**Pn**	**02 13 45.6**	**-1.4**
LMD	**Lutirano**	**1.50**	**315**	P	**Pn**	**02 13 46.6**	**-0.4**
OSSC	**Osservatorio P**	**1.50**	**290**	P	**Pn**	**02 13 46.0**	**-1.0**
OSSC				AML	AML		
	comp=N,452µm,0.7s						
OSSC				AML	AML		
	comp=E,498µm,0.9s						
FRES	**Fresagrandinar**	**1.53**	**133**	P	**Pg**	**02 13 47.9**	**-1.4**
LATB	**Latina**	**1.55**	**186**	P	**Pn**	**02 13 47.2**	**-0.4**
CERA	**Filignano**	**1.56**	**156**	P	**Pg**	**02 13 48.2**	**-1.8**
MIDA	**Miranda**	**1.60**	**150**	P	**Pg**	**02 13 48.8**	**-1.9**
TRIV	**Trivento**	**1.62**	**141**	P	**Pg**	**02 13 49.3**	**-1.8**
MAON	**Monte Argentar**	**1.63**	**249**	P	**Pn**	**02 13 48.1**	**-0.7**
BRIS	**BRISIGHELLA**	**1.65**	**313**	P	**Pn**	**02 13 47.6**	**-1.4**
TRIF	**Trifonti**	**1.67**	**274**	P	**Pn**	**02 13 48.6**	**-0.8**
TRIF				AML	AML		
	comp=N,342µm,0.6s						
TRIF				AML	AML		
	comp=E,342µm,1.6s						
VAGA	**Valle Agricola**	**1.80**	**154**	P	**Pb**	**02 13 51.4**	**-1.6**
BSSO	**Busso**	**1.82**	**144**	P	**Pb**	**02 13 51.9**	**-1.5**
FNVD	**Fontana Vidola**	**1.88**	**308**	P	**Pn**	**02 13 51.4**	**-0.8**
CIGN	**Sant'Elia a Pi**	**1.88**	**137**	P	**Pb**	**02 13 53.0**	**-1.4**
MELA	**Melanico ??? S**	**1.96**	**132**	P	**Pg**	**02 13 54.5**	**-2.9**
GATE	**Gambatesa**	**1.99**	**139**	P	**Pg**	**02 13 53.8**	**-2.5**
SACR	**S. Croce Del S**	**1.99**	**145**	P	**Pb**	**02 13 53.9**	**-2.5**
PII	**Pisa**	**2.06**	**290**	P	**Pn**	**02 13 54.3**	**-0.3**
MAIM	**Mastiano**	**2.15**	**295**	P	**Pn**	**02 13 55.5**	**-0.4**
SKDS	**Skadanscina**	**2.58**	**13**	*e*Pn	**Pn**	**02 14 00.9**	**-1.0**
CEY	**Cerknica**	**2.85**	**18**	*e*Pn	**Pn**	**02 14 04.7**	**-0.9**
BOJS	**Bojanci**	**2.88**	**30**	*e*Pn	**Pb**	**02 14 07.5**	**-4.0**
SABO	**M.te Sabotino**	**2.96**	**6**	P	**Pn**	**02 14 07.0**	**-0.1**
SABO				AML	AML		
	comp=N,406µm,0.6s						
SABO				AML	AML		
	comp=N,1710µm,0.6s						
SABO				AML	AML		
	comp=E,1320µm,0.7s						
SABO				AML	AML		
	comp=E,290µm,1.3s						
CGRP	**Cima Grappa**	**3.01**	**341**	P	**Pn**	**02 14 08.2**	**+0.2**
CGRP				AML	AML		
	comp=N,430µm,0.6s						
CGRP				AML	AML		
	comp=E,350µm,1.1s						
SRKY	**Kupres RS**	**3.07**	**69**	*e*Pn	**Pb**	**02 14 12.7**	**-2.1**
MGRS	**Mrkonjic Grad**	**3.15**	**63**	*e*Pn	Pb	02 14 10.8	-5.2
PRIJ	**Prijedor**	**3.20**	**51**	*e*Pn	**Pb**	**02 14 14.3**	**-2.6**
A051A	**Mrakovica**	**3.33**	**52**	*e*Pn	Pb	02 14 13.8	-5.4
BLY	**Banja Luka**	**3.36**	**58**	*e*Pn	**Pb**	**02 14 15.9**	**-3.8**
OBKA	**Obir**	**3.61**	**15**	*e*Pn	**Pn**	**02 14 16.2**	**+0.1**
OBKA	**Obir**	**3.61**	**15**	*i* Pn	**Pn**	**02 14 17.3**	**+1.3**
	comp=E,2.9nm,0.2s						
MYKA	**Terra Mystica**	**3.61**	**5**	*i* Pn	**Pn**	**02 14 16.7**	**+0.6**
	comp=E,6.1nm,0.4s						
MYKA				*i* Sn	**Sn**	**02 14 59.8**	**+1.0**
	comp=E,11nm,0.4s						
A052A	**Srbac**	**3.74**	**55**	*e*Pn	Pb	02 14 19.9	-6.3
ABTA	**Abfaltersbach**	**3.74**	**353**	*i* Pn	**Pn**	**02 14 19.3**	**+1.4**
	comp=E,49nm,0.4s,SNR=25						
ABTA				*e*Sn	**Sn**	**02 15 03.7**	**+1.6**
	comp=E,36nm,0.5s						
KBA	**Koelnbreinsper**	**4.04**	**2**	*i* Pn	**Pn**	**02 14 23.6**	**+1.5**
	comp=E,9.6nm,0.5s						
FETA	**Feichten**	**4.35**	**337**	*i* Pn	**Pn**	**02 14 27.9**	**+1.6**
	comp=E,11nm,0.5s,SNR=12						
FETA				*e*Sn	**Sn**	**02 15 20.8**	**+3.6**
	comp=E,10nm,0.5s						
WTTA	**Wattenberg**	**4.37**	**346**	*i* Pn	**Pn**	**02 14 28.5**	**+1.9**
	comp=E,15nm,0.6s,SNR=6.3						
WTTA				*e*Sn	**Sn**	**02 15 21.9**	**+4.2**
	comp=E,12nm,0.4s						
SQTA	**Sankt Quirin**	**4.41**	**342**	*i* Pn	**Pn**	**02 14 28.9**	**+1.7**
	comp=E,18nm,0.4s,SNR=11						
WATA	**Walderalm**	**4.45**	**346**	*i* Pn	**Pn**	**02 14 30.0**	**+2.4**
	comp=E,14nm,0.4s,SNR=12						
WATA				*e*Sn	**Sn**	**02 15 23.4**	**+3.8**
	comp=E,14nm,0.3s						
DRME	**Dracevica, Mon**	**4.51**	**99**	*e*Pn	**Pn**	**02 14 29.8**	**+1.4**
ARSA	**Arzberg**	**4.53**	**21**	*i* Pn	**Pn**	**02 14 29.3**	**+0.6**
	comp=E,3.4nm,0.4s						
ARSA				*e*Sn	**Sn**	**02 15 21.1**	**-0.3**
	comp=E,5.0nm,0.4s						
RUDO	**Rudo**	**4.55**	**81**	*e*Pn	**Pn**	**02 14 30.3**	**+1.4**
MOTA	**Moosalm**	**4.55**	**342**	*i* Pn	**Pn**	**02 14 31.4**	**+2.3**
	comp=E,14nm,0.5s,SNR=12						
MOTA				*e*Sn	**Sn**	**02 15 25.2**	**+2.9**
	comp=E,14nm,0.6s						
BBLS	**Lazići**	**4.61**	**77**	*e*Pn	**Pb**	**02 14 36.6**	**-4.3**
BIOA	**Bad Ischl, Aus**	**4.67**	**4**	*i* Pn	**Pn**	**02 14 31.8**	**+1.3**
	comp=E,15nm,0.4s,SNR=9.6						
BIOA				*e*Sn	**Sn**	**02 15 26.5**	**+1.7**
	comp=E,22nm,0.5s						
RETA	**Reutte**	**4.77**	**340**	*i* Pn	**Pn**	**02 14 34.3**	**+2.3**
	comp=E,2.8nm,0.3s						
DAVA	**Damuels**	**4.85**	**332**	*i* Pn	**Pn**	**02 14 35.3**	**+2.1**

comp=E,10nm,0.5s,SNR=9.1
DAVA *e*Sn **Sn** **02 15 30.7 +1.1**
comp=E,30nm,0.6s
MOA **Molln** **4.88 9** *i* Pn **Pn** **02 14 34.6 +1.2**
comp=E,5.9nm,0.4s
MOA *i* Sn **Sn** **02 15 31.5 +1.5**
comp=E,12nm,0.5s
DIVS **Divibare** **5.06 76** *e*Pn Pb 02 14 40.0 -8.7
RONA **Rosalia, Austr** **5.15 24** *i* Pn **Pn** **02 14 38.2 +0.9**
comp=E,0.8nm,0.2s
CONA **Conrad Observa** **5.24 20** *i* Pn **Pn** **02 14 39.3 +0.8**
comp=E,1.6nm,0.2s
CONA *i* Sn **Sn** **02 15 38.4 -0.7**
comp=E,2.5nm,0.3s
CKRC **Cesky Krumlov** **5.84 7** *e*PN **Pn** **02 14 46.4 -0.2**
CKRC *e*SN **Sn** **02 15 52.9 -0.8**
KHC **Kasperske Hory** **6.10 2** *e*PN **Pn** **02 14 49.6 -0.7**
KHC *e*SN **Sn** **02 15 59.5 -0.7**
TREC **Trest** **6.46 14** *e*PN **Pn** **02 14 55.5 +0.3**
PRU **Pruhonice** **7.02 7** *e*SN **Sn** **02 16 20.1 -2.6**
NKC **Novy Kostel** **7.22 356** *e*SN **Sn** **02 16 26.6 -1.0**
CLL **Colm** **8.28 359** *e*Pn **Pn** **02 15 19.0 -1.1**
CLL *e*Sn Sn 02 16 37.0 -17
CLL *ex* x 02 16 59.0
CLL *e*Sg **Sg** **02 17 42.0 -3.4**
comp=Z,9.0nm,0.9s
CLL *ex* x 02 17 58.0
comp=Z,9.0nm,0.9s

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*MEX **28** 02:13:53.3±0.6, 14°.41N×92°.69W, h4km±64km, MD3.9*
*GCG **28** 02:13:54.5±0.5, 14°.83N×92°.43W, h33km, MD3.8*
ISC 28 02:13:51.0±3.0, 14°.49N±0°.08×92°.61W±0°.06, h10km±18km, n11, σ0s95/21, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.53**	**38**	*i* P	**Pn**	**02 14 05.0**	**+0.3**
THIG				*i* S	**Sn**	**02 14 14.3**	**+0.4**
PATR	**El Naranjo**	**0.72**	**30**	*e*P	**Pn**	**02 14 07.2**	**-0.3**
PATR				*e*S	**Sn**	**02 14 19.1**	**+0.3**
CHUJ	**Union Juarez**	**0.77**	**39**	*e*P	**Pn**	**02 14 08.1**	**-0.2**
CHUJ				*e*S	**Sn**	**02 14 20.2**	**+0.1**
PAVE	**Pavencul**	**0.82**	**31**	*e*P	**Pn**	**02 14 08.7**	**-0.1**
PAVE				*e*S	**Sn**	**02 14 21.8**	**+0.6**
PCIG		**1.35**	**334**	*i* P	**Pn**	**02 14 16.0**	**+0.1**
PCIG				*i* S	**Sn**	**02 14 33.0**	**-0.9**
FUG	**Fuego 3**	**1.71**	**91**	*e*P	**Pn**	**02 14 20.9**	**-0.2**
FUG				*e*S	**Sn**	**02 14 41.2**	**-2.0**
CCIG	**Comitan**	**1.84**	**14**	*e*P	**Pb**	**02 14 25.6**	**+0.6**
CCIG				*e*S	**Sg**	**02 14 49.1**	**-1.1**
PCG	**Pacaya**	**1.94**	**93**	*e*P	**Pn**	**02 14 24.6**	**+0.2**
PCG				*e*S	**Sn**	**02 14 48.1**	**-0.8**
NBG	**Las Nubes**	**2.19**	**87**	*e*P	**Pn**	**02 14 29.6**	**+1.8**
TGIG		**2.33**	**348**	*e*P	**Pn**	**02 14 30.6**	**+1.1**
TGIG				*e*S	**Sn**	**02 14 57.1**	**-1.2**
CMIG	**Matias Romero**	**3.39**	**320**	*e*P	**Pn**	**02 14 44.6**	**+0.6**
CMIG				*e*S	**Sn**	**02 15 23.6**	**-0.8**

ROM 28 02:19:03.7±0.1, 42°.985N±0°.003×13°.155E±0°.005, h8km, ML2.4/25, 15C-11D, Error ellipse: s-maj=0.4km s-min=0.2km az=53.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.07**	**316**	P	Pg	02 19 05.6	-0.2
MC2	**Monte Cornacci**	**0.08**	**160**	⇓P	Pg	02 19 06.2	+0.2
MC2				S	Sg	02 19 07.7	+0.2
FEMA	**Monte Fema**	**0.08**	**253**	⇓P	Pg	02 19 06.3	+0.3
FEMA				S	Sg	02 19 08.0	+0.5
FEMA				AML	AML		
comp=E,18850μm,0.3s							
FEMA				AML	AML		
comp=E,18800μm,0.3s							
FEMA				AML	AML		
comp=N,12100μm,0.8s							
FEMA				AML	AML		
comp=E,18850μm,0.3s							
T1245	**Castelsantange**	**0.13**	**169**	⇓P	Pg	02 19 07.2	+0.5
T1245				S	Sg	02 19 09.8	+1.0
T1245				AML	AML		
comp=E,3175μm,0.6s							
T1245				AML	AML		
comp=N,5435μm,0.2s							
T1216	**Preci, Frazion**	**0.14**	**227**	⇑P	Pg	02 19 07.2	+0.5
T1216				S	Sg	02 19 09.8	+1.0
T1216				AML	AML		
comp=N,4550μm,0.2s							
T1216				AML	AML		
comp=E,4710μm,0.4s							
AM05	**Amandola Campo**	**0.14**	**93**	⇑P	Pg	02 19 07.4	+0.6
AM05				S	Sg	02 19 10.1	+1.1
AM05				AML	AML		
comp=E,547μm,0.2s							
AM05				AML	AML		
comp=N,580μm,1.5s							
AM05				AML	AML		
comp=E,546μm,0.2s							
AM05				AML	AML		
comp=N,170μm,0.1s							
AM05				AML	AML		
comp=E,2565μm,0.8s							
MMO1	**Montemonaco**	**0.15**	**124**	⇑P	Pg	02 19 07.4	+0.4
MMO1				S	Sg	02 19 10.2	+1.0
GUMA	**Gualdo di Mace**	**0.15**	**60**	⇑P	Pg	02 19 07.7	+0.7
GUMA				AML	AML		
comp=E,5115μm,0.6s							
GUMA				AML	AML		
comp=N,4230μm,0.6s							
GUMA				AML	AML		
comp=N,4460μm,0.4s							
GUMA				AML	AML		
comp=E,5230μm,0.3s							
NRCA	**Norcia**	**0.15**	**191**	⇓P	Pg	02 19 07.5	+0.5
NRCA				S	Sg	02 19 11.0	+1.7
NRCA				AML	AML		
comp=E,5350μm,0.5s							
NRCA				AML	AML		
comp=N,5380μm,0.5s							
NRCA				AML	AML		
comp=N,5485μm,0.2s							
NRCA				AML	AML		
comp=E,5350μm,0.5s							
NRCA				AML	AML		
comp=N,5480μm,0.2s							
NRCA				AML	AML		
comp=E,5355μm,0.5s							
NRCA				AML	AML		
comp=E,5885μm,0.5s							
T1241	**Roccafluvione,**	**0.24**	**122**	P	Pg	02 19 09.3	+0.8
T1241				S	Sg	02 19 13.3	+1.5
T1241				AML	AML		
comp=E,876μm,0.6s							
T1241				AML	AML		
comp=N,578μm,0.3s							
T1215	**Vallo di Nera,**	**0.28**	**229**	⇑P	Pg	02 19 09.8	+0.6
T1215				S	Sg	02 19 14.3	+1.3
SNTG	**Esanatoglia**	**0.31**	**330**	⇓P	Pg	02 19 10.3	+0.4
SNTG				AML	AML		
comp=E,928μm,1.1s							
SNTG				AML	AML		
comp=N,892μm,0.1s							
SNTG				AML	AML		
comp=E,948μm,1.1s							
SNTG				AML	AML		
comp=N,990μm,0.1s							
SNTG				AML	AML		
comp=N,892μm,0.1s							
T1217	**Poggiodomo (PG**	**0.32**	**211**	⇓P	Pg	02 19 10.5	+0.5
T1217				S	Sb	02 19 16.0	-1.0
T1217				AML	AML		
comp=E,736μm,1.1s							
T1217				AML	AML		
comp=N,1038μm,0.3s							
T1217				AML	AML		
comp=E,682μm,0.6s							
T1217				AML	AML		
comp=N,1094μm,0.4s							
T1204	**Amatrice, Fraz**	**0.33**	**159**	⇑P	Pg	02 19 11.0	+0.7
T1204				S	Sb	02 19 16.6	-0.8
T1204				AML	AML		
comp=E,1660μm,0.3s							
T1204				AML	AML		
comp=N,1147μm,0.2s							
T1204				AML	AML		
comp=E,1654μm,0.3s							
EL6	**Elcito**	**0.35**	**354**	⇑P	Pg	02 19 10.8	+0.2
EL6				AML	AML		
comp=E,1690μm,0.2s							
EL6				AML	AML		
comp=N,1945μm,0.4s							
EL6				AML	AML		
comp=N,1944μm,0.4s							
EL6				AML	AML		
comp=E,1692μm,0.2s							
T1243	**Rocca Santa Ma**	**0.36**	**143**	P	Pg	02 19 11.3	+0.5
T1243				S	Sb	02 19 17.3	-0.9
SMA1	**SAN MARTINO**	**0.38**	**159**	⇓P	Pg	02 19 11.5	+0.4
SMA1				S	Sb	02 19 18.0	-0.8
SMA1				AML	AML		
comp=E,374μm,0.4s							
SMA1				AML	AML		
comp=N,348μm,0.3s							
SMA1				AML	AML		
comp=E,733μm,1.4s							
SMA1				AML	AML		
comp=N,593μm,0.4s							
SMA1				AML	AML		
comp=N,592μm,0.4s							
CING	**Cingoli**	**0.39**	**4**	⇑P	Pg	02 19 11.7	+0.3
CING				S	Sb	02 19 18.1	-1.0
CING				AML	AML		
comp=N,592μm,0.3s							
CING				AML	AML		
comp=E,792μm,1.3s							
CING				AML	AML		
comp=N,592μm,0.3s							
LNSS	**Leonessa**	**0.39**	**193**	⇓P	Pg	02 19 11.8	+0.4
LNSS				S	Sb	02 19 18.3	-0.9
LNSS				AML	AML		
comp=E,426μm,0.2s							
LNSS				AML	AML		
comp=N,384μm,1.1s							
LNSS				AML	AML		
comp=E,994μm,0.2s							
LNSS				AML	AML		
comp=E,994μm,0.2s							
LNSS				AML	AML		
comp=N,576μm,0.5s							
ATCC	**AVT- Casa Cast**	**0.43**	**298**	⇓P	Pg	02 19 12.5	+0.5
ATCC				S	Sb	02 19 19.6	-0.6
ATCC				AML	AML		
comp=E,1205μm,0.6s							
ATCC				AML	AML		
comp=N,1007μm,1.5s							
ATCC				AML	AML		
comp=E,1200μm,0.6s							
ATCC				AML	AML		
comp=N,1008μm,1.5s							
RM33	**Pellescritta (**	**0.48**	**175**	⇓P	Pg	02 19 13.4	+0.4
RM33				S	Sb	02 19 21.3	-0.3
RM33				AML	AML		
comp=E,209μm,0.2s							
RM33				AML	AML		
comp=N,208μm,0.3s							
RM33				AML	AML		
comp=E,378μm,0.6s							
RM33				AML	AML		
comp=N,256μm,0.3s							
CAMP	**Campotosto**	**0.49**	**157**	P	Pg	02 19 13.4	+0.3
CAMP				S	Sb	02 19 21.2	-0.7
CAMP				AML	AML		
comp=E,462μm,0.3s							
CAMP				AML	AML		
comp=N,214μm,0.6s							
CAMP				AML	AML		
comp=N,214μm,0.6s							
TERO	**Teramo**	**0.49**	**137**	P	Pg	02 19 13.6	+0.3
TERO				S	Sb	02 19 21.9	0.0
TERO				AML	AML		
comp=E,193μm,1.5s							
TERO				AML	AML		
comp=N,224μm,1.3s							
TERO				AML	AML		
comp=E,390μm,0.8s							
TERO				AML	AML		
comp=E,391μm,0.8s							
TERO				AML	AML		
comp=N,332μm,0.8s							
ARRO	**Arrone**	**0.50**	**215**	⇑P	Pg	02 19 13.7	+0.4
T1211	**Morro Reatino**	**0.50**	**206**	⇓P	Pb	02 19 14.6	-0.3
T1211				AML	AML		
comp=E,324μm,0.3s							
T1211				AML	AML		
comp=N,606μm,0.3s							
T1211				AML	AML		
comp=E,350μm,1.6s							
T1211				AML	AML		
comp=N,609μm,0.9s							
T1211				AML	AML		
comp=N,606μm,0.3s							
T1211				AML	AML		
comp=N,606μm,0.3s							
T1211				AML	AML		
comp=E,355μm,1.6s							
ARVD	**Arcevia**	**0.54**	**343**	⇑P	Pg	02 19 14.3	+0.2
ARVD				S	Sb	02 19 23.1	-0.2
ARVD				AML	AML		
comp=E,494μm,0.8s							
ARVD				AML	AML		
comp=N,455μm,0.1s							
MURB	**Monte Urbino**	**0.54**	**301**	P	Pb	02 19 15.1	-0.4
MURB				S	Sb	02 19 23.6	+0.2
T1247	**Pizzolo (AQ)**	**0.55**	**169**	P	Pg	02 19 14.7	+0.3
T1247				S	Sb	02 19 24.0	+0.2
CESX	**Cesi**	**0.57**	**229**	⇑P	Pg	02 19 15.0	+0.4
CESX				AML	AML		
comp=N,328μm,0.4s							
CESX				AML	AML		
comp=E,448μm,0.5s							
GIGS	**Gran Sasso**	**0.62**	**150**	⇑P	Pg	02 19 15.7	+0.1
GIGS				S	Sb	02 19 25.6	0.0
GIGS				AML	AML		
comp=E,88μm,0.8s							
GIGS				AML	AML		
comp=N,84μm,1.5s							
GIGS				AML	AML		
comp=E,88μm,0.8s							
PIEI	**Pieia**	**0.71**	**321**	⇑P	Pb	02 19 18.1	-0.3
PIEI				AML	AML		
comp=E,271μm,0.1s							
PIEI				AML	AML		
comp=N,172μm,1.0s							
PIEI				AML	AML		
comp=E,270μm,0.1s							
NARO	**Abbazia di Nar**	**0.75**	**326**	⇑P	Pg	02 19 18.2	0.0
NARO				AML	AML		
comp=E,170μm,1.6s							
NARO				AML	AML		
comp=E,171μm,1.6s							
NARO				AML	AML		
comp=N,152μm,0.8s							
FAGN	**Fagnano**	**0.79**	**156**	⇑P	Pb	02 19 19.3	-0.4
FAGN				AML	AML		
comp=E,428μm,0.3s							
FAGN				AML	AML		
comp=E,428μm,0.3s							
FAGN				AML	AML		
comp=N,326μm,0.3s							
SAMA	**S.Maria delle**	**1.27**	**199**	P	Pn	02 19 26.0	-1.7
MODR	**Mondragone**	**1.92**	**163**	P	Pn	02 19 34.5	-2.1
MODR				AML	AML		
comp=N,100μm,1.5s							
MODR				AML	AML		
comp=E,88μm,1.6s							

ROM 28 02:19:26.6±0.1, 43°.025N±0°.004×13°.090E±0°.005, h9km, ML2.5/12, 14C-15D, Error ellipse: s-maj=0.5km s-min=0.3km az=15.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**352**	P	Pg	02 19 27.5	-0.7
FEMA	**Monte Fema**	**0.07**	**205**	⇑P	Pg	02 19 28.8	+0.1
FEMA				AML	AML		
comp=E,18850μm,0.3s							
FEMA				AML	AML		
comp=E,12100μm,0.8s							
FEMA				AML	AML		
comp=E,18800μm,0.3s							
FEMA				AML	AML		
comp=E,18850μm,0.3s							
FEMA				AML	AML		
comp=N,12100μm,0.7s							
MC2	**Monte Cornacci**	**0.13**	**146**	⇑P	Pg	02 19 30.2	+0.5
CESI	**CESI - Serrava**	**0.14**	**262**	⇑P	Pg	02 19 30.2	+0.5
CESI				S	Sg	02 19 32.9	+1.1
T1216	**Preci, Frazion**	**0.14**	**201**	⇓P	Pg	02 19 30.1	+0.3
T1216				S	Sg	02 19 33.5	+1.6
SEF1	**Sefro**	**0.16**	**320**	⇑P	Pg	02 19 30.7	+0.7
SEF1				S	Sg	02 19 33.8	+1.4
SEF1				AML	AML		
comp=N,4185μm,0.3s							
SEF1				AML	AML		
comp=E,4755μm,0.2s							
SEF1				AML	AML		
comp=N,4180μm,0.3s							
T1245	**Castelsantange**	**0.18**	**157**	⇑P	Pg	02 19 31.0	+0.5
T1245				S	Sg	02 19 34.4	+1.3
T1245				AML	AML		
comp=N,5435μm,0.2s							
T1245				AML	AML		
comp=E,3175μm,0.6s							
GUMA	**Gualdo di Mace**	**0.18**	**78**	⇓P	Pg	02 19 31.3	+0.8
GUMA				S	Sg	02 19 34.9	+1.9
NRCA	**Norcia**	**0.19**	**175**	⇓P	Pg	02 19 31.2	+0.6
NRCA				S	Sg	02 19 34.9	+1.6
NRCA				AML	AML		
comp=E,5350μm,0.5s							
NRCA				AML	AML		
comp=N,5485μm,0.2s							
NRCA				AML	AML		
comp=E,5355μm,0.5s							
NRCA				AML	AML		
comp=N,5385μm,0.5s							
NRCA				AML	AML		
comp=E,5350μm,0.5s							
NRCA				AML	AML		
comp=N,5380μm,0.5s							
NRCA				AML	AML		
comp=N,5480μm,0.2s							
NRCA				AML	AML		
comp=E,5885μm,0.5s							
AM05	**Amandola Campo**	**0.20**	**104**	⇓P	Pg	02 19 31.3	+0.6
AM05				S	Sg	02 19 34.9	+1.4
MMO1	**Montemonaco**	**0.21**	**126**	⇓P	Pg	02 19 31.4	+0.4
MMO1				S	Sg	02 19 35.3	+1.3
SNTG	**Esanatoglia**	**0.26**	**335**	⇑P	Pg	02 19 32.1	+0.4
SNTG				AML	AML		
comp=E,928μm,1.1s							
SNTG				AML	AML		
comp=N,894μm,0.1s							
SNTG				AML	AML		
comp=E,948μm,1.1s							
SNTG				AML	AML		
comp=N,990μm,0.1s							
SNTG				AML	AML		
comp=N,892μm,0.1s							
SNTG				AML	AML		
comp=N,892μm,0.1s							
T1215	**Vallo di Nera,**	**0.28**	**216**	⇑P	Pg	02 19 32.7	+0.6
T1215				S	Sb	02 19 37.5	-1.0
T1241	**Roccafluvione,**	**0.30**	**124**	⇓P	Pg	02 19 33.1	+0.5
T1241				S	Sb	02 19 38.5	-0.8
EL6	**Elcito**	**0.30**	**2**	⇑P	Pg	02 19 33.1	+0.5
EL6				AML	AML		
comp=E,1690μm,0.2s							
EL6				AML	AML		
comp=N,1945μm,0.4s							
EL6				AML	AML		
comp=N,1944μm,0.4s							
EL6				AML	AML		
comp=E,1692μm,0.2s							
T1217	**Poggiodomo (PG**	**0.33**	**200**	⇑P	Pg	02 19 33.8	+0.6
T1217				S	Sb	02 19 39.6	-0.7
CING	**Cingoli**	**0.36**	**12**	⇓P	Pg	02 19 34.2	+0.5
CING				AML	AML		
comp=N,592μm,0.3s							
CING				AML	AML		
comp=E,792μm,1.3s							
CING				AML	AML		
comp=N,592μm,0.3s							
ATCC	**AVT- Casa Cast**	**0.37**	**296**	⇓P	Pg	02 19 34.4	+0.6
ATCC				S	Sb	02 19 40.7	-0.4
T1204	**Amatrice, Fraz**	**0.39**	**154**	P	Pg	02 19 34.7	+0.5
T1204				S	Sb	02 19 41.5	-0.4
T1243	**Rocca Santa Ma**	**0.42**	**141**	⇓P	Pg	02 19 35.2	+0.4
T1243				S	Sb	02 19 42.0	-0.8
LNSS	**Leonessa**	**0.42**	**185**	⇑P	Pg	02 19 35.2	+0.4
SMA1	**SAN MARTINO**	**0.43**	**155**	⇓P	Pg	02 19 35.2	+0.1
SMA1				S	Sb	02 19 42.6	-0.6
SMA1				AML	AML		
comp=N,593μm,0.4s							
SMA1				AML	AML		
comp=E,733μm,1.4s							
SMA1				AML	AML		
comp=N,592μm,0.4s							
MURB	**Monte Urbino**	**0.48**	**300**	S	Sb	02 19 45.0	+0.6
ARVD	**Arcevia**	**0.48**	**347**	⇑P	Pg	02 19 36.5	+0.5
ARVD				S	Sb	02 19 45.0	+0.4
ARVD				AML	AML		
comp=N,455μm,0.1s							
ARVD				AML	AML		
comp=E,494μm,0.8s							
ARRO	**Arrone**	**0.51**	**208**	⇑P	Pg	02 19 36.8	+0.4
ARRO				S	Sb	02 19 46.0	+0.9
ARRO				AML	AML		
comp=E,405μm,1.2s							
ARRO				AML	AML		
comp=N,318μm,0.2s							
ATFO	**Monte Foce - G**	**0.51**	**312**	P	Pb	02 19 37.5	-0.3
ATFO				S	Sb	02 19 46.0	+0.6
T1211	**Morro Reatino**	**0.52**	**199**	⇓P	Pg	02 19 37.1	+0.4
RM33	**Pellescritta (**	**0.52**	**170**	⇓P	Pg	02 19 37.0	+0.3
RM33				AML	AML		
comp=E,378μm,0.6s							
RM33				AML	AML		
comp=N,256μm,0.3s							
CAMP	**Campotosto**	**0.54**	**154**	⇓P	Pg	02 19 37.2	+0.1
TERO	**Teramo**	**0.55**	**137**	⇓P	Pg	02 19 37.4	+0.1
TERO				S	Sb	02 19 47.0	+0.5
TERO				AML	AML		
comp=N,332μm,0.8s							
TERO				AML	AML		
comp=E,390μm,0.8s							
TERO				AML	AML		
comp=E,391μm,0.8s							
CESX	**Cesi**	**0.56**	**222**	⇑P	Pg	02 19 37.6	+0.2
ATVO	**AVT- Monte Val**	**0.61**	**306**	⇑P	Pg	02 19 38.8	+0.4
MPAG	**Monte Paganucc**	**0.65**	**338**	S	Sb	02 19 51.0	+1.6
PIEI	**Pieia**	**0.65**	**322**	S	Sb	02 19 51.0	+1.6
NARO	**Abbazia di Nar**	**0.69**	**328**	⇓P	Pg	02 19 40.3	+0.4
NARO				S	Sb	02 19 51.0	+0.4
NARO				AML	AML		
comp=E,170μm,1.6s							
NARO				AML	AML		
comp=E,171μm,1.6s							
NARO				AML	AML		
comp=N,152μm,0.8s							
FSSB	**Fossombrone**	**0.70**	**341**	S	Sn	02 19 53.0	-0.9
FAGN	**Fagnano**	**0.84**	**154**	S	Sb	02 19 56.0	+1.1

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*IDC **28** 02:26:31.5±3.0, 31°.57S×178°.05W, h0km, mb4.3/2, mbtmp4.2/4, ML3.6/2, Error ellipse: s-maj=71.0km s-min=29.9km az=117.0*
*NEIC **28** 02:26:32.5±2.8, 31°.70S±0°.09×177°.9W±0°.3, h18km±10km, mb4.2/5, Error ellipse: s-maj=35.2km s-min=9.9km az=105.0*
ISC 28 02:26:34.7±1.4, 31°.56S±0°.10×178°.0W±0°.3, h35km, n17, σ1s65/16, mb4.4/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.30**	**2**	Pn	**Pn**	**02 27 11.1**	**+1.1**
47nm,0.3s,baz=202,slow=22,SNR=1.5							
RAO				Sn	**Sn**	**02 27 34.3**	**-2.9**
177nm,0.3s,baz=62,slow=22,SNR=3.7							
183nm,0.2s							
RAO	**Raoul Island**	**2.30**	**2**	Pn	**Pn**	**02 27 11.0**	**+0.9**
URZ	**Urewera**	**7.79**	**210**	Pn	**Pn**	**02 28 25.8**	**+0.2**

```
     0.3nm,0.3s,baz=2.1,slow=5.3,SNR=6.6
URZ                                  Sn   Sn      02 29 53.0 +0.5
     1.3nm,0.3s,baz=310,slow=23,SNR=6.9
     5.1nm,0.9s
CMWZ Cape Campbell      11.93 209    Pn   Pn      02 29 19.7 -2.4
OXZ  Oxford             14.14 211    Pn   Pn      02 29 50.4 -2.1
AS31 Alice Springs      43.05 268    P    P       02 34 30.8 -0.5
AS31                                 IAmb IAmb    02 34 33.8
     comp=Z,0.9nm,0.7s
ASAR Alice Springs      43.05 268    P    P       02 34 32.9 +1.6
     comp=Z,2.1nm,0.5s,baz=105,slow=7.6,SNR=32
     comp=Z,2.1nm,0.5s
ASAR Alice Springs      43.05 268    P    P       02 34 30.0 -1.3
WB2  Warramunga Arr     44.13 273    P    P       02 34 41.9 +1.9
WB2                                  IAmb IAmb    02 34 42.3
     comp=Z,4.3nm,0.7s
WRA  Warramunga Arr     44.14 273    P    P       02 34 41.7 +1.6
     comp=Z,4.3nm,0.6s,baz=114,slow=7.6,SNR=66
     comp=Z,4.3nm,0.6s
WRA  Warramunga Arr     44.14 273    P    P       02 34 41.5 +1.4
WB0  Warramunga Arr     44.17 274    P    P       02 34 41.5 +1.2
WB0                                  IAmb IAmb    02 34 42.6
     comp=Z,5.4nm,0.8s
SNAA Sanae              77.00 178    P    P       02 38 23.9 +0.4
H03S2 Juan Fernandez    79.84 123    T    T       04 07 32.2
     baz=237
H03S1 Juan Fernandez    79.85 123    T    T       04 07 28.2
     baz=237,slow=74,SNR=3.2
H03S3 Juan Fernandez    79.86 123    T    T       04 07 36.7
     baz=237,slow=74,SNR=4.0
FINES FINESS Array B    146.22 339   PKPbc PKPab  02 46 12.1 +0.7
     comp=Z,2.3nm,0.7s,baz=48,slow=2.1,SNR=5.3
```

ROM 28 02:27:48.3±0.0, 42°.939N±0°.003×13°.167E±0°.004,
h8km, ML2.6/39, 7C-24D, Error ellipse: s-maj=0.3km
s-min=0.1km az=219.0, Central Italy

```
Code Station Name       Δ°   AZ°  Phase ID                Time     Res
                                  Op    ISC               h m s    ISC
MC2  Monte Cornacci     0.03 147  ⇓P    Pg                02 27 50.0 -0.2
MC2                               S     Sg                02 27 51.0 -0.5
T1245 Castelsantange    0.08 169  P     Pg                02 27 51.0 +0.3
T1245                             S     Sg                02 27 52.8 +0.5
T1245                             AML   AML
     comp=E,10560µm,0.6s
T1245                             AML   AML
     comp=E,11700µm,0.7s
T1245                             AML   AML
     comp=E,10565µm,0.7s
T1245                             AML   AML
     comp=N,15200µm,0.7s
T1245                             AML   AML
     comp=N,14700µm,0.7s
T1245                             AML   AML
     comp=E,10550µm,0.7s
T1245                             AML   AML
     comp=N,15200µm,0.7s
T1245                             AML   AML
     comp=E,11750µm,0.7s
T1245                             AML   AML
     comp=E,10540µm,0.7s
FEMA Monte Fema         0.09 285  P     Pg                02 27 50.9 +0.1
FEMA                              S     Sg                02 27 52.8 +0.3
FEMA                              AML   AML
     comp=N,25100µm,0.3s
FEMA                              AML   AML
     comp=E,38150µm,0.6s
NRCA Norcia             0.11 200  P     Pg                02 27 51.4 +0.5
NRCA                              S     Sg                02 27 54.0 +1.2
NRCA                              AML   AML
     comp=E,12315µm,0.5s
NRCA                              AML   AML
     comp=N,10925µm,0.4s
NRCA                              AML   AML
     comp=E,12340µm,0.5s
NRCA                              AML   AML
     comp=N,10930µm,0.4s
NRCA                              AML   AML
     comp=E,12950µm,0.5s
NRCA                              AML   AML
     comp=N,11870µm,0.4s
NRCA                              AML   AML
     comp=E,12340µm,0.5s
NRCA                              AML   AML
     comp=N,10920µm,0.4s
NRCA                              AML   AML
     comp=E,12350µm,0.5s
NRCA                              AML   AML
     comp=N,10965µm,0.4s
T1216 Preci, Frazion    0.12 246  ⇑P    Pg                02 27 51.5 +0.4
T1216                             S     Sg                02 27 54.0 +1.0
T1216                             AML   AML
     comp=E,8025µm,0.9s
T1216                             AML   AML
     comp=E,8035µm,0.9s
T1216                             AML   AML
     comp=N,13100µm,0.5s
T1216                             AML   AML
     comp=E,8045µm,0.9s
T1216                             AML   AML
     comp=N,13100µm,0.5s
MMO1 Montemonaco        0.12 109  P     Pg                02 27 51.6 +0.5
MMO1                              S     Sg                02 27 54.1 +0.9
AM05 Amandola Campo     0.14  74  ⇓P    Pg                02 27 52.0 +0.6
AM05                              S     Sg                02 27 54.7 +1.1
AM05                              AML   AML
     comp=E,4575µm,1.6s
AM05                              AML   AML
     comp=E,1345µm,1.4s
AM05                              AML   AML
     comp=N,1350µm,1.0s
AM05                              AML   AML
     comp=N,324µm,0.4s
AM05                              AML   AML
     comp=E,1350µm,1.4s
GUMA Gualdo di Mace     0.17  45  ⇓P    Pg                02 27 52.8 +0.9
GUMA                              AML   AML
     comp=E,11185µm,0.6s
GUMA                              AML   AML
     comp=N,10230µm,0.8s
GUMA                              AML   AML
     comp=E,13500µm,0.6s
GUMA                              AML   AML
     comp=N,11700µm,0.4s
GUMA                              AML   AML
     comp=N,10225µm,0.8s
GUMA                              AML   AML
     comp=E,11185µm,0.6s
CESI CESI - Serrava     0.20 289  ⇑P    Pg                02 27 53.0 +0.5
CESI                              S     Sg                02 27 56.6 +1.2
CESI                              AML   AML
     comp=E,6565µm,0.5s
CESI                              AML   AML
     comp=N,7055µm,0.3s
CESI                              AML   AML
     comp=N,7050µm,0.3s
T1241 Roccafluvione,    0.21 113  ⇓P    Pg                02 27 53.3 +0.7
T1241                             S     Sg                02 27 57.3 +1.7
T1241                             AML   AML
     comp=E,2345µm,1.0s
T1241                             AML   AML
     comp=N,2405µm,0.6s
T1241                             AML   AML
     comp=E,2350µm,1.0s
T1215 Vallo di Nera,    0.26 238  ⇓P    Pg                02 27 54.1 +0.6
T1215                             S     Sb                02 27 58.8 -1.1
T1215                             AML   AML
     comp=N,1290µm,1.0s
T1215                             AML   AML
     comp=N,1466µm,0.3s
T1215                             AML   AML
     comp=E,1500µm,0.8s
T1215                             AML   AML
     comp=N,1465µm,0.3s
T1204 Amatrice, Fraz    0.28 157  P     Pg                02 27 54.7 +0.6
T1204                             S     Sb                02 27 59.8 -0.9
T1204                             AML   AML
     comp=E,1512µm,0.9s
T1204                             AML   AML
     comp=N,1755µm,1.1s
T1204                             AML   AML
     comp=E,1515µm,0.9s
T1204                             AML   AML
     comp=N,1758µm,1.1s
T1217 Poggiodomo (PG    0.29 217  ⇓P    Pg                02 27 54.7 +0.6
T1217                             S     Sb                02 27 59.8 -0.8
T1217                             AML   AML
     comp=E,2340µm,0.9s
T1217                             AML   AML
     comp=N,3025µm,0.4s
T1217                             AML   AML
     comp=E,2460µm,0.9s
T1217                             AML   AML
     comp=N,3030µm,1.5s
T1217                             AML   AML
     comp=N,3023µm,0.4s
T1217                             AML   AML
     comp=E,2465µm,0.9s
T1217                             AML   AML
     comp=E,2340µm,0.9s
T1217                             AML   AML
     comp=N,3035µm,1.5s
T1243 Rocca Santa Ma    0.32 139  ⇓P    Pg                02 27 55.1 +0.5
T1243                             S     Sb                02 28 00.7 -1.0
SMA1 SAN MARTINO        0.33 158  ⇓P    Pg                02 27 55.4 +0.5
SMA1                              AML   AML
     comp=N,1500µm,1.2s
SMA1                              AML   AML
     comp=E,2150µm,1.0s
SMA1                              AML   AML
     comp=N,1495µm,1.2s
LNSS Leonessa           0.35 196  ⇓P    Pg                02 27 55.7 +0.5
LNSS                              AML   AML
     comp=E,1650µm,0.9s
LNSS                              AML   AML
     comp=N,1365µm,0.7s
SNTG Esanatoglia        0.36 332  ⇓P    Pg                02 27 55.7 +0.4
SNTG                              S     Sg                02 28 01.4 +1.3
SNTG                              AML   AML
     comp=N,909µm,1.6s
SNTG                              AML   AML
     comp=N,911µm,1.6s
SNTG                              AML   AML
     comp=N,934µm,1.6s
SNTG                              AML   AML
     comp=E,912µm,0.5s
SNTG                              AML   AML
     comp=E,1030µm,0.5s
OFFI Offida             0.38  90  ⇑P    Pb                02 27 57.5 +0.3
OFFI                              AML   AML
     comp=N,2265µm,0.7s
OFFI                              AML   AML
     comp=E,1535µm,0.9s
EL6  Elcito             0.39 353  ⇓P    Pg                02 27 56.3 +0.2
RM33 Pellescritta (     0.43 175  ⇓P    Pg                02 27 57.2 +0.4
RM33                              S     Sb                02 28 04.8 -0.1
RM33                              AML   AML
     comp=N,630µm,1.5s
RM33                              AML   AML
     comp=E,970µm,1.4s
CING Cingoli            0.44   3  ⇑P    Pg                02 27 57.3 +0.4
CING                              AML   AML
     comp=N,640µm,1.0s
CING                              AML   AML
     comp=E,872µm,0.4s
CING                              AML   AML
     comp=N,640µm,1.0s
CAMP Campotosto         0.44 156  ⇓P    Pg                02 27 57.3 +0.3
CAMP                              S     Sb                02 28 04.7 -0.5
CAMP                              AML   AML
     comp=E,571µm,0.7s
CAMP                              AML   AML
     comp=N,417µm,0.8s
CAMP                              AML   AML
     comp=N,418µm,0.8s
TERO Teramo             0.45 134  ⇓P    Pg                02 27 57.4 +0.3
TERO                              S     Sb                02 28 05.0 -0.4
TERO                              AML   AML
     comp=N,941µm,0.8s
TERO                              AML   AML
     comp=E,792µm,0.5s
ATCC AVT- Casa Cast     0.46 303  P     Pg                02 27 57.8 +0.5
ATCC                              S     Sb                02 28 05.5  0.0
ATCC                              AML   AML
     comp=N,2110µm,0.4s
ATCC                              AML   AML
     comp=E,2730µm,1.1s
ATCC                              AML   AML
     comp=N,2105µm,0.4s
FOSV Fossato di Vic     0.46 320  ⇑P    Pg                02 27 57.7 +0.4
FOSV                              S     Sb                02 28 05.6 -0.1
FOSV                              AML   AML
     comp=E,1006µm,0.7s
FOSV                              AML   AML
     comp=E,1009µm,0.7s
FOSV                              AML   AML
     comp=N,1295µm,0.7s
ARRO Arrone             0.47 220  ⇓P    Pg                02 27 57.8 +0.4
ARRO                              S     Sb                02 28 05.7 -0.1
ARRO                              AML   AML
     comp=E,524µm,0.7s
ARRO                              AML   AML
     comp=N,670µm,0.9s
ARRO                              AML   AML
     comp=E,524µm,0.7s
ARRO                              AML   AML
     comp=N,670µm,0.9s
T1211 Morro Reatino     0.47 210  ⇓P    Pg                02 27 57.7 +0.3
T1211                             S     Sb                02 28 06.0 +0.1
T1211                             AML   AML
     comp=N,1068µm,1.2s
T1211                             AML   AML
     comp=E,704µm,1.1s
T1211                             AML   AML
     comp=N,1069µm,1.2s
T1211                             AML   AML
     comp=E,726µm,0.6s
T1211                             AML   AML
     comp=N,1030µm,1.1s
T1211                             AML   AML
     comp=E,704µm,1.1s
T1247 Pizzolo (AQ)      0.51 169  ⇓P    Pg                02 27 58.5 +0.4
T1247                             AML   AML
     comp=N,978µm,0.9s
T1247                             AML   AML
     comp=E,888µm,1.0s
T1247                             AML   AML
     comp=N,978µm,0.9s
CESX Cesi               0.54 233  ⇓P    Pg                02 27 59.0 +0.2
CESX                              S     Sb                02 28 08.0  0.0
CESX                              AML   AML
     comp=E,1148µm,0.7s
CESX                              AML   AML
     comp=N,1285µm,0.4s
PP3  Marolino           0.55  36  P     Pb                02 28 00.5 +0.5
MURB Monte Urbino       0.57 305  P     Pg                02 27 59.7 +0.3
MURB                              AML   AML
     comp=E,2385µm,0.3s
MURB                              AML   AML
     comp=N,1945µm,0.3s
MURB                              AML   AML
     comp=N,1865µm,0.4s
MURB                              AML   AML
     comp=E,2750µm,0.4s
MURB                              AML   AML
     comp=E,2385µm,0.4s
GIGS Gran Sasso         0.57 149  ⇑P    Pg                02 27 59.7 +0.4
GIGS                              AML   AML
     comp=E,160µm,0.7s
GIGS                              AML   AML
     comp=N,136µm,1.0s
GIGS                              AML   AML
     comp=E,160µm,0.7s
ARVD Arcevia            0.58 344  ⇓P    Pg                02 27 60.0 +0.4
ARVD                              S     Sb                02 28 09.1  0.0
ARVD                              AML   AML
     comp=E,630µm,0.5s
ARVD                              AML   AML
     comp=N,382µm,0.8s
AQU  L'Aquila           0.61 163  ⇑P    Pg                02 28 00.3 +0.2
AQU                               AML   AML
     comp=N,522µm,0.8s
AQU                               AML   AML
     comp=E,632µm,1.0s
AQU                               AML   AML
     comp=E,657µm,1.0s
AQU                               AML   AML
     comp=N,532µm,0.8s
FRON Frontone           0.66 331  ⇓P    Pg                02 28 01.3 +0.2
FRON                              AML   AML
     comp=E,450µm,0.4s
FRON                              AML   AML
     comp=N,625µm,0.4s
FIAM Fiamignano         0.67 183  P     Pg                02 28 01.3  0.0
FIAM                              S     Sb                02 28 12.4 +0.7
ATVO AVT- Monte Val     0.71 309  P     Pg                02 28 02.0  0.0
ATVO                              AML   AML
     comp=E,372µm,0.5s
ATVO                              AML   AML
     comp=N,427µm,0.5s
ATVO                              AML   AML
     comp=N,426µm,0.5s
ATVO                              AML   AML
     comp=E,372µm,0.5s
VCEL Villa Celiera      0.74 137  ⇓P    Pg                02 28 02.8 +0.3
VCEL                              AML   AML
     comp=N,712µm,1.1s
VCEL                              AML   AML
     comp=E,588µm,0.8s
VCEL                              AML   AML
     comp=N,712µm,1.1s
FAGN Fagnano            0.74 155  ⇓P    Pb                02 28 03.4 -0.1
FAGN                              AML   AML
     comp=E,598µm,1.0s
FAGN                              AML   AML
     comp=N,552µm,0.5s
FAGN                              AML   AML
     comp=E,598µm,1.0s
FAGN                              AML   AML
     comp=N,552µm,0.5s
MPAG Monte Paganucc     0.75 337  P     Pb                02 28 03.3 -0.4
MPAG                              S     Sn                02 28 15.5 -1.3
ATPI Pietralunga -      0.76 313  ⇓P    Pg                02 28 03.2 +0.3
ATPI                              S     Sb                02 28 15.4 +1.2
ATPI                              AML   AML
     comp=N,338µm,1.1s
ATPI                              AML   AML
     comp=E,312µm,1.5s
NARO Abbazia di Nar     0.80 328  ⇓P    Pg                02 28 03.6 -0.1
NARO                              AML   AML
     comp=N,199µm,0.5s
NARO                              AML   AML
     comp=E,260µm,0.8s
FSSB Fossombrone        0.81 339  P     Pb                02 28 04.3 -0.2
FSSB                              AML   AML
     comp=E,924µm,0.4s
FSSB                              AML   AML
     comp=N,1485µm,0.4s
FSSB                              AML   AML
     comp=E,924µm,0.4s
T0110 Collepietro       0.84 147  P     Pg                02 28 04.3 -0.2
T0110                             AML   AML
     comp=E,561µm,1.2s
T0110                             AML   AML
     comp=N,594µm,0.6s
T0110                             AML   AML
     comp=E,560µm,1.2s
CAFI Castiglion Fio     0.96 294  P     Pg                02 28 06.8  0.0
CAFI                              S     Sn                02 28 22.5 +0.6
CAFI                              AML   AML
     comp=E,178µm,0.6s
CAFI                              AML   AML
     comp=N,282µm,0.9s
CERT Cerreto            1.00 188  P     Pn                02 28 08.4 -0.2
CERT                              AML   AML
     comp=E,278µm,0.6s
CERT                              AML   AML
     comp=N,190µm,1.0s
MODR Mondragone         1.87 163  P     Pb                02 28 22.5 -0.1
VITU Vitulano (BN)      2.06 148  P     Pb                02 28 26.8 +0.7
APRC Apricena           2.12 123  P     Pb                02 28 27.0  0.0
SGRT San Giovanni R     2.25 121  S     Sg                02 29 03.0 +2.5
HVAR Hvar               2.42  83  S     Sg                02 29 06.0  0.0
ABTA Abfaltersbach      3.84 353  ePn   Pn                02 28 49.2 +1.6
     comp=N,3.9nm,0.4s
ABTA                              i Sn  Sn                02 29 34.0 +1.1
     comp=N,6.1nm,0.7s
WATA Walderalm          4.54 346  i Pn  Pn                02 29 00.8 +3.4
     comp=N,1.3nm,0.4s
MOTA Moosalm            4.64 342  i Sn  Sn                02 29 55.6 +2.7
     comp=N,3.6nm,0.7s
```

ROM 28 02:28:48.1±0.0, 42°.894N±0°.003×12°.989E±0°.004,
h11km, ML2.3/11, 14C-8D, Error ellipse: s-maj=0.4km
s-min=0.3km az=307.0, Central Italy

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Code Station Name       Δ°   AZ°  Phase ID                Time     Res
                                  Op    ISC               h m s    ISC
T1216 Preci, Frazion    0.02  97  P     Pg                02 28 50.4 +0.3
T1216                             S     Sg                02 28 51.8 +0.4
T1216                             AML   AML
     comp=E,6255µm,0.7s
T1216                             AML   AML
     comp=N,8715µm,1.4s
T1216                             AML   AML
     comp=E,6260µm,0.7s
T1216                             AML   AML
     comp=N,8700µm,1.4s
T1216                             AML   AML
     comp=E,6265µm,0.7s
T1216                             AML   AML
     comp=N,8705µm,1.4s
FEMA Monte Fema         0.08  33  ⇑P    Pg                02 28 51.1 +0.5
FEMA                              S     Sg                02 28 53.2 +0.6
NRCA Norcia             0.11 123  ⇑P    Pg                02 28 51.4 +0.4
NRCA                              S     Sg                02 28 53.6 +0.5
NRCA                              AML   AML
     comp=E,2430µm,1.2s
NRCA                              AML   AML
     comp=N,3620µm,0.1s
NRCA                              AML   AML
     comp=N,3875µm,0.2s
NRCA                              AML   AML
     comp=E,2435µm,1.2s
NRCA                              AML   AML
     comp=E,2595µm,1.2s
NRCA                              AML   AML
     comp=N,3625µm,0.2s
CESI CESI - Serrava     0.13 331  ⇓P    Pg                02 28 51.8 +0.5
CESI                              S     Sg                02 28 54.2 +0.7
CESI                              AML   AML
     comp=E,1028µm,0.2s
CESI                              AML   AML
     comp=E,1032µm,0.2s
CESI                              AML   AML
     comp=N,2775µm,0.3s
T1215 Vallo di Nera,    0.13 224  ⇑P    Pg                02 28 51.7 +0.5
T1215                             S     Sg                02 28 54.2 +0.8
T1215                             AML   AML
     comp=E,1140µm,0.5s
T1215                             AML   AML
     comp=N,1466µm,0.3s
T1215                             AML   AML
     comp=N,1465µm,0.3s
T1215                             AML   AML
     comp=E,1142µm,0.5s
MC2  Monte Cornacci     0.15  83  ⇓P    Pb                02 28 54.8 +1.7
T1245 Castelsantange    0.15 104  ⇑P    Pg                02 28 52.2 +0.6
T1245                             S     Sg                02 28 54.8 +0.7
T1245                             AML   AML
     comp=E,1102µm,0.2s
T1245                             AML   AML
     comp=N,1330µm,0.5s
T1245                             AML   AML
     comp=E,1166µm,1.2s
T1245                             AML   AML
     comp=E,1166µm,1.2s
T1245                             AML   AML
     comp=N,1390µm,0.5s
FDMO Fiordimonte        0.16  27  P     Pg                02 28 51.3 -0.4
FDMO                              S     Sg                02 28 55.0 +0.8
FDMO                              AML   AML
     comp=N,1375µm,0.5s
FDMO                              AML   AML
     comp=E,2820µm,0.3s
T1217 Poggiodomo (PG    0.19 193  ⇑P    Pg                02 28 52.7 +0.6
T1217                             S     Sg                02 28 56.0 +1.1
T1217                             AML   AML
     comp=E,780µm,0.6s
T1217                             AML   AML
     comp=N,1095µm,1.6s
T1217                             AML   AML
     comp=E,781µm,0.6s
MMO1 Montemonaco        0.25  89  ⇓P    Pg                02 28 53.7 +0.4
MMO1                              S     Sg                02 28 57.9 +1.2
AM05 Amandola Campo     0.28  72  ⇑P    Pg                02 28 54.4 +0.6
AM05                              S     Sb                02 28 58.8 -1.1
AM05                              AML   AML
```

	comp=N,33μm,1.6s				
AM05			AML	AML	
	comp=E,425μm,0.5s				
AM05			AML	AML	
	comp=N,33μm,1.6s				
LNSS	**Leonessa**	**0.29 173**	⇑P	Pg	02 28 54.4 +0.4
LNSS			S	Sb	02 28 59.3 -1.1
LNSS			AML	AML	
	comp=E,941μm,0.2s				
LNSS			AML	AML	
	comp=N,1265μm,0.1s				
LNSS			AML	AML	
	comp=E,940μm,0.2s				
GUMA	**Gualdo di Mace**	**0.30 56**	P	Pb	02 28 55.0 -0.6
T1204	**Amatrice, Fraz**	**0.33 132**	P	Pg	02 28 55.1 +0.4
T1204			S	Sb	02 29 00.5 -0.8
T1241	**Roccafluvione,**	**0.33 96**	⇑P	Pg	02 28 55.3 +0.6
ARRO	**Arrone**	**0.35 208**	⇑P	Pg	02 28 55.3 +0.2
ARRO			S	Sb	02 29 01.2 -0.8
SNTG	**Esanatoglia**	**0.36 354**	P	Pg	02 28 55.7 +0.3
SMA1	**SAN MARTINO**	**0.37 136**	⇓P	Pg	02 28 55.7 +0.3
SMA1			S	Sb	02 29 01.9 -0.6
T1211	**Morro Reatino**	**0.37 195**	⇑P	Pb	02 28 56.6 -0.3
T1211			AML	AML	
	comp=E,490μm,1.4s				
T1211			AML	AML	
	comp=N,611μm,0.1s				
T1211			AML	AML	
	comp=N,610μm,0.1s				
T1211			AML	AML	
	comp=E,468μm,0.4s				
ATCC	**AVT- Casa Cast**	**0.39 319**	P	Pg	02 28 53.3 -2.5
T1243	**Rocca Santa Ma**	**0.39 120**	⇓P	Pg	02 28 56.0 +0.2
CESX	**Cesi**	**0.41 227**	⇑P	Pb	02 28 57.3 -0.2
RM33	**Pellescritta (**	**0.42 157**	⇓P	Pg	02 28 56.6 +0.2
RM33			AML	AML	
	comp=N,340μm,0.8s				
RM33			AML	AML	
	comp=E,400μm,0.7s				
FOSV	**Fossato di Vic**	**0.43 338**	⇑P	Pg	02 28 57.0 +0.4
EL6	**Elcito**	**0.44 11**	⇑P	Pg	02 28 57.1 +0.2
EL6			AML	AML	
	comp=E,500μm,1.1s				
EL6			AML	AML	
	comp=N,366μm,1.5s				
CING	**Cingoli**	**0.51 17**	⇓P	Pg	02 28 58.4 +0.4
T1247	**Pizzolo (AQ)**	**0.51 153**	⇑P	Pg	02 28 58.2 +0.3
TERO	**Teramo**	**0.53 121**	P	Pg	02 28 58.5 +0.2
ARVD	**Arcevia**	**0.60 357**	⇓P	Pg	02 28 59.6 -0.2
FIAM	**Fiamignano**	**0.63 171**	S	Sb	02 29 11.0 +0.8

ROM ***28*** *02:33:53.3±0.0, 42°.994N±0°.003×13°.149E±0°.004, h9km, ML3.3/48, Error ellipse: s-maj=0.3km s-min=0.2km az=41.0*

IDC ***28*** *02:33:54.0±2.0, 43°.07N×13°.49E, h0km, mb3.5/1, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=57.1km s-min=15.3km az=98.0*

PRU ***28*** *02:33:56.3±0.0, 43°.11N×13°.36E, h0km*

ISC 28 02:33:54.1±0.8, **42°.96N**±0°.02×**13°.14E**±0°.02, **h7**km±5km, **n80**, σ**1°39**/113, **24C-18D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.06**	**141**	P		**Pg**	**02 33 55.9**	**0.0**
MC2				S		**Sg**	**02 33 57.8**	**+0.4**
FEMA	**Monte Fema**	**0.07**	**271**	⇓P		**Pg**	**02 33 56.0**	**+0.1**
FEMA				S		**Sg**	**02 33 57.9**	**+0.6**
FEMA				AML	AML			
	comp=E,66050μm,1.6s							
FEMA				AML	AML			
	comp=N,71300μm,0.6s							
FEMA				AML	AML			
	comp=N,59150μm,0.5s							
FEMA				AML	AML			
	comp=N,71250μm,0.6s							
FEMA				AML	AML			
	comp=E,66100μm,1.6s							
FDMO	**Fiordimonte**	**0.08**	**334**	P		**Pg**	**02 33 55.3**	**-0.9**
FDMO				S		**Sg**	**02 33 56.8**	**-0.8**
T1245	**Castelsantange**	**0.11**	**161**	AML	AML			
	comp=N,84300μm,0.4s							
T1245				AML	AML			
	comp=E,62950μm,0.2s							
T1245				AML	AML			
	comp=N,85700μm,0.4s							
T1245				AML	AML			
	comp=E,59650μm,0.7s							
T1216	**Preci, Frazion**	**0.11**	**231**	AML	AML			
	comp=E,55750μm,1.1s							
T1216				AML	AML			
	comp=N,99500μm,0.4s							
NRCA	**Norcia**	**0.13**	**188**	P		**Pg**	**02 33 57.4**	**+0.5**
NRCA				S		**Sg**	**02 34 00.6**	**+1.9**
NRCA				AML	AML			
	comp=E,56600μm,1.5s							
NRCA				AML	AML			
	comp=N,53400μm,0.5s							
NRCA				AML	AML			
	comp=E,59500μm,1.5s							
NRCA				AML	AML			
	comp=N,57150μm,0.4s							
MMO1	**Montemonaco**	**0.15**	**114**	⇓P		**Pg**	**02 33 57.4**	**+0.1**
MMO1				S		**Sg**	**02 34 00.1**	**+0.7**
AM05	**Amandola Campo**	**0.16**	**84**	⇑P		**Pg**	**02 33 57.2**	**-0.1**
AM05				S		**Sg**	**02 33 60.0**	**+0.4**
AM05				AML	AML			
	comp=E,10295μm,0.3s							
AM05				AML	AML			
	comp=E,39550μm,0.3s							
AM05				AML	AML			
	comp=N,7535μm,0.9s							
AM05				AML	AML			
	comp=E,10285μm,0.3s							
AM05				AML	AML			
	comp=N,1475μm,0.9s							
CESI	**CESI - Serrava**	**0.18**	**284**	⇓P		**Pg**	**02 33 57.7**	**0.0**
CESI				S		**Sg**	**02 34 00.9**	**+0.8**
CESI				AML	AML			
	comp=E,25300μm,0.5s							
CESI				AML	AML			
	comp=N,19650μm,0.8s							
GUMA	**Gualdo di Mace**	**0.18**	**55**	⇑P		**Pg**	**02 33 57.5**	**-0.2**
GUMA				AML	AML			
	comp=E,88050μm,0.5s							
GUMA				AML	AML			
	comp=N,91600μm,0.5s							
GUMA				AML	AML			
	comp=E,74500μm,1.0s							
GUMA				AML	AML			
	comp=N,91550μm,0.5s							
GUMA				AML	AML			
	comp=N,82050μm,0.4s							
MDAR	**Monte D'Aria**	**0.23**	**1**	P		**Pg**	**02 33 58.0**	**-0.7**
MDAR				S		**Sg**	**02 34 01.6**	**-0.3**
MDAR				AML	AML			
	comp=E,5045μm,1.1s							
MDAR				AML	AML			
	comp=N,7000μm,1.5s							
MDAR				AML	AML			
	comp=E,5045μm,1.1s							
SEF1	**Sefro**	**0.23**	**323**	⇓P		**Pg**	**02 33 58.5**	**-0.2**
SEF1				AML	AML			
	comp=E,10620μm,1.3s							
SEF1				AML	AML			
	comp=N,10805μm,0.4s							
SEF1				AML	AML			
	comp=E,10630μm,1.3s							
SEF1				AML	AML			
	comp=N,10760μm,0.4s							
SEF1				AML	AML			
	comp=E,10650μm,1.3s							
SEF1				AML	AML			
	comp=E,10625μm,1.3s							
SEF1				AML	AML			
	comp=N,10770μm,0.4s							
T1241	**Roccafluvione,**	**0.24**	**116**	P		**Pg**	**02 33 58.9**	**+0.1**
T1241				S		**Sg**	**02 34 03.4**	**+1.4**
T1241				AML	AML			
	comp=N,16550μm,0.5s							
T1241				AML	AML			
	comp=N,16600μm,0.5s							
T1241				AML	AML			
	comp=E,18050μm,0.5s							
T1215	**Vallo di Nera,**	**0.25**	**231**	P		**Pg**	**02 33 59.5**	**+0.5**
T1215				S		**Sg**	**02 34 04.4**	**+1.9**
T1215				AML	AML			
	comp=E,7720μm,0.4s							
T1215				AML	AML			
	comp=N,4855μm,0.6s							
T1215				AML	AML			
	comp=E,8135μm,0.4s							
T1215				AML	AML			
	comp=N,4895μm,1.6s							
T1215				AML	AML			
	comp=E,7725μm,0.4s							
T1215				AML	AML			
	comp=N,4850μm,0.6s							
T1215				AML	AML			
	comp=E,8130μm,0.4s							
T1215				AML	AML			
	comp=N,4855μm,0.6s							
T1215				AML	AML			
	comp=N,4910μm,1.6s							
T1215				AML	AML			
	comp=E,8135μm,0.4s							
T1215				AML	AML			
	comp=E,7720μm,0.4s							
GAG1	**Gagliole**	**0.28**	**349**	⇓P		**Pg**	**02 33 59.2**	**-0.5**
GAG1				S		**Sg**	**02 34 03.8**	**+0.4**
GAG1				AML	AML			
	comp=E,16300μm,0.6s							
GAG1				AML	AML			
	comp=E,16350μm,0.7s							
GAG1				AML	AML			
	comp=N,20900μm,0.8s							
T1217	**Poggiodomo (PG**	**0.29**	**211**	⇑P		**Pb**	**02 34 00.3**	**-1.4**
T1217				S		**Sb**	**02 34 05.8**	**-1.0**
T1217				AML	AML			
	comp=E,12800μm,0.6s							
T1217				AML	AML			
	comp=N,13500μm,0.3s							
T1217				AML	AML			
	comp=N,13445μm,0.3s							
T1217				AML	AML			
	comp=E,12550μm,0.6s							
T1217				AML	AML			
	comp=N,13900μm,0.3s							
T1204	**Amatrice, Fraz**	**0.31**	**155**	P		**Pb**	**02 34 00.6**	**-1.5**
T1204				S		**Sb**	**02 34 06.6**	**-0.9**
T1204				AML	AML			
	comp=E,27100μm,0.3s							
T1204				AML	AML			
	comp=N,13600μm,0.3s							
T1204				AML	AML			
	comp=E,27050μm,0.3s							
T1204				AML	AML			
	comp=N,13650μm,0.3s							
SNTG	**Esanatoglia**	**0.33**	**334**	⇓P		**Pg**	**02 33 59.7**	**-0.8**
SNTG				S		**Sg**	**02 34 05.4**	**+0.6**
SNTG				AML	AML			
	comp=E,2300μm,0.5s							
SNTG				AML	AML			
	comp=E,2205μm,1.0s							
SNTG				AML	AML			
	comp=N,2955μm,0.7s							
SNTG				AML	AML			
	comp=N,2865μm,0.7s							
SNTG				AML	AML			
	comp=N,2870μm,0.7s							
T1243	**Rocca Santa Ma**	**0.35**	**139**	⇑P		**Pb**	**02 34 01.0**	**-1.7**
T1243				S		**Sb**	**02 34 07.2**	**-1.3**
SMA1	**SAN MARTINO**	**0.36**	**156**	⇓P		**Pb**	**02 34 01.3**	**-1.6**
SMA1				S		**Sb**	**02 34 07.8**	**-0.9**
SMA1				AML	AML			
	comp=E,10365μm,0.4s							
SMA1				AML	AML			
	comp=N,11600μm,0.3s							
SMA1				AML	AML			
	comp=E,10325μm,0.4s							
LNSS	**Leonessa**	**0.36**	**191**	P		**Pb**	**02 34 01.6**	**-1.4**
LNSS				S		**Sb**	**02 34 08.3**	**-0.6**
LNSS				AML	AML			
	comp=N,9435μm,0.4s							
LNSS				AML	AML			
	comp=E,12800μm,0.3s							
LNSS				AML	AML			
	comp=N,9440μm,0.4s							
EL6	**Elcito**	**0.37**	**356**	⇓P		**Pg**	**02 34 00.4**	**-0.9**
EL6				AML	AML			
	comp=E,5810μm,1.3s							
EL6				AML	AML			
	comp=N,7250μm,0.4s							
EL6				AML	AML			
	comp=E,5815μm,1.3s							
EL6				AML	AML			
	comp=N,7260μm,0.4s							
EL6				AML	AML			
	comp=N,7255μm,0.4s							
EL6				AML	AML			
	comp=E,5795μm,1.3s							
OFFI	**Offida**	**0.40**	**94**	⇑P		**Pb**	**02 34 02.5**	**-1.1**
OFFI				AML	AML			
	comp=N,15050μm,0.7s							
OFFI				AML	AML			
	comp=E,10050μm,0.5s							
CING	**Cingoli**	**0.42**	**6**	P		**Pg**	**02 34 01.3**	**-0.9**
CING				AML	AML			
	comp=E,2975μm,1.4s							
CING				AML	AML			
	comp=N,1970μm,1.1s							
ATCC	**AVT- Casa Cast**	**0.43**	**302**	⇓P		**Pb**	**02 34 02.0**	**-2.0**
ATCC				S		**Sb**	**02 34 09.2**	**-1.5**
ATCC				AML	AML			
	comp=E,7675μm,1.1s							
ATCC				AML	AML			
	comp=N,6825μm,0.9s							
ATCC				AML	AML			
	comp=E,7670μm,1.1s							
RM33	**Pellescritta (**	**0.46**	**173**	⇑P		**Pb**	**02 34 03.1**	**-1.4**
RM33				S		**Sb**	**02 34 12.0**	**+0.5**
RM33				AML	AML			
	comp=E,5545μm,0.2s							
RM33				AML	AML			
	comp=N,5315μm,0.6s							
RM33				AML	AML			
	comp=E,5435μm,0.2s							
RM33				AML	AML			
	comp=E,5540μm,0.2s							
RM33				AML	AML			
	comp=N,5315μm,0.6s							
RM33				AML	AML			
	comp=N,5390μm,0.6s							
RM33				AML	AML			
	comp=N,5310μm,0.6s							
CAMP	**Campotosto**	**0.47**	**155**	⇑P		**Pb**	**02 34 03.1**	**-1.6**
CAMP				AML	AML			
	comp=E,4885μm,0.3s							
CAMP				AML	AML			
	comp=N,5535μm,0.3s							
ARRO	**Arrone**	**0.47**	**216**	⇑P		**Pb**	**02 34 03.4**	**-1.3**
ARRO				AML	AML			
	comp=E,3130μm,1.2s							
ARRO				AML	AML			
	comp=N,3390μm,1.1s							
T1211	**Morro Reatino**	**0.48**	**206**	⇓P		**Pb**	**02 34 03.8**	**-1.0**
T1211				AML	AML			
	comp=E,4230μm,0.5s							
T1211				AML	AML			
	comp=N,8025μm,1.2s							
T1211				AML	AML			
	comp=N,7880μm,1.2s							
T1211				AML	AML			
	comp=N,8015μm,1.2s							
T1211				AML	AML			
	comp=E,4200μm,0.8s							
T1211				AML	AML			
	comp=N,7905μm,1.2s							
T1211				AML	AML			
	comp=E,4205μm,0.8s							
TERO	**Teramo**	**0.48**	**134**	⇑P		**Pb**	**02 34 03.2**	**-1.7**
TERO				S		**Sb**	**02 34 11.7**	**-0.5**
TERO				AML	AML			
	comp=E,5245μm,0.4s							
TERO				AML	AML			
	comp=E,5455μm,0.4s							
TERO				AML	AML			
	comp=E,5250μm,0.4s							
TERO				AML	AML			
	comp=N,6170μm,0.5s							
TERO				AML	AML			
	comp=N,5980μm,0.5s							
T1247	**Pizzolo (AQ)**	**0.53**	**167**	⇑P		**Pb**	**02 34 04.4**	**-1.3**
T1247				S		**Sb**	**02 34 14.0**	**+0.3**
T1247				AML	AML			
	comp=E,6470μm,0.3s							
T1247				AML	AML			
	comp=N,6460μm,1.0s							
CESX	**Cesi**	**0.54**	**230**	⇑P		**Pb**	**02 34 04.5**	**-1.4**
CESX				S		**Sb**	**02 34 13.4**	**-0.5**
CESX				AML	AML			
	comp=N,6445μm,0.4s							
CESX				AML	AML			
	comp=E,4240μm,0.6s							
MURB	**Monte Urbino**	**0.54**	**304**	⇓P		**Pb**	**02 34 04.1**	**-1.8**
MURB				AML	AML			
	comp=E,5245μm,1.2s							
MURB				AML	AML			
	comp=N,5315μm,1.2s							
MURB				AML	AML			
	comp=E,5630μm,1.1s							
MURB				AML	AML			
	comp=N,5305μm,1.1s							
MURB				AML	AML			
	comp=N,5315μm,1.2s							
MURB				AML	AML			
	comp=E,5245μm,1.1s							
PP3	**Marolino**	**0.54**	**39**	⇑P		**Pb**	**02 34 05.1**	**-0.8**
PP3				AML	AML			
	comp=E,5530μm,0.8s							
PP3				AML	AML			
	comp=E,5730μm,0.8s							
PP3				AML	AML			
	comp=N,5570μm,0.7s							
PP3				AML	AML			
	comp=N,5470μm,0.7s							
PP3				AML	AML			
	comp=E,5530μm,0.8s							
ARVD	**Arcevia**	**0.56**	**345**	⇓P		**Pg**	**02 34 03.8**	**-1.0**
ARVD				S		**Sb**	**02 34 13.0**	**-1.4**
ARVD				AML	AML			
	comp=E,1810μm,0.8s							
ARVD				AML	AML			
	comp=N,1280μm,0.7s							
ARVD				AML	AML			
	comp=E,1815μm,0.8s							
ATFO	**Monte Foce - G**	**0.58**	**315**	P		**Pb**	**02 34 04.8**	**-1.8**
ATFO				AML	AML			
	comp=N,1915μm,0.7s							
ATFO				AML	AML			
	comp=E,1950μm,0.8s							
TRTR	**Tortoreto Alta**	**0.59**	**105**	⇓P		**Pb**	**02 34 06.8**	**+0.1**
GIGS	**Gran Sasso**	**0.60**	**148**	P		**Pb**	**02 34 05.4**	**-1.6**
GIGS				S		**Sb**	**02 34 16.0**	**+0.3**
GIGS				AML	AML			
	comp=E,1865μm,0.3s							
GIGS				AML	AML			
	comp=N,1975μm,0.3s							
FRON	**Frontone**	**0.63**	**332**	⇑P		**Pg**	**02 34 05.2**	**-1.1**
FRON				AML	AML			
	comp=E,1530μm,0.6s							
FRON				AML	AML			
	comp=N,1880μm,0.5s							
FRON				AML	AML			
	comp=E,1535μm,0.6s							
AQU	**L'Aquila**	**0.64**	**162**	⇑P		**Pb**	**02 34 06.3**	**-1.3**
AQU				AML	AML			
	comp=E,2245μm,1.0s							
AQU				AML	AML			
	comp=N,2790μm,1.1s							
AQU				AML	AML			
	comp=E,2200μm,1.0s							
AQU				AML	AML			
	comp=E,2250μm,1.0s							
AQU				AML	AML			
	comp=N,2795μm,1.1s							
AQU				AML	AML			
	comp=N,2845μm,1.1s							
AOI	**Ancona**	**0.68**	**30**	P		**Pb**	**02 34 06.9**	**-1.3**
AOI				AML	AML			
	comp=E,990μm,0.5s							
AOI				AML	AML			
	comp=N,1306μm,0.6s							
ATVO	**AVT- Monte Val**	**0.68**	**308**	⇑P		**Pb**	**02 34 06.5**	**-1.8**
ATVO				AML	AML			
	comp=E,1320μm,0.4s							
ATVO				AML	AML			
	comp=E,1325μm,0.4s							
ATVO				AML	AML			
	comp=N,1325μm,1.6s							
FIAM	**Fiamignano**	**0.69**	**181**	⇑P		**Pb**	**02 34 07.3**	**-1.3**
FIAM				AML	AML			
	comp=E,1650μm,0.7s							
FIAM				AML	AML			
	comp=N,1350μm,0.5s							
MPAG	**Monte Paganucc**	**0.72**	**338**	⇑P		**Pg**	**02 34 07.2**	**-0.7**
MPAG				AML	AML			
	comp=E,1470μm,0.8s							
MPAG				AML	AML			
	comp=N,1715μm,1.3s							
MPAG				AML	AML			
	comp=E,1265μm,0.7s							
MPAG				AML	AML			
	comp=N,1225μm,1.4s							
MPAG				AML	AML			
	comp=E,1270μm,0.7s							
PIEI	**Pieia**	**0.72**	**323**	⇑P		**Pg**	**02 34 07.3**	**-0.7**
PIEI				AML	AML			
	comp=E,835μm,1.6s							
PIEI				AML	AML			
	comp=E,836μm,1.6s							
PIEI				AML	AML			
	comp=N,744μm,0.6s							
ATPI	**Pietralunga -**	**0.73**	**313**	⇓P		**Pb**	**02 34 08.4**	**-0.7**
ATPI				AML	AML			
	comp=N,1279μm,0.8s							
ATPI				AML	AML			
	comp=E,1475μm,0.6s							
MGAB	**Montegabbione**	**0.76**	**267**	P		**Pn**	**02 34 09.2**	**-2.0**
MGAB				AML	AML			
	comp=N,3965μm,0.6s							
MGAB				AML	AML			
	comp=N,3920μm,0.6s							
MGAB				AML	AML			
	comp=E,3275μm,0.5s							
MGAB				AML	AML			
	comp=E,2820μm,0.5s							
NARO	**Abbazia di Nar**	**0.77**	**328**	⇑P		**Pg**	**02 34 07.8**	**-1.0**
NARO				S		**Sb**	**02 34 21.0**	**+0.6**
NARO				AML	AML			
	comp=E,756μm,1.6s							
NARO				AML	AML			
	comp=N,794μm,1.6s							
NARO				AML	AML			
	comp=E,756μm,1.6s							
NARO				AML	AML			
	comp=N,793μm,1.6s							
VCEL	**Villa Celiera**	**0.77**	**137**	⇓P		**Pb**	**02 34 08.9**	**-0.9**
VCEL				AML	AML			
	comp=E,3705μm,0.4s							
VCEL				AML	AML			
	comp=N,4785μm,0.5s							
FAGN	**Fagnano**	**0.77**	**154**	⇓P		**Pb**	**02 34 08.6**	**-1.3**
FAGN				S		**Sn**	**02 34 22.0**	**-1.3**
FAGN				AML	AML			
	comp=N,6170μm,1.5s							
FAGN				AML	AML			
	comp=E,5860μm,1.3s							
FAGN				AML	AML			
	comp=N,6165μm,1.5s							
FSSB	**Fossombrone**	**0.78**	**340**	⇑P		**Pg**	**02 34 08.1**	**-0.9**
FSSB				S		**Sn**	**02 34 22.0**	**-1.5**
FSSB				AML	AML			
	comp=N,3685μm,0.3s							
FSSB				AML	AML			
	comp=E,3215μm,0.5s							
PE3	**Peglio**	**0.87**	**328**	⇑P		**Pb**	**02 34 10.6**	**-1.0**
T0110	**Collepietro**	**0.87**	**147**	⇑P		**Pb**	**02 34 10.1**	**-1.5**
T0110				AML	AML			
	comp=E,3295μm,0.6s							
T0110				AML	AML			
	comp=N,4290μm,0.5s							
SACS	**San Casciano d**	**0.91**	**263**	P		**Pn**	**02 34 11.8**	**-1.6**
SACS				AML	AML			
	comp=E,1280μm,0.6s							
SACS				AML	AML			
	comp=N,2220μm,0.7s							
SACS				AML	AML			
	comp=E,1124μm,0.6s							

SACS				AML	AML	
	comp=E,1129μm,0.6s					
SACS				AML	AML	
	comp=N,2190μm,0.7s					
CAFI	**Castiglion Fio**	**0.93 294**	⇓P	**Pb**	**02 34 11.9**	**-0.7**
CAFI				AML	AML	
	comp=N,1024μm,1.0s					
CAFI				AML	AML	
	comp=E,1320μm,0.8s					
MTCE	**Montecelio**	**0.98 197**	⇓P	**Pn**	**02 34 12.8**	**-1.5**
MTCE				AML	AML	
	comp=E,1113μm,0.5s					
MTCE				AML	AML	
	comp=N,840μm,0.6s					
INTR	**Introdacqua**	**1.10 149**	⇑P	**Pg**	**02 34 13.2**	**-2.0**
LPEL	**Lama dei Pelig**	**1.20 139**	⇑P	**Pn**	**02 34 16.5**	**-0.8**
LPEL			S	**Sn**	**02 34 35.0**	**+1.2**
LPEL				AML	AML	
	comp=N,1042μm,0.7s					
LPEL				AML	AML	
	comp=E,1170μm,1.1s					
MA9	**Marino**	**1.24 197**	P	**Pn**	**02 34 16.9**	**-0.9**
MA9				AML	AML	
	comp=N,1325μm,0.7s					
MA9				AML	AML	
	comp=E,1835μm,0.6s					
VITU	**Vitulano (BN)**	**2.10 147**	S	**Sb**	**02 34 58.0**	**-0.7**
MYKA	**Terra Mystica**	**3.69 5**	*i* Pn	**Pn**	**02 34 50.4**	**-1.2**
	comp=E,1.2nm,0.2s					
OBKA	**Obir**	**3.69 15**	*e*Pg	**Pg**	**02 35 03.2**	**-1.5**
	comp=E,3.8nm,0.3s					
ABTA	**Abfaltersbach**	**3.81 354**	*e*Pn	**Pn**	**02 34 53.8**	**+0.6**
	comp=E,24nm,0.5s,SNR=11					
ABTA			*e*Sn	**Sn**	**02 35 40.0**	**+1.6**
	comp=E,27nm,0.7s					
FETA	**Feichten**	**4.41 338**	*e*Pn	**Pn**	**02 35 03.0**	**+1.5**
	comp=E,4.1nm,0.4s,SNR=6.7					
WTTA	**Wattenberg**	**4.43 347**	*i* Pn	**Pn**	**02 35 03.5**	**+1.6**
	comp=E,3.8nm,0.4s					
WTTA			*e*Sn	**Sn**	**02 35 55.6**	**+1.8**
	comp=E,20nm,0.6s					
DAVOX	**Davos/Dischmat**	**4.47 330**	Pn	**Pn**	**02 35 04.1**	**+1.8**
	comp=E,1.6nm,0.3s,baz=160,slow=16,SNR=16					
DAVOX			Sn	**Sn**	**02 35 56.4**	**+1.8**
	comp=E,0.2nm,0.3s,baz=282,slow=23,SNR=1.0					
	comp=E,10nm,0.5s					
SQTA	**Sankt Quirin**	**4.47 343**	*e*Pn	**Pn**	**02 35 04.5**	**+2.1**
	comp=E,5.9nm,0.4s,SNR=9.2					
SQTA			*e*Sn	**Sn**	**02 35 55.1**	**+0.4**
	comp=E,28nm,0.7s					
WATA	**Walderalm**	**4.51 346**	*i* Pn	**Pn**	**02 35 04.7**	**+1.7**
	comp=E,3.3nm,0.2s					
MOTA	**Moosalm**	**4.61 343**	*i* Pn	**Pn**	**02 35 05.9**	**+1.5**
	comp=E,5.5nm,0.6s					
BIOA	**Bad Ischl, Aus**	**4.74 4**	*e*Pn	**Pn**	**02 35 06.6**	**+0.6**
	comp=E,2.6nm,0.2s					
RETA	**Reutte**	**4.83 340**	*i* Pn	**Pn**	**02 35 09.3**	**+2.1**
	comp=E,2.3nm,0.3s					
DAVA	**Damuels**	**4.90 333**	Pn	**Pn**	**02 35 10.4**	**+2.1**
	comp=E,4.7nm,0.4s,SNR=6.9					
DAVA			*e*Sn	**Sn**	**02 36 07.7**	**+2.3**
	comp=E,13nm,0.6s					
MOA	**Molln**	**4.95 9**	*i* Pn	**Pn**	**02 35 09.3**	**+0.5**
	comp=E,1.5nm,0.3s					
MOA			*e*Sn	**Sn**	**02 36 07.8**	**+1.4**
	comp=E,5.0nm,0.5s					
CONA	**Conrad Observa**	**5.32 20**	*i* Pn	**Pn**	**02 35 15.3**	**+1.2**
	comp=E,1.4nm,0.3s					
GERES	**GERESS Array B**	**5.90 4**	Pn	**Pn**	**02 35 20.8**	**-1.1**
	comp=E,0.4nm,0.3s,baz=174,slow=13,SNR=7.8					
GERES			Sn	**Sn**	**02 36 29.0**	**-0.8**
	comp=E,0.7nm,0.3s,baz=182,slow=24,SNR=5.9					
	comp=E,0.8nm,0.4s					
CKRC	**Cesky Krumlov**	**5.92 8**	*e*SN	**Sn**	**02 36 27.6**	**-2.5**
KHC	**Kasperske Hory**	**6.18 3**	*e*PN	**Pn**	**02 35 24.6**	**-1.1**
KHC			*e*SN	**Sn**	**02 36 32.6**	**-4.0**
KEST	**Kesra**	**7.79 203**	Pn	Pn	02 35 53.6	+5.7
	comp=E,0.2nm,0.3s,baz=30,slow=8.1,SNR=1.8					
	comp=E,5.6nm,0.9s					
CLL	**Collm**	**8.35 359**	*e*Sg	**Sg**	**02 38 27.0**	**+5.1**
TORD	**Torodi Ar. Bea**	**31.31 202**	P	**P**	**02 40 17.2**	**+2.2**
	comp=E,0.6nm,0.9s,baz=21,slow=9.2,SNR=3.3					
	comp=E,0.6nm,0.9s					

PRU ***28*** *02:40:22.0±0.0, 43°.06N×13°.64E, h0km*
ROM 28 02:40:20.5±0.1, 43°.000N±0°.003×13°.142E±0°.004,
h7km±1km, ML3.1/51, 27C-21D, Error ellipse:
s-maj=0.4km s-min=0.2km az=50.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.06**	**312**	P	Pg	02 40 22.1	-0.1
FDMO				S	Sg	02 40 23.2	-0.2
FDMO				AML	AML		
FDMO				AML	AML		
FEMA	**Monte Fema**	**0.08**	**241**	⇓P	Pg	02 40 23.0	+0.4
FEMA				S	Sg	02 40 24.6	+0.6
FEMA				AML	AML		
	comp=E,54800μm,1.3s						
FEMA				AML	AML		
	comp=N,56150μm,0.6s						
FEMA				AML	AML		
	comp=E,54800μm,1.3s						
MC2	**Monte Cornacci**	**0.09**	**158**	P	Pg	02 40 23.2	+0.3
MC2				S	Sg	02 40 25.0	+0.5
T1245	**Castelsantange**	**0.15**	**167**	⇑P	Pg	02 40 24.1	+0.4
T1245				S	Sg	02 40 26.7	+0.9
T1245				AML	AML		
	comp=E,20200μm,1.5s						
T1245				AML	AML		
	comp=N,19100μm,0.6s						
T1245				AML	AML		
	comp=E,20800μm,1.5s						
T1245				AML	AML		
	comp=E,20200μm,1.5s						
T1245				AML	AML		
	comp=N,18650μm,0.6s						
GUMA	**Gualdo di Mace**	**0.15**	**66**	⇑P	Pg	02 40 24.5	+0.7
GUMA				S	Sg	02 40 27.7	+1.7
GUMA				AML	AML		
	comp=N,38100μm,0.5s						
GUMA				AML	AML		
	comp=N,54450μm,0.5s						
GUMA				AML	AML		
	comp=E,42750μm,1.4s						
GUMA				AML	AML		
	comp=E,55500μm,0.4s						
GUMA				AML	AML		
	comp=N,38100μm,0.5s						
AM05	**Amandola Campo**	**0.16**	**98**	P	Pg	02 40 24.3	+0.6
AM05				S	Sg	02 40 27.1	+1.1
AM05				AML	AML		
	comp=E,5420μm,0.4s						
AM05				AML	AML		
	comp=N,1045μm,0.4s						
AM05				AML	AML		
	comp=E,5415μm,0.4s						
AM05				AML	AML		
	comp=E,21000μm,0.4s						
AM05				AML	AML		
	comp=N,1050μm,0.4s						
AM05				AML	AML		
	comp=N,4240μm,0.5s						
MMO1	**Montemonaco**	**0.17**	**126**	P	Pg	02 40 24.4	+0.4
MMO1				S	Sg	02 40 27.2	+0.8
CESI	**CESI - Serrava**	**0.17**	**272**	⇑P	Pg	02 40 24.6	+0.5
CESI				S	Sg	02 40 27.9	+1.3
CESI				AML	AML		
	comp=E,25700μm,0.5s						
CESI				AML	AML		
	comp=N,22400μm,1.5s						
CESI				AML	AML		
	comp=E,33000μm,0.2s						
CESI				AML	AML		
	comp=N,62700μm,0.1s						
MDAR	**Monte D'Aria**	**0.19**	**0**	⇑P	Pg	02 40 24.9	+0.5
MDAR				S	Sg	02 40 28.4	+1.2
MDAR				AML	AML		
	comp=E,11850μm,0.2s						
MDAR				AML	AML		
	comp=N,9910μm,1.5s						
MDAR				AML	AML		
	comp=E,11850μm,0.2s						
MDAR				AML	AML		
	comp=N,9925μm,1.5s						
SEF1	**Sefro**	**0.20**	**316**	⇑P	Pg	02 40 25.2	+0.6
SEF1				S	Sg	02 40 29.1	+1.7
SEF1				AML	AML		
	comp=E,20550μm,0.4s						
SEF1				AML	AML		
	comp=N,20400μm,0.3s						
SEF1				AML	AML		
	comp=E,20600μm,0.4s						
SEF1				AML	AML		
	comp=N,20350μm,0.3s						
SSM1	**San Severino M**	**0.23**	**6**	P	Pg	02 40 25.6	+0.5
SSM1				S	Sg	02 40 29.6	+1.3
FIU1	**Fiuminata**	**0.24**	**321**	⇓P	Pg	02 40 26.1	+0.8
FIU1				S	Sg	02 40 30.3	+1.6
FIU1				AML	AML		
	comp=E,5525μm,0.2s						
FIU1				AML	AML		
	comp=E,5525μm,0.2s						
FIU1				AML	AML		
	comp=N,4025μm,0.7s						
GAG1	**Gagliole**	**0.24**	**347**	⇑P	Pg	02 40 26.0	+0.6
GAG1				AML	AML		
	comp=E,18600μm,1.3s						
GAG1				AML	AML		
	comp=N,16250μm,0.4s						
GAG1				AML	AML		
	comp=E,18550μm,1.3s						
GAG1				AML	AML		
	comp=N,16250μm,0.4s						
T1241	**Roccafluvione,**	**0.26**	**124**	⇓P	Pg	02 40 26.0	+0.4
T1241				S	Sg	02 40 30.5	+1.5
T1241				AML	AML		
	comp=E,6090μm,0.5s						
T1241				AML	AML		
	comp=E,6085μm,0.5s						
T1241				AML	AML		
	comp=N,3840μm,0.3s						
MNTP	**Montappone**	**0.28**	**60**	⇑P	Pb	02 40 27.2	-0.6
MNTP				AML	AML		
	comp=E,14050μm,0.6s						
MNTP				AML	AML		
	comp=E,14000μm,0.6s						
MNTP				AML	AML		
	comp=N,10950μm,0.4s						
SNTG	**Esanatoglia**	**0.29**	**330**	⇓P	Pg	02 40 26.6	+0.3
SNTG				AML	AML		
	comp=E,3265μm,1.0s						
SNTG				AML	AML		
	comp=N,3655μm,0.3s						
SNTG				AML	AML		
	comp=N,3655μm,0.2s						
SNTG				AML	AML		
	comp=N,4010μm,0.3s						
SNTG				AML	AML		
	comp=N,3660μm,0.2s						
SNTG				AML	AML		
	comp=E,3245μm,0.9s						
T1217	**Poggiodomo (PG**	**0.33**	**208**	⇑P	Pg	02 40 27.4	+0.5
T1217				AML	AML		
	comp=E,5190μm,0.7s						
T1217				AML	AML		
	comp=N,5645μm,0.5s						
T1217				AML	AML		
	comp=E,5085μm,0.8s						
T1217				AML	AML		
	comp=E,5185μm,0.7s						
T1217				AML	AML		
	comp=N,5415μm,0.5s						
EL6	**Elcito**	**0.33**	**355**	⇑P	Pg	02 40 27.1	+0.1
EL6				AML	AML		
	comp=E,6875μm,1.1s						
EL6				AML	AML		
	comp=N,9815μm,0.5s						
EL6				AML	AML		
	comp=N,9830μm,0.5s						
EL6				AML	AML		
	comp=E,6880μm,1.1s						
T1204	**Amatrice, Fraz**	**0.35**	**158**	P	Pg	02 40 27.7	+0.3
T1204				AML	AML		
	comp=N,3700μm,0.5s						
T1204				AML	AML		
	comp=E,5800μm,0.3s						
T1204				AML	AML		
	comp=N,3710μm,0.5s						
CING	**Cingoli**	**0.38**	**6**	⇑P	Pg	02 40 28.2	+0.3
CING				AML	AML		
	comp=E,4820μm,0.2s						
CING				AML	AML		
	comp=N,4415μm,0.9s						
T1243	**Rocca Santa Ma**	**0.38**	**143**	P	Pg	02 40 27.9	0.0
SMA1	**SAN MARTINO**	**0.40**	**159**	⇓P	Pg	02 40 28.3	+0.1
SMA1				AML	AML		
	comp=N,5555μm,0.4s						
SMA1				AML	AML		
	comp=E,5285μm,0.6s						
LNSS	**Leonessa**	**0.40**	**191**	⇑P	Pg	02 40 28.7	+0.3
LNSS				AML	AML		
	comp=E,3360μm,1.2s						
LNSS				AML	AML		
	comp=N,3225μm,0.4s						
OFFI	**Offida**	**0.40**	**99**	⇑P	Pg	02 40 28.4	+0.1
OFFI				AML	AML		
	comp=N,7785μm,0.5s						
OFFI				AML	AML		
	comp=E,4240μm,0.5s						
FOSV	**Fossato di Vic**	**0.41**	**317**	⇓P	Pg	02 40 28.7	+0.3
FOSV				AML	AML		
	comp=N,5090μm,0.6s						
FOSV				AML	AML		
	comp=E,3165μm,1.1s						
ATCC	**AVT- Casa Cast**	**0.41**	**297**	⇓P	Pg	02 40 29.0	+0.4
ATCC				AML	AML		
	comp=N,8715μm,0.3s						
ATCC				AML	AML		
	comp=E,15350μm,0.2s						
RM33	**Pellescritta (**	**0.49**	**174**	⇓P	Pg	02 40 30.1	0.0
RM33				AML	AML		
	comp=E,1600μm,0.4s						
RM33				AML	AML		
	comp=N,1605μm,0.5s						
RM33				AML	AML		
	comp=E,1645μm,0.5s						
RM33				AML	AML		
	comp=N,1560μm,0.5s						
RM33				AML	AML		
	comp=N,1600μm,0.5s						
RM33				AML	AML		
	comp=N,1555μm,0.5s						
RM33				AML	AML		
	comp=E,1600μm,0.5s						
ARRO	**Arrone**	**0.50**	**214**	⇑P	Pg	02 40 30.5	+0.3
ARRO				AML	AML		
	comp=N,1235μm,1.2s						
ARRO				AML	AML		
	comp=E,1165μm,1.4s						
ARRO				AML	AML		
	comp=N,1230μm,1.2s						
CAMP	**Campotosto**	**0.50**	**157**	⇑P	Pg	02 40 30.3	+0.1
CAMP				AML	AML		
	comp=N,1052μm,0.6s						
CAMP				AML	AML		
	comp=E,1140μm,0.3s						
TERO	**Teramo**	**0.51**	**138**	⇓P	Pg	02 40 30.2	-0.1
TERO				AML	AML		
	comp=E,2570μm,0.3s						
TERO				AML	AML		
	comp=N,1655μm,0.5s						
TERO				AML	AML		
	comp=N,1660μm,0.5s						
PP3	**Marolino**	**0.51**	**42**	⇓P	Pb	02 40 31.8	0.0
PP3				AML	AML		
	comp=E,5510μm,0.3s						
PP3				AML	AML		
	comp=N,8710μm,0.3s						
PP3				AML	AML		
	comp=E,5505μm,0.3s						
PP3				AML	AML		
	comp=E,5120μm,0.3s						
PP3				AML	AML		
	comp=N,8270μm,0.2s						
T1211	**Morro Reatino**	**0.51**	**204**	⇑P	Pg	02 40 30.6	+0.2
T1211				S	Sb	02 40 40.0	+0.4
T1211				AML	AML		
	comp=E,2180μm,0.5s						
T1211				AML	AML		
	comp=E,2320μm,0.5s						
T1211				AML	AML		
	comp=E,2323μm,0.5s						
T1211				AML	AML		
	comp=N,2550μm,0.8s						
T1211				AML	AML		
	comp=N,2620μm,0.8s						
ARVD	**Arcevia**	**0.52**	**344**	⇓P	Pg	02 40 30.7	+0.1
ARVD				S	Sb	02 40 40.0	+0.3
ARVD				AML	AML		
	comp=E,3035μm,1.0s						
ARVD				AML	AML		
	comp=N,1925μm,1.3s						
MURB	**Monte Urbino**	**0.52**	**300**	⇓P	Pg	02 40 31.1	+0.4
MURB				S	Sb	02 40 40.0	+0.1
MURB				AML	AML		
	comp=N,7145μm,0.8s						
MURB				AML	AML		
	comp=E,8325μm,0.4s						
MURB				AML	AML		
	comp=E,9005μm,0.3s						
MURB				AML	AML		
	comp=N,7570μm,0.8s						
MURB				AML	AML		
	comp=N,7150μm,0.8s						
ATFO	**Monte Foce - G**	**0.56**	**311**	⇑P	Pg	02 40 31.6	+0.3
ATFO				S	Sb	02 40 42.0	+1.2
ATFO				AML	AML		
	comp=N,1425μm,1.2s						
ATFO				AML	AML		
	comp=E,1860μm,0.8s						
ATFO				AML	AML		
	comp=N,1420μm,1.2s						
CESX	**Cesi**	**0.57**	**227**	⇑P	Pg	02 40 31.4	-0.1
CESX				AML	AML		
	comp=N,3940μm,0.6s						
CESX				AML	AML		
	comp=E,2870μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.57**	**168**	⇓P	Pg	02 40 31.4	-0.1
T1247				AML	AML		
	comp=E,2035μm,0.7s						
T1247				AML	AML		
	comp=N,2340μm,0.4s						
TRTR	**Tortoreto Alta**	**0.60**	**108**	⇓P	Pb	02 40 33.5	+0.2
TRTR				AML	AML		
	comp=E,6890μm,0.5s						
TRTR				AML	AML		
	comp=N,3900μm,1.6s						
FRON	**Frontone**	**0.60**	**330**	⇓P	Pg	02 40 32.1	0.0
FRON				AML	AML		
	comp=E,1835μm,0.5s						
FRON				AML	AML		
	comp=E,1840μm,0.5s						
FRON				AML	AML		
	comp=N,3895μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.61**	**289**	⇑P	Pn	02 40 35.5	-0.2
GIGS	**Gran Sasso**	**0.63**	**150**	⇓P	Pg	02 40 32.6	-0.2
GIGS				S	Sb	02 40 43.0	0.0
GIGS				AML	AML		
	comp=E,427μm,0.7s						
GIGS				AML	AML		
	comp=N,502μm,0.4s						
AOI	**Ancona**	**0.64**	**31**	P	Pg	02 40 33.4	+0.5
AOI				S	Sn	02 40 45.0	-1.6
AOI				AML	AML		
	comp=E,1445μm,1.1s						
AOI				AML	AML		
	comp=N,1365μm,1.2s						
AOI				AML	AML		
	comp=N,1360μm,1.2s						
ATVO	**AVT- Monte Val**	**0.66**	**306**	⇑P	Pg	02 40 33.3	0.0
ATVO				AML	AML		
	comp=N,1080μm,0.5s						
ATVO				AML	AML		
	comp=E,1023μm,0.3s						
MPAG	**Monte Paganucc**	**0.69**	**336**	⇑P	Pg	02 40 34.2	+0.4
MPAG				S	Sb	02 40 46.0	+1.3
MPAG				AML	AML		
	comp=E,1410μm,0.5s						
MPAG				AML	AML		
	comp=N,1390μm,0.6s						
PIEI	**Pieia**	**0.70**	**321**	⇑P	Pg	02 40 33.7	-0.2
PIEI				S	Sb	02 40 46.0	+1.2
PIEI				AML	AML		
	comp=E,1230μm,0.2s						
PIEI				AML	AML		
	comp=N,1265μm,0.6s						
ATPI	**Pietralunga -**	**0.70**	**310**	P	Pg	02 40 34.1	0.0
ATPI				S	Sb	02 40 46.0	+0.9
FIAM	**Fiamignano**	**0.73**	**181**	P	Pg	02 40 34.2	-0.4
FIAM				AML	AML		
	comp=E,841μm,1.6s						
FIAM				AML	AML		
	comp=N,626μm,0.7s						
FIAM				AML	AML		
	comp=E,842μm,1.6s						
FSSB	**Fossombrone**	**0.74**	**339**	P	Pg	02 40 35.0	+0.2
FSSB				S	Sn	02 40 48.0	-1.0
FSSB				AML	AML		
	comp=N,12250μm,0.4s						
FSSB				AML	AML		
	comp=E,6730μm,1.3s						
MGAB	**Montegabbione**	**0.76**	**264**	⇑P	Pb	02 40 36.3	+0.2
MGAB				AML	AML		
	comp=E,2205μm,0.6s						
MGAB				AML	AML		
	comp=N,2425μm,0.5s						
MGAB				AML	AML		
	comp=E,2735μm,0.5s						
MGAB				AML	AML		
	comp=N,2650μm,1.3s						
APEC	**Apecchio**	**0.77**	**317**	⇓P	Pb	02 40 35.9	-0.3
VCEL	**Villa Celiera**	**0.79**	**139**	⇑P	Pg	02 40 35.8	0.0
VCEL				AML	AML		
	comp=E,1425μm,0.4s						
VCEL				AML	AML		
	comp=N,1700μm,0.4s						
FAGN	**Fagnano**	**0.80**	**156**	⇑P	Pg	02 40 35.8	-0.1
FAGN				AML	AML		
	comp=E,2380μm,0.4s						
FAGN				AML	AML		
	comp=N,1535μm,0.4s						
PE3	**Peglio**	**0.84**	**326**	⇓P	Pb	02 40 37.9	+0.4
PE3				AML	AML		
	comp=E,11μm,0.2s						
PE3				AML	AML		
	comp=N,14μm,0.2s						
SRES	**S.Oreste - Sor**	**0.89**	**212**	⇓P	Pb	02 40 38.5	+0.2
SRES				AML	AML		
	comp=N,688μm,0.4s						
SRES				AML	AML		
	comp=E,752μm,1.2s						
T0110	**Collepietro**	**0.91**	**148**	⇑P	Pg	02 40 37.2	-0.7
T0110				AML	AML		
	comp=E,1730μm,0.6s						
T0110				AML	AML		
	comp=N,1260μm,0.5s						
SACS	**San Casciano d**	**0.92**	**261**	⇑P	Pb	02 40 39.1	+0.3
SACS				AML	AML		
	comp=E,844μm,0.4s						
SACS				AML	AML		
	comp=N,1040μm,0.7s						
CAFI	**Castiglion Fio**	**0.92**	**291**	⇓P	Pg	02 40 38.4	+0.2
CAFI				AML	AML		
	comp=E,919μm,0.8s						
CAFI				AML	AML		
	comp=N,542μm,0.7s						
SSP9	**Sansepolcro**	**0.94**	**308**	⇓P	Pb	02 40 39.3	+0.2
CERT	**Cerreto**	**1.06**	**186**	P	Pg	02 40 41.0	+0.2
CERT				AML	AML		
	comp=E,798μm,0.6s						
CERT				AML	AML		
	comp=N,423μm,0.5s						
TOLF	**Tolfa**	**1.26**	**222**	P	Pn	02 40 42.3	-2.3
TOLF				AML	AML		
	comp=N,419μm,0.7s						
TOLF				AML	AML		
	comp=E,386μm,0.5s						
RUFI	**Rufina**	**1.46**	**306**	⇑P	Pg	02 40 49.5	+1.1
PAOL	**Paolisi**	**2.23**	**151**	S	Sg	02 41 31.0	-1.3
MYKA	**Terra Mystica**	**3.65**	**5**	*i* Pn	Pn	02 41 18.9	+1.5
	comp=E,5.0nm,0.3s						
ABTA	**Abfaltersbach**	**3.77**	**353**	*e*Pn	Pn	02 41 20.6	+1.4
	comp=E,24nm,0.6s,SNR=30						
ABTA				*i* Sn	Sn	02 42 06.8	+2.9
	comp=E,17nm,0.5s						
FETA	**Feichten**	**4.37**	**338**	*i* Pn	Pn	02 41 30.0	+2.6
	comp=E,3.9nm,0.3s						
FETA				*e*Sn	Sn	02 42 22.1	+3.5

comp=E,0.8nm,0.2s
WTTA Wattenberg 4.39 346 *i* Pn Pn 02 41 30.9 +3.1
comp=E,1.5nm,0.3s
WTTA *e*Sn Sn 02 42 21.7 +2.4
comp=E,9.9nm,0.3s
SQTA Sankt Quirin 4.44 343 *e*Pn Pn 02 41 30.4 +2.1
comp=E,5.8nm,0.3s,SNR=11
SQTA *e*Sn Sn 02 42 23.7 +3.5
comp=E,9.5nm,0.4s
WATA Walderalm 4.47 346 *i* Pn Pn 02 41 31.5 +2.6
comp=E,5.2nm,0.4s
WATA *e*Sn Sn 02 42 24.8 +3.6
comp=E,11nm,0.4s
MOTA Moosalm 4.58 342 *e*Pn Pn 02 41 33.1 +2.8
comp=E,3.4nm,0.3s
MOTA *i* Sn Sn 02 42 27.0 +3.2
comp=E,1.8nm,0.3s
BIOA Bad Ischl, Aus 4.71 4 *i* Pn Pn 02 41 34.0 +2.0
comp=E,12nm,0.3s
BIOA *e*Sn Sn 02 42 29.7 +3.0
comp=E,13nm,0.5s
RETA Reutte 4.79 340 *i* Pn Pn 02 41 35.7 +2.6
comp=E,0.9nm,0.2s,SNR=5.7
RETA *i* Sn Sn 02 42 30.3 +1.3
comp=E,1.5nm,0.3s
DAVA Damuels 4.87 333 *e*Pn Pn 02 41 35.7 +1.5
comp=E,4.8nm,0.6s,SNR=5.3
DAVA *e*Sn Sn 02 42 33.7 +2.7
comp=E,10nm,0.5s
MOA Molln 4.91 9 *i* Pn Pn 02 41 36.0 +1.2
comp=E,0.9nm,0.2s
MOA *i* Sn Sn 02 42 32.5 +0.6
comp=E,3.2nm,0.3s
CONA Conrad Observa 5.29 20 *i* Pn Pn 02 41 40.4 +0.4
comp=E,1.7nm,0.3s,SNR=5.1
CONA *e*Sn Sn 02 42 41.3 +0.1
comp=E,1.5nm,0.4s
CKRC Cesky Krumlov 5.88 8 *e*PN Pn 02 41 47.8 -0.2
CKRC *e*SN Sn 02 42 53.3 -2.3
KHC Kasperske Hory 6.14 3 *e*PN Pn 02 41 51.0 -0.6
KHC *e*SN Sn 02 42 59.1 -3.0
CLL Collm 8.31 359 *e*x x 02 44 40.0
CLL *e*Sg Sg 02 44 45.0 -2.1

ROM 28 02:40:59.0±0.1, 42°.944N±0°.003×13°.044E±0°.004, h12km, ML3.3/9, 11C-13D, Error ellipse: s-maj=0.3km s-min=0.1km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**13**	⇓P	Pg	02 41 01.5	+0.2
FEMA				S	Sg	02 41 03.1	+0.2
FEMA				AML	AML		
	comp=E,22100μm,0.4s						
FEMA				AML	AML		
	comp=E,22150μm,0.4s						
FEMA				AML	AML		
	comp=N,13400μm,0.4s						
T1216	**Preci, Frazion**	**0.06**	**199**	⇑P	Pg	02 41 01.7	+0.3
T1216				S	Sg	02 41 03.4	+0.3
T1216				AML	AML		
	comp=E,34650μm,0.3s						
T1216				AML	AML		
	comp=N,34400μm,0.4s						
T1216				AML	AML		
	comp=E,34650μm,0.3s						
T1216				AML	AML		
	comp=N,34450μm,0.4s						
T1216				AML	AML		
	comp=E,34700μm,0.3s						
T1216				AML	AML		
	comp=N,34450μm,0.4s						
FDMO	**Fiordimonte**	**0.10**	**19**	P	Pg	02 41 02.1	+0.3
FDMO				S	Sg	02 41 04.1	+0.2
FDMO				AML	AML		
	comp=E,19150μm,0.5s						
FDMO				AML	AML		
	comp=N,23100μm,0.2s						
MC2	**Monte Cornacci**	**0.11**	**106**	⇓P	Pg	02 41 02.5	+0.4
MC2				S	Sg	02 41 04.9	+0.4
CESI	**CESI - Serrava**	**0.12**	**301**	⇓P	Pg	02 41 02.6	+0.4
CESI				S	Sg	02 41 05.0	+0.6
CESI				AML	AML		
	comp=E,33000μm,0.2s						
CESI				AML	AML		
	comp=N,62700μm,0.1s						
NRCA	**Norcia**	**0.12**	**155**	⇓P	Pg	02 41 02.5	+0.3
NRCA				AML	AML		
	comp=E,4560μm,0.2s						
NRCA				AML	AML		
	comp=N,5575μm,0.3s						
NRCA				AML	AML		
	comp=E,4960μm,0.2s						
NRCA				AML	AML		
	comp=N,5860μm,0.3s						
NRCA				AML	AML		
	comp=N,43350μm,0.1s						
NRCA				AML	AML		
	comp=N,39600μm,0.1s						
NRCA				AML	AML		
	comp=E,21450μm,1.4s						
NRCA				AML	AML		
	comp=E,22700μm,1.4s						
T1245	**Castelsantange**	**0.14**	**130**	⇓P	Pg	02 41 02.9	+0.4
T1245				S	Sg	02 41 05.5	+0.6
T1245				AML	AML		
	comp=E,6030μm,1.0s						
T1245				AML	AML		
	comp=E,6025μm,0.9s						
T1245				AML	AML		
	comp=N,8680μm,0.8s						
T1215	**Vallo di Nera,**	**0.19**	**222**	⇑P	Pg	02 41 03.5	+0.2
T1215				S	Sg	02 41 07.0	+0.8
MMO1	**Montemonaco**	**0.21**	**102**	⇑P	Pg	02 41 03.9	+0.3
MMO1				S	Sg	02 41 07.4	+0.6
SEF1	**Sefro**	**0.21**	**341**	⇑P	Pg	02 41 04.0	+0.4
SEF1				S	Sg	02 41 07.8	+1.0
SEF1				AML	AML		
	comp=E,14800μm,0.2s						
SEF1				AML	AML		
	comp=N,8370μm,0.2s						
AM05	**Amandola Campo**	**0.23**	**82**	⇑P	Pg	02 41 04.3	+0.4
AM05				S	Sg	02 41 08.1	+0.9
PIO1	**Pioraco**	**0.24**	**349**	⇑P	Pb	02 41 05.1	-0.2
PIO1				S	Sg	02 41 08.5	+1.0
GUMA	**Gualdo di Mace**	**0.24**	**61**	⇑P	Pb	02 41 04.8	-0.6
GUMA				S	Sg	02 41 09.2	+1.6
T1217	**Poggiodomo (PG**	**0.25**	**200**	⇑P	Pg	02 41 04.6	+0.4
FIU1	**Fiuminata**	**0.26**	**341**	P	Pg	02 41 05.0	+0.6
FIU1				S	Sg	02 41 09.0	+1.0
MDAR	**Monte D'Aria**	**0.26**	**16**	⇓P	Pg	02 41 04.7	+0.3
MDAR				S	Sg	02 41 09.0	+0.9
MDAR				AML	AML		
	comp=E,5970μm,0.5s						
MDAR				AML	AML		
	comp=N,8820μm,0.3s						
MDAR				AML	AML		
	comp=N,8835μm,0.3s						
GAG1	**Gagliole**	**0.29**	**3**	P	Pg	02 41 05.6	+0.6
T1241	**Roccafluvione,**	**0.30**	**107**	⇑P	Pg	02 41 05.4	+0.3
T1241				AML	AML		
	comp=E,2725μm,0.3s						
T1241				AML	AML		
	comp=N,3155μm,0.2s						
MTL1	**Matelica**	**0.31**	**355**	P	Pg	02 41 05.8	+0.4
SNTG	**Esanatoglia**	**0.32**	**346**	P	Pb	02 41 06.4	-0.2
SNTG				AML	AML		
	comp=E,2105μm,0.6s						
SNTG				AML	AML		
	comp=E,2100μm,0.6s						
SNTG				AML	AML		
	comp=N,1765μm,1.2s						
T1204	**Amatrice, Fraz**	**0.34**	**143**	P	Pb	02 41 06.5	-0.5
LNSS	**Leonessa**	**0.34**	**180**	⇓P	Pg	02 41 06.3	+0.4
MNTP	**Montappone**	**0.37**	**58**	P	Pb	02 41 07.5	0.0
ATCC	**AVT- Casa Cast**	**0.38**	**309**	⇓P	Pg	02 41 06.7	+0.1
EL6	**Elcito**	**0.39**	**6**	⇓P	Pg	02 41 07.0	+0.2
T1243	**Rocca Santa Ma**	**0.39**	**130**	⇑P	Pg	02 41 07.0	+0.2
FOSV	**Fossato di Vic**	**0.41**	**329**	P	Pg	02 41 07.6	+0.5
ARRO	**Arrone**	**0.42**	**209**	⇓P	Pg	02 41 07.6	+0.3
CING	**Cingoli**	**0.45**	**14**	⇓P	Pg	02 41 07.8	0.0
MURB	**Monte Urbino**	**0.50**	**310**	⇑P	Pg	02 41 09.0	+0.3
TERO	**Teramo**	**0.52**	**128**	⇓P	Pb	02 41 10.1	0.0
ATFO	**Monte Foce - G**	**0.55**	**321**	P	Pg	02 41 10.1	+0.4
ARVD	**Arcevia**	**0.56**	**352**	⇓P	Pg	02 41 09.7	-0.3
ARVD				S	Sb	02 41 20.0	+1.3
FRON	**Frontone**	**0.62**	**338**	P	Pb	02 41 11.5	-0.3
PIEI	**Pieia**	**0.70**	**328**	S	Sb	02 41 24.0	+1.2
FSSB	**Fossombrone**	**0.77**	**345**	S	Sn	02 41 27.0	-0.3

*ISU **28** 02:42:53, 39°.76N×72°.86E, h1km*
*KRNET **28** 02:42:54.7±0.1, 39°.64N×72°.87E, mb2.6*
*SOME **28** 02:42:56.6, 39°.87N×72°.85E, h10km*
*NNC **28** 02:42:59.2±1.3, 39°.95N×72°.95E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=9.6km s-min=4.2km az=178.0
ISC 28 02:42:53.0±1.3, 39°.78N±0°.05×72°.95E±0°.03, h10km±12km, n34, σ1s23/56, 15C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.75**	**351**	P	**Pb**	**02 43 08.6**	**+0.4**
OHH				S	**Sn**	**02 43 21.0**	**-0.3**
DRK	**Karamyk**	**0.94**	**252**	⇑*i*P	**Pg**	**02 43 10.7**	**-0.3**
	baz=60						
DRK				⇑*i*S	**Sg**	**02 43 22.2**	**-1.0**
	baz=60						
FRG	**Fergana**	**1.07**	**304**	P	**Sn**	**02 43 29.6**	**+0.5**
ANR	**Andizhan**	**1.07**	**335**	P	**Sn**	**02 43 32.8**	**+3.7**
MINT	**Mingtut**	**1.66**	**295**	P	**Pg**	**02 43 26.4**	**+1.6**
MINT				S	**Sg**	**02 43 49.0**	**+2.7**
BTK	**Batken**	**1.66**	**280**	⇑*i*P	**Pg**	**02 43 25.1**	**+0.3**
	baz=85						
BTK				⇑*i*S	**Sg**	**02 43 47.5**	**+1.1**
	baz=85						
BTK	**Batken**	**1.66**	**280**	P	**Pg**	**02 43 24.7**	**-0.1**
BTK				S	**Sg**	**02 43 47.0**	**+0.6**
ARK	**Arkit**	**2.15**	**340**	⇑*i*P	**Pg**	**02 43 34.9**	**+0.7**
	baz=43						
ARK				⇑*i*S	**Sg**	**02 44 04.1**	**+2.1**
	baz=43						
GAR	**Garm**	**2.18**	**250**	⇑*i*P	**Pb**	**02 43 32.5**	**-0.1**
	baz=53						
GAR				⇑*i*S	**Sb**	**02 43 59.9**	**+0.1**
	baz=53						
TRKS	**Terek-Say**	**2.22**	**322**	⇓*i*P	**Pg**	**02 43 34.5**	**-1.1**
	baz=25						
TRKS				⇓*i*S	**Sg**	**02 44 03.5**	**-0.9**
	baz=25						
ARLS	**Aral**	**2.33**	**26**	⇑*i*P	**Pg**	**02 43 37.4**	**-0.2**
	baz=26						
ARLS				⇑*i*S	**Sg**	**02 44 09.1**	**+1.4**
	baz=26						
UCH	**Uchtor**	**2.72**	**25**	⇑*i*P	**Pb**	**02 43 43.7**	**+1.8**
	baz=25						
UCH				⇑*i*S	**Sg**	**02 44 19.2**	**-1.1**
	baz=25						
MRKS	**Merke**	**2.97**	**4**	*e*P	**Pg**	**02 43 50.3**	**+0.4**
	7.4nm,0.2s						
MRKS				*e*S	**Sg**	**02 44 29.6**	**+1.3**
	8.5nm,0.3s						
MRKS	**Merke**	**2.97**	**4**	Pg	**Pg**	**02 43 50.3**	**+0.4**
	7.4nm,0.2s						
MRKS				Lg	Lg	02 44 29.6	
	8.5nm,0.3s						
IUG	**Iuzhnay**	**3.23**	**318**	*e*P	**Pg**	**02 43 54.2**	**-0.8**
	54nm,0.4s						
IUG				*e*S	**Sg**	**02 44 36.0**	**-0.8**
	30nm,0.5s						
IUG	**Iuzhnay**	**3.23**	**318**	Pg	**Pg**	**02 43 54.2**	**-0.8**
	54nm,0.4s						
IUG				Lg	Lg	02 44 36.0	
	30nm,0.5s						
TKM2	**Tokmak 2**	**3.72**	**32**	⇑Pg	**Pg**	**02 44 04.5**	**+0.3**
	0.4nm,0.3s						
TKM2				⇓Lg	Lg	02 44 51.7	
	2.3nm,0.5s						
KK31	**Karatay Array**	**3.79**	**332**	⇑Pn	**Pb**	**02 43 57.9**	**-2.1**
	0.8nm,0.7s,baz=140,slow=15,SNR=7.1						
KK31				⇓Pg	**Pg**	**02 44 06.0**	**+0.5**
	1.0nm,0.6s,baz=149,slow=14,SNR=5.0						
KK31				⇓Sn	**Sb**	**02 44 42.1**	**-3.9**
	0.9nm,0.4s,baz=146,slow=23,SNR=4.1						
KK31				⇑Lg	Lg	02 44 53.7	
	1.3nm,0.3s,baz=156,slow=31,SNR=4.8						
KST	**Kastek**	**3.97**	**34**	*e*P	**Pg**	**02 44 09.8**	**+0.7**
	2.1nm,0.3s						
KST				*e*S	**Sg**	**02 45 02.5**	**+2.0**
	8.0nm,0.7s						
KST	**Kastek**	**3.97**	**34**	Pg	**Pg**	**02 44 09.8**	**+0.7**
	2.1nm,0.3s						
KST				Lg	Lg	02 45 02.5	
	8.0nm,0.7s						
DGS	**Degeres**	**4.06**	**31**	*e*P	**Pg**	**02 44 10.2**	**-0.4**
	2.1nm,0.5s						
DGS				*e*S	**Sg**	**02 45 03.3**	**+0.1**
	3.9nm,0.5s						
DGS	**Degeres**	**4.06**	**31**	Pg	**Pg**	**02 44 10.2**	**-0.4**
	2.1nm,0.5s						
DGS				Lg	Lg	02 45 03.3	
	3.9nm,0.5s						
KRBS	**Karabastau**	**4.41**	**27**	*e*P	**Pg**	**02 44 17.1**	**-0.4**
	1.0nm,0.5s						
KRBS				*e*S	**Sg**	**02 45 15.0**	**+0.4**
	2.7nm,0.5s						
KRBS	**Karabastau**	**4.41**	**27**	Pg	**Pg**	**02 44 17.1**	**-0.4**
	1.0nm,0.5s						
KRBS				Lg	Lg	02 45 15.0	
	2.7nm,0.5s						
TNSS	**Tian-Shan**	**4.43**	**41**	*e*P	**Pg**	**02 44 17.1**	**-0.7**
	1.4nm,0.5s						
TNSS				*e*S	**Sg**	**02 45 15.3**	**+0.1**
	2.5nm,0.6s						
TNSS	**Tian-Shan**	**4.43**	**41**	Pg	**Pg**	**02 44 17.1**	**-0.7**
	1.4nm,0.5s						
TNSS				Lg	Lg	02 45 15.3	
	2.5nm,0.6s						
MDOK	**Medeo**	**4.57**	**41**	*e*P	**Pg**	**02 44 19.9**	**-0.6**
	2.6nm,0.2s						
MDOK				*e*S	**Sg**	**02 45 19.9**	**+0.1**
	7.4nm,0.6s						
MDOK	**Medeo**	**4.57**	**41**	Pg	**Pg**	**02 44 19.9**	**-0.6**
	2.6nm,0.2s						
MDOK				Lg	Lg	02 45 19.9	
	7.4nm,0.6s						
KOTS	**Kotyrbulak**	**4.66**	**41**	*e*P	**Pg**	**02 44 22.0**	**-0.1**
	2.6nm,0.4s						
KOTS				*e*S	**Sg**	**02 45 23.5**	**+1.0**
	8.5nm,0.7s						
KOTS	**Kotyrbulak**	**4.66**	**41**	Pg	**Pg**	**02 44 22.0**	**-0.1**
	2.6nm,0.4s						
KOTS				Lg	Lg	02 45 23.5	
	8.5nm,0.7s						
KTBS	**Karatobe**	**4.82**	**34**	*e*P	**Pg**	**02 44 24.5**	**-0.8**
	0.8nm,0.5s						
KTBS				*e*S	**Sg**	**02 45 27.7**	**0.0**
	4.9nm,0.5s						
KTBS	**Karatobe**	**4.82**	**34**	Pg	**Pg**	**02 44 24.5**	**-0.8**
	0.8nm,0.5s						
KTBS				Lg	Lg	02 45 27.7	
	4.9nm,0.5s						
KUU	**Kurty**	**4.83**	**31**	*e*P	**Pg**	**02 44 23.9**	**-1.5**
	1.0nm,0.1s						
KUU				*e*S	**Sg**	**02 45 26.7**	**-1.2**
	3.9nm,0.7s						
KUU	**Kurty**	**4.83**	**31**	Pg	**Pg**	**02 44 23.9**	**-1.5**
	1.0nm,0.1s						
KUU				Lg	Lg	02 45 26.7	
	3.9nm,0.7s						

ROM 28 02:46:30.9±0.0, 42°.944N±0°.002×13°.045E±0°.004, h11km, ML1.6/7, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=286.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.02**	**11**	P	Pg	02 46 33.4	+0.3
FEMA				S	Sg	02 46 35.0	+0.3
T1216	**Preci, Frazion**	**0.06**	**200**	P	Pg	02 46 33.6	+0.4
T1216				S	Sg	02 46 35.3	+0.4
T1216				AML	AML		
	comp=E,1164μm,0.4s						
T1216				AML	AML		
	comp=N,1027μm,0.3s						
FDMO	**Fiordimonte**	**0.10**	**19**	P	Pg	02 46 34.0	+0.3
FDMO				S	Sg	02 46 36.1	+0.4
FDMO				AML	AML		
	comp=E,1150μm,0.2s						
FDMO				AML	AML		
	comp=N,1193μm,0.2s						
FDMO				AML	AML		
	comp=E,16850μm,0.4s						
FDMO				AML	AML		
	comp=N,25300μm,0.1s						
FDMO				AML	AML		
	comp=E,369μm,0.2s						
FDMO				AML	AML		
	comp=N,262μm,0.1s						
CESI	**CESI - Serrava**	**0.12**	**300**	⇑P	Pg	02 46 34.5	+0.4
CESI				S	Sg	02 46 36.9	+0.7
CESI				AML	AML		
	comp=E,573μm,0.1s						
CESI				AML	AML		
	comp=N,1140μm,0.1s						
CESI				AML	AML		
	comp=E,11800μm,0.6s						
CESI				AML	AML		
	comp=N,25550μm,0.1s						
CESI				AML	AML		
	comp=E,573μm,0.1s						
CESI				AML	AML		
	comp=N,1142μm,0.1s						
NRCA	**Norcia**	**0.12**	**155**	P	Pg	02 46 34.4	+0.4
NRCA				S	Sg	02 46 36.8	+0.5
NRCA				AML	AML		
	comp=E,858μm,0.1s						
NRCA				AML	AML		
	comp=N,814μm,0.2s						
NRCA				AML	AML		
	comp=E,926μm,0.2s						
NRCA				AML	AML		
	comp=N,884μm,0.5s						
NRCA				AML	AML		
	comp=E,8825μm,1.0s						
NRCA				AML	AML		
	comp=N,6325μm,1.6s						
NRCA				AML	AML		
	comp=E,9530μm,1.0s						
NRCA				AML	AML		
	comp=N,6800μm,1.5s						
NRCA				AML	AML		
	comp=N,560μm,0.1s						
NRCA				AML	AML		
	comp=E,517μm,0.1s						
NRCA				AML	AML		
	comp=E,565μm,0.1s						
NRCA				AML	AML		
	comp=N,613μm,0.1s						
T1245	**Castelsantange**	**0.14**	**130**	P	Pg	02 46 34.7	+0.4
T1245				AML	AML		
	comp=E,19350μm,0.7s						
T1245				AML	AML		
	comp=N,14810μm,0.2s						
T1245				AML	AML		
	comp=E,19900μm,0.7s						
T1245				AML	AML		
	comp=N,15800μm,0.7s						
T1215	**Vallo di Nera,**	**0.19**	**222**	P	Pg	02 46 35.5	+0.4
T1215				S	Sg	02 46 38.9	+0.9
T1215				AML	AML		
	comp=E,1690μm,0.6s						
T1215				AML	AML		
	comp=N,3825μm,0.1s						
T1215				AML	AML		
	comp=E,1850μm,0.6s						
T1215				AML	AML		
	comp=N,3930μm,0.1s						
T1215				AML	AML		
	comp=N,102μm,0.1s						
T1215				AML	AML		
	comp=N,3820μm,0.1s						
T1215				AML	AML		
	comp=E,1851μm,0.6s						
MMO1	**Montemonaco**	**0.21**	**102**	⇓P	Pg	02 46 35.9	+0.4
MMO1				S	Sg	02 46 39.4	+0.9
AM05	**Amandola Campo**	**0.23**	**82**	P	Pg	02 46 36.2	+0.5
AM05				S	Sg	02 46 39.9	+0.9
AM05				AML	AML		
	comp=E,870μm,0.1s						
AM05				AML	AML		
	comp=N,970μm,0.4s						
AM05				AML	AML		
	comp=E,3260μm,0.5s						
AM05				AML	AML		
	comp=N,308μm,0.4s						
AM05				AML	AML		
	comp=E,53μm,0.1s						
AM05				AML	AML		
	comp=E,202μm,0.1s						
AM05				AML	AML		
	comp=N,60μm,0.1s						
AM05				AML	AML		
	comp=N,23μm,0.1s						
GUMA	**Gualdo di Mace**	**0.24**	**61**	P	Pg	02 46 36.7	+0.7
GUMA				S	Sg	02 46 41.1	+1.6
GUMA				AML	AML		
	comp=E,3470μm,0.5s						
GUMA				AML	AML		
	comp=N,4760μm,0.5s						
GUMA				AML	AML		
	comp=E,3690μm,0.2s						
GUMA				AML	AML		
	comp=N,4340μm,0.5s						
GUMA				AML	AML		
	comp=E,301μm,0.6s						
GUMA				AML	AML		
	comp=N,378μm,0.4s						
GUMA				AML	AML		
	comp=N,303μm,0.1s						
GUMA				AML	AML		
	comp=E,377μm,0.5s						
T1217	**Poggiodomo (PG**	**0.25**	**200**	P	Pg	02 46 36.5	+0.4
T1217				S	Sg	02 46 40.7	+1.2
T1217				AML	AML		
	comp=E,1340μm,0.7s						
T1217				AML	AML		
	comp=E,1286μm,0.7s						
T1217				AML	AML		
	comp=N,1342μm,1.3s						
T1217				AML	AML		
	comp=E,1286μm,0.7s						
T1217				AML	AML		
	comp=N,1375μm,1.3s						
T1241	**Roccafluvione,**	**0.30**	**107**	P	Pg	02 46 37.3	+0.4
T1241				S	Sb	02 46 42.2	-1.0
T1241				AML	AML		
	comp=E,1840μm,0.1s						
T1241				AML	AML		
	comp=E,1845μm,0.1s						
T1241				AML	AML		
	comp=N,2280μm,0.2s						
SNTG	**Esanatoglia**	**0.32**	**346**	P	Pg	02 46 37.6	+0.2
SNTG				S	Sg	02 46 42.8	+1.1
SNTG				AML	AML		
	comp=E,719μm,0.2s						
SNTG				AML	AML		
	comp=N,723μm,1.1s						
SNTG				AML	AML		
	comp=E,714μm,0.1s						
SNTG				AML	AML		
	comp=N,680μm,1.1s						
SNTG				AML	AML		
	comp=N,288μm,3.0s						
SNTG				AML	AML		
	comp=N,31μm,0.1s						
SNTG				AML	AML		
	comp=E,38μm,0.1s						
SNTG				AML	AML		
	comp=E,285μm,1.6s						
T1201	**Domo (RI)**	**0.32**	**152**	P	Pb	02 46 38.2	-0.6
T1204	**Amatrice, Fraz**	**0.33**	**143**	S	Sb	02 46 44.0	-0.4
LNSS	**Leonessa**	**0.34**	**181**	P	Pg	02 46 38.1	+0.3
LNSS				AML	AML		
	comp=N,1215μm,0.8s						
LNSS				AML	AML		
	comp=E,1865μm,0.2s						
T1243	**Rocca Santa Ma**	**0.39**	**130**	P	Pg	02 46 38.8	+0.1
EL6	**Elcito**	**0.39**	**6**	P	Pg	02 46 38.9	+0.2
EL6				S	Sb	02 46 45.2	-0.7
EL6				AML	AML		
	comp=N,72μm,0.2s						
ARRO	**Arrone**	**0.42**	**210**	P	Pg	02 46 39.2	0.0
ARRO				S	Sb	02 46 46.2	-0.5
T1211	**Morro Reatino**	**0.43**	**199**	P	Pg	02 46 40.0	+0.5
RM33	**Pellescritta (**	**0.45**	**164**	P	Pg	02 46 40.3	+0.4
RM33				AML	AML		
	comp=E,368μm,0.3s						

RM33				AML	AML	
	comp=N,342μm,0.3s					
RM33				AML	AML	
	comp=E,367μm,0.3s					
RM33				AML	AML	
	comp=N,341μm,0.3s					
TERO	**Teramo**	**0.52**	**128**	⇑P	Pg	02 46 41.2 0.0
TERO				AML	AML	
	comp=E,600μm,0.8s					
TERO				AML	AML	
	comp=N,644μm,1.4s					
ATFO	**Monte Foce - G**	**0.55**	**321**	S	Sb	02 46 52.0 +1.5
ARVD	**Arcevia**	**0.56**	**352**	S	Sb	02 46 51.0 +0.2
ATTE	**AVT- Monte Tez**	**0.57**	**297**	P	Pn	02 46 44.9 -0.1
PE3	**Peglio**	**0.85**	**332**	⇑P	Pn	02 46 49.2 +0.3
BRSN	**Barisano**	**1.51**	**333**	S	Sg	02 47 21.0 +1.4

ROM 28 02:47:26.9±0.7, 43°.21N±0°.03×13°.13E±0°.02, h5km±4km, ML2.5/20, 11C-9D, Error ellipse: s-maj=2.7km s-min=1.8km az=11.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MDAR	**Monte D'Aria**	**0.02**	**159**	⇓P		Pg	02 47 30.2	+2.2
MDAR					AML	AML		
	comp=E,1770μm,0.4s							
MDAR					AML	AML		
	comp=N,2415μm,0.2s							
MDAR					AML	AML		
	comp=E,1775μm,0.4s							
MDAR					AML	AML		
	comp=N,2420μm,0.2s							
SSM1	**San Severino M**	**0.04**	**58**	⇓P		Pg	02 47 31.1	+3.0
GAG1	**Gagliole**	**0.06**	**301**	⇑P		Pg	02 47 31.0	+2.7
EL6	**Elcito**	**0.12**	**349**	⇑P		Pg	02 47 32.5	+3.0
FIU1	**Fiuminata**	**0.15**	**262**	⇓P		Pg	02 47 31.1	+1.2
SNTG	**Esanatoglia**	**0.15**	**288**	⇓P		Pg	02 47 31.5	+1.6
SNTG					AML	AML		
	comp=E,719μm,0.1s							
SNTG					AML	AML		
	comp=E,720μm,0.1s							
SNTG					AML	AML		
	comp=N,723μm,1.1s							
SNTG					AML	AML		
	comp=E,714μm,0.1s							
SNTG					AML	AML		
	comp=N,680μm,1.1s							
SNTG					AML	AML		
	comp=N,724μm,1.1s							
SEF1	**Sefro**	**0.15**	**245**	P		Pg	02 47 29.9	0.0
SEF1				S		Sg	02 47 32.6	+0.7
CING	**Cingoli**	**0.17**	**15**	⇑P		Pg	02 47 33.5	+3.2
CING					AML	AML		
	comp=N,796μm,0.6s							
CING					AML	AML		
	comp=E,616μm,0.1s							
GUMA	**Gualdo di Mace**	**0.21**	**135**	⇑P		Pg	02 47 31.1	+0.1
GUMA				S		Sg	02 47 34.8	+1.1
GUMA					AML	AML		
	comp=E,3470μm,0.5s							
GUMA					AML	AML		
	comp=N,4760μm,0.5s							
GUMA					AML	AML		
	comp=N,4340μm,0.5s							
GUMA					AML	AML		
	comp=E,3875μm,1.1s							
FEMA	**Monte Fema**	**0.26**	**194**	P		Pb	02 47 34.7	+0.7
FEMA				S		Sg	02 47 36.3	+1.1
FEMA					AML	AML		
	comp=E,21750μm,1.1s							
FEMA					AML	AML		
	comp=N,14150μm,0.1s							
CESI	**CESI - Serrava**	**0.27**	**220**	P		Pn	02 47 35.9	-1.6
CESI				S		Sb	02 47 38.2	-0.8
CESI					AML	AML		
	comp=E,11750μm,0.6s							
CESI					AML	AML		
	comp=N,25550μm,0.1s							
CESI					AML	AML		
	comp=E,11800μm,0.6s							
AM05	**Amandola Campo**	**0.28**	**145**	⇑P		Pg	02 47 31.2	-1.1
AM05					AML	AML		
	comp=E,868μm,0.1s							
AM05					AML	AML		
	comp=N,971μm,0.4s							
AM05					AML	AML		
	comp=N,308μm,0.4s							
AM05					AML	AML		
	comp=E,870μm,0.1s							
AM05					AML	AML		
	comp=N,967μm,0.4s							
AM05					AML	AML		
	comp=E,3260μm,0.5s							
AM05					AML	AML		
	comp=E,870μm,0.1s							
AM05					AML	AML		
	comp=N,970μm,0.4s							
AM05					AML	AML		
	comp=E,872μm,0.1s							
AM05					AML	AML		
	comp=E,3255μm,0.5s							
AM05					AML	AML		
	comp=N,969μm,0.4s							
AM05					AML	AML		
	comp=N,307μm,0.4s							
FOSV	**Fossato di Vic**	**0.28**	**288**	⇑P		Pb	02 47 33.5	-1.0
FOSV					AML	AML		
	comp=N,426μm,0.3s							
FOSV					AML	AML		
	comp=E,426μm,1.4s							
MC2	**Monte Cornacci**	**0.30**	**172**	P		Pg	02 47 32.9	+0.1
MC2				S		Sg	02 47 38.0	+1.3
ARVD	**Arcevia**	**0.32**	**334**	⇓P		Pb	02 47 35.6	+0.5
ARVD					AML	AML		
	comp=E,216μm,1.1s							
ARVD					AML	AML		
	comp=N,178μm,0.4s							
T1216	**Preci, Frazion**	**0.33**	**195**	P		Pb	02 47 34.7	-0.6
T1216					AML	AML		
	comp=N,30350μm,0.3s							
T1216					AML	AML		
	comp=E,28050μm,0.2s							
T1216					AML	AML		
	comp=N,30300μm,0.3s							
T1216					AML	AML		
	comp=E,28050μm,0.3s							
MMO1	**Montemonaco**	**0.34**	**155**	P		Pb	02 47 35.3	-0.1
MMO1				S		Sb	02 47 40.7	-0.5
T1245	**Castelsantange**	**0.35**	**174**	P		Pb	02 47 35.9	+0.2
T1245				S		Sg	02 47 38.5	0.0
ATCC	**AVT- Casa Cast**	**0.36**	**266**	⇓P		Pg	02 47 33.7	-0.2
ATCC					AML	AML		
	comp=E,898μm,0.3s							
ATCC					AML	AML		
	comp=N,748μm,0.6s							
ATCC					AML	AML		
	comp=N,747μm,0.6s							
NRCA	**Norcia**	**0.38**	**182**	P		Pg	02 47 34.8	+0.7
NRCA				S		Sg	02 47 37.7	-1.4
NRCA					AML	AML		
	comp=E,8825μm,1.0s							
NRCA					AML	AML		
	comp=E,8820μm,1.0s							
NRCA					AML	AML		
	comp=N,6320μm,1.6s							
NRCA					AML	AML		
	comp=E,9535μm,1.0s							
NRCA					AML	AML		
	comp=N,6325μm,1.6s							
NRCA					AML	AML		
	comp=E,9530μm,1.0s							
NRCA					AML	AML		
	comp=N,6800μm,1.5s							
NRCA					AML	AML		
	comp=N,6795μm,1.5s							
NRCA					AML	AML		
	comp=E,8825μm,1.0s							
T1241	**Roccafluvione,**	**0.41**	**148**	P		Pg	02 47 33.1	-1.8
T1241					AML	AML		
	comp=N,2280μm,0.2s							
T1241					AML	AML		
	comp=E,1840μm,0.1s							
T1241					AML	AML		
	comp=E,1845μm,0.1s							
FRON	**Frontone**	**0.43**	**316**	⇓P		Pb	02 47 37.1	+0.2
FRON					AML	AML		
	comp=E,164μm,1.0s							
FRON					AML	AML		
	comp=N,217μm,0.7s							
MURB	**Monte Urbino**	**0.45**	**277**	P		Pg	02 47 35.7	+0.2
MURB					AML	AML		
	comp=E,814μm,0.3s							
MURB					AML	AML		
	comp=N,818μm,0.5s							
MURB					AML	AML		
	comp=E,941μm,0.2s							
MURB					AML	AML		
	comp=N,898μm,0.2s							
MURB					AML	AML		
	comp=N,818μm,0.5s							
MURB					AML	AML		
	comp=E,940μm,0.2s							
T1215	**Vallo di Nera,**	**0.45**	**206**	P		Pb	02 47 36.7	-0.6
T1215				S		Sg	02 47 39.7	-1.7
T1215					AML	AML		
	comp=E,1690μm,0.6s							
T1215					AML	AML		
	comp=N,3825μm,0.1s							
T1215					AML	AML		
	comp=E,1850μm,0.6s							
T1215					AML	AML		
	comp=E,1850μm,0.6s							
T1215					AML	AML		
	comp=N,3930μm,0.1s							
T1215					AML	AML		
	comp=E,1851μm,0.6s							
T1215					AML	AML		
	comp=N,3820μm,0.1s							
OFFI	**Offida**	**0.49**	**124**	⇑P		Pg	02 47 36.8	+0.5
OFFI					AML	AML		
	comp=N,716μm,0.7s							
OFFI					AML	AML		
	comp=E,864μm,1.3s							
T1217	**Poggiodomo (PG**	**0.52**	**197**	⇑P		Pg	02 47 33.4	-3.5
T1217					AML	AML		
	comp=E,1340μm,0.7s							
T1217					AML	AML		
	comp=N,1343μm,1.3s							
T1217					AML	AML		
	comp=N,1375μm,1.3s							
T1217					AML	AML		
	comp=E,1287μm,0.7s							
T1217					AML	AML		
	comp=N,1334μm,1.3s							
T1217					AML	AML		
	comp=E,1286μm,0.7s							
T1217					AML	AML		
	comp=N,1331μm,1.3s							
T1217					AML	AML		
	comp=N,1375μm,1.3s							
T1217					AML	AML		
	comp=E,1286μm,0.7s							
T1217					AML	AML		
	comp=E,1340μm,0.7s							
FSSB	**Fossombrone**	**0.55**	**332**	P		Pb	02 47 39.9	+0.9
FSSB				S		Sb	02 47 49.0	+1.8
FSSB					AML	AML		
	comp=E,761μm,0.4s							
FSSB					AML	AML		
	comp=N,662μm,0.5s							
T1204	**Amatrice, Fraz**	**0.55**	**166**	S		Sg	02 47 41.0	-3.6
T1243	**Rocca Santa Ma**	**0.56**	**156**	P		Pg	02 47 35.1	-2.6
SMA1	**SAN MARTINO**	**0.60**	**166**	⇑P		Pg	02 47 35.3	-3.1
SMA1					AML	AML		
	comp=N,642μm,1.3s							
SMA1					AML	AML		
	comp=N,642μm,1.3s							
SMA1					AML	AML		
	comp=E,610μm,0.6s							
LNSS	**Leonessa**	**0.61**	**187**	⇓P		Pg	02 47 35.1	-3.5
LNSS					AML	AML		
	comp=E,1865μm,0.2s							
LNSS					AML	AML		
	comp=N,1210μm,0.8s							
LNSS					AML	AML		
	comp=N,1215μm,0.8s							
TERO	**Teramo**	**0.68**	**149**	P		Pg	02 47 37.3	-2.6
TERO					AML	AML		
	comp=E,599μm,0.8s							
TERO					AML	AML		
	comp=N,644μm,1.4s							
TERO					AML	AML		
	comp=E,600μm,0.8s							
ARRO	**Arrone**	**0.69**	**203**	⇑P		Pg	02 47 36.7	-3.3
ARRO					AML	AML		
	comp=N,722μm,1.3s							
ARRO					AML	AML		
	comp=E,760μm,0.2s							
RM33	**Pellescritta (**	**0.70**	**175**	P		Pg	02 47 36.9	-3.5
RM33					AML	AML		
	comp=E,368μm,0.3s							
RM33					AML	AML		
	comp=N,342μm,0.3s							
RM33					AML	AML		
	comp=N,341μm,0.3s							
RM33					AML	AML		
	comp=E,367μm,0.3s							
T1211	**Morro Reatino**	**0.71**	**197**	⇑P		Pg	02 47 36.9	-3.5
T1211					AML	AML		
	comp=E,644μm,0.5s							
T1211					AML	AML		
	comp=N,978μm,1.5s							
T1211					AML	AML		
	comp=E,644μm,0.5s							
T1211					AML	AML		
	comp=N,977μm,1.6s							
VIVA	**Pratoni del Vi**	**1.48**	**191**	⇓P		Pn	02 47 47.7	-6.5
VIVA					AML	AML		
	comp=E,672μm,1.3s							
VIVA					AML	AML		
	comp=N,368μm,0.4s							

ROM 28 02:48:21.5±0.1, 43°.049N±0°.004×13°.094E±0°.007, h6km, ML1.9/6, 6C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=88.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**203**	P		Pg	02 48 22.5	-0.1
FDMO				S		Sg	02 48 23.1	-0.3
CESI	**CESI - Serrava**	**0.15**	**253**	⇑P		Pg	02 48 25.3	+0.8
CESI				S		Sg	02 48 28.2	+1.6
CESI					AML	AML		
	comp=E,366μm,0.7s							
CESI					AML	AML		
	comp=N,321μm,0.4s							
CESI					AML	AML		
	comp=E,870μm,0.5s							
CESI					AML	AML		
	comp=N,1150μm,0.2s							
T1216	**Preci, Frazion**	**0.17**	**199**	⇑P		Pg	02 48 25.6	+0.7
T1216					AML	AML		
	comp=E,1315μm,0.3s							
T1216					AML	AML		
	comp=N,1690μm,0.3s							
T1216					AML	AML		
	comp=N,1692μm,0.3s							
T1216					AML	AML		
	comp=E,1316μm,0.3s							
GUMA	**Gualdo di Mace**	**0.18**	**85**	P		Pg	02 48 26.0	+0.9
GUMA				S		Sg	02 48 29.6	+2.1
GUMA					AML	AML		
	comp=E,948μm,0.9s							
GUMA					AML	AML		
	comp=N,900μm,0.6s							
AM05	**Amandola Campo**	**0.20**	**111**	⇓P		Pg	02 48 26.3	+0.7
AM05					AML	AML		
	comp=N,42μm,0.1s							
AM05					AML	AML		
	comp=E,630μm,0.2s							
MMO1	**Montemonaco**	**0.23**	**131**	P		Pg	02 48 26.7	+0.7
MMO1				S		Sg	02 48 30.5	+1.5
SNTG	**Esanatoglia**	**0.23**	**331**	⇑P		Pg	02 48 26.8	+0.6
SNTG				S		Sg	02 48 31.0	+1.7
SNTG					AML	AML		
	comp=E,150μm,0.7s							
SNTG					AML	AML		
	comp=N,147μm,1.2s							
EL6	**Elcito**	**0.28**	**1**	⇑P		Pg	02 48 27.7	+0.6
EL6				S		Sb	02 48 32.7	-1.4
T1215	**Vallo di Nera,**	**0.30**	**214**	P		Pg	02 48 28.0	+0.7
T1215				S		Sb	02 48 33.0	-1.5
T1215					AML	AML		
	comp=N,340μm,0.1s							
T1215					AML	AML		
	comp=E,170μm,0.5s							
CING	**Cingoli**	**0.34**	**13**	⇑P		Pg	02 48 28.7	+0.6
CING				S		Sb	02 48 34.3	-1.3
T1243	**Rocca Santa Ma**	**0.44**	**143**	⇑P		Pg	02 48 30.4	+0.4
T1243				S		Sb	02 48 38.0	-0.6
SMA1	**SAN MARTINO**	**0.45**	**157**	S		Sb	02 48 39.0	-0.1
ARVD	**Arcevia**	**0.46**	**346**	⇓P		Pg	02 48 31.1	+0.7

ROM 28 02:49:00.0±0.1, 42°.992N±0°.004×13°.150E±0°.004, h9km, ML2.0/6, 7C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=212.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.06**	**314**	⇑P		Pg	02 49 02.0	0.0
FDMO				S		Sg	02 49 03.2	-0.3
FDMO					AML	AML		
	comp=E,1800μm,0.2s							
FDMO					AML	AML		
	comp=N,2035μm,0.2s							
FDMO					AML	AML		
	comp=E,8485μm,0.2s							
FDMO					AML	AML		
	comp=N,9580μm,0.3s							
FEMA	**Monte Fema**	**0.08**	**248**	P		Pg	02 49 02.5	+0.2
FEMA				S		Sg	02 49 04.2	+0.3
MC2	**Monte Cornacci**	**0.09**	**159**	P		Pg	02 49 02.6	+0.2
MC2				S		Sg	02 49 04.4	+0.3
T1245	**Castelsantange**	**0.14**	**168**	⇓P		Pg	02 49 03.5	+0.3
T1245				S		Sg	02 49 06.1	+0.8
T1245					AML	AML		
	comp=E,1040μm,1.1s							
T1245					AML	AML		
	comp=N,1140μm,0.2s							
T1216	**Preci, Frazion**	**0.14**	**224**	P		Pg	02 49 03.0	-0.1
T1216				S		Sg	02 49 06.5	+1.2
AM05	**Amandola Campo**	**0.15**	**95**	P		Pg	02 49 03.9	+0.6
AM05				S		Sg	02 49 06.6	+1.1
GUMA	**Gualdo di Mace**	**0.15**	**62**	⇑P		Pg	02 49 04.2	+0.9
GUMA					AML	AML		
	comp=N,899μm,0.6s							
GUMA					AML	AML		
	comp=N,762μm,1.5s							
GUMA					AML	AML		
	comp=E,949μm,0.9s							
GUMA					AML	AML		
	comp=E,1270μm,0.9s							
MMO1	**Montemonaco**	**0.16**	**125**	⇑P		Pg	02 49 03.7	+0.3
MMO1				S		Sg	02 49 06.6	+0.8
NRCA	**Norcia**	**0.16**	**189**	P		Pg	02 49 04.7	+1.2
CESI	**CESI - Serrava**	**0.18**	**274**	⇑P		Pg	02 49 04.5	+0.7
CESI				S		Sg	02 49 07.7	+1.3
CESI					AML	AML		
	comp=E,870μm,0.5s							
CESI					AML	AML		
	comp=N,1146μm,0.2s							
CESI					AML	AML		
	comp=N,1150μm,0.2s							
T1241	**Roccafluvione,**	**0.25**	**123**	⇓P		Pg	02 49 05.7	+0.8
T1241				S		Sg	02 49 09.8	+1.5
T1241					AML	AML		
	comp=N,251μm,1.0s							
T1241					AML	AML		
	comp=E,202μm,1.6s							
T1215	**Vallo di Nera,**	**0.28**	**228**	⇓P		Pg	02 49 06.2	+0.6
SNTG	**Esanatoglia**	**0.30**	**330**	⇓P		Pb	02 49 06.9	-0.8
SNTG					AML	AML		
	comp=N,129μm,1.6s							
SNTG					AML	AML		
	comp=E,110μm,1.2s							
T1217	**Poggiodomo (PG**	**0.32**	**210**	P		Pg	02 49 06.8	+0.4
T1217				S		Sb	02 49 12.4	-0.9
EL6	**Elcito**	**0.34**	**354**	⇑P		Pg	02 49 07.4	+0.6
EL6				S		Sb	02 49 13.3	-0.6
T1243	**Rocca Santa Ma**	**0.37**	**143**	⇓P		Pg	02 49 07.9	+0.6
T1243				S		Sb	02 49 13.7	-1.0
CING	**Cingoli**	**0.39**	**5**	⇑P		Pg	02 49 08.2	+0.6
CING				S		Sb	02 49 14.8	-0.3
LNSS	**Leonessa**	**0.40**	**192**	⇑P		Pg	02 49 08.2	+0.4
LNSS				S		Sb	02 49 14.8	-0.7
SENI	**Senigallia**	**0.72**	**5**	P		Pg	02 49 13.2	-0.6
SRES	**S.Oreste - Sor**	**0.89**	**212**	⇓P		Pn	02 49 18.6	-0.2

ROM 28 02:49:51.3±0.1, 43°.025N±0°.004×13°.080E±0°.006, h10km, ML1.8/4, 1C-5D, Error ellipse: s-maj=0.5km s-min=0.4km az=188.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.13**	**261**	P		Pg	02 49 54.9	+0.5
CESI				S		Sg	02 49 57.4	+0.8
CESI					AML	AML		
	comp=E,463μm,0.5s							
CESI					AML	AML		
	comp=N,490μm,0.3s							
CESI					AML	AML		
	comp=E,464μm,0.5s							
CESI					AML	AML		
	comp=N,490μm,0.3s							
MC2	**Monte Cornacci**	**0.14**	**144**	P		Pg	02 49 55.3	+0.6
T1245	**Castelsantange**	**0.19**	**155**	⇓P		Pg	02 49 55.5	+0.1
T1245					AML	AML		
	comp=E,567μm,0.6s							
T1245					AML	AML		
	comp=N,495μm,0.6s							
T1245					AML	AML		
	comp=N,852μm,0.1s							
T1245					AML	AML		
	comp=E,818μm,0.1s							
GUMA	**Gualdo di Mace**	**0.19**	**78**	P		Pb	02 49 56.3	-0.6
GUMA				S		Sg	02 50 00.1	+1.9
GUMA					AML	AML		
	comp=E,474μm,0.5s							
GUMA					AML	AML		
	comp=N,464μm,0.3s							
NRCA	**Norcia**	**0.19**	**173**	P		Pg	02 49 54.6	-0.8
AM05	**Amandola Campo**	**0.20**	**103**	⇓P		Pb	02 49 56.5	-0.7
AM05				S		Sg	02 49 59.8	+1.3
MMO1	**Montemonaco**	**0.22**	**125**	⇓P		Pg	02 49 56.5	+0.5
MMO1				S		Sg	02 50 00.2	+1.2
SNTG	**Esanatoglia**	**0.25**	**336**	P		Pg	02 49 56.9	+0.4
SNTG				S		Sb	02 50 01.6	-0.9
SNTG					AML	AML		
	comp=E,100μm,0.8s							
SNTG					AML	AML		
	comp=N,104μm,1.4s							
SNTG					AML	AML		
	comp=E,100μm,0.8s							
SNTG					AML	AML		
	comp=N,104μm,1.4s							
EL6	**Elcito**	**0.30**	**3**	⇓P		Pg	02 49 57.8	+0.3
EL6				S		Sb	02 50 03.1	-1.0
T1241	**Roccafluvione,**	**0.31**	**123**	P		Pg	02 49 57.8	+0.3
T1241				S		Sb	02 50 03.3	-0.7
T1217	**Poggiodomo (PG**	**0.33**	**199**	P		Pg	02 49 58.6	+0.6
T1217				S		Sb	02 50 04.4	-0.4
FOSV	**Fossato di Vic**	**0.36**	**319**	P		Pg	02 49 58.8	+0.3
FOSV				S		Sb	02 50 05.0	-0.4
CING	**Cingoli**	**0.36**	**13**	⇑P		Pg	02 49 58.9	+0.4
CING				S		Sb	02 50 04.9	-0.7
ARVD	**Arcevia**	**0.48**	**348**	S		Sb	02 50 10.0	+0.8
T1211	**Morro Reatino**	**0.52**	**199**	⇓P		Pg	02 50 01.9	+0.5
PIEI	**Pieia**	**0.65**	**322**	S		Sb	02 50 15.0	+1.1

ZUR 28 02:54:30.0, 46°.39N×7°.44E, h2km±1km, MLh0.2/2, 1C, Error ellipse: s-maj=2.5km s-min=0.9km az=282.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SENIN	**Lac Senin/Sane**	**0.10**	**255**	⇑Pg		Pg	02 54 32.3	+0.3
SENIN					Sg	Sg	02 54 33.9	+0.4
LKBD	**Leukerbad**	**0.13**	**91**	Sg		Sg	02 54 34.7	+0.4
LKBD2	**Leukerbad 2**	**0.14**	**96**	Sg		Sg	02 54 35.3	+0.6

ROM 28 02:55:50.6±0.1, 43°.073N±0°.003×13°.085E±0°.005,

h9km, ML2.2/20, 18C-10D, Error ellipse: s-maj=0.4km s-min=0.1km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**177**	P	Pg	02 55 52.3	0.0
FDMO				S	Sg	02 55 53.2	-0.4
FDMO				AML	AML		
	comp=N,10115μm,0.2s						
FDMO				AML	AML		
	comp=E,12750μm,0.2s						
FEMA	**Monte Fema**	**0.11**	**193**	P	Pg	02 55 53.8	+0.4
FEMA				S	Sg	02 55 56.3	+0.9
FEMA				AML	AML		
	comp=E,3005μm,0.3s						
FEMA				AML	AML		
	comp=N,2085μm,0.7s						
FEMA				AML	AML		
	comp=E,3660μm,0.2s						
FEMA				AML	AML		
	comp=E,3665μm,0.2s						
FEMA				AML	AML		
	comp=N,3085μm,0.5s						
SEF1	**Sefro**	**0.12**	**306**	P	Pg	02 55 54.0	+0.5
SEF1				S	Sg	02 55 56.2	+0.7
SEF1				AML	AML		
	comp=E,2830μm,0.4s						
SEF1				AML	AML		
	comp=N,2985μm,1.6s						
MDAR	**Monte D'Aria**	**0.13**	**19**	⇓P	Pg	02 55 54.2	+0.6
MDAR				AML	AML		
	comp=E,962μm,1.5s						
MDAR				AML	AML		
	comp=N,1165μm,0.6s						
MDAR				AML	AML		
	comp=E,966μm,1.5s						
MDAR				AML	AML		
	comp=N,1170μm,0.6s						
PIO1	**Pioraco**	**0.13**	**325**	P	Pg	02 55 54.0	+0.4
CESI	**CESI - Serrava**	**0.15**	**243**	⇑P	Pg	02 55 54.5	+0.6
CESI				S	Sg	02 55 57.5	+1.3
CESI				AML	AML		
	comp=E,1250μm,0.6s						
CESI				AML	AML		
	comp=N,1330μm,1.4s						
GAG1	**Gagliole**	**0.17**	**356**	P	Pg	02 55 55.0	+0.8
GAG1				S	Sg	02 55 55.9	-0.7
MC2	**Monte Cornacci**	**0.18**	**154**	⇑P	Pg	02 55 55.1	+0.7
MC2				S	Sg	02 55 58.4	+1.3
GUMA	**Gualdo di Mace**	**0.18**	**93**	⇑P	Pg	02 55 55.5	+1.0
GUMA				S	Sg	02 55 59.2	+2.1
GUMA				AML	AML		
	comp=E,4245μm,0.4s						
GUMA				AML	AML		
	comp=N,2595μm,0.3s						
GUMA				AML	AML		
	comp=E,2920μm,0.4s						
GUMA				AML	AML		
	comp=N,2890μm,0.3s						
T1216	**Preci, Frazion**	**0.19**	**195**	⇑P	Pg	02 55 55.1	+0.6
T1216				S	Sg	02 55 58.8	+1.6
T1216				AML	AML		
	comp=E,1875μm,0.4s						
T1216				AML	AML		
	comp=N,2235μm,0.2s						
SNTG	**Esanatoglia**	**0.21**	**330**	⇑P	Pg	02 55 55.5	+0.6
SNTG				S	Sg	02 55 59.4	+1.5
SNTG				AML	AML		
	comp=N,312μm,0.1s						
SNTG				AML	AML		
	comp=E,342μm,0.3s						
T1245	**Castelsantange**	**0.23**	**161**	⇑P	Pg	02 55 56.0	+0.6
T1245				S	Sg	02 56 00.0	+1.5
T1245				AML	AML		
	comp=E,1595μm,0.6s						
T1245				AML	AML		
	comp=E,1584μm,0.6s						
T1245				AML	AML		
	comp=N,1725μm,0.1s						
T1245				AML	AML		
	comp=N,1675μm,0.2s						
T1245				AML	AML		
	comp=E,1582μm,0.6s						
T1245				AML	AML		
	comp=N,1730μm,0.1s						
NRCA	**Norcia**	**0.24**	**175**	⇑P	Pg	02 55 56.0	+0.5
NRCA				AML	AML		
	comp=E,1570μm,1.2s						
NRCA				AML	AML		
	comp=E,1525μm,1.2s						
NRCA				AML	AML		
	comp=N,1760μm,0.1s						
NRCA				AML	AML		
	comp=E,1575μm,1.2s						
NRCA				AML	AML		
	comp=N,1855μm,0.1s						
MMO1	**Montemonaco**	**0.25**	**134**	⇓P	Pg	02 55 56.3	+0.6
MMO1				S	Sg	02 56 00.5	+1.5
EL6	**Elcito**	**0.26**	**3**	⇑P	Pg	02 55 56.5	+0.6
EL6				S	Sb	02 56 01.1	-1.1
CING	**Cingoli**	**0.31**	**15**	⇑P	Pg	02 55 57.5	+0.6
CING				S	Sb	02 56 03.0	-0.8
CING				AML	AML		
	comp=N,536μm,0.5s						
CING				AML	AML		
	comp=E,696μm,0.1s						
T1215	**Vallo di Nera,**	**0.31**	**210**	⇑P	Pg	02 55 57.4	+0.5
T1215				S	Sb	02 56 02.4	-1.3
FOSV	**Fossato di Vic**	**0.32**	**313**	⇓P	Pg	02 55 57.7	+0.6
FOSV				S	Sb	02 56 03.1	-0.9
FOSV				AML	AML		
	comp=E,315μm,1.4s						
FOSV				AML	AML		
	comp=N,188μm,1.1s						
FOSV				AML	AML		
	comp=E,316μm,1.4s						
T1241	**Roccafluvione,**	**0.33**	**130**	⇑P	Pg	02 55 57.9	+0.7
T1241				S	Sb	02 56 03.4	-0.9
T1241				AML	AML		
	comp=E,261μm,0.5s						
T1241				AML	AML		
	comp=N,212μm,1.4s						
ATCC	**AVT- Casa Cast**	**0.34**	**289**	⇑P	Pg	02 55 58.1	+0.7
ATCC				S	Sb	02 56 04.2	-0.4
ATCC				AML	AML		
	comp=N,622μm,0.2s						
ATCC				AML	AML		
	comp=E,748μm,0.3s						
T1217	**Poggiodomo (PG**	**0.38**	**197**	⇑P	Pg	02 55 58.6	+0.5
T1217				S	Sb	02 56 04.7	-0.9
MURB	**Monte Urbino**	**0.45**	**295**	P	Pb	02 56 00.2	-0.7
MURB				S	Sb	02 56 07.8	+0.1
MURB				AML	AML		
	comp=E,504μm,0.2s						
MURB				AML	AML		
	comp=N,508μm,0.2s						
MURB				AML	AML		
	comp=E,644μm,0.8s						
MURB				AML	AML		
	comp=N,833μm,1.1s						
MURB				AML	AML		
	comp=N,508μm,0.2s						
T1243	**Rocca Santa Ma**	**0.46**	**144**	⇑P	Pg	02 55 60.0	+0.3
LNSS	**Leonessa**	**0.47**	**184**	⇓P	Pg	02 56 00.1	+0.3
LNSS				S	Sb	02 56 07.7	-0.6
LNSS				AML	AML		
	comp=E,414μm,1.2s						
LNSS				AML	AML		
	comp=N,334μm,1.2s						
LNSS				AML	AML		
	comp=E,414μm,1.2s						
SMA1	**SAN MARTINO**	**0.48**	**157**	⇓P	Pg	02 56 00.3	+0.4
SMA1				S	Sb	02 56 08.0	-0.5
SMA1				AML	AML		
	comp=E,194μm,1.2s						
SMA1				AML	AML		
	comp=E,194μm,1.2s						
SMA1				AML	AML		
	comp=N,199μm,0.7s						
FRON	**Frontone**	**0.52**	**330**	⇓P	Pg	02 56 01.0	+0.4
FRON				AML	AML		
	comp=E,200μm,0.8s						
FRON				AML	AML		
	comp=N,201μm,1.2s						
FRON				AML	AML		
	comp=E,200μm,0.8s						
ARRO	**Arrone**	**0.55**	**206**	⇑P	Pg	02 56 01.5	+0.3
ARRO				AML	AML		
	comp=N,136μm,1.5s						
ARRO				AML	AML		
	comp=E,187μm,1.1s						
ARRO				AML	AML		
	comp=N,136μm,1.5s						
T1211	**Morro Reatino**	**0.56**	**197**	⇓P	Pg	02 56 01.9	+0.3
RM33	**Pellescritta (**	**0.57**	**170**	P	Pg	02 56 02.1	+0.4
ATVO	**AVT- Monte Val**	**0.58**	**302**	⇑P	Pb	02 56 02.5	-0.6
TERO	**Teramo**	**0.59**	**139**	⇓P	Pg	02 56 02.2	+0.2
CESX	**Cesi**	**0.59**	**219**	⇑P	Pg	02 56 02.1	+0.1
CESX				AML	AML		
	comp=E,134μm,0.4s						
CESX				AML	AML		
	comp=N,138μm,1.6s						
PIEI	**Pieia**	**0.61**	**319**	P	Pg	02 56 02.8	+0.3
PIEI				AML	AML		
	comp=E,132μm,1.1s						
PIEI				AML	AML		
	comp=N,86μm,1.4s						
PIEI				AML	AML		
	comp=E,133μm,1.1s						
PIEI				AML	AML		
	comp=N,86μm,1.4s						
FSSB	**Fossombrone**	**0.66**	**340**	⇑P	Pb	02 56 04.2	-0.2
FSSB				AML	AML		
	comp=E,310μm,0.5s						
FSSB				AML	AML		
	comp=E,310μm,0.5s						
FSSB				AML	AML		
	comp=N,324μm,0.2s						
GIGS	**Gran Sasso**	**0.72**	**150**	⇓P	Pg	02 56 04.4	0.0
FAGN	**Fagnano**	**0.89**	**155**	⇓P	Pb	02 56 08.2	0.0

ROM 28 02:57:51.7±0.0, 42°.868N±0°.002×13°.152E±0°.004, h8km, ML1.9/8, 7C-5D, Error ellipse: s-maj=0.2km s-min=0.2km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**114**	P	Pg	02 57 53.5	0.0
T1245				AML	AML		
	comp=N,3800μm,0.6s						
T1245				AML	AML		
	comp=E,5065μm,0.2s						
T1245				AML	AML		
	comp=E,5205μm,0.2s						
T1245				AML	AML		
	comp=N,3800μm,0.6s						
T1245				AML	AML		
	comp=E,5070μm,0.2s						
T1245				AML	AML		
	comp=N,3745μm,0.6s						
T1245				AML	AML		
	comp=E,5210μm,0.2s						
T1245				AML	AML		
	comp=N,3795μm,0.6s						
NRCA	**Norcia**	**0.04**	**219**	⇑P	Pg	02 57 53.7	+0.2
NRCA				S	Sg	02 57 54.9	+0.1
NRCA				AML	AML		
	comp=E,2270μm,0.1s						
NRCA				AML	AML		
	comp=E,2455μm,0.1s						
NRCA				AML	AML		
	comp=N,2360μm,0.4s						
NRCA				AML	AML		
	comp=N,2535μm,0.4s						
T1216	**Preci, Frazion**	**0.10**	**283**	⇓P	Pg	02 57 54.6	+0.5
T1216				S	Sg	02 57 56.5	+0.6
T1216				AML	AML		
	comp=E,1385μm,0.3s						
T1216				AML	AML		
	comp=N,1290μm,0.3s						
T1216				AML	AML		
	comp=E,1388μm,0.3s						
T1216				AML	AML		
	comp=N,1289μm,0.3s						
T1216				AML	AML		
	comp=E,1388μm,0.3s						
FDMO	**Fiordimonte**	**0.17**	**344**	⇑P	Pg	02 57 55.8	+0.5
FDMO				S	Sg	02 57 58.8	+0.9
FDMO				AML	AML		
	comp=E,482μm,1.5s						
FDMO				AML	AML		
	comp=N,644μm,0.3s						
FDMO				AML	AML		
	comp=E,617μm,1.5s						
FDMO				AML	AML		
	comp=N,718μm,0.3s						
AM05	**Amandola Campo**	**0.18**	**53**	P	Pg	02 57 56.1	+0.6
T1215	**Vallo di Nera,**	**0.22**	**252**	⇓P	Pg	02 57 56.9	+0.8
T1215				S	Sg	02 58 00.7	+1.5
T1217	**Poggiodomo (PG**	**0.23**	**226**	⇑P	Pg	02 57 57.1	+0.8
T1217				S	Sg	02 58 01.2	+1.8
CESI	**CESI - Serrava**	**0.23**	**307**	P	Pg	02 57 56.9	+0.6
CESI				S	Sg	02 58 00.8	+1.3
CESI				AML	AML		
	comp=E,543μm,0.3s						
CESI				AML	AML		
	comp=N,1150μm,0.3s						
CESI				AML	AML		
	comp=E,544μm,0.3s						
GUMA	**Gualdo di Mace**	**0.24**	**35**	⇑P	Pg	02 57 57.3	+0.8
GUMA				S	Sg	02 58 01.6	+2.0
GUMA				AML	AML		
	comp=E,627μm,1.6s						
GUMA				AML	AML		
	comp=N,687μm,0.4s						
GUMA				AML	AML		
	comp=N,617μm,0.6s						
GUMA				AML	AML		
	comp=E,589μm,0.4s						
SMA1	**SAN MARTINO**	**0.27**	**150**	P	Pg	02 57 57.8	+0.7
SMA1				AML	AML		
	comp=E,190μm,1.6s						
SMA1				AML	AML		
	comp=N,169μm,0.9s						
LNSS	**Leonessa**	**0.28**	**197**	⇓P	Pb	02 57 58.1	-0.8
LNSS				S	Sb	02 58 02.8	-1.0
LNSS				AML	AML		
	comp=E,292μm,0.8s						
LNSS				AML	AML		
	comp=E,292μm,0.8s						
LNSS				AML	AML		
	comp=N,482μm,0.4s						
RM33	**Pellescritta (**	**0.36**	**173**	⇑P	Pg	02 57 59.5	+0.7
RM33				S	Sb	02 58 05.5	-0.7
TERO	**Teramo**	**0.41**	**126**	P	Pg	02 58 00.2	+0.5
TERO				S	Sb	02 58 07.1	-0.6
TERO				AML	AML		
	comp=E,132μm,1.0s						
TERO				AML	AML		
	comp=N,174μm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**338**	⇓P	Pg	02 58 00.3	+0.5
SNTG				S	Sb	02 58 07.1	-0.6
SNTG				AML	AML		
	comp=N,106μm,0.2s						
SNTG				AML	AML		
	comp=E,144μm,1.6s						
EL6	**Elcito**	**0.46**	**355**	⇑P	Pg	02 58 01.0	+0.3
EL6				S	Sb	02 58 08.8	-0.4
CING	**Cingoli**	**0.51**	**4**	P	Pg	02 58 01.9	+0.3
FOSV	**Fossato di Vic**	**0.51**	**326**	⇓P	Pg	02 58 01.9	+0.2
FOSV				S	Sb	02 58 10.2	-0.4
FIAM	**Fiamignano**	**0.60**	**182**	S	Sb	02 58 14.0	+0.9
ARVD	**Arcevia**	**0.65**	**346**	S	Sb	02 58 15.0	+0.6
ATFO	**Monte Foce - G**	**0.66**	**320**	P	Pg	02 58 04.2	-0.1
PIEI	**Pieia**	**0.81**	**326**	⇑P	Pg	02 58 07.1	-0.1
PIEI				S	Sb	02 58 20.0	+1.0
FSSB	**Fossombrone**	**0.87**	**342**	S	Sn	02 58 23.0	0.0
SF01	**Poggio Pratacc**	**1.17**	**268**	S	Sn	02 58 31.0	+0.5
SACR	**S. Croce Del S**	**1.87**	**141**	S	Sg	02 58 51.0	-0.7

DJA 28 02:59:01.9±1.2, 6°.S±5°.5×11°.6E±°, h10km±11km, M4.0/8, mb4.4/1, MLv3.7/8, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNI	**Mataram**	**2.15**	**190**	P	Pn	02 59 38.8	+1.0
KLNI				S	Sb	03 00 07.9	+0.2
SRBI	**Singaraja**	**2.17**	**215**	P	Pn	02 59 37.2	-0.9
SRBI				S	Sb	03 00 08.0	-0.3
TWSI	**Taliwang, Sumb**	**2.47**	**170**	P	Pn	02 59 42.6	+0.4
TWSI				S	Sn	03 00 13.2	+0.7
RTBI	**Rangdo, Negare**	**2.63**	**215**	P	Pn	02 59 45.0	+0.5
RTBI				S	Sn	03 00 15.5	-1.0
DNP	**Denpasar**	**2.68**	**208**	P	Pn	02 59 46.3	+1.2
IGBI	**Denpasar**	**2.83**	**207**	P	Pn	02 59 48.3	+1.1
PLAI	**Plampang**	**2.84**	**153**	P	Pn	02 59 46.4	-0.9
PLAI				S	Sn	03 00 20.0	-1.6
JAGI	**Jajag, Banyuwa**	**3.15**	**226**	P	Pn	02 59 51.2	-0.4
PMSI	**Majene**	**3.70**	**42**	P	Pn	03 00 00.5	+1.3
PCJI	**Pacitan**	**5.57**	**250**	P	Pn	03 00 21.7	-3.2

KRSZO 28 02:59:20.8±1.4, 47°.05N×21°.18E, h7km±9km, ML2.1/9, 9C-4D, Error ellipse: s-maj=4.1km s-min=3.7km az=82.0, Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTVH	**Ltavrtes, Hu**	**0.59**	**55**	Pg	Pb	02 59 34.3	+0.8
	comp=Z,0.2nm,SNR=2.2						
LTVH				Lg	Lg	02 59 44.0	
LTVH	**Ltavrtes, Hu**	**0.59**	**55**	P	Pb	02 59 34.3	+0.8
LTVH				S	Sn	02 59 44.0	-1.5
BSZH	**Besenyszg**	**0.67**	**292**	Lg	Lg	02 59 43.7	
BSZH	**Besenyszg**	**0.67**	**292**	S	Sb	02 59 43.7	-0.6
AMBH	**Ambrzfalva**	**0.77**	**204**	Pg	Pb	02 59 36.9	+0.5
	comp=Z,0.2nm,SNR=1.4						
AMBH				Lg	Lg	02 59 48.4	
AMBH	**Ambrzfalva**	**0.77**	**204**	P	Pb	02 59 36.9	+0.5
AMBH				S	Sb	02 59 48.4	+1.3
SIRR	**Siria**	**0.85**	**157**	⇑P	Pb	02 59 37.8	-0.1
SIRR				⇑S	Sb	02 59 49.8	+0.4
SIRR	**Siria**	**0.85**	**157**	Pg	Pb	02 59 37.6	-0.2
	comp=Z,0.1nm,SNR=1.7						
SIRR				Sg	Sb	02 59 49.7	+0.2
DRGR		**1.08**	**103**	⇑P	Pb	02 59 41.8	0.0
DRGR				⇑S	Sn	02 59 57.5	-0.2
DRGR		**1.08**	**103**	Pn	Pb	02 59 41.8	0.0
	comp=Z,0.1nm,SNR=2.2						
DRGR				Sn	Sn	02 59 57.0	-0.6
MESR	**Meseseni**	**1.21**	**85**	⇑P	Pn	02 59 44.5	+0.4
MESR				⇓S	Sn	03 00 01.1	+0.3
PSZ	**Piszkesteto**	**1.23**	**315**	Pn	Pg	02 59 42.5	-1.9
	comp=Z,0.1nm,SNR=3.2						
PSZ				Sn	Sg	02 59 58.3	-2.0
PSZ	**Piszkesteto**	**1.23**	**315**	P	Pg	02 59 42.5	-1.9
PSZ				S	Sg	02 59 58.3	-2.0
ABAH	**Abaujker**	**1.25**	**2**	Pn	Pn	02 59 44.3	-0.3
	comp=Z,0.1nm,SNR=1.4						
ABAH				Sn	Sg	02 59 59.8	-1.1
ABAH	**Abaujker**	**1.25**	**2**	P	Pn	02 59 44.3	-0.3
ABAH				S	Sg	02 59 59.8	-1.1
MARR	**Marisel-Cluj**	**1.38**	**105**	⇑P	Pn	02 59 46.2	-0.4
MARR				⇑S	Sg	03 00 06.2	+1.0
TRPA	**Tarpa**	**1.42**	**40**	Pn	Pn	02 59 46.8	-0.1
	comp=Z,0.1nm,SNR=1.9						
TRPA				Sn	Sg	03 00 07.5	+1.1
TRPA	**Tarpa**	**1.42**	**40**	P	Pn	02 59 46.8	-0.1
TRPA				S	Sg	03 00 07.5	+1.1
BZS	**Buzias**	**1.47**	**168**	⇑P	Pn	02 59 47.8	+0.2
BZS				⇑S	Sg	03 00 07.9	0.0
BZS	**Buzias**	**1.47**	**168**	Pn	Pn	02 59 47.9	+0.2
	SNR=1.4						
BZS				Lg	Lg	03 00 08.3	
KECS	**Kecovo**	**1.51**	**342**	Sn	Sb	03 00 08.5	+0.1
CJR	**Cluj-Napoca**	**1.69**	**101**	⇓S	Sn	03 00 13.1	+0.4
MORH	**Mrgy, Hungar**	**1.94**	**245**	Pn	Pb	02 59 55.3	-1.1
	comp=Z,0.1nm,SNR=2.0						
MORH				Sn	Sg	03 00 22.0	-1.0
MORH	**Mrgy, Hungar**	**1.94**	**245**	P	Pb	02 59 55.3	-1.1
MORH				S	Sg	03 00 22.0	-1.0
GZR	**Gura Zlata**	**1.99**	**146**	⇓P	Pn	02 59 54.7	-0.3
GZR				⇓S	Sn	03 00 20.4	+0.3

ROM 28 02:59:28.9±0.0, 43°.010N±0°.001×13°.067E±0°.003, h9km, Md1.3/7, 4C-5D, Error ellipse: s-maj=0.2km s-min=0.0km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**29**	⇓P	Pg	02 59 30.9	+0.2
FDMO				S	Sg	02 59 31.9	-0.1
FDMO				AML	AML		
	comp=E,22850μm,0.2s						
FDMO				AML	AML		
	comp=N,26300μm,0.3s						
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				END			
FEMA	**Monte Fema**	**0.05**	**195**	⇑P	Pg	02 59 31.3	+0.3
FEMA				S	Sg	02 59 32.6	+0.1
FEMA				AML	AML		
	comp=E,78800μm,1.2s						
FEMA				AML	AML		
	comp=N,77050μm,0.5s						
FEMA				AML	AML		
	comp=E,78850μm,1.2s						
FEMA				END			
CESI	**CESI - Serrava**	**0.12**	**268**	⇑P	Pg	02 59 32.5	+0.7
CESI				S	Sg	02 59 34.8	+1.0
CESI				AML	AML		
	comp=E,7965μm,0.9s						
CESI				AML	AML		
	comp=N,8000μm,0.4s						
CESI				AML	AML		
	comp=E,33500μm,0.5s						
CESI				AML	AML		
	comp=N,28000μm,0.5s						
CESI				END			
T1216	**Preci, Frazion**	**0.12**	**196**	P	Pg	02 59 32.4	+0.6
T1216				S	Sg	02 59 34.8	+0.9
T1216				AML	AML		
	comp=E,6975μm,0.4s						
T1216				AML	AML		
	comp=N,8980μm,0.3s						
T1216				AML	AML		
	comp=E,54700μm,1.0s						
T1216				AML	AML		
	comp=N,78750μm,1.1s						
T1216				AML	AML		
	comp=E,54750μm,1.0s						
T1216				AML	AML		
	comp=N,78750μm,1.1s						
T1216				END			
CSP1	**Cessapalombo**	**0.13**	**51**	⇑P	Pg	02 59 32.5	+0.5
CSP1				S	Sg	02 59 34.8	+0.6
CSP1				AML	AML		
	comp=E,7010μm,1.1s						
CSP1				AML	AML		
	comp=N,5375μm,0.3s						
SEF1	**Sefro**	**0.16**	**328**	P	Pg	02 59 33.1	+0.7
SEF1				S	Sg	02 59 35.9	+1.0
SEF1				AML	AML		
	comp=E,27650μm,0.3s						
SEF1				AML	AML		
	comp=N,22750μm,0.2s						
SEF1				AML	AML		
	comp=E,36200μm,0.3s						
SEF1				AML	AML		
	comp=N,22700μm,0.2s						
SEF1				END			
T1245	**Castelsantange**	**0.18**	**150**	P	Pg	02 59 33.4	+0.6
T1245				S	Sg	02 59 36.4	+1.0
T1245				AML	AML		
	comp=E,46750μm,1.4s						
T1245				AML	AML		
	comp=N,43800μm,0.7s						
T1245				AML	AML		
	comp=N,42800μm,1.0s						
T1245				AML	AML		
	comp=E,48800μm,1.4s						
NRCA	**Norcia**	**0.18**	**169**	P	Pg	02 59 33.4	+0.6
NRCA				S	Sg	02 59 36.5	+1.1
NRCA				AML	AML		
	comp=N,28800μm,1.5s						
NRCA				AML	AML		
	comp=E,22150μm,1.6s						
NRCA				AML	AML		
	comp=E,23850μm,1.6s						
NRCA				AML	AML		
	comp=N,30350μm,1.6s						
NRCA				END			
PIO1	**Pioraco**	**0.18**	**340**	P	Pg	02 59 33.4	+0.7

PIO1				S	Sg	02 59 36.4 +1.1
MDAR	**Monte D'Aria**	**0.19**	**17**	P	Pg	02 59 33.5 +0.5
MDAR				S	Sg	02 59 37.0 +1.3
GUMA	**Gualdo di Mace**	**0.20**	**75**	P	Pg	02 59 34.1 +1.0
FIU1	**Fiuminata**	**0.20**	**331**	P	Pg	02 59 34.1 +0.9
FIU1				S	Sg	02 59 37.2 +1.1
AM05	**Amandola Campo**	**0.21**	**99**	⇑P	Pg	02 59 34.1 +0.8
AM05				S	Sg	02 59 37.7 +1.4
AM05				AML	AML	
	comp=E,362μm,0.4s					
AM05				AML	AML	
	comp=N,471μm,0.4s					
AM05				AML	AML	
	comp=E,1520μm,0.4s					
AM05				AML	AML	
	comp=N,98μm,1.0s					
AM05				AML	AML	
	comp=N,11355μm,0.8s					
AM05				AML	AML	
	comp=E,65900μm,0.3s					
AM05				AML	AML	
	comp=N,2800μm,0.8s					
AM05				AML	AML	
	comp=E,16350μm,0.3s					
AM05				AML	AML	
	comp=N,11350μm,0.8s					
AM05				AML	AML	
	comp=E,65950μm,0.3s					
AM05				AML	AML	
	comp=N,2795μm,0.8s					
MMO1	**Montemonaco**	**0.22**	**120**	⇓P	Pg	02 59 34.2 +0.7
MMO1				S	Sg	02 59 37.8 +1.3
GAG1	**Gagliole**	**0.23**	**0**	P	Pg	02 59 34.5 +0.9
GAG1				S	Sg	02 59 38.4 +1.6
GAG1				AML	AML	
	comp=E,17200μm,0.4s					
GAG1				AML	AML	
	comp=N,22050μm,0.5s					
GAG1				AML	AML	
	comp=E,22600μm,0.4s					
GAG1				AML	AML	
	comp=N,24550μm,1.5s					
SSM1	**San Severino M**	**0.23**	**20**	P	Pg	02 59 34.4 +0.7
SSM1				S	Sg	02 59 38.5 +1.5
MTL1	**Matelica**	**0.25**	**350**	P	Pg	02 59 34.8 +0.7
MTL1				S	Sb	02 59 39.1 -1.0
T1215	**Vallo di Nera,**	**0.25**	**215**	P	Pg	02 59 34.8 +0.7
T1215				S	Sg	02 59 38.8 +1.3
T1215				AML	AML	
	comp=E,738μm,0.4s					
T1215				AML	AML	
	comp=N,854μm,0.3s					
T1215				AML	AML	
	comp=N,5410μm,0.5s					
T1215				AML	AML	
	comp=E,7545μm,0.5s					
T1215				AML	AML	
	comp=N,4965μm,0.5s					
T1215				AML	AML	
	comp=E,7250μm,0.5s					
T1215				AML	AML	
	comp=N,5410μm,0.4s					
T1215				AML	AML	
	comp=E,7555μm,0.5s					
T1215				AML	AML	
	comp=N,4960μm,0.4s					
SNTG	**Esanatoglia**	**0.26**	**339**	P	Pg	02 59 34.8 +0.6
SNTG				S	Sg	02 59 39.2 +1.3
SNTG				END		
T1241	**Roccafluvione,**	**0.31**	**120**	P	Pg	02 59 35.8 +0.7
T1241				S	Sb	02 59 40.8 -1.0
T1241				AML	AML	
	comp=E,12600μm,0.4s					
T1241				AML	AML	
	comp=N,9420μm,0.6s					
T1217	**Poggiodomo (PG**	**0.31**	**199**	P	Pg	02 59 35.9 +0.7
T1217				S	Sb	02 59 41.0 -1.0
T1217				AML	AML	
	comp=E,882μm,1.5s					
T1217				AML	AML	
	comp=N,1745μm,1.3s					
T1217				AML	AML	
	comp=E,9775μm,0.5s					
T1217				AML	AML	
	comp=N,10625μm,0.3s					
T1217				AML	AML	
	comp=E,9610μm,0.6s					
T1217				AML	AML	
	comp=N,10320μm,0.3s					
T1217				AML	AML	
	comp=E,9775μm,0.6s					
T1217				AML	AML	
	comp=N,10665μm,0.3s					
T1217				AML	AML	
	comp=E,9590μm,0.6s					
T1217				AML	AML	
	comp=N,10335μm,0.3s					
EL6	**Elcito**	**0.32**	**5**	P	Pg	02 59 35.8 +0.5
EL6				S	Sb	02 59 41.2 -1.0
EL6				AML	AML	
	comp=E,7860μm,1.5s					
EL6				AML	AML	
	comp=N,12600μm,0.5s					
EL6				AML	AML	
	comp=E,7960μm,1.0s					
ATCC	**AVT- Casa Cast**	**0.36**	**299**	P	Pg	02 59 36.7 +0.6
ATCC				S	Sb	02 59 42.7 -0.6
ATCC				AML	AML	
	comp=E,13200μm,0.2s					
ATCC				AML	AML	
	comp=N,10720μm,0.3s					
FOSV	**Fossato di Vic**	**0.36**	**322**	P	Pg	02 59 36.4 +0.3
FOSV				S	Sg	02 59 42.1 +1.2
CING	**Cingoli**	**0.38**	**14**	P	Pg	02 59 36.9 +0.5
CING				S	Sb	02 59 43.1 -0.7
CING				AML	AML	
	comp=E,7265μm,1.0s					
CING				AML	AML	
	comp=N,5035μm,0.9s					
T1204	**Amatrice, Fraz**	**0.38**	**151**	P	Pg	02 59 37.2 +0.7
T1204				S	Sb	02 59 43.2 -0.8
T1204				AML	AML	
	comp=E,19750μm,0.3s					
T1204				AML	AML	
	comp=N,8050μm,0.3s					
LNSS	**Leonessa**	**0.41**	**183**	P	Pg	02 59 37.3 +0.4
LNSS				S	Sb	02 59 43.9 -0.8
LNSS				AML	AML	
	comp=E,719μm,0.9s					
LNSS				AML	AML	
	comp=N,861μm,0.9s					
LNSS				AML	AML	
	comp=E,7885μm,1.2s					
LNSS				AML	AML	
	comp=N,5645μm,1.3s					
LNSS				AML	AML	
	comp=E,7890μm,1.2s					
LNSS				AML	AML	
	comp=N,6190μm,0.8s					
T1243	**Rocca Santa Ma**	**0.42**	**138**	P	Pg	02 59 37.6 +0.4
T1243				S	Sb	02 59 44.3 -0.8
SMA1	**SAN MARTINO**	**0.43**	**152**	P	Pg	02 59 37.8 +0.5
SMA1				S	Sb	02 59 44.5 -0.8
SMA1				AML	AML	
	comp=E,6255μm,0.6s					
SMA1				AML	AML	
	comp=N,7395μm,0.5s					
SMA1				AML	AML	
	comp=E,10450μm,0.6s					
SMA1				AML	AML	
	comp=N,12000μm,0.3s					
OFFI	**Offida**	**0.46**	**99**	AML	AML	
	comp=N,17800μm,0.5s					
OFFI				AML	AML	
	comp=E,9770μm,0.4s					
MURB	**Monte Urbino**	**0.47**	**303**	P	Pg	02 59 38.7 +0.6
MURB				AML	AML	
	comp=E,12650μm,0.3s					
MURB				AML	AML	
	comp=N,8325μm,0.3s					
MURB				AML	AML	
	comp=E,13400μm,0.3s					
MURB				AML	AML	
	comp=N,8530μm,0.9s					
ARRO	**Arrone**	**0.48**	**207**	P	Pg	02 59 38.7 +0.4
ARRO				S	Sb	02 59 46.2 -0.6
ARRO				AML	AML	
	comp=E,1850μm,0.3s					
ARRO				AML	AML	
	comp=N,1775μm,0.2s					
ARRO				AML	AML	
	comp=E,2745μm,0.8s					
ARRO				AML	AML	
	comp=N,2965μm,0.6s					
ARVD	**Arcevia**	**0.50**	**349**	P	Pg	02 59 38.9 +0.3
ARVD				S	Sb	02 59 47.0 -0.3
ARVD				AML	AML	
	comp=E,2910μm,0.3s					
ARVD				AML	AML	
	comp=N,2020μm,0.8s					
ARVD				AML	AML	
	comp=E,3725μm,0.5s					
ARVD				AML	AML	
	comp=N,2475μm,0.7s					
ATFO	**Monte Foce - G**	**0.51**	**315**	P	Pg	02 59 39.2 +0.4
ATFO				S	Sb	02 59 46.8 -0.8
ATFO				AML	AML	
	comp=E,3035μm,0.8s					
ATFO				AML	AML	
	comp=N,2455μm,0.5s					
RM33	**Pellescritta (**	**0.51**	**168**	P	Pg	02 59 39.3 +0.4
RM33				S	Sb	02 59 47.5 -0.3
RM33				AML	AML	
	comp=E,2705μm,0.2s					
RM33				AML	AML	
	comp=N,3560μm,0.6s					
RM33				AML	AML	
	comp=E,2625μm,0.2s					
RM33				AML	AML	
	comp=E,3515μm,0.4s					
RM33				AML	AML	
	comp=N,3560μm,0.6s					
RM33				AML	AML	
	comp=E,3615μm,0.4s					
RM33				AML	AML	
	comp=N,3505μm,0.6s					
TERO	**Teramo**	**0.55**	**134**	P	Pg	02 59 39.9 +0.2
TERO				S	Sb	02 59 48.5 -0.4
TERO				AML	AML	
	comp=E,3875μm,0.6s					
TERO				AML	AML	
	comp=N,4000μm,0.4s					
TERO				AML	AML	
	comp=E,4080μm,0.6s					
TERO				AML	AML	
	comp=E,5185μm,0.3s					
TERO				AML	AML	
	comp=E,5450μm,0.3s					
TERO				AML	AML	
	comp=N,4210μm,0.4s					
ATVO	**AVT- Monte Val**	**0.61**	**308**	P	Pg	02 59 41.0 +0.2
ATVO				AML	AML	
	comp=E,1405μm,0.4s					
ATVO				AML	AML	
	comp=N,1735μm,0.7s					
PIEI	**Pieia**	**0.65**	**324**	P	Pg	02 59 42.0 +0.4
PIEI				AML	AML	
	comp=E,492μm,1.4s					
PIEI				AML	AML	
	comp=N,347μm,0.3s					
PIEI				AML	AML	
	comp=E,1580μm,0.2s					
PIEI				AML	AML	
	comp=N,1265μm,0.5s					
ATPI	**Pietralunga -**	**0.66**	**312**	P	Pb	02 59 42.3 -0.3
ATPI				AML	AML	
	comp=E,2130μm,0.5s					
ATPI				AML	AML	
	comp=N,1260μm,0.5s					
MPAG	**Monte Paganucc**	**0.66**	**340**	⇓P	Pb	02 59 42.4 -0.3
MPAG				AML	AML	
	comp=E,2385μm,0.6s					
MPAG				AML	AML	
	comp=N,1760μm,1.2s					
NARO	**Abbazia di Nar**	**0.70**	**330**	P	Pg	02 59 42.6 +0.2
NARO				AML	AML	
	comp=E,214μm,0.7s					
NARO				AML	AML	
	comp=N,258μm,1.4s					
MGAB	**Montegabbione**	**0.71**	**262**	AML	AML	
	comp=E,4900μm,0.5s					
MGAB				AML	AML	
	comp=E,3910μm,0.5s					
MGAB				AML	AML	
	comp=N,4340μm,1.3s					
MGAB				AML	AML	
	comp=N,4240μm,0.4s					
FSSB	**Fossombrone**	**0.71**	**343**	⇓P	Pg	02 59 43.1 +0.3
FSSB				AML	AML	
	comp=E,1148μm,0.3s					
FSSB				AML	AML	
	comp=N,1565μm,1.5s					
FSSB				AML	AML	
	comp=E,7590μm,0.3s					
FSSB				AML	AML	
	comp=N,13550μm,0.4s					
MCIV	**Monte Civitell**	**1.05**	**258**	⇓P	Pg	02 59 49.0 -0.1
MCIV				AML	AML	
	comp=E,366μm,1.3s					
MCIV				AML	AML	
	comp=N,238μm,0.8s					
MCIV				AML	AML	
	comp=E,516μm,0.7s					
MCIV				AML	AML	
	comp=N,465μm,0.5s					
SF01	**Poggio Pratacc**	**1.12**	**260**	S	Sn	03 00 08.0 +1.5
SAMA	**S.Maria delle**	**1.28**	**196**	AML	AML	
	comp=N,818μm,0.9s					
SAMA				AML	AML	
	comp=E,544μm,1.5s					
SAMA				AML	AML	
	comp=N,612μm,1.4s					
SAMA				AML	AML	
	comp=E,669μm,1.6s					
PIGN	**Pignataro Magg**	**1.99**	**155**	P	Pn	03 00 03.2 +0.5
PIGN				AML	AML	
	comp=E,1520μm,1.5s					
PIGN				AML	AML	
	comp=N,1460μm,0.9s					
PIGN				AML	AML	
	comp=E,139μm,1.5s					
PIGN				AML	AML	
	comp=N,117μm,0.5s					

PRU ***28*** *03:00:13.8±0.0, 43.°02N×13.°52E, h0km*
LDG ***28*** *03:00:13.9±0.2, 43.°02N×13.°12E, h10km, Ml3.2/13, Error ellipse: s-maj=8.2km s-min=3.7km az=16.0*
ROM 28 03:00:12.8±0.1, 43.°004N±0.°004×13.°140E±0.°005, h5km, ML3.4/19, Error ellipse: s-maj=0.5km s-min=0.2km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**238**	P	Pg	03 00 14.9	+0.2
FEMA				S	Sg	03 00 16.8	+0.8
FEMA				AML	AML		
	comp=E,78800μm,1.2s						
FEMA				AML	AML		
	comp=N,77000μm,0.5s						
FEMA				AML	AML		
	comp=N,77050μm,0.5s						
FEMA				AML	AML		
	comp=E,78850μm,1.2s						
FEMA				AML	AML		
	comp=E,62503μm,0.3s						
FEMA				AML	AML		
	comp=N,77038μm,0.5s						
MC2	**Monte Cornacci**	**0.10**	**158**	P	Pg	03 00 15.1	+0.1
MC2				S	Sg	03 00 16.9	+0.3
GUMA	**Gualdo di Mace**	**0.15**	**68**	P	Pg	03 00 16.7	+0.7
GUMA				S	Sg	03 00 19.7	+1.7
GUMA				AML	AML		
	comp=N,89350μm,0.5s						
GUMA				AML	AML		
	comp=E,86900μm,1.5s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,86823μm,0.3s						
GUMA				AML	AML		
	comp=N,89355μm,0.5s						
GUMA				AML	AML		
AM05	**Amandola Campo**	**0.16**	**100**	P	Pg	03 00 16.4	+0.3
AM05				S	Sg	03 00 19.1	+1.0
AM05				AML	AML		
	comp=N,11340μm,0.8s						
AM05				AML	AML		
	comp=E,65900μm,0.3s						
AM05				AML	AML		
	comp=E,16350μm,0.3s						
AM05				AML	AML		
	comp=N,11335μm,0.8s						
AM05				AML	AML		
	comp=N,2795μm,0.8s						
AM05				AML	AML		
	comp=N,11355μm,0.8s						
AM05				AML	AML		
	comp=E,65950μm,0.3s						
AM05				AML	AML		
	comp=N,2800μm,0.8s						
AM05				AML	AML		
	comp=N,11375μm,0.8s						
AM05				AML	AML		
	comp=N,2443μm,0.1s						
AM05				AML	AML		
	comp=E,65928μm,0.3s						
AM05				AML	AML		
	comp=E,16348μm,0.3s						
AM05				AML	AML		
	comp=N,11112μm,0.1s						
CESI	**CESI - Serrava**	**0.17**	**270**	P	Pg	03 00 16.6	+0.3
CESI				S	Sg	03 00 19.9	+1.2
CESI				AML	AML		
	comp=N,28000μm,0.5s						
CESI				AML	AML		
	comp=E,33500μm,0.5s						
CESI				AML	AML		
	comp=N,28050μm,0.5s						
CESI				AML	AML		
	comp=N,24160μm,0.4s						
CESI				AML	AML		
	comp=E,33509μm,0.5s						
MDAR	**Monte D'Aria**	**0.19**	**1**	P	Pg	03 00 17.0	+0.4
MDAR				S	Sg	03 00 20.3	+1.2
SEF1	**Sefro**	**0.20**	**315**	P	Pg	03 00 17.7	+0.8
SEF1				S	Sg	03 00 20.9	+1.4
SNTG	**Esanatoglia**	**0.29**	**330**	P	Pg	03 00 19.1	+0.6
SNTG				S	Sg	03 00 23.8	+1.4
EL6	**Elcito**	**0.33**	**355**	P	Pb	03 00 20.5	-0.7
EL6				S	Sb	03 00 25.2	-1.6
FOSV	**Fossato di Vic**	**0.40**	**316**	P	Pg	03 00 21.5	+0.8
FOSV				S	Sb	03 00 29.1	+0.2
PGF	**Pioggiola**	**3.08**	**263**	*e*P	Pn	03 01 03.7	+1.5
PGF				*e*Sn	Sn	03 01 36.4	-3.1
	comp=E,3.5nm,0.4s						
MYKA	**Terra Mystica**	**3.64**	**5**	*e*Pn	Pn	03 01 10.3	+0.4
	comp=E,7.4nm,0.4s,SNR=6.1						
OBKA	**Obir**	**3.65**	**15**	*i* Pn	Pn	03 01 09.5	-0.5
	comp=E,2.5nm,0.3s						
ABTA	**Abfaltersbach**	**3.77**	**353**	*e*Pn	Pn	03 01 12.7	+1.0
	comp=E,33nm,0.5s,SNR=41						
KBA	**Koelnbreinsper**	**4.08**	**2**	*e*Pn	Pn	03 01 16.8	+0.8
	comp=E,5.4nm,0.3s						
SBF	**Sospel**	**4.24**	**284**	*e*P	Pn	03 01 19.0	+0.9
SBF				*e*Sn	Sn	03 02 03.6	-4.5
	comp=E,22nm,0.6s						
FETA	**Feichten**	**4.37**	**338**	*e*Pn	Pn	03 01 21.8	+1.9
	comp=E,6.9nm,0.4s,SNR=10						
FETA				*e*Sn	Sn	03 02 13.4	+2.2
	comp=E,6.0nm,0.6s						
WTTA	**Wattenberg**	**4.39**	**346**	*i* Pn	Pn	03 01 22.3	+2.0
	comp=E,3.2nm,0.3s						
WTTA				*e*Sn	Sn	03 02 14.4	+2.5
	comp=E,27nm,0.5s						
SQTA	**Sankt Quirin**	**4.43**	**343**	*i* Pn	Pn	03 01 22.7	+1.9
	comp=E,17nm,0.4s,SNR=12						
SQTA				*e*Sn	Sn	03 02 13.5	+0.8
	comp=E,18nm,0.4s						
WATA	**Walderalm**	**4.47**	**346**	*e*Pn	Pn	03 01 23.3	+1.9
	comp=E,10nm,0.4s,SNR=8.7						
WATA				*e*Sn	Sn	03 02 17.0	+3.2
	comp=E,21nm,0.5s						
ARSA	**Arzberg**	**4.57**	**21**	*e*Pn	Pn	03 01 23.1	+0.5
	comp=E,4.2nm,0.4s						
ARSA				*e*Sn	Sn	03 02 14.4	-1.6
	comp=E,8.2nm,0.7s						
MOTA	**Moosalm**	**4.57**	**342**	*i* Pn	Pn	03 01 25.0	+2.3
	comp=E,5.7nm,0.3s,SNR=13						
MOTA				*i* Sn	Sn	03 02 19.0	+2.7
	comp=E,14nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.70**	**4**	*e*Pn	Pn	03 01 25.4	+1.0
	comp=E,17nm,0.3s,SNR=8.1						
BIOA				*e*Sn	Sn	03 02 21.2	+1.9
	comp=E,21nm,0.5s						
RETA	**Reutte**	**4.79**	**340**	*i* Pn	Pn	03 01 27.2	+1.6
	comp=E,5.4nm,0.4s,SNR=7.0						
RETA				*i* Sn	Sn	03 02 23.8	+2.4
	comp=E,8.5nm,0.5s						
LMR	**La Mourre**	**4.86**	**276**	*e*P	Pn	03 01 25.8	-0.8
DAVA	**Damuels**	**4.86**	**333**	*i* Pn	Pn	03 01 28.1	+1.3
	comp=E,7.9nm,0.5s,SNR=9.3						
DAVA				*i* Sn	Sn	03 02 25.6	+2.2
	comp=E,16nm,0.5s						
MOA	**Molln**	**4.91**	**9**	*i* Pn	Pn	03 01 28.2	+1.0
	comp=E,3.7nm,0.4s,SNR=7.5						
MBDF	**Montbardon**	**4.92**	**293**	*e*P	Pn	03 01 31.0	+3.5
MBDF				*e*Sn	Sn	03 02 19.5	-5.3
	comp=E,11nm,0.7s						
RONA	**Rosalia, Austr**	**5.20**	**24**	*i* Pn	Pn	03 01 31.2	+0.1
	comp=E,2.6nm,0.4s						
RONA				*i* Sn	Sn	03 02 30.8	-0.7
	comp=E,2.8nm,0.4s						
LPG	**La Plagne**	**5.22**	**301**	*e*P	Pn	03 01 33.3	+1.5
LPG				*e*Sn	Sn	03 02 26.6	-5.9
	comp=E,11nm,0.8s						
LPL	**La Plagne**	**5.24**	**301**	*e*P	Pn	03 01 33.4	+1.4
LPL				*e*Sn	Sn	03 02 28.6	-4.3
	comp=E,17nm,0.9s						
CONA	**Conrad Observa**	**5.28**	**20**	*i* Pn	Pn	03 01 32.4	-0.1
	comp=E,3.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.58**	**293**	*e*P	Pn	03 01 40.5	+4.0
ORIF				*e*Sn	Sn	03 02 35.3	-5.7
	comp=E,6.1nm,0.7s						
SMRF	**Simiane la Rot**	**5.59**	**283**	*e*P	Pn	03 01 37.1	+0.5
CKRC	**Cesky Krumlov**	**5.87**	**8**	*e*PN	Pn	03 01 40.0	-0.5
CKRC				*e*SN	Sn	03 02 45.7	-2.5
KHC	**Kasperske Hory**	**6.14**	**3**	*e*PN	Pn	03 01 43.3	-0.8
KHC				*e*SN	Sn	03 02 52.3	-2.3
CABF	**La Chapelle**	**6.18**	**308**	*e*P	Pn	03 01 46.0	+1.3
VIVF	**Saint-Julien-l**	**6.39**	**290**	*e*P	Pn	03 01 51.8	+4.2
VIVF				*e*Sn	Sn	03 02 53.5	-7.4
	comp=E,0.6nm,0.3s						
HINF	**Hinteralfeld**	**6.54**	**320**	*e*P	Pn	03 01 49.1	-0.5
HINF				*e*Sn	Sn	03 02 57.3	-7.2
	comp=E,41nm,1.0s						
CDF	**Champ du Feu**	**6.79**	**325**	*e*P	Pn	03 01 53.0	-0.1
CDF				*e*Sn	Sn	03 03 03.5	-7.3
	comp=E,6.3nm,0.6s						
LASF	**Ste Croix**	**6.83**	**282**	*e*P	Pn	03 01 56.6	+3.0
HAU	**Haudompre**	**6.91**	**319**	*e*P	Pn	03 01 54.4	-0.3
HAU				*e*Sn	Sn	03 03 04.1	-10
	comp=E,21nm,0.6s						
PRU	**Pruhonice**	**7.05**	**7**	*e*SN	Sn	03 03 14.7	-2.4
NKC	**Novy Kostel**	**7.25**	**356**	*e*SN	Sn	03 03 20.6	-1.4
SMF	**Signal de Mont**	**7.55**	**302**	*e*P	Pn	03 02 06.3	+2.9
SMF				*e*Sn	Sn	03 03 22.7	-6.6
	comp=E,9.0nm,0.8s						
PAGF	**Fort de Pagny**	**7.59**	**320**	*e*P	Pn	03 02 07.1	+3.0
SFTF	**Sexfontaines**	**7.70**	**315**	*e*P	Pn	03 02 07.7	+2.2
LOR	**Lormes**	**7.82**	**306**	*e*Pn	Pn	03 02 05.3	-2.0
LOR				*e*Sn	Sn	03 03 29.4	-6.8
	comp=E,4.8nm,0.5s						
AVF	**Avril sur Loir**	**7.91**	**302**	*e*P	Pn	03 02 10.5	+2.1
SSF	**Saint Saulge**	**7.94**	**304**	*e*P	Pn	03 02 10.8	+2.0
SSF				*e*Sn	Sn	03 03 30.8	-8.1
	comp=E,2.6nm,0.5s						
BGF	**Bois d'Agland**	**8.14**	**299**	*e*P	Pn	03 02 13.7	+2.1
CAF	**Calviac**	**8.22**	**287**	*e*P	Pn	03 02 12.1	-0.6
CLL	**Collm**	**8.31**	**359**	*e*Pn	Pn	03 02 12.0	-1.8
CLL				*ex*	x	03 02 16.0	
CLL				*e*Sn	Sn	03 03 33.0	-15
CLL				*e*Sg	Sg	03 04 39.0	-0.3
RJF	**Les Rejaudoux**	**8.67**	**289**	*e*P	Pn	03 02 18.6	-0.2

ROM 28 03:00:53.6±0.1, 42°.928N±0°.003×13°.070E±0°.004, h10km, Md1.3/4, 4C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=353.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.04**	**337**	⇓P	Pg	03 00 55.9	+0.2
FEMA				S	Sg	03 00 57.2	0.0
FEMA				AML	AML		
	comp=E,12750μm,0.2s						
FEMA				AML	AML		
	comp=N,9070μm,0.8s						
FEMA				END			
T1216	**Preci, Frazion**	**0.05**	**225**	⇑P	Pg	03 00 56.0	+0.4
T1216				S	Sg	03 00 57.4	+0.2
T1216				AML	AML		
	comp=E,30500μm,0.4s						
T1216				AML	AML		
	comp=N,20550μm,0.3s						
T1216				AML	AML		
	comp=E,30500μm,0.4s						
T1216				AML	AML		
	comp=N,20600μm,0.3s						
T1216				END			
MC2	**Monte Cornacci**	**0.09**	**100**	P	Pg	03 00 56.6	+0.3
MC2				S	Sg	03 00 58.5	+0.4
MC2				END			
NRCA	**Norcia**	**0.10**	**161**	P	Pg	03 00 56.7	+0.5
NRCA				AML	AML		
	comp=E,96300μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,96350μm,0.2s						
NRCA				AML	AML		
FDMO	**Fiordimonte**	**0.11**	**7**	⇑P	Pg	03 00 56.8	+0.5
FDMO				S	Sg	03 00 58.8	+0.5
FDMO				AML	AML		
	comp=E,3690μm,0.7s						
FDMO				AML	AML		
	comp=N,6050μm,0.2s						
FDMO				END			
T1245	**Castelsantange**	**0.11**	**129**	P	Pg	03 00 57.0	+0.5
T1245				S	Sg	03 00 59.2	+0.6
T1245				AML	AML		
	comp=N,17550μm,0.2s						
T1245				AML	AML		
	comp=N,17450μm,0.2s						
T1245				AML	AML		
	comp=E,13450μm,0.7s						
T1245				AML	AML		
	comp=E,14050μm,0.7s						
CESI	**CESI - Serrava**	**0.14**	**302**	P	Pg	03 00 57.4	+0.5
CESI				S	Sg	03 01 00.1	+0.8
MMO1	**Montemonaco**	**0.19**	**98**	P	Pg	03 00 58.2	+0.5
MMO1				S	Sg	03 01 01.4	+0.9
T1215	**Vallo di Nera,**	**0.19**	**230**	⇑P	Pg	03 00 58.4	+0.7
T1215				S	Sg	03 01 01.5	+1.0
T1215				AML	AML		
	comp=E,3375μm,0.1s						
T1215				AML	AML		
	comp=N,4305μm,0.1s						
AM05	**Amandola Campo**	**0.21**	**76**	P	Pg	03 00 58.7	+0.6
AM05				S	Sg	03 01 02.2	+1.2
GUMA	**Gualdo di Mace**	**0.24**	**55**	P	Pg	03 00 59.2	+0.8
T1217	**Poggiodomo (PG**	**0.24**	**205**	⇑P	Pg	03 00 59.1	+0.6
T1217				S	Sg	03 01 03.0	+1.2
T1201	**Domo (RI)**	**0.30**	**154**	P	Pb	03 01 00.5	-0.6
T1204	**Amatrice, Fraz**	**0.31**	**144**	P	Pg	03 01 00.4	+0.5
T1204				S	Sb	03 01 05.3	-1.2
LNSS	**Leonessa**	**0.33**	**184**	P	Pg	03 01 00.7	+0.6
LNSS				S	Sb	03 01 05.9	-1.0
SMA1	**SAN MARTINO**	**0.36**	**147**	P	Pb	03 01 01.7	-0.4
T1243	**Rocca Santa Ma**	**0.36**	**130**	P	Pg	03 01 01.0	+0.2
T1243				S	Sb	03 01 06.9	-1.1
T1211	**Morro Reatino**	**0.42**	**202**	P	Pg	03 01 02.5	+0.6
T1211				S	Sb	03 01 09.1	-0.6

ROM 28 03:01:39.5±0.1, 43°.007N±0°.003×13°.139E±0°.004, h8km, ML2.4/4, 12C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=187.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.05**	**308**	⇑P	Pg	03 01 41.2	0.0
FDMO				S	Sg	03 01 42.5	0.0
FDMO				AML	AML		
	comp=N,6050μm,0.2s						
FDMO				AML	AML		
	comp=E,3690μm,0.7s						
FDMO				AML	AML		
	comp=N,6050μm,0.2s						
FDMO				AML	AML		
	comp=E,3606μm,0.2s						
FEMA	**Monte Fema**	**0.08**	**236**	P	Pg	03 01 42.0	+0.3
FEMA				S	Sg	03 01 43.9	+0.6
FEMA				AML	AML		
	comp=E,2895μm,0.3s						
FEMA				AML	AML		
	comp=N,3470μm,0.4s						
FEMA				AML	AML		
	comp=E,2583μm,0.1s						
FEMA				AML	AML		
	comp=N,2835μm,0.3s						
MC2	**Monte Cornacci**	**0.10**	**158**	⇓P	Pg	03 01 42.3	+0.2
T1216	**Preci, Frazion**	**0.15**	**217**	⇑P	Pg	03 01 43.1	+0.5
T1216				S	Sg	03 01 45.8	+1.0
T1216				AML	AML		
	comp=E,1473μm,0.3s						
T1216				AML	AML		
	comp=N,1648μm,0.2s						
GUMA	**Gualdo di Mace**	**0.15**	**69**	⇑P	Pg	03 01 43.5	+0.8
GUMA				S	Sg	03 01 46.7	+1.7
GUMA				AML	AML		
	comp=E,2315μm,0.3s						
GUMA				AML	AML		
	comp=N,2235μm,0.5s						
GUMA				AML	AML		
	comp=N,2236μm,0.5s						
GUMA				AML	AML		
	comp=E,1877μm,0.3s						
GUMA				AML	AML		
	comp=E,2316μm,0.3s						
GUMA				AML	AML		
	comp=N,1790μm,0.5s						
T1245	**Castelsantange**	**0.15**	**167**	⇓P	Pg	03 01 43.2	+0.4
T1245				S	Sg	03 01 46.1	+1.0
T1245				AML	AML		
	comp=E,1210μm,0.2s						
T1245				AML	AML		
	comp=N,1170μm,0.3s						
T1245				AML	AML		
	comp=N,4215μm,0.7s						
T1245				AML	AML		
	comp=E,3460μm,0.9s						
T1245				AML	AML		
	comp=N,4135μm,0.8s						
T1245				AML	AML		
	comp=E,3740μm,0.9s						
T1245				AML	AML		
	comp=N,1201μm,0.3s						
T1245				AML	AML		
	comp=E,1211μm,0.2s						
T1245				AML	AML		
	comp=N,1171μm,0.3s						
T1245				AML	AML		
	comp=E,1280μm,0.2s						
AM05	**Amandola Campo**	**0.16**	**101**	⇑P	Pg	03 01 43.4	+0.5
AM05				S	Sg	03 01 46.2	+1.0
AM05				AML	AML		
	comp=E,548μm,1.0s						
AM05				AML	AML		
	comp=N,566μm,0.8s						
AM05				AML	AML		
	comp=N,186μm,0.1s						
AM05				AML	AML		
	comp=N,187μm,0.1s						
AM05				AML	AML		
	comp=N,565μm,0.8s						
AM05				AML	AML		
	comp=E,548μm,1.0s						
AM05				AML	AML		
	comp=E,2555μm,1.1s						
AM05				AML	AML		
	comp=E,497μm,0.3s						
AM05				AML	AML		
	comp=N,539μm,0.1s						
AM05				AML	AML		
	comp=E,2129μm,0.1s						
AM05				AML	AML		
	comp=N,187μm,0.1s						
CESI	**CESI - Serrava**	**0.17**	**269**	⇑P	Pg	03 01 43.8	+0.7
CESI				S	Sg	03 01 47.0	+1.4
CESI				AML	AML		
	comp=E,1265μm,1.6s						
CESI				AML	AML		
	comp=N,1025μm,0.8s						
CESI				AML	AML		
	comp=N,1019μm,0.2s						
CESI				AML	AML		
	comp=E,1140μm,0.4s						
MMO1	**Montemonaco**	**0.17**	**128**	⇑P	Pg	03 01 43.5	+0.3
MMO1				S	Sg	03 01 46.5	+0.8
T1241	**Roccafluvione,**	**0.26**	**125**	⇑P	Pg	03 01 45.4	+0.7
T1241				S	Sb	03 01 50.0	-1.2
T1241				AML	AML		
	comp=N,217μm,0.2s						
T1241				AML	AML		
	comp=E,348μm,0.4s						
T1215	**Vallo di Nera,**	**0.28**	**224**	⇑P	Pg	03 01 46.0	+0.8
T1215				S	Sb	03 01 50.7	-1.0
T1215				AML	AML		
	comp=E,179μm,0.2s						
T1215				AML	AML		
	comp=N,149μm,0.1s						
T1215				AML	AML		
	comp=E,204μm,0.4s						
T1215				AML	AML		
	comp=N,160μm,0.1s						
SNTG	**Esanatoglia**	**0.29**	**330**	⇑P	Pg	03 01 45.8	+0.5
SNTG				S	Sb	03 01 50.8	-1.1
SNTG				AML	AML		
	comp=E,206μm,0.8s						
SNTG				AML	AML		
	comp=N,227μm,0.2s						
SNTG				AML	AML		
	comp=E,138μm,0.2s						
SNTG				AML	AML		
	comp=N,206μm,0.3s						
EL6	**Elcito**	**0.32**	**355**	⇓P	Pg	03 01 46.6	+0.6
EL6				AML	AML		
	comp=E,338μm,0.4s						
EL6				AML	AML		
	comp=N,424μm,0.3s						
T1217	**Poggiodomo (PG**	**0.33**	**208**	⇑P	Pg	03 01 46.8	+0.8
T1217				AML	AML		
	comp=E,241μm,0.3s						
T1217				AML	AML		
	comp=N,335μm,0.3s						
T1217				AML	AML		
	comp=E,235μm,0.3s						
T1217				AML	AML		
	comp=N,316μm,0.3s						
CING	**Cingoli**	**0.37**	**6**	P	Pb	03 01 47.6	-0.8
CING				S	Sb	03 01 53.5	-0.8
CING				AML	AML		
	comp=N,181μm,0.2s						
CING				AML	AML		
	comp=E,291μm,0.2s						
T1243	**Rocca Santa Ma**	**0.38**	**144**	⇑P	Pg	03 01 47.5	+0.5
FOSV	**Fossato di Vic**	**0.40**	**316**	⇑P	Pg	03 01 47.8	+0.5
FOSV				S	Sb	03 01 54.7	-0.4
FOSV				AML	AML		
	comp=E,131μm,0.4s						
FOSV				AML	AML		
	comp=N,244μm,0.3s						
ARVD	**Arcevia**	**0.51**	**344**	⇓P	Pg	03 01 49.9	+0.5
ARVD				S	Sb	03 01 59.0	+0.7
ARVD				AML	AML		
	comp=E,164μm,0.2s						
ARVD				AML	AML		
	comp=N,119μm,0.8s						

ROM 28 03:05:59.4±0.0, 42°.905N±0°.003×13°.059E±0°.003, h11km, ML1.9/6, 1C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=345.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**245**	⇓P	Pg	03 06 01.8	+0.3
T1216				S	Sg	03 06 03.2	+0.2
T1216				AML	AML		
	comp=E,9800μm,0.8s						
T1216				AML	AML		
	comp=N,9010μm,0.5s						
T1216				AML	AML		
	comp=E,9790μm,0.9s						
T1216				AML	AML		
	comp=N,9020μm,0.5s						
T1216				AML	AML		
	comp=E,2320μm,0.2s						
T1216				AML	AML		
	comp=N,2321μm,0.1s						
T1216				AML	AML		
	comp=E,2036μm,0.1s						
FEMA	**Monte Fema**	**0.06**	**353**	P	Pg	03 06 02.1	+0.3
FEMA				S	Sg	03 06 03.8	+0.1
FEMA				AML	AML		
	comp=N,7575μm,0.8s						
FEMA				AML	AML		
	comp=E,10950μm,0.9s						
FEMA				AML	AML		
	comp=E,11000μm,0.9s						
FEMA				AML	AML		
	comp=N,1399μm,0.0s						
FEMA				AML	AML		
	comp=E,1276μm,0.1s						
FEMA				AML	AML		
	comp=N,1406μm,0.2s						
T1245	**Castelsantange**	**0.11**	**117**	P	Pg	03 06 02.7	+0.4
T1245				S	Sg	03 06 04.9	+0.4
T1245				AML	AML		
	comp=E,14550μm,0.5s						
T1245				AML	AML		
	comp=E,13200μm,0.5s						
T1245				AML	AML		
	comp=N,18550μm,0.3s						
T1245				AML	AML		
	comp=N,17750μm,0.3s						
T1245				AML	AML		
	comp=N,18500μm,0.3s						
T1245				AML	AML		
	comp=E,14600μm,0.5s						
T1245				AML	AML		
	comp=N,1826μm,0.2s						
T1245				AML	AML		
	comp=E,1362μm,0.2s						
T1245				AML	AML		
	comp=N,1874μm,0.1s						
T1245				AML	AML		
	comp=E,1329μm,0.2s						
CESI	**CESI - Serrava**	**0.15**	**312**	⇑P	Pg	03 06 03.5	+0.6
CESI				S	Sg	03 06 06.3	+0.8
CESI				AML	AML		
	comp=N,3375μm,0.2s						
CESI				AML	AML		
	comp=E,2680μm,0.4s						
CESI				AML	AML		
	comp=N,1429μm,0.1s						
CESI				AML	AML		
	comp=E,787μm,0.1s						
T1215	**Vallo di Nera,**	**0.17**	**234**	P	Pg	03 06 03.8	+0.5
T1215				S	Sg	03 06 06.7	+0.8
T1215				AML	AML		
	comp=N,1151μm,0.2s						
T1215				AML	AML		
	comp=E,1320μm,0.5s						
T1215				AML	AML		
	comp=N,1155μm,0.2s						
T1215				AML	AML		
	comp=E,343μm,0.1s						
T1215				AML	AML		
	comp=N,219μm,0.0s						
T1215				AML	AML		
	comp=N,238μm,0.1s						
T1215				AML	AML		
	comp=E,343μm,0.1s						
T1215				AML	AML		
	comp=N,238μm,0.1s						
MMO1	**Montemonaco**	**0.20**	**91**	P	Pg	03 06 04.1	+0.4
MMO1				S	Sg	03 06 07.5	+0.9
T1217	**Poggiodomo (PG**	**0.21**	**206**	P	Pg	03 06 04.5	+0.5
T1217				S	Sg	03 06 08.1	+1.0
T1217				AML	AML		
	comp=E,1215μm,0.3s						
T1217				AML	AML		
	comp=E,1233μm,0.3s						
T1217				AML	AML		
	comp=N,1740μm,0.8s						
T1217				AML	AML		
	comp=E,1220μm,0.3s						
T1217				AML	AML		
	comp=N,1755μm,0.8s						
T1217				AML	AML		
	comp=E,1232μm,0.3s						
T1217				AML	AML		
	comp=N,1735μm,0.8s						
T1217				AML	AML		
	comp=E,1230μm,0.3s						
T1217				AML	AML		
	comp=N,1738μm,0.8s						
T1217				AML	AML		
	comp=N,1750μm,0.8s						
T1217				AML	AML		
	comp=E,86μm,0.2s						
T1217				AML	AML		
	comp=E,70μm,0.2s						
T1217				AML	AML		
	comp=N,86μm,0.2s						
T1217				AML	AML		
	comp=N,266μm,0.8s						
AM05	**Amandola Campo**	**0.23**	**71**	P	Pg	03 06 04.7	+0.5
AM05				S	Sg	03 06 08.5	+1.1
AM05				AML	AML		
	comp=E,1575μm,0.1s						
AM05				AML	AML		
	comp=N,2300μm,0.1s						
AM05				AML	AML		
	comp=E,7730μm,0.1s						
AM05				AML	AML		
	comp=N,824μm,0.1s						
AM05				AML	AML		
	comp=E,52μm,0.1s						
AM05				AML	AML		
	comp=E,249μm,0.1s						
AM05				AML	AML		
	comp=N,32μm,0.0s						
AM05				AML	AML		
	comp=N,99μm,0.0s						
AM05				AML	AML		
	comp=E,1576μm,0.1s						
AM05				AML	AML		
	comp=N,2302μm,0.1s						
AM05				AML	AML		
	comp=E,7733μm,0.1s						
AM05				AML	AML		
	comp=N,823μm,0.1s						
T1241	**Roccafluvione,**	**0.28**	**100**	P	Pg	03 06 05.5	+0.4
T1241				S	Sb	03 06 10.2	-0.9
T1241				AML	AML		
	comp=N,1145μm,0.4s						
T1241				AML	AML		
	comp=E,1330μm,1.3s						
T1241				AML	AML		
	comp=N,221μm,0.9s						
T1241				AML	AML		
	comp=N,696μm,0.2s						
T1241				AML	AML		
	comp=E,114μm,0.7s						
T1241				AML	AML		
	comp=E,806μm,0.2s						
T1211	**Morro Reatino**	**0.40**	**202**	P	Pg	03 06 07.6	+0.2
T1211				S	Sb	03 06 14.1	-0.5
TERO	**Teramo**	**0.49**	**125**	P	Pg	03 06 08.9	0.0
TERO				AML	AML		
	comp=E,549μm,1.5s						
TERO				AML	AML		
	comp=N,582μm,1.3s						
TERO				AML	AML		
	comp=E,599μm,0.3s						
TERO				AML	AML		
	comp=E,550μm,1.5s						
TERO				AML	AML		
	comp=N,581μm,1.3s						
TERO				AML	AML		
	comp=N,623μm,1.3s						
TERO				AML	AML		
	comp=E,544μm,0.2s						
TERO				AML	AML		
	comp=E,502μm,0.2s						
TERO				AML	AML		
	comp=N,491μm,0.3s						
TERO				AML	AML		
	comp=N,448μm,0.2s						
MCIV	**Monte Civitell**	**1.02**	**263**	⇓P	Pg	03 06 18.5	-0.6
MCIV				AML	AML		
	comp=E,82μm,0.3s						
MCIV				AML	AML		
	comp=N,69μm,0.3s						

ROM 28 03:06:11.9±0.1, 42°.913N±0°.003×13°.160E±0°.004, h8km, ML2.5/36, 22C-16D, Error ellipse: s-maj=0.3km s-min=0.1km az=173.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.02**	**90**	P	Pg	03 06 13.2	-0.5
MC2				S	Sg	03 06 14.1	-0.9
T1245	**Castelsantange**	**0.06**	**160**	⇑P	Pg	03 06 14.0	+0.1
T1245				S	Sg	03 06 15.6	+0.2
T1245				AML	AML		
	comp=N,18500μm,0.3s						
T1245				AML	AML		
	comp=N,17750μm,0.3s						
T1245				AML	AML		
	comp=E,14600μm,0.5s						
T1245				AML	AML		
	comp=E,13200μm,0.5s						
T1245				AML	AML		
	comp=N,18550μm,0.3s						
T1245				AML	AML		
	comp=E,13341μm,0.2s						
T1245				AML	AML		
	comp=N,14256μm,0.2s						
T1245				AML	AML		
	comp=E,12333μm,0.2s						
T1245				AML	AML		
	comp=N,13718μm,0.1s						
NRCA	**Norcia**	**0.09**	**203**	⇑P	Pg	03 06 14.6	+0.4
NRCA				S	Sg	03 06 16.5	+0.7
NRCA				AML	AML		
	comp=E,28100μm,0.3s						
NRCA				AML	AML		
	comp=N,33950μm,0.2s						
NRCA				AML	AML		
	comp=E,26250μm,0.3s						
NRCA				AML	AML		
	comp=N,32000μm,0.2s						
NRCA				AML	AML		
	comp=N,32000μm,0.2s						
NRCA				AML	AML		
	comp=E,26250μm,0.3s						
NRCA				AML	AML		
	comp=E,26240μm,0.3s						
NRCA				AML	AML		
	comp=N,32007μm,0.2s						
NRCA				AML	AML		
	comp=N,33949μm,0.2s						
NRCA				AML	AML		
	comp=E,28089μm,0.3s						
FEMA	**Monte Fema**	**0.09**	**301**	⇓P	Pg	03 06 14.7	+0.4
FEMA				S	Sg	03 06 16.1	0.0
FEMA				AML	AML		
	comp=E,11000μm,0.9s						
FEMA				AML	AML		
	comp=N,7575μm,0.8s						
FEMA				AML	AML		
	comp=E,10950μm,0.9s						
FEMA				AML	AML		
	comp=E,9459μm,0.3s						
FEMA				AML	AML		
	comp=N,6923μm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**258**	⇑P	Pg	03 06 14.9	+0.5
T1216				S	Sg	03 06 17.0	+0.8
T1216				AML	AML		
	comp=E,9800μm,0.8s						

T1216				AML	AML	
	comp=N,9010μm,0.5s					
T1216				AML	AML	
	comp=E,9795μm,0.8s					
T1216				AML	AML	
	comp=E,9790μm,0.9s					
T1216				AML	AML	
	comp=N,9020μm,0.5s					
T1216				AML	AML	
	comp=E,9820μm,0.8s					
T1216				AML	AML	
	comp=E,8495μm,0.3s					
T1216				AML	AML	
	comp=N,9019μm,0.5s					
MMO1	**Montemonaco**	**0.12**	**96**	P	Pg	03 06 15.6 +0.9
MMO1				S	Sg	03 06 17.2 +0.5
FDMO	**Fiordimonte**	**0.14**	**337**	⇑P	Pg	03 06 15.3 +0.4
FDMO				S	Sg	03 06 17.9 +0.9
FDMO				AML	AML	
	comp=N,6000μm,0.3s					
FDMO				AML	AML	
	comp=E,4515μm,1.4s					
FDMO				AML	AML	
	comp=N,5999μm,0.3s					
FDMO				AML	AML	
	comp=E,4361μm,0.2s					
AM05	**Amandola Campo**	**0.16**	**65**	⇓P	Pg	03 06 15.9 +0.6
AM05				S	Sg	03 06 18.4 +0.9
AM05				AML	AML	
	comp=E,1580μm,0.1s					
AM05				AML	AML	
	comp=N,2305μm,0.1s					
AM05				AML	AML	
	comp=E,7735μm,0.1s					
AM05				AML	AML	
	comp=E,1575μm,0.1s					
AM05				AML	AML	
	comp=N,2300μm,0.1s					
AM05				AML	AML	
	comp=E,7730μm,0.1s					
AM05				AML	AML	
	comp=N,824μm,0.1s					
AM05				AML	AML	
	comp=N,823μm,0.1s					
AM05				AML	AML	
	comp=E,1576μm,0.1s					
AM05				AML	AML	
	comp=N,2302μm,0.1s					
AM05				AML	AML	
	comp=E,7733μm,0.1s					
CSP1	**Cessapalombo**	**0.18**	**11**	⇓P	Pg	03 06 16.1 +0.3
CSP1				S	Sg	03 06 19.3 +1.0
CSP1				AML	AML	
	comp=N,3095μm,0.3s					
CSP1				AML	AML	
	comp=E,3305μm,1.4s					
CSP1				AML	AML	
	comp=N,3098μm,0.3s					
CSP1				AML	AML	
	comp=E,3106μm,0.4s					
GUMA	**Gualdo di Mace**	**0.20**	**41**	⇑P	Pg	03 06 16.8 +0.9
GUMA				S	Sg	03 06 20.5 +1.8
GUMA				AML	AML	
	comp=N,4710μm,0.3s					
GUMA				AML	AML	
	comp=E,4400μm,1.4s					
GUMA				AML	AML	
	comp=E,4615μm,0.6s					
GUMA				AML	AML	
	comp=N,4935μm,0.4s					
GUMA				AML	AML	
	comp=N,4710μm,0.3s					
GUMA				AML	AML	
	comp=E,4277μm,0.4s					
GUMA				AML	AML	
	comp=N,4712μm,0.3s					
GUMA				AML	AML	
	comp=E,4415μm,0.3s					
GUMA				AML	AML	
	comp=N,4935μm,0.4s					
T1241	**Roccafluvione,**	**0.21**	**106**	⇑P	Pg	03 06 16.9 +0.7
T1241				S	Sg	03 06 20.6 +1.6
T1241				AML	AML	
	comp=N,1145μm,0.4s					
T1241				AML	AML	
	comp=E,1330μm,1.3s					
T1241				AML	AML	
	comp=E,1042μm,0.4s					
T1241				AML	AML	
	comp=N,228μm,0.9s					
T1241				AML	AML	
	comp=E,105μm,0.6s					
T1241				AML	AML	
	comp=N,1034μm,0.3s					
CESI	**CESI - Serrava**	**0.21**	**296**	⇓P	Pg	03 06 16.8 +0.6
CESI				S	Sg	03 06 20.6 +1.5
CESI				AML	AML	
	comp=E,2680μm,0.4s					
CESI				AML	AML	
	comp=N,3375μm,0.2s					
CESI				AML	AML	
	comp=E,2682μm,0.4s					
CESI				AML	AML	
	comp=N,3376μm,0.2s					
T1215	**Vallo di Nera,**	**0.24**	**243**	P	Pg	03 06 17.5 +0.8
T1215				S	Sg	03 06 21.6 +1.6
T1215				AML	AML	
	comp=E,1320μm,0.4s					
T1215				AML	AML	
	comp=N,1150μm,0.2s					
T1215				AML	AML	
	comp=E,1320μm,0.5s					
T1215				AML	AML	
	comp=E,1320μm,0.5s					
T1215				AML	AML	
	comp=N,1155μm,0.2s					
T1215				AML	AML	
	comp=E,1402μm,0.5s					
T1215				AML	AML	
	comp=N,1158μm,0.2s					
T1215				AML	AML	
	comp=E,1319μm,0.5s					
T1215				AML	AML	
	comp=N,1153μm,0.2s					
T1217	**Poggiodomo (PG**	**0.26**	**220**	⇑P	Pg	03 06 18.0 +0.8
T1217				S	Sb	03 06 22.5 -1.1
T1217				AML	AML	
	comp=E,1232μm,0.3s					
T1217				AML	AML	
	comp=N,1740μm,0.8s					
T1217				AML	AML	
	comp=N,1755μm,0.8s					
T1217				AML	AML	
	comp=E,1232μm,0.3s					
T1217				AML	AML	
	comp=N,1735μm,0.8s					
T1217				AML	AML	
	comp=E,1220μm,0.3s					
T1217				AML	AML	
	comp=E,1230μm,0.3s					
T1217				AML	AML	
	comp=N,1750μm,0.8s					
T1217				AML	AML	
	comp=N,1738μm,0.8s					
T1217				AML	AML	
	comp=E,1234μm,0.3s					
T1217				AML	AML	
	comp=N,1497μm,0.3s					
T1217				AML	AML	
	comp=E,1219μm,0.3s					
T1217				AML	AML	
	comp=N,1531μm,0.4s					
T1204	**Amatrice, Fraz**	**0.26**	**154**	⇓P	Pb	03 06 18.3 -0.7
T1204				AML	AML	
	comp=E,1252μm,0.5s					
T1204				AML	AML	
	comp=N,1170μm,0.8s					
T1204				AML	AML	
	comp=N,863μm,0.2s					
T1204				AML	AML	
	comp=E,1040μm,0.4s					
T1243	**Rocca Santa Ma**	**0.30**	**135**	⇑P	Pg	03 06 18.5 +0.6
SMA1	**SAN MARTINO**	**0.31**	**155**	⇑P	Pg	03 06 18.7 +0.6
SMA1				S	Sb	03 06 23.9 -1.1
SMA1				AML	AML	
	comp=N,1030μm,1.2s					
SMA1				AML	AML	
	comp=E,1515μm,0.5s					
SMA1				AML	AML	
	comp=N,1035μm,1.2s					
SMA1				AML	AML	
	comp=E,1514μm,0.5s					
SMA1				AML	AML	
	comp=N,978μm,0.4s					
LNSS	**Leonessa**	**0.32**	**196**	⇓P	Pg	03 06 18.9 +0.6
LNSS				AML	AML	
	comp=E,2725μm,0.2s					
LNSS				AML	AML	
	comp=N,2120μm,1.4s					
LNSS				AML	AML	
	comp=N,2115μm,1.4s					
LNSS				AML	AML	
	comp=E,2730μm,0.2s					
LNSS				AML	AML	
	comp=N,2073μm,0.2s					
LNSS				AML	AML	
	comp=E,2725μm,0.2s					
SNTG	**Esanatoglia**	**0.38**	**335**	⇓P	Pg	03 06 19.8 +0.5
SNTG				AML	AML	
	comp=E,614μm,0.5s					
SNTG				AML	AML	
	comp=N,686μm,0.8s					
SNTG				AML	AML	
	comp=N,650μm,0.8s					
SNTG				AML	AML	
	comp=E,535μm,0.5s					
SNTG				AML	AML	
	comp=N,566μm,0.4s					
SNTG				AML	AML	
	comp=N,537μm,0.4s					
SNTG				AML	AML	
	comp=E,462μm,0.6s					
SNTG				AML	AML	
	comp=E,452μm,0.3s					
OFFI	**Offida**	**0.39**	**87**	⇑P	Pb	03 06 21.0 0.0
OFFI				AML	AML	
	comp=N,871μm,1.3s					
OFFI				AML	AML	
	comp=N,872μm,1.3s					
OFFI				AML	AML	
	comp=E,746μm,1.6s					
OFFI				AML	AML	
	comp=E,736μm,0.7s					
OFFI				AML	AML	
	comp=N,827μm,0.4s					
RM33	**Pellescritta (**	**0.41**	**174**	⇑P	Pg	03 06 20.4 +0.6
RM33				AML	AML	
	comp=N,1003μm,0.4s					
RM33				AML	AML	
	comp=E,713μm,0.2s					
RM33				AML	AML	
	comp=N,990μm,0.4s					
RM33				AML	AML	
	comp=N,993μm,0.4s					
RM33				AML	AML	
	comp=E,708μm,0.2s					
RM33				AML	AML	
	comp=N,1004μm,0.4s					
RM33				AML	AML	
	comp=N,992μm,0.4s					
RM33				AML	AML	
	comp=E,708μm,0.2s					
RM33				AML	AML	
	comp=N,1002μm,0.4s					
RM33				AML	AML	
	comp=E,713μm,0.2s					
EL6	**Elcito**	**0.42**	**354**	S	Sb	03 06 28.0 -0.1
CAMP	**Campotosto**	**0.42**	**154**	⇑P	Pg	03 06 20.5 +0.4
CAMP				AML	AML	
	comp=N,752μm,0.2s					
CAMP				AML	AML	
	comp=E,482μm,1.3s					
CAMP				AML	AML	
	comp=N,753μm,0.2s					
CAMP				AML	AML	
	comp=E,468μm,0.2s					
TERO	**Teramo**	**0.44**	**131**	⇑P	Pg	03 06 20.8 +0.4
TERO				AML	AML	
	comp=E,550μm,1.5s					
TERO				AML	AML	
	comp=N,581μm,1.3s					
TERO				AML	AML	
	comp=E,598μm,0.3s					
TERO				AML	AML	
	comp=E,549μm,1.5s					
TERO				AML	AML	
	comp=N,582μm,1.3s					
TERO				AML	AML	
	comp=E,599μm,0.3s					
TERO				AML	AML	
	comp=N,623μm,1.3s					
TERO				AML	AML	
	comp=E,544μm,0.2s					
TERO				AML	AML	
	comp=N,448μm,0.2s					
TERO				AML	AML	
	comp=E,502μm,0.2s					
TERO				AML	AML	
	comp=N,491μm,0.3s					
T1211	**Morro Reatino**	**0.44**	**211**	S	Sb	03 06 29.0 +0.3
ARRO	**Arrone**	**0.44**	**221**	⇓P	Pg	03 06 21.2 +0.7
ARRO				AML	AML	
	comp=N,474μm,0.8s					
ARRO				AML	AML	
	comp=E,516μm,0.2s					
ARRO				AML	AML	
	comp=N,424μm,0.2s					
ARRO				AML	AML	
	comp=E,515μm,0.2s					
CING	**Cingoli**	**0.46**	**3**	⇓P	Pg	03 06 21.5 +0.5
CING				AML	AML	
	comp=N,504μm,0.9s					
CING				AML	AML	
	comp=E,443μm,0.2s					
CING				AML	AML	
	comp=N,479μm,0.2s					
CING				AML	AML	
	comp=E,443μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.47**	**306**	⇓P	Pg	03 06 21.5 +0.5
ATCC				AML	AML	
	comp=E,852μm,1.5s					
ATCC				AML	AML	
	comp=N,612μm,1.4s					
ATCC				AML	AML	
	comp=E,852μm,1.5s					
ATCC				AML	AML	
	comp=N,605μm,0.4s					
ATCC				AML	AML	
	comp=E,672μm,0.3s					
FOSV	**Fossato di Vic**	**0.48**	**323**	⇓P	Pg	03 06 21.6 +0.3
FOSV				AML	AML	
	comp=E,470μm,0.5s					
FOSV				AML	AML	
	comp=N,1235μm,0.4s					
FOSV				AML	AML	
	comp=E,470μm,0.5s					
FOSV				AML	AML	
	comp=E,431μm,0.3s					
FOSV				AML	AML	
	comp=N,1235μm,0.4s					
CESX	**Cesi**	**0.52**	**235**	⇑P	Pg	03 06 22.4 +0.4
CESX				S	Sb	03 06 31.0 0.0
CESX				AML	AML	
	comp=E,580μm,1.4s					
CESX				AML	AML	
	comp=N,562μm,1.5s					
CESX				AML	AML	
	comp=E,496μm,0.3s					
CESX				AML	AML	
	comp=N,456μm,0.4s					
GIGS	**Gran Sasso**	**0.55**	**147**	⇓P	Pg	03 06 23.0 +0.4
GIGS				AML	AML	
	comp=E,107μm,1.3s					
GIGS				AML	AML	
	comp=N,134μm,0.4s					
GIGS				AML	AML	
	comp=E,107μm,1.3s					
GIGS				AML	AML	
	comp=N,134μm,0.4s					
GIGS				AML	AML	
	comp=N,124μm,0.2s					
GIGS				AML	AML	
	comp=E,87μm,0.2s					
PP3	**Marolino**	**0.57**	**35**	⇑P	Pb	03 06 24.4 +0.3
PP3				AML	AML	
	comp=N,1090μm,0.4s					
PP3				AML	AML	
	comp=E,946μm,1.6s					
PP3				AML	AML	
	comp=E,954μm,1.6s					
PP3				AML	AML	
	comp=N,1043μm,0.4s					
MURB	**Monte Urbino**	**0.58**	**307**	⇑P	Pg	03 06 23.6 +0.4
MURB				S	Sn	03 06 35.0 -1.3
MURB				AML	AML	
	comp=E,1092μm,0.2s					
MURB				AML	AML	
	comp=N,908μm,0.3s					
MURB				AML	AML	
	comp=E,1088μm,0.2s					
MURB				AML	AML	
	comp=N,912μm,0.3s					
MURB				AML	AML	
	comp=N,948μm,0.2s					
MURB				AML	AML	
	comp=E,1135μm,0.2s					
MURB				AML	AML	
	comp=E,1090μm,0.2s					
MURB				AML	AML	
	comp=N,911μm,0.3s					
MURB				AML	AML	
	comp=N,948μm,0.2s					
MURB				AML	AML	
	comp=E,1135μm,0.2s					
AQU	**L'Aquila**	**0.59**	**162**	⇑P	Pg	03 06 23.8 +0.6
AQU				S	Sb	03 06 34.0 +1.1
AQU				AML	AML	
	comp=E,306μm,1.6s					
AQU				AML	AML	
	comp=N,274μm,1.1s					
AQU				AML	AML	
	comp=N,248μm,0.4s					
AQU				AML	AML	
	comp=E,256μm,0.3s					
AQU				AML	AML	
	comp=N,265μm,0.4s					
AQU				AML	AML	
	comp=E,276μm,0.3s					
ARVD	**Arcevia**	**0.61**	**345**	⇑P	Pg	03 06 21.7 -2.0
ARVD				S	Sb	03 06 35.0 +1.5
ATFO	**Monte Foce - G**	**0.62**	**317**	⇑P	Pg	03 06 24.3 +0.3
ATFO				AML	AML	
	comp=N,214μm,1.5s					
ATFO				AML	AML	
	comp=E,235μm,0.7s					
ATFO				AML	AML	
	comp=E,205μm,0.5s					
ATFO				AML	AML	
	comp=N,202μm,0.4s					
FIAM	**Fiamignano**	**0.65**	**183**	P	Pg	03 06 24.6 +0.3
FIAM				S	Sb	03 06 35.0 +0.4
FIAM				AML	AML	
	comp=E,296μm,0.2s					
FIAM				AML	AML	
	comp=N,220μm,0.3s					
FIAM				AML	AML	
	comp=E,295μm,0.2s					
FIAM				AML	AML	
	comp=N,220μm,0.3s					
FIAM				AML	AML	
	comp=E,295μm,0.2s					
FAGN	**Fagnano**	**0.72**	**154**	⇑P	Pg	03 06 26.2 +0.4
FAGN				AML	AML	
	comp=N,510μm,1.5s					
FAGN				AML	AML	
	comp=N,511μm,1.5s					
FAGN				AML	AML	
	comp=E,606μm,0.3s					
FAGN				AML	AML	
	comp=N,486μm,0.4s					
FAGN				AML	AML	
	comp=E,605μm,0.3s					
VCEL	**Villa Celiera**	**0.72**	**136**	P	Pg	03 06 26.2 +0.4
VCEL				AML	AML	
	comp=N,368μm,1.5s					
VCEL				AML	AML	
	comp=E,364μm,1.2s					
VCEL				AML	AML	
	comp=N,351μm,0.3s					
VCEL				AML	AML	
	comp=E,365μm,1.2s					
ATVO	**AVT- Monte Val**	**0.72**	**311**	⇑P	Pg	03 06 25.9 +0.1
ATVO				AML	AML	
	comp=E,166μm,0.4s					
ATVO				AML	AML	
	comp=N,146μm,1.6s					
ATVO				AML	AML	
	comp=N,146μm,1.6s					
ATVO				AML	AML	
	comp=E,165μm,0.4s					
ATVO				AML	AML	
	comp=N,134μm,0.3s					
PIEI	**Pieia**	**0.77**	**324**	⇓P	Pb	03 06 27.4 -0.2
PIEI				S	Sn	03 06 41.0 +0.1
PIEI				AML	AML	
	comp=N,133μm,1.5s					
PIEI				AML	AML	
	comp=N,133μm,1.5s					
PIEI				AML	AML	
	comp=E,170μm,0.3s					
PIEI				AML	AML	
	comp=E,170μm,0.3s					
PIEI				AML	AML	
	comp=N,127μm,0.2s					
NARO	**Abbazia di Nar**	**0.82**	**329**	⇓P	Pg	03 06 27.7 +0.1
NARO				AML	AML	
	comp=N,82μm,0.4s					
NARO				AML	AML	
	comp=E,106μm,0.4s					
T0110	**Collepietro**	**0.82**	**146**	P	Pg	03 06 27.9 +0.2
T0110				AML	AML	
	comp=E,278μm,1.5s					
T0110				AML	AML	
	comp=N,348μm,1.3s					
T0110				AML	AML	
	comp=N,329μm,0.4s					
T0110				AML	AML	
	comp=E,259μm,0.4s					
FSSB	**Fossombrone**	**0.83**	**340**	⇓P	Pb	03 06 28.3 -0.3
FSSB				AML	AML	
	comp=E,548μm,0.3s					
FSSB				AML	AML	
	comp=N,672μm,0.4s					
FSSB				AML	AML	
	comp=E,548μm,0.3s					
FSSB				AML	AML	
	comp=N,672μm,0.4s					
PE3	**Peglio**	**0.92**	**328**	⇓P	Pn	03 06 30.9 -0.2
PE3				AML	AML	
	comp=N,5μm,0.1s					
PE3				AML	AML	
	comp=E,4μm,1.2s					
PE3				AML	AML	
	comp=E,2μm,0.1s					
PE3				AML	AML	
	comp=N,3μm,0.1s					
INTR	**Introdacqua**	**1.06**	**148**	⇑P	Pg	03 06 30.6 -1.6
SEI	**Scarperia**	**1.74**	**312**	S	Sn	03 07 04.0 -0.8
PAOL	**Paolisi**	**2.15**	**150**	P	Pn	03 06 48.6 +0.5

*IDC **28** 03:09:20.5±1.6,2˙38S×140˙58E,h0km,mb3.7/3,*
mbtmp3.8/4,ML3.7/1,MS3.4/3,Error ellipse: s-maj=77.8km
s-min=26.5km az=99.0
*DJA **28** 03:09:24.4±1.5,2˙S±5˙×14˙0E±˙,h10km,M3.6/2,MLv3.6/2*
ISC 28 03:09:24.4±1.3,2˙31S±0˙08×140˙4E±0˙1,h24km,n9,
σ1§11/10,mb3.9/3,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.34**	**214**	P	**Pb**	**03 09 31.1**	**-0.9**
GENI				S	**Sb**	**03 09 35.9**	**-1.2**
SMPI	**Sarmi**	**1.68**	**281**	P	**Pn**	**03 09 52.0**	**-0.3**
SMPI				S	**Sn**	**03 10 13.4**	**+0.3**
WAMI	**Wamena**	**2.27**	**226**	P	**Pn**	**03 10 01.5**	**+1.1**
WAMI				S	**Sn**	**03 10 29.5**	**+1.8**
PMG	**Port Moresby**	**9.77**	**136**	LR	LR	03 16 11.9	
	comp=Z,62nm,18.2s,baz=7.5,slow=43						
WRA	**Warramunga Arr**	**18.48**	**198**	P	**P**	**03 13 38.2**	**-0.7**
	0.3nm,0.3s,baz=22,slow=12,SNR=19						
	2.5nm,0.7s						

ASAR	**Alice Springs**	**22.13 196**	P		**P**	**03 14 17.9**	**-0.6**
	1.5nm,0.6s,baz=27,slow=9.8,SNR=27						
ASAR			LR		LR	03 23 29.8	
	comp=Z,68nm,19.1s,baz=338,slow=38						
	1.5nm,0.6s						
MSVF	**Nonsavu**	**40.03 115**	LR		LR	03 30 30.3	
	comp=Z,264nm,19.8s,baz=134,slow=32						
MKAR	**Makanchi Array**	**70.49 322**	P		**P**	**03 20 38.1**	**+0.9**
	1.0nm,0.8s,baz=99,slow=7.5,SNR=4.8						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**84.79 24**	P		**P**	**03 21 56.5**	**-0.1**
	0.6nm,0.8s,baz=267,slow=4.6,SNR=5.0						
	0.6nm,0.8s						

*JMA **28** 03:19:22.1±0.2, 42°.0N±0°.8×142°.6E±0°.7, h63km±1km, MV3.6/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .
*IDC **28** 03:19:28.8±7.4, 41°.94N×142°.58E, h131km±116km, mb3.5/7, mbtmp3.8/9, ML2.4/1, MS3.7/2, Error ellipse: s-maj=123.5km s-min=23.6km az=171.0*

ISC 28 03:19:21.6±0.9, 41°.99N±0°.06×142°.55E±0°.04, h63km±7km, n36, σ0°81/36, mb3.8/7, 11D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.33**	**28**	P	**Pn**	**03 19 32.2**	**0.0**
JNBK				*e*S	**Sn**	**03 19 39.9**	**-0.1**
JSHD	**Hidakashinhida**	**0.42**	**352**	P	**Pn**	**03 19 33.4**	**+0.3**
JSHD				*e*S	**Sn**	**03 19 42.2**	**+0.8**
JEM	**Erimo**	**0.46**	**87**	P	**Pn**	**03 19 33.9**	**+0.5**
JTHR	**Tokachihiroo**	**0.63**	**61**	P	**Pn**	**03 19 35.5**	**+0.2**
JTHR				*e*S	**Sn**	**03 19 45.3**	**+0.1**
JIAM	**Iburiatsuma**	**0.79**	**324**	⇓P	**Pn**	**03 19 38.0**	**+0.9**
JBT2	**Biratori 2**	**0.80**	**350**	⇓P	**Pn**	**03 19 37.1**	**-0.2**
JBT2				⇓*e*S	**Sn**	**03 19 48.5**	**-0.3**
JCH	**Churui**	**0.87**	**44**	P	**Pn**	**03 19 38.1**	**0.0**
JCH				*e*S	**Sn**	**03 19 49.9**	**-0.4**
JKB	**Kayabe**	**1.14**	**265**	⇓P	**Pn**	**03 19 42.1**	**+0.6**
JKB				⇓*e*S	**Sn**	**03 19 56.8**	**+0.5**
JFR	**Furan**	**1.17**	**2**	*e*P	**Pn**	**03 19 42.0**	**-0.1**
JEW	**Eniwo**	**1.18**	**317**	⇓P	**Pn**	**03 19 42.5**	**+0.4**
JEW				⇓*e*S	**Sn**	**03 19 57.7**	**+0.3**
JNB	**Noboribetsu**	**1.22**	**294**	⇓P	**Pn**	**03 19 42.4**	**-0.3**
JNB				⇓*e*S	**Sn**	**03 19 58.4**	**+0.1**
JOT	**Ohata**	**1.28**	**242**	⇓P	**Pn**	**03 19 44.2**	**+0.8**
JOT				⇓*e*S	**Sn**	**03 20 00.5**	**+0.8**
JOB	**Onbets**	**1.32**	**46**	*e*P	**Pn**	**03 19 44.9**	**+0.9**
JOB				*e*S	**Sn**	**03 20 02.0**	**+1.3**
JISS	**Ishikarishitsu**	**1.53**	**327**	*e*P	**Pn**	**03 19 47.2**	**+0.5**
JISS				*e*S	**Sn**	**03 20 06.4**	**+0.7**
JAB	**Ashibetsu**	**1.53**	**351**	*e*P	**Pn**	**03 19 47.3**	**+0.5**
JAR	**Ashorobuto**	**1.59**	**34**	*e*P	**Pn**	**03 19 47.8**	**+0.2**
JAR				*e*S	**Sn**	**03 20 06.9**	**-0.2**
MJAR	**Matsushiro Arr**	**6.40**	**213**	P	Pn	03 20 59.9	+6.6
	0.1nm,0.3s,baz=35,slow=16,SNR=4.8						
	1.5nm,0.5s						
KSRS	**Korea Array**	**12.14**	**253**	P	**P**	**03 22 18.8**	**-3.3**
	1.5nm,0.7s,baz=67,slow=14,SNR=4.6						
SONM	**Songino Array**	**26.09**	**295**	P	**P**	**03 24 50.5**	**+1.1**
	0.4nm,0.4s,baz=69,slow=9.2,SNR=3.8						
	0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**30.29**	**130**	T	T	03 57 08.6	
	baz=323,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**30.30**	**130**	T	T	03 57 02.9	
	baz=323,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	**30.31**	**130**	T	T	03 57 09.9	
	baz=323,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**31.15**	**131**	T	T	03 58 10.8	
	baz=325,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**31.16**	**131**	T	T	03 58 10.2	
	baz=325,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**31.17**	**131**	T	T	03 58 11.2	
	baz=325,slow=76,SNR=22						
ZALV	**Zalesovo Beam**	**39.39**	**308**	P	**P**	**03 26 45.3**	**+0.5**
	1.4nm,0.5s,baz=88,slow=7.9,SNR=8.6						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**03 27 10.4**	**+0.6**
	1.3nm,0.9s,baz=87,slow=7.4,SNR=6.2						
	1.3nm,0.9s						
ILAR	**Eielson Array**	**44.89**	**35**	P	**P**	**03 27 29.9**	**+0.4**
	0.2nm,0.4s,baz=264,slow=5.7,SNR=4.4						
	0.2nm,0.4s						
INK	**Inuvik**	**49.60**	**29**	P	**P**	**03 28 06.2**	**+0.2**
	1.1nm,0.8s,baz=302,slow=8.2,SNR=6.5						
	1.1nm,0.8s						
PMG	**Port Moresby**	**51.32**	**174**	LR	LR	03 47 40.9	
	comp=Z,56nm,21.5s,baz=43,slow=33						
FINES	**FINESS Array B**	**64.86**	**332**	P	**P**	**03 29 53.7**	**+0.1**
	10nm,1.3s,baz=55,slow=7.2,SNR=7.8						
	10nm,1.3s						
ASAR	**Alice Springs**	**65.81**	**189**	LR	LR	03 56 28.9	
	comp=Z,90nm,22.0s,baz=140,slow=34						
AKASG	**Malin Array Be**	**70.93**	**322**	P	**P**	**03 30 32.0**	**0.0**
	0.6nm,0.4s,baz=48,slow=5.4,SNR=4.3						
	0.6nm,0.4s						
H03N2	**Juan Fernandez**	**146.36**	**89**	T	T	06 22 03.1	
	baz=300,slow=76,SNR=5.0						
H03N3	**Juan Fernandez**	**146.38**	**89**	T	T	06 22 10.8	
	baz=300,slow=76,SNR=4.5						
H03N1	**Juan Fernandez**	**146.38**	**89**	T	T	06 22 05.9	
	baz=300,slow=76,SNR=4.2						

ROM 28 03:44:31.4±0.1, 42°.864N±0°.003×13°.060E±0°.004, h10km, ML2.3/23, 14C-9D, Error ellipse: s-maj=0.3km s-min=0.2km az=314.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**312**	P	Pg	03 44 33.7	+0.3
T1216				S	Sg	03 44 35.1	+0.2
T1216				AML	AML		
	comp=E,14750μm,0.3s						
T1216				AML	AML		
	comp=N,20600μm,0.3s						
T1216				AML	AML		
	comp=N,20550μm,0.3s						
T1216				AML	AML		
	comp=E,14700μm,0.3s						
T1216				AML	AML		
	comp=N,11067μm,0.2s						
T1216				AML	AML		
	comp=E,12213μm,0.3s						
NRCA	**Norcia**	**0.05**	**127**	⇓P	Pg	03 44 33.9	+0.3
NRCA				S	Sg	03 44 35.2	+0.1
NRCA				AML	AML		
	comp=E,7870μm,0.1s						
NRCA				AML	AML		
	comp=E,8760μm,0.1s						
NRCA				AML	AML		
	comp=E,7865μm,0.1s						
NRCA				AML	AML		
	comp=N,27650μm,0.1s						
NRCA				AML	AML		
	comp=N,29550μm,0.2s						
NRCA				AML	AML		
	comp=E,7867μm,0.1s						
NRCA				AML	AML		
	comp=N,27675μm,0.1s						
NRCA				AML	AML		
	comp=N,29522μm,0.2s						
NRCA				AML	AML		
	comp=E,8762μm,0.1s						
T1245	**Castelsantange**	**0.10**	**94**	⇓P	Pg	03 44 34.5	+0.4
T1245				S	Sg	03 44 36.5	+0.4
T1245				AML	AML		
	comp=E,9650μm,0.5s						
T1245				AML	AML		
	comp=N,13600μm,0.3s						
T1245				AML	AML		
	comp=N,13500μm,0.3s						
T1245				AML	AML		
	comp=E,9685μm,0.5s						
T1245				AML	AML		
	comp=E,8960μm,0.5s						
T1245				AML	AML		
	comp=E,9670μm,0.5s						
T1245				AML	AML		
	comp=E,8965μm,0.5s						
T1245				AML	AML		
	comp=N,13650μm,0.3s						
T1245				AML	AML		
	comp=N,12971μm,0.2s						
T1245				AML	AML		
	comp=E,8483μm,0.1s						
T1245				AML	AML		
	comp=N,12256μm,0.2s						
T1245				AML	AML		
	comp=E,7191μm,0.2s						
FEMA	**Monte Fema**	**0.10**	**356**	⇓P	Pg	03 44 34.6	+0.4
FEMA				S	Sg	03 44 36.4	+0.2
FEMA				AML	AML		
	comp=E,8635μm,0.6s						
FEMA				AML	AML		
	comp=N,8290μm,0.6s						
FEMA				AML	AML		
	comp=E,6436μm,0.1s						
FEMA				AML	AML		
	comp=N,6555μm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**63**	P	Pg	03 44 34.8	+0.5
MC2				S	Sg	03 44 37.0	+0.5
T1215	**Vallo di Nera,**	**0.15**	**246**	⇑P	Pg	03 44 35.5	+0.6
T1215				S	Sg	03 44 38.1	+0.8
T1215				AML	AML		
	comp=E,1760μm,0.5s						
T1215				AML	AML		
	comp=N,3785μm,0.1s						
T1215				AML	AML		
	comp=E,1595μm,0.5s						
T1215				AML	AML		
	comp=N,4015μm,0.1s						
T1215				AML	AML		
	comp=E,1760μm,0.5s						
T1215				AML	AML		
	comp=N,3790μm,0.1s						
T1215				AML	AML		
	comp=E,1605μm,0.5s						
T1215				AML	AML		
	comp=N,878μm,0.1s						
T1215				AML	AML		
	comp=N,930μm,0.1s						
T1215				AML	AML		
	comp=E,731μm,0.1s						
T1215				AML	AML		
	comp=E,808μm,0.1s						
FDMO	**Fiordimonte**	**0.17**	**7**	P	Pg	03 44 35.7	+0.5
FDMO				S	Sg	03 44 38.8	+1.0
FDMO				AML	AML		
	comp=E,1975μm,0.6s						
FDMO				AML	AML		
	comp=N,2225μm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**212**	⇑P	Pg	03 44 36.0	+0.6
T1217				S	Sg	03 44 39.1	+1.1
T1217				AML	AML		
	comp=E,904μm,0.2s						
T1217				AML	AML		
	comp=N,1044μm,0.7s						
T1217				AML	AML		
	comp=E,898μm,0.2s						
T1217				AML	AML		
	comp=N,976μm,0.1s						
T1217				AML	AML		
	comp=E,906μm,0.2s						
T1217				AML	AML		
	comp=N,1042μm,0.7s						
T1217				AML	AML		
	comp=E,899μm,0.2s						
T1217				AML	AML		
	comp=N,974μm,0.1s						
T1217				AML	AML		
	comp=N,1042μm,0.7s						
T1217				AML	AML		
	comp=E,854μm,0.1s						
T1217				AML	AML		
	comp=E,828μm,0.1s						
T1217				AML	AML		
	comp=N,1022μm,0.1s						
T1217				AML	AML		
	comp=N,976μm,0.1s						
MMO1	**Montemonaco**	**0.20**	**80**	⇓P	Pg	03 44 36.2	+0.5
MMO1				S	Sg	03 44 39.5	+0.9
AM05	**Amandola Campo**	**0.24**	**62**	⇑P	Pg	03 44 37.0	+0.6
AM05				S	Sg	03 44 41.0	+1.2
AM05				AML	AML		
	comp=E,2980μm,0.8s						
AM05				AML	AML		
	comp=E,741μm,0.8s						
AM05				AML	AML		
	comp=N,256μm,0.2s						
AM05				AML	AML		
	comp=N,617μm,0.2s						
AM05				AML	AML		
	comp=E,2783μm,0.1s						
AM05				AML	AML		
	comp=E,728μm,0.1s						
AM05				AML	AML		
	comp=N,596μm,0.1s						
AM05				AML	AML		
	comp=N,239μm,0.1s						
LNSS	**Leonessa**	**0.26**	**183**	⇑P	Pg	03 44 37.3	+0.5
LNSS				S	Sg	03 44 41.6	+1.2
LNSS				AML	AML		
	comp=N,1073μm,0.4s						
LNSS				AML	AML		
	comp=N,1072μm,0.4s						
LNSS				AML	AML		
	comp=E,1380μm,0.1s						
LNSS				AML	AML		
	comp=N,979μm,0.2s						
LNSS				AML	AML		
	comp=E,1382μm,0.1s						
T1241	**Roccafluvione,**	**0.27**	**91**	⇑P	Pg	03 44 37.5	+0.5
T1241				S	Sb	03 44 41.9	-1.2
T1241				AML	AML		
	comp=N,1380μm,0.4s						
T1241				AML	AML		
	comp=E,1570μm,0.3s						
T1241				AML	AML		
	comp=E,1569μm,0.3s						
T1241				AML	AML		
	comp=N,1337μm,0.2s						
GUMA	**Gualdo di Mace**	**0.28**	**45**	⇑P	Pb	03 44 37.9	-0.7
GUMA				S	Sb	03 44 42.8	-0.6
GUMA				AML	AML		
	comp=E,1545μm,1.4s						
GUMA				AML	AML		
	comp=N,1540μm,0.6s						
GUMA				AML	AML		
	comp=E,1340μm,0.6s						
GUMA				AML	AML		
	comp=N,1790μm,0.6s						
GUMA				AML	AML		
	comp=N,1542μm,0.6s						
GUMA				AML	AML		
	comp=N,1793μm,0.6s						
GUMA				AML	AML		
	comp=E,1201μm,0.3s						
GUMA				AML	AML		
	comp=E,1240μm,0.3s						
SMA1	**SAN MARTINO**	**0.31**	**139**	⇑P	Pg	03 44 38.1	+0.5
SMA1				S	Sb	03 44 43.5	-0.6
SMA1				AML	AML		
	comp=E,984μm,0.4s						
SMA1				AML	AML		
	comp=N,1150μm,0.3s						
SMA1				AML	AML		
	comp=E,985μm,0.4s						
SMA1				AML	AML		
	comp=E,502μm,0.3s						
SMA1				AML	AML		
	comp=N,503μm,0.3s						
T1243	**Rocca Santa Ma**	**0.33**	**120**	P	Pg	03 44 38.4	+0.3
T1243				S	Sg	03 44 43.4	+0.9
ARRO	**Arrone**	**0.36**	**217**	⇑P	Pg	03 44 39.0	+0.5
ARRO				AML	AML		
	comp=E,386μm,0.2s						
ARRO				AML	AML		
	comp=N,356μm,1.2s						
ARRO				AML	AML		
	comp=N,356μm,1.2s						
ARRO				AML	AML		
	comp=E,386μm,0.2s						
ARRO				AML	AML		
	comp=N,323μm,0.2s						
T1211	**Morro Reatino**	**0.36**	**205**	⇑P	Pg	03 44 39.1	+0.4
T1211				AML	AML		
	comp=E,474μm,1.4s						
T1211				AML	AML		
	comp=N,713μm,1.4s						
T1211				AML	AML		
	comp=E,474μm,1.4s						
T1211				AML	AML		
	comp=N,712μm,1.4s						
T1211				AML	AML		
	comp=N,551μm,0.2s						
T1211				AML	AML		
	comp=E,452μm,0.1s						
T1211				AML	AML		
	comp=E,418μm,0.1s						
T1211				AML	AML		
	comp=N,530μm,0.2s						
RM33	**Pellescritta (**	**0.37**	**162**	⇑P	Pg	03 44 38.9	+0.1
RM33				AML	AML		
	comp=E,378μm,1.1s						
RM33				AML	AML		
	comp=N,268μm,1.5s						
RM33				AML	AML		
	comp=E,380μm,1.1s						
RM33				AML	AML		
	comp=N,235μm,0.1s						
RM33				AML	AML		
	comp=E,241μm,0.1s						
RM33				AML	AML		
	comp=N,231μm,0.1s						
RM33				AML	AML		
	comp=E,244μm,0.1s						
SNTG	**Esanatoglia**	**0.40**	**347**	P	Pg	03 44 39.3	-0.1
SNTG				AML	AML		
	comp=N,390μm,0.6s						
SNTG				AML	AML		
	comp=E,349μm,1.2s						
SNTG				AML	AML		
	comp=N,356μm,1.0s						
SNTG				AML	AML		
	comp=E,407μm,1.2s						
SNTG				AML	AML		
	comp=N,390μm,0.6s						
SNTG				AML	AML		
	comp=E,350μm,1.2s						
SNTG				AML	AML		
	comp=N,356μm,1.0s						
SNTG				AML	AML		
	comp=N,250μm,0.1s						
SNTG				AML	AML		
	comp=N,268μm,0.1s						
SNTG				AML	AML		
	comp=E,291μm,0.1s						
SNTG				AML	AML		
	comp=E,289μm,0.1s						
CAMP	**Campotosto**	**0.42**	**142**	P	Pg	03 44 40.1	+0.5
CAMP				AML	AML		
	comp=N,95μm,0.5s						
CAMP				AML	AML		
	comp=E,111μm,0.2s						
CESX	**Cesi**	**0.43**	**235**	⇑P	Pg	03 44 40.2	+0.2
CESX				AML	AML		
	comp=E,253μm,1.4s						
CESX				AML	AML		
	comp=E,252μm,1.4s						
CESX				AML	AML		
	comp=N,298μm,0.9s						
CESX				AML	AML		
	comp=N,270μm,0.3s						
CESX				AML	AML		
	comp=E,220μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.46**	**157**	P	Pg	03 44 40.7	+0.3
T1247				AML	AML		
	comp=N,282μm,1.2s						
T1247				AML	AML		
	comp=E,350μm,1.5s						
T1247				AML	AML		
	comp=N,282μm,1.2s						
T1247				AML	AML		
	comp=E,244μm,0.2s						
T1247				AML	AML		
	comp=N,258μm,0.2s						
OFFI	**Offida**	**0.47**	**81**	⇓P	Pb	03 44 41.8	+0.1
OFFI				AML	AML		
	comp=E,432μm,1.3s						
OFFI				AML	AML		
	comp=N,533μm,1.0s						
EL6	**Elcito**	**0.47**	**4**	⇑P	Pg	03 44 40.8	+0.2
EL6				AML	AML		
	comp=E,463μm,0.1s						
EL6				AML	AML		
	comp=N,496μm,0.3s						
TERO	**Teramo**	**0.47**	**121**	⇓P	Pg	03 44 40.7	+0.2
TERO				AML	AML		
	comp=E,227μm,0.1s						
TERO				AML	AML		
	comp=E,226μm,0.1s						
TERO				AML	AML		
	comp=N,233μm,1.3s						
TERO				AML	AML		
	comp=E,227μm,0.1s						
TERO				AML	AML		
	comp=E,197μm,0.1s						
TERO				AML	AML		
	comp=N,199μm,0.1s						
TERO				AML	AML		
	comp=N,183μm,0.3s						
FOSV	**Fossato di Vic**	**0.48**	**333**	P	Pg	03 44 41.1	+0.3
FOSV				AML	AML		
	comp=E,182μm,1.0s						
FOSV				AML	AML		
	comp=E,182μm,1.0s						
FOSV				AML	AML		
	comp=N,429μm,0.2s						
FOSV				AML	AML		
	comp=E,142μm,0.3s						
FOSV				AML	AML		
	comp=N,128μm,0.3s						
CING	**Cingoli**	**0.52**	**11**	⇑P	Pg	03 44 41.7	+0.1
CING				AML	AML		
	comp=N,214μm,1.3s						
CING				AML	AML		
	comp=E,302μm,1.2s						
CING				AML	AML		
	comp=E,154μm,0.2s						
CING				AML	AML		
	comp=N,155μm,0.2s						
MURB	**Monte Urbino**	**0.56**	**316**	S	Sb	03 44 53.0	+1.6
FIAM	**Fiamignano**	**0.60**	**176**	⇓P	Pg	03 44 43.2	+0.2
FIAM				S	Sb	03 44 53.0	+0.5
FIAM				AML	AML		
	comp=E,95μm,0.4s						
FIAM				AML	AML		
	comp=N,81μm,0.4s						
ARVD	**Arcevia**	**0.64**	**352**	⇑P	Pg	03 44 43.8	-0.1
ARVD				S	Sb	03 44 55.0	+1.3
ARVD				AML	AML		
	comp=E,198μm,0.9s						
ARVD				AML	AML		
	comp=N,152μm,0.5s						
ARVD				AML	AML		
	comp=E,111μm,0.1s						
ARVD				AML	AML		
	comp=N,102μm,0.1s						
MGAB	**Montegabbione**	**0.70**	**274**	⇓P	Pn	03 44 48.0	+0.7
FAGN	**Fagnano**	**0.71**	**147**	⇓P	Pb	03 44 46.2	+0.3
FAGN				S	Sn	03 44 58.0	-0.5
FAGN				AML	AML		
	comp=E,194μm,0.6s						
FAGN				AML	AML		
	comp=N,164μm,1.4s						
FAGN				AML	AML		
	comp=E,145μm,0.6s						
FAGN				AML	AML		
	comp=N,136μm,0.4s						
FSSB	**Fossombrone**	**0.85**	**346**	P	Pg	03 44 47.9	0.0
FSSB				AML	AML		
	comp=N,323μm,0.4s						
FSSB				AML	AML		
	comp=E,248μm,1.1s						
FSSB				AML	AML		
	comp=N,238μm,0.2s						
FSSB				AML	AML		
	comp=E,223μm,0.2s						
CERT	**Cerreto**	**0.92**	**184**	P	Pg	03 44 48.8	-0.3
CERT				AML	AML		
	comp=E,149μm,0.4s						
CERT				AML	AML		
	comp=N,77μm,0.4s						
VIVA	**Pratoni del Vi**	**1.13**	**191**	S	Sb	03 45 05.0	-2.8
LPEL	**Lama dei Pelig**	**1.17**	**134**	P	Pg	03 44 54.1	+0.4
LPEL				AML	AML		
	comp=E,65μm,0.8s						
LPEL				AML	AML		
	comp=N,45μm,0.6s						

MODR	Mondragone	1.82	160	S	Sg	03 45 29.0 -0.9
PIGN	Pignataro Magg	1.86	153	P	Pg	03 45 06.3 -0.8
SACR	S. Croce Del S	1.91	140	S	Sb	03 45 31.0 +0.8

ROM 28 03:44:59.7±0.1, 42°.893N±0°.003×13°.042E±0°.005, h10km, ML2.5/12, 17C-7D, Error ellipse: s-maj=0.4km s-min=0.3km az=106.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.02**	**262**	P	Pg	03 45 02.0	+0.4
T1216				S	Sg	03 45 03.4	+0.4
T1216	comp=E,14750μm,0.3s			AML	AML		
T1216	comp=N,20550μm,0.3s			AML	AML		
T1216	comp=N,20600μm,0.3s			AML	AML		
T1216	comp=E,14750μm,0.3s			AML	AML		
T1216	comp=N,20550μm,0.3s			AML	AML		
T1216	comp=N,15742μm,0.2s			AML	AML		
T1216	comp=E,11022μm,0.1s			AML	AML		
FEMA	**Monte Fema**	**0.07**	**5**	⇓P	Pg	03 45 02.6	+0.4
FEMA				S	Sg	03 45 04.2	+0.3
FEMA	comp=N,6225μm,0.4s			AML	AML		
FEMA	comp=E,8635μm,0.6s			AML	AML		
FEMA	comp=N,6230μm,0.3s			AML	AML		
FEMA	comp=E,7615μm,0.2s			AML	AML		
FEMA	comp=N,6227μm,0.3s			AML	AML		
NRCA	**Norcia**	**0.08**	**138**	⇓P	Pg	03 45 02.6	+0.4
NRCA				S	Sg	03 45 04.3	+0.4
NRCA	comp=N,12300μm,0.1s			AML	AML		
NRCA	comp=E,5020μm,0.2s			AML	AML		
NRCA	comp=E,5410μm,0.2s			AML	AML		
NRCA	comp=N,13150μm,0.1s			AML	AML		
NRCA	comp=E,5015μm,0.2s			AML	AML		
NRCA	comp=E,5410μm,0.2s			AML	AML		
NRCA	comp=E,5018μm,0.2s			AML	AML		
NRCA	comp=N,12288μm,0.1s			AML	AML		
NRCA	comp=N,13172μm,0.1s			AML	AML		
MC2	**Monte Cornacci**	**0.11**	**80**	⇑P	Pg	03 45 03.2	+0.4
MC2				S	Sg	03 45 05.5	+0.7
T1245	**Castelsantange**	**0.11**	**109**	⇑P	Pg	03 45 03.2	+0.5
T1245				S	Sg	03 45 05.6	+0.7
T1245	comp=E,3615μm,1.3s			AML	AML		
T1245	comp=N,3760μm,0.3s			AML	AML		
T1245	comp=E,3430μm,1.3s			AML	AML		
T1245	comp=E,3610μm,1.3s			AML	AML		
T1245	comp=E,3435μm,1.3s			AML	AML		
T1245	comp=N,3775μm,0.3s			AML	AML		
T1245	comp=E,3239μm,0.1s			AML	AML		
T1245	comp=N,3506μm,0.1s			AML	AML		
T1245	comp=E,3104μm,0.1s			AML	AML		
T1245	comp=N,3675μm,0.1s			AML	AML		
FDMO	**Fiordimonte**	**0.15**	**13**	⇑P	Pg	03 45 03.6	+0.5
FDMO				S	Sg	03 45 05.2	-0.3
FDMO	comp=N,11500μm,0.2s			AML	AML		
FDMO	comp=E,6765μm,1.6s			AML	AML		
FDMO	comp=N,11502μm,0.2s			AML	AML		
FDMO	comp=E,6429μm,0.1s			AML	AML		
FDMO	comp=E,6765μm,0.4s			AML	AML		
T1215	**Vallo di Nera,**	**0.16**	**235**	⇑P	Pg	03 45 03.9	+0.7
T1215				S	Sg	03 45 06.6	+0.9
T1215	comp=E,1760μm,0.5s			AML	AML		
T1215	comp=N,3785μm,0.1s			AML	AML		
T1215	comp=E,1602μm,0.5s			AML	AML		
T1215	comp=E,1760μm,0.5s			AML	AML		
T1215	comp=N,3790μm,0.1s			AML	AML		
T1215	comp=E,1600μm,0.5s			AML	AML		
T1215	comp=E,1604μm,0.5s			AML	AML		
T1215	comp=N,4015μm,0.1s			AML	AML		
T1215	comp=N,4014μm,0.1s			AML	AML		
T1215	comp=E,1524μm,0.1s			AML	AML		
T1215	comp=N,3786μm,0.1s			AML	AML		
T1215	comp=E,1352μm,0.1s			AML	AML		
T1217	**Poggiodomo (PG**	**0.20**	**204**	P	Pg	03 45 04.5	+0.6
T1217				S	Sg	03 45 08.1	+1.2
T1217	comp=E,743μm,0.1s			AML	AML		
T1217	comp=N,758μm,0.3s			AML	AML		
T1217	comp=N,615μm,0.1s			AML	AML		
T1217	comp=E,725μm,0.1s			AML	AML		
MMO1	**Montemonaco**	**0.21**	**88**	⇓P	Pg	03 45 04.7	+0.5
MMO1				S	Sg	03 45 08.2	+1.0
AM05	**Amandola Campo**	**0.24**	**70**	⇑P	Pg	03 45 05.3	+0.6
AM05				S	Sg	03 45 09.5	+1.3
AM05	comp=E,2525μm,0.1s			AML	AML		
AM05	comp=N,172μm,0.1s			AML	AML		
AM05	comp=N,377μm,0.1s			AML	AML		
AM05	comp=N,173μm,0.1s			AML	AML		
AM05	comp=E,2527μm,0.1s			AML	AML		
AM05	comp=E,549μm,0.1s			AML	AML		
SEF1	**Sefro**	**0.26**	**345**	⇑P	Pg	03 45 05.6	+0.5
SEF1				S	Sb	03 45 10.0	-1.2
SEF1	comp=E,2386μm,0.3s			AML	AML		
SEF1	comp=N,2334μm,0.2s			AML	AML		
GUMA	**Gualdo di Mace**	**0.27**	**52**	⇑P	Pb	03 45 06.1	-0.7
GUMA				S	Sb	03 45 10.9	-0.6
GUMA	comp=N,1504μm,0.3s			AML	AML		
GUMA	comp=N,1262μm,0.4s			AML	AML		
GUMA	comp=E,1239μm,0.5s			AML	AML		
GUMA	comp=E,1212μm,0.5s			AML	AML		
T1241	**Roccafluvione,**	**0.29**	**97**	⇑P	Pg	03 45 06.0	+0.4
T1241				S	Sb	03 45 10.8	-1.1
T1241	comp=E,1030μm,0.3s			AML	AML		
T1241	comp=N,1218μm,0.3s			AML	AML		
T1241	comp=E,1028μm,0.3s			AML	AML		
T1241	comp=N,1222μm,0.3s			AML	AML		
T1241	comp=N,1221μm,0.3s			AML	AML		
T1241	comp=E,987μm,0.1s			AML	AML		
LNSS	**Leonessa**	**0.29**	**180**	⇑P	Pg	03 45 06.1	+0.4
LNSS				S	Sb	03 45 11.1	-0.9
LNSS	comp=E,818μm,1.2s			AML	AML		
LNSS	comp=N,988μm,0.7s			AML	AML		
LNSS	comp=E,818μm,1.2s			AML	AML		
LNSS	comp=N,990μm,0.7s			AML	AML		
LNSS	comp=N,887μm,0.1s			AML	AML		
LNSS	comp=E,700μm,0.1s			AML	AML		
T1204	**Amatrice, Fraz**	**0.30**	**137**	P	Pg	03 45 06.3	+0.6
T1204	comp=E,1216μm,0.3s			AML	AML		
T1204	comp=N,1121μm,0.3s			AML	AML		
T1204	comp=E,445μm,0.1s			AML	AML		
T1204	comp=N,1103μm,0.1s			AML	AML		
MDAR	**Monte D'Aria**	**0.31**	**14**	P	Pg	03 45 06.3	+0.3
MDAR				S	Sg	03 45 11.3	+1.2
MDAR	comp=N,1196μm,0.2s			AML	AML		
MDAR	comp=E,764μm,1.4s			AML	AML		
MDAR	comp=E,622μm,0.1s			AML	AML		
MDAR	comp=N,1195μm,0.2s			AML	AML		
SMA1	**SAN MARTINO**	**0.34**	**140**	P	Pb	03 45 07.3	-0.7
SMA1	comp=E,984μm,0.4s			AML	AML		
SMA1	comp=N,1150μm,0.3s			AML	AML		
SMA1	comp=E,985μm,0.4s			AML	AML		
SMA1	comp=E,873μm,0.1s			AML	AML		
SMA1	comp=N,1107μm,0.1s			AML	AML		
GAG1	**Gagliole**	**0.34**	**3**	⇑P	Pg	03 45 07.2	+0.6
GAG1	comp=E,1547μm,0.8s			AML	AML		
GAG1	comp=N,1867μm,0.6s			AML	AML		
T1243	**Rocca Santa Ma**	**0.36**	**123**	⇓P	Pg	03 45 07.3	+0.4
SNTG	**Esanatoglia**	**0.37**	**348**	⇑P	Pg	03 45 07.4	+0.3
SNTG	comp=E,244μm,0.3s			AML	AML		
SNTG	comp=E,241μm,0.1s			AML	AML		
SNTG	comp=N,336μm,0.2s			AML	AML		
SNTG	comp=N,305μm,0.2s			AML	AML		
ARRO	**Arrone**	**0.37**	**213**	⇑P	Pg	03 45 07.6	+0.5
T1211	**Morro Reatino**	**0.39**	**201**	⇑P	Pg	03 45 07.8	+0.4
T1211	comp=N,497μm,0.1s			AML	AML		
T1211	comp=E,381μm,0.1s			AML	AML		
T1211	comp=N,492μm,0.1s			AML	AML		
T1211	comp=E,378μm,0.1s			AML	AML		
RM33	**Pellescritta (**	**0.40**	**162**	P	Pg	03 45 08.1	+0.3
RM33	comp=N,248μm,0.2s			AML	AML		
RM33	comp=N,244μm,0.2s			AML	AML		
RM33	comp=E,390μm,0.2s			AML	AML		
RM33	comp=E,362μm,0.2s			AML	AML		
EL6	**Elcito**	**0.44**	**6**	⇑P	Pg	03 45 08.4	0.0
EL6	comp=N,588μm,0.2s			AML	AML		
EL6	comp=E,561μm,0.2s			AML	AML		
CESX	**Cesi**	**0.44**	**230**	⇑P	Pg	03 45 08.4	0.0
CESX	comp=N,295μm,0.2s			AML	AML		
CESX	comp=E,217μm,0.3s			AML	AML		
CAMP	**Campotosto**	**0.45**	**143**	⇓P	Pg	03 45 09.0	+0.5
CAMP	comp=N,89μm,0.7s			AML	AML		
CAMP	comp=E,96μm,1.0s			AML	AML		
FOSV	**Fossato di Vic**	**0.45**	**333**	⇓P	Pg	03 45 08.9	+0.3
FOSV	comp=E,182μm,1.0s			AML	AML		
FOSV	comp=N,429μm,0.2s			AML	AML		
FOSV	comp=E,182μm,1.0s			AML	AML		
FOSV	comp=E,166μm,0.2s			AML	AML		
FOSV	comp=N,429μm,0.2s			AML	AML		
TERO	**Teramo**	**0.49**	**123**	P	Pg	03 45 09.5	+0.2
TERO	comp=E,149μm,0.1s			AML	AML		
TERO	comp=N,139μm,0.1s			AML	AML		
TERO	comp=E,176μm,0.1s			AML	AML		
TERO	comp=N,160μm,0.1s			AML	AML		
CING	**Cingoli**	**0.49**	**13**	⇑P	Pg	03 45 09.6	+0.2
CING				S	Sb	03 45 17.5	-0.3
CING	comp=E,290μm,0.1s			AML	AML		
CING	comp=N,199μm,0.1s			AML	AML		
MURB	**Monte Urbino**	**0.53**	**314**	P	Pb	03 45 10.6	-0.5
MURB	comp=N,336μm,0.4s			AML	AML		
MURB	comp=E,379μm,0.2s			AML	AML		
MURB	comp=N,315μm,0.4s			AML	AML		
MURB	comp=E,411μm,0.2s			AML	AML		
ARVD	**Arcevia**	**0.61**	**353**	⇓P	Pg	03 45 11.7	+0.1
ARVD				S	Sb	03 45 21.5	+0.4
ARVD	comp=N,140μm,0.1s			AML	AML		
ARVD	comp=E,147μm,0.1s			AML	AML		
FRON	**Frontone**	**0.67**	**340**	⇑P	Pg	03 45 12.6	-0.1
FRON	comp=E,90μm,0.2s			AML	AML		
FRON	comp=N,142μm,0.1s			AML	AML		
FSSB	**Fossombrone**	**0.82**	**347**	S	Sn	03 45 29.0	-0.6

*ARE **28** 03:47:28±4.5, 12°.03S±0°.07×77°.66W±0°.07, h52km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=138.0*
*IDC **28** 03:47:31.9±0.6, 11°.90S×77°.19W, h59km±4km, mb3.9/13, mbtmp4.2/15, MS3.5/19, Error ellipse: s-maj=17.9km s-min=8.4km az=32.0*
*NEIC **28** 03:47:32.9±1.3, 11°.85S±0°.07×77°.2W±0°.1, h67km±6km, mb4.8/61, ML5.0(ARE), Error ellipse: s-maj=15.5km s-min=9.6km az=68.0*
ISC 28 03:47:32.0±0.5, 11°.88S±0°.06×77°.26W±0°.09, h62km±4km, h62km:pP-P, n130, σ0°.95/103, mb4.7/40, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.42**	**105**	P	Pn	**03 47 43.9**	**+0.5**
	6μm,0.3s,baz=254,slow=18,SNR=4712						
NNA				S	Sn	**03 47 52.5**	**+0.8**
	35μm,0.3s,baz=183,slow=16,SNR=82						
ATAH	**Atahualpa**	**4.85**	**347**	P	Pn	**03 48 44.9**	**+2.1**
	139nm,0.7s,baz=145,slow=3.9,SNR=114						
ATAH				LR	LR	03 51 09.2	
	comp=Z,46nm,20.7s,baz=249,slow=44						
ARNL	**Arenillas**	**8.73**	**341**		Pn	**03 49 36.1**	**+0.4**
BOSC	**San Juan Bosco**	**8.76**	**352**		Pn	**03 49 33.4**	**-2.8**
PB12	**IPOC Station P**	**9.46**	**136**	Pn	Pn	**03 49 44.9**	**-0.8**
COHC	**Cochancay**	**9.56**	**348**	Pn	Pn	**03 49 46.6**	**-0.4**
PB16	**IPOC Station P**	**9.86**	**132**		Pn	**03 49 51.8**	**+0.3**
LPAZ	**La Paz**	**9.88**	**117**	P	Pn	**03 49 52.7**	**+0.8**
	2.9nm,0.6s,baz=288,slow=4.2,SNR=13						
LPAZ	**La Paz**	**9.88**	**117**	Pn	Pn	**03 49 51.4**	**-0.5**
PORT	**Chimborazo Vol**	**10.46**	**352**		Pn	**03 50 00.9**	**+1.1**
PB11	**IPOC Station P**	**10.72**	**138**	Pn	Pn	**03 50 02.0**	**-0.9**
GO01	**Chusmiza**	**10.96**	**136**		Pn	**03 50 06.0**	**-0.5**
SLOR	**San Lorenzo -**	**11.14**	**354**		Pn	**03 50 08.8**	**-0.2**
PB08	**IPOC Station P**	**11.32**	**138**		Pn	**03 50 10.0**	**-1.3**
PULU	**Pululahua**	**11.89**	**354**	Pn	Pn	**03 50 19.0**	**-0.2**
CUSE	**Cuicocha Este**	**12.16**	**355**	*eP*	Pn	**03 50 24.6**	**+1.7**
PAC1	**Pacto, Paraso**	**12.16**	**353**	*eP*	Pn	**03 50 22.5**	**-0.2**
LVC	**Limon Verde**	**13.31**	**144**	LR	LR	03 55 11.5	
	comp=Z,68nm,21.3s,baz=290,slow=35						
FLOC	**Florencia**	**13.47**	**7**	*eP*	Pn	**03 50 40.5**	**+0.1**
BBAC	**Balboa, Cauca**	**13.81**	**0**	*eP*	Pn	**03 50 46.9**	**+1.8**
GARC	**Garzon, Huila**	**14.08**	**7**	*eP*	Pn	**03 50 46.8**	**-2.0**
GO02	**Mina Guanaco**	**15.07**	**152**	Pn	Pn	**03 51 02.7**	**+1.0**
PRAC	**Prado**	**15.67**	**9**	*eP*	Pn	**03 51 10.8**	**+1.6**
YOTC	**Yotoco, Valle**	**15.79**	**3**	*eP*	P	**03 51 12.7**	**-0.8**
ORTC	**Ortega, Tolima**	**15.81**	**7**	*eP*	P	**03 51 15.6**	**+1.9**
SIV	**San Ignacio**	**16.23**	**106**	P	P	**03 51 18.7**	**+0.4**
	4.1nm,0.8s,baz=274,slow=12,SNR=18						
SIV				LR	LR	03 58 15.7	
	comp=Z,139nm,22.0s,baz=281,slow=40						
PLMC	**San Jos del P**	**16.70**	**3**	*eP*	P	**03 51 23.3**	**-0.3**
PTGC	**Puerto Gaitan,**	**16.77**	**18**	*eP*	P	**03 51 24.3**	**+0.1**
CHIC	**Chingaza**	**16.77**	**12**	*eP*	P	**03 51 24.4**	**-0.3**
ROSC	**El Rosal**	**16.86**	**10**	LR	LR	03 59 14.4	
	comp=Z,314nm,19.6s,baz=204,slow=42						
ROSC	**El Rosal**	**16.86**	**10**	Pn	Pn	**03 51 21.9**	**-2.6**
ROSC				IAmb	IAmb	03 51 40.0	
	comp=Z,56nm,1.3s						
GUY2C	**Guyana, Caldas**	**17.10**	**6**	*eP*	P	**03 51 30.1**	**+1.7**
NORC	**Norcasia**	**17.49**	**8**	*eP*	P	**03 51 33.0**	**+0.7**
CBOC	**Ciudad Bolivar**	**17.67**	**4**	*eP*	P	**03 51 34.7**	**+0.3**
SPBC	**San Pablo de B**	**17.70**	**10**	*eP*	P	**03 51 35.9**	**+1.2**
LCO	**Las Campanas**	**18.11**	**161**	P	Pn	**03 51 39.8**	**+0.2**
RUSC	**La Rusia**	**18.14**	**13**	*eP*	Pn	**03 51 41.7**	**+1.5**
PTBC	**PUERTO BERRIO,**	**18.51**	**9**	*eP*	P	**03 51 43.6**	**+0.1**
PAMC	**Pamplona, Colo**	**19.62**	**14**	*eP*	P	**03 51 56.1**	**0.0**
BRU2	**Volcan**	**21.24**	**345**	P	P	**03 52 13.1**	**-0.1**
BRU2				IAmb	IAmb	03 52 15.9	
	comp=Z,64nm,1.0s						
H03N1	**Juan Fernandez**	**21.52**	**184**	T	T	04 14 30.3	
	baz=3.6,slow=75,SNR=153						
H03N2	**Juan Fernandez**	**21.52**	**184**	T	T	04 14 30.6	
	baz=3.6,slow=75,SNR=141						
H03N3	**Juan Fernandez**	**21.53**	**184**	T	T	04 14 29.9	
	baz=3.6,slow=75,SNR=150						
SDV	**Santo Domingo**	**21.66**	**18**	P	P	**03 52 18.0**	**+0.3**
	comp=Z,7.7nm,0.5s,baz=228,slow=15,SNR=8.5						
SDV				LR	LR	04 01 58.1	
	comp=Z,117nm,21.3s,baz=140,slow=40						
	comp=Z,7.7nm,0.5s						
SDV	**Santo Domingo**	**21.66**	**18**	P	P	**03 52 17.1**	**-0.6**
SJCC	**San Jacinto, C**	**21.73**	**6**	*eP*	P	**03 52 18.3**	**-0.1**
RIMA	**Rio Macho**	**22.48**	**343**	P	P	**03 52 26.7**	**+0.1**
BAUV	**El Baul**	**22.62**	**24**	P	P	**03 52 27.0**	**-0.9**
LMEL	**Las Melosas**	**22.80**	**165**	P	P	**03 52 29.6**	**-0.2**
CPUP	**Villa Florida**	**23.64**	**130**	P	P	**03 52 37.9**	**0.0**
	comp=Z,2.6nm,0.8s,baz=325,slow=10.0,SNR=5.3						
CPUP				LR	LR	04 01 48.6	
	comp=Z,106nm,19.2s,baz=322,slow=36						
	comp=Z,2.6nm,0.8s						
URIC	**Uribia, Colomb**	**24.00**	**13**	*eP*	P	**03 52 39.6**	**-1.6**
PCRV	**Puerto La Cruz**	**25.25**	**30**	P	P	**03 52 54.3**	**+1.7**
	comp=Z,13nm,0.8s,baz=214,slow=3.4,SNR=8.5						
PCRV				LR	LR	04 04 09.7	
	comp=Z,228nm,18.6s,slow=40						
	comp=Z,13nm,0.8s						
PLCA	**Paso Flores**	**29.34**	**170**	P	P	**03 53 28.9**	**-0.1**
	comp=Z,2.6nm,0.9s,baz=347,slow=9.7,SNR=5.1						
PLCA				pP	**pP**	**03 53 44.4**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=339,slow=9.3,SNR=2.7						
	comp=Z,2.6nm,0.9s						
MDP	**Montagnes des**	**29.73**	**57**	P	P	**03 53 32.6**	**-0.1**
	comp=Z,4.3nm,0.6s,baz=228,slow=10,SNR=5.3						
MDP				LR	LR	04 05 46.3	
	comp=Z,108nm,20.6s,baz=238,slow=37						
	comp=Z,4.3nm,0.6s						
SJG	**San Juan**	**31.75**	**20**	P	P	**03 53 49.9**	**-0.5**
RPN	**Rapa Nui**	**33.70**	**239**	LR	LR	04 03 35.4	
	comp=Z,125nm,21.5s,baz=104,slow=29						
CCAR	**Cane Creek**	**47.59**	**344**	P	P	**03 56 01.6**	**-0.1**
V48A	**Smith Brothers**	**48.22**	**350**	IAmb	IAmb	03 56 05.8	
	comp=Z,8.5nm,0.7s						
TXAR	**Lajitas Array**	**48.25**	**329**	P	P	**03 56 07.3**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=147,slow=9.5,SNR=18						
TXAR				pP	**pP**	**03 56 23.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=146,slow=9.4,SNR=5.6						
	comp=Z,1.4nm,0.8s						
TXAR	**Lajitas Array**	**48.25**	**329**	P	P	**03 56 07.5**	**+0.4**
TX31	**Lajitas Ar. Si**	**48.25**	**329**	IAmb	IAmb	03 56 08.7	
	comp=Z,6.1nm,0.8s						
UALR	**University of**	**48.56**	**343**	IAmb	IAmb	03 56 10.6	
	comp=Z,16nm,1.0s						
T57A	**Hurt**	**48.65**	**358**	IAmb	IAmb	03 56 10.1	
	comp=Z,14nm,0.9s						
MIAR	**Mount Ida**	**48.70**	**342**	IAmb	IAmb	03 56 11.4	
	comp=Z,11nm,0.8s						
WVT	**Waverly**	**48.78**	**349**	P	P	**03 56 08.9**	**-2.0**
WVT				pP	**pP**	**03 56 26.0**	**-0.8**
WHAR	**Wooly Hollow**	**49.02**	**344**	IAmb	IAmb	03 56 13.7	
	comp=Z,16nm,1.0s						
ABTX	**Abilene, Hawle**	**49.15**	**335**	P	P	**03 56 13.0**	**-0.8**
ABTX				IAmb	IAmb	03 56 14.5	
	comp=Z,4.6nm,0.8s						
X37A	**Clayton**	**49.31**	**340**	IAmb	IAmb	03 56 16.5	
	comp=Z,18nm,1.1s						
LCAR	**Lake Charles**	**49.46**	**345**	IAmb	IAmb	03 56 16.3	
	comp=Z,9.6nm,0.9s						
FCAR	**Ozark Folk Cen**	**49.54**	**344**	IAmb	IAmb	03 56 17.2	
	comp=Z,14nm,1.0s						
R58B	**Mineral**	**49.58**	**359**	IAmb	IAmb	03 56 17.8	
	comp=Z,13nm,0.8s						
T42A	**Van Buren**	**50.36**	**346**	IAmb	IAmb	03 56 22.6	
	comp=Z,5.8nm,0.8s						
HHAR	**Hobbs**	**50.42**	**342**	IAmb	IAmb	03 56 24.1	
	comp=Z,6.8nm,0.7s						
WCI	**Wyandotte Cave**	**50.56**	**351**	P	P	**03 56 23.0**	**-1.3**
S44A	**Carbondale**	**50.58**	**348**	IAmb	IAmb	03 56 24.4	
	comp=Z,15nm,0.9s						
TUL1	**Leonard**	**50.66**	**341**	P	P	**03 56 24.3**	**-0.8**
U38A	**Gravette**	**50.70**	**342**	IAmb	IAmb	03 56 26.2	
	comp=Z,8.3nm,0.8s						
CCM	**Cathedral Cave**	**51.37**	**346**	P	P	**03 56 29.8**	**-0.6**
CCM				IAmb	IAmb	03 56 31.1	
	comp=Z,6.4nm,0.8s						
CCM	**Cathedral Cave**	**51.37**	**346**	P	P	**03 56 30.1**	**-0.4**
CCM				pP	**pP**	**03 56 48.5**	**+2.0**
P49A	**Miami Univ. Ec**	**51.62**	**353**	IAmb	IAmb	03 56 31.4	
	comp=Z,14nm,1.0s						
T35A	**Sooner Cattle**	**51.81**	**340**	P	P	**03 56 33.4**	**-0.3**
T35A				IAmb	IAmb	03 56 34.7	
	comp=Z,11nm,0.9s						
SSPA	**Standing Stone**	**52.25**	**359**	P	P	**03 56 36.3**	**-0.6**
SSPA				pP	**pP**	**03 56 52.0**	**-1.1**
P40A	**Paris**	**52.97**	**346**	IAmb	IAmb	03 56 42.8	
	comp=Z,8.9nm,0.8s						
N41A	**Harden Midland**	**53.81**	**347**	IAmb	IAmb	03 56 48.1	
	comp=Z,12nm,0.8s						
BINY	**Binghamton**	**53.82**	**1**	P	P	**03 56 47.2**	**-1.3**
ANMO	**Albuquerque**	**54.17**	**330**	P	P	**03 56 51.2**	**-0.2**
N35A	**Tabor**	**55.16**	**343**	P	P	**03 56 57.2**	**-1.1**
SADO	**Sadowa**	**56.41**	**358**	LR	LR	04 22 28.3	
	comp=Z,29nm,21.8s,baz=174,slow=37						
G62A	**West of Eustis**	**57.15**	**6**	P	P	**03 57 11.9**	**-0.5**
ECSD	**EROS Data Cent**	**58.09**	**344**	P	P	**03 57 17.4**	**-1.6**
ECSD				IAmb	IAmb	03 57 18.9	
	comp=Z,4.3nm,0.8s						
RSSD	**Black Hills**	**60.83**	**338**	P	P	**03 57 38.4**	**+0.3**
RSSD				pP	**pP**	**03 57 55.5**	**+0.9**

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HWUT Hardware Ranch     61.90 331  P      P      03 57 45.6 +0.3
PDAR Pinedale Array     61.91 334  P      P      03 57 44.9 -0.6
     comp=Z,0.7nm,0.9s,baz=122,slow=5.6,SNR=3.9
PDAR                                pP     pP     03 58 01.5 -0.4
     comp=Z,0.3nm,0.6s,baz=113,slow=8.4,SNR=3.4
     comp=Z,0.7nm,0.9s
NVAR Mina Array Bea     63.05 325  P      P      03 57 53.9 +0.8
     comp=Z,0.3nm,0.5s,baz=157,slow=8.0,SNR=4.3
     comp=Z,0.3nm,0.5s
FLWY Flagg Ranch        63.46 334  P      P      03 57 56.4 +0.7
FLWY                               IAmb   IAmb   03 57 58.9
     comp=Z,11nm,1.4s
ULM  Lac du Bonnet      63.98 347  P      P      03 57 57.9 -0.8
     comp=Z,4.3nm,0.7s,baz=187,slow=3.3,SNR=5.1
ULM                                pP     pP     03 58 15.2 -0.2
     comp=Z,8.4nm,0.8s,baz=161,slow=6.3,SNR=5.7
     comp=Z,4.3nm,0.7s
ULM  Lac du Bonnet      63.98 347  P      P      03 57 58.3 -0.4
ULM                                IAmb   IAmb   03 58 17.2
     comp=Z,11nm,0.9s
YHL  Hebgen Lake        64.28 334  P      P      03 58 00.2 -1.0
PAHR Pah Rah Range      64.54 325  P      P      03 58 02.8  0.0
BCYI Bear Canyon        64.84 332  P      P      03 58 05.0 +0.1
ORV  Oroville           65.64 324  P      P      03 58 10.8 +0.9
ORV                                IAmb   IAmb   03 58 29.6
     comp=Z,5.4nm,0.8s
SCHQ Schefferville      67.04   7  LR     LR     04 28 25.7
     comp=Z,23nm,20.5s,baz=206,slow=37
BELA Belgrano 2         69.38 171  P      P      03 58 33.6 +0.8
EDM  Edmonton           71.81 338  P      P      03 58 47.3 -0.6
EDM                                IAmb   IAmb   03 58 48.2
     comp=Z,7.0nm,1.0s
SNAA Sanae              73.91 162  P      P      03 59 00.0 -0.2
SNAA Sanae              73.91 162  LR     LR     04 30 22.7
     comp=Z,16nm,19.8s,baz=193,slow=35
DBIC Dimbokro           74.31  80  P      P      03 59 03.7 +0.2
     comp=Z,3.4nm,0.9s,baz=222,slow=6.2,SNR=3.1
DBIC                               LR     LR     04 29 46.5
     comp=Z,54nm,20.1s,baz=215,slow=34
     comp=Z,3.4nm,0.9s
TROLL Troll, Antarti    75.62 162  P      P      03 59 10.9 +0.7
FRB  Frobisher Bay      75.69   4  LR     LR     04 33 55.0
     comp=Z,37nm,20.7s,baz=187,slow=37
YKA  Yellowknife Ar     79.62 343  P      P      03 59 31.9 -0.4
YKA                                pP     pP     03 59 49.1 -0.3
     comp=Z,1.2nm,0.8s,baz=138,slow=6.6,SNR=6.1
     comp=Z,1.2nm,0.8s,baz=144,slow=6.3,SNR=4.8
     comp=Z,1.2nm,0.8s
TORD Torodi Ar. Bea     82.16  75  P      P      03 59 47.1 +0.3
     comp=Z,3.8nm,0.9s,baz=256,slow=4.6,SNR=20
TORD                               pP     pP     04 00 03.6 -0.7
     comp=Z,3.2nm,0.8s,baz=261,slow=4.7,SNR=9.1
     comp=Z,3.8nm,0.9s
MDT  Midelt             82.21  54  LR     LR     04 31 55.3
     comp=Z,17nm,22.0s,baz=292,slow=32
VNDA Vanda              84.82 191  LR     LR     04 27 38.1
     comp=Z,20nm,21.6s,baz=36,slow=28
ESDC Sonseca Array      85.00  48  P      P      04 00 01.9 +0.9
     comp=Z,1.0nm,1.1s,baz=259,slow=6.3,SNR=4.3
ESDC                               LR     LR     04 32 52.9
     comp=Z,25nm,21.4s,baz=318,slow=32
     comp=Z,1.0nm,1.1s
BORG Borgarnes          87.11  21  LR     LR     04 38 21.3
     comp=Z,43nm,19.7s,baz=321,slow=35
I29M Ogilvie Camp,      89.26 338  P      P      04 00 20.9 -0.1
I29M                               IAmb   IAmb   04 00 40.5
     comp=Z,3.3nm,0.8s
BCAR Beaver Creek A     89.45 336  P      P      04 00 21.8 -0.1
ILAR Eielson Array      92.22 336  pP     pP     04 00 52.5 +0.4
     comp=Z,0.6nm,0.8s,baz=146,slow=2.3,SNR=4.8
COLA College            92.64 336  P      P      04 00 37.7 +1.1
BOSA Boshof             95.11 120  LR     LR     04 41 55.6
     comp=Z,23nm,18.2s,baz=5.5,slow=34
LBTB Lobatse            96.41 117  LR     LR     04 42 05.0
     comp=Z,36nm,18.2s,baz=127,slow=34
H11N3 WAKE ISLAND Hyl 18.06 286    T      T      06 14 43.5
     baz=93,slow=75,SNR=7.4
H11N2 WAKE ISLAND Hyl 18.07 286    T      T      06 14 45.1
     baz=93,slow=75,SNR=12
H11N1 WAKE ISLAND Hyl 18.08 286    T      T      06 14 41.0
     baz=93,slow=75,SNR=7.2
H11S2 WAKE ISLAND Hyl 18.18 285    T      T      06 15 02.8
     baz=95,slow=75,SNR=33
H11S1 WAKE ISLAND Hyl 18.19 285    T      T      06 15 03.2
     baz=95,slow=75,SNR=51
H11S3 WAKE ISLAND Hyl 18.20 285    T      T      06 15 04.5
     baz=95,slow=75,SNR=37
ASAR Alice Springs      133.34 221 PKP    PKPdf  04 06 41.6 -0.5
     comp=Z,0.2nm,0.3s,baz=134,slow=1.8,SNR=4.4
ASAR                               pPKP   pPKPdf 04 07 00.2 +0.2
     comp=Z,0.5nm,0.7s,baz=136,slow=2.1,SNR=3.0
WRA  Warramunga Arr     135.64 225 PKP    PKPdf  04 06 46.2 -0.1
     comp=Z,0.6nm,0.8s,baz=126,slow=1.7,SNR=6.3
WRA                                pPKP   pPKPdf 04 07 04.6 +0.2
     comp=Z,0.9nm,0.7s,baz=122,slow=2.1,SNR=6.2
ZALV Zalesovo Beam      135.69  15 pPKP   pPKPdf 04 07 02.7 -0.7
     comp=Z,1.0nm,0.5s,baz=336,slow=3.3,SNR=3.2
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*LDG **28** 03:51:13.5±0.1, 42°.85N×13°.06E, h11km, Ml2.8/11, Error ellipse: s-maj=2.8km s-min=1.7km az=39.0*
*ROM **28** 03:51:14.2±0.0, 42°.860N±0°.003×13°.044E±0°.004, h11km, ML3.3/57, Error ellipse: s-maj=0.3km s-min=0.2km az=310.0*
*IDC **28** 03:51:16.6±1.9, 43°.07N×13°.18E, h0km, mb3.2/1, mbtmp3.3/4, ML3.2/3, MS3.6/1, Error ellipse: s-maj=54.1km s-min=15.0km az=99.0*
*PRU **28** 03:51:16.4±0.0, 42°.97N×13°.58E, h1km*
ISC 28 03:51:14.3±0.8, 42°.85N±0°.02×13°.02E±0°.02, h12km±4km, n113, σ1§94/156, 39C-17D, Central Italy

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Code Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op    ISC         h m  s    ISC
T1216 Preci, Frazion    0.04    4  P     Pg          03 51 16.5 -0.1
T1216                              S     Sg          03 51 17.9 -0.5
T1216                              AML   AML
T1216                              AML   AML
T1216                              AML   AML
T1216                              AML   AML
T1216                              AML   AML
T1216                              AML   AML
T1216                              AML   AML
NRCA Norcia             0.07  104 ⇓P    Pg          03 51 16.7 -0.2
NRCA                               S     Sg          03 51 18.2 -0.7
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
NRCA                               AML   AML
FEMA Monte Fema         0.11   13 ⇓P    Pg          03 51 17.4 -0.1
FEMA                               S     Sg          03 51 19.1 -0.6
FEMA                               AML   AML
FEMA                               AML   AML
     comp=N,75900µm,0.4s
FEMA                               AML   AML
FEMA                               AML   AML
     comp=N,75900µm,0.4s
FEMA                               AML   AML
     comp=N,75950µm,0.4s
FEMA                               AML   AML
FEMA                               AML   AML
     comp=E,95160µm,0.2s
FEMA                               AML   AML
     comp=N,55363µm,0.2s
T1215 Vallo di Nera,    0.12  245  P     Pg          03 51 18.1 +0.6
T1215                              S     Sg          03 51 20.7 +1.0
T1215                              AML   AML
     comp=E,13200µm,0.7s
T1215                              AML   AML
     comp=N,18550µm,0.4s
T1215                              AML   AML
     comp=E,13650µm,0.7s
T1215                              AML   AML
     comp=E,13250µm,0.7s
T1215                              AML   AML
     comp=E,13700µm,0.7s
T1215                              AML   AML
     comp=N,17900µm,0.4s
T1215                              AML   AML
     comp=E,13250µm,0.7s
T1215                              AML   AML
     comp=N,18550µm,0.4s
T1215                              AML   AML
     comp=E,13650µm,0.7s
T1215                              AML   AML
     comp=E,7848µm,0.1s
T1215                              AML   AML
     comp=E,8750µm,0.1s
T1215                              AML   AML
     comp=N,10888µm,0.1s
T1215                              AML   AML
     comp=N,10783µm,0.1s
T1245 Castelsantange    0.13   88  P     Pg          03 51 17.5 -0.2
T1245                              S     Sg          03 51 19.8 -0.3
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
T1245                              AML   AML
MC2  Monte Cornacci     0.14   65 ⇑P    Pg          03 51 17.7 -0.2
MC2                                S     Sg          03 51 20.1 -0.4
T1217 Poggiodomo (PG    0.15  204 ⇑P    Pg          03 51 18.6 +0.6
T1217                              S     Sg          03 51 21.6 +1.1
T1217                              AML   AML
     comp=E,26850µm,0.8s
T1217                              AML   AML
     comp=E,26650µm,0.8s
T1217                              AML   AML
     comp=N,52700µm,0.2s
T1217                              AML   AML
     comp=E,26900µm,0.8s
T1217                              AML   AML
     comp=N,54150µm,0.2s
T1217                              AML   AML
     comp=E,26700µm,0.8s
T1217                              AML   AML
     comp=N,52750µm,0.2s
T1217                              AML   AML
     comp=E,26900µm,0.8s
T1217                              AML   AML
     comp=N,54150µm,0.2s
T1217                              AML   AML
     comp=E,26700µm,0.7s
T1217                              AML   AML
     comp=N,52700µm,0.2s
T1217                              AML   AML
     comp=N,54129µm,0.2s
T1217                              AML   AML
     comp=N,52730µm,0.2s
T1217                              AML   AML
     comp=E,24378µm,0.1s
T1217                              AML   AML
     comp=E,24465µm,0.1s
MMO1 Montemonaco        0.23   78 ⇑P    Pg          03 51 19.1 -0.2
MMO1                               S     Sg          03 51 22.6 -0.1
LNSS Leonessa           0.25  176 ⇑P    Pg          03 51 20.0 +0.4
LNSS                               S     Sg          03 51 24.1 +1.0
LNSS                               AML   AML
     comp=E,22650µm,1.4s
LNSS                               AML   AML
     comp=N,28850µm,0.8s
LNSS                               AML   AML
     comp=N,17030µm,0.2s
LNSS                               AML   AML
     comp=E,22162µm,0.3s
AM05 Amandola Campo     0.28   63 ⇑P    Pg          03 51 20.0 -0.1
AM05                               S     Sg          03 51 23.9  0.0
AM05                               AML   AML
     comp=E,4575µm,0.1s
AM05                               AML   AML
     comp=N,1695µm,0.4s
AM05                               AML   AML
     comp=N,1700µm,0.4s
AM05                               AML   AML
     comp=N,4895µm,0.4s
AM05                               AML   AML
     comp=E,4570µm,0.1s
AM05                               AML   AML
     comp=E,18700µm,1.6s
AM05                               AML   AML
     comp=E,16576µm,0.1s
AM05                               AML   AML
     comp=E,4573µm,0.1s
AM05                               AML   AML
     comp=N,3738µm,0.1s
AM05                               AML   AML
     comp=N,1596µm,0.1s
T1204 Amatrice, Fraz    0.28  128 ⇑P    Pg          03 51 20.4 +0.2
T1204                              S     Sg          03 51 24.9 +0.8
T1204                              AML   AML
     comp=E,17250µm,0.5s
T1204                              AML   AML
     comp=N,10200µm,0.5s
T1204                              AML   AML
     comp=E,17300µm,0.5s
T1204                              AML   AML
     comp=N,10215µm,0.5s
T1204                              AML   AML
     comp=E,16458µm,0.3s
T1204                              AML   AML
     comp=N,9557µm,0.2s
SEF1 Sefro              0.30  350 ⇑P    Pg          03 51 20.6 +0.2
SEF1                               S     Sg          03 51 25.3 +0.7
SEF1                               AML   AML
     comp=N,17050µm,0.2s
SEF1                               AML   AML
     comp=N,17000µm,0.2s
SEF1                               AML   AML
     comp=E,16050µm,0.2s
SEF1                               AML   AML
     comp=N,17024µm,0.2s
SEF1                               AML   AML
     comp=E,16048µm,0.2s
T1241 Roccafluvione,    0.31   89  P     Pg          03 51 20.4 -0.2
T1241                              S     Sg          03 51 25.0 +0.3
T1241                              AML   AML
     comp=N,25600µm,0.2s
T1241                              AML   AML
     comp=N,25550µm,0.2s
T1241                              AML   AML
     comp=E,24350µm,0.3s
T1241                              AML   AML
     comp=E,119µm,0.7s
T1241                              AML   AML
     comp=E,24334µm,0.3s
T1241                              AML   AML
     comp=N,197µm,1.3s
T1241                              AML   AML
     comp=N,25558µm,0.2s
GUMA Gualdo di Mace     0.32   48 ⇑P    Pg          03 51 20.9 +0.1
GUMA                               S     Sb          03 51 26.0 -1.0
GUMA                               AML   AML
     comp=N,35400µm,1.4s
GUMA                               AML   AML
     comp=E,37550µm,0.4s
GUMA                               AML   AML
     comp=E,33800µm,0.6s
GUMA                               AML   AML
     comp=N,43700µm,0.4s
GUMA                               AML   AML
     comp=E,33802µm,0.6s
GUMA                               AML   AML
     comp=N,43658µm,0.4s
GUMA                               AML   AML
     comp=N,33276µm,0.4s
GUMA                               AML   AML
     comp=E,37546µm,0.4s
SMA1 SAN MARTINO        0.32  133 ⇓P    Pg          03 51 21.0 +0.1
SMA1                               S     Sg          03 51 26.2 +0.9
SMA1                               AML   AML
     comp=E,12085µm,0.5s
SMA1                               AML   AML
     comp=N,8650µm,1.0s
SMA1                               AML   AML
     comp=E,12069µm,0.5s
SMA1                               AML   AML
     comp=N,7683µm,0.4s
ARRO Arrone             0.33  214 ⇑P    Pg          03 51 21.6 +0.7
ARRO                               S     Sb          03 51 27.1 -0.3
ARRO                               AML   AML
     comp=E,6555µm,0.2s
ARRO                               AML   AML
     comp=N,8045µm,0.8s
ARRO                               AML   AML
     comp=E,6560µm,0.2s
ARRO                               AML   AML
     comp=N,8050µm,0.8s
ARRO                               AML   AML
     comp=N,6768µm,0.2s
ARRO                               AML   AML
     comp=E,6559µm,0.2s
T1211 Morro Reatino     0.34  200 ⇑P    Pg          03 51 21.7 +0.5
T1211                              AML   AML
     comp=E,10605µm,1.5s
T1211                              AML   AML
     comp=N,13800µm,1.5s
T1211                              AML   AML
     comp=E,11000µm,1.5s
T1211                              AML   AML
     comp=N,13300µm,1.5s
T1211                              AML   AML
     comp=E,11015µm,1.5s
T1211                              AML   AML
     comp=N,13250µm,1.5s
T1211                              AML   AML
     comp=N,13800µm,1.4s
T1211                              AML   AML
     comp=E,10610µm,1.5s
T1211                              AML   AML
     comp=N,12121µm,0.1s
T1211                              AML   AML
     comp=N,12280µm,0.1s
T1211                              AML   AML
     comp=E,9702µm,0.1s
T1211                              AML   AML
     comp=E,9510µm,0.1s
FIU1 Fiuminata          0.34  350  P     Pg          03 51 21.5 +0.2
FIU1                               AML   AML
     comp=E,7345µm,0.2s
FIU1                               AML   AML
     comp=N,8600µm,0.3s
FIU1                               AML   AML
     comp=N,8597µm,0.3s
FIU1                               AML   AML
     comp=E,7344µm,0.2s
MDAR Monte D'Aria       0.35   15 ⇓P    Pg          03 51 21.4 -0.1
MDAR                               AML   AML
     comp=E,7605µm,1.0s
MDAR                               AML   AML
     comp=N,15700µm,0.4s
MDAR                               AML   AML
     comp=E,6652µm,0.3s
MDAR                               AML   AML
     comp=N,15694µm,0.4s
T1243 Rocca Santa Ma    0.35  116 ⇓P    Pg          03 51 21.3 -0.2
T1243                              S     Sg          03 51 26.7 +0.4
RM33 Pellescritta (     0.37  157  P     Pg          03 51 22.1 +0.2
RM33                               AML   AML
     comp=E,5505µm,0.7s
RM33                               AML   AML
     comp=N,6900µm,1.5s
RM33                               AML   AML
     comp=E,5685µm,0.7s
RM33                               AML   AML
     comp=N,6880µm,1.5s
RM33                               AML   AML
     comp=E,5510µm,0.7s
RM33                               AML   AML
     comp=N,6905µm,1.5s
RM33                               AML   AML
     comp=N,6885µm,1.5s
RM33                               AML   AML
     comp=E,5680µm,0.7s
RM33                               AML   AML
     comp=E,4884µm,0.2s
RM33                               AML   AML
     comp=E,5071µm,0.2s
RM33                               AML   AML
     comp=N,6722µm,0.2s
RM33                               AML   AML
     comp=N,6770µm,0.2s
GAG1 Gagliole           0.39    6 ⇑P    Pg          03 51 22.3 +0.2
GAG1                               AML   AML
     comp=E,13450µm,0.4s
GAG1                               AML   AML
     comp=N,16350µm,0.7s
GAG1                               AML   AML
     comp=E,13400µm,0.4s
GAG1                               AML   AML
     comp=N,16300µm,0.7s
GAG1                               AML   AML
     comp=E,13428µm,0.4s
GAG1                               AML   AML
     comp=N,16311µm,0.8s
SSM1 San Severino M     0.40   17 ⇑P    Pg          03 51 22.2 +0.1
CESX Cesi               0.40  233 ⇑P    Pg          03 51 22.8 +0.5
CESX                               AML   AML
     comp=E,5120µm,1.4s
CESX                               AML   AML
     comp=N,8035µm,0.5s
CESX                               AML   AML
     comp=E,5125µm,1.4s
CESX                               AML   AML
     comp=E,4060µm,0.3s
CESX                               AML   AML
     comp=N,6499µm,0.3s
SNTG Esanatoglia        0.41  352  P     Pg          03 51 22.4  0.0
SNTG                               AML   AML
     comp=E,3450µm,0.3s
SNTG                               AML   AML
     comp=N,3755µm,0.4s
SNTG                               AML   AML
     comp=N,3755µm,0.4s
SNTG                               AML   AML
     comp=E,3350µm,0.3s
SNTG                               AML   AML
     comp=N,3980µm,0.4s
SNTG                               AML   AML
     comp=E,3140µm,0.5s
SNTG                               AML   AML
     comp=N,3757µm,0.4s
SNTG                               AML   AML
     comp=E,2956µm,0.5s
SNTG                               AML   AML
     comp=N,3980µm,0.4s
CAMP Campotosto         0.43  137 ⇓P    Pg          03 51 22.7 -0.2
CAMP                               AML   AML
     comp=N,2215µm,1.0s
CAMP                               AML   AML
     comp=E,2085µm,0.2s
CAMP                               AML   AML
     comp=E,2085µm,0.2s
CAMP                               AML   AML
     comp=N,1957µm,0.4s
ATCC AVT- Casa Cast     0.43  321 ⇓P    Pg          03 51 23.2 +0.3
ATCC                               AML   AML
     comp=N,6475µm,0.4s
ATCC                               AML   AML
     comp=E,5525µm,1.5s
ATCC                               AML   AML
     comp=N,6474µm,0.4s
ATCC                               AML   AML
     comp=E,4601µm,0.4s
MNTP Montappone         0.44   49  P     Pg          03 51 23.3 +0.3
MNTP                               AML   AML
     comp=E,8505µm,1.4s
MNTP                               AML   AML
     comp=N,10610µm,0.4s
MNTP                               AML   AML
     comp=E,8475µm,1.4s
MNTP                               AML   AML
     comp=N,10615µm,0.3s
MNTP                               AML   AML
     comp=E,7821µm,0.3s
MNTP                               AML   AML
     comp=N,10619µm,0.3s
T1247 Pizzolo (AQ)      0.46  153 ⇓P    Pg          03 51 23.4  0.0
T1247                              AML   AML
     comp=E,5675µm,1.1s
T1247                              AML   AML
     comp=N,6405µm,1.6s
T1247                              AML   AML
     comp=N,5384µm,0.1s
T1247                              AML   AML
     comp=E,5212µm,0.1s
FOSV Fossato di Vic     0.48  337 ⇓P    Pg          03 51 23.8  0.0
FOSV                               AML   AML
     comp=E,2150µm,0.5s
FOSV                               AML   AML
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comp=N,3430µm,0.4s
FOSV AML AML
comp=E,2645µm,0.7s
FOSV AML AML
comp=N,5790µm,0.3s
FOSV AML AML
comp=E,2099µm,0.2s
FOSV AML AML
comp=N,3428µm,0.4s
EL6 Elcito 0.48 8 ⇑P Pg 03 51 23.6 -0.2
EL6 S **Sb 03 51 32.0 +0.1**
EL6 AML AML
comp=E,7090µm,0.2s
EL6 AML AML
comp=N,8450µm,0.2s
EL6 AML AML
comp=E,7085µm,0.2s
EL6 AML AML
comp=N,8455µm,0.2s
EL6 AML AML
comp=E,5151µm,0.2s
EL6 AML AML
comp=N,8330µm,0.4s
TERO Teramo 0.49 118 ⇑P Pg 03 51 23.5 -0.5
TERO AML AML
comp=E,4265µm,0.8s
TERO AML AML
comp=N,6970µm,1.5s
TERO AML AML
comp=E,4270µm,0.8s
TERO AML AML
comp=N,6460µm,0.7s
TERO AML AML
comp=E,4655µm,1.2s
TERO AML AML
comp=N,6455µm,0.1s
TERO AML AML
comp=N,5712µm,0.1s
TERO AML AML
comp=E,3933µm,0.1s
TERO AML AML
comp=E,3575µm,0.1s
OFFI Offida 0.50 80 ⇑P Pg 03 51 24.6 +0.5
OFFI AML AML
comp=E,5845µm,0.4s
OFFI AML AML
comp=N,9365µm,0.4s
OFFI AML AML
comp=N,9365µm,0.4s
OFFI AML AML
comp=E,5844µm,0.4s
CING Cingoli 0.54 14 ⇑P Pg 03 51 24.6 -0.3
CING AML AML
comp=E,2970µm,0.5s
CING AML AML
comp=N,2680µm,0.8s
CING AML AML
comp=N,2287µm,0.5s
CING AML AML
comp=E,2158µm,0.2s
MURB Monte Urbino 0.55 319 P Pg 03 51 25.4 +0.3
MURB S **Sn 03 51 36.0 -1.1**
MURB AML AML
comp=E,5510µm,0.3s
MURB AML AML
comp=E,5900µm,0.3s
MURB AML AML
comp=N,6630µm,1.0s
MURB AML AML
comp=N,6780µm,1.0s
MURB AML AML
comp=N,5969µm,0.3s
MURB AML AML
comp=E,5511µm,0.3s
MURB AML AML
comp=N,6053µm,0.3s
MURB AML AML
comp=E,5898µm,0.3s
GIGS Gran Sasso 0.57 134 ⇓P Pg 03 51 24.9 -0.6
GIGS AML AML
comp=E,822µm,0.2s
GIGS AML AML
comp=N,791µm,0.5s
GIGS AML AML
comp=N,606µm,0.2s
GIGS AML AML
comp=E,822µm,0.2s
AQU L'Aquila 0.57 150 ⇑P Pg 03 51 25.4 -0.1
AQU AML AML
comp=E,1775µm,0.9s
AQU AML AML
comp=E,1780µm,0.9s
AQU AML AML
comp=N,1395µm,0.6s
AQU AML AML
comp=E,1810µm,0.9s
AQU AML AML
comp=N,1350µm,1.6s
AQU AML AML
comp=N,1239µm,0.3s
AQU AML AML
comp=E,1625µm,0.3s
AQU AML AML
comp=N,1343µm,0.6s
AQU AML AML
comp=E,1617µm,0.3s
FIAM Fiamignano 0.59 173 ⇑P Pg 03 51 25.6 -0.2
FIAM S **Sb 03 51 36.0 +1.1**
FIAM AML AML
comp=E,2780µm,0.8s
FIAM AML AML
comp=N,2820µm,0.8s
FIAM AML AML
comp=N,2668µm,0.3s
FIAM AML AML
comp=E,2764µm,0.2s
ATFO Monte Foce - G 0.61 328 ⇑P Pb 03 51 26.7 -0.3
ATFO AML AML
comp=E,1535µm,0.8s
ATFO AML AML
comp=N,1385µm,0.8s
ATFO AML AML
comp=N,1390µm,0.8s
ATFO AML AML
comp=N,1276µm,0.3s
ATFO AML AML
comp=E,1522µm,0.6s
ARVD Arcevia 0.65 355 ⇓P Pg 03 51 26.7 -0.2
ARVD S **Sn 03 51 38.0 -1.6**
ARVD AML AML
comp=E,1805µm,0.4s
ARVD AML AML
comp=N,1054µm,0.8s
ARVD AML AML
comp=E,2000µm,0.5s
ARVD AML AML
comp=N,1480µm,0.6s
ARVD AML AML
comp=E,1257µm,0.2s
ARVD AML AML
comp=N,986µm,0.4s
TRTR Tortoreto Alta 0.66 94 ⇑P Pg 03 51 27.0 -0.2
TRTR AML AML
comp=E,8450µm,0.4s
TRTR AML AML
comp=N,7555µm,0.5s
TRTR AML AML
comp=E,8455µm,0.4s
TRTR AML AML
comp=N,7552µm,0.5s
MGAB Montegabbione 0.67 276 ⇑P Pg 03 51 27.7 +0.4
MGAB AML AML
comp=E,3540µm,0.4s
MGAB AML AML
comp=N,3690µm,1.4s
MGAB AML AML
comp=N,3630µm,0.3s
MGAB AML AML
comp=N,3695µm,1.4s
MGAB AML AML
comp=E,3625µm,0.4s
MGAB AML AML
comp=E,3535µm,0.4s
MGAB AML AML
comp=N,3525µm,0.3s
MGAB AML AML
comp=N,3627µm,0.3s
MGAB AML AML
comp=E,3536µm,0.4s
MGAB AML AML
comp=E,3624µm,0.4s
PP3 Marolino 0.68 39 ⇑P Pb 03 51 27.9 -0.2
PP3 AML AML
comp=E,4620µm,0.4s
PP3 AML AML
comp=N,5300µm,0.8s
PP3 AML AML
comp=E,4730µm,0.3s
PP3 AML AML
comp=N,5295µm,0.8s
PP3 AML AML
comp=N,5480µm,0.8s
PP3 AML AML
comp=N,4942µm,0.5s
PP3 AML AML
comp=E,4729µm,0.3s
PP3 AML AML
comp=N,4593µm,0.5s
PP3 AML AML
comp=E,4620µm,0.4s
ATVO AVT- Monte Val 0.69 320 ⇑P Pg 03 51 27.8 +0.1
ATVO AML AML
comp=E,998µm,0.8s
ATVO AML AML
comp=N,1385µm,0.6s
ATVO AML AML
comp=E,987µm,0.6s
ATVO AML AML
comp=N,1383µm,0.6s
FRON Frontone 0.70 342 P Pg 03 51 27.6 -0.2
FRON AML AML
comp=N,1540µm,0.4s
FRON AML AML
comp=E,1240µm,1.3s
FRON AML AML
comp=N,2090µm,0.3s
FRON AML AML
comp=N,1544µm,0.4s
FRON AML AML
comp=E,1217µm,0.3s
SRES S.Oreste - Sor 0.72 211 ⇑P Pg 03 51 28.3 0.0
SRES S **Sn 03 51 41.0 -0.3**
SRES AML AML
comp=N,1490µm,0.4s
SRES AML AML
comp=E,1830µm,1.2s
SRES AML AML
comp=N,1489µm,0.4s
SRES AML AML
comp=E,1558µm,0.2s
FAGN Fagnano 0.72 144 ⇓P Pg 03 51 27.6 -0.7
FAGN AML AML
comp=E,3465µm,0.4s
FAGN AML AML
comp=N,3560µm,0.6s
FAGN AML AML
comp=E,3464µm,0.4s
FAGN AML AML
comp=N,3559µm,0.6s
ATMI Monte Miggiano 0.73 312 ⇓P Pn 03 51 30.3 -0.2
ATPI Pietralunga - 0.75 323 P Pb 03 51 29.3 0.0
ATPI AML AML
comp=N,1070µm,0.5s
ATPI AML AML
comp=E,1390µm,0.5s
ATPI AML AML
comp=N,1071µm,0.5s
ATPI AML AML
comp=E,1389µm,0.5s
VCEL Villa Celiera 0.76 127 ⇓P Pg 03 51 28.1 -1.0
VCEL S **Sb 03 51 41.0 +1.1**
VCEL AML AML
comp=E,2905µm,0.9s
VCEL AML AML
comp=N,2975µm,0.3s
VCEL AML AML
comp=N,2980µm,0.3s
VCEL AML AML
comp=E,2884µm,0.4s
VCEL AML AML
comp=N,2850µm,0.2s
PIEI Pieia 0.77 333 ⇑P Pg 03 51 29.3 +0.1
PIEI S **Sn 03 51 42.0 -0.6**
PIEI AML AML
comp=E,946µm,0.4s
PIEI AML AML
comp=N,809µm,0.9s
PIEI AML AML
comp=N,808µm,0.9s
PIEI AML AML
comp=E,946µm,0.4s
PIEI AML AML
comp=E,946µm,0.4s
PIEI AML AML
comp=N,708µm,0.3s
MPAG Monte Paganucc 0.80 347 ⇑P Pg 03 51 29.6 -0.2
MPAG S **Sn 03 51 43.0 -0.4**
MPAG AML AML
comp=E,976µm,0.7s
MPAG AML AML
comp=N,894µm,0.4s
MPAG AML AML
comp=E,1090µm,0.5s
MPAG AML AML
comp=N,894µm,0.4s
MPAG AML AML
comp=N,1471µm,0.7s
MPAG AML AML
comp=E,811µm,0.3s
MPAG AML AML
comp=E,1049µm,0.8s
MPAG AML AML
comp=N,895µm,0.4s
SACS San Casciano d 0.81 270 ⇑P Pn 03 51 32.0 +0.3
AOI Ancona 0.82 31 ⇑P Pg 03 51 30.2 0.0
AOI AML AML
comp=E,1685µm,1.3s
AOI AML AML
comp=N,1580µm,0.5s
AOI AML AML
comp=N,1582µm,0.5s
AOI AML AML
comp=E,1628µm,0.3s
NARO Abbazia di Nar 0.82 337 P Pg 03 51 30.0 -0.3
NARO AML AML
comp=N,638µm,0.8s
NARO AML AML
comp=E,666µm,0.8s
NARO AML AML
comp=E,521µm,0.5s
NARO AML AML
comp=N,574µm,0.3s
T0110 Collepietro 0.84 138 ⇑P Pg 03 51 29.7 -0.9
T0110 AML AML
comp=N,2190µm,0.6s
T0110 AML AML
comp=E,2355µm,0.6s
T0110 AML AML
comp=E,2358µm,0.6s
T0110 AML AML
comp=N,2189µm,0.6s
MTCE Montecelio 0.85 194 P Pg 03 51 30.4 -0.4
MTCE AML AML
comp=E,1495µm,0.7s
MTCE AML AML
comp=N,1365µm,0.5s
MTCE AML AML
comp=N,1368µm,0.5s
MTCE AML AML
comp=E,1493µm,0.7s
FSSB Fossombrone 0.86 348 ⇑P Pg 03 51 30.6 -0.3
FSSB AML AML
comp=E,2680µm,0.4s
FSSB AML AML
comp=N,3590µm,0.5s
FSSB AML AML
comp=N,4390µm,0.3s
FSSB AML AML
comp=E,2679µm,0.4s
FSSB AML AML
comp=N,3587µm,0.5s
BADI Badiali 0.87 320 ⇑P Pb 03 51 31.5 +0.2
CERT Cerreto 0.90 182 ⇓P Pg 03 51 31.2 -0.5
CERT AML AML
comp=N,1380µm,0.4s
CERT AML AML
comp=E,2025µm,0.4s
CERT AML AML
comp=E,2026µm,0.4s
CERT AML AML
comp=N,1379µm,0.4s
CAFI Castiglion Fio 0.90 302 ⇑P Pb 03 51 32.4 +0.4
CAFI AML AML
comp=E,938µm,0.6s
CAFI AML AML
comp=E,946µm,0.6s
CAFI AML AML
comp=N,1004µm,1.5s
CAFI AML AML
comp=N,1022µm,1.6s
CAFI AML AML
comp=N,1001µm,0.6s
CAFI AML AML
comp=E,937µm,0.6s
CAFI AML AML
comp=N,958µm,0.6s
CAFI AML AML
comp=E,944µm,0.6s
PE3 Peglio 0.93 336 ⇑P Pn 03 51 34.0 +0.8
INTR Introdacqua 1.07 142 ⇑P Pb 03 51 32.3 -2.5
SF01 Poggio Pratacc 1.07 268 ⇓P Pg 03 51 35.1 +0.2
SF01 AML AML
comp=E,604µm,0.4s
SF01 AML AML
comp=N,728µm,0.5s
MA9 Marino 1.11 194 P Pb 03 51 35.2 -0.3
MA9 AML AML
comp=E,2450µm,0.5s
MA9 AML AML
comp=N,1955µm,0.6s
MA9 AML AML
comp=E,2454µm,0.5s
MA9 AML AML
comp=N,1958µm,0.6s
ARCI Arcidosso 1.13 271 P Pn 03 51 36.2 +0.1
ARCI AML AML
comp=E,194µm,0.6s
ARCI AML AML
comp=N,171µm,0.9s
ARCI AML AML
comp=N,171µm,0.9s
ARCI AML AML
comp=E,194µm,0.6s
CAFR Castel Frentan 1.17 122 ⇑P Pg 03 51 38.6 +1.9
LPEL Lama dei Pelig 1.18 133 ⇑P Pb 03 51 36.1 -0.6
LPEL AML AML
comp=N,974µm,0.6s
LPEL AML AML
comp=E,1160µm,1.0s
LPEL AML AML
comp=N,975µm,0.6s
LPEL AML AML
comp=E,994µm,0.3s
GIUL Giuliano Di Ro 1.30 172 ⇓P Pg 03 51 40.7 +1.3
RUFI Rufina 1.48 312 ⇑P Pg 03 51 42.6 -0.1
MODR Mondragone 1.82 159 S Sb 03 52 11.0 +0.6
APRC Apricena 2.17 119 P Pg 03 51 55.5 -0.4
HVAR Hvar 2.54 81 ⇑P Pn 03 51 56.3 +0.9
VULT Monte Vulture 2.71 133 S Sb 03 52 39.0 +2.9
PGF Pioggiola 2.98 266 *e*P **Pn 03 52 02.7 +1.3**
PGF *e*Sn **Sn 03 52 33.6 -3.5**
comp=E,4.8nm,0.4s
MYKA Terra Mystica 3.80 7 *e*Pn **Pn 03 52 13.8 +1.0**
comp=E,5.8nm,0.4s,SNR=6.1
OBKA Obir 3.82 16 *i* Pn **Pn 03 52 13.5 +0.5**
comp=E,1.7nm,0.2s
ABTA Abfaltersbach 3.91 355 *i* Pn **Pn 03 52 15.7 +1.4**
comp=E,5.4nm,0.3s,SNR=12
ABTA *i* Sn **Sn 03 53 01.3 +1.2**
comp=E,11nm,0.6s
SBF Sospel 4.19 286 *e*P **Pn 03 52 19.6 +1.5**
SBF *e*Sn **Sn 03 53 02.5 -4.6**
comp=E,7.6nm,0.5s
KBA Koelnbreinsper 4.23 3 *i* Pn **Pn 03 52 20.8 +2.0**
comp=E,2.4nm,0.2s
FETA Feichten 4.47 340 *i* Pn **Pn 03 52 25.7 +3.6**
comp=E,0.9nm,0.2s
FETA *i* Sn **Sn 03 53 17.4 +3.3**
comp=E,2.3nm,0.3s
DAVOX Davos/Dischmat 4.52 331 Pn **Pn 03 52 26.6 +3.9**
comp=E,1.3nm,0.3s,baz=152,slow=18,SNR=12
DAVOX Sn **Sn 03 53 18.7 +3.5**
comp=E,0.6nm,0.3s,baz=323,slow=22,SNR=2.0
comp=E,6.0nm,0.4s
WTTA Wattenberg 4.52 348 *e*Pn **Pn 03 52 26.1 +3.4**
comp=E,3.2nm,0.3s
SQTA Sankt Quirin 4.55 344 *e*Pn **Pn 03 52 26.6 +3.5**
comp=E,3.8nm,0.2s
SQTA *i* Sn **Sn 03 53 18.2 +2.2**
comp=E,6.6nm,0.3s
WATA Walderalm 4.60 348 *i* Pn **Pn 03 52 26.9 +3.1**
comp=E,1.8nm,0.2s
ARSA Arzberg 4.74 21 *e*Pn **Pn 03 52 25.5 -0.2**
comp=E,3.3nm,0.3s,SNR=4.4
ARSA *i* Sn **Sn 03 53 18.9 -1.7**
comp=E,5.2nm,0.5s
LMR La Mourre 4.79 278 *e*P **Pn 03 52 26.8 +0.6**
LMR *e*Sn **Sn 03 53 17.5 -4.1**
comp=E,1.2nm,0.3s
BIOA Bad Ischl, Aus 4.86 5 *i* Pn **Pn 03 52 28.4 +1.2**
comp=E,9.5nm,0.3s,SNR=4.5
MBDF Montbardon 4.89 295 *e*P **Pn 03 52 30.0 +2.2**
MBDF *e*Sn **Sn 03 53 19.5 -4.9**
comp=E,3.6nm,0.6s
RETA Reutte 4.90 342 *i* Pn **Pn 03 52 31.3 +3.4**
comp=E,3.0nm,0.4s,SNR=4.6
DAVA Damuels 4.96 334 *i* Pn **Pn 03 52 30.5 +1.8**
comp=E,4.8nm,0.4s
DAVA *i* Sn **Sn 03 53 27.8 +1.8**
comp=E,3.0nm,0.4s
MOA Molln 5.08 10 *i* Pn **Pn 03 52 31.3 +1.1**
comp=E,1.1nm,0.1s,SNR=6.2
MOA *e*Sn **Sn 03 53 29.6 +0.9**
comp=E,9.0nm,0.5s
LPG La Plagne 5.22 303 *e*P **Pn 03 52 34.8 +2.3**
LPG *e*Sn **Sn 03 53 27.6 -5.2**
comp=E,5.9nm,0.7s
LPL La Plagne 5.24 303 *e*P **Pn 03 52 34.9 +2.2**
LPL *e*Sn **Sn 03 53 28.4 -4.8**
comp=E,4.6nm,0.5s
CONA Conrad Observa 5.46 21 *e*Pn **Pn 03 52 36.0 +0.5**
comp=E,2.3nm,0.2s,SNR=12
CONA *i* Sn **Sn 03 53 37.9 -0.3**
comp=E,2.1nm,0.3s
SMRF Simiane la Rot 5.54 284 *e*P **Pn 03 52 39.4 +2.9**
ORIF Oris-en-Rattie 5.55 294 *e*P **Pn 03 52 39.6 +2.7**
ORIF *e*Sn **Sn 03 53 35.5 -5.2**
comp=E,2.7nm,0.5s
GERES GERESS Array B 6.01 4 Pn **Pn 03 52 43.2 +0.1**
comp=E,0.4nm,0.3s,baz=183,slow=13,SNR=9.0
GERES Sn **Sn 03 53 51.5 -0.5**
comp=E,1.2nm,0.3s,baz=189,slow=28,SNR=7.8
comp=E,0.6nm,0.3s
CKRC Cesky Krumlov 6.04 8 *e*PN **Pn 03 52 42.9 -0.5**
CKRC *e*SN **Sn 03 53 49.7 -2.7**
CABF La Chapelle 6.20 310 *e*P **Pn 03 52 48.3 +2.6**
KHC Kasperske Hory 6.29 3 *e*PN **Pn 03 52 47.3 +0.4**
KHC *e*SN **Sn 03 53 56.7 -2.0**
VIVF Saint-Julien-l 6.36 291 *e*P **Pn 03 52 49.0 +1.2**
HINF Hinteralfeld 6.59 321 *e*P **Pn 03 52 52.9 +1.8**
HINF *e*Sn **Sn 03 54 00.2 -6.0**
comp=E,2.4nm,0.3s
LASF Ste Croix 6.78 284 *e*P **Pn 03 52 56.0 +2.4**
CDF Champ du Feu 6.86 326 *e*P **Pn 03 52 56.7 +1.9**
HAU Haudompre 6.97 320 *e*P **Pn 03 52 58.7 +2.5**
HAU *e*Sn **Sn 03 54 08.6 -6.7**
comp=E,8.2nm,0.4s
KEST Kesra 7.66 203 Pn Pn 03 53 12.2 +6.5
comp=E,0.2nm,0.3s,baz=12,slow=9.3,SNR=4.1
comp=E,4.8nm,1.1s
MTLF Montolieu 7.92 277 *e*P **Pn 03 53 08.9 -0.3**
MEZF Maizieres J'vi 7.94 318 *e*P **Pn 03 53 12.0 +2.6**
CAF Calviac 8.18 288 *e*P **Pn 03 53 15.5 +2.7**
CLL Collm 8.46 360 *e*Sn **Sn 03 54 43.0 -8.9**
CLL *e*Sg **Sg 03 55 48.0 +2.4**
HFS Hagfors 17.31 1 LR LR 04 02 58.0
comp=E,183nm,18.7s,baz=341,slow=41
TORD Torodi Ar. Bea 31.18 202 P P 03 57 40.3 +7.0
comp=E,0.2nm,0.7s,baz=12,slow=7.5,SNR=1.8
comp=E,0.2nm,0.7s

ROM 28 03:52:01.0±0.1, 42.°869N±0.°005×13.°053E±0.°007, h8km, ML3.1/19, 2C-3D, Error ellipse: s-maj=0.6km s-min=0.6km az=154.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**311**	P	Pg	03 52 03.2	+0.5
T1216				S	Sg	03 52 04.0	+0.1
T1216				AML	AML		
	comp=E,9470μm,1.1s						
T1216				AML	AML		
	comp=N,6105μm,0.5s						
T1216				AML	AML		
	comp=E,9460μm,1.1s						
T1216				AML	AML		
	comp=N,6115μm,0.5s						
T1216				AML	AML		
	comp=E,8225μm,0.3s						
T1216				AML	AML		
	comp=N,5842μm,0.3s						
T1216				AML	AML		
	comp=N,5006μm,0.3s						
T1216				AML	AML		
	comp=E,5347μm,0.1s						
NRCA	**Norcia**	**0.06**	**128**	P	Pg	03 52 03.4	+0.4
NRCA				S	Sg	03 52 04.8	+0.5
NRCA				AML	AML		
	comp=E,6540μm,0.5s						
NRCA				AML	AML		
	comp=N,13050μm,0.2s						
NRCA				AML	AML		
	comp=E,6090μm,0.4s						
NRCA				AML	AML		
	comp=N,12200μm,0.2s						
NRCA				AML	AML		
	comp=N,13064μm,0.2s						
NRCA				AML	AML		
	comp=E,4972μm,0.1s						
NRCA				AML	AML		
	comp=E,4652μm,0.1s						
NRCA				AML	AML		
	comp=N,12189μm,0.2s						
FEMA	**Monte Fema**	**0.09**	**359**	P	Pg	03 52 04.0	+0.5
FEMA				S	Sg	03 52 05.8	+0.6
FEMA				AML	AML		
	comp=E,18850μm,0.6s						
FEMA				AML	AML		
	comp=E,18900μm,0.6s						
FEMA				AML	AML		
	comp=N,17000μm,0.4s						
FEMA				AML	AML		
	comp=E,18729μm,0.3s						
FEMA				AML	AML		
	comp=N,15437μm,0.5s						
T1245	**Castelsantange**	**0.10**	**97**	P	Pg	03 52 04.0	+0.4
T1245				S	Sg	03 52 05.3	-0.1
T1245				AML	AML		
	comp=N,8205μm,0.3s						
T1245				AML	AML		
	comp=N,7940μm,0.3s						
T1245				AML	AML		
	comp=N,5003μm,0.3s						
T1245				AML	AML		
	comp=N,4806μm,0.4s						
T1245				AML	AML		
	comp=E,6015μm,0.1s						
T1245				AML	AML		
	comp=E,6250μm,0.2s						
T1245				AML	AML		
	comp=N,4327μm,0.2s						
T1245				AML	AML		
	comp=E,6015μm,0.1s						
T1245				AML	AML		
	comp=N,4422μm,0.3s						
T1245				AML	AML		
	comp=E,6249μm,0.1s						
T1215	**Vallo di Nera,**	**0.15**	**244**	P	Pg	03 52 04.8	+0.5
T1215				S	Sg	03 52 07.3	+0.8
T1215				AML	AML		
	comp=E,644μm,0.1s						
T1215				AML	AML		
	comp=E,649μm,0.1s						
T1215				AML	AML		
	comp=E,344μm,0.1s						
T1215				AML	AML		
	comp=E,392μm,0.1s						
FDMO	**Fiordimonte**	**0.17**	**9**	AML	AML		
	comp=E,74750μm,0.2s						
FDMO				AML	AML		
	comp=N,69000μm,0.5s						
T1217	**Poggiodomo (PG**	**0.18**	**210**	P	Pg	03 52 05.3	+0.5
T1217				S	Sg	03 52 08.3	+0.9
T1217				AML	AML		
	comp=E,1995μm,1.6s						
T1217				AML	AML		
	comp=N,2765μm,0.5s						
T1217				AML	AML		
	comp=N,1513μm,0.2s						
T1217				AML	AML		
	comp=E,585μm,0.2s						
T1217				AML	AML		
	comp=E,597μm,0.2s						
T1217				AML	AML		
	comp=E,606μm,0.2s						
T1217				AML	AML		
	comp=N,1446μm,0.2s						
MMO1	**Montemonaco**	**0.20**	**81**	⇑P	Pg	03 52 05.8	+0.6
MMO1				S	Sg	03 52 09.2	+1.1
AM05	**Amandola Campo**	**0.25**	**64**	P	Pg	03 52 06.6	+0.6
AM05				S	Sg	03 52 10.0	+0.7
AM05				AML	AML		
	comp=E,1115μm,0.2s						
AM05				AML	AML		
	comp=N,1175μm,0.3s						
AM05				AML	AML		
	comp=E,4095μm,1.1s						
AM05				AML	AML		
	comp=E,1114μm,0.2s						
AM05				AML	AML		
	comp=N,1170μm,0.3s						
AM05				AML	AML		
	comp=N,220μm,1.0s						
AM05				AML	AML		
	comp=E,4100μm,1.1s						
AM05				AML	AML		
	comp=E,3632μm,0.2s						
AM05				AML	AML		
	comp=E,1116μm,0.2s						
AM05				AML	AML		
	comp=N,1170μm,0.3s						
AM05				AML	AML		
	comp=N,205μm,0.1s						
CSP1	**Cessapalombo**	**0.25**	**27**	AML	AML		
	comp=N,19050μm,1.6s						
CSP1				AML	AML		
	comp=E,28300μm,0.3s						
CSP1				AML	AML		
	comp=N,19050μm,0.4s						
T1201	**Domo (RI)**	**0.26**	**145**	P	Pg	03 52 06.9	+0.8
T1201				S	Sg	03 52 10.9	+1.3
GUMA	**Gualdo di Mace**	**0.28**	**47**	⇑P	Pg	03 52 07.5	+0.8
GUMA				S	Sb	03 52 12.9	-0.4
GUMA				AML	AML		
	comp=N,17600μm,0.3s						
GUMA				AML	AML		
	comp=E,23850μm,0.4s						
GUMA				AML	AML		
	comp=N,18800μm,0.5s						
GUMA				AML	AML		
	comp=E,18500μm,0.7s						
GUMA				AML	AML		
	comp=N,17650μm,0.3s						
GUMA				AML	AML		
	comp=N,18796μm,0.5s						
GUMA				AML	AML		
	comp=E,18508μm,0.7s						
GUMA				AML	AML		
	comp=N,17612μm,0.3s						
GUMA				AML	AML		
	comp=E,23844μm,0.4s						
SEF1	**Sefro**	**0.29**	**345**	P	Pg	03 52 07.2	+0.5
SEF1				S	Sg	03 52 10.8	+0.2
SEF1				AML	AML		
	comp=N,10745μm,0.2s						
SEF1				AML	AML		
	comp=E,8290μm,0.5s						
SEF1				AML	AML		
	comp=N,10710μm,0.2s						
SEF1				AML	AML		
	comp=E,8295μm,0.5s						
SEF1				AML	AML		
	comp=N,10740μm,0.2s						
SEF1				AML	AML		
	comp=N,10735μm,0.2s						
SEF1				AML	AML		
	comp=E,7245μm,0.2s						
PIO1	**Pioraco**	**0.31**	**351**	P	Pb	03 52 08.3	-0.6
PIO1				AML	AML		
	comp=E,3935μm,0.4s						
PIO1				AML	AML		
	comp=N,3690μm,1.2s						
PIO1				AML	AML		
	comp=E,3940μm,0.4s						
PIO1				AML	AML		
	comp=E,3938μm,0.4s						
PIO1				AML	AML		
	comp=N,3074μm,0.3s						
MDAR	**Monte D'Aria**	**0.33**	**11**	AML	AML		
	comp=E,7605μm,1.0s						
MDAR				AML	AML		
	comp=E,7605μm,1.0s						
MDAR				AML	AML		
	comp=N,15400μm,0.4s						
MDAR				AML	AML		
	comp=N,15450μm,0.4s						
T1243	**Rocca Santa Ma**	**0.34**	**120**	S	Sb	03 52 14.0	-0.9
T1211	**Morro Reatino**	**0.37**	**204**	S	Sg	03 52 14.0	+0.9
GAG1	**Gagliole**	**0.37**	**2**	P	Pb	03 52 09.3	-0.5
GAG1				AML	AML		
	comp=E,10495μm,0.8s						
GAG1				AML	AML		
	comp=N,10725μm,0.7s						
GAG1				AML	AML		
	comp=E,10510μm,0.8s						
GAG1				AML	AML		
	comp=N,10750μm,0.7s						
GAG1				AML	AML		
	comp=N,10740μm,0.7s						
GAG1				AML	AML		
	comp=E,10485μm,0.8s						
GAG1				AML	AML		
	comp=N,8998μm,0.2s						
GAG1				AML	AML		
	comp=E,8385μm,0.3s						
SNTG	**Esanatoglia**	**0.39**	**348**	P	Pb	03 52 09.9	-0.4
SNTG				AML	AML		
	comp=E,2105μm,0.1s						
SNTG				AML	AML		
	comp=N,1925μm,0.6s						
SNTG				AML	AML		
	comp=N,1970μm,1.5s						
SNTG				AML	AML		
	comp=E,2100μm,0.1s						
SNTG				AML	AML		
	comp=N,1920μm,0.6s						
SNTG				AML	AML		
	comp=E,2100μm,0.1s						
SNTG				AML	AML		
	comp=N,1925μm,0.6s						
SNTG				AML	AML		
	comp=E,2105μm,0.1s						
SNTG				AML	AML		
	comp=N,1958μm,0.3s						
SNTG				AML	AML		
	comp=E,2104μm,0.1s						
SNTG				AML	AML		
	comp=E,2098μm,0.1s						
SNTG				AML	AML		
	comp=N,1896μm,0.3s						
CAMP	**Campotosto**	**0.42**	**142**	S	Sg	03 52 16.0	+1.1
CESX	**Cesi**	**0.43**	**234**	S	Sg	03 52 16.0	+0.8
ATCC	**AVT- Casa Cast**	**0.44**	**316**	P	Pg	03 52 10.0	+0.4
ATCC				S	Sb	03 52 16.8	-0.9
ATCC				AML	AML		
	comp=N,4015μm,0.3s						
ATCC				AML	AML		
	comp=E,4945μm,0.2s						
ATCC				AML	AML		
	comp=E,4943μm,0.2s						
ATCC				AML	AML		
	comp=N,4015μm,0.3s						
EL6	**Elcito**	**0.46**	**4**	P	Pg	03 52 10.7	+0.7
EL6				AML	AML		
	comp=E,7090μm,0.2s						
EL6				AML	AML		
	comp=N,8450μm,0.2s						
EL6				AML	AML		
	comp=N,8455μm,0.2s						
EL6				AML	AML		
	comp=E,7085μm,0.2s						
EL6				AML	AML		
	comp=E,7091μm,0.2s						
EL6				AML	AML		
	comp=N,8446μm,0.2s						
FOSV	**Fossato di Vic**	**0.48**	**333**	P	Pb	03 52 11.0	-0.6
FOSV				S	Sg	03 52 17.6	+1.1
FOSV				AML	AML		
	comp=E,2645μm,0.7s						
FOSV				AML	AML		
	comp=N,5790μm,0.3s						
FOSV				AML	AML		
	comp=E,2588μm,0.1s						
FOSV				AML	AML		
	comp=N,5791μm,0.3s						
CING	**Cingoli**	**0.52**	**12**	P	Pg	03 52 11.4	+0.3
CING				AML	AML		
	comp=N,2680μm,0.8s						
CING				AML	AML		
	comp=E,2970μm,0.5s						
CING				AML	AML		
	comp=E,2919μm,0.2s						
CING				AML	AML		
	comp=N,2491μm,0.2s						
MURB	**Monte Urbino**	**0.55**	**316**	AML	AML		
	comp=E,3895μm,0.2s						
MURB				AML	AML		
	comp=E,3690μm,0.2s						
MURB				AML	AML		
	comp=N,2910μm,0.9s						
MURB				AML	AML		
	comp=N,3300μm,0.9s						
ARVD	**Arcevia**	**0.63**	**353**	P	Pb	03 52 14.6	+0.2
ARVD				S	Sg	03 52 21.4	-0.2
ARVD				AML	AML		
	comp=E,2000μm,0.5s						
ARVD				AML	AML		
	comp=N,1480μm,0.6s						
ARVD				AML	AML		
	comp=E,1545μm,0.1s						
ARVD				AML	AML		
	comp=N,1163μm,0.3s						
FRON	**Frontone**	**0.69**	**340**	P	Pb	03 52 15.3	0.0
FRON				S	Sg	03 52 23.9	+0.5
FRON				AML	AML		
	comp=E,1180μm,0.1s						
FRON				AML	AML		
	comp=N,2086μm,0.3s						
ATVO	**AVT- Monte Val**	**0.70**	**318**	⇓P	Pn	03 52 16.7	-0.5
ATVO				S	Sn	03 52 27.0	-1.2
ATVO				AML	AML		
	comp=N,567μm,0.2s						
ATVO				AML	AML		
	comp=E,636μm,0.2s						
PIEI	**Pieia**	**0.77**	**331**	⇓P	Pb	03 52 17.1	+0.5
PIEI				S	Sb	03 52 28.0	+0.8
PIEI				AML	AML		
	comp=E,547μm,0.1s						
PIEI				AML	AML		
	comp=N,575μm,0.2s						
NARO	**Abbazia di Nar**	**0.82**	**335**	P	Pb	03 52 17.7	+0.2
NARO				S	Sb	03 52 28.3	-0.4
NARO				AML	AML		
	comp=E,448μm,0.2s						
NARO				AML	AML		
	comp=N,333μm,0.3s						
FSSB	**Fossombrone**	**0.85**	**346**	⇓P	Pb	03 52 18.3	+0.3
FSSB				S	Sb	03 52 29.2	-0.3
FSSB				AML	AML		
	comp=E,1817μm,0.2s						
FSSB				AML	AML		
	comp=N,4387μm,0.3s						
RMP	**Rome, Mte Porz**	**1.09**	**194**	S	Sg	03 52 34.0	-2.0
LIK	**San Giovanni I**	**1.41**	**164**	S	Sb	03 52 44.0	-1.8
MODR	**Mondragone**	**1.83**	**160**	S	Sg	03 53 02.0	+2.2
PIGN	**Pignataro Magg**	**1.87**	**153**	P	Pn	03 52 33.6	+0.4
PIGN				AML	AML		
	comp=N,148μm,1.3s						
PIGN				AML	AML		
	comp=N,800μm,0.6s						
PIGN				AML	AML		
	comp=E,139μm,1.0s						
PIGN				AML	AML		
	comp=E,897μm,0.6s						

*TAP **28** 04:18:10.2, 21.°53N×122.°06E, h54km±1km, ML3.3, D*
*JMA **28** 04:18:12.5±0.6, 22.°N±3.°×12.°2E±.°, h50km, MV4.0/10, TAIWAN REGION*
*NIED **28** 04:18:12.5, 21.°60N×121.°82E, h50km, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.29; $M_{\theta\theta}$1.59; $M_{\phi\phi}$-0.30; $M_{r\theta}$2.21; $M_{\theta\phi}$-0.15; $M_{\phi r}$0.19; Fault plane solution: M_o2.65000×10^{14} NP1: ϕ_s107.00000°, δ17.00000°, λ-70.00000°. NP2: ϕ_s266.00000°, δ74.00000°, λ-96.00000°.*

ISC 28 04:18:12.2±1.4, 21.°50N±0.°04×121.°92E±0.°04, h30km±12km, n57, σ1°10/81, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.58**	**328**	*i* P	**Pb**	**04 18 23.7**	**-0.3**
	baz=317						
LYUB				*e*S	**Sb**	**04 18 33.2**	**+1.1**
	baz=317						
LAY	**Lan-yu**	**0.63**	**328**	*i* P	**Pb**	**04 18 23.6**	**-1.2**
	baz=318						
LAY				*e*S	**Sb**	**04 18 33.9**	**+0.5**
	baz=318						
TSEB	**Hengchuen, Pin**	**1.02**	**293**	*e*P	**Pn**	**04 18 30.8**	**+0.2**
	baz=288						
TSEB				*e*S	**Sn**	**04 18 46.1**	**+2.2**
	baz=288						
TWKBT	**Hengchun**	**1.11**	**293**	P	**Pn**	**04 18 31.8**	**-0.1**
	baz=298						
TWK1	**Hengchun**	**1.12**	**293**	*e*P	**Pn**	**04 18 31.9**	**0.0**
	baz=290						
SMST	**Manzhou Townsh**	**1.13**	**297**	*e*P	**Pn**	**04 18 30.6**	**-1.4**
	baz=303						
HEN	**Hengchun**	**1.20**	**295**	*e*P	**Pn**	**04 18 32.7**	**-0.4**
	baz=299						
LDUT	**Ludao**	**1.23**	**340**	*i* P	**Pn**	**04 18 31.7**	**-1.8**
	baz=335						
LDUT				*e*S	**Sn**	**04 18 48.0**	**-1.1**
	baz=335						
SLIU	**Shizi**	**1.26**	**305**	*e*P	**Pn**	**04 18 32.9**	**-0.9**
	baz=300						
SLIU				*e*S	**Sn**	**04 18 50.1**	**+0.4**
	baz=300						
TAWH	**Dawu Township**	**1.27**	**311**	*e*P	**Pn**	**04 18 32.7**	**-1.2**
	baz=316						
TAWH				*e*S	**Sn**	**04 18 49.2**	**-0.8**
	baz=316						
TAW	**Tawu**	**1.27**	**312**	*e*P	**Pn**	**04 18 34.7**	**+0.7**
	baz=317						
TAW				*e*S	**Sn**	**04 18 50.5**	**+0.4**
	baz=317						
EAST	**Anshuo**	**1.32**	**312**	*e*P	**Pn**	**04 18 34.0**	**-0.7**
	baz=316						
EAST				*e*S	**Sn**	**04 18 51.9**	**+0.5**
	baz=316						
ECL	**Taimali**	**1.41**	**321**	*e*P	**Pn**	**04 18 35.1**	**-0.8**
	baz=309						
ECL				*e*S	**Sn**	**04 18 53.2**	**-0.2**
	baz=309						
SCZT	**Fangliau**	**1.48**	**306**	*e*P	**Pn**	**04 18 37.3**	**+0.4**
	baz=310						
TWGBT	**Beinan**	**1.52**	**329**	*e*P	**Pn**	**04 18 36.9**	**-0.5**
	baz=314						
TWGBT				*e*S	**Sn**	**04 18 55.7**	**-0.5**
	baz=314						
TWG	**Pinlang**	**1.53**	**329**	*e*P	**Pn**	**04 18 36.9**	**-0.6**
	baz=314						
EDH	**Donghe**	**1.57**	**339**	*e*P	**Pn**	**04 18 36.5**	**-1.6**
	baz=341						
EDH				*e*S	**Sn**	**04 18 56.0**	**-1.4**
	baz=341						
LONT	**Longtian**	**1.57**	**333**	*e*P	**Pn**	**04 18 38.2**	**0.0**
	baz=321						
MASBT	**Mashibuluo**	**1.62**	**313**	*e*P	**Pn**	**04 18 39.6**	**+0.8**
	baz=309						
TSMG	**Majia**	**1.68**	**316**	*e*P	**Pn**	**04 18 39.1**	**-0.5**
	baz=312						
SSD	**Sandimen**	**1.72**	**316**	*e*P	**Pn**	**04 18 40.1**	**0.0**
	baz=313						
EHD	**Haiduan**	**1.76**	**338**	*e*P	**Pn**	**04 18 39.2**	**-1.6**
	baz=322						
EHD				*e*S	**Sn**	**04 19 02.0**	**-0.3**
	baz=322						
FULB	**Fuli**	**1.78**	**341**	*e*P	**Pn**	**04 18 39.8**	**-1.3**
	baz=346						
FULB				*e*S	**Sn**	**04 19 01.6**	**-1.2**
	baz=346						
ELDTW	**Lidau**	**1.87**	**334**	*e*P	**Pn**	**04 18 41.4**	**-1.0**
	baz=322						
EYUL	**Yuli**	**1.92**	**343**	*e*P	**Pn**	**04 18 41.2**	**-1.7**
	baz=346						
EYUL				*e*S	**Sn**	**04 19 05.8**	**-0.2**
	baz=346						
YULB	**Yu-li**	**1.96**	**343**	*e*P	**Pn**	**04 18 42.7**	**-0.9**
	baz=346						
YULB				*e*S	**Sn**	**04 19 08.0**	**+0.7**
	baz=346						
STYH	**Taoyuan**	**1.97**	**328**	*e*P	**Pn**	**04 18 42.5**	**-1.1**
	baz=321						
HGSD	**Ruisui**	**2.03**	**347**	*e*P	**Pn**	**04 18 42.9**	**-1.5**
	baz=350						
EHY	**Hungye**	**2.07**	**345**	*e*P	**Pn**	**04 18 44.0**	**-1.0**
	baz=347						
CHN1	**Nanshi**	**2.11**	**323**	*e*P	**Pn**	**04 18 48.0**	**+2.4**
	baz=320						
WTP	**Ta-pu**	**2.11**	**325**	*e*P	**Pn**	**04 18 47.3**	**+1.7**
	baz=322						
TPUB	**Ta-pu**	**2.15**	**327**	*e*P	**Pn**	**04 18 48.2**	**+2.1**
	baz=323						
TPUB				*e*S	**Sn**	**04 19 12.7**	**+0.9**
	baz=323						
YUS	**Yu-Shan**	**2.17**	**336**	*e*P	**Pn**	**04 18 46.3**	**-0.5**
	baz=340						
TWK	**Hsinying**	**2.20**	**323**	*e*P	**Pn**	**04 18 49.3**	**+2.5**
	baz=307						
CHN4	**Tsaushan**	**2.21**	**327**	*e*P	**Pn**	**04 18 48.1**	**+1.2**
	baz=309						
ALS	**Alishan**	**2.25**	**333**	*e*P	**Pn**	**04 18 49.2**	**+1.5**
	baz=330						
VWDT	**VWDT**	**2.35**	**342**	*e*P	**Pn**	**04 18 49.2**	**+0.3**
	baz=345						
WHYT	**Xinyi Township**	**2.39**	**336**	*e*P	**Pn**	**04 18 50.8**	**+1.3**
	baz=324						
SSLB	**Suanglung**	**2.44**	**339**	*e*P	**Pn**	**04 18 51.1**	**+1.0**
	baz=342						
WUSB	**Renai**	**2.58**	**344**	*e*P	**Pn**	**04 18 52.9**	**+0.7**
	baz=349						
CHGB	**Renai**	**2.63**	**345**	*e*P	**Pn**	**04 18 53.3**	**+0.3**
	baz=350						
NACB	**Ningnanchiao**	**2.67**	**354**	*e*P	**Pn**	**04 18 51.0**	**-2.4**
	baz=357						
ETLH	**Xiulin Townshi**	**2.72**	**352**	*e*P	**Pn**	**04 18 52.9**	**-1.1**
	baz=355						
WDGT	**Dungji**	**2.72**	**310**	*e*P	**Pn**	**04 18 54.6**	**+0.6**
	baz=308						
VCHM	**Qimei**	**2.86**	**307**	*e*P	**Pn**	**04 18 55.8**	**-0.1**
	baz=305						
PHUB	**P'eng-hu**	**2.95**	**313**	*e*P	**Pn**	**04 18 57.0**	**-0.1**
	baz=311						
PHUB				*e*S	**Sn**	**04 19 32.2**	**+0.7**
	baz=311						
LATG	**Datong**	**3.04**	**353**	*e*P	**Pn**	**04 18 58.2**	**-0.2**
	baz=351						
PACPP	**Pamplona Cagay**	**3.08**	**190**	⇑*i*P	**Pn**	**04 18 59.4**	**+0.6**
PACPP				*i* S	**Sn**	**04 19 32.4**	**-2.2**
HATJ	**Hateruma jima**	**3.08**	**34**	P	**Pn**	**04 18 60.0**	**+1.1**
HATJ				S	**Sn**	**04 19 34.8**	**0.0**
JYNG	**Yonagunijimaku**	**3.08**	**18**	P	**Pn**	**04 18 59.7**	**+0.8**
YOJ	**Yonaguni jima**	**3.11**	**19**	P	**Pn**	**04 19 00.2**	**+0.9**
YOJ				*e*S	**Sn**	**04 19 36.1**	**+0.6**
YHNB	**Yeheng**	**3.19**	**351**	*e*P	**Pn**	**04 19 01.8**	**+1.3**
	baz=356						
IRIF	**Iriomote-Funau**	**3.28**	**30**	P	**Pn**	**04 19 02.9**	**+1.3**
IRIF				S	**Sn**	**04 19 40.5**	**+1.0**
JKRS	**Kuro-shima**	**3.34**	**35**	P	**Pn**	**04 19 03.7**	**+1.3**

JKRS				S		Sn	04 19 41.2	+0.2
JIJ	Ishigaki jima	3.51	35	P		Pn	04 19 05.3	+0.5
JIJ				eS		Sn	04 19 44.6	-0.8
JISG	Ishigakijimahi	3.78	35	P		Pn	04 19 09.3	+0.8
JISG				eS		Sn	04 19 51.1	-0.8
JTJ	Tarama	4.04	39	eS		Sn	04 19 58.2	-0.2

TAP 28 04:31:13.4,21°.60N×122°.12E,h25km±1km,ML2.9,1D,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.64	309	P	Pn	04 31 27.1	+0.2
	baz=308						
LYUB				eS	Sn	04 31 35.9	-0.3
	baz=308						
LAY	Lan-yu	0.69	310	i P	Pb	04 31 26.7	0.0
	baz=309						
LAY				eS	Sn	04 31 37.0	-0.4
	baz=309						
TSEB	Hengchuen, Pin	1.17	285	eS	Sb	04 31 50.3	+0.6
	baz=284						
LDUT	Ludao	1.23	331	P	Pn	04 31 34.9	-0.1
	baz=330						
LDUT				S	Sb	04 31 51.3	0.0
	baz=330						
TWKBT	Hengchun	1.26	286	eP	Pn	04 31 35.2	-0.3
	baz=285						
TWKBT				eS	Sb	04 31 52.2	-0.1
	baz=285						
SMST	Manzhou Townsh	1.26	290	eP	Pn	04 31 35.3	-0.2
	baz=289						
SMST				eS	Sb	04 31 52.4	0.0
	baz=289						
TWK1	Hengchun	1.27	286	eP	Pb	04 31 36.1	-0.5
	baz=285						
TWK1				eS	Sb	04 31 52.3	-0.3
	baz=285						
HEN	Hengchun	1.35	288	eS	Sb	04 31 54.4	-0.3
	baz=287						
TAWH	Dawu Township	1.36	303	eP	Pn	04 31 37.2	+0.4
	baz=302						
TAWH				eS	Sn	04 31 54.5	+0.5
	baz=302						
TAW	Tawu	1.36	304	eP	Pb	04 31 38.3	+0.1
	baz=303						
SLIU	Shizi	1.37	297	eP	Pn	04 31 36.8	-0.2
	baz=296						
SLIU				eS	Sb	04 31 55.0	-0.5
	baz=296						
EAST	Anshuo	1.41	304	eP	Pn	04 31 37.7	+0.1
	baz=303						
EAST				eS	Sn	04 31 55.6	+0.2
	baz=303						
ECL	Taimali	1.47	313	eP	Pb	04 31 39.4	-0.6
	baz=312						
ECL				eS	Sn	04 31 57.3	+0.6
	baz=312						
TWGBT	Beinan	1.55	322	eP	Pb	04 31 40.6	-0.8
	baz=321						
TWGBT				eS	Sn	04 31 59.2	+0.5
	baz=321						
TWG	Pinlang	1.56	322	eP	Pn	04 31 40.4	+0.9
	baz=321						
TWG				eS	Sn	04 31 59.4	+0.5
	baz=321						
EDH	Donghe	1.56	331	eP	Pn	04 31 40.0	+0.5
	baz=331						
EDH				eS	Sn	04 31 59.5	+0.5
	baz=331						
SCZT	Fangliau	1.59	299	eP	Pn	04 31 40.5	+0.6
	baz=298						
MASBT	Mashibuluo	1.71	306	eP	Pn	04 31 42.1	+0.5
	baz=306						
TSMG	Majia	1.75	309	eP	Pn	04 31 43.0	+0.8
	baz=308						
EHD	Haiduan	1.76	331	eP	Pn	04 31 42.5	+0.2
	baz=331						
EHD				eS	Sn	04 32 04.5	+0.6
	baz=331						
FULB	Fuli	1.76	334	eP	Pn	04 31 43.1	+0.7
	baz=334						
FULB				eS	Sn	04 32 04.5	+0.5
	baz=334						
SSD	Sandimen	1.79	310	eP	Pn	04 31 43.4	+0.7
	baz=309						
EYUL	Yuli	1.89	337	eS	Sn	04 32 07.8	+0.6
	baz=336						
YULB	Yu-li	1.94	337	eP	Pn	04 31 45.7	+0.9
	baz=336						
YULB				eS	Sb	04 32 10.5	-1.4
	baz=336						
HGSD	Ruisui	1.99	341	eP	Pn	04 31 46.1	+0.6
	baz=341						
HGSD				eS	Sn	04 32 10.3	+0.7
	baz=341						
STYH	Taoyuan	2.00	322	eP	Pn	04 31 46.5	+0.9
	baz=321						
EHY	Hungye	2.03	339	eP	Pn	04 31 46.7	+0.6
	baz=338						
WTP	Ta-pu	2.15	320	eP	Pb	04 31 50.4	-1.3
	baz=319						
CHN1	Nanshi	2.16	317	eP	Pb	04 31 51.5	-0.3
	baz=316						
TPUB	Ta-pu	2.18	321	eP	Pb	04 31 50.4	-1.8
	baz=320						
CHN4	Tsaushan	2.24	321	eP	Pn	04 31 50.2	+1.3
	baz=320						
TWK	Hsinying	2.24	318	eP	Pb	04 31 52.3	-1.0
	baz=317						
VWDT	VWDT	2.33	337	eP	Pn	04 31 52.0	+1.9
	baz=337						
WHYT	Xinyi Township	2.39	331	eP	Pb	04 31 54.2	-1.7
	baz=330						
SSLB	Suanglung	2.43	334	eP	Pb	04 31 55.4	-1.0
	baz=333						
WUSB	Renai	2.55	339	eP	Pn	04 31 55.6	+2.2
	baz=338						
CHGB	Renai	2.60	341	eP	Pn	04 31 55.6	+1.5
	baz=340						
NACB	Ninganchiao	2.61	349	eP	Pn	04 31 54.9	+1.0
	baz=349						
NACB				eS	Sn	04 32 25.7	+0.9
	baz=349						
WHF	Hehuan Shan	2.65	343	eP	Pn	04 31 56.0	+1.0
	baz=342						
WCS	Beigang Elemen	2.69	336	eP	Pn	04 31 57.2	+2.2
	baz=335						
WDGT	Dungji	2.81	306	eP	Pn	04 31 57.9	+1.1
	baz=306						
YOJ	Yonaguni jima	2.96	16	eP	Pn	04 31 59.8	+0.9
	baz=15						
PHUB	P'eng-hu	3.03	309	eP	Pn	04 32 00.7	+1.0
	baz=309						
YHNB	Yeheng	3.13	348	eP	Pn	04 32 02.3	+1.1
	baz=347						
PACPP	Pamplona Cagay	3.21	193	⇓i P	Pn	04 32 02.8	+0.5
PACPP				i S	Sn	04 32 37.7	-2.0

*NEIC **28** 04:34:09.1±2.2,8°.2N±0°.1×126°.6E±0°.1,h70km±11km, mb4.3/12,Error ellipse: s-maj=21.6km s-min=15.4km az=106.0*
*MAN **28** 04:34:09.4,8°.10N×126°.51E,h32km,mb5.3,ML4.2,MS4.4*
*IDC **28** 04:34:10.7±2.8,8°.15N×126°.60E,h81km±25km,mb3.8/11, mbtmp4.1/11,MS3.0/8,Error ellipse: s-maj=31.4km s-min=15.2km az=71.0*
ISC 28 04:34:07.2±1.1,8°.12N±0°.04×126°.70E±0°.08,h50km±9km, n59,σ1s72/58,mb4.3/17,MS3.1/6,10C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.34	280	⇑eP	Pn	04 34 16.4	-0.4
BIPH				i S	Sn	04 34 22.0	-1.5
DAV	Davao City (W)	1.52	227	P	Pn	04 34 34.2	+2.1
	865nm,0.7s,baz=133,slow=0.7,SNR=10						
DAV				S	Sn	04 34 55.0	+4.2
	620nm,0.4s,baz=99,slow=15,SNR=5.7						
BUKP	Musuan	1.64	262	⇓iP	Pn	04 34 34.7	+1.0
BUKP				i S	Sn	04 34 54.9	+1.3
KCP	Kidapawan	1.94	235	⇑eP	Pn	04 34 38.7	+0.8
KCP				i S	Sn	04 34 45.4	-16
CGP	Cagayan de Oro	2.01	280	⇑iP	Pn	04 34 39.3	+0.6
CGP				i S	Sn	04 35 00.9	-1.8
SCPH	Surigao	2.04	324	⇓eP	Pn	04 34 41.6	+2.5
SCPH				eS	Sn	04 35 04.8	+1.5
CTBH	Cotabato--PC H	2.59	250	⇑iP	Pn	04 34 47.1	+0.5
CTBH				i S	Sn	04 35 15.4	-1.6
GSPH	General Santos	2.67	221	⇑eP	Pn	04 34 44.4	-3.5
GSPH				i S	Sn	04 35 18.9	-0.1
MSLP	Maasin	2.70	318	⇓iP	Pn	04 34 49.3	+1.1
MSLP				i S	Sn	04 35 17.2	-2.4
GHBP	Garcia Hernand	2.79	303	⇑iP	Pn	04 34 50.2	+0.9
GHBP				i S	Sn	04 35 25.6	+3.9
TABP	Talibon, Bohol	3.05	310	⇑iP	Pn	04 34 53.5	+0.5
TABP				i S	Sn	04 35 20.0	-8.2
LSIP	Lazi, Siquijor	3.19	288	⇓iP	Pn	04 34 55.8	+0.8
LSIP				i S	Sn	04 35 30.7	-1.1
TBP	Tagbilaran	3.21	299	⇓eP	Pn	04 34 55.9	+0.8
TBP				i S	Sn	04 35 35.6	+3.5
LLP	Lapu-Lapu	3.47	309	⇑eP	Pn	04 35 00.6	+1.9
LLP				eS	Sn	04 35 42.5	+4.0
CNOP	Candoni, Negro	4.35	293	⇑eP	Pn	04 35 12.1	+1.2
RCP	Roxas	5.18	312	⇑eP	Pn	04 35 24.6	+2.4
SIJI	Sorong	10.03	153	LR	LR	04 40 58.1	
	comp=Z,34nm,19.2s,baz=230,slow=40						
SBUM	Sibu	15.47	249	Pn	Pn	04 37 43.1	+0.7
GUMO	Guam	18.65	71	LR	LR	04 43 54.1	
	comp=Z,63nm,21.7s,baz=102,slow=31						
KNRA	Kununurra	23.73	175	P	P	04 39 14.1	-0.8
KNRA				IAmb	IAmb	04 39 29.6	
	comp=Z,9.0nm,0.7s						
JHJ	Hachijo jima 2	27.67	24	LR	LR	04 50 35.1	
	comp=Z,41nm,21.2s,baz=36,slow=36						
CMAR	Chiang Mai Arr	28.86	294	P	P	04 40 02.0	+0.7
	comp=Z,0.9nm,0.3s,baz=101,slow=4.7,SNR=4.3						
CMAR				LR	LR	04 53 36.3	
	comp=Z,7.6nm,19.1s,baz=180,slow=40						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	28.86	294	P	P	04 40 00.8	-0.4
WRA	Warramunga Arr	28.89	165	P	P	04 40 01.5	0.0
	comp=Z,0.3nm,0.6s,baz=347,slow=9.7,SNR=3.3						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	28.89	165	P	P	04 40 00.9	-0.6
WB2	Warramunga Arr	28.89	165	P	P	04 40 00.7	-0.8
WB2				IAmb	IAmb	04 40 18.2	
	comp=Z,5.6nm,1.4s						
KSRS	Korea Array	29.22	2	LR	LR	04 51 51.9	
	comp=Z,16nm,21.2s,baz=185,slow=36						
PSA00	Pilbara Seismi	30.27	193	P	P	04 40 13.9	+0.2
AS31	Alice Springs	32.37	168	P	P	04 40 33.8	+1.5
ASAR	Alice Springs	32.37	168	P	P	04 40 32.4	+0.2
	comp=Z,0.4nm,0.3s,baz=343,slow=8.0,SNR=6.5						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	32.37	168	P	P	04 40 32.7	+0.5
CTA	Charters Tower	34.01	146	LR	LR	04 56 05.1	
	comp=Z,39nm,18.1s,baz=269,slow=39						
USRK	Ussuriysk Ar.	36.23	6	P	P	04 41 06.3	+1.0
	comp=Z,3.3nm,0.7s,baz=189,slow=7.5,SNR=6.7						
	comp=Z,3.3nm,0.7s						
USRK	Ussuriysk Ar.	36.23	6	P	P	04 41 04.2	-1.2
BRDH	Bariadhala	36.64	297	LR	LR	04 55 53.3	
	comp=Z,70nm,18.9s,baz=272,slow=36						
H11S3	WAKE ISLAND Hy	40.17	71	T	T	05 24 50.5	
	baz=262,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	40.18	71	T	T	05 24 53.1	
	baz=262,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	40.19	71	T	T	05 24 55.3	
	baz=262,slow=75,SNR=19						
GOMU	GeErMu	40.31	319	P	P	04 41 43.3	+3.0
H11N1	WAKE ISLAND Hy	40.57	69	T	T	05 25 24.4	
	baz=266,slow=74						
H11N2	WAKE ISLAND Hy	40.58	69	T	T	05 25 28.8	
	baz=266,slow=74						
H11N3	WAKE ISLAND Hy	40.59	69	T	T	05 25 34.2	
	baz=266						
BBOO	Buckleboo	41.67	168	P	P	04 41 51.3	+0.3
STKA	Stephens Creek	42.25	161	P	P	04 41 57.1	+1.4
	comp=Z,1.7nm,0.5s,baz=357,slow=11,SNR=4.6						
	comp=Z,1.7nm,0.5s						
MK31	Makanchi Array	53.99	324	P	P	04 43 25.1	-1.1
MK31				IAmb	IAmb	04 43 26.3	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	53.99	324	P	P	04 43 25.7	-0.5
	comp=Z,3.2nm,0.7s,baz=121,slow=8.0,SNR=17						
MKAR				PcP	PcP	04 44 30.3	-0.6
	comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=2.3						
	comp=Z,3.2nm,0.7s						
NIL	Nilore	55.30	305	P	P	04 43 33.3	-2.7
NIL				IAmb	IAmb	04 43 36.0	
	comp=Z,5.1nm,0.8s						
ZALV	Zalesovo Beam	56.70	332	P	P	04 43 43.8	-1.8
	comp=Z,1.0nm,0.5s,baz=110,slow=6.5,SNR=5.1						
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	57.15	316	LR	LR	05 09 19.8	
	comp=Z,52nm,21.5s,baz=52,slow=37						
KURK	Kurchatov	58.07	326	P	P	04 43 53.3	-2.0
KK31	Karatay Array	60.06	315	P	P	04 44 06.9	-2.4
KK31				IAmb	IAmb	04 44 10.1	
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	60.06	315	P	P	04 44 06.6	-2.6
KKAR				IAmb	IAmb	04 44 10.1	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	68.77	320	P	P	04 45 05.6	-0.4
ILAR	Eielson Array	81.18	26	P	P	04 46 17.9	+0.6
	comp=Z,0.5nm,0.7s,baz=261,slow=4.3,SNR=8.6						
	comp=Z,0.5nm,0.7s						
VNDA	Vanda	87.76	173	P	P	04 46 50.5	+0.3
	comp=Z,1.0nm,0.9s,baz=303,slow=11,SNR=4.6						
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	87.97	332	P	P	04 46 50.1	-1.5
	comp=Z,1.3nm,0.4s,baz=81,slow=5.4,SNR=16						
	comp=Z,1.3nm,0.4s						
YKA	Yellowknife Ar	95.53	24	P	P	04 47 27.3	+0.6
	comp=Z,0.9nm,0.7s,baz=287,slow=4.8,SNR=4.0						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	118.89	50	PKP	PKiKP	04 52 52.1	+1.1
	comp=Z,0.2nm,0.5s,baz=338,slow=2.1,SNR=4.6						
TORD	Torodi Ar. Bea	121.43	291	PKP	PKiKP	04 52 55.7	-0.5
	comp=Z,0.1nm,0.3s,baz=47,slow=2.6,SNR=4.4						

*TRN **28** 04:41:04.3,10°.42N×62°.29W,h2km,MD3.7*
*FUNV **28** 04:41:05.6,10°.47N×62°.21W,h6km,MW3.1*
ISC 28 04:41:04.0±1.7,10°.40N±0°.06×62°.29W±0°.04,h2km±13km, n24,σ1s21/34,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.91	74	eP	Pg	04 41 20.9	-0.5
TRN				eS	Sb	04 41 34.5	-0.4
CRUV	Carupano	0.97	287	eP	Pg	04 41 22.8	+0.1
CRUV				eS	Sb	04 41 37.5	+0.5
GRFF	Grenada Fort F	1.73	18	eP	Pn	04 41 35.6	+0.4
GRFF				eS	Sn	04 41 57.7	-0.2
GRGR	Grenville	1.83	20	eP	Pn	04 41 37.0	+0.4
GRGR				eS	Sn	04 42 00.6	+0.2
TOSP	Speyside	1.94	62	eP	Pb	04 41 39.5	-0.7
TOSP				eS	Sn	04 42 03.8	+0.7
GCMP	Grenada, Carri	2.24	22	eP	Pn	04 41 43.3	+1.1
GCMP				eS	Sn	04 42 10.6	+0.1
PCRV	Puerto La Cruz	2.32	265	eP	Pn	04 41 44.6	+1.3
PCRV				eS	Sn	04 42 12.5	-0.1
PRGV	PARIAGUAN	2.84	235	eP	Pn	04 41 51.9	+1.5
PRGV				eS	Sn	04 42 26.4	+1.1
SVB	Belmont	3.03	19	eP	Pn	04 41 53.6	+0.4
MCLT	Moule a Chique	3.55	22	eP	Pn	04 42 01.9	+1.7
MCLT				eS	Sn	04 42 42.0	-0.8
SLBI	Saint Lucia, B	3.83	19	e	Pn	04 42 06.9	+2.9
SLBI				eS	Sn	04 42 49.9	+0.2
MPOM	Morne Pois Mar	4.26	19	eP	Pn	04 42 10.7	+0.7
MPOM	Morne Pois Mar	4.26	19	eS	Sn	04 42 59.4	-1.0
BIM	Bigot	4.26	16	eP	Pn	04 42 10.7	+0.6
BIM	Bigot	4.26	16	eS	Sn	04 42 58.9	-1.7
FDF	Fort de France	4.45	14	eP	Pn	04 42 14.0	+1.3
TACV	Tcata	4.67	267	eP	Pn	04 42 16.3	+0.5
CACV	CAICARA DEL OR	5.06	237	eP	Pn	04 42 15.7	-5.2
DSLB	Salisbury	5.08	9	eP	Pn	04 42 22.6	+1.2
BENV	Beln	5.25	266	eP	Pn	04 42 24.2	+0.6
BAUV	El Baul	5.85	256	eP	Pn	04 42 32.7	+0.8
BAUV	El Baul	5.85	256	eS	Sn	04 43 38.4	-1.4
BAUV	El Baul	5.85	256	eS	Sn	04 43 38.9	-0.9
BAUV	El Baul	5.85	256	eP	Pn	04 42 31.7	-0.2
BAUV				eS	Sn	04 43 36.3	-3.4

*JMA **28** 04:49:41.9±0.3,44°.N±1°.×14°.7E±°,h13km,MV3.8/22,E OFF HOKKAIDO*
*SKHL **28** 04:49:43.0±0.2,43°.70N×147°.50E,h35km±4km,mb4.2/3*
ISC 28 04:49:38.6±2.1,43°.76N±0°.08×147°.53E±0°.09,h4km±13km, n13,σ1s29/24,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.23	284	i P	Pg	04 50 03.2	+0.9
YUK				AMB	AMB	04 50 04.3	
	100nm,0.3s						
YUK				i S	Sb	04 50 18.3	-0.4
YUK				A	A	04 50 29.6	
	560nm,0.4s						
YUK				A	A	04 50 29.6	
	210nm,0.4s						
NEM2	Nemuro 2	1.35	254	eP	Pg	04 50 04.8	+0.3
NEM2				eS	Sb	04 50 21.4	-0.7
NMR	Nemuro--Hokkai	1.36	254	i P	Pg	04 50 04.9	+0.2
NMR				AMB	AMB	04 50 05.0	
	40nm,0.2s						
NMR				i S	Sb	04 50 21.4	-0.9
NMR				A	A	04 50 27.4	
	250nm,0.3s						
NMR				A	A	04 50 27.4	
	160nm,0.3s						
KUR	Kuril'sk	1.50	9	eP	Pg	04 50 07.4	+0.1
KUR				AMB	AMB	04 50 08.6	
	70nm,0.3s						
KUR				eS	Sn	04 50 25.7	-0.5
KUR				A	A	04 50 32.9	
	210nm,0.3s						
KUR				A	A	04 50 32.9	
	120nm,0.3s						
JRA	Rausu	1.75	277	eP	Pb	04 50 11.4	+0.2
JRA				eS	Sb	04 50 33.1	-0.4
JNSB	Nemuroshibetsu	1.83	272	eP	Pb	04 50 12.5	0.0
JNSB				eS	Sn	04 50 34.7	+0.4
JKHN	Kushirohamanak	1.85	250	eP	Pb	04 50 12.2	-0.7
JNK	Nakash	2.04	266	eP	Pb	04 50 15.1	-1.2
JNK				eS	Sn	04 50 40.0	+0.4
AKK	Akkeshi	2.09	250	eP	Pb	04 50 15.6	-1.4
AKK				eS	Sn	04 50 39.8	-1.0
JTKR	Abashiri--Toko	2.62	276	eP	Pb	04 50 24.1	-2.0
JTKR				eS	Sb	04 50 56.7	-2.0
JAR	Ashorobuto	2.77	262	eP	Pb	04 50 25.9	-2.8
JAR				eS	Sn	04 50 58.8	+1.2
JOB	Onbets	2.82	254	eP	Pn	04 50 26.3	+1.8
JOB				eS	Sn	04 50 58.3	-0.6
JCH	Churui	3.25	251	eP	Pn	04 50 32.3	+2.0

ROM 28 04:57:49.1±0.1,43°.029N±0°.003×13°.076E±0°.005, h9km,ML2.5/24,18C-8D,Error ellipse: s-maj=0.4km s-min=0.2km az=254.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.01	47	P	Pg	04 57 50.6	0.0
FDMO				S	Sg	04 57 51.4	-0.4
FDMO				AML	AML		
	comp=E,42900μm,0.2s						
FDMO				AML	AML		
	comp=N,22850μm,0.2s						
FDMO				AML	AML		
	comp=N,22822μm,0.2s						
FDMO				AML	AML		
	comp=E,42866μm,0.2s						
FEMA	Monte Fema	0.07	196	P	Pg	04 57 51.6	+0.4
FEMA				S	Sg	04 57 53.0	+0.2
FEMA				AML	AML		
	comp=N,6640μm,1.4s						
FEMA				AML	AML		
	comp=E,9525μm,0.6s						
FEMA				AML	AML		
	comp=N,6645μm,1.5s						
FEMA				AML	AML		
	comp=E,9520μm,0.6s						
FEMA				AML	AML		
	comp=E,7700μm,0.2s						
FEMA				AML	AML		
	comp=N,6547μm,0.3s						
MC2	Monte Cornacci	0.14	144	⇑P	Pg	04 57 52.8	+0.5
T1216	Preci, Frazion	0.14	197	⇑P	Pg	04 57 52.9	+0.6
T1216				S	Sg	04 57 55.7	+1.3
T1216				AML	AML		
	comp=E,3810μm,0.3s						
T1216				AML	AML		
	comp=N,3515μm,1.3s						
T1216				AML	AML		
	comp=N,3735μm,1.1s						
T1216				AML	AML		
	comp=N,3730μm,1.1s						
T1216				AML	AML		
	comp=E,6105μm,0.3s						
T1216				AML	AML		
	comp=E,3076μm,0.2s						
T1216				AML	AML		
	comp=N,3112μm,0.2s						
MDAR	Monte D'Aria	0.17	17	P	Pg	04 57 53.3	+0.6
MDAR				S	Sg	04 57 56.3	+1.0
MDAR				AML	AML		
	comp=E,927μm,0.1s						
MDAR				AML	AML		
	comp=N,1135μm,0.3s						
T1245	Castelsantange	0.19	154	⇑P	Pg	04 57 53.6	+0.6
T1245				AML	AML		
	comp=E,2715μm,0.8s						
T1245				AML	AML		
	comp=N,2415μm,1.0s						
T1245				AML	AML		
	comp=E,2665μm,0.8s						
T1245				AML	AML		
	comp=N,2350μm,1.0s						
T1245				AML	AML		
	comp=E,10650μm,0.4s						
T1245				AML	AML		
	comp=N,19650μm,0.3s						
T1245				AML	AML		
	comp=E,10550μm,0.4s						
T1245				AML	AML		
	comp=E,10600μm,0.4s						
T1245				AML	AML		
	comp=N,19200μm,0.3s						
T1245				AML	AML		
	comp=E,2597μm,0.2s						
T1245				AML	AML		
	comp=N,2291μm,0.3s						
T1245				AML	AML		
	comp=E,2470μm,0.3s						
T1245				AML	AML		
	comp=N,2245μm,0.3s						
GUMA	Gualdo di Mace	0.19	80	⇑P	Pg	04 57 54.1	+1.0
GUMA				S	Sg	04 57 57.8	+2.0
GUMA				AML	AML		
	comp=N,7490μm,0.2s						
GUMA				AML	AML		
	comp=E,8665μm,0.2s						
GUMA				AML	AML		
	comp=N,6695μm,0.2s						
GUMA				AML	AML		
	comp=E,5875μm,0.2s						
GUMA				AML	AML		
	comp=N,7490μm,0.2s						
GUMA				AML	AML		
	comp=N,7487μm,0.2s						
GUMA				AML	AML		
	comp=E,8670μm,0.2s						
GUMA				AML	AML		
	comp=N,6693μm,0.2s						
GUMA				AML	AML		
	comp=E,5875μm,0.2s						
NRCA	Norcia	0.20	172	⇓P	Pg	04 57 53.8	+0.7
NRCA				S	Sg	04 57 57.8	+1.9
NRCA				AML	AML		
	comp=E,4305μm,0.2s						
NRCA				AML	AML		
	comp=N,4750μm,0.5s						
NRCA				AML	AML		
	comp=E,4720μm,0.2s						
NRCA				AML	AML		
	comp=N,5110μm,0.5s						
NRCA				AML	AML		
	comp=E,8065μm,0.2s						
NRCA				AML	AML		
	comp=N,6035μm,0.2s						
NRCA				AML	AML		
	comp=E,8060μm,0.2s						
NRCA				AML	AML		
	comp=N,6495μm,0.2s						
NRCA				AML	AML		

	comp=E,8490μm,0.2s					
NRCA				AML	AML	
	comp=E,4308μm,0.2s					
NRCA				AML	AML	
	comp=E,4716μm,0.2s					
NRCA				AML	AML	
	comp=N,4335μm,0.2s					
NRCA				AML	AML	
	comp=N,4666μm,0.2s					
AM05	**Amandola Campo**	**0.21**	**104**	⇑P	Pg	04 57 54.1 +0.8
AM05				S	Sg	04 57 57.1 +0.8
AM05				AML	AML	
	comp=E,892μm,0.2s					
AM05				AML	AML	
	comp=N,946μm,0.1s					
AM05				AML	AML	
	comp=E,3495μm,0.2s					
AM05				AML	AML	
	comp=E,894μm,0.2s					
AM05				AML	AML	
	comp=N,944μm,0.1s					
AM05				AML	AML	
	comp=E,3490μm,0.2s					
AM05				AML	AML	
	comp=N,312μm,0.1s					
AM05				AML	AML	
	comp=E,568μm,0.1s					
AM05				AML	AML	
	comp=N,946μm,0.1s					
AM05				AML	AML	
	comp=E,2361μm,0.1s					
AM05				AML	AML	
	comp=N,312μm,0.1s					
GAG1	**Gagliole**	**0.21**	**358**	⇑P	Pg	04 57 54.2 +0.9
GAG1				S	Sg	04 57 58.0 +1.7
GAG1				AML	AML	
	comp=E,4345μm,0.4s					
GAG1				AML	AML	
	comp=N,3010μm,0.6s					
GAG1				AML	AML	
	comp=E,4340μm,0.4s					
GAG1				AML	AML	
	comp=N,3015μm,0.6s					
GAG1				AML	AML	
	comp=N,3010μm,0.6s					
GAG1				AML	AML	
	comp=N,2940μm,0.1s					
GAG1				AML	AML	
	comp=E,2708μm,0.1s					
MMO1	**Montemonaco**	**0.23**	**125**	⇑P	Pg	04 57 54.2 +0.6
MMO1				S	Sg	04 57 58.0 +1.3
SNTG	**Esanatoglia**	**0.25**	**336**	⇑P	Pg	04 57 54.7 +0.6
SNTG				S	Sg	04 57 59.0 +1.6
SNTG				AML	AML	
	comp=E,1575μm,0.2s					
SNTG				AML	AML	
	comp=N,1840μm,0.2s					
SNTG				AML	AML	
	comp=E,1520μm,0.6s					
SNTG				AML	AML	
	comp=E,1575μm,0.2s					
SNTG				AML	AML	
	comp=N,1845μm,0.2s					
SNTG				AML	AML	
	comp=N,2105μm,0.2s					
SNTG				AML	AML	
	comp=E,1449μm,0.1s					
SNTG				AML	AML	
	comp=N,2104μm,0.2s					
SNTG				AML	AML	
	comp=E,1576μm,0.2s					
SNTG				AML	AML	
	comp=N,1844μm,0.2s					
T1215	**Vallo di Nera,**	**0.27**	**214**	⇑P	Pg	04 57 55.3 +0.7
T1215				S	Sb	04 57 59.8 -1.2
T1215				AML	AML	
	comp=E,824μm,0.3s					
T1215				AML	AML	
	comp=N,688μm,0.2s					
T1215				AML	AML	
	comp=N,735μm,0.2s					
T1215				AML	AML	
	comp=N,688μm,0.2s					
T1215				AML	AML	
	comp=E,824μm,0.3s					
T1215				AML	AML	
	comp=E,817μm,0.3s					
EL6	**Elcito**	**0.30**	**4**	⇑P	Pg	04 57 55.7 +0.6
EL6				S	Sb	04 58 00.8 -1.0
EL6				AML	AML	
	comp=E,1820μm,0.7s					
EL6				AML	AML	
	comp=N,2640μm,0.2s					
EL6				AML	AML	
	comp=E,1799μm,0.2s					
EL6				AML	AML	
	comp=N,2640μm,0.2s					
T1241	**Roccafluvione,**	**0.31**	**123**	⇓P	Pg	04 57 55.9 +0.6
T1241				S	Sb	04 58 01.1 -1.0
T1241				AML	AML	
	comp=E,1025μm,0.5s					
T1241				AML	AML	
	comp=N,941μm,0.5s					
T1217	**Poggiodomo (PG**	**0.33**	**199**	⇑P	Pg	04 57 56.3 +0.7
T1217				AML	AML	
	comp=E,855μm,0.2s					
T1217				AML	AML	
	comp=N,1164μm,0.4s					
T1217				AML	AML	
	comp=N,1168μm,0.4s					
T1217				AML	AML	
	comp=N,1116μm,0.4s					
T1217				AML	AML	
	comp=E,880μm,0.2s					
T1217				AML	AML	
	comp=E,856μm,0.2s					
T1217				AML	AML	
	comp=N,1167μm,0.4s					
T1217				AML	AML	
	comp=E,879μm,0.2s					
T1217				AML	AML	
	comp=N,1118μm,0.4s					
T1217				AML	AML	
	comp=E,856μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.36**	**296**	⇓P	Pb	04 57 56.9 -0.8
ATCC				S	Sb	04 58 03.0 -0.4
ATCC				AML	AML	
	comp=N,1470μm,0.5s					
ATCC				AML	AML	
	comp=E,2605μm,0.3s					
ATCC				AML	AML	
	comp=N,1475μm,0.5s					
ATCC				AML	AML	
	comp=N,1324μm,0.2s					
ATCC				AML	AML	
	comp=E,2240μm,0.2s					
LNSS	**Leonessa**	**0.43**	**184**	⇑P	Pg	04 57 57.8 +0.4
LNSS				AML	AML	
	comp=E,1058μm,0.2s					
LNSS				AML	AML	
	comp=N,1370μm,0.2s					
LNSS				AML	AML	
	comp=N,1375μm,0.2s					
LNSS				AML	AML	
	comp=E,1059μm,0.2s					
LNSS				AML	AML	
	comp=E,1047μm,0.2s					
LNSS				AML	AML	
	comp=N,614μm,0.2s					
T1243	**Rocca Santa Ma**	**0.43**	**140**	P	Pg	04 57 57.8 +0.3
MURB	**Monte Urbino**	**0.47**	**300**	P	Pb	04 57 58.9 -0.6
MURB				S	Sb	04 58 07.0 +0.4
MURB				AML	AML	
	comp=E,1475μm,0.3s					
MURB				AML	AML	
	comp=N,1026μm,1.1s					
MURB				AML	AML	
	comp=E,1475μm,0.3s					
MURB				AML	AML	
	comp=N,1024μm,1.1s					
MURB				AML	AML	
	comp=E,1605μm,0.3s					
MURB				AML	AML	
	comp=N,1120μm,0.2s					
MURB				AML	AML	
	comp=E,1474μm,0.3s					
MURB				AML	AML	
	comp=N,1122μm,0.2s					
MURB				AML	AML	
	comp=E,1604μm,0.3s					
MURB				AML	AML	
	comp=N,993μm,0.3s					
ARVD	**Arcevia**	**0.48**	**348**	⇑P	Pg	04 57 58.9 +0.5
ARVD				S	Sb	04 58 07.0 +0.1
ARVD				AML	AML	
	comp=E,610μm,0.2s					
ARVD				AML	AML	
	comp=N,395μm,0.2s					
ARVD				AML	AML	
	comp=E,610μm,0.2s					
ARVD				AML	AML	
	comp=N,395μm,0.2s					
ATFO	**Monte Foce - G**	**0.50**	**313**	P	Pg	04 57 58.4 -0.4
ATFO				AML	AML	
	comp=E,196μm,0.7s					
ATFO				AML	AML	
	comp=N,219μm,1.6s					
ATFO				AML	AML	
	comp=E,178μm,0.3s					
ATFO				AML	AML	
	comp=N,207μm,0.3s					
T1211	**Morro Reatino**	**0.52**	**198**	⇓P	Pg	04 57 59.8 +0.6
T1211				S	Sb	04 58 09.0 +0.8
T1211				AML	AML	
	comp=E,304μm,0.2s					
T1211				AML	AML	
	comp=E,315μm,0.2s					
T1211				AML	AML	
	comp=N,547μm,0.2s					
T1211				AML	AML	
	comp=N,528μm,0.2s					
RM33	**Pellescritta (**	**0.53**	**169**	⇓P	Pg	04 57 59.6 +0.3
RM33				S	Sb	04 58 09.0 +0.6
RM33				AML	AML	
	comp=N,432μm,0.3s					
RM33				AML	AML	
	comp=E,292μm,0.4s					
RM33				AML	AML	
	comp=E,208μm,0.2s					
RM33				AML	AML	
	comp=N,224μm,0.3s					
RM33				AML	AML	
	comp=E,286μm,1.0s					
RM33				AML	AML	
	comp=N,203μm,0.3s					
CAMP	**Campotosto**	**0.55**	**153**	⇑P	Pg	04 57 59.8 +0.1
CAMP				AML	AML	
	comp=N,246μm,0.2s					
CAMP				AML	AML	
	comp=E,279μm,0.2s					
CAMP				AML	AML	
	comp=N,144μm,0.4s					
CAMP				AML	AML	
	comp=E,200μm,0.3s					
FRON	**Frontone**	**0.55**	**332**	⇓P	Pg	04 58 00.2 +0.4
FRON				AML	AML	
	comp=E,322μm,1.1s					
FRON				AML	AML	
	comp=N,489μm,1.3s					
FRON				AML	AML	
	comp=E,314μm,0.2s					
FRON				AML	AML	
	comp=N,396μm,0.3s					
CESX	**Cesi**	**0.56**	**221**	⇑P	Pg	04 58 00.1 +0.3
CESX				S	Sb	04 58 09.0 -0.1
CESX				AML	AML	
	comp=E,560μm,0.4s					
CESX				AML	AML	
	comp=N,600μm,0.6s					
CESX				AML	AML	
	comp=N,527μm,0.3s					
CESX				AML	AML	
	comp=E,560μm,0.4s					
TERO	**Teramo**	**0.56**	**136**	⇑P	Pg	04 58 00.1 +0.2
TERO				AML	AML	
	comp=E,334μm,0.3s					
TERO				AML	AML	
	comp=N,316μm,1.2s					
TERO				AML	AML	
	comp=E,316μm,0.3s					
TERO				AML	AML	
	comp=N,230μm,0.3s					
TERO				AML	AML	
	comp=N,229μm,0.3s					
TERO				AML	AML	
	comp=E,334μm,0.3s					
ATVO	**AVT- Monte Val**	**0.60**	**306**	⇑P	Pg	04 58 01.2 +0.4
ATVO				S	Sb	04 58 11.0 +0.5
ATVO				AML	AML	
	comp=E,170μm,1.6s					
ATVO				AML	AML	
	comp=N,118μm,1.4s					
ATVO				AML	AML	
	comp=N,118μm,1.4s					
ATVO				AML	AML	
	comp=E,170μm,1.6s					
ATVO				AML	AML	
	comp=N,117μm,0.3s					
ATVO				AML	AML	
	comp=E,166μm,0.4s					
MPAG	**Monte Paganucc**	**0.64**	**339**	⇓P	Pb	04 58 02.3 -0.3
MPAG				S	Sb	04 58 13.0 +1.3
MPAG				AML	AML	
	comp=E,366μm,0.2s					
MPAG				AML	AML	
	comp=N,249μm,1.6s					
MPAG				AML	AML	
	comp=E,711μm,0.9s					
MPAG				AML	AML	
	comp=E,366μm,0.2s					
MPAG				AML	AML	
	comp=N,995μm,0.9s					
MPAG				AML	AML	
	comp=N,225μm,0.2s					
PIEI	**Pieia**	**0.64**	**322**	P	Pg	04 58 01.9 +0.4
PIEI				S	Sb	04 58 13.0 +1.3
PIEI				AML	AML	
	comp=N,148μm,1.0s					
PIEI				AML	AML	
	comp=E,234μm,0.2s					
PIEI				AML	AML	
	comp=N,136μm,0.2s					
PIEI				AML	AML	
	comp=E,235μm,0.2s					
SENI	**Senigallia**	**0.69**	**10**	S	Sn	04 58 15.0 -0.8
FSSB	**Fossombrone**	**0.70**	**342**	⇑P	Pb	04 58 03.5 +0.1
FSSB				AML	AML	
	comp=E,964μm,1.0s					
FSSB				AML	AML	
	comp=N,1825μm,0.2s					
FSSB				AML	AML	
	comp=E,963μm,1.0s					
FSSB				AML	AML	
	comp=N,1825μm,0.2s					
FSSB				AML	AML	
	comp=E,913μm,0.2s					
FAGN	**Fagnano**	**0.85**	**154**	⇓P	Pg	04 58 05.6 +0.2
FAGN				S	Sg	04 58 16.0 -0.5
FAGN				AML	AML	
	comp=E,427μm,0.5s					
FAGN				AML	AML	
	comp=N,287μm,0.4s					
FAGN				AML	AML	
	comp=E,351μm,0.1s					
FAGN				AML	AML	
	comp=N,287μm,0.4s					
T0110	**Collepietro**	**0.95**	**147**	S	Sn	04 58 23.0 +0.4
RMP	**Rome, Mte Porz**	**1.25**	**193**	S	Sn	04 58 31.0 +1.3

ROM 28 04:58:21.0±0.1, 42°.981N±0°.003×13°.136E±0°.004, h7km, ML2.6/8, 8C-13D, Error ellipse: s-maj=0.3km s-min=0.2km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.07**	**327**	⇓P	Pg	04 58 22.9	+0.1
FDMO				S	Sg	04 58 24.2	+0.2
FDMO				AML	AML		
	comp=E,5030μm,0.8s						
FDMO				AML	AML		
	comp=N,5830μm,0.7s						
FDMO				AML	AML		
	comp=N,4991μm,0.2s						
FDMO				AML	AML		
	comp=E,4944μm,0.4s						
MC2	**Monte Cornacci**	**0.08**	**150**	P	Pg	04 58 23.2	+0.2
T1216	**Preci, Frazion**	**0.12**	**224**	⇓P	Pg	04 58 24.2	+0.6
T1216				S	Sg	04 58 26.6	+1.1
T1216				AML	AML		
	comp=E,6100μm,0.3s						
T1216				AML	AML		
	comp=N,3730μm,1.1s						
T1216				AML	AML		
	comp=E,6105μm,0.3s						
T1216				AML	AML		
	comp=N,3735μm,1.1s						
T1216				AML	AML		
	comp=E,2639μm,0.3s						
T1216				AML	AML		
	comp=N,3652μm,0.3s						
T1245	**Castelsantange**	**0.13**	**163**	P	Pg	04 58 24.1	+0.3
T1245				S	Sg	04 58 26.6	+0.9
T1245				AML	AML		
	comp=E,10600μm,0.4s						
T1245				AML	AML		
	comp=E,10550μm,0.4s						
T1245				AML	AML		
	comp=N,19200μm,0.3s						
T1245				AML	AML		
	comp=N,19650μm,0.3s						
T1245				AML	AML		
	comp=E,5006μm,0.2s						
T1245				AML	AML		
	comp=N,4209μm,0.1s						
NRCA	**Norcia**	**0.15**	**186**	⇑P	Pg	04 58 24.6	+0.5
NRCA				S	Sg	04 58 27.7	+1.6
NRCA				AML	AML		
	comp=E,8065μm,0.2s						
NRCA				AML	AML		
	comp=N,6040μm,0.2s						
NRCA				AML	AML		
	comp=E,8495μm,0.2s						
NRCA				AML	AML		
	comp=E,8060μm,0.2s						
NRCA				AML	AML		
	comp=E,8490μm,0.2s						
NRCA				AML	AML		
	comp=N,6495μm,0.2s						
NRCA				AML	AML		
	comp=N,6035μm,0.2s						
NRCA				AML	AML		
	comp=N,4106μm,0.1s						
NRCA				AML	AML		
	comp=E,4196μm,0.8s						
AM05	**Amandola Campo**	**0.16**	**91**	⇑P	Pg	04 58 25.0	+0.8
AM05				S	Sg	04 58 27.3	+0.9
AM05				AML	AML		
	comp=E,893μm,0.2s						
AM05				AML	AML		
	comp=N,590μm,1.0s						
AM05				AML	AML		
	comp=E,3495μm,0.2s						
AM05				AML	AML		
	comp=N,170μm,0.1s						
AM05				AML	AML		
	comp=E,3492μm,0.2s						
AM05				AML	AML		
	comp=N,170μm,0.1s						
AM05				AML	AML		
	comp=E,893μm,0.2s						
AM05				AML	AML		
	comp=N,557μm,0.1s						
MMO1	**Montemonaco**	**0.16**	**120**	⇓P	Pg	04 58 24.7	+0.4
MMO1				S	Sg	04 58 27.4	+0.9
GUMA	**Gualdo di Mace**	**0.17**	**61**	⇑P	Pg	04 58 25.1	+0.7
GUMA				S	Sg	04 58 28.2	+1.5
GUMA				AML	AML		
	comp=E,4520μm,0.2s						
GUMA				AML	AML		
	comp=N,3030μm,0.3s						
GUMA				AML	AML		
	comp=N,3032μm,0.3s						
GUMA				AML	AML		
	comp=E,2152μm,0.5s						
GUMA				AML	AML		
	comp=E,2704μm,0.4s						
GUMA				AML	AML		
	comp=N,3213μm,0.5s						
T1241	**Roccafluvione,**	**0.25**	**120**	⇓P	Pg	04 58 26.3	+0.4
T1241				S	Sg	04 58 30.6	+1.3
T1215	**Vallo di Nera,**	**0.27**	**228**	⇑P	Pg	04 58 26.9	+0.7
T1215				S	Sg	04 58 31.3	+1.5
T1215				AML	AML		
	comp=E,354μm,0.2s						
T1215				AML	AML		
	comp=N,301μm,0.2s						
T1215				AML	AML		
	comp=E,340μm,0.2s						
T1215				AML	AML		
	comp=N,308μm,0.2s						
T1217	**Poggiodomo (PG**	**0.31**	**209**	⇓P	Pg	04 58 27.6	+0.5
T1217				S	Sb	04 58 32.8	-1.4
T1217				AML	AML		
	comp=E,431μm,0.2s						
T1217				AML	AML		
	comp=E,428μm,0.2s						
T1217				AML	AML		
	comp=N,702μm,0.2s						
T1217				AML	AML		
	comp=N,684μm,0.2s						
SNTG	**Esanatoglia**	**0.31**	**332**	⇓P	Pg	04 58 27.7	+0.6
SNTG				S	Sb	04 58 33.2	-1.1
SNTG				AML	AML		
	comp=E,259μm,0.1s						
SNTG				AML	AML		
	comp=N,261μm,0.2s						
EL6	**Elcito**	**0.35**	**356**	S	Sb	04 58 36.0	+0.5
T1243	**Rocca Santa Ma**	**0.36**	**141**	⇓P	Pg	04 58 28.2	+0.1
LNSS	**Leonessa**	**0.38**	**191**	⇓P	Pg	04 58 28.7	+0.2
LNSS				AML	AML		
	comp=E,1058μm,0.2s						
LNSS				AML	AML		
	comp=N,1370μm,0.2s						
LNSS				AML	AML		
	comp=N,1375μm,0.2s						
LNSS				AML	AML		
	comp=E,1059μm,0.2s						
LNSS				AML	AML		
	comp=E,1058μm,0.2s						
LNSS				AML	AML		
	comp=N,1373μm,0.2s						
CING	**Cingoli**	**0.40**	**6**	⇑P	Pg	04 58 29.1	+0.4
CING				AML	AML		
	comp=N,281μm,0.1s						
CING				AML	AML		
	comp=E,302μm,0.4s						
OFFI	**Offida**	**0.41**	**96**	⇓P	Pb	04 58 30.4	-0.2
OFFI				AML	AML		
	comp=E,530μm,0.5s						
OFFI				AML	AML		
	comp=N,636μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.42**	**300**	⇓P	Pg	04 58 29.8	+0.7
ATCC				S	Sb	04 58 37.0	-0.4
ATCC				AML	AML		
	comp=E,459μm,0.2s						
ATCC				AML	AML		
	comp=N,470μm,0.3s						
FOSV	**Fossato di Vic**	**0.42**	**319**	P	Pb	04 58 30.0	-0.7
FOSV				S	Sb	04 58 37.0	-0.3
FOSV				AML	AML		
	comp=N,656μm,0.3s						
FOSV				AML	AML		
	comp=E,445μm,0.5s						
FOSV				AML	AML		
	comp=E,446μm,0.5s						
FOSV				AML	AML		
	comp=N,658μm,0.3s						
RM33	**Pellescritta (**	**0.47**	**173**	⇓P	Pg	04 58 30.2	0.0
RM33				AML	AML		
	comp=E,217μm,0.5s						
RM33				AML	AML		
	comp=N,433μm,0.3s						
RM33				AML	AML		
	comp=N,401μm,0.3s						
RM33				AML	AML		
	comp=E,292μm,0.4s						
ARRO	**Arrone**	**0.48**	**214**	⇓P	Pg	04 58 31.1	+0.7
ARRO				AML	AML		
	comp=E,219μm,0.3s						
ARRO				AML	AML		

	comp=N,170μm,0.2s						
CAMP	**Campotosto**	**0.49 156**	⇓P		Pg	04 58 30.4	0.0
CAMP			AML		AML		
	comp=E,279μm,0.2s						
CAMP			AML		AML		
	comp=N,246μm,0.2s						
CAMP			AML		AML		
	comp=N,247μm,0.2s						
CAMP			AML		AML		
	comp=E,279μm,0.2s						
T1211	**Morro Reatino**	**0.49 205**	⇑P		Pb	04 58 31.3	-0.7
T1211			AML		AML		
	comp=N,474μm,0.2s						
T1211			AML		AML		
	comp=N,494μm,0.2s						
T1211			AML		AML		
	comp=E,257μm,0.3s						
T1211			AML		AML		
	comp=E,275μm,0.2s						
TERO	**Teramo**	**0.50 136**	⇑P		Pg	04 58 30.6	0.0
TERO			AML		AML		
	comp=E,285μm,0.2s						
TERO			AML		AML		
	comp=E,261μm,0.3s						
TERO			AML		AML		
	comp=N,274μm,0.3s						
TERO			AML		AML		
	comp=N,288μm,0.4s						
MURB	**Monte Urbino**	**0.53 302**	P		Pg	04 58 31.7	+0.5
MURB			AML		AML		
	comp=E,734μm,0.3s						
MURB			AML		AML		
	comp=E,764μm,0.3s						
MURB			AML		AML		
	comp=N,569μm,0.3s						
MURB			AML		AML		
	comp=N,588μm,0.3s						
ARVD	**Arcevia**	**0.54 345**	S		Sb	04 58 41.0	+0.2
GIGS	**Gran Sasso**	**0.62 149**	⇑P		Pg	04 58 32.7	-0.2
GIGS			AML		AML		
	comp=E,67μm,0.2s						
GIGS			AML		AML		
	comp=N,71μm,0.3s						
MPAG	**Monte Paganucc**	**0.70 337**	S		Sn	04 58 48.0	-0.7
TOLF	**Tolfa**	**1.24 223**	S		Sb	04 59 01.0	0.0

*LDG **28** 05:09:13.7±0.1, 43°.05N×0°.21W, h8km, Md2.9/2, Ml2.6/12, Error ellipse: s-maj=1.1km s-min=1.1km az=43.0*
*MRB **28** 05:09:13.8±0.2, 43°.05N×0°.24W, h4km±3km, ML2.1/27, Error ellipse: s-maj=1.1km s-min=0.6km az=183.0*
*STR **28** 05:09:14.1±0.4, 43°N±4°×°±°, h5km, MLv1.9/10, Error ellipse: s-maj=0.0km s-min=0.0km az=9.6, preliminary*
*MDD **28** 05:09:14.8±0.3, 43°.06N×0°.23W, h12km, mb_Lg2.4/12, Error ellipse: s-maj=2.3km s-min=1.6km az=3.0*
ISC 28 05:09:13.2±0.8, 43°.11N±0°.02×0°.25W±0°.01, h13km±5km, n78, σ1§13/148, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYLO	**Lourdes**	**0.15**	**95**	P	**Pg**	**05 09 16.8**	**-0.1**
PYLO				S	**Sg**	**05 09 19.1**	**-0.4**
	9μm,0.2s						
PYLO	**Lourdes**	**0.15**	**95**	Pg	**Pg**	**05 09 16.4**	**-0.6**
PYLO				Sg	**Sg**	**05 09 18.5**	**-1.0**
VIEF	**Viey**	**0.30 138**		⇑Pg	**Pg**	**05 09 18.8**	**-0.8**
VIEF				Sg	**Sg**	**05 09 22.6**	**-1.3**
ETSF	**Etsaut**	**0.31 227**		*e*Pg	**Pg**	**05 09 19.3**	**-0.3**
ETSF				*e*Sg	**Sg**	**05 09 23.2**	**-0.8**
	95nm,0.2s						
ETSF	**Etsaut**	**0.31 227**		Pg	**Pg**	**05 09 19.3**	**-0.3**
ETSF				Sg	**Sg**	**05 09 23.2**	**-0.8**
ATE	**Arette**	**0.33 266**		P	**Pg**	**05 09 20.3**	**+0.3**
ATE				S	**Sg**	**05 09 25.3**	**+0.8**
	50nm,0.2s						
ATE	**Arette**	**0.33 266**		Pg	**Pg**	**05 09 20.3**	**+0.3**
ATE				Sg	**Sb**	**05 09 25.6**	**-0.6**
CANF	**Canfranc**	**0.40 209**		Pg	**Pg**	**05 09 20.8**	**-0.5**
CANF				Sg	**Sg**	**05 09 26.0**	**-0.6**
EPF	**Esparros**	**0.44 100**		*e*Pg	**Pg**	**05 09 21.7**	**-0.3**
EPF				*e*Sg	**Sg**	**05 09 27.3**	**-0.7**
	54nm,0.2s						
EPF	**Esparros**	**0.44 100**		Pg	**Pg**	**05 09 21.7**	**-0.3**
ECHI	**Chisagues Biel**	**0.55 144**		P	**Pg**	**05 09 23.2**	**-0.9**
ECHI				S	**Sg**	**05 09 30.1**	**-1.4**
	51nm,0.1s						
ECHI	**Chisagues Biel**	**0.55 144**		Pg	**Pg**	**05 09 23.3**	**-0.9**
ECHI				Sg	**Sg**	**05 09 29.7**	**-1.8**
ECHI				*i* Vmb_Lg		05 09 30.9	
ECHI	**Chisagues Biel**	**0.55 144**		Pg	**Pg**	**05 09 23.3**	**-0.9**
ECHI				Sg	**Sg**	**05 09 30.2**	**-1.4**
SJPF	**Ste Jean**	**0.71 270**		*e*Pg	**Pb**	**05 09 27.6**	**+0.1**
SJPF				*e*Sg	**Sb**	**05 09 37.6**	**+0.4**
	22nm,0.3s						
SJPF	**Ste Jean**	**0.71 270**		Pg	**Pb**	**05 09 27.6**	**+0.1**
SJPF				Sg	**Sb**	**05 09 37.6**	**+0.4**
OSSF	**Osses**	**0.75 281**		Pg	**Pb**	**05 09 29.1**	**+0.9**
EORO	**Oroz-Betelu**	**0.81 255**		Pg	**Pb**	**05 09 29.1**	**0.0**
EORO				Sg	**Sb**	**05 09 40.7**	**+0.8**
EORO	**Oroz-Betelu**	**0.81 255**		Pg	**Pb**	**05 09 29.1**	**0.0**
EORO				Sg	**Sb**	**05 09 40.7**	**+0.8**
EORO				*i* Vmb_Lg		05 09 43.3	
TERF	**Tercis-les-Bai**	**0.85 312**		Pg	**Pn**	**05 09 31.6**	**+0.8**
CARA	**Val d'Aran**	**0.88 117**		P	**Pg**	**05 09 29.8**	**-0.6**
CARA				S	**Sg**	**05 09 41.8**	**-0.1**
	50nm,0.2s						
EALK	**Alkurruntz**	**0.93 277**		Pg	**Pb**	**05 09 31.5**	**+0.4**
EALK				Sg	**Sb**	**05 09 44.9**	**+1.5**
EALK	**Alkurruntz**	**0.93 277**		Pg	**Pb**	**05 09 31.5**	**+0.4**
EALK				Sg	**Sb**	**05 09 44.9**	**+1.5**
EALK				*i* Vmb_Lg		05 09 49.1	
EALK	**Alkurruntz**	**0.93 277**		Pg	**Pb**	**05 09 31.4**	**+0.2**
MLS	**Moulis**	**1.00 98**		P	**Pg**	**05 09 32.3**	**-0.2**
MLS				S	**Sg**	**05 09 45.6**	**0.0**
	6.7nm,0.2s						
MLS	**Moulis**	**1.00 98**		Pg	**Pg**	**05 09 31.7**	**-0.8**
CTRE	**Tremp**	**1.09 136**		P	**Pg**	**05 09 33.2**	**-1.0**
CTRE				S	**Sg**	**05 09 47.3**	**-1.2**
	14nm,0.3s						
CEST	**Esterri de Car**	**1.22 114**		P	**Pg**	**05 09 35.6**	**-1.2**
CEST				S	**Sg**	**05 09 52.1**	**-0.6**
	12nm,0.2s						
CSOR	**Sort**	**1.26 125**		P	**Pg**	**05 09 35.9**	**-1.5**
CSOR				S	**Sg**	**05 09 52.8**	**-1.1**
	10nm,0.3s						
ESAC	**San Caprasio**	**1.40 187**		Pg	**Pg**	**05 09 39.6**	**-0.5**
ESAC				Sg	**Sn**	**05 09 57.9**	**+1.1**
CAVN	**Les Avellanes**	**1.44 148**		P	**Pn**	**05 09 38.6**	**-0.3**
CAVN				S	**Sb**	**05 09 57.4**	**-0.6**
	38nm,0.2s						
PAND	**Andorre**	**1.45 113**		S	**Sb**	**05 09 59.1**	**+0.5**
	12nm,0.2s						
CORG	**Organya**	**1.45 127**		P	**Pn**	**05 09 39.3**	**+0.1**
CORG				S	**Sb**	**05 09 58.3**	**-0.2**
	4.9nm,0.3s						
ARBS	**La Rabassa**	**1.48 116**		P	**Pn**	**05 09 40.0**	**+0.2**
ARBS				S	**Sn**	**05 09 59.7**	**+0.6**
	23nm,0.3s						
MONQ	**Montcuq**	**1.64 39**		Pn	**Pn**	**05 09 41.8**	**+0.1**
MONQ				Pg	**Pg**	**05 09 44.9**	**+0.2**
MONQ				Sn	**Sg**	**05 10 07.3**	**+1.4**
FNEB	**Nbias**	**1.74 96**		P	**Pn**	**05 09 44.3**	**+1.2**
FNEB				S	**Sn**	**05 10 07.1**	**+1.8**
	12nm,0.5s						
FNEB	**Nbias**	**1.74 96**		Pn	**Pg**	**05 09 46.4**	**-0.3**
FNEB				Sg	**Sg**	**05 10 11.2**	**+1.8**
CLLI	**Llivia**	**1.76 110**		P	**Pn**	**05 09 44.1**	**+0.6**
CLLI				S	**Sn**	**05 10 06.7**	**+1.0**
	6.9nm,0.4s						
EMIR	**Miracle**	**1.78 132**		Pn	**Pn**	**05 09 43.3**	**-0.4**
EMIR				Sg	**Sg**	**05 10 10.2**	**-0.2**
MTLF	**Montolieu**	**1.82 82**		*e*Pg	**Pb**	**05 09 47.3**	**+0.9**
MTLF				*e*Sg	**Sb**	**05 10 10.4**	**+1.4**
	8.3nm,0.2s						
MTLF	**Montolieu**	**1.82 82**		Pg	**Pb**	**05 09 47.3**	**+0.9**
MTLF	**Montolieu**	**1.82 82**		Pg	**Pg**	**05 09 47.9**	**-0.3**
LFF	**La Frestale**	**1.96 21**		*e*Pn	**Pn**	**05 09 46.6**	**+0.4**
LFF	**La Frestale**	**1.96 21**		*e*Pg	**Pg**	**05 09 50.7**	**-0.2**
LFF				*e*Sg	**Sg**	**05 10 16.4**	**0.0**
	19nm,0.3s						
CBRU	**Bruguera**	**1.97 114**		P	**Pn**	**05 09 47.0**	**+0.5**
CBRU				S	**Sn**	**05 10 12.3**	**+1.2**
	16nm,0.6s						
EPOB	**Poblet**	**2.02 150**		P	**Pn**	**05 09 47.0**	**+0.1**
EPOB				S	**Sn**	**05 10 12.6**	**+0.6**
	8.0nm,0.4s						
EPOB	**Poblet**	**2.02 150**		Pg	**Pb**	**05 09 50.2**	**+0.4**
EPOB				Sg	**Sb**	**05 10 16.1**	**+1.4**
EPOB				*i* Vmb_Lg		05 10 17.3	
CORI	**Orista**	**2.05 123**		P	**Pn**	**05 09 47.9**	**+0.6**
CORI				S	**Sn**	**05 10 13.2**	**+0.5**
	20nm,0.3s						
FILF	**Fillols**	**2.14 104**		P	**Pn**	**05 09 48.1**	**-0.6**
FILF				S	**Sn**	**05 10 14.2**	**-0.9**
	7.0nm,0.5s						
ERTA	**Horta de San J**	**2.20 168**		P	**Pn**	**05 09 49.7**	**+0.3**
ERTA				S	**Sn**	**05 10 16.5**	**+0.1**
	6.6nm,0.3s						
ERTA	**Horta de San J**	**2.20 168**		Pn	**Pn**	**05 09 49.4**	**0.0**
ERTA				Sn	**Sn**	**05 10 16.1**	**-0.3**
ERTA				Sg	**Sb**	**05 10 20.6**	**+0.7**
ERTA				*i* Vmb_Lg		05 10 26.4	
CBEU	**Beuda**	**2.32 111**		P	**Pn**	**05 09 51.8**	**+0.7**
CBEU				S	**Sn**	**05 10 20.8**	**+1.2**
	21nm,0.5s						
ELAN	**Lanestosa**	**2.33 274**		Pn	**Pn**	**05 09 52.9**	**+1.6**
ELAN				Sn	**Sb**	**05 10 23.0**	**-0.8**
ELAN				*i* Vmb_Lg		05 10 27.6	
SJAF	**Saint Jean de**	**2.39 104**		S	**Sn**	**05 10 22.3**	**+1.1**
	14nm,1.5s						
CFON	**Fontmartina**	**2.40 123**		P	**Pn**	**05 09 53.1**	**+0.8**
CFON				S	**Sn**	**05 10 22.1**	**+0.5**
	25nm,0.3s						
EJON	**La Jonquera**	**2.41 105**		Pn	**Pn**	**05 09 51.1**	**-1.2**
EJON				Sn	**Sn**	**05 10 23.3**	**+1.7**
EJON				Sg	**Sg**	**05 10 29.9**	**-0.6**
EJON				*i* Vmb_Lg		05 10 33.2	
CMAS	**Mas de Barbera**	**2.42 170**		P	**Pn**	**05 09 52.4**	**-0.1**
CMAS				S	**Sn**	**05 10 22.1**	**+0.2**
	8.3nm,0.4s						
CGAR	**Garraf**	**2.43 138**		S	**Sn**	**05 10 22.5**	**+0.4**
	8.0nm,0.8s						
CAF	**Calviac**	**2.47 42**		*e*Pn	**Pn**	**05 09 53.5**	**+0.4**
CAF	**Calviac**	**2.47 42**		*e*Pg	**Pb**	**05 09 59.4**	**+2.0**
CAF				*e*Sn	**Sn**	**05 10 21.9**	**-1.2**
CAF				*e*Sg	**Sg**	**05 10 32.3**	**-0.2**
	5.8nm,0.3s						
RJF	**Les Rejaudoux**	**2.54 30**		*e*Pn	**Pn**	**05 09 54.3**	**+0.3**
RJF	**Les Rejaudoux**	**2.54 30**		*e*Pg	**Pg**	**05 10 01.2**	**-0.6**
RJF				*e*Sg	**Sg**	**05 10 34.3**	**-0.4**
	6.7nm,0.2s						
CCAS	**Cassa de la Se**	**2.64 117**		P	**Pn**	**05 09 55.8**	**+0.3**
CCAS				S	**Sn**	**05 10 27.9**	**+0.6**
	17nm,2.1s						
CPAL	**Palau Saverder**	**2.64 106**		S	**Sn**	**05 10 27.8**	**+0.5**
	14nm,1.6s						
ETOR	**Torete**	**2.66 211**		Pn	**Pn**	**05 09 56.6**	**+0.8**
ETOR				Sn	**Sn**	**05 10 28.3**	**+0.4**
ETOR				*i* Vmb_Lg		05 10 45.8	
EMOS	**Mosqueruela**	**2.75 184**		P	**Pn**	**05 09 57.1**	**-0.1**
EMOS				S	**Sn**	**05 10 30.8**	**+0.5**
	8.5nm,1.3s						
EMOS	**Mosqueruela**	**2.75 184**		Pn	**Pn**	**05 09 56.8**	**-0.4**
EMOS				Pg	**Pb**	**05 10 01.5**	**-0.9**
EMOS				Sn	**Sn**	**05 10 29.6**	**-0.7**
EMOS				Sg	**Sb**	**05 10 38.2**	**+2.2**
EMOS				*i* Vmb_Lg		05 10 40.1	
LASF	**Ste Croix**	**3.14 71**		*e*Pn	**Pn**	**05 10 02.9**	**+0.6**
LASF	**Ste Croix**	**3.14 71**		*e*Pg	**Pg**	**05 10 11.7**	**-1.6**
LASF				*e*Sn	**Sn**	**05 10 38.1**	**-1.5**
LASF				*e*Sg	**Sg**	**05 10 51.9**	**-2.1**
	2.1nm,0.3s						
MFF	**Saint Martin d**	**3.49 1**		*e*Pn	**Pn**	**05 10 07.4**	**+0.2**
MFF	**Saint Martin d**	**3.49 1**		*e*Pg	**Pg**	**05 10 19.4**	**-0.7**
MFF				*e*Sn	**Sn**	**05 10 47.5**	**-0.8**
MFF				*e*Sg	**Sg**	**05 11 04.4**	**-0.9**
	3.1nm,0.3s						
TCF	**Toulx Ste Croi**	**3.63 28**		*e*Pg	**Pg**	**05 10 21.7**	**-1.0**
TCF				*e*Sn	**Sn**	**05 10 49.2**	**-2.6**
TCF				*e*Sg	**Sg**	**05 11 08.5**	**-1.2**
	3.6nm,0.3s						
VIVF	**Saint-Julien-l**	**3.96 62**		*e*Pn	**Pn**	**05 10 13.0**	**-0.6**
VIVF	**Saint-Julien-l**	**3.96 62**		*e*Pg	**Pb**	**05 10 26.3**	**+3.5**
VIVF				*e*Sn	**Sn**	**05 10 57.6**	**-2.3**
VIVF				*e*Sg	**Sg**	**05 11 17.5**	**-2.8**
	2.3nm,0.4s						
BGF	**Bois d'Agland**	**4.09 32**		*e*Pg	**Pb**	**05 10 28.9**	**+3.8**
BGF				*e*Sn	**Sn**	**05 11 00.8**	**-2.3**
BGF				*e*Sg	**Sg**	**05 11 22.9**	**-1.6**
	14nm,0.4s						
AVF	**Avril sur Loir**	**4.48 34**		*e*Pg	**Pg**	**05 10 37.5**	**-1.5**
AVF				*e*Sg	**Sg**	**05 11 35.0**	**-2.0**
	1.6nm,0.4s						
HYF	**Humbligny**	**4.63 25**		*e*Sn	**Sn**	**05 11 14.0**	**-2.5**
HYF				*e*Sg	**Sg**	**05 11 39.7**	**-2.2**
SSF	**Saint Saulge**	**4.76 33**		*e*Sg	**Sg**	**05 11 43.7**	**-2.4**
	0.9nm,0.2s						
QUIF	**Quistinic**	**5.22 338**		*e*Sn	**Sn**	**05 11 28.4**	**-2.6**

WEL 28 05:20:14.3±1.1, 37°S±4°×17°9E±°, h15km±7km, M3.3/17, ML3.6/18, MLv3.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=101.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.76**	**228**	P	Pg	05 20 28.0	-1.1
MXZ				S	Sg	05 20 38.4	-0.8
WMGZ	**Waiomatatini S**	**0.90**	**212**	P	Pn	05 20 32.3	-0.1
WMGZ				S	Sn	05 20 46.3	+1.1
PKGZ	**Pakihiroa**	**1.12**	**222**	P	Pb	05 20 34.7	-0.7
PKGZ				S	Sn	05 20 50.7	+0.1
PUZ	**Puketiti**	**1.18**	**211**	P	Pn	05 20 36.0	-0.3
PUZ				S	Sn	05 20 52.0	-0.1
HAZ	**Te Kaha**	**1.21**	**234**	P	Pn	05 20 35.1	-1.6
HAZ				S	Sg	05 20 53.7	+0.4
TWGZ	**Tauwhareparae**	**1.39**	**216**	P	Pn	05 20 39.2	0.0
TWGZ				S	Sb	05 20 58.3	+0.7
RUGZ	**Raukumara Rang**	**1.40**	**229**	P	Pn	05 20 39.4	0.0
CNGZ	**Carnagh Statio**	**1.56**	**204**	P	Pn	05 20 41.7	+0.1
MWZ	**Matawai**	**1.74**	**222**	P	Pn	05 20 43.8	-0.2
MWZ				S	Sn	05 21 05.4	-0.5
RAGZ	**Rawiri**	**1.92**	**221**	P	Pn	05 20 46.4	-0.1
RAGZ				S	Sn	05 21 11.1	+0.7
RIGZ	**Rimuhau**	**1.92**	**211**	P	Pn	05 20 46.2	-0.4
URZ	**Urewera**	**1.93**	**231**	P	Pn	05 20 46.6	0.0
URZ				S	Sn	05 21 09.8	-0.8
EDRZ	**Edgecumbe**	**2.09**	**239**	P	Pn	05 20 50.4	+1.5
SNGZ	**Shannon Statio**	**2.17**	**217**	P	Pn	05 20 49.5	-0.5
SNGZ				S	Sn	05 21 17.5	+0.8
KNZ	**Kokohu**	**2.23**	**208**	P	Pn	05 20 49.4	-1.3
RTZ	**Ruatahuna**	**2.24**	**225**	P	Pn	05 20 51.6	+0.6
MHGZ	**Mahia Peninsul**	**2.27**	**202**	P	Pn	05 20 50.2	-1.1
MUGZ	**Murupara**	**2.28**	**231**	P	Pn	05 20 51.3	-0.1
RAHZ	**Arahi**	**2.40**	**219**	P	Pn	05 20 53.1	0.0
WHHZ	**Waihua**	**2.46**	**214**	P	Pn	05 20 52.9	-1.0
MTHZ	**Maungataniwha**	**2.48**	**223**	P	Pn	05 20 54.3	0.0
KUZ	**Kuaotunu**	**2.66**	**276**	P	Pn	05 20 55.2	-1.4
NMHZ	**Naumai**	**2.68**	**220**	P	Pn	05 20 56.7	-0.3
ARHZ	**Aropaoanui**	**2.72**	**215**	P	Pn	05 20 56.4	-1.0
TOZ	**Tahuroa Road**	**2.88**	**255**	P	Pn	05 21 00.3	+0.6
BKZ	**Black Stump Fm**	**2.90**	**223**	P	Pn	05 20 59.3	-0.7
GRZ	**Great Barrier**	**2.98**	**285**	P	Pn	05 21 01.6	+0.6
MKAZ	**Moumakai**	**3.08**	**268**	P	Pn	05 21 01.8	-0.7
KWHZ	**Kaweka Forest**	**3.12**	**220**	P	Pn	05 21 01.6	-1.5
KAHZ	**Kahuranaki**	**3.21**	**211**	P	Pn	05 21 02.0	-2.2
MBAZ	**Motutapu North**	**3.31**	**274**	P	Pn	05 21 06.6	+0.9
ETVZ	**East Tongariro**	**3.33**	**231**	P	Pn	05 21 05.6	-0.4
KRVZ	**Karewarewa**	**3.35**	**232**	P	Pn	05 21 06.1	-0.2
NNVZ	**North Ngauruho**	**3.39**	**231**	P	Pn	05 21 06.8	0.0
WTVZ	**West Tongariro**	**3.40**	**232**	P	Pn	05 21 07.4	+0.5
NGZ	**Ngauruhoe**	**3.42**	**231**	P	Pn	05 21 07.2	-0.1
MOVZ	**Moawhango**	**3.48**	**227**	P	Pn	05 21 07.1	-0.9
HIZ	**Hauiti**	**3.60**	**245**	P	Pn	05 21 11.2	+1.6
OUZ	**Omahuta**	**4.76**	**291**	P	Pn	05 21 26.3	+0.9
CTZ	**Chatham Island**	**7.45**	**155**	P	Pn	05 22 01.1	-1.3

WEL 28 05:23:13.2±0.9, 37°S±4°×17°9E±°, h13km±4km, M3.3/18, ML3.6/19, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=89.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.69**	**223**	P	Pg	05 23 26.1	-0.6
MXZ				S	Sg	05 23 34.8	-1.1
WMGZ	**Waiomatatini S**	**0.85**	**207**	P	Pn	05 23 30.5	-0.5
WMGZ				S	Sn	05 23 43.1	-0.3
PKGZ	**Pakihiroa**	**1.06**	**218**	P	Pb	05 23 32.9	-0.6
PKGZ				S	Sn	05 23 49.0	+0.4
HAZ	**Te Kaha**	**1.14**	**232**	P	Pb	05 23 33.4	-1.3
HAZ				S	Sn	05 23 51.3	+1.0
PUZ	**Puketiti**	**1.14**	**207**	P	Pb	05 23 34.0	-0.8
RUGZ	**Raukumara Rang**	**1.33**	**227**	P	Pn	05 23 37.3	-0.4
TWGZ	**Tauwhareparae**	**1.34**	**213**	P	Pn	05 23 37.7	+0.1
TWGZ				S	Sg	05 23 56.1	-0.2
CNGZ	**Carnagh Statio**	**1.53**	**201**	P	Pn	05 23 39.8	-0.4
CNGZ				S	Sb	05 24 01.4	+0.7
TKGZ	**Te Karaka**	**1.61**	**211**	P	Pn	05 23 40.9	-0.5
TKGZ				S	Sn	05 24 01.7	-0.4
MWZ	**Matawai**	**1.68**	**220**	P	Pn	05 23 42.0	-0.4
RAGZ	**Rawiri**	**1.86**	**219**	P	Pn	05 23 44.6	-0.3
URZ	**Urewera**	**1.86**	**229**	P	Pn	05 23 44.8	-0.1
RIGZ	**Rimuhau**	**1.88**	**209**	P	Pn	05 23 44.2	-0.9
RIGZ				S	Sn	05 24 06.8	-1.9
EDRZ	**Edgecumbe**	**2.02**	**238**	P	Pn	05 23 47.2	+0.2
SNGZ	**Shannon Statio**	**2.12**	**215**	P	Pn	05 23 47.6	-0.8
SNGZ				S	Sn	05 24 16.1	+1.4
RTZ	**Ruatahuna**	**2.18**	**224**	P	Pn	05 23 49.2	0.0
RTZ				S	Sb	05 24 18.5	-1.0
KNZ	**Kokohu**	**2.19**	**206**	P	Pn	05 23 47.9	-1.4
MHGZ	**Mahia Peninsul**	**2.23**	**200**	P	Pn	05 23 48.5	-1.5
RAHZ	**Arahi**	**2.35**	**217**	P	Pn	05 23 51.6	+0.1
RAHZ				S	Sn	05 24 21.6	+1.3
MTHZ	**Maungataniwha**	**2.42**	**222**	P	Pn	05 23 52.3	-0.3
MTHZ				S	Sn	05 24 22.7	+0.5
KUZ	**Kuaotunu**	**2.57**	**276**	P	Pn	05 23 55.1	+0.5
KUZ				S	Sn	05 24 22.9	-2.8
NMHZ	**Naumai**	**2.63**	**219**	P	Pn	05 23 55.3	-0.2
NMHZ				S	Sn	05 24 26.4	-0.8
ARHZ	**Aropaoanui**	**2.67**	**214**	P	Pn	05 23 54.4	-1.5
ARHZ				S	Sn	05 24 26.0	-2.1
BKZ	**Black Stump Fm**	**2.84**	**221**	P	Pn	05 23 55.9	-2.4
BKZ				S	Sn	05 24 31.6	-0.8
GRZ	**Great Barrier**	**2.89**	**285**	P	Pn	05 23 59.7	+0.7
MCHZ	**McNeill Hill**	**2.95**	**215**	P	Pn	05 23 58.5	-1.3
MKAZ	**Moumakai**	**3.00**	**268**	P	Pn	05 24 00.2	-0.2
WIAZ	**Waiheke Island**	**3.04**	**274**	P	Pn	05 24 02.1	+1.1
KWHZ	**Kaweka Forest**	**3.07**	**219**	P	Pn	05 23 59.7	-1.8
KWHZ				S	Sn	05 24 37.0	-1.1
KAHZ	**Kahuranaki**	**3.16**	**210**	P	Pn	05 24 00.2	-2.6
ETAZ	**East Tamaki Re**	**3.19**	**271**	P	Pn	05 24 05.2	+2.1
MBAZ	**Motutapu North**	**3.23**	**274**	P	Pn	05 24 04.5	+0.9
ETVZ	**East Tongariro**	**3.27**	**230**	P	Pn	05 24 03.7	-0.6
KRVZ	**Karewarewa**	**3.28**	**231**	P	Pn	05 24 04.2	-0.3
NNVZ	**North Ngauruho**	**3.32**	**230**	P	Pn	05 24 05.1	0.0
MOVZ	**Moawhango**	**3.42**	**226**	P	Pn	05 24 05.3	-1.0
HIZ	**Hauiti**	**3.52**	**244**	P	Pn	05 24 08.8	+1.1
PREZ	**Palmer Road**	**4.38**	**237**	P	Pn	05 24 24.1	+4.6
MRZ	**Mangatainoka R**	**4.44**	**215**	P	Pn	05 24 17.6	-2.6
OUZ	**Omahuta**	**4.67**	**292**	P	Pn	05 24 24.1	+0.6
TRWZ	**Traveller**	**5.00**	**209**	P	Pn	05 24 26.0	-2.1
CTZ	**Chatham Island**	**7.49**	**154**	P	Pn	05 24 59.2	-2.9

*SOME **28** 05:24:17.4, 42°.90N×78°.13E, h15km*
*NNC **28** 05:24:17.1±0.4, 42°.93N×78°.13E, h0km±2km, mb3.2, mpv3.4, Error ellipse: s-maj=4.4km s-min=1.4km az=174.0*
*KRNET **28** 05:24:18.0±0.1, 42°.94N×78°.13E, h21km, mb3.2*
ISC 28 05:24:17.7±0.9, 42°.91N±0°.03×78°.12E±0°.02, h12km±8km, n70, σ1§11/125, 17C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.25**	**54**	*e*P	**Pg**	**05 24 23.2**	**+0.1**
	56nm,0.1s						
SATY				*e*S	**Sg**	**05 24 27.3**	**+0.7**
	2μm,0.1s						
SATY	**Saty**	**0.25**	**54**	P	**Pg**	**05 24 23.2**	**+0.1**
	24nm,0.1s						
SATY				S	**Sg**	**05 24 27.4**	**+0.7**
	2μm,0.1s						
ANVS	**Anan'yevo**	**0.36**	**249**	⇓*i*P	**Pb**	**05 24 25.4**	**-0.8**
	baz=46						
ANVS				⇓*i*S	**Sb**	**05 24 31.3**	**-0.6**
	baz=46						
KURS	**Kuram**	**0.58**	**3**	*e*P	**Pg**	**05 24 28.9**	**-0.1**
	baz=3.0						
KURS				*e*S	**Sg**	**05 24 36.9**	**+0.2**
	baz=3.0						
KURS	**Kuram**	**0.58**	**3**	*e*P	**Pg**	**05 24 28.9**	**-0.1**
	46nm,0.1s						
KURS				*e*S	**Sg**	**05 24 36.9**	**+0.2**
	86nm,0.1s						
KURS	**Kuram**	**0.58**	**3**	P	**Pg**	**05 24 28.9**	**-0.1**
	46nm,0.1s						
KURS				S	**Sg**	**05 24 36.9**	**+0.2**
	86nm,0.1

PDGK	Podgornoye	1.08	67	P		Pb	05 24 37.3 -1.2
	3.2nm,0.1s						
PDGK				S		Sb	05 24 51.2 -1.5
	8.0nm,0.1s						
PDGK	Podgornoye	1.08	67	⇓P		Pb	05 24 36.9 -1.6
	2.0nm,0.2s						
PDGK				⇑S		Sb	05 24 51.0 -1.7
	12nm,0.5s						
BLB	Baldybastay	1.21	12	*e*P		Pn	05 24 40.1 -0.6
	75nm,0.1s						
BLB				*e*S		Sb	05 24 56.1 -0.3
	164nm,0.2s						
BLB	Baldybastay	1.21	12	P		Pn	05 24 40.1 -0.6
	75nm,0.1s						
BLB				S		Sb	05 24 56.1 -0.3
	164nm,0.2s						
CHKK	Chushkaly	1.25	319	*e*P		Pb	05 24 40.9 -0.5
	baz=19						
CHKK				*e*S		Sn	05 24 57.5 -0.5
	baz=19						
CHKK	Chushkaly	1.25	319	*e*P		Pb	05 24 40.9 -0.5
	26nm,0.2s						
CHKK				*e*S		Sn	05 24 57.5 -0.5
	141nm,0.2s						
CHKK	Chushkaly	1.25	319	P		Pb	05 24 40.9 -0.5
	26nm,0.2s						
CHKK				S		Sn	05 24 57.5 -0.5
	141nm,0.2s						
MTBS	Maitube	1.26	281	*e*P		Pb	05 24 41.4 -0.1
	baz=79						
MTBS				*e*S		Sg	05 24 58.3 -0.1
	baz=79						
MTBS	Maitube	1.26	281	*e*P		Pb	05 24 41.4 -0.1
	4.0nm,0.1s						
MTBS				*e*S		Sg	05 24 58.3 -0.1
	37nm,0.2s						
MTBS	Maitube	1.26	281	P		Pb	05 24 41.4 -0.1
	4.0nm,0.1s						
MTBS				S		Sg	05 24 58.3 -0.1
	37nm,0.2s						
ARXS	Arharly	1.32	351	*e*P		Pb	05 24 42.1 -0.4
	43nm,0.2s						
ARXS				*e*S		Sn	05 24 59.5 -0.2
	139nm,0.2s						
ARXS	Arharly	1.32	351	P		Pb	05 24 42.1 -0.4
	43nm,0.2s						
ARXS				S		Sn	05 24 59.5 -0.2
	139nm,0.2s						
KTBS	Karatobe	1.32	308	*e*P		Pb	05 24 42.2 -0.4
	baz=7.0						
KTBS				*e*S		Sb	05 24 59.7 +0.1
	baz=7.0						
KTBS	Karatobe	1.32	308	*e*P		Pb	05 24 42.1 -0.4
	21nm,0.1s						
KTBS				*e*S		Sb	05 24 59.6 +0.1
	188nm,0.2s						
KTBS	Karatobe	1.32	308	P		Pb	05 24 42.2 -0.4
	21nm,0.1s						
KTBS				S		Sb	05 24 59.6 +0.1
	188nm,0.2s						
ULHL	Ulahol	1.54	245	⇑*i*P		Pg	05 24 46.6 -0.7
	baz=44						
ULHL				⇑*i*S		Sg	05 25 07.6 +0.3
	baz=44						
KST	Kastek	1.59	275	*e*P		Pb	05 24 47.3 +0.1
	baz=75						
KST				*e*S		Sg	05 25 08.5 -0.5
	baz=75						
KST	Kastek	1.59	275	*e*P		Pb	05 24 47.3 +0.1
	5.4nm,0.1s						
KST				*e*S		Sg	05 25 08.5 -0.5
	30nm,0.3s						
KST	Kastek	1.59	275	P		Pb	05 24 47.3 +0.1
	5.4nm,0.1s						
KST				S		Sg	05 25 08.5 -0.5
	30nm,0.3s						
KUU	Kurty	1.63	308	*e*P		Pb	05 24 47.5 -0.2
	baz=7.0						
KUU				*e*S		Sb	05 25 08.8 +0.5
	baz=7.0						
KUU	Kurty	1.63	308	*e*P		Pb	05 24 47.5 -0.2
	13nm,0.2s						
KUU				*e*S		Sb	05 25 08.8 +0.5
	90nm,0.2s						
KUU	Kurty	1.63	308	P		Pb	05 24 47.5 -0.2
	13nm,0.2s						
KUU				S		Sb	05 25 08.8 +0.5
	90nm,0.2s						
BOOM	Boomskoye usch	1.66	256	⇑*i*P		Pb	05 24 48.1 -0.3
	baz=55						
BOOM				⇑*i*S		Sg	05 25 10.2 -1.1
	baz=55						
DGS	Degeres	1.75	282	*e*P		Pb	05 24 49.8 -0.2
	baz=81						
DGS				*e*S		Sb	05 25 12.7 +0.7
	baz=81						
DGS	Degeres	1.75	282	*e*P		Pb	05 24 49.8 -0.2
	4.9nm,0.3s						
DGS				*e*S		Sb	05 25 12.7 +0.7
	25nm,0.2s						
DGS	Degeres	1.75	282	P		Pb	05 24 49.8 -0.2
	4.9nm,0.3s						
DGS				S		Sb	05 25 12.7 +0.7
	25nm,0.2s						
TKM2	Tokmak 2	1.86	271	⇑*i*P		Pb	05 24 51.0 -0.7
	baz=70						
TKM2				⇑*i*S		Sb	05 25 15.3 +0.3
	baz=70						
TKM2	Tokmak 2	1.86	271	⇑Pn		Pb	05 24 51.7 0.0
	3.7nm,0.5s						
TKM2				⇓Sn		Sg	05 25 16.5 -0.9
	20nm,0.5s						
DJR	Jarkent	1.87	40	*e*P		Pb	05 24 50.8 -1.0
	14nm,0.2s						
DJR				*e*S		Sb	05 25 14.4 -0.7
	40nm,0.3s						
DJR	Jarkent	1.87	40	P		Pb	05 24 50.8 -1.0
	14nm,0.2s						
DJR				S		Sb	05 25 14.4 -0.7
	40nm,0.3s						
KRBS	Karabastau	1.95	295	*e*P		Pb	05 24 52.9 -0.4
	baz=94						
KRBS				*e*S		Sb	05 25 18.0 +0.4
	baz=94						
KRBS	Karabastau	1.95	295	*e*P		Pb	05 24 52.9 -0.4
	5.5nm,0.2s						
KRBS				*e*S		Sb	05 25 18.0 +0.4
	59nm,0.2s						
KRBS	Karabastau	1.95	295	Pg		Pb	05 24 52.9 -0.4
	5.5nm,0.2s						
KRBS				Lg		Lg	05 25 18.0
	59nm,0.2s						
TDK	Taldyqorghan	2.10	5	*e*P		Pb	05 24 55.1 -0.6
	44nm,0.3s						
TDK				*e*S		Sb	05 25 22.2 +0.3
	73nm,0.3s						
TDK	Taldyqorghan	2.10	5	Pg		Pb	05 24 55.1 -0.6
	44nm,0.3s						
TDK				Lg		Lg	05 25 22.2
	73nm,0.3s						
NRN	Naryn	2.16	228	⇓*i*P		Pb	05 24 56.5 -0.5
	baz=27						
NRN				⇓*i*S		Sb	05 25 23.7 -0.2
	baz=27						
KBK	Karagaybulak	2.35	265	⇑*i*P		Pb	05 24 58.1 -2.1
	baz=64						
KBK				⇑*i*S		Sb	05 25 27.6 -1.6
	baz=64						
CHMS	Chumysh	2.48	273	⇑*i*P		Pn	05 24 59.3 +1.3
	baz=73						
CHMS				⇑*i*S		Sb	05 25 30.0 -2.7
	baz=73						
CHMS	Chumysh	2.48	273	⇑Pn		Pn	05 24 59.4 +1.4
	1.8nm,0.5s						
CHMS				⇑Lg		Lg	05 25 36.2
	6.6nm,0.3s						
MRKS	Merke	3.61	269	*e*P		Pb	05 25 23.0 +1.5
	5.4nm,1.0s						
MRKS				*e*S		Sg	05 26 09.6 -3.9
	7.7nm,0.5s						
MRKS	Merke	3.61	269	Pg		Pb	05 25 23.0 +1.5
	5.4nm,1.0s						
MRKS				Lg		Lg	05 26 09.6
	7.7nm,0.5s						
BTLS	Baital	3.63	307	*e*P		Pb	05 25 22.2 +0.3
	1.6nm,0.3s						
BTLS				*e*S		Sb	05 26 08.2 +2.3
	1.9nm,0.5s						
BTLS	Baital	3.63	307	Pg		Pb	05 25 22.2 +0.3
	1.6nm,0.3s						
BTLS				Lg		Lg	05 26 08.2
	1.9nm,0.5s						
MK31	Makanchi Array	4.88	36	⇑Pn		Pn	05 25 30.2 -0.8
	0.4nm,0.2s,baz=210,slow=11,SNR=24						
MK31				⇓Lg		Lg	05 26 49.6
	0.9nm,0.5s,baz=218,slow=27,SNR=5.1						
KK31	Karatay Array	5.59	275	Pg		Pb	05 25 58.3 +3.2
	0.3nm,0.3s,baz=82,slow=16,SNR=5.2						
KK31				⇓Lg		Lg	05 27 15.1
	0.4nm,0.2s,baz=98,slow=25,SNR=4.9						
OTUK	Ortayu	6.70	325	⇓Lg		Lg	05 27 49.3
	2.7nm,0.5s						
KURBB	Kurchatov Arra	7.72	2	⇓Lg		Lg	05 28 19.9
	8.7nm,1.0s						

IDC ***28*** *05:26:54.0±1.1,4°.67S×153°.27E,h34km±7km,mb5.4/32, mbtmp5.5/34,ML4.0/2,MS5.2/51,Error ellipse: s-maj=13.7km s-min=9.2km az=89.0*

BJI ***28*** *05:26:54.9±0.0,4°.37S×153°.40E,h52km,mb5.8/93, mB5.9/81,Ms5.6/95,Ms7 5.5/89*

MOS ***28*** *05:26:54.0±1.1,4°.62S×153°.16E,h44km,mb6.2/51, MS5.5/21,Error ellipse: s-maj=7.4km s-min=5.1km az=107.4*

NEIC ***28*** *05:26:55.9±1.9,4°.67S±0°.06×153°.22E±0°.05,h45km±4km, mb5.8/145,Ms_20 5.5/391,Mwb5.9/41,Mww5.9,Error ellipse: s-maj=8.8km s-min=7.6km az=170.0*

NEIC ***28*** *05:26:56.3,4°.70S×153°.21E,h47km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}9.35; $M_{\theta\theta}$-7.17; $M_{\phi\phi}$-2.17; $M_{r\theta}$4.34; $M_{\theta\phi}$0.79; $M_{\phi r}$1.73; Fault plane solution: $M_0$9.70000×10^{17} NP1:ϕ_s285.62000°, δ32.46000°,λ106.71000°. NP2:ϕ_s86.04000°,δ59.06000°, λ79.63000°. Principal axes: T 10.6871, Plg74.0000°, Azm329.0000°; N -2.4237, Plg9.0000°, Azm91.0000°; P -8.2634, Plg13.0000°, Azm184.0000°;*

GCMT ***28*** *05:26:57.9±0.1,4°.93S×153°.09E,h53km,MW5.9/162, Moment Tensor Solution. s162,c361; s158,c470; Duration: 2≥1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.63±.01; $M_{\theta\theta}$-0.70±.00; $M_{\phi\phi}$0.07±.01; $M_{r\theta}$0.38±.01; $M_{\theta\phi}$0.16±.00; $M_{\phi r}$0.14±.01; Best double couple: $M_0$0.79800×10^{18} NP1:ϕ_s84.00000°,δ61.00000°, λ71.00000°. NP2:ϕ_s299.00000°,δ34.00000°,λ120.00000°. Principal axes: T 0.7750, Plg68.0000°, Azm316.0000°; N 0.0470, Plg16.0000°, Azm94.0000°; P -0.8210, Plg14.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *05:26:58,4°.71S×153°.15E,h50km,Moment Tensor Solution. Duration: 2≥0 Moment tensor: Scale 10^{17}Nm; M_{rr}6.36; $M_{\theta\theta}$-6.62; $M_{\phi\phi}$0.27; $M_{r\theta}$5.53; $M_{\theta\phi}$2.21; $M_{\phi r}$1.47; Fault plane solution: $M_0$8.93000×10^{17} NP1: ϕ_s306.00000°,δ30.00000°,λ125.00000°. NP2: ϕ_s87.00000°,δ66.00000°,λ72.00000°. Principal axes: T 8.9296, Plg64.0000°, Azm326.0000°; N 0.0075, Plg17.0000°, Azm95.0000°; P -8.9371, Plg19.0000°, Azm191.0000°;*

DJA ***28*** *05:27:00.3±0.4,5°S±3°×15°3E±°,h88km±4km,M5.7/96, mB6.1/79,mb5.7/96,MLv6.2/3,Mw(mB)5.8/79, MwMwp5.6/53,Mwp5.7/53*

ISC 28 05:26:56.3±0.2,4.74S±0°.03×153°.21E±0°.03,h56km±1km, h57km:pP-P,n1487,σ1°55/1471,mb5.8/237,MS5.5/301, 136C-26D,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.17	298		Pn	05 27 17.7	+1.2
RABL	Rabaul	1.17	298	P	Pn	05 27 19.3	+2.8
MANU	Manus Island	6.41	294		Pn	05 28 30.8	+2.6
PMG	Port Moresby	7.58	232	Pn	Pn	05 28 44.6	+0.3
	32nm,0.3s,baz=44,slow=14,SNR=23						
PMG				Sn	Sn	05 30 07.9	-1.0
	51nm,0.3s,baz=306,slow=23,SNR=9.3						
	95nm,0.3s						
PMG	Port Moresby	7.58	232	Pn	Pn	05 28 45.0	+0.8
PMG	Port Moresby	7.58	232	P	Pn	05 28 45.0	+0.8
PMG	Port Moresby	7.58	232	P	Pn	05 28 46.4	+2.2
	4.5nm42μm7μm566nm,0.8s						
PMG	Port Moresby	7.58	232	P	Pn	05 28 47.3	+3.1
HNR	Honiara	8.15	125	Pn	Pn	05 28 52.4	+0.3
	355nm,0.3s,baz=204,slow=11,SNR=1.8						
HNR				Sn	Sn	05 30 25.9	+3.0
	513nm,0.3s,baz=227,slow=19,SNR=1.2						
HNR	Honiara	8.15	125		Pn	05 28 54.5	+2.4
HNR	Honiara	8.15	125	P	Pn	05 28 54.5	+2.4
PATS	Pohnpei	12.58	24	P	Pn	05 29 50.8	-1.7
	baz=13						
PATS	Pohnpei	12.58	24		Pn	05 29 50.5	-2.0
PATS	Pohnpei	12.58	24	P	Pn	05 29 53.1	+0.6
GENI	Genyem	13.18	279	P	Pn	05 30 02.6	+1.7
	22μm14μm574nm,1.0s						
COEN	Coen	13.48	226	P	Pn	05 30 06.8	+1.9
	baz=14,SNR=23						
COEN	Coen	13.48	226	Pn	Pn	05 30 05.0	+0.1
COEN	Coen	13.48	226	P	Pn	05 30 06.9	+2.0
SMPI	Sarmi	14.72	280	P	Pn	05 30 23.2	+1.8
	20μm11μm913nm,1.2s						
TV1H	Townsville Har	15.73	203	P	P	05 30 36.3	-1.1
MTSU	Mount Surprise	15.90	212	P	P	05 30 38.5	-0.9
	baz=16,SNR=38						
MTSU	Mount Surprise	15.90	212	P	P	05 30 38.7	-0.7
CTA	Charters Tower	16.69	203	Pn	P	05 30 47.9	-0.2
	1.4nm,0.3s,baz=21,slow=12,SNR=62						
CTA				Sn	S	05 33 56.9	-2.8
	baz=26,slow=23						
CTA				LR	LR	05 36 26.7	
	comp=Z,20μm,21.8s,baz=22,slow=34						
CTA				ScP	ScP	05 39 07.4	+3.8
	14nm,0.8s,baz=326,slow=3.7,SNR=8.2						
	52nm,0.8s						
CTA	Charters Tower	16.69	203	P	P	05 30 48.0	-0.1
CTAO	Charters Tower	16.69	203		Pn	05 30 47.1	+0.6
CTAO	Charters Tower	16.69	203	P	Pn	05 30 47.2	+0.6
CTAO				pmax	pmax		
	comp=Z,187nm,1.2s						
CTAO	Charters Tower	16.69	203	P	P	05 30 47.9	-0.2
SRPI	Serui, Papua	17.17	279	P	P	05 30 55.2	+1.7
	comp=Z,8μmcomp=Z,6μmcomp=Z,188nm,0.5s						
RK1H	Rockhampton Ha	18.73	188	P	Pn	05 31 12.3	+0.9
KOUNC	Koumac, New Ca	19.06	147	P	P	05 31 14.4	+0.3
KOUNC	Koumac, New Ca	19.06	147	P	Pn	05 31 15.5	+0.1
RKPI	Ransiki, Papua	19.27	279	P	Pn	05 31 18.2	+0.2
	comp=Z,19μmcomp=Z,21μmcomp=Z,1μm,1.4s						
MWPI	Manokwari, Pap	19.51	281	P	Pn	05 31 20.7	-0.1
	comp=Z,19μmcomp=Z,13μmcomp=Z,548nm,0.7s						
KWAJ	Kwajalein Atol	19.68	47	P	Pn	05 31 22.5	-0.3
KWAJ	Kwajalein Atol	19.68	47	P	Pn	05 31 22.5	-0.3
KWAJ				pmax	pmax		
	comp=Z,2μm,1.7s						
KWAJ	Kwajalein Atol	19.68	47	P	Pn	05 31 23.9	+1.1
GUMO	Guam	20.00	336	P	Pn	05 31 26.8	+0.2
	comp=Z,2μm,1.0s,baz=172,slow=7.7,SNR=52						
GUMO				LR	LR	05 38 11.6	
	comp=Z,4μm,21.5s,baz=158,slow=34						
GUMO	Guam	20.00	336	P	Pn	05 31 26.2	-0.4
GUMO	Guam	20.00	336	P	Pn	05 31 26.2	-0.4
GUMO				pmax	pmax		
	comp=Z,3μm,1.1s						
GUMO	Guam	20.00	336	P	Pn	05 31 26.8	+0.2
QIS	Mount Isa	20.55	219	P	P	05 31 30.7	+0.3
	baz=21,SNR=75						
QIS	Mount Isa	20.55	219	P	P	05 31 31.7	+1.3
TARA	Tarawa	20.61	73	P	Pn	05 31 32.7	-1.1
TARA				IAmb	IAmb	05 31 42.6	
	comp=Z,406nm,1.1s						
EIDS	Eidsvold	20.62	185	P	Pn	05 31 33.5	-0.3
	baz=21,SNR=31						
EIDS	Eidsvold	20.62	185	P	P	05 31 31.3	+0.3
EIDS	Eidsvold	20.62	185	P	P	05 31 32.0	+0.9
LIFNC	LIFOU	20.98	141	P	P	05 31 36.1	+1.1
LIFNC				IAmb	IAmb	05 31 51.7	
	comp=Z,618nm,1.0s						
LIFNC	LIFOU	20.98	141	P	P	05 31 35.6	+0.6
FAKI	Fak Fak	20.99	274	P	P	05 31 34.6	-0.6
FAKI	Fak Fak	20.99	274	P	P	05 31 35.2	0.0
	comp=Z,8μmcomp=Z,407nm,1.8s						
FAKI	Fak Fak	20.99	274	P	P	05 31 35.4	+0.2
NOUC	Port Laguerre	21.42	145	P	P	05 31 40.4	+0.7
DZM	Mont Dzumac	21.48	145	*e*Pn	P	05 31 40.5	0.0
	comp=Z,554nm,1.0s						
DZM				*e*S	S	05 35 32.6	-3.3
	comp=Z,13μm,27.1s						
DZM				*e*LR	LR	05 36 55.4	
	comp=Z,36μm,26.6s						
DZM	Mont Dzumac	21.48	145	P	P	05 31 40.8	+0.3
	comp=Z,138nm,0.7s,baz=314,slow=7.9,SNR=62						
DZM				LR	LR	05 39 08.3	
	comp=Z,15μm,21.7s,baz=320,slow=34						
DZM				ScP	ScP	05 39 17.1	+2.8
	comp=Z,76nm,1.2s,baz=38,slow=1.2,SNR=9.9						
	comp=Z,138nm,0.7s						
DZM	Mont Dzumac	21.48	145	P	P	05 31 40.6	+0.1
DZM				IAmb	IAmb	05 31 58.5	
	comp=Z,248nm,0.9s						
DZM	Mont Dzumac	21.48	145	P	P	05 31 41.1	+0.6
KDU	Kakadu	21.95	248	P	P	05 31 44.4	-1.0
	baz=22,SNR=144						
KDU	Kakadu	21.95	248	P	P	05 31 45.4	0.0
MARNC	Mare, Loyalty	22.00	140	P	P	05 31 46.2	+0.3
SAUI	Saumlaki	22.00	260	P	P	05 31 46.3	+0.2
SAUI				IAmb	IAmb	05 31 50.4	
	comp=Z,248nm,0.8s						
RMQ	Roma	22.04	191	P	P	05 31 47.1	+0.7
	baz=22,SNR=33						
RMQ	Roma	22.04	191	P	P	05 31 47.6	+1.2
SIJI	Sorong	22.24	279	P	P	05 31 48.5	-0.2
	comp=Z,252nm,0.7s,baz=88,slow=8.5,SNR=46						
SIJI				ScP	ScP	05 39 18.0	+1.6
	comp=Z,10nm,0.5s,baz=63,slow=4.1,SNR=7.9						
SIJI				LR	LR	05 39 31.8	
	comp=Z,11μm,20.6s,baz=98,slow=34						
	comp=Z,252nm,0.7s						
SIJI	Sorong	22.24	279	P	P	05 31 48.9	+0.2
	comp=Z,11μmcomp=Z,8μmcomp=Z,509nm,1.0s						
SWI	Sorong	22.25	279	P	P	05 31 49.2	+0.5
	comp=Z,13μmcomp=Z,11μmcomp=Z,685nm,1.0s						
BNDI	Bandanaira	23.23	270	P	P	05 31 57.7	-1.1
	comp=Z,11μmcomp=Z,8μmcomp=Z,448nm,0.9s						
MTN	Manton Dam	23.23	248	P	P	05 31 58.3	-0.6
	baz=23,SNR=80						
MTN	Manton Dam	23.23	248	P	P	05 31 57.5	-1.4
MTN				IAmb	IAmb	05 32 17.8	
	comp=Z,462nm,1.1s						
MTN	Manton Dam	23.23	248	P	P	05 31 58.9	0.0
QLP	Quilpie	23.36	201	P	P	05 32 00.1	+0.1
	baz=24,SNR=56						
QLP	Quilpie	23.36	201	P	P	05 32 00.5	+0.6
WB0	Warramunga Arr	23.64	229	P	P	05 32 02.5	-0.2
WB0				IAmb	IAmb	05 32 26.9	
	comp=Z,479nm,1.1s						
WR0	Warramunga Arr	23.65	229	P	P	05 32 02.4	-0.3
WR0				IAmb	IAmb	05 32 27.6	
	comp=Z,278nm,1.0s						
WRAB	Tennant Creek	23.77	229	P	P	05 32 03.5	-0.5
WRAB				IAmb	IAmb	05 32 28.7	
	comp=Z,224nm,0.7s						
WRAB	Tennant Creek	23.77	229	P	P	05 32 03.5	-0.5
WRAB				pmax	pmax		
	comp=Z,224nm,0.7s						
WRAB	Tennant Creek	23.77	229	P	P	05 32 04.7	+0.8
WB2	Warramunga Arr	23.78	229	P	P	05 32 03.8	-0.2
WB2				IAmb	IAmb	05 32 28.8	
	comp=Z,232nm,0.7s						
WRA	Warramunga Arr	23.79	229	P	P	05 32 04.0	-0.1
	comp=Z,35nm,0.6s,baz=52,slow=10,SNR=102						
WRA				S	S	05 36 14.3	-1.6
	comp=Z,11nm,1.0s,baz=50,slow=15,SNR=5.8						
WRA				ScP	ScP	05 39 22.2	+1.8
	comp=Z,16nm,0.9s,baz=53,slow=2.7,SNR=11						
WRA				LR	LR	05 41 41.2	
	comp=Z,5μm,21.3s,baz=54,slow=37						
WRA				PKiKP	PKiKP	05 43 29.3	-0.8
	comp=Z,1.7nm,0.6s,baz=331,slow=0.8,SNR=8.2						
	comp=Z,35nm,0.6s						
WRA	Warramunga Arr	23.79	229	P	P	05 32 03.4	-0.6
WRA	Warramunga Arr	23.79	229	*i* P	P	05 32 04.0	-0.1
WRA				pmax	pmax		
	comp=Z,43nm,0.7s						
MSAI	Masohi	24.25	272	P	P	05 32 08.2	-0.2
	comp=Z,736nmcomp=Z,35nm,0.6s						
KRAI	Karang Ratu	24.79	272	P	P	05 32 12.4	-0.8
	comp=Z,3μmcomp=Z,155nm,2.3s						
AAI	Ambon	24.96	271	P	P	05 32 14.1	-0.7
	comp=Z,8μmcomp=Z,3μmcomp=Z,222nm,0.7s						
ARMA	Armidale	25.59	183	P	P	05 32 22.0	+1.6
	baz=26,SNR=15						
ARMA	Armidale	25.59	183	P	P	05 32 21.7	+1.3
ARMA	Armidale	25.59	183	P	P	05 32 22.2	+1.8
INKA	Innaminka	25.77	206	P	P	05 32 22.6	+0.6
LBMI	Labuha	25.99	278	P	P	05 32 24.7	+0.5
	comp=Z,10μmcomp=Z,762nm,1.4s						
NLAI	Namlea	26.08	272	P	P	05 32 24.6	-0.4
	comp=Z,62nm,0.6s						
GAMI	Galela, Maluku	26.22	284	P	P	05 32 25.7	-0.5
	comp=Z,7μmcomp=Z,4μmcomp=Z,323nm,1.2s						
KNRA	Kununurra	26.36	244	P	P	05 32 27.6	+0.1
	baz=26,SNR=84						
KNRA	Kununurra	26.36	244	P	P	05 32 26.6	-0.9
KNRA	Kununurra	26.36	244	P	P	05 32 27.4	-0.1
TNTI	Ternate	26.39	281	P	P	05 32 27.0	-0.7
TNTI				IAmb	IAmb	05 32 29.1	
	comp=Z,255nm,1.2s						
TNTI	Ternate	26.39	281	P	P	05 32 28.0	+0.3
	comp=Z,4μmcomp=Z,3μmcomp=Z,204nm,1.3s						
AS01	Alice Springs	26.44	223	P	P	05 32 29.7	+1.6
AS31	Alice Springs	26.47	223	P	P	05 32 28.3	-0.1
ASAR	Alice Springs	26.47	223	P	P	05 32 28.3	-0.1
	comp=Z,7.0nm,0.6s,baz=56,slow=8.7,SNR=78						
ASAR				S	S	05 37 03.9	+5.3
	comp=Z,2.8nm,0.9s,baz=71,slow=20,SNR=1.5						
ASAR				ScP	ScP	05 39 30.9	+3.0
	comp=Z,16nm,0.8s,baz=48,slow=3.2,SNR=9.9						
ASAR				LR	LR	05 42 51.6	
	comp=Z,7μm,22.0s,baz=56,slow=36						
ASAR				ScS	ScS	05 43 25.1	+6.6
	comp=Z,3.0nm,1.1s,baz=70,slow=6.0,SNR=4.2						
	comp=Z,7.0nm,0.6s						
H11S3	WAKE ISLAND Hy	26.64	30	T	T	06 00 16.7	
	baz=208,slow=74,SNR=444						
H11S2	WAKE ISLAND Hy	26.64	30	T	T	06 00 19.1	
	baz=208,slow=74,SNR=300						
H11S1	WAKE ISLAND Hy	26.66	30	T	T	06 00 20.3	
	baz=208,slow=74,SNR=214						
LHI	Lord Howe Isla	27.21	169	P	P	05 32 36.3	+1.5
	baz=27,SNR=3.1						
SANI	Sanana	27.30	275	P	P	05 32 35.2	-0.7
	comp=Z,7μmcomp=Z,4μmcomp=Z,196nm,1.3s						
MSVF	Nonsavu	27.53	120	ScP	ScP	05 39 34.2	+3.0
	comp=Z,42nm,0.9s,baz=242,slow=2.8,SNR=15						
MSVF				LR	LR	05 44 25.2	
	comp=Z,5μm,18.4s,baz=295,slow=38						
MSVF	Nonsavu	27.53	120	P	P	05 32 38.5	+0.5
MSVF	Nonsavu	27.53	120	P	P	05 32 38.5	+0.5
MSVF				pmax	pmax		
	comp=Z,64nm,1.1s						
MSVF				MLR	MLR		
	comp=Z,6μm,19.0s						
MSVF	Nonsavu	27.53	120	P	P	05 32

STKA Stephens Creek 29.11 201 P **P** **05 32 51.6 -0.3**
SOEI Soe 29.12 259 P **P** **05 32 51.7 -0.7**
SOEI IAmb IAmb 05 33 39.7
comp=Z,120nm,0.8s
SOEI Soe 29.12 259 P **P** **05 32 52.7 +0.3**
comp=Z,7µmcomp=Z,2µmcomp=Z,85nm,1.2s
LCRK Leigh Creek 29.22 207 P **P** **05 32 53.0 +0.1**
BIPH Bislig 29.69 296⇑ *eP* **P** **05 32 56.0 -1.2**
BATI Baumata 29.78 258 P **P** **05 32 57.8 -0.3**
comp=Z,85nm,0.6s,baz=302,slow=2.4,SNR=7.4
BATI LR LR 05 47 24.9
comp=Z,15µm,21.8s,baz=109,slow=41
comp=Z,85nm,0.6s
BATI Baumata 29.78 258 P **P** **05 32 58.9 +0.9**
comp=Z,5µmcomp=Z,2µmcomp=Z,108nm,0.8s
DAV Davao City (W) 29.96 293 LR LR 05 45 09.8
comp=Z,2µm,18.7s,baz=110,slow=36
GSPH General Santos 30.19 291⇓ *eP* **P** **05 33 00.3 -1.5**
LUWI Luwuk 30.61 276 P **P** **05 33 04.8 -0.5**
LUWI IAmb IAmb 05 33 40.5
comp=Z,232nm,1.1s
LUWI Luwuk 30.61 276 P **P** **05 33 05.2 -0.2**
comp=Z,5µmcomp=Z,4µmcomp=Z,205nm,0.9s
GTOI Gorontalo 30.63 279 P **P** **05 33 06.6 +1.0**
comp=Z,1µmcomp=Z,67nm,0.7s
CNB Canberra Magne 30.64 186 P **P** **05 33 06.8 +1.4**
baz=31,SNR=4.5
CAN Canberra 30.68 187 P **P** **05 33 06.4 +0.6**
CAN IAMs_20 IAMs_20 05 45 50.9
comp=Z,10µm,18.0s
CAN Canberra 30.68 187 P **P** **05 33 06.4 +0.6**
CAN pmax pmax
comp=Z,44nm,1.0s
CAN MLR MLR
comp=Z,10µm,18.0s
CAN Canberra 30.68 187 P **P** **05 33 06.4 +0.6**
CAN pP **pP** **05 33 18.5 -0.8**
CAN sP **sP** **05 33 25.4 -0.3**
CAN ScP **ScP** **05 39 43.1 +2.3**
BUKP Musuan 30.75 294⇓ *eP* **P** **05 33 06.9 +0.3**
MMRI Maumere 30.99 261 P **P** **05 33 07.9 -0.8**
MMRI IAmb IAmb 05 33 26.9
comp=Z,151nm,1.0s
MULG Mulgathing 31.18 213 P **P** **05 33 09.0 -1.2**
CTBH Cotabato--PC H 31.25 292⇓ *iP* **P** **05 33 11.4 +0.4**
WRKA Warakurna 31.30 227 P **P** **05 33 10.4 -0.9**
baz=31,SNR=19
WRKA Warakurna 31.30 227 P **P** **05 33 11.5 +0.1**
CGP Cagayan de Oro 31.31 295⇓ *eP* **P** **05 33 12.4 +0.9**
KKSI Kolaka, Sulawe 31.46 270 P **P** **05 33 12.9 0.0**
comp=Z,3µmcomp=Z,76nm,0.5s
HTT Hallett 31.50 203 P **P** **05 33 12.9 -0.1**
baz=32,SNR=18
HTT Hallett 31.50 203 P **P** **05 33 13.7 +0.7**
MRSI Marisa 31.66 279 P **P** **05 33 14.1 -0.5**
comp=Z,1µmcomp=Z,88nm,0.6s
APSI Ampana 31.74 276 P **P** **05 33 15.0 -0.3**
comp=Z,5µmcomp=Z,3µmcomp=Z,182nm,1.1s
BBOO Buckleboo 32.20 208 P **P** **05 33 18.8 -0.3**
baz=32,SNR=7.2
BBOO Buckleboo 32.20 208 P **P** **05 33 18.8 -0.3**
BBOO Buckleboo 32.20 208 P **P** **05 33 19.3 +0.2**
TABP Talibon, Bohol 32.31 297⇓ *eP* **P** **05 33 19.3 -1.0**
TBP Tagbilaran 32.56 296⇑ *iP* **P** **05 33 22.0 -0.5**
BSSI Bau Bau, Buton 32.59 266 P **P** **05 33 21.8 -1.0**
comp=Z,4µmcomp=Z,2µmcomp=Z,110nm,1.0s
TOLI2 Tolitoli 32.91 279 P **P** **05 33 24.4 -1.2**
TOLI2 Tolitoli 32.91 279 P **P** **05 33 26.4 +0.8**
BKSI Bulukumba 32.96 268 P **P** **05 33 23.8 -2.2**
comp=Z,1µmcomp=Z,34nm,1.1s
BNSI Bone 32.99 269 P **P** **05 33 25.5 -0.8**
comp=Z,4µmcomp=Z,1µmcomp=Z,71nm,1.3s
KAPI Kappang 33.33 268 LR LR 05 50 28.8
comp=Z,2µm,20.7s,baz=92,slow=42
KAPI Kappang 33.33 268 P **P** **05 33 27.9 -1.3**
KAPI Kappang 33.33 268 P **P** **05 33 27.9 -1.3**
KAPI pmax pmax
comp=Z,73nm,1.0s
KAPI MLR MLR
comp=Z,1µm,19.0s
KAPI Kappang 33.33 268 P **P** **05 33 27.5 -1.8**
KAPI Kappang 33.33 268 P **P** **05 33 27.9 -1.3**
comp=Z,1µmcomp=Z,71nm,1.2s
KAPI Kappang 33.33 268 P **P** **05 33 28.2 -1.1**
KAPI Kappang 33.33 268 P **P** **05 33 28.0 -1.3**
KAPI sP **pP** **05 33 45.8 +2.3**
SPSI Sidrap Palu 33.35 270 P **P** **05 33 27.2 -2.2**
comp=Z,11µmcomp=Z,1µmcomp=Z,77nm,1.0s
JCJ Chichijima 33.39 342 P **P** **05 33 26.5 -3.1**
comp=Z,272nm,0.7s,baz=230,slow=4.7,SNR=17
JCJ Chichijima 33.39 342 P **P** **05 33 27.0 -2.6**
TOO Toolangi 33.43 191 P **P** **05 33 31.6 +1.7**
baz=34,SNR=3.9
TOO Toolangi 33.43 191 P **P** **05 33 30.4 +0.5**
TOO Toolangi 33.43 191 P **P** **05 33 30.4 +0.5**
TOO pmax pmax
comp=Z,96nm,1.7s
ARPS Mount Arapiles 33.55 197 P **P** **05 33 31.3 +0.5**
baz=34,SNR=35
ARPS Mount Arapiles 33.55 197 P **P** **05 33 31.6 +0.8**
MPSI Mapaga 33.65 278 P **P** **05 33 30.1 -1.9**
comp=Z,5µmcomp=Z,2µmcomp=Z,134nm,1.3s
CNOP Candoni, Negro 33.72 295⇑ *eP* **P** **05 33 32.1 -0.4**
RCP Roxas 34.36 298⇓ *eP* **P** **05 33 39.0 +0.9**
FORT Forrest 35.09 220 P **P** **05 33 44.8 +0.5**
baz=35,SNR=10
FORT Forrest 35.09 220 P **P** **05 33 44.3 0.0**
FORT Forrest 35.09 220 P **P** **05 33 44.5 +0.2**
PLAI Plampang 35.40 261 P **P** **05 33 44.4 -2.8**
comp=Z,3µmcomp=Z,1µmcomp=Z,135nm,0.8s
PLAI Plampang 35.40 261 P **P** **05 33 45.7 -1.5**
AFI Afiamalu 35.69 107 LR LR 05 46 24.3
comp=Z,4µm,20.1s,baz=277,slow=33
OUZ Omahuta 35.71 151 P **P** **05 33 51.6 +2.1**
MYLDM Lahad Datu 36.03 285 P **P** **05 33 53.4 +0.8**
MYLDM Lahad Datu 36.03 285 P **P** **05 33 53.0 +0.4**
comp=Z,6µmcomp=Z,5µmcomp=Z,256nm,1.7s
TWSI Taliwang, Sumb 36.28 262 P **P** **05 33 50.8 -3.9**
comp=Z,1µmcomp=Z,56nm,1.3s
MBWA Marble Bar 36.35 240 P **P** **05 33 54.0 -1.3**
MBWA Marble Bar 36.35 240 IAMs_20 IAMs_20 05 50 28.0
comp=Z,7µm,19.0s
MBWA Marble Bar 36.35 240 P **P** **05 33 54.3 -1.0**
MBWA P **P** **05 33 54.3 -1.0**
MBWA Marble Bar 36.35 240 P **P** **05 33 55.1 -0.1**
MBWA Marble Bar 36.35 240 P **P** **05 33 54.3 -1.0**
MBWA pP **pP** **05 34 06.3 -2.9**
PSA00 Pilbara Seismi 36.41 240 P **P** **05 33 55.0 -0.7**
PSA00 Pilbara Seismi 36.41 240 P **P** **05 33 54.9 -0.9**
PSA00 IAmb IAmb 05 33 58.5
comp=Z,97nm,1.2s
PSA00 Pilbara Seismi 36.41 240 P **P** **05 33 56.0 +0.3**
BKB Balikpapan 36.42 274 **P** **05 33 56.4 +0.6**
BKB IAmb IAmb 05 33 59.6
comp=Z,430nm,1.8s
BKB Balikpapan 36.42 274 P **P** **05 33 55.9 0.0**
comp=Z,5µmcomp=Z,10µmcomp=Z,67nm,1.0s
LQP Lukban 36.57 301⇓ *eP* **P** **05 33 55.8 -1.6**
RAO Raoul Island 36.63 135 LR LR 05 47 12.2
comp=Z,3µm,21.6s,baz=321,slow=33
KLNI Mataram 37.03 262 P **P** **05 33 57.9 -3.2**
comp=Z,2µmcomp=Z,73nm,0.7s
PPR Puerto Princes 37.25 293⇑ *iP* **P** **05 34 04.1 +1.2**
PCPH Palayan 37.65 303⇑ *eP* **P** **05 34 06.2 -0.1**
MOO Moorlands 37.92 187 P **P** **05 34 10.3 +2.1**
baz=38,SNR=4.8
MOO Moorlands 37.92 187 P **P** **05 34 10.0 +1.7**
BBKI Banjar Baru 38.28 270 P **P** **05 34 11.3 -0.4**
comp=Z,132nm,1.0s
TAU Tasmania Unive 38.37 187 P **P** **05 34 13.9 +1.9**
TAU Tasmania Unive 38.37 187 IAMs_20 IAMs_20 05 48 20.4
comp=Z,7µm,22.0s
TAU Tasmania Unive 38.37 187 P **P** **05 34 13.9 +1.9**
TAU pmax pmax
comp=Z,61nm,0.9s
TAU Tasmania Unive 38.37 187 P **P** **05 34 13.8 +1.8**
TAU Tasmania Unive 38.37 187 P **P** **05 34 12.9 +1.0**
TAU pP **pP** **05 34 25.9 +0.1**
TAU ScP **ScP** **05 40 12.5 +4.4**
KKM Kota Kinabalu 38.45 286 P **P** **05 34 12.2 -1.0**
KKM IAmb IAmb 05 34 14.3
comp=Z,201nm,1.2s
KKM Kota Kinabalu 38.45 286 P **P** **05 34 12.2 -1.0**
comp=Z,5µmcomp=Z,3µmcomp=Z,164nm,1.4s
KKM Kota Kinabalu 38.45 286 P **P** **05 34 12.8 -0.4**

JAGI Jajag, Banyuwa 38.96 262 P **P** **05 34 14.4 -2.9**
JAGI IAmb IAmb 05 34 33.4
comp=Z,102nm,1.0s
JAGI Jajag, Banyuwa 38.96 262 P **P** **05 34 13.3 -4.1**
comp=Z,2µmcomp=Z,101nm,1.0s
JAGI Jajag, Banyuwa 38.96 262 P **P** **05 34 17.4 0.0**
HIZ Hauiti 38.96 153 P **P** **05 34 19.5 +2.5**
HIZ IAmb IAmb 05 34 26.0
comp=Z,168nm,1.2s
KMMI Kalianget 39.09 265 P **P** **05 34 16.2 -2.3**
comp=Z,50nm,1.0s
MEEK Meekatharra 39.56 233 P **P** **05 34 22.0 -0.3**
baz=40,SNR=154
MEEK Meekatharra 39.56 233 P **P** **05 34 22.3 0.0**
JOW Kunigami 39.58 324 LR LR 05 48 04.0
comp=Z,3µm,21.9s,baz=136,slow=32
JOW Kunigami 39.58 324 P **P** **05 34 23.0 +0.6**
JOW Kunigami 39.58 324 P **P** **05 34 23.7 +1.4**
JHJ Hachijo jima 2 39.74 342 LR LR 05 48 30.7
comp=Z,2µm,22.0s,baz=136,slow=33
URZ Urewera 39.84 150 LR LR 05 50 17.7
comp=Z,4µm,19.8s,baz=52,slow=35
URZ Urewera 39.84 150 P **P** **05 34 26.2 +1.9**
URZ IAmb IAmb 05 34 51.6
comp=Z,102nm,1.1s
QRZ Quartz Range 39.90 157 P **P** **05 34 25.9 +1.0**
QRZ IAmb IAmb 05 34 29.9
comp=Z,131nm,1.2s
QRZ IAMs_20 IAMs_20 05 49 12.7
comp=Z,9µm,20.0s
QRZ Quartz Range 39.90 157 P **P** **05 34 26.3 +1.5**
BKZ Black Stump Fm 40.25 152 P **P** **05 34 28.5 +0.7**
BKZ IAMs_20 IAMs_20 05 48 13.9
comp=Z,7µm,22.0s
BKZ Black Stump Fm 40.25 152 P **P** **05 34 29.1 +1.3**
NNZ Nelson 40.57 156 IAMs_20 IAMs_20 05 49 34.4
comp=Z,8µm,21.0s
THZ Tophouse 40.85 157 P **P** **05 34 33.0 +0.3**
THZ IAmb IAmb 05 34 38.3
comp=Z,111nm,0.9s
THZ IAMs_20 IAMs_20 05 50 03.8
comp=Z,7µm,21.0s
TUWZ Tuamarina 40.98 156 P **P** **05 34 34.4 +0.7**
BSWZ Blackbirch Sta 41.19 156 P **P** **05 34 36.0 +0.5**
SNZO South Karori 41.19 155 IAMs_20 IAMs_20 05 48 49.8
comp=Z,9µm,22.0s
YOJ Yonaguni jima 41.30 316 P **P** **05 34 37.0 +0.4**
YOJ Yonaguni jima 41.30 316 P **P** **05 34 37.0 +0.4**
YOJ pmax pmax
comp=Z,585nm,0.9s
YOJ Yonaguni jima 41.30 316 P **P** **05 34 37.3 +0.7**
BFZ Birch Farm 41.35 153 P **P** **05 34 38.7 +1.9**
PBKI Pangkalan Bun 41.49 271 P **P** **05 34 38.3 -0.1**
comp=Z,4µmcomp=Z,362nm,1.1s
JCZ Jackson Bay 41.51 163 P **P** **05 34 39.8 +1.6**
SBUM Sibu 41.57 279 **P** **05 34 39.2 +0.2**
SBUM Sibu 41.57 279 P **P** **05 34 38.9 -0.1**
comp=Z,2µmcomp=Z,1µmcomp=Z,49nm,1.8s
NGJI Ngawi 41.58 264 P P 05 34 52.4 +13
GIRL Giralia 41.65 241 P **P** **05 34 40.2 +0.7**
baz=42,SNR=30
GIRL Giralia 41.65 241 P **P** **05 34 39.6 +0.1**
GIRL Giralia 41.65 241 P **P** **05 34 40.6 +1.1**
KHZ Kahutara 41.66 157 IAMs_20 IAMs_20 05 49 28.1
comp=Z,9µm,22.0s
TWG Pinlang 41.66 312 IAMs_20 IAMs_20 05 47 53.9
comp=Z,6µm,22.0s
YULB Yu-li 41.85 313 P **P** **05 34 40.6 -0.5**
YULB IAmb IAmb 05 34 46.6
comp=Z,194nm,0.9s
YULB Yu-li 41.85 313 P **P** **05 34 41.1 0.0**
PCJI Pacitan 41.89 263 P **P** **05 34 39.6 -2.0**
comp=Z,254nm,1.1s
RPZ Rata Peaks 41.90 161 P **P** **05 34 41.4 +0.2**
comp=Z,86nm,1.0s,baz=294,slow=2.4,SNR=12
RPZ LR LR 05 50 09.4
comp=Z,15µm,21.8s,baz=328,slow=33
comp=Z,86nm,1.0s
RPZ Rata Peaks 41.90 161 P **P** **05 34 42.7 +1.5**
NACB Ninganchiao 42.12 314 P **P** **05 34 43.6 +0.4**
NACB IAmb IAmb 05 34 45.1
comp=Z,288nm,0.9s
NACB Ninganchiao 42.12 314 P **P** **05 34 44.0 +0.8**
TPUB Ta-pu 42.28 313 P **P** **05 34 43.8 -0.8**
TPUB IAmb IAmb 05 34 45.3
comp=Z,107nm,0.7s
TPUB Ta-pu 42.28 313 P **P** **05 34 44.1 -0.5**
SSLB Suanglung 42.34 313 P **P** **05 34 44.6 -0.5**
SSLB IAmb IAmb 05 34 56.1
comp=Z,97nm,0.8s
SSLB IAMs_20 IAMs_20 05 48 36.8
comp=Z,6µm,22.0s
SSLB Suanglung 42.34 313 P **P** **05 34 45.6 +0.5**
JMN Monobe 42.40 336 P **P** **05 34 45.4 -0.1**
MQZ McQueen's Vall 42.44 159 IAMs_20 IAMs_20 05 50 21.8
comp=Z,7µm,21.0s
MLZ Mavora Lakes 42.52 164 P **P** **05 34 47.0 +0.8**
MLZ IAmb IAmb 05 35 06.9
comp=Z,121nm,1.0s
UGM Wanagama 42.52 263 P **P** **05 34 46.4 -0.4**
JOHN Johnston Islan 42.56 59 IAMs_20 IAMs_20 05 48 59.9
comp=Z,6µm,21.0s
YHNB Yeheng 42.58 315 P **P** **05 34 47.3 +0.2**
YHNB IAmb IAmb 05 34 53.6
comp=Z,308nm,1.0s
YHNB IAMs_20 IAMs_20 05 49 19.3
comp=Z,6µm,22.0s
YHNB Yeheng 42.58 315 P **P** **05 34 47.7 +0.6**
SMRI Semarang 42.59 265 P **P** **05 34 46.5 -0.8**
SMRI Semarang 42.59 265 P **P** **05 34 45.6 -1.7**
comp=Z,4µmcomp=Z,81nm,0.5s
KLBR Kellerberrin 42.64 227 P **P** **05 34 47.7 +0.2**
baz=43,SNR=36
KLBR Kellerberrin 42.64 227 P **P** **05 34 47.6 +0.1**
INU Inuyama 42.68 340 P **P** **05 34 46.3 -1.3**
INU Inuyama 42.68 340 P **P** **05 34 46.0 -1.6**
INU pP **pP** **05 34 57.3 -4.3**
INU ScP **ScP** **05 40 27.1 +2.1**
TATO Taipei 42.69 315 P **P** **05 34 48.1 +0.2**
TATO IAmb IAmb 05 34 49.7
comp=Z,397nm,1.1s
TATO Taipei 42.69 315 IAMs_20 IAMs_20 05 49 11.1
comp=Z,7µm,22.0s
TATO Taipei 42.69 315 P **P** **05 34 48.1 +0.2**
TATO P **P** **05 34 48.1 +0.2**
TATO Taipei 42.69 315 P **P** **05 34 48.3 +0.4**
MORW Morawa 42.70 231 P **P** **05 34 47.6 -0.4**
baz=43,SNR=29
MORW Morawa 42.70 231 P **P** **05 34 48.8 +0.8**
MORW IAmb IAmb 05 34 52.6
comp=Z,415nm,1.6s
MORW Morawa 42.70 231 P **P** **05 34 49.2 +1.2**
JGF Kuroka 42.80 341 P **P** **05 34 47.2 -1.5**
JGF Kuroka 42.80 341 P **P** **05 34 47.4 -1.2**
BLDU Ballidu 42.92 229 P **P** **05 34 49.8 0.0**
baz=43,SNR=20
BLDU Ballidu 42.92 229 P **P** **05 34 49.9 +0.1**
ODZ Otahua Downs 42.95 162 P **P** **05 34 50.6 +0.8**
WHZ Wether Hill Ro 42.96 165 P **P** **05 34 50.8 +0.9**
WHZ IAmb IAmb 05 35 08.2
comp=Z,297nm,1.8s
KSM Kuching 43.30 277 P **P** **05 34 52.8 -0.3**
KSM IAmb IAmb 05 34 54.5
comp=Z,299nm,1.6s
KSM Kuching 43.30 277 P **P** **05 34 52.4 -0.6**
comp=Z,2µmcomp=Z,106nm,0.8s
KSM Kuching 43.30 277 P **P** **05 34 52.8 -0.3**
MIDW Midway 43.33 39 IAMs_20 IAMs_20 05 49 08.6
comp=Z,5µm,21.0s
MJAR Matsushiro Arr 43.39 342 P **P** **05 34 51.5 -1.9**
comp=Z,42nm,0.9s,baz=164,slow=8.7,SNR=45
MJAR PcP **PcP** **05 36 41.6 +0.4**
comp=Z,53nm,0.8s,baz=167,slow=3.4,SNR=12
MJAR ScP **ScP** **05 40 29.3 +1.3**
comp=Z,11nm,1.0s,baz=173,slow=5.0,SNR=8.8
MJAR LR LR 05 51 05.2
comp=Z,4µm,21.9s,baz=173,slow=34
comp=Z,42nm,0.9s
MAJO Matsushiro 43.39 342 P **P** **05 34 51.7 -1.7**
MAJO Matsushiro 43.39 342 P **P** **05 34 51.7 -1.7**
MAJO pmax pmax
comp=Z,63nm,0.9s
MAJO Matsushiro 43.39 342 P **P** **05 34 51.8 -1.7**
MAJO Matsushiro 43.39 342 P **P** **05 34 51.6 -1.9**
MAJO ScP **ScP** **05 40 29.6 +1.6**

MJB9 Matsu-Tunnel 43.40 342 P **P** **05 34 52.4 -1.1**
NWAO Narrogin (SRO) 43.72 226 LR LR 05 53 08.1
comp=Z,6µm,21.5s,baz=274,slow=36
NWAO Narrogin (SRO) 43.72 226 P **P** **05 34 57.2 +1.0**
baz=44,SNR=8.4
NWAO P **P** **05 34 57.2 +1.0**
baz=44,SNR=8.4
NWAO Narrogin (SRO) 43.72 226 P **P** **05 34 56.5 +0.3**
NWAO Narrogin (SRO) 43.72 226 IAMs_20 IAMs_20 05 52 45.5
comp=Z,6µm,22.0s
NWAO Narrogin (SRO) 43.72 226 P **P** **05 34 56.5 +0.3**
NWAO pmax pmax
comp=Z,144nm,1.8s
NWAO MLR MLR
comp=Z,6µm,22.0s
NWAO Narrogin (SRO) 43.72 226 P **P** **05 34 59.3 +3.1**
JHS Saijyo 43.81 336 P **P** **05 34 56.2 -0.7**
JHS IAmb IAmb 05 34 57.2
comp=Z,91nm,0.9s
JHS Saijyo 43.81 336 P **P** **05 34 56.1 -0.7**
CTJI Waduk Cacaban 43.84 265 P **P** **05 34 56.6 -0.8**
comp=Z,3µmcomp=Z,111nm,0.9s
JMM Marumori 43.93 346 P **P** **05 34 57.2 -0.5**
MUN Mundaring 43.97 227 P **P** **05 34 58.6 +0.4**
baz=44,SNR=8.6
MUN Mundaring 43.97 227 P **P** **05 34 59.3 +1.1**
KNMB Chin-men Tao 44.62 312 P **P** **05 35 03.8 +0.4**
KNMB IAmb IAmb 05 35 05.3
comp=Z,189nm,1.0s
JCJI Jatiwangi 44.74 266 P **P** **05 35 03.7 -0.9**
comp=Z,374nm,0.5s
QZH Quanzhou 44.75 313⇑ *iP* **P** **05 35 05.0 +0.6**
QZH pP **pP** **05 35 20.3 +1.0**
QZH ScP **ScP** **05 40 35.3 +1.6**
QZH S **S** **05 41 36.8 -0.8**
QZH sS **sS** **05 42 03.0 +2.5**
QZH pmax pmax
comp=Z,170nm,0.9s
QZH pmax pmax
comp=Z,1µm,5.4s
QZH LR LR
comp=Z,1µm,20.8s
QZH LR LR
comp=Z,2µm,19.9s
QZH LR LR
comp=Z,2µm,19.4s
JSD Sado 44.76 343 P **P** **05 35 04.1 -0.3**
RKGY Rocky Gully 44.81 224 P **P** **05 35 05.3 +0.5**
baz=45,SNR=8.5
RKGY Rocky Gully 44.81 224 P **P** **05 35 05.0 +0.2**
JTU Tsushima 45.04 332 P **P** **05 35 06.8 +0.2**
JTU Tsushima 45.04 332 P **P** **05 35 07.0 +0.4**
BBJI Bungbulang 45.36 264 P **P** **05 35 08.5 -1.1**
LEM Lembang 45.39 265 LR LR 05 57 36.8
comp=Z,2µm,22.0s,baz=90,slow=40
CNJI Cibinong 45.88 264 P **P** **05 35 11.6 -2.0**
comp=Z,3µmcomp=Z,297nm,1.0s
CBJI Citeko 46.15 266 P **P** **05 35 14.8 -1.0**
comp=Z,139nm,0.7s
JTM Tenmabayashi 46.65 347 P **P** **05 35 18.6 -0.6**
JTM Tenmabayashi 46.65 347 P **P** **05 35 19.0 -0.2**
HKC Hong Kong Obse 46.68 307 ⇑P **P** **05 35 22.0 +2.2**
HKPS Hong Kong Po S 46.70 307 P **P** **05 35 20.1 +0.2**
HKPS IAmb IAmb 05 35 22.8
comp=Z,205nm,1.0s
SSE Sheshan 46.94 322 P **P** **05 35 22.3 +0.7**
SSE S **S** **05 42 09.0 +0.1**
SSE pmax pmax
comp=Z,59nm,0.7s
SSE pmax pmax
comp=Z,910nm,4.1s
SSE LR LR
comp=Z,750nm,24.4s
SSE LR LR
comp=Z,1µm,24.7s
PPBI Pangkal Pinang 47.05 271 P **P** **05 35 21.9 -0.9**
comp=Z,4µmcomp=Z,14µmcomp=Z,73nm,1.2s
ERM Erimo 47.42 350 P **P** **05 35 25.4 +0.3**
ERM IAmb IAmb 05 35 30.9
comp=Z,90nm,0.8s
ERM Erimo 47.42 350 IAMs_20 IAMs_20 05 51 59.2
comp=Z,4µm,21.0s
ERM Erimo 47.42 350 P **P** **05 35 25.4 +0.3**
ERM pmax pmax
comp=Z,90nm,0.9s
ERM Erimo 47.42 350 P **P** **05 35 25.7 +0.5**
ERM Erimo 47.42 350 P **P** **05 35 25.7 +0.5**
ERM pP **pP** **05 35 39.5 -0.1**
JEM Erimo 47.42 350 P **P** **05 35 26.0 +0.8**
TJN Taejon 47.51 332 P **P** **05 35 26.1 +0.1**
TJN Taejon 47.51 332 *ceP* **P** **05 35 26.1 +0.1**
TJN Taejon 47.51 332 P **P** **05 35 26.0 +0.1**
GZH Guangzhou 47.74 307⇑ *iP* **P** **05 35 29.0 +1.0**
GZH PP **PP** **05 37 20.0 -0.2**
GZH ScP **ScP** **05 40 44.8 -1.5**
GZH S **S** **05 42 22.8 +2.3**
GZH ScS **ScS** **05 45 17.0 +0.1**
GZH pmax pmax
comp=Z,990nm,8.4s
GZH LR LR
comp=Z,2µm,24.5s
GZH LR LR
comp=Z,3µm,23.3s
KSRS Korea Array 48.13 333 P **P** **05 35 31.1 +0.3**
comp=Z,107nm,0.8s,baz=150,slow=7.9,SNR=230
KSRS ScP **ScP** **05 40 49.5 +1.9**
comp=Z,12nm,0.9s,baz=139,slow=5.2,SNR=14
comp=Z,107nm,0.8s
KASI Kota Agung 48.51 267 P **P** **05 35 30.3 -3.8**
comp=Z,162nm,1.0s
DSRI Dabo 48.75 274 P **P** **05 35 35.2 -0.7**
comp=Z,2µmcomp=Z,75nm,1.1s
INCN Inchon 48.75 332 P **P** **05 35 35.9 +0.3**
INCN Inchon 48.75 332 P **P** **05 35 36.3 +0.7**
QIZ Qiongzhong 48.78 300 IAMs_20 IAMs_20 05 52 33.7
comp=Z,7µm,22.0s
QIZ Qiongzhong 48.78 300 P **P** **05 35 37.0 +0.9**
QIZ sP **sP** **05 35 58.0 +0.5**
QIZ PP **PP** **05 37 28.0 -1.8**
QIZ S **S** **05 42 38.5 +3.0**
QIZ sS **sS** **05 43 02.0 +3.4**
QIZ pmax pmax
comp=Z,85nm,1.0s
QIZ pmax pmax
comp=Z,1µm,4.5s
QIZ LR LR
comp=Z,2µm,21.4s
QIZ LR LR
comp=Z,4µm,21.4s
QIZ LR LR
comp=Z,6µm,20.1s
QIZ Qiongzhong 48.78 300 P **P** **05 35 36.8 +0.7**
TPRI Tanjung Pinang 48.95 275 P **P** **05 35 36.7 -0.8**
comp=Z,4µmcomp=Z,17µmcomp=Z,102nm,0.8s
LWLI Liwa 48.96 267 P **P** **05 35 36.3 -1.4**
comp=Z,271nm,0.9s
NJ2 Nanjing 49.05 321⇑ *iP* **P** **05 35 39.3 +1.4**
NJ2 pP **pP** **05 35 54.5 +1.9**
NJ2 PcP **PcP** **05 37 01.8 +0.7**
NJ2 ScP **ScP** **05 40 55.0 +3.4**
NJ2 S **S** **05 42 37.0 -1.8**
NJ2 sS **sS** **05 43 05.0 +3.0**
NJ2 pmax pmax
comp=Z,72nm,0.6s
NJ2 pmax pmax
comp=Z,2µm,3.5s
NJ2 LR LR
comp=Z,3µm,18.4s
NJ2 LR LR
comp=Z,2µm,14.7s
NJ2 LR LR
comp=Z,5µm,19.6s
HJU Haeju 49.63 331 P **P** **05 35 42.6 +0.4**
HJU pP **sP** **05 36 08.1 +4.5**
HJU S S 05 43 13.2 +27
MYKOM Kota Tinggi 49.73 276 P **P** **05 35 42.7 -0.8**
comp=Z,4µmcomp=Z,3µmcomp=Z,60nm,1.0s
PYAG Pyongyang 50.42 332 P **P** **05 35 48.8 +0.6**
PYAG pP **sP** **05 36 14.3 +4.6**
PYAG S S 05 43 25.7 +28
CNSH ChangSha 50.75 313⇑ *iP* **P** **05 35 52.5 +1.6**
CNSH S **S** **05 43 06.8 +4.2**
CNSH pmax pmax
comp=Z,99nm,1.0s
CNSH LR LR

comp=Z,1μm,17.1s
CNSH LR LR
comp=Z,2μm,19.4s
CNSH LR LR
comp=Z,3μm,18.4s
MASI Maura Aman, Be 50.86 270 P P 05 35 51.1 -1.0
comp=Z,45nm,0.7s
WHN Wuhan 51.09 316 ⇑P P 05 35 54.0 +0.6
WHN S S 05 43 09.3 +2.1
WHN pmax pmax
comp=Z,300nm,1.2s
WHN LR LR
comp=Z,14μm,31.2s
WHN LR LR
comp=Z,10μm,25.6s
WHN LR LR
comp=Z,17μm,33.1s
MSHR Mys Shultsa 51.17 339 *ce*P **P 05 35 53.9 +0.1**
MSHR pmax pmax
comp=Z,37nm,0.7s
GULI GuiLin 51.19 308 ⇑P P 05 35 52.5 -1.8
GULI S S 05 43 09.0 +0.1
GULI pmax pmax
comp=Z,140nm,1.1s
GULI LR LR
comp=Z,2μm,22.8s
GULI LR LR
comp=Z,3μm,22.8s
GULI LR LR
comp=Z,6μm,22.4s
UBPT Khong Chiam 51.29 294 P P 05 35 55.3 +0.2
UBPT Khong Chiam 51.29 294 P P 05 35 54.6 -0.5
comp=Z,2μmcomp=Z,58nm,2.1s
TEY Ternei 51.73 345⇓ *e*P **P 05 35 55.9 -2.0**
TEY pmax pmax
comp=N,40nm,0.9s
TEY pmax pmax
comp=E,20nm,0.9s
TEY pmax pmax
comp=Z,80nm,0.9s
TEY pmax pmax
comp=Z,100nm,7.6s
SDSI Sungai Dareh 51.84 273 P P 05 35 57.6 -1.7
comp=Z,3μmcomp=Z,86nm,1.3s
SUJ Sinuiju 51.84 332 P **P 05 35 58.9 +0.1**
SUJ pP **sP 05 36 25.0 +4.6**
SUJ S S 05 43 44.5 +27
YSS Yuzh-Sakhalins 52.29 351 P **P 05 36 01.9 -0.1**
YSS IAmb IAmb 05 36 02.8
comp=Z,79nm,0.8s
YSS IAMs_20 IAMs_20 05 54 37.2
comp=Z,5μm,21.0s
YSS Yuzh-Sakhalins 52.29 351α *i*P **P 05 36 02.1 +0.1**
YSS *e*S **S 05 43 24.7 +1.5**
YSS pmax pmax
comp=Z,70nm,0.6s
YSS pmax pmax
comp=Z,1μm,4.4s
YSS pmax pmax
comp=N,500nm,4.0s
YSS pmax pmax
comp=E,500nm,4.0s
YSS MLR MLR
comp=E,900nm,16.0s
YSS Yuzh-Sakhalins 52.29 351 P **P 05 36 01.9 -0.1**
YSS pP **pP 05 36 16.8 -0.1**
USA0B Ussuriysk Arra 52.32 341 P **P 05 36 02.6 +0.3**
USA0B Ussuriysk Arra 52.32 341 P **P 05 36 02.6 +0.3**
USA0B pmax pmax
comp=Z,230nm,0.9s
USRK Ussuriysk Ar. 52.32 341 P **P 05 36 02.5 +0.2**
comp=Z,181nm,0.8s,baz=172,slow=8.2,SNR=222
USRK PcP **PcP 05 37 13.0 +0.2**
comp=Z,34nm,0.9s,baz=172,slow=5.1,SNR=1.7
USRK ScP **ScP 05 41 06.9 +1.5**
comp=Z,9.7nm,1.1s,baz=169,slow=1.9,SNR=4.9
USRK LR LR 05 54 35.8
comp=Z,2μm,21.7s,baz=143,slow=32
USRK PKP2ab 06 07 20.3
comp=Z,7.5nm,1.0s,baz=336,slow=4.2,SNR=9.1
comp=Z,181nm,0.8s
USRK Ussuriysk Ar. 52.32 341 P **P 05 36 02.1 -0.2**
USRK Ussuriysk Ar. 52.32 341 P **P 05 36 02.2 -0.2**
DL2 Dalian 52.33 329 P **P 05 36 03.0 +0.5**
DL2 S **S 05 43 26.3 +2.4**
DL2 pmax pmax
comp=Z,170nm,0.8s
DL2 pmax pmax
comp=Z,2μm,9.2s
DL2 LR LR
comp=Z,2μm,27.5s
DL2 LR LR
comp=Z,2μm,28.8s
DL2 LR LR
comp=Z,4μm,30.0s
TIA Tai'an 52.90 323 P **P 05 36 06.8 0.0**
TIA PP **PP 05 38 01.5 -5.5**
TIA pmax pmax
comp=Z,140nm,0.9s
TIA pmax pmax
comp=Z,810nm,4.3s
TIA LR LR
comp=Z,1μm,20.6s
TIA LR LR
comp=Z,1μm,20.6s
TIA LR LR
comp=Z,4μm,24.9s
IPM Ipoh 52.92 279 P **P 05 36 06.5 -0.9**
IPM IAmb IAmb 05 37 17.2
comp=Z,63nm,1.1s
IPM Ipoh 52.92 279 P **P 05 36 07.1 -0.3**
comp=Z,2μmcomp=Z,54nm,1.2s
KULM Kulim 53.42 280 P **P 05 36 10.1 -1.0**
KULM IAmb IAmb 05 36 11.0
comp=Z,91nm,1.4s
KULM Kulim 53.42 280 P **P 05 36 10.4 -0.7**
comp=Z,2μmcomp=Z,37nm,0.7s
MDJ Mudanjiang 53.50 339 P **P 05 36 11.3 +0.2**
MDJ pP pP 05 36 28.3 +2.7
MDJ PcP **PcP 05 37 17.0 -0.4**
MDJ S **S 05 43 41.0 +1.2**
MDJ pmax pmax
comp=Z,260nm,0.9s
MDJ pmax pmax
comp=Z,690nm,11.3s
MDJ LR LR
comp=Z,1μm,24.9s
MDJ LR LR
comp=Z,1μm,22.2s
MDJ LR LR
comp=Z,4μm,23.5s
MDJ Mudanjiang 53.50 339 P **P 05 36 11.6 +0.5**
MDJ Mudanjiang 53.50 339 P **P 05 36 10.7 -0.4**
MDJ sP **sP 05 36 31.7 -0.1**
SNY Shenyang 53.63 333 ⇑P P 05 36 11.8 -0.2
SNY S **S 05 43 47.0 +5.4**
SNY pmax pmax
comp=Z,64nm,1.0s
SNY pmax pmax
comp=Z,2μm,3.6s
SNY LR LR
comp=Z,2μm,32.8s
SNY LR LR
comp=Z,3μm,22.7s
SNY LR LR
comp=Z,5μm,26.5s
SKLT Songkhla 53.79 282 P **P 05 36 12.8 -0.9**
comp=Z,2μmcomp=Z,86nm,1.8s
SISI Saibi 54.13 272 P **P 05 36 14.4 -1.8**
comp=Z,2μmcomp=Z,105nm,1.1s
KIP Kipapa 54.40 60 P **P 05 36 17.6 -0.4**
KIP Kipapa 54.40 60 P **P 05 36 17.6 -0.4**
KIP pmax pmax
comp=Z,281nm,1.3s
CN2 Changchun 54.41 336 ⇑P P 05 36 17.5 -0.2
CN2 *ep*P pwP 05 36 33.5 -0.8
CN2 *e*S **S 05 43 51.0 -1.1**
CN2 pmax pmax
comp=Z,200nm,1.2s
CN2 pmax pmax
comp=Z,1μm,5.0s
CN2 LR LR
comp=Z,1μm,18.0s
CN2 LR LR
comp=Z,1μm,18.0s
CN2 LR LR
comp=Z,2μm,18.0s
ENH Enshi 54.41 313 P **P 05 36 18.5 +0.5**
ENH Enshi 54.41 313 P **P 05 36 18.1 +0.2**
ENH ScP **ScP 05 41 17.2 +2.2**
OPA Opana 54.51 59 P **P 05 36 19.9 +1.1**
OPA Opana 54.51 59 P **P 05 36 19.9 +1.1**
OPA pmax pmax
comp=Z,691nm,1.5s
GYA Guiyang 54.68 307⇓P **P 05 36 21.3 +1.2**
GYA pP pP 05 36 37.5 +2.1
GYA PcP **PcP 05 37 22.5 +0.1**
GYA S **S 05 43 55.3 -1.3**
GYA sS sS 05 44 24.0 +2.8
GYA pmax pmax
comp=Z,110nm,1.1s
GYA pmax pmax
comp=Z,1μm,6.7s
GYA LR LR
comp=Z,2μm,20.5s
GYA LR LR
comp=Z,2μm,15.4s
GYA LR LR
comp=Z,3μm,17.6s
RPSI Rantau Prapat 54.73 277 P **P 05 36 19.3 -1.3**
PSI Prapat 54.75 277 P **P 05 36 19.3 -1.6**
PSI pmax pmax
comp=Z,79nm,1.6s
PSI MLR MLR
comp=Z,600nm,19.0s
PSI Prapat 54.75 277 P **P 05 36 19.1 -1.8**
comp=Z,2μmcomp=Z,1μmcomp=Z,28nm,2.7s,comp=Z,4μm,2.7s,
comp=Z,2μm,2.7s,comp=Z,46nm,2.6s
PSI P **P 05 36 19.3 -1.6**
comp=Z,2μmcomp=Z,1μmcomp=Z,28nm,2.7s,comp=Z,4μm,2.7s,
comp=Z,2μm,2.7s,comp=Z,46nm,2.6s
LYN LuoYang 54.76 319⇑ *i*P **P 05 36 20.5 +0.1**
LYN PP **PP 05 38 22.0 -1.7**
LYN pmax pmax
comp=Z,70nm,2.0s
LYN pmax pmax
comp=Z,1μm,7.2s
LYN LR LR
comp=Z,2μm,22.6s
LYN LR LR
comp=Z,3μm,27.7s
LYN LR LR
comp=Z,5μm,30.9s
NAYO Nakonayok 54.82 291 P **P 05 36 22.2 +1.0**
SRIT Nakonsritamara 55.06 284 P **P 05 36 22.3 -0.7**
HNS HongShan 55.14 323 ⇑P P 05 36 23.8 +0.7
HNS pP **pP 05 36 38.5 +0.4**
HNS PcP **PcP 05 37 25.5 +1.7**
HNS ScP **ScP 05 41 20.5 +2.6**
HNS S **S 05 44 03.0 +0.9**
HNS sS **sS 05 44 26.0 -1.4**
HNS pmax pmax
comp=Z,270nm,1.5s
HNS pmax pmax
comp=Z,2μm,5.8s
HNS LR LR
comp=Z,700nm,23.9s
HNS LR LR
comp=Z,2μm,23.7s
HNS LR LR
comp=Z,4μm,24.7s
SKR Severo-Kuril's 55.26 2 *ce*P **P 05 36 23.5 -0.1**
BNX BinXian 55.26 338⇓P **P 05 36 24.0 +0.2**
BNX pP **pP 05 36 40.0 +1.6**
BNX sP **sP 05 36 46.0 +1.4**
BNX PP **PP 05 38 29.0 +1.0**
BNX S **S 05 44 02.8 -0.6**
BNX sS **sS 05 44 27.5 -0.8**
BNX pmax pmax
comp=Z,300nm,0.9s
BNX pmax pmax
comp=Z,2μm,4.3s
BNX LR LR
comp=Z,1μm,24.9s
BNX LR LR
comp=Z,1μm,20.7s
BNX LR LR
comp=Z,3μm,30.4s
GSI Gunungsitoli 55.90 275 P **P 05 36 27.4 -1.6**
GSI IAmb IAmb 05 36 44.4
comp=Z,87nm,0.7s
GSI Gunungsitoli 55.90 275 P **P 05 36 27.7 -1.3**
comp=Z,141nm,0.9s
HMH Humu'ula Sheep 55.95 63 P **P 05 36 29.5 -0.1**
POHA Pohakuloa 55.96 62 P **P 05 36 30.7 +1.1**
POHA pP **pP 05 36 45.1 +1.9**
KCSI Kotacane, Aceh 55.99 277 P **P 05 36 27.8 -1.8**
comp=Z,2μmcomp=Z,57nm,1.1s
BJT Baijiatuau 56.05 326 P **P 05 36 29.7 +0.1**
BJT pP **pP 05 36 43.1 -1.6**
BJT pwP **sP 05 36 47.2 -3.9**
BJT ScP **ScP 05 41 23.7 +1.8**
BJI Beijing 56.06 326 P **P 05 36 29.0 -0.7**
BJI pP **pP 05 36 47.0 +2.2**
BJI sP **sP 05 36 54.0 +2.9**
BJI PcP **PcP 05 37 28.5 +1.2**
BJI ScP **ScP 05 41 24.3 +2.4**
BJI S **S 05 44 11.0 -3.3**
BJI pmax pmax
comp=Z,63nm,2.1s
BJI pmax pmax
comp=Z,1μm,4.1s
BJI LR LR
comp=Z,480nm,22.3s
BJI LR LR
comp=Z,2μm,21.3s
BJI LR LR
comp=Z,5μm,24.4s
TYV Tymovskoe 56.12 352 *e*P **P 05 36 29.8 0.0**
TYV *e*S **S 05 44 18.0 +3.3**
TYV pmax pmax
comp=Z,1μm,3.8s
TYV pmax pmax
comp=Z,111nm,0.8s
TYV smax smax
comp=N,400nm,4.7s
TYV smax smax
comp=E,1μm,4.7s
COCO West Island 56.16 259 P **P 05 36 31.7 +0.9**
COCO West Island 56.16 259 P **P 05 36 31.7 +0.9**
COCO pmax pmax
comp=Z,705nm,1.6s
TIY Taiyuan 56.73 322 *e*P **P 05 36 34.0 -0.6**
TIY pmax pmax
comp=Z,65nm,1.1s
TIY pmax pmax
comp=Z,1μm,5.3s
TIY LR LR
comp=Z,780nm,23.4s
TIY LR LR
comp=Z,2μm,27.5s
TIY LR LR
comp=Z,3μm,26.1s
XAN Xi'an 56.85 316 P **P 05 36 35.8 +0.3**
XAN pP pP 05 36 53.0 +2.5
XAN S **S 05 44 21.5 -3.7**
XAN pmax pmax
comp=Z,140nm,1.6s
XAN pmax pmax
comp=Z,2μm,5.6s
XAN LR LR
comp=Z,2μm,22.0s
XAN LR LR
comp=Z,3μm,20.1s
XAN LR LR
comp=Z,5μm,20.9s
XAN Xi'an 56.85 316 P **P 05 36 35.2 -0.3**
SRDT SRDT 56.88 290 P **P 05 36 35.6 -0.3**
comp=Z,4μmcomp=Z,238nm,0.8s
SRDT SRDT 56.88 290 P **P 05 36 36.1 +0.2**
KLR Kul'dur 56.90 343 P **P 05 36 35.9 +0.4**
comp=Z,180nm,0.9s,baz=155,slow=5.4,SNR=313
KLR PcP **PcP 05 37 30.7 +0.4**
comp=Z,76nm,0.9s,baz=154,slow=4.3,SNR=5.8
KLR LR LR 05 59 35.1
comp=Z,838nm,21.6s,baz=169,slow=34
comp=Z,180nm,0.9s
KLR Kul'dur 56.90 343 *ce*P **P 05 36 35.6 +0.2**
KLR pmax pmax
comp=Z,472nm,1.6s
LHMI Lhok Sumawe 57.05 279 P **P 05 36 36.5 -0.7**
LHMI Lhok Sumawe 57.05 279 P **P 05 36 37.3 +0.1**
comp=Z,4μmcomp=Z,3μmcomp=Z,208nm,0.9s
GRNR Gornyy 57.14 347⇓ *i*P **P 05 36 37.2 0.0**
GRNR pmax pmax
comp=N,30nm,1.0s
GRNR pmax pmax
comp=Z,40nm,0.8s
KMI Kunming 57.29 304 ⇑P P 05 36 40.3 +1.4
KMI pP pP 05 36 57.0 +2.8
KMI sP sP 05 37 05.0 +4.4
KMI S **S 05 44 38.0 +6.5**
KMI pmax pmax
comp=Z,94nm,1.1s
KMI pmax pmax
comp=Z,1μm,7.0s
KMI LR LR
comp=Z,1μm,22.2s
KMI LR LR
comp=Z,3μm,24.6s
KMI LR LR
comp=Z,5μm,25.2s
PPT Papeete 57.36 108 LR LR 05 58 57.2
comp=Z,2μm,19.3s,baz=260,slow=34
PPT2 Papeete2 57.36 108 *e*P **P 05 36 42.0 +2.6**
comp=Z,475nm,27.5s
PPT2 *e*S **S 05 44 32.3 -0.1**
comp=Z,2μm,26.8s
PPT2 *e*LR LR 05 53 33.5
comp=Z,2μm,24.0s
PPT2 *e*LR LR 05 53 33.7
comp=Z,2μm,25.5s
MLSI Meulaboh, Aceh 57.44 278 P **P 05 36 38.5 -1.5**
comp=Z,120nm,1.0s
TIAR Tiarei 57.58 108 *e*P **P 05 36 43.0 +2.1**
comp=Z,17nm,0.9s
PET Petropavlovsk 57.73 4 IAMs_20 IAMs_20 05 56 07.0
comp=Z,3μm,22.0s
PET Petropavlovsk 57.73 4 *e*P **P 05 36 41.2 0.0**
PET *e**SP **sP 05 37 02.7 +1.1**
PET *e*S **S 05 44 34.5 -1.3**
PET pmax pmax
comp=Z,208nm,0.9s
PET pmax pmax
comp=Z,1μm,11.2s
PET pmax pmax
comp=Z,1μm,12.2s
PEA0B Petropavlovsk- 57.75 3 *ce*P **P 05 36 41.8 +0.4**
PETK Petropavlovsk- 57.75 3 P **P 05 36 41.5 +0.2**
comp=Z,139nm,1.0s,baz=166,slow=6.9,SNR=50
PETK LR LR 05 57 33.3
comp=Z,3μm,21.9s,baz=201,slow=32
comp=Z,139nm,1.0s
PETK Petropavlovsk- 57.75 3 P **P 05 36 41.3 -0.1**
PETK Petropavlovsk- 57.75 3 P **P 05 36 41.3 -0.1**
CM31 Chiang Mai Arr 58.22 295 P **P 05 36 45.6 +0.3**
CM31 IAmb IAmb 05 36 49.0
comp=Z,121nm,0.8s
CM31 Chiang Mai Arr 58.22 295 P **P 05 36 46.7 +1.4**
SNR=54
CM31 P **P 05 36 46.7 +1.4**
SNR=54
CMAR Chiang Mai Arr 58.22 295 P **P 05 36 46.5 +1.2**
comp=Z,78nm,0.9s,baz=113,slow=5.2,SNR=267
CMAR LR LR 06 00 06.6
comp=Z,2μm,21.4s,baz=110,slow=34
CMAR PKPPKP **P'P'df 06 06 30.3 +3.3**
comp=Z,1.0nm,0.3s,baz=270,slow=3.2,SNR=4.2
comp=Z,78nm,0.9s
CMAR Chiang Mai Arr 58.22 295 P **P 05 36 46.0 +0.7**
CMAR Chiang Mai Arr 58.22 295 *i* P **P 05 36 46.5 +1.2**
CMAR pmax pmax
comp=Z,85nm,0.9s
TBI Tubuai 58.22 114 *e*S **S 05 44 43.4 +0.1**
comp=Z,5μm,29.5s
TBI *e*LR LR 05 53 56.6
comp=Z,48μm,33.2s
TBI *e*LR LR 05 53 56.9
comp=Z,104μm,26.8s
CHTO Chiang Mai 58.32 295 P **P 05 36 46.5 +0.5**
CHTO Chiang Mai 58.32 295 P **P 05 36 46.5 +0.5**
PZH PanZhiHua 58.67 305 ⇑P P 05 36 48.8 +0.3
PZH pP **sP 05 37 07.0 -2.7**
PZH sP pP 05 37 12.8 +9.4
PZH PP **PP 05 38 55.3 -3.5**
PZH S **S 05 44 50.5 +1.2**
PZH sS **sS 05 45 13.5 -1.2**
PZH pmax pmax
comp=Z,40nm,1.2s
PZH pmax pmax
comp=Z,1μm,5.5s
PZH LR LR
comp=Z,7μm,21.0s
PZH LR LR
comp=Z,9μm,21.4s
PZH LR LR
comp=Z,9μm,21.3s
XLT XiLinHaoTe 58.82 329⇑ *i*P **P 05 36 49.3 +0.2**
XLT pP pP 05 37 05.0 +0.6
XLT sP sP 05 37 13.3 +2.5
XLT PP **PP 05 38 56.8 -3.0**
XLT S **S 05 44 50.5 -0.1**
XLT SS **SS 05 48 44.5 -0.4**
XLT pmax pmax
comp=Z,290nm,0.9s
XLT pmax pmax
comp=Z,2μm,5.5s
XLT LR LR
comp=Z,2μm,22.0s
XLT LR LR
comp=Z,5μm,24.8s
CD2 Chengdu 59.00 310 P **P 05 36 51.3 +0.7**
CD2 pP sP 05 37 09.0 -3.0
CD2 PP **PP 05 38 57.5 -4.2**
CD2 S **S 05 44 49.0 -4.4**
CD2 sS sS 05 45 19.5 +1.1
CD2 SS **SS 05 48 46.3 -1.9**
CD2 pmax pmax
comp=Z,320nm,0.8s
CD2 LR LR
comp=Z,3μm,29.4s
CD2 LR LR
comp=Z,4μm,22.7s
CD2 LR LR
comp=Z,5μm,23.7s
HHC Hu-ho-hao-te 59.23 324 *e*P **P 05 36 52.8 +0.7**
HHC S **S 05 44 53.8 -2.3**
HHC pmax pmax
comp=Z,130nm,1.2s
HHC pmax pmax
comp=Z,2μm,6.0s
HHC LR LR
comp=Z,3μm,19.0s
HHC LR LR
comp=Z,4μm,19.7s
HHC LR LR
comp=Z,7μm,18.4s
SHEM Shemya Is, Ala 59.92 15 LR LR 05 58 23.8
comp=Z,5μm,21.9s,baz=194,slow=32
BTO Baotou 59.99 323 *e*P **P 05 36 59.0 +1.7**
BTO S **S 05 45 07.8 +1.9**
BTO LR LR
comp=Z,7μm,23.2s
BTO LR LR
comp=Z,5μm,25.0s
HIA Hailar 61.14 336 P **P 05 37 05.0 +0.1**
HIA sP **sP 05 37 24.1 -1.4**
LZH Lanzhou 61.47 316 ⇑P P 05 37 09.0 +1.5
LZH sP sP 05 37 28.3 -0.7
LZH PP **PP 05 39 29.5 +6.0**
LZH S **S 05 45 26.0 +1.0**
LZH SS **SS 05 49 30.0 +3.1**
LZH pmax pmax
comp=Z,250nm,1.1s
LZH pmax pmax
comp=Z,2μm,4.6s
LZH LR LR
comp=Z,2μm,18.0s
LZH LR LR
comp=Z,3μm,18.3s
LZH LR LR
comp=Z,4μm,19.0s
KIWB Kanaga Island 61.78 20 P **P 05 37 09.6 +0.5**
ADK Adak 61.97 21 P **P 05 37 10.2 -0.1**
ADK sP **sP 05 37 30.2 +0.1**
ZEA Zeya 62.20 343 *c i*P **P 05 37 12.3 +0.4**
ZEA *e* 05 37 52.0

ZEA e 05 39 32.3
ZEA eS **S** **05 45 41.5 +8.2**
ZEA e 05 46 11.1
ZEA eSS **SS** **05 49 39.3 +1.9**
ZEA pmax pmax
comp=N,100nm,1.1s
ZEA pmax pmax
comp=E,30nm,1.1s
ZEA pmax pmax
comp=Z,180nm,1.0s
ZEA pmax pmax
comp=Z,300nm,9.0s
ZEA pmax pmax
comp=Z,200nm,12.5s
ZEA smax smax
comp=E,200nm,7.1s
PBA Port Blair 62.30 286 P **P** **05 37 11.5 -1.7**
SNR=5.6
PBA Port Blair 62.30 286⇑ *i*P **P** **05 37 11.1 -2.2**
DGPR DIGLIPUR 62.44 287⇑ *i*P **P** **05 37 13.0 -1.1**
DRV Dumont d'Urvil 62.50 186 P **P** **05 37 14.5 +0.9**
DRV sP **sP** **05 37 34.0 -0.1**
MA2 Magadan 64.14 359 P **P** **05 37 24.7 +0.1**
baz=157,slow=8.0
MA2 LR LR 06 05 14.5
comp=E,1μm,19.2s,baz=190,slow=36
MA2 Magadan 64.14 359 P **P** **05 37 24.2 -0.4**
MA2 Magadan 64.14 359 *ce*P **P** **05 37 24.3 -0.4**
MA2 pmax pmax
comp=Z,341nm,1.0s
MA2 Magadan 64.14 359 P **P** **05 37 24.8 +0.2**
MA2 Magadan 64.14 359 P **P** **05 37 23.8 -0.8**
MA2 sP **pwP** **05 37 43.5 +0.1**
CIT Chita 65.82 334 *e*P **P** **05 37 36.6 +0.9**
CIT *e* 05 38 06.0
CIT pmax pmax
comp=Z,456nm,2.7s
GTA Gaotai 65.88 317 ⇑P **P** **05 37 37.8 +1.3**
GTA pP sP 05 37 56.5 -1.7
GTA PP **PP** **05 39 59.5 -2.7**
GTA S **S** **05 46 18.8 -0.9**
GTA sS sS 05 46 46.8 +1.2
GTA pmax pmax
comp=Z,180nm,1.5s
GTA pmax pmax
comp=Z,2μm,5.4s
GTA LR LR
comp=Z,890nm,20.7s
GTA LR LR
comp=Z,2μm,20.7s
GTA LR LR
comp=Z,3μm,21.1s
BRDH Bariadhala 65.99 297 LR LR 06 07 27.8
comp=Z,971nm,20.2s,baz=149,slow=37
ULN Ulaanbaatar 66.16 328 *ce*P **P** **05 37 38.8 +0.6**
ULN pmax pmax
comp=Z,79nm,0.8s
ULN MLR MLR
comp=Z,2μm,19.0s
ULN Ulaanbaatar 66.16 328 P **P** **05 37 39.0 +0.9**
ULN Ulaanbaatar 66.16 328 P **P** **05 37 38.6 +0.5**
comp=Z,22μmcomp=Z,10μmcomp=Z,417nm,0.9s
ULN Ulaanbaatar 66.16 328 P **P** **05 37 38.8 +0.6**
TAOE Nuku Hiva Isla 66.24 98 *e*P **P** **05 37 41.0 +1.8**
comp=Z,420nm,27.8s
TAOE Nuku Hiva Isla 66.24 98 *e*SS SS 05 50 43.1 +1.2
comp=Z,260nm,26.5s
TAOE *e*LR LR 05 57 39.8
comp=Z,3μm,31.7s
TAOE Nuku Hiva Isla 66.24 98 P **P** **05 37 39.9 +0.7**
SONM Songino Array 66.49 328 P **P** **05 37 40.9 +0.7**
comp=Z,34nm,0.7s,baz=138,slow=7.1,SNR=111
SONM PcP **PcP** **05 38 09.8 +0.4**
comp=Z,39nm,0.7s,baz=142,slow=3.4,SNR=10
SONM ScP 05 42 09.6
comp=Z,5.8nm,1.0s,baz=144,slow=5.6,SNR=4.2
SONM PKP2ab 06 06 18.1
comp=Z,0.7nm,0.3s,baz=256,slow=3.1,SNR=7.4
SONM LR LR 06 07 49.8
comp=Z,1μm,18.1s,baz=132,slow=37
comp=Z,34nm,0.7s
SHL Shillong 66.62 300 P **P** **05 37 41.3 -0.3**
SNR=57
SHL Shillong 66.62 300⇑ *i*P **P** **05 37 41.1 -0.5**
UNV Unalaska Valle 67.39 25 P **P** **05 37 44.6 -1.0**
baz=224
SEY Seymchan 67.48 360 P **P** **05 37 46.3 +0.2**
comp=Z,40nm,0.9s,baz=176,slow=5.6,SNR=45
comp=Z,40nm,0.9s
SEY Seymchan 67.48 360 *ce*P **P** **05 37 46.4 +0.4**
SEY pmax pmax
comp=Z,158nm,1.9s
GOMU GeErMu 68.02 312 P **P** **05 37 51.8 +1.3**
GOMU S **S** **05 46 51.3 +5.2**
GOMU sS pS 05 47 05.5 +0.8
GOMU SS **SS** **05 51 07.5 -1.9**
GOMU pmax pmax
comp=Z,50nm,0.8s
GOMU pmax pmax
comp=Z,250nm,3.6s
GOMU LR LR
comp=Z,2μm,20.8s
GOMU LR LR
comp=Z,1μm,20.0s
GOMU LR LR
comp=Z,1μm,20.8s
CASY Casey 68.19 197 IAMs_20 IAMs_20 06 04 48.2
comp=Z,2μm,20.0s
CASY Casey 68.19 197 P **P** **05 37 50.2 -0.3**
SPIA Saint Paul Isl 68.45 20 P **P** **05 37 50.3 -2.0**
baz=220
LSA Lhasa 68.53 304 IAMs_20 IAMs_20 06 05 10.4
comp=Z,3μm,22.0s
LSA Lhasa 68.53 304 P **P** **05 37 54.5 +0.6**
LSA pmax pmax
comp=Z,91nm,1.1s
LSA Lhasa 68.53 304 *i*P **P** **05 37 54.8 +0.8**
SNR=13
LSA Lhasa 68.53 304 P **P** **05 37 54.8 +0.8**
LSA pP **pP** **05 38 09.4 +0.1**
YAK Yakutsk 68.99 348 P **P** **05 37 55.3 -0.2**
YAK Yakutsk 68.99 348 *c i*P **P** **05 37 55.7 +0.2**
YAK *e**PP **sP** **05 38 17.0 +0.1**
YAK *e* 05 40 30.0
YAK *e*S **S** **05 46 55.2 -0.6**
YAK *e**SS **sS** **05 47 27.6 +5.6**
YAK *e*SS **SS** **05 51 29.8 +7.2**
YAK pmax pmax
comp=Z,234nm,1.1s
YAK pmax pmax
comp=N,74nm,1.2s
YAK pmax pmax
comp=E,42nm,1.5s
YAK pmax pmax
comp=Z,10.0nm,0.4s
YAK smax smax
comp=N,187nm,3.3s
YAK smax smax
comp=E,120nm,2.7s
YAK Yakutsk 68.99 348 P **P** **05 37 55.5 +0.1**
FALS False Pass 69.39 25 P **P** **05 37 57.2 -0.9**
baz=227
ZAK Zakamensk 69.65 328 *e*P **P** **05 37 59.7 -0.3**
ZAK *e* 05 38 19.2
ZAK pmax pmax
comp=Z,128nm,1.1s
BOD Bodaibo 69.88 339 *e*P **P** **05 38 01.1 +0.1**
BOD pmax pmax
comp=Z,171nm,1.3s
IRK Irkutsk 70.25 330 *e*P **P** **05 38 03.3 -0.2**
IRK pmax pmax
comp=Z,187nm,2.6s
BWNR Bhubaneshwar 70.66 293⇑ *i*P **P** **05 38 06.6 0.0**
SDPT Sand Point 70.98 26 P **P** **05 38 06.9 -1.0**
baz=230
CHNA Chernabura Isl 71.04 27 P **P** **05 38 07.3 -0.9**
baz=231
BOK Bokaro 71.39 297⇑ *i*P **P** **05 38 10.9 -0.1**
BOK IAmb IAmb 05 38 14.1
comp=Z,630nm,2.4s
MOY Mondy 71.57 329 *e*P **P** **05 38 12.1 +0.5**
MOY pmax pmax
comp=Z,282nm,1.9s
VIS Vishakhapatnam 72.42 290 *i*P **P** **05 38 17.5 +0.2**
CHGN Chignik 72.49 26 P **P** **05 38 15.7 -1.1**
baz=231

RAGD RAYAGADA 72.60 292⇑ *i*P **P** **05 38 18.9 +0.6**
JHSG JHARSUGUGA 72.83 294⇑ *i*P **P** **05 38 20.1 +0.5**
VNDA Vanda 72.88 178 P **P** **05 38 20.1 +1.2**
comp=Z,20nm,0.8s,baz=329,slow=6.3,SNR=83
comp=Z,20nm,0.8s
VNDA Vanda 72.88 178 P **P** **05 38 19.9 +1.0**
VNDA Vanda 72.88 178 P **P** **05 38 19.9 +1.0**
VNDA pmax pmax
comp=Z,44nm,1.0s
BILL Bilibino 73.19 5 P **P** **05 38 21.1 +0.3**
BILL IAmb IAmb 05 38 22.4
comp=Z,100nm,0.7s
BILL Bilibino 73.19 5 *de*P **P** **05 38 21.2 +0.3**
BILL *e* 05 38 34.4
BILL *e* 05 41 05.3
BILL *e*PPP PPP 05 42 49.4
BILL *e*S **S** **05 47 44.3 0.0**
BILL *e*SS **SS** **05 52 28.6 +1.7**
BILL pmax pmax
comp=Z,96nm,0.7s
BILL MLR MLR
comp=Z,1μm,19.0s
GAMB Gambell 73.21 15 P **P** **05 38 21.1 +0.1**
baz=217
PALK Pallekele 73.32 279 LR LR 06 10 58.5
comp=Z,769nm,21.9s,baz=214,slow=36
PALK Pallekele 73.32 279 P **P** **05 38 22.5 -0.3**
PALK Pallekele 73.32 279 P **P** **05 38 22.5 -0.3**
PALK pmax pmax
comp=Z,45nm,0.8s
PALK Pallekele 73.32 279 P **P** **05 38 22.3 -0.5**
PALK Pallekele 73.32 279 P **P** **05 38 23.2 +0.4**
comp=Z,3μmcomp=Z,2μmcomp=Z,89nm,2.3s
SBA Scott Base 73.42 177 P **P** **05 38 23.7 +1.7**
SBA IAmb IAmb 05 38 45.9
comp=Z,72nm,1.1s
SBA Scott Base 73.42 177 P **P** **05 38 23.7 +1.7**
SBA pmax pmax
comp=Z,72nm,1.2s
CHIR Chirikof Islan 73.44 27 P **P** **05 38 22.6 +0.1**
baz=234
R16K Pilot Point 73.64 25 P **P** **05 38 23.2 -0.4**
baz=232
VLK Valmikinagar 74.01 300⇑ *i*P **P** **05 38 27.2 +0.8**
VAR Varanasi 74.28 298 *e*P **P** **05 38 28.1 0.0**
P16K Nushagak River 74.38 24 P **P** **05 38 28.3 +0.4**
baz=231
BLSP Bilaspur 74.39 294⇑ *i*P **P** **05 38 28.5 -0.3**
SII Sitkinak Islan 74.53 27 P **P** **05 38 28.7 -0.2**
baz=235
SII Sitkinak Islan 74.53 27 P **P** **05 38 29.2 +0.3**
MDRS Chennai 74.56 285 *i*P **P** **05 38 29.4 -0.5**
O16K Kokwok River B 74.69 23 P **P** **05 38 29.2 -0.6**
baz=231
Q16K King Salmon 74.71 25 P **P** **05 38 28.6 -1.2**
baz=232
VJD Vijayawada 74.73 288⇑ *i*P **P** **05 38 31.3 +0.5**
Q17K Contact Creek 74.78 25 P **P** **05 38 29.8 -0.6**
baz=233,SNR=18
N16K Nishlik Lake 75.00 22 P **P** **05 38 32.2 +0.6**
baz=230
P17K Kvichak River 75.11 24 P **P** **05 38 31.2 -0.9**
baz=232
O17K Koliganek Bris 75.20 24 P **P** **05 38 32.6 -0.1**
baz=232
OHAK Old Harbor 75.31 27 P **P** **05 38 33.2 -0.1**
baz=236,SNR=5.8
ALBI Allahabad 75.35 298⇑ *i*P **P** **05 38 34.1 -0.1**
Q18K Katmai Hardscr 75.38 25 P **P** **05 38 33.2 -0.7**
baz=234,SNR=20
ANM Nome 75.60 17 IAMs_20 IAMs_20 06 06 41.8
comp=Z,3μm,22.0s
ANM Nome 75.60 17 P **P** **05 38 34.2 -0.6**
baz=223
TNA Tin City 75.63 16 P **P** **05 38 34.3 -0.7**
baz=220
P18K Big Mountain, 75.73 24 IAMs_20 IAMs_20 06 05 45.0
comp=Z,3μm,22.0s
P18K Big Mountain, 75.73 24 P **P** **05 38 34.6 -1.1**
baz=234
KDAK Kodiak Island 75.94 27 P **P** **05 38 36.6 -0.3**
comp=Z,38nm,1.0s,baz=268,slow=4.0,SNR=7.7
KDAK LR LR 06 06 48.4
comp=Z,2μm,21.3s,baz=255,slow=32
comp=Z,38nm,1.0s
KDAK Kodiak Island 75.94 27 P **P** **05 38 36.3 -0.6**
baz=236
WMQ Urumqi 75.97 317 *e*P **P** **05 38 38.8 +1.3**
WMQ PcP **PcP** **05 38 50.0 +0.3**
WMQ S **S** **05 48 12.8 -3.6**
WMQ SKS **SKSac** **05 48 42.0 -1.7**
WMQ pmax pmax
comp=Z,260nm,1.1s
WMQ pmax pmax
comp=Z,2μm,4.3s
WMQ LR LR
comp=Z,1μm,20.5s
WMQ LR LR
comp=Z,990nm,20.5s
WMQ LR LR
comp=Z,2μm,22.5s
O18K Koktuh Hills 76.01 24 IAMs_20 IAMs_20 06 06 49.9
comp=Z,3μm,21.0s
O18K Koktuh Hills 76.01 24 P **P** **05 38 36.7 -0.7**
baz=234
Q19K Cape Douglas, 76.12 25 P **P** **05 38 37.8 -0.2**
Q19K IAmb IAmb 05 39 05.0
comp=Z,258nm,1.2s
Q19K IAMs_20 IAMs_20 06 06 06.0
comp=Z,3μm,22.0s
Q19K Cape Douglas, 76.12 25 P **P** **05 38 37.5 -0.5**
baz=235,SNR=13
N18K Kilae Creek 76.24 23 P **P** **05 38 39.1 +0.5**
N18K IAmb IAmb 05 39 04.5
comp=Z,219nm,1.6s
N18K IAMs_20 IAMs_20 06 06 27.9
comp=Z,2μm,22.0s
N18K Kilae Creek 76.24 23 P **P** **05 38 39.4 +0.7**
baz=233,SNR=20
SALM Salem 76.34 283⇑ *i*P **P** **05 38 41.2 +1.1**
Q20K Shuyak Island 76.48 26 P **P** **05 38 39.3 -0.7**
baz=236
O19K Port Alsworth 76.57 24 IAMs_20 IAMs_20 06 07 39.8
comp=Z,3μm,22.0s
O19K Port Alsworth 76.57 24 P **P** **05 38 39.4 -1.1**
baz=234
P19K Oil Pt 76.71 25 P **P** **05 38 40.7 -0.6**
P19K IAmb IAmb 05 38 41.7
comp=Z,128nm,0.8s
P19K Oil Pt 76.71 25 P **P** **05 38 40.6 -0.7**
baz=235,SNR=14
HYB Hyderabad 76.85 289⇑ *i*P **P** **05 38 42.5 -0.6**
HYB IAmb IAmb 05 38 46.1
comp=Z,30nm,0.6s
HYBB Hyderabad (bro 76.85 289 *e*P **P** **05 38 43.0 -0.1**
HYBB IVmB_BB 05 38 43.2
comp=Z,2μm,2.7s
HYBB *ep*P **pP** **05 38 56.5 -2.0**
HYBB *e*PP **PP** **05 41 37.4 +0.7**
HYBB *e*S **S** **05 48 27.6 +0.6**
N19K Bonanza Creek 76.87 23 IAMs_20 IAMs_20 06 08 54.7
comp=Z,3μm,21.0s
N19K Bonanza Creek 76.87 23 P **P** **05 38 42.1 -0.2**
baz=234,SNR=7.7
NGP Nagpur 77.02 293⇑ *i*P **P** **05 38 43.8 -0.1**
TRD Trivandrum 77.16 280⇑ *i*P **P** **05 38 45.6 +0.9**
TRD IAmb IAmb 05 38 48.5
comp=Z,86nm,0.5s
O20K Slope Mountain 77.20 25 P **P** **05 38 43.5 -0.6**
baz=236,SNR=6.0
HOM Homer 77.38 25 P **P** **05 38 43.8 -1.3**
baz=237,SNR=6.9
L19K White Mountain 77.54 22 P **P** **05 38 46.1 +0.2**
L19K IAmb IAmb 05 38 47.6
comp=Z,73nm,0.8s
L19K IAMs_20 IAMs_20 06 09 47.3
comp=Z,2μm,20.0s
L19K White Mountain 77.54 22 P **P** **05 38 45.9 0.0**
baz=233,SNR=42
M19K Big River Lodg 77.55 23 P **P** **05 38 46.3 +0.4**
baz=234
TTA Tatalina 77.56 21 P **P** **05 38 45.8 -0.3**
TTA Tatalina 77.56 21 P **P** **05 38 45.8 -0.3**
TTA pmax pmax
comp=Z,37nm,0.9s
TTA Tatalina 77.56 21 P **P** **05 38 46.2 +0.1**
baz=232,SNR=27
LGTI Lohaghat 77.61 301⇑ *i*P **P** **05 38 48.0 +1.0**
PTH Pithoragarh 77.65 301⇑ *i*P **P** **05 38 47.4 -0.1**
BRSE Bradley Lake S 77.81 25 P **P** **05 38 47.2 -0.3**
baz=238,SNR=6.9
TIXI Tiksi 77.89 352 P **P** **05 38 47.1 -0.5**
comp=Z,24nm,0.6s,baz=90,slow=24,SNR=42
TIXI LR LR 06 10 44.9
comp=Z,710nm,22.0s,baz=1.5,slow=34
comp=Z,24nm,0.6s
TIXI Tiksi 77.89 352 *ce*P **P** **05 38 46.9 -0.7**
TIXI pmax pmax
comp=Z,149nm,1.7s
PCHI Peechi 78.00 282⇑ *e*P **P** **05 38 50.3 +0.8**
PCHI *e*S **S** **05 48 37.0 -2.4**
N20K Mount Spurr 78.00 24 P **P** **05 38 46.4 -2.1**
baz=236,SNR=5.8
SPCR Spurr Chakacha 78.00 24 P **P** **05 38 46.8 -1.8**
baz=236
M20K Styx River 78.02 23 P **P** **05 38 48.2 -0.5**
M20K IAmb IAmb 05 39 26.4
comp=Z,245nm,1.8s
M20K IAMs_20 IAMs_20 06 16 35.1
comp=Z,3μm,19.0s
M20K Styx River 78.02 23 P **P** **05 38 48.8 0.0**
baz=235,SNR=24
L20K Farewell, AK 78.08 22 P **P** **05 38 49.4 +0.4**
baz=234,SNR=28
CAPN Captain Cook N 78.19 24 P **P** **05 38 49.9 +0.4**
baz=237
JHNI Jhansi 78.28 297⇑ *i*P **P** **05 38 49.5 -1.3**
DGZ Jazzator, Alta 78.28 323 *c i*P **P** **05 38 50.8 +0.3**
DGZ pmax pmax
comp=Z,285nm,0.9s
GCSA Galena City Sc 78.39 20 P **P** **05 38 50.6 +0.1**
baz=231,SNR=25
K20K Telida 78.53 21 P **P** **05 38 51.9 +0.5**
baz=234,SNR=33
SEW Seward 78.56 25 P **P** **05 38 51.1 -0.5**
baz=239,SNR=8.4
O22K Cooper Landing 78.64 25 P **P** **05 38 51.8 -0.2**
baz=238,SNR=8.8
SKT Skwentna 78.70 23 IAMs_20 IAMs_20 06 09 11.2
comp=Z,3μm,22.0s
SKT Skwentna 78.70 23 P **P** **05 38 50.5 -1.9**
baz=237,SNR=5.8
SUA Susitna One 78.74 24 IAMs_20 IAMs_20 06 08 38.0
comp=Z,2μm,21.0s
SUA Susitna One 78.74 24 P **P** **05 38 51.6 -1.1**
baz=237
FIS Fire Island 78.78 24 IAMs_20 IAMs_20 06 03 43.2
comp=Z,2μm,21.0s
AKL Akola 78.82 292⇑ *i*P **P** **05 38 53.7 -0.2**
BHPL Bhopal 78.87 295 *i*P **P** **05 38 52.4 -1.8**
BHPL IAmb IAmb 05 38 54.6
comp=Z,583nm,1.9s
RC01 Rabbit Creek A 78.95 25 IAMs_20 IAMs_20 06 08 02.7
comp=Z,3μm,22.0s
RC01 Rabbit Creek A 78.95 25 P **P** **05 38 53.1 -0.6**
baz=238,SNR=19
PPLA Purkeypile 78.96 22 P **P** **05 38 53.0 -0.9**
baz=236,SNR=11
J20K Nowinta River 78.98 21 P **P** **05 38 53.9 +0.1**
J20K IAmb IAmb 05 38 55.7
comp=Z,327nm,1.7s
J20K IAMs_20 IAMs_20 06 09 23.5
comp=Z,2μm,21.0s
J20K Nowinta River 78.98 21 P **P** **05 38 54.5 +0.7**
baz=234,SNR=49
ZSN Zaisan 79.08 320 *e*P **P** **05 38 54.9 +0.1**
ZSN pmax pmax
comp=Z,299nm,2.1s
ZSN Zaisan 79.08 320 *e*P **P** **05 38 54.9 +0.1**
comp=Z,299nm,2.1s,baz=320
M22K Willow 79.14 24 IAMs_20 IAMs_20 06 10 24.8
comp=Z,2μm,20.0s
M22K Willow 79.14 24 P **P** **05 38 53.2 -1.5**
baz=238,SNR=14
CAST Castle Rocks 79.29 22 IAMs_20 IAMs_20 06 12 16.7
comp=Z,2μm,20.0s
CAST Castle Rocks 79.29 22 P **P** **05 38 54.9 -0.7**
baz=236,SNR=29
PWL Port Wells 79.42 25 P **P** **05 38 55.9 -0.4**
baz=240,SNR=31
CUT Chulitna 79.43 23 P **P** **05 38 54.9 -1.4**
CUT IAmb IAmb 05 38 56.2
comp=Z,121nm,1.2s
CUT IAMs_20 IAMs_20 06 07 56.5
comp=Z,2μm,22.0s
CUT Chulitna 79.43 23 P **P** **05 38 54.7 -1.6**
baz=238,SNR=11
PMR Palmer 79.46 24 P **P** **05 38 55.8 -0.6**
baz=239,SNR=18
CHUM Lake Minchumin 79.47 21 P **P** **05 38 56.8 +0.3**
baz=236,SNR=7.1
GHO Glory Hole Cre 79.64 24 IAMs_20 IAMs_20 06 13 42.9
comp=Z,2μm,21.0s
KNK Knik Glacier 79.65 25 P **P** **05 38 57.2 -0.3**
baz=240,SNR=16
DDI Dehra Dun 79.65 302 *i*P **P** **05 38 58.2 -0.1**
DDI IAmb IAmb 05 39 01.7
comp=Z,216nm,1.4s
MNGI Mangalore 79.78 284⇑ *i*P **P** **05 38 59.0 -0.2**
SML Sawmill 79.90 24 P **P** **05 38 58.6 -0.3**
SML IAmb IAmb 05 39 24.0
comp=Z,233nm,1.4s
SML IAMs_20 IAMs_20 06 09 06.8
comp=Z,3μm,22.0s
SML Sawmill 79.90 24 P **P** **05 38 58.7 -0.3**
baz=240,SNR=34
GLI Glacier Island 79.95 25 P **P** **05 38 58.6 -0.6**
baz=241,SNR=9.9
HIN Hinchinbrook I 79.98 26 IAMs_20 IAMs_20 06 12 12.9
comp=Z,3μm,20.0s
TRF Thorofare Moun 79.99 22 IAMs_20 IAMs_20 06 09 35.0
comp=Z,3μm,22.0s
TRF Thorofare Moun 79.99 22 P **P** **05 38 57.8 -1.7**
baz=238,SNR=16
BPAW Bear Paw Mtn. 80.08 22 P **P** **05 38 58.7 -1.1**
baz=237,SNR=21
M23K Glacier View 80.14 24 P **P** **05 38 59.6 -0.6**
baz=240,SNR=5.9
FID Port Fidalgo 80.16 26 IAMs_20 IAMs_20 06 13 04.0
comp=Z,2μm,20.0s
IMAR Indian Mountai 80.19 19 P **P** **05 38 59.9 -0.4**
DGAR Diego Garcia 80.25 263 *ce*P **P** **05 39 02.3 +0.5**
DGAR pmax pmax
comp=Z,362nm,1.7s
DGAR Diego Garcia 80.25 263 P **P** **05 39 01.7 -0.1**
KAAM Kaadhehdhoo 80.28 271 P **P** **05 39 00.3 -1.7**
KAAM Kaadhehdhoo 80.28 271 P **P** **05 39 04.3 +2.3**
comp=Z,7μmcomp=Z,324nm,1.8s
H21K Melozitna Rive 80.31 20 IAMs_20 IAMs_20 06 09 46.6
comp=Z,2μm,22.0s
H21K Melozitna Rive 80.31 20 P **P** **05 39 01.3 +0.2**
baz=235,SNR=22
I21K Tanana 80.33 20 IAMs_20 IAMs_20 06 11 38.9
comp=Z,2μm,19.0s
I21K Tanana 80.33 20 P **P** **05 39 01.5 +0.5**
baz=236,SNR=34
SCM Sheep Creek Mo 80.33 24 P **P** **05 39 00.7 -0.6**
SCM IAmb IAmb 05 39 02.4
comp=Z,110nm,1.2s
SCM Sheep Creek Mo 80.33 24 P **P** **05 39 00.7 -0.6**
SCM pmax pmax
comp=Z,110nm,1.2s
SCM Sheep Creek Mo 80.33 24 P **P** **05 39 00.9 -0.3**
baz=240,SNR=12
WAT1 Susitna Watana 80.33 23 P **P** **05 39 00.4 -0.8**
baz=239
EYAK Cordova Ski Ar 80.38 26 P **P** **05 39 00.8 -0.7**
baz=242
EYAK Cordova Ski Ar 80.38 26 P **P** **05 39 01.7 +0.3**
RND Reindeer 80.51 23 IAMs_20 IAMs_20 06 12 41.9
comp=Z,2μm,20.0s
WAT6 Susitna Watana 80.53 24 P **P** **05 39 01.7 -0.8**
baz=240,SNR=22
MK31 Makanchi Array 80.54 319 P **P** **05 39 03.0 +0.4**
MK31 Makanchi Array 80.54 319 P **P** **05 39 03.1 +0.4**
MK31 pmax pmax
comp=Z,246nm,1.0s
MKAR Makanchi Array 80.54 319 P **P** **05 39 03.4 +0.7**
comp=Z,234nm,0.9s,baz=106,slow=6.1,SNR=892
MKAR PKKPbc **PKKPbc** **05 57 44.6 -0.7**
comp=Z,0.8nm,0.6s,baz=34,slow=0.7,SNR=5.6
MKAR LR LR 06 14 11.0
comp=Z,2μm,20.9s,baz=117,slow=35

comp=Z,234nm,0.9s
MKAR **Makanchi Array** 80.54 319 P P 05 39 03.0 +0.3
SMLA **Simla** 80.56 302⇑ *i*P P 05 39 03.0 0.0
G21K **Allakaket** 80.58 19 P P 05 39 02.4 0.0
baz=234
MCK **McKinley** 80.65 22 IAMs_20 IAMs_20 06 09 56.5
comp=Z,2μm,22.0s
MCK **McKinley** 80.65 22 P P 05 39 01.8 -1.1
baz=239,SNR=62
MLY **Manley** 80.68 21 P P 05 39 02.2 -0.8
MLY IAmb IAmb 05 39 42.3
comp=Z,167nm,1.5s
MLY **Manley** 80.68 21 P P 05 39 02.3 -0.8
baz=237,SNR=59
BWN **Browne** 80.68 22 IAMs_20 IAMs_20 06 13 27.0
comp=Z,2μm,20.0s
HMDM **Hanimaadhoo** 80.68 278 P P 05 39 05.1 +1.0
HMDM **Hanimaadhoo** 80.68 278 P P 05 39 04.3 +0.2
SNR=7.1
HMDM **Hanimaadhoo** 80.68 278 P P 05 39 05.4 +1.3
comp=Z,6μmcomp=Z,299nm,1.3s
KLU **Klutina** 80.75 25 IAMs_20 IAMs_20 06 09 02.3
comp=Z,3μm,22.0s
KLU **Klutina** 80.75 25 P P 05 39 03.6 +0.1
baz=242,SNR=28
MAKZ **Makanchi** 80.75 319 IAMs_20 IAMs_20 06 15 49.8
comp=Z,2μm,20.0s
MAKZ **Makanchi** 80.75 319 P P 05 39 04.2 +0.4
DHY **Denali Highway** 80.92 23 P P 05 39 03.7 -0.8
DHY **Denali Highway** 80.92 23 P P 05 39 04.0 -0.5
baz=240,SNR=24
H22K **Ishtalitna Cre** 80.94 20 P P 05 39 04.7 +0.3
baz=236,SNR=24
M24K **Tolsona, Glenn** 80.94 25 P P 05 39 04.6 +0.1
M24K IAmb IAmb 05 39 30.2
comp=Z,263nm,1.4s
M24K **Tolsona, Glenn** 80.94 25 P P 05 39 04.9 +0.4
baz=242,SNR=14
KAD **Karad** 80.96 288⇑ *i*P P 05 39 05.2 -0.4
MNCY **Minicoy** 80.99 279⇑ *i*P P 05 39 06.2 +0.5
MNCY IAmb IAmb 05 39 10.0
comp=Z,167nm,0.9s
F21K **Alatna River** 81.01 18 P P 05 39 04.8 +0.1
baz=234,SNR=10.0
NEA2 **Nenana** 81.05 22 P P 05 39 03.2 -1.7
NEA2 IAMs_20 IAMs_20 06 16 17.1
comp=Z,2μm,19.0s
NEA2 **Nenana** 81.05 22 P P 05 39 03.9 -1.1
baz=238,SNR=26
BMRM **Bremner River** 81.07 26 P P 05 39 04.8 -0.4
BMRM IAmb IAmb 05 39 30.5
comp=Z,173nm,1.4s
BMRM **Bremner River** 81.07 26 P P 05 39 05.1 -0.2
baz=243,SNR=14
I23K **Minto, Yukon-K** 81.24 21 P P 05 39 05.3 -0.6
baz=238,SNR=15
BHK **Bhakra** 81.25 303⇑ *i*P P 05 39 06.6 -0.2
ZAA0 **Zalesovo Array** 81.32 326 P P 05 39 05.8 -0.8
ZAA0 IAmb IAmb 05 39 06.9
comp=Z,89nm,0.9s
ZALV **Zalesovo Beam** 81.32 326 P P 05 39 06.1 -0.5
comp=Z,38nm,0.5s,baz=108,slow=5.7,SNR=185
ZALV S S 05 49 17.4 +4.3
comp=Z,3.5nm,0.9s,baz=99,slow=7.9,SNR=7.6
ZALV PKKPbc PKKPbc 05 57 42.5 -1.3
comp=Z,0.8nm,0.4s,baz=300,slow=2.9,SNR=3.6
ZALV PKPPKP P'P'df 06 05 49.5 +4.2
comp=Z,0.4nm,0.3s,baz=45,slow=0.2,SNR=3.9
ZALV LR LR 06 15 20.8
comp=Z,1μm,20.9s,baz=110,slow=36
comp=Z,38nm,0.5s
ZALV **Zalesovo Beam** 81.32 326 P P 05 39 05.7 -1.0
N25K **Chitina, Valde** 81.36 25 P P 05 39 06.9 +0.1
baz=243,SNR=13
POO **Poona** 81.44 289⇑ *i*P P 05 39 02.0 -6.1
comp=Z,310nm,1.0s
G22K **Bettles** 81.47 19 P P 05 39 07.0 -0.1
baz=236
SHLS **Shalkode** 81.47 315*c* *i*P P 05 39 06.9 -0.9
SHLS *e*S S 05 49 12.4 -2.9
SHLS pmax pmax
comp=Z,112nm,1.2s
SHLS **Shalkode** 81.47 315⇑ *i*P P 05 39 07.0 -0.9
comp=Z,112nm,1.2s,baz=315
SHLS *e*S S 05 49 12.5 -2.9
baz=315
HARP **HAARP** 81.49 24 P P 05 39 07.0 -0.4
baz=242,SNR=7.2
PDGK **Podgornoye** 81.50 315 *i*P P 05 39 08.2 +0.2
PDGK pmax pmax
comp=Z,203nm,0.9s
H23K **Yukon River** 81.53 20 P P 05 39 07.6 0.0
baz=238,SNR=30
F22K **John River** 81.58 18 P P 05 39 07.8 +0.1
baz=235
WAX **Waxell Ridge** 81.62 27 IAMs_20 IAMs_20 06 08 39.3
comp=Z,3μm,22.0s
GLB **Gilahina Butte** 81.63 26 IAMs_20 IAMs_20 06 10 49.5
comp=Z,2μm,22.0s
PAX **Paxson** 81.63 24 P P 05 39 07.6 -0.6
baz=242,SNR=7.2
TCOL **CIGO, UAF Yank** 81.64 22 IAMs_20 IAMs_20 06 16 52.7
comp=Z,2μm,19.0s
TCOL **CIGO, UAF Yank** 81.64 22 P P 05 39 06.5 -1.5
baz=240,SNR=15
COLA **College** 81.64 22*c* *i*P P 05 39 06.3 -1.8
COLA pmax pmax
comp=Z,78nm,1.0s
COLA **College** 81.64 22 P P 05 39 06.6 -1.4
baz=240
COLA **College** 81.64 22 P P 05 39 06.7 -1.4
HDA **Harding Lake** 81.75 22 IAMs_20 IAMs_20 06 09 54.6
comp=Z,3μm,22.0s
HDA **Harding Lake** 81.75 22 P P 05 39 07.5 -1.2
baz=240,SNR=12
UZB **Uzynbulak** 81.78 315 *i*P P 05 39 10.1 +0.6
UZB pmax pmax
comp=Z,94nm,2.3s
UZB **Uzynbulak** 81.78 315 *i*P P 05 39 10.1 +0.6
comp=Z,94nm,2.3s,baz=315
G23K **Bananza Creek** 81.84 20 P P 05 39 09.4 +0.2
baz=237,SNR=26
K24K **Donnelly Dome** 81.90 23 P P 05 39 09.0 -0.5
baz=242,SNR=12
AJM **Ajmer** 81.91 297⇑ *i*P P 05 39 10.0 -0.4
AJM ⇑ *i*P P 05 39 10.2 -0.2
MESA **MESA** 81.91 27 P P 05 39 09.0 -0.9
baz=246
ISLE **Juniper Island** 81.91 27 IAMs_20 IAMs_20 06 09 00.1
comp=Z,3μm,22.0s
POKR **Poker Plat Res** 81.92 22 P P 05 39 08.2 -1.4
baz=240,SNR=5.7
MCARA **McCarthy VSAT** 81.94 26 IAMs_20 IAMs_20 06 09 51.9
comp=Z,3μm,22.0s
MCARA **McCarthy VSAT** 81.94 26 P P 05 39 09.7 -0.1
baz=244,SNR=14
IL31 81.95 22 P P 05 39 08.3 -1.3
ILAR **Eielson Array** 81.95 22 P P 05 39 07.8 -1.9
comp=Z,25nm,0.9s,baz=254,slow=5.1,SNR=124
ILAR PKKPbc PKKPbc 05 57 40.4 -2.5
comp=Z,1.7nm,0.7s,baz=344,slow=1.6,SNR=16
ILAR PKPPKP P'P'df 06 05 42.9 -0.5
comp=Z,0.7nm,1.0s,baz=168,slow=1.4,SNR=4.7
ILAR LR LR 06 10 59.7
comp=Z,1μm,21.9s,baz=223,slow=32
comp=Z,25nm,0.9s
THN **Thein Dam** 82.02 304⇑ *i*P P 05 39 10.8 +0.1
COLD **Coldfoot** 82.06 19 P P 05 39 10.7 +0.4
baz=237,SNR=20
YAH **Yahtse** 82.08 27 IAMs_20 IAMs_20 06 11 46.5
comp=Z,3μm,21.0s
KPKS **Kokpek** 82.10 315*c* *i*P P 05 39 11.6 +0.5
KPKS pmax pmax
comp=Z,260nm,2.4s
KPKS **Kokpek** 82.10 315⇑ *i*P P 05 39 11.7 +0.5
comp=Z,260nm,2.4s,baz=315
H24K **Noodor Dome** 82.12 21 P P 05 39 10.5 -0.2
baz=240,SNR=11
SATY **Saty** 82.20 314*c* *i*P P 05 39 12.4 +0.7
SATY *e*S S 05 49 25.1 +2.3
SATY pmax pmax
comp=Z,270nm,2.4s
SATY smax smax
comp=E,104nm,3.6s
SATY **Saty** 82.20 314⇑ *i*P P 05 39 12.4 +0.7
comp=E,270nm,2.4s,baz=314
SATY *e*S S 05 49 25.1 +2.3
comp=E,104nm,3.6s,baz=314
ZHN **Zhinishke** 82.20 315 *e*P P 05 39 10.9 -0.8
ZHN **Zhinishke** 82.20 315 *e*P P 05 39 10.9 -0.8
baz=314
RIDG **Independent Ri** 82.24 23 IAMs_20 IAMs_20 06 19 15.6
comp=Z,2μm,18.0s
RIDG **Independent Ri** 82.24 23 P P 05 39 11.1 -0.2
baz=243
TABL **Table Mountain** 82.39 27 IAMs_20 IAMs_20 06 12 06.6
comp=Z,3μm,21.0s
M26K **Nabesna, AK** 82.39 25 P P 05 39 12.0 -0.2
baz=244,SNR=11
BARN **Barnard Glacie** 82.41 26 IAMs_20 IAMs_20 06 10 04.1
comp=Z,3μm,22.0s
J25K **Salcha River,** 82.44 22 IAMs_20 IAMs_20 06 10 25.0
comp=Z,3μm,22.0s
J25K **Salcha River,** 82.44 22 P P 05 39 12.0 -0.5
baz=242
CTG **Chitna Glacier** 82.51 27 P P 05 39 13.0 +0.1
baz=246,SNR=22
CTGM **Chitina Glacie** 82.51 27 IAMs_20 IAMs_20 06 09 29.9
comp=Z,3μm,22.0s
L26K **Log Cabin Wild** 82.52 24 P P 05 39 12.4 -0.4
baz=244,SNR=21
LOGN **Logan Glacier** 82.60 27 IAMs_20 IAMs_20 06 09 09.4
comp=Z,2μm,22.0s
PINM **Pinnacle** 82.66 28 P P 05 39 13.6 0.0
baz=247
TDK **Taldyqorghan** 82.67 316*c* *i*P P 05 39 14.5 +0.6
TDK *e*S S 05 49 25.9 -1.4
TDK **Taldyqorghan** 82.67 316⇑ *i*P P 05 39 14.5 +0.6
baz=316
TDK *e*S S 05 49 25.9 -1.4
baz=316
SCRK **Sand Creek** 82.69 23 IAMs_20 IAMs_20 06 19 28.4
comp=Z,2μm,19.0s
SCRK **Sand Creek** 82.69 23 P P 05 39 12.9 -0.9
baz=243,SNR=24
G24K **Hadweenzic Riv** 82.70 20 P P 05 39 13.6 0.0
baz=240,SNR=24
E23K **Chandalar** 82.70 19 P P 05 39 14.0 +0.3
baz=238,SNR=30
JMU **Jammu** 82.75 304⇑ *i*P P 05 39 15.0 +0.5
PRP **Porcupine Dome** 82.81 22 P P 05 39 11.8 -2.6
PRP IAMs_20 IAMs_20 06 12 00.8
comp=Z,2μm,21.0s
PRP **Porcupine Dome** 82.81 22 P P 05 39 13.1 -1.3
baz=242,SNR=7.4
M27K **Edge Creek, AK** 82.85 25 IAMs_20 IAMs_20 06 11 10.8
comp=Z,3μm,21.0s
M27K **Edge Creek, AK** 82.85 25 P P 05 39 15.0 +0.4
baz=245,SNR=65
D23K **Nanushuk River** 82.87 18 P P 05 39 15.4 +0.9
baz=236,SNR=33
BCPM **Bancas Point** 82.89 28 IAMs_20 IAMs_20 06 10 05.0
comp=Z,2μm,22.0s
PNL **Peninsula** 82.89 28 P P 05 39 15.1 +0.3
baz=248,SNR=5.3
PNL **Peninsula** 82.89 28 P P 05 39 15.3 +0.5
O28M **Mount Upton** 82.95 27 P P 05 39 15.5 +0.1
baz=247,SNR=9.0
F24K **Squaw Lake** 82.98 19 P P 05 39 15.7 +0.5
baz=239,SNR=38
TOLK **Toolik Lake Re** 83.03 18 IAMs_20 IAMs_20 06 11 32.3
comp=Z,2μm,22.0s
TOLK **Toolik Lake Re** 83.03 18 P P 05 39 15.6 +0.3
baz=238,SNR=8.3
H25K **Birch Creek** 83.07 21 P P 05 39 15.5 0.0
baz=241,SNR=9.1
E24K **Your Creek** 83.07 19 P P 05 39 15.2 -0.4
baz=239,SNR=9.9
J26L **Joseph Creek** 83.09 23 P P 05 39 15.3 -0.4
J26L IAMs_20 IAMs_20 06 17 49.0
comp=Z,2μm,20.0s
J26L **Joseph Creek** 83.09 23 P P 05 39 15.5 -0.3
baz=244,SNR=17
L27K **Beaver Creek,** 83.16 25 P P 05 39 16.2 0.0
L27K IAmb IAmb 05 39 41.8
comp=Z,84nm,1.4s
L27K IAMs_20 IAMs_20 06 10 20.1
comp=Z,3μm,22.0s
L27K **Beaver Creek,** 83.16 25 P P 05 39 16.3 +0.1
baz=245,SNR=29
BCAR **Beaver Creek A** 83.18 25 P P 05 39 16.1 -0.1
MDOK **Medeo** 83.19 314 *i*P P 05 39 17.5 +0.7
MDOK *e*S S 05 49 37.1 +4.1
MDOK **Medeo** 83.19 314 *i*P P 05 39 17.6 +0.7
baz=314
MDOK *e*S S 05 49 37.1 +4.1
baz=314
KSH **Kashi** 83.20 311 P P 05 39 19.8 +2.8
KSH pP sP 05 39 36.5 -2.6
KSH S S 05 49 35.8 +2.6
KSH pmax pmax
comp=Z,160nm,1.2s
KSH pmax pmax
comp=Z,3μm,5.3s
KSH LR LR
comp=Z,710nm,18.6s
KSH LR LR
comp=Z,2μm,19.2s
KSH LR LR
comp=Z,2μm,21.3s
G25K **Bearman Lake** 83.21 20 P P 05 39 16.4 +0.2
baz=241,SNR=24
YUK3 **Moose Creek** 83.22 26 P P 05 39 16.8 +0.1
baz=247,SNR=18
KNDC **Almaty** 83.26 314 P P 05 39 18.1 +1.0
AAA **Alma-Ata** 83.30 314 *e*P P 05 39 17.6 +0.3
AAA **Alma-Ata** 83.30 314 *e*P P 05 39 17.7 +0.3
baz=314
BVCY **Beaver Creek** 83.30 25 P P 05 39 17.1 +0.2
baz=246,SNR=19
YUK8 **Steele Glacier** 83.34 27 P P 05 39 17.8 +0.4
baz=248,SNR=11
C23K **Itkillik River** 83.37 17 P P 05 39 17.5 +0.5
baz=236,SNR=19
FYU **Fort Yukon** 83.42 21 P P 05 39 17.5 +0.2
FYU IAmb IAmb 05 39 57.9
comp=Z,255nm,1.8s
K27K **Chicken** 83.47 24 P P 05 39 18.9 +1.3
baz=245
O29M **Mount Kennedy** 83.51 28 P P 05 39 18.5 +0.4
baz=249,SNR=11
D24K **Happy Valley** 83.53 18 P P 05 39 18.3 +0.5
baz=238
ULHL **Ulahol** 83.57 313 P P 05 39 20.2 +1.3
SNR=33
I26K **Coal Creek Min** 83.60 22 IAMs_20 IAMs_20 06 11 33.6
comp=Z,3μm,22.0s
I26K **Coal Creek Min** 83.60 22 P P 05 39 17.9 -0.4
baz=244
P29M **Windy Craggy** 83.66 29 P P 05 39 19.1 +0.3
baz=250,SNR=6.8
F25K **Christian Rive** 83.77 20 P P 05 39 19.6 +0.5
baz=241,SNR=17
S31K **Pelican** 83.83 30 P P 05 39 19.9 +0.3
baz=251
YUK6 **Outpost Mounta** 83.84 27 P P 05 39 20.1 +0.2
baz=249,SNR=5.4
KUU **Kurty** 83.85 315*c* *i*P P 05 39 20.5 +0.4
KUU *e*S S 05 49 36.3 -3.1
KUU **Kurty** 83.85 315⇑ *i*P P 05 39 20.6 +0.4
baz=315
KUU *e*S S 05 49 36.3 -3.1
baz=315
YUK4 **Talbot Arm** 83.86 27 P P 05 39 20.9 +1.0
baz=249,SNR=8.6
C24K **Franklin Bluff** 83.87 17 P P 05 39 19.9 +0.4
baz=238
KURK **Kurchatov** 83.97 322 P P 05 39 20.8 +0.4
KURK **Kurchatov** 83.97 322 P P 05 39 20.8 +0.4
KURK pmax pmax
comp=Z,334nm,1.0s
KURK **Kurchatov** 83.97 322 P P 05 39 20.1 -0.3
KURK P P 05 39 20.1 -0.3
KURBB **Kurchatov Arra** 84.00 322 P P 05 39 20.6 0.0
comp=Z,138nm,0.8s,baz=109,slow=4.2,SNR=720
KURBB PKKPbc PKKPbc 05 57 36.8 -0.7
comp=Z,0.9nm,0.6s,baz=297,slow=3.1,SNR=4.9
KURBB PKPPKP P'P'df 06 05 41.6 +0.9
comp=Z,1.3nm,0.2s,baz=278,slow=3.4,SNR=11
KURBB LR LR 06 16 23.5
comp=Z,895nm,21.5s,baz=107,slow=35
comp=Z,138nm,0.8s
KURBB **Kurchatov Arra** 84.00 322 P P 05 39 20.2 -0.4
SIT **Sitka** 84.01 31 P P 05 39 20.3 -0.2
baz=252
E25K **Arctic Village** 84.04 19 P P 05 39 20.8 +0.2
baz=241,SNR=11
BMAR **Burnt Mountain** 84.05 20 P P 05 39 21.1 +0.5
G26K **Porcupine Rive** 84.11 21 P P 05 39 21.4 +0.6
baz=243,SNR=69
EGAK **Eagle** 84.14 23 P P 05 39 20.6 -0.4
EGAK IAmb IAmb 05 39 59.9
comp=Z,49nm,1.0s
EGAK IAMs_20 IAMs_20 06 18 17.9
comp=Z,2μm,19.0s
EGAK **Eagle** 84.14 23 P P 05 39 21.0 -0.1
baz=246,SNR=22
TKM2 **Tokmak 2** 84.18 314 P P 05 39 23.0 +1.0
SNR=273
TKM2 **Tokmak 2** 84.18 314 *i*P P 05 39 22.8 +0.8
TKM2 pmax pmax
comp=Z,288nm,0.8s
HYT **Haines Junctio** 84.19 27 P P 05 39 21.9 +0.3
HYT IAmb IAmb 05 39 59.1
comp=Z,86nm,1.0s
HYT **Haines Junctio** 84.19 27 P P 05 39 22.1 +0.6
baz=250,SNR=23
P30M **Million Dollar** 84.20 28 P P 05 39 21.8 +0.3
baz=250
PLBC **Pleasant Camp** 84.26 29 P P 05 39 21.7 -0.1
baz=251
NIL **Nilore** 84.27 304 P P 05 39 22.6 +0.2
NIL **Nilore** 84.27 304 IAMs_20 IAMs_20 06 16 03.2
comp=Z,2μm,22.0s
NIL **Nilore** 84.27 304 P P 05 39 22.6 +0.2
NIL pmax pmax
comp=Z,224nm,0.9s
NIL MLR MLR
comp=Z,2μm,22.0s
NIL **Nilore** 84.27 304 P P 05 39 22.6 +0.2
NIL P P 05 39 22.6 +0.2
I27K **Kandik River** 84.31 22 P P 05 39 21.8 -0.1
baz=245,SNR=25
F26K **Sheenjek River** 84.32 20 P P 05 39 22.5 +0.6
baz=243,SNR=19
M29M **Somme Creek** 84.35 26 P P 05 39 22.5 +0.2
baz=248,SNR=17
D25K **Kavik River** 84.37 18 P P 05 39 22.0 -0.2
baz=241,SNR=19
H02S1 **DAWSON INLET T** 84.46 36 T T 07 12 48.8
SNR=747
S32K **Kilisnoo** 84.52 31 P P 05 39 23.2 +0.1
baz=252
DAWY **Dawson** 84.56 24 P P 05 39 23.3 0.0
DAWY IAmb IAmb 05 39 49.2
comp=Z,71nm,1.2s
DAWY **Dawson** 84.56 24 P P 05 39 23.5 +0.2
baz=248,SNR=40
KBK **Karagaybulak** 84.59 313 P P 05 39 25.1 +1.0
SNR=144
N30M **Aishikik Lake** 84.60 27 P P 05 39 23.7 +0.2
baz=250,SNR=5.6
H27K **Steamboat Moun** 84.61 22 P P 05 39 23.8 +0.3
baz=245,SNR=31
CRAG **Craig** 84.71 33 P P 05 39 24.3 +0.2
baz=254
BESE **Bessie Mountai** 84.72 30 P P 05 39 24.4 +0.2
BESE IAmb IAmb 05 39 50.1
comp=Z,96nm,1.2s
L29M **L29M** 84.73 25 P P 05 39 24.5 +0.3
baz=249,SNR=23
SKAG **Skagway** 84.76 29 P P 05 39 24.5 +0.2
SKAG IAmb IAmb 05 39 50.2
comp=Z,57nm,1.2s
SKAG **Skagway** 84.76 29 P P 05 39 24.6 +0.4
baz=252
R32K **Eaglecrest** 84.80 30 P P 05 39 24.9 +0.4
baz=252
CHMS **Chumysh** 84.80 314 P P 05 39 25.9 +0.9
SNR=223
CHMS **Chumysh** 84.80 314 *i*P P 05 39 25.6 +0.7
CHMS pmax pmax
comp=Z,531nm,0.9s
G27K **Doyon Strip** 84.80 21 P P 05 39 24.7 +0.3
baz=245,SNR=19
UCH **Uchtor** 84.82 313 P P 05 39 27.2 +1.7
SNR=408
O30N **Mendenhall** 84.83 28 P P 05 39 24.5 -0.2
baz=251,SNR=11
U33K **Whale Pass** 84.90 33 P P 05 39 25.4 +0.4
baz=254
AAK **Ala-Archa** 84.92 313 P P 05 39 26.8 +1.1
SNR=164
AAK **Ala-Archa** 84.92 313 LR LR 06 17 18.4
comp=Z,1μm,21.9s,baz=101,slow=36
AAK **Ala-Archa** 84.92 313 P P 05 39 26.0 +0.4
AAK **Ala-Archa** 84.92 313*ce*P P 05 39 26.6 +0.9
AAK pmax pmax
comp=Z,342nm,0.8s
AAK **Ala-Archa** 84.92 313 P P 05 39 26.3 +0.7
AAK P P 05 39 26.3 +0.7
AAK **Ala-Archa** 84.92 313 *i*P P 05 39 26.6 +0.9
SNR=184
SGDS **Sogindy** 84.98 314*c* *i*P P 05 39 26.2 +0.4
SGDS pmax pmax
comp=Z,157nm,1.1s
SGDS **Sogindy** 84.98 314⇑ *i*P P 05 39 26.2 +0.4
comp=Z,157nm,1.1s,baz=314
USP **Ospenovka** 85.03 314 P P 05 39 27.1 +1.0
SNR=22
C26K **Camden Bay** 85.11 18 P P 05 39 26.6 +0.8
baz=242,SNR=34
M30M **Minto, Yukon** 85.12 26 P P 05 39 26.3 +0.2
M30M IAmb IAmb 05 40 09.6
comp=Z,150nm,1.9s
M30M IAMs_20 IAMs_20 06 16 14.8
comp=Z,2μm,20.0s
M30M **Minto, Yukon** 85.12 26 P P 05 39 26.3 +0.2
baz=250,SNR=17
J29M **Klondike Camp** 85.19 24 P P 05 39 26.8 +0.3
J29M IAmb IAmb 05 39 52.7
comp=Z,64nm,1.1s
J29M **Klondike Camp** 85.19 24 P P 05 39 26.7 +0.3
baz=249,SNR=5.6
N31M **Braeburn, Yuko** 85.20 27 P P 05 39 27.0 +0.5
N31M IAmb IAmb 05 39 52.7
comp=Z,115nm,1.2s
N31M IAMs_20 IAMs_20 06 12 18.2
comp=Z,2μm,20.0s
N31M **Braeburn, Yuko** 85.20 27 P P 05 39 26.7 +0.2
baz=251,SNR=13
QSPA **South Pole Qui** 85.22 180 P P 05 39 27.2 +0.5
comp=Z,42nm,0.6s,baz=277,slow=0.7,SNR=62
QSPA PKKPbc PKKPbc 05 57 32.6 -3.1
comp=Z,4.7nm,0.9s,baz=270,slow=0.6,SNR=11
QSPA LR LR 06 16 35.5
comp=Z,795nm,19.6s,baz=1.5,slow=35
comp=Z,42nm,0.6s
QSPA **South Pole Qui** 85.22 180 P P 05 39 27.5 +0.8
K29M **Barlow Dome** 85.25 25 P P 05 39 26.7 -0.1
baz=249,SNR=45
JASL **Jaisalmer** 85.28 297 *e*P P 05 39 27.2 -0.4
C27K **Jago River** 85.34 18 P P 05 39 27.5 +0.5
baz=243,SNR=23
WHY **Whitehorse** 85.36 28 P P 05 39 26.9 -0.5
WHY IAmb IAmb 05 39 53.2
comp=Z,101nm,1.6s
WHY **Whitehorse** 85.36 28 P P 05 39 27.4 0.0
baz=252,SNR=5.8
WRAK **Wrangell Islan** 85.39 32 P P 05 39 27.4 -0.1
WRAK IAmb IAmb 05 39 53.3
comp=Z,108nm,1.4s
WRAK **Wrangell Islan** 85.39 32 IAMs_20 IAMs_20 06 11 39.5
comp=Z,2μm,21.0s
WRAK **Wrangell Islan** 85.39 32 P P 05 39 27.5 +0.1
baz=254
E27K **Coleen River** 85.40 20 P P 05 39 27.9 +0.5
baz=245,SNR=35
AML **Almayashu** 85.40 313 P P 05 39 29.8 +1.4
SNR=35
EKS2 **Erkin-Say** 85.44 313 P P 05 39 29.6 +1.3
SNR=265
I29M **Ogilvie Camp,** 85.48 23 P P 05 39 27.3 -0.6
I29M IAmb IAmb 05 39 53.2
comp=Z,68nm,1.2s
I29M **Ogilvie Camp,** 85.48 23 P P 05 39 27.2 -0.6
baz=248,SNR=12
V35K **Ketchikan** 85.50 34 P P 05 39 28.0 -0.1
baz=255
P32M **Atlin** 85.59 29 P P 05 39 28.5 0.0
baz=253

BTLS Baital 85.70 316 *c iP* **P 05 39 29.9 +0.6**
BTLS *eS* **SKSac 05 49 46.1 -4.1**
BTLS pmax pmax
comp=Z,265nm,1.1s
BTLS Baital 85.70 316⇑ *iP* **P 05 39 29.9 +0.6**
comp=Z,264nm,1.1s,baz=316
BTLS *eS* **SKSac 05 49 46.2 -4.0**
baz=316
MAW Mawson 85.78 203 P **P 05 39 29.8 +0.6**
comp=Z,17nm,0.6s,baz=99,slow=6.2,SNR=40
MAW LR LR 06 14 45.1
comp=Z,2μm,20.9s,baz=85,slow=33
comp=Z,17nm,0.6s
MAW Mawson 85.78 203 P **P 05 39 30.0 +0.8**
baz=86,SNR=14
MAW Mawson 85.78 203 P **P 05 39 29.9 +0.7**
MAYO Mayo, Yukon 85.85 25 P **P 05 39 30.2 +0.6**
MAYO Mayo, Yukon 85.85 25 P **P 05 39 30.3 +0.6**
baz=251,SNR=14
NRIK Noril'sk 86.03 341 P **P 05 39 30.2 -0.2**
comp=Z,194nm,0.6s,baz=113,slow=4.7,SNR=278
NRIK LR LR 06 15 54.1
comp=Z,2μm,22.0s,baz=111,slow=34
comp=Z,194nm,0.6s
NRIK Noril'sk 86.03 341 *cePP* **P 05 39 29.2 -1.2**
NRIK pmax pmax
comp=Z,248nm,0.8s
M31M Drury Creek, Y 86.06 27 P **P 05 39 30.4 -0.3**
baz=252,SNR=14
Q32M Nakina River 86.12 30 P **P 05 39 31.8 +0.5**
baz=254
P33M Teslin, Yukon 86.20 29 IAMs_20 IAMs_20 06 11 09.6
comp=Z,3μm,21.0s
P33M Teslin, Yukon 86.20 29 P **P 05 39 31.2 -0.3**
baz=254,SNR=7.5
N32M Quiet Lake 86.34 28 P **P 05 39 32.4 +0.2**
baz=253,SNR=21
S34M Telegraph Cree 86.42 31 P **P 05 39 33.1 +0.5**
baz=255,SNR=11
EPYK Eagle Plains 86.45 22 P **P 05 39 32.5 -0.1**
baz=250,SNR=42
FARO Faro, Yukon 86.53 27 P **P 05 39 32.5 -0.5**
FARO IAmb IAmb 05 39 58.5
comp=Z,80nm,1.3s
FARO Faro, Yukon 86.53 27 P **P 05 39 32.8 -0.2**
baz=253,SNR=20
T35M Bob Quinn 86.66 32 P **P 05 39 34.1 +0.3**
baz=256
BBB Bella Bella 86.80 37 LR LR 06 13 59.7
comp=Z,606nm,19.4s,baz=268,slow=33
G30M tAoh Zraii Nji 86.85 22 P **P 05 39 33.8 -0.8**
baz=250,SNR=25
R33M Jennings River 86.88 30 P **P 05 39 34.7 -0.3**
baz=255,SNR=6.1
DLBC Dease Lake 87.12 31 LR LR 06 14 05.5
comp=Z,2μm,19.4s,baz=272,slow=32
DLBC Dease Lake 87.12 31 P **P 05 39 36.9 +0.8**
baz=256,SNR=7.0
DZA Taraz 87.25 313 *eP* **P 05 39 35.4 -1.6**
DZA Taraz 87.25 313 *eP* **P 05 39 35.4 -1.6**
baz=313
GAR Garm 87.44 309 P **P 05 39 38.3 +0.2**
OTUK Ortayu 87.44 319 P **P 05 39 37.5 -0.3**
BRZS Berezniki 87.52 320 *c iP* **P 05 39 37.2 -0.9**
BRZS pmax pmax
comp=Z,53nm,1.0s
BRZS Berezniki 87.52 320⇑ *iP* **P 05 39 37.2 -0.9**
comp=Z,53nm,1.0s,baz=320
MMPY Sheldon Lake, 87.57 27 P **P 05 39 38.2 +0.1**
baz=255,SNR=20
JCC Jacoby Creek, 87.60 49 IAMs_20 IAMs_20 06 11 29.0
comp=Z,3μm,22.0s
KBL Kabul 87.86 305 P **P 05 39 39.0 -1.4**
KBL P **P 05 39 39.0 -1.4**
SNR=24
KK31 Karatay Array 87.88 313 *i P* **P 05 39 39.7 -0.3**
KKAR Karatay Array 87.88 313 P **P 05 39 40.3 +0.3**
KKAR Karatay Array 87.88 313 P **P 05 39 40.3 +0.3**
F31M Tsiigehtchic 87.91 22 P **P 05 39 39.0 -0.5**
baz=253
IUG Iuzhnay 88.09 312 *c iP* **P 05 39 41.4 +0.3**
IUG *eS* **SKSac 05 50 02.4 -2.9**
IUG Iuzhnay 88.09 312⇑ *iP* **P 05 39 41.5 +0.3**
baz=312
IUG *eS* **SKSac 05 50 02.4 -2.9**
baz=312
WTLY Watson Lake, Y 88.12 29 P **P 05 39 40.9 +0.1**
baz=257,SNR=28
INK Inuvik 88.25 21 P **P 05 39 40.2 -0.9**
comp=Z,37nm,1.1s,baz=237,slow=5.0,SNR=27
INK PKKPbc **PKKPbc 05 57 25.7 -2.2**
comp=Z,3.9nm,0.7s,baz=43,slow=4.3,SNR=8.0
INK LR LR 06 15 39.4
comp=Z,2μm,21.5s,baz=241,slow=33
comp=Z,37nm,1.1s
INK Inuvik 88.25 21 P **P 05 39 40.2 -0.9**
baz=253
TAS Tashkent 88.53 311 P **P 05 39 44.0 +0.9**
HUMO Hull Mountain 88.64 47 IAMs_20 IAMs_20 06 11 15.5
comp=Z,2μm,21.0s
COR Corvallis 88.66 45 IAMs_20 IAMs_20 06 11 25.8
comp=Z,2μm,21.0s
NLWA Neilton Lookou 88.67 42 IAMs_20 IAMs_20 06 11 26.8
comp=Z,2μm,20.0s
TGTN Hyland Airport 88.68 28 P **P 05 39 44.3 +0.9**
baz=258,SNR=7.5
LIRD Liard River Hi 89.32 30 P **P 05 39 46.5 +0.1**
baz=260
ORV Oroville 89.36 50 IAMs_20 IAMs_20 06 11 13.6
comp=Z,3μm,22.0s
BVA0 Borovoye Array 89.43 323 *i P* **P 05 39 46.3 -0.8**
BVAR Borovoye Array 89.43 323 P **P 05 39 46.5 -0.6**
comp=Z,238nm,0.7s,baz=101,slow=6.2,SNR=1257
BVAR PP **PP 05 43 20.5 +1.7**
comp=Z,8.1nm,0.8s,baz=80,slow=9.3,SNR=4.3
BVAR PKKPbc **PKKPbc 05 57 23.0 -1.5**
comp=Z,0.6nm,0.6s,baz=289,slow=5.7,SNR=4.0
BVAR LR LR 06 22 14.4
comp=Z,802nm,18.4s,baz=97,slow=37
comp=Z,238nm,0.7s
BRVK Borovoye 89.50 323 P **P 05 39 46.9 -0.4**
BRVK Borovoye 89.50 323 P **P 05 39 46.9 -0.4**
BRVK pmax pmax
comp=Z,345nm,0.9s
BRVK MLR MLR
comp=Z,1μm,21.0s
BRVK Borovoye 89.50 323 P **P 05 39 46.3 -1.0**
BRVK P **P 05 39 46.3 -1.0**
SMMC Simmler 90.10 55 P **P 05 39 50.7 +0.1**
baz=264
PKM Mcpherson Peak 90.20 55 P **P 05 39 51.8 +0.4**
baz=264
KOTAN Kotaneelee Air 90.46 30 P **P 05 39 51.7 0.0**
baz=261
MOD Modoc Plateau 90.52 48 IAMs_20 IAMs_20 06 12 46.2
comp=Z,3μm,22.0s
VES Vestal, Richgr 90.89 54 P **P 05 39 53.7 -0.5**
baz=265
ARVC Arvin 91.03 55 P **P 05 39 55.5 +0.6**
baz=265
ISA Isabella, Lake 91.37 55 P **P 05 39 56.7 +0.1**
baz=265
PASC Pasadena Art C 91.48 56 IAMs_20 IAMs_20 06 12 31.2
comp=Z,2μm,19.0s
EDW2 Edwards Air Fo 91.69 55 P **P 05 39 57.5 -0.6**
baz=266,SNR=7.0
NVAR Mina Array Bea 91.73 52 P **P 05 39 57.5 -0.9**
comp=Z,3.3nm,0.9s,baz=260,slow=6.0,SNR=20
comp=Z,3.3nm,0.9s
CWC Cottonwood Cre 91.75 54 P **P 05 39 58.3 -0.1**
baz=266
C36M Paulatuk 91.83 21 P **P 05 39 56.5 -1.3**
baz=262
A36M Sachs Harbour 91.86 18 P **P 05 39 57.1 -0.8**
baz=260
BFSC Mount Baldy Ra 91.92 56 P **P 05 39 58.2 -1.0**
baz=266
LRMC Laurel Mtn Rad 92.00 55 P **P 05 39 58.8 -0.8**
baz=266
MPMC Manual Prospec 92.19 54 P **P 05 39 59.7 -0.8**
baz=266,SNR=11
MURC Murrieta 92.26 57 P **P 05 39 59.9 -0.8**
baz=266
GRAC Grapevine Rang 92.36 53 P **P 05 40 00.4 -0.8**
baz=266,SNR=5.2
BBRC Big Bear Solar 92.53 56 P **P 05 40 01.7 -0.5**
baz=266
GSC Goldstone, Bar 92.70 55 P **P 05 40 02.6 -0.2**
baz=266
FURC Furnace Creek, 92.73 54 P **P 05 40 03.0 +0.3**
baz=266,SNR=12
MONP2 Monument Peak 92.85 57 P **P 05 40 03.9 +0.2**
baz=266
PFO Pinyon Flats O 92.87 57 P **P 05 40 03.9 +0.2**
baz=266,SNR=5.7
TPFO Pinon Flats 92.87 57 P **P 05 40 03.5 -0.1**
baz=266,SNR=6.1
BMO Blue Mountains 92.94 45 IAMs_20 IAMs_20 06 14 23.1
comp=Z,2μm,21.0s
HEC Hector,Ludlow 93.05 55 P **P 05 40 04.1 -0.3**
baz=266
IKP In-Ko-Pah, Jac 93.10 58 P **P 05 40 04.7 0.0**
baz=266
SHOC Shoshone, Teco 93.17 54 P **P 05 40 05.0 +0.2**
baz=266,SNR=5.2
TPNV Topopah Spring 93.25 53 IAMs_20 IAMs_20 06 13 33.9
comp=Z,2μm,21.0s
TPNV Topopah Spring 93.25 53 P **P 05 40 05.5 +0.1**
baz=267,SNR=7.3
BELC Belle Mtn. Jos 93.28 56 P **P 05 40 05.9 +0.3**
baz=267,SNR=5.3
NEW Newport 93.28 42 P **P 05 40 04.3 -0.7**
comp=Z,5.8nm,1.0s,baz=17,slow=3.4,SNR=8.8
NEW LR LR 06 14 43.9
comp=Z,1μm,21.8s,baz=274,slow=31
comp=Z,5.8nm,1.0s
NEW Newport 93.28 42 P **P 05 40 03.3 -1.8**
NEW IAMs_20 IAMs_20 06 19 01.7
comp=Z,2μm,19.0s
NEW Newport 93.28 42 P **P 05 40 03.3 -1.8**
NEW Newport 93.28 42 P **P 05 40 04.4 -0.7**
baz=267,SNR=6.6
SWSC Sam W. Stewart 93.38 57 P **P 05 40 06.4 +0.6**
baz=267,SNR=5.9
TUQ Turquoise Moun 93.42 55 P **P 05 40 05.8 -0.4**
baz=267,SNR=6.8
GMRC Granite Mounta 93.60 56 P **P 05 40 06.8 -0.2**
baz=267,SNR=7.9
BC3 Big Chuckawall 93.71 57 P **P 05 40 08.0 +0.5**
baz=267,SNR=5.9
R11A Troy Canyon, C 93.86 52 P **P 05 40 07.6 -0.6**
baz=267,SNR=7.3
NGCH Negor - Chabah 93.87 295 P **P 05 40 07.9 -0.3**
SNR=5.3
PLID Pearl Lake 93.88 45 IAMs_20 IAMs_20 06 14 30.9
comp=Z,2μm,22.0s
IRM Iron Mountain 93.99 56 P **P 05 40 08.9 +0.2**
baz=267,SNR=9.4
GLA Glamis 94.20 57 P **P 05 40 10.1 +0.4**
baz=267
RPN Rapa Nui 94.48 118 LR LR 06 16 10.5
comp=Z,996nm,20.2s,baz=268,slow=31
PDMCI Parker Dam,Lak 94.83 56 P **P 05 40 12.7 +0.2**
baz=268
HLID Hailey 94.96 47 IAMs_20 IAMs_20 06 15 44.5
comp=Z,2μm,22.0s
HLID Hailey 94.96 47 P **P 05 40 13.1 0.0**
baz=268
YKA Yellowknife Ar 95.18 28 P **P 05 40 12.6 -0.9**
comp=Z,6.8nm,0.9s,baz=267,slow=4.8,SNR=22
YKA PKiKP **PKiKP 05 44 54.5 +0.2**
comp=Z,0.5nm,0.6s,baz=248,slow=1.5,SNR=5.1
YKA PKKPbc **PKKPdf 05 57 07.0 -2.7**
comp=Z,1.1nm,0.8s,baz=87,slow=2.6,SNR=6.0
YKA LR LR 06 17 28.3
comp=Z,2μm,21.5s,baz=277,slow=32
comp=Z,6.8nm,0.9s
YKA Yellowknife Ar 95.18 28 P **P 05 40 12.7 -0.7**
YKA Yellowknife Ar 95.18 28 P **P 05 40 12.7 -0.7**
SVE Sverdlovsk 95.34 327 *d iP* **P 05 40 13.2 -1.1**
SVE *eS* **SKSac 05 50 44.4 -0.9**
SVE pmax pmax
comp=Z,163nm,1.7s
SVE MLR MLR
comp=Z,2μm,19.0s
MSO Missoula 95.38 44 P **P 05 40 14.9 +0.1**
baz=269
AB31 Akbulak array 95.69 319 *i P* **P 05 40 14.2 -1.8**
ABKAR Akbulak array 95.69 319 P **P 05 40 14.8 -1.2**
WBK Wadi Bani Khal 95.70 292 P **P 05 40 16.1 -0.7**
SNR=10.0
214A Organ Pipe Nat 95.86 58 P **P 05 40 17.0 -0.3**
baz=268
WSAR Wadi Sarin 96.04 293 LR LR 06 23 46.3
comp=Z,470nm,21.9s,baz=114,slow=36
WSAR Wadi Sarin 96.04 293 P **P 05 40 17.5 -0.7**
SNR=9.9
DUG Dugway, Tooele 96.07 50 IAMs_20 IAMs_20 06 15 29.2
comp=Z,2μm,22.0s
DUG Dugway, Tooele 96.07 50 P **P 05 40 18.0 -0.2**
baz=269
ARU Arti 96.49 326 LR LR 06 24 39.8
comp=Z,1μm,21.1s,baz=83,slow=36
ARU Arti 96.49 326 *c iP* **P 05 40 18.0 -1.5**
ARU *PP **pP** 05 40 34.6 -0.4
ARU 05 44 13.6
ARU S **SKSac 05 50 50.2 -1.2**
ARU SP **SP 05 53 04.0 +8.6**
ARU PS PS 05 53 39.2 +36
ARU SS SS 05 58 22.2 +12
ARU pmax pmax
comp=Z,147nm,1.0s
JMDO Jabal Madar 96.49 292 P **P 05 40 19.1 -1.2**
BIDO Bidbid 96.52 293 P **P 05 40 19.4 -1.0**
SNR=15
MHTO MHTO 96.56 290 P **P 05 40 19.3 -1.3**
SNR=10.0
SMDO Samad 96.57 293 P **P 05 40 20.0 -0.8**
JASK Jask - Hormozg 96.84 295 P **P 05 40 22.1 +0.3**
SNR=8.5
GEYT Alibeck 96.90 307 P **P 05 40 21.4 -0.5**
comp=Z,16nm,1.0s,baz=166,slow=0.6,SNR=22
GEYT PP **PP 05 44 19.7 +1.9**
comp=Z,3.7nm,0.8s,baz=93,slow=3.0,SNR=5.6
GEYT LR LR 06 25 20.4
comp=Z,810nm,21.6s,baz=102,slow=36
comp=Z,16nm,1.0s
GYA0 ALIBECK ARRAY 96.90 307 P **P 05 40 20.5 -1.4**
DQM DQM 96.91 289 P **P 05 40 21.3 -0.9**
BOZ Bozeman (W) 96.97 45 IAMs_20 IAMs_20 06 16 17.7
comp=Z,2μm,22.0s
HWUT Hardware Ranch 97.03 49 IAMs_20 IAMs_20 06 19 58.5
comp=Z,2μm,19.0s
WUAZ Wupatki 97.14 55 IAMs_20 IAMs_20 06 15 48.9
comp=Z,2μm,21.0s
WUAZ Wupatki 97.14 55 P Pdif 05 40 23.5 +0.3
baz=269
HOQ Hoqain 97.27 293 P **P 05 40 22.9 -0.9**
SNR=15
BSY Bisya 97.34 292 P **P 05 40 22.9 -1.3**
SNR=6.6
AHID Auburn Hatcher 97.37 48 IAMs_20 IAMs_20 06 19 11.5
comp=Z,2μm,20.0s
BELA Belgrano 2 97.39 178 P Pdif 05 40 23.6 +0.4
BELA IAmb IAmb 05 40 24.8
comp=Z,35nm,1.5s
IMW Indian Meadow 97.48 46 IAMs_20 IAMs_20 06 16 54.2
comp=Z,2μm,22.0s
TUC Tucson 97.58 58 IAMs_20 IAMs_20 06 23 15.0
comp=Z,1μm,19.0s
TUC Tucson 97.58 58 P Pdif 05 40 25.5 +0.3
baz=269
FLWY Flagg Ranch 97.65 46 IAMs_20 IAMs_20 06 18 28.7
comp=Z,1μm,22.0s
H17A Grant Village 97.73 46 P **P 05 40 25.5 -0.3**
baz=271
LPIG La Paz 97.83 66 LR LR 06 21 25.5
comp=Z,1μm,18.1s,baz=280,slow=34
ARQ Araqi 97.98 293 P **P 05 40 26.0 -1.1**
SNR=8.6
SOHO SOHO 98.00 294 P **P 05 40 25.7 -1.4**
SOHO SOHO 98.00 294 *i P* **P 05 40 25.7 -1.4**
SNR=11
EGMT Eagleton 98.21 42 IAMs_20 IAMs_20 06 18 00.2
comp=Z,2μm,21.0s
EGMT Eagleton 98.21 42 P **P 05 40 27.1 -0.5**
baz=272
BANOM Banah 98.25 295 P **P 05 40 27.0 -1.2**
BANOM P **P 05 40 27.0 -1.2**
BANOM Banah 98.25 295 *i* Pdiff **P 05 40 26.7 -1.6**
SNR=7.5
MSFE Esma-Masafi 98.37 295 *i* Pdiff **P 05 40 27.9 -0.9**
SNR=11
MASF Masafi 98.37 295 P **P 05 40 28.0 -0.7**
SNR=11
HATD Hatta, Dubai 98.38 294 *i* Pdiff **P 05 40 27.6 -1.2**
SNR=9.2
SHME Shamm 98.40 296 P **P 05 40 28.1 -0.8**
SHME Shamm 98.40 296 *i* Pdiff **P 05 40 27.9 -1.0**
SNR=6.5
ASHO Ashiyiah 98.44 294 P **P 05 40 27.9 -1.2**
SNR=6.5
ASHO Ashiyiah 98.44 294 *i* Pdiff **P 05 40 27.5 -1.6**
SNR=7.5
BW06 Boulder Array 98.51 48 IAMs_20 IAMs_20 06 20 17.5
comp=Z,2μm,20.0s
BW06 Boulder Array 98.51 48 P **P 05 40 28.7 -0.6**
baz=272
PDAR Pinedale Array 98.51 48 P **P 05 40 27.6 -1.7**
comp=Z,2.5nm,1.0s,baz=255,slow=3.5,SNR=12
comp=Z,2.5nm,1.0s
RLMT Red Lodge 98.65 45 IAMs_20 IAMs_20 06 17 22.0
comp=Z,2μm,22.0s
RLMT Red Lodge 98.65 45 P **P 05 40 28.8 -1.0**
baz=272
ALNE Al Ain 98.71 294 P **P 05 40 29.2 -1.1**
SNR=9.7
ALNE Al Ain 98.71 294 *i* Pdiff **P 05 40 29.2 -1.1**
SNR=8.5
NAZ Nazwa, Dubai 98.81 294 *i* Pdiff **P 05 40 29.5 -1.2**
SNR=6.4
FAQ Al Faqa, Dubai 98.87 294 *i* Pdiff **P 05 40 29.9 -1.0**
SNR=5.5
ASUD Al Ashush, Dub 99.11 294 Pdiff **Pdif 05 40 31.2 -0.9**
UMZA Um Al Zommool 99.22 292 P **Pdif 05 40 30.9 -1.7**
DMTO DMTO 99.28 287 P **Pdif 05 40 30.4 -2.5**
DMTO P **Pdif 05 40 30.4 -2.5**
AJN Ajban 99.42 294 P **Pdif 05 40 31.9 -1.5**
MVCO Mesa Verde 99.45 53 P **Pdif 05 40 33.6 0.0**
baz=271
O20A White River Ci 99.57 50 P **Pdif 05 40 33.5 -0.5**
baz=272
RBK Rabkut 99.98 287 P **Pdif 05 40 34.7 -1.4**
DOK Doka 100.08 288 P **Pdif 05 40 34.7 -1.8**
RES Resolute Bay 100.24 15 P **Pdif 05 40 36.6 +0.6**
comp=Z,4.3nm,0.8s,baz=314,slow=7.2,SNR=4.8
RWWY Rawlins 100.29 49 IAMs_20 IAMs_20 06 18 23.8
comp=Z,1μm,22.0s
WHFO Wadi Hawf 100.41 287 P **Pdif 05 40 35.6 -2.4**
LAO LASA Array 100.68 44 P **Pdif 05 40 38.3 -0.4**
baz=274
S22A 4UR Ranch, Cre 100.76 53 P **Pdif 05 40 38.8 -0.7**
baz=272
MZR Muzera 100.78 292 P **Pdif 05 40 36.5 -3.0**
SNR=5.7
MZR Muzera 100.78 292 *i* Pdiff **Pdif 05 40 38.7 -0.8**
SNR=9.9
Y22D IRIS PASSCAL I 100.81 56 IAMs_20 IAMs_20 06 17 55.4
comp=Z,1μm,22.0s
ABTO Aybut 100.84 287 P **Pdif 05 40 38.6 -1.4**
TROLL Troll, Antarti 101.07 189 PKKP 05 56 50.0
N23A Red Feather La 101.29 49 P **Pdif 05 40 41.3 -0.4**
baz=274
GHWR Ruwais 101.34 293 P **Pdif 05 40 41.0 -0.9**
JRN Qarnain Island 101.36 294 P **Pdif 05 40 39.9 -2.1**
SDCO Great Sand Dun 101.81 53 IAMs_20 IAMs_20 06 18 46.5
comp=Z,2μm,22.0s
DGMT Dagmar 101.88 42 IAMs_20 IAMs_20 06 24 40.3
comp=Z,2μm,20.0s
SNAA Sanae 102.14 188 PP **PKiKP 05 45 03.4 -3.2**
FFC Flin Flon 102.40 35 IAMs_20 IAMs_20 06 22 47.2
comp=Z,2μm,21.0s
RSSD Black Hills 102.44 46 IAMs_20 IAMs_20 06 28 44.5
comp=Z,1μm,19.0s
PRGR Permogore 102.46 332 *eP* **Pdif 05 40 43.9 -2.2**
PRGR *eS* **SKSac 05 51 19.0 -1.8**
PRGR pmax pmax
comp=Z,128nm,0.9s
BRIGG Briggsdale 102.54 50 IAMs_20 IAMs_20 06 22 36.5
comp=Z,1μm,20.0s
VNA3 Neumayer Olymp 103.33 186 PKKP 05 56 43.4
VNA3 Neumayer Olymp 103.33 186 PP **PKiKP 05 45 09.4 +0.7**
KBS Kingsbay 103.34 353 IAMs_20 IAMs_20 06 25 20.0
comp=Z,1μm,22.0s
VOI Vohitsoka 103.36 246 IAMs_20 IAMs_20 06 26 39.6
comp=Z,1μm,20.0s
VNA2 Neumayer--Watz 103.39 186 PKKP 05 56 44.0
baz=325,slow=4.6
VNA2 Neumayer--Watz 103.39 186 PP **PKiKP 05 45 09.7 +0.9**
ABPO Ambohimpanom 103.47 249 IAMs_20 IAMs_20 06 22 23.1
comp=Z,1μm,22.0s
TXAR Lajitas Array 103.75 61 PP **PP 05 45 08.3 -1.7**
comp=Z,1.0nm,0.9s,baz=273,slow=6.9,SNR=5.1
TXAR PKKPbc **PKKPbc 05 56 44.9 +0.3**
comp=Z,0.6nm,0.7s,baz=111,slow=3.5,SNR=5.5
VNA1 Neumayer--Stat 103.75 186 PP **PKiKP 05 45 12.0 +2.6**
OGNE Ogallala 104.24 49 IAMs_20 IAMs_20 06 24 04.9
comp=Z,1μm,21.0s
MAK Makhachkala 104.69 313 *i P* **Pdif 05 40 53.3 -3.1**
MAK *e* 05 45 15.5
MAK *e*PPP PPP 05 47 32.1
MAK *e* 05 51 31.6
MAK *e* 05 52 16.1
MAK *e*PS PS 05 54 29.0 -2.1
MAK *e*SS SS 06 00 09.1 +4.3
MAK *e*SSS SSS 06 04 01.2
MAK MLR MLR
comp=Z,1μm,17.0s
AMTX Amarillo 105.09 55 IAMs_20 IAMs_20 06 21 29.5
comp=Z,1μm,22.0s
APA Apatity 105.42 340⇓ *iP* **Pdif 05 40 55.9 -3.2**
APA pmax pmax
comp=Z,30nm,0.8s
PMSA Palmer Station 105.42 164 PKKPab PKKPab 05 56 54.0 -2.9
comp=Z,5.9nm,0.8s,baz=355,slow=5.2,SNR=4.8
PMSA Palmer Station 105.42 164 IAMs_20 IAMs_20 06 23 05.2
comp=Z,1μm,19.0s
KLMR Klimovskoe 105.52 332 *i P* **Pdif 05 40 56.9 -2.7**
KLMR *e* 05 45 20.1
KLMR PS **PS 05 54 39.9 +1.1**
KLMR SS SS 06 00 20.5 +5.6
KLMR SSS SSS 06 04 14.2
KLMR pmax pmax
comp=Z,108nm,1.2s
KLMR Klimovskoe 105.52 332 *e*Pdif **Pdif 05 40 57.0 -2.7**
KLMR AMP 05 40 59.3
comp=Z,108nm,1.2s
KLMR *e*PP **PP 05 45 20.1 -1.8**
KLMR PS **PS 05 54 40.0 +1.1**
KLMR PS **PS 05 54 40.0 +1.1**
KLMR SS **SS 06 00 20.6 +5.7**
KLMR SS **SS 06 00 20.6 +5.7**
KLMR SSS SSS 06 04 14.2
KLMR SSS SSS 06 04 14.2
KLMR LQ LQ 06 18 16.6
KLMR LQ LQ 06 18 16.6
KLMR LR LR 06 20 52.0
KLMR AMP 06 34 15.2
comp=Z,2μm,18.1s
ARCES ARCESS Array B 106.93 343 Pdiff **Pdif 05 41 04.6 -1.2**
comp=Z,10.0nm,0.7s,baz=46,slow=7.0,SNR=16
ARCES PKiKP **PKiKP 05 45 15.9 +0.6**
comp=Z,5.7nm,0.7s,baz=79,slow=2.3,SNR=22
ARCES PKKPbc **PKKPbc 05 56 32.7 -3.4**
comp=Z,5.0nm,1.0s,baz=270,slow=2.2,SNR=5.8
ARCES PKKPab **PKKPdf 05 56 47.8 -0.4**
comp=Z,2.2nm,0.9s,baz=236,slow=2.9,SNR=4.8
JCT Junction City 107.03 60 IAMs_20 IAMs_20 06 22 05.2
comp=Z,2μm,20.0s
VRH Novokhopyorsk 107.06 322 *eP* **Pdif 05 41 03.2 -3.6**
VRH pmax pmax
comp=Z,10.0nm,0.9s
OK035 E0210 Rd and N 107.30 53 IAMs_20 IAMs_20 06 24 12.9
comp=Z,1μm,20.0s
OK038 West end E0370 107.31 53 IAMs_20 IAMs_20 06 24 05.0
comp=Z,2μm,21.0s
ZEI Tsey 107.34 313 *eP* **Pdif 05 41 06.8 -1.7**
ZEI pmax pmax
comp=Z,10.0nm,1.0s
AGMN Agassiz Nation 107.39 41 IAMs_20 IAMs_20 06 27 23.8
comp=Z,2μm,20.0s
WMOK Wichita Mounta 107.48 55 IAMs_20 IAMs_20 06 22 39.7
comp=Z,1μm,22.0s
OK032 Salt Plains WL 107.69 53 IAMs_20 IAMs_20 06 26 19.1
comp=Z,1μm,21.0s
ECSD EROS Data Cent 107.80 46 IAMs_20 IAMs_20 06 28 38.3
comp=Z,1μm,20.0s
KBZ Khabaz 107.89 314 Pdiff **Pdif 05 41 10.8 +0.1**
comp=Z,2.8nm,0.9s,baz=105,slow=2.2,SNR=4.9
KIV Kislovodsk 108.00 315 *eP* **Pdif 05 41 08.8 -2.5**

KIV e 05 45 38.5
KIV e 05 51 43.6
KIV ePS PS 05 55 02.9 -2.5
KIV eSS SS 06 00 49.2 -0.7
KIV eSSS SSS 06 04 53.2
KIV MLR MLR
comp=Z,1μm,21.0s
MOS Moscow 108.12 328 *i* P **Pdif 05 41 09.8 -1.6**
MOS pmax pmax
comp=Z,81nm,0.8s
UNM Universidad Na 108.17 71 IAMs_20 IAMs_20 06 25 49.4
comp=Z,997nm,19.0s
LPSR Galich'ya Gora 108.36 324 *e*P **Pdif 05 41 10.6 -1.9**
LPSR pmax pmax
comp=Z,30nm,1.0s
OK029 Liberty Lake 108.43 54 IAMs_20 IAMs_20 06 24 07.7
comp=Z,2μm,22.0s
VORR Voronezh 108.46 323 *e*P **Pdif 05 41 12.8 -0.2**
VORR pmax pmax
comp=Z,60nm,0.4s
OK049 E0420 Rd and N 108.47 53 IAMs_20 IAMs_20 06 25 08.6
comp=Z,2μm,22.0s
OK025 Westminster Rd 108.55 54 IAMs_20 IAMs_20 06 24 05.0
comp=Z,2μm,22.0s
KSU1 Kansas State U 108.61 50 IAMs_20 IAMs_20 06 24 40.2
comp=Z,2μm,20.0s
VSR Storozhevoye 108.61 323 *e*P **Pdif 05 41 11.1 -2.6**
VSR pmax pmax
comp=Z,20nm,1.2s
OK050 Pawnee Station 108.72 53 IAMs_20 IAMs_20 06 25 28.5
comp=Z,2μm,21.0s
OK048 Pawnee Station 108.75 53 IAMs_20 IAMs_20 06 25 38.2
comp=Z,1μm,20.0s
OK045 Pawnee Station 108.76 53 IAMs_20 IAMs_20 06 25 38.5
comp=Z,2μm,21.0s
OK046 Pawnee Station 108.78 53 IAMs_20 IAMs_20 06 25 30.1
comp=Z,1μm,20.0s
OK033 Mehan 108.81 54 IAMs_20 IAMs_20 06 32 04.8
comp=Z,1μm,19.0s
OK051 E0350 and S346 108.83 53 IAMs_20 IAMs_20 06 25 53.2
comp=Z,2μm,20.0s
OK044 Pawnee Station 108.88 53 IAMs_20 IAMs_20 06 25 33.5
comp=Z,2μm,20.0s
OBN Obninsk 108.89 327 *de*P **Pdif 05 41 14.2 -0.6**
OBN *e* 05 45 46.8
OBN pmax pmax
comp=Z,102nm,1.3s
OBN MLR MLR
comp=Z,2μm,20.0s
OK031 S. Brethren Rd 108.90 54 IAMs_20 IAMs_20 06 32 25.2
comp=Z,1μm,20.0s
435B Jarrell 108.90 59 IAMs_20 IAMs_20 06 25 42.9
comp=Z,2μm,20.0s
KVTX Kingsville 108.93 63 IAMs_20 IAMs_20 06 24 46.9
comp=Z,2μm,21.0s
OK034 N. Norfolk Rd. 108.99 54 IAMs_20 IAMs_20 06 25 24.7
comp=Z,2μm,20.0s
TUL1 Leonard 109.75 54 IAMs_20 IAMs_20 06 32 15.6
comp=Z,1μm,20.0s
SOC Sochi 110.18 315 *i* PKIKP **PKiKP 05 45 17.7 -4.4**
SOC *e* 05 51 53.2
SOC ePS **PS 05 55 21.5 -5.4**
SOC eSSS SSS 06 05 24.6
SOC MLR MLR
comp=Z,973nm,21.0s
EYMN Ely 110.31 40 IAMs_20 IAMs_20 06 30 59.0
comp=Z,2μm,20.0s
SCIA State Center 110.62 47 IAMs_20 IAMs_20 06 25 08.0
comp=Z,1μm,21.0s
FINES FINESS Array B 111.16 336 Pdiff **Pdif 05 41 23.4 -1.3**
comp=Z,12nm,0.7s,baz=72,slow=4.8,SNR=25
FINES PKiKP **PKiKP 05 45 23.9 +0.5**
comp=Z,9.6nm,0.8s,baz=59,slow=3.2,SNR=9.2
FINES PP **PP 05 46 02.5 -0.4**
comp=Z,16nm,0.9s,baz=66,slow=5.2,SNR=5.9
FINES PKKPbc **PKKPbc 05 56 20.3 -2.0**
comp=Z,1.9nm,0.8s,baz=212,slow=4.9,SNR=4.3
ANN Anapa 111.47 316 *i* P **Pdif 05 41 23.5 -3.0**
ANN *e* 05 46 01.5
MIAR Mount Ida 111.75 55 IAMs_20 IAMs_20 06 31 25.9
comp=Z,1μm,19.0s
COWI Conover 112.38 42 IAMs_20 IAMs_20 06 27 13.1
comp=Z,2μm,21.0s
JFWS Jewell Farm 112.51 45 IAMs_20 IAMs_20 06 26 55.9
comp=Z,1μm,21.0s
JFWS Jewell Farm 112.51 45 P **PKiKP 05 45 25.7 -0.9**
baz=285
CCM Cathedral Cave 112.94 51 IAMs_20 IAMs_20 06 26 30.7
comp=Z,2μm,21.0s
CCM Cathedral Cave 112.94 51 P **PKiKP 05 45 27.6 +0.1**
baz=283
MNK Minsk 113.75 329 *i* P **Pdif 05 41 34.5 -1.9**
MNK *i* 05 46 20.4
MNK *i* PPP PPP 05 48 43.8
MNK *i* 05 52 34.9
MNK *i* PS PKKPbc 05 55 56.7 -17
MNK *i* SS SS 06 02 04.3 -1.2
MNK *i* SSS SSS 06 06 19.7
MNK pmax pmax
comp=N,50nm,1.2s
MNK pmax pmax
comp=E,3.0nm,1.2s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK Minsk 113.75 329 *i* P **Pdif 05 41 34.5 -1.9**
comp=E,3.0nm,1.2s
MNK *i* P **Pdif 05 41 34.5 -1.9**
comp=N,50nm,1.2s
MNK *i* P **Pdif 05 41 34.5 -1.9**
comp=Z,15nm,0.8s,baz=62
MNK *i* PP **PP 05 46 20.4 -1.1**
MNK *i* PPP PPP 05 48 43.9
MNK *i* SKS **SKSdf 05 52 34.9 -1.0**
MNK *i* PS PKKPbc 05 55 56.7 -17
MNK *i* SS **SS 06 02 04.3 -1.2**
MNK *i* SSS SSS 06 06 19.7
MNK *i* LQ LQ 06 27 25.2
MNK *i* LR LR 06 32 45.2
MNK *i* LRM MLR 06 36 36.7
comp=N,1μm,17.8s
MNK *i* LRM MLR 06 36 55.1
comp=Z,2μm,22.3s
MNK *i* LRM MLR 06 37 08.5
comp=E,139nm,19.7s
HDIL Hopedale 113.81 48 IAMs_20 IAMs_20 06 36 13.6
comp=Z,1μm,20.0s
HDIL Hopedale 113.81 48 P **PKiKP 05 45 28.8 -0.3**
baz=285
NACGM Naroch 114.12 329 *e*P **Pdif 05 41 38.1 0.0**
baz=61
L44A Lake County Fo 114.37 46 IAMs_20 IAMs_20 06 39 29.2
comp=Z,1μm,20.0s
AKASG Malin Array Be 114.68 325 PKP **PKiKP 05 45 30.0 -0.4**
comp=Z,14nm,0.7s,baz=51,slow=2.2,SNR=34
AKASG PP **PP 05 46 22.7 -5.6**
comp=Z,7.6nm,1.1s,baz=56,slow=7.1,SNR=4.2
AKASG PKKPbc **PKKPbc 05 56 08.3 -1.9**
comp=Z,1.0nm,0.6s,baz=265,slow=3.5,SNR=4.9
VBMS Vicksburg 114.68 57 IAMs_20 IAMs_20 06 31 45.5
comp=Z,1μm,19.0s
ASF Jabal al Asfar 114.71 303 PKP **PKiKP 05 45 32.0 +0.8**
comp=Z,6.3nm,0.8s,baz=24,slow=3.0,SNR=8.1
ASF PP **PP 05 46 31.3 +1.8**
comp=Z,2.4nm,0.6s,baz=41,slow=1.6,SNR=3.3
OXF Oxford 115.14 54 IAMs_20 IAMs_20 06 35 59.4
comp=Z,966nm,19.0s
SFIN Lafayette 115.48 47 P **PKiKP 05 45 32.1 -0.2**
baz=287
BRTR Keskin Array B 115.56 312 PKP **PKiKP 05 45 31.8 -0.8**
comp=Z,3.5nm,0.6s,baz=123,slow=1.9,SNR=13
BRTR PP **PP 05 46 34.8 -0.4**
comp=Z,8.6nm,1.1s,baz=141,slow=2.6,SNR=2.5
GLMI Grayling 115.81 42 P **PKiKP 05 45 32.5 -0.3**
baz=291
WVT Waverly 116.03 52 IAMs_20 IAMs_20 06 29 41.8
comp=Z,2μm,22.0s
WVT Waverly 116.03 52 P **PKPdf 05 45 32.3 -1.2**
baz=284
PLAL Pickwick Lake 116.11 53 IAMs_20 IAMs_20 06 28 34.0
comp=Z,1μm,21.0s
MILM Milestii Mici 116.46 321 *e*PP PP 05 46 41.0 0.0
MILM eL L 06 32 24.0
MILM LRM MLR 06 35 26.0
comp=Z,1μm,22.0s
WCI Wyandotte Cave 116.67 49 P **PKPdf 05 45 34.4 -0.3**
baz=286
MOPA Mopani 116.72 241 *i* P **PKiKP 05 45 36.0 +0.8**
MOPA Mopani 116.72 241 *i* P **PKiKP 05 45 36.0 +0.8**
O48B Farmland 116.93 47 P **PKPdf 05 45 34.3 -0.9**
baz=288
MOL Molde 116.99 343 *e*PKPdf **PKPdf 05 45 34.3 -0.2**
NB2 NORSAR Subarra 116.99 340 PKPdf **PKPdf 05 45 33.6 -1.1**
comp=Z,8.1nm,0.8s,baz=44,slow=1.9
NB2 NORSAR Subarra 116.99 340 PKPdf **PKPdf 05 45 33.6 -1.1**
baz=44,slow=1.9
NOA NORSAR Array B 116.99 340 PKP **PKPdf 05 45 34.2 -0.5**
comp=Z,8.0nm,0.7s,baz=46,slow=1.9,SNR=21
NC602 NORSAR Array S 117.10 340 *e*PKPdf **PKiKP 05 45 34.8 0.0**
AAM Ann Arbor 117.33 44 P **PKPdf 05 45 35.6 -0.2**
baz=290
LRAL Lakeview Retre 117.42 55 IAMs_20 IAMs_20 06 35 52.9
comp=Z,1μm,20.0s
LRAL Lakeview Retre 117.42 55 P **PKPdf 05 45 35.7 -0.6**
baz=283
P49A Miami Univ. Ec 117.47 48 IAMs_20 IAMs_20 06 29 41.5
comp=Z,1μm,22.0s
P49A Miami Univ. Ec 117.47 48 P **PKPdf 05 45 35.8 -0.4**
baz=288
CFR Carcaliu 117.58 319 ⇑P **PKiKP 05 45 37.0 +0.8**
CFR Carcaliu 117.58 319 ⇑PKIKP **PKiKP 05 45 37.0 +0.8**
BRAL Brewton 117.78 57 IAMs_20 IAMs_20 06 34 27.7
comp=Z,1μm,20.0s
BRAL Brewton 117.78 57 P **PKPdf 05 45 36.4 -0.6**
baz=282
HARR Harsova 117.91 319 ⇑P **PKiKP 05 45 37.1 +0.2**
HARR Harsova 117.91 319 ⇑PKIKP **PKiKP 05 45 37.1 +0.2**
LVV L'vov 118.05 325 *e*P **Pdif 05 41 53.0 -2.7**
LVV *e* 05 45 36.7
LVV MLR MLR
comp=Z,2μm,23.0s
VRI Vrincioaia 118.21 320 ⇑P **PKiKP 05 45 40.3 +2.8**
VRI Vrincioaia 118.21 320 ⇑PKIKP **PKiKP 05 45 40.3 +2.8**
SKAR Skarslia 118.21 341 *e*PKPdf **PKiKP 05 45 37.7 +0.7**
SKAR IAmb IAmb 05 45 42.8
comp=Z,358nm,2.4s
TEIG Tepich 118.36 70 IAMs_20 IAMs_20 06 30 49.4
comp=Z,1μm,22.0s
BURAR Bucovina Array 118.39 323 ⇑P **PKiKP 05 45 39.2 +1.4**
BURAR Bucovina Array 118.39 323 ⇑PKIKP **PKiKP 05 45 39.2 +1.4**
MUSN Musina, Limpop 118.45 242 *i* P **PKiKP 05 45 39.5 +0.8**
MUSN Musina, Limpop 118.45 242 *i* P **PKiKP 05 45 39.5 +0.8**
BLEU Blekinge 118.48 335 *i* P **PKPdf 05 45 36.2 -1.4**
ACSO Alum Creek Sta 118.51 46 IAMs_20 IAMs_20 06 34 58.8
comp=Z,1μm,21.0s
ACSO Alum Creek Sta 118.51 46 P **PKPdf 05 45 37.6 -0.5**
baz=290
KONO Kongsberg 118.56 340 *e*PKPdf **PKiKP 05 45 38.0 +0.3**
BEL Belsk 118.78 328 *e*PKPdf **PKiKP 05 45 39.2 +0.9**
BORU Boraas 118.84 337 *i* P **PKPdf 05 45 36.7 -1.6**
MLR Muntele Rosu 118.86 320 ⇑P **PKPdf 05 45 38.1 -0.7**
MLR Muntele Rosu 118.86 320 ⇑PKIKP **PKPdf 05 45 38.1 -0.7**
DOPR Dopca 119.01 321 ⇑P **PKiKP 05 45 40.1 +1.1**
DEL Delary 119.19 336 *i* P **PKPdf 05 45 38.0 -0.9**
FABU Falkenberg 119.30 336 *i* P **PKPdf 05 45 37.8 -1.3**
P52A Corning 119.33 47 IAMs_20 IAMs_20 06 28 52.5
comp=Z,1μm,22.0s
P52A Corning 119.33 47 P **PKPdf 05 45 39.3 -0.5**
baz=290
TKL Tuckaleechee C 119.33 52 PKKP 05 56 24.7
comp=Z,5.8nm,1.0s,baz=190,slow=4.5,SNR=3.6
ODD1 Odda 119.34 341 *e*PKPdf **PKiKP 05 45 40.0 +0.8**
ONAU Onsala 119.34 337 *i* P **PKPdf 05 45 37.9 -1.3**
VOIR 119.46 321 ⇑P **PKiKP 05 45 40.8 +0.8**
VOIR 119.46 321 ⇑PKIKP **PKiKP 05 45 40.8 +0.8**
PLCA Paso Flores 119.59 143 PKP **PKiKP 05 45 40.8 +0.4**
comp=Z,8.4nm,0.5s,baz=250,slow=1.6,SNR=54
PLCA PKKPbc **PKKPbc 05 55 51.9 -0.8**
comp=Z,7.4nm,0.9s,baz=68,slow=3.7,SNR=12
PLCA SKKPbc SKKPbc 05 59 41.1 +5.6
comp=Z,2.5nm,0.9s,baz=13,slow=1.9,SNR=3.2
M53A WI Miller and 119.72 44 P **PKPdf 05 45 39.9 -0.5**
baz=292
GKP Gorka Klasztor 119.73 331 *e*PKPdf **PKiKP 05 45 40.8 +0.6**
TRPA Tarpa 119.73 324 ⇑P **PKiKP 05 45 41.1 +0.8**
TRPA Tarpa 119.73 324 PKP **PKiKP 05 45 40.5 +0.2**
ARR Arges 119.75 321 ⇑P **PKiKP 05 45 42.2 +1.6**
TGUH Tegucigalpa,Un 119.76 77 IAMs_20 IAMs_20 06 30 03.0
comp=Z,2μm,20.0s
O53A New Philadelph 119.78 46 P **PKPdf 05 45 39.9 -0.7**
baz=291
BJUU Bjuv 119.81 336 *i* P **PKPdf 05 45 38.2 -1.9**
STHS Stebnicka Huta 119.82 326 *e*PKIKP **PKiKP 05 45 40.6 +0.1**
ERPA Erie 119.94 43 P **PKPdf 05 45 40.4 -0.4**
baz=293
CRVS Cervenica-Dubn 119.97 325 *e*P **Pdif 05 42 04.8 +0.5**
CRVS *e* 05 45 41.2
HOMB Homborsund 119.97 339 *e*PKPdf **PKiKP 05 45 40.7 +0.3**
HOMB IAmb IAmb 05 45 41.8
comp=Z,124nm,1.3s
HOMB Homborsund 119.97 339 *i* P **PKPdf 05 45 39.2 -1.1**
BOSA Boshof 119.98 233 PKP **PKPdf 05 45 41.4 -0.1**
comp=Z,6.2nm,0.7s,baz=124,slow=2.4,SNR=17
BOSA Boshof 119.98 233 *i* P **PKPdf 05 45 40.6 -1.0**
BOSA Boshof 119.98 233 *i* P **PKPdf 05 45 40.6 -1.0**
OJC Ojcow 120.19 327 *e*PKPdf **PKPdf 05 45 39.3 -1.8**
GOGA Godfrey 120.20 54 IAMs_20 IAMs_20 06 30 52.3
comp=Z,2μm,22.0s
GOGA Godfrey 120.20 54 P **PKPdf 05 45 40.7 -0.9**
baz=286
MATP Matopo 120.25 243 PKP **PKPdf 05 45 42.2 0.0**
comp=Z,7.5nm,0.5s,baz=5.6,slow=1.6,SNR=28
MATP Matopo 120.25 243 *i* P **PKiKP 05 45 42.8 +0.5**
MATP Matopo 120.25 243 *i* P **PKiKP 05 45 42.8 +0.5**
DRGR 120.28 323 ⇑P **PKPdf 05 45 41.4 -0.1**
DRGR 120.28 323 ⇑PKIKP **PKPdf 05 45 41.4 -0.1**
SNART Snartemo 120.36 340 *e*PKPdf **PKPdf 05 45 41.0 -0.1**
SNART IAmb IAmb 05 45 42.5
comp=Z,66nm,0.7s
SNART Snartemo 120.36 340 *i* P **PKPdf 05 45 40.8 -0.4**
ABAH Abaujker 120.40 325 PKP **PKiKP 05 45 42.2 +0.6**
DEV Deva 120.60 322 ⇑P **PKiKP 05 45 42.4 +0.3**
DEV Deva 120.60 322 ⇑PKIKP **PKiKP 05 45 42.4 +0.3**
GZR Gura Zlata 120.90 321 ⇑P **PKPdf 05 45 42.1 -0.6**
GZR Gura Zlata 120.90 321 ⇑PKIKP **PKPdf 05 45 42.1 -0.6**
MCWV Mont Chateau 120.97 46 IAMs_20 IAMs_20 06 37 37.9
comp=Z,1μm,20.0s
LBTB Lobatse 121.15 237 PKP **PKPdf 05 45 43.8 -0.1**
comp=Z,4.3nm,0.5s,baz=152,slow=2.1,SNR=10
SIRR Siria 121.17 323 ⇑P **PKiKP 05 45 44.2 +0.9**
OKC Ostrava-Krasne 121.28 328 *e*PKIKP **PKiKP 05 45 44.0 +0.7**
OKC Ostrava-Krasne 121.28 328 *e*PKPDF **PKiKP 05 45 44.0 +0.7**
HERR Herculane 121.37 321 ⇑P **PKPdf 05 45 42.5 -1.0**
LRW Lerwick 121.38 345 *e*P **PKPdf 05 45 42.9 -0.2**
KMSC Kings Mountain 121.39 51 P **PKPdf 05 45 43.3 -0.6**
baz=288
BLA Blacksburg 121.42 49 P **PKPdf 05 45 43.4 -0.5**
baz=290
BZS Buzias 121.52 322 ⇑P **PKiKP 05 45 44.0 +0.1**
BZS Buzias 121.52 322 ⇑PKIKP **PKiKP 05 45 44.0 +0.1**
MORC Moravsky Berou 121.64 328 ⇑P **PKiKP 05 45 44.6 +0.5**
MORC Moravsky Berou 121.64 328 ⇑PKIKP **PKiKP 05 45 44.6 +0.5**
MORC Moravsky Berou 121.64 328 *e*PKP **PKiKP 05 45 44.4 +0.3**
VYHS Vyhne 121.66 326 *e*P **Pdif 05 42 12.3 +0.5**
VYHS *e* 05 45 44.1
KSP Ksiaz 121.66 329 *e*PKPdf **PKiKP 05 45 44.5 +0.5**
MAUC Maruska 121.72 327 *e*PKPDF **PKiKP 05 45 45.3 +1.0**
MAUC AMS AMS 06 38 50.0
comp=Z,2μm,15.8s
BLKB Belogradchik 121.78 320 ⇑P **PKiKP 05 45 44.6 0.0**
MDVR Moldovita 121.86 321 ⇑P **PKPdf 05 45 44.4 -0.1**
VTS Vitosha 121.86 318 ⇑P **PKPdf 05 45 44.6 -0.1**
VTS Vitosha 121.86 318 ⇑PKIKP **PKPdf 05 45 44.6 -0.1**
KRLC Kraliky 121.87 328 *e*PKIKP **PKiKP 05 45 45.0 +0.5**
KRLC MLR MLR
comp=Z,1μm,20.2s
KRLC Kraliky 121.87 328 *e*PKPDF **PKiKP 05 45 45.0 +0.5**
KRLC *ex* x 05 45 48.9
KRLC AMS AMS 06 40 40.0
comp=Z,1μm,20.2s
OSTC Ostas 121.87 329 *e*PKPDF **PKiKP 05 45 45.2 +0.7**
CHVC Chvalec 121.94 329 *e*PKPDF **PKiKP 05 45 45.0 +0.4**
CHVC *ex* x 05 45 49.0
CHVC AMS AMS 06 37 10.0
comp=Z,3μm,23.9s
DPC Dobruska-Polom 121.94 329 *e*PKIKP **PKiKP 05 45 45.4 +0.7**
DPC MLR MLR
comp=Z,2μm,20.5s
DPC Dobruska-Polom 121.94 329 *e*PKPDF **PKiKP 05 45 45.4 +0.7**
DPC AMS AMS 06 38 30.0
comp=Z,2μm,20.5s
SSPA Standing Stone 121.98 44 P **PKPdf 05 45 44.3 -0.5**
baz=294
UPC Upice 122.00 329 *e*PKIKP **PKiKP 05 45 45.4 +0.7**
UPC MLR MLR
comp=Z,3μm,22.8s
UPC Upice 122.00 329 *e*PKPDF **PKiKP 05 45 45.4 +0.7**
UPC AMS AMS 06 37 10.0
comp=Z,3μm,22.8s
LSZ Lusaka 122.04 249 PKP **PKiKP 05 45 46.1 +0.1**
comp=Z,9.1nm,0.7s,baz=155,slow=3.0,SNR=10
LSZ Lusaka 122.04 249 IAMs_20 IAMs_20 06 38 02.0
comp=Z,1μm,20.0s
LSZ Lusaka 122.04 249 *i* P **PKiKP 05 45 48.9 +3.0**
LSZ Lusaka 122.04 249 *i* P **PKiKP 05 45 48.9 +3.0**
JAVC Velka Javorina 122.09 327 *e*PKP **PKiKP 05 45 46.1 +1.1**
JTS Las Juntas de 122.14 81 PKP **PKiKP 05 45 46.3 +0.2**
comp=Z,4.2nm,0.4s,baz=254,slow=2.9,SNR=10.0
JTS Las Juntas de 122.14 81 IAMs_20 IAMs_20 06 27 06.3
comp=Z,2μm,22.0s
LONY Lake Ozonia 122.39 39 IAMs_20 IAMs_20 06 33 27.4
comp=Z,1μm,20.0s
LONY Lake Ozonia 122.39 39 P **PKiKP 05 45 45.8 +0.1**
baz=299
BOVS Bovan 122.40 320 ⇑P **PKPdf 05 45 45.1 -0.4**
VRAC Vranov 122.42 328 ⇑P **PKiKP 05 45 46.1 +0.5**
VRAC Vranov 122.42 328 ⇑PKIKP **PKiKP 05 45 46.1 +0.5**
VRAC Vranov 122.42 328 *e*PKP **PKiKP 05 45 45.8 +0.2**
SMOL Smolenice 122.42 327 *e*PKIKP **PKiKP 05 45 46.8 +1.2**
MODS Modra-Piesok 122.58 327 *e*P **Pdif 05 42 17.4 +1.4**
MODS *e* 05 45 46.5
CSKK Cskako 122.60 325 PKP **PKiKP 05 45 46.1 +0.1**
BINY Binghamton 122.61 42 IAMs_20 IAMs_20 06 38 13.6
comp=Z,1μm,21.0s
BINY Binghamton 122.61 42 P **PKPdf 05 45 44.3 -1.8**
baz=297
KRUC Moravsky 122.67 328 *e*PKP **PKiKP 05 45 46.2 +0.1**
PVCC Panska Ves 122.72 330 AMS AMS 06 38 00.0
comp=Z,2μm,23.1s
ZST Bratislava 122.78 327 *e*PKIKP **PKiKP 05 45 46.9 +0.6**
BRG Berggiesshubel 122.81 331 ⇑*i*PKIKP **PKiKP 05 45 46.6 +0.3**
BRG *e* 05 46 02.7
BRG *e* 05 47 29.0
BRG *e* 05 57 17.0
BRG pmax pmax
comp=Z,90nm,1.3s
BRG MLR MLR
comp=Z,2μm,19.4s
BRG MLR MLR
comp=E,402nm,19.4s
BRG MLR MLR
comp=N,906nm,17.0s
FRGS Fruska Gora 122.85 322 ⇑P **PKiKP 05 45 46.6 0.0**
FRGS Fruska Gora 122.85 322 ⇑*i*P **PKPdf 05 45 46.2 -0.2**
NHSC New Hope 122.92 53 IAMs_20 IAMs_20 06 33 24.5
comp=Z,1μm,21.0s
NHSC New Hope 122.92 53 P **PKPdf 05 45 45.1 -1.8**
baz=288
HDC Heredia 122.97 81 IAMs_20 IAMs_20 06 28 52.4
comp=Z,1μm,21.0s
CLL Collm 122.99 331 *i* PKIKP **PKPdf 05 45 46.4 0.0**
CLL *e* 05 47 24.0
CLL pmax pmax
comp=Z,59nm,0.8s
CLL MLR MLR
comp=Z,2μm,20.3s
CLL Collm 122.99 331 *i* PKPdf **PKPdf 05 45 46.4 0.0**
comp=Z,59nm,0.8s
CLL *e*PP **PP 05 47 24.0 -1.4**
CLL *e*PPP PPP 05 50 12.0
CLL *ex* x 05 56 06.0
CLL *e*PS **PS 05 57 14.0 -8.4**
CLL *e*PPS PPS 05 58 43.0
CLL *e*SS SS 06 04 18.0 +13
CLL *e*SSS SSS 06 08 42.0
CLL *e*SSSS 06 12 18.0
CLL *ex* x 06 17 30.0
CLL LmV 06 45 00.0
comp=Z,2μm,20.3s
GOPC GO Pecny, Ondr 122.99 329 *e*PKIKP **PKiKP 05 45 47.1 +0.4**
GOPC MLR MLR
comp=Z,2μm,21.5s
GOPC GO Pecny, Ondr 122.99 329 *e*PKPDF **PKiKP 05 45 47.1 +0.4**
GOPC AMS AMS 06 38 20.0
comp=Z,2μm,21.5s
MORH Mrgy, Hungar 123.00 324 ⇑P **PKiKP 05 45 46.8 0.0**
MORH Mrgy, Hungar 123.00 324 PKP **PKPdf 05 45 46.6 0.0**
TREC Trest 123.01 328 *e*PKIKP **PKiKP 05 45 47.2 +0.4**
TREC Trest 123.01 328 *e*PKPDF **PKiKP 05 45 47.2 +0.4**
PRU Pruhonice 123.07 329 *e*PKIKP **PKiKP 05 45 46.9 +0.1**
PRU MLR MLR
comp=Z,2μm,25.6s
PRU Pruhonice 123.07 329 *e*PKPDF **PKiKP 05 45 46.9 +0.1**
PRU *ex* x 05 45 51.0
PRU AMS AMS 06 38 10.0
comp=Z,2μm,25.6s
MPLH Magyarpolny 123.12 325 PKP **PKiKP 05 45 47.1 +0.1**
DIVS Divibare 123.27 321 ⇑*i*P **PKPdf 05 45 47.1 -0.2**
CBN Corbin Frederi 123.31 47 IAMs_20 IAMs_20 06 37 46.8
comp=Z,1μm,20.0s
TEKS Tekeris 123.33 322 *e*P **PKPdf 05 45 46.4 -0.9**
SOP Sopron 123.38 326 PKP **PKiKP 05 45 48.1 +0.6**
KOVH Kovagotottos 123.39 324 PKP **PKiKP 05 45 47.5 0.0**
RONA Rosalia, Austr 123.51 326 *i* P **PKiKP 05 45 47.8 -0.1**
comp=Z,67nm,1.3s,SNR=17
CONA Conrad Observa 123.62 327 *i* P **PKiKP 05 45 48.1 0.0**
comp=Z,32nm,0.9s,SNR=16
BBLS Lazići 123.75 321 ⇑*i*P **PKiKP 05 45 48.4 -0.1**
RUDO Rudo 123.90 321 *e*P **PKiKP 05 45 49.0 +0.3**
CKRC Cesky Krumlov 123.91 328 *e*PKPDF **PKiKP 05 45 49.0 +0.4**
CKRC AMS AMS 06 38 50.0
comp=Z,2μm,25.0s
BEHE Becsehely 123.94 325 PKP **PKiKP 05 45 50.4 +1.7**
NKC Novy Kostel 123.96 331 *e*PKIKP **PKPdf 05 45 48.3 -0.1**
NKC MLR MLR
comp=Z,2μm,22.1s
NKC Novy Kostel 123.96 331 *e*PKPDF **PKPdf 05 45 48.3 -0.1**
NKC AMS AMS 06 41 40.0
comp=Z,2μm,22.1s
KHC Kasperske Hory 124.09 329 *e*PKIKP **PKiKP 05 45 49.3 +0.3**
KHC MLR MLR
comp=Z,2μm,21.1s
KHC Kasperske Hory 124.09 329 *e*PKPDF **PKiKP 05 45 49.3 +0.3**
KHC *ex* x 05 45 52.7
KHC AMS AMS 06 40 10.0
comp=Z,2μm,21.1s
MCD Coleburn Disti 124.14 345 *e*P **PKPdf 05 45 48.1 -0.4**
ARSA Arzberg 124.20 326 *e*P **PKPdf 05 45 48.9 -0.1**
comp=Z,18nm,1.0s
GERES GERESS Array B 124.21 329 PKP **PKPdf 05 45 47.6 -1.4**
comp=Z,15nm,0.7s,baz=244,slow=12,SNR=96
LBNH Lisbon 124.22 38 P **PKPdf 05 45 48.6 -0.5**
baz=301
KOGS Kog 124.25 325 *i* PKPdf **PKPdf 05 45 48.9 -0.1**
A052A Srbac 124.26 323 *e*P **PKPdf 05 45 47.3 -1.7**
UPM Unac-Piva 124.40 321 *e*P **PKiKP 05 45 53.6 +3.7**
MOA Molln 124.53 328 *i* P **PKPdf 05 45 49.5 0.0**
comp=Z,17nm,0.9s
MDO Dochfour 124.55 345 *e*P **PKPdf 05 45 49.4 +0.1**
PDG Podgorica 124.56 320 ⇑P **PKPdf 05 45 49.4 -0.3**
BLY Banja Luka 124.65 323 *e*P **PKPdf 05 45 49.5 -0.3**
L61B Northampton 124.65 40 P **PKPdf 05 45 49.8 0.0**
baz=300
A051A Mrakovica 124.67 323 ⇑*i*P **PKPdf 05 45 49.9 -0.1**
DRME Dracevica, Mon 124.72 319 *e*P **PKiKP 05 45 52.4 +2.0**
BRY Bratogost 124.78 320 *e*P **PKPdf 05 45 49.4 -0.9**
SOKA Soboth 124.81 326 *i* P **PKPdf 05 45 50.0 -0.2**
comp=Z,37nm,1.0s,SNR=16
GRA1 Grafenberg Arr 124.91 331 IAMs_20 IAMs_20 06 42 11.8
comp=Z,1μm,21.0s
GRFO Grafenberg 124.91 331 IAMs_20 IAMs_20 06 46 00.9
comp=Z,1μm,20.0s
KPL Plockton 124.96 346 *e*P **PKPdf 05 45 49.2 -0.8**
BIOA Bad Ischl, Aus 124.96 328 *e*P **PKPdf 05 45 50.0 -0.4**
comp=Z,49nm,1.2s,SNR=11
HCY Herceg Novi 125.04 320 *e*P **PKiKP 05 45 53.1 +2.1**
OBKA Obir 125.18 326 ⇑*i*P **PKPdf 05 45 50.3 -0.6**
OBKA Obir 125.18 326 *i* P **PKPdf 05 45 50.6 -0.3**
comp=Z,25nm,1.2s
STON Ston 125.33 321 *e*P **PKPdf 05 45 49.6 -1.5**
HRV Adam Dziewonsk 125.34 40 IAMs_20 IAMs_20 06 38 41.8
comp=Z,1μm,21.0s
BOJS Bojanci 125.36 325 ⇑*i*P **PKiKP 05 45 51.4 -0.1**
BOJS Bojanci 125.36 325 *i* PKPdf **PKiKP 05 45 51.6 +0.1**
ESY Stoneypath 125.42 344 *e*P **PKPdf 05 45 50.5 -0.4**

LJU	Ljubljana	125.46 326	*i* PKPdf		PKiKP	05 45 51.7	0.0
KBA	Koelnbreinsper	125.49 327	*e*P		PKPdf	05 45 50.8	-0.8
	comp=Z,48nm,1.2s						
MYKA	Terra Mystica	125.61 327	*i* P		PKPdf	05 45 51.1	-0.6
	comp=Z,20nm,0.9s						
EBL	Broad Law	125.67 344	*e*P		PKPdf	05 45 51.4	-0.1
CEY	Cerknica	125.70 325	*e*P		PKPdf	05 45 49.7	-2.1
LAWE	Loch Awe, Argy	125.86 345	*e*P		PKPdf	05 45 51.0	-0.8
SKDS	Skadanscina	126.05 325⇑	*i* P		PKPdf	05 45 52.3	-0.2
ABTA	Abfaltersbach	126.14 327	*e*P		PKPdf	05 45 52.1	-0.6
	comp=Z,99nm,1.2s,SNR=21						
EDMD	Edmundbyers	126.17 342	*e*P		PKPdf	05 45 51.8	-0.6
WATA	Walderalm	126.27 328	*e*P		PKPdf	05 45 52.7	-0.3
	comp=Z,107nm,1.3s,SNR=21						
WTTA	Wattenberg	126.28 328	*e*P		PKPdf	05 45 53.2	+0.1
	comp=Z,165nm,1.1s,SNR=31						
MOTA	Moosalm	126.51 329	*i* P		PKPdf	05 45 53.4	-0.1
	comp=Z,129nm,1.2s,SNR=23						
STU	Stuttgart	126.51 331	IAms_20	IAms_20		06 45 05.2	
	comp=Z,927nm,20.0s						
SQTA	Sankt Quirin	126.53 329	*i* P		PKPdf	05 45 53.6	+0.1
	comp=Z,109nm,1.2s,SNR=21						
NEWG	New Galloway	126.57 344	*e*P		PKPdf	05 45 51.9	-1.3
RETA	Reutte	126.59 329	*i* P		PKPdf	05 45 53.4	-0.1
	comp=Z,43nm,1.0s,SNR=12						
BTNL	Ternell	126.62 334	*d*PKiKP		PKiKP	05 45 53.8	-0.1
EMMW	East Machias	126.63 35	IAms_20	IAms_20		06 39 40.2	
	comp=Z,1μm,21.0s						
MEM	Membach	126.65 335	*d*PKiKP		PKiKP	05 45 53.8	-0.1
KESW	Keswick, Cumbr	126.72 343	*e*P		PKPdf	05 45 51.5	-2.0
BSTI	Sart Tilman	126.86 335	*d*PKiKP		PKiKP	05 45 54.5	+0.1
FETA	Feichten	126.91 329	*e*P		PKPdf	05 45 54.5	+0.2
	comp=Z,121nm,1.1s,SNR=27						
GAL1	Galloway	126.93 344	*e*P		PKPdf	05 45 53.3	-0.5
BCLA	Clavier	127.09 335	*d*PKiKP		PKiKP	05 45 54.7	-0.1
CLGH	Cloghs, Cushen	127.10 345	*e*P		PKPdf	05 45 53.9	-0.3
ATAH	Atahualpa	127.17 103	PKP		PKiKP	05 45 56.5	0.0
	comp=Z,3.9nm,0.6s,baz=200,slow=2.8,SNR=6.4						
DAVA	Damuels	127.17 329	*i* P		PKPdf	05 45 54.9	+0.1
	comp=Z,59nm,1.0s,SNR=16						
BCIP	Isla Barro Col	127.20 82	IAms_20	IAms_20		06 29 06.5	
	comp=Z,882nm,21.0s						
BGES	Gesves	127.21 335	*d*PKiKP		PKPdf	05 45 54.7	+0.2
BFO	Black Forest	127.23 331	IAms_20	IAms_20		06 45 56.3	
	comp=Z,1μm,20.0s						
WLF	Walferdange	127.28 334	*d*PKiKP		PKiKP	05 45 56.0	+0.7
RCHB	Rochefort	127.32 335	*d*PKiKP		PKiKP	05 45 55.1	-0.2
BMRD	Maredsous	127.41 335	*d*PKiKP		PKiKP	05 45 55.3	-0.2
FUORN	Ofenpass-Fuorn	127.42 328	IAms_20	IAms_20		06 46 17.4	
	comp=Z,1μm,22.0s						
SNF	Seneffe	127.45 335	*d*PKiKP		PKiKP	05 45 55.6	+0.1
DAVOX	Davos/Dischmat	127.51 329	PKP		PKiKP	05 45 55.8	-0.2
	comp=Z,70nm,0.9s,baz=40,slow=0.4,SNR=45						
DOU	Dourbes	127.64 335	*d*PKiKP		PKiKP	05 45 55.9	0.0
TIP	Timpagrande	127.81 317	⇑P		PKiKP	05 45 57.5	+0.8
WME	Mynd Eilian	128.11 343	*e*P		PKPdf	05 45 56.2	+0.1
FOEL	Foel Wylfa	128.22 342	*e*P		PKPdf	05 45 55.5	-0.9
WLF1	Llynfaes	128.23 343	*e*P		PKiKP	05 45 57.0	0.0
AQU	L'Aquila	128.27 322	IAms_20	IAms_20		06 45 47.4	
	comp=Z,1μm,22.0s						
YLL	Llanberis	128.29 343	*e*P		PKPdf	05 45 56.1	-0.4
HLM1	Long Mynd	128.44 342	*e*P		PKPdf	05 45 56.6	-0.3
STRD	Stroud	128.84 341	*e*P		PKPdf	05 45 56.1	-1.4
CEL	Celeste	128.85 317	IAms_20	IAms_20		06 44 39.5	
	comp=Z,1μm,22.0s						
SWN1	Swindon	128.94 340	*e*P		PKPdf	05 45 58.1	+0.3
MONM	Monmouth	129.00 341	*e*P		PKPdf	05 45 56.9	-1.0
SENIN	Lac Senin/Sane	129.10 330	IAms_20	IAms_20		06 47 22.9	
	comp=Z,1μm,20.0s						
LPL	La Plagne	129.98 330	*e*PKiKP		PKiKP	05 46 00.9	-0.2
LPL			pmax	pmax			
	comp=Z,25nm,0.8s						
TSUM	Tsumeb	130.27 240	IAms_20	IAms_20		06 37 48.4	
	comp=Z,1μm,22.0s						
JSA	Saint Aubin	131.02 339	*e*P		PKPdf	05 46 01.0	-0.8
CCA1	Carnmenellis	131.20 342	*e*P		PKPdf	05 46 01.5	-0.6
MFF	Saint Martin d	132.34 335	*e*PKiKP		PKPdf	05 46 04.4	0.0
MFF			pmax	pmax			
	comp=Z,102nm,1.5s						
ROSC	El Rosal	132.65 88	SKPbc		SKPab	05 49 31.1	+0.6
	comp=Z,26nm,0.8s,baz=133,slow=1.9,SNR=8.8						
LPAZ	La Paz	134.09 118	PKP		PKiKP	05 46 10.1	-0.5
	comp=Z,9.7nm,0.7s,baz=300,slow=2.1,SNR=5.5						
LPAZ			SKPbc		SKPab	05 49 36.0	-0.9
	comp=Z,46nm,1.1s,baz=265,slow=2.0,SNR=31						
KEST	Kesra	134.63 318	PKP		PKiKP	05 46 10.1	-0.5
	comp=Z,6.4nm,0.5s,baz=11,slow=4.8,SNR=7.8						
KEST			SKPbc		SKPbc	05 49 36.0	+1.4
	comp=Z,20nm,0.9s,baz=291,slow=3.6,SNR=6.6						
MAHO	Mahon	135.17 326	IAms_20	IAms_20		06 51 21.8	
	comp=Z,846nm,21.0s						
SDV	Santo Domingo	136.30 82	PKP		PKiKP	05 46 13.9	-0.8
	comp=Z,25nm,0.7s,baz=250,slow=3.5,SNR=5.9						
SDV			SKPbc		SKPbc	05 49 41.4	+0.7
	comp=Z,31nm,0.9s,baz=204,slow=1.6,SNR=8.9						
SDV	Santo Domingo	136.30 82	IAms_20	IAms_20		06 36 56.5	
	comp=Z,845nm,21.0s						
CPUP	Villa Florida	137.24 138	PKP		PKiKP	05 46 15.7	-0.4
	comp=Z,6.1nm,0.6s,baz=312,slow=1.5,SNR=17						
CPUP			SKPbc		SKPbc	05 49 44.1	+1.2
	comp=Z,25nm,1.1s,baz=235,slow=4.4,SNR=8.9						
CPUP			SKPab		SKPab	05 49 51.0	+1.2
	comp=Z,17nm,1.0s,baz=251,slow=4.6,SNR=7.7						
HATO	Hato, Curacao	137.69 77	IAms_20	IAms_20		06 37 25.1	
	comp=Z,1μm,22.0s						
PBRG	Braganca	138.97 337	*e*PKPdf		PKPdf	05 46 11.0	-6.0
PBRG			*i* LQ	LQ		05 49 48.8	
SJG	San Juan	139.31 68	SKPbc		SKPbc	05 49 50.2	+1.2
	comp=Z,35nm,1.0s,baz=272,slow=5.8,SNR=9.2						
SJG	San Juan	139.31 68	IAms_20	IAms_20		06 43 51.2	
	comp=Z,1μm,21.0s						
PGAV	Gavieira, Arco	139.41 339	*e*PKPdf		PKPdf	05 46 08.8	-9.0
PGAV			*i* LQ	LQ		05 49 49.4	
PGAV	Gavieira, Arco	139.41 339	*e*SS	SS		06 08 20.2	+55
PGAV	Gavieira, Arco	139.41 339	*e*LR	LR		06 34 55.7	
	comp=Z,1μm,20.0s						
PCAB	Cabril	139.54 338	*e*PKPdf		PKPdf	05 46 18.9	+0.9
PCAB			*i* LQ	LQ		05 49 51.1	
ESDC	Sonseca Array	139.56 333	PKhKP		PKPpre	05 46 10.0	
	comp=Z,3.4nm,0.9s,baz=8.0,slow=3.2,SNR=17						
ESDC			PKP		PKPdf	05 46 18.7	+0.6
	comp=Z,4.6nm,0.8s,baz=10,slow=3.0,SNR=12						
ESDC			PP		PP	05 49 11.4	-1.0
	comp=Z,3.8nm,0.9s,baz=26,slow=6.6,SNR=6.8						
ESDC			SKPbc		SKiKP	05 49 50.7	-1.4
	comp=Z,9.6nm,1.0s,baz=14,slow=3.7,SNR=11						
ESDC			SKPab		SKPab	05 50 01.4	+1.8
	comp=Z,6.1nm,1.0s,baz=41,slow=4.0,SNR=5.7						
ESDC			SKKPbc		SKKPbc	05 58 27.4	+1.9
	comp=Z,14nm,1.1s,baz=232,slow=4.2,SNR=21						
MVO	Moncorvo	139.63 337	*e*PKPdf		PKPdf	05 46 10.2	-8.0
MVO			*i* LQ	LQ		05 49 50.1	
MVO	Moncorvo	139.63 337	*e*SS	SS		06 08 08.5	+41
MVO	Moncorvo	139.63 337	*e*LR	LR		06 35 58.6	
CART	Cartagena	139.70 328	IAms_20	IAms_20		06 52 03.5	
	comp=Z,868nm,22.0s						
POLO	Lamas de Olo	139.75 338	*e*PKPdf		PKPdf	05 46 10.3	-8.2
POLO			*i* LQ	LQ		05 49 50.6	
POLO	Lamas de Olo	139.75 338	*e*SS	SS		06 08 37.5	+68
PVRL	Vila Real	139.80 338	*e*PKPdf		PKPdf	05 46 17.6	-0.9
PVRL			*i* LQ	LQ		05 49 52.0	
SIV	San Ignacio	140.32 122	PKhKP		PKPpre	05 46 13.0	
	comp=Z,3.1nm,0.6s,baz=210,slow=5.6,SNR=12						
SIV			PKP		PKPdf	05 46 21.2	+1.1
	comp=Z,11nm,0.6s,baz=211,slow=2.3,SNR=31						
SIV			SKPbc		SKiKP	05 49 53.4	-0.8
	comp=Z,32nm,0.9s,baz=235,slow=1.9,SNR=18						
PVIS	Viseu	140.35 337	*e*PKPdf		PKPdf	05 46 12.3	-7.2
PVIS			*i* LQ	LQ		05 49 53.4	
MTE	Manteigas	140.49 337	*e*PKPdf		PKPdf	05 46 13.1	-6.7
MTE			*i* LQ	LQ		05 49 53.1	
MTE	Manteigas	140.49 337	*e*SS	SS		06 08 05.2	+27
MTE	Manteigas	140.49 337	*e*LR	LR		06 36 54.3	
	comp=Z,1μm,20.0s						
PCBR	Castelo Branco	140.94 336	*e*PKPdf		PKPdf	05 46 14.1	-6.4
PCBR			*i* LQ	LQ		05 49 55.1	
PCAS	Casmilo, Conde	141.16 337	*e*PKPdf		PKPdf	05 46 14.2	-6.7
PCAS	Casmilo, Conde	141.16 337	*e*SS	SS		06 08 53.5	+68
PMRV	Marv??o	141.25 336	*e*PKPdf		PKPdf	05 46 15.0	-6.2
PMRV			*i* LQ	LQ		05 49 54.5	
PMRV	Marv??o	141.25 336	*e*LR	LR		06 37 07.4	
	comp=Z,800nm,22.0s						
PSBE	So Bento	141.74 337	*e*PKPdf		PKPdf	05 46 16.6	-5.4
PSBE			*i* LQ	LQ		05 49 55.8	
PESTR	Estremoz	141.81 335	*e*PKPdf		PKPdf	05 46 16.7	-5.5
PESTR			*i* LQ	LQ		05 49 55.9	
PESTR	Estremoz	141.81 335	*e*SS	SS		06 08 24.1	+31
PMTG	Montargil	141.90 336	*e*PKPdf		PKPdf	05 46 16.8	-5.5
PMTG			*i* LQ	LQ		05 49 56.1	
SMRT	St. Maarten	142.15 67	IAms_20	IAms_20		06 44 40.3	
	comp=Z,963nm,21.0s						
PBAR	Barrancos	142.16 334	*e*PKPdf		PKPdf	05 46 18.6	-4.2
PBAR			*i* LQ	LQ		05 49 57.1	
PBAR	Barrancos	142.16 334	*e*SS	SS		06 08 43.3	+46
EVO	Evora	142.27 336	*e*PKPdf		PKPdf	05 46 18.5	-4.5
EVO			*i* LQ	LQ		05 49 57.0	
SEUS	St. Eustatius	142.39 67	IAms_20	IAms_20		06 39 54.7	
	comp=Z,1μm,22.0s						
SEUS	St. Eustatius	142.39 67	*e*P		PKPdf	05 46 19.0	-4.7
PACT	Alcochete	142.40 337	*e*PKPdf		PKPdf	05 46 17.7	-5.5
PMAFR	Mafra	142.41 337	*e*PKPdf		PKPdf	05 46 18.9	-4.3
PMAFR	Mafra	142.41 337	*e*SS	SS		06 08 22.1	+22
LIS	Lisbon	142.57 337	*e*PKPdf		PKPdf	05 46 21.0	-2.4
LIS			IAms_20	IAms_20		06 52 30.9	
	comp=Z,2μm,21.1s						
LIS	Lisbon	142.57 337	*e*PKiKP		PKPdf	05 46 21.0	-2.4
PBEJ	Beja	142.64 335	*e*PKPdf		PKPdf	05 46 20.0	-3.6
PBEJ			*i* LQ	LQ		05 49 59.2	
PNCL	Nicolau / Gran	142.84 336	*e*PKPdf		PKPdf	05 46 20.3	-3.7
PNCL			*i* LQ	LQ		05 49 58.9	
PNCL	Nicolau / Gran	142.84 336	*e*SS	SS		06 08 29.0	+24
PCVE	Castro Verde	143.04 335	*e*PKPdf		PKPbc	05 46 21.4	+0.2
PCVE			*i* LQ	LQ		05 49 59.6	
PCVE	Castro Verde	143.04 335	*e*SS	SS		06 08 29.4	+22
PVAQ	Vaqueiros	143.10 334	*e*PKPdf		PKPab	05 46 19.6	-0.3
PVAQ			*i* LQ	LQ		05 49 59.6	
PVAQ	Vaqueiros	143.10 334	*e*SS	SS		06 08 46.7	+38
PVAQ	Vaqueiros	143.10 334	*e*LR	LR		06 37 00.7	
	comp=Z,760nm,24.0s						
PTEO	Sao Teotonio	143.40 336	*e*PKPdf		PKPbc	05 46 22.9	+0.7
ANWB	Willy Bob	143.44 67	IAms_20	IAms_20		06 40 29.4	
	comp=Z,871nm,21.0s						
ANWB	Willy Bob	143.44 67	*e*P		PKPab	05 46 19.0	-2.8
MORF	Marmelete	143.58 335	*e*PKPdf		PKPbc	05 46 23.4	+0.6
MORF			IAms_20	IAms_20		06 45 45.2	
	comp=Z,328nm,22.4s						
MORF	Marmelete	143.58 335	*e*PKPdf		PKPbc	05 46 23.6	+0.8
MORF	Marmelete	143.58 335	*e*PKiKP		PKPbc	05 46 23.4	+0.6
ANBD	Bethesda, Anti	143.62 68	*e*P		PKPab	05 46 21.1	-1.4
FIGM	Figuig	143.75 322	P		PKPbc	05 46 24.1	+0.5
PFVI	Vila Bisbo	143.80 335	*e*PKPdf		PKPab	05 46 22.7	0.0
GDHS	Morne Mazeau,	143.83 69	IAms_20	IAms_20		06 59 23.6	
	comp=Z,772nm,19.0s						
CBE	Ff, Capester	144.02 69	*e*P		PKPab	05 46 19.7	-4.4
ABD	La Joyeuse, An	144.03 68	IAms_20	IAms_20		06 59 07.0	
	comp=Z,1μm,21.0s						
ABD	La Joyeuse, An	144.03 68	*e*P		PKPab	05 46 16.5	-7.6
TDBA	Terre de Bas,	144.05 69	IAms_20	IAms_20		06 59 26.9	
	comp=Z,1μm,22.0s						
TDBA	Terre de Bas,	144.05 69	*e*P		PKPab	05 46 22.9	-1.3
DSLB	Salisbury	144.35 70	*e*P		PKPab	05 46 19.0	-6.3
MAGL	Barre de l'ile	144.36 69	IAms_20	IAms_20		06 59 54.7	
	comp=Z,1μm,20.0s						
MAGL	Barre de l'ile	144.36 69	*e*P		PKPab	05 46 18.1	-7.2
LCRM	LCR	144.70 327	P		PKPdf	05 46 28.0	+0.4
FDF	Fort de France	144.76 71	IAms_20	IAms_20		07 00 53.2	
	comp=Z,1μm,21.0s						
FDF	Fort de France	144.76 71	*e*P		PKPab	05 46 22.7	-4.3
GRGR	Grenville	144.78 76	IAms_20	IAms_20		06 49 12.8	
	comp=Z,642nm,20.0s						
GRGR	Grenville	144.78 76	*e*P		PKPab	05 46 23.0	-4.0
BIM	Bigot	144.89 71	IAms_20	IAms_20		07 00 58.5	
	comp=Z,1μm,21.0s						
BIM	Bigot	144.89 71	*e*P		PKPab	05 46 23.4	-4.0
SVB	Belmont	144.97 74	*e*P		PKPbc	05 46 26.8	-0.9
H07N1	FLORES T-PHASB	44.98 6	PKP		PKPdf	05 46 27.6	-0.1
	SNR=5.6						
ILAM	Ilet Lapin Mar	145.02 71	*e*P		PKPbc	05 46 16.4	-11
SLBI	Saint Lucia, B	145.08 72	*e*P		PKPbc	05 46 21.3	-6.7
MPOM	Morne Pois Mar	145.10 72	PKPbc		PKPbc	05 46 26.8	-1.3
MPOM	Morne Pois Mar	145.10 72	*e*P		PKPbc	05 46 21.3	-6.8
MCLT	Moule a Chique	145.18 73	*e*P		PKPdf	05 46 28.8	+0.1
MDT	Midelt	145.22 326	PKPbc		PKPdf	05 46 29.1	+0.7
	comp=Z,44nm,0.5s,baz=69,slow=3.8,SNR=134						
MDT	Midelt	145.22 326	P		PKPdf	05 46 29.1	+0.7
TRN	Trinidad (W)	145.22 78	*e*		PKPbc	05 46 27.5	-1.0
MACA	Manacapuru-AM	145.24 102	*e*P		PKPbc	05 46 26.6	-2.0
H07S1	FLORES T-PHASB	45.28 6	PKPbc		PKPdf	05 46 29.4	+1.1
	SNR=12						
H07S1	FLORES T-PHASB	45.28 6	*e*PKP		PKPbc	05 46 26.7	-1.3
CZD	Col de Zad	145.29 327	P		PKPdf	05 46 30.1	+1.3
PGRA	Graciosa	145.85 2	*e*PKP		PKPdf	05 46 28.5	-0.7
TOSP	Speyside	145.98 77	PKPdf		PKPdf	05 46 30.1	0.0
TOSP	Speyside	145.98 77	*e*		PKPdf	05 46 29.2	-0.8
PAGU	Agualva, Azore	146.12 1	*e*PKP		PKPdf	05 46 29.9	+0.2
ROSA	Rosais	146.15 2	*e*PKP		PKPdf	05 46 30.0	+0.3
BOAV	Boa Vista	146.26 93	*e*S		PKPdf	05 46 29.9	-0.8
CALA	Caldeira	146.27 3	*e*PKP		PKPab	05 46 32.3	+0.4
AVE	Averroes	146.33 330	PKPbc		PKPbc	05 46 30.9	-0.5
AVE	Averroes	146.33 330	P		PKPab	05 46 32.6	+0.4
PICO	Pico	146.36 2	*e*PKP		PKPdf	05 46 30.6	+0.4
PCAN	Candelaria	146.39 2	*e*PKP		PKPab	05 46 32.0	-0.3
BBGH	Gun Hill	146.61 73	*e*		PKPbc	05 46 33.2	+0.5
SRHM	Skhour des Reh	147.23 330	P		PKPbc	05 46 35.0	+0.9
PSMN	Pico do Norte,	147.85 357	*e*PKP		PKPdf	05 46 31.2	-1.4
OUK	Oukaimeden	148.22 328	P		PKPdf	05 46 35.0	+1.1
PMPST	Porto Santo, M	150.16 342	*e*PKPbc		PKiKP	05 46 42.2	-0.2
PMPS	Porto Santo	150.18 342	*e*PKPbc		PKiKP	05 46 42.6	+0.2
PMOZ	Porto Moniz, M	150.65 343	*e*PKPbc		PKiKP	05 46 43.7	+0.2
PMOZ	Porto Moniz, M	150.65 343	*e*LR		LR	06 40 03.8	
	comp=Z,475nm,20.0s						
PMOZ	Porto Moniz, M	150.65 343	P		PKiKP	05 46 44.4	+0.8
PMAR	Madeira	150.66 343	*e*PKPbc		PKiKP	05 46 43.5	-0.2
TOA0	Torodi Ar. Sit	150.67 288	PKPdf		PKPdf	05 46 36.2	-1.5
TOA0			PKPbc		PKPbc	05 46 43.1	-0.1
TORD	Torodi Ar. Bea	150.67 288	PKP		PKPdf	05 46 36.9	-0.8
	comp=Z,9.2nm,1.2s,baz=37,slow=0.8,SNR=22						
TORD			PKPbc		PKPbc	05 46 43.0	-0.2
	comp=Z,109nm,0.8s,baz=74,slow=2.4,SNR=208						
TORD			PP		PP	05 50 16.9	-3.3
	comp=Z,3.3nm,0.9s,baz=93,slow=5.9,SNR=3.9						
TORD	Torodi Ar. Bea	150.67 288	PKPdf		PKPdf	05 46 36.4	-1.4
TORD			PKPbc		PKPbc	05 46 43.0	-0.2
BDFB	Brasilia	150.82 134	PKP		PKPdf	05 46 39.4	+1.3
	comp=Z,37nm,0.7s,baz=200,slow=2.2,SNR=27						
BDFB			PKPbc		PKPbc	05 46 43.5	-0.2
	comp=Z,55nm,0.7s,baz=238,slow=1.7,SNR=28						
MDP	Montagnes des	154.25 88	PKP		PKPdf	05 46 44.7	+1.6
	comp=Z,5.3nm,0.6s,baz=224,slow=5.0,SNR=5.4						
MDP			PKPbc		PKiKP	05 46 52.3	+1.0
	comp=Z,5.5nm,0.6s,baz=283,slow=0.9,SNR=6.7						
KIC	Kosan Boka	157.99 275⇓	*e*PKP1		PKPdf	05 46 48.4	+0.4
	comp=Z,54nm,0.7s						
DBIC	Dimbokro	158.09 276	PKP		PKPdf	05 46 47.8	-0.3
	comp=Z,4.4nm,0.7s,baz=147,slow=1.0,SNR=8.2						
DBIC			PKPab		PKPab	05 47 21.9	+0.1
	comp=Z,19nm,0.6s,baz=66,slow=2.7,SNR=16						
DBIC			PP		PP	05 51 02.4	+0.3
	comp=Z,12nm,1.0s,baz=64,slow=6.9,SNR=6.9						
TIC	Toumodi	158.25 276⇓	*e*PKP1		PKPdf	05 46 48.1	-0.2
	comp=Z,50nm,0.7s						
LIC	Lamto	158.28 275⇓	*e*PKP1		PKPdf	05 46 47.4	-0.9
	comp=Z,32nm,0.8s						
BBTS	Babate	165.88 315	PKP		PKPdf	05 46 57.1	+1.2
	comp=Z,66nm,0.9s,baz=330,slow=13,SNR=5.7						
BBTS			PKPab		PKPab	05 47 56.9	+1.2
	comp=Z,149nm,1.1s,baz=122,slow=22,SNR=6.4						
RCBR	Riachuelo	166.12 139	PKP		PKPdf	05 46 56.9	+0.7
	comp=Z,24nm,1.2s,baz=236,slow=5.2,SNR=4.1						

WEL ***28*** *05:28:28.5±1.2,30°S±14°×17°9W±2°4,h33km,M4.6/3, mB4.8/3,ML5.0/3,MLv4.7/2,Mw(mB)4.1/3,Error ellipse: s-maj=0.0km s-min=0.0km az=120.3*

IDC ***28*** *05:28:32.5±4.4,30°01S×177°59W,h45km±33km,mb4.8/3, mbtmp5.0/3,Error ellipse: s-maj=47.9km s-min=33.9km az=144.0*

NEIC ***28*** *05:28:34.8±1.8,29°81S±0°06×177°7W±0°2,h58km±8km, mb4.7/9,Error ellipse: s-maj=20.0km s-min=8.5km az=81.0*

ISC 28 05:28:31.1±0.7,30°05S±0°08×178°5W±0°2,h35km,n43, σ1970/41,mb4.8/7,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.94	34	P	Pn	05 28 47.2	-0.6
GLKZ				S	Sn	05 28 58.6	-1.6
RAO	Raoul Island	0.95	34	P	Pn	05 28 47.9	-0.1
	1μm,0.3s,baz=114,slow=7.2,SNR=31						
RAO				S	Sn	05 28 59.4	-1.0
	6μm,0.3s,baz=96,slow=21,SNR=19						
RAO	Raoul Island	0.95	34		Pn	05 28 47.6	-0.4
RIZ	Raoul Island	0.95	33	P	Pn	05 28 47.7	-0.3
RIZ				S	Sn	05 28 58.5	-1.9
MXZ	Matakaoa Point	7.94	199	Pn	Pn	05 30 34.6	+11
MXZ	Matakaoa Point	7.94	199	P	Pn	05 30 22.1	-2.0
MXZ				S	Sn	05 31 53.1	+0.4
WMGZ	Waiomatatini S	8.16	197	P	Pn	05 30 24.5	-2.5
WMGZ				S	Sn	05 32 00.6	+2.6
HAZ	Te Kaha	8.28	201	P	Pn	05 30 28.2	-0.4
HAZ				S	Sn	05 32 03.5	+2.6
PKGZ	Pakihiroa	8.31	199	P	Pn	05 30 27.3	-1.9
PKGZ				S	Sn	05 31 57.8	-4.1
OUZ	Omahuta	8.41	230	Pn	Pn	05 30 43.7	+13
PUZ	Puketiti	8.44	198	S	Sn	05 32 03.8	-1.0
RUGZ	Raukumara Rang	8.50	201	P	Pn	05 30 29.9	-1.9
RUGZ				S	Sn	05 32 07.8	+1.2
TWGZ	Tauwhareparae	8.61	199	S	Sn	05 32 06.9	-2.2
CNGZ	Carnagh Statio	8.84	197	P	Pn	05 30 35.2	-1.1
CNGZ				S	Sn	05 32 15.8	+1.1
URZ	Urewera	8.95	203	P	Pn	05 30 35.1	-2.8
URZ				S	Sn	05 32 16.2	-1.3
RAHZ	Arahi	9.56	201	S	Sn	05 32 31.7	-0.7
BKZ	Black Stump Fm	9.98	203	S	Sn	05 32 42.1	-0.7
KWHZ	Kaweka Forest	10.23	203	P	Pn	05 30 52.3	-3.2
KWHZ				S	Sn	05 32 46.7	-2.3
BFZ	Birch Farm	11.43	200	Pn	Pn	05 31 20.0	+8.1
MSVF	Nonsavu	12.65	345	Pn	Pn	05 31 29.8	+1.1
NIUE	Niue	13.43	37	Pn	Pn	05 31 33.3	-5.9
CTA	Charters Tower	33.30	279	P	P	05 35 14.1	+8.5
	12nm,0.4s,baz=100,slow=9.5,SNR=7.7						
	12nm,0.4s						
CTAO	Charters Tower	33.30	279	P	P	05 35 13.2	+7.6
CTAO				IAmb	IAmb	05 35 14.8	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	34.12	257	P	P	05 35 19.8	+7.1
ASAR	Alice Springs	42.68	267	P	P	05 36 30.7	+5.9
	comp=Z,5.4nm,0.4s,baz=104,slow=7.4,SNR=5.4						
	comp=Z,5.4nm,0.4s						
WR0	Warramunga Arr	43.45	272	P	P	05 36 37.4	+6.4
WR0				IAmb	IAmb	05 36 50.6	
	comp=Z,56nm,1.0s						
WB2	Warramunga Arr	43.62	272	P	P	05 36 38.2	+5.8
WRAB	Tennant Creek	43.63	272	P	P	05 36 38.2	+5.8
WRA	Warramunga Arr	43.63	272	P	P	05 36 38.8	+6.3
	comp=Z,9.9nm,0.3s,baz=110,slow=8.1,SNR=13						
	comp=Z,9.9nm,0.3s						
SBA	Scott Base	48.35	184	P	P	05 37 12.9	+4.0
SBA				IAmb	IAm

comp=N,938μm,0.1s
FDMO Fiordimonte 0.09 354 P Pg 05 44 59.6 +0.3
FDMO S Sg 05 45 01.6 +0.6
FDMO AML AML
comp=E,993μm,0.2s
FDMO AML AML
comp=N,1265μm,0.3s
FDMO AML AML
comp=N,273μm,0.1s
FDMO AML AML
comp=E,402μm,0.2s
T1245 Castelsantange 0.11 145 P Pg 05 44 59.6 -0.1
T1245 S Sg 05 45 02.7 +0.9
T1245 AML AML
comp=E,355μm,0.1s
T1245 AML AML
comp=N,449μm,0.1s
T1245 AML AML
comp=E,335μm,0.1s
T1245 AML AML
comp=N,434μm,0.1s
MMO1 Montemonaco 0.17 107 P Pg 05 45 01.2 +0.6
MMO1 S Sg 05 45 04.2 +0.9
AM05 Amandola Campo 0.19 81 ⇓P Pg 05 45 01.6 +0.8
AM05 AML AML
comp=E,476μm,0.1s
AM05 AML AML
comp=N,70μm,0.1s
AM05 AML AML
comp=N,29μm,0.1s
AM05 AML AML
comp=E,97μm,0.1s
AM05 AML AML
comp=N,84μm,0.1s
AM05 AML AML
comp=E,467μm,0.1s
T1215 Vallo di Nera, 0.23 229 P Pg 05 45 02.1 +0.6
T1215 S Sg 05 45 06.0 +1.4
T1241 Roccafluvione, 0.26 111 P Pg 05 45 02.8 +0.7
T1241 S Sb 05 45 07.2 -1.1
T1241 AML AML
comp=E,119μm,0.6s
T1241 AML AML
comp=N,195μm,0.8s
T1217 Poggiodomo (PG 0.27 208 P Pg 05 45 02.9 +0.7
T1217 S Sb 05 45 07.4 -1.1
LNSS Leonessa 0.35 187 P Pg 05 45 04.3 +0.5
LNSS S Sb 05 45 09.8 -1.0
T1243 Rocca Santa Ma 0.36 134 P Pb 05 45 04.7 -0.7
T1243 S Sb 05 45 10.3 -0.9
RM33 Pellescritta (0.45 169 P Pb 05 45 07.9 +1.0
RM33 S Sb 05 45 13.0 -0.7
RM33 AML AML
comp=E,395μm,1.3s
RM33 AML AML
comp=E,50μm,1.1s
RM33 AML AML
comp=N,307μm,0.6s
RM33 AML AML
comp=N,69μm,1.0s
PP3 Marolino 0.57 41 S Sn 05 45 21.0 +0.6
APEC Apecchio 0.79 321 ⇑P Pn 05 45 13.6 -0.4
APEC AML AML
comp=N,56μm,0.1s
APEC AML AML
comp=N,563μm,1.2s
APEC AML AML
comp=E,226μm,0.5s
APEC AML AML
comp=E,74439μm,0.2s
CPGN Carpegna, Ital 1.02 327 S Sn 05 45 32.0 +0.1
MCIV Monte Civitell 1.06 261 ⇑P Pn 05 45 18.0 +0.1
MCIV AML AML
comp=N,32μm,0.2s
MCIV AML AML
comp=E,78μm,0.3s
VIVA Pratoni del Vi 1.22 192 S Sb 05 45 31.0 -4.9

*JMA **28** 05:45:04.4±0.2,37°.1N±0°.5×14°.2E±°, h47km±2km, MD3.9/40, MV4.1/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*IDC **28** 05:45:07.3±2.8,36°.91N×141°.56E, h54km±25km, mb3.7/9, mbtmp4.0/12, ML3.0/3, Error ellipse: s-maj=25.0km s-min=12.8km az=78.0*
ISC 28 05:45:04.7±1.7,37°.09N±0°.04×141°.57E±0°.08, h30km±12km, n48, σ1§24/41, mb4.0/9, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.62**	**297**	P	**Pb**	**05 45 17.1**	**-0.1**
JFK				S	**Sb**	**05 45 25.9**	**+0.2**
JFK	**Kawauchi**	**0.62**	**297**	A	A	05 45 17.1	
comp=E,7.0nm,0.4s,comp=E,7.0nm,0.4s							
JFFD	**Fukushimafurud**	**0.81**	**271**	⇓P	**Pn**	**05 45 19.6**	**-0.5**
JFFD				⇓S	**Sb**	**05 45 30.5**	**-0.4**
JFFD	**Fukushimafurud**	**0.81**	**271**	A	A	05 45 19.6	
comp=E,6.0nm,0.4s,comp=E,4.0nm,0.4s							
JMST	**Minamisoumatoc**	**0.84**	**320**	P	**Pn**	**05 45 20.1**	**-0.3**
JMST				S	**Sn**	**05 45 30.7**	**-1.1**
JMST	**Minamisoumatoc**	**0.84**	**320**	A	A	05 45 20.1	
comp=E,7.0nm,0.3s,comp=E,10.0nm,0.5s							
JHO	**Hitachi**	**0.94**	**240**	*i* P	**Pn**	**05 45 20.4**	**-1.4**
JHO				S	**Sn**	**05 45 32.6**	**-1.5**
JMM	**Marumori**	**1.00**	**322**	P	**Pn**	**05 45 22.4**	**-0.2**
JMM	**Marumori**	**1.00**	**322**	P	**Pn**	**05 45 22.4**	**-0.2**
JMM				S	**Sn**	**05 45 34.5**	**-1.1**
JOTO	**OTAMA OYAMA**	**1.10**	**296**	*i* P	**Pb**	**05 45 24.7**	**-0.3**
JSB	**Shiboa**	**1.33**	**265**	A	A	05 45 27.0	
comp=E,6.0nm,0.9s,comp=E,5.0nm,7.0s							
JIO	**Ouri**	**1.38**	**353**	*i* P	**Pn**	**05 45 27.4**	**-0.4**
JIO				S	**Sn**	**05 45 43.7**	**-1.3**
JYT	**Yasato**	**1.40**	**233**	P	**Pb**	**05 45 29.8**	**-0.4**
JOU	**Okura**	**1.47**	**331**	*i* P	**Pn**	**05 45 29.8**	**+0.7**
JOU				S	**Sb**	**05 45 49.2**	**-0.5**
JOU	**Okura**	**1.47**	**331**	A	A	05 45 29.8	
comp=E,6.0nm,1.0s,comp=E,7.0nm,0.7s							
JFY	**Yanaizu**	**1.53**	**283**	*i* P	**Pn**	**05 45 30.8**	**+0.9**
JFY				S	**Sb**	**05 45 51.3**	**0.0**
JYS	**Shiratake**	**1.65**	**314**	*i* P	**Pn**	**05 45 32.7**	**+1.1**
JYS				S	**Sb**	**05 45 54.0**	**-0.8**
JYS	**Shiratake**	**1.65**	**314**	A	A	05 45 32.7	
comp=E,5.0nm,1.8s,comp=E,4.0nm,3.1s							
JOM	**Ohasama**	**2.40**	**355**	A	A	05 45 42.8	
comp=E,2.0nm,0.4s,comp=E,2.0nm,7.5s							
MJAR	**Matsushiro Arr**	**2.75**	**260**	P	**Pn**	**05 45 48.3**	**+1.5**
0.9nm,0.3s,baz=85,slow=15,SNR=18							
4.9nm,0.3s							
MAJO	**Matsushiro**	**2.75**	**260**	P	**Pn**	**05 45 49.5**	**+2.7**
JGF	**Kuroka**	**3.71**	**248**	P	**Pn**	**05 46 02.8**	**+2.8**
JTM	**Tenmabayashi**	**3.72**	**354**	P	**Pn**	**05 46 01.8**	**+1.8**
INU	**Inuyama**	**4.07**	**246**	P	**Pn**	**05 46 07.6**	**+2.7**
JHJ2	**Mitsune**	**4.22**	**200**	P	**Pn**	**05 46 08.1**	**+1.2**
JHJ	**Hachijo jima 2**	**4.22**	**201**	P	**Pn**	**05 46 07.8**	**+0.9**
27nm,0.3s,baz=249,slow=22,SNR=4.6							
JHJ				S	**Sn**	**05 46 52.8**	**-2.4**
224nm,0.3s,baz=75,slow=22,SNR=10							
63nm,0.3s							
ERM	**Erimo**	**5.07**	**13**	P	**Pn**	**05 46 19.4**	**+0.8**
JEM	**Erimo**	**5.07**	**13**	P	**Pn**	**05 46 19.7**	**+1.1**
USRK	**Ussuriysk Ar.**	**10.17**	**317**	P	Pn	05 47 34.0	+5.5
0.4nm,0.3s,baz=126,slow=12,SNR=11							
6.9nm,0.7s							
SONM	**Songino Array**	**27.86**	**304**	P	**P**	**05 50 52.5**	**+0.8**
2.3nm,0.5s,baz=105,slow=8.8,SNR=9.3							
2.3nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.06**	**121**	T	T	06 20 09.3	
baz=314,slow=75,SNR=80							
H11N1	**WAKE ISLAND Hy**	**28.07**	**121**	T	T	06 20 10.3	
baz=314,slow=75,SNR=63							
H11N3	**WAKE ISLAND Hy**	**28.08**	**121**	T	T	06 20 16.7	
baz=314,slow=75,SNR=77							
H11S1	**WAKE ISLAND Hy**	**28.78**	**123**	T	T	06 20 59.6	
baz=316,slow=76,SNR=47							
H11S3	**WAKE ISLAND Hy**	**28.78**	**123**	T	T	06 21 03.4	
baz=316,slow=76,SNR=61							
H11S2	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	06 20 58.5	
baz=316,slow=76,SNR=46							
ZALV	**Zalesovo Beam**	**41.98**	**312**	P	**P**	**05 52 53.4**	**+0.7**
0.9nm,0.5s,baz=90,slow=5.8,SNR=3.7							
0.9nm,0.5s							
MKAR	**Makanchi Array**	**44.20**	**302**	P	**P**	**05 53 11.0**	**+0.2**
1.9nm,0.7s,baz=93,slow=9.9,SNR=11							
1.9nm,0.7s							
KURBB	**Kurchatov Arra**	**46.07**	**308**	P	**P**	**05 53 25.8**	**+0.3**
4.5nm,0.6s,baz=82,slow=7.8,SNR=16							
4.5nm,0.6s							
ILAR	**Eielson Array**	**49.38**	**32**	P	**P**	**05 53 51.1**	**0.0**
0.9nm,0.7s,baz=277,slow=7.0,SNR=8.5							
0.9nm,0.7s							
BVAR	**Borovoye Array**	**50.63**	**312**	P	**P**	**05 54 02.2**	**+1.5**
0.6nm,0.5s,baz=87,slow=9.0,SNR=4.6							
0.6nm,0.5s							
WRA	**Warramunga Arr**	**57.13**	**188**	P	**P**	**05 54 47.0**	**-1.4**
1.1nm,0.5s,baz=7.1,slow=7.4,SNR=38							
1.1nm,0.5s							
ASAR	**Alice Springs**	**60.86**	**188**	P	**P**	**05 55 13.4**	**-0.8**
1.1nm,0.7s,baz=12,slow=6.8,SNR=17							
1.1nm,0.7s							
NVAR	**Mina Array Bea**	**74.86**	**53**	P	**P**	**05 56 43.2**	**+0.6**
0.5nm,0.8s,baz=290,slow=8.7,SNR=3.7							
0.5nm,0.8s							
LPAZ	**La Paz**	**146.56**	**60**	PKPbc	**PKPbc**	**06 04 44.0**	**-0.3**
1.4nm,0.8s,baz=29,slow=8.2,SNR=4.9							
H03N2	**Juan Fernandez**	**146.90**	**96**	T	T	08 48 51.3	
baz=291,slow=76,SNR=5.1							
H03N3	**Juan Fernandez**	**146.91**	**96**	T	T	08 48 55.5	
baz=291,slow=76,SNR=6.0							
H03N1	**Juan Fernandez**	**146.92**	**96**	T	T	08 48 51.5	
baz=291,slow=76,SNR=7.3							

ROM 28 05:56:06.2±0.1,42°.917N±0°.004×13°.058E±0°.005, h11km, ML1.7/9, 3C-1D, Error ellipse: s-maj=0.4km s-min=0.4km az=126.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**227**	P	Pg	05 56 08.7	+0.4
T1216				S	Sg	05 56 10.1	+0.3
T1216				AML	AML		
comp=E,30850μm,1.2s							
T1216				AML	AML		
comp=N,41300μm,0.2s							
T1216				AML	AML		
comp=E,30900μm,1.2s							
T1216				AML	AML		
comp=N,41300μm,0.2s							
T1216				AML	AML		
comp=N,4951μm,0.3s							
T1216				AML	AML		
comp=E,4469μm,0.3s							
T1216				AML	AML		
comp=N,3474μm,0.1s							
T1216				AML	AML		
comp=E,3410μm,0.1s							
FEMA	**Monte Fema**	**0.04**	**352**	P	Pg	05 56 08.8	+0.3
FEMA				S	Sg	05 56 10.5	+0.3
FEMA				AML	AML		
comp=N,10840μm,0.9s							
FEMA				AML	AML		
comp=E,13900μm,0.2s							
FEMA				AML	AML		
comp=N,10850μm,0.9s							
FEMA				AML	AML		
comp=N,1224μm,0.5s							
FEMA				AML	AML		
comp=E,1783μm,0.1s							
FEMA				AML	AML		
comp=N,1138μm,0.2s							
MC2	**Monte Cornacci**	**0.10**	**93**	P	Pg	05 56 09.4	+0.4
MC2				S	Sg	05 56 11.4	+0.3
FDMO	**Fiordimonte**	**0.12**	**10**	P	Pg	05 56 09.6	+0.4
FDMO				S	Sg	05 56 12.0	+0.6
FDMO				AML	AML		
comp=E,4265μm,0.4s							
FDMO				AML	AML		
comp=N,3035μm,1.1s							
FDMO				AML	AML		
comp=N,883μm,0.6s							
FDMO				AML	AML		
comp=E,840μm,3.3s							
FDMO				AML	AML		
comp=E,733μm,0.2s							
FDMO				AML	AML		
comp=N,768μm,0.1s							
T1215	**Vallo di Nera,**	**0.18**	**231**	P	Pg	05 56 10.7	+0.6
T1215				S	Sg	05 56 13.8	+0.9
T1215				AML	AML		
comp=N,2745μm,0.4s							
T1215				AML	AML		
comp=E,4205μm,0.4s							
T1215				AML	AML		
comp=E,4090μm,0.3s							
T1215				AML	AML		
comp=E,4210μm,0.4s							
T1215				AML	AML		
comp=N,2385μm,0.4s							
T1215				AML	AML		
comp=E,144μm,2.0s							
T1215				AML	AML		
comp=E,292μm,5.3s							
T1215				AML	AML		
comp=N,299μm,0.1s							
T1215				AML	AML		
comp=N,310μm,0.1s							
T1215				AML	AML		
comp=E,116μm,0.1s							
T1215				AML	AML		
comp=E,117μm,0.1s							
AM05	**Amandola Campo**	**0.22**	**74**	P	Pg	05 56 11.4	+0.5
AM05				S	Sg	05 56 15.0	+0.9
AM05				AML	AML		
comp=E,974μm,0.7s							
AM05				AML	AML		
comp=E,976μm,0.7s							
AM05				AML	AML		
comp=N,852μm,0.4s							
AM05				AML	AML		
comp=E,3715μm,0.7s							
AM05				AML	AML		
comp=N,232μm,0.2s							
AM05				AML	AML		
comp=N,86μm,0.2s							
AM05				AML	AML		
comp=N,224μm,0.4s							
AM05				AML	AML		
comp=E,243μm,0.2s							
AM05				AML	AML		
comp=E,1071μm,0.3s							
AM05				AML	AML		
comp=E,929μm,0.1s							
AM05				AML	AML		
comp=E,222μm,0.1s							
AM05				AML	AML		
comp=N,213μm,0.2s							
AM05				AML	AML		
comp=N,107μm,0.1s							
T1217	**Poggiodomo (PG**	**0.23**	**205**	P	Pg	05 56 11.4	+0.5
T1217				S	Sg	05 56 15.3	+1.2
T1217				AML	AML		
comp=N,2210μm,0.4s							
T1217				AML	AML		
comp=E,1924μm,0.7s							
T1217				AML	AML		
comp=N,2155μm,0.4s							
T1217				AML	AML		
comp=E,1990μm,0.7s							
T1217				AML	AML		
comp=N,280μm,2.5s							
T1217				AML	AML		
comp=E,190μm,3.1s							
T1217				AML	AML		
comp=N,220μm,0.3s							
T1217				AML	AML		
comp=E,145μm,0.2s							
T1217				AML	AML		
comp=E,166μm,0.1s							
T1217				AML	AML		
comp=N,187μm,0.2s							
GUMA	**Gualdo di Mace**	**0.25**	**54**	P	Pg	05 56 07.4	-4.0
GUMA				S	Sg	05 56 12.1	-2.7
GUMA				AML	AML		
comp=E,6130μm,0.6s							
GUMA				AML	AML		
comp=N,6755μm,0.3s							
GUMA				AML	AML		
comp=N,6240μm,0.4s							
GUMA				AML	AML		
comp=E,6125μm,0.6s							
GUMA				AML	AML		
comp=E,7740μm,0.5s							
GUMA				AML	AML		
comp=N,6755μm,0.3s							
GUMA				AML	AML		
comp=N,596μm,0.1s							
GUMA				AML	AML		
comp=N,810μm,0.3s							
GUMA				AML	AML		
comp=E,488μm,0.4s							
GUMA				AML	AML		
comp=E,611μm,0.5s							
T1241 Roccafluvione, 0.28 102 ⇑P Pg 05 56 12.2 +0.3
T1241 AML AML
comp=E,117μm,1.0s
T1241 AML AML
comp=N,223μm,0.8s
LNSS Leonessa 0.31 182 P Pg 05 56 13.1 +0.5
LNSS AML AML
comp=E,1190μm,0.6s
LNSS AML AML
comp=N,1815μm,0.4s
LNSS AML AML
comp=E,304μm,0.3s
LNSS AML AML
comp=N,209μm,1.0s
LNSS AML AML
comp=N,204μm,0.1s
LNSS AML AML
comp=E,267μm,0.2s
SNTG Esanatoglia 0.35 346 S Sg 05 56 14.0 -3.9
T1243 Rocca Santa Ma 0.36 127 ⇑P Pg 05 56 13.8 +0.3
ARRO Arrone 0.40 213 ⇑P Pb 05 56 14.9 -0.3
ARRO AML AML
comp=E,436μm,0.8s
ARRO AML AML
comp=N,462μm,0.8s
ARRO AML AML
comp=E,145μm,1.5s
ARRO AML AML
comp=N,92μm,0.2s
ARRO AML AML
comp=E,140μm,0.2s
T1211 Morro Reatino 0.41 201 P Pb 05 56 14.9 -0.6
T1211 AML AML
comp=E,520μm,1.2s
T1211 AML AML
comp=N,992μm,0.5s
T1211 AML AML
comp=N,994μm,0.5s
T1211 AML AML
comp=N,133μm,0.1s
T1211 AML AML
comp=N,129μm,0.1s
T1211 AML AML
comp=E,109μm,0.2s
T1211 AML AML
comp=E,107μm,0.1s
EL6 Elcito 0.41 4 S Sg 05 56 15.0 -4.9
RM33 Pellescritta (0.42 164 ⇓P Pg 05 56 14.8 +0.3
RM33 S Sb 05 56 22.0 -0.2
RM33 AML AML
comp=E,1260μm,1.0s
RM33 AML AML
comp=N,941μm,1.2s
RM33 AML AML
comp=N,470μm,0.2s
RM33 AML AML
comp=E,1255μm,1.0s
RM33 AML AML
comp=N,938μm,1.2s
RM33 AML AML
comp=N,939μm,1.2s
RM33 AML AML
comp=E,592μm,0.4s
RM33 AML AML
comp=N,469μm,0.2s
RM33 AML AML
comp=E,81μm,3.4s
RM33 AML AML
comp=N,86μm,4.1s
RM33 AML AML
comp=E,1230μm,5.1s
RM33 AML AML
comp=N,839μm,2.9s
RM33 AML AML
comp=E,903μm,0.9s
RM33 AML AML
comp=E,51μm,0.1s
RM33 AML AML
comp=N,73μm,0.2s
RM33 AML AML
comp=N,633μm,1.0s
TERO Teramo 0.50 126 P Pg 05 56 16.1 +0.2
TERO AML AML
comp=N,1023μm,0.3s
TERO AML AML
comp=N,1068μm,0.3s
TERO AML AML
comp=E,782μm,0.3s
TERO AML AML
comp=N,1025μm,0.3s
TERO AML AML
comp=N,1067μm,0.3s
TERO AML AML
comp=E,781μm,0.3s
TERO AML AML
comp=N,1022μm,0.3s
TERO AML AML
comp=E,829μm,0.3s
TERO AML AML
comp=N,101μm,0.2s
TERO AML AML
comp=E,169μm,0.6s
TERO AML AML
comp=N,106μm,0.1s
TERO AML AML
comp=E,118μm,0.1s

ROM 28 05:56:28.4±0.1,42°.859N±0°.003×13°.111E±0°.004, h9km, ML2.5/18, 19C-11D, Error ellipse: s-maj=0.3km s-min=0.2km az=336.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**175**	⇑P	Pg	05 56 30.1	-0.1
NRCA				S	Sg	05 56 31.1	-0.3
NRCA				AML	AML		
comp=N,43500μm,0.2s							
NRCA				AML	AML		
comp=N,46450μm,0.2s							
NRCA				AML	AML		
comp=E,13600μm,1.6s							
NRCA				AML	AML		
comp=E,14450μm,1.6s							
NRCA				AML	AML		
comp=E,14450μm,0.4s							
NRCA				AML	AML		
comp=E,13600μm,0.4s							
T1245	**Castelsantange**	**0.06**	**93**	P	Pg	05 56 30.8	+0.3
T1245				S	Sg	05 56 32.6	+0.5
T1245				AML	AML		
comp=E,19500μm,0.8s							
T1245				AML	AML		
comp=N,28050μm,0.8s							
T1245				AML	AML		
comp=N,26950μm,0.8s							
T1245				AML	AML		
comp=N,28050μm,0.8s							
T1245				AML	AML		
comp=E,18100μm,0.8s							
T1245				AML	AML		
comp=N,26900μm,0.8s							
T1245				AML	AML		
comp=E,19500μm,1.2s							
T1245				AML	AML		
comp=N,26900μm,1.2s							
T1245				AML	AML		
comp=N,28050μm,1.2s							
T1245				AML	AML		
comp=E,18100μm,1.2s							
T1216	**Preci, Frazion**	**0.07**	**295**	⇓P	Pg	05 56 30.7	+0.1
T1216				S	Sg	05 56 32.4	+0.2
T1216				AML	AML		
comp=N,41300μm,0.2s							
T1216				AML	AML		
comp=E,30850μm,1.2s							
T1216				AML	AML		
comp=N,41300μm,0.2s							

T1216 AML AML
comp=E,30900μm,1.2s
T1216 AML AML
comp=E,30900μm,0.8s
MC2 Monte Cornacci 0.08 47 ⇑P Pg 05 56 31.2 +0.3
FEMA Monte Fema 0.11 336 ⇓P Pg 05 56 31.6 +0.4
FEMA S Sg 05 56 33.6 +0.4
FEMA AML AML
comp=N,10855μm,0.9s
FEMA AML AML
comp=E,13950μm,0.2s
FEMA AML AML
comp=N,10840μm,0.9s
FEMA AML AML
comp=N,10850μm,0.9s
FEMA AML AML
comp=E,13900μm,0.2s
MMO1 Montemonaco 0.16 76 P Pg 05 56 32.6 +0.6
MMO1 S Sg 05 56 35.5 +1.1
FDMO Fiordimonte 0.18 354 P Pg 05 56 32.8 +0.6
FDMO S Sg 05 56 35.9 +1.1
FDMO AML AML
comp=N,3035μm,1.1s
FDMO AML AML
comp=E,4265μm,0.4s
FDMO AML AML
comp=N,3035μm,0.9s
FDMO AML AML
comp=E,4265μm,1.6s
T1215 Vallo di Nera, 0.19 252 ⇑P Pg 05 56 33.0 +0.6
T1215 S Sg 05 56 36.5 +1.4
T1215 AML AML
comp=E,4090μm,0.3s
T1215 AML AML
comp=E,4210μm,0.4s
T1215 AML AML
comp=E,4090μm,0.3s
T1215 AML AML
comp=N,2385μm,0.4s
T1215 AML AML
comp=E,4208μm,0.4s
T1215 AML AML
comp=N,2745μm,0.4s
T1217 Poggiodomo (PG 0.20 222 P Pg 05 56 33.3 +0.7
T1217 S Sg 05 56 37.2 +1.8
T1241 Roccafluvione, 0.23 91 ⇑P Pg 05 56 33.8 +0.6
T1241 S Sg 05 56 38.0 +1.6
T1204 Amatrice, Fraz 0.24 140 P Pg 05 56 34.1 +0.8
LNSS Leonessa 0.26 192 ⇑P Pg 05 56 34.4 +0.7
LNSS S Sb 05 56 38.8 -1.2
LNSS AML AML
comp=N,1815μm,0.4s
LNSS AML AML
comp=N,1815μm,1.6s
LNSS AML AML
comp=E,1190μm,0.6s
GUMA Gualdo di Mace 0.26 39 P Pb 05 56 34.6 -0.7
GUMA S Sb 05 56 39.3 -0.6
GUMA AML AML
comp=E,6130μm,0.6s
GUMA AML AML
comp=N,6755μm,0.3s
GUMA AML AML
comp=E,7740μm,0.5s
GUMA AML AML
comp=N,6240μm,0.4s
GUMA AML AML
comp=E,6125μm,0.6s
GUMA AML AML
comp=N,6755μm,0.3s
SMA1 SAN MARTINO 0.28 144 P Pg 05 56 34.7 +0.6
SMA1 AML AML
comp=E,1095μm,0.4s
SMA1 AML AML
comp=N,1046μm,0.8s
SMA1 AML AML
comp=N,1047μm,0.8s
SMA1 AML AML
comp=E,1090μm,0.4s
T1243 Rocca Santa Ma 0.30 123 ⇑P Pg 05 56 34.8 +0.5
T1243 S Sb 05 56 39.8 -1.2
RM33 Pellescritta (0.36 168 ⇓P Pg 05 56 36.1 +0.6
RM33 S Sb 05 56 42.1 -0.7
RM33 AML AML
comp=E,592μm,0.4s
RM33 AML AML
comp=N,470μm,0.2s
RM33 AML AML
comp=E,592μm,1.6s
RM33 AML AML
comp=N,469μm,0.2s
T1211 Morro Reatino 0.38 210 ⇓P Pb 05 56 36.6 -0.7
T1211 S Sb 05 56 42.9 -0.4
T1211 AML AML
comp=N,996μm,0.5s
T1211 AML AML
comp=E,520μm,1.2s
T1211 AML AML
comp=N,994μm,0.5s
T1211 AML AML
comp=N,994μm,1.5s
T1211 AML AML
comp=E,520μm,0.8s
ARRO Arrone 0.38 222 ⇑P Pg 05 56 36.4 +0.6
ARRO S Sb 05 56 42.6 -0.6
ARRO AML AML
comp=N,462μm,0.8s
ARRO AML AML
comp=E,436μm,0.8s
GAG1 Gagliole 0.38 355 P Pb 05 56 36.8 -0.5
GAG1 AML AML
comp=N,2985μm,0.4s
GAG1 AML AML
comp=N,2985μm,0.4s
GAG1 AML AML
comp=E,3215μm,0.5s
GAG1 AML AML
comp=N,2985μm,1.6s
CAMP Campotosto 0.39 146 ⇑P Pg 05 56 36.5 +0.4
CAMP S Sb 05 56 42.8 -0.9
CAMP AML AML
comp=E,468μm,0.9s
CAMP AML AML
comp=N,227μm,0.9s
CAMP AML AML
comp=N,228μm,0.9s
CAMP AML AML
comp=E,468μm,1.1s
CAMP AML AML
comp=N,228μm,1.1s
SNTG Esanatoglia 0.41 343 ⇑P Pg 05 56 37.0 +0.4
SNTG AML AML
comp=E,1290μm,0.5s
SNTG AML AML
comp=N,1130μm,0.5s
SNTG AML AML
comp=E,1290μm,0.5s
SNTG AML AML
comp=N,1135μm,0.5s
SNTG AML AML
comp=E,1295μm,0.5s
SNTG AML AML
comp=N,1340μm,0.5s
OFFI Offida 0.43 80 ⇑P Pb 05 56 38.2 +0.1
OFFI AML AML
comp=E,1034μm,0.8s
OFFI AML AML
comp=N,876μm,0.7s
OFFI AML AML
comp=N,876μm,1.3s
TERO Teramo 0.43 123 ⇑P Pg 05 56 37.1 +0.3
TERO S Sb 05 56 44.3 -0.6
TERO AML AML
comp=E,782μm,0.3s
TERO AML AML
comp=N,1025μm,0.3s
TERO AML AML
comp=N,1067μm,0.3s
TERO AML AML
comp=N,1022μm,0.3s
TERO AML AML
comp=E,829μm,0.3s
TERO AML AML
comp=E,781μm,0.3s
T1247 Pizzolo (AQ) 0.44 162 S Sb 05 56 46.0 +0.9
CESX Cesi 0.46 238 ⇑P Pg 05 56 37.8 +0.3
CESX AML AML
comp=N,859μm,0.5s
CESX AML AML
comp=E,711μm,1.5s
CESX AML AML
comp=E,711μm,0.5s
EL6 Elcito 0.47 359 ⇓P Pg 05 56 37.7 +0.1
EL6 S Sb 05 56 46.0 0.0
ATCC AVT- Casa Cast 0.47 313 ⇑P Pg 05 56 38.1 +0.4
ATCC AML AML
comp=E,1795μm,0.4s
ATCC AML AML
comp=N,2040μm,0.5s
ATCC AML AML
comp=E,1800μm,0.4s
ATCC AML AML
comp=N,2040μm,1.5s
FOSV Fossato di Vic 0.51 330 ⇓P Pg 05 56 38.6 +0.4
FOSV AML AML
comp=E,1715μm,0.2s
FOSV AML AML
comp=N,1425μm,0.3s
FOSV AML AML
comp=E,1720μm,0.2s
CING Cingoli 0.52 7 ⇓P Pg 05 56 39.0 +0.5
CING AML AML
comp=E,655μm,1.3s
CING AML AML
comp=N,598μm,1.5s
GIGS Gran Sasso 0.53 140 ⇑P Pg 05 56 38.9 +0.2
MURB Monte Urbino 0.59 313 P Pg 05 56 40.3 +0.4
MURB S Sb 05 56 51.0 +1.6
MURB AML AML
comp=E,2535μm,0.3s
MURB AML AML
comp=N,2385μm,0.2s
MURB AML AML
comp=N,2380μm,0.2s
MURB AML AML
comp=N,2450μm,0.1s
MURB AML AML
comp=E,2805μm,0.4s
MURB AML AML
comp=N,2450μm,1.9s
MURB AML AML
comp=N,2380μm,1.8s
ARVD Arcevia 0.65 349 ⇑P Pg 05 56 41.2 +0.2
ARVD S Sb 05 56 52.0 +0.9
ARVD AML AML
comp=E,473μm,1.6s
ARVD AML AML
comp=N,458μm,0.6s
ARVD AML AML
comp=E,473μm,0.4s
FRON Frontone 0.72 337 ⇑P Pg 05 56 42.3 0.0
FRON AML AML
comp=E,470μm,0.1s
FRON AML AML
comp=N,578μm,0.4s
ATVO AVT- Monte Val 0.73 316 ⇑P Pg 05 56 42.6 +0.1
ATVO S Sn 05 56 55.0 -1.3
ATVO AML AML
comp=E,360μm,1.4s
ATVO AML AML
comp=E,360μm,1.4s
ATVO AML AML
comp=N,374μm,0.8s
ATVO AML AML
comp=N,374μm,1.2s
ATVO AML AML
comp=E,360μm,0.6s
MGAB Montegabbione 0.74 275 ⇑P Pb 05 56 43.1 -0.3
MGAB AML AML
comp=E,658μm,0.6s
MGAB AML AML
comp=N,994μm,0.5s
MGAB AML AML
comp=E,650μm,1.6s
MGAB AML AML
comp=N,994μm,0.5s
MGAB AML AML
comp=E,657μm,0.6s
MGAB AML AML
comp=E,657μm,1.4s
MGAB AML AML
comp=E,650μm,0.4s
ATPI Pietralunga - 0.79 319 ⇓P Pg 05 56 43.8 +0.2
ATPI AML AML
comp=E,318μm,0.5s
ATPI AML AML
comp=E,318μm,0.5s
ATPI AML AML
comp=N,310μm,0.4s
PIEI Pieia 0.80 328 P Pg 05 56 43.7 -0.1
PIEI S Sn 05 56 57.0 -0.9
PIEI AML AML
comp=E,536μm,1.5s
PIEI AML AML
comp=E,536μm,0.5s
PIEI AML AML
comp=N,297μm,0.3s
T0110 Collepietro 0.80 142 ⇓P Pg 05 56 43.9 0.0
T0110 AML AML
comp=E,246μm,0.5s
T0110 AML AML
comp=N,264μm,1.3s
T0110 AML AML
comp=N,264μm,0.7s
MPAG Monte Paganucc 0.81 342 P Pb 05 56 44.5 -0.2
MPAG S Sn 05 56 58.0 -0.3
MPAG AML AML
comp=E,410μm,0.4s
MPAG AML AML
comp=N,372μm,0.4s
FSSB Fossombrone 0.87 344 ⇓P Pg 05 56 45.2 +0.1
FSSB S Sn 05 56 60.0 +0.4
FSSB AML AML
comp=N,1305μm,0.4s
FSSB AML AML
comp=E,900μm,1.4s
BADI Badiali 0.91 316 P Pb 05 56 46.1 -0.2
BADI S Sn 05 57 01.0 +0.4
CAFI Castiglion Fio 0.96 300 ⇑P Pg 05 56 47.0 +0.1
CAFI S Sn 05 57 02.0 +0.1
CAFI AML AML
comp=N,231μm,0.4s
CAFI AML AML
comp=E,299μm,0.6s
VIVA Pratoni del Vi 1.14 193 ⇓P Pb 05 56 49.9 -0.3
VIVA AML AML
comp=E,1855μm,0.1s
VIVA AML AML
comp=N,1075μm,1.2s

ROM 28 05:57:16.6±0.2, 42°.953N±0°.009×13°.13E±0°.01, h5km±1km, ML2.4/2, 1C, Error ellipse: s-maj=0.9km s-min=0.8km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.06**	**130**	P	Pg	05 57 18.8	+0.6
MC2				S	Sg	05 57 19.2	-0.1
FDMO	**Fiordimonte**	**0.09**	**341**	P	Pg	05 57 19.2	+0.7
FDMO				S	Sg	05 57 19.7	-0.1
T1216	**Preci, Frazion**	**0.10**	**232**	AML	AML		
	comp=N,516μm,0.2s						
T1216				AML	AML		
	comp=E,535μm,0.3s						
T1245	**Castelsantange**	**0.11**	**155**	P	Pg	05 57 19.2	+0.4
T1245				AML	AML		
	comp=N,3470μm,0.2s						
T1245				AML	AML		
	comp=E,4360μm,0.2s						
T1245				AML	AML		
	comp=N,3280μm,0.2s						
T1245				AML	AML		
	comp=E,4145μm,0.2s						
T1245				AML	AML		
	comp=E,4145μm,0.2s						
T1245				AML	AML		
	comp=N,3470μm,0.2s						
T1245				AML	AML		
	comp=E,4364μm,0.2s						
T1245				AML	AML		
	comp=N,3281μm,0.2s						
NRCA	**Norcia**	**0.12**	**184**	P	Pg	05 57 19.3	+0.2
NRCA				AML	AML		
	comp=N,2235μm,0.4s						
NRCA				AML	AML		
	comp=E,3520μm,0.2s						
NRCA				AML	AML		
	comp=N,2086μm,0.1s						
NRCA				AML	AML		
	comp=E,3521μm,0.2s						
NRCA				AML	AML		
	comp=E,3223μm,0.2s						
NRCA				AML	AML		
	comp=N,2016μm,0.1s						
MMO1	**Montemonaco**	**0.16**	**110**	P	Pg	05 57 20.7	+1.0
MMO1				S	Sg	05 57 22.9	+1.1
T1215	**Vallo di Nera,**	**0.24**	**232**	P	Pg	05 57 22.2	+0.9
T1215				AML	AML		
	comp=E,124μm,0.3s						
T1215				AML	AML		
	comp=N,84μm,0.1s						
T1215				AML	AML		
	comp=E,124μm,0.3s						
T1215				AML	AML		
	comp=N,121μm,0.3s						
T1241	**Roccafluvione,**	**0.24**	**113**	P	Pg	05 57 22.1	+0.8
T1241				S	Sg	05 57 25.9	+1.4
T1241				AML	AML		
	comp=E,256μm,0.3s						
T1241				AML	AML		
	comp=N,192μm,0.1s						
T1243	**Rocca Santa Ma**	**0.35**	**137**	⇑P	Pg	05 57 24.1	+0.7
T1243				S	Sg	05 57 29.4	+1.5
RM33	**Pellescritta (**	**0.45**	**172**	P	Pb	05 57 26.4	-0.7
RM33				S	Sb	05 57 33.0	-1.1

*IDC **28** 06:25:39.7±1.2, 38°.24N×134°.03E, h442km±16km, mb2.9/4, mbtmp3.6/7, Error ellipse: s-maj=36.2km s-min=18.7km az=56.0*
*JMA **28** 06:25:41.2±0.4, 38°N±3°×13°4E±°, h446km, MV3.3/33, SEA OF JAPAN*
ISC 28 06:25:40.1±0.9, 38°.2N±0°.1×134°.08E±0°.09, h459km, n14, σ1ŝ19/15, mb3.4/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	**Kaga**	**2.65**	**136**	*e*P	**P**	**06 26 44.6**	**-0.8**
JKSM	**Kasumi**	**2.67**	**170**	*e*P	**P**	**06 26 44.4**	**-1.2**
JKY	**Yasaka**	**2.71**	**162**	*e*P	**P**	**06 26 44.9**	**-1.0**
JWT	**Wachi**	**3.12**	**160**	P	**P**	**06 26 48.1**	**-0.7**
JSD	**Sado**	**3.31**	**92**	P	**P**	**06 26 49.4**	**-0.7**
JNG	**Nsakai**	**3.68**	**118**	P	**P**	**06 26 52.6**	**-0.7**
MJAR	**Matsushiro Arr**	**3.69**	**116**	P	**P**	**06 26 52.6**	**-0.7**
	7.3nm,0.7s,baz=300,slow=9.9,SNR=15						
KSRS	**Korea Array**	**4.93**	**263**	P	**P**	**06 27 02.8**	**-1.4**
	4.3nm,0.6s,baz=83,slow=9.9,SNR=8.6						
JRG	**Rokugo**	**5.26**	**75**	P	**P**	**06 27 08.1**	**+0.9**
JRG				S	**S**	**06 28 16.8**	**-1.7**
USRK	**Ussuriysk Ar.**	**6.18**	**346**	P	**P**	**06 27 15.0**	**-1.3**
	1.6nm,0.5s,baz=177,slow=10,SNR=4.2						
SONM	**Songino Array**	**22.30**	**304**	P	**P**	**06 30 03.2**	**+1.5**
	0.8nm,0.4s,baz=120,slow=9.2,SNR=3.3						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**38.51**	**300**	P	**P**	**06 32 21.0**	**-0.5**
	0.4nm,0.5s,baz=90,slow=9.9,SNR=3.8						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**57.85**	**180**	P	**P**	**06 34 48.0**	**+1.2**
	0.1nm,0.4s,baz=352,slow=7.5,SNR=5.8						
	0.1nm,0.4s						
FINES	**FINESS Array B**	**64.95**	**330**	P	**P**	**06 35 33.7**	**+0.8**
	5.2nm,0.9s,baz=79,slow=7.2,SNR=4.5						
	5.2nm,0.9s						

*IDC **28** 06:39:39.5±1.9, 14°.71N×91°.08W, h179km±24km, mb3.3/2, mbtmp3.9/5, MS4.0/1, Error ellipse: s-maj=40.0km s-min=17.2km az=52.0*
*GCG **28** 06:39:39.9±0.6, 15°.01N×91°.08W, h177km±10km, MD3.9*
ISC 28 06:39:38.9±0.9, 14°.7N±0°.1×91°.12W±0°.09, h202km±7km, n11, σ2ŝ65/18, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.38**	**134**	*e*P	**Pn**	**06 40 05.5**	**-0.7**
FUG				*e*S	**Sn**	**06 40 27.9**	**+0.7**
STG3	**Santiaguito 3,**	**0.43**	**270**	*e*P	**Pn**	**06 40 05.6**	**-0.7**
STG3				*e*S	**Sn**	**06 40 28.5**	**+1.1**
PCG	**Pacaya**	**0.59**	**123**	*e*P	**Pn**	**06 40 06.6**	**-0.4**
PCG				*e*S	**Sn**	**06 40 27.9**	**-0.8**
NBG	**Las Nubes**	**0.76**	**99**	*e*P	**Pn**	**06 40 07.6**	**-0.2**
NBG				*e*S	**Sn**	**06 40 28.8**	**-1.2**
MRL	**Marmol**	**1.44**	**75**	*e*P	**Pn**	**06 40 12.4**	**-0.2**
MRL				*e*S	**Sn**	**06 40 35.7**	**-2.9**
CMIG	**Matias Romero**	**4.32**	**304**	P	**Pn**	**06 40 44.4**	**-0.4**
	10.0nm,0.3s,baz=139,slow=12,SNR=35						
CMIG				S	**Sn**	**06 41 31.4**	**-5.3**
	105nm,0.7s,baz=155,slow=8.8,SNR=10						
JTS	**Las Juntas de**	**7.46**	**125**	P	**Pn**	**06 41 25.9**	**+0.7**
	14nm,0.3s,baz=7.8,slow=15,SNR=20						
JTS				S	**Sn**	**06 42 43.0**	**-6.8**
	2.2nm,0.3s,baz=359,slow=20,SNR=1.4						
TXAR	**Lajitas Array**	**18.60**	**324**	P	**Pn**	**06 43 45.1**	**+1.1**
	0.7nm,0.4s,baz=145,slow=11,SNR=30						
TKL	**Tuckaleechee C**	**21.88**	**16**	P	**P**	**06 44 17.7**	**+2.0**
	1.8nm,0.5s,baz=193,slow=12,SNR=5.5						
TKL				LR	LR	06 53 01.7	
	comp=Z,421nm,21.0s,baz=355,slow=37						
	1.8nm,0.5s						
LPAZ	**La Paz**	**38.27**	**143**	P	**P**	**06 46 42.9**	**+2.2**
	0.9nm,0.6s,baz=301,slow=9.0,SNR=5.2						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**136.39**	**256**	PKP	**PKiKP**	**06 58 40.1**	**+0.9**
	0.2nm,0.4s,baz=87,slow=2.4,SNR=5.9						

*NNC **28** 06:41:43.1±1.6, 53°.67N×88°.32E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=13.1km s-min=8.5km az=63.0, Suspected Mining explosion.*
*IDC **28** 06:41:44.7±3.1, 53°.81N×88°.14E, h0km, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=28.7km s-min=18.8km az=48.0*
ISC 28 06:41:44.9±4.4, 53°.7N±0°.1×88°.2E±0°.2, h0km, n9, σ1ŝ16/10, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.04**	**278**	I		06 56 10.0	
	baz=91,slow=340,SNR=3.5						
ZAA0	**Zalesovo Array**	**2.04**	**278**	⇑Pn	**Pn**	**06 42 19.2**	**-1.2**
	4.5nm,0.8s						
ZAA0				⇑Sn	**Sn**	**06 42 47.3**	**+0.8**
	13nm,0.8s						
ZALV	**Zalesovo Beam**	**2.04**	**278**	Pn	**Pn**	**06 42 19.7**	**-0.6**
	4.1nm,0.3s,baz=89,slow=14,SNR=86						
ZALV				Lg	Lg	06 42 47.2	
	8.5nm,0.3s,baz=94,slow=21,SNR=27						
KURK	**Kurchatov**	**6.62**	**247**	⇑Pn	**Pn**	**06 43 23.2**	**-0.2**
	0.5nm,0.6s						
KURK				⇓Lg	Lg	06 45 13.9	
	12nm,0.8s						
KURBB	**Kurchatov Arra**	**6.72**	**247**	Pn	**Pn**	**06 43 24.7**	**0.0**
	0.3nm,0.3s,baz=62,slow=14,SNR=6.7						
KURBB				Lg	Lg	06 45 16.4	
	0.2nm,0.3s,baz=60,slow=31,SNR=4.0						
	3.3nm,0.6s						
KURBB	**Kurchatov Arra**	**6.72**	**247**	⇑Pn	**Pn**	**06 43 24.4**	**-0.3**
	2.2nm,0.3s						
KURBB				⇓Sn	**Sn**	**06 44 41.1**	**-0.8**
	9.8nm,0.7s						
KURBB				⇓Lg	Lg	06 45 19.2	
	16nm,0.9s						
MK31	**Makanchi Array**	**7.90**	**211**	⇓Pn	Pn	06 43 38.3	-2.6
	0.6nm,0.6s,baz=30,slow=13,SNR=6.2						
MK31				⇓Sn	**Sn**	**06 45 10.8**	**-0.3**
	2.1nm,0.8s,baz=226,slow=25,SNR=2.8						
MK31				⇑Lg	Lg	06 45 52.9	
	2.8nm,0.8s,baz=33,slow=24,SNR=4.2						
MKAR	**Makanchi Array**	**7.90**	**211**	Pn	**Pn**	**06 43 42.8**	**+1.9**
	0.2nm,0.3s,baz=28,slow=13,SNR=7.3						
MKAR				Lg	Lg	06 45 57.7	
	0.1nm,0.3s,baz=30,slow=23,SNR=4.3						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**10.69**	**274**	Pn	**Pn**	**06 44 20.6**	**+1.6**
	0.1nm,0.3s,baz=75,slow=18,SNR=3.2						

ROM 28 06:41:45.2±0.3, 43°.03N±0°.01×13°.11E±0°.01, h4km±1km, Md1.2/4, 1C-3D, Error ellipse: s-maj=1.4km s-min=0.6km az=340.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**280**	P	Pg	06 41 45.8	-0.2
FDMO				S	Sg	06 41 46.8	+0.2
FDMO				END			
MC2	**Monte Cornacci**	**0.14**	**153**	P	Pg	06 41 47.3	-0.6
CESI	**CESI - Serrava**	**0.15**	**259**	⇑P	Pg	06 41 48.5	+0.3
CESI				S	Sg	06 41 51.7	+1.5
CESI				AML	AML		
	comp=E,8505μm,0.9s						
CESI				AML	AML		
	comp=N,20500μm,0.3s						
CESI				END			
T1216	**Preci, Frazion**	**0.16**	**205**	P	Pg	06 41 47.7	-0.6
T1216				AML	AML		
	comp=E,30100μm,1.2s						
T1216				AML	AML		
	comp=N,35850μm,0.2s						
T1216				AML	AML		
	comp=E,30100μm,1.2s						
GUMA	**Gualdo di Mace**	**0.17**	**80**	⇓P	Pg	06 41 48.9	+0.4
GUMA				S	Sg	06 41 52.2	+1.5
GUMA				AML	AML		
	comp=E,7785μm,0.7s						
GUMA				AML	AML		
	comp=N,7710μm,0.4s						
GUMA				AML	AML		
	comp=E,8785μm,1.6s						
GUMA				AML	AML		
	comp=N,9290μm,0.4s						
GUMA				END			
T1245	**Castelsantange**	**0.19**	**162**	AML	AML		
	comp=E,23150μm,0.2s						
T1245				AML	AML		
	comp=N,27550μm,0.2s						
T1245				AML	AML		
	comp=E,23450μm,0.2s						
T1245				AML	AML		
	comp=N,27800μm,1.6s						
AM05	**Amandola Campo**	**0.19**	**107**	⇓P	Pg	06 41 47.0	-1.8
SNTG	**Esanatoglia**	**0.25**	**331**	AML	AML		
	comp=N,1580μm,0.5s						
SNTG				AML	AML		
	comp=E,136μm,0.6s						
SNTG				AML	AML		
	comp=N,239μm,0.2s						
SNTG				AML	AML		
	comp=E,1480μm,0.5s						
SNTG				AML	AML		
	comp=N,1520μm,0.5s						
SNTG				AML	AML		
	comp=E,1510μm,0.1s						
T1215	**Vallo di Nera,**	**0.29**	**217**	AML	AML		
	comp=N,1990μm,0.2s						
T1215				AML	AML		
	comp=E,3030μm,0.4s						
EL6	**Elcito**	**0.29**	**359**	⇓P	Pg	06 41 51.3	+0.4
EL6				S	Sb	06 41 56.9	-1.5
EL6				AML	AML		
	comp=E,1890μm,1.0s						
EL6				AML	AML		
	comp=N,1729μm,0.2s						
EL6				END			
T1241	**Roccafluviore,**	**0.30**	**127**	AML	AML		
	comp=E,1840μm,0.9s						
T1241				AML	AML		
	comp=N,1540μm,0.7s						
LNSS	**Leonessa**	**0.43**	**187**	AML	AML		
	comp=E,1060μm,1.4s						
LNSS				AML	AML		
	comp=E,1045μm,1.3s						
LNSS				AML	AML		
	comp=N,1214μm,0.2s						
LNSS				AML	AML		
	comp=N,1216μm,0.2s						
TERO	**Teramo**	**0.55**	**138**	AML	AML		
	comp=E,434μm,1.1s						
TERO				AML	AML		
	comp=N,646μm,1.5s						

ROM 28 06:42:05.7±0.1, 42°.859N±0°.002×13°.106E±0°.003, h9km, ML2.6/30, 14C-7D, Error ellipse: s-maj=0.2km s-min=0.1km az=342.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**166**	⇓P	Pg	06 42 07.4	0.0
NRCA				S	Sg	06 42 08.5	-0.2
NRCA				AML	AML		
	comp=E,31150μm,0.2s						
NRCA				AML	AML		
	comp=N,19850μm,0.2s						
NRCA				AML	AML		
	comp=E,32500μm,0.2s						
NRCA				AML	AML		
	comp=N,21400μm,0.2s						
NRCA				AML	AML		
	comp=N,19870μm,0.2s						
NRCA				AML	AML		
	comp=E,32518μm,0.2s						
NRCA				AML	AML		
	comp=E,31164μm,0.2s						
NRCA				AML	AML		
	comp=N,20907μm,0.2s						
T1245	**Castelsantange**	**0.06**	**93**	P	Pg	06 42 08.1	+0.2
T1245				S	Sg	06 42 09.5	+0.1
T1245				AML	AML		
	comp=E,23150μm,0.2s						
T1245				AML	AML		
	comp=N,27550μm,0.2s						
T1245				AML	AML		
	comp=E,23150μm,0.3s						
T1245				AML	AML		
	comp=N,27550μm,0.2s						
T1245				AML	AML		
	comp=E,23450μm,0.2s						
T1245				AML	AML		
	comp=N,27800μm,1.6s						
T1245				AML	AML		
	comp=E,23100μm,0.3s						
T1245				AML	AML		
	comp=N,27550μm,0.2s						
T1245				AML	AML		
	comp=N,27561μm,0.2s						
T1245				AML	AML		
	comp=N,27800μm,0.4s						
T1245				AML	AML		
	comp=N,27600μm,0.2s						
T1245				AML	AML		
	comp=E,23479μm,0.2s						
T1245				AML	AML		
	comp=E,23128μm,0.2s						
T1216	**Preci, Frazion**	**0.07**	**296**	⇑P	Pg	06 42 08.1	+0.3
T1216				S	Sg	06 42 09.6	+0.2
T1216				AML	AML		
	comp=N,35850μm,0.2s						
T1216				AML	AML		
	comp=E,30100μm,1.2s						
T1216				AML	AML		
	comp=N,35860μm,0.2s						
T1216				AML	AML		
	comp=E,28328μm,0.2s						
MC2	**Monte Cornacci**	**0.08**	**49**	P	Pg	06 42 08.5	+0.4
FEMA	**Monte Fema**	**0.11**	**338**	P	Pg	06 42 08.9	+0.5
FEMA				S	Sg	06 42 10.9	+0.5
FEMA				AML	AML		
	comp=E,16300μm,0.2s						
FEMA				AML	AML		
	comp=N,11020μm,0.6s						
FEMA				AML	AML		
	comp=E,16250μm,0.2s						
FEMA				AML	AML		
	comp=N,10985μm,0.6s						
FEMA				AML	AML		
	comp=E,16269μm,0.2s						
FEMA				AML	AML		
	comp=N,9536μm,0.2s						
FEMA				AML	AML		
	comp=N,10985μm,1.4s						
MMO1	**Montemonaco**	**0.17**	**76**	P	Pg	06 42 09.8	+0.5
MMO1				S	Sg	06 42 12.8	+1.0
FDMO	**Fiordimonte**	**0.18**	**356**	P	Pg	06 42 10.2	+0.7
FDMO				S	Sg	06 42 13.1	+1.1
FDMO				AML	AML		
	comp=E,5700μm,0.1s						
FDMO				AML	AML		
	comp=N,3619μm,0.2s						
FDMO				AML	AML		
	comp=E,3886μm,0.2s						
FDMO				AML	AML		
	comp=N,9050μm,0.2s						
T1215	**Vallo di Nera,**	**0.18**	**252**	P	Pg	06 42 10.3	+0.8
T1215				S	Sg	06 42 13.5	+1.3
T1215				AML	AML		
	comp=E,3030μm,0.4s						
T1215				AML	AML		
	comp=N,1790μm,0.2s						
T1215				AML	AML		
	comp=N,1990μm,0.2s						
T1215				AML	AML		
	comp=N,1790μm,0.2s						
T1215				AML	AML		
	comp=N,1793μm,0.2s						
T1215				AML	AML		
	comp=N,1985μm,0.2s						
T1215				AML	AML		
	comp=E,3035μm,0.4s						
T1215				AML	AML		
	comp=E,3155μm,0.4s						
T1215				AML	AML		
	comp=E,2990μm,0.3s						
T1215				AML	AML		
	comp=E,2916μm,0.3s						
T1215				AML	AML		
	comp=N,1986μm,0.2s						
T1215				AML	AML		
	comp=N,1791μm,0.2s						
T1217	**Poggiodomo (PG**	**0.20**	**221**	P	Pg	06 42 10.6	+0.8
T1217				S	Sg	06 42 14.2	+1.6
T1217				AML	AML		
	comp=E,1670μm,0.7s						
T1217				AML	AML		
	comp=N,2185μm,0.8s						
T1217				AML	AML		
	comp=E,1670μm,0.7s						
T1217				AML	AML		
	comp=E,1615μm,0.7s						
T1217				AML	AML		
	comp=N,1930μm,0.8s						
T1217				AML	AML		
	comp=N,1925μm,0.8s						
T1217				AML	AML		
	comp=E,1388μm,0.4s						
T1217				AML	AML		
	comp=N,1664μm,0.3s						
T1217				AML	AML		
	comp=E,1357μm,0.2s						
CESI	**CESI - Serrava**	**0.21**	**315**	P	Pg	06 42 10.6	+0.7
CESI				S	Sg	06 42 14.2	+1.2
CESI				AML	AML		
	comp=E,8505μm,0.9s						
CESI				AML	AML		
	comp=N,20500μm,0.3s						
CESI				AML	AML		
	comp=N,20467μm,0.3s						
CESI				AML	AML		
	comp=E,7560μm,0.3s						
AM05	**Amandola Campo**	**0.22**	**57**	P	Pg	06 42 10.9	+0.7
AM05				S	Sg	06 42 14.6	+1.5
AM05				AML	AML		
	comp=N,958μm,0.3s						
AM05				AML	AML		
	comp=N,957μm,0.3s						
AM05				AML	AML		
	comp=N,325μm,1.4s						
AM05				AML	AML		
	comp=N,958μm,0.3s						
AM05				AML	AML		
	comp=E,3295μm,0.3s						
AM05				AML	AML		
	comp=E,809μm,0.8s						
AM05				AML	AML		
	comp=N,324μm,1.4s						
AM05				AML	AML		
	comp=N,878μm,0.2s						
AM05				AML	AML		
	comp=E,809μm,1.2s						
AM05				AML	AML		
	comp=N,324μm,0.6s						
AM05				AML	AML		
	comp=E,708μm,0.1s						
AM05				AML	AML		
	comp=E,3176μm,0.1s						
T1241	**Roccafluviore,**	**0.24**	**91**	P	Pg	06 42 11.1	+0.5
T1241				S	Sg	06 42 15.4	+1.6
T1241				AML	AML		
	comp=E,1840μm,0.9s						
T1241				AML	AML		
	comp=N,1540μm,0.7s						
T1241				AML	AML		
	comp=E,111μm,0.9s						
T1241				AML	AML		
	comp=E,1405μm,0.3s						
T1241				AML	AML		
	comp=N,1538μm,0.7s						
T1241				AML	AML		
	comp=N,166μm,1.0s						
T1204	**Amatrice, Fraz**	**0.24**	**140**	P	Pg	06 42 11.4	+0.8
T1204				S	Sg	06 42 15.8	+1.9
T1204				AML	AML		
	comp=N,645μm,0.3s						
T1204				AML	AML		
	comp=E,1322μm,0.2s						
CSP1	**Cessapalombo**	**0.24**	**17**	P	Pg	06 42 11.4	+0.7
CSP1				S	Sg	06 42 15.4	+1.4
CSP1				AML	AML		
	comp=E,4925μm,1.3s						
CSP1				AML	AML		
	comp=N,3112μm,0.4s						
CSP1				AML	AML		
	comp=E,4965μm,1.3s						
CSP1				AML	AML		
	comp=N,3110μm,0.4s						
CSP1				AML	AML		
	comp=N,3111μm,0.4s						
CSP1				AML	AML		
	comp=E,4965μm,0.7s						
CSP1				AML	AML		
	comp=E,3943μm,0.4s						
LNSS	**Leonessa**	**0.26**	**191**	P	Pg	06 42 11.7	+0.7
LNSS				S	Sb	06 42 15.9	-1.4
LNSS				AML	AML		
	comp=E,1060μm,1.4s						
LNSS				AML	AML		
	comp=N,1214μm,0.2s						
LNSS				AML	AML		
	comp=E,1065μm,1.4s						
LNSS				AML	AML		
	comp=N,1216μm,0.2s						
LNSS				AML	AML		
	comp=N,1216μm,0.2s						
LNSS				AML	AML		
	comp=E,883μm,0.3s						
LNSS				AML	AML		
	comp=N,1216μm,0.2s						
GUMA	**Gualdo di Mace**	**0.26**	**40**	P	Pb	06 42 11.9	-0.7
GUMA				S	Sb	06 42 16.7	-0.6
GUMA				AML	AML		
	comp=E,7785μm,0.7s						
GUMA				AML	AML		
	comp=N,7710μm,0.4s						
GUMA				AML	AML		
	comp=N,9290μm,0.4s						
GUMA				AML	AML		
	comp=N,7715μm,0.4s						
GUMA				AML	AML		
	comp=E,8151μm,0.4s						
GUMA				AML	AML		
	comp=E,8785μm,1.6s						
GUMA				AML	AML		
	comp=E,7785μm,1.3s						
GUMA				AML	AML		
	comp=E,7787μm,0.7s						
GUMA				AML	AML		
	comp=N,7713μm,0.4s						
T1243	**Rocca Santa Ma**	**0.30**	**123**	P	Pg	06 42 12.0	+0.3
T1243				S	Sb	06 42 17.2	-1.1
SEF1	**Sefro**	**0.31**	**338**	P	Pg	06 42 12.6	+0.7
SEF1				S	Sb	06 42 17.5	-1.1
MDAR	**Monte D'Aria**	**0.33**	**5**	S	Sb	06 42 20.0	+0.6
RM33	**Pellescritta (**	**0.36**	**167**	⇑P	Pg	06 42 13.5	+0.7
RM33				AML	AML		
	comp=N,508μm,0.3s						
RM33				AML	AML		
	comp=N,522μm,0.3s						
RM33				AML	AML		
	comp=N,509μm,0.3s						
RM33				AML	AML		
	comp=E,437μm,0.9s						
RM33				AML	AML		
	comp=E,434μm,0.3s						
RM33				AML	AML		
	comp=E,414μm,0.2s						
T1211	**Morro Reatino**	**0.38**	**210**	⇓P	Pb	06 42 13.9	-0.6
T1211				AML	AML		
	comp=N,824μm,0.7s						
T1211				AML	AML		
	comp=N,828μm,0.7s						
T1211				AML	AML		
	comp=E,488μm,1.4s						
T1211				AML	AML		
	comp=N,856μm,0.7s						
T1211				AML	AML		
	comp=E,377μm,0.2s						
T1211				AML	AML		
	comp=E,365μm,0.2s						
T1211				AML	AML		
	comp=E,488μm,0.6s						
T1211				AML	AML		
	comp=N,775μm,0.5s						
ARRO	**Arrone**	**0.38**	**222**	⇑P	Pg	06 42 13.8	+0.7
ARRO				AML	AML		
	comp=E,487μm,0.8s						
ARRO				AML	AML		
	comp=N,440μm,0.7s						
ARRO				AML	AML		
	comp=E,372μm,0.3s						
ARRO				AML	AML		
	comp=E,487μm,1.2s						
ARRO				AML	AML		
	comp=N,361μm,0.3s						
CAMP	**Campotosto**	**0.39**	**145**	⇓P	Pg	06 42 14.0	+0.6
CAMP				AML	AML		
	comp=N,270μm,0.7s						
CAMP				AML	AML		
	comp=E,328μm,1.6s						
CAMP				AML	AML		
	comp=N,262μm,0.6s						
CAMP				AML	AML		
	comp=N,269μm,0.7s						
CAMP				AML	AML		
	comp=E,320μm,0.6s						
SNTG	**Esanatoglia**	**0.41**	**343**	P	Pg	06 42 14.3	+0.5
SNTG				AML	AML		
	comp=E,1485μm,0.5s						
SNTG				AML	AML		
	comp=N,1520μm,0.5s						
SNTG				AML	AML		
	comp=N,1515μm,0.5s						
SNTG				AML	AML		
	comp=E,1480μm,0.5s						
SNTG				AML	AML		
	comp=N,1580μm,0.5s						
SNTG				AML	AML		
	comp=N,1382μm,0.2s						
SNTG				AML	AML		
	comp=N,1310μm,0.2s						
SNTG				AML	AML		
	comp=E,1508μm,0.1s						
SNTG				AML	AML		
	comp=E,1510μm,0.1s						
SNTG				AML	AML		
	comp=E,1402μm,0.1s						
OFFI	**Offida**	**0.43**	**80**	⇑P	Pb	06 42 15.6	+0.1
OFFI				AML	AML		
	comp=E,922μm,1.4s						
OFFI				AML	AML		
	comp=E,917μm,1.4s						
OFFI				AML	AML		
	comp=N,1032μm,0.7s						
OFFI				AML	AML		
	comp=E,876μm,0.8s						
OFFI				AML	AML		
	comp=N,1030μm,0.7s						
TERO	**Teramo**	**0.44**	**123**	⇑P	Pg	06 42 14.4	+0.2
TERO				AML	AML		
	comp=E,434μm,1.1s						
TERO				AML	AML		
	comp=N,646μm,1.5s						
TERO				AML	AML		
	comp=E,387μm,0.3s						
TERO				AML	AML		
	comp=E,344μm,0.2s						
TERO				AML	AML		
	comp=N,586μm,0.2s						
TERO				AML	AML		
	comp=N,646μm,0.5s						
TERO				AML	AML		
	comp=E,434μm,0.9s						
TERO				AML	AML		
	comp=N,548μm,0.2s						
CESX	**Cesi**	**0.46**	**237**	⇑P	Pg	06 42 15.1	+0.5
CESX				AML	AML		
	comp=N,662μm,0.5s						
CESX				AML	AML		
	comp=E,662μm,1.5s						
CESX				AML	AML		
	comp=N,663μm,0.5s						
CESX				AML	AML		
	comp=E,653μm,0.6s						
CESX				AML	AML		
	comp=E,662μm,0.5s						
EL6	**Elcito**	**0.47**	**360**	⇓P	Pg	06 42 15.4	+0.5
EL6				AML	AML		
	comp=N,1727μm,0.2s						
EL6				AML	AML		
	comp=E,1790μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.47**	**314**	⇑P	Pg	06 42 15.4	+0.5
ATCC				AML	AML		
	comp=N,2005μm,0.5s						
ATCC				AML	AML		
	comp=N,2010μm,0.5s						
ATCC				AML	AML		
	comp=E,1930μm,0.5s						
ATCC				AML	AML		
	comp=N,1907μm,0.3s						
ATCC				AML	AML		
	comp=E,1767μm,0.3s						
FOSV	**Fossato di Vic**	**0.50**	**330**	⇓P	Pg	06 42 15.9	+0.5
FOSV				S	Sb	06 42 25.0	+0.8
FOSV				AML	AML		
	comp=E,1815μm,0.2s						
FOSV				AML	AML		
	comp=E,1817μm,0.2s						
FOSV				AML	AML		
	comp=N,1585μm,0.3s						
FOSV				AML	AML		
	comp=N,1587μm,0.3s						
CING	**Cingoli**	**0.52**	**7**	⇑P	Pb	06 42 16.4	-0.6
GIGS	**Gran Sasso**	**0.53**	**140**	⇑P	Pb	06 42 16.6	-0.6
GIGS				AML	AML		
	comp=E,87μm,1.6s						
GIGS				AML	AML		
	comp=N,86μm,1.1s						
GIGS				AML	AML		
	comp=E,87μm,1.6s						
MURB	**Monte Urbino**	**0.59**	**314**	⇑P	Pg	06 42 17.5	+0.5
MURB				S	Sb	06 42 28.0	+1.4
MURB				AML	AML		
	comp=E,2865μm,0.4s						
MURB				AML	AML		
	comp=E,2495μm,0.4s						
MURB				AML	AML		
	comp=N,2210μm,0.9s						
MURB				AML	AML		
	comp=E,2865μm,1.6s						
MURB				AML	AML		
	comp=E,2495μm,1.6s						
MURB				AML	AML		
	comp=E,2591μm,0.2s						
MURB				AML	AML		
	comp=E,2444μm,0.3s						
MURB				AML	AML		
	comp=N,2190μm,0.2s						
MURB				AML	AML		
	comp=N,2191μm,0.2s						

MURB				AML	AML		
	comp=N,2148μm,0.2s						
ARVD	**Arcevia**	**0.65 349**		P	Pg	06 42 18.6	+0.3
ARVD				S	Sb	06 42 29.0	+0.6
ARVD				AML	AML		
	comp=N,456μm,0.2s						
ARVD				AML	AML		
	comp=E,516μm,1.1s						
ARVD				AML	AML		
	comp=E,516μm,0.9s						
ARVD				AML	AML		
	comp=E,458μm,0.2s						
ARVD				AML	AML		
	comp=N,455μm,0.2s						
FAGN	**Fagnano**	**0.69 149**	⇑	P	Pb	06 42 20.0	+0.1
FAGN				AML	AML		
	comp=E,390μm,0.6s						
FAGN				AML	AML		
	comp=N,408μm,0.5s						
FAGN				AML	AML		
	comp=E,391μm,0.6s						
FAGN				AML	AML		
	comp=E,391μm,0.6s						
FRON	**Frontone**	**0.71 337**	⇓	P	Pg	06 42 19.0	-0.4
FRON				AML	AML		
	comp=E,534μm,0.2s						
FRON				AML	AML		
	comp=N,645μm,1.4s						
FRON				AML	AML		
	comp=N,498μm,0.3s						
FRON				AML	AML		
	comp=E,534μm,0.2s						
FRON				AML	AML		
	comp=N,645μm,0.6s						
FRON				AML	AML		
	comp=E,534μm,1.8s						
ATVO	**AVT- Monte Val**	**0.73 316**	⇑	P	Pg	06 42 20.0	+0.2
ATVO				S	Sb	06 42 32.0	+1.2
ATVO				AML	AML		
	comp=E,348μm,1.2s						
ATVO				AML	AML		
	comp=N,362μm,0.8s						
ATVO				AML	AML		
	comp=E,339μm,0.2s						
ATVO				AML	AML		
	comp=N,322μm,0.3s						
ATVO				AML	AML		
	comp=E,348μm,0.8s						
ATMI	**Monte Miggiano**	**0.78 308**		S	Sn	06 42 34.0	-0.6
ATPI	**Pietralunga -**	**0.78 319**		S	Sn	06 42 34.0	-0.9
PIEI	**Pieia**	**0.80 329**	⇑	P	Pg	06 42 21.2	+0.2
PIEI				S	Sn	06 42 34.0	-1.1
PIEI				AML	AML		
	comp=E,510μm,1.5s						
PIEI				AML	AML		
	comp=E,448μm,0.2s						
PIEI				AML	AML		
	comp=N,318μm,0.3s						
PIEI				AML	AML		
	comp=N,318μm,0.3s						
PIEI				AML	AML		
	comp=E,510μm,1.5s						
T0110	**Collepietro**	**0.81 142**	⇓	P	Pn	06 42 23.1	-0.1
MPAG	**Monte Paganucc**	**0.81 342**		S	Sn	06 42 35.0	-0.5
FSSB	**Fossombrone**	**0.87 344**	⇑	P	Pg	06 42 22.5	+0.2
FSSB				S	Sn	06 42 37.0	+0.1
FSSB				AML	AML		
	comp=E,932μm,1.4s						
FSSB				AML	AML		
	comp=N,1345μm,0.4s						
FSSB				AML	AML		
	comp=E,931μm,1.4s						
FSSB				AML	AML		
	comp=N,1346μm,0.4s						
FSSB				AML	AML		
	comp=E,931μm,0.6s						
FSSB				AML	AML		
	comp=E,805μm,0.4s						
BADI	**Badiali**	**0.91 316**		S	Sn	06 42 38.0	+0.2

*IDC **28** 06:56:13.5±2.1, 18.°05S×175.°44W, h211km±20km, mb3.9/12, mbtmp4.4/13, Error ellipse: s-maj=21.1km s-min=11.5km az=132.0*
*NEIC **28** 06:56:14.9±2.0, 18.°0S±0.°1×175.°34W±0.°09, h225km±7km, mb4.4/31, Error ellipse: s-maj=15.8km s-min=11.6km az=154.0*

ISC 28 06:56:17.2±0.4, 18.°08S±0.°09×175.°29W±0.°08, h250km, n80, σ1°18/78, mb4.4/29, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.18**	**102**	Pn	**Pn**	**06 57 33.7**	**-1.5**
AFI	**Afiamalu**	**5.35**	**40**	P	**Pn**	**06 57 33.8**	**-3.6**
	98nm,0.5s,baz=162,slow=1.9,SNR=26						
AFI				S	S	06 58 31.4	-10
	92nm,0.3s,baz=81,slow=21,SNR=7.5						
AFI	**Afiamalu**	**5.35**	**40**	Pn	Pn	06 57 33.4	-4.0
MSVF	**Nonsavu**	**6.35**	**272**	P	**Pn**	**06 57 52.5**	**+2.7**
	66nm,0.8s,baz=112,slow=13,SNR=30						
MSVF	**Nonsavu**	**6.35**	**272**		**Pn**	**06 57 52.4**	**+2.6**
DZM	**Mont Dzumac**	**17.61**	**254**	P	**Pn**	**07 00 07.2**	**-1.1**
	9.9nm,0.9s,baz=78,slow=17,SNR=5.4						
DZM	**Mont Dzumac**	**17.61**	**254**	Pn	**P**	**07 00 06.3**	**+0.6**
DZM				IAmb	IAmb	07 00 08.4	
	comp=Z,14nm,0.9s						
URZ	**Urewera**	**21.17**	**197**	P	**P**	**07 00 42.1**	**-1.3**
	comp=Z,5.0nm,0.3s,baz=57,slow=1.3,SNR=12						
	comp=Z,5.0nm,0.3s						
BKZ	**Black Stump Fm**	**22.19**	**197**	P	**P**	**07 00 52.4**	**-0.6**
MSWZ	**Moikau Station**	**24.63**	**197**	P	**P**	**07 01 16.2**	**+1.2**
CTA	**Charters Tower**	**36.35**	**261**	P	**P**	**07 02 56.1**	**-1.7**
	comp=Z,4.8nm,0.5s,baz=91,slow=11,SNR=12						
	comp=Z,4.8nm,0.5s						
TOO	**Toolangi**	**39.39**	**232**	P	**P**	**07 03 21.3**	**-1.7**
TOO				IAmb	IAmb	07 03 57.1	
	comp=Z,25nm,1.4s						
COEN	**Coen**	**40.07**	**270**	P	**P**	**07 03 27.9**	**-0.9**
COEN				IAmb	IAmb	07 03 29.1	
	comp=Z,7.1nm,0.7s						
STKA	**Stephens Creek**	**41.16**	**242**	P	**P**	**07 03 36.6**	**-0.9**
	comp=Z,8.0nm,0.9s,baz=69,slow=10,SNR=16						
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	**41.16**	**242**	P	**P**	**07 03 36.8**	**-0.8**
BBOO	**Buckleboo**	**45.93**	**242**	P	**P**	**07 04 14.2**	**-1.3**
BBOO				IAmb	IAmb	07 04 15.1	
	comp=Z,20nm,0.7s						
WB2	**Warramunga Arr**	**47.51**	**259**	P	**P**	**07 04 26.3**	**-1.5**
WB2				IAmb	IAmb	07 04 27.1	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**47.52**	**259**	P	**P**	**07 04 26.2**	**-1.7**
	comp=Z,8.4nm,0.4s,baz=98,slow=7.2,SNR=386						
	comp=Z,8.4nm,0.4s						
WRA	**Warramunga Arr**	**47.52**	**259**	P	**P**	**07 04 26.2**	**-1.7**
AS31	**Alice Springs**	**47.60**	**254**	P	**P**	**07 04 27.4**	**-1.1**
AS31				IAmb	IAmb	07 04 28.5	
	comp=Z,18nm,0.9s						
ASAR	**Alice Springs**	**47.60**	**254**	P	**P**	**07 04 27.4**	**-1.1**
	comp=Z,58nm,0.7s,baz=90,slow=8.0,SNR=684						
ASAR	**Alice Springs**	**47.60**	**254**	P	**P**	**07 04 27.3**	**-1.2**
MTN	**Manton Dam**	**51.76**	**268**	P	**P**	**07 04 58.4**	**-1.4**
MTN				IAmb	IAmb	07 04 58.9	
	comp=Z,15nm,0.7s						
FORT	**Forrest**	**52.62**	**245**	P	**P**	**07 05 04.1**	**-1.9**
KNRA	**Kununurra**	**53.42**	**264**	P	**P**	**07 05 10.7**	**-1.3**
SBA	**Scott Base**	**60.45**	**184**	P	**P**	**07 06 02.1**	**+2.0**
VNDA	**Vanda**	**60.54**	**186**	P	**P**	**07 06 02.5**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=32,slow=4.8,SNR=3.6						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**60.54**	**186**	P	**P**	**07 06 02.8**	**+2.0**
PSA00	**Pilbara Seismi**	**60.73**	**255**	P	**P**	**07 06 01.4**	**-1.6**
PSA00				IAmb	IAmb	07 06 02.5	
	comp=Z,5.3nm,0.9s						
MBWA	**Marble Bar**	**60.91**	**255**	P	**P**	**07 06 02.3**	**-1.9**
MBWA				IAmb	IAmb	07 06 03.8	
	comp=Z,22nm,1.4s						
JGF	**Kuroka**	**69.73**	**320**	P	**P**	**07 07 01.0**	**+0.6**
JGF				IAmb	IAmb	07 07 27.3	
	comp=Z,15nm,1.2s						
MJAR	**Matsushiro Arr**	**69.85**	**322**	P	**P**	**07 07 00.9**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=157,slow=6.7,SNR=8.9						
	comp=Z,3.8nm,0.6s						
MAJO	**Matsushiro**	**69.85**	**322**	P	**P**	**07 07 01.1**	**+0.1**
QSPA	**South Pole Qui**	**71.98**	**180**	P	**P**	**07 07 13.8**	**+0.3**
QSPA				IAmb	IAmb	07 07 53.4	
	comp=Z,6.7nm,1.5s						

JHS	**Saijyo**	**72.00**	**317**	P	**P**	**07 07 14.6**	**+0.7**
UGM	**Wanagama**	**72.61**	**267**	P	**P**	**07 07 17.2**	**-0.8**
PETK	**Petropavlovsk-**	**74.64**	**344**	P	**P**	**07 07 29.1**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=142,slow=7.2,SNR=3.5						
	comp=Z,4.7nm,0.8s						
KMRM	**Mail Ridge**	**75.28**	**38**	P	**P**	**07 07 34.4**	**+1.4**
KMRM				IAmb	IAmb	07 07 35.4	
	comp=Z,9.2nm,0.9s						
KSRS	**Korea Array**	**76.83**	**317**	P	**P**	**07 07 43.0**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=123,slow=6.0,SNR=5.1						
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**77.52**	**42**	P	**P**	**07 07 46.8**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=224,slow=9.3,SNR=9.6						
	comp=Z,0.9nm,0.8s						
I07A	**Izee**	**80.12**	**37**	P	**P**	**07 08 00.3**	**+0.7**
NJ2	**Nanjing**	**80.36**	**308**	*e*P	**P**	**07 08 02.3**	**+1.4**
WRH	**Wood River Hil**	**84.92**	**11**	P	**P**	**07 08 23.6**	**-0.1**
WRH				IAmb	IAmb	07 08 24.6	
	comp=Z,7.2nm,0.9s						
HDA	**Harding Lake**	**85.08**	**12**	P	**P**	**07 08 24.6**	**+0.1**
HDA				IAmb	IAmb	07 08 25.2	
	comp=Z,5.8nm,0.7s						
CCB	**Clear Creek Bu**	**85.13**	**12**	P	**P**	**07 08 24.3**	**-0.4**
CCB				IAmb	IAmb	07 08 25.3	
	comp=Z,5.9nm,0.6s						
IL31		**85.42**	**12**	P	**P**	**07 08 25.7**	**-0.4**
ILAR	**Eielson Array**	**85.42**	**12**	P	**P**	**07 08 25.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=226,slow=6.0,SNR=25						
	comp=Z,1.4nm,0.6s						
ILAR	**Eielson Array**	**85.42**	**12**	P	**P**	**07 08 25.4**	**-0.7**
J26L	**Joseph Creek**	**85.86**	**13**	P	**P**	**07 08 29.2**	**+0.8**
J26L				IAmb	IAmb	07 08 30.3	
	comp=Z,4.8nm,0.9s						
M30M	**Minto, Yukon**	**85.91**	**17**	P	**P**	**07 08 28.8**	**+0.1**
M30M				IAmb	IAmb	07 08 30.0	
	comp=Z,3.6nm,0.9s						
DAWY	**Dawson**	**86.46**	**15**	P	**P**	**07 08 31.4**	**+0.1**
HHC	**Hu-ho-hao-te**	**89.53**	**313**	*e*P	**P**	**07 08 47.8**	**+1.4**
VNA3	**Neumayer Olymp**	**90.36**	**175**	P	**P**	**07 08 49.5**	**-0.1**
VNA2	**Neumayer--Watz**	**90.83**	**176**	P	**P**	**07 08 52.1**	**+0.3**
	baz=208,slow=3.4						
VNA1	**Neumayer--Stat**	**91.04**	**176**	P	**P**	**07 08 53.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**91.74**	**289**	P	**P**	**07 08 58.4**	**+1.3**
	comp=Z,1.6nm,0.4s,baz=106,slow=2.2,SNR=6.4						
	comp=Z,1.6nm,0.4s						
PZH	**PanZhiHua**	**91.87**	**297**	P	**P**	**07 08 58.8**	**+1.2**
YKA	**Yellowknife Ar**	**93.27**	**24**	P	**P**	**07 09 03.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=278,slow=4.8,SNR=4.4						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**111.39**	**314**	PKiKP	**PKiKP**	**07 14 20.7**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=201,slow=1.2,SNR=3.2						
BVAR	**Borovoye Array**	**118.85**	**321**	PKP	**PKPdf**	**07 14 34.0**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=124,slow=2.1,SNR=4.2						
ARCES	**ARCESS Array B**	**126.98**	**351**	PKP	**PKPdf**	**07 14 50.3**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=0.0,slow=2.4,SNR=7.7						
AKASG	**Malin Array Be**	**142.04**	**335**	PKhKP	PKPpre	07 15 13.7	
	comp=Z,0.2nm,0.3s,baz=36,slow=4.0,SNR=4.2						
CLL	**Collm**	**146.20**	**351**	*i* PKPbc	**PKPbc**	**07 15 28.5**	**+0.5**
	comp=Z,7.0nm,0.7s						
CLL	**Collm**	**146.20**	**351**	*e*PKPdf	**PKPdf**	**07 15 27.0**	**+0.5**
OSTC	**Ostas**	**146.32**	**347**	*e*PKP	**PKPab**	**07 15 29.4**	**-0.3**
DPC	**Dobruska-Polom**	**146.49**	**346**	*e*PKP	**PKPbc**	**07 15 29.6**	**+0.7**
KRLC	**Kraliky**	**146.64**	**346**	*e*PKP	**PKPbc**	**07 15 30.3**	**+0.9**
BRTR	**Keskin Array B**	**146.98**	**317**	PKPbc	**PKPbc**	**07 15 31.1**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=134,slow=3.5,SNR=8.4						
KHC	**Kasperske Hory**	**148.21**	**349**	*e*PKP	**PKPbc**	**07 15 34.2**	**+0.6**
GERES	**GERESS Array B**	**148.46**	**349**	PKPbc	**PKPbc**	**07 15 34.6**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=25,slow=3.5,SNR=8.3						
RONA	**Rosalia, Austr**	**148.97**	**345**	*e*P	**PKPab**	**07 15 41.3**	**+0.8**
	comp=Z,4.9nm,0.9s						
BIOA	**Bad Ischl, Aus**	**149.57**	**348**	*e*P	**PKPab**	**07 15 43.8**	**+0.9**
	comp=Z,2.9nm,0.4s						
EIL	**Elat**	**150.13**	**298**	PKPbc	**PKiKP**	**07 15 39.5**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=71,slow=4.0,SNR=3.8						
WATA	**Walderalm**	**150.28**	**351**	*e*P	**PKPbc**	**07 15 39.2**	**+0.2**
	comp=Z,3.5nm,0.5s						
WTTA	**Wattenberg**	**150.34**	**350**	*e*P	**PKPbc**	**07 15 39.3**	**+0.2**
	comp=Z,9.9nm,0.9s						
DAVA	**Damuels**	**150.56**	**353**	*e*P	**PKiKP**	**07 15 40.6**	**+0.3**
	comp=Z,2.7nm,0.4s						
ABTA	**Abfaltersbach**	**150.69**	**349**	*e*P	**PKPbc**	**07 15 39.7**	**-0.1**
	comp=Z,10.0nm,0.9s						
FETA	**Feichten**	**150.72**	**352**	*e*P	**PKiKP**	**07 15 40.7**	**+0.2**
	comp=Z,6.5nm,0.9s						
DAVOX	**Davos/Dischmat**	**151.06**	**353**	PKPbc	**PKiKP**	**07 15 41.5**	**+0.2**
	comp=Z,5.7nm,0.4s,baz=305,slow=2.1,SNR=12						
ESDC	**Sonseca Array**	**157.21**	**17**	PKPab	**PKPab**	**07 16 16.4**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=305,slow=5.2,SNR=4.5						

*IDC **28** 07:06:41.2±1.1, 26.°62N×66.°30E, h0km, mb3.8/8, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=26.3km s-min=25.4km az=159.0*
*OMAN **28** 07:07:11.6±8.9, 25.°93N×64.°44E, h25km, mb4.8/12, Error ellipse: s-maj=97.7km s-min=18.5km az=73.0*

ISC 28 07:06:46.0±0.9, 26.°7N±0.°1×66.°5E±0.°1, h35km, n27, σ1°31/27, mb3.7/8, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**4.99**	**256**	P	**Pn**	**07 07 57.9**	**-0.5**
THW	**Thamme Wali**	**7.62**	**36**	P	**Pn**	**07 08 32.2**	**-2.4**
JASK	**Jask - Hormozg**	**7.78**	**266**	P	**Pn**	**07 08 37.0**	**+0.2**
	SNR=12						
WSAR	**Wadi Sarin**	**7.91**	**246**	Pn	**Pn**	**07 08 36.4**	**-2.2**
	1.2nm,0.3s,baz=103,slow=7.4,SNR=23						
WSAR				Sn	Sn	07 09 57.4	-9.4
	1.0nm,0.3s,baz=209,slow=3.1,SNR=6.5						
	2.8nm,0.3s						
WSAR	**Wadi Sarin**	**7.91**	**246**	P	**Pn**	**07 08 36.5**	**-2.0**
	SNR=26						
WBK	**Wadi Bani Khal**	**7.94**	**241**	P	**Pn**	**07 08 38.1**	**-1.0**
	SNR=23						
BIDO	**Bidbid**	**8.20**	**249**	P	**Pn**	**07 08 43.0**	**+0.4**
SMDO	**Samad**	**8.46**	**247**	P	**Pn**	**07 08 45.3**	**-1.0**
CEP	**Cherat**	**8.53**	**32**	P	**Pn**	**07 08 46.0**	**-1.2**
JMDO	**Jabal Madar**	**8.75**	**242**	P	**Pn**	**07 08 49.8**	**-0.4**
HOQ	**Hoqain**	**8.86**	**252**	P	**Pn**	**07 08 51.0**	**-0.7**
BANOM	**Banah**	**9.17**	**268**	P	**Pn**	**07 08 57.2**	**+1.2**
SHME	**Shamm**	**9.30**	**268**	P	**Pn**	**07 08 58.9**	**+1.3**
BSY	**Bisya**	**9.30**	**247**	P	**Pn**	**07 08 58.3**	**+0.6**
SOHO	**SOHO**	**9.35**	**256**	P	**Pn**	**07 08 56.4**	**-1.9**
MASF	**Masafi**	**9.38**	**264**	P	**Pn**	**07 08 58.8**	**0.0**
ASHO	**Ashiyiah**	**9.61**	**260**	P	**Pn**	**07 09 02.1**	**+0.1**
ARQ	**Araqi**	**9.63**	**252**	P	**Pn**	**07 09 03.9**	**+1.8**
MHTO	**MHTO**	**9.63**	**236**	P	**Pn**	**07 09 03.1**	**+0.9**
MKAR	**Makanchi Array**	**23.66**	**28**	P	**P**	**07 11 56.1**	**+1.9**
	1.0nm,0.6s,baz=211,slow=9.9,SNR=6.4						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**25.63**	**18**	P	**P**	**07 12 13.6**	**+1.5**
	0.4nm,0.6s,baz=211,slow=8.7,SNR=2.9						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**44.03**	**333**	P	**P**	**07 14 50.5**	**+0.5**
	3.2nm,1.0s,baz=134,slow=6.0,SNR=1.1						
	3.2nm,1.0s						
HFS	**Hagfors**	**48.90**	**328**	P	**P**	**07 15 26.6**	**-1.6**
	11nm,1.1s,baz=177,slow=12,SNR=3.5						
	11nm,1.1s						
ARCES	**ARCESS Array B**	**49.04**	**342**	P	**P**	**07 15 29.4**	**+0.2**
	0.8nm,0.7s,baz=141,slow=6.2,SNR=3.8						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**61.83**	**271**	P	**P**	**07 17 01.4**	**-0.5**
	1.0nm,0.8s,baz=68,slow=4.0,SNR=6.2						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**80.45**	**118**	P	**P**	**07 18 55.8**	**+1.2**
	0.3nm,0.8s,baz=309,slow=4.9,SNR=3.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**82.14**	**121**	P	**P**	**07 19 04.6**	**+1.1**
	0.4nm,0.8s,baz=299,slow=4.8,SNR=5.1						
	0.4nm,0.8s						

*NOU **28** 07:10:02.8, 39.°11S×174.°72E, h234km, MLv3.6/13, North Island, New Zealand*
*WEL **28** 07:10:04.2±0.7, 39.°S±4.°×17.°5E±.°, h223km±5km, M3.2/60, ML2.8/8, MLv3.2/60, Error ellipse: s-maj=0.0km s-min=0.0km az=121.8*

ISC 28 07:10:01.2±1.9, 39.°11S±0.°07×174.°71E±0.°06, h248km±11km, n130, σ0°98/137, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.04**	**116**	P	**Pn**	**07 10 33.4**	**+0.4**
VRZ				S	**S**	**07 10 56.3**	**-1.7**
MHEZ	**Mangahewa**	**0.30**	**275**	P	**Pn**	**07 10 34.6**	**+1.3**
DREZ	**Durham Road**	**0.40**	**258**	P	**Pn**	**07 10 34.8**	**+1.3**
DREZ				S	**S**	**07 10 58.0**	**-0.9**
PREZ	**Palmer Road**	**0.49**	**241**	P	**Pn**	**07 10 35.2**	**+1.4**
PREZ				S	**S**	**07 10 59.0**	**-0.4**
NEZ	**North Egmont**	**0.50**	**251**	P	**Pn**	**07 10 35.3**	**+1.4**
NEZ				S	**S**	**07 10 58.4**	**-1.2**
PKVZ	**Pokaka**	**0.53**	**111**	P	**Pn**	**07 10 34.7**	**+0.8**
KHEZ	**Kahui Hut**	**0.57**	**250**	P	**Pn**	**07 10 35.5**	**+1.4**
KHEZ				S	**S**	**07 10 59.4**	**-0.6**
KHEZ	**Kahui Hut**	**0.57**	**250**	P	**Pn**	**07 10 35.4**	**+1.3**
TWVZ	**Taurewa**	**0.57**	**87**	P	**Pn**	**07 10 34.6**	**+0.5**
TWVZ				S	**S**	**07 10 58.5**	**-1.5**
HIZ	**Hauiti**	**0.60**	**11**	P	**Pn**	**07 10 34.7**	**+0.4**
HIZ				S	**S**	**07 10 58.5**	**-1.6**
HIZ	**Hauiti**	**0.60**	**11**	P	**Pn**	**07 10 34.6**	**+0.4**
MTVZ	**Mangateitei**	**0.66**	**115**	P	**Pn**	**07 10 35.1**	**+0.7**
FWVZ	**Far West T-bar**	**0.68**	**103**	P	**Pn**	**07 10 35.4**	**+0.7**
TRVZ	**Turoa**	**0.68**	**107**	P	**Pn**	**07 10 34.9**	**+0.2**
WAZ	**Wanganui**	**0.68**	**162**	P	**Pn**	**07 10 35.9**	**+1.5**
WTVZ	**West Tongariro**	**0.69**	**91**	P	**Pn**	**07 10 35.3**	**+0.7**
NGZ	**Ngauruhoe**	**0.70**	**96**	P	**Pn**	**07 10 35.5**	**+0.8**
NNVZ	**North Ngauruho**	**0.71**	**92**	P	**Pn**	**07 10 35.5**	**+0.8**
WNVZ	**Wahianoa**	**0.73**	**108**	P	**Pn**	**07 10 35.7**	**+0.9**
KRVZ	**Karewarewa**	**0.73**	**89**	P	**Pn**	**07 10 35.5**	**+0.8**
SNVZ	**South Ngauruho**	**0.73**	**97**	P	**Pn**	**07 10 35.8**	**+0.9**
OTVZ	**Oturere**	**0.75**	**95**	P	**Pn**	**07 10 36.0**	**+1.1**
TUVZ	**Tukino**	**0.75**	**103**	P	**Pn**	**07 10 35.9**	**+1.0**
KATZ	**Kakaramea**	**0.78**	**81**	P	**Pn**	**07 10 35.6**	**+0.6**
ETVZ	**East Tongariro**	**0.78**	**93**	P	**Pn**	**07 10 36.0**	**+1.0**
RATZ	**Rangitukua**	**0.86**	**74**	P	**Pn**	**07 10 35.8**	**+0.5**
MOVZ	**Moawhango**	**0.87**	**111**	P	**Pn**	**07 10 35.8**	**+0.5**
TLZ	**Tolley Road**	**1.01**	**40**	P	**Pn**	**07 10 36.6**	**+0.4**
HATZ	**Hinemaiaia**	**1.10**	**79**	P	**Pn**	**07 10 36.8**	**+0.3**
BHHZ	**Black Hill Sta**	**1.12**	**114**	P	**Pn**	**07 10 37.3**	**+0.6**
OHWZ	**Ohakea**	**1.20**	**157**	P	**Pn**	**07 10 38.8**	**+1.8**
TSZ	**Takapari Road**	**1.36**	**135**	P	**Pn**	**07 10 39.5**	**+1.3**
MRHZ	**Matea Rd**	**1.36**	**79**	P	**Pn**	**07 10 38.5**	**+0.2**
KWHZ	**Kaweka Forest**	**1.37**	**104**	P	**Pn**	**07 10 39.5**	**+1.1**
ALRZ	**Allen Road**	**1.39**	**68**	P	**Pn**	**07 10 39.0**	**+0.5**
BKZ	**Black Stump Fm**	**1.39**	**93**	P	**Pn**	**07 10 39.0**	**+0.5**
BKZ	**Black Stump Fm**	**1.39**	**93**	P	**Pn**	**07 10 39.0**	**+0.5**
PNHZ	**Pukenui**	**1.41**	**125**	P	**Pn**	**07 10 39.7**	**+1.2**
HRRZ	**Handcock Road**	**1.43**	**60**	P	**Pn**	**07 10 39.4**	**+0.6**
TOZ	**Tahuroa Road**	**1.51**	**25**	P	**Pn**	**07 10 40.1**	**+0.7**
MCHZ	**McNeill Hill**	**1.58**	**103**	P	**Pn**	**07 10 41.5**	**+1.7**
NMHZ	**Naumai**	**1.63**	**90**	P	**Pn**	**07 10 41.9**	**+1.5**
DVHZ	**Dannevirke**	**1.64**	**137**	P	**Pn**	**07 10 41.3**	**+1.0**
WPHZ	**Waipukurau**	**1.65**	**126**	P	**Pn**	**07 10 41.9**	**+1.5**
MTHZ	**Maungataniwha**	**1.68**	**82**	P	**Pn**	**07 10 41.2**	**+0.5**
MRZ	**Mangatainoka R**	**1.69**	**157**	P	**Pn**	**07 10 41.6**	**+0.8**
MUGZ	**Murupara**	**1.73**	**69**	P	**Pn**	**07 10 41.1**	**0.0**
PRWZ	**Pori Road**	**1.75**	**146**	P	**Pn**	**07 10 42.4**	**+1.3**
OGWZ	**Otaki Gorge**	**1.75**	**168**	P	**Pn**	**07 10 42.4**	**+1.2**
KIW	**Kapiti Island**	**1.76**	**175**	P	**Pn**	**07 10 42.3**	**+1.0**
ARHZ	**Aropaoanui**	**1.79**	**96**	P	**Pn**	**07 10 42.9**	**+1.3**
DUWZ	**D'Urville Isla**	**1.80**	**199**	P	**Pn**	**07 10 42.8**	**+1.2**
KAHZ	**Kahuranaki**	**1.82**	**113**	P	**Pn**	**07 10 43.4**	**+1.6**
RTZ	**Ruatahuna**	**1.84**	**75**	P	**Pn**	**07 10 42.4**	**+0.3**
RAHZ	**Arahi**	**1.86**	**85**	P	**Pn**	**07 10 43.3**	**+1.0**
PRHZ	**Porangahau**	**1.89**	**129**	P	**Pn**	**07 10 43.8**	**+1.4**
HOWZ	**Holdsworth Sta**	**1.90**	**161**	P	**Pn**	**07 10 43.2**	**+0.8**
PXZ	**Pawanui**	**1.91**	**120**	P	**Pn**	**07 10 43.8**	**+1.3**
CKHZ	**Cape Kidnapper**	**1.92**	**107**	P	**Pn**	**07 10 44.2**	**+1.6**
WHHZ	**Waihua**	**1.97**	**90**	P	**Pn**	**07 10 44.2**	**+1.1**
BFZ	**Birch Farm**	**1.97**	**144**	P	**Pn**	**07 10 44.0**	**+0.9**
BFZ	**Birch Farm**	**1.97**	**144**	P	**Pn**	**07 10 44.0**	**+0.9**
CAW	**Cannon Point**	**2.02**	**172**	P	**Pn**	**07 10 44.5**	**+1.0**
MKAZ	**Moumakai**	**2.03**	**10**	P	**Pn**	**07 10 44.9**	**+1.2**
AWAZ	**Awhitu Peninsu**	**2.04**	**359**	P	**Pn**	**07 10 45.2**	**+1.4**
URZ	**Urewera**	**2.06**	**67**	P	**Pn**	**07 10 44.0**	**0.0**
URZ	**Urewera**	**2.06**	**67**	P	**Pn**	**07 10 44.0**	**0.0**
SNGZ	**Shannon Statio**	**2.08**	**82**	P	**Pn**	**07 10 44.4**	**+0.2**
TCW	**Tory Channel**	**2.13**	**189**	P	**Pn**	**07 10 45.9**	**+1.4**
MTW	**Mount Morrison**	**2.14**	**164**

CTAO	**Charters Tower**	**34.04**	**263**	P	**P**	**07 27 52.3**	**+0.8**
CTAO				IAmb	IAmb	07 27 53.4	
comp=Z,6.9nm,0.6s							
STKA	**Stephens Creek**	**38.49**	**244**	P	**P**	**07 28 27.5**	**-0.4**
comp=Z,0.7nm,0.4s,baz=93,slow=11,SNR=4.1							
comp=Z,0.7nm,0.4s							
BBOO	**Buckleboo**	**43.26**	**243**	P	**P**	**07 29 05.6**	**0.0**
BBOO				IAmb	IAmb	07 29 05.8	
comp=Z,16nm,1.4s							
AS31	**Alice Springs**	**45.13**	**256**	P	**P**	**07 29 20.9**	**+0.7**
AS31				IAmb	IAmb	07 29 22.0	
comp=Z,2.8nm,0.2s							
ASAR	**Alice Springs**	**45.13**	**256**	P	**P**	**07 29 21.4**	**+1.2**
comp=Z,3.0nm,0.5s,baz=94,slow=7.7,SNR=51							
ASAR				S	**S**	**07 35 17.8**	**+0.5**
comp=Z,0.6nm,0.8s,baz=89,slow=18,SNR=6.3							
comp=Z,3.0nm,0.5s							
ASAR	**Alice Springs**	**45.13**	**256**	P	**P**	**07 29 20.9**	**+0.7**
WB0	**Warramunga Arr**	**45.15**	**262**	P	**P**	**07 29 20.8**	**+0.6**
WB0				IAmb	IAmb	07 29 21.9	
comp=Z,4.6nm,0.5s							
WRA	**Warramunga Arr**	**45.17**	**261**	P	**P**	**07 29 21.5**	**+1.0**
comp=Z,2.0nm,0.5s,baz=97,slow=7.7,SNR=133							
comp=Z,2.0nm,0.5s							
WRA	**Warramunga Arr**	**45.17**	**261**	P	**P**	**07 29 20.9**	**+0.4**
MTN	**Manton Dam**	**49.65**	**270**	P	**P**	**07 29 55.4**	**+1.5**
MTN				IAmb	IAmb	07 30 22.7	
comp=Z,20nm,1.4s							
FORT	**Forrest**	**49.98**	**246**	P	**P**	**07 29 56.5**	**+0.3**
KNRA	**Kununurra**	**51.19**	**266**	P	**P**	**07 30 05.0**	**0.0**
KNRA				IAmb	IAmb	07 30 19.1	
comp=Z,15nm,1.2s							
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**07 32 11.8**	**+2.9**
UNV	**Unalaska Valle**	**74.03**	**7**	P	P	07 32 37.0	+6.1
KSAR	**Wonju Array Be**	**76.77**	**318**	P	P	07 32 41.7	-4.8
KS19	**Wonju Array Si**	**76.82**	**318**	P	P	07 32 40.2	-6.5
BELA	**Belgrano 2**	**80.10**	**173**	P	**P**	**07 33 03.3**	**-0.2**
PAX	**Paxson**	**86.34**	**14**	P	**P**	**07 33 35.7**	**+1.0**
PAX				IAmb	IAmb	07 33 38.3	
comp=Z,3.4nm,0.6s							
RLMT	**Red Lodge**	**89.51**	**41**	P	**P**	**07 33 50.8**	**+0.7**

GCMT 28 07:28:08.0±0.4, **52°24S**±0°.02×**4°67W**±0°.03, **h12**km, **MW4.8**/77, **Moment Tensor Solution. s6,c6; s77,c94; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}0.21±.10; $M_{\theta\theta}$0.41±.11; $M_{\phi\phi}$-0.61±.11; $M_{r\theta}$0.04±.28; $M_{\theta\phi}$-2.07±.07; $M_{\phi r}$-0.97±.33; **Best double couple:** $M_0$2.34300×10^{16} **NP1:**ϕ_s174.00000°, δ88.00000°, λ25.00000°. **NP2:**ϕ_s83.00000°, δ65.00000°, λ178.00000°. **Principal axes:** T 2.2380, Plg18.0000°, Azm41.0000°; N 0.2090, Plg65.0000°, Azm177.0000°; P -2.4480, Plg16.0000°, Azm306.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**18.55**	**184**	P	P	07 32 21.9	-2.3
VNA2	**Neumayer--Watz**	**18.79**	**183**	P	P	07 32 23.4	-3.5
baz=4.0,slow=13							
VNA3	**Neumayer Olymp**	**19.20**	**185**	P	P	07 32 27.1	-4.3
SNAA	**Sanae**	**19.52**	**178**	P	P	07 32 31.6	-3.3
TROLL	**Troll, Antarti**	**20.09**	**173**	P	P	07 32 38.3	-2.9

HVO ***28*** *07:28:51.2±0.7, 19°.14N±0°.03×155°.50W±0°.01, h36*km*±2*km*, Md2.5/24, ML2.2/38(NEIC) Error ellipse: s-maj=4.7km s-min=1.6km az=174.0*

NEIC 28 07:28:49.4±0.7, **19°.14N**±0°.04×**155°.50W**±0°.02, **h43**km±2km, **Error ellipse: s-maj=5.6km s-min=2.3km az=167.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.14**	**46**		Pn	07 28 57.0	+0.4
HTC					Sn	07 29 01.9	+0.2
KHU	**Kahuku**	**0.15**	**315**		Pn	07 28 57.0	+0.1
AIN	**Ainahou**	**0.23**	**10**		Pn	07 28 57.7	+0.2
HLP	**Hilina Pali**	**0.24**	**50**		Sn	07 29 02.9	-0.2
HLP	**Hilina Pali**	**0.24**	**50**	Pn	Pn	07 28 57.5	+0.1
HLP				IAML		07 28 57.7	
comp=N,348nm,3.5s							
HLP				IAML		07 29 03.0	
comp=E,225nm,0.4s							
SDHHI	**Sand Hill**	**0.32**	**39**		Pn	07 28 58.3	+0.1
SDHHI					Sn	07 29 03.7	-0.7
WRMHI	**West Rim**	**0.33**	**36**		Pn	07 28 58.4	0.0
WRMHI					Sn	07 29 03.8	-0.9
KKO	**Keanakako`i**	**0.34**	**41**		Sn	07 29 03.8	-1.1
KKO	**Keanakako`i**	**0.34**	**41**		Pn	07 28 58.5	0.0
KKO	**Keanakako`i**	**0.34**	**41**	IAML		07 29 03.8	
comp=N,430nm,1.3s							
KKO	**Keanakako`i**	**0.34**	**41**	IAML		07 29 05.2	
comp=E,316nm,0.9s							
NPH	**North Pit**	**0.34**	**38**		Pn	07 28 58.5	0.0
NPH	**North Pit**	**0.34**	**38**	IAML		07 28 59.3	
comp=N,249nm,2.1s							
NPH				IAML		07 29 00.2	
comp=E,128nm,1.4s							
UWE	**Uwekahuna**	**0.34**	**35**		Pn	07 28 58.5	0.0
UWE	**Uwekahuna**	**0.34**	**35**		Sn	07 29 04.1	-0.8
OBL	**Observatory Le**	**0.34**	**37**		Pn	07 28 58.5	0.0
OBL	**Observatory Le**	**0.34**	**37**		Sn	07 29 04.9	-0.1
UWB	**Uwekahuna B**	**0.35**	**37**		Pn	07 28 58.5	-0.1
UWB	**Uwekahuna B**	**0.35**	**37**		Sn	07 29 04.0	-1.1
BYL	**Byron's Ledge**	**0.35**	**40**		Sn	07 29 04.5	-0.7
BYL	**Byron's Ledge**	**0.35**	**40**		Pn	07 28 58.5	-0.1
BYL	**Byron's Ledge**	**0.35**	**40**	IAML		07 29 00.0	
comp=N,283nm,1.4s							
BYL				IAML		07 29 02.7	
comp=E,256nm,3.1s							
MWH	**Moku`aweowe**	**0.35**	**345**		Pn	07 28 58.9	-0.1
MWH	**Moku`aweowe**	**0.35**	**345**	IAML		07 29 01.8	
comp=N,240nm,1.5s							
MWH				IAML		07 29 07.2	
comp=E,438nm,2.5s							
PUH	**Pauahi**	**0.36**	**49**		Sn	07 29 03.9	-1.3
PUH	**Pauahi**	**0.36**	**49**		Pn	07 28 58.6	-0.1
PUH				IAML		07 29 06.6	
comp=N,282nm,1.2s							
PUH	**Pauahi**	**0.36**	**49**	IAML		07 29 01.3	
comp=E,150nm,2.4s							
SBLHI	**Steaming Bluff**	**0.36**	**38**	IAML		07 29 04.3	
comp=N,349nm,0.7s							
SBLHI	**Steaming Bluff**	**0.36**	**38**		Pn	07 28 58.6	-0.2
SBLHI					Sn	07 29 03.9	-1.4
HATHI	**Halema`uma`u T**	**0.36**	**39**		Sn	07 29 04.2	-1.0
HATHI	**Halema`uma`u T**	**0.36**	**39**		Pn	07 28 58.7	0.0
HATHI				IAML		07 29 06.5	
comp=N,236nm,0.8s							
HATHI	**Halema`uma`u T**	**0.36**	**39**	IAML		07 29 00.8	
comp=E,282nm,0.7s							
MLH	**Mauna Loa**	**0.37**	**17**	IAML		07 29 05.2	
comp=E,222nm,0.2s							
MLH				IAML		07 29 05.5	
comp=N,351nm,2.0s							
MLH	**Mauna Loa**	**0.37**	**17**		Pn	07 28 59.1	+0.2
MLH					Sn	07 29 04.9	-0.7
KNHH	**Kane Nui o Ham**	**0.40**	**53**		Pn	07 28 59.0	0.0
KNHH					Sn	07 29 05.4	-0.5
MLOA	**Mauna Loa Obse**	**0.40**	**350**		Pn	07 28 59.5	0.0
MLOA					Sn	07 29 05.5	-1.0
MLOA	**Mauna Loa Obse**	**0.40**	**350**	IAML		07 29 05.6	
comp=E,315nm,0.2s							
MLOA				IAML		07 29 06.4	
comp=N,175nm,0.2s							
NPOC	**North of Pu'u**	**0.45**	**56**		Sn	07 29 05.8	-1.2
HMH	**Humu'ula Sheep**	**0.46**	**2**		Pn	07 29 00.4	+0.4
HMH					Sn	07 29 07.2	-0.4
HMH	**Humu'ula Sheep**	**0.46**	**2**	IAML		07 29 07.6	
comp=N,358nm,0.3s							
HMH				IAML		07 29 07.9	
comp=E,300nm,0.3s							
CPH	**Captain Cook**	**0.52**	**311**		Pn	07 29 00.6	0.0
KHLU	**Kahalu`u**	**0.58**	**321**		Pn	07 29 01.5	0.0
KHLU	**Kahalu`u**	**0.58**	**321**	IAML		07 29 05.8	
comp=E,164nm,2.9s							
KHLU				IAML		07 29 21.2	
comp=N,136nm,1.5s							
HUH	**Hualalai**	**0.62**	**330**		Pn	07 29 02.5	+0.3
HUH	**Hualalai**	**0.62**	**330**	IAML		07 29 23.1	
comp=E,198nm,1.4s							
HPAH	**Hawaii Prepara**	**0.90**	**348**		Pn	07 29 05.6	-0.1
HPAH					Sn	07 29 16.0	-1.7

NEIC ***28*** *07:33:51.0±1.5, 2°.04S±0°.05×79°.84W±0°.07, h67*km*±12*km*, mb3.6/2, Error ellipse: s-maj=11.7km s-min=6.2km az=117.0*

ISC 28 07:33:49.6±1.5, **2°.00S**±0°.05×**80°.0W**±0°.1, **h50**km, **n16,** σ1§**15**/21, **1C, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**0.87**	**122**		**Pn**	**07 34 05.5**	**-0.1**
COHC				Sn	**Sn**	**07 34 16.5**	**-0.9**
PORT	**Chimborazo Vol**	**1.33**	**67**		**Pn**	**07 34 12.5**	**+0.2**
PORT					**Sn**	**07 34 27.7**	**-1.5**
ARNL	**Arenillas**	**1.54**	**183**		**Pn**	**07 34 16.1**	**+1.3**
BOSC	**San Juan Bosco**	**1.88**	**128**		**Pn**	**07 34 21.6**	**+2.0**
SLOR	**San Lorenzo -**	**1.95**	**50**		**Pn**	**07 34 21.8**	**+1.0**
PULU	**Pululahua**	**2.50**	**37**		**Pn**	**07 34 29.1**	**+0.9**
PAC1	**Pacto, Paraso**	**2.55**	**28**	*eP*	**Pn**	**07 34 28.7**	**+0.1**
PAC1				*eS*	**Sn**	**07 34 57.4**	**-1.1**
PAC1				*i*		07 35 04.3	
comp=Z,832nm,0.2s							
CUSE	**Cuicocha Este**	**2.79**	**35**	*eP*	**Pn**	**07 34 33.0**	**+0.9**
CUSE				*eS*	**Sn**	**07 35 06.4**	**+1.6**
CUSE				*i*		07 35 11.2	
comp=Z,636nm,0.3s							
IMBA	**Imbabura, San**	**2.88**	**38**		**Pn**	**07 34 33.8**	**+0.3**
TULM	**Tulcn-Chalpat**	**3.48**	**39**		**Pn**	**07 34 42.1**	**+0.3**
CMBC	**Cumbal**	**3.63**	**37**	*eP*	**Pn**	**07 34 42.3**	**-1.5**
CRUC	**La Cruz**	**4.67**	**41⇑**	*eP*	**Pn**	**07 34 59.7**	**+1.7**
BBAC	**Balboa, Cauca**	**4.84**	**35**	*eP*	**Pn**	**07 34 58.6**	**-1.6**
BBAC				*eS*	**Sn**	**07 35 55.2**	**0.0**
BBAC				*i*		07 36 02.5	
comp=Z,9.9nm,0.3s							
NNA	**Nana**	**10.41**	**163**	Pn	**Pn**	**07 36 16.4**	**+0.1**
SDV	**Santo Domingo**	**14.28**	**41**	Pn	**Pn**	**07 37 09.0**	**-0.3**
LPAZ	**La Paz**	**18.39**	**141**	P	**P**	**07 38 00.6**	**-0.6**
LPAZ				IAmb	IAmb	07 38 38.2	
comp=Z,3.0nm,1.1s							

CNRM ***28*** *07:39:55.1, 36°.25N×4°.83W, h30*km*, ml2.6*
MDD ***28*** *07:39:57.0±0.5, 36°.34N×4°.67W, h95*km*±4*km*, Mb2.4/14, Error ellipse: s-maj=3.9km s-min=2.3km az=162.0*
SFS ***28*** *07:39:57.0, 36°.46N×4°.65W, h80*km*, ML2.5, ALBORAN OESTE*
INMG ***28*** *07:39:57.6±1.6, 36°.41N×4°.67W, h89*km*±3*km*, ML2.4, Error ellipse: s-maj=5.4km s-min=2.6km az=173.0*

ISC 28 07:39:54.4±1.2, **36°.30N**±0°.03×**4°67W**±0°.03, **h106**km±7km, **n41,** σ1§**75**/72, **13C-1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.28**	**342**	P	**Pn**	**07 40 10.1**	**+0.4**
EMIJ				S	**Sn**	**07 40 19.6**	**-1.5**
EMAL	**Malaga-Limoner**	**0.50**	**22**	P	**Pn**	**07 40 11.8**	**+1.0**
EMAL				S	**Sn**	**07 40 21.6**	**-1.5**
EJIF	**Jimena Fronter**	**0.67**	**283**	P	**Pn**	**07 40 14.3**	**+2.2**
EJIF				S	**Sn**	**07 40 22.1**	**-3.2**
EGOR	**Sierra Gorda,**	**0.93**	**29**	P	**Pn**	**07 40 16.4**	**+1.8**
EGOR				S	**Sn**	**07 40 30.6**	**+0.7**
ELGU	**Los Guajares,**	**1.01**	**55**	P	**Pn**	**07 40 15.8**	**+0.3**
ELGU				⇑*i*Vmb_V		07 40 20.2	
403nm,SNR=2.7							
ELGU				S	**Sn**	**07 40 29.4**	**-1.9**
ESPR	**Espera**	**1.11**	**301**	P	**Pn**	**07 40 18.6**	**+2.1**
ESPR				⇑*i*Vmb_V		07 40 27.3	
211nm,SNR=1.9							
ESPR				S	**Sn**	**07 40 32.5**	**-0.6**
EQUE	**Quentar**	**1.34**	**47**	S	**Sn**	**07 40 38.7**	**+0.9**
EBER	**Berja**	**1.55**	**67**	P	**Pn**	**07 40 22.5**	**+0.8**
EBER				⇑*i*Vmb_V		07 40 25.2	
250nm,SNR=1.5							
EBER				S	**Sn**	**07 40 42.1**	**-0.4**
EADA	**Adamuz**	**1.87**	**2**	P	**Pn**	**07 40 26.9**	**+1.4**
EADA				⇑*i*Vmb_V		07 40 27.3	
2μm,SNR=36							
EADA				S	**Sn**	**07 40 48.0**	**-1.3**
ECAB	**El Cabril**	**1.87**	**341**	P	**Pn**	**07 40 26.6**	**+1.0**
ECAB				⇑*i*Vmb_V		07 40 27.5	
398nm,SNR=7.4							
ECAB				S	**Sn**	**07 40 47.6**	**-1.8**
EQES	**Quesada**	**1.97**	**40**	P	**Pn**	**07 40 28.6**	**+1.7**
EQES				⇑*i*Vmb_V		07 40 32.5	
187nm,SNR=2.6							
EQES				S	**Sn**	**07 40 50.3**	**-1.4**
EMIN	**Mina Concepcio**	**2.17**	**313**	P	**Pn**	**07 40 30.8**	**+1.4**
EMIN				⇑*i*Vmb_V		07 40 30.9	
660nm,SNR=9.0							
EMIN				S	**Sn**	**07 40 54.8**	**-1.4**
EGRO	**El Granado**	**2.57**	**299**	P	**Pn**	**07 40 36.3**	**+1.7**
EGRO				⇑*i*Vmb_V		07 40 37.1	
250nm,SNR=1.9							
EGRO				S	**Sn**	**07 41 04.7**	**-0.8**
JBK	**JBK**	**2.60**	**138**	P	**Pn**	**07 40 34.8**	**-0.4**
JBK				S	**Sn**	**07 41 07.5**	**+0.9**
PBAR	**Barrancos**	**2.66**	**315**	*eP*	**Pn**	**07 40 37.3**	**+1.5**
PBAR				*eS*	**Sn**	**07 41 06.4**	**-1.2**
PBAR				A	A	07 41 09.4	
6.4nm,0.1s							
PVAQ	**Vaqueiros**	**2.69**	**295⇓**	*eP*	**Pn**	**07 40 37.7**	**+1.7**
PVAQ				*eS*	**Sn**	**07 41 07.1**	**-1.0**
PVAQ				A	A	07 41 09.2	
16nm,0.1s							
PVAQ	**Vaqueiros**	**2.69**	**295**	P	**Pn**	**07 40 36.2**	**+0.2**
PVAQ				S	**Sn**	**07 41 06.5**	**-1.6**
EZAR	**Zarzadilla de**	**2.85**	**56**	P	**Pn**	**07 40 40.5**	**+2.2**
EZAR				⇑*i*Vmb_V		07 40 40.7	
165nm,SNR=1.5							
EZAR				S	**Sn**	**07 41 11.3**	**-0.8**
PCVE	**Castro Verde**	**3.01**	**297**	*eP*	**Pn**	**07 40 42.3**	**+1.9**
PCVE				*eS*	**Sn**	**07 41 14.4**	**-1.5**
PCVE				A	A	07 41 16.0	
8.6nm,0.4s							
EBAD	**Badajoz**	**3.08**	**323**	P	**Pn**	**07 40 43.0**	**+1.7**
EBAD				⇑*i*Vmb_V		07 40 43.5	
511nm,SNR=6.3							
EBAD				S	**Sn**	**07 41 16.4**	**-1.1**
PBEJ	**Beja**	**3.08**	**305**	*eS*	**Sn**	**07 41 16.4**	**-1.2**
PBEJ				A	A	07 41 18.2	
13nm,0.3s							
PAB	**San Pablo**	**3.25**	**4**	P	**Pn**	**07 40 45.0**	**+1.3**
PAB				⇑*i*Vmb_V		07 40 45.1	
128nm,SNR=1.9							
PAB				S	**Sn**	**07 41 19.4**	**-2.3**
MORF	**Marmelete**	**3.35**	**289**	*eS*	**Sn**	**07 41 23.0**	**-1.1**
MORF				A	A	07 41 25.2	
15nm,0.1s							
ETOB	**Tobarra**	**3.41**	**46**	P	**Pn**	**07 40 47.2**	**+1.5**
ETOB				⇑*i*Vmb_V		07 40 52.0	
208nm,SNR=1.7							
ETOB				S	**Sn**	**07 41 23.0**	**-2.5**
ESDC	**Sonseca Array**	**3.42**	**9**	S	**Sn**	**07 41 23.3**	**-2.2**
MD31	**MD31**	**3.42**	**181**	P	**Pn**	**07 40 47.2**	**+1.2**
MD31				S	**Sn**	**07 41 24.3**	**-1.6**
PFVI	**Vila Bisbo**	**3.45**	**285**	*eS*	**Sn**	**07 41 24.6**	**-1.6**
PFVI				A	A	07 41 26.8	
11nm,0.8s							
PFVI	**Vila Bisbo**	**3.45**	**285**	P	**Pn**	**07 40 45.2**	**-1.0**
PFVI				S	**Sn**	**07 41 24.2**	**-2.0**
PESTR	**Estremoz**	**3.46**	**319**	*eP*	**Pn**	**07 40 48.3**	**+1.9**
PESTR				*eS*	**Sn**	**07 41 25.2**	**-1.4**
PESTR				A	A	07 41 26.8	
4.2nm,0.5s							
PESTR	**Estremoz**	**3.46**	**319**	P	**Pn**	**07 40 47.1**	**+0.8**
PESTR				S	**Sn**	**07 41 24.1**	**-2.5**
EVO	**Evora**	**3.48**	**311**	*eS*	**Sn**	**07 41 25.7**	**-1.2**
EVO				A	A	07 41 28.3	
13nm,0.3s							
MDT	**Midelt**	**3.48**	**179**	P	**Pn**	**07 40 48.6**	**+1.9**
MDT				S	**Sn**	**07 41 26.3**	**-0.8**
PTEO	**Sao Teotonio**	**3.48**	**292**	*eS*	**Sn**	**07 41 26.2**	**-0.9**
PTEO				A	A	07 41 29.3	
5.9nm,0.6s							
PNCL	**Nicolau / Gran**	**3.58**	**302**	*eP*	**Pn**	**07 40 50.0**	**+2.1**
PNCL				*eS*	**Sn**	**07 41 27.7**	**-1.6**
PNCL				A	A	07 41 29.4	
5.5nm,0.2s							
PMRV	**Marv??o**	**3.80**	**326**	*eP*	**Pn**	**07 40 52.9**	**+2.0**
PMRV				*eS*	**Sn**	**07 41 32.7**	**-2.0**
PMRV				A	A	07 41 34.1	
3.5nm,0.2s							
EPLA	**Plasencia**	**3.92**	**344**	P	**Pn**	**07 40 54.5**	**+1.9**
EPLA				⇑*i*Vmb_V		07 40 54.7	
136nm,SNR=1.4							
PMTG	**Montargil**	**3.95**	**315**	*eP*	**Pn**	**07 40 54.7**	**+1.8**
PMTG				*eS*	**Sn**	**07 41 36.4**	**-2.0**
PMTG				A	A	07 41 39.4	
1.9nm,0.5s							
PACT	**Alcochete**	**4.13**	**308**	*eP*	**Pn**	**07 40 58.1**	**+2.8**
PACT				*eS*	**Sn**	**07 41 42.4**	**-0.2**
PACT				A	A	07 41 47.2	
20nm,0.4s							
ETOR	**Torete**	**4.96**	**24**	P	**Pn**	**07 41 08.7**	**+2.1**
ETOR				S	**Sn**	**07 41 58.6**	**-4.1**
EMOS	**Mosqueruela**	**5.23**	**38**	S	**Sn**	**07 42 06.3**	**-3.2**
ELOB	**Lobios**	**6.16**	**336**	P	**Pn**	**07 41 25.4**	**+2.6**

KRSC 28 07:53:01.3±1.8, **50°.18N**×**157°.12E, h42**km±25km, **ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.82**	**309**	*eP*	Pn	07 53 15.9	-0.4
SKR				*eS*	Sn	07 53 26.6	-0.7
PAU	**Pauzhetka**	**1.31**	**352**	*eP*	Pn	07 53 24.8	+1.8
PAU				*eS*	Sn	07 53 41.6	+2.3
KDTR	**Khodutka, Kamc**	**1.74**	**20**	*eP*	Pn	07 53 30.6	+1.6
KDTR				*eS*	Sn	07 53 52.8	+2.8
MTVR	**Mutnovka**	**2.41**	**16**	*eP*	Pn	07 53 41.8	+3.5
MTVR				*eS*	Sn	07 54 10.4	+3.9
RUS	**Russkaya**	**2.42**	**21**	*eP*	Pn	07 53 40.8	+2.4
RUS				*eS*	Sn	07 54 08.6	+1.8
GRL	**Gorelyy**	**2.45**	**14**	*eP*	Pn	07 53 42.5	+3.6
GRL				*eS*	Sn	07 54 11.6	+3.9
UGLR	**Uglovaya**	**3.22**	**19**	*eP*	Pn	07 53 53.7	+4.3
AVH	**Avacha**	**3.25**	**17**	*eP*	Pn	07 53 54.6	+4.8
SMAR	**Somma**	**3.26**	**18**	*eP*	Pn	07 53 54.4	+4.3
KRER	**Koryakskii**	**3.29**	**17**	*eP*	Pn	07 53 55.0	+4.5
KRX	**Arik**	**3.33**	**16**	*eP*	Pn	07 53 55.1	+4.2
MKZ	**Mys Kozlova**	**5.22**	**31**	*eP*	Pn	07 54 18.9	+2.2

IDC ***28*** *08:03:47.4±4.5, 19°.74N×144°.44E, h96*km*±41*km*, mb3.5/7, mbtmp3.9/8, Error ellipse: s-maj=44.3km s-min=21.1km az=104.0*

ISC 28 08:03:40.6±0.9, **19°.7N**±0°.1×**144°.5E**±0°.3, **h35**km, **n8,** σ1§**23**/8, **mb3.9**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.13**	**177**	P	Pn	08 05 15.5	+6.8
21nm,0.2s,baz=88,slow=5.9,SNR=7.4							
GUMO				S	**Sn**	**08 06 17.4**	**-0.2**
53nm,0.7s,baz=5.6,slow=20,SNR=2.3							
WRA	**Warramunga Arr**	**40.67**	**195**	P	**P**	**08 11 18.2**	**+0.4**
1.1nm,0.4s,baz=7.0,slow=8.1,SNR=38							
1.1nm,0.4s							
ASAR	**Alice Springs**	**44.36**	**194**	P	**P**	**08 11 49.1**	**+1.4**
0.3nm,0.4s,baz=16,slow=12,SNR=10							
0.3nm,0.4s							
STKA	**Stephens Creek**	**51.40**	**183**	P	**P**	**08 12 41.3**	**-0.8**
0.3nm,0.4s,baz=341,slow=17,SNR=3.5							
0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**56.50**	**322**	P	**P**	**08 13 18.5**	**-0.6**
0.6nm,0.3s,baz=82,slow=11,SNR=3.8							
0.6nm,0.3s							
YKA	**Yellowknife Ar**	**77.61**	**28**	P	**P**	**08 15 34.6**	**+1.6**
1.1nm,0.8s,baz=289,slow=5.4,SNR=4.6							
1.1nm,0.8s							
NVAR	**Mina Array Bea**	**83.40**	**52**	P	**P**	**08 16 04.0**	**-0.9**
0.7nm,0.7s,baz=267,slow=6.6,SNR=6.8							
0.7nm,0.7s							
PDAR	**Pinedale Array**	**87.91**	**45**	P	**P**	**08 16 26.3**	**-1.0**
0.2nm,0.4s,baz=254,slow=3.4,SNR=2.3							
0.2nm,0.4s							

IDC 28 08:08:16.5±2.5, **49°.01S**×**124°.54E, h0**km, **mb3.8**/4, **mbtmp3.8**/4, **MS3.6**/4, **Error ellipse: s-maj=106.8km s-min=24.8km az=97.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.06**	**328**	T	T	08 28 57.1	
baz=152,slow=75,SNR=17							
H01W2	**Cape Leeuwin H**	**16.06**	**328**	T	T	08 28 54.2	
baz=152,slow=75,SNR=19							
H01W3	**Cape Leeuwin H**	**16.07**	**328**	T	T	08 29 03.7	
baz=152,slow=75,SNR=13							
STKA	**Stephens Creek**	**21.39**	**43**	P	P	08 13 05.8	+0.2
2.3nm,0.7s,baz=211,slow=11,SNR=9.0							
2.3nm,0.7s							
ASAR	**Alice Springs**	**26.35**	**20**	P	P	08 13 53.8	-0.4
1.5nm,0.8s,baz=193,slow=9.1,SNR=14							
ASAR				LR	LR	08 23 24.5	
comp=Z,271nm,20.7s,baz=239,slow=34							
1.5nm,0.8s							
WRA	**Warramunga Arr**	**30.05**	**19**	P	P	08 14 26.6	-0.6
0.6nm,1.0s,baz=179,slow=8.3,SNR=2.8							
0.6nm,1.0s							
VNDA	**Vanda**	**31.95**	**166**	P	P	08 14 42.9	-0.5
2.9nm,1.1s,baz=308,slow=8.5,SNR=9.0							
2.9nm,1.1s							
CTA	**Charters Tower**	**33.70**	**39**	LR	LR	08 29 05.3	
comp=Z,221nm,19.0s,baz=244,slow=37							
MAW	**Mawson**	**35.42**	**216**	LR	LR	08 27 25.5	
comp=Z,24nm,18.4s,baz=192,slow=32							
SNAA	**Sanae**	**54.02**	**198**	LR	LR	08 38 50.8	
comp=Z,56nm,21.1s,baz=196,slow=34							

P18K	Big Mountain,	2.65	30	P	Pn	08 31 32.6	-0.1
	baz=212						
Q19K	Cape Douglas,	2.85	49	Pn	Pn	08 31 34.4	-1.1
Q19K	Cape Douglas,	2.85	49	P	Pn	08 31 35.5	0.0
	baz=232						
KDAK	Kodiak Island	2.89	75	Pn	Pn	08 31 36.3	+0.4
	comp=E,10nm,0.3s,baz=227,slow=3.0,SNR=110						
KDAK				Sn	Sn	08 32 11.7	+1.1
	comp=E,4.3nm,0.3s,baz=9.0,slow=12,SNR=4.6						
KDAK				LR	LR	08 33 05.0	
	comp=E,99nm,21.6s,baz=252,slow=45						
	comp=E,82nm,0.5s						
KDAK	Kodiak Island	2.89	75	Pn	Pn	08 31 35.6	-0.2
O18K	Koktuh Hills	3.06	25		Pn	08 31 38.2	0.0
O18K				IAML		08 32 26.9	
	comp=N,414nm,0.5s						
O18K				IAML		08 32 28.7	
	comp=E,377nm,0.7s						
P19K	Oil Pt	3.49	41		Pn	08 31 43.8	-0.5
O19K	Port Alsworth	3.58	29		Pn	08 31 45.8	+0.6
N18K	Kilae Creek	3.70	15	Pn	Pn	08 31 47.8	+0.7
N18K				IAML		08 32 57.5	
	comp=N,166nm,0.6s						
N18K				IAML		08 32 60.0	
	comp=E,203nm,1.1s						
N18K	Kilae Creek	3.70	15	P	Pn	08 31 47.2	+0.1
	baz=196						
O20K	Slope Mountain	4.01	40	P	Pn	08 31 52.2	+0.8
	baz=224						
N19K	Bonanza Creek	4.08	23	Pn	Pn	08 31 52.9	+0.6
N19K				IAML		08 33 12.6	
	comp=N,222nm,0.7s						
N19K	Bonanza Creek	4.08	23	P	Pn	08 31 53.0	+0.6
	baz=206						
SVW2	Sparrevohn	4.15	15		Pn	08 31 53.5	+0.3
SVW2				IAML		08 33 05.5	
	comp=E,183nm,0.9s						
SVW2				IAML		08 33 10.2	
	comp=N,184nm,0.8s						
RSO	Redoubt South	4.25	36		Pn	08 31 55.5	+0.7
BRLK	Bradley Lake	4.49	51		Pn	08 31 58.8	+0.8
SPU	Mount Spurr	5.03	34		Pn	08 32 06.5	+1.2
M19K	Big River Lodg	5.10	18		Pn	08 32 06.8	+0.5
M19K				IAML		08 33 43.0	
	comp=E,119nm,1.3s						
M19K				IAML		08 33 53.2	
	comp=N,84nm,1.0s						
L19K	White Mountain	5.29	15	Pn	Pn	08 32 08.6	-0.3
M20K	Styx River	5.33	24		Pn	08 32 10.2	+0.7
M20K				IAML		08 33 47.4	
	comp=E,99nm,1.1s						
M20K				IAML		08 33 52.5	
	comp=N,66nm,1.9s						
SUA	Susitna One	5.66	37	Pn	Pn	08 32 14.9	+1.0
RC01	Rabbit Creek A	5.75	43		Pn	08 32 16.3	+1.2
SKT	Skwentna	5.82	31		Pn	08 32 17.5	+1.4
TTA	Tatalina	5.90	8	Pn	Pn	08 32 17.1	-0.1
PMR	Palmer	6.30	41		Pn	08 32 23.2	+0.6
KNK	Knik Glacier	6.43	44		Pn	08 32 22.4	-2.2
PPLA	Purkeypile	6.44	23		Pn	08 32 25.9	+1.2
GHO	Glory Hole Cre	6.49	40		Pn	08 32 26.2	+0.8
K20K	Telida	6.52	15		Pn	08 32 25.6	-0.2
HIN	Hinchinbrook I	6.73	56	Pn	Pn	08 32 28.4	-0.2
SML	Sawmill	6.73	42	Pn	Pn	08 32 29.6	+0.9
FID	Port Fidalgo	6.89	53	Pn	Pn	08 32 31.0	+0.2
CAST	Castle Rocks	6.92	22	Pn	Pn	08 32 31.6	+0.4
KTH	Kantishna Hill	7.29	25		Pn	08 32 37.2	+0.8
J20K	Nowinta River	7.30	13	Pn	Pn	08 32 36.5	+0.1
KLU	Klutina	7.49	49		Pn	08 32 39.6	+0.6
M24K	Tolsona, Glenn	7.72	45	Pn	Pn	08 32 43.5	+1.3
BPAW	Bear Paw Mtn.	7.76	23	Pn	Pn	08 32 43.2	+0.5
N25K	Chitina, Valde	8.09	51	Pn	Pn	08 32 47.5	+0.2
ANM	Nome	8.33	337	Pn	Pn	08 32 52.1	+1.6
MLY	Manley	8.63	20	Pn	Pn	08 32 55.5	+0.8
WRH	Wood River Hil	8.76	29		Pn	08 32 56.0	-0.4
H21K	Melozitna Rive	8.89	13		Pn	08 32 58.3	+0.1
CCB	Clear Creek Bu	8.97	29		Pn	08 32 59.8	+0.5
M26K	Nabesna, AK	9.14	48	Pn	Pn	08 33 02.3	+0.6
IL31		9.31	30		Pn	08 33 04.9	+1.0
ILAR	Eielson Array	9.31	30	Pn	Pn	08 33 02.6	-1.3
	comp=N,0.2nm,0.3s,baz=215,slow=13,SNR=15						
ILAR				Lg	Lg	08 35 43.6	
	comp=N,0.1nm,0.3s,baz=231,slow=27,SNR=4.5						
	comp=N,1.1nm,0.5s						
H23K	Yukon River	9.57	21		Pn	08 33 08.1	+0.6
J26L	Joseph Creek	10.13	37		Pn	08 33 16.1	+0.9
PRP	Porcupine Dome	10.26	30	Pn	Pn	08 33 16.3	-0.7
COLD	Coldfoot	10.73	16	Pn	Pn	08 33 22.3	-1.1
YKA	Yellowknife Ar	22.03	58	P	P	08 35 44.1	0.0
	comp=N,0.8nm,0.6s,baz=274,slow=9.9,SNR=8.5						
	comp=N,0.8nm,0.6s						
NVAR	Mina Array Bea	31.85	109	P	P	08 37 14.2	-0.8
	comp=N,1.2nm,0.8s,baz=303,slow=8.6,SNR=9.5						
	comp=N,1.2nm,0.8s						
PDAR	Pinedale Array	33.42	94	P	P	08 37 29.0	+0.3
	comp=N,0.5nm,0.6s,baz=308,slow=7.3,SNR=4.6						
	comp=N,0.5nm,0.6s						
TXAR	Lajitas Array	46.56	103	P	P	08 39 16.7	-0.9
	comp=N,0.8nm,0.8s,baz=308,slow=5.1,SNR=9.2						
	comp=N,0.8nm,0.8s						
SONM	Songino Array	54.40	304	P	P	08 40 16.3	-0.4
	comp=N,0.8nm,0.7s,baz=37,slow=7.9,SNR=4.2						
	comp=N,0.8nm,0.7s						
CMAR	Chiang Mai Arr	81.67	291	P	P	08 43 08.3	+0.1
	comp=N,2.0nm,0.3s,baz=11,slow=6.0,SNR=4.3						
	comp=N,2.0nm,0.3s						
NNA	Nana	95.11	104	LR	LR	09 25 16.5	
	comp=N,50nm,18.1s,baz=336,slow=34						

IDC ***28*** *08:36:17.8±2.1, 54°.46N×83°.61E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=16.8km s-min=10.7km az=161.0*

NNC 28 08:35:48.0±1.2, 54°.10N×86°.53E, h0km, mb2.5, mpv2.5, 3C-1D, Error ellipse: s-maj=7.3km s-min=4.3km az=77.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.02	262	I		08 41 20.0	
	baz=305,slow=323,SNR=1.6						
ZAA0	Zalesovo Array	1.02	262	⇓P	Pg	08 36 07.4	-0.1
	0.2nm,0.3s,baz=80,slow=17						
ZAA0				⇑S	Sb	08 36 21.7	-0.7
	5.1nm,1.1s,baz=82,slow=28						
ZALV	Zalesovo Beam	1.02	262	Pg	Pn	08 36 34.7	+25
	2.4nm,0.3s,baz=307,slow=14,SNR=8.1						
ZALV				Lg	Lg	08 36 46.6	
	2.5nm,0.3s,baz=307,slow=29,SNR=14						
KURK	Kurchatov	5.90	238	⇑Pn	Pn	08 37 16.1	-0.5
	2.7nm,0.8s						
KURBB	Kurchatov Arra	6.01	238	Pn	Pb	08 37 33.0	-0.4
	0.1nm,0.3s,baz=39,slow=12,SNR=4.2						
	0.2nm,0.3s						
MK31	Makanchi Array	7.79	202	Pn	Pn	08 37 43.7	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=14						
MK31				⇑Lg	Lg	08 39 57.2	
	1.0nm,0.6s,baz=157,slow=46,SNR=4.6						
MKAR	Makanchi Array	7.79	202	Pn	Pg	08 38 11.7	-5.5
	0.2nm,0.3s,baz=19,slow=13,SNR=2.7						
	0.3nm,0.4s						

BJI ***28*** *08:36:29.1±0.0, 53°.80N×163°.91W, h4km, mb5.1/60, mB5.1/30, Ms4.9/26, Ms7 4.6/27*

MOS ***28*** *08:36:29.1±1.1, 53°.71N×163°.37W, h10km, mb5.2/65, MS4.3/6, Error ellipse: s-maj=8.8km s-min=4.6km az=98.3*

IDC ***28*** *08:36:30.6±3.2, 53°.66N×163°.41W, h10km±18km, mb4.7/43, mbtmp4.7/46, ML3.8/3, MS4.1/57, Error ellipse: s-maj=15.8km s-min=9.4km az=179.0*

AEIC ***28*** *08:36:31±2.3, 53°.5N±0°.1×163°.21W±0°.09, h29km±5km, Error ellipse: s-maj=15.4km s-min=7.3km az=169.0*

NEIC ***28*** *08:36:33.4±1.8, 53°.6N±0°.1×163°.25W±0°.02, h28km±6km, mb4.9/84, ML4.5/10, ML4.4(AEIC), Error ellipse: s-maj=14.9km s-min=1.9km az=182.0*

GCMT ***28*** *08:36:34.4±0.3, 53°.49N±0°.02×163°.45W±0°.05, h22km±1km, MW4.9/78, Moment Tensor Solution. s30, c34; s78, c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.62±.19; $M_{\theta\theta}$-2.23±.13; $M_{\phi\phi}$-0.39±.12; $M_{r\theta}$1.10±.19; $M_{\theta\phi}$-1.25±.07; $M_{\phi r}$0.02±.19; Best double couple: $M_0$2.95800×10^{16} NP1:ϕ_s73.00000°, δ56.00000°, λ102.00000°. NP2: ϕ_s233.00000°, δ36.00000°, λ73.00000°. Principal axes: T*

2.8780, Plg76.0000°, Azm20.0000°; N 0.1560, Plg10.0000°, Azm246.0000°; P -3.0380, Plg10.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 28 08:36:32.3±0.5, 53°.58N±0°.07×163°.31W±0°.04, h27km±2km, n736, σ1$32/732, mb5.0/176, MS4.2/73, 42C-19D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.28	357		Pn	08 36 54.6	+0.1
FALS	False Pass	1.28	357	P	Pn	08 36 55.2	+0.8
	baz=175,SNR=99						
AKUT	Akutan	1.56	292	Pn	Pn	08 36 58.4	+0.2
AKUT				IAML		08 37 27.2	
	comp=E,3μm,0.6s						
AKUT				IAML		08 37 31.9	
	comp=N,3μm,0.8s						
UNV	Unalaska Valle	1.92	279	Pn	Pn	08 37 02.8	-0.3
UNV	Unalaska Valle	1.92	279	P	Pn	08 37 03.5	+0.4
	baz=99,SNR=42						
SDPT	Sand Point	2.43	42	Pn	Pn	08 37 09.9	-0.3
SDPT				IAML		08 37 58.1	
	comp=E,3μm,1.0s						
SDPT	Sand Point	2.43	42	P	Pn	08 37 10.6	+0.4
	baz=222,SNR=78						
CNBA	Chernabura Isl	2.52	59	Pn	Pn	08 37 10.4	-1.0
CHNA	Chernabura Isl	2.52	59	P	Pn	08 37 11.0	-0.5
	baz=239,SNR=9.9						
NIKH	Nikolski High	3.38	262	P	Pn	08 37 22.9	-0.4
	baz=79						
CHGN	Chignik	3.93	44	Pn	Pn	08 37 31.1	+0.3
CHGN				IAML		08 38 37.1	
	comp=N,713nm,1.0s						
CHGN				IAML		08 38 39.1	
	comp=E,718nm,1.0s						
CHGN	Chignik	3.93	44	P	Pn	08 37 31.3	+0.5
	baz=226,SNR=20						
CHIR	Chirikof Islan	5.00	60	Pn	Pn	08 37 44.4	-1.1
CHIR				IAML		08 39 44.6	
	comp=E,430nm,4.5s						
CHIR	Chirikof Islan	5.00	60	P	Pn	08 37 45.2	-0.2
	baz=245						
SII	Sitkinak Islan	6.04	57	Pn	Pn	08 37 59.1	-0.7
SII	Sitkinak Islan	6.04	57	P	Pn	08 37 59.3	-0.4
	baz=243						
P16K	Nushagak River	6.22	26	P	Pn	08 38 01.1	-1.0
	baz=210						
Q17K	Contact Creek	6.28	39	P	Pn	08 38 03.0	-0.2
	baz=224,SNR=6.7						
Q16K	King Salmon	6.32	33	P	Pn	08 38 03.2	-0.4
	baz=218						
O16K	Kokwok River B	6.68	23	P	Pn	08 38 09.5	+0.9
	baz=207,SNR=12						
OHAK	Old Harbor	6.78	53		Pn	08 38 09.0	-0.9
OHAK	Old Harbor	6.78	53	P	Pn	08 38 09.5	-0.4
	baz=241						
P17K	Kvichak River	6.80	31	P	Pn	08 38 10.1	-0.1
	baz=216						
Q18K	Katmai Hardscr	6.88	39	P	Pn	08 38 11.7	+0.3
	baz=225,SNR=6.6						
O17K	Koliganek Bris	7.09	26	P	Pn	08 38 14.9	+0.7
	baz=211						
N16K	Nishlik Lake	7.34	18	P	Pn	08 38 18.8	+1.1
	baz=201,SNR=22						
P18K	Big Mountain,	7.34	34	Pn	Pn	08 38 18.7	+0.9
P18K	Big Mountain,	7.34	34	P	Pn	08 38 18.7	+0.9
	baz=220,SNR=12						
KDAK	Kodiak Island	7.38	51	Pn	Pn	08 38 16.4	-1.8
	comp=E,1.4nm,0.3s,baz=201,slow=4.4,SNR=19						
KDAK				Sn	Sn	08 39 35.1	-5.8
	comp=E,3.2nm,0.3s,baz=313,slow=22,SNR=6.6						
	comp=E,13nm,0.6s						
KDAK	Kodiak Island	7.38	51	Pn	Pn	08 38 16.8	-1.4
KDAK	Kodiak Island	7.38	51	P	Pn	08 38 16.8	-1.4
KDAK	Kodiak Island	7.38	51	P	Pn	08 38 19.3	+1.1
	baz=239						
Q19K	Cape Douglas,	7.60	41	Pn	Pn	08 38 22.1	+1.0
Q19K	Cape Douglas,	7.60	41	P	Pn	08 38 22.5	+1.3
	baz=228,SNR=8.8						
O18K	Koktuh Hills	7.71	32		Pn	08 38 23.6	+1.0
O18K	Koktuh Hills	7.71	32	P	Pn	08 38 23.3	+0.6
	baz=218						
N18K	Kilae Creek	8.18	27		Pn	08 38 29.1	-0.1
N18K	Kilae Creek	8.18	27	P	Pn	08 38 30.1	+0.9
	baz=212,SNR=8.2						
O19K	Port Alsworth	8.26	33		Pn	08 38 31.2	+1.0
O19K	Port Alsworth	8.26	33	P	Pn	08 38 30.9	+0.8
	baz=220						
ADK	Adak	8.29	264	Pn	Pn	08 38 31.6	+0.9
ADK	Adak	8.29	264	P	Pn	08 38 31.6	+0.9
SVW2	Sparrevohn	8.62	26		Pn	08 38 36.0	+0.9
N19K	Bonanza Creek	8.69	30	Pn	Pn	08 38 37.6	+1.4
N19K	Bonanza Creek	8.69	30	P	Pn	08 38 37.4	+1.2
	baz=217,SNR=19						
O20K	Slope Mountain	8.76	38	P	Pn	08 38 36.7	-0.4
	baz=226						
HOM	Homer	8.85	42	P	Pn	08 38 37.9	-0.4
	baz=231						
CNPM	China Poot	8.94	43		Pn	08 38 40.5	+0.9
RSO	Redoubt South	8.98	36		Pn	08 38 41.6	+1.3
M19K	Big River Lodg	9.61	26		Pn	08 38 48.3	-0.4
M19K	Big River Lodg	9.61	26	P	Pn	08 38 49.2	+0.5
	baz=213						
N20K	Mount Spurr	9.70	34	P	Pn	08 38 49.9	-0.1
	baz=222						
SPCR	Spurr Chakacha	9.70	34	P	Pn	08 38 50.2	+0.2
	baz=222						
L19K	White Mountain	9.72	24	Pn	Pn	08 38 50.4	+0.1
L19K	White Mountain	9.72	24	P	Pn	08 38 50.7	+0.4
	baz=211						
M20K	Styx River	9.94	29		Pn	08 38 55.3	+2.1
M20K	Styx River	9.94	29	P	Pn	08 38 54.6	+1.3
	baz=217						
SEW	Seward	10.01	44	P	Pn	08 38 53.7	-0.4
	baz=235						
O22K	Cooper Landing	10.12	41		Pn	08 38 55.9	+0.2
O22K	Cooper Landing	10.12	41	P	Pn	08 38 55.4	-0.3
	baz=232						
TTA	Tatalina	10.13	19		Pn	08 38 56.0	+0.1
TTA	Tatalina	10.13	19	P	Pn	08 38 56.0	+0.1
TTA	Tatalina	10.13	19	P	Pn	08 38 56.0	+0.1
	baz=205,SNR=7.2						
L20K	Farewell, AK	10.22	25	P	Pn	08 38 57.1	0.0
	baz=213,SNR=6.2						
SUA	Susitna One	10.38	35		Pn	08 38 58.8	-0.6
SUA	Susitna One	10.38	35	P	Pn	08 38 59.1	-0.3
	baz=225,SNR=20						
RC01	Rabbit Creek A	10.49	39		Pn	08 39 00.9	+0.1
RC01	Rabbit Creek A	10.49	39	P	Pn	08 39 00.8	0.0
	baz=230						
SKT	Skwentna	10.49	32		Pn	08 39 01.3	+0.4
SKT	Skwentna	10.49	32	P	Pn	08 39 01.0	+0.2
	baz=221,SNR=8.7						
M22K	Willow	10.80	35		Pn	08 39 04.2	-0.7
M22K	Willow	10.80	35	P	Pn	08 39 03.7	-1.3
	baz=226						
AMKA	Amchitka	10.83	265		Pn	08 39 05.3	-0.2
PWL	Port Wells	10.90	42		Pn	08 39 04.6	-1.7
PWL	Port Wells	10.90	42	P	Pn	08 39 05.6	-0.7
	baz=234,SNR=8.2						
K20K	Telida	10.92	22		Pn	08 39 07.2	+0.5
K20K	Telida	10.92	22	P	Pn	08 39 06.9	+0.3
	baz=210,SNR=8.9						
PPLA	Purkeypile	11.01	28		Pn	08 39 10.1	+2.1
PPLA	Purkeypile	11.01	28	P	Pn	08 39 09.0	+1.0
	baz=216						
PMR	Palmer	11.04	38		Pn	08 39 08.0	-0.3
PMR	Palmer	11.04	38	P	Pn	08 39 08.0	-0.3
PMR	Palmer	11.04	38	P	Pn	08 39 07.0	-1.3
	baz=229						
KNK	Knik Glacier	11.18	39		Pn	08 39 09.0	-1.2
KNK	Knik Glacier	11.18	39	P	Pn	08 39 09.1	-1.1
	baz=231						
GHO	Glory Hole Cre	11.23	37		Pn	08 39 09.1	-1.9
HIN	Hinchinbrook I	11.41	47		Pn	08 39 11.9	-1.4
CAST	Castle Rocks	11.46	26		Pn	08 39 14.2	+0.1
CAST	Castle Rocks	11.46	26	P	Pn	08 39 15.2	+1.1
	baz=215,SNR=6.7						
SML	Sawmill	11.47	38		Pn	08 39 13.2	-1.0
SML	Sawmill	11.47	38	P	Pn	08 39 12.5	-1.8
	baz=230						
J20K	Nowinta River	11.62	20		Pn	08 39 17.4	+1.2
J20K	Nowinta River	11.62	20	P	Pn	08 39 15.4	-0.9
	baz=208,SNR=6.7						
GCSA	Galena City Sc	11.67	14	P	Pn	08 39 15.5	-1.3
	baz=199,SNR=8.1						
M23K	Glacier View	11.69	39	P	Pn	08 39 15.8	-1.4
	baz=232,SNR=7.9						
CHUM	Lake Minchumin	11.79	24	P	Pn	08 39 17.0	-1.5
	baz=213						
EYAK	Cordova Ski Ar	11.81	47		Pn	08 39 17.0	-1.8
SCM	Sheep Creek Mo	11.87	39		Pn	08 39 17.7	-1.9
SCM	Sheep Creek Mo	11.87	39	P	Pn	08 39 17.7	-1.9
SCM	Sheep Creek Mo	11.87	39	P	Pn	08 39 18.1	-1.5
	baz=232,SNR=5.9						
KTH	Kantishna Hill	11.88	28		Pn	08 39 19.6	-0.3
TRF	Thorofare Moun	11.98	29		Pn	08 39 21.1	-0.2
TRF	Thorofare Moun	11.98	29	P	Pn	08 39 20.1	-1.2
	baz=220						
WAT1	Susitna Watana	12.07	34	P	Pn	08 39 19.6	-2.9
	baz=226						
DIV	Divide	12.09	44		Pn	08 39 22.6	-0.1
KAIM	Kayak Island	12.14	51	P	Pn	08 39 20.7	-2.5
	baz=246						
WAT6	Susitna Watana	12.19	36	P	Pn	08 39 21.0	-3.0
	baz=229,SNR=8.0						
KLU	Klutina	12.22	43		Pn	08 39 22.7	-1.7
KLU	Klutina	12.22	43	P	Pn	08 39 22.9	-1.6
	baz=237,SNR=17						
BPAW	Bear Paw Mtn.	12.30	26		Pn	08 39 26.6	+1.1
BPAW	Bear Paw Mtn.	12.30	26	P	Pn	08 39 25.3	-0.2
	baz=216,SNR=5.4						
HMT	Hamilton	12.38	49		Pn	08 39 25.8	-0.8
M24K	Tolsona, Glenn	12.47	40		Pn	08 39 26.2	-1.6
M24K	Tolsona, Glenn	12.47	40	P	Pn	08 39 26.2	-1.6
	baz=234,SNR=7.2						
BMRM	Bremner River	12.51	46	P	Pn	08 39 27.1	-1.2
	baz=242						
MCK	McKinley	12.60	30		Pn	08 39 29.7	+0.1
MCK	McKinley	12.60	30	P	Pn	08 39 29.7	+0.1
MCK	McKinley	12.60	30	P	Pn	08 39 29.2	-0.4
	baz=222						
DHY	Denali Highway	12.64	35	P	Pn	08 39 28.4	-1.9
	baz=228,SNR=7.0						
BERG	Berg Lake	12.65	50		Pn	08 39 29.1	-1.2
N25K	Chitina, Valde	12.82	44	Pn	Pn	08 39 31.3	-1.4
N25K	Chitina, Valde	12.82	44	P	Pn	08 39 31.6	-1.1
	baz=239,SNR=5.3						
I21K	Tanana	12.96	22		Pn	08 39 34.6	+0.2
I21K	Tanana	12.96	22	P	Pn	08 39 34.7	+0.2
	baz=211						
SNH	Sunshine Point	12.97	51		Pn	08 39 35.2	+0.5
HARP	HAARP	13.03	40	P	Pn	08 39 34.7	-0.7
	baz=235,SNR=5.1						
WAX	Waxell Ridge	13.06	50		Pn	08 39 34.9	-1.0
GLB	Gilahina Butte	13.07	45		Pn	08 39 34.2	-1.8
MLY	Manley	13.12	24		Pn	08 39 37.3	+0.6
MLY	Manley	13.12	24	P	Pn	08 39 36.8	+0.1
	baz=214,SNR=17						
TGL	Tana Glacier	13.19	49		Pn	08 39 36.9	-0.9
H21K	Melozitna Rive	13.20	19	P	Pn	08 39 38.7	+0.9
	baz=208,SNR=10						
NEA2	Nenana	13.21	28		Pn	08 39 38.1	+0.3
NEA2	Nenana	13.21	28	P	Pn	08 39 37.9	0.0
	baz=220						
PAX	Paxson	13.24	38	P	Pn	08 39 36.7	-1.8
	baz=232,SNR=27						
IMAR	Indian Mountai	13.32	17		Pn	08 39 40.5	+1.1
ISLE	Juniper Island	13.36	50		Pn	08 39 39.2	-0.8
MCARA	McCarthy VSAT	13.38	46		Pn	08 39 39.6	-0.6
MCARA	McCarthy VSAT	13.38	46	P	Pn	08 39 38.9	-1.3
	baz=243						
WRH	Wood River Hil	13.39	29		Pn	08 39 38.8	-1.6
I23K	Minto, Yukon-K	13.56	26	P	Pn	08 39 40.9	-1.8
	baz=217						
SHEM	Shemya Is, Ala	13.57	276	LR	LR	08 44 41.6	
	comp=E,782nm,21.0s,baz=119,slow=36						
K24K	Donnelly Dome	13.66	34	P	Pn	08 39 42.9	-1.1
	baz=229						
HDA	Harding Lake	13.69	31	P	Pn	08 39 43.0	-1.5
	baz=225						
H22K	Ishtalitna Cre	13.70	21	P	Pn	08 39 45.8	+1.2
	baz=211,SNR=8.4						
MDM	Murphy Dome	13.72	28		Pn	08 39 44.8	0.0
TCOL	CIGO, UAF Yank	13.76	29	P	Pn	08 39 45.5	+0.1
	baz=222						
COLA	College	13.76	29⇑	eP	Pn	08 39 43.9	-1.5
COLA	College	13.76	29	P	Pn	08 39 45.5	+0.1
	baz=222						
BARN	Barnard Glacie	13.84	49		Pn	08 39 45.9	-0.7
G21K	Allakaket	13.85	17	P	Pn	08 39 46.8	+0.3
	baz=205						
TABL	Table Mountain	13.85	51		Pn	08 39 46.2	-0.6
M26K	Nabesna, AK	13.88	42		Pn	08 39 44.9	-2.1
M26K	Nabesna, AK	13.88	42	P	Pn	08 39 45.4	-1.6
	baz=239,SNR=11						
MENT	Mentasta	13.88	40		Pn	08 39 46.2	-0.8
RIDG	Independent Ri	13.94	36	P	Pn	08 39 47.4	-0.5
	baz=231						
CTG	Chitna Glacier	13.95	49	P	Pn	08 39 47.8	-0.2
	baz=247						
CTGM	Chitina Glacie	13.95	49		Pn	08 39 47.8	-0.3
ILAR	Eielson Array	13.97	30	Pn	Pn	08 39 43.8	-4.4
	comp=E,0.2nm,0.3s,baz=220,slow=12,SNR=12						
ILAR				LR	LR	08 45 44.3	
	comp=E,2μm,18.1s,baz=218,slow=40						
	comp=E,0.9nm,0.6s						
LOGN	Logan Glacier	14.05	50		Pn	08 39 49.2	-0.2
H23K	Yukon River	14.06	24		Pn	08 39 49.7	+0.1
H23K	Yukon River	14.06	24	P	Pn	08 39 48.0	-1.5
	baz=215,SNR=14						
L26K	Log Cabin Wild	14.07	40		Pn	08 39 48.6	-1.0
L26K	Log Cabin Wild	14.07	40	P	Pn	08 39 47.7	-1.9
	baz=236						
PCA	Pinnacle	14.16	53		Pn	08 39 50.1	-0.8
PINM	Pinnacle	14.16	53	P	Pn	08 39 50.0	-0.9
	baz=252						
M27K	Edge Creek, AK	14.31	44		Pn	08 39 51.5	-1.5
M27K	Edge Creek, AK	14.

baz=222,SNR=10
I26K Coal Creek Min 15.50 33 P **Pn 08 40 07.8 -0.9**
baz=230
G25K Bearman Lake 15.67 26 P **Pn 08 40 09.7 -1.2**
baz=220
HYT Haines Junctio 15.67 52 P **Pn 08 40 10.1 -1.0**
baz=254,SNR=8.2
P30M Million Dollar 15.76 55 P **Pn 08 40 11.8 -0.4**
baz=257
M29M Somme Creek 15.78 46 P **Pn 08 40 11.5 -1.1**
baz=247,SNR=18
F24K Squaw Lake 15.83 22 P **Pn 08 40 12.3 -0.7**
baz=215
EGAK Eagle 15.85 36 P **Pn 08 40 11.0 -2.3**
baz=235,SNR=12
PLBC Pleasant Camp 15.92 58 P **Pn 08 40 13.1 -1.2**
baz=260,SNR=10
E23K Chandalar 15.92 19 P **Pn 08 40 12.7 -1.6**
baz=211,SNR=37
N30M Aishikik Lake 16.05 50 P **Pn 08 40 14.2 -1.7**
baz=252,SNR=7.4
DAWY Dawson 16.12 40 P **Pn 08 40 15.0 -1.8**
baz=240,SNR=11
E24K Your Creek 16.16 20 P **Pn 08 40 16.8 -0.5**
baz=213,SNR=59
I27K Kandik River 16.19 33 P **Pn 08 40 15.9 -1.8**
baz=232,SNR=20
L29M L29M 16.19 44 P **Pn 08 40 16.2 -1.5**
baz=245,SNR=85
O30N Mendenhall 16.33 53 P **Pn 08 40 19.0 -0.5**
baz=256
F25K Christian Rive 16.42 24 P **Pn 08 40 19.4 -1.1**
baz=220,SNR=12
TOLK Toolik Lake Re 16.43 18 P **Pn 08 40 20.8 0.0**
baz=210,SNR=25
SKAG Skagway 16.44 58 P **P 08 40 22.4 -1.0**
SKAG Skagway 16.44 58 P **Pn 08 40 20.3 -0.5**
baz=261
D23K Nanushuk River 16.53 16 P **Pn 08 40 21.5 -0.4**
baz=207
M30M Minto, Yukon 16.55 47 P **Pn 08 40 22.0 -0.3**
baz=249,SNR=9.8
BMAR Burnt Mountain 16.56 26 **Pn 08 40 21.8 -0.6**
H27K Steamboat Moun 16.61 32 P **Pn 08 40 22.7 -0.3**
baz=230,SNR=12
N31M Braeburn, Yuko 16.66 51 P **Pn 08 40 22.3 -1.3**
baz=254,SNR=11
S32K Killisnoo 16.66 65 P **Pn 08 40 23.1 -0.6**
baz=268
R32K Eaglecrest 16.73 62 P **Pn 08 40 23.7 -0.8**
baz=266
K29M Barlow Dome 16.75 42 P **Pn 08 40 24.0 -0.9**
baz=244,SNR=50
J29M Klondike Camp 16.76 40 P **Pn 08 40 24.2 -0.7**
baz=241,SNR=10
JIS Juneau Island 16.80 62 P **P 08 40 26.5 -0.8**
E25K Arctic Village 16.84 23 P **Pn 08 40 24.9 -1.1**
baz=218
F26K Sheenjek River 16.87 26 P **Pn 08 40 25.3 -1.0**
baz=222,SNR=8.7
WHY Whitehorse 16.88 54 P **P 08 40 28.2 -0.2**
WHY Whitehorse 16.88 54 P **Pn 08 40 25.6 -0.9**
baz=258,SNR=18
G27K Doyon Strip 16.94 30 P **Pn 08 40 25.7 -1.5**
baz=229
D24K Happy Valley 17.02 18 P **Pn 08 40 27.6 -0.4**
baz=210
I29M Ogilvie Camp, 17.18 37 P **Pn 08 40 30.0 -0.2**
baz=238,SNR=33
P32M Atlin 17.28 58 P **Pn 08 40 31.2 -0.2**
baz=262
MAYO Mayo, Yukon 17.31 44 P **Pn 08 40 31.2 -0.6**
baz=247,SNR=21
C23K Itkillik River 17.32 15 P **Pn 08 40 31.5 -0.3**
baz=206,SNR=14
M31M Drury Creek, Y 17.49 49 P **Pn 08 40 33.4 -0.6**
baz=253,SNR=30
C24K Franklin Bluff 17.53 17 P **Pn 08 40 33.8 -0.6**
baz=210
D25K Kavik River 17.63 20 P **Pn 08 40 36.0 +0.2**
baz=215,SNR=11
P33M Teslin, Yukon 17.81 56 P **P 08 40 40.4 +1.8**
P33M Teslin, Yukon 17.81 56 P **P 08 40 38.7 +0.1**
baz=261,SNR=34
N32M Quiet Lake 17.84 53 P **P 08 40 39.5 +0.6**
baz=258
E27K Coleen River 17.89 27 P **P 08 40 39.6 +0.1**
baz=226
Q32M Nakina River 17.95 60 P **P 08 40 41.2 +0.8**
baz=266
FARO Faro, Yukon 17.97 49 P **P 08 40 42.3 +2.0**
FARO Faro, Yukon 17.97 49 P **P 08 40 41.9 +1.6**
baz=254,SNR=42
A21K Barrow 18.06 7 P **P 08 40 41.7 +0.6**
baz=193
EPYK Eagle Plains 18.27 35 P **Pn 08 40 42.7 -0.9**
EPYK Eagle Plains 18.27 35 P **Pn 08 40 43.0 -0.7**
baz=238,SNR=16
C26K Camden Bay 18.42 20 P **Pn 08 40 45.4 +0.1**
baz=216,SNR=24
C27K Jago River 18.44 22 P **Pn 08 40 45.6 0.0**
baz=219,SNR=12
S34M Telegraph Cree 18.52 64 P **Pn 08 40 46.7 +0.1**
baz=270,SNR=11
R33M Jennings River 18.65 59 P **P 08 40 47.9 -0.1**
baz=266,SNR=13
G30M tAoh Zraii Nji 18.77 34 P **P 08 40 47.7 -1.3**
baz=237,SNR=11
MMPY Sheldon Lake, 19.01 49 P **Pn 08 40 53.9 +1.4**
baz=256,SNR=50
T35M Bob Quinn 19.03 66 P **Pn 08 40 53.1 +0.3**
baz=273
DLBC Dease Lake 19.10 62 P **P 08 40 52.4 -0.5**
comp=E,0.2nm,0.3s,baz=258,slow=8.9,SNR=13
DLBC S **Sn 08 44 25.6 -1.1**
comp=E,1.6nm,0.6s,baz=230,slow=15,SNR=4.0
DLBC LR LR 08 47 32.7
comp=E,458nm,21.0s,baz=286,slow=35
comp=E,5.2nm,0.8s
DLBC Dease Lake 19.10 62 P **Pn 08 40 53.4 -0.4**
baz=269
WTLY Watson Lake, Y 19.80 57 P **Pn 08 41 01.3 -0.7**
WTLY Watson Lake, Y 19.80 57 P **Pn 08 41 02.1 +0.1**
baz=266,SNR=14
F31M Tsiigehtchic 19.83 34 P **P 08 40 59.1 -1.5**
baz=240
TGTN Hyland Airport 20.19 53 P Pn 08 41 06.2 -0.5
baz=262
INK Inuvik 20.35 32 P **P 08 41 02.9 -3.2**
comp=E,13nm,0.8s,baz=150,slow=13,SNR=8.0
INK Inuvik 20.35 32 P **P 08 41 04.6 -1.5**
baz=238,SNR=6.8
BILL Bilibino 20.41 327 P **P 08 41 08.1 +1.2**
BILL IAmb IAmb 08 41 12.4
comp=Z,33nm,1.0s
BILL Bilibino 20.41 327 *e*P **P 08 41 04.9 -2.0**
BILL *e*PPP PPP 08 41 29.8
BILL pmax pmax
comp=Z,39nm,1.0s
BILL MLR MLR
comp=Z,1µm,17.0s
LIRD Liard River Hi 21.14 59 P **P 08 41 14.6 -0.2**
baz=270
BBB Bella Bella 21.16 79 LR LR 08 47 52.4
comp=Z,303nm,18.6s,baz=291,slow=32
KOTAN Kotaneelee Air 22.17 57 P **P 08 41 25.7 -0.2**
baz=270,SNR=7.1
FLDN Fort Liard 22.46 57 P **P 08 41 28.9 0.0**
baz=270
PET Petropavlovsk 22.56 284 *e*P **P 08 41 30.1 0.0**
PET *e*S **S 08 45 28.9 -6.7**
PET pmax pmax
comp=Z,200nm,15.3s
PET MLR MLR
comp=Z,700nm,17.0s
PET MLR MLR
comp=Z,500nm,16.0s
WRGLY Wrigley 22.63 49 P **P 08 41 31.3 +0.6**
baz=263
PEA0B Petropavlovsk- 23.09 285⇓ *e*P **P 08 41 37.3 +1.7**
PETK Petropavlovsk- 23.09 285 P **P 08 41 34.0 -1.7**
comp=Z,19nm,0.8s,baz=88,slow=14,SNR=37
PETK LR LR 08 50 25.8
comp=Z,584nm,20.8s,baz=83,slow=36
comp=Z,19nm,0.8s
PETK Petropavlovsk- 23.09 285 P **P 08 41 34.0 -1.7**
C36M Paulatuk 23.88 34 P **P 08 41 43.9 +0.7**
baz=248

SEY Seymchan 24.63 310 P **P 08 41 50.0 -0.1**
comp=Z,6.2nm,0.8s,baz=108,slow=8.2,SNR=11
SEY PcP **PcP 08 45 28.0 +1.2**
comp=Z,1.9nm,0.7s,baz=98,slow=5.8,SNR=3.8
comp=Z,6.2nm,0.8s
SEY Seymchan 24.63 310⇓ *e*P **P 08 41 49.9 -0.1**
SEY pmax pmax
comp=Z,33nm,2.0s
A36M Sachs Harbour 24.64 27 P **P 08 41 50.2 +0.1**
A36M Sachs Harbour 24.64 27 P **P 08 41 50.3 +0.3**
baz=242,SNR=19
MA2 Magadan 25.56 302 P **P 08 41 58.4 -0.2**
comp=Z,10nm,0.8s,baz=244,slow=23,SNR=3.5
MA2 LR LR 08 52 50.8
comp=Z,382nm,18.1s,baz=108,slow=38
comp=Z,10nm,0.8s
YKA Yellowknife Ar 26.66 51 P **P 08 42 09.3 +0.8**
comp=Z,12nm,0.9s,baz=272,slow=9.5,SNR=32
YKA LR LR 08 55 02.0
comp=Z,612nm,18.1s,baz=236,slow=42
comp=Z,12nm,0.9s
YKA Yellowknife Ar 26.66 51 P **P 08 42 10.1 +1.6**
YKA Yellowknife Ar 26.66 51 *i* P **P 08 42 10.3 +1.8**
YKA pmax pmax
comp=Z,12nm,0.9s
HAWA Hanford 28.67 87 P **P 08 42 27.2 +0.5**
NEW Newport 29.18 81 P **P 08 42 32.6 +1.4**
comp=Z,2.2nm,0.8s,baz=316,slow=8.2,SNR=5.1
NEW LR LR 08 52 28.8
comp=Z,174nm,19.2s,baz=302,slow=33
comp=Z,2.2nm,0.8s
NEW Newport 29.18 81 P **P 08 42 31.0 -0.2**
NEW Newport 29.18 81 P **P 08 42 31.0 -0.2**
NEW pmax pmax
comp=Z,11nm,1.2s
NEW Newport 29.18 81 P **P 08 42 31.1 -0.1**
baz=298
EDM Edmonton 29.30 70 P **P 08 42 32.7 +0.5**
EDM IAmb IAmb 08 42 53.7
comp=Z,20nm,1.3s
EDM Edmonton 29.30 70 P **P 08 42 32.7 +0.5**
EDM pmax pmax
comp=Z,20nm,1.3s
YBH Yreka Blue Hor 29.40 97 P **P 08 42 35.3 +2.0**
comp=Z,1.3nm,0.8s,baz=360,slow=13,SNR=2.5
YBH LR LR 08 51 19.4
comp=Z,403nm,21.7s,baz=302,slow=30
comp=Z,1.3nm,0.8s
E09A Wood Farm, Sta 29.43 85 P **P 08 42 34.5 +1.1**
E09A IAmb IAmb 08 42 40.6
comp=Z,18nm,1.3s
I07A Izee 29.93 90 P **P 08 42 39.2 +1.3**
I07A IAmb IAmb 08 42 56.5
comp=Z,13nm,1.0s
J08A Circle Bar Ran 30.95 91 P **P 08 42 48.4 +1.4**
PLID Pearl Lake 31.46 86 P **P 08 42 52.8 +1.2**
MSO Missoula 31.76 82 P **P 08 42 54.0 -0.1**
baz=301
MFID Camas Ranch 32.50 89 P **P 08 43 00.8 +0.2**
MFID IAmb IAmb 08 43 07.7
comp=Z,11nm,1.1s
PAHR Pah Rah Range 32.64 97 P **P 08 43 02.8 +0.9**
YERR Yerington 33.19 98 P **P 08 43 08.2 +1.4**
YERR IAmb IAmb 08 43 20.4
comp=Z,8.1nm,0.8s
HLID Hailey 33.26 87 P **P 08 43 05.6 -1.7**
baz=305
MCMT McKenzie Canyo 33.48 84 P **P 08 43 10.6 +1.4**
EGMT Eagleton 33.62 77 P **P 08 43 09.8 -0.4**
baz=300
TIXI Tiksi 33.62 328 P **P 08 43 08.7 -1.2**
comp=Z,7.2nm,0.8s,baz=270,slow=23,SNR=17
TIXI PcP **PcP 08 45 49.2 -0.1**
comp=Z,5.3nm,0.9s,baz=90,slow=22,SNR=5.8
TIXI LR LR 08 58 39.4
comp=Z,573nm,18.9s,baz=99,slow=40
comp=Z,7.2nm,0.8s
TIXI Tiksi 33.62 328⇑ *e*P **P 08 43 09.3 -0.6**
TIXI pmax pmax
comp=Z,12nm,1.0s
TIXI Tiksi 33.62 328 P **P 08 43 09.0 -0.9**
TIXI pP **pP 08 43 17.2 -0.2**
TIXI sP **pwP 08 43 20.3 +0.8**
RES Resolute Bay 33.68 26 P **P 08 43 10.1 -0.3**
comp=Z,2.8nm,0.6s,baz=279,slow=10.0,SNR=13
RES LR LR 08 58 32.2
comp=Z,529nm,18.5s,baz=266,slow=39
comp=Z,2.8nm,0.6s
BOZ Bozeman (W) 33.78 82 P **P 08 43 10.4 -1.4**
baz=303
NVAR Mina Array Bea 34.10 98 P **P 08 43 16.4 +1.6**
comp=Z,1.7nm,0.9s,baz=302,slow=7.2,SNR=7.8
NVAR ScP **ScP 08 49 35.9 +1.5**
comp=Z,0.5nm,0.7s,baz=302,slow=5.4,SNR=4.8
NVAR LR LR 08 54 13.2
comp=Z,197nm,19.6s,baz=305,slow=31
comp=Z,1.7nm,0.9s
NVAR Mina Array Bea 34.10 98 P **P 08 43 16.1 +1.3**
ELK Elko 34.45 92 LR LR 08 55 10.1
comp=Z,262nm,19.1s,baz=314,slow=32
ELK Elko 34.45 92 P **P 08 43 18.4 +0.7**
ELK IAmb IAmb 08 43 36.6
comp=Z,8.7nm,0.9s
ELK Elko 34.45 92 P **P 08 43 18.4 +0.7**
ELK pmax pmax
comp=Z,9.0nm,0.9s
YHH Holmes Hill 34.68 83 P **P 08 43 19.6 -0.2**
YHH IAmb IAmb 08 43 39.7
comp=Z,12nm,1.0s
H17A Grant Village 35.06 83 P **P 08 43 22.5 -0.5**
baz=304
HVU Hansel Valley 35.28 89 P **P 08 43 26.1 +1.3**
HVU IAmb IAmb 08 43 43.6
comp=Z,36nm,2.0s
HVU Hansel Valley 35.28 89 P **P 08 43 26.1 +1.3**
HVU pmax pmax
comp=Z,36nm,2.0s
VES Vestal, Richgr 35.40 102 P **P 08 43 26.6 +1.0**
baz=314
RLMT Red Lodge 35.43 81 P **P 08 43 25.1 -1.1**
baz=304
CWC Cottonwood Cre 35.57 100 P **P 08 43 28.4 +1.0**
baz=313
GRAC Grapevine Rang 35.61 99 P **P 08 43 28.2 +0.6**
baz=313
BGU Big Grassy Mou 35.65 90 P **P 08 43 29.2 +1.2**
BGU IAmb IAmb 08 43 43.7
comp=Z,34nm,1.8s
AHID Auburn Hatcher 35.69 86 P **P 08 43 28.1 -0.3**
R11A Troy Canyon, C 35.77 96 P **P 08 43 29.4 +0.4**
R11A IAmb IAmb 08 43 48.7
comp=Z,10nm,1.1s
R11A Troy Canyon, C 35.77 96 P **P 08 43 27.8 -1.2**
baz=311
GRNR Gornyy 36.11 291⇓ *i* P **P 08 43 31.0 -0.6**
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=N,150nm,10.0s
GRNR MLR MLR
comp=E,400nm,10.0s
GRNR MLR MLR
comp=Z,240nm,10.0s
MPMC Manual Prospec 36.18 100 P **P 08 43 31.8 -0.8**
baz=314
DUG Dugway, Tooele 36.23 91 P **P 08 43 34.2 +1.2**
DUG IAmb IAmb 08 43 45.8
comp=Z,18nm,1.1s
DUG Dugway, Tooele 36.23 91 P **P 08 43 34.2 +1.2**
DUG pmax pmax
comp=Z,18nm,1.2s
DUG Dugway, Tooele 36.23 91 P **P 08 43 32.3 -0.7**
baz=309,SNR=10
FURC Furnace Creek, 36.27 99 P **P 08 43 32.6 -0.4**
baz=313
TPNV Topopah Spring 36.30 98 P **P 08 43 32.9 -0.7**
baz=312
BW06 Boulder Array 36.61 85 P **P 08 43 35.9 -0.4**
baz=306
PDAR Pinedale Array 36.61 85 P **P 08 43 38.6 +2.4**
comp=Z,1.9nm,0.9s,baz=300,slow=4.5,SNR=6.3
PDAR LR LR 08 56 48.0
comp=Z,125nm,18.7s,baz=316,slow=33
PDAR Pinedale Array 36.61 85 P **P 08 43 37.3 +1.1**
PSUT Pine Spring 36.67 94 P **P 08 43 37.3 +0.5**
SHOC Shoshone, Teco 37.00 99 P **P 08 43 39.6 +0.2**
baz=314

GSC Goldstone, Bar 37.10 100 P **P 08 43 40.4 0.0**
baz=314
TMUT Trail Mountain 37.76 91 P **P 08 43 46.9 +0.8**
TMUT IAmb IAmb 08 43 59.5
comp=Z,8.8nm,0.8s
RDMU Red Mountain 37.93 88 P **P 08 43 48.0 +0.5**
RDMU IAmb IAmb 08 44 08.2
comp=Z,18nm,1.2s
SRU San Rafael Swe 38.29 90 P **P 08 43 51.4 +1.0**
SRU IAmb IAmb 08 44 07.1
comp=Z,67nm,1.9s
SRU San Rafael Swe 38.29 90 P **P 08 43 51.4 +1.0**
SRU pmax pmax
comp=Z,67nm,1.9s
BELC Belle Mtn. Jos 38.49 101 P **P 08 43 52.3 +0.1**
baz=315
PFO Pinyon Flats O 38.50 102 LR LR 08 56 39.0
comp=Z,296nm,18.7s,baz=299,slow=31
ALE Alert 38.66 12 P **P 08 43 52.1 -0.8**
ALE pP **pP 08 44 01.2 +0.9**
IRM Iron Mountain 38.88 100 P **P 08 43 55.2 -0.1**
baz=315
O20A White River Ci 39.00 87 P **P 08 43 56.3 -0.1**
baz=309
MONP2 Monument Peak 39.03 103 P **P 08 43 57.3 +0.5**
baz=316
RSSD Black Hills 39.07 79 P **P 08 43 57.3 +0.3**
baz=306
IKP In-Ko-Pah, Jac 39.39 103 P **P 08 44 00.0 +0.4**
baz=316
KLR Kul'dur 39.49 291 P **P 08 43 59.1 -1.0**
comp=Z,12nm,1.0s,baz=57,slow=8.6,SNR=16
KLR LR LR 09 01 15.4
comp=Z,223nm,19.2s,baz=50,slow=38
comp=Z,12nm,1.0s
KLR Kul'dur 39.49 291 *c e*P **P 08 43 59.2 -0.9**
KLR pmax pmax
comp=Z,20nm,1.3s
MDND Maddock 39.53 72 P **P 08 44 00.9 +0.2**
MDND Maddock 39.53 72 P **P 08 44 00.8 +0.2**
baz=303
E28A Huff 39.61 74 P **P 08 44 02.4 +1.1**
E28A IAmb IAmb 08 44 17.4
comp=Z,20nm,0.8s
ZEA Zeya 39.63 299 *e*P **P 08 44 00.3 -1.0**
ZEA *e* 08 44 07.5
ZEA *e*S **S 08 49 58.4 -4.0**
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=E,300nm,18.0s
ZEA MLR MLR
comp=Z,300nm,17.0s
PV11 David Mesa, Pa 39.80 90 P **P 08 44 03.9 +0.8**
PV11 IAmb IAmb 08 44 25.2
comp=Z,9.5nm,0.7s
PV13 Radium Mtn., P 39.92 90 P **P 08 44 04.8 +0.7**
PV13 IAmb IAmb 08 44 16.7
comp=Z,14nm,0.8s
PV15 Paradox Valley 40.00 90 P **P 08 44 05.2 +0.3**
WUAZ Wupatki 40.16 95 P **P 08 44 06.8 +0.7**
WUAZ Wupatki 40.16 95 P **P 08 44 05.9 -0.2**
baz=313
ULM Lac du Bonnet 40.33 66 P **P 08 44 07.8 +0.7**
comp=Z,9.4nm,1.0s,baz=298,slow=7.8,SNR=4.9
comp=Z,9.4nm,1.0s
MVCO Mesa Verde 40.73 91 P **P 08 44 11.2 +0.3**
baz=312
H11N2 WAKE ISLAND Hy 40.81 226 T T 09 28 12.2
baz=26,slow=76,SNR=135
H11N3 WAKE ISLAND Hy 40.81 226 T T 09 28 12.7
baz=26,slow=76,SNR=165
H11N1 WAKE ISLAND Hy 40.83 226 T T 09 28 13.6
baz=26,slow=76,SNR=194
S22A 4UR Ranch, Cre 41.38 89 P **P 08 44 15.7 -0.6**
baz=311
AGMN Agassiz Nation 41.39 69 P **P 08 44 15.6 -0.2**
AGMN IAmb IAmb 08 44 30.2
comp=Z,31nm,1.4s
AGMN Agassiz Nation 41.39 69 P **P 08 44 16.0 +0.2**
baz=304,SNR=5.6
214A Organ Pipe Nat 41.82 100 P **P 08 44 20.3 +0.6**
baz=316
H11S1 WAKE ISLAND Hy 41.98 225 T T 09 29 21.2
baz=26,slow=76,SNR=152
H11S2 WAKE ISLAND Hy 41.99 225 T T 09 29 41.0
baz=26,slow=76,SNR=124
H11S3 WAKE ISLAND Hy 41.99 225 T T 09 29 40.4
baz=26,slow=76,SNR=135
SDCO Great Sand Dun 42.17 88 P **P 08 44 24.0 +1.3**
SDCO Great Sand Dun 42.17 88 P **P 08 44 20.9 -1.8**
baz=311
JSD Sado 42.35 273 P **P 08 44 24.4 +0.6**
TUC Tucson 42.76 98 P **P 08 44 25.3 -2.1**
baz=316
TUC Tucson 42.76 98 P P 08 44 32.5 +5.2
TUC pP pwP 08 44 39.7 +0.6
NEEM North Greenlan 42.79 17 *i* P **P 08 44 26.6 -0.6**
NEEM IAmb IAmb 08 44 28.9
comp=Z,44nm,1.1s
T25A Trinidad 43.22 88 P **P 08 44 29.2 -2.0**
baz=312
MJAR Matsushiro Arr 43.37 271 P **P 08 44 32.5 +0.3**
comp=Z,12nm,1.0s,baz=38,slow=6.9,SNR=20
MJAR LR LR 09 02 57.2
comp=Z,191nm,19.6s,baz=55,slow=37
comp=Z,12nm,1.0s
MAJO Matsushiro 43.37 271 P **P 08 44 32.4 +0.3**
MAJO Matsushiro 43.37 271 *c i* P **P 08 44 33.0 +0.9**
MAJO pmax pmax
comp=Z,43nm,0.9s
MAJO Matsushiro 43.37 271 P **P 08 44 33.1 +0.9**
ANMO Albuquerque 43.48 92 LR LR 09 01 03.0
comp=Z,171nm,18.6s,baz=315,slow=34
ANMO Albuquerque 43.48 92⇑ *e*P **P 08 44 36.0 +2.7**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 43.48 92 P **P 08 44 32.4 -0.9**
baz=314
ECSD EROS Data Cent 43.62 75 P **P 08 44 32.4 -1.7**
baz=307
MSHR Mys Shultsa 43.65 283⇑ *e*P **P 08 44 34.9 +0.6**
MSHR pmax pmax
comp=Z,42nm,1.7s
NOR Nord 43.88 7 *i* P **P 08 44 34.9 -0.9**
NOR IAmb IAmb 08 44 37.2
comp=Z,12nm,0.9s
BNM Barren Site 43.93 93 P **P 08 44 36.9 0.0**
EYMN Ely 44.00 67 P **P 08 44 35.5 -1.6**
baz=305
BOD Bodaibo 44.05 310 *e*P **P 08 44 37.2 -0.1**
BOD pmax pmax
comp=Z,29nm,1.6s
121A Cookes Peak, D 44.38 95 P **P 08 44 38.6 -1.9**
baz=315
E38A The Farm, Brul 44.75 68 P **P 08 44 43.3 +0.2**
E38A IAmb IAmb 08 44 57.7
comp=Z,26nm,1.2s
SPMN Marine on St. 44.88 71 P **P 08 44 42.7 -1.4**
baz=307
FRB Frobisher Bay 45.82 38 LR LR 09 06 56.8
comp=Z,706nm,18.6s,baz=302,slow=40
NRIK Noril'sk 47.07 333 P **P 08 45 01.6 +0.5**
comp=Z,11nm,0.9s,baz=67,slow=5.9,SNR=9.6
comp=Z,11nm,0.9s
NRIK Noril'sk 47.07 333 *c i* P **P 08 45 01.2 +0.2**
NRIK pmax pmax
comp=Z,28nm,1.2s
KBS Kingsbay 47.73 1 *d i* P **P 08 45 06.9 +0.9**
KBS pmax pmax
comp=Z,67nm,2.5s
KBS Kingsbay 47.73 1 *i* P **P 08 45 05.7 -0.3**
KBS Kingsbay 47.73 1 P **P 08 45 06.4 +0.4**
KBS sP **sP 08 45 17.6 +1.4**
JCJ Chichijima 47.75 259 LR LR 09 03 05.3
comp=Z,127nm,21.5s,baz=100,slow=33
JFWS Jewell Farm 47.76 72 P **P 08 45 05.2 -1.5**
baz=310
DAG Danmarks Havn 48.00 10 *i* P **P 08 45 06.9 -1.3**
DAG IAmb IAmb 08 45 10.4
comp=Z,25nm,0.7s
WMOK Wichita Mounta 48.20 86 P **P 08 45 10.5 +0.2**
baz=314
SUMG Summit 48.49 19 *i* P **P 08 45 12.7 +0.2**

SUMG IAmb IAmb 08 45 15.9
comp=Z,34nm,1.0s
SPITS Spitsbergen Ar 48.51 0 P P 08 45 11.6 -0.5
comp=Z,10nm,0.8s,baz=51,slow=4.4,SNR=4.2
SPITS LR LR 09 06 21.3
comp=Z,192nm,18.5s,baz=334,slow=37
comp=Z,10nm,0.8s
KSRS Korea Array 48.85 280 P P 08 45 17.0 +1.8
comp=Z,15nm,0.9s,baz=53,slow=6.7,SNR=29
KSRS LR LR 09 07 42.6
comp=Z,96nm,18.8s,baz=115,slow=38
comp=Z,15nm,0.9s
KSAR Wonju Array Be 48.88 280 P P 08 45 16.3 +0.8
KSAR Wonju Array Be 48.88 280 P P 08 45 16.3 +0.8
P40A Paris 48.93 76 P P 08 45 15.5 -0.3
P40A IAmb IAmb 08 45 35.4
comp=Z,11nm,0.8s
TX31 Lajitas Ar. Si 49.12 95 P P 08 45 17.5 -0.1
TX31 IAmb IAmb 08 45 30.6
comp=Z,14nm,0.8s
TXAR Lajitas Array 49.13 95 P P 08 45 18.6 +1.1
comp=Z,1.1nm,0.7s,baz=302,slow=5.5,SNR=31
TXAR ScP **ScP 08 50 35.1 +1.3**
comp=Z,0.7nm,0.9s,baz=289,slow=3.8,SNR=5.8
TXAR LR LR 09 04 50.4
comp=Z,136nm,20.0s,baz=311,slow=35
comp=Z,1.1nm,0.7s
TXAR Lajitas Array 49.13 95 P P 08 45 18.3 +0.8
ABTX Abilene, Hawle 49.16 89 P P 08 45 17.8 +0.1
baz=315
LPIG La Paz 49.16 105 LR LR 09 03 23.6
comp=Z,88nm,19.9s,baz=304,slow=33
TUL1 Leonard 49.17 82 P P 08 45 17.4 -0.2
baz=313
SFJD Kangerlussuaq 49.63 28 *i* P **P 08 45 19.4 -1.4**
SFJD Kangerlussuaq 49.63 28 P **P 08 45 21.2 +0.4**
U38A Gravette 49.64 81 P **P 08 45 21.4 +0.1**
U38A IAmb IAmb 08 45 39.9
comp=Z,8.5nm,1.0s
HDIL Hopedale 49.83 73 P **P 08 45 22.3 -0.4**
HDIL Hopedale 49.83 73 P **P 08 45 21.8 -0.9**
baz=311,SNR=6.8
TJN Taejon 49.91 279⇑ *eP* **P 08 45 23.3 0.0**
DBG Daneborg 50.01 12 *i* P **P 08 45 23.3 -0.3**
DBG IAmb IAmb 08 45 25.9
comp=Z,24nm,1.0s
P43A Skaggs, Pawnee 50.31 74 P **P 08 45 25.5 -0.9**
CCM Cathedral Cave 50.38 77 P **P 08 45 26.1 -0.8**
baz=313
JCT Junction City 50.60 91 P **P 08 45 29.2 +0.6**
JCT IAmb IAmb 08 45 46.1
comp=Z,8.4nm,0.9s
JCT Junction City 50.60 91 P **P 08 45 29.3 +0.6**
JCT pmax pmax
comp=Z,8.0nm,0.9s
JCT Junction City 50.60 91 P **P 08 45 27.5 -1.1**
baz=316
ICESG Greenland Ices 50.91 23 *i* P **P 08 45 28.3 -2.5**
WHTX Lake Whitney, 50.91 87 P **P 08 45 31.4 +0.4**
WHTX IAmb IAmb 08 45 48.9
comp=Z,9.9nm,0.9s
WHTX Lake Whitney, 50.91 87 P **P 08 45 29.6 -1.4**
baz=316
DY2G Dye2 51.22 27 *i* P **P 08 45 31.3 -1.8**
XLT XiLinHaoTe 51.32 294⇑ *iP* **P 08 45 35.0 +1.0**
XLT pP pP 08 45 40.0 -1.4
XLT sP pwP 08 45 45.5 +0.8
XLT SS **SS 08 56 16.5 -10**
XLT pmax pmax
comp=Z,45nm,0.9s
XLT pmax pmax
comp=Z,110nm,5.4s
XLT LR LR
comp=Z,31nm,15.1s
XLT LR LR
comp=Z,280nm,12.7s
XLT LR LR
comp=Z,380nm,15.7s
FCAR Ozark Folk Cen 51.34 80 P **P 08 45 33.6 -0.5**
MIAR Mount Ida 51.42 82 P **P 08 45 34.1 -0.7**
baz=314
SCHQ Schefferville 51.99 47 P **P 08 45 39.0 +0.3**
comp=Z,9.4nm,0.9s,baz=299,slow=10,SNR=6.2
SCHQ LR LR 09 10 19.9
comp=Z,373nm,18.2s,baz=343,slow=39
comp=Z,9.4nm,0.9s
O48B Farmland 52.38 71 P **P 08 45 39.7 -2.2**
baz=312
SADO Sadowa 52.66 63 LR LR 09 09 10.3
comp=Z,211nm,18.3s,baz=339,slow=37
P49A Miami Univ. Ec 53.12 71 P **P 08 45 45.5 -1.8**
baz=313
ULN Ulaanbaatar 53.41 303 P **P 08 45 50.0 +0.5**
ULN Ulaanbaatar 53.41 303 *c iP* **P 08 45 50.0 +0.5**
ULN pmax pmax
comp=Z,25nm,1.0s
ULN Ulaanbaatar 53.41 303 P **P 08 45 49.9 +0.3**
ZAK Zakamensk 53.56 307 *eP* **P 08 45 48.8 -1.7**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
WVT Waverly 53.68 77 P **P 08 45 50.0 -1.5**
baz=314
WVT Waverly 53.68 77 P **P 08 45 51.0 -0.5**
WVT pP **pP 08 45 58.9 0.0**
WVT sP **sP 08 46 02.4 +0.4**
MOY Mondy 53.76 310 *eP* **P 08 45 53.0 +1.0**
SONM Songino Array 53.76 303 P **P 08 45 51.5 -0.5**
comp=Z,12nm,0.9s,baz=48,slow=7.1,SNR=41
SONM PcP **PcP 08 46 59.2 +1.4**
comp=Z,4.6nm,0.9s,baz=56,slow=1.4,SNR=6.2
SONM LR LR 09 09 26.5
comp=Z,156nm,20.2s,baz=40,slow=37
comp=Z,12nm,0.9s
SONM Songino Array 53.76 303 P **P 08 45 52.8 +0.7**
SONM IAmb IAmb 08 45 53.9
comp=Z,19nm,1.1s
SONM Songino Array 53.76 303 P **P 08 45 52.8 +0.7**
SONM pmax pmax
comp=Z,19nm,1.1s
BJI Beijing 53.85 290 P **P 08 45 53.3 +0.6**
BJI pmax pmax
comp=Z,13nm,0.8s
BJI LR LR
comp=Z,67nm,19.4s
BJI LR LR
comp=Z,160nm,19.4s
BJI LR LR
comp=Z,170nm,18.2s
R50A Paris 54.20 72 P **P 08 45 54.9 -0.3**
R50A IAmb IAmb 08 45 55.9
comp=Z,12nm,1.1s
IVI Ivigtut 54.57 33 P **P 08 45 58.6 +1.0**
S51A Beattyville 55.06 72 P **P 08 46 00.9 -0.6**
S51A IAmb IAmb 08 46 01.6
comp=Z,21nm,1.2s
HHC Hu-ho-hao-te 55.84 294 *eP* **P 08 46 08.3 +1.1**
HHC pmax pmax
comp=Z,48nm,1.1s
HHC pmax pmax
comp=Z,330nm,5.1s
HHC LR LR
comp=Z,410nm,13.3s
HHC LR LR
comp=Z,380nm,12.7s
HHC LR LR
comp=Z,590nm,13.3s
TIA Tai'an 55.98 286 P **P 08 46 08.0 -0.1**
TIA pmax pmax
comp=Z,7.0nm,0.8s
LRAL Lakeview Retre 56.35 79 P **P 08 46 09.1 -1.7**
baz=316
HNS HongShan 56.51 289 ⇑P **P 08 46 13.5 +1.6**
HNS pmax pmax
comp=Z,43nm,0.8s
HNS LR LR
comp=Z,200nm,14.9s
HNS LR LR
comp=Z,270nm,14.1s
HNS LR LR
comp=Z,290nm,15.5s
KEV Kevo 56.75 356 P **P 08 46 12.3 -0.7**
KEV pP **pP 08 46 22.4 +1.6**
ARA0 ARCESS Array S 57.03 356 *eP* **P 08 46 15.5 +0.4**
ARA0 IAmb IAmb 08 46 29.1
comp=Z,174nm,2.2s
ARCES ARCESS Array B 57.03 356 P **P 08 46 14.9 -0.2**
comp=Z,5.8nm,0.8s,baz=10,slow=7.8,SNR=14
ARCES LR LR 09 13 25.4
comp=Z,225nm,18.1s,baz=336,slow=39
comp=Z,5.8nm,0.8s
TRO Tromso 57.09 359 *eP* **P 08 46 16.1 +0.6**
JETT Jettan, Norway 57.15 358 *eP* **P 08 46 16.5 +0.5**
JETT IAmb IAmb 08 46 24.6
comp=Z,27nm,1.0s
BLA Blacksburg 57.16 71 P **P 08 46 13.9 -2.7**
baz=315
KTK1 Kautokeino 57.63 357 *eP* **P 08 46 19.7 +0.4**
NJ2 Nanjing 57.95 282 *eP* **P 08 46 21.0 -1.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
LVZ Lovozero 58.10 352 *deP* **P 08 46 22.9 +0.2**
LVZ pmax pmax
comp=Z,119nm,2.4s
LVZ Lovozero 58.10 352 P **P 08 46 22.6 -0.2**
KMSC Kings Mountain 58.12 73 P **P 08 46 22.1 -1.1**
baz=316
BORG Borgarnes 58.43 18 LR LR 09 13 39.5
comp=Z,163nm,20.3s,baz=334,slow=38
ZALV Zalesovo Beam 58.92 320 P **P 08 46 28.7 +0.1**
comp=Z,2.9nm,0.5s,baz=41,slow=6.7,SNR=20
ZALV LR LR 09 14 35.7
comp=Z,416nm,18.2s,baz=32,slow=39
comp=Z,2.9nm,0.5s
LYN LuoYang 59.82 288⇑ *iP* **P 08 46 36.3 +1.3**
LYN S **S 08 54 41.5 -3.1**
LYN SS **SS 08 58 43.8 +3.5**
LYN pmax pmax
comp=Z,20nm,0.7s
LYN LR LR
comp=Z,300nm,20.1s
LYN LR LR
comp=Z,190nm,14.2s
LYN LR LR
comp=Z,250nm,23.0s
NHSC New Hope 60.25 74 P **P 08 46 37.2 -0.8**
baz=317
DGZ Jazzator, Alta 61.13 316 *c iP* **P 08 46 44.8 +0.8**
DGZ pmax pmax
comp=Z,16nm,1.0s
XAN Xi'an 62.19 290 P **P 08 46 52.0 +0.8**
XAN pP sP 08 47 01.3 -0.5
XAN pmax pmax
comp=Z,15nm,1.0s
PRGR Permogore 62.87 345 *eP* **P 08 46 53.4 -1.8**
PRGR pmax pmax
comp=Z,18nm,0.7s
GTA Gaotai 63.11 300 *eP* **P 08 46 58.0 +0.6**
GTA pP pP 08 47 03.8 -1.2
GTA sP sP 08 47 06.5 -1.4
GTA pmax pmax
comp=Z,15nm,1.0s
GTA pmax pmax
comp=Z,170nm,6.7s
GTA LR LR
comp=Z,280nm,15.6s
GTA LR LR
comp=Z,360nm,16.0s
GTA LR LR
comp=Z,450nm,15.3s
LZH Lanzhou 63.46 295 *eP* **P 08 47 01.0 +1.2**
LZH pP pP 08 47 05.5 -2.0
LZH sP sP 08 47 09.0 -1.4
LZH pmax pmax
comp=Z,47nm,1.0s
LZH LR LR
comp=Z,310nm,14.4s
LZH LR LR
comp=Z,310nm,12.7s
LZH LR LR
comp=Z,410nm,14.4s
KURK Kurchatov 63.81 321 P **P 08 47 02.5 +0.8**
KURK Kurchatov 63.81 321 P **P 08 47 02.5 +0.8**
KURK pmax pmax
comp=Z,30nm,1.1s
KURK Kurchatov 63.81 321 P **P 08 47 02.2 +0.5**
KURK pP **sP 08 47 11.4 -0.7**
KURBB Kurchatov Arra 63.92 321 P **P 08 47 02.8 +0.4**
comp=Z,20nm,0.9s,baz=34,slow=6.7,SNR=73
comp=Z,20nm,0.9s
ZSN Zaisan 63.95 315 *eP* **P 08 47 02.4 -0.3**
ZSN Zaisan 63.95 315 *eP* **P 08 47 02.5 -0.3**
baz=316
SVE Sverdlovsk 64.25 335 *eP* **P 08 47 05.4 +1.0**
SVE pmax pmax
comp=Z,42nm,1.0s
KLMR Klimovskoe 64.47 348 *eP* **P 08 47 02.5 -3.3**
KLMR pmax pmax
comp=Z,41nm,1.5s
KLMR Klimovskoe 64.47 348 *eP* **P 08 47 02.6 -3.3**
KLMR AMP 08 47 06.9
comp=Z,41nm,1.5s
ENH Enshi 64.67 287 P **P 08 47 08.0 +0.3**
BVA0 Borovoye Array 64.75 327 *i* P **P 08 47 08.5 +0.7**
BVAR Borovoye Array 64.75 327 P **P 08 47 08.7 +0.8**
comp=Z,18nm,0.8s,baz=44,slow=6.6,SNR=83
BVAR LR LR 09 19 59.8
comp=Z,188nm,18.9s,baz=43,slow=40
comp=Z,18nm,0.8s
BRVK Borovoye 64.76 328 P **P 08 47 08.4 +0.6**
BRVK Borovoye 64.76 328 *c iP* **P 08 47 08.6 +0.7**
BRVK pmax pmax
comp=Z,37nm,0.9s
BRVK Borovoye 64.76 328 P **P 08 47 08.4 +0.6**
BRVK pP **pwP 08 47 17.7 -1.4**
FINES FINESS Array B 65.08 355 P **P 08 47 10.0 +0.2**
comp=Z,16nm,0.8s,baz=15,slow=8.1,SNR=24
FINES LR LR 09 17 28.2
comp=Z,175nm,18.1s,baz=9.5,slow=38
comp=Z,16nm,0.8s
FINES FINESS Array B 65.08 355 P **P 08 47 09.8 0.0**
FINES FINESS Array B 65.08 355 P **P 08 47 09.8 0.0**
KIRV Kirov 65.10 342 P **P 08 47 09.7 -0.2**
comp=Z,20nm,0.5s,baz=348,slow=3.7,SNR=7.2
KIRV LR LR 09 20 39.0
comp=Z,253nm,18.2s,baz=23,slow=41
comp=Z,20nm,0.5s
KIRV Kirov 65.10 342 *c iP* **P 08 47 10.1 +0.2**
ARU Arti 65.12 336 P **P 08 47 10.7 +0.6**
comp=Z,20nm,0.6s,baz=16,slow=5.7,SNR=22
comp=Z,20nm,0.6s
ARU Arti 65.12 336 P **P 08 47 10.3 +0.2**
ARU Arti 65.12 336 *c iP* **P 08 47 10.3 +0.2**
ARU 08 49 30.0
ARU S **S 08 55 54.8 +4.2**
ARU SS **SS 09 00 03.8 +1.8**
ARU pmax pmax
comp=Z,31nm,0.9s
ARU MLR MLR
comp=Z,314nm,18.0s
TAOE Nuku Hiva Isla 65.22 155 *e*LR LR 09 06 43.6
comp=Z,130nm,23.5s
MK31 Makanchi Array 65.54 317 P **P 08 47 13.0 -0.1**
MK31 IAmb IAmb 08 47 14.1
comp=Z,7.0nm,0.9s
MK31 Makanchi Array 65.54 317 P **P 08 47 13.0 -0.1**
MK31 pmax pmax
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 65.54 317 P **P 08 47 13.3 +0.2**
comp=Z,5.7nm,0.8s,baz=46,slow=6.1,SNR=42
MKAR LR LR 09 17 28.0
comp=Z,184nm,18.0s,baz=40,slow=38
comp=Z,5.7nm,0.8s
WMQ Urumqi 65.58 311 *eP* **P 08 47 14.5 +1.1**
WMQ PcP **PcP 08 47 46.5 +1.6**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ LR LR
comp=Z,420nm,19.5s
WMQ LR LR
comp=Z,210nm,19.5s
WMQ LR LR
comp=Z,99nm,23.3s
NB2 NORSAR Subarra 65.65 3 P **P 08 47 14.0 +0.5**
comp=Z,36nm,1.2s,baz=358,slow=6.5
NB2 NORSAR Subarra 65.65 3 P **P 08 47 14.0 +0.5**
baz=358,slow=6.5
NOA NORSAR Array B 65.65 3 P **P 08 47 14.4 +0.8**
comp=Z,10nm,0.9s,baz=357,slow=6.5,SNR=14
NOA LR LR 09 17 41.0
comp=Z,88nm,18.1s,baz=355,slow=38
comp=Z,10nm,0.9s
MAKZ Makanchi 65.66 317 P **P 08 47 13.1 -0.7**
MAKZ Makanchi 65.66 317 P **P 08 47 13.8 0.0**
BRZS Berezniki 66.56 324 *eP* **P 08 47 19.1 -0.5**
BRZS pmax pmax
comp=Z,7.0nm,0.8s
BRZS Berezniki 66.56 324 *eP* **P 08 47 19.1 -0.5**
comp=Z,7.2nm,0.8s,baz=324
HFS Hagfors 66.62 2 P **P 08 47 19.6 -0.1**
comp=Z,22nm,0.8s,baz=29,slow=3.4,SNR=41
comp=Z,22nm,0.8s
AFI Afiamalu 67.60 189 LR LR 09 12 11.3
comp=Z,52nm,18.6s,baz=356,slow=32
VSU Vasula 68.02 354⇑ *eP* **P 08 47 28.1 -0.5**
GOMU GeErMu 68.11 301 P **P 08 47 29.5 -0.5**
GOMU pP pP 08 47 34.0 -3.7
GOMU sP sP 08 47 35.5 -5.1
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU pmax pmax
comp=Z,60nm,6.0s
GOMU LR LR
comp=Z,270nm,15.1s
GOMU LR LR
comp=Z,250nm,13.9s
GOMU LR LR
comp=Z,180nm,15.6s
OTUK Ortayu 68.15 324 P **P 08 47 30.2 +0.5**
TDK Taldyqorghan 68.58 318 *eP* **P 08 47 31.8 -0.5**
TDK Taldyqorghan 68.58 318 *eP* **P 08 47 31.8 -0.5**
baz=318
GYA Guiyang 69.18 286⇓ *iP* **P 08 47 37.8 +1.3**
GYA pmax pmax
comp=Z,36nm,1.2s
PDGK Podgornoye 69.52 316 *i* P **P 08 47 38.8 +0.4**
PDGK pmax pmax
comp=Z,28nm,1.0s
SHLS Shalkode 69.67 316 *eP* **P 08 47 37.9 -1.4**
SHLS pmax pmax
comp=Z,24nm,1.6s
SHLS Shalkode 69.67 316 *eP* **P 08 47 37.9 -1.4**
comp=Z,24nm,1.6s,baz=316
KPKS Kokpek 69.73 317 *eP* **P 08 47 39.4 -0.2**
KPKS pmax pmax
comp=Z,11nm,0.9s
KPKS Kokpek 69.73 317 *eP* **P 08 47 39.5 -0.2**
comp=Z,11nm,0.9s,baz=317
SATY Saty 70.18 317 *eP* **P 08 47 41.5 -1.0**
SATY Saty 70.18 317 *eP* **P 08 47 41.5 -1.0**
baz=317
EKA Eskdalemuir Ar 70.23 12 LR LR 09 20 12.2
comp=Z,102nm,18.8s,baz=342,slow=37
ESK Eskdalemuir 70.24 12 P **P 08 47 43.0 +0.6**
ESK pP **pwP 08 47 52.4 -1.3**
BTLS Baital 70.24 321 *eP* **P 08 47 42.4 -0.2**
BTLS pmax pmax
comp=Z,8.0nm,0.6s
BTLS Baital 70.24 321 *eP* **P 08 47 42.4 -0.2**
comp=Z,7.8nm,0.6s,baz=321
KUU Kurty 70.32 319 *eP* **P 08 47 41.7 -1.4**
KUU Kurty 70.32 319 *eP* **P 08 47 41.7 -1.4**
baz=318
OBN Obninsk 70.44 348 *d iP* **P 08 47 43.9 +0.3**
OBN *e* 08 48 05.4
OBN *e* 08 50 18.9
OBN *e*PPP PPP 08 52 01.2
OBN pmax pmax
comp=Z,24nm,0.6s
OBN MLR MLR
comp=Z,188nm,18.0s
MDOK Medeo 70.65 318 *eP* **P 08 47 44.5 -0.8**
MDOK Medeo 70.65 318 *eP* **P 08 47 44.5 -0.8**
baz=318
PABE Paberze 71.12 356 P **P 08 47 47.6 -0.1**
AB31 Akbulak array 71.22 332 *i* P **P 08 47 49.3 +0.8**
ABKAR Akbulak array 71.22 332 P **P 08 47 49.1 +0.6**
ABKAR Akbulak array 71.22 332 P **P 08 47 48.9 +0.4**
BELG Belogornoye 71.28 341 P **P 08 47 49.4 +0.6**
comp=Z,54nm,0.8s,baz=284,slow=2.6,SNR=8.9
comp=Z,54nm,0.8s
BELG Belogornoye 71.28 341 *c eP* **P 08 47 49.3 +0.6**
BELG pmax pmax
comp=Z,10.0nm,0.8s
SGDS Sogindy 71.36 319 *eP* **P 08 47 49.0 -0.5**
SGDS Sogindy 71.36 319 *eP* **P 08 47 49.0 -0.5**
baz=319
TKM2 Tokmak 2 71.43 318 P **P 08 47 51.3 +1.2**
SNR=12
TKM2 Tokmak 2 71.43 318 *i* P **P 08 47 50.9 +0.7**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s
NACGM Naroch 71.56 354 *eP* **P 08 47 47.5 -3.0**
comp=Z,54nm,0.8s,baz=7.0
USP Ospenovka 71.57 319 P **P 08 47 52.1 +1.4**
SNR=12
BOOM Boomskoye usch 71.66 318 P **P 08 47 52.6 +1.1**
BOOM Boomskoye usch 71.66 318 P **P 08 47 52.6 +1.1**
BOOM pmax pmax
comp=Z,14nm,0.7s
CHMS Chumysh 71.70 319 P **P 08 47 54.1 +2.5**
SNR=7.1
PPT Papeete 71.83 166 LR LR 09 10 18.5
comp=Z,135nm,20.9s,baz=8.5,slow=28
PPT2 Papeete2 71.85 166 *e*LR LR 09 09 48.0
comp=Z,160nm,24.5s
PPT2 *e*LR LR 09 09 48.8
comp=Z,152nm,25.8s
MNK Minsk 71.89 353 *i* P **P 08 47 51.8 -0.6**
MNK *i* 08 50 31.1
MNK *i* PPP PPP 08 52 14.7
MNK *i* S **S 08 57 13.1 +2.0**
MNK *i* SS **SS 09 01 48.6 +2.2**
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=N,29nm,1.0s
MNK pmax pmax
comp=Z,45nm,0.8s
MNK MLR MLR
comp=E,26nm,14.0s
MNK MLR MLR
comp=Z,116nm,16.0s
MNK MLR MLR
comp=N,257nm,20.0s
MNK Minsk 71.89 353 *i* P **P 08 47 51.9 -0.6**
comp=E,4.0nm,1.0s
MNK *i* P **P 08 47 51.9 -0.6**
comp=N,29nm,1.0s
MNK *i* P **P 08 47 51.9 -0.6**
comp=Z,45nm,0.8s,baz=6.9
MNK *i* PP **PP 08 50 31.1 -0.3**
MNK *i* PPP PPP 08 52 14.8
MNK *i* S **S 08 57 13.2 +2.0**
MNK *i* SS **SS 09 01 48.6 +2.2**
MNK *i* SSS SSS 09 05 09.9
MNK *i* LQ LQ 09 14 31.0
MNK *i* LR LR 09 19 47.3
MNK *i* LRM MLR 09 21 51.3
comp=E,26nm,14.1s
MNK *i* LRM MLR 09 21 56.4
comp=Z,116nm,16.0s
MNK *i* LRM MLR 09 22 04.7
comp=N,257nm,20.4s
KBK Karagaybulak 71.91 319 P **P 08 47 54.1 +1.1**
SNR=8.9
PZH PanZhiHua 71.93 290 P **P 08 47 54.3 +1.0**
PZH pmax pmax
comp=N,8.0nm,1.2s
PZH pmax pmax
comp=N,100nm,4.2s
AAK Ala-Archa 72.10 319 P **P 08 47 55.5 +1.4**
SNR=12
AAK Ala-Archa 72.10 319 P **P 08 47 54.5 +0.3**
comp=N,9.9nm,0.6s,baz=140,slow=3.8,SNR=18
AAK LR LR 09 23 15.7
comp=N,267nm,18.7s,baz=29,slow=39
comp=N,9.9nm,0.6s
AAK Ala-Archa 72.10 319 P **P 08 47 55.1 +1.0**
AAK Ala-Archa 72.10 319 P **P 08 47 55.1 +1.0**
AAK pmax pmax
comp=Z,81nm,1.8s
AAK Ala-Archa 72.10 319 P **P 08 47 55.2 +1.0**
EKS2 Erkin-Say 72.36 319 P **P 08 47 57.2 +1.5**
SNR=13
UCH Uchtor 72.44 319 P **P 08 47 58.3 +1.7**
SNR=5.3
NRN Naryn 72.52 317 P **P 08 47 58.0 +1.2**
NRN IAmb IAmb 08 47 59.7

comp=Z,7.6nm,0.9s
NRN Naryn 72.52 317 P P 08 47 58.1 +1.2
NRN pmax pmax
comp=Z,8.0nm,0.9s
LPSR Galich'ya Gora 72.58 346 *eP* **P 08 47 56.2 -0.3**
LPSR pmax pmax
comp=Z,30nm,0.8s
MSVF Nonsavu 72.81 199 LR LR 09 12 22.6
comp=Z,73nm,21.9s,baz=27,slow=30
AML Almayashu 72.85 319 P **P 08 48 00.6 +1.7**
SNR=18
DAV Davao City (W) 73.16 259 LR LR 09 16 08.5
comp=Z,178nm,20.5s,baz=92,slow=32
KK31 Karatay Array 73.22 322 *i* P **P 08 48 01.1 +0.5**
KKAR Karatay Array 73.22 322 P **P 08 48 00.5 -0.1**
KKAR Karatay Array 73.22 322 P **P 08 48 00.5 -0.1**
VORR Voronezh 73.44 346 *eP* **P 08 48 01.8 +0.1**
VORR pmax pmax
comp=Z,40nm,0.3s
VRH Novokhopyorsk 73.50 344 *eP* **P 08 48 00.0 -2.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 73.89 346 *eP* **P 08 48 03.9 -0.4**
VSR pmax pmax
comp=Z,40nm,1.3s
KSH Kashi 74.15 316 P **P 08 48 10.8 +4.6**
KSH sP sP 08 48 17.5 +0.6
KSH pmax pmax
comp=Z,13nm,0.8s
RAR Rarotonga 74.54 177 LR LR 09 17 00.4
comp=Z,109nm,18.6s,baz=312,slow=33
BEL Belsk 74.90 357 *eP* **P 08 48 08.6 -1.6**
LSA Lhasa 75.12 300 P **P 08 48 13.2 +0.7**
LSA Lhasa 75.12 300 P **P 08 48 13.2 +0.7**
LSA pmax pmax
comp=Z,22nm,0.7s
CLL Collm 75.44 2 *i* P **P 08 48 13.8 +0.5**
CLL *i* 08 48 18.0
CLL pmax pmax
comp=Z,19nm,1.0s
CLL Collm 75.44 2 *i* P **P 08 48 13.8 +0.5**
comp=Z,19nm,1.0s
CLL *i* x x 08 48 18.0
AKASG Malin Array Be 75.56 352 P **P 08 48 13.8 -0.2**
comp=Z,18nm,0.7s,baz=10,slow=5.7,SNR=52
comp=Z,18nm,0.7s
AKBB Malin Array Si 75.56 352 P **P 08 48 14.0 0.0**
AKBB Malin Array Si 75.56 352 P **P 08 48 14.0 0.0**
AKBB pmax pmax
comp=Z,47nm,1.1s
BTK Batken 75.74 320 P **P 08 48 15.7 +0.4**
BTK IAmb IAmb 08 48 17.9
comp=Z,16nm,0.8s
BTK Batken 75.74 320 P **P 08 48 15.7 +0.4**
BTK pmax pmax
comp=Z,16nm,0.8s
BSTI Sart Tilman 75.79 7 *dP* **P 08 48 16.7 +1.4**
MEM Membach 75.80 7 *dP* **P 08 48 16.5 +1.2**
comp=Z,15nm,0.9s
BTNL Ternell 75.83 7 *dP* **P 08 48 17.1 +1.5**
comp=Z,15nm,1.0s
DRK Karamyk 75.86 319 P **P 08 48 17.1 +0.7**
BRG Berggiesshubel 75.90 2 *i* P **P 08 48 17.1 +1.2**
BRG pmax pmax
comp=Z,15nm,0.9s
BCLA Clavier 75.94 7 *dP* **P 08 48 16.0 -0.2**
comp=Z,11nm,0.9s
BGES Gesves 75.95 8 *dP* **P 08 48 16.8 +0.5**
comp=Z,8.8nm,1.1s
KSP Ksiaz 75.95 0 *eP* **P 08 48 17.0 +0.8**
BMRD Maredsous 76.01 8 *dP* **P 08 48 17.9 +1.3**
comp=Z,11nm,1.0s
BHOU Houvegnez 76.05 7 *dx* x 08 48 19.7
RCHB Rochefort 76.19 8 *dP* **P 08 48 17.8 +0.2**
comp=Z,14nm,0.9s
DOU Dourbes 76.20 8 *dP* **P 08 48 18.3 +0.6**
comp=Z,6.4nm,1.0s
CHVC Chvalec 76.21 0 *eP* **P 08 48 18.8 +1.0**
PVCC Panska Ves 76.25 1 *eP* **P 08 48 19.3 +1.3**
PVCC Panska Ves 76.25 1 *eP* **P 08 48 19.3 +1.3**
DPC Dobruska-Polom 76.45 0 *eP* **P 08 48 20.2 +1.1**
DPC Dobruska-Polom 76.45 0 *eP* **P 08 48 20.2 +1.1**
NKC Novy Kostel 76.50 3 *eP* **P 08 48 20.8 +1.4**
NKC Novy Kostel 76.50 3 *eP* **P 08 48 20.8 +1.4**
OJC Ojcow 76.55 358 *eP* **P 08 48 18.5 -1.2**
KRLC Kraliky 76.72 360 *eP* **P 08 48 21.6 +0.9**
KRLC Kraliky 76.72 360 *eP* **P 08 48 21.6 +0.9**
WLF Walferdange 76.75 7 *dP* **P 08 48 22.2 +1.4**
LVV L'vov 76.79 355 *eP* **P 08 48 21.4 +0.4**
PRU Pruhonice 76.79 1 *eP* **P 08 48 21.9 +0.9**
PRU Pruhonice 76.79 1 *eP* **P 08 48 21.9 +0.9**
GAR Garm 76.85 320 P **P 08 48 22.0 +0.3**
GOPC GO Pecny, Ondr 76.87 1 *eP* **P 08 48 22.4 +0.9**
GOPC GO Pecny, Ondr 76.87 1 *eP* **P 08 48 22.4 +0.9**
OKC Ostrava-Krasne 76.95 359 *eP* **P 08 48 23.2 +1.3**
OKC Ostrava-Krasne 76.95 359 *eP* **P 08 48 23.2 +1.3**
MORC Moravsky Berou 77.02 359 ⇑P **P 08 48 22.9 +0.5**
MORC Moravsky Berou 77.02 359 P **P 08 48 23.4 +1.0**
MORC IAmb IAmb 08 48 24.5
comp=Z,8.6nm,0.8s
MORC Moravsky Berou 77.02 359 P **P 08 48 23.4 +1.0**
MORC pmax pmax
comp=Z,9.0nm,0.8s
MORC Moravsky Berou 77.02 359 *eP* **P 08 48 23.1 +0.7**
STHS Stebnicka Huta 77.31 357 *eP* **P 08 48 24.9 +0.9**
STHS pmax pmax
comp=Z,20nm,0.8s
MAUC Maruska 77.43 359 *eP* **P 08 48 26.3 +1.6**
VRAC Vranov 77.49 0 ⇑P **P 08 48 26.5 +1.5**
VRAC Vranov 77.49 0 P **P 08 48 26.3 +1.3**
comp=Z,14nm,0.9s,baz=342,slow=5.0,SNR=11
comp=Z,14nm,0.9s
VRAC Vranov 77.49 0 *eP* **P 08 48 26.1 +1.1**
TBI Tubuai 77.54 167 *e*LR LR 09 12 25.7
comp=Z,632nm,28.2s
TBI *e*LR LR 09 12 26.0
comp=Z,2μm,25.8s
CHGR Chuyangaron 77.59 321 P **P 08 48 25.9 +0.1**
CHGR Chuyangaron 77.59 321 P **P 08 48 25.9 +0.1**
CHGR pmax pmax
comp=Z,81nm,0.8s
KHC Kasperske Hory 77.63 2 P **P 08 48 26.6 +0.8**
KHC IAmb IAmb 08 48 28.4
comp=Z,25nm,1.2s
KHC Kasperske Hory 77.63 2 P **P 08 48 26.7 +0.8**
KHC pmax pmax
comp=Z,25nm,1.2s
KHC Kasperske Hory 77.63 2 *eP* **P 08 48 27.1 +1.3**
KRUC Moravsky 77.74 0 *eP* **P 08 48 27.3 +1.0**
KOLS Kolonicke sedl 77.76 356 *eP* **P 08 48 28.4 +1.9**
KOLS pmax pmax
comp=Z,15nm,1.0s
CRVS Cervenica-Dubn 77.82 357 *eP* **P 08 48 28.7 +1.9**
CRVS pmax pmax
comp=Z,25nm,1.3s
GERES GERESS Array B 77.92 2 P **P 08 48 28.8 +1.3**
comp=Z,4.8nm,0.7s,baz=6.9,slow=4.4,SNR=22
comp=Z,4.8nm,0.7s
GERES GERESS Array B 77.92 2 P **P 08 48 27.6 0.0**
JAVC Velka Javorina 77.94 359 *eP* **P 08 48 29.6 +2.1**
CKRC Cesky Krumlov 77.96 2 *eP* **P 08 48 28.5 +0.9**
UZH Uzhgorod 78.06 356 *i* P **P 08 48 29.3 +1.2**
UZH *e* 08 48 36.6
ECH Echery 78.26 6 P **P 08 48 29.4 +0.1**
ECH IAmb IAmb 08 48 31.3
comp=Z,12nm,0.8s
ECH Echery 78.26 6 P **P 08 48 29.4 +0.1**
ECH pmax pmax
comp=Z,12nm,0.8s
SMOL Smolenice 78.28 359 *eP* **P 08 48 31.4 +2.0**
SMOL pmax pmax
comp=Z,10.0nm,1.1s
VYHS Vyhne 78.29 359 *eP* **P 08 48 31.0 +1.6**
VYHS pmax pmax
comp=Z,25nm,1.2s
MODS Modra-Piesok 78.42 360 *eP* **P 08 48 32.0 +1.8**
MODS pmax pmax
comp=Z,50nm,1.2s
TRPA Tarpa 78.55 356 ⇑P **P 08 48 32.2 +1.4**
ZST Bratislava 78.60 360 *eP* **P 08 48 32.7 +1.6**
ZST pmax pmax
comp=Z,37nm,0.8s
CONA Conrad Observa 78.87 1 *eP* **P 08 48 34.3 +1.6**
comp=Z,13nm,0.8s,SNR=6.1

BUR01 Bucovina Ar. S 78.92 354 ⇑P **P 08 48 34.1 +1.0**
BURAR Bucovina Array 78.92 354 P **P 08 48 34.2 +1.1**
BURAR IAmb IAmb 08 48 35.3
comp=Z,12nm,0.9s
MOA Molln 78.93 2 *i* P **P 08 48 37.6 +4.6**
comp=Z,12nm,1.3s
BIOA Bad Ischl, Aus 79.08 2 *i* P P 08 48 39.7 +5.9
comp=Z,2.3nm,0.4s
RONA Rosalia, Austr 79.10 0 *i* P **P 08 48 35.5 +1.6**
comp=Z,6.9nm,0.8s
MFF Saint Martin d 79.17 12 *eP* **P 08 48 35.2 +0.9**
MFF pmax pmax
comp=Z,22nm,1.2s
RETA Reutte 79.19 4 *i* P **P 08 48 35.4 +0.9**
comp=Z,6.9nm,0.8s
MOTA Moosalm 79.34 4 *i* P **P 08 48 36.6 +1.1**
comp=Z,25nm,1.0s,SNR=6.5
WATA Walderalm 79.37 4 *i* P **P 08 48 37.1 +1.5**
comp=Z,14nm,0.7s
WTTA Wattenberg 79.44 3 *i* P **P 08 48 37.5 +1.5**
comp=Z,18nm,0.7s,SNR=5.3
SQTA Sankt Quirin 79.47 4 *i* P **P 08 48 37.7 +1.7**
comp=Z,26nm,0.9s,SNR=6.1
ARCR ARCALIA 79.50 355 ⇑P **P 08 48 37.6 +1.5**
ARSA Arzberg 79.55 1 *i* P **P 08 48 38.1 +1.7**
comp=Z,12nm,0.9s
FETA Feichten 79.65 4 *i* P **P 08 48 38.7 +1.6**
comp=Z,21nm,0.9s,SNR=7.0
KBA Koelnbreinsper 79.68 2 *i* P **P 08 48 39.2 +1.9**
comp=Z,24nm,0.8s,SNR=8.5
DZM Mont Dzumac 79.75 208 *e*LR LR 09 13 27.5
comp=Z,134nm,21.9s
DZM Mont Dzumac 79.75 208 LR LR 09 20 08.6
comp=Z,85nm,18.6s,baz=20,slow=33
SJG San Juan 79.79 74 LR LR 09 23 32.1
comp=Z,59nm,20.2s,baz=322,slow=35
CMAR Chiang Mai Arr 79.84 287 P **P 08 48 39.6 +1.3**
comp=Z,18nm,1.1s,baz=17,slow=5.4,SNR=46
CMAR LR LR 09 28 19.3
comp=Z,64nm,18.3s,baz=40,slow=39
comp=Z,18nm,1.1s
CMAR Chiang Mai Arr 79.84 287 P **P 08 48 39.4 +1.0**
DAVOX Davos/Dischmat 79.85 5 P **P 08 48 40.0 +1.7**
comp=Z,8.5nm,0.7s,baz=346,slow=6.5,SNR=15
comp=Z,8.5nm,0.7s
DAVOX Davos/Dischmat 79.85 5 P **P 08 48 40.0 +1.7**
DRGR 79.88 356 ⇑P **P 08 48 39.1 +0.8**
CJR Cluj-Napoca 79.91 355 ⇑P **P 08 48 40.3 +1.9**
ABTA Abfaltersbach 79.99 3 *i* P **P 08 48 39.2 +0.4**
comp=Z,16nm,1.0s
SOKA Soboth 80.11 1 *i* P **P 08 48 41.0 +1.5**
comp=Z,20nm,0.9s,SNR=7.4
MYKA Terra Mystica 80.14 2 *i* P **P 08 48 40.4 +0.8**
comp=Z,9.5nm,0.9s
OBKA Obir 80.27 1 *i* P **P 08 48 42.0 +1.6**
comp=Z,31nm,0.8s,SNR=7.6
KIV Kislovodsk 80.32 341 ⇑P **P 08 48 41.4 +0.7**
KIV Kislovodsk 80.32 341 *eP* **P 08 48 42.1 +1.4**
KIV pmax pmax
comp=Z,26nm,1.1s
ANN Anapa 80.41 345 *eP* **P 08 48 37.9 -3.1**
ANN *e**PP **PcP 08 48 42.5 -5.5**
ANN *eS* **S 08 58 43.6 -1.4**
ANN *e*SS **SS 09 03 52.1 -3.2**
ANN pmax pmax
comp=Z,53nm,1.2s
SIRR Siria 80.44 357 ⇓P **P 08 48 43.0 +1.8**
KBZ Khabaz 80.50 341 P **P 08 48 43.5 +2.0**
comp=Z,14nm,0.9s,baz=331,slow=4.0,SNR=17
KBZ LR LR 09 30 20.1
comp=Z,144nm,18.1s,baz=17,slow=40
comp=Z,14nm,0.9s
KBZ Khabaz 80.50 341 *c i* P **P 08 48 42.9 +1.4**
KBZ pmax pmax
comp=Z,17nm,1.0s
BRDH Bariadhala 80.52 295 LR LR 09 26 09.5
comp=Z,60nm,19.8s,baz=82,slow=37
DOPR Dopca 80.56 354 ⇑P **P 08 48 42.7 +0.9**
VRI Vrincioaia 80.56 353 ⇑P **P 08 48 43.3 +1.4**
MORH Mrgy, Hungar 80.57 359 ⇑P **P 08 48 42.7 +0.8**
PLOR Plostina 80.58 353 ⇑P **P 08 48 43.7 +1.7**
NCK Nalchik 80.59 340 ⇑ *eP* **P 08 48 44.2 +2.1**
NCK pmax pmax
comp=Z,44nm,0.4s
LPL La Plagne 80.92 7 *eP* **P 08 48 45.7 +1.6**
LPL pmax pmax
comp=Z,11nm,1.2s
MLR Muntele Rosu 80.99 353 ⇑P **P 08 48 46.4 +2.0**
MLR Muntele Rosu 80.99 353 P **P 08 48 46.0 +1.6**
comp=Z,3.9nm,0.7s,baz=36,slow=2.3,SNR=5.0
MLR LR LR 09 27 55.0
comp=Z,176nm,18.2s,baz=6.5,slow=38
comp=Z,3.9nm,0.7s
MLR Muntele Rosu 80.99 353 P **P 08 48 46.0 +1.6**
BZS Buzias 81.09 357 ⇑P **P 08 48 45.0 +0.3**
VOIR 81.11 354 ⇑P **P 08 48 45.0 +0.2**
ARR Arges 81.20 354 ⇑P **P 08 48 46.7 +1.3**
ZEI Tsey 81.20 340 *eP* **P 08 48 46.2 +0.6**
ZEI pmax pmax
comp=Z,13nm,0.9s
SOC Sochi 81.22 343 *eP* **P 08 48 45.7 +0.3**
SOC *e* 08 51 47.6
SOC *e*PPP PPP 08 53 41.2
SOC *eS* **S 08 58 57.6 +4.0**
SOC *e*SS **SS 09 04 14.4 +6.8**
SOC pmax pmax
comp=Z,31nm,0.9s
KBL Kabul 81.23 319 P **P 08 48 45.6 -0.3**
KBL IAmb IAmb 08 48 47.8
comp=Z,17nm,1.1s
KBL Kabul 81.23 319 P **P 08 48 45.6 -0.3**
KBL pmax pmax
comp=Z,17nm,1.1s
GZR Gura Zlata 81.27 356 ⇑P **P 08 48 46.6 +0.9**
AKT Akhty 81.62 337 *eP* **P 08 48 48.9 +1.2**
AKT *e* 08 48 54.2
AKT pmax pmax
comp=Z,43nm,0.9s
ZKTA Zakatala 81.72 338 P **P 08 48 49.6 +1.5**
HERR Herculane 81.80 356 ⇑P **P 08 48 49.0 +0.5**
MDVR Moldovita 81.92 356 ⇑P **P 08 48 49.8 +0.6**
GEYT Alibeck 82.08 328 P **P 08 48 51.2 +1.1**
comp=Z,14nm,0.9s,baz=319,slow=4.3,SNR=22
comp=Z,14nm,0.9s
GEYT Alibeck 82.08 328 P **P 08 48 51.2 +1.1**
GEYT IAmb IAmb 08 48 52.4
comp=Z,14nm,0.9s
GYA0 ALIBECK ARRAY 82.08 328 P **P 08 48 51.0 +0.9**
GYA0B ALIBECK ARRAY 82.08 328 P **P 08 48 51.5 +1.4**
GYA0B IAmb IAmb 08 48 52.8
comp=Z,12nm,0.8s
DIVS Divibare 82.66 358 P **P 08 48 53.6 +0.5**
DIVS IAmb IAmb 08 48 55.1
comp=Z,16nm,1.0s
GANJ Ganja 82.73 338 P **P 08 48 54.8 +1.3**
BLKB Belogradchik 83.04 356 ⇑P **P 08 48 55.4 +0.4**
GNI Garni 83.56 339 LR LR 09 32 13.3
comp=Z,128nm,18.4s,baz=347,slow=40
GNI Garni 83.56 339 ⇓ *eP* **P 08 48 59.6 +1.7**
GNI pmax pmax
comp=Z,15nm,0.9s
DIKM Dikmen 83.81 346 ⇑P **P 08 49 00.4 +1.5**
HRA Herat 83.92 324 P **P 08 48 60.0 +0.1**
HRA IAmb IAmb 08 49 01.6
comp=Z,9.1nm,1.0s
VTS Vitosha 84.02 355 ⇑P **P 08 49 00.8 +0.6**
KOPT Kop Dagi 84.54 342 P **P 08 49 04.2 +1.2**
KOPT IAmb IAmb 08 49 10.1
comp=Z,11nm,0.9s
CTA Charters Tower 85.24 227 P **P 08 49 06.8 +0.6**
ESDC Sonseca Array 85.42 16 P **P 08 49 08.7 +1.4**
comp=Z,2.6nm,0.9s,baz=353,slow=4.6,SNR=8.7
ESDC LR LR 09 30 51.8
comp=Z,103nm,18.2s,baz=322,slow=38
comp=Z,2.6nm,0.9s
BR131 Keskin Array S 85.92 347 P **P 08 49 10.6 +0.8**
BR131 Keskin Array S 85.92 347 P **P 08 49 10.6 +0.8**
BR131 pmax pmax
comp=Z,21nm,1.1s
BRTR Keskin Array B 85.92 347 P **P 08 49 10.0 +0.2**
comp=Z,9.9nm,0.9s,baz=35,slow=2.8,SNR=22
BRTR LR LR 09 31 39.1
comp=Z,116nm,19.5s,baz=11,slow=38
comp=Z,9.9nm,0.9s
BRTR Keskin Array B 85.92 347 P **P 08 49 10.8 +1.0**
BRTR Keskin Array B 85.92 347 P **P 08 49 10.8 +1.0**

WRA Warramunga Arr 90.68 236 P **P 08 49 31.4 -1.0**
comp=Z,1.3nm,1.2s,baz=39,slow=6.1,SNR=4.4
comp=Z,1.3nm,1.2s
IDI Anoyia 91.22 353 LR LR 09 34 49.4
comp=Z,29nm,20.2s,baz=319,slow=38
PSI Prapat 92.38 278 LR LR 09 35 17.9
comp=Z,106nm,18.3s,baz=66,slow=38
ASAR Alice Springs 94.03 235 P **P 08 49 47.1 -0.7**
comp=Z,1.8nm,1.0s,baz=53,slow=3.9,SNR=9.6
ASAR LR LR 09 25 29.0
comp=Z,62nm,21.9s,baz=356,slow=31
comp=Z,1.8nm,1.0s
WSAR Wadi Sarin 95.34 322 P **P 08 49 53.1 -0.9**
comp=Z,7.8nm,1.0s,baz=84,slow=2.9,SNR=4.0
WSAR LR LR 09 39 42.8
comp=Z,74nm,18.4s,baz=67,slow=40
comp=Z,7.8nm,1.0s
EIL Elat 95.60 344 LR LR 09 37 41.0
comp=Z,60nm,18.4s,baz=80,slow=38
MDP Montagnes des 97.98 70 LR LR 09 33 42.7
comp=Z,87nm,21.8s,baz=1.5,slow=35
H03N2 Juan Fernandez 113.04 115 T T 10 58 32.2
baz=322,slow=78,SNR=22
H03N1 Juan Fernandez 113.06 115 T T 10 58 33.3
baz=322,slow=78,SNR=23
H03N3 Juan Fernandez 113.06 115 T T 10 58 32.6
baz=322,slow=78,SNR=22

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*IDC **28** 08:37:53.4±0.8, 7.°05S×83.°12E, h0km, mb4.3/23, mbtmp4.3/24, ML4.5/1, MS3.5/9, Error ellipse: s-maj=28.7km s-min=14.7km az=38.0*
*NEIC **28** 08:37:56.3±1.4, 6.°95S±0.°10×83.°18E±0.°07, h10km±1km, mb4.8/24, Error ellipse: s-maj=17.1km s-min=11.3km az=158.0*

ISC 28 08:37:55.0±0.5, 7.°00S±0.°09×83.°09E±0.°06, h10km, n66, σ1§14/58, mb4.5/30, MS3.6/8, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**10.56**	**267**	Pn	**Pn**	**08 40 28.4**	**+1.9**
DGAR				Sn	**Sn**	**08 42 19.1**	**-5.8**
KAAM	**Kaadhehdhoo**	**12.52**	**306**	Pn	**Pn**	**08 40 52.3**	**-1.1**
PALK	**Pallekele**	**14.38**	**350**	Pn	**Pn**	**08 41 18.2**	**-0.6**
	2.3nm,0.3s,baz=269,slow=13,SNR=8.3						
PALK				Sn	Sn	08 43 46.7	-12
	2.8nm,0.3s,baz=171,slow=22,SNR=8.7						
PALK				LR	LR	08 45 57.9	
	comp=Z,208nm,19.7s,baz=261,slow=34						
	8.8nm,0.4s						
HMDM	**Hanimaadhoo**	**16.88**	**324**	P	**P**	**08 41 53.6**	**+0.1**
HMDM				IAmb	IAmb	08 41 56.1	
	comp=Z,60nm,0.8s						
MYKOM	**Kota Tinggi**	**22.49**	**68**	P	**P**	**08 42 53.7**	**-1.1**
LEM	**Lembang**	**24.35**	**91**	LR	LR	08 51 06.8	
	comp=Z,177nm,19.2s,baz=203,slow=33						
KSM	**Kuching**	**28.44**	**74**	P	**P**	**08 43 48.3**	**-2.0**
KSM				IAmb	IAmb	08 44 05.4	
	comp=Z,15nm,1.3s						
CMAR	**Chiang Mai Arr**	**29.75**	**32**	P	**P**	**08 44 02.9**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=211,slow=10,SNR=1.3						
CMAR				LR	LR	08 55 58.1	
	comp=Z,49nm,18.9s,baz=180,slow=36						
	comp=Z,0.9nm,0.3s						
CHTO	**Chiang Mai**	**30.04**	**31**	P	**P**	**08 44 04.3**	**-0.1**
BRDH	**Bariadhala**	**30.66**	**16**	LR	LR	08 58 19.1	
	comp=Z,114nm,18.4s,baz=90,slow=40						
JAGI	**Jajag, Banyuwa**	**30.81**	**95**	P	**P**	**08 44 10.3**	**-1.0**
SHL	**Shillong**	**33.49**	**14**	P	**P**	**08 44 34.6**	**-0.2**
WSAR	**Wadi Sarin**	**38.41**	**322**	LR	LR	08 59 07.7	
	comp=Z,43nm,18.4s,baz=168,slow=33						
KIBK	**Kibwezi**	**45.11**	**274**	P	**P**	**08 46 13.6**	**+1.5**
GAR	**Garm**	**47.28**	**346**	P	**P**	**08 46 29.7**	**+0.9**
GAR				IAmb	IAmb	08 46 41.5	
	comp=Z,10nm,0.9s						
XAN	**Xi'an**	**47.59**	**29**	P	**P**	**08 46 31.0**	**-0.2**
XAN				pP	pwP	08 46 42.0	+2.7
RAYN	**Ar Rayn**	**47.63**	**311**	P	**P**	**08 46 32.3**	**+0.7**
AAK	**Ala-Archa**	**50.02**	**352**	P	**P**	**08 46 51.8**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=199,slow=9.4,SNR=3.7						
	comp=Z,0.6nm,0.3s						
GEYT	**Alibeck**	**50.40**	**334**	P	**P**	**08 46 54.3**	**+1.6**
	comp=Z,2.6nm,0.8s,baz=183,slow=8.8,SNR=6.5						
	comp=Z,2.6nm,0.8s						
KK31	**Karatay Array**	**51.16**	**348**	P	**P**	**08 46 58.8**	**+0.5**
KK31				IAmb	IAmb	08 48 02.6	
	comp=Z,8.2nm,0.7s						
KKAR	**Karatay Array**	**51.16**	**348**	P	**P**	**08 46 59.0**	**+0.7**
WRA	**Warramunga Arr**	**51.28**	**110**	P	**P**	**08 46 59.9**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=286,slow=7.9,SNR=21						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**51.28**	**110**	P	**P**	**08 47 00.1**	**+0.5**
WB2	**Warramunga Arr**	**51.29**	**110**	P	**P**	**08 46 59.6**	**0.0**
ASAR	**Alice Springs**	**51.44**	**115**	P	**P**	**08 47 01.2**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=279,slow=7.2,SNR=9.1						
	comp=Z,1.0nm,0.9s						
LSZ	**Lusaka**	**54.37**	**256**	LR	LR	09 07 03.1	
	comp=Z,22nm,21.1s,baz=166,slow=32						
BBOO	**Buckleboo**	**55.34**	**125**	P	**P**	**08 47 29.3**	**0.0**
KURBB	**Kurchatov Arra**	**57.53**	**357**	P	**P**	**08 47 44.4**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=168,slow=6.7,SNR=7.0						
	comp=Z,3.2nm,0.8s						
KURK	**Kurchatov**	**57.61**	**357**	P	**P**	**08 47 46.0**	**+0.9**
KURK				IAmb	IAmb	08 47 58.4	
	comp=Z,9.6nm,1.1s						
STKA	**Stephens Creek**	**59.68**	**123**	P	**P**	**08 47 59.1**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=216,slow=5.9,SNR=6.1						
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**59.68**	**123**	P	**P**	**08 47 59.9**	**-0.1**
MMAI	**Mount Meron Ar**	**60.28**	**314**	P	**P**	**08 48 05.1**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=108,slow=9.3						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**60.74**	**1**	P	**P**	**08 48 07.3**	**+0.7**
	comp=Z,5.2nm,0.7s,baz=199,slow=4.1,SNR=6.0						
	comp=Z,5.2nm,0.7s						
ZALV	**Zalesovo Beam**	**60.74**	**1**	P	**P**	**08 48 06.7**	**0.0**
KSRS	**Korea Array**	**60.87**	**40**	P	**P**	**08 48 07.1**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=241,slow=5.1,SNR=4.6						
	comp=Z,2.5nm,0.8s						
ONI	**Oni**	**61.13**	**327**	P	**P**	**08 48 09.3**	**-0.3**
ONI				IAmb	IAmb	08 49 16.3	
	comp=Z,6.1nm,0.9s						
KBZ	**Khabaz**	**62.21**	**328**	P	**P**	**08 48 17.2**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=145,slow=6.0,SNR=4.3						
	comp=Z,2.1nm,0.7s						
CTA	**Charters Tower**	**62.45**	**109**	P	**P**	**08 48 18.3**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=280,slow=9.1,SNR=3.9						
	comp=Z,2.7nm,0.8s						
CTAO	**Charters Tower**	**62.45**	**109**	P	**P**	**08 48 19.3**	**+0.3**
PMG	**Port Moresby**	**63.39**	**97**	LR	LR	09 19 37.0	
	comp=Z,70nm,19.0s,baz=68,slow=40						
BRTR	**Keskin Array B**	**65.13**	**320**	P	**P**	**08 48 36.0**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=157,slow=6.7,SNR=4.3						
	comp=Z,1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**67.34**	**46**	P	**P**	**08 48 50.2**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=202,slow=6.1,SNR=2.5						
	comp=Z,1.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**67.35**	**36**	P	**P**	**08 48 50.2**	**-0.1**
KLR	**Kul'dur**	**70.23**	**32**	P	**P**	**08 49 07.8**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=202,slow=3.2,SNR=4.8						
	comp=Z,2.6nm,0.6s						
OBN	**Obninsk**	**72.94**	**334**	LR	LR	09 24 01.4	
	comp=Z,49nm,18.6s,baz=318,slow=38						
MLR	**Muntele Rosu**	**72.98**	**322**	P	**P**	**08 49 24.1**	**-1.0**
	comp=Z,4.4nm,0.6s,baz=152,slow=13,SNR=3.2						
	comp=Z,4.4nm,0.6s						
FINES	**FINESS Array B**	**81.17**	**336**	P	**P**	**08 50 11.2**	**+0.7**
	comp=Z,4.9nm,0.6s,baz=116,slow=5.0,SNR=12						
	comp=Z,4.9nm,0.6s						
QSPA	**South Pole Qui**	**83.01**	**180**	LR	LR	09 23 30.9	
	comp=Z,40nm,19.6s,baz=336,slow=33						
QSPA	**South Pole Qui**	**83.01**	**180**	P	**P**	**08 50 20.4**	**0.0**
QSPA				IAmb	IAmb	08 50 33.6	
	comp=Z,4.6nm,1.0s						
CLL	**Collm**	**83.23**	**324**	*eP*	**P**	**08 50 23.0**	**+1.4**
TORD	**Torodi Ar. Bea**	**83.26**	**284**	P	**P**	**08 50 22.4**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=102,slow=4.6,SNR=5.2						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**83.26**	**284**	P	**P**	**08 50 23.3**	**+0.8**
TORD				IAmb	IAmb	08 52 38.6	
	comp=Z,5.8nm,1.7s						
TIXI	**Tiksi**	**84.01**	**13**	P	**P**	**08 50 24.2**	**-1.0**
	comp=Z,6.5nm,0.8s,baz=90,slow=23,SNR=12						
	comp=Z,6.5nm,0.8s						
TIXI	**Tiksi**	**84.01**	**13**	P	**P**	**08 50 23.9**	**-1.3**
TIXI				IAmb	IAmb	08 50 26.0	
	comp=Z,7.9nm,0.8s						

SENIN	**Lac Senin/Sane**	**85.33 318**	P	**P**	**08 50 32.7**	**0.0**
SENIN			IAmb	IAmb	08 53 35.9	
	comp=Z,7.4nm,0.8s					
ARCES	**ARCESS Array B**	**85.77 343**	P	**P**	**08 50 34.6**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=132,slow=1.8,SNR=6.0					
	comp=Z,5.2nm,0.9s					
HFS	**Hagfors**	**85.99 332**	P	**P**	**08 50 35.7**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=276,slow=2.8,SNR=5.3					
	comp=Z,3.2nm,0.7s					
SEY	**Seymchan**	**86.97 25**	P	**P**	**08 50 40.3**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=243,slow=5.6,SNR=8.7					
	comp=Z,3.0nm,0.6s					
ESDC	**Sonseca Array**	**92.16 310**	P	**P**	**08 51 06.1**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=66,slow=3.2,SNR=4.2					
	comp=Z,1.0nm,0.7s					
PDAR	**Pinedale Array**	**142.67 15**	PKhKP	PKPpre	08 57 23.8	
	comp=Z,0.2nm,0.5s,baz=151,slow=2.1,SNR=2.5					
PDAR			PKP	**PKPdf**	**08 57 28.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=166,slow=0.6,SNR=4.2					
NVAR	**Mina Array Bea**	**143.22 29**	PKP	PKPbc	08 57 27.4	+0.3
	comp=Z,0.2nm,0.5s,baz=313,slow=3.1,SNR=2.4					
LCH	**Last Change Ra**	**144.48 29**		**PKPab**	**08 57 30.8**	**+0.2**
R11A	**Troy Canyon, C**	**144.51 26**		PKPbc	08 57 31.4	+0.4
P40A	**Paris**	**147.32 353**		**PKPdf**	**08 57 36.3**	**-0.6**
CLTN	**Cedars of Leba**	**149.47 343**		**PKPdf**	**08 57 40.0**	**-0.5**
U38A	**Gravette**	**150.61 356**		**PKPdf**	**08 57 42.8**	**+0.4**

ROM 28 08:46:31.9±0.1, 42°.879N±0°.002×13°.029E±0°.005, h10km, ML1.8/3, 2D, Error ellipse: s-maj=0.4km s-min=0.2km az=282.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.01**	**328**	P	Pg	08 46 34.2	+0.3
T1216				S	Sg	08 46 35.4	+0.2
NRCA	**Norcia**	**0.08**	**126**	P	Pg	08 46 34.8	+0.4
NRCA				S	Sg	08 46 36.5	+0.4
NRCA				AML	AML		
	comp=E,863μm,0.7s						
NRCA				AML	AML		
	comp=N,1455μm,0.2s						
NRCA				AML	AML		
	comp=N,1640μm,0.5s						
NRCA				AML	AML		
	comp=E,1450μm,1.0s						
FEMA	**Monte Fema**	**0.08**	**11**	P	Pg	08 46 34.9	+0.4
FEMA				S	Sg	08 46 36.7	+0.4
T1215	**Vallo di Nera,**	**0.14**	**237**	P	Pg	08 46 35.8	+0.6
T1215				S	Sg	08 46 38.3	+0.8
T1215				AML	AML		
	comp=E,552μm,0.1s						
T1215				AML	AML		
	comp=N,558μm,0.1s						
T1215				AML	AML		
	comp=E,552μm,0.1s						
T1215				AML	AML		
	comp=N,558μm,0.1s						
CESI	**CESI - Serrava**	**0.15**	**324**	P	Pg	08 46 36.0	+0.6
CESI				S	Sg	08 46 38.8	+0.9
CESI				AML	AML		
	comp=E,238μm,0.2s						
CESI				AML	AML		
	comp=N,346μm,0.3s						
CESI				AML	AML		
	comp=N,346μm,0.3s						
CESI				AML	AML		
	comp=E,242μm,0.4s						
FDMO	**Fiordimonte**	**0.16**	**15**	P	Pg	08 46 36.1	+0.5
FDMO				S	Sg	08 46 38.9	+0.9
T1217	**Poggiodomo (PG**	**0.18**	**203**	P	Pg	08 46 36.5	+0.7
T1217				S	Sg	08 46 39.7	+1.1
LNSS	**Leonessa**	**0.28**	**178**	P	Pg	08 46 38.2	+0.7
LNSS				S	Sb	08 46 42.6	-1.2
T1241	**Roccafluvione,**	**0.30**	**94**	⇓P	Pg	08 46 38.3	+0.4
T1211	**Morro Reatino**	**0.37**	**200**	P	Pg	08 46 39.5	+0.2
T1211				S	Sb	08 46 45.8	-0.7
EL6	**Elcito**	**0.45**	**7**	P	Pb	08 46 41.6	-0.5
TERO	**Teramo**	**0.49**	**121**	⇓P	Pg	08 46 42.0	+0.4
ARVD	**Arcevia**	**0.62**	**354**	S	Sb	08 46 55.0	+1.3
FRON	**Frontone**	**0.68**	**341**	S	Sb	08 46 56.0	+0.7
TOLF	**Tolfa**	**1.11**	**223**	P	Pn	08 46 53.7	+0.1
LPEL	**Lama dei Pelig**	**1.19**	**134**	P	Pb	08 46 54.4	-0.2
LATB	**Latina**	**1.39**	**182**	P	Pg	08 46 59.3	+0.8
MODR	**Mondragone**	**1.84**	**160**	S	Sg	08 47 31.0	-0.2
CARD	**Cardoso**	**2.18**	**303**	P	Pn	08 47 09.7	+1.5
PZUN	**Potenza**	**3.05**	**136**	P	Pg	08 47 30.9	+0.6
CNCS	**Concesio**	**3.39**	**324**	S	Sn	08 48 07.0	+1.8
ZONE	**Zone**	**3.56**	**325**	S	Sb	08 48 14.0	-4.3
SARZ	**Sarezzano**	**3.58**	**305**	S	Sn	08 48 10.0	+0.2
SALB	**San Lorenzo Be**	**3.90**	**139**	S	Sn	08 48 22.0	+4.1
MGRO	**Montegrosso**	**3.97**	**289**	P	Pb	08 47 37.7	-4.4
SERS	**Sersale**	**4.73**	**143**	P	Pn	08 47 45.3	+1.8
AIO	**Antillo**	**5.18**	**160**	P	Pn	08 47 49.9	+0.4

KRSC 28 08:54:20.1±1.4, 53°.64N×165°.75E, h18km±50km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**2.54**	**293**	*e*P	Pn	08 55 02.5	+2.2
MKZ				*e*S	Sb	08 55 33.4	-2.5
TUMR	**Tumrok**	**3.66**	**299**	*e*P	Pn	08 55 18.3	+2.4
NLC	**Nalytchevo**	**3.86**	**266**	*e*P	Pn	08 55 22.5	+4.0
NLC				*e*S	Sn	08 56 08.1	+4.8
UGLR	**Uglovaya**	**4.16**	**267**	*e*P	Pn	08 55 27.5	+4.7
UGLR				*e*S	Sn	08 56 15.8	+4.8
SMAR	**Somma**	**4.17**	**268**	*e*P	Pn	08 55 27.4	+4.4
KRER	**Koryakskii**	**4.19**	**268**	*e*P	Pn	08 55 27.9	+4.6
KRER				*e*S	Sb	08 56 17.9	-5.9
AVH	**Avacha**	**4.21**	**268**	*e*P	Pn	08 55 28.1	+4.7
DALK	**Dalny**	**4.24**	**265**	P	Pn	08 55 27.9	+4.2
KRX	**Arik**	**4.25**	**269**	*e*P	Pn	08 55 28.1	+4.1
KRX				*e*S	Sn	08 56 18.3	+5.2
RUS	**Russkaya**	**4.53**	**257**	*e*P	Pn	08 55 31.7	+4.0
RUS				*e*S	Sn	08 56 25.2	+5.4
GNL	**Ganaly**	**4.64**	**274**	*e*P	Pn	08 55 33.4	+4.0
KRMR	**Karymshinskiy**	**4.65**	**263**	*e*P	Pn	08 55 33.3	+4.0
KRMR				*e*S	Sn	08 56 27.8	+5.1
MTVR	**Mutnovka**	**4.71**	**259**	*e*P	Pn	08 55 35.0	+4.7
MTVR				*e*S	Sn	08 56 29.8	+5.4
GRL	**Gorelyy**	**4.75**	**260**	*e*P	Pn	08 55 35.9	+5.0
GRL				*e*S	Sn	08 56 31.3	+5.8
KDTR	**Khodutka, Kamc**	**5.01**	**252**	*e*P	Pn	08 55 38.1	+3.8
KDTR				*e*S	Sn	08 56 35.6	+4.0
APC	**Apacha**	**5.20**	**266**	*e*P	Pn	08 55 42.3	+5.4

ROM 28 08:59:36.9±0.1, 42°.852N±0°.004×13°.116E±0°.004, h8km, ML2.4/8, 5C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=355.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**184**	⇓P	Pg	08 59 38.6	+0.2
NRCA				S	Sg	08 59 39.4	-0.2
T1216	**Preci, Frazion**	**0.08**	**299**	⇑P	Pg	08 59 39.3	+0.2
T1216				AML	AML		
	comp=E,5540μm,1.2s						
T1216				AML	AML		
	comp=N,6370μm,0.3s						
T1216				AML	AML		
	comp=N,9430μm,0.4s						
T1216				AML	AML		
	comp=E,9075μm,0.7s						
MC2	**Monte Cornacci**	**0.08**	**42**	P	Pg	08 59 39.6	+0.4
MC2				S	Sg	08 59 41.5	+0.6
T1215	**Vallo di Nera,**	**0.19**	**255**	P	Pg	08 59 41.4	+0.6
T1215				S	Sg	08 59 44.6	+1.2
T1215				AML	AML		
	comp=E,974μm,0.3s						
T1215				AML	AML		
	comp=N,810μm,0.4s						
T1215				AML	AML		
	comp=E,1190μm,1.5s						
T1215				AML	AML		
	comp=N,1220μm,1.0s						
T1217	**Poggiodomo (PG**	**0.20**	**224**	P	Pg	08 59 41.7	+0.8
T1217				S	Sg	08 59 45.2	+1.5
T1217				AML	AML		
	comp=E,1376μm,0.6s						
T1217				AML	AML		
	comp=N,2242μm,0.2s						
AM05	**Amandola Campo**	**0.21**	**54**	P	Pg	08 59 41.9	+0.7
AM05				S	Sg	08 59 45.8	+1.6
AM05				AML	AML		
	comp=E,467μm,0.8s						
AM05				AML	AML		
	comp=N,431μm,0.2s						
AM05				AML	AML		
	comp=E,1480μm,0.8s						
AM05				AML	AML		
	comp=N,83μm,0.2s						
AM05				AML	AML		
	comp=E,6345μm,0.3s						
AM05				AML	AML		
	comp=N,420μm,0.1s						
AM05				AML	AML		
	comp=N,1355μm,0.1s						
AM05				AML	AML		
	comp=E,1230μm,0.1s						
CESI	**CESI - Serrava**	**0.22**	**315**	⇑P	Pg	08 59 41.8	+0.5
CESI				S	Sg	08 59 45.4	+1.1
CESI				AML	AML		
	comp=E,1695μm,0.3s						
CESI				AML	AML		
	comp=N,4545μm,0.3s						
CESI				AML	AML		
	comp=N,19200μm,0.3s						
CESI				AML	AML		
	comp=E,11600μm,0.5s						
T1241	**Roccafluvione,**	**0.23**	**89**	⇑P	Pg	08 59 42.2	+0.7
T1241				S	Sg	08 59 46.4	+1.6
T1241				AML	AML		
	comp=E,1730μm,0.9s						
T1241				AML	AML		
	comp=N,1190μm,0.3s						
LNSS	**Leonessa**	**0.26**	**193**	⇑P	Pg	08 59 42.8	+0.8
LNSS				AML	AML		
	comp=E,302μm,1.0s						
LNSS				AML	AML		
	comp=N,383μm,0.3s						
LNSS				AML	AML		
	comp=N,1295μm,0.9s						
LNSS				AML	AML		
	comp=E,1740μm,0.8s						
SMA1	**SAN MARTINO**	**0.27**	**144**	P	Pg	08 59 43.1	+0.7
SMA1				S	Sb	08 59 48.0	-0.9
SMA1				AML	AML		
	comp=E,1064μm,0.7s						
SMA1				AML	AML		
	comp=N,1020μm,1.6s						
T1243	**Rocca Santa Ma**	**0.29**	**122**	⇑P	Pg	08 59 43.3	+0.6
T1243				S	Sb	08 59 48.2	-1.1
RM33	**Pellescritta (**	**0.35**	**168**	P	Pg	08 59 44.4	+0.6
RM33				S	Sb	08 59 50.3	-0.8
T1211	**Morro Reatino**	**0.37**	**211**	P	Pg	08 59 44.9	+0.7
T1211				S	Sb	08 59 51.2	-0.5
T1211				AML	AML		
	comp=E,728μm,0.1s						
T1211				AML	AML		
	comp=N,1282μm,0.6s						
ARRO	**Arrone**	**0.38**	**224**	P	Pb	08 59 45.6	-0.2
ARRO				S	Sb	08 59 51.0	-0.7
TERO	**Teramo**	**0.43**	**122**	P	Pg	08 59 45.6	+0.4
TERO				S	Sb	08 59 52.5	-0.7
TERO				AML	AML		
	comp=E,217μm,0.6s						
TERO				AML	AML		
	comp=N,352μm,0.5s						
TERO				AML	AML		
	comp=E,236μm,0.6s						
TERO				AML	AML		
	comp=N,368μm,0.5s						
TERO				AML	AML		
	comp=N,676μm,0.8s						
TERO				AML	AML		
	comp=E,680μm,0.3s						
TERO				AML	AML		
	comp=N,695μm,0.8s						
TERO				AML	AML		
	comp=E,612μm,1.1s						
EL6	**Elcito**	**0.48**	**359**	S	Sb	08 59 55.0	+0.2
ATCC	**AVT- Casa Cast**	**0.48**	**314**	⇓P	Pb	08 59 47.0	-0.7
PIEI	**Pieia**	**0.81**	**328**	S	Sn	09 00 06.0	-0.7

ROM 28 09:00:24.3±0.1, 43°.012N±0°.003×13°.111E±0°.005, h9km, ML2.5/27, 13C-9D, Error ellipse: s-maj=0.4km s-min=0.2km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**325**	P	Pg	09 00 26.1	0.0
FDMO				S	Sg	09 00 26.9	-0.4
FDMO				AML	AML		
	comp=E,57050μm,0.2s						
FDMO				AML	AML		
	comp=N,99700μm,0.3s						
MC2	**Monte Cornacci**	**0.12**	**150**	P	Pg	09 00 27.6	+0.4
MC2				S	Sg	09 00 29.9	+0.7
T1216	**Preci, Frazion**	**0.14**	**209**	⇑P	Pg	09 00 27.9	+0.5
T1216				S	Sg	09 00 30.6	+1.0
T1216				AML	AML		
	comp=E,9080μm,0.7s						
T1216				AML	AML		
	comp=E,9075μm,0.7s						
T1216				AML	AML		
	comp=N,9470μm,0.4s						
T1216				AML	AML		
	comp=N,9430μm,0.4s						
T1216				AML	AML		
	comp=E,9075μm,0.7s						
CESI	**CESI - Serrava**	**0.15**	**267**	⇑P	Pg	09 00 28.3	+0.7
CESI				S	Sg	09 00 31.2	+1.2
CESI				AML	AML		
	comp=E,11600μm,0.5s						
CESI				AML	AML		
	comp=N,19200μm,0.3s						
NRCA	**Norcia**	**0.18**	**179**	⇑P	Pg	09 00 28.8	+0.7
NRCA				S	Sg	09 00 32.1	+1.4
NRCA				AML	AML		
	comp=E,8825μm,0.2s						
NRCA				AML	AML		
	comp=E,9255μm,0.2s						
NRCA				AML	AML		
	comp=N,7835μm,0.7s						
NRCA				AML	AML		
	comp=E,8800μm,0.2s						
NRCA				AML	AML		
	comp=N,7355μm,0.7s						
AM05	**Amandola Campo**	**0.18**	**101**	P	Pg	09 00 28.8	+0.7
AM05				S	Sg	09 00 32.0	+1.3
AM05				AML	AML		
	comp=E,1230μm,0.1s						
AM05				AML	AML		
	comp=N,420μm,0.1s						
AM05				AML	AML		
	comp=E,1235μm,0.1s						
AM05				AML	AML		
	comp=N,1355μm,0.1s						
AM05				AML	AML		
	comp=E,6345μm,0.3s						
AM05				AML	AML		
	comp=N,1350μm,0.1s						
AM05				AML	AML		
	comp=E,6350μm,0.3s						
AM05				AML	AML		
	comp=N,420μm,0.1s						
MDAR	**Monte D'Aria**	**0.18**	**7**	P	Pg	09 00 28.9	+0.7
MDAR				S	Sg	09 00 32.1	+1.2
MDAR				AML	AML		
	comp=N,2850μm,0.5s						
MDAR				AML	AML		
	comp=E,1840μm,1.4s						
SNTG	**Esanatoglia**	**0.27**	**333**	P	Pg	09 00 30.5	+0.7
SNTG				S	Sb	09 00 35.4	-0.8
SNTG				AML	AML		
	comp=E,1099μm,0.9s						
SNTG				AML	AML		
	comp=E,1036μm,0.6s						
SNTG				AML	AML		
	comp=E,1096μm,0.9s						
SNTG				AML	AML		
	comp=N,1135μm,0.6s						
SNTG				AML	AML		
	comp=N,1085μm,0.7s						
T1215	**Vallo di Nera,**	**0.28**	**220**	P	Pg	09 00 30.4	+0.6
T1215				S	Sb	09 00 35.1	-1.1
T1215				AML	AML		
	comp=E,1188μm,1.5s						
T1215				AML	AML		
	comp=N,1220μm,1.0s						
T1215				AML	AML		
	comp=E,1230μm,1.4s						
T1215				AML	AML		
	comp=N,1236μm,1.0s						
T1215				AML	AML		
	comp=E,1186μm,1.5s						
T1215				AML	AML		
	comp=N,1220μm,1.0s						
T1215				AML	AML		
	comp=E,1230μm,1.4s						
T1215				AML	AML		
	comp=N,1234μm,1.0s						
T1215				AML	AML		
	comp=E,1190μm,1.5s						
T1215				AML	AML		
	comp=E,1237μm,1.4s						
T1215				AML	AML		
	comp=N,1236μm,1.0s						
T1241	**Roccafluvione,**	**0.28**	**123**	P	Pg	09 00 30.4	+0.4
T1241				S	Sb	09 00 35.5	-0.9
T1241				AML	AML		
	comp=E,1725μm,0.9s						
T1241				AML	AML		
	comp=N,1190μm,0.3s						
T1241				AML	AML		
	comp=E,1730μm,0.9s						
EL6	**Elcito**	**0.32**	**359**	⇑P	Pg	09 00 31.4	+0.7
EL6				S	Sb	09 00 36.9	-0.6
EL6				AML	AML		
	comp=E,1999μm,0.4s						
EL6				AML	AML		
	comp=N,3115μm,0.3s						
EL6				AML	AML		
	comp=N,3120μm,0.3s						
EL6				AML	AML		
	comp=E,2002μm,0.4s						
T1217	**Poggiodomo (PG**	**0.33**	**204**	⇑P	Pg	09 00 31.4	+0.5
T1217				AML	AML		
	comp=E,1370μm,0.6s						
T1217				AML	AML		
	comp=N,2235μm,0.2s						
T1217				AML	AML		
	comp=E,1368μm,0.6s						
T1217				AML	AML		
	comp=N,2240μm,0.2s						
T1217				AML	AML		
	comp=E,1376μm,0.6s						
T1217				AML	AML		
	comp=N,2242μm,0.2s						
T1204	**Amatrice, Fraz**	**0.37**	**156**	⇑P	Pb	09 00 33.0	-0.1
T1204				AML	AML		
	comp=E,1585μm,0.3s						
T1204				AML	AML		
	comp=N,1072μm,0.2s						
FOSV	**Fossato di Vic**	**0.38**	**318**	⇑P	Pg	09 00 32.5	+0.6
FOSV				AML	AML		
	comp=E,1195μm,1.2s						
FOSV				AML	AML		
	comp=N,1640μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.39**	**297**	S	Sb	09 00 40.0	+0.6
T1243	**Rocca Santa Ma**	**0.40**	**142**	P	Pg	09 00 32.8	+0.6
LNSS	**Leonessa**	**0.41**	**187**	⇓P	Pg	09 00 32.8	+0.4
LNSS				AML	AML		
	comp=E,1740μm,0.8s						
LNSS				AML	AML		
	comp=N,1295μm,0.9s						
SMA1	**SAN MARTINO**	**0.42**	**157**	⇑P	Pg	09 00 33.1	+0.7
SMA1				AML	AML		
	comp=E,1065μm,0.7s						
SMA1				AML	AML		
	comp=N,1016μm,1.6s						
SMA1				AML	AML		
	comp=E,1064μm,0.7s						
SMA1				AML	AML		
	comp=N,1020μm,1.6s						
OFFI	**Offida**	**0.43**	**100**	⇓P	Pb	09 00 34.2	+0.2
OFFI				AML	AML		
	comp=N,1395μm,0.5s						
OFFI				AML	AML		
	comp=E,1125μm,1.0s						
ARVD	**Arcevia**	**0.50**	**346**	P	Pb	09 00 34.8	-0.5
ARVD				S	Sb	09 00 44.0	+1.3
ARVD				AML	AML		
	comp=E,728μm,1.1s						
ARVD				AML	AML		
	comp=N,528μm,0.3s						
ARRO	**Arrone**	**0.50**	**211**	P	Pg	09 00 34.4	+0.4
ARRO				S	Sb	09 00 44.0	+1.3
ARRO				AML	AML		
	comp=N,464μm,0.6s						
ARRO				AML	AML		
	comp=E,650μm,0.7s						
RM33	**Pellescritta (**	**0.51**	**171**	S	Sb	09 00 44.0	+1.0
T1211	**Morro Reatino**	**0.52**	**202**	P	Pg	09 00 34.8	+0.5
T1211				S	Sb	09 00 44.0	+0.9
CAMP	**Campotosto**	**0.52**	**155**	⇑P	Pg	09 00 34.7	+0.2
CAMP				AML	AML		
	comp=E,516μm,0.3s						
CAMP				AML	AML		
	comp=N,370μm,0.4s						
TERO	**Teramo**	**0.53**	**137**	⇑P	Pg	09 00 34.9	+0.2
TERO				S	Sb	09 00 44.0	+0.4
TERO				AML	AML		
	comp=E,612μm,1.1s						
TERO				AML	AML		
	comp=N,676μm,0.8s						
TERO				AML	AML		
	comp=N,694μm,0.8s						
TERO				AML	AML		
	comp=E,612μm,1.1s						
TERO				AML	AML		
	comp=E,680μm,0.3s						
TERO				AML	AML		
	comp=N,695μm,0.8s						
CESX	**Cesi**	**0.56**	**224**	⇑P	Pg	09 00 35.3	+0.2
CESX				S	Sb	09 00 45.0	+0.6
CESX				AML	AML		
	comp=N,753μm,0.3s						
CESX				AML	AML		
	comp=E,876μm,0.4s						
FRON	**Frontone**	**0.58**	**331**	⇓P	Pb	09 00 36.3	-0.4
FRON				AML	AML		
	comp=N,784μm,1.3s						
FRON				AML	AML		
	comp=E,562μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.59**	**166**	S	Sb	09 00 46.0	+0.8
ATVO	**AVT- Monte Val**	**0.63**	**306**	⇓P	Pg	09 00 37.0	+0.4
ATVO				S	Sb	09 00 48.0	+1.4
ATVO				AML	AML		
	comp=E,326μm,1.2s						
ATVO				AML	AML		
	comp=N,355μm,0.8s						
GIGS	**Gran Sasso**	**0.66**	**149**	⇓P	Pg	09 00 37.1	+0.1
GIGS				S	Sb	09 00 48.0	+0.8
GIGS				AML	AML		
	comp=E,232μm,1.5s						
GIGS				AML	AML		
	comp=N,126μm,0.6s						
PIEI	**Pieia**	**0.67**	**321**	⇑P	Pb	09 00 37.8	-0.4
PIEI				AML	AML		
	comp=E,396μm,0.3s						
PIEI				AML	AML		
	comp=N,270μm,0.7s						
PIEI				AML	AML		
	comp=E,397μm,0.3s						
ATPI	**Pietralunga -**	**0.68**	**310**	⇓P	Pb	09 00 37.9	-0.4
ATPI				S	Sn	09 00 50.0	-0.9
ATMI	**Monte Miggiano**	**0.70**	**298**	S	Sn	09 00 50.0	-1.3
FSSB	**Fossombrone**	**0.72**	**340**	⇑P	Pb	09 00 39.0	0.0
FSSB				S	Sn	09 00 52.0	+0.1
FSSB				AML	AML		
	comp=E,1235μm,1.5s						
FSSB				AML	AML		
	comp=N,1680μm,0.4s						
MGAB	**Montegabbione**	**0.74**	**263**	⇓P	Pb	09 00 40.0	+0.7
MGAB				AML	AML		
	comp=E,630μm,0.3s						
MGAB				AML	AML		
	comp=N,532μm,0.4s						
MGAB				AML	AML		
	comp=N,458μm,0.4s						
MGAB				AML	AML		

comp=E,734μm,0.3s
BADI Badiali 0.81 308 ⇓P Pb 09 00 40.5 +0.1
VCEL Villa Celiera 0.82 139 S Sn 09 00 54.0 -0.4
FAGN Fagnano 0.82 155 ⇓P Pn 09 00 41.5 -0.6
FAGN AML AML
comp=E,732μm,0.9s
FAGN AML AML
comp=N,546μm,0.4s
CAFI Castiglion Fio 0.90 291 P Pb 09 00 42.5 +0.4
CAFI AML AML
comp=E,228μm,1.0s
CAFI AML AML
comp=N,188μm,1.0s
CIGN Sant'Elia a Pi 1.90 135 P Pg 09 01 00.9 +0.2
PTRJ Pietraroja 1.96 147 S Sn 09 01 22.0 -0.4

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*IDC **28** 09:02:04.7±1.6, 30°.42S×71°.87W, h0km, mb3.4/2, mbtmp3.5/5, ML3.4/3, MS3.2/1, Error ellipse: s-maj=56.2km s-min=34.6km az=89.0*
*GUC **28** 09:02:07.5±0.7, 30°.37S×71°.91W, h27km±5km, ML3.6*
ISC 28 09:02:06.6±1.9, 30°.36S±0°.04×71°.95W±0°.08, h15km±11km, n21, σ1§04/28, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.41**	**139**	⇓*e*P		**Pn**	**09 02 16.4**	**-1.7**
CO06				*e*S		**Sn**	**09 02 22.9**	**-2.6**
CO06				IAML			09 02 26.4	
comp=E,6μm,0.2s								
CO05	**La Serena**	**0.76**	**55**	⇓*e*P		**Pb**	**09 02 21.7**	**+0.1**
CO05				*e*S		**Sn**	**09 02 33.5**	**-0.5**
CO05				IAML			09 02 37.9	
comp=E,3μm,0.4s								
GO04	**Tololo Observa**	**1.01**	**80**	⇓*e*P		**Pn**	**09 02 26.4**	**-0.1**
GO04				*e*S		**Sn**	**09 02 41.3**	**+0.6**
GO04				IAML			09 02 44.5	
comp=N,5μm,0.5s								
CO02	**Combarbal**	**1.17**	**136**	⇓*e*P		**Pg**	**09 02 28.9**	**-0.4**
CO02				*e*S		**Sg**	**09 02 45.9**	**+1.3**
CO02				IAML			09 02 49.0	
comp=N,6μm,0.3s								
CO03	**El Pedregal**	**1.19**	**114**	*e*P		**Pg**	**09 02 29.0**	**-0.6**
CO03				*e*S		**Sg**	**09 02 45.7**	**+0.6**
CO03				IAML			09 02 50.4	
comp=E,1μm,0.6s								
CO01	**Juntas del Tor**	**1.65**	**77**	*e*P		**Pb**	**09 02 37.2**	**+0.3**
CO01				*e*S		**Sg**	**09 02 59.5**	**-0.4**
LCO	**Las Campanas**	**1.73**	**39**	*e*P		**Pn**	**09 02 36.3**	**-0.2**
LCO				*e*S		**Sb**	**09 02 59.9**	**-0.1**
AC05	**El Transito**	**2.11**	**44**	⇑*e*P		**Pn**	**09 02 42.2**	**+0.6**
AC05				*e*S		**Sb**	**09 03 09.4**	**-1.3**
AC05				IAML			09 03 24.5	
comp=N,470nm,0.5s								
VA06	**Catapilco**	**2.26**	**166**	⇑*e*P		**Pn**	**09 02 43.3**	**-0.2**
VA06				*e*S		**Sn**	**09 03 10.8**	**-0.3**
VA06				IAML			09 03 26.0	
comp=E,528nm,0.5s								
AC04	**Llanos de Chal**	**2.28**	**20**	⇑*e*P		**Pn**	**09 02 42.1**	**-1.7**
AC04				*e*S		**Sn**	**09 03 10.2**	**-1.5**
AC04				IAML			09 03 26.3	
comp=E,315nm,0.8s								
VA03	**San Esteban**	**2.68**	**154**	*e*P		**Pn**	**09 02 50.7**	**+1.4**
VA03				*e*S		**Sn**	**09 03 22.1**	**+0.6**
VA03				IAML			09 03 41.0	
comp=E,370nm,0.4s								
H03N1	**Juan Fernandez**	**6.67**	**241**	T		T	09 10 45.6	
baz=70,slow=72,SNR=727								
H03N2	**Juan Fernandez**	**6.68**	**241**	T		T	09 10 49.7	
baz=70,slow=72,SNR=543								
H03N3	**Juan Fernandez**	**6.68**	**241**	T		T	09 10 45.0	
baz=70,slow=72,SNR=534								
PLCA	**Paso Flores**	**10.41**	**174**	Pn		**Pn**	**09 04 34.7**	**-0.8**
comp=E,0.1nm,0.3s,baz=334,slow=12,SNR=1.9								
comp=E,1.1nm,0.7s								
CPUP	**Villa Florida**	**13.49**	**76**	LR		LR	09 10 30.2	
comp=E,93nm,18.1s,baz=225,slow=38								
LPAZ	**La Paz**	**14.44**	**15**	Pn		**Pn**	**09 05 31.4**	**+0.3**
comp=E,0.1nm,0.3s,baz=188,slow=7.3,SNR=3.9								
comp=E,0.9nm,0.7s								
SIV	**San Ignacio**	**17.44**	**37**	Pn		**Pn**	**09 06 09.5**	**+0.1**
baz=219,slow=13,SNR=7.4								
comp=E,1.4nm,0.7s								
TXAR	**Lajitas Array**	**66.62**	**330**	P		**P**	**09 12 57.9**	**+1.3**
comp=E,0.2nm,0.8s,baz=143,slow=9.1,SNR=2.3								
comp=E,0.2nm,0.8s								
TORD	**Torodi Ar. Bea**	**82.91**	**70**	P		**P**	**09 14 31.8**	**+0.6**
comp=E,0.3nm,0.6s,baz=253,slow=4.4,SNR=2.4								
comp=E,0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**151.06**	**29**	PKPbc		**PKiKP**	**09 21 58.5**	**-0.6**
comp=E,1.1nm,0.6s,baz=288,slow=5.7,SNR=5.8								

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*IDC **28** 09:15:30.4±1.7, 6°.04S×130°.40E, h157km±16km, mb3.7/10, mbtmp4.4/14, Error ellipse: s-maj=24.1km s-min=11.6km az=82.0*
*NEIC **28** 09:15:31.5±1.3, 6°.13S±0°.06×130°.4E±0°.1, h164km±7km, mb4.3/25, Error ellipse: s-maj=14.5km s-min=8.5km az=88.0*
*DJA **28** 09:15:31.3±0.4, 6°.S±3°.×13°.0E±°, h194km±6km, M4.8/13, mb4.8/6, mB5.2/6, MLv4.8/13, Mw(mB)4.6/6*
ISC 28 09:15:30.0±0.4, 6°.18S±0°.04×130°.34E±0°.06, h150km, n114, σ1§93/118, mb4.2/22, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.71**	**345**	P		**Pn**	**09 16 06.1**	**+4.2**
BNDI				S		**Sn**	**09 16 32.3**	**+6.0**
BNDI	**Bandanaira**	**1.71**	**345**	P		**Pn**	**09 16 06.1**	**+4.2**
SAUI	**Saumlaki**	**2.02**	**152**	Pn		**Pn**	**09 16 07.9**	**+2.5**
SAUI	**Saumlaki**	**2.02**	**152**	P		Pn	09 16 11.2	+5.7
SAUI				S		**Sn**	**09 16 41.0**	**+8.2**
SAUI	**Saumlaki**	**2.02**	**152**	P		Pn	09 16 11.0	+5.5
MSAI	**Masohi**	**3.15**	**333**	P		**Pn**	**09 16 21.6**	**+2.2**
AAI	**Ambon**	**3.28**	**319**	P		**Pn**	**09 16 24.2**	**+3.2**
KRAI	**Karang Ratu**	**3.44**	**326**	P		**Pn**	**09 16 26.0**	**+2.9**
FAKI	**Fak Fak**	**3.76**	**30**	Pn		**Pn**	**09 16 28.1**	**+0.9**
FAKI	**Fak Fak**	**3.76**	**30**	P		**Pn**	**09 16 28.5**	**+1.3**
FAKI	**Fak Fak**	**3.76**	**30**	P		**Pn**	**09 16 28.5**	**+1.3**
NLAI	**Namlea**	**4.36**	**312**	P		**Pn**	**09 16 38.7**	**+3.7**
SIJI	**Sorong**	**5.36**	**10**	P		**Pn**	**09 16 48.0**	**-0.3**
60nm,0.2s,baz=31,slow=22,SNR=49								
SIJI				S		**Sn**	**09 17 45.9**	**-3.5**
195nm,0.3s,baz=151,slow=23,SNR=38								
SIJI	**Sorong**	**5.36**	**10**	P		**Pn**	**09 16 48.3**	**0.0**
SANI	**Sanana**	**5.98**	**313**	P		**Pn**	**09 16 58.7**	**+2.2**
SANI	**Sanana**	**5.98**	**313**	P		**Pn**	**09 16 59.0**	**+2.5**
RKPI	**Ransiki, Papua**	**6.01**	**40**	P		**Pn**	**09 16 58.2**	**+1.2**
2.6nm408nm,0.7s								
LBMI	**Labuha**	**6.20**	**333**	P		**Pn**	**09 17 00.4**	**+1.0**
1.2nm4μm259nm,0.8s								
MTN	**Manton Dam**	**6.66**	**173**	Pn		**Pn**	**09 17 08.0**	**+2.3**
MTN	**Manton Dam**	**6.66**	**173**	P		**Pn**	**09 17 08.4**	**+2.7**
KDU	**Kakadu**	**6.79**	**162**	P		**Pn**	**09 17 09.6**	**+2.2**
SOEI	**Soe**	**6.99**	**239**	Pn		**Pn**	**09 17 12.2**	**+2.2**
SOEI	**Soe**	**6.99**	**239**	P		**Pn**	**09 17 12.3**	**+2.2**
0.4nm1μm29nm,0.5s								
SOEI	**Soe**	**6.99**	**239**	P		**Pn**	**09 17 13.6**	**+3.5**
TNTI	**Ternate**	**7.52**	**337**	Pn		**Pn**	**09 17 17.6**	**+0.5**
BATI	**Baumata**	**7.73**	**238**	P		**Pn**	**09 17 21.5**	**+1.6**
51nm,0.3s,baz=130,slow=7.8,SNR=4.9								
BATI				S		**Sn**	**09 18 45.0**	**-1.2**
51nm,0.3s,baz=108,slow=20,SNR=5.6								
BATI	**Baumata**	**7.73**	**238**	P		**Pn**	**09 17 20.5**	**+0.6**
MMRI	**Maumere**	**8.40**	**253**	Pn		**Pn**	**09 17 29.4**	**+0.5**
KNRA	**Kununurra**	**9.56**	**189**	Pn		**Pn**	**09 17 45.8**	**+1.4**
KDU	**Kununurra**	**9.56**	**189**	P		**Pn**	**09 17 45.7**	**+1.4**
TOLI2	**Tolitoli**	**11.98**	**307**	P		**Pn**	**09 18 17.8**	**+1.6**
PLAI	**Plampang**	**12.73**	**257**	P		**Pn**	**09 18 28.1**	**+2.2**
WB0	**Warramunga Arr**	**14.06**	**164**	Pn		**Pn**	**09 18 41.5**	**-1.4**
WRAB	**Tennant Creek**	**14.21**	**164**			**Pn**	**09 18 43.4**	**-1.3**
WRAB	**Tennant Creek**	**14.21**	**164**	P		**Pn**	**09 18 44.8**	**+0.1**
WRA	**Warramunga Arr**	**14.22**	**165**	P		**Pn**	**09 18 43.6**	**-1.2**
4.0nm,0.4s,baz=348,slow=13,SNR=101								
WRA				S		**Sn**	**09 21 14.8**	**-7.8**
9.0nm,0.7s,baz=341,slow=22,SNR=11								
WRA	**Warramunga Arr**	**14.22**	**165**			**Pn**	**09 18 42.1**	**-2.7**
WB2	**Warramunga Arr**	**14.22**	**164**	Pn		**Pn**	**09 18 43.7**	**-1.1**
WB1	**Warramunga Ar.**	**14.24**	**165**	P		**Pn**	**09 18 45.1**	**+0.1**
WR0	**Warramunga Arr**	**14.29**	**164**			**Pn**	**09 18 44.4**	**-1.3**
COEN	**Coen**	**14.80**	**122**			**P**	**09 18 53.3**	**-0.9**
COEN	**Coen**	**14.80**	**122**	P		**P**	**09 18 54.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**16.22**	**261**	P		**Pn**	**09 19 10.2**	**+0.6**
JAGI	**Jajag, Banyuwa**	**16.22**	**261**	P		**Pn**	**09 19 09.1**	**-0.5**
34nm,1.5s								
QIS	**Mount Isa**	**16.88**	**149**	P		**Pn**	**09 19 19.5**	**+1.9**
PMG	**Port Moresby**	**16.96**	**102**	P		**Pn**	**09 19 18.4**	**-0.2**
24nm,0.8s,baz=311,slow=10,SNR=4.9								
AS31	**Alice Springs**	**17.72**	**169**	Pn		**Pn**	**09 19 28.6**	**+1.0**
AS31				IAmb		IAmb	09 19 30.0	
comp=Z,6.8nm,0.6s								
ASAR	**Alice Springs**	**17.72**	**169**	P		**Pn**	**09 19 28.6**	**+0.9**
comp=Z,13nm,0.5s,baz=350,slow=9.4,SNR=244								
ASAR				S		**S**	**09 22 39.7**	**-3.1**
comp=Z,3.7nm,0.8s,baz=347,slow=21,SNR=11								
ASAR	**Alice Springs**	**17.72**	**169**	Pn		**Pn**	**09 19 28.3**	**+0.7**
AS01	**Alice Springs**	**17.73**	**169**	P		**Pn**	**09 19 28.6**	**+0.9**
MBWA	**Marble Bar**	**18.09**	**214**	P		**P**	**09 19 31.6**	**+1.2**
PSA00	**Pilbara Seismi**	**18.36**	**213**	P		**P**	**09 19 33.7**	**+0.3**
PSA00				IAmb		IAmb	09 19 35.6	
comp=Z,19nm,1.2s								
PSA00	**Pilbara Seismi**	**18.36**	**213**	P		**P**	**09 19 34.2**	**+0.8**
KKM	**Kota Kinabalu**	**18.61**	**310**	P		**P**	**09 19 36.4**	**+0.1**
KKM				IAmb		IAmb	09 19 49.6	
comp=Z,12nm,0.9s								
KKM	**Kota Kinabalu**	**18.61**	**310**	P		**P**	**09 19 36.8**	**+0.6**
WRKA	**Warakurna**	**18.85**	**186**	P		**Pn**	**09 19 40.6**	**-0.3**
SBUM	**Sibu**	**20.03**	**295**	P		**P**	**09 19 52.7**	**+1.2**
OOD	**Oodnadatta**	**22.09**	**167**	P		**P**	**09 20 13.5**	**+0.3**
MEEK	**Meekatharra**	**23.21**	**207**	P		**P**	**09 20 24.6**	**+0.7**
INKA	**Innaminka**	**23.61**	**156**	P		**P**	**09 20 28.7**	**+1.3**
MULG	**Mulgathing**	**24.23**	**172**	P		**P**	**09 20 33.6**	**+0.6**
FORT	**Forrest**	**24.56**	**185**	P		**P**	**09 20 36.4**	**+0.4**
FORT				IAmb		IAmb	09 20 37.7	
comp=Z,13nm,0.7s								
FORT	**Forrest**	**24.56**	**185**	P		**P**	**09 20 36.6**	**+0.6**
LCRK	**Leigh Creek**	**25.25**	**164**	P		**P**	**09 20 43.7**	**+1.4**
BBOO	**Buckleboo**	**27.02**	**169**	P		**P**	**09 20 58.8**	**+0.6**
BBOO				IAmb		IAmb	09 21 11.8	
comp=Z,14nm,1.4s								
BBOO	**Buckleboo**	**27.02**	**169**	P		**P**	**09 20 58.5**	**+0.3**
BLDU	**Ballidu**	**27.48**	**206**	P		**P**	**09 21 01.9**	**-0.4**
comp=Z,11nm,0.4s								
STKA	**Stephens Creek**	**27.64**	**159**	P		**P**	**09 21 04.3**	**+0.6**
comp=Z,1.8nm,0.4s,baz=336,slow=6.0,SNR=5.4								
comp=Z,1.8nm,0.4s								
STKA	**Stephens Creek**	**27.64**	**159**	P		**P**	**09 21 04.4**	**+0.6**
KLBR	**Kellerberrin**	**27.89**	**203**	P		**P**	**09 21 06.6**	**+0.6**
HTT	**Hallett**	**28.26**	**165**	P		**P**	**09 21 10.4**	**+1.1**
CMSA	**Cobar Meteorol**	**29.03**	**152**	P		**P**	**09 21 17.7**	**+1.6**
NWAO	**Narrogin (SRO)**	**29.27**	**203**	P		**P**	**09 21 17.0**	**-1.2**
NWAO	**Narrogin (SRO)**	**29.27**	**203**	P		**P**	**09 21 18.5**	**+0.3**
comp=Z,26nm,1.4s								
CAN	**Canberra**	**33.70**	**152**	P		**P**	**09 21 57.2**	**+0.1**
NJ2	**Nanjing**	**39.57**	**345**	*e*P		**P**	**09 22 47.0**	**+0.4**
PZH	**PanZhiHua**	**42.71**	**321**	P		**P**	**09 23 14.3**	**+1.7**
HHC	**Hu-ho-hao-te**	**49.88**	**341**	*e*P		**P**	**09 24 11.0**	**+2.7**
SONM	**Songino Array**	**57.78**	**341**	P		**P**	**09 25 05.1**	**-0.5**
comp=Z,0.7nm,0.5s,baz=153,slow=5.1,SNR=3.5								
comp=Z,0.7nm,0.5s								
SONM	**Songino Array**	**57.78**	**341**	P		**P**	**09 25 05.3**	**-0.3**
WMQ	**Urumqi**	**62.90**	**327**	*e*P		**P**	**09 25 42.3**	**+1.9**
MK31	**Makanchi Array**	**67.73**	**326**	P		**P**	**09 26 11.2**	**-0.2**
MK31				IAmb		IAmb	09 26 11.6	
comp=Z,2.4nm,0.8s								
MKAR	**Makanchi Array**	**67.73**	**326**	P		**P**	**09 26 10.9**	**-0.5**
comp=Z,2.4nm,0.4s,baz=115,slow=8.1,SNR=30								
comp=Z,2.4nm,0.4s								
MKAR	**Makanchi Array**	**67.73**	**326**	P		**P**	**09 26 11.1**	**-0.3**
MAKZ	**Makanchi**	**67.92**	**326**	P		**P**	**09 26 12.3**	**-0.2**
MAKZ				IAmb		IAmb	09 26 12.6	
comp=Z,2.7nm,0.5s								
SEY	**Seymchan**	**70.95**	**10**	P		**P**	**09 26 30.6**	**-0.1**
comp=Z,1.6nm,0.4s,baz=213,slow=8.8,SNR=3.6								
comp=Z,1.6nm,0.4s								
ZALV	**Zalesovo Beam**	**71.01**	**334**	P		**P**	**09 26 29.9**	**-1.4**
comp=Z,1.6nm,0.7s,baz=145,slow=5.3,SNR=0.9								
comp=Z,1.6nm,0.7s								
KURBB	**Kurchatov Arra**	**72.00**	**328**	P		**P**	**09 26 36.3**	**-1.0**
comp=Z,1.4nm,0.6s,baz=128,slow=4.9,SNR=16								
comp=Z,1.4nm,0.6s								
KURK	**Kurchatov**	**72.00**	**328**	P		**P**	**09 26 35.6**	**-1.7**
CHGR	**Chuyangaron**	**72.02**	**314**	P		**P**	**09 26 36.3**	**-1.6**
CHGR				IAmb		IAmb	09 26 37.7	
comp=Z,4.9nm,0.9s								
KK31	**Karatay Array**	**72.96**	**319**	P		**P**	**09 26 41.8**	**-1.4**
KKAR	**Karatay Array**	**72.96**	**319**	P		**P**	**09 26 42.3**	**-0.9**
VNDA	**Vanda**	**73.21**	**173**	P		**P**	**09 26 44.1**	**0.0**
comp=Z,1.5nm,0.6s,baz=320,slow=6.8,SNR=16								
comp=Z,1.5nm,0.6s								
VNDA	**Vanda**	**73.21**	**173**	P		**P**	**09 26 44.2**	**0.0**
BVAR	**Borovoye Array**	**77.56**	**328**	P		**P**	**09 27 08.2**	**-1.1**
comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=4.2								
comp=Z,0.5nm,0.5s								
TIXI	**Tiksi**	**77.68**	**360**	P		**P**	**09 27 08.0**	**-1.5**
comp=Z,1.3nm,0.4s,baz=270,slow=20,SNR=1.6								
comp=Z,1.3nm,0.4s								
QSPA	**South Pole Qui**	**83.79**	**180**	P		**P**	**09 27 41.7**	**-0.7**
QSPA				IAmb		IAmb	09 27 49.2	
comp=Z,4.1nm,1.3s								
OHAK	**Old Harbor**	**87.84**	**32**	P		**P**	**09 28 01.6**	**-0.7**
N19K	**Bonanza Creek**	**88.20**	**28**	P		**P**	**09 28 03.6**	**-0.4**
J20K	**Nowinta River**	**89.27**	**25**	P		**P**	**09 28 08.2**	**-0.6**
J20K				IAmb		IAmb	09 28 15.0	
comp=Z,4.3nm,1.3s								
H23K	**Yukon River**	**91.56**	**24**	P		**P**	**09 28 18.3**	**-1.2**
H23K				IAmb		IAmb	09 28 35.9	
comp=Z,7.6nm,1.5s								
ILAR	**Eielson Array**	**92.47**	**25**	P		**P**	**09 28 20.4**	**-3.2**
comp=Z,0.3nm,0.7s,baz=256,slow=4.4,SNR=5.1								
comp=Z,0.3nm,0.7s								
BMAR	**Burnt Mountain**	**93.77**	**23**	P		**P**	**09 28 28.9**	**-0.8**
J26L	**Joseph Creek**	**93.85**	**26**	P		**P**	**09 28 28.8**	**-1.4**
J26L				IAmb		IAmb	09 28 52.9	
comp=Z,3.4nm,1.2s								
TROLL	**Troll, Antarti**	**95.03**	**194**	P		**P**	**09 28 35.5**	**0.0**
BELA	**Belgrano 2**	**95.65**	**183**	P		**P**	**09 28 37.2**	**-0.9**
BELA				IAmb		IAmb	09 28 40.4	
comp=Z,1.7nm,1.1s								
SNAA	**Sanae**	**96.53**	**193**	P		**P**	**09 28 42.5**	**+0.2**
SNAA	**Sanae**	**96.53**	**193**	P		**P**	**09 28 42.6**	**+0.3**
VNA2	**Neumayer--Watz**	**98.10**	**193**	Pdiff		**P**	**09 28 48.1**	**-1.1**
VNA1	**Neumayer--Stat**	**98.50**	**193**	Pdiff		**P**	**09 28 51.2**	**+0.2**
NACGM	**Naroch**	**102.83**	**325**	*e*P		**Pdif**	**09 29 09.4**	**-1.2**
comp=Z,31nm,0.8s,baz=83								
TORD	**Torodi Ar. Bea**	**128.98**	**282**	PKP		**PKPdf**	**09 34 19.5**	**-1.6**
comp=Z,0.3nm,0.5s,baz=63,slow=1.4,SNR=3.6								
CPUP	**Villa Florida**	**146.83**	**167**	PKPbc		**PKPbc**	**09 34 55.0**	**-0.4**
comp=Z,3.2nm,0.8s,baz=188,slow=4.7,SNR=4.4								
LPAZ	**La Paz**	**151.14**	**141**	PKPbc		**PKPbc**	**09 35 07.2**	**-0.1**
comp=Z,1.3nm,0.4s,baz=212,slow=3.5,SNR=6.4								

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*IDC **28** 09:21:55.5±1.4, 31°.03N×137°.64E, h358km±39km, mb2.6/2, mbtmp3.6/6, Error ellipse: s-maj=71.3km s-min=16.5km az=61.0*
*JMA **28** 09:21:56.3±0.2, 31°.N±2°.×13°.8E±°, h414km, MV3.6/29, NEAR TORISHIMA IS*
ISC 28 09:21:55.4±0.9, 31°.41N±0°.07×138°.4E±0°.1, h400km, n19, σ2§08/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.07**	**34**	P		**Pn**	**09 22 54.2**	**+2.5**
67nm,0.4s,baz=39,slow=22,SNR=8.7								
JHJ				S		**S**	**09 23 40.8**	**+3.5**
50nm,0.3s,baz=62,slow=23,SNR=1.2								
JHJ2	**Mitsune**	**2.08**	**35**	*e*P		**Pn**	**09 22 54.3**	**+2.6**
TTO2	**TONANKAI O.B.S**	**2.59**	**334**	*e*P		**Pn**	**09 22 58.4**	**+3.4**
JIE	**Ise**	**3.30**	**335**	*e*P		**Pn**	**09 23 03.5**	**+2.5**
JKN2	**Miekihoku**	**3.34**	**328**	*e*P		**Pn**	**09 23 03.3**	**+1.9**
BSO3	**Boso 3**	**3.82**	**27**	S		**S**	**09 24 03.4**	**+1.2**
JOD2	**Odawara 2**	**3.89**	**8**	*e*P		**Pn**	**09 23 08.3**	**+1.9**
BSO1	**Boso 1**	**3.90**	**33**	*e*P		**Pn**	**09 23 08.0**	**+2.2**
JHU	**Hanno**	**4.49**	**9**	*e*P		**Pn**	**09 23 13.6**	**+1.5**
JHU				*e*S		**S**	**09 24 13.5**	**-1.0**
JRY	**Ryogami san**	**4.62**	**5**	*e*P		**Pn**	**09 23 15.5**	**+2.1**
JAG	**Ashikaga**	**5.08**	**10**	*e*P		**Pn**	**09 23 19.0**	**+0.9**
MJAR	**Matsushiro Arr**	**5.12**	**358**	P		**Pn**	**09 23 19.8**	**+1.2**
2.7nm,0.6s,baz=170,slow=10,SNR=7.6								
CBIJ	**Chichi jima**	**5.42**	**141**	*e*P		**Pn**	**09 23 23.4**	**+1.4**
CBIJ				*e*S		**S**	**09 24 31.2**	**-1.1**
JCJ	**Chichijima**	**5.42**	**141**	P		**Pn**	**09 23 23.0**	**+1.0**
87nm,1.0s,baz=292,slow=19,SNR=6.2								
JCJ				S		**S**	**09 24 31.4**	**-0.9**
41nm,0.4s,baz=303,slow=22,SNR=7.9								
JHO	**Hitachi**	**5.49**	**19**	*e*P		**Pn**	**09 23 23.5**	**+1.1**
JHO				*e*S		**S**	**09 24 31.2**	**-2.2**
JMK	**Ichinoseki**	**7.87**	**16**	*e*S		**S**	**09 25 19.2**	**-2.4**
KSRS	**Korea Array**	**10.54**	**308**	P		**P**	**09 24 16.4**	**-2.5**
0.9nm,0.4s,baz=121,slow=11,SNR=4.2								
WRA	**Warramunga Arr**	**51.21**	**185**	P		**P**	**09 30 20.1**	**+0.1**
0.2nm,0.3s,baz=0.8,slow=7.7,SNR=6.3								
0.2nm,0.3s								
ASAR	**Alice Springs**	**54.93**	**185**	P		**P**	**09 30 47.8**	**+1.0**
0.1nm,0.5s,baz=20,slow=12,SNR=5.9								
0.1nm,0.5s								

ROM 28 09:34:34.0±0.1, 42°.995N±0°.004×13°.152E±0°.005, h8km, ML2.5/20, 3C-4D, Error ellipse: s-maj=0.5km s-min=0.2km az=32.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.06**	**311**	⇑P		Pg	09 34 35.8	-0.1
FDMO				AML		AML		
comp=E,28600μm,0.2s								
FDMO				AML		AML		
comp=N,32250μm,0.3s								
FEMA	**Monte Fema**	**0.08**	**247**	P		Pg	09 34 36.4	+0.2
FEMA				S		Sg	09 34 38.5	+0.7
FEMA				AML		AML		
comp=N,12300μm,0.8s								
FEMA				AML		AML		
comp=E,16000μm,1.2s								
FEMA				AML		AML		
comp=E,15950μm,1.2s								
T1216	**Preci, Frazion**	**0.14**	**223**	P		Pg	09 34 37.6	+0.5
T1216				S		Sg	09 34 40.4	+1.2
T1216				AML		AML		
comp=N,15850μm,0.4s								
T1216				AML		AML		
comp=E,9230μm,0.9s								
T1216				AML		AML		
comp=N,15850μm,0.3s								
AM05	**Amandola Campo**	**0.15**	**97**	P		Pg	09 34 37.9	+0.7
AM05				S		Sg	09 34 40.7	+1.4
AM05				AML		AML		
comp=E,1395μm,0.2s								
AM05				AML		AML		
comp=E,6105μm,0.2s								
AM05				AML		AML		
comp=N,1105μm,1.4s								
AM05				AML		AML		
comp=E,6100μm,0.2s								
AM05				AML		AML		
comp=N,287μm,0.2s								
MMO1	**Montemonaco**	**0.16**	**127**	⇑P		Pg	09 34 37.9	+0.5
MMO1				S		Sg	09 34 41.0	+1.3
NRCA	**Norcia**	**0.16**	**190**	⇓P		Pg	09 34 38.0	+0.6
NRCA				AML		AML		
comp=E,4570μm,0.5s								
NRCA				AML		AML		
comp=N,3425μm,1.4s								
NRCA				AML		AML		
comp=E,4830μm,0.5s								
NRCA				AML		AML		
comp=N,3625μm,1.4s								
CESI	**CESI - Serrava**	**0.18**	**273**	⇑P		Pg	09 34 38.4	+0.6
CESI				S		Sg	09 34 41.7	+1.4
CESI				AML		AML		
comp=E,10300μm,0.2s								
CESI				AML		AML		
comp=N,12350μm,0.3s								
T1241	**Roccafluvione,**	**0.25**	**124**	⇓P		Pg	09 34 39.4	+0.5
T1241				S		Sg	09 34 43.7	+1.4
T1241				AML		AML		
comp=E,1630μm,0.8s								
T1241				AML		AML		
comp=N,1285μm,1.0s								
T1241				AML		AML		
comp=N,1285μm,1.0s								
T1241				AML		AML		
comp=E,1655μm,1.0s								
T1215	**Vallo di Nera,**	**0.28**	**227**	P		Pg	09 34 40.4	+0.8
T1215				S		Sb	09 34 45.1	-1.2
T1215				AML		AML		
comp=E,1044μm,0.4s								
T1215				AML		AML		
comp=N,708μm,0.8s								
T1215				AML		AML		
comp=E,1043μm,0.4s				

```
        comp=N,159μm,0.4s
FIAM    Fiamignano      0.73 182  P    Pg   09 34 48.0  0.0
FIAM                              AML  AML
        comp=E,222μm,0.7s
FIAM                              AML  AML
        comp=N,188μm,0.5s
FIAM                              AML  AML
        comp=N,188μm,0.5s
FIAM                              AML  AML
        comp=E,222μm,0.7s
T0110   Collepietro     0.90 149  ⇓P   Pb   09 34 51.8  0.0
T0110                             AML  AML
        comp=E,313μm,0.7s
T0110                             AML  AML
        comp=N,348μm,0.5s
T0110                             AML  AML
        comp=N,348μm,0.5s
T0110                             AML  AML
        comp=E,313μm,0.7s
```

ROM 28 09:35:28.7±0.1, 42°.958N±0°.001×13°.095E±0°.003, h7km, ML1.8/2, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.0km az=293.0, Central Italy

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
FEMA    Monte Fema      0.03 277  P    Pg   09 35 30.4 +0.1
FEMA                              S    Sg   09 35 31.5 +0.1
FDMO    Fiordimonte     0.08 356  P    Pg   09 35 30.9 +0.2
FDMO                              S    Sg   09 35 32.6 +0.4
FDMO                              AML  AML
        comp=E,626μm,0.2s
FDMO                              AML  AML
        comp=N,540μm,0.5s
T1216   Preci, Frazion  0.09 220  ⇓P   Pg   09 35 31.1 +0.3
T1216                             S    Sg   09 35 32.8 +0.5
T1216                             AML  AML
        comp=E,1315μm,0.3s
T1216                             AML  AML
        comp=N,2445μm,1.0s
T1216                             AML  AML
        comp=E,1316μm,0.3s
NRCA    Norcia          0.12 173  AML  AML
        comp=E,645μm,1.5s
NRCA                              AML  AML
        comp=N,575μm,0.2s
NRCA                              AML  AML
        comp=N,1445μm,0.1s
NRCA                              AML  AML
        comp=E,1410μm,0.1s
CESI    CESI - Serrava  0.15 289  ⇑P   Pg   09 35 32.2 +0.4
CESI                              S    Sg   09 35 34.9 +0.9
```

ROM 28 09:36:17.9±0.0, 42°.741N±0°.002×13°.211E±0°.002, h9km, ML1.8/9, 4C, Error ellipse: s-maj=0.2km s-min=0.1km az=355.0, Central Italy

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
T1204   Amatrice, Fraz  0.10 130  P    Pg   09 36 21.1 +0.5
T1204                             S    Sg   09 36 23.0 +0.6
NRCA    Norcia          0.12 323  P    Pg   09 36 21.1 +0.4
NRCA                              S    Sg   09 36 23.2 +0.5
NRCA                              AML  AML
        comp=N,1445μm,0.1s
NRCA                              AML  AML
        comp=E,1410μm,0.1s
MMO1    Montemonaco     0.18  28  P    Pg   09 36 22.3 +0.5
MMO1                              S    Sg   09 36 25.6 +1.2
T1243   Rocca Santa Ma  0.18 104  ⇑P   Pg   09 36 22.2 +0.5
T1243                             S    Sg   09 36 25.3 +0.9
LNSS    Leonessa        0.19 222  ⇑P   Pg   09 36 22.5 +0.7
LNSS                              S    Sg   09 36 25.9 +1.4
LNSS                              AML  AML
        comp=N,902μm,0.8s
LNSS                              AML  AML
        comp=E,878μm,0.3s
LNSS                              AML  AML
        comp=N,902μm,0.8s
T1241   Roccafluvione,  0.20  55  ⇑P   Pg   09 36 22.5 +0.4
T1241                             S    Sg   09 36 26.0 +1.1
T1241                             AML  AML
        comp=E,238μm,0.1s
T1241                             AML  AML
        comp=N,168μm,0.4s
T1216   Preci, Frazion  0.21 317  P    Pg   09 36 22.8 +0.7
T1216                             S    Sg   09 36 26.3 +1.3
T1217   Poggiodomo (PG  0.21 262  P    Pg   09 36 22.8 +0.6
T1217                             S    Sg   09 36 26.7 +1.6
T1217                             AML  AML
        comp=E,171μm,0.3s
T1217                             AML  AML
        comp=N,151μm,1.6s
T1215   Vallo di Nera,  0.26 284  P    Pg   09 36 23.8 +0.6
T1215                             S    Sb   09 36 28.1  -1.3
FDMO    Fiordimonte     0.31 343  P    Pb   09 36 24.9  -0.8
FDMO                              AML  AML
        comp=E,418μm,1.5s
FDMO                              AML  AML
        comp=N,418μm,0.3s
TERO    Teramo          0.31 112  P    Pg   09 36 23.9  -0.2
TERO                              AML  AML
        comp=N,197μm,0.1s
TERO                              AML  AML
        comp=E,148μm,0.3s
GUMA    Gualdo di Mace  0.33  16  P    Pb   09 36 25.6  -0.5
GUMA                              AML  AML
        comp=E,838μm,0.3s
GUMA                              AML  AML
        comp=N,652μm,0.3s
T1211   Morro Reatino   0.34 232  P    Pg   09 36 24.9 +0.4
T1211                             S    Sb   09 36 30.6  -1.0
T1211                             AML  AML
        comp=E,143μm,1.5s
T1211                             AML  AML
        comp=N,198μm,0.3s
CESI    CESI - Serrava  0.35 320  P    Pg   09 36 25.5 +0.7
CESI                              AML  AML
        comp=E,158μm,0.5s
CESI                              AML  AML
        comp=N,186μm,0.2s
CSP1    Cessapalombo    0.35 359  P    Pb   09 36 25.7  -0.8
CSP1                              S    Sb   09 36 31.5  -0.6
ARRO    Arrone          0.37 244  P    Pg   09 36 25.8 +0.7
ATFO    Monte Foce - G  0.78 323  ⇑P   Pg   09 36 30.9  -2.1
APEC    Apecchio        1.00 325  S    Sb   09 36 51.0 +0.2
```

*IDC **28** 09:36:59.0±3.4, 53°.76N×91°.04E, h0km, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=27.9km s-min=24.8km az=59.0*
*NNC **28** 09:37:11.2±3.5, 53°.65N×90°.05E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=32.9km s-min=27.7km az=24.0, Suspected Mining explosion.*

ISC 28 09:36:59.9±4.3, 53°.8N±0°.1×90°.9E±0°.2, h0km, n8, σ1§61/8, 2C-5D, Southwestern Siberia

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
I46RU   ZALESOVO INFRA  3.59 275  I              10 04 40.0
        baz=92,slow=338,SNR=0.8
ZAA0    Zalesovo Array  3.59 275  ⇓Pn  Pb   09 38 02.0  -2.1
        1.0nm,0.7s
ZAA0                              ⇑Lg  Lg   09 38 49.6
        3.6nm,0.8s
ZALV    Zalesovo Beam   3.59 275  Pn   Pn   09 37 58.5 +1.8
        0.9nm,0.3s,baz=93,slow=16,SNR=14
ZALV                              Lg   Lg   09 38 53.5
        1.9nm,0.3s,baz=89,slow=25,SNR=9.3
        2.0nm,0.5s
KURBB   Kurchatov Arra  8.21 252  Pn   Pn   09 39 00.0  -0.2
        0.1nm,0.3s,baz=66,slow=15,SNR=7.3
KURBB                             Sn   Sn   09 40 33.9 +0.3
        0.1nm,0.3s,baz=67,slow=25,SNR=7.1
KURBB                             Lg   Lg   09 41 21.7
        0.1nm,0.3s,baz=62,slow=28,SNR=4.0
        1.0nm,0.5s
KURBB   Kurchatov Arra  8.21 252  ⇓Pn  Pn   09 39 02.3 +2.1
        1.9nm,0.6s
KURBB                             ⇓Sn  Sn   09 40 34.3 +0.7
        6.9nm,0.7s
KURBB                             ⇓Lg  Lg   09 41 16.9
        19nm,1.0s
MK31    Makanchi Array  8.88 222  ⇑Pn  Pn   09 39 15.9 +6.4
        0.5nm,0.5s,baz=41,slow=15,SNR=4.1
MK31                              ⇓Lg  Lg   09 41 41.7
        4.8nm,0.9s,baz=39,slow=26,SNR=3.9
MKAR    Makanchi Array  8.88 222  Pn   Pn   09 39 09.8 +0.4
        0.1nm,0.3s,baz=39,slow=15,SNR=4.1
MKAR                              Sn   Sn   09 40 50.6 +0.4
        0.2nm,0.3s,baz=43,slow=22,SNR=2.5
MKAR                              Lg   Lg   09 41 40.9
        0.1nm,0.3s,baz=39,slow=32,SNR=3.8
        0.4nm,0.6s
SONM    Songino Array   11.47 115 Lg   Lg   09 43 00.7
        0.1nm,0.3s,baz=300,slow=24,SNR=5.6
```

IDC 28 09:56:00.5±4.3, 16°.83N×121°.61E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=397.7km s-min=30.1km az=62.0, Luzon

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
WRA     Warramunga Arr  38.62 161 P    P    10 03 25.6  -0.1
        0.2nm,0.7s,baz=341,slow=9.0,SNR=5.1
        0.2nm,0.7s
ASAR    Alice Springs   42.00 163 P    P    10 03 53.5  -0.2
        0.2nm,0.9s,baz=340,slow=6.7,SNR=1.5
        0.2nm,0.9s
MKAR    Makanchi Array  44.10 321 P    P    10 04 10.5  -0.1
        0.7nm,1.1s,baz=120,slow=8.9,SNR=1.8
        0.7nm,1.1s
```

ROM 28 10:10:05.4±0.1, 42°.840N±0°.003×13°.163E±0°.004, h8km, ML2.2/8, 2D, Error ellipse: s-maj=0.3km s-min=0.2km az=329.0, Central Italy

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
NRCA    Norcia          0.04 261  P    Pg   10 10 07.0  0.0
NRCA                              S    Sg   10 10 07.9 -0.3
NRCA                              AML  AML
        comp=N,16200μm,0.1s
NRCA                              AML  AML
        comp=N,17800μm,0.1s
NRCA                              AML  AML
        comp=E,13700μm,0.2s
NRCA                              AML  AML
        comp=N,16250μm,0.2s
NRCA                              AML  AML
        comp=E,14750μm,1.5s
T1216   Preci, Frazion  0.12 296  P    Pg   10 10 08.3 +0.3
T1216                             S    Sg   10 10 11.5 +1.6
T1216                             AML  AML
        comp=E,1680μm,0.8s
T1216                             AML  AML
        comp=N,1935μm,0.3s
T1216                             AML  AML
        comp=E,1678μm,0.8s
T1216                             AML  AML
        comp=N,1938μm,0.3s
T1216                             AML  AML
        comp=E,27050μm,0.4s
T1216                             AML  AML
        comp=N,28900μm,1.1s
T1216                             AML  AML
        comp=E,1522μm,5.6s
T1216                             AML  AML
        comp=N,1911μm,1.8s
MMO1    Montemonaco     0.13  64  P    Pg   10 10 08.8 +0.5
MMO1                              S    Sg   10 10 11.3 +0.9
AM05    Amandola Campo  0.20  45  AML  AML
        comp=E,1446μm,0.2s
AM05                              AML  AML
        comp=E,2555μm,0.4s
AM05                              AML  AML
        comp=N,2950μm,0.4s
AM05                              AML  AML
        comp=E,11300μm,0.4s
AM05                              AML  AML
        comp=N,410μm,0.1s
AM05                              AML  AML
        comp=N,412μm,1.3s
AM05                              AML  AML
        comp=N,74μm,0.2s
AM05                              AML  AML
        comp=E,278μm,3.6s
T1241   Roccafluvione,  0.20  85  P    Pg   10 10 10.0 +0.6
T1241                             S    Sg   10 10 13.5 +1.3
T1241                             AML  AML
        comp=E,1670μm,0.9s
T1241                             AML  AML
        comp=N,1255μm,0.7s
T1241                             AML  AML
        comp=E,1760μm,0.9s
T1241                             AML  AML
        comp=N,1340μm,0.7s
T1241                             AML  AML
        comp=E,3875μm,1.2s
T1241                             AML  AML
        comp=N,3730μm,0.9s
T1241                             AML  AML
        comp=E,3990μm,0.5s
T1241                             AML  AML
        comp=N,3950μm,0.9s
T1241                             AML  AML
        comp=N,1339μm,0.7s
T1241                             AML  AML
        comp=E,1758μm,0.9s
T1241                             AML  AML
        comp=E,1673μm,0.0s
T1241                             AML  AML
        comp=N,1254μm,0.7s
FDMO    Fiordimonte     0.20 344  AML  AML
FDMO                              AML  AML
        comp=E,674μm,0.1s
FDMO                              AML  AML
        comp=N,708μm,1.6s
FDMO                              AML  AML
FDMO                              AML  AML
        comp=N,760μm,1.6s
FDMO                              AML  AML
        comp=E,409μm,2.0s
T1217   Poggiodomo (PG  0.21 233  P    Pg   10 10 10.4 +0.7
T1217                             S    Sg   10 10 14.2 +1.5
T1215   Vallo di Nera,  0.22 260  P    Pg   10 10 10.4 +0.6
T1215                             S    Sg   10 10 14.1 +1.2
T1215                             AML  AML
        comp=E,315μm,0.4s
T1215                             AML  AML
        comp=N,362μm,1.2s
T1215                             AML  AML
        comp=E,4170μm,1.1s
T1215                             AML  AML
        comp=N,5370μm,0.3s
T1215                             AML  AML
        comp=E,4000μm,1.1s
T1215                             AML  AML
        comp=N,5275μm,0.3s
T1215                             AML  AML
        comp=E,315μm,0.4s
T1215                             AML  AML
        comp=E,566μm,9.3s
T1215                             AML  AML
        comp=N,339μm,0.8s
T1215                             AML  AML
        comp=N,361μm,1.1s
LNSS    Leonessa        0.25 201  P    Pg   10 10 11.2 +0.7
LNSS                              S    Sb   10 10 15.9  -1.0
CSP1    Cessapalombo    0.25   7  P    Pg   10 10 10.9 +0.4
CSP1                              S    Sg   10 10 15.2 +1.3
CSP1                              AML  AML
        comp=E,694μm,1.3s
CSP1                              AML  AML
        comp=N,872μm,0.4s
T1243   Rocca Santa Ma  0.25 124  P    Pg   10 10 11.2 +0.7
T1243                             S    Sb   10 10 15.6  -1.3
GUMA    Gualdo di Mace  0.26  29  P    Pg   10 10 11.4 +0.9
GUMA                              S    Sb   10 10 16.0  -0.9
GUMA                              AML  AML
        comp=E,2450μm,0.2s
GUMA                              AML  AML
        comp=N,3260μm,0.6s
GUMA                              AML  AML
        comp=E,2265μm,0.3s
GUMA                              AML  AML
        comp=N,2910μm,0.2s
GUMA                              AML  AML
        comp=E,78900μm,0.6s
GUMA                              AML  AML
        comp=N,42900μm,0.5s
GUMA                              AML  AML
        comp=E,76950μm,0.6s
GUMA                              AML  AML
        comp=N,52750μm,0.5s
GUMA                              AML  AML
        comp=E,2995μm,1.9s
GUMA                              AML  AML
        comp=E,2266μm,0.3s
GUMA                              AML  AML
        comp=N,3312μm,1.9s
GUMA                              AML  AML
        comp=N,3259μm,0.6s
RM33    Pellescritta (  0.33 173  P    Pg   10 10 12.7 +0.7
RM33                              S    Sb   10 10 18.2  -0.9
T1211   Morro Reatino   0.38 217  P    Pb   10 10 13.7  -0.8
T1211                             S    Sb   10 10 19.9  -0.6
TERO    Teramo          0.39 124  P    Pg   10 10 13.6 +0.6
TERO                              S    Sb   10 10 20.1  -0.6
EL6     Elcito          0.49 355  P    Pg   10 10 15.3 +0.4
EL6                               S    Sb   10 10 23.4  -0.3
FIAM    Fiamignano      0.57 183  P    Pg   10 10 16.8 +0.4
FIAM                              S    Sb   10 10 25.8  -0.2
ARVD    Arcevia         0.68 346  S    Sn   10 10 31.0  -1.1
IMOL    Imola, Italy    1.84 326  S    Sb   10 11 02.0  -0.3
MRB1    Monte Rocchett  2.18 141  P    Pb   10 10 44.0  -1.1
CAFE    Carife          2.38 139  P    Pn   10 10 45.3 +0.5
MCRV    Calabrutti - M  2.54 143  S    Sn   10 11 20.0 +1.8
CAVE    Cavezzo         2.56 323  ⇓P   Pn   10 10 43.2  -3.9
NDIM    Novi di Modena  2.62 322  S    Sg   10 11 31.0 +1.4
CTI     Castel Tesino   3.39 342  S    Sg   10 11 56.0 +1.9
MPRI    Monte Prat      3.40 358  S    Sg   10 11 56.0 +1.3
STAL    STALIGIAL       3.44 355  S    Sg   10 11 56.0 +0.3
LISI    Trento, Gardas  3.50 334  S    Sg   10 11 58.0 +0.2
CIMO    Cimolais        3.51 352  S    Sg   10 11 57.0  -1.0
LTRZ    Laterza         3.53 128  S    Sb   10 11 51.0  -0.2
CAPR    Capriolo        3.63 321  S    Sb   10 11 50.0  -4.0
ACOM    Acomizza, Ital  3.72   4  S    Sg   10 12 01.0  -3.7
ZOU     Zoufplan        3.72 358  S    Sb   10 11 60.0 +3.3
EUCT    Pavia           3.74 310  P    Pn   10 11 05.6 +2.2
EUCT                              S    Sn   10 11 47.0  -0.7
EUCT                              AML  AML
        comp=E,1385μm,0.1s
EUCT                              AML  AML
        comp=N,2425μm,0.5s
KOSI    Kohlern         3.84 341  S    Sb   10 12 03.0 +2.8
BRES    Bressanone      3.99 346  S    Sb   10 12 03.0  -1.6
PDG     Podgorica       4.51  93  ⇓P   Pn   10 11 16.0 +2.1
MILZ    Milazzo         4.83 160  P    Pb   10 11 29.6  -0.5
CLTA    Licata          5.71 174  P    Pn   10 11 29.7  -0.7
```

*LDG **28** 10:11:02.6±0.1, 43°.02N×13°.09E, h9km, Ml2.8/5, Error ellipse: s-maj=3.0km s-min=1.8km az=52.0*
*PRU **28** 10:11:05.9±0.0, 43°.13N×13°.37E, h0km*

ROM 28 10:11:03.3±0.1, 43°.036N±0°.003×13°.125E±0°.005, h9km, ML3.1/42, 19C-16D, Error ellipse: s-maj=0.4km s-min=0.2km az=56.0, Central Italy

```
Code    Station Name    Δ°   AZ°  Phase ID          Time      Res
                                  Op   ISC     h m s     ISC
FDMO    Fiordimonte     0.03 271  P    Pg   10 11 04.6  -0.4
FDMO                              AML  AML
FDMO                              AML  AML
FEMA    Monte Fema      0.09 217  ⇑P   Pg   10 11 06.2 +0.4
FEMA                              S    Sg   10 11 08.2 +0.6
FEMA                              AML  AML
        comp=N,58750μm,0.8s
FEMA                              AML  AML
        comp=E,56850μm,1.0s
FEMA                              AML  AML
        comp=N,58700μm,0.8s
FEMA                              AML  AML
        comp=E,56800μm,1.0s
GUMA    Gualdo di Mace  0.16  80  ⇑P   Pg   10 11 07.5 +0.9
GUMA                              S    Sg   10 11 10.9 +1.9
GUMA                              AML  AML
        comp=E,78900μm,0.6s
GUMA                              AML  AML
        comp=N,42950μm,0.5s
GUMA                              AML  AML
        comp=E,76950μm,0.6s
GUMA                              AML  AML
        comp=E,78850μm,0.6s
GUMA                              AML  AML
        comp=N,42950μm,0.5s
GUMA                              AML  AML
        comp=N,52750μm,0.5s
MDAR    Monte D'Aria    0.16   5  P    Pg   10 11 07.2 +0.4
MDAR                              S    Sg   10 11 09.8 +0.7
MDAR                              AML  AML
        comp=E,13550μm,0.3s
MDAR                              AML  AML
        comp=E,13600μm,0.3s
MDAR                              AML  AML
        comp=N,11800μm,1.3s
T1216   Preci, Frazion  0.17 208  P    Pg   10 11 07.5 +0.6
T1216                             S    Sg   10 11 10.5 +1.3
T1216                             AML  AML
        comp=E,27050μm,0.4s
T1216                             AML  AML
        comp=N,28850μm,1.1s
T1216                             AML  AML
        comp=N,28900μm,1.1s
T1216                             AML  AML
        comp=N,28850μm,1.1s
T1216                             AML  AML
        comp=E,27000μm,0.4s
SEF1    Sefro           0.17 310  P    Pg   10 11 07.5 +0.6
SEF1                              S    Sg   10 11 10.6 +1.2
SEF1                              AML  AML
        comp=E,51050μm,0.3s
SEF1                              AML  AML
        comp=N,43100μm,0.3s
SEF1                              AML  AML
        comp=N,43100μm,0.3s
SEF1                              AML  AML
        comp=E,51100μm,0.3s
PIO1    Pioraco         0.18 324  P    Pg   10 11 07.6 +0.6
PIO1                              S    Sg   10 11 10.7 +1.1
PIO1                              AML  AML
        comp=E,10440μm,0.3s
PIO1                              AML  AML
        comp=N,14950μm,1.2s
PIO1                              AML  AML
        comp=E,10445μm,0.3s
PIO1                              AML  AML
        comp=N,15000μm,1.2s
PIO1                              AML  AML
        comp=E,10445μm,0.3s
PIO1                              AML  AML
        comp=N,15000μm,1.2s
AM05    Amandola Campo  0.18 109  ⇑P   Pg   10 11 07.7 +0.7
AM05                              S    Sg   10 11 11.0 +1.4
AM05                              AML  AML
        comp=E,2555μm,0.4s
AM05                              AML  AML
        comp=E,11300μm,0.4s
AM05                              AML  AML
        comp=N,410μm,0.1s
AM05                              AML  AML
        comp=E,11250μm,0.4s
AM05                              AML  AML
        comp=E,2550μm,0.4s
AM05                              AML  AML
        comp=N,410μm,0.1s
AM05                              AML  AML
        comp=N,2950μm,0.4s
MMO1    Montemonaco     0.20 133  P    Pg   10 11 08.0 +0.5
MMO1                              S    Sg   10 11 11.5 +1.2
NRCA    Norcia          0.20 182  P    Pg   10 11 07.9 +0.4
NRCA                              AML  AML
        comp=E,12650μm,0.8s
NRCA                              AML  AML
        comp=N,10500μm,0.9s
NRCA                              AML  AML
        comp=N,10535μm,0.9s
NRCA                              AML  AML
        comp=N,11050μm,0.9s
NRCA                              AML  AML
        comp=N,10550μm,0.9s
NRCA                              AML  AML
        comp=E,13300μm,0.8s
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GAG1	**Gagliole**	**0.21 348**	P	Pg	10 11 08.3 +0.7
GAG1			S	Sg	10 11 12.1 +1.6
GAG1			AML	AML	
	comp=E,27800μm,0.6s				
GAG1			AML	AML	
	comp=N,26150μm,0.6s				
GAG1			AML	AML	
	comp=E,27750μm,0.6s				
GAG1			AML	AML	
	comp=N,26200μm,0.5s				
SNTG	**Esanatoglia**	**0.26 328**	⇓P	Pg	10 11 09.0 +0.5
SNTG			S	Sb	10 11 13.6 -1.1
SNTG			AML	AML	
	comp=N,5515μm,0.6s				
SNTG			AML	AML	
	comp=E,4895μm,0.7s				
SNTG			AML	AML	
	comp=E,5000μm,0.7s				
SNTG			AML	AML	
	comp=E,4890μm,0.7s				
SNTG			AML	AML	
	comp=N,5855μm,0.6s				
SNTG			AML	AML	
	comp=N,5515μm,0.6s				
T1241	**Roccafluvione,**	**0.29 129**	P	Pg	10 11 09.4 +0.4
T1241			S	Sb	10 11 14.5 -1.1
T1241			AML	AML	
	comp=E,3875μm,1.2s				
T1241			AML	AML	
	comp=N,3945μm,0.9s				
T1241			AML	AML	
	comp=N,3730μm,0.9s				
T1241			AML	AML	
	comp=N,3730μm,0.9s				
T1241			AML	AML	
	comp=N,3950μm,0.9s				
T1241			AML	AML	
	comp=E,3990μm,0.5s				
EL6	**Elcito**	**0.29 357**	P	Pg	10 11 09.8 +0.5
EL6			S	Sb	10 11 14.8 -1.0
T1215	**Vallo di Nera,**	**0.30 219**	P	Pg	10 11 09.9 +0.7
T1215			S	Sb	10 11 15.1 -0.8
T1215			AML	AML	
	comp=N,5370μm,0.3s				
T1215			AML	AML	
	comp=E,4020μm,1.1s				
T1215			AML	AML	
	comp=N,5275μm,0.3s				
T1215			AML	AML	
	comp=E,4170μm,1.1s				
T1215			AML	AML	
	comp=E,4020μm,1.0s				
T1215			AML	AML	
	comp=E,4165μm,1.1s				
T1215			AML	AML	
	comp=N,5370μm,0.3s				
T1215			AML	AML	
	comp=N,5275μm,0.3s				
T1217	**Poggiodomo (PG**	**0.35 204**	⇓P	Pg	10 11 10.9 +0.6
T1217			S	Sb	10 11 17.0 -0.5
T1217			AML	AML	
	comp=E,2705μm,0.5s				
T1217			AML	AML	
	comp=N,5475μm,1.4s				
T1217			AML	AML	
	comp=N,5220μm,1.4s				
T1217			AML	AML	
	comp=E,2705μm,0.5s				
T1217			AML	AML	
	comp=N,5480μm,1.4s				
T1217			AML	AML	
	comp=E,2670μm,0.3s				
FOSV	**Fossato di Vic**	**0.37 314**	⇓P	Pg	10 11 11.2 +0.6
FOSV			S	Sb	10 11 17.6 -0.4
FOSV			AML	AML	
	comp=E,8150μm,0.2s				
FOSV			AML	AML	
	comp=N,7575μm,0.3s				
FOSV			AML	AML	
	comp=N,7570μm,0.3s				
FOSV			AML	AML	
	comp=E,8155μm,0.2s				
ATCC	**AVT- Casa Cast**	**0.39 293**	⇓P	Pb	10 11 11.6 -0.7
ATCC			S	Sb	10 11 18.3 -0.1
ATCC			AML	AML	
	comp=N,13095μm,0.9s				
ATCC			AML	AML	
	comp=E,27300μm,0.2s				
ATCC			AML	AML	
	comp=N,13105μm,0.9s				
T1204	**Amatrice, Fraz**	**0.39 159**	P	Pg	10 11 11.4 +0.5
T1204			AML	AML	
	comp=E,6795μm,0.4s				
T1204			AML	AML	
	comp=N,2830μm,0.2s				
T1204			AML	AML	
	comp=E,6800μm,0.4s				
T1243	**Rocca Santa Ma**	**0.41 145**	P	Pg	10 11 11.7 +0.3
T1243			S	Sb	10 11 18.9 -0.4
OFFI	**Offida**	**0.42 104**	⇑P	Pb	10 11 13.3 +0.4
SMA1	**SAN MARTINO**	**0.43 159**	P	Pg	10 11 11.9 +0.1
SMA1			S	Sb	10 11 19.3 -0.5
SMA1			AML	AML	
	comp=N,3685μm,0.6s				
SMA1			AML	AML	
	comp=E,4525μm,0.7s				
LNSS	**Leonessa**	**0.44 188**	⇓P	Pg	10 11 12.2 +0.3
LNSS			AML	AML	
	comp=E,2870μm,1.1s				
LNSS			AML	AML	
	comp=N,3015μm,0.6s				
ARVD	**Arcevia**	**0.48 344**	⇓P	Pg	10 11 13.1 +0.4
ARVD			S	Sb	10 11 22.0 +0.8
ARVD			AML	AML	
	comp=E,3525μm,0.3s				
ARVD			AML	AML	
	comp=N,3305μm,1.0s				
MURB	**Monte Urbino**	**0.49 298**	⇑P	Pb	10 11 13.6 -0.6
MURB			S	Sb	10 11 22.0 +0.4
MURB			AML	AML	
	comp=E,15050μm,0.2s				
MURB			AML	AML	
	comp=N,10285μm,0.3s				
MURB			AML	AML	
	comp=E,16000μm,0.2s				
MURB			AML	AML	
	comp=N,10420μm,0.3s				
MURB			AML	AML	
	comp=N,10280μm,0.3s				
MURB			AML	AML	
	comp=E,15100μm,0.2s				
ATFO	**Monte Foce - G**	**0.52 309**	⇓P	Pg	10 11 14.0 +0.5
ATFO			AML	AML	
	comp=N,2145μm,0.6s				
ATFO			AML	AML	
	comp=E,2440μm,0.8s				
ARRO	**Arrone**	**0.53 210**	⇑P	Pg	10 11 14.0 +0.5
ARRO			S	Sb	10 11 24.0 +1.6
ARRO			AML	AML	
	comp=E,1505μm,1.1s				
ARRO			AML	AML	
	comp=N,1770μm,1.2s				
RM33	**Pellescritta (**	**0.53 173**	⇑P	Pg	10 11 13.9 +0.3
RM33			S	Sb	10 11 23.0 +0.4
RM33			AML	AML	
	comp=N,1560μm,0.3s				
RM33			AML	AML	
	comp=N,1470μm,0.3s				
RM33			AML	AML	
	comp=E,1615μm,0.8s				
RM33			AML	AML	
	comp=N,1475μm,0.3s				
RM33			AML	AML	
	comp=E,1670μm,0.8s				
RM33			AML	AML	
	comp=N,1560μm,0.4s				
T1211	**Morro Reatino**	**0.54 202**	⇑P	Pb	10 11 14.7 -0.3
T1211			AML	AML	
	comp=N,2490μm,1.4s				
T1211			AML	AML	
	comp=E,1720μm,1.5s				
CAMP	**Campotosto**	**0.54 157**	⇓P	Pg	10 11 13.9 +0.1
CAMP			AML	AML	
	comp=E,1160μm,0.7s				
CAMP			AML	AML	
	comp=N,1230μm,0.9s				
TERO	**Teramo**	**0.54 139**	⇑P	Pg	10 11 14.0 +0.2
TERO			S	Sb	10 11 24.0 +1.1
TERO			AML	AML	
	comp=N,1980μm,0.5s				
TERO			AML	AML	
	comp=E,2235μm,0.9s				
FRON	**Frontone**	**0.56 329**	⇓P	Pg	10 11 14.5 +0.3
FRON			AML	AML	
	comp=E,2805μm,0.2s				
FRON			AML	AML	
	comp=N,4650μm,0.3s				
FRON			AML	AML	
	comp=E,2810μm,0.2s				
CESX	**Cesi**	**0.58 223**	⇓P	Pg	10 11 14.8 +0.2
CESX			S	Sb	10 11 25.0 +0.9
CESX			AML	AML	
	comp=N,3820μm,0.3s				
CESX			AML	AML	
	comp=E,4835μm,1.2s				
ATTE	**AVT- Monte Tez**	**0.59 286**	⇑P	Pb	10 11 16.4 +0.6
ATTE			S	Sb	10 11 25.0 +0.7
ATTE			AML	AML	
	comp=N,1345μm,0.3s				
ATTE			AML	AML	
	comp=E,1900μm,0.4s				
AOI	**Ancona**	**0.62 34**	S	Sn	10 11 28.0 -0.4
ATVO	**AVT- Monte Val**	**0.63 304**	⇓P	Pg	10 11 15.8 +0.3
ATVO			AML	AML	
	comp=N,1735μm,0.5s				
ATVO			AML	AML	
	comp=E,1410μm,0.2s				
MPAG	**Monte Paganucc**	**0.65 336**	⇑P	Pg	10 11 16.4 +0.5
MPAG			S	Sn	10 11 28.0 -1.3
MPAG			AML	AML	
	comp=E,1595μm,0.7s				
MPAG			AML	AML	
	comp=N,1505μm,0.9s				
MPAG			AML	AML	
	comp=E,1600μm,0.7s				
PIEI	**Pieia**	**0.66 319**	P	Pg	10 11 16.2 +0.2
PIEI			S	Sn	10 11 28.0 -1.4
PIEI			AML	AML	
	comp=N,1560μm,0.2s				
PIEI			AML	AML	
	comp=E,1470μm,0.3s				
GIGS	**Gran Sasso**	**0.67 151**	⇓P	Pg	10 11 16.2 0.0
GIGS			S	Sb	10 11 27.0 +0.3
GIGS			AML	AML	
	comp=E,390μm,0.5s				
GIGS			AML	AML	
	comp=E,389μm,0.5s				
GIGS			AML	AML	
	comp=N,332μm,0.3s				
ATPI	**Pietralunga -**	**0.67 308**	⇑P	Pg	10 11 16.7 +0.4
ATPI			S	Sb	10 11 28.0 +1.3
ATPI			AML	AML	
	comp=E,1330μm,0.5s				
ATPI			AML	AML	
	comp=N,1345μm,0.7s				
SENI	**Senigallia**	**0.67 7**	P	Pn	10 11 18.5 -0.5
ATMI	**Monte Miggiano**	**0.69 296**	S	Sn	10 11 30.0 -0.3
FSSB	**Fossombrone**	**0.70 339**	⇑P	Pb	10 11 17.3 -0.4
FSSB			S	Sn	10 11 30.0 -0.5
FSSB			AML	AML	
	comp=N,11550μm,0.3s				
FSSB			AML	AML	
	comp=E,6625μm,1.3s				
MGAB	**Montegabbione**	**0.75 261**	⇓P	Pb	10 11 18.3 -0.3
MGAB			AML	AML	
	comp=E,2585μm,0.4s				
MGAB			AML	AML	
	comp=N,2600μm,0.6s				
MGAB			AML	AML	
	comp=E,2605μm,0.4s				
MGAB			AML	AML	
	comp=N,2760μm,0.4s				
FIAM	**Fiamignano**	**0.77 180**	⇑P	Pg	10 11 17.8 -0.3
FIAM			AML	AML	
	comp=N,536μm,0.5s				
FIAM			AML	AML	
	comp=E,764μm,1.2s				
BADI	**Badiali**	**0.80 307**	⇑P	Pb	10 11 19.1 -0.3
BADI			S	Sn	10 11 33.0 +0.2
PE3	**Peglio**	**0.80 325**	⇑P	Pb	10 11 19.7 +0.2
FAGN	**Fagnano**	**0.84 156**	⇓P	Pb	10 11 20.0 -0.1
FAGN			AML	AML	
	comp=E,1985μm,0.4s				
FAGN			AML	AML	
	comp=N,1670μm,1.3s				
CAFI	**Castiglion Fio**	**0.90 289**	⇑P	Pb	10 11 21.0 0.0
CAFI			AML	AML	
	comp=N,968μm,0.8s				
CAFI			AML	AML	
	comp=E,1198μm,1.3s				
SSP9	**Sansepolcro**	**0.90 307**	⇓P	Pb	10 11 21.2 +0.1
SSP9			AML	AML	
	comp=E,584μm,0.7s				
SSP9			AML	AML	
	comp=N,741μm,0.6s				
T0110	**Collepietro**	**0.94 149**	P	Pg	10 11 20.6 -0.8
T0110			AML	AML	
	comp=E,1240μm,0.6s				
T0110			AML	AML	
	comp=N,1160μm,0.7s				
T0110			AML	AML	
	comp=N,1155μm,0.7s				
MTCE	**Montecelio**	**1.05 196**	⇓P	Pg	10 11 22.8 -0.7
MTCE			AML	AML	
	comp=E,699μm,1.2s				
MTCE			AML	AML	
	comp=N,470μm,1.2s				
MCIV	**Monte Civitell**	**1.09 257**	S	Sn	10 11 43.0 +2.8
INTR	**Introdacqua**	**1.18 150**	⇑P	Pb	10 11 23.7 -2.1
RUFI	**Rufina**	**1.43 305**	⇑P	Pg	10 11 30.6 0.0
FERS	**Ferrara-Casagl**	**2.19 329**	S	Sg	10 12 13.0 -0.6
PGF	**Pioggiola**	**3.08 262**	*e*P	Pn	10 11 51.7 -0.4
PGF			*e*Sn	Sn	10 12 24.7 -4.4
	comp=N,7.3nm,0.6s				
MYKA	**Terra Mystica**	**3.61 6**	*e*Pn	Pn	10 12 01.3 +1.9
	comp=N,2.4nm,0.3s				
OBKA	**Obir**	**3.62 16**	*e*Pn	Pn	10 12 01.1 +1.6
	comp=N,1.5nm,0.2s				
ABTA	**Abfaltersbach**	**3.74 354**	Pn	Pn	10 12 03.3 +2.1
	comp=N,6.2nm,0.2s,SNR=13				
KBA	**Koelnbreinsper**	**4.04 2**	*e*Pn	Pn	10 12 07.9 +2.3
	comp=N,4.9nm,0.3s				
SBF	**Sospel**	**4.22 283**	*e*P	Pn	10 12 08.5 +0.6
SBF			*e*Sn	Sn	10 12 51.6 -5.8
	comp=N,16nm,0.6s				
FETA	**Feichten**	**4.33 338**	*e*Pn	Pn	10 12 13.8 +4.4
	comp=N,1.3nm,0.2s				
WTTA	**Wattenberg**	**4.36 347**	*e*Pn	Pn	10 12 12.7 +2.9
	comp=N,1.8nm,0.2s				
SQTA	**Sankt Quirin**	**4.40 343**	Pn	Pn	10 12 13.8 +3.5
	comp=N,4.9nm,0.2s,SNR=6.9				
WATA	**Walderalm**	**4.44 346**	Pn	Pn	10 12 14.4 +3.5
	comp=N,4.0nm,0.2s,SNR=5.0				
BIOA	**Bad Ischl, Aus**	**4.67 4**	*e*Pn	Pn	10 12 16.0 +2.0
	comp=N,3.8nm,0.2s				
RETA	**Reutte**	**4.75 340**	*e*Pn	Pn	10 12 18.5 +3.3
	comp=N,1.4nm,0.2s				
DAVA	**Damuels**	**4.83 333**	*e*Pn	Pn	10 12 19.9 +3.6
	comp=N,4.3nm,0.5s				
LMR	**La Mourre**	**4.85 276**	*e*P	Pn	10 12 17.0 +0.6
MOA	**Molln**	**4.88 9**	*e*Pn	Pn	10 12 18.7 +1.8
	comp=N,1.0nm,0.2s				
MBDF	**Montbardon**	**4.89 292**	*e*P	Pn	10 12 18.1 +0.9
MBDF			*e*Sn	Sn	10 13 07.3 -6.7
	comp=N,3.4nm,0.6s				
LPG	**La Plagne**	**5.20 300**	*e*P	Pn	10 12 22.6 +1.2
LPG			*e*Sn	Sn	10 13 14.5 -7.1
	comp=N,2.9nm,0.4s				
CONA	**Conrad Observa**	**5.26 21**	Pn	Pn	10 12 23.4 +1.3
	comp=N,0.9nm,0.2s,SNR=5.0				
ORIF	**Oris-en-Rattie**	**5.56 292**	*e*P	Pn	10 12 27.3 +1.1
ORIF			*e*Sn	Sn	10 13 22.9 -7.3
	comp=N,1.5nm,0.4s				
SMRF	**Simiane la Rot**	**5.57 282**	*e*P	Pn	10 12 27.2 +0.8
CKRC	**Cesky Krumlov**	**5.84 8**	*e*SN	Sn	10 13 36.3 -0.9
KHC	**Kasperske Hory**	**6.10 3**	*e*PN	Pn	10 12 34.7 +1.0
KHC			*e*SN	Sn	10 13 41.8 -1.8

NEIC ***28*** *10:15:07.4±1.4, 10°.3S±0°.1×161°.24E±0°.06, h68km±8km, mb4.5/31, Error ellipse: s-maj=17.6km s-min=5.0km*

az=206.0
IDC ***28*** *10:15:08.3±1.0, 10°.25S×161°.11E, h83km±7km, mb3.6/11, mbtmp4.0/13, MS3.2/11, Error ellipse: s-maj=16.2km s-min=10.6km az=55.0*
ISC 28 10:15:05.7±0.5, 10°.27S±0°.07×161°.32E±0°.08, h61km, n63, σ1°18/57, mb4.4/26, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.58**	**301**	P		**Pn**	**10 15 32.3**	**+0.8**
	17μm,0.2s,baz=176,slow=8.1,SNR=114							
HNR				S		**Sn**	**10 15 50.5**	**-0.5**
	52μm,0.3s,baz=168,slow=19,SNR=14							
HNR				LR		LR	10 16 23.4	
	comp=Z,5μm,18.4s,baz=134,slow=54							
HNR	**Honiara**	**1.58**	**301**	Pn		**Pn**	**10 15 32.1**	**+0.5**
KOUNC	**Koumac, New Ca**	**10.62**	**165**	Pn		**Pn**	**10 17 36.7**	**+1.6**
LIFNC	**LIFOU**	**11.90**	**152**	Pn		**Pn**	**10 17 52.9**	**+0.2**
DZM	**Mont Dzumac**	**12.73**	**158**	P		**Pn**	**10 18 06.7**	**+2.7**
	14nm,0.4s,baz=20,slow=6.7,SNR=45							
DZM				S		**Sn**	**10 20 21.5**	**-2.7**
	4.8nm,0.7s,baz=62,slow=14,SNR=1.4							
DZM				LR		LR	10 22 51.6	
	comp=Z,88nm,18.7s,baz=168,slow=36							
MARNC	**Mare, Loyalty**	**12.88**	**151**			**Pn**	**10 18 07.8**	**+1.8**
PMG	**Port Moresby**	**13.98**	**272**	LR		LR	10 23 43.2	
	comp=Z,87nm,19.4s,baz=79,slow=37							
CTA	**Charters Tower**	**17.50**	**234**	P		**P**	**10 19 06.4**	**+0.3**
	1.0nm,0.4s,baz=38,slow=12,SNR=1.7							
CTA				LR		LR	10 24 59.1	
	comp=Z,41nm,18.2s,baz=79,slow=34							
CTAO	**Charters Tower**	**17.50**	**234**	P		**P**	**10 19 06.6**	**+0.5**
EIDS	**Eidsvold**	**17.89**	**212**	P		**Pn**	**10 19 12.4**	**+2.0**
COEN	**Coen**	**18.11**	**257**	P		**P**	**10 19 12.3**	**-0.6**
COEN				IAmb		IAmb	10 19 27.7	
	comp=Z,9.4nm,1.0s							
ARMA	**Armidale**	**21.99**	**203**	P		**P**	**10 19 55.3**	**+0.4**
ARMA				IAmb		IAmb	10 20 04.1	
	comp=Z,20nm,1.2s							
AFI	**Afiamalu**	**26.55**	**101**	LR		LR	10 28 53.7	
	comp=Z,75nm,19.3s,baz=276,slow=31							
WR0	**Warramunga Arr**	**27.55**	**246**	P		**P**	**10 20 45.3**	**-1.8**
WR0				IAmb		IAmb	10 21 06.5	
	comp=Z,5.7nm,0.6s							
WB0	**Warramunga Arr**	**27.63**	**247**	P		**P**	**10 20 46.9**	**-0.9**
WB0				IAmb		IAmb	10 21 07.3	
	comp=Z,10.0nm,0.7s							
WB2	**Warramunga Arr**	**27.71**	**247**	P		**P**	**10 20 47.5**	**-1.0**
WB2				IAmb		IAmb	10 21 08.1	
	comp=Z,4.6nm,0.7s							
WRA	**Warramunga Arr**	**27.73**	**247**	P		**P**	**10 20 47.2**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=76,slow=9.0,SNR=17							
WRA				pP		**pwP**	**10 21 07.0**	**-1.0**
	comp=Z,4.8nm,0.5s,baz=75,slow=9.4,SNR=22							
WRA				LR		LR	10 30 29.1	
	comp=Z,63nm,20.6s,baz=52,slow=33							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**27.73**	**247**	P		**P**	**10 20 46.5**	**-2.1**
STKA	**Stephens Creek**	**28.20**	**217**	P		**P**	**10 20 53.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=11,slow=16,SNR=2.2							
STKA				LR		LR	10 30 45.2	
	comp=Z,58nm,20.1s,baz=24,slow=33							
	comp=Z,0.7nm,0.5s							
STKA	**Stephens Creek**	**28.20**	**217**	P		**P**	**10 20 52.7**	**-0.1**
GUMO	**Guam**	**28.78**	**325**	LR		LR	10 31 23.2	
	comp=Z,31nm,22.0s,baz=138,slow=34							
H11S2	**WAKE ISLAND Hy**	**29.07**	**11**	T		T	10 49 59.0	
	baz=194,slow=76,SNR=18							
H11S3	**WAKE ISLAND Hy**	**29.07**	**11**	T		T	10 49 51.7	
	baz=194,slow=76,SNR=15							
H11S1	**WAKE ISLAND Hy**	**29.08**	**11**	T		T	10 49 52.8	
	baz=194,slow=76,SNR=15							
NIUE	**Niue**	**29.13**	**111**	P		**P**	**10 20 59.4**	**-1.7**
AS31	**Alice Springs**	**29.34**	**239**	P		**P**	**10 21 01.0**	**-2.0**
ASAR	**Alice Springs**	**29.34**	**239**	P		**P**	**10 21 01.6**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=64,slow=9.9,SNR=7.3							
ASAR				pP		**pwP**	**10 21 20.8**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=60,slow=10,SNR=11							
ASAR				LR		LR	10 31 10.1	
	comp=Z,92nm,20.8s,baz=20,slow=33							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**29.34**	**239**	P		**P**	**10 21 02.9**	**-0.1**
H11N1	**WAKE ISLAND Hy**	**30.29**	**10**	T		T	10 51 43.3	
	baz=192,slow=76,SNR=25							
H11N3	**WAKE ISLAND Hy**	**30.30**	**10**	T		T	10 51 25.5	
	baz=192,slow=76,SNR=18							
H11N2	**WAKE ISLAND Hy**	**30.31**	**10**	T		T	10 51 44.7	
	baz=192,slow=76,SNR=25							
URZ	**Urewera**	**31.27**	**156**	LR		LR	10 31 14.2	
	comp=Z,107nm,20.5s,baz=20,slow=31							
KNRA	**Kununurra**	**32.15**	**257**	P		**P**	**10 21 27.4**	**-0.4**
BBOO	**Buckleboo**	**32.32**	**222**	P		**P**	**10 21 28.8**	**-0.3**
BBOO				IAmb		IAmb	10 21 29.5	
	comp=Z,6.2nm,0.8s							
SOEI	**Soe**	**36.48**	**267**	P		**P**	**10 22 06.1**	**+0.7**
MJAR	**Matsushiro Arr**	**51.39**	**336**	P		**P**	**10 24 03.5**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=163,slow=8.2,SNR=4.1							
MJAR				LR		LR	10 43 38.1	
	comp=Z,9.7nm,21.5s,baz=163,slow=33							
	comp=Z,1.3nm,0.7s							
KSRS	**Korea Array**	**56.86**	**328**	LR		LR	10 47 49.5	
	comp=Z,13nm,20.0s,baz=35,slow=35							
VNDA	**Vanda**	**67.24**	**180**	P		**P**	**10 25 53.6**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=343,slow=9.4,SNR=2.5							
	comp=Z,0.4nm,0.6s							
VNDA	**Vanda**	**67.24**	**180**	P		**P**	**10 25 53.9**	**+0.6**
SONM	**Songino Array**	**75.51**	**325**	P		**P**	**10 26 44.1**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=139,slow=5.9,SNR=5.3							
	comp=Z,0.8nm,0.4s							
SONM	**Songino Array**	**75.51**	**325**	P		**P**	**10 26 44.3**	**+0.6**
OHAK	**Old Harbor**	**76.86**	**23**	P		**P**	**10 26 52.3**	**+1.4**
KDAK	**Kodiak Island**	**77.52**	**23**	P		**P**	**10 26 55.9**	**+1.3**
Q19K	**Cape Douglas,**	**77.92**	**22**	P		**P**	**10 26 57.8**	**+0.9**
O18K	**Koktuh Hills**	**78.02**	**21**	P		**P**	**10 26 58.0**	**+0.6**
O18K				IAmb		IAmb	10 27 05.8	
	comp=Z,13nm,1.2s							
SVW2	**Sparrevohn**	**78.80**	**20**	P		**P**	**10 27 03.1**	**+1.4**
SVW2				IAmb		IAmb	10 27 04.2	
	comp=Z,7.8nm,0.7s							
N19K	**Bonanza Creek**	**78.96**	**20**	P		**P**	**10 27 03.1**	**+0.4**
N19K				IAmb		IAmb	10 27 06.8	
	comp=Z,7.6nm,1.2s							
QSPA	**South Pole Qui**	**79.73**	**180**	P		**P**	**10 27 07.0**	**0.0**
QSPA				IAmb		IAmb	10 27 07.8	
	comp=Z,4.0nm,0.9s							
M19K	**Big River Lodg**	**79.77**	**20**	P		**P**	**10 27 08.8**	**+1.9**
M19K				IAmb		IAmb	10 27 09.7	
	comp=Z,5.5nm,0.6s							
L19K	**White Mountain**	**79.82**	**19**	P		**P**	**10 27 08.9**	**+1.7**
L19K				IAmb		IAmb	10 27 10.1	
	comp=Z,5.7nm,1.0s							
SUA	**Susitna One**	**80.72**	**21**	P		**P**	**10 27 11.9**	**-0.3**
SUA				IAmb		IAmb	10 27 34.0	
	comp=Z,8.3nm,1.2s							
PMR	**Palmer**	**81.38**	**22**	P		**P**	**10 27 17.2**	**+1.7**
PMR				IAmb		IAmb	10 27 37.2	
	comp=Z,8.4nm,1.4s							
CAST	**Castle Rocks**	**81.60**	**19**	P		**P**	**10 27 17.3**	**+0.5**
CAST				IAmb		IAmb	10 27 18.1	
	comp=Z,4.5nm,0.7s							
SCM	**Sheep Creek Mo**	**82.20**	**22**	P		**P**	**10 27 19.9**	**-0.1**
TRF	**Thorofare Moun**	**82.21**	**20**	P		**P**	**10 27 20.6**	**+0.5**
TRF				IAmb		IAmb	10 27 46.5	
	comp=Z,14nm,1.5s							
MCK	**McKinley**	**82.86**	**20**	P		**P**	**10 27 24.3**	**+1.0**
MCK				IAmb		IAmb	10 27 24.9	
	comp=Z,7.6nm,0.9s							
IMAR	**Indian Mountai**	**82.90**	**17**	P		**P**	**10 27 24.8**	**+1.4**
ILAR	**Eielson Array**	**84.21**	**20**	P		**P**	**10 27 30.1**	**0.0**
	comp=Z,0.5nm,0.4s,baz=242,slow=4.9,SNR=15							
ILAR				pP		**sP**	**10 27 52.9**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=238,slow=5.1,SNR=1.9							
	comp=Z,0.5nm,0.4s							
NVAR	**Mina Array Bea**	**88.88**	**51**	P		**P**	**10 27 54.5**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=238,slow=7.2,SNR=6.9							
	comp=Z,0.6nm,0.7s							
MKAR	**Makanchi Array**	**90.00**	**318**	P		**P**	**10 27 57.9**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=85,slow=5.9,SNR=2.5							
	comp=Z,0.4nm,0.4s							
YKA	**Yellowknife Ar**	**96.30**	**28**	P		**P**	**10 28 27.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=261,slow=4.9,SNR=6.0							
	comp=Z,0.5nm,0.5s							
TXAR	**Lajitas Array**	**99.29**	**62**	P		**Pdif**	**10 28 42.6**	**+0.9**
	comp=Z,0.4nm,1.0s,baz=305,slow=3.2,SNR=2.4							
	comp=Z,0.4nm,1.0s							
ARCES	**ARCESS Array B**	**114.45**	**344**	PKP		**PKiKP**	**10 33 37.0**	**-1.3**

comp=Z,0.4nm,0.4s,baz=75,slow=1.4,SNR=5.1

ROM 28 10:20:32.4±0.0, 42°.868N±0°.002×13°.101E±0°.003, h9km, ML2.3/7, 1D, Error ellipse: s-maj=0.2km s-min=0.1km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**164**	P	Pg	10 20 34.6	+0.4
NRCA				S	Sg	10 20 35.9	+0.4
T1216	**Preci, Frazion**	**0.07**	**291**	P	Pg	10 20 34.9	+0.4
T1216				S	Sg	10 20 36.3	+0.3
T1216				AML	AML		
	comp=E,5960μm,1.6s						
T1216				AML	AML		
	comp=N,10625μm,0.2s						
T1216				AML	AML		
	comp=N,10635μm,0.2s						
T1216				AML	AML		
	comp=E,5970μm,1.6s						
FEMA	**Monte Fema**	**0.10**	**338**	P	Pg	10 20 35.5	+0.5
FEMA				S	Sg	10 20 37.4	+0.5
FEMA				AML	AML		
	comp=N,3705μm,0.1s						
FEMA				AML	AML		
	comp=E,6375μm,0.3s						
FEMA				AML	AML		
	comp=N,3710μm,0.1s						
FDMO	**Fiordimonte**	**0.17**	**357**	P	Pg	10 20 36.4	+0.4
FDMO				S	Sg	10 20 39.3	+0.8
FDMO				AML	AML		
	comp=E,1295μm,1.2s						
FDMO				AML	AML		
	comp=N,1585μm,1.0s						
MMO1	**Montemonaco**	**0.17**	**79**	P	Pg	10 20 36.7	+0.7
MMO1				S	Sg	10 20 39.7	+1.1
T1215	**Vallo di Nera,**	**0.18**	**249**	P	Pg	10 20 36.9	+0.6
T1215				S	Sg	10 20 40.0	+1.1
T1215				AML	AML		
	comp=E,1360μm,0.4s						
T1215				AML	AML		
	comp=N,820μm,0.5s						
T1215				AML	AML		
	comp=E,1360μm,0.4s						
T1215				AML	AML		
	comp=N,820μm,0.5s						
CESI	**CESI - Serrava**	**0.20**	**314**	P	Pg	10 20 37.1	+0.6
CESI				S	Sg	10 20 40.5	+1.1
CESI				AML	AML		
	comp=E,1460μm,0.5s						
CESI				AML	AML		
	comp=N,2290μm,0.2s						
T1217	**Poggiodomo (PG**	**0.20**	**219**	P	Pg	10 20 37.3	+0.7
T1217				S	Sg	10 20 40.8	+1.4
T1217				AML	AML		
	comp=E,1426μm,0.2s						
T1217				AML	AML		
	comp=N,2440μm,0.2s						
AM05	**Amandola Campo**	**0.21**	**59**	AML	AML		
	comp=N,626μm,0.3s						
AM05				AML	AML		
	comp=N,188μm,1.5s						
AM05				AML	AML		
	comp=E,2445μm,0.3s						
AM05				AML	AML		
	comp=E,610μm,1.0s						
T1241	**Roccafluvione,**	**0.24**	**93**	P	Pg	10 20 37.9	+0.6
T1241				S	Sg	10 20 41.9	+1.3
GUMA	**Gualdo di Mace**	**0.26**	**41**	P	Pb	10 20 38.5	-0.7
GUMA				S	Sb	10 20 43.0	-0.8
LNSS	**Leonessa**	**0.27**	**190**	P	Pb	10 20 38.6	-0.8
LNSS				S	Sb	10 20 43.0	-1.1
T1243	**Rocca Santa Ma**	**0.31**	**124**	P	Pg	10 20 39.2	+0.7
T1243				S	Sb	10 20 44.2	-1.1
FIU1	**Fiuminata**	**0.34**	**339**	⇓P	Pg	10 20 27.2	-12
ARRO	**Arrone**	**0.38**	**221**	P	Pg	10 20 40.4	+0.6
ARRO				S	Sb	10 20 46.7	-0.6
T1211	**Morro Reatino**	**0.38**	**209**	S	Sg	10 20 43.0	-1.9
SNTG	**Esanatoglia**	**0.41**	**343**	P	Pg	10 20 41.0	+0.7
SNTG				S	Sb	10 20 47.1	-0.9
SNTG				AML	AML		
	comp=E,202μm,0.4s						
SNTG				AML	AML		
	comp=N,256μm,0.1s						
SNTG				AML	AML		
	comp=N,257μm,0.1s						
EL6	**Elcito**	**0.46**	**0**	P	Pg	10 20 32.6	-8.8
EL6				S	Sg	10 20 42.0	-5.5
ATCC	**AVT- Casa Cast**	**0.46**	**313**	P	Pg	10 20 41.9	+0.5
ATCC				S	Sb	10 20 49.1	-0.6
CING	**Cingoli**	**0.51**	**8**	P	Pg	10 20 42.8	+0.4
CING				S	Sb	10 20 50.8	-0.3
ARVD	**Arcevia**	**0.64**	**350**	S	Sb	10 20 56.0	+1.2
PIEI	**Pieia**	**0.79**	**328**	S	Sb	10 20 60.0	+1.0
APEC	**Apecchio**	**0.85**	**324**	S	Sn	10 21 07.0	+3.8
MCIV	**Monte Civitell**	**1.05**	**266**	S	Sg	10 20 59.0	-7.3

BUC 28 10:23:47.4±0.4, 45°.16N×24°.05E, h5km, ml1.1/2, 14C-14D, Error ellipse: s-maj=3.9km s-min=2.0km az=175.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOT	**Lotru**	**0.35**	**325**	⇑P	Pg	10 23 53.6	-0.6
LOT				⇑S	Sg	10 23 58.4	-0.5
LOT	**Lotru**	**0.35**	**325**	⇑P	Pg	10 23 53.6	-0.6
LOT				⇑S	Sg	10 23 58.4	-0.5
MTUR	**Matau**	**0.72**	**84**	⇑P	Pg	10 24 01.1	0.0
MTUR	**Matau**	**0.72**	**84**	⇑P	Pg	10 24 01.1	0.0
VOIR		**0.76**	**68**	⇓P	Pg	10 24 01.8	0.0
VOIR				⇑S	Sg	10 24 12.3	+0.6
VOIR		**0.76**	**68**	⇓P	Pg	10 24 01.8	0.0
VOIR				⇑S	Sg	10 24 12.3	+0.6
GZR	**Gura Zlata**	**0.93**	**285**	⇓P	Pg	10 24 04.7	-0.5
GZR				⇓S	Sg	10 24 17.8	+0.5
GZR	**Gura Zlata**	**0.93**	**285**	⇓P	Pg	10 24 04.7	-0.5
GZR				⇓S	Sg	10 24 17.8	+0.5
HERR	**Herculane**	**1.19**	**257**	⇓P	Pn	10 24 11.0	+0.3
HERR				⇑S	Sb	10 24 26.1	-0.1
HERR	**Herculane**	**1.19**	**257**	⇓P	Pn	10 24 11.0	+0.3
HERR				⇑S	Sb	10 24 26.1	-0.1
MARR	**Marisel-Cluj**	**1.65**	**337**	⇑P	Pn	10 24 17.4	+0.3
MARR				⇓S	Sg	10 24 40.4	+0.1
MARR	**Marisel-Cluj**	**1.65**	**337**	⇑P	Pn	10 24 17.4	+0.3
MARR				⇓S	Sg	10 24 40.4	+0.1
BZS	**Buzias**	**1.78**	**286**	⇓P	Pn	10 24 19.1	+0.3
BZS				⇑S	Sb	10 24 43.0	0.0
BZS	**Buzias**	**1.78**	**286**	⇓P	Pn	10 24 19.1	+0.3
BZS				⇑S	Sb	10 24 43.0	0.0
DRGR		**1.88**	**331**	⇓S	Sb	10 24 46.0	0.0
DRGR		**1.88**	**331**	⇓S	Sb	10 24 46.0	0.0

*NEIC **28** 10:25:50.0±1.2, 19°.65N±0°.01×145°.8E±0°.2, h59km±10km, mb4.5/42, Error ellipse: s-maj=24.9km s-min=1.8km az=87.0*
*IDC **28** 10:25:54.4±8.4, 19°.44N×145°.50E, h129km±100km, mb3.7/5, mbtmp4.1/6, ML4.0/1, MS2.9/1, Error ellipse: s-maj=94.4km s-min=51.0km az=177.0*
ISC 28 10:25:52.3±0.8, 19°.60N±0°.10×145°.6E±0°.2, h100km, n55, σ19°34/53, mb4.4/26, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.02**	**187**	P	**Pn**	**10 27 19.0**	**0.0**
	4.2nm,0.3s,baz=24,slow=19,SNR=1.9						
	35nm,0.8s						
GUMO	**Guam**	**6.02**	**187**	Pn	**Pn**	**10 27 16.9**	**-2.1**
JCJ	**Chichijima**	**8.10**	**338**	Pn	**Pn**	**10 27 44.7**	**-2.4**
JHJ2	**Mitsune**	**14.42**	**340**	Pn	**Pn**	**10 29 10.8**	**-0.8**
JYT	**Yasato**	**17.23**	**345**	P	**Pn**	**10 29 46.5**	**-0.2**
JYT				IAmb	IAmb	10 30 10.6	
	comp=Z,102nm,1.4s						
DAV	**Davao City (W)**	**23.10**	**240**	LR	LR	10 41 15.1	
	comp=Z,26nm,18.3s,baz=111,slow=40						
CM31	**Chiang Mai Arr**	**44.03**	**277**	P	**P**	**10 33 53.0**	**+2.6**
P18K	**Big Mountain,**	**57.73**	**31**	P	**P**	**10 35 31.5**	**-1.1**
N18K	**Kilae Creek**	**57.81**	**30**	P	**P**	**10 35 35.2**	**+2.1**
N18K				IAmb	IAmb	10 36 14.8	
	comp=Z,10nm,1.2s						
O18K	**Koktuh Hills**	**57.88**	**31**	P	**P**	**10 35 35.8**	**+2.2**
O18K				IAmb	IAmb	10 36 06.0	
	comp=Z,10nm,1.2s						
M20K	**Styx River**	**59.44**	**29**	P	**P**	**10 35 45.4**	**+0.9**
M20K				IAmb	IAmb	10 36 12.1	
	comp=Z,3.8nm,1.2s						
CAPN	**Captain Cook N**	**60.07**	**30**	P	**P**	**10 35 49.7**	**+1.1**
SKT	**Skwentna**	**60.19**	**29**	P	**P**	**10 35 50.4**	**+0.9**
CAST	**Castle Rocks**	**60.33**	**27**	P	**P**	**10 35 51.8**	**+1.3**
IMAR	**Indian Mountai**	**60.43**	**24**	P	**P**	**10 35 52.8**	**+1.8**
KTH	**Kantishna Hill**	**60.87**	**27**	P	**P**	**10 35 55.9**	**+1.7**
KTH				IAmb	IAmb	10 36 37.4	
	comp=Z,5.1nm,1.2s						
I21K	**Tanana**	**60.88**	**25**	P	**P**	**10 35 55.9**	**+1.8**
BPAW	**Bear Paw Mtn.**	**60.99**	**27**	P	**P**	**10 35 56.2**	**+1.3**
BPAW				IAmb	IAmb	10 35 57.2	
	comp=Z,4.4nm,1.0s						
TRF	**Thorofare Moun**	**61.12**	**27**	P	**P**	**10 35 56.8**	**+0.8**
TRF				IAmb	IAmb	10 36 34.2	
	comp=Z,7.6nm,1.4s						
MLY	**Manley**	**61.34**	**26**	P	**P**	**10 35 58.3**	**+1.0**
MLY				IAmb	IAmb	10 36 20.9	
	comp=Z,4.1nm,1.2s						
PWL	**Port Wells**	**61.44**	**31**	P	**P**	**10 35 59.3**	**+1.3**
SML	**Sawmill**	**61.63**	**30**	P	**P**	**10 36 00.2**	**+0.9**
MCK	**McKinley**	**61.77**	**27**	P	**P**	**10 36 02.4**	**+2.2**
H23K	**Yukon River**	**62.03**	**25**	P	**P**	**10 36 03.6**	**+1.7**
H23K				IAmb	IAmb	10 36 38.5	
	comp=Z,4.8nm,1.4s						
SCM	**Sheep Creek Mo**	**62.10**	**30**	P	**P**	**10 36 03.4**	**+0.9**
WRH	**Wood River Hil**	**62.30**	**27**	P	**P**	**10 36 03.5**	**-0.2**
MDM	**Murphy Dome**	**62.35**	**26**	P	**P**	**10 36 06.1**	**+2.0**
MDM				IAmb	IAmb	10 36 25.4	
	comp=Z,7.3nm,1.4s						
H24K	**Noodor Dome**	**62.70**	**25**	P	**P**	**10 36 07.6**	**+1.2**
H24K				IAmb	IAmb	10 36 10.6	
	comp=Z,3.5nm,1.1s						
TOLK	**Toolik Lake Re**	**62.79**	**22**	P	**P**	**10 36 08.6**	**+1.6**
ILAR	**Eielson Array**	**62.87**	**26**	P	**P**	**10 36 07.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=255,slow=5.9,SNR=9.1						
	comp=Z,0.6nm,0.5s						
J25K	**Salcha River,**	**63.48**	**27**	P	**P**	**10 36 11.3**	**-0.4**
J25K				IAmb	IAmb	10 36 29.1	
	comp=Z,5.6nm,1.4s						
DOT	**Dot Lake**	**63.89**	**28**	P	**P**	**10 36 14.8**	**+0.5**
DOT				IAmb	IAmb	10 36 32.4	
	comp=Z,6.7nm,1.4s						
SCRK	**Sand Creek**	**63.97**	**28**	P	**P**	**10 36 15.2**	**+0.3**
SCRK				IAmb	IAmb	10 36 43.0	
	comp=Z,6.4nm,1.5s						
J26L	**Joseph Creek**	**64.23**	**27**	P	**P**	**10 36 16.9**	**+0.4**
BMAR	**Burnt Mountain**	**64.32**	**24**	P	**P**	**10 36 18.6**	**+1.6**
YAH	**Yahtse**	**64.58**	**32**	P	**P**	**10 36 18.8**	**-0.3**
M27K	**Edge Creek, AK**	**64.71**	**29**	P	**P**	**10 36 21.1**	**+1.3**
M27K				IAmb	IAmb	10 36 24.9	
	comp=Z,10nm,1.4s						
L27K	**Beaver Creek,**	**64.81**	**29**	P	**P**	**10 36 20.7**	**+0.4**
HYT	**Haines Junctio**	**66.70**	**31**	P	**P**	**10 36 32.6**	**+0.1**
HYT				IAmb	IAmb	10 37 11.5	
	comp=Z,6.6nm,1.2s						
M30M	**Minto, Yukon**	**67.08**	**29**	P	**P**	**10 36 35.9**	**+1.1**
M30M				IAmb	IAmb	10 36 43.1	
	comp=Z,5.3nm,1.4s						
EPYK	**Eagle Plains**	**67.27**	**25**	P	**P**	**10 36 36.9**	**+0.9**
EPYK				IAmb	IAmb	10 36 38.6	
	comp=Z,9.1nm,1.4s						
N31M	**Braeburn, Yuko**	**67.55**	**31**	P	**P**	**10 36 39.6**	**+1.8**
N31M				IAmb	IAmb	10 36 40.5	
	comp=Z,8.1nm,1.1s						
M31M	**Drury Creek, Y**	**68.20**	**30**	P	**P**	**10 36 43.0**	**+1.1**
M31M				IAmb	IAmb	10 37 21.9	
	comp=Z,8.0nm,1.4s						
INK	**Inuvik**	**68.58**	**23**	P	**P**	**10 36 45.7**	**+1.7**
FARO	**Faro, Yukon**	**68.69**	**30**	P	**P**	**10 36 45.8**	**+0.9**
DLBC	**Dease Lake**	**70.59**	**34**	P	**P**	**10 36 57.6**	**+0.9**
DLBC				IAmb	IAmb	10 37 09.4	
	comp=Z,8.4nm,1.4s						
YKA	**Yellowknife Ar**	**77.23**	**28**	P	**P**	**10 37 35.7**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=289,slow=5.2,SNR=3.2						
	comp=Z,0.9nm,0.8s						
HUMO	**Hull Mountain**	**78.02**	**49**	P	**P**	**10 37 39.6**	**-0.5**
HUMO				IAmb	IAmb	10 38 00.7	
	comp=Z,7.2nm,1.4s						
PINE	**Pine Mountain**	**79.11**	**47**	P	**P**	**10 37 47.2**	**+0.9**
ARCES	**ARCESS Array B**	**81.61**	**342**	P	**P**	**10 37 59.2**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=61,slow=9.4,SNR=1.1						
	comp=Z,1.4nm,0.8s						
KVN	**Kaiserville**	**82.60**	**51**	P	**P**	**10 38 03.2**	**-1.7**
NVAR	**Mina Array Bea**	**82.65**	**52**	P	**P**	**10 38 04.9**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=262,slow=6.0,SNR=7.9						
	comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**82.65**	**52**	P	**P**	**10 38 04.0**	**-1.3**
FINES	**FINESS Array B**	**86.03**	**335**	P	**P**	**10 38 20.0**	**-1.6**
	comp=Z,3.7nm,1.1s,baz=59,slow=7.4,SNR=6.5						
	comp=Z,3.7nm,1.1s						
ATD	**Arta Tunnel**	**97.93**	**285**	P	Pdif	10 39 19.9	+2.1

*IDC **28** 10:28:41.4±4.9, 2°.30S×139°.85E, h0km, mb3.7/2, mbtmp3.7/3, ML3.9/1, MS2.6/1, Error ellipse: s-maj=190.7km s-min=29.8km az=88.0*
*DJA **28** 10:28:51.5±0.4, 2°.5±10°×13°.8E±°, h39km±8km, M4.2/6, mb4.2/2, mB4.8/1, MLv4.2/6, Mw(mB)4.0/1*
ISC 28 10:28:50.7±1.0, 2°.41S±0°.09×138°.42E±0°.06, h32km, n9, σ0°98/10, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.51**	**35**	P	**Pn**	**10 29 01.9**	**+0.2**
SMPI				S	**Sb**	**10 29 07.8**	**-0.8**
GENI	**Genyem**	**1.75**	**96**	P	**Pn**	**10 29 20.1**	**+1.2**
GENI				S	**Sb**	**10 29 42.8**	**-1.1**
SRPI	**Serui, Papua**	**2.25**	**284**	P	**Pn**	**10 29 24.5**	**-1.2**
FAKI	**Fak Fak**	**6.19**	**265**	P	**Pn**	**10 30 20.8**	**+0.9**
	0.1nm13nm,0.5s						
SIJI	**Sorong**	**7.31**	**282**	LR	LR	10 33 51.1	
	comp=Z,33nm,18.7s,baz=132,slow=36						
SIJI	**Sorong**	**7.31**	**282**	P	**Pn**	**10 30 35.9**	**+0.5**
WRA	**Warramunga Arr**	**17.88**	**193**	P	**Pn**	**10 32 56.5**	**-0.6**
	0.4nm,0.3s,baz=17,slow=12,SNR=28						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**21.58**	**191**	P	**P**	**10 33 37.8**	**-0.1**
	2.6nm,0.7s,baz=23,slow=10,SNR=44						
	2.6nm,0.7s						
MKAR	**Makanchi Array**	**69.38**	**322**	P	**P**	**10 39 56.2**	**+0.7**
	0.4nm,0.7s,baz=104,slow=6.1,SNR=4.0						
	0.4nm,0.7s						

*IDC **28** 10:45:42.6±1.1, 52°.19N×169°.58W, h0km, mb3.5/6, mbtmp3.5/8, ML2.9/2, MS3.0/1, Error ellipse: s-maj=42.4km s-min=21.9km az=156.0*
*NEIC **28** 10:45:45.3±1.6, 52°.28N±0°.04×169°.29W±0°.09, h12km±9km, mb3.8/18, ML3.9/6, ML3.5(AEIC), Error ellipse: s-maj=7.9km s-min=6.0km az=79.0*
*AEIC **28** 10:45:47±1.7, 52°.36N±0°.05×169°.29W±0°.08, h14km±6km, Error ellipse: s-maj=7.4km s-min=6.6km az=64.0*
ISC 28 10:45:45.3±1.0, 52°.3N±0°.1×169°.39W±0°.07, h10km, n61, σ0°96/52, mb3.5/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.73**	**27**		**Pg**	**10 45 59.1**	**-0.3**
UNV	**Unalaska Valle**	**2.31**	**48**		**Pn**	**10 46 23.5**	**+0.1**
AKUT	**Akutan**	**2.83**	**49**	Pn	**Pn**	**10 46 30.6**	**0.0**
AKUT				Sn	**Sn**	**10 47 04.3**	**-0.4**
AKUT				IAML		10 47 18.7	
	comp=E,322nm,0.9s						
GSTR	**Great Sitkin T**	**4.11**	**269**	Pn	**Pn**	**10 46 49.1**	**+1.0**
ADK	**Adak**	**4.52**	**267**	IAML		10 48 23.5	
	comp=E,134nm,4.2s						
ADK				IAML		10 49 04.6	
	comp=E,95nm,4.6s						
ADK	**Adak**	**4.52**	**267**	Pn	**Pn**	**10 46 54.6**	**+0.8**
ADK				Sn	**Sn**	**10 47 45.0**	**-1.3**
KIWB	**Kanaga Island**	**4.81**	**267**	Pn	**Pn**	**10 46 57.8**	**0.0**
SPIA	**Saint Paul Isl**	**4.89**	**355**	Pn	**Pn**	**10 46 58.8**	**0.0**
SDPT	**Sand Point**	**6.08**	**57**	Pn	**Pn**	**10 47 11.7**	**-3.5**
CNBA	**Chernabura Isl**	**6.35**	**63**	Pn	**Pn**	**10 47 17.7**	**-1.2**
AMKA	**Amchitka**	**7.07**	**267**	Pn	**Pn**	**10 47 30.4**	**+1.6**
CHGN	**Chignik**	**7.55**	**54**	Pn	**Pn**	**10 47 35.2**	**-0.1**
CHIR	**Chirikof Islan**	**8.82**	**61**	Pn	**Pn**	**10 47 52.1**	**-0.6**
OHAK	**Old Harbor**	**10.51**	**56**	Pn	**Pn**	**10 48 14.5**	**-1.3**
P18K	**Big Mountain,**	**10.64**	**43**	Pn	**Pn**	**10 48 16.7**	**-0.9**
O18K	**Koktuh Hills**	**10.92**	**41**	Pn	**Pn**	**10 48 20.4**	**-1.1**
KDAK	**Kodiak Island**	**11.07**	**54**	Pn	**Pn**	**10 48 23.0**	**-0.5**
	comp=E,0.2nm,0.3s,baz=284,slow=7.7,SNR=6.5						
Q19K	**Cape Douglas,**	**11.07**	**47**	Pn	**Pn**	**10 48 22.9**	**-0.7**
N18K	**Kilae Creek**	**11.19**	**36**	Pn	**Pn**	**10 48 25.6**	**+0.3**
M19K	**Big River Lodg**	**12.56**	**34**	Pn	**Pn**	**10 48 44.5**	**+0.6**
L19K	**White Mountain**	**12.59**	**33**	Pn	**Pn**	**10 48 43.5**	**-0.9**
M20K	**Styx River**	**12.99**	**36**	Pn	**Pn**	**10 48 48.1**	**-1.8**
SEW	**Seward**	**13.51**	**47**	Pn	**Pn**	**10 48 56.3**	**-0.5**
SUA	**Susitna One**	**13.65**	**41**	Pn	**Pn**	**10 48 58.2**	**-0.6**
PPLA	**Purkeypile**	**13.99**	**34**	Pn	**Pn**	**10 49 03.1**	**-0.4**
PWL	**Port Wells**	**14.35**	**45**	Pn	**Pn**	**10 49 08.2**	**-0.1**
KTH	**Kantishna Hill**	**14.85**	**34**	Pn	**Pn**	**10 49 14.0**	**-1.2**
HIN	**Hinchinbrook I**	**14.97**	**48**	Pn	**Pn**	**10 49 15.3**	**-1.6**
FID	**Port Fidalgo**	**15.12**	**47**	Pn	**Pn**	**10 49 17.4**	**-1.4**
BPAW	**Bear Paw Mtn.**	**15.19**	**32**	Pn	**Pn**	**10 49 21.1**	**+1.4**
BPAW				IAmb	IAmb	10 49 26.6	
	comp=Z,9.9nm,1.3s						
SCM	**Sheep Creek Mo**	**15.23**	**43**	Pn	**Pn**	**10 49 21.1**	**+0.8**
EYAK	**Cordova Ski Ar**	**15.38**	**48**	Pn	**Pn**	**10 49 22.2**	**+0.1**
KLU	**Klutina**	**15.68**	**45**	Pn	**Pn**	**10 49 24.6**	**-1.5**
KLU				IAmb	IAmb	10 49 47.8	
	comp=Z,8.2nm,1.4s						
M24K	**Tolsona, Glenn**	**15.84**	**43**	Pn	**Pn**	**10 49 28.1**	**-0.2**
N25K	**Chitina, Valde**	**16.30**	**46**	Pn	**Pn**	**10 49 32.5**	**-1.6**
N25K				IAmb	IAmb	10 50 06.8	
	comp=Z,8.6nm,1.4s						
GLB	**Gilahina Butte**	**16.59**	**47**	Pn	**Pn**	**10 49 36.6**	**-1.1**
GLB				IAmb	IAmb	10 50 01.6	
	comp=Z,14nm,1.4s						
VRDI	**Verde Repeater**	**16.67**	**48**	Pn	**Pn**	**10 49 38.8**	**-0.2**
VRDI				IAmb	IAmb	10 50 07.0	
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**17.00**	**34**	P	**Pn**	**10 49 43.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=236,slow=10,SNR=5.2						
	comp=Z,0.2nm,0.5s						
M26K	**Nabesna, AK**	**17.31**	**44**		**Pn**	**10 49 47.1**	**+0.2**
M26K				IAmb	IAmb	10 50 25.8	
	comp=Z,11nm,1.4s						
H24K	**Noodor Dome**	**17.34**	**30**		**Pn**	**10 49 47.4**	**+0.2**
H24K				IAmb	IAmb	10 50 26.0	
	comp=Z,9.3nm,1.5s						
DOT	**Dot Lake**	**17.43**	**40**	Pn	**Pn**	**10 49 46.5**	**-1.8**
DOT				IAmb	IAmb	10 49 47.0	
	comp=Z,10nm,1.5s						
J25K	**Salcha River,**	**17.44**	**36**	Pn	**Pn**	**10 49 47.5**	**-1.0**
SCRK	**Sand Creek**	**17.62**	**39**	Pn	**Pn**	**10 49 49.9**	**-0.9**
J26L	**Joseph Creek**	**18.04**	**38**		**Pn**	**10 49 55.4**	**-0.6**
I26K	**Coal Creek Min**	**18.61**	**36**	P	**P**	**10 50 03.4**	**+0.9**
HYT	**Haines Junctio**	**19.34**	**51**	Pn	**P**	**10 50 11.8**	**+1.1**
HYT				IAmb	IAmb	10 50 35.5	
	comp=Z,6.5nm,1.1s						
PETK	**Petropavlovsk-**	**19.86**	**285**	P	**P**	**10 50 15.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=91,slow=13,SNR=1.8						
	comp=Z,3.8nm,0.9s						
SKAG	**Skagway**	**20.21**	**56**	P	**P**	**10 50 20.4**	**+0.4**
SKAG				IAmb	IAmb	10 50 42.1	
	comp=Z,12nm,1.3s						
INK	**Inuvik**	**23.39**	**33**	P	**P**	**10 50 52.6**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=243,slow=5.8,SNR=1.3						
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**30.28**	**49**	P	**P**	**10 51 57.5**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=277,slow=8.5,SNR=1.6						
	comp=Z,0.2nm,0.5s						
RES	**Resolute Bay**	**36.42**	**26**	LR	LR	11 10 48.4	
	comp=Z,20nm,18.7s,baz=242,slow=41						
H11N2	**WAKE ISLAND Hy**	**37.41**	**219**	T	T	11 32 46.1	
	baz=24,slow=76,SNR=7.6						
H11N3	**WAKE ISLAND Hy**	**37.42**	**219**	T	T	11 32 46.7	
	baz=24,slow=76,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**37.43**	**219**	T	T	11 32 45.1	
	baz=24,slow=76,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**38.60**	**218**	T	T	11 34 16.1	
	baz=23,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**38.61**	**218**	T	T	11 34 20.9	
	baz=23,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**38.62**	**218**	T	T	11 34 15.5	
	baz=23,slow=76,SNR=22						
PDAR	**Pinedale Array**	**40.42**	**79**	P	**P**	**10 53 23.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=305,slow=2.6,SNR=10.0						
	comp=Z,0.7nm,0.5s						
TXAR	**Lajitas Array**	**52.76**	**89**	P	**P**	**10 55 00.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=307,slow=5.8,SNR=7.8						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**86.97**	**232**	P	P	10 58 27.3	-3.2
	comp=Z,0.3nm,1.0s,baz=36,slow=5.7,SNR=2.0						
	comp=Z,0.3nm,1.0s						
ASAR	**Alice Springs**	**90.36**	**230**	P	P	10 58 44.9	-1.7
	comp=Z,0.2nm,0.7s,baz=37,slow=5.1,SNR=6.0						
	comp=Z,0.2nm,0.7s						

ROM 28 10:49:23.5±0.1, 43°.054N±0°.003×13°.093E±0°.004, h9km, ML2.6/22, 7C-5D, Error ellipse: s-maj=0.3km s-min=0.2km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**193**	P	Pg	10 49 24.9	-0.3
FDMO				AML	AML		
	comp=E,88800μm,0.1s						
FDMO				AML	AML		
	comp=N,91850μm,0.2s						
FEMA	**Monte Fema**	**0.10**	**199**	P	Pg	10 49 26.4	+0.3
FEMA				S	Sg	10 49 28.5	+0.5
FEMA				AML	AML		
	comp=E,13950μm,0.3s						
FEMA				AML	AML		
	comp=N,9320μm,0.4s						
FEMA				AML	AML		
	comp=E,13950μm,0.3s

	comp=E,1010μm,1.2s					
SNTG				AML	AML	
	comp=N,1046μm,0.3s					
SNTG				AML	AML	
	comp=N,1132μm,1.1s					
SNTG				AML	AML	
	comp=N,1048μm,0.3s					
SNTG				AML	AML	
	comp=E,962μm,0.7s					
SNTG				AML	AML	
	comp=E,1010μm,1.2s					
MMO1	**Montemonaco**	**0.23**	**132**	P	Pg	10 49 28.8 +0.6
MMO1				S	Sg	10 49 32.6 +1.2
EL6	**Elcito**	**0.28**	**1**	⇑P	Pg	10 49 29.5 +0.4
EL6				AML	AML	
	comp=E,2414μm,0.2s					
EL6				AML	AML	
	comp=N,3295μm,1.4s					
EL6				AML	AML	
	comp=E,2414μm,0.2s					
EL6				AML	AML	
	comp=N,3300μm,1.4s					
T1215	**Vallo di Nera,**	**0.30**	**213**	P	Pg	10 49 30.1 +0.6
T1215				S	Sb	10 49 35.2 -0.9
T1215				AML	AML	
	comp=N,1255μm,0.4s					
T1215				AML	AML	
	comp=E,876μm,0.9s					
T1215				AML	AML	
	comp=N,1272μm,0.4s					
T1215				AML	AML	
	comp=E,892μm,1.5s					
T1215				AML	AML	
	comp=N,1260μm,0.4s					
T1215				AML	AML	
	comp=E,893μm,1.5s					
T1241	**Roccafluvione,**	**0.32**	**128**	P	Pg	10 49 30.2 +0.4
T1241				S	Sb	10 49 35.6 -1.0
CING	**Cingoli**	**0.33**	**13**	⇑P	Pg	10 49 30.5 +0.4
CING				AML	AML	
	comp=E,1775μm,0.2s					
CING				AML	AML	
	comp=N,1135μm,0.3s					
FOSV	**Fossato di Vic**	**0.34**	**315**	⇑P	Pg	10 49 30.8 +0.5
FOSV				AML	AML	
	comp=E,1535μm,0.5s					
FOSV				AML	AML	
	comp=N,4145μm,0.3s					
FOSV				AML	AML	
	comp=E,1530μm,0.5s					
FOSV				AML	AML	
	comp=N,4150μm,0.3s					
ATCC	**AVT- Casa Cast**	**0.36**	**292**	⇑P	Pg	10 49 31.2 +0.7
ATCC				AML	AML	
	comp=E,3585μm,0.2s					
ATCC				AML	AML	
	comp=N,3255μm,0.2s					
T1217	**Poggiodomo (PG**	**0.36**	**199**	P	Pg	10 49 31.2 +0.5
T1217				S	Sb	10 49 37.2 -0.7
T1243	**Rocca Santa Ma**	**0.44**	**144**	P	Pg	10 49 32.6 +0.4
T1243				S	Sb	10 49 39.9 -0.3
ARVD	**Arcevia**	**0.46**	**346**	S	Sb	10 49 41.0 +0.4
MURB	**Monte Urbino**	**0.47**	**297**	⇓P	Pg	10 49 33.2 +0.6
MURB				S	Sb	10 49 42.0 +1.1
MURB				AML	AML	
	comp=E,2680μm,0.2s					
MURB				AML	AML	
	comp=N,2110μm,0.3s					
MURB				AML	AML	
	comp=E,2875μm,0.2s					
MURB				AML	AML	
	comp=N,2155μm,0.3s					
MURB				AML	AML	
	comp=E,2675μm,0.2s					
MURB				AML	AML	
	comp=N,2110μm,0.3s					
MURB				AML	AML	
	comp=E,2875μm,0.2s					
MURB				AML	AML	
	comp=N,2155μm,0.3s					
MURB				AML	AML	
	comp=E,2875μm,0.2s					
MURB				AML	AML	
	comp=E,2675μm,0.2s					
MURB				AML	AML	
	comp=N,2155μm,0.3s					
MURB				AML	AML	
	comp=N,2110μm,0.3s					
ATFO	**Monte Foce - G**	**0.49**	**310**	⇓P	Pb	10 49 34.0 -0.4
ATFO				AML	AML	
	comp=E,494μm,0.6s					
ATFO				AML	AML	
	comp=N,456μm,0.8s					
ATFO				AML	AML	
	comp=E,494μm,0.6s					
ATFO				AML	AML	
	comp=N,456μm,0.8s					
ATFO				AML	AML	
	comp=E,494μm,0.6s					
ATFO				AML	AML	
	comp=N,456μm,0.8s					
FRON	**Frontone**	**0.54**	**330**	⇓P	Pg	10 49 34.5 +0.6
FRON				AML	AML	
	comp=E,486μm,0.3s					
FRON				AML	AML	
	comp=N,820μm,0.3s					
FRON				AML	AML	
	comp=E,486μm,0.3s					
FRON				AML	AML	
	comp=N,820μm,0.3s					
CESX	**Cesi**	**0.58**	**221**	⇑P	Pg	10 49 34.9 +0.2
CESX				AML	AML	
	comp=E,828μm,0.3s					
CESX				AML	AML	
	comp=N,946μm,0.8s					
CESX				AML	AML	
	comp=E,828μm,0.3s					
CESX				AML	AML	
	comp=N,946μm,0.8s					
ATVO	**AVT- Monte Val**	**0.60**	**303**	⇓P	Pg	10 49 35.4 +0.3
ATVO				S	Sb	10 49 46.0 +1.3
ATVO				AML	AML	
	comp=E,426μm,0.2s					
ATVO				AML	AML	
	comp=N,388μm,0.2s					
ATVO				AML	AML	
	comp=E,426μm,0.2s					
ATVO				AML	AML	
	comp=N,387μm,0.2s					
ATVO				AML	AML	
	comp=N,387μm,0.2s					
ATVO				AML	AML	
	comp=E,426μm,0.2s					
MPAG	**Monte Paganucc**	**0.62**	**337**	⇓P	Pb	10 49 36.4 -0.2
MPAG				S	Sb	10 49 47.0 +1.5
MPAG				AML	AML	
	comp=E,404μm,1.1s					
MPAG				AML	AML	
	comp=N,314μm,0.9s					
MPAG				AML	AML	
	comp=E,404μm,1.1s					
MPAG				AML	AML	
	comp=N,314μm,0.9s					
MPAG				AML	AML	
	comp=N,314μm,0.9s					
MPAG				AML	AML	
	comp=E,404μm,1.1s					
PIEI	**Pieia**	**0.63**	**320**	P	Pg	10 49 36.0 +0.3
PIEI				S	Sb	10 49 47.0 +1.4
PIEI				AML	AML	
	comp=E,310μm,0.7s					
PIEI				AML	AML	
	comp=N,326μm,1.6s					
PIEI				AML	AML	
	comp=E,310μm,0.7s					
PIEI				AML	AML	
	comp=N,326μm,1.6s					
PIEI				AML	AML	
	comp=E,310μm,0.7s					
PIEI				AML	AML	
	comp=N,326μm,1.6s					
ATPI	**Pietralunga -**	**0.64**	**308**	P	Pg	10 49 35.9 0.0
ATPI				S	Sb	10 49 47.0 +1.1
ATPI				AML	AML	
	comp=E,240μm,0.5s					
ATPI				AML	AML	
	comp=N,268μm,0.7s					
ATPI				AML	AML	
	comp=E,239μm,0.5s					
ATPI				AML	AML	
	comp=N,268μm,0.7s					
ATPI				AML	AML	
	comp=E,239μm,0.5s					
NARO	**Abbazia di Nar**	**0.67**	**326**	P	Pg	10 49 36.5 +0.1
NARO				S	Sb	10 49 48.0 +1.3
NARO				AML	AML	
	comp=E,245μm,1.0s					
NARO				AML	AML	
	comp=N,190μm,1.6s					
NARO				AML	AML	
	comp=E,244μm,1.0s					
NARO				AML	AML	
	comp=N,190μm,1.6s					
NARO				AML	AML	
	comp=N,190μm,1.6s					
NARO				AML	AML	
	comp=E,244μm,1.0s					
FSSB	**Fossombrone**	**0.68**	**340**	⇑P	Pb	10 49 37.0 -0.4
FSSB				S	Sn	10 49 49.0 -1.0
FSSB				AML	AML	
	comp=E,1125μm,0.3s					
FSSB				AML	AML	
	comp=N,2055μm,0.3s					
FSSB				AML	AML	
	comp=E,1125μm,0.3s					
FSSB				AML	AML	
	comp=N,2055μm,0.3s					
FSSB				AML	AML	
	comp=E,1125μm,0.3s					
FSSB				AML	AML	
	comp=N,2055μm,0.3s					
MGAB	**Montegabbione**	**0.73**	**259**	P	Pn	10 49 39.6 -0.4
MGAB				AML	AML	
	comp=E,391μm,1.0s					
MGAB				AML	AML	
	comp=N,459μm,0.4s					
MGAB				AML	AML	
	comp=N,459μm,0.4s					
MGAB				AML	AML	
	comp=E,391μm,1.0s					
BADI	**Badiali**	**0.77**	**307**	S	Sn	10 49 52.0 -0.2

ROM 28 10:50:19.4±0.0, 42°.907N±0°.003×13°.106E±0°.003, h12km, ML1.7/1, 4D, Error ellipse: s-maj=0.3km s-min=0.1km az=350.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**175**	⇓P	Pg	10 50 22.4	+0.4
NRCA				S	Sg	10 50 24.2	+0.4
NRCA				AML	AML		
	comp=N,1895μm,0.2s						
NRCA				AML	AML		
	comp=E,1685μm,0.1s						
FDMO	**Fiordimonte**	**0.13**	**354**	AML	AML		
	comp=N,1705μm,0.4s						
FDMO				AML	AML		
	comp=E,1595μm,1.0s						
MMO1	**Montemonaco**	**0.16**	**93**	⇓P	Pg	10 50 23.7	+0.5
MMO1				S	Sg	10 50 26.6	+0.7
CESI	**CESI - Serrava**	**0.18**	**304**	P	Pg	10 50 23.9	+0.4
CESI				S	Sg	10 50 26.9	+0.7
CESI				AML	AML		
	comp=N,395μm,0.2s						
CESI				AML	AML		
	comp=E,342μm,0.5s						
AM05	**Amandola Campo**	**0.20**	**69**	S	Sg	10 50 28.0	+1.4
T1215	**Vallo di Nera,**	**0.20**	**239**	P	Pg	10 50 24.4	+0.5
T1215				S	Sg	10 50 27.8	+0.9
GUMA	**Gualdo di Mace**	**0.23**	**47**	P	Pb	10 50 24.9	-0.7
T1217	**Poggiodomo (PG**	**0.23**	**213**	⇓P	Pg	10 50 25.0	+0.6
T1241	**Roccafluvione,**	**0.24**	**102**	P	Pg	10 50 24.9	+0.3
T1241				S	Sg	10 50 29.1	+1.1
T1204	**Amatrice, Fraz**	**0.28**	**146**	P	Pg	10 50 24.7	-0.5
T1204				AML	AML		
	comp=E,346μm,1.6s						
T1204				AML	AML		
	comp=N,286μm,0.4s						
T1243	**Rocca Santa Ma**	**0.33**	**130**	⇓P	Pg	10 50 26.6	+0.5
SNTG	**Esanatoglia**	**0.37**	**341**	P	Pg	10 50 27.2	+0.4
SNTG				S	Sb	10 50 32.8	-1.0
MURB	**Monte Urbino**	**0.56**	**310**	S	Sg	10 50 37.0	-0.6

*IDC **28** 10:50:52.1±2.2, 41°.19N×79°.16E, h0km, mb3.5/2, mbtmp3.7/6, ML3.4/4, MS2.9/3, Error ellipse: s-maj=32.5km s-min=19.4km az=155.0*
*SOME **28** 10:50:54.2, 41°.63N×78°.88E, h5km, MS3.0*
*KRNET **28** 10:50:54.9±0.1, 41°.61N×78°.88E, h13km, mb4.3*
*BJI **28** 10:50:55.0±0.0, 41°.70N×78°.80E, h10km, ML3.8/9*
*NNC **28** 10:50:55.2±0.7, 41°.61N×78°.88E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=4.6km s-min=2.7km az=161.0*
*MOS **28** 10:50:56.8±0.6, 41°.67N×78°.86E, h10km, mb4.7/1, Error ellipse: s-maj=7.9km s-min=5.1km az=111.9*
MOS Felt (II-III) at Ak-Shyyrak.

ISC 28 10:50:57.4±1.4, 41°.69N±0°.04×78°.82E±0°.03, h4km±9km, n136, σ1°39/207, 22C-30D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.85**	**339**	⇑*e*P	**Pg**	**10 51 12.8**	**-0.9**
	baz=38						
PRZ				⇑*e*S	**Sb**	**10 51 26.4**	**-0.3**
	baz=38						
PRZ	**Przheval'sk**	**0.85**	**339**	*e*PG	**Pg**	**10 51 12.8**	**-0.9**
PRZ				*e*S	**Sg**	**10 51 25.4**	**+0.7**
ANVS	**Anan'yevo**	**1.39**	**322**	⇓*e*P	**Pn**	**10 51 22.4**	**-1.3**
	baz=23						
ANVS				⇓*e*S	**Sg**	**10 51 42.4**	**+0.5**
	baz=23						
ANVS	**Anan'yevo**	**1.39**	**322**	*e*PG	**Pn**	**10 51 22.4**	**-1.3**
ANVS				*e*S	**Sg**	**10 51 42.4**	**+0.5**
SATY	**Saty**	**1.40**	**348**	*e*P	**Pn**	**10 51 23.1**	**-0.8**
	baz=47						
SATY				*e*S	**Sg**	**10 51 44.1**	**+1.7**
	baz=47						
SATY	**Saty**	**1.40**	**348**	*e*P	**Pn**	**10 51 23.1**	**-0.8**
	36nm,0.1s						
SATY				*e*S	**Sg**	**10 51 44.1**	**+1.7**
	1μm,0.2s						
SATY	**Saty**	**1.40**	**348**	P	**Pn**	**10 51 23.1**	**-0.8**
	36nm,0.1s						
SATY				S	**Sg**	**10 51 44.1**	**+1.7**
	1μm,0.2s						
UZB	**Uzynbulak**	**1.46**	**6**	*e*P	**Pn**	**10 51 23.2**	**-1.6**
	baz=4.0						
UZB				*e*S	**Sb**	**10 51 44.4**	**+0.1**
	baz=4.0						
UZB	**Uzynbulak**	**1.46**	**6**	*e*PG	**Pn**	**10 51 23.2**	**-1.6**
UZB	**Uzynbulak**	**1.46**	**6**	*e*P	**Pn**	**10 51 23.2**	**-1.6**
	62nm,0.3s						
UZB				*e*S	**Sb**	**10 51 44.4**	**+0.1**
	834nm,0.4s						
UZB	**Uzynbulak**	**1.46**	**6**	P	**Pn**	**10 51 23.2**	**-1.6**
	62nm,0.3s						
UZB				S	**Sb**	**10 51 44.4**	**+0.1**
	834nm,0.4s						
ZHN	**Zhinishke**	**1.50**	**349**	*e*P	**Pn**	**10 51 24.8**	**-0.5**
	baz=48						
ZHN				*e*S	**Sg**	**10 51 47.0**	**+1.3**
	baz=48						
ZHN	**Zhinishke**	**1.50**	**349**	*e*P	**Pn**	**10 51 24.8**	**-0.5**
	193nm,0.2s						
ZHN				*e*S	**Sg**	**10 51 47.0**	**+1.3**
	6μm,0.2s						
ZHN	**Zhinishke**	**1.50**	**349**	P	**Pn**	**10 51 24.8**	**-0.5**
	193nm,0.2s						
ZHN				S	**Sg**	**10 51 47.0**	**+1.3**
	6μm,0.2s						
SHLS	**Shalkode**	**1.54**	**18**	*e*P	**Pb**	**10 51 26.4**	**-0.2**
	baz=25						
SHLS				*e*S	**Sg**	**10 51 50.1**	**+3.1**
	baz=25						
SHLS	**Shalkode**	**1.54**	**18**	*e*PN	**Pb**	**10 51 26.2**	**-0.4**
SHLS	**Shalkode**	**1.54**	**18**	*e*P	**Pb**	**10 51 26.4**	**-0.2**
	177nm,0.3s						
SHLS				*e*S	**Sg**	**10 51 50.0**	**+3.1**
	2μm,0.5s						
SHLS	**Shalkode**	**1.54**	**18**	P	**Pb**	**10 51 26.4**	**-0.2**
	177nm,0.3s						
SHLS				S	**Sg**	**10 51 50.0**	**+3.1**
	2μm,0.5s						
PDGK	**Podgornoye**	**1.71**	**17**	PN	**Pn**	**10 51 27.1**	**-1.1**
PDGK				SN	**Sb**	**10 51 51.3**	**-0.2**
PDGK	**Podgornoye**	**1.71**	**17**	P	**Pn**	**10 51 27.3**	**-0.9**
	93nm,0.4s						
PDGK				S	**Sb**	**10 51 51.4**	**-0.1**
	335nm,0.5s						
PDGK	**Podgornoye**	**1.71**	**17**	⇓Pn	**Pn**	**10 51 27.0**	**-1.1**
	178nm,0.6s						
PDGK				⇑Sn	**Sb**	**10 51 51.3**	**-0.2**
	509nm,0.5s						
KPKS	**Kokpek**	**1.78**	**357**	*e*P	**Pn**	**10 51 29.3**	**+0.2**
	baz=56						
KPKS				*e*S	**Sg**	**10 51 54.3**	**-0.2**
	baz=56						
KPKS	**Kokpek**	**1.78**	**357**	*e*PN	**Pn**	**10 51 29.1**	**+0.1**
KPKS	**Kokpek**	**1.78**	**357**	*e*P	**Pn**	**10 51 29.3**	**+0.2**
	714nm,0.3s						
KPKS				*e*S	**Sg**	**10 51 54.3**	**-0.2**
	2μm,0.3s						
KPKS	**Kokpek**	**1.78**	**357**	P	**Pn**	**10 51 29.3**	**+0.2**
	714nm,0.3s						
KPKS				S	**Sg**	**10 51 54.3**	**-0.2**
	2μm,0.3s						
KURS	**Kuram**	**1.86**	**345**	*e*P	**Pb**	**10 51 31.4**	**-0.6**
	baz=45						
KURS				*e*S	**Sg**	**10 51 58.0**	**+1.0**
	baz=45						
KURS	**Kuram**	**1.86**	**345**	*e*P	**Pb**	**10 51 31.4**	**-0.6**
	54nm,0.3s						
KURS				*e*S	**Sg**	**10 51 58.1**	**+1.0**
	436nm,0.4s						
KURS	**Kuram**	**1.86**	**345**	Pg	**Pb**	**10 51 31.4**	**-0.6**
	54nm,0.3s						
KURS				Lg	Lg	10 51 58.1	
	436nm,0.4s						
TNSS	**Tian-Shan**	**1.93**	**315**	*e*P	**Pb**	**10 51 32.6**	**-0.8**
	329nm,0.3s						
TNSS				*e*S	**Sg**	**10 52 00.4**	**+1.0**
	316nm,0.4s						
TNSS	**Tian-Shan**	**1.93**	**315**	Pg	**Pb**	**10 51 32.6**	**-0.8**
	329nm,0.3s						
TNSS				Lg	Lg	10 52 00.4	
	316nm,0.4s						
MDOK	**Medeo**	**1.97**	**319**	PN	**Pb**	**10 51 33.8**	**-0.1**
MDOK				LG	Lg	10 52 00.8	
MDOK	**Medeo**	**1.97**	**319**	*e*P	**Pb**	**10 51 33.1**	**-0.8**
	167nm,0.5s						
MDOK				*e*S	**Sg**	**10 52 01.5**	**+0.9**
	790nm,0.6s						
MDOK	**Medeo**	**1.97**	**319**	Pg	**Pb**	**10 51 33.1**	**-0.8**
	167nm,0.5s						
MDOK				⇑Pg	**Pb**	**10 51 33.1**	**-0.8**
	132nm,0.6s						
MDOK				⇑Lg	Lg	10 52 00.8	
	481nm,0.4s						
MDOK				Lg	Lg	10 52 01.5	
	790nm,0.6s						
KOTS	**Kotyrbulak**	**1.99**	**321**	*e*P	**Pb**	**10 51 33.9**	**-0.4**
	155nm,0.4s						
KOTS				*e*S	**Sg**	**10 52 02.4**	**+1.0**
	1μm,0.5s						
KOTS	**Kotyrbulak**	**1.99**	**321**	Pg	**Pb**	**10 51 33.9**	**-0.4**
	155nm,0.4s						
KOTS				Lg	Lg	10 52 02.4	
	1μm,0.5s						
ULHL	**Ulahol**	**2.00**	**287**	⇓*e*P	**Pn**	**10 51 32.4**	**+0.2**
	baz=89						
ULHL				⇓*e*S	**Sb**	**10 51 59.7**	**-0.1**
	baz=89						
ULHL	**Ulahol**	**2.00**	**287**	*e*PN	**Pn**	**10 51 32.4**	**+0.2**
ULHL				*e*S	**Sb**	**10 51 59.7**	**-0.1**
KNDC	**Almaty**	**2.05**	**319**	PN	**Pb**	**10 51 34.8**	**-0.4**
KNDC						10 52 05.2	
KNDC	**Almaty**	**2.05**	**319**	⇓Pg	**Pb**	**10 51 34.8**	**-0.4**
	149nm,0.3s						
KNDC				⇑Lg	Lg	10 52 03.8	
	1μm,0.7s						
AAA	**Alma-Ata**	**2.07**	**318**	⇓*e*PN	**Pb**	**10 51 35.5**	**-0.1**
AAA	**Alma-Ata**	**2.07**	**318**	*e*P	**Pb**	**10 51 35.8**	**+0.3**
	471nm,0.3s						
AAA				*e*S	**Sg**	**10 52 05.6**	**+1.7**
	2μm,0.4s						
AAA	**Alma-Ata**	**2.07**	**318**	Pg	**Pb**	**10 51 35.8**	**+0.3**
	471nm,0.3s						
AAA				Lg	Lg	10 52 05.6	
	2μm,0.4s						
KTMS	**Ketmen**	**2.09**	**32**	*e*P	**Pn**	**10 51 33.1**	**-0.3**
	baz=30						
KTMS				*e*S	**Sb**	**10 52 01.0**	**-1.3**
	baz=30						
KTMS	**Ketmen**	**2.09**	**32**	*e*P	**Pn**	**10 51 33.1**	**-0.3**
	45nm,0.2s						
KTMS				*e*S	**Sb**	**10 52 01.0**	**-1.3**
	412nm,0.3s						
KTMS	**Ketmen**	**2.09**	**32**	Pg	**Pn**	**10 51 33.1**	**-0.3**
	45nm,0.2s						
KTMS				Lg	Lg	10 52 01.0	
	412nm,0.3s						
NRN	**Naryn**	**2.13**	**264**	⇑*e*P	**Pn**	**10 51 34.6**	**+0.5**
	baz=66						
NRN				⇑*e*S	**Sb**	**10 52 03.5**	**-0.1**
	baz=66						
NRN	**Naryn**	**2.13**	**264**	*e*PN	**Pn**	**10 51 34.6**	**+0.5**
NRN				*e*S	**Sb**	**10 52 03.5**	**-0.1**
MTBS	**Maitube**	**2.28**	**310**	*e*P	**Pb**	**10 51 38.4**	**-0.8**
	158nm,0.4s						
MTBS				*e*S	**Sg**	**10 52 10.8**	**+0.2**
	792nm,0.4s						
MTBS	**Maitube**	**2.28**	**310**	Pg	**Pb**	**10 51 38.4**	**-0.8**
	158nm,0.4s						
MTBS				Lg	Lg	10 52 10.8	
	792nm,0.4s						
BOOM	**Boomskoye usch**	**2.28**	**291**	⇑*e*P	**Pn**	**10 51 36.6**	**+0.5**
	baz=93						
BOOM				⇑*e*S	**Sb**	**10 52 06.5**	**-1.5**
	baz=93						
BOOM	**Boomskoye usch**	**2.28**	**291**	*e*PN	**Pn**	**10 51 36.6**	**+0.5**
BOOM				*e*S	**Sb**	**10 52 06.5**	**-1.5**
BLB	**Baldybastay**	**2.42**	**354**	*e*P	**Pb**	**10 51 40.9**	**-0.6**
	556nm,0.3s						
BLB				*e*S	**Sg**	**10 52 14.4**	**-0.6**
	3μm,0.3s						
BLB	**Baldybastay**	**2.42**	**354**	Pg	**Pb**	**10 51 40.9**	**-0.6**
	556nm,0.3s						
BLB				Lg	Lg	10 52 14.4	
	3μm,0.3s						
CHKK	**Chushkaly**	**2.55**	**329**	*e*P	**Pb**	**10 51 43.5**	**-0.2**
	192nm,0.4s						
CHKK				*e*S	**Sg**	**10 52 19.0**	**-0.1**
	2μm,0.3s						
CHKK	**Chushkaly**	**2.55**	**329**	Pg	**Pb**	**10 51 43.5**	**-0.2**
	192nm,0.4s						
CHKK				Lg	Lg	10 52 19.0	
	2μm,0.3s						
KTBS	**Karatobe**	**2.56**	**323**	*e*P	**Pb**	**10 51 42.7**	**-1.2**
	125nm,0.5s						
KTBS				*e*S	**Sg**	**10 52 18.2**	**-1.4**
	1μm,0.3s						
KTBS	**Karatobe**	**2.56**	**323**	Pg	**Pb**	**10 51 42.7**	**-1.2**
	125nm,0.5s						
KTBS				Lg	Lg	10 52 18.2	
	1μm,0.3s						
ARXS	**Arharly**	**2.62**	**344**	*i* PN	**Pb**	**10 51 42.9**	**-2.1**
ARXS	**Arharly**	**2.62**	**344**	*e*P	**Pb**	**10 51 44.2**	**-0.9**
	57nm,0.2s						
ARXS				*e*S	**Sg**	**10 52 20.0**	**-1.7**
	1μm,0.4s						
ARXS	**Arharly**	**2.62**	**344**	Pg	**Pb**	**10 51 44.2**	**-0.9**
	57nm,0.2s						
ARXS				Lg	Lg	10 52 20.0	
	1μm,0.4s						
KNOS	**Konyrlen**	**2.68**	**6**	*e*P	**Pb**	**10 51 44.8**	**-1.3**
	144nm,0.3s						
KNOS				*e*S	**Sb**	**10 52 20.9**	**+1.5**
	876nm,0.4s						
KNOS	**Konyrlen**	**2.68**	**6**	Pg	**Pb**	**10 51 44.8**	**-1.3**
	144nm,0.3s						
KNOS				Lg	Lg	10 52 20.9	
	876nm,0.4s						
TKM2	**Tokmak 2**	**2.69**	**298**	P	**Pb**	**10 51 44.9**	**-1.3**
	SNR=20						
TKM2	**Tokmak 2**	**2.69**	**298**	⇓*e*P	**Pn**	**10 51 42.1**	**+0.5**
	baz=99						
TKM2				⇓*e*S	**Sn**	**10 52 16.0**	**+1.3**

baz=99
TKM2 Tokmak 2 2.69 298 *e*PN **Pn 10 51 42.1 +0.5**
TKM2 *e*S **Sn 10 52 16.0 +1.3**
TKM2 Tokmak 2 2.69 298 ⇓Pg **Pb 10 51 44.6 -1.5**
86nm,0.5s
TKM2 ⇑Lg Lg 10 52 22.3
256nm,0.5s
DGS Degeres 2.73 306 *e*P **Pb 10 51 46.3 -0.6**
108nm,0.5s
DGS *e*S **Sg 10 52 24.1 -1.0**
193nm,0.5s
DGS Degeres 2.73 306 Pg **Pb 10 51 46.3 -0.6**
108nm,0.5s
DGS Lg Lg 10 52 24.1
193nm,0.5s
DJR Jarkent 2.73 15 *e*P **Pb 10 51 45.8 -1.1**
82nm,0.3s
DJR *e*S **Sb 10 52 22.7 +1.9**
2μm,0.4s
DJR Jarkent 2.73 15 Pg **Pb 10 51 45.8 -1.1**
82nm,0.3s
DJR Lg Lg 10 52 22.7
2μm,0.4s
KUU Kurty 2.86 321 *e*P **Pb 10 51 48.2 -0.8**
48nm,0.5s
KUU *e*S **Sb 10 52 26.8 +2.5**
346nm,0.5s
KUU Kurty 2.86 321 Pg **Pb 10 51 48.2 -0.8**
48nm,0.5s
KUU Lg Lg 10 52 26.8
346nm,0.5s
KBK Karagaybulak 3.03 290 P **Pb 10 51 50.6 -1.4**
SNR=11
KBK Karagaybulak 3.03 290⇓*e*P **Pn 10 51 46.8 +0.4**
baz=91
KBK ⇓*e*S **Sn 10 52 24.3 +1.1**
baz=91
KBK Karagaybulak 3.03 290 *e*PN **Pn 10 51 46.8 +0.4**
KBK *e*S **Sn 10 52 24.3 +1.1**
KRBS Karabastau 3.06 312 *e*P **Pb 10 51 52.6 +0.1**
81nm,0.4s
KRBS *e*S **Sg 10 52 34.2 -1.5**
160nm,0.3s
KRBS Karabastau 3.06 312 Pg **Pb 10 51 52.6 +0.1**
81nm,0.4s
KRBS Lg Lg 10 52 34.2
160nm,0.3s
KSH Kashi 3.07 226 Pg **Pg 10 51 57.0 +0.9**
KSH Sg Sg 10 52 45.5 +10
KSH smax smax
comp=N,90nm,0.7s
KSH smax smax
comp=E,140nm,0.7s
UCH Uchtor 3.25 281 P **Pb 10 51 55.5 -0.5**
SNR=6.5
UCH Uchtor 3.25 281⇑*e*P **Pn 10 51 50.3 +0.6**
baz=82
UCH ⇑*e*S **Sn 10 52 30.0 +0.9**
baz=82
UCH Uchtor 3.25 281 *e*PN **Pn 10 51 50.3 +0.6**
UCH *e*S **Sn 10 52 30.0 +0.9**
CHMS Chumysh 3.28 295 P **Pb 10 51 53.1 -3.2**
SNR=8.9
CHMS Chumysh 3.28 295⇑*e*P **Pn 10 51 50.1 +0.4**
baz=96
CHMS ⇑*e*S **Sn 10 52 30.3 +1.1**
baz=96
CHMS Chumysh 3.28 295 *e*PN **Pn 10 51 50.1 +0.4**
CHMS *e*S **Sn 10 52 30.3 +1.1**
CHMS Chumysh 3.28 295 ⇑Pn **Pn 10 51 49.9 +0.2**
17nm,0.4s
CHMS ⇓Lg Lg 10 52 42.7
67nm,0.5s
FRU1 Bishkek 3.30 291⇓*e*P **Pn 10 51 50.7 +0.7**
baz=92
FRU1 ⇓*e*S **Sn 10 52 31.0 +1.3**
baz=92
FRU1 Bishkek 3.30 291 *e*PN **Pn 10 51 50.7 +0.7**
FRU1 *e*S **Sn 10 52 31.0 +1.3**
TDK Taldyqorghan 3.32 355 *e*P **Pb 10 51 56.3 -0.6**
35nm,0.2s
TDK *e*S **Sb 10 52 40.7 +3.0**
730nm,0.3s
TDK Taldyqorghan 3.32 355 Pg **Pb 10 51 56.3 -0.6**
35nm,0.2s
TDK Lg Lg 10 52 40.7
730nm,0.3s
AAK Ala-Archa 3.35 288 P **Pb 10 51 55.6 -1.9**
SNR=15
AAK Ala-Archa 3.35 288 Pn **Pn 10 51 53.7 +3.0**
13nm,0.3s,baz=108,slow=10,SNR=41
AAK Sn **Sb 10 52 41.5 +2.9**
19nm,0.3s,baz=330,slow=21,SNR=10
50nm,0.5s
AAK Ala-Archa 3.35 288⇓*e*P **Pn 10 51 51.4 +0.7**
baz=89
AAK ⇓*e*S **Sn 10 52 32.5 +1.5**
baz=89
AAK Ala-Archa 3.35 288 *e*PN **Pn 10 51 51.4 +0.7**
AAK *e*S **Sn 10 52 32.2 +1.2**
ARLS Aral 3.36 274⇓*e*P **Pn 10 51 51.3 +0.4**
baz=76
ARLS ⇓*e*S **Sn 10 52 32.2 +0.8**
baz=76
ARLS Aral 3.36 274 *e*PN **Pn 10 51 51.3 +0.4**
ARLS *e*S **Sn 10 52 32.5 +1.1**
SGDS Sogindy 3.56 301 *e*PN **Pn 10 51 54.0 +0.5**
SGDS Sogindy 3.56 301 *e*P **Pb 10 51 59.6 -1.4**
27nm,0.6s
SGDS *e*S **Sb 10 52 46.3 +1.8**
55nm,0.4s
SGDS Sogindy 3.56 301 Pg **Pb 10 51 59.6 -1.4**
27nm,0.6s
SGDS Lg Lg 10 52 46.3
55nm,0.4s
USP Ospenovka 3.56 298 P **Pb 10 51 59.8 -1.1**
SNR=11
USP Ospenovka 3.56 298⇓*e*P **Pn 10 51 53.9 +0.4**
baz=99
USP ⇓*e*S **Sn 10 52 37.6 +1.6**
baz=99
USP Ospenovka 3.56 298 *e*PN **Pn 10 51 53.9 +0.4**
USP *e*S **Sn 10 52 36.7 +0.7**
AML Almayashu 3.85 278 P **Pb 10 52 05.9 -0.2**
SNR=28
AML Almayashu 3.85 278 *e*PN **Pn 10 51 58.5 +0.7**
AML *e*S **Sn 10 52 44.5 +0.9**
EKS2 Erkin-Say 3.87 286 P **Pb 10 52 03.1 -3.2**
SNR=13
EKS2 Erkin-Say 3.87 286⇓*e*P **Pn 10 51 58.3 +0.5**
baz=87
EKS2 ⇓*e*S **Sn 10 52 44.6 +0.8**
baz=87
EKS2 Erkin-Say 3.87 286 *e*PN **Pn 10 51 58.3 +0.5**
EKS2 *e*S **Sn 10 52 44.6 +0.8**
MRKS Merke 4.28 286 *e*P **Pb 10 52 14.2 +0.8**
17nm,0.7s
MRKS *e*S **Sg 10 53 12.3 -2.6**
66nm,0.6s
MRKS Merke 4.28 286 Pg **Pb 10 52 14.2 +0.8**
17nm,0.7s
MRKS Lg Lg 10 53 12.3
66nm,0.6s
BTLS Baital 4.83 316 *e*P **Pb 10 52 24.2 +1.7**
5.1nm,0.4s
BTLS *e*S **Sg 10 53 28.6 -3.7**
37nm,0.6s
BTLS Baital 4.83 316 Pg **Pb 10 52 24.2 +1.7**
5.1nm,0.4s
BTLS Lg Lg 10 53 28.7
37nm,0.6s
MAKZ Makanchi 5.60 23 PN **Pn 10 52 22.3 +0.9**
MAKZ 10 53 28.3
MAKZ 10 53 50.8
MAKZ Makanchi 5.60 23 ⇓Pn **Pn 10 52 21.9 +0.5**
3.7nm,0.3s
MAKZ ⇑Sn **Sn 10 53 28.4 +2.2**
6.3nm,0.4s
MAKZ ⇓Lg Lg 10 53 54.3
9.4nm,0.5s
MK31 Makanchi Array 5.68 25 PN **Pn 10 52 22.9 +0.3**
MK31 10 53 30.5
MK31 10 53 52.7
MK31 Makanchi Array 5.68 25 ⇓Pn **Pn 10 52 22.4 -0.1**
2.3nm,0.2s,baz=212,slow=15,SNR=81
MK31 ⇑Sn **Sn 10 53 29.2 +0.9**
6.8nm,0.3s,baz=213,slow=31,SNR=4.1
MK31 ⇑Lg Lg 10 53 54.8
28nm,0.4s,baz=207,slow=27,SNR=5.0
MKAR Makanchi Array 5.68 25 Pn **Pn 10 52 23.4 +0.8**
3.6nm,0.3s,baz=201,slow=12,SNR=48
MKAR Sn **Sn 10 53 30.7 +2.4**
5.6nm,0.3s,baz=210,slow=28,SNR=6.6
MKAR Lg Lg 10 53 52.5
7.6nm,0.3s,baz=208,slow=28,SNR=7.1
MKAR LR LR 10 54 16.8
comp=Z,31nm,19.7s,baz=277,slow=34
7.0nm,0.4s
KK31 Karatay Array 6.31 286 ⇑Pg **Pb 10 52 52.0 +4.3**
3.5nm,0.5s,baz=95,slow=15,SNR=28
KK31 ⇓Lg Lg 10 54 18.0
8.5nm,0.5s,baz=94,slow=28,SNR=5.5
WMQ Urumqi 6.87 69 *e*Pn **Pn 10 52 37.5 -1.5**
WMQ Sn **Sn 10 53 58.0 +0.3**
WMQ smax smax
comp=N,55nm,1.5s
WMQ smax smax
comp=E,61nm,1.5s
OTUK Ortayu 8.00 327 P **Pn 10 52 54.9 +0.5**
OTUK Ortayu 8.00 327 ⇑Pn **Pn 10 52 54.9 +0.5**
4.3nm,0.8s
OTUK ⇓Lg Lg 10 55 10.4
33nm,0.7s
KURBB Kurchatov Arra 8.94 359 Pn **Pn 10 53 09.9 +2.7**
0.1nm,0.3s,baz=190,slow=13,SNR=2.1
KURBB Lg Lg 10 55 39.5
0.6nm,0.3s,baz=170,slow=32,SNR=8.5
0.3nm,0.3s
KURBB Kurchatov Arra 8.94 359 ⇑Lg Lg 10 55 39.3
73nm,0.8s
KURK Kurchatov 9.03 359 P **Pn 10 53 09.9 +1.4**
CHCP Chirah Chowk 9.14 211 P **Pn 10 53 09.6 -0.6**
CEP Cherat 9.57 217 P **Pn 10 53 12.1 -4.0**
CEP S **Sn 10 55 08.0 +3.9**
DGZ Jazzator, Alta 10.02 34⇓*i*P **Pn 10 53 25.0 +2.8**
BVA0 Borovoye Array 12.68 336 ⇓Lg Lg 10 57 40.5
16nm,1.1s,baz=154,slow=27,SNR=6.0
BVAR Borovoye Array 12.68 336 Lg Lg 10 57 40.8
0.3nm,0.3s,baz=165,slow=29,SNR=7.0
ZALV Zalesovo Beam 12.90 16 Pn **Pn 10 54 01.9 +0.4**
0.3nm,0.3s,baz=200,slow=12,SNR=6.1
ZALV Sn **Sn 10 56 22.3 -3.1**
0.4nm,0.3s,baz=211,slow=19,SNR=5.2
1.0nm,0.4s
AB31 Akbulak array 15.22 306 P **Pn 10 54 33.3 +0.3**
AB31 Akbulak array 15.22 306 Pn **Pn 10 54 33.3 +0.3**
1.1nm,0.6s,baz=114,slow=12,SNR=15
SONM Songino Array 20.46 63 P **P 10 55 32.2 -3.9**
1.6nm,0.8s,baz=269,slow=11,SNR=8.4
1.6nm,0.8s
KBZ Khabaz 26.35 287 LR LR 11 08 55.7
comp=Z,22nm,20.7s,baz=44,slow=40
OBN Obninsk 30.59 311 *e*P **P 10 57 16.3 +4.3**
OBN pmax pmax
comp=Z,5.0nm,0.8s
KEST Kesra 53.20 288 LR LR 11 26 22.4
comp=Z,42nm,21.3s,baz=232,slow=40
TORD Torodi Ar. Bea 71.80 272 P **P 11 02 17.7 -3.7**
comp=Z,0.4nm,0.6s,baz=40,slow=5.2,SNR=3.0
comp=Z,0.4nm,0.6s
MATP Matopo 77.37 228 LR LR 11 39 01.9
comp=Z,165nm,21.4s,baz=240,slow=37

ROM 28 10:51:18.0±0.1, 42°.885N±0°.003×13°.169E±0°.004,
h9km, ML1.7/3, 1D, Error ellipse: s-maj=0.3km
s-min=0.2km az=193.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**218**	P	Pg		10 51 20.3	+0.2
NRCA				S	Sg		10 51 21.9	+0.2
NRCA				AML	AML			
	comp=E,1320μm,0.2s							
NRCA				AML	AML			
	comp=N,1215μm,0.1s							
MMO1	**Montemonaco**	**0.12**	**83**	P	Pg		10 51 21.3	+0.4
MMO1				S	Sg		10 51 23.5	+0.7
FDMO	**Fiordimonte**	**0.16**	**339**	⇓P	Pg		10 51 22.0	+0.4
T1241	**Roccafluvione,**	**0.20**	**98**	P	Pg		10 51 22.7	+0.6
T1241				S	Sg		10 51 26.2	+1.3
CSP1	**Cessapalombo**	**0.21**	**7**	P	Pg		10 51 22.8	+0.4
CSP1				S	Sg		10 51 26.5	+1.1
CESI	**CESI - Serrava**	**0.23**	**302**	P	Pg		10 51 23.7	+1.0
CESI				S	Sg		10 51 27.6	+1.8
CESI				AML	AML			
	comp=N,313μm,0.1s							
CESI				AML	AML			
	comp=E,142μm,0.6s							
T1215	**Vallo di Nera,**	**0.24**	**250**	P	Pg		10 51 23.3	+0.5
T1243	**Rocca Santa Ma**	**0.28**	**132**	P	Pg		10 51 24.5	+0.8
T1243				S	Sb		10 51 29.4	-0.8
LNSS	**Leonessa**	**0.30**	**199**	P	Pb		10 51 24.9	-0.7
LNSS				S	Sb		10 51 29.7	-0.9
LNSS				AML	AML			
	comp=E,125μm,0.2s							
LNSS				AML	AML			
	comp=N,184μm,0.2s							

IDC ***28*** *10:58:26.8±1.3, 40°.64N×73°.51E, h0km, mb3.5/3,*
mbtmp3.4/7, ML3.0/4, MS2.8/2, Error ellipse: s-maj=34.9km
s-min=14.4km az=109.0
MOS ***28*** *10:58:27.8±0.8, 40°.90N×72°.86E, h11km, mb4.7/3, Error*
ellipse: s-maj=10.8km s-min=5.0km az=63.8
MOS Felt (III-IV) at Suzak, Kayyrma, Dzhar-Kyshtak,
Dzhalal-Abad; (III) at Bazar-Korgon.
KRNET ***28*** *10:58:28.1±0.1, 40°.92N×72°.84E, h21km, mb4.1*
ISU ***28*** *10:58:28, 40°.84N×72°.94E, h16km*
SOME ***28*** *10:58:28.3, 41°.05N×72°.83E, h15km*
NNC ***28*** *10:58:30.3±1.0, 41°.05N×72°.89E, h0km, mb4.2, mpv3.8,*
Error ellipse: s-maj=8.5km s-min=4.3km az=0.0
KNET ***28*** *10:58:31.5±0.3, 41°.10N×72°.90E, h21km±1km, ml3.6, Error*
ellipse: s-maj=4.1km s-min=2.1km az=116.0
ISC 28 10:58:26.1±1.0, 40°.92N±0°.02×72°.85E±0°.02, h12km±8km,
n117, σ1§56/187, mb3.8/5, MS3.4/3, 45C-27D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.40**	**187**	⇓*e*P		**Pn**	**10 58 36.3**	**-1.4**
	baz=86							
OHH				⇓*e*S		**Sb**	**10 58 41.9**	**+0.7**
	baz=86							
OHH	**Osh**	**0.40**	**187**	*e*PG		**Pn**	**10 58 36.3**	**-1.4**
OHH				*e*S		**Sb**	**10 58 41.9**	**+0.7**
OHH	**Osh**	**0.40**	**187**	P		**Pb**	**10 58 35.8**	**+0.7**
OHH				S		**Sb**	**10 58 41.2**	**0.0**
ANR	**Andizhan**	**0.41**	**246**	P		**Pn**	**10 58 37.6**	**-0.2**
ANR				S		**Sn**	**10 58 44.4**	**+4.7**
FRG	**Fergana**	**0.98**	**236**	P		**Pn**	**10 58 47.3**	**+1.7**
FRG				S		**Sn**	**10 59 01.1**	**+1.7**
AML	**Almayashu**	**1.36**	**27**	⇓P		**Pg**	**10 58 54.1**	**+1.8**
	207nm,0.2s,SNR=227							
AML				⇑S		**Sg**	**10 59 11.3**	**+1.2**
	860nm,0.2s							
AML	**Almayashu**	**1.36**	**27**	*e*PG		**Pg**	**10 58 53.2**	**+0.9**
AML				*e*S		**Sg**	**10 59 11.4**	**+1.4**
TRKS	**Terek-Say**	**1.43**	**296**	⇑*e*P		**Pg**	**10 58 53.4**	**-0.1**
	baz=94							
TRKS				⇑*e*S		**Sg**	**10 59 11.7**	**-0.4**
	baz=94							
TRKS	**Terek-Say**	**1.43**	**296**	*e*PG		**Pg**	**10 58 53.4**	**-0.1**
TRKS				*e*S		**Sg**	**10 59 11.7**	**-0.4**
ARLS	**Aral**	**1.45**	**49**	⇑*e*P		**Pg**	**10 58 54.8**	**+0.9**
	baz=50							
ARLS				⇑*e*S		**Sg**	**10 59 14.0**	**+1.2**
	baz=50							
ARLS	**Aral**	**1.45**	**49**	*e*PG		**Pg**	**10 58 54.8**	**+0.9**
ARLS				*e*S		**Sg**	**10 59 14.0**	**+1.2**
DRK	**Karamyk**	**1.65**	**210**	⇑*e*P		**Pg**	**10 58 58.2**	**+0.4**
	baz=9.0							
DRK				⇑*e*S		**Sg**	**10 59 20.1**	**+0.8**
	baz=9.0							
BTK	**Batken**	**1.78**	**242**	⇑*e*P		**Pg**	**10 58 59.4**	**-0.8**
	baz=41							
BTK				⇑*e*S		**Sg**	**10 59 22.7**	**-0.5**
	baz=41							
BTK	**Batken**	**1.78**	**242**	*e*PN		**Pg**	**10 58 59.4**	**-0.8**
BTK				*e*S		**Sg**	**10 59 22.7**	**-0.5**
UCH	**Uchtor**	**1.80**	**43**	⇑P		**Pg**	**10 59 02.0**	**+1.2**
	360nm,0.2s,SNR=536							
UCH				⇓S		**Sg**	**10 59 25.2**	**+1.1**
	583nm,0.4s							
UCH	**Uchtor**	**1.80**	**43**	⇑*i*P		**Pg**	**10 59 01.0**	**+0.3**
	baz=43							
UCH				⇑*e*S		**Sg**	**10 59 24.4**	**+0.3**
	baz=43							
UCH	**Uchtor**	**1.80**	**43**	*i* PN		**Pg**	**10 59 01.0**	**+0.3**
UCH				*e*S		**Sg**	**10 59 24.4**	**+0.3**
MRKS	**Merke**	**1.84**	**9**	*e*P		**Pg**	**10 59 02.3**	**+0.9**
	279nm,0.5s							
MRKS				*e*S		**Sg**	**10 59 26.8**	**+1.5**
	831nm,0.3s							
MRKS	**Merke**	**1.84**	**9**	P		**Pg**	**10 59 02.3**	**+0.9**
	279nm,0.5s							
MRKS				S		**Sg**	**10 59 26.8**	**+1.5**
	831nm,0.3s							
EKS2	**Erkin-Say**	**1.87**	**21**	⇓P		**Pg**	**10 59 02.7**	**+0.8**
	41nm,0.3s,SNR=29							
EKS2				⇓S		**Sg**	**10 59 25.7**	**-0.5**
	236nm,0.2s							
EKS2	**Erkin-Say**	**1.87**	**21**	⇓*e*P		**Pg**	**10 59 01.4**	**-0.5**
	baz=22							
EKS2				⇓*e*S		**Sg**	**10 59 25.9**	**-0.3**
	baz=22							
EKS2	**Erkin-Say**	**1.87**	**21**	*e*PN		**Pg**	**10 59 01.4**	**-0.5**
EKS2				*e*S		**Sg**	**10 59 25.9**	**-0.3**
AAK	**Ala-Archa**	**2.11**	**35**	P		**Pg**	**10 59 06.3**	**-0.1**
	154nm,0.3s,SNR=112							
AAK				⇓S		**Sg**	**10 59 33.7**	**-0.1**
	342nm,0.3s							
AAK	**Ala-Archa**	**2.11**	**35**	Pn		**Pg**	**10 59 06.4**	**-0.1**
	46nm,0.3s,baz=191,slow=5.1,SNR=228							
AAK				Lg		Lg	10 59 35.1	
	88nm,0.3s,baz=54,slow=13,SNR=46							
AAK				LR		LR	11 00 02.7	
	comp=Z,64nm,20.2s,baz=200,slow=45							
	112nm,0.3s							
AAK	**Ala-Archa**	**2.11**	**35**	⇑*e*P		**Pb**	**10 59 04.8**	**+0.5**
	baz=35							
AAK				⇑*e*S		**Sb**	**10 59 31.4**	**+1.0**
	baz=35							
AAK	**Ala-Archa**	**2.11**	**35**	*e*PN		**Pb**	**10 59 04.8**	**+0.5**
AAK				*e*S		**Sb**	**10 59 31.4**	**+1.0**
CHMG	**Chimgan**	**2.23**	**287**	P		**Sg**	**10 59 39.2**	**+1.3**
DZA	**Taraz**	**2.27**	**330**	*e*P		**Pg**	**10 59 10.4**	**+0.7**
	161nm,0.4s							
DZA				*e*S		**Sg**	**10 59 40.3**	**+1.2**
	974nm,0.3s							
DZA	**Taraz**	**2.27**	**330**	Pg		**Pg**	**10 59 10.4**	**+0.7**
	161nm,0.4s							
DZA				Lg		Lg	10 59 40.3	
	974nm,0.3s							
CHRV	**Charvak**	**2.30**	**289**	P		**Sg**	**10 59 41.6**	**+1.6**
FRU1	**Bishkek**	**2.31**	**35**	⇑*e*P		**Pb**	**10 59 07.6**	**0.0**
	baz=35							
FRU1				⇑*e*S		**Sb**	**10 59 36.3**	**+0.3**
	baz=35							
FRU1	**Bishkek**	**2.31**	**35**	*e*PN		**Pb**	**10 59 07.6**	**0.0**
FRU1				*e*S		**Sb**	**10 59 36.3**	**+0.3**
KBK	**Karagaybulak**	**2.33**	**41**	⇓P		**Pg**	**10 59 09.8**	**-1.0**
	52nm,0.2s,SNR=43							
KBK				⇓S		**Sg**	**10 59 39.7**	**-1.4**
	1μm,0.4s							
KBK	**Karagaybulak**	**2.33**	**41**	⇑*e*P		**Pb**	**10 59 07.9**	**-0.3**
	baz=42							
KBK				⇑*e*S		**Sb**	**10 59 37.0**	**0.0**
	baz=42							
KBK	**Karagaybulak**	**2.33**	**41**	*e*PN		**Pb**	**10 59 07.9**	**-0.3**
KBK				*e*S		**Sb**	**10 59 37.0**	**0.0**
NRN	**Naryn**	**2.43**	**77**	⇑*e*P		**Pb**	**10 59 08.8**	**-1.1**
	baz=77							
NRN				⇑*e*S		**Sb**	**10 59 38.7**	**-1.1**
	baz=77							
NRN	**Naryn**	**2.43**	**77**	*e*PN		**Pb**	**10 59 08.8**	**-1.1**
NRN				*e*S		**Sb**	**10 59 38.7**	**-1.1**
CHMS	**Chumysh**	**2.51**	**34**	⇑P		**Pb**	**10 59 11.6**	**+0.6**
	17nm,0.2s,SNR=14							
CHMS				⇓S		**Sb**	**10 59 43.4**	**+1.4**
	104nm,0.3s							
CHMS	**Chumysh**	**2.51**	**34**	⇓*e*P		**Pb**	**10 59 10.4**	**-0.7**
	baz=34							
CHMS				⇓*e*S		**Sb**	**10 59 41.0**	**-0.9**
	baz=34							
CHMS	**Chumysh**	**2.51**	**34**	*e*PN		**Pb**	**10 59 10.4**	**-0.7**
CHMS				*e*S		**Sb**	**10 59 41.0**	**-0.9**
CHMS	**Chumysh**	**2.51**	**34**	⇑Pn		**Pb**	**10 59 11.7**	**+0.6**
	13nm,0.4s							
CHMS				⇑Pg		**Pg**	**10 59 14.7**	**+0.5**
	56nm,0.8s							
CHMS				⇑Lg		Lg	10 59 45.3	
	223nm,0.9s							
USP	**Ospenovka**	**2.64**	**27**	⇑P		**Pb**	**10 59 13.2**	**-0.1**
	44nm,0.3s,SNR=43							
USP				⇓S		**Sb**	**10 59 46.2**	**+0.4**
	264nm,0.3s							
USP	**Ospenovka**	**2.64**	**27**	⇑*e*P		**Pb**	**10 59 12.2**	**-1.1**
	baz=27							
USP				⇑*e*S		**Sb**	**10 59 44.0**	**-1.7**
	baz=27							
USP	**Ospenovka**	**2.64**	**27**	*e*PN		**Pb**	**10 59 12.2**	**-1.1**
USP				*e*S		**Sb**	**10 59 44.0**	**-1.7**
TAS	**Tashkent**	**2.72**	**280**	⇓*e*P		**Pb**	**10 59 13.0**	**-1.6**
	baz=80							
TAS				⇓*e*S		**Sb**	**10 59 45.9**	**-2.0**
	baz=80							
TAS	**Tashkent**	**2.72**	**280**	*e*PN		**Pb**	**10 59 13.0**	**-1.6**
TAS				*e*S		**Sb**	**10 59 45.9**	**-2.0**
TAS	**Tashkent**	**2.72**	**280**	P		**Sg**	**10 59 54.9**	**+1.5**
GAR	**Garm**	**2.74**	**226**	⇑*e*P		**Pb**	**10 59 13.5**	**-1.5**
	baz=26							
GAR				⇑*e*S		**Sb**	**10 59 46.7**	**-1.8**
	baz=26							
GAR	**Garm**	**2.74**	**226**	*e*PN		**Pb**	**10 59 13.5**	**-1.5**
GAR				*e*S		**Sb**	**10 59 46.7**	**-1.8**
KSH	**Kashi**	**2.77**	**119**	Pn		**Pb**	**10 59 13.5**	**-2.1**
KSH				Sn		**Sb**	**10 59 48.5**	**-1.0**
BOOM	**Boomskoye usch**	**2.79**	**55**	⇑*e*P		**Pb**	**10 59 14.5**	**-1.4**
	baz=55							
BOOM				⇑*i*S		**Sb**	**10 59 48.1**	**-2.0**
	baz=55							
BOOM	**Boomskoye usch**	**2.79**	**55**	*e*PN		**Pb**	**10 59 14.5**	**-1.4**
BOOM				*i* S		**Sb**	**10 59 48.1**	**-2.0**
KK31	**Karatay Array**	**2.79**	**322**	PN		**Pb**	**10 59 14.6**	**-1.2**
KK31				PG		**Pg**	**10 59 18.6**	**-0.9**
KK31				LG		Lg	10 59 56.2	
KK31	**Karatay Array**	**2.79**	**322**	⇑Pn		**Pb**	**10 59 14.6**	**-1.2**
	0.8nm,0.2s,baz=129,slow=30,SNR=4.2							
KK31				⇓Pg		**Pg**	**10 59 18.6**	**-0.9**
	25nm,0.3s,baz=123,slow=12,SNR=347							
KK31				⇑Lg		Lg	10 59 56.2	
	89nm,0.4s,baz=148,slow=27,SNR=11							
KKAR	**Karatay Array**	**2.79**	**322**	⇓*i*P		**Pb**	**10 59 14.3**	**-1.5**
	baz=22							
KKAR				⇓*i*S		**Sb**	**10 59 47.8**	**-2.2**
	baz=22							
KKAR	**Karatay Array**	**2.79**	**322**	*i* PN		**Pb**	**10 59 14.3**	**-1.5**
KKAR				*i* S		**Sb**	**10 59 47.8**	**-2.2**
SGDS	**Sogindy**	**2.85**	**27**	*e*P		**Pb**	**10 59 16.1**	**-0.8**
	15nm,0.4s							
SGDS				*e*S		**Sb**	**10 59 51.4**	**-0.4**
	74nm,0.5s							
SGDS	**Sogindy**	**2.85**	**27**	Pg		**Pb**	**10 59 16.0**	**-0.8**
	15nm,0.4s							
SGDS				Lg		Lg	10 59 51.4	
	74nm,0.5s							
TKM2	**Tokmak 2**	**2.86**	**45**	⇑P		**Pb**	**10 59 16.6**	**-0.5**
	32nm,0.3s,SNR=35							
TKM2	**Tokmak 2**	**2.86**	**45**	⇑*e*P		**Pb**	**10 59 15.4**	**-1.7**
	baz=45							
TKM2				⇑*e*S		**Sb**	**10 59 49.7**	**-2.4**
	baz=45							
TKM2	**Tokmak 2**	**2.86**	**45**	*e*PN		**Pb**	**10 59 15.4**	**-1.7**
TKM2				*e*S		**Sb**	**10 59 49.7**	**-2.4**
TKM2	**Tokmak 2**	**2.86**	**45**	⇑Pn		**Pb**	**10 59 16.5**	**-0.6**
	21nm,0.4s							
TKM2				⇓Lg		Lg	10 59 57.3	
	80nm,0.4s							
DGS	**Degeres**	**3.18**	**42**	*e*P		**Pg**	**10 59 26.6**	**-0.3**
	20nm,0.6s							
DGS				*e*S		**Sg**	**11 00 08.2**	**+0.1**
	204nm,0.7s							
DGS	**Degeres**	**3.18**	**42**	Pg		**Pg**	**10 59 26.6**	**-0.3**
	20nm,0.6s							
DGS				Lg		Lg	11 00 08.2	
	204nm,0.7s							
MTBS	**Maitube**	**3.46**	**49**	*e*P		**Pg**	**10 59 30.6**	**-1.7**
	9.3nm,0.3s							

MTBS					*e*S		**Sg**	**11 00 16.0 -1.1**
	48nm,0.4s							
MTBS	**Maitube**	**3.46**	**49**		Pg		**Pg**	**10 59 30.6 -1.7**
	9.3nm,0.3s							
MTBS					Lg		Lg	11 00 16.0
	48nm,0.4s							
KRBS	**Karabastau**	**3.47**	**36**		*e*P		**Pg**	**10 59 31.6 -1.0**
	6.3nm,0.3s							
KRBS					*e*S		**Sg**	**11 00 16.7 -0.8**
	74nm,0.6s							
KRBS	**Karabastau**	**3.47**	**36**		Pg		**Pg**	**10 59 31.6 -1.0**
	6.3nm,0.3s							
KRBS					Lg		Lg	11 00 16.7
	74nm,0.6s							
TNSS	**Tian-Shan**	**3.71**	**54**		*e*P		**Pg**	**10 59 35.9 -1.3**
	7.1nm,0.5s							
TNSS					*e*S		**Sg**	**11 00 24.4 -0.9**
	35nm,0.8s							
TNSS	**Tian-Shan**	**3.71**	**54**		Pg		**Pg**	**10 59 35.9 -1.3**
	7.1nm,0.5s							
TNSS					Lg		Lg	11 00 24.4
	35nm,0.8s							
AAA	**Alma-Ata**	**3.79**	**52**		*e*P		**Pg**	**10 59 38.4 -0.2**
	43nm,0.3s							
AAA					*e*S		**Sg**	**11 00 28.6 +0.8**
	121nm,0.5s							
AAA	**Alma-Ata**	**3.79**	**52**		Pg		**Pg**	**10 59 38.4 -0.2**
	43nm,0.3s							
AAA					Lg		Lg	11 00 28.6
	121nm,0.5s							
KNDC	**Almaty**	**3.82**	**52**		PN		**Pg**	**10 59 39.1 -0.2**
KNDC					LG		Lg	11 00 29.9
KNDC	**Almaty**	**3.82**	**52**		⇓Pg		**Pg**	**10 59 39.1 -0.2**
	36nm,0.4s							
KNDC					⇓Lg		Lg	11 00 29.9
	109nm,0.6s							
MDOK	**Medeo**	**3.84**	**53**		PN		**Pb**	**10 59 30.2 -3.6**
MDOK					PG		**Pg**	**10 59 39.3 -0.4**
MDOK					LG		Lg	11 00 29.1
MDOK	**Medeo**	**3.84**	**53**		*e*P		**Pg**	**10 59 38.8 -0.9**
	13nm,0.4s							
MDOK					*e*S		**Sg**	**11 00 28.8 -0.7**
	47nm,0.7s							
MDOK	**Medeo**	**3.84**	**53**		⇑Pn		**Pb**	**10 59 30.2 -3.6**
	14nm,0.6s							
MDOK					Pg		**Pg**	**10 59 38.8 -0.9**
	13nm,0.4s							
MDOK					⇑Pg		**Pg**	**10 59 39.3 -0.4**
	19nm,0.8s							
MDOK					Lg		Lg	11 00 28.8
	47nm,0.7s							
MDOK					⇓Lg		Lg	11 00 29.0
	48nm,0.7s							
KOTS	**Kotyrbulak**	**3.92**	**53**		*e*P		**Pg**	**10 59 40.8 -0.4**
	12nm,0.4s							
KOTS					*e*S		**Sg**	**11 00 32.4 +0.4**
	148nm,0.7s							
KOTS	**Kotyrbulak**	**3.92**	**53**		Pg		**Pg**	**10 59 40.8 -0.4**
	12nm,0.4s							
KOTS					Lg		Lg	11 00 32.4
	148nm,0.7s							
KUU	**Kurty**	**3.93**	**40**		*e*P		**Pg**	**10 59 40.1 -1.3**
	11nm,0.3s							
KUU					*e*S		**Sg**	**11 00 31.1 -1.2**
	55nm,0.6s							
KUU	**Kurty**	**3.93**	**40**		Pg		**Pg**	**10 59 40.1 -1.3**
	11nm,0.3s							
KUU					Lg		Lg	11 00 31.1
	55nm,0.6s							
KTBS	**Karatobe**	**3.98**	**44**		*e*P		**Pg**	**10 59 41.0 -1.2**
	21nm,0.6s							
KTBS					*e*S		**Sg**	**11 00 32.5 -1.3**
	114nm,0.4s							
KTBS	**Karatobe**	**3.98**	**44**		Pg		**Pg**	**10 59 41.0 -1.2**
	21nm,0.6s							
KTBS					Lg		Lg	11 00 32.5
	114nm,0.4s							
BTLS	**Baital**	**4.21**	**12**		*e*P		**Pg**	**10 59 45.0 -1.6**
	12nm,0.5s							
BTLS					*e*S		**Sg**	**11 00 39.8 -1.3**
	48nm,0.5s							
BTLS	**Baital**	**4.21**	**12**		Pg		**Pg**	**10 59 45.0 -1.6**
	12nm,0.5s							
BTLS					Lg		Lg	11 00 39.8
	48nm,0.5s							
CHKK	**Chushkaly**	**4.24**	**45**		*e*P		**Pg**	**10 59 45.8 -1.4**
	14nm,0.7s							
CHKK					*e*S		**Sg**	**11 00 41.2 -0.8**
	54nm,0.3s							
CHKK	**Chushkaly**	**4.24**	**45**		Pg		**Pg**	**10 59 45.8 -1.4**
	14nm,0.7s							
CHKK					Lg		Lg	11 00 41.2
	54nm,0.3s							
KURS	**Kuram**	**4.71**	**55**		*e*P		**Pg**	**10 59 54.7 -1.5**
	8.3nm,0.7s							
KURS					*e*S		**Sg**	**11 00 56.1 -1.0**
	13nm,1.2s							
KURS	**Kuram**	**4.71**	**55**		Pg		**Pg**	**10 59 54.7 -1.5**
	8.3nm,0.7s							
KURS					Lg		Lg	11 00 56.1
	13nm,1.2s							
ZHN	**Zhinishke**	**4.72**	**60**		*e*P		**Pg**	**10 59 55.5 -1.1**
	9.3nm,0.2s							
ZHN					*e*S		**Sg**	**11 00 57.5 -0.2**
	23nm,0.5s							
ZHN	**Zhinishke**	**4.72**	**60**		Pg		**Pg**	**10 59 55.5 -1.1**
	9.3nm,0.2s							
ZHN					Lg		Lg	11 00 57.5
	23nm,0.5s							
KPKS	**Kokpek**	**5.02**	**58**		*e*P		**Pg**	**11 00 00.4 -1.9**
	9.1nm,0.6s							
KPKS					*e*S		**Sg**	**11 01 06.0 -1.2**
	42nm,0.5s							
KPKS	**Kokpek**	**5.02**	**58**		Pg		**Pg**	**11 00 00.4 -1.9**
	9.1nm,0.6s							
KPKS					Lg		Lg	11 01 06.0
	42nm,0.5s							
UZB	**Uzynbulak**	**5.10**	**62**		*e*P		**Pg**	**11 00 00.7 -3.1**
	3.6nm,0.5s							
UZB					*e*S		**Sg**	**11 01 06.9 -3.0**
	18nm,0.4s							
UZB	**Uzynbulak**	**5.10**	**62**		Pg		**Pg**	**11 00 00.7 -3.1**
	3.6nm,0.5s							
UZB					Lg		Lg	11 01 06.9
	18nm,0.4s							
SHLS	**Shalkode**	**5.40**	**63**		*e*P		**Pg**	**11 00 11.1 +1.6**
	3.8nm,0.3s							
SHLS					*e*S		**Sg**	**11 01 24.0 +4.5**
	26nm,0.8s							
SHLS	**Shalkode**	**5.40**	**63**		Pg		**Pg**	**11 00 11.1 +1.6**
	3.8nm,0.3s							
SHLS					Lg		Lg	11 01 24.0
	26nm,0.8s							
PDGK	**Podgornoye**	**5.49**	**62**		Pg		**Pg**	**11 00 07.9 -3.3**
	1.3nm,0.6s							
PDGK					Lg		Lg	11 01 19.3
	13nm,0.9s							
PDGK	**Podgornoye**	**5.49**	**62**		⇑Pg		**Pg**	**11 00 09.4 -1.7**
	4.7nm,0.6s							
PDGK					⇓Lg		Lg	11 01 20.5
	45nm,0.8s							
OTUK	**Ortayu**	**7.33**	**357**		P		**Pn**	**11 00 17.3 +4.4**
OTUK	**Ortayu**	**7.33**	**357**		⇑Pn		**Pn**	**11 00 17.3 +4.4**
	2.4nm,1.0s							
OTUK					⇓Pg		**Pg**	**11 00 42.2 -4.1**
	5.0nm,0.7s							
OTUK					⇑Lg		Lg	11 02 17.0
	30nm,0.6s							
MK31	**Makanchi Array**	**8.99**	**46**		⇓*e*P		**Pn**	**11 00 39.5 +3.9**
MK31	**Makanchi Array**	**8.99**	**46**		Pn		**Pn**	**11 00 39.9 +4.2**
	2.9nm,0.8s,baz=224,slow=14,SNR=4.7							
MKAR	**Makanchi Array**	**8.99**	**46**		Pn		**Pn**	**11 00 38.4 +2.8**
	0.1nm,0.3s,baz=234,slow=14,SNR=3.5							
MKAR					Lg		Lg	11 02 59.9
	0.1nm,0.3s,baz=242,slow=23,SNR=3.7							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**10.47**	**20**		Pn		**Pn**	**11 00 58.1 +2.2**
	baz=214,slow=13,SNR=2.0							
KURBB					Lg		Lg	11 03 57.5
	0.1nm,0.3s,baz=207,slow=28,SNR=6.6							
	0.3nm,0.2s							
KURK	**Kurchatov**	**10.58**	**20**		⇑*e*P		**Pn**	**11 01 00.4 +3.0**
KURK	**Kurchatov**	**10.58**	**20**		⇑Lg		Lg	11 03 59.8
	21nm,1.0s							
BVAR	**Borovoye Array**	**12.22**	**353**		Lg		Lg	11 04 58.5
	0.1nm,0.3s,baz=151,slow=28,SNR=3.0							
DGZ	**Jazzator, Alta**	**13.48**	**45**		⇑*e*P		**Pn**	**11 01 39.8 +2.7**
DGZ					pmax		pmax	
	comp=Z,5.0nm,1.8s							
ZALV	**Zalesovo Beam**	**15.31**	**28**		Pn		**P**	**11 02 06.3 -0.2**
	comp=Z,0.1nm,0.3s,baz=217,slow=9.1,SNR=2.9							
	comp=Z,0.7nm,0.6s							
OBN	**Obninsk**	**27.75**	**313**		*e*P		**P**	**11 04 14.7 +0.5**
OBN					pmax		pmax	
	comp=Z,4.0nm,0.8s							
OBN					MLR		MLR	
	comp=Z,78nm,15.0s							
CMAR	**Chiang Mai Arr**	**31.64**	**127**		*i* P		**P**	**11 04 51.2 +2.1**
CMAR					pmax		pmax	
	comp=Z,2.0nm,0.3s							
JOW	**Kunigami**	**47.37**	**89**		LR		LR	11 30 15.8
	comp=Z,30nm,18.4s,baz=356,slow=41							
BILL	**Bilibino**	**54.01**	**28**		*e*P		**P**	**11 07 48.7 -0.8**
BILL					*e*			11 09 01.1
BILL					*e*			11 09 55.3
BILL					pmax		pmax	
	comp=Z,7.0nm,1.4s							
BILL					MLR		MLR	
	comp=Z,29nm,13.0s							
TORD	**Torodi Ar. Bea**	**67.30**	**268**		P		P	11 09 27.8 +6.9
	comp=Z,0.5nm,0.7s,baz=52,slow=6.1,SNR=3.6							
	comp=Z,0.5nm,0.7s							
WRA	**Warramunga Arr**	**83.16**	**124**		P		**P**	**11 10 51.7 -0.4**
	comp=Z,0.2nm,0.7s,baz=322,slow=3.6,SNR=1.8							
	comp=Z,0.2nm,0.7s							
ASAR	**Alice Springs**	**85.65**	**126**		P		**P**	**11 11 03.7 -0.9**
	comp=Z,0.3nm,0.8s,baz=302,slow=5.3,SNR=4.6							
	comp=Z,0.3nm,0.8s							

IDC 28 10:58:34.7±2.8, 54.00N×63.63E, h0km, mb3.5/1, mbtmp3.3/2, ML2.4/1, MS2.7/1, Error ellipse: s-maj=93.0km s-min=18.2km az=20.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVAR	**Borovoye Array**	**4.15**	**101**	Pn	Pn	10 59 40.8	+1.6
	0.2nm,0.3s,baz=287,slow=14,SNR=1.8						
BVAR				Pg	Pb	10 59 46.4	-2.2
	0.3nm,0.3s,baz=285,slow=15,SNR=6.8						
BVAR				Sn	Sn	11 00 29.5	+1.1
	0.3nm,0.3s,baz=290,slow=21,SNR=1.8						
BVAR				Lg	Lg	11 00 51.6	
	0.5nm,0.3s,baz=266,slow=21,SNR=2.6						
	0.8nm,0.6s						
I31KZ	**AKTYUBINSK INF**	**4.98**	**226**	I		11 31 40.0	
	baz=44,slow=320,SNR=3.1						
I46RU	**ZALESOVO INFRA**	**12.47**	**82**	I		12 10 50.0	
	baz=276,slow=285,SNR=2.9						
OBN	**Obninsk**	**15.70**	**285**	LR	LR	11 07 17.9	
	comp=Z,28nm,19.5s,baz=102,slow=33						
FINES	**FINESS Array B**	**21.13**	**306**	P	P	11 03 20.4	-0.3
	2.5nm,0.9s,baz=102,slow=13,SNR=3.6						
	2.5nm,0.9s						

IDC 28 11:02:08.2±603.0, 53.05N×7.30E, h0km, Error ellipse: s-maj=282.7km s-min=108.7km az=125.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**5.84**	**133**	I		11 37 50.0	
	baz=319,slow=376,SNR=0.8						
I43RU	**DUBNA INFRASONI**	**7.53**	**66**	I		12 47 50.0	
	baz=274,slow=322,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**31.01**	**74**	I		14 12 10.0	
	baz=291,slow=329,SNR=2.0						
I46RU	**ZALESOVO INFRA**	**43.93**	**56**	I		15 33 10.0	
	baz=303,slow=324,SNR=4.0						

ROM 28 11:03:17.9±0.1, 43.037N±0.005×13.068E±0.006, h10km, Md1.1/7, 1C-4D, Error ellipse: s-maj=0.6km s-min=0.4km az=215.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**91**	P	Pg	11 03 19.7	-0.1
FDMO				S	Sg	11 03 20.8	-0.2
FDMO				AML	AML		
	comp=E,1514μm,0.2s						
FDMO				AML	AML		
	comp=N,2150μm,0.1s						
FDMO				END			
CESI	**CESI - Serrava**	**0.12**	**255**	P	Pg	11 03 21.5	+0.6
CESI				S	Sg	11 03 24.1	+1.1
CESI				AML	AML		
	comp=E,259μm,0.1s						
CESI				AML	AML		
	comp=N,337μm,0.1s						
CESI				AML	AML		
	comp=E,11785μm,0.6s						
CESI				AML	AML		
	comp=N,21000μm,0.3s						
CESI				END			
GUMA	**Gualdo di Mace**	**0.20**	**82**	⇑P	Pb	11 03 22.9	-0.7
GUMA				S	Sg	11 03 26.7	+1.8
GUMA				AML	AML		
	comp=E,10440μm,0.2s						
GUMA				AML	AML		
	comp=N,7875μm,0.4s						
GUMA				AML	AML		
	comp=E,14600μm,0.2s						
GUMA				AML	AML		
	comp=N,8375μm,0.6s						
GUMA				END			
GAG1	**Gagliole**	**0.20**	**360**	P	Pb	11 03 23.4	-0.3
GAG1				AML	AML		
	comp=E,8040μm,1.4s						
GAG1				AML	AML		
	comp=N,6970μm,0.5s						
MMO1	**Montemonaco**	**0.23**	**126**	⇓P	Pg	11 03 23.3	+0.6
MMO1				S	Sg	11 03 27.4	+1.4
MMO1				END			
SNTG	**Esanatoglia**	**0.24**	**337**	P	Pg	11 03 23.5	+0.7
SNTG				S	Sg	11 03 27.4	+1.3
SNTG				AML	AML		
	comp=E,2085μm,0.1s						
SNTG				AML	AML		
	comp=N,1510μm,0.7s						
SNTG				AML	AML		
	comp=E,2080μm,0.1s						
SNTG				AML	AML		
	comp=N,1730μm,0.1s						
SNTG				END			
T1215	**Vallo di Nera,**	**0.28**	**212**	⇓P	Pg	11 03 24.2	+0.7
T1215				AML	AML		
	comp=E,1690μm,0.8s						
T1215				AML	AML		
	comp=N,1515μm,0.4s						
T1215				AML	AML		
	comp=E,1620μm,0.8s						
T1215				AML	AML		
	comp=N,1730μm,0.4s						
EL6	**Elcito**	**0.29**	**5**	⇓P	Pg	11 03 24.3	+0.5
EL6				S	Sb	11 03 29.3	-1.0
EL6				AML	AML		
	comp=E,3255μm,0.4s						
EL6				AML	AML		
	comp=N,4360μm,0.3s						
EL6				END			
T1241	**Roccafluvione,**	**0.32**	**124**	P	Pg	11 03 24.7	+0.4
T1241				S	Sb	11 03 30.1	-0.9
T1241				AML	AML		
	comp=E,2040μm,1.6s						
T1241				AML	AML		
	comp=N,1616μm,0.4s						
T1241				AML	AML		
	comp=E,2030μm,0.3s						
T1241				AML	AML		
	comp=N,1610μm,0.4s						
T1241				END			
CING	**Cingoli**	**0.35**	**15**	P	Pg	11 03 25.3	+0.4
CING				S	Sb	11 03 31.1	-0.8
CING				AML	AML		
	comp=E,2550μm,0.1s						
CING				AML	AML		
	comp=N,2145μm,0.1s						
PE3	**Peglio**	**0.78**	**328**	⇓P	Pg	11 03 32.1	-0.8

ROM 28 11:04:08.2±0.1, 42.953N±0.003×13.067E±0.004, h10km, ML2.8/15, 2C-4D, Error ellipse: s-maj=0.3km s-min=0.3km az=181.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.01**	**305**	P	Pg	11 04 10.3	+0.2
FEMA				S	Sg	11 04 11.5	+0.1
FEMA				AML	AML		
	comp=N,26200μm,0.2s						
FEMA				AML	AML		
	comp=E,37650μm,1.4s						
FDMO	**Fiordimonte**	**0.09**	**10**	P	Pg	11 04 11.0	+0.4
FDMO				S	Sg	11 04 12.6	+0.3
FDMO				AML	AML		
	comp=N,32300μm,0.2s						
FDMO				AML	AML		
	comp=E,33250μm,0.2s						
NRCA	**Norcia**	**0.12**	**164**	P	Pg	11 04 11.9	+0.7
NRCA				S	Sg	11 04 14.0	+0.8
NRCA				AML	AML		
	comp=E,3885μm,0.2s						
NRCA				AML	AML		
	comp=N,4415μm,0.2s						
NRCA				AML	AML		
	comp=E,4265μm,0.2s						
NRCA				AML	AML		
	comp=N,4415μm,0.2s						
NRCA				AML	AML		
	comp=N,4670μm,0.2s						
NRCA				AML	AML		
	comp=E,3890μm,0.2s						
NRCA				AML	AML		
	comp=N,4420μm,0.2s						
CESI	**CESI - Serrava**	**0.13**	**293**	P	Pg	11 04 11.8	+0.6
CESI				S	Sg	11 04 14.3	+0.9
CESI				AML	AML		
	comp=E,11785μm,0.6s						
CESI				AML	AML		
	comp=N,21000μm,0.3s						
MMO1	**Montemonaco**	**0.20**	**106**	P	Pg	11 04 12.9	+0.5
MMO1				S	Sg	11 04 16.2	+1.0
T1215	**Vallo di Nera,**	**0.21**	**224**	P	Pg	11 04 13.2	+0.6
T1215				S	Sg	11 04 16.7	+1.2
T1215				AML	AML		
	comp=E,1695μm,0.9s						
T1215				AML	AML		
	comp=N,1520μm,0.4s						
T1215				AML	AML		
	comp=E,1615μm,0.9s						
T1215				AML	AML		
	comp=N,1725μm,0.4s						
T1215				AML	AML		
	comp=E,1690μm,0.8s						
T1215				AML	AML		
	comp=N,1515μm,0.4s						
AM05	**Amandola Campo**	**0.21**	**83**	P	Pg	11 04 13.2	+0.6
AM05				S	Sg	11 04 16.9	+1.3
AM05				AML	AML		
	comp=N,954μm,1.1s						
AM05				AML	AML		
	comp=E,2985μm,1.4s						
AM05				AML	AML		
	comp=N,275μm,0.1s						
AM05				AML	AML		
	comp=E,674μm,0.2s						
AM05				AML	AML		
	comp=N,954μm,1.1s						
AM05				AML	AML		
	comp=E,674μm,0.2s						
AM05				AML	AML		
	comp=N,276μm,0.1s						
AM05				AML	AML		
	comp=E,2980μm,1.4s						
AM05				AML	AML		
	comp=N,954μm,1.1s						
SEF1	**Sefro**	**0.21**	**336**	P	Pg	11 04 13.2	+0.5
SEF1				S	Sg	11 04 16.9	+1.2
GUMA	**Gualdo di Mace**	**0.23**	**61**	P	Pg	11 04 13.7	+0.8
GUMA				S	Sg	11 04 17.8	+1.8
GUMA				AML	AML		
	comp=E,10405μm,0.2s						
GUMA				AML	AML		
	comp=E,14600μm,0.2s						
GUMA				AML	AML		
	comp=E,10440μm,0.2s						
GUMA				AML	AML		
	comp=E,10425μm,0.2s						
GUMA				AML	AML		
	comp=N,8375μm,0.6s						
GUMA				AML	AML		
	comp=N,7875μm,0.4s						
FIU1	**Fiuminata**	**0.26**	**337**	P	Pg	11 04 14.0	+0.6
FIU1				S	Sb	11 04 18.2	-1.3
T1217	**Poggiodomo (PG**	**0.26**	**202**	P	Pg	11 04 14.1	+0.6
GAG1	**Gagliole**	**0.28**	**0**	P	Pb	11 04 15.0	-0.5
GAG1				S	Sb	11 04 19.6	-0.7
T1241	**Roccafluvione,**	**0.28**	**110**	⇓P	Pg	11 04 14.4	+0.4
T1241				AML	AML		
	comp=E,2045μm,1.6s						
T1241				AML	AML		
	comp=N,1620μm,0.4s						
T1241				AML	AML		
	comp=E,2030μm,0.3s						
T1241				AML	AML		
	comp=N,1615μm,0.4s						
T1241				AML	AML		
	comp=N,1610μm,0.4s						
T1241				AML	AML		
	comp=E,2035μm,0.3s						
SNTG	**Esanatoglia**	**0.32**	**343**	P	Pg	11 04 14.9	+0.4
SNTG				S	Sb	11 04 20.0	-1.2
MNTP	**Montappone**	**0.35**	**58**	P	Pb	11 04 16.3	-0.3
MNTP				AML	AML		
	comp=N,2645μm,1.5s						
MNTP				AML	AML		
	comp=E,3260μm,0.2s						
MNTP				AML	AML		
	comp=N,2640μm,1.5s						
LNSS	**Leonessa**	**0.35**	**183**	⇑P	Pg	11 04 15.8	+0.7
LNSS				AML	AML		
	comp=N,1030μm,0.9s						
LNSS				AML	AML		
	comp=E,1056μm,1.1s						
EL6	**Elcito**	**0.38**	**4**	P	Pb	11 04 16.4	-0.7
EL6				S	Sb	11 04 22.4	-0.7
T1243	**Rocca Santa Ma**	**0.38**	**132**	P	Pg	11 04 16.0	+0.3
ATCC	**AVT- Casa Cast**	**0.39**	**307**	P	Pg	11 04 16.3	+0.5
ATCC				S	Sb	11 04 22.9	-0.4
FOSV	**Fossato di Vic**	**0.41**	**327**	P	Pg	11 04 16.6	+0.3
FOSV				S	Sb	11 04 23.1	-0.8
FOSV				AML	AML		
	comp=N,3930μm,0.3s						
FOSV				AML	AML		
	comp=E,2530μm,0.3s						
FOSV				AML	AML		
	comp=N,3925μm,0.3s						
FOSV				AML	AML		
	comp=E,2525μm,0.3s						
FOSV				AML	AML		
	comp=N,8650μm,0.6s						
FOSV				AML	AML		
	comp=N,3930μm,0.3s						
CING	**Cingoli**	**0.43**	**13**	P	Pg	11 04 17.0	+0.3
CING				S	Sb	11 04 24.0	-0.6
T1211	**Morro Reatino**	**0.45**	**200**	P	Pb	11 04 18.3	+0.1
OFFI	**Offida**	**0.46**	**92**	⇑P	Pb	11 04 18.5	+0.1
OFFI				AML	AML		
	comp=E,2290μm,0.4s						
OFFI				AML	AML		
	comp=N,2220μm,1.2s						
RM33	**Pellescritta (**	**0.46**	**166**	⇓P	Pb	11 04 17.9	-0.5
RM33				AML	AML		
	comp=E,440μm,1.5s						
RM33				AML	AML		
	comp=N,354μm,0.4s						
RM33				AML	AML		
	comp=E,440μm,1.5s						
CESX	**Cesi**	**0.50**	**226**	⇓P	Pg	11 04 18.2	+0.4
CESX				AML	AML		
	comp=N,948μm,0.6s						
CESX				AML	AML		
	comp=E,892μm,1.2s						
MURB	**Monte Urbino**	**0.50**	**308**	S	Sg	11 04 19.0	-5.7
PP3	**Marolino**	**0.58**	**43**	⇓P	Pg	11 04 18.1	-1.4
PP3				AML	AML		
	comp=E,1595μm,0.9s						
PP3				AML	AML		
	comp=E,1637μm,1.1s						

PP3			AML	AML		
	comp=N,1475μm,1.5s					
PP3			AML	AML		
	comp=E,1600μm,0.9s					
PP3			AML	AML		
	comp=E,1636μm,1.1s					
PP3			AML	AML		
	comp=N,1430μm,1.5s					
ABTA	**Abfaltersbach**	**3.81 354**	*e*Pn	Pn	11 05 09.9	+2.8
	comp=N,2.5nm,0.6s					
FETA	**Feichten**	**4.39 339**	*e*Pn	Pb	11 05 22.8	-2.7
	comp=N,0.6nm,0.2s					

*AEIC **28** 11:19:34±2.2, 61°41'N±0°03'×139°99'W±0°06, h9km±7km, Error ellipse: s-maj=5.6km s-min=1.8km az=222.0*
*IDC **28** 11:19:36.6±0.8, 61°55'N×140°00'W, h0km, mb3.3/5, mbtmp3.4/10, ML3.2/5, MS2.6/1, Error ellipse: s-maj=15.5km s-min=9.3km az=40.0*
*PGC **28** 11:19:36.3±0.0, 61°41'N×140°01'W, h2km, ML3.4, ML3.7/15, 151km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*
*NEIC **28** 11:19:36.9±2.1, 61°38'N±0°03'×140°03'W±0°06, h10km±2km, Error ellipse: s-maj=6.6km s-min=3.0km az=47.0*
ISC 28 11:19:35.5±1.0, 61°39'N±0°01'×139°99'W±0°01, h1km±8km, n308, σ1§76/411, mb3.4/5, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier**	**0.15**	**135**	P	**Pg**	**11 19 39.2**	**+0.7**
YUK8				S	**Sg**	**11 19 41.9**	**+1.3**
YUK8	**Steele Glacier**	**0.15**	**135**	P	**Pg**	**11 19 39.2**	**+0.7**
	baz=318,SNR=1000						
YUK8				S	**Sg**	**11 19 41.8**	**+1.1**
	baz=318						
YUK3	**Moose Creek**	**0.44**	**330**	P	**Pg**	**11 19 44.1**	**0.0**
YUK3				S	**Sg**	**11 19 50.1**	**+0.3**
YUK3	**Moose Creek**	**0.44**	**330**	P	**Pg**	**11 19 44.1**	**0.0**
	baz=149,SNR=1000						
YUK3				S	**Sg**	**11 19 50.1**	**+0.3**
	baz=149						
YUK2	**White River**	**0.57**	**314**		**Pg**	**11 19 46.4**	**0.0**
YUK2					**Sg**	**11 19 53.5**	**-0.2**
YUK2	**White River**	**0.57**	**314**	P	**Pg**	**11 19 46.4**	**0.0**
YUK2				S	**Sg**	**11 19 53.5**	**-0.2**
O28M	**Mount Upton**	**0.63**	**189**		**Pg**	**11 19 47.4**	**-0.2**
O28M					**Sg**	**11 19 56.5**	**+0.7**
O28M	**Mount Upton**	**0.63**	**189**	P	**Pg**	**11 19 47.4**	**-0.2**
O28M				S	**Sg**	**11 19 56.5**	**+0.7**
O28M	**Mount Upton**	**0.63**	**189**	P	**Pg**	**11 19 47.7**	**+0.1**
	baz=8.7,SNR=1000						
O28M				S	**Sg**	**11 19 56.2**	**+0.4**
	baz=8.7						
YUK4	**Talbot Arm**	**0.65**	**94**		**Pg**	**11 19 48.7**	**+0.7**
YUK4	**Talbot Arm**	**0.65**	**94**	P	**Pg**	**11 19 48.7**	**+0.7**
YUK4	**Talbot Arm**	**0.65**	**94**	P	**Pg**	**11 19 48.6**	**+0.7**
	baz=268,SNR=1000						
LOGN	**Logan Glacier**	**0.75**	**221**		**Pg**	**11 19 49.8**	**-0.2**
LOGN	**Logan Glacier**	**0.75**	**221**	P	**Pg**	**11 19 49.8**	**-0.2**
LOGN				S	**Sg**	**11 20 00.5**	**+0.8**
CTGM	**Chitina Glacie**	**0.78**	**237**		**Pg**	**11 19 50.1**	**-0.3**
CTGM	**Chitina Glacie**	**0.78**	**237**	P	**Pg**	**11 19 50.1**	**-0.3**
CTGM				S	**Sg**	**11 20 00.8**	**+0.3**
CTG	**Chitna Glacier**	**0.78**	**237**	P	**Pg**	**11 19 50.0**	**-0.5**
	baz=56,SNR=1000						
CTG				S	**Sg**	**11 20 01.0**	**+0.3**
	baz=56						
BARN	**Barnard Glacie**	**0.87**	**248**		**Pg**	**11 19 51.8**	**-0.5**
YUK6	**Outpost Mounta**	**0.91**	**119**	P	**Pg**	**11 19 52.5**	**-0.5**
YUK6				S	**Sg**	**11 20 04.8**	**0.0**
YUK6	**Outpost Mounta**	**0.91**	**119**	P	**Pg**	**11 19 52.5**	**-0.5**
	baz=301,SNR=1000						
YUK6				S	**Sg**	**11 20 04.7**	**0.0**
	baz=301						
YUK5	**Granite Creek**	**1.06**	**103**	P	**Pg**	**11 19 55.0**	**-0.8**
YUK5				S	**Sg**	**11 20 08.5**	**-1.1**
BVCY	**Beaver Creek**	**1.10**	**339**	P	**Pb**	**11 19 56.0**	**-1.4**
BVCY				S	**Sg**	**11 20 10.7**	**-0.2**
BVCY	**Beaver Creek**	**1.10**	**339**	P	**Pb**	**11 19 56.0**	**-1.4**
	baz=158,SNR=265						
BVCY				S	**Sg**	**11 20 11.5**	**+0.6**
	baz=158						
TABL	**Table Mountain**	**1.11**	**211**		**Pg**	**11 19 56.1**	**-0.6**
TABL	**Table Mountain**	**1.11**	**211**	P	**Pg**	**11 19 56.1**	**-0.6**
TABL				S	**Sg**	**11 20 10.9**	**-0.2**
BALM	**Baldy**	**1.19**	**254**	P	**Pb**	**11 19 57.5**	**-1.5**
BALM				S	**Sb**	**11 20 13.4**	**-1.6**
PTPK	**Patty Peak**	**1.21**	**261**	P	**Pb**	**11 19 57.9**	**-1.5**
KIAG	**Kiagna River**	**1.24**	**249**	P	**Pb**	**11 19 58.2**	**-1.6**
KIAG				S	**Sb**	**11 20 15.1**	**-1.3**
YUK7	**Dusty Glacier**	**1.25**	**133**	P	**Pn**	**11 19 58.8**	**-1.6**
YUK7				S	**Sb**	**11 20 15.8**	**-0.9**
M29M	**Somme Creek**	**1.28**	**34**	P	**Pn**	**11 19 59.4**	**-1.2**
M29M				S	**Sb**	**11 20 16.2**	**-1.1**
M29M	**Somme Creek**	**1.28**	**34**	P	**Pn**	**11 19 59.4**	**-1.2**
	baz=215,SNR=1000						
M29M				S	**Sb**	**11 20 16.4**	**-1.0**
	baz=215						
O29M	**Mount Kennedy**	**1.30**	**147**	P	**Pn**	**11 19 59.3**	**-1.6**
O29M				S	**Sg**	**11 20 18.2**	**+1.1**
O29M	**Mount Kennedy**	**1.30**	**147**	P	**Pn**	**11 19 59.3**	**-1.6**
	baz=329,SNR=1000						
O29M				S	**Sb**	**11 20 17.4**	**-0.5**
	baz=329						
PCA	**Pinnacle**	**1.31**	**186**		**Pn**	**11 20 00.3**	**-0.7**
PCA	**Pinnacle**	**1.31**	**186**	P	**Pn**	**11 20 00.2**	**-0.7**
PCA				S	**Sb**	**11 20 17.8**	**-0.4**
PINM	**Pinnacle**	**1.31**	**186**	P	**Pn**	**11 20 00.3**	**-0.7**
	baz=5.5,SNR=1000						
PINM				S	**Sn**	**11 20 18.6**	**-0.5**
	baz=5.5						
M27K	**Edge Creek, AK**	**1.32**	**318**	Pg	**Pn**	**11 19 59.6**	**-1.5**
M27K				IAML		11 20 22.9	
	comp=N,1μm,0.7s						
M27K				IAML		11 20 23.8	
	comp=E,1μm,1.0s						
M27K	**Edge Creek, AK**	**1.32**	**318**	P	**Pn**	**11 19 59.3**	**-1.8**
M27K				S	**Sb**	**11 20 17.3**	**-1.2**
M27K	**Edge Creek, AK**	**1.32**	**318**	P	**Pn**	**11 19 59.3**	**-1.8**
	baz=136,SNR=1000						
M27K				S	**Sb**	**11 20 18.7**	**+0.2**
	baz=136						
SAMH	**Samovar Hills**	**1.33**	**197**	P	**Pn**	**11 20 00.5**	**-0.8**
HYT	**Haines Junctio**	**1.34**	**114**	Pn	**Pn**	**11 20 00.3**	**-1.1**
HYT				IAML		11 20 20.9	
	comp=E,692nm,0.4s						
HYT				IAML		11 20 22.0	
	comp=N,1μm,0.6s						
HYT	**Haines Junctio**	**1.34**	**114**	P	**Pn**	**11 20 00.1**	**-1.3**
HYT				S	**Sb**	**11 20 17.8**	**-1.3**
HYT	**Haines Junctio**	**1.34**	**114**	P	**Pn**	**11 20 00.2**	**-1.3**
	baz=297,SNR=907						
HYT				S	**Sb**	**11 20 17.4**	**-1.7**
	baz=297						
YAH	**Yahtse**	**1.34**	**220**		**Pn**	**11 20 00.6**	**-0.9**
YAH				IAML		11 20 21.2	
	comp=N,1μm,0.7s						
YAH				IAML		11 20 21.2	
	comp=E,909nm,0.8s						
ISLE	**Juniper Island**	**1.39**	**236**		**Pn**	**11 20 01.1**	**-1.1**
ISLE				IAML		11 20 27.1	
	comp=E,2μm,0.9s						
ISLE				IAML		11 20 27.4	
	comp=N,1μm,1.0s						
N30M	**Aishikik Lake**	**1.40**	**86**	P	**Pn**	**11 20 01.2**	**-1.0**
N30M				S	**Sn**	**11 20 19.7**	**-1.5**
N30M	**Aishikik Lake**	**1.40**	**86**	P	**Pn**	**11 20 01.2**	**-1.0**
	baz=269,SNR=1000						
N30M				S	**Sn**	**11 20 19.9**	**-1.4**
	baz=269						
BCPM	**Bancas Point**	**1.46**	**173**		**Pn**	**11 20 02.6**	**-0.3**
BCPM				IAML		11 20 23.4	
	comp=N,869nm,0.7s						
BCPM				IAML		11 20 26.2	
	comp=E,864nm,0.5s						
MCARA	**McCarthy VSAT**	**1.46**	**271**		**Pn**	**11 20 02.4**	**-0.5**
MCARA				IAML		11 20 30.0	
	comp=N,1μm,0.9s						
MCARA	**McCarthy VSAT**	**1.46**	**271**	P	**Pn**	**11 20 02.3**	**-0.6**
	baz=88,SNR=308						
TGL	**Tana Glacier**	**1.52**	**246**		**Pn**	**11 20 03.0**	**-0.9**
TGL				IAML		11 20 24.3	
	comp=N,538nm,0.5s						
TGL				IAML		11 20 31.0	
	comp=E,569nm,0.5s						
MESA	**MESA**	**1.55**	**219**		**Pn**	**11 20 04.8**	**+0.4**
MESA				IAML		11 20 35.5	
	comp=E,978nm,0.7s						
MESA	**MESA**	**1.55**	**219**	P	**Pb**	**11 20 05.0**	**-0.1**
MESA				S	**Sg**	**11 20 26.0**	**+0.7**
MESA	**MESA**	**1.55**	**219**	P	**Pb**	**11 20 05.0**	**-0.1**
	baz=37,SNR=564						
VRDI	**Verde Repeater**	**1.68**	**266**		**Pn**	**11 20 06.3**	**+0.2**
VRDI				IAML		11 20 36.4	
	comp=N,525nm,1.0s						
WAX	**Waxell Ridge**	**1.69**	**237**		**Pn**	**11 20 06.2**	**0.0**
M26K	**Nabesna, AK**	**1.75**	**307**		**Pn**	**11 20 06.9**	**-0.1**
M26K				IAML		11 20 34.9	
	comp=E,644nm,0.5s						
M26K				IAML		11 20 38.7	
	comp=N,595nm,0.8s						
M26K	**Nabesna, AK**	**1.75**	**307**	P	**Pn**	**11 20 06.9**	**-0.1**
	baz=124,SNR=433						
M26K				Sb	**Sg**	**11 20 31.9**	**+0.3**
	baz=124						
PNL	**Peninsula**	**1.76**	**170**	Pn	**Pn**	**11 20 08.0**	**+0.9**
PNL				S	**Sb**	**11 20 31.5**	**+0.5**
PNL	**Peninsula**	**1.76**	**170**	P	**Pn**	**11 20 07.4**	**+0.3**
	baz=351,SNR=306						
PNL				Sb	**Sg**	**11 20 32.7**	**+0.8**
	baz=351						
GLB	**Gilahina Butte**	**1.84**	**273**		**Pn**	**11 20 08.5**	**+0.3**
GLB				IAML		11 20 42.1	
	comp=N,437nm,1.1s						
SNH	**Sunshine Point**	**1.85**	**230**		**Pb**	**11 20 09.8**	**-0.3**
SNH				IAML		11 20 49.0	
	comp=E,421nm,0.8s						
BCAR	**Beaver Creek A**	**1.88**	**334**		**Pn**	**11 20 08.4**	**-0.4**
L27K	**Beaver Creek,**	**1.88**	**334**		**Pn**	**11 20 08.4**	**-0.4**
L27K				IAML		11 20 36.1	
	comp=E,591nm,0.9s						
L27K	**Beaver Creek,**	**1.88**	**334**	Pn	**Pn**	**11 20 08.1**	**-0.7**
L27K				Sn	**Sn**	**11 20 32.9**	**-0.3**
L27K	**Beaver Creek,**	**1.88**	**334**	P	**Pn**	**11 20 08.1**	**-0.7**
	baz=152,SNR=732						
L27K				Sb	**Sb**	**11 20 35.5**	**+0.8**
	baz=152						
M30M	**Minto, Yukon**	**1.92**	**50**		**Pn**	**11 20 09.2**	**-0.1**
M30M	**Minto, Yukon**	**1.92**	**50**	Pn	**Pn**	**11 20 08.9**	**-0.5**
M30M				Sn	**Sn**	**11 20 34.0**	**-0.1**
M30M	**Minto, Yukon**	**1.92**	**50**	P	**Pn**	**11 20 08.9**	**-0.5**
	baz=233,SNR=1000						
M30M				Sb	**Sb**	**11 20 36.6**	**+0.9**
	baz=233						
L29M	**L29M**	**1.93**	**26**	Pn	**Pn**	**11 20 09.7**	**+0.2**
L29M				Sn	**Sn**	**11 20 33.7**	**-0.7**
L29M	**L29M**	**1.93**	**26**	P	**Pn**	**11 20 09.7**	**+0.2**
	baz=208,SNR=1000						
L29M				Sb	**Sb**	**11 20 37.2**	**+1.1**
	baz=208						
P30M	**Million Dollar**	**1.96**	**129**	Pn	**Pn**	**11 20 10.4**	**+0.5**
P30M				Sn	**Sn**	**11 20 35.7**	**+0.5**
P30M				Sg	**Sg**	**11 20 39.1**	**+0.6**
P30M	**Million Dollar**	**1.96**	**129**	P	**Pn**	**11 20 10.3**	**+0.4**
	baz=312						
P30M				Sb	**Sb**	**11 20 37.9**	**+0.9**
	baz=312						
O30N	**Mendenhall**	**2.00**	**107**	P	**Pn**	**11 20 09.6**	**-0.8**
	baz=290,SNR=588						
O30N				S	**Sn**	**11 20 35.5**	**-0.5**
	baz=290						
N31M	**Braeburn, Yuko**	**2.03**	**86**		**Pn**	**11 20 11.3**	**+0.5**
N31M	**Braeburn, Yuko**	**2.03**	**86**	Pn	**Pn**	**11 20 11.3**	**+0.5**
N31M				Pg	**Pb**	**11 20 13.2**	**+0.1**
N31M				Sn	**Sn**	**11 20 36.3**	**-0.4**
N31M				Sg	**Sb**	**11 20 39.6**	**+0.8**
N31M	**Braeburn, Yuko**	**2.03**	**86**	P	**Pn**	**11 20 10.6**	**-0.2**
	baz=270,SNR=52						
N31M				S	**Sn**	**11 20 36.8**	**+0.1**
	baz=270						
BGLC	**Bering Glacier**	**2.06**	**233**	Pb	**Pb**	**11 20 13.2**	**-0.4**
	baz=50						
BERG	**Berg Lake**	**2.07**	**243**		**Pn**	**11 20 12.3**	**+0.8**
P29M	**Windy Craggy**	**2.09**	**147**		**Pn**	**11 20 12.4**	**+0.7**
P29M				IAML		11 20 47.7	
	comp=N,572nm,0.5s						
P29M				IAML		11 20 50.3	
	comp=E,472nm,0.5s						
P29M	**Windy Craggy**	**2.09**	**147**	Pn	**Pn**	**11 20 12.6**	**+0.9**
P29M				Sn	**Sn**	**11 20 38.6**	**+0.3**
P29M				Sg	**Sb**	**11 20 42.0**	**+1.3**
P29M	**Windy Craggy**	**2.09**	**147**	P	**Pn**	**11 20 12.5**	**+0.9**
	baz=329,SNR=593						
N25K	**Chitina, Valde**	**2.22**	**278**	Pn	**Pn**	**11 20 13.5**	**0.0**
N25K	**Chitina, Valde**	**2.22**	**278**	P	**Pn**	**11 20 14.5**	**+1.0**
	baz=93,SNR=211						
L26K	**Log Cabin Wild**	**2.27**	**318**		**Pn**	**11 20 14.6**	**+0.4**
L26K				IAML		11 20 58.8	
	comp=N,510nm,0.5s						
L26K	**Log Cabin Wild**	**2.27**	**318**	P	**Pn**	**11 20 14.3**	**+0.1**
	baz=134,SNR=35						
BMRM	**Bremner River**	**2.27**	**261**		**Pn**	**11 20 14.6**	**+0.4**
BMRM	**Bremner River**	**2.27**	**261**	P	**Pn**	**11 20 14.8**	**+0.6**
	baz=77,SNR=521						
MENT	**Mentasta**	**2.34**	**313**		**Pn**	**11 20 15.1**	**0.0**
MENT				IAML		11 21 01.5	
	comp=N,373nm,0.6s						
MENT				IAML		11 21 05.8	
	comp=E,403nm,0.7s						
WHY	**Whitehorse**	**2.59**	**104**	Pn	**Pn**	**11 20 18.4**	**-0.3**
WHY				IAML		11 20 59.2	
	comp=N,387nm,0.8s						
WHY				IAML		11 21 05.3	
	comp=E,243nm,0.6s						
WHY	**Whitehorse**	**2.59**	**104**	Pn	**Pn**	**11 20 17.9**	**-0.7**
WHY				Pg	**Pb**	**11 20 22.8**	**0.0**
WHY				Sn	**Sn**	**11 20 51.6**	**+0.8**
WHY				Sg	**Sb**	**11 20 56.6**	**+1.4**
WHY	**Whitehorse**	**2.59**	**104**	P	**Pn**	**11 20 18.1**	**-0.6**
	baz=289,SNR=169						
WHY				Sb	**Sb**	**11 20 56.7**	**+1.5**
	baz=289						
KAIM	**Kayak Island**	**2.63**	**238**	Pn	**Pn**	**11 20 19.3**	**+0.3**
KAIM				IAML		11 21 07.7	
	comp=N,229nm,1.1s						
KAIM	**Kayak Island**	**2.63**	**238**	P	**Pn**	**11 20 20.9**	**+1.9**
	baz=54						
HARP	**HAARP**	**2.65**	**295**	P	**Pn**	**11 20 20.3**	**+1.0**
	baz=110						
PLBC	**Pleasant Camp**	**2.65**	**136**	Pn	**Pn**	**11 20 20.6**	**+1.3**
PLBC				Pg	**Pb**	**11 20 23.5**	**-0.2**
PLBC				Sg	**Sg**	**11 20 59.6**	**-0.9**
PLBC	**Pleasant Camp**	**2.65**	**136**	P	**Pn**	**11 20 19.6**	**+0.3**
	baz=319,SNR=25						
DAWY	**Dawson**	**2.70**	**6**		**Pn**	**11 20 20.6**	**+0.6**
DAWY				IAML		11 21 09.1	
	comp=E,460nm,0.9s						
DAWY	**Dawson**	**2.70**	**6**	Pn	**Pn**	**11 20 20.1**	**+0.1**
DAWY				Sn	**Sn**	**11 20 52.5**	**-0.8**
DAWY				Sg	**Sb**	**11 21 00.5**	**+2.4**
DAWY	**Dawson**	**2.70**	**6**	P	**Pn**	**11 20 20.2**	**+0.1**
	baz=186,SNR=372						
K29M	**Barlow Dome**	**2.71**	**24**	Pn	**Pn**	**11 20 20.8**	**+0.5**
K29M				Sn	**Sn**	**11 20 52.7**	**-1.0**
K29M				Sg	**Sb**	**11 21 01.2**	**+2.6**
K29M	**Barlow Dome**	**2.71**	**24**	P	**Pn**	**11 20 20.8**	**+0.5**
	baz=206,SNR=279						
K29M				Sb	**Sb**	**11 21 00.8**	**+2.2**
	baz=206						
M31M	**Drury Creek, Y**	**2.78**	**71**		**Pn**	**11 20 21.2**	**0.0**
M31M	**Drury Creek, Y**	**2.78**	**71**	Pn	**Pn**	**11 20 21.1**	**-0.1**
M31M				Sn	**Sn**	**11 20 55.6**	**+0.3**
M31M				Sg	**Sb**	**11 21 03.6**	**+3.1**
M31M	**Drury Creek, Y**	**2.78**	**71**	P	**Pn**	**11 20 21.1**	**-0.1**
	baz=256,SNR=27						
DIV	**Divide**	**2.81**	**267**		**Pn**	**11 20 21.3**	**-0.2**
DIV	**Divide**	**2.81**	**267**	Pn	**Pn**	**11 20 20.0**	**-1.6**
DIV				Pg	**Pb**	**11 20 23.8**	**-2.6**
K27K	**Chicken**	**2.81**	**341**		**Pn**	**11 20 21.9**	**+0.2**
K27K				IAML		11 21 11.4	
	comp=E,227nm,0.8s						
K27K				IAML		11 21 13.9	
	comp=N,219nm,0.8s						
K27K	**Chicken**	**2.81**	**341**	Pn	**Pn**	**11 20 21.8**	**+0.2**
K27K				Sn	**Sn**	**11 20 55.0**	**-1.1**
K27K				Sg	**Sb**	**11 21 04.6**	**+3.1**
K27K	**Chicken**	**2.81**	**341**	P	**Pn**	**11 20 21.8**	**+0.2**
	baz=159						
KLU	**Klutina**	**2.85**	**275**		**Pn**	**11 20 22.4**	**+0.2**
KLU				IAML		11 21 09.5	
	comp=N,152nm,0.7s						
KLU				IAML		11 21 12.0	
	comp=E,159nm,0.7s						
KLU	**Klutina**	**2.85**	**275**	P	**Pn**	**11 20 22.1**	**-0.1**
	baz=89						
MAYO	**Mayo, Yukon**	**2.92**	**39**		**Pn**	**11 20 23.7**	**+0.7**
MAYO	**Mayo, Yukon**	**2.92**	**39**	Pn	**Pn**	**11 20 23.4**	**+0.4**
MAYO				Sn	**Sn**	**11 20 57.5**	**-1.1**
MAYO				Sg	**Sb**	**11 21 07.3**	**+2.9**
MAYO	**Mayo, Yukon**	**2.92**	**39**	P	**Pn**	**11 20 23.3**	**+0.3**
	baz=223,SNR=16						
EYAK	**Cordova Ski Ar**	**2.93**	**256**	Pn	**Pn**	**11 20 25.5**	**+2.3**
EYAK	**Cordova Ski Ar**	**2.93**	**256**	P	**Pn**	**11 20 25.4**	**+2.3**
	baz=70						
DOT	**Dot Lake**	**2.95**	**322**		**Pn**	**11 20 23.4**	**-0.1**
DOT	**Dot Lake**	**2.95**	**322**	Pn	**Pn**	**11 20 23.1**	**-0.3**
DOT				Sg	**Sb**	**11 21 07.3**	**+2.1**
PAX	**Paxson**	**3.02**	**304**		**Pn**	**11 20 25.3**	**+0.9**
PAX	**Paxson**	**3.02**	**304**	P	**Pn**	**11 20 24.8**	**+0.4**
	baz=119,SNR=8.4						
SKAG	**Skagway**	**3.02**	**128**		**Pn**	**11 20 25.8**	**+1.4**
SKAG				IAML		11 21 18.1	
	comp=N,137nm,0.8s						
SKAG				IAML		11 21 19.6	
	comp=E,149nm,0.8s						
M24K	**Tolsona, Glenn**	**3.03**	**286**		**Pn**	**11 20 24.6**	**0.0**
M24K				IAML		11 21 33.4	
	comp=E,166nm,1.2s						
M24K	**Tolsona, Glenn**	**3.03**	**286**	P	**Pn**	**11 20 24.5**	**0.0**
	baz=101						
SCRK	**Sand Creek**	**3.18**	**326**	Pn	**Pn**	**11 20 26.8**	**+0.1**
SCRK	**Sand Creek**	**3.18**	**326**	P	**Pn**	**11 20 25.8**	**-0.9**
	baz=143,SNR=74						
FID	**Port Fidalgo**	**3.22**	**261**		**Pn**	**11 20 28.4**	**+1.3**
FID				IAML		11 21 23.9	
	comp=N,101nm,1.3s						
FID				IAML		11 21 29.8	
	comp=E,130nm,1.2s						
RIDG	**Independent Ri**	**3.25**	**318**	Pn	**Pn**	**11 20 28.1**	**+0.5**
RIDG				IAML		11 21 25.5	
	comp=E,142nm,0.9s						
RIDG				IAML		11 21 40.5	
	comp=N,122nm,1.0s						
RIDG	**Independent Ri**	**3.25**	**318**	P	**Pn**	**11 20 27.9**	**+0.2**
	baz=134						
FARO	**Faro, Yukon**	**3.26**	**72**		**Pn**	**11 20 28.0**	**+0.2**
FARO	**Faro, Yukon**	**3.26**	**72**	Pn	**Pn**	**11 20 27.7**	**-0.1**
FARO				Sn	**Sn**	**11 21 07.1**	**-0.1**
FARO				Sg	**Sb**	**11 21 18.1**	**+3.8**
FARO	**Faro, Yukon**	**3.26**	**72**	P	**Pn**	**11 20 27.9**	**+0.2**
	baz=258,SNR=14						
HIN	**Hinchinbrook I**	**3.33**	**255**	Pn	**Pn**	**11 20 28.5**	**-0.2**
HIN				IAML		11 21 34.7	
	comp=N,182nm,1.2s						
HIN				IAML		11 21 35.0	
	comp=E,196nm,1.2s						
N32M	**Quiet Lake**	**3.35**	**91**	Pn	**Pn**	**11 20 28.6**	**-0.3**
N32M				Sn	**Sn**	**11 21 09.8**	**+0.6**
N32M				Sg	**Sb**	**11 21 20.2**	**+3.4**
EGAK	**Eagle**	**3.44**	**352**		**Pn**	**11 20 31.1**	**+1.0**
EGAK	**Eagle**	**3.44**	**352**	P	**Pn**	**11 20 30.8**	**+0.7**
	baz=171,SNR=88						
GLI	**Glacier Island**	**3.48**	**265**		**Pn**	**11 20 31.0**	**+0.2**
GLI				IAML		11 21 31.1	
	comp=E,94nm,1.3s						
GLI	**Glacier Island**	**3.48**	**265**	P	**Pn**	**11 20 31.5**	**+0.7**
	baz=78						
J26L	**Joseph Creek**	**3.52**	**334**		**Pn**	**11 20 31.4**	**+0.1**
J26L				IAML		11 21 31.2	
	comp=N,217nm,0.6s						
J26L	**Joseph Creek**	**3.52**	**334**	P	**Pn**	**11 20 31.2**	**-0.1**
	baz=151,SNR=100						
SCM	**Sheep Creek Mo**	**3.53**	**280**		**Pn**	**11 20 31.4**	**-0.2**
SCM				IAML		11 21 34.9	
	comp=E,99nm,1.0s						
SCM				IAML		11 21 36.4	
	comp=N,119nm,1.3s						
SCM	**Sheep Creek Mo**	**3.53**	**280**	P	**Pn**	**11 20 33.3**	**+1.8**
	baz=94						
P32M	**Atlin**	**3.59**	**117**	Sn	**Sn**	**11 21 13.8**	**-1.6**
P32M				Sg	**Sb**	**11 21 28.3**	**+4.4**
P33M	**Teslin, Yukon**	**3.71**	**105**	Pn	**Pn**	**11 20 33.0**	**-0.9**
P33M				IAML		11 21 39.3	
	comp=E,105nm,0.6s						
P33M	**Teslin, Yukon**	**3.71**	**105**	Pn	**Pn**	**11 20 33.0**	**-0.9**
P33M				Sn	**Sn**	**11 21 16.7**	**-1.6**
P33M				Sg	**Sg**	**11 21 32.3**	**-2.3**
P33M	**Teslin, Yukon**	**3.71**	**105**	P	**Pn**	**11 20 33.2**	**-0.8**
	baz=292,SNR=17						
BESE	**Bessie Mountai**	**3.83**	**135**	Pn	**Pn**	**11 20 36.4**	**+0.9**
BESE	**Bessie Mountai**	**3.83**	**135**	Pn	**Pn**	**11 20 36.4**	**+0.9**
BESE				Sn	**Sn**	**11 21 20.5**	**-0.5**
BESE				Sg	**Sg**	**11 21 36.4**	**-1.9**
WAT6	**Susitna Watana**	**3.84**	**291**	P	**Pn**	**11 20 38.4**	**+2.5**
	baz=104						
DHY	**Denali Highway**	**3.84**	**299**	Pn	**Pn**	**11 20 35.8**	**-0.1**
DHY	**Denali Highway**	**3.84**	**299**	P	**Pn**	**11 20 38.5**	**+2.6**
	baz=113						
SML	**Sawmill**	**4.01**	**280**		**Pn**	**11 20 40.1**	**+2.1**
SML				IAML		11 21 46.0	
	comp=E,56nm,1.3s						
SML				IAML		11 21 46.8	
	comp=N,63nm,1.4s						
SML	**Sawmill**	**4.01**	**280**	P	**Pn**	**11 20 40.3**	**+2.3**
	baz=92						
I29M	**Ogilvie Camp,**	**4.05**	**10**		**Pn**	**11 20 39.6**	**+1.0**
I29M	**Ogilvie Camp,**	**4.05**	**10**	Pn	**Pn**	**11 20 39.4**	**+0.8**
I29M				Sn	**Sn**	**11 21 26.3**	**-0.4**
I29M				Sg	**Sg**	**11 21 43.5**	**-2.2**
I29M	**Ogilvie Camp,**	**4.05**	**10**	P	**Pn**	**11 20 38.9**	**+0.3**
	baz=192,SNR=15						
J25K	**Salcha River,**	**4.05**	**325**		**Pn**	**11 20 38.6**	**0.0**
J25K				IAML		11 21 51.1	
	comp=N,83nm,0.7s						
J25K				IAML		11 21 54.2	
	comp=E,53nm,0.9s						

ILAR	**Eielson Array**	**4.62 320**	Pn	**Pn**	**11 20 45.1**	**-1.2**
	comp=N,0.8nm,0.3s,baz=145,slow=12,SNR=48					
ILAR			Sn	**Sn**	**11 21 38.3**	**-2.2**
	comp=N,1.7nm,0.3s,baz=180,slow=23,SNR=5.0					
ILAR			Lg	Lg	11 22 00.9	
	comp=N,5.1nm,0.3s,baz=122,slow=28,SNR=11					
ILAR			LR	LR	11 22 58.9	
	comp=N,64nm,18.8s,baz=196,slow=45					
	comp=N,2.5nm,0.5s					
RC01	**Rabbit Creek A**	**4.72 271**		**Pn**	**11 20 49.7**	**+2.0**
RC01			IAML		11 22 10.6	
	comp=N,56nm,0.9s					
RC01	**Rabbit Creek A**	**4.72 271**	P	**Pn**	**11 20 50.2**	**+2.5**
	baz=82					
MCK	**McKinley**	**4.75 303**	Pn	**Pn**	**11 20 47.8**	**-0.5**
MCK			IAML		11 22 22.7	
	comp=N,54nm,1.9s					
MCK	**McKinley**	**4.75 303**	P	**Pn**	**11 20 51.8**	**+3.5**
	baz=115					
S32K	**Killisnoo**	**4.81 143**	P	**Pn**	**11 20 48.9**	**0.0**
	baz=327,SNR=37					
WRH	**Wood River Hil**	**4.82 313**	Pn	**Pn**	**11 20 47.4**	**-1.7**
PRP	**Porcupine Dome**	**4.83 331**		**Pn**	**11 20 50.1**	**+0.8**
PRP			IAML		11 22 18.2	
	comp=E,80nm,0.6s					
PRP	**Porcupine Dome**	**4.83 331**	P	**Pn**	**11 20 49.7**	**+0.4**
	baz=146,SNR=30					
CCB	**Clear Creek Bu**	**4.83 316**		**Pn**	**11 20 47.9**	**-1.3**
O22K	**Cooper Landing**	**4.83 263**		**Pn**	**11 20 48.6**	**-0.7**
O22K	**Cooper Landing**	**4.83 263**	P	**Pn**	**11 20 50.8**	**+1.5**
	baz=75					
M22K	**Willow**	**4.86 279**		**Pn**	**11 20 51.0**	**+1.4**
M22K			IAML		11 22 23.4	
	comp=N,63nm,1.0s					
M22K			IAML		11 22 34.9	
	comp=E,70nm,2.5s					
M22K	**Willow**	**4.86 279**	P	**Pn**	**11 20 52.4**	**+2.8**
	baz=90					
H27K	**Steamboat Moun**	**4.90 353**	Pn	**Pn**	**11 20 51.1**	**+0.8**
H27K			Sg	**Sb**	**11 22 08.2**	**+6.7**
H27K	**Steamboat Moun**	**4.90 353**	P	**Pn**	**11 20 51.1**	**+0.8**
	baz=171,SNR=51					
R33M	**Jennings River**	**4.90 110**	Pn	**Pn**	**11 20 50.0**	**-0.4**
R33M			Sn	**Sn**	**11 21 45.5**	**-2.3**
R33M			Sg	**Sg**	**11 22 09.5**	**-3.4**
CUT	**Chulitna**	**4.96 286**		**Pn**	**11 20 51.2**	**+0.1**
CUT			IAML		11 22 34.2	
	comp=N,79nm,2.7s					
COLA	**College**	**4.99 318**		**Pn**	**11 20 50.2**	**-1.2**
TCOL	**CIGO, UAF Yank**	**4.99 318**		**Pn**	**11 20 50.4**	**-1.1**
POKR	**Poker Plat Res**	**5.02 321**		**Pn**	**11 20 50.8**	**-1.1**
POKR			IAML		11 22 21.3	
	comp=N,58nm,0.8s					
POKR			IAML		11 22 30.4	
	comp=E,55nm,0.7s					
POKR	**Poker Plat Res**	**5.02 321**	P	**Pn**	**11 20 50.8**	**-1.1**
	baz=135					
BWN	**Browne**	**5.16 307**		**Pn**	**11 20 51.9**	**-2.0**
SUA	**Susitna One**	**5.17 275**	Pn	**Pn**	**11 20 55.8**	**+1.8**
SUA			IAML		11 21 34.7	
	comp=N,41nm,4.2s					
SUA			IAML		11 22 29.3	
	comp=E,45nm,3.9s					
SUA	**Susitna One**	**5.17 275**	P	**Pn**	**11 20 57.1**	**+3.1**
	baz=86					
MDM	**Murphy Dome**	**5.17 317**		**Pn**	**11 20 54.5**	**+0.6**
MDM			IAML		11 22 29.8	
	comp=N,30nm,1.3s					
MDM			IAML		11 23 07.6	
	comp=E,44nm,0.9s					
EPYK	**Eagle Plains**	**5.20 15**		**Pn**	**11 20 54.8**	**+0.4**
EPYK	**Eagle Plains**	**5.20 15**	Pn	**Pn**	**11 20 54.0**	**-0.4**
EPYK			Sn	**Sn**	**11 21 53.2**	**-1.7**
EPYK	**Eagle Plains**	**5.20 15**	P	**Pn**	**11 20 53.7**	**-0.6**
	baz=198					
TRF	**Thorofare Moun**	**5.21 298**		**Pn**	**11 20 55.5**	**+0.8**
TRF			IAML		11 22 40.2	
	comp=N,34nm,1.9s					
TRF			IAML		11 22 56.1	
	comp=E,27nm,1.9s					
TRF	**Thorofare Moun**	**5.21 298**	P	**Pn**	**11 20 58.0**	**+3.3**
	baz=109					
NEA2	**Nenana**	**5.24 312**		**Pn**	**11 20 55.2**	**+0.4**
NEA2	**Nenana**	**5.24 312**	P	**Pn**	**11 20 58.4**	**+3.6**
	baz=124					
G27K	**Doyon Strip**	**5.49 353**	Pn	**Pn**	**11 20 59.1**	**+0.8**
G27K			Sn	**Sn**	**11 21 57.5**	**-4.5**
G27K			Sg	**Sb**	**11 22 25.6**	**+7.4**
G27K	**Doyon Strip**	**5.49 353**	P	**Pn**	**11 20 58.5**	**+0.2**
	baz=172,SNR=17					
KTH	**Kantishna Hill**	**5.51 298**		**Pn**	**11 21 02.0**	**+3.3**
SKT	**Skwentna**	**5.53 281**		**Pn**	**11 21 01.1**	**+2.2**
SKT	**Skwentna**	**5.53 281**	P	**Pn**	**11 21 00.7**	**+1.8**
	baz=91					
BRSE	**Bradley Lake S**	**5.55 257**	P	**Pn**	**11 21 01.2**	**+2.0**
	baz=68					
BRLK	**Bradley Lake**	**5.61 258**	Pn	**Pn**	**11 21 00.8**	**+0.7**
TGTN	**Hyland Airport**	**5.62 84**	Pn	**Pn**	**11 21 00.1**	**-0.1**
TGTN			Sg	**Sb**	**11 22 30.1**	**+7.9**
TGTN	**Hyland Airport**	**5.62 84**	P	**Pn**	**11 21 00.1**	**-0.1**
	baz=274					
WTLY	**Watson Lake, Y**	**5.64 98**	Sg	**Sg**	**11 22 31.8**	**-4.6**
H24K	**Noodor Dome**	**5.68 325**	Pn	**Pn**	**11 21 01.3**	**+0.3**
H24K	**Noodor Dome**	**5.68 325**	P	**Pn**	**11 21 01.0**	**+0.1**
	baz=138,SNR=27					
FYU	**Fort Yukon**	**5.68 338**	Pn	**Pn**	**11 20 59.8**	**-1.1**
BPAW	**Bear Paw Mtn.**	**5.73 303**	Pn	**Pn**	**11 21 03.4**	**+1.7**
BPAW	**Bear Paw Mtn.**	**5.73 303**	P	**Pn**	**11 21 03.4**	**+1.7**
	baz=113					
G26K	**Porcupine Rive**	**5.82 345**	P	**Pn**	**11 21 03.4**	**+0.6**
	baz=162					
SPU	**Mount Spurr**	**5.82 273**		**Pn**	**11 21 04.0**	**+1.1**
DLBC	**Dease Lake**	**5.82 116**	Pn	**Pn**	**11 21 05.3**	**+2.3**
	comp=E,0.2nm,0.3s,baz=314,slow=8.0,SNR=4.6					
DLBC			Pg	Pb	11 21 23.1	+5.3
	comp=E,1.5nm,0.3s,baz=313,slow=9.1,SNR=15					
DLBC			Lg	Lg	11 22 37.0	
	comp=E,3.0nm,0.3s,baz=31,slow=20,SNR=9.0					
	comp=E,0.9nm,0.4s					
DLBC	**Dease Lake**	**5.82 116**	Sg	**Sg**	**11 22 37.1**	**-5.3**
G30M	**tAoh Zraii Nji**	**5.84 15**	P	**Pn**	**11 21 03.4**	**+0.1**
	baz=198,SNR=124					
CNPM	**China Poot**	**5.87 256**	Pn	**Pn**	**11 21 05.1**	**+1.5**
PPLA	**Purkeypile**	**5.91 290**		**Pn**	**11 21 07.1**	**+2.9**
PPLA	**Purkeypile**	**5.91 290**	P	**Pn**	**11 21 05.8**	**+1.5**
	baz=99					
CAST	**Castle Rocks**	**5.97 295**	Pn	**Pn**	**11 21 06.9**	**+1.9**
CAST	**Castle Rocks**	**5.97 295**	P	**Pn**	**11 21 06.4**	**+1.4**
	baz=104					
G25K	**Bearman Lake**	**6.02 336**	P	**Pn**	**11 21 05.8**	**+0.3**
	baz=151,SNR=10.0					
MLY	**Manley**	**6.07 312**	Pn	**Pn**	**11 21 06.7**	**+0.3**
MLY	**Manley**	**6.07 312**	P	**Pn**	**11 21 06.3**	**0.0**
	baz=122					
H23K	**Yukon River**	**6.15 320**		**Pn**	**11 21 08.0**	**+0.5**
H23K	**Yukon River**	**6.15 320**	P	**Pn**	**11 21 07.3**	**-0.1**
	baz=132					
G24K	**Hadweenzic Riv**	**6.25 332**	P	**Pn**	**11 21 09.4**	**+0.6**
	baz=145,SNR=55					
M20K	**Styx River**	**6.28 280**		**Pn**	**11 21 09.8**	**+0.5**
RSO	**Redoubt South**	**6.29 267**		**Pn**	**11 21 10.6**	**+1.1**
WRAK	**Wrangell Islan**	**6.37 138**		**Pn**	**11 21 11.3**	**+1.0**
WRAK	**Wrangell Islan**	**6.37 138**	P	**Pn**	**11 21 10.9**	**+0.6**
	baz=325,SNR=20					
BMAR	**Burnt Mountain**	**6.38 344**	Pn	**Pn**	**11 21 11.5**	**+1.0**
F26K	**Sheenjek River**	**6.57 346**	P	**Pn**	**11 21 14.1**	**+0.9**
	baz=162,SNR=113					
F31M	**Tsiigehtchic**	**6.64 21**	P	**Pn**	**11 21 13.5**	**-0.6**
	baz=207,SNR=26					
L20K	**Farewell, AK**	**6.64 285**	P	**Pn**	**11 21 14.9**	**+0.7**
	baz=93					
F25K	**Christian Rive**	**6.68 341**	P	**Pn**	**11 21 15.3**	**+0.6**
	baz=156,SNR=23					
K20K	**Telida**	**6.83 293**		**Pn**	**11 21 17.3**	**+0.5**
K20K	**Telida**	**6.83 293**	P	**Pn**	**11 21 17.7**	**+0.9**
	baz=100					
E27K	**Coleen River**	**6.86 355**	P	**Pn**	**11 21 18.2**	**+1.1**
	baz=174,SNR=13					
G23K	**Bananza Creek**	**6.91 325**	P	**Pn**	**11 21 17.8**	**0.0**
	baz=136					
F24K	**Squaw Lake**	**7.03 334**	P	**Pn**	**11 21 20.1**	**+0.7**
	baz=147,SNR=68					
J20K	**Nowinta River**	**7.06 299**	Pn	**Pn**	**11 21 19.4**	**-0.4**
J20K	**Nowinta River**	**7.06 299**	P	**Pn**	**11 21 21.2**	**+1.3**
	baz=107					
L19K	**White Mountain**	**7.09 283**	Pn	**Pn**	**11 21 21.3**	**+1.0**
L19K	**White Mountain**	**7.09 283**	P	**Pn**	**11 21 21.6**	**+1.3**
	baz=90					
H21K	**Melozitna Rive**	**7.14 312**		**Pn**	**11 21 20.1**	**-0.9**
H21K	**Melozitna Rive**	**7.14 312**	P	**Pn**	**11 21 23.0**	**+2.0**
	baz=121					
E25K	**Arctic Village**	**7.16 343**	P	**Pn**	**11 21 21.8**	**+0.6**
	baz=158,SNR=44					
LIRD	**Liard River Hi**	**7.16 100**	Sn	**Sn**	**11 22 39.6**	**-3.6**
LIRD			Sg	**Sg**	**11 23 19.5**	**-5.8**
Q19K	**Cape Douglas,**	**7.25 256**	Pn	**Pn**	**11 21 23.9**	**+1.5**
Q19K	**Cape Douglas,**	**7.25 256**	P	**Pn**	**11 21 24.7**	**+2.2**
	baz=64					
COLD	**Coldfoot**	**7.34 327**	Pn	**Pn**	**11 21 24.3**	**+0.7**
COLD	**Coldfoot**	**7.34 327**	Pn	**Pn**	**11 21 24.2**	**+0.7**
COLD			Sn	**Sn**	**11 22 43.1**	**-4.3**
COLD			Sg	**Sg**	**11 23 23.3**	**-7.5**
COLD	**Coldfoot**	**7.34 327**	P	**Pn**	**11 21 24.3**	**+0.7**
	baz=138					
KDAK	**Kodiak Island**	**7.34 246**	Pn	**Pn**	**11 21 24.1**	**+0.4**
	comp=E,0.7nm,0.3s,baz=69,slow=6.2,SNR=15					
KDAK			Sn	**Sn**	**11 22 45.0**	**-2.5**
	baz=315,slow=20					
	comp=E,11nm,0.8s					
KDAK	**Kodiak Island**	**7.34 246**	P	**Pn**	**11 21 24.7**	**+1.0**
	baz=55					
INK	**Inuvik**	**7.46 19**	Pn	**Pn**	**11 21 23.4**	**-1.9**
	comp=E,0.5nm,0.3s,baz=193,slow=19,SNR=11					
INK			Sn	**Sn**	**11 22 46.1**	**-4.3**
	comp=E,1.6nm,0.3s,baz=98,slow=27,SNR=6.3					
INK			Lg	Lg	11 23 30.8	
	comp=E,0.8nm,0.3s,baz=99,slow=26,SNR=6.0					
	comp=E,1.1nm,0.3s					
INK	**Inuvik**	**7.46 19**		**Pn**	**11 21 26.2**	**+0.9**
INK	**Inuvik**	**7.46 19**	Pn	**Pn**	**11 21 25.2**	**-0.1**
INK			Sn	**Sn**	**11 22 45.8**	**-4.6**
INK	**Inuvik**	**7.46 19**	P	**Pn**	**11 21 25.2**	**-0.1**
	baz=205,SNR=9.3					
V35K	**Ketchikan**	**7.50 140**	P	**Pn**	**11 21 26.3**	**+0.4**
	baz=328					
SVW2	**Sparrevohn**	**7.53 275**		**Pn**	**11 21 27.0**	**+0.7**
E24K	**Your Creek**	**7.62 335**	P	**Pn**	**11 21 28.9**	**+1.3**
	baz=148,SNR=64					
IMAR	**Indian Mountai**	**7.64 313**	Pn	**Pn**	**11 21 29.6**	**+1.7**
N18K	**Kilae Creek**	**7.75 272**	Pn	**Pn**	**11 21 29.7**	**+0.4**
E23K	**Chandalar**	**7.85 333**	P	**Pn**	**11 21 31.5**	**+0.9**
	baz=144					
G21K	**Allakaket**	**7.85 317**	P	**Pn**	**11 21 30.4**	**-0.2**
	baz=124					
KOTAN	**Kotaneelee Air**	**7.91 92**	P	**Pn**	**11 21 30.5**	**-0.9**
	baz=286					
OHAK	**Old Harbor**	**7.98 244**	Pn	**Pn**	**11 21 32.4**	**0.0**
F22K	**John River**	**8.07 325**	P	**Pn**	**11 21 33.9**	**+0.2**
	baz=134					
FLDN	**Fort Liard**	**8.15 91**	Sn	**Sn**	**11 23 01.3**	**-6.2**
NBC1	**NorthernBC 1**	**8.16 95**	Sn	**Sn**	**11 23 04.6**	**-3.1**
TOLK	**Toolik Lake Re**	**8.32 335**	Pn	**Pn**	**11 21 37.1**	**+0.1**
TOLK	**Toolik Lake Re**	**8.32 335**	P	**Pn**	**11 21 39.3**	**+2.2**
	baz=146,SNR=18					
D25K	**Kavik River**	**8.39 344**	P	**Pn**	**11 21 39.9**	**+1.9**
	baz=158					
C27K	**Jago River**	**8.41 351**	P	**Pn**	**11 21 40.5**	**+2.2**
	baz=168,SNR=22					
NBC2	**NorthernBC 2**	**8.76 93**	Sn	**Sn**	**11 23 16.3**	**-6.2**
NBC2			Sg	**Sg**	**11 24 09.8**	**-6.8**
Q16K	**King Salmon**	**8.77 259**	P	**Pn**	**11 21 45.0**	**+1.8**
	baz=65					
FNBB	**Fort Nelson**	**8.83 99**	Pn	**Pn**	**11 21 43.6**	**-0.6**
FNBB			Sn	**Sn**	**11 23 19.6**	**-4.6**
FNBB			Sg	Sg	11 24 09.1	-10
KITB	**Kitimat**	**9.51 135**	Pn	**Pn**	**11 21 53.9**	**+0.5**
C23K	**Itkillik River**	**9.53 337**	P	**Pn**	**11 21 55.8**	**+2.2**
	baz=148,SNR=15					
BNKB	**Banks Island**	**9.74 142**	Pn	**Pn**	**11 21 57.0**	**+0.5**
C36M	**Paulatuk**	**10.34 33**	Pn	**Pn**	**11 22 03.3**	**-1.4**
C36M			Sn	**Sn**	**11 23 53.7**	**-7.4**
C36M	**Paulatuk**	**10.34 33**	P	**Pn**	**11 22 03.9**	**-0.8**
	baz=227,SNR=8.1					
YKA	**Yellowknife Ar**	**11.97 74**	Pn	**Pn**	**11 22 26.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=268,slow=13,SNR=6.3					
	comp=E,0.4nm,0.6s					
YKA	**Yellowknife Ar**	**11.97 74**	Pn	**Pn**	**11 22 28.9**	**+1.9**
A36M	**Sachs Harbour**	**12.08 22**	Pn	**Pn**	**11 22 28.0**	**-0.4**
A36M	**Sachs Harbour**	**12.08 22**	Pn	**Pn**	**11 22 27.7**	**-0.8**
UBRB	**Upper Baezaeko**	**12.10 128**	Sn	Sn	11 24 34.5	-10
PDAR	**Pinedale Array**	**26.02 122**	P	**P**	**11 25 13.4**	**+3.3**
	comp=E,0.2nm,0.6s,baz=120,slow=21,SNR=2.1					
	comp=E,0.2nm,0.6s					
NVAR	**Mina Array Bea**	**26.64 140**	P	**P**	**11 25 18.9**	**+3.2**
	comp=E,0.7nm,0.8s,baz=326,slow=7.8,SNR=6.7					
	comp=E,0.7nm,0.8s					
TXAR	**Lajitas Array**	**40.02 126**	P	**P**	**11 27 13.3**	**+1.4**
	comp=E,0.2nm,0.7s,baz=332,slow=9.5,SNR=1.9					
	comp=E,0.2nm,0.7s					
NOA	**NORSAR Array B**	**55.91 16**	P	**P**	**11 29 13.2**	**-1.2**
	comp=E,1.0nm,0.8s,baz=325,slow=12,SNR=2.0					
	comp=E,1.0nm,0.8s					
MKAR	**Makanchi Array**	**66.90 330**	P	**P**	**11 30 28.0**	**-0.9**
	comp=E,0.1nm,0.4s,baz=34,slow=8.7,SNR=1.8					
	comp=E,0.1nm,0.4s					

*IDC **28** 11:20:20.7±4.8, 2°.22S×100°.61E, h0km, mb3.6/4, mbtmp3.6/4, MS3.8/2, Error ellipse: s-maj=246.5km s-min=24.0km az=53.0*
*NEIC **28** 11:20:26.0±0.4, 2°.1S±0°.1×100°.6E±0°.2, h35km±2km, mb4.1/6, Error ellipse: s-maj=40.3km s-min=12.5km az=238.0*
*DJA **28** 11:20:29.9±0.5, 2°.S±4°×10°.1E±°, h31km±9km, M3.5/6, MLv3.5/6*

ISC 28 11:20:27.0±0.8, 2°.10S±0°.05×100°.56E±0°.05, h35km, n25, σ2°.96/23, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.85**	**220**	P	**Pn**	**11 20 44.4**	**+1.8**
PPSI				S	**Sn**	**11 20 55.9**	**+2.0**
SDSI	**Sungai Dareh**	**1.45**	**37**	P	Pn	11 20 56.1	+5.3
SDSI				S	**Sn**	**11 21 15.6**	**+7.0**
SISI	**Saibi**	**1.65**	**298**	P	**Pn**	**11 20 57.3**	**+3.8**
SISI				S	**Sn**	**11 21 17.5**	**+3.9**
MASI	**Maura Aman, Be**	**1.98**	**122**	P	**Pn**	**11 21 02.2**	**+4.2**
MASI				S	**Sn**	**11 21 22.9**	**+1.3**
KSI	**Kapahiang**	**2.55**	**127**	P	**Pn**	**11 21 10.6**	**+4.6**
MNAI	**Manna**	**3.29**	**133**	Pn	**Pn**	**11 21 13.9**	**-2.1**
RPSI	**Rantau Prapat**	**5.03**	**341**	Pn	**Pn**	**11 21 39.3**	**-0.8**
IPM	**Ipoh**	**6.55**	**4**	Pn	**Pn**	**11 21 59.9**	**-1.1**
H08S2	**Diego Garcia H**	**28.49**	**258**	T	T	11 55 15.9	
	baz=78,slow=74,SNR=5.9						
H08S3	**Diego Garcia H**	**28.49**	**258**	T	T	11 55 16.4	
	baz=78,slow=74,SNR=9.8						
H08S1	**Diego Carcia H**	**28.50**	**258**	T	T	11 55 24.1	
	baz=78						
LSA	**Lhasa**	**32.88**	**345**	P	**P**	**11 26 55.6**	**-2.7**
WB0	**Warramunga Arr**	**37.44**	**120**	P	**P**	**11 27 35.0**	**-2.3**
WB0				IAmb	IAmb	11 27 45.9	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**37.47**	**121**	P	**P**	**11 27 35.0**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=296,slow=9.4,SNR=19						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**37.47**	**121**	P	**P**	**11 27 35.4**	**-2.1**
WB2	**Warramunga Arr**	**37.48**	**121**	P	**P**	**11 27 35.6**	**-1.9**
WB2				IAmb	IAmb	11 27 49.6	
	comp=Z,9.8nm,1.4s						
WR0	**Warramunga Arr**	**37.65**	**121**	P	**P**	**11 27 37.0**	**-2.1**
WR0				IAmb	IAmb	11 27 43.3	
	comp=Z,4.4nm,1.4s						
ASAR	**Alice Springs**	**38.75**	**126**	P	**P**	**11 27 46.5**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=298,slow=7.9,SNR=8.9						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**38.75**	**126**	P	**P**	**11 27 46.2**	**-2.1**
AS31	**Alice Springs**	**38.75**	**126**	P	**P**	**11 27 46.5**	**-1.8**
AS31				IAmb	IAmb	11 28 05.5	
	comp=Z,0.7nm,1.0s						
MKAR	**Makanchi Array**	**51.27**	**344**	P	**P**	**11 29 27.9**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=155,slow=7.2,SNR=2.1						
	comp=Z,0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**55.80**	**343**	LR	LR	11 59 07.2	
	comp=Z,180nm,19.4s,baz=94,slow=42						
ZALV	**Zalesovo Beam**	**57.37**	**349**	P	**P**	**11 30 11.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=168,slow=8.8,SNR=3.7						
	comp=Z,0.4nm,0.3s						
VAE	**Valguarnera**	**88.20**	**307**	LR	LR	12 15 35.0	
	comp=Z,29nm,21.5s,baz=327,slow=38						
TXAR	**Lajitas Array**	**144.44**	**38**	PKP	**PKPab**	**11 39 58.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=330,slow=1.5,SNR=6.0						

IDC 28 11:52:20.9±26.0, 45°.92N×149°.58E, h0km, mb3.4/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=610.6km s-min=68.5km az=12.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.21**	**250**	P	P	11 56 35.8	+0.6
	0.2nm,0.3s,baz=52,slow=14,SNR=1.6						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	**66.99**	**196**	P	P	12 03 14.9	-0.5
	0.2nm,0.5s,baz=8.1,slow=6.6,SNR=6.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**70.70**	**195**	P	P	12 03 38.9	+0.4
	0.3nm,0.8s,baz=6.9,slow=5.2,SNR=7.3						
	0.3nm,0.8s						

*IDC **28** 11:55:36.7±0.7, 6°.74N×72°.96W, h163km±9km, mb3.5/6, mbtmp4.1/10, Error ellipse: s-maj=26.5km s-min=8.0km az=132.0*
*NEIC **28** 11:55:37.1±1.4, 6°.55N±0°.10×72°.79W±0°.10, h175km±8km, mb4.3/11, Error ellipse: s-maj=16.3km s-min=11.2km az=133.0*
*RSNC **28** 11:55:38.0±0.7, 6°.79N×73°.13W, h150km±3km, ML3.7, Mw4.1*

ISC 28 11:55:36.9±0.6, 6°.84N±0°.03×73°.10W±0°.04, h155km±5km, n66, σ1°.66/102, mb4.1/13, 8C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**199⇑**	*e*P	**Pn**	**11 55 58.0**	**-0.3**
BARC				*e*S	**Sn**	**11 56 13.3**	**-1.3**
BARC				*i*		11 56 14.6	
	comp=Z,2μm,0.5s						
PAMC	**Pamplona, Colo**	**0.63**	**39⇑**	*i*P	**Pn**	**11 56 00.8**	**+0.6**
PAMC				*e*S	**Sn**	**11 56 18.0**	**+0.2**
PAMC				*i*		11 56 21.1	
	comp=Z,734nm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**293⇑**	*i*P	**Pn**	**11 55 59.8**	**+0.1**
BRRC				*e*S	**Sn**	**11 56 17.1**	**-0.1**
BRRC				*i*		11 56 18.1	
	comp=Z,983nm,0.3s						
RUSC	**La Rusia**	**0.94**	**179**	*i*P	**Pn**	**11 56 01.9**	**-0.4**
RUSC				*e*S	**Sn**	**11 56 20.6**	**-1.1**
RUSC				*i*		11 56 21.9	
	comp=Z,864nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**107⇑**	*i*P	**Pn**	**11 56 06.4**	**+0.9**
TAMC				*e*S	**Sn**	**11 56 28.0**	**+0.7**
TAMC				*i*		11 56 37.8	
	comp=Z,398nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.38**	**257⇑**	*e*P	**Pn**	**11 56 04.5**	**-1.2**
PTBC				*e*S	**Sn**	**11 56 25.7**	**-2.0**
PTBC				*i*		11 56 31.7	
	comp=Z,562nm,0.4s						
SPBC	**San Pablo de B**	**1.53**	**219**	*e*P	**Pn**	**11 56 06.8**	**-0.4**
SPBC				*e*S	**Sn**	**11 56 29.6**	**-1.0**
SPBC				*i*		11 56 33.8	
	comp=Z,704nm,0.2s						
NORC	**Norcasia**	**2.17**	**234⇑**	*e*P	**Pn**	**11 56 13.6**	**-0.8**
NORC				*e*S	**Sn**	**11 56 42.1**	**-1.2**
NORC				*i*		11 56 46.4	
	comp=Z,335nm,0.4s						
CHIC	**Chingaza**	**2.29**	**196⇓**	*e*P	**Pn**	**11 56 15.8**	**-0.4**
CHIC				*e*S	**Sn**	**11 56 45.4**	**-1.0**
CHIC				*i*		11 56 49.4	
	comp=Z,404nm,0.6s						
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**11 56 17.7**	**+1.1**
	comp=Z,334nm,0.3s,baz=316,slow=2.7,SNR=94						
ROSC				S	**Sn**	**11 56 47.9**	**+0.6**
	comp=Z,829nm,0.4s,baz=79,slow=22,SNR=7.4						
ROSC	**El Rosal**	**2.33**	**212**	*e*P	**Pn**	**11 56 17.5**	**+0.9**
ROSC				*e*S	**Sn**	**11 56 48.8**	**+1.5**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**11 56 18.5**	**-0.1**
HELC				*e*S	**Sn**	**11 56 52.7**	**+1.9**
HELC				*i*		11 56 57.0	
	comp=Z,420nm,0.5s						
LL1C	**La Loma 1 Cana**	**2.72**	**350**	*e*P	**Pn**	**11 56 22.8**	**+1.9**
LL1C				*e*S	**Sn**	**11 56 58.1**	**+2.9**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	*e*P	**Pn**	**11 56 22.2**	**+0.1**
GUY2C				*e*S	**Sn**	**11 56 59.8**	**+2.8**
GUY2C				*i*		11 57 04.5	
	comp=Z,516nm,0.6s						
VILC	**Villavicencio,**	**2.78**	**192**	*e*P	**Pn**	**11 56 21.4**	**-0.4**
VILC				*e*S	**Sn**	**11 56 55.6**	**-1.0**
PTGC	**Puerto Gaitan,**	**2.80**	**160⇓**	*i*P	**Pn**	**11 56 21.1**	**-0.9**
PTGC				*e*S	**Sn**	**11 56 54.4**	**-2.5**
PTGC				*i*		11 56 59.5	
	comp=Z,243nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*e*P	**Pn**	**11 56 25.7**	**+0.3**
CBOC				*e*S	**Sn**	**11 57 01.7**	**-1.2**
CBOC				*i*		11 57 08.2	
	comp=Z,121nm,0.4s						
DBBC	**Dabeiba**	**3.10**	**273**	*e*P	**Pn**	**11 56 25.9**	**+0.1**
DBBC				*e*S	**Sn**	**11 57 02.0**	**-1.5**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**11 56 27.4**	**+0.6**
	comp=Z,176nm,0.

GCUF *e*S **Sn** **11 58 35.6 -0.9**
TULM Tulcn-Chalpat 7.68 218 Pn **Pn** **11 57 27.5 +1.0**
PCRV Puerto La Cruz 9.00 68 P **Pn** **11 57 43.5 -0.2**
comp=Z,5.6nm,0.5s,baz=163,slow=10,SNR=3.7
MTDJ Mount Denham 12.11 339 Pn **P** **11 58 28.3 -2.5**
SDDR Presa de Saban 12.19 8 **Pn** **11 58 28.2 +2.6**
SDDR Presa de Saban 12.19 8 *e*S **Pn** **11 58 28.2 +2.6**
SJG San Juan 13.09 31 P **Pn** **11 58 38.8 +1.7**
comp=Z,7.4nm,0.3s,baz=345,slow=20,SNR=5.7
GTBY Guantanamo Bay 13.15 352 Pn **P** **11 58 41.7 -0.6**
WVT Waverly 32.12 337 P **P** **12 01 50.8 +1.3**
WVT IAmb IAmb 12 01 51.3
comp=Z,8.0nm,1.1s
WHAR Wooly Hollow 33.36 331 P **P** **12 02 00.7 +0.4**
WHAR IAmb IAmb 12 02 37.8
comp=Z,8.2nm,1.4s
CCM Cathedral Cave 35.16 335 P **P** **12 02 16.5 +0.7**
CCM IAmb IAmb 12 02 17.0
comp=Z,8.8nm,0.8s
TXAR Lajitas Array 36.47 312 P **P** **12 02 27.5 +0.2**
comp=Z,0.6nm,0.7s,baz=127,slow=9.4,SNR=7.7
comp=Z,0.6nm,0.7s
TXAR Lajitas Array 36.47 312 P **P** **12 02 27.8 +0.5**
TX31 Lajitas Ar. Si 36.47 312 P **P** **12 02 27.7 +0.5**
TX31 IAmb IAmb 12 02 28.9
comp=Z,6.7nm,1.2s
TX32 Lajitas Array 36.47 312 P **P** **12 02 27.8 +0.6**
E46A Sault Ste Mari 40.55 348 P **P** **12 03 02.3 +1.4**
BATG Bathurst New B 40.74 7 P **P** **12 03 03.5 +1.1**
BO01 Tunca 41.05 177 P P 12 02 59.9 -5.3
BO01 IAmb IAmb 12 03 17.9
comp=Z,6.0nm,1.1s
SDCO Great Sand Dun 42.55 321 P **P** **12 03 19.7 +2.0**
EYMN Ely 43.86 342 P **P** **12 03 27.9 +0.2**
EYMN IAmb IAmb 12 03 35.2
comp=Z,19nm,1.4s
PV05 Paradox Valley 45.04 319 P **P** **12 03 37.9 +0.4**
PV05 IAmb IAmb 12 04 11.3
comp=Z,6.9nm,1.3s
PDAR Pinedale Array 48.07 324 P **P** **12 04 01.2 +0.1**
comp=Z,0.3nm,0.4s,baz=125,slow=9.7,SNR=5.2
comp=Z,0.3nm,0.4s
PDAR Pinedale Array 48.07 324 P **P** **12 04 00.8 -0.3**
SCHQ Schefferville 48.12 5 P **P** **12 04 00.5 -0.4**
comp=Z,2.3nm,0.6s,baz=233,slow=2.6,SNR=4.3
comp=Z,2.3nm,0.6s
NVAR Mina Array Bea 51.48 315 P **P** **12 04 27.5 +0.6**
comp=Z,0.3nm,0.6s,baz=114,slow=9.0,SNR=2.1
comp=Z,0.3nm,0.6s
YKA Yellowknife Ar 63.25 340 P **P** **12 05 48.3 -0.3**
comp=Z,1.3nm,0.5s,baz=134,slow=6.7,SNR=18
comp=Z,1.3nm,0.5s
HFS Hagfors 82.51 30 P **P** **12 07 40.7 -1.3**
comp=Z,9.7nm,1.1s,baz=251,slow=4.5,SNR=3.8
comp=Z,9.7nm,1.1s
ASAR Alice Springs 149.14 234 PKPbc **PKPbc** **12 15 06.7 -1.2**
comp=Z,0.6nm,0.7s,baz=112,slow=3.7,SNR=9.8
WRA Warramunga Arr 150.37 241 PKPbc **PKPbc** **12 15 09.2 -1.7**
comp=Z,0.4nm,0.4s,baz=108,slow=2.6,SNR=16

OSPL 28 11:57:22.3±2.7, 18°.58N×68°.76W, h130km±19km, ML2.4, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.36**	**100**	*i* P	Pn	11 57 38.5	-2.2
PCDR				*e*S	Sn	11 57 52.4	-2.1
PCDR				IAML		11 57 59.5	
	comp=Z,101nm,1.3s						
BANI	**BANI**	**1.53**	**263**	*i* P	Pn	11 57 40.9	-10
BANI				*e*S	Sn	11 58 00.4	-12
BANI				IAML		11 58 08.7	
	comp=Z,19nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.66**	**110**	*i* P	Pn	11 57 51.7	-0.5
CRPR				IAML		11 58 18.4	
	comp=Z,22nm,0.7s						
SC01	**Santiago de Io**	**2.05**	**295**	*e*S	Sn	11 58 20.4	-2.9
SC01				IAML		11 58 33.1	
	comp=Z,47nm,2.1s						
SDDR	**Presa de Saban**	**2.43**	**280**	*i* P	Pn	11 58 00.1	-1.6
SDDR				IAML		11 58 31.3	
	comp=Z,16nm,2.0s						

IDC 28 12:07:14.2±3.8, 4°.13S×151°.64E, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=149.2km s-min=50.3km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.88**	**220**	Sn	Sn	12 10 17.2	+1.7
	2.8nm,0.3s,baz=107,slow=22,SNR=5.8						
WRA	**Warramunga Arr**	**23.06**	**226**	P	P	12 12 21.1	-0.4
	0.4nm,0.5s,baz=50,slow=9.8,SNR=15						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.90**	**220**	P	P	12 12 48.5	+0.5
	0.2nm,0.5s,baz=53,slow=9.2,SNR=9.8						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**149.00**	**289**	PKPbc	PKPbc	12 27 04.6	-0.8
	0.2nm,0.4s,baz=66,slow=3.7,SNR=3.5						

BUC 28 12:13:32.4±0.2, 46°.06N×22°.86E, h4km±2km, ml1.6/8, 28C-8D, Error ellipse: s-maj=1.7km s-min=1.4km az=50.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.17**	**170**	⇓P	Pg	12 13 35.3	-0.5
DEV				⇑S	Sg	12 13 39.1	+1.0
DEV	**Deva**	**0.17**	**170**	⇓P	Pg	12 13 35.3	-0.5
DEV				⇑S	Sg	12 13 39.1	+1.0
GZR	**Gura Zlata**	**0.66**	**185**	⇓P	Pg	12 13 44.8	-0.4
GZR				⇑S	Sg	12 13 54.5	+0.8
GZR	**Gura Zlata**	**0.66**	**185**	⇓P	Pg	12 13 44.8	-0.4
GZR				⇑S	Sg	12 13 54.5	+0.8
DRGR		**0.74**	**352**	⇑P	Pg	12 13 47.0	+0.3
DRGR				⇑S	Sg	12 13 57.2	+0.8
DRGR		**0.74**	**352**	⇑P	Pg	12 13 47.0	+0.3
DRGR				⇑S	Sg	12 13 57.2	+0.8
SIRR	**Siria**	**0.86**	**285**	⇑P	Pg	12 13 49.3	+0.4
SIRR				⇑S	Sb	12 14 01.0	-0.8
SIRR	**Siria**	**0.86**	**285**	⇑P	Pg	12 13 49.3	+0.4
SIRR				⇑S	Sb	12 14 01.0	-0.8
LOT	**Lotru**	**0.88**	**133**	⇓P	Pg	12 13 49.6	+0.3
LOT				⇓S	Sb	12 14 01.7	-0.8
LOT	**Lotru**	**0.88**	**133**	⇓P	Pg	12 13 49.6	+0.3
LOT				⇓S	Sb	12 14 01.7	-0.8
BZS	**Buzias**	**0.97**	**244**	⇑P	Pg	12 13 50.7	-0.3
BZS				⇑S	Sg	12 14 03.5	-0.2
BZS	**Buzias**	**0.97**	**244**	⇑P	Pg	12 13 50.7	-0.3
BZS				⇑S	Sg	12 14 03.5	-0.2
ARR	**Arges**	**1.42**	**118**	⇑P	Pn	12 13 58.5	-0.6
ARR				⇑S	Sn	12 14 19.8	+1.4
ARR	**Arges**	**1.42**	**118**	⇑P	Pn	12 13 58.5	-0.6
ARR				⇑S	Sn	12 14 19.8	+1.4
MDVR	**Moldovita**	**1.51**	**213**	⇑P	Pn	12 14 00.0	-0.2
MDVR				⇑S	Sg	12 14 21.9	+1.0
MDVR	**Moldovita**	**1.51**	**213**	⇑P	Pn	12 14 00.0	-0.2
MDVR				⇑S	Sg	12 14 21.9	+1.0
VOIR		**1.65**	**111**	⇑P	Pn	12 14 02.5	+0.2
VOIR				⇑S	Sb	12 14 24.7	-0.1
VOIR		**1.65**	**111**	⇑P	Pn	12 14 02.5	+0.2
VOIR				⇑S	Sb	12 14 24.7	-0.1

BUC 28 12:14:09.0±0.3, 46°.00N×22°.85E, h4km±2km, ml1.0/1, 16C-6D, Error ellipse: s-maj=2.3km s-min=1.6km az=69.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.12**	**162**	⇑P	Pg	12 14 10.7	-0.7
DEV				⇑S	Sg	12 14 13.6	+0.6
DEV	**Deva**	**0.12**	**162**	⇑P	Pg	12 14 10.7	-0.7
DEV				⇑S	Sg	12 14 13.6	+0.6
GZR	**Gura Zlata**	**0.61**	**185**	⇓P	Pg	12 14 20.1	-0.5
GZR				⇑S	Sg	12 14 29.7	+1.1
GZR	**Gura Zlata**	**0.61**	**185**	⇓P	Pg	12 14 20.1	-0.5
GZR				⇑S	Sg	12 14 29.7	+1.1
DRGR		**0.80**	**353**	⇑P	Pg	12 14 24.6	+0.3
DRGR				⇓S	Sb	12 14 36.0	-0.7
DRGR		**0.80**	**353**	⇑P	Pg	12 14 24.6	+0.3
DRGR				⇓S	Sb	12 14 36.0	-0.7
SIRR	**Siria**	**0.87**	**288**	⇑P	Pg	12 14 25.5	-0.9
SIRR				⇑S	Sg	12 14 37.0	+0.1
SIRR	**Siria**	**0.87**	**288**	⇑P	Pg	12 14 25.5	-0.1
SIRR				⇑S	Sg	12 14 37.0	+0.1
BZS	**Buzias**	**0.94**	**246**	⇑S	Sb	12 14 40.2	-0.6
BZS	**Buzias**	**0.94**	**246**	⇑S	Sb	12 14 40.2	-0.6
MDVR	**Moldovita**	**1.46**	**214**	⇑S	Sg	12 14 57.0	+1.2
MDVR	**Moldovita**	**1.46**	**214**	⇑S	Sg	12 14 57.0	+1.2
VOIR		**1.64**	**109**	⇓S	Sb	12 15 01.2	+0.2
VOIR		**1.64**	**109**	⇓S	Sb	12 15 01.2	+0.2

BJI ***28*** *12:17:02.6±0.0, 3°.84S×152°.38E, h196km, mb4.7/37, mB4.8/16*
DJA ***28*** *12:17:02.8±0.3, 4°.3±.3°×15°.2E±°, h217km±4km, M4.6/44, mB5.3/9, mb4.6/44, MLv4.5/2, Mw(mB)4.7/9*
NEIC ***28*** *12:17:04.4±2.3, 4°.24S±0°.06×152°.07E±0°.07, h193km±5km, mb4.7/103, Error ellipse: s-maj=10.9km s-min=8.3km az=116.0*
IDC ***28*** *12:17:05.3±0.9, 4°.25S×152°.07E, h212km±8km, mb4.0/22, mbtmp4.6/25, Error ellipse: s-maj=13.8km s-min=9.2km az=74.0*
ISC 28 12:17:04.6±0.6, **4°.25S**±0°.05×**152°.02E**±0°.05, **h207**km±5km, **n254**, σ1°**08**/268, **mb4.6**/96, **4C-3D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.16**	**68**		**Pn**	**12 17 31.3**	**-0.4**
RABL	**Rabaul**	**0.16**	**68**	P	**Pn**	**12 17 31.3**	**-0.4**
MANU	**Manus Island**	**5.13**	**295**	Pn	**Pn**	**12 18 21.6**	**+0.7**
PMG	**Port Moresby**	**7.04**	**223**	P	**Pn**	**12 18 47.6**	**+2.3**
	30nm,0.8s,baz=61,slow=5.5,SNR=6.7						
PMG				S	**S**	**12 20 05.7**	**+0.4**
	110nm,0.5s,baz=299,slow=20,SNR=10						
PMG	**Port Moresby**	**7.04**	**223**	Pn	**Pn**	**12 18 46.4**	**+1.1**
PMG	**Port Moresby**	**7.04**	**223**	P	**Pn**	**12 18 47.5**	**+2.2**
HNR	**Honiara**	**9.41**	**124**	Pn	**Pn**	**12 19 14.8**	**-1.3**
GENI	**Genyem**	**11.94**	**278**	P	**Pn**	**12 19 47.7**	**-0.9**
	45nm,0.9s						
COEN	**Coen**	**13.00**	**222**	Pn	**Pn**	**12 20 02.7**	**+0.7**
COEN	**Coen**	**13.00**	**222**	P	**P**	**12 20 03.9**	**-1.1**
SMPI	**Sarmi**	**13.47**	**279**	P	**Pn**	**12 20 06.9**	**-1.0**
	62nm,1.5s						
MTSU	**Mount Surprise**	**15.72**	**208**	P	**Pn**	**12 20 37.7**	**+2.3**
TV1H	**Townsville Har**	**15.77**	**198**	P	**Pn**	**12 20 37.7**	**+1.8**
SRPI	**Serui, Papua**	**15.93**	**278**	P	**P**	**12 20 36.0**	**-1.4**
	50nm,0.4s						
CTA	**Charters Tower**	**16.71**	**199**	P	**Pn**	**12 20 47.8**	**+0.5**
	19nm,0.6s,baz=20,slow=11,SNR=31						
CTA	**Charters Tower**	**16.71**	**199**	P	**Pn**	**12 20 48.0**	**+0.7**
CTAO	**Charters Tower**	**16.71**	**199**	P	**P**	**12 20 46.0**	**-0.1**
CTAO				IAmb	IAmb	12 20 49.7	
	comp=Z,25nm,0.7s						
CTAO	**Charters Tower**	**16.71**	**199**	P	**Pn**	**12 20 47.9**	**+0.7**
RKPI	**Ransiki, Papua**	**18.02**	**278**	P	**P**	**12 20 57.9**	**-2.5**
	comp=Z,8μmcomp=Z,74nm,1.4s						
RK1H	**Rockhampton Ha**	**19.08**	**184**	P	**P**	**12 21 12.9**	**+1.2**
GUMO	**Guam**	**19.09**	**338**	P	**P**	**12 21 13.8**	**+1.9**
	comp=Z,120nm,1.0s,baz=153,slow=8.7,SNR=3.7						
FAKI	**Fak Fak**	**19.77**	**273**	P	**P**	**12 21 20.3**	**+1.0**
FAKI				IAmb	IAmb	12 21 24.6	
	comp=Z,17nm,0.8s						
FAKI	**Fak Fak**	**19.77**	**273**	P	**P**	**12 21 17.3**	**-2.0**
	comp=Z,22nm,1.0s						
FAKI	**Fak Fak**	**19.77**	**273**	P	**P**	**12 21 18.0**	**-1.3**
KOUNC	**Koumac, New Ca**	**20.13**	**145**	P	**P**	**12 21 22.9**	**0.0**
KOUNC				IAmb	IAmb	12 21 29.4	
	comp=Z,28nm,1.0s						
KOUNC	**Koumac, New Ca**	**20.13**	**145**	P	**P**	**12 21 24.0**	**+1.0**
QIS	**Mount Isa**	**20.21**	**216**	P	**P**	**12 21 25.1**	**+1.2**
SIJI	**Sorong**	**21.00**	**279**	P	**P**	**12 21 33.6**	**+1.3**
	comp=Z,26nm,0.8s,baz=61,slow=6.1,SNR=8.9						
	comp=Z,26nm,0.8s						
SIJI	**Sorong**	**21.00**	**279**	P	**P**	**12 21 30.7**	**-1.6**
	comp=Z,33nm,1.1s						
EIDS	**Eidsvold**	**21.02**	**182**	P	**P**	**12 21 31.9**	**-0.4**
EIDS				IAmb	IAmb	12 21 34.4	
	comp=Z,17nm,0.7s						
EIDS	**Eidsvold**	**21.02**	**182**	P	**P**	**12 21 32.9**	**+0.5**
KDU	**Kakadu**	**21.05**	**245**	P	**P**	**12 21 32.4**	**-0.4**
LIFNC	**LIFOU**	**22.12**	**139**	P	**P**	**12 21 41.4**	**-2.0**
MTN	**Manton Dam**	**22.33**	**246**	P	**P**	**12 21 45.3**	**-0.2**
MTN				IAmb	IAmb	12 21 46.3	
	comp=Z,20nm,0.8s						
MTN	**Manton Dam**	**22.33**	**246**	P	**P**	**12 21 45.5**	**0.0**
RMQ	**Roma**	**22.33**	**188**	P	**P**	**12 21 45.9**	**+0.5**
NOUC	**Port Laguerre**	**22.51**	**143**	P	**P**	**12 21 48.3**	**+1.3**
DZM	**Mont Dzumac**	**22.57**	**143**	P	**P**	**12 21 48.5**	**+0.8**
	comp=Z,57nm,0.5s,baz=318,slow=6.7,SNR=108						
	comp=Z,57nm,0.5s						
WB0	**Warramunga Arr**	**23.09**	**227**	P	**P**	**12 21 51.7**	**-0.6**
WR0	**Warramunga Arr**	**23.10**	**226**	P	**P**	**12 21 51.3**	**-1.2**
MARNC	**Mare, Loyalty**	**23.13**	**139**	P	**P**	**12 21 53.0**	**+0.4**
WRAB	**Tennant Creek**	**23.22**	**226**	P	**P**	**12 21 53.7**	**+0.2**
WRAB	**Tennant Creek**	**23.22**	**226**	P	**P**	**12 21 53.9**	**+0.4**
WB2	**Warramunga Arr**	**23.23**	**226**	P	**P**	**12 21 53.1**	**-0.5**
WRA	**Warramunga Arr**	**23.24**	**226**	P	**P**	**12 21 53.9**	**+0.2**
	comp=Z,29nm,0.6s,baz=50,slow=9.5,SNR=162						
WRA				pP	**pP**	**12 22 32.6**	**+1.1**
	comp=Z,7.0nm,0.9s,baz=52,slow=10,SNR=2.8						
WRA				PcP	**PcP**	**12 25 35.5**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=49,slow=2.3,SNR=5.1						
WRA				S	**S**	**12 25 48.5**	**-1.8**
	comp=Z,5.1nm,0.8s,baz=46,slow=16,SNR=8.6						
	comp=Z,29nm,0.6s						
WRA	**Warramunga Arr**	**23.24**	**226**	P	**P**	**12 21 52.4**	**-1.3**
WB1	**Warramunga Ar.**	**23.24**	**226**	P	**P**	**12 21 54.3**	**+0.6**
QLP	**Quilpie**	**23.42**	**198**	P	**P**	**12 21 56.4**	**+1.2**
AAI	**Ambon**	**23.77**	**270**	P	**P**	**12 21 56.9**	**-1.7**
	comp=Z,991nmcomp=Z,35nm,0.7s						
LBMI	**Labuha**	**24.75**	**278**	P	**P**	**12 22 06.3**	**-1.2**
	comp=Z,46nm,1.7s						
KNRA	**Kununurra**	**25.53**	**242**	P	**P**	**12 22 13.5**	**-1.0**
KNRA	**Kununurra**	**25.53**	**242**	P	**P**	**12 22 14.3**	**-0.1**
INKA	**Innaminka**	**25.71**	**204**	P	**P**	**12 22 16.6**	**+0.6**
AS01	**Alice Springs**	**26.01**	**220**	P	**P**	**12 22 19.2**	**+0.4**
ARMA	**Armidale**	**26.03**	**181**	P	**P**	**12 22 20.0**	**+1.1**
ARMA				IAmb	IAmb	12 22 21.4	
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**26.03**	**181**	P	**P**	**12 22 21.0**	**+2.1**
AS31	**Alice Springs**	**26.04**	**220**	P	**P**	**12 22 18.7**	**-0.3**
ASAR	**Alice Springs**	**26.04**	**220**	P	**P**	**12 22 19.0**	**0.0**
	comp=Z,0.8nm,0.3s,baz=49,slow=8.3,SNR=35						
ASAR				pP	**pP**	**12 23 00.2**	**-0.3**
	comp=Z,5.5nm,0.7s,baz=54,slow=9.3,SNR=10						
ASAR				PcP	**PcP**	**12 25 41.9**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=50,slow=2.4,SNR=5.6						
ASAR				S	**S**	**12 26 32.3**	**-2.4**
	comp=Z,1.9nm,0.8s,baz=53,slow=14,SNR=6.5						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**26.04**	**220**	P	**P**	**12 22 17.6**	**-1.4**
SANI	**Sanana**	**26.08**	**274**	P	**P**	**12 22 17.8**	**-1.6**
	comp=Z,14nm,0.9s						
FUNA	**Funafuti**	**27.34**	**100**	P	**P**	**12 22 28.9**	**-1.7**
CMSA	**Cobar Meteorol**	**27.79**	**192**	P	**P**	**12 22 34.8**	**+0.4**
OOD	**Oodnadatta**	**28.11**	**212**	P	**P**	**12 22 38.5**	**+1.1**
LCRK	**Leigh Creek**	**29.13**	**205**	P	**P**	**12 22 46.7**	**+0.3**
STKA	**Stephens Creek**	**29.17**	**198**	P	**P**	**12 22 46.2**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=11,slow=11,SNR=6.6						
STKA				pP	**pP**	**12 23 29.1**	**+1.4**
	comp=Z,1.6nm,0.5s,baz=34,slow=12,SNR=3.4						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**29.17**	**198**	P	**P**	**12 22 45.7**	**-1.0**
STKA	**Stephens Creek**	**29.17**	**198**	P	**P**	**12 22 46.4**	**-0.3**
LUWI	**Luwuk**	**29.38**	**275**	P	**P**	**12 22 48.1**	**-0.7**
GTOI	**Gorontalo**	**29.39**	**279**	P	**P**	**12 22 48.4**	**-0.4**
	comp=Z,11nm,1.0s						
MMRI	**Maumere**	**29.90**	**260**	P	**P**	**12 22 52.0**	**-1.4**
	comp=Z,18nm,0.4s						
WRKA	**Warakurna**	**30.77**	**225**	P	**P**	**12 23 00.5**	**-0.5**
MULG	**Mulgathing**	**30.95**	**211**	P	**P**	**12 23 02.3**	**-0.1**
CNB	**Canberra Magne**	**31.01**	**184**	P	**P**	**12 23 04.3**	**+1.4**
CAN	**Canberra**	**31.04**	**185**	P	**P**	**12 23 02.6**	**-0.6**
CAN				IAmb	IAmb	12 23 36.7	
	comp=Z,27nm,1.3s						
CAN	**Canberra**	**31.04**	**185**	P	**P**	**12 23 04.5**	**+1.3**
BSSI	**Bau Bau, Buton**	**31.45**	**265**	P	**P**	**12 23 05.4**	**-1.6**
	comp=Z,17nm,1.4s						
HTT	**Hallett**	**31.50**	**201**	P	**P**	**12 23 07.6**	**+0.4**
TOLI2	**Tolitoli**	**31.66**	**279**	P	**P**	**12 23 07.9**	**-1.0**
TOLI2				IAmb	IAmb	12 23 10.8	
	comp=Z,9.9nm,0.9s						
BNSI	**Bone**	**31.82**	**269**	P	**P**	**12 23 08.5**	**-1.7**
	comp=Z,15nm,0.8s						
BBOO	**Buckleboo**	**32.09**	**206**	P	**P**	**12 23 11.6**	**-0.8**
BBOO	**Buckleboo**	**32.09**	**206**	P	**P**	**12 23 12.1**	**-0.3**
SPSI	**Sidrap Palu**	**32.16**	**269**	P	**P**	**12 23 11.5**	**-1.7**
	comp=Z,614nmcomp=Z,17nm,0.9s						
KAPI	**Kappang**	**32.17**	**267**	P	**P**	**12 23 13.4**	**+0.1**
	comp=Z,7.2nm,0.3s,baz=193,slow=23,SNR=5.7						
	comp=Z,7.2nm,0.3s						
KAPI	**Kappang**	**32.17**	**267**	P	**P**	**12 23 14.0**	**+0.7**
MPSI	**Mapaga**	**32.41**	**277**	P	**P**	**12 23 13.5**	**-1.9**
	comp=Z,28nm,0.9s						
JCJ	**Chichijima**	**32.58**	**344**	P	**P**	**12 23 16.5**	**-0.1**
TOO	**Toolangi**	**33.70**	**189**	P	**P**	**12 23 25.7**	**-0.6**
PLAI	**Plampang**	**34.31**	**261**	P	**P**	**12 23 30.3**	**-1.5**
	comp=Z,19nm,0.7s						
PLAI	**Plampang**	**34.31**	**261**	P	**P**	**12 23 30.1**	**-1.7**
FORT	**Forrest**	**34.73**	**218**	P	**P**	**12 23 35.3**	**+0.1**
FORT				IAmb	IAmb	12 24 14.0	
	comp=Z,19nm,1.0s						
FORT	**Forrest**	**34.73**	**218**	P	**P**	**12 23 35.2**	**+0.1**
MYLDM	**Lahad Datu**	**34.76**	**285**	P	**P**	**12 23 36.9**	**+1.2**
MYLDM	**Lahad Datu**	**34.76**	**285**	P	**P**	**12 23 33.8**	**-1.9**
	comp=Z,27nm,1.4s						
TWSI	**Taliwang, Sumb**	**35.18**	**261**	P	**P**	**12 23 37.6**	**-1.6**
	comp=Z,15nm,0.7s						
MBWA	**Marble Bar**	**35.57**	**239**	P	**P**	**12 23 41.5**	**-1.0**
MBWA	**Marble Bar**	**35.57**	**239**	P	**P**	**12 23 41.8**	**-0.7**
PSA00	**Pilbara Seismi**	**35.64**	**238**	P	**P**	**12 23 42.2**	**-0.9**
PSA00				IAmb	IAmb	12 23 43.0	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**35.64**	**238**	P	**P**	**12 23 42.5**	**-0.6**
KLNI	**Mataram**	**35.93**	**262**	P	**P**	**12 23 44.0**	**-1.6**
	comp=Z,22nm,1.1s						
OUZ	**Omahuta**	**36.72**	**150**	P	**P**	**12 23 53.5**	**+1.5**
JAGI	**Jajag, Banyuwa**	**37.85**	**262**	P	**P**	**12 23 59.8**	**-2.0**
	comp=Z,38nm,1.1s						
JOW	**Kunigami**	**38.49**	**325**	P	**P**	**12 24 07.6**	**+0.6**
JOW				IAmb	IAmb	12 24 09.3	
	comp=Z,20nm,1.0s						
TAU	**Tasmania Unive**	**38.72**	**186**	P	**P**	**12 24 10.2**	**+1.6**
MEEK	**Meekatharra**	**38.92**	**232**	P	**P**	**12 24 10.4**	**-0.2**
YOJ	**Yonaguni jima**	**40.14**	**317**	P	**P**	**12 24 20.6**	**0.0**
YOJ				IAmb	IAmb	12 24 46.1	
	comp=Z,22nm,0.9s						
SBUM	**Sibu**	**40.32**	**279**	P	**P**	**12 24 23.8**	**+1.5**
SBUM	**Sibu**	**40.32**	**279**	P	**P**	**12 24 20.4**	**-1.9**
	comp=Z,7.4nm,0.9s						
QRZ	**Quartz Range**	**40.82**	**156**	P	**P**	**12 24 27.7**	**+1.7**
OTVZ	**Oturere**	**40.84**	**152**	P	P	12 24 41.6	+15
URZ	**Urewera**	**40.85**	**149**	P	**P**	**12 24 27.3**	**+1.1**
	comp=Z,7.6nm,0.5s,baz=330,slow=5.1,SNR=7.2						
	comp=Z,7.6nm,0.5s						
URZ	**Urewera**	**40.85**	**149**	P	**P**	**12 24 27.5**	**+1.2**
GIRL	**Giralia**	**40.86**	**240**	P	**P**	**12 24 27.2**	**+0.7**
MWZ	**Matawai**	**41.12**	**149**	P	**P**	**12 24 30.0**	**+1.5**
MTHZ	**Maungataniwha**	**41.17**	**150**	P	**P**	**12 24 30.2**	**+1.3**
WMGZ	**Waiomatatini S**	**41.20**	**148**	P	**P**	**12 24 30.3**	**+1.2**
BKZ	**Black Stump Fm**	**41.24**	**151**	P	**P**	**12 24 30.5**	**+1.0**
BKZ				IAmb	IAmb	12 24 31.6	
	comp=Z,25nm,1.2s						
BKZ	**Black Stump Fm**	**41.24**	**151**	P	**P**	**12 24 30.5**	**+1.0**
BKZ	**Black Stump Fm**	**41.24**	**151**	P	**P**	**12 24 30.5**	**+1.0**
SNGZ	**Shannon Statio**	**41.37**	**150**	P	**P**	**12 24 31.8**	**+1.3**
WHHZ	**Waihua**	**41.54**	**150**	P	**P**	**12 24 32.7**	**+0.8**
ARHZ	**Aropaoanui**	**41.57**	**150**	P	**P**	**12 24 33.2**	**+1.1**
CNGZ	**Carnagh Statio**	**41.59**	**149**	P	**P**	**12 24 33.2**	**+0.9**
KSM	**Kuching**	**42.06**	**277**	P	**P**	**12 24 36.9**	**+0.4**
KSM	**Kuching**	**42.06**	**277**	P	**P**	**12 24 34.3**	**-2.2**
	comp=Z,19nm,0.9s						
MORW	**Morawa**	**42.09**	**230**	P	**P**	**12 24 36.6**	**+0.1**
BSWZ	**Blackbirch Sta**	**42.12**	**155**	P	**P**	**12 24 37.6**	**+1.1**
KHZ	**Kahutara**	**42.57**	**156**	P	**P**	**12 24 39.7**	**-0.4**
KHZ	**Kahutara**	**42.57**	**156**	P	**P**	**12 24 40.4**	**+0.3**
	comp=Z,47nm,1.0s						
MAJO	**Matsushiro**	**42.58**	**343**	P	**P**	**12 24 39.4**	**-0.9**
MAJO				IAmb	IAmb	12 25 18.9	
	comp=Z,28nm,1.4s						
MJB9	**Matsu-Tunnel**	**42.59**	**343**	P	**P**	**12 24 40.4**	**+0.1**
MJB9				IAmb	IAmb	12 25 19.9	
	comp=Z,28nm,1.4s						
JHS	**Saijyo**	**42.90**	**337**	P	**P**	**12 24 43.5**	**+0.6**
JHS				IAmb	IAmb	12 25 17.0	
	comp=Z,32nm,1.3s						
JSD	**Sado**	**43.97**	**344**	P	**P**	**12 24 51.0**	**-0.3**
JSD				IAmb	IAmb	12 24 52.5	
	comp=Z,32nm,1.3s						
JTM	**Tenmabayashi**	**45.93**	**348**	P	**P**	**12 25 06.9**	**+0

PKI	Pulchoki	71.48	301	eP	P	12 28 03.7	+0.2
KKN	Kakani	71.65	301	eP	P	12 28 04.5	+0.1
DMN	Daman	71.75	301	eP	P	12 28 05.4	+0.3
	comp=Z,65nm,0.9s						
GKN	Gorkha	72.25	301	eP	P	12 28 08.1	+0.2
	comp=Z,45nm,0.9s						
KOLN	Koldanda	73.08	301	eP	P	12 28 12.7	-0.2
	comp=Z,4.1nm,0.8s						
DANN	Dangsing	73.09	301	eP	P	12 28 12.8	-0.2
	comp=Z,30nm,0.8s						
VNDA	Vanda	73.41	178	P	P	12 28 13.9	+0.4
	comp=Z,0.5nm,0.7s,baz=313,slow=8.4,SNR=3.9						
	comp=Z,0.5nm,0.7s						
PYUN	Piuthan	73.69	301	eP	P	12 28 16.1	-0.3
	comp=Z,57nm,0.9s						
WMQ	Urumqi	74.81	317	eP	P	12 28 24.5	+2.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
Q19K	Cape Douglas,	76.20	26	P	P	12 28 29.1	-0.7
N18K	Kilae Creek	76.26	24	P	P	12 28 31.3	+1.1
N18K				IAmb	IAmb	12 28 32.2	
	comp=Z,19nm,1.5s						
L19K	White Mountain	77.54	23	P	P	12 28 38.1	+0.8
CNPM	China Poot	77.56	26	P	P	12 28 38.1	+0.6
O22K	Cooper Landing	78.70	25	P	P	12 28 43.2	-0.4
SKT	Skwentna	78.73	24	P	P	12 28 44.1	+0.3
SUA	Susitna One	78.78	24	P	P	12 28 43.1	-1.1
SUA				IAmb	IAmb	12 28 44.8	
	comp=Z,16nm,1.2s						
J20K	Nowinta River	78.96	21	P	P	12 28 46.1	+1.1
RC01	Rabbit Creek A	79.01	25	P	P	12 28 45.4	+0.1
CAST	Castle Rocks	79.29	22	P	P	12 28 46.4	-0.5
MKAR	Makanchi Array	79.40	319	P	P	12 28 48.2	+0.4
	comp=Z,4.4nm,0.8s,baz=107,slow=6.7,SNR=16						
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	79.40	319	P	P	12 28 47.6	-0.2
PWL	Port Wells	79.49	25	P	P	12 28 48.4	+0.5
PWL				IAmb	IAmb	12 28 49.5	
	comp=Z,18nm,1.3s						
MAKZ	Makanchi	79.61	319	P	P	12 28 49.5	+0.6
MAKZ				IAmb	IAmb	12 28 50.2	
	comp=Z,9.7nm,1.0s						
GHO	Glory Hole Cre	79.69	24	P	P	12 28 50.3	+1.2
GHO				IAmb	IAmb	12 29 09.8	
	comp=Z,15nm,1.4s						
SML	Sawmill	79.95	25	P	P	12 28 51.2	+0.7
ZAA0	Zalesovo Array	80.27	326	P	P	12 28 52.3	0.0
ZALV	Zalesovo Beam	80.27	326	P	P	12 28 51.5	-0.8
	comp=Z,6.3nm,0.7s,baz=111,slow=5.5,SNR=31						
	comp=Z,6.3nm,0.7s						
ZALV	Zalesovo Beam	80.27	326	P	P	12 28 52.1	-0.1
ILAR	Eielson Array	81.95	22	P	P	12 28 59.5	-1.4
	comp=Z,1.6nm,0.8s,baz=254,slow=5.2,SNR=12						
	comp=Z,1.6nm,0.8s						
KSH	Kashi	81.99	311	P	P	12 29 04.5	+2.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	82.86	322	P	P	12 29 05.6	-0.3
KURK				IAmb	IAmb	12 29 07.9	
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	82.89	322	P	P	12 29 05.5	-0.6
	comp=Z,1.9nm,0.4s,baz=104,slow=4.0,SNR=13						
	comp=Z,1.9nm,0.4s						
M27K	Edge Creek, AK	82.92	25	P	P	12 29 06.2	0.0
NIL	Nilore	83.02	304	P	P	12 29 07.1	-0.1
NIL				IAmb	IAmb	12 29 08.4	
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	83.72	314	P	P	12 29 11.1	+0.4
	comp=Z,4.3nm,0.8s,baz=129,slow=4.5,SNR=8.1						
	comp=Z,4.3nm,0.8s						
AAK	Ala-Archa	83.72	314	P	P	12 29 11.9	+1.2
M30M	Minto, Yukon	85.20	26	P	P	12 29 17.7	+0.2
MAW	Mawson	85.77	203	P	P	12 29 20.5	+0.3
	comp=Z,2.2nm,0.6s,baz=127,slow=10,SNR=2.3						
	comp=Z,2.2nm,0.6s						
EPYK	Eagle Plains	86.46	22	P	P	12 29 24.5	+0.9
EPYK				IAmb	IAmb	12 29 24.8	
	comp=Z,20nm,1.2s						
KKAR	Karatay Array	86.69	313	P	P	12 29 25.3	+0.1
CHGR	Chuyangaron	87.06	309	P	P	12 29 28.2	+1.0
CHGR				IAmb	IAmb	12 29 28.3	
	comp=Z,9.5nm,0.9s						
WTLY	Watson Lake, Y	88.28	29	P	P	12 29 34.1	+1.7
WTLY				IAmb	IAmb	12 29 34.3	
	comp=Z,8.8nm,1.1s						
BVAR	Borovoye Array	88.33	323	P	P	12 29 32.6	-0.2
	comp=Z,2.0nm,0.6s,baz=123,slow=5.5,SNR=14						
	comp=Z,2.0nm,0.6s						
HUMO	Hull Mountain	89.19	47	P	P	12 29 38.0	+1.0
HUMO				IAmb	IAmb	12 29 39.3	
	comp=Z,11nm,0.9s						
YBH	Yreka Blue Hor	89.27	48	P	P	12 29 39.0	+1.5
YBH				IAmb	IAmb	12 29 39.4	
	comp=Z,7.4nm,1.1s						
AFDM	Forest Hills D	90.32	51	P	P	12 29 43.9	+1.5
CMB	Columbia Colle	90.70	52	P	P	12 29 45.3	+1.1
CMB				IAmb	IAmb	12 29 46.1	
	comp=Z,8.7nm,1.4s						
K05A	Summer Lake	90.71	47	P	P	12 29 45.0	+0.6
PINE	Pine Mountain	90.77	46	P	P	12 29 44.2	-0.5
PINE				IAmb	IAmb	12 29 46.2	
	comp=Z,7.5nm,0.8s						
BEKR	Beckworth	90.87	50	P	P	12 29 45.5	+0.3
MOD	Modoc Plateau	91.08	48	P	P	12 29 46.8	+0.7
VCNR	Virginia City	91.37	51	P	P	12 29 48.9	+1.4
YERR	Yerington	91.67	51	P	P	12 29 49.0	+0.1
YERR				IAmb	IAmb	12 29 50.3	
	comp=Z,6.4nm,1.2s						
LHV	Little Huntoon	92.19	52	P	P	12 29 52.4	+1.4
LHV				IAmb	IAmb	12 29 53.1	
	comp=Z,6.6nm,0.9s						
RYN	Ryan	92.20	52	P	P	12 29 52.5	+1.2
RYN				IAmb	IAmb	12 29 52.8	
	comp=Z,5.1nm,1.0s						
NVAR	Mina Array Bea	92.36	52	P	P	12 29 52.9	+0.8
	comp=Z,3.8nm,0.8s,baz=253,slow=5.8,SNR=30						
	comp=Z,3.8nm,0.8s						
NVAR	Mina Array Bea	92.36	52	P	P	12 29 52.6	+0.4
NV11	Mina Array Sit	92.48	52	P	P	12 29 52.7	+0.1
NV11				IAmb	IAmb	12 29 54.7	
	comp=Z,12nm,1.4s						
J08A	Circle Bar Ran	92.53	47	P	P	12 29 53.1	+0.4
J08A				IAmb	IAmb	12 29 53.9	
	comp=Z,5.1nm,0.8s						
KVN	Kaiserville	92.56	51	P	P	12 29 53.7	+0.7
KVN				IAmb	IAmb	12 29 54.4	
	comp=Z,6.0nm,1.3s						
E09A	Wood Farm, Sta	92.94	44	P	P	12 29 55.0	+0.6
E09A				IAmb	IAmb	12 29 56.0	
	comp=Z,4.7nm,0.9s						
QSM	Queen of Sheba	93.37	54	P	P	12 29 57.6	+1.0
QSM				IAmb	IAmb	12 29 58.0	
	comp=Z,6.4nm,0.8s						
WCT	Wildcat Mounta	93.61	54	P	P	12 29 58.7	+1.0
BRLDA	Berland Lookou	93.75	36	P	P	12 29 59.1	+1.1
TPNV	Topopah Spring	93.91	53	P	P	12 29 59.1	-0.2
PLID	Pearl Lake	94.38	45	P	P	12 30 00.9	-0.4
PLID				IAmb	IAmb	12 30 01.4	
	comp=Z,3.8nm,1.0s						
R11A	Troy Canyon, C	94.49	52	P	P	12 30 02.5	+0.7
R11A				IAmb	IAmb	12 30 04.1	
	comp=Z,4.9nm,1.2s						
PRN	Pahroc Range	94.89	53	P	P	12 30 05.0	+1.3
PRN				IAmb	IAmb	12 30 06.6	
	comp=Z,6.4nm,1.1s						
V12A	Nelson	95.00	55	P	P	12 30 05.5	+1.3
V12A				IAmb	IAmb	12 30 05.9	
	comp=Z,4.8nm,0.7s						
YKA	Yellowknife Ar	95.31	28	P	P	12 30 03.1	-1.7
	comp=Z,1.1nm,0.8s,baz=261,slow=5.0,SNR=4.3						
	comp=Z,1.1nm,0.8s						
EDM	Edmonton	96.16	37	P	P	12 30 10.7	+1.8
LCMT	Little Creek M	96.32	53	P	P	12 30 09.7	-0.5
LCMT				IAmb	IAmb	12 30 12.4	
	comp=Z,4.3nm,1.2s						
HVU	Hansel Valley	96.69	49	P	P	12 30 11.5	-0.3
HVU				IAmb	IAmb	12 30 13.3	
	comp=Z,4.8nm,1.1s						
TCRU	Three Creeks R	96.96	52	P	P	12 30 14.2	+1.0
PDAR	Pinedale Array	99.06	48	P	Pdif	12 30 21.7	-0.8
	comp=Z,1.7nm,0.7s,baz=243,slow=2.1,SNR=17						
	comp=Z,1.7nm,0.7s						
PDAR	Pinedale Array	99.06	48	P	Pdif	12 30 22.0	-0.5
GERES	GERESS Array B	123.18	328	PKP	PKiKP	12 35 37.6	+0.5
	comp=Z,0.3nm,0.4s,baz=45,slow=0.4,SNR=4.4						
SDV	Santo Domingo	137.40	82	PKP	PKPdf	12 36 05.5	+0.6
	comp=Z,12nm,0.9s,baz=312,slow=2.1,SNR=9.1						
SDV	Santo Domingo	137.40	82	PKPdf	PKPdf	12 36 05.1	+0.2
SIV	San Ignacio	141.58	122	PKhKP	PKPpre	12 36 06.3	
	comp=Z,0.9nm,0.5s,baz=282,slow=2.8,SNR=3.7						
SIV				PKP	PKPdf	12 36 11.3	-1.0
	comp=Z,0.9nm,0.6s,baz=208,slow=5.2,SNR=3.8						
BIM	Bigot	145.85	70	PKPdf	PKPdf	12 36 16.6	-3.1
TOSP	Speyside	147.02	76	PKPab	PKPab	12 36 25.2	-0.7
TOA0	Torodi Ar. Sit	149.39	289	PKPdf	PKPdf	12 36 24.5	-1.0
TOA0				PKPbc	PKPbc	12 36 29.6	-0.5
TOA0				PKPab	PKPab	12 36 34.4	-1.1
TORD	Torodi Ar. Bea	149.39	289	PKPbc	PKPbc	12 36 29.5	-0.7
	comp=Z,8.1nm,0.7s,baz=64,slow=2.6,SNR=57						
TORD	Torodi Ar. Bea	149.39	289	PKPbc	PKPbc	12 36 29.2	-1.0
TORD				PKPab	PKPab	12 36 35.4	-0.2
PMOZ	Porto Moniz, M	149.84	342	PKPdf	PKPdf	12 36 24.0	-1.9
BDFB	Brasilia	152.00	135	PKPbc	PKPbc	12 36 36.0	-0.4
	comp=Z,1.9nm,0.3s,baz=176,slow=14,SNR=4.5						
BDFB	Brasilia	152.00	135	PKPdf	PKPdf	12 36 28.7	-1.0
BDFB				PKPbc	PKPbc	12 36 36.2	-0.2
BDFB				PKPab	PKPab	12 36 47.1	+0.7
MACI	Morro de la Ar	153.75	337	PKPbc	PKPbc	12 36 39.5	-0.6
KIC	Kosan Boka	156.76	276	↑iPKP2	PKPab	12 37 06.8	0.0
	comp=Z,3.2nm,0.5s						
DBIC	Dimbokro	156.85	277	PKPdf	PKPdf	12 36 35.4	-0.9
DBIC				PKPab	PKPab	12 37 07.2	0.0
TIC	Toumodi	157.02	277	↓iPKP2	PKPab	12 37 07.8	-0.1
	comp=Z,1.4nm,0.2s						
LIC	Lamto	157.06	276	↑iPKP2	PKPab	12 37 08.0	-0.1
	comp=Z,3.9nm,0.4s						

*STR **28** 12:23:27.6±0.9, 47°.N±9°×°±1°, h0km, MLv1.4/5, Error ellipse: s-maj=0.0km s-min=0.0km az=62.5, preliminary*
ZUR 28 12:23:27.1, 46°.87N×8°.60E, h2km±2km, MLh1.1/8, 3C, Error ellipse: s-maj=4.7km s-min=1.2km az=260.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTS	Altdorf, Kanto	0.03	60	Pg	Pg	12 23 28.0	+0.2
MUO	Muotathal	0.10	13	↑Pg	Pg	12 23 29.6	+0.4
BNALP	Bannalp	0.12	271	↑Pg	Pg	12 23 29.9	+0.4
BNALP				Sg	Sg	12 23 32.1	+0.9
NALPS	Val Nalps	0.29	160	↑Pg	Pg	12 23 33.3	+0.6
FUSIO	Fusio	0.42	174	Pg	Pg	12 23 35.7	+0.6
SULZ	Cheisacher	0.74	333	Pg	Pb	12 23 42.4	-0.4
BALST	Balsthal	0.78	307	Pg	Pg	12 23 42.0	0.0
SLE	Schleitheim	0.90	355	Pg	Pg	12 23 44.9	+0.5
KIZ	Kirchzarten	1.18	337	Pg	Pb	12 23 50.4	+0.1
KIZ				Sg	Sb	12 24 06.0	-0.1

*SOME **28** 12:24:00.5, 41°.57N×78°.90E, h10km*
*NNC **28** 12:24:01.8±0.7, 41°.58N×78°.87E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=4.8km s-min=3.1km az=163.0*
*KRNET **28** 12:24:01.3±0.1, 41°.60N×78°.95E, h17km, mb3.5*
ISC 28 12:24:04.4±1.5, 41°.67N±0°.06×78°.82E±0°.04, h10km, n67, σ1§20/111, 15C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	1.42	348	eP	Pb	12 24 30.2	-0.9
	baz=45						
SATY				eS	Sg	12 24 50.9	+0.8
	baz=45						
SATY	Saty	1.42	348	eP	Pb	12 24 30.2	-0.9
	11nm,0.1s						
SATY				eS	Sg	12 24 50.9	+0.8
	106nm,0.2s						
SATY	Saty	1.42	348	P	Pb	12 24 30.2	-0.9
	11nm,0.1s						
SATY				S	Sg	12 24 50.9	+0.8
	106nm,0.2s						
UZB	Uzynbulak	1.48	6	eP	Pn	12 24 30.2	-1.1
	baz=2.0						
UZB				eS	Sb	12 24 51.3	+0.2
	baz=2.0						
UZB	Uzynbulak	1.48	6	eP	Pn	12 24 30.2	-1.1
	5.1nm,0.2s						
UZB				eS	Sb	12 24 51.3	+0.2
	61nm,0.3s						
UZB	Uzynbulak	1.48	6	P	Pn	12 24 30.2	-1.1
	5.1nm,0.2s						
UZB				S	Sb	12 24 51.3	+0.2
	61nm,0.3s						
ZHN	Zhinishke	1.52	349	eP	Pb	12 24 31.9	-0.9
	baz=46						
ZHN				eS	Sg	12 24 54.0	+0.6
	baz=46						
ZHN	Zhinishke	1.52	349	eP	Pb	12 24 31.9	-0.9
	15nm,0.2s						
ZHN				eS	Sg	12 24 54.1	+0.6
	386nm,0.2s						
ZHN	Zhinishke	1.52	349	P	Pb	12 24 31.9	-0.9
	15nm,0.2s						
ZHN				S	Sg	12 24 54.1	+0.6
	386nm,0.2s						
SHLS	Shalkode	1.56	18	eP	Pg	12 24 33.5	-0.8
	baz=24						
SHLS				eS	Sg	12 24 57.0	+2.5
	baz=24						
SHLS	Shalkode	1.56	18	eP	Pg	12 24 33.5	-0.8
	16nm,0.2s						
SHLS				eS	Sg	12 24 57.1	+2.5
	83nm,0.2s						
SHLS	Shalkode	1.56	18	P	Pg	12 24 33.5	-0.8
	16nm,0.2s						
SHLS				S	Sg	12 24 57.1	+2.5
	83nm,0.2s						
PDGK	Podgornoye	1.73	16	P	Pn	12 24 34.1	-0.5
	5.7nm,0.3s						
PDGK				S	Sb	12 24 58.3	+0.2
	20nm,0.5s						
PDGK	Podgornoye	1.73	16	↓Pn	Pn	12 24 34.0	-0.7
	5.8nm,0.3s						
PDGK				↑Sn	Sb	12 24 58.7	+0.6
	40nm,0.5s						
KPKS	Kokpek	1.80	357	eP	Pb	12 24 36.3	-1.2
	baz=54						
KPKS				eS	Sg	12 25 01.5	-0.7
	baz=54						
KPKS	Kokpek	1.80	357	eP	Pb	12 24 36.3	-1.2
	38nm,0.3s						
KPKS				eS	Sg	12 25 01.5	-0.7
	112nm,0.3s						
KPKS	Kokpek	1.80	357	P	Pb	12 24 36.3	-1.2
	38nm,0.3s						
KPKS				S	Sg	12 25 01.5	-0.7
	112nm,0.3s						
KURS	Kuram	1.88	345	eP	Pb	12 24 38.4	-0.4
	baz=43						
KURS				eS	Sg	12 25 05.0	+0.2
	baz=43						
KURS	Kuram	1.88	345	eP	Pb	12 24 38.4	-0.4
	2.9nm,0.2s						
KURS				eS	Sg	12 25 05.0	+0.2
	27nm,0.4s						
KURS	Kuram	1.88	345	Pg	Pb	12 24 38.4	-0.4
	2.9nm,0.2s						
KURS				Lg	Lg	12 25 05.0	
	27nm,0.4s						
TNSS	Tian-Shan	1.95	315	eP	Pb	12 24 39.6	-0.6
	baz=15						
TNSS				eS	Sg	12 25 07.3	+0.3
	baz=15						
TNSS	Tian-Shan	1.95	315	eP	Pb	12 24 39.6	-0.6
	27nm,0.2s						
TNSS				eS	Sg	12 25 07.3	+0.3
	36nm,0.2s						
TNSS	Tian-Shan	1.95	315	Pg	Pb	12 24 39.6	-0.6
	27nm,0.2s						
TNSS				Lg	Lg	12 25 07.3	
	36nm,0.2s						
MDOK	Medeo	1.99	319	eP	Pb	12 24 40.0	-0.7
	baz=19						
MDOK				eS	Sg	12 25 08.5	+0.3
	baz=19						
MDOK	Medeo	1.99	319	eP	Pb	12 24 40.0	-0.7
	8.8nm,0.2s						
MDOK				eS	Sg	12 25 08.6	+0.3
	44nm,0.6s						
MDOK	Medeo	1.99	319	↑Pn	Pb	12 24 38.7	-2.0
	10nm,0.6s						
MDOK				Pg	Pb	12 24 40.0	-0.7
	8.8nm,0.2s						
MDOK				↑Lg	Lg	12 25 08.2	
	43nm,0.5s						
MDOK				Lg	Lg	12 25 08.6	
	44nm,0.6s						
ULHL	Ulahol	2.01	287	↓iP	Pb	12 24 40.1	-1.0
	baz=89						
ULHL				↓iS	Sg	12 25 08.7	-0.2
	baz=89						
KOTS	Kotyrbulak	2.01	322	eP	Pb	12 24 40.7	-0.4
	baz=21						
KOTS				eS	Sg	12 25 09.6	+0.6
	baz=21						
KOTS	Kotyrbulak	2.01	322	eP	Pb	12 24 40.7	-0.4
	19nm,0.2s						
KOTS				eS	Sg	12 25 09.6	+0.6
	78nm,0.5s						
KOTS	Kotyrbulak	2.01	322	Pg	Pb	12 24 40.7	-0.4
	19nm,0.2s						
KOTS				Lg	Lg	12 25 09.6	
	78nm,0.5s						
KNDC	Almaty	2.07	319	↑Lg	Lg	12 25 10.2	
	95nm,0.5s						
AAA	Alma-Ata	2.09	318	eP	Pb	12 24 42.5	+0.1
	69nm,0.2s						
AAA				eS	Sg	12 25 12.4	+1.0
	133nm,0.2s						
AAA	Alma-Ata	2.09	318	Pg	Pb	12 24 42.5	+0.1
	69nm,0.2s						
AAA				Lg	Lg	12 25 12.4	
	133nm,0.2s						
NRN	Naryn	2.13	265	↑iP	Pb	12 24 42.8	-0.4
	baz=66						
NRN				↑iS	Sg	12 25 12.0	-0.8
	baz=66						
MTBS	Maitube	2.29	310	eP	Pb	12 24 45.4	-0.5
	13nm,0.4s						
MTBS				eS	Sg	12 25 17.5	-0.6
	61nm,0.4s						
MTBS	Maitube	2.29	310	Pg	Pb	12 24 45.4	-0.5
	13nm,0.4s						
MTBS				Lg	Lg	12 25 17.5	
	61nm,0.4s						
BOOM	Boomskoye usch	2.29	292	↑iP	Pb	12 24 43.9	-2.1
	baz=93						
BOOM				↑iS	Sb	12 25 15.7	+1.2
	baz=93						
BLB	Baldybastay	2.44	354	eP	Pb	12 24 47.3	-1.1
	39nm,0.2s						
BLB				eS	Sg	12 25 21.4	-1.3
	198nm,0.6s						
BLB	Baldybastay	2.44	354	Pg	Pb	12 24 47.3	-1.1
	39nm,0.2s						
BLB				Lg	Lg	12 25 21.4	
	198nm,0.6s						
KST	Kastek	2.52	304	eP	Pb	12 24 49.1	-0.7
	20nm,0.5s						
KST				eS	Sg	12 25 24.5	-0.9
	85nm,0.5s						
KST	Kastek	2.52	304	Pg	Pb	12 24 49.1	-0.7
	20nm,0.5s						
KST				Lg	Lg	12 25 24.5	
	85nm,0.5s						
CHKK	Chushkaly	2.57	329	eP	Pb	12 24 50.1	-0.4
	15nm,0.3s						
CHKK				eS	Sg	12 25 25.9	-0.8
	66nm,0.3s						
CHKK	Chushkaly	2.57	329	Pg	Pb	12 24 50.1	-0.4
	15nm,0.3s						
CHKK				Lg	Lg	12 25 25.9	
	66nm,0.3s						
KTBS	Karatobe	2.58	323	eP	Pb	12 24 50.2	-0.5
	10.0nm,0.3s						
KTBS				eS	Sg	12 25 26.1	-1.1
	96nm,0.3s						
KTBS	Karatobe	2.58	323	Pg	Pb	12 24 50.2	-0.5
	10.0nm,0.3s						
KTBS				Lg	Lg	12 25 26.1	
	96nm,0.3s						
ARXS	Arharly	2.64	344	eP	Pb	12 24 51.3	-0.6
	3.6nm,0.2s						
ARXS				eS	Sg	12 25 27.9	-1.4
	74nm,0.2s						
ARXS	Arharly	2.64	344	Pg	Pb	12 24 51.3	-0.6
	3.6nm,0.2s						
ARXS				Lg	Lg	12 25 27.9	
	74nm,0.2s						
TKM2	Tokmak 2	2.70	299	↑iP	Pn	12 24 49.3	+1.3
	baz=99						
TKM2				↑iS	Sb	12 25 24.8	-1.3
	baz=99						
TKM2	Tokmak 2	2.70	299	↑Pg	Pb	12 24 51.1	-1.7
	6.6nm,0.5s						
TKM2				↓Lg	Lg	12 25 29.3	
	14nm,0.4s						
KNOS	Konyrlen	2.70	5	eP	Pb	12 24 51.9	-1.0
	9.2nm,0.2s						
KNOS				eS	Sg	12 25 29.0	-2.1
	62nm,0.3s						
KNOS	Konyrlen	2.70	5	Pg	Pb	12 24 51.9	-1.0
	9.2nm,0.2s						
KNOS				Lg	Lg	12 25 29.0	
	62nm,0.3s						
DGS	Degeres	2.75	306	eP	Pb	12 24 53.2	-0.5
	9.1nm,0.4s						
DGS				eS	Sg	12 25 30.9	-1.7
	15nm,0.4s						
DGS	Degeres	2.75	306	Pg	Pb	12 24 53.2	-0.5
	9.1nm,0.4s						
DGS				Lg	Lg	12 25 30.9	
	15nm,0.4s						
DJR	Jarkent	2.75	15	eP	Pb	12 24 51.9	-1.9
	4.7nm,0.2s						
DJR				eS	Sb	12 25 29.3	+1.7
	104nm,0.6s						
DJR	Jarkent	2.75	15	Pg	Pb	12 24 51.9	-1.9
	4.7nm,0.2s						
DJR				Lg	Lg	12 25 29.3	
	104nm,0.6s						
KUU	Kurty	2.88	321	eP	Pb	12 24 55.0	-0.7
	3.8nm,0.2s						
KUU				eS	Sg	12 25 34.9	-1.8
	25nm,0.2s						
KUU	Kurty	2.88	321	Pg	Pb	12 24 55.1	-0.7
	3.8nm,0.2s						
KUU				Lg	Lg	12 25 34.9	
	25nm,0.2s						
KBK	Karagaybulak	3.04	290	↓eP	Pn	12 24 54.3	+1.6
	baz=91						
KBK				↓iS	Sb	12 25 33.8	-2.2
	baz=91						
KRBS	Karabastau	3.08	312	eP	Pb	12 24 59.2	0.0
	5.4nm,0.4s						
KRBS				eS	Sg	12 25 41.1	-2.1
	11nm,0.3s						
KRBS	Karabastau	3.08	312	Pg	Pb	12 24 59.2	0.0
	5.4nm,0.4s						
KRBS				Lg	Lg	12 25 41.1	
	11nm,0.3s						
CHMS	Chumysh	3.30	295	↑Pg	Pb	12 25 02.7	-0.2
	3.0nm,1.1s						
CHMS				↓Lg	Lg	12 25 49.1	
	5.8nm,0.7s						
AAK	Ala-Archa	3.36	288	↑iP	Pn	12 24 58.7	+1.7
	baz=89						
AAK				↑iS	Sb	12 25 41.5	-3.5
	baz=89						
SGDS	Sogindy	3.57	301	eP	Pb	12 25 06.2	-1.4
	2.3nm,0.3s						
SGDS				eS	Sb	12 25 53.5	+2.5
	36nm,0.4s						
SGDS	Sogindy	3.57	301	Pg	Pb	12 25 06.2	-1.4
	2.3nm,0.3s						
SGDS				Lg	Lg	12 25 53.6	
	36nm,0.4s						
EKS2	Erkin-Say	3

s-min=0.5km az=323.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**200**	P	Pg	12 24 29.6	+0.4
FEMA				S	Sg	12 24 30.8	0.0
FDMO	**Fiordimonte**	**0.05**	**21**	P	Pg	12 24 29.6	+0.3
FDMO				S	Sg	12 24 31.0	+0.2
T1216	**Preci, Frazion**	**0.11**	**198**	P	Pg	12 24 30.6	+0.6
T1216				S	Sg	12 24 32.5	+0.6
MMO1	**Montemonaco**	**0.21**	**116**	⇓P	Pb	12 24 32.5	-0.7
MMO1				S	Sg	12 24 36.1	+1.4
MMO1				END			
T1215	**Vallo di Nera,**	**0.24**	**217**	P	Pb	12 24 33.0	-0.6
T1215				S	Sg	12 24 36.6	+1.2
T1215				END			
T1241	**Roccafluvione,**	**0.30**	**117**	P	Pg	12 24 33.8	+0.5
T1241				S	Sb	12 24 38.7	-1.0
T1241				END			
PP3	**Marolino**	**0.55**	**46**	⇑P	Pg	12 24 35.4	-2.6
PP3				AML	AML		
	comp=E,1740μm,0.2s						
PP3				AML	AML		
	comp=N,2520μm,0.1s						

*IDC **28** 12:29:28.7±1.1, 22°.14S×68°.08W, h85km±20km, mb3.1/1, mbtmp3.7/4, Error ellipse: s-maj=38.5km s-min=13.9km az=113.0*
*GUC **28** 12:29:29.4±0.7, 22°.12S×68°.60W, h117km±4km, ML3.7*
ISC 28 12:29:29.0±1.0, 22°.09S±0°.04×68°.52W±0°.06, h122km±8km, n21, σ1s70/40, 10C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.63**	**215**	P	Pn	12 29 48.4	-0.2
	129nm,0.3s,baz=40,slow=7.9,SNR=668						
LVC				S	Sn	12 30 01.6	-1.6
	259nm,0.3s,baz=176,slow=21,SNR=26						
LVC	**Limon Verde**	**0.63**	**215**	*e*P	Pn	12 29 48.3	-0.3
LVC				*i* S	Sn	12 30 02.2	-1.1
PB09	**IPOC Station P**	**0.73**	**293**	⇑*i*P	Pn	12 29 49.4	+0.4
PB09				*i* S	Sn	12 30 04.1	0.0
AF01	**San Pedro de A**	**0.92**	**160**	*e*P	Pn	12 29 51.2	+0.5
AF01				*i* S	Sn	12 30 08.1	+0.8
PB03	**IPOC Station P**	**1.14**	**272**	⇑*i*P	Pn	12 29 52.7	-0.2
PB03				*i* S	Sn	12 30 10.2	-0.6
PB03				IAML		12 30 11.8	
	comp=E,2μm,0.2s						
PB06	**IPOC Station P**	**1.15**	**237**	⇑*i*P	Pn	12 29 52.8	-0.1
PB06				*i* S	Sn	12 30 10.4	-0.6
PB06				IAML		12 30 11.0	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**1.32**	**286**	⇑*i*P	Pn	12 29 54.8	+0.1
PB07				*i* S	Sn	12 30 13.4	-0.8
PB07				IAML		12 30 14.2	
	comp=N,2μm,0.4s						
PB01	**IPOC Station P**	**1.37**	**319**	*e*P	Pn	12 29 55.6	+0.4
PB01				*i* S	Sn	12 30 15.2	0.0
PB01				IAML		12 30 16.9	
	comp=E,836nm,0.2s						
PB15	**IPOC Station P**	**1.42**	**218**	*i* P	Pn	12 29 55.8	-0.1
PB15				*i* S	Sn	12 30 16.3	0.0
PB02	**IPOC Station P**	**1.49**	**301**	⇑*i*P	Pn	12 29 56.5	0.0
PB02				*i* S	Sn	12 30 17.1	-0.4
PB04	**IPOC Station P**	**1.53**	**260**	⇑*i*P	Pn	12 29 56.8	-0.3
PB04				*i* S	Sn	12 30 17.5	-0.9
PB04				IAML		12 30 20.2	
	comp=N,1μm,0.2s						
PATCX	**Punta Patache**	**1.97**	**309**	⇑*i*P	Pn	12 30 02.0	-0.3
PATCX				*i* S	Sn	12 30 28.6	+0.8
PATCX				IAML		12 30 35.0	
	comp=N,599nm,0.3s						
PB08	**IPOC Station P**	**2.02**	**343**	⇑*i*P	Pn	12 30 04.5	+1.2
PB08				*i* S	Sn	12 30 30.8	+1.4
PB08				IAML		12 30 33.9	
	comp=E,565nm,0.6s						
TA01	**Diego Aracena**	**2.16**	**314**	⇑*i*P	Pn	12 30 03.8	-0.8
TA01				*i* S	Sn	12 30 32.4	+0.5
PB10	**IPOC Station P**	**2.35**	**232**	*e*P	Pn	12 30 06.2	-0.8
PB10				*i* S	Sn	12 30 33.0	-3.1
GO01	**Chusmiza**	**2.49**	**345**	*e*P	Pn	12 30 10.2	+1.0
GO01				*i* S	Sn	12 30 41.9	+1.9
GO01				IAML		12 30 43.1	
	comp=E,636nm,0.3s						
PB11	**IPOC Station P**	**2.54**	**335**	⇑*i*P	Pn	12 30 09.4	-0.2
PB11				*i* S	Sn	12 30 40.2	-0.7
PB11				IAML		12 30 43.2	
	comp=E,678nm,0.2s						
LPAZ	**La Paz**	**5.78**	**4**	P	Pn	12 30 54.8	+1.7
	comp=E,2.2nm,0.3s,baz=193,slow=6.9,SNR=16						
LPAZ				S	Sn	12 31 59.3	+0.7
	comp=E,1.4nm,0.5s,baz=198,slow=11,SNR=1.4						
SIV	**San Ignacio**	**9.29**	**51**	P	Pn	12 31 36.7	-3.3
	comp=E,3.8nm,0.4s,baz=233,slow=12,SNR=17						
SIV				S	Sn	12 33 15.3	-7.6
	comp=E,0.8nm,0.4s,baz=302,slow=22,SNR=2.8						
PLCA	**Paso Flores**	**18.67**	**185**	P	Pn	12 33 41.0	+1.7
	comp=E,1.9nm,0.9s,baz=342,slow=15,SNR=2.2						
TORD	**Torodi Ar. Bea**	**77.21**	**70**	P	P	12 41 11.1	+1.0
	comp=E,0.2nm,0.4s,baz=258,slow=5.7,SNR=1.8						
	comp=E,0.2nm,0.4s						

*JMA **28** 12:30:32.9±0.0, 25°.N±2°.×122°.2E±0°.8, h38km, MV2.7/9, TAIWAN REGION*
*TAP **28** 12:30:32.4, 24°.69N×122°.10E, h9km, ML3.1, C*
ISC 28 12:30:32.0±0.9, 24°.68N±0°.02×122°.15E±0°.02, h10km±8km, n72, σ0s71/125, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.26**	**309**	P	Pg	12 30 37.4	+0.2
	baz=318						
EGS				S	Sg	12 30 40.5	-0.2
	baz=318						
TWC	**Suao**	**0.28**	**255**	*i* P	Pg	12 30 37.5	-0.2
	baz=252						
TWC				S	Sg	12 30 40.6	-0.9
	baz=252						
NTC	**Toucheng**	**0.34**	**300**	*e*P	Pg	12 30 39.2	+0.6
	baz=305						
NTC				*e*S	Sg	12 30 43.9	+0.7
	baz=305						
TWB1	**Santiao Chiao**	**0.35**	**335**	P	Pg	12 30 39.6	+0.6
	baz=343						
TWB1				*e*S	Sg	12 30 43.9	+0.1
	baz=343						
ILA	**Ilan**	**0.38**	**283**	*e*P	Pg	12 30 39.8	+0.4
	baz=277						
ILA				*e*S	Sg	12 30 44.8	+0.4
	baz=277						
TIPB	**Shuangxi**	**0.41**	**314**	P	Pg	12 30 40.6	+0.5
	baz=319						
TIPB				S	Sg	12 30 45.3	-0.2
	baz=319						
TWE	**Neicheng**	**0.44**	**275**	*i* P	Pg	12 30 40.5	-0.1
	baz=277						
TWE				*e*S	Sg	12 30 46.0	-0.5
	baz=277						
ENA	**Nanau**	**0.45**	**236**	P	Pg	12 30 40.6	-0.2
	baz=232						
ENA				*e*S	Sg	12 30 47.7	+0.9
	baz=232						
SXI1	**Grass Mountain**	**0.48**	**329**	*i* P	Pb	12 30 42.0	-0.6
	baz=339						
NWF	**Wu-fen Shan**	**0.51**	**319**	P	Pb	12 30 42.7	-0.3
	baz=315						
NWF				*e*S	Sb	12 30 49.7	-0.9
	baz=315						
FUSB	**Fushanzhiwuyua**	**0.52**	**278**	P	Pg	12 30 42.0	0.0
	baz=281						
FUSB				*e*S	Sb	12 30 49.8	-1.0
	baz=281						
EHP	**Heping Village**	**0.53**	**225**	*e*P	Pg	12 30 42.2	-0.1
	baz=230						
EHP				*e*S	Sg	12 30 48.7	-0.5
	baz=230						
ENTT	**Nioudou**	**0.53**	**265**	*e*P	Pg	12 30 41.1	-1.3
	baz=264						
NDT	**Datong Townshi**	**0.59**	**262**	*e*P	Pg	12 30 41.2	-2.1
	baz=272						
NDT				*e*S	Sg	12 30 50.0	-1.1
	baz=272						
LATG	**Datong**	**0.59**	**255**	*i* P	Pg	12 30 43.0	-0.4
	baz=264						
LATG				*e*S	Sg	12 30 51.5	+0.3
	baz=264						
TWA	**Mucha**	**0.59**	**300**	P	Pb	12 30 44.1	-0.3
	baz=294						
TWA				*e*S	Sg	12 30 51.6	+0.2
	baz=294						
NHDH	**Xindian Distri**	**0.63**	**296**	*e*P	Pb	12 30 45.0	0.0
	baz=299						
NHDH				*e*S	Sb	12 30 53.2	-0.8
	baz=299						
TAP	**Taipei**	**0.68**	**301**	*e*P	Pg	12 30 45.3	+0.1
	baz=297						
TAP				*e*S	Sg	12 30 54.5	+0.4
	baz=297						
YM01	**YM01**	**0.70**	**311**	*e*P	Pb	12 30 46.4	+0.2
	baz=305						
YM01				*e*S	Sb	12 30 55.3	-0.7
	baz=305						
YHNB	**Yeheng**	**0.70**	**269**	*e*P	Pg	12 30 45.2	-0.4
	baz=277						
YHNB				*e*S	Sb	12 30 55.7	-0.5
	baz=277						
ETL	**Fush Village**	**0.71**	**223**	P	Pg	12 30 45.6	-0.1
	baz=221						
ETL				*e*S	Sg	12 30 55.4	+0.3
	baz=221						
NACB	**Ninganchiao**	**0.72**	**225**	P	Pg	12 30 45.4	-0.4
	baz=223						
NACB				*e*S	Sg	12 30 54.0	-1.3
	baz=223						
NSK	**Sanguang**	**0.72**	**269**	*e*P	Pg	12 30 44.5	-1.4
	baz=271						
NSK				*e*S	Sg	12 30 53.9	-1.5
	baz=271						
NNSB	**Datong**	**0.74**	**250**	P	Pg	12 30 45.8	-0.5
	baz=239						
NNSB				*e*S	Sg	12 30 56.0	-0.1
	baz=239						
NNS	**Nan Shan**	**0.75**	**251**	P	Pg	12 30 44.8	-1.6
	baz=240						
NNS				*e*S	Sg	12 30 55.1	-1.1
	baz=240						
ANP	**Anpu**	**0.76**	**311**	*e*P	Pb	12 30 47.4	+0.1
	baz=314						
JYNG	**Yonagunijimaku**	**0.76**	**108**	*i* P	Pb	12 30 47.6	+0.4
JYNG				S	Sb	12 30 58.3	+0.7
TWY	**Chenhua**	**0.77**	**320**	*e*P	Pb	12 30 48.2	+0.7
	baz=323						
ETLH	**Xiulin Townshi**	**0.77**	**232**	*e*P	Pg	12 30 46.4	-0.5
	baz=231						
ETLH				*e*S	Sg	12 30 57.2	+0.2
	baz=231						
TWS1	**Kuangyinshan**	**0.78**	**302**	*e*P	Pb	12 30 48.4	+0.8
	baz=295						
TWS1				*e*S	Sb	12 30 58.4	0.0
	baz=295						
TWD	**Chiawan**	**0.79**	**220**	*e*P	Pg	12 30 47.1	0.0
	baz=228						
TWD				*e*S	Sg	12 30 57.2	-0.2
	baz=228						
NTST	**Danshui**	**0.80**	**307**	*e*P	Pn	12 30 48.8	-0.5
	baz=310						
NTST				*e*S	Sb	12 30 59.0	+0.4
	baz=310						
YOJ	**Yonaguni jima**	**0.81**	**106**	*e*P	Pg	12 30 48.3	+0.6
	baz=104						
YOJ				*i* S	Sb	12 31 00.8	+1.6
	baz=104						
YOJ	**Yonaguni jima**	**0.81**	**106**	P	Pb	12 30 48.5	+0.3
YOJ				S	Sb	12 30 59.7	+0.5
NCU	**National Centr**	**0.92**	**288**	*e*P	Pn	12 30 50.8	-0.1
	baz=291						
NCU				*e*S	Sn	12 31 04.8	+0.6
	baz=291						
NCUH	**Zhongli**	**0.92**	**288**	*e*P	Pb	12 30 50.3	+0.3
	baz=290						
NCUH				*e*S	Sn	12 31 04.5	+0.3
	baz=290						
FUSS	**Fushou**	**0.93**	**242**	*e*P	Pg	12 30 49.5	-0.5
	baz=243						
FUSS				*e*S	Sg	12 31 02.0	-0.1
	baz=243						
NFF	**Wufeng Townshi**	**0.94**	**267**	*e*P	Pg	12 30 49.2	-0.9
	baz=258						
NFF				*e*S	Sb	12 31 02.9	-0.1
	baz=258						
PCYT	**Pengchaiyu**	**0.94**	**356**	*e*P	Pg	12 30 50.3	+0.1
	baz=360						
WHF	**Hehuan Shan**	**0.97**	**237**	*e*P	Pg	12 30 50.3	-0.3
	baz=236						
WHF				*e*S	Sg	12 31 02.9	-0.5
	baz=236						
TDCB	**Techi**	**1.00**	**245**	P	Pg	12 30 51.1	-0.2
	baz=237						
TDCB				*e*S	Sg	12 31 03.7	-0.6
	baz=237						
LIOB	**Emei**	**1.03**	**268**	*e*P	Pn	12 30 53.1	+0.6
	baz=268						
NSTT	**Nanjuang**	**1.05**	**267**	*e*P	Pn	12 30 52.8	+0.1
	baz=257						
NSTT				*e*S	Sb	12 31 05.9	-0.1
	baz=257						
SBCB	**Hsinchu**	**1.06**	**276**	*e*P	Pn	12 30 53.8	+0.9
	baz=296						
SBCB				*e*S	Sn	12 31 09.3	+1.5
	baz=296						
HSN	**Hsinchu**	**1.08**	**276**	*e*P	Pb	12 30 53.0	+0.3
	baz=294						
CHGB	**Renai**	**1.09**	**235**	*e*P	Pg	12 30 52.6	-0.3
	baz=235						
CHGB				*e*S	Sg	12 31 07.0	0.0
	baz=235						
ESL	**Shilin**	**1.09**	**217**	*e*P	Pb	12 30 53.4	+0.5
	baz=225						
ESL				*e*S	Sb	12 31 07.4	+0.4
	baz=225						
OWD	**Renai**	**1.15**	**231**	P	Pb	12 30 53.6	-0.4
	baz=231						
OWD				*e*S	Sb	12 31 09.8	+0.8
	baz=231						
WUSB	**Renai**	**1.17**	**234**	P	Pb	12 30 53.9	-0.4
	baz=234						
WUSB				*e*S	Sg	12 31 09.7	+0.1
	baz=234						
WHP	**Taichung City**	**1.17**	**250**	*e*P	Pb	12 30 54.4	+0.1
	baz=251						
WHP				*e*S	Sg	12 31 09.5	-0.2
	baz=251						
EGFH	**Guangfu**	**1.21**	**213**	*e*P	Pb	12 30 54.5	-0.4
	baz=216						
NMLH	**Miaoli**	**1.25**	**264**	*e*P	Pg	12 30 57.0	+1.1
	baz=256						
NMLH				*e*S	Sn	12 31 12.4	+0.1
	baz=256						
WCS	**Beigang Elemen**	**1.29**	**241**	*e*P	Pn	12 30 55.9	-0.1
	baz=239						
NSY	**Sanyi**	**1.29**	**258**	*e*P	Pg	12 30 57.3	+0.5
	baz=247						
TWQ1	**Liyutan**	**1.30**	**255**	*e*P	Pg	12 30 57.4	+0.5
	baz=257						
TWQ1				*e*S	Sn	12 31 15.0	+1.5
	baz=257						
VWDT	**VWDT**	**1.31**	**225**	*e*P	Pb	12 30 57.0	+0.4
	baz=234						
VWDT				*e*S	Sg	12 31 14.7	+0.7
	baz=234						
HGSD	**Ruisui**	**1.36**	**209**	P	Pb	12 30 57.7	+0.2
	baz=208						
HGSD				*e*S	Sg	12 31 16.7	+0.9
	baz=208						
SMLT	**Sun Moon Lake**	**1.39**	**235**	*e*P	Pn	12 30 58.1	+0.5
	baz=232						
EHY	**Hungye**	**1.40**	**213**	*e*P	Pn	12 30 57.5	0.0
	baz=229						
EHY				*e*S	Sg	12 31 17.4	+0.5
	baz=229						
SSLB	**Suanglung**	**1.41**	**231**	*e*P	Pn	12 30 57.7	0.0
	baz=231						
SSLB				*e*S	Sn	12 31 16.4	+0.1
	baz=231						
TYC	**Yuchr**	**1.41**	**237**	*e*P	Pn	12 30 58.0	+0.3
	baz=234						
IRIF	**Iriomote-Funau**	**1.48**	**103**	P	Pn	12 30 57.9	-0.7
IRIF				S	Sn	12 31 16.4	-1.6
YULB	**Yu-li**	**1.50**	**211**	*e*P	Pn	12 30 58.6	-0.4
	baz=211						
YULB				*e*S	Sn	12 31 19.0	+0.3
	baz=211						
WHYT	**Xinyi Township**	**1.54**	**231**	*e*P	Pg	12 31 01.9	+0.3
	baz=227						
WJS	**Zhushan**	**1.56**	**237**	*e*P	Pg	12 31 03.3	+1.5
	baz=233						
HATJ	**Hateruma jima**	**1.63**	**112**	*e*S	Sn	12 31 20.8	-1.0
FULB	**Fuli**	**1.67**	**208**	*e*P	Pn	12 31 02.0	+0.7
	baz=221						
ALS	**Alishan**	**1.70**	**227**	*e*P	Pb	12 31 03.8	+0.4
	baz=206						
JKRS	**Kuro-shima**	**1.75**	**104**	P	Pn	12 31 02.2	-0.1
JKRS				S	Sn	12 31 23.4	-1.3
EHD	**Haiduan**	**1.76**	**210**	*e*P	Pn	12 31 01.4	-1.1
	baz=203						
JIJ	**Ishigaki jima**	**1.84**	**100**	P	Pn	12 31 03.2	-0.5
JIJ				S	Sn	12 31 24.7	-2.3
JISG	**Ishigakijimahi**	**1.97**	**92**	P	Pn	12 31 05.2	-0.2

IDC 28 12:30:31.1±2.3, 22°.23S×172°.92E, h37km±9km, mb3.6/4, mbtmp3.7/5, ML3.0/1, MS3.5/2, Error ellipse: s-maj=74.2km s-min=33.0km az=156.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.00**	**270**	Pn	Pn	12 31 59.2	+1.8
	0.4nm,0.3s,baz=126,slow=12,SNR=13						
DZM				Sn	Sn	12 33 08.2	+3.2
	0.8nm,0.3s,baz=191,slow=14,SNR=2.2						
	3.0nm,0.7s						
MSVF	**Nonsavu**	**6.58**	**48**	LR	LR	12 34 18.3	
	comp=Z,100nm,18.6s,baz=276,slow=35						
HNR	**Honiara**	**17.81**	**314**	LR	LR	12 40 49.3	
	comp=Z,539nm,18.2s,baz=140,slow=35						
STKA	**Stephens Creek**	**29.41**	**244**	P	P	12 36 30.8	-0.3
	1.3nm,0.9s,baz=100,slow=6.1,SNR=3.2						
STKA				pP	pP	12 36 41.5	+0.5
	1.1nm,0.7s,baz=0.9,slow=14,SNR=2.0						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**35.88**	**260**	P	P	12 37 27.5	-0.3
	1.7nm,0.8s,baz=84,slow=8.7,SNR=18						
ASAR				pP	pP	12 37 38.5	+0.5
	2.6nm,0.8s,baz=86,slow=7.7,SNR=14						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**36.01**	**266**	P	P	12 37 28.2	-0.7
	0.4nm,0.7s,baz=97,slow=8.2,SNR=9.2						
WRA				pP	pP	12 37 39.0	+0.4
	0.4nm,0.4s,baz=97,slow=8.2,SNR=5.2						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**92.10**	**16**	P	P	12 43 36.6	+0.8
	0.3nm,0.6s,baz=234,slow=5.3,SNR=4.2						
	0.3nm,0.6s						

*NEIC **28** 12:36:20.8±1.3, 51°.5N±0°.3×173°.5W±0°.1, h44km±34km, Error ellipse: s-maj=41.7km s-min=10.5km az=172.0*
AEIC 28 12:36:22±1.7, 51°.6N±0°.2×173°.5W±0°.1, h42km±9km, ML2.8, mb3.7/17(NEIC), **Error ellipse: s-maj=27.3km s-min=9.7km az=172.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.64**	**288**	Pn	Pn	12 36 50.4	+2.1
ADK	**Adak**	**1.98**	**279**	Pn	Pn	12 36 52.8	-0.2
KIWB	**Kanaga Island**	**2.26**	**277**	Pn	Pn	12 36 56.3	-0.6
KDAK	**Kodiak Island**	**13.55**	**55**	Pn	Pn	12 39 26.9	-4.6
CNPM	**China Poot**	**14.82**	**49**	Pn	Pn	12 39 47.5	-1.0
M20K	**Styx River**	**15.11**	**39**	Pn	Pn	12 39 51.6	-0.9
M20K				IAmb	IAmb	12 40 19.4	
	comp=Z,12nm,1.4s						
KLU	**Klutina**	**17.99**	**46**		P	12 40 28.9	+0.1
KLU				IAmb	IAmb	12 40 33.8	
	comp=Z,8.4nm,1.3s						
RAGM	**Ragged Mountai**	**18.22**	**50**	P	P	12 40 30.0	-1.4
N25K	**Chitina, Valde**	**18.63**	**46**	P	P	12 40 34.9	-0.9
CCB	**Clear Creek Bu**	**18.64**	**36**	P	P	12 40 34.7	-1.1
BERG	**Berg Lake**	**18.69**	**50**	P	P	12 40 34.7	-1.8
IL31		**19.04**	**36**	P	P	12 40 38.0	-2.2
IL31				IAmb	IAmb	12 40 39.6	
	comp=Z,7.5nm,1.5s						
ILAR	**Eielson Array**	**19.04**	**36**	P	P	12 40 40.2	0.0
H24K	**Noodor Dome**	**19.28**	**33**	P	P	12 40 41.5	-1.4
J25K	**Salcha River,**	**19.53**	**37**	P	P	12 40 45.8	+0.1
J25K				IAmb	IAmb	12 40 46.9	
	comp=Z,2.2nm,0.7s						
SCRK	**Sand Creek**	**19.78**	**40**	P	P	12 40 47.5	-1.0
TABL	**Table Mountain**	**19.94**	**51**	P	P	12 40 49.5	-0.8
J26L	**Joseph Creek**	**20.17**	**39**	P	P	12 40 52.2	-0.5
J26L				IAmb	IAmb	12 40 54.3	
	comp=Z,2.8nm,0.7s						
L27K	**Beaver Creek,**	**20.33**	**44**	P	P	12 40 53.8	-0.6
BCAR	**Beaver Creek A**	**20.35**	**44**	P	P	12 40 53.9	-0.7
K27K	**Chicken**	**20.58**	**41**	P	P	12 40 55.2	-1.7
K27K				IAmb	IAmb	12 41 21.4	
	comp=Z,6.2nm,1.4s						
I26K	**Coal Creek Min**	**20.69**	**37**	P	P	12 40 58.6	+0.5
I26K				IAmb	IAmb	12 40 58.6	
	comp=Z,2.2nm,0.8s						
EGAK	**Eagle**	**21.23**	**39**	P	P	12 41 04.6	+0.6
EGAK				IAmb	IAmb	12 41 05.9	
	comp=Z,3.8nm,0.8s						
DAWY	**Dawson**	**21.70**	**42**	P	P	12 41 08.2	-0.8
DAWY				IAmb	IAmb	12 41 13.0	
	comp=Z,5.7nm,1.4s						

*LDG **28** 12:40:18.3±0.1, 42°.68N×0°.60E, h17km, Md2.5/2, Ml2.3/6, Error ellipse: s-maj=1.9km s-min=1.3km az=15.0*
*STR **28** 12:40:19.7±0.5, 43°N±7°×±°, h5km, MLv1.7/10, Error ellipse: s-maj=0.0km s-min=0.0km az=177.7, preliminary*
*MRB **28** 12:40:19.0±0.2, 42°.69N×0°.65E, h17km±1km, ML1.4/21, Error ellipse: s-maj=1.1km s-min=0.9km az=287.0*
*MDD **28** 12:40:19.5±0.4, 42°.73N×0°.61E, h11km, mb_Lg1.9/6, Error ellipse: s-maj=3.1km s-min=1.8km az=9.0*
ISC 28 12:40:18.4±0.8, 42°.71N±0°.02×0°.64E±0°.01, h15km±6km, n45, σ0s78/81, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARA	**Val d'Aran**	**0.14**	**92**	P	Pb	12 40 23.0	+0.2
CARA				S	Sg	12 40 25.8	+1.0
	290nm,0.1s						
ECHI	**Chisagues Biel**	**0.33**	**262**	Pg	Pg	12 40 25.0	-0.3
ECHI				Sg	Sg	12 40 29.1	-0.9
ECHI	**Chisagues Biel**	**0.33**	**262**	Pg	Pg	12 40 24.9	-0.3
ECHI				Sg	Sg	12 40 29.0	-1.0
EPF	**Esparros**	**0.39**	**326**	*e*Pg	Pg	12 40 26.1	-0.2
EPF				*e*Sg	Sg	12 40 30.8	-0.8
	30nm,0.2s						
CTRE	**Tremp**	**0.40**	**165**	P	Pg	12 40 26.6	0.0
CTRE				S	Sg	12 40 32.2	+0.2
	4.2nm,0.2s						
MLS	**Moulis**	**0.42**	**54**	P	Pb	12 40 27.3	-0.3
MLS				S	Sb	12 40 33.4	-0.3
MLS	**Moulis**	**0.42**	**54**	Pg	Pb	12 40 27.7	+0.1
CEST	**Esterri de Car**	**0.47**	**103**	P	Pg	12 40 28.0	+0.1
CEST				S	Sb	12 40 34.5	-0.9
	19nm,0.1s						
VIEF	**Viey**	**0.48**	**291**	⇑Pg	Pg	12 40 27.8	-0.2
VIEF				Sg	Sg	12 40 33.5	-1.0
CSOR	**Sort**	**0.50**	**132**	P	Pg	12 40 28.3	-0.1
CSOR				S	Sg	12 40 35.2	+0.2
	10nm,0.2s						
CORG	**Organya**	**0.70**	**133**	P	Pg	12 40 31.7	-0.3
CORG				S	Sg	12 40 41.1	-0.2
	4.2nm,0.1s						
PAND	**Andorre**	**0.70**	**105**	P	Pg	12 40 31.8	-0.3
PAND				S	Sg	12 40 41.1	-0.2
	15nm,0.1s						
ARBS	**La Rabassa**	**0.72**	**111**	P	Pg	12 40 32.1	-0.5
ARBS				S	Sg	12 40 42.0	-0.2
	10nm,0.3s						
CAVN	**Les Avellanes**	**0.83**	**174**	P	Pg	12 40 33.9	-0.7
CAVN				S	Sg	12 40 45.2	-0.3
	15nm,0.2s						
CANF	**Canfranc**	**0.85**	**274**	Pg	Pg	12 40 34.6

ATE				S	Sg	12 40 52.5	0.0
	4.7nm,0.1s						
ATE	**Arette**	**1.05 291**		Pg	Pb	12 40 37.4	-1.0
ATE				Sg	Sg	12 40 51.5	-0.9
FNEB	**Nbias**	**1.10 79**		Pg	Pn	12 40 40.6	+1.2
FNEB				Sg	Sn	12 40 55.4	+1.1
CORI	**Orista**	**1.28 125**		P	Pn	12 40 41.5	-0.3
CORI				S	Sb	12 40 58.6	0.0
	9.3nm,0.2s						
MTLF	**Montolieu**	**1.32**	**61**	*e*Pg	Pg	12 40 44.2	+0.4
MTLF				*e*Sg	Sg	12 41 01.9	+0.9
	11nm,0.3s						
MTLF	**Montolieu**	**1.32**	**61**	Sg	Sg	12 41 02.2	+1.2
MTLF	**Montolieu**	**1.32**	**61**	Pg	Pg	12 40 44.5	+0.7
EPOB	**Poblet**	**1.40 166**		P	Pn	12 40 43.4	-0.1
EPOB				S	Sn	12 41 01.4	-0.3
	3.8nm,0.2s						
EPOB	**Poblet**	**1.40 166**		Pg	Pb	12 40 45.2	+0.8
EPOB				Sg	Sn	12 41 02.8	+1.0
EPOB				*i* Vmb_Lg		12 41 05.4	
SJPF	**Ste Jean**	**1.43 287**		*e*Pg	Pb	12 40 45.2	+0.5
SJPF				*e*Sg	Sn	12 41 02.6	+0.3
	2.9nm,0.2s						
FILF	**Fillols**	**1.43**	**95**	P	Pn	12 40 42.5	-1.4
FILF				S	Sn	12 40 59.9	-2.6
	3.4nm,0.2s						
FILF	**Fillols**	**1.43**	**95**	Pg	Pg	12 40 45.3	-0.6
FILF				Sn	Sg	12 41 04.1	-0.4
EORO	**Oroz-Betelu**	**1.44 278**		Pg	Pn	12 40 45.2	+1.0
EORO				Sg	Sg	12 41 06.0	+1.1
EORO				*i* Vmb_Lg		12 41 08.5	
CBEU	**Beuda**	**1.58 106**		P	Pn	12 40 45.9	-0.1
CBEU				S	Sn	12 41 05.9	-0.3
	6.6nm,0.2s						
CFON	**Fontmartina**	**1.64 125**		P	Pn	12 40 46.7	-0.2
CFON				S	Sn	12 41 07.5	-0.2
	19nm,0.2s						
EALK	**Alkurruntz**	**1.65 289**		Pg	Pn	12 40 48.5	+1.4
EALK				Sg	Sb	12 41 10.7	+1.4
EALK				*i* Vmb_Lg		12 41 14.9	
EALK	**Alkurruntz**	**1.65 289**		Sn	Sb	12 41 10.3	+1.0
EALK	**Alkurruntz**	**1.65 289**		Pn	Pb	12 40 49.1	+0.4
SJAF	**Saint Jean de**	**1.67**	**97**	P	Pn	12 40 47.3	+0.1
SJAF				S	Sn	12 41 08.6	+0.1
	3.4nm,0.3s						
SJAF	**Saint Jean de**	**1.67**	**97**	Pn	Pg	12 40 50.0	-0.6
SJAF				Sn	Sg	12 41 13.9	+1.6
CGAR	**Garraf**	**1.71 146**		S	Sn	12 41 08.8	-0.5
	2.5nm,0.4s						
ERTA	**Horta de San J**	**1.77 187**		P	Pn	12 40 48.3	-0.2
ERTA				S	Sn	12 41 10.2	-0.6
	3.2nm,0.3s						
ERTA	**Horta de San J**	**1.77 187**		Sg	Sb	12 41 14.5	+1.9
ERTA				*i* Vmb_Lg		12 41 17.1	
CCAS	**Cassa de la Se**	**1.88 115**		S	Sn	12 41 12.7	-0.7
	3.5nm,0.4s						
CPAL	**Palau Saverder**	**1.91 101**		S	Sn	12 41 13.8	-0.5
	1.9nm,0.3s						
CMAS	**Mas de Barbera**	**2.00 187**		P	Pn	12 40 51.4	-0.4
CMAS				S	Sn	12 41 15.8	-0.7
	3.7nm,0.2s						
CAF	**Calviac**	**2.44**	**25**	*e*Pg	Pg	12 41 04.5	-0.8
CAF				*e*Sg	Sg	12 41 36.0	-1.0
	0.8nm,0.1s						
LASF	**Ste Croix**	**2.71**	**59**	*e*Pg	Pg	12 41 10.1	-0.4
LASF				*e*Sg	Sg	12 41 45.6	-0.1
	0.5nm,0.2s						

*TAP **28** 13:13:16.8,24.°68N×122.°10E,h11km,ML2.8,C*
*JMA **28** 13:13:17.9±0.1,25.°N±3.°×12.°2E±.°,h37km,MV2.4/9,*
TAIWAN REGION
ISC 28 13:13:16.6±0.9,24.°66N±0.°02×122.°14E±0.°02,h16km±7km,
n85,σ0°54/154,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.27 314**		*i* P	Pg	13 13 22.4	0.0
	baz=318						
EGS				S	Sg	13 13 25.4	-0.9
	baz=318						
TWC	**Suao**	**0.27 260**		*i* P	Pg	13 13 22.4	0.0
	baz=252						
TWC				*e*S	Sb	13 13 26.9	-0.5
	baz=252						
NTC	**Toucheng**	**0.34 305**		*e*P	Pb	13 13 24.0	-0.3
	baz=305						
NTC				*e*S	Sg	13 13 28.8	+0.2
	baz=305						
ILA	**Ilan**	**0.37 287**		*e*P	Pg	13 13 24.4	+0.2
	baz=285						
ILA				*e*S	Sb	13 13 30.2	-0.2
	baz=285						
TWB1	**Santiao Chiao**	**0.38 338**		*i* P	Pg	13 13 24.4	+0.2
	baz=343						
TWB1				*e*S	Sg	13 13 29.7	+0.2
	baz=343						
NDS	**Dongshan**	**0.39 266**		*e*P	Pb	13 13 25.0	-0.1
	baz=263						
NDS				*e*S	Sg	13 13 30.1	+0.2
	baz=263						
EWUT	**Wuta**	**0.39 237**		*e*P	Pb	13 13 25.0	-0.2
	baz=231						
EWUT				*e*S	Sb	13 13 30.9	-0.1
	baz=231						
TIPB	**Shuangxi**	**0.42 317**		*i* P	Pb	13 13 25.5	-0.2
	baz=319						
TIPB				*i* S	Sg	13 13 30.6	-0.3
	baz=319						
ENA	**Nanau**	**0.43 238**		*e*P	Pb	13 13 25.7	-0.2
	baz=232						
ENA				*e*S	Sb	13 13 32.1	0.0
	baz=232						
TWE	**Neicheng**	**0.44 278**		*i* P	Pg	13 13 25.4	+0.1
	baz=276						
TWE				*e*S	Sb	13 13 32.3	0.0
	baz=276						
SXI1	**Grass Mountain**	**0.50 331**		*e*P	Pb	13 13 26.9	-0.1
	baz=333						
SXI1				*e*S	Sb	13 13 33.9	-0.3
	baz=333						
EHP	**Heping Village**	**0.50 227**		*e*P	Pb	13 13 27.0	-0.1
	baz=221						
EHP				*e*S	Sb	13 13 34.9	+0.7
	baz=221						
FUSB	**Fushanzhiwuyua**	**0.51 281**		P	Pb	13 13 27.0	-0.3
	baz=279						
FUSB				S	Sb	13 13 34.8	+0.2
	baz=279						
ENTT	**Nioudou**	**0.52 268**		*e*P	Pg	13 13 26.7	-0.3
	baz=265						
ENTT				*e*S	Sb	13 13 34.5	-0.3
	baz=265						
NWF	**Wu-fen Shan**	**0.53 322**		*e*P	Pb	13 13 27.4	-0.1
	baz=323						
NWF				S	Sb	13 13 34.9	-0.1
	baz=323						
WFSB	**Wu-fen Shan**	**0.53 322**		*e*S	Sb	13 13 34.7	-0.1
	baz=323						
LATG	**Datong**	**0.57 258**		P	Pb	13 13 28.1	-0.2
	baz=254						
LATG				S	Sb	13 13 36.3	-0.1
	baz=254						
NDT	**Datong Townshi**	**0.57 265**		*e*P	Pg	13 13 27.4	-0.5
	baz=262						
NDT				*e*S	Sg	13 13 35.6	0.0
	baz=262						
TWA	**Mucha**	**0.60 302**		*e*P	Pb	13 13 29.0	+0.3
	baz=302						
TWA				S	Sb	13 13 36.7	-0.3
	baz=302						
NHDH	**Xindian Distri**	**0.64 299**		*e*P	Pb	13 13 29.8	+0.4
	baz=298						
NHDH				S	Sb	13 13 37.8	-0.2
	baz=298						
ETL	**Fush Village**	**0.69 224**		*e*P	Pb	13 13 30.5	+0.3
	baz=220						
ETL				*e*S	Sb	13 13 40.5	+1.0
	baz=220						
TAP	**Taipei**	**0.69 303**		*e*S	Sb	13 13 39.8	+0.2
	baz=303						
NACB	**Ninganchiao**	**0.69 226**		*e*P	Pb	13 13 30.6	+0.3
	baz=222						
NACB				*e*S	Sb	13 13 39.9	+0.2
	baz=222						
YHNB	**Yeheng**	**0.70 271**		P	Pb	13 13 30.3	-0.1
	baz=269						
YHNB				*e*S	Sb	13 13 39.7	-0.2
	baz=269						
YM01	**YM01**	**0.71 313**		P	Pb	13 13 31.3	+0.6
	baz=314						
YM01				*e*S	Sg	13 13 39.8	-0.1
	baz=314						
NSK	**Sanguang**	**0.71 272**		*e*P	Pg	13 13 29.9	-0.6
	baz=269						
NSK				*e*S	Sb	13 13 40.3	0.0
	baz=269						
NNSB	**Datong**	**0.73 252**		P	Pg	13 13 30.6	-0.2
	baz=249						
NNSB				*e*S	Sb	13 13 41.1	+0.3
	baz=249						
NNS	**Nan Shan**	**0.73 253**		*e*P	Pg	13 13 30.0	-0.9
	baz=250						
NNS				*e*S	Sg	13 13 40.5	-0.1
	baz=250						
ETLH	**Xiulin Townshi**	**0.75 233**		*e*P	Pb	13 13 31.7	+0.3
	baz=230						
ETLH				*e*S	Sb	13 13 42.2	+0.8
	baz=230						
JYNG	**Yonagunijimaku**	**0.76 106**		P	Pn	13 13 32.5	-0.2
JYNG				S	Sn	13 13 43.1	-0.8
TWD	**Chiawan**	**0.76 221**		*e*P	Pg	13 13 31.8	+0.4
	baz=217						
TWD				S	Sn	13 13 42.6	-1.3
	baz=217						
ANP	**Anpu**	**0.77 313**		*e*P	Pg	13 13 31.7	0.0
	baz=314						
ANP				*e*S	Sb	13 13 42.1	+0.1
	baz=314						
TWY	**Chenhua**	**0.79 321**		*e*P	Pg	13 13 32.0	+0.1
	baz=322						
TWY				*e*S	Sg	13 13 42.9	+0.6
	baz=322						
TWS1	**Kuangyinshan**	**0.79 304**		*e*P	Pg	13 13 32.2	+0.2
	baz=304						
TWS1				*e*S	Sg	13 13 42.9	+0.4
	baz=304						
NTST	**Danshui**	**0.81 309**		*e*P	Pg	13 13 32.3	0.0
	baz=309						
NTST				*e*S	Sn	13 13 44.1	-0.9
	baz=309						
YOJ	**Yonaguni jima**	**0.81 104**		P	Pn	13 13 33.5	+0.1
	baz=104						
YOJ				S	Sn	13 13 45.5	+0.3
	baz=104						
YOJ	**Yonaguni jima**	**0.81 104**		P	Pn	13 13 33.4	-0.1
YOJ				S	Sn	13 13 44.5	-0.7
FUSS	**Fushou**	**0.92 244**		*e*P	Pn	13 13 34.9	-0.2
	baz=241						
FUSS				*e*S	Sn	13 13 47.0	-1.0
	baz=241						
NFF	**Wufeng Townshi**	**0.93 269**		*e*P	Pb	13 13 34.2	-0.2
	baz=267						
NFF				*e*S	Sn	13 13 48.0	-0.3
	baz=267						
WHF	**Hehuan Shan**	**0.95 238**		*e*P	Pn	13 13 35.5	-0.2
	baz=234						
WHF				*e*S	Sg	13 13 48.1	+0.5
	baz=234						
TDCB	**Techi**	**0.98 246**		*e*P	Pn	13 13 36.0	+0.1
	baz=243						
TDCB				*e*S	Sn	13 13 49.3	-0.3
	baz=243						
LIOB	**Emei**	**1.02 270**		*e*P	Pg	13 13 36.9	+0.5
	baz=268						
LIOB				*e*S	Sn	13 13 50.6	+0.2
	baz=268						
NSTT	**Nanjuang**	**1.04 269**		*e*P	Pg	13 13 36.7	+0.1
	baz=267						
NSTT				*e*S	Sn	13 13 50.8	+0.1
	baz=267						
SBCB	**Hsinchu**	**1.06 277**		*e*P	Pb	13 13 36.5	0.0
	baz=276						
SBCB				*e*S	Sn	13 13 51.6	+0.3
	baz=276						
ESL	**Shilin**	**1.06 218**		*e*P	Pn	13 13 36.7	-0.1
	baz=215						
ESL				*e*S	Sn	13 13 51.7	+0.4
	baz=215						
CHGB	**Renai**	**1.06 236**		*e*P	Pg	13 13 37.7	+0.5
	baz=234						
CHGB				*e*S	Sn	13 13 52.1	+0.4
	baz=234						
HSN	**Hsinchu**	**1.07 278**		*e*S	Sb	13 13 50.5	-0.1
	baz=278						
OWD	**Renai**	**1.13 232**		*e*P	Pg	13 13 38.3	-0.1
	baz=229						
OWD				*e*S	Sg	13 13 53.8	+0.7
	baz=229						
WUSB	**Renai**	**1.15 235**		P	Pg	13 13 39.4	+0.6
	baz=232						
WUSB				*e*S	Sg	13 13 54.3	+0.6
	baz=232						
WHP	**Taichung City**	**1.15 251**		*e*P	Pg	13 13 38.6	-0.3
	baz=249						
WHP				*e*S	Sg	13 13 54.1	+0.2
	baz=249						
EGFH	**Guangfu**	**1.18 214**		*e*P	Pg	13 13 39.3	0.0
	baz=211						
EGFH				*e*S	Sg	13 13 55.5	+0.7
	baz=211						
NMLH	**Miaoli**	**1.23 265**		*e*P	Pg	13 13 40.0	-0.4
	baz=263						
NMLH				*e*S	Sg	13 13 56.5	-0.1
	baz=263						
WCS	**Beigang Elemen**	**1.27 242**		*e*P	Pb	13 13 40.1	-0.1
	baz=240						
WCS				*e*S	Sg	13 13 57.7	0.0
	baz=240						
NSY	**Sanyi**	**1.28 259**		*e*P	Pb	13 13 40.4	0.0
	baz=257						
NSY				*e*S	Sg	13 13 57.5	-0.5
	baz=257						
VWDT	**VWDT**	**1.28 226**		*e*P	Pg	13 13 40.9	-0.4
	baz=223						
VWDT				*e*S	Sg	13 13 58.1	+0.1
	baz=223						
TWQ1	**Liyutan**	**1.28 256**		*e*P	Pb	13 13 40.5	+0.1
	baz=254						
TWQ1				*e*S	Sg	13 13 57.8	-0.3
	baz=254						
HGSD	**Ruisui**	**1.33 210**		*e*P	Pb	13 13 41.3	+0.1
	baz=207						
HGSD				*e*S	Sg	13 13 60.0	+0.3
	baz=207						
EHY	**Hungye**	**1.37 213**		*e*P	Pb	13 13 42.2	+0.3
	baz=211						
SMLT	**Sun Moon Lake**	**1.37 236**		*e*P	Pb	13 13 42.0	+0.1
	baz=233						
SMLT				*e*S	Sg	13 14 00.2	-0.7
	baz=233						
SSLB	**Suanglung**	**1.39 232**		*e*P	Pb	13 13 42.0	-0.2
	baz=229						
SSLB				*e*S	Sg	13 14 00.6	-0.8
	baz=229						
TYC	**Yuchr**	**1.39 238**		*e*P	Pb	13 13 42.3	+0.1
	baz=235						
TYC				*e*S	Sg	13 14 00.7	-0.9
	baz=235						
YULB	**Yu-li**	**1.48 212**		*e*P	Pb	13 13 43.3	-0.4
	baz=209						
YULB				*e*S	Sb	13 14 02.8	+0.5
	baz=209						
IRIF	**Iriomote-Funau**	**1.48 102**		P	Pn	13 13 42.9	+0.3
IRIF				*e*S	Sn	13 14 01.3	-0.4
EYUL	**Yuli**	**1.51 210**		*e*P	Pb	13 13 44.4	+0.2
	baz=208						
WHYT	**Xinyi Township**	**1.52 231**		*e*P	Pb	13 13 44.3	-0.1
	baz=229						
WHYT				*e*S	Sb	13 14 04.2	+0.8
	baz=229						
WJS	**Zhushan**	**1.54 237**		*e*P	Pb	13 13 44.5	-0.2
	baz=235						
WJS				*e*S	Sg	13 14 05.0	-1.1
	baz=235						
YUS	**Yu-Shan**	**1.59 223**		*e*P	Pb	13 13 45.5	-0.5
	baz=221						
HATJ	**Hateruma jima**	**1.63 111**		S	Sn	13 14 05.7	+0.3
FULB	**Fuli**	**1.65 208**		*e*S	Sb	13 14 06.9	-0.3
	baz=206						
ALS	**Alishan**	**1.67 227**		*e*P	Pn	13 13 46.1	+0.5
	baz=225						
ALS				*e*S	Sb	13 14 08.0	-0.2
	baz=225						
EHD	**Haiduan**	**1.73 210**		*e*S	Sb	13 14 09.4	-0.1
	baz=208						
JKRS	**Kuro-shima**	**1.75 103**		P	Pn	13 13 47.2	+0.8
JKRS				*e*S	Sn	13 14 08.4	0.0
WRL	**Guolierlin Hig**	**1.78 245**		*e*S	Sb	13 14 10.2	-0.7
	baz=243						
ELDTW	**Lidau**	**1.79 215**		*e*P	Pn	13 13 47.4	+0.4
	baz=213						
EDH	**Donghe**	**1.84 205**		*e*S	Sb	13 14 12.5	-0.4
	baz=203						
JIJ	**Ishigaki jima**	**1.85**	**99**	P	Pn	13 13 48.0	+0.3
JIJ				*e*S	Sn	13 14 10.1	-0.6
WCKO	**Fanlu**	**1.86 229**		*e*S	Sb	13 14 12.3	-0.9
	baz=227						
CHN4	**Tsaushan**	**1.92 228**		*e*P	Pb	13 13 50.3	-1.0
	baz=226						
CHN4				*e*S	Sb	13 14 14.0	-1.1
	baz=226						
TPUB	**Ta-pu**	**1.93 226**		*e*P	Pn	13 13 50.0	+1.2
	baz=224						
TPUB				*e*S	Sb	13 14 14.4	-1.1
	baz=224						
STYH	**Taoyuan**	**1.94 220**		*e*S	Sb	13 14 14.1	-1.4
	baz=219						
JISG	**Ishigakijimahi**	**1.98**	**92**	*e*P	Pn	13 13 49.9	+0.5
WTP	**Ta-pu**	**1.98 225**		*e*P	Pn	13 13 50.6	+1.0
	baz=223						
WTP				*e*S	Sb	13 14 15.3	-1.5
	baz=223						
TWK	**Hsinying**	**2.05 228**		*e*P	Pn	13 13 51.5	+1.0
	baz=226						
TWK				*e*S	Sn	13 14 16.9	+1.1
	baz=226						
CHN1	**Nanshi**	**2.08 226**		*e*P	Pn	13 13 52.0	+1.1
	baz=224						
CHN1				*e*S	Sb	13 14 18.0	-1.6
	baz=224						
SGST	**Jiashian**	**2.12 223**		*e*S	Sn	13 14 18.8	+1.3
	baz=221						

IDC 28 13:15:21.6±999.0,56.°99N×35.°59E,h0km,Error ellipse:
s-maj=860.1km s-min=22.2km az=106.0,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON 0.93 106**			I		13 20 30.0	
	0.4nm,0.6s,baz=288,slow=306,SNR=0.4						
I31KZ	**AKTYUBINSK INF 14.79 107**			I		14 44 33.5	
	baz=304,slow=326,SNR=8.6						
I46RU	**ZALESOVO INFRA27.58 75**			I		16 05 30.0	
	baz=298,slow=330,SNR=2.2						

*JMA **28** 13:17:03.3±0.2,25.°N±2.°×121.°9E±1.°0,h112km±1km,*
MV2.8/13,TAIWAN REGION
*TAP **28** 13:17:03.1,24.°88N×121.°93E,h113km,ML3.7,C*
ISC 28 13:17:03.4±1.4,24.°89N±0.°04×121.°91E±0.°03,h114km±6km,
n112,σ0°78/184,2C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.05 152**		P	Pn	13 17 18.9	-0.1
	baz=154						
EGS				*e*S	Sn	13 17 30.6	0.0
	baz=154						
TIPB	**Shuangxi**	**0.11 318**		P	Pn	13 17 18.8	-0.3
	baz=303						
TWB1	**Santiao Chiao**	**0.14**	**33**	P	Pn	13 17 18.8	-0.3
	baz=22						
TWB1				*e*S	Sn	13 17 30.3	-0.6
	baz=22						
ILA	**Ilan**	**0.19 228**		*e*P	Pn	13 17 20.2	+1.0
	baz=242						
ILA				*e*S	Sn	13 17 33.1	+2.1
	baz=242						
SXI1	**Grass Mountain**	**0.20 353**		*e*P	Pn	13 17 18.6	-0.7
	baz=340						
NWF	**Wu-fen Shan**	**0.21 328**		P	Pn	13 17 19.1	-0.3
	baz=322						
NWF				*e*S	Sn	13 17 30.8	-0.6
	baz=322						
TWE	**Neicheng**	**0.28 232**		*i* P	Pn	13 17 19.7	+0.2
	baz=240						
TWE				S	Sn	13 17 31.6	+0.1
	baz=240						
TWC	**Suao**	**0.29 190**		P	Pn	13 17 19.5	0.0
	baz=201						
TWC				S	Sn	13 17 31.1	-0.5
	baz=201						
TWA	**Mucha**	**0.30 287**		*i* P	Pn	13 17 19.9	+0.3
	baz=288						
TWA				S	Sn	13 17 32.3	+0.5
	baz=288						
FUSB	**Fushanzhiwuyua**	**0.32 245**		*i* P	Pn	13 17 19.8	+0.1
	baz=263						
FUSB				*e*S	Sn	13 17 32.1	+0.1
	baz=263						
NHDH	**Xindian Distri**	**0.35 282**		P	Pn	13 17 20.0	+0.2
	baz=283						
NHDH				*e*S	Sn	13 17 32.3	+0.2
	baz=283						
TAP	**Taipei**	**0.39 292**		*e*P	Pn	13 17 20.2	+0.2
	baz=292						
TAP				*e*S	Sn	13 17 33.1	+0.6
	baz=292						
YM01	**YM01**	**0.40 310**		P	Pn	13 17 19.9	-0.2
	baz=315						
YM01				*e*S	Sn	13 17 32.2	-0.5
	baz=315						
ENTT	**Nioudou**	**0.40 231**		P	Pn	13 17 19.4	-0.7
	baz=246						
ENTT				*e*S	Sn	13 17 32.3	-0.2
	baz=246						
ANP	**Anpu**	**0.46 310**		*e*P	Pn	13 17 20.2	-0.3
	baz=316						
NDT	**Datong Townshi**	**0.46 231**		*e*P	Pn	13 17 18.5	-1.9
	baz=246						
NDT				*e*S	Sn	13 17 31.4	-1.8
	baz=246						
TWY	**Chenhua**	**0.47 324**		*e*P	Pn	13 17 20.4	0.0
	baz=325						
TWY				*e*S	Sn	13 17 34.3	+1.0
	baz=325						
ENA	**Nanau**	**0.49 198**		P	Pn	13 17 21.1	+0.5
	baz=194						
ENA				*e*S	Sn	13 17 35.5	+2.0
	baz=194						
TWS1	**Kuangyinshan**	**0.49 295**		P	Pn	13 17 20.9	+0.3
	baz=285						
TWS1				*e*S	Sn	13 17 33.9	+0.4
	baz=285						
NTST	**Danshui**	**0.49 303**		*e*P	Pn	13 17 21.1	+0.5
	baz=302						
NTST				*e*S	Sn	13 17 34.1	+0.6
	baz=302						
LATG	**Datong**	**0.49 224**		P	Pn	13 17 20.9	+0.1
	baz=239						
LATG				*e*S	Sn	13 17 32.9	-0.9
	baz=239						
YHNB	**Yeheng**	**0.53 245**	⇑	*i* P	Pn	13 17 20.9	-0.1
	baz=242						
YHNB				S	Sn	13 17 33.1	-1.0
	baz=242						
NSK	**Sanguang**	**0.54 247**	⇑	*i* P	Pn	13 17 19.8	-1.2
	baz=242						
NSK				S	Sn	13 17 32.6	-1.6
	baz=242						
EHP	**Heping Village**	**0.60 194**		*e*P	Pn	13 17 21.6	+0.2
	baz=187						
NCU	**National Centr**	**0.66 277**		P	Pn	13 17 22.0	+0.2
	baz=269						
NCU				S	Sn	13 17 36.0	+0.4
	baz=269						
NCUH	**Zhongli**	**0.66 277**		P	Pn	13 17 22.1	+0.3
	baz=269						
NCUH				S	Sn	13 17 36.2	+0.6
	baz=269						
NNS	**Nan Shan**	**0.66 227**		P	Pn	13 17 21.2	-0.8
	baz=232						
NNS				*e*S	Sn	13 17 36.2	+0.3
	baz=232						
NNSB	**Datong**	**0.66 226**		P	Pn	13 17 22.3	+0.3
	baz=231						
NNSB				*e*S	Sn	13 17 35.6	-0.3
	baz=231						
PCYT	**Pengchaiyu**	**0.75**	**12**	*e*P	Pn	13 17 22.7	+0.1

	baz=3.0						
NFF	**Wufeng Townshi**	**0.76 250**	P		**Pn**	**13 17 21.7**	**-1.0**
	baz=252						
NFF			*e*S		**Sn**	**13 17 36.0**	**-1.2**
	baz=252						
NACB	**Ninganchiao**	**0.77 202**	P		**Pn**	**13 17 22.1**	**-0.7**
	baz=211						
ETL	**Fush Village**	**0.77 199**	P		**Pn**	**13 17 22.3**	**-0.5**
	baz=209						
ETLH	**Xiulin Townshi**	**0.78 210**	P		**Pn**	**13 17 22.9**	**-0.1**
	baz=213						
ETLH			*e*S		**Sn**	**13 17 37.3**	**-0.3**
	baz=213						
SBCB	**Hsinchu**	**0.84 263**	P		**Pn**	**13 17 23.5**	**+0.1**
	baz=264						
SBCB			*e*S		**Sn**	**13 17 38.8**	**+0.5**
	baz=264						
LIOB	**Emei**	**0.84 253**	P		**Pn**	**13 17 23.7**	**+0.3**
	baz=249						
LIOB			S		**Sn**	**13 17 38.8**	**+0.3**
	baz=249						
TWD	**Chiawan**	**0.86 199**	P		**Pn**	**13 17 22.9**	**-0.6**
	baz=211						
TWD			*e*S		**Sn**	**13 17 38.0**	**-0.6**
	baz=211						
NSTT	**Nanjuang**	**0.86 253**	P		**Pn**	**13 17 23.7**	**+0.1**
	baz=248						
NSTT			*e*S		**Sn**	**13 17 38.2**	**-0.5**
	baz=248						
FUSS	**Fushou**	**0.88 223**	P		**Pn**	**13 17 24.7**	**+0.7**
	baz=227						
FUSS			*e*S		**Sn**	**13 17 40.1**	**+0.6**
	baz=227						
TDCB	**Techi**	**0.93 227**	P		**Pn**	**13 17 25.0**	**+0.6**
	baz=230						
TDCB			*e*S		**Sn**	**13 17 40.5**	**+0.3**
	baz=230						
WHF	**Hehuan Shan**	**0.94 218**	P		**Pn**	**13 17 25.3**	**+0.5**
	baz=217						
WHF			*e*S		**Sn**	**13 17 41.7**	**+0.8**
	baz=217						
HWA	**Hwalien**	**0.95 197**	*e*P		**Pn**	**13 17 24.0**	**-0.4**
	baz=210						
HWA			*e*S		**Sn**	**13 17 41.6**	**+1.4**
	baz=210						
JYNG	**Yonagunijimaku**	**1.04 115**	P		**Pn**	**13 17 25.3**	**0.0**
JYNG			S		**Sn**	**13 17 41.8**	**0.0**
CHGB	**Renai**	**1.06 219**	P		**Pn**	**13 17 26.7**	**+0.9**
	baz=228						
CHGB			*e*S		**Sn**	**13 17 43.4**	**+0.8**
	baz=228						
WHP	**Taichung City**	**1.07 235**	P		**Pn**	**13 17 26.1**	**+0.4**
	baz=237						
WHP			*e*S		**Sn**	**13 17 42.3**	**-0.2**
	baz=237						
NMLH	**Miaoli**	**1.07 251**	*e*P		**Pn**	**13 17 26.1**	**+0.5**
	baz=252						
NMLH			*e*S		**Sn**	**13 17 41.9**	**-0.6**
	baz=252						
YOJ	**Yonaguni jima**	**1.09 113**	P		**Pn**	**13 17 25.6**	**-0.3**
	baz=119						
YOJ			*e*S		**Sn**	**13 17 42.3**	**-0.5**
	baz=119						
YOJ	**Yonaguni jima**	**1.09 113**	P		**Pn**	**13 17 25.8**	**0.0**
YOJ			S		**Sn**	**13 17 42.7**	**-0.1**
NSY	**Sanyi**	**1.14 246**	*e*P		**Pn**	**13 17 26.8**	**+0.4**
	baz=247						
NSY			*e*S		**Sn**	**13 17 44.7**	**+0.9**
	baz=247						
OWD	**Renai**	**1.15 216**	*e*P		**Pn**	**13 17 27.4**	**+0.8**
	baz=218						
OWD			*e*S		**Sn**	**13 17 44.4**	**+0.3**
	baz=218						
WUSB	**Renai**	**1.15 219**	P		**Pn**	**13 17 27.5**	**+0.9**
	baz=227						
WUSB			*e*S		**Sn**	**13 17 44.8**	**+0.6**
	baz=227						
ESL	**Shilin**	**1.16 202**	P		**Pn**	**13 17 25.7**	**-0.8**
	baz=203						
ESL			*e*S		**Sn**	**13 17 42.7**	**-1.3**
	baz=203						
TWQ1	**Liyutan**	**1.16 242**	P		**Pn**	**13 17 26.7**	**+0.1**
	baz=237						
TWQ1			*e*S		**Sn**	**13 17 44.1**	**0.0**
	baz=237						
WCS	**Beigang Elemen**	**1.23 228**	P		**Pn**	**13 17 26.8**	**-0.5**
	baz=235						
WCS			*e*S		**Sn**	**13 17 44.7**	**-0.7**
	baz=235						
WDJ	**Dajia District**	**1.27 245**	*e*P		**Pn**	**13 17 28.2**	**+0.4**
	baz=246						
WDJ			*e*S		**Sn**	**13 17 46.3**	**+0.1**
	baz=246						
EGFH	**Guangfu**	**1.29 200**	*e*P		**Pn**	**13 17 27.3**	**-0.8**
	baz=206						
EGFH			*e*S		**Sn**	**13 17 45.9**	**-0.9**
	baz=206						
VWDT	**VWDT**	**1.33 212**	P		**Pn**	**13 17 29.2**	**+0.8**
	baz=213						
VWDT			*e*S		**Sn**	**13 17 48.2**	**+0.8**
	baz=213						
TCU	**Taichung**	**1.34 237**	*e*P		**Pn**	**13 17 29.0**	**+0.4**
	baz=238						
TCU			*e*S		**Sn**	**13 17 48.1**	**+0.4**
	baz=238						
SMLT	**Sun Moon Lake**	**1.36 223**	P		**Pn**	**13 17 29.5**	**+0.6**
	baz=231						
SMLT			*e*S		**Sn**	**13 17 49.4**	**+1.2**
	baz=231						
TYC	**Yuchr**	**1.37 224**	P		**Pn**	**13 17 29.3**	**+0.4**
	baz=234						
TYC			*e*S		**Sn**	**13 17 48.9**	**+0.6**
	baz=234						
SSLB	**Suanglung**	**1.40 218**	P		**Pn**	**13 17 29.9**	**+0.6**
	baz=230						
SSLB			S		**Sn**	**13 17 49.7**	**+0.7**
	baz=230						
HGSD	**Ruisui**	**1.46 198**	P		**Pn**	**13 17 30.3**	**+0.3**
	baz=202						
HGSD			*e*S		**Sn**	**13 17 51.3**	**+1.2**
	baz=202						
WCHH	**Zhanghua**	**1.47 237**	*e*P		**Pn**	**13 17 30.2**	**+0.1**
	baz=237						
EHY	**Hungye**	**1.48 201**	*e*P		**Pn**	**13 17 29.1**	**-1.1**
	baz=199						
EHY			*e*S		**Sn**	**13 17 48.4**	**-2.1**
	baz=199						
WNT	**Mingjian**	**1.50 228**	*e*P		**Pn**	**13 17 30.8**	**+0.3**
	baz=230						
WNT			*e*S		**Sn**	**13 17 51.8**	**+0.8**
	baz=230						
WJS	**Zhushan**	**1.51 225**	*e*P		**Pn**	**13 17 30.9**	**+0.4**
	baz=235						
WJS			*e*S		**Sn**	**13 17 52.0**	**+0.8**
	baz=235						
WHYT	**Xinyi Township**	**1.53 219**	P		**Pn**	**13 17 31.7**	**+0.8**
	baz=228						
WHYT			*e*S		**Sn**	**13 17 52.8**	**+1.2**
	baz=228						
YULB	**Yu-li**	**1.59 201**	*e*P		**Pn**	**13 17 30.4**	**-1.2**
	baz=198						
EYUL	**Yuli**	**1.63 199**	*e*P		**Pn**	**13 17 32.0**	**+0.1**
	baz=205						
YUS	**Yu-Shan**	**1.65 212**	*e*P		**Pn**	**13 17 33.8**	**+1.2**
	baz=217						
YUS			*e*S		**Sn**	**13 17 56.6**	**+1.8**
	baz=217						
ALS	**Alishan**	**1.70 216**	*e*P		**Pn**	**13 17 33.9**	**+0.7**
	baz=220						
ALS			*e*S		**Sn**	**13 17 56.8**	**+1.0**
	baz=220						
WRL	**Guolierlin Hig**	**1.71 235**	*e*P		**Pn**	**13 17 31.9**	**-1.0**
	baz=236						
WRL			*e*S		**Sn**	**13 17 53.3**	**-2.1**
	baz=236						
WDLH	**Douliu**	**1.73 226**	*e*P		**Pn**	**13 17 33.6**	**+0.4**
	baz=235						
WDLH			*e*S		**Sn**	**13 17 56.1**	**+0.2**
	baz=235						
IRIF	**Iriomote-Funau**	**1.75 108**	P		**Pn**	**13 17 33.0**	**-0.4**
IRIF			S		**Sn**	**13 17 55.4**	**-0.9**
FULB	**Fuli**	**1.78 198**	*e*P		**Pn**	**13 17 33.8**	**0.0**
	baz=210						
FULB			*e*S		**Sn**	**13 17 57.8**	**+0.8**
	baz=210						
EHD	**Haiduan**	**1.85 200**	*e*P		**Pn**	**13 17 32.8**	**-1.9**
	baz=195						
WCKO	**Fanlu**	**1.87 220**	*e*P		**Pn**	**13 17 34.5**	**-0.4**
	baz=220						
ELDTW	**Lidau**	**1.88 206**	*e*P		**Pn**	**13 17 35.2**	**0.0**
	baz=203						
ELDTW			*e*S		**Sn**	**13 17 59.6**	**+0.2**
	baz=203						
HATJ	**Hateruma jima**	**1.92 115**	P		**Pn**	**13 17 35.9**	**+0.3**
HATJ			*e*S		**Sn**	**13 18 00.2**	**+0.1**
CHY	**Chiayi**	**1.94 225**	*e*P		**Pn**	**13 17 35.2**	**-0.6**
	baz=233						
CHN4	**Tsaushan**	**1.95 218**	*e*P		**Pn**	**13 17 35.5**	**-0.4**
	baz=219						
TPUB	**Ta-pu**	**1.97 217**	*e*P		**Pn**	**13 17 36.2**	**0.0**
	baz=217						
EDH	**Donghe**	**1.99 196**	*e*P		**Pn**	**13 17 35.7**	**-0.7**
	baz=198						
STYH	**Taoyuan**	**2.00 211**	*e*P		**Pn**	**13 17 36.2**	**-0.4**
	baz=213						
WTP	**Ta-pu**	**2.02 216**	*e*P		**Pn**	**13 17 37.1**	**+0.2**
	baz=217						
JKRS	**Kuro-shima**	**2.02 108**	P		**Pn**	**13 17 37.0**	**+0.2**
JKRS			S		**Sn**	**13 18 02.6**	**+0.2**
WSL	**Shuilin Townsh**	**2.05 229**	*e*P		**Pn**	**13 17 35.9**	**-1.2**
	baz=229						
TWK	**Hsinying**	**2.07 219**	*e*P		**Pn**	**13 17 37.8**	**+0.3**
	baz=219						
JIJ	**Ishigaki jima**	**2.10 104**	P		**Pn**	**13 17 37.5**	**-0.3**
JIJ			S		**Sn**	**13 18 03.5**	**-0.7**
SNST	**Tainan City**	**2.10 218**	*e*P		**Pn**	**13 17 40.6**	**+2.7**
	baz=218						
CHN1	**Nanshi**	**2.12 217**	*e*P		**Pn**	**13 17 38.4**	**+0.3**
	baz=217						
ICHU	**Yijhu**	**2.13 225**	*e*P		**Pn**	**13 17 38.2**	**0.0**
	baz=233						
MATB	**Ma-tsu**	**2.17 306**	*e*P		**Pn**	**13 17 38.0**	**-0.6**
	baz=304						
SGST	**Jiashian**	**2.17 214**	*e*P		**Pn**	**13 17 38.4**	**-0.3**
	baz=222						
TWG	**Pinlang**	**2.20 200**	*e*P		**Pn**	**13 17 38.1**	**-1.0**
	baz=196						
TWGBT	**Beinan**	**2.20 200**	*e*P		**Pn**	**13 17 37.7**	**-1.4**
	baz=196						
JISG	**Ishigakijimahi**	**2.21 97**	P		**Pn**	**13 17 39.1**	**0.0**
JISG			S		**Sn**	**13 18 06.2**	**-0.4**
VWUC	**VWUC**	**2.23 273**	*e*P		**Pn**	**13 17 38.4**	**-1.0**
	baz=273						
LDUT	**Ludao**	**2.25 190**	*e*P		**Pn**	**13 17 38.3**	**-1.4**
	baz=187						
SCST	**Cishan**	**2.38 213**	*e*P		**Pn**	**13 17 42.3**	**+0.9**
	baz=214						
TSCK	**Chigu Township**	**2.41 224**	*e*P		**Pn**	**13 17 40.3**	**-1.4**
	baz=231						
SSD	**Sandimen**	**2.43 209**	*e*P		**Pn**	**13 17 42.6**	**+0.5**
	baz=210						
ECL	**Taimali**	**2.44 201**	*e*P		**Pn**	**13 17 42.6**	**+0.3**
	baz=197						
TSMG	**Majia**	**2.46 208**	*e*P		**Pn**	**13 17 43.1**	**+0.6**
	baz=218						
PNG	**Penghu**	**2.52 239**	*e*P		**Pn**	**13 17 42.8**	**-0.4**
	baz=231						
PHUB	**P'eng-hu**	**2.53 238**	*e*P		**Pn**	**13 17 42.3**	**-1.1**
	baz=230						
MASBT	**Mashibuluo**	**2.55 207**	*e*P		**Pn**	**13 17 44.3**	**+0.6**
	baz=209						
JTJ	**Tarama**	**2.56 95**	P		**Pn**	**13 17 44.0**	**+0.3**
JTJ			S		**Sn**	**13 18 14.5**	**0.0**
WDGT	**Dungji**	**2.62 232**	*e*P		**Pn**	**13 17 44.0**	**-0.5**
	baz=225						
EAST	**Anshuo**	**2.68 201**	*e*P		**Pn**	**13 17 45.5**	**+0.2**
	baz=203						
JIRB	**Irabujima**	**2.97 91**	P		**Pn**	**13 17 49.7**	**+0.6**
JMJ2	**Miyako jima3**	**3.11 92**	P		**Pn**	**13 17 51.6**	**+0.7**
JMJ2			*e*S		**Sn**	**13 18 27.8**	**+0.1**
JOGS	**Gusukube**	**3.19 92**	P		**Pn**	**13 17 52.9**	**+1.0**
JOGS			*e*S		**Sn**	**13 18 29.8**	**+0.4**

JMA 28 13:41:04.5±0.5, 37°N±1°×14°2E±°, h22km, MV1.2/14, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.66**	**264**		S	Sb	13 41 25.8	-0.4
JFK	**Kawauchi**	**0.66**	**264**		S	Sb	13 41 25.8	-0.4
JMST	**Minamisoumatoc**	**0.70**	**294**		*e*P	Pb	13 41 17.7	-0.4
JMST					*e*S	Sn	13 41 28.6	-0.7
JMM	**Marumori**	**0.83**	**301**		*e*S	Sn	13 41 32.1	-0.4
JIKH	**Ishinomakikobu**	**0.89**	**348**		*e*S	Sb	13 41 32.6	0.0
JIO	**Ouri**	**1.05**	**345**		*e*S	Sb	13 41 36.9	-0.3

JMA 28 13:41:12.7±0.0, 37°1N±0°1×140°6E±0°3, h5km, MID FUKUSHIMA PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.02**	**338**		P	Pg	13 41 13.6	0.0
JFFD					S	Sg	13 41 14.2	-0.1

*IDC **28** 13:54:56.5±2.4, 35°76N×140°93E, h0km, mb3.5/6, mbtmp3.7/9, ML4.0/2, MS3.2/3, Error ellipse: s-maj=69.6km s-min=18.7km az=66.0*
*JMA **28** 13:55:02.7±0.1, 35°9N±0°3×140°5E±0°4, h37km±1km, MV3.4/39, NORTHERN CHIBA PREF*
JMA Felt I J1 at NORTHERN CHIBA PREF .
*NIED **28** 13:55:02.7, 35°87N×140°47E, h37km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.42; $M_{\theta\theta}$-1.47; $M_{\phi\phi}$2.90; $M_{r\theta}$5.27; $M_{\theta\phi}$-1.17; $M_{\phi r}$-0.68; Fault plane solution: $M_0$5.74000×10^{14} NP1: ϕ_s191.00000°, δ26.00000°, λ-13.00000°. NP2: ϕ_s293.00000°, δ84.00000°, λ-116.00000°.*
ISC 28 13:55:03.2±0.9, 35°83N±0°05×140°57E±0°07, h50km, n25, σ2s33/24, mb3.4/6, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.14**	**345**	⇓	*i*P	**Pn**	**13 55 09.5**	**-1.7**
JIHU				⇓	S	**Sn**	**13 55 14.5**	**-2.4**
JSMT	**Sammumatsuo**	**0.21**	**207**		P	**Pn**	**13 55 10.2**	**-1.4**
JSMT					S	**Sn**	**13 55 16.0**	**-1.6**
CHOJ	**Chosi**	**0.27**	**119**	⇓	*i*P	**Pn**	**13 55 11.2**	**-0.9**
CHOJ				⇓	S	**Sn**	**13 55 17.0**	**-1.4**
JYT	**Yasato**	**0.50**	**322**	⇓	*i*P	**Pn**	**13 55 12.3**	**-2.1**
JYT				⇓	S	**Sn**	**13 55 18.8**	**-3.7**
JHO	**Hitachi**	**0.78**	**360**		*i* P	**Pn**	**13 55 16.4**	**-1.6**
JHO					S	**Sn**	**13 55 26.1**	**-2.6**
BSO3	**Boso 3**	**1.03**	**183**		P	**Pn**	**13 55 21.2**	**+0.1**
JAG	**Ashikaga**	**1.08**	**304**	⇓	*i*P	**Pn**	**13 55 20.0**	**-2.1**
JAG				⇓	S	**Sn**	**13 55 32.2**	**-3.8**
MJAR	**Matsushiro Arr**	**2.04**	**291**		Pn	**Pn**	**13 55 34.2**	**-0.9**
	5.2nm,0.3s,baz=93,slow=8.9,SNR=61							
MJAR					Sn	**Sn**	**13 55 58.4**	**-1.0**
	1.0nm,0.3s,baz=132,slow=11,SNR=2.7							
JHJ	**Hachijo jima 2**	**2.78**	**194**		Pn	**Pn**	**13 55 44.0**	**-1.3**
	26nm,0.3s,baz=43,slow=19,SNR=5.8							
JHJ					Sn	**Sn**	**13 56 14.9**	**-2.8**
	25nm,0.3s,baz=30,slow=20,SNR=1.9							
	60nm,0.3s							
JCJ	**Chichijima**	**8.82**	**171**		Pn	**Pn**	**13 57 05.1**	**-3.0**
	3.5nm,0.3s,baz=277,slow=11,SNR=2.0							
	65nm,0.9s							
USRK	**Ussuriysk Ar.**	**10.63**	**324**		LR	LR	14 01 14.7	
	comp=Z,94nm,20.2s,baz=175,slow=35							
PETK	**Petropavlovsk-**	**21.07**	**30**		LR	LR	14 09 32.4	
	comp=Z,27nm,18.3s,baz=58,slow=42							
SONM	**Songino Array**	**27.91**	**306**		P	**P**	**14 00 52.8**	**+4.1**
	0.3nm,0.4s,baz=97,slow=7.1,SNR=2.0							
	0.3nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.16**	**118**		T	T	14 30 16.3	
	baz=310,slow=75,SNR=7.3							
H11N1	**WAKE ISLAND Hy**	**28.16**	**118**		T	T	14 30 05.2	
	baz=310,slow=75,SNR=6.6							
H11N3	**WAKE ISLAND Hy**	**28.17**	**118**		T	T	14 30 12.7	
	baz=310,slow=75,SNR=5.9							
H11S3	**WAKE ISLAND Hy**	**28.82**	**120**		T	T	14 30 52.0	
	baz=312,slow=76,SNR=8.7							
H11S1	**WAKE ISLAND Hy**	**28.82**	**120**		T	T	14 30 51.2	
	baz=312,slow=76,SNR=9.1							
H11S2	**WAKE ISLAND Hy**	**28.83**	**120**		T	T	14 30 51.2	
	baz=312,slow=76,SNR=6.4							
ZALV	**Zalesovo Beam**	**42.23**	**313**		P	**P**	**14 02 53.6**	**+2.4**
	0.4nm,0.3s,baz=77,slow=6.2,SNR=2.4							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**44.19**	**303**		P	**P**	**14 03 09.3**	**+2.2**
	0.4nm,0.8s,baz=72,slow=9.5,SNR=2.5							
	0.4nm,0.8s							
BRDH	**Bariadhala**	**44.23**	**267**		LR	LR	14 25 07.7	
	comp=Z,90nm,18.8s,baz=275,slow=41							
KURBB	**Kurchatov Arra**	**46.21**	**309**		P	**P**	**14 03 24.4**	**+1.3**
	0.4nm,0.2s,baz=86,slow=8.1,SNR=3.9							
	0.4nm,0.2s							
WRA	**Warramunga Arr**	**55.78**	**187**		P	**P**	**14 04 33.9**	**-1.3**
	0.4nm,0.6s,baz=0.9,slow=7.7,SNR=8.4							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**59.51**	**187**		P	**P**	**14 05 01.2**	**-0.2**
	0.2nm,0.9s,baz=3.8,slow=7.0,SNR=1.7							
	0.2nm,0.9s							

*ROM **28** 13:56:32.5±0.0, 42°865N±0°002×13°210E±0°003, h8km, ML3.7/56, Error ellipse: s-maj=0.2km s-min=0.1km az=247.0*
*LDG **28** 13:56:32.0±0.1, 42°87N×13°21E, h9km, Ml3.5/16, Error ellipse: s-maj=3.3km s-min=1.9km az=42.0*
*PRU **28** 13:56:32.8±0.0, 42°84N×13°77E, h0km*
*BGR **28** 13:56:32.1±0.8, 42°64N×13°67E, h10km, ML4.0/7, Error ellipse: s-maj=21.1km s-min=14.5km az=80.0*
*IDC **28** 13:56:33.0±1.1, 43°00N×13°40E, h0km, mb3.6/5, mbtmp3.5/12, ML3.3/5, MS3.1/9, Error ellipse: s-maj=23.0km s-min=12.6km az=96.0*
ISC 28 13:56:33.1±0.7, 42°86N±0°01×13°20E±0°01, h8km±3km, n192, σ2s90/250, mb3.7/5, MS3.4/3, 11C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.01**	**238**	⇑	P	**Pg**	**13 56 34.0**	**-0.8**
T1245					S	**Sg**	**13 56 34.6**	**-1.3**
MC2	**Monte Cornacci**	**0.05**	**351**	⇑	P	**Pg**	**13 56 34.4**	**-0.7**
MC2					S	**Sg**	**13 56 35.5**	**-1.0**
NRCA	**Norcia**	**0.07**	**246**	⇑	P	**Pg**	**13 56 35.2**	**0.0**
NRCA					S	**Sg**	**13 56 36.9**	**+0.3**
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
MMO1	**Montemonaco**	**0.10**	**68**		P	**Pg**	**13 56 35.1**	**-0.5**
MMO1					S	**Sg**	**13 56 36.7**	**-0.6**
T1244	**Arquata del Tr**	**0.13**	**146**	⇓	P	**Pg**	**13 56 36.1**	**+0.1**
T1244					S	**Sg**	**13 56 38.9**	**+0.9**
T1216	**Preci, Frazion**	**0.14**	**282**	⇑	P	**Pg**	**13 56 36.4**	**+0.2**
T1216					S	**Sg**	**13 56 39.2**	**+1.0**
T1216					AML	AML		
T1216					AML	AML		
T1216					AML	AML		
T1216					AML	AML		
T1256	**Bolognola (MC)**	**0.14**	**7**	⇑	P	**Pg**	**13 56 36.1**	**-0.3**
T1256					S	**Sg**	**13 56 38.5**	**-0.1**
FEMA	**Monte Fema**	**0.15**	**312**		P	**Pg**	**13 56 36.5**	**+0.1**
FEMA					S	**Sg**	**13 56 39.2**	**+0.5**
FEMA					AML	AML		
	comp=N,86850μm,0.3s							
FEMA					AML	AML		
FEMA					AML	AML		
	comp=N,86800μm,0.3s							
AM05	**Amandola Campo**	**0.16**	**44**	⇑	P	**Pg**	**13 56 36.5**	**-0.1**
AM05					S	**Sg**	**13 56 39.1**	**+0.3**
AM05					AML	AML		
	comp=E,13065μm,0.6s							
AM05					AML	AML		
	comp=N,15325μm,0.6s							
AM05					AML	AML		
	comp=E,13105μm,0.6s							
AM05					AML	AML		
	comp=N,15330μm,0.6s							
AM05					AML	AML		
	comp=E,13100μm,0.6s							
AM05					AML	AML		
	comp=N,15345μm,0.6s							
AM05					AML	AML		
	comp=N,17250μm,0.9s							
AM05					AML	AML		
	comp=E,63750μm,0.5s							
T1241	**Roccafluvione,**	**0.17**	**92**	⇓	P	**Pg**	**13 56 36.3**	**-0.4**
T1241					S	**Sg**	**13 56 39.3**	**+0.2**
T1241					AML	AML		
	comp=N,56000μm,0.5s							
T1241					AML	AML		
	comp=E,45350μm,1.5s							
T1241					AML	AML		
	comp=N,57600μm,0.5s							
T1241					AML	AML		
	comp=N,56050μm,0.5s							
T1241					AML	AML		
	comp=E,42950μm,1.5s							
FDMO	**Fiordimonte**	**0.19**	**334**	⇓	P	**Pg**	**13 56 37.0**	**-0.1**
FDMO					S	**Sg**	**13 56 40.3**	**+0.5**
FDMO					AML	AML		
	comp=E,46900μm,0.2s							
FDMO					AML	AML		
	comp=N,53150μm,0.7s							
T1204	**Amatrice, Fraz**	**0.20**	**155**	⇓	P	**Pg**	**13 56 37.5**	**+0.2**
T1204					S	**Sg**	**13 56 41.4**	**+1.2**
T1204					AML	AML		
	comp=N,14050μm,0.9s							
T1204					AML	AML		
	comp=E,25450μm,0.7s							
T1201	**Domo (RI)**	**0.21**	**170**		P	**Pg**	**13 56 37.9**	**+0.5**
T1201					S	**Sg**	**13 56 42.3**	**+2.0**
GUMA	**Gualdo di Mace**	**0.22**	**26**	⇓	P	**Pg**	**13 56 37.9**	**+0.2**
GUMA					S	**Sg**	**13 56 41.9**	**+1.2**
GUMA					AML	AML		
GUMA					AML	AML		
GUMA					AML	AML		
GUMA					AML	AML		
GUMA					AML	AML		
GUMA					AML	AML		
CSP1	**Cessapalombo**	**0.23**	**1**	⇓	P	**Pg**	**13 56 37.6**	**-0.2**
CSP1					S	**Sg**	**13 56 41.5**	**+0.5**
T1243	**Rocca Santa Ma**	**0.25**	**132**	⇓	P	**Pg**	**13 56 38.0**	**-0.1**
T1243					S	**Sg**	**13 56 42.4**	**+1.0**
T1217	**Poggiodomo (PG**	**0.25**	**233**	⇑	P	**Pg**	**13 56 38.5**	**+0.4**
T1217					S	**Sb**	**13 56 43.1**	**+1.6**
T1217					AML	AML		
	comp=E,15800μm,0.7s							
T1217					AML	AML		
	comp=N,24100μm,0.6s							
T1217					AML	AML		
	comp=E,15850μm,0.7s							
T1217					AML	AML		
	comp=N,24700μm,0.7s							
T1217					AML	AML		
	comp=E,15150μm,0.7s							
T1217					AML	AML		
	comp=N,24150μm,0.6s							
T1217					AML	AML		
	comp=N,24750μm,0.7s							
T1217					AML	AML		
	comp=E,15200μm,0.7s							
T1217					AML	AML		
	comp=N,24150μm,0.6s							
SMA1	**SAN MARTINO**	**0.25**	**157**	⇓	P	**Pg**	**13 56 38.3**	**+0.1**
SMA1					S	**Sg**	**13 56 42.4**	**+0.8**
SMA1					AML	AML		
	comp=E,33050μm,0.5s							
SMA1					AML	AML		
	comp=N,32850μm,0.6s							
T1215	**Vallo di Nera,**	**0.25**	**256**	⇑	P	**Pg**	**13 56 38.6**	**+0.4**
T1215					S	**Sg**	**13 56 43.1**	**+1.5**
T1215					AML	AML		
	comp=E,26700μm,0.4s							
T1215					AML	AML		
	comp=E,28250μm,0.5s							
T1215					AML	AML		
	comp=N,26050μm,1.4s							
T1215					AML	AML		
	comp=E,26750μm,0.4s							
T1215					AML	AML		
	comp=N,26100μ

T1215				AML	AML	
	comp=N,26050µm,1.4s					
CESI	**CESI - Serrava**	**0.26 303**	⇓	P	**Pg**	**13 56 38.5 +0.2**
CESI				S	**Sg**	**13 56 43.2 +1.3**
CESI				AML	AML	
	comp=N,51500µm,0.3s					
CESI				AML	AML	
	comp=E,40250µm,1.5s					
LNSS	**Leonessa**	**0.28 205**	⇑	P	**Pg**	**13 56 39.0 +0.2**
LNSS				S	**Sb**	**13 56 44.4 -1.2**
LNSS				AML	AML	
	comp=E,33300µm,1.2s					
LNSS				AML	AML	
	comp=N,22550µm,0.4s					
MDAR	**Monte D'Aria**	**0.33 353**		P	**Pg**	**13 56 39.6 -0.2**
MNTP	**Montappone**	**0.34 36**		P	**Pg**	**13 56 40.3 +0.5**
MNTP				S	**Sb**	**13 56 46.7 -0.3**
SEF1	**Sefro**	**0.34 327**		P	**Pg**	**13 56 39.8 -0.1**
SEF1				S	**Sg**	**13 56 45.7 +1.3**
SEF1				AML	AML	
	comp=N,54100µm,1.1s					
SEF1				AML	AML	
	comp=E,53850µm,0.3s					
T1246	**Crognaleto (TE**	**0.35 142**	⇓	P	**Pg**	**13 56 40.0 -0.1**
T1246				S	**Sg**	**13 56 45.8 +1.1**
PIO1	**Pioraco**	**0.35 333**		P	**Pg**	**13 56 40.0 -0.1**
PIO1				S	**Sg**	**13 56 45.9 +1.1**
PIO1				AML	AML	
	comp=N,32750µm,0.2s					
PIO1				AML	AML	
	comp=E,18200µm,0.8s					
RM33	**Pellescritta (**	**0.35 178**	⇓	P	**Pg**	**13 56 40.2 +0.1**
RM33				S	**Sb**	**13 56 46.3 -1.2**
RM33				AML	AML	
	comp=E,19300µm,0.9s					
RM33				AML	AML	
	comp=N,14000µm,1.6s					
RM33				AML	AML	
	comp=N,14250µm,1.6s					
RM33				AML	AML	
	comp=E,19950µm,0.9s					
CAMP	**Campotosto**	**0.36 155**	⇓	P	**Pg**	**13 56 40.1 -0.2**
CAMP				S	**Sg**	**13 56 46.1 +1.1**
CAMP				AML	AML	
	comp=E,8050µm,1.1s					
CAMP				AML	AML	
	comp=N,6430µm,0.8s					
OFFI	**Offida**	**0.36 78**		P	**Pb**	**13 56 41.0 -0.8**
OFFI				AML	AML	
	comp=N,34500µm,0.5s					
OFFI				AML	AML	
	comp=E,28400µm,0.7s					
SSM1	**San Severino M**	**0.37 357**		P	**Pg**	**13 56 40.1 -0.2**
SSM1				S	**Sg**	**13 56 46.3 +1.1**
FIU1	**Fiuminata**	**0.38 329**		P	**Pg**	**13 56 40.5 -0.1**
FIU1				S	**Sg**	**13 56 46.9 +1.2**
FIU1				AML	AML	
	comp=E,14050µm,0.6s					
FIU1				AML	AML	
	comp=N,12050µm,0.4s					
FIU1				AML	AML	
	comp=E,14100µm,0.6s					
TERO	**Teramo**	**0.38 129**	⇓	P	**Pg**	**13 56 40.4 -0.2**
TERO				S	**Sb**	**13 56 46.7 -1.6**
TERO				AML	AML	
	comp=N,11370µm,1.6s					
TERO				AML	AML	
	comp=E,9675µm,0.9s					
TERO				AML	AML	
	comp=N,11680µm,1.6s					
TERO				AML	AML	
	comp=N,11365µm,1.6s					
TERO				AML	AML	
	comp=E,9405µm,0.9s					
TERO	**Teramo**	**0.38 129**		P	**Sb**	**13 56 47.2 -1.1**
GAG1	**Gagliole**	**0.39 345**		P	**Pg**	**13 56 40.8 +0.1**
GAG1				S	**Sg**	**13 56 47.1 +1.2**
GAG1				AML	AML	
	comp=N,73450µm,0.9s					
GAG1				AML	AML	
	comp=E,70100µm,0.2s					
GAG1				AML	AML	
	comp=N,73500µm,0.9s					
T1211	**Morro Reatino**	**0.42 218**		P	**Pg**	**13 56 41.4 +0.1**
T1211				AML	AML	
	comp=N,16350µm,0.5s					
T1211				AML	AML	
	comp=N,16150µm,0.5s					
T1211				AML	AML	
	comp=N,16350µm,0.5s					
T1211				AML	AML	
	comp=E,8740µm,0.5s					
T1211				AML	AML	
	comp=N,16150µm,0.5s					
T1211				AML	AML	
	comp=E,9060µm,0.5s					
MTL1	**Matelica**	**0.42 340**		P	**Pg**	**13 56 41.3 0.0**
MTL1				S	**Sb**	**13 56 48.4 -0.9**
MTL1				AML	AML	
	comp=E,38950µm,0.3s					
MTL1				AML	AML	
	comp=N,51100µm,0.6s					
MTL1				AML	AML	
	comp=N,51050µm,0.6s					
MTL1				AML	AML	
	comp=E,38950µm,0.3s					
MTL1	**Matelica**	**0.42 340**		P	**Sb**	**13 56 48.5 -0.9**
T1247	**Pizzolo (AQ)**	**0.43 170**		P	**Pg**	**13 56 41.5 +0.1**
ARRO	**Arrone**	**0.43 229**		P	**Pg**	**13 56 41.5 0.0**
ARRO				AML	AML	
	comp=E,7850µm,0.6s					
ARRO				AML	AML	
	comp=N,9520µm,0.7s					
ARRO				AML	AML	
	comp=E,7835µm,0.6s					
SNTG	**Esanatoglia**	**0.44 334**	⇓	P	**Pg**	**13 56 41.4 -0.3**
SNTG				S	**Sg**	**13 56 48.6 +1.2**
SNTG				AML	AML	
	comp=N,14400µm,0.2s					
SNTG				AML	AML	
	comp=E,11100µm,0.6s					
SNTG				AML	AML	
	comp=E,10990µm,0.6s					
SNTG				AML	AML	
	comp=N,15150µm,0.2s					
ASSB	**Assisi San Ben**	**0.44 294**		P	**Pg**	**13 56 41.6 0.0**
ASSB				S	**Sb**	**13 56 48.9 -1.0**
ASSB				AML	AML	
	comp=E,13200µm,1.2s					
ASSB				AML	AML	
	comp=N,14600µm,0.5s					
TRE1	**Treia**	**0.46 10**		P	**Pb**	**13 56 42.6 -0.8**
TRE1				AML	AML	
	comp=N,29150µm,0.6s					
TRE1				AML	AML	
	comp=E,37550µm,1.0s					
EL6	**Elcito**	**0.47 351**		P	**Pg**	**13 56 42.0 -0.3**
EL6				S	**Sb**	**13 56 50.0 -1.0**
EL6				AML	AML	
	comp=N,47550µm,0.3s					
EL6				AML	AML	
	comp=E,40400µm,1.0s					
GIGS	**Gran Sasso**	**0.49 147**		P	**Pg**	**13 56 42.3 -0.4**
GIGS				AML	AML	
	comp=E,2355µm,1.3s					
GIGS				AML	AML	
	comp=N,1720µm,1.6s					
CING	**Cingoli**	**0.51 360**		P	**Pg**	**13 56 42.7 -0.4**
ATCC	**AVT- Casa Cast**	**0.52 308**		P	**Pg**	**13 56 43.3 0.0**
ATCC				S	**Sb**	**13 56 51.9 -0.5**
CESX	**Cesi**	**0.52 241**	⇑	P	**Pg**	**13 56 43.1 -0.1**
CESX				AML	AML	
	comp=N,11050µm,0.5s					
CESX				AML	AML	
	comp=E,11350µm,1.6s					
TRTR	**Tortoreto Alta**	**0.53 96**		P	**Pb**	**13 56 44.4 -0.2**
TRTR				AML	AML	
	comp=E,32800µm,0.6s					
TRTR				AML	AML	
	comp=N,24850µm,0.6s					
CADA	**Capodarco di F**	**0.53 51**		P	**Pb**	**13 56 44.5 -0.1**
AQU	**L'Aquila**	**0.53 164**		P	**Pg**	**13 56 43.0 -0.3**
AQU				AML	AML	
	comp=E,7270µm,1.0s					
AQU				AML	AML	
	comp=N,9180µm,1.5s					
AQU				AML	AML	
	comp=E,6630µm,1.0s					
AQU				AML	AML	
	comp=N,9290µm,1.6s					
AQU				AML	AML	
	comp=E,7265µm,1.0s					
FOSV	**Fossato di Vic**	**0.54 323**		P	**Pg**	**13 56 43.4 -0.2**
PP3	**Marolino**	**0.59 30**		AML	AML	
	comp=N,36950µm,0.4s					
PP3				AML	AML	
	comp=N,36150µm,0.4s					
PP3				AML	AML	
	comp=E,24650µm,0.4s					
PP3				AML	AML	
	comp=E,26450µm,0.4s					
FIAM	**Fiamignano**	**0.60 186**		P	**Pg**	**13 56 44.4 -0.3**
FIAM				AML	AML	
	comp=N,5045µm,0.9s					
FIAM				AML	AML	
	comp=E,7395µm,0.7s					
MMUR	**Monte Murano**	**0.60 346**		P	**Pg**	**13 56 44.5 -0.2**
MMUR				S	**Sb**	**13 56 54.3 -0.3**
MURB	**Monte Urbino**	**0.64 309**		P	**Pg**	**13 56 45.3 -0.2**
MURB				AML	AML	
	comp=N,14650µm,0.3s					
MURB				AML	AML	
	comp=N,15350µm,0.3s					
MURB				AML	AML	
	comp=E,17700µm,0.3s					
MURB				AML	AML	
	comp=E,19250µm,0.3s					
FAGN	**Fagnano**	**0.66 154**		P	**Pg**	**13 56 45.2 -0.6**
FAGN				AML	AML	
	comp=E,6920µm,1.4s					
FAGN				AML	AML	
	comp=N,7320µm,0.5s					
ARVD	**Arcevia**	**0.66 343**		P	**Pg**	**13 56 45.6 -0.4**
ARVD				S	**Sb**	**13 56 56.3 -0.1**
ARVD				AML	AML	
	comp=N,4370µm,0.8s					
ARVD				AML	AML	
	comp=E,12600µm,0.2s					
VCEL	**Villa Celiera**	**0.66 135**		P	**Pg**	**13 56 45.7 -0.3**
VCEL				AML	AML	
	comp=N,7625µm,0.9s					
VCEL				AML	AML	
	comp=E,7350µm,0.6s					
ATSC	**Scheggia e Pas**	**0.68 326**		P	**Pg**	**13 56 45.7 -0.5**
ATFO	**Monte Foce - G**	**0.68 318**		P	**Pg**	**13 56 46.0 -0.4**
ATFO				AML	AML	
	comp=E,8040µm,0.6s					
ATFO				AML	AML	
	comp=N,4745µm,0.5s					
ATTE	**AVT- Monte Tez**	**0.71 299**		P	**Pg**	**13 56 46.8 0.0**
ATTE				AML	AML	
	comp=N,3390µm,0.7s					
ATTE				AML	AML	
	comp=E,4375µm,0.5s					
ATLO	**AVT- Montelove**	**0.74 308**		P	**Pg**	**13 56 46.9 -0.5**
FRON	**Frontone**	**0.74 332**		P	**Pg**	**13 56 46.8 -0.6**
FRON				AML	AML	
	comp=E,6480µm,0.2s					
FRON				AML	AML	
	comp=N,6965µm,0.8s					
AOI	**Ancona**	**0.75 23**		P	**Pg**	**13 56 47.3 -0.2**
AOI				AML	AML	
	comp=N,4870µm,0.4s					
AOI				AML	AML	
	comp=E,4375µm,0.4s					
TB01	**Gubbio**	**0.76 313**		P	**Pg**	**13 56 47.3 -0.6**
T0110	**Collepietro**	**0.77 146**		P	**Pg**	**13 56 47.0 -0.9**
T0110				AML	AML	
	comp=E,4010µm,0.5s					
T0110				AML	AML	
	comp=N,5395µm,0.4s					
ATBU	**Serra di Buran**	**0.78 322**		P	**Pg**	**13 56 47.8 -0.3**
ATVO	**AVT- Monte Val**	**0.78 312**		P	**Pg**	**13 56 47.6 -0.5**
ATVO				AML	AML	
	comp=E,3790µm,1.4s					
ATVO				AML	AML	
	comp=N,3615µm,0.7s					
TB03	**Pietralunga**	**0.79 313**	⇑	P	**Pg**	**13 56 47.8 -0.5**
MGAB	**Montegabbione**	**0.80 274**		P	**Pg**	**13 56 48.4 -0.2**
MGAB				AML	AML	
	comp=E,9575µm,1.2s					
MGAB				AML	AML	
	comp=N,9670µm,0.6s					
MGAB				AML	AML	
	comp=E,9410µm,1.2s					
MGAB				AML	AML	
	comp=N,9310µm,0.6s					
SRES	**S.Oreste - Sor**	**0.81 219**		P	**Pg**	**13 56 48.1 -0.6**
SRES				AML	AML	
	comp=N,2020µm,0.4s					
SRES				AML	AML	
	comp=E,2380µm,0.4s					
ATPC	**Poggio Castell**	**0.82 319**		P	**Pg**	**13 56 48.6 -0.4**
ATPI	**Pietralunga -**	**0.83 315**		P	**Pg**	**13 56 48.5 -0.6**
ATPI				AML	AML	
	comp=N,3220µm,1.6s					
ATPI				AML	AML	
	comp=E,3745µm,0.8s					
ATMI	**Monte Miggiano**	**0.83 305**		P	**Pb**	**13 56 49.8 -0.1**
ATMI				AML	AML	
	comp=N,10695µm,0.5s					
ATMI				AML	AML	
	comp=E,8040µm,0.5s					
MPAG	**Monte Paganucc**	**0.83 337**		P	**Pg**	**13 56 48.7 -0.5**
MPAG				AML	AML	
	comp=N,4535µm,0.2s					
MPAG				AML	AML	
	comp=E,5205µm,0.6s					
PIEI	**Pieia**	**0.83 324**		P	**Pg**	**13 56 48.3 -0.8**
PIEI				AML	AML	
	comp=N,2850µm,0.2s					
PIEI				AML	AML	
	comp=E,3285µm,0.3s					
PTQR	**Pietraquaria**	**0.85 170**		P	**Pg**	**13 56 48.5 -1.0**
FSSB	**Fossombrone**	**0.89 340**		P	**Pg**	**13 56 49.7 -0.4**
FSSB				AML	AML	
	comp=N,17100µm,0.3s					
FSSB				AML	AML	
	comp=E,20050µm,0.4s					
APEC	**Apecchio**	**0.90 321**		P	**Pg**	**13 56 50.3 -0.2**
MTCE	**Montecelio**	**0.91 202**		P	**Pb**	**13 56 50.8 -0.3**
CERT	**Cerreto**	**0.93 190**		P	**Pg**	**13 56 50.1 -0.8**
ATMC	**Monte Cedrone**	**0.94 309**		P	**Pg**	**13 56 51.2 -0.1**
SACS	**San Casciano d**	**0.95 270**		P	**Pb**	**13 56 52.0 0.0**
SACS				AML	AML	
	comp=E,4450µm,0.7s					
SACS				AML	AML	
	comp=E,4465µm,0.7s					
SACS				AML	AML	
	comp=N,3360µm,0.7s					
SACS				AML	AML	
	comp=N,3415µm,0.7s					
PE3	**Peglio**	**0.98 329**		AML	AML	
	comp=N,37µm,0.3s					
PE3				AML	AML	
	comp=E,37µm,0.3s					
CAFI	**Castiglion Fio**	**1.02 298**		P	**Pg**	**13 56 52.5 -0.2**
CAFI				AML	AML	
	comp=N,2830µm,1.0s					
CAFI				AML	AML	
	comp=N,2940µm,1.0s					
CAFI				AML	AML	
	comp=E,2375µm,0.5s					
CAFI				AML	AML	
	comp=E,2420µm,0.5s					
VVLD	**Villa Vallelon**	**1.04 162**		P	**Pg**	**13 56 52.6 -0.5**
SSP9	**Sansepolcro**	**1.06 313**		P	**Pb**	**13 56 53.9 +0.2**
SSP9				AML	AML	
	comp=E,3225µm,1.2s					
SSP9				AML	AML	
	comp=N,3665µm,1.3s					
GUAR	**Guarcino**	**1.07 176**		P	**Pb**	**13 56 54.1 +0.2**
LPEL	**Lama dei Pelig**	**1.09 138**		P	**Pg**	**13 56 52.9 -1.2**
LPEL				AML	AML	
	comp=N,1785µm,0.9s					
LPEL				AML	AML	
	comp=E,1885µm,1.6s					
MCIV	**Monte Civitell**	**1.12 266**		P	**Pb**	**13 56 55.0 +0.1**
SF13	**Bagnolo**	**1.16 268**		P	**Pg**	**13 56 55.2 -0.2**
SF14	**Selvena**	**1.17 265**		P	**Pb**	**13 56 55.8 +0.1**
CRE	**Caprese Michel**	**1.19 310**		P	**Pn**	**13 56 56.2 0.0**
TOLF	**Tolfa**	**1.19 228**		P	**Pg**	**13 56 55.3 -0.8**
POFI	**Posta Fibreno**	**1.21 162**		P	**Pg**	**13 56 55.9 -0.3**
ARCI	**Arcidosso**	**1.27 270**		P	**Pb**	**13 56 57.6 +0.2**
GIUL	**Giuliano Di Ro**	**1.30 178**		P	**Pg**	**13 56 58.5 +0.3**
CERA	**Filignano**	**1.40 154**		P	**Pb**	**13 56 59.6 0.0**
SFI	**Santa Sofia**	**1.44 317**		P	**Pg**	**13 57 00.8 +0.1**
MIDA	**Miranda**	**1.45 147**		P	**Pb**	**13 57 00.3 -0.1**
TRIV	**Trivento**	**1.48 137**		P	**Pg**	**13 57 02.0 +0.5**
CSNT	**Castellina Chi**	**1.52 294**		P	**Pn**	**13 57 00.9 +0.1**
FROS	**Frosini**	**1.54 284**		P	**Pn**	**13 57 01.0 +0.1**
RUFI	**Rufina**	**1.57 309**		P	**Pb**	**13 57 02.3 -0.2**
OSSC	**Osservatorio P**	**1.57 295**		P	**Pn**	**13 57 00.6 -0.8**
MAON	**Monte Argentar**	**1.59 255**		P	**Pn**	**13 57 01.3 -0.2**
LMD	**Lutirano**	**1.63 319**		P	**Pg**	**13 57 04.3 -0.1**
VAGA	**Valle Agricola**	**1.64 152**		P	**Pg**	**13 57 04.3 -0.2**
TRIF	**Trifonti**	**1.71 279**		P	**Pn**	**13 57 03.3 +0.1**
TRIF				AML	AML	
	comp=N,650µm,0.5s					
TRIF				AML	AML	
	comp=E,610µm,0.7s					
BRIS	**BRISIGHELLA**	**1.78 317**		P	**Pb**	**13 57 06.0 0.0**
MTRZ	**Monterenzio**	**1.97 321**		P	**Pb**	**13 57 09.0 -0.2**
MAIM	**Mastiano**	**2.24 299**		P	**Pn**	**13 57 11.2 +0.7**
SKDS	**Skadanscina**	**2.75 12**		*e*Pn	**Pn**	**13 57 16.1 -1.4**
CEY	**Cerknica**	**3.01 17**		*e*Pn	**Pn**	**13 57 20.5 -0.6**
PGF	**Pioggiola**	**3.11 266**		*e*P	**Pn**	**13 57 23.9 +1.3**
PGF				*e*Sn	**Sn**	**13 57 54.9 -5.2**
	comp=E,67nm,1.0s					
MGRS	**Mrkonjic Grad**	**3.22 60**		*e*Pn	**Pn**	**13 57 27.0 +3.0**
STON	**Ston**	**3.31 88**		*e*Pn	**Pn**	**13 57 23.4 -1.8**
A051A	**Mrakovica**	**3.43 50**		*e*Pn	**Pn**	**13 57 25.2 -1.8**
BLY	**Banja Luka**	**3.44 55**		*e*Pn	**Pb**	**13 57 31.2 -3.2**
OBKA	**Obir**	**3.77 14**		*e*Pn	**Pn**	**13 57 32.8 +1.1**
OBKA	**Obir**	**3.77 14**		*e*Pn	**Pb**	**13 57 39.8 -0.2**
	comp=E,4.4nm,0.3s					
MYKA	**Terra Mystica**	**3.78 5**		*e*Pn	**Pn**	**13 57 32.6 +0.8**
	comp=E,6.5nm,0.5s					
TREB	**Trebinje**	**3.79 90**		*e*Pn	**Pn**	**13 57 34.3 +2.4**
ABTA	**Abfaltersbach**	**3.92 353**		*i* Pn	**Pn**	**13 57 34.7 +1.0**
	comp=E,48nm,0.4s,SNR=30					
ABTA				*e*Sn	**Sn**	**13 58 20.0 +0.2**
	comp=E,50nm,0.6s					
BRY	**Bratogost**	**3.92 88**		*e*Pn	**Pn**	**13 57 33.7 -0.1**
SOKA	**Soboth**	**4.03 18**		*e*Pn	**Pn**	**13 57 36.8 +1.6**
	comp=E,1.4nm,0.2s					
KBA	**Koelnbreinsper**	**4.22 1**		*i* Pn	**Pn**	**13 57 38.9 +1.1**
	comp=E,17nm,0.4s,SNR=6.7					
KBA	**Koelnbreinsper**	**4.22 1**		*e*Pn	**Pn**	**13 57 38.9 +1.1**
KBA				*e*Sn	**Sn**	**13 58 25.4 -2.0**
SBF	**Sospel**	**4.32 285**		*e*P	**Pn**	**13 57 39.4 +0.2**
SBF				*e*Sn	**Sn**	**13 58 23.4 -6.4**
	comp=E,38nm,0.5s					
HAPS	**Han Pijesak,Bl**	**4.36 72**		*e*Pn	**Pn**	**13 57 43.0 +3.2**
DRME	**Dracevica, Mon**	**4.47 97**		*e*Pn	**Pn**	**13 57 42.0 +0.8**
FETA	**Feichten**	**4.51 338**		*e*Pn	**Pn**	**13 57 44.0 +2.1**
	comp=E,6.0nm,0.6s					
FETA				*e*Sn	**Sn**	**13 58 38.1 +3.5**
	comp=E,15nm,0.4s					
WTTA	**Wattenberg**	**4.54 346**		*i* Pn	**Pn**	**13 57 44.4 +2.1**
	comp=E,9.1nm,0.3s,SNR=6.5					
WTTA	**Wattenberg**	**4.54 346**		*e*Pn	**Pn**	**13 57 44.3 +2.1**
WTTA				*e*Sn	**Sn**	**13 58 38.6 +3.3**
RUDO	**Rudo**	**4.57 78**		*e*Pn	**Pn**	**13 57 43.3 +0.7**
DAVOX	**Davos/Dischmat**	**4.58 330**		Pn	**Pn**	**13 57 44.0 +1.2**
	comp=E,4.0nm,0.3s,baz=146,slow=14,SNR=18					
DAVOX				Sn	**Sn**	**13 58 37.1 +0.9**
	comp=E,1.6nm,0.3s,baz=108,slow=20,SNR=1.3					
DAVOX				LR	LR	14 00 04.1
	comp=E,98nm,19.0s,baz=93,slow=47					
	comp=E,13nm,0.4s					
SQTA	**Sankt Quirin**	**4.58 343**		*i* Pn	**Pn**	**13 57 44.9 +2.1**
	comp=E,33nm,0.5s,SNR=17					
WATA	**Walderalm**	**4.62 346**		*i* Pn	**Pn**	**13 57 45.9 +2.5**
	comp=E,26nm,0.5s,SNR=8.9					
BBLS	**Lazići**	**4.63 75**		*e*Pn	**Pn**	**13 57 45.0 +1.5**
ARSA	**Arzberg**	**4.69 20**		*e*Pn	**Pn**	**13 57 48.0 +3.8**
	comp=E,5.5nm,0.6s					
MOTA	**Moosalm**	**4.72 342**		*i* Pn	**Pn**	**13 57 47.5 +2.7**
	comp=E,18nm,0.6s,SNR=5.2					
BIOA	**Bad Ischl, Aus**	**4.84 4**		*i* Pn	**Pn**	**13 57 47.3 +1.0**
	comp=E,12nm,0.3s,SNR=12					
RJOB	**Jochberg**	**4.88 357**		*e*Pn	**Pn**	**13 57 48.2 +1.3**
RJOB				*e*Sn	**Sn**	**13 58 45.4 +1.8**
LMR	**La Mourre**	**4.92 278**		*e*P	**Pn**	**13 57 47.8 +0.4**
LMR				*e*Sn	**Sn**	**13 58 37.8 -6.7**
RETA	**Reutte**	**4.94 340**		*i* Pn	**Pn**	**13 57 50.0 +2.3**
	comp=E,12nm,0.3s,SNR=8.2					
OBER	**Oberstdorf**	**4.99 337**		*e*Pn	**Pn**	**13 57 51.0 +2.7**
OBER				*e*Sn	**Sn**	**13 58 48.4 +2.2**
DAVA	**Damuels**	**5.01 333**		*i* Pn	**Pn**	**13 57 51.6 +2.8**
	comp=E,22nm,0.6s,SNR=8.5					
DAVA	**Damuels**	**5.01 333**		*e*Pn	**Pn**	**13 57 51.5 +2.8**
DAVA				*e*Sn	**Sn**	**13 58 48.0 +1.1**
MBDF	**Montbardon**	**5.01 294**		*e*P	**Pn**	**13 57 50.0 +1.2**
MBDF				*e*Sn	**Sn**	**13 58 40.2 -6.8**
	comp=E,16nm,0.6s					
MOA	**Molln**	**5.04 8**		*e*Pn	**Pn**	**13 57 50.4 +1.3**
	comp=E,5.0nm,0.3s					
MOA	**Molln**	**5.04 8**		*e*Pn	**Pn**	**13 57 50.0 +1.0**
MOA				*e*Sn	**Sn**	**13 58 49.5 +2.0**
DIVS	**Divibare**	**5.09 74**		*e*Pn	**Pn**	**13 57 51.0 +1.2**
UBR	**Ueberruh**	**5.29 337**		*e*Pn	**Pn**	**13 57 54.5 +2.0**
UBR				*e*Sn	**Sn**	**13 58 55.1 +1.5**
LPG	**La Plagne**	**5.33 302**		*e*P	**Pn**	**13 57 55.2 +1.9**
LPG				*e*Sn	**Sn**	**13 58 48.1 -7.0**
	comp=E,17nm,0.6s					
LPL	**La Plagne**	**5.35 302**		*e*P	**Pn**	**13 57 54.8 +1.3**
LPL				*e*Sn	**Sn**	**13 58 48.4 -7.1**
	comp=E,10.0nm,0.4s					
CONA	**Conrad Observa**	**5.40 19**		*e*Pn	**Pn**	**13 57 54.7 +0.7**
	comp=E,1.2nm,0.2s					
SMRF	**Simiane la Rot**	**5.67 284**		*e*P	**Pn**	**13 57 58.3 +0.7**
SMRF				*e*Sn	**Sn**	**13 58 55.6 -7.3**
ORIF	**Oris-en-Rattie**	**5.68 294**		*e*P	**Pn**	**13 58 00.1 +2.3**
ORIF				*e*Sn	**Sn**	**13 58 55.8 -7.4**
	comp=E,17nm,0.7s					
GEC2	**GERESS Array S**	**5.99 3**		*e*Pn	**Pn**	**13 58 01.9 -0.3**
GEC2				*e*Sn	**Sn**	**13 59 08.8 -2.2**
GERES	**GERESS Array B**	**5.99 3**		Pn	**Pn**	**13 58 01.4 -0.8**
	comp=E,0.8nm,0.3s,baz=173,slow=13,SNR=14					
GERES				Sn	**Sn**	**13 59 08.2 -2.8**
	comp=E,2.0nm,0.3s,baz=174,slow=15,SNR=1.6					
GERES				LR	LR	14 00 35.0
	comp=E,44nm,18.6s,baz=272,slow=41					
	comp=E,1.2nm,0.3s					
CKRC	**Cesky Krumlov**	**6.01 7**		*e*PN	**Pn**	**13 58 01.9 -0.4**
CKRC				*e*SN	**Sn**	**13 59 09.2 -2.1**
KHC	**Kasperske Hory**	**6.28 2**		*e*PN	**Pn**	**13 58 05.6 -0.4**
KHC				*e*SN	**Sn**	**13 59 15.2 -2.7**
WET	**Wettzell**	**6.29 358**		*e*Pn	**Pn**	**13 58 05.7 -0.5**
WET				*e*Sn	**Sn**	**13 59 16.1 -2.0**
CABF	**La Chapelle**	**6.30 309**		*e*P	**Pn**	**13 58 07.7 +1.3**
CABF				*e*Sn	**Sn**	**13 59 10.8 -7.8**
	comp=E,16nm,0.6s					
VIVF	**Saint-Julien-l**	**6.48 291**		*e*P	**Pn**	**13 58 10.0 +1.2**
HINF	**Hinteralfeld**	**6.67 320**		*e*P	**Pn**	**13 58 11.9 +0.4**
HINF				*e*Sn	**Sn**	**13 59 19.0 -8.7**
	comp=E,35nm,0.5s					
VRAC	**Vranov**	**6.86 19**		Pn	**Pn**	**13 58 13.0 -1.1**
	comp=E,0.9nm,0.3s,baz=114,slow=14,SNR=1.1					
VRAC				Sn	**Sn**	**13 59 29.4 -2.9**
	comp=E,0.5nm,0.3s,baz=150,slow=20,SNR=1.8					
VRAC				LR	LR	14 01 43.8
	comp=E,62nm,18.7s,baz=198,slow=46					
CDF	**Champ du Feu**	**6.93 325**		*e*P	**Pn**	**13 58 15.7 +0.7**
CDF				*e*Sn	Sn	13 59 25.2 -8.9
	comp=E,14nm,0.5s					
ROTZ	**Rotzenmuhle**	**6.94 355**		*e*Pn	**Pn**	**13 58 16.3 +1.2**
ROTZ				*e*Sn	**Sn**	**13 59 30.5 -3.8**
GRF	**Grafenberg Arr**	**6.97 349**		*e*Sn	**Sn**	**13 59 31.5 -3.4**
HAU	**Haudompre**	**7.05 319**		*e*P	**Pn**	**13 58 17.5 +0.9**
HAU				*e*Sn	**Sn**	**13 59 28.2 -8.7**
	comp=E,76nm,0.8s					
MANZ	**Manzenberg**	**7.17 354**		*e*Sn	**Sn**	**13 59 36.1 -3.7**
NKC	**Novy Kostel**	**7.39 356**		*e*SN	**Sn**	**13 59 42.6 -2.7**
SMF	**Signal de Mont**	**7.66 303**		*e*P	**Pn**	**13 58 26.5 +1.5**
SMF				*e*Sn	Sn	13 59 43.0 -8.9
	comp=E,13nm,0.6s					
KEST	**Kesra**	**7.72 204**		Pn	**Pn**	**13 58 29.9 +4.0**
	comp=E,0.4nm,0.3s,baz=90,slow=20,SNR=2.4					
KEST				LR	LR	14 01 42.4
	comp=E,68nm,19.0s,baz=312,slow=39					

LOR	**Lormes**	**7.94 307**	*e*P	**Pn**	**13 58 30.4 +1.5**	
	baz=124					
LOR			*e*Sn	Sn	13 59 50.0 -8.9	
	comp=E,14nm,0.6s					
AVF	**Avril sur Loir**	**8.03 303**	*e*Sn	Sn	13 59 52.0 -8.9	
SSF	**Saint Saulge**	**8.05 305**	*e*Sn	Sn	13 59 52.5 -9.1	
	comp=E,6.7nm,0.6s					
MLR	**Muntele Rosu**	**9.53 70**	LR	LR	14 03 56.0	
	comp=E,132nm,18.6s,baz=260,slow=47					
ESDC	**Sonseca Array**	**13.30 262**	Pn	**Pn**	**13 59 45.6 +3.4**	
	comp=E,0.3nm,0.4s,baz=76,slow=15,SNR=1.9					
EKA	**Eskdalemuir Ar**	**16.39 325**	Pn	**Pn**	**14 00 24.4 +1.1**	
	baz=135,slow=14					
	comp=E,0.4nm,0.5s					
NOA	**NORSAR Array B**	**18.25 357**	LR	LR	14 08 01.8	
	comp=E,73nm,18.4s,baz=280,slow=38					
FINES	**FINESS Array B**	**20.14 18**	P	**P**	**14 01 06.2 -1.2**	
	comp=E,0.1nm,0.3s,baz=193,slow=7.8,SNR=1.0					
	comp=E,2.4nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.24 202**	P	**P**	**14 02 55.0 +1.8**	
	comp=E,0.5nm,0.7s,baz=11,slow=8.9,SNR=3.2					
	comp=E,0.5nm,0.7s					
AKTO	**Aktyubinsk**	**31.28 60**	LR	LR	14 18 42.7	
	comp=E,27nm,18.9s,baz=196,slow=43					
BVAR	**Borovoye Array**	**38.66 54**	P	**P**	**14 03 57.2 +0.2**	
	comp=E,0.8nm,0.8s,baz=284,slow=5.8,SNR=7.0					
	comp=E,0.8nm,0.8s					
MBAR	**Mbarara**	**46.05 155**	LR	LR	14 25 56.8	
	comp=E,141nm,18.5s,baz=272,slow=38					
ZALV	**Zalesovo Beam**	**46.86 50**	P	**P**	**14 05 03.8 +0.4**	
	comp=E,0.4nm,0.5s,baz=290,slow=8.2,SNR=1.5					
	comp=E,0.4nm,0.5s					
MKAR	**Makanchi Array**	**47.72 60**	P	**P**	**14 05 08.7 -1.6**	
	comp=E,0.5nm,0.7s,baz=280,slow=8.0,SNR=3.4					
	comp=E,0.5nm,0.7s					
OPO	**Ambohidratompo**	**68.67 145**	LR	LR	14 41 21.5	
	comp=E,22nm,18.2s,baz=173,slow=39					
CMAR	**Chiang Mai Arr**	**74.63 79**	P	**P**	**14 08 13.3 +0.2**	
	comp=E,0.4nm,0.4s,baz=301,slow=7.2,SNR=4.8					
	comp=E,0.4nm,0.4s					

ROM 28 13:56:39.5±0.1, 42°.865N±0°.004×13°.208E±0°.005, h7^{km}, ML3.5/2, Error ellipse: s-maj=0.4km s-min=0.3km az=148.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**239**	P	Pg	13 56 40.7	-0.4
T1245				S	Sg	13 56 41.3	-0.9
T1245				AML	AML		
	comp=E,28447μm,0.4s						
T1245				AML	AML		
	comp=N,95578μm,0.5s						
T1245				AML	AML		
	comp=E,17847μm,0.5s						
MC2	**Monte Cornacci**	**0.05**	**345**	P	Pg	13 56 41.3	-0.1
MC2				S	Sg	13 56 42.3	-0.4
NRCA	**Norcia**	**0.08**	**245**	P	Pg	13 56 41.9	+0.3
NRCA				S	Sg	13 56 43.5	+0.5
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
MMO1	**Montemonaco**	**0.09**	**69**	P	Pg	13 56 42.0	+0.2
MMO1				S	Sg	13 56 43.7	+0.3
T1216	**Preci, Frazion**	**0.14**	**280**	P	Pg	13 56 43.3	+0.7
T1216				S	Sg	13 56 46.1	+1.5
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1256	**Bolognola (MC)**	**0.14**	**5**	P	Pg	13 56 43.3	+0.6
T1256				S	Sg	13 56 45.7	+0.9
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=N,96450μm,0.5s						
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=N,70087μm,0.6s						
FEMA	**Monte Fema**	**0.15**	**310**	P	Pg	13 56 43.0	+0.2
FEMA				S	Sg	13 56 45.9	+0.9
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,86850μm,0.3s						
FEMA				AML	AML		
	comp=N,86800μm,0.3s						
FEMA				AML	AML		
	comp=N,86800μm,0.3s						
AM05	**Amandola Campo**	**0.15**	**43**	P	Pg	13 56 43.8	+1.0
AM05				S	Sg	13 56 46.1	+1.1
AM05				AML	AML		
	comp=E,13065μm,0.6s						
AM05				AML	AML		
	comp=N,17250μm,0.9s						
AM05				AML	AML		
	comp=N,15325μm,0.6s						
AM05				AML	AML		
	comp=E,13105μm,0.6s						
AM05				AML	AML		
	comp=N,15330μm,0.6s						
AM05				AML	AML		
	comp=N,15345μm,0.6s						
AM05				AML	AML		
	comp=E,63750μm,0.5s						
AM05				AML	AML		
	comp=E,13100μm,0.6s						
AM05				AML	AML		
	comp=E,37896μm,0.1s						
T1241	**Roccafluvione,**	**0.16**	**93**	P	Pg	13 56 43.4	+0.5
T1241				S	Sg	13 56 46.4	+1.1
T1241				AML	AML		
	comp=N,57600μm,0.5s						
T1241				AML	AML		
	comp=N,56000μm,0.5s						
T1241				AML	AML		
	comp=E,45350μm,1.5s						
T1241				AML	AML		
	comp=N,56050μm,0.5s						
T1241				AML	AML		
	comp=E,42950μm,1.5s						
FDMO	**Fiordimonte**	**0.19**	**333**	P	Pg	13 56 43.8	+0.3
FDMO				S	Sg	13 56 47.2	+1.1
FDMO				AML	AML		
	comp=N,53150μm,0.7s						
FDMO				AML	AML		
	comp=E,46900μm,0.2s						
FDMO				AML	AML		
	comp=N,30192μm,0.6s						
T1204	**Amatrice, Fraz**	**0.20**	**157**	AML	AML		
	comp=E,25450μm,0.7s						
T1204				AML	AML		
	comp=N,14050μm,0.9s						
T1201	**Domo (RI)**	**0.21**	**171**	P	Pg	13 56 44.9	+1.2
GUMA	**Gualdo di Mace**	**0.22**	**25**	P	Pg	13 56 45.4	+1.5
GUMA				S	Sg	13 56 48.7	+1.8
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SMA1	**SAN MARTINO**	**0.25**	**158**	AML	AML		
	comp=E,33100μm,0.5s						
SMA1				AML	AML		
	comp=N,32850μm,0.6s						
SMA1				AML	AML		
	comp=E,33050μm,0.5s						
T1217	**Poggiodomo (PG**	**0.26**	**233**	AML	AML		
	comp=E,15200μm,0.7s						
T1217				AML	AML		
	comp=N,24100μm,0.6s						
T1217				AML	AML		
	comp=E,15800μm,0.7s						
T1217				AML	AML		
	comp=N,24700μm,0.7s						
T1217				AML	AML		
	comp=E,15150μm,0.7s						
T1217				AML	AML		
	comp=N,24150μm,0.6s						
T1217				AML	AML		
	comp=N,24750μm,0.7s						
T1217				AML	AML		
	comp=E,15850μm,0.7s						
T1215	**Vallo di Nera,**	**0.26**	**256**	P	Pb	13 56 45.8	-0.8
T1215				S	Sb	13 56 49.7	-1.5
T1215				AML	AML		
	comp=E,26700μm,0.4s						
T1215				AML	AML		
	comp=N,26400μm,1.4s						
T1215				AML	AML		
	comp=E,26750μm,0.4s						
T1215				AML	AML		
	comp=E,28250μm,0.5s						
T1215				AML	AML		
	comp=N,26100μm,1.4s						
T1215				AML	AML		
	comp=N,26050μm,1.4s						
T1215				AML	AML		
	comp=E,26700μm,0.5s						
CESI	**CESI - Serrava**	**0.26**	**302**	AML	AML		
	comp=E,40250μm,1.5s						
CESI				AML	AML		
	comp=N,51500μm,0.3s						
LNSS	**Leonessa**	**0.29**	**205**	P	Pb	13 56 46.4	-0.7
LNSS				S	Sb	13 56 51.2	-0.9
LNSS				AML	AML		
	comp=E,33300μm,1.2s						
LNSS				AML	AML		
	comp=N,22550μm,0.4s						
SEF1	**Sefro**	**0.34**	**326**	AML	AML		
	comp=E,53850μm,0.3s						
SEF1				AML	AML		
	comp=N,54100μm,1.1s						
PIO1	**Pioraco**	**0.35**	**332**	P	Pb	13 56 47.3	-0.8
PIO1				S	Sb	13 56 52.7	-1.2
PIO1				AML	AML		
	comp=E,18200μm,0.8s						
PIO1				AML	AML		
	comp=N,32750μm,0.2s						
RM33	**Pellescritta (**	**0.36**	**179**	P	Pb	13 56 47.5	-0.7
RM33				S	Sb	13 56 53.2	-0.8
RM33				AML	AML		
	comp=E,19950μm,0.9s						
RM33				AML	AML		
	comp=E,19300μm,0.9s						
RM33				AML	AML		
	comp=N,14250μm,1.6s						
RM33				AML	AML		
	comp=N,14000μm,1.6s						
OFFI	**Offida**	**0.36**	**79**	AML	AML		
	comp=E,28400μm,0.7s						
OFFI				AML	AML		
	comp=N,34500μm,0.5s						
CAMP	**Campotosto**	**0.36**	**156**	AML	AML		
	comp=E,8050μm,1.1s						
CAMP				AML	AML		
	comp=N,6430μm,0.8s						
SSM1	**San Severino M**	**0.36**	**356**	P	Pg	13 56 47.4	+0.7
SSM1				S	Sb	13 56 52.9	-1.3
TERO	**Teramo**	**0.38**	**130**	AML	AML		
	comp=N,11370μm,1.6s						
TERO				AML	AML		
	comp=N,11680μm,1.6s						
TERO				AML	AML		
	comp=N,11365μm,1.6s						
TERO				AML	AML		
	comp=E,9405μm,0.9s						
TERO				AML	AML		
	comp=E,9675μm,0.9s						
TERO	**Teramo**	**0.38**	**130**	S	Sb	13 56 53.8	-0.9
FIU1	**Fiuminata**	**0.38**	**328**	AML	AML		
	comp=E,14050μm,0.6s						
FIU1				AML	AML		
	comp=N,12050μm,0.4s						
FIU1				AML	AML		
	comp=E,14100μm,0.6s						
GAG1	**Gagliole**	**0.39**	**345**	AML	AML		
	comp=E,70100μm,0.2s						
GAG1				AML	AML		
	comp=N,73450μm,0.9s						
GAG1				AML	AML		
	comp=N,73500μm,0.9s						
MTL1	**Matelica**	**0.42**	**340**	AML	AML		
	comp=E,38950μm,0.3s						
MTL1				AML	AML		
	comp=E,38950μm,0.3s						
MTL1				AML	AML		
	comp=N,51100μm,0.6s						
MTL1				AML	AML		
	comp=N,51050μm,0.6s						
MTL1	**Matelica**	**0.42**	**340**	S	Sb	13 56 55.1	-0.7
T1211	**Morro Reatino**	**0.42**	**218**	AML	AML		
	comp=E,9070μm,0.5s						
T1211				AML	AML		
	comp=E,8740μm,0.5s						
T1211				AML	AML		
	comp=N,16350μm,0.5s						
T1211				AML	AML		
	comp=E,9060μm,0.5s						
T1211				AML	AML		
	comp=N,16150μm,0.5s						
T1211				AML	AML		
	comp=E,8740μm,0.5s						
T1211				AML	AML		
	comp=N,16200μm,0.5s						
T1211				AML	AML		
	comp=N,16350μm,0.5s						
ARRO	**Arrone**	**0.43**	**229**	AML	AML		
	comp=E,7835μm,0.6s						
ARRO				AML	AML		
	comp=E,7850μm,0.6s						
ARRO				AML	AML		
	comp=N,9525μm,0.7s						
ARRO				AML	AML		
	comp=N,9520μm,0.7s						
SNTG	**Esanatoglia**	**0.44**	**333**	AML	AML		
	comp=E,10970μm,0.6s						
SNTG				AML	AML		
	comp=E,10980μm,0.6s						
SNTG				AML	AML		
	comp=N,14400μm,0.2s						
SNTG				AML	AML		
	comp=E,11100μm,0.6s						
SNTG				AML	AML		
	comp=N,15150μm,0.2s						
SNTG				AML	AML		
	comp=E,10990μm,0.6s						
ASSB	**Assisi San Ben**	**0.44**	**294**	AML	AML		
	comp=N,14600μm,0.5s						
ASSB				AML	AML		
	comp=E,13200μm,1.2s						
TRE1	**Treia**	**0.45**	**10**	AML	AML		
	comp=N,29150μm,0.6s						
TRE1				AML	AML		
	comp=E,37550μm,1.0s						
EL6	**Elcito**	**0.47**	**350**	AML	AML		
	comp=E,40400μm,1.0s						
EL6				AML	AML		
	comp=N,47550μm,0.3s						
GIGS	**Gran Sasso**	**0.49**	**147**	AML	AML		
	comp=N,1720μm,1.6s						
GIGS				AML	AML		
	comp=E,2355μm,1.3s						
TRTR	**Tortoreto Alta**	**0.52**	**96**	P	Pb	13 56 51.2	+0.3
TRTR				AML	AML		
	comp=E,32800μm,0.6s						
TRTR				AML	AML		
	comp=N,24850μm,0.6s						
CESX	**Cesi**	**0.53**	**241**	AML	AML		
	comp=E,11350μm,1.6s						
CESX				AML	AML		
	comp=N,11050μm,0.5s						
AQU	**L'Aquila**	**0.53**	**164**	AML	AML		
	comp=E,7265μm,1.0s						
AQU				AML	AML		
	comp=E,7270μm,1.0s						
AQU				AML	AML		
	comp=N,9180μm,1.5s						
AQU				AML	AML		
	comp=E,6630μm,1.0s						
AQU				AML	AML		
	comp=N,9290μm,1.6s						
FOSV	**Fossato di Vic**	**0.54**	**323**	P	Pg	13 56 50.3	+0.3
FOSV				S	Sb	13 56 58.9	-0.4
FOSV				AML	AML		
	comp=E,10445μm,0.5s						
FOSV				AML	AML		
	comp=N,19650μm,0.3s						
PP3	**Marolino**	**0.59**	**30**	AML	AML		
	comp=N,36950μm,0.4s						
PP3				AML	AML		
	comp=N,36150μm,0.4s						
PP3				AML	AML		
	comp=E,26450μm,0.4s						
PP3				AML	AML		
	comp=E,24650μm,0.4s						
FIAM	**Fiamignano**	**0.60**	**186**	AML	AML		
	comp=E,7395μm,0.7s						
FIAM				AML	AML		
	comp=N,5045μm,0.9s						
MURB	**Monte Urbino**	**0.64**	**309**	AML	AML		
	comp=N,15350μm,0.3s						
MURB				AML	AML		
	comp=N,14650μm,0.3s						
MURB				AML	AML		
	comp=E,19250μm,0.3s						
MURB				AML	AML		
	comp=E,17700μm,0.3s						
FAGN	**Fagnano**	**0.66**	**155**	AML	AML		
	comp=N,7320μm,0.5s						
FAGN				AML	AML		
	comp=E,6920μm,1.4s						
ARVD	**Arcevia**	**0.66**	**343**	P	Pg	13 56 52.5	+0.2
ARVD				S	Sb	13 57 03.4	+0.6
ARVD				AML	AML		
	comp=E,12600μm,0.2s						
ARVD				AML	AML		
	comp=N,4370μm,0.8s						
ARVD				AML	AML		
	comp=N,3239μm,0.2s						
ARVD				END			
VCEL	**Villa Celiera**	**0.66**	**135**	AML	AML		
	comp=E,7355μm,0.6s						
VCEL				AML	AML		
	comp=N,7625μm,0.9s						
VCEL				AML	AML		
	comp=E,7350μm,0.6s						
ATFO	**Monte Foce - G**	**0.68**	**317**	AML	AML		
	comp=E,8040μm,0.6s						
ATFO				AML	AML		
	comp=N,4745μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.71**	**298**	AML	AML		
	comp=N,3390μm,0.7s						
ATTE				AML	AML		
	comp=E,4375μm,0.5s						
AOI	**Ancona**	**0.74**	**23**	AML	AML		
	comp=N,4870μm,0.4s						
AOI				AML	AML		
	comp=E,4375μm,0.4s						
FRON	**Frontone**	**0.74**	**332**	AML	AML		
	comp=E,6480μm,0.2s						
FRON				AML	AML		
	comp=N,6965μm,0.8s						
T0110	**Collepietro**	**0.77**	**146**	AML	AML		
	comp=N,5395μm,0.4s						
T0110				AML	AML		
	comp=E,4010μm,0.5s						
ATVO	**AVT- Monte Val**	**0.78**	**312**	AML	AML		
	comp=N,3615μm,0.7s						
ATVO				AML	AML		
	comp=E,3790μm,1.4s						
MGAB	**Montegabbione**	**0.81**	**274**	AML	AML		
	comp=E,9410μm,1.2s						
MGAB				AML	AML		
	comp=E,9575μm,1.2s						
MGAB				AML	AML		
	comp=N,9670μm,0.6s						
MGAB				AML	AML		
	comp=N,9310μm,0.6s						
SRES	**S.Oreste - Sor**	**0.81**	**220**	AML	AML		
	comp=E,2380μm,0.4s						
SRES				AML	AML		
	comp=N,2020μm,0.4s						
ATPI	**Pietralunga -**	**0.83**	**315**	AML	AML		
	comp=N,3220μm,1.6s						
ATPI				AML	AML		
	comp=E,3745μm,0.8s						
MPAG	**Monte Paganucc**	**0.83**	**337**	AML	AML		
	comp=N,4535μm,0.2s						
MPAG				AML	AML		
	comp=E,5205μm,0.6s						
PIEI	**Pieia**	**0.83**	**324**	AML	AML		
	comp=E,3285μm,0.3s						
PIEI				AML	AML		
	comp=N,2850μm,0.2s						
ATMI	**Monte Miggiano**	**0.83**	**305**	AML	AML		
	comp=N,10695μm,0.5s						
ATMI				AML	AML		
	comp=E,8040μm,0.5s						
FSSB	**Fossombrone**	**0.88**	**339**	AML	AML		
	comp=E,20050μm,0.4s						
FSSB				AML	AML		
	comp=N,17100μm,0.3s						
SACS	**San Casciano d**	**0.95**	**269**	AML	AML		
	comp=E,4450μm,0.7s						
SACS				AML	AML		
	comp=N,3360μm,0.7s						
SACS				AML	AML		
	comp=N,3415μm,0.7s						
SACS				AML	AML		
	comp=E,4465μm,0.7s						
PE3	**Peglio**	**0.98**	**328**	AML	AML		
	comp=N,37μm,0.3s						
PE3				AML	AML		
	comp=N,37μm,0.3s						
PE3				AML	AML		
	comp=E,37μm,0.3s						
CAFI	**Castiglion Fio**	**1.02**	**297**	AML	AML		
	comp=N,2940μm,1.0s						
CAFI				AML	AML		
	comp=E,2375μm,0.5s						
CAFI				AML	AML		
	comp=E,2420μm,0.5s						
CAFI				AML	AML		
	comp=N,2830μm,1.0s						
SSP9	**Sansepolcro**	**1.06**	**312**	AML	AML		
	comp=E,3225μm,1.2s						
SSP9				AML	AML		
	comp=N,3665μm,1.3s						
LPEL	**Lama dei Pelig**	**1.09**	**138**	AML	AML		
	comp=N,1785μm,0.9s						
LPEL				AML	AML		
	comp=E,1885μm,1.6s						
TRIF	**Trifonti**	**1.71**	**279**	AML	AML		
	comp=N,650μm,0.5s						
TRIF				AML	AML		
	comp=E,610μm,0.7s						
TRIF				AML	AML		
	comp=E,610μm,0.7s						

MOS ***28*** *14:02:25.1±1.1, 30°.61N×56°.45E, h13^{km}, mb4.8/35, Error ellipse: s-maj=6.6km s-min=4.6km az=88.4*
IDC ***28*** *14:02:25.1±0.5, 30°.63N×56°.46E, h0^{km}, mb4.4/35, mbtmp4.4/43, ML3.7/8, MS3.5/32, Error ellipse: s-maj=12.5km s-min=10.8km az=176.0*
TEH ***28*** *14:02:25.1, 30°.82N×56°.53E, h6^{km}, ML4.7*
BJI ***28*** *14:02:27.3±0.0, 30°.71N×56°.46E, h26^{km}, mb4.6/35, mB4.9/16, Ms4.3/14, Ms7 3.9/14*
NNC ***28*** *14:02:27.0±2.0, 30°.89N×56°.50E, h0^{km}, mb4.6, Error ellipse: s-maj=32.0km s-min=17.1km az=52.0*
THR ***28*** *14:02:27.1±0.7, 30°.80N×56°.55E, h15^{km}±8^{km}, ML4.6*
NEIC ***28*** *14:02:28.1±1.4, 30°.7N±0°.1×56°.40E±0°.07, h18^{km}±5^{km}, mb4.8/51, mb_Lg4.7(TEH), Error ellipse: s-maj=17.1km s-min=8.3km az=168.0*
DSN ***28*** *14:02:30.1±1.6, 30°.71N×56°.04E, h10^{km}, ML4.4/13, Error ellipse: s-maj=23.2km s-min=10.8km az=59.0*
OMAN ***28*** *14:02:30.2±0.7, 30°.76N×56°.33E, h18^{km}, mb5.7/17, ml4.5/4, ms2.9/3, Error ellipse: s-maj=10.6km s-min=6.0km az=73.0*
GII ***28*** *14:03:22.5±0.0, 30°.40N×51°.89E, h20^{km}*
ISC 28 14:02:27.2±0.3, 30°.80N±0°.03×56°.53E±0°.03, h10^{km}, n386, σ1§60/410, mb4.7/97, MS3.6/34, 18C-12D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHGB	**Koh Gabri**	**0.42**	**186**	*e*Pg	**Pg**	**14 02 35.1**	**-0.5**
KHGB				*e*Sg	**Sg**	**14 02 41.3**	**0.0**
TVBK	**TV Kerman**	**0.84**	**166**	*e*Pg	**Pg**	**14 02 42.9**	**-0.5**
TVBK				*e*Sg	**Sb**	**14 02 55.5**	**0.0**
TVBK				*e*		14 03 01.6	

comp=Z,12μm,0.2s
KRBR Kerman 0.84 166 *e*Pn **Pg 14 02 43.0 -0.5**
KRBR Kerman 0.84 166 *e*Pg **Pg 14 02 43.0 -0.5**
KRBR *e*Sg **Sg 14 02 54.9 +0.4**
KRBR IAML 14 02 59.8
comp=E,11μm,0.3s
KRBR IAML 14 03 00.7
comp=N,11μm,0.2s
IBAF Bafgh 1.14 314 *e*Pg **Pb 14 02 47.4 -1.7**
IBAF *e* 14 03 04.6
comp=Z,87μm,0.2s
NGRK Negar Kerman 1.17 171 *e*Pg **Pg 14 02 49.0 -0.7**
NGRK *e* 14 02 49.7
comp=Z,31μm,0.2s
CHMN Cheshme madani 1.28 137 *e*Pg **Pn 14 02 50.1 -1.4**
CHMN *e* 14 03 11.5
comp=Z,93μm,0.4s
IMEH Mehriz 1.74 290 *e*Pn **Pn 14 02 58.2 +0.4**
IMEH *e*Sg **Sg 14 03 22.9 -0.4**
TPRV Parvadeh(Tabas 2.23 3 *e*Pn **Pn 14 03 05.5 +1.2**
YZKH Yazd 2.29 314 *e*Pn **Pn 14 03 06.6 +1.5**
YZKH Yazd 2.29 314 *e*Pn **Pn 14 03 06.6 +1.5**
YZKH IAML 14 03 40.1
comp=E,3μm,0.5s
YZKH IAML 14 03 41.5
comp=N,4μm,0.6s
ICHK Chekchek 2.31 309 *e* 14 03 44.9
comp=Z,68μm,0.5s
ICHK *e*Pn **Pn 14 03 06.8 +1.2**
KBAM BAM 2.35 134 *e*Pn **Pn 14 03 07.6 +1.6**
BSRN Basiran 2.51 62 *e*Pn **Pn 14 03 08.7 +0.5**
BSRN Basiran 2.51 62 *e*Pn **Pn 14 03 08.7 +0.5**
IKOO Kooshah 2.66 52 *e*Pn **Pn 14 03 11.0 +0.6**
IKOO *e* 14 03 52.1
comp=Z,35μm,0.3s
ISAD Sadrabad 2.67 295 *e*Pn **Pn 14 03 12.0 +1.4**
ISAD *e* 14 03 55.8
comp=Z,50μm,0.6s
ITEG Tejag 2.82 42 *e*Pn **Pn 14 03 13.2 +0.7**
TKDS Koohdasht(Taba 2.85 10 *e*Pn **Pn 14 03 14.1 +1.2**
TABS Tabas 2.88 10 *e*Pn **Pn 14 03 14.7 +1.3**
TABS Tabas 2.88 10 *e*Pn **Pn 14 03 14.7 +1.3**
TABS IAML 14 04 07.9
comp=N,2μm,0.5s
TABS IAML 14 04 13.4
comp=E,1μm,0.8s
BAGH Bagheran - Bir 3.02 48 *e*Pn **Pn 14 03 15.3 -0.1**
BAGH *e* 14 04 08.4
comp=Z,9μm,0.3s
KHNJ Kahnooj 3.02 160 *e*Pn **Pn 14 03 16.3 +1.1**
KHNJ *e* 14 03 25.8
comp=Z,18μm,0.5s
NHDN Nehbandan 3.08 78 *e*Pn **Pn 14 03 17.2 +1.1**
TNSJ Nastanj 3.15 1 *e*Pn **Pn 14 03 18.3 +1.2**
IBND Bandar-abas 3.34 180 *e*Pn **Pn 14 03 20.8 +1.3**
AFRZ Afriz 3.36 38 *e*Pn **Pn 14 03 20.4 +0.4**
ANAR Anarak 3.37 316 *e*Pn **Pn 14 03 20.8 +0.8**
GENO Geno 3.40 185 *e*Pn **Pn 14 03 22.9 +2.4**
GENO *e* 14 04 26.8
comp=Z,10μm,0.4s
JHRM Jahrom 3.44 229 *e*Pn **Pn 14 03 22.4 +1.5**
IDAH Dahanechah 3.44 55 *e*Pn **Pn 14 03 21.9 +0.8**
IDAH *e* 14 04 24.7
comp=Z,9μm,1.0s
IMON Monand 3.58 47 *e*Pn **Pn 14 03 25.4 +2.4**
LAR1 LAR 3.64 212 *e*Pn **Pn 14 03 25.8 +2.1**
LAR1 *e* 14 04 29.1
comp=Z,16μm,0.5s
SHI Shiraz 3.66 253 *e*Pn **Pn 14 03 25.5 +1.4**
IRAM Ramesheh 3.69 287 *e*Pn **Pn 14 03 25.9 +1.4**
IRAM *e* 14 04 25.6
comp=Z,12μm,0.7s
NASN Na'in 3.74 303 *e*Pn **Pn 14 03 26.7 +1.4**
NASN Na'in 3.74 303 *e*Pn **Pn 14 03 26.7 +1.4**
NASN IAML 14 04 33.3
comp=E,627nm,0.5s
NASN IAML 14 04 36.8
comp=N,714nm,0.4s
QIR1 Qir 3.81 233 *e*Pn **Pn 14 03 27.9 +1.8**
ZHSF Zahedan 3.86 107 *e*Pn **Pn 14 03 28.7 +1.8**
ZHSF Zahedan 3.86 107 *e*Pn **Pn 14 03 28.7 +1.8**
ZHDN Zahedan 3.97 110 *e*Pn **Pn 14 03 29.5 +1.2**
IZEF Zefreh 4.14 301 *e*Pn **Pn 14 03 32.6 +1.9**
IGAR Gharneh 4.15 294 *e*Pn **Pn 14 03 32.1 +1.3**
KLNJ Kolanjah 4.25 274 *e*Pn **Pn 14 03 34.5 +2.2**
SHRT Shahrakht 4.27 47 *e*Pn **Pn 14 03 33.6 +1.2**
SHRT Shahrakht 4.27 47 *e*Pn **Pn 14 03 33.6 +1.2**
LMD1 Lamerd 4.53 221 *e*Pn **Pn 14 03 37.9 +2.0**
IBRJ Brojen 4.64 285 *e*Pn **Pn 14 03 39.2 +1.6**
SHME Shamm 4.75 184 P **Pn 14 03 40.6 +1.8**
SNR=17
SHME S **Sn 14 04 36.8 +2.8**
SHME Shamm 4.75 184 *i* P **Pn 14 03 40.2 +1.4**
SNR=17
BANOM Banah 4.86 182 P **Pn 14 03 43.0 +2.5**
SNR=82
BANOM P **Pn 14 03 43.1 +2.6**
SNR=37
BANOM S **Sn 14 04 38.6 +1.8**
BANOM Banah 4.86 182 *i* P **Pn 14 03 42.2 +1.7**
SNR=38
BANOM S **Sn 14 04 38.9 +2.0**
KRSH Karshahi 4.88 312 *e*Pn **Pn 14 03 42.3 +1.5**
IKLH Kolahrood 4.89 302 *e*Pn **Pn 14 03 43.2 +2.1**
AHBU AHRAM 4.94 248 *e*Pn **Pn 14 03 43.0 +1.5**
JASK Jask - Hormozg 5.05 166 *e*Pn **Pn 14 03 45.3 +2.2**
JASK Jask - Hormozg 5.05 166 P **Pn 14 03 45.7 +2.6**
SNR=28
ISFB Sefidab 5.06 316 *e*Pn **Pn 14 03 44.5 +1.2**
TBHD Torbat heydari 5.13 26 *e*Pn **Pn 14 03 45.5 +1.2**
IANJ Anjilo 5.14 335 *e*Pn **Pn 14 03 45.7 +1.2**
IPIR Pirpir 5.15 293 *e*Pn **Pn 14 03 46.5 +1.8**
SHRO Shahrood 5.19 355 *e*Pn **Pn 14 03 46.6 +1.5**
SHRO Shahrood 5.19 355 *e*Pn **Pn 14 03 46.6 +1.5**
SHRO IAML 14 05 20.6
comp=N,260nm,0.7s
SHRO IAML 14 05 23.1
comp=E,374nm,0.6s
QAMS Qamsar 5.24 305 *e*Pn **Pn 14 03 47.6 +1.8**
UMQ Umm Al-Quwin 5.31 188 P **Pn 14 03 50.1 +3.5**
MASF Masafi 5.42 184 P **Pn 14 03 50.5 +2.4**
SNR=54
MASF S **Sn 14 04 52.7 +2.1**
MSFE Esma-Masafi 5.43 184 *i* P **Pn 14 03 50.2 +1.9**
SNR=54
ILAS Lasjerd 5.46 328 *e*Pn **Pn 14 03 50.6 +1.7**
ILAS *e* 14 05 41.7
comp=Z,4μm,0.6s
TBJM Torbat-e-JAM 5.48 35 *e*Pn **Pn 14 03 50.2 +1.1**
ISHM Shahmirzad 5.68 332 *e*Pn **Pn 14 03 53.3 +1.4**
GHVR GHOM 5.74 311 *e*Pn **Pn 14 03 54.8 +2.2**
GHVR GHOM 5.74 311 *e*Pn **Pn 14 03 54.8 +2.2**
IFIR Firoozkooh 5.77 328 *e*Pn **Pn 14 03 54.0 +0.8**
IMOG Moghan 5.79 23 *e*Pn **Pn 14 03 55.4 +1.9**
IVRN Varamin 5.81 317 *e*Pn **Pn 14 03 55.1 +1.5**
NAZ Nazwa, Dubai 5.84 188 *i* P **Pn 14 03 56.2 +2.3**
SNR=37
HATD Hatta, Dubai 5.96 183 *i* P **Pn 14 03 57.4 +1.8**
SNR=30
IPAY Payeh 6.00 19 *e*Pn **Pn 14 03 58.8 +2.5**
HRA Herat 6.01 52 Pn **Pn 14 03 57.6 +1.3**
JRKH Jarkhoshk 6.01 31 *e*Pn **Pn 14 03 57.2 +0.8**
IDMV Damavand 6.07 323 *e*Pn **Pn 14 03 58.6 +1.3**
IAKL Akhelmad 6.08 17 *e*Pn **Pn 14 03 59.8 +2.4**
FAQ Al Faqa, Dubai 6.09 188 *i* P **Pn 14 03 59.2 +1.9**
SNR=46
ASHO Ashiyiah 6.11 184 P **Pn 14 03 60.0 +2.4**
SNR=78
ASHO P **Pn 14 03 60.0 +2.4**
SNR=56
ASHO Ashiyiah 6.11 184 *i* P **Pn 14 03 59.7 +2.1**
SNR=78
IQOM Qom 6.11 313 *e*Pn **Pn 14 03 59.3 +1.5**
IGLO Ghaloghah 6.12 339 *e*Pn **Pn 14 03 59.6 +1.7**
DAMV Damavand 6.14 323 *e*Pn **Pn 14 03 59.6 +1.3**
DAMV Damavand 6.14 323 *e*Pn **Pn 14 03 59.6 +1.3**
ASUD Al Ashush, Dub 6.24 190 *i* P **Pn 14 04 01.8 +2.4**
SNR=25
CHBR Chabahar 6.25 145 *e*Pn **Pn 14 04 01.4 +1.9**
CHBR Chabahar 6.25 145 *e*Pn **Pn 14 04 01.3 +1.8**
AMIS Naft Sefid 6.26 280 *e*Pn **Pn 14 03 58.2 -1.5**
IMYA Miami 6.28 27 *e*Pn **Pn 14 04 01.8 +1.7**
KHMZ Khomeyn 6.29 300 *e*Pn **Pn 14 04 02.6 +2.4**
KHMZ Khomeyn 6.29 300 *e*Pn **Pn 14 04 02.5 +2.4**
AJN Ajban 6.36 193 P **Pn 14 04 05.0 +4.0**
SNR=25
AJN Ajban 6.36 193 *i* P **Pn 14 04 03.4 +2.4**
SNR=14
IHSB Hasanabad 6.39 318 *e*Pn **Pn 14 04 02.9 +1.4**
IPRN Peran 6.46 328 *e*Pn **Pn 14 04 04.2 +1.7**
IKRD Kardeh 6.46 22 *e*Pn **Pn 14 04 04.6 +2.0**
IMND Minoodasht 6.51 352 *e*Pn **Pn 14 04 03.1 +0.1**
TEH Tehran 6.54 320 *e*Pn **Pn 14 04 05.7 +2.1**
TEHA Amirabad Tehra 6.54 320 *e*Pn **Pn 14 04 05.3 +1.6**
ASAO Ashtian 6.63 306 *e*Pn **Pn 14 04 06.8 +1.8**
ASAO Ashtian 6.63 306 *e*Pn **Pn 14 04 06.8 +1.8**
SOHO SOHO 6.64 180 P **Pn 14 04 05.6 +0.8**
SOHO SOHO 6.64 180 *i* P **Pn 14 04 05.4 +0.5**
SNR=12
ALNE Al Ain 6.75 186 P **Pn 14 04 08.9 +2.5**
SNR=10
ALNE S **Sn 14 05 24.4 +0.9**
ALNE Al Ain 6.75 186 *i* P **Pn 14 04 07.5 +1.0**
SNR=9.4
NGCH Negor - Chabah 6.78 142 *e*Pn **Pn 14 04 08.6 +1.8**
NGCH Negor - Chabah 6.78 142 P **Pn 14 04 08.5 +1.8**
CHTH Charan 6.81 320 *e*Pn **Pn 14 04 09.0 +1.6**
CHTH Charan 6.81 320 *e*Pn **Pn 14 04 09.0 +1.6**
IEMG Emamgholi 6.83 14 *e*Pn **Pn 14 04 09.2 +1.5**
MRVT Maraveh tapeh 6.85 357 *e*Pn **Pn 14 04 09.8 +2.0**
MRVT Maraveh tapeh 6.85 357 *e*Pn **Pn 14 04 09.9 +2.1**
IMHD Mahdasht 6.91 316 *e*Pn **Pn 14 04 10.8 +2.1**
BJRD Bojnurd 6.92 6 *e*Pn **Pn 14 04 10.3 +1.4**
BJRD Bojnurd 6.92 6 *e*Pn **Pn 14 04 10.3 +1.4**
IRAZ Razeghan 7.19 311 *e*Pn **Pn 14 04 14.7 +2.1**
HOQ Hoqain 7.22 174 *e*Pn **Pn 14 04 13.0 +0.1**
HOQ Hoqain 7.22 174 P **Pn 14 04 13.3 +0.4**
SNR=22
HOQ P **Pn 14 04 13.3 +0.4**
SNR=22
GEYT Alibeck 7.23 10 Pn **Pn 14 04 15.5 +2.4**
comp=Z,3.9nm,0.3s,baz=192,slow=13,SNR=90
GEYT Lg Lg 14 06 21.5
baz=215,slow=49
GEYT LR LR 14 07 53.8
comp=Z,174nm,19.6s,baz=204,slow=44
comp=Z,47nm,0.7s
GEYT Alibeck 7.23 10 Pn **Pn 14 04 15.1 +2.1**
GYA0 ALIBECK ARRAY 7.23 10 P **Pn 14 04 15.1 +2.1**
GYA0B ALIBECK ARRAY 7.23 10 Pn **Pn 14 04 15.1 +2.1**
GYA0B ALIBECK ARRAY 7.23 10 ⇑Pn **Pn 14 04 13.0 -0.1**
GYA0B ⇑Lg Lg 14 06 14.3
KLST Kelardasht - M 7.30 323 *e*Pn **Pn 14 04 15.9 +1.7**
BIDO Bidbid 7.39 168 P **Pn 14 04 15.7 +0.5**
SNR=6.0
MZWR Madinat Zayed 7.39 199 P **Pn 14 04 16.6 +1.4**
MZWR S **Sn 14 05 38.4 -0.8**
HAGD Aghdareh 7.40 305 *e*Pn **Pn 14 04 18.0 +2.5**
ARQ Araqi 7.43 180 P **Pn 14 04 18.0 +2.2**
SNR=19
ARQ P **Pn 14 04 18.0 +2.2**
SNR=10
ARQ S **Sn 14 05 40.5 +0.2**
QALM Alamut, Qazvin 7.46 320 *e*Pn **Pn 14 04 18.3 +2.0**
HSAM Samen 7.51 299 *e*Pn **Pn 14 04 18.7 +1.7**
GHWR Ruwais 7.54 206 P **Pn 14 04 18.2 +1.0**
GHWR S **Sn 14 05 41.4 -1.5**
QABG Abgarm-Qazvin 7.60 312 *e*Pn **Pn 14 04 19.2 +0.9**
IGZV Ghazvin 7.66 318 *e*Pn **Pn 14 04 20.5 +1.4**
IDOB Doab 7.67 295 *e*Pn **Pn 14 04 20.3 +1.1**
WSAR Wadi Sarin 7.76 166 Pn **Pn 14 04 18.4 -1.9**
comp=Z,3.2nm,0.3s,baz=354,slow=8.5,SNR=63
WSAR Sn **Sn 14 05 43.9 -4.4**
baz=185,slow=22
comp=Z,10nm,0.5s
WSAR Wadi Sarin 7.76 166 P **Pn 14 04 21.7 +1.4**
SNR=15
SMDO Samad 7.83 170 P **Pn 14 04 22.3 +1.0**
SNR=23
SMDO P **Pn 14 04 22.3 +1.0**
SNR=23
SLWR Sila 7.96 214 P **Pn 14 04 23.4 +0.4**
SLWR S **Sn 14 05 51.4 -1.7**
BSY Bisya 8.05 176 P **Pn 14 04 27.5 +3.2**
SNR=18
UMZA Um Al Zommool 8.14 189 P **Pn 14 04 25.7 +0.1**
GIDE GILAN DEYLAMAN 8.22 320 *e*Pn **Pn 14 04 29.5 +2.8**
GIDE GILAN DEYLAMAN 8.22 320 *e*Pn **Pn 14 04 29.5 +2.8**
MZR Muzera 8.23 200 P **Pn 14 04 27.8 +1.1**
SNR=8.0
MZR S **Sn 14 05 59.1 -0.7**
MZR Muzera 8.23 200 *i* P **Pn 14 04 27.8 +1.1**
SNR=7.8
IKOM Komasi 8.32 296 *e*Pn **Pn 14 04 30.1 +2.0**
WBK Wadi Bani Khal 8.44 164 *e*Pn **Pn 14 04 30.8 +1.1**
WBK Wadi Bani Khal 8.44 164 P **Pn 14 04 31.1 +1.4**
SNR=5.5
JMDO Jabal Madar 8.51 170 P **Pn 14 04 33.0 +2.3**
SNR=15
JMDO P **Pn 14 04 33.0 +2.3**
SNR=15
ZNJK Zanjan 8.77 314 *e*Pn **Pn 14 04 36.5 +2.2**
ZNJK Zanjan 8.77 314 *e*Pn **Pn 14 04 36.5 +2.2**
SNGE Sanandaj 8.82 301 *e*Pn **Pn 14 04 36.6 +1.6**
SNGE Sanandaj 8.82 301 *e*Pn **Pn 14 04 36.6 +1.6**
ISRB Sarab 10.13 316 *e*Pn **Pn 14 04 55.1 +2.1**
RAYN Ar Rayn 12.19 236 **Pn 14 05 17.0 -4.1**
RAYN Ar Rayn 12.19 236 P **Pn 14 05 17.0 -4.1**
RAYN Ar Rayn 12.19 236 *i* P **Pn 14 05 17.7 -3.4**
SNR=17
CHGR Chuyangaron 13.01 50 **Pn 14 05 33.3 +1.1**
CHGR Chuyangaron 13.01 50 P **Pn 14 05 33.3 +1.1**
THW Thamme Wali 13.10 77 P **Pn 14 05 36.0 +2.6**
GEVA Gevas 13.38 308 Pn **Pn 14 05 34.4 -3.0**
GAR Garm 13.95 50 **Pn 14 05 45.1 0.0**
MAK Makhachkala 14.11 332 *e*P **Pn 14 05 44.7 -2.4**
MAK *e*S **Sn 14 08 19.8 -3.9**
MAK pmax pmax
comp=Z,423nm,1.9s
MAK MLR MLR
comp=Z,67nm,9.0s
NIL Nilore 14.44 74 P **Pn 14 05 54.3 +2.5**
CHCP Chirah Chowk 14.45 74 P **Pn 14 05 53.8 +1.9**
BTK Batken 14.85 48 **Pn 14 05 57.8 +0.4**
BTK Batken 14.85 48 P **Pn 14 05 57.8 +0.4**
BTK pmax pmax
comp=Z,19nm,0.9s
GROC Groznyy 15.04 328 *e*P **P 14 06 02.9 -2.3**
ZEI Tsey 15.64 323 *e*P **P 14 06 15.5 +3.4**
ZEI pmax pmax
comp=Z,8.0nm,0.8s
NCK Nalchik 16.31 325⇑*e*P **Pn 14 06 15.2 -1.1**
KK31 Karatay Array 16.58 38 **Pn 14 06 20.1 +0.4**
KK31 Karatay Array 16.58 38 P **Pn 14 06 20.2 +0.4**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 16.58 38 P **Pn 14 06 19.9 +0.2**
KKAR Karatay Array 16.58 38 P **Pn 14 06 20.1 +0.4**
KKAR IAmb IAmb 14 06 41.8
comp=Z,5.3nm,0.8s
KKAR Karatay Array 16.58 38 P **Pn 14 06 19.9 +0.2**
KKAR pmax pmax
comp=Z,5.0nm,0.9s
NEY Neytrino 16.58 322⇓*e*P **Pn 14 06 19.9 0.0**
ASF Jabal al Asfar 16.80 280 Pn **Pn 14 06 20.9 -1.9**
comp=Z,0.7nm,0.3s,baz=81,slow=6.6,SNR=6.8
ASF Sn **Sn 14 09 30.0 +0.5**
comp=Z,0.1nm,0.3s,baz=154,slow=21,SNR=1.9
comp=Z,2.0nm,0.3s
KBZ Khabaz 16.83 324 Pn **Pn 14 06 22.6 -0.2**
comp=Z,0.1nm,0.3s,baz=104,slow=8.3,SNR=1.6
comp=Z,0.3nm,0.3s
KVAR Kislovodsk Arr 17.09 324 P **Pn 14 06 25.9 -0.4**
baz=156,slow=12
comp=Z,1.9nm,0.4s
KIV Kislovodsk 17.10 324 *e*P **P 14 06 28.9 +0.8**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,27nm,14.0s
HMDT Nahal Hemdat 17.96 280 Pn **P 14 06 41.3 +3.7**
MMAI Mount Meron Ar 18.07 283 LR LR 14 14 44.4
comp=Z,85nm,21.6s,baz=312,slow=41
KSH Kashi 18.10 56 P **Pn 14 06 34.0 -4.9**
KSH pmax pmax
comp=Z,5.0nm,0.6s
ZFRI Zfri 18.37 275 Pn **P 14 06 45.1 +3.0**
SOC Sochi 18.45 318 *e*P **P 14 06 42.9 0.0**
SOC *e* 14 10 11.5
SOC MLR MLR
comp=Z,78nm,14.0s
PRNI Paran 18.54 274 Pn **Pn 14 06 48.3 +4.1**
AAK Ala-Archa 18.59 46 P **Pn 14 06 45.2 +0.4**
comp=Z,0.1nm,0.3s,baz=225,slow=12,SNR=10
AAK LR LR 14 15 13.8
comp=Z,177nm,19.4s,baz=255,slow=41
comp=Z,5.1nm,1.0s
AAK Ala-Archa 18.59 46 P **P 14 06 44.9 +0.2**
AB31 Akbulak array 18.61 7 P **P 14 06 44.2 -0.5**
comp=Z,3.3nm,0.7s,baz=201,slow=11,SNR=39
ABKAR Akbulak array 18.61 7 P **P 14 06 45.1 +0.4**
EIL Elat 18.68 272 P **P 14 06 45.4 -0.1**
comp=Z,0.2nm,0.3s,baz=79,slow=8.4,SNR=1.8
EIL LR LR 14 15 14.2
comp=Z,107nm,21.7s,baz=360,slow=41
comp=Z,2.0nm,0.6s
EIL Elat 18.68 272 Pn **Pn 14 06 49.3 +3.4**
MBRI Mt Berech 18.69 272 Pn **Pn 14 06 49.3 +3.2**
KRMI Paran Flat 18.81 274 Pn **Pn 14 06 51.2 +3.7**
NRN Naryn 18.94 51 P **P 14 06 48.6 0.0**
NRN Naryn 18.94 51 P **P 14 06 48.6 0.0**
NRN pmax pmax
comp=Z,13nm,1.1s
BOOM Boomskoye usch 19.41 48 P **Pn 14 06 56.1 +1.3**
BOOM Boomskoye usch 19.41 48 P **Pn 14 06 56.1 +1.3**
BOOM pmax pmax
comp=Z,8.0nm,0.8s
AKTO Aktyubinsk 19.65 3 P **P 14 06 56.9 +0.9**
comp=Z,0.2nm,0.3s,baz=168,slow=9.6,SNR=25
comp=Z,4.6nm,0.7s
ANN Anapa 20.50 318 *e*P **P 14 07 05.4 +0.1**
ANN *e**PP **sP 14 07 11.2 +1.1**
ANN *e* 14 07 23.8
ANN *e*S **S 14 10 56.2 +1.7**
ANN pmax pmax
comp=Z,44nm,1.0s
BR131 Keskin Array S 20.66 302 P **P 14 07 07.3 0.0**
BR131 Keskin Array S 20.66 302 P **P 14 07 07.3 0.0**
BR131 pmax pmax
comp=Z,16nm,1.0s
BRTR Keskin Array B 20.66 302 P **P 14 07 07.9 +0.6**
comp=Z,8.7nm,0.9s,baz=128,slow=13,SNR=20
BRTR LR LR 14 16 43.7
comp=Z,28nm,20.4s,baz=104,slow=42
comp=Z,8.7nm,0.9s
BRTR Keskin Array B 20.66 302 P **P 14 07 05.9 -1.4**
BRTR Keskin Array B 20.66 302 *i* P Pn 14 07 11.0 +1.4
BRTR pmax pmax
comp=Z,9.0nm,0.9s
OTUK Ortayu 21.20 30⇑P **P 14 07 13.9 +1.1**
comp=Z,34nm,1.1s
PDGK Podgornoye 22.10 49⇓P **P 14 07 23.0 +0.3**
comp=Z,30nm,1.0s
BELG Belogornoye 22.55 346 P **P 14 07 27.6 +0.4**
comp=Z,13nm,0.5s,baz=149,slow=9.2,SNR=6.1
comp=Z,13nm,0.5s
BELG Belogornoye 22.55 346⇑*e*P **P 14 07 27.6 +0.4**
BELG pmax pmax
comp=Z,12nm,1.3s
ATD Arta Tunnel 22.99 216 LR LR 14 17 15.6
comp=Z,59nm,18.3s,baz=18,slow=39
VRH Novokhopyorsk 23.16 336 *e*P **P 14 07 33.2 -0.5**
VRH pmax pmax
comp=Z,30nm,1.0s
PYUN Piuthan 23.18 90 *e*P **P 14 07 33.1 -1.3**
comp=Z,18nm,0.8s
DANN Dangsing 23.79 89 *e*P **P 14 07 40.9 +0.4**
comp=Z,97nm,1.4s
VSR Storozhevoye 24.13 333 *e*P **P 14 07 42.9 -0.2**
VSR pmax pmax
comp=Z,20nm,1.5s
BRVK Borovoye 24.40 20 P **P 14 07 45.5 0.0**
BRVK Borovoye 24.40 20 P **P 14 07 45.6 0.0**
BRVK pmax pmax
comp=Z,11nm,1.1s
BRVK Borovoye 24.40 20⇓P **P 14 07 46.4 +0.8**
comp=Z,7.9nm,0.8s
BVA0 Borovoye Array 24.40 21⇑P **P 14 07 46.1 +0.4**
comp=Z,13nm,0.8s,baz=204,slow=8.6,SNR=54
BVAR Borovoye Array 24.40 21 P **P 14 07 47.0 +1.3**
comp=Z,6.3nm,0.8s,baz=201,slow=7.3,SNR=52
BVAR PcP **PcP 14 11 24.4 -0.1**
comp=Z,1.1nm,0.6s,baz=201,slow=3.0,SNR=4.8
BVAR LR LR 14 17 29.5
comp=Z,137nm,18.2s,baz=211,slow=37
comp=Z,6.3nm,0.8s
VORR Voronezh 24.47 333 *e*P **P 14 07 45.7 -0.5**
VORR pmax pmax
comp=Z,60nm,0.4s
GKN Gorkha 24.62 89 *e*P **P 14 07 47.9 -0.2**
comp=Z,32nm,1.1s
LPSR Galich'ya Gora 25.31 334 *e*P **P 14 07 54.2 +0.4**
LPSR pmax pmax
comp=Z,30nm,1.2s
MAKZ Makanchi 25.32 44 P **P 14 07 54.7 +0.7**
MAKZ Makanchi 25.32 44 P **P 14 07 54.7 +0.7**
MAKZ pmax pmax
comp=Z,53nm,1.0s
MAKZ Makanchi 25.32 44⇑P **P 14 07 55.1 +1.1**
comp=Z,63nm,1.1s
PKIN Phulchoki 25.38 90 *e*P **P 14 07 55.3 +0.3**
comp=Z,109nm,1.5s
PKI Pulchoki 25.39 90 *e*P **P 14 07 55.3 +0.1**
comp=Z,87nm,1.4s
MK31 Makanchi Array 25.49 44 P **P 14 07 56.9 +1.3**
MK31 IAmb IAmb 14 07 58.0
comp=Z,38nm,1.3s
MK31 Makanchi Array 25.49 44 P **P 14 07 56.9 +1.3**
MK31 pmax pmax
comp=Z,38nm,1.3s
MK31 Makanchi Array 25.49 44 P **P 14 07 56.6 +1.0**
comp=Z,8.2nm,0.5s,baz=226,slow=8.4,SNR=79
MKAR Makanchi Array 25.49 44 P **P 14 07 57.0 +1.4**
comp=Z,13nm,0.7s,baz=229,slow=8.3,SNR=98
MKAR LR LR 14 19 25.6
comp=Z,93nm,19.9s,baz=256,slow=40
comp=Z,13nm,0.7s
MKAR Makanchi Array 25.49 44 P **P 14 07 57.0 +1.4**
MKAR Makanchi Array 25.49 44*c e*P **P 14 07 57.0 +1.4**
MKAR pmax pmax
comp=Z,14nm,0.7s
ARU Arti 25.66 3 P **P 14 07 58.5 +1.5**
comp=Z,6.0nm,0.2s,baz=278,slow=9.9,SNR=1.2
ARU LR LR 14 18 38.6
comp=Z,114nm,20.9s,baz=194,slow=38
comp=Z,6.0nm,0.2s
ARU Arti 25.66 3*c i*P **P 14 07 57.9 +0.9**
ARU 14 08 34.8
ARU S **S 14 12 28.0 +2.8**
ARU pmax pmax
comp=Z,49nm,5.1s
GUN Gumba 25.71 89 *e*P **P 14 07 58.7 +0.5**
KURBB Kurchatov Arra 25.72 33 P **P 14 07 59.1 +1.5**
comp=Z,14nm,0.8s,baz=233,slow=9.7,SNR=42
comp=Z,14nm,0.8s
KURBB Kurchatov Arra 25.72 33⇑P **P 14 07 58.8 +1.2**
comp=Z,22nm,1.2s
KURK Kurchatov 25.82 33 P **P 14 07 59.2 +0.7**
KURK IAmb IAmb 14 08 03.5
comp=Z,32nm,0.9s
KURK Kurchatov 25.82 33*c i*P **P 14 07 59.8 +1.3**
KURK pmax pmax
comp=Z,37nm,1.0s
JIRN Jiri 26.04 89 *e*P **P 14 08 01.4 +0.2**
SVE Sverdlovsk 26.18 5 *e*P **P 14 08 05.3 +3.6**
RAMN Ramite 26.57 91 *e*P **P 14 08 05.5 -0.4**
IDI Anoyia 26.83 288 P **P 14 08 06.8 -1.1**
comp=Z,16nm,1.0s,baz=119,slow=13,SNR=1.7
comp=Z,16nm,1.0s
WMQ Urumqi 27.81 53 *e*P **P 14 08 18.3 +1.7**
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ LR LR
comp=Z,130nm,15.5s
WMQ LR LR
comp=Z,120nm,21.5s
MLR Muntele Rosu 27.97 310 P **P 14 08 18.4 +0.3**
comp=Z,2.8nm,0.8s,baz=124,slow=7.3,SNR=1.9
MLR LR LR 14 22 11.2
comp=Z,42nm,21.1s,baz=152,slow=42
comp=Z,2.8nm,0.8s
OBN Obninsk 28.15 335 P **P 14 08 20.3 +0.9**
comp=Z,4.1nm,0.4s,baz=248,slow=7.0,SNR=2.2
comp=Z,4.1nm,0.4s

OBN Obninsk 28.15 335 *eP* **P 14 08 18.8 -0.6**
OBN *e* 14 09 08.3
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,35nm,7.0s
KIRV Kirov 28.21 352 P **P 14 08 21.1 +1.2**
comp=Z,7.6nm,0.5s,baz=157,slow=7.7,SNR=2.0
KIRV LR LR 14 21 54.7
comp=Z,116nm,19.1s,baz=175,slow=41
comp=Z,7.6nm,0.5s
AKASG Malin Array Be 28.43 322 P **P 14 08 22.3 +0.4**
comp=Z,0.2nm,0.3s,baz=124,slow=7.7,SNR=9.2
AKASG LR LR 14 20 10.5
comp=Z,102nm,18.9s,baz=94,slow=37
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 28.43 322 *i* P **P 14 08 23.7 +1.8**
AKBB Malin Array Si 28.43 322⇓*iP* **P 14 08 23.0 +1.1**
AKBB pmax pmax
comp=Z,16nm,1.4s
DGZ Jazzator, Alta 29.90 42*c i* P **P 14 08 36.8 +1.6**
DGZ pmax pmax
comp=Z,12nm,0.7s
ZAA0 Zalesovo Array 30.82 33 P **P 14 08 43.5 +0.5**
ZAA0 Zalesovo Array 30.82 33 ⇓P **P 14 08 43.5 +0.5**
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 30.82 33 P **P 14 08 43.8 +0.7**
comp=Z,24nm,0.6s,baz=240,slow=9.2,SNR=102
comp=Z,24nm,0.6s
MNK Minsk 31.32 327 *i* P **P 14 08 45.0 -2.4**
MNK *i* 14 09 47.2
MNK *i* S **S 14 13 49.9 -4.3**
MNK *i* SS **SnSn 14 15 37.6 +0.5**
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=N,28nm,0.8s
MNK pmax pmax
comp=Z,8.0nm,1.0s
MNK MLR MLR
comp=Z,148nm,15.0s
MNK MLR MLR
comp=E,51nm,19.0s
MNK MLR MLR
comp=N,365nm,16.0s
MNK Minsk 31.32 327 *i* P **P 14 08 45.0 -2.4**
comp=E,4.0nm,1.0s
MNK *i* P **P 14 08 45.0 -2.4**
comp=N,28nm,0.8s
MNK *i* P **P 14 08 45.0 -2.4**
comp=Z,8.0nm,1.0s,baz=127
MNK *i* PP **PnPn 14 09 47.2 -2.4**
MNK *i* PPP PPP 14 09 58.7
MNK *i* S **S 14 13 49.9 -4.3**
MNK *i* SS **SnSn 14 15 37.7 +0.5**
MNK *i* SSS SSS 14 15 54.9
MNK *i* LQ LQ 14 19 03.9
MNK *i* LR LR 14 20 34.8
MNK *i* LRM MLR 14 22 24.8
comp=Z,148nm,14.6s
MNK *i* LRM MLR 14 22 52.8
comp=E,51nm,19.1s
MNK *i* LRM MLR 14 23 04.3
comp=N,365nm,15.9s
KOLS Kolonicke sedl 31.57 315 *eP* **P 14 08 51.6 +1.8**
CRVS Cervenica-Dubn 32.05 314 *eP* **P 14 08 56.1 +2.1**
VYHS Vyhne 33.55 313 *eP* **P 14 09 09.9 +2.7**
VRAC Vranov 35.21 313 LR LR 14 26 05.0
comp=N,62nm,18.1s,baz=186,slow=40
GTA Gaotai 36.16 64⇑P **P 14 09 31.5 +1.6**
GTA pP sP 14 09 36.8 +1.8
GTA sP pP 14 09 39.8 +6.3
GTA pmax pmax
comp=N,10.0nm,1.5s
GTA pmax pmax
comp=N,98nm,4.9s
GTA LR LR
comp=N,120nm,14.5s
GTA LR LR
comp=N,120nm,15.3s
GTA LR LR
comp=N,120nm,17.1s
CKRC Cesky Krumlov 36.53 312 *eP* **P 14 09 35.8 +2.9**
FINES FINESS Array B 36.56 336 P **P 14 09 33.6 +0.7**
comp=N,7.3nm,0.9s,baz=141,slow=9.3,SNR=9.1
FINES LR LR 14 29 02.6
comp=N,59nm,19.4s,baz=1.0,slow=44
comp=N,7.3nm,0.9s
FINES FINESS Array B 36.56 336 P **P 14 09 33.0 +0.2**
GERES GERESS Array B 36.93 312 P **P 14 09 36.3 0.0**
comp=N,1.2nm,0.8s,baz=99,slow=8.8,SNR=6.0
GERES PcP **PcP 14 11 59.4 +1.8**
comp=N,0.8nm,0.8s,baz=116,slow=2.3,SNR=4.4
comp=N,1.2nm,0.8s
GERES GERESS Array B 36.93 312 P **P 14 09 35.2 -1.1**
KHC Kasperske Hory 37.07 312 *eP* **P 14 09 39.3 +1.8**
KHC Kasperske Hory 37.07 312 *eP* **P 14 09 39.3 +1.8**
KHC *ex* x 14 09 58.5
CLL Collm 37.98 315 *eP* **P 14 09 46.0 +0.9**
CLL Collm 37.98 315 *eP* **P 14 09 46.0 +0.9**
MOY Mondy 38.64 44 *eP* **P 14 09 52.9 +2.1**
MOY pmax pmax
comp=Z,26nm,1.8s
APA Apatity 39.27 346⇓*iP* **P 14 09 56.3 +0.6**
APA pmax pmax
comp=Z,8.0nm,0.7s
APA MLR MLR
comp=Z,900nm,10.0s
KEST Kesra 39.46 290 P **P 14 09 57.7 -0.1**
comp=Z,4.7nm,0.8s,baz=49,slow=11,SNR=1.3
comp=Z,4.7nm,0.8s
LZH Lanzhou 39.53 69 *eP* **P 14 09 57.3 -1.2**
LZH pP pP 14 10 02.3 +0.2
LZH sP sP 14 10 06.3 +2.7
LZH pmax pmax
comp=Z,12nm,1.1s
LZH LR LR
comp=Z,210nm,14.5s
LZH LR LR
comp=Z,180nm,15.3s
LZH LR LR
comp=Z,180nm,17.1s
PZH PanZhiHua 39.71 85 P **P 14 10 00.8 +0.7**
PZH pmax pmax
comp=Z,9.0nm,1.0s
PZH pmax pmax
comp=Z,90nm,4.8s
ZAK Zakamensk 39.75 47 *eP* **P 14 10 00.5 +0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
CHTO Chiang Mai 40.09 97 P **P 14 10 03.0 -0.2**
CHTO IAmb IAmb 14 10 04.1
comp=Z,14nm,0.9s
CHTO Chiang Mai 40.09 97 P **P 14 10 03.0 -0.2**
CHTO pmax pmax
comp=Z,14nm,1.0s
CM31 Chiang Mai Arr 40.24 98 P **P 14 10 04.0 -0.4**
CMAR Chiang Mai Arr 40.24 98 P **P 14 10 04.5 +0.1**
comp=Z,2.9nm,0.8s,baz=295,slow=8.3,SNR=23
comp=Z,2.9nm,0.8s
CMAR Chiang Mai Arr 40.24 98 P **P 14 10 04.2 -0.2**
HFS Hagfors 40.81 329 P **P 14 10 09.0 +0.5**
comp=Z,7.6nm,0.8s,baz=130,slow=14,SNR=6.1
comp=Z,7.6nm,0.8s
PHRA Phrae 41.32 97 P **P 14 10 13.1 -0.2**
SONM Songino Array 41.40 51 P **P 14 10 14.8 +1.1**
comp=Z,5.6nm,1.0s,baz=264,slow=9.6,SNR=21
SONM LR LR 14 28 33.5
comp=Z,53nm,18.9s,baz=208,slow=38
comp=Z,5.6nm,1.0s
SONM Songino Array 41.40 51 P **P 14 10 14.4 +0.7**
SONM Songino Array 41.40 51 P **P 14 10 14.4 +0.7**
SONM pmax pmax
comp=Z,10.0nm,1.2s
ULN Ulaanbaatar 41.84 51*ceP* **P 14 10 18.8 +1.4**
ULN pmax pmax
comp=Z,15nm,1.7s
ULN Ulaanbaatar 41.84 51 P **P 14 10 16.7 -0.7**
comp=Z,42nm,1.1s
NB2 NORSAR Subarra 42.30 329 P **P 14 10 20.7 -0.2**
comp=Z,2.7nm,0.8s,baz=116,slow=8.6
NOA NORSAR Array B 42.30 329 P **P 14 10 21.2 +0.4**
comp=Z,1.6nm,0.7s,baz=115,slow=8.1,SNR=6.0
NOA LR LR 14 31 43.2
comp=Z,64nm,18.1s,baz=315,slow=41
comp=Z,1.6nm,0.7s
NRIK Noril'sk 42.44 16 P **P 14 10 22.9 +1.2**
comp=Z,3.5nm,0.7s,baz=206,slow=4.5,SNR=4.7
NRIK LR LR 14 29 50.1
comp=Z,76nm,18.1s,baz=191,slow=39
comp=Z,3.5nm,0.7s
NRIK Noril'sk 42.44 16⇓*eP* **P 14 10 23.0 +1.2**
NRIK pmax pmax
comp=Z,8.0nm,1.1s
ARCES ARCESS Array B 42.58 344 P **P 14 10 23.5 +0.5**
comp=Z,2.7nm,0.9s,baz=115,slow=5.5,SNR=5.8
ARCES LR LR 14 30 43.0
comp=Z,103nm,18.1s,baz=150,slow=40
comp=Z,2.7nm,0.9s
HHC Hu-ho-hao-te 45.09 61 *eP* **P 14 10 44.5 +0.8**
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,170nm,5.4s
BOD Bodaibo 47.31 38 *eP* **P 14 11 01.4 +0.6**
BOD pmax pmax
comp=Z,29nm,1.4s
XLT XiLinHaoTe 48.15 57⇓*iP* **P 14 11 09.5 +1.9**
XLT pP sP 14 11 15.5 +2.8
XLT sP pP 14 11 18.0 +6.7
XLT pmax pmax
comp=Z,9.0nm,1.1s
XLT pmax pmax
comp=Z,110nm,5.5s
EKA Eskdalemuir Ar 48.22 319 P **P 14 11 07.6 -0.3**
comp=Z,0.5nm,0.5s,baz=96,slow=5.9,SNR=3.6
comp=Z,0.5nm,0.5s
BJI Beijing 48.68 62 P **P 14 11 12.3 +0.7**
BJI pmax pmax
comp=Z,10.0nm,1.9s
PSI Prapat 48.74 116 P **P 14 11 10.2 -2.3**
comp=Z,4.2nm,0.9s,comp=Z,5.8nm,2.4s
PSI P **P 14 11 10.5 -2.0**
comp=Z,4.2nm,0.9s,comp=Z,5.8nm,2.4s
IPM Ipoh 49.35 113 P **P 14 11 13.8 -3.3**
comp=Z,9.4nm,1.2s
ESDC Sonseca Array 49.37 298 P **P 14 11 15.6 -1.5**
comp=Z,0.8nm,0.8s,baz=74,slow=8.2,SNR=5.3
ESDC PcP **PcP 14 12 38.5 -1.0**
comp=Z,2.6nm,1.0s,baz=47,slow=4.5,SNR=7.2
comp=Z,0.8nm,0.8s
MDT Midelt 51.35 289 LR LR 14 38 13.8
comp=Z,40nm,18.1s,baz=322,slow=42
NJ2 Nanjing 52.52 71 *eP* **P 14 11 38.0 -2.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
SDSI Sungai Dareh 53.05 118 P **P 14 11 42.0 -2.8**
comp=Z,20μmcomp=Z,10.0nm,1.0s
TOA0 Torodi Ar. Sit 53.28 263 P **P 14 11 44.4 -2.1**
TOA0 IAmb IAmb 14 11 47.2
comp=Z,15nm,0.8s
TOA0 Torodi Ar. Sit 53.28 263 P **P 14 11 46.2 -0.3**
SNR=18
TORD Torodi Ar. Bea 53.28 263 P **P 14 11 46.1 -0.5**
comp=Z,10nm,0.7s,baz=56,slow=7.1,SNR=79
comp=Z,10nm,0.7s
TORD Torodi Ar. Bea 53.28 263 P **P 14 11 46.0 -0.5**
TORD IAmb IAmb 14 11 50.0
comp=Z,10nm,0.8s
ZEA Zeya 54.65 43 *eP* **P 14 11 57.8 +1.8**
ZEA pmax pmax
comp=Z,10.0nm,1.5s
TIXI Tiksi 55.53 21⇓*eP* **P 14 12 02.0 -0.1**
TIXI pmax pmax
comp=Z,6.0nm,1.3s
BORG Borgarnes 57.46 330 LR LR 14 42 10.1
comp=Z,60nm,19.6s,baz=103,slow=41
KLR Kul'dur 58.09 48 LR LR 14 38 15.3
comp=Z,53nm,18.3s,baz=272,slow=37
KLR Kul'dur 58.09 48⇑*eP* **P 14 12 20.4 -0.2**
KLR pmax pmax
comp=Z,8.0nm,1.1s
KSRS Korea Array 58.20 63 P **P 14 12 21.4 -0.2**
comp=Z,2.5nm,0.8s,baz=279,slow=6.7,SNR=5.7
comp=Z,2.5nm,0.8s
DBIC Dimbokro 62.08 261 P **P 14 12 47.0 -1.5**
comp=Z,7.8nm,0.9s,baz=7.3,slow=3.6,SNR=6.7
DBIC LR LR 14 41 10.5
comp=Z,54nm,18.4s,baz=32,slow=38
comp=Z,7.8nm,0.9s
DBIC Dimbokro 62.08 261 P **P 14 12 45.6 -2.9**
DBIC Dimbokro 62.08 261 P **P 14 12 45.6 -2.9**
DBIC pmax pmax
comp=Z,26nm,1.5s
KIC Kosan Boka 62.15 260⇑*eP* **P 14 12 48.7 -0.3**
comp=Z,3.7nm,0.4s
TSUM Tsumeb 62.23 222 LR LR 14 38 49.1
comp=Z,44nm,20.2s,baz=340,slow=35
TIC Toumodi 62.24 261⇑*iP* **P 14 12 49.0 -0.6**
comp=Z,2.0nm,0.2s
SUMG Summit 62.40 340 *i* P **P 14 12 50.0 -0.3**
LIC Lamto 62.46 260⇑*iP* **P 14 12 50.4 -0.7**
comp=Z,13nm,0.4s
SEY Seymchan 65.61 30 P **P 14 13 11.5 +0.5**
comp=Z,4.7nm,0.6s,baz=276,slow=7.6,SNR=14
comp=Z,4.7nm,0.6s
SEY Seymchan 65.61 30⇓*eP* **P 14 13 11.5 +0.5**
SEY pmax pmax
comp=Z,22nm,2.0s
YSS Yuzh-Sakhalins 65.80 49⇓*eP* **P 14 13 13.5 +1.0**
YSS pmax pmax
comp=Z,97nm,1.8s
MA2 Magadan 66.03 34 LR LR 14 44 46.3
comp=Z,37nm,21.1s,baz=268,slow=38
BOSA Boshof 66.18 210 P **P 14 13 14.6 -0.6**
comp=Z,1.4nm,0.7s,baz=26,slow=9.0,SNR=1.5
BOSA LR LR 14 42 21.1
comp=Z,33nm,18.9s,baz=14,slow=36
comp=Z,1.4nm,0.7s
MJAR Matsushiro Arr 66.28 61 LR LR 14 42 46.3
comp=Z,26nm,20.6s,baz=0.5,slow=36
EUNU Eureka 67.52 353 P **P 14 13 24.0 +0.9**
EUNU IAmb IAmb 14 13 31.1
comp=Z,12nm,1.2s
SFJD Kangerlussuaq 68.36 336 LR LR 14 45 18.0
comp=Z,42nm,18.1s,baz=96,slow=38
BILL Bilibino 68.73 22 *eP* **P 14 13 32.2 +1.4**
BILL *e* 14 13 56.5
BILL *e* 14 16 05.7
BILL pmax pmax
comp=Z,5.0nm,1.3s
BILL MLR MLR
comp=Z,40nm,16.0s
SUR Sutherland 71.36 211 LR LR 14 45 45.1
comp=Z,75nm,18.6s,baz=357,slow=36
A36M Sachs Harbour 77.49 1 P **P 14 14 22.9 +0.4**
C36M Paulatuk 80.15 0 P **P 14 14 36.4 -0.7**
C36M IAmb IAmb 14 14 37.5
comp=Z,9.5nm,0.8s
COLD Coldfoot 80.20 10 P **P 14 14 37.8 +0.3**
COLD IAmb IAmb 14 14 39.2
comp=Z,5.4nm,0.9s
IMAR Indian Mountai 80.75 12 P **P 14 14 40.6 +0.2**
BMAR Burnt Mountain 80.79 8 P **P 14 14 40.3 -0.4**
INK Inuvik 80.91 4 P **P 14 14 41.2 0.0**
comp=Z,3.7nm,0.9s,baz=345,slow=8.7,SNR=4.3
comp=Z,3.7nm,0.9s
INK Inuvik 80.91 4 P **P 14 14 41.4 +0.2**
INK Inuvik 80.91 4 P **P 14 14 41.4 +0.2**
INK pmax pmax
comp=Z,5.0nm,1.2s
H21K Melozitna Rive 81.22 12 P **P 14 14 43.4 +0.4**
H21K IAmb IAmb 14 14 44.5
comp=Z,5.5nm,0.9s
H23K Yukon River 81.61 11 P **P 14 14 45.8 +0.8**
H23K IAmb IAmb 14 14 47.2
comp=Z,7.5nm,0.8s
SCHQ Schefferville 81.85 331 P **P 14 14 46.1 -0.4**
comp=Z,3.8nm,0.8s,baz=108,slow=3.2,SNR=2.2
SCHQ LR LR 14 51 29.8
comp=Z,30nm,18.7s,baz=194,slow=36
comp=Z,3.8nm,0.8s
MLY Manley 82.14 11 P **P 14 14 47.1 -0.8**
MLY IAmb IAmb 14 14 49.8
comp=Z,5.1nm,1.0s
J20K Nowinta River 82.31 13 P **P 14 14 49.1 +0.4**
J20K IAmb IAmb 14 14 53.5
comp=Z,12nm,1.1s
MDM Murphy Dome 82.62 10 P **P 14 14 49.4 -1.0**
MDM IAmb IAmb 14 14 51.8
comp=Z,9.8nm,0.9s
COLA College 82.76 10⇓*eP* **P 14 14 50.5 -0.5**
COLA pmax pmax
comp=Z,7.0nm,0.9s
BPAW Bear Paw Mtn. 82.96 12 P **P 14 14 52.5 +0.3**
BPAW IAmb IAmb 14 14 54.0
comp=Z,9.6nm,0.9s
IL31 83.00 10 P **P 14 14 51.5 -0.7**
IL31 IAmb IAmb 14 14 52.9
comp=Z,3.8nm,0.8s
ILAR Eielson Array 83.00 10 P **P 14 14 52.1 -0.2**
comp=Z,2.2nm,0.7s,baz=320,slow=4.3,SNR=28
ILAR LR LR 14 56 39.0
comp=Z,69nm,18.0s,baz=50,slow=39
comp=Z,2.2nm,0.7s
ILAR Eielson Array 83.00 10 P **P 14 14 52.2 -0.1**
K20K Telida 83.06 13 P **P 14 14 52.2 -0.4**
K20K IAmb IAmb 14 14 54.2
comp=Z,9.7nm,0.8s
J25K Salcha River, 83.36 9 P **P 14 14 54.5 +0.2**
J25K IAmb IAmb 14 14 55.2
comp=Z,6.0nm,1.0s
CAST Castle Rocks 83.39 13 P **P 14 14 54.1 -0.3**
J26L Joseph Creek 83.71 9 P **P 14 14 56.0 -0.1**
J26L IAmb IAmb 14 14 57.2
comp=Z,7.0nm,0.7s
EGAK Eagle 83.74 8 P **P 14 14 56.4 +0.3**
EGAK IAmb IAmb 14 14 57.4
comp=Z,6.7nm,0.9s
SCRK Sand Creek 84.16 9 P **P 14 14 58.8 +0.4**
SCRK IAmb IAmb 14 15 00.2
comp=Z,8.6nm,1.1s
K27K Chicken 84.35 8 P **P 14 14 60.0 +0.7**
K27K IAmb IAmb 14 15 00.6
comp=Z,6.7nm,0.8s
DHY Denali Highway 84.52 11 P **P 14 15 00.3 0.0**
DHY IAmb IAmb 14 15 01.3
comp=Z,4.8nm,0.8s
DAWY Dawson 84.62 7 P **P 14 15 00.9 +0.2**
DAWY IAmb IAmb 14 15 03.3
comp=Z,16nm,1.4s
N19K Bonanza Creek 85.26 15 P **P 14 15 03.7 -0.3**
L27K Beaver Creek, 85.32 8 P **P 14 15 05.0 +0.8**
L27K IAmb IAmb 14 15 06.1
comp=Z,6.9nm,1.0s
BCAR Beaver Creek A 85.32 8 P **P 14 15 04.3 +0.1**
SUA Susitna One 85.43 13 P **P 14 15 04.0 -0.9**
M24K Tolsona, Glenn 85.62 10 P **P 14 15 07.0 +1.2**
GENI Genyem 85.85 95 P **P 14 15 05.5 -2.1**
M27K Edge Creek, AK 85.99 8 P **P 14 15 08.3 +0.6**
M27K IAmb IAmb 14 15 09.7
comp=Z,10nm,0.8s
YKA Yellowknife Ar 86.76 356 P **P 14 15 11.9 +0.6**
comp=Z,3.9nm,1.0s,baz=360,slow=5.1,SNR=7.8
comp=Z,3.9nm,1.0s
YKA Yellowknife Ar 86.76 356 *i* P **P 14 15 11.8 +0.5**
YKA pmax pmax
comp=Z,4.0nm,1.0s
FARO Faro, Yukon 86.96 5 P **P 14 15 12.6 +0.3**
FARO IAmb IAmb 14 15 13.7
comp=Z,11nm,1.3s
CTGM Chitina Glacie 87.41 9 P **P 14 15 14.8 +0.2**
KDAK Kodiak Island 88.42 15 P **P 14 15 19.7 +0.3**
comp=Z,6.0nm,0.8s,baz=300,slow=7.2,SNR=5.4
KDAK LR LR 15 01 14.1
comp=Z,47nm,18.4s,baz=112,slow=40
comp=Z,6.0nm,0.8s
KDAK Kodiak Island 88.42 15 P **P 14 15 19.5 +0.2**
KDAK Kodiak Island 88.42 15 P **P 14 15 19.5 +0.2**
KDAK pmax pmax
comp=Z,24nm,1.5s
LATQ La Tuque 89.81 328 P **P 14 15 25.4 -0.6**
WRA Warramunga Arr 90.11 113 P **P 14 15 26.9 -0.9**
comp=Z,1.3nm,1.0s,baz=318,slow=3.8,SNR=8.4
comp=Z,1.3nm,1.0s
WRA Warramunga Arr 90.11 113 *i* P **P 14 15 26.8 -1.0**
WRA pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 91.78 116 P **P 14 15 34.5 -1.1**
comp=Z,1.7nm,0.9s,baz=306,slow=4.8,SNR=13
comp=Z,1.7nm,0.9s
ULM Lac du Bonnet 95.68 343 LR LR 15 00 33.9
comp=Z,69nm,18.6s,baz=295,slow=36
TXAR Lajitas Array 117.29 341 PKP **PKPdf 14 21 11.1 -2.3**
comp=Z,0.3nm,0.8s,baz=27,slow=2.0,SNR=2.5

UCR 28 14:11:05.8±1.3, 9.66N×84.78W, h23km±2km, MW3.6, 2C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACO	**JACO, Garabito**	**0.12**	**87**	*eP*	Pb	14 11 09.9	-0.4
JACO				*eS*	Sb	14 11 13.6	+0.3
JTS	**Las Juntas de**	**0.65**	**345**	*eP*	Pb	14 11 17.7	-0.9
HDC	**Heredia**	**0.74**	**62**	*eP*	Pb	14 11 19.9	-0.2
INDI	**Punta indio, G**	**0.75**	**286**	*eP*	Pb	14 11 19.5	-0.6
CASO	**Castillo**	**0.77**	**3**	⇓*iP*	Pb	14 11 20.1	-0.5
CASO				*eS*	Sb	14 11 30.9	+0.1
FORC	**Fortuna**	**0.81**	**7**	*eP*	Pb	14 11 21.0	-0.3
FORC				*eS*	Sb	14 11 32.3	+0.5
CEDE	**Laguna Cedeo**	**0.83**	**5**	*eP*	Pb	14 11 21.4	-0.2
CEDE				*eS*	Sn	14 11 33.1	-0.6
ORTG	**Ortega, Santa**	**0.97**	**316**	*eP*	Pb	14 11 23.1	-0.9
HAYA	**Volcan Irazu**	**0.97**	**71**	*eP*	Pn	14 11 24.6	+0.1
EDDO	**Dominical**	**0.98**	**114**	*eP*	Pb	14 11 23.1	-1.0
ACAL	**Aguas Claras**	**1.00**	**345**	⇓*iP*	Pb	14 11 23.9	-0.8
ACAL				*eS*	Sb	14 11 37.7	+0.3
SAJU	**San Juanillo,**	**1.01**	**294**	*eP*	Pb	14 11 29.1	+4.5
CUI	**Cuipilapa**	**1.07**	**339**	*eP*	Pn	14 11 24.8	-0.6
CUI				*eS*	Sn	14 11 39.5	-0.1
PTEN	**Parque Tenorio**	**1.07**	**349**	*eP*	Pn	14 11 24.9	-0.6
PTEN				*eS*	Sn	14 11 41.3	+1.5
COLC	**Colonia**	**1.09**	**337**	⇑*iP*	Pn	14 11 25.2	-0.5
COLC				*eS*	Sn	14 11 40.9	+0.8
PEZE	**Perez Zeledon,**	**1.12**	**104**	*eP*	Pn	14 11 25.8	-0.4
COVE	**Coope Vega, Sa**	**1.12**	**19**	*eP*	Pn	14 11 25.5	-0.6
HORNC	**Hornillas**	**1.12**	**339**	⇓*eP*	Pn	14 11 25.5	-0.7
HORNC				*eS*	Sb	14 11 40.9	+0.1
GUAB	**Guayabo de Bag**	**1.14**	**337**	⇑*eP*	Pn	14 11 25.8	-0.6
GUAB				*eS*	Sn	14 11 43.0	+1.6
LIM1	**Limonal**	**1.14**	**336**	*eP*	Pn	14 11 25.9	-0.5
LIM1				*eS*	Sn	14 11 43.0	+1.7
MESS	**Mesas**	**1.15**	**339**	⇓*eP*	Pn	14 11 26.2	-0.4
MESS				*eS*	Sn	14 11 42.0	+0.2
VERA	**Finca Concepci**	**1.19**	**356**	*eP*	Pn	14 11 27.0	-0.2
VERA				*eS*	Sb	14 11 44.1	+1.3
VMAR	**Armenia, Volca**	**1.20**	**344**	*eP*	Pn	14 11 27.1	-0.2
GPS2	**Hotel Rincn d**	**1.23**	**333**	*eP*	Pn	14 11 27.3	-0.4
LAPC	**Finca la Perla**	**1.28**	**330**	⇓*eP*	Pn	14 11 27.8	-0.6
BUEV	**Buena Vista**	**1.29**	**331**	*eP*	Pn	14 11 28.1	-0.5
BUEV				*eS*	Sb	14 11 48.0	+2.2
GBS3	**Finca Las Img**	**1.30**	**329**	*eP*	Pn	14 11 28.2	-0.5
GBS3				*eS*	Sb	14 11 47.2	+1.2
GB1A	**Borinquen Arri**	**1.31**	**332**	*eP*	Pn	14 11 28.4	-0.4
BUAI	**Buenos Aires**	**1.33**	**336**	*eP*	Pn	14 11 29.0	-0.1
BUAI				*eS*	Sb	14 11 48.3	+1.5
SRBA	**San Rafael, Bu**	**1.46**	**107**	*eP*	Pn	14 11 30.7	-0.2

ROM 28 14:25:05.8±0.1, 42.955N±0.004×13.136E±0.005, h9km, ML2.5/31, 10C-25D, Error ellipse: s-maj=0.3km s-min=0.3km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.06**	**137**	⇓P	Pg	14 25 07.9	0.0
MC2				S	Sg	14 25 09.4	-0.1
FEMA	**Monte Fema**	**0.06**	**276**	⇓P	Pg	14 25 08.2	+0.2
FEMA				S	Sg	14 25 09.7	+0.2
FEMA				AML	AML		
	comp=E,14150μm,0.9s						
FEMA				AML	AML		
	comp=N,12000μm,0.2s						
FEMA				AML	AML		
	comp=N,12000μm,0.2s						
FEMA				AML	AML		
	comp=N,12000μm,1.8s						
FDMO	**Fiordimonte**	**0.09**	**336**	⇓P	Pg	14 25 08.3	+0.1
FDMO				S	Sg	14 25 09.9	0.0
FDMO				AML	AML		
	comp=E,10750μm,0.2s						
FDMO				AML	AML		
	comp=N,8030μm,1.4s						
FDMO				AML	AML		
	comp=N,8030μm,0.6s						
FDMO				AML	AML		

	comp=E,10750μm,1.8s					
T1245	**Castelsantange**	**0.11 159**	⇑P	Pg	14 25 08.9	+0.4
T1245			S	Sg	14 25 11.4	+1.0
T1245			AML	AML		
	comp=E,10645μm,0.2s					
T1245			AML	AML		
	comp=N,8890μm,1.0s					
T1245			AML	AML		
	comp=E,10660μm,0.2s					
T1245			AML	AML		
	comp=E,9895μm,0.2s					
T1245			AML	AML		
	comp=N,8905μm,0.4s					
T1245			AML	AML		
	comp=N,8890μm,1.0s					
T1245			AML	AML		
	comp=E,10665μm,0.2s					
NRCA	**Norcia**	**0.12 187**	⇓P	Pg	14 25 09.3	+0.6
NRCA			S	Sg	14 25 11.9	+1.3
NRCA			AML	AML		
	comp=E,9810μm,0.2s					
NRCA			AML	AML		
	comp=N,6705μm,0.5s					
NRCA			AML	AML		
	comp=E,9790μm,0.2s					
NRCA			AML	AML		
	comp=E,10705μm,0.2s					
NRCA			AML	AML		
	comp=N,6700μm,0.5s					
NRCA			AML	AML		
	comp=E,9780μm,0.2s					
NRCA			AML	AML		
	comp=N,6330μm,0.5s					
NRCA			AML	AML		
	comp=E,9785μm,0.2s					
NRCA			AML	AML		
	comp=N,6325μm,0.5s					
MMO1	**Montemonaco**	**0.15 112**	P	Pg	14 25 09.5	+0.4
MMO1			S	Sg	14 25 12.3	+0.9
AM05	**Amandola Campo**	**0.16 82**	⇓P	Pg	14 25 09.9	+0.6
AM05			S	Sg	14 25 12.7	+1.0
AM05			AML	AML		
	comp=E,664μm,1.3s					
AM05			AML	AML		
	comp=N,182μm,1.6s					
AM05			AML	AML		
	comp=E,664μm,1.3s					
AM05			AML	AML		
	comp=E,2990μm,0.3s					
AM05			AML	AML		
	comp=N,764μm,0.8s					
AM05			AML	AML		
	comp=E,664μm,0.7s					
GUMA	**Gualdo di Mace**	**0.18 54**	P	Pg	14 25 10.4	+0.8
GUMA			S	Sg	14 25 13.9	+1.7
GUMA			AML	AML		
	comp=E,5420μm,0.7s					
GUMA			AML	AML		
	comp=E,5415μm,0.7s					
GUMA			AML	AML		
	comp=E,5570μm,0.5s					
GUMA			AML	AML		
	comp=N,5150μm,0.5s					
GUMA			AML	AML		
	comp=N,5575μm,0.6s					
GUMA			AML	AML		
	comp=N,5150μm,1.5s					
GUMA			AML	AML		
	comp=N,5575μm,1.4s					
SEF1	**Sefro**	**0.24 324**	P	Pg	14 25 11.3	+0.7
SEF1			AML	AML		
	comp=E,4420μm,0.3s					
SEF1			AML	AML		
	comp=N,2880μm,0.5s					
T1241	**Roccafluvione,**	**0.24 114**	⇓P	Pg	14 25 10.9	+0.2
T1241			S	Sg	14 25 15.2	+1.3
T1241			AML	AML		
	comp=E,1675μm,0.8s					
T1241			AML	AML		
	comp=N,1215μm,1.6s					
T1241			AML	AML		
	comp=N,1177μm,1.6s					
T1241			AML	AML		
	comp=N,1215μm,1.6s					
T1241			AML	AML		
	comp=E,1785μm,0.8s					
T1241			AML	AML		
	comp=N,1175μm,1.6s					
T1241			AML	AML		
	comp=N,1180μm,1.6s					
T1241			AML	AML		
	comp=E,1780μm,0.8s					
T1241			AML	AML		
	comp=E,1675μm,0.8s					
T1241			AML	AML		
	comp=N,1220μm,1.6s					
T1241			AML	AML		
	comp=N,1180μm,0.4s					
T1241			AML	AML		
	comp=E,1675μm,1.2s					
T1241			AML	AML		
	comp=E,1780μm,1.2s					
T1241			AML	AML		
	comp=N,1220μm,0.4s					
T1215	**Vallo di Nera,**	**0.25 232**	⇑P	Pg	14 25 11.6	+0.8
T1215			S	Sg	14 25 16.1	+1.9
T1217	**Poggiodomo (PG**	**0.29 212**	⇑P	Pg	14 25 12.3	+0.8
T1217			S	Sb	14 25 17.5	-0.6
T1217			AML	AML		
	comp=E,946μm,1.6s					
T1217			AML	AML		
	comp=N,1368μm,0.8s					
T1217			AML	AML		
	comp=E,947μm,0.3s					
T1217			AML	AML		
	comp=N,1452μm,0.8s					
T1217			AML	AML		
	comp=E,944μm,1.6s					
T1217			AML	AML		
	comp=N,1366μm,0.7s					
T1217			AML	AML		
	comp=N,1459μm,0.8s					
T1217			AML	AML		
	comp=E,944μm,0.4s					
T1217			AML	AML		
	comp=N,1366μm,1.3s					
T1217			AML	AML		
	comp=N,1459μm,1.2s					
T1217			AML	AML		
	comp=E,951μm,0.3s					
T1204	**Amatrice, Fraz**	**0.31 154**	⇓P	Pg	14 25 12.8	+0.8
SNTG	**Esanatoglia**	**0.33 335**	⇓P	Pg	14 25 12.8	+0.3
SNTG			S	Sb	14 25 18.7	-0.8
SNTG			AML	AML		
	comp=N,674μm,0.6s					
SNTG			AML	AML		
	comp=E,690μm,0.4s					
SNTG			AML	AML		
	comp=N,712μm,0.3s					
SNTG			AML	AML		
	comp=E,722μm,0.5s					
SNTG			AML	AML		
	comp=N,674μm,0.6s					
T1243	**Rocca Santa Ma**	**0.35 138**	⇓P	Pg	14 25 13.1	+0.4
T1243			S	Sb	14 25 18.9	-0.9
SMA1	**SAN MARTINO**	**0.36 156**	⇓P	Pg	14 25 13.2	+0.4
SMA1			S	Sb	14 25 19.4	-0.8
SMA1			AML	AML		
	comp=N,941μm,1.4s					
SMA1			AML	AML		
	comp=N,940μm,1.4s					
SMA1			AML	AML		
	comp=N,940μm,0.6s					
SMA1			AML	AML		
	comp=E,928μm,1.1s					
LNSS	**Leonessa**	**0.36 191**	P	Pg	14 25 13.5	+0.5
LNSS			AML	AML		
	comp=N,834μm,1.5s					
LNSS			AML	AML		
	comp=E,1102μm,0.2s					
ASSB	**Assisi San Ben**	**0.36 284**	⇓P	Pg	14 25 13.5	+0.6
EL6	**Elcito**	**0.38 356**	⇓P	Pg	14 25 13.6	+0.3
OFFI	**Offida**	**0.40 93**	⇑P	Pb	14 25 15.4	+0.2
OFFI			AML	AML		
	comp=E,718μm,1.1s					
OFFI			AML	AML		
	comp=N,867μm,0.9s					
OFFI			AML	AML		
	comp=N,868μm,0.9s					
OFFI			AML	AML		
	comp=E,718μm,0.9s					
ATCC	**AVT- Casa Cast**	**0.43 302**	⇓P	Pb	14 25 15.3	-0.3
ATCC			AML	AML		
	comp=E,798μm,1.5s					
ATCC			AML	AML		
	comp=N,1025μm,0.2s					
ATCC			AML	AML		
	comp=E,798μm,1.5s					
ATCC			AML	AML		
	comp=N,1024μm,0.2s					
FOSV	**Fossato di Vic**	**0.44 321**	P	Pg	14 25 14.8	+0.4
FOSV			S	Sb	14 25 22.2	-0.2
FOSV			AML	AML		
	comp=E,652μm,0.5s					
FOSV			AML	AML		
	comp=N,735μm,0.3s					
FOSV			AML	AML		
	comp=E,652μm,0.5s					
RM33	**Pellescritta (**	**0.45 173**	⇓P	Pg	14 25 15.1	+0.5
RM33			AML	AML		
	comp=E,372μm,0.2s					
RM33			AML	AML		
	comp=E,373μm,0.2s					
RM33			AML	AML		
	comp=N,520μm,0.3s					
ARRO	**Arrone**	**0.46 216**	⇓P	Pb	14 25 15.5	-0.7
ARRO			AML	AML		
	comp=E,326μm,1.4s					
ARRO			AML	AML		
	comp=N,376μm,0.2s					
ARRO			AML	AML		
	comp=N,377μm,0.2s					
ARRO			AML	AML		
	comp=E,327μm,1.4s					
ARRO			AML	AML		
	comp=E,327μm,0.6s					
CAMP	**Campotosto**	**0.47 154**	⇓P	Pg	14 25 15.3	+0.4
CAMP			AML	AML		
	comp=E,739μm,0.2s					
CAMP			AML	AML		
	comp=N,424μm,0.3s					
CAMP			AML	AML		
	comp=E,738μm,0.2s					
T1211	**Morro Reatino**	**0.47 206**	⇓P	Pb	14 25 15.7	-0.6
T1211			S	Sb	14 25 25.0	+1.6
TERO	**Teramo**	**0.48 134**	⇑P	Pg	14 25 15.4	+0.3
TERO			AML	AML		
	comp=E,944μm,1.6s					
TERO			AML	AML		
	comp=N,984μm,0.3s					
TERO			AML	AML		
	comp=N,1039μm,0.3s					
TERO			AML	AML		
	comp=E,944μm,1.6s					
TERO			AML	AML		
	comp=E,946μm,1.6s					
TERO			AML	AML		
	comp=N,984μm,0.3s					
TERO			AML	AML		
	comp=E,946μm,0.4s					
TERO			AML	AML		
	comp=E,944μm,0.4s					
CESX	**Cesi**	**0.54 230**	⇓P	Pg	14 25 16.6	+0.4
CESX			AML	AML		
	comp=N,353μm,0.3s					
CESX			AML	AML		
	comp=N,353μm,1.7s					
CESX			AML	AML		
	comp=E,342μm,1.0s					
MURB	**Monte Urbino**	**0.54 305**	P	Pb	14 25 17.1	-0.5
MURB			AML	AML		
	comp=E,1195μm,0.3s					
MURB			AML	AML		
	comp=N,1158μm,0.3s					
MURB			AML	AML		
	comp=E,1325μm,0.3s					
MURB			AML	AML		
	comp=E,1194μm,0.3s					
MURB			AML	AML		
	comp=N,1160μm,0.3s					
MURB			AML	AML		
	comp=N,1099μm,0.2s					
MURB			AML	AML		
	comp=E,1190μm,0.3s					
MURB			AML	AML		
	comp=N,1157μm,0.3s					
MURB			AML	AML		
	comp=N,1100μm,0.2s					
ARVD	**Arcevia**	**0.56 345**	⇓P	Pg	14 25 17.2	+0.5
ARVD			S	Sb	14 25 27.0	+1.0
ARVD			AML	AML		
	comp=N,214μm,0.9s					
ARVD			AML	AML		
	comp=E,458μm,0.2s					
ATFO	**Monte Foce - G**	**0.58 315**	⇓P	Pg	14 25 17.4	+0.3
ATFO			AML	AML		
	comp=N,242μm,0.7s					
ATFO			AML	AML		
	comp=N,242μm,0.7s					
ATFO			AML	AML		
	comp=N,242μm,1.3s					
ATFO			AML	AML		
	comp=E,294μm,0.5s					
GIGS	**Gran Sasso**	**0.60 148**	⇓P	Pg	14 25 17.6	+0.2
GIGS			AML	AML		
	comp=E,108μm,0.1s					
GIGS			AML	AML		
	comp=N,116μm,1.2s					
GIGS			AML	AML		
	comp=N,117μm,1.2s					
GIGS			AML	AML		
	comp=N,117μm,0.8s					
GIGS			AML	AML		
	comp=E,108μm,0.1s					
FRON	**Frontone**	**0.64 332**	⇑P	Pg	14 25 18.3	+0.1
FRON			AML	AML		
	comp=N,490μm,0.3s					
FRON			AML	AML		
	comp=E,266μm,0.2s					
ATVO	**AVT- Monte Val**	**0.68 309**	⇑P	Pg	14 25 19.2	+0.2
ATVO			AML	AML		
	comp=E,168μm,0.5s					
ATVO			AML	AML		
	comp=N,184μm,0.4s					
FIAM	**Fiamignano**	**0.69 181**	S	Sb	14 25 30.0	+0.3
MPAG	**Monte Paganucc**	**0.73 338**	⇓P	Pb	14 25 20.5	-0.3
MPAG			S	Sn	14 25 33.0	-0.7
MPAG			AML	AML		
	comp=E,262μm,1.5s					
MPAG			AML	AML		
	comp=N,295μm,1.2s					
MPAG			AML	AML		
	comp=E,262μm,0.5s					
PIEI	**Pieia**	**0.73 323**	⇓P	Pg	14 25 20.2	+0.4
PIEI			AML	AML		
	comp=E,150μm,1.5s					
PIEI			AML	AML		
	comp=N,167μm,0.4s					
PIEI			AML	AML		
	comp=N,168μm,0.4s					
VCEL	**Villa Celiera**	**0.76 137**	⇓P	Pb	14 25 21.2	-0.1
VCEL			AML	AML		
	comp=E,342μm,1.3s					
VCEL			AML	AML		
	comp=N,326μm,1.2s					
VCEL			AML	AML		
	comp=N,326μm,1.2s					
VCEL			AML	AML		
	comp=E,342μm,1.3s					
VCEL			AML	AML		
	comp=E,342μm,0.7s					
VCEL			AML	AML		
	comp=N,326μm,0.8s					
FSSB	**Fossombrone**	**0.78 341**	⇓P	Pb	14 25 21.5	-0.1
FSSB			AML	AML		
	comp=E,630μm,0.3s					
FSSB			AML	AML		
	comp=N,1255μm,0.3s					
T0110	**Collepietro**	**0.87 147**	⇑P	Pg	14 25 22.8	+0.2
T0110			AML	AML		
	comp=E,286μm,1.6s					
T0110			AML	AML		
	comp=N,308μm,1.6s					
T0110			AML	AML		
	comp=E,286μm,0.4s					
T0110			AML	AML		
	comp=N,308μm,0.4s					
PE3	**Peglio**	**0.88 328**	⇑P	Pg	14 25 21.8	-0.9
PIGN	**Pignataro Magg**	**1.92 156**	⇑P	Pg	14 25 43.2	+0.6

ROM 28 14:25:47.3±0.1, 42°.889N±0°.004×13°.057E±0°.004, h11km, Md0.8/8, 3C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=347.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**143**	⇓P	Pg	14 25 50.2	+0.4
NRCA				S	Sg	14 25 51.8	+0.2
NRCA				AML	AML		
	comp=E,2090μm,1.1s						
NRCA				AML	AML		
	comp=N,1960μm,0.2s						
NRCA				END			
MC2	**Monte Cornacci**	**0.10**	**76**	P	Pg	14 25 50.6	+0.3
MC2				S	Sg	14 25 52.9	+0.5
MC2				END			
T1245	**Castelsantange**	**0.10**	**109**	⇓P	Pg	14 25 50.7	+0.5
T1245				S	Sg	14 25 52.8	+0.5
T1245				END			
CESI	**CESI - Serrava**	**0.16**	**316**	⇑P	Pg	14 25 51.7	+0.7
CESI				S	Sg	14 25 54.5	+0.9
CESI				END			
T1215	**Vallo di Nera,**	**0.16**	**238**	⇑P	Pg	14 25 51.7	+0.6
T1215				S	Sg	14 25 54.4	+0.7
T1215				END			
MMO1	**Montemonaco**	**0.20**	**87**	P	Pg	14 25 52.3	+0.6
MMO1				S	Sg	14 25 55.6	+1.0
MMO1				END			
T1217	**Poggiodomo (PG**	**0.20**	**208**	P	Pg	14 25 52.3	+0.6
T1217				S	Sg	14 25 55.9	+1.3
T1217				END			
AM05	**Amandola Campo**	**0.23**	**68**	P	Pg	14 25 52.4	+0.2
AM05				S	Sg	14 25 56.8	+1.2
GUMA	**Gualdo di Mace**	**0.27**	**49**	P	Pb	14 25 53.8	-0.4
T1241	**Roccafluvione,**	**0.28**	**97**	P	Pg	14 25 53.4	+0.4
T1241				S	Sg	14 25 57.7	+0.9
T1241				END			
T1243	**Rocca Santa Ma**	**0.35**	**124**	⇑P	Pg	14 25 54.7	+0.4
EL6	**Elcito**	**0.44**	**4**	S	Sb	14 26 04.0	+0.1

IDC 28 14:33:07.4±3.6, 0°.47S×99°.91E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=194.6km s-min=24.3km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.24**	**255**	T	T	15 06 56.9	
	baz=77						
H08S3	**Diego Garcia H**	**28.25**	**255**	T	T	15 06 54.8	
	baz=77						
H08S1	**Diego Carcia H**	**28.26**	**255**	T	T	15 06 55.0	
	baz=77						
WRA	**Warramunga Arr**	**38.86**	**122**	P	P	14 40 34.9	0.0
	0.4nm,0.9s,baz=299,slow=8.5,SNR=6.2						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**40.24**	**127**	P	P	14 40 46.0	-0.3
	0.3nm,0.7s,baz=298,slow=7.4,SNR=5.1						
ASAR				PcP	PcP	14 42 50.0	-0.5
	0.1nm,0.6s,baz=315,slow=2.2,SNR=1.4						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**49.54**	**344**	P	P	14 42 00.0	0.0
	0.3nm,0.5s,baz=161,slow=8.2,SNR=4.4						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**55.66**	**349**	P	P	14 42 45.1	-0.1
	0.7nm,0.4s,baz=156,slow=6.2,SNR=4.2						
	0.7nm,0.4s						

IDC 28 14:35:38.4±3.1, 17°.69N×147°.24E, h242km±27km, mb3.1/4, mbtmp3.7/5, Error ellipse: s-maj=50.6km s-min=23.7km az=99.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.67**	**210**	P	Pn	14 36 49.9	-0.1
	43nm,1.0s,baz=208,slow=20,SNR=1.2						
GUMO				S	S	14 37 47.4	+0.5
	43nm,0.8s,baz=344,slow=16,SNR=1.6						
WRA	**Warramunga Arr**	**39.48**	**199**	P	P	14 42 45.7	0.0
	1.5nm,0.6s,baz=22,slow=9.1,SNR=38						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**43.12**	**198**	P	P	14 43 14.9	-0.3
	0.2nm,0.7s,baz=19,slow=7.6,SNR=6.0						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**59.71**	**323**	P	P	14 45 17.4	-0.1
	0.3nm,0.3s,baz=90,slow=5.8,SNR=2.1						
	0.3nm,0.3s						
NVAR	**Mina Array Bea**	**82.60**	**52**	P	P	14 47 35.0	0.0
	0.5nm,0.6s,baz=270,slow=6.2,SNR=4.1						
	0.5nm,0.6s						

IDC ***28*** *14:52:27.3±1.2, 30°.57N×50°.37E, h0km, mb3.8/11, mbtmp3.8/15, ML3.6/4, MS2.8/2, Error ellipse: s-maj=26.1km s-min=17.2km az=178.0*
TEH ***28*** *14:52:30.9, 30°.67N×50°.45E, h17km, ML3.7*
DSN ***28*** *14:52:34.8±2.4, 30°.23N×50°.57E, h12km, ML4.2/11, Error ellipse: s-maj=30.8km s-min=11.1km az=3.0*
OMAN ***28*** *14:52:36.1±0.3, 30°.32N×50°.83E, h10km, mb5.4/22, Error ellipse: s-maj=3.9km s-min=3.4km az=317.0*

ISC 28 14:52:29.4±0.5, 30°.64N±0°.03×50°.47E±0°.03, h10km, n122, σ2°.21/145, mb3.9/10, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.19**	**257**	*e*Pg	**Pg**	**14 52 35.9**	**+2.5**
KLNJ	**Kolanjah**	**1.03**	**69**	*e*Pg	**Pg**	**14 52 49.9**	**+0.6**
KLNJ				*e*Sg	**Sb**	**14 53 05.7**	**+2.3**
KLNJ				*e*		14 53 12.5	
	comp=Z,24μm,0.6s						
IBRJ	**Brojen**	**1.43**	**28**	*e*Pg	**Pb**	**14 52 57.9**	**+1.5**
IBRJ				*e*		14 53 23.3	
	comp=Z,7μm,0.5s						
KAZ1	**Kazerun**	**1.44**	**135**	*e*Pn	**Pg**	**14 52 58.7**	**+1.8**
KAZ1				*e*Sg	**Sg**	**14 53 19.7**	**+4.1**
AMIS	**Naft Sefid**	**1.44**	**316**	*e*Pg	**Pn**	**14 52 56.8**	**+1.3**
AMIS				*e*		14 53 34.4	
	comp=Z,15μm,0.8s						
SHK1	**Shahrekord**	**1.72**	**12**	*e*Pn	**Pn**	**14 53 02.0**	**+2.4**
AHBU	**AHRAM**	**1.91**	**158**	*e*		14 53 46.9	
	comp=Z,99nm,0.7s						
AHBU				*e*Pn	**Pb**	**14 53 05.2**	**+0.8**
IRAM	**Ramesheh**	**2.01**	**54**	*e*		14 53 08.2	
	comp=Z,4μm,0.3s						
IRAM				*e*Pn	**Pb**	**14 53 07.1**	**+0.9**
SHI	**Shiraz**	**2.03**	**119**	*e*		14 53 42.4	
	comp=Z,7μm,0.3s						
SHI				*e*Pn	**Pn**	**14 53 06.7**	**+2.8**
IPIR	**Pirpir**	**2.07**	**10**	*e*		14 53 40.3	
	comp=Z,5μm,0.4s						
IPIR				*e*Pn	**Pb**	**14 53 07.6**	**+0.4**
IGAR	**Gharneh**	**2.21**	**37**	*e*		14 53 46.2	
	comp=Z,4μm,0.5s						
IGAR				*e*Pn	**Pn**	**14 53 09.4**	**+3.0**
IZEF	**Zefreh**	**2.75**	**35**	*e*Pn	**Pn**	**14 53 16.8**	**+3.0**
IZEF				*e*		14 53 22.9	
	comp=Z,2μm,0.3s						
IKLH	**Kolahrood**	**2.83**	**19**	*e*Pn	**Pn**	**14 53 17.7**	**+2.8**
IKLH				*e*		14 54 16.8	
	comp=Z,2μm,0.6s						
NASN	**Na'in**	**2.93**	**42**	*e*Pn	**Pn**	**14 53 19.0**	**+2.6**
ISAD	**Sadrabad**	**3.03**	**64**	*e*Pn	**Pn**	**14 53 20.9**	**+3.2**
ISAD				*e*		14 53 28.4	
	comp=Z,2μm,0.4s						
QIR1	**Qir**	**3.11**	**133**	*e*Pn	**Pn**	**14 53 20.5**	**+1.9**
KHMZ	**Khomeyn**	**3.12**	**352**	*e*Pn	**Pn**	**14 53 21.2**	**+2.4**
QAMS	**Qamsar**	**3.18**	**14**	*e*Pn	**Pn**	**14 53 23.2**	**+3.4**
QAMS				*e*		14 53 32.0	
	comp=Z,3μm,0.5s						
IKMR	**Kamar-syah**	**3.37**	**329**	*e*Pn	**Pn**	**14 53 23.2**	**+1.1**
IKMR				*e*		14 54 29.8	
	comp=Z,2μm,0.5s						
KRSH	**Karshahi**	**3.61**	**23**	*e*Pn	**Pn**	**14 53 28.3**	**+2.8**
KRSH				*e*		14 53 34.6	
	comp=Z,2μm,0.3s						
IKFM	**Kafar-mosalman**	**3.63**	**323**	*e*Pn	**Pn**	**14 53 27.6**	**+1.9**
IKFM				*e*		14 54 42.1	

comp=Z,2μm,0.6s
IMEH Mehriz 3.64 77 *e*Pn **Pn 14 53 28.9 +2.9**
IMEH *e* 14 53 30.1
comp=Z,1μm,0.2s
IDOB Doab 3.69 329 *e*Pn **Pn 14 53 28.4 +1.7**
ICHK Chekchek 3.73 64 *e*Pn **Pn 14 53 29.7 +2.5**
ANAR Anarak 3.76 47 *e*Pn **Pn 14 53 29.8 +2.2**
ANAR *e* 14 53 47.9
comp=Z,953nm,0.9s
GHVR GHOM 3.89 10 *e*Pn **Pn 14 53 32.2 +2.9**
HSAM Samen 3.89 337 *e*Pn **Pn 14 53 31.3 +1.8**
ASAO Ashtian 3.91 355 *e*Pn **Pn 14 53 32.3 +2.5**
YZKH Yazd 3.93 63 *e*Pn **Pn 14 53 32.7 +2.8**
ISFB Sefidab 3.99 22 *e*Pn **Pn 14 53 32.9 +2.2**
ISFB *e* 14 53 45.0
comp=Z,635nm,0.6s
IQOM Qom 4.22 7 *e*Pn **Pn 14 53 36.0 +2.0**
IQOM *e* 14 53 37.2
comp=Z,1μm,0.5s
HAGD Aghdareh 4.32 345 *e*Pn **Pn 14 53 37.4 +2.1**
HAGD *e* 14 54 29.4
comp=Z,443nm,0.3s
IKOM Komasi 4.32 325 *e*Pn **Pn 14 53 37.0 +1.7**
IBZA Bozab 4.41 331 *e*Pn **Pn 14 53 37.8 +1.2**
IVRN Varamin 4.47 13 *e*Pn **Pn 14 53 39.4 +2.1**
IBAF Bafgh 4.47 77 *e*Pn **Pn 14 53 40.1 +2.7**
SAKB Bahrain 4.65 179 P **Pn 14 53 42.2 +2.5**
SAKB S **Sn 14 54 35.6 +2.0**
IRAZ Razeghan 4.77 355 *e*Pn **Pn 14 53 44.0 +2.4**
SHMA Al-Shehemyia 4.79 175 P **Pn 14 53 44.2 +2.7**
SHMA S **Sn 14 54 39.0 +1.8**
IDMV Damavand 5.09 15 *e*Pn **Pn 14 53 48.2 +2.1**
QABG Abgarm-Qazvin 5.11 352 *e*Pn **Pn 14 53 48.2 +2.0**
DAMV Damavand 5.13 14 *e*Pn **Pn 14 53 48.6 +2.0**
SNGE Sanandaj 5.16 330 *e*Pn **Pn 14 53 48.3 +1.5**
ILAS Lasjerd 5.17 23 *e*Pn **Pn 14 53 48.9 +1.8**
ILIN Lien 5.19 326 *e*Pn **Pn 14 53 49.5 +2.2**
KHGB Koh Gabri 5.19 91 *e*Pn **Pn 14 53 49.6 +2.2**
CHTH Charan 5.28 6 *e*Pn **Pn 14 53 51.1 +2.5**
IDHR Dehrash 5.31 321 *e*Pn **Pn 14 53 50.0 +1.0**
IFIR Firoozkooh 5.34 20 *e*Pn **Pn 14 53 51.4 +2.0**
KRBR Kerman 5.48 95 *e*Pn **Pn 14 53 53.9 +2.5**
NGRK Negar Kerman 5.51 99 *e*Pn **Pn 14 53 54.2 +2.3**
NGRK *e* 14 53 57.1
comp=Z,964nm,0.2s
IANJ Anjilo 5.62 30 *e*Pn **Pn 14 53 54.5 +1.3**
ISHM Shahmirzad 5.67 24 *e*Pn **Pn 14 53 55.9 +2.0**
QALM Alamut, Qazvin 5.78 1 *e*Pn **Pn 14 53 58.1 +2.7**
IPRN Peran 5.80 15 *e*Pn **Pn 14 53 58.6 +3.0**
TPRV Parvadeh(Tabas 5.80 64 *e*Pn **Pn 14 53 58.0 +2.4**
KLST Kelardasht - M 5.88 5 *e*Pn **Pn 14 53 59.5 +2.6**
SMRA Abu-Samra 5.88 177 P **Pn 14 53 58.0 +1.4**
SMRA S **Sn 14 55 05.0 +0.8**
QSDN Sirdan 5.95 350 *e*Pn **Pn 14 53 58.9 +1.2**
TNSJ Nastanj 6.16 56 *e*Pn **Pn 14 54 03.0 +2.4**
TKDS Koohdasht(Taba 6.38 61 *e*Pn **Pn 14 54 05.6 +2.1**
TABS Tabas 6.39 60 *e*Pn **Pn 14 54 05.5 +1.8**
IGLO Ghaloghah 6.48 25 *e*Pn **Pn 14 54 07.3 +2.2**
SLWR Sila 6.64 170 P **Pn 14 54 07.7 +0.7**
SLWR S **Sn 14 55 21.7 -1.0**
SHME Shamm 6.78 131 P **Pn 14 54 10.1 +1.2**
SNR=5.5
SHME S **Sn 14 55 23.8 -2.4**
SHME Shamm 6.78 131 P **Pn 14 54 09.5 +0.6**
BANOM Banah 6.97 131 P **Pn 14 54 12.1 +0.5**
SNR=25
BANOM S **Sn 14 55 27.7 -3.2**
BANOM Banah 6.97 131 *i* P **Pn 14 54 11.2 -0.4**
SNR=25
BANOM S **Sn 14 55 27.7 -3.2**
GHWR Ruwais 6.99 162 P **Pn 14 54 13.6 +1.8**
GHWR S **Sn 14 55 29.3 -2.1**
SHRO Shahrood 7.07 40 *e*Pn **Pn 14 54 15.3 +2.3**
AJN Ajban 7.26 145 P **Pn 14 54 17.3 +1.7**
AJN S **Sn 14 55 36.8 -1.3**
MASF Masafi 7.27 135 P **Pn 14 54 16.7 +0.9**
SNR=6.9
MASF S **Sn 14 55 35.0 -3.4**
NAZ Nazwa, Dubai 7.27 140 P **Pn 14 54 16.0 +0.3**
MSFE Esma-Masafi 7.28 135 *i* P **Pn 14 54 15.6 -0.2**
SNR=6.8
ASUD Al Ashush, Dub 7.38 143 *i* P **Pn 14 54 18.6 +1.3**
SNR=22
FAQ Al Faqa, Dubai 7.42 141 P **Pn 14 54 18.3 +0.4**
MZWR Madinat Zayed 7.50 155 P **Pn 14 54 20.5 +1.7**
MZWR S **Sn 14 55 41.7 -2.2**
BSRN Basiran 7.53 78 *e*Pn **Pn 14 54 21.6 +2.3**
HATD Hatta, Dubai 7.67 138 P **Pn 14 54 22.2 +1.0**
ASHO Ashiyiah 7.73 139 P **Pn 14 54 23.0 +0.9**
SNR=20
ASHO S **Sn 14 55 46.8 -3.0**
ASHO Ashiyiah 7.73 139 *i* P **Pn 14 54 22.4 +0.3**
SNR=20
IMND Minoodasht 7.77 31 *e*Pn **Pn 14 54 24.7 +2.2**
ALNE Al Ain 8.07 143 P **Pn 14 54 27.8 +1.1**
ALNE S **Sn 14 55 55.6 -2.4**
MZR Muzera 8.07 160 P **Pn 14 54 28.0 +1.2**
SNR=10
MZR S **Sn 14 55 55.2 -2.9**
MZR Muzera 8.07 160 *i* P **Pn 14 54 27.9 +1.2**
SNR=10
JASK Jask - Hormozg 8.07 124 P **Pn 14 54 27.3 +0.6**
JASK S **Sn 14 55 55.2 -3.0**
RAYN Ar Rayn 8.36 213 *i* P **Pn 14 54 29.2 -1.5**
SNR=16
MRVT Maraveh tapeh 8.41 32 *e*Pn **Pn 14 54 34.2 +2.9**
SHRT Shahrakht 8.85 68 *e*Pn **Pn 14 54 39.0 +1.5**
UMZA Um Al Zommool 8.94 151 P **Pn 14 54 39.2 +0.6**
UMZA S **Sn 14 56 15.1 -4.4**
ARQ Araqi 9.06 142 P **Pn 14 54 41.8 +1.6**
ARQ S **Sn 14 56 19.3 -3.1**
BJRD Bojnurd 9.09 37 *e*Pn **Pn 14 54 43.4 +2.7**
HOQ Hoqain 9.30 137 P **Pn 14 54 43.6 -0.1**
HOQ S **Sn 14 56 23.1 -5.3**
GEYT Alibeck 9.63 39 Pn **Pn 14 54 50.1 +2.0**
comp=Z,0.4nm,0.3s,baz=218,slow=11,SNR=6.3
comp=Z,2.1nm,0.6s
BIDO Bidbid 9.84 134 P **Pn 14 54 51.3 +0.3**
BIDO S **Sn 14 56 37.6 -4.0**
BSY Bisya 9.90 141 P **Pn 14 54 52.2 +0.4**
SNR=5.7
BSY S **Sn 14 56 38.6 -4.5**
SMDO Samad 10.14 136 P **Pn 14 54 55.4 +0.2**
SNR=5.8
SMDO S **Sn 14 56 44.7 -4.3**
WSAR Wadi Sarin 10.36 133 Pn **Pn 14 54 58.6 +0.5**
comp=Z,1.6nm,0.3s,baz=356,slow=13,SNR=19
WSAR Sn **Sn 14 56 48.4 -5.9**
comp=Z,2.5nm,0.3s,baz=38,slow=21,SNR=9.4
comp=Z,5.2nm,0.4s
WSAR Wadi Sarin 10.36 133 P **Pn 14 54 58.7 +0.6**
JMDO Jabal Madar 10.70 139 P **Pn 14 55 04.9 +2.1**
NGCH Negor - Chabah 10.79 117 P **Pn 14 55 03.7 -0.3**
WBK Wadi Bani Khal 11.03 134 P **Pn 14 55 06.4 -1.0**
ASF Jabal al Asfar 11.70 281 Pn **Pn 14 55 14.4 -2.0**
comp=Z,0.4nm,0.3s,baz=97,slow=8.1,SNR=2.3
ASF Sn **Sn 14 57 21.1 -6.1**
comp=Z,0.3nm,0.3s,baz=66,slow=18,SNR=2.1
comp=Z,1.0nm,0.3s
MHTO MHTO 11.75 143 P **Pn 14 55 17.6 +0.6**
SNR=6.9
DOK Doka 12.42 164 P **Pn 14 55 26.7 +0.3**
SNR=8.0
DQM DQM 12.43 147 P **Pn 14 55 25.5 -1.0**
WHFO Wadi Hawf 13.02 166 P **Pn 14 55 34.0 -0.6**
SNR=13
MMAI Mount Meron Ar 13.03 284 LR LR 15 01 22.6
comp=Z,26nm,19.2s,baz=153,slow=41
EIL Elat 13.46 270 LR LR 15 01 59.8
comp=Z,54nm,19.4s,baz=132,slow=43
DMTO DMTO 13.50 161 P **Pn 14 55 40.0 -1.1**
BRTR Keskin Array B 16.45 308 Pn **Pn 14 56 21.8 +1.4**
comp=Z,0.1nm,0.3s,baz=138,slow=15,SNR=1.5
comp=Z,0.3nm,0.6s
AKTO Aktyubinsk 20.57 14 P **P 14 57 08.5 +0.3**
comp=Z,0.4nm,0.5s,baz=168,slow=10,SNR=2.9
comp=Z,0.4nm,0.5s
IDI Anoyia 21.93 289 P **P 14 57 22.7 -0.4**
comp=Z,8.7nm,1.0s,baz=145,slow=16,SNR=1.5
comp=Z,8.7nm,1.0s
AKASG Malin Array Be 25.55 328 P **P 14 57 59.3 +1.1**
comp=Z,0.4nm,0.4s,baz=137,slow=8.6,SNR=2.2
comp=Z,0.4nm,0.4s
BVAR Borovoye Array 26.67 27 P **P 14 58 09.2 +0.8**
comp=Z,0.5nm,0.5s,baz=222,slow=9.2,SNR=4.7
comp=Z,0.5nm,0.5s
KURBB Kurchatov Arra 28.91 38 P **P 14 58 28.7 +0.3**
comp=Z,1.3nm,0.2s,baz=241,slow=9.4,SNR=5.3
comp=Z,1.3nm,0.2s
MKAR Makanchi Array 29.35 48 P **P 14 58 33.4 +0.9**
comp=Z,0.5nm,0.5s,baz=246,slow=9.3,SNR=8.8
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 33.94 37 P **P 14 59 12.8 +0.2**
comp=Z,1.3nm,0.5s,baz=254,slow=8.1,SNR=7.2
comp=Z,1.3nm,0.5s
FINES FINESS Array B 34.72 340 P **P 14 59 17.6 -1.7**
comp=Z,2.3nm,0.8s,baz=144,slow=8.4,SNR=6.3
comp=Z,2.3nm,0.8s
NOA NORSAR Array B 39.84 331 P **P 15 00 01.3 -1.5**
comp=Z,0.7nm,0.7s,baz=126,slow=8.3,SNR=1.7
comp=Z,0.7nm,0.7s
CMAR Chiang Mai Arr 45.42 94 P **P 15 00 47.4 -1.2**
comp=Z,0.5nm,0.5s,baz=295,slow=9.9,SNR=4.3
comp=Z,0.5nm,0.5s
TORD Torodi Ar. Bea 48.09 260 P **P 15 01 08.3 -1.3**
comp=Z,0.8nm,0.6s,baz=57,slow=7.7,SNR=5.5
comp=Z,0.8nm,0.6s

NEIC ***28*** *15:13:14.3±1.4, 18°.2N±0°.1×68°.18W±0°.05, h94km±7km, Error ellipse: s-maj=15.1km s-min=6.0km az=195.0*
OSPL ***28*** *15:13:15.8±4.2, 18°.40N×67°.67W, h140km±36km, ML3.2*
RSPR ***28*** *15:13:15.8, 18°.21N×68°.13W, h88km±1km, MD3.6/14*
ISC 28 15:13:15.5±1.2, 18°.2N±0°.1×68°.07W±0°.03, h94km, n68, σ19 31/77, 18C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.42**	**315**	⇑*e*P	**Pn**	**15 13 28.7**	**-1.3**
PCDR	**Punta Cana, DR**	**0.42**	**315**	*e*S	**Sn**	**15 13 39.7**	**-1.2**
PCDR	**Punta Cana, DR**	**0.42**	**315**		**Pn**	**15 13 28.7**	**-1.3**
PCDR	**Punta Cana, DR**	**0.42**	**315**		**Sn**	**15 13 39.7**	**-1.2**
PCDR	**Punta Cana, DR**	**0.42**	**315**	IAML		15 13 34.0	
	comp=E,60nm,1.0s						
IDE	**Isla Desecheo**	**0.59**	**73**	⇑*e*P	**Pn**	**15 13 31.0**	**-0.4**
IDE	**Isla Desecheo**	**0.59**	**73**	*e*S	**Sn**	**15 13 42.8**	**-0.4**
PRSN	**Puerto Rico Se**	**0.88**	**90**	⇑*e*P	**Pn**	**15 13 33.4**	**-0.7**
PRSN	**Puerto Rico Se**	**0.88**	**90**		**Pn**	**15 13 33.4**	**-0.7**
PRSN	**Puerto Rico Se**	**0.88**	**90**	IAML		15 13 54.5	
	comp=E,2μm,0.3s						
PRSN				IAML		15 13 55.3	
	comp=N,2μm,0.3s						
LSP	**Las Mesas**	**0.94**	**92**	⇑*e*P	**Pn**	**15 13 35.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.94**	**103**	⇑*e*P	**Pn**	**15 13 34.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.94**	**103**	*e*S	**Sn**	**15 13 49.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.94**	**103**		**Pn**	**15 13 34.5**	**-0.2**
CRPR					**Sn**	**15 13 49.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.94**	**103**	*i* P	**Pn**	**15 13 35.7**	**+0.9**
CRPR				*e*S	**Sn**	**15 13 50.0**	**+0.8**
CRPR				IAML		15 13 52.5	
	comp=Z,138nm,0.3s						
AGPR	**Aguadilla, PR**	**0.94**	**74**	⇑*e*P	**Pn**	**15 13 34.9**	**+0.1**
AGPR	**Aguadilla, PR**	**0.94**	**74**	*e*S	**Sn**	**15 13 49.3**	**0.0**
AGPR	**Aguadilla, PR**	**0.94**	**74**		**Pn**	**15 13 34.9**	**+0.1**
AGPR					**Sn**	**15 13 49.3**	**0.0**
AGPR	**Aguadilla, PR**	**0.94**	**74**	*i* P	**Pn**	**15 13 35.0**	**+0.1**
AGPR				*e*S	**Sn**	**15 13 50.6**	**+1.2**
AGPR				IAML		15 13 54.5	
	comp=Z,388nm,0.2s						
MLPR	**Magueyes Islan**	**1.00**	**104**	⇑*e*P	**Pn**	**15 13 35.2**	**-0.3**
MLPR	**Magueyes Islan**	**1.00**	**104**	*e*S	**Sn**	**15 13 51.1**	**+0.6**
MLPR	**Magueyes Islan**	**1.00**	**104**		**Pn**	**15 13 35.2**	**-0.3**
MLPR					**Sn**	**15 13 51.1**	**+0.6**
AOPR	**Arecibo Observ**	**1.26**	**84**	⇑*e*P	**Pn**	**15 13 38.6**	**+0.2**
AOPR	**Arecibo Observ**	**1.26**	**84**	*e*S	**Sn**	**15 13 56.4**	**+0.6**
AOPR	**Arecibo Observ**	**1.26**	**84**		**Pn**	**15 13 38.6**	**+0.2**
AOPR					**Sn**	**15 13 56.4**	**+0.6**
UUPR	**Utuado, UPR, P**	**1.28**	**88**	⇑*e*P	**Pn**	**15 13 39.6**	**+0.9**
UUPR	**Utuado, UPR, P**	**1.28**	**88**	*e*S	**Sn**	**15 13 58.3**	**+2.0**
UUPR	**Utuado, UPR, P**	**1.28**	**88**		**Pn**	**15 13 39.6**	**+0.9**
UUPR					**Sn**	**15 13 58.3**	**+2.0**
UUPR	**Utuado, UPR, P**	**1.28**	**88**	Pn	**Pn**	**15 13 39.5**	**+0.7**
UUPR				IAML		15 14 01.8	
	comp=N,5μm,0.4s						
UUPR				IAML		15 14 02.7	
	comp=E,5μm,0.3s						
DR12	**Loma Pena Alta**	**1.37**	**295**	Pn	Pn	15 13 33.6	-6.2
CELP	**Cerrillos**	**1.42**	**95**		**Pn**	**15 13 39.9**	**-0.6**
CELP				IAML		15 14 03.5	
	comp=E,368nm,0.3s						
CELP				IAML		15 14 04.0	
	comp=N,410nm,0.2s						
EMPR	**Esperanza - Ma**	**1.48**	**80**	⇑*e*P	**Pn**	**15 13 41.4**	**+0.1**
EMPR	**Esperanza - Ma**	**1.48**	**80**	*e*S	**Sn**	**15 14 01.3**	**+0.6**
EMPR	**Esperanza - Ma**	**1.48**	**80**		**Pn**	**15 13 41.4**	**+0.1**
EMPR					**Sn**	**15 14 01.3**	**+0.6**
EMPR	**Esperanza - Ma**	**1.48**	**80**	IAML		15 14 03.9	
	comp=N,659nm,0.5s						
EMPR				IAML		15 14 10.0	
	comp=E,682nm,0.7s						
SJG	**San Juan**	**1.83**	**93**		**Pn**	**15 13 44.4**	**-1.2**
SJG				IAML		15 14 10.2	
	comp=E,438nm,0.5s						
SJG				IAML		15 14 11.4	
	comp=E,633nm,0.3s						
IGPR	**InterUniversit**	**1.88**	**97**	⇑*e*P	**Pn**	**15 13 47.1**	**+0.8**
IGPR	**InterUniversit**	**1.88**	**97**	*e*S	**Sn**	**15 14 11.5**	**+1.8**
GCPR	**Guaynabo City**	**1.89**	**87**	⇑*e*P	**Pn**	**15 13 46.2**	**-0.2**
GCPR	**Guaynabo City**	**1.89**	**87**	*e*S	**Sn**	**15 14 09.5**	**-0.4**
GCPR	**Guaynabo City**	**1.89**	**87**		**Pn**	**15 13 46.2**	**-0.2**
GCPR					**Sn**	**15 14 09.5**	**-0.4**
GCPR	**Guaynabo City**	**1.89**	**87**	IAML		15 14 11.1	
	comp=N,152nm,0.2s						
GCPR				IAML		15 14 11.8	
	comp=E,224nm,0.2s						
CBYP	**Canovanas**	**2.10**	**88**	⇑*e*P	**Pn**	**15 13 49.0**	**-0.2**
CBYP	**Canovanas**	**2.10**	**88**	*e*S	**Sn**	**15 14 14.9**	**-0.1**
CBYP	**Canovanas**	**2.10**	**88**		**Pn**	**15 13 49.0**	**-0.2**
CBYP					**Sn**	**15 14 14.9**	**-0.1**
HUMP	**Col San Antoni**	**2.11**	**92**	⇑*e*P	**Pn**	**15 13 49.6**	**+0.3**
HUMP	**Col San Antoni**	**2.11**	**92**	*e*S	**Sn**	**15 14 14.9**	**-0.2**
HUMP	**Col San Antoni**	**2.11**	**92**		**Pn**	**15 13 49.6**	**+0.3**
HUMP					**Sn**	**15 14 14.9**	**-0.2**
HUMP	**Col San Antoni**	**2.11**	**92**	IAML		15 14 18.4	
	comp=E,442nm,0.2s						
BANI	**BANI**	**2.18**	**275**		**Pn**	**15 13 46.6**	**-3.7**
BANI	**BANI**	**2.18**	**275**	*i* P	**Pn**	**15 13 46.5**	**-3.9**
BANI				*e*S	**Sn**	**15 14 16.6**	**-0.3**
BANI				IAML		15 14 19.9	
	comp=Z,104nm,0.5s						
MTP	**Monte Pirata**	**2.40**	**92**	⇑*e*P	**Pn**	**15 13 53.4**	**+0.4**
MTP	**Monte Pirata**	**2.40**	**92**	*e*S	**Sn**	**15 14 23.5**	**+1.7**
MTP	**Monte Pirata**	**2.40**	**92**		**Pn**	**15 13 53.4**	**+0.4**
MTP					**Sn**	**15 14 23.5**	**+1.7**
MTP	**Monte Pirata**	**2.40**	**92**	IAML		15 14 26.7	
	comp=N,99nm,0.2s						
CUPR	**Culebra, Puert**	**2.65**	**88**	⇑*e*P	**Pn**	**15 13 55.7**	**-0.7**
CUPR	**Culebra, Puert**	**2.65**	**88**	*e*S	**Sn**	**15 14 26.4**	**-1.5**
CUPR	**Culebra, Puert**	**2.65**	**88**		**Pn**	**15 13 55.7**	**-0.7**
CUPR					**Sn**	**15 14 26.4**	**-1.5**
STVI	**Saint Thomas**	**2.96**	**87**	⇑*e*P	**Pn**	**15 13 59.6**	**-1.0**
STVI	**Saint Thomas**	**2.96**	**87**	*e*S	**Sn**	**15 14 33.9**	**-1.5**
STVI	**Saint Thomas**	**2.96**	**87**		**Pn**	**15 13 59.6**	**-1.0**
STVI					**Sn**	**15 14 33.9**	**-1.5**
STVI	**Saint Thomas**	**2.96**	**87**	IAML		15 14 34.7	
	comp=N,80nm,0.5s						
STVI				IAML		15 14 38.8	
	comp=E,81nm,0.3s						
SJVI	**Gifft Hill Sch**	**3.13**	**87**	⇑*e*P	**Pn**	**15 14 02.7**	**-0.2**
SJVI	**Gifft Hill Sch**	**3.13**	**87**	*e*S	**Sn**	**15 14 38.5**	**-1.0**
SJVI	**Gifft Hill Sch**	**3.13**	**87**		**Pn**	**15 14 02.7**	**-0.2**
SJVI					**Sn**	**15 14 38.5**	**-1.0**
SJVI	**Gifft Hill Sch**	**3.13**	**87**	Pn	**Pn**	**15 14 02.3**	**-0.6**
SJVI				IAML		15 14 44.4	
	comp=E,37nm,0.2s						
SJVI				IAML		15 14 44.9	
	comp=N,42nm,0.6s						
SDDR	**Presa de Saban**	**3.15**	**285**		**Pn**	**15 14 04.8**	**+1.6**
SDDR				IAML		15 14 51.1	
	comp=N,65nm,0.7s						
SDDR				IAML		15 14 52.0	
	comp=N,82nm,0.6s						
SDDR	**Presa de Saban**	**3.15**	**285**	*i* P	**Pn**	**15 14 06.1**	**+3.0**
SDDR				*e*S	**Sn**	**15 14 46.0**	**+6.1**
SDDR				IAML		15 14 50.6	
	comp=Z,33nm,1.0s						

IDC ***28*** *15:27:07.0±8.4, 25°.86S×28°.76E, h0km, mbtmp2.9/1, ML2.3/1, Error ellipse: s-maj=90.3km s-min=56.6km az=137.0*
EAF ***28*** *15:27:12.5±0.9, 25°.87S×29°.39E, h12km±12km, MD3.5*
BUL 28 15:27:12.3±1.3, 25°.85S×29°.30E, h4km±14km, MD3.6, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.01**	**40**	*i* P	Pn	15 27 58.8	-2.0
MOPA				*i* S	Sn	15 28 33.3	-4.1
MOPA	**Mopani**	**3.01**	**40**	*i* P	Pn	15 27 58.8	-2.0
MOPA				*i* S	Sn	15 28 33.3	-4.1
MUSN	**Musina, Limpop**	**3.59**	**8**	*i* P	Pn	15 28 08.5	-0.3
MUSN				*i* S	Sn	15 28 50.1	-1.6
MUSN	**Musina, Limpop**	**3.59**	**8**	*i* P	Pn	15 28 08.5	-0.3
MUSN				*i* S	Sn	15 28 50.1	-1.6
BOSA	**Boshof**	**4.53**	**232**	Pn	Pn	15 28 11.0	-11
	0.1nm,0.3s,baz=27,slow=11,SNR=1.7						
BOSA				Pg	Pb	15 28 24.6	-7.9
	0.3nm,0.3s,baz=52,slow=18,SNR=1.6						
BOSA				Sn	Sn	15 29 00.9	-14
	0.2nm,0.3s,baz=149,slow=16,SNR=1.8						
BOSA				Lg	Lg	15 29 19.0	
	0.9nm,0.3s,baz=142,slow=21,SNR=4.0						
	3.8nm,1.1s						
BOSA	**Boshof**	**4.53**	**232**	*i* P	Pn	15 28 20.9	-0.9
BOSA				*i* S	Sn	15 29 11.7	-3.4
BOSA	**Boshof**	**4.53**	**232**	*i* P	Pn	15 28 20.9	-0.9
BOSA				*i* S	Sn	15 29 11.7	-3.4
I47ZA	**BOSHOF INFRASO**	**4.55**	**232**	I		15 53 30.0	
	baz=49,slow=315,SNR=4.6						
MATP	**Matopo**	**5.45**	**352**	*i* P	Pn	15 28 34.1	-0.4
MATP				*i* S	Sn	15 29 31.9	-5.9
MATP	**Matopo**	**5.45**	**352**	*i* P	Pn	15 28 34.1	-0.4
MATP				*i* S	Sn	15 29 31.9	-5.9
I35NA	**TSUMEB INFRASO**	**12.70**	**299**	I		16 46 10.0	
	baz=125,slow=317,SNR=1.2						

PRU ***28*** *15:35:32.2±0.0, 43°.15N×13°.38E, h0km*
ROM 28 15:35:29.6±0.0, 43°.045N±0°.002×13°.090E±0°.004, h8km, ML3.0/42, 15C-14D, Error ellipse: s-maj=0.3km s-min=0.2km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**192**	P	Pg	15 35 31.1	-0.1
FDMO				S	Sg	15 35 31.8	-0.3
FEMA	**Monte Fema**	**0.09**	**199**	P	Pg	15 35 32.5	+0.5
FEMA				AML	AML		
	comp=E,36150μm,0.7s						
FEMA				AML	AML		
	comp=E,36150μm,0.6s						
FEMA				AML	AML		
	comp=N,29450μm,1.0s						
CSP1	**Cessapalombo**	**0.10**	**61**	P	Pg	15 35 32.4	+0.3
CESI	**CESI - Serrava**	**0.14**	**254**	P	Pg	15 35 33.5	+0.8
CESI				S	Sg	15 35 36.3	+1.5
CESI				AML	AML		
	comp=N,16150μm,0.4s						
CESI				AML	AML		
	comp=N,16200μm,0.4s						
CESI				AML	AML		
	comp=E,13850μm,0.7s						
CESI				AML	AML		
	comp=N,16200μm,1.6s						
SEF1	**Sefro**	**0.15**	**314**	P	Pg	15 35 33.3	+0.5
SEF1				S	Sg	15 35 36.3	+1.3
SEF1				AML	AML		
	comp=E,29200μm,0.2s						
SEF1				AML	AML		
	comp=N,31900μm,0.2s						
SEF1				AML	AML		
	comp=N,31900μm,0.2s						
SEF1				AML	AML		
	comp=E,29150μm,0.2s						
SEF1				AML	AML		
	comp=N,31900μm,1.8s						
MC2	**Monte Cornacci**	**0.15**	**151**	P	Pg	15 35 33.3	+0.3
MC2				S	Sg	15 35 36.6	+1.4
MDAR	**Monte D'Aria**	**0.15**	**15**	P	Pg	15 35 33.4	+0.4
MDAR				S	Sg	15 35 35.9	+0.7
MDAR				AML	AML		
	comp=E,11330μm,0.3s						
MDAR				AML	AML		
	comp=N,10930μm,0.4s						
MDAR				AML	AML		
	comp=E,11335μm,0.3s						
MDAR				AML	AML		
	comp=N,10950μm,0.4s						
MDAR				AML	AML		
	comp=N,10955μm,0.4s						
MDAR				AML	AML		
	comp=E,11345μm,0.3s						
PIO1	**Pioraco**	**0.15**	**330**	P	Pg	15 35 33.4	+0.5
PIO1				S	Sg	15 35 36.5	+1.3
PIO1				AML	AML		
	comp=E,7250μm,1.0s						
PIO1				AML	AML		
	comp=E,7250μm,1.0s						
PIO1				AML	AML		
	comp=N,7615μm,0.8s						
PIO1				AML	AML		
	comp=E,7250μm,1.0s						
GUMA	**Gualdo di Mace**	**0.18**	**84**	⇑P	Pg	15 35 34.2	+0.9
GUMA				S	Sg	15 35 37.8	+1.8
GUMA				AML	AML		
	comp=E,37400μm,0.4s						
GUMA				AML	AML		
	comp=N,35000μm,0.3s						
GUMA				AML	AML		
	comp=E,37250μm,0.3s						
GUMA				AML	AML		
	comp=N,34200μm,0.2s						
GUMA				AML	AML		
	comp=E,37400μm,0.4s						
GUMA				AML	AML		
	comp=E,37200μm,0.3s						
GUMA				AML	AML		
	comp=E,37200μm,1.7s						
FIU1	**Fiuminata**	**0.18**	**321**	P	Pg	15 35 34.0	+0.6
FIU1				S	Sg	15 35 37.4	+1.3
FIU1				AML	AML		
	comp=E,5555μm,1.5s						
FIU1				AML	AML		
	comp=N,5325μm,1.4s						
FIU1				AML	AML		
	comp=N,5330μm,1.4s						
FIU1				AML	AML		
	comp=E,5555μm,0.5s						
GAG1	**Gagliole**	**0.19**	**355**	⇑P	Pg	15 35 34.5	+0.8
SSM1	**San Severino M**	**0.20**	**19**	P	Pg	15 35 34.1	+0.5
T1245	**Castelsantange**	**0.20**	**159**	P	Pg	15 35 34.2	+0.5
AM05	**Amandola Campo**	**0.20**	**109**	P	Pg	15 35 34.5	+0.7
AM05				S	Sg	15 35 38.1	+1.4
AM05				AML	AML		
	comp=E,3340μm,1.0s						
AM05				AML	AML		
	comp=E,13250μm,0.1s						
AM05				AML	AML		
	comp=N,1048μm,1.5s						
AM05				AML	AML		
	comp=E,13300μm,0.1s						
AM05				AML	AML		
	comp=N,1052μm,1.5s						
AM05				AML	AML		
	comp=N,3910μm,1.5s						
AM05				AML	AML		
	comp=E,3335μm,1.0s						
AM05				AML	AML		
	comp=N,1052μm,0.5s						
AM05				A

NRCA			AML	AML	
	comp=N,13600μm,0.4s				
NRCA			AML	AML	
	comp=E,18200μm,0.1s				
NRCA			AML	AML	
	comp=E,19450μm,0.2s				
NRCA			AML	AML	
	comp=N,12500μm,0.5s				
NRCA			AML	AML	
	comp=N,13600μm,1.6s				
NRCA			AML	AML	
	comp=N,12500μm,1.5s				
MTL1	**Matelica**	**0.22 345**	P	Pg	15 35 34.9 +0.8
MMO1	**Montemonaco**	**0.23 130**	⇑P	Pg	15 35 34.8 +0.6
MMO1			S	Sg	15 35 38.8 +1.4
SNTG	**Esanatoglia**	**0.24 333**	P	Pg	15 35 34.8 +0.4
SNTG			S	Sg	15 35 39.3 +1.7
SNTG			AML	AML	
	comp=E,3395μm,0.7s				
SNTG			AML	AML	
	comp=N,3740μm,0.9s				
SNTG			AML	AML	
	comp=E,3500μm,0.7s				
SNTG			AML	AML	
	comp=N,3740μm,0.9s				
SNTG			AML	AML	
	comp=E,3400μm,0.7s				
SNTG			AML	AML	
	comp=N,3735μm,0.9s				
SNTG			AML	AML	
	comp=E,3500μm,1.3s				
SNTG			AML	AML	
	comp=E,3400μm,1.3s				
SNTG			AML	AML	
	comp=N,3865μm,0.9s				
EL6	**Elcito**	**0.28 2**	⇑P	Pg	15 35 35.8 +0.4
EL6			S	Sb	15 35 40.7 -1.3
EL6			AML	AML	
	comp=E,5035μm,0.2s				
EL6			AML	AML	
	comp=N,6720μm,0.2s				
EL6			AML	AML	
	comp=E,5045μm,0.2s				
T1215	**Vallo di Nera,**	**0.29 214**	⇑P	Pg	15 35 36.2 +0.8
T1215			S	Sb	15 35 41.1 -1.1
T1215			AML	AML	
	comp=N,4130μm,0.2s				
T1215			AML	AML	
	comp=E,3295μm,1.0s				
T1215			AML	AML	
	comp=N,4125μm,0.2s				
T1215			AML	AML	
	comp=E,3300μm,1.0s				
T1215			AML	AML	
	comp=N,4135μm,0.2s				
T1215			AML	AML	
	comp=E,3365μm,0.5s				
T1215			AML	AML	
	comp=E,3365μm,1.5s				
T1215			AML	AML	
	comp=N,4130μm,0.2s				
MNTP	**Montappone**	**0.29 71**	P	Pb	15 35 36.6 -0.6
MNTP			AML	AML	
	comp=E,8370μm,0.5s				
MNTP			AML	AML	
	comp=N,6465μm,1.0s				
MNTP			AML	AML	
	comp=E,8365μm,0.5s				
TRE1	**Treia**	**0.31 31**	P	Pb	15 35 36.8 -0.7
TRE1			AML	AML	
	comp=E,8195μm,0.3s				
TRE1			AML	AML	
	comp=N,6645μm,1.1s				
TRE1			AML	AML	
	comp=N,6645μm,1.1s				
TRE1			AML	AML	
	comp=N,6645μm,0.9s				
ASSB	**Assisi San Ben**	**0.32 270**	P	Pg	15 35 36.4 +0.5
CING	**Cingoli**	**0.34 13**	P	Pg	15 35 36.7 +0.4
FOSV	**Fossato di Vic**	**0.35 316**	⇑P	Pg	15 35 37.0 +0.5
FOSV			S	Sb	15 35 42.9 -0.9
FOSV			AML	AML	
	comp=E,8395μm,0.5s				
FOSV			AML	AML	
	comp=N,14150μm,0.3s				
FOSV			AML	AML	
	comp=E,8390μm,0.5s				
FOSV			AML	AML	
	comp=N,14100μm,0.3s				
FOSV			AML	AML	
	comp=E,8380μm,0.5s				
T1217	**Poggiodomo (PG**	**0.35 199**	P	Pg	15 35 37.2 +0.6
T1217			S	Sb	15 35 43.2 -0.8
T1217			AML	AML	
	comp=N,4525μm,0.4s				
T1217			AML	AML	
	comp=N,4510μm,0.4s				
T1217			AML	AML	
	comp=E,3220μm,0.5s				
T1217			AML	AML	
	comp=N,4530μm,0.4s				
T1217			AML	AML	
	comp=E,3245μm,1.6s				
T1217			AML	AML	
	comp=E,3255μm,1.6s				
T1217			AML	AML	
	comp=N,4505μm,0.4s				
T1217			AML	AML	
	comp=N,4525μm,0.4s				
ATCC	**AVT- Casa Cast**	**0.36 293**	⇑P	Pg	15 35 37.4 +0.7
ATCC			S	Sb	15 35 43.6 -0.5
ATCC			AML	AML	
	comp=E,16750μm,0.3s				
ATCC			AML	AML	
	comp=E,16800μm,0.3s				
ATCC			AML	AML	
	comp=N,20350μm,0.3s				
ATCC			AML	AML	
	comp=E,16750μm,1.7s				
MMUR	**Monte Murano**	**0.40 350**	P	Pb	15 35 38.6 -0.5
MMUR			S	Sb	15 35 44.8 -0.7
T1201	**Domo (RI)**	**0.41 163**	P	Pb	15 35 38.4 -0.7
T1204	**Amatrice, Fraz**	**0.41 156**	P	Pg	15 35 38.1 +0.5
T1204			S	Sb	15 35 44.9 -0.6
T1243	**Rocca Santa Ma**	**0.44 143**	⇓P	Pg	15 35 38.7 +0.5
LNSS	**Leonessa**	**0.44 185**	P	Pg	15 35 38.8 +0.5
LNSS			AML	AML	
	comp=E,4110μm,1.1s				
LNSS			AML	AML	
	comp=N,2870μm,0.7s				
LNSS			AML	AML	
	comp=N,2870μm,1.3s				
OFFI	**Offida**	**0.45 104**	P	Pb	15 35 40.0 +0.1
OFFI			AML	AML	
	comp=E,4870μm,0.5s				
OFFI			AML	AML	
	comp=N,5165μm,0.5s				
OFFI			AML	AML	
	comp=N,5165μm,1.5s				
SMA1	**SAN MARTINO**	**0.45 156**	P	Pg	15 35 38.9 +0.5
SMA1			AML	AML	
	comp=N,2335μm,0.4s				
SMA1			AML	AML	
	comp=E,2015μm,0.3s				
SMA1			AML	AML	
	comp=E,2010μm,0.3s				
ARVD	**Arcevia**	**0.47 347**	⇓P	Pg	15 35 39.2 +0.5
ARVD			S	Sb	15 35 48.0 +0.8
ARVD			AML	AML	
	comp=N,2025μm,0.7s				
ARVD			AML	AML	
	comp=E,2360μm,0.8s				
ARVD			AML	AML	
	comp=N,2025μm,1.3s				
MURB	**Monte Urbino**	**0.47 298**	⇑P	Pg	15 35 39.4 +0.6
MURB			S	Sb	15 35 48.0 +0.7
MURB			AML	AML	
	comp=E,10225μm,0.2s				
MURB			AML	AML	
	comp=E,10175μm,0.2s				
MURB			AML	AML	
	comp=N,9560μm,0.2s				
MURB			AML	AML	
	comp=E,10430μm,0.2s				
MURB			AML	AML	
	comp=N,10560μm,0.2s				
MURB			AML	AML	
	comp=N,9575μm,0.2s				
MURB			AML	AML	
	comp=E,10200μm,0.2s				
ATFO	**Monte Foce - G**	**0.50 310**	⇑P	Pg	15 35 39.8 +0.5
ATFO			S	Sb	15 35 48.1 0.0
ATFO			AML	AML	
	comp=E,2095μm,0.1s				
ATFO			AML	AML	
	comp=N,1535μm,0.5s				
CIMA	**Civitanova Mar**	**0.50 58**	P	Pb	15 35 40.7 +0.1
PP3	**Marolino**	**0.51 49**	P	Pb	15 35 40.8 0.0
PP3			AML	AML	
	comp=E,2965μm,1.4s				
PP3			AML	AML	
	comp=N,4290μm,0.7s				
PP3			AML	AML	
	comp=N,4090μm,0.7s				
PP3			AML	AML	
	comp=E,2970μm,1.4s				
PP3			AML	AML	
	comp=N,4290μm,1.3s				
PP3			AML	AML	
	comp=E,2965μm,0.6s				
PP3			AML	AML	
	comp=E,2970μm,0.6s				
PP3			AML	AML	
	comp=N,4090μm,1.3s				
ARRO	**Arrone**	**0.52 207**	P	Pg	15 35 40.3 +0.5
ARRO			S	Sb	15 35 48.9 +0.1
ARRO			AML	AML	
	comp=E,2055μm,0.8s				
ARRO			AML	AML	
	comp=N,1800μm,1.4s				
ARRO			AML	AML	
	comp=N,1795μm,1.4s				
ARRO			AML	AML	
	comp=E,2060μm,0.8s				
ARRO			AML	AML	
	comp=N,1795μm,0.6s				
T1211	**Morro Reatino**	**0.54 199**	P	Pg	15 35 40.7 +0.6
T1211			AML	AML	
	comp=E,2080μm,0.8s				
T1211			AML	AML	
	comp=N,2772μm,1.1s				
T1211			AML	AML	
	comp=E,2010μm,0.8s				
T1211			AML	AML	
	comp=N,2780μm,0.5s				
FRON	**Frontone**	**0.54 331**	⇓P	Pg	15 35 40.4 +0.3
FRON			AML	AML	
	comp=E,2245μm,0.8s				
FRON			AML	AML	
	comp=N,2610μm,0.3s				
FRON			AML	AML	
	comp=E,2240μm,0.8s				
FRON			AML	AML	
	comp=N,2605μm,0.3s				
RM33	**Pellescritta (**	**0.54 170**	P	Pg	15 35 40.3 +0.1
RM33			S	Sb	15 35 51.0 +1.5
RM33			AML	AML	
	comp=E,1060μm,0.3s				
RM33			AML	AML	
	comp=N,1205μm,0.3s				
RM33			AML	AML	
	comp=E,1038μm,0.6s				
RM33			AML	AML	
	comp=N,1207μm,0.3s				
RM33			AML	AML	
	comp=N,1195μm,0.3s				
RM33			AML	AML	
	comp=E,1060μm,0.3s				
RM33			AML	AML	
	comp=E,1060μm,1.7s				
RM33			AML	AML	
	comp=E,1038μm,0.6s				
T1246	**Crognaleto (TE**	**0.55 147**	P	Pg	15 35 40.5 +0.2
ATTE	**AVT- Monte Tez**	**0.56 286**	P	Pg	15 35 41.0 +0.5
CAMP	**Campotosto**	**0.56 155**	P	Pg	15 35 40.6 +0.1
CAMP			S	Sb	15 35 49.5 -0.5
CAMP			AML	AML	
	comp=E,853μm,0.8s				
CAMP			AML	AML	
	comp=N,785μm,0.3s				
CAMP			AML	AML	
	comp=E,854μm,0.8s				
CAMP			AML	AML	
	comp=N,785μm,1.7s				
TERO	**Teramo**	**0.57 138**	P	Pg	15 35 40.8 +0.2
TERO			AML	AML	
	comp=E,2355μm,0.5s				
TERO			AML	AML	
	comp=N,1695μm,0.2s				
CESX	**Cesi**	**0.57 221**	⇑P	Pg	15 35 41.0 +0.3
CESX			S	Sb	15 35 50.0 -0.3
CESX			AML	AML	
	comp=E,3285μm,0.3s				
CESX			AML	AML	
	comp=N,2960μm,0.4s				
CESX			AML	AML	
	comp=N,2960μm,1.6s				
ATVO	**AVT- Monte Val**	**0.60 304**	⇑P	Pg	15 35 41.5 +0.2
ATVO			S	Sb	15 35 52.0 +0.8
ATVO			AML	AML	
	comp=E,1645μm,0.4s				
ATVO			AML	AML	
	comp=N,1830μm,0.3s				
ATVO			AML	AML	
	comp=N,1835μm,0.3s				
T1247	**Pizzolo (AQ)**	**0.62 166**	P	Pg	15 35 42.0 +0.4
AOI	**Ancona**	**0.63 36**	P	Pg	15 35 42.3 +0.5
AOI			AML	AML	
	comp=E,790μm,1.0s				
AOI			AML	AML	
	comp=E,790μm,1.0s				
AOI			AML	AML	
	comp=E,790μm,1.0s				
AOI			AML	AML	
	comp=N,795μm,0.4s				
MPAG	**Monte Paganucc**	**0.63 338**	⇓P	Pg	15 35 42.4 +0.6
MPAG			S	Sn	15 35 54.0 -1.3
MPAG			AML	AML	
	comp=E,1024μm,0.3s				
MPAG			AML	AML	
	comp=N,905μm,0.4s				
MPAG			AML	AML	
	comp=E,1022μm,0.3s				
MPAG			AML	AML	
	comp=N,906μm,0.4s				
MPAG			AML	AML	
	comp=E,1020μm,0.3s				
PIEI	**Pieia**	**0.64 321**	⇓P	Pg	15 35 42.0 +0.1
PIEI			S	Sb	15 35 53.0 +0.9
PIEI			AML	AML	
	comp=N,1465μm,1.5s				
PIEI			AML	AML	
	comp=E,1485μm,0.4s				
PIEI			AML	AML	
	comp=E,1485μm,1.6s				
ATPI	**Pietralunga -**	**0.65 309**	⇑P	Pg	15 35 42.4 +0.3
ATPI			S	Sb	15 35 53.0 +0.6
ATPI			AML	AML	
	comp=E,1010μm,0.6s				
ATPI			AML	AML	
	comp=N,1225μm,1.2s				
ATPI			AML	AML	
	comp=E,1010μm,1.4s				
TRTR	**Tortoreto Alta**	**0.65 111**	⇑P	Pb	15 35 43.9 +0.7
TRTR			AML	AML	
	comp=E,3560μm,0.5s				
TRTR			AML	AML	
	comp=N,4015μm,1.1s				
TRTR			AML	AML	
	comp=N,4015μm,0.9s				
ATMI	**Monte Miggiano**	**0.67 296**	⇑P	Pn	15 35 46.0 +0.6
NARO	**Abbazia di Nar**	**0.68 327**	⇓P	Pg	15 35 42.9 +0.2
NARO			S	Sb	15 35 54.0 +0.7
NARO			AML	AML	
	comp=N,712μm,1.0s				
NARO			AML	AML	
	comp=E,878μm,0.8s				
FSSB	**Fossombrone**	**0.69 341**	P	Pg	15 35 43.3 +0.4
FSSB			S	Sn	15 35 56.0 -0.6
FSSB			AML	AML	
	comp=E,3210μm,0.4s				
FSSB			AML	AML	
	comp=N,6965μm,0.3s				
GIGS	**Gran Sasso**	**0.69 149**	P	Pg	15 35 43.0 0.0
GIGS			S	Sb	15 35 54.0 +0.3
GIGS			AML	AML	
	comp=E,315μm,0.4s				
GIGS			AML	AML	
	comp=N,304μm,1.2s				
GIGS			AML	AML	
	comp=E,314μm,0.4s				
GIGS			AML	AML	
	comp=N,304μm,0.8s				
AQU	**L'Aquila**	**0.73 161**	S	Sb	15 35 54.0 -0.8
MGAB	**Montegabbione**	**0.73 260**	P	Pg	15 35 43.9 +0.2
MGAB			AML	AML	
	comp=E,1775μm,0.3s				
MGAB			AML	AML	
	comp=N,2425μm,0.3s				
MGAB			AML	AML	
	comp=E,1810μm,0.3s				
MGAB			AML	AML	
	comp=N,2425μm,1.7s				
MGAB			AML	AML	
	comp=N,2310μm,0.4s				
MGAB			AML	AML	
	comp=E,1780μm,0.3s				
BADI	**Badiali**	**0.77 307**	⇓P	Pg	15 35 44.8 +0.3
BADI			S	Sn	15 35 58.0 -0.7
FIAM	**Fiamignano**	**0.78 178**	P	Pb	15 35 45.5 +0.1
FIAM			AML	AML	
	comp=N,475μm,0.6s				
FIAM			AML	AML	
	comp=E,616μm,0.8s				
PE3	**Peglio**	**0.78 327**	P	Pn	15 35 47.2 +0.2
PE3			S	Sn	15 35 59.0 0.0
VCEL	**Villa Celiera**	**0.85 139**	⇑P	Pg	15 35 46.4 +0.3
VCEL			AML	AML	
	comp=N,1072μm,0.9s				
VCEL			AML	AML	
	comp=N,1074μm,0.9s				
VCEL			AML	AML	
	comp=N,1074μm,1.1s				
VCEL			AML	AML	
	comp=E,1355μm,0.4s				
CAFI	**Castiglion Fio**	**0.87 289**	⇓P	Pb	15 35 46.7 -0.3
CAFI			AML	AML	
	comp=E,741μm,1.1s				
CAFI			AML	AML	
	comp=N,648μm,0.5s				
CAFI			AML	AML	
	comp=E,724μm,1.1s				
CAFI			AML	AML	
	comp=N,608μm,0.6s				
CAFI			AML	AML	
	comp=E,741μm,0.9s				
CAFI			AML	AML	
	comp=E,724μm,0.9s				
SACS	**San Casciano d**	**0.89 258**	⇓P	Pb	15 35 47.8 +0.5
SACS			S	Sn	15 36 02.0 +0.4
SACS			AML	AML	
	comp=E,551μm,1.2s				
SACS			AML	AML	
	comp=N,466μm,1.1s				
SRES	**S.Oreste - Sor**	**0.91 208**	⇓P	Pg	15 35 47.2 0.0
SRES			S	Sn	15 36 03.0 +0.8
SRES			AML	AML	
	comp=N,581μm,0.4s				
SRES			AML	AML	
	comp=E,566μm,1.6s				
T0110	**Collepietro**	**0.96 148**	⇓P	Pg	15 35 47.8 -0.4
T0110			AML	AML	
	comp=N,952μm,0.7s				
T0110			AML	AML	
	comp=E,1395μm,0.4s				
SF04	**Casetta**	**1.07 259**	⇓P	Pn	15 35 51.9 +0.8
SF04			AML	AML	
	comp=E,345μm,0.7s				
SF04			AML	AML	
	comp=N,321μm,0.8s				
LPEL	**Lama dei Pelig**	**1.28 141**	P	Pb	15 35 54.1 +0.1
LPEL			AML	AML	
	comp=N,288μm,0.9s				
LPEL			AML	AML	
	comp=E,472μm,0.9s				
LMD	**Lutirano**	**1.44 316**	⇓P	Pg	15 35 59.7 +2.4
LIK	**San Giovanni I**	**1.58 167**	⇓P	Pb	15 35 58.6 -0.4
GSCL	**Gusciola**	**2.23 307**	S	Sb	15 36 37.0 -1.1
MYKA	**Terra Mystica**	**3.61 6**	*e*Pn	Pn	15 36 27.9 +2.0
	comp=E,3.3nm,0.4s				
OBKA	**Obir**	**3.62 16**	*e*Pn	Pn	15 36 27.5 +1.5
	comp=E,1.5nm,0.3s				
ABTA	**Abfaltersbach**	**3.73 354**	*e*Pn	Pn	15 36 29.2 +1.7
	comp=E,2.7nm,0.2s				
FETA	**Feichten**	**4.31 338**	*e*Pn	Pn	15 36 38.9 +3.2
	comp=E,1.3nm,0.3s				
WTTA	**Wattenberg**	**4.34 347**	*e*Pn	Pn	15 36 39.1 +3.0
	comp=E,0.8nm,0.2s				
SQTA	**Sankt Quirin**	**4.38 343**	*e*Pn	Pn	15 36 39.9 +3.4
	comp=E,1.5nm,0.2s				
ARSA	**Arzberg**	**4.54 21**	*e*Pn	Pb	15 36 50.9 +1.2
	comp=E,1.1nm,0.3s				
MOA	**Molln**	**4.88 9**	*e*Pn	Pn	15 36 44.6 +1.3
	comp=E,1.3nm,0.5s				
CONA	**Conrad Observa**	**5.26 21**	*e*Pn	Pn	15 36 50.1 +1.5
	comp=E,0.9nm,0.2s				
CKRC	**Cesky Krumlov**	**5.84 8**	*e*SN	Sn	15 38 02.1 -1.5
KHC	**Kasperske Hory**	**6.10 3**	*e*PN	Pn	15 37 00.4 +0.3
KHC			*e*SN	Sn	15 38 07.9 -2.1

ROM 28 15:36:26.3±0.0, 42°.892N±0°.002×13°.169E±0°.004, h8km, ML2.4/7, 4C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**159**	P	Pg	15 36 28.2	+0.1
T1245				S	Sg	15 36 29.4	+0.1
T1245				AML	AML		
	comp=N,26750μm,0.7s						
T1245				AML	AML		
	comp=E,19800μm,1.2s						
T1245				AML	AML		
	comp=N,28000μm,0.7s						
T1245				AML	AML		
	comp=E,22250μm,0.2s						
T1245				AML	AML		
	comp=E,22247μm,0.2s						
T1245				AML	AML		
	comp=N,21682μm,0.1s						
T1245				AML	AML		
	comp=N,21302μm,0.2s						
NRCA	**Norcia**	**0.07**	**214**	P	Pg	15 36 28.6	+0.3
NRCA				S	Sg	15 36 30.1	+0.3
NRCA				AML	AML		
	comp=E,18250μm,0.1s						
NRCA				AML	AML		
	comp=N,12500μm,0.5s						
NRCA				AML	AML		
	comp=N,13600μm,0.4s						
NRCA				AML	AML		
	comp=E,18200μm,0.1s						
NRCA				AML	AML		
	comp=E,19450μm,0.2s						
NRCA				AML	AML		
	comp=E,19451μm,0.1s						
NRCA				AML	AML		
	comp=E,18236μm,0.1s						
NRCA				AML	AML		
	comp=N,11709μm,0.1s						
NRCA				AML	AML		
	comp=N,12902μm,0.1s						
FEMA	**Monte Fema**	**0.11**	**309**	P	Pg	15 36 29.3	+0.4
FEMA				S	Sg	15 36 31.3	+0.5
MMO1	**Montemonaco**	**0.12**	**86**	P	Pg	15 36 29.4	+0.4
MMO1				S	Sg	15 36 31.5	+0.7
FDMO	**Fiordimonte**	**0.16**	**337**	⇑P	Pg	15 36 30.2	+0.6
FDMO				S	Sg	15 36 33.0	+1.1
FDMO				AML	AML		
	comp=E,1885μm,0.1s						
FDMO				AML	AML		
	comp=N,2295μm,0.1s						
FDMO				AML	AML		
	comp=N,951μm,0.2s						
T1241	**Roccafluviore,**	**0.20**	**100**	P	Pg	15 36 30.6	+0.3
T1241				S	Sg	15 36 34.4	+1.4
T1241				AML	AML		
	comp=N,1144μm,0.6s						
T1241				AML	AML		

comp=E,1150μm,0.2s
T1241 AML AML
comp=N,1004μm,0.2s
T1241 AML AML
comp=E,1151μm,0.3s
CSP1 Cessapalombo 0.20 7 P Pg 15 36 31.2 +0.8
CSP1 S Sg 15 36 34.5 +1.2
GUMA Gualdo di Mace 0.21 36 P Pg 15 36 31.4 +0.8
GUMA S Sg 15 36 35.3 +1.9
GUMA AML AML
comp=N,3170μm,1.2s
GUMA AML AML
comp=E,4735μm,0.7s
GUMA AML AML
comp=N,3460μm,1.0s
GUMA AML AML
comp=E,4225μm,0.3s
GUMA AML AML
comp=E,4113μm,0.3s
GUMA AML AML
comp=N,3416μm,0.4s
GUMA AML AML
comp=E,4228μm,0.3s
GUMA AML AML
comp=N,2852μm,0.3s
CESI CESI - Serrava 0.22 300 P Pg 15 36 31.4 +0.6
CESI S Sg 15 36 35.2 +1.3
CESI AML AML
comp=E,868μm,0.5s
CESI AML AML
comp=E,868μm,0.5s
CESI AML AML
comp=N,1330μm,0.4s
CESI AML AML
comp=N,1330μm,0.4s
CESI AML AML
comp=E,868μm,0.5s
T1215 Vallo di Nera, 0.24 248 ⇑P Pg 15 36 31.7 +0.7
T1215 S Sg 15 36 35.7 +1.4
T1215 AML AML
comp=E,449μm,0.2s
T1215 AML AML
comp=N,361μm,0.2s
T1215 AML AML
comp=E,458μm,0.2s
T1215 AML AML
comp=N,356μm,0.2s
T1204 Amatrice, Fraz 0.24 153 ⇑P Pg 15 36 32.1 +0.9
T1204 S Sg 15 36 36.3 +1.9
T1204 AML AML
comp=E,771μm,0.3s
T1204 AML AML
comp=N,497μm,0.4s
T1217 Poggiodomo (PG 0.25 224 ⇑P Pg 15 36 32.0 +0.7
T1217 S Sb 15 36 36.4 -1.3
T1217 AML AML
comp=E,648μm,0.8s
T1217 AML AML
comp=N,906μm,0.5s
T1217 AML AML
comp=E,648μm,0.8s
T1217 AML AML
comp=N,906μm,0.5s
T1217 AML AML
comp=N,793μm,0.2s
T1217 AML AML
comp=N,738μm,0.2s
T1217 AML AML
comp=E,473μm,0.1s
T1217 AML AML
comp=E,491μm,0.1s
T1243 Rocca Santa Ma 0.28 133 P Pg 15 36 32.5 +0.6
T1243 S Sb 15 36 37.6 -1.0
SMA1 SAN MARTINO 0.29 155 P Pg 15 36 32.7 +0.7
SMA1 S Sb 15 36 37.6 -1.2
SMA1 AML AML
comp=N,917μm,0.5s
SMA1 AML AML
comp=E,850μm,0.5s
LNSS Leonessa 0.30 198 ⇓P Pg 15 36 33.0 +0.7
LNSS AML AML
comp=E,1170μm,0.8s
LNSS AML AML
comp=N,1900μm,0.2s
LNSS AML AML
comp=E,1165μm,0.8s
LNSS AML AML
comp=N,1895μm,0.2s
LNSS AML AML
comp=E,1160μm,0.2s
LNSS AML AML
comp=N,1898μm,0.1s
CAMP Campotosto 0.40 154 P Pg 15 36 34.5 +0.5
CAMP S Sb 15 36 41.0 -0.9
CAMP AML AML
comp=E,313μm,1.2s
CAMP AML AML
comp=N,419μm,0.2s
CAMP AML AML
comp=E,309μm,0.2s
CAMP AML AML
comp=N,419μm,0.2s
SNTG Esanatoglia 0.40 335 P Pg 15 36 34.3 +0.2
SNTG S Sb 15 36 41.1 -0.8
SNTG AML AML
comp=E,148μm,0.4s
SNTG AML AML
comp=N,235μm,0.3s
SNTG AML AML
comp=E,220μm,1.1s
SNTG AML AML
comp=N,230μm,0.3s
ASSB Assisi San Ben 0.40 292 S Sb 15 36 42.0 0.0
TERO Teramo 0.42 130 P Pg 15 36 34.8 +0.4
TERO S Sb 15 36 41.8 -0.6
TERO AML AML
comp=N,323μm,0.3s
TERO AML AML
comp=E,330μm,0.2s
TERO AML AML
comp=E,358μm,0.4s
TERO AML AML
comp=N,335μm,0.3s
T1211 Morro Reatino 0.43 213 P Pb 15 36 35.8 -0.3
T1211 S Sb 15 36 42.1 -0.6
ARRO Arrone 0.43 224 P Pb 15 36 35.7 -0.4
ARRO S Sb 15 36 43.0 +0.3
ARRO AML AML
comp=N,215μm,0.3s
ARRO AML AML
comp=E,249μm,0.2s
EL6 Elcito 0.44 354 S Sb 15 36 43.0 -0.1
FOSV Fossato di Vic 0.50 324 P Pg 15 36 36.2 +0.2
FOSV S Sb 15 36 44.5 -0.3
FOSV AML AML
comp=E,271μm,0.3s
FOSV AML AML
comp=N,279μm,0.3s
GIGS Gran Sasso 0.53 146 P Pg 15 36 36.8 +0.3
GIGS S Sb 15 36 45.4 -0.3
PP3 Marolino 0.58 33 S Sb 15 36 47.0 -0.1
ARVD Arcevia 0.63 345 S Sb 15 36 48.0 -0.5

IDC 28 15:38:51.6±1.9, 9°.23N×92°.50E, h0km, mb3.9/2, mbtmp3.8/4, ML3.5/2, MS3.4/3, Error ellipse: s-maj=44.7km s-min=29.9km az=180.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.10**	**34**	Pn	Pn	15 41 31.9	+0.1
	0.1nm,0.3s,baz=227,slow=14,SNR=6.3 0.4nm,0.6s						
PALK	**Pallekele**	**11.83**	**261**	Pn	Pn	15 41 42.5	+0.7
	0.2nm,0.3s,baz=116,slow=21,SNR=1.3						
PALK				Sn	Sn	15 43 54.6	-0.1
	0.5nm,0.3s,baz=77,slow=23,SNR=7.3						
PALK				LR	LR	15 45 20.2	
	comp=Z,56nm,18.2s,baz=202,slow=33 3.1nm,0.7s						
H08S3	**Diego Garcia H**	**26.04**	**231**	T	T	16 11 55.6	
	baz=49,slow=74						
H08S2	**Diego Garcia H**	**26.04**	**231**	T	T	16 11 52.5	
	baz=49,slow=74						
H08S1	**Diego Carcia H**	**26.05**	**231**	T	T	16 11 58.7	
	baz=49						
WRA	**Warramunga Arr**	**50.37**	**125**	P	P	15 47 50.6	-0.3
	1.4nm,0.6s,baz=305,slow=8.8,SNR=26						
WRA				LR	LR	16 10 35.0	
	comp=Z,43nm,18.5s,baz=88,slow=38 1.4nm,0.6s						
ASAR	**Alice Springs**	**52.03**	**130**	P	P	15 48 03.4	0.0
	0.9nm,0.7s,baz=306,slow=6.9,SNR=14 0.9nm,0.7s						
CTA	**Charters Tower**	**60.38**	**119**	LR	LR	16 18 37.7	
	comp=Z,63nm,20.3s,baz=253,slow=40						

TUL ***28*** *15:50:39.6±0.6, 36°.76N±0°.01×98°.06W±0°.01, h7km±2km, ML3.0, mb_Lg2.8/34(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=188.0*

NEIC 28 15:50:40.2±0.5, 36°.750N±0°.009×98°.062W±0°.008, h5km±1km, Error ellipse: s-maj=2.7km s-min=1.8km az=303.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.13**	**294**	Pg	Pg	15 50 42.8	-0.1
KAN14	**Manchester OK**	**0.22**	**21**		Pg	15 50 44.3	-0.2
KAN17	**Caldwell West**	**0.38**	**39**	Pg	Pg	15 50 47.1	-0.4
KAN17				Sg	Sg	15 50 52.4	-0.1
KAN16	**Harper SW Stat**	**0.47**	**360**	Pg	Pg	15 50 49.0	-0.4
KAN08	**Anthony NE Sta**	**0.48**	**9**		Pg	15 50 49.1	-0.4
OK035	**E0210 Rd and N**	**0.52**	**266**	Pg	Pg	15 50 49.9	-0.3
OK035				Sg	Sg	15 50 57.1	0.0
KAN06	**Argonia West S**	**0.52**	**18**		Pg	15 50 49.9	-0.4
KAN09	**Caldwell North**	**0.52**	**42**		Pg	15 50 49.7	-0.5
KAN13	**South Haven SW**	**0.54**	**61**	Pg	Pg	15 50 49.9	-0.6
KAN12	**Harper NE Stat**	**0.55**	**5**		Pg	15 50 50.3	-0.5
OK038	**West end E0370**	**0.61**	**244**	Pg	Pg	15 50 50.5	-1.4
KS21	**Milan North St**	**0.62**	**31**	Pg	Pg	15 50 51.6	-0.6
OK049	**E0420 Rd and N**	**0.70**	**119**	Pg	Pg	15 50 52.9	-0.7
U32A	**Winter Ranch,**	**0.84**	**244**	Pg	Pg	15 50 55.7	-0.7
OK048	**Pawnee Station**	**0.96**	**110**	Pg	Pg	15 50 57.8	-0.8
OK045	**Pawnee Station**	**0.96**	**108**		Pg	15 50 57.8	-0.8
OK046	**Pawnee Station**	**0.99**	**110**		Pg	15 50 58.4	-0.9
OK051	**E0350 and S346**	**1.02**	**104**	Pg	Pg	15 50 58.8	-0.8
OK029	**Liberty Lake**	**1.07**	**153**	Pg	Pg	15 50 59.7	-1.0
OK044	**Pawnee Station**	**1.09**	**110**	Pg	Pg	15 51 00.1	-0.9
OK033	**Mehan**	**1.15**	**127**	Pg	Pg	15 51 01.1	-1.1
T35A	**Sooner Cattle**	**1.25**	**82**	Pg	Pg	15 51 02.9	-1.4
OK031	**S. Brethren Rd**	**1.27**	**128**		Pg	15 51 03.2	-1.2
OK025	**Westminster Rd**	**1.30**	**153**	Pg	Pn	15 51 03.9	-1.1
OK034	**N. Norfolk Rd.**	**1.31**	**124**	Pg	Pn	15 51 03.9	-1.3
FNO	**Franklin**	**1.58**	**160**		Pn	15 51 08.5	-0.4
R32A	**Long Quarter,**	**1.75**	**343**		Pn	15 51 10.1	-1.1
TUL1	**Leonard**	**2.02**	**114**	Pn	Pn	15 51 14.8	0.0
WMOK	**Wichita Mounta**	**2.09**	**196**	Pn	Pn	15 51 15.9	0.0
X34A	**Smith Ranch, M**	**2.15**	**175**	Pn	Pn	15 51 17.2	+0.4
CBKS	**Cedar Bluff**	**2.45**	**328**	Pn	Pn	15 51 20.7	-0.2
KSU1	**Kansas State U**	**2.61**	**26**	IAmb_Lg		15 52 02.4	
	comp=Z,36nm,0.7s						
U38A	**Gravette**	**2.97**	**95**		Pn	15 51 27.8	-0.2
X37A	**Clayton**	**3.07**	**134**		Pn	15 51 29.5	+0.1
X37A				IAmb_Lg		15 52 19.6	
	comp=Z,25nm,1.1s						
HHAR	**Hobbs**	**3.35**	**97**	Pn	Pn	15 51 33.2	-0.1
AMTX	**Amarillo**	**3.48**	**239**	IAmb_Lg		15 52 31.0	
	comp=Z,19nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.26**	**303**	IAmb_Lg		15 53 06.6	
	comp=Z,21nm,0.9s						
MIAR	**Mount Ida**	**4.26**	**120**	IAmb_Lg		15 53 04.8	
	comp=Z,26nm,1.1s						
ABTX	**Abilene, Hawle**	**4.32**	**198**	IAmb_Lg		15 52 57.4	
	comp=Z,15nm,0.8s						
P38A	**Dawn**	**4.58**	**50**	IAmb_Lg		15 53 03.4	
	comp=Z,14nm,0.8s						
MGMO	**Mountain Grove**	**4.66**	**83**	IAmb_Lg		15 53 06.7	
	comp=Z,20nm,1.1s						
WHAR	**Wooly Hollow**	**4.90**	**106**	IAmb_Lg		15 53 20.2	
	comp=Z,19nm,1.1s						
UALR	**University of**	**5.05**	**111**	IAmb_Lg		15 53 25.5	
	comp=Z,14nm,0.7s						
T25A	**Trinidad**	**5.10**	**276**	IAmb_Lg		15 53 28.7	
	comp=Z,22nm,0.8s						
P40A	**Paris**	**5.49**	**58**	IAmb_Lg		15 53 36.4	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	**5.58**	**74**	IAmb_Lg		15 53 41.4	
	comp=Z,14nm,1.0s						
Q24A	**Divide**	**6.03**	**294**	IAmb_Lg		15 53 56.8	
	comp=Z,17nm,1.0s						
S44A	**Carbondale**	**7.09**	**80**	IAmb_Lg		15 54 26.2	
	comp=Z,17nm,0.7s						
SIUC	**Southern Illin**	**7.12**	**80**	IAmb_Lg		15 54 29.8	
	comp=Z,16nm,0.8s						
T45A	**Paducah**	**7.55**	**85**	IAmb_Lg		15 54 34.0	
	comp=Z,14nm,0.7s						

LDG ***28*** *15:56:57.3±0.2, 42°.80N×13°.29E, h11km, MI3.4/14, Error ellipse: s-maj=5.4km s-min=4.4km az=71.0*
PRU ***28*** *15:56:57.9±0.0, 42°.76N×13°.25E, h0km*
IDC ***28*** *15:56:59.5±1.1, 42°.91N×13°.14E, h0km, mb3.5/6, mbtmp3.6/11, ML3.8/5, MS3.0/4, Error ellipse: s-maj=24.2km s-min=13.6km az=99.0*
ROM ***28*** *15:56:59.1±0.0, 42°.785N±0°.002×13°.114E±0°.003, h11km, ML3.8/12, Error ellipse: s-maj=0.2km s-min=0.1km az=71.0*
BEO ***28*** *15:57:04.0±0.8, 42°.92N×13°.36E, h19km±9km, ML3.6/12*

ISC 28 15:56:59.7±0.7, 42°.78N±0°.01×13°.12E±0°.01, h13km±4km, n242, σ1$71/299, mb3.7/5, 26C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**359**	⇓P	**Pg**	**15 57 01.6**	**-0.7**
NRCA				S	**Sg**	**15 57 02.9**	**-1.3**
T1245	**Castelsantange**	**0.09**	**36**	⇑P	**Pg**	**15 57 02.2**	**-0.6**
T1245				S	**Sg**	**15 57 04.0**	**-1.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.13**	**327**	⇑P	**Pg**	**15 57 02.7**	**-0.4**
T1216				S	**Sg**	**15 57 05.1**	**-0.4**
T1216				AML	AML		
	comp=E,70650μm,1.5s						
T1216				AML	AML		
T1216				AML	AML		
	comp=E,70800μm,1.6s						
T1244	**Arquata del Tr**	**0.14**	**101**	⇓P	**Pg**	**15 57 03.1**	**-0.2**
T1244				S	**Sg**	**15 57 05.8**	**+0.1**
MC2	**Monte Cornacci**	**0.14**	**23**	⇑P	**Pg**	**15 57 03.0**	**-0.5**
MC2				S	**Sg**	**15 57 05.7**	**-0.4**
T1217	**Poggiodomo (PG**	**0.15**	**243**	⇑P	**Pg**	**15 57 03.3**	**-0.2**
T1217				S	**Sg**	**15 57 06.1**	**0.0**
T1217				AML	AML		
	comp=N,91500μm,0.5s						
T1217				AML	AML		
	comp=N,87050μm,0.5s						
T1217				AML	AML		
	comp=E,62750μm,0.3s						
T1217				AML	AML		
	comp=E,65150μm,0.3s						
T1201	**Domo (RI)**	**0.16**	**141**	⇓P	**Pg**	**15 57 03.6**	**+0.1**
T1201				S	**Sb**	**15 57 06.9**	**-0.9**
T1204	**Amatrice, Fraz**	**0.18**	**126**	⇓P	**Pg**	**15 57 03.8**	**-0.1**
T1204				S	**Sg**	**15 57 07.1**	**+0.2**
T1204				AML	AML		
T1204				AML	AML		
	comp=N,70050μm,1.0s						
T1215	**Vallo di Nera,**	**0.18**	**276**	⇓P	**Pg**	**15 57 03.7**	**-0.2**
T1215				S	**Sg**	**15 57 06.8**	**0.0**
T1215				AML	AML		
	comp=E,26300μm,1.4s						
T1215				AML	AML		
	comp=N,26550μm,0.9s						
T1215				AML	AML		
	comp=E,26350μm,1.4s						
T1215				AML	AML		
	comp=N,25550μm,0.8s						
T1215				AML	AML		
	comp=E,26500μm,1.4s						
T1215				AML	AML		
	comp=N,25500μm,0.9s						
T1215				AML	AML		
	comp=N,26550μm,0.9s						
FEMA	**Monte Fema**	**0.19**	**345**	P	**Pg**	**15 57 03.7**	**-0.4**
FEMA				S	**Sg**	**15 57 06.8**	**-0.2**
LNSS	**Leonessa**	**0.19**	**197**	⇑P	**Pg**	**15 57 03.9**	**-0.1**
LNSS				S	**Sg**	**15 57 07.4**	**+0.4**
MMO1	**Montemonaco**	**0.19**	**53**	⇑P	**Pg**	**15 57 03.7**	**-0.4**
MMO1				S	**Sg**	**15 57 07.0**	**-0.2**
SMA1	**SAN MARTINO**	**0.22**	**133**	⇓P	**Pg**	**15 57 04.4**	**-0.2**
SMA1				S	**Sb**	**15 57 08.8**	**-0.8**
T1256	**Bolognola (MC)**	**0.24**	**20**	⇑P	**Pg**	**15 57 04.5**	**-0.4**
T1256				S	**Sg**	**15 57 08.6**	**+0.2**
T1241	**Roccafluvione,**	**0.24**	**72**	⇑P	**Pg**	**15 57 04.2**	**-0.7**
T1241				S	**Sg**	**15 57 08.2**	**-0.2**
FDMO	**Fiordimonte**	**0.26**	**355**	⇑P	**Pg**	**15 57 04.8**	**-0.3**
FDMO				S	**Sg**	**15 57 08.7**	**-0.1**
FDMO				AML	AML		
	comp=N,34550μm,1.5s						
FDMO				AML	AML		
	comp=E,29900μm,0.8s						
T1243	**Rocca Santa Ma**	**0.26**	**109**	⇓P	**Pg**	**15 57 04.8**	**-0.4**
T1243				S	**Sg**	**15 57 09.1**	**+0.2**
AM05	**Amandola Campo**	**0.26**	**42**	P	**Pg**	**15 57 05.0**	**-0.2**
RM33	**Pellescritta (**	**0.28**	**165**	⇑P	**Pg**	**15 57 05.4**	**-0.2**
RM33				S	**Sg**	**15 57 10.0**	**+0.4**
T1211	**Morro Reatino**	**0.32**	**218**	⇑P	**Pg**	**15 57 06.0**	**-0.2**
T1211				S	**Sg**	**15 57 11.2**	**+0.7**
CSP1	**Cessapalombo**	**0.32**	**12**	⇑P	**Pg**	**15 57 05.8**	**-0.4**
CSP1				S	**Sg**	**15 57 10.8**	**+0.2**
CSP1				AML	AML		
	comp=E,23300μm,0.6s						
CSP1				AML	AML		
	comp=N,31550μm,0.7s						
CSP1				AML	AML		
	comp=N,31600μm,0.7s						
CSP1				AML	AML		
	comp=E,23250μm,0.6s						
GUMA	**Gualdo di Mace**	**0.32**	**30**	⇑P	**Pg**	**15 57 06.3**	**-0.1**
GUMA				S	**Sb**	**15 57 12.1**	**-0.4**
CAMP	**Campotosto**	**0.33**	**139**	⇓P	**Pg**	**15 57 06.1**	**-0.3**
CAMP				S	**Sg**	**15 57 11.0**	**0.0**
ARRO	**Arrone**	**0.33**	**232**	⇑P	**Pg**	**15 57 06.2**	**-0.1**
ARRO				S	**Sg**	**15 57 11.5**	**+0.6**
T1246	**Crognaleto (TE**	**0.34**	**125**	⇓P	**Pg**	**15 57 06.3**	**-0.4**
T1246				S	**Sg**	**15 57 11.8**	**+0.4**
T1247	**Pizzolo (AQ)**	**0.37**	**158**	P	**Pg**	**15 57 06.7**	**-0.4**
T1247				S	**Sb**	**15 57 12.9**	**-0.8**
SEF1	**Sefro**	**0.39**	**341**	P	**Pg**	**15 57 07.0**	**-0.4**
SEF1				S	**Sg**	**15 57 13.0**	**+0.4**
TERO	**Teramo**	**0.39**	**114**	⇓P	**Pg**	**15 57 07.0**	**-0.5**
TERO				S	**Sg**	**15 57 13.1**	**+0.2**
PIO1	**Pioraco**	**0.41**	**346**	P	**Pg**	**15 57 07.4**	**-0.4**
MDAR	**Monte D'Aria**	**0.41**	**3**	P	**Pg**	**15 57 07.3**	**-0.6**
MDAR				S	**Sg**	**15 57 14.0**	**+0.5**
ASSB	**Assisi San Ben**	**0.42**	**308**	⇓P	**Pg**	**15 57 07.7**	**-0.5**
FIU1	**Fiuminata**	**0.43**	**342**	P	**Pg**	**15 57 07.7**	**-0.5**
CESX	**Cesi**	**0.43**	**247**	⇑P	**Pg**	**15 57 07.8**	**-0.4**
CESX				S	**Sg**	**15 57 14.4**	**+0.4**
MNTP	**Montappone**	**0.44**	**36**	⇑P	**Pb**	**15 57 08.6**	**-0.7**
OFFI	**Offida**	**0.45**	**70**	⇑P	**Pb**	**15 57 09.0**	**-0.4**
SSM1	**San Severino M**	**0.45**	**6**	P	**Pg**	**15 57 08.0**	**-0.6**
GAG1	**Gagliole**	**0.46**	**356**	P	**Pg**	**15 57 08.3**	**-0.4**
GAG1				S	**Sb**	**15 57 15.6**	**-0.7**
GIGS	**Gran Sasso**	**0.47**	**135**	⇓P	**Pg**	**15 57 08.2**	**-0.8**
GIGS				S	**Sb**	**15 57 15.7**	**-1.1**
AQU	**L'Aquila**	**0.48**	**154**	P	**Pg**	**15 57 08.8**	**-0.4**
MTL1	**Matelica**	**0.48**	**351**	P	**Pg**	**15 57 08.7**	**-0.5**
SNTG	**Esanatoglia**	**0.49**	**345**	⇑P	**Pg**	**15 57 08.8**	**-0.6**
SNTG				S	**Sg**	**15 57 16.2**	**+0.3**
FIAM	**Fiamignano**	**0.51**	**180**	⇑P	**Pg**	**15 57 09.2**	**-0.6**
FIAM				S	**Sg**	**15 57 17.1**	**+0.4**
ATCC	**AVT- Casa Cast**	**0.53**	**319**	⇓P	**Pg**	**15 57 09.7**	**-0.5**
EL6	**Elcito**	**0.55**	**359**	⇑P	**Pg**	**15 57 09.9**	**-0.6**
EL6				S	**Sb**	**15 57 18.5**	**-0.5**
TRE1	**Treia**	**0.55**	**15**	P	**Pg**	**15 57 10.3**	**-0.2**
FOSV	**Fossato di Vic**	**0.57**	**333**	⇓P	**Pg**	**15 57 10.2**	**-0.7**
TRTR	**Tortoreto Alta**	**0.59**	**87**	P	**Pb**	**15 57 11.8**	**0.0**
CING	**Cingoli**	**0.60**	**6**	⇑P	**Pg**	**15 57 10.6**	**-0.7**
FAGN	**Fagnano**	**0.62**	**146**	P	**Pg**	**15 57 10.4**	**-1.5**
CADA	**Capodarco di F**	**0.63**	**49**	P	**Pb**	**15 57 12.8**	**+0.3**
MURB	**Monte Urbino**	**0.65**	**318**	P	**Pg**	**15 57 11.8**	**-0.5**
VCEL	**Villa Celiera**	**0.66**	**126**	P	**Pg**	**15 57 12.0**	**-0.6**
CIMA	**Civitanova Mar**	**0.66**	**38**	P	**Pb**	**15 57 13.0**	**-0.1**
PP3	**Marolino**	**0.70**	**31**	P	**Pb**	**15 57 13.4**	**-0.3**
ATTE	**AVT- Monte Tez**	**0.70**	**307**	P	**Pg**	**15 57 12.5**	**-0.8**
SRES	**S.Oreste - Sor**	**0.70**	**220**	⇑P	**Pg**	**15 57 12.4**	**-0.9**
ATFO	**Monte Foce - G**	**0.71**	**326**	P	**Pg**	**15 57 12.8**	**-0.6**
ATSC	**Scheggia e Pas**	**0.71**	**334**	P	**Pg**	**15 57 12.7**	**-0.8**
ARVD	**Arcevia**	**0.73**	**350**	P	**Pg**	**15 57 12.9**	**-0.9**
ARVD				S	**Sb**	**15 57 24.0**	**-0.1**
T0110	**Collepietro**	**0.74**	**138**	⇓P	**Pg**	**15 57 13.0**	**-1.0**
ATLO	**AVT- Montelove**	**0.74**	**316**	P	**Pg**	**15 57 13.2**	**-1.0**
MGAB	**Montegabbione**	**0.75**	**280**	⇓P	**Pg**	**15 57 13.6**	**-0.6**
TB01	**Gubbio**	**0.78**	**320**	⇓P	**Pg**	**15 57 13.8**	**-1.0**
ATVA	**AVT- Monte Val**	**0.79**	**309**	P	**Pg**	**15 57 14.1**	**-0.8**
FRON	**Frontone**	**0.79**	**339**	P	**Pg**	**15 57 13.9**	**-1.1**
PTQR	**Pietraquaria**	**0.79**	**164**	P	**Pg**	**15 57 13.8**	**-1.2**
ATVO	**AVT- Monte Val**	**0.79**	**319**	P	**Pg**	**15 57 14.0**	**-1.1**
TB03	**Pietralunga**	**0.81**	**320**	P	**Pg**	**15 57 14.2**	**-1.1**
ATBU	**Serra di Buran**	**0.81**	**329**	P	**Pg**	**15 57 14.6**	**-0.7**
MTCE	**Montecelio**	**0.81**	**200**	⇑P	**Pg**	**15 57 14.1**	**-1.3**
ATMI	**Monte Miggiano**	**0.83**	**312**	P	**Pg**	**15 57 15.3**	**-0.5**
CERT	**Cerreto**	**0.84**	**187**	⇑P	**Pg**	**15 57 14.4**	**-1.5**
AOI	**Ancona**	**0.85**	**25**	⇑P	**Pg**	**15 57 15.4**	**-0.7**
ATPC	**Poggio Castell**	**0.85**	**326**	P	**Pg**	**15 57 15.4**	**-0.7**
ATPI	**Pietralunga -**	**0.85**	**322**	P	**Pg**	**15 57 15.0**	**-1.1**
PIEI	**Pieia**	**0.86**	**331**	P	**Pg**	**15 57 15.2**	**-1.2**
PCRO	**Pietralacroce**	**0.88**	**20**	P	**Pn**	**15 57 17.1**	**-0.7**
MPAG	**Monte Paganucc**	**0.89**	**343**	P	**Pb**	**15 57 15.9**	**-1.0**
SACS	**San Casciano d**	**0.89**	**275**	P	**Pb**	**15 57 16.3**	**-0.7**
SENI	**Senigallia**	**0.93**	**5**	P	**Pg**	**15 57 17.8**	**+0.2**
APEC	**Apecchio**	**0.93**	**327**	P	**Pb**	**15 57 17.1**	**-0.5**
FSSB	**Fossombrone**	**0.94**	**345**	P	**Pb**	**15 57 17.1**	**-0.8**
ATMC	**Monte Cedrone**	**0.95**	**315**	P	**Pb**	**15 57 17.4**	**-0.6**
VVLD	**Villa Vallelon**	**0.98**	**157**	P	**Pb**	**15 57 17.5**	**-1.2**
GUAR	**Guarcino**	**1.00**	**172**	P	**Pb**	**15 57 18.0**	**-0.8**
CAFI	**Castiglion Fio**	**1.00**	**303**	P	**Pb**	**15 57 18.0**	**-0.9**
RMP	**Rome, Mte Porz**	**1.02**	**198**	P	**Pb**	**15 57 17.6**	**-1.6**
PE3	**Peglio**	**1.02**	**334**	P	**Pb**	**15 57 18.8**	**-0.4**
MCIV	**Monte Civitell**	**1.06**	**270**	P	**Pb**	**15 57 19.6**	**-0.3**
SF11	**Podere del Sol**	**1.06**	**275**	P	**Pb**	**15 57 19.5**	**-0.4**
RDP	**Rocca di Papa**	**1.06**	**196**	P	**Pb**	**15 57 18.5**	**-1.5**
CAFR	**Castel Frentan**	**1.07**	**121**	P	**Pb**	**15 57 18.7**	**-1.2**
LPEL	**Lama dei Pelig**	**1.08**	**133**	P	**Pb**	**15 57 18.3**	**-1.9**
LPEL				AML	AML		
	comp=N,3295μm,0.6s						
LPEL				AML	AML		
	comp=E,4595μm,0.6s						
TOLF	**Tolfa**	**1.09**	**229**	⇑P	**Pb**	**15 57 19.4**	**-1.0**
SF13	**Bagnolo**	**1.10**	**272**	P	**Pb**	**15 57 20.2**	**-0.5**
SF14	**Selvena**	**1.11**	**269**	P	**Pb**	**15 57 20.1**	**-0.5**
POFI	**Posta Fibreno**	**1.15**	**157**	P	**Pb**	**15 57 20.6**	**-0.8**
LRP	**Arpino**	**1.19**	**163**	P	**Pg**	**15 57 22.4**	**-0.1**
CRE	**Caprese Michel**	**1.19**	**315**	P	**Pn**	**15 57 21.9**	**-0.3**
ARCI	**Arcidosso**	**1.21**	**274**	P	**Pb**	**15 57 22.8**	**+0.3**
GIUL	**Giuliano Di Ro**	**1.23**	**175**	P	**Pn**	**15 57 21.5**	**-1.1**
LATB	**Latina**	**1.29**	**185**	P	**Pn**	**15 57 21.8**	**-1.6**
RNI2	**Rionero Sannit**	**1.33**	**144**	P	**Pn**	**15 57 23.4**	**-0.5**
CERA	**Filignano**	**1.36**	**150**	P	**Pn**	**15 57 24.1**	**-0.4**
ASQU	**Asqua**	**1.40**	**317**	P	**Pn**	**15 57 25.4**	**+0.4**
MIDA	**Miranda**	**1.42**	**143**	P	**Pn**	**15 57 24.4**	**-0.9**
SFI	**Santa Sofia**	**1.45**	**321**	P	**Pn**	**15 57 25.3**	**-0.4**
TRIV	**Trivento**	**1.47**	**133**	P	**Pg**	**15 57 27.8**	**-0.1**
FROS	**Frosini**	**1.50**	**287**	P	**Pn**	**15 57 26.1**	**-0.2**
CSNT	**Castellina Chi**	**1.50**	**298**	P	**Pn**	**15 57 26.1**	**-0.2**
MAON	**Monte Argentar**	**1.51**	**257**	P	**Pn**	**15 57 25.7**	**-0.7**
OSSC	**Osservatorio P**	**1.56**	**299**	P	**Pn**	**15 57 26.0**	**-1.1**
OSSC				AML	AML		
	comp=E,356μm,0.8s						
OSSC				AML	AML		
	comp=N,472μm,0.7s						
RUFI	**Rufina**	**1.58**	**313**	P	**Pn**	**15 57 26.6**	**-0.8**
VAGA	**Valle Agricola**	**1.60**	**148**	P	**Pg**	**15 57 29.8**	**-0.6**
LMD	**Lutirano**	**1.65**	**322**	P	**Pn**	**15 57 28.4**	**+0.1**
BSSO	**Busso**	**1.65**	**138**	P	**Pb**	**15 57 30.4**	**+0.3**
CASP	**Castiglione de**	**1.66**	**271**	P	**Pn**	**15 57 27.9**	**-0.5**
CIGN	**Sant'Elia a Pi**	**1.74**	**130**	P	**Pb**	**15 57 31.2**	**-0.3

comp=E,988μm,0.7s
MRB1 AML AML
comp=N,904μm,1.0s
MRB1 AML AML
comp=E,956μm,0.8s
MRB1 AML AML
comp=N,916μm,0.9s
CRTO Cratere Ovest, 2.19 153 AML AML
CRTO AML AML
SGRT San Giovanni R 2.20 117 P **Pb 15 57 37.4 -2.1**
ZCCA Zocca 2.21 316 P **Pb 15 57 39.4 0.0**
MAIM Mastiano 2.22 301 P **Pn 15 57 36.5 +0.3**
BDI Bagni Di Lucca 2.24 306 P **Pn 15 57 36.0 -0.5**
VLC Villacollemand 2.42 306 P **Pn 15 57 38.6 -0.4**
EQUI Equi 2.56 304 P **Pn 15 57 41.1 +0.2**
RIY Rijeka 2.73 21 *e*Pn **Pn 15 57 43.7 +0.6**
RIY *e*Sn **Sn 15 58 14.4 -1.5**
SKDS Skadanscina 2.84 13 *e*Pn **Pn 15 57 44.0 -0.7**
SMPL Sampolo 2.92 258 P **Pn 15 57 46.2 +0.4**
MSSA Maissana 3.03 302 P **Pn 15 57 47.3 -0.1**
PGF Pioggiola 3.04 267 *e*P **Pn 15 57 47.5 -0.1**
CEY Cerknica 3.10 17 *e*Pn **Pn 15 57 48.8 +0.5**
SABO M.te Sabotino 3.22 6 P **Pn 15 57 50.0 +0.1**
CGRP Cima Grappa 3.24 343 P **Pn 15 57 51.7 +1.3**
MGRS Mrkonjic Grad 3.31 59 *e*Pn **Pn 15 57 52.8 +1.6**
STON Ston 3.37 87 *e*Pn **Pn 15 57 51.3 -0.7**
STON Ston 3.37 87 *e*Pn **Pn 15 57 52.0 0.0**
STON *e*Sn **Sn 15 58 30.1 -1.8**
STON Ston 3.37 87 AML AML
comp=N,114μm,1.4s
STON AML AML
comp=E,99μm,1.3s
CTI Castel Tesino 3.43 343 P **Pn 15 57 53.8 +0.9**
CTI AML AML
comp=E,188μm,0.8s
CTI AML AML
comp=N,228μm,1.4s
MPRI Monte Prat 3.46 359 P **Pn 15 57 53.8 +0.6**
STAL STALIGIAL 3.49 355 P **Pn 15 57 54.3 +0.7**
A051A Mrakovica 3.53 50 *e*Pn **Pn 15 57 54.9 +0.6**
LUSI Trento, Gardas 3.54 335 P **Pn 15 57 55.3 +0.9**
BLY Banja Luka 3.54 55 *e*Pn **Pb 15 58 00.2 -2.0**
BLY Banja Luka 3.54 55 *e*Pn **Pn 15 57 54.5 +0.2**
BLY *e*Sn **Sn 15 58 33.9 -2.2**
CIMO Cimolais 3.56 352 P **Pn 15 57 55.3 +0.7**
PTCC Patocco-Chiusa 3.63 3 P **Pn 15 57 55.6 0.0**
GAGG Gaggia 3.64 336 P **Pn 15 57 56.8 +0.9**
CLUD Cludinico 3.68 357 P **Pn 15 57 56.5 +0.3**
MABI Malga Bissina 3.77 331 P **Pn 15 57 58.7 +1.1**
FVI Forni Avoltri 3.82 357 P **Pn 15 57 59.2 +0.9**
TREB Trebinje 3.85 89 *e*Pn **Pn 15 57 59.5 +0.8**
TREB Trebinje 3.85 89 *e*Pn **Pn 15 57 59.7 +1.0**
TREB *e*Sn **Sn 15 58 41.5 -2.3**
OBKA Obir 3.86 15 *e*Pn **Pn 15 57 58.9 0.0**
OBKA Obir 3.86 15 *e*Pn **Pn 15 57 59.9 +1.1**
comp=N,2.6nm,0.2s
MYKA Terra Mystica 3.87 5 Pn **Pn 15 57 59.9 +1.0**
comp=N,14nm,0.6s,SNR=7.7
KOSI Kohlern 3.88 342 P **Pn 15 58 01.1 +1.9**
A052A Srbac 3.93 52 *e*Pn **Pb 15 58 10.5 +1.7**
APPI Appiano 3.93 341 P **Pn 15 58 01.4 +1.6**
HCY Herceg Novi 3.98 93 *e*Pn **Pn 15 58 00.5 +0.1**
ABTA Abfaltersbach 3.99 354 *i* Pn **Pn 15 58 01.9 +1.3**
comp=N,36nm,0.4s,SNR=83
BRY Bratogost 3.99 86 *e*Pn **Pn 15 58 02.1 +1.5**
SOKA Soboth 4.13 19 *e*Pn **Pn 15 58 05.9 +3.5**
comp=N,2.3nm,0.3s
BRMO Bormio 4.18 333 P **Pn 15 58 05.5 +2.3**
SBF Sospel 4.28 287 *e*P **Pn 15 58 05.0 +0.4**
SBF *e*Sn **Sn 15 58 51.7 -2.7**
comp=N,27nm,0.6s
KBA Koelnbreinsper 4.30 2 Pn **Pn 15 58 05.6 +0.7**
comp=N,6.3nm,0.2s,SNR=5.9
VSL Villasalto 4.33 222 P **Pn 15 58 06.4 +1.2**
HAPS Han Pijesak,BI 4.45 71 *e*Pn **Pn 15 58 07.5 +0.6**
DRME Dracevica, Mon 4.53 96 *e*Pn **Pn 15 58 09.7 +1.8**
PDG Podgorica 4.54 92 *e*Sn **Pn 15 58 09.0 +0.9**
PDG Podgorica 4.54 92 *e*Pn **Sn 15 58 58.6 -2.2**
FETA Feichten 4.56 339 Pn **Pn 15 58 12.4 +3.8**
comp=N,3.2nm,0.3s,SNR=11
WTTA Wattenberg 4.60 347 Pn **Pn 15 58 11.8 +2.8**
comp=N,3.8nm,0.3s,SNR=8.4
DAVOX Davos/Dischmat 4.61 331 Pn **Pn 15 58 10.8 +1.5**
comp=N,3.7nm,0.3s,baz=150,slow=17,SNR=30
DAVOX Sn **Sn 15 59 04.7 +1.9**
comp=N,0.8nm,0.3s,baz=326,slow=19,SNR=3.2
comp=N,19nm,0.6s
SQTA Sankt Quirin 4.64 344 *i* Pn **Pn 15 58 13.1 +3.5**
comp=N,6.0nm,0.2s,SNR=7.7
RUDO Rudo 4.65 78 *e*Pn **Pn 15 58 10.7 +1.1**
WATA Walderalm 4.68 347 Pn **Pn 15 58 13.4 +3.3**
comp=N,4.3nm,0.2s,SNR=7.9
BBLS Lazići 4.71 75 *e*Pn **Pn 15 58 11.1 +0.6**
BBLS Lazići 4.71 75 *e*Pn **Pn 15 58 11.6 +1.1**
BBLS *e*Sn **Sn 15 59 01.4 -3.7**
MOTA Moosalm 4.78 343 Pn **Pn 15 58 15.6 +4.2**
comp=N,8.1nm,0.5s,SNR=8.2
ARSA Arzberg 4.78 20 *e*Pn **Pn 15 58 12.4 +1.0**
comp=N,1.3nm,0.2s
LMR La Mourre 4.87 279 *e*P **Pn 15 58 12.0 -0.6**
BIOA Bad Ischl, Aus 4.92 4 Pn **Pn 15 58 15.2 +1.8**
comp=N,10nm,0.2s,SNR=8.6
RJOB Jochberg 4.96 358 *e*Pn **Pn 15 58 15.9 +2.0**
RJOB *e*Sn **Sn 15 59 13.3 +2.2**
MBDF Montbardon 4.99 295 *e*P **Pn 15 58 15.1 +0.7**
MBDF *e*Sn **Sn 15 59 08.6 -3.4**
comp=N,12nm,0.7s
RETA Reutte 4.99 341 *e*Pn **Pn 15 58 18.3 +4.0**
comp=N,8.1nm,0.4s
SJES Sjenica 5.05 82 *e*Pn **Pn 15 58 16.0 +0.8**
SJES *e*Sn **Sn 15 59 09.7 -3.7**
DAVA Damuels 5.05 334 *i* Pn **Pn 15 58 19.0 +3.7**
comp=N,18nm,0.6s,SNR=6.1
MOA Molln 5.13 9 *e*Pn **Pn 15 58 17.5 +1.3**
MOA *e*Sn **Sn 15 59 13.1 -2.2**
MOA Molln 5.13 9 *e*Pn **Pn 15 58 17.6 +1.4**
comp=N,2.1nm,0.2s
DIVS Divibare 5.18 73 *e*Pn Pn 15 58 21.8 +4.9
DIVS Divibare 5.18 73 *e*Pn **Pn 15 58 17.7 +0.8**
LPG La Plagne 5.32 303 *e*P **Pn 15 58 21.6 +2.5**
LPG *e*Sn **Sn 15 59 16.5 -3.9**
comp=N,14nm,0.6s
UBR Ueberruh 5.34 338 *e*Pn **Pn 15 58 21.7 +2.6**
LPL La Plagne 5.34 303 *e*P **Pn 15 58 20.8 +1.5**
LPL *e*Sn **Sn 15 59 16.7 -4.1**
comp=N,7.2nm,0.6s
RONA Rosalia, Austr 5.41 23 *e*Pn **Pn 15 58 21.0 +1.0**
comp=N,1.0nm,0.2s
TRUS Trudelj 5.50 72 *e*Pn **Pn 15 58 22.0 +0.8**
CONA Conrad Observa 5.50 20 *i* Pn **Pn 15 58 22.0 +0.7**
comp=N,1.4nm,0.2s,SNR=9.9
SMRF Simiane la Rot 5.62 285 *e*P **Pn 15 58 24.9 +1.9**
ORIF Oris-en-Rattie 5.65 295 *e*P **Pn 15 58 25.0 +1.6**
ORIF *e*Sn **Sn 15 59 24.4 -3.8**
comp=N,20nm,0.9s
GRUS Gruza 5.65 76 *e*Pn **Pn 15 58 24.2 +0.9**
GRUS *e*Sn **Sn 15 59 23.9 -4.2**
SELS Selova 5.88 83 *e*Pn **Pn 15 58 26.9 +0.3**
GEC2 GERESS Array S 6.08 4 *e*Pn **Pn 15 58 29.4 +0.1**
GEC2 *e*Sn **Sn 15 59 36.1 -2.6**
GERES GERESS Array B 6.08 4 Pn **Pn 15 58 29.4 +0.1**
comp=N,0.7nm,0.3s,baz=176,slow=13,SNR=22
GERES Sn **Sn 15 59 36.9 -1.8**
comp=N,1.3nm,0.3s,baz=198,slow=25,SNR=6.2
GERES LR LR 16 01 24.7
comp=N,77nm,19.0s,baz=230,slow=45
comp=N,1.6nm,0.5s
CKRC Cesky Krumlov 6.10 7 *e*PN **Pn 15 58 29.1 -0.3**
CKRC *e*SN **Sn 15 59 37.6 -1.4**
CABF La Chapelle 6.30 310 *e*P **Pn 15 58 33.5 +1.1**
CABF *e*Sn **Sn 15 59 39.6 -4.6**
comp=N,23nm,0.9s
BOVS Bovan 6.33 79 *e*Pn **Pn 15 58 33.5 +0.8**
KHC Kasperske Hory 6.36 3 *e*PN **Pn 15 58 33.0 -0.1**
KHC *e*SN **Sn 15 59 44.3 -1.2**
WET Wettzell 6.37 359 *e*Pn **Pn 15 58 32.9 -0.3**
BARS Barje 6.40 87 *e*Pn **Pn 15 58 34.7 +1.1**
BARS *e*Sn **Sn 15 59 42.9 -3.6**
VIVF Saint-Julien-l 6.45 292 *e*P **Pn 15 58 35.3 +1.0**
BFO Black Forest 6.49 330 *e*Pn **Pn 15 58 36.3 +1.5**
KRUC Moravsky 6.68 19 *e*PN **Pn 15 58 36.0 -1.5**
HINF Hinteralfeld 6.70 321 *e*P **Pn 15 58 38.4 +0.7**
HINF *e*Sn **Sn 15 59 47.9 -5.9**
comp=N,22nm,0.6s
ZAGS Zajecar 6.73 78 *e*Pn **Pn 15 58 39.0 +0.9**
ZAGS *e*Sn **Sn 15 59 49.0 -5.7**
LASF Ste Croix 6.86 284 *e*P **Pn 15 58 40.4 +0.4**
VRAC Vranov 6.96 19 Pn **Pn 15 58 40.8 -0.5**
comp=N,1.4nm,0.3s,baz=270,slow=18,SNR=4.9
comp=N,2.3nm,0.3s
CDF Champ du Feu 6.96 326 *e*P **Pn 15 58 41.8 +0.4**
CDF *e*Sn **Sn 15 59 56.9 -3.5**
comp=N,14nm,0.7s
ZAPS Zavoj 6.99 83 *e*Pn **Pn 15 58 41.2 -0.6**
ZAPS *e*Sn **Sn 15 59 55.9 -5.3**
HAU Haudompre 7.07 320 *e*P **Pn 15 58 43.5 +0.7**
HAU *e*Sn **Sn 15 59 56.8 -6.1**
comp=N,56nm,0.7s
KEST Kesra 7.62 204 Pn **Pn 15 58 54.3 +3.8**
comp=N,0.3nm,0.3s,baz=326,slow=19,SNR=1.7
comp=N,3.3nm,0.7s
SMF Signal de Mont 7.65 303 *e*P **Pn 15 58 52.2 +1.4**
SMF *e*Sn **Sn 16 00 10.7 -6.6**
comp=N,11nm,0.7s
MOX Moxa 7.93 353 *e*Sn **Sn 16 00 21.0 -3.2**
LOR Lormes 7.94 308 *e*P **Pn 15 58 58.3 +3.5**
baz=127
LOR *e*Sn **Sn 16 00 17.4 -7.1**
comp=N,6.5nm,0.5s
AVF Avril sur Loir 8.02 303 *e*P **Pn 15 58 58.6 +2.8**
SSF Saint Saulge 8.05 305 *e*P **Pn 15 58 58.7 +2.5**
CAF Calviac 8.27 289 *e*P **Pn 15 59 01.0 +1.7**
CLL Collm 8.53 360 *e*Pn **Pn 15 59 03.0 +0.2**
CLL *e*Sn Sn 16 00 21.0 -18
CLL *ex* x 16 01 13.0
CLL *e*Sg **Sg 16 01 25.0 -8.2**
CLL *ex* x 16 01 41.0
MLR Muntele Rosu 9.61 69 LR LR 16 03 50.7
comp=N,101nm,20.1s,baz=294,slow=43
ESDC Sonseca Array 13.23 262 Pn **Pn 16 00 07.2 0.0**
comp=N,0.1nm,0.3s,baz=56,slow=15,SNR=2.5
comp=N,0.4nm,0.7s
NOA NORSAR Array B 18.32 357 LR LR 16 09 04.9
comp=N,22nm,20.7s,baz=280,slow=40
FINES FINESS Array B 20.24 18 P Pn 16 01 35.3 -1.0
comp=N,1.8nm,0.8s,baz=190,slow=7.1,SNR=1.0
comp=N,1.8nm,0.8s
KBZ Khabaz 21.66 77 P **P 16 01 52.3 +2.6**
comp=N,1.8nm,0.9s,baz=284,slow=13,SNR=3.1
comp=N,1.8nm,0.9s
TORD Torodi Ar. Bea 31.14 202 P **P 16 03 19.4 +1.3**
comp=N,0.4nm,0.8s,baz=354,slow=8.6,SNR=3.2
comp=N,0.4nm,0.8s
MKAR Makanchi Array 47.81 60 P **P 16 05 38.0 +1.3**
comp=N,0.5nm,0.7s,baz=285,slow=6.1,SNR=4.8
MKAR LR LR 16 29 12.1
comp=N,43nm,18.5s,baz=316,slow=40
comp=N,0.5nm,0.7s
SONM Songino Array 61.85 50 P **P 16 07 20.3 +1.8**
comp=N,0.5nm,0.8s,baz=306,slow=9.9,SNR=2.8
comp=N,0.5nm,0.8s
PDAR Pinedale Array 80.49 321 P **P 16 09 14.8 +3.2**
comp=N,0.3nm,0.3s,baz=19,slow=5.7,SNR=2.7
comp=N,0.3nm,0.3s

*WEL **28** 16:19:13.1,42°S±4°×17°3E±°, h31km±9km, M3.6/30, ML3.8/37, MLv3.6/30, Error ellipse: s-maj=0.0km s-min=0.0km az=78.7*
*NOU **28** 16:19:14.3,42°54S×173°08E, h21km, MLv4.2/15, South Island, New Zealand*
ISC 28 16:19:12.9±1.1, 42°46S±0°02×172°92E±0°03, h14km±11km, n111, σ1§34/116, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.46**	**84**	P	**Pb**	**16 19 23.2**	**+0.4**
KHZ				S	**Sb**	**16 19 30.0**	**+0.6**
KHZ	**Kahutara**	**0.46**	**84**	P	**Pb**	**16 19 23.2**	**+0.4**
GVZ	**Greta Valley S**	**0.51**	**171**	P	**Pb**	**16 19 25.0**	**+1.3**
GVZ				S	**Sn**	**16 19 33.4**	**-1.0**
LTZ	**Lake Taylor**	**0.58**	**236**	P	**Pg**	**16 19 24.3**	**0.0**
LTZ				S	**Sg**	**16 19 31.7**	**-0.2**
THZ	**Tophouse**	**0.70**	**359**	P	**Pb**	**16 19 25.7**	**-1.3**
THZ				S	**Sg**	**16 19 33.6**	**-2.2**
AMCZ	**Amberley**	**0.74**	**196**	P	**Pn**	**16 19 29.0**	**0.0**
BSWZ	**Blackbirch Sta**	**1.03**	**44**	P	**Pb**	**16 19 32.5**	**-0.1**
MRNZ	**Matariki Terra**	**1.07**	**353**	P	**Pb**	**16 19 32.4**	**-0.9**
MRNZ				S	**Sb**	**16 19 46.1**	**-1.0**
OXZ	**Oxford**	**1.08**	**217**	P	**Pb**	**16 19 33.6**	**+0.2**
OXZ				S	**Sg**	**16 19 48.4**	**+0.6**
DSZ	**Denniston Nort**	**1.10**	**310**	P	**Pb**	**16 19 33.3**	**-0.4**
INZ	**Inchbonnie**	**1.12**	**256**	P	**Pn**	**16 19 33.6**	**-0.7**
CMWZ	**Cape Campbell**	**1.20**	**54**	P	**Pg**	**16 19 37.0**	**+1.0**
MQZ	**McQueen's Vall**	**1.26**	**189**	P	**Pn**	**16 19 36.0**	**-0.1**
OKCZ	**Okains Bay**	**1.26**	**176**	P	**Pb**	**16 19 36.6**	**+0.1**
TUWZ	**Tuamarina**	**1.28**	**37**	P	**Pn**	**16 19 36.5**	**+0.1**
NNZ	**Nelson**	**1.29**	**15**	P	**Pn**	**16 19 36.1**	**-0.5**
RACZ	**Rakaia**	**1.39**	**204**	P	**Pn**	**16 19 37.9**	**0.0**
AKCZ	**Akaroa Harbour**	**1.41**	**180**	P	**Pn**	**16 19 38.5**	**+0.3**
TKNZ	**Takaka Hill**	**1.43**	**1**	P	**Pn**	**16 19 38.5**	**0.0**
TCW	**Tory Channel**	**1.61**	**39**	P	**Pn**	**16 19 41.6**	**+0.7**
QRZ	**Quartz Range**	**1.66**	**350**	P	**Pn**	**16 19 42.1**	**+0.4**
QRZ	**Quartz Range**	**1.66**	**350**	P	**Pb**	**16 19 42.9**	**-0.4**
WACZ	**Wakanui South**	**1.68**	**208**	P	**Pn**	**16 19 41.8**	**-0.1**
WVZ	**Waitaha Valley**	**1.72**	**248**	P	**Pb**	**16 19 43.6**	**-0.7**
SNZO	**South Karori**	**1.76**	**50**	P	**Pn**	**16 19 43.6**	**+0.6**
WEL	**Wellington**	**1.81**	**50**	P	**Pn**	**16 19 44.3**	**+0.6**
DUWZ	**D'Urville Isla**	**1.82**	**25**	P	**Pn**	**16 19 44.8**	**+0.9**
RPZ	**Rata Peaks**	**1.85**	**227**	P	**Pn**	**16 19 44.2**	**-0.1**
RPZ	**Rata Peaks**	**1.85**	**227**	P	**Pn**	**16 19 44.6**	**+0.3**
PLWZ	**Palliser**	**1.95**	**64**	P	**Pn**	**16 19 45.5**	**-0.2**
ARCZ	**Arundel**	**1.96**	**220**	P	**Pn**	**16 19 45.4**	**-0.3**
MSWZ	**Moikau Station**	**2.03**	**60**	P	**Pn**	**16 19 46.6**	**-0.1**
GCSZ	**Gaunt Creek Bo**	**2.09**	**245**	P	**Pn**	**16 19 48.9**	**+1.4**
CAW	**Cannon Point**	**2.10**	**51**	P	**Pn**	**16 19 47.9**	**+0.2**
PAWZ	**Paruwai Farm**	**2.16**	**61**	P	**Pn**	**16 19 48.2**	**-0.3**
KIW	**Kapiti Island**	**2.19**	**44**	P	**Pn**	**16 19 49.6**	**+0.8**
TRWZ	**Traveller**	**2.32**	**64**	P	**Pn**	**16 19 50.1**	**-0.6**
MTW	**Mount Morrison**	**2.33**	**57**	P	**Pn**	**16 19 50.3**	**-0.5**
OGWZ	**Otaki Gorge**	**2.35**	**46**	P	**Pn**	**16 19 51.6**	**+0.4**
TMZ	**Timaru**	**2.37**	**215**	P	**Pn**	**16 19 51.2**	**-0.3**
HOWZ	**Holdsworth Sta**	**2.49**	**52**	P	**Pn**	**16 19 52.7**	**-0.4**
FOZ	**Fox Glacier**	**2.52**	**244**	P	**Pn**	**16 19 54.8**	**+1.4**
TMWZ	**Te Maipa**	**2.60**	**60**	P	**Pn**	**16 19 53.8**	**-0.8**
MRZ	**Mangatainoka R**	**2.69**	**49**	P	**Pn**	**16 19 55.4**	**-0.3**
LBZ	**Lake Benmore**	**2.77**	**225**	P	**Pn**	**16 19 57.2**	**+0.3**
OHWZ	**Ohakea**	**2.89**	**39**	P	**Pn**	**16 19 60.0**	**+1.5**
POWZ	**Post Office Ro**	**2.98**	**47**	P	**Pn**	**16 19 59.5**	**-0.2**
PRWZ	**Pori Road**	**2.98**	**51**	P	**Pn**	**16 19 59.4**	**-0.4**
BFZ	**Birch Farm**	**3.06**	**56**	P	**Pn**	**16 19 59.5**	**-1.4**
BFZ	**Birch Farm**	**3.06**	**56**	P	**Pn**	**16 19 59.7**	**-1.2**
ODZ	**Otahua Downs**	**3.06**	**212**	P	**Pn**	**16 20 00.5**	**-0.4**
ODZ	**Otahua Downs**	**3.06**	**212**	P	**Pn**	**16 20 00.5**	**-0.4**
WAZ	**Wanganui**	**3.12**	**31**	P	**Pn**	**16 20 04.1**	**+2.4**
NMEZ	**Namu Road**	**3.13**	**14**	P	**Pn**	**16 20 05.2**	**+3.4**
LREZ	**Lake Rotokare**	**3.20**	**21**	P	**Pn**	**16 20 06.4**	**+3.6**
DVHZ	**Dannevirke**	**3.26**	**50**	P	**Pn**	**16 20 02.5**	**-1.2**
NBEZ	**Newall Road No**	**3.27**	**13**	P	**Pn**	**16 20 06.4**	**+2.6**
KHEZ	**Kahui Hut**	**3.27**	**15**	P	**Pn**	**16 20 06.7**	**+2.9**
KHEZ	**Kahui Hut**	**3.27**	**15**	P	**Pn**	**16 20 06.3**	**+2.4**
TSZ	**Takapari Road**	**3.32**	**45**	P	**Pn**	**16 20 04.0**	**-0.4**
PKE	**Pukeiti**	**3.36**	**14**	P	**Pn**	**16 20 07.9**	**+2.8**
JCZ	**Jackson Bay**	**3.42**	**241**	P	**Pn**	**16 20 09.6**	**+3.6**
JCZ	**Jackson Bay**	**3.42**	**241**	P	**Pn**	**16 20 08.4**	**+2.4**
PNHZ	**Pukenui**	**3.55**	**45**	P	**Pn**	**16 20 06.9**	**-0.7**
WPHZ	**Waipukurau**	**3.57**	**49**	P	**Pn**	**16 20 07.0**	**-1.0**
VRZ	**Vera Road**	**3.61**	**23**	P	**Pn**	**16 20 11.0**	**+2.5**
PKVZ	**Pokaka**	**3.66**	**31**	P	**Pn**	**16 20 10.1**	**+0.9**
WKZ	**Wanaka**	**3.69**	**229**	P	**Pn**	**16 20 11.9**	**+2.3**
MOVZ	**Moawhango**	**3.73**	**36**	P	**Pn**	**16 20 10.3**	**+0.1**
WNVZ	**Wahianoa**	**3.73**	**34**	P	**Pn**	**16 20 11.8**	**+1.5**
BHHZ	**Black Hill Sta**	**3.80**	**40**	P	**Pn**	**16 20 10.1**	**-1.0**
TUVZ	**Tukino**	**3.81**	**34**	P	**Pn**	**16 20 12.4**	**+1.1**
EAZ	**Earnscleugh**	**3.81**	**222**	P	**Pn**	**16 20 11.4**	**+0.3**
NGZ	**Ngauruhoe**	**3.86**	**33**	P	**Pn**	**16 20 13.3**	**+1.3**
SNVZ	**South Ngauruho**	**3.87**	**33**	P	**Pn**	**16 20 13.5**	**+1.3**
TWVZ	**Taurewa**	**3.89**	**30**	P	**Pn**	**16 20 13.6**	**+1.3**
OTVZ	**Oturere**	**3.90**	**33**	P	**Pn**	**16 20 13.9**	**+1.3**
NNVZ	**North Ngauruho**	**3.91**	**32**	P	**Pn**	**16 20 14.1**	**+1.4**
WTVZ	**West Tongariro**	**3.91**	**32**	P	**Pn**	**16 20 14.0**	**+1.3**
KAHZ	**Kahuranaki**	**4.00**	**50**	P	**Pn**	**16 20 12.9**	**-1.0**
KWHZ	**Kaweka Forest**	**4.03**	**42**	P	**Pn**	**16 20 14.1**	**-0.2**
MCHZ	**McNeill Hill**	**4.15**	**45**	P	**Pn**	**16 20 16.0**	**+0.1**
RATZ	**Rangitukua**	**4.20**	**32**	P	**Pn**	**16 20 19.6**	**+3.1**
HIZ	**Hauiti**	**4.21**	**21**	P	**Pn**	**16 20 18.4**	**+1.7**
HIZ	**Hauiti**	**4.21**	**21**	P	**Pn**	**16 20 18.8**	**+2.1**
BKZ	**Black Stump Fm**	**4.26**	**41**	P	**Pn**	**16 20 16.3**	**-1.1**
BKZ	**Black Stump Fm**	**4.26**	**41**	P	**Pn**	**16 20 16.7**	**-0.8**
NMHZ	**Naumai**	**4.47**	**43**	P	**Pn**	**16 20 19.6**	**-0.7**
MRHZ	**Matea Rd**	**4.50**	**37**	P	**Pn**	**16 20 19.5**	**-1.1**
TLZ	**Tolley Road**	**4.59**	**27**	P	**Pn**	**16 20 22.8**	**+0.9**
SYZ	**Scrubby Hill**	**4.89**	**212**	P	**Pn**	**16 20 26.3**	**+0.3**
SYZ	**Scrubby Hill**	**4.89**	**212**	P	**Pn**	**16 20 27.2**	**+1.2**
TOZ	**Tahuroa Road**	**5.12**	**24**	P	**Pn**	**16 20 30.5**	**+1.3**
URZ	**Urewera**	**5.28**	**39**	P	**Pn**	**16 20 30.3**	**-1.0**
AWAZ	**Awhitu Peninsu**	**5.55**	**14**	P	**Pn**	**16 20 37.5**	**+2.4**
MKAZ	**Moumakai**	**5.62**	**19**	P	**Pn**	**16 20 37.5**	**+1.4**
ETAZ	**East Tamaki Re**	**5.71**	**16**	P	**Pn**	**16 20 39.4**	**+2.0**
TWGZ	**Tauwhareparae**	**5.77**	**44**	P	**Pn**	**16 20 38.0**	**-0.1**
RUGZ	**Raukumara Rang**	**5.78**	**41**	P	**Pn**	**16 20 38.2**	**-0.2**
RVAZ	**Riverhead Bore**	**5.83**	**13**	P	**Pn**	**16 20 41.4**	**+2.5**
MBAZ	**Motutapu North**	**5.89**	**16**	P	**Pn**	**16 20 42.1**	**+2.3**
WIAZ	**Waiheke Island**	**5.91**	**17**	P	**Pn**	**16 20 42.0**	**+1.9**
HAZ	**Te Kaha**	**6.00**	**40**	P	**Pn**	**16 20 39.4**	**-1.8**
PKGZ	**Pakihiroa**	**6.04**	**43**	P	**Pn**	**16 20 40.6**	**-1.2**
ABAZ	**Army Bay**	**6.04**	**15**	P	**Pn**	**16 20 44.1**	**+2.3**
KUZ	**Kuaotunu**	**6.11**	**22**	P	**Pn**	**16 20 43.8**	**+1.2**
KUZ	**Kuaotunu**	**6.11**	**22**	P	**Pn**	**16 20 43.9**	**+1.2**
WMGZ	**Waiomatatini S**	**6.26**	**44**	P	**Pn**	**16 20 43.3**	**-1.5**
WCZ	**Waipu Caves**	**6.61**	**10**	P	**Pn**	**16 20 51.7**	**+2.1**
OUZ	**Omahuta**	**7.25**	**4**	P	**Pn**	**16 20 59.9**	**+1.4**
CTZ	**Chatham Island**	**7.76**	**103**	P	**Pn**	**16 21 05.2**	**-0.2**

*DJA **28** 16:19:10.8±0.3,5°S±3°×13°8E±°, h10km, M4.0/6, mb4.0/6, mB5.2/2, MLv4.0/6, Mw(mB)4.6/2*
ISC 28 16:19:13.5±0.9, 4°55S±0°08×138°38E±0°09, h35km, n21, σ1§17/21, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**0.74**	**27**	P	**Pn**	**16 19 26.4**	**-1.1**
SMPI	**Sarmi**	**2.57**	**7**	P	**Pn**	**16 19 53.4**	**+0.8**
GENI	**Genyem**	**2.64**	**43**	P	**Pn**	**16 19 54.5**	**+0.8**
SRPI	**Serui, Papua**	**3.41**	**321**	P	**Pn**	**16 20 04.6**	**+0.3**
FAKI	**Fak Fak**	**6.33**	**285**	P	**Pn**	**16 20 43.7**	**-0.6**
0.1nm12nm,1.2s							
FAKI	**Fak Fak**	**6.33**	**285**	P	**Pn**	**16 20 48.0**	**+3.7**
SIJI	**Sorong**	**7.99**	**297**	P	**Pn**	**16 21 06.9**	**-0.3**
0.1nm560nm4.2nm,1.2s							
MSAI	**Masohi**	**9.50**	**277**	P	**Pn**	**16 21 27.1**	**-0.8**
KDU	**Kakadu**	**9.97**	**215**	P	**Pn**	**16 21 34.7**	**+0.4**
COEN	**Coen**	**10.47**	**153**	P	**Pn**	**16 21 41.3**	**0.0**
MTN	**Manton Dam**	**10.91**	**221**	P	**Pn**	**16 21 46.7**	**-0.6**
KNRA	**Kununurra**	**14.54**	**220**	P	**Pn**	**16 22 35.4**	**-1.5**
MTSU	**Mount Surprise**	**14.70**	**157**	P	**Pn**	**16 22 39.8**	**+0.8**
SOEI	**Soe**	**14.92**	**249**	P	**Pn**	**16 22 41.2**	**-0.9**
12nm,2.7s							
SGSI	**Sangihe**	**15.22**	**302**	P	**Pn**	**16 22 46.3**	**+0.3**
BATI	**Baumata**	**15.63**	**248**	P	**Pn**	**16 22 50.4**	**-0.9**
10nm,1.2s							
WRAB	**Tennant Creek**	**15.78**	**194**	P	**Pn**	**16 22 51.7**	**-1.6**
CTA	**Charters Tower**	**17.24**	**154**	P	**P**	**16 23 13.0**	**+0.1**
CTAO	**Charters Tower**	**17.24**	**154**	P	**P**	**16 23 13.1**	**+0.1**
AS01	**Alice Springs**	**19.48**	**192**	P	**Pn**	**16 23 39.1**	**+0.2**
3.3nm,0.8s							
WRKA	**Warakurna**	**22.55**	**204**	P	**P**	**16 24 10.6**	**-0.2**

IDC 28 16:29:33.5±20.0, 20°55S×177°62W, h429km±149km, mb2.8/3, mbtmp3.8/4, Error ellipse: s-maj=175.9km s-min=131.8km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.93**	**261**	P	P	16 32 45.0	+0.5
6.5nm,0.7s,baz=94,slow=19,SNR=3.9							
STKA	**Stephens Creek**	**38.09**	**244**	P	P	16 36 12.8	-1.1
1.3nm,0.7s,baz=78,slow=9.3,SNR=3.2							
1.3nm,0.7s							
ASAR	**Alice Springs**	**44.85**	**257**	P	P	16 37 08.2	+0.1
0.3nm,0.5s,baz=93,slow=8.3,SNR=16							
ASAR				PcP	PcP	16 38 41.0	-0.2
0.2nm,0.6s,baz=101,slow=5.0,SNR=2.1							
0.3nm,0.5s							
WRA	**Warramunga Arr**	**44.95**	**262**	P	P	16 37 08.7	-0.1
0.4nm,0.6s,baz=94,slow=7.4,SNR=13							
0.4nm,0.6s							

*NOU **28** 16:47:26.5,37°09S×179°84E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **28** 16:47:36.6±0.8,37°S±4°×17°9E±°, h20km, M3.2/16, ML3.5/21, MLv3.2/16, Error ellipse: s-maj=0.0km s-min=0.0km az=106.3*
ISC 28 16:47:34.1±2.6, 37°14S±0°07×179°2E±0°1, h16km±10km, n54, σ1§11/74, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.85**	**240**	P	**Pg**	**16 47 50.5**	**-0.2**
MXZ				S	**Sg**	**16 48 01.0**	**-1.0**
MXZ	**Matakaoa Point**	**0.85**	**240**	P	**Pg**	**16 47 50.5**	**-0.2**
WMGZ	**Waiomatatini S**	**0.94**

HIZ	Hauiti	3.73	247	P	Pn	16 48 32.5	+1.5
HIZ	Hauiti	3.73	247	P	Pn	16 48 32.5	+1.5
TSZ	Takapari Road	3.89	220	P	Pn	16 48 31.7	-1.5
WCZ	Waipu Caves	4.12	285	P	Pn	16 48 36.8	+0.5
BFZ	Birch Farm	4.24	212	P	Pn	16 48 36.2	-1.8
MRZ	Mangatainoka R	4.53	218	P	Pn	16 48 39.9	-2.1
OUZ	Omahuta	4.95	291	P	Pn	16 48 48.7	+1.0
OUZ	Omahuta	4.95	291	P	Pn	16 48 48.6	+0.9
CTZ	Chatham Island	7.31	156	P	Pn	16 49 21.4	+1.3

NNC 28 16:49:47.5±0.9, 37°.51N×71°.34E, h0km, mb3.6, mpv3.3, 3C-2D, Error ellipse: s-maj=8.0km s-min=5.8km az=43.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.62**	**354**	⇑Pn	Pn	16 51 12.5	+0.2
	0.6nm,0.3s,baz=174,slow=12,SNR=9.8						
KK31				⇑Sn	Sn	16 52 18.8	+1.1
	0.9nm,0.3s,baz=313,slow=27,SNR=4.5						
CHMS	**Chumysh**	**6.07**	**24**	⇓Pn	Pn	16 51 18.5	0.0
	2.2nm,0.3s						
TKM2	**Tokmak 2**	**6.31**	**30**	⇑Pn	Pn	16 51 21.8	-0.2
	1.2nm,0.6s						
TKM2				⇓Sn	Sn	16 52 36.2	+1.4
	1.6nm,0.7s						

*IDC **28** 16:51:28.8±1.6, 1°.35N×124°.99E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=168.4km s-min=22.3km az=63.0*
*DJA **28** 16:51:32.5±2.8, 2°.N±3°.×12°.6E±°, h19km±27km, M3.9/15, mb4.1/10, mB5.2/2, MLv3.8/15, Mw(mB)4.6/2*
ISC 28 16:51:33.3±1.1, 1°.9N±0°.1×126°.27E±0°.08, h35km, n22, σ0°70/22, mb3.8/4, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.52**	**93**	P	**Pn**	**16 51 59.2**	**+1.2**
TNTI	**Ternate**	**1.57**	**136**	P	**Pn**	**16 51 59.0**	**+0.3**
SGSI	**Sangihe**	**1.91**	**337**	P	**Pn**	**16 52 04.3**	**+0.9**
LBMI	**Labuha**	**2.81**	**154**	P	**Pn**	**16 52 16.3**	**+0.5**
GTOI	**Gorontalo**	**3.50**	**249**	P	**Pn**	**16 52 26.6**	**+1.4**
SANI	**Sanana**	**3.94**	**184**	P	**Pn**	**16 52 31.6**	**+0.3**
MRSI	**Marisa**	**4.56**	**252**	P	**Pn**	**16 52 40.0**	**+0.2**
LUWI	**Luwuk**	**4.56**	**230**	P	**Pn**	**16 52 40.2**	**+0.3**
NLAI	**Namlea**	**5.18**	**171**	P	**Pn**	**16 52 49.0**	**+0.6**
	0.1nm7μm8.1nm,1.0s						
APSI	**Ampana**	**5.40**	**239**	P	**Pn**	**16 52 52.1**	**+0.7**
	0.3nm926nm75nm,0.7s						
KRAI	**Karang Ratu**	**5.61**	**158**	P	**Pn**	**16 52 54.8**	**+0.5**
	0.1nm7.7nm,1.1s						
SIJI	**Sorong**	**5.71**	**119**	P	**Pn**	**16 52 56.6**	**+1.0**
	0.0nm4.7nm,1.1s						
MPSI	**Mapaga**	**6.56**	**256**	P	**Pn**	**16 53 08.0**	**+0.7**
	0.0nm11nm,0.7s						
BBSI	**Bau Bau**	**8.22**	**207**	P	**Pn**	**16 53 30.3**	**+0.1**
	13nm,0.9s						
MYLDM	**Lahad Datu**	**8.41**	**293**	P	**Pn**	**16 53 33.1**	**+0.4**
	21nm,0.8s						
SPSI	**Sidrap Palu**	**8.73**	**228**	P	**Pn**	**16 53 37.5**	**+0.3**
	12nm,0.5s						
BNSI	**Bone**	**8.79**	**224**	P	**Pn**	**16 53 38.1**	**+0.2**
	7.0nm,1.1s						
BSSI	**Bau Bau, Buton**	**9.86**	**216**	P	**Pn**	**16 53 53.2**	**+0.5**
WRA	**Warramunga Arr**	**23.11**	**160**	P	**P**	**16 56 35.6**	**-0.8**
	1.4nm,0.4s,baz=334,slow=11,SNR=41						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**26.48**	**164**	P	**P**	**16 57 07.5**	**+0.1**
	0.6nm,0.4s,baz=343,slow=7.6,SNR=40						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**36.61**	**158**	P	**P**	**16 58 36.1**	**-0.2**
	1.1nm,0.5s,baz=358,slow=6.6,SNR=4.6						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**58.79**	**326**	P	**P**	**17 01 27.3**	**-0.8**
	0.3nm,0.4s,baz=116,slow=8.5,SNR=10						
	0.3nm,0.4s						

IDC 28 16:53:27.1±3.3, 23°.62S×179°.96E, h505km±32km, mb3.4/4, mbtmp4.3/5, Error ellipse: s-maj=41.9km s-min=29.8km az=2.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.80**	**189**	P	P	16 56 34.8	-0.1
	2.7nm,0.3s,baz=57,slow=2.7,SNR=7.4						
URZ				S	S	16 59 07.7	-2.1
	5.8nm,0.7s,baz=163,slow=18,SNR=6.1						
CTA	**Charters Tower**	**31.44**	**270**	P	P	16 59 07.6	+0.9
	8.8nm,0.4s,baz=94,slow=10,SNR=33						
	8.8nm,0.4s						
ASAR	**Alice Springs**	**42.04**	**260**	P	P	17 00 34.0	-0.2
	1.5nm,0.5s,baz=92,slow=9.5,SNR=33						
ASAR				ScP	ScP	17 05 19.4	-0.4
	0.7nm,0.8s,baz=109,slow=4.1,SNR=8.4						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**42.39**	**266**	P	P	17 00 36.0	-0.8
	2.7nm,0.5s,baz=92,slow=8.3,SNR=81						
	2.7nm,0.5s						
TXAR	**Lajitas Array**	**90.31**	**58**	P	P	17 05 34.2	0.0
	0.3nm,0.7s,baz=239,slow=5.1,SNR=2.4						
	0.3nm,0.7s						

TAP 28 17:19:32.9, 24°.12N×121°.65E, h11km, ML1.9, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.05**	**322**	*i* P	Pg	17 19 35.4	+0.2
	baz=321						
ETL				*i* S	Sg	17 19 36.9	+0.2
	baz=321						
TWD	**Chiawan**	**0.07**	**232**	*i* P	Pg	17 19 35.5	+0.2
	baz=228						
TWD				*i* S	Sg	17 19 37.1	+0.1
	baz=228						
NACB	**Ninganchiao**	**0.07**	**314**	⇓*i* P	Pg	17 19 35.7	+0.3
	baz=313						
NACB				*i* S	Sg	17 19 37.4	+0.2
	baz=313						
HWA	**Hwalien**	**0.15**	**197**	*i* P	Pg	17 19 37.0	+0.6
	baz=194						
HWA				*e* S	Sg	17 19 39.9	+1.1
	baz=194						
ETLH	**Xiulin Townshi**	**0.18**	**298**	⇓*i* P	Pg	17 19 37.5	+0.5
	baz=298						
ETLH				S	Sg	17 19 40.5	+0.8
	baz=298						
ETM	**Tongmen**	**0.21**	**223**	*i* P	Pg	17 19 37.8	+0.3
	baz=218						
ETM				*e* S	Sg	17 19 41.0	+0.4
	baz=218						
TEYL	**Yanliau Villag**	**0.26**	**191**	*e* P	Pb	17 19 39.4	-0.2
	baz=193						
TEYL				*e* S	Sb	17 19 44.4	+0.4
	baz=193						
ENA	**Nanau**	**0.32**	**15**	*i* P	Pg	17 19 39.5	+0.2
	baz=16						
ENA				*e* S	Sg	17 19 43.9	+0.4
	baz=16						
EWUT	**Wuta**	**0.34**	**19**	*e* P	Pg	17 19 38.7	-1.1
	baz=19						
EWUT				*e* S	Sg	17 19 43.4	-1.0
	baz=19						
WHF	**Hehuan Shan**	**0.36**	**274**	*i* P	Pg	17 19 40.8	+0.6
	baz=273						
WHF				*e* S	Sg	17 19 46.0	+0.9
	baz=273						
ESL	**Shilin**	**0.37**	**213**	*i* P	Pg	17 19 40.3	+0.1
	baz=212						
ESL				*e* S	Sg	17 19 45.1	0.0
	baz=212						
NNSB	**Datong**	**0.39**	**321**	*e* P	Pb	17 19 41.6	-0.4
	baz=320						
NNSB				*e* S	Sb	17 19 47.2	-0.9
	baz=320						
FUSS	**Fushou**	**0.40**	**289**	P	Pb	17 19 41.7	-0.3
	baz=288						
FUSS				*e* S	Sb	17 19 47.8	-0.4
	baz=288						
NNS	**Nan Shan**	**0.41**	**321**	P	Pg	17 19 40.8	-0.2
	baz=321						
NNS				*e* S	Sg	17 19 46.9	+0.4
	baz=321						
TEGC	**Jichi Village**	**0.42**	**194**	*e* P	Pg	17 19 41.3	0.0
	baz=184						
LATG	**Datong**	**0.43**	**344**	P	Pg	17 19 41.9	+0.5
	baz=343						
LATG				*e* S	Sb	17 19 48.4	-0.6
	baz=343						
CHGB	**Renai**	**0.44**	**262**	⇓P	Pb	17 19 42.6	-0.3
	baz=256						
CHGB				*e* S	Sb	17 19 48.7	-0.8
	baz=256						
OWD	**Renai**	**0.47**	**249**	*e* P	Pb	17 19 42.7	-0.5
	baz=249						
OWD				*e* S	Sg	17 19 49.2	+0.8
	baz=249						
TDCB	**Techi**	**0.47**	**286**	*e* P	Pb	17 19 43.4	+0.1
	baz=286						
TDCB				*e* S	Sb	17 19 50.0	-0.3
	baz=286						
NDT	**Datong Townshi**	**0.49**	**345**	*e* P	Pg	17 19 41.6	-1.0
	baz=344						
NDT				*e* S	Sg	17 19 48.6	-0.6
	baz=344						
EGFH	**Guangfu**	**0.50**	**205**	*e* P	Pg	17 19 43.1	+0.5
	baz=211						
EGFH				*e* S	Sb	17 19 50.1	-0.8
	baz=211						
WUSB	**Renai**	**0.51**	**255**	*e* P	Pb	17 19 43.8	-0.1
	baz=255						
WUSB				*e* S	Sb	17 19 51.0	-0.4
	baz=255						
TWC	**Suao**	**0.52**	**20**	*e* P	Pg	17 19 43.5	+0.4
	baz=12						
TWC				*e* S	Sg	17 19 50.0	+0.1
	baz=12						
ENTT	**Nioudou**	**0.52**	**351**	P	Pg	17 19 42.8	-0.4
	baz=351						
ENTT				*e* S	Sg	17 19 50.1	0.0
	baz=351						
VWDT	**VWDT**	**0.59**	**232**	*e* P	Pg	17 19 44.9	+0.4
	baz=232						
VWDT				*e* S	Sb	17 19 53.3	-0.4
	baz=232						
TWE	**Neicheng**	**0.60**	**1**	*e* P	Pb	17 19 45.2	-0.1
	baz=2.0						
TWE				*e* S	Sb	17 19 53.2	-0.5
	baz=2.0						
YHNB	**Yeheng**	**0.60**	**335**	*e* P	Pb	17 19 45.5	0.0
	baz=334						
YHNB				*e* S	Sb	17 19 53.8	-0.2
	baz=334						
NSK	**Sanguang**	**0.61**	**334**	*e* P	Pg	17 19 44.9	0.0
	baz=334						
NSK				*e* S	Sg	17 19 53.4	+0.4
	baz=334						
FUSB	**Fushanzhiwuyua**	**0.64**	**355**	*e* P	Pb	17 19 46.1	0.0
	baz=354						
WPL	**Puli Township**	**0.65**	**260**	*e* P	Pg	17 19 45.8	+0.3
	baz=251						
WPL				*e* S	Sb	17 19 55.6	+0.4
	baz=251						
EHY	**Hungye**	**0.68**	**206**	*e* P	Pb	17 19 46.9	+0.1
	baz=206						
SSLB	**Suanglung**	**0.72**	**243**	*e* P	Pb	17 19 47.5	0.0
	baz=243						
SMLT	**Sun Moon Lake**	**0.73**	**251**	*e* P	Pb	17 19 48.4	+0.7
	baz=251						
YULB	**Yu-li**	**0.80**	**204**	*e* P	Pg	17 19 48.4	+0.1
	baz=205						

JMA 28 17:20:24.8±0.2, 24°.7N±0°.7×123°.9E±0°.5, h4km, MV0.7/5, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.39**	**203**	*e* P	Pg	17 20 32.5	+0.1
JISG	**Ishigakijimahi**	**0.40**	**106**	*e* P	Pg	17 20 32.7	+0.3
JIJ	**Ishigaki jima**	**0.40**	**145**	*e* S	Sg	17 20 37.8	0.0
JKRS	**Kuro-shima**	**0.47**	**167**	*e* P	Pg	17 20 34.2	+0.3
JKRS				*e* S	Sg	17 20 40.7	+0.7

MAN 28 17:32:06.1, 10°.47N×124°.08E, h99km, mb3.8, ML2.5, MS2.0, 1C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.18**	**217**	⇑*i* P	Pn	17 32 18.7	-1.5
LLP				*i* S	Sn	17 32 22.1	-8.5
TABP	**Talibon, Bohol**	**0.45**	**146**	⇓*i* P	Pn	17 32 21.4	-0.1
TABP				*i* S	Sn	17 32 25.1	-7.8
TBP	**Tagbilaran**	**0.80**	**195**	*e* P	Pn	17 32 28.8	+4.3
TBP				*i* S	Sn	17 32 40.2	+2.1
MSLP	**Maasin**	**0.84**	**113**	⇓*e* P	Pn	17 32 28.7	+3.9
MSLP				*e* S	Sn	17 32 40.1	+1.3
GUIM	**Jordan**	**1.47**	**276**	⇓*e* P	Pn	17 32 42.3	+10
GUIM				*e* S	Sn	17 33 03.0	+11

*DNK **28** 17:50:12.0±2.0, 71°.40N×9°.34W, h0km±766km*
ISC 28 17:50:09.6±1.3, 71°.21N±0°.08×8°.6W±0°.1, h20km, n6, σ0°71/7, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**0.23**	**176**	⇑*i* P	**Pb**	**17 50 15.1**	**0.0**
JMIC				*e* S	**Sb**	**17 50 18.7**	**-0.2**
JMIC				IAML		17 50 19.6	
	comp=Z,14μm,0.5s						
SCO	**Scoresbysund**	**4.47**	**267**	*i* P	**Pn**	**17 51 17.1**	**+1.0**
DBG	**Daneborg**	**4.65**	**317**	*i* P	**Pn**	**17 51 18.0**	**-0.5**
DAG	**Danmarks Havn**	**6.23**	**338**	*i* P	**Pn**	**17 51 39.7**	**-0.5**
KBS	**Kingsbay**	**9.29**	**25**	*i* P	**Pn**	**17 52 22.7**	**+0.6**
NOR	**Nord**	**10.60**	**354**	*i* P	**Pn**	**17 52 39.9**	**0.0**

*IDC **28** 18:21:09.5±2.9, 30°.33S×177°.60W, h0km, mb4.0/3, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=62.7km s-min=24.6km az=108.0*
*NEIC **28** 18:21:12.5±1.9, 30°.2S±0°.1×177°.2W±0°.2, h35km±2km, mb4.5/9, Error ellipse: s-maj=27.1km s-min=12.0km az=59.0*
ISC 28 18:21:13.1±2.0, 30°.35S±0°.07×177°.5W±0°.3, h33km, n27, σ1°57/20, mb4.3/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.15**	**342**	Pn	**Pn**	**18 21 32.1**	**-0.8**
	298nm,0.3s,baz=39,slow=23,SNR=13						
RAO				Sn	**Sn**	**18 21 46.0**	**-1.4**
	831nm,0.3s,baz=76,slow=22,SNR=13						
RAO	**Raoul Island**	**1.15**	**342**		**Pn**	**18 21 31.0**	**-1.8**
RAO				Sn	**Sn**	**18 21 45.0**	**-2.4**
URZ	**Urewera**	**9.06**	**208**	Pn	**Pn**	**18 23 19.1**	**-2.4**
	0.5nm,0.3s,baz=234,slow=9.6,SNR=1.4						
URZ				Sn	**Sn**	**18 25 00.1**	**-2.3**
	0.7nm,0.3s,baz=10,slow=13,SNR=1.1						
	7.4nm,0.9s						
BKZ	**Black Stump Fm**	**10.09**	**208**	Pn	Pn	18 23 31.6	-4.0
THZ	**Tophouse**	**13.77**	**212**	Pn	**Pn**	**18 24 24.8**	**-1.2**
TOO	**Toolangi**	**31.38**	**247**	P	**P**	**18 27 33.2**	**+2.3**
TOO				IAmb	IAmb	18 27 38.1	
	comp=Z,14nm,1.4s						
CTAO	**Charters Tower**	**34.21**	**279**	P	**P**	**18 27 56.5**	**+0.7**
STKA	**Stephens Creek**	**34.91**	**257**	P	**P**	**18 28 03.4**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=102,slow=11,SNR=5.3						
	comp=Z,2.2nm,0.8s						
STKA	**Stephens Creek**	**34.91**	**257**	P	**P**	**18 28 03.3**	**+1.6**
PMG	**Port Moresby**	**38.97**	**295**	P	**P**	**18 28 38.4**	**+2.0**
BBOO	**Buckleboo**	**39.40**	**254**	P	**P**	**18 28 41.1**	**+1.3**
BBOO				IAmb	IAmb	18 28 53.9	
	comp=Z,24nm,1.5s						
ASAR	**Alice Springs**	**43.54**	**267**	P	**P**	**18 29 14.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=105,slow=7.4,SNR=10						
	comp=Z,0.5nm,0.6s						
WR0	**Warramunga Arr**	**44.34**	**272**	P	**P**	**18 29 20.8**	**+0.4**
WR0				IAmb	IAmb	18 29 45.5	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	**P**	**18 29 21.9**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=111,slow=7.7,SNR=91						
	comp=Z,1.7nm,0.3s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	**P**	**18 29 21.6**	**-0.3**
WB0	**Warramunga Arr**	**44.55**	**272**	P	**P**	**18 29 22.3**	**+0.2**
WB0				IAmb	IAmb	18 29 23.9	
	comp=Z,2.4nm,0.6s						
CASY	**Casey**	**55.39**	**208**	P	**P**	**18 30 44.1**	**+0.4**
H03S2	**Juan Fernandez**	**80.14**	**123**	T	T	20 02 43.5	
	baz=238,slow=74,SNR=22						
H03S1	**Juan Fernandez**	**80.15**	**123**	T	T	20 02 54.2	
	baz=238,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**80.15**	**123**	T	T	20 02 51.6	
	baz=238,slow=74,SNR=22						
H03N3	**Juan Fernandez**	**80.33**	**123**	T	T	20 02 44.9	
	baz=242,slow=72,SNR=4.7						
H03N2	**Juan Fernandez**	**80.33**	**123**	T	T	20 02 43.4	
	baz=242,slow=72,SNR=7.1						
H03N1	**Juan Fernandez**	**80.34**	**123**	T	T	20 02 22.0	
	baz=242,slow=72,SNR=82						
H10N3	**ASCENSION HYDR**	**138.67**	**154**	T	T	21 16 26.5	
	baz=203,slow=75,SNR=7.9						
H10N1	**ASCENSION HYDR**	**138.68**	**154**	T	T	21 16 29.9	
	baz=203,slow=75,SNR=8.4						
H10N2	**ASCENSION HYDR**	**138.69**	**154**	T	T	21 16 27.8	
	baz=203,slow=75,SNR=11						
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc	**PKPdf**	**18 40 47.4**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=55,slow=3.9,SNR=28						

*TUL **28** 18:24:54.7±0.6, 36°.439N±0°.008×96°.89W±0°.01, h5km±1km, ML3.1, mb_Lg3.1/60(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=114.0*
*NEIC **28** 18:24:54.7±0.7, 36°.437N±0°.009×96°.89W±0°.01, h6km±1km, Error ellipse: s-maj=1.4km s-min=1.2km az=198.0*
*ANF **28** 18:24:55.6±0.3, 36°.44N×96°.85W, h5km, ML3.5/7, Error ellipse: s-maj=3.9km s-min=3.2km az=132.0*
ISC 28 18:24:54.5±0.8, 36°.45N±0°.02×96°.90W±0°.02, h7km±4km, n84, σ0°83/100, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK045	**Pawnee Station**	**0.02**	**259**		**Pg**	**18 24 55.8**	**0.0**
OK045				Sg	**Sg**	**18 24 56.5**	**-0.1**
OK048	**Pawnee Station**	**0.05**	**225**	Pg	**Pg**	**18 24 56.3**	**+0.3**
OK048				Sg	**Sg**	**18 24 57.2**	**+0.1**
OK046	**Pawnee Station**	**0.06**	**186**		**Pg**	**18 24 56.2**	**+0.1**
OK046				Sg	**Sg**	**18 24 57.1**	**-0.1**
OK051	**E0350 and S346**	**0.07**	**44**	Pg	**Pg**	**18 24 56.8**	**+0.5**
OK051				Sg	**Sg**	**18 24 58.1**	**+0.4**
OK050	**Pawnee Station**	**0.09**	**229**		**Pg**	**18 24 56.9**	**+0.4**
OK050				Sg	**Sg**	**18 24 58.3**	**+0.3**
OK044	**Pawnee Station**	**0.12**	**133**	Pg	**Pg**	**18 24 57.2**	**+0.2**
OK044				Sg	**Sg**	**18 24 59.0**	**+0.3**
OK049	**E0420 Rd and N**	**0.33**	**262**	Pg	**Pg**	**18 25 01.5**	**+0.6**
OK049				Sg	**Sg**	**18 25 05.9**	**+0.6**
OK033	**Mehan**	**0.41**	**184**	Pg	**Pg**	**18 25 02.7**	**+0.3**
OK033				Sg	**Sg**	**18 25 08.3**	**+0.5**
OK034	**N. Norfolk Rd.**	**0.47**	**161**	Pg	**Pg**	**18 25 03.8**	**+0.3**
OK034				Sg	**Sg**	**18 25 09.9**	**+0.4**
OK031	**S. Brethren Rd**	**0.50**	**174**	Pg	**Pg**	**18 25 04.4**	**+0.3**
OK031				Sg	**Sg**	**18 25 11.0**	**+0.3**
T35A	**Sooner Cattle**	**0.56**	**34**	Pg	**Pg**	**18 25 05.7**	**+0.5**
T35A				Sg	**Sg**	**18 25 13.0**	**+0.4**
T35B	**Sooner Cattle**	**0.56**	**34**	P	**Pg**	**18 25 05.6**	**+0.3**
	baz=213						
T35B				S	**Sg**	**18 25 13.1**	**+0.5**
	baz=213						
KAN13	**South Haven SW**	**0.73**	**321**	Pg	**Pg**	**18 25 09.0**	**+0.5**
KAN13				Sg	**Sg**	**18 25 18.7**	**+0.8**
OK029	**Liberty Lake**	**0.79**	**215**	Pg	**Pg**	**18 25 09.9**	**+0.2**
OK029					**Sg**	**18 25 20.4**	**+0.4**
KAN09	**Caldwell North**	**0.89**	**320**	Pg	**Pg**	**18 25 11.4**	**-0.2**
KAN09				Sg	**Sg**	**18 25 23.9**	**+0.6**
KAN17	**Caldwell West**	**0.91**	**311**		**Pg**	**18 25 12.2**	**+0.2**
KAN17				Sg	**Sg**	**18 25 24.4**	**+0.5**
KS20	**Mayfield South**	**0.94**	**326**	Pg	**Pg**	**18 25 12.8**	**+0.3**
KS20				Sg	**Sg**	**18 25 25.2**	**+0.6**
OK025	**Westminster Rd**	**0.94**	**202**	Pg	**Pg**	**18 25 12.2**	**-0.2**
OK025				Sg	**Sg**	**18 25 25.3**	**+0.6**
KAN01	**Argonia South**	**0.98**	**316**	Pg	**Pg**	**18 25 13.5**	**+0.2**
KAN01				Sg	**Sg**	**18 25 26.7**	**+0.6**
KAN14	**Manchester OK**	**0.99**	**301**		**Pg**	**18 25 13.7**	**+0.2**
KAN14				Sg	**Sg**	**18 25 26.9**	**+0.5**
KS21	**Milan North St**	**1.03**	**324**		**Pg**	**18 25 14.6**	**+0.3**
TUL1	**Leonard**	**1.05**	**121**		**Pg**	**18 25 14.3**	**-0.3**
TUL1	**Leonard**	**1.05**	**121**	P	**Pg**	**18 25 14.4**	**-0.2**
	baz=301						
KAN06	**Argonia West S**	**1.11**	**316**		**Pg**	**18 25 15.7**	**0.0**
KAN06				Sg	**Sg**	**18 25 30.4**	**+0.4**
OK032	**Salt Plains WL**	**1.11**	**289**	Pg	**Pg**	**18 25 15.6**	**-0.2**
OK032				Sg	**Sg**	**18 25 30.9**	**+0.7**
OKCSW	**OKLAHOMA CITY**	**1.13**	**203**		**Pg**	**18 25 15.3**	**-0.9**
OKCSW				Sg	**Sg**	**18 25 30.5**	**-0.3**
KAN08	**Anthony NE Sta**	**1.16**	**312**		**Pg**	**18 25 16.3**	**-0.3**
KAN08				Sg	**Sg**	**18 25 32.3**	**+0.6**
KAN16	**Harper SW Stat**	**1.21**	**310**	Pg	**Pg**	**18 25 17.1**	**-0.7**
KAN16				Sg	**Sg**	**18 25 33.8**	**+0.3**
KAN12	**Harper NE Stat**	**1.22**	**314**	Sg	**Sg**	**18 25 34.0**	**+0.3**
FNO	**Franklin**	**1.26**	**199**		**Pg**	**18 25 17.4**	**-1.2**
OK035	**E0210 Rd and N**	**1.48**	**281**		**Pn**	**18 25 22.2**	**+0.7**
OK038	**West end E0370**	**1.48**	**272**		**Pn**	**18 25 21.1**	**-0.5**
U32A	**Winter Ranch,**	**1.70**	**268**		**Pn**	**18 25 25.2**	**+0.7**
U32A	**Winter Ranch,**	**1.70**	**268**	P	**Pn**	**18 25 25.8**	**+1.2**
	baz=87						
U32A				S	**Sg**	**18 25 49.2**	**+0.2**
	baz=87						
X34A	**Smith Ranch, M**	**2.00**	**203**		**Pb**	**18 25 30.5**	**-0.7**
U38A	**Gravette**	**2.03**	**90**		**Pn**	**18 25 30.4**	**+1.2**
U38A				IAmb_Lg		18 26 00.2	
	comp=Z,84nm,0.8s						
U38A	**Gravette**	**2.03**	**90**	P	**Pb**	**18 25 30.7**	**-1.0**
	baz=271						
X37A	**Clayton**	**2.24**	**146**		**Pn**	**18 25 33.1**	**+1.1**
X37A				IAmb_Lg		18 26 06.9	
	comp=Z,79nm,0.9s						
X37A	**Clayton**	**2.24**	**146**	P	**Pn**	**18 25 33.4**	**+1.5**
	baz=327						
X37A				S	**Sn**	**18 26 01.1**	**+1.2**
	baz=327						
WMOK	**Wichita Mounta**	**2.30**	**222**	Pn	**Pn**	**18 25 33.7**	**+0.8**
WMOK	**Wichita Mounta**	**2.30**	**222**	P	**Pn**	**18 25 34.1**	**+1.3**
	baz=42						
WMOK				S	**Sb**	**18 26 04.3**	**-0.6**
	baz=42						
HHAR	**Hobbs**	**2.40**	**93**		**Pn**	**18 25 35.4**	**+1.2**
HHAR				IAmb_Lg		18 26 09.1	
	comp=Z,83nm,0.7s						
HHAR	**Hobbs**	**2.40**	**93**	P	**Pn**	**18 25 35.8**	**+1.6**
	baz=275						
R32A	**Long Quarter,**	**2.44**	**324**		**Pn**	**18 25 35.5**	**+0.7**
R32A				IAmb_Lg		18 26 12.9	
	comp=Z,73nm,0.8s						
R32A	**Long Quarter,**	**2.44**	**324**	S	**Sb**	**18 26 10.

N35A	Tabor	4.51	12	IAmb_Lg		18 27 29.2
	comp=Z,44nm,0.7s					
237A	Washetta, Mont	4.53	168	Pn	Pn	18 26 04.3 +0.8
LCAR	Lake Charles	4.66	93	Pn	Pn	18 26 03.6 -1.6
CCM	Cathedral Cave	4.79	69	Pn	Pn	18 26 06.2 -0.9
CCAR	Cane Creek	4.90	120	Pn	Pn	18 26 07.1 -1.5
P40A	Paris	4.91	50	IAmb_Lg		18 27 27.5
	comp=Z,50nm,0.7s					
HBAR	Harrisburg	5.14	98	IAmb_Lg		18 27 42.0
	comp=Z,51nm,0.7s					
N38A	Joes South For	5.20	32	Pn	Pn	18 26 10.4 -2.3
N38A				IAmb_Lg		18 27 47.8
	comp=Z,45nm,0.7s					
KSCO	Kaye Shedlock'	5.21	301		Pn	18 26 11.8 -1.2
KSCO				IAmb_Lg		18 27 50.0
	comp=Z,23nm,0.7s					
PBMO	Poplar Bluff	5.21	84	Pn	Pn	18 26 10.8 -2.1
PBMO				IAmb_Lg		18 27 35.6
	comp=Z,30nm,0.8s					
435B	Jarrell	5.68	186	IAmb_Lg		18 28 06.1
	comp=Z,25nm,0.7s					
OGNE	Ogallala	6.02	320	Pn	Pn	18 26 23.4 -0.7
OGNE				IAmb_Lg		18 28 11.2
	comp=Z,31nm,0.8s					
T25A	Trinidad	6.07	279		Pn	18 26 24.4 -0.4
K31A	O'Neill	6.33	347	IAmb_Lg		18 28 25.9
	comp=Z,38nm,0.8s					
N41A	Harden Midland	6.36	46	Pn	Pn	18 26 26.4 -2.3
JCT	Junction City	6.43	203	IAmb_Lg		18 28 37.2
	comp=Z,19nm,0.8s					
BRIGG	Briggsdale	7.13	308	IAmb_Lg		18 28 44.8
	comp=Z,22nm,0.8s					
HDIL	Hopedale	7.24	53	IAmb_Lg		18 28 46.6
	comp=Z,34nm,0.8s					
O44A	Mansfield	7.59	58	IAmb_Lg		18 29 12.7
	comp=Z,30nm,0.7s					
JFWS	Jewell Farm	8.24	36	IAmb_Lg		18 29 17.5
	comp=Z,17nm,0.7s					
SFIN	Lafayette	8.63	60	IAmb_Lg		18 29 29.5
	comp=Z,26nm,0.8s					
RSSD	Black Hills	9.40	327	IAmb_Lg		18 29 56.0
	comp=Z,25nm,1.3s					

*IDC **28** 18:33:40.2±1.3,37.'21N×135.'27E,h367km±15km,mb2.8/8, mbtmp3.5/10,Error ellipse: s-maj=21.5km s-min=16.9km az=59.0*

ISC 28 18:33:39.3±0.9,37.'3N±0.'2×135.'2E±0.'1,h350km,n10, σ1°60/10,mb3.0/8,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	2.49	106	P	Pn	18 34 36.6	+2.2
	33nm,0.6s,baz=286,slow=7.8,SNR=63						
KSRS	Korea Array	5.83	274	P	Pn	18 35 10.2	+2.1
	1.5nm,0.7s,baz=96,slow=11,SNR=2.4						
SONM	Songino Array	23.59	306	P	P	18 38 20.4	+0.4
	0.5nm,0.5s,baz=122,slow=12,SNR=2.9						
	0.5nm,0.5s						
CMAR	Chiang Mai Arr	36.86	249	P	P	18 40 16.6	+0.9
	0.3nm,0.4s,baz=41,slow=8.5,SNR=1.3						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	38.11	312	P	P	18 40 24.6	-0.9
	0.3nm,0.3s,baz=121,slow=7.4,SNR=1.9						
	0.3nm,0.3s						
MKAR	Makanchi Array	39.79	301	P	P	18 40 38.6	-1.0
	0.4nm,0.6s,baz=88,slow=8.2,SNR=3.8						
	0.4nm,0.6s						
ILAR	Eielson Array	51.94	32	P	P	18 42 13.2	+0.2
	0.2nm,0.7s,baz=285,slow=8.3,SNR=4.5						
	0.2nm,0.7s						
WRA	Warramunga Arr	56.91	181	P	P	18 42 47.5	-1.5
	0.5nm,0.5s,baz=355,slow=7.4,SNR=6.6						
	0.5nm,0.5s						
ASAR	Alice Springs	60.62	181	P	P	18 43 12.7	-1.6
	0.2nm,0.7s,baz=21,slow=13,SNR=2.7						
	0.2nm,0.7s						
FINES	FINESS Array B	66.23	330	P	P	18 43 49.2	-1.0
	2.8nm,1.0s,baz=46,slow=8.0,SNR=1.3						
	2.8nm,1.0s						

*JMA **28** 18:45:31.1±0.3,33°N±3°×13°8E±°,h340km,MV3.0/23, FAR S OFF TOKAI DISTRICT*

*IDC **28** 18:45:32.9±0.7,33.'21N×138.'04E,h322km±10km,mb3.1/9, mbtmp3.7/13,Error ellipse: s-maj=28.3km s-min=11.4km az=70.0*

ISC 28 18:45:32.4±0.7,33.'21N±0.'07×138.'29E±0.'07,h350km,n29, σ3°25/37,mb3.2/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	1.18	297	P	Pn	18 46 16.9	-1.6
TTO2				S	S	18 46 52.6	-2.9
JHJ	Hachijo jima 2	1.26	94	P	Pn	18 46 19.1	-0.3
	104nm,0.7s,baz=118,slow=23,SNR=8.4						
JHJ				S	S	18 46 54.5	-2.4
	114nm,0.8s,baz=48,slow=23,SNR=2.0						
JIE	Ise	1.77	312	P	Pn	18 46 19.7	-2.4
JOD2	Odawara 2	2.16	18	P	Pn	18 46 23.1	-1.7
JYN	Shimob	2.30	5	P	Pn	18 46 25.3	-0.7
JTNC	Tanabenakahech	2.32	286	P	Pn	18 46 23.1	-2.9
JWY	Kouya	2.46	295	P	Pn	18 46 24.7	-2.5
BSO1	Boso 1	2.66	56	P	Pn	18 46 26.9	-1.2
JYTA	Yamagatataniai	2.71	332	P	Pn	18 46 26.9	-2.2
JYTA				S	S	18 47 09.5	-5.2
JRY	Ryogami san	2.85	10	S	S	18 47 13.9	-3.2
JWT	Wachi	3.16	312	P	Pn	18 46 30.6	-2.5
JWT				S	S	18 47 15.8	-6.3
JAI	Aioi	3.26	281	P	Pn	18 46 31.2	-3.0
MJAR	Matsushiro Arr	3.33	359	P	Pn	18 46 33.7	-1.0
	3.9nm,0.7s,baz=185,slow=11,SNR=6.7						
MJAR				S	S	18 47 20.7	-4.2
	1.5nm,0.4s,baz=210,slow=42,SNR=1.3						
MAT	Matsubiro	3.33	359	S	S	18 47 20.2	-4.8
JAG	Ashikaga	3.35	16	P	Pn	18 46 33.3	-1.6
JAG				S	S	18 47 19.6	-5.8
JMN	Monobe	3.72	279	P	Pn	18 46 36.0	-2.6
JCJ	Chichijima	6.96	150	P	Pn	18 47 11.1	-3.4
	51nm,0.8s,baz=6.8,slow=19,SNR=8.4						
JCJ				S	S	18 48 29.6	-7.7
	51nm,0.4s,baz=296,slow=23,SNR=13						
KSRS	Korea Array	9.47	299	P	Pn	18 47 42.4	-1.5
	1.6nm,0.7s,baz=108,slow=12,SNR=4.5						
USRK	Ussuriysk Ar.	12.02	338	P	Pn	18 48 15.2	+0.9
	3.3nm,1.0s,baz=140,slow=9.0,SNR=6.0						
KLR	Kul'dur	16.74	345	P	Pn	18 49 06.0	-3.1
	1.2nm,0.4s,baz=131,slow=9.9,SNR=4.9						
SONM	Songino Array	28.07	311	P	P	18 50 55.0	+2.1
	1.1nm,0.6s,baz=116,slow=8.2,SNR=6.6						
	1.1nm,0.6s						
CMAR	Chiang Mai Arr	38.10	257	P	P	18 52 19.8	+0.7
	0.2nm,0.5s,baz=50,slow=7.0,SNR=2.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	42.72	316	P	P	18 52 57.2	+1.1
	0.7nm,0.4s,baz=94,slow=8.8,SNR=4.5						
ZALV				PcP	PcP	18 54 43.1	+2.8
	0.5nm,0.6s,baz=84,slow=4.5,SNR=2.0						
	0.7nm,0.4s						
MKAR	Makanchi Array	44.09	305	P	P	18 53 08.1	+1.0
	0.4nm,0.3s,baz=87,slow=9.1,SNR=12						
	0.4nm,0.3s						
WRA	Warramunga Arr	52.98	185	P	P	18 54 16.7	+2.3
	0.4nm,0.6s,baz=1.7,slow=7.6,SNR=11						
	0.4nm,0.6s						
ASAR	Alice Springs	56.71	185	P	P	18 54 43.8	+3.0
	0.2nm,0.5s,baz=11,slow=11,SNR=1.9						
	0.2nm,0.5s						
ARCES	ARCESS Array B	66.67	339	P	P	18 55 49.1	+3.1
	2.5nm,0.8s,baz=59,slow=7.6,SNR=5.5						
	2.5nm,0.8s						
FINES	FINESS Array B	70.99	332	P	P	18 56 15.0	+2.5
	1.9nm,0.6s,baz=54,slow=4.9,SNR=11						
	1.9nm,0.6s						
NOA	NORSAR Array B	76.69	336	P	P	18 56 47.7	+2.3
	0.4nm,0.4s,baz=49,slow=5.4,SNR=1.6						
	0.4nm,0.4s						

*IDC **28** 18:58:09.7±0.8,41.'22N×119.'78E,h0km,mb3.8/12, mbtmp3.8/16,ML3.2/4,MS3.0/5,Error ellipse: s-maj=19.3km s-min=14.2km az=32.0*

*NEIC **28** 18:58:12.3±1.1,41.'3N±0.'1×119.'72E±0.'09,h15km±4km, mb4.6/10,ML4.3(BJI),Error ellipse: s-maj=14.8km s-min=10.1km az=169.0*

ISC 28 18:58:11.1±0.6,41.'20N±0.'09×119.'76E±0.'07,h10km,n38, σ0°97/36,mb4.0/17,Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJT	Baijiatuan	2.98	248		Pn	18 58 57.6	-0.8
KS19	Wonju Array Si	7.29	118		Pn	18 59 59.6	+2.1
KSAR	Wonju Array Be	7.33	118	Pn	Pn	18 59 59.4	+1.3
KSRS	Korea Array	7.35	118	Pn	Pn	18 59 59.8	+1.4
	1.2nm,0.3s,baz=303,slow=14,SNR=14						
KSRS				Sn	Sn	19 01 19.7	-2.1
	1.0nm,0.3s,baz=300,slow=22,SNR=7.6						
KSRS				Lg	Lg	19 02 01.6	
	2.3nm,0.3s,baz=308,slow=28,SNR=4.5						
KSRS				LR	LR	19 02 13.3	
	comp=Z,17nm,18.5s,baz=315,slow=33						
	7.9nm,0.6s						
TJN	Taejon	7.64	127	Pn	Pn	19 00 04.1	+1.7
MDJ	Mudanjiang	7.98	61	Pn	Pn	19 00 05.6	-1.5
USRK	Ussuriysk Ar.	9.48	68	Pn	Pn	19 00 27.6	0.0
	0.6nm,0.3s,baz=252,slow=14,SNR=2.2						
USRK				Lg	Lg	19 03 09.6	
	1.1nm,0.3s,baz=249,slow=27,SNR=8.2						
	1.3nm,0.3s						
SONM	Songino Array	11.61	309	Pn	Pn	19 00 57.4	+0.5
	0.2nm,0.3s,baz=43,slow=43,SNR=2.0						
SONM				Lg	Lg	19 04 12.8	
	0.9nm,0.3s,baz=124,slow=28,SNR=7.3						
	0.2nm,0.3s						
KLR	Kul'dur	11.64	42	Pn	Pn	19 00 58.6	+1.4
	0.2nm,0.3s,baz=136,slow=23,SNR=1.6						
KLR				Lg	Lg	19 04 13.6	
	0.2nm,0.3s,baz=261,slow=6.8,SNR=4.4						
KLR				LR	LR	19 06 12.4	
	comp=Z,64nm,20.3s,baz=228,slow=42						
	0.6nm,0.4s						
YAK	Yakutsk	21.70	13	P	P	19 03 00.4	-1.4
	1.6nm,0.3s,baz=39,slow=1.3,SNR=1.3						
YAK				Lg	Lg	19 09 26.2	
	0.1nm,0.3s,baz=92,slow=1.4,SNR=2.1						
	1.6nm,0.3s						
CMAR	Chiang Mai Arr	28.84	224	LR	LR	19 15 40.6	
	comp=Z,18nm,18.9s,baz=230,slow=36						
SEY	Seymchan	29.04	31	P	P	19 04 11.7	+0.7
	2.2nm,0.9s,baz=205,slow=21,SNR=1.7						
	2.2nm,0.9s						
KURBB	Kurchatov Arra	29.85	302	P	P	19 04 18.1	-0.3
	0.5nm,0.6s,baz=91,slow=10,SNR=8.1						
	0.5nm,0.6s						
BVAR	Borovoye Array	34.94	307	P	P	19 05 03.1	+0.2
	0.4nm,0.5s,baz=98,slow=11,SNR=4.7						
	0.4nm,0.5s						
CHGR	Chuyangaron	38.45	283	P	P	19 05 32.9	-0.2
CHGR				IAmb	IAmb	19 05 34.1	
	comp=Z,11nm,1.2s						
ARU	Arti	41.62	313	P	P	19 05 59.6	+0.7
	comp=Z,2.1nm,0.5s,baz=116,slow=7.9,SNR=6.1						
	comp=Z,2.1nm,0.5s						
ARU	Arti	41.62	313	P	P	19 05 59.7	+0.7
ARU				IAmb	IAmb	19 06 04.8	
	comp=Z,3.6nm,0.7s						
ABKAR	Akbulak array	41.90	302	P	P	19 06 01.3	-0.2
ABKAR	Akbulak array	41.90	302	P	P	19 06 01.2	-0.2
ABKAR				IAmb	IAmb	19 06 02.4	
	comp=Z,1.3nm,0.7s						
GEYT	Alibeck	46.76	287	P	P	19 06 41.3	+0.7
	comp=Z,0.5nm,0.3s,baz=69,slow=9.4,SNR=3.7						
	comp=Z,0.5nm,0.3s						
BMAR	Burnt Mountain	54.78	28	P	P	19 07 41.4	+0.8
ILAR	Eielson Array	54.97	32	P	P	19 07 41.3	-0.6
	comp=Z,0.6nm,0.8s,baz=285,slow=6.5,SNR=6.1						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	54.97	32	P	P	19 07 41.7	-0.2
SCM	Sheep Creek Mo	55.98	35	P	P	19 07 49.2	-0.1
SCM				IAmb	IAmb	19 08 21.0	
	comp=Z,15nm,1.3s						
RIDG	Independent Ri	56.21	32	P	P	19 07 50.3	-0.6
M24K	Tolsona, Glenn	56.36	34	P	P	19 07 51.8	-0.2
M24K				IAmb	IAmb	19 08 02.3	
	comp=Z,5.6nm,0.8s						
FINES	FINESS Array B	56.48	325	P	P	19 07 52.4	-0.4
	comp=Z,1.7nm,0.6s,baz=90,slow=5.1,SNR=11						
	comp=Z,1.7nm,0.6s						
N25K	Chitina, Valde	57.25	34	P	P	19 07 59.5	+1.2
N25K				IAmb	IAmb	19 08 28.8	
	comp=Z,8.1nm,1.2s						
PCA	Pinnacle	59.84	35	P	P	19 08 16.3	-0.2
AKASG	Malin Array Be	59.87	313	LR	LR	19 36 03.7	
	comp=Z,82nm,18.9s,baz=250,slow=38						
WRA	Warramunga Arr	62.32	164	P	P	19 08 33.2	-0.4
	comp=Z,0.7nm,0.8s,baz=349,slow=7.5,SNR=6.9						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	62.32	164	P	P	19 08 33.8	+0.3
WB2	Warramunga Arr	62.32	164	P	P	19 08 34.0	+0.4
WB2				IAmb	IAmb	19 08 49.4	
	comp=Z,7.4nm,1.2s						
BRTR	Keskin Array B	62.80	300	P	P	19 08 37.8	+0.9
	comp=Z,0.5nm,0.6s,baz=44,slow=4.4,SNR=2.0						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	62.80	300	P	P	19 08 35.5	-1.4
NOA	NORSAR Array B	62.84	329	P	P	19 08 36.5	-0.2
	comp=Z,0.7nm,0.8s,baz=60,slow=7.1,SNR=1.0						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	65.86	166	P	P	19 08 57.4	+0.6
	comp=Z,0.4nm,0.7s,baz=3.0,slow=12,SNR=8.2						
	comp=Z,0.4nm,0.7s						
AFI	Afiamalu	83.55	115	LR	LR	19 44 08.8	
	comp=Z,13nm,20.9s,baz=328,slow=33						

*IDC **28** 19:11:03.7±0.6,2.'32S×140.'36E,h0km,mb4.4/20, mbtmp4.5/23,ML4.7/3,MS3.9/23,Error ellipse: s-maj=19.5km s-min=13.8km az=89.0*

*DJA **28** 19:11:03.9±0.7,2.'S±3.'×14.'0E±.',h13km±4km,M4.6/43, mB5.1/14,mb4.7/43,MLv4.9/7,Mw(mB)4.4/14*

*NEIC **28** 19:11:07.0±1.9,2.'41S±0.'08×140.'32E±0.'06,h24km±5km, mb4.9/77,Error ellipse: s-maj=12.1km s-min=9.1km az=190.0*

*BJI **28** 19:11:06.8±0.0,2.'44S×140.'56E,h41km,mb4.7/42, mB5.0/20,Ms4.5/7,Ms7 4.2/7*

ISC 28 19:11:07.0±0.3,2.'38S±0.'05×140.'31E±0.'05,h24km,n309, σ1°27/291,mb4.8/65,MS3.9/22,4C-3D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.25	214	P	Pb	19 11 13.8	+0.6
SMPI	Sarmi	1.64	284	P	Pn	19 11 33.7	-0.7
WAMI	Wamena	2.18	227	P	Pn	19 11 43.5	+1.7
SRPI	Serui, Papua	4.10	277	P	Pn	19 12 08.3	+0.1
RKPI	Ransiki, Papua	6.19	278	P	Pn	19 12 37.6	+0.7
	0.4nm1μm63nm,0.7s						
MANU	Manus Island	7.06	87		Pn	19 12 49.6	+0.6
FAKI	Fak Fak	8.07	266	Pn	Pn	19 13 01.8	-1.0
FAKI	Fak Fak	8.07	266	P	Pn	19 13 03.3	+0.5
	526nm53nm,1.3s						
SIJI	Sorong	9.16	279	Pn	Pn	19 13 19.9	+2.1
	3.6nm,0.3s,baz=101,slow=22,SNR=22						
SIJI				Sn	Sn	19 15 05.3	+5.0
	0.2nm,0.3s,baz=152,slow=24,SNR=1.2						
SIJI				LR	LR	19 17 02.4	
	comp=Z,292nm,21.2s,baz=78,slow=39						
	4.9nm,0.3s						
SIJI	Sorong	9.16	279	P	Pn	19 13 18.2	+0.4
	455nm21nm,1.1s						
PMG	Port Moresby	9.75	136	Pn	Pn	19 13 29.5	+3.6
	0.7nm,0.3s,baz=347,slow=24,SNR=2.4						
PMG				LR	LR	19 18 23.4	
	comp=Z,772nm,19.7s,baz=352,slow=45						
PMG	Port Moresby	9.75	136	Pn	Pn	19 13 27.4	+1.5
PMG	Port Moresby	9.75	136	P	Pn	19 13 23.7	-2.2
	28nm,1.0s						
SAUI	Saumlaki	10.55	238	Pn	Pn	19 13 38.2	+1.4
SAUI	Saumlaki	10.55	238	P	Pn	19 13 38.1	+1.2
	233nm,0.9s						
BNDI	Bandanaira	10.60	258	P	Pn	19 13 38.5	+1.0
	78nm,0.9s						
MSAI	Masohi	11.40	265	P	Pn	19 13 49.5	+1.0
	7.0nm,0.8s						
COEN	Coen	11.85	166	Pn	Pn	19 13 57.2	+2.6
COEN	Coen	11.85	166	P	Pn	19 13 59.9	+5.3
KRAI	Karang Ratu	11.93	265	P	Pn	19 13 56.8	+1.0
	32nm,1.0s						
AAI	Ambon	12.16	264	P	Pn	19 13 59.7	+0.8
	39nm,1.2s						
KDU	Kakadu	12.85	217	P	Pn	19 14 07.8	-0.4

LBMI	Labuha	12.92	278	P	Pn	19 14 09.2	-0.1
	1μm74nm,1.1s					
GAMI	Galela, Maluku	13.20	288	P	Pn	19 14 13.1	0.0
	74nm,1.0s					
NLAI	Namlea	13.22	266	P	Pn	19 14 14.1	+0.8
	20nm,1.2s					
MTN	Manton Dam	13.80	221		Pn	19 14 19.5	-1.8
MTN	Manton Dam	13.80	221	P	Pn	19 14 19.9	-1.4
SANI	Sanana	14.31	271	P	Pn	19 14 28.8	+0.5
	39nm,1.1s						
MTSU	Mount Surprise	16.14	166	P	P	19 14 58.3	+2.7
GUMO	Guam	16.50	16	LR	LR	19 20 50.8	
	comp=Z,268nm,19.4s,baz=196,slow=36						
KNRA	Kununurra	17.43	220		Pn	19 15 08.2	-0.5
KNRA				IAmb	IAmb	19 15 15.7	
	comp=Z,57nm,0.9s						
KNRA	Kununurra	17.43	220	P	P	19 15 09.6	-0.3
DAV	Davao City (W)	17.44	303	LR	LR	19 21 52.0	
	comp=Z,138nm,18.5s,baz=129,slow=37						
SOEI	Soe	17.54	245		P	19 15 11.0	-0.2
SOEI				IAmb	IAmb	19 15 19.7	
	comp=Z,90nm,0.9s						
SOEI	Soe	17.54	245	P	P	19 15 11.0	-0.2
	comp=Z,2μmcomp=Z,228nm,1.0s						
LUWI	Luwuk	17.58	274		Pn	19 15 09.2	-1.4
LUWI	Luwuk	17.58	274	P	Pn	19 15 10.7	+0.1
	comp=Z,831nmcomp=Z,82nm,1.2s						
BBSI	Bau Bau	17.96	260	P	P	19 15 16.6	+0.9
	comp=Z,1μmcomp=Z,69nm,1.7s						
QIS	Mount Isa	18.08	182	P	P	19 15 18.6	+1.6
WB0	Warramunga Arr	18.22	198	P	Pn	19 15 16.5	-2.0
BATI	Baumata	18.27	244	P	P	19 15 19.8	+0.6
	comp=Z,5.4nm,0.3s,baz=69,slow=1.0,SNR=25						
	comp=Z,55nm,0.7s						
BATI	Baumata	18.27	244	P	P	19 15 20.1	+1.0
	comp=Z,1μmcomp=Z,176nm,0.9s						
WR0	Warramunga Arr	18.36	197	P	P	19 15 17.6	-2.4
WRAB	Tennant Creek	18.39	198	P	P	19 15 18.9	-1.6
WRAB	Tennant Creek	18.39	198	P	Pn	19 15 21.0	+0.5
WB2	Warramunga Arr	18.40	198	P	P	19 15 18.7	-1.8
WRA	Warramunga Arr	18.40	198	P	P	19 15 20.1	-0.5
	comp=Z,2.3nm,0.3s,baz=25,slow=9.6,SNR=61						
WRA				S	Sn	19 18 33.4	-12
	comp=Z,6.3nm,1.2s,baz=18,slow=22,SNR=3.4						
WRA				LR	LR	19 23 01.8	
	comp=Z,519nm,21.5s,baz=12,slow=39						
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	18.40	198	P	P	19 15 18.5	-2.1
CTA	Charters Tower	18.53	162	P	Pn	19 15 28.0	+5.7
	comp=Z,4.5nm,0.8s,baz=326,slow=11,SNR=4.7						
CTA				LR	LR	19 22 58.7	
	comp=Z,375nm,19.7s,baz=342,slow=38						
MRSI	Marisa	18.58	279	P	Pn	19 15 23.3	+0.4
	comp=Z,32nm,0.7s						
APSI	Ampana	18.71	274	P	Pn	19 15 24.3	-0.1
	comp=Z,1μmcomp=Z,61nm,1.1s						
KKSI	Kolaka, Sulawe	18.71	264	P	Pn	19 15 24.7	+0.2
	comp=Z,22nm,1.0s						
MMRI	Maumere	19.02	250	P	Pn	19 15 28.0	-0.2
	comp=Z,29nm,1.0s						
TOLI2	Tolitoli	19.83	280	P	P	19 15 34.6	-1.7
BSSI	Bau Bau, Buton	20.11	259	P	P	19 15 39.8	+0.5
	comp=Z,793nmcomp=Z,75nm,1.1s						
PATS	Pohnpei	20.17	63	P	P	19 15 38.8	-1.1
BNSI	Bone	20.26	264	P	P	19 15 41.4	+0.4
	comp=Z,19nm,1.2s						
BKSI	Bulukumba	20.35	261	P	P	19 15 42.5	+0.6
	comp=Z,20nm,1.1s						
SPSI	Sidrap Palu	20.57	265	P	P	19 15 45.2	+0.9
	comp=Z,30nm,0.8s						
MPSI	Mapaga	20.58	277	P	P	19 15 44.9	+0.5
	comp=Z,7.5nm,1.0s						
KAPI	Kappang	20.68	262	P	Pn	19 15 48.1	+0.2
	comp=Z,2.7nm,0.4s,baz=55,slow=19,SNR=2.1						
	comp=Z,2.7nm,0.4s						
KAPI	Kappang	20.68	262	P	P	19 15 44.7	-0.8
KAPI	Kappang	20.68	262	P	P	19 15 46.3	+0.8
	comp=Z,16nm,1.2s						
HNR	Honiara	20.74	111	LR	LR	19 24 36.5	
	comp=Z,3μm,19.2s,baz=300,slow=39						
HNR	Honiara	20.74	111	P	P	19 15 45.7	-0.5
HNR	Honiara	20.74	111	P	Pn	19 15 54.9	+6.3
AS01	Alice Springs	22.03	196	P	P	19 16 01.0	+1.0
AS31	Alice Springs	22.05	196	P	P	19 15 58.4	-1.7
ASAR	Alice Springs	22.05	196	P	P	19 16 00.3	+0.2
	comp=Z,16nm,0.8s,baz=27,slow=10,SNR=90						
ASAR				S	S	19 20 01.9	-0.5
	comp=Z,4.8nm,0.8s,baz=17,slow=27,SNR=6.3						
ASAR				LR	LR	19 25 04.5	
	comp=Z,358nm,21.5s,baz=24,slow=38						
	comp=Z,16nm,0.8s						
ASAR	Alice Springs	22.05	196	P	P	19 15 59.3	-0.9
MYLDM	Lahad Datu	23.04	289	P	P	19 16 10.0	-0.8
MYLDM				IAmb	IAmb	19 16 29.1	
	comp=Z,51nm,0.9s						
MYLDM	Lahad Datu	23.04	289	P	P	19 16 10.6	-0.2
	comp=Z,779nmcomp=Z,63nm,1.0s						
KLNI	Mataram	24.83	255	P	P	19 16 28.2	+0.5
	comp=Z,18nm,0.7s						
EIDS	Eidsvold	25.10	157	P	P	19 16 28.6	-1.4
EIDS				IAmb	IAmb	19 16 38.0	
	comp=Z,44nm,1.4s						
INKA	Innaminka	25.22	179	P	P	19 16 34.9	+3.8
WRKA	Warakurna	25.33	206	P	P	19 16 31.9	-0.3
KKM	Kota Kinabalu	25.47	289	P	P	19 16 31.5	-2.2
KKM				IAmb	IAmb	19 16 39.8	
	comp=Z,22nm,0.9s						
OOD	Oodnadatta	25.65	189	P	P	19 16 36.6	+1.6
RTBI	Rangdo, Negare	25.95	256	P	P	19 16 38.1	+0.2
	comp=Z,67nm,0.8s						
KMMI	Kalianget	26.65	259	P	P	19 16 45.0	+0.8
	comp=Z,79nm,1.0s						
MBWA	Marble Bar	27.39	225	P	P	19 16 50.9	+0.1
PSA00	Pilbara Seismi	27

GSI IAmb IAmb 19 19 06.1
comp=Z,21nm,0.6s
GSI Gunungsitoli 42.88 274 P **P 19 19 03.3 -0.7**
GYA Guiyang 43.33 314 ⇑P **P 19 19 11.0 +3.4**
GYA pmax pmax
comp=Z,6.0nm,1.1s
PHRA Phrae 44.56 299 P **P 19 19 16.4 -1.0**
LYN LuoYang 45.09 327 ⇑P **P 19 19 21.8 +0.4**
KMI Kunming 45.53 309 ⇑P **P 19 19 26.3 +0.9**
KMI pmax pmax
comp=Z,7.0nm,1.1s
CM31 Chiang Mai Arr 45.67 299 P **P 19 19 24.5 -1.8**
CM31 IAmb IAmb 19 19 27.8
comp=Z,8.9nm,0.9s
CMAR Chiang Mai Arr 45.67 299 P **P 19 19 27.0 +0.7**
comp=Z,5.6nm,0.9s,baz=119,slow=6.4,SNR=43
comp=Z,5.6nm,0.9s
CMAR Chiang Mai Arr 45.67 299 P **P 19 19 24.2 -2.0**
CMAR PcP **PcP 19 21 03.9 -0.4**
CHTO Chiang Mai 45.81 299 P **P 19 19 26.1 -1.2**
USRK Ussuriysk Ar. 46.97 352 P **P 19 19 36.9 +0.9**
comp=Z,4.8nm,0.9s,baz=164,slow=7.4,SNR=5.6
USRK LR LR 19 35 57.0
comp=Z,166nm,21.6s,baz=182,slow=32
comp=Z,4.8nm,0.9s
PZH PanZhiHua 47.02 310 P **P 19 19 37.0 +0.1**
PZH pmax pmax
comp=Z,6.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.7s
MDJ Mudanjiang 47.76 350 P **P 19 19 43.3 +1.1**
MDJ pmax pmax
comp=Z,12nm,0.9s
MDJ pmax pmax
comp=Z,110nm,3.6s
URZ Urewera 49.06 141 LR LR 19 40 56.8
comp=Z,127nm,18.8s,baz=35,slow=36
BKZ Black Stump Fm 49.24 143 P **P 19 19 52.0 -1.8**
RPZ Rata Peaks 49.38 151 LR LR 19 39 32.8
comp=Z,144nm,20.8s,baz=293,slow=35
HHC Hu-ho-hao-te 50.38 332 *e*P **P 19 20 05.3 +2.8**
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,140nm,5.8s
HHC LR LR
comp=Z,260nm,14.0s
HHC LR LR
comp=Z,330nm,14.0s
HHC LR LR
comp=Z,390nm,14.6s
LZH Lanzhou 51.20 322 *e*P **P 19 20 10.5 +1.7**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH LR LR
comp=Z,120nm,14.5s
LZH LR LR
comp=Z,160nm,15.3s
LZH LR LR
comp=Z,150nm,17.1s
KLR Kul'dur 51.94 353 LR LR 19 38 34.5
comp=Z,89nm,21.8s,baz=189,slow=32
GTA Gaotai 55.77 323 ⇑P **P 19 20 43.0 +0.7**
GTA pP sP 19 20 51.3 -0.7
GTA sP pP 19 20 55.8 +6.5
GTA pmax pmax
comp=Z,8.0nm,1.1s
PETK Petropavlovsk- 57.19 12 P **P 19 20 51.2 -0.7**
comp=Z,5.4nm,0.9s,baz=194,slow=11,SNR=2.8
PETK LR LR 19 45 36.3
comp=Z,41nm,19.5s,baz=212,slow=36
comp=Z,5.4nm,0.9s
SONM Songino Array 58.12 334 P **P 19 20 59.4 +0.6**
comp=Z,0.8nm,0.8s,baz=72,slow=29,SNR=3.3
SONM LR LR 19 44 39.5
comp=Z,111nm,21.8s,baz=164,slow=35
comp=Z,0.8nm,0.8s
TAPN Taplejung 58.60 304 *e*P **P 19 21 03.5 +0.7**
comp=Z,19nm,1.0s
RAMN Ramite 59.38 303 *e*P **P 19 21 08.1 0.0**
JIRN Jiri 59.98 304 *e*P **P 19 21 12.8 +0.5**
PKI Pulchoki 60.59 304 *e*P **P 19 21 16.6 +0.1**
comp=Z,5.2nm,0.7s
PKIN Phulchoki 60.60 304 *e*P **P 19 21 16.5 0.0**
comp=Z,2.7nm,0.5s
KKN Kakani 60.77 304 *e*P **P 19 21 17.8 +0.2**
GKN Gorkha 61.38 304 *e*P **P 19 21 22.0 +0.3**
comp=Z,27nm,0.9s
DANN Dangsing 62.23 304 *e*P **P 19 21 27.4 -0.1**
comp=Z,26nm,0.9s
MA2 Magadan 62.32 6 LR LR 19 51 58.9
comp=Z,21nm,18.1s,baz=158,slow=39
YAK Yakutsk 64.75 354 P **P 19 21 43.8 +0.7**
comp=Z,5.1nm,0.5s,baz=40,slow=2.2,SNR=8.1
YAK LR LR 19 46 18.4
comp=Z,54nm,20.6s,baz=90,slow=33
comp=Z,5.1nm,0.5s
YAK Yakutsk 64.75 354 P **P 19 21 42.6 -0.5**
WMQ Urumqi 65.75 321 *e*P **P 19 21 51.5 +1.4**
WMQ pP sP 19 22 01.3 +1.4
WMQ pmax pmax
comp=Z,21nm,0.7s
PPT2 Papeete2 70.33 108 *e*LR LR 19 43 42.0
comp=Z,60nm,23.0s
MK31 Makanchi Array 70.51 322 P **P 19 22 18.3 -1.6**
MK31 IAmb IAmb 19 22 22.3
comp=Z,9.4nm,1.0s
MKAR Makanchi Array 70.51 322 P **P 19 22 20.7 +0.8**
comp=Z,9.4nm,0.8s,baz=107,slow=8.1,SNR=55
comp=Z,9.4nm,0.8s
MKAR Makanchi Array 70.51 322 P **P 19 22 19.4 -0.5**
MAKZ Makanchi 70.71 322 P **P 19 22 20.7 -0.4**
TBI Tubuai 70.92 114 *e*LR LR 19 43 58.4
comp=Z,411nm,36.2s
KSH Kashi 72.03 313 P **P 19 22 32.3 +3.0**
KSH PcP **PcP 19 22 48.8 +1.0**
KSH pmax pmax
comp=Z,11nm,1.0s
NIL Nilore 72.41 306 P **P 19 22 30.7 -1.0**
ZAA0 Zalesovo Array 72.46 329 P **P 19 22 30.0 -1.4**
ZAA0 IAmb IAmb 19 22 32.0
comp=Z,6.3nm,0.8s
ZALV Zalesovo Beam 72.46 329 P **P 19 22 31.3 -0.1**
comp=Z,7.1nm,0.9s,baz=104,slow=6.3,SNR=25
comp=Z,7.1nm,0.9s
ZALV Zalesovo Beam 72.46 329 P **P 19 22 30.5 -1.0**
NRN Naryn 72.63 315 P **P 19 22 33.2 +0.1**
BOOM Boomskoye usch 73.03 316 P **P 19 22 36.2 +0.9**
BOOM IAmb IAmb 19 22 41.3
comp=Z,7.5nm,0.8s
TKM2 Tokmak 2 73.41 316 P **P 19 22 38.4 +0.8**
SNR=8.4
UCH Uchtor 73.94 315 P **P 19 22 42.8 +1.8**
SNR=6.4
AAK Ala-Archa 74.08 316 P **P 19 22 40.3 -1.2**
comp=Z,1.3nm,0.5s,baz=92,slow=6.6,SNR=5.4
comp=Z,1.3nm,0.5s
AAK Ala-Archa 74.08 316 P **P 19 22 41.4 -0.1**
USP Ospenovka 74.28 316 P **P 19 22 43.7 +1.2**
SNR=7.0
KURK Kurchatov 74.37 324 P **P 19 22 42.0 -0.8**
KURK IAmb IAmb 19 22 44.1
comp=Z,9.9nm,0.9s
KURBB Kurchatov Arra 74.39 324 P **P 19 22 43.4 +0.5**
comp=Z,6.3nm,0.9s,baz=111,slow=6.1,SNR=41
comp=Z,6.3nm,0.9s
AML Almayashu 74.49 315 P **P 19 22 45.9 +1.7**
SNR=10.0
EKS2 Erkin-Say 74.59 315 P **P 19 22 45.9 +1.5**
SNR=5.9
VNDA Vanda 75.97 175 P **P 19 22 52.2 +0.7**
comp=Z,0.6nm,0.5s,baz=323,slow=6.3,SNR=8.2
VNDA LR LR 19 54 44.7
comp=Z,113nm,21.7s,baz=343,slow=34
comp=Z,0.6nm,0.5s
GAR Garm 76.08 311 P **P 19 22 53.3 +0.3**
CHGR Chuyangaron 76.88 310 P **P 19 22 56.9 -0.7**
KK31 Karatay Array 77.02 315 P **P 19 22 57.4 -0.8**
KKAR Karatay Array 77.02 315 P **P 19 22 57.5 -0.7**
KKAR Karatay Array 77.02 315 P **P 19 22 57.6 -0.5**
KKAR IAmb IAmb 19 23 06.0
comp=Z,5.6nm,1.3s
N16K Nishlik Lake 78.19 26 P **P 19 23 05.7 +1.4**
baz=243
O17K Koliganek Bris 78.64 27 P **P 19 23 08.4 +1.7**
baz=245
OHAK Old Harbor 79.46 30 P **P 19 23 12.5 +1.2**
baz=249
N18K Kilae Creek 79.56 27 P **P 19 23 13.2 +1.4**
baz=246
NRIK Noril'sk 79.86 343 P **P 19 23 13.8 +0.5**
comp=Z,9.9nm,1.0s,baz=116,slow=5.5,SNR=6.1
comp=Z,9.9nm,1.0s
NRIK Noril'sk 79.86 343 P **P 19 23 13.1 -0.1**
NRIK IAmb IAmb 19 23 14.6
comp=Z,16nm,1.1s
Q19K Cape Douglas, 79.92 29 P **P 19 23 14.3 +0.5**
baz=248
BVAR Borovoye Array 79.96 325 P **P 19 23 14.9 +0.8**
comp=Z,5.1nm,0.8s,baz=110,slow=8.1,SNR=51
comp=Z,5.1nm,0.8s
KDAK Kodiak Island 80.02 30 P **P 19 23 15.8 +1.5**
baz=249
BRVK Borovoye 80.03 325 P **P 19 23 14.2 -0.3**
BRVK IAmb IAmb 19 23 16.6
comp=Z,9.5nm,0.9s
N19K Bonanza Creek 80.25 27 P **P 19 23 17.1 +1.5**
baz=247
L19K White Mountain 80.63 25 P **P 19 23 18.1 +0.5**
L19K IAmb IAmb 19 23 20.4
comp=Z,15nm,1.0s
L19K White Mountain 80.63 25 P **P 19 23 18.7 +1.1**
baz=246
M19K Big River Lodg 80.72 26 P **P 19 23 19.6 +1.6**
baz=247
L20K Farewell, AK 81.16 25 P **P 19 23 22.0 +1.5**
baz=247
M20K Styx River 81.26 26 P **P 19 23 22.2 +1.1**
baz=248
N20K Mount Spurr 81.42 27 P **P 19 23 22.3 +0.4**
baz=249
K20K Telida 81.43 25 P **P 19 23 23.1 +1.3**
K20K IAmb IAmb 19 23 25.1
comp=Z,12nm,1.1s
K20K Telida 81.43 25 P **P 19 23 23.1 +1.3**
baz=247
HRA Herat 81.51 305 P **P 19 23 22.6 -0.5**
HRA IAmb IAmb 19 23 30.4
comp=Z,13nm,1.8s
J20K Nowinta River 81.72 24 P **P 19 23 24.6 +1.4**
baz=247
SUA Susitna One 82.17 27 P **P 19 23 25.9 0.0**
baz=250
CAST Castle Rocks 82.28 25 P **P 19 23 26.4 +0.1**
CAST Castle Rocks 82.28 25 P **P 19 23 26.8 +0.5**
baz=249
CHUM Lake Minchumin 82.35 24 P **P 19 23 27.8 +1.2**
baz=248
RC01 Rabbit Creek A 82.51 27 P **P 19 23 27.6 +0.1**
baz=251
H21K Melozitna Rive 82.82 23 P **P 19 23 30.2 +1.2**
baz=248
PMR Palmer 82.95 27 P **P 19 23 29.9 +0.2**
baz=252
PWL Port Wells 83.09 28 P **P 19 23 31.0 +0.4**
baz=252
KNK Knik Glacier 83.20 27 P **P 19 23 31.0 -0.1**
KNK IAmb IAmb 19 23 32.6
comp=Z,13nm,1.0s
KNK Knik Glacier 83.20 27 P **P 19 23 31.5 +0.4**
baz=252
SML Sawmill 83.38 27 P **P 19 23 31.3 -0.8**
SML Sawmill 83.38 27 P **P 19 23 32.4 +0.4**
baz=252
MLY Manley 83.40 24 P **P 19 23 32.8 +0.7**
MLY IAmb IAmb 19 23 36.9
comp=Z,22nm,1.7s
MLY Manley 83.40 24 P **P 19 23 32.8 +0.7**
baz=250
H22K Ishtalitna Cre 83.45 23 P **P 19 23 33.4 +1.1**
baz=249
WAT1 Susitna Watana 83.59 26 P **P 19 23 33.6 +0.5**
baz=252
RND Reindeer 83.64 25 P **P 19 23 33.5 0.0**
RND IAmb IAmb 19 23 34.4
comp=Z,9.1nm,1.0s
M23K Glacier View 83.65 27 P **P 19 23 33.8 +0.4**
baz=253
MCK McKinley 83.71 25 P **P 19 23 33.8 +0.1**
baz=252
SCM Sheep Creek Mo 83.84 27 P **P 19 23 35.4 +0.9**
baz=253
WAT6 Susitna Watana 83.88 26 P **P 19 23 35.6 +0.8**
baz=253
I23K Minto, Yukon-K 83.99 24 P **P 19 23 36.8 +1.8**
baz=251
H23K Yukon River 84.14 23 P **P 19 23 37.2 +1.4**
baz=251
DHY Denali Highway 84.18 26 P **P 19 23 36.2 -0.1**
DHY IAmb IAmb 19 23 38.1
comp=Z,11nm,1.0s
DHY Denali Highway 84.18 26 P **P 19 23 36.8 +0.5**
baz=253
G23K Bananza Creek 84.25 22 P **P 19 23 37.5 +1.1**
baz=250
COLD Coldfoot 84.36 21 P **P 19 23 38.0 +1.1**
baz=250
KLU Klutina 84.39 28 P **P 19 23 37.3 0.0**
KLU IAmb IAmb 19 23 39.5
comp=Z,8.2nm,0.9s
KLU Klutina 84.39 28 P **P 19 23 38.5 +1.2**
baz=255
M24K Tolsona, Glenn 84.44 27 P **P 19 23 38.7 +1.2**
baz=254
CCB Clear Creek Bu 84.46 24 P **P 19 23 36.2 -1.2**
CCB IAmb IAmb 19 23 39.8
comp=Z,9.4nm,0.9s
HDA Harding Lake 84.75 25 P **P 19 23 38.5 -0.4**
HDA IAmb IAmb 19 23 42.1
comp=Z,4.6nm,0.9s
HDA Harding Lake 84.75 25 P **P 19 23 38.7 -0.2**
baz=253
H24K Noodor Dome 84.79 23 P **P 19 23 39.4 +0.3**
baz=252
D23K Nanushuk River 84.80 20 P **P 19 23 40.3 +1.2**
baz=250
E23K Chandalar 84.85 21 P **P 19 23 41.1 +1.6**
baz=251
BMRM Bremner River 84.87 28 P **P 19 23 40.6 +0.9**
baz=256
IL31 84.88 24 P **P 19 23 38.7 -0.8**
IL31 IAmb IAmb 19 23 39.5
comp=Z,5.6nm,0.9s
ILAR Eielson Array 84.88 24 P **P 19 23 38.5 -1.0**
comp=Z,3.6nm,0.8s,baz=255,slow=5.2,SNR=14
comp=Z,3.6nm,0.8s
ILAR Eielson Array 84.88 24 P **P 19 23 38.2 -1.4**
PAX Paxson 84.99 26 P **P 19 23 41.2 +0.9**
baz=255
N25K Chitina, Valde 85.03 28 P **P 19 23 42.3 +1.8**
baz=256
TOLK Toolik Lake Re 85.06 20 P **P 19 23 42.5 +2.0**
baz=251
K24K Donnelly Dome 85.07 25 P **P 19 23 41.3 +0.7**
baz=254
C23K Itkillik River 85.12 19 P **P 19 23 42.0 +1.3**
baz=250,SNR=6.0
G24K Hadweenzic Riv 85.21 22 P **P 19 23 42.6 +1.4**
baz=253
GEYT Alibeck 85.29 308 P **P 19 23 43.3 +1.0**
comp=Z,5.0nm,1.0s,baz=130,slow=2.3,SNR=14
comp=Z,5.0nm,1.0s
GEYT Alibeck 85.29 308 P **P 19 23 42.4 +0.1**
GEYT IAmb IAmb 19 23 44.4
comp=Z,6.2nm,0.9s
GYA0B ALIBECK ARRAY 85.29 308 P **P 19 23 42.3 0.0**
GYA0B IAmb IAmb 19 23 50.2
comp=Z,6.4nm,0.9s
F24K Squaw Lake 85.30 22 P **P 19 23 42.9 +1.2**
baz=252
GLB Gilahina Butte 85.36 28 P **P 19 23 42.2 +0.1**
GLB IAmb IAmb 19 23 43.7
comp=Z,8.3nm,1.0s
RIDG Independent Ri 85.46 26 P **P 19 23 42.6 0.0**
baz=255
J25K Salcha River, 85.46 25 P **P 19 23 43.6 +1.0**
baz=255
D24K Happy Valley 85.49 20 P **P 19 23 44.1 +1.6**
baz=251
ABKAR Akbulak array 85.50 320 P **P 19 23 42.6 -0.4**
ABKAR IAmb IAmb 19 23 57.8
comp=Z,20nm,2.0s
ABKAR Akbulak array 85.50 320 P **P 19 23 42.4 -0.6**
C24K Franklin Bluff 85.71 19 P **P 19 23 45.1 +1.5**
baz=251
H25K Birch Creek 85.72 23 P **P 19 23 45.1 +1.4**
baz=254
G25K Bearman Lake 85.75 22 P **P 19 23 45.6 +1.7**
baz=254
L26K Log Cabin Wild 85.94 26 P **P 19 23 46.1 +1.2**
baz=257
MESA MESA 85.97 29 P **P 19 23 46.6 +1.3**
baz=258
F25K Christian Rive 86.15 22 P **P 19 23 46.9 +1.0**
baz=254
J26L Joseph Creek 86.19 25 P **P 19 23 46.7 +0.5**
J26L IAmb IAmb 19 23 48.7
comp=Z,5.9nm,1.0s
J26L Joseph Creek 86.19 25 P **P 19 23 47.5 +1.2**
baz=256,SNR=5.3
E25K Arctic Village 86.32 21 P **P 19 23 48.0 +1.3**
baz=254
D25K Kavik River 86.37 20 P **P 19 23 48.6 +1.7**
baz=254,SNR=5.4
CTG Chitna Glacier 86.42 29 P **P 19 23 49.0 +1.5**
baz=259,SNR=6.7
M27K Edge Creek, AK 86.45 27 P **P 19 23 47.4 -0.2**
M27K IAmb IAmb 19 23 50.5
comp=Z,6.6nm,0.8s
M27K Edge Creek, AK 86.45 27 P **P 19 23 49.0 +1.3**
baz=258,SNR=5.8
L27K Beaver Creek, 86.62 26 P **P 19 23 48.8 +0.5**
L27K IAmb IAmb 19 23 50.3
comp=Z,4.3nm,0.9s
L27K Beaver Creek, 86.62 26 P **P 19 23 49.5 +1.1**
baz=258
BCAR Beaver Creek A 86.64 26 P **P 19 23 48.6 +0.1**
G26K Porcupine Rive 86.68 22 P **P 19 23 50.4 +2.0**
baz=256
F26K Sheenjek River 86.73 22 P **P 19 23 50.8 +2.1**
baz=256,SNR=8.4
O28M Mount Upton 86.94 29 P **P 19 23 51.2 +1.0**
baz=260
YUK3 Moose Creek 87.00 28 P **P 19 23 51.4 +1.0**
baz=259
I27K Kandik River 87.24 24 P **P 19 23 52.3 +1.0**
baz=258,SNR=6.6
EGAK Eagle 87.26 25 P **P 19 23 52.6 +1.3**
baz=259
H27K Steamboat Moun 87.40 23 P **P 19 23 53.9 +1.8**
baz=258
G27K Doyon Strip 87.47 23 P **P 19 23 54.0 +1.7**
baz=258,SNR=6.4
QSPA South Pole Qui 87.56 180 LR LR 20 03 10.0
comp=Z,89nm,20.2s,baz=338,slow=36
O29M Mount Kennedy 87.65 29 P **P 19 23 54.7 +1.2**
baz=261
YUK4 Talbot Arm 87.78 28 P **P 19 23 55.6 +1.4**
baz=261
E27K Coleen River 87.78 21 P **P 19 23 55.2 +1.4**
baz=258,SNR=6.2
DAWY Dawson 87.88 26 P **P 19 23 54.9 +0.5**
DAWY Dawson 87.88 26 P **P 19 23 56.3 +1.9**
baz=260,SNR=7.9
P29M Windy Craggy 87.97 30 P **P 19 23 55.8 +1.0**
baz=262
M29M Somme Creek 88.03 27 P **P 19 23 57.0 +1.7**
baz=261,SNR=5.6
HYT Haines Junctio 88.25 29 P **P 19 23 56.8 +0.5**
HYT Haines Junctio 88.25 29 P **P 19 23 57.8 +1.5**
baz=262,SNR=5.7
L29M L29M 88.29 27 P **P 19 23 57.7 +1.4**
baz=261
P30M Million Dollar 88.42 30 P **P 19 23 58.2 +1.1**
baz=262
N30M Aishikik Lake 88.54 28 P **P 19 23 58.9 +1.3**
baz=262
I29M Ogilvie Camp, 88.55 24 P **P 19 23 58.8 +1.3**
baz=261,SNR=5.4
PLBC Pleasant Camp 88.64 30 P **P 19 23 59.3 +1.4**
baz=263
K29M Barlow Dome 88.67 26 P **P 19 23 59.9 +1.7**
baz=262,SNR=7.8
M30M Minto, Yukon 88.82 27 P **P 19 24 00.8 +1.9**
baz=263,SNR=5.0
N31M Braeburn, Yuko 89.16 29 P **P 19 24 01.8 +1.3**
baz=264
EPYK Eagle Plains 89.34 24 P **P 19 24 01.7 +0.5**
baz=263
WHY Whitehorse 89.51 29 P **P 19 24 03.4 +1.2**
baz=264
G30M tAoh Zraii Nji 89.61 23 P **P 19 24 02.7 +0.2**
baz=263
M31M Drury Creek, Y 89.89 28 P **P 19 24 04.3 +0.4**
baz=265
FARO Faro, Yukon 90.38 28 P **P 19 24 06.2 0.0**
FARO IAmb IAmb 19 24 08.2
comp=Z,7.8nm,1.0s
FARO Faro, Yukon 90.38 28 P **P 19 24 07.2 +1.0**
baz=266
INK Inuvik 90.77 22 P **P 19 24 08.2 +0.4**
INK IAmb IAmb 19 24 09.2
comp=Z,8.6nm,1.2s
INK Inuvik 90.77 22 P **P 19 24 08.4 +0.6**
baz=266
MMPY Sheldon Lake, 91.37 28 P **P 19 24 12.3 +1.5**
baz=268
R33M Jennings River 91.38 31 P **P 19 24 11.5 +0.5**
baz=268
NVAR Mina Array Bea 100.40 52 P **Pdif 19 24 54.1 +1.5**
comp=Z,0.6nm,0.8s,baz=244,slow=5.4,SNR=3.0
EKA Eskdalemuir Ar 119.51 337 PKP **PKiKP 19 29 54.9 +0.3**
comp=Z,0.7nm,0.6s,baz=35,slow=2.6,SNR=2.4
PKME Peaks-Kenny Pk 130.00 27 P **PKPdf 19 30 14.9 -0.1**
baz=320
L61B Northampton 130.39 32 P **PKPdf 19 30 15.1 -0.8**
baz=315
TORD Torodi Ar. Bea 137.69 287 PKP **PKPdf 19 30 30.2 0.0**
comp=Z,1.3nm,0.8s,baz=67,slow=3.7,SNR=7.5
PB11 IPOC Station P 143.26 128 PKPdf PKPbc 19 30 37.8 +0.4
KIC Kosan Boka 144.94 278 ⇓*i*PKP1 PKPbc 19 30 42.8 +0.2
comp=Z,3.8nm,0.5s
SDDR Presa de Saban 144.95 60 PKPdf **PKPab 19 30 42.5 0.0**
DBIC Dimbokro 145.02 278 PKPbc **PKPdf 19 30 43.2 -0.2**
comp=Z,7.1nm,0.7s,baz=64,slow=3.4,SNR=17
TIC Toumodi 145.19 278 ⇓*i*PKP1 **PKPdf 19 30 43.7 -0.1**
comp=Z,4.0nm,0.2s
LIC Lamto 145.23 277 ⇓*i*PKP1 **PKPdf 19 30 43.8 0.0**
comp=Z,13nm,0.7s
LPAZ La Paz 146.33 124 PKPbc **PKPab 19 30 48.5 +0.2**
comp=Z,5.0nm,0.9s,baz=254,slow=1.0,SNR=13
CPUP Villa Florida 146.75 150 PKPbc **PKPab 19 30 48.9 0.0**
comp=Z,2.4nm,0.7s,baz=208,slow=1.5,SNR=3.9

NEIC ***28*** *19:15:38.9±1.9, 63°.31N±0°.03×151°.85W±0°.09, h10km±4km, Error ellipse: s-maj=5.9km s-min=4.3km az=107.0*
IDC ***28*** *19:15:39.5±1.8, 63°.45N×152°.08W, h0km, mb3.4/2, mbtmp3.5/5, ML3.4/3, MS3.0/2, Error ellipse: s-maj=23.5km s-min=17.4km az=157.0*
AEIC ***28*** *19:15:39±2.0, 63°.30N±0°.04×151°.82W±0°.08, h14km±7km, ML3.8, ML4.0/170(NEIC), Mwr3.7/54(NEIC), Error ellipse: s-maj=5.7km s-min=5.2km az=154.0*
NEIC ***28*** *19:15:39, 63°.30N×151°.83W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; M_{rr}1.49; $M_{\theta\theta}$-2.09; $M_{\phi\phi}$0.60; $M_{r\theta}$-1.48; $M_{r\phi}$-2.75; $M_{\theta\phi}$1.72; Fault plane solution: $M_0$4.02000×10^14 NP1:φ±275.84000°, δ66.46000°, λ146.44000°. NP2:φ±20.68000°, δ59.55000°, λ27.60000°. Principal axes: T 4.1825, Plg40.0000°, Azm236.0000°; N -0.3539, Plg50.0000°, Azm65.0000°; P -3.8286, Plg4.0000°, Azm330.0000°;*

ISC 28 19:15:39.2±0.9, 63°.29N±0°.02×151°.86W±0°.03, h10km±7km, n155, σ1°.07/164, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	Time h m s	ISC	Res ISC
CAST	**Castle Rocks**	**0.16**	**322**		**Pg**	**19 15 43.0**		**+0.3**
CAST	**Castle Rocks**	**0.16**	**322**	P	**Pg**	**19 15 43.2**		**+0.4**
CAST	baz=136			S	**Sg**	**19 15 45.7**		**+0.5**
PPLA	**Purkeypile**	**0.42**	**201**		**Pg**	**19 15 47.2**		**-0.3**
PPLA	**Purkeypile**	**0.42**	**201**	P	**Pg**	**19 15 47.3**		**-0.2**
PPLA	baz=22			S	**Sg**	**19 15 52.5**		**-0.6**
KTH	**Kantishna Hill**	**0.50**	**58**		**Pg**	**19 15 48.6**		**-0.3**
KTH	comp=N,10μm,0.5s			IAML		19 15 55.8		
CHUM	**Lake Minchumin**	**0.63**	**341**	P	**Pb**	**19 15 51.7**		**-0.4**

	baz=159						
CHUM				S	Sb	19 16 00.1	-0.9
	baz=159						
TRF	**Thorofare Moun**	**0.73**	**77**		**Pg**	**19 15 52.8**	**-0.4**
TRF	**Thorofare Moun**	**0.73**	**77**	P	**Pg**	**19 15 52.8**	**-0.4**
	baz=258						
TRF				S	**Sg**	**19 16 02.3**	**-0.4**
	baz=258						
BPAW	**Bear Paw Mtn.**	**0.90**	**25**	Pg	**Pg**	**19 15 56.0**	**-0.5**
BPAW	**Bear Paw Mtn.**	**0.90**	**25**	P	**Pg**	**19 15 56.1**	**-0.3**
	baz=205						
BPAW				S	**Sb**	**19 16 07.8**	**-1.1**
	baz=205						
K20K	**Telida**	**1.00**	**275**		**Pg**	**19 15 57.8**	**-0.5**
K20K				IAML		19 16 14.2	
	comp=E,4μm,0.6s						
K20K	**Telida**	**1.00**	**275**	P	**Pg**	**19 15 58.1**	**-0.2**
	baz=92						
CUT	**Chulitna**	**1.15**	**140**		**Pb**	**19 16 00.9**	**-0.2**
CUT	**Chulitna**	**1.15**	**140**	P	**Pb**	**19 16 00.9**	**-0.2**
	baz=322						
CUT				S	**Sb**	**19 16 15.3**	**-0.8**
	baz=322						
L20K	**Farewell, AK**	**1.23**	**229**	P	**Pn**	**19 16 01.5**	**-1.0**
	baz=48						
L20K				S	**Sb**	**19 16 17.4**	**-1.1**
	baz=48						
SKT	**Skwentna**	**1.33**	**173**		**Pn**	**19 16 03.6**	**-0.1**
SKT	**Skwentna**	**1.33**	**173**	P	**Pn**	**19 16 03.6**	**-0.1**
	baz=354						
SKT				S	**Sb**	**19 16 20.4**	**-0.8**
	baz=354						
J20K	**Nowinta River**	**1.35**	**312**	Pn	**Pb**	**19 16 04.4**	**-0.1**
J20K				IAML		19 16 23.4	
	comp=N,4μm,0.4s						
RND	**Reindeer**	**1.36**	**84**		**Pn**	**19 16 03.8**	**-0.4**
BWN	**Browne**	**1.38**	**49**		**Pn**	**19 16 04.2**	**-0.3**
BWN				IAML		19 16 30.9	
	comp=E,3μm,0.6s						
BWN				IAML		19 16 32.3	
	comp=N,3μm,0.7s						
MCK	**McKinley**	**1.39**	**70**	Pn	**Pn**	**19 16 03.7**	**-0.9**
MCK	**McKinley**	**1.39**	**70**	P	**Pn**	**19 16 04.3**	**-0.2**
	baz=253						
M20K	**Styx River**	**1.53**	**203**		**Pn**	**19 16 06.4**	**-0.3**
M20K				IAML		19 16 29.4	
	comp=N,3μm,0.6s						
M20K				IAML		19 16 30.4	
	comp=E,3μm,0.7s						
WAT1	**Susitna Watana**	**1.58**	**106**	P	**Pn**	**19 16 06.1**	**-1.1**
	baz=289						
M22K	**Willow**	**1.74**	**152**		**Pn**	**19 16 09.3**	**-0.1**
M22K	**Willow**	**1.74**	**152**	P	**Pn**	**19 16 09.5**	**+0.1**
	baz=334						
L19K	**White Mountain**	**1.77**	**232**	Pn	**Pn**	**19 16 10.1**	**+0.2**
L19K				IAML		19 16 35.9	
	comp=N,2μm,0.6s						
L19K				IAML		19 16 37.1	
	comp=E,2μm,0.6s						
NEA2	**Nenana**	**1.80**	**42**		**Pn**	**19 16 09.7**	**-0.5**
NEA2	**Nenana**	**1.80**	**42**	P	**Pn**	**19 16 08.5**	**-1.6**
	baz=224						
MLY	**Manley**	**1.81**	**15**		**Pn**	**19 16 09.8**	**-0.7**
MLY				IAML		19 16 39.4	
	comp=E,1μm,0.4s						
MLY	**Manley**	**1.81**	**15**	P	**Pn**	**19 16 09.7**	**-0.7**
	baz=196						
M19K	**Big River Lodg**	**1.82**	**221**		**Pn**	**19 16 10.1**	**-0.4**
M19K				IAML		19 16 38.0	
	comp=N,1μm,0.2s						
M19K				IAML		19 16 39.0	
	comp=E,2μm,0.6s						
M19K	**Big River Lodg**	**1.82**	**221**	P	**Pn**	**19 16 09.3**	**-1.2**
	baz=39						
I21K	**Tanana**	**1.90**	**358**		**Pn**	**19 16 11.1**	**-0.4**
I21K				IAML		19 16 46.5	
	comp=E,986nm,0.6s						
I21K	**Tanana**	**1.90**	**358**	P	**Pn**	**19 16 11.3**	**-0.3**
	baz=178						
SUA	**Susitna One**	**1.91**	**164**	Pn	**Pn**	**19 16 11.8**	**-0.1**
SUA				IAML		19 16 39.7	
	comp=E,1μm,0.7s						
SUA				IAML		19 16 40.8	
	comp=N,1μm,0.5s						
TTA	**Tatalina**	**1.92**	**261**		**Pn**	**19 16 11.5**	**-0.5**
TTA				IAML		19 16 43.1	
	comp=N,2μm,0.5s						
WAT6	**Susitna Watana**	**2.02**	**109**	P	**Pn**	**19 16 12.9**	**-0.5**
	baz=293						
GHO	**Glory Hole Cre**	**2.04**	**137**		**Pn**	**19 16 12.8**	**-0.9**
GHO				IAML		19 16 43.4	
	comp=N,1μm,0.5s						
GHO				IAML		19 16 51.4	
	comp=E,910nm,0.7s						
DHY	**Denali Highway**	**2.05**	**94**	Pn	**Pn**	**19 16 12.1**	**-1.7**
DHY				IAML		19 16 43.9	
	comp=E,1μm,0.7s						
DHY				IAML		19 16 43.9	
	comp=N,2μm,0.6s						
DHY	**Denali Highway**	**2.05**	**94**	P	**Pn**	**19 16 14.1**	**+0.4**
	baz=278						
WRH	**Wood River Hil**	**2.05**	**53**		**Pn**	**19 16 11.9**	**-1.7**
SPU	**Mount Spurr**	**2.12**	**183**		**Pn**	**19 16 14.2**	**-0.4**
PMR	**Palmer**	**2.13**	**142**		**Pn**	**19 16 14.3**	**-0.4**
I23K	**Minto, Yukon-K**	**2.16**	**29**		**Pn**	**19 16 14.2**	**-1.0**
I23K				IAML		19 16 47.8	
	comp=E,1μm,0.5s						
I23K				IAML		19 16 49.8	
	comp=N,1μm,0.9s						
I23K	**Minto, Yukon-K**	**2.16**	**29**	P	**Pn**	**19 16 14.3**	**-0.8**
	baz=211						
SML	**Sawmill**	**2.21**	**131**		**Pn**	**19 16 15.5**	**-0.5**
SML				IAML		19 16 48.5	
	comp=E,1μm,0.6s						
SML				IAML		19 16 53.9	
	comp=N,1μm,0.7s						
SML	**Sawmill**	**2.21**	**131**	P	**Pn**	**19 16 15.9**	**0.0**
	baz=314						
CCB	**Clear Creek Bu**	**2.25**	**51**		**Pn**	**19 16 14.5**	**-1.8**
CCB				IAML		19 16 51.5	
	comp=E,794nm,0.5s						
CCB				IAML		19 16 54.5	
	comp=N,713nm,0.6s						
FIS	**Fire Island**	**2.29**	**160**		**Pn**	**19 16 16.4**	**-0.6**
MDM	**Murphy Dome**	**2.31**	**42**		**Pn**	**19 16 15.7**	**-1.6**
TCOL	**CIGO, UAF Yank**	**2.37**	**46**		**Pn**	**19 16 16.8**	**-1.2**
COLA	**College**	**2.37**	**46**		**Pn**	**19 16 16.8**	**-1.3**
H21K	**Melozitna Rive**	**2.41**	**351**		**Pn**	**19 16 17.6**	**-1.0**
H21K				IAML		19 16 55.2	
	comp=E,834nm,0.8s						
H21K				IAML		19 16 56.5	
	comp=N,595nm,0.7s						
H21K	**Melozitna Rive**	**2.41**	**351**	P	**Pn**	**19 16 18.2**	**-0.4**
	baz=169						
RC01	**Rabbit Creek A**	**2.42**	**155**		**Pn**	**19 16 18.9**	**+0.1**
RC01	**Rabbit Creek A**	**2.42**	**155**	P	**Pn**	**19 16 19.5**	**+0.7**
	baz=337						
HDA	**Harding Lake**	**2.45**	**61**		**Pn**	**19 16 17.7**	**-1.4**
HDA				IAML		19 16 59.6	
	comp=E,905nm,0.4s						
HDA				IAML		19 16 59.9	
	comp=N,1μm,0.6s						
KNK	**Knik Glacier**	**2.46**	**138**		**Pn**	**19 16 19.2**	**-0.2**
KNK				IAML		19 16 58.5	
	comp=E,883nm,0.4s						
KNK				IAML		19 17 00.7	
	comp=N,546nm,0.6s						
KNK	**Knik Glacier**	**2.46**	**138**	P	**Pn**	**19 16 20.5**	**+1.1**
	baz=322						
CAPN	**Captain Cook N**	**2.56**	**172**		**Pn**	**19 16 22.8**	**+2.2**
SCM	**Sheep Creek Mo**	**2.56**	**123**		**Pn**	**19 16 19.8**	**-0.9**
SCM				IAML		19 16 58.4	
	comp=N,702nm,0.7s						
SCM				IAML		19 17 07.8	
	comp=E,846nm,0.9s						
IL31		**2.65**	**54**		**Pn**	**19 16 20.2**	**-1.6**
ILAR	**Eielson Array**	**2.65**	**54**	Pn	**Pn**	**19 16 20.7**	**-1.2**
	comp=E,2.6nm,0.3s,baz=240,slow=14,SNR=66						
ILAR				Pg	**Pb**	**19 16 27.1**	**+0.5**
	comp=E,29nm,0.3s,baz=243,slow=18,SNR=228						
ILAR				Lg	Lg	19 17 00.4	
	comp=E,72nm,0.3s,baz=238,slow=29,SNR=30						
ILAR				LR	LR	19 17 17.9	
	comp=E,143nm,21.6s,baz=124,slow=37						
	comp=E,8.9nm,0.5s						
ILAR	**Eielson Array**	**2.65**	**54**		**Pn**	**19 16 20.4**	**-1.4**
POKR	**Poker Plat Res**	**2.67**	**45**		**Pn**	**19 16 20.9**	**-1.2**
H23K	**Yukon River**	**2.73**	**20**		**Pn**	**19 16 22.1**	**-1.0**
H23K				IAML		19 17 05.9	
	comp=N,488nm,0.4s						
H23K				IAML		19 17 07.9	
	comp=E,635nm,0.5s						
N19K	**Bonanza Creek**	**2.78**	**208**	Pn	**Pn**	**19 16 23.0**	**-0.7**
N19K				IAML		19 17 07.3	
	comp=E,516nm,0.9s						
N19K				IAML		19 17 08.8	
	comp=N,544nm,0.4s						
SVW2	**Sparrevohn**	**2.81**	**220**		**Pn**	**19 16 22.8**	**-1.3**
SVW2				IAML		19 17 07.9	
	comp=E,636nm,0.7s						
SVW2				IAML		19 17 10.8	
	comp=N,547nm,0.8s						
IMAR	**Indian Mountai**	**2.82**	**344**	Pn	**Pn**	**19 16 23.4**	**-0.9**
RSO	**Redoubt South**	**2.87**	**189**		**Pn**	**19 16 25.4**	**+0.3**
M24K	**Tolsona, Glenn**	**2.88**	**112**		**Pn**	**19 16 25.8**	**+0.7**
PAX	**Paxson**	**2.92**	**94**		**Pn**	**19 16 26.6**	**+0.8**
PWL	**Port Wells**	**2.95**	**144**		**Pn**	**19 16 26.7**	**+0.6**
PWL				IAML		19 17 20.4	
	comp=N,540nm,0.8s						
PWL				IAML		19 17 24.1	
	comp=E,369nm,0.7s						
O22K	**Cooper Landing**	**3.00**	**159**		**Pn**	**19 16 27.5**	**+0.8**
H24K	**Noodor Dome**	**3.08**	**32**	Pn	**Pn**	**19 16 26.4**	**-1.4**
J25K	**Salcha River,**	**3.16**	**62**		**Pn**	**19 16 27.5**	**-1.4**
J25K				IAML		19 17 23.4	
	comp=N,305nm,0.7s						
J25K				IAML		19 17 25.6	
	comp=E,334nm,0.6s						
RIDG	**Independent Ri**	**3.18**	**79**		**Pn**	**19 16 29.4**	**+0.2**
RIDG				IAML		19 17 21.5	
	comp=N,505nm,1.0s						
N18K	**Kilae Creek**	**3.24**	**218**	Pn	**Pn**	**19 16 28.8**	**-1.2**
N18K				IAML		19 17 21.3	
	comp=N,351nm,0.8s						
N18K				IAML		19 17 24.7	
	comp=E,480nm,0.7s						
GLI	**Glacier Island**	**3.30**	**135**		**Pn**	**19 16 30.6**	**-0.3**
GLI				IAML		19 17 29.4	
	comp=N,324nm,0.6s						
GLI				IAML		19 17 29.6	
	comp=E,557nm,0.7s						
KLU	**Klutina**	**3.30**	**120**		**Pn**	**19 16 31.2**	**+0.3**
KLU				IAML		19 17 23.2	
	comp=E,327nm,0.7s						
KLU				IAML		19 17 23.4	
	comp=N,361nm,0.7s						
SEW	**Seward**	**3.40**	**159**	Pn	**Pn**	**19 16 33.0**	**+0.9**
DOT	**Dot Lake**	**3.52**	**81**		**Pn**	**19 16 34.8**	**+1.0**
PRP	**Porcupine Dome**	**3.54**	**48**	Pn	**Pn**	**19 16 33.2**	**-1.1**
PRP				IAML		19 17 32.1	
	comp=N,303nm,0.6s						
PRP				IAML		19 17 39.4	
	comp=E,262nm,0.5s						
BRLK	**Bradley Lake**	**3.57**	**172**		**Pn**	**19 16 35.8**	**+1.2**
SCRK	**Sand Creek**	**3.58**	**75**		**Pn**	**19 16 34.8**	**0.0**
SCRK				IAML		19 17 31.1	
	comp=N,232nm,0.7s						
SCRK				IAML		19 17 34.2	
	comp=E,216nm,0.5s						
DIV	**Divide**	**3.58**	**125**		**Pn**	**19 16 35.0**	**+0.3**
FID	**Port Fidalgo**	**3.60**	**133**		**Pn**	**19 16 35.5**	**+0.6**
FID				IAML		19 17 36.4	
	comp=E,310nm,0.7s						
HOM	**Homer**	**3.65**	**178**	Pn	**Pn**	**19 16 37.8**	**+2.2**
P19K	**Oil Pt**	**3.71**	**191**		**Pn**	**19 16 37.0**	**+0.5**
P19K				IAML		19 17 44.5	
	comp=E,232nm,1.0s						
P19K				IAML		19 17 44.5	
	comp=N,237nm,0.7s						
MENT	**Mentasta**	**3.72**	**92**		**Pn**	**19 16 38.5**	**+2.0**
MENT				IAML		19 17 44.2	
	comp=E,404nm,0.6s						
N25K	**Chitina, Valde**	**3.77**	**113**		**Pn**	**19 16 39.1**	**+1.6**
CNPM	**China Poot**	**3.79**	**175**		**Pn**	**19 16 38.9**	**+1.3**
O18K	**Koktuh Hills**	**3.80**	**206**		**Pn**	**19 16 37.5**	**-0.2**
O18K				IAML		19 17 42.0	
	comp=N,368nm,0.9s						
O18K				IAML		19 17 42.6	
	comp=E,326nm,0.8s						
HIN	**Hinchinbrook I**	**3.86**	**136**		**Pn**	**19 16 39.2**	**+0.6**
HIN				IAML		19 17 51.1	
	comp=E,340nm,0.9s						
J26L	**Joseph Creek**	**3.86**	**68**		**Pn**	**19 16 38.3**	**-0.4**
J26L				IAML		19 17 40.4	
	comp=N,225nm,0.6s						
J26L				IAML		19 17 43.3	
	comp=E,191nm,0.5s						
L26K	**Log Cabin Wild**	**3.87**	**90**		**Pn**	**19 16 38.5**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.99**	**131**		**Pn**	**19 16 40.9**	**+0.6**
COLD	**Coldfoot**	**4.01**	**9**	Pn	**Pn**	**19 16 40.5**	**-0.2**
BMRM	**Bremner River**	**4.13**	**121**		**Pn**	**19 16 42.3**	**0.0**
M26K	**Nabesna, AK**	**4.16**	**98**		**Pn**	**19 16 43.0**	**+0.3**
M26K				IAML		19 17 49.3	
	comp=E,246nm,0.6s						
GLB	**Gilahina Butte**	**4.18**	**113**		**Pn**	**19 16 42.6**	**-0.4**
GLB				IAML		19 17 53.9	
	comp=N,166nm,0.9s						
P18K	**Big Mountain,**	**4.24**	**204**		**Pn**	**19 16 43.2**	**-0.5**
P18K				IAML		19 17 52.4	
	comp=E,192nm,1.1s						
I26K	**Coal Creek Min**	**4.30**	**58**		**Pn**	**19 16 44.0**	**-0.5**
I26K				IAML		19 17 56.8	
	comp=N,229nm,0.7s						
I26K				IAML		19 18 02.4	
	comp=E,256nm,0.6s						
FYU	**Fort Yukon**	**4.33**	**38**		**Pn**	**19 16 44.2**	**-0.7**
FYU				IAML		19 18 06.0	
	comp=N,169nm,0.6s						
FYU				IAML		19 18 12.3	
	comp=E,170nm,1.3s						
K27K	**Chicken**	**4.42**	**76**		**Pn**	**19 16 46.6**	**+0.4**
K27K				IAML		19 18 00.1	
	comp=N,166nm,1.0s						
K27K				IAML		19 18 08.9	
	comp=E,117nm,1.0s						
VRDI	**Verde Repeater**	**4.44**	**114**		**Pn**	**19 16 46.8**	**+0.1**
Q19K	**Cape Douglas,**	**4.46**	**192**		**Pn**	**19 16 47.1**	**+0.3**
RAGM	**Ragged Mountai**	**4.48**	**127**		**Pn**	**19 16 49.5**	**+2.4**
MCARA	**McCarthy VSAT**	**4.54**	**111**		**Pn**	**19 16 49.3**	**+1.4**
MCARA				IAML		19 18 04.9	
	comp=N,205nm,0.9s						
L27K	**Beaver Creek,**	**4.55**	**88**		**Pn**	**19 16 48.0**	**-0.1**
BCAR	**Beaver Creek A**	**4.57**	**88**		**Pn**	**19 16 48.7**	**+0.3**
HMT	**Hamilton**	**4.67**	**126**		**Pn**	**19 16 50.5**	**+0.9**
M27K	**Edge Creek, AK**	**4.67**	**97**		**Pn**	**19 16 51.1**	**+1.3**
M27K				IAML		19 18 11.0	
	comp=N,128nm,1.0s						
BERG	**Berg Lake**	**4.84**	**123**		**Pn**	**19 16 53.3**	**+1.4**
KAIM	**Kayak Island**	**4.90**	**130**	Pn	**Pn**	**19 16 54.4**	**+1.6**
KAIM				IAML		19 19 46.2	
	comp=N,112nm,2.7s						
KAIM				IAML		19 19 56.3	
	comp=E,125nm,3.3s						
EGAK	**Eagle**	**4.94**	**68**		**Pn**	**19 16 54.0**	**+0.7**
TGL	**Tana Glacier**	**4.96**	**117**		**Pn**	**19 16 53.3**	**-0.4**
TGL				IAML		19 18 17.6	
	comp=E,119nm,0.9s						
TGL				IAML		19 18 18.0	
	comp=N,122nm,1.1s						
SUCK	**Suckling Hills**	**5.02**	**126**	Pn	**Pn**	**19 16 54.4**	**-0.1**
SUCK				IAML		19 18 18.2	
	comp=N,136nm,1.7s						
SUCK				IAML		19 18 20.1	
	comp=E,87nm,1.3s						
WAX	**Waxell Ridge**	**5.13**	**120**		**Pn**	**19 16 55.2**	**-0.8**
WAX				IAML		19 18 21.9	
	comp=E,132nm,0.8s						
BMAR	**Burnt Mountain**	**5.15**	**33**	Pn	**Pn**	**19 16 55.1**	**-1.1**
ISLE	**Juniper Island**	**5.24**	**117**		**Pn**	**19 16 54.9**	**-2.7**
ISLE				IAML		19 18 33.8	
	comp=E,104nm,1.1s						
ISLE				IAML		19 18 34.9	
	comp=N,130nm,1.0s						
BARN	**Barnard Glacie**	**5.28**	**111**		**Pn**	**19 16 55.5**	**-2.7**
SNH	**Sunshine Point**	**5.30**	**122**	Pn	**Pn**	**19 16 56.0**	**-2.3**
SNH				IAML		19 18 28.4	
	comp=N,84nm,1.6s						
SNH				IAML		19 18 35.9	
	comp=E,76nm,1.0s						
TOLK	**Toolik Lake Re**	**5.45**	**9**	Pn	**Pn**	**19 16 59.7**	**-0.7**
CTGM	**Chitina Glacie**	**5.46**	**111**		**Pn**	**19 16 59.6**	**-1.1**
KDAK	**Kodiak Island**	**5.54**	**184**		**Pn**	**19 17 02.6**	**+1.0**
DAWY	**Dawson**	**5.60**	**76**		**Pn**	**19 17 02.7**	**+0.2**
YAH	**Yahtse**	**5.62**	**117**		**Pn**	**19 17 01.5**	**-1.4**
MESA	**MESA**	**5.65**	**119**		**Pn**	**19 17 02.4**	**-0.9**
LOGN	**Logan Glacier**	**5.67**	**111**		**Pn**	**19 17 02.9**	**-0.7**
TABL	**Table Mountain**	**5.82**	**115**	Pn	**Pn**	**19 17 03.5**	**-2.1**
OHAK	**Old Harbor**	**6.13**	**187**	Pn	**Pn**	**19 17 08.1**	**-1.6**
J29M	**Klondike Camp**	**6.14**	**73**	Pn	**Pn**	**19 17 09.2**	**-0.6**
I29M	**Ogilvie Camp,**	**6.25**	**65**	Pn	**Pn**	**19 17 09.2**	**-2.1**
PCA	**Pinnacle**	**6.38**	**115**		**Pn**	**19 17 10.9**	**-2.2**
BCPM	**Bancas Point**	**6.72**	**114**	Pn	**Pn**	**19 17 16.6**	**-1.2**
M30M	**Minto, Yukon**	**6.91**	**89**	Pn	**Pn**	**19 17 18.6**	**-1.8**
EPYK	**Eagle Plains**	**7.15**	**58**		**Pn**	**19 17 23.0**	**-0.7**
HYT	**Haines Junctio**	**7.18**	**104**		**Pn**	**19 17 23.6**	**-0.6**
TNA	**Tin City**	**7.31**	**295**	Pn	**Pn**	**19 17 25.4**	**-0.4**
N31M	**Braeburn, Yuko**	**7.69**	**96**	Pn	**Pn**	**19 17 32.4**	**+1.3**
P29M	**Windy Craggy**	**7.69**	**112**		**Pn**	**19 17 32.4**	**+1.2**
CHGN	**Chignik**	**7.75**	**208**	Pn	**Pn**	**19 17 31.7**	**-0.1**
M31M	**Drury Creek, Y**	**8.09**	**90**	Pn	**Pn**	**19 17 35.0**	**-1.6**
WHY	**Whitehorse**	**8.41**	**101**		**Pn**	**19 17 42.3**	**+1.2**
SKAG	**Skagway**	**8.81**	**108**	Pn	**Pn**	**19 17 46.7**	**+0.4**
INK	**Inuvik**	**9.03**	**48**	Pn	**Pn**	**19 17 50.6**	**+1.3**
	comp=E,0.8nm,0.3s,baz=230,slow=12,SNR=15						
INK				Lg	Lg	19 20 23.7	
	comp=E,0.1nm,0.3s,baz=178,slow=17,SNR=3.6						
	comp=E,2.9nm,0.4s						
INK	**Inuvik**	**9.03**	**48**	Pn	**Pn**	**19 17 49.7**	**+0.4**
BESE	**Bessie Mountai**	**9.52**	**112**	Pn	**Pn**	**19 17 56.9**	**+0.8**
JIS	**Juneau Island**	**9.90**	**113**		**Pn**	**19 18 00.1**	**-1.1**
C36M	**Paulatuk**	**12.61**	**49**	Pn	**Pn**	**19 18 37.9**	**-0.4**
YKA	**Yellowknife Ar**	**16.84**	**76**	Pn	**P**	**19 19 35.5**	**-1.3**
	comp=E,0.1nm,0.3s,baz=293,slow=11,SNR=1.7						
	comp=E,0.7nm,0.8s						
TXAR	**Lajitas Array**	**45.75**	**115**	P	**P**	**19 24 04.8**	**+4.3**
	comp=E,0.2nm,0.5s,baz=330,slow=6.4,SNR=2.4						
TXAR				LR	LR	19 44 40.1	
	comp=E,38nm,20.5s,baz=358,slow=38						
	comp=E,0.2nm,0.5s						
MKAR	**Makanchi Array**	**62.20**	**321**	P	**P**	**19 25 59.6**	**-0.8**
	comp=E,0.4nm,0.7s,baz=42,slow=8.4,SNR=1.8						
	comp=E,0.4nm,0.7s						

NOU ***28*** *19:52:31.5, 37.°00S×179.°22E, h0km, MLv3.5/5, Off E. Coast of N. Island, N.Z.*
WEL ***28*** *19:52:34.1±1.2, 37.°S±6.°×17.°9E±1.°0, h20km, M3.3/12, ML3.5/13, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=103.3*

ISC 28 19:52:31.7±3.0, 36.°95S±0.°09×179.°1E±0.°1, h4km±12km, n31, σ1°20/38, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.88**	**226**	P	**Pg**	**19 52 49.0**	**+0.4**
MXZ				S	**Sg**	**19 52 59.2**	**-0.9**
MXZ	**Matakaoa Point**	**0.88**	**226**	P	**Pg**	**19 52 48.7**	**0.0**
WMGZ	**Waiomatatini S**	**1.03**	**212**	P	**Pn**	**19 52 53.5**	**+0.6**
PKGZ	**Pakihiroa**	**1.24**	**221**	P	**Pg**	**19 52 55.4**	**-0.2**
PKGZ				S	**Sb**	**19 53 12.8**	**+0.7**
PUZ	**Puketiti**	**1.31**	**211**	P	**Pb**	**19 52 57.1**	**+0.3**
HAZ	**Te Kaha**	**1.32**	**232**	P	**Pn**	**19 52 55.7**	**-1.3**
HAZ				S	**Sn**	**19 53 16.2**	**+1.2**
TWGZ	**Tauwhareparae**	**1.52**	**216**	P	**Pg**	**19 53 00.7**	**-0.1**
TWGZ				S	**Sg**	**19 53 21.6**	**+1.1**
RUGZ	**Raukumara Rang**	**1.52**	**228**	P	**Pn**	**19 53 00.2**	**+0.4**
RUGZ				S	**Sg**	**19 53 21.3**	**+0.7**
CNGZ	**Carnagh Statio**	**1.69**	**204**	P	**Pb**	**19 53 02.8**	**-0.5**
MWZ	**Matawai**	**1.86**	**222**	P	**Pn**	**19 53 05.2**	**+0.8**
RAGZ	**Rawiri**	**2.04**	**220**	P	**Pn**	**19 53 07.7**	**+0.8**
URZ	**Urewera**	**2.05**	**230**	P	**Pn**	**19 53 07.7**	**+0.7**
URZ	**Urewera**	**2.05**	**230**	P	**Pb**	**19 53 08.5**	**-1.0**
EDRZ	**Edgecumbe**	**2.20**	**238**	P	**Pb**	**19 53 11.3**	**-0.8**
SNGZ	**Shannon Statio**	**2.30**	**217**	P	**Pn**	**19 53 11.6**	**+1.1**
SNGZ				S	**Sn**	**19 53 38.9**	**-0.3**
RTZ	**Ruatahuna**	**2.36**	**225**	P	**Pn**	**19 53 12.2**	**+0.8**
MTHZ	**Maungataniwha**	**2.61**	**223**	P	**Pn**	**19 53 15.6**	**+0.9**
MTHZ				S	**Sn**	**19 53 46.5**	**-0.3**
HSRZ	**Hossack Road**	**2.64**	**238**	P	Pn	19 53 10.5	-4.6
KMRZ	**Kaimai**	**2.67**	**249**	P	**Pn**	**19 53 11.1**	**-4.4**
KUZ	**Kuaotunu**	**2.72**	**273**	P	**Pn**	**19 53 15.7**	**-0.4**
KUZ	**Kuaotunu**	**2.72**	**273**	P	**Pn**	**19 53 17.3**	**+1.2**
NMHZ	**Naumai**	**2.81**	**219**	P	**Pn**	**19 53 18.2**	**+0.7**
ARHZ	**Aropaoanui**	**2.85**	**215**	P	**Pn**	**19 53 16.3**	**-1.6**
ARHZ				S	**Sn**	**19 53 51.9**	**-0.7**
BKZ	**Black Stump Fm**	**3.02**	**222**	P	**Pn**	**19 53 20.8**	**+0.5**
BKZ	**Black Stump Fm**	**3.02**	**222**	P	**Pn**	**19 53 21.7**	**+1.3**
MKAZ	**Moumakai**	**3.15**	**266**	P	**Pn**	**19 53 22.4**	**+0.2**
WIAZ	**Waiheke Island**	**3.18**	**272**	P	**Pn**	**19 53 24.5**	**+2.0**
KAHZ	**Kahuranaki**	**3.34**	**211**	P	**Pn**	**19 53 23.3**	**-1.4**
BHHZ	**Black Hill Sta**	**3.49**	**222**	P	**Pn**	**19 53 26.7**	**0.0**
SNVZ	**South Ngauruho**	**3.53**	**230**	P	**Pn**	**19 53 28.8**	**+1.4**
BFZ	**Birch Farm**	**4.34**	**210**	P	**Pn**	**19 53 37.7**	**-0.8**

LDG ***28*** *19:56:30.7±0.1, 42.°89N×13.°20E, h10km, Ml3.5/21, Error ellipse: s-maj=3.6km s-min=1.8km az=49.0*
PDG ***28*** *19:56:31.8±0.6, 42.°87N×13.°18E, h9km, ML3.9/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
STR ***28*** *19:56:31.0, 42.°87N×13.°16E, h10km, MLv3.9/7, preliminary*
ROM ***28*** *19:56:31.2±0.0, 42.°862N±0.°002×13.°156E±0.°003, h9km, ML3.8/101, Error ellipse: s-maj=0.2km s-min=0.1km az=63.0*
NEIC ***28*** *19:56:31.8±2.0, 42.°91N±0.°05×13.°15E±0.°07, h5km±6km, mb4.4/7, ML3.7(ROM), Error ellipse: s-maj=8.1km s-min=6.6km az=222.0*
IDC ***28*** *19:56:32.1±0.9, 42.°93N×13.°10E, h0km, mb3.8/13, mbtmp3.7/23, ML3.7/9, MS4

AM05 AML AML
comp=N,26100µm,0.5s
AM05 AML AML
comp=E,19250µm,0.5s
AM05 AML AML
comp=E,72800µm,0.4s
AM05 AML AML
comp=N,3465µm,0.4s
T1241 Roccafluvione, 0.21 95 AML AML
T1241 AML AML
comp=N,80650µm,0.7s
T1215 Vallo di Nera, 0.22 250 ⇑P **Pg 19 56 36.5 -0.1**
T1215 S **Sg 19 56 40.2 +0.5**
T1215 AML AML
comp=E,83900µm,0.4s
T1215 AML AML
comp=N,61700µm,0.4s
T1215 AML AML
comp=E,87250µm,0.5s
T1215 AML AML
comp=N,58000µm,0.4s
T1215 AML AML
comp=N,61750µm,0.4s
T1215 AML AML
comp=N,58000µm,0.5s
T1215 AML AML
comp=N,61700µm,0.4s
T1215 AML AML
comp=E,83850µm,0.4s
T1215 AML AML
comp=E,87300µm,0.5s
CESI CESI - Serrava 0.22 306 P **Pg 19 56 36.7 0.0**
CESI S **Sg 19 56 40.6 +0.8**
CESI AML AML
comp=E,67250µm,0.3s
CESI AML AML
T1217 Poggiodomo (PG 0.23 224 ⇑P **Pg 19 56 36.6 -0.3**
T1217 S **Sg 19 56 40.5 +0.5**
T1217 AML AML
comp=N,91050µm,0.3s
T1217 AML AML
comp=E,58300µm,0.4s
T1217 AML AML
comp=E,58950µm,0.4s
T1217 AML AML
comp=N,91000µm,0.3s
T1217 AML AML
comp=E,58300µm,0.4s
T1217 AML AML
comp=N,88500µm,0.3s
T1217 AML AML
comp=E,58950µm,0.4s
T1217 AML AML
comp=N,88550µm,0.3s
T1201 Domo (RI) 0.23 161 ⇑P **Pg 19 56 36.7 -0.2**
T1201 S **Sg 19 56 40.9 +0.8**
GUMA Gualdo di Mace 0.23 36 ⇑P **Pg 19 56 37.0 0.0**
GUMA S **Sg 19 56 41.2 +1.0**
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
comp=E,95600µm,0.5s
GUMA AML AML
T1204 Amatrice, Fraz 0.24 148 ⇑P **Pg 19 56 36.5 -0.5**
T1204 S **Sg 19 56 40.5 +0.2**
T1204 AML AML
T1204 AML AML
comp=N,64300µm,0.6s
T1204 AML AML
comp=N,64350µm,0.6s
SMA1 SAN MARTINO 0.28 150 ⇑P **Pg 19 56 37.2 -0.7**
SMA1 S **Sg 19 56 41.6 -0.1**
SMA1 AML AML
comp=E,59900µm,0.5s
SMA1 AML AML
comp=N,63800µm,0.3s
SMA1 AML AML
comp=N,63750µm,0.3s
SMA1 AML AML
comp=E,59850µm,0.5s
LNSS Leonessa 0.28 196 ⇑P **Pg 19 56 37.4 -0.5**
LNSS S **Sg 19 56 41.9 +0.2**
LNSS AML AML
comp=N,87100µm,0.2s
LNSS AML AML
comp=E,64600µm,0.3s
T1243 Rocca Santa Ma 0.28 129 ⇑P **Pg 19 56 37.2 -0.8**
T1243 S **Sg 19 56 41.6 -0.2**
SEF1 Sefro 0.31 332 P **Pg 19 56 38.1 -0.3**
SEF1 AML AML
comp=E,43150µm,0.3s
SEF1 AML AML
comp=N,24300µm,0.4s
SEF1 AML AML
comp=E,43150µm,0.3s
SEF1 AML AML
comp=N,24350µm,0.4s
MDAR Monte D'Aria 0.32 359 P **Pg 19 56 38.4 -0.2**
MDAR S **Sb 19 56 43.9 -1.5**
MDAR AML AML
comp=E,10875µm,1.2s
MDAR AML AML
comp=N,15550µm,0.5s
PIO1 Pioraco 0.33 338 P **Pg 19 56 38.3 -0.4**
FIU1 Fiuminata 0.35 333 P **Pg 19 56 38.9 -0.2**
FIU1 AML AML
comp=E,11300µm,0.3s
FIU1 AML AML
comp=E,11325µm,0.3s
FIU1 AML AML
comp=N,12350µm,1.4s
MNTP Montappone 0.35 42 P **Pb 19 56 39.4 -1.3**
MNTP AML AML
comp=E,27400µm,0.5s
MNTP AML AML
comp=N,20700µm,1.6s
SSM1 San Severino M 0.35 4 P **Pg 19 56 39.1 -0.1**
GAG1 Gagliole 0.37 351 P **Pg 19 56 39.4 -0.1**
GAG1 AML AML
comp=E,36550µm,0.4s
GAG1 AML AML
comp=N,34550µm,0.4s
RM33 Pellescritta (0.37 172 ⇑P **Pg 19 56 38.8 -0.7**
RM33 S **Sg 19 56 44.6 +0.2**
RM33 AML AML
comp=N,17250µm,1.1s
RM33 AML AML
comp=N,17800µm,1.1s
RM33 AML AML
comp=N,17300µm,1.1s
RM33 AML AML
comp=E,23550µm,0.6s
RM33 AML AML
comp=E,23200µm,0.6s
RM33 AML AML
comp=N,17750µm,1.1s
T1246 Crognaleto (TE 0.39 139 ⇑P **Pg 19 56 39.0 -0.9**
T1246 S **Sg 19 56 45.0 0.0**
CAMP Campotosto 0.39 150 **Pg 19 56 39.0 -0.9**
CAMP Sg **Sg 19 56 45.1 +0.1**
CAMP Campotosto 0.39 150 ⇑P **Pg 19 56 39.0 -0.9**
CAMP S **Sg 19 56 45.0 -0.1**
CAMP AML AML
comp=N,19600µm,0.5s
CAMP AML AML
comp=E,42600µm,0.2s
MTL1 Matelica 0.39 345 P **Pg 19 56 39.8 -0.2**
MTL1 AML AML
comp=E,29900µm,0.7s
MTL1 AML AML
comp=N,48950µm,0.5s
MTL1 AML AML
comp=E,29900µm,0.7s
MTL1 AML AML
comp=N,48950µm,0.5s
ASSB Assisi San Ben 0.40 295 ⇓P **Pg 19 56 39.7 -0.3**
OFFI Offida 0.40 81 ⇑P **Pb 19 56 40.3 -1.1**
OFFI AML AML
comp=N,42300µm,0.6s
OFFI AML AML
comp=E,40400µm,1.3s
T1211 Morro Reatino 0.41 212 P **Pg 19 56 39.5 -0.6**
T1211 S **Sg 19 56 46.3 +0.8**
T1211 AML AML
comp=N,61450µm,0.2s
T1211 AML AML
comp=E,29600µm,1.2s
T1211 AML AML
comp=N,61250µm,0.3s
T1211 AML AML
comp=N,61450µm,0.2s
T1211 AML AML
comp=E,29650µm,1.2s
T1211 AML AML
comp=N,61250µm,0.3s
T1211 AML AML
comp=E,28750µm,1.2s
T1211 AML AML
comp=N,61400µm,0.2s
T1211 AML AML
comp=E,29600µm,1.2s
SNTG Esanatoglia 0.41 338 ⇓P **Pg 19 56 39.8 -0.4**
SNTG AML AML
comp=E,7455µm,1.0s
SNTG AML AML
comp=N,7995µm,0.6s
SNTG AML AML
comp=N,8645µm,0.8s
SNTG AML AML
comp=N,8035µm,0.6s
SNTG AML AML
comp=E,7440µm,1.0s
SNTG AML AML
comp=E,6935µm,1.0s
ARRO Arrone 0.41 224 ⇑P **Pg 19 56 39.8 -0.4**
ARRO AML AML
comp=N,21050µm,0.7s
ARRO AML AML
comp=E,23150µm,1.4s
ARRO AML AML
comp=N,21000µm,0.7s
TERO Teramo 0.42 127 ⇑P **Pg 19 56 39.5 -1.0**
TERO S **Sg 19 56 45.9 -0.1**
TERO AML AML
comp=E,62400µm,0.2s
TERO AML AML
comp=E,65550µm,0.2s
TERO AML AML
comp=N,62950µm,0.4s
TERO AML AML
comp=N,59150µm,0.4s
TERO AML AML
comp=E,62450µm,0.2s
T1247 Pizzolo (AQ) 0.45 166 ⇑P **Pg 19 56 40.2 -0.8**
T1247 S **Sg 19 56 47.2 +0.4**
T1247 AML AML
comp=N,26050µm,0.6s
T1247 AML AML
comp=E,26100µm,0.4s
TRE1 Treia 0.45 16 P **Pb 19 56 41.2 -1.1**
TRE1 AML AML
comp=E,22800µm,0.4s
TRE1 AML AML
comp=N,15200µm,0.5s
EL6 Elcito 0.45 356 P **Pg 19 56 40.7 -0.4**
EL6 AML AML
comp=E,16950µm,0.4s
EL6 AML AML
comp=N,17150µm,0.5s
EL6 AML AML
comp=N,17200µm,0.5s
EL6 AML AML
comp=E,17000µm,0.4s
ATCC AVT- Casa Cast 0.48 310 ⇓P **Pg 19 56 41.4 -0.2**
ATCC S **Sb 19 56 49.4 -0.7**
ATCC AML AML
comp=E,25800µm,0.9s
ATCC AML AML
comp=N,36500µm,1.1s
CESX Cesi 0.49 238 **Pg 19 56 41.2 -0.7**
CESX Sg **Sg 19 56 46.7 -1.6**
CESX Cesi 0.49 238 ⇑P **Pg 19 56 41.2 -0.7**
CESX S **Sg 19 56 49.0 +0.7**
CESX AML AML
comp=E,22250µm,0.2s
CESX AML AML
comp=N,24700µm,1.3s
CING Cingoli 0.50 4 ⇑P **Pg 19 56 41.5 -0.4**
CING AML AML
comp=E,5735µm,0.6s
CING AML AML
comp=N,4680µm,0.4s
FOSV Fossato di Vic 0.51 326 ⇓P **Pg 19 56 41.7 -0.4**
FOSV S **Sb 19 56 49.7 -1.0**
FOSV AML AML
comp=E,15850µm,0.4s
FOSV AML AML
comp=N,14700µm,0.7s
GIGS Gran Sasso 0.53 144 ⇑P **Pg 19 56 41.0 -1.4**
GIGS S **Sg 19 56 48.9 -0.5**
GIGS AML AML
comp=E,7900µm,0.5s
GIGS AML AML
comp=N,7310µm,0.2s
CADA Capodarco di F 0.55 55 P **Pb 19 56 43.9 -0.1**
AQU L'Aquila 0.56 160 **Pg 19 56 41.8 -1.1**
AQU Sg **Sg 19 56 49.1 -1.1**
AQU L'Aquila 0.56 160 ⇑P **Pg 19 56 41.9 -1.1**
AQU AML AML
comp=E,11295µm,0.7s
AQU AML AML
comp=N,11000µm,1.2s
AQU AML AML
comp=E,11320µm,0.7s
AQU AML AML
comp=N,10900µm,1.2s
AQU AML AML
comp=E,10800µm,1.5s
AQU AML AML
comp=N,10950µm,1.2s
TRTR Tortoreto Alta 0.57 97 ⇑P **Pb 19 56 43.6 -0.7**
CIMA Civitanova Mar 0.58 42 P **Pb 19 56 43.8 -0.6**
MMUR Monte Murano 0.58 349 P **Pg 19 56 42.9 -0.5**
MURB Monte Urbino 0.60 311 **Pg 19 56 43.1 -0.7**
MURB Sg **Sg 19 56 50.9 -0.7**
MURB Monte Urbino 0.60 311 P **Pg 19 56 43.4 -0.4**
MURB AML AML
comp=N,30200µm,1.0s
MURB AML AML
comp=E,28150µm,0.9s
MURB AML AML
comp=E,25600µm,0.9s
MURB AML AML
comp=N,30300µm,1.0s
PP3 Marolino 0.60 34 ⇑P **Pb 19 56 44.2 -0.7**
PP3 AML AML
comp=E,19850µm,0.4s
PP3 AML AML
comp=N,12600µm,0.7s
PP3 AML AML
comp=N,11900µm,0.5s
PP3 AML AML
comp=E,18650µm,0.4s
FIAM Fiamignano 0.61 182 P **Pg 19 56 42.8 -1.1**
FIAM AML AML
comp=E,7525µm,0.6s
FIAM AML AML
comp=N,6420µm,0.6s
FIAM AML AML
comp=E,7520µm,0.6s
ARVD Arcevia 0.64 346 P **Pg 19 56 44.0 -0.6**
ARVD S **Sb 19 56 54.2 -0.4**
ARVD AML AML
comp=E,3075µm,0.6s
ARVD AML AML
comp=N,2985µm,0.8s
ATSC Scheggia e Pas 0.64 329 ⇓P **Pg 19 56 44.0 -0.7**
ATFO Monte Foce - G 0.65 320 ⇓P **Pg 19 56 44.2 -0.5**
ATFO AML AML
comp=N,6405µm,0.5s
ATFO AML AML
comp=E,8350µm,0.5s
ATTE AVT- Monte Tez 0.67 299 P **Pg 19 56 44.2 -0.9**
ATTE AML AML
comp=N,4840µm,0.9s
ATTE AML AML
comp=E,6155µm,1.2s
FAGN Fagnano 0.69 152 P **Pg 19 56 43.7 -1.8**
FAGN AML AML
comp=E,30250µm,0.3s
FAGN AML AML
comp=N,16800µm,0.3s
ATLO AVT- Montelove 0.70 309 ⇓P **Pg 19 56 45.0 -0.7**
VCEL Villa Celiera 0.70 133 ⇑P **Pg 19 56 44.8 -1.0**
VCEL AML AML
comp=N,19250µm,1.4s
VCEL AML AML
comp=E,25100µm,1.1s
VCEL AML AML
comp=N,19300µm,1.4s
FRON Frontone 0.71 334 ⇓P **Pg 19 56 45.2 -0.8**
FRON AML AML
comp=E,4680µm,0.6s
FRON AML AML
comp=N,6730µm,0.7s
TB01 Gubbio 0.73 314 ⇓P **Pg 19 56 45.5 -0.7**
ATVO AVT- Monte Val 0.74 313 ⇓P **Pg 19 56 45.8 -0.7**
ATVO AML AML
comp=E,5070µm,0.6s
ATVO AML AML
comp=N,5130µm,1.2s
ATBU Serra di Buran 0.74 324 ⇓P **Pg 19 56 46.0 -0.5**
ATVA AVT- Monte Val 0.75 303 P **Pg 19 56 45.9 -0.8**
AOI Ancona 0.75 26 P **Pb 19 56 46.3 -1.1**
AOI AML AML
comp=E,4600µm,0.4s
AOI AML AML
comp=N,4475µm,0.4s
TB03 Pietralunga 0.75 314 ⇓P **Pg 19 56 46.0 -0.7**
MGAB Montegabbione 0.76 273 P **Pg 19 56 46.4 -0.5**
MGAB AML AML
comp=E,12925µm,1.1s
MGAB AML AML
comp=N,16700µm,0.4s
MGAB AML AML
comp=N,16100µm,0.5s
MGAB AML AML
comp=E,13700µm,1.1s
MGAB AML AML
comp=E,12930µm,1.1s
MGAB AML AML
comp=N,16750µm,0.4s
ATPC Poggio Castell 0.79 320 ⇓P **Pg 19 56 46.7 -0.7**
ATMI Monte Miggiano 0.79 306 P **Pg 19 56 47.2 -0.2**
ATMI AML AML
comp=E,12185µm,0.8s
ATMI AML AML
comp=N,13350µm,1.0s
ATPI Pietralunga - 0.79 317 P **Pg 19 56 46.8 -0.7**
ATPI AML AML
comp=E,5645µm,1.2s
ATPI AML AML
comp=N,4515µm,0.5s
SRES S.Oreste - Sor 0.79 217 P **Pg 19 56 46.7 -0.8**
SRES AML AML
comp=E,4215µm,0.4s
SRES AML AML
comp=N,3725µm,0.6s
PIEI Pieia 0.80 326 P **Pg 19 56 46.7 -0.9**
PIEI AML AML
comp=N,2215µm,1.3s
PIEI AML AML
comp=E,3580µm,0.5s
T0110 Collepietro 0.80 144 ⇑P **Pg 19 56 45.9 -1.7**
T0110 S **Sb 19 56 58.4 -0.8**
T0110 AML AML
comp=E,17800µm,0.5s
T0110 AML AML
comp=N,15400µm,0.4s
MPAG Monte Paganucc 0.81 340 P **Pg 19 56 47.0 -0.7**
MPAG AML AML
comp=N,3880µm,0.5s
MPAG AML AML
comp=N,3665µm,0.6s
MPAG AML AML
comp=E,4110µm,0.7s
MPAG AML AML
comp=E,4230µm,0.8s
SENI Senigallia 0.83 4 P **Pn 19 56 48.8 -1.2**
FSSB Fossombrone 0.86 342 P **Pg 19 56 48.1 -0.7**
FSSB AML AML
comp=E,9050µm,0.4s
FSSB AML AML
comp=N,11550µm,0.4s
APEC Apecchio 0.86 322 P **Pg 19 56 48.6 -0.3**
PTQR Pietraquaria 0.87 168 P **Pg 19 56 47.2 -1.8**
PTQR AML AML
comp=E,2490µm,1.6s
PTQR AML AML
comp=N,2445µm,0.6s
ATMC Monte Cedrone 0.90 310 P **Pg 19 56 49.0 -0.6**
MTCE Montecelio 0.90 200 P **Pg 19 56 47.9 -1.6**
MTCE AML AML
comp=E,4070µm,0.3s
MTCE AML AML
comp=N,2680µm,0.6s
SACS San Casciano d 0.91 269 P **Pg 19 56 49.5 -0.3**
SACS AML AML
comp=N,4905µm,0.6s
SACS AML AML
comp=E,5260µm,1.3s
SACS AML AML
comp=E,5040µm,1.3s
SACS AML AML
comp=N,4890µm,0.6s
CERT Cerreto 0.93 188 P **Pg 19 56 48.7 -1.4**
CERT AML AML
comp=E,4940µm,1.2s
CERT AML AML
comp=N,5445µm,1.1s
PE3 Peglio 0.95 330 P **Pg 19 56 49.8 -0.6**
PE3 AML AML
comp=E,21µm,0.4s
PE3 AML AML
comp=N,20µm,0.2s
CAFI Castiglion Fio 0.98 298 P **Pg 19 56 50.4 -0.6**
CAFI AML AML
comp=N,3675µm,1.3s
CAFI AML AML
comp=E,3605µm,0.7s
CAFI AML AML
comp=E,3570µm,0.7s
CAFI AML AML
comp=N,3495µm,1.3s
SSP9 Sansepolcro 1.02 314 P **Pg 19 56 51.5 -0.3**
LATE Laterza 1.02 256 **Pg 19 56 51.4 -0.4**
INTR Introdacqua 1.03 147 **Pg 19 56 48.0 -4.0**
INTR Introdacqua 1.03 147 AML AML
comp=N,8µm,0.9s
INTR AML AML
comp=N,11750µm,0.9s
INTR AML AML
comp=E,7µm,0.7s
INTR AML AML
comp=E,6555µm,0.7s
RCAV Rocca di Cave 1.04 188 P **Pg 19 56 51.5 -0.6**
RCAV AML AML
comp=E,7590µm,1.0s
RCAV AML AML
comp=N,5370µm,0.9s
VVLD Villa Vallelon 1.06 161 P **Pg 19 56 50.8 -1.9**
VVLD AML AML
comp=N,4940µm,0.6s
VVLD AML AML
comp=E,2680µm,1.0s
SF11 Podere del Sol 1.08 270 P **Pg 19 56 52.5 -0.4**
MCIV Monte Civitell 1.09 265 P **Pg 19 56 52.9 -0.1**
MCIV AML AML
comp=E,1690µm,0.9s
MCIV AML AML
comp=N,1825µm,0.5s
GUAR Guarcino 1.09 173 P **Pg 19 56 52.6 -0.5**
GUAR AML AML
comp=E,3285µm,1.2s
GUAR AML AML
comp=N,3700µm,1.3s
SF04 Casetta 1.09 268 AML AML
comp=E,3285µm,0.4s
SF04 AML AML
comp=N,2767µm,0.8s
CAFR Castel Frentan 1.10 126 P **Pg 19 56 51.4 -1.9**
CAFR AML AML
comp=E,2835µm,0.4s
CAFR AML AML
comp=N,3250µm,0.9s
CPGN Carpegna, Ital 1.10 327 P **Pb 19 56 53.1 -0.4**

CPGN				AML	AML		
	comp=E,5390µm,0.9s						
CPGN				AML	AML		
	comp=N,3645µm,0.7s						
CPGN				AML	AML		
	comp=E,3940µm,0.7s						
CPGN				AML	AML		
	comp=N,5460µm,0.9s						
RMP	**Rome, Mte Porz**	**1.11**	**197**	P	**Pb**	**19 56 53.0**	**-0.6**
RMP				AML	AML		
	comp=N,4195µm,1.0s						
RMP				AML	AML		
	comp=E,3755µm,1.2s						
SF13	**Bagnolo**	**1.12**	**268**	P	**Pb**	**19 56 53.4**	**-0.4**
LPEL	**Lama dei Pelig**	**1.13**	**137**	P	**Pg**	**19 56 51.0**	**-2.8**
LPEL				AML	AML		
	comp=E,5385µm,0.8s						
LPEL				AML	AML		
	comp=N,4680µm,0.5s						
RDP	**Rocca di Papa**	**1.16**	**196**	P	**Pb**	**19 56 54.0**	**-0.5**
TOLF	**Tolfa**	**1.17**	**227**	P	**Pb**	**19 56 53.7**	**-0.9**
TOLF				AML	AML		
	comp=N,2440µm,0.3s						
TOLF				AML	AML		
	comp=E,2725µm,0.7s						
ARCI	**Arcidosso**	**1.23**	**269**	P	**Pn**	**19 56 55.2**	**-0.4**
ARCI				AML	AML		
	comp=E,831µm,0.6s						
ARCI				AML	AML		
	comp=N,708µm,0.7s						
POFI	**Posta Fibreno**	**1.23**	**160**	P	**Pn**	**19 56 54.1**	**-1.5**
POFI				AML	AML		
	comp=N,1490µm,0.8s						
POFI				AML	AML		
	comp=E,2340µm,0.6s						
LRP	**Arpino**	**1.27**	**165**	P	**Pn**	**19 56 55.2**	**-0.8**
GIUL	**Giuliano Di Ro**	**1.32**	**177**	AML	AML		
	comp=E,1405µm,0.4s						
GIUL				AML	AML		
	comp=N,1475µm,0.5s						
ASQU	**Asqua**	**1.35**	**313**	P	**Pn**	**19 56 56.4**	**-0.9**
LATB	**Latina**	**1.39**	**186**	P	**Pn**	**19 56 56.5**	**-1.2**
LATB				AML	AML		
	comp=E,419µm,0.8s						
LATB				AML	AML		
	comp=N,442µm,0.7s						
RNI2	**Rionero Sannit**	**1.39**	**147**	P	**Pn**	**19 56 56.6**	**-1.2**
RNI2				AML	AML		
	comp=E,3220µm,1.0s						
RNI2				AML	AML		
	comp=E,3105µm,1.0s						
RNI2				AML	AML		
	comp=N,2385µm,0.6s						
RNI2				AML	AML		
	comp=N,2390µm,0.6s						
SFI	**Santa Sofia**	**1.40**	**318**	P	**Pn**	**19 56 57.7**	**-0.2**
LIK	**San Giovanni I**	**1.40**	**167**	P	**Pb**	**19 56 58.2**	**-0.3**
CERA	**Filignano**	**1.43**	**153**	P	**Pn**	**19 56 56.7**	**-1.6**
CERA				AML	AML		
	comp=N,2130µm,1.1s						
CERA				AML	AML		
	comp=N,2230µm,1.1s						
CERA				AML	AML		
	comp=E,2940µm,0.6s						
CERA				AML	AML		
	comp=E,2830µm,0.6s						
MIDA	**Miranda**	**1.48**	**146**	P	**Pn**	**19 56 57.5**	**-1.6**
CSNT	**Castellina Chi**	**1.48**	**294**	P	**Pn**	**19 56 58.5**	**-0.5**
CSNT				AML	AML		
	comp=N,808µm,0.9s						
CSNT				AML	AML		
	comp=E,857µm,0.5s						
FROS	**Frosini**	**1.50**	**284**	P	**Pn**	**19 56 58.7**	**-0.6**
FROS				AML	AML		
	comp=E,1180µm,1.1s						
FROS				AML	AML		
	comp=N,1425µm,0.7s						
TRIV	**Trivento**	**1.52**	**136**	P	**Pb**	**19 56 59.6**	**-1.0**
TRIV				AML	AML		
	comp=E,1935µm,0.7s						
TRIV				AML	AML		
	comp=N,2125µm,0.9s						
OSSC	**Osservatorio P**	**1.53**	**296**		**Pn**	**19 56 59.3**	**-0.4**
OSSC	**Osservatorio P**	**1.53**	**296**	P	**Pn**	**19 56 59.3**	**-0.4**
OSSC				AML	AML		
	comp=N,900µm,1.2s						
OSSC				AML	AML		
	comp=E,730µm,0.8s						
MAON	**Monte Argentar**	**1.55**	**254**	P	**Pn**	**19 56 59.2**	**-0.8**
LMD	**Lutirano**	**1.59**	**319**	P	**Pb**	**19 57 01.0**	**-0.8**
TRIF	**Trifonti**	**1.66**	**279**	P	**Pn**	**19 57 01.0**	**-0.5**
TRIF				AML	AML		
	comp=E,885µm,0.8s						
TRIF				AML	AML		
	comp=N,670µm,0.6s						
VAGA	**Valle Agricola**	**1.67**	**151**	P	**Pn**	**19 57 01.2**	**-0.4**
VAGA				AML	AML		
	comp=N,1014µm,0.8s						
VAGA				AML	AML		
	comp=N,1028µm,0.8s						
VAGA				AML	AML		
	comp=E,739µm,0.6s						
VAGA				AML	AML		
	comp=E,768µm,0.6s						
CASP	**Castiglione de**	**1.68**	**268**		**Pn**	**19 57 00.9**	**-0.9**
CASP	**Castiglione de**	**1.68**	**268**	AML	AML		
	comp=E,292µm,0.9s						
CASP				AML	AML		
	comp=N,256µm,1.1s						
BSSO	**Busso**	**1.71**	**141**	P	**Pn**	**19 57 02.2**	**0.0**
BSSO				AML	AML		
	comp=N,1068µm,0.6s						
BSSO				AML	AML		
	comp=N,420µm,0.6s						
BSSO				AML	AML		
	comp=E,844µm,1.3s						
BSSO				AML	AML		
	comp=E,344µm,0.8s						
CIGN	**Sant'Elia a Pi**	**1.79**	**133**	P	**Pb**	**19 57 04.5**	**-0.6**
MODR	**Mondragone**	**1.81**	**162**	AML	AML		
	comp=E,454µm,1.2s						
MODR				AML	AML		
	comp=N,674µm,1.0s						
PIGN	**Pignataro Magg**	**1.84**	**155**	AML	AML		
	comp=N,486µm,1.3s						
PIGN				AML	AML		
	comp=E,544µm,0.8s						
MELA	**Melanico ??? S**	**1.88**	**128**	P	**Pb**	**19 57 05.1**	**-1.5**
MELA				AML	AML		
	comp=N,3015µm,0.6s						
MELA				AML	AML		
	comp=E,2920µm,0.5s						
MELA				AML	AML		
	comp=N,3180µm,0.6s						
MELA				AML	AML		
	comp=E,3045µm,0.5s						
SACR	**S. Croce Del S**	**1.88**	**141**	P	**Pb**	**19 57 06.4**	**-0.3**
GATE	**Gambatesa**	**1.89**	**136**	P	**Pb**	**19 57 06.8**	**-0.1**
MTCR	**Monte La Croce**	**1.94**	**307**	P	**Pn**	**19 57 04.8**	**-0.6**
PSB1	**Pescosannita**	**2.06**	**143**	P	**Pb**	**19 57 08.8**	**-1.1**
BRJN	**Brijuni**	**2.08**	**12**	P	**Pn**	**19 57 07.3**	**+0.1**
PII	**Pisa**	**2.09**	**295**	P	**Pn**	**19 57 07.1**	**-0.3**
PII				AML	AML		
	comp=N,554µm,0.7s						
PII				AML	AML		
	comp=E,441µm,0.6s						
APRC	**Apricena**	**2.10**	**121**	P	**Pn**	**19 57 07.7**	**+0.2**
APRC				AML	AML		
	comp=N,1780µm,0.8s						
APRC				AML	AML		
	comp=E,931µm,0.7s						
PAOL	**Paolisi**	**2.13**	**150**		**Pn**	**19 57 08.3**	**+0.4**
ZCCA	**Zocca**	**2.16**	**314**		**Pn**	**19 57 09.5**	**+1.1**
MAIM	**Mastiano**	**2.20**	**299**	P	**Pn**	**19 57 08.4**	**-0.4**
MAIM				AML	AML		
	comp=E,344µm,1.6s						
MAIM				AML	AML		
	comp=N,325µm,0.4s						
SGRT	**San Giovanni R**	**2.23**	**119**		**Pn**	**19 57 09.4**	**+0.1**
SGRT	**San Giovanni R**	**2.23**	**119**	P	**Pn**	**19 57 09.8**	**+0.4**
SGRT				AML	AML		
	comp=E,1475µm,0.6s						
SGRT				AML	AML		
	comp=N,1150µm,0.7s						
VLC	**Villacollemand**	**2.38**	**304**		**Pn**	**19 57 10.7**	**-0.7**
SGTA	**Sant Agata di**	**2.40**	**136**	AML	AML		
	comp=N,470µm,0.9s						
SGTA				AML	AML		
	comp=N,451µm,1.0s						
SGTA				AML	AML		
	comp=E,702µm,0.6s						
SGTA				AML	AML		
	comp=E,671µm,0.6s						
EQUI	**Equi**	**2.53**	**302**	AML	AML		
	comp=N,209µm,0.8s						
EQUI				AML	AML		
	comp=E,168µm,0.7s						
CAPA	**Cerignola FG**	**2.63**	**130**	AML	AML		
	comp=N,1225µm,1.4s						
CAPA				AML	AML		
	comp=E,970µm,1.0s						
RIY	**Rijeka**	**2.63**	**21**	*e*Pn	**Pn**	**19 57 15.7**	**+0.9**
RIY				*e*Sn	**Sn**	**19 57 47.2**	**+0.4**
TEOL	**Teolo**	**2.70**	**337**		**Pn**	**19 57 15.5**	**-0.3**
MRLC	**Muro Lucano**	**2.75**	**140**	P	**Pn**	**19 57 18.4**	**+1.9**
PRMA	**PARMA**	**2.79**	**314**		**Pn**	**19 57 16.1**	**-0.8**
KNDS	**Knezji Dol**	**2.80**	**18**	*i* Pn	**Pn**	**19 57 17.3**	**+0.2**
MSSA	**Maissana**	**3.00**	**300**	Pn	**Pn**	**19 57 20.2**	**+0.2**
CEY	**Cerknica**	**3.01**	**17**	*e*Pn	**Pn**	**19 57 19.7**	**-0.3**
PGF	**Pioggiola**	**3.07**	**265**	*e*P	**Pn**	**19 57 20.9**	**-0.1**
PGF				*e*Sn	**Sn**	**19 57 52.5**	**-5.4**
	comp=E,17nm,0.4s						
PGF	**Pioggiola**	**3.07**	**265**	AML	AML		
	comp=E,63µm,1.2s						
PGF				AML	AML		
	comp=N,53µm,0.7s						
SABO	**M.te Sabotino**	**3.12**	**6**	P	**Pn**	**19 57 21.6**	**0.0**
SABO				AML	AML		
	comp=N,712µm,0.9s						
SABO				AML	AML		
	comp=N,2590µm,1.4s						
SABO				AML	AML		
	comp=E,625µm,0.5s						
SABO				AML	AML		
	comp=E,2615µm,0.6s						
ROVR	**Rover Verones**	**3.15**	**332**	P	**Pn**	**19 57 22.9**	**+0.9**
ROVR				AML	AML		
	comp=N,156µm,0.3s						
ROVR				AML	AML		
	comp=E,116µm,0.9s						
MGRS	**Mrkonjic Grad**	**3.25**	**60**	*e*Pn	**Pn**	**19 57 24.8**	**+1.5**
CRNS	**Crni Vrh**	**3.30**	**14**	*i* Pn	**Pn**	**19 57 24.2**	**+0.2**
LJU	**Ljubljana**	**3.32**	**17**	AML	AML		
	comp=N,2200µm,0.6s						
LJU				AML	AML		
	comp=E,2020µm,0.6s						
PRIJ	**Prijedor**	**3.32**	**50**	*e*Pn	**Pg**	**19 57 33.6**	**-2.3**
SALO	**Salr**	**3.33**	**326**	Pn	**Pn**	**19 57 24.3**	**-0.1**
SALO	**Salr**	**3.33**	**326**	P	**Pn**	**19 57 25.6**	**+1.3**
SALO				AML	AML		
	comp=E,362µm,1.1s						
SALO				AML	AML		
	comp=N,440µm,0.7s						
STON	**Ston**	**3.35**	**89**	*e*Pn	**Pn**	**19 57 23.1**	**-1.5**
STON	**Ston**	**3.35**	**89**	*e*Pn	**Pn**	**19 57 24.0**	**-0.6**
STON				*e*Sn	**Sn**	**19 58 02.2**	**-2.2**
STON	**Ston**	**3.35**	**89**	AML	AML		
	comp=E,120µm,1.4s						
STON				AML	AML		
	comp=N,143µm,0.4s						
CTI	**Castel Tesino**	**3.35**	**342**		**Pn**	**19 57 24.7**	**-0.1**
CTI	**Castel Tesino**	**3.35**	**342**	P	**Pn**	**19 57 25.4**	**+0.6**
CTI				AML	AML		
	comp=N,412µm,0.4s						
CTI				AML	AML		
	comp=E,382µm,1.0s						
MPRI	**Monte Prat**	**3.37**	**358**	P	**Pn**	**19 57 25.2**	**+0.3**
MPRI				AML	AML		
	comp=E,574µm,0.7s						
MPRI				AML	AML		
	comp=N,626µm,0.6s						
STAL	**STALIGIAL**	**3.40**	**355**		**Pn**	**19 57 25.3**	**-0.1**
STAL	**STALIGIAL**	**3.40**	**355**	P	**Pn**	**19 57 25.3**	**-0.1**
STAL				AML	AML		
	comp=N,316µm,1.0s						
STAL				AML	AML		
	comp=E,566µm,0.4s						
A051A	**Mrakovica**	**3.45**	**51**	*e*Pn	**Pn**	**19 57 26.4**	**+0.2**
LUSI	**Trento, Gardas**	**3.46**	**334**	P	**Pn**	**19 57 26.7**	**+0.4**
LUSI				AML	AML		
	comp=E,281µm,0.7s						
LUSI				AML	AML		
	comp=N,280µm,0.4s						
MATE	**Matera**	**3.47**	**129**	⇑P	**Pn**	**19 57 27.5**	**+1.2**
BLY	**Banja Luka**	**3.47**	**56**	*e*Pn	**Pb**	**19 57 30.5**	**-3.3**
BLY	**Banja Luka**	**3.47**	**56**	*e*Pn	**Pn**	**19 57 27.4**	**+1.1**
BLY				*e*Sn	**Sn**	**19 58 06.1**	**-1.4**
CIMO	**Cimolais**	**3.47**	**352**	P	**Pn**	**19 57 26.3**	**-0.1**
CIMO				AML	AML		
	comp=N,109µm,0.7s						
CIMO				AML	AML		
	comp=E,108µm,1.1s						
CIMO				AML	AML		
	comp=E,122µm,1.1s						
CIMO				AML	AML		
	comp=N,122µm,0.7s						
CUC	**Castrocucco**	**3.51**	**144**		**Pn**	**19 57 27.2**	**+0.3**
PTCC	**Patocco-Chiusa**	**3.53**	**2**	P	**Pn**	**19 57 26.8**	**-0.4**
PTCC				AML	AML		
	comp=N,171µm,0.6s						
PTCC				AML	AML		
	comp=E,188µm,0.8s						
GAGG	**Gaggia**	**3.57**	**335**	P	**Pn**	**19 57 28.9**	**+1.1**
GAGG				AML	AML		
	comp=N,314µm,0.9s						
GAGG				AML	AML		
	comp=E,385µm,1.0s						
PRED	**Cave del Predi**	**3.58**	**5**		**Pn**	**19 57 26.5**	**-1.4**
CLUD	**Cludinico**	**3.59**	**357**	Pn	**Pn**	**19 57 28.1**	**+0.1**
CLUD	**Cludinico**	**3.59**	**357**	AML	AML		
	comp=N,282µm,0.8s						
CLUD				AML	AML		
	comp=E,333µm,0.9s						
NOCI	**Noci**	**3.59**	**124**	P	**Pn**	**19 57 28.5**	**+0.5**
NOCI				AML	AML		
	comp=N,277µm,1.5s						
NOCI				AML	AML		
	comp=E,238µm,0.6s						
ZONE	**Zone**	**3.61**	**324**	P	**Pn**	**19 57 29.4**	**+1.0**
ZONE				AML	AML		
	comp=E,220µm,0.7s						
ZONE				AML	AML		
	comp=N,210µm,0.3s						
ACOM	**Acomizza, Ital**	**3.68**	**4**	P	**Pn**	**19 57 29.8**	**+0.4**
ACOM				AML	AML		
	comp=E,418µm,0.9s						
ACOM				AML	AML		
	comp=N,440µm,0.9s						
ZOU	**Zoufplan**	**3.68**	**358**	P	**Pn**	**19 57 29.5**	**0.0**
ZOU				AML	AML		
	comp=E,317µm,1.0s						
ZOU				AML	AML		
	comp=N,390µm,1.3s						
ZOU				AML	AML		
	comp=N,344µm,1.3s						
ZOU				AML	AML		
	comp=E,268µm,1.0s						
MABI	**Malga Bissina**	**3.69**	**330**	P	**Pn**	**19 57 30.6**	**+1.0**
FVI	**Forni Avoltri**	**3.73**	**356**	AML	AML		
	comp=N,259µm,0.6s						
FVI				AML	AML		
	comp=E,183µm,0.6s						
OBKA	**Obir**	**3.77**	**15**	*e*Pn	**Pn**	**19 57 29.9**	**-0.6**
OBKA	**Obir**	**3.77**	**15**	*e*Pn	**Pn**	**19 57 31.6**	**+1.1**
	comp=E,5.0nm,0.4s						
OBKA	**Obir**	**3.77**	**15**	*e*Pn	**Pn**	**19 57 31.0**	**+0.5**
MYKA	**Terra Mystica**	**3.77**	**5**	*e*Pn	**Pn**	**19 57 31.1**	**+0.6**
	comp=E,8.9nm,0.2s						
KOSI	**Kohlern**	**3.80**	**341**	P	**Pn**	**19 57 32.1**	**+1.1**
KOSI				AML	AML		
	comp=N,328µm,0.6s						
KOSI				AML	AML		
	comp=E,333µm,0.7s						
CANO	**Canova, Maglio**	**3.81**	**292**	AML	AML		
	comp=E,257µm,0.9s						
CANO				AML	AML		
	comp=N,92µm,1.0s						
TREB	**Trebinje**	**3.83**	**91**	*e*Pn	**Pn**	**19 57 31.5**	**+0.2**
TREB	**Trebinje**	**3.83**	**91**	*e*Pn	**Pn**	**19 57 31.7**	**+0.4**
TREB				*e*Sn	**Sn**	**19 58 13.5**	**-2.9**
APPI	**Appiano**	**3.85**	**340**	P	**Pn**	**19 57 32.7**	**+1.0**
APPI				AML	AML		
	comp=E,245µm,0.4s						
APPI				AML	AML		
	comp=N,208µm,0.7s						
A052A	**Srbac**	**3.86**	**53**	*e*Pn	**Pn**	**19 57 29.9**	**-1.7**
TAR1	**Taranto**	**3.89**	**126**	AML	AML		
	comp=E,219µm,0.7s						
TAR1				AML	AML		
	comp=N,334µm,0.7s						
ABTA	**Abfaltersbach**	**3.90**	**354**	*i* Pn	**Pn**	**19 57 33.3**	**+1.0**
	comp=N,99nm,0.9s,SNR=44						
BRY	**Bratogost**	**3.96**	**88**	*e*Pn	**Pn**	**19 57 33.4**	**+0.2**
BRY	**Bratogost**	**3.96**	**88**	⇑*i*Pn	**Pn**	**19 57 33.6**	**+0.4**
BRY				*i* Sn	**Sn**	**19 58 21.1**	**+1.2**
HCY	**Herceg Novi**	**3.97**	**94**	*e*Pn	**Pn**	**19 57 33.5**	**+0.4**
HCY	**Herceg Novi**	**3.97**	**94**	⇑*i*Pn	**Pn**	**19 57 33.6**	**+0.4**
HCY				*i* Sn	**Sn**	**19 58 21.1**	**+1.3**
SOKA	**Soboth**	**4.03**	**19**	*e*Pn	**Pn**	**19 57 35.5**	**+1.4**
	comp=N,1.9nm,0.3s						
BRMO	**Bormio**	**4.11**	**332**	P	**Pn**	**19 57 37.3**	**+2.1**
RISI	**Rein**	**4.14**	**350**	P	**Pn**	**19 57 36.9**	**+1.1**
RISI				AML	AML		
	comp=E,677µm,0.5s						
RISI				AML	AML		
	comp=N,879µm,0.5s						
SAOF	**Saorge**	**4.22**	**287**	P	**Pn**	**19 57 39.0**	**+2.3**
UPM	**Unac-Piva**	**4.23**	**84**	*e*Pn	**Pn**	**19 57 38.1**	**+1.1**
UPM	**Unac-Piva**	**4.23**	**84**	*e*Pn	**Pn**	**19 57 37.4**	**+0.4**
UPM				*i* Sn	**Sn**	**19 58 27.7**	**+1.1**
MUGIO	**Muggio**	**4.23**	**317**	P	**Pn**	**19 57 37.0**	**+0.1**
ROSI	**Rosskopf**	**4.24**	**344**	P	**Pn**	**19 57 38.1**	**+1.0**
ROSI				AML	AML		
	comp=E,296µm,0.8s						
ROSI				AML	AML		
	comp=N,350µm,0.6s						
CEME	**Cevo**	**4.26**	**92**	⇑*i*Pn	**Pn**	**19 57 37.8**	**+0.5**
CEME				*i* Sn	**Sn**	**19 58 28.4**	**+1.2**
FUORN	**Ofenpass-Fuorn**	**4.27**	**332**	Pn	**Pn**	**19 57 38.2**	**+0.7**
NKME	**Niksic**	**4.27**	**89**	*e*Pn	**Pn**	**19 57 37.9**	**+0.5**
NKME				*i* Sn	**Sn**	**19 58 28.6**	**+1.2**
SBF	**Sospel**	**4.28**	**285**	*e*P	**Pn**	**19 57 38.1**	**+0.6**
SBF				*e*Sn	**Sn**	**19 58 21.5**	**-6.1**
	comp=N,42nm,0.5s						
BUM	**Brajici-Budva**	**4.28**	**96**	⇑*i*Pn	**Pn**	**19 57 38.1**	**+0.6**
BUM				*i* Sn	**Sn**	**19 58 28.8**	**+1.2**
HAPS	**Han Pijesak,BI**	**4.39**	**72**	*e*Pn	**Pn**	**19 57 40.5**	**+1.4**
VSL	**Villasalto**	**4.41**	**221**	P	**Pn**	**19 57 40.0**	**+0.7**
BEHE	**Becsehely**	**4.43**	**35**	P	**Pn**	**19 57 40.8**	**+1.3**
FETA	**Feichten**	**4.49**	**338**	*i* Pn	**Pn**	**19 57 42.3**	**+1.9**
	comp=N,18nm,0.7s,SNR=17						
TUE	**Stuetta**	**4.50**	**324**	Pn	**Pn**	**19 57 40.5**	**-0.2**
DRME	**Dracevica, Mon**	**4.51**	**97**	*e*Pn	**Pn**	**19 57 41.6**	**+0.9**
DRME	**Dracevica, Mon**	**4.51**	**97**	⇓*i*Pn	**Pn**	**19 57 41.3**	**+0.6**
DRME				*i* Sn	**Sn**	**19 58 34.1**	**+0.8**
WTTA	**Wattenberg**	**4.52**	**347**	*i* Pn	**Pn**	**19 57 42.6**	**+1.7**
	comp=N,18nm,0.6s,SNR=13						
WTTA	**Wattenberg**	**4.52**	**347**	*e*Pn	**Pn**	**19 57 42.4**	**+1.5**
PDG	**Podgorica**	**4.53**	**94**	⇑P	**Pn**	**19 57 41.9**	**+1.1**
PDG	**Podgorica**	**4.53**	**94**	Pn	**Pn**	**19 57 41.3**	**+0.5**
PDG	**Podgorica**	**4.53**	**94**	*e*Pn	**Pn**	**19 57 41.9**	**+1.1**
PDG				*e*Sn	**Sn**	**19 58 30.3**	**-3.2**
TTG	**Podgorica**	**4.53**	**94**	⇓*i*Pn	**Pn**	**19 57 41.5**	**+0.7**
TTG				*i* Sn	**Sn**	**19 58 34.8**	**+1.3**
DAVOX	**Davos/Dischmat**	**4.54**	**330**	Pn	**Pn**	**19 57 43.2**	**+2.0**
	comp=N,7.5nm,0.3s,baz=169,slow=21,SNR=85						
DAVOX				Sn	**Sn**	**19 58 38.7**	**+4.5**
	comp=N,3.7nm,0.3s,baz=90,slow=16,SNR=4.5						
DAVOX				LR	LR	19 59 15.9	
	comp=N,55nm,18.3s,baz=80,slow=37						
	comp=N,26nm,0.5s						
DAVOX	**Davos/Dischmat**	**4.54**	**330**	P	**Pn**	**19 57 42.8**	**+1.5**
SQTA	**Sankt Quirin**	**4.56**	**343**	*i* Pn	**Pn**	**19 57 43.1**	**+1.8**
	comp=N,29nm,0.4s,SNR=23						
PLE	**Pljevlja**	**4.59**	**82**	⇑*i*Pn	**Pn**	**19 57 42.5**	**+0.6**
PLE				*i* Sn	**Sn**	**19 58 36.5**	**+1.1**
TIP	**Timpagrande**	**4.59**	**142**	Pn	**Pn**	**19 57 44.5**	**+2.6**
WATA	**Walderalm**	**4.60**	**347**	*i* Pn	**Pn**	**19 57 44.0**	**+2.1**
	comp=N,15nm,0.5s,SNR=14						
ULC	**Ulcinj**	**4.61**	**99**	*e*Pn	**Pn**	**19 57 42.5**	**+0.6**
ULC				*i* Sn	**Sn**	**19 58 36.6**	**+1.1**
RUDO	**Rudo**	**4.61**	**79**	*e*Pn	**Pn**	**19 57 42.4**	**+0.5**
CALF	**Calern**	**4.63**	**283**	P	**Pn**	**19 57 42.9**	**+0.6**
BBLS	**Lazići**	**4.67**	**76**	*e*Pn	**Pn**	**19 57 44.1**	**+1.2**
BBLS	**Lazići**	**4.67**	**76**	*e*Pn	**Pn**	**19 57 43.2**	**+0.3**
BBLS				*e*Sn	**Sn**	**19 58 33.2**	**-4.0**
KOME	**Kolasin**	**4.68**	**88**	⇑*i*Pn	**Pn**	**19 57 43.6**	**+0.5**
KOME				*i* Sn	**Sn**	**19 58 38.5**	**+1.0**
ARSA	**Arzberg**	**4.69**	**20**	*e*Pn	**Pn**	**19 57 43.5**	**+0.4**
	comp=N,1.3nm,0.2s						
ARSA	**Arzberg**	**4.69**	**20**	*e*Pn	**Pn**	**19 57 42.9**	**-0.2**
ARSA				*e*Sn	**Sn**	**19 58 35.6**	**-2.0**
TRAV	**Traversella**	**4.69**	**306**	AML	AML		
	comp=N,44µm,1.2s						
TRAV				AML	AML		
	comp=E,50µm,1.1s						
MOTA	**Moosalm**	**4.70**	**343**	*i* Pn	**Pn**	**19 57 45.2**	**+1.8**
	comp=E,20nm,0.6s,SNR=11						
KOVH	**Kovagotottos**	**4.78**	**46**	P	**Pn**	**19 57 44.0**	**-0.3**
KOVH				S	**Sn**	**19 58 36.6**	**-3.2**
BIOA	**Bad Ischl, Aus**	**4.83**	**4**	*i* Pn	**Pn**	**19 57 46.3**	**+1.3**
	comp=E,44nm,0.3s,SNR=34						
PART	**Garmisch-Parte**	**4.84**	**343**	*e*Pn	**Pn**	**19 57 47.3**	**+2.1**
SURF	**Saint Ours**	**4.87**	**291**	P	**Pn**	**19 57 48.3**	**+2.6**
RJOB	**Jochberg**	**4.87**	**357**	*e*Pn	**Pn**	**19 57 46.7**	**+1.2**
RJOB				*e*Sn	**Sn**	**19 58 42.5**	**+0.5**
LMR	**La Mourre**	**4.88**	**278**	*e*P	**Pn**	**19 57 45.4**	**-0.3**
LMR				*e*Sn	**Sn**	**19 58 35.7**	**-6.6**
	comp=E,7.2nm,0.6s						
JAUF	**Jausiers**	**4.89**	**291**	P	**Pn**	**19 57 47.3**	**+1.2**
RETA	**Reutte**	**4.91**	**341**	*i* Pn	**Pn**	**19 57 48.2**	**+2.1**
	comp=E,8.1nm,0.4s,SNR=11						
IVA	**Berane**	**4.96**	**88**	⇑*i*Pn	**Pn**	**19 57 47.5**	**+0.6**
IVA				*i* Sn	**Sn**	**19 58 45.3**	**+1.0**
OBER	**Oberstdorf**	**4.96**	**337**	*e*Pn	**Pn**	**19 57 49.9**	**+3.0**
MBDF	**Montbardon**	**4.97**	**294**	*e*P	**Pn**	**19 57 47.8**	**+0.7**
MBDF				*e*Sn	**Sn**	**19 58 38.4**	**-6.4**
	comp=E,24nm,0.8s						
DAVA	**Damuels**	**4.98**	**333**	*i* Pn	**Pn**	**19 57 49.5**	**+2.2**
	comp=E,14nm,0.4s,SNR=13						
DAVA	**Damuels**	**4.98**	**333**	*e*Pn	**Pn**	**19 57 49.4**	**+2.2**
TRIGF	**Trigance**	**5.00**	**282**	P	**Pn**	**19 57 49.1**	**+1.8**
SJES	**Sjenica**	**5.02**	**83**	*e*Pn	**Pn**	**19 57 48.4**	**+0.7**
SJES				*e*Sn	**Sn**	**19 58 41.6**	**-4.2**
PVY	**Plav**	**5.03**	**91**	⇑*i*Pn	**Pn**	**19 57 48.4**	**+0.6**
PVY				*i* Sn	**Sn**	**19 58 46.9**	**+0.9**
MOA	**Molln**	**5.04**	**9**	*e*Pn	**Pn**	**19 57 49.0**	**+1.1**
MOA				*e*Sn	**Sn**	**19 58 44.9**	**-1.2**
MOA	**Molln**	**5.04**	**9**	*e*Pn	**Pn**	**19 57 49.2**	**+1.3**
	comp=E,9.6nm,0.4s						
MOA	**Molln**	**5.04**	**9**	*e*Pn	**Pn**	**19 57 48.9**	**+1.1**
DIVS	**Divibare**	**5.13**	**74**	Pn	**Pn**	**19 57 49.5**	**+0.3**
DIVS	**Divibare**	**5.13**	**74**	*e*Pn	**Pn**	**19 57 48.8**	**-0.4**
DIVS	**Divibare**	**5.13**	**74**	*e*Pn	**Pn**	**19 57 49.7**	**+0.5**
DIVS				*e*Sn	**Sn**	**19 58 45.3**	**-3.2**
MORH	**Mrgy, Hungar**	**5.15**	**48**	P	**Pn**	**19 57 50.5**	**+1.0**

ORIF	Oris-en-Rattie	5.63	294	eP		Pn	19 57 57.4 +1.3
ORIF				eSn		Sn	19 58 54.1 -6.9
comp=E,12nm,0.6s							
ORIF	Oris-en-Rattie	5.63	294	P		Pn	19 57 59.4 +3.2
RUSF	Rustrel	5.68	283	P		Pn	19 58 01.6 +4.9
RAFF	Raffo Rosso	5.72	170	Pn		Pn	19 57 56.4 -0.9
GRN	Grenoble	5.83	296	P		Pn	19 58 03.8 +4.9
SELS	Selova	5.85	84	ePn		Pn	19 57 59.3 +0.2
SELS				eSn		Sn	19 59 01.9 -4.4
KEK	Kerkira	5.92	120	Pn		Pn	19 58 01.0 +1.0
OHR	Ohrid	5.97	105	i Pn		Pn	19 58 02.2 +1.5
GEC2	GERESS Array S	5.98	4			Pn	19 58 00.1 -0.8
GEC2	GERESS Array S	5.98	4	ePn		Pn	19 58 00.6 -0.3
GEC2				eSn		Sn	19 59 07.0 -2.5
GERES	GERESS Array B	5.98	4	Pn		Pn	19 58 00.6 -0.3
comp=E,1.2nm,0.3s,baz=169,slow=12,SNR=20							
GERES				Sn		Sn	19 59 04.7 -4.8
comp=E,0.8nm,0.3s,baz=181,slow=23,SNR=2.5							
comp=E,1.6nm,0.3s							
GERES	GERESS Array B	5.98	4			Pn	19 57 59.8 -1.2
CKRC	Cesky Krumlov	6.00	7	ePN		Pn	19 58 00.9 -0.2
CKRC				eSN		Sn	19 59 07.0 -2.9
OGSM	Saint Maurice	6.01	300	P		Pn	19 58 05.2 +4.0
KBN	Korca	6.14	109			Pn	19 58 02.8 -0.3
CABF	La Chapelle	6.26	309	eP		Pn	19 58 06.2 +1.4
KHC	Kasperske Hory	6.26	3	Pn		Pn	19 58 04.2 -0.6
KHC	Kasperske Hory	6.26	3	ePN		Pn	19 58 04.1 -0.6
KHC				eSN		Sn	19 59 13.7 -2.7
WET	Wettzell	6.27	358	ePn		Pn	19 58 04.3 -0.5
WET				eSn		Sn	19 59 12.7 -3.9
BOVS	Bovan	6.30	80	⇓P		Pn	19 58 05.3 +0.1
BOVS	Bovan	6.30	80	ePn		Pn	19 58 04.9 -0.2
BOVS				eSn		Sn	19 59 12.6 -4.5
BARS	Barje	6.37	88	ePn		Pn	19 58 06.5 +0.3
BARS				eSn		Sn	19 59 14.0 -5.1
BFO	Black Forest	6.42	330			Pn	19 58 06.1 -0.7
BFO	Black Forest	6.42	330	ePn		Pn	19 58 07.4 +0.6
VIVF	Saint-Julien-l	6.44	291	eP		Pn	19 58 08.6 +1.5
VIVF				eSn		Sn	19 59 13.1 -7.6
MDVR	Moldovita	6.48	70	⇑P		Pn	19 58 08.3 +0.5
KRUC	Moravsky	6.59	19	ePN		Pn	19 58 08.9 -0.2
KRUC				eSN		Sn	19 59 21.2 -3.1
HINF	Hinteralfeld	6.64	320	eP		Pn	19 58 10.7 +0.8
HINF				eSn		Sn	19 59 17.8 -7.8
comp=E,33nm,0.7s							
SSB	Saint Sauveur	6.65	294	Pn		Pn	19 58 08.9 -1.1
BZS	Buzias	6.67	63	⇑P		Pn	19 58 11.9 +1.6
ZAGS	Zajecar	6.69	79	ePn		Pn	19 58 10.3 -0.3
ECH	Echery	6.79	324			Pn	19 58 11.7 -0.3
STIP	Stip	6.81	97	i Pn		Pn	19 58 14.3 +2.2
VRAC	Vranov	6.86	19	Pn		Pn	19 58 14.4 +1.4
comp=E,0.7nm,0.3s,baz=318,slow=19,SNR=1.8							
VRAC				Sn		Sn	19 59 27.1 -4.1
comp=E,0.1nm,0.3s,baz=122,slow=21,SNR=4.6							
VRAC				Lg		Lg	20 00 08.6
comp=E,0.4nm,0.3s,baz=151,slow=18,SNR=1.5							
comp=E,1.8nm,0.4s							
LASF	Ste Croix	6.87	283	eP		Pn	19 58 14.3 +1.3
CDF	Champ du Feu	6.90	325	eP		Pn	19 58 14.1 +0.6
CDF				eSn		Sn	19 59 24.0 -8.0
comp=E,17nm,0.5s							
GRFO	Grafenberg	6.95	350	Pn		Pn	19 58 14.6 +0.6
GRA1	Grafenberg Arr	6.95	350	Pn		Pn	19 58 14.7 +0.7
ZAPS	Zavoj	6.96	84	ePn		Pn	19 58 14.6 +0.3
ZAPS				eSn		Sn	19 59 27.4 -6.1
HERR	Herculane	6.99	70	⇑P		Pn	19 58 15.6 +0.9
BLKB	Belogradchik	7.00	81	⇑P		Pn	19 58 15.5 +0.7
HAU	Haudompre	7.01	319	eP		Pn	19 58 16.6 +1.6
HAU				eSn		Sn	19 59 26.7 -8.1
comp=E,51nm,0.6s							
GOPC	GO Pecny, Ondr	7.13	9	ePN		Pn	19 58 16.0 -0.6
PRU	Pruhonice	7.18	7	ePN		Pn	19 58 16.9 -0.3
PRU				eSN		Sn	19 59 34.1 -4.8
VAY	Valandovo	7.18	99	i Pn		Pn	19 58 18.3 +1.0
MAHO	Mahon	7.31	249	Pn		Pn	19 58 20.4 +1.3
GZR	Gura Zlata	7.37	67	⇑P		Pn	19 58 21.1 +1.1
NKC	Novy Kostel	7.38	356	eSN		Sn	19 59 41.6 -2.1
KKB	Krupnik	7.43	94	i P		Pn	19 58 22.0 +1.3
VTS	Vitosha	7.43	89	⇑P		Pn	19 58 22.4 +1.5
VTS	Vitosha	7.43	89	Pn		Pn	19 58 21.4 +0.5
VTS	Vitosha	7.43	89	i P		Pn	19 58 21.9 +1.0
DEV	Deva	7.61	63	⇑P		Pn	19 58 25.3 +2.2
SMF	Signal de Mont	7.62	303	eP		Pn	19 58 24.0 +0.7
SMF				eSn		Sn	19 59 41.5 -8.2
comp=E,11nm,0.6s							
PAGF	Fort de Pagny	7.69	320	eP		Pn	19 58 25.8 +1.5
PAGF				eSn		Sn	19 59 42.9 -8.6
comp=E,41nm,0.8s							
KEST	Kesra	7.72	204	Pn		Pn	19 58 28.3 +3.5
comp=E,0.2nm,0.3s,baz=193,slow=19,SNR=1.0							
comp=E,2.3nm,0.8s							
KEST	Kesra	7.72	204	Pn		Pn	19 58 30.4 +5.7
SFTF	Sexfontaines	7.79	316	eP		Pn	19 58 26.9 +1.2
MOX	Moxa	7.84	353	ePn		Pn	19 58 26.8 +0.4
MOX				eSn		Sn	19 59 50.2 -5.0
LOR	Lormes	7.90	307	eP		Pn	19 58 28.8 +1.6
LOR				eSn		Sn	19 59 48.3 -8.4
comp=E,12nm,0.5s							
MMB	Musomiste	7.96	96	i P		Pn	19 58 29.6 +1.6
OSTC	Ostas	7.97	14	ePN		Pn	19 58 28.7 +0.6
MEZF	Maizieres J'vi	7.98	318	eP		Pn	19 58 30.1 +1.8
MEZF				eSn		Sn	19 59 49.9 -8.7
comp=E,11nm,0.6s							
AVF	Avril sur Loir	7.99	303	eP		Pn	19 58 30.1 +1.8
MTLF	Montolieu	8.01	277	eP		Pn	19 58 30.2 +1.5
MTLF				eSn		Sn	19 59 50.7 -8.7
SSF	Saint Saulge	8.01	305	eP		Pn	19 58 30.5 +1.8
SSF				eSn		Sn	19 59 50.7 -8.7
comp=E,4.7nm,0.5s							
SAVF	Savonnieres en	8.02	318	eP		Pn	19 58 30.2 +1.4
SAVF				eSn		Sn	19 59 50.9 -8.7
comp=E,7.9nm,0.5s							
PGB	Panagyurishte	8.12	89	i P		Pn	19 58 31.8 +1.5
BGF	Bois d'Agland	8.21	300	eP		Pn	19 58 33.0 +1.6
BGF				eSn		Sn	19 59 55.2 -9.0
comp=E,7.9nm,0.5s							
CAF	Calviac	8.26	288	eP		Pn	19 58 34.1 +1.9
WLF	Walferdange	8.34	327	Pn		Pn	19 58 34.4 +1.3
CLL	Collm	8.44	359	Pn		Pn	19 58 33.0 -1.5
CLL	Collm	8.44	359	ePn		Pn	19 58 33.0 -1.5
CLL				ex		x	19 58 36.0
CLL				ex		x	19 58 46.0
CLL				ePg		Pg	19 59 11.0 -2.6
CLL				eSn		Sn	19 59 55.0 -15
CLL				ex		x	20 00 07.0
CLL				ex		x	20 00 49.0
CLL				eSg		Sg	20 01 03.0 +0.3
comp=Z,29nm,1.3s							
ARR	Arges	8.63	69	⇓P		Pn	19 58 39.3 +2.1
RZN	Rozhen	8.66	94	i P		Pn	19 58 39.3 +1.5
ITM	Ithomi	8.81	127	Pn		Pn	19 58 40.3 +0.6
VOIR		8.93	69	⇑P		Pn	19 58 43.5 +2.1
RDO	Rodhopi	9.38	96	Pn		Pn	19 58 48.2 +0.7
MLR	Muntele Rosu	9.56	70	⇑P		Pn	19 58 53.1 +3.1
MLR	Muntele Rosu	9.56	70	Pn		Pn	19 58 53.1 +3.1
comp=Z,0.2nm,0.3s,baz=125,slow=9.9,SNR=3.4							
comp=Z,2.5nm,0.7s							
BURAR	Bucovina Array	9.74	57	⇑P		Pn	19 58 55.0 +2.6
BURAR	Bucovina Array	9.74	57	Pn		Pn	19 58 51.8 -0.6
BUR08	Bucovina Ar. S	9.74	57	Pn		Pn	19 58 51.5 -1.0
ETSF	Etsaut	10.06	275	eP		Pn	19 58 58.9 +2.0
SANT	Santorini	11.50	120	Pn		Pn	19 59 15.4 -1.1
IDI	Anoyia	11.85	126	Pn		Pn	19 59 22.6 +1.2
comp=Z,0.3nm,0.3s,baz=37,slow=10,SNR=2.4							
IDI				Sn		Sn	20 01 22.8 -11
comp=Z,0.3nm,0.3s,baz=1.0,slow=19,SNR=1.1							
comp=Z,19nm,1.1s							
IDI	Anoyia	11.85	126	Pn		Pn	19 59 21.2 -0.1
ESDC	Sonseca Array	13.26	262	Pn		Pn	19 59 41.0 +0.4
comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=2.9							
comp=Z,0.4nm,0.7s							
ILGA	Ilgaz	15.41	90	Pn		Pn	20 00 07.9 -2.0
ILGA				IAmb		IAmb	20 00 20.8
comp=Z,44nm,1.3s							
BRTR	Keskin Array B	15.72	95	Pn		P	20 00 16.1 -1.8
baz=316,slow=6.0,SNR=2.4							
comp=Z,1.1nm,1.0s							
EKA	Eskdalemuir Ar	16.36	325	Pn		Pn	20 00 22.6 +0.8
baz=138,slow=14							
comp=Z,0.3nm,0.4s							
NOA	NORSAR Array B	18.23	357	P		P	20 00 46.9 +1.5
comp=Z,0.6nm,0.7s,baz=181,slow=8.8,SNR=2.7							
MMAI	Mount Meron Ar	20.07	112	P		Pn	20 01 07.3 -0.3
comp=Z,2.8nm,0.6s,baz=319,slow=10.0,SNR=6.4							
comp=Z,2.8nm,0.6s							
FINES	FINESS Array B	20.14	18	P		Pn	20 01 08.3 +0.2
comp=Z,4.2nm,0.8s,baz=220,slow=8.7,SNR=4.1							
comp=Z,4.2nm,0.8s							
FINES	FINESS Array B	20.14	18			Pn	20 01 07.5 -0.7
FIA1	FINESS Array S	20.15	18			Pn	20 01 08.7 +0.5
FIA1				IAmb		IAmb	20 01 54.9
comp=Z,46nm,1.4s							
ASF	Jabal al Asfar	21.59	112	P		P	20 01 25.1 +2.8
comp=Z,1.5nm,0.7s,baz=353,slow=13,SNR=3.7							
comp=Z,1.5nm,0.7s							
KBZ	Khabaz	21.62	78	P		P	20 01 24.2 +1.8
comp=Z,3.0nm,0.8s,baz=300,slow=8.8,SNR=7.5							
comp=Z,3.0nm,0.8s							
GNI	Garni	23.74	86	P		P	20 01 47.5 +2.7
comp=Z,7.3nm,0.8s,baz=172,slow=17,SNR=1.9							
comp=Z,7.3nm,0.8s							
BELG	Belogornoye	24.89	55	P		P	20 01 56.7 +1.7
comp=Z,9.5nm,0.8s,baz=257,slow=4.2,SNR=3.8							
comp=Z,9.5nm,0.8s							
TOA0	Torodi Ar. Sit	31.23	202	P		P	20 02 50.9 -1.1
TOA0				IAmb		IAmb	20 03 01.5
comp=Z,1.5nm,0.9s							
TORD	Torodi Ar. Bea	31.23	202	P		P	20 02 52.6 +0.6
comp=Z,0.5nm,0.5s,baz=16,slow=8.3,SNR=5.7							
comp=Z,0.5nm,0.5s							
TORD	Torodi Ar. Bea	31.23	202	P		P	20 02 51.4 -0.6
TORD				IAmb		IAmb	20 03 05.8
comp=Z,3.6nm,1.5s							
ARU	Arti	31.75	49	P		P	20 02 55.8 -0.4
ARU				IAmb		IAmb	20 02 59.7
comp=Z,12nm,1.5s							
GEYT	Alibeck	34.28	83	P		P	20 03 20.1 +1.4
comp=Z,0.7nm,0.6s,baz=300,slow=12,SNR=1.9							
comp=Z,0.7nm,0.6s							
ATD	Arta Tunnel	40.50	132	LR		LR	20 19 10.4
comp=Z,316nm,21.6s,baz=322,slow=34							
KK31	Karatay Array	41.24	69	P		P	20 04 18.2 +0.8
KKAR	Karatay Array	41.24	69	P		P	20 04 17.9 +0.6
SFJD	Kangerlussuaq	41.31	328	P		P	20 04 18.6 +1.0
WSAR	Wadi Sarin	42.26	103	LR		LR	20 25 35.3
comp=Z,901nm,20.0s,baz=319,slow=41							
ZALV	Zalesovo Beam	46.88	50	P		P	20 05 04.4 +2.0
comp=Z,0.5nm,0.6s,baz=297,slow=6.3,SNR=2.2							
comp=Z,0.5nm,0.6s							
MKAR	Makanchi Array	47.75	60	P		P	20 05 09.7 +0.4
comp=Z,0.6nm,0.6s,baz=287,slow=5.9,SNR=5.9							
comp=Z,0.6nm,0.6s							
MKAR	Makanchi Array	47.75	60	P		P	20 05 08.4 -0.9
SONM	Songino Array	61.78	50	P		P	20 06 54.1 +3.0
comp=Z,1.1nm,0.9s,baz=296,slow=8.5,SNR=5.7							
comp=Z,1.1nm,0.9s							
PALK	Pallekele	68.67	100	LR		LR	20 39 38.5
comp=Z,346nm,21.8s,baz=54,slow=38							
ILAR	Eielson Array	71.55	351	P		P	20 07 55.4 +2.3
comp=Z,0.2nm,0.7s,baz=10,slow=5.5,SNR=2.4							
comp=Z,0.2nm,0.7s							
CMAR	Chiang Mai Arr	74.66	79	P		P	20 08 12.1 -0.1
comp=Z,0.8nm,0.8s,baz=308,slow=7.4,SNR=7.9							
comp=Z,0.8nm,0.8s							
VENT	Ventotene	1.44	357	⇑P		P	20 03 49.1 +1.3
VENT				S		S	20 04 35.7 +0.1
VENT				AML		AML	
comp=E,21750μm,1.6s							
VENT				AML		AML	
comp=N,10615μm,0.9s							
LLI	Lipari	1.44	129	⇓P		P	20 03 47.7 -0.4
LLI				S		S	20 04 36.0 +0.3
LLI				AML		AML	
LLI				AML		AML	
IST3	Stromboli F	1.44	112	⇓P		P	20 03 48.2 +0.2
IST3				S		S	20 04 34.8 -0.9
IST3				AML		AML	
comp=E,25700μm,1.5s							
IST3				AML		AML	
comp=N,25050μm,0.4s							
PLLN	Pollina	1.45	160	⇓P		P	20 03 46.9 -1.3
PLLN				S		S	20 04 33.7 -2.2
PLLN				AML		AML	
PLLN				AML		AML	
CORL	Corleone	1.47	187	⇓P		P	20 03 48.5 +0.2
CORL				S		S	20 04 35.9 -0.2
CORL				AML		AML	
comp=E,47050μm,1.6s							
CORL				AML		AML	
comp=N,52900μm,1.6s							
CAAM	Accademia Aero	1.54	18	⇑P		P	20 03 49.8 +1.6
MSFR	San Fratello	1.56	147	⇓P		P	20 03 47.3 -1.4
MSFR				S		S	20 04 34.7 -2.1
MSFR				AML		AML	
comp=E,17500μm,1.6s							
MSFR				AML		AML	
comp=N,36800μm,1.6s							
PETRA	Petralia Sopra	1.59	163	⇓P		P	20 03 48.1 -0.9
PETRA				S		S	20 04 35.4 -1.9
PETRA				AML		AML	
comp=N,60850μm,1.2s							
PETRA				AML		AML	
comp=E,76900μm,0.9s							
VTIR	Vesuvio Tirone	1.60	25	⇑P		P	20 03 50.1 +1.5
VTIR				AML		AML	
comp=E,5010μm,0.8s							
VTIR				AML		AML	
comp=N,6025μm,0.6s							
OVO	Vesuviano	1.61	24	⇑P		P	20 03 50.2 +1.6
OVO				S		S	20 04 37.1 0.0
OVO				AML		AML	
comp=E,10800μm,0.7s							
OVO				AML		AML	
comp=N,16250μm,0.7s							
CRTO	Cratere Ovest,	1.62	25	⇑P		P	20 03 50.3 +1.5
ALJA	Alia	1.62	174	⇓P		P	20 03 48.9 0.0
ALJA				S		S	20 04 36.8 -0.4
ALJA				AML		AML	
ALJA				AML		AML	
VBKN	Vesuvio Bunker	1.63	25	⇑P		P	20 03 50.3 +1.5
VBKN				S		S	20 04 38.0 +0.7
VBKN				AML		AML	
comp=E,17600μm,0.6s							
VBKN				AML		AML	
comp=N,18550μm,0.6s							
VVDG	Vesuvio Valle	1.63	25	⇑P		P	20 03 50.1 +1.3
CMPR	Campora	1.67	54	⇑P		P	20 03 50.0 +1.0
CMPR				S		S	20 04 37.5 -0.1
CMPR				AML		AML	
comp=E,4310μm,1.0s							
CMPR				AML		AML	
comp=N,6940μm,1.4s							
CMPR				AML		AML	
comp=E,4305μm,1.0s							
MNO	Monte Soro	1.69	147	⇓P		P	20 03 48.6 -0.9
MNO				S		S	20 04 38.1 -0.1
MNO				AML		AML	
comp=E,63750μm,1.6s							
MNO				AML		AML	
comp=N,43200μm,0.8s							
MILZ	Milazzo	1.72	129	⇓P		P	20 03 47.3 -1.9
MILZ				S		S	20 04 36.0 -1.9
MILZ				AML		AML	
comp=E,41000μm,0.5s							
MILZ				AML		AML	
comp=N,34600μm,0.5s							
MCT	Mte Cammarata	1.73	177	⇓P		P	20 03 50.1 +0.5
MGR	Morigerati	1.75	63	⇑P		P	20 03 50.2 +0.9
MGR				S		S	20 04 37.8 -0.4
MGR				AML		AML	
comp=E,8035μm,1.0s							
MGR				AML		AML	
comp=E,7325μm,0.9s							
MGR				AML		AML	
comp=N,11180μm,1.6s							
MGR				AML		AML	
comp=N,12395μm,1.6s							
RESU	Resuttano	1.76	166	⇓P		P	20 03 49.6 -0.1
RESU				S		S	20 04 38.5 0.0
RESU				AML		AML	
comp=E,31150μm,1.4s							
RESU				AML		AML	
comp=N,50650μm,0.6s							
CDRU	Civita di Ruta	1.78	50	⇑P		P	20 03 50.5 +1.0
CLTB	Caltabellotta	1.79	188	P		P	20 03 49.9 +0.1
CLTB				S		S	20 04 36.4 -2.4
CLTB	Caltabellotta	1.79	188	⇓P		P	20 03 50.1 +0.3
CLTB				S		S	20 04 37.5 -1.3
CLTB				AML		AML	
CLTB				AML		AML	
MODR	Mondragone	1.81	9	⇑P		P	20 03 50.7 +1.2
MODR				S		S	20 04 38.6 -0.1
MODR				AML		AML	
comp=E,6475μm,1.0s							
MODR				AML		AML	
comp=N,4265μm,1.6s							
GALF	Gagliano Caste	1.84	153	⇓P		P	20 03 48.9 -1.1
GALF				S		S	20 04 37.5 -1.6
GALF				AML		AML	
comp=N,8710μm,1.6s							
GALF				AML		AML	
comp=E,13815μm,0.6s							
PAOL	Paolisi	1.85	25	P		P	20 03 50.9 +1.1
PAOL				S		S	20 04 39.0 -0.2
PAOL	Paolisi	1.85	25	⇑P		P	20 03 51.0 +1.2
PAOL				S		S	20 04 39.6 +0.4
PAOL				AML		AML	
comp=E,5400μm,0.5s							
PAOL				AML		AML	
comp=N,6990μm,1.6s							
PAOL				AML		AML	
comp=N,7130μm,1.6s							
PAOL				AML		AML	
comp=E,5275μm,0.5s							
EPZF	Pizzo Felice	1.85	145	⇓P		P	20 03 49.3 -0.8
EPZF				S		S	20 04 39.4 0.0
EPZF				AML		AML	
comp=N,46050μm,1.6s							
EPZF				AML		AML	
comp=E,38550μm,1.5s							
CUC	Castrocucco	1.88	70	P		P	20 03 50.6 +0.6
CUC				S		S	20 04 37.6 -1.8
CUC	Castrocucco	1.88	70	⇓P		P	20 03 50.7 +0.7
CUC				S		S	20 04 37.6 -1.8
CUC				AML		AML	
comp=N,8470μm,1.4s							
CUC				AML		AML	
comp=E,9265μm,0.8s							
CUC				AML		AML	
comp=N,10235μm,1.4s							
CUC				AML		AML	
comp=E,7590μm,0.8s							
CET2	Cetraro	1.89	84	⇓P		P	20 03 50.3 +0.2
CET2				S		S	20 04 37.1 -2.5
CET2				AML		AML	
comp=N,45800μm,0.6s							
CET2				AML		AML	
comp=E,46500μm,0.9s							
CAGR	Agira	1.90	156	⇓P		P	20 03 49.9 -0.4
CAGR				S		S	20 04 40.0 +0.4
CAGR				AML		AML	
comp=E,35300μm,0.8s							
CAGR				AML		AML	
comp=N,38050μm,1.4s							
MSRU	Castanea	1.90	125	⇓P		P	20 03 48.1 -2.1
MSRU				AML		AML	
comp=N,78700μm,1.2s							
MSRU				AML		AML	

ROM ***28*** *20:02:43.1±0.2, 39°.267N±0°.009×13°.55E±0°.02, h481km±1km, ML5.8/126, Error ellipse: s-maj=1.7km s-min=0.5km az=82.0*

BJI ***28*** *20:02:46.2±0.0, 39°.44N×13°.44E, h445km, mb5.8/90, mB5.7/59*

LDG ***28*** *20:02:48.5, 39°.48N×13°.32E, h449km*

MOS ***28*** *20:02:48.9±0.8, 39°.40N×13°.50E, h464km, mb5.8/81, Error ellipse: s-maj=4.8km s-min=2.7km az=67.6*

CRAAG ***28*** *20:02:49.2, 39°.36N×13°.44E, Mw5.8*

NEIC ***28*** *20:02:49.8±1.6, 39°.39N±0°.07×13°.52E±0°.09, h458km±3km, mb5.7/834, Mwb5.8/53, Mww5.8, ML5.7(ROM), Error ellipse: s-maj=10.6km s-min=10.4km az=200.0*

IDC ***28*** *20:02:49.5±0.5, 39°.38N×13°.47E, h460km±4km, mb5.1/55, mbtmp6.0/68, Error ellipse: s-maj=5.9km s-min=5.0km az=101.0*

MED_RC ***28*** *20:02:49.0±0.1, 39°.32N×13°.59E, h464km±1km, MW5.8/31, Moment Tensor Solution. Body waves: s12,c19;Mantle waves: s31,c47; Duration: 2s5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.92±.07; $M_{\theta\theta}$-3.64±.08; $M_{\phi\phi}$1.72±.08; $M_{r\theta}$-1.29±.08; $M_{r\phi}$-2.62±.06; $M_{\theta r}$-4.34±.09; Best double couple: $M_0$6.10000×10^{17} NP1:ϕ_s209.00000°,δ78.00000°, λ52.00000°. NP2:ϕ_s105.00000°,δ40.00000°,λ161.00000°. Principal axes: T 6.2500, Plg44.0000°, Azm82.0000°; N -0.3000, Plg37.0000°, Azm218.0000°; P -5.9500, Plg23.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

NEIC ***28*** *20:02:50.2, 39°.43N×13°.54E, h454km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.81; $M_{\theta\theta}$-4.09; $M_{\phi\phi}$2.27; $M_{r\theta}$-1.41; $M_{\theta\phi}$-2.13; $M_{\phi r}$-5.01; Fault plane solution: $M_0$6.65000×10^{17} NP1:ϕ_s211.55000°, δ79.70000°,λ52.72000°. NP2:ϕ_s108.33000°,δ38.48000°, λ163.30000°. Principal axes: T 7.0856, Plg43.0000°, Azm86.0000°; N -0.9858, Plg37.0000°, Azm219.0000°; P -6.0998, Plg25.0000°, Azm330.0000°;*

GCMT ***28*** *20:02:50.8±0.1, 39°.35N±0°.01×13°.62E±0°.02, h462km±1km, MW5.8/132, Moment Tensor Solution. s132,c261; s91,c98; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.87±.05; $M_{\theta\theta}$-4.09±.08; $M_{\phi\phi}$2.22±.08; $M_{r\theta}$-1.62±.08; $M_{\theta\phi}$-2.81±.07; $M_{\phi r}$-4.83±.08; Best double couple: $M_0$6.80900×10^{17} NP1:ϕ_s210.00000°,δ80.00000°, λ51.00000°. NP2:ϕ_s107.00000°,δ40.00000°,λ164.00000°. Principal axes: T 6.9580, Plg42.0000°, Azm83.0000°; N -0.2990, Plg38.0000°, Azm218.0000°; P -6.6590, Plg25.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***28*** *20:02:53, 39°.51N×13°.55E, h480km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.94; $M_{\theta\theta}$-3.51; $M_{\phi\phi}$1.58; $M_{r\theta}$-1.35; $M_{\theta\phi}$-2.98; $M_{\phi r}$-4.80; Fault plane solution: $M_0$6.56000×10^{17} NP1: ϕ_s102.00000°,δ38.00000°,λ162.00000°. NP2: ϕ_s206.00000°,δ79.00000°,λ53.00000°. Principal axes: T 6.6879, Plg44.0000°, Azm81.0000°; N -0.2659, Plg36.0000°, Azm215.0000°; P -6.4220, Plg25.0000°, Azm324.0000°;*

PDG ***28*** *20:03:09.0±6.0, 39°.46N×12°.49E, h42km±11km, MD5.7/9, ML5.7/12 Error ellipse: s-maj=5.5km s-min=8.9km az=0.0*

ISC 28 20:02:49.2±0.2, 39°.36N±0°.02×13°.52E±0°.02, h460km±1km, h460km;pP-P,n2880,σ1s48/3478, mb5.8/636, 343C-294D, Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USI	Ustica	0.70	203	⇑P	P	20 03 46.2	+0.3
USI				S	S	20 04 31.3	-0.3
IACL	Alicudi	1.05	141	⇓P	P	20 03 46.7	0.0

comp=E,75150µm,1.2s
EMSG Monte Spagnolo 1.90 143 ⇓P **P 20 03 49.5 -0.9**
EMSG AML AML
comp=E,45050µm,1.6s
EMSG AML AML
comp=N,82600µm,1.6s
MCRV Calabrutti - M 1.90 41 ⇑P **P 20 03 51.5 +1.4**
MCRV S **S 20 04 40.2 +0.4**
MCRV AML AML
comp=E,5285µm,0.7s
MCRV AML AML
comp=N,5540µm,0.6s
MCRV AML AML
comp=N,12850µm,1.1s
MCRV AML AML
comp=E,12000µm,1.0s
PIGN Pignataro Magg 1.91 15 ⇑P **P 20 03 51.3 +1.2**
PIGN S **S 20 04 40.3 +0.7**
PIGN AML AML
comp=E,3965µm,1.6s
PIGN AML AML
comp=N,7915µm,1.6s
PIGN AML AML
comp=N,8000µm,1.6s
PIGN AML AML
comp=N,7920µm,1.6s
PIGN AML AML
comp=N,7995µm,1.6s
PIGN AML AML
comp=E,4825µm,1.6s
PIGN AML AML
comp=E,3970µm,1.6s
AIO Antillo 1.93 135 ⇓P **P 20 03 48.8 -1.7**
AIO S **S 20 04 37.6 -2.4**
AIO AML AML
comp=N,42500µm,1.6s
AIO AML AML
comp=E,33600µm,1.6s
MTSN Montesano sull 1.94 61 P **P 20 03 51.1 +0.8**
MTSN AML AML
comp=E,10550µm,1.2s
MTSN AML AML
comp=N,8860µm,1.4s
MMN Mormanno 1.98 74 ⇓P **P 20 03 51.0 +0.6**
MMN S **S 20 04 38.8 -1.4**
MMN AML AML
comp=E,4300µm,1.2s
MMN AML AML
comp=N,5560µm,0.6s
SIRI Monte Sirino - 1.99 65 ⇓P **P 20 03 51.6 +1.0**
SIRI S **S 20 04 39.6 -1.0**
SIRI AML AML
comp=E,11350µm,0.7s
SIRI AML AML
comp=N,11510µm,1.4s
SIRI AML AML
comp=E,11400µm,0.7s
SIRI AML AML
comp=N,11620µm,1.4s
JOPP Joppolo 1.99 111 ⇓P **P 20 03 49.5 -1.2**
JOPP AML AML
comp=E,29800µm,0.6s
JOPP AML AML
comp=N,26450µm,1.3s
LIO3 Lioni 1.99 39 ⇑P **P 20 03 51.8 +1.3**
MCEL Monticello 2.00 60 ⇓P **P 20 03 52.4 +1.7**
MCEL S **S 20 04 40.9 +0.2**
MCEL AML AML
comp=E,24400µm,1.3s
MCEL AML AML
comp=N,17500µm,1.6s
MCEL AML AML
comp=E,24550µm,1.3s
MCEL AML AML
comp=N,17200µm,1.6s
VAE Valguarnera 2.00 159 P **P 20 03 50.0 -0.8**
comp=N,470nm,0.4s,baz=324,slow=5.0,SNR=133
VAE S **S 20 04 37.2 -3.5**
comp=N,2µm,0.6s,baz=15,slow=19,SNR=6.8
VITU Vitulano (BN) 2.01 25 ⇑P **P 20 03 51.9 +1.3**
VITU AML AML
comp=E,3215µm,1.2s
VITU AML AML
comp=N,6765µm,0.5s
VITU AML AML
comp=E,8110µm,0.5s
VITU AML AML
comp=N,6950µm,0.5s
ESLN Serra La Nave 2.02 145 ⇓P **P 20 03 49.4 -1.6**
ESLN AML AML
comp=E,33600µm,1.6s
ESLN AML AML
comp=N,37250µm,1.4s
SNAL S. Angelo Dei 2.03 39 ⇑P **P 20 03 52.1 +1.3**
SNAL AML AML
comp=N,15450µm,1.2s
SNAL AML AML
comp=N,16600µm,1.2s
SNAL AML AML
comp=E,10565µm,1.6s
SNAL AML AML
comp=E,10745µm,1.6s
ESML S. M. di Licod 2.04 148 ⇓P **P 20 03 49.6 -1.3**
ESML AML AML
comp=N,26100µm,1.6s
ESML AML AML
comp=E,19950µm,1.6s
MRLC Muro Lucano 2.06 47 ⇑P **P 20 03 52.4 +1.5**
MRLC S **S 20 04 40.9 -0.2**
MRLC AML AML
comp=E,5940µm,1.4s
MRLC AML AML
comp=N,15050µm,1.6s
MRLC AML AML
comp=N,14800µm,1.6s
MRLC AML AML
comp=E,5030µm,1.6s
MRB1 Monte Rocchett 2.09 32 ⇑P **P 20 03 52.7 +1.6**
MRB1 AML AML
comp=E,9060µm,0.7s
MRB1 AML AML
comp=N,12350µm,0.6s
MRB1 AML AML
comp=E,9155µm,0.7s
MRB1 AML AML
comp=N,12800µm,0.6s
MRB1 AML AML
comp=E,9160µm,0.7s
MRB1 AML AML
comp=E,9065µm,0.7s
CAR1 CAROLEI 2.09 92 ⇓P **P 20 03 50.6 -0.6**
CAR1 AML AML
comp=N,65950µm,0.8s
CAR1 AML AML
comp=E,43800µm,0.7s
CAR1 AML AML
comp=N,58550µm,0.8s
CAR1 AML AML
comp=E,48650µm,0.8s
FAVR Favara 2.09 177 ⇓P **P 20 03 51.8 +0.5**
FAVR AML AML
comp=N,35450µm,1.5s
FAVR AML AML
comp=E,30900µm,1.4s
MSCL Scilla 2.10 122 ⇓P **P 20 03 49.4 -1.9**
MSCL AML AML
comp=N,72400µm,1.6s
MSCL AML AML
comp=E,83400µm,1.1s
AG11 Viggiano (PZ) 2.11 62 ⇓P **P 20 03 53.0 +1.7**
AG11 AML AML
comp=E,36800µm,1.6s
AG11 AML AML
comp=N,27400µm,1.5s
PSB1 Pescosannita 2.11 27 ⇑P **P 20 03 52.8 +1.6**
PSB1 S **S 20 04 42.4 +0.8**
PSB1 AML AML
comp=E,4505µm,1.4s
PSB1 AML AML
comp=E,5360µm,1.6s
PSB1 AML AML
comp=N,8950µm,1.6s
PSB1 AML AML
comp=N,8810µm,1.6s
CAFE Carife 2.12 38 ⇑P **P 20 03 52.9 +1.5**
CAFE S **S 20 04 42.8 +0.9**
CAFE AML AML
comp=N,14135µm,1.2s
CAFE AML AML
comp=E,12750µm,1.6s
CAFE AML AML
comp=E,12950µm,1.6s
CAFE AML AML
comp=N,13770µm,1.2s
VAGA Valle Agricola 2.13 15 ⇑P **P 20 03 52.4 +1.2**
VAGA S **S 20 04 42.5 +0.6**
VAGA AML AML
comp=E,6190µm,1.6s
VAGA AML AML
comp=E,6375µm,1.6s
VAGA AML AML
comp=N,5875µm,1.6s
VAGA AML AML
comp=N,5705µm,1.6s
SCHR S. Chirico Rap 2.14 66 ⇓P **P 20 03 52.6 +1.2**
SCHR S **S 20 04 42.0 -0.1**
SCHR AML AML
comp=N,14180µm,1.6s
SCHR AML AML
comp=E,12650µm,1.6s
LIK San Giovanni I 2.14 1 ⇑P **P 20 03 52.3 +1.0**
LIK AML AML
comp=N,7300µm,1.3s
LIK AML AML
comp=E,6930µm,1.3s
CEL Celeste 2.15 120 P **P 20 03 49.5 -2.1**
CEL S **S 20 04 37.8 -4.4**
CEL Celeste 2.15 120 ⇓P **P 20 03 49.8 -1.8**
CEL AML AML
comp=N,26450µm,0.6s
CEL AML AML
comp=E,25050µm,1.1s
CEL AML AML
comp=N,32150µm,0.6s
CEL AML AML
comp=E,20750µm,1.2s
GMB Gambarie 2.16 123 ⇓P **P 20 03 50.1 -1.7**
GMB AML AML
GMB AML AML
PZUN Potenza 2.17 53 P **P 20 03 53.0 +1.5**
PZUN AML AML
comp=E,3355µm,0.8s
PZUN AML AML
comp=N,3420µm,0.6s
PZUN AML AML
comp=E,3290µm,0.7s
PZUN AML AML
comp=N,3560µm,0.6s
PZUN AML AML
comp=E,12250µm,1.6s
PZUN AML AML
comp=E,12200µm,1.6s
PZUN AML AML
comp=N,9400µm,1.6s
PZUN AML AML
comp=N,9040µm,1.6s
LATB Latina 2.18 349 ⇑P **P 20 03 52.3 +0.8**
LATB AML AML
comp=E,3490µm,1.6s
LATB AML AML
comp=N,2093µm,1.6s
SPS2 Spezzano della 2.18 91 AML AML
comp=E,10900µm,0.8s
SPS2 AML AML
comp=N,11600µm,0.9s
TDS Terranova Sìba 2.20 81 ⇓P **P 20 03 52.2 +0.5**
TDS S **S 20 04 41.0 -1.5**
TDS AML AML
comp=N,18650µm,1.6s
TDS AML AML
comp=E,25950µm,1.6s
GIUL Giuliano Di Ro 2.21 355 ⇑P **P 20 03 52.7 +1.0**
GIUL S **S 20 04 42.1 -0.6**
GIUL AML AML
comp=E,4300µm,0.5s
GIUL AML AML
comp=N,4425µm,0.5s
EPOZ Pozzillo 2.21 146 ⇓P **P 20 03 50.2 -1.7**
EPOZ S **S 20 04 40.9 -1.8**
EPOZ AML AML
comp=N,33700µm,1.6s
EPOZ AML AML
comp=E,60700µm,1.6s
BIOG Biogem 2.21 33 ⇑P **P 20 03 53.9 +2.2**
BIOG AML AML
comp=N,39350µm,1.6s
BIOG AML AML
comp=N,28950µm,1.6s
BIOG AML AML
comp=E,19250µm,1.6s
BIOG AML AML
comp=E,27000µm,1.6s
CLTA Licata 2.22 171 ⇓P **P 20 03 51.7 -0.3**
CLTA S **S 20 04 42.7 -0.1**
CLTA AML AML
CLTA AML AML
SACR S. Croce Del S 2.23 24 ⇑P **P 20 03 53.3 +1.4**
SACR S **S 20 04 44.2 +1.2**
SACR AML AML
comp=N,6415µm,1.6s
SACR AML AML
comp=E,4950µm,1.6s
RAFF Raffo Rosso 2.23 163 P **P 20 03 51.0 -1.1**
RAFF S **S 20 04 40.8 -2.2**
RAFF Raffo Rosso 2.23 163 ⇓P **P 20 03 51.3 -0.8**
SALB San Lorenzo Be 2.24 76 ⇓P **P 20 03 52.8 +0.7**
SALB S **S 20 04 41.4 -1.8**
SALB AML AML
comp=E,24300µm,1.6s
SALB AML AML
comp=N,26350µm,1.6s
SALB AML AML
comp=E,24250µm,1.6s
SALB AML AML
comp=E,25050µm,1.6s
SALB AML AML
comp=N,26400µm,1.6s
SGTA Sant Agata di 2.27 38 ⇑P **P 20 03 53.2 +1.1**
SGTA AML AML
comp=E,7005µm,1.6s
SGTA AML AML
comp=E,7165µm,1.6s
SGTA AML AML
comp=N,8765µm,1.6s
SGTA AML AML
comp=N,8560µm,1.6s
CERA Filignano 2.27 9 ⇑P **P 20 03 52.9 +0.8**
CERA AML AML
comp=E,3830µm,1.0s
CERA AML AML
comp=N,3535µm,0.6s
CERA AML AML
comp=E,3720µm,1.0s
CERA AML AML
comp=N,3440µm,0.6s
HLNI Lentini 2.27 152 ⇓P **P 20 03 50.8 -1.5**
HLNI S **S 20 04 40.4 -2.9**
HLNI AML AML
comp=E,39650µm,1.5s
HLNI AML AML
comp=N,19650µm,1.3s
PTRP Pietrapertosa 2.27 58 ⇓P **P 20 03 53.1 +0.9**
PTRP S **S 20 04 43.5 0.0**
PTRP AML AML
comp=E,4030µm,0.9s
PTRP AML AML
comp=N,4420µm,0.7s
PTRP AML AML
comp=E,9250µm,1.4s
PTRP AML AML
comp=N,11130µm,1.6s
LRP Arpino 2.29 1 ⇑P **P 20 03 53.3 +1.2**
LRP S **S 20 04 43.9 +0.4**
LRP AML AML
comp=E,5620µm,1.6s
LRP AML AML
comp=N,3725µm,1.6s
GRI Girifalco 2.32 102 ⇑P **P 20 03 51.8 -0.7**
GRI AML AML
comp=E,63300µm,0.7s
GRI AML AML
comp=N,68900µm,0.8s
BSSO Busso 2.33 20 ⇑P **P 20 03 54.2 +1.7**
BSSO S **S 20 04 45.3 +1.1**
BSSO AML AML
comp=E,8060µm,1.6s
BSSO AML AML
comp=E,3595µm,1.6s
BSSO AML AML
comp=N,2735µm,1.2s
BSSO AML AML
comp=N,6555µm,1.2s
ACER Acerenza 2.34 52 ⇓P **P 20 03 53.2 +0.6**
ACER AML AML
comp=E,3480µm,0.6s
ACER AML AML
comp=N,2820µm,0.9s
ACER AML AML
comp=E,3630µm,0.6s
ACER AML AML
comp=N,2830µm,0.9s
ACER AML AML
comp=E,9785µm,1.5s
ACER AML AML
comp=N,11350µm,1.0s
ACER AML AML
comp=E,10165µm,1.4s
ACER AML AML
comp=N,11750µm,1.0s
SOI Samo 2.36 122 ⇓P **P 20 03 51.0 -1.7**
SOI AML AML
comp=N,22650µm,0.5s
SOI AML AML
comp=E,32050µm,0.6s
POFI Posta Fibreno 2.36 3 ⇑P **P 20 03 54.0 +1.4**
POFI S **S 20 04 45.4 +1.0**
POFI AML AML
comp=E,3950µm,1.6s
POFI AML AML
comp=N,6785µm,1.6s
POFI AML AML
comp=E,3960µm,1.6s
POFI AML AML
comp=N,7085µm,1.6s
ORI Oriolo Calabro 2.37 72 ⇓P **P 20 03 53.7 +1.0**
ORI AML AML
comp=N,42750µm,0.5s
ORI AML AML
comp=E,34300µm,0.5s
MOCO Biccari - m.te 2.37 31 P **P 20 03 53.8 +1.1**
MOCO AML AML
comp=E,5940µm,1.6s
MOCO AML AML
comp=N,6870µm,1.6s
MOCO AML AML
comp=N,6500µm,1.6s
MOCO AML AML
comp=E,6140µm,1.6s
HVZN Vizzini 2.37 156 ⇓P **P 20 03 51.8 -1.2**
RNI2 Rionero Sannit 2.39 11 ⇑P **P 20 03 54.7 +1.8**
RNI2 S **S 20 04 46.8 +2.0**
RNI2 AML AML
comp=N,7375µm,1.6s
RNI2 AML AML
comp=E,11240µm,1.6s
RNI2 AML AML
comp=N,7515µm,1.6s
RNI2 AML AML
comp=E,11425µm,1.6s
GATE Gambatesa 2.40 26 P **P 20 03 55.1 +2.2**
GATE AML AML
comp=E,6310µm,1.6s
GATE AML AML
comp=N,5370µm,1.6s
GATE AML AML
comp=E,4265µm,0.5s
GATE AML AML
comp=N,5105µm,1.6s
LAV9 Lanuvio 2.40 345 ⇑P **P 20 03 54.7 +1.9**
LAV9 S **S 20 04 45.5 +0.8**
LAV9 AML AML
comp=N,41150µm,0.5s
LAV9 AML AML
comp=N,43100µm,0.5s
LAV9 AML AML
comp=E,24600µm,0.5s
LAV9 AML AML
comp=E,24950µm,0.5s
HAGA Augusta 2.44 148 P **P 20 03 51.5 -1.8**
GUAR Guarcino 2.44 356 ⇑P **P 20 03 54.4 +1.3**
GUAR S **S 20 04 46.2 +0.9**
GUAR AML AML
comp=N,6865µm,1.3s
GUAR AML AML
comp=E,4805µm,0.7s
PALZ Palazzo San Ge 2.45 49 P **P 20 03 54.0 +0.8**
PALZ AML AML
comp=E,22600µm,1.5s
PALZ AML AML
comp=N,17300µm,1.6s
PLAC Placanica 2.45 111 ⇓P **P 20 03 52.1 -1.2**
PLAC AML AML
comp=N,30250µm,0.4s
PLAC AML AML
comp=E,31450µm,0.4s
PLAC AML AML
comp=N,29100µm,0.7s
PLAC AML AML
comp=E,28050µm,0.7s
CRAC Craco 2.46 65 ⇓P **P 20 03 53.8 +0.5**
CRAC AML AML
comp=E,29300µm,1.6s
CRAC AML AML
comp=N,19900µm,1.2s
VIVA Pratoni del Vi 2.46 347 ⇑P **P 20 03 54.8 +1.6**
VIVA S **S 20 04 45.9 +0.5**
VIVA AML AML
comp=E,16200µm,0.5s
VIVA AML AML
comp=N,17400µm,0.5s
RDP Rocca di Papa 2.48 346 ⇑P **P 20 03 55.1 +1.7**
RDP S **S 20 04 45.9 +0.2**
RDP AML AML
comp=E,28250µm,0.6s
RDP AML AML
comp=N,22500µm,0.5s
SERS Sersale 2.48 96 ⇓P **P 20 03 53.2 -0.4**
SERS AML AML
comp=E,25050µm,0.8s
SERS AML AML
comp=N,25900µm,0.8s
SERS AML AML
comp=E,24350µm,0.8s
SERS AML AML
comp=N,24550µm,0.8s
AGST Augusta-Monte 2.49 147 ⇓P **P 20 03 51.9 -1.7**
AGST AML AML
comp=N,46800µm,1.4s
AGST AML AML
comp=E,28400µm,1.6s
MA9 Marino 2.50 345 ⇑P **P 20 03 55.1 +1.7**
MA9 S **S 20 04 46.2 +0.4**
MA9 AML AML
comp=E,13650µm,1.2s
MA9 AML AML
comp=N,10210µm,0.7s
VVLD Villa Vallelon 2.51 2 ⇑P **P 20 03 54.8 +1.2**
VVLD S **S 20 04 46.5 +0.3**
VVLD AML AML
comp=N,3460µm,1.5s
VVLD AML AML
comp=E,2735µm,0.6s
CAPA Cerignola FG 2.51 44 ⇑P **P 20 03 53.9 +0.4**
CAPA AML AML
comp=N,10290µm,1.1s
CAPA AML AML
comp=E,10880µm,1.6s
SSY Sortino 2.52 151 ⇓P **P 20 03 52.2 -1.6**
SSY S **S 20 04 44.0 -2.2**
SSY AML AML
comp=E,25600µm,1.6s
SSY AML AML
comp=N,25800µm,0.8s
TIP Timpagrande 2.52 93 ⇓P **P 20 03 53.7 0.0**
TIP Timpagrande 2.52 93 P **P 20 03 53.1 -0.6**
TIP S **S 20 04 41.5 -4.7**
TIP Timpagrande 2.52 93 ⇓P **P 20 03 53.6 -0.1**
TIP AML AML
comp=N,18600µm,0.7s

TIP				AML	AML	
	comp=N,23200µm,0.7s					
TIP				AML	AML	
	comp=E,32600µm,0.7s					
TIP				AML	AML	
	comp=E,27700µm,0.7s					
SAMA	**S.Maria delle**	**2.52**	**344**	⇑P	**P**	**20 03 55.2 +1.6**
SAMA				AML	AML	
	comp=N,8545µm,1.6s					
SAMA				AML	AML	
	comp=E,16550µm,1.6s					
CIGN	**Sant'Elia a Pi**	**2.52**	**24**	⇑P	**P**	**20 03 54.5 +0.8**
CIGN				AML	AML	
	comp=E,5905µm,1.6s					
CIGN				AML	AML	
	comp=N,5375µm,1.6s					
RCAV	**Rocca di Cave**	**2.52**	**350**	⇑P	**P**	**20 03 55.0 +1.3**
RCAV				AML	AML	
	comp=N,6310µm,1.6s					
RCAV				AML	AML	
	comp=E,7350µm,1.2s					
RMP	**Rome, Mte Porz**	**2.53**	**346**	⇑P	**P**	**20 03 55.2 +1.6**
RMP				S	**S**	**20 04 47.2 +1.0**
RMP				AML	AML	
	comp=N,10945µm,0.5s					
RMP				AML	AML	
	comp=E,11700µm,0.6s					
TRIV	**Trivento**	**2.53**	**18**	⇑P	**P**	**20 03 55.3 +1.6**
TRIV				AML	AML	
	comp=E,9600µm,1.6s					
TRIV				AML	AML	
	comp=N,13300µm,1.6s					
MIGL	**Miglionico**	**2.56**	**60**	⇓P	**P**	**20 03 54.0 +0.1**
MIGL				AML	AML	
	comp=E,40100µm,1.5s					
MIGL				AML	AML	
	comp=N,54600µm,1.2s					
HMDC	**Modica**	**2.59**	**157**	⇓P	**P**	**20 03 53.8 -0.6**
HMDC				S	**S**	**20 04 45.1 -2.0**
HMDC				AML	AML	
	comp=E,23800µm,1.6s					
HMDC				AML	AML	
	comp=N,24150µm,1.6s					
CERT	**Cerreto**	**2.62**	**351**	⇑P	**P**	**20 03 55.6 +1.3**
CERT				S	**S**	**20 04 47.0 -0.4**
CERT				AML	AML	
	comp=E,6860µm,1.2s					
CERT				AML	AML	
	comp=N,4400µm,1.6s					
MELA	**Melanico ??? S**	**2.65**	**27**	⇑P	**P**	**20 03 54.8 +0.4**
MELA				AML	AML	
	comp=N,5660µm,1.0s					
MELA				AML	AML	
	comp=E,8580µm,1.0s					
MELA				AML	AML	
	comp=E,8870µm,1.0s					
MELA				AML	AML	
	comp=N,5840µm,1.0s					
MRVN	**Minervino Murg**	**2.66**	**49**	P	**P**	**20 03 54.8 +0.2**
MRVN				AML	AML	
	comp=E,4475µm,1.6s					
MRVN				AML	AML	
	comp=N,2706µm,1.1s					
PTQR	**Pietraquaria**	**2.66**	**358**	⇑P	**P**	**20 03 56.4 +1.8**
PTQR				S	**S**	**20 04 47.4 -0.6**
PTQR				AML	AML	
	comp=E,2870µm,1.6s					
PTQR				AML	AML	
	comp=N,2925µm,1.6s					
INTR	**Introdacqua**	**2.67**	**6**	P	**P**	**20 03 54.2 -0.4**
INTR				S	**S**	**20 04 47.2 -0.8**
INTR	**Introdacqua**	**2.67**	**6**	⇑P	**P**	**20 03 54.4 -0.3**
INTR				S	**S**	**20 04 47.6 -0.4**
INTR				AML	AML	
	comp=N,5990µm,1.4s					
INTR				AML	AML	
	comp=N,4µm,1.3s					
INTR				AML	AML	
	comp=E,4595µm,1.5s					
INTR				AML	AML	
	comp=E,5µm,1.4s					
LADO	**San Nicola del**	**2.68**	**90**	⇓P	**P**	**20 03 54.4 -0.4**
LADO				AML	AML	
	comp=N,1645µm,1.2s					
LADO				AML	AML	
	comp=E,2510µm,0.5s					
MTCE	**Montecelio**	**2.73**	**348**	⇑P	**P**	**20 03 56.2 +1.2**
MTCE				S	**S**	**20 04 48.1 -0.5**
MTCE				AML	AML	
	comp=E,3580µm,1.6s					
MTCE				AML	AML	
	comp=N,4010µm,1.6s					
MATE	**Matera**	**2.76**	**61**	⇓P	**P**	**20 03 55.1 -0.1**
MATE	**Matera**	**2.76**	**61**	⇓P	**P**	**20 03 55.0 -0.2**
MATE				AML	AML	
	comp=N,11550µm,1.0s					
MATE				AML	AML	
	comp=E,10970µm,1.6s					
LTRZ	**Laterza**	**2.82**	**63**	⇓P	**P**	**20 03 55.4 -0.3**
AMUR	**Altamura**	**2.82**	**56**	P	**P**	**20 03 55.8 +0.1**
AMUR				AML	AML	
	comp=E,8460µm,1.6s					
AMUR				AML	AML	
	comp=N,10780µm,1.5s					
APRC	**Apricena**	**2.85**	**32**	⇑P	**P**	**20 03 55.4 -0.4**
APRC				AML	AML	
	comp=N,6435µm,1.0s					
APRC				AML	AML	
	comp=E,4435µm,1.2s					
T0110	**Collepietro**	**2.87**	**4**	⇑P	**P**	**20 03 57.4 +1.4**
T0110				S	**S**	**20 04 52.0 +1.4**
T0110				AML	AML	
	comp=N,6300µm,1.2s					
T0110				AML	AML	
	comp=E,7920µm,1.6s					
FAGN	**Fagnano**	**2.91**	**1**	⇑P	**P**	**20 03 57.8 +1.5**
FAGN				AML	AML	
	comp=N,5270µm,1.5s					
FAGN				AML	AML	
	comp=E,7150µm,0.6s					
FIAM	**Fiamignano**	**2.92**	**354**	⇑P	**P**	**20 03 58.1 +1.7**
FIAM				S	**S**	**20 04 51.9 +0.6**
FIAM				AML	AML	
	comp=N,4715µm,1.3s					
FIAM				AML	AML	
	comp=E,5250µm,1.1s					
SGRT	**San Giovanni R**	**2.93**	**35**	P	**P**	**20 03 56.2 -0.3**
SGRT				S	**S**	**20 04 47.9 -3.5**
SGRT	**San Giovanni R**	**2.93**	**35**	⇑P	**P**	**20 03 56.1 -0.4**
SGRT				AML	AML	
	comp=N,3535µm,0.8s					
SGRT				AML	AML	
	comp=E,4870µm,1.0s					
HPAC	**Pachino**	**2.94**	**154**	⇓P	**P**	**20 03 56.1 -0.5**
HPAC				S	**S**	**20 04 49.5 -1.8**
HPAC				AML	AML	
	comp=E,35200µm,1.6s					
HPAC				AML	AML	
	comp=N,43950µm,1.6s					
TOLF	**Tolfa**	**2.94**	**337**	⇑P	**P**	**20 03 58.1 +1.6**
TOLF				AML	AML	
	comp=E,5455µm,1.5s					
TOLF				AML	AML	
	comp=N,6470µm,1.2s					
SRES	**S.Oreste - Sor**	**2.98**	**345**	⇑P	**P**	**20 03 58.1 +1.4**
SRES				S	**S**	**20 04 51.5 -0.3**
SRES				AML	AML	
	comp=E,3755µm,1.3s					
SRES				AML	AML	
	comp=N,3356µm,1.2s					
AQU	**L'Aquila**	**2.99**	**358**	P	**P**	**20 03 58.1 +1.3**
AQU	**L'Aquila**	**2.99**	**358**	P	**P**	**20 03 58.2 +1.3**
AQU				S	**S**	**20 04 52.0 -0.1**
AQU	**L'Aquila**	**2.99**	**358**	⇑P	**P**	**20 03 58.5 +1.7**
AQU				AML	AML	
	comp=E,5750µm,1.4s					
AQU				AML	AML	
	comp=N,6565µm,1.6s					
AQU				AML	AML	
	comp=N,6575µm,1.6s					
AQU				AML	AML	
	comp=E,5505µm,1.4s					
VCEL	**Villa Celiera**	**3.04**	**4**	P	**P**	**20 03 58.8 +1.5**
VCEL				AML	AML	
	comp=E,7385µm,1.6s					
VCEL				AML	AML	
	comp=N,4715µm,1.4s					
NOCI	**Noci**	**3.07**	**61**	⇓P	**P**	**20 03 57.6 +0.1**
NOCI				AML	AML	
	comp=E,13200µm,1.1s					
NOCI				AML	AML	
	comp=N,16050µm,1.6s					
T1247	**Pizzolo (AQ)**	**3.08**	**357**	⇓P	**P**	**20 03 59.5 +1.9**
T1247				AML	AML	
	comp=E,5955µm,1.4s					
T1247				AML	AML	
	comp=N,4755µm,0.6s					
GIGS	**Gran Sasso**	**3.09**	**1**	⇓P	**P**	**20 03 59.1 +1.5**
GIGS				AML	AML	
	comp=N,1586µm,1.6s					
GIGS				AML	AML	
	comp=E,3215µm,1.6s					
TAR1	**Taranto**	**3.12**	**67**	⇓P	**P**	**20 03 57.5 -0.3**
TAR1				AML	AML	
	comp=E,30950µm,0.8s					
TAR1				AML	AML	
	comp=N,24650µm,1.6s					
TREM	**Isole Tremiti**	**3.15**	**28**	P	**P**	**20 03 57.9 -0.1**
TREM				AML	AML	
	comp=N,10750µm,0.9s					
TREM				AML	AML	
	comp=E,15200µm,0.9s					
RM33	**Pellescritta (**	**3.16**	**356**	⇓P	**P**	**20 03 59.7 +1.5**
RM33				AML	AML	
	comp=E,4620µm,1.1s					
RM33				AML	AML	
	comp=N,3765µm,1.6s					
RM33				AML	AML	
	comp=N,3840µm,1.6s					
RM33				AML	AML	
	comp=E,4770µm,1.1s					
DGI	**Dorgali Grotta**	**3.16**	**289**	⇑P	**P**	**20 03 59.1 +0.9**
DGI				S	**S**	**20 04 53.4 -0.9**
CAMP	**Campotosto**	**3.18**	**358**	P	**P**	**20 03 59.4 +1.1**
CAMP				S	**S**	**20 04 55.1 +0.4**
CAMP	**Campotosto**	**3.18**	**358**	⇓P	**P**	**20 03 59.8 +1.5**
CAMP				AML	AML	
	comp=E,3755µm,1.4s					
CAMP				AML	AML	
	comp=N,5490µm,1.6s					
T1211	**Morro Reatino**	**3.21**	**351**	⇓P	**P**	**20 04 00.1 +1.6**
T1211				AML	AML	
	comp=E,4285µm,1.0s					
T1211				AML	AML	
	comp=E,4285µm,1.1s					
T1211				AML	AML	
	comp=N,6230µm,0.6s					
T1211				AML	AML	
	comp=N,6125µm,0.6s					
VSL	**Villasalto**	**3.21**	**274**	⇑P	**P**	**20 03 59.7 +1.1**
VSL				S	**S**	**20 04 55.1 +0.1**
VSL				AML	AML	
	comp=E,4715µm,1.2s					
VSL				AML	AML	
	comp=N,3610µm,1.6s					
LNSS	**Leonessa**	**3.26**	**354**	⇓P	**P**	**20 04 00.4 +1.5**
LNSS				AML	AML	
	comp=E,4475µm,1.6s					
LNSS				AML	AML	
	comp=N,3875µm,0.5s					
TERO	**Teramo**	**3.26**	**1**	⇓P	**P**	**20 04 00.3 +1.4**
TERO				AML	AML	
	comp=E,9935µm,1.5s					
TERO				AML	AML	
	comp=N,6270µm,0.9s					
TERO				AML	AML	
	comp=N,6205µm,0.9s					
TERO				AML	AML	
	comp=E,10155µm,1.5s					
ARRO	**Arrone**	**3.27**	**350**	⇓P	**P**	**20 04 00.5 +1.7**
ARRO				AML	AML	
	comp=E,5005µm,1.5s					
ARRO				AML	AML	
	comp=N,2731µm,1.6s					
SMA1	**SAN MARTINO**	**3.27**	**358**	⇓P	**P**	**20 04 00.3 +1.3**
CESX	**Cesi**	**3.33**	**348**	P	**P**	**20 04 00.5 +1.2**
CESX				S	**S**	**20 04 56.4 -0.2**
CESX	**Cesi**	**3.33**	**348**	P	**P**	**20 04 00.7 +1.4**
CESX				AML	AML	
	comp=E,2625µm,0.5s					
CESX				AML	AML	
	comp=N,3045µm,1.6s					
T1243	**Rocca Santa Ma**	**3.34**	**359**	⇓P	**P**	**20 04 00.9 +1.4**
T1217	**Poggiodomo (PG**	**3.38**	**353**	⇓P	**P**	**20 04 01.2 +1.4**
T1217				AML	AML	
	comp=N,4880µm,1.6s					
T1217				AML	AML	
	comp=E,4840µm,0.5s					
T1217				AML	AML	
	comp=N,6205µm,1.6s					
T1217				AML	AML	
	comp=E,4655µm,0.5s					
TRTR	**Tortoreto Alta**	**3.46**	**5**	⇓P	**P**	**20 04 01.8 +1.5**
TRTR				AML	AML	
	comp=N,7765µm,1.5s					
TRTR				AML	AML	
	comp=E,13250µm,0.9s					
T1215	**Vallo di Nera,**	**3.48**	**352**	⇓P	**P**	**20 04 01.9 +1.3**
T1215				AML	AML	
	comp=E,4245µm,1.3s					
T1215				AML	AML	
	comp=N,6160µm,1.6s					
T1215				AML	AML	
	comp=E,4805µm,1.3s					
T1215				AML	AML	
	comp=N,5740µm,1.6s					
T1241	**Roccafluvione,**	**3.50**	**359**	AML	AML	
	comp=N,5125µm,0.8s					
T1241				AML	AML	
	comp=E,6570µm,1.6s					
T1241				AML	AML	
	comp=E,6440µm,1.6s					
T1241				AML	AML	
	comp=N,6365µm,1.1s					
T1241				AML	AML	
	comp=N,6475µm,1.1s					
LATE	**Laterza**	**3.50**	**339**	P	**P**	**20 04 02.0 +1.3**
T1245	**Castelsantange**	**3.50**	**356**	⇓P	**P**	**20 04 02.4 +1.5**
T1245				AML	AML	
	comp=N,10565µm,0.9s					
T1245				AML	AML	
	comp=E,9225µm,0.8s					
T1245				AML	AML	
	comp=E,9050µm,0.8s					
T1245				AML	AML	
	comp=N,10865µm,1.0s					
MMO1	**Montemonaco**	**3.54**	**358**	⇓P	**P**	**20 04 02.5 +1.4**
T1216	**Preci, Frazion**	**3.55**	**354**	AML	AML	
	comp=E,6950µm,0.6s					
T1216				AML	AML	
	comp=E,6955µm,0.6s					
T1216				AML	AML	
	comp=N,6680µm,1.0s					
T1216				AML	AML	
	comp=N,6660µm,1.0s					
MC2	**Monte Cornacci**	**3.56**	**356**	⇓P	**P**	**20 04 02.9 +1.5**
MAON	**Monte Argentar**	**3.56**	**330**	⇑P	**P**	**20 04 02.3 +1.1**
MAON				AML	AML	
	comp=E,4650µm,1.1s					
MAON				AML	AML	
	comp=N,5025µm,1.6s					
OFFI	**Offida**	**3.58**	**2**	⇓P	**P**	**20 04 02.9 +1.6**
OFFI				AML	AML	
	comp=E,12350µm,1.6s					
OFFI				AML	AML	
	comp=N,11650µm,0.9s					
WDD	**Wied Dalam**	**3.60**	**167**	P	**P**	**20 04 01.2 -0.5**
AM05	**Amandola Campo**	**3.62**	**358**	⇓P	**P**	**20 04 03.1 +1.4**
AM05				AML	AML	
	comp=E,4745µm,1.6s					
AM05				AML	AML	
	comp=N,168µm,0.3s					
AM05				AML	AML	
	comp=N,169µm,0.3s					
CESI	**CESI - Serrava**	**3.67**	**353**	⇓P	**P**	**20 04 03.1 +0.9**
FDMO	**Fiordimonte**	**3.69**	**355**	P	**P**	**20 04 03.2 +0.9**
FDMO	**Fiordimonte**	**3.69**	**355**	AML	AML	
	comp=E,5200µm,0.2s					
FDMO				AML	AML	
	comp=N,5245µm,1.4s					
MCIV	**Monte Civitell**	**3.69**	**338**	⇓P	**P**	**20 04 03.8 +1.5**
SACS	**San Casciano d**	**3.69**	**341**	⇓P	**P**	**20 04 03.9 +1.6**
SACS				AML	AML	
	comp=E,4870µm,0.6s					
SACS				AML	AML	
	comp=N,7755µm,1.6s					
GUMA	**Gualdo di Mace**	**3.70**	**358**	⇓P	**P**	**20 04 03.7 +1.3**
GUMA				AML	AML	
	comp=E,17450µm,0.6s					
GUMA				AML	AML	
	comp=N,14600µm,0.6s					
GUMA				AML	AML	
	comp=E,11550µm,0.7s					
GUMA				AML	AML	
	comp=N,18350µm,0.6s					
MGAB	**Montegabbione**	**3.71**	**344**	⇓P	**P**	**20 04 03.8 +1.3**
MGAB				AML	AML	
	comp=N,3990µm,1.6s					
MGAB				AML	AML	
	comp=E,4415µm,0.6s					
MGAB				AML	AML	
	comp=N,3850µm,1.6s					
MGAB				AML	AML	
	comp=E,4830µm,0.6s					
SF13	**Bagnolo**	**3.74**	**338**	⇓P	**P**	**20 04 04.3 +1.6**
SF11	**Podere del Sol**	**3.77**	**339**	⇓P	**P**	**20 04 04.7 +1.7**
ARCI	**Arcidosso**	**3.82**	**337**	⇓P	**P**	**20 04 05.4 +2.0**
ARCI				AML	AML	
	comp=E,2095µm,0.8s					
ARCI				AML	AML	
	comp=N,2720µm,0.8s					
SCTE	**Santa Cesarea**	**3.88**	**78**		**P**	**20 04 03.7 -0.2**
ATCC	**AVT- Casa Cast**	**3.88**	**350**	⇓P	**P**	**20 04 04.7 +0.8**
SNTG	**Esanatoglia**	**3.92**	**354**	⇓P	**P**	**20 04 05.2 +1.1**
ATTE	**AVT- Monte Tez**	**3.94**	**347**	P	**P**	**20 04 05.4 +1.1**
ATTE				AML	AML	
	comp=N,6930µm,0.5s					
ATTE				AML	AML	
	comp=E,6255µm,0.8s					
MURB	**Monte Urbino**	**3.97**	**349**	P	**P**	**20 04 05.5 +0.9**
CASP	**Castiglione de**	**3.97**	**330**		**P**	**20 04 05.4 +0.8**
CASP	**Castiglione de**	**3.97**	**330**	⇓P	**P**	**20 04 05.8 +1.2**
CAFI	**Castiglion Fio**	**4.14**	**344**	⇓P	**P**	**20 04 07.4 +1.4**
CELB	**S.Piero in Cam**	**4.21**	**325**	⇓P	**P**	**20 04 07.7 +0.9**
FROS	**Frosini**	**4.24**	**336**	⇓P	**P**	**20 04 08.3 +1.3**
TRIF	**Trifonti**	**4.24**	**333**	⇓P	**P**	**20 04 08.3 +1.3**
A318A	**Donoratico (LI**	**4.37**	**330**	⇓P	**P**	**20 04 09.3 +1.2**
CRE	**Caprese Michel**	**4.42**	**345**	⇓P	**P**	**20 04 09.1 +0.5**
CORF	**Corte**	**4.43**	**313**	⇓P	**P**	**20 04 09.7 +1.1**
AJAC	**Base Areonaval**	**4.44**	**307**	⇑P	**P**	**20 04 10.0 +1.3**
CSNT	**Castellina Chi**	**4.44**	**339**	⇓P	**P**	**20 04 09.9 +1.2**
OSSC	**Osservatorio P**	**4.50**	**338**		**P**	**20 04 10.3 +1.0**
OSSC	**Osservatorio P**	**4.50**	**338**	⇓P	**P**	**20 04 10.5 +1.2**
A319A	**Santa Luce (PI**	**4.67**	**333**	⇓P	**P**	**20 04 12.2 +1.3**
PGF	**Pioggiola**	**4.68**	**314**	*e*P	**P**	**20 04 11.8 +0.8**
STON	**Ston**	**4.72**	**41**	⇑*i*Pn	**P**	**20 04 10.2 -1.0**
VLO	**Vlora**	**4.72**	**75**	P	**P**	**20 04 12.3 +0.9**
VLO	**Vlora**	**4.72**	**75**	P	**P**	**20 04 12.3 +0.9**
KEK	**Kerkira**	**4.87**	**84**	P	**P**	**20 04 13.2 +0.4**
KEK	**Kerkira**	**4.87**	**84**	P	**P**	**20 04 13.1 +0.4**
KEK	**Kerkira**	**4.87**	**84**	P	**P**	**20 04 13.1 +0.4**
HCY	**Herceg Novi**	**4.87**	**49**	⇑*i*Pn	**P**	**20 04 13.2 +0.5**
HCY	**Herceg Novi**	**4.87**	**49**	*e*Pn	**P**	**20 04 13.2 +0.5**
HCY				*i* Sn	**S**	**20 05 19.3 -1.6**
GROG	**Isola di Gorgo**	**4.90**	**327**	⇓P	**P**	**20 04 14.2 +1.3**
KEST	**Kesra**	**4.91**	**224**	P	**P**	**20 04 13.9 +0.5**
	comp=E,2µm,0.5s,baz=332,slow=4.8,SNR=1116					
KEST				S	**S**	**20 05 22.1 +0.1**
	comp=E,1µm,1.1s,baz=107,slow=22,SNR=17					
KEST	**Kesra**	**4.91**	**224**	P	**P**	**20 04 14.1 +0.7**
KEST	**Kesra**	**4.91**	**224**	P	**P**	**20 04 14.4 +1.1**
	SNR=254					
KEST				P	**P**	**20 04 14.4 +1.1**
	SNR=254					
TREB	**Trebinje**	**4.96**	**46**	⇑*i*Pn	**P**	**20 04 13.9 +0.4**
BUM	**Brajici-Budva**	**5.02**	**52**	*e*Pn	**P**	**20 04 15.0 +0.8**
BUM				*i* Sn	**S**	**20 05 22.0 -1.7**
ULC	**Ulcinj**	**5.07**	**57**	*e*Pn	**P**	**20 04 15.2 +0.5**
ULC				*i* Sn	**S**	**20 05 22.5 -2.0**
DRME	**Dracevica, Mon**	**5.14**	**55**	⇑*i*Pn	**P**	**20 04 16.3 +0.9**
DRME	**Dracevica, Mon**	**5.14**	**55**	*e*Pn	**P**	**20 04 16.2 +0.9**
DRME				*i* Sn	**S**	**20 05 24.4 -1.3**
CEME	**Cevo**	**5.18**	**50**	*e*Pn	**P**	**20 04 16.3 +0.6**
CEME				*i* Sn	**S**	**20 05 25.1 -1.3**
BRY	**Bratogost**	**5.18**	**45**	⇑*i*Pn	**P**	**20 04 16.2 +0.3**
BRY	**Bratogost**	**5.18**	**45**	*e*Pn	**P**	**20 04 16.2 +0.3**
BRY				*i* Sn	**S**	**20 05 25.5 -1.1**
TIR	**Tirane**	**5.24**	**66**	⇑P	**P**	**20 04 17.5 +1.3**
TIR	**Tirane**	**5.24**	**66**	P	**P**	**20 04 17.6 +1.3**
TIR	**Tirane**	**5.24**	**66**		**P**	**20 04 17.2 +1.0**
TIR	**Tirane**	**5.24**	**66**	⇑P	**P**	**20 04 17.5 +1.3**
IGT	**Igoumenitsa**	**5.27**	**86**	P	**P**	**20 04 17.1 +0.4**
PDG	**Podgorica**	**5.32**	**53**	⇑P	**P**	**20 04 18.1 +1.1**
PDG	**Podgorica**	**5.32**	**53**	P	**P**	**20 04 18.1 +1.1**
PDG	**Podgorica**	**5.32**	**53**		**P**	**20 04 17.7 +0.7**
TTG	**Podgorica**	**5.32**	**53**	⇓*i*Pn	**P**	**20 04 17.9 +0.9**
TTG				*i* Sn	**S**	**20 05 28.0 -0.7**
NKME	**Niksic**	**5.33**	**49**	⇑*i*Pn	**P**	**20 04 17.7 +0.5**
NKME				*i* Sn	**S**	**20 05 28.4 -0.7**
ZCCA	**Zocca**	**5.34**	**340**	P	**P**	**20 04 17.9 +0.7**
VLC	**Villacollemand**	**5.34**	**335**	P	**P**	**20 04 17.2 0.0**
KEF3	**Kipouria, Keph**	**5.46**	**100**	P	**P**	**20 04 19.0 +0.6**
DMLN	**Damoulianata-K**	**5.47**	**100**	P	**P**	**20 04 18.7 +0.1**
KEF4	**Livadi, Kephal**	**5.50**	**99**	P	**P**	**20 04 19.2 +0.3**
LSK	**Leskovik**	**5.51**	**80**	P	**P**	**20 04 20.1 +1.1**
DRAG	**Dragano-Lefkad**	**5.53**	**95**	P	**P**	**20 04 19.6 +0.4**
CMAH	**Djebel Manchou**	**5.54**	**242**	P	**P**	**20 04 20.1 +0.7**
TSLK	**Tsoukalades, L**	**5.58**	**93**	P	**P**	**20 04 20.3 +0.7**
UPM	**Unac-Piva**	**5.58**	**45**	⇑*i*Pn	**P**	**20 04 20.7 +0.9**
UPM	**Unac-Piva**	**5.58**	**45**	⇑*i*Pn	**P**	**20 04 20.8 +0.9**
UPM				*i* Sn	**S**	**20 05 33.3 -0.6**
EVGI	**Lefkada island**	**5.61**	**95**	P	**P**	**20 04 20.6 +0.7**
NYDR	**Nydri-Lefkada**	**5.62**	**94**	P	**P**	**20 04 20.6 +0.5**
VLS	**Valsamata**	**5.65**	**100**	P	**P**	**20 04 20.4 0.0**
PSDA	**Pessada-Kefalo**	**5.66**	**100**	P	**P**	**20 04 20.4 0.0**
JAN	**Janina**	**5.67**	**85**	P	**P**	**20 04 21.2 +0.6**
ABSA	**Djebel Ababsia**	**5.69**	**239**	P	**P**	**20 04 21.8 +0.8**
MGRS	**Mrkonjic Grad**	**5.71**	**27**	⇑*i*Pn	**P**	**20 04 21.6 +0.7**
KOME	**Kolasin**	**5.71**	**50**	⇓*i*Pn	**P**	**20 04 22.6 +1.6**
KOME				*i* Sn	**S**	**20 05 35.7 -0.4**
KBN	**Korca**	**5.72**	**75**	P	**P**	**20 04 22.5 +1.4**
KBN	**Korca**	**5.72**	**75**	P	**P**	**20 04 23.2 +2.1**
KBN	**Korca**	**5.72**	**75**	P	**P**	**20 04 22.5 +1.4**
PHP	**Peshkopia**	**5.76**	**64**	P	**P**	**20 04 22.8 +1.3**
MSSA	**Maissana**	**5.79**	**330**	P	**P**	**20 04 22.0 +0.3**
OHR	**Ohrid**	**5.84**	**70**	*i* Pn	**P**	**20 04 24.5 +2.2**
PVY	**Plav**	**5.84**	**54**	⇑*i*Pn	**P**	**20 04 24.1 +1.7**
PVY				*i* Sn	**S**	**20 05 38.4 -0.1**
NEST	**Nestorio**	**5.88**	**77**	P	**P**	**20 04 25.1 +2.3**
PRMA	**PARMA**	**5.91**	**337**	P	**P**	**20 04 22.6 -0.1**
PENT	**Pentalofos**	**5.93**	**79**	P	**P**	**20 04 25.1 +1.9**
PLE	**Pljevlja**	**5.94**	**46**	⇓*i*Pn	**P**	**20 04 24.3 +1.1**
PLE				*i* Sn	**S**	**20 05 40.1 0.0**
IVA	**Berane**	**5.96**	**52**	*e*Pn	**P**	**20 04 25.1 +1.7**
IVA				*i* Sn	**S**	**20 05 40.4 -0.1**
BLY	**Banja Luka**	**6.04**	**26**	⇑*i*Pn	**P**	**20 04 24.4 +0.3**
KPRO	**Kipourio**	**6.08**	**82**	P	**P**	**20 04 26.4 +1.7**
PRIJ	**Prijedor**	**6.09**	**22**	*e*Pn	**P**	**20 04 25.4 +0.8**
RUDO	**Rudo**	**6.11**	**44**	*e*Pn	**P**	**20 04 25.0 +0.1**
CKFL	**Kef-Lekhel**	**6.14**	**243**	P	**P**	**20 04 26.7 +1.2**
TEOL	**Teolo**	**6.15**	**348**	P	**P**	**20 04 23.5 -1.7**
A051A	**Mrakovica**	**6.18**	**23**	*e*Pn	**P**	**20 04 26.1 +0.4**
SKDS	**Skadanscina**	**6.20**	**3**	*i* P	**P**	**20 04 24.9 -0.9**
SKDS				*i* S	**S**	**20 05 42.3 -2.5**
SKDS				*i* ScP	**ScP**	**20 13 13.8 -0.4**
SKDS				*i* ScS	**ScS**	**20 16 46.8 -0.4**
HAPS	**Han Pijesak,BI**	**6.23**	**39**	⇑*i*Pn	**P**	**20 04 26.7 +0.5**
BBLS	**Lazići**	**6.30**	**42**	⇑*i*Pn	**P**	**20 04 27.3 +0.4**
RLS	**Riolos of Patr**	**6.35**	**99**	P	**P**	**20 04 28.5 +1.1**
CASM	**Ain Smara**	**6.37**	**243**	P	**P**	**20 04 28.9 +1.2**
SBF	**Sospel**	**6.41**	**317**	*e*P	**P**	**20 04 28.8 +0.8**
CEY	**Cerknica**	**6.41**	**6**	*e*Pn	**P**	**20 04 27.3 -0.6**
KZN	**Kozani**	**6.42**	**79**	P	**P**	**20 04 29.6 +1.4**
EVR	**Evrytania**	**6.46**	**91**	P	**P**	**20 04 30.7 +2.1**
A052A	**Srbac**	**6.46**	**26**	⇑*i*Pn	**P**	**20 04 28.2 -0.2**
CTEI	**Djebel Teioual**	**6.53**	**242**	P	**P**	**20 04 30.9 +1.5**
SKO	**Skopje**	**6.56**	**64**	*i* Pn	**P**	**20 04 30.6 +1.1**
THL	**Klokotos Trika**	**6.58**	**86**	P	**P**	**20 04 31.0 +1.4**
LMR	**La Mourre**	**6.60**	**309**	*e*P	**P**	**20 04 30.6 +0.7**
SALO	**Salr**	**6.64**	**341**	P	**P**	**20 04 28.4 -1.8**
DFRA	**Djebel Bou Aff**	**6.66**	**247**	P	**P**	**20 04 32.2 +1.4**
LJU	**Ljubljana**	**6.72**	**6**	*i* P	**P**	**20 04 30.9 -0.1**
LJU				*i* S	**S**	**20 05 52.5 -2.1**

LJU *i* ScP **ScP** 20 13 14.6 -0.1
LJU *i* ScS **ScS** 20 16 47.5 -0.3
DIVS Divibare 6.77 44 P **P** 20 04 32.2 +0.5
DIVS Divibare 6.77 44⇑ *i* Pn **P** 20 04 32.4 +0.7
ALIK Aliki, Aigiali 6.80 97 P **P** 20 04 33.9 +1.9
CTI Castel Tesino 6.83 349 P **P** 20 04 30.7 -1.6
CTI Castel Tesino 6.83 349 P **P** 20 04 30.7 -1.6
AGG Agios Georgios 6.85 90 P **P** 20 04 34.2 +1.6
AGG S **S** 20 05 58.3 +1.0
TEKS Tekeris 6.85 39⇑ *i* Pn **P** 20 04 32.3 -0.1
BLJ Bijeljina 6.90 36 *e* Pn **P** 20 04 32.2 -0.7
STAL STALIGIAL 6.92 355 P **P** 20 04 32.0 -1.2
ITM Ithomi 6.96 106 P **P** 20 04 34.7 +1.0
ITM Ithomi 6.96 106 P **P** 20 04 34.5 +0.7
ITM Ithomi 6.96 106 P **P** 20 04 34.6 +0.9
GRG Griva 6.99 74 P **P** 20 04 34.8 +0.9
GRG Griva 6.99 74 P **P** 20 04 34.8 +0.9
STIP Stip 7.00 68 *i* Pn **P** 20 04 37.1 +3.1
PRED Cave del Predi 7.08 0 P **P** 20 04 33.0 -1.9
KLMT Kalamata 7.10 106 P **P** 20 04 36.0 +0.8
CLUD Cludinico 7.11 356 P **P** 20 04 34.3 -0.8
SET Setif 7.16 246 P **P** 20 04 40.0 +4.0
MAHO Mahon 7.17 277 P **P** 20 04 32.8 -2.9
MAHO S **S** 20 05 59.9 -3.3
MAHO Mahon 7.17 277 P **P** 20 04 36.1 +0.3
CKHR Kef el Ahmar 7.17 245 P **P** 20 04 37.8 +1.7
VAY Valandovo 7.18 71 *i* Pn **P** 20 04 37.1 +1.1
OBKA Obir 7.19 6⇑ *i* Pn **P** 20 04 35.7 -0.3
OBKA Obir 7.19 6 *i* Pn **P** 20 04 35.9 -0.1
comp=E,452nm,0.6s,SNR=164
OBKA *i* S **ScP** 20 13 15.5 +0.4
comp=E,59nm,0.8s,SNR=9.5
MYKA Terra Mystica 7.27 1 *i* Pn **P** 20 04 36.8 -0.1
comp=E,251nm,0.5s,SNR=177
MYKA *i* S **ScP** 20 13 15.0 -0.2
comp=E,26nm,0.9s,SNR=8.1
MBDF Montbardon 7.35 319 *e* P **P** 20 04 39.3 +1.5
PERS Pernice 7.37 9 *i* P **P** 20 04 38.0 +0.1
PERS *i* S **S** 20 06 04.6 -2.5
PERS *i* ScP **ScP** 20 13 15.1 -0.1
KNT Kendrikon 7.39 73 P **P** 20 04 38.8 +0.6
KNT Kendrikon 7.39 73 P **P** 20 04 38.7 +0.6
SOKA Soboth 7.40 8 *i* Pn **P** 20 04 38.4 +0.2
comp=E,188nm,0.4s,SNR=169
SOKA *i* S **ScP** 20 13 15.6 +0.3
comp=E,92nm,1.0s,SNR=25
ABTA Abfaltersbach 7.42 355 *i* Pn **P** 20 04 38.4 -0.1
comp=E,702nm,0.5s,SNR=619
ABTA *i* S **ScP** 20 13 14.9 -0.4
comp=E,32nm,1.1s,SNR=6.4
FRGS Fruska Gora 7.44 37⇑ P **P** 20 04 39.6 +1.0
FRGS Fruska Gora 7.44 37⇑ *i* Pn **P** 20 04 39.5 +0.9
HORT Hortiatis 7.46 77 P **P** 20 04 39.6 +0.6
HORT Hortiatis 7.46 77 P **P** 20 04 39.5 +0.6
BOVS Bovan 7.48 53 ⇑P **P** 20 04 40.1 +1.1
XOR Xorichti 7.49 87 P **P** 20 04 41.1 +1.8
BEHE Becsehely 7.50 17 P **P** 20 04 40.3 +1.2
BEHE S **S** 20 06 07.2 -2.3
NEO Neokhori 7.52 87 P **P** 20 04 40.7 +1.1
KOVH Kovagotottos 7.52 25 P **P** 20 04 40.2 +0.8
KOVH S **S** 20 06 07.4 -2.6
SMRF Simiane la Rot 7.53 310 *e* P **P** 20 04 40.9 +1.3
FUORN Ofenpass-Fuorn 7.64 343 P **P** 20 04 40.3 -0.7
SOH Sokhos 7.68 76 P **P** 20 04 42.1 +0.8
KKB Krupnik 7.69 68 *i* P **P** 20 04 43.4 +2.0
TUE Stuetta 7.74 338 P **P** 20 04 40.6 -1.4
KRND KRANIDI 7.82 102 P **P** 20 04 42.7 0.0
MORH Mrgy, Hungar 7.82 27 ⇑P **P** 20 04 43.6 +1.0
MORH Mrgy, Hungar 7.82 27 P **P** 20 04 43.5 +1.0
MORH S **S** 20 06 12.6 -3.2
PAIG Paliouri 7.86 83 P **P** 20 04 43.7 +0.6
PAIG Paliouri 7.86 83 P **P** 20 04 43.6 +0.5
DAVOX Davos/Dischmat 7.88 341 P **P** 20 04 42.7 -0.8
comp=E,493nm,0.5s,baz=159,slow=9.2,SNR=480
DAVOX S **S** 20 06 12.8 -4.6
comp=E,264nm,0.6s,baz=154,slow=22,SNR=1.4
DAVOX ScP **ScP** 20 13 15.6 -0.3
comp=E,32nm,0.9s,baz=147,slow=5.5,SNR=7.5
DAVOX ScS **ScS** 20 16 48.7 -1.0
comp=E,57nm,0.8s,baz=311,slow=20,SNR=8.9
VLI Velia1 7.88 107 P **P** 20 04 45.0 +1.5
SRS Serrai 7.90 74 P **P** 20 04 44.3 +0.7
LPG La Plagne 7.92 323 *e* P **P** 20 04 44.9 +0.9
FETA Feichten 7.93 346 *i* Pn **P** 20 04 43.8 -0.2
comp=E,1μm,0.5s,SNR=1029
FETA *i* S **ScP** 20 13 16.3 +0.4
comp=E,23nm,0.8s,SNR=5.0
LPL La Plagne 7.94 323 *e* P **P** 20 04 44.9 +0.7
ORIF Oris-en-Rattie 7.94 317 *e* P **P** 20 04 44.9 +0.8
WTTA Wattenberg 8.02 351 *i* Pn **P** 20 04 45.4 +0.4
comp=E,3μm,0.5s,SNR=1172
WTTA *i* S **ScP** 20 13 16.0 0.0
comp=E,32nm,0.7s,SNR=10
WTTA Wattenberg 8.02 351 *i* P **ScS** 20 16 49.5 -0.3
comp=E,196nm,1.7s,SNR=9.7
ARSA Arzberg 8.02 10 *i* Pn **P** 20 04 45.7 +0.9
comp=E,275nm,0.5s,SNR=460
ARSA *i* S **ScP** 20 13 15.8 0.0
comp=E,58nm,0.8s,SNR=13
VTS Vitosha 8.04 63 P **P** 20 04 46.7 +1.5
VTS Vitosha 8.04 63 P **P** 20 04 46.3 +1.2
VTS Vitosha 8.04 63 P **P** 20 04 46.3 +1.2
VTS S **S** 20 06 20.9 +0.5
VTS Vitosha 8.04 63 *i* P **P** 20 04 46.5 +1.3
SQTA Sankt Quirin 8.04 349 *i* Pn **P** 20 04 45.2 +0.1
comp=E,918nm,0.5s,SNR=441
SQTA *i* S **ScP** 20 13 15.9 -0.1
comp=E,12nm,0.5s,SNR=5.7
BLKB Belogradchik 8.08 55 ⇑P **P** 20 04 47.3 +1.8
MMB Musomiste 8.09 71 *i* P **P** 20 04 47.3 +1.6
WATA Walderalm 8.10 351 *i* Pn **P** 20 04 45.8 +0.1
comp=E,2μm,0.5s,SNR=1383
WATA *i* S **ScP** 20 13 15.6 -0.5
comp=E,13nm,0.7s,SNR=7.7
WATA Walderalm 8.10 351 *i* P **ScS** 20 16 49.5 -0.4
comp=E,103nm,1.2s,SNR=5.7
OUR Ouranopolis 8.11 80 P **P** 20 04 46.7 +0.9
OUR Ouranopolis 8.11 80 P **P** 20 04 46.6 +0.8
KTHR Kythira 8.12 109 P **P** 20 04 47.2 +1.2
NVR Nevrokopi 8.14 73 P **P** 20 04 47.5 +1.3
MDVR Moldovita 8.15 46 ⇑P **P** 20 04 47.8 +1.6
KTHA Kythira Island 8.16 109 P **P** 20 04 48.1 +1.6
KTHA Kythira Island 8.16 109 P **P** 20 04 47.8 +1.3
MOTA Moosalm 8.18 348 *i* Pn **P** 20 04 46.2 -0.4
comp=E,703nm,0.6s,SNR=355
MOTA *e* S **ScP** 20 13 16.0 -0.1
comp=E,17nm,0.7s
TIH Tihany 8.19 22 P **P** 20 04 48.1 +1.6
TIH S **S** 20 06 23.6 +0.7
BANR Banloc 8.24 41 ⇑P **P** 20 04 48.9 +1.8
KYMI Kymi, Euboea I 8.27 92 P **P** 20 04 48.4 +0.8
BIOA Bad Ischl, Aus 8.33 1 *i* Pn **P** 20 04 48.5 +0.4
comp=E,1μm,0.5s,SNR=752
BIOA *i* S **ScP** 20 13 15.8 -0.3
comp=E,47nm,1.0s,SNR=10
BIOA Bad Ischl, Aus 8.33 1 *e* P **ScS** 20 16 48.9 -1.1
comp=E,49nm,1.4s
MPLH Magyarpolny 8.34 19 P **P** 20 04 49.2 +1.1
MPLH S **S** 20 06 26.8 +0.9
DAVA Damuels 8.36 343 *i* Pn **P** 20 04 47.5 -1.0
comp=E,2μm,0.5s,SNR=530
DAVA *i* S **ScP** 20 13 16.6 +0.2
comp=E,40nm,0.8s,SNR=7.3
SENIN Lac Senin/Sane 8.36 329 P **P** 20 04 47.5 -1.2
RETA Reutte 8.37 347 *i* Pn **P** 20 04 47.8 -0.8
comp=E,828nm,0.5s,SNR=546
RETA *e* S **ScP** 20 13 16.0 -0.3
comp=E,12nm,0.5s
RETA Reutte 8.37 347 *i* P **ScS** 20 16 50.1 0.0
comp=E,121nm,1.3s,SNR=14
ANKY Antikythira Is 8.51 111 P **P** 20 04 51.9 +1.7
MOA Molln 8.51 3 *i* Pn **P** 20 04 50.7 +0.8
comp=E,643nm,0.4s,SNR=679
MOA *e* S **ScP** 20 13 16.0 -0.3
comp=E,16nm,0.9s
EGYH Egyhazaskeszo 8.52 18 P **P** 20 04 51.3 +1.2
EGYH S **S** 20 06 29.0 -0.4
TIM Timisoara 8.54 39 ⇑P **P** 20 04 52.2 +1.9
TIM Timisoara 8.54 39 ⇑P **P** 20 04 52.2 +1.9
DJES Djerdap 8.54 49 ⇓P **P** 20 04 51.9 +1.5
VIVF Saint-Julien-l 8.57 313 *e* P **P** 20 04 51.2 +0.5
KAVA Kavala 8.57 75 P **P** 20 04 51.4 +0.6
PUNG Punghina 8.57 52 ⇑P **P** 20 04 52.0 +1.3

RONA Rosalia, Austr 8.58 13 *i* Pn **P** 20 04 52.4 +1.6
comp=E,639nm,0.9s,SNR=652
RONA *i* S **ScP** 20 13 16.5 +0.1
comp=E,25nm,0.8s,SNR=5.4
HERR Herculane 8.61 47 ⇑P **P** 20 04 52.6 +1.5
SOP Sopron 8.61 14 P **P** 20 04 52.0 +1.0
SOP S **S** 20 06 32.2 +1.0
LASF Ste Croix 8.63 306 *e* P **P** 20 04 51.6 +0.3
RMGR Halanga-Turnu 8.64 49 ⇑P **P** 20 04 53.5 +2.1
BZS Buzias 8.65 41 ⇑P **P** 20 04 53.2 +1.7
BZS Buzias 8.65 41 ⇑P **P** 20 04 53.2 +1.7
PGB Panagyurishte 8.66 65 *i* P **P** 20 04 53.6 +1.8
THAS Thassos island 8.69 78 P **P** 20 04 47.6 -4.4
BAIL Bailesti 8.70 54 ⇑P **P** 20 04 53.5 +1.4
CSKK Cskako 8.71 22 P **P** 20 04 53.8 +1.6
CSKK S **S** 20 06 33.7 +0.4
CONA Conrad Observa 8.73 10 *i* Pn **P** 20 04 53.6 +1.2
comp=E,542nm,0.9s,SNR=763
CONA *e* S **ScP** 20 13 16.3 -0.4
comp=E,28nm,0.8s
CONA Conrad Observa 8.73 10 *i* P **ScS** 20 16 49.8 -0.9
comp=E,28nm,1.3s,SNR=6.0
AMBH Ambrzfalva 8.76 35 ⇓P **P** 20 04 55.0 +2.3
AMBH Ambrzfalva 8.76 35 P **P** 20 04 54.1 +1.4
AMBH S **S** 20 06 35.0 +0.8
RZN Rozhen 8.84 71 *i* P **P** 20 04 55.2 +1.4
SSB Saint Sauveur 8.90 315 P **P** 20 04 54.5 +0.2
SSB Saint Sauveur 8.90 315 P **P** 20 04 54.5 +0.2
PLD Plovdiv 8.92 69 P **P** 20 04 56.1 +1.6
PLD Plovdiv 8.92 69 *i* P **P** 20 04 56.1 +1.6
SRE Strehaia 8.94 51 ⇑P **P** 20 04 56.6 +1.9
SRE Strehaia 8.94 51 ⇑P **P** 20 04 56.6 +1.9
MHLO Agia Marina, M 8.99 104 P **P** 20 04 55.7 +0.4
BUD Budapest 9.05 24 P **P** 20 04 57.3 +1.5
BUD S **S** 20 06 41.3 +1.4
CABF La Chapelle 9.06 326 *e* P **P** 20 04 54.9 -1.2
CABF *e* Sn **S** 20 06 36.4 -4.1
comp=E,2μm,0.7s
KNDR Palaiochora Ch 9.08 114 P **P** 20 04 56.8 +0.4
KNDR Palaiochora Ch 9.08 114 P **P** 20 04 56.8 +0.4
GZR Gura Zlata 9.12 46 ⇑P **P** 20 04 58.2 +1.5
SIRR Siria 9.13 38 ⇑P **P** 20 04 58.3 +1.6
SRO Srobarova 9.14 21 *e* P **P** 20 04 59.0 +2.3
SRO *e* S **S** 20 06 43.2 +1.6
SRO pmax pmax
comp=Z,2μm,1.1s
IMMV Iera Moni Meta 9.18 112 P **P** 20 04 58.8 +1.3
IMMV Iera Moni Meta 9.18 112 P **P** 20 04 58.7 +1.3
ZST Bratislava 9.21 15 *e* P **P** 20 04 59.2 +1.7
ZST *e* S **S** 20 06 43.2 +0.2
ZST pmax pmax
comp=Z,3μm,0.9s
SMTH Samothraki Isl 9.29 79 P **P** 20 04 59.5 +0.9
BSZH Besenyszg 9.33 30 ⇑P **P** 20 05 01.3 +2.5
BSZH Besenyszg 9.33 30 P **P** 20 05 00.8 +2.0
BSZH S **S** 20 06 46.9 +1.4
KDZ Kurdzhali 9.35 72 P **P** 20 04 59.9 +0.8
KDZ Kurdzhali 9.35 72 *i* P **P** 20 04 59.8 +0.7
RDO Rodhopi 9.36 75 P **P** 20 05 00.8 +1.5
RDO Rodhopi 9.36 75 P **P** 20 05 00.4 +1.2
RDO Rodhopi 9.36 75 P **P** 20 05 00.7 +1.5
VLAD Vladila 9.37 57 ⇑P **P** 20 05 00.7 +1.5
MTLF Montolieu 9.38 299 *e* P **P** 20 04 59.7 +0.2
MODS Modra-Piesok 9.41 15 *e* P **P** 20 05 01.4 +1.7
MODS *e* S **S** 20 06 47.0 -0.1
MODS pmax pmax
comp=Z,3μm,1.4s
CKRC Cesky Krumlov 9.48 3⇓ *i* P **P** 20 05 01.1 +0.7
CKRC *e* S **S** 20 06 46.9 -1.5
CKRC *e* SCP **ScP** 20 13 17.3 -0.1
CKRC *e* SCS **ScS** 20 16 49.5 -2.3
GEC2 GERESS Array S 9.49 1 P **P** 20 05 00.8 +0.2
GERES GERESS Array B 9.49 1 P **P** 20 04 59.9 -0.7
comp=Z,622nm,0.4s,baz=241,slow=38,SNR=302
GERES S **S** 20 06 46.3 -2.5
comp=Z,29nm,0.6s,baz=307,slow=43,SNR=1.8
GERES ScP **ScP** 20 13 17.3 -0.2
comp=Z,46nm,0.8s,baz=132,slow=2.0,SNR=47
GERES P3KPbc 20 41 08.6
comp=Z,0.8nm,0.9s,baz=297,slow=4.3,SNR=2.5
GERES GERESS Array B 9.49 1 P **P** 20 04 58.6 -2.0
DEV Deva 9.50 44 ⇑P **P** 20 05 02.8 +2.1
DEV Deva 9.50 44 ⇑P **P** 20 05 02.8 +2.1
DIM Dimitrovgrad 9.51 70 *i* P **P** 20 05 02.7 +1.8
SIGR SIGRI 9.56 87 P **P** 20 05 02.9 +1.4
SIGR SIGRI 9.56 87 P **P** 20 05 02.7 +1.2
GADA Gvkgeada 9.57 81 P **P** 20 05 02.8 +1.3
GVD Gavdhos 9.57 115 P **P** 20 05 02.4 +0.8
GVD Gavdhos 9.57 115 P **P** 20 05 02.4 +0.8
SMOL Smolenice 9.57 16 *e* P **P** 20 05 03.0 +1.5
SMOL *e* S **S** 20 06 50.2 -0.2
SMOL pmax pmax
comp=Z,376nm,1.2s
BOZC Bozcaada 9.69 83 P **P** 20 05 03.9 +1.1
PVL Pavlikeni 9.69 63 *i* P **P** 20 05 02.7 -0.1
LOT Lotru 9.71 48 ⇑P **P** 20 05 05.3 +2.1
LOT Lotru 9.71 48 P **P** 20 05 05.3 +2.1
BFO Black Forest 9.72 339 P **P** 20 05 01.5 -1.5
BFO Black Forest 9.72 339 P **P** 20 05 01.8 -1.3
BFO S **S** 20 06 52.1 -1.2
PSZ Piszkesteto 9.72 26 ⇑P **P** 20 05 04.7 +1.6
PSZ Piszkesteto 9.72 26 P **P** 20 05 04.2 +1.1
PSZ Piszkesteto 9.72 26 P **P** 20 05 04.7 +1.6
PSZ S **S** 20 06 52.6 -0.8
PSZ Piszkesteto 9.72 26 P **P** 20 05 04.4 +1.3
PSZ S **S** 20 06 54.4 +1.0
APE Apeiranthos 9.72 100 ⇑P **P** 20 05 03.9 +0.6
APE Apeiranthos 9.72 100 P **P** 20 05 03.8 +0.5
APE Apeiranthos 9.72 100 P **P** 20 05 03.9 +0.6
APE Apeiranthos 9.72 100 ⇑P **P** 20 05 03.9 +0.6
HINF Hinteralfeld 9.74 332 *e* P **P** 20 05 01.8 -1.5
HINF *e* Sn **S** 20 06 51.7 -2.0
comp=Z,762nm,0.8s
KHC Kasperske Hory 9.77 0 P **P** 20 05 04.2 +0.5
KHC Kasperske Hory 9.77 0⇓ *i* P **P** 20 05 04.4 +0.8
KHC *e* S **S** 20 06 52.1 -2.2
KHC Kasperske Hory 9.77 0⇓ *i* P **P** 20 05 04.4 +0.8
KHC *e* S **S** 20 06 52.1 -2.2
KHC *e* SCP **ScP** 20 13 17.4 -0.4
KHC *e* SCS **ScS** 20 16 50.6 -1.7
BORR Bors 9.80 35 ⇑P **P** 20 05 06.0 +2.2
THR5 Thira Island, 9.80 104 P **P** 20 05 04.6 +0.5
CHOS Chios island 9.82 92 P **P** 20 05 05.9 +1.5
THR9 Santorini-Faro 9.82 104 P **P** 20 05 05.0 +0.6
PRK Paraskevi 9.88 87 P **P** 20 05 07.2 +2.2
EZN Ezine 9.89 83 P **P** 20 05 06.2 +1.1
SANT Santorini 9.90 104 ⇑P **P** 20 05 06.0 +0.8
SANT Santorini 9.90 104 P **P** 20 05 06.1 +0.8
SANT Santorini 9.90 104 P **P** 20 05 04.9 -0.3
VYHS Vyhne 9.90 21 *e* P **P** 20 05 06.4 +1.4
VYHS *e* S **S** 20 06 56.6 -0.3
VYHS pmax pmax
comp=Z,445nm,0.9s
STU Stuttgart 9.91 343 P **P** 20 05 04.2 -0.9
STU Stuttgart 9.91 343 P **P** 20 05 04.5 -0.6
STU S **S** 20 06 56.8 -0.2
KRUC Moravsky 9.92 11⇓ *i* P **P** 20 05 06.7 +1.5
KRUC *e* S **S** 20 06 57.3 +0.1
KRUC *e* SCP **ScP** 20 13 18.2 +0.3
KRUC *e* SCS **ScS** 20 16 51.7 -0.8
IDI Anoyia 9.92 111 ⇑P **P** 20 05 06.0 +0.4
IDI Anoyia 9.92 111 P **P** 20 05 05.7 +0.2
comp=Z,1μm,0.8s,baz=332,slow=9.2,SNR=311
IDI S **S** 20 06 51.9 -5.8
comp=Z,528nm,0.9s,baz=298,slow=15,SNR=2.9
IDI Anoyia 9.92 111 P **P** 20 05 06.2 +0.7
IDI Anoyia 9.92 111 P **P** 20 05 05.1 -0.5
COPA Copaceanca 9.95 58 ⇑P **P** 20 05 07.6 +1.9
JAVC Velka Javorina 9.95 16⇓ *i* P **P** 20 05 07.9 +2.3
JAVC *e* S **S** 20 06 59.0 +1.0
JAVC *e* SCP **ScP** 20 13 19.5 +1.5
JAVC *e* SCS **ScS** 20 16 54.2 +1.5
ECH Echery 9.97 335 P **P** 20 05 04.5 -1.3
ECH Echery 9.97 335 P **P** 20 05 04.5 -1.3
HUMR Humele 9.97 55 ⇑P **P** 20 05 07.6 +1.7
GELI Tayfur-Gelibol 10.01 80 P **P** 20 05 07.5 +1.2
DRGR 10.01 39 ⇑P **P** 20 05 08.1 +1.8
DRGR 10.01 39 ⇑P **P** 20 05 08.1 +1.8
TREC Trest 10.03 7⇓ *i* P **P** 20 05 08.2 +1.8
TREC *e* S **S** 20 06 59.7 +0.2
TREC Trest 10.03 7⇓ *i* P **P** 20 05 08.2 +1.8

TREC *e* S **S** 20 06 59.7 +0.2
LTVH Ltavrtes, Hu 10.07 34 ⇑P **P** 20 05 09.3 +2.5
LTVH Ltavrtes, Hu 10.07 34 P **P** 20 05 09.1 +2.2
HAU Haudompre 10.08 331 *e* P **P** 20 05 06.0 -1.0
HAU *e* Sn **S** 20 06 58.9 -1.6
comp=Z,750nm,0.8s
CDF Champ du Feu 10.11 336 *e* P **P** 20 05 06.5 -0.8
CDF *e* Sn **S** 20 06 59.2 -1.9
comp=Z,548nm,0.8s
STFAR Stefanesti-Arg 10.12 53 ⇓P **P** 20 05 09.7 +2.3
SZH Strazhica 10.12 63 *i* P **P** 20 05 09.2 +1.7
SMF Signal de Mont 10.16 319 *e* P **P** 20 05 07.2 -0.6
SMF *e* Sn **S** 20 06 59.0 -3.1
comp=Z,455nm,0.9s
CAF Calviac 10.16 307 *e* P **P** 20 05 08.4 +0.5
CAF *e* Sn **S** 20 06 58.5 -3.7
comp=Z,133nm,0.6s
ARR Arges 10.18 50 ⇑P **P** 20 05 10.5 +2.4
VRAC Vranov 10.19 11 ⇓P **P** 20 05 09.7 +1.6
VRAC Vranov 10.19 11 P **P** 20 05 09.4 +1.3
comp=Z,755nm,0.6s,baz=197,slow=10,SNR=560
VRAC S **S** 20 07 00.7 -1.8
comp=Z,58nm,0.7s,baz=327,slow=20,SNR=7.4
VRAC ScP **ScP** 20 13 18.3 +0.1
comp=Z,96nm,0.9s,baz=172,slow=1.7,SNR=25
VRAC Vranov 10.19 11⇓ *i* P **P** 20 05 09.6 +1.5
VRAC *e* S **S** 20 07 01.7 -0.8
VRAC *e* SCP **ScP** 20 13 18.6 +0.4
VRAC *e* SCS **ScS** 20 16 52.9 -0.1
URLA Izmir 10.25 91 P **P** 20 05 09.6 +0.6
EDRB Edirne 10.36 72 P **P** 20 05 11.8 +1.7
EDRB Edirne 10.36 72 P **P** 20 05 11.7 +1.7
JMB Yambol 10.36 68 *i* P **P** 20 05 08.5 -1.6
MESR Meseseni 10.38 38 ⇑P **P** 20 05 12.3 +2.0
DKL Dikili 10.39 87 P **P** 20 05 12.2 +1.8
CJR Cluj-Napoca 10.41 42 ⇑P **P** 20 05 12.4 +1.8
CJR Cluj-Napoca 10.41 42 ⇑P **P** 20 05 12.4 +1.8
KECS Kecovo 10.41 27 *e* P **P** 20 05 12.4 +1.9
KECS *e* S **S** 20 07 08.1 +1.2
KECS pmax pmax
comp=Z,628nm,1.2s
CBBR Cluj-Babes-Bol 10.42 41 ⇑P **P** 20 05 12.4 +1.8
EANR 'Ain N'Sour 10.42 255 P **P** 20 05 12.0 +1.1
GRA1 Grafenberg Arr 10.46 352 P **P** 20 05 11.1 0.0
GRF Grafenberg Arr 10.46 352 P **P** 20 05 11.1 0.0
GRFO Grafenberg 10.46 352 P **P** 20 05 11.2 +0.2
GRFO Grafenberg 10.46 352 P **P** 20 05 11.2 +0.2
VOIR 10.46 51 ⇑P **P** 20 05 13.7 +2.5
VOIR 10.46 51 ⇑P **P** 20 05 13.7 +2.5
MAUC Maruska 10.47 16⇓ *i* P **P** 20 05 12.9 +1.7
MAUC *e* S **S** 20 07 08.0 -0.1
MAUC *e* SCS **ScS** 20 16 54.5 +0.9
MDB Medias 10.47 46 ⇑P **P** 20 05 13.6 +2.4
MDB Medias 10.47 46 ⇑P **P** 20 05 13.6 +2.4
SGRR Singureni 10.49 58 ⇑P **P** 20 05 13.4 +2.0
AVF Avril sur Loir 10.51 318 *e* P **P** 20 05 11.1 -0.5
AVF *e* Sn **S** 20 07 06.1 -2.8
ABAH Abaujker 10.53 29 P **P** 20 05 12.7 +1.0
ABAH S **S** 20 07 08.6 -0.7
CEI Carei 10.55 35 ⇑P **P** 20 05 14.3 +2.3
CEI Carei 10.55 35 ⇑P **P** 20 05 14.3 +2.3
RKY Sarkoy-Tekirda 10.56 78 P **P** 20 05 13.9 +1.6
SMG Samos 10.56 95 P **P** 20 05 13.7 +1.3
BUC1 Bucharest 10.57 58 ⇑P **P** 20 05 14.1 +1.8
BUC1 Bucharest 10.57 58 ⇑P **P** 20 05 14.1 +1.8
LOR Lormes 10.58 321 *e* P **P** 20 05 11.5 -0.9
baz=132
LOR *e* Sn **S** 20 07 08.1 -2.3
comp=Z,160nm,0.8s
BLCB Balcova 10.59 91 P **P** 20 05 14.3 +1.7
BLCB Balcova 10.59 91 P **P** 20 05 14.0 +1.4
EPF Esparros 10.59 294 *e* P **P** 20 05 11.6 -1.0
EPF *e* Sn **S** 20 07 08.9 -1.9
comp=Z,334nm,1.3s
GOPC GO Pecny, Ondr 10.59 4⇓ *i* P **P** 20 05 13.7 +1.2
GOPC *e* S **S** 20 07 10.7 +0.1
GOPC GO Pecny, Ondr 10.59 4⇓ *i* P **P** 20 05 13.7 +1.2
GOPC *e* S **S** 20 07 10.7 +0.1
GOPC *e* SCP **ScP** 20 13 19.0 +0.2
SSF Saint Saulge 10.61 320 *e* P **P** 20 05 12.2 -0.5
SSF *e* Sn **S** 20 07 08.5 -2.5
comp=Z,365nm,0.9s
RAZG Razgrad 10.61 62 ⇑P **P** 20 05 14.4 +1.6
BGF Bois d'Agland 10.62 316 *e* P **P** 20 05 12.7 -0.2
BGF *e* Sn **S** 20 07 08.4 -2.9
comp=Z,236nm,0.6s
PRU Pruhonice 10.65 4⇓ *i* P **P** 20 05 14.1 +1.0
PRU *e* S **S** 20 07 10.4 -1.4
PRU Pruhonice 10.65 4⇓ *i* P **P** 20 05 14.1 +1.0
PRU *e* S **S** 20 07 10.4 -1.4
PRU *e* SCP **ScP** 20 13 19.1 +0.3
PRU *e* SCS **ScS** 20 16 53.5 -0.3
RJF Les Rejaudoux 10.69 308 *e* P **P** 20 05 14.3 +0.7
RJF *e* Sn **S** 20 07 09.9 -2.7
comp=Z,102nm,0.5s
INCR INCERC-Sediu C 10.70 58 ⇑P **P** 20 05 15.7 +2.0
SFTF Sexfontaines 10.76 328 *e* P **P** 20 05 13.9 -0.4
baz=149
SFTF *e* Sn **S** 20 07 12.4 -1.5
comp=Z,4μm,1.6s
PAGF Fort de Pagny 10.77 331 *e* P **P** 20 05 14.5 +0.1
baz=151
PAGF *e* Sn **S** 20 07 14.0 -0.1
comp=Z,512nm,0.7s
TGMR Targu Mures 10.78 45 ⇑P **P** 20 05 17.0 +2.4
MORC Moravsky Berou 10.80 14 ⇓P **P** 20 05 16.3 +1.5
MORC Moravsky Berou 10.80 14 P **P** 20 05 16.0 +1.2
MORC Moravsky Berou 10.80 14 ⇓P **P** 20 05 16.3 +1.5
MORC Moravsky Berou 10.80 14⇓ *i* P **P** 20 05 16.2 +1.4
MORC *e* S **S** 20 07 14.4 -0.4
MORC *e* SCP **ScP** 20 13 19.5 +0.4
MORC *e* SCS **ScS** 20 16 53.7 -0.5
TCF Toulx Ste Croi 10.81 314 *e* P **P** 20 05 15.4 +0.5
TCF *e* Sn **S** 20 07 12.5 -2.5
comp=Z,239nm,1.0s
PLAR PLOIESTI 10.81 55 ⇓P **P** 20 05 17.0 +2.0
SULR 10.86 57 ⇑P **P** 20 05 17.6 +2.2
GCAM G?zelcaml? 10.87 94 P **P** 20 05 17.5 +1.8
MRMT Marmara Adasi 10.87 79 P **P** 20 05 16.9 +1.2
SECR 10.89 55 ⇓P **P** 20 05 18.3 +2.5
NKC Novy Kostel 10.90 356 *e* P **P** 20 05 16.9 +1.1
NKC *e* S **S** 20 07 16.2 -0.5
NKC Novy Kostel 10.90 356⇓ *e* P **P** 20 05 16.9 +1.1
NKC *e* S **S** 20 07 16.2 -0.5
NKC *e* SCP **ScP** 20 13 19.4 +0.2
PHSR Pinarhisar 10.90 74 P **P** 20 05 17.9 +1.9
TRPA Tarpa 10.92 34 ⇑P **P** 20 05 17.7 +1.7
TRPA Tarpa 10.92 34 P **P** 20 05 17.3 +1.3
TRPA S **S** 20 07 17.5 +0.4
KOSK Kos Island 10.93 100 P **P** 20 05 17.1 +0.8
DOPR Dopca 10.95 49 ⇑P **P** 20 05 17.7 +1.3
KRLC Kraliky 10.96 11⇓ *i* P **P** 20 05 18.1 +1.6
KRLC Kraliky 10.96 11⇓ *i* P **P** 20 05 18.1 +1.6
ZKR Zakros 10.97 109 P **P** 20 05 17.5 +0.7
OKC Ostrava-Krasne 10.98 16⇓ *i* P **P** 20 05 18.2 +1.5
OKC *e* S **S** 20 07 17.4 -0.9
OKC Ostrava-Krasne 10.98 16⇓ *i* P **P** 20 05 18.2 +1.5
OKC *e* S **S** 20 07 17.4 -0.9
OKC *e* SCP **ScP** 20 13 19.7 +0.5
MEZF Maizieres J'vi 10.99 329 *e* P **P** 20 05 16.8 +0.1
baz=150
MEZF *e* Sn **S** 20 07 18.1 -0.3
comp=Z,674nm,0.9s
LFF La Frestale 11.00 305 *e* P **P** 20 05 18.4 +1.4
LFF *e* Sn **S** 20 07 16.7 -2.1
comp=Z,266nm,0.8s
CRLT Corlu 11.01 76 P **P** 20 05 19.6 +2.5
BMR Baia Mare 11.02 38 ⇑P **P** 20 05 18.9 +1.8
BMR Baia Mare 11.02 38 ⇑P **P** 20 05 18.9 +1.8
MLR Muntele Rosu 11.03 52 ⇑P **P** 20 05 19.7 +2.2
MLR Muntele Rosu 11.03 52 P **P** 20 05 19.7 +2.2
comp=Z,1μm,0.9s,baz=232,slow=3.6,SNR=739
MLR S **S** 20 07 19.9 +0.2
comp=Z,434nm,1.2s,baz=90,slow=22,SNR=7.1
MLR ScP **ScP** 20 13 19.2 -0.4
comp=Z,69nm,0.9s,baz=311,slow=1.6,SNR=10
MLR Muntele Rosu 11.03 52 P **P** 20 05 19.9 +2.4
ARCR ARCALIA 11.04 42 ⇑P **P** 20 05 18.9 +1.5
SAVF Savonnieres en 11.05 330 *e* P **P** 20 05 17.8 +0.4
baz=140
SAVF *e* Sn **S** 20 07 19.7 +0.1
comp=Z,951nm,1.3s

EDC Edincik 11.07 80 P **P 20 05 19.7 +1.9**
ROIA ROIAK 11.08 66 *i* P **P 20 05 19.7 +1.8**
NISR Nisiros 11.08 100 P **P 20 05 18.7 +0.7**
BODT Bodrum 11.09 98 P **P 20 05 18.3 +0.2**
BODT Bodrum 11.09 98 P **P 20 05 18.1 0.0**
CRVS Cervenica-Dubn 11.11 28 *e*P **P 20 05 20.2 +2.1**
CRVS *e*S **S 20 07 22.3 +1.4**
CRVS pmax pmax
comp=Z,688nm,1.3s
NIS1 Nisyros Isl. 11.12 100 P **P 20 05 19.4 +0.9**
NIS1 Nisyros Isl. 11.12 100 P **P 20 05 19.1 +0.6**
PRD Provadia 11.12 65 *i* P **P 20 05 19.7 +1.4**
LEHL Lehliu 11.14 58 ⇑P **P 20 05 20.6 +2.1**
DPC Dobruska-Polom 11.17 9 ⇓*i*P **P 20 05 19.9 +1.2**
DPC Dobruska-Polom 11.17 9 ⇓*i*P **P 20 05 19.9 +1.2**
DPC *e*SCP **ScP 20 13 20.2 +0.6**
HYF Humbligny 11.19 318 *e*P **P 20 05 18.7 -0.3**
HYF *e*Sn **S 20 07 21.3 -1.2**
ETSF Etsaut 11.19 293 *e*P **P 20 05 20.0 +0.8**
ETSF *e*Sn **S 20 07 22.3 -0.6**
comp=Z,1μm,1.6s
PVCC Panska Ves 11.19 3 ⇓*i*P **P 20 05 20.1 +1.1**
PVCC Panska Ves 11.19 3 ⇓*i*P **P 20 05 20.1 +1.1**
PVCC *e*SCP **ScP 20 13 20.1 +0.6**
UZH Uzhgorod 11.21 31 *e*P **P 20 05 19.0 -0.1**
UZH *i* S **S 20 07 20.0 -2.8**
UZH pmax pmax
comp=Z,80nm,0.8s
NEHR Nehoiu 11.22 53 ⇓P **P 20 05 20.8 +1.5**
RAC Raciborz 11.22 16 *e*P **P 20 05 21.0 +1.7**
RAC *e*S **S 20 07 23.7 +0.6**
RAC LMZ LR 20 11 51.3
comp=Z,4.1nm,13.4s
RAC Raciborz 11.22 16 *e*P **P 20 05 21.0 +1.7**
RAC *e*S **S 20 07 23.7 +0.6**
RAC MLR MLR
comp=Z,4μm,13.4s
ISR Istrita 11.23 55 ⇑P **P 20 05 21.9 +2.4**
ISR Istrita 11.23 55 ⇑P **P 20 05 21.9 +2.4**
OZUR 11.25 49 ⇑P **P 20 05 21.5 +1.8**
RASA Rasa 11.27 60 ⇑P **P 20 05 21.7 +1.8**
UPC Upice 11.29 8 ⇓*i*P **P 20 05 21.4 +1.4**
UPC *e*S **S 20 07 23.2 -1.1**
UPC Upice 11.29 8 ⇓*i*P **P 20 05 21.4 +1.4**
UPC *e*S **S 20 07 23.2 -1.1**
UPC *e*SCS **ScS 20 16 54.5 -0.6**
AYDB Zeytinkoy-Aydi 11.33 93 P **P 20 05 22.7 +1.9**
OSTC Ostas 11.36 9 ⇓*i*P **P 20 05 22.1 +1.3**
OSTC *e*SCP **ScP 20 13 20.6 +0.8**
OSTC *e*SCS **ScS 20 16 55.3 +0.1**
MOX Moxa 11.37 354 P **P 20 05 22.3 +1.5**
CHVC Chvalec 11.37 8 ⇓*i*P **P 20 05 22.3 +1.4**
SLVT Silivri 11.37 76 P **P 20 05 23.3 +2.2**
PGOR Pogoanele 11.43 57 ⇑P **P 20 05 23.9 +2.4**
KOLS Kolonicke sedl 11.44 30 *e*P **P 20 05 24.0 +2.3**
KOLS pmax pmax
comp=Z,493nm,0.6s
CTYL Yalikoy Yolu 11.46 75 P **P 20 05 23.9 +2.0**
STHS Stebnicka Huta 11.47 26 *e*P **P 20 05 23.7 +1.7**
STHS pmax pmax
comp=Z,794nm,1.4s
KARP Karpathos 11.49 105 P **P 20 05 21.9 -0.5**
KARP Karpathos 11.49 105 P **P 20 05 21.6 -0.8**
BRG Berggiesshubel 11.52 1 ⇓*i*P **P 20 05 24.0 +1.5**
BRG S **S 20 07 29.0 +0.1**
BRG pmax pmax
comp=Z,1μm,0.6s
BRG MLR MLR
comp=N,2μm,14.4s
BRG MLR MLR
comp=Z,6μm,11.2s
BRG MLR MLR
comp=E,2μm,9.1s
CART Cartagena 11.52 266 P **P 20 05 20.0 -2.7**
CART S S 20 07 19.8 -10
CART Cartagena 11.52 266 P **P 20 05 22.3 -0.5**
BISRR Bisoca 11.53 53 ⇑P **P 20 05 24.4 +1.6**
AMRR Amara 11.54 58 ⇑P **P 20 05 24.9 +2.1**
AMRR Amara 11.54 58 ⇑P **P 20 05 24.9 +2.1**
WLF Walferdange 11.56 335 P **P 20 05 23.4 +0.4**
WLF S **S 20 07 29.3 -0.5**
WLF Walferdange 11.56 335 *d*P **P 20 05 23.3 +0.3**
comp=Z,1μm,0.6s
WLF *d*S **S 20 07 28.1 -1.7**
CTKS Kestanelik-??a 11.60 76 P **P 20 05 25.4 +1.9**
GRER 11.62 54 ⇓P **P 20 05 25.9 +2.2**
PLOR Plostina 11.64 52 ⇑P **P 20 05 24.8 +0.9**
PLOR Plostina 11.64 52 ⇑P **P 20 05 24.8 +0.9**
KSP Ksiaz 11.65 9 *e*P **P 20 05 25.3 +1.4**
KSP *e*S **S 20 07 30.6 -0.9**
ICOR Ion Corvin 11.68 61 ⇑P **P 20 05 26.1 +1.8**
VRI Vrincioaia 11.70 52 ⇑P **P 20 05 25.6 +1.1**
VRI Vrincioaia 11.70 52 P **P 20 05 25.5 +1.1**
VRI Vrincioaia 11.70 52 ⇑P **P 20 05 25.6 +1.1**
SJPF Ste Jean 11.72 293 *e*P **P 20 05 25.6 +0.8**
SJPF *e*Sn **S 20 07 34.4 +1.2**
comp=Z,2μm,1.8s
OJC Ojcow 11.73 20 *e*P **P 20 05 24.5 -0.3**
OJC *e*S **S 20 07 31.2 -2.0**
USTO Oran 11.74 256 P P 20 05 20.0 -5.1
MANT Manisa 11.75 89 P **P 20 05 27.2 +1.8**
LVIA Vianden 11.78 336 κP **P 20 05 25.4 0.0**
comp=Z,720nm,0.7s
PSN Preselentsi 11.81 64 *i* P **P 20 05 26.9 +1.2**
YER Yerkesik 11.82 96 P **P 20 05 27.8 +1.8**
BURAR Bucovina Array 11.83 42 ⇑P **P 20 05 28.6 +2.5**
BURAR Bucovina Array 11.83 42 P **P 20 05 28.0 +1.9**
BURAR Bucovina Array 11.83 42 ⇑P **P 20 05 28.6 +2.5**
ODBI Odobesti 11.85 53 ⇑P **P 20 05 28.1 +2.0**
MDNY Mudanya-Bursa 11.85 80 P **P 20 05 27.9 +1.7**
CLF Chambon-Foret 11.88 320 P **P 20 05 26.8 +0.4**
TURN Turunc 11.89 98 P **P 20 05 27.2 +0.5**
CVDA Cernavoda 11.91 61 ⇑P **P 20 05 28.5 +1.7**
CLL Collm 11.96 358 P **P 20 05 28.5 +1.3**
CLL Collm 11.96 358 ⇓*i*P **P 20 05 29.0 +1.8**
CLL *e*S **S 20 07 39.0 +1.4**
CLL pmax pmax
comp=Z,3μm,1.0s
CLL Collm 11.96 358 ⇓*i*P **P 20 05 29.0 +1.8**
comp=Z,3μm,1.0s
CLL *e*Plp 20 05 30.0
comp=N,1μm,23.5s
CLL *e*Plp 20 05 30.0
comp=E,500nm,44.3s
CLL *e*Plp 20 05 30.0
comp=Z,1μm,23.2s
CLL *e*sPP 20 07 06.0
CLL *e*S **S 20 07 39.0 +1.4**
comp=N,3μm,23.8s
CLL *e*S **S 20 07 39.0 +1.4**
comp=E,10μm,16.7s
CLL *e*S **S 20 07 39.0 +1.4**
comp=Z,3μm,22.3s
CLL *e*x x 20 07 55.0
CLL *e*x x 20 09 42.0
CLL *e*x x 20 10 48.0
CLL ⇓*i*ScP **ScP 20 13 20.3 -0.3**
comp=Z,128nm,1.0s
CLL *e*ScS **ScS 20 16 54.0 -2.4**
LKLB Kalborn 11.96 336 κP **P 20 05 27.1 -0.2**
comp=Z,898nm,0.8s
PANC Panciu 11.96 53 ⇑P **P 20 05 28.6 +1.4**
HARR Harsova 11.96 59 ⇑P **P 20 05 28.8 +1.4**
HARR Harsova 11.96 59 ⇑P **P 20 05 28.8 +1.4**
ARG Arkhangelos 11.97 101 P **P 20 05 27.5 -0.1**
ARG Arkhangelos 11.97 101 P **P 20 05 27.3 -0.3**
ARG Arkhangelos 11.97 101 P **P 20 05 27.3 -0.3**
ARG Arkhangelos 11.97 101 P **P 20 05 27.3 -0.3**
TESR Tescani 11.98 49 ⇑P **P 20 05 29.2 +1.7**
TLBR Topalu 11.99 60 ⇑P **P 20 05 29.1 +1.5**
KLYT Kilyos 12.00 76 P **P 20 05 29.7 +1.9**
ISK Istanbul-Kandi 12.00 77 P **P 20 05 29.1 +1.2**
ISK Istanbul-Kandi 12.00 77 P **P 20 05 29.2 +1.3**
KAVV Kandilli-Istan 12.00 77 P **P 20 05 29.4 +1.5**
MANR Mangalia 12.12 64 ⇑P **P 20 05 30.6 +1.4**
TSMN Mangalia Port- 12.13 64 ⇑P **P 20 05 30.9 +1.8**
TUDR 12.15 55 ⇓P **P 20 05 29.6 +0.2**
DALY Dalyan (Mula) 12.19 97 P **P 20 05 30.9 +1.0**
IZVR Izvoarele 12.20 55 ⇓P **P 20 05 30.0 +0.1**
TIRR Tirgusor 12.20 61 ⇑P **P 20 05 31.1 +1.2**
TIRR Tirgusor 12.20 61 ⇑P **P 20 05 31.1 +1.2**
TIRR Tirgusor 12.20 61 P **P 20 05 31.1 +1.2**
TIRR Tirgusor 12.20 61 ⇑P **P 20 05 31.1 +1.2**
GHRR 12.21 52 ⇑P **P 20 05 31.1 +1.2**
BHOU Houvegnez 12.21 337 κP **P 20 05 30.0 0.0**
comp=Z,942nm,0.5s
BHOU *d*S **S 20 07 39.9 -2.8**
PRAR RASCA 12.21 45 ⇑P **S 20 05 32.5 +2.4**
SCHL Schela 12.22 55 ⇓P **P 20 05 30.3 +0.2**
SLCR Slobozia Conac 12.22 55 ⇓P **P 20 05 30.3 +0.2**
YLV Yalova 12.22 79 P **P 20 05 31.7 +1.3**
EFOR EFORIE 12.23 62 ⇑P **P 20 05 31.9 +1.7**
TSCT Constanta Port 12.27 62 ⇓P **P 20 05 32.2 +1.4**
CFR Carcaliu 12.28 57 ⇑P **P 20 05 31.7 +0.9**
CFR Carcaliu 12.28 57 ⇑P **P 20 05 31.7 +0.9**
RCHB Rochefort 12.29 334 *d*P **P 20 05 30.5 -0.3**
comp=Z,774nm,0.5s
RCHB *d*S **S 20 07 41.5 -2.7**
GEDZ Gediz 12.33 86 P **P 20 05 33.7 +2.1**
TVSB Tavsanli 12.33 85 P **P 20 05 32.8 +1.2**
GISR Galati 12.34 56 ⇓P **P 20 05 32.5 +1.1**
MFF Saint Martin d 12.34 310 *e*P **P 20 05 32.0 +0.6**
MFF *e*Sn **S 20 07 44.9 -0.5**
comp=Z,220nm,0.9s
MFF Saint Martin d 12.34 310 P **P 20 05 32.2 +0.8**
TPGR Topolog 12.35 59 ⇑P **P 20 05 32.7 +1.1**
BTNL Ternell 12.38 338 κP **P 20 05 32.2 +0.4**
comp=Z,2μm,0.7s
BTNL *d*S **S 20 07 48.1 +2.1**
GIVF Givet 12.38 333 *e*P **P 20 05 31.6 -0.2**
GIVF *e*Sn **S 20 07 49.9 +3.8**
comp=Z,260nm,0.8s
SCTR Scanteiesti 12.39 55 ⇑P **P 20 05 32.6 +0.5**
TATR Tatarca 12.40 55 ⇑P **P 20 05 32.5 +0.4**
VARL Varlezi 12.40 54 ⇑P **P 20 05 32.4 +0.3**
BIR Birlad 12.44 52 ⇑P **P 20 05 33.4 +1.0**
BIR Birlad 12.44 52 ⇑P **P 20 05 33.4 +1.0**
MEM Membach 12.44 337 κP **P 20 05 32.8 +0.4**
comp=Z,882nm,0.6s
MEM *d*S **S 20 07 45.9 -1.1**
SILT Sile 12.45 77 P **P 20 05 34.5 +1.8**
GIUM Giurgiulesti 12.45 56 ⇓P **P 20 05 33.7 +1.0**
HRT Hereke 12.45 78 P **P 20 05 33.9 +1.1**
DOU Dourbes 12.46 332 *d*P **P 20 05 32.2 -0.5**
comp=Z,634nm,0.5s
DOU *d*S **S 20 07 45.4 -2.2**
BCLA Clavier 12.49 335 κP **P 20 05 33.0 0.0**
comp=Z,484nm,0.7s
BCLA *d*S **S 20 07 48.5 +0.3**
ADVT Abdulvahap 12.50 80 P **P 20 05 34.9 +1.6**
APMY Acipayam-Deniz 12.52 94 P **P 20 05 35.3 +1.7**
VLDR Vladesti 12.52 54 ⇑P **P 20 05 33.6 +0.2**
BGES Gesves 12.53 334 κP **P 20 05 33.3 -0.1**
comp=Z,766nm,0.7s
BGES *d*S **S 20 07 46.9 -2.2**
BSTI Sart Tilman 12.55 336 *d*P **P 20 05 34.0 +0.5**
comp=Z,431nm,0.5s
BAIF Baives 12.57 331 *e*P **P 20 05 33.4 -0.5**
BAIF *e*Sn **S 20 07 52.7 +2.9**
comp=Z,183nm,0.8s
BMRD Maredsous 12.57 333 κP **P 20 05 33.5 -0.3**
comp=Z,553nm,0.9s
BMRD *d*S **S 20 07 48.1 -1.7**
FETY Fethiye 12.57 98 P **P 20 05 32.9 -1.2**
BLCH La Chartreuse 12.59 336 κP **P 20 05 34.7 +0.7**
comp=Z,1μm,0.4s
CAVI Cavuskoy 12.59 81 P **P 20 05 36.2 +2.0**
JURR Jurilovca 12.62 60 ⇑P **P 20 05 35.5 +1.1**
CAME Cameli-Denizli 12.65 96 P **P 20 05 35.9 +0.8**
BEBN Eben Emael 12.70 337 *d*P **P 20 05 36.0 +0.8**
comp=Z,10μm,0.5s
VASR Vaslui 12.72 50 ⇑P **P 20 05 36.7 +1.2**
AUBOZ BOZOYUK 12.74 82 P **P 20 05 36.8 +0.8**
LVV L'vov 12.85 32 ⇑*i*P **P 20 05 38.2 +1.4**
LVV *e*S **S 20 07 54.0 -1.3**
LVV MLR MLR
comp=Z,1μm,10.0s
IAS Iasi 12.86 48 ⇑P **P 20 05 38.6 +1.6**
IAS Iasi 12.86 48 ⇑P **P 20 05 38.6 +1.6**
LEOM Leova 12.91 52 ⇓P **P 20 05 38.0 +0.5**
LEOM Leova 12.91 52 ⇓P **P 20 05 38.0 +0.5**
SNF Seneffe 12.91 333 *d*P **P 20 05 37.0 -0.5**
comp=Z,708nm,0.6s
SNF *d*S **S 20 07 56.3 -0.2**
UCM Universidad Co 12.93 280 P **P 20 05 33.2 -4.7**
UCM S **S 20 07 53.2 -4.0**
DRBR Darabani 12.93 43 ⇓P **P 20 05 39.6 +1.9**
BBOU Bougnies 12.94 332 κP **P 20 05 37.3 -0.5**
comp=Z,1μm,0.6s
SAUV Serdivan-Sakar 12.95 79 P **P 20 05 39.5 +1.4**
BOPT Opiter 12.99 337 κP **P 20 05 39.8 +1.5**
comp=Z,4μm,0.8s
BRQR Ronquire 13.02 333 *d*P **P 20 05 38.2 -0.4**
comp=Z,530nm,0.5s
BORA Eskisehir 13.07 82 P **P 20 05 41.0 +1.5**
BORA Eskisehir 13.07 82 P **P 20 05 40.7 +1.2**
GULT Gulveren 13.10 80 P **P 20 05 41.6 +1.8**
AKAS Kas 13.10 99 P **P 20 05 38.0 -1.9**
AKAS Kas 13.10 99 P **P 20 05 37.8 -2.1**
BSKQ Steenkerk 13.10 333 *d*P **P 20 05 38.9 -0.7**
comp=Z,471nm,0.7s
RUE Ruedersdorf 13.13 1 *e*P **P 20 05 40.8 +1.1**
UCC Uccle 13.13 334 κP **P 20 05 38.5 -1.3**
comp=Z,2μm,0.5s
ELL Elmali 13.18 96 P **P 20 05 41.7 +1.0**
ELL Elmali 13.18 96 P **P 20 05 41.7 +1.0**
ELL Elmali 13.18 96 P **P 20 05 41.7 +1.0**
BMOL Mol 13.25 336 κP **P 20 05 42.6 +1.5**
comp=Z,9μm,0.8s
BDSL Dessel 13.26 336 *d*P **P 20 05 42.5 +1.3**
comp=Z,5μm,0.6s
SHUT Suhut-Afyon 13.28 88 P **P 20 05 44.0 +2.2**
TSSL Sulina 13.32 59 ⇑P **P 20 05 43.5 +1.5**
CHAS Isla Isabel II 13.37 257 P **P 20 05 38.2 -4.5**
CHAS S **S 20 08 03.0 -2.9**
ISP Isparta 13.39 91 P **P 20 05 44.3 +1.3**
ISP Isparta 13.39 91 P **P 20 05 43.9 +0.9**
ISP Isparta 13.39 91 *c i*P **P 20 05 44.1 +1.1**
KORT Korkueli 13.45 95 P **P 20 05 45.4 +1.7**
LDF La Druitiere 13.46 318 *e*P **P 20 05 42.7 -0.8**
LDF *e*Sn **S 20 08 11.7 +4.3**
comp=Z,2μm,1.4s
BEL Belsk 13.46 20 *e*P **P 20 05 45.4 +2.0**
BEL *e*S **S 20 08 08.2 +0.9**
MILM Milestii Mici 13.47 51 ⇑P **P 20 05 44.0 +0.5**
MILM Milestii Mici 13.47 51 ⇑*i*P **P 20 05 43.7 +0.2**
comp=Z,5μm,0.7s
MILM *i* S **S 20 08 04.0 -3.5**
comp=Z,24μm,1.9s
MILM Milestii Mici 13.47 51 *c i*P **P 20 05 43.7 +0.2**
MILM *i* S **S 20 08 04.0 -3.5**
MILM pmax pmax
comp=Z,5μm,0.7s
MILM smax smax
comp=N,24μm,1.9s
MILM smax smax
comp=E,22μm,1.8s
ESBB Sonseca Array 13.51 277 P **P 20 05 44.5 +0.3**
ESDC Sonseca Array 13.51 277 P **P 20 05 44.4 +0.2**
comp=E,495nm,0.8s,baz=75,slow=11,SNR=4090
ESDC S **S 20 08 07.9 -0.8**
comp=E,186nm,1.3s,baz=79,slow=17,SNR=8.4
ESDC ScP **ScP 20 13 23.5 +0.1**
comp=E,12nm,1.0s,baz=16,slow=2.6,SNR=8.1
ESDC P3KPbc 20 41 01.0
comp=E,0.7nm,0.9s,baz=291,slow=2.6,SNR=3.9
KIS Kishinev 13.51 51 ⇑P **P 20 05 44.5 +0.6**
KIS Kishinev 13.51 51 ⇑*i*P **P 20 05 44.0 0.0**
comp=E,2μm,0.6s
KIS *i* S **S 20 08 06.0 -2.3**
comp=E,22μm,2.0s
KIS Kishinev 13.51 51 *c i*P **P 20 05 44.0 0.0**
KIS PS 20 08 06.0
KIS pmax pmax
comp=Z,2μm,0.6s
BCK Bucak 13.52 93 P **P 20 05 45.9 +1.5**
CIFT Cifteler, Eski 13.58 84 P **P 20 05 46.6 +1.7**
MDUB Mudurnu 13.62 80 P **P 20 05 46.1 +0.7**
ANTB Antalya 13.71 95 P **P 20 05 48.4 +2.1**
WMELI Melilla 13.71 258 P **P 20 05 44.0 -2.4**
WMELI S **S 20 08 09.1 -3.5**
GRR Gorron 13.73 316 *e*P **P 20 05 45.6 -0.7**
GRR *e*Sn **S 20 08 17.8 +5.2**
comp=Z,310nm,1.1s
FLN La Foliniere 13.76 318 *e*P **P 20 05 45.7 -0.9**
baz=138
FLN *e*Sn **S 20 08 18.3 +5.2**
comp=Z,2μm,1.5s
KDZE Karadeniz Ereo 13.81 76 ⇑P **P 20 05 48.5 +1.1**
KDZE Karadeniz Ereo 13.81 76 P **P 20 05 48.4 +1.1**
PAB San Pablo 13.81 276 P **P 20 05 47.9 +0.4**
PAB San Pablo 13.81 276 P **P 20 05 48.1 +0.6**
PAB S **S 20 08 14.2 -0.5**
AUMIH MIHALICIK 13.86 82 P **P 20 05 49.6 +1.6**
SVRH Sivrihisar-ESK 13.92 84 P **P 20 05 50.3 +1.6**
BZEV Zevekote 13.94 331 *d*P **P 20 05 48.4 0.0**
comp=Z,5μm,0.6s
AUSIV SIVRIHISAR 13.94 84 P **P 20 05 50.5 +1.7**
YUVA Yuva-Kibriscik 13.99 80 P **P 20 05 51.4 +2.0**
GKP Gorka Klasztor 14.15 9 *e*P **P 20 05 52.0 +1.3**
GKP *e*S **S 20 08 20.3 -0.3**
GKP Gorka Klasztor 14.15 9 *e*P **P 20 05 52.0 +1.3**
KIZT Kizilcal 14.26 86 P **P 20 05 53.9 +1.6**
EMAL Malaga-Limoner 14.38 265 P **P 20 05 51.0 -2.4**
EMAL S **S 20 08 18.3 -7.3**
SEYD Seydisehir-KON 14.50 92 P **P 20 05 55.7 +0.8**
SGMF Saint Gilles 14.60 313 *e*P **P 20 05 54.4 -1.2**
SGMF *e*Sn **S 20 08 37.0 +7.4**
comp=Z,320nm,1.3s
ELSH Elham, Standar 14.64 328 ⇓*i*P **P 20 05 55.8 -0.2**
LADK Ladik-KONYA 14.75 89 P **P 20 05 58.2 +0.7**
HMNX Herstmonceux 14.77 325 ⇓*i*P **P 20 05 55.6 -1.8**
QUIF Quistinic 14.78 311 *e*P **P 20 05 56.7 -0.8**
QUIF *e*Sn **S 20 08 41.6 +8.5**
comp=Z,87nm,0.7s
KONT Konya--Tatoy 14.79 90 P **P 20 05 59.7 +1.8**
PVLZ Peæn de 14.79 259 P **P 20 05 55.8 -2.0**
PVLZ S **S 20 08 28.2 -5.5**
JQE Queens East 14.84 317 ⇓*i*P **P 20 05 56.9 -1.2**
JDG Jersey Dam (Ga 14.84 317 ⇓*e*P **P 20 05 56.9 -1.3**
LOD Lodumlu 14.84 82 P **P 20 05 58.4 0.0**
ANTO Ankara 14.87 82 ⇑P **P 20 05 59.9 +1.3**
ANTO Ankara 14.87 82 P **P 20 06 00.0 +1.3**
ANTO Ankara 14.87 82 P **P 20 05 59.8 +1.1**
ANTO Ankara 14.87 82 P **P 20 06 00.0 +1.3**
ANTO S **S 20 08 36.5 +1.3**
ANTO Ankara 14.87 82 P **P 20 06 00.2 +1.6**
ANTO P **P 20 06 00.2 +1.6**
JLP Les Platons 14.90 317 ⇓*i*P **P 20 05 57.6 -1.2**
JSA Saint Aubin 14.90 316 ⇓*i*P **P 20 05 57.5 -1.3**
JSA IAmb IAmb 20 05 59.0
comp=Z,1μm,0.5s
JVM Valle D.L. Mar 14.94 316 ⇓*i*P **P 20 05 58.0 -1.2**
ROSF Rostrenen 15.05 312 *e*P **P 20 05 59.5 -0.9**
ROSF *e*Sn **S 20 08 47.5 +9.1**
comp=Z,134nm,0.9s
CHBY Cihanbeyli 15.09 87 P **P 20 06 02.7 +1.6**
HDMB Hadim 15.11 93 P **P 20 06 01.7 +0.2**
KULU Kulu 15.11 85 P **P 20 06 02.8 +1.5**
GAZI Gazipasa 15.18 96 P **P 20 06 01.9 -0.1**
CEU Ceuta 15.36 263 P **P 20 06 04.0 +0.1**
CEU S **S 20 08 37.8 -6.9**
ELMS Elmsett, Ipswi 15.42 330 ⇓*i*P **P 20 06 04.8 +0.5**
ELMS IAmb IAmb 20 06 06.1
comp=Z,4μm,0.7s
CANT Cankiri 15.46 79 P **P 20 06 06.1 +1.1**
BR131 Keskin Array S 15.53 82 *c i*P **P 20 06 06.6 +0.9**
BR131 Keskin Array S 15.53 82 P **P 20 06 07.0 +1.2**
SNR=197
BR131 P **P 20 06 07.0 +1.2**
SNR=197
BRTR Keskin Array B 15.53 82 P **P 20 06 06.8 +1.0**
comp=Z,273nm,0.8s,baz=268,slow=8.1,SNR=817
BRTR S **S 20 08 48.0 -0.1**
comp=Z,9.5nm,0.9s,baz=319,slow=1.7,SNR=1.0
BRTR PcP **PcP 20 10 37.0 -0.1**
comp=Z,19nm,0.9s,baz=145,slow=2.2,SNR=4.2
BRTR ScP **ScP 20 13 27.0 -0.1**
comp=Z,25nm,0.8s,baz=186,slow=2.1,SNR=14
BRTR ScS **ScS 20 17 05.5 -0.5**
comp=Z,9.3nm,1.1s,baz=252,slow=13,SNR=10.0
BRTR Keskin Array B 15.53 82 P **P 20 06 06.9 +1.2**
BRTR Keskin Array B 15.53 82 P **P 20 06 06.7 +0.9**
BRTR Keskin Array B 15.53 82 *i* P **P 20 06 06.8 +1.0**
BRTR pmax pmax
comp=Z,277nm,0.8s
SERE Sereflikochisa 15.56 85 P **P 20 06 06.9 +0.8**
PBRG Braganca 15.59 286 ⇓*i*P **P 20 06 05.7 -0.6**
comp=Z,1μm,1.4s
PBRG *e*S **S 20 08 47.9 -1.2**
KAMT Kaman 15.62 84 P **P 20 06 07.8 +1.1**
SULT Sultanhani-AKS 15.64 88 P **P 20 06 08.8 +1.9**
KRMN Karaman 15.66 92 P **P 20 06 07.7 +0.5**
YAYX Yaylak 15.75 85 P **P 20 06 09.2 +1.1**
BZK Bozkurt 15.76 74 ⇑P **P 20 06 06.3 -1.7**
BZK Bozkurt 15.76 74 P **P 20 06 06.2 -1.8**
BZK Bozkurt 15.76 74 P **P 20 06 05.9 -2.1**
WOL Wolverton 15.79 324 ⇓*i*P **P 20 06 07.2 -1.0**
BSD Bornholm Skovb 15.79 3 *e*P **P 20 06 07.3 -0.8**
BSD Bornholm Skovb 15.79 3 *i* P **P 20 06 05.5 -2.7**
BSD IAmb IAmb 20 06 09.9
comp=Z,425nm,0.7s
MVO Moncorvo 15.79 283 ⇓*i*P **P 20 06 08.0 -0.5**
comp=Z,2μm,1.4s
MVO *e*S **S 20 08 51.6 -1.5**
TEKE Tekeli-Mersin 15.82 96 P **P 20 06 08.5 -0.3**
AKASG Malin Array Be 15.83 39 P **P 20 06 07.3 -1.3**
comp=Z,364nm,0.5s,baz=233,slow=9.6,SNR=280
AKASG S **S 20 08 48.2 -5.1**
comp=Z,110nm,0.7s,baz=222,slow=24,SNR=11
AKASG ScP **ScP 20 13 26.4 -0.9**
comp=Z,21nm,0.6s,baz=256,slow=2.1,SNR=13
AKASG ScS **ScS 20 17 03.2 -2.7**
comp=Z,6.1nm,0.8s,baz=240,slow=4.5,SNR=6.3
AKASG Malin Array Be 15.83 39 P **P 20 06 07.0 -1.7**
AKBB Malin Array Si 15.83 39 *c i*P **P 20 06 07.4 -1.2**
BERE Bereket-Mersin 15.85 95 P **P 20 06 09.3 +0.1**
YESY Yesilyurt 15.89 89 P **P 20 06 11.2 +1.5**
LEF Lefka 15.99 99 P **P 20 06 09.5 -1.1**
TEVE Tevekalti-Mers 15.99 94 P **P 20 06 11.1 +0.4**
MDT Midelt 16.03 252 P **P 20 06 10.3 -0.9**
comp=Z,171nm,0.9s,baz=81,slow=11,SNR=122
MDT S **S 20 08 54.8 -3.2**
comp=Z,24nm,0.9s,baz=133,slow=19,SNR=1.3
WACR West Acre 16.05 331 ⇓*i*P **P 20 06 10.6 -0.4**
WACR IAmb IAmb 20 06 11.3
comp=Z,2μm,0.6s
ARNO Arenosillo 16.08 268 P **P 20 06 11.8 +0.4**
ARNO S **S 20 08 54.1 -4.4**
PBAR Barrancos 16.08 272 ⇓*i*P **P 20 06 10.7 -0.8**
comp=Z,853nm,1.5s
PBAR *e*S **S 20 08 57.2 -1.4**
IFR Ifrane 16.09 255 P **P 20 06 09.5 -2.3**
IFR S **S 20 08 55.4 -3.9**
AKKU Akkuyu-Mersin 16.16 95 P **P 20 06 12.0 -0.3**
GULA Gulagac 16.17 87 P **P 20 06 13.9 +1.3**
PMRV Marv??o 16.17 277 ⇓*i*P **P 20 06 11.6 -0.8**
comp=Z,794nm,1.5s
PMRV *e*S **S 20 09 00.0 -0.3**
SWN1 Swindon 16.19 324 ⇓*e*P **P 20 06 11.3 -1.0**
SWN1 IAmb IAmb 20 06 14.7
comp=Z,3μm,0.7s
PCBR Castelo Branco 16.20 278 ⇓*i*P **P 20 06 11.8 -0.9**
comp=Z,758nm,1.2s
PCBR *e*S **S 20 08 59.8 -0.9**
KEBE Keben-Mersin 16.20 94 P **P 20 06 13.2 +0.4**
MTE Manteigas 16.21 280 ⇓*i*P **P 20 06 12.1 -0.8**
comp=Z,875nm,1.4s
MTE *e*S **S 20 08 59.8 -1.3**
MTE Manteigas 16.21 280 P **P 20 06 11.8 -1.0**
IKL Isikli 16.24 95 P **P 20 06 12.9 -0.2**
SIM Simferopol' 16.25 63 *c i*P **P 20 06 13.7 +0.6**
SIM *i* S **S 20 09 02.3 +0.7**
SIM pmax pmax
comp=Z,2μm,1.1s
SIM smax smax
comp=N,2μm,6.0s
CORM Corum 16.25 80 P **P 20 06 13.5 +0.1**
PVRL Vila Real 16.31 284 ⇓*i*P **P 20 06 12.9 -1.0**
comp=N,481nm,2.0s
PVRL *e*S **S 20 09 01.2 -1.8**
COP Copenhagen 16.35 358 *i* P **P 20 06 13.4 -0.6**
COP IAmb IAmb 20 06 16.0
comp=Z,2μm,0.8s
POLO Lamas de Olo 16.37 284 ⇓*i*P **P 20 06 13.5 -1.1**
comp=Z,275nm,1.3s
POLO *e*S **S 20 09 02.3 -1.9**
CSS Mathiatis 16.38 99 P **P 20 06 14.4 -0.3**

CSS Mathiatis 16.38 99 P **P 20 06 13.7 -1.0**
SILI Silifke-Mersin 16.38 94 P **P 20 06 14.6 -0.1**
PESTR Estremoz 16.40 275⇓*i*P **P 20 06 13.6 -1.2**
comp=Z,855nm,1.2s
PESTR *e*S **S 20 09 02.7 -2.0**
PESTR Estremoz 16.40 275 P **P 20 06 13.4 -1.4**
PVIS Viseu 16.46 282⇓*i*P **P 20 06 14.8 -0.7**
comp=Z,1μm,1.2s
PVIS *e*S **S 20 09 04.9 -1.0**
KIZK Mersin 16.52 94 P **P 20 06 16.4 +0.2**
KOZK Kozakli-Nevseh 16.53 84 P **P 20 06 17.2 +0.9**
STRD Stroud 16.53 324⇓*i*P **P 20 06 15.0 -1.0**
STRD IAmb IAmb 20 06 17.5
comp=Z,7μm,0.7s
PCAB Cabril 16.55 285⇓*i*P **P 20 06 15.3 -1.1**
comp=Z,971nm,1.3s
PCAB *e*S **S 20 09 05.5 -2.0**
OLDB Oldbury-Upon-S 16.63 323⇓*i*P **P 20 06 15.9 -1.2**
OLDB IAmb IAmb 20 06 17.6
comp=Z,2μm,0.5s
DIKM Dikmen 16.68 75 P **P 20 06 18.2 +0.4**
MERS Mersin 16.71 92 P **P 20 06 18.7 +0.5**
PGAV Gavieira, Arco 16.73 286⇓*i*P **P 20 06 17.4 -1.0**
comp=Z,711nm,1.7s
PGAV *e*S **S 20 09 09.7 -1.4**
PBEJ Beja 16.75 272⇓*i*P **P 20 06 17.4 -1.2**
comp=Z,1μm,1.2s
PBEJ *e*S **S 20 09 08.6 -2.8**
PVAQ Vaqueiros 16.77 270⇓*i*P **P 20 06 17.3 -1.4**
comp=Z,774nm,1.2s
PVAQ *e*S **S 20 09 08.9 -2.8**
PVAQ Vaqueiros 16.77 270 P **P 20 06 17.5 -1.3**
EVO Evora 16.77 274 P **P 20 06 14.3 -4.5**
EVO S **S 20 09 06.8 -4.9**
EVO Evora 16.77 274⇓*i*P **P 20 06 17.5 -1.3**
comp=Z,878nm,1.2s
EVO *e*S **S 20 09 08.9 -2.9**
YOZ Yozgat 16.83 82 P **P 20 06 19.9 +0.4**
EREN Erenkoy 16.83 97 P **P 20 06 18.7 -0.7**
PMTG Montargil 16.86 276⇓*i*P **P 20 06 18.2 -1.4**
comp=Z,937nm,1.2s
PMTG *e*S **S 20 09 10.3 -3.0**
MONM Monmouth 16.87 323⇓*i*P **P 20 06 18.3 -1.3**
MONM IAmb IAmb 20 06 21.9
comp=Z,6μm,1.2s
COI Coimbra 16.88 280⇓*i*P **P 20 06 19.0 -0.9**
comp=Z,1μm,1.4s
COI *e*S **S 20 09 12.5 -1.2**
CMRD Camardi-Nigde 16.89 89 P **P 20 06 20.6 +0.5**
PCAS Casmilo, Conde 16.96 279⇓*i*P **P 20 06 19.5 -1.2**
comp=Z,560nm,1.5s
PCAS *e*S **S 20 09 13.0 -2.2**
PCVE Castro Verde 16.97 271⇓*i*P **P 20 06 19.4 -1.4**
comp=Z,556nm,1.7s
PCVE *e*S **S 20 09 12.8 -2.6**
LMK Market Rasen 16.98 331⇓*i*P **P 20 06 20.1 -0.7**
LMK IAmb IAmb 20 06 21.7
comp=Z,3μm,0.9s
KARA Karaisali 17.03 90 P **P 20 06 21.6 +0.1**
CCA1 Carnmenellis 17.11 315⇓*e*P **P 20 06 19.9 -2.2**
CCA1 IAmb IAmb 20 06 23.3
comp=Z,581nm,0.9s
DEL Delary 17.12 1 *e*P **P 20 06 21.2 -1.0**
HTL Hartland 17.17 319 *e*P **P 20 06 21.1 -1.6**
HTL IAmb IAmb 20 06 24.1
comp=Z,4μm,1.2s
PSBE So Bento 17.24 278⇓*i*P **P 20 06 22.4 -1.3**
comp=Z,438nm,1.1s
PSBE *e*S **S 20 09 18.4 -2.0**
PNCL Nicolau / Gran 17.25 273⇓*i*P **P 20 06 22.8 -0.9**
comp=Z,2μm,1.1s
PNCL *e*S **S 20 09 19.2 -1.3**
KVT Kavak 17.28 77 P **P 20 06 24.7 +0.6**
BNN Bunyan 17.33 85 P **P 20 06 24.7 -0.1**
BNN Bunyan 17.33 85 P **P 20 06 24.5 -0.3**
MUD Monsted U'grnd 17.35 352 *i*P **P 20 06 23.5 -0.9**
MUD IAmb IAmb 20 06 25.6
comp=Z,1μm,0.7s
HLM1 Long Mynd 17.36 325⇓*i*P **P 20 06 23.5 -1.2**
HLM1 IAmb IAmb 20 06 25.2
comp=Z,1μm,0.6s
PACT Alcochete 17.37 275⇓*i*P **P 20 06 23.8 -1.2**
comp=Z,779nm,1.5s
PACT *e*S **S 20 09 21.3 -1.3**
STNC Stoke 17.47 327⇓*i*P **P 20 06 25.4 -0.4**
STNC IAmb IAmb 20 06 27.1
comp=Z,9μm,1.1s
MORF Marmelete 17.52 270 *e*P **P 20 06 25.1 -1.5**
MORF IAmb IAmb 20 06 25.4
comp=Z,243nm,1.2s
MORF *e*S **S 20 09 24.3 -1.0**
MORF Marmelete 17.52 270⇓*i*P **P 20 06 24.9 -1.7**
comp=Z,313nm,1.3s
MORF *e*S **S 20 09 23.7 -1.6**
MORF Marmelete 17.52 270 *e*P **P 20 06 25.1 -1.5**
MORF *e*S **S 20 09 24.3 -1.0**
PTEO Sao Teotonio 17.52 271⇓*i*P **P 20 06 25.3 -1.2**
comp=Z,2μm,1.1s
PTEO *e*S **S 20 09 23.7 -1.5**
KOZT Kozan 17.57 89 P **P 20 06 26.2 -1.0**
PBUR Paburge 17.59 16 *e*P **P 20 06 26.2 -0.7**
PABE Paberze 17.60 20 P **P 20 06 26.1 -1.0**
PABE Paberze 17.60 20 *e*P **P 20 06 26.6 -0.5**
LIS Lisbon 17.62 275 *e*P **P 20 06 26.2 -1.4**
LIS IAmb IAmb 20 06 28.4
comp=Z,450nm,0.9s
LIS *e*S **S 20 09 26.1 -1.0**
LIS Lisbon 17.62 275 *e*P **P 20 06 26.2 -1.4**
LIS *e*S **S 20 09 26.2 -0.8**
CEYT Ceyhan 17.62 91 P **P 20 06 26.5 -1.1**
LPW Lampeter 17.64 322⇓*i*P **P 20 06 26.8 -0.8**
PMST Lisbon--Monsan 17.65 275⇓*i*P **P 20 06 26.5 -1.3**
comp=Z,687nm,1.2s
PMST *e*S **S 20 09 25.8 -1.6**
PMAFR Mafra 17.69 276⇓*i*P **P 20 06 26.6 -1.7**
comp=Z,283nm,1.1s
PMAFR *e*S **S 20 09 25.7 -2.5**
PFVI Vila Bisbo 17.69 270⇓*i*P **P 20 06 26.6 -1.7**
comp=Z,680nm,1.0s
PFVI *e*S **S 20 09 25.8 -2.5**
PFVI Vila Bisbo 17.69 270 P **P 20 06 26.7 -1.6**
PFVI **S 20 09 27.7 -0.6**
TOKT Tokat 17.70 80 P **P 20 06 28.9 +0.4**
FOEL Foel Wylfa 17.76 325⇓*i*P **P 20 06 27.0 -1.8**
FOEL IAmb IAmb 20 06 29.8
comp=Z,4μm,1.0s
SARI SarD1z-Kayseri 17.85 86 P **P 20 06 29.9 -0.2**
TAM Tamanrasset 17.86 205 P **P 20 06 31.0 +0.6**
TAM Tamanrasset 17.86 205 P **P 20 06 31.0 +0.6**
HPK Haverah Park 17.87 330⇓*i*P **P 20 06 28.5 -1.3**
HPK IAmb IAmb 20 06 30.8
comp=Z,2μm,0.5s
RSBS Rosebush, Pemb 17.87 321⇓*i*P **P 20 06 29.0 -0.9**
RSBS IAmb IAmb 20 06 30.3
comp=Z,3μm,0.5s
AVE Averroes 17.91 257 P **P 20 06 29.3 -1.2**
AVE S **S 20 09 26.4 -5.6**
AVE Averroes 17.91 257 P **P 20 06 28.9 -1.6**
GOET G??ttrup 17.91 352 *i*P **P 20 06 29.9 -0.3**
GOET IAmb IAmb 20 06 31.6
comp=Z,2μm,1.2s
GDLE Glaisdale, N Y 17.92 332⇓*i*P **P 20 06 28.9 -1.5**
GDLE IAmb IAmb 20 06 31.3
comp=Z,3μm,0.7s
NACGM Naroch 17.93 25⇑*i*P **P 20 06 28.6 -1.8**
baz=216
LLW Llanuwychllyn 17.94 324⇓*i*P **P 20 06 29.2 -1.3**
MNK Minsk 17.99 28 *i*P **P 20 06 28.0 -3.0**
MNK *i*S **S 20 09 27.4 -5.4**
MNK pmax pmax
comp=Z,1μm,0.8s
MNK pmax pmax
comp=N,736nm,1.1s
MNK pmax pmax
comp=E,118nm,1.1s
MNK MLR MLR
comp=Z,1μm,12.0s
MNK MLR MLR
comp=E,244nm,15.0s
MNK MLR MLR
comp=N,641nm,15.0s
MNK Minsk 17.99 28 *i*P **P 20 06 28.1 -3.0**
comp=E,118nm,1.1s
MNK *i*P **P 20 06 28.1 -3.0**
comp=N,736nm,1.1s
MNK *i*P **P 20 06 28.1 -3.0**
comp=Z,1μm,0.8s,baz=219
MNK *i*S **S 20 09 27.4 -5.4**
MNK *i*LRM MLR 20 16 31.8
comp=Z,1μm,11.9s
MNK *i*LRM MLR 20 16 35.6
comp=E,244nm,15.3s
MNK *i*LRM MLR 20 16 36.9
comp=N,641nm,15.3s
VSVD Vaisvydziai 18.01 19 *e*P **P 20 06 30.8 -0.4**
VSVD *e*P **ScP 20 13 31.3 -0.3**
SVSK Karacayir 18.08 81 P **P 20 06 32.8 +0.6**
IIGN Ignalina 18.12 24 *e*P **P 20 06 31.8 -0.5**
TAHT Tahtakopru-Hat 18.13 92 P **P 20 06 32.5 -0.2**
YAYL Yayladag 18.17 93 P **P 20 06 33.4 +0.2**
ISAL Salakas 18.27 23 *e*P **P 20 06 32.9 -0.8**
RSDY Resadiye-TOKAT 18.29 79 P **P 20 06 34.9 +0.7**
YLL Llanberis 18.36 324⇓*i*P **P 20 06 33.6 -1.0**
KMRS Kahramanmaras 18.40 88 P **P 20 06 35.7 +0.4**
ANN Anapa 18.54 65*c i*P **P 20 06 35.7 -0.7**
ANN *i*S **S 20 09 41.6 -0.4**
ANN pmax pmax
comp=Z,4μm,1.2s
WLF1 Llynfaes 18.56 325⇓*i*P **P 20 06 35.9 -0.5**
WLF1 IAmb IAmb 20 06 36.9
comp=Z,17μm,1.6s
BHL Bhannes 18.56 100 *e*P **P 20 06 37.3 +0.4**
DQRL Deir Qamar 18.58 101 *e*P **P 20 06 38.4 +1.3**
WME Myndd Eilian 18.59 325⇓*i*P **P 20 06 36.1 -0.6**
YRC Rhoscolyn 18.61 324⇓*i*P **P 20 06 36.6 -0.3**
HWQ Hawqa 18.64 99 *e*P **P 20 06 38.8 +1.1**
DARE Darende-Malaty 18.64 85 P **P 20 06 38.5 +0.9**
EDMD Edmundbyers 18.66 331⇓*i*P **P 20 06 35.8 -1.6**
EDMD IAmb IAmb 20 06 41.1
comp=Z,577nm,0.7s
WPS Cemaes, Angles 18.68 325⇓*i*P **P 20 06 37.1 -0.4**
WPS IAmb IAmb 20 06 38.6
comp=Z,4μm,0.9s
GAZ Gaziantep 18.72 89 P **P 20 06 39.4 +1.1**
QRWL Qaraoun 18.73 101 *e*P **P 20 06 39.7 +1.2**
MMAI Mount Meron Ar 18.74 103 P **P 20 06 39.0 +0.5**
comp=Z,425nm,0.5s,baz=312,slow=7.6,SNR=422
MMAI S **S 20 09 49.6 +3.7**
comp=Z,4.5nm,0.5s,baz=300,slow=5.4,SNR=1.8
MMAI ScP **ScP 20 13 33.9 +0.1**
comp=Z,42nm,0.9s,baz=32,slow=3.3,SNR=11
RCY Rachaya 18.86 101 *e*P **P 20 06 41.0 +1.2**
KESW Keswick, Cumbr 18.92 329⇓*i*P **P 20 06 39.4 -0.4**
KESW IAmb IAmb 20 06 41.4
comp=Z,3μm,1.0s
MMLI Mount Malkishu 19.01 105 P **P 20 06 43.3 +2.3**
IWEX Carrickbyrne, 19.13 320⇓*e*P **P 20 06 40.9 -0.9**
SLIT Slitere, Latvi 19.16 14 *e*P **P 20 06 41.3 -0.6**
HOMB Homborsund 19.20 352 *e*P **P 20 06 42.4 +0.1**
HOMB IAmb IAmb 20 06 43.6
comp=Z,3μm,1.7s
ARPR Arapgir-MALATY 19.21 83 P **P 20 06 44.4 +1.5**
WIM Isle of Man 19.26 326⇓*i*P **P 20 06 42.7 -0.3**
VIKU Vikbolandet 19.27 5 *e*P **P 20 06 43.2 +0.3**
UJAP Al Uja 19.27 106 P **P 20 06 45.7 +2.4**
IOMK Kirk Michael 19.29 327⇓*i*P **P 20 06 42.9 -0.3**
IOMK IAmb IAmb 20 06 45.1
comp=Z,19μm,1.7s
ESPY Espiye-Giresun 19.32 77 P **P 20 06 44.4 +0.7**
SNART Snartemo 19.43 350 *e*P **P 20 06 44.7 +0.3**
SNART IAmb IAmb 20 06 47.0
comp=Z,7μm,1.8s
DSB Dublin 19.45 322⇓*e*P **P 20 06 44.2 -0.4**
EKA Eskdalemuir Ar 19.49 331 P **P 20 06 44.5 -0.6**
comp=Z,386nm,0.3s,baz=145,slow=11,SNR=2950
EKA S **S 20 09 55.4 -1.8**
comp=Z,3.2nm,0.6s,baz=204,slow=39,SNR=2.1
EKA ScP **ScP 20 13 34.9 0.0**
comp=Z,80nm,1.0s,baz=122,slow=3.1,SNR=30
ESK Eskdalemuir 19.50 330⇓*i*P **P 20 06 44.6 -0.5**
ESK IAmb IAmb 20 06 46.0
comp=Z,2μm,0.9s
ESK Eskdalemuir 19.50 330 P **P 20 06 44.6 -0.5**
ESK Eskdalemuir 19.50 330 P **P 20 06 44.6 -0.5**
GHAJ Ghor Haditha 19.67 107 P **P 20 06 49.3 +2.4**
ESY Stoneypath 19.73 332⇓*e*P **P 20 06 46.7 -0.5**
NEWG New Galloway 19.75 329 *i*P **P 20 06 47.0 -0.4**
NEWG IAmb IAmb 20 06 49.0
comp=Z,2μm,0.7s
GAL1 Galloway 19.77 328 *e*P **P 20 06 46.3 -1.3**
GAL1 IAmb IAmb 20 06 48.5
comp=Z,5μm,1.7s
EBL Broad Law 19.78 332⇓*i*P **P 20 06 47.1 -0.6**
GMM Mts of Mourne 19.88 325⇓*i*P **P 20 06 48.0 -0.5**
URFA Urfa 19.91 88 P **P 20 06 45.8 -3.4**
ILTH Belurgan, Co L 19.92 324⇓*e*P **P 20 06 47.8 -1.1**
EDI Edinburgh 19.95 332⇓*i*P **P 20 06 48.8 -0.4**
EDI IAmb IAmb 20 06 50.5
comp=Z,2μm,0.5s
SOC Sochi 20.04 69 *e*P **P 20 06 49.7 -0.5**
SOC *e**SP **sP 20 08 51.1 -0.3**
SOC *e*S **S 20 10 07.4 +0.9**
PTK Pertek 20.06 83 P **P 20 06 52.2 +1.5**
EIL Elat 20.09 112 P **P 20 06 52.4 +1.5**
comp=Z,885nm,0.9s,baz=318,slow=6.0,SNR=391
EIL S **S 20 10 08.0 +0.4**
comp=Z,21nm,0.8s,baz=54,slow=20,SNR=1.0
comp=Z,885nm,0.9s
EIL Elat 20.09 112 P **P 20 06 52.6 +1.8**
KTUT Trabzon 20.10 77 P **P 20 06 52.1 +1.3**
ERZN Erzincan 20.21 81 P **P 20 06 52.3 +0.3**
ASF Jabal al Asfar 20.25 104 P **P 20 06 54.8 +2.4**
comp=Z,2μm,1.1s,baz=302,slow=4.8,SNR=1439
ASF S **S 20 10 12.9 +2.7**
comp=Z,22nm,0.9s,baz=323,slow=15,SNR=1.9
ASF ScP **ScP 20 13 37.8 +0.4**
comp=Z,38nm,0.8s,baz=188,slow=1.0,SNR=9.1
comp=Z,2μm,1.1s
PGBU Glenifferbraes 20.35 330⇓*i*P **P 20 06 52.1 -0.7**
PGBU IAmb IAmb 20 06 55.1
comp=Z,1μm,1.0s
EDU Dundee 20.36 333 *e*P **P 20 06 52.4 -0.5**
BAYT Aydıntepe-Bayb 20.43 79 P **P 20 06 55.9 +1.9**
KONO Kongsberg 20.46 354 P **P 20 06 52.8 -1.0**
KONO Kongsberg 20.46 354*d i*P **P 20 06 53.7 -0.1**
KONO pmax pmax
comp=Z,1μm,1.7s
KONO Kongsberg 20.46 354 *e*P **P 20 06 53.3 -0.5**
KONO IAmb IAmb 20 06 56.6
comp=Z,2μm,1.6s
MTSE Matsula 20.47 15 *e*P **P 20 06 54.2 +0.3**
CLGH Cloghs, Cushen 20.51 327⇓*i*P **P 20 06 54.0 -0.2**
KMY Karmoy 20.56 348 *e*P **P 20 06 54.2 -0.4**
KMY IAmb IAmb 20 06 56.5
comp=Z,1μm,0.9s
EAB Aberfoyle 20.57 331⇓*e*P **P 20 06 54.2 -0.7**
BLS5 Blasjo 20.58 350 *e*P **P 20 06 54.6 -0.4**
BLS5 IAmb IAmb 20 06 57.4
comp=Z,838nm,0.8s
OSL Oslo 20.68 356 *e*P **P 20 06 55.5 -0.2**
OSL IAmb IAmb 20 06 57.2
comp=Z,1μm,1.0s
VAL Valentia 20.73 315 *e*P **P 20 06 55.4 -0.9**
VAL Valentia 20.73 315 P **P 20 06 55.8 -0.5**
VAL pmax pmax
comp=Z,975nm,1.3s
KOPT Kop Dagi 20.75 80 P **P 20 06 59.0 +2.0**
HFS Hagfors 20.80 0 P **P 20 06 56.2 -0.6**
comp=Z,410nm,0.5s,baz=180,slow=11,SNR=876
HFS S **S 20 10 23.9 +5.6**
comp=Z,53nm,0.8s,baz=182,slow=18,SNR=4.5
HFS ScP **ScP 20 13 36.4 -1.6**
comp=Z,35nm,0.8s,baz=131,slow=6.7,SNR=8.1
comp=Z,410nm,0.5s
DYBB Diyarbakir 20.81 85 P **P 20 06 59.4 +2.0**
CHOM Cayeli-Rize 20.84 76 P **P 20 06 58.2 +0.6**
VSU Vasula 20.93 20 *e*P **P 20 06 58.7 +0.7**
VSU Vasula 20.93 20*ce*P **P 20 06 58.2 +0.2**
IGLA Glengowla, Co 21.02 320⇓*e*P **P 20 06 58.4 -0.5**
IGLA IAmb IAmb 20 07 00.5
comp=Z,822nm,0.7s
ODD1 Odda 21.03 350 *e*P **P 20 06 58.6 -0.4**
ODD1 IAmb IAmb 20 07 01.4
comp=Z,447nm,0.6s
BNGB Bingl 21.03 82 P **P 20 07 01.3 +1.9**
LAWE Loch Awe, Argy 21.03 330⇓*i*P **P 20 06 58.7 -0.4**
LAWE IAmb IAmb 20 07 01.8
comp=Z,2μm,0.6s
IDGL Inch Island, C 21.11 325⇓*i*P **P 20 06 59.5 -0.2**
IDGL IAmb IAmb 20 07 03.1
comp=Z,3μm,1.1s
MAZI Mazidag 21.16 87 P **P 20 07 01.9 +1.3**
AAL Aland 21.24 9 *e*P **P 20 07 00.3 -0.5**
MCD Coleburn Disti 21.25 335 *i*P **P 20 07 00.0 -1.0**
NC602 NORSAR Array S 21.44 357 *e*P **P 20 07 02.3 -0.4**
NC602 IAmb IAmb 20 07 04.5
comp=Z,578nm,0.8s
MARD Mardin 21.45 87 P **P 20 07 04.2 +0.9**
VSR Storozhevoye 21.47 48 *e*P **P 20 07 03.3 +0.3**
VSR *e*S **S 20 10 21.2 -7.9**
VSR *e* 20 17 20.8
VSR pmax pmax
comp=Z,1μm,0.6s
VSR smax smax
comp=N,1μm,6.4s
SVAN Silvan-Diyarba 21.59 84 P **P 20 07 05.9 +1.5**
SKAR Skarslia 21.59 353 *e*P **P 20 07 04.0 -0.1**
SKAR IAmb IAmb 20 07 07.5
comp=Z,742nm,1.4s
VRTB Varto-Mus 21.60 82 P **P 20 07 06.3 +1.7**
BER Bergen 21.67 349 *e*P **P 20 07 04.1 -0.6**
BER IAmb IAmb 20 07 07.0
comp=Z,219nm,0.8s
VORR Voronezh 21.68 47 *e*P **P 20 07 05.2 +0.3**
VORR S **S 20 10 31.3 -1.1**
VORR *e* 20 10 48.1
VORR *e* 20 17 23.4
VORR pmax pmax
comp=Z,890nm,1.4s
NB2 NORSAR Subarra 21.75 357 P **P 20 07 04.9 -0.7**
comp=Z,192nm,0.5s,baz=174,slow=11
NB2 NORSAR Subarra 21.75 357 P **P 20 07 04.9 -0.7**
baz=174,slow=11
NOA NORSAR Array B 21.75 357 P **P 20 07 04.8 -0.8**
comp=Z,60nm,0.4s,baz=181,slow=8.5,SNR=265
NOA S **S 20 10 34.1 +0.5**
comp=Z,3.6nm,0.8s,baz=278,slow=18,SNR=1.9
NOA ScP **ScP 20 13 40.2 -0.3**
comp=Z,80nm,0.9s,baz=158,slow=2.5,SNR=23
comp=Z,60nm,0.4s
ASK Askoy 21.78 349 *e*P **P 20 07 05.2 -0.5**
ASK IAmb IAmb 20 07 08.0
comp=Z,518nm,1.0s
KOPR Koprukoy-ERZUR 21.78 79 P **P 20 07 08.7 +2.4**
MLA1 Latheron 21.86 336⇓*i*P **P 20 07 05.5 -1.0**
KPL Plockton 21.91 331⇓*e*P **P 20 07 06.4 -0.6**
KPL IAmb IAmb 20 07 10.1
comp=Z,1μm,0.7s
LPSR Galich'ya Gora 21.93 44 *e*P **P 20 07 07.4 +0.2**
LPSR *e*S **S 20 10 33.6 -2.7**
LPSR *e* 20 17 23.2
LPSR pmax pmax
comp=Z,1μm,1.2s
LPSR smax smax
comp=N,1μm,5.6s
MEF Metsahovi 21.97 15 *e*P **P 20 07 07.7 +0.3**
OBN Obninsk 22.05 37 ⇑P **P 20 07 08.4 +0.2**
OBN Obninsk 22.05 37 P **P 20 07 07.7 -0.6**
comp=N,45nm,0.5s,baz=230,slow=7.8,SNR=59
OBN S **S 20 10 34.9 -3.3**
comp=N,6.7nm,0.6s,baz=144,slow=23,SNR=5.0
OBN ScP **ScP 20 13 40.5 -0.7**
comp=N,27nm,0.9s,baz=236,slow=9.5,SNR=3.7
OBN Obninsk 22.05 37*c i*P **P 20 07 07.8 -0.4**
OBN *i*S **S 20 10 35.8 -2.4**
OBN *i* 20 10 47.2
OBN pmax pmax
comp=Z,1μm,1.7s
SENK Senkaya-Erzuru 22.09 78 P **P 20 07 10.9 +1.8**
GURO Guroymak-BITLI 22.15 83 P **P 20 07 11.1 +1.5**
BIGH Upper Bighouse 22.19 335 *e*P **P 20 07 07.9 -1.5**
BIGH IAmb IAmb 20 07 09.7
comp=Z,351nm,0.6s
KIV Kislovodsk 22.21 69 P **P 20 07 11.5 +1.5**
KIV Kislovodsk 22.21 69 P **P 20 07 11.1 +1.0**
KIV Kislovodsk 22.21 69 *e*P **P 20 07 11.0 +1.0**
KIV *e**SP **sP 20 09 18.1 +2.1**
KIV *e*S **S 20 10 42.7 +1.4**
KIV pmax pmax
comp=Z,460nm,4.2s
KIV pmax pmax
comp=Z,863nm,1.1s
KIV Kislovodsk 22.21 69 P **P 20 07 11.2 +1.3**
KIV P **P 20 07 11.2 +1.3**
KIV Kislovodsk 22.21 69 *i*P **P 20 07 11.3 +1.3**
SNR=103
KVAR Kislovodsk Arr 22.22 69 P **P 20 07 11.2 +1.1**
comp=Z,82nm,0.5s,baz=90,slow=20
KVAR ScP **ScP 20 13 41.3 -0.7**
comp=Z,19nm,0.8s,baz=259,slow=23,SNR=2.3
KVAR ScS **ScS 20 17 28.1 +0.3**
comp=Z,72nm,1.1s,baz=249,slow=4.5,SNR=7.8
comp=Z,82nm,0.5s
NEY Neytrino 22.22 70*c i*P **P 20 07 12.2 +2.0**
NEY pmax pmax
comp=Z,540nm,1.4s
RAF Rauma 22.29 11 *e*P **P 20 07 10.0 -0.3**
HYA Hoyanger 22.30 351 *e*P **P 20 07 10.7 +0.3**
HYA IAmb IAmb 20 07 15.4
comp=Z,176nm,0.7s
KBZ Khabaz 22.36 69 P **P 20 07 13.1 +1.9**
comp=Z,572nm,1.0s,baz=254,slow=6.3,SNR=814
KBZ PcP **PcP 20 10 48.9 0.0**
comp=Z,87nm,0.9s,baz=188,slow=0.6,SNR=4.8
KBZ ScP **ScP 20 13 42.4 +0.2**
comp=Z,82nm,1.1s,baz=252,slow=5.2,SNR=9.3
KBZ ScS **ScS 20 17 24.0 -3.9**
comp=Z,13nm,1.0s,baz=13,slow=5.5,SNR=4.0
comp=Z,572nm,1.0s
KBZ Khabaz 22.36 69*c i*P **P 20 07 13.1 +1.9**
KBZ pmax pmax
comp=Z,899nm,1.2s
GOF Gofitskoye 22.52 66⇓*i*P **P 20 07 14.4 +1.7**
GOF *e*S **ScS 20 17 30.4 +1.8**
KARS Kars 22.64 77 P **P 20 07 15.8 +1.8**
AGRB Hanur-Agry 22.71 80 P **P 20 07 16.5 +1.8**
LRW Lerwick 22.76 341 *e*P **P 20 07 13.4 -1.2**
LRW IAmb IAmb 20 07 17.1
comp=Z,3μm,1.7s
ONI Oni 22.77 72 P **P 20 07 16.8 +1.8**
NCK Nalchik 22.86 70*c i*P **P 20 07 18.2 +2.4**
NCK pmax pmax
comp=Z,708nm,0.8s
AKH Akhalkalaki 22.87 75 P **P 20 07 17.5 +1.4**
FOO Floro 22.87 350 *e*P **P 20 07 14.9 -0.6**
FOO IAmb IAmb 20 07 16.1
comp=Z,276nm,1.1s
DOMB Dombas 22.88 355 *e*P **P 20 07 16.0 +0.4**
DOMB IAmb IAmb 20 07 20.5
comp=Z,234nm,1.0s
MOS Moscow 22.91 36 *e*P **P 20 07 13.4 -2.6**
MOS *e*S **S 20 10 49.5 -2.2**
MOS *e* 20 17 26.9
MOS pmax pmax
comp=Z,885nm,0.6s
AKDM Akdamar-Van 22.93 83 P **P 20 07 18.3 +1.7**
LEWI Lewis, Hebride 22.95 332 *e*P **P 20 07 14.7 -1.6**
LEWI IAmb IAmb 20 07 16.0
comp=Z,610nm,1.1s
VRH Novokhopyorsk 22.95 50 *e*P **P 20 07 16.8 +0.4**
VRH *e*S **S 20 10 46.9 -5.7**
VRH *e* 20 17 27.5
VRH pmax pmax
comp=Z,730nm,0.6s
VRH smax smax
comp=N,830nm,3.8s
GEVA Gevas 22.99 83 P **P 20 07 18.5 +1.3**
PUL Pulkovo 23.03 22*ce*P **P 20 07 16.6 -0.4**
PUL pmax pmax
comp=Z,419nm,0.7s
ZEI Tsey 23.09 72 *e*P **P 20 07 15.8 -2.3**
ZEI pmax pmax
comp=Z,640nm,1.2s
VANB Van 23.19 82 P **P 20 07 20.6 +1.7**
AKN Aaknes 23.20 352 *e*P **P 20 07 18.1 -0.4**
AKN IAmb IAmb 20 07 19.1
comp=Z,562nm,1.7s
FINES FINESS Array B 23.43 15 P **P 20 07 20.7 +0.1**
comp=Z,178nm,0.5s,baz=183,slow=8.6,SNR=1031
FINES PcP **PcP 20 10 50.8 0.0**
comp=Z,18nm,0.7s,baz=212,slow=4.9,SNR=2.7
FINES ScP **ScP 20 13 44.3 -0.5**
comp=Z,45nm,0.8s,baz=130,slow=6.0,SNR=6.3

FINES ScS **ScS** **20 17 31.6 +0.1**
comp=Z,14nm,1.0s,baz=157,slow=7.5,SNR=2.8
FINES P3KPbc 20 40 22.0
comp=Z,6.7nm,1.1s,baz=12,slow=7.1,SNR=2.7
comp=Z,178nm,0.5s
FIA1 FINESS Array S 23.43 15 P **P** **20 07 20.7 +0.1**
CLDR Caldiran 23.49 81 P **P** **20 07 22.4 +0.7**
MOL Molde 23.52 353 *eP* **P** **20 07 21.0 -0.4**
MOL IAmb IAmb 20 07 26.2
comp=Z,64nm,0.8s
TASB TASBURUN-IGDIR 23.60 79 P **P** **20 07 24.1 +1.6**
CUKT Cukurca 23.66 86 P **P** **20 07 23.2 +0.1**
GNI Garni 23.96 78 P **P** **20 07 27.1 +1.3**
comp=Z,931nm,1.1s,baz=207,slow=0.7,SNR=168
GNI ScP **ScP** **20 13 47.2 +0.3**
comp=Z,80nm,0.9s,baz=108,slow=2.9,SNR=11
comp=Z,931nm,1.1s
GNI Garni 23.96 78 P **P** **20 07 27.2 +1.4**
GNI Garni 23.96 78 P **P** **20 07 27.0 +1.3**
GNI Garni 23.96 78*c i*P **P** **20 07 27.1 +1.3**
GNI pmax pmax
comp=Z,3μm,1.7s
GNI Garni 23.96 78 P **P** **20 07 27.6 +1.8**
GNI P **P** **20 07 27.6 +1.8**
GNI Garni 23.96 78 P **P** **20 07 27.1 +1.3**
TBLU Trondheim 24.01 356 *eP* **P** **20 07 26.6 +0.8**
TBLU IAmb IAmb 20 07 27.5
comp=Z,500nm,1.5s
GROC Groznyy 24.47 70⇑*i*P **P** **20 07 31.8 +1.7**
GROC *e* 20 10 52.1
GROC *e*S **S** **20 11 18.0 +1.2**
GROC pmax pmax
comp=N,796nm,1.2s
GROC pmax pmax
comp=Z,3μm,1.4s
GROC pmax pmax
comp=E,741nm,1.4s
VALR Valaam 24.50 20*ce*P **P** **20 07 29.7 -0.4**
VALR pmax pmax
comp=Z,263nm,0.9s
PMPST Porto Santo, M 24.82 265 *eP* **P** **20 07 33.2 -0.2**
comp=Z,212nm,2.4s
PMPS Porto Santo 24.83 265 *eP* **P** **20 07 33.2 -0.2**
NSS Namsos 25.23 358 *eP* **P** **20 07 36.5 0.0**
NSS IAmb IAmb 20 07 37.5
comp=Z,215nm,0.9s
PMAR Madeira 25.41 264 *eP* **P** **20 07 39.1 +0.3**
PMOZ Porto Moniz, M 25.59 265 *eP* **P** **20 07 40.9 +0.6**
comp=Z,352nm,2.2s
PMOZ Porto Moniz, M 25.59 265 P **P** **20 07 40.5 +0.2**
MAK Makhachkala 25.73 71*d i*P **P** **20 07 42.3 +1.0**
MAK *e**SP **sP** **20 09 52.4 -1.7**
MAK *e*S **S** **20 11 37.9 +1.3**
MAK pmax pmax
comp=Z,3μm,1.3s
MAK MLR MLR
comp=Z,641nm,8.0s
AKT Akhty 26.03 74⇑*i*P **P** **20 07 45.3 +1.1**
AKT *e**SP **sP** **20 09 55.1 -2.1**
AKT *e*S **S** **20 11 42.6 +1.0**
AKT pmax pmax
comp=Z,1μm,1.1s
BELG Belogornoye 26.81 50 P **P** **20 07 51.2 +0.6**
comp=Z,767nm,1.0s,baz=0.3,slow=0.7,SNR=217
BELG PcP **PcP** **20 10 58.3 -0.4**
comp=Z,170nm,0.9s,baz=308,slow=1.2,SNR=4.0
BELG S **S** **20 11 51.9 -1.3**
comp=Z,55nm,1.0s,baz=166,slow=21,SNR=1.5
BELG ScP **ScP** **20 13 54.0 -0.7**
comp=Z,361nm,1.0s,baz=189,slow=2.5,SNR=8.4
BELG ScS **ScS** **20 17 42.8 -3.3**
comp=Z,104nm,1.1s,baz=348,slow=23,SNR=14
comp=Z,767nm,1.0s
BELG Belogornoye 26.81 50*c i*P **P** **20 07 51.2 +0.6**
BELG pmax pmax
comp=Z,236nm,1.0s
MOR8 Moi Rana 26.86 1 *eP* **P** **20 07 51.8 +0.8**
MOR8 IAmb IAmb 20 07 52.9
comp=Z,67nm,0.8s
KLMR Klimovskoe 26.89 28*c i*P **P** **20 07 50.8 -0.5**
KLMR *e* 20 10 57.7
KLMR *e*S **S** **20 11 50.9 -3.2**
KLMR pmax pmax
comp=Z,296nm,0.7s
KLMR pmax pmax
comp=Z,377nm,1.0s
KLMR Klimovskoe 26.89 28⇑*i*P **P** **20 07 50.9 -0.4**
KLMR ⇑*i*P **P** **20 07 50.9 -0.4**
KLMR ⇑*i*P **P** **20 07 50.9 -0.4**
KLMR AMP 20 07 51.9
comp=Z,377nm,1.0s
KLMR *e*PcP **PcP** **20 10 57.7 -1.1**
KLMR *e*S **S** **20 11 51.0 -3.2**
KLMR *e*S **S** **20 11 51.0 -3.2**
STOK Stokkvaagen 27.02 360 *eP* **P** **20 07 52.6 +0.3**
MACI Morro de la Ar 27.18 255 P **P** **20 07 54.1 -0.5**
KONS Konsvik 27.19 360 *eP* **P** **20 07 53.8 -0.1**
KONS IAmb IAmb 20 07 54.9
comp=Z,72nm,0.7s
FAUS Fauske 28.09 1 *eP* **P** **20 08 01.8 0.0**
FAUS IAmb IAmb 20 08 03.0
comp=Z,257nm,0.8s
TOA0 Torodi Ar. Sit 28.12 205 P **P** **20 08 02.6 -0.1**
TOA0 Torodi Ar. Sit 28.12 205 P **P** **20 08 02.9 +0.2**
SNR=24
TORD Torodi Ar. Bea 28.12 205 P **P** **20 08 02.8 +0.1**
comp=Z,52nm,0.7s,baz=19,slow=8.4,SNR=379
TORD PcP **PcP** **20 11 02.8 +0.1**
comp=Z,19nm,0.8s,baz=69,slow=2.3,SNR=3.3
TORD S **S** **20 12 10.8 -3.8**
comp=Z,4.2nm,0.6s,baz=335,slow=6.6,SNR=2.5
TORD ScP **ScP** **20 13 59.0 -0.4**
comp=Z,83nm,1.0s,baz=20,slow=4.7,SNR=29
TORD P3KPbc 20 40 05.9
comp=Z,0.2nm,0.4s,baz=224,slow=4.0,SNR=2.3
TORD P3KP 20 41 13.6
comp=Z,0.7nm,1.1s,baz=211,slow=2.5,SNR=1.7
comp=Z,52nm,0.7s
STEI Steigen 28.64 1 *eP* **P** **20 08 06.8 +0.2**
STEI IAmb IAmb 20 08 08.0
comp=Z,416nm,0.8s
LOF Lofoten 28.83 0 *eP* **P** **20 08 08.0 -0.2**
LOF IAmb IAmb 20 08 09.0
comp=Z,635nm,1.3s
PRGR Permogore 29.71 31⇑*i*P **P** **20 08 15.8 -0.2**
PRGR *e* 20 11 04.5
PRGR *e*S **S** **20 12 36.0 -2.1**
PRGR pmax pmax
comp=Z,293nm,0.8s
KIRV Kirov 29.89 38 P **P** **20 08 17.2 -0.3**
comp=Z,379nm,0.8s,baz=248,slow=2.5,SNR=148
KIRV PcP **PcP** **20 11 06.2 -0.2**
comp=Z,70nm,0.8s,baz=173,slow=4.2,SNR=4.2
KIRV S **S** **20 12 37.2 -3.7**
comp=Z,42nm,0.6s,baz=360,slow=23,SNR=17
KIRV ScP **ScP** **20 14 03.8 -0.5**
comp=Z,114nm,0.7s,baz=167,slow=0.9,SNR=12
comp=Z,379nm,0.8s
BART Pico Bartolome 30.14 279 *eP* **P** **20 08 20.9 +0.7**
comp=Z,534nm,1.4s
KTK1 Kautokeino 30.17 7 *eP* **P** **20 08 20.1 +0.2**
KTK1 IAmb IAmb 20 08 21.1
comp=Z,327nm,0.9s
PSMN Pico do Norte, 30.27 278 *eP* **P** **20 08 21.9 +0.6**
comp=Z,736nm,2.2s
PGRON Lagoa das Cont 30.30 280 *eP* **P** **20 08 20.7 -0.8**
comp=Z,667nm,2.0s
PSMA Santa Maria 30.32 278 *eP* **P** **20 08 22.5 +0.8**
comp=Z,627nm,2.6s
APA Apatity 30.34 15⇓*i*P **P** **20 08 20.0 -1.4**
APA *i* *PP **pP** **20 09 38.3 -3.6**
APA *i* S **S** **20 12 43.0 -4.8**
APA pmax pmax
comp=Z,43nm,0.9s
PCALD Caldeiras da R 30.38 280 *eP* **P** **20 08 23.1 +0.9**
comp=Z,392nm,0.6s
CMLA Cha da Macela 30.42 280 *eP* **P** **20 08 21.8 -0.7**
comp=Z,376nm,2.7s
TRO Tromso 30.47 4 *eP* **P** **20 08 22.6 +0.2**
TRO IAmb IAmb 20 08 23.7
comp=Z,406nm,1.0s
JETT Jettan, Norway 30.48 5 *eP* **P** **20 08 22.8 +0.2**
JETT IAmb IAmb 20 08 23.9
comp=Z,412nm,0.8s
PDA Ponta Delgada 30.53 280 *eP* **P** **20 08 22.9 -0.5**
comp=Z,711nm,1.2s

PSET Sete Cidades 30.55 280 *eP* **P** **20 08 22.4 -1.3**
comp=Z,671nm,2.6s
LVZ Lovozero 30.87 15 P **P** **20 08 25.6 -0.4**
LVZ IAmb IAmb 20 08 27.8
comp=Z,183nm,0.8s
LVZ Lovozero 30.87 15*d i*P **P** **20 08 26.6 +0.6**
LVZ pmax pmax
comp=Z,205nm,0.8s
LVZ Lovozero 30.87 15 P **P** **20 08 25.8 -0.3**
LVZ ScP **ScP** **20 14 06.8 -0.7**
ARA0 ARCESS Array S 30.91 8 *eP* **P** **20 08 26.1 -0.2**
ARA0 IAmb IAmb 20 08 27.1
comp=Z,290nm,0.7s
ARCES ARCESS Array B 30.91 8 P **P** **20 08 25.4 -0.8**
comp=Z,178nm,0.5s,baz=179,slow=7.8,SNR=1342
ARCES PP **PP** **20 09 51.8 -0.3**
comp=Z,30nm,0.8s,baz=202,slow=9.5,SNR=4.5
ARCES PcP **PcP** **20 11 09.1 +0.1**
comp=Z,26nm,0.8s,baz=207,slow=4.1,SNR=4.4
ARCES S **S** **20 12 54.7 -1.9**
comp=Z,11nm,0.6s,baz=193,slow=15,SNR=3.0
ARCES ScP **ScP** **20 14 06.7 -0.9**
comp=Z,43nm,0.8s,baz=204,slow=2.7,SNR=12
comp=Z,178nm,0.5s
ARCES ARCESS Array B 30.91 8 IAmb IAmb 20 08 27.3
comp=Z,264nm,0.7s
KEV Kevo 31.29 9 P **P** **20 08 29.1 -0.4**
KEV IAmb IAmb 20 08 30.7
comp=Z,483nm,1.4s
KEV Kevo 31.29 9 P **P** **20 08 29.2 -0.4**
KEV pmax pmax
comp=Z,483nm,1.4s
KEV Kevo 31.29 9 P **P** **20 08 29.2 -0.4**
KEV ScP **ScP** **20 14 07.8 -1.0**
RAYN Ar Rayn 31.32 111 P **P** **20 08 31.8 +1.3**
RAYN IAmb IAmb 20 08 33.1
comp=Z,339nm,0.9s
RAYN Ar Rayn 31.32 111 P **P** **20 08 31.8 +1.3**
RAYN pmax pmax
comp=Z,339nm,1.0s
RAYN Ar Rayn 31.32 111 P **P** **20 08 32.1 +1.6**
RAYN Ar Rayn 31.32 111 *i* P **P** **20 08 31.8 +1.3**
SNR=49
RAYN Ar Rayn 31.32 111 ⇑P **P** **20 08 31.9 +1.4**
RAYN pP **pP** **20 09 50.8 +0.3**
RAYN PcP **PcP** **20 11 10.6 -0.5**
RAYN ScP **ScP** **20 14 10.5 +0.7**
PAGU Agualva, Azore 31.43 282 *eP* **P** **20 08 31.2 0.0**
comp=Z,588nm,2.4s
ADH Angra Heroismo 31.49 282 *eP* **P** **20 08 30.0 -1.7**
comp=Z,416nm,2.4s
PSBA Serra de Santa 31.53 282 *eP* **P** **20 08 33.4 +1.3**
comp=Z,929nm,1.6s
HAMF Hammerfest 31.80 6 *eP* **P** **20 08 33.8 -0.1**
HAMF IAmb IAmb 20 08 35.0
comp=Z,158nm,0.8s
PGRA Graciosa 31.97 283 *eP* **P** **20 08 36.8 +1.0**
comp=Z,465nm,2.4s
SRBC Serra Branca 32.01 283 *eP* **P** **20 08 37.2 +1.0**
comp=Z,745nm,1.4s
PMAN Manadas 32.15 282 *eP* **P** **20 08 37.6 +0.2**
comp=Z,709nm,1.2s
PID Ribeirinha 32.22 282 *eP* **P** **20 08 38.7 +0.7**
comp=Z,361nm,1.5s
ROSA Rosais 32.24 282 *eP* **P** **20 08 38.7 +0.5**
comp=Z,503nm,3.2s
ROSA Rosais 32.24 282 P **P** **20 08 38.4 +0.3**
ROSA IAmb IAmb 20 08 39.9
comp=Z,246nm,1.1s
PPNO Prainha do Nor 32.32 282 *eP* **P** **20 08 39.0 +0.1**
comp=Z,560nm,1.9s
PICO Pico 32.43 282 *eP* **P** **20 08 39.9 0.0**
comp=Z,529nm,1.5s
PCAN Candelaria 32.49 282 *eP* **P** **20 08 40.1 -0.2**
comp=Z,394nm,1.9s
BORG Borgarnes 32.49 333 P **P** **20 08 41.6 +1.7**
comp=Z,92nm,0.5s,baz=106,slow=3.7,SNR=68
comp=Z,92nm,0.5s
BORG Borgarnes 32.49 333 P **P** **20 08 41.4 +1.5**
BORG IAmb IAmb 20 08 43.4
comp=Z,744nm,1.6s
BORG Borgarnes 32.49 333 P **P** **20 08 41.4 +1.5**
BORG pmax pmax
comp=Z,744nm,1.6s
BORG Borgarnes 32.49 333 P **P** **20 08 41.8 +1.9**
HOR Horta 32.58 282 *eP* **P** **20 08 41.7 +0.6**
comp=Z,501nm,2.2s
PCED Cedros 32.61 282 *eP* **P** **20 08 43.0 +1.7**
comp=Z,468nm,3.1s
CALA Caldeira 32.62 282 *eP* **P** **20 08 43.0 +1.5**
comp=Z,902nm,2.4s
AKTO Aktyubinsk 32.94 56 P **P** **20 08 44.1 +0.2**
comp=Z,87nm,0.4s,baz=244,slow=8.7,SNR=492
AKTO PcP **PcP** **20 11 15.2 +0.2**
comp=Z,38nm,0.9s,baz=207,slow=5.5,SNR=3.2
AKTO S **S** **20 13 26.0 -2.2**
comp=Z,25nm,1.1s,baz=3.5,slow=22,SNR=10
AKTO ScP **ScP** **20 14 14.6 -0.3**
comp=Z,65nm,0.9s,baz=262,slow=5.3,SNR=9.3
comp=Z,87nm,0.4s
SAKB Bahrain 33.66 102 P **P** **20 08 50.6 +0.2**
JMIC Jan Mayen 33.67 347 P **P** **20 08 50.7 +0.8**
comp=Z,190nm,0.7s,baz=116,slow=3.2,SNR=9.2
JMIC ScP **ScP** **20 14 15.7 -1.3**
comp=Z,91nm,0.7s,baz=213,slow=7.3,SNR=4.0
comp=Z,190nm,0.7s
JMIC Jan Mayen 33.67 347 *eP* **P** **20 08 50.9 +1.0**
ARU Arti 33.95 45 P **P** **20 08 52.4 -0.1**
comp=Z,273nm,0.4s,baz=246,slow=5.6,SNR=732
ARU PP **PP** **20 10 25.4 +1.1**
comp=Z,40nm,0.6s,baz=281,slow=8.6,SNR=5.4
ARU PcP **PcP** **20 11 18.0 +0.2**
comp=Z,47nm,0.4s,baz=280,slow=2.6,SNR=5.1
ARU S **S** **20 13 40.3 -3.1**
comp=Z,29nm,0.5s,baz=240,slow=17,SNR=10
ARU ScP **ScP** **20 14 18.0 -0.3**
comp=Z,109nm,0.8s,baz=210,slow=1.6,SNR=7.5
comp=Z,273nm,0.4s
ARU Arti 33.95 45 P **P** **20 08 52.1 -0.3**
ARU IAmb IAmb 20 08 53.7
comp=Z,566nm,0.9s
ARU Arti 33.95 45*c i*P **P** **20 08 52.4 -0.1**
ARU 20 10 21.5
ARU 20 11 17.3
ARU S **S** **20 13 42.2 -1.2**
ARU SS **SS** **20 16 33.3 -3.0**
ARU 20 18 14.2
ARU pmax pmax
comp=Z,887nm,1.0s
ARU Arti 33.95 45⇑P **P** **20 08 52.4 -0.1**
ARU pP **pP** **20 10 14.9 +0.8**
ARU PP **PP** **20 10 22.1 -2.2**
ARU PcP **PcP** **20 11 17.7 -0.1**
ARU ScP **ScP** **20 14 17.7 -0.6**
SHMA Al-Shehemyia 34.05 102 P **P** **20 08 55.0 +1.3**
H07N1 FLORES T-PHASE 34.17 285 *eP* **P** **20 08 55.5 +0.9**
comp=Z,121nm,1.0s
ABKAR Akbulak array 34.17 58 IAmb IAmb 20 08 55.8
comp=Z,528nm,1.2s
H07S1 FLORES T-PHASE 34.31 285 *eP* **P** **20 08 56.6 +0.8**
comp=Z,425nm,2.0s
SMRA Abu-Samra 34.55 104 P **P** **20 08 58.5 +0.6**
GEYT Alibeck 34.59 78 P **P** **20 08 59.0 +0.7**
comp=Z,318nm,0.8s,baz=280,slow=10,SNR=714
GEYT ScP **ScP** **20 14 21.7 +0.6**
comp=Z,59nm,0.8s,baz=260,slow=5.9,SNR=18
GEYT PKiKP **PKiKP** **20 18 40.9 -0.6**
comp=Z,3.2nm,0.8s,baz=270,slow=5.5,SNR=3.5
comp=Z,318nm,0.8s
SVE Sverdlovsk 35.15 44*d i*P **P** **20 09 03.1 +0.6**
SVE *e* 20 10 33.9
SVE *i* S **S** **20 14 00.8 -0.7**
SVE *e* 20 17 00.4
SVE pmax pmax
comp=Z,1μm,1.2s
BJO1 Bjornoya 35.33 3 *eP* **P** **20 09 04.5 +0.7**
BJO1 IAmb IAmb 20 09 05.3
comp=Z,167nm,1.0s
SLWR Sila 35.58 104 P **P** **20 09 07.2 +0.6**
BBTS Babate 36.07 235 P **P** **20 09 09.7 -1.0**
comp=Z,124nm,0.9s,baz=62,slow=4.7,SNR=13
BBTS PP **PP** **20 10 42.7 -3.3**
comp=Z,67nm,0.7s,baz=160,slow=18,SNR=3.7
comp=Z,124nm,0.9s
SCO Scoresbysund 36.19 341 *i* P **P** **20 09 13.1 +2.1**
SCO IAmb IAmb 20 09 14.5

comp=Z,309nm,1.0s
DBIC Dimbokro 36.52 212 P **P** **20 09 14.7 +0.2**
comp=Z,114nm,0.5s,baz=1.6,slow=8.8,SNR=165
DBIC PP **PP** **20 10 48.5 -2.4**
comp=Z,41nm,0.8s,baz=322,slow=8.9,SNR=3.2
DBIC PcP **PcP** **20 11 25.9 -0.1**
comp=Z,40nm,0.8s,baz=321,slow=5.5,SNR=2.6
DBIC S **S** **20 14 19.2 -3.7**
comp=Z,42nm,0.9s,baz=144,slow=16,SNR=8.0
DBIC ScP **ScP** **20 14 27.8 -0.5**
comp=Z,97nm,0.9s,baz=1.7,slow=3.8,SNR=9.2
comp=Z,114nm,0.5s
DBIC Dimbokro 36.52 212 P **P** **20 09 14.6 +0.2**
DBIC IAmb IAmb 20 09 16.6
comp=Z,132nm,0.5s
DBIC Dimbokro 36.52 212⇓*i*P **P** **20 09 14.7 +0.2**
DBIC Dimbokro 36.52 212 P **P** **20 09 14.6 +0.2**
DBIC pmax pmax
comp=Z,132nm,0.5s
DBIC Dimbokro 36.52 212 P **P** **20 09 14.6 +0.2**
DBIC pP **pP** **20 10 38.3 +0.7**
DBIC PcP **PcP** **20 11 26.1 0.0**
DBIC ScP **ScP** **20 14 27.8 -0.5**
GHWR Ruwais 36.53 103 P **P** **20 09 15.5 +1.0**
GHWR P **P** **20 09 15.5 +1.0**
GHWR Ruwais 36.53 103 P **ScP** **20 14 28.7 +0.3**
MBO M'Bour 36.54 236 P **P** **20 09 15.1 +0.5**
TIC Toumodi 36.60 212⇑*i*P **P** **20 09 16.8 +1.6**
comp=Z,36nm,0.2s
KIC Kosan Boka 36.75 211⇑*i*P **P** **20 09 18.1 +1.7**
comp=Z,79nm,0.3s
LIC Lamto 36.99 212⇑*e*P **P** **20 09 19.2 +0.8**
comp=Z,419nm,0.4s
MZWR Madinat Zayed 37.41 102 P **P** **20 09 22.5 +0.8**
MZWR P **P** **20 09 22.5 +0.8**
MZWR Madinat Zayed 37.41 102 P **ScP** **20 14 31.9 +0.3**
MZR Muzera 37.53 104 P **P** **20 09 23.5 +0.7**
SNR=98
MZR Muzera 37.53 104 P **ScP** **20 14 33.1 +0.9**
SNR=5.9
MZR Muzera 37.53 104 *i* P **P** **20 09 23.3 +0.5**
SNR=53
HOPEN Hopen 37.60 4 *eP* **P** **20 09 24.3 +1.8**
HSPB Hornsund (broa 37.76 1 *eP* **P** **20 09 25.4 +1.5**
FURI Furi 37.77 137 P **P** **20 09 28.1 +2.9**
FURI IAmb IAmb 20 09 29.5
comp=Z,598nm,1.0s
FURI Furi 37.77 137 P **P** **20 09 28.3 +3.2**
FURI pP **pP** **20 10 49.0 +1.1**
AJN Ajban 37.80 100 P **P** **20 09 26.1 +1.2**
SNR=34
AJN P **P** **20 09 26.1 +1.2**
SNR=34
AJN Ajban 37.80 100 P **ScP** **20 14 33.5 +0.3**
AJN Ajban 37.80 100 *i* P **P** **20 09 25.9 +0.9**
SNR=46
UMQ Umm Al-Quwin 37.80 99 P **P** **20 09 27.2 +2.2**
SNR=19
UMQ P **P** **20 09 27.2 +2.2**
SNR=19
UMQ Umm Al-Quwin 37.80 99 P **ScP** **20 14 34.4 +1.2**
UMQ Umm Al-Quwin 37.80 99 *i* P **P** **20 09 26.4 +1.4**
SNR=24
SHME Shamm 37.90 97 P **P** **20 09 26.1 +0.4**
SNR=100
SHME P **P** **20 09 26.1 +0.4**
SNR=100
SHME Shamm 37.90 97 P **ScP** **20 14 33.5 0.0**
SNR=11
SHME Shamm 37.90 97 *i* P **P** **20 09 25.8 +0.1**
SNR=229
ATD Arta Tunnel 38.01 129 ScP **ScP** **20 14 33.7 -0.4**
comp=Z,58nm,0.8s,baz=311,slow=4.5,SNR=18
ATD Arta Tunnel 38.01 129 P **P** **20 09 29.2 +2.4**
SNR=21
ATD Arta Tunnel 38.01 129 P **P** **20 09 28.8 +2.0**
ATD pP **pP** **20 10 50.1 +0.4**
ATD PcP **PcP** **20 11 32.8 +1.9**
ATD ScP **ScP** **20 14 36.1 +2.0**
ASUD Al Ashush, Dub 38.03 100 *i* P **P** **20 09 27.9 +1.0**
SNR=500
BANOM Banah 38.09 97 P **P** **20 09 28.0 +0.7**
SNR=132
BANOM Banah 38.09 97 P **ScP** **20 14 34.0 -0.2**
BANOM Banah 38.09 97 *i* P **P** **20 09 27.8 +0.4**
SNR=597
NAZ Nazwa, Dubai 38.09 99 *i* P **P** **20 09 28.1 +0.8**
SNR=74
FAQ Al Faqa, Dubai 38.17 100 *i* P **P** **20 09 28.5 +0.5**
SNR=60
MASF Masafi 38.27 98 P **P** **20 09 29.4 +0.6**
SNR=131
MASF Masafi 38.27 98 P **ScP** **20 14 35.6 +0.6**
SNR=14
MSFE Esma-Masafi 38.27 98 *i* P **P** **20 09 29.2 +0.4**
SNR=53
DBG Daneborg 38.44 346 *i* P **P** **20 09 31.2 +1.7**
DBG IAmb IAmb 20 09 32.8
comp=Z,123nm,1.1s
UOSS Minazif 38.53 99⇑P **P** **20 09 31.1 +0.2**
UOSS PP **PP** **20 11 12.8 +0.7**
UOSS PcP **PcP** **20 11 32.3 -0.1**
UOSS sP **sP** **20 11 48.5 +2.2**
UOSS ScP **ScP** **20 14 36.4 +0.4**
HATD Hatta, Dubai 38.54 99 *i* P **P** **20 09 31.4 +0.4**
SNR=1090
ASHO Ashiyiah 38.56 99 P **P** **20 09 31.7 +0.5**
SNR=318
ASHO Ashiyiah 38.56 99 P **ScP** **20 14 36.4 +0.3**
SNR=5.5
ASHO Ashiyiah 38.56 99 *i* P **P** **20 09 31.5 +0.2**
SNR=1053
ALNE Al Ain 38.66 100 P **P** **20 09 33.0 +1.0**
SNR=215
ALNE P **P** **20 09 33.0 +1.0**
SNR=215
ALNE Al Ain 38.66 100 P **ScP** **20 14 37.1 +0.6**
SNR=5.3
ALNE Al Ain 38.66 100 *i* P **P** **20 09 32.8 +0.7**
SNR=144
SPB2 Spitsbergen Ar 38.95 1 IAmb IAmb 20 09 36.0
comp=Z,241nm,0.8s
SPA0 Spitsbergen Ar 38.95 1 *eP* **P** **20 09 34.8 +1.1**
SPA0 IAmb IAmb 20 09 35.8
comp=Z,335nm,0.9s
SPITS Spitsbergen Ar 38.95 1 P **P** **20 09 34.4 +0.8**
comp=Z,94nm,0.4s,baz=162,slow=11,SNR=364
SPITS PP **PP** **20 11 15.8 +0.1**
comp=Z,38nm,0.9s,baz=191,slow=11,SNR=2.8
SPITS ScP **ScP** **20 14 36.3 -0.4**
comp=Z,136nm,0.9s,baz=177,slow=3.9,SNR=14
comp=Z,94nm,0.4s
UMZA Um Al Zommool 38.97 103 P **P** **20 09 35.2 +0.7**
UMZA P **P** **20 09 35.2 +0.7**
UMZA Um Al Zommool 38.97 103 P **ScP** **20 14 38.5 +0.9**
ANGG Ammassalik, Gr 39.06 329 *i* P **P** **20 09 35.5 +0.8**
ANGG IAmb IAmb 20 09 37.5
comp=Z,498nm,1.2s
JASK Jask - Hormozg 39.32 96 P **P** **20 09 38.9 +1.5**
SNR=106
ISOG Isortoq, Green 39.58 329 *i* P **P** **20 09 39.2 +0.3**
ISOG IAmb IAmb 20 09 40.9
comp=Z,830nm,1.4s
ARQ Araqi 39.65 101 P **P** **20 09 41.1 +1.0**
SNR=204
ARQ P **P** **20 09 41.1 +1.0**
SNR=204
ARQ Araqi 39.65 101 P **ScP** **20 14 40.6 +0.2**
KBS Kingsbay 39.69 360 P **P** **20 09 40.4 +0.8**
KBS IAmb IAmb 20 09 42.2
comp=Z,146nm,0.7s
KBS Kingsbay 39.69 360*c i*P **P** **20 09 39.7 +0.1**
KBS pmax pmax
comp=Z,559nm,2.5s
KBS Kingsbay 39.69 360 *eP* **P** **20 09 40.8 +1.2**
KBS IAmb IAmb 20 09 42.0
comp=Z,147nm,0.7s
KBS Kingsbay 39.69 360 P **P** **20 09 39.5 -0.1**
KBS ScP **ScP** **20 14 40.0 +0.6**
DAG Danmarks Havn 40.02 349 *i* P **P** **20 09 42.9 +0.6**
DAG IAmb IAmb 20 09 44.1
comp=Z,180nm,1.0s
HOQ Hoqain 40.12 100 P **P** **20 09 43.6 -0.2**
SNR=151
HOQ P **P** **20 09 43.6 -0.2**
SNR=151

HOQ Hoqain 40.12 100 P ScP 20 14 42.1 -0.1
SNR=8.2
BSY Bisya 40.50 101 P P 20 09 47.4 +0.5
SNR=230
BRVK Borovoye 40.53 51 P P 20 09 47.4 +0.6
BRVK Borovoye 40.53 51*c* *i*P P 20 09 47.3 +0.6
BRVK pmax pmax
comp=Z,917nm,1.0s
BRVK Borovoye 40.53 51 P P 20 09 47.6 +0.9
BRVK Borovoye 40.53 51 ⇑P P 20 09 47.4 +0.6
BRVK sP sP 20 12 06.3 +2.6
BRVK ScP ScP 20 14 43.1 -0.2
SACV Santiago Islan 40.58 244 P P 20 09 48.2 +0.6
BVAR Borovoye Array 40.59 51 P P 20 09 47.8 +0.5
comp=Z,104nm,0.7s,baz=273,slow=7.2,SNR=779
BVAR PP PcP 20 11 36.5 -2.0
comp=Z,24nm,0.8s,baz=316,slow=8.1,SNR=4.0
BVAR ScP ScP 20 14 43.0 -0.5
comp=Z,24nm,0.8s,baz=280,slow=4.1,SNR=10
BVAR S S 20 15 20.9 -1.5
comp=Z,3.8nm,1.0s,baz=197,slow=20,SNR=1.8
comp=Z,104nm,0.7s
DOK Doka 40.66 109 P P 20 09 48.6 +0.4
SNR=153
BIDO Bidbid 40.77 99 P P 20 09 49.0 -0.1
SNR=130
WHFO Wadi Hawf 40.84 110 P P 20 09 49.8 0.0
SNR=59
WHFO P P 20 09 49.8 0.0
SNR=59
ICESG Greenland Ices 40.86 334 *i*P P 20 09 49.8 +0.3
ICESG IAmb IAmb 20 09 51.8
comp=Z,479nm,0.6s
ABTO Aybut 40.86 111 P P 20 09 50.5 +0.6
SNR=65
ABTO P P 20 09 50.5 +0.6
SNR=65
LODK Lodwar 40.90 145 P P 20 09 51.3 +1.0
LODK IAmb IAmb 20 09 52.7
comp=Z,156nm,0.9s
LODK Lodwar 40.90 145 P P 20 09 51.7 +1.4
SNR=68
SMDO Samad 40.97 100 P P 20 09 51.1 +0.3
SNR=328
SMDO P P 20 09 51.1 +0.3
SNR=328
WSAR Wadi Sarin 41.31 99 P P 20 09 53.6 +0.2
comp=Z,173nm,0.7s,baz=317,slow=7.7,SNR=3.6
WSAR PcP PcP 20 11 41.5 +0.1
comp=Z,116nm,0.8s,baz=282,slow=1.9,SNR=4.4
WSAR ScP ScP 20 14 47.7 +0.7
comp=Z,167nm,0.9s,baz=296,slow=2.5,SNR=20
WSAR S S 20 15 30.9 -2.7
comp=Z,14nm,0.8s,baz=73,slow=16,SNR=1.0
comp=Z,173nm,0.7s
WSAR Wadi Sarin 41.31 99 P P 20 09 54.0 +0.6
SNR=79
JMDO Jabal Madar 41.40 101 P P 20 09 54.4 +0.3
SNR=222
JMDO P P 20 09 54.4 +0.3
SNR=222
RBK Rabkut 41.42 110 P P 20 09 54.8 +0.4
SNR=110
RBK P P 20 09 54.8 +0.4
SNR=110
NRS Narsarsuaq 41.73 321 *i*P P 20 09 55.1 -1.0
NRS IAmb IAmb 20 09 58.4
comp=Z,574nm,0.5s
DMTO DMTO 41.83 109 P P 20 09 57.4 -0.1
SNR=49
DMTO P P 20 09 57.4 -0.1
SNR=49
WBK Wadi Bani Khal 41.92 100 P P 20 09 59.4 +1.1
SNR=158
TAS Tashkent 41.93 69 IAmb IAmb 20 09 59.6
comp=Z,424nm,1.1s
MHTO MHTO 42.09 103 P P 20 10 00.5 +0.9
SNR=271
MHTO P P 20 10 00.5 +0.9
SNR=271
NGCH Negor - Chabah 42.11 95 P P 20 10 02.0 +2.4
SNR=27
KK31 Karatay Array 42.32 66 IAmb IAmb 20 10 03.3
comp=Z,197nm,0.9s
KKAR Karatay Array 42.32 66 IAmb IAmb 20 10 03.3
comp=Z,197nm,0.9s
BRZS Berezniki 42.35 55*d* *i*P P 20 10 00.9 -0.4
BRZS *i*S S 20 15 47.1 -0.9
BRZS pmax pmax
comp=Z,376nm,1.2s
BRZS smax smax
comp=N,264nm,2.6s
BRZS Berezniki 42.35 55⇓*i*P P 20 10 01.0 -0.4
comp=N,376nm,1.2s,baz=56
BRZS *i*S S 20 15 47.2 -0.9
comp=N,264nm,2.6s,baz=56
DQM DQM 42.39 104 P P 20 10 02.2 +0.2
SNR=196
DQM P P 20 10 02.2 +0.2
SNR=196
SIMJ Simiganj 42.53 73 ⇑P P 20 10 03.2 +0.2
SIMJ PcP PcP 20 11 45.9 +0.5
SIMJ ScP ScP 20 14 51.6 -0.2
CHGR Chuyangaron 42.65 73 IAmb IAmb 20 10 04.9
comp=Z,385nm,0.7s
DY2G Dye2 42.68 329 *i*P P 20 10 03.6 -0.3
DY2G IAmb IAmb 20 10 06.2
comp=Z,2μm,1.2s
MBAR Mbarara 42.78 154 P P 20 10 05.5 +0.2
comp=Z,27nm,0.8s,baz=322,slow=8.2,SNR=54
MBAR S S 20 15 53.9 -1.4
comp=Z,1.5nm,0.2s,baz=120,slow=20,SNR=1.5
comp=Z,27nm,0.8s
MBAR Mbarara 42.78 154 P P 20 10 05.5 +0.2
MBAR Mbarara 42.78 154*ce*P P 20 10 05.5 +0.2
MBAR pmax pmax
comp=Z,86nm,1.3s
MBAR Mbarara 42.78 154 P P 20 10 05.6 +0.3
MBAR Mbarara 42.78 154 ⇑P P 20 10 05.6 +0.2
MBAR pP pP 20 11 30.9 -0.6
MBAR sP sP 20 12 23.4 +1.1
MBAR ScP ScP 20 14 53.5 +0.4
DZA Taraz 42.95 66 *e*P P 20 10 05.8 -0.4
DZA *e*S S 20 15 56.6 -0.3
DZA pmax pmax
comp=Z,189nm,1.3s
DZA Taraz 42.95 66 *e*P P 20 10 05.8 -0.4
comp=Z,189nm,1.3s,baz=66
DZA *e*S S 20 15 56.6 -0.3
baz=66
IVI Ivigtut 43.06 321 P P 20 10 06.6 -0.1
IVI Ivigtut 43.06 321 *i*P P 20 10 06.3 -0.4
IVI IAmb IAmb 20 10 08.9
comp=Z,928nm,1.1s
IVI Ivigtut 43.06 321 ⇓P P 20 10 06.7 0.0
IVI PP PP 20 11 55.3 -1.7
NOR Nord 43.67 354 *i*P P 20 10 11.1 -0.2
NOR IAmb IAmb 20 10 12.6
comp=Z,255nm,1.2s
KBL Kabul 44.05 78 P P 20 10 15.4 +0.3
KBL IAmb IAmb 20 10 16.9
comp=Z,524nm,1.1s
KBL Kabul 44.05 78 P P 20 10 15.4 +0.3
KBL pmax pmax
comp=Z,524nm,1.1s
KBL Kabul 44.05 78 P P 20 10 16.1 +1.0
SNR=208
KBL P P 20 10 16.1 +1.0
SNR=208
BTLS Baital 44.28 62*c* *i*P P 20 10 16.8 +0.3
BTLS pmax pmax
comp=Z,219nm,1.5s
BTLS Baital 44.28 62⇑*i*P P 20 10 16.8 +0.3
comp=Z,218nm,1.5s,baz=62
DRK Karamyk 44.32 70 IAmb IAmb 20 10 18.9
comp=Z,651nm,1.2s
SFJD Kangerlussuaq 44.47 330 P P 20 10 17.8 +0.3
SFJD Kangerlussuaq 44.47 330 P P 20 10 17.8 +0.3
SFJD pmax pmax
comp=Z,996nm,1.3s
SFJD Kangerlussuaq 44.47 330 *i*P P 20 10 18.0 +0.4
SFJD IAmb IAmb 20 10 19.2
comp=Z,1μm,1.2s
SFJD Kangerlussuaq 44.47 330 P P 20 10 17.9 +0.3
EKS2 Erkin-Say 44.75 65 P P 20 10 21.1 +0.8
SNR=139

NUUK Nuuk 44.77 326 *i*P P 20 10 19.6 -0.3
AML Almayashu 44.85 66 P P 20 10 21.8 +0.3
SNR=36
USP Ospenovka 45.08 64 P P 20 10 22.5 -0.2
SNR=16
SGDS Sogindy 45.12 64⇑*i*P P 20 10 22.5 -0.6
comp=Z,83nm,1.2s,baz=64
AAK Ala-Archa 45.26 65 P P 20 10 25.1 +0.8
SNR=11
AAK Ala-Archa 45.26 65 P P 20 10 24.9 +0.6
comp=Z,164nm,1.0s,baz=238,slow=4.3,SNR=358
AAK PcP PcP 20 11 54.9 +0.1
comp=Z,91nm,1.0s,baz=204,slow=0.9,SNR=7.0
AAK PP PP 20 12 18.6 +0.9
comp=Z,56nm,1.0s,baz=264,slow=8.8,SNR=3.7
AAK ScP ScP 20 15 03.5 +0.5
comp=Z,172nm,1.0s,baz=258,slow=3.0,SNR=23
comp=Z,164nm,1.0s
AAK Ala-Archa 45.26 65 P P 20 10 25.0 +0.8
AAK IAmb IAmb 20 10 26.4
comp=Z,300nm,1.1s
AAK Ala-Archa 45.26 65*c* *i*P P 20 10 25.0 +0.8
AAK pmax pmax
comp=Z,498nm,1.7s
AAK Ala-Archa 45.26 65 P P 20 10 25.2 +0.8
AAK P P 20 10 25.2 +0.8
AAK Ala-Archa 45.26 65 *i*P P 20 10 25.0 +0.8
SNR=278
AAK Ala-Archa 45.26 65 ⇑P P 20 10 25.1 +0.8
AAK PcP PcP 20 11 55.7 +0.9
AAK ScP ScP 20 15 04.1 +1.1
CHMS Chumysh 45.33 65 P P 20 10 25.0 +0.3
SNR=272
UCH Uchtor 45.40 66 P P 20 10 26.6 +0.8
SNR=359
KBK Karagaybulak 45.57 65 P P 20 10 27.5 +0.8
SNR=157
KMBO Kilima Mbogo 45.79 146 P P 20 10 30.2 +1.5
comp=Z,2.8nm,1.0s,baz=341,slow=23,SNR=56
KMBO PcP PcP 20 11 57.2 +0.1
comp=Z,1.1nm,1.0s,baz=333,slow=4.3,SNR=5.2
KMBO Kilima Mbogo 45.79 146 P P 20 10 29.9 +1.1
KMBO Kilima Mbogo 45.79 146 P P 20 10 29.9 +1.1
KMBO pmax pmax
comp=Z,118nm,1.1s
KMBO Kilima Mbogo 45.79 146 P P 20 10 30.3 +1.5
KMBO Kilima Mbogo 45.79 146 *i*P P 20 10 30.3 +1.5
SNR=105
KMBO Kilima Mbogo 45.79 146 ⇑P P 20 10 30.1 +1.3
KMBO pP PcP 20 11 56.9 -0.3
KMBO ScP ScP 20 15 06.3 +0.7
KURBB Kurchatov Arra 45.93 53 P P 20 10 28.9 -0.2
comp=Z,190nm,0.3s,baz=272,slow=9.2,SNR=1681
KURBB PcP PcP 20 11 57.4 +0.6
comp=Z,68nm,0.8s,baz=287,slow=4.1,SNR=9.5
KURBB PP PP 20 12 24.6 +1.2
comp=Z,30nm,0.9s,baz=285,slow=11,SNR=7.1
KURBB ScP ScP 20 15 05.0 -0.3
comp=Z,88nm,0.8s,baz=285,slow=4.8,SNR=28
KURBB S S 20 16 36.5 -2.3
comp=Z,22nm,0.9s,baz=294,slow=16,SNR=9.9
comp=Z,190nm,0.3s
TKM2 Tokmak 2 45.95 65 P P 20 10 29.9 +0.2
SNR=149
KURK Kurchatov 45.97 53 P P 20 10 29.3 0.0
KURK Kurchatov 45.97 53*c* *i*P P 20 10 29.1 -0.3
KURK pmax pmax
comp=Z,1μm,1.3s
KURK Kurchatov 45.97 53 P P 20 10 29.7 +0.3
KURK Kurchatov 45.97 53 ⇑P P 20 10 29.4 0.0
KURK pP pP 20 11 57.4 +0.5
KURK PP PP 20 12 25.3 +1.6
KURK ScP ScP 20 15 05.1 -0.4
KUU Kurty 46.18 63*c* *i*P P 20 10 31.6 +0.5
KUU pmax pmax
comp=Z,1μm,1.1s
KUU Kurty 46.18 63⇑*i*P P 20 10 31.6 +0.5
comp=Z,1μm,1.1s,baz=63
KUU *e*S S 20 16 42.6 +0.1
comp=Z,221nm,2.1s,baz=63
NEEM North Greenlan 46.44 344 *i*P P 20 10 33.9 +0.9
NEEM IAmb IAmb 20 10 35.2
comp=Z,260nm,1.0s
ULHL Ulahol 46.61 65 P P 20 10 35.4 +0.7
SNR=18
CHKK Chushkaly 46.64 63⇑*i*P P 20 10 34.6 -0.1
CHKK Chushkaly 46.64 63⇑*i*P P 20 10 34.6 -0.1
baz=63
NRN Naryn 46.70 66 IAmb IAmb 20 10 38.5
comp=Z,371nm,1.0s
AAA Alma-Ata 46.78 64*c* *i*P P 20 10 36.6 +0.8
AAA pmax pmax
comp=Z,286nm,0.4s
AAA Alma-Ata 46.78 64⇑*i*P P 20 10 36.6 +0.8
comp=Z,286nm,0.4s,baz=64
MDOK Medeo 46.89 64 *i*P P 20 10 37.3 +0.6
MDOK *i*S S 20 16 52.8 0.0
MDOK Medeo 46.89 64 *i*P P 20 10 37.4 +0.6
baz=64
MDOK *i*S S 20 16 52.9 +0.1
baz=64
UPNV Upernavik 46.91 338 *i*P P 20 10 36.9 +0.7
UPNV IAmb IAmb 20 10 40.0
comp=Z,308nm,1.2s
KIBK Kibwezi 47.22 146 P P 20 10 40.4 +0.9
KIBK Kibwezi 47.22 146 P P 20 10 40.7 +1.2
SNR=33
TDK Taldyqorghan 47.27 61*c* *i*P P 20 10 39.5 +0.1
TDK *e*S S 20 16 56.7 -1.0
TDK pmax pmax
comp=Z,143nm,0.5s
TDK Taldyqorghan 47.27 61⇑*i*P P 20 10 39.6 +0.1
comp=Z,142nm,0.5s,baz=61
TDK *e*S S 20 16 56.8 -1.0
baz=61
KSH Kashi 47.34 69 P P 20 10 40.3 +0.1
KSH PcP PcP 20 12 03.3 +1.1
KSH ScP ScP 20 15 12.0 +0.3
KSH S S 20 16 56.3 -2.8
KSH ScS ScS 20 19 39.5 -4.1
KSH pmax pmax
comp=Z,840nm,1.0s
KULLO Kullorsuaq 47.39 340 *i*P P 20 10 38.7 -1.1
KULLO IAmb IAmb 20 10 41.6
comp=Z,260nm,1.2s
NIL Nilore 47.60 77 P P 20 10 43.3 +1.2
NIL Nilore 47.60 77 P P 20 10 43.3 +1.2
NIL pmax pmax
comp=Z,5μm,1.8s
NIL Nilore 47.60 77 ⇑P P 20 10 43.4 +1.3
NIL ScP ScP 20 15 13.2 +0.5
ZHN Zhinishke 47.85 63 *e*P P 20 10 43.8 -0.2
ZHN *e*S S 20 17 05.6 -0.5
ZHN Zhinishke 47.85 63 *e*P P 20 10 43.8 -0.2
baz=64
ZHN *e*S S 20 17 05.6 -0.5
baz=64
SATY Saty 47.87 63*c* *i*P P 20 10 44.5 +0.4
SATY *e*S S 20 17 06.7 +0.4
SATY pmax pmax
comp=Z,299nm,1.4s
SATY Saty 47.87 63⇑*i*P P 20 10 44.5 +0.4
comp=Z,299nm,1.4s,baz=64
SATY *e*S S 20 17 06.8 +0.4
baz=64
KPKS Kokpek 47.93 63*c* *i*P P 20 10 44.5 0.0
KPKS *e*S S 20 17 06.7 -0.4
KPKS pmax pmax
comp=Z,189nm,1.2s
KPKS smax smax
comp=N,103nm,3.0s
KPKS Kokpek 47.93 63⇑*i*P P 20 10 44.5 0.0
comp=N,189nm,1.2s,baz=63
KPKS *e*S S 20 17 06.8 -0.4
comp=N,103nm,3.0s,baz=63
NRIK Noril'sk 48.23 27 P P 20 10 47.5 +1.3
comp=N,48nm,0.8s,baz=255,slow=4.4,SNR=41
NRIK PcP PcP 20 12 06.0 +1.3
comp=N,14nm,0.8s,baz=121,slow=1.5,SNR=4.2
NRIK ScP ScP 20 15 14.4 -0.2
comp=N,18nm,0.9s,baz=343,slow=1.8,SNR=4.0
comp=N,48nm,0.8s
NRIK Noril'sk 48.23 27 P P 20 10 47.4 +1.2
NRIK Noril'sk 48.23 27*c* *i*P P 20 10 47.3 +1.1
NRIK pmax pmax
comp=Z,163nm,1.5s

UZB Uzynbulak 48.26 63*c* *i*P P 20 10 46.9 -0.2
UZB *e*S S 20 17 11.1 -0.7
UZB Uzynbulak 48.26 63⇑*i*P P 20 10 47.0 -0.2
baz=63
UZB *e*S S 20 17 11.1 -0.7
baz=63
SHLS Shalkode 48.56 63*c* *i*P P 20 10 51.7 +2.4
SHLS *e*S S 20 17 19.7 +3.8
SHLS pmax pmax
comp=Z,125nm,0.7s
SHLS Shalkode 48.56 63⇑*i*P P 20 10 51.8 +2.4
comp=Z,126nm,0.7s,baz=63
SHLS *e*S S 20 17 19.7 +3.8
baz=63
JASL Jaisalmer 48.88 87 *e*P P 20 10 52.6 +0.8
ZAA0 Zalesovo Array 48.97 48 IAmb IAmb 20 10 53.2
comp=Z,592nm,1.4s
ZALV Zalesovo Beam 48.97 48 P P 20 10 52.0 0.0
comp=Z,205nm,0.5s,baz=288,slow=7.9,SNR=743
ZALV PP PP 20 12 49.6 -1.2
comp=Z,18nm,0.5s,baz=275,slow=7.6,SNR=3.3
ZALV ScP ScP 20 15 17.2 -1.0
comp=Z,33nm,0.9s,baz=261,slow=5.2,SNR=7.8
ZALV S S 20 17 13.2 -7.8
comp=Z,16nm,1.0s,baz=292,slow=16,SNR=4.6
comp=Z,205nm,0.5s
MAKZ Makanchi 49.11 58 P P 20 10 53.1 0.0
MAKZ IAmb IAmb 20 10 54.5
comp=Z,442nm,1.1s
MAKZ Makanchi 49.11 58 P P 20 10 53.2 0.0
MAKZ pmax pmax
comp=Z,442nm,1.1s
MAKZ Makanchi 49.11 58 ⇑P P 20 10 53.3 +0.1
MAKZ PcP PcP 20 12 08.7 +0.3
MAKZ PP PP 20 12 54.7 +2.4
MAKZ sP sP 20 13 14.6 +1.0
MAKZ ScP ScP 20 15 18.4 -0.5
JMU Jammu 49.24 78⇑*i*P P 20 10 54.5 +0.1
MK31 Makanchi Array 49.32 58 IAmb IAmb 20 10 55.9
comp=Z,526nm,1.1s
MK31 Makanchi Array 49.32 58*c* *i*P P 20 10 54.8 0.0
MKAR Makanchi Array 49.32 58 P P 20 10 54.8 0.0
comp=Z,458nm,0.6s,baz=285,slow=6.7,SNR=9669
MKAR PcP PcP 20 12 09.3 +0.1
comp=Z,54nm,0.8s,baz=286,slow=4.5,SNR=5.9
MKAR ScP ScP 20 15 19.2 -0.7
comp=Z,71nm,0.8s,baz=291,slow=3.8,SNR=18
MKAR S S 20 17 24.0 -2.0
comp=Z,22nm,1.0s,baz=282,slow=12,SNR=7.7
MKAR ScS ScS 20 19 55.5 -1.1
comp=Z,4.2nm,0.9s,baz=247,slow=11,SNR=3.8
MKAR P4KPbc 20 48 21.1
comp=Z,1.0nm,0.9s,baz=274,slow=4.0,SNR=5.2
comp=Z,458nm,0.6s
MKAR Makanchi Array 49.32 58 *i*P P 20 10 54.7 -0.1
MKAR pmax pmax
comp=Z,465nm,0.6s
ALE Alert 49.38 350 P P 20 10 55.0 +0.3
ALE ScP ScP 20 15 19.7 +0.2
THN Thein Dam 49.99 78 *e*P P 20 11 00.0 +0.1
THN ⇑*i*P P 20 11 00.4 +0.5
DRLN Deer Lake 50.04 306 P P 20 10 59.7 -0.3
TULEG Thule 50.34 342 IAmb IAmb 20 11 03.3
comp=Z,505nm,1.5s
ZSN Zaisan 50.79 56*c* *i*P P 20 11 06.4 +0.8
ZSN *e*S S 20 17 46.2 +0.3
ZSN pmax pmax
comp=Z,376nm,1.2s
ZSN smax smax
comp=E,204nm,2.4s
ZSN Zaisan 50.79 56⇑*i*P P 20 11 06.4 +0.8
comp=E,376nm,1.2s,baz=56
ZSN *e*S S 20 17 46.2 +0.3
comp=E,204nm,2.4s,baz=56
BHK Bhakra 50.98 78⇑*i*P P 20 11 07.0 -0.2
SMLA Simla 51.68 78 *i*P P 20 11 11.7 -0.6
SMLA IAmb IAmb 20 11 13.2
comp=Z,1μm,1.5s
SMLA *i*S S 20 17 55.6 -2.8
DGZ Jazzator, Alta 51.69 53*c* *i*P P 20 11 12.6 +0.3
DGZ pmax pmax
comp=Z,315nm,1.5s
AJM Ajmer 52.00 85⇑*i*P P 20 11 14.0 -0.7
AJM ⇑*i*P P 20 11 14.6 -0.1
BHGR Bahadurgarh 52.67 81 *e*P P 20 11 18.8 -0.7
DDI Dehra Dun 52.73 79⇑*i*P P 20 11 19.3 -0.7
NDI New Delhi 52.88 81 *e*P P 20 11 22.0 +1.0
SONA Sohna 52.99 82 *e*P P 20 11 20.8 -0.9
EUNU Eureka 53.22 348 IAmb IAmb 20 11 25.5
comp=Z,252nm,1.0s
SCHQ Schefferville 53.82 315 P P 20 11 27.3 -0.1
comp=Z,535nm,0.5s,baz=70,slow=5.5,SNR=1414
SCHQ S S 20 18 22.2 -4.1
comp=Z,18nm,1.2s,baz=220,slow=18,SNR=5.6
comp=Z,535nm,0.5s
SCHQ Schefferville 53.82 315 P P 20 11 27.3 -0.1
WMQ Urumqi 53.92 59 ⇑P P 20 11 29.0 +0.7
WMQ PcP PcP 20 12 28.0 +1.3
WMQ PP PP 20 13 37.3 +1.9
WMQ S S 20 18 28.5 +0.4
WMQ ScS ScS 20 20 31.8 +2.7
WMQ pmax pmax
comp=Z,360nm,0.7s
WMQ pmax pmax
comp=Z,2μm,3.9s
WMQ Urumqi 53.92 59 P P 20 11 29.0 +0.7
WMQ ScP ScP 20 15 40.6 +0.6
PTH Pithoragarh 54.75 79⇑*i*P P 20 11 33.9 -0.6
LGTI Lohaghat 54.82 79⇑*i*P P 20 11 33.7 -1.0
JHNI Jhansi 55.52 84⇑*i*P P 20 11 38.9 -0.8
POO Poona 55.69 94 *e*P P 20 11 40.9 -0.1
BHPL Bhopal 55.84 87 *i*P P 20 11 40.2 -1.8
BHPL IAmb IAmb 20 11 44.9
comp=Z,79nm,0.8s
LSZ Lusaka 56.05 163 P P 20 11 44.5 +1.0
comp=Z,195nm,0.8s,baz=359,slow=7.6,SNR=318
LSZ ScP ScP 20 15 50.3 +0.8
comp=Z,19nm,0.8s,baz=360,slow=3.5,SNR=6.2
comp=Z,195nm,0.8s
LSZ Lusaka 56.05 163⇑*i*P P 20 11 44.5 +1.0
LSZ IAmb IAmb 20 11 45.3
comp=Z,242nm,0.8s
LSZ Lusaka 56.05 163 *i*P P 20 11 44.4 +0.9
LSZ Lusaka 56.05 163 P P 20 11 44.4 +0.9
LSZ pmax pmax
comp=Z,240nm,0.9s
LSZ Lusaka 56.05 163 *i*P P 20 11 44.4 +0.9
LSZ Lusaka 56.05 163 P P 20 11 44.4 +0.9
LSZ pP pP 20 13 14.3 -1.8
LSZ ScP ScP 20 15 51.5 +2.0
KAD Karad 56.66 95⇑*i*P P 20 11 47.6 -0.2
BRCI Bahraich 56.78 80 *e*P P 20 11 48.3 -0.1
AKL Akola 56.91 89⇑*i*P P 20 11 49.0 -0.5
RES Resolute Bay 57.06 343 P P 20 11 50.6 +1.0
RES Resolute Bay 57.06 343 P P 20 11 50.6 +1.0
RES pmax pmax
comp=Z,124nm,1.1s
GOA Goa 57.45 97 *i*P P 20 11 53.1 -0.1
GOA IAmb IAmb 20 11 56.7
comp=Z,86nm,0.9s
JBP Jabalpur 57.86 85 *e*P P 20 11 53.4 -2.5
G65A Princeton 57.88 304 IAmb IAmb 20 11 57.3
comp=Z,623nm,1.3s
G65A Princeton 57.88 304 P P 20 11 56.1 +0.4
baz=65,SNR=16
G65A P P 20 11 56.1 +0.4
baz=65,SNR=16
E63A Oxbow 57.91 306 P P 20 11 56.4 +0.4
baz=65,SNR=39
E63A P P 20 11 56.4 +0.4
baz=65,SNR=39
D62A Allapoint, All 58.02 307 P P 20 11 57.0 +0.3
D62A Allapoint, All 58.02 307 P P 20 11 57.0 +0.3
baz=65,SNR=74
D62A P P 20 11 57.0 +0.3
baz=65,SNR=74
EMMW East Machias 58.03 304 IAmb IAmb 20 11 58.1
comp=Z,615nm,1.2s
EMMW East Machias 58.03 304 P P 20 11 56.9 +0.1
baz=64,SNR=13
DANN Dangsing 58.03 78 *e*P P 20 11 57.5 +0.1
comp=Z,2μm,0.9s
F64A Sherman 58.10 305 IAmb IAmb 20 11 58.7
comp=Z,793nm,1.4s
F64A Sherman 58.10 305 P P 20 11 57.7 +0.4

baz=65,SNR=33
F64A P **P** **20 11 57.7 +0.4**
baz=65,SNR=33
ALBI Allahabad 58.12 82⇑ *i*P **P** **20 11 56.1 -1.6**
KOLN Koldanda 58.21 79 *e*P **P** **20 11 57.4 -1.1**
NGP Nagpur 58.24 88⇑ *i*P **P** **20 11 57.8 -0.7**
TSUM Tsumeb 58.38 175 P **P** **20 11 59.6 +0.1**
comp=Z,54nm,0.8s,baz=0.0,slow=8.1,SNR=46
comp=Z,54nm,0.8s
TSUM Tsumeb 58.38 175 P **P** **20 11 59.5 -0.1**
TSUM Tsumeb 58.38 175⇑ *i*P **P** **20 11 59.6 +0.1**
TSUM IAmb IAmb 20 12 00.6
comp=Z,80nm,0.9s
TSUM Tsumeb 58.38 175 P **P** **20 11 59.4 -0.1**
MSEY Mahe Island 58.43 129 P **P** **20 12 00.3 +0.3**
MSEY IAmb IAmb 20 12 01.6
comp=Z,660nm,1.7s
MSEY Mahe Island 58.43 129 P **P** **20 12 00.3 +0.3**
MSEY pmax pmax
comp=Z,660nm,1.7s
MSEY Mahe Island 58.43 129 P **P** **20 12 00.4 +0.5**
MSEY Mahe Island 58.43 129 *i* P **P** **20 12 00.3 +0.3**
SNR=13
MSEY Mahe Island 58.43 129⇑P **P** **20 12 00.1 +0.2**
MSEY pP **pP** **20 13 34.3 +1.6**
E62A Clayton Lake 58.51 307 P **P** **20 12 00.4 +0.4**
baz=64,SNR=77
E62A P **P** **20 12 00.4 +0.4**
baz=64,SNR=77
VLK Valmikinagar 58.64 79⇑ *i*P **P** **20 12 01.4 +0.2**
F63A Nahmakanta, Br 58.65 306 IAmb IAmb 20 12 02.0
comp=Z,305nm,1.2s
F63A Nahmakanta, Br 58.65 306 P **P** **20 12 01.5 +0.5**
baz=64
F63A P **P** **20 12 01.5 +0.5**
baz=64
GKN Gorkha 58.88 78 *e*P **P** **20 12 02.5 -0.5**
comp=Z,3μm,1.2s
PKME Peaks-Kenny Pk 58.96 305 IAmb IAmb 20 12 04.8
comp=Z,605nm,1.3s
PKME Peaks-Kenny Pk 58.96 305 P **P** **20 12 03.7 +0.6**
baz=64,SNR=22
PKME Peaks-Kenny Pk 58.96 305 P **P** **20 12 03.4 +0.4**
baz=64,SNR=22
MOY Mondy 58.97 47 *e*P **P** **20 12 04.3 +1.1**
MOY pmax pmax
comp=Z,389nm,2.2s
VAR Varanasi 59.05 81 *e*P **P** **20 12 02.7 -1.3**
F62A Pittston Farm, 59.10 306 IAmb IAmb 20 12 05.9
comp=Z,340nm,1.1s
F62A Pittston Farm, 59.10 306 P **P** **20 12 04.5 +0.5**
baz=64,SNR=16
F62A P **P** **20 12 04.5 +0.5**
baz=64,SNR=16
DMN Daman 59.43 78 *e*P **P** **20 12 06.8 -0.1**
comp=Z,2μm,0.9s
KKN Kakani 59.47 78 *e*P **P** **20 12 06.1 -1.0**
WVL Waterville 59.50 305 P **P** **20 12 06.3 -0.4**
baz=63,SNR=7.3
PKIN Phulchoki 59.67 78 *e*P **P** **20 12 07.9 -0.6**
comp=Z,438nm,0.6s
PKI Pulchoki 59.68 78 *e*P **P** **20 12 08.2 -0.4**
comp=Z,383nm,0.6s
G62A West of Eustis 59.76 306 IAmb IAmb 20 12 10.6
comp=Z,313nm,1.2s
G62A West of Eustis 59.76 306 P **P** **20 12 09.1 +0.6**
baz=63,SNR=17
G62A P **P** **20 12 09.1 +0.6**
baz=63,SNR=17
MNGI Mangalore 59.77 98 *e*P **P** **20 12 08.9 0.0**
GUN Gumba 59.86 77 *e*P **P** **20 12 09.7 -0.2**
comp=Z,1μm,0.8s
HYBB Hyderabad (bro 59.97 92 *e*P **P** **20 12 09.3 -1.1**
HYBB IVmB_BB 20 12 09.8
comp=Z,2μm,1.7s
HYBB *e*PcP **PcP** **20 12 51.1 +0.1**
HYBB *e*pP **pP** **20 13 45.2 +0.8**
HYBB *e*PP **PP** **20 14 31.1 +1.7**
HYBB *e*ScP **ScP** **20 16 09.0 +2.0**
HYBB *e*PcS **PcS** **20 16 54.4 +0.2**
HYB Hyderabad 59.98 92 *i* P **P** **20 12 09.1 -1.3**
HYB IAmb IAmb 20 12 14.1
comp=Z,195nm,1.4s
BLSP Bilaspur 60.08 85⇑ *i*P **P** **20 12 10.1 -0.9**
LATQ La Tuque 60.18 309 IAmb IAmb 20 12 12.5
comp=Z,666nm,1.3s
JIRN Jiri 60.23 77 *e*P **P** **20 12 12.1 -0.2**
comp=Z,289nm,0.3s
I63A Otisfield 60.33 304 IAmb IAmb 20 12 14.2
comp=Z,214nm,0.8s
I63A Otisfield 60.33 304 P **P** **20 12 12.7 +0.4**
baz=62,SNR=11
I63A P **P** **20 12 12.7 +0.4**
baz=62,SNR=11
TIXI Tiksi 60.40 19 S **S** **20 19 52.1 +1.8**
comp=Z,3.6nm,0.8s,baz=270,slow=24,SNR=12
TIXI Tiksi 60.40 19 P **P** **20 12 12.9 +0.8**
TIXI Tiksi 60.40 19*c i*P **P** **20 12 13.0 +0.8**
TIXI pmax pmax
comp=Z,120nm,1.9s
TIXI Tiksi 60.40 19 P **P** **20 12 12.8 +0.5**
H62A Milan 60.45 305 IAmb IAmb 20 12 15.1
comp=Z,622nm,1.4s
H62A Milan 60.45 305 P **P** **20 12 13.9 +0.8**
baz=62,SNR=18
H62A P **P** **20 12 13.9 +0.8**
baz=62,SNR=18
IRK Irkutsk 60.54 45 *e*P **P** **20 12 12.9 -0.6**
IRK *e*S **S** **20 19 53.7 +1.0**
IRK pmax pmax
comp=Z,730nm,1.8s
ZAK Zakamensk 60.84 47 *e*P **P** **20 12 16.4 +0.7**
ZAK pmax pmax
comp=Z,255nm,1.3s
I62A Tamworth 60.89 304 IAmb IAmb 20 12 18.3
comp=Z,711nm,1.6s
I62A Tamworth 60.89 304 P **P** **20 12 17.0 +1.0**
baz=62,SNR=13
I62A P **P** **20 12 17.0 +1.0**
baz=62,SNR=13
RAMN Ramite 60.91 78 *e*P **P** **20 12 15.9 -0.8**
comp=Z,1μm,0.8s
LBNH Lisbon 61.09 305 P **P** **20 12 18.4 +1.1**
LBNH IAmb IAmb 20 12 19.8
comp=Z,774nm,1.5s
LBNH Lisbon 61.09 305 P **P** **20 12 18.4 +1.1**
LBNH pmax pmax
comp=Z,774nm,1.5s
LBNH Lisbon 61.09 305 P **P** **20 12 18.6 +1.2**
baz=62,SNR=28
LBNH Lisbon 61.09 305 P **P** **20 12 18.6 +1.2**
baz=62,SNR=28
MATP Matopo 61.10 164 *i* P **P** **20 12 18.3 +0.6**
MATP Matopo 61.10 164 *i* P **P** **20 12 18.3 +0.6**
FFD Franklin Falls 61.28 304 IAmb IAmb 20 12 21.2
comp=Z,664nm,1.4s
FFD Franklin Falls 61.28 304 P **P** **20 12 19.6 +1.1**
baz=62,SNR=12
MNCY Minicoy 61.34 104 *i* P **P** **20 12 18.6 -0.8**
MNCY IAmb IAmb 20 12 20.8
comp=Z,149nm,1.0s
MNCI Minicoy 61.35 104 P **P** **20 12 18.2 -1.2**
L64A Middleborough 61.49 302 IAmb IAmb 20 12 22.0
comp=Z,220nm,0.8s
L64A Middleborough 61.49 302 P **P** **20 12 20.7 +0.7**
baz=61,SNR=10
L64A P **P** **20 12 20.7 +0.7**
baz=61,SNR=10
BCX Boston College 61.51 303 IAmb IAmb 20 12 22.0
comp=Z,540nm,1.2s
TAPN Taplejung 61.54 77 *e*P **P** **20 12 20.3 -0.6**
comp=Z,807nm,1.1s
JHSG JHARSUGUDA 61.55 84 *e*P **P** **20 12 19.9 -0.8**
MNTQ Montreal, Queb 61.56 307 IAmb IAmb 20 12 22.2
comp=Z,585nm,1.2s
VT1 Waterbury 61.58 305 P **P** **20 12 21.2 +0.7**
baz=62,SNR=11
HNH Hanover 61.58 305 IAmb IAmb 20 12 23.0
comp=Z,216nm,1.0s
HNH Hanover 61.58 305 P **P** **20 12 21.4 +0.9**
baz=62,SNR=14
WES Weston 61.59 303 P **P** **20 12 20.4 -0.2**
baz=61,SNR=22
HRV Adam Dziewonsk 61.68 303 P **P** **20 12 21.6 +0.4**
HRV IAmb IAmb 20 12 23.1
comp=Z,395nm,1.2s
HRV Adam Dziewonsk 61.68 303 P **P** **20 12 21.6 +0.4**
HRV pmax pmax
comp=Z,395nm,1.2s
HRV Adam Dziewonsk 61.68 303 P **P** **20 12 21.8 +0.6**
baz=61
HRV Adam Dziewonsk 61.68 303 P **P** **20 12 22.0 +0.8**
baz=61
HRV Adam Dziewonsk 61.68 303 P **P** **20 12 21.6 +0.4**
MCVT Middlebury Col 61.91 305 P **P** **20 12 23.7 +1.0**
baz=61,SNR=16
J61A Chester 61.92 304 IAmb IAmb 20 12 25.3
comp=Z,330nm,1.3s
J61A Chester 61.92 304 P **P** **20 12 23.4 +0.6**
baz=61,SNR=19
J61A P **P** **20 12 23.4 +0.6**
baz=61,SNR=19
BBSR BB Station 61.93 290 P **P** **20 12 23.7 +0.7**
BBSR IAmb IAmb 20 12 25.0
comp=Z,287nm,1.1s
BBSR BB Station 61.93 290 P **P** **20 12 22.9 -0.1**
baz=59,SNR=21
BBSR BB Station 61.93 290 P **P** **20 12 23.2 +0.2**
BRYW Bryant College 61.95 303 IAmb IAmb 20 12 25.1
comp=Z,300nm,1.0s
K62A Royalston 62.04 304 IAmb IAmb 20 12 26.1
comp=Z,446nm,1.2s
K62A Royalston 62.04 304 P **P** **20 12 24.7 +1.1**
baz=61,SNR=15
K62A P **P** **20 12 24.7 +1.1**
baz=61,SNR=15
BOK Bokaro 62.06 81 *i* P **P** **20 12 23.4 -0.6**
BOK IAmb IAmb 20 12 25.1
comp=Z,2μm,1.5s
VJD Vijayawada 62.13 91⇑ *i*P **P** **20 12 24.1 -0.4**
GOMU GeErMu 62.20 65 P **P** **20 12 26.0 +0.8**
GOMU S **S** **20 20 14.3 -0.3**
GOMU ScS **ScS** **20 21 34.0 +2.7**
GOMU pmax pmax
comp=Z,110nm,1.5s
QUA2 Belchertown 62.31 303 IAmb IAmb 20 12 27.7
comp=Z,251nm,1.0s
QUA2 Belchertown 62.31 303 P **P** **20 12 26.4 +1.1**
baz=61,SNR=15
PCHI Peechi 62.42 99⇑ *e*P **P** **20 12 26.3 -0.1**
PCHI *e*S **S** **20 20 16.6 -0.5**
BMNY Brushton-Moira 62.43 307 P **P** **20 12 25.8 -0.3**
baz=61,SNR=42
L61B Northampton 62.44 304 IAmb IAmb 20 12 28.6
comp=Z,373nm,1.2s
L61B Northampton 62.44 304 P **P** **20 12 27.1 +1.0**
baz=61,SNR=19
L61B Northampton 62.44 304 P **P** **20 12 27.3 +1.1**
baz=61,SNR=19
UCCT U. Connecticut 62.46 303 IAmb IAmb 20 12 27.6
comp=Z,684nm,1.5s
M63A Gales Ferry 62.53 302 IAmb IAmb 20 12 29.1
comp=Z,236nm,0.9s
M63A Gales Ferry 62.53 302 P **P** **20 12 27.7 +0.9**
baz=60,SNR=13
M63A P **P** **20 12 27.7 +0.9**
baz=60,SNR=13
SBV Sambava 62.55 139⇑ *i*P **P** **20 12 27.3 +0.2**
SBV Sambava 62.55 139 P **P** **20 12 28.3 +1.2**
SNR=15
LONY Lake Ozonia 62.59 306 IAmb IAmb 20 12 29.7
comp=Z,611nm,1.4s
LONY Lake Ozonia 62.59 306 P **P** **20 12 27.9 +0.7**
baz=61,SNR=40
ACCN Adirondack Com 62.61 305 P **P** **20 12 28.3 +1.0**
ACCN IAmb IAmb 20 12 29.8
comp=Z,456nm,1.1s
ACCN Adirondack Com 62.61 305 P **P** **20 12 28.2 +0.9**
baz=61,SNR=35
NCB Newcomb 62.68 306 IAmb IAmb 20 12 29.9
comp=Z,322nm,1.2s
NCB Newcomb 62.68 306 P **P** **20 12 28.6 +0.8**
baz=61,SNR=20
RAGD RAYAGADA 62.72 87⇑ *i*P **P** **20 12 28.2 -0.1**
BOD Bodaibo 62.74 36 *e*P **P** **20 12 27.5 -0.3**
BOD pmax pmax
comp=Z,363nm,1.1s
LSA Lhasa 62.88 73 IAmb IAmb 20 12 31.6
comp=Z,482nm,1.1s
LSA Lhasa 62.88 73 P **P** **20 12 30.3 +0.5**
LSA pmax pmax
comp=Z,410nm,1.0s
LSA Lhasa 62.88 73 P **P** **20 12 30.3 +0.5**
LSA Lhasa 62.88 73 P **P** **20 12 30.0 +0.2**
LSA sP **sP** **20 14 53.7 -0.6**
TRY Troy 62.93 304 IAmb IAmb 20 12 32.0
comp=Z,219nm,1.1s
J59A Piesco 63.10 305 IAmb IAmb 20 12 32.9
comp=Z,305nm,1.1s
J59A Piesco 63.10 305 P **P** **20 12 31.2 +0.7**
baz=60,SNR=28
J59A P **P** **20 12 31.2 +0.7**
baz=60,SNR=28
SALM Salem 63.16 97⇑ *i*P **P** **20 12 30.8 -0.4**
YLE Yale 63.16 303 IAmb IAmb 20 12 32.6
comp=Z,226nm,1.0s
MUSN Musina, Limpop 63.20 163⇑ *i*P **P** **20 12 32.5 +1.2**
MUSN IAmb IAmb 20 12 33.4
comp=Z,294nm,0.8s
MUSN Musina, Limpop 63.20 163 *i* P **P** **20 12 32.6 +1.4**
MUSN Musina, Limpop 63.20 163 *i* P **P** **20 12 32.6 +1.4**
KSCT Kent School, K 63.31 303 IAmb IAmb 20 12 35.0
comp=Z,499nm,1.3s
HCNY Howe Caverns 63.42 305 P **P** **20 12 33.9 +1.4**
baz=60,SNR=46
KOD Kodaikanal 63.47 99⇑ *i*P **P** **20 12 33.7 +0.1**
VIS Vishakhapatnam 63.50 88 *i* P **P** **20 12 33.2 -0.2**
WCNY West Carthage 63.57 306 P **P** **20 12 34.3 +0.8**
baz=60,SNR=107
J58A Remsen 63.65 306 IAmb IAmb 20 12 36.4
comp=Z,299nm,0.7s
J58A Remsen 63.65 306 P **P** **20 12 35.2 +1.2**
baz=60,SNR=72
J58A P **P** **20 12 35.2 +1.2**
baz=60,SNR=72
NPNY Mohonk Preserv 63.73 304 P **P** **20 12 35.4 +0.9**
baz=60,SNR=38
BRNY Black Rk. Fore 63.81 303 P **P** **20 12 35.8 +0.7**
baz=60,SNR=21
SONM Songino Array 63.86 49 P **P** **20 12 36.2 +0.7**
comp=Z,270nm,0.9s,baz=291,slow=6.9,SNR=1083
SONM PcP **PcP** **20 13 07.1 +0.6**
comp=Z,36nm,0.9s,baz=298,slow=4.8,SNR=5.4
SONM PP **PP** **20 14 59.1 -3.6**
comp=Z,24nm,0.9s,baz=290,slow=7.9,SNR=5.0
SONM ScP 20 16 23.5
comp=Z,40nm,1.1s,baz=287,slow=4.4,SNR=9.6
SONM S **S** **20 20 35.4 +1.4**
comp=Z,8.5nm,1.2s,baz=288,slow=11,SNR=7.0
SONM PKPPKP **P'P'df** **20 41 22.0 -2.6**
comp=Z,1.7nm,1.0s,baz=118,slow=4.3,SNR=6.2
comp=Z,270nm,0.9s
SONM Songino Array 63.86 49 P **P** **20 12 36.0 +0.7**
SONM PcP **PcP** **20 13 07.6 +1.1**
SONM Songino Array 63.86 49 P **P** **20 12 36.1 +0.7**
SONM 20 13 07.6
SONM pmax pmax
comp=Z,524nm,1.1s
MDRS Chennai 63.87 94 *i* P **P** **20 12 35.8 0.0**
MDRS IAmb IAmb 20 12 39.8
comp=Z,83nm,0.8s
BWNR Bhubaneshwar 63.94 84⇑ *i*P **P** **20 12 36.5 +0.3**
PAL Palisades 63.95 303 P **P** **20 12 36.4 +0.5**
PAL Palisades 63.95 303 P **P** **20 12 36.4 +0.5**
PAL pmax pmax
comp=Z,796nm,1.5s
PAL Palisades 63.95 303 P **P** **20 12 36.5 +0.6**
baz=60,SNR=24
PAL Palisades 63.95 303 P **P** **20 12 36.5 +0.6**
baz=60,SNR=24
DHUB DHUBRI 63.98 77⇑ *i*P **P** **20 12 35.5 -0.8**
FOR Fordham 64.01 303 P **P** **20 12 37.0 +0.7**
baz=59,SNR=35
GTA Gaotai 64.01 59⇑P **P** **20 12 37.5 +1.0**
GTA pP pP 20 14 14.5 +2.2
GTA sP sP 20 15 02.8 +1.2
GTA ScP 20 16 25.5
GTA S **S** **20 20 38.3 +2.2**
GTA ScS **ScS** **20 21 45.5 +0.9**
GTA SS **SS** **20 24 51.8 -2.9**
GTA pmax pmax
comp=Z,360nm,1.0s
GTA pmax pmax
comp=Z,1μm,4.3s
RCBR Riachuelo 64.02 237 P **P** **20 12 38.0 +1.2**
RCBR Riachuelo 64.02 237 P **P** **20 12 38.0 +1.2**
RCBR pmax pmax
comp=Z,44nm,0.8s
RCBR Riachuelo 64.02 237 P **P** **20 12 37.2 +0.5**
J57A Williamstown 64.07 306 P **P** **20 12 37.7 +1.0**
baz=60,SNR=69
J57A P **P** **20 12 37.7 +1.0**
baz=60,SNR=69
L59A Walton 64.08 304 P **P** **20 12 36.7 -0.2**
baz=60,SNR=34
L59A P **P** **20 12 36.7 -0.2**
baz=60,SNR=34
TRNY Table Rock, Ra 64.09 303 IAmb IAmb 20 12 38.8
comp=Z,507nm,1.4s
TRD Trivandrum 64.17 101 *i* P **P** **20 12 37.6 -0.1**
ULN Ulaanbaatar 64.23 48 P **P** **20 12 38.5 +0.7**
ULN IAmb IAmb 20 12 39.9
comp=Z,335nm,1.1s
ULN Ulaanbaatar 64.23 48*c i*P **P** **20 12 38.5 +0.7**
ULN pmax pmax
comp=Z,372nm,1.2s
ULN Ulaanbaatar 64.23 48 P **P** **20 12 38.6 +0.8**
ULN Ulaanbaatar 64.23 48 P **P** **20 12 36.9 -0.9**
comp=Z,7μmcomp=Z,14μmcomp=Z,1μm,1.6s
ULN Ulaanbaatar 64.23 48⇑P **P** **20 12 38.5 +0.7**
ULN sP **sP** **20 15 02.8 -0.2**
LEPH Lephalale, Lim 64.29 165⇑ *i*P **P** **20 12 38.6 +0.3**
LEPH IAmb IAmb 20 12 39.5
comp=Z,138nm,1.2s
ODNJ Ogdensburg 64.37 303 IAmb IAmb 20 12 40.6
comp=Z,254nm,1.1s
ODNJ Ogdensburg 64.37 303 P **P** **20 12 39.4 +0.8**
baz=59,SNR=27
PECO Prince Edward 64.43 307 IAmb IAmb 20 12 41.1
comp=Z,315nm,0.9s
DELO Deloro Mine 64.52 308 IAmb IAmb 20 12 41.6
comp=Z,248nm,1.0s
BRNJ Basking Ridge 64.55 303 IAmb IAmb 20 12 42.0
comp=Z,245nm,1.2s
BRNJ Basking Ridge 64.55 303 P **P** **20 12 39.7 0.0**
baz=59,SNR=11
J56A Wolcott 64.68 306 IAmb IAmb 20 12 42.8
comp=Z,353nm,0.9s
J56A Wolcott 64.68 306 P **P** **20 12 41.6 +1.1**
baz=59,SNR=30
J56A P **P** **20 12 41.6 +1.1**
baz=59,SNR=30
BINY Binghamton 64.68 305 P **P** **20 12 41.7 +1.1**
baz=59,SNR=55
BINY Binghamton 64.68 305 P **P** **20 12 41.7 +1.1**
baz=59,SNR=55
MOPA Mopani 64.74 162⇑ *i*P **P** **20 12 42.6 +1.5**
MOPA IAmb IAmb 20 12 43.8
comp=Z,32nm,1.0s
MOPA Mopani 64.74 162 *i* P **P** **20 12 42.8 +1.7**
MOPA Mopani 64.74 162 *i* P **P** **20 12 42.8 +1.7**
K57A Scipio Center 64.75 305 P **P** **20 12 42.2 +1.2**
baz=59,SNR=54
KSPA Keystone Colle 64.87 304 P **P** **20 12 42.8 +0.9**
KSPA IAmb IAmb 20 12 44.2
comp=Z,525nm,1.3s
KSPA Keystone Colle 64.87 304 P **P** **20 12 42.9 +1.0**
baz=59,SNR=36
LBTB Lobatse 65.02 168 P **P** **20 12 43.7 +0.7**
comp=Z,157nm,0.7s,baz=336,slow=7.5,SNR=190
comp=Z,157nm,0.7s
LBTB Lobatse 65.02 168⇑P **P** **20 12 43.6 +0.7**
LBTB pP **pP** **20 14 17.0 -1.9**
TUPA Temple Univers 65.22 302 P **P** **20 12 44.2 +0.2**
baz=58,SNR=52
A36M Sachs Harbour 65.24 347 IAmb IAmb 20 12 46.7
comp=Z,291nm,1.0s
A36M Sachs Harbour 65.24 347 P **P** **20 12 44.9 +1.4**
baz=34,SNR=13
A36M S **S** **20 20 51.7 +2.2**
baz=34
J55A Hilton 65.28 306 P **P** **20 12 45.2 +0.9**
baz=58,SNR=28
J55A P **P** **20 12 45.2 +0.9**
baz=58,SNR=28
FCC Fort Churchill 65.36 327 IAmb IAmb 20 12 47.0
comp=Z,638nm,1.5s
PSUB Penn St. - Bra 65.52 302 P **P** **20 12 44.6 -1.3**
baz=58
CIT Chita 65.60 42 *e*P **P** **20 12 46.6 +0.3**
CIT *e* 20 13 15.0
CIT *e* 20 14 21.8
CIT *e* 20 17 01.2
CIT *e*S **S** **20 20 55.8 +1.2**
CIT *e* 20 21 56.8
CIT pmax pmax
comp=Z,550nm,2.2s
WUPA West Chester U 65.61 302 IAmb IAmb 20 12 48.3
comp=Z,245nm,1.4s
MMNY Mt. Morris Dam 65.62 306 P **P** **20 12 47.2 +0.7**
SHL Shillong 65.65 76 P **P** **20 12 46.4 -0.8**
SNR=176
SHL Shillong 65.65 76 *i* P **P** **20 12 45.9 -1.3**
SHL IAmb IAmb 20 12 47.6
comp=Z,356nm,0.5s
OPO Ambohidratompo 65.66 145 P **P** **20 12 48.0 +0.8**
comp=Z,164nm,1.1s,baz=322,slow=4.7,SNR=57
comp=Z,164nm,1.1s
GEDE Greenville 65.70 302 P **P** **20 12 47.1 0.0**
baz=58,SNR=32
L56A Greenwood 65.71 305 P **P** **20 12 47.6 +0.4**
baz=58,SNR=81
L56A P **P** **20 12 47.6 +0.4**
baz=58,SNR=81
TEZP TEZPUR 65.76 75⇑ *i*P **P** **20 12 47.1 -0.5**
J54A Appleton 65.79 307 P **P** **20 12 48.5 +0.9**
baz=58,SNR=31
J54A P **P** **20 12 48.5 +0.9**
baz=58,SNR=31
N58A Sunbury 65.86 304 P **P** **20 12 49.0 +1.0**
baz=58,SNR=61
N58A P **P** **20 12 49.0 +1.0**
baz=58,SNR=61
M57A Sunshine Farm, 65.86 304 P **P** **20 12 49.4 +1.3**
baz=58,SNR=92
M57A P **P** **20 12 49.4 +1.3**
baz=58,SNR=92
ZIRO ZIRO 66.04 73 *i* P **P** **20 12 49.9 +0.2**
MVL Millersville 66.06 303 P **P** **20 12 49.6 +0.3**
MVL IAmb IAmb 20 12 51.5
comp=Z,319nm,1.3s
ABPO Ambohimpanom 66.07 145 P **P** **20 12 50.5 +0.7**
ABPO IAmb IAmb 20 12 52.0
comp=Z,120nm,1.2s
ABPO Ambohimpanom 66.07 145 P **P** **20 12 50.5 +0.7**
ABPO pmax pmax
comp=Z,120nm,1.2s
ABPO Ambohimpanom 66.07 145 P **P** **20 12 50.4 +0.7**
ITAN ITANAGAR 66.16 74 *i* P **P** **20 12 50.9 +0.7**
PAGS Pennsylvania G 66.19 303 IAmb IAmb 20 12 51.7
comp=Z,182nm,1.0s
SLR Silverton 66.21 165⇑ *i*P **P** **20 12 51.4 +1.0**
SLR IAmb IAmb 20 12 52.4
comp=Z,203nm,1.0s
WVNY West Valley, N 66.23 306 P **P** **20 12 51.5 +1.1**
baz=58,SNR=70
KAAM Kaadhehdhoo 66.47 110 P **P** **20 12 51.7 -0.5**
KAAM Kaadhehdhoo 66.47 110 P **P** **20 12 52.3 0.0**
SNR=6.0
KAAM Kaadhehdhoo 66.47 110 P **P** **20 12 51.2 -1.0**
comp=Z,8μmcomp=Z,881nm,1.3s
YAK Yakutsk 66.68 27 S **S** **20 21 03.4 -3.5**
comp=Z,8.3nm,0.7s,baz=240,slow=23,SNR=36
YAK Yakutsk 66.68 27 P **P** **20 12 52.8 +0.1**
YAK IAmb IAmb 20 12 54.2
comp=Z,289nm,0.9s
YAK PcP **PcP** **20 13 17.3 -0.4**
YAK Yakutsk 66.68 27*c i*P **P** **20 12 52.8 +0.1**
YAK *e* 20 13 18.5
YAK *e**PP **pP** **20 14 33.5 +4.0**
YAK *e* 20 15 25.8
YAK *i* S **S** **20 21 06.2 -0.7**
YAK *e* 20 22 02.3
YAK pmax pmax
comp=Z,275nm,1.0s
YAK pmax pmax
comp=N,79nm,1.3s
YAK pmax pmax

comp=E,126nm,1.3s
YAK pmax pmax
comp=Z,24nm,0.7s
YAK pmax pmax
comp=N,38nm,1.5s
YAK pmax pmax
comp=E,33nm,1.2s
YAK smax smax
comp=N,851nm,1.7s
YAK smax smax
comp=E,1µm,1.5s
YAK Yakutsk 66.68 27 P P 20 12 52.8 +0.1
SDMD Soldier's Deli 66.70 302 IAmb IAmb 20 12 55.0
comp=Z,168nm,1.3s
SDMD Soldier's Deli 66.70 302 P P 20 12 53.6 +0.3
baz=58,SNR=23
WDLM Western Deep L 66.72 166 *e*P **P 20 12 54.4 +0.8**
WDLM IAmb IAmb 20 12 55.4
comp=Z,64nm,0.9s
SSPA Standing Stone 66.72 304 P P 20 12 54.3 +0.9
SSPA Standing Stone 66.72 304 P P 20 12 54.4 +0.9
baz=58,SNR=93
SSPA Standing Stone 66.72 304 P P 20 12 54.5 +1.0
baz=58
SSPA S **S 20 21 09.8 +1.6**
baz=58
SSPA Standing Stone 66.72 304 ⇓P **P 20 12 54.5 +1.0**
JORH JORHAT 66.77 74⇑*i*P **P 20 12 54.0 0.0**
M55A Ridgway 66.83 305 P **P 20 12 55.2 +1.1**
baz=57,SNR=83
M55A P **P 20 12 55.2 +1.1**
baz=57,SNR=83
DIBR DIBRUGARH 66.86 73⇑*i*P **P 20 12 54.8 +0.3**
BRDH Bariadhala 67.07 79 P **P 20 12 56.8 +0.9**
comp=Z,724nm,0.8s,baz=64,slow=2.0,SNR=75
comp=Z,724nm,0.8s
SWZ Schweizer 67.11 169 *e*P **P 20 12 56.2 +0.2**
SWZ IAmb IAmb 20 12 57.2
comp=Z,163nm,0.8s
PRYS Parys 67.19 167⇑*i*P **P 20 12 56.7 +0.1**
PRYS IAmb IAmb 20 12 57.9
comp=Z,86nm,1.1s
MOKO MOKOCHONG 67.20 74 *i* P **P 20 12 57.0 +0.2**
C36M Paulatuk 67.20 345 IAmb IAmb 20 12 58.1
comp=Z,208nm,1.2s
C36M Paulatuk 67.20 345 P P 20 12 56.8 +0.9
baz=34,SNR=39
C36M S **S 20 21 15.1 +2.2**
baz=34
ERPA Erie 67.25 306 P P 20 12 57.7 +1.1
baz=57,SNR=82
ERPA Erie 67.25 306 P P 20 12 57.8 +1.1
baz=57,SNR=82
ERPA S **S 20 21 15.2 +0.8**
baz=57
P57A Homestead Farm 67.42 303 P P 20 12 58.8 +1.0
baz=57,SNR=112
P57A P **P 20 12 58.8 +1.0**
baz=57,SNR=112
E46A Sault Ste Mari 67.51 312 IAmb IAmb 20 13 00.5
comp=Z,425nm,1.0s
E46A Sault Ste Mari 67.51 312 P P 20 12 59.2 +1.0
baz=56,SNR=60
ALLY Alegheny Colle 67.60 306 IAmb IAmb 20 13 00.9
comp=Z,316nm,0.8s
ALLY Alegheny Colle 67.60 306 P P 20 12 59.6 +0.7
baz=57,SNR=37
LKP Lekhapani 67.63 72 *i* P **P 20 13 00.1 +0.9**
CBN Corbin Frederi 67.70 302 P P 20 13 00.3 +0.8
baz=57,SNR=12
CBN Corbin Frederi 67.70 302 P P 20 13 00.4 +0.9
baz=57,SNR=12
CBN S **S 20 21 21.4 +1.6**
baz=57
UPI Upington 67.76 173⇑*i*P **P 20 13 00.0 +0.1**
UPI IAmb IAmb 20 13 01.2
comp=Z,162nm,1.3s
ANWB Willy Bob 67.79 275 IAmb IAmb 20 13 02.0
comp=Z,289nm,1.2s
ANWB Willy Bob 67.79 275 *e*P **P 20 13 00.8 +0.4**
PALK Pallekele 67.81 99 P **P 20 13 00.2 -0.4**
comp=Z,297nm,0.9s,baz=51,slow=6.8,SNR=106
PALK PP **PP 20 15 38.3 +0.7**
comp=Z,28nm,1.0s,baz=58,slow=7.4,SNR=3.6
comp=Z,297nm,0.9s
PALK Pallekele 67.81 99 P P 20 13 00.1 -0.4
PALK IAmb IAmb 20 13 01.4
comp=Z,402nm,0.9s
PALK Pallekele 67.81 99 P **P 20 13 00.1 -0.5**
PALK Pallekele 67.81 99 P **P 20 13 00.3 -0.2**
PALK Pallekele 67.81 99 P **P 20 12 59.7 -0.9**
comp=Z,4µmcomp=Z,440nm,1.1s
PALK Pallekele 67.81 99 P **P 20 13 00.1 -0.5**
PALK PP **PP 20 15 37.9 +0.3**
T60A Surry 67.86 300 P **P 20 13 01.5 +1.0**
baz=57,SNR=16
T60A P **P 20 13 01.5 +1.0**
baz=57,SNR=16
I49A Point Hope 67.99 309 P P 20 13 02.0 +0.8
baz=56,SNR=21
I49A P **P 20 13 02.0 +0.8**
baz=56,SNR=21
M53A WI Miller and 68.05 306 P P 20 13 02.2 +0.6
M53A WI Miller and 68.05 306 P P 20 13 02.4 +0.8
baz=56,SNR=55
M53A S **S 20 21 24.8 +0.9**
baz=56
R58B Mineral 68.17 302 P P 20 13 03.2 +0.9
baz=56,SNR=159
R58B P **P 20 13 03.2 +0.9**
baz=56,SNR=159
UPAO U. Pittsburgh 68.17 305 P P 20 13 03.5 +1.1
baz=56
SAIH SAIHA 68.20 78 *i* P **P 20 13 04.0 +1.0**
ABD La Joyeuse, An 68.26 274 IAmb IAmb 20 13 05.4
comp=Z,431nm,1.1s
MAGL Barre de l'ile 68.41 273 P P 20 13 03.2 -0.9
MAGL IAmb IAmb 20 13 07.3
comp=Z,269nm,1.1s
MPGF Montagnes des 68.41 258 P **P 20 13 05.4 +1.1**
MPGF pP **pwP 20 14 43.1 -0.9**
M52A Chesterland 68.42 306 P **P 20 13 04.9 +1.0**
baz=56,SNR=64
M52A P **P 20 13 04.9 +1.0**
baz=56,SNR=64
Q56A Snyder Ridge, 68.43 303 P P 20 13 04.6 +0.6
Q56A Snyder Ridge, 68.43 303 P P 20 13 05.0 +1.0
baz=56,SNR=105
Q56A P **P 20 13 05.0 +1.0**
baz=56,SNR=105
VOI Vohitsoka 68.43 147 P P 20 13 05.0 +0.8
VOI IAmb IAmb 20 13 06.5
comp=Z,349nm,1.1s
VOI Vohitsoka 68.43 147⇑*i*P **P 20 13 05.2 +1.0**
VOI Vohitsoka 68.43 147 P P 20 13 05.1 +0.8
SNR=22
VOI Vohitsoka 68.43 147 P P 20 13 05.2 +1.0
NWCL Newcastle 68.47 164⇑*i*P **P 20 13 05.3 +0.9**
NWCL IAmb IAmb 20 13 06.2
comp=Z,199nm,0.9s
LZH Lanzhou 68.48 61⇑*i*P **P 20 13 05.8 +1.3**
LZH PcP **PcP 20 13 26.8 +0.7**
LZH sP sP 20 15 32.3 +1.5
LZH S **S 20 21 30.3 +1.0**
LZH ScS **ScS 20 22 21.8 +2.2**
LZH sS sS 20 24 17.8 -3.2
LZH SS **SS 20 26 07.0 +3.4**
LZH pmax pmax
comp=Z,650nm,1.1s
LZH pmax pmax
comp=Z,2µm,4.3s
V61A Roper 68.49 299 P P 20 13 05.1 +0.7
baz=56,SNR=8.1
V61A P **P 20 13 05.1 +0.7**
baz=56,SNR=8.1
POGA Pongola 68.50 163 P P 20 13 05.5 +1.2
POGA IAmb IAmb 20 13 07.0
comp=Z,172nm,1.2s
POGA Pongola 68.50 163⇑*i*P **P 20 13 05.4 +1.0**
POGA IAmb IAmb 20 13 06.7
comp=Z,170nm,1.2s
T59A Double "B" Far 68.50 301 IAmb IAmb 20 13 06.4
comp=Z,471nm,1.2s
T59A Double "B" Far 68.50 301 P P 20 13 05.0 +0.6
baz=56,SNR=58
T59A P **P 20 13 05.0 +0.6**
baz=56,SNR=58

BOSA Boshof 68.50 169 P **P 20 13 05.0 +0.5**
comp=Z,108nm,0.6s,baz=355,slow=6.6,SNR=238
comp=Z,108nm,0.6s
BOSA Boshof 68.50 169 P P 20 13 05.0 +0.5
BOSA IAmb IAmb 20 13 05.9
comp=Z,165nm,0.8s
BOSA Boshof 68.50 169 *i* P **P 20 13 05.0 +0.5**
BOSA Boshof 68.50 169 P **P 20 13 05.0 +0.5**
BOSA Boshof 68.50 169 *i* P **P 20 13 05.0 +0.5**
BOSA Boshof 68.50 169⇑P **P 20 13 04.9 +0.5**
BOSA pP **pP 20 14 40.6 -1.2**
N53A Lisbon 68.50 306 P P 20 13 05.4 +1.0
baz=56,SNR=111
N53A P **P 20 13 05.4 +1.0**
baz=56,SNR=111
MCWV Mont Chateau 68.51 304 P P 20 13 05.2 +0.8
MCWV Mont Chateau 68.51 304 P P 20 13 05.3 +0.8
baz=56,SNR=9.5
MCWV Mont Chateau 68.51 304 P P 20 13 05.7 +1.2
baz=56,SNR=9.5
MCWV S **S 20 21 30.6 +1.4**
baz=56
K50A Casco 68.51 308 P P 20 13 05.4 +1.0
baz=56,SNR=37
K50A P **P 20 13 05.4 +1.0**
baz=56,SNR=37
GLMI Grayling 68.55 311 P P 20 13 05.6 +1.0
baz=56,SNR=16
GLMI Grayling 68.55 311 P P 20 13 05.8 +1.1
baz=56,SNR=16
GLMI S **S 20 21 30.2 +0.6**
baz=56
O54A Avella 68.56 305 P P 20 13 05.6 +0.9
baz=56,SNR=51
O54A P **P 20 13 05.6 +0.9**
baz=56,SNR=51
SMRT St. Maarten 68.56 276 P P 20 13 05.4 +0.3
SNKL Senekal, Frees 68.58 167⇑*i*P **P 20 13 06.0 +0.9**
SNKL IAmb IAmb 20 13 06.8
comp=Z,183nm,0.8s
GDHS Morne Mazeau, 68.59 274 IAmb IAmb 20 13 07.5
comp=Z,475nm,1.2s
TDBA Terre de Bas, 68.74 273 P P 20 13 06.4 +0.2
TDBA IAmb IAmb 20 13 08.5
comp=Z,377nm,1.3s
BBGH Gun Hill 68.75 270 P P 20 13 06.3 +0.1
BBGH IAmb IAmb 20 13 20.2
comp=Z,314nm,1.1s
DLPL La Plaine 68.75 273 P P 20 13 05.9 -0.3
ILAM Ilet Lapin Mar 68.79 272 P P 20 13 06.6 +0.1
ILAM IAmb IAmb 20 13 08.7
comp=Z,322nm,1.3s
MPOM Morne Pois Mar 68.97 272 P P 20 13 08.0 +0.4
MPOM IAmb IAmb 20 13 09.8
comp=Z,150nm,0.8s
SVN Savane Anatole 68.98 272 P P 20 13 08.3 +0.6
S57A Dark Hollow, R 68.99 302 IAmb IAmb 20 13 09.3
comp=Z,322nm,1.2s
S57A Dark Hollow, R 68.99 302 P P 20 13 08.1 +0.7
baz=56,SNR=42
S57A P **P 20 13 08.1 +0.7**
baz=56,SNR=42
FDF Fort de France 69.03 272 P P 20 13 08.1 +0.1
FDF IAmb IAmb 20 13 10.3
comp=Z,197nm,1.1s
FDF Fort de France 69.03 272 P P 20 13 08.1 +0.1
FDF pmax pmax
comp=Z,197nm,1.1s
FDF Fort de France 69.03 272 P P 20 13 08.6 +0.6
E43A Lone Tree Farm 69.04 313 P P 20 13 08.3 +0.8
E43A Lone Tree Farm 69.04 313 P P 20 13 08.4 +0.8
baz=55,SNR=62
G45A Suttons Bay 69.04 311 P P 20 13 08.4 +0.9
baz=55,SNR=16
G45A P **P 20 13 08.4 +0.9**
baz=55,SNR=16
O53A New Philadelph 69.05 305 IAmb IAmb 20 13 10.0
comp=Z,377nm,0.9s
O53A New Philadelph 69.05 305 P P 20 13 08.8 +1.0
baz=56,SNR=69
O53A S **S 20 21 35.5 0.0**
baz=56
BIM Bigot 69.10 272 P P 20 13 08.8 +0.4
A21K Barrow 69.40 357 P P 20 13 10.6 +1.3
baz=8.1
N51A Ashland 69.41 306 P P 20 13 10.4 +0.5
N51A Ashland 69.41 306 P P 20 13 10.4 +0.5
baz=55,SNR=64
N51A P **P 20 13 10.4 +0.5**
baz=55,SNR=64
AAM Ann Arbor 69.41 308 P P 20 13 10.5 +0.7
baz=55,SNR=14
AAM Ann Arbor 69.41 308 P P 20 13 10.5 +0.7
baz=55,SNR=14
R55A Marlinton 69.46 303 P P 20 13 11.3 +1.0
baz=56,SNR=99
R55A P **P 20 13 11.3 +1.0**
baz=56,SNR=99
MCLT Moule a Chique 69.48 271 P P 20 13 09.8 -0.9
MCLT IAmb IAmb 20 13 12.7
comp=Z,256nm,1.0s
D41A Chassel 69.52 314 P P 20 13 11.6 +1.2
baz=54,SNR=42
O52A Adamsville 69.52 305 P P 20 13 11.5 +0.9
baz=55,SNR=109
O52A P **P 20 13 11.5 +0.9**
baz=55,SNR=109
Q54A Coxs Mills 69.52 304 P P 20 13 11.0 +0.4
Q54A Coxs Mills 69.52 304 P P 20 13 11.3 +0.7
baz=56,SNR=99
Q54A P **P 20 13 11.3 +0.7**
baz=56,SNR=99
M50A Fremont 69.55 307 P P 20 13 11.2 +0.5
baz=55,SNR=30
M50A P **P 20 13 11.2 +0.5**
baz=55,SNR=30
J47A Sunmer 69.58 310 P P 20 13 11.7 +0.9
baz=55,SNR=48
J47A P **P 20 13 11.7 +0.9**
baz=55,SNR=48
P53A Whipple 69.59 305 P P 20 13 12.1 +1.1
baz=55,SNR=74
P53A P **P 20 13 12.1 +1.1**
baz=55,SNR=74
T57A Hurt 69.61 301 IAmb IAmb 20 13 13.3
comp=Z,244nm,0.7s
T57A Hurt 69.61 301 P P 20 13 12.1 +0.9
baz=56,SNR=88
T57A P **P 20 13 12.1 +0.9**
baz=56,SNR=88
CNNC Cliffs of the 69.69 299 IAmb IAmb 20 13 13.5
comp=Z,503nm,1.2s
CNNC Cliffs of the 69.69 299 P P 20 13 12.4 +0.8
baz=56
INK Inuvik 69.85 348 S **S 20 21 44.9 +1.2**
comp=Z,8.5nm,1.1s,baz=138,slow=32,SNR=20
INK Inuvik 69.85 348 P P 20 13 12.2 +0.2
INK Inuvik 69.85 348 P P 20 13 12.2 +0.2
INK pmax pmax
comp=Z,116nm,1.4s
INK Inuvik 69.85 348 P P 20 13 12.4 +0.4
baz=27,SNR=28
INK S **S 20 21 45.0 +1.4**
baz=27
C26K Camden Bay 69.90 352 P P 20 13 14.2 +1.9
baz=18,SNR=23
C26K S **S 20 21 46.4 +2.2**
baz=18
I45A Fountain 69.95 311 P P 20 13 14.4 +1.3
baz=54,SNR=6.9
I45A P **P 20 13 14.4 +1.3**
baz=54,SNR=6.9
BTO Baotou 69.96 54 *e*P **P 20 13 12.8 -0.5**
BTO S **S 20 21 44.5 -1.6**
SVB Belmont 69.98 271 P **P 20 13 14.1 +0.4**
SVB IAmb IAmb 20 13 15.8
comp=Z,356nm,1.1s
P52A Corning 69.98 305 P P 20 13 14.0 +0.6
baz=55,SNR=32
P52A S **S 20 21 46.5 +0.3**
baz=55
CDVI St. Croix 70.04 277 IAmb IAmb 20 13 15.9
comp=Z,506nm,1.2s
F42A Maple Grove Fa 70.04 313 IAmb IAmb 20 13 15.8
comp=Z,208nm,0.9s
F42A Maple Grove Fa 70.04 313 P P 20 13 14.5 +0.9
baz=54,SNR=18

C27K Jago River 70.05 352 P **P 20 13 15.1 +1.9**
baz=19,SNR=74
C27K S **S 20 21 46.4 +0.5**
baz=19
L48A N Adams 70.09 308 P P 20 13 14.3 +0.3
L48A N Adams 70.09 308 P P 20 13 14.4 +0.5
baz=55,SNR=48
L48A P **P 20 13 14.4 +0.5**
baz=55,SNR=48
ACSO Alum Creek Sta 70.18 306 P P 20 13 15.1 +0.7
baz=55,SNR=119
ACSO Alum Creek Sta 70.18 306 P P 20 13 15.2 +0.7
baz=55,SNR=119
ACSO S **S 20 21 45.8 -2.6**
baz=55
V58A Windy Hill, Pi 70.20 300 IAmb IAmb 20 13 16.8
comp=Z,238nm,0.8s
V58A Windy Hill, Pi 70.20 300 P P 20 13 15.7 +1.0
baz=55,SNR=73
V58A P **P 20 13 15.7 +1.0**
baz=55,SNR=73
BLA Blacksburg 70.26 302 P P 20 13 15.4 +0.3
BLA IAmb IAmb 20 13 16.9
comp=Z,177nm,1.1s
BLA Blacksburg 70.26 302 P P 20 13 15.4 +0.3
BLA pmax pmax
comp=Z,177nm,1.1s
BLA Blacksburg 70.26 302 P P 20 13 15.6 +0.5
baz=55,SNR=19
BLA Blacksburg 70.26 302 P P 20 13 15.6 +0.5
baz=55,SNR=19
BLA S **S 20 21 49.4 -0.2**
baz=55
YKA Yellowknife Ar 70.30 337 P **P 20 13 15.5 +0.7**
comp=Z,68nm,0.8s,baz=38,slow=5.6,SNR=147
YKA S **S 20 21 48.9 0.0**
comp=Z,15nm,1.1s,baz=37,slow=11,SNR=9.2
YKA PKP2bc 20 41 06.8
comp=Z,7.5nm,0.9s,baz=214,slow=3.4,SNR=8.6
comp=Z,68nm,0.8s
YKA Yellowknife Ar 70.30 337 *i* P **P 20 13 15.5 +0.7**
YKA pmax pmax
comp=Z,65nm,0.7s
COWI Conover 70.40 314 P **P 20 13 16.6 +0.9**
baz=53
HIA Hailar 70.40 42 IAmb IAmb 20 13 18.2
comp=Z,374nm,1.2s
HIA Hailar 70.40 42⇑P **P 20 13 17.0 +1.2**
MTP Monte Pirata 70.44 278 IAmb IAmb 20 13 18.3
comp=Z,274nm,1.6s
C24K Franklin Bluff 70.45 354 P **P 20 13 17.3 +1.8**
baz=14,SNR=27
C24K S **S 20 21 53.5 +3.0**
baz=14
Q52A Bidwell 70.45 305 P **P 20 13 16.8 +0.6**
baz=55,SNR=119
Q52A P **P 20 13 16.8 +0.6**
baz=55,SNR=119
C23K Itkillik River 70.50 354 P **P 20 13 17.8 +2.0**
baz=13,SNR=33
C23K S **S 20 21 54.0 +3.0**
baz=13
S54A Dingess, Beckl 70.50 303 P **P 20 13 16.8 +0.3**
S54A IAmb IAmb 20 13 18.1
comp=Z,318nm,1.4s
S54A Dingess, Beckl 70.50 303 P P 20 13 17.0 +0.5
baz=55,SNR=37
S54A P **P 20 13 17.0 +0.5**
baz=55,SNR=37
N49A Columbus Grove 70.53 307 P P 20 13 17.1 +0.5
baz=54,SNR=105
N49A P **P 20 13 17.1 +0.5**
baz=54,SNR=105
CBYP Canovanas 70.57 278 IAmb IAmb 20 13 18.7
comp=Z,195nm,1.1s
EYMN Ely 70.58 316 P P 20 13 17.5 +0.8
baz=52,SNR=73
EYMN Ely 70.58 316 P P 20 13 17.6 +0.8
baz=52,SNR=73
EYMN S **S 20 21 53.1 +0.3**
baz=52
H43A Windswept, Lux 70.59 312 P P 20 13 17.7 +0.8
baz=54,SNR=23
Y60A Bolivia 70.61 298 IAmb IAmb 20 13 19.0
comp=Z,335nm,1.1s
Y60A Bolivia 70.61 298 P P 20 13 17.7 +0.6
baz=55,SNR=9.2
Y60A P **P 20 13 17.7 +0.6**
baz=55,SNR=9.2
R53A Hurricane 70.61 304 P P 20 13 18.0 +0.9
baz=55,SNR=85
R53A P **P 20 13 18.0 +0.9**
baz=55,SNR=85
D25K Kavik River 70.62 353 P P 20 13 18.1 +1.5
baz=16
D25K S **S 20 21 55.8 +3.2**
baz=16
TOSP Speyside 70.62 269 P P 20 13 18.7 +1.2
TOSP IAmb IAmb 20 13 20.7
comp=Z,184nm,1.2s
HUMP Col San Antoni 70.64 278 IAmb IAmb 20 13 19.7
comp=Z,409nm,1.1s
P51A Williamsport 70.66 305 P P 20 13 17.4 0.0
P51A Williamsport 70.66 305 P P 20 13 17.6 +0.3
baz=55,SNR=36
P51A P **P 20 13 17.6 +0.3**
baz=55,SNR=36
F31M Tsiigehtchic 70.67 347 P P 20 13 17.7 +0.9
baz=26,SNR=45
F31M S **S 20 21 54.2 +1.3**
baz=26
GCPR Guaynabo City 70.73 278 IAmb IAmb 20 13 19.5
comp=Z,296nm,1.1s
U56A King 70.73 301 IAmb IAmb 20 13 20.0
comp=Z,296nm,1.0s
U56A King 70.73 301 P P 20 13 18.7 +0.9
baz=55,SNR=42
U56A P **P 20 13 18.7 +0.9**
baz=55,SNR=42
HHC Hu-ho-hao-te 70.78 53 *e*P **P 20 13 19.0 +0.8**
HHC S **S 20 21 54.8 -0.6**
HHC ScS **SKKSac 20 22 35.8 +0.1**
HHC sS sS 20 24 46.5 -2.0
HHC pmax pmax
comp=Z,430nm,1.0s
HHC pmax pmax
comp=Z,2µm,5.5s
MND Mandalay 70.84 77 P **P 20 13 16.7 -2.0**
comp=Z,343nm,1.5s
SJG San Juan 70.89 278 P **P 20 13 19.0 0.0**
SJG IAmb IAmb 20 13 21.1
comp=Z,159nm,1.2s
SJG San Juan 70.89 278 P **P 20 13 19.0 0.0**
SJG pmax pmax
comp=Z,159nm,1.2s
SJG San Juan 70.89 278 P **P 20 13 19.2 +0.2**
BILL Bilibino 70.97 10*de*P **P 20 13 19.2 +0.5**
BILL *e* 20 13 34.9
BILL *e**PP **pP 20 14 56.2 -0.9**
BILL *e**SP **sP 20 15 47.9 +2.0**
BILL *e* 20 16 03.0
BILL *e*PPP PPP 20 17 53.4
BILL *e*S **S 20 21 57.4 +0.9**
BILL pmax pmax
comp=Z,24nm,0.8s
BILL Bilibino 70.97 10 P **P 20 13 19.0 +0.3**
GRGR Grenville 70.98 270 P **P 20 13 20.1 +0.4**
D24K Happy Valley 71.02 353 P **P 20 13 20.8 +1.9**
baz=14
D24K S **S 20 21 59.5 +2.6**
baz=14
O49A Covington 71.05 307 P P 20 13 19.8 +0.1
baz=54,SNR=121
O49A P **P 20 13 19.8 +0.1**
baz=54,SNR=121
X58A Rowland 71.05 299 IAmb IAmb 20 13 22.1
comp=Z,306nm,0.8s
X58A Rowland 71.05 299 P P 20 13 20.1 +0.3
baz=55,SNR=9.3
X58A P **P 20 13 20.1 +0.3**
baz=55,SNR=9.3
Y59A Loris 71.06 299 P P 20 13 20.7 +0.9
baz=55,SNR=12
Y59A P **P 20 13 20.7 +0.9**
baz=55,SNR=12
Q51A Peebles 71.10 305 P P 20 13 20.3 +0.2
Q51A Peebles 71.10 305 P P 20 13 20.5 +0.5

	baz=54,SNR=97					
Q51A				P	**P**	**20 13 20.5 +0.5**
	baz=54,SNR=97					
W57A	**Gilead**	**71.15 300**		IAmb	IAmb	20 13 22.2
	comp=Z,259nm,0.8s					
W57A	**Gilead**	**71.15 300**		P	**P**	**20 13 21.1 +0.7**
	baz=55,SNR=78					
W57A				P	**P**	**20 13 21.1 +0.7**
	baz=55,SNR=78					
E27K	**Coleen River**	**71.16 350**		P	**P**	**20 13 21.2 +1.3**
	baz=20,SNR=45					
E27K				S	**S**	**20 22 01.2 +2.5**
	baz=20					
ZEA	**Zeya**	**71.17**	**35**	*e*P	**P**	**20 13 21.4 +1.3**
ZEA				*e*		20 16 05.2
ZEA				*e*S	**S**	**20 22 01.5 +2.3**
ZEA				*e*		20 22 41.1
ZEA				pmax	pmax	
	comp=E,20nm,0.9s					
ZEA				pmax	pmax	
	comp=Z,80nm,1.3s					
ZEA				pmax	pmax	
	comp=Z,200nm,5.7s					
ZEA				pmax	pmax	
	comp=Z,100nm,4.8s					
ZEA				smax	smax	
	comp=E,700nm,9.1s					
ZEA				smax	smax	
	comp=N,700nm,8.9s					
ZEA				MLR	MLR	
	comp=N,200nm,18.0s					
ZEA				MLR	MLR	
	comp=Z,300nm,15.0s					
L46A	**Eue Claire**	**71.18 309**		IAmb	IAmb	20 13 21.9
	comp=Z,344nm,1.1s					
L46A	**Eue Claire**	**71.18 309**		P	**P**	**20 13 20.7 +0.3**
	baz=54,SNR=8.7					
L46A				P	**P**	**20 13 20.7 +0.3**
	baz=54,SNR=8.7					
AOPR	**Arecibo Observ**	**71.22 279**		IAmb	IAmb	20 13 22.3
	comp=Z,428nm,1.2s					
CELP	**Cerrillos**	**71.24 278**		IAmb	IAmb	20 13 23.1
	comp=Z,288nm,1.3s					
FFC	**Flin Flon**	**71.28 326**		P	**P**	**20 13 21.6 +0.8**
FFC				IAmb	IAmb	20 13 23.3
	comp=Z,191nm,1.1s					
FFC	**Flin Flon**	**71.28 326**		P	**P**	**20 13 21.6 +0.8**
FFC				pmax	pmax	
	comp=Z,191nm,1.2s					
FFC	**Flin Flon**	**71.28 326**		P	**P**	**20 13 21.6 +0.8**
FFC				sP	**sP**	**20 15 46.3 -0.7**
FFC				PP	**PP**	**20 16 04.4 -1.5**
CD2	**Chengdu**	**71.33**	**65**	P	**P**	**20 13 22.3 +0.8**
CD2				sP	sP	20 15 39.5 -9.0
CD2				PP	**PP**	**20 16 05.0 -2.1**
CD2				S	**S**	**20 22 03.0 +1.1**
CD2				SKS	**ScS**	**20 22 42.5 +0.4**
CD2				sS	sS	20 24 52.5 -2.8
CD2				pmax	pmax	
	comp=Z,610nm,1.2s					
CD2				pmax	pmax	
	comp=Z,990nm,4.0s					
D23K	**Nanushuk River**	**71.36 354**		P	**P**	**20 13 22.8 +1.9**
	baz=13,SNR=40					
D23K				S	**S**	**20 22 04.8 +3.9**
	baz=13					
ULM	**Lac du Bonnet**	**71.40 320**		P	**P**	**20 13 21.8 +0.2**
	comp=Z,141nm,0.5s,baz=49,slow=6.4,SNR=112					
	comp=Z,141nm,0.5s					
E38A	**The Farm, Brul**	**71.43 315**		IAmb	IAmb	20 13 23.5
	comp=Z,406nm,1.1s					
E38A	**The Farm, Brul**	**71.43 315**		P	**P**	**20 13 22.2 +0.4**
	baz=52,SNR=59					
N47A	**Urbana**	**71.48 308**		P	**P**	**20 13 22.4 +0.2**
	baz=54,SNR=94					
N47A				P	**P**	**20 13 22.4 +0.2**
	baz=54,SNR=94					
G30M	**tAoh Zrail Nji**	**71.50 348**		P	**P**	**20 13 22.3 +0.4**
	baz=24,SNR=35					
G30M				S	**S**	**20 22 04.0 +1.4**
	baz=24					
G40A	**Rib Lake**	**71.50 314**		P	**P**	**20 13 22.9 +0.7**
G40A				IAmb	IAmb	20 13 24.3
	comp=Z,433nm,1.1s					
G40A	**Rib Lake**	**71.50 314**		P	**P**	**20 13 23.1 +0.8**
	baz=52,SNR=66					
B35A	**Bob, Littlefor**	**71.50 318**		IAmb	IAmb	20 13 24.1
	comp=Z,468nm,1.4s					
B35A	**Bob, Littlefor**	**71.50 318**		P	**P**	**20 13 22.7 +0.5**
	baz=51,SNR=65					
O48B	**Farmland**	**71.52 307**		P	**P**	**20 13 22.5 +0.1**
	baz=54,SNR=67					
O48B	**Farmland**	**71.52 307**		P	**P**	**20 13 22.4 0.0**
	baz=54,SNR=67					
O48B				S	**S**	**20 22 00.7 -2.9**
	baz=54					
V55A	**Taylorsville**	**71.56 301**		IAmb	IAmb	20 13 24.9
	comp=Z,410nm,1.0s					
V55A	**Taylorsville**	**71.56 301**		P	**P**	**20 13 23.7 +1.0**
	baz=54,SNR=101					
V55A				P	**P**	**20 13 23.7 +1.0**
	baz=54,SNR=101					
U54A	**Nelsons Funny**	**71.57 302**		P	**P**	**20 13 23.6 +0.7**
	baz=54,SNR=81					
U54A				P	**P**	**20 13 23.6 +0.7**
	baz=54,SNR=81					
TOLK	**Toolik Lake Re**	**71.58 354**		IAmb	IAmb	20 13 25.5
	comp=Z,121nm,0.8s					
TOLK	**Toolik Lake Re**	**71.58 354**		P	**P**	**20 13 24.2 +1.8**
	baz=14,SNR=59					
TOLK				S	**S**	**20 22 06.6 +3.2**
	baz=14					
DGAR	**Diego Garcia**	**71.59 116**		P	**P**	**20 13 23.3 +0.2**
DGAR	**Diego Garcia**	**71.59 116**		P	**P**	**20 13 23.3 +0.2**
DGAR				pmax	pmax	
	comp=Z,776nm,1.0s					
DGAR	**Diego Garcia**	**71.59 116**		P	**P**	**20 13 24.2 +1.1**
DGAR	**Diego Garcia**	**71.59 116**		P	**P**	**20 13 23.5 +0.4**
I42A	**Draeger Farm,**	**71.60 312**		IAmb	IAmb	20 13 24.8
	comp=Z,225nm,0.9s					
I42A	**Draeger Farm,**	**71.60 312**		P	**P**	**20 13 23.5 +0.7**
	baz=53,SNR=24					
Y58A	**Scranton**	**71.65 299**		P	**P**	**20 13 23.9 +0.6**
	baz=54,SNR=27					
Y58A				P	**P**	**20 13 23.9 +0.6**
	baz=54,SNR=27					
MLPR	**Magueyes Islan**	**71.66 278**		IAmb	IAmb	20 13 24.9
	comp=Z,124nm,0.7s					
XLT	**XiLinHaoTe**	**71.66**	**48⇑**	*i*P	**P**	**20 13 24.3 +1.0**
XLT				PP	**PP**	**20 16 05.5 -4.0**
XLT				S	**S**	**20 22 06.0 +0.7**
XLT				sS	sS	20 24 51.5 -7.4
XLT				pmax	pmax	
	comp=Z,220nm,1.2s					
XLT				pmax	pmax	
	comp=Z,1μm,3.8s					
P49A	**Miami Univ. Ec**	**71.67 306**		P	**P**	**20 13 23.0 -0.2**
	baz=54,SNR=41					
P49A	**Miami Univ. Ec**	**71.67 306**		P	**P**	**20 13 23.1 -0.2**
	baz=54,SNR=41					
P49A				S	**S**	**20 22 03.0 -2.3**
	baz=54					
CRPR	**Cabo Rojo, PR**	**71.69 279**		IAmb	IAmb	20 13 25.8
	comp=Z,281nm,0.8s					
E25K	**Arctic Village**	**71.69 352**		P	**P**	**20 13 24.6 +1.6**
	baz=17,SNR=64					
E25K				S	**S**	**20 22 07.0 +2.3**
	baz=17					
SUR	**Sutherland**	**71.70 174**		P	**P**	**20 13 24.0 +0.4**
	comp=Z,78nm,0.9s,baz=1.8,slow=6.3,SNR=40					
	comp=Z,78nm,0.9s					
SUR	**Sutherland**	**71.70 174**		P	**P**	**20 13 23.9 +0.3**
SUR				IAmb	IAmb	20 13 25.5
	comp=Z,98nm,0.9s					
SUR	**Sutherland**	**71.70 174**		P	**P**	**20 13 23.7 +0.1**
BIRD	**Birdtown, Kers**	**71.76 300**		P	**P**	**20 13 24.8 +0.9**
	baz=54,SNR=68					
F26K	**Sheenjek River**	**71.94 351**		P	**P**	**20 13 26.5 +2.1**
	baz=18,SNR=74					
F26K				S	**SKiKP**	**20 22 10.9 -0.8**
	baz=18					
K43A	**Burlington**	**71.98 311**		P	**P**	**20 13 25.9 +0.8**
	baz=53,SNR=27					
RER	**Riviere de l'E**	**71.99 139**		P	**P**	**20 13 25.1 -0.3**
E24K	**Your Creek**	**72.03 353**		P	**P**	**20 13 26.3 +1.3**
	baz=15					
E24K				S	**SKiKP**	**20 22 11.4 -0.5**
	baz=15					
L44A	**Lake County Fo**	**72.04 310**		P	**P**	**20 13 25.4 -0.1**
	baz=53,SNR=15					
L44A	**Lake County Fo**	**72.04 310**		P	**P**	**20 13 25.9 +0.4**
	baz=53,SNR=15					
L44A				S	**S**	**20 22 07.8 -1.6**
	baz=53					
MERW	**Merweville**	**72.05 173**	**⇑**	*i*P	**P**	**20 13 26.1 +0.6**
MERW				IAmb	IAmb	20 13 27.2
	comp=Z,169nm,1.0s					
KMSC	**Kings Mountain**	**72.05 301**		IAmb	IAmb	20 13 27.6
	comp=Z,316nm,0.9s					
KMSC	**Kings Mountain**	**72.05 301**		P	**P**	**20 13 26.5 +0.9**
	baz=54,SNR=77					
KMSC	**Kings Mountain**	**72.05 301**		P	**P**	**20 13 26.5 +0.9**
	baz=54,SNR=77					
KMSC				S	**S**	**20 22 09.2 -0.6**
	baz=54					
S51A	**Beattyville**	**72.07 304**		IAmb	IAmb	20 13 27.3
	comp=Z,114nm,0.9s					
S51A	**Beattyville**	**72.07 304**		P	**P**	**20 13 25.9 +0.1**
	baz=54,SNR=27					
S51A				P	**P**	**20 13 25.9 +0.1**
	baz=54,SNR=27					
Y57A	**Sumter**	**72.08 299**		P	**P**	**20 13 26.7 +0.9**
	baz=54,SNR=12					
Y57A				P	**P**	**20 13 26.7 +0.9**
	baz=54,SNR=12					
ROOI	**Rooidraai Farm**	**72.09 171**	**⇑**	*i*P	**P**	**20 13 26.6 +0.9**
ROOI				IAmb	IAmb	20 13 27.7
	comp=Z,251nm,0.9s					
EPYK	**Eagle Plains**	**72.14 348**		IAmb	IAmb	20 13 27.7
	comp=Z,129nm,1.1s					
EPYK	**Eagle Plains**	**72.14 348**		P	**P**	**20 13 26.4 +0.7**
	baz=24,SNR=43					
EPYK				S	**SKiKP**	**20 22 11.3 -0.8**
	baz=24					
E23K	**Chandalar**	**72.15 353**		P	**P**	**20 13 27.5 +1.8**
	baz=14,SNR=30					
E23K				S	**SKiKP**	**20 22 13.5 +1.4**
	baz=14					
P48A	**Milroy**	**72.15 307**		P	**P**	**20 13 25.8 -0.4**
P48A				IAmb	IAmb	20 13 27.1
	comp=Z,297nm,0.9s					
P48A	**Milroy**	**72.15 307**		P	**P**	**20 13 25.9 -0.2**
	baz=54,SNR=52					
P48A				P	**P**	**20 13 25.9 -0.2**
	baz=54,SNR=52					
WRGLY	**Wrigley**	**72.16 341**		P	**P**	**20 13 27.2 +1.5**
	baz=34,SNR=44					
WRGLY				S	**SKiKP**	**20 22 12.5 +0.5**
	baz=34					
R50A	**Paris**	**72.16 305**		IAmb	IAmb	20 13 27.7
	comp=Z,383nm,1.2s					
R50A	**Paris**	**72.16 305**		P	**P**	**20 13 26.4 +0.2**
	baz=54,SNR=76					
R50A				P	**P**	**20 13 26.4 +0.2**
	baz=54,SNR=76					
F25K	**Christian Rive**	**72.21 352**		P	**P**	**20 13 28.1 +2.1**
	baz=17,SNR=24					
F25K				S	**SKiKP**	**20 22 14.7 +2.5**
	baz=17					
E22K	**Anaktuvuk Pass**	**72.26 354**		P	**P**	**20 13 27.8 +1.4**
	baz=12					
E22K				S	**SKiKP**	**20 22 14.4 +2.1**
	baz=12					
PZH	**PanZhiHua**	**72.43**	**70**	⇑P	**P**	**20 13 28.3 +0.2**
PZH				PcP	**PcP**	**20 13 43.3 +0.3**
PZH				PP	**PP**	**20 16 16.8 +0.3**
PZH				S	**SKiKP**	**20 22 13.0 -0.7**
PZH				SKS	**SKSac**	**20 22 45.0 -3.4**
PZH				SS	**SS**	**20 27 06.5 +2.4**
PZH				pmax	pmax	
	comp=Z,280nm,0.9s					
NHSC	**New Hope**	**72.46 299**		P	**P**	**20 13 29.4 +1.4**
NHSC	**New Hope**	**72.46 299**		P	**P**	**20 13 29.1 +1.0**
	baz=54,SNR=40					
NHSC	**New Hope**	**72.46 299**		P	**P**	**20 13 29.4 +1.4**
	baz=54,SNR=40					
NHSC				S	**S**	**20 22 15.7 +1.4**
	baz=54					
G27K	**Doyon Strip**	**72.47 350**		P	**P**	**20 13 29.2 +1.7**
	baz=20,SNR=52					
G27K				S	**S**	**20 22 17.5 +4.1**
	baz=20					
JSC	**Jenkinsville**	**72.51 300**		IAmb	IAmb	20 13 30.4
	comp=Z,285nm,0.7s					
JSC	**Jenkinsville**	**72.51 300**		P	**P**	**20 13 29.3 +1.0**
	baz=54,SNR=113					
F24K	**Squaw Lake**	**72.52 353**		P	**P**	**20 13 30.0 +2.2**
	baz=15,SNR=50					
F24K				S	**S**	**20 22 19.2 +5.2**
	baz=15					
PAULI	**Pauline**	**72.56 301**		P	**P**	**20 13 29.5 +0.9**
	baz=54,SNR=85					
SOE	**Somerset East**	**72.57 169**		P	**P**	**20 13 29.2 +0.7**
SOE				IAmb	IAmb	20 13 31.0
	comp=Z,126nm,1.0s					
SOE	**Somerset East**	**72.57 169**		*e*P	**P**	**20 13 29.9 +1.4**
SOE				IAmb	IAmb	20 13 30.8
	comp=Z,117nm,1.0s					
I40A	**Norwalk**	**72.58 313**		IAmb	IAmb	20 13 30.5
	comp=Z,364nm,1.0s					
I40A	**Norwalk**	**72.58 313**		P	**P**	**20 13 29.1 +0.5**
	baz=52,SNR=38					
M44A	**Midewin, Midew**	**72.60 309**		IAmb	IAmb	20 13 30.2
	comp=Z,439nm,1.1s					
M44A	**Midewin, Midew**	**72.60 309**		P	**P**	**20 13 29.0 +0.3**
	baz=53,SNR=23					
G26K	**Porcupine Rive**	**72.61 351**		P	**P**	**20 13 30.5 +2.3**
	baz=18,SNR=88					
G26K				S	**S**	**20 22 19.4 +4.6**
	baz=18					
SFIN	**Lafayette**	**72.64 308**		IAmb	IAmb	20 13 30.3
	comp=Z,383nm,1.1s					
SFIN	**Lafayette**	**72.64 308**		P	**P**	**20 13 29.1 +0.2**
	baz=53,SNR=51					
SFIN	**Lafayette**	**72.64 308**		P	**P**	**20 13 29.0 0.0**
	baz=53,SNR=51					
AGMN	**Agassiz Nation**	**72.64 319**		P	**P**	**20 13 28.9 +0.1**
AGMN	**Agassiz Nation**	**72.64 319**		P	**P**	**20 13 29.3 +0.5**
	baz=50,SNR=34					
AGMN	**Agassiz Nation**	**72.64 319**		P	**P**	**20 13 29.3 +0.5**
	baz=50,SNR=34					
AGMN				S	**S**	**20 22 16.3 +0.3**
	baz=50					
TZTN	**Tazewell**	**72.69 303**		IAmb	IAmb	20 13 31.1
	comp=Z,273nm,1.1s					
TZTN	**Tazewell**	**72.69 303**		P	**P**	**20 13 29.7 +0.4**
	baz=54,SNR=46					
TZTN	**Tazewell**	**72.69 303**		P	**P**	**20 13 29.7 +0.4**
	baz=54,SNR=46					
R49A	**Shelbyville**	**72.69 305**		IAmb	IAmb	20 13 30.7
	comp=Z,459nm,1.1s					
R49A	**Shelbyville**	**72.69 305**		P	**P**	**20 13 29.1 -0.1**
	baz=53,SNR=70					
R49A				P	**P**	**20 13 29.1 -0.1**
	baz=53,SNR=70					
GRTK	**Grand Turk**	**72.69 284**		IAmb	IAmb	20 13 31.4
	comp=Z,310nm,1.1s					
V53A	**Saluda**	**72.72 302**		IAmb	IAmb	20 13 31.3
	comp=Z,310nm,1.1s					
V53A	**Saluda**	**72.72 302**		P	**P**	**20 13 30.1 +0.5**
	baz=54,SNR=67					
V53A				P	**P**	**20 13 30.1 +0.5**
	baz=54,SNR=67					
SEY	**Seymchan**	**72.87**	**18⇑**	*i*P	**P**	**20 13 31.2 +1.4**
SEY				pmax	pmax	
	comp=Z,60nm,1.1s					
F22K	**John River**	**72.91 354**		P	**P**	**20 13 31.9 +1.8**
	baz=12					
F22K				S	**S**	**20 22 22.0 +3.7**
	baz=12					
F36A	**Milaca**	**72.96 316**		IAmb	IAmb	20 13 32.5
	comp=Z,365nm,1.1s					
F36A	**Milaca**	**72.96 316**		P	**P**	**20 13 31.3 +0.6**
	baz=51,SNR=123					
JFWS	**Jewell Farm**	**72.97 312**		IAmb	IAmb	20 13 32.2
	comp=Z,220nm,0.9s					
JFWS	**Jewell Farm**	**72.97 312**		P	**P**	**20 13 31.0 +0.2**
	baz=52,SNR=29					
JFWS	**Jewell Farm**	**72.97 312**		P	**P**	**20 13 31.0 +0.2**
	baz=52,SNR=29					
JFWS				S	**S**	**20 22 18.6 -1.1**
	baz=52					
SPMN	**Marine on St.**	**72.97 315**		P	**P**	**20 13 31.3 +0.5**
SPMN				IAmb	IAmb	20 13 32.8
	comp=Z,378nm,1.0s					
SPMN	**Marine on St.**	**72.97 315**		P	**P**	**20 13 31.6 +0.8**
	baz=51,SNR=54					
SPMN	**Marine on St.**	**72.97 315**		P	**P**	**20 13 31.6 +0.8**
	baz=51,SNR=54					
SPMN				S	**S**	**20 22 21.0 +1.3**
	baz=51					
H27K	**Steamboat Moun**	**72.99 350**		P	**P**	**20 13 32.5 +1.9**
	baz=20,SNR=107					
H27K				S	**S**	**20 22 23.6 +4.2**
	baz=20					
COLD	**Coldfoot**	**73.02 353**		P	**P**	**20 13 32.1 +1.5**
	baz=13,SNR=34					
COLD				S	**S**	**20 22 23.1 +3.7**
	baz=13					
G25K	**Bearman Lake**	**73.06 352**		P	**P**	**20 13 33.2 +2.3**
	baz=16,SNR=33					
G25K				S	**S**	**20 22 25.3 +5.4**
	baz=16					
XAN	**Xi'an**	**73.06**	**60⇑**	*i*P	**P**	**20 13 32.3 +0.7**
XAN				PP	**PP**	**20 16 22.8 +1.2**
XAN				S	**S**	**20 22 21.8 +0.6**
XAN				SS	**SS**	**20 27 12.8 -0.3**
XAN				pmax	pmax	
	comp=Z,470nm,1.2s					
XAN				pmax	pmax	
	comp=Z,2μm,4.6s					
V52A	**Sevierville**	**73.13 303**		IAmb	IAmb	20 13 33.3
	comp=Z,155nm,0.9s					
V52A	**Sevierville**	**73.13 303**		P	**P**	**20 13 32.0 +0.1**
	baz=53,SNR=44					
FYU	**Fort Yukon**	**73.15 351**		IAmb	IAmb	20 13 35.1
	comp=Z,279nm,1.0s					
P46A	**Rosedale**	**73.16 308**		P	**P**	**20 13 31.6 -0.4**
P46A				IAmb	IAmb	20 13 33.3
	comp=Z,363nm,1.1s					
P46A	**Rosedale**	**73.16 308**		P	**P**	**20 13 31.8 -0.1**
	baz=53,SNR=37					
TIY	**Taiyuan**	**73.17**	**55**	⇑P	**P**	**20 13 32.5 +0.3**
TIY				PP	**PP**	**20 16 25.3 +2.9**
TIY				S	**S**	**20 22 21.0 -1.4**
TIY				SS	**SS**	**20 27 19.8 +5.1**
TIY				pmax	pmax	
	comp=Z,110nm,1.1s					
TIY				pmax	pmax	
	comp=Z,610nm,5.9s					
L42A	**Oliver, Polo**	**73.19 311**		IAmb	IAmb	20 13 33.8
	comp=Z,461nm,1.1s					
L42A	**Oliver, Polo**	**73.19 311**		P	**P**	**20 13 32.5 +0.4**
	baz=52,SNR=43					
BG3	**Lake Jocassee**	**73.20 302**		IAmb	IAmb	20 13 34.1
	comp=Z,287nm,1.1s					
CASEE	**Lake Jocassee**	**73.20 302**		P	**P**	**20 13 33.0 +0.7**
	baz=54,SNR=67					
HODGE	**Hodges**	**73.20 301**		IAmb	IAmb	20 13 34.1
	comp=Z,127nm,0.7s					
HODGE	**Hodges**	**73.20 301**		P	**P**	**20 13 32.9 +0.5**
	baz=54,SNR=55					
T50A	**Nancy**	**73.24 304**		IAmb	IAmb	20 13 34.1
	comp=Z,168nm,0.7s					
T50A	**Nancy**	**73.24 304**		P	**P**	**20 13 32.9 +0.4**
	baz=53					
T50A				P	**P**	**20 13 32.9 +0.4**
	baz=53					
G24K	**Hadweenzic Riv**	**73.27 352**		P	**P**	**20 13 34.0 +1.9**
	baz=15,SNR=30					
G24K				S	**S**	**20 22 25.7 +3.4**
	baz=15					
HAW	**Hawthorne Fire**	**73.28 300**		P	**P**	**20 13 33.5 +0.7**
	baz=54,SNR=76					
F21K	**Alatna River**	**73.28 355**		P	**P**	**20 13 34.2 +2.0**
	baz=10,SNR=69					
F21K				S	**S**	**20 22 26.6 +4.1**
	baz=10					
I29M	**Ogilvie Camp,**	**73.33 348**		IAmb	IAmb	20 13 34.8
	comp=Z,183nm,1.1s					
I29M	**Ogilvie Camp,**	**73.33 348**		P	**P**	**20 13 33.4 +0.9**
	baz=22,SNR=140					
I29M				S	**S**	**20 22 25.0 +1.9**
	baz=22					
TKL	**Tuckaleechee C**	**73.36 303**		IAmb	IAmb	20 13 34.7
	comp=Z,227nm,1.0s					
TKL	**Tuckaleechee C**	**73.36 303**		P	**P**	**20 13 33.6 +0.4**
	baz=53,SNR=55					
G22K	**Bettles**	**73.43 354**		P	**P**	**20 13 34.5 +1.5**
	baz=12,SNR=28					
G22K				S	**S**	**20 22 28.0 +4.0**
	baz=12					
WCI	**Wyandotte Cave**	**73.43 306**		P	**P**	**20 13 33.7 +0.2**
WCI	**Wyandotte Cave**	**73.43 306**		P	**P**	**20 13 33.7 +0.2**
WCI				pmax	pmax	
	comp=Z,583nm,1.2s					
WCI	**Wyandotte Cave**	**73.43 306**		P	**P**	**20 13 34.1 +0.5**
	baz=53,SNR=73					
WCI	**Wyandotte Cave**	**73.43 306**		P	**P**	**20 13 34.1 +0.5**
	baz=53					
WCI				S	**S**	**20 22 22.8 -2.3**
	baz=53					
H25K	**Birch Creek**	**73.50 351**		P	**P**	**20 13 35.7 +2.3**
	baz=17,SNR=35					
H25K				S	**S**	**20 22 29.5 +4.7**
	baz=17					
G23K	**Bananza Creek**	**73.51 353**		P	**P**	**20 13 35.2 +1.7**
	baz=13,SNR=53					
G23K				S	**S**	**20 22 28.9 +3.9**
	baz=13					
SDD	**Santo Domingo**	**73.57 281**		IAmb	IAmb	20 13 36.8
	comp=Z,275nm,1.1s					
I27K	**Kandik River**	**73.60 350**		P	**P**	**20 13 35.7 +1.6**
	baz=20,SNR=52					
I27K				S	**S**	**20 22 29.8 +3.7**
	baz=20					
O44A	**Mansfield**	**73.61 309**		IAmb	IAmb	20 13 36.2
	comp=Z,433nm,1.1s					
O44A	**Mansfield**	**73.61 309**		P	**P**	**20 13 35.0 +0.5**
	baz=52,SNR=14					
SC01	**Santiago de lo**	**73.61 282**		IAmb	IAmb	20 13 38.1
	comp=Z,277nm,1.0s					
DGPR	**DIGLIPUR**	**73.63**	**86⇑**	*i*P	**P**	**20 13 35.2 +0.2**
DGPR				IAmb	IAmb	20 13 36.7
	comp=Z,1μm,1.5s					
V51A	**Loudon**	**73.65 303**		P	**P**	**20 13 35.3 +0.5**
V51A	**Loudon**	**73.65 303**		P	**P**	**20 13 35.6 +0.7**
	baz=53,SNR=100					
257A	**Skidaway Islan**	**73.70 298**		P	**P**	**20 13 36.2 +1.0**
	baz=54					
W52A	**Murphy**	**73.80 302**		IAmb	IAmb	20 13 37.3
	comp=Z,541nm,1.4s					
W52A	**Murphy**	**73.80 302**		P	**P**	**20 13 36.2 +0.4**
	baz=53,SNR=65					
ROSN	**Rosenhof**	**73.80 170**		*e*P	**P**	**20 13 36.9 +1.4**
ROSN				IAmb	IAmb	20 13 37.3
	comp=Z,129nm,0.8s					
HDIL	**Hopedale**	**73.86 309**		P	**P**	**20 13 36.4 +0.4**
	baz=52,SNR=42					
HDIL	**Hopedale**	**73.86 309**		P	**P**	**20 13 36.4 +0.4**
	baz=52,SNR=42					
HDIL				S	**S**	**20 22 27.6 -2.1**
	baz=52					
KMI	**Kunming**	**73.96**	**71**	⇑P	**P**	**20 13 37.0 -0.1**
KMI				PP	**PP**	**20 16 30.8 +1.2**
KMI				S	**S**	**20 22 29.0 -2.7**
KMI				SKS	**SKSac**	**20 22 55.5 -4.7**
KMI				pmax	pmax	
	comp=Z,200nm,1.5s					
KMI				pmax	pmax	
	comp=Z,1μm,7.2s					
CPCT	**Cooper Cave**	**73.97 303**		P	**P**	**20 13 37.1 +0.4**
CPCT				IAmb	IAmb	20 13 38.5
	comp=Z,357nm,1.1s					
G21K	**Allakaket**	**73.98 355**		P	**P**	**20 13 37.9 +1.7**
	baz=10,SNR=31					
G21K				S	**S**	**20 22 33.6 +3.4**
	baz=10					
D32A	**Dogwood Acres,**	**73.99 318**		IAmb	IAmb	20 13 38.1
	comp=Z,255nm,1.1s					
D32B	**Dogwood Acres,**	**73.99 318**		P	**P**	**20 13 36.7 +0.1**
	baz=49,SNR=5.9					
L40A	**Anamosa**	**74.06 312**		P	**P**	**20 13 37.3 +0.3**
	baz=51,SNR=92					
I37B	**Waseca**	**74.07 314**		P	**P**	**20 13 37.9 +0.8**
	baz=50,SNR=61					
BJI	**Beijing**	**74.08**	**51**	P	**P**	**20 13 38.0 +0.8**
BJI				PcP	**PcP**	**20 13 46.8 -2.9**
BJI				sP	**sP**	**20 16 04.3 -0.7**
BJI				PP	**PP**	**20 16 31.5 +1.7**
BJI				S	**S**	**20 22 33.0 +1.0**
BJI				SKS	**SKKSac**	**20 23 00.3 -0.1**

BJI			sS	**sS**	**20 25 24.8 -2.3**
BJI			SS	**SS**	**20 27 30.0 +2.1**
BJI			pmax	pmax	
	comp=Z,260nm,1.1s				
BJI			pmax	pmax	
	comp=Z,1μm,5.6s				
BJT	**Baijiatuau**	**74.08 51**	IAmb	IAmb	20 13 39.4
	comp=Z,451nm,1.3s				
I26K	**Coal Creek Min**	**74.09 350**	P	**P**	**20 13 38.5 +1.7**
	baz=19				
I26K			S	**S**	**20 22 35.7 +4.3**
	baz=19				
U49A	**Red Boiling Sp**	**74.14 304**	IAmb	IAmb	20 13 39.3
	comp=Z,586nm,1.4s				
U49A	**Red Boiling Sp**	**74.14 304**	P	**P**	**20 13 38.1 +0.4**
	baz=53,SNR=90				
H24K	**Noodor Dome**	**74.15 352**	P	**P**	**20 13 38.7 +1.4**
	baz=15,SNR=34				
H24K			S	**S**	**20 22 34.2 +2.1**
	baz=15				
J29M	**Klondike Camp**	**74.15 348**	P	**P**	**20 13 39.1 +1.8**
	baz=22,SNR=10.0				
J29M			S	**S**	**20 22 35.4 +3.1**
	baz=22				
PRP	**Porcupine Dome**	**74.19 351**	P	**P**	**20 13 39.4 +1.8**
	baz=17,SNR=36				
PRP			S	**S**	**20 22 36.9 +4.2**
	baz=17				
SDDR	**Presa de Saban**	**74.30 282**	IAmb	IAmb	20 13 41.9
	comp=Z,462nm,1.1s				
SDDR	**Presa de Saban**	**74.30 282**	*e*P	**P**	**20 13 40.6 +1.8**
EGAK	**Eagle**	**74.31 349**	P	**P**	**20 13 38.7 +0.6**
EGAK	**Eagle**	**74.31 349**	P	**P**	**20 13 39.2 +1.2**
	baz=20,SNR=33				
EGAK			S	**S**	**20 22 36.8 +3.0**
	baz=20				
H23K	**Yukon River**	**74.33 353**	IAmb	IAmb	20 13 41.4
	comp=Z,70nm,0.7s				
H23K	**Yukon River**	**74.33 353**	P	**P**	**20 13 40.1 +1.9**
	baz=14,SNR=58				
H23K			S	**S**	**20 22 38.0 +4.0**
	baz=14				
PBA	**Port Blair**	**74.40 88**	P	**P**	**20 13 38.5 -0.9**
	SNR=27				
PBA	**Port Blair**	**74.40 88**	*i*P	**P**	**20 13 38.5 -0.9**
PBA			IAmb	IAmb	20 13 39.7
	comp=Z,294nm,0.5s				
H22K	**Ishtalitna Cre**	**74.43 354**	P	**P**	**20 13 40.9 +2.1**
	baz=12,SNR=28				
H22K			S	**S**	**20 22 40.4 +5.3**
	baz=12				
F33A	**5 Mile Ranch,**	**74.46 317**	IAmb	IAmb	20 13 41.0
	comp=Z,251nm,1.1s				
F33A	**5 Mile Ranch,**	**74.46 317**	P	**P**	**20 13 39.2 -0.1**
	baz=49,SNR=40				
GOGA	**Godfrey**	**74.50 301**	P	**P**	**20 13 40.2 +0.5**
GOGA			IAmb	IAmb	20 13 41.6
	comp=Z,314nm,1.1s				
GOGA	**Godfrey**	**74.50 301**	P	**P**	**20 13 40.2 +0.5**
GOGA			pmax	pmax	
	comp=Z,314nm,1.2s				
GOGA	**Godfrey**	**74.50 301**	P	**P**	**20 13 40.4 +0.7**
	baz=53,SNR=63				
GOGA	**Godfrey**	**74.50 301**	P	**P**	**20 13 40.5 +0.8**
	baz=53,SNR=63				
MMPY	**Sheldon Lake,**	**74.50 344**	P	**P**	**20 13 41.7 +2.5**
	baz=28,SNR=46				
MMPY			S	**S**	**20 22 41.7 +5.7**
	baz=28				
MAYO	**Mayo, Yukon**	**74.54 346**	IAmb	IAmb	20 13 42.9
	comp=Z,217nm,0.9s				
MAYO	**Mayo, Yukon**	**74.54 346**	P	**P**	**20 13 41.2 +1.8**
	baz=24,SNR=5.1				
P43A	**Skaggs, Pawnee**	**74.56 309**	P	**P**	**20 13 40.4 +0.4**
	baz=52,SNR=49				
K38A	**Parkersburg**	**74.58 313**	IAmb	IAmb	20 13 41.0
	comp=Z,245nm,0.9s				
K38A	**Parkersburg**	**74.58 313**	P	**P**	**20 13 39.9 -0.1**
	baz=50,SNR=21				
K29M	**Barlow Dome**	**74.60 347**	P	**P**	**20 13 41.3 +1.4**
	baz=23,SNR=54				
K29M			S	**S**	**20 22 38.2 +0.9**
	baz=23				
Y52A	**Lilburn**	**74.62 301**	IAmb	IAmb	20 13 42.4
	comp=Z,399nm,0.9s				
Y52A	**Lilburn**	**74.62 301**	P	**P**	**20 13 41.3 +0.8**
	baz=53,SNR=86				
Y52A			P	**P**	**20 13 41.3 +0.8**
	baz=53,SNR=86				
W50A	**Signal Mountai**	**74.64 303**	P	**P**	**20 13 41.1 +0.5**
W50A	**Signal Mountai**	**74.64 303**	P	**P**	**20 13 41.2 +0.7**
	baz=52,SNR=136				
N41A	**Harden Midland**	**74.69 310**	P	**P**	**20 13 41.0 +0.3**
	baz=51,SNR=68				
T47A	**Sharon Grove**	**74.70 305**	P	**P**	**20 13 41.3 +0.5**
	baz=52,SNR=227				
DAWY	**Dawson**	**74.71 348**	IAmb	IAmb	20 13 43.3
	comp=Z,169nm,1.1s				
DAWY	**Dawson**	**74.71 348**	P	**P**	**20 13 42.0 +1.6**
	baz=21,SNR=125				
DAWY			S	**S**	**20 22 42.9 +4.6**
	baz=21				
Q44A	**Meyer Farm, Va**	**74.71 308**	P	**P**	**20 13 41.0 +0.2**
	baz=52,SNR=37				
255A	**Hazlehurst**	**74.72 299**	P	**P**	**20 13 41.4 +0.5**
	baz=53,SNR=29				
X51A	**Calhoun**	**74.72 302**	P	**P**	**20 13 41.4 +0.4**
X51A	**Calhoun**	**74.72 302**	P	**P**	**20 13 41.6 +0.6**
	baz=53,SNR=64				
X51A			P	**P**	**20 13 41.6 +0.6**
	baz=53,SNR=64				
154A	**Montrose**	**74.74 300**	P	**P**	**20 13 42.2 +1.1**
	baz=53,SNR=25				
CLTN	**Cedars of Leba**	**74.75 304**	IAmb	IAmb	20 13 42.7
	comp=Z,204nm,0.8s				
H21K	**Melozitna Rive**	**74.78 354**	IAmb	IAmb	20 13 44.4
	comp=Z,158nm,1.2s				
H21K	**Melozitna Rive**	**74.78 354**	P	**P**	**20 13 43.0 +2.2**
	baz=11,SNR=58				
H21K			S	**S**	**20 22 43.8 +4.9**
	baz=11				
TGTN	**Hyland Airport**	**74.79 342**	P	**P**	**20 13 43.2 +2.3**
	baz=30,SNR=47				
HNS	**HongShan**	**74.80 54**	⇑P	**P**	**20 13 42.0 +0.7**
HNS			PcP	**PcP**	**20 13 53.0 +0.2**
HNS			PP	**PP**	**20 16 37.5 +1.6**
HNS			S	**S**	**20 22 39.8 -0.2**
HNS			ScS	**ScS**	**20 23 10.3 +0.7**
HNS			sS	**sS**	**20 25 37.0 +1.6**
HNS			pmax	pmax	
	comp=Z,240nm,1.1s				
HNS			pmax	pmax	
	comp=Z,980nm,4.6s				
POKR	**Poker Plat Res**	**74.80 352**	P	**P**	**20 13 42.3 +1.5**
	baz=15,SNR=18				
POKR			S	**S**	**20 22 42.3 +3.1**
	baz=15				
MDND	**Maddock**	**74.83 320**	IAmb	IAmb	20 13 43.1
	comp=Z,445nm,1.2s				
MDND	**Maddock**	**74.83 320**	P	**P**	**20 13 41.6 +0.3**
	baz=48,SNR=12				
MDND	**Maddock**	**74.83 320**	P	**P**	**20 13 41.8 +0.5**
	baz=48,SNR=12				
CHTO	**Chiang Mai**	**74.86 78**	P	**P**	**20 13 41.8 -0.2**
CHTO	**Chiang Mai**	**74.86 78**	P	**P**	**20 13 41.8 -0.2**
CHTO			pmax	pmax	
	comp=Z,641nm,1.2s				
KOTAN	**Kotaneelee Air**	**74.91 340**	P	**P**	**20 13 43.5 +1.9**
	baz=33,SNR=27				
J26L	**Joseph Creek**	**74.91 350**	P	**P**	**20 13 43.0 +1.4**
	baz=18,SNR=68				
J26L			S	**S**	**20 22 44.3 +3.7**
	baz=18				
I23K	**Minto, Yukon-K**	**74.97 353**	P	**P**	**20 13 43.1 +1.4**
	baz=14,SNR=19				
I23K			S	**S**	**20 22 45.1 +4.2**
	baz=14				
ROCAM	**Rodrigues Isla**	**75.01 132**	P	**P**	**20 13 43.0 +0.3**
ROCAM			IAmb	IAmb	20 13 44.3
	comp=Z,362nm,1.0s				
SWET	**Sewanee**	**75.03 303**	P	**P**	**20 13 42.6 -0.1**
SWET			IAmb	IAmb	20 13 43.9
	comp=Z,151nm,1.1s				
J25K	**Salcha River,**	**75.04 351**	P	**P**	**20 13 43.3 +1.0**
	baz=17				
J25K			S	**S**	**20 22 43.9 +2.0**
	baz=17				
ILAR	**Eielson Array**	**75.07 351**	P	**P**	**20 13 43.0 +0.6**
	comp=Z,19nm,1.0s,baz=347,slow=4.1,SNR=92				
ILAR			PKKPbc	**PKKPbc**	**20 32 58.4 -2.3**
	comp=Z,1.4nm,0.8s,baz=227,slow=2.8,SNR=9.3				
ILAR			PKPPKP		20 41 02.7
	comp=Z,4.7nm,0.9s,baz=228,slow=2.4,SNR=8.3				
	comp=Z,19nm,1.0s				
ILAR	**Eielson Array**	**75.07 351**	P	**P**	**20 13 43.0 +0.6**
CM31	**Chiang Mai Arr**	**75.08 78**	P	**P**	**20 13 43.8 +0.5**
	SNR=191				
CMAR	**Chiang Mai Arr**	**75.08 78**	P	**P**	**20 13 43.5 +0.2**
	comp=Z,227nm,0.8s,baz=307,slow=7.2,SNR=1408				
CMAR			PP	**PP**	**20 16 39.3 +0.5**
	comp=Z,14nm,1.1s,baz=291,slow=7.5,SNR=2.8				
CMAR			S	**S**	**20 22 39.3 -4.3**
	comp=Z,8.4nm,1.2s,baz=305,slow=11,SNR=13				
	comp=Z,227nm,0.8s				
COLA	**College**	**75.08 352**	P	**P**	**20 13 43.0 +0.6**
COLA	**College**	**75.08 352**	P	**P**	**20 13 43.0 +0.6**
COLA			pmax	pmax	
	comp=Z,33nm,0.8s				
COLA	**College**	**75.08 352**	P	**P**	**20 13 43.3 +1.0**
	baz=15				
COLA	**College**	**75.08 352**	P	**P**	**20 13 43.9 +1.5**
	comp=Z,52nm,1.2s				
TCOL	**CIGO, UAF Yank**	**75.08 352**	P	**P**	**20 13 43.3 +0.9**
	baz=15				
LYN	**LuoYang**	**75.10 58**	⇑*i*P	**P**	**20 13 43.5 +0.4**
LYN			sP	sP	20 16 12.0 +0.7
LYN			PP	**PP**	**20 16 39.0 +0.4**
LYN			S	**S**	**20 22 43.5 0.0**
LYN			SS	**SS**	**20 27 46.0 +2.3**
LYN			pmax	pmax	
	comp=Z,120nm,1.4s				
LYN			pmax	pmax	
	comp=Z,790nm,4.0s				
456A	**Hilliard**	**75.13 298**	IAmb	IAmb	20 13 45.9
	comp=Z,252nm,0.9s				
456A	**Hilliard**	**75.13 298**	P	**P**	**20 13 44.5 +1.2**
	baz=53				
K27K	**Chicken**	**75.15 349**	P	**P**	**20 13 44.8 +1.9**
	baz=19				
K27K			S	**S**	**20 22 47.2 +4.2**
	baz=19				
I21K	**Tanana**	**75.18 354**	P	**P**	**20 13 44.6 +1.7**
I21K	**Tanana**	**75.18 354**	P	**P**	**20 13 44.6 +1.7**
	baz=12,SNR=22				
I21K			S	**S**	**20 22 47.4 +4.2**
	baz=12				
MLY	**Manley**	**75.22 353**	P	**P**	**20 13 44.7 +1.5**
	baz=12,SNR=39				
MLY			S	**S**	**20 22 47.6 +3.8**
	baz=12				
FPAL	**Fort Paine**	**75.23 303**	IAmb	IAmb	20 13 45.5
	comp=Z,209nm,0.8s				
V48A	**Smith Brothers**	**75.28 304**	IAmb	IAmb	20 13 45.6
	comp=Z,450nm,1.1s				
V48A	**Smith Brothers**	**75.28 304**	P	**P**	**20 13 44.3 +0.2**
	baz=52,SNR=93				
MA2	**Magadan**	**75.29 21**	P	**P**	**20 13 44.0 +0.3**
MA2			IAmb	IAmb	20 13 46.2
	comp=Z,186nm,0.9s				
MA2	**Magadan**	**75.29 21**	*c i*P	**P**	**20 13 44.9 +1.2**
MA2			pmax	pmax	
	comp=Z,256nm,1.0s				
MA2	**Magadan**	**75.29 21**	P	**P**	**20 13 45.1 +1.4**
	comp=Z,285nm,1.0s				
FARO	**Faro, Yukon**	**75.29 345**	IAmb	IAmb	20 13 47.5
	comp=Z,152nm,1.2s				
FARO	**Faro, Yukon**	**75.29 345**	P	**P**	**20 13 46.0 +2.4**
	baz=26,SNR=88				
FARO			S	**S**	**20 22 50.0 +5.4**
	baz=26				
SCIA	**State Center**	**75.31 312**	IAmb	IAmb	20 13 45.5
	comp=Z,318nm,1.1s				
SCIA	**State Center**	**75.31 312**	P	**P**	**20 13 43.6 -0.5**
	baz=50,SNR=12				
SCIA	**State Center**	**75.31 312**	P	**P**	**20 13 44.4 +0.2**
	baz=50,SNR=12				
SCIA			S	**S**	**20 22 43.3 -2.1**
	baz=50				
L29M	**L29M**	**75.39 347**	P	**P**	**20 13 45.8 +1.6**
	baz=22,SNR=48				
L29M			S	**S**	**20 22 48.1 +2.4**
	baz=22				
TNA	**Tin City**	**75.41 1**	P	**P**	**20 13 45.3 +1.1**
	baz=359				
HDA	**Harding Lake**	**75.43 351**	IAmb	IAmb	20 13 46.6
	comp=Z,92nm,0.8s				
HDA	**Harding Lake**	**75.43 351**	P	**P**	**20 13 45.3 +0.9**
	baz=16,SNR=62				
HDA			S	**S**	**20 22 46.9 +0.9**
	baz=16				
HDA			S	**S**	**20 22 46.9 +0.9**
	baz=16				
SCRK	**Sand Creek**	**75.47 350**	P	**P**	**20 13 46.3 +1.5**
	baz=18,SNR=56				
SCRK			S	**S**	**20 22 49.3 +2.6**
	baz=18				
NEA2	**Nenana**	**75.48 352**	P	**P**	**20 13 45.6 +0.9**
	baz=14,SNR=16				
NEA2			S	**S**	**20 22 47.2 +0.6**
	baz=14				
M31M	**Drury Creek, Y**	**75.52 345**	P	**P**	**20 13 47.1 +2.1**
	baz=25,SNR=73				
M31M			S	**S**	**20 22 52.4 +5.2**
	baz=25				
SIUC	**Southern Illin**	**75.57 307**	P	**P**	**20 13 45.7 0.0**
SIUC			IAmb	IAmb	20 13 47.1
	comp=Z,478nm,1.1s				
S44A	**Carbondale**	**75.61 307**	P	**P**	**20 13 45.8 0.0**
	baz=51,SNR=48				
SLM	**Saint Louis**	**75.62 308**	P	**P**	**20 13 45.5 -0.4**
	baz=51,SNR=16				
M30M	**Minto, Yukon**	**75.64 346**	P	**P**	**20 13 47.0 +1.3**
	baz=23,SNR=20				
T45A	**Paducah**	**75.65 306**	IAmb	IAmb	20 13 47.1
	comp=Z,266nm,1.1s				
T45B	**Paducah**	**75.65 306**	P	**P**	**20 13 45.8 -0.3**
	baz=51				
MANA	**Manning**	**75.67 335**	IAmb	IAmb	20 13 48.3
	comp=Z,205nm,0.7s				
WVT	**Waverly**	**75.69 305**	P	**P**	**20 13 46.0 -0.3**
WVT			IAmb	IAmb	20 13 47.3
	comp=Z,196nm,0.8s				
WVT	**Waverly**	**75.69 305**	P	**P**	**20 13 46.0 -0.3**
WVT			pmax	pmax	
	comp=Z,197nm,0.8s				
WVT	**Waverly**	**75.69 305**	P	**P**	**20 13 46.1 -0.2**
	baz=52,SNR=143				
WVT	**Waverly**	**75.69 305**	P	**P**	**20 13 46.2 -0.2**
	baz=52				
WVT			S	**S**	**20 22 44.8 -4.9**
	baz=52				
Z51A	**Franklin**	**75.69 301**	IAmb	IAmb	20 13 48.2
	comp=Z,231nm,0.9s				
Z51A	**Franklin**	**75.69 301**	P	**P**	**20 13 47.0 +0.5**
	baz=52,SNR=39				
TIGA	**Tifton**	**75.77 299**	IAmb	IAmb	20 13 49.0
	comp=Z,364nm,0.8s				
TIGA	**Tifton**	**75.77 299**	P	**P**	**20 13 47.9 +0.9**
	baz=52,SNR=13				
TIGA	**Tifton**	**75.77 299**	P	**P**	**20 13 47.8 +0.9**
	baz=52,SNR=13				
TIGA			S	**S**	**20 22 49.0 -1.8**
	baz=52				
152A	**Waverly Hall**	**75.78 301**	IAmb	IAmb	20 13 48.6
	comp=Z,300nm,1.0s				
152A	**Waverly Hall**	**75.78 301**	P	**P**	**20 13 47.6 +0.6**
	baz=52,SNR=56				
RIDG	**Independent Ri**	**75.81 350**	IAmb	IAmb	20 13 50.4
	comp=Z,149nm,1.1s				
RIDG	**Independent Ri**	**75.81 350**	P	**P**	**20 13 48.4 +1.8**
	baz=17,SNR=27				
RIDG			S	**S**	**20 22 54.5 +4.2**
	baz=17				
K24K	**Donnelly Dome**	**75.87 351**	P	**P**	**20 13 48.0 +1.1**
	baz=16,SNR=25				
GCSA	**Galena City Sc**	**75.96 356**	P	**P**	**20 13 49.0 +1.8**
	baz=7.6				
GCSA			S	**S**	**20 22 55.8 +4.2**
	baz=7.6				
GYA	**Guiyang**	**76.01 67**	⇑*i*P	**P**	**20 13 48.5 +0.1**
GYA			PcP	**PcP**	**20 13 58.8 +0.4**
GYA			pP	pP	20 15 29.5 +1.1
GYA			PP	**PP**	**20 16 47.8 +1.3**
GYA			S	**S**	**20 22 52.3 -1.4**
GYA			sS	sS	20 25 51.8 +2.0
GYA			pmax	pmax	
	comp=Z,480nm,1.1s				
GYA			pmax	pmax	
	comp=Z,1μm,3.5s				
ECSD	**EROS Data Cent**	**76.02 315**	P	**P**	**20 13 48.9 +0.8**
	baz=48,SNR=228				
ECSD	**EROS Data Cent**	**76.02 315**	P	**P**	**20 13 48.9 +0.8**
	baz=48,SNR=228				
ECSD			S	**S**	**20 22 52.6 -0.5**
	baz=48				
PHRA	**Phrae**	**76.03 77**	P	**P**	**20 13 48.5 -0.1**
L27K	**Beaver Creek,**	**76.03 349**	P	**P**	**20 13 49.5 +1.7**
	baz=19,SNR=56				
L27K			S	**S**	**20 22 56.5 +3.9**
	baz=19				
N38A	**Joes South For**	**76.03 311**	IAmb	IAmb	20 13 49.6
	comp=Z,277nm,0.7s				
N38A	**Joes South For**	**76.03 311**	P	**P**	**20 13 48.3 +0.1**
	baz=50,SNR=5.4				
M29M	**Somme Creek**	**76.06 347**	P	**P**	**20 13 49.9 +1.8**
	baz=22,SNR=69				
M29M			S	**S**	**20 22 57.0 +3.9**
	baz=22				
LIRD	**Liard River Hi**	**76.07 340**	P	**P**	**20 13 49.9 +1.8**
	baz=31,SNR=12				
P40A	**Paris**	**76.15 310**	IAmb	IAmb	20 13 50.1
	comp=Z,218nm,0.8s				
P40A	**Paris**	**76.15 310**	P	**P**	**20 13 49.0 +0.2**
	baz=50,SNR=59				
FVM	**French Village**	**76.15 308**	P	**P**	**20 13 49.1 +0.2**
FVM			IAmb	IAmb	20 13 50.6
	comp=Z,349nm,0.9s				
FVM	**French Village**	**76.15 308**	P	**P**	**20 13 49.1 +0.2**
FVM			pmax	pmax	
	comp=Z,349nm,0.9s				
FVM	**French Village**	**76.15 308**	P	**P**	**20 13 49.5 +0.6**
	baz=51,SNR=91				
WTLY	**Watson Lake, Y**	**76.15 342**	IAmb	IAmb	20 13 52.5
	comp=Z,214nm,1.3s				
WTLY	**Watson Lake, Y**	**76.15 342**	P	**P**	**20 13 50.6 +2.1**
	baz=29,SNR=75				
BPAW	**Bear Paw Mtn.**	**76.15 353**	P	**P**	**20 13 48.9 +0.5**
	baz=12				
BPAW			S	**S**	**20 22 55.0 +1.1**
	baz=12				
Y49A	**Blount Mountai**	**76.17 302**	IAmb	IAmb	20 13 50.7
	comp=Z,264nm,1.1s				
Y49A	**Blount Mountai**	**76.17 302**	P	**P**	**20 13 49.6 +0.5**
	baz=52,SNR=43				
N32M	**Quiet Lake**	**76.21 344**	P	**P**	**20 13 50.7 +1.8**
	baz=26				
N32M			S	**S**	**20 22 58.1 +3.6**
	baz=26				
UTMT	**University of**	**76.21 306**	IAmb	IAmb	20 13 50.4
	comp=Z,435nm,1.1s				
X48A	**Hartselle**	**76.22 303**	P	**P**	**20 13 49.9 +0.6**
	baz=52,SNR=226				
E28A	**Huff**	**76.24 320**	P	**P**	**20 13 50.3 +1.0**
E28A	**Huff**	**76.24 320**	P	**P**	**20 13 50.5 +1.2**
	baz=47,SNR=30				
L26K	**Log Cabin Wild**	**76.29 349**	P	**P**	**20 13 51.1 +1.8**
	baz=18,SNR=25				
L26K			S	**S**	**20 22 59.0 +3.7**
	baz=18				
DWPF	**Disney Wildern**	**76.30 295**	P	**P**	**20 13 50.2 +0.4**
DWPF			IAmb	IAmb	20 13 52.3
	comp=Z,370nm,1.1s				
DWPF	**Disney Wildern**	**76.30 295**	P	**P**	**20 13 51.2 +1.4**
	baz=52,SNR=7.1				
DWPF	**Disney Wildern**	**76.30 295**	P	**P**	**20 13 50.8 +1.0**
	baz=52				
656A	**Willston**	**76.30 297**	IAmb	IAmb	20 13 52.3
	comp=Z,288nm,0.7s				
656A	**Willston**	**76.30 297**	P	**P**	**20 13 51.3 +1.5**
	baz=52,SNR=19				
MCK	**McKinley**	**76.31 352**	IAmb	IAmb	20 13 51.5
	comp=Z,155nm,1.3s				
MCK	**McKinley**	**76.31 352**	P	**P**	**20 13 50.1 +0.7**
	baz=14,SNR=26				
MCK			S	**S**	**20 22 54.8 -0.7**
	baz=14				
KLR	**Kul'dur**	**76.31 36**	P	**P**	**20 13 49.7 +0.1**
	comp=Z,78nm,1.0s				
KLR			PP	**PP**	**20 16 47.6 -0.5**
	comp=Z,6.3nm,1.0s,baz=311,slow=5.9,SNR=4.0				
KLR			S	**S**	**20 22 56.3 +0.3**
	comp=Z,8.0nm,1.1s,baz=149,slow=21,SNR=9.6				
	comp=Z,78nm,1.0s				
KLR	**Kul'dur**	**76.31 36**	*c i*P	**P**	**20 13 50.1 +0.5**
KLR			pmax	pmax	
	comp=Z,184nm,1.3s				
J20K	**Nowinta River**	**76.34 354**	P	**P**	**20 13 51.1 +1.6**
	baz=9.8,SNR=20				
J20K			S	**S**	**20 22 59.6 +3.8**
	baz=9.8				
ANM	**Nome**	**76.41 360**	P	**P**	**20 13 50.9 +1.1**
	baz=0.9				
N31M	**Braeburn, Yuko**	**76.45 345**	P	**P**	**20 13 51.4 +1.2**
	baz=24,SNR=24				
N31M			S	**S**	**20 22 57.5 +0.4**
	baz=24				
CHUM	**Lake Minchumin**	**76.49 354**	P	**P**	**20 13 51.4 +1.2**
	baz=11,SNR=57				
CHUM			S	**S**	**20 22 59.3 +2.0**
	baz=11				
BVCY	**Beaver Creek**	**76.49 348**	P	**P**	**20 13 52.4 +2.1**
	baz=20,SNR=47				
BVCY			S	**S**	**20 23 02.1 +4.5**
	baz=20				
CCM	**Cathedral Cave**	**76.60 308**	P	**P**	**20 13 51.5 +0.1**
CCM			IAmb	IAmb	20 13 52.9
	comp=Z,230nm,0.8s				
CCM	**Cathedral Cave**	**76.60 308**	P	**P**	**20 13 51.5 +0.1**
CCM			pmax	pmax	
	comp=Z,230nm,0.9s				
CCM	**Cathedral Cave**	**76.60 308**	P	**P**	**20 13 51.8 +0.4**
	baz=50,SNR=101				
CCM	**Cathedral Cave**	**76.60 308**	P	**P**	**20 13 51.7 +0.4**
	baz=50				
CCM			S	**S**	**20 22 56.9 -2.6**
	baz=50				
HATO	**Hato, Curacao**	**76.61 275**	IAmb	IAmb	20 13 54.0
	comp=Z,252nm,1.1s				
DGMT	**Dagmar**	**76.62 323**	P	**P**	**20 13 52.3 +1.0**
DGMT			IAmb	IAmb	20 13 54.3
	comp=Z,220nm,1.1s				
DGMT	**Dagmar**	**76.62 323**	P	**P**	**20 13 53.2 +1.9**
	baz=45,SNR=14				
DGMT	**Dagmar**	**76.62 323**	P	**P**	**20 13 52.5 +1.1**
	baz=45,SNR=14				
DGMT			S	**S**	**20 23 02.6 +3.2**
	baz=45				
GTBY	**Guantanamo Bay**	**76.62 285**	IAmb	IAmb	20 13 54.5
	comp=Z,143nm,1.0s				
GTBY	**Guantanamo Bay**	**76.62 285**	*e*P	**P**	**20 13 53.1 +1.4**
PAX	**Paxson**	**76.63 350**	P	**P**	**20 13 51.9 +0.7**
	baz=17,SNR=17				
PAX			S	**S**	**20 23 02.0 +2.8**
	baz=17				
BNX	**BinXian**	**76.64 41**	⇑P	**P**	**20 13 52.0 +0.6**
BNX			pP	**pP**	**20 15 28.5 -3.1**
BNX			sP	**sP**	**20 16 13.5 -6.4**
BNX			S	**S**	**20 22 55.8 -3.8**
BNX			pmax	pmax	
	comp=Z,320nm,1.2s				
BNX			pmax	pmax	
	comp=Z,1μm,3.8s				
352A	**Blakely**	**76.65 300**	IAmb	IAmb	20 13 53.3
	comp=Z,199nm,0.9s				
352A	**Blakely**	**76.65 300**	P	**P**	**20 13 51.9 +0.1**
	baz=52,SNR=10				
M27K	**Edge Creek, AK**	**76.71 348**	IAmb	IAmb	20 13 55.2
	comp=Z,159nm,1.4s				
M27K	**Edge Creek, AK**	**76.71 348**	P	**P**	**20 13 53.8 +2.1**
	baz=19,SNR=46				
M27K			S	**S**	**20 23 03.2 +3.2**
	baz=19				
TRF	**Thorofare Moun**	**76.72 353**	P	**P**	**20 13 52.1 +0.3**
TRF	**Thorofare Moun**	**76.72 353**	P	**P**	**20 13 52.1 +0.3**
	baz=13,SNR=23				
TRF			S	**S**	**20 22 59.5 -0.8**
	baz=13				
N30M	**Aishikik Lake**	**76.73 346**	P	**P**	**20 13 53.4 +1.7**
	baz=23,SNR=48				
N30M			S	**S**	**20 23 03.1 +2.9**
	baz=23				
LNXT	**Lenox**	**76.75 306**	P	**P**	**20 13 52.1 -0.1**

	baz=51				
DHY	**Denali Highway**	**76.77 351**	IAmb	IAmb	20 13 54.6
	comp=Z,142nm,0.8s				
DHY	**Denali Highway**	**76.77 351**	P	**P**	**20 13 53.3 +1.3**
	baz=15,SNR=82				
DHY			S	**S**	**20 23 02.8 +2.0**
	baz=15				
HALT	**Halls**	**76.78 306**	IAmb	IAmb	20 13 53.1
	comp=Z,528nm,1.3s				
SUSD	**Miller**	**76.80 317**	P	**P**	**20 13 53.4 +1.0**
	baz=47,SNR=16				
SUSD	**Miller**	**76.80 317**	P	**P**	**20 13 53.2 +0.8**
	baz=47,SNR=16				
SUSD			S	**S**	**20 23 02.3 +0.9**
	baz=47				
M26K	**Nabesna, AK**	**76.83 349**	P	**P**	**20 13 53.1 +0.8**
M26K	**Nabesna, AK**	**76.83 349**	P	**P**	**20 13 53.6 +1.3**
	baz=18,SNR=48				
M26K			S	**S**	**20 23 05.3 +4.0**
	baz=18				
PBMO	**Poplar Bluff**	**76.91 307**	P	**P**	**20 13 53.1 0.0**
	baz=50,SNR=7.3				
CAST	**Castle Rocks**	**76.92 353**	P	**P**	**20 13 53.9 +1.2**
	baz=11,SNR=18				
CAST			S	**S**	**20 23 01.4 -0.7**
	baz=11				
CN2	**Changchun**	**76.94 44⇑**	*i*P	**P**	**20 13 54.0 +0.9**
CN2			*ep*P	pP	20 15 32.5 -0.9
CN2			*e*S	**S**	**20 23 03.3 +0.5**
CN2			pmax	pmax	
	comp=Z,400nm,1.2s				
CN2			pmax	pmax	
	comp=Z,2μm,3.0s				
P38A	**Dawn**	**76.96 311**	P	**P**	**20 13 54.0 +0.7**
	baz=50,SNR=119				
P33M	**Teslin, Yukon**	**77.00 343**	P	**P**	**20 13 54.9 +1.6**
	baz=26,SNR=58				
P33M			S	**S**	**20 23 07.6 +4.5**
	baz=26				
WHY	**Whitehorse**	**77.03 345**	P	**P**	**20 13 53.9 +0.4**
WHY	**Whitehorse**	**77.03 345**	P	**P**	**20 13 54.6 +1.2**
	baz=25,SNR=21				
WHY			S	**S**	**20 23 07.2 +3.7**
	baz=25				
YUK3	**Moose Creek**	**77.03 348**	P	**P**	**20 13 55.1 +1.5**
	baz=20,SNR=62				
YUK3			S	**S**	**20 23 07.7 +4.0**
	baz=20				
TIA	**Tai'an**	**77.05 54**	P	**P**	**20 13 54.3 +0.4**
TIA			pmax	pmax	
	comp=Z,160nm,0.8s				
L34A	**Svendsen Farm,**	**77.06 314**	P	**P**	**20 13 54.0 +0.2**
L34A	**Svendsen Farm,**	**77.06 314**	P	**P**	**20 13 54.2 +0.3**
	baz=48,SNR=39				
LRAL	**Lakeview Retre**	**77.07 302**	P	**P**	**20 13 54.7 +0.6**
	baz=51,SNR=148				
LRAL	**Lakeview Retre**	**77.07 302**	P	**P**	**20 13 54.5 +0.5**
	baz=51,SNR=148				
LRAL			S	**S**	**20 23 00.9 -3.7**
	baz=51				
R40A	**Maddies Statio**	**77.07 309**	IAmb	IAmb	20 13 55.8
	comp=Z,416nm,1.0s				
R40A	**Maddies Statio**	**77.07 309**	P	**P**	**20 13 54.7 +0.7**
	baz=50,SNR=127				
YUK4	**Talbot Arm**	**77.12 347**	P	**P**	**20 13 55.3 +1.2**
	baz=22,SNR=41				
GAMB	**Gambell**	**77.12 2**	P	**P**	**20 13 54.5 +0.8**
	baz=356				
HARP	**HAARP**	**77.14 350**	P	**P**	**20 13 55.5 +1.6**
	baz=17,SNR=11				
HARP			S	**S**	**20 23 10.2 +5.8**
	baz=17				
WAT1	**Susitna Watana**	**77.14 352**	P	**P**	**20 13 54.3 +0.3**
	baz=14				
WAT1			S	**S**	**20 23 04.0 -0.5**
	baz=14				
K20K	**Telida**	**77.15 354**	P	**P**	**20 13 55.0 +1.0**
	baz=9.8,SNR=20				
K20K			S	**S**	**20 23 05.9 +1.4**
	baz=9.8				
W45A	**Hickory Valley**	**77.16 305**	P	**P**	**20 13 54.1 -0.3**
	baz=51,SNR=29				
T42A	**Van Buren**	**77.16 307**	P	**P**	**20 13 54.8 +0.3**
	baz=50				
O30N	**Mendenhall**	**77.17 345**	P	**P**	**20 13 55.5 +1.3**
	baz=24,SNR=27				
O30N			S	**S**	**20 23 08.0 +3.1**
	baz=24				
SNY	**Shenyang**	**77.23 46**	⇑P	**P**	**20 13 55.0 +0.2**
SNY			pmax	pmax	
	comp=Z,400nm,1.0s				
250A	**Grady**	**77.24 301**	P	**P**	**20 13 54.8 -0.2**
250A			IAmb	IAmb	20 13 56.6
	comp=Z,347nm,1.0s				
250A	**Grady**	**77.24 301**	P	**P**	**20 13 54.4 -0.6**
	baz=52,SNR=30				
GRNR	**Gornyy**	**77.26 33⇓**	*i*P	**P**	**20 13 54.9 +0.1**
GRNR			pmax	pmax	
	comp=E,20nm,0.7s				
GRNR			pmax	pmax	
	comp=N,20nm,0.8s				
GRNR			pmax	pmax	
	comp=Z,70nm,0.9s				
GRNR			MLR	MLR	
	comp=E,300nm,15.0s				
GRNR			MLR	MLR	
	comp=Z,300nm,14.0s				
061Z	**Ochoppi**	**77.28 293**	P	**P**	**20 13 56.9 +1.5**
	baz=52				
WAT6	**Susitna Watana**	**77.29 351**	P	**P**	**20 13 55.9 +0.9**
	baz=15,SNR=32				
WAT6			S	**S**	**20 23 08.1 +1.7**
	baz=15				
R33M	**Jennings River**	**77.30 342**	P	**P**	**20 13 57.3 +2.3**
	baz=27,SNR=91				
R33M			S	**S**	**20 23 12.6 +6.0**
	baz=27				
YUK8	**Steele Glacier**	**77.37 347**	P	**P**	**20 13 56.9 +1.4**
	baz=21,SNR=14				
N35A	**Tabor**	**77.37 313**	IAmb	IAmb	20 13 57.4
	comp=Z,321nm,1.0s				
N35A	**Tabor**	**77.37 313**	P	**P**	**20 13 56.2 +0.6**
	baz=48,SNR=12				
HYT	**Haines Junctio**	**77.39 346**	IAmb	IAmb	20 14 00.7
	comp=Z,129nm,1.2s				
HYT	**Haines Junctio**	**77.39 346**	P	**P**	**20 13 57.1 +1.6**
	baz=23,SNR=63				
YUK6	**Outpost Mounta**	**77.44 346**	P	**P**	**20 13 57.9 +2.1**
	baz=22,SNR=97				
PPLA	**Purkeypile**	**77.45 353**	IAmb	IAmb	20 13 57.7
	comp=Z,89nm,0.6s				
PPLA	**Purkeypile**	**77.45 353**	P	**P**	**20 13 56.3 +0.6**
	baz=11,SNR=23				
M24K	**Tolsona, Glenn**	**77.56 350**	P	**P**	**20 13 57.5 +1.3**
	baz=16,SNR=7.9				
WAPA	**Wapiti River**	**77.56 334**	IAmb	IAmb	20 13 59.3
	comp=Z,292nm,1.1s				
MET	**Memphis--Engin**	**77.65 305**	P	**P**	**20 13 56.7 -0.4**
Z47A	**Carrollton**	**77.67 303**	P	**P**	**20 13 56.8 -0.5**
Z47A			IAmb	IAmb	20 13 58.2
	comp=Z,152nm,0.7s				
Z47A	**Carrollton**	**77.67 303**	P	**P**	**20 13 57.1 -0.2**
	baz=51,SNR=42				
OXF	**Oxford**	**77.70 305**	P	**P**	**20 13 57.1 -0.4**
	baz=51,SNR=136				
OXF	**Oxford**	**77.70 305**	P	**P**	**20 13 56.9 -0.6**
	baz=51,SNR=136				
TTA	**Tatalina**	**77.71 355**	P	**P**	**20 13 58.3 +1.2**
	baz=8.3				
451A	**Vernon**	**77.74 299**	IAmb	IAmb	20 13 59.5
	comp=Z,524nm,1.2s				
CUT	**Chulitna**	**77.74 352**	P	**P**	**20 13 56.9 -0.2**
	baz=13				
P32M	**Atlin**	**77.75 344**	P	**P**	**20 13 58.5 +1.2**
	baz=25,SNR=16				
BRLDA	**Berland Lookou**	**77.81 333**	P	**P**	**20 13 58.8 +1.0**
BRLDA			IAmb	IAmb	20 14 00.6
	comp=Z,115nm,1.0s				
MCARA	**McCarthy VSAT**	**77.81 349**	P	**P**	**20 13 59.4 +1.9**
	baz=18,SNR=22				
LCAR	**Lake Charles**	**77.81 307**	IAmb	IAmb	20 13 59.8
	comp=Z,162nm,1.0s				
LCAR	**Lake Charles**	**77.81 307**	P	**P**	**20 13 58.5 +0.5**
	baz=50,SNR=43				
N25K	**Chitina, Valde**	**77.83 350**	P	**P**	**20 13 58.6 +0.8**
	baz=17,SNR=19				
HBAR	**Harrisburg**	**77.83 306**	P	**P**	**20 13 58.9 +0.7**
	baz=50,SNR=6.4				
GLB	**Gilahina Butte**	**77.87 349**	P	**P**	**20 13 58.6 +0.7**
BAUV	**El Baul**	**77.88 272**	P	**P**	**20 13 58.7 -0.1**
BAUV			IAmb	IAmb	20 14 00.4
	comp=Z,362nm,1.1s				
K31A	**O'Neill**	**77.92 316**	P	**P**	**20 13 59.7 +1.2**
	baz=47,SNR=16				
DLBC	**Dease Lake**	**77.93 341**	P	**P**	**20 14 00.7 +2.4**
	baz=28,SNR=11				
O28M	**Mount Upton**	**77.93 347**	P	**P**	**20 14 00.3 +1.8**
	baz=20,SNR=37				
P30M	**Million Dollar**	**77.94 345**	P	**P**	**20 14 00.4 +2.0**
	baz=23				
SCM	**Sheep Creek Mo**	**77.97 351**	P	**P**	**20 13 59.6 +1.1**
	baz=15,SNR=18				
Q32M	**Nakina River**	**78.00 343**	P	**P**	**20 14 01.2 +2.4**
	baz=26,SNR=20				
L20K	**Farewell, AK**	**78.00 354**	P	**P**	**20 14 00.3 +1.7**
	baz=9.9,SNR=10				
M23K	**Glacier View**	**78.06 351**	P	**P**	**20 13 59.7 +0.8**
	baz=15,SNR=11				
O29M	**Mount Kennedy**	**78.08 346**	P	**P**	**20 14 00.7 +1.5**
	baz=22,SNR=27				
S39A	**Bolivar**	**78.09 309**	P	**P**	**20 14 00.3 +0.7**
S39A			IAmb	IAmb	20 14 01.5
	comp=Z,285nm,1.1s				
S39A	**Bolivar**	**78.09 309**	P	**P**	**20 14 00.4 +0.8**
	baz=49,SNR=89				
SML	**Sawmill**	**78.11 351**	P	**P**	**20 14 00.4 +1.1**
	baz=14,SNR=18				
KLU	**Klutina**	**78.12 350**	P	**P**	**20 14 00.5 +1.1**
KLU	**Klutina**	**78.12 350**	P	**P**	**20 14 00.6 +1.3**
	baz=16,SNR=24				
Y45A	**Yeager Farm, C**	**78.20 304**	P	**P**	**20 14 00.5 +0.3**
	baz=50,SNR=180				
SKAG	**Skagway**	**78.22 344**	IAmb	IAmb	20 14 03.5
	comp=Z,166nm,1.5s				
SKAG	**Skagway**	**78.22 344**	P	**P**	**20 14 01.4 +1.7**
	baz=24,SNR=24				
BRAL	**Brewton**	**78.27 301**	IAmb	IAmb	20 14 02.5
	comp=Z,286nm,1.1s				
BRAL	**Brewton**	**78.27 301**	P	**P**	**20 14 01.0 +0.5**
	baz=51,SNR=6.8				
BRAL	**Brewton**	**78.27 301**	P	**P**	**20 14 01.1 +0.5**
	baz=51,SNR=6.8				
SKT	**Skwentna**	**78.29 353**	P	**P**	**20 14 00.0 -0.1**
	baz=12,SNR=20				
M22K	**Willow**	**78.37 352**	IAmb	IAmb	20 14 02.7
	comp=Z,164nm,1.0s				
M22K	**Willow**	**78.37 352**	P	**P**	**20 14 01.3 +0.8**
	baz=13,SNR=8.5				
L19K	**White Mountain**	**78.37 354**	P	**P**	**20 14 01.7 +1.1**
L19K	**White Mountain**	**78.37 354**	P	**P**	**20 14 02.2 +1.6**
	baz=9.2,SNR=14				
TABL	**Table Mountain**	**78.40 347**	P	**P**	**20 14 01.9 +0.9**
PMR	**Palmer**	**78.42 352**	P	**P**	**20 14 02.0 +1.2**
	baz=14,SNR=6.4				
BGNE	**Belgrade**	**78.42 314**	P	**P**	**20 14 02.2 +1.0**
	baz=47,SNR=56				
BGNE	**Belgrade**	**78.42 314**	P	**P**	**20 14 02.4 +1.1**
	baz=47,SNR=56				
PLBC	**Pleasant Camp**	**78.43 345**	P	**P**	**20 14 03.1 +2.1**
	baz=23,SNR=21				
BMRM	**Bremner River**	**78.44 349**	IAmb	IAmb	20 14 06.8
	comp=Z,170nm,1.3s				
BMRM	**Bremner River**	**78.44 349**	P	**P**	**20 14 02.2 +1.2**
	baz=17,SNR=30				
ISLE	**Juniper Island**	**78.44 348**	IAmb	IAmb	20 14 04.5
	comp=Z,273nm,1.5s				
N33B	**J Bar K, Exete**	**78.48 314**	P	**P**	**20 14 01.9 +0.3**
	baz=48,SNR=5.2				
KNK	**Knik Glacier**	**78.51 351**	P	**P**	**20 14 02.1 +0.7**
KNK	**Knik Glacier**	**78.51 351**	P	**P**	**20 14 02.4 +1.0**
	baz=14,SNR=18				
M20K	**Styx River**	**78.53 354**	P	**P**	**20 14 01.9 +0.3**
	baz=10				
FCAR	**Ozark Folk Cen**	**78.53 307**	P	**P**	**20 14 02.5 +0.6**
FCAR			IAmb	IAmb	20 14 03.8
	comp=Z,316nm,0.9s				
MDJ	**Mudanjiang**	**78.53 41**	IAmb	IAmb	20 14 05.3
	comp=Z,171nm,1.2s				
MDJ	**Mudanjiang**	**78.53 41**	P	**P**	**20 14 01.0 -0.8**
MDJ			S	**S**	**20 23 19.3 -0.4**
MDJ			ScS	**ScS**	**20 23 38.0 -1.7**
MDJ			sS	sS	20 26 19.3 +1.2
MDJ			pmax	pmax	
	comp=Z,140nm,1.2s				
MDJ			pmax	pmax	
	comp=Z,350nm,5.1s				
P29M	**Windy Craggy**	**78.54 346**	P	**P**	**20 14 03.4 +1.8**
	baz=22,SNR=38				
PCA	**Pinnacle**	**78.57 347**	IAmb	IAmb	20 14 04.9
	comp=Z,224nm,1.0s				
PINM	**Pinnacle**	**78.57 347**	P	**P**	**20 14 03.3 +1.6**
	baz=20,SNR=28				
M19K	**Big River Lodg**	**78.61 354**	P	**P**	**20 14 03.8 +1.9**
	baz=9.5				
S34M	**Telegraph Cree**	**78.66 342**	P	**P**	**20 14 04.6 +2.4**
	baz=27,SNR=37				
146A	**Union**	**78.67 303**	IAmb	IAmb	20 14 04.3
	comp=Z,408nm,1.1s				
146A	**Union**	**78.67 303**	P	**P**	**20 14 03.1 +0.4**
	baz=50,SNR=13				
WAX	**Waxell Ridge**	**78.67 348**	P	**P**	**20 14 03.5 +1.2**
WAX			IAmb	IAmb	20 14 07.7
	comp=Z,175nm,1.3s				
SUA	**Susitna One**	**78.72 352**	IAmb	IAmb	20 14 05.1
	comp=Z,217nm,1.4s				
SUA	**Susitna One**	**78.72 352**	P	**P**	**20 14 03.8 +1.2**
	baz=12,SNR=14				
MESA	**MESA**	**78.78 348**	IAmb	IAmb	20 14 06.2
	comp=Z,128nm,1.2s				
MESA	**MESA**	**78.78 348**	P	**P**	**20 14 04.7 +1.6**
	baz=19,SNR=12				
PNL	**Peninsula**	**78.82 346**	P	**P**	**20 14 04.6 +1.5**
	baz=21,SNR=18				
PNL	**Peninsula**	**78.82 346**	P	**P**	**20 14 05.2 +2.1**
	comp=Z,180nm,1.1s				
WHN	**Wuhan**	**78.83 60**	⇑P	**P**	**20 14 03.8 +0.2**
WHN			pmax	pmax	
	comp=Z,270nm,1.2s				
LAO	**LASA Array**	**78.85 322**	P	**P**	**20 14 04.5 +1.0**
	baz=43,SNR=15				
LAO	**LASA Array**	**78.85 322**	P	**P**	**20 14 05.3 +1.8**
	baz=43,SNR=15				
GLI	**Glacier Island**	**78.86 350**	P	**P**	**20 14 04.2 +0.9**
	baz=15,SNR=9.1				
SNH	**Sunshine Point**	**78.92 348**	P	**P**	**20 14 04.8 +1.1**
SNH			IAmb	IAmb	20 14 07.1
	comp=Z,128nm,1.0s				
RC01	**Rabbit Creek A**	**78.97 352**	P	**P**	**20 14 04.8 +1.0**
	baz=13,SNR=14				
EYAK	**Cordova Ski Ar**	**79.00 350**	P	**P**	**20 14 05.4 +1.5**
	baz=16,SNR=8.0				
EYAK	**Cordova Ski Ar**	**79.00 350**	P	**P**	**20 14 06.2 +2.3**
	comp=Z,58nm,1.7s				
WHAR	**Wooly Hollow**	**79.02 307**	P	**P**	**20 14 05.1 +0.5**
PWL	**Port Wells**	**79.04 351**	P	**P**	**20 14 05.1 +0.9**
	baz=14,SNR=15				
JIS	**Juneau Island**	**79.09 343**	P	**P**	**20 14 06.8 +2.4**
	comp=Z,65nm,1.4s				
KSU1	**Kansas State U**	**79.10 312**	P	**P**	**20 14 05.7 +0.8**
	baz=48,SNR=85				
KSU1	**Kansas State U**	**79.10 312**	P	**P**	**20 14 05.7 +0.8**
	baz=48,SNR=85				
N20K	**Mount Spurr**	**79.12 353**	P	**P**	**20 14 04.9 +0.2**
	baz=11,SNR=11				
SPCR	**Spurr Chakacha**	**79.12 353**	P	**P**	**20 14 04.9 +0.2**
	baz=11,SNR=7.8				
R32K	**Eaglecrest**	**79.12 343**	P	**P**	**20 14 06.8 +2.2**
	baz=25,SNR=15				
SUCK	**Suckling Hills**	**79.17 349**	IAmb	IAmb	20 14 07.5
	comp=Z,442nm,2.0s				
BDFB	**Brasilia**	**79.24 240**	P	**P**	**20 14 06.4 +0.4**
	comp=Z,29nm,0.7s,baz=57,slow=5.4,SNR=31				
	comp=Z,29nm,0.7s				
BDFB	**Brasilia**	**79.24 240**	P	**P**	**20 14 06.6 +0.6**
BDFB	**Brasilia**	**79.24 240**	P	**P**	**20 14 06.6 +0.6**
BDFB			pmax	pmax	
	comp=Z,26nm,0.8s				
URIC	**Uribia, Colomb**	**79.24 276**	*e*P	**P**	**20 14 07.2 +1.1**
R31K	**City Hall, Gus**	**79.26 344**	P	**P**	**20 14 07.5 +2.1**
	baz=24				
T35M	**Bob Quinn**	**79.27 341**	P	**P**	**20 14 07.7 +2.2**
	baz=28,SNR=16				
CNSH	**ChangSha**	**79.35 62**	⇑P	**P**	**20 14 06.8 +0.4**
CNSH			S	**S**	**20 23 28.3 -0.4**
CNSH			pmax	pmax	
	comp=Z,400nm,1.2s				
GULI	**GuiLin**	**79.35 66**	⇑P	**P**	**20 14 03.5 -3.0**
GULI			PP	**PP**	**20 17 10.0 -4.0**
GULI			S	**S**	**20 23 20.8 -8.1**
GULI			pmax	pmax	
	comp=Z,150nm,1.2s				
HHAR	**Hobbs**	**79.39 308**	IAmb	IAmb	20 14 08.2
	comp=Z,387nm,1.1s				
HHAR	**Hobbs**	**79.39 308**	P	**P**	**20 14 06.9 +0.4**
	baz=49				
UALR	**University of**	**79.39 306**	P	**P**	**20 14 06.8 +0.3**
UALR			IAmb	IAmb	20 14 08.3
	comp=Z,198nm,0.8s				
NAYO	**Nakonayok**	**79.39 80**	P	**P**	**20 14 06.6 -0.2**
	comp=Z,4μm,1.1s				
KAIM	**Kayak Island**	**79.41 349**	P	**P**	**20 14 07.6 +1.4**
	baz=17				
MTDJ	**Mount Denham**	**79.47 285**	IAmb	IAmb	20 14 10.6
	comp=Z,407nm,1.5s				
MTDJ	**Mount Denham**	**79.47 285**	*e*P	**P**	**20 14 07.8 +0.5**
EGMT	**Eagleton**	**79.48 325**	IAmb	IAmb	20 14 09.9
	comp=Z,349nm,1.2s				
EGMT	**Eagleton**	**79.48 325**	P	**P**	**20 14 08.1 +1.2**
	baz=41,SNR=34				
U38A	**Gravette**	**79.56 309**	P	**P**	**20 14 07.7 +0.2**
U38A			IAmb	IAmb	20 14 09.2
	comp=Z,380nm,1.1s				
U38A	**Gravette**	**79.56 309**	P	**P**	**20 14 07.9 +0.5**
	baz=48,SNR=104				
O22K	**Cooper Landing**	**79.57 352**	P	**P**	**20 14 07.7 +0.8**
	baz=13				
CCAR	**Cane Creek**	**79.59 305**	P	**P**	**20 14 08.1 +0.5**
	baz=49,SNR=22				
RSSD	**Black Hills**	**79.64 320**	P	**P**	**20 14 09.1 +1.1**
	baz=44,SNR=8.5				
RSSD	**Black Hills**	**79.64 320**	P	**P**	**20 14 09.1 +1.1**
	baz=44				
N19K	**Bonanza Creek**	**79.70 354**	P	**P**	**20 14 08.7 +0.9**
	baz=9.4				
TYV	**Tymovskoe**	**79.72 30**	*e*P	**P**	**20 14 08.7 +0.8**
TYV			*e*S	**S**	**20 23 27.1 -4.6**
TYV			pmax	pmax	
	comp=Z,200nm,2.6s				
TYV			pmax	pmax	
	comp=Z,48nm,0.9s				
TYV			smax	smax	
	comp=N,1μm,4.9s				
TYV			smax	smax	
	comp=E,1μm,4.9s				
346A	**Big Creek Wild**	**79.73 302**	P	**P**	**20 14 09.8 +1.4**
	baz=50,SNR=14				
P23K	**Montague Islan**	**79.76 350**	P	**P**	**20 14 09.2 +1.2**
	baz=15				
S31K	**Pelican**	**79.78 344**	P	**P**	**20 14 10.1 +2.0**
	baz=23,SNR=11				
S32K	**Killisnoo**	**79.87 343**	P	**P**	**20 14 10.5 +1.9**
	baz=25,SNR=12				
VBMS	**Vicksburg**	**79.88 303**	P	**P**	**20 14 10.0 +0.8**
	baz=50,SNR=23				
VBMS	**Vicksburg**	**79.88 303**	P	**P**	**20 14 10.0 +0.8**
	baz=50,SNR=23				
SEW	**Seward**	**79.90 351**	P	**P**	**20 14 09.3 +0.6**
	baz=13				
SDV	**Santo Domingo**	**79.92 273**	P	**P**	**20 14 10.7 +0.8**
SDV			IAmb	IAmb	20 14 11.9
	comp=Z,187nm,0.7s				
N18K	**Kilae Creek**	**79.94 355**	P	**P**	**20 14 10.8 +1.9**
	baz=8.3,SNR=12				
USA0B	**Ussuriysk Arra**	**80.04 40**	IAmb	IAmb	20 14 11.4
	comp=Z,263nm,1.1s				
USRK	**Ussuriysk Ar.**	**80.04 40**	P	**P**	**20 14 09.7 -0.1**
	comp=Z,179nm,0.9s,baz=292,slow=2.0,SNR=97				
USRK			PP	**PP**	**20 17 19.6 +0.7**
	comp=Z,14nm,1.0s,baz=312,slow=8.9,SNR=5.6				
USRK			S	**S**	**20 23 33.0 -2.3**
	comp=Z,0.6nm,0.3s,baz=302,slow=9.6,SNR=4.1				
	comp=Z,179nm,0.9s				
143A	**Socs Landing,**	**80.14 304**	P	**P**	**20 14 11.5 +1.0**
	baz=49,SNR=5.4				
Q23K	**Middleton Isla**	**80.17 350**	P	**P**	**20 14 10.3 +0.2**
	baz=16				
O20K	**Slope Mountain**	**80.26 353**	P	**P**	**20 14 11.2 +0.5**
	baz=11				
WRAK	**Wrangell Islan**	**80.30 342**	P	**P**	**20 14 12.9 +2.1**
	baz=26,SNR=11				
MIAR	**Mount Ida**	**80.31 307**	P	**P**	**20 14 12.2 +0.9**
MIAR	**Mount Ida**	**80.31 307**	P	**P**	**20 14 12.3 +0.9**
MIAR			pmax	pmax	
	comp=Z,530nm,1.1s				
MIAR	**Mount Ida**	**80.31 307**	P	**P**	**20 14 12.5 +1.2**
	baz=49,SNR=152				
MIAR	**Mount Ida**	**80.31 307**	P	**P**	**20 14 12.5 +1.2**
	baz=49,SNR=152				
N16K	**Nishlik Lake**	**80.32 356**	P	**P**	**20 14 13.4 +2.4**
	baz=6.0,SNR=5.2				
CRJC	**Cerrejon, Guaj**	**80.35 276**	*e*P	**P**	**20 14 13.0 +1.0**
BRSE	**Bradley Lake S**	**80.40 352**	P	**P**	**20 14 12.1 +0.7**
	baz=12				
SIT	**Sitka**	**80.42 343**	P	**P**	**20 14 13.6 +2.1**
	baz=24				
T35B	**Sooner Cattle**	**80.51 310**	P	**P**	**20 14 13.6 +1.2**
	baz=48,SNR=258				
344A	**Westbrook Farm**	**80.51 303**	P	**P**	**20 14 14.3 +1.8**
	baz=50,SNR=21				
HOM	**Homer**	**80.58 352**	P	**P**	**20 14 13.6 +1.4**
	baz=12				
WLAR	**White Oak Lake**	**80.58 306**	P	**P**	**20 14 13.6 +0.8**
WLAR			IAmb	IAmb	20 14 15.1
	comp=Z,320nm,1.1s				
O18K	**Koktuh Hills**	**80.71 354**	P	**P**	**20 14 14.1 +1.1**
	baz=8.8,SNR=8.4				
P19K	**Oil Pt**	**80.74 353**	P	**P**	**20 14 14.4 +1.3**
	baz=10				
TUL1	**Leonard**	**80.75 309**	IAmb	IAmb	20 14 15.6
	comp=Z,382nm,1.1s				
TUL1	**Leonard**	**80.75 309**	P	**P**	**20 14 14.4 +0.7**
	baz=48,SNR=49				
TUL1	**Leonard**	**80.75 309**	P	**P**	**20 14 14.5 +0.8**
	baz=48,SNR=49				
R32A	**Long Quarter,**	**80.77 313**	P	**P**	**20 14 14.5 +0.8**
	baz=46,SNR=55				
MSHR	**Mys Shultsa**	**80.78 42**	*c i*P	**P**	**20 14 13.6 -0.1**
MSHR			pmax	pmax	
	comp=Z,118nm,1.3s				
NJ2	**Nanjing**	**80.82 56**	⇑*i*P	**P**	**20 14 14.5 +0.4**
NJ2			PP	**PP**	**20 17 27.5 +1.8**
NJ2			S	**S**	**20 23 42.0 -1.7**
NJ2			SKS	**SKSac**	**20 23 45.3 -3.0**
NJ2			pmax	pmax	
	comp=Z,350nm,1.0s				
NJ2			pmax	pmax	
	comp=Z,910nm,3.5s				
OGNE	**Ogallala**	**80.85 316**	IAmb	IAmb	20 14 17.1
	comp=Z,399nm,1.2s				
OGNE	**Ogallala**	**80.85 316**	P	**P**	**20 14 15.6 +1.3**
	baz=45,SNR=15				
OGNE	**Ogallala**	**80.85 316**	P	**P**	**20 14 15.7 +1.4**
	baz=45,SNR=15				
OGNE			S	**S**	**20 23 46.6 +2.6**
	baz=45				
O17K	**Koliganek Bris**	**80.92 355**	P	**P**	**20 14 16.2 +2.2**
	baz=7.3,SNR=5.3				
CBKS	**Cedar Bluff**	**81.08 313**	P	**P**	**20 14 16.4 +1.0**
	baz=46,SNR=36				
CBKS	**Cedar Bluff**	**81.08 313**	P	**P**	**20 14 16.4 +1.0**
	baz=46,SNR=36				
CBKS			S	**S**	**20 23 46.2 0.0**
	baz=46				
OK046	**Pawnee Station**	**81.09 310**	P	**P**	**20 14 16.9 +1.4**
V35K	**Ketchikan**	**81.09 341**	P	**P**	**20 14 16.4 +1.4**
	baz=27,SNR=5.2				
KAN12	**Harper NE Stat**	**81.12 311**	IAmb	IAmb	20 14 18.0
	comp=Z,263nm,0.9s				
KAN08	**Anthony NE Sta**	**81.16 311**	P	**P**	**20 14 16.7 +0.9**
O16K	**Kokwok River B**	**81.16 356**	P	**P**	**20 14 17.1 +1.8**
	baz=6.5				
P18K	**Big Mountain,**	**81.17 354**	P	**P**	**20 14 16.8 +1.4**
	baz=8.8				
KAN14	**Manchester OK**	**81.34 311**	IAmb	IAmb	20 14 19.1
	comp=Z,373nm,1.0s				
CRAG	**Craig**	**81.35 342**	IAmb	IAmb	20 14 37.2
	comp=Z,156nm,1.6s				
CRAG	**Craig**	**81.35 342**	P	**P**	**20 14 17.8 +1.5**
	baz=26				
X37A	**Clayton**	**81.38 308**	IAmb	IAmb	20 14 19.5
	comp=Z,364nm,0.9s				
X37A	**Clayton**	**81.38 308**	P	**P**	**20 14 18.1 +1.2**

baz=48,SNR=111
HRY Holter Researc 81.39 325 P P 20 14 17.7 +0.7
RLMT Red Lodge 81.44 323 P P 20 14 18.5 +1.1
baz=41,SNR=21
RLMT S **S 20 23 50.7 +0.6**
baz=41
Q19K Cape Douglas, 81.49 353 P P 20 14 16.8 -0.3
baz=10,0
OK032 Salt Plains WL 81.58 311 IAmb IAmb 20 14 20.4
comp=Z,259nm,1.1s
SRIT Nakonsritamara 81.59 86 P P 20 14 17.5 -0.9
SRIT IAmb IAmb 20 14 19.1
comp=Z,277nm,1.1s
SRIT Nakonsritamara 81.59 86 P P 20 14 17.7 -0.6
comp=Z,276nm,1.3s
342A Flagon Creek P 81.60 304 IAmb IAmb 20 14 20.8
comp=Z,288nm,1.0s
342B Flagon Creek P 81.60 304 P P 20 14 19.6 +1.4
baz=49,SNR=12
LHMI Lhok Sumawe 81.63 90 P P 20 14 16.8 -1.7
comp=Z,2μcomp=Z,94nm,0.8s
LHMI Lhok Sumawe 81.63 90 P P 20 14 18.5 0.0
comp=Z,95nm,0.8s
Q20K Shuyak Island 81.69 353 P P 20 14 18.8 +0.8
baz=11,SNR=5.6
Q20K S **S 20 23 53.2 +1.6**
baz=11
P16K Nushagak River 81.72 356 P P 20 14 19.4 +1.2
baz=6.6
MLSI Meulaboh, Aceh 81.81 91 P P 20 14 17.8 -1.6
comp=Z,4μcomp=Z,464nm,0.9s
OK025 Westminster Rd 81.90 310 IAmb IAmb 20 14 22.1
comp=Z,489nm,1.1s
INCN Inchon 81.91 48 P P 20 14 19.8 +0.1
INCN IAmb IAmb 20 14 21.7
comp=Z,219nm,1.1s
INCN Inchon 81.91 48 P P 20 14 19.8 +0.1
INCN pmax pmax
comp=Z,219nm,1.1s
INCN Inchon 81.91 48 P P 20 14 20.5 +0.8
comp=Z,249nm,1.4s
OK035 E0210 Rd and N 81.94 311 IAmb IAmb 20 14 22.6
comp=Z,488nm,1.1s
K22A Casper 81.95 320 IAmb IAmb 20 14 22.8
comp=Z,481nm,1.2s
K22A Casper 81.95 320 P P 20 14 20.7 +0.7
baz=43,SNR=31
K22A Casper 81.95 320 P P 20 14 20.9 +0.9
baz=43,SNR=31
K22A S **S 20 23 53.4 -1.8**
baz=43
UBPT Khong Chiam 81.95 77 P P 20 14 19.6 -0.6
UBPT IAmb IAmb 20 14 21.0
comp=Z,246nm,1.1s
UBPT Khong Chiam 81.95 77 P P 20 14 18.8 -1.4
comp=Z,3μcomp=Z,225nm,1.5s
UBPT Khong Chiam 81.95 77 P P 20 14 19.6 -0.6
comp=Z,236nm,1.5s
Z38A Mt. Pleasant 82.03 307 IAmb IAmb 20 14 23.2
comp=Z,201nm,0.8s
Z38A Mt. Pleasant 82.03 307 P P 20 14 21.9 +1.5
baz=48,SNR=20
ARGC Ariguani, Magd 82.11 276 *e*P **P 20 14 22.9 +1.8**
YMP Mirror Lake Pl 82.14 323 IAmb IAmb 20 14 25.4
comp=Z,384nm,1.5s
BOZ Bozeman (W) 82.16 325 IAmb IAmb 20 14 24.1
comp=Z,299nm,1.7s
BOZ Bozeman (W) 82.16 325 P P 20 14 22.6 +1.7
baz=40,SNR=66
BOZ S **S 20 23 57.2 0.0**
baz=40
FNO Franklin 82.16 309 IAmb IAmb 20 14 23.5
comp=Z,363nm,1.3s
MSO Missoula 82.22 327 P P 20 14 21.6 +0.5
MSO IAmb IAmb 20 14 23.5
comp=Z,191nm,1.8s
MSO Missoula 82.22 327 P P 20 14 21.9 +0.7
baz=38,SNR=27
MSO S **S 20 23 58.2 +0.6**
baz=38
BRIGG Briggsdale 82.33 317 IAmb IAmb 20 14 25.2
comp=Z,497nm,1.2s
YUF Upper Falls 82.33 323 IAmb IAmb 20 14 25.7
comp=Z,205nm,1.7s
Q17K Contact Creek 82.34 354 P P 20 14 22.3 +0.7
baz=8.2
U32A Winter Ranch, 82.34 311 P P 20 14 23.5 +1.6
baz=46,SNR=25
TAMC Tame, Arauca 82.34 272 *e*P **P 20 14 23.6 +1.4**
NEW Newport 82.39 329 P P 20 14 22.9 +1.0
NEW Newport 82.39 329 P P 20 14 22.9 +1.0
NEW pmax pmax
comp=Z,60nm,0.9s
NEW Newport 82.39 329 P P 20 14 23.2 +1.3
baz=36,SNR=56
NEW S **S 20 24 02.3 +3.2**
baz=36
LKWY Lake 82.39 323 IAmb IAmb 20 14 27.5
comp=Z,402nm,1.8s
YHH Holmes Hill 82.43 324 IAmb IAmb 20 14 25.8
comp=Z,175nm,1.7s
PAMC Pamplona, Colo 82.48 273 *e*P **P 20 14 22.7 -0.8**
KDAK Kodiak Island 82.52 353 P P 20 14 23.6 +1.3
KDAK IAmb IAmb 20 14 25.9
comp=Z,267nm,1.6s
KDAK Kodiak Island 82.52 353 P P 20 14 23.6 +1.3
KDAK pmax pmax
comp=Z,267nm,1.7s
KDAK Kodiak Island 82.52 353 P P 20 14 24.0 +1.7
baz=11
YHL Hebgen Lake 82.53 324 IAmb IAmb 20 14 26.6
comp=Z,204nm,1.4s
KSCO Kaye Shedlock' 82.54 315 P P 20 14 24.8 +1.8
baz=44,SNR=63
KSCO Kaye Shedlock' 82.54 315 P P 20 14 24.9 +1.9
baz=44,SNR=63
441A DeRidder 82.56 304 IAmb IAmb 20 14 26.1
comp=Z,358nm,1.1s
441A DeRidder 82.56 304 P P 20 14 24.9 +1.9
baz=48
YMR Madison River 82.57 324 IAmb IAmb 20 14 28.3
comp=Z,254nm,1.4s
H17A Grant Village 82.60 323 IAmb IAmb 20 14 28.8
comp=Z,241nm,1.4s
H17A Grant Village 82.60 323 P P 20 14 26.0 +2.7
baz=40,SNR=46
KS19 Wonju Array Si 82.60 47 P P 20 14 24.2 +1.0
KS19 IAmb IAmb 20 14 25.6
comp=Z,422nm,1.6s
YHB Horse Butte 82.61 324 IAmb IAmb 20 14 27.8
comp=Z,200nm,1.3s
KSAR Wonju Array Be 82.66 47 P P 20 14 23.8 +0.4
KSAR Wonju Array Be 82.66 47 P P 20 14 23.8 +0.4
QLMT Earthquake Lak 82.66 324 P P 20 14 25.6 +2.0
KSRS Korea Array 82.67 47 P P 20 14 24.0 +0.5
comp=Z,80nm,0.9s,baz=319,slow=4.6,SNR=95
KSRS PP **PP 20 17 40.5 0.0**
comp=Z,22nm,1.0s,baz=311,slow=7.0,SNR=7.7
KSRS S **S 20 23 58.1 -4.0**
comp=Z,2.0nm,0.9s,baz=320,slow=11,SNR=2.6
comp=Z,80nm,0.9s
YFT Old Faithful 82.68 323 IAmb IAmb 20 14 29.8
comp=Z,652nm,1.9s
DLMT Dillon 82.78 325 IAmb IAmb 20 14 27.1
comp=Z,215nm,1.6s
SJCC San Jacinto, C 82.81 277 *e*P **P 20 14 26.8 +2.2**
PEA0B Petropavlovsk- 82.82 21 IAmb IAmb 20 14 25.3
comp=Z,296nm,1.4s
PEA0B Petropavlovsk- 82.82 21 *c i*P **P 20 14 23.6 -0.4**
PETK Petropavlovsk- 82.82 21 P P 20 14 23.7 -0.3
comp=Z,41nm,1.0s,baz=20,slow=2.2,SNR=19
comp=Z,41nm,1.0s
NATX Nacogdoches 82.83 305 IAmb IAmb 20 14 27.0
comp=Z,154nm,0.9s
NATX Nacogdoches 82.83 305 P P 20 14 25.6 +1.2
baz=48,SNR=8.5
NATX Nacogdoches 82.83 305 P P 20 14 25.2 +0.8
baz=48,SNR=8.5
YSS Yuzh-Sakhalins 82.86 32 P P 20 14 24.4 +0.1
YSS Yuzh-Sakhalins 82.86 32 *α i*P **P 20 14 24.8 +0.5**
YSS *e**SP **pP 20 16 09.0 +2.7**
YSS *e*S **S 20 24 02.8 -0.9**
YSS pmax pmax
comp=Z,640nm,1.0s
YSS pmax pmax
comp=Z,500nm,4.5s
YSS smax smax
comp=N,2μm,6.1s
YSS smax smax
comp=E,2μm,6.8s
YSS Yuzh-Sakhalins 82.86 32 P **P 20 14 24.8 +0.5**
comp=E,778nm,1.1s
X34A Smith Ranch, M 82.87 309 IAmb IAmb 20 14 27.6
comp=Z,427nm,1.2s
QIZ Qiongzhong 82.88 71 IAmb IAmb 20 14 26.4
comp=Z,229nm,1.2s
QIZ Qiongzhong 82.88 71 P P 20 14 25.0 +0.2
QIZ sP **sP 20 16 54.8 +0.1**
QIZ PP **PP 20 17 41.0 -1.9**
QIZ S **S 20 24 02.3 -2.5**
QIZ sS **sS 20 27 02.3 -4.5**
QIZ pmax pmax
comp=Z,680nm,1.4s
FLWY Flagg Ranch 82.90 323 IAmb IAmb 20 14 28.9
comp=Z,384nm,1.6s
RWWY Rawlins 83.01 320 IAmb IAmb 20 14 28.2
comp=Z,302nm,1.1s
TJN Tanjon 83.10 48 P P 20 14 26.3 +0.6
comp=Z,444nm,1.2s
OHAK Old Harbor 83.14 353 P P 20 14 26.4 +0.9
OHAK Old Harbor 83.14 353 P P 20 14 26.9 +1.5
baz=10,SNR=11
R16K Pilot Point 83.15 355 P P 20 14 25.8 +0.3
baz=6.9
IMW Indian Meadow 83.15 323 IAmb IAmb 20 14 30.8
comp=Z,167nm,1.4s
PET Petropavlovsk 83.16 20 P P 20 14 25.3 -0.3
PET IAmb IAmb 20 14 26.8
comp=Z,128nm,1.1s
PET Petropavlovsk 83.16 20 *e*P **P 20 14 24.1 -1.5**
PET *e*S **S 20 24 02.4 -4.0**
PET *e*SSS SSS 20 33 10.1
PET pmax pmax
comp=Z,152nm,1.1s
PET MLR MLR
comp=Z,1μm,17.0s
PET MLR MLR
comp=Z,900nm,18.0s
PET Petropavlovsk 83.16 20 P **P 20 14 26.5 +0.9**
comp=Z,483nm,1.2s
MOOW Moose Ponds 83.17 323 P P 20 14 27.4 +1.2
MOOW IAmb IAmb 20 14 29.6
comp=Z,216nm,1.6s
LOHW Long Hollow 83.21 323 IAmb IAmb 20 14 29.6
comp=Z,212nm,1.7s
C09A Chrisman Ranch 83.22 330 IAmb IAmb 20 14 28.6
comp=Z,387nm,1.6s
SKLT Songkhla 83.27 86 P P 20 14 25.8 -1.0
comp=Z,4μcomp=Z,344nm,1.3s
SKLT Songkhla 83.27 86 P P 20 14 26.4 -0.4
comp=Z,361nm,1.3s
BARC Barichara 83.32 273 *e*P **P 20 14 25.4 -2.0**
KCSI Kotacane, Aceh 83.33 91 P P 20 14 25.3 -1.9
comp=Z,2μcomp=Z,196nm,1.4s
WMOK Wichita Mounta 83.34 310 IAmb IAmb 20 14 29.7
comp=Z,288nm,1.1s
WMOK Wichita Mounta 83.34 310 P P 20 14 28.4 +1.4
baz=46,SNR=121
WMOK Wichita Mounta 83.34 310 P P 20 14 28.1 +1.2
baz=46,SNR=121
BW06 Boulder Array 83.36 322 P P 20 14 27.9 +0.7
baz=41,SNR=40
BW06 S **S 20 24 10.5 +1.2**
baz=41
PDAR Pinedale Array 83.36 322 P P 20 14 27.7 +0.5
comp=Z,19nm,0.5s,baz=74,slow=7.0,SNR=64
PDAR PP **PP 20 17 46.1 0.0**
comp=Z,11nm,1.1s,baz=66,slow=7.0,SNR=4.4
PDAR S **SKSac 20 24 01.4 -3.8**
comp=Z,1.2nm,0.9s,baz=46,slow=5.5,SNR=2.6
PDAR PKKPbc **PKKPbc 20 32 42.3 0.0**
comp=Z,3.7nm,1.1s,baz=209,slow=2.7,SNR=6.6
comp=Z,19nm,0.5s
PDAR Pinedale Array 83.36 322 P P 20 14 27.2 0.0
Z35A Perchaven, San 83.39 308 P P 20 14 28.2 +1.1
baz=47,SNR=34
FXWY Fox Creek 83.39 323 P P 20 14 28.3 +1.0
FXWY IAmb IAmb 20 14 30.8
comp=Z,194nm,1.7s
FXWY pP **pP 20 16 09.7 +1.0**
237A Washetta, Mont 83.39 306 P P 20 14 28.8 +1.6
baz=47,SNR=24
TPAW Teton Pass 83.47 323 IAmb IAmb 20 14 31.1
comp=Z,266nm,1.8s
REDW Red Top Meadow 83.52 323 P P 20 14 28.8 +0.9
REDW IAmb IAmb 20 14 31.9
comp=Z,244nm,1.5s
ISCO Idaho Springs 83.58 317 S **S 20 24 14.9 +3.2**
baz=43
RUSC La Rusia 83.68 272 *e*P **P 20 14 29.0 -0.5**
SPIA Saint Paul Isl 83.78 2 P P 20 14 28.8 +0.2
baz=357
HKPS Hong Kong Po S 83.93 66 P P 20 14 30.6 +0.5
comp=Z,379nm,1.1s
Q24A Divide 83.94 317 P P 20 14 30.9 +0.7
Q24A IAmb IAmb 20 14 33.8
comp=Z,320nm,1.4s
Q24A pP **pP 20 16 11.4 -0.4**
Q24A Divide 83.94 317 P P 20 14 31.3 +1.1
baz=43,SNR=86
Q24A S **S 20 24 18.0 +2.6**
baz=43
TSI Tuntungan 83.96 90 P P 20 14 28.9 -1.4
comp=Z,6μcomp=Z,443nm,1.1s
D08A Wollman Farm, 84.08 330 P P 20 14 30.4 0.0
E09A Wood Farm, Sta 84.21 329 P P 20 14 30.6 -0.4
E09A IAmb IAmb 20 14 33.1
comp=Z,120nm,1.4s
PTBC PUERTO BERRIO, 84.34 274 *e*P **P 20 14 32.3 +0.1**
WHTX Lake Whitney, 84.42 307 P P 20 14 33.4 +1.0
baz=46,SNR=68
WHTX Lake Whitney, 84.42 307 P P 20 14 33.5 +1.2
baz=46,SNR=68
PGC Sidney 84.44 333 IAmb IAmb 20 14 34.7
comp=Z,100nm,0.8s
KULM Kulim 84.46 88 P P 20 14 31.9 -0.9
comp=Z,5μcomp=Z,449nm,1.2s
CHGN Chignik 84.46 355 P P 20 14 32.5 +0.5
baz=6.2
GSI Gunungsitoli 84.57 93 P P 20 14 33.4 +0.1
GSI Gunungsitoli 84.57 93 P P 20 14 32.7 -0.6
comp=Z,5μcomp=Z,466nm,1.2s
GSI Gunungsitoli 84.57 93 P P 20 14 33.6 +0.3
comp=Z,468nm,1.2s
SPBC San Pablo de B 84.60 273 *e*P **P 20 14 33.6 0.0**
PSI Prapat 84.68 91 P P 20 14 33.8 -0.3
comp=Z,130nm,0.8s,baz=284,slow=5.2,SNR=109
PSI S **SKSac 20 24 09.9 -4.1**
comp=Z,8.7nm,0.7s,baz=130,slow=20,SNR=15
comp=Z,130nm,0.8s
PSI Prapat 84.68 91 P P 20 14 33.1 -0.9
PSI pmax pmax
comp=Z,204nm,0.9s
PSI Prapat 84.68 91 P P 20 14 33.1 -0.9
comp=Z,2μcomp=Z,193nm,1.3s,comp=Z,4μm,1.3s,
comp=Z,319nm,1.3s
PSI P **P 20 14 33.1 -0.9**
comp=Z,2μcomp=Z,193nm,1.3s,comp=Z,4μm,1.3s,
comp=Z,319nm,1.3s
PSI Prapat 84.68 91 P P 20 14 33.4 -0.6
comp=Z,319nm,1.3s
O20A White River Ci 84.69 319 IAmb IAmb 20 14 36.1
comp=Z,179nm,1.4s
O20A White River Ci 84.69 319 P P 20 14 34.4 +0.7
baz=41,SNR=17
O20A S **S 20 24 23.6 +1.3**
baz=41
RPSI Rantau Prapat 84.75 91 P P 20 14 33.1 -1.1
RPSI IAmb IAmb 20 14 35.0
comp=Z,204nm,0.9s
SMCO Snowmass 84.75 318 IAmb IAmb 20 14 36.9
comp=Z,130nm,1.5s
HKT Hockley 84.80 305 P P 20 14 34.8 +0.7
HKT IAmb IAmb 20 14 37.1
comp=Z,258nm,1.1s
HKT Hockley 84.80 305 P P 20 14 34.8 +0.7
HKT pmax pmax
comp=Z,258nm,1.1s
HKT Hockley 84.80 305 P P 20 14 35.7 +1.6
baz=47
T25A Trinidad 84.87 315 IAmb IAmb 20 14 38.5
comp=Z,205nm,1.4s
T25A Trinidad 84.87 315 P P 20 14 36.1 +1.3
baz=43,SNR=53
T25A S **S 20 24 27.0 +2.8**
baz=43
OZB Mount Ozzard 84.88 334 IAmb IAmb 20 14 37.6
comp=Z,109nm,0.9s
AMTX Amarillo 84.94 312 IAmb IAmb 20 14 37.4
comp=Z,178nm,1.2s
AMTX Amarillo 84.94 312 P P 20 14 35.9 +0.9
baz=45,SNR=16
AMTX Amarillo 84.94 312 P P 20 14 35.9 +0.9
baz=45
CHIC Chingaza 84.97 272 *e*P **P 20 14 35.4 -0.4**
HLID Hailey 84.99 325 P P 20 14 36.3 +1.2
baz=38
HLID S **S 20 24 28.2 +3.0**
baz=38
SDCO Great Sand Dun 85.02 316 P P 20 14 35.5 0.0
SDCO pP **pP 20 16 16.6 -0.7**
SDCO Great Sand Dun 85.02 316 P P 20 14 36.5 +0.9
baz=43,SNR=50
SDCO Great Sand Dun 85.02 316 P P 20 14 36.5 +0.9
baz=43,SNR=50
SDCO S **S 20 24 26.9 +1.1**
baz=43
RDMU Red Mountain 85.02 320 P P 20 14 35.7 +0.2
RDMU IAmb IAmb 20 14 38.4
comp=Z,113nm,1.0s
RDMU pP **pP 20 16 17.2 0.0**
D05A Enumclaw 85.14 331 IAmb IAmb 20 14 39.2
comp=Z,200nm,1.9s
TRSI Tarutung 85.19 91 P P 20 14 35.5 -1.0
comp=Z,3μcomp=Z,154nm,1.1s
IPM Ipoh 85.26 88 IAmb IAmb 20 14 37.4
comp=Z,194nm,1.2s
IPM Ipoh 85.26 88 P P 20 14 35.2 -1.5
comp=Z,2μcomp=Z,147nm,1.6s
IPM Ipoh 85.26 88 P P 20 14 35.8 -0.9
comp=Z,146nm,1.6s
NORC Norcasia 85.27 273 *e*P **P 20 14 37.4 +0.5**
ROSC El Rosal 85.30 272 P P 20 14 37.6 +0.3
comp=Z,31nm,0.3s,baz=76,slow=2.8,SNR=27
ROSC S **SKSac 20 24 14.6 -3.9**
comp=Z,10nm,0.3s,baz=214,slow=22,SNR=17
comp=Z,31nm,0.3s
ROSC El Rosal 85.30 272 P P 20 14 37.3 -0.1
ROSC IAmb IAmb 20 14 39.3
comp=Z,301nm,1.6s
ROSC El Rosal 85.30 272 *e*P **P 20 14 38.1 +0.7**
ROSC El Rosal 85.30 272 P P 20 14 37.3 -0.1
ROSC pmax pmax
comp=Z,301nm,1.6s
QZH Quanzhou 85.30 62 ⇑ *i*P **P 20 14 36.5 -0.2**
QZH SKS **SKSac 20 24 16.0 -1.4**
QZH S **S 20 24 27.0 -1.3**
QZH pmax pmax
comp=Z,110nm,0.9s
ABTX Abilene, Hawle 85.32 309 P P 20 14 38.3 +1.5
baz=46,SNR=84
ABTX Abilene, Hawle 85.32 309 P P 20 14 38.5 +1.7
baz=46,SNR=84
435B Jarrell 85.33 306 P P 20 14 37.1 +0.3
435B Jarrell 85.33 306 P P 20 14 38.2 +1.4
baz=46,SNR=22
435B Jarrell 85.33 306 P P 20 14 38.4 +1.5
baz=46
PRVC Isla de Provid 85.36 283 *e*P **P 20 14 38.7 +1.5**
HELC Santa Helena 85.39 274 *e*P **P 20 14 38.6 +0.8**
JTU Tsushima 85.58 48 IAmb IAmb 20 14 39.8
comp=Z,160nm,1.1s
JTU Tsushima 85.58 48 P P 20 14 40.1 +2.1
comp=Z,137nm,1.1s
HVU Hansel Valley 85.64 323 P P 20 14 38.6 +0.2
HVU Hansel Valley 85.64 323 P P 20 14 38.6 +0.2
HVU pmax pmax
comp=Z,134nm,1.8s
S22A 4UR Ranch, Cre 85.73 317 P P 20 14 40.3 +1.3
baz=42,SNR=54
S22A S **S 20 24 33.6 +0.9**
baz=42
GUY2C Guyana, Caldas 85.86 273 *e*P **P 20 14 41.1 +0.9**
JLU Jordanelle 85.92 321 IAmb IAmb 20 14 42.1
comp=Z,208nm,1.7s
CBOC Ciudad Bolivar 85.97 274 *e*P **P 20 14 41.1 +0.8**
PBSI Pulau Batu 85.97 93 P P 20 14 39.1 -1.0
comp=Z,521nm,1.2s
P18A Preston Nutter 86.08 320 IAmb IAmb 20 14 42.7
comp=Z,171nm,1.6s
TEIG Tepich 86.09 293 P P 20 14 40.8 +0.2
TEIG IAmb IAmb 20 14 42.4
comp=Z,216nm,1.2s
PV07 Paradox Valley 86.17 318 IAmb IAmb 20 14 43.2
comp=Z,102nm,1.0s
MSTX Muleshoe 86.22 312 IAmb IAmb 20 14 43.7
comp=Z,207nm,1.1s
MSTX Muleshoe 86.22 312 P P 20 14 42.3 +1.1
baz=44,SNR=47
MSTX Muleshoe 86.22 312 P P 20 14 42.3 +1.1
baz=44,SNR=47
MSTX S **S 20 24 36.1 -1.1**
baz=44
E03A Lebam 86.27 332 IAmb IAmb 20 14 44.1
comp=Z,103nm,1.3s
DLV T Lat 86.32 78 P P 20 14 42.3 +0.3
comp=Z,316nm,1.1s
KUR Kuril'sk 86.33 30 P P 20 14 41.6 +0.3
KUR S **SKSac 20 24 22.3 -0.7**
KUR MLR MLR
comp=Z,700nm,14.0s
PV23 Carpenter Ridg 86.34 318 IAmb IAmb 20 14 44.2
comp=Z,159nm,1.1s
ANIL Santa Ana 86.35 273 *e*P **P 20 14 43.2 +0.9**
PV11 David Mesa, Pa 86.39 318 P P 20 14 42.5 +0.5
PV11 IAmb IAmb 20 14 44.5
comp=Z,124nm,0.9s
PV11 pP **pP 20 16 24.5 +0.3**
PV10 Paradox Valley 86.41 318 IAmb IAmb 20 14 44.9
comp=Z,223nm,1.2s
BGU Big Grassy Mou 86.43 322 IAmb IAmb 20 14 44.4
comp=Z,180nm,1.9s
PRAC Prado 86.44 272 *e*P **P 20 14 42.7 +0.3**
MNSI Mandailing Nat 86.44 92 P P 20 14 41.4 -1.0
comp=Z,2μcomp=Z,163nm,1.1s
ORTC Ortega, Tolima 86.59 272 *e*P **P 20 14 43.7 +0.5**
SRU San Rafael Swe 86.61 320 IAmb IAmb 20 14 44.8
comp=Z,198nm,1.4s
NLU North Lily Min 86.72 321 P P 20 14 43.9 +0.2
PLMC San Jos del P 86.77 274 *e*P **P 20 14 44.9 +0.8**
735A Kenedy 86.80 305 IAmb IAmb 20 14 47.2
comp=Z,304nm,1.2s
735A Kenedy 86.80 305 P P 20 14 45.8 +1.9
baz=46,SNR=7.1
TMUT Trail Mountain 86.81 320 IAmb IAmb 20 14 46.0
comp=Z,113nm,1.4s
BCIP Isla Barro Col 86.84 279 IAmb IAmb 20 14 46.6
comp=Z,179nm,1.1s
BCIP Isla Barro Col 86.84 279 *e*P **P 20 14 45.2 +1.0**
DUG Dugway, Tooele 86.89 322 P P 20 14 44.6 +0.3
DUG pP **pP 20 16 26.2 -0.5**
DUG Dugway, Tooele 86.89 322 P P 20 14 44.7 +0.3
DUG *PP **pP 20 16 26.2 -0.5**
DUG pmax pmax
comp=Z,27nm,0.7s
DUG Dugway, Tooele 86.89 322 P P 20 14 45.1 +0.8
baz=39,SNR=31
DUG S **S 20 24 44.3 +0.9**
baz=39
JCT Junction City 86.92 307 IAmb IAmb 20 14 48.3
comp=Z,422nm,1.7s
JCT Junction City 86.92 307 P P 20 14 45.6 +1.1
baz=45,SNR=22
JCT Junction City 86.92 307 P P 20 14 45.6 +1.1
baz=45,SNR=22
JCT S **S 20 24 44.7 +1.0**
baz=45
JEM Erimo 86.98 35 P P 20 14 46.1 +1.6
comp=Z,60nm,1.1s
ERM Erimo 86.98 35 P P 20 14 44.3 -0.1
ERM IAmb IAmb 20 14 45.9
comp=Z,110nm,1.1s
ERM Erimo 86.98 35 P P 20 14 44.3 -0.1
ERM pmax pmax
comp=Z,110nm,1.1s
ERM Erimo 86.98 35 P P 20 14 46.1 +1.6
comp=Z,147nm,1.1s
JTM Tenmabayashi 87.00 37 IAmb IAmb 20 14 45.0
comp=Z,112nm,1.1s
JTM Tenmabayashi 87.00 37 P P 20 14 44.9 +0.3

comp=Z,100nm,1.1s
MVCO Mesa Verde 87.01 317 P **P 20 14 46.0 +0.9**
baz=41,SNR=32
MVCO S **S 20 24 44.5 -0.2**
baz=41
Q16A Castle Valley 87.08 320 IAmb IAmb 20 14 48.1
comp=Z,151nm,1.3s
H04A Detroit Lake 87.32 330 P **P 20 14 46.1 +0.1**
TRCB Terra Rica 87.37 238 P **P 20 14 48.4 +1.8**
TRCB IAmb IAmb 20 14 49.7
comp=Z,88nm,0.7s
SISI Saibi 87.40 94 P **P 20 14 45.7 -1.2**
comp=Z,5µmcomp=Z,471nm,1.2s
YOTC Yotoco, Valle 87.40 273 *e*P **P 20 14 47.0 -0.1**
ANMO Albuquerque 87.60 315 P **P 20 14 48.2 +0.4**
ANMO pP **pP 20 16 30.8 +0.5**
ANMO Albuquerque 87.60 315*c i*P **P 20 14 48.4 +0.6**
ANMO pmax pmax
comp=Z,34nm,1.0s
ANMO Albuquerque 87.60 315 P **P 20 14 49.1 +1.3**
baz=42,SNR=33
ANMO Albuquerque 87.60 315 P **P 20 14 49.0 +1.3**
baz=42
ANMO S **S 20 24 49.8 -0.5**
baz=42
AQDB Aquidauana 87.81 241 P **P 20 14 49.9 +1.3**
BKNI Bangkinang 87.87 91 P **P 20 14 47.9 -1.2**
BKNI IAmb IAmb 20 14 49.3
comp=Z,301nm,1.1s
BKNI Bangkinang 87.87 91 P **P 20 14 47.6 -1.5**
comp=Z,3µmcomp=Z,294nm,1.2s
BKNI Bangkinang 87.87 91 P **P 20 14 48.3 -0.8**
comp=Z,292nm,1.2s
TCRU Three Creeks R 87.95 321 P **P 20 14 50.2 +0.8**
TCRU IAmb IAmb 20 14 53.0
comp=Z,223nm,1.3s
TCRU pP **pP 20 16 32.5 +0.6**
BUCK Buck Mountain 88.04 330 IAmb IAmb 20 14 52.5
comp=Z,70nm,0.9s
833A Chaparral WMA, 88.17 306 IAmb IAmb 20 14 53.3
comp=Z,114nm,1.1s
833A Chaparral WMA, 88.17 306 P **P 20 14 52.0 +1.6**
baz=46,SNR=18
833A Chaparral WMA, 88.17 306 P **P 20 14 52.1 +1.8**
baz=46,SNR=18
833A S **S 20 24 55.5 +0.1**
baz=46
MTPU Mount Pierson 88.26 320 IAmb IAmb 20 14 54.8
comp=Z,176nm,1.2s
ESPN Las Esperanzas 88.32 284 IAmb IAmb 20 18 17.1
comp=Z,122nm,0.7s
JSU Suzuyama 88.36 50 P **P 20 14 52.2 +1.0**
comp=Z,87nm,1.1s
FLOC Florencia 88.37 271 *e*P **P 20 14 51.5 0.0**
CRNM Carthage 88.49 314 P **P 20 14 52.1 +0.2**
Y22D IRIS PASSCAL I 88.50 314 P **P 20 14 53.5 +1.5**
baz=42
Y22F Passcal Instru 88.50 314 P **P 20 14 53.1 +1.1**
baz=42
Y22A Socorro 88.63 314 P **P 20 14 54.1 +1.5**
baz=42,SNR=16
PSUT Pine Spring 88.70 321 IAmb IAmb 20 14 57.2
comp=Z,92nm,1.1s
JMN Monobe 88.71 46 IAmb IAmb 20 14 54.2
comp=Z,96nm,0.9s
JMN Monobe 88.71 46 P **P 20 14 53.4 +0.6**
comp=Z,123nm,1.1s
PKCU Pink Cliffs 88.79 320 IAmb IAmb 20 14 56.6
comp=Z,180nm,1.2s
MJB9 Matsu-Tunnel 88.90 41 IAmb IAmb 20 14 55.3
comp=Z,100nm,1.2s
MAJO Matsushiro 88.90 41 P **P 20 14 53.0 -0.7**
MAJO IAmb IAmb 20 14 54.3
comp=Z,106nm,1.2s
MAJO Matsushiro 88.90 41*c i*P **P 20 14 52.9 -0.7**
MAJO pmax pmax
comp=Z,110nm,1.3s
MAJO Matsushiro 88.90 41 P **P 20 14 53.3 -0.3**
comp=Z,84nm,1.4s
MJAR Matsushiro Arr 88.90 41 P **P 20 14 53.0 -0.6**
comp=Z,48nm,1.0s,baz=314,slow=4.9,SNR=48
MJAR PP **PP 20 18 30.5 +0.3**
comp=Z,5.9nm,1.0s,baz=309,slow=7.6,SNR=4.6
comp=Z,48nm,1.0s
MJAR Matsushiro Arr 88.90 41 P **P 20 14 53.0 -0.6**
SDSI Sungai Dareh 88.96 92 P **P 20 14 52.7 -1.5**
comp=Z,3µmcomp=Z,309nm,1.2s
SZCU Shurtz Canyon 89.06 320 IAmb IAmb 20 14 58.1
comp=Z,102nm,1.2s
MATN Matagalpa 89.06 286 IAmb IAmb 20 14 56.5
comp=Z,70nm,1.1s
ACON Acoyapa 89.12 285 pwP 20 16 41.7 +0.2
MYKOM Kota Tinggi 89.13 88 P **P 20 14 54.0 -0.9**
MYKOM IAmb IAmb 20 14 56.4
comp=Z,251nm,1.3s
MYKOM Kota Tinggi 89.13 88 P **P 20 14 53.9 -1.1**
comp=Z,2µmcomp=Z,163nm,1.4s
JMM Marumori 89.17 39 IAmb IAmb 20 14 54.7
comp=Z,88nm,1.0s
JMM Marumori 89.17 39 P **P 20 14 54.4 -0.4**
comp=Z,106nm,1.6s
JGF Kuroka 89.18 43 P **P 20 14 53.8 -1.2**
JGF Kuroka 89.18 43 P **P 20 14 55.0 0.0**
comp=Z,55nm,1.4s
CCUT Cedar City 89.23 321 IAmb IAmb 20 14 58.4
comp=Z,110nm,1.4s
W18A Petrified Fore 89.25 317 P **P 20 14 56.2 +0.7**
baz=40
COVE Coope Vega, Sa 89.33 283 IAmb IAmb 20 14 57.1
comp=Z,133nm,1.3s
TGUH Tegucigalpa,Un 89.34 288 IAmb IAmb 20 14 58.4
comp=Z,117nm,1.1s
PETF Flores 89.38 291 IAmb IAmb 20 14 56.9
comp=Z,118nm,1.2s
GR1C Gorgona, Isla 89.42 273 *e*P **P 20 14 57.0 +0.6**
SRBA San Rafael, Bu 89.49 281 IAmb IAmb 20 16 44.7
comp=Z,136nm,1.9s
RIMA Rio Macho 89.53 282 IAmb IAmb 20 14 58.5
comp=Z,94nm,1.7s
U15A North Rim 89.57 319 P **P 20 14 56.8 -0.3**
U15A IAmb IAmb 20 15 00.0
comp=Z,113nm,1.2s
R11A Troy Canyon, C 89.67 322 IAmb IAmb 20 15 01.0
comp=Z,114nm,1.5s
R11A Troy Canyon, C 89.67 322 P **P 20 14 58.6 +1.2**
baz=37,SNR=35
R11A S **S 20 25 09.7 +0.5**
baz=37
WUAZ Wupatki 89.80 318 IAmb IAmb 20 15 01.6
comp=Z,146nm,1.2s
WUAZ Wupatki 89.80 318 P **P 20 14 59.5 +1.5**
baz=39,SNR=35
GCUF Volcan Galeras 89.90 271 *e*P **P 20 15 00.2 +0.9**
CNGN Cerro Negro 89.92 286 P **P 20 14 57.6 -1.1**
CNGN Cerro Negro 89.92 286 *e*P **P 20 14 57.8 -0.9**
RIOS Rincon, Osa 89.94 281 pP 20 16 39.1 -2.5
KIDD KIDD Seismic O 89.97 312 P **P 20 15 00.4 +1.6**
baz=42,SNR=9.2
YBH Yreka Blue Hor 90.01 329 PKKPbc PKKPbc 20 32 26.8 +0.3
comp=Z,4.2nm,0.8s,baz=323,slow=0.5,SNR=13
YBH Yreka Blue Hor 90.01 329 P **P 20 14 58.6 -0.2**
YBH Yreka Blue Hor 90.01 329 P **P 20 14 58.6 -0.2**
YBH pmax pmax
comp=Z,50nm,1.8s
CRIN San Cristobal 90.05 286 *e*P **P 20 14 58.9 -0.5**
TX31 Lajitas Ar. Si 90.08 309 P **P 20 15 01.0 +1.6**
baz=44,SNR=104
TX32 Lajitas Array 90.08 309 IAmb IAmb 20 15 02.5
comp=Z,182nm,1.2s
TXAR Lajitas Array 90.08 309 P **P 20 15 00.9 +1.5**
comp=Z,90nm,1.1s,baz=72,slow=4.1,SNR=234
TXAR PP **PP 20 18 36.6 -3.2**
comp=Z,13nm,1.1s,baz=52,slow=7.0,SNR=5.0
TXAR ScS **S 20 25 17.7 +4.6**
comp=Z,8.4nm,1.2s,baz=90,slow=7.5,SNR=10.0
TXAR PKKPbc **PKKPbc 20 32 25.7 -0.1**
comp=Z,3.0nm,0.8s,baz=198,slow=5.6,SNR=18
TXAR SKKPbc **SKKPbc 20 35 17.5 +0.9**
comp=Z,0.5nm,0.7s,baz=215,slow=5.6,SNR=4.1
comp=Z,90nm,1.1s
121A Cookes Peak, D 90.13 314 P **P 20 15 00.5 +0.9**
121A IAmb IAmb 20 15 02.6
comp=Z,121nm,1.2s
121A Cookes Peak, D 90.13 314 P **P 20 15 01.2 +1.6**
baz=41,SNR=52
121A Cookes Peak, D 90.13 314 P **P 20 15 01.2 +1.6**
baz=41,SNR=52
S **S 20 25 16.9 +3.3**
baz=41
JYT Yasato 90.16 40 IAmb IAmb 20 14 59.5
comp=Z,96nm,1.0s
JYT Yasato 90.16 40 P **P 20 14 59.1 -0.3**
comp=Z,105nm,1.0s
PRN Pahroc Range 90.17 321 IAmb IAmb 20 15 03.8
comp=Z,107nm,1.3s
ITAB Concordia 90.17 234 P **P 20 15 01.3 +1.9**
ITAB IAmb IAmb 20 15 02.5
comp=Z,41nm,0.8s
TPRI Tanjung Pinang 90.20 89 P **P 20 14 58.9 -1.1**
comp=Z,2µmcomp=Z,129nm,1.2s
KVN Kaiserville 90.27 324 IAmb IAmb 20 18 38.7
comp=Z,116nm,1.9s
S11A Rachel 90.31 322 IAmb IAmb 20 15 08.1
comp=Z,42nm,0.8s
JOW Kunigami 90.37 54 P **P 20 15 01.2 +0.6**
comp=Z,210nm,1.4s
BONI La Bonita 90.53 271 *e*P **P 20 15 02.7 +0.9**
MTO3 Montecristo 90.66 289 P **P 20 15 01.6 -0.7**
MTO3 IAmb IAmb 20 15 04.2
comp=Z,211nm,1.4s
TPH Tonopah 90.66 323 IAmb IAmb 20 18 38.0
comp=Z,74nm,1.1s
NV11 Mina Array Sit 90.80 324 IAmb IAmb 20 18 42.1
comp=Z,97nm,1.9s
YERR Yerington 90.83 325 IAmb IAmb 20 15 06.4
comp=Z,149nm,1.6s
NVAR Mina Array Bea 90.86 324 P **P 20 15 03.6 +0.7**
comp=Z,3.6nm,0.6s,baz=36,slow=5.1,SNR=24
NVAR PP **PP 20 18 41.0 -4.8**
comp=Z,8.8nm,1.0s,baz=54,slow=6.7,SNR=8.6
NVAR S **SKSac 20 24 53.2 +2.8**
comp=Z,2.5nm,1.0s,baz=36,slow=8.6,SNR=11
NVAR PKKPbc **PKKPbc 20 32 24.5 +0.1**
comp=Z,6.9nm,0.8s,baz=205,slow=5.1,SNR=16
comp=Z,3.6nm,0.6s
MPK Martis Peak 90.92 326 P **P 20 15 02.1 -1.2**
MPK IAmb IAmb 20 15 06.9
comp=Z,154nm,1.6s
MASI Maura Aman, Be 90.98 93 P **P 20 15 02.0 -1.6**
comp=Z,118nm,1.1s
LHV Little Huntoon 91.10 324 IAmb IAmb 20 15 07.7
comp=Z,62nm,1.3s
TPNV Topopah Spring 91.11 322 P **P 20 15 04.7 +0.7**
baz=36,SNR=7.4
DSRI Dabo 91.12 90 P **P 20 15 02.6 -1.6**
comp=Z,1µmcomp=Z,64nm,1.7s
IMBA Imbabura, San 91.16 271 P **P 20 15 07.0 +2.0**
EMB Emerald Bay 91.22 326 IAmb IAmb 20 15 08.2
comp=Z,152nm,1.7s
V12A Nelson 91.40 320 IAmb IAmb 20 15 08.4
comp=Z,107nm,1.6s
W13A Hualapai Mount 91.41 319 P **P 20 15 06.4 +0.9**
W13A IAmb IAmb 20 15 08.7
comp=Z,77nm,1.6s
CCIG Comitan 91.43 292 IAmb IAmb 20 15 08.4
comp=Z,87nm,1.3s
KSI Kapahiang 91.57 93 P **P 20 15 04.5 -1.8**
comp=Z,3µmcomp=Z,198nm,0.9s
GRAC Grapevine Rang 91.60 323 P **P 20 15 07.4 +1.3**
baz=36
KMRM Mail Ridge 91.69 329 IAmb IAmb 20 15 09.8
comp=Z,59nm,1.4s
MLAC Mammoth, Mammo 91.76 324 P **P 20 15 08.7 +1.6**
baz=35
FURC Furnace Creek, 91.78 322 P **P 20 15 08.6 +1.7**
baz=36,SNR=8.1
319A Douglas 91.83 314 P **P 20 15 08.2 +0.7**
319A IAmb IAmb 20 15 10.5
comp=Z,103nm,1.2s
GWY Greenwater Val 91.92 322 IAmb IAmb 20 15 11.7
comp=Z,43nm,1.0s
TUC Tucson 91.95 316 P **P 20 15 08.9 +1.0**
TUC IAmb IAmb 20 15 10.9
comp=Z,92nm,1.2s
TUC Tucson 91.95 316 P **P 20 15 08.9 +1.0**
TUC pmax pmax
comp=Z,92nm,1.2s
TUC Tucson 91.95 316 P **P 20 15 09.3 +1.4**
baz=40
TIN Tinemaha, Big 91.95 323 P **P 20 15 09.6 +1.7**
baz=35
SHOC Shoshone, Teco 91.96 321 P **P 20 15 09.4 +1.6**
baz=36
PIAT Ana Tenorio 92.01 270 *e*P **P 20 15 09.3 +0.5**
SLOR San Lorenzo - 92.02 271 P **P 20 15 10.3 +1.4**
SLOR IAmb IAmb 20 15 12.8
comp=Z,129nm,1.2s
NEE2 Needles Airpor 92.04 320 P **P 20 15 09.2 +1.1**
baz=38
KCPM Cahto Peak 92.09 328 IAmb IAmb 20 15 11.6
comp=Z,97nm,1.8s
TUQ Turquoise Moun 92.16 321 P **P 20 15 10.4 +1.6**
baz=37,SNR=16
PDMCI Parker Dam,Lak 92.17 319 P **P 20 15 10.3 +1.6**
baz=38,SNR=12
CWC Cottonwood Cre 92.38 323 P **P 20 15 11.1 +1.1**
baz=35
MPMC Manual Prospec 92.41 322 P **P 20 15 11.3 +1.2**
baz=36,SNR=16
GMRC Granite Mounta 92.55 320 P **P 20 15 12.1 +1.4**
baz=37,SNR=14
GSC Goldstone, Bar 92.69 321 P **P 20 15 12.6 +1.4**
baz=36,SNR=13
PORT Chimborazo Vol 92.70 270 P **P 20 15 13.7 +1.5**
PORT IAmb IAmb 20 15 15.3
comp=Z,236nm,1.6s
IRM Iron Mountain 92.79 320 P **P 20 15 13.3 +1.7**
baz=37,SNR=25
BLYC Blythe 92.80 319 IAmb IAmb 20 15 14.6
comp=Z,69nm,1.4s
HEC Hector,Ludlow 92.84 321 P **P 20 15 13.4 +1.4**
baz=36,SNR=13
CPUP Villa Florida 92.89 238 P **P 20 15 11.9 0.0**
comp=Z,6.0nm,1.0s,baz=58,slow=3.3,SNR=3.4
comp=Z,6.0nm,1.0s
CPUP Villa Florida 92.89 238 P **P 20 15 12.7 +0.7**
CPUP Villa Florida 92.89 238 P **P 20 15 12.7 +0.7**
CPUP pmax pmax
comp=Z,71nm,1.9s
LRMC Laurel Mtn Rad 92.97 322 P **P 20 15 13.5 +0.9**
baz=36
VOG Valley Oaks Go 93.08 324 P **P 20 15 13.2 +0.3**
baz=35
RRX Edison Barstow 93.13 321 P **P 20 15 14.4 +1.2**
baz=36
ISA Isabella, Lake 93.20 323 P **P 20 15 15.0 +1.4**
baz=35,SNR=16
214A Organ Pipe Nat 93.31 317 P **P 20 15 15.1 +1.0**
baz=39,SNR=14
BELC Belle Mtn. Jos 93.34 320 P **P 20 15 15.9 +1.5**
baz=37,SNR=14
BC3 Big Chuckawall 93.34 319 P **P 20 15 15.7 +1.4**
baz=37,SNR=13
PPBI Pangkal Pinang 93.38 90 P **P 20 15 13.0 -1.6**
comp=Z,674nmcomp=Z,34nm,1.2s
CCAC Calif City Air 93.40 322 IAmb IAmb 20 15 18.3
comp=Z,38nm,0.9s
GLA Glamis 93.50 319 P **P 20 15 16.0 +1.0**
baz=37
BOSC San Juan Bosco 93.54 269 P **P 20 15 15.2 -0.3**
BOSC IAmb IAmb 20 15 17.3
comp=Z,58nm,1.1s
LWLI Liwa 93.56 94 P **P 20 15 13.8 -1.7**
comp=Z,2µmcomp=Z,254nm,0.9s
BBRC Big Bear Solar 93.59 321 P **P 20 15 17.0 +1.5**
baz=36
EDW2 Edwards Air Fo 93.61 322 P **P 20 15 16.9 +1.5**
baz=36,SNR=9.7
COHC Cochancay 93.70 270 P **P 20 15 16.1 +0.1**
ARVC Arvin 93.80 323 P **P 20 15 17.3 +1.1**
baz=35
PMPB Monarch Peak 93.81 325 IAmb IAmb 20 18 51.6
comp=Z,134nm,2.0s
PFO Pinyon Flats O 93.88 320 P **P 20 15 18.3 +1.5**
PFO IAmb IAmb 20 15 20.4
comp=Z,42nm,1.1s
PFO Pinyon Flats O 93.88 320 P **P 20 15 18.3 +1.5**
PFO pmax pmax
comp=Z,42nm,1.1s
PFO Pinyon Flats O 93.88 320 P **P 20 15 18.1 +1.3**
baz=36,SNR=9.9
TPFO Pinon Flats 93.89 320 P **P 20 15 18.2 +1.4**
baz=36,SNR=13
LPAZ La Paz 93.90 252 P **P 20 15 16.6 -1.0**
comp=Z,3.1nm,0.8s,baz=330,slow=3.2,SNR=8.3
LPAZ S **SKSac 20 25 06.2 -2.0**
comp=Z,1.8nm,0.9s,baz=202,slow=17,SNR=4.2
LPAZ PKKPbc **PKKPbc 20 32 16.8 -0.1**
comp=Z,3.6nm,0.9s,baz=213,slow=1.5,SNR=8.4
comp=Z,3.1nm,0.8s
LPAZ La Paz 93.90 252 P **P 20 15 16.3 -1.3**
LPAZ La Paz 93.90 252 P **P 20 15 16.3 -1.3**
LPAZ pmax pmax
comp=Z,15nm,1.6s
BFSC Mount Baldy Ra 93.97 321 P **P 20 15 18.2 +1.0**
baz=36,SNR=6.0
PIX Pinacate 93.97 317 IAmb IAmb 20 15 19.1
comp=Z,42nm,1.2s
SWSC Sam W. Stewart 94.08 319 P **P 20 15 18.9 +1.4**
baz=37
OSI Osito Audit: C 94.17 322 P **P 20 15 19.2 +1.2**
baz=35
KASI Kota Agung 94.22 94 P **P 20 15 16.8 -1.6**
comp=Z,112nm,0.9s
BCW Bitter Crk WRg 94.23 323 P **P 20 15 18.6 +0.3**
BCW IAmb IAmb 20 15 21.4
comp=Z,104nm,1.8s
MURC Murrieta 94.26 321 P **P 20 15 19.4 +1.0**
baz=36,SNR=5.5
DECC Green Verdugo 94.28 322 P **P 20 15 19.0 +0.5**
baz=35
KSM Kuching 94.33 85 P **P 20 15 18.4 -0.6**
KSM IAmb IAmb 20 15 20.2
comp=Z,126nm,1.9s
KSM Kuching 94.33 85 P **P 20 15 17.7 -1.2**
comp=Z,551nmcomp=Z,26nm,1.6s
KSM Kuching 94.33 85 P **P 20 15 19.1 +0.2**
comp=Z,26nm,1.6s
ELS Elsinore Mount 94.33 321 IAmb IAmb 20 15 21.3
comp=Z,84nm,1.6s
MONP2 Monument Peak 94.44 320 P **P 20 15 20.9 +1.4**
baz=36,SNR=18
PKM Mcpherson Peak 94.46 323 P **P 20 15 21.0 +1.5**
baz=34,SNR=5.9
IKP In-Ko-Pah, Jac 94.48 319 P **P 20 15 21.0 +1.6**
baz=37,SNR=9.9
BAR Barrett 94.74 320 IAmb IAmb 20 15 23.1
comp=Z,52nm,1.4s
TLIG Tlapa 95.09 297 P **P 20 15 22.9 +0.4**
TLIG IAmb IAmb 20 15 25.4
comp=Z,92nm,1.5s
SBUM Sibu 95.18 83 P **P 20 15 21.2 -1.6**
comp=Z,236nmcomp=Z,17nm,1.4s
PB16 IPOC Station P 96.21 252 P **P 20 15 27.1 -0.8**
GO01 Chusmiza 96.82 250 P **P 20 15 29.2 -1.4**
PB11 IPOC Station P 97.21 250 P **P 20 15 31.3 -0.6**
LEM Lembang 97.44 93 S **SKSac 20 25 21.9 -4.0**
comp=Z,33nm,1.0s,baz=179,slow=23,SNR=11
PB01 IPOC Station P 97.89 249 P Pdif 20 15 34.8 -0.1
MPSI Mapaga 102.41 79 P **Pdif 20 15 53.0 -2.1**
KAPI Kappang 105.70 84 PKiKP **PKiKP 20 20 19.6 -0.3**
comp=Z,12nm,1.0s,baz=324,slow=2.0,SNR=3.8
KAPI PP **PP 20 20 36.0 -2.7**
comp=Z,39nm,1.3s,baz=310,slow=4.1,SNR=6.4
PLCA Paso Flores 110.47 234 PKiKP **PKiKP 20 20 28.4 +0.3**
comp=Z,3.4nm,1.0s,baz=353,slow=6.9,SNR=6.0
PLCA SKKPbc SKKPbc 20 34 28.4 -1.2
comp=Z,1.1nm,0.3s,baz=128,slow=12,SNR=6.8
VNA1 Neumayer--Stat 110.83 188 PKiKP **PKiKP 20 20 28.0 +0.2**
VNA2 Neumayer--Watz 111.00 187 PKiKP **PKiKP 20 20 27.5 -0.6**
baz=4.0,slow=5.3
VNA2 Neumayer--Watz 111.00 187 PP **PP 20 21 18.1 +2.0**
baz=12,slow=7.1
VNA2 Neumayer--Watz 111.00 187 Pdiff **Pdif 20 16 42.2 +10**
baz=2.0,slow=6.2
VNA2 x x 20 20 28.2
SNAA Sanae 111.33 185 PKiKP **PKiKP 20 20 29.0 +0.1**
SNAA Sanae 111.33 185 Pdiff **Pdif 20 16 38.5 +5.1**
SNAA Sanae 111.33 185 *e*P **PKiKP 20 20 28.6 -0.2**
TROLL Troll, Antarti 111.34 184 PKiKP **PKiKP 20 20 29.4 +0.5**
TROLL Troll, Antarti 111.34 184 Pdiff **Pdif 20 16 43.4 +10**
VNA3 Neumayer Olymp 111.54 188 PKiKP **PKiKP 20 20 29.1 -0.1**
VNA3 Neumayer Olymp 111.54 188 Pdiff **Pdif 20 16 40.3 +6.0**
SIJI Sorong 111.74 72 PKiKP **PKiKP 20 20 30.4 -0.9**
comp=Z,15nm,1.0s,baz=314,slow=2.8,SNR=8.0
SIJI PP **PP 20 21 17.4 -4.5**
comp=Z,11nm,0.9s,baz=337,slow=8.3,SNR=5.8
SOEI Soe 112.15 84 PKP **PKiKP 20 20 32.9 +0.7**
MAW Mawson 112.95 162 PKiKP **PKiKP 20 20 32.2 +0.3**
comp=Z,7.9nm,1.0s,baz=272,slow=5.2,SNR=6.2
FAKI Fak Fak 113.83 73 PKP **PKiKP 20 20 35.4 +0.1**
FAKI Fak Fak 113.83 73 P **PKiKP 20 20 35.8 +0.5**
PSA00 Pilbara Seismi 115.70 98 PKPdf **PKPdf 20 20 37.3 -1.3**
PSA00 Pilbara Seismi 115.70 98 P **PKiKP 20 20 39.2 +0.6**
MORW Morawa 116.90 107 PKPdf **PKPdf 20 20 39.9 -0.8**
MORW Morawa 116.90 107 P **PKPdf 20 20 40.7 0.0**
MEEK Meekatharra 117.54 103 P **PKPdf 20 20 41.6 -0.5**
BLDU Ballidu 118.20 108 P **PKPdf 20 20 42.7 -0.5**
MUN Mundaring 118.53 109 P **PKiKP 20 20 43.8 0.0**
KNRA Kununurra 119.21 87 P **PKPdf 20 20 45.4 -0.1**
MTN Manton Dam 119.34 82 PKPdf **PKPdf 20 20 44.8 -1.0**
MTN Manton Dam 119.34 82 P **PKPdf 20 20 45.2 -0.6**
GENI Genyem 119.38 67 PKP **PKiKP 20 20 46.5 +0.5**
GENI Genyem 119.38 67 P **PKiKP 20 20 46.6 +0.5**
KLBR Kellerberrin 119.47 108 P **PKPdf 20 20 44.7 -0.9**
NWAO Narrogin (SRO) 119.75 110 PKP **PKPdf 20 20 44.5 -1.5**
comp=Z,22nm,0.7s,baz=124,slow=1.1,SNR=12
PMSA Palmer Station 119.95 209 **PKiKP 20 20 45.8 +0.3**
KDU Kakadu 120.27 81 P **PKPdf 20 20 47.0 -0.6**
SMAI San Martin Ant 122.57 206 **PKPdf 20 20 50.1 -0.2**
MANU Manus Island 123.99 60 P **PKiKP 20 20 55.9 +0.7**
WRKA Warakurna 124.09 96 P **PKPdf 20 20 54.4 -0.3**
WRA Warramunga Arr 126.00 87 PKhKP PKPpre 20 20 46.0
comp=Z,3.4nm,1.1s,baz=299,slow=1.3,SNR=5.4
WRA PKP **PKPdf 20 20 58.0 -0.4**
comp=Z,53nm,0.9s,baz=299,slow=2.3,SNR=93
WRA PP **PP 20 22 59.7 +0.3**
comp=Z,33nm,1.0s,baz=309,slow=6.6,SNR=7.6
WRA sPKP 20 23 30.3
comp=Z,14nm,0.9s,baz=314,slow=3.1,SNR=5.4
WRA PKKPbc **PKKPbc 20 30 32.9 -0.2**
comp=Z,0.4nm,0.3s,baz=119,slow=3.5,SNR=12
WRA PKKP **PKKPdf 20 31 15.4 +0.3**
comp=Z,1.9nm,0.9s,baz=120,slow=2.1,SNR=7.0
WRA SKKPbc SKKPbc 20 33 36.6 -1.5
comp=Z,1.9nm,0.8s,baz=153,slow=3.5,SNR=12
WRA Warramunga Arr 126.00 87 PKPpre 20 20 46.6
WRA PKPdf **PKPdf 20 20 57.2 -1.3**
WRAB Tennant Creek 126.00 87 PKPpre 20 20 46.2
WRAB PKPdf **PKPdf 20 20 57.4 -1.1**
WRAB Tennant Creek 126.00 87 PKHKP PKPpre 20 20 46.2
WRAB 20 20 57.4
WRAB Tennant Creek 126.00 87 P **PKPdf 20 20 57.7 -0.8**
WB1 Warramunga Ar. 126.02 87 P **PKiKP 20 20 59.2 +0.2**
FORT Forrest 126.78 102 PKPdf **PKPdf 20 20 58.8 -0.8**
FORT Forrest 126.78 102 P **PKiKP 20 21 00.1 -0.1**
AS31 Alice Springs 127.71 91 PKPpre 20 20 55.0
AS31 PKPdf **PKPdf 20 21 00.9 -0.8**
ASAR Alice Springs 127.71 91 PKhKP PKPpre 20 20 46.8
comp=Z,3.2nm,0.9s,baz=329,slow=1.4,SNR=10
ASAR PKP **PKPdf 20 21 00.9 -0.8**
comp=Z,46nm,0.7s,baz=318,slow=1.6,SNR=70
ASAR PP **PP 20 23 10.8 +0.3**
comp=Z,16nm,0.9s,baz=310,slow=5.6,SNR=6.9
ASAR sPKP 20 23 37.3
comp=Z,32nm,0.9s,baz=303,slow=3.4,SNR=16
ASAR PKKPbc PKKPbc 20 30 26.4
comp=Z,0.6nm,0.4s,baz=120,slow=3.6,SNR=12
ASAR PKKP **PKKPdf 20 31 11.9 -0.1**
comp=Z,1.1nm,0.8s,baz=96,slow=2.2,SNR=4.1
ASAR SKKPbc SKKPbc 20 33 31.9 -0.7
comp=Z,2.8nm,0.7s,baz=120,slow=3.7,SNR=21
ASAR Alice Springs 127.71 91 PKPdf **PKPdf 20 21 00.8 -0.9**
ASAR Alice Springs 127.71 91 PKIKP **PKPdf 20 21 00.8 -0.9**
AS01 Alice Springs 127.74 91 P **PKPdf 20 20 58.2 -3.5**
PMG Port Moresby 129.08 67 PKPdf **PKPdf 20 21 04.1 -0.4**
PMG Port Moresby 129.08 67 PKIKP **PKPdf 20 21 04.1 -0.4**
PMG Port Moresby 129.08 67 PKP **PKiKP 20 21 05.8 +0.5**
PMG Port Moresby 129.08 67 P **PKiKP 20 21 06.1 +0.8**
COEN Coen 129.18 75 P **PKiKP 20 21 05.9 +0.5**
QSPA South Pole Qui 129.22 180 SKKPbc SKKPbc 20 33 27.2 -4.4
comp=Z,2.2nm,0.6s,baz=73,slow=1.6,SNR=4.2
QSPA South Pole Qui 129.22 180 **PKPdf 20 21 02.6 -0.6**
QIS Mount Isa 130.42 84 P **PKPdf 20 21 06.6 -0.3**
MULG Mulgathing 131.12 99 P **PKPdf 20 21 07.2 -0.7**
MTSU Mount Surprise 132.62 78 P **PKiKP 20 21 11.8 -0.5**
BBOO Buckleboo 133.77 101 PKPdf **PKPdf 20 21 12.9 0.0**
BBOO Buckleboo 133.77 101 P **PKiKP 20 21 13.7 -0.5**
LCRK Leigh Creek 134.39 96 P **PKPdf 20 21 14.2 +0.2**
WHYH Whyalla 135.02 100 P **PKPdf 20 21 15.3 +0.2**

TV1H	Townsville Har	135.17	77	P	PKiKP	20 21 16.8	-0.6
CTA	Charters Tower	135.24	79	P	PKPdf	20 21 16.2	+0.3
CTAO	Charters Tower	135.24	79	PKPpre	PKPpre	20 20 59.4	
CTAO				PKPdf	PKPdf	20 21 15.5	-0.5
CTAO	Charters Tower	135.24	79	PKHKP	PKPpre	20 20 59.4	
CTAO						20 21 15.5	
CTAO	Charters Tower	135.24	79	P	PKPdf	20 21 16.3	+0.3
HTT	Hallett	136.21	100	P	PKPdf	20 21 18.1	+0.7
STKA	Stephens Creek	137.62	96	PKhKP	PKPpre	20 21 07.0	
	comp=Z,6.4nm,0.3s,baz=353,slow=2.9,SNR=35						
STKA				SKP		20 24 09.6	
	comp=Z,162nm,0.8s,baz=280,slow=2.3,SNR=47						
STKA	Stephens Creek	137.62	96		PKPpre	20 21 07.1	
STKA	Stephens Creek	137.62	96	PKHKP	PKPpre	20 21 07.1	
VNDA	Vanda	139.47	170	PKhKP	PKPpre	20 21 13.7	
	comp=Z,2.5nm,0.8s,baz=252,slow=4.5,SNR=14						
VNDA				SKP		20 24 12.8	
	comp=Z,12nm,1.0s,baz=264,slow=4.5,SNR=7.8						
VNDA	Vanda	139.47	170		PKPpre	20 21 13.1	
VNDA	Vanda	139.47	170	PKHKP	PKPpre	20 21 13.1	
ARPS	Mount Arapiles	139.68	103	P	PKPdf	20 21 21.2	-2.4
SBA	Scott Base	139.81	171		PKPpre	20 21 16.8	
SBA	Scott Base	139.81	171	PKHKP	PKPpre	20 21 16.8	
GEXS	Deakin Univers	141.98	104	P	PKPdf	20 21 26.3	-1.4
TOO	Toolangi	142.70	103		PKPpre	20 21 25.6	
TOO	Toolangi	142.70	103	PKHKP	PKPpre	20 21 25.6	
TOO	Toolangi	142.70	103	P	PKPdf	20 21 26.5	-2.5
AUDCS	Dubbo College	143.20	93	P	PKPbc	20 21 28.1	+0.1
AUWSH	Wavell State H	144.43	83	P	PKPdf	20 21 32.3	0.0
CAN	Canberra	144.64	98	PKPdf	PKPbc	20 21 32.8	+0.2
CAN	Canberra	144.64	98	PKIKP	PKPab	20 21 32.8	-0.2
CAN	Canberra	144.64	98	P	PKPdf	20 21 32.5	0.0
ARMA	Armidale	144.76	88	PKPdf	PKPbc	20 21 33.2	+0.1
ARMA	Armidale	144.76	88	P	PKPab	20 21 33.8	+0.1
CNB	Canberra Magne	144.92	98	P	PKPdf	20 21 33.2	+0.2
CORO	Coronation Par	144.95	109	P	PKPab	20 21 34.3	+0.4
GC1S	Gold Coast 1 S	145.17	84	P	PKPab	20 21 35.1	0.0
MOO	Moorlands	145.18	110	P	PKPab	20 21 34.6	-0.2
MILA	Mila	145.32	101	P	PKPbc	20 21 34.9	+0.3
TAU	Tasmania Unive	145.36	111	PKPdf	PKPdf	20 21 33.6	+0.2
TAU	Tasmania Unive	145.36	111	PKIKP	PKPdf	20 21 33.6	+0.2
TAU	Tasmania Unive	145.36	111	P	PKPab	20 21 35.2	-0.2
SYDH	Sydney Hard Ro	145.43	94	P	PKPab	20 21 35.5	-0.5
RIV	Riverview	145.78	94	P	PKPab	20 21 37.0	-0.3
NTLH	Newcastle Hard	145.84	92	P	PKPab	20 21 37.2	-0.4
FUNA	Funafuti	146.72	26	PKPdf	PKPdf	20 21 35.8	-0.8
FUNA					PKPbc	20 21 39.4	+0.3
FUNA	Funafuti	146.72	26	P	PKiKP	20 21 40.3	-0.9
KOUNC	Koumac, New Ca	148.69	62	P	PKiKP	20 21 44.6	-0.5
NOUC	Port Laguerre	151.12	61	P	PKPdf	20 21 44.9	+1.5
DZM	Mont Dzumac	151.20	61	PKPdf	PKPdf	20 21 43.0	-0.6
DZM				PKPbc	PKiKP	20 21 51.4	+1.0
DZM				PKPab	PKPab	20 22 00.2	+0.3
DZM	Mont Dzumac	151.20	61	P	PKPdf	20 21 44.9	+1.3
MARNC	Mare, Loyalty	151.85	58		PKPbc	20 21 51.4	0.0
MCQ	Macquarie Isla	152.30	135		PKPbc	20 21 51.3	0.0
MCQ					PKPab	20 22 03.4	-0.2
MCQ	Macquarie Isla	152.30	135	PKP2	PKPab	20 22 03.4	-0.2
MSVF	Nonsavu	154.60	36	PKPbc	PKPbc	20 21 58.5	+1.0
	comp=Z,10nm,0.9s,baz=130,slow=14,SNR=0.8						
MSVF				PKPab	PKPab	20 22 14.6	+0.2
	comp=Z,25nm,0.9s,baz=256,slow=5.5,SNR=5.8						
DCZ	Deep Cove	159.65	116		PKPab	20 22 35.1	-0.5
WHZ	Wether Hill Ro	160.13	118		PKPab	20 22 37.0	-0.8
MLZ	Mavora Lakes	160.33	116		PKPab	20 22 37.9	-0.8
RAR	Rarotonga	161.02	340	PKP	PKPdf	20 21 57.8	+1.6
	comp=Z,19nm,0.8s,baz=80,slow=5.1,SNR=4.0						
WKZ	Wanaka	161.04	115		PKPab	20 22 40.9	-0.9
RPZ	Rata Peaks	162.64	112	PKPab	PKPab	20 22 48.8	-0.1
	comp=Z,84nm,1.0s,baz=81,slow=1.3,SNR=11						
RPZ	Rata Peaks	162.64	112	PKPab	PKPab	20 22 47.8	-1.1
OXZ	Oxford	163.40	111	PKPdf	PKPdf	20 21 57.5	-0.4
OXZ					PKPab	20 22 51.4	-0.8
OUZ	Omahuta	163.62	82		PKPdf	20 21 57.5	-0.8
LTZ	Lake Taylor	163.62	109		PKPdf	20 21 56.9	-1.3
LTZ				PKPab	PKPab	20 22 52.0	-1.2
WCZ	Waipu Caves	164.43	83	P	PKPab	20 22 57.7	+0.8
MHEZ	Mangahewa	165.11	95	P	PKPab	20 23 07.5	+7.6
PKVZ	Pokaka	165.93	95	P	PKPab	20 23 02.9	-0.7
TWVZ	Taurewa	165.97	95	P	PKPab	20 23 03.3	-0.5
WTVZ	West Tongariro	166.09	95	P	PKPab	20 23 03.5	-0.9
NGZ	Ngauruhoe	166.11	95	P	PKPab	20 23 04.0	-0.5
NNVZ	North Ngauruho	166.12	95	P	PKPab	20 23 03.5	-1.1
WNVZ	Wahianoa	166.12	96	P	PKPab	20 23 03.7	-0.9
KRVZ	Karewarewa	166.13	95	P	PKPab	20 23 03.7	-0.8
SNVZ	South Ngauruho	166.14	95	P	PKPab	20 23 04.2	-0.5
KATZ	Kakaramea	166.16	94	P	PKPab	20 23 04.3	-0.4
KMRZ	Kaimai	166.16	89	P	PKPab	20 23 04.4	-0.2
ETVZ	East Tongariro	166.19	95	P	PKPab	20 23 06.0	+1.2
MOVZ	Moawhango	166.25	96	P	PKPab	20 23 03.7	-1.3
RITZ	Rihia Road	166.28	94	P	PKPab	20 23 04.5	-0.7
WHTZ	Whakaora	166.32	93	P	PKPab	20 23 04.7	-0.7
DVHZ	Dannevirke	166.62	100	P	PKPab	20 23 05.0	-1.6
PNHZ	Pukenui	166.63	98	P	PKPab	20 23 04.9	-1.7
BKZ	Black Stump Fm	166.80	95	PKPdf	PKPdf	20 21 58.8	-2.2
BKZ					PKPab	20 23 05.7	-1.7
BKZ	Black Stump Fm	166.80	95	P	PKPab	20 23 05.7	-1.7
WPHZ	Waipukurau	166.82	99	P	PKPab	20 23 06.5	-1.0
EDRZ	Edgecumbe	166.83	90	P	PKPab	20 23 06.0	-1.6
MUGZ	Murupara	166.92	91	P	PKPab	20 23 05.9	-2.1
PRHZ	Porangahau	166.98	99	P	PKPab	20 23 07.3	-0.8
MTHZ	Maungataniwha	167.03	93	P	PKPab	20 23 07.1	-1.4
RTZ	Ruatahuna	167.10	92	P	PKPab	20 23 06.7	-2.1
KAHZ	Kahuranaki	167.15	97	P	PKPab	20 23 08.6	-0.3
URZ	Urewera	167.15	90	PKPab	PKPab	20 23 06.9	-2.0
	comp=Z,104nm,0.9s,baz=65,slow=2.5,SNR=22						
URZ	Urewera	167.15	90	PKPab	PKPab	20 23 06.0	-2.9
URZ	Urewera	167.15	90	P	PKPab	20 23 06.8	-2.0
RAGZ	Rawiri	167.42	91	P	PKPab	20 23 08.6	-1.6
MWZ	Matawai	167.48	90	P	PKPab	20 23 08.5	-1.9
RUGZ	Raukumara Rang	167.53	89	P	PKPab	20 23 09.3	-1.5
TWGZ	Tauwhareparae	167.81	89	P	PKPab	20 23 10.2	-1.7

*IDC **28** 20:05:13.6±0.9, 29°.17S×61°.12E, h0km, mb4.1/7, mbtmp4.2/8, ML4.6/1, MS4.1/3, Error ellipse: s-maj=30.8km s-min=23.5km az=40.0*
*NEIC **28** 20:05:15.6±0.5, 29°.2S±0°.1×61°.0E±0°.1, h10km±1km, mb4.3/9, Error ellipse: s-maj=28.8km s-min=6.7km az=38.0.*

ISC 28 20:05:14.8±0.8, 29°.1S±0°.1×61°.2E±0°.2, h10km, n30, σ0.85/21, mb4.2/9, MS4.3/3, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.26	327		Pn	20 07 26.1	-2.3
VOI	Vohitsoka	14.78	295		Pn	20 08 43.7	-0.3
ABPO	Ambohimpanom	16.16	305		Pn	20 09 02.7	+0.6
ABPO				IAmb	IAmb	20 09 08.8	
	comp=Z,17nm,1.2s						
OPO	Ambohidratompo	16.48	306	Pn	Pn	20 09 07.0	+0.8
	comp=Z,0.2nm,0.3s,baz=122,slow=14,SNR=9.1						
OPO				Sn	Sn	20 11 50.7	-19
	baz=147,slow=19,SNR=1.3						
	comp=Z,3.5nm,0.4s						
H08S1	Diego Garcia H	23.81	29	T	T	20 35 13.1	
	baz=204,slow=76,SNR=5.1						
H08S2	Diego Garcia H	23.82	29	T	T	20 35 30.5	
	baz=204,slow=76,SNR=5.6						
H08S3	Diego Garcia H	23.83	29	T	T	20 35 31.3	
	baz=204,slow=76,SNR=7.9						
KIBK	Kibwezi	34.48	316	P	P	20 12 03.5	+0.3
H01W2	Cape Leeuwin H	44.89	112	T	T	21 01 13.1	
	baz=262,slow=75,SNR=30						
H01W3	Cape Leeuwin H	44.90	112	T	T	21 01 20.4	
	baz=262,slow=75,SNR=27						
H01W1	Cape Leeuwin H	44.91	112	T	T	21 01 09.6	
	baz=262,slow=75,SNR=30						
SNAA	Sanae	54.57	200	P	P	20 14 41.9	-0.9
	comp=Z,0.7nm,0.7s,baz=92,slow=5.0,SNR=1.9						
	comp=Z,0.7nm,0.7s						
SNAA	Sanae	54.57	200	P	P	20 14 41.9	-0.9
SNAA				IAmb	IAmb	20 15 20.7	
	comp=Z,6.1nm,1.5s						
CMAR	Chiang Mai Arr	59.68	42	LR	LR	20 39 11.5	
	comp=Z,49nm,18.0s,baz=285,slow=34						
QSPA	South Pole Qui	61.11	180	P	P	20 15 28.2	-0.7
	comp=Z,1.3nm,0.7s,baz=273,slow=2.5,SNR=4.5						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	64.14	166	P	P	20 15 48.8	0.0
	comp=Z,1.3nm,0.7s,baz=280,slow=7.0,SNR=12						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	64.14	166	P	P	20 15 48.6	-0.2
VNDA				IAmb	IAmb	20 15 58.9	
	comp=Z,1.8nm,0.9s						
ASAR	Alice Springs	64.48	104	P	P	20 15 52.2	+0.3
	comp=Z,2.0nm,0.7s,baz=245,slow=6.2,SNR=31						
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	64.48	104	P	P	20 15 52.4	+0.4
AS31	Alice Springs	64.48	104	P	P	20 15 52.6	+0.6
AS31				IAmb	IAmb	20 15 53.4	
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	66.29	100	P	P	20 16 04.4	+0.6
	comp=Z,2.0nm,0.8s,baz=246,slow=5.7,SNR=23						
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	66.29	100	P	P	20 16 04.4	+0.6
WB2	Warramunga Arr	66.31	100	P	P	20 16 04.5	+0.7
WB0	Warramunga Arr	66.41	100	P	P	20 16 05.0	+0.5
WB0				IAmb	IAmb	20 16 07.7	
	comp=Z,9.9nm,1.5s						
MTN	Manton Dam	66.48	92	P	P	20 16 05.2	+0.3
TORD	Torodi Ar. Bea	71.08	298	P	P	20 16 34.8	+1.2
	comp=Z,5.0nm,0.8s,baz=137,slow=5.5,SNR=2.1						
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	73.06	338	P	P	20 16 45.7	+0.7
	comp=Z,2.0nm,0.8s,baz=163,slow=7.8,SNR=2.4						
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	73.06	338	P	P	20 16 45.5	+0.5
KSRS	Korea Array	91.01	47	LR	LR	20 56 12.8	
	comp=Z,122nm,21.7s,baz=245,slow=34						
CPUP	Villa Florida	99.30	233	LR	LR	20 58 31.2	
	comp=Z,142nm,18.1s,baz=48,slow=32						

*MAN **28** 20:14:51.2, 12°.40N×126°.33E, h1km, mb4.8, ML3.7, MS3.6*
*IDC **28** 20:15:01.9±3.2, 13°.45N×126°.70E, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=197.0km s-min=78.4km az=59.0*

ISC 28 20:15:02.2±1.2, 12°.05N±0°.08×126°.1E±0°.1, h35km, n10, σ3.10/15, mb4.2/4, 3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	2.33	195	eP	Pn	20 15 39.3	+1.2
SCPH				eS	Sn	20 16 03.0	-2.6
TABP	Talibon, Bohol	2.61	222	↓iP	Pn	20 15 38.9	-3.1
TABP				i S	Sn	20 16 13.5	+1.0
LLP	Lapu-Lapu	2.72	231	eP	Pn	20 15 39.5	-4.0
LLP				eS	Sn	20 16 21.4	+6.3
RCP	Roxas	3.33	262	↓eP	Pn	20 15 49.5	-2.4
RCP				eS	Sn	20 16 32.5	+2.1
CGP	Cagayan de Oro	3.83	202	↓eP	Pn	20 15 57.2	-1.6
CGP				eS	Sn	20 16 42.2	-0.4
MKAR	Makanchi Array	50.54	322	P	P	20 23 56.1	-1.1
	1.1nm,0.8s,baz=107,slow=9.4,SNR=4.3						
	1.1nm,0.8s						
KURBB	Kurchatov Arra	54.54	325	P	P	20 24 26.1	-0.7
	1.7nm,0.5s,baz=120,slow=8.2,SNR=7.2						
	1.7nm,0.5s						
ARCES	ARCESS Array B	82.49	340	P	P	20 27 20.6	-0.3
	1.4nm,0.8s,baz=83,slow=7.4,SNR=4.8						
	1.4nm,0.8s						
FINES	FINESS Array B	84.27	332	P	P	20 27 29.5	-0.6
	9.1nm,1.1s,baz=64,slow=3.2,SNR=3.0						
	9.1nm,1.1s						
TORD	Torodi Ar. Bea	119.46	293	PKP	PKiKP	20 33 54.4	+5.2
	0.4nm,0.7s,baz=63,slow=2.9,SNR=4.1						

*NEIC **28** 20:23:48.9±0.9, 19°.54N±0°.10×64°.35W±0°.06, h38km±53km, Error ellipse: s-maj=14.5km s-min=7.6km az=186.0*
*RSPR **28** 20:23:49.1, 19°.64N×64°.40W, h49km±10km, MD2.9/3*

ISC 28 20:23:46.3±2.2, 19°.6N±0°.1×64°.36W±0°.05, h27km, n27, σ18.26/31, 4C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJVI	Gifft Hill Sch	1.33	197	↓eP	Pb	20 24 10.5	0.0
SJVI	Gifft Hill Sch	1.33	197	eS	Sb	20 24 27.5	+0.4
SJVI	Gifft Hill Sch	1.33	197		Pb	20 24 10.5	0.0
SJVI					Sb	20 24 27.5	+0.4
STVI	Saint Thomas	1.37	204	Pn	Pb	20 24 10.4	-0.8
STVI				Sn	Sn	20 24 27.3	+0.5
CUPR	Culebra, Puert	1.56	214	↑eP	Pb	20 24 13.7	-0.8
CUPR	Culebra, Puert	1.56	214	eS	Sb	20 24 32.8	-1.0
CUPR	Culebra, Puert	1.56	214		Pb	20 24 13.7	-0.8
CUPR					Sb	20 24 32.8	-1.0
MTP	Monte Pirata	1.88	217	↑eP	Pb	20 24 18.4	-1.5
MTP	Monte Pirata	1.88	217	eS	Sn	20 24 40.4	+1.0
MTP	Monte Pirata	1.88	217		Pb	20 24 18.0	-1.9
MTP				IAML		20 24 49.6	
	comp=E,37nm,0.3s						
MTP	Monte Pirata	1.88	217		Sn	20 24 40.4	+1.0
CDVI	St. Croix	1.88	192	Pn	Pn	20 24 17.0	+0.3
CBYP	Canovanas	1.94	227	Pn	Pn	20 24 18.6	+1.0
SMRT	St. Maarten	1.97	142	Pn	Pn	20 24 18.0	+0.1
SMRT				Sn	Sb	20 24 43.7	-1.9
SMRT				IAML		20 24 46.6	
	comp=N,53nm,0.2s						
SMRT				IAML		20 24 54.6	
	comp=E,53nm,0.4s						
HUMP	Col San Antoni	2.03	224	↑eP	Pb	20 24 20.1	-2.4
HUMP	Col San Antoni	2.03	224		Pb	20 24 20.1	-2.4
HUMP	Col San Antoni	2.03	224	IAML		20 24 48.4	
	comp=E,33nm,0.2s						
HUMP				IAML		20 24 56.3	
	comp=N,40nm,0.5s						
GCPR	Guaynabo City	2.08	232	Pn	Pn	20 24 20.0	+0.5
GCPR				IAML		20 25 06.3	
	comp=N,30nm,4.0s						
AOPR	Arecibo Observ	2.59	241	Pn	Pn	20 24 27.6	+1.1
AOPR	Arecibo Observ	2.59	241	eP	Pn	20 24 27.8	+1.3
CELP	Cerrillos	2.59	234	↑eP	Pn	20 24 27.8	+1.2
CELP	Cerrillos	2.59	234		Pn	20 24 26.2	-0.4
CELP				IAML		20 25 11.3	
	comp=N,22nm,2.4s						
CELP				IAML		20 25 59.8	
	comp=E,19nm,4.0s						
MLPR	Magueyes Islan	3.02	238	Pn	Pn	20 24 33.7	+1.4
MLPR				IAML		20 25 10.6	
	comp=N,19nm,2.5s						
MLPR				IAML		20 25 47.7	
	comp=E,19nm,3.3s						
CRPR	Cabo Rojo, PR	3.05	239	Pn	Pn	20 24 34.1	+1.4
CRPR				IAML		20 26 06.2	
	comp=E,18nm,3.3s						
CRPR				IAML		20 26 32.3	
	comp=N,20nm,2.2s						
ANBD	Bethesda, Anti	3.54	135	eP	Pn	20 24 40.9	+1.4
ANBD				eS	Sn	20 25 22.3	+1.7
SVN	Savane Anatole	5.63	147	Pn	Pn	20 25 09.0	+0.7
SDDR	Presa de Saban	6.57	266		Pn	20 25 22.9	+1.6

WEL 28 20:23:54.0±0.5, 40°S±3°×17°4E±°, h214km±3km, M3.6/55, MLv3.6/55, Error ellipse: s-maj=0.0km s-min=0.0km az=123.3, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PREZ	Palmer Road	0.62	25	P	Pn	20 24 24.0	+0.7
PREZ				S	S	20 24 47.8	+1.8
KHEZ	Kahui Hut	0.63	14	P	Pn	20 24 23.9	+0.6
KHEZ				S	S	20 24 48.1	+1.9
LREZ	Lake Rotokare	0.64	46	P	Pn	20 24 24.2	+1.0
NBEZ	Newall Road No	0.64	4	P	Pn	20 24 23.6	+0.3
NBEZ				S	S	20 24 48.9	+2.8
NEZ	North Egmont	0.67	19	P	Pn	20 24 24.3	+0.7
NEZ				S	S	20 24 48.4	+1.8
PKE	Pukeiti	0.72	11	P	Pn	20 24 24.2	+0.5
DREZ	Durham Road	0.78	23	P	Pn	20 24 24.6	+0.7
DREZ				S	S	20 24 48.7	+1.5
DUWZ	D'Urville Isla	0.90	175	P	Pn	20 24 25.2	+0.6
DUWZ				S	S	20 24 49.4	+0.8
WAZ	Wanganui	0.91	81	P	Pn	20 24 26.1	+1.4
WAZ				S	S	20 24 51.0	+2.5
MHEZ	Mangahewa	0.92	25	P	Pn	20 24 25.9	+1.2
MHEZ				S	S	20 24 50.5	+2.0
VRZ	Vera Road	1.07	43	P	Pn	20 24 25.6	-0.1
VRZ				S	S	20 24 50.8	+0.7
OHWZ	Ohakea	1.19	105	P	Pn	20 24 27.5	+1.1
OHWZ				S	S	20 24 53.4	+1.9
KIW	Kapiti Island	1.27	139	P	Pn	20 24 27.4	+0.4
KIW				S	S	20 24 53.2	+0.4
TKNZ	Takaka Hill	1.30	210	P	Pn	20 24 27.1	-0.1
TKNZ				S	S	20 24 53.2	-0.1
PKVZ	Pokaka	1.33	63	P	Pn	20 24 27.8	+0.2
PKVZ				S	S	20 24 53.9	+0.2
QRZ	Quartz Range	1.34	227	P	Pn	20 24 27.1	-0.5
QRZ				S	S	20 24 53.7	0.0
TCW	Tory Channel	1.35	165	P	Pn	20 24 28.1	+0.5
TCW				S	S	20 24 54.0	+0.1
NNZ	Nelson	1.35	194	P	Pn	20 24 27.7	+0.1
NNZ				S	S	20 24 54.3	+0.4
OGWZ	Otaki Gorge	1.38	132	P	Pn	20 24 28.4	+0.6
OGWZ				S	S	20 24 54.9	+0.7
MTVZ	Mangateitei	1.38	68	P	Pn	20 24 28.4	+0.3
MTVZ				S	S	20 24 54.6	+0.2
TRVZ	Turoa	1.47	66	P	Pn	20 24 29.2	+0.3
TRVZ				S	S	20 24 55.7	-0.2
FWVZ	Far West T-bar	1.49	65	P	Pn	20 24 29.2	0.0
FWVZ				S	S	20 24 56.3	+0.1
WNVZ	Wahianoa	1.49	68	P	Pn	20 24 29.4	+0.4
WNVZ				S	S	20 24 55.9	-0.2
TWVZ	Taurewa	1.51	57	P	Pn	20 24 28.8	-0.3
TWVZ				S	S	20 24 56.3	+0.1
TUWZ	Tuamarina	1.52	176	P	Pn	20 24 29.2	+0.2
TUWZ				S	S	20 24 56.1	-0.2
CAW	Cannon Point	1.53	142	P	Pn	20 24 29.4	+0.3
CAW				S	S	20 24 57.0	+0.5
MRZ	Mangatainoka R	1.54	120	P	Pn	20 24 29.7	+0.4
MRZ				S	S	20 24 57.1	+0.5
WEL	Wellington	1.56	153	P	Pn	20 24 29.4	+0.1
TUVZ	Tukino	1.56	66	P	Pn	20 24 30.0	+0.4
NGZ	Ngauruhoe	1.56	63	P	Pn	20 24 29.7	+0.1
NGZ				S	S	20 24 57.0	-0.1
POWZ	Post Office Ro	1.57	109	P	Pn	20 24 30.0	+0.5
POWZ				S	S	20 24 57.9	+0.9
MOVZ	Moawhango	1.58	72	P	Pn	20 24 29.5	-0.2
MOVZ				S	S	20 24 56.1	-1.1
SNVZ	South Ngauruho	1.58	64	P	Pn	20 24 30.0	+0.2
SNVZ				S	S	20 24 57.8	+0.3
WTVZ	West Tongariro	1.58	61	P	Pn	20 24 29.9	+0.1
NNVZ	North Ngauruho	1.59	61	P	Pn	20 24 30.0	+0.1
NNVZ				S	S	20 24 57.5	-0.2
HIZ	Hauiti	1.61	30	P	Pn	20 24 29.3	-0.7
OTVZ	Oturere	1.61	63	P	Pn	20 24 30.4	+0.3
OTVZ				S	S	20 24 58.1	+0.2
KRVZ	Karewarewa	1.63	61	P	Pn	20 24 30.3	+0.1
HOWZ	Holdsworth Sta	1.63	128	P	Pn	20 24 30.2	+0.2
HOWZ				S	S	20 24 58.5	+0.5
ETVZ	East Tongariro	1.66	63	P	Pn	20 24 30.7	+0.3
TSZ	Takapari Road	1.66	96	P	Pn	20 24 30.6	+0.3
MRNZ	Matariki Terra	1.69	208	P	Pn	20 24 30.1	-0.5
KATZ	Kakaramea	1.73	58	P	Pn	20 24 31.0	-0.2
PRWZ	Pori Road	1.77	112	P	Pn	20 24 32.1	+0.8
BHHZ	Black Hill Sta	1.78	77	P	Pn	20 24 31.1	-0.4
MTW	Mount Morrison	1.79	135	P	Pn	20 24 31.5	+0.1
TIWZ	Tintock	1.81	119	P	Pn	20 24 32.2	+0.6
BSWZ	Blackbirch Sta	1.81	179	P	Pn	20 24 31.6	0.0
PNHZ	Pukenui	1.83	91	P	Pn	20 24 32.2	+0.3
RITZ	Rihia Road	1.83	60	P	Pn	20 24 32.0	0.0
RATZ	Rangitukua	1.84	56	P	Pn	20 24 32.2	+0.2
DVHZ	Dannevirke	1.84	103	P	Pn	20 24 32.3	+0.3
MSWZ	Moikau Station	1.86	145	P	Pn	20 24 32.0	-0.1
CMWZ	Cape Campbell	1.86	171	P	Pn	20 24 32.9	+0.7
PAWZ	Paruwai Farm	1.92	141	P	Pn	20 24 32.6	-0.1
THZ	Tophouse	1.98	200	P	Pn	20 24 32.8	-0.6
TMWZ	Te Maipa	1.98	128	P	Pn	20 24 33.5	+0.2
PLWZ	Palliser	1.99	147	P	Pn	20 24 33.1	-0.3
BFZ	Birch Farm	2.01	113	P	Pn	20 24 33.9	+0.3
WPHZ	Waipukurau	2.02	95	P	Pn	20 24 34.2	+0.5
HATZ	Hinemaiaia	2.04	61	P	Pn	20 24 33.3	-0.7
TRWZ	Traveller	2.06	137	P	Pn	20 24 34.2	+0.1
KWHZ	Kaweka Forest	2.07	77	P	Pn	20 24 33.8	-0.5
CPWZ	Castlepoint	2.08	120	P	Pn	20 24 35.2	+0.9
ANWZ	Angora Road	2.11	106	P	Pn	20 24 35.1	+0.5
PRHZ	Porangahau	2.19	100	P	Pn	20 24 36.0	+0.5
BKZ	Black Stump Fm	2.20	71	P	Pn	20 24 35.1	-0.5
MCHZ	McNeill Hill	2.27	79	P	Pn	20 24 36.9	+0.6
MRHZ	Matea Rd	2.28	63	P	Pn	20 24 35.4	-1.1
WPRZ	Whakapapatarin	2.29	54	P	Pn	20 24 35.8	-0.8
PXZ	Pawanui	2.34	94	P	Pn	20 24 37.4

URZ	**Urewera**	**6.43 199**	P	P	20 57 15.2	+1.1
	3.4nm,0.3s,baz=351,slow=3.7,SNR=18					
URZ			S	S	20 58 33.3	-0.7
	24nm,0.4s,baz=164,slow=20,SNR=18					
ASAR	**Alice Springs**	**41.19 270**	P	P	21 02 43.4	-0.1
	0.3nm,0.8s,baz=106,slow=8.6,SNR=4.3					
	0.3nm,0.8s					
WRA	**Warramunga Arr**	**42.34 275**	P	P	21 02 52.6	-0.1
	0.3nm,0.3s,baz=111,slow=8.0,SNR=15					
	0.3nm,0.3s					
FINES	**FINESS Array B**	**146.15 338**	PKPbc	PKPdf	21 14 27.7	+0.9
	11nm,1.2s,baz=37,slow=2.3,SNR=7.6					

*GUC **28** 21:22:53.9±0.7,21°.27S×68°.57W,h128km±4km,ML3.4*
*IDC **28** 21:22:55.1±9.1,21°.27S×68°.17W,h118km±62km,mb3.2/1,*
mbtmp3.7/3,Error ellipse: s-maj=90.3km s-min=43.9km
az=42.0

ISC 28 21:22:53.6±0.9,21°.27S±0°.04×68°.67W±0°.09,h133km±9km,
n24,σ0°.74/39,8C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.75**	**225**	⇑*i*P	**Pn**	**21 23 15.0**	**+0.2**
PB09				*e*S	**Sn**	**21 23 31.5**	**+0.6**
PB09				IAML		21 23 32.2	
	comp=N,854nm,0.2s						
PB01	**IPOC Station P**	**0.79**	**286**	⇑*i*P	**Pn**	**21 23 14.8**	**-0.2**
PB01				*e*S	**Sn**	**21 23 31.1**	**-0.2**
PB01				IAML		21 23 33.0	
	comp=E,1μm,0.4s						
PB02	**IPOC Station P**	**1.14**	**267**	⇑*i*P	**Pn**	**21 23 18.6**	**+0.3**
PB02				*e*S	**Sn**	**21 23 37.2**	**+0.3**
PB02				IAML		21 23 39.2	
	comp=E,2μm,0.5s						
PB08	**IPOC Station P**	**1.21**	**338**	*e*P	**Pn**	**21 23 19.5**	**+0.3**
PB08				*e*S	**Sn**	**21 23 38.9**	**+0.3**
PB08				IAML		21 23 41.0	
	comp=E,257nm,0.2s						
PB07	**IPOC Station P**	**1.22**	**248**	⇑*i*P	**Pn**	**21 23 19.3**	**+0.3**
PB07				*e*S	**Sn**	**21 23 38.7**	**+0.3**
PB07				IAML		21 23 39.8	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	**1.27**	**232**	⇑*i*P	**Pn**	**21 23 19.8**	**+0.2**
PB03				*e*S	**Sn**	**21 23 39.5**	**+0.2**
PB03				IAML		21 23 40.3	
	comp=E,888nm,0.2s						
LVC	**Limon Verde**	**1.35**	**189**	*e*P	**Pn**	**21 23 20.6**	**0.0**
LVC				*e*S	**Sn**	**21 23 40.4**	**-0.9**
PATCX	**Punta Patache**	**1.45**	**288**	⇑*i*P	**Pn**	**21 23 21.9**	**+0.5**
PATCX				*e*S	**Sn**	**21 23 43.2**	**+0.6**
PATCX				IAML		21 23 44.4	
	comp=N,956nm,0.3s						
HMBC	**Humberstone**	**1.50**	**311**	⇑*i*P	**Pn**	**21 23 22.0**	**-0.1**
HMBC				*e*S	**Sn**	**21 23 43.5**	**-0.2**
HMBC				IAML		21 23 44.2	
	comp=N,620nm,0.3s						
TA01	**Diego Aracena**	**1.57**	**296**	*i*P	**Pn**	**21 23 22.8**	**+0.1**
TA01				*e*S	**Sn**	**21 23 44.8**	**-0.1**
PB06	**IPOC Station P**	**1.66**	**210**	⇑*i*P	**Pn**	**21 23 23.9**	**+0.1**
PB06				*e*S	**Sn**	**21 23 47.2**	**+0.3**
PB06				IAML		21 23 47.8	
	comp=E,607nm,0.2s						
GO01	**Chusmiza**	**1.67**	**343**	*e*P	**Pn**	**21 23 24.3**	**0.0**
GO01				IAML		21 23 50.0	
	comp=N,335nm,0.1s						
TA02	**Huaiquique**	**1.69**	**306**	*e*P	**Pn**	**21 23 23.9**	**-0.1**
TA02				*e*S	**Sn**	**21 23 46.9**	**-0.4**
PB04	**IPOC Station P**	**1.73**	**232**	*e*P	**Pn**	**21 23 24.8**	**+0.1**
PB04				IAML		21 23 54.4	
	comp=E,432nm,0.3s						
PB11	**IPOC Station P**	**1.76**	**328**	*i*P	**Pn**	**21 23 24.8**	**-0.3**
PB11				*e*S	**Sn**	**21 23 48.8**	**-0.3**
PB11				IAML		21 23 50.4	
	comp=N,389nm,0.3s						
PB15	**IPOC Station P**	**2.07**	**201**	*e*P	**Pn**	**21 23 29.4**	**+0.6**
PB15				*e*S	**Sn**	**21 23 56.6**	**+0.9**
PB10	**IPOC Station P**	**2.83**	**218**	*e*P	**Pn**	**21 23 38.0**	**-0.1**
PB10				IAML		21 24 26.3	
	comp=E,56nm,0.2s						
PB16	**IPOC Station P**	**3.02**	**345**	*e*P	**Pn**	**21 23 41.7**	**+0.5**
PB12	**IPOC Station P**	**3.07**	**329**	*e*P	**Pn**	**21 23 39.8**	**-1.5**
PB12				IAML		21 24 18.5	
	comp=N,65nm,0.3s						
GO02	**Mina Guanaco**	**3.97**	**192**	*e*P	**Pn**	**21 23 52.7**	**-0.6**
LPAZ	**La Paz**	**4.98**	**6**	P	**Pn**	**21 24 08.3**	**+1.2**
	comp=N,1.7nm,0.3s,baz=170,slow=4.2,SNR=8.5						
LPAZ				S	**Sn**	**21 25 04.7**	**+0.5**
	comp=N,1.4nm,0.9s,baz=116,slow=6.2,SNR=1.3						
BDFB	**Brasilia**	**20.37**	**78**	P	**P**	**21 27 17.2**	**-2.9**
	comp=N,2.8nm,0.5s,baz=228,slow=9.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**77.07**	**70**	P	**P**	**21 34 34.1**	**+1.4**
	comp=N,0.3nm,0.5s,baz=246,slow=5.2,SNR=4.3						
	comp=N,0.3nm,0.5s						
MKAR	**Makanchi Array**	**145.32**	**36**	PKPbc	**PKPab**	**21 42 16.4**	**+0.4**
	comp=N,0.3nm,0.9s,baz=310,slow=2.9,SNR=2.0						

ROM 28 21:48:56.8±0.1,42°.865N±0°.004×13°.155E±0°.004,
h9km,ML2.6/44,27C-18D,Error ellipse: s-maj=0.3km
s-min=0.3km az=261.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**109**	P	Pg	21 48 58.7	0.0
T1245				S	Sg	21 48 59.8	-0.4
T1245				AML	AML		
	comp=E,58150μm,1.2s						
T1245				AML	AML		
	comp=N,67800μm,0.3s						
T1245				AML	AML		
	comp=N,65250μm,0.4s						
T1245				AML	AML		
	comp=E,58150μm,0.7s						
T1245				AML	AML		
	comp=E,54346μm,0.3s						
T1245				AML	AML		
	comp=N,65254μm,0.4s						
T1245				AML	AML		
	comp=E,46964μm,0.2s						
T1245				AML	AML		
	comp=N,67790μm,0.4s						
MC2	**Monte Cornacci**	**0.05**	**28**	P	Pg	21 48 59.0	0.0
MC2				S	Sg	21 49 00.3	-0.3
T1216	**Preci, Frazion**	**0.10**	**284**	⇑P	Pg	21 49 00.0	+0.6
T1216				S	Sg	21 49 01.9	+0.6
T1216				AML	AML		
	comp=N,19050μm,1.0s						
T1216				AML	AML		
	comp=N,19100μm,1.0s						
T1216				AML	AML		
	comp=E,25050μm,0.4s						
T1216				AML	AML		
	comp=E,25000μm,0.4s						
T1216				AML	AML		
	comp=N,19100μm,1.0s						
T1216				AML	AML		
	comp=E,25040μm,0.4s						
T1216				AML	AML		
	comp=N,18511μm,0.3s						
FEMA	**Monte Fema**	**0.12**	**321**	⇓P	Pg	21 49 00.4	+0.6
FEMA				S	Sg	21 49 02.7	+0.7
FEMA				AML	AML		
	comp=E,23000μm,0.2s						
FEMA				AML	AML		
	comp=N,19500μm,0.3s						
FEMA				AML	AML		
	comp=E,23036μm,0.2s						
FEMA				AML	AML		
	comp=N,15527μm,0.2s						
MMO1	**Montemonaco**	**0.13**	**75**	⇑P	Pg	21 49 00.4	+0.5
MMO1				S	Sg	21 49 02.6	+0.6
FDMO	**Fiordimonte**	**0.18**	**344**	⇓P	Pg	21 49 01.2	+0.5
FDMO				S	Sg	21 49 04.2	+0.9
FDMO				AML	AML		
	comp=N,3300μm,0.4s						
FDMO				AML	AML		
	comp=E,3110μm,0.3s						
FDMO				AML	AML		
	comp=E,3111μm,0.3s						
FDMO				AML	AML		
	comp=N,3300μm,0.4s						
AM05	**Amandola Campo**	**0.18**	**52**	⇑P	Pg	21 49 01.4	+0.7
AM05				S	Sg	21 49 04.4	+1.0
AM05				AML	AML		
	comp=E,2005μm,0.2s						
AM05				AML	AML		
	comp=E,10550μm,0.3s						
AM05				AML	AML		
	comp=N,890μm,1.4s						
AM05				AML	AML		
	comp=N,3530μm,0.3s						
AM05				AML	AML		
	comp=N,886μm,1.4s						
AM05				AML	AML		
	comp=E,10500μm,0.3s						
AM05				AML	AML		
	comp=N,3525μm,0.3s						
AM05				AML	AML		
	comp=E,2000μm,0.2s						
AM05				AML	AML		
	comp=E,2004μm,0.2s						
AM05				AML	AML		
	comp=N,2583μm,0.1s						
AM05				AML	AML		
	comp=E,8922μm,0.1s						
AM05				AML	AML		
	comp=N,791μm,0.1s						
T1241	**Roccafluvione,**	**0.20**	**92**	⇑P	Pg	21 49 02.1	+1.0
T1241				S	Sg	21 49 05.5	+1.6
T1241				AML	AML		
	comp=E,10630μm,0.2s						
T1241				AML	AML		
	comp=N,5705μm,0.6s						
T1241				AML	AML		
	comp=E,10650μm,0.2s						
T1241				AML	AML		
	comp=E,10800μm,0.2s						
T1241				AML	AML		
	comp=N,5855μm,0.6s						
T1241				AML	AML		
	comp=E,10645μm,0.2s						
T1241				AML	AML		
	comp=N,5186μm,0.3s						
T1241				AML	AML		
	comp=N,4865μm,0.3s						
T1241				AML	AML		
	comp=E,10798μm,0.2s						
T1215	**Vallo di Nera,**	**0.22**	**253**	⇑P	Pg	21 49 02.2	+0.8
T1215				AML	AML		
	comp=E,2710μm,0.5s						
T1215				AML	AML		
	comp=N,2210μm,0.4s						
T1215				AML	AML		
	comp=E,2715μm,0.5s						
T1215				AML	AML		
	comp=N,2215μm,0.4s						
T1215				AML	AML		
	comp=E,2840μm,0.5s						
T1215				AML	AML		
	comp=E,2835μm,0.5s						
T1215				AML	AML		
	comp=N,2095μm,0.4s						
T1215				AML	AML		
	comp=N,2078μm,0.4s						
T1215				AML	AML		
	comp=N,1873μm,0.3s						
T1215				AML	AML		
	comp=E,2170μm,0.4s						
T1215				AML	AML		
	comp=E,2242μm,0.3s						
T1204	**Amatrice, Fraz**	**0.22**	**148**	⇑P	Pg	21 49 02.3	+0.8
T1204				S	Sg	21 49 06.1	+1.5
T1204				AML	AML		
	comp=E,2250μm,1.0s						
T1204				AML	AML		
	comp=N,1935μm,1.2s						
T1204				AML	AML		
	comp=E,2246μm,1.0s						
T1204				AML	AML		
	comp=E,2247μm,1.0s						
T1204				AML	AML		
	comp=N,1942μm,1.2s						
T1204				AML	AML		
	comp=N,1520μm,0.2s						
T1204				AML	AML		
	comp=E,1760μm,0.3s						
T1217	**Poggiodomo (PG**	**0.23**	**227**	⇑P	Pg	21 49 02.4	+0.9
T1217				AML	AML		
	comp=E,1300μm,0.6s						
T1217				AML	AML		
	comp=N,2145μm,1.2s						
T1217				AML	AML		
	comp=E,1272μm,1.6s						
T1217				AML	AML		
	comp=E,1275μm,1.6s						
T1217				AML	AML		
	comp=N,2085μm,0.3s						
T1217				AML	AML		
	comp=E,1255μm,0.4s						
T1217				AML	AML		
	comp=N,2084μm,0.3s						
T1217				AML	AML		
	comp=E,1242μm,0.4s						
T1217				AML	AML		
	comp=N,2100μm,0.3s						
CESI	**CESI - Serrava**	**0.23**	**307**	⇓P	Pg	21 49 02.3	+0.7
CESI				AML	AML		
	comp=E,5130μm,0.6s						
CESI				AML	AML		
	comp=N,10550μm,0.3s						
CESI				AML	AML		
	comp=N,10535μm,0.3s						
CESI				AML	AML		
	comp=E,4463μm,0.3s						
GUMA	**Gualdo di Mace**	**0.24**	**34**	⇑P	Pg	21 49 02.5	+0.8
GUMA				S	Sg	21 49 06.7	+1.7
GUMA				AML	AML		
	comp=N,12550μm,0.5s						
GUMA				AML	AML		
	comp=N,14850μm,0.2s						
GUMA				AML	AML		
	comp=E,12350μm,0.3s						
GUMA				AML	AML		
	comp=E,10195μm,0.2s						
GUMA				AML	AML		
	comp=E,12326μm,0.3s						
GUMA				AML	AML		
	comp=N,14825μm,0.2s						
GUMA				AML	AML		
	comp=N,11914μm,0.3s						
GUMA				AML	AML		
	comp=E,10194μm,0.2s						
SMA1	**SAN MARTINO**	**0.27**	**150**	⇓P	Pg	21 49 02.9	+0.6
SMA1				AML	AML		
	comp=E,2015μm,0.4s						
SMA1				AML	AML		
	comp=N,2745μm,1.1s						
SMA1				AML	AML		
	comp=N,2668μm,0.4s						
SMA1				AML	AML		
	comp=E,2017μm,0.4s						
T1243	**Rocca Santa Ma**	**0.27**	**128**	⇑P	Pg	21 49 02.8	+0.4
T1243				S	Sb	21 49 07.6	-1.2
LNSS	**Leonessa**	**0.28**	**198**	⇑P	Pg	21 49 03.1	+0.7
LNSS				S	Sb	21 49 07.7	-1.0
LNSS				AML	AML		
	comp=N,1380μm,0.3s						
LNSS				AML	AML		
	comp=E,1660μm,0.3s						
LNSS				AML	AML		
	comp=N,1385μm,0.3s						
LNSS				AML	AML		
	comp=N,1384μm,0.3s						
LNSS				AML	AML		
	comp=E,1661μm,0.3s						
MNTP	**Montappone**	**0.36**	**40**	⇓P	Pb	21 49 05.0	-0.3
MNTP				AML	AML		
	comp=E,2105μm,0.7s						
MNTP				AML	AML		
	comp=N,2010μm,0.7s						
MNTP				AML	AML		
	comp=N,2015μm,0.7s						
MNTP				AML	AML		
	comp=N,1806μm,0.2s						
MNTP				AML	AML		
	comp=E,1934μm,0.2s						
RM33	**Pellescritta (**	**0.36**	**173**	⇑P	Pg	21 49 04.7	+0.7
RM33				AML	AML		
	comp=E,642μm,1.5s						
RM33				AML	AML		
	comp=N,606μm,0.3s						
RM33				AML	AML		
	comp=E,643μm,1.5s						
RM33				AML	AML		
	comp=E,597μm,0.4s						
RM33				AML	AML		
	comp=N,626μm,0.3s						
RM33				AML	AML		
	comp=E,606μm,0.3s						
CAMP	**Campotosto**	**0.38**	**150**	⇑P	Pg	21 49 04.8	+0.5
CAMP				AML	AML		
	comp=E,608μm,1.2s						
CAMP				AML	AML		
	comp=N,767μm,0.5s						
CAMP				AML	AML		
	comp=N,655μm,0.2s						
CAMP				AML	AML		
	comp=E,585μm,0.2s						
OFFI	**Offida**	**0.40**	**80**	⇑P	Pb	21 49 06.1	+0.1
OFFI				AML	AML		
	comp=E,1610μm,1.4s						
OFFI				AML	AML		
	comp=N,2375μm,0.7s						
OFFI				AML	AML		
	comp=N,2375μm,0.7s						
OFFI				AML	AML		
	comp=E,1602μm,0.7s						
T1211	**Morro Reatino**	**0.40**	**214**	⇑P	Pb	21 49 05.6	-0.5
T1211				AML	AML		
	comp=E,574μm,0.7s						
T1211				AML	AML		
	comp=N,1265μm,0.3s						
T1211				AML	AML		
	comp=E,560μm,0.8s						
T1211				AML	AML		
	comp=N,1292μm,0.3s						
T1211				AML	AML		
	comp=E,574μm,0.7s						
T1211				AML	AML		
	comp=N,1265μm,0.3s						
T1211				AML	AML		
	comp=E,563μm,0.3s						
T1211				AML	AML		
	comp=N,1264μm,0.3s						
T1211				AML	AML		
	comp=N,1293μm,0.3s						
T1211				AML	AML		
	comp=E,517μm,0.3s						
ARRO	**Arrone**	**0.41**	**225**	⇑P	Pb	21 49 05.5	-0.7
ARRO				AML	AML		
	comp=E,568μm,0.3s						
ARRO				AML	AML		
	comp=N,516μm,0.4s						
ARRO				AML	AML		
	comp=N,516μm,0.4s						
ARRO				AML	AML		
	comp=E,568μm,0.3s						
ARRO				AML	AML		
	comp=N,516μm,0.4s						
ASSB	**Assisi San Ben**	**0.41**	**296**	⇓P	Pg	21 49 05.3	+0.5
ASSB				AML	AML		
	comp=N,2505μm,0.3s						
ASSB				AML	AML		
	comp=E,2350μm,0.1s						
ASSB				AML	AML		
	comp=N,2507μm,0.3s						
TERO	**Teramo**	**0.41**	**126**	⇓P	Pg	21 49 05.2	+0.3
TERO				AML	AML		
	comp=E,1465μm,0.2s						
TERO				AML	AML		
	comp=E,1470μm,0.2s						
TERO				AML	AML		
	comp=N,1288μm,0.5s						
TERO				AML	AML		
	comp=E,1550μm,0.2s						
TERO				AML	AML		
	comp=N,1350μm,0.5s						
TERO				AML	AML		
	comp=N,1290μm,0.5s						
TERO				AML	AML		
	comp=E,1554μm,0.2s						
TERO				AML	AML		
	comp=N,1142μm,0.3s						
TERO				AML	AML		
	comp=E,1468μm,0.2s						
TERO				AML	AML		
	comp=N,1199μm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**338**	⇓P	Pg	21 49 05.5	+0.4
SNTG				AML	AML		
	comp=N,740μm,1.0s						
SNTG				AML	AML		
	comp=N,717μm,0.1s						
SNTG				AML	AML		
	comp=E,608μm,0.3s						
SNTG				AML	AML		
	comp=E,614μm,0.5s						
SNTG				AML	AML		
	comp=E,557μm,0.1s						
SNTG				AML	AML		
	comp=N,649μm,0.3s						
SNTG				AML	AML		
	comp=E,607μm,0.3s						
SNTG				AML	AML		
	comp=N,717μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.44**	**166**	⇓P	Pb	21 49 07.0	+0.3
T1247				AML	AML		
	comp=N,738μm,0.6s						
T1247				AML	AML		
	comp=E,644μm,1.1s						
T1247				AML	AML		
	comp=N,739μm,0.6s						
T1247				AML	AML		
	comp=E,598μm,0.6s						
T1247				AML	AML		
	comp=N,698μm,0.3s						
EL6	**Elcito**	**0.47**	**355**	P	Pg	21 49 06.3	+0.4
EL6				AML	AML		
	comp=E,2345μm,0.2s						
EL6				AML	AML		
	comp=N,2340μm,0.2s						
EL6				AML	AML		
	comp=E,2350μm,0.2s						
EL6				AML	AML		
	comp=N,2342μm,0.2s						
EL6				AML	AML		
	comp=N,2340μm,0.2s						
EL6				AML	AML		
	comp=E,2348μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.49**	**310**	⇑P	Pb	21 49 07.1	-0.6
ATCC				S	Sb	21 49 16.0	+0.9
ATCC				AML	AML		
	comp=E,1200μm,1.4s						
ATCC				AML	AML		
	comp=N,1660μm,1.1s						
ATCC				AML	AML		
	comp=E,1141μm,0.2s						
ATCC				AML	AML		
	comp=N,1177μm,0.4s						
CESX	**Cesi**	**0.49**	**239**	⇓P	Pb	21 49 07.1	-0.6
CESX				AML	AML		
	comp=E,590μm,0.4s						
CESX				AML	AML		
	comp=N,596μm,0.6s						
CESX				AML	AML		
	comp=E,590μm,0.4s						
CESX				AML	AML		
	comp=N,578μm,0.4s						
CING	**Cingoli**	**0.51**	**3**	⇓P	Pg	21 49 07.2	+0.4
CING				AML	AML		
	comp=E,898μm,1.0s						
CING				AML	AML		
	comp=N,702μm,0.2s						
CING				AML	AML		
	comp=E,815μm,0.1s						
CING				AML	AML		
	comp=N,642μm,0.1s						
GIGS	**Gran Sasso**	**0.52**	**144**	⇑P	Pg	21 49 07.2	+0.3
GIGS				AML	AML		
	comp=E,176μm,1.0s						
GIGS				AML	AML		
	comp=N,152μm,0.4s						
GIGS				AML	AML		
	comp=E,175μm,1.0s						
GIGS				AML	AML		
	comp=N,153μm,0.4s						
GIGS				AML	AML		
	comp=E,161μm,0.2s						
GIGS				AML	AML		
	comp=N,149μm,0.3s						
FOSV	**Fossato di Vic**	**0.52**	**326**	⇓P	Pg	21 49 07.3	+0.4

FOSV			S	Sb	21 49 16.0 +0.3
FOSV			AML	AML	
	comp=E,1320μm,0.4s				
FOSV			AML	AML	
	comp=N,1048μm,0.3s				
FOSV			AML	AML	
	comp=E,1015μm,0.3s				
FOSV			AML	AML	
	comp=N,1050μm,0.3s				
TRTR	**Tortoreto Alta**	**0.56 96**	⇓P	Pb	21 49 09.4 +0.6
TRTR			AML	AML	
	comp=N,1365μm,0.6s				
TRTR			AML	AML	
	comp=E,2125μm,0.5s				
TRTR			AML	AML	
	comp=N,1363μm,0.6s				
TRTR			AML	AML	
	comp=E,2126μm,0.5s				
FIAM	**Fiamignano**	**0.60 183**	⇑P	Pb	21 49 09.2 -0.3
FIAM			AML	AML	
	comp=E,221μm,0.7s				
FIAM			AML	AML	
	comp=N,196μm,0.9s				
FIAM			AML	AML	
	comp=E,220μm,0.7s				
FIAM			AML	AML	
	comp=N,160μm,0.3s				
FIAM			AML	AML	
	comp=E,221μm,0.7s				
MURB	**Monte Urbino**	**0.61 311**	⇓P	Pg	21 49 09.1 +0.4
MURB			S	Sb	21 49 20.0 +1.6
MURB			AML	AML	
	comp=E,1895μm,0.2s				
MURB			AML	AML	
	comp=E,2310μm,0.8s				
MURB			AML	AML	
	comp=N,1595μm,0.2s				
MURB			AML	AML	
	comp=N,1515μm,0.2s				
MURB			AML	AML	
	comp=E,1896μm,0.2s				
MURB			AML	AML	
	comp=N,1595μm,0.2s				
MURB			AML	AML	
	comp=E,2134μm,0.2s				
MURB			AML	AML	
	comp=N,1512μm,0.2s				
PP3	**Marolino**	**0.61 33**	⇓P	Pb	21 49 09.9 +0.3
PP3			AML	AML	
	comp=E,1300μm,0.3s				
PP3			AML	AML	
	comp=N,1205μm,1.1s				
PP3			AML	AML	
	comp=E,1297μm,0.3s				
PP3			AML	AML	
	comp=N,954μm,0.2s				
PP3			AML	AML	
	comp=E,1254μm,0.3s				
PP3			AML	AML	
	comp=N,1025μm,0.2s				
ARVD	**Arcevia**	**0.65 346**	⇑P	Pg	21 49 09.7 +0.2
ARVD			S	Sb	21 49 21.0 +1.4
ARVD			AML	AML	
	comp=N,284μm,0.5s				
ARVD			AML	AML	
	comp=E,348μm,0.2s				
ARVD			AML	AML	
	comp=E,347μm,0.1s				
ARVD			AML	AML	
	comp=N,229μm,0.1s				
FAGN	**Fagnano**	**0.68 152**	⇑P	Pb	21 49 10.6 -0.2
FAGN			AML	AML	
	comp=N,554μm,0.5s				
FAGN			AML	AML	
	comp=E,736μm,0.4s				
FAGN			AML	AML	
	comp=N,553μm,0.5s				
FAGN			AML	AML	
	comp=E,736μm,0.4s				
VCEL	**Villa Celiera**	**0.69 133**	⇑P	Pg	21 49 10.6 +0.4
VCEL			S	Sb	21 49 22.0 +1.3
VCEL			AML	AML	
	comp=N,690μm,1.1s				
VCEL			AML	AML	
	comp=E,658μm,0.5s				
VCEL			AML	AML	
	comp=N,690μm,1.1s				
VCEL			AML	AML	
	comp=E,658μm,0.5s				
VCEL			AML	AML	
	comp=N,515μm,0.6s				
FRON	**Frontone**	**0.72 334**	⇓P	Pg	21 49 10.8 0.0
FRON			AML	AML	
	comp=N,512μm,0.3s				
FRON			AML	AML	
	comp=E,346μm,0.2s				
FRON			AML	AML	
	comp=N,458μm,0.1s				
FRON			AML	AML	
	comp=E,346μm,0.2s				
ATVO	**AVT- Monte Val**	**0.75 314**	⇓P	Pg	21 49 11.4 +0.1
ATVO			S	Sn	21 49 24.0 -1.2
ATVO			AML	AML	
	comp=N,241μm,0.5s				
ATVO			AML	AML	
	comp=E,290μm,1.5s				
ATVO			AML	AML	
	comp=E,271μm,0.3s				
ATVO			AML	AML	
	comp=N,241μm,0.5s				
MGAB	**Montegabbione**	**0.77 274**	P	Pn	21 49 13.1 -0.7
MGAB			AML	AML	
	comp=N,611μm,0.6s				
MGAB			AML	AML	
	comp=E,568μm,0.5s				
MGAB			AML	AML	
	comp=E,475μm,0.5s				
MGAB			AML	AML	
	comp=N,632μm,0.6s				
MGAB			AML	AML	
	comp=E,568μm,0.5s				
MGAB			AML	AML	
	comp=N,605μm,0.5s				
MGAB			AML	AML	
	comp=E,475μm,0.5s				
MGAB			AML	AML	
	comp=N,618μm,0.5s				
ATMI	**Monte Miggiano**	**0.80 306**	⇑P	Pb	21 49 13.2 +0.3
ATMI			AML	AML	
	comp=E,547μm,0.3s				
ATMI			AML	AML	
	comp=N,545μm,0.3s				
ATMI			AML	AML	
	comp=E,547μm,0.3s				
ATMI			AML	AML	
	comp=N,545μm,0.3s				
ATPI	**Pietralunga -**	**0.80 317**	P	Pg	21 49 12.1 -0.2
ATPI			AML	AML	
	comp=N,196μm,0.6s				
ATPI			AML	AML	
	comp=E,254μm,0.9s				
ATPI			AML	AML	
	comp=N,194μm,0.5s				
ATPI			AML	AML	
	comp=E,195μm,0.4s				
PIEI	**Pieia**	**0.81 326**	⇑P	Pg	21 49 12.4 -0.1
PIEI			AML	AML	
	comp=E,236μm,0.1s				
PIEI			AML	AML	
	comp=N,190μm,0.5s				
PIEI			AML	AML	
	comp=E,236μm,0.1s				
PIEI			AML	AML	
	comp=N,172μm,0.2s				
MPAG	**Monte Paganucc**	**0.82 339**	⇑P	Pg	21 49 12.8 +0.2
MPAG			S	Sn	21 49 26.0 -0.8
MPAG			AML	AML	
	comp=E,304μm,0.4s				
MPAG			AML	AML	
	comp=N,262μm,1.4s				
MPAG			AML	AML	
	comp=E,246μm,0.4s				
MPAG			AML	AML	
	comp=N,236μm,0.3s				
FSSB	**Fossombrone**	**0.87 342**	⇑P	Pg	21 49 13.8 +0.2
FSSB			AML	AML	
	comp=E,690μm,0.6s				
FSSB			AML	AML	
	comp=N,883μm,0.4s				
FSSB			AML	AML	
	comp=E,690μm,0.6s				
FSSB			AML	AML	
	comp=N,883μm,0.4s				
BADI	**Badiali**	**0.93 314**	⇑P	Pg	21 49 14.8 +0.1
PE3	**Peglio**	**0.96 330**	⇑P	Pb	21 49 15.9 +0.2
CAFI	**Castiglion Fio**	**0.99 298**	⇓P	Pg	21 49 15.6 -0.3
CAFI			AML	AML	
	comp=E,132μm,1.5s				
CAFI			AML	AML	
	comp=N,134μm,0.4s				
CAFI			AML	AML	
	comp=E,132μm,1.5s				
CAFI			AML	AML	
	comp=N,134μm,0.4s				
CAFI			AML	AML	
	comp=N,134μm,0.4s				
CAFI			AML	AML	
	comp=N,119μm,0.4s				
CAFI			AML	AML	
	comp=E,125μm,0.3s				
CAFI			AML	AML	
	comp=E,129μm,0.3s				
ABTA	**Abfaltersbach**	**3.91 354**	*e*Pn	Pn	21 49 59.2 +2.1
	comp=E,3.0nm,0.6s				
SQTA	**Sankt Quirin**	**4.57 343**	*e*Pn	Pn	21 50 09.7 +3.6
	comp=E,1.7nm,0.4s				
WATA	**Walderalm**	**4.61 347**	*e*Pn	Pn	21 50 10.9 +4.1
	comp=E,1.1nm,0.3s				
MOTA	**Moosalm**	**4.71 343**	*e*Pn	Pn	21 50 13.5 +5.4
	comp=E,1.2nm,0.4s				
MOA	**Molln**	**5.05 9**	*e*Pn	Pn	21 50 15.6 +2.9
	comp=E,0.2nm,0.2s				

ROM 28 21:49:44.4±0.1, 42°.943N±0°.004×13°.136E±0°.005, h9km, ML2.0/3, 5C-6D, Error ellipse: s-maj=0.5km s-min=0.3km az=167.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**127**	⇓P	Pg	21 49 46.4	-0.1
MC2				S	Sg	21 49 48.2	+0.3
FEMA	**Monte Fema**	**0.07**	**287**	⇓P	Pg	21 49 46.6	+0.1
FEMA				S	Sg	21 49 48.0	-0.1
FEMA				AML	AML		
	comp=E,2200μm,0.2s						
FEMA				AML	AML		
	comp=N,2280μm,0.3s						
T1245	**Castelsantange**	**0.09**	**156**	P	Pg	21 49 46.6	-0.3
T1245				S	Sg	21 49 49.7	+1.0
T1245				AML	AML		
	comp=N,1640μm,0.1s						
T1245				AML	AML		
	comp=E,2120μm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**239**	⇑P	Pg	21 49 47.3	+0.4
T1216				S	Sg	21 49 49.6	+1.0
MMO1	**Montemonaco**	**0.15**	**107**	⇑P	Pg	21 49 47.2	-0.5
MMO1				S	Sg	21 49 50.6	+0.7
AM05	**Amandola Campo**	**0.16**	**78**	⇑P	Pg	21 49 48.5	+0.6
AM05				S	Sg	21 49 51.1	+0.8
CESI	**CESI - Serrava**	**0.18**	**290**	⇑P	Pg	21 49 48.8	+0.6
CESI				S	Sg	21 49 52.3	+1.4
GUMA	**Gualdo di Mace**	**0.19**	**51**	⇑P	Pg	21 49 49.1	+0.8
GUMA				S	Sg	21 49 52.6	+1.6
T1241	**Roccafluvione,**	**0.23**	**112**	⇓P	Pg	21 49 50.3	+1.1
T1241				S	Sg	21 49 54.2	+1.9
T1215	**Vallo di Nera,**	**0.24**	**234**	⇓P	Pg	21 49 50.0	+0.7
T1215				S	Sg	21 49 54.2	+1.6
T1217	**Poggiodomo (PG**	**0.28**	**213**	P	Pg	21 49 50.6	+0.7
T1217				S	Sb	21 49 55.6	-0.8
T1217				AML	AML		
	comp=E,210μm,1.3s						
T1217				AML	AML		
	comp=N,385μm,0.7s						
T1204	**Amatrice, Fraz**	**0.30**	**153**	P	Pg	21 49 51.0	+0.6
T1243	**Rocca Santa Ma**	**0.34**	**137**	P	Pg	21 49 51.5	+0.4
SNTG	**Esanatoglia**	**0.34**	**335**	P	Pg	21 49 51.8	+0.6
LNSS	**Leonessa**	**0.35**	**192**	⇓P	Pg	21 49 52.0	+0.7
LNSS				S	Sb	21 49 57.8	-0.7
ASSB	**Assisi San Ben**	**0.36**	**286**	S	Sb	21 49 59.0	0.0
EL6	**Elcito**	**0.39**	**356**	S	Sb	21 49 60.0	+0.3
CING	**Cingoli**	**0.43**	**6**	⇓P	Pg	21 49 53.4	+0.4
TERO	**Teramo**	**0.47**	**133**	P	Pg	21 49 53.8	+0.3
ARVD	**Arcevia**	**0.57**	**346**	S	Sb	21 50 06.0	+1.1
PCRO	**Pietralacroce**	**0.72**	**23**	P	Pb	21 49 60.0	+0.7
SAMA	**S.Maria delle**	**1.23**	**199**	AML	AML		
	comp=N,584μm,0.4s						
SAMA				AML	AML		
	comp=E,502μm,0.1s						

BJI ***28*** *21:57:32.3±0.0, 25°.43N×125°.28E, h22km, mb4.6/72, mB5.1/53, ML5.0/4, Ms5.0/81, Ms7 4.8/76*
JMA ***28*** *21:57:33.2±0.3, 25°.7N±0°.7×125°.1E±0°.9, h22km±3km, MD5.3/16, MV4.9/16, NW OFF MIYAKOJIMA ISLAND*
JMA Felt II J1 at NW OFF MIYAKOJIMA ISLAND.
NIED ***28*** *21:57:33.2, 25°.73N×125°.07E, h22km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr-2.81; Mθθ2.51; Mφφ0.30; Mrθ-0.79; Mθφ1.20; Mφr-1.21; Fault plane solution: M0 3.26000×10^16 NP1: φs261.00000°, δ36.00000°, λ-66.00000°. NP2: φs52.00000°, δ58.00000°, λ-106.00000°.*
GCMT ***28*** *21:57:35.2±0.2, 25°.63N±0°.01×125°.04E±0°.02, h16km, MW5.0/112, Moment Tensor Solution. s58, c75; s112, c190; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.85±.16; Mθθ3.85±.11; Mφφ0.00±.10; Mrθ1.24±.26; Mθφ1.43±.07; Mφr0.20±.34; Best double couple: M0 4.27600×10^16 NP1: φs255.00000°, δ54.00000°, λ-86.00000°. NP2: φs68.00000°, δ37.00000°, λ-95.00000°. Principal axes: T 4.5080, Plg8.0000°, Azm342.0000°; N -0.4600, Plg3.0000°, Azm72.0000°; P -4.0450, Plg81.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***28*** *21:57:35.6±0.9, 25°.71N×125°.04E, h39km, mb5.2/80, MS4.7/7 Error ellipse: s-maj=6.9km s-min=4.3km az=116.7*
NEIC ***28*** *21:57:37.2±1.0, 25°.68N±0°.05×125°.13E±0°.06, h32km±2km, mb5.1/240, Error ellipse: s-maj=8.7km s-min=7.4km az=132.0*
IDC ***28*** *21:57:38.5±2.0, 25°.74N×125°.17E, h51km±18km, mb4.4/41, mbtmp4.6/45, ML3.5/4, MS4.2/74, Error ellipse: s-maj=12.0km s-min=8.6km az=68.0*

ISC 28 21:57:37.1±0.3, 25°.65N±0°.02×125°.10E±0°.03, h38km±1km, h38km:pP-P, n852, σ1§43/824, mb5.1/269, MS4.3/86, 11C-14D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.73**	**170**	*i* P	**Pn**	**21 57 48.7**	**-2.2**
JIKM				S	**Sn**	**21 57 59.5**	**-1.3**
JIKM	**Ikemajima**	**0.73**	**170**	A	A	21 57 48.7	
	comp=E,347nm,2.4s,comp=E,410nm,2.3s						
JIRB	**Irabujima**	**0.82**	**176**	*i* P	**Pn**	**21 57 49.7**	**-2.3**
JIRB				S	**Sn**	**21 58 01.2**	**-1.7**
JIRB	**Irabujima**	**0.82**	**176**	A	A	21 57 49.7	
	comp=E,317nm,2.0s,comp=E,281nm,0.8s						
JMJ	**Miyako jima 2**	**0.84**	**168**	P	**Pn**	**21 57 51.7**	**-0.8**
JMJ2	**Miyako jima3**	**0.92**	**167**	*i* P	**Pn**	**21 57 51.8**	**-1.7**
JMJ2				S	**Sn**	**21 58 04.9**	**-0.6**
JMJ2	**Miyako jima3**	**0.92**	**167**	A	A	21 57 51.8	
	comp=E,196nm,1.7s,comp=E,197nm,1.5s						
JOGS	**Gusukube**	**0.92**	**163**	*i* P	**Pn**	**21 57 52.0**	**-1.6**
JOGS				S	**Sn**	**21 58 05.3**	**-0.3**
JOGS	**Gusukube**	**0.92**	**163**	A	A	21 57 52.0	
	comp=E,353nm,0.7s,comp=E,297nm,1.9s						
JTJ	**Tarama**	**1.06**	**200**	*i* P	**Pn**	**21 57 53.4**	**-2.1**
JTJ				S	**Sn**	**21 58 08.2**	**-0.8**
JTJ	**Tarama**	**1.06**	**200**	A	A	21 57 53.4	
	comp=E,131nm,3.2s,comp=E,112nm,2.0s						
JISG	**Ishigakijimahi**	**1.27**	**214**	*i* P	**Pn**	**21 57 56.9**	**-1.4**
JISG				S	**Sn**	**21 58 13.7**	**-0.5**
JISG	**Ishigakijimahi**	**1.27**	**214**	A	A	21 57 56.9	
	comp=E,35nm,1.8s,comp=E,31nm,1.1s						
JIJ	**Ishigaki jima**	**1.54**	**215**	*i* P	**Pn**	**21 58 00.8**	**-1.3**
JIJ				S	**Sn**	**21 58 21.0**	**+0.1**
JIJ	**Ishigaki jima**	**1.54**	**215**	A	A	21 58 00.8	
	comp=E,42nm,1.5s,comp=E,27nm,1.4s						
JKE	**Kume jima 2**	**1.66**	**66**	P	**Pn**	**21 58 01.3**	**-2.4**
JKE	**Kume jima 2**	**1.66**	**66**	A	A	21 58 01.3	
	comp=E,12nm,9.8s,comp=E,8.0nm,5.6s						
JKRS	**Kuro-shima**	**1.72**	**216**	P	**Pn**	**21 58 03.9**	**-0.5**
JKRS				*e*S	**Sn**	**21 58 26.4**	**+1.3**
JKRS	**Kuro-shima**	**1.72**	**216**	A	A	21 58 03.9	
	comp=E,89nm,2.1s,comp=E,92nm,2.2s						
IRIF	**Iriomote-Funau**	**1.80**	**224**	*i* P	**Pn**	**21 58 04.5**	**-1.1**
IRIF				S	**Sn**	**21 58 27.9**	**+0.6**
IRIF	**Iriomote-Funau**	**1.80**	**224**	A	A	21 58 04.5	
	comp=E,26nm,1.6s,comp=E,25nm,1.4s						
HATJ	**Hateruma jima**	**1.97**	**217**	P	**Pn**	**21 58 07.6**	**-0.3**
HATJ				S	**Sn**	**21 58 33.8**	**+2.4**
HATJ	**Hateruma jima**	**1.97**	**217**	A	A	21 58 07.6	
	comp=E,54nm,2.8s,comp=E,59nm,4.7s						
JAGN	**Aguni-jima**	**2.14**	**63**	*e*P	**Pn**	**21 58 08.2**	**-2.0**
JAGN	**Aguni-jima**	**2.14**	**63**	A	A	21 58 08.2	
	comp=E,15nm,8.3s,comp=E,11nm,6.6s						
YOJ	**Yonaguni jima**	**2.23**	**239**	Pn	**Pn**	**21 58 11.1**	**-0.5**
YOJ	**Yonaguni jima**	**2.23**	**239**	P	**Pn**	**21 58 11.1**	**-0.5**
YOJ	**Yonaguni jima**	**2.23**	**239**	P	**Pn**	**21 58 14.7**	**+3.2**
YOJ	**Yonaguni jima**	**2.23**	**239**	P	**Pn**	**21 58 11.1**	**-0.5**
YOJ				S	**Sn**	**21 58 39.2**	**+1.3**
YOJ	**Yonaguni jima**	**2.23**	**239**	A	A	21 58 11.1	
	comp=E,11nm,9.6s,comp=E,13nm,6.2s						
JYNG	**Yonagunijimaku**	**2.29**	**239**	*e*P	**Pn**	**21 58 11.7**	**-0.7**
JYNG				S	**Sn**	**21 58 40.7**	**+1.4**
JYNG	**Yonagunijimaku**	**2.29**	**239**	A	A	21 58 11.7	
	comp=E,12nm,6.5s,comp=E,13nm,14.9s						
JJT3	**Tamagusuku3**	**2.46**	**78**	A	A	21 58 13.5	
	comp=E,37nm,6.5s,comp=E,30nm,3.7s						
JNTH	**Nagotoyohara**	**2.77**	**71**	A	A	21 58 17.6	
	comp=E,6.0nm,7.8s,comp=E,5.0nm,8.3s						
JIH	**Iheya**	**2.92**	**61**	A	A	21 58 19.6	
	comp=E,7.0nm,7.5s,comp=E,7.0nm,6.7s						
JOW	**Kunigami**	**3.08**	**67**	P	**Pn**	**21 58 23.0**	**-0.3**
	43nm,0.3s,baz=252,slow=12,SNR=35						
JOW				S	**Sn**	**21 58 58.3**	**-0.6**
	202nm,0.5s,baz=279,slow=22,SNR=6.3 168nm,0.4s						
JOW	**Kunigami**	**3.08**	**67**	Pn	**Pn**	**21 58 23.0**	**-0.3**
JOW	**Kunigami**	**3.08**	**67**	P	**Pn**	**21 58 25.3**	**+2.0**
JOW	**Kunigami**	**3.08**	**67**	A	A	21 58 22.0	
	comp=E,6.0nm,9.4s,comp=E,5.0nm,6.7s						
JYRO	**Yoronjima**	**3.30**	**65**	A	A	21 58 25.1	
	comp=E,6.0nm,8.1s,comp=E,4.0nm,16.3s						
TATO	**Taipei**	**3.34**	**259**		**Pn**	**21 58 26.6**	**-0.1**
TATO	**Taipei**	**3.34**	**259**	P	Pn	21 58 32.9	+6.2
QZH	**Quanzhou**	**5.93**	**265**	*e*Pn	**Pn**	**21 59 05.0**	**+2.6**
QZH				Sn	**Sn**	**22 00 08.8**	**-0.4**
QZH				smax	smax		
	comp=N,180nm,1.2s						
QZH				smax	smax		
	comp=E,150nm,1.2s						
QZH				LR	LR		
	comp=N,2μm,9.2s						
QZH				LR	LR		
	comp=E,1μm,8.3s						
QZH				LR	LR		
	comp=Z,2μm,14.5s						
JSU	**Suzuyama**	**7.50**	**38**	Pn	**Pn**	**21 59 25.9**	**+2.0**
NJ2	**Nanjing**	**8.41**	**321**	*e*P	**Pn**	**21 59 37.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,4μm,7.3s						
NJ2				LR	LR		
	comp=E,5μm,10.2s						
NJ2				LR	LR		
	comp=Z,5μm,9.7s						
HKPS	**Hong Kong Po S**	**10.57**	**254**		**Pn**	**22 00 05.1**	**-1.0**
WHN	**Wuhan**	**10.67**	**300**	P	**Pn**	**22 00 10.5**	**+3.1**
WHN				S	Sn	22 02 22.0	+16
WHN				pmax	pmax		
	comp=Z,50nm,0.7s						
WHN				LR	LR		
	comp=N,18μm,13.6s						
WHN				LR	LR		
	comp=E,4μm,7.3s						
WHN				LR	LR		
	comp=Z,7μm,11.0s						
JMN	**Monobe**	**11.09**	**41**	Pn	**Pn**	**22 00 11.3**	**-1.8**
CNSH	**ChangSha**	**11.15**	**286**	⇑P	**Pn**	**22 00 10.0**	**-4.0**
CNSH				S	**Sn**	**22 02 13.8**	**-3.6**
KSAR	**Wonju Array Be**	**12.00**	**11**	Pn	**Pn**	**22 00 25.4**	**-0.1**
KSAR	**Wonju Array Be**	**12.00**	**11**	P	**Pn**	**22 00 25.4**	**-0.1**
KSRS	**Korea Array**	**12.02**	**11**	P	**Pn**	**22 00 26.6**	**+0.9**
	0.2nm,0.3s,baz=192,slow=14,SNR=13						
KSRS				S	**Sn**	**22 02 36.0**	**-2.4**
	1.2nm,0.6s,baz=284,slow=9.4,SNR=1.1						
KSRS				LR	LR	22 05 13.5	
	comp=Z,2μm,19.7s,baz=195,slow=38 16nm,1.1s						
KS19	**Wonju Array Si**	**12.05**	**11**	Pn	**Pn**	**22 00 26.9**	**+0.7**
TIA	**Tai'an**	**12.56**	**329**	P	**P**	**22 00 42.8**	**-1.3**
TIA				S	**Sn**	**22 02 52.0**	**+0.3**
DL2	**Dalian**	**13.54**	**348**	P	**P**	**22 00 57.5**	**+2.5**
DL2				S	**S**	**22 03 37.0**	**-0.9**
LYN	**LuoYang**	**14.07**	**312**	⇑P	**P**	**22 00 58.3**	**-2.7**
LYN				pP	Pn	22 01 06.3	+12
LYN				S	**S**	**22 03 44.5**	**-4.4**
LYN				pmax	pmax		
	comp=Z,20nm,1.4s						
LYN				pmax	pmax		
	comp=Z,200nm,4.2s						
LYN				LR	LR		
	comp=N,4μm,12.6s						
LYN				LR	LR		
	comp=Z,3μm,12.8s						
ENH	**Enshi**	**14.55**	**292**	P	**P**	**22 01 04.9**	**-1.4**
HNS	**HongShan**	**14.68**	**325**	⇑P	**P**	**22 01 04.3**	**-3.4**
HNS				S	**S**	**22 03 54.5**	**-6.7**
HNS				SS	**SnSn**	**22 04 08.8**	**+12**
HNS				pmax	pmax		
	comp=Z,12nm,1.6s						
HNS				LR	LR		
	comp=N,3μm,9.6s						
HNS				LR	LR		
	comp=E,3μm,10.7s						
HNS				LR	LR		
	comp=Z,3μm,9.0s						
JHJ	**Hachijo jima 2**	**14.80**	**56**	LR	LR	22 06 43.0	
	comp=Z,415nm,18.6s,baz=202,slow=37						
JCJ	**Chichijima**	**15.38**	**81**	LR	LR	22 06 19.4	
	comp=Z,304nm,20.0s,baz=269,slow=34						
JCJ	**Chichijima**	**15.38**	**81**	Pn	**Pn**	**22 01 07.4**	**-3.9**
QIZ	**Qiongzhong**	**15.57**	**248**	P	**P**	**22 01 18.3**	**+0.6**
QIZ	**Qiongzhong**	**15.57**	**248**	P	**P**	**22 01 16.3**	**-1.4**
QIZ				S	**Sn**	**22 04 08.8**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,210nm,2.5s						
QIZ				LR	LR		
	comp=N,690nm,9.7s						
QIZ				LR	LR		
	comp=E,670nm,8.4s						
QIZ				LR	LR		
	comp=Z,590nm,7.0s						
MJAR	**Matsushiro Arr**	**15.60**	**43**	P	**Pn**	**22 01 14.2**	**0.0**
	baz=232,slow=9.2,SNR=3.4						
MJAR				LR	LR	22 07 34.3	
	comp=Z,1μm,20.9s,baz=226,slow=38 2.4nm,1.0s						
TIY	**Taiyuan**	**16.14**	**321**	*e*P	P	22 01 32.0	+8.0
TIY				pP	sP	22 01 40.5	+2.1
TIY				sP	pP	22 01 52.5	+19
TIY				S	**S**	**22 04 31.3**	**+0.1**
TIY				sS	sS	22 04 46.0	+0.5
BJT	**Baijiatuau**	**16.17**	**335**		**Pn**	**22 01 21.8**	**+0.4**
BJT	**Baijiatuau**	**16.17**	**335**	P	**Pn**	**22 01 21.8**	**+0.4**
BJT				pmax	pmax		
	comp=Z,38nm,1.1s						
BJI	**Beijing**	**16.18**	**335**	P	**P**	**22 01 23.5**	**-0.8**
BJI				sP	**pP**	**22 01 32.5**	**-1.0**
BJI				sS	**S**	**22 04 36.5**	**+4.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
BJI				pmax	pmax		
	comp=Z,500nm,9.4s						
BJI				LR	LR		
	comp=Z,180nm,14.8s						
BJI				LR	LR		
	comp=Z,1μm,14.7s						
BJI				LR	LR		
	comp=Z,1μm,18.1s						

SNY	**Shenyang**	**16.19 356**	⇓P	**P**	**22 01 23.5 -0.9**
SNY			pmax	pmax	
	comp=Z,100nm,1.5s				
SNY			pmax	pmax	
	comp=Z,820nm,5.3s				
SNY			LR	LR	
	comp=Z,2μm,18.2s				
SNY			LR	LR	
	comp=Z,5μm,16.5s				
SNY			LR	LR	
	comp=Z,2μm,17.7s				
XAN	**Xi'an**	**16.33 305**	P	**P**	**22 01 28.5 +2.4**
XAN			pP	pP	22 01 34.5 -0.7
XAN			pmax	pmax	
	comp=Z,17nm,1.9s				
XAN			pmax	pmax	
	comp=Z,250nm,3.5s				
XAN			LR	LR	
	comp=Z,4μm,11.9s				
XAN			LR	LR	
	comp=Z,3μm,13.9s				
XAN			LR	LR	
	comp=Z,3μm,12.0s				
GYA	**Guiyang**	**16.59 277**	⇑*i*P	**P**	**22 01 32.5 +3.4**
GYA			S	**S**	**22 04 35.8 -4.9**
GYA			pmax	pmax	
	comp=Z,73nm,1.4s				
GYA			pmax	pmax	
	comp=Z,350nm,3.5s				
GYA			LR	LR	
	comp=Z,590nm,3.8s				
GYA			LR	LR	
	comp=Z,360nm,4.2s				
GYA			LR	LR	
	comp=Z,320nm,4.7s				
JSD	**Sado**	**16.64 39**	Pn	**Pn**	**22 01 25.5 -1.9**
MSHR	**Mys Shultsa**	**17.61 15**	⇓*e*P	**P**	**22 01 42.2 +2.1**
CN2	**Changchun**	**18.12 1**	*e*P	**P**	**22 01 47.5 +1.8**
CN2			*e*pP	pP	22 01 55.5 +0.6
CN2			*e*S	**Sn**	**22 05 04.8 -1.9**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.8s				
CN2			pmax	pmax	
	comp=Z,300nm,4.0s				
CN2			LR	LR	
	comp=Z,1μm,13.0s				
CN2			LR	LR	
	comp=Z,2μm,13.0s				
CN2			LR	LR	
	comp=Z,1μm,12.0s				
DAV	**Davao City (W)**	**18.48 179**	LR	LR	22 08 38.1
	comp=Z,587nm,21.3s,baz=335,slow=36				
HHC	**Hu-ho-hao-te**	**18.89 327**	*e*P	**Pn**	**22 01 57.5 +2.3**
HHC			S	**Sn**	**22 05 23.5 -2.1**
HHC			SS	**SnSn**	**22 05 49.0 +9.1**
HHC			pmax	pmax	
	comp=Z,48nm,0.9s				
HHC			LR	LR	
	comp=Z,4μm,8.9s				
HHC			LR	LR	
	comp=Z,2μm,7.9s				
HHC			LR	LR	
	comp=Z,4μm,11.1s				
MDJ	**Mudanjiang**	**19.27 10**	P	**Pn**	**22 01 59.4 -0.3**
MDJ	**Mudanjiang**	**19.27 10**	P	**Pn**	**22 02 03.0 +3.3**
MDJ			sP	pwP	22 02 09.0 -1.2
MDJ			PP	**sP**	**22 02 16.8 +4.0**
MDJ			S	**Sn**	**22 05 41.5 +6.8**
MDJ			pmax	pmax	
	comp=Z,23nm,1.4s				
MDJ			pmax	pmax	
	comp=Z,450nm,4.2s				
MDJ			LR	LR	
	comp=Z,1μm,17.9s				
MDJ			LR	LR	
	comp=Z,3μm,14.1s				
MDJ			LR	LR	
	comp=Z,1μm,21.7s				
USA0B	**Ussuriysk Arra**	**19.34 15**	P	**P**	**22 01 59.3 +0.2**
USA0B	**Ussuriysk Arra**	**19.34 15**	P	**P**	**22 01 59.3 +0.2**
USA0B			pmax	pmax	
	comp=Z,100nm,1.4s				
USRK	**Ussuriysk Ar.**	**19.34 15**	P	**P**	**22 01 59.3 +0.2**
	comp=Z,0.4nm,0.3s,baz=196,slow=8.6,SNR=7.1				
	comp=Z,3.3nm,0.8s				
USRK	**Ussuriysk Ar.**	**19.34 15**		**P**	**22 01 58.7 -0.4**
BTO	**Baotou**	**19.50 324**	*e*P	**Pn**	**22 02 05.5 +2.9**
BTO			LR	LR	
	comp=Z,8μm,15.9s				
BTO			LR	LR	
	comp=Z,6μm,14.7s				
CD2	**Chengdu**	**19.51 290**	P	**Pn**	**22 02 03.0 +0.4**
CD2			S	**Sn**	**22 05 42.5 +1.9**
CD2			pmax	pmax	
	comp=Z,220nm,1.1s				
CD2			pmax	pmax	
	comp=Z,690nm,11.5s				
CD2			LR	LR	
	comp=Z,4μm,12.3s				
CD2			LR	LR	
	comp=Z,4μm,11.4s				
CD2			LR	LR	
	comp=Z,4μm,11.8s				
XLT	**XiLinHaoTe**	**19.64 340**	⇓*i*P	**Pn**	**22 02 07.8 +3.7**
XLT			sP	sP	22 02 16.3 -0.7
XLT			S	**Sn**	**22 05 50.0 +6.4**
XLT			pmax	pmax	
	comp=Z,95nm,2.0s				
XLT			pmax	pmax	
	comp=Z,530nm,5.6s				
XLT			LR	LR	
	comp=Z,150nm,15.2s				
XLT			LR	LR	
	comp=Z,1μm,14.0s				
XLT			LR	LR	
	comp=Z,1μm,13.5s				
BNX	**BinXian**	**20.14 5**	⇑P	Pn	22 02 11.5 +1.6
BNX			pP	pP	22 02 16.0 -1.1
BNX			sP	pwP	22 02 18.0 -1.2
BNX			PP	**PnPn**	**22 02 31.5 +6.5**
BNX			S	Sn	22 05 59.3 +3.9
BNX			sS	sS	22 06 02.3 -3.6
BNX			pmax	pmax	
	comp=Z,37nm,1.4s				
BNX			pmax	pmax	
	comp=Z,490nm,3.9s				
BNX			LR	LR	
	comp=Z,2μm,15.7s				
BNX			LR	LR	
	comp=Z,970nm,14.7s				
BNX			LR	LR	
	comp=Z,2μm,15.1s				
KMI	**Kunming**	**20.21 273**	⇓P	Pn	22 02 12.0 +0.8
KMI			pmax	pmax	
	comp=Z,42nm,0.9s				
KMI			pmax	pmax	
	comp=Z,620nm,7.8s				
KMI			LR	LR	
	comp=Z,990nm,11.8s				
KMI			LR	LR	
	comp=Z,2μm,12.9s				
KMI			LR	LR	
	comp=Z,1μm,13.4s				
LZH	**Lanzhou**	**20.97 305**	*e*P	Pn	22 02 19.3 -0.5
LZH			sP	pP	22 02 25.8 -0.6
LZH			PP	**PnPn**	**22 02 37.3 +0.8**
LZH			pmax	pmax	
	comp=Z,53nm,1.0s				
LZH			pmax	pmax	
	comp=Z,450nm,4.5s				
LZH			LR	LR	
	comp=Z,4μm,13.4s				
LZH			LR	LR	
	comp=Z,2μm,13.7s				
LZH			LR	LR	
	comp=Z,3μm,13.9s				
PZH	**PanZhiHua**	**21.00 277**	⇓P	Pn	22 02 19.0 -1.2
PZH			sP	pP	22 02 26.0 -0.7
PZH			S	Sn	22 06 11.5 -5.2
PZH			PcP	**PcP**	**22 06 25.0 +1.2**
PZH			pmax	pmax	
	comp=Z,20nm,1.3s				
PZH			pmax	pmax	
	comp=Z,120nm,5.3s				
PZH			LR	LR	
	comp=Z,2μm,13.1s				
PZH			LR	LR	
	comp=Z,3μm,11.4s				
PZH			LR	LR	
	comp=Z,3μm,12.3s				
UBPT	**Khong Chiam**	**21.06 244**	P	**P**	**22 02 19.6 +1.6**
UBPT			IAmb	IAmb	22 02 24.5
	comp=Z,162nm,1.4s				
UBPT	**Khong Chiam**	**21.06 244**	P	**P**	**22 02 19.0 +1.0**
	comp=Z,2μmcomp=Z,85nm,2.1s				
UBPT	**Khong Chiam**	**21.06 244**	P	**P**	**22 02 21.2 +3.2**
	comp=Z,89nm,2.1s				
KKM	**Kota Kinabalu**	**21.27 205**	P	**P**	**22 02 20.9 +0.5**
KKM			IAmb	IAmb	22 02 22.8
	comp=Z,68nm,0.9s				
KKM	**Kota Kinabalu**	**21.27 205**	P	**P**	**22 02 20.3 0.0**
	comp=Z,1μmcomp=Z,92nm,1.0s				
KKM	**Kota Kinabalu**	**21.27 205**	P	**P**	**22 02 22.1 +1.8**
	comp=Z,86nm,1.0s				
MYLDM	**Lahad Datu**	**21.31 198**	P	**P**	**22 02 21.8 +1.1**
MYLDM	**Lahad Datu**	**21.31 198**	P	**P**	**22 02 22.1 +1.4**
	comp=Z,2μmcomp=Z,114nm,1.1s				
GUMO	**Guam**	**22.11 119**	LR	LR	22 09 18.6
	comp=Z,404nm,21.6s,baz=312,slow=32				
GAMI	**Galela, Maluku**	**23.81 173**	P	**P**	**22 02 46.6 0.0**
	comp=Z,2μmcomp=Z,147nm,1.0s				
HIA	**Hailar**	**23.95 351**	P	**P**	**22 02 47.8 +0.2**
HIA			IAmb	IAmb	22 02 57.5
	comp=Z,99nm,1.4s				
HIA	**Hailar**	**23.95 351**	P	**P**	**22 02 47.8 +0.2**
HIA			pmax	pmax	
	comp=Z,99nm,1.4s				
PHRA	**Phrae**	**24.10 258**	P	**P**	**22 02 50.2 +0.9**
KLR	**Kul'dur**	**24.11 11**	P	**P**	**22 02 48.8 -0.3**
	comp=Z,7.1nm,0.9s,baz=220,slow=5.6,SNR=14				
KLR			LR	LR	22 12 07.5
	comp=Z,693nm,19.4s,baz=187,slow=36				
	comp=Z,7.1nm,0.9s				
KLR	**Kul'dur**	**24.11 11**	⇑*e*P	**P**	**22 02 51.2 +2.1**
KLR			pmax	pmax	
	comp=Z,50nm,1.4s				
TOLI2	**Tolitoli**	**24.75 190**	P	**P**	**22 02 55.7 +0.6**
TOLI2			IAmb	IAmb	22 03 07.2
	comp=Z,43nm,1.0s				
TOLI2	**Tolitoli**	**24.75 190**	P	**P**	**22 02 57.2 +2.0**
	comp=Z,50nm,1.5s				
TNTI	**Ternate**	**24.82 175**	P	**P**	**22 02 56.5 +0.6**
TNTI			IAmb	IAmb	22 03 02.2
	comp=Z,65nm,0.9s				
TNTI	**Ternate**	**24.82 175**	P	**P**	**22 02 56.0 +0.1**
	comp=Z,63nm,1.2s				
TNTI	**Ternate**	**24.82 175**	P	**P**	**22 03 02.0 +6.1**
	comp=Z,87nm,1.2s				
GTOI	**Gorontalo**	**24.95 185**	P	**P**	**22 02 56.4 -0.6**
	comp=Z,271nmcomp=Z,20nm,1.3s				
NAYO	**Nakonayok**	**24.98 248**	P	**P**	**22 03 00.5 +3.1**
	comp=Z,432nm,1.0s				
CHTO	**Chiang Mai**	**25.12 260**	P	**P**	**22 02 58.6 0.0**
CHTO	**Chiang Mai**	**25.12 260**	P	**P**	**22 02 58.6 0.0**
CHTO			pmax	pmax	
	comp=Z,21nm,1.0s				
MRSI	**Marisa**	**25.21 187**	P	**P**	**22 03 00.2 +0.9**
	comp=Z,976nmcomp=Z,66nm,0.8s				
CM31	**Chiang Mai Arr**	**25.25 259**	P	**P**	**22 03 00.0 +0.3**
CMAR	**Chiang Mai Arr**	**25.25 259**	P	**P**	**22 03 00.6 +0.8**
	comp=Z,5.9nm,0.9s,baz=344,slow=29,SNR=5.7				
CMAR			PcP	**PcP**	**22 06 33.7 +1.1**
	comp=Z,2.1nm,0.3s,baz=51,slow=0.7,SNR=8.7				
CMAR			LR	LR	22 13 34.7
	comp=Z,382nm,18.9s,baz=60,slow=38				
	comp=Z,5.9nm,0.9s				
CMAR	**Chiang Mai Arr**	**25.25 259**	P	**P**	**22 03 00.2 +0.4**
GTA	**Gaotai**	**25.25 309**	⇓P	**P**	**22 03 00.0 +0.2**
GTA			pP	pP	22 03 04.0 -5.7
GTA			sP	pwP	22 03 07.0 -5.4
GTA			PcP	**PcP**	**22 06 37.5 +5.1**
GTA			S	**S**	**22 07 25.3 +2.3**
GTA			sS	sS	22 07 37.3 -2.6
GTA			PcS	**PcS**	**22 10 11.0 -1.9**
GTA			ScS	**ScS**	**22 13 57.0 -0.5**
GTA			pmax	pmax	
	comp=Z,63nm,1.1s				
GTA			pmax	pmax	
	comp=Z,320nm,7.6s				
GTA			LR	LR	
	comp=Z,2μm,13.8s				
GTA			LR	LR	
	comp=Z,2μm,14.5s				
GTA			LR	LR	
	comp=Z,1μm,13.5s				
MPSI	**Mapaga**	**25.66 192**	P	**P**	**22 03 04.1 +0.7**
	comp=Z,803nmcomp=Z,40nm,1.0s				
SBUM	**Sibu**	**26.18 210**	IAmb	IAmb	22 03 11.9
	comp=Z,52nm,1.0s				
SBUM	**Sibu**	**26.18 210**	P	**P**	**22 03 08.6 +0.4**
	comp=Z,519nmcomp=Z,61nm,1.0s				
LBMI	**Labuha**	**26.23 175**	P	**P**	**22 03 09.3 +0.7**
	comp=Z,82nm,1.0s				
ULN	**Ulaanbaatar**	**26.35 332**	P	**P**	**22 03 10.0 +0.4**
ULN			IAmb	IAmb	22 03 20.3
	comp=Z,79nm,1.1s				
ULN	**Ulaanbaatar**	**26.35 332**	P	**P**	**22 03 10.0 +0.4**
ULN			pmax	pmax	
	comp=Z,79nm,1.1s				
ULN	**Ulaanbaatar**	**26.35 332**	P	**P**	**22 03 09.0 -0.6**
	comp=Z,3μmcomp=Z,271nm,1.1s				
SONM	**Songino Array**	**26.61 331**	P	**P**	**22 03 12.3 +0.4**
	comp=Z,13nm,0.9s,baz=149,slow=9.6,SNR=24				
SONM			PcP	**PcP**	**22 06 35.0 -0.4**
	comp=Z,3.5nm,0.9s,baz=166,slow=3.9,SNR=4.8				
SONM			LR	LR	22 15 11.8
	comp=Z,1μm,18.6s,baz=144,slow=40				
	comp=Z,13nm,0.9s				
SONM	**Songino Array**	**26.61 331**	P	**P**	**22 03 12.1 +0.1**
SONM			IAmb	IAmb	22 03 22.6
	comp=Z,51nm,1.1s				
SONM	**Songino Array**	**26.61 331**	P	**P**	**22 03 12.1 +0.1**
SONM			pmax	pmax	
	comp=Z,51nm,1.1s				
APSI	**Ampana**	**26.61 188**	P	**P**	**22 03 12.9 +0.9**
	comp=Z,1μmcomp=Z,118nm,1.2s				
LUWI	**Luwuk**	**26.63 185**	P	**P**	**22 03 12.3 +0.2**
LUWI			IAmb	IAmb	22 03 24.8
	comp=Z,49nm,1.0s				
LUWI	**Luwuk**	**26.63 185**	P	**P**	**22 03 12.4 +0.2**
	comp=Z,1μmcomp=Z,52nm,1.2s				
LUWI	**Luwuk**	**26.63 185**	P	**P**	**22 03 18.3 +6.1**
	comp=Z,53nm,1.3s				
SIJI	**Sorong**	**27.02 166**	P	**P**	**22 03 16.6 +0.8**
	comp=Z,12nm,0.8s,baz=82,slow=7.2,SNR=4.3				
SIJI			LR	LR	22 11 58.1
	comp=Z,591nm,21.5s,baz=34,slow=32				
	comp=Z,12nm,0.8s				
SANI	**Sanana**	**27.55 178**	P	**P**	**22 03 20.3 -0.1**
	comp=Z,798nmcomp=Z,77nm,1.0s				
SANI	**Sanana**	**27.55 178**	P	**P**	**22 03 20.5 +0.1**
	comp=Z,78nm,1.0s				
CIT	**Chita**	**27.76 345**	*e*P	**P**	**22 03 22.6 +0.4**
CIT			pmax	pmax	
	comp=Z,218nm,2.0s				
GOMU	**GeErMu**	**27.93 299**	P	**P**	**22 03 25.8 +1.6**
GOMU			pP	pP	22 03 32.5 -1.8
GOMU			sP	pwP	22 03 36.3 -0.6
GOMU			pmax	pmax	
	comp=Z,6.0nm,0.8s				
GOMU			pmax	pmax	
	comp=Z,110nm,5.2s				
GOMU			LR	LR	
	comp=Z,650nm,14.9s				
GOMU			LR	LR	
	comp=Z,780nm,12.7s				
GOMU			LR	LR	
	comp=Z,830nm,12.8s				
KSM	**Kuching**	**27.94 213**	P	**P**	**22 03 24.8 +0.8**
KSM			IAmb	IAmb	22 03 28.3
	comp=Z,42nm,1.1s				
KSM	**Kuching**	**27.94 213**	P	**P**	**22 03 24.7 +0.7**
	comp=Z,38nm,1.1s				
KSM	**Kuching**	**27.94 213**	P	**P**	**22 03 25.3 +1.3**
	comp=Z,38nm,1.1s				
ZEA	**Zeya**	**28.11 3**	*e*P	P	22 03 34.4 +9.3
ZEA			*e*		22 03 46.0
ZEA			pmax	pmax	
	comp=Z,20nm,1.3s				
ZEA			MLR	MLR	
	comp=N,1μm,15.0s				
ZEA			MLR	MLR	
	comp=Z,900nm,16.0s				
MTKI	**Muara Teweh, K**	**28.21 202**	P	**P**	**22 03 27.0 +0.6**
	comp=Z,39nm,0.8s				
KRAI	**Karang Ratu**	**28.97 173**	P	**P**	**22 03 33.4 +0.3**
	comp=Z,14nm,1.2s				
SURA	**Surathani**	**29.22 240**	P	**P**	**22 03 39.1 +3.7**
FAKI	**Fak Fak**	**29.23 165**	P	**P**	**22 03 36.0 +0.5**
FAKI			IAmb	IAmb	22 03 39.9
	comp=Z,38nm,1.0s				
FAKI	**Fak Fak**	**29.23 165**	P	**P**	**22 03 35.4 0.0**
	comp=Z,39nm,1.1s				
FAKI	**Fak Fak**	**29.23 165**	P	**P**	**22 03 37.6 +2.2**
	comp=Z,40nm,1.2s				
PMSI	**Majene**	**29.59 193**	P	**P**	**22 03 38.9 +0.2**
	comp=Z,50nm,1.4s				
SRIT	**Nakonsritamara**	**29.59 240**	P	**P**	**22 03 40.4 +1.7**
SRIT			IAmb	IAmb	22 03 41.4
	comp=Z,57nm,1.2s				
SRIT	**Nakonsritamara**	**29.59 240**	P	**P**	**22 03 41.3 +2.6**
	comp=Z,54nm,1.3s				
ZAK	**Zakamensk**	**29.87 331**	*e*P	P	22 03 36.3 -4.7
SPSI	**Sidrap Palu**	**29.89 191**	P	**P**	**22 03 41.3 +0.1**
	comp=Z,9.0nm,1.1s				
SHL	**Shillong**	**29.91 277**	P	**P**	**22 03 41.8 0.0**
SHL	**Shillong**	**29.91 277**	P	**P**	**22 03 41.8 0.0**
SHL			pmax	pmax	
	comp=Z,10.0nm,0.9s				
LSA	**Lhasa**	**30.27 285**	P	**P**	**22 03 45.9 +0.7**
LSA	**Lhasa**	**30.27 285**	P	**P**	**22 03 45.9 +0.7**
LSA			pmax	pmax	
	comp=Z,8.0nm,1.1s				
SMPI	**Sarmi**	**30.47 152**	P	**P**	**22 03 46.4 0.0**
BBKI	**Banjar Baru**	**30.60 200**	P	**P**	**22 03 48.2 +0.6**
KAPI	**Kappang**	**30.92 190**	LR	LR	22 15 49.8
	comp=Z,366nm,21.8s,baz=9.0,slow=35				
KAPI	**Kappang**	**30.92 190**	P	**P**	**22 03 51.7 +1.4**
KAPI	**Kappang**	**30.92 190**	P	**P**	**22 03 51.7 +1.4**
KAPI			pmax	pmax	
	comp=Z,10.0nm,1.1s				
KAPI	**Kappang**	**30.92 190**	P	**P**	**22 03 51.0 +0.6**
	comp=Z,6.8nm,1.5s				
KULM	**Kulim**	**30.95 233**	P	**P**	**22 03 50.9 +0.2**
KULM			IAmb	IAmb	22 03 53.0
	comp=Z,28nm,1.0s				
KULM	**Kulim**	**30.95 233**	P	**P**	**22 03 51.0 +0.3**
	comp=Z,33nm,1.2s				
BBSI	**Bau Bau**	**31.04 185**	P	**P**	**22 03 52.2 +0.7**
	comp=Z,30nm,1.1s				
BKSI	**Bulukumba**	**31.16 190**	P	**P**	**22 03 53.2 +0.7**
	comp=Z,4.2nm,1.1s				
IPM	**Ipoh**	**31.24 232**	P	**P**	**22 03 53.2 -0.2**
IPM	**Ipoh**	**31.24 232**	P	**P**	**22 03 52.6 -0.7**
	comp=Z,512nmcomp=Z,62nm,0.9s				
IPM	**Ipoh**	**31.24 232**	P	**P**	**22 03 53.9 +0.6**
	comp=Z,62nm,0.9s				
MYKOM	**Kota Tinggi**	**31.33 224**	P	**P**	**22 03 54.4 +0.4**
MYKOM			IAmb	IAmb	22 03 56.1
	comp=Z,25nm,0.8s				
MYKOM	**Kota Tinggi**	**31.33 224**	P	**P**	**22 03 54.4 +0.4**
	comp=Z,37nm,1.0s				
TPRI	**Tanjung Pinang**	**31.59 222**	P	**P**	**22 03 56.6 +0.2**
	comp=Z,39nm,1.0s				
MOY	**Mondy**	**31.80 331**	*e*P	**P**	**22 03 58.1 +0.1**
MOY			pmax	pmax	
	comp=Z,67nm,2.2s				
DSRI	**Dabo**	**32.68 220**	P	**P**	**22 04 05.8 -0.1**
TPI	**Tanjungpandan**	**32.91 213**	P	**P**	**22 04 07.6 -0.3**
	comp=Z,10nm,0.6s				
PPBI	**Pangkal Pinang**	**33.19 216**	P	**P**	**22 04 11.2 +0.9**
	comp=Z,3μmcomp=Z,22nm,1.1s				
TAPN	**Taplejung**	**33.43 281**	*e*P	**P**	**22 04 13.4 +0.6**
ODAN	**Odare**	**33.77 281**	*e*P	**P**	**22 04 16.6 +1.0**
PSI	**Prapat**	**33.90 232**	P	**P**	**22 04 17.4 +0.6**
PSI			pmax	pmax	
	comp=Z,27nm,0.9s				
PSI	**Prapat**	**33.90 232**	P	pP	22 04 17.1 -10
	comp=Z,23nm,1.2s,comp=Z,38nm,1.3s				
PSI			P	**P**	**22 04 16.9 +0.1**
	comp=Z,23nm,1.2s,comp=Z,38nm,1.3s				
PSI	**Prapat**	**33.90 232**	P	**P**	**22 04 17.9 +1.1**
	comp=Z,38nm,1.3s				
RPSI	**Rantau Prapat**	**33.98 232**	P	**P**	**22 04 17.4 +0.2**
RPSI			IAmb	IAmb	22 04 18.7
	comp=Z,27nm,0.9s				
MMRI	**Maumere**	**34.19 185**	P	**P**	**22 04 18.1 -0.9**
BKNI	**Bangkinang**	**34.25 226**	P	**P**	**22 04 20.0 +0.4**
BKNI	**Bangkinang**	**34.25 226**	P	**P**	**22 04 20.2 +0.6**
	comp=Z,82nm,1.0s				
BKNI	**Bangkinang**	**34.25 226**	P	**P**	**22 04 21.4 +1.8**
	comp=Z,83nm,1.0s				
KMMI	**Kalianget**	**34.26 200**	P	**P**	**22 04 19.8 +0.2**
	comp=Z,64nm,1.0s				
RAMN	**Ramite**	**34.45 281**	*e*P	**P**	**22 04 22.4 +0.8**
JIRN	**Jiri**	**34.74 282**	*e*P	**P**	**22 04 24.7 +0.5**
	comp=Z,38nm,1.3s				
MLSI	**Meulaboh, Aceh**	**34.78 237**	P	**P**	**22 04 24.4 +0.2**
	comp=Z,38nm,0.6s				
MNSI	**Mandailing Nat**	**34.88 229**	P	**P**	**22 04 25.5 +0.5**
	comp=Z,54nm,1.0s				
SDSI	**Sungai Dareh**	**34.96 224**	P	**P**	**22 04 26.0 +0.3**
	comp=Z,17nm,1.1s				
KLNI	**Mataram**	**34.98 196**	P	**P**	**22 04 26.2 +0.4**
	comp=Z,15nm,1.2s				
GUN	**Gumba**	**34.99 283**	*e*P	**P**	**22 04 26.8 +0.4**
	comp=Z,47nm,1.0s				
TWSI	**Taliwang, Sumb**	**35.10 194**	P	**P**	**22 04 27.0 +0.1**
	comp=Z,20nm,1.3s				
WMQ	**Urumqi**	**35.32 310**	*e*P	**P**	**22 04 29.8 +1.1**
WMQ			pP	pP	22 04 37.0 -1.8
WMQ			pmax	pmax	
	comp=Z,20nm,0.9s				
WMQ			LR	LR	
	comp=Z,3μm,16.1s				
WMQ			LR	LR	
	comp=Z,980nm,16.1s				
WMQ			LR	LR	
	comp=Z,770nm,19.1s				
PKI	**Pulchoki**	**35.44 282**	*e*P	**P**	**22 04 30.1 -0.1**
	comp=Z,27nm,1.0s				
PKIN	**Phulchoki**	**35.45 282**	*e*P	**P**	**22 04 30.1 -0.1**
SMRI	**Semarang**	**35.49 206**	P	**P**	**22 04 31.0 +0.8**
SMRI	**Semarang**	**35.49 206**	P	P	22 04 36.9 +6.6
	comp=Z,83nm,1.4s				
KKN	**Kakani**	**35.53 282**	*e*P	**P**	**22 04 31.2 +0.3**
JAGI	**Jajag, Banyuwa**	**35.55 199**	P	**P**	**22 04 30.6 -0.1**
JAGI			IAmb	IAmb	22 04 32.0
	comp=Z,27nm,1.0s				
BATI	**Baumata**	**35.66 182**	P	**P**	**22 04 30.1 -1.6**
	comp=Z,18nm,0.7s,baz=185,slow=13,SNR=4.8				
BATI			LR	LR	22 19 30.4
	comp=Z,168nm,21.8s,baz=323,slow=37				
DMN	**Daman**	**35.70 282**	*e*P	**P**	**22 04 32.6 +0.2**
	comp=Z,46nm,1.0s				
GSI	**Gunungsitoli**	**35.91 232**	P	**P**	**22 04 33.4 -0.5**
GSI			IAmb	IAmb	22 04 34.6
	comp=Z,19nm,0.9s				
GSI	**Gunungsitoli**	**35.91 232**	P	**P**	**22 04 33.3 -0.6**
	comp=Z,20nm,0.8s				
CTJI	**Waduk Cacaban**	**35.96 208**	P	**P**	**22 04 34.8 +0.5**
	comp=Z,70nm,1.6s				
GKN	**Gorkha**	**36.08 283**	*e*P	**P**	**22 04 35.4 -0.1**
	comp=Z,34nm,1.1s				
KLI	**Kotabumi**	**36.14 216**	P	**P**	**22 04 35.9 +0.1**
	comp=Z,3μmcomp=Z,137nm,0.7s				
MASI	**Maura Aman, Be**	**36.19 221**	P	**P**	**22 04 37.0 +0.6**
	comp=Z,62nm,0.9s				
CBJI	**Citeko**	**36.48 212**	P	**P**	**22 04 41.3 +2.6**
LEM	**Lembang**	**36.48 210**	P	**P**	**22 04 39.8 +0.8**
	comp=Z,47nm,0.7s,baz=114,slow=7.2,SNR=9.8				
LEM			LR	LR	22 21 39.1
	comp=Z,106nm,18.8s,baz=18,slow=39				
	comp=Z,47nm,0.7s				
LEM	**Lembang**	**36.48 210**	P	**P**	**22 04 39.7 +0.8**
	comp=Z,5μmcomp=Z,54nm,0.5s				
YAK	**Yakutsk**	**36.51 4**	P	**P**	**22 04 37.7 -0.8**
	comp=Z,2.2nm,0.3s,baz=15,slow=1.0,SNR=1.3				
YAK			PcP	**PcP**	**22 07 00.1 -1.4**
	comp=Z,4.8nm,0.5s,baz=196,slow=3.5,SNR=4.2				
YAK			LR	LR	22 20 23.2
	comp=Z,350nm,18.4s,baz=128,slow=38				
	comp=Z,2.2nm,0.3s				
YAK	**Yakutsk**	**36.51 4**	*e*P	**P**	**22 04 41.5 +3.0**
YAK			pmax	pmax	
	comp=Z,13nm,0.9s				
YAK			pmax	pmax	
	comp=N,7.0nm,1.1s				
YAK			pmax	pmax	
	comp=E,9.0nm,1.5s				

YAK MLR MLR
comp=Z,479nm,13.0s
YAK MLR MLR
comp=N,245nm,11.0s
YAK MLR MLR
comp=E,333nm,13.0s
SBJI Serang 36.56 213 P **P 22 04 39.7 +0.3**
comp=E,137nm,0.8s
PETK Petropavlovsk- 36.69 33 LR LR 22 19 51.7
comp=E,357nm,18.0s,baz=232,slow=36
LWLI Liwa 36.69 217 P **P 22 04 41.2 +0.5**
comp=E,2μcomp=E,63nm,0.9s
DANN Dangsing 36.81 284 *e*P **P 22 04 42.5 +0.6**
KASI Kota Agung 36.88 216 P **P 22 04 42.0 -0.2**
comp=E,49nm,1.1s
KOLN Koldanda 37.01 283 *e*P **P 22 04 44.0 +0.5**
BBJI Bungbulang 37.03 210 P **P 22 04 45.4 +1.9**
comp=E,58nm,1.0s
MA2 Magadan 38.32 21 LR LR 22 20 46.5
comp=E,234nm,19.5s,baz=225,slow=36
ZSN Zaisan 38.39 315 *e*P **P 22 04 52.8 -1.9**
ZSN Zaisan 38.39 315 *e*P **P 22 04 52.8 -1.9**
baz=315
MTN Manton Dam 38.70 171 IAmb IAmb 22 05 01.1
comp=Z,44nm,1.2s
MTN Manton Dam 38.70 171 P **P 22 04 57.4 -0.1**
comp=Z,32nm,1.3s
KDU Kakadu 38.77 168 P **P 22 04 58.0 -0.1**
comp=Z,40nm,1.2s
H11N1 WAKE ISLAND Hy 38.89 90 T T 22 45 58.2
baz=283
H11N2 WAKE ISLAND Hy 38.89 90 T T 22 45 56.5
baz=283
H11N3 WAKE ISLAND Hy 38.90 90 T T 22 45 52.6
baz=283
H11S3 WAKE ISLAND Hy 39.07 92 T T 22 46 00.1
baz=289
H11S1 WAKE ISLAND Hy 39.07 92 T T 22 45 51.6
baz=289
H11S2 WAKE ISLAND Hy 39.08 92 T T 22 47 19.8
baz=289
MK31 Makanchi Array 39.85 313 P **P 22 05 07.0 +0.1**
MK31 Makanchi Array 39.85 313 P **P 22 05 07.0 +0.1**
MK31 pmax pmax
comp=Z,34nm,1.4s
MKAR Makanchi Array 39.85 313 P **P 22 05 06.9 0.0**
comp=Z,8.2nm,0.8s,baz=96,slow=10,SNR=57
MKAR PcP **PcP 22 07 11.4 -0.8**
comp=Z,3.8nm,0.8s,baz=96,slow=3.7,SNR=4.2
MKAR LR LR 22 22 58.5
comp=Z,441nm,20.0s,baz=120,slow=38
comp=Z,8.2nm,0.8s
MAKZ Makanchi 40.06 313 P **P 22 05 08.6 -0.1**
MAKZ IAmb IAmb 22 05 17.5
comp=Z,44nm,1.2s
MAKZ Makanchi 40.06 313 P **P 22 05 08.6 -0.1**
MAKZ pmax pmax
comp=Z,44nm,1.2s
MAKZ Makanchi 40.06 313 P **P 22 05 08.4 -0.3**
MAKZ pP **pP 22 05 15.9 -3.0**
MAKZ PcP **PcP 22 07 12.8 -0.1**
PMG Port Moresby 40.92 146 P **P 22 05 15.7 -0.3**
comp=Z,8.6nm,0.3s,baz=259,slow=15,SNR=2.2
PMG LR LR 22 19 51.0
comp=Z,345nm,21.8s,baz=301,slow=32
comp=Z,8.6nm,0.3s
PMG Port Moresby 40.92 146 P **P 22 05 15.6 -0.4**
PMG IAmb IAmb 22 05 20.3
comp=Z,22nm,0.8s
PMG Port Moresby 40.92 146 P **P 22 05 15.6 -0.4**
PMG pmax pmax
comp=Z,22nm,0.8s
SHLS Shalkode 40.96 307 *e*P **P 22 05 12.4 -3.9**
SHLS Shalkode 40.96 307 *e*P **P 22 05 12.4 -3.9**
baz=307
ZAA0 Zalesovo Array 41.04 324 P **P 22 05 16.1 -0.5**
ZAA0 IAmb IAmb 22 05 17.1
comp=Z,26nm,0.8s
ZALV Zalesovo Beam 41.04 324 P **P 22 05 16.0 -0.6**
comp=Z,23nm,0.7s,baz=111,slow=8.2,SNR=94
ZALV LR LR 22 23 23.0
comp=Z,414nm,20.7s,baz=116,slow=38
comp=Z,23nm,0.7s
ZALV Zalesovo Beam 41.04 324 P **P 22 05 15.8 -0.8**
KNRA Kununurra 41.23 175 P **P 22 05 18.6 +0.1**
KNRA IAmb IAmb 22 05 22.3
comp=Z,24nm,0.9s
KNRA Kununurra 41.23 175 P **P 22 05 22.1 +3.7**
comp=Z,34nm,1.4s
UZB Uzynbulak 41.28 307 *e*P **P 22 05 16.8 -2.1**
UZB Uzynbulak 41.28 307 *e*P **P 22 05 16.8 -2.1**
baz=307
SEY Seymchan 41.43 18 P **P 22 05 19.4 -0.2**
comp=Z,2.8nm,0.8s,baz=352,slow=21,SNR=2.7
SEY PcP **PcP 22 07 17.1 +0.1**
comp=Z,7.9nm,1.1s,baz=226,slow=6.8,SNR=3.6
comp=Z,2.8nm,0.8s
KPKS Kokpek 41.57 307 *e*P **P 22 05 19.7 -1.5**
KPKS Kokpek 41.57 307 *e*P **P 22 05 19.7 -1.5**
baz=308
SATY Saty 41.71 307 *e*P **P 22 05 20.4 -2.0**
SATY Saty 41.71 307 *e*P **P 22 05 20.5 -2.0**
baz=307
TDK Taldyqorghan 42.05 310 *e*P **P 22 05 24.3 -0.7**
TDK Taldyqorghan 42.05 310 *e*P **P 22 05 24.4 -0.7**
baz=310
MDOK Medeo 42.70 307 *e*P **P 22 05 29.7 -0.8**
MDOK Medeo 42.70 307 *e*P **P 22 05 29.7 -0.8**
baz=307
CHKK Chushkaly 42.85 308 *e*P **P 22 05 30.5 -1.0**
CHKK Chushkaly 42.85 308 *e*P **P 22 05 30.6 -1.0**
baz=308
COEN Coen 43.12 154 P **P 22 05 34.8 +0.9**
COEN IAmb IAmb 22 05 39.1
comp=Z,36nm,0.9s
COEN Coen 43.12 154 P **P 22 05 35.9 +2.0**
comp=Z,46nm,0.9s
KSH Kashi 43.14 301 P **P 22 05 38.0 +3.9**
KSH sP sP 22 05 48.5 -1.0
KSH PcP **PcP 22 07 25.5 +2.2**
KSH pmax pmax
comp=Z,12nm,1.5s
KSH LR LR
comp=Z,1μm,14.8s
KSH LR LR
comp=Z,950nm,13.4s
KSH LR LR
comp=Z,1μm,16.5s
ULHL Ulaho! 43.18 305 P **P 22 05 35.3 +0.8**
SNR=8.0
KUU Kurty 43.32 308 *e*P **P 22 05 33.7 -1.6**
KUU Kurty 43.32 308 *e*P **P 22 05 33.8 -1.6**
baz=308
KURK Kurchatov 43.33 318 P **P 22 05 35.1 -0.2**
KURK IAmb IAmb 22 05 36.4
comp=Z,44nm,1.1s
KURK Kurchatov 43.33 318 P **P 22 05 35.1 -0.2**
KURK pmax pmax
comp=Z,44nm,1.2s
KURK Kurchatov 43.33 318 P **P 22 05 35.2 -0.2**
KURK pP **pP 22 05 42.5 -3.1**
KURBB Kurchatov Arra 43.36 318 P **P 22 05 35.6 +0.1**
comp=Z,13nm,0.8s,baz=102,slow=10,SNR=59
comp=Z,13nm,0.8s
BOOM Boomskoye usch 43.43 306 P **P 22 05 37.1 +0.7**
BOOM Boomskoye usch 43.43 306 P **P 22 05 37.1 +0.7**
BOOM pmax pmax
comp=Z,9.0nm,1.0s
TKM2 Tokmak 2 43.73 306 P **P 22 05 40.1 +1.2**
SNR=30
HYBB Hyderabad (bro 43.89 269 *e*P **P 22 05 41.9 +1.6**
HYBB *es*P **pwP 22 05 54.3 +1.0**
HYBB *e*PcS **PcS 22 11 18.7 -0.7**
HYBB *e*S **S 22 12 09.0 -0.2**
KBK Karagaybulak 44.17 306 P **P 22 05 44.0 +1.5**
SNR=7.5
CHMS Chumysh 44.35 306 P **P 22 05 44.5 +0.8**
SNR=9.3
UCH Uchtor 44.45 305 P **P 22 05 46.5 +1.5**
SNR=24
SGDS Sogindy 44.49 307 *i* P **P 22 05 43.4 -1.4**
SGDS Sogindy 44.49 307 *i* P **P 22 05 43.4 -1.4**
baz=307
AAK Ala-Archa 44.51 306 P **P 22 05 45.8 +0.7**
SNR=5.8
AAK Ala-Archa 44.51 306 P **P 22 05 45.3 +0.2**
comp=Z,4.0nm,0.7s,baz=132,slow=7.9,SNR=16
AAK LR LR 22 26 30.7
comp=Z,495nm,18.3s,baz=100,slow=39
comp=Z,4.0nm,0.7s
AAK Ala-Archa 44.51 306 P **P 22 05 45.8 +0.7**
AAK Ala-Archa 44.51 306‖ *e*P **P 22 05 45.6 +0.5**
AAK pmax pmax
comp=Z,22nm,2.5s
AAK Ala-Archa 44.51 306 *i* P **P 22 05 46.1 +1.1**
SNR=8.4
AAK Ala-Archa 44.51 306 P **P 22 05 46.0 +0.9**
AAK pP **pP 22 05 53.1 -2.3**
USP Ospenovka 44.57 306 P **P 22 05 47.2 +1.8**
SNR=6.1
EKS2 Erkin-Say 45.03 306 P **P 22 05 49.8 +0.6**
SNR=6.5
AML Almayashu 45.05 305 P **P 22 05 51.0 +1.3**
SNR=11
BTLS Baital 45.11 309 *e*P **P 22 05 48.1 -1.5**
BTLS Baital 45.11 309 *e*P **P 22 05 48.1 -1.5**
baz=309
NIL Nilore 45.37 293 P **P 22 05 52.3 +0.4**
NIL IAmb IAmb 22 05 53.6
comp=Z,28nm,0.9s
NIL Nilore 45.37 293 P **P 22 05 52.3 +0.4**
NIL pmax pmax
comp=Z,28nm,1.0s
NIL Nilore 45.37 293 P **P 22 05 52.4 +0.5**
NIL pP **pP 22 06 00.3 -2.0**
SHEM Shemya Is, Ala 45.42 40 LR LR 22 23 50.1
comp=Z,58nm,21.4s,baz=259,slow=35
WB0 Warramunga Arr 46.03 168 IAmb IAmb 22 06 01.7
comp=Z,32nm,0.9s
PALK Pallekele 46.06 255 LR LR 22 28 13.1
comp=Z,113nm,18.2s,baz=149,slow=40
TIXI Tiksi 46.09 2 LR LR 22 24 45.4
comp=Z,673nm,21.6s,baz=359,slow=35
TIXI Tiksi 46.09 2 P **P 22 05 57.5 +0.6**
TIXI Tiksi 46.09 2‖ *e*P **P 22 05 58.0 +1.1**
TIXI pmax pmax
comp=Z,9.0nm,0.9s
WRAB Tennant Creek 46.19 168 P **P 22 05 58.8 +0.5**
WRAB Tennant Creek 46.19 168 P **P 22 05 58.8 +0.5**
WRAB pmax pmax
comp=Z,31nm,0.8s
WRAB Tennant Creek 46.19 168 P **P 22 05 58.9 +0.5**
comp=Z,42nm,1.0s
WRAB Tennant Creek 46.19 168 P **P 22 05 58.9 +0.5**
WRA Warramunga Arr 46.20 168 P **P 22 05 58.9 +0.5**
comp=Z,22nm,0.7s,baz=350,slow=8.7,SNR=112
WRA LR LR 22 23 58.0
comp=Z,284nm,20.3s,baz=319,slow=34
comp=Z,22nm,0.7s
WRA Warramunga Arr 46.20 168 *i* P **P 22 05 58.9 +0.5**
WRA pmax pmax
comp=Z,21nm,0.7s
WB1 Warramunga Ar. 46.21 168 P **P 22 05 59.0 +0.5**
comp=Z,50nm,0.9s
WR0 Warramunga Arr 46.25 168 P **P 22 05 58.9 +0.1**
DRK Karamyk 46.37 301 P **P 22 06 00.2 +0.2**
DRK IAmb IAmb 22 06 13.2
comp=Z,23nm,1.4s
MBWA Marble Bar 46.82 187 P **P 22 06 03.2 -0.1**
MBWA IAmb IAmb 22 06 04.1
comp=Z,27nm,0.9s
MBWA Marble Bar 46.82 187 P **P 22 06 03.8 +0.6**
comp=Z,21nm,1.0s
MBWA Marble Bar 46.82 187 P **P 22 06 03.1 -0.1**
BRZS Berezniki 46.84 315 *e*P **P 22 06 01.4 -1.8**
BRZS Berezniki 46.84 315 *e*P **P 22 06 01.5 -1.8**
baz=316
BTK Batken 47.13 302 P **P 22 06 05.8 +0.1**
BTK Batken 47.13 302 P **P 22 06 05.8 +0.1**
BTK pmax pmax
comp=Z,20nm,1.5s
PSA00 Pilbara Seismi 47.21 187 P **P 22 06 06.3 0.0**
PSA00 Pilbara Seismi 47.21 187 IAmb IAmb 22 06 10.5
comp=Z,22nm,1.0s
PSA00 Pilbara Seismi 47.21 187 P **P 22 06 06.6 +0.3**
comp=Z,55nm,0.9s
MTSU Mount Surprise 47.36 155 P **P 22 06 09.5 +1.9**
comp=Z,22nm,0.9s
KK31 Karatay Array 47.46 306 P **P 22 06 08.6 +0.5**
KK31 Karatay Array 47.46 306 P **P 22 06 08.6 +0.5**
KK31 pmax pmax
comp=Z,19nm,1.5s
GAR Garm 47.52 300 P **P 22 06 09.0 +0.2**
GAR IAmb IAmb 22 06 21.2
comp=Z,22nm,1.0s
QIS Mount Isa 48.04 162 P **P 22 06 13.7 +0.9**
comp=Z,33nm,1.0s
AMKA Amchitka 48.22 43 P **P 22 06 13.5 -0.3**
CHGR Chuyangaron 48.43 300 P **P 22 06 16.2 +0.4**
CHGR IAmb IAmb 22 06 28.2
comp=Z,28nm,1.1s
CHGR Chuyangaron 48.43 300 P **P 22 06 16.2 +0.4**
CHGR pmax pmax
comp=Z,28nm,1.1s
HNR Honiara 48.64 131 LR LR 22 23 51.0
comp=Z,2μm,21.5s,baz=317,slow=32
KBL Kabul 48.78 294 P **P 22 06 19.2 +0.5**
KBL Kabul 48.78 294 P **P 22 06 19.2 +0.5**
KBL pmax pmax
comp=Z,33nm,1.0s
BVAR Borovoye Array 48.85 319 P **P 22 06 19.0 +0.3**
comp=Z,2.8nm,0.6s,baz=99,slow=9.2,SNR=24
BVAR PcP **PcP 22 07 43.0 +0.2**
comp=Z,3.0nm,0.9s,baz=49,slow=2.7,SNR=4.5
BVAR LR LR 22 27 13.4
comp=Z,246nm,21.6s,baz=98,slow=36
comp=Z,2.8nm,0.6s
BRVK Borovoye 48.92 319 P **P 22 06 19.5 +0.2**
BRVK IAmb IAmb 22 06 20.7
comp=Z,22nm,1.0s
BRVK Borovoye 48.92 319 *de*P **P 22 06 19.5 +0.2**
BRVK pmax pmax
comp=Z,32nm,1.3s
BRVK Borovoye 48.92 319 P **P 22 06 19.2 0.0**
BRVK pP **pP 22 06 27.9 -1.8**
NRIK Noril'sk 48.97 343 P **P 22 06 19.1 -0.3**
comp=Z,6.5nm,0.8s,baz=148,slow=9.5,SNR=6.9
NRIK LR LR 22 28 45.6
comp=Z,728nm,18.4s,baz=132,slow=38
comp=Z,6.5nm,0.8s
NRIK Noril'sk 48.97 343 IAmb IAmb 22 06 29.6
comp=Z,28nm,1.1s
NRIK Noril'sk 48.97 343 *c i* P **P 22 06 19.1 -0.3**
NRIK pmax pmax
comp=Z,39nm,1.3s
BILL Bilibino 49.12 19 *e*P **P 22 06 19.9 -0.7**
BILL *e**SP **pP 22 06 32.0 +1.0**
BILL *e* 22 07 44.6
BILL *e* 22 08 14.6
BILL *e*PPP PPP 22 09 07.1
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,182nm,23.0s
AS31 Alice Springs 49.76 169 P **P 22 06 26.7 +0.8**
ASAR Alice Springs 49.76 169 P **P 22 06 26.6 +0.7**
comp=Z,12nm,0.7s,baz=356,slow=14,SNR=102
ASAR PcP **PcP 22 07 46.6 +0.1**
comp=Z,4.5nm,0.8s,baz=352,slow=3.2,SNR=5.5
ASAR LR LR 22 27 06.7
comp=Z,189nm,21.3s,baz=349,slow=36
comp=Z,12nm,0.7s
AS01 Alice Springs 49.76 169 P **P 22 06 27.3 +1.3**
comp=Z,21nm,0.6s
CTA Charters Tower 49.89 154 P **P 22 06 28.1 +1.2**
comp=Z,6.6nm,0.8s,baz=326,slow=11,SNR=4.2
comp=Z,6.6nm,0.8s
CTA Charters Tower 49.89 154 P P 22 06 31.8 +4.8
CTAO Charters Tower 49.89 154 P P 22 06 32.4 +5.4
comp=Z,17nm,1.3s
WRKA Warakurna 50.48 176 P **P 22 06 32.7 +1.3**
comp=Z,48nm,1.1s
OOD Oodnadatta 54.10 168 P **P 22 06 59.2 +1.1**
comp=Z,67nm,0.8s
HRA Herat 54.37 295 P **P 22 07 00.7 +0.2**
HRA IAmb IAmb 22 07 02.6
comp=Z,29nm,1.4s
RK1H Rockhampton Ha 54.60 151 P P 22 07 07.6 +5.8
comp=Z,16nm,1.0s
ABKAR Akbulak array 55.00 313 IAmb IAmb 22 07 06.0
comp=Z,21nm,1.3s
SVE Sverdlovsk 55.01 323 *e*P **P 22 07 04.7 +0.2**
SVE pmax pmax
comp=Z,61nm,0.9s
SVE MLR MLR
comp=Z,1μm,18.0s
MORW Morawa 55.09 190 P **P 22 07 06.0 +0.7**
MORW Morawa 55.09 190 P **P 22 07 09.2 +3.9**
comp=Z,26nm,1.0s
QLP Quilpie 55.11 159 P **P 22 07 09.7 +4.2**
INKA Innaminka 55.17 163 P **P 22 07 07.2 +1.3**
comp=Z,64nm,0.8s
GAMB Gambell 55.49 29 P **P 22 07 07.9 +0.1**
baz=258
NIKH Nikolski High 55.63 42 P **P 22 07 09.0 0.0**
baz=268
ARU Arti 56.12 322 LR LR 22 32 57.0
comp=Z,628nm,21.9s,baz=90,slow=38
ARU Arti 56.12 322 P **P 22 07 12.2 -0.2**
ARU Arti 56.12 322 *d i* P **P 22 07 12.2 -0.2**
ARU 22 08 08.6
ARU S **S 22 15 02.3 +3.7**
ARU SS **SS 22 18 43.9 -1.0**
ARU pmax pmax
comp=Z,38nm,0.8s
ARU MLR MLR
comp=Z,683nm,22.0s
ARU Arti 56.12 322 P **P 22 07 11.9 -0.5**
ARU sP **pP 22 07 23.2 +0.1**
AKTO Aktyubinsk 56.24 315 LR LR 22 33 06.3
comp=Z,326nm,18.1s,baz=45,slow=38
MULG Mulgathing 56.27 171 P **P 22 07 15.3 +1.6**
comp=Z,28nm,1.2s
RMQ Roma 56.63 154 P P 22 07 21.1 +4.7
comp=Z,7.1nm,1.0s
GEYT Alibeck 57.14 300 P **P 22 07 20.9 +0.8**
comp=Z,32nm,0.8s,baz=48,slow=2.2,SNR=106
GEYT LR LR 22 34 32.3
comp=Z,460nm,18.8s,baz=94,slow=39
comp=Z,32nm,0.8s
GEYT Alibeck 57.14 300 P **P 22 07 21.2 +1.1**
GYA0B ALIBECK ARRAY 57.14 300 P **P 22 07 21.1 +1.0**
LCRK Leigh Creek 57.17 167 P **P 22 07 21.5 +1.3**
comp=Z,55nm,0.9s
KLBR Kellerberrin 57.35 187 P **P 22 07 22.6 +1.2**
comp=Z,115nm,0.9s
NWAO Narrogin (SRO) 58.73 188 P **P 22 07 31.6 +0.5**
comp=Z,25nm,0.9s,baz=228,slow=6.8,SNR=8.9
NWAO LR LR 22 36 10.3
comp=Z,134nm,18.6s,baz=149,slow=39
comp=Z,25nm,0.9s
NWAO Narrogin (SRO) 58.73 188 P **P 22 07 31.1 +0.1**
NWAO Narrogin (SRO) 58.73 188 P **P 22 07 31.1 +0.1**
NWAO pmax pmax
comp=Z,77nm,1.3s
NWAO Narrogin (SRO) 58.73 188 P **P 22 07 33.2 +2.2**
comp=Z,63nm,1.6s
NWAO Narrogin (SRO) 58.73 188 P **P 22 07 31.9 +0.9**
BBOO Buckleboo 59.06 169 P **P 22 07 34.0 +0.6**
BBOO Buckleboo 59.06 169 P P 22 07 37.9 +4.5
comp=Z,38nm,1.0s
STKA Stephens Creek 59.33 164 P **P 22 07 35.8 +0.6**
comp=Z,9.9nm,0.8s,baz=334,slow=6.3,SNR=10
STKA LR LR 22 34 18.1
comp=Z,47nm,20.0s,baz=4.2,slow=37
comp=Z,9.9nm,0.8s
STKA Stephens Creek 59.33 164 P **P 22 07 35.6 +0.4**
STKA Stephens Creek 59.33 164 P **P 22 07 35.6 +0.4**
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 59.33 164 P **P 22 07 36.2 +1.0**
comp=Z,3.4nm,0.9s
KOUNC Koumac, New Ca 59.64 137 P **P 22 07 37.5 -0.1**
WSAR Wadi Sarin 59.98 283 LR LR 22 38 40.8
comp=Z,105nm,18.0s,baz=76,slow=41
CMSA Cobar Meteorol 60.17 160 P **P 22 07 43.4 +2.4**
comp=Z,20nm,1.4s
HTT Hallett 60.20 167 P **P 22 07 45.3 +4.0**
comp=Z,19nm,0.9s
KIRV Kirov 61.08 325 P **P 22 07 46.8 -0.2**
comp=Z,28nm,0.8s,baz=70,slow=3.9,SNR=10
KIRV LR LR 22 35 54.5
comp=Z,536nm,20.5s,baz=97,slow=38
comp=Z,28nm,0.8s
KIRV Kirov 61.08 325‖ *e*P **P 22 07 46.4 -0.5**
BANOM Banah 61.25 287 P **P 22 07 49.8 +1.1**
MSFE Esma-Masafi 61.53 286 P **P 22 07 50.4 -0.2**
O16K Kokwok River B 61.61 34 P **P 22 07 50.7 +0.2**
baz=273
HATD Hatta, Dubai 61.70 286 P **P 22 07 52.8 +1.1**
ASHO Ashiyiah 61.81 285 P **P 22 07 53.3 +0.8**
NAZ Nazwa, Dubai 62.06 286 P **P 22 07 55.0 +0.8**
DZM Mont Dzumac 62.11 136 *e*S **S 22 16 21.0 +3.8**
comp=Z,226nm,25.5s
DZM *e*SS **SS 22 20 25.8 +4.9**
comp=Z,186nm,31.7s
DZM *e*LR LR 22 26 22.6
comp=Z,593nm,23.4s
DZM Mont Dzumac 62.11 136 LR LR 22 30 35.9
comp=Z,235nm,21.5s,baz=308,slow=32
DZM Mont Dzumac 62.11 136 P **P 22 07 55.7 +1.2**
DZM pP **pP 22 08 05.1 -0.2**
ASUD Al Ashush, Dub 62.46 286 P **P 22 07 56.7 -0.1**
BELG Belogornoye 62.61 318 P **P 22 07 55.9 -1.5**
comp=Z,12nm,0.8s,baz=153,slow=2.0,SNR=11
BELG LR LR 22 36 46.0
comp=Z,326nm,20.1s,baz=122,slow=38
comp=Z,12nm,0.8s
BELG Belogornoye 62.61 318‖ *e*P **P 22 07 56.5 -0.8**
BELG pmax pmax
comp=Z,4.0nm,0.9s
PRGR Permogore 62.81 328 *e*P **P 22 07 57.2 -1.3**
PRGR pmax pmax
comp=Z,20nm,0.8s
O18K Koktuh Hills 63.05 34 P **P 22 08 00.7 +0.4**
O18K Koktuh Hills 63.05 34 P **P 22 08 00.7 +0.4**
baz=275
J20K Nowinta River 63.22 29 IAmb IAmb 22 08 18.9
comp=Z,13nm,0.9s
J20K Nowinta River 63.22 29 P **P 22 08 02.0 +0.8**
baz=274
M19K Big River Lodg 63.28 32 P **P 22 08 02.4 +0.8**
M19K IAmb IAmb 22 08 07.0
comp=Z,29nm,1.4s
IMAR Indian Mountai 63.28 27 P **P 22 08 02.0 +0.4**
K20K Telida 63.31 30 P **P 22 08 02.2 +0.3**
K20K IAmb IAmb 22 08 18.1
comp=Z,24nm,1.3s
K20K Telida 63.31 30 P **P 22 08 01.9 0.0**
baz=274
F21K Alatna River 63.33 26 P **P 22 08 02.0 +0.1**
baz=273
G21K Allakaket 63.35 26 P **P 22 08 02.4 +0.3**
baz=273
H21K Melozitna Rive 63.69 27 P **P 22 08 04.7 +0.3**
H21K IAmb IAmb 22 08 21.4
comp=Z,21nm,1.2s
H21K Melozitna Rive 63.69 27 P **P 22 08 04.5 +0.2**
baz=274
F22K John River 63.81 25 P **P 22 08 06.1 +1.0**
baz=274
M20K Styx River 63.88 31 P **P 22 08 06.5 +0.8**
baz=276
E22K Anaktuvuk Pass 63.91 24 P **P 22 08 06.4 +0.6**
baz=274
Q19K Cape Douglas, 63.95 35 P **P 22 08 05.7 -0.4**
baz=277
CHUM Lake Minchumin 64.05 29 P **P 22 08 07.1 +0.4**
baz=276
ARPS Mount Arapiles 64.05 165 P **P 22 08 11.1 +4.1**
comp=Z,28nm,0.8s
I21K Tanana 64.07 28 P **P 22 08 07.7 +0.8**
I21K IAmb IAmb 22 08 08.9
comp=Z,15nm,0.9s
I21K Tanana 64.07 28 P **P 22 08 07.5 +0.7**
baz=275,SNR=5.1
G22K Bettles 64.12 26 P **P 22 08 06.8 -0.2**
baz=275
CAST Castle Rocks 64.20 30 P **P 22 08 07.8 0.0**
CAST IAmb IAmb 22 08 09.5
comp=Z,19nm,1.1s
CAST Castle Rocks 64.20 30 P **P 22 08 08.1 +0.4**
baz=276,SNR=7.0
PPLA Purkeypile 64.21 30 P **P 22 08 08.2 +0.3**
PPLA Purkeypile 64.21 30 P **P 22 08 08.0 +0.1**
baz=276
H22K Ishtalitna Cre 64.26 27 P **P 22 08 08.8 +0.7**
baz=275,SNR=8.5
D23K Nanushuk River 64.26 24 P **P 22 08 08.6 +0.6**
baz=274

OHAK	Old Harbor	64.35	37	P	P	22 08 08.6	-0.2
OHAK	Old Harbor	64.35	37	P	P	22 08 09.6	+0.8
	baz=278						
N20K	Mount Spurr	64.39	32	P	P	22 08 09.4	+0.3
	baz=277,SNR=5.6						
SPCR	Spurr Chakacha	64.39	32	P	P	22 08 09.5	+0.4
	baz=277						
SPU	Mount Spurr	64.47	32	P	P	22 08 09.5	-0.1
COLD	Coldfoot	64.60	25	P	P	22 08 11.1	+0.9
BPAW	Bear Paw Mtn.	64.61	29	P	P	22 08 11.0	+0.6
BPAW				IAmb	IAmb	22 08 33.5	
	comp=Z,26nm,1.5s						
BPAW	Bear Paw Mtn.	64.61	29	P	P	22 08 10.9	+0.5
	baz=277,SNR=5.2						
MLY	Manley	64.61	28	P	P	22 08 11.0	+0.6
MLY				IAmb	IAmb	22 08 12.2	
	comp=Z,12nm,0.9s						
MLY	Manley	64.61	28	P	P	22 08 11.1	+0.7
	baz=276,SNR=8.3						
SKT	Skwentna	64.62	31	P	P	22 08 10.1	-0.3
	baz=277						
Q20K	Shuyak Island	64.63	35	P	P	22 08 10.0	-0.6
	baz=278						
KDAK	Kodiak Island	64.65	36	LR	LR	22 39 11.8	
	comp=Z,68nm,18.4s,baz=236,slow=39						
KDAK	Kodiak Island	64.65	36	P	P	22 08 10.8	+0.1
KDAK	Kodiak Island	64.65	36	P	P	22 08 10.8	+0.1
KDAK				pmax	pmax		
	comp=Z,29nm,0.9s						
KDAK	Kodiak Island	64.65	36	P	P	22 08 10.7	0.0
	baz=278						
KDAK	Kodiak Island	64.65	36	P	P	22 08 10.2	-0.5
TOLK	Toolik Lake Re	64.69	24	P	P	22 08 10.7	-0.2
	baz=276						
KTH	Kantishna Hill	64.70	30	P	P	22 08 11.3	+0.2
KTH				IAmb	IAmb	22 08 11.8	
	comp=Z,20nm,1.3s						
G23K	Bananza Creek	64.72	26	P	P	22 08 11.3	+0.1
	baz=276,SNR=5.2						
E23K	Chandalar	64.74	24	P	P	22 08 12.0	+0.7
	baz=276						
C24K	Franklin Bluff	64.89	23	P	P	22 08 12.5	+0.4
	baz=276						
D24K	Happy Valley	64.91	23	P	P	22 08 12.8	+0.5
	baz=276						
TRF	Thorofare Moun	65.00	30	P	P	22 08 13.5	+0.4
	baz=278						
H23K	Yukon River	65.02	27	P	P	22 08 14.1	+1.1
H23K	Yukon River	65.02	27	P	P	22 08 14.1	+1.1
	baz=277,SNR=15						
SUA	Susitna One	65.06	32	P	P	22 08 13.6	+0.1
	baz=278						
E24K	Your Creek	65.16	24	P	P	22 08 14.9	+0.9
	baz=277						
I23K	Minto, Yukon-K	65.18	28	P	P	22 08 14.6	+0.6
I23K				IAmb	IAmb	22 08 15.9	
	comp=Z,22nm,1.4s						
I23K	Minto, Yukon-K	65.18	28	P	P	22 08 14.0	0.0
	baz=278						
BWN	Browne	65.26	29	P	P	22 08 15.5	+0.8
BRSE	Bradley Lake S	65.31	34	P	P	22 08 15.5	+0.4
	baz=279						
M22K	Willow	65.31	31	P	P	22 08 14.1	-0.8
	baz=278						
NEA2	Nenana	65.38	28	P	P	22 08 15.3	-0.1
	baz=278,SNR=13						
GROC	Groznyy	65.41	308	eP	P	22 08 14.0	-1.9
GROC				e		22 08 46.2	
GROC				pmax	pmax		
	comp=Z,46nm,1.0s						
F24K	Squaw Lake	65.45	25	P	P	22 08 16.0	+0.1
	baz=278,SNR=5.4						
MCK	McKinley	65.56	29	IAmb	IAmb	22 08 18.2	
	comp=Z,22nm,1.0s						
MCK	McKinley	65.56	29	P	P	22 08 16.3	-0.2
	baz=278,SNR=7.6						
RC01	Rabbit Creek A	65.59	32	P	P	22 08 15.9	-0.9
RC01	Rabbit Creek A	65.59	32	P	P	22 08 17.4	+0.6
	baz=279						
RND	Reindeer	65.64	30	P	P	22 08 16.7	-0.5
RND	Reindeer	65.64	30	P	P	22 08 16.7	-0.5
RND				pmax	pmax		
	comp=Z,30nm,1.0s						
MDM	Murphy Dome	65.68	28	P	P	22 08 17.5	+0.2
H24K	Noodor Dome	65.69	27	P	P	22 08 18.2	+0.8
H24K				IAmb	IAmb	22 08 19.5	
	comp=Z,19nm,1.1s						
H24K	Noodor Dome	65.69	27	P	P	22 08 18.0	+0.6
	baz=278,SNR=6.9						
G24K	Hadweenzic Riv	65.73	26	P	P	22 08 18.2	+0.6
	baz=278,SNR=7.5						
TOO	Toolangi	65.74	162	P	P	22 08 19.0	+1.0
TOO	Toolangi	65.74	162	P	P	22 08 19.0	+1.0
TOO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOO	Toolangi	65.74	162	P	P	22 08 22.9	+4.9
	comp=Z,20nm,1.4s						
D25K	Kavik River	65.75	23	P	P	22 08 17.9	+0.1
	baz=278						
PMR	Palmer	65.80	32	P	P	22 08 17.3	-0.8
PMR				IAmb	IAmb	22 08 33.0	
	comp=Z,11nm,0.6s						
PMR	Palmer	65.80	32	P	P	22 08 17.3	-0.8
PMR				pmax	pmax		
	comp=Z,11nm,0.6s						
WRH	Wood River Hil	65.81	28	P	P	22 08 18.6	+0.5
WRH				IAmb	IAmb	22 08 20.3	
	comp=Z,20nm,1.1s						
KLMR	Klimovskoe	65.84	328	eP	P	22 08 16.4	-1.9
KLMR				pmax	pmax		
	comp=Z,48nm,1.4s						
KLMR	Klimovskoe	65.84	328	eP	P	22 08 16.4	-1.9
KLMR				AMP		22 08 20.0	
	comp=Z,48nm,1.4s						
TCOL	CIGO, UAF Yank	65.85	28	P	P	22 08 18.9	+0.6
TCOL				IAmb	IAmb	22 08 40.5	
	comp=Z,12nm,0.8s						
COLA	College	65.85	28	P	P	22 08 18.8	+0.4
COLA				IAmb	IAmb	22 08 20.8	
	comp=Z,18nm,1.1s						
COLA	College	65.85	28⇑	eP	P	22 08 19.1	+0.8
COLA				pmax	pmax		
	comp=Z,14nm,1.3s						
COLA	College	65.85	28	P	P	22 08 25.7	+7.3
	comp=Z,11nm,0.8s						
COLA	College	65.85	28	P	P	22 08 19.1	+0.8
GHO	Glory Hole Cre	65.87	31	P	P	22 08 18.9	+0.2
GHO				IAmb	IAmb	22 08 43.4	
	comp=Z,18nm,1.1s						
WAT1	Susitna Watana	65.87	30	P	P	22 08 18.6	0.0
	baz=279						
SEW	Seward	65.89	33	P	P	22 08 19.2	+0.5
CCB	Clear Creek Bu	65.91	28	P	P	22 08 18.9	+0.1
POKR	Poker Plat Res	65.99	28	P	P	22 08 19.8	+0.6
POKR	Poker Plat Res	65.99	28	P	P	22 08 19.9	+0.6
	baz=279,SNR=7.0						
SML	Sawmill	66.14	31	IAmb	IAmb	22 08 38.0	
	comp=Z,15nm,0.8s						
SML	Sawmill	66.14	31	P	P	22 08 20.3	-0.1
	baz=280						
KNK	Knik Glacier	66.15	32	IAmb	IAmb	22 08 38.1	
	comp=Z,22nm,1.0s						
KNK	Knik Glacier	66.15	32	P	P	22 08 20.1	-0.4
	baz=280,SNR=5.2						
E25K	Arctic Village	66.23	24	P	P	22 08 20.9	0.0
	baz=280						
G25K	Bearman Lake	66.26	26	P	P	22 08 21.5	+0.6
	baz=280,SNR=5.3						
IL31		66.28	28	P	P	22 08 21.2	+0.2
ILAR	Eielson Array	66.28	28	P	P	22 08 19.9	-1.2
	comp=Z,1.0nm,0.6s,baz=250,slow=4.3,SNR=18						
ILAR				LR	LR	22 37 07.5	
	comp=Z,93nm,21.4s,baz=270,slow=36						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	66.28	28	P	P	22 08 20.1	-1.1
ILAR	Eielson Array	66.28	28	P	P	22 08 20.1	-1.1
WAT6	Susitna Watana	66.28	30	P	P	22 08 21.5	+0.1
	baz=280,SNR=9.1						
F25K	Christian Rive	66.29	25	P	P	22 08 21.7	+0.5
	baz=280,SNR=9.1						
PWL	Port Wells	66.31	32	P	P	22 08 21.0	-0.4
PWL	Port Wells	66.31	32	P	P	22 08 20.5	-0.9
	baz=280,SNR=7.4						
HDA	Harding Lake	66.31	28	IAmb	IAmb	22 08 21.6	
	comp=Z,17nm,1.0s						
HDA	Harding Lake	66.31	28	P	P	22 08 20.9	-0.5
	baz=280,SNR=10						
DHY	Denali Highway	66.36	30	P	P	22 08 22.3	+0.4
DHY	Denali Highway	66.36	30	P	P	22 08 21.0	-0.9
	baz=280						
VRH	Novokhopyorsk	66.42	317	eP	P	22 08 20.6	-1.7
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
M23K	Glacier View	66.43	31	P	P	22 08 21.5	-0.7
	baz=280						
H25K	Birch Creek	66.45	26	P	P	22 08 22.1	-0.1
	baz=280						
SCM	Sheep Creek Mo	66.61	31	P	P	22 08 23.4	+0.1
SCM	Sheep Creek Mo	66.61	31	P	P	22 08 23.5	+0.1
SCM				pmax	pmax		
	comp=Z,37nm,1.0s						
SCM	Sheep Creek Mo	66.61	31	P	P	22 08 23.2	-0.2
	baz=281,SNR=7.8						
C27K	Jago River	66.63	22	P	P	22 08 24.1	+0.7
	baz=281						
PRP	Porcupine Dome	66.71	27	P	P	22 08 24.4	+0.3
PRP	Porcupine Dome	66.71	27	P	P	22 08 24.3	+0.2
	baz=281						
F26K	Sheenjek River	66.84	25	P	P	22 08 25.7	+0.9
	baz=281,SNR=8.9						
GLI	Glacier Island	66.90	32	P	P	22 08 24.0	-1.2
GLI	Glacier Island	66.90	32	P	P	22 08 24.9	-0.3
	baz=281						
GNI	Garni	66.90	305	LR	LR	22 40 40.7	
	comp=Z,156nm,19.2s,baz=75,slow=39						
NCK	Nalchik	66.91	309⇓	eP	P	22 08 24.1	-1.5
NCK				pmax	pmax		
	comp=Z,23nm,1.2s						
P23K	Montague Islan	66.92	33	P	P	22 08 25.1	-0.2
	baz=281						
K24K	Donnelly Dome	66.93	29	P	P	22 08 25.4	+0.1
	baz=281,SNR=7.9						
J25K	Salcha River,	66.95	28	P	P	22 08 25.1	-0.4
	baz=281						
M24K	Tolsona, Glenn	67.09	31	P	P	22 08 27.1	+0.7
M24K	Tolsona, Glenn	67.09	31	P	P	22 08 26.2	-0.2
	baz=282						
G26K	Porcupine Rive	67.12	25	P	P	22 08 26.8	+0.3
	baz=282,SNR=10						
MSVF	Nonsavu	67.17	124	LR	LR	22 36 11.9	
	comp=Z,76nm,19.6s,baz=191,slow=34						
APA	Apatity	67.22	335⇓	iP	P	22 08 34.1	+7.0
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,1μm,18.0s						
FID	Port Fidalgo	67.22	32	IAmb	IAmb	22 08 32.1	
	comp=Z,19nm,1.0s						
ONI	Oni	67.23	308	P	P	22 08 28.2	+0.5
ONI				IAmb	IAmb	22 08 30.1	
	comp=Z,32nm,1.5s						
ONI	Oni	67.23	308	P	P	22 08 28.2	+0.5
ONI				pmax	pmax		
	comp=Z,32nm,1.5s						
PAX	Paxson	67.23	30	P	P	22 08 27.5	+0.1
PAX				IAmb	IAmb	22 08 31.8	
	comp=Z,12nm,1.1s						
PAX	Paxson	67.23	30	P	P	22 08 27.5	+0.1
PAX				pmax	pmax		
	comp=Z,12nm,1.1s						
PAX	Paxson	67.23	30	P	P	22 08 27.3	-0.1
	baz=282						
KLU	Klutina	67.33	31	P	P	22 08 27.9	-0.1
KLU				IAmb	IAmb	22 08 42.2	
	comp=Z,15nm,1.0s						
KLU	Klutina	67.33	31	P	P	22 08 27.4	-0.6
	baz=282						
KBZ	Khabaz	67.34	309	P	P	22 08 28.0	-0.2
	comp=Z,7.9nm,0.8s,baz=124,slow=4.0,SNR=15						
KBZ				LR	LR	22 42 25.8	
	comp=Z,308nm,18.4s,baz=64,slow=40						
	comp=Z,7.9nm,0.8s						
KBZ	Khabaz	67.34	309	ceP	P	22 08 29.0	+0.8
KBZ				pmax	pmax		
	comp=Z,16nm,1.0s						
RIDG	Independent Ri	67.35	29	P	P	22 08 27.8	-0.3
RIDG	Independent Ri	67.35	29	P	P	22 08 27.7	-0.4
	baz=282						
KVAR	Kislovodsk Arr	67.43	309	P	P	22 08 29.7	+0.7
	comp=Z,6.7nm,0.9s,baz=91,slow=22,SNR=5.4						
KVAR				LR	LR	22 39 02.9	
	comp=Z,222nm,21.1s,baz=242,slow=37						
	comp=Z,6.7nm,0.9s						
KIV	Kislovodsk	67.43	309	P	P	22 08 29.4	+0.4
KIV	Kislovodsk	67.43	309	eP	P	22 08 29.1	+0.1
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV				MLR	MLR		
	comp=Z,111nm,17.0s						
KIV	Kislovodsk	67.43	309	i P	P	22 08 29.7	+0.7
	SNR=11						
KIV	Kislovodsk	67.43	309	P	P	22 08 29.3	+0.4
KIV				pP	pP	22 08 39.0	-0.9
DIV	Divide	67.48	32	P	P	22 08 29.3	+0.4
HARP	HAARP	67.49	30	P	P	22 08 28.8	-0.1
	baz=282						
EYAK	Cordova Ski Ar	67.61	32	P	P	22 08 28.4	-1.3
EYAK				IAmb	IAmb	22 08 39.3	
	comp=Z,33nm,1.5s						
EYAK	Cordova Ski Ar	67.61	32	P	P	22 08 29.7	0.0
	baz=283						
SCRK	Sand Creek	67.67	28	P	P	22 08 29.8	-0.4
SCRK				IAmb	IAmb	22 08 30.3	
	comp=Z,14nm,1.1s						
SCRK	Sand Creek	67.67	28	P	P	22 08 29.7	-0.5
	baz=283,SNR=9.8						
E27K	Coleen River	67.68	24	P	P	22 08 30.4	+0.3
	baz=283						
DOT	Dot Lake	67.71	29	P	P	22 08 29.8	-0.5
DOT				IAmb	IAmb	22 08 31.0	
	comp=Z,17nm,1.0s						
I26K	Coal Creek Min	67.72	27	IAmb	IAmb	22 08 52.7	
	comp=Z,15nm,0.9s						
I26K	Coal Creek Min	67.72	27	P	P	22 08 30.5	+0.2
	baz=283						
J26L	Joseph Creek	67.73	28	IAmb	IAmb	22 08 31.0	
	comp=Z,19nm,0.9s						
J26L	Joseph Creek	67.73	28	P	P	22 08 30.4	-0.1
	baz=283,SNR=14						
LPSR	Galich'ya Gora	67.80	319	eP	P	22 08 29.4	-1.6
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
MOS	Moscow	67.82	322	eP	P	22 08 29.8	-1.3
MOS				e		22 08 36.7	
MOS				pmax	pmax		
	comp=Z,44nm,1.3s						
VORR	Voronezh	67.85	318	eP	P	22 08 30.0	-1.3
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
N25K	Chitina, Valde	67.92	31	P	P	22 08 32.1	+0.4
N25K				IAmb	IAmb	22 08 44.9	
	comp=Z,14nm,1.1s						
N25K	Chitina, Valde	67.92	31	P	P	22 08 31.8	+0.1
	baz=283						
G27K	Doyon Strip	67.97	25	P	P	22 08 32.3	+0.3
	baz=284						
VSR	Storozhevoye	67.98	317	eP	P	22 08 29.9	-2.3
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
KARS	Kars	68.00	306	P	P	22 08 32.6	-0.2
KARS	Kars	68.00	306	P	P	22 08 32.6	-0.2
KARS				pmax	pmax		
	comp=Z,77nm,1.4s						
BMRM	Bremner River	68.07	32	P	P	22 08 32.6	0.0
BMRM				IAmb	IAmb	22 08 44.8	
	comp=Z,17nm,0.9s						
BMRM	Bremner River	68.07	32	P	P	22 08 32.5	0.0
	baz=283,SNR=6.5						
H27K	Steamboat Moun	68.16	26	P	P	22 08 34.2	+1.1
	baz=284,SNR=11						
L26K	Log Cabin Wild	68.16	29	P	P	22 08 33.4	+0.2
L26K				IAmb	IAmb	22 08 34.8	
	comp=Z,21nm,1.1s						
L26K	Log Cabin Wild	68.16	29	P	P	22 08 33.5	+0.3
	baz=284,SNR=6.2						
RAGM	Ragged Mountai	68.17	32	P	P	22 08 34.5	+1.3
I27K	Kandik River	68.28	27	P	P	22 08 34.8	+0.9
	baz=284,SNR=20						
GLB	Gilahina Butte	68.33	31	P	P	22 08 34.4	+0.1
GLB				IAmb	IAmb	22 08 35.6	
	comp=Z,20nm,1.1s						
M26K	Nabesna, AK	68.47	30	P	P	22 08 35.5	+0.4
	baz=284,SNR=17						
K27K	Chicken	68.47	28	P	P	22 08 35.8	+0.8
	baz=284						
VRDI	Verde Repeater	68.55	31	P	P	22 08 35.8	-0.1
VRDI				IAmb	IAmb	22 08 36.9	
	comp=Z,13nm,0.8s						
OBN	Obninsk	68.56	322	P	P	22 08 34.6	-1.1
	comp=Z,1.9nm,0.4s,baz=52,slow=10,SNR=5.7						
OBN				LR	LR	22 41 40.5	
	comp=Z,90nm,18.1s,baz=109,slow=39						
	comp=Z,1.9nm,0.4s						
OBN	Obninsk	68.56	322	P	P	22 08 35.2	-0.4
OBN	Obninsk	68.56	322	deP	P	22 08 35.0	-0.7
OBN				e*PP	pP	22 08 42.0	-4.6
OBN				e		22 09 02.4	
OBN				e		22 11 06.1	
OBN				pmax	pmax		
	comp=Z,37nm,1.3s						
OBN				MLR	MLR		
	comp=Z,287nm,16.0s						
GEVA	Gevas	68.65	303	P	P	22 08 37.4	+0.5
GEVA				IAmb	IAmb	22 08 38.5	
	comp=Z,11nm,0.9s						
EGAK	Eagle	68.67	27	IAmb	IAmb	22 08 37.3	
	comp=Z,13nm,0.9s						
EGAK	Eagle	68.67	27	P	P	22 08 36.7	+0.4
	baz=285,SNR=8.5						
MCARA	McCarthy VSAT	68.71	31	P	P	22 08 37.1	+0.5
MCARA				IAmb	IAmb	22 08 39.3	
	comp=Z,18nm,0.8s						
MCARA	McCarthy VSAT	68.71	31	P	P	22 08 36.8	+0.2
	baz=284,SNR=7.5						
SPITS	Spitsbergen Ar	68.81	348	LR	LR	22 45 05.9	
	comp=Z,169nm,18.3s,baz=15,slow=41						
L27K	Beaver Creek,	68.83	29	P	P	22 08 37.6	+0.3
L27K				IAmb	IAmb	22 08 40.2	
	comp=Z,21nm,1.4s						
L27K	Beaver Creek,	68.83	29	P	P	22 08 38.2	+0.9
	baz=285,SNR=10						
M27K	Edge Creek, AK	68.99	30	P	P	22 08 38.6	+0.2
M27K				IAmb	IAmb	22 08 39.9	
	comp=Z,13nm,0.9s						
M27K	Edge Creek, AK	68.99	30	P	P	22 08 38.7	+0.2
	baz=285,SNR=7.3						
WAX	Waxell Ridge	69.03	32	P	P	22 08 38.8	+0.1
WAX				IAmb	IAmb	22 08 39.9	
	comp=Z,16nm,0.7s						
ISLE	Juniper Island	69.24	32	IAmb	IAmb	22 08 48.9	
	comp=Z,14nm,1.0s						
GURO	Guroymak-BITLI	69.36	304	P	P	22 08 41.3	+0.1
BARN	Barnard Glacie	69.43	31	P	P	22 08 41.1	-0.2
BARN				IAmb	IAmb	22 08 42.7	
	comp=Z,12nm,0.8s						
ARCES	ARCESS Array B	69.51	338	LR	LR	22 44 18.6	
	comp=Z,226nm,18.7s,baz=82,slow=40						
DAWY	Dawson	69.60	28	P	P	22 08 42.6	+0.5
DAWY				IAmb	IAmb	22 08 43.5	
	comp=Z,16nm,1.0s						
DAWY	Dawson	69.60	28	P	P	22 08 42.6	+0.5
	baz=287,SNR=11						
I29M	Ogilvie Camp,	69.67	26	P	P	22 08 42.4	-0.1
I29M				IAmb	IAmb	22 08 44.2	
	comp=Z,18nm,1.0s						
I29M	Ogilvie Camp,	69.67	26	P	P	22 08 42.9	+0.4
	baz=287,SNR=13						
YUK3	Moose Creek	69.79	30	P	P	22 08 44.3	+0.8
	baz=286,SNR=7.0						
J29M	Klondike Camp	69.98	27	P	P	22 08 45.6	+1.1
J29M	Klondike Camp	69.98	27	P	P	22 08 45.1	+0.6
	baz=287,SNR=6.6						
G30M	tAoh Zraii Nji	69.99	24	P	P	22 08 44.2	-0.3
	baz=288,SNR=10						
EPYK	Eagle Plains	69.99	25	IAmb	IAmb	22 08 54.0	
	comp=Z,18nm,0.9s						
EPYK	Eagle Plains	69.99	25	P	P	22 08 44.5	+0.1
	baz=288,SNR=8.2						
KOPT	Kop Dagi	70.07	306	P	P	22 08 46.3	+0.6
KOPT				IAmb	IAmb	22 08 59.9	
	comp=Z,16nm,1.1s						
O28M	Mount Upton	70.20	31	P	P	22 08 46.8	+0.6
	baz=287,SNR=7.2						
YUK8	Steele Glacier	70.25	31	P	P	22 08 47.0	+0.5
	baz=287						
PCA	Pinnacle	70.37	32	P	P	22 08 47.4	+0.5
PINM	Pinnacle	70.37	32	P	P	22 08 47.5	+0.5
	baz=287,SNR=5.2						
L29M	L29M	70.43	29	P	P	22 08 48.1	+0.9
	baz=288,SNR=32						
K29M	Barlow Dome	70.46	28	P	P	22 08 48.4	+0.9
	baz=288						
M29M	Somme Creek	70.49	29	P	P	22 08 48.5	+0.9
	baz=288,SNR=15						
INK	Inuvik	70.52	23	LR	LR	22 41 56.7	
	comp=Z,98nm,18.6s,baz=282,slow=38						
INK	Inuvik	70.52	23	P	P	22 08 47.7	+0.1
	baz=290						
MARD	Mardin	70.67	303	P	P	22 08 49.4	+0.1
BCPM	Bancas Point	70.71	32	P	P	22 08 49.5	+0.6
YUK4	Talbot Arm	70.75	30	P	P	22 08 50.0	+0.6
	baz=288,SNR=8.8						
F31M	Tsiigehtchic	70.75	24	P	P	22 08 48.7	-0.2
	baz=290						
ANN	Anapa	70.83	311	eP	P	22 08 48.6	-1.3
ANN				e*PP	pP	22 08 55.4	-5.4
ANN				e		22 09 08.2	
ANN				e		22 11 23.3	
ANN				eS	S	22 18 02.8	+0.6
ANN				eSS	SS	22 22 33.6	-1.0
ANN				pmax	pmax		
	comp=Z,80nm,1.4s						
PNL	Peninsula	70.92	32	P	P	22 08 50.8	+0.6
	baz=288						
YUK6	Outpost Mounta	71.00	31	P	P	22 08 51.8	+0.8
	baz=288,SNR=6.6						
O29M	Mount Kennedy	71.11	32	P	P	22 08 52.2	+0.7
	baz=289						
M30M	Minto, Yukon	71.18	29	IAmb	IAmb	22 08 57.4	
	comp=Z,30nm,1.3s						
M30M	Minto, Yukon	71.18	29	P	P	22 08 53.0	+1.2
	baz=289,SNR=16						
MAYO	Mayo, Yukon	71.22	28	P	P	22 08 52.4	+0.4
MAYO	Mayo, Yukon	71.22	28	P	P	22 08 53.2	+1.2
	baz=290						
RAYN	Ar Rayn	71.31	288	P	P	22 08 53.4	+0.1
RAYN				IAmb	IAmb	22 08 54.9	
	comp=Z,22nm,1.3s						
RAYN	Ar Rayn	71.31	288	P	P	22 08 53.4	+0.1
RAYN				pmax	pmax		
	comp=Z,22nm,1.3s						
RAYN	Ar Rayn	71.31	288	i P	P	22 08 53.2	-0.1
	SNR=17						
RAYN	Ar Rayn	71.31	288	P	P	22 08 52.5	-0.8
N30M	Aishikik Lake	71.42	30	P	P	22 08 54.3	+1.0
	baz=289,SNR=9.3						
HYT	Haines Junctio	71.44	31	P	P	22 08 54.4	+0.9
HYT				IAmb	IAmb	22 08 55.6	
	comp=Z,27nm,1.1s						
HYT	Haines Junctio	71.44	31	P	P	22 08 54.3	+0.9
	baz=289,SNR=11						
P29M	Windy Craggy	71.72	32	P	P	22 08 55.9	+0.8
P29M				IAmb	IAmb	22 08 57.4	
	comp=Z,20nm,0.8s						
P29M	Windy Craggy	71.72	32	P	P	22 08 55.7	+0.6
	baz=289,SNR=7.4						
P30M	Million Dollar	71.93	31	P	P	22 08 57.3	+0.9
	baz=290						
FINES	FINESS Array B	71.97	330	P	P	22 08 55.8	-0.7
	comp=Z,5.3nm,0.8s,baz=54,slow=9.7,SNR=13						
FINES				LR	LR	22 44 21.3	
	comp=Z,390nm,18.6s,baz=76,slow=39						
	comp=Z,5.3nm,0.8s						
ALE	Alert	71.99	1	P	P	22 08 55.3	-1.0
ALE				pP	pP	22 09 06.0	-1.2
ALE				sP	pwP	22 09 10.7	+0.7
N31M	Braeburn, Yuko	72.00	30	P	P	22 08 57.7	+1.0
N31M	Braeburn, Yuko	72.00	30	P	P	22 08 58.1	+

baz=291,SNR=20
FARO Faro, Yukon 72.80 29 P P 22 09 02.5 +1.0
baz=292,SNR=30
TOKA Tokat 72.90 307 P P 22 09 02.5 -0.1
AFI Afiamalu 72.94 115 LR LR 22 34 39.7
comp=Z,106nm,19.3s,baz=35,slow=30
SKAG Skagway 72.94 32 P P 22 09 03.2 +1.0
SKAG IAmb IAmb 22 09 04.5
comp=Z,24nm,0.9s
SKAG Skagway 72.94 32 P P 22 09 03.0 +0.8
baz=291,SNR=7.8
SIM Simferopol' 73.02 312 *e*P **P 22 09 02.7 -0.4**
SIM *e* 22 09 20.0
SIM *e* 22 11 47.2
SIM pmax pmax
comp=Z,30nm,1.0s
SIM pmax pmax
comp=Z,120nm,5.4s
S31K Pelican 73.04 33 P P 22 09 03.6 +0.7
baz=291
C36M Paulatuk 73.23 20 P P 22 09 03.5 -0.3
baz=298
N32M Quiet Lake 73.33 30 P P 22 09 05.6 +0.9
baz=293
GAZ Gaziantep 73.41 304 P P 22 09 05.5 -0.1
GAZ IAmb IAmb 22 09 07.3
comp=Z,15nm,1.0s
BESE Bessie Mountai 73.49 33 P P 22 09 06.3 +0.7
BESE IAmb IAmb 22 09 07.7
comp=Z,36nm,1.3s
MNK Minsk 73.53 323 *i* P **P 22 09 03.5 -2.3**
MNK *i* 22 11 46.0
MNK *i* PPP PPP 22 13 30.7
MNK *i* S **SKiKP 22 18 32.2 -0.9**
MNK *i* SS **SS 22 23 16.1 +0.7**
MNK pmax pmax
comp=E,24nm,1.1s
MNK pmax pmax
comp=Z,26nm,0.9s
MNK pmax pmax
comp=E,8.0nm,1.3s
MNK MLR MLR
comp=Z,263nm,12.0s
MNK MLR MLR
comp=N,214nm,12.0s
MNK MLR MLR
comp=E,60nm,20.0s
MNK Minsk 73.53 323 *i* P **P 22 09 03.6 -2.3**
comp=E,8.0nm,1.3s
MNK *i* P **P 22 09 03.6 -2.3**
comp=N,24nm,1.1s
MNK *i* P **P 22 09 03.6 -2.3**
comp=Z,26nm,0.9s,baz=69
MNK *i* PP **PP 22 11 46.0 -3.6**
MNK *i* PPP PPP 22 13 30.8
MNK *i* S **SKiKP 22 18 32.2 -0.9**
MNK *i* SS **SS 22 23 16.1 +0.7**
MNK *i* SSS SSS 22 26 37.1
MNK *i* LQ LQ 22 36 18.7
MNK *i* LR LR 22 42 02.2
MNK *i* LRM MLR 22 43 41.2
comp=Z,263nm,11.5s
MNK *i* LRM MLR 22 43 43.1
comp=N,214nm,12.2s
MNK *i* LRM MLR 22 43 45.6
comp=E,60nm,19.8s
MMPY Sheldon Lake, 73.54 28 P P 22 09 06.2 +0.3
baz=294,SNR=8.7
P32M Atlin 73.65 31 P P 22 09 06.9 +0.3
baz=293
R32K Eaglecrest 73.77 33 P P 22 09 07.4 +0.1
baz=292,SNR=5.7
P33M Teslin, Yukon 73.82 31 IAmb IAmb 22 09 09.7
comp=Z,33nm,1.1s
P33M Teslin, Yukon 73.82 31 P P 22 09 08.5 +0.9
baz=293,SNR=18
SIT Sitka 73.83 34 P P 22 09 08.4 +0.9
baz=292
JIS Juneau Island 73.83 33 P P 22 09 08.7 +1.1
JIS IAmb IAmb 22 09 09.8
comp=Z,21nm,0.8s
MSEY Mahe Island 73.83 257 P P 22 09 08.1 -0.3
MSEY IAmb IAmb 22 09 10.2
comp=Z,17nm,1.1s
MSEY Mahe Island 73.83 257 P P 22 09 08.1 -0.3
MSEY pmax pmax
comp=Z,17nm,1.1s
BNN Bunyan 73.86 306 IAmb IAmb 22 09 08.6
comp=Z,34nm,1.2s
NACGM Naroch 73.98 324 *e*P **P 22 09 08.7 +0.2**
comp=Z,36nm,0.9s,baz=69
S32K Killisnoo 74.05 34 P P 22 09 10.3 +1.5
baz=293
AKASG Malin Array Be 74.13 319 P P 22 09 08.3 -1.2
comp=Z,5.1nm,0.7s,baz=56,slow=6.4,SNR=26
AKASG LR LR 22 42 37.4
comp=Z,383nm,18.9s,baz=66,slow=36
comp=Z,5.1nm,0.7s
AKASG Malin Array Be 74.13 319 P P 22 09 08.8 -0.7
AKASG Malin Array Be 74.13 319 *i* P **P 22 09 08.8 -0.7**
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 74.13 319 P P 22 09 08.5 -0.9
AKBB IAmb IAmb 22 09 09.6
comp=Z,15nm,1.1s
AKBB Malin Array Si 74.13 319⇑ *i*P **P 22 09 08.7 -0.7**
AKBB pmax pmax
comp=Z,102nm,5.3s
AK05 Malin Array Si 74.17 319 P 22 09 08.7 -1.0
AK05 IAmb IAmb 22 09 09.8
comp=Z,15nm,1.1s
Q32M Nakina River 74.58 32 P P 22 09 13.0 +0.8
baz=294
R33M Jennings River 75.01 31 P P 22 09 15.2 +0.7
baz=295,SNR=11
BR131 Keskin Array S 75.15 307 P P 22 09 15.7 -0.1
BR131 Keskin Array S 75.15 307 P P 22 09 15.7 -0.1
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 75.15 307 P P 22 09 15.8 0.0
comp=Z,3.3nm,0.6s,baz=92,slow=4.6,SNR=22
BRTR LR LR 22 45 05.6
comp=Z,160nm,21.0s,baz=52,slow=38
comp=Z,3.3nm,0.6s
TGTN Hyland Airport 75.28 28 P P 22 09 17.0 +1.0
baz=297,SNR=10
U33K Whale Pass 75.32 35 P P 22 09 17.2 +1.0
baz=294
ASF Jabal al Asfar 75.40 299 P P 22 09 18.2 +0.9
comp=Z,8.0nm,0.8s,baz=87,slow=2.3,SNR=17
comp=Z,8.0nm,0.8s
S34M Telegraph Cree 75.56 32 P P 22 09 18.3 +0.7
baz=295
WRAK Wrangell Islan 75.59 34 P P 22 09 18.8 +1.1
baz=295
WTLY Watson Lake, Y 75.69 30 P P 22 09 19.4 +1.1
WTLY IAmb IAmb 22 09 21.0
comp=Z,33nm,1.2s
WTLY Watson Lake, Y 75.69 30 P P 22 09 19.5 +1.1
baz=296,SNR=5.9
ANTO Ankara 75.71 307 P P 22 09 18.9 0.0
ANTO IAmb IAmb 22 09 22.6
comp=Z,19nm,1.2s
ANTO Ankara 75.71 307 P P 22 09 18.9 0.0
ANTO pmax pmax
comp=Z,19nm,1.2s
DLBC Dease Lake 75.86 32 P P 22 09 20.5 +1.1
DLBC IAmb IAmb 22 09 21.4
comp=Z,14nm,0.9s
DLBC Dease Lake 75.86 32 P P 22 09 20.5 +1.1
baz=296,SNR=6.7
MMAI Mount Meron Ar 76.27 300 LR LR 22 47 32.8
comp=Z,157nm,18.5s,baz=214,slow=39
T35M Bob Quinn 76.39 33 P P 22 09 23.6 +1.2
baz=296
WRGLY Wrigley 76.45 26 P P 22 09 23.2 +0.7
baz=300
RES Resolute Bay 76.63 10 LR LR 22 46 05.0
comp=Z,80nm,18.2s,baz=304,slow=38
GHAJ Ghor Haditha 76.77 298 P P 22 09 25.4 +0.4
CSS Mathiatis 77.14 303 IAmb IAmb 22 09 27.7
comp=Z,12nm,0.7s
LIRD Liard River Hi 77.22 30 P P 22 09 27.9 +0.9
baz=299,SNR=10
BUR08 Bucovina Ar. S 77.75 317 P P 22 09 30.0 -0.3
BURAR Bucovina Array 77.75 317 P P 22 09 30.2 -0.2
EIL Elat 77.88 297 P P 22 09 30.6 -0.6
comp=Z,7.2nm,1.1s,baz=64,slow=5.5,SNR=3.9
EIL LR LR 22 46 54.2
comp=Z,86nm,18.5s,baz=66,slow=38
comp=Z,7.2nm,1.1s
GRNB Grenville Isla 77.94 36 P P 22 09 30.8 -0.4
HFS Hagfors 78.01 332 P P 22 09 30.4 -1.0
comp=Z,5.3nm,0.8s,baz=88,slow=4.6,SNR=3.9
HFS LR LR 22 46 59.5
comp=Z,392nm,18.3s,baz=62,slow=38
comp=Z,5.3nm,0.8s
MLR Muntele Rosu 78.18 315 LR LR 22 49 01.1
comp=Z,270nm,19.3s,baz=67,slow=39
JMIC Jan Mayen 78.31 346 LR LR 22 48 13.7
comp=Z,125nm,19.0s,baz=334,slow=39
NB2 NORSAR Subarra 78.57 333 P **P 22 09 33.4 -1.1**
comp=Z,26nm,1.2s,baz=55,slow=5.6
NB2 NORSAR Subarra 78.57 333 P **P 22 09 33.4 -1.1**
baz=55,slow=5.6
NOA NORSAR Array B 78.57 333 P **P 22 09 33.4 -1.1**
comp=Z,4.0nm,0.8s,baz=56,slow=5.5,SNR=8.9
NOA LR LR 22 47 54.9
comp=Z,472nm,18.4s,baz=60,slow=38
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 78.97 319 *e*P **P 22 09 36.8 -0.1**
KOLS pmax pmax
comp=Z,5.0nm,0.8s
UZH Uzhgorod 79.09 319 *e*P **P 22 09 37.3 -0.2**
UZH *e* 22 09 46.3
TRPA Tarpa 79.16 318 P **P 22 09 37.6 -0.3**
OJC Ojcow 79.81 321 IAmb IAmb 22 09 40.5
comp=Z,18nm,0.9s
ABAH Abaujker 79.86 319 P **P 22 09 42.1 +0.4**
YKA Yellowknife Ar 80.22 24 P **P 22 09 43.4 0.0**
comp=Z,16nm,0.9s,baz=305,slow=5.3,SNR=16
YKA LR LR 22 48 52.6
comp=Z,125nm,18.1s,baz=342,slow=38
comp=Z,16nm,0.9s
YKA Yellowknife Ar 80.22 24 P **P 22 09 43.3 -0.1**
YKA Yellowknife Ar 80.22 24 *i* P **P 22 09 43.7 +0.3**
YKA pmax pmax
comp=Z,16nm,0.9s
RPZ Rata Peaks 80.87 148 LR LR 22 43 44.4
comp=Z,129nm,21.8s,baz=310,slow=34
OKC Ostrava-Krasne 80.93 321 *e*P **P 22 09 48.0 +0.5**
OKC Ostrava-Krasne 80.93 321 *e*P **P 22 09 48.0 +0.5**
VTS Vitosha 81.18 313 IAmb IAmb 22 09 50.5
comp=Z,16nm,1.1s
VYHS Vyhne 81.19 320 *e*P **P 22 09 49.4 +0.5**
VYHS pmax pmax
comp=Z,14nm,1.1s
MORC Moravsky Berou 81.30 321 *e*P **P 22 09 49.8 +0.3**
MAUC Maruska 81.34 321 *e*P **P 22 09 50.0 +0.3**
JAVC Velka Javorina 81.68 320 *e*P **P 22 09 53.0 +1.4**
DPC Dobruska-Polom 81.70 322 *e*P **P 22 09 52.0 +0.4**
DPC Dobruska-Polom 81.70 322 *e*P **P 22 09 52.0 +0.4**
RER Riviere de l'E 81.80 242 P **P 22 09 51.8 -0.8**
SMOL Smolenice 81.99 320 *e*P **P 22 09 54.2 +1.1**
VRAC Vranov 82.07 321 LR LR 22 49 09.1
comp=Z,397nm,18.6s,baz=68,slow=38
VRAC Vranov 82.07 321 *e*P **P 22 09 54.0 +0.5**
KRUC Moravsky 82.31 321 *e*P **P 22 09 55.1 +0.3**
WAPA Wapiti River 82.61 31 P **P 22 09 56.3 0.0**
WAPA IAmb IAmb 22 09 57.5
comp=Z,17nm,1.0s
CLL Collm 83.00 324 P **P 22 09 57.6 -0.7**
CLL Collm 83.00 324 P **P 22 09 57.6 -0.7**
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 83.00 324 *i* P **P 22 09 57.8 -0.5**
comp=Z,12nm,1.1s
CLL *e*PcP **PcP 22 10 02.0 -0.9**
CLL *es*P **pP 22 10 10.0 +0.6**
CLL *e*PP **PP 22 13 10.0 +1.3**
CLL *ex* x 22 29 54.0
CLL LmV 22 51 00.0
comp=Z,400nm,19.0s
CONA Conrad Observa 83.19 320 *e*P **P 22 10 00.2 +0.7**
comp=Z,9.9nm,1.2s
IDI Anoyia 83.30 306 P **P 22 10 00.2 -0.1**
comp=Z,11nm,1.0s,baz=112,slow=16,SNR=1.7
comp=Z,11nm,1.0s
CKRC Cesky Krumlov 83.61 322 *e*P **P 22 10 02.1 +0.6**
ARSA Arzberg 83.74 320 *e*P **P 22 10 03.2 +1.0**
comp=Z,5.4nm,1.3s
KHC Kasperske Hory 83.86 322 *e*P **P 22 10 03.0 +0.2**
KHC Kasperske Hory 83.86 322 *e*P **P 22 10 03.0 +0.2**
LLLB Lillooet 83.86 36 P **P 22 10 03.2 +0.4**
LLLB IAmb IAmb 22 10 04.2
comp=Z,12nm,1.2s
GEC2 GERESS Array S 83.94 322 P **P 22 10 03.3 0.0**
GERES GERESS Array B 83.94 322 P **P 22 10 03.0 -0.3**
comp=Z,2.0nm,0.8s,baz=40,slow=2.3,SNR=13
GERES LR LR 22 50 37.2
comp=Z,384nm,21.4s,baz=67,slow=38
comp=Z,2.0nm,0.8s
GERES GERESS Array B 83.94 322 P **P 22 10 03.5 +0.2**
GERES GERESS Array B 83.94 322 P **P 22 10 03.5 +0.2**
MOA Molln 84.15 321 *i* P **P 22 10 04.9 +0.6**
comp=Z,5.1nm,0.8s,SNR=5.3
GRFO Grafenberg 84.84 323 P **P 22 10 08.3 +0.6**
GRFO IAmb IAmb 22 10 09.2
comp=Z,20nm,1.2s
GRFO Grafenberg 84.84 323 P **P 22 10 08.3 +0.6**
GRFO pmax pmax
comp=Z,20nm,1.2s
WTTA Wattenberg 85.97 321 *e*P **P 22 10 13.5 -0.2**
comp=Z,10nm,1.3s
LON Longmire 86.03 39 P **P 22 10 14.1 +0.3**
LON Longmire 86.03 39 P **P 22 10 14.1 +0.3**
LON pmax pmax
comp=Z,8.0nm,1.2s
BORG Borgarnes 86.20 346 LR LR 22 51 39.9
comp=Z,125nm,19.7s,baz=11,slow=38
MOTA Moosalm 86.22 321 *e*P **P 22 10 14.5 -0.4**
comp=Z,8.1nm,1.1s
SQTA Sankt Quirin 86.23 321 *e*P **P 22 10 14.5 -0.3**
comp=Z,7.2nm,1.1s
RAR Rarotonga 86.48 115 LR LR 22 43 54.7
comp=Z,35nm,20.1s,baz=301,slow=32
B08A Colville Reser 86.51 37 P **P 22 10 16.0 -0.1**
B08A IAmb IAmb 22 10 22.8
comp=Z,12nm,1.4s
EDM Edmonton 86.56 31 P **P 22 10 16.0 -0.3**
EDM Edmonton 86.56 31 P **P 22 10 16.0 -0.3**
EDM pmax pmax
comp=Z,28nm,1.1s
FETA Feichten 86.61 321 *e*P **P 22 10 16.8 0.0**
comp=Z,6.2nm,1.1s
DAVA Damuels 86.94 322 *e*P **P 22 10 18.5 +0.1**
comp=Z,7.3nm,0.9s
FUORN Ofenpass-Fuorn 87.11 321 P **P 22 10 19.2 -0.1**
DBO Dodson Butte 87.18 43 P **P 22 10 19.3 -0.2**
DBO IAmb IAmb 22 10 37.0
comp=Z,16nm,1.3s
BFO Black Forest 87.18 323 P **P 22 10 19.3 0.0**
BFO IAmb IAmb 22 10 20.0
comp=Z,20nm,1.4s
BFO Black Forest 87.18 323 P **P 22 10 19.3 0.0**
BFO pmax pmax
comp=Z,20nm,1.4s
DAVOX Davos/Dischmat 87.23 322 LR LR 22 52 53.7
comp=Z,344nm,19.2s,baz=46,slow=38
WLF Walferdange 87.52 325 P **P 22 10 20.5 -0.4**
WLF IAmb IAmb 22 10 22.5
comp=Z,8.9nm,0.9s
WLF Walferdange 87.52 325 P **P 22 10 20.5 -0.4**
WLF pmax pmax
comp=Z,9.0nm,0.9s
SFJD Kangerlussuaq 87.59 358 LR LR 22 51 44.5
comp=Z,119nm,18.2s,baz=344,slow=37
ABPO Ambohimpanom 87.71 248 P **P 22 10 22.7 +0.2**
ABPO Ambohimpanom 87.71 248 P **P 22 10 22.7 +0.2**
ABPO pmax pmax
comp=Z,36nm,1.4s
ECH Echery 87.87 324 P **P 22 10 20.9 -1.8**
ECH IAmb IAmb 22 10 24.1
comp=Z,14nm,1.4s
ECH Echery 87.87 324 P **P 22 10 20.9 -1.8**
ECH pmax pmax
comp=Z,14nm,1.4s
EKA Eskdalemuir Ar 88.06 333 P **P 22 10 21.9 -1.5**
comp=Z,0.9nm,0.8s,baz=47,slow=9.0,SNR=3.8
EKA LR LR 22 54 06.4
comp=Z,463nm,19.0s,baz=46,slow=38
comp=Z,0.9nm,0.8s
PINE Pine Mountain 88.20 41 P **P 22 10 23.8 -0.8**
PINE IAmb IAmb 22 10 27.2
comp=Z,9.5nm,1.1s
E09A Wood Farm, Sta 88.24 38 P **P 22 10 24.2 -0.2**
YBH Yreka Blue Hor 88.26 44 P **P 22 10 24.9 +0.1**
YBH Yreka Blue Hor 88.26 44 P **P 22 10 24.9 +0.1**
YBH pmax pmax
comp=Z,6.0nm,1.2s
LODK Lodwar 88.30 273 P **P 22 10 25.8 +0.5**
KIBK Kibwezi 88.35 267 P **P 22 10 26.1 +0.5**
KMBO Kilima Mbogo 88.54 268 P **P 22 10 27.1 +0.4**
comp=Z,0.4nm,0.7s,baz=49,slow=23,SNR=6.5
comp=Z,0.4nm,0.7s
KMBO Kilima Mbogo 88.54 268 P **P 22 10 27.2 +0.5**
KMBO Kilima Mbogo 88.54 268 P **P 22 10 27.2 +0.5**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 88.54 268 *i* P **P 22 10 27.6 +0.9**
SNR=7.5
MOD Modoc Plateau 89.66 43 P **P 22 10 32.1 +0.7**
BMO Blue Mountains 89.70 39 P **P 22 10 32.1 +0.6**
BMO Blue Mountains 89.70 39 P **P 22 10 32.1 +0.6**
BMO pmax pmax
comp=Z,4.0nm,1.1s
FRB Frobisher Bay 90.26 6 LR LR 22 54 49.0
comp=Z,173nm,18.8s,baz=9.0,slow=38
MSO Missoula 90.34 36 P **P 22 10 35.1 +0.7**
baz=309
FFC Flin Flon 90.34 25 P **P 22 10 34.5 +0.4**
FFC Flin Flon 90.34 25 P **P 22 10 34.5 +0.4**
FFC pmax pmax
comp=Z,23nm,1.0s
BEKR Beckworth 90.78 44 P **P 22 10 36.9 +0.2**
MFID Camas Ranch 91.42 40 P **P 22 10 40.5 +1.0**
MFID IAmb IAmb 22 10 56.5
comp=Z,8.7nm,1.1s
PNTR Pine Nut 91.71 45 P **P 22 10 41.2 +0.1**
CMB Columbia Colle 91.81 46 P **P 22 10 40.9 -0.4**
CMB Columbia Colle 91.81 46 P **P 22 10 40.9 -0.4**
CMB pmax pmax
comp=Z,4.0nm,1.2s
DLMT Dillon 91.99 37 P **P 22 10 42.3 +0.2**
DLMT IAmb IAmb 22 10 44.6
comp=Z,8.3nm,0.8s
HLID Hailey 92.14 39 P **P 22 10 43.9 +1.0**
HLID IAmb IAmb 22 10 59.7
comp=Z,8.8nm,1.1s
HLID Hailey 92.14 39 P **P 22 10 43.3 +0.4**
baz=309
MCMT McKenzie Canyo 92.20 37 P **P 22 10 43.3 0.0**
BOZ Bozeman (W) 92.36 36 P **P 22 10 44.3 +0.4**
BOZ Bozeman (W) 92.36 36 P **P 22 10 44.3 +0.4**
BOZ pmax pmax
comp=Z,4.0nm,1.1s
BOZ Bozeman (W) 92.36 36 P **P 22 10 44.9 +1.0**
baz=311
NVAR Mina Array Bea 92.92 45 P **P 22 10 46.2 -0.5**
comp=Z,0.9nm,0.7s,baz=295,slow=6.2,SNR=7.6
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 92.92 45 P **P 22 10 46.0 -0.6**
YHB Horse Butte 93.14 36 P **P 22 10 47.9 +0.3**
YHB IAmb IAmb 22 10 50.3
comp=Z,11nm,1.0s
YHH Holmes Hill 93.30 36 P **P 22 10 48.5 +0.1**
PPT Papeete 93.38 108 LR LR 22 43 40.2
comp=Z,78nm,20.9s,baz=358,slow=30
PPT2 Papeete2 93.39 108 *e*LR LR 22 40 51.2
comp=Z,429nm,31.8s
PPT2 *e*LR LR 22 40 51.5
comp=Z,278nm,32.0s
ELK Elko 93.41 41 P **P 22 10 49.5 +0.6**
ELK Elko 93.41 41 P **P 22 10 49.5 +0.6**
ELK pmax pmax
comp=Z,3.0nm,1.1s
H17A Grant Village 93.71 36 P **P 22 10 50.7 +0.4**
H17A IAmb IAmb 22 11 03.8
comp=Z,7.6nm,1.1s
H17A Grant Village 93.71 36 P **P 22 10 51.7 +1.4**
baz=312
IMW Indian Meadow 93.85 37 P **P 22 10 52.0 +1.1**
IMW IAmb IAmb 22 11 07.9
comp=Z,5.9nm,1.1s
KEST Kesra 93.95 313 LR LR 22 57 23.5
comp=Z,103nm,20.8s,baz=268,slow=38
MBAR Mbarara 94.20 271 P **P 22 10 52.4 -0.5**
MBAR IAmb IAmb 22 10 54.6
comp=Z,7.5nm,1.2s
MBAR Mbarara 94.20 271 P **P 22 10 52.4 -0.5**
MBAR pmax pmax
comp=Z,8.0nm,1.2s
HVU Hansel Valley 94.20 39 P **P 22 10 53.3 +0.9**
HVU IAmb IAmb 22 11 09.4
comp=Z,8.7nm,1.3s
HVU Hansel Valley 94.20 39 P **P 22 10 53.3 +0.9**
HVU pmax pmax
comp=Z,9.0nm,1.3s
MPMC Manual Prospec 94.84 46 P **P 22 10 56.2 +0.7**
baz=307
DUG Dugway, Tooele 95.19 41 P **P 22 10 57.2 +0.2**
DUG Dugway, Tooele 95.19 41 P **P 22 10 57.2 +0.2**
DUG pmax pmax
comp=Z,3.0nm,1.0s
PDAR Pinedale Array 95.35 37 P **P 22 10 57.8 0.0**
comp=Z,0.2nm,0.3s,baz=328,slow=3.2,SNR=2.4
comp=Z,0.2nm,0.3s
GSC Goldstone, Bar 95.74 46 P **P 22 11 00.2 +0.7**
baz=307
TBI Tubuai 95.95 113 *e*LR LR 22 42 03.3
comp=Z,2μm,27.5s
ULM Lac du Bonnet 96.17 25 LR LR 22 59 47.8
comp=Z,88nm,21.4s,baz=337,slow=39
PFO Pinyon Flats O 96.98 48 LR LR 22 51 50.0
comp=Z,78nm,18.6s,baz=243,slow=34
TAOE Nuku Hiva Isla 98.03 96 *e*LR LR 22 43 00.4
comp=Z,129nm,25.2s
SCHQ Schefferville 99.20 7 P **Pdif 22 11 13.4 -1.2**
comp=Z,3.7nm,0.9s,baz=33,slow=16,SNR=1.9
SCHQ LR LR 23 00 38.7
comp=Z,176nm,18.1s,baz=60,slow=38
comp=Z,3.7nm,0.9s
ESDC Sonseca Array 99.52 323 LR LR 22 58 58.0
comp=Z,165nm,19.3s,baz=35,slow=37
DBIC Dimbokro 121.75 296 PKP **PKPdf 22 16 27.1 -0.8**
comp=Z,5.4nm,0.8s,baz=34,slow=3.7,SNR=6.5
SDV Santo Domingo 142.41 26 PKPpre 22 17 02.9
SDV PKPdf **PKPdf 22 17 07.4 +0.6**
PTBC PUERTO BERRIO 142.79 33 *e*P **PKPdf 22 17 00.5 -6.8**
SPBC San Pablo de B 143.74 34 *e*P PKPab 22 17 06.2 +0.4
RUSC La Rusia 144.01 32 *e*P PKPbc 22 17 08.0 +0.1
ROSC El Rosal 144.31 35 PKP PKPbc 22 17 09.8 +1.1
comp=Z,9.8nm,0.6s,baz=348,slow=21,SNR=5.8
ORTC Ortega, Tolima 144.61 37 *e*P **PKPab 22 17 08.7 -0.3**
CHIC Chingaza 144.79 34 *e*P **PKPab 22 17 10.3 +0.1**
PRAC Prado 144.96 36 *e*P **PKPab 22 17 09.3 -1.1**
BETC Betania 145.52 38 *e*P **PKPab 22 17 13.3 +0.9**
GARC Garzon, Huila 145.90 39 *e*P **PKPab 22 17 14.7 +0.6**
PIAT Ana Tenorio 146.71 46 *e*P **PKPab 22 17 17.3 -0.1**
BOSC San Juan Bosco 148.15 49 **PKiKP 22 17 21.3 -0.4**
RCBR Riachuelo 153.19 314 PKPbc **PKPbc 22 17 30.9 -0.8**
comp=Z,5.7nm,0.6s,baz=208,slow=3.6,SNR=4.6
SIV San Ignacio 168.80 32 PKP **PKPdf 22 17 41.1 +0.3**
comp=Z,2.8nm,1.0s,baz=223,slow=0.8,SNR=7.0
SIV PKPab **PKPab 22 18 50.1 -1.0**
comp=Z,1.5nm,0.9s,baz=310,slow=1.5,SNR=3.9

IDC 28 22:05:14.8±1.5, 11°.80N×144°.96E, h0km, mb3.4/3, mbtmp3.4/3, MS3.9/1, Error ellipse: s-maj=59.0km s-min=23.5km az=95.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**357**	Pn	Pb	22 05 47.8	-0.5
48nm,0.3s,baz=180,slow=6.1,SNR=35							
GUMO				Sn	Sn	22 06 09.7	-0.5
79nm,0.3s,baz=178,slow=22,SNR=14							
H11N1	**WAKE ISLAND Hy**	**22.51**	**67**	T	T	22 34 59.9	
baz=255,slow=75,SNR=5.4							
H11N2	**WAKE ISLAND Hy**	**22.52**	**67**	T	T	22 34 59.8	
baz=255,slow=75,SNR=5.0							
H11N3	**WAKE ISLAND Hy**	**22.53**	**67**	T	T	22 35 06.6	
baz=255,slow=75,SNR=3.8							
CTA	**Charters Tower**	**31.71**	**178**	LR	LR	22 25 03.8	
comp=Z,221nm,21.3s,baz=286,slow=38							
WRA	**Warramunga Arr**	**33.23**	**198**	P	P	22 11 53.8	0.0
0.2nm,0.6s,baz=20,slow=9.5,SNR=1.4							
0.2nm,0.6s							

ILAR	Eielson Array 0.2nm,0.4s,baz=247,slow=5.8,SNR=4.1 0.2nm,0.4s	70.14	25	P	P	22 16 28.5	-0.4
NVAR	Mina Array Bea 0.1nm,0.3s,baz=251,slow=5.6,SNR=1.1 0.1nm,0.3s	87.96	51	P	P	22 18 07.4	+0.1

*IDC **28** 22:07:02.6±1.0,25°.64N×124°.92E,h0km,mb3.8/7,*
mbtmp3.8/8,ML3.1/1,Error ellipse: s-maj=37.6km
s-min=19.6km az=59.0
*JMA **28** 22:07:03.8±0.2,25°.7N±0°.6×125°.0E±0°.7,h17km±2km,*
MV3.6/12,NW OFF MIYAKOJIMA ISLAND

ISC 28 22:07:03.4±1.8,25°.67N±0°.06×124°.99E±0°.05,h9km±12km,
n19,σ0°72/27,mb3.6/7,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.78	162	*i* P	Pb	22 07 18.9	-0.2
JIKM				S	Sb	22 07 29.5	-0.3
JIRB	Irabujima	0.85	168	*i* P	Pg	22 07 20.0	+0.2
JIRB				S	Sb	22 07 31.6	-0.4
JMJ2	Miyako jima3	0.97	161	*i* P	Pg	22 07 22.0	-0.1
JMJ2				S	Sb	22 07 35.3	-0.1
JOGS	Gusukube	0.98	157	*i* P	Pg	22 07 22.2	-0.1
JOGS				S	Sg	22 07 35.2	+0.2
JTJ	Tarama	1.05	194	P	Pb	22 07 23.9	0.0
JTJ				S	Sb	22 07 38.1	+0.4
JISG	Ishigakijimahi	1.24	210	P	Pg	22 07 27.0	-0.2
JISG				S	Sn	22 07 43.7	0.0
JIJ	Ishigaki jima	1.51	211	P	Pn	22 07 30.8	+0.1
JIJ				S	Sb	22 07 50.9	+0.1
JKRS	Kuro-shima	1.68	212	P	Pb	22 07 34.0	-0.5
JKRS				S	Sb	22 07 55.6	-0.1
IRIF	Iriomote-Funau	1.75	221	P	Pb	22 07 34.7	-1.0
JKE	Kume jima 2	1.75	68	*e*S	Sn	22 07 54.2	-2.2
HATJ	Hateruma jima	1.93	214	*e*P	Pb	22 07 37.8	-1.0
JOW	Kunigami 4.0nm,0.3s,baz=127,slow=24,SNR=6.4 12nm,0.3s	3.17	68	Pn	Pn	22 07 54.5	+0.9
SONM	Songino Array 1.1nm,0.7s,baz=150,slow=9.0,SNR=5.6 1.1nm,0.7s	26.54	331	P	P	22 12 42.7	+1.0
MKAR	Makanchi Array 0.6nm,0.7s,baz=104,slow=11,SNR=8.2 0.6nm,0.7s	39.76	313	P	P	22 14 37.5	+0.9
ZALV	Zalesovo Beam 2.3nm,0.6s,baz=112,slow=8.5,SNR=10 2.3nm,0.6s	40.97	324	P	P	22 14 46.5	+0.2
WRA	Warramunga Arr 0.6nm,0.6s,baz=351,slow=9.4,SNR=4.4 0.6nm,0.6s	46.24	168	P	P	22 15 29.1	-0.1
ASAR	Alice Springs 0.4nm,0.6s,baz=355,slow=7.8,SNR=6.8 0.4nm,0.6s	49.80	169	P	P	22 15 57.8	+1.0
GEYT	Alibeck 1.5nm,0.5s,baz=29,slow=3.4,SNR=5.1 1.5nm,0.5s	57.04	300	P	P	22 16 49.7	-0.3
BRTR	Keskin Array B 0.4nm,0.6s,baz=52,slow=7.5,SNR=1.9 0.4nm,0.6s	75.06	307	P	P	22 18 45.4	-0.6

IDC 28 22:36:15.0±6.6,30°.17S×177°.76W,h0km,mb3.7/3,
mbtmp3.7/3,Error ellipse: s-maj=233.6km
s-min=44.2km az=149.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.4nm,0.9s,baz=94,slow=8.5,SNR=2.3 0.4nm,0.9s	43.33	267	P	P	22 44 19.4	+0.4
WRA	Warramunga Arr 0.3nm,0.4s,baz=109,slow=8.7,SNR=8.6 0.3nm,0.4s	44.29	272	P	P	22 44 26.2	-0.6
PETK	Petropavlovsk- 2.0nm,0.8s,baz=120,slow=5.8,SNR=5.3 2.0nm,0.8s	85.64	345	P	P	22 48 55.0	0.0
FINES	FINESS Array B 2.3nm,0.5s,baz=55,slow=4.1,SNR=20	145.00	340	PKPbc	PKPbc	22 55 52.0	-0.8

IDC 28 22:36:34.9±2.1,0°.26N×126°.50E,h0km,mb3.2/3,
mbtmp3.3/3,MS3.5/1,Error ellipse: s-maj=190.9km
s-min=26.4km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.7nm,0.6s,baz=338,slow=10,SNR=7.0 0.7nm,0.6s	21.50	159	P	P	22 41 26.7	+1.2
ASAR	Alice Springs 0.4nm,0.9s,baz=344,slow=8.3,SNR=6.1 0.4nm,0.9s	24.85	164	P	P	22 41 58.4	-0.9
SONM	Songino Array comp=Z,45nm,19.3s,baz=308,slow=39	50.50	343	LR	LR	23 09 18.1	
MKAR	Makanchi Array 0.2nm,0.5s,baz=114,slow=7.7,SNR=5.9 0.2nm,0.5s	60.28	327	P	P	22 46 45.4	0.0

*NOU **28** 22:38:54.8,40°.15S×173°.42E,h207km,MLv3.7/9,Cook*
Strait, New Zealand
*WEL **28** 22:38:59.5±0.8,40°S±3°×17°4E±°,h159km±6km,M3.0/17,*
ML3.2/8,MLv3.0/17,Error ellipse: s-maj=0.0km
s-min=0.0km az=100.6

ISC 28 22:38:54.6±1.7,40°.21S±0°.04×173°.45E±0°.06,h195km±9km,
n108,σ1°40/120,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.69	149	P	Pn	22 39 23.3	+1.3
DUWZ				S	Sn	22 39 41.1	-2.3
NMEZ	Namu Road	0.86	23	P	Pn	22 39 24.3	+1.3
NMEZ				S	Sn	22 39 44.6	-0.3
TKNZ	Takaka Hill	0.90	204	P	Pn	22 39 24.4	+1.2
TKNZ				S	Sn	22 39 43.3	-2.3
QRZ	Quartz Range	0.93	229	P	Pn	22 39 24.6	+1.2
QRZ				S	Sn	22 39 44.2	-1.6
QRZ	Quartz Range	0.93	229	P	Pn	22 39 24.5	+1.1
NBEZ	Newall Road No	1.00	19	P	Pn	22 39 25.3	+1.4
NBEZ				S	Sn	22 39 46.5	0.0
NNZ	Nelson	1.00	183	P	Pn	22 39 25.1	+1.3
NNZ				S	Sn	22 39 45.2	-1.5
KHEZ	Kahui Hut	1.02	26	P	Pn	22 39 25.5	+1.4
KHEZ				S	Sn	22 39 46.0	-0.9
KHEZ	Kahui Hut	1.02	26	P	Pn	22 39 25.5	+1.4
PREZ	Palmer Road	1.03	32	P	Pn	22 39 25.6	+1.5
PREZ				S	Sn	22 39 46.0	-0.9
LREZ	Lake Rotokare	1.05	45	P	Pn	22 39 25.8	+1.5
LREZ				S	Sn	22 39 47.0	-0.2
NEZ	North Egmont	1.06	28	P	Pn	22 39 25.6	+1.1
NEZ				S	Sn	22 39 46.0	-1.5
PKE	Pukeiti	1.10	22	P	Pn	22 39 26.0	+1.3
DREZ	Durham Road	1.18	30	P	Pn	22 39 26.7	+1.5
TCW	Tory Channel	1.18	148	P	Pn	22 39 27.0	+1.9
TCW				S	Sn	22 39 46.7	-2.3
WAZ	Wanganui	1.27	69	P	Pn	22 39 27.8	+1.9
TUWZ	Tuamarina	1.27	163	P	Pn	22 39 27.6	+1.7
KIW	Kapiti Island	1.29	121	P	Pn	22 39 27.4	+1.4
KIW				S	Sn	22 39 47.5	-2.9
MRNZ	Matariki Terra	1.30	204	P	Pn	22 39 27.5	+1.4
MHEZ	Mangahewa	1.32	31	P	Pn	22 39 27.9	+1.6
OHWZ	Ohakea	1.43	90	P	Pn	22 39 29.3	+2.1
OGWZ	Otaki Gorge	1.44	115	P	Pn	22 39 29.0	+1.6
VRZ	Vera Road	1.48	43	P	Pn	22 39 28.8	+1.1
CAW	Cannon Point	1.52	127	P	Pn	22 39 29.7	+1.6
BSWZ	Blackbirch Sta	1.53	168	P	Pn	22 39 30.6	+2.4
THZ	Tophouse	1.60	195	P	Pn	22 39 30.5	+1.6
MRZ	Mangatainoka R	1.68	106	P	Pn	22 39 30.8	+1.2
HOWZ	Holdsworth Sta	1.71	114	P	Pn	22 39 31.4	+1.5
PKVZ	Pokaka	1.73	58	P	Pn	22 39 31.4	+1.2
MTVZ	Mangateitei	1.76	63	P	Pn	22 39 31.7	+1.2
POWZ	Post Office Ro	1.78	96	P	Pn	22 39 32.0	+1.4
MSWZ	Moikau Station	1.82	132	P	Pn	22 39 32.5	+1.6
MTW	Mount Morrison	1.82	122	P	Pn	22 39 32.6	+1.6
WNVZ	Wahianoa	1.88	63	P	Pn	22 39 32.9	+1.2
FWVZ	Far West T-bar	1.88	60	P	Pn	22 39 33.1	+1.3
PAWZ	Paruwai Farm	1.90	129	P	Pn	22 39 33.3	+1.6
TWVZ	Taurewa	1.91	54	P	Pn	22 39 32.9	+0.9
PLWZ	Palliser	1.93	135	P	Pn	22 39 33.5	+1.5
TSZ	Takapari Road	1.93	86	P	Pn	22 39 33.5	+1.4
TUVZ	Tukino	1.94	62	P	Pn	22 39 33.8	+1.4
MOVZ	Moawhango	1.95	66	P	Pn	22 39 33.2	+0.8
PRWZ	Pori Road	1.96	101	P	Pn	22 39 34.2	+1.9
NGZ	Ngauruhoe	1.96	59	P	Pn	22 39 33.6	+1.1
DSZ	Denniston Nort	1.97	219	P	Pn	22 39 34.2	+1.7
SNVZ	South Ngauruho	1.98	59	P	Pn	22 39 34.0	+1.2
WTVZ	West Tongariro	1.98	57	P	Pn	22 39 33.8	+1.1
NNVZ	North Ngauruho	1.99	58	P	Pn	22 39 34.0	+1.1
OTVZ	Oturere	2.00	59	P	Pn	22 39 34.3	+1.3
HIZ	Hauiti	2.02	33	P	Pn	22 39 34.0	+1.0
HIZ	Hauiti	2.02	33	P	Pn	22 39 34.0	+1.0
KRVZ	Karewarewa	2.03	57	P	Pn	22 39 34.3	+1.1
ETVZ	East Tongariro	2.05	59	P	Pn	22 39 34.8	+1.3
TMWZ	Te Maipa	2.06	116	P	Pn	22 39 35.1	+1.7
TRWZ	Traveller	2.07	126	P	Pn	22 39 35.2	+1.7
DVHZ	Dannevirke	2.08	93	P	Pn	22 39 34.9	+1.3
KATZ	Kakaramea	2.13	55	P	Pn	22 39 35.7	+1.4
PNHZ	Pukenui	2.13	83	P	Pn	22 39 35.5	+1.3
BHHZ	Black Hill Sta	2.14	71	P	Pn	22 39 35.0	+0.7
BFZ	Birch Farm	2.18	103	P	Pn	22 39 36.3	+1.6
BFZ	Birch Farm	2.18	103	P	Pn	22 39 36.3	+1.6
KHZ	Kahutara	2.20	178	P	Pn	22 39 36.7	+1.9
KHZ	Kahutara	2.20	178	P	Pn	22 39 36.8	+2.0
CPWZ	Castlepoint	2.21	109	P	Pn	22 39 37.2	+2.3
RITZ	Rihia Road	2.23	57	P	Pn	22 39 37.0	+1.7
RATZ	Rangitukua	2.24	54	P	Pn	22 39 37.0	+1.6
WPHZ	Waipukurau	2.30	87	P	Pn	22 39 37.6	+1.6
ANWZ	Angora Road	2.33	97	P	Pn	22 39 38.0	+1.8
KWHZ	Kaweka Forest	2.42	72	P	Pn	22 39 39.0	+1.6
PRHZ	Porangahau	2.44	92	P	Pn	22 39 39.2	+1.7
BKZ	Black Stump Fm	2.57	67	P	Pn	22 39 39.8	+0.8
BKZ	Black Stump Fm	2.57	67	P	Pn	22 39 39.8	+0.8
MCHZ	McNeill Hill	2.62	74	P	Pn	22 39 39.9	+0.4
PXZ	Pawanui	2.62	87	P	Pn	22 39 41.1	+1.5
KAHZ	Kahuranaki	2.67	82	P	Pn	22 39 41.7	+1.6
MRHZ	Matea Rd	2.68	60	P	Pn	22 39 40.8	+0.5
LTZ	Lake Taylor	2.71	199	P	Pn	22 39 42.2	+1.6
GVZ	Greta Valley S	2.77	186	P	Pn	22 39 42.8	+1.5
NMHZ	Naumai	2.82	68	P	Pn	22 39 44.0	+2.0
ARHZ	Aropaoanui	2.89	72	P	Pn	22 39 44.0	+1.2
INZ	Inchbonnie	2.93	210	P	Pn	22 39 44.5	+1.4
MTHZ	Maungataniwha	2.95	64	P	Pn	22 39 44.2	+0.7
AMCZ	Amberley	3.02	191	P	Pn	22 39 45.7	+1.6
RAHZ	Arahi	3.09	66	P	Pn	22 39 46.4	+1.3
RTZ	Ruatahuna	3.17	61	P	Pn	22 39 46.5	+0.4
OXZ	Oxford	3.28	198	P	Pn	22 39 48.4	+1.1
SNGZ	Shannon Statio	3.33	66	P	Pn	22 39 49.9	+1.9
URZ	Urewera	3.45	57	P	Pn	22 39 49.5	+0.1
URZ	Urewera	3.45	57	P	Pn	22 39 49.7	+0.3
KNZ	Kokohu	3.47	71	P	Pn	22 39 50.4	+0.8
OKCZ	Okains Bay	3.52	185	P	Pn	22 39 51.2	+1.0
MQZ	McQueen's Vall	3.54	189	P	Pn	22 39 50.9	+0.5
MHGZ	Mahia Peninsul	3.60	74	P	Pn	22 39 52.6	+1.4
RACZ	Rakaia	3.64	195	P	Pn	22 39 52.7	+1.0
RIGZ	Rimuhau	3.66	67	P	Pn	22 39 53.0	+1.0
WIAZ	Waiheke Island	3.66	22	P	Pn	22 39 53.5	+1.5
MWZ	Matawai	3.68	61	P	Pn	22 39 52.3	+0.1
RUGZ	Raukumara Rang	3.98	57	P	Pn	22 39 56.1	0.0
TWGZ	Tauwhareparae	4.07	61	P	Pn	22 39 57.8	+0.7
CNGZ	Carnagh Statio	4.07	66	P	Pn	22 39 58.2	+1.1
ARCZ	Arundel	4.10	204	P	Pn	22 39 58.4	+1.0
HAZ	Te Kaha	4.17	55	P	Pn	22 39 58.0	-0.3
PUZ	Puketiti	4.31	62	P	Pn	22 40 00.1	0.0
TMZ	Timaru	4.54	203	P	Pn	22 40 04.3	+1.3
WMGZ	Waiomatatini S	4.55	60	P	Pn	22 40 03.0	-0.1
MXZ	Matakaoa Point	4.62	57	P	Pn	22 40 04.4	+0.3
MXZ	Matakaoa Point	4.62	57	P	Pn	22 40 04.2	+0.1
JCZ	Jackson Bay	5.19	220	P	Pn	22 40 12.5	+1.2
JCZ	Jackson Bay	5.19	220	P	Pn	22 40 12.2	+0.9

*IPEC **28** 22:39:21.3±0.2,50°.17N×19°.22E,h0km,ML2.6/4,Error*
ellipse: s-maj=2.6km s-min=1.0km az=167.0
*PRU **28** 22:39:21.7±0.0,50°.18N×19°.12E,h0km*
*IDC **28** 22:39:23.0±3.2,49°.95N×19°.01E,h0km,mbtmp3.6/2,*
ML2.4/3,Error ellipse: s-maj=54.7km s-min=16.4km
az=139.0

ISC 28 22:39:20.5±1.0,50°.15N±0°.05×19°.18E±0°.04,h0km,n23,
σ0°62/35,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.40	80	*e*Pg	Pg	22 39 28.5	+0.2
OJC				*i* Sgd		22 39 34.6	
OKC	Ostrava-Krasne	0.73	245	*e*PG	Pb	22 39 36.7	+0.5
OKC				*e*SG	Sg	22 39 43.6	-0.5
	comp=Z,57nm,0.4s						
MORC	Moravsky Berou	1.12	251	*e*PG	Pn	22 39 43.4	-0.1
MORC				*e*SG	Sb	22 39 57.3	-0.7
MORC	Moravsky Berou baz=69	1.12	251	*e*Pg	Pn	22 39 43.4	-0.1
MORC				*e*Sg	Sb	22 39 57.2	-0.7
	72nm,0.5s,baz=69						
MAUC	Maruska	1.18	229	*e*PG	Pn	22 39 44.7	+0.4
MAUC				*e*SG	Sn	22 40 00.4	-0.6
	comp=Z,110nm,0.4s						
KRLC	Kraliky	1.54	268	*e*PG	Pb	22 39 49.8	-0.3
KRLC				*e*SG	Sn	22 40 10.9	+0.7
	comp=Z,56nm,0.3s						
JAVC	Velka Javorina	1.62	218	*e*PN	Pb	22 39 51.6	+0.2
JAVC	Velka Javorina baz=37	1.62	218	*e*Pn	Pb	22 39 51.6	+0.2
DPC	Dobruska-Polom	1.84	277	*e*PG	Pb	22 39 54.8	-0.4
DPC				*e*SG	Sg	22 40 19.8	0.0
	comp=Z,53nm,0.4s						
VRAC	Vranov	1.88	244	*e*PN	Pb	22 39 55.2	-0.5
VRAC				*e*SG	Sg	22 40 21.0	+0.1
VRAC	Vranov baz=62	1.88	244	*e*Pn	Pb	22 39 55.1	-0.6
VRAC				*e*Sg	Sg	22 40 20.9	+0.1
	22nm,0.4s,baz=62						
OSTC	Ostas	1.94	283	*e*PG	Pb	22 39 56.5	-0.3
KSP	Ksiaz	1.97	292	*e*Pb	Pb	22 39 57.0	-0.2
KSP				*e*Pg	Pg	22 39 59.4	+1.1
KSP				*e*Sg	Sg	22 40 24.8	+1.0
CHVC	Chvalec	2.05	284	*e*PG	Pb	22 39 57.6	-1.0
KRUC	Moravsky	2.11	240	*e*SG	Sg	22 40 28.4	0.0
KRUC	Moravsky 24nm,0.5s,baz=58	2.11	240	*e*Sg	Sg	22 40 28.3	-0.1
PRU	Pruhonice comp=Z,14nm,0.4s	2.99	269	*e*SG	Sg	22 40 55.5	-1.1
CKRC	Cesky Krumlov comp=Z,8.7nm,0.4s	3.44	249	*e*SG	Sg	22 41 09.9	-1.2
KHC	Kasperske Hory	3.78	257	*e*PN	Pn	22 40 21.4	+1.3
KHC				*e*PG	Pb	22 40 27.9	-0.2
KHC				*e*SG	Sg	22 41 21.8	-0.1
	comp=Z,14nm,0.6s						
GERES	GERESS Array B 0.1nm,0.3s,baz=69,slow=19,SNR=1.9	3.80	252	Pn	Pn	22 40 20.6	+0.2
GERES				Lg	Lg	22 41 18.1	
	1.9nm,0.3s,baz=70,slow=27,SNR=10						
CLL	Collm comp=Z,10.0nm,0.8s	4.09	289	*e*Sg	Sg	22 41 31.0	-0.9
FINES	FINESS Array B comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=3.4 comp=Z,1.5nm,0.8s	11.96	16	Pn	Pn	22 42 11.9	-0.2
ARCES	ARCESS Array B baz=188,slow=11,SNR=1.6 comp=Z,1.5nm,0.9s	19.68	7	Pn	Pn	22 43 52.2	0.0

*IDC **28** 22:55:41.2±2.1,52°.23N×179°.30E,h146km±20km,mb3.1/9,*
mbtmp3.6/11,Error ellipse: s-maj=32.7km s-min=14.0km
az=165.0
*NEIC **28** 22:55:43.0±1.5,52°.2N±0°.2×179°.19E±0°.10,h146km±19km,*
mb4.1/65,ML3.3(AEIC),Error ellipse: s-maj=28.6km
s-min=8.5km az=184.0
*AEIC **28** 22:55:43±1.6,52°.0N±0°.1×179°.31E±0°.10,h164km±8km,*
Error ellipse: s-maj=19.7km s-min=8.6km az=179.0

ISC 28 22:55:41.9±0.6,52°.2N±0°.1×179°.21E±0°.04,h150km,n178,
σ1°45/179,mb4.0/26,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.85	176		Pn	22 56 06.5	+1.0
AMKA				Sn	Sn	22 56 23.6	+0.3
KIWB	Kanaga Island	2.28	98	Pn	Pn	22 56 20.9	+0.6
KIWB					Sn	22 56 49.9	+0.1
ADK	Adak	2.56	96	Pn	Pn	22 56 24.3	+0.6
ADK					Sn	22 56 56.0	+0.1
GSTR	Great Sitkin T	2.92	91	Pn	Pn	22 56 29.0	+0.8
SHEM	Shemya Is, Ala 20nm,0.2s,baz=94,slow=22,SNR=1.6	3.17	281	P	Pn	22 56 30.3	-1.0
SHEM				S	Sn	22 57 10.5	+1.0
	105nm,0.4s,baz=236,slow=18,SNR=19						
SMY	Shemya	3.17	281	Pn	Pn	22 56 31.4	+0.1
UNV	Unalaska Valle	8.76	74	Pn	Pn	22 57 46.6	+1.3
CNBA	Chernabura Isl	12.87	70	Pn	P	22 58 42.7	-1.5
PEA0B	Petropavlovsk-	13.08	282	P	P	22 58 47.6	+1.0
Q18K	Katmai Hardscr baz=256	15.91	56	P	P	22 59 18.4	+0.3
P18K	Big Mountain, baz=254	15.98	53	P	P	22 59 19.5	+0.8
SII	Sitkinak Islan baz=265	16.04	64	P	P	22 59 19.1	-0.3
OHAK	Old Harbor baz=263	16.59	62	P	Pn	22 59 25.5	0.0
O19K	Port Alsworth	16.65	51		S	23 02 29.7	-1.3
Q19K	Cape Douglas,	16.67	56	P	Pn	22 59 27.9	+1.4
Q19K	Cape Douglas, baz=257	16.67	56	P	Pn	22 59 26.7	+0.2
N19K	Bonanza Creek	16.76	49	P	Pn	22 59 31.5	+3.8
N19K				IAmb	IAmb	22 59 35.1	
	comp=Z,7.1nm,0.8s						
N19K	Bonanza Creek baz=250	16.76	49	P	Pn	22 59 28.6	+0.9
KDAK	Kodiak Island comp=Z,3.5nm,0.3s,baz=291,slow=5.3,SNR=26	17.03	60	P	P	22 59 28.6	-1.6
KDAK	Kodiak Island	17.03	60	P	P	22 59 29.5	-0.7
KDAK				IAmb	IAmb	22 59 30.8	
	comp=Z,13nm,1.1s						
KDAK	Kodiak Island baz=262	17.03	60	P	P	22 59 29.8	-0.4
P19K	Oil Pt	17.04	53	P	Pn	22 59 31.9	+1.0
RSO	Redoubt South	17.47	51	P	Pn	22 59 38.0	+1.6
M20K	Styx River	17.74	46	P	Pn	22 59 42.7	+3.3
M20K				IAmb	IAmb	22 59 47.2	
	comp=Z,6.5nm,0.8s						
M20K	Styx River baz=249	17.74	46	P	Pn	22 59 39.9	+0.5
K20K	Telida	17.93	41	P	Pn	22 59 42.1	+0.7
N20K	Mount Spurr baz=252	17.94	49	P	Pn	22 59 41.5	-0.2
SPCR	Spurr Chakacha baz=252	17.94	49	P	Pn	22 59 41.3	-0.4
CNPM	China Poot	18.00	54	P	Pn	22 59 41.9	-0.5
BRLK	Bradley Lake	18.22	54	P	Pn	22 59 44.1	-0.9
BRLK				IAmb	IAmb	23 00 03.1	
	comp=Z,11nm,1.0s						
J20K	Nowinta River	18.27	39	P	Pn	22 59 45.8	+0.3
BRSE	Bradley Lake S baz=258	18.29	54	P	P	22 59 44.5	+0.5
SKT	Skwentna	18.49	47	P	Pn	22 59 48.8	+0.7
SKT				IAmb	IAmb	22 59 54.0	
	comp=Z,4.6nm,0.7s						
SKT	Skwentna baz=251	18.49	47	P	Pn	22 59 48.5	+0.4
PPLA	Purkeypile	18.52	44	Pn	Pn	22 59 49.7	+1.1
PPLA				IAmb	IAmb	23 00 00.0	
	comp=Z,9.1nm,1.2s						
SUA	Susitna One	18.69	49	P	Pn	22 59 49.7	-0.8
SUA				IAmb	IAmb	22 59 58.8	
	comp=Z,14nm,1.1s						
O22K	Cooper Landing	18.93	52	P	Pn	22 59 52.5	-0.8
RC01	Rabbit Creek A	19.06	50	P	Pn	22 59 54.2	-0.7
RC01				IAmb	IAmb	22 59 57.5	
	comp=Z,13nm,1.0s						
RC01	Rabbit Creek A baz=256	19.06	50	P	Pn	22 59 53.7	-1.1
KTH	Kantishna Hill	19.30	42	P	Pn	22 59 57.4	-0.2
H21K	Melozitna Rive	19.50	36	P	Pn	22 59 59.2	-0.6
H21K	Melozitna Rive baz=239	19.50	36	P	Pn	22 59 59.0	-0.9
TRF	Thorofare Moun	19.52	43	P	Pn	22 59 59.7	-0.6
TRF	Thorofare Moun baz=248	19.52	43	P	Pn	23 00 00.3	-0.1
I21K	Tanana baz=242	19.57	37	P	Pn	22 59 59.7	-0.9
GHO	Glory Hole Cre	19.61	48	P	Pn	23 00 00.8	-0.5
GHO				IAmb	IAmb	23 00 01.6	
	comp=Z,4.2nm,0.6s						
PWL	Port Wells	19.68	51	P	P	22 59 59.9	+0.8
PWL	Port Wells baz=258	19.68	51	P	P	22 59 59.4	+0.4
KNK	Knik Glacier	19.74	50	P	Pn	23 00 01.3	-1.4
KNK				IAmb	IAmb	23 00 17.2	
	comp=Z,4.2nm,0.9s						
KNK	Knik Glacier baz=256	19.74	50	P	P	23 00 00.8	+1.1
SML	Sawmill	19.89	49	P	P	23 00 02.9	+1.5
SML				IAmb	IAmb	23 00 04.7	
	comp=Z,12nm,1.2s						
SML	Sawmill baz=255	19.89	49	P	P	23 00 02.9	+1.5
MLY	Manley baz=244	19.97	38	P	P	23 00 03.3	+1.1
F21K	Alatna River baz=234	20.11	31	P	Pn	23 00 05.9	-1.2
M23K	Glacier View baz=256	20.17	49	P	P	23 00 04.4	+0.1
GLI	Glacier Island	20.28	52	P	P	23 00 06.2	+0.8
GLI	Glacier Island baz=259	20.28	52	P	P	23 00 05.4	-0.1
WAT6	Susitna Watana baz=254	20.36	47	P	P	23 00 08.0	+1.5
SCM	Sheep Creek Mo	20.36	49	P	P	23 00 07.6	+1.1
SCM	Sheep Creek Mo baz=256	20.36	49	P	P	23 00 07.4	+1.0
NEA2	Nenana baz=247	20.45	40	P	P	23 00 08.8	+1.6
HIN	Hinchinbrook I	20.49	53	P	P	23 00 08.7	+0.9
I23K	Minto, Yukon-K	20.55	39	P	Pn	23 00 10.3	-2.0
I23K	Minto, Yukon-K baz=245	20.55	39	P	P	23 00 09.1	+0.9
FID	Port Fidalgo	20.56	52	P	P	23 00 08.8	+0.4
FID				IAmb	IAmb	23 00 10.3	
	comp=Z,11nm,1.0s						
DHY	Denali Highway	20.65	45	P	P	23 00 10.9	+1.3
DHY				IAmb	IAmb	23 00 12.6	
	comp=Z,7.9nm,1.0s						
DHY	Denali Highway baz=253	20.65	45	P	P	23 00 11.2	+1.6
H23K	Yukon River baz=244	20.77	37	P	P	23 00 11.9	+1.2
EYAK	Cordova Ski Ar baz=262	20.88	53	P	P	23 00 12.4	+0.5
MDM	Murphy Dome	20.92	40

BERG				IAmb	IAmb	23 00 26.0	
	comp=Z,8.2nm,0.8s						
G24K	**Hadweenzic Riv**	**21.90**	**36**	P	**P**	**23 00 24.3**	**+1.6**
	baz=244						
GLB	**Gilahina Butte**	**21.94**	**51**	P	**P**	**23 00 24.0**	**+0.8**
J25K	**Salcha River,**	**21.95**	**42**	P	**P**	**23 00 22.9**	**-0.3**
D23K	**Nanushuk River**	**21.97**	**29**	P	**P**	**23 00 24.8**	**+1.4**
	baz=235						
VRDI	**Verde Repeater**	**22.09**	**51**	P	**P**	**23 00 25.1**	**+0.3**
VRDI				IAmb	IAmb	23 00 26.8	
	comp=Z,5.9nm,1.0s						
TOLK	**Toolik Lake Re**	**22.13**	**30**	P	**P**	**23 00 26.5**	**+1.4**
TOLK				IAmb	IAmb	23 00 27.8	
	comp=Z,5.1nm,0.6s						
TOLK	**Toolik Lake Re**	**22.13**	**30**	P	**P**	**23 00 26.4**	**+1.4**
	baz=237						
PRP	**Porcupine Dome**	**22.18**	**40**	P	**P**	**23 00 26.6**	**+0.9**
	baz=250						
E24K	**Your Creek**	**22.18**	**32**	P	**P**	**23 00 26.4**	**+0.8**
	baz=240						
DOT	**Dot Lake**	**22.25**	**45**	P	**P**	**23 00 27.0**	**+0.8**
DOT				IAmb	IAmb	23 00 27.8	
	comp=Z,6.7nm,1.0s						
SNH	**Sunshine Point**	**22.29**	**54**	P	**P**	**23 00 27.9**	**+1.3**
WAX	**Waxell Ridge**	**22.30**	**53**	P	**P**	**23 00 27.9**	**+1.2**
WAX				IAmb	IAmb	23 00 29.5	
	comp=Z,6.4nm,0.8s						
MCARA	**McCarthy VSAT**	**22.31**	**51**	P	**P**	**23 00 28.3**	**+1.5**
MCARA	**McCarthy VSAT**	**22.31**	**51**	P	**P**	**23 00 27.3**	**+0.5**
	baz=262						
H25K	**Birch Creek**	**22.34**	**38**	P	**P**	**23 00 27.3**	**+0.4**
	baz=247						
SCRK	**Sand Creek**	**22.36**	**44**	P	**P**	**23 00 26.9**	**-0.5**
SCRK	**Sand Creek**	**22.36**	**44**	P	**P**	**23 00 26.8**	**-0.5**
	baz=255						
G25K	**Bearman Lake**	**22.42**	**36**	P	**P**	**23 00 27.8**	**0.0**
	baz=246						
M26K	**Nabesna, AK**	**22.47**	**48**	P	**P**	**23 00 30.9**	**+2.6**
D24K	**Happy Valley**	**22.64**	**30**	P	**P**	**23 00 31.3**	**+1.5**
	baz=237						
J26L	**Joseph Creek**	**22.67**	**43**	P	**P**	**23 00 30.6**	**+0.3**
J26L				IAmb	IAmb	23 00 31.8	
	comp=Z,4.0nm,0.7s						
J26L	**Joseph Creek**	**22.67**	**43**	P	**P**	**23 00 30.3**	**+0.1**
	baz=254						
MESA	**MESA**	**22.73**	**54**	P	**P**	**23 00 32.3**	**+1.3**
MESA	**MESA**	**22.73**	**54**	P	**P**	**23 00 31.2**	**+0.2**
	baz=266						
YAH	**Yahtse**	**22.84**	**54**	P	**P**	**23 00 33.9**	**+1.8**
YAH				IAmb	IAmb	23 00 34.2	
	comp=Z,6.2nm,0.6s						
F25K	**Christian Rive**	**22.93**	**35**	P	**P**	**23 00 33.7**	**+1.1**
	baz=245						
BARN	**Barnard Glacie**	**22.93**	**52**	P	**P**	**23 00 34.1**	**+1.2**
BARN				IAmb	IAmb	23 00 35.8	
	comp=Z,7.4nm,0.6s						
M27K	**Edge Creek, AK**	**22.98**	**49**	P	**P**	**23 00 35.6**	**+2.4**
M27K				IAmb	IAmb	23 00 36.5	
	comp=Z,7.5nm,1.1s						
M27K	**Edge Creek, AK**	**22.98**	**49**	P	**P**	**23 00 34.2**	**+1.0**
	baz=261						
C24K	**Franklin Bluff**	**22.98**	**28**	P	**P**	**23 00 35.0**	**+2.0**
	baz=236						
I26K	**Coal Creek Min**	**23.06**	**41**	P	**P**	**23 00 34.9**	**+1.1**
L27K	**Beaver Creek,**	**23.11**	**47**	P	**P**	**23 00 36.0**	**+1.7**
L27K				IAmb	IAmb	23 00 37.5	
	comp=Z,5.6nm,0.8s						
L27K	**Beaver Creek,**	**23.11**	**47**	P	**P**	**23 00 35.2**	**+0.9**
	baz=260						
BCAR	**Beaver Creek A**	**23.13**	**47**	P	**P**	**23 00 36.4**	**+1.9**
TABL	**Table Mountain**	**23.14**	**54**	P	**P**	**23 00 34.8**	**0.0**
TABL				IAmb	IAmb	23 00 49.7	
	comp=Z,11nm,1.2s						
E25K	**Arctic Village**	**23.18**	**33**	P	**P**	**23 00 36.3**	**+1.4**
	baz=244						
K27K	**Chicken**	**23.19**	**44**	P	**P**	**23 00 36.0**	**+1.0**
K27K	**Chicken**	**23.19**	**44**	P	**P**	**23 00 35.9**	**+1.0**
	baz=257						
BMAR	**Burnt Mountain**	**23.23**	**35**	P	**P**	**23 00 37.0**	**+1.6**
G26K	**Porcupine Rive**	**23.34**	**37**	P	**P**	**23 00 37.7**	**+1.4**
	baz=248						
F26K	**Sheenjek River**	**23.49**	**35**	P	**P**	**23 00 39.7**	**+1.9**
	baz=246						
YUK3	**Moose Creek**	**23.57**	**50**	P	**P**	**23 00 39.7**	**+1.0**
	baz=264						
O28M	**Mount Upton**	**23.63**	**53**	P	**P**	**23 00 40.4**	**+1.1**
	baz=266,SNR=15						
EGAK	**Eagle**	**23.74**	**43**	P	**P**	**23 00 40.8**	**+0.8**
EGAK				IAmb	IAmb	23 00 41.8	
	comp=Z,6.0nm,0.8s						
EGAK	**Eagle**	**23.74**	**43**	P	**P**	**23 00 40.5**	**+0.5**
	baz=256						
YUK8	**Steele Glacier**	**23.86**	**52**	P	**P**	**23 00 43.1**	**+1.6**
	baz=266,SNR=7.7						
BCPM	**Bancas Point**	**23.88**	**55**	P	**P**	**23 00 42.7**	**+1.4**
G27K	**Doyon Strip**	**24.09**	**38**	P	**P**	**23 00 43.7**	**+0.6**
	baz=251						
DAWY	**Dawson**	**24.36**	**45**	P	**P**	**23 00 47.2**	**+1.7**
DAWY				IAmb	IAmb	23 00 49.1	
	comp=Z,3.5nm,0.7s						
DAWY	**Dawson**	**24.36**	**45**	P	**P**	**23 00 47.3**	**+1.7**
	baz=260						
YUK4	**Talbot Arm**	**24.41**	**52**	P	**P**	**23 00 50.0**	**+3.7**
	baz=267,SNR=12						
O29M	**Mount Kennedy**	**24.41**	**54**	P	**P**	**23 00 47.5**	**+1.2**
	baz=269,SNR=10						
C27K	**Jago River**	**24.45**	**31**	P	**P**	**23 00 49.2**	**+2.9**
	baz=243						
YUK6	**Outpost Mounta**	**24.53**	**52**	P	**P**	**23 00 49.3**	**+1.9**
	baz=268,SNR=8.3						
M29M	**Somme Creek**	**24.57**	**49**	P	**P**	**23 00 51.1**	**+3.5**
	baz=264						
E27K	**Coleen River**	**24.57**	**35**	P	**P**	**23 00 50.7**	**+3.2**
	baz=249						
P29M	**Windy Craggy**	**24.84**	**56**	P	**P**	**23 00 52.5**	**+2.4**
P29M				IAmb	IAmb	23 00 53.6	
	comp=Z,2.5nm,0.6s						
P29M	**Windy Craggy**	**24.84**	**56**	P	**P**	**23 00 52.2**	**+2.1**
	baz=271						
HYT	**Haines Junctio**	**24.95**	**53**	P	**P**	**23 00 54.4**	**+3.3**
HYT				IAmb	IAmb	23 00 55.7	
	comp=Z,6.4nm,0.9s						
HYT	**Haines Junctio**	**24.95**	**53**	P	**P**	**23 00 53.8**	**+2.7**
	baz=269,SNR=6.9						
I29M	**Ogilvie Camp,**	**25.05**	**42**	P	**P**	**23 00 52.1**	**+0.3**
I29M	**Ogilvie Camp,**	**25.05**	**42**	P	**P**	**23 00 51.6**	**-0.2**
	baz=258						
K29M	**Barlow Dome**	**25.14**	**46**	P	**P**	**23 00 54.1**	**+1.3**
	baz=262						
N30M	**Aishikik Lake**	**25.16**	**51**	P	**P**	**23 00 56.5**	**+3.6**
	baz=268,SNR=8.2						
P30M	**Million Dollar**	**25.22**	**54**	P	**P**	**23 00 56.4**	**+2.9**
	baz=271						
M30M	**Minto, Yukon**	**25.35**	**49**	P	**P**	**23 00 59.3**	**+4.7**
M30M	**Minto, Yukon**	**25.35**	**49**	P	**P**	**23 00 59.1**	**+4.4**
	baz=266						
EPYK	**Eagle Plains**	**25.88**	**40**	P	**P**	**23 00 59.3**	**-0.1**
	baz=258						
INK	**Inuvik**	**27.49**	**36**	P	**P**	**23 01 12.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=133,slow=30,SNR=0.6						
	comp=Z,0.3nm,0.4s						
R33M	**Jennings River**	**28.30**	**56**	P	**P**	**23 01 22.2**	**+1.1**
	baz=277						
DLBC	**Dease Lake**	**28.93**	**57**	P	**P**	**23 01 28.6**	**+2.0**
	baz=279						
HLID	**Hailey**	**43.90**	**74**	P	**P**	**23 03 33.5**	**0.0**
	baz=305						
NVAR	**Mina Array Bea**	**44.67**	**82**	P	**P**	**23 03 39.3**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=289,slow=6.8,SNR=6.2						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**45.16**	**295**	P	**P**	**23 03 43.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=47,slow=8.5,SNR=3.1						
	comp=Z,0.6nm,0.7s						
DUG	**Dugway, Tooele**	**46.88**	**77**	P	**P**	**23 03 56.2**	**-0.8**
	baz=308						
EDW2	**Edwards Air Fo**	**47.15**	**86**	P	**P**	**23 03 58.2**	**-0.9**
	baz=312						
BW06	**Boulder Array**	**47.22**	**72**	P	**P**	**23 03 58.7**	**-1.0**
	baz=307						
PDAR	**Pinedale Array**	**47.22**	**72**	P	**P**	**23 03 58.2**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=302,slow=2.8,SNR=5.5						
	comp=Z,0.5nm,0.7s						
GSC	**Goldstone, Bar**	**47.60**	**84**	P	**P**	**23 04 02.6**	**0.0**
	baz=311						
GMRC	**Granite Mounta**	**48.65**	**84**	P	**P**	**23 04 10.1**	**-0.5**
	baz=312						
PFO	**Pinyon Flats O**	**48.95**	**86**	P	**P**	**23 04 12.5**	**-0.4**
	baz=312						
MKAR	**Makanchi Array**	**58.54**	**307**	P	**P**	**23 05 21.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=53,slow=4.5,SNR=4.8						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**59.74**	**80**	P	**P**	**23 05 30.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=315,slow=4.3,SNR=3.6						
	comp=Z,0.6nm,0.4s						
MIAR	**Mount Ida**	**61.98**	**69**	P	**P**	**23 05 44.4**	**-1.5**
	baz=316						
WRA	**Warramunga Arr**	**81.79**	**222**	P	**P**	**23 07 43.6**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=32,slow=6.2,SNR=4.6						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**85.30**	**221**	P	**P**	**23 08 01.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=17,slow=6.8,SNR=1.5						
	comp=Z,0.1nm,0.3s						

*IDC **28** 23:18:09.7±1.2, 43.°00N×12.°84E, h0km, mb3.5/7, mbtmp3.5/10, ML3.2/3, Error ellipse: s-maj=32.1km s-min=13.0km az=100.0*
*LDG **28** 23:18:10.0±0.1, 42.°85N×13.°05E, h9km, Ml3.0/11, Error ellipse: s-maj=3.7km s-min=2.5km az=49.0*
*ROM **28** 23:18:10.2±0.0, 42.°880N±0.°002×13.°090E±0.°004, h9km, ML3.5/75, Error ellipse: s-maj=0.2km s-min=0.1km az=67.0*
*PRU **28** 23:18:12.5±0.0, 42.°98N×13.°56E, h0km*
*BEO **28** 23:18:14.1±0.8, 42.°95N×13.°18E, h18km±7km, ML3.5/12*
ISC 28 23:18:10.6±0.7,**42.°85N**±0.°01×**13.°07E**±0.°01,**h12**km±4km,
n218,σ1$**64**/286,**mb3.5**/6,**37C-5D**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.05**	**316**	⇑P	**Pg**	**23 18 12.6**	**-0.3**
T1216				S	**Sg**	**23 18 14.0**	**-0.7**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.09**	**87**	⇓P	**Pg**	**23 18 13.0**	**-0.4**
T1245				S	**Sg**	**23 18 14.6**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.11**	**55**	⇓P	**Pg**	**23 18 13.0**	**-0.7**
MC2				S	**Sg**	**23 18 14.7**	**-1.3**
FEMA	**Monte Fema**	**0.11**	**352**	⇓P	**Pg**	**23 18 13.1**	**-0.6**
FEMA				S	**Sg**	**23 18 14.7**	**-1.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1215	**Vallo di Nera,**	**0.16**	**252**	⇑P	**Pg**	**23 18 14.8**	**+0.6**
T1215				S	**Sg**	**23 18 17.9**	**+1.1**
T1215				AML	AML		
	comp=E,31550μm,0.3s						
T1215				AML	AML		
	comp=E,32800μm,0.3s						
T1215				AML	AML		
	comp=N,22200μm,0.5s						
T1215				AML	AML		
	comp=E,31500μm,0.3s						
T1215				AML	AML		
	comp=N,23900μm,0.5s						
T1215				AML	AML		
	comp=N,22250μm,0.5s						
T1215				AML	AML		
	comp=E,31550μm,0.3s						
T1215				AML	AML		
	comp=E,32850μm,0.3s						
T1217	**Poggiodomo (PG**	**0.17**	**216**	⇑P	**Pg**	**23 18 15.3**	**+0.7**
T1217				S	**Sg**	**23 18 18.9**	**+1.6**
T1217				AML	AML		
	comp=E,67800μm,0.7s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,67800μm,0.7s						
T1217				AML	AML		
	comp=E,68200μm,0.7s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,68250μm,0.7s						
T1217				AML	AML		
	comp=E,67850μm,0.7s						
T1217				AML	AML		
T1217				AML	AML		
FDMO	**Fiordimonte**	**0.18**	**4**	⇓P	**Pg**	**23 18 14.1**	**-0.6**
FDMO				S	**Sg**	**23 18 16.6**	**-1.0**
FDMO				AML	AML		
	comp=E,26000μm,0.9s						
FDMO				AML	AML		
	comp=N,34800μm,0.9s						
T1244	**Arquata del Tr**	**0.19**	**119**	⇑P	**Pg**	**23 18 15.1**	**+0.2**
T1244				S	**Sg**	**23 18 18.7**	**+0.9**
T1256	**Bolognola (MC)**	**0.19**	**36**	⇑P	**Pg**	**23 18 14.2**	**-0.8**
T1256				S	**Sg**	**23 18 16.9**	**-1.0**
MMO1	**Montemonaco**	**0.20**	**76**	⇑P	**Pg**	**23 18 14.5**	**-0.4**
MMO1				S	**Sg**	**23 18 17.3**	**-0.6**
CESI	**CESI - Serrava**	**0.20**	**322**	⇑P	**Pg**	**23 18 14.8**	**-0.2**
CESI				S	**Sg**	**23 18 17.9**	**0.0**
CESI				AML	AML		
	comp=N,88200μm,0.2s						
CESI				AML	AML		
	comp=E,39150μm,0.3s						
T1201	**Domo (RI)**	**0.23**	**146**	⇓P	**Pg**	**23 18 16.3**	**+0.7**
T1201				S	**Sg**	**23 18 20.8**	**+1.8**
AM05	**Amandola Campo**	**0.24**	**59**	⇑P	**Pg**	**23 18 15.2**	**-0.4**
AM05				S	**Sg**	**23 18 18.7**	**-0.4**
AM05				AML	AML		
	comp=E,10835μm,0.1s						
AM05				AML	AML		
	comp=E,10845μm,0.1s						
AM05				AML	AML		
	comp=N,12100μm,0.5s						
AM05				AML	AML		
	comp=E,47300μm,0.1s						
AM05				AML	AML		
	comp=N,4175μm,0.5s						
AM05				AML	AML		
	comp=N,4180μm,0.5s						
AM05				AML	AML		
	comp=E,47250μm,0.1s						
AM05				AML	AML		
	comp=N,12050μm,0.5s						
AM05				AML	AML		
	comp=E,10825μm,0.1s						
LNSS	**Leonessa**	**0.25**	**185**	⇑P	**Pg**	**23 18 16.5**	**+0.7**
LNSS				S	**Sg**	**23 18 21.1**	**+1.7**
LNSS				AML	AML		
	comp=N,40750μm,1.1s						
LNSS				AML	AML		
	comp=E,33400μm,0.3s						
T1204	**Amatrice, Fraz**	**0.25**	**134**	⇑P	**Pg**	**23 18 16.2**	**+0.3**
T1204				S	**Sg**	**23 18 20.6**	**+1.1**
T1204				AML	AML		
	comp=E,41800μm,0.9s						
T1204				AML	AML		
	comp=N,27150μm,1.0s						
T1204				AML	AML		
	comp=E,41850μm,0.9s						
T1204				AML	AML		
	comp=N,27200μm,1.0s						
CSP1	**Cessapalombo**	**0.26**	**22**	⇑P	**Pg**	**23 18 15.3**	**-0.7**
CSP1				S	**Sg**	**23 18 19.0**	**-0.7**
T1241	**Roccafluvione,**	**0.27**	**89**	⇑P	**Pb**	**23 18 16.3**	**-1.1**
T1241				S	**Sb**	**23 18 20.5**	**-1.4**
GUMA	**Gualdo di Mace**	**0.29**	**43**	⇑P	**Pg**	**23 18 16.1**	**-0.4**
GUMA				S	**Sg**	**23 18 20.5**	**+0.1**
GUMA				AML	AML		
	comp=E,46100μm,0.4s						
GUMA				AML	AML		
	comp=N,58800μm,0.6s						
GUMA				AML	AML		
	comp=N,43700μm,0.5s						
GUMA				AML	AML		
	comp=E,56550μm,0.8s						
GUMA				AML	AML		
	comp=E,46100μm,0.4s						
SMA1	**SAN MARTINO**	**0.29**	**138**	⇑P	**Pg**	**23 18 16.9**	**+0.2**
SMA1				S	**Sg**	**23 18 21.8**	**+1.1**
SMA1				AML	AML		
	comp=E,17700μm,1.0s						
SMA1				AML	AML		
	comp=N,20550μm,0.2s						
SEF1	**Sefro**	**0.31**	**343**	P	**Pg**	**23 18 16.4**	**-0.5**
SEF1				S	**Sg**	**23 18 21.2**	**+0.1**
SEF1				AML	AML		
	comp=N,11095μm,0.2s						
SEF1				AML	AML		
	comp=E,14950μm,0.2s						
SEF1				AML	AML		
	comp=N,11085μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**119**	P	**Pb**	**23 18 16.9**	**-1.4**
T1243				S	**Sb**	**23 18 22.0**	**-1.5**
PIO1	**Pioraco**	**0.33**	**349**	P	**Pg**	**23 18 16.7**	**-0.6**
PIO1				S	**Sg**	**23 18 22.0**	**+0.2**
PIO1				AML	AML		
	comp=E,5435μm,1.2s						
PIO1				AML	AML		
	comp=N,6060μm,1.3s						
MDAR	**Monte D'Aria**	**0.34**	**9**	P	**Pg**	**23 18 16.8**	**-0.7**
MDAR				S	**Sg**	**23 18 21.7**	**-0.5**
MDAR				AML	AML		
	comp=E,13100μm,0.2s						
MDAR				AML	AML		
	comp=E,13150μm,0.2s						
MDAR				AML	AML		
	comp=N,11200μm,0.3s						
FIU1	**Fiuminata**	**0.35**	**343**	P	**Pg**	**23 18 17.1**	**-0.6**
ARRO	**Arrone**	**0.35**	**220**	⇑P	**Pb**	**23 18 18.4**	**-0.4**
ARRO				S	**Sb**	**23 18 24.4**	**+0.1**
ARRO				AML	AML		
	comp=E,12650μm,0.2s						
ARRO				AML	AML		
	comp=E,12600μm,0.2s						
ARRO				AML	AML		
	comp=N,12100μm,1.0s						
T1211	**Morro Reatino**	**0.36**	**207**	⇑P	**Pb**	**23 18 18.4**	**-0.5**
T1211				S	**Sb**	**23 18 24.6**	**+0.1**
T1211				AML	AML		
	comp=E,17150μm,1.0s						
T1211				AML	AML		
	comp=E,17800μm,1.0s						
T1211				AML	AML		
	comp=N,23400μm,0.3s						
T1211				AML	AML		
	comp=N,23450μm,0.2s						
T1211				AML	AML		
	comp=E,17750μm,1.0s						
ASSB	**Assisi San Ben**	**0.36**	**302**	⇑P	**Pg**	**23 18 17.6**	**-0.1**
ASSB				S	**Sg**	**23 18 23.2**	**+0.6**
ASSB				AML	AML		
	comp=N,15300μm,0.6s						
ASSB				AML	AML		
	comp=E,20500μm,0.3s						
RM33	**Pellescritta (**	**0.36**	**163**	P	**Pb**	**23 18 18.1**	**-0.8**
RM33				S	**Sb**	**23 18 24.4**	**-0.2**
RM33				AML	AML		
	comp=E,11340μm,0.2s						
RM33				AML	AML		
	comp=N,11550μm,0.3s						
RM33				AML	AML		
	comp=E,11380μm,0.2s						
RM33				AML	AML		
	comp=E,11330μm,0.2s						
RM33				AML	AML		
	comp=N,11500μm,0.3s						
RM33				AML	AML		
	comp=E,11335μm,0.2s						
RM33				AML	AML		
	comp=E,11345μm,0.2s						
RM33				AML	AML		
	comp=N,11750μm,0.3s						
RM33				AML	AML		
	comp=E,11320μm,0.2s						
SSM1	**San Severino M**	**0.39**	**12**	P	**Pg**	**23 18 17.5**	**-0.8**
GAG1	**Gagliole**	**0.39**	**360**	P	**Pg**	**23 18 17.8**	**-0.5**
GAG1				S	**Sg**	**23 18 23.5**	**0.0**
GAG1				AML	AML		
	comp=E,14800μm,0.4s						
GAG1				AML	AML		
	comp=N,15200μm,0.4s						
GAG1				AML	AML		
	comp=N,15150μm,0.4s						
CAMP	**Campotosto**	**0.40**	**142**	⇑P	**Pb**	**23 18 18.6**	**-1.1**
CAMP				S	**Sb**	**23 18 25.0**	**-0.9**
CAMP				AML	AML		
	comp=E,7160μm,1.0s						
CAMP				AML	AML		
	comp=N,5225μm,1.2s						
MTL1	**Matelica**	**0.41**	**354**	P	**Pg**	**23 18 18.1**	**-0.5**
MTL1				S	**Sg**	**23 18 24.3**	**+0.2**
MNTP	**Montappone**	**0.41**	**46**	P	**Pg**	**23 18 18.5**	**-0.2**
MNTP				S	**Sg**	**23 18 25.4**	**+1.2**
MNTP				AML	AML		
	comp=N,12800μm,1.6s						
MNTP				AML	AML		
	comp=E,11950μm,1.1s						
T1246	**Crognaleto (TE**	**0.41**	**131**	⇑P	**Pb**	**23 18 18.7**	**-1.2**
T1246				S	**Sb**	**23 18 25.2**	**-0.9**
SNTG	**Esanatoglia**	**0.41**	**347**	P	**Pg**	**23 18 18.2**	**-0.7**
SNTG				S	**Sg**	**23 18 24.3**	**-0.1**
SNTG				AML	AML		
	comp=E,3930μm,0.6s						
SNTG				AML	AML		
	comp=N,3150μm,0.7s						
SNTG				AML	AML		
	comp=E,3740μm,0.6s						
SNTG				AML	AML		
	comp=N,3390μm,0.5s						
CESX	**Cesi**	**0.43**	**236**	⇑P	**Pb**	**23 18 19.6**	**-0.7**
CESX				S	**Sb**	**23 18 26.8**	**+0.1**
CESX				AML	AML		
	comp=N,16500μm,0.3s						
CESX				AML	AML		
	comp=E,8700μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.44**	**158**	P	**Pb**	**23 18 19.5**	**-0.9**
T1247				S	**Sb**	**23 18 26.9**	**-0.1**
T1247				AML	AML		
	comp=E,10410μm,0.9s						
T1247				AML	AML		
	comp=N,14200μm,1.2s						
TERO	**Teramo**	**0.46**	**120**	⇑P	**Pb**	**23 18 19.2**	**-1.3**
TERO				S	**Sb**	**23 18 26.3**	**-1.0**
TERO				AML	AML		
	comp=E,15100μm,0.3s						
TERO				AML	AML		
	comp=N,20650μm,0.4s						
TERO				AML	AML		
	comp=E,16400μm,0.3s						
TERO				AML	AML		
	comp=N,22200μm,0.4s						
TERO				AML	AML		
	comp=N,20700μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.46**	**317**	⇑P	**Pg**	**23 18 19.4**	**-0.2**
ATCC				S	**Sg**	**23 18 26.5**	**+0.8**
ATCC				AML	AML		
	comp=E,7625μm,0.2s						
ATCC				AML	AML		
	comp=N,6945μm,0.4s						
OFFI	**Offida**	**0.46**	**79**	⇑P	**Pb**	**23 18 20.0**	**-0.7**
OFFI				S	**Sb**	**23 18 28.3**	**+0.9**
OFFI				AML	AML		
	comp=E,13750μm,0.5s						
OFFI				AML	AML		
	comp=N,16600μm,0.6s						
EL6	**Elcito**	**0.48**	**3**	⇑P	**Pg**	**23 18 19.2**	**-0.8**
EL6				S	**Sg**	**23 18 26.4**	**0.0**
EL6				AML	AML		
	comp=E,7300μm,1.3s						
EL6				AML	AML		
	comp=N,9915μm,0.2s						
EL6				AML	AML		
	comp=E,7370μm,1.3s						
EL6				AML	AML		
	comp=N,9910μm,0.2s						
EL6				AML	AML		
	comp=N,9925μm,0.2s						
EL6				AML	AML		
	comp=E,7295μm,1.3s						
TRE1	**Treia**	**0.49**	**21**	P	**Pg**	**23 18 19.8**	**-0.4**
TRE1				S	**Sg**	**23 18 27.7**	**+0.9**
TRE1				AML	AML		
	comp=E,10085μm,0.4s						
TRE1				AML	AML		
	comp=N,7840μm,0.8s						
TRE1				AML	AML		
	comp=E,10080μm,0.4s						

TRE1				AML	AML		
	comp=N,7835µm,0.8s						
FOSV	**Fossato di Vic**	**0.50**	**333**	⇑P	**Pg**	**23 18 19.8**	**-0.5**
FOSV				S	**Sg**	**23 18 27.2**	**+0.2**
FOSV				AML	AML		
	comp=N,3520µm,0.8s						
FOSV				AML	AML		
	comp=E,3060µm,0.6s						
CING	**Cingoli**	**0.53**	**10**	⇑P	**Pg**	**23 18 20.1**	**-0.9**
CING				S	**Sg**	**23 18 28.0**	**-0.1**
CING				AML	AML		
	comp=E,3360µm,0.8s						
CING				AML	AML		
	comp=N,3025µm,0.1s						
GIGS	**Gran Sasso**	**0.55**	**137**	P	**Pb**	**23 18 20.8**	**-1.3**
GIGS				S	**Sb**	**23 18 29.1**	**-0.8**
GIGS				AML	AML		
	comp=E,2345µm,1.3s						
GIGS				AML	AML		
	comp=N,2500µm,1.4s						
AQU	**L'Aquila**	**0.56**	**154**	⇑P	**Pb**	**23 18 21.5**	**-0.8**
AQU				S	**Sb**	**23 18 30.4**	**+0.2**
AQU				AML	AML		
	comp=N,3725µm,0.2s						
AQU				AML	AML		
	comp=E,5230µm,0.2s						
AQU				AML	AML		
	comp=E,5175µm,0.2s						
AQU				AML	AML		
	comp=N,3645µm,0.2s						
MURB	**Monte Urbino**	**0.57**	**316**	⇑P	**Pg**	**23 18 21.4**	**-0.4**
MURB				S	**Sb**	**23 18 30.6**	**-0.2**
MURB				AML	AML		
	comp=E,9365µm,0.2s						
MURB				AML	AML		
	comp=E,10890µm,0.2s						
MURB				AML	AML		
	comp=N,8855µm,0.2s						
MURB				AML	AML		
	comp=N,7970µm,0.2s						
FIAM	**Fiamignano**	**0.58**	**177**	P	**Pn**	**23 18 22.1**	**-2.7**
FIAM				S	**Sn**	**23 18 31.4**	**-3.0**
FIAM				AML	AML		
	comp=N,3460µm,1.3s						
FIAM				AML	AML		
	comp=E,3760µm,0.7s						
FIAM				AML	AML		
	comp=N,3455µm,1.3s						
MMUR	**Monte Murano**	**0.59**	**355**	P	**Pg**	**23 18 21.5**	**-0.7**
MMUR				S	**Sg**	**23 18 30.7**	**+0.7**
MMUR				AML	AML		
	comp=N,3410µm,0.3s						
MMUR				AML	AML		
	comp=E,5435µm,1.0s						
CADA	**Capodarco di F**	**0.61**	**56**	P	**Pb**	**23 18 23.1**	**-0.1**
TRTR	**Tortoreto Alta**	**0.62**	**94**	⇑P	**Pb**	**23 18 23.3**	**0.0**
TRTR				AML	AML		
	comp=E,21150µm,0.5s						
TRTR				AML	AML		
	comp=N,18100µm,0.3s						
ATTE	**AVT- Monte Tez**	**0.63**	**304**	P	**Pg**	**23 18 22.4**	**-0.5**
ATTE				AML	AML		
	comp=N,1970µm,1.1s						
ATTE				AML	AML		
	comp=E,1630µm,0.3s						
ATFO	**Monte Foce - G**	**0.63**	**325**	P	**Pg**	**23 18 22.2**	**-0.6**
ATFO				S	**Sg**	**23 18 32.2**	**+1.0**
ATFO				AML	AML		
	comp=E,2230µm,1.3s						
ATFO				AML	AML		
	comp=N,2000µm,0.8s						
CIMA	**Civitanova Mar**	**0.63**	**44**	P	**Pg**	**23 18 22.9**	**0.0**
ATSC	**Scheggia e Pas**	**0.64**	**334**	P	**Pg**	**23 18 22.1**	**-0.8**
ARVD	**Arcevia**	**0.65**	**352**	P	**Pg**	**23 18 22.4**	**-0.9**
ARVD				S	**Sg**	**23 18 32.2**	**+0.3**
ARVD				AML	AML		
	comp=E,1610µm,0.7s						
ARVD				AML	AML		
	comp=N,1225µm,0.7s						
PP3	**Marolino**	**0.66**	**37**	⇑P	**Pg**	**23 18 23.3**	**-0.1**
PP3				AML	AML		
	comp=N,7320µm,1.1s						
PP3				AML	AML		
	comp=N,7325µm,1.1s						
PP3				AML	AML		
	comp=E,6820µm,0.9s						
PP3				AML	AML		
	comp=E,6740µm,0.3s						
ATLO	**AVT- Montelove**	**0.67**	**314**	⇑P	**Pg**	**23 18 23.0**	**-0.6**
TB01	**Gubbio**	**0.70**	**319**	⇑P	**Pg**	**23 18 23.5**	**-0.7**
MGAB	**Montegabbione**	**0.71**	**275**	⇑P	**Pb**	**23 18 24.3**	**-0.6**
MGAB				AML	AML		
	comp=N,7535µm,0.6s						
MGAB				AML	AML		
	comp=N,7425µm,0.6s						
MGAB				AML	AML		
	comp=N,7540µm,0.6s						
MGAB				AML	AML		
	comp=E,5900µm,0.5s						
MGAB				AML	AML		
	comp=E,5460µm,1.2s						
TB02	**Pietralunga**	**0.71**	**317**	P	**Pg**	**23 18 23.6**	**-0.8**
FRON	**Frontone**	**0.71**	**339**	P	**Pg**	**23 18 23.6**	**-0.7**
FRON				S	**Sg**	**23 18 34.2**	**+0.4**
FRON				AML	AML		
	comp=E,1365µm,1.4s						
FRON				AML	AML		
	comp=N,1855µm,0.7s						
ATVA	**AVT- Monte Val**	**0.72**	**307**	P	**Pg**	**23 18 23.9**	**-0.6**
ATVO	**AVT- Monte Val**	**0.72**	**318**	⇑P	**Pg**	**23 18 23.8**	**-0.7**
ATVO				AML	AML		
	comp=E,1680µm,0.7s						
ATVO				AML	AML		
	comp=N,1460µm,1.2s						
VCEL	**Villa Celiera**	**0.73**	**129**	⇑P	**Pb**	**23 18 24.5**	**-0.8**
VCEL				AML	AML		
	comp=E,9730µm,0.3s						
VCEL				AML	AML		
	comp=E,9725µm,0.3s						
VCEL				AML	AML		
	comp=N,10240µm,0.3s						
ATBU	**Serra di Buran**	**0.73**	**329**	P	**Pg**	**23 18 24.1**	**-0.7**
TB03	**Pietralunga**	**0.73**	**319**	⇑P	**Pg**	**23 18 24.0**	**-0.8**
SRES	**S.Oreste - Sor**	**0.74**	**214**	P	**Pn**	**23 18 25.3**	**-1.6**
SRES				AML	AML		
	comp=N,4330µm,0.3s						
SRES				AML	AML		
	comp=E,3815µm,1.6s						
ATMI	**Monte Miggiano**	**0.76**	**310**	P	**Pg**	**23 18 24.9**	**-0.4**
ATMI				AML	AML		
	comp=N,4760µm,0.8s						
ATMI				AML	AML		
	comp=E,3695µm,1.2s						
ATPC	**Poggio Castell**	**0.77**	**325**	P	**Pg**	**23 18 24.7**	**-0.8**
ATPI	**Pietralunga -**	**0.77**	**321**	P	**Pg**	**23 18 24.8**	**-0.8**
ATPI				S	**Sg**	**23 18 36.3**	**+0.6**
ATPI				AML	AML		
	comp=E,1975µm,0.7s						
ATPI				AML	AML		
	comp=N,1230µm,0.8s						
ATPI				AML	AML		
	comp=E,1980µm,0.7s						
ATPI				AML	AML		
	comp=N,1235µm,0.8s						
PIEI	**Pieia**	**0.79**	**330**	P	**Pg**	**23 18 25.1**	**-0.7**
PIEI				AML	AML		
	comp=E,1315µm,0.3s						
PIEI				AML	AML		
	comp=N,1032µm,0.9s						
AOI	**Ancona**	**0.80**	**29**	P	**Pg**	**23 18 25.1**	**-1.0**
AOI				AML	AML		
	comp=N,1815µm,0.8s						
AOI				AML	AML		
	comp=E,2125µm,0.7s						
MPAG	**Monte Paganucc**	**0.81**	**344**	P	**Pg**	**23 18 25.2**	**-1.1**
MPAG				AML	AML		
	comp=E,1660µm,0.8s						
MPAG				AML	AML		
	comp=N,1500µm,1.4s						
MPAG				AML	AML		
	comp=E,1680µm,0.8s						
MPAG				AML	AML		
	comp=N,1810µm,0.5s						
T0110	**Collepietro**	**0.81**	**140**	P	**Pb**	**23 18 25.7**	**-1.0**
T0110				AML	AML		
	comp=N,6980µm,1.2s						
T0110				AML	AML		
	comp=E,6430µm,0.3s						
PCRO	**Pietralacroce**	**0.83**	**24**	P	**Pg**	**23 18 26.2**	**-0.4**
APEC	**Apecchio**	**0.85**	**326**	P	**Pg**	**23 18 26.4**	**-0.6**
APEC				AML	AML		
	comp=N,688µm,1.0s						
APEC				AML	AML		
	comp=E,382µm,1.1s						
SACS	**San Casciano d**	**0.85**	**270**	P	**Pb**	**23 18 27.0**	**-0.4**
SACS				AML	AML		
	comp=N,2385µm,0.6s						
SACS				AML	AML		
	comp=E,2090µm,0.8s						
SACS				AML	AML		
	comp=E,2135µm,0.7s						
SACS				AML	AML		
	comp=N,2515µm,0.6s						
MTCE	**Montecelio**	**0.86**	**196**	⇑P	**Pn**	**23 18 27.1**	**-1.5**
MTCE				AML	AML		
	comp=N,1910µm,0.8s						
MTCE				AML	AML		
	comp=E,2410µm,0.8s						
PTQR	**Pietraquaria**	**0.86**	**163**	P	**Pn**	**23 18 26.9**	**-1.8**
PTQR				AML	AML		
	comp=N,1360µm,0.6s						
PTQR				AML	AML		
	comp=E,1495µm,0.8s						
FSSB	**Fossombrone**	**0.87**	**346**	P	**Pg**	**23 18 26.3**	**-1.0**
FSSB				AML	AML		
	comp=E,3370µm,0.5s						
FSSB				AML	AML		
	comp=N,4200µm,0.2s						
ATMC	**Monte Cedrone**	**0.88**	**313**	P	**Pg**	**23 18 27.0**	**-0.5**
CERT	**Cerreto**	**0.91**	**184**	P	**Pn**	**23 18 28.1**	**-1.1**
CERT				AML	AML		
	comp=N,2300µm,0.7s						
CERT				AML	AML		
	comp=E,3215µm,0.9s						
CAFI	**Castiglion Fio**	**0.94**	**301**	P	**Pb**	**23 18 28.1**	**-0.7**
CAFI				AML	AML		
	comp=E,1260µm,0.6s						
CAFI				AML	AML		
	comp=N,1260µm,1.5s						
PE3	**Peglio**	**0.94**	**334**	P	**Pg**	**23 18 28.3**	**-0.5**
PE3				AML	AML		
	comp=E,9µm,1.5s						
PE3				AML	AML		
	comp=N,12µm,0.5s						
RCAV	**Rocca di Cave**	**1.01**	**185**	P	**Pn**	**23 18 30.0**	**-0.6**
SF11	**Podere del Sol**	**1.02**	**271**	P	**Pn**	**23 18 30.1**	**-0.7**
MCIV	**Monte Civitell**	**1.03**	**266**	P	**Pn**	**23 18 30.3**	**-0.6**
MCIV				AML	AML		
	comp=E,1230µm,0.7s						
MCIV				AML	AML		
	comp=N,968µm,1.4s						
SF04	**Casetta**	**1.04**	**270**	AML	AML		
	comp=E,1176µm,0.4s						
SF04				AML	AML		
	comp=N,1146µm,0.4s						
VVLD	**Villa Vallelon**	**1.06**	**157**	P	**Pn**	**23 18 30.9**	**-0.5**
SF13	**Bagnolo**	**1.07**	**269**	P	**Pn**	**23 18 30.9**	**-0.5**
GUAR	**Guarcino**	**1.07**	**170**	P	**Pn**	**23 18 31.5**	**0.0**
RMP	**Rome, Mte Porz**	**1.07**	**195**	P	**Pn**	**23 18 31.0**	**-0.5**
SF14	**Selvena**	**1.08**	**265**	P	**Pn**	**23 18 30.7**	**-0.8**
TOLF	**Tolfa**	**1.12**	**226**	P	**Pn**	**23 18 31.6**	**-0.5**
TOLF				AML	AML		
	comp=N,1585µm,1.2s						
TOLF				AML	AML		
	comp=E,1430µm,0.7s						
CRE	**Caprese Michel**	**1.12**	**314**	P	**Pg**	**23 18 31.7**	**-0.5**
RDP	**Rocca di Papa**	**1.12**	**194**	P	**Pn**	**23 18 33.1**	**+0.9**
RDP				AML	AML		
	comp=E,7100µm,0.6s						
RDP				AML	AML		
	comp=N,7835µm,0.5s						
CAFR	**Castel Frentan**	**1.13**	**123**	P	**Pn**	**23 18 31.2**	**-1.1**
CAFR				AML	AML		
	comp=N,1855µm,0.3s						
CAFR				AML	AML		
	comp=E,1300µm,0.4s						
LPEL	**Lama dei Peligi**	**1.15**	**134**	P	**Pn**	**23 18 31.5**	**-1.1**
LPEL				AML	AML		
	comp=E,1790µm,1.4s						
LPEL				AML	AML		
	comp=N,2025µm,0.9s						
ARCI	**Arcidosso**	**1.17**	**271**	P	**Pn**	**23 18 32.7**	**-0.2**
POFI	**Posta Fibreno**	**1.23**	**157**	P	**Pn**	**23 18 34.9**	**+1.2**
LRP	**Arpino**	**1.26**	**162**	P	**Pn**	**23 18 36.2**	**+2.1**
GIUL	**Giuliano Di Ro**	**1.30**	**174**	P	**Pn**	**23 18 35.6**	**+1.0**
GIUL				AML	AML		
	comp=E,766µm,1.0s						
GIUL				AML	AML		
	comp=N,1006µm,0.6s						
ASQU	**Asqua**	**1.33**	**316**	P	**Pn**	**23 18 35.5**	**+0.4**
LATB	**Latina**	**1.36**	**183**	P	**Pn**	**23 18 35.5**	**+0.2**
LATB				AML	AML		
	comp=N,262µm,1.0s						
LATB				AML	AML		
	comp=E,213µm,1.6s						
RNI2	**Rionero Sannit**	**1.40**	**145**	P	**Pb**	**23 18 36.9**	**+0.1**
CERA	**Filignano**	**1.44**	**150**	P	**Pb**	**23 18 36.8**	**-0.6**
CSNT	**Castellina Chi**	**1.44**	**296**	P	**Pn**	**23 18 36.8**	**+0.3**
FROS	**Frosini**	**1.45**	**285**	P	**Pg**	**23 18 36.8**	**-1.6**
MAON	**Monte Argentar**	**1.49**	**254**	P	**Pg**	**23 18 37.3**	**-1.9**
MAON				AML	AML		
	comp=E,282µm,0.6s						
MAON				AML	AML		
	comp=N,252µm,1.1s						
OSSC	**Osservatorio P**	**1.49**	**297**	P	**Pn**	**23 18 36.8**	**-0.5**
MIDA	**Miranda**	**1.50**	**144**	P	**Pb**	**23 18 37.4**	**-0.9**
RUFI	**Rufina**	**1.51**	**311**	P	**Pn**	**23 18 37.8**	**+0.3**
TRIV	**Trivento**	**1.54**	**134**	P	**Pg**	**23 18 40.2**	**0.0**
TRIF	**Trifonti**	**1.61**	**280**	P	**Pn**	**23 18 39.1**	**+0.2**
CASP	**Castiglione de**	**1.62**	**269**	P	**Pb**	**23 18 39.2**	**-1.3**
VAGA	**Valle Agricola**	**1.68**	**149**	P	**Pg**	**23 18 42.1**	**-0.6**
BSSO	**Busso**	**1.73**	**139**	P	**Pg**	**23 18 43.3**	**-0.4**
MODR	**Mondragone**	**1.81**	**160**	P	**Pg**	**23 18 42.8**	**-2.5**
CIGN	**Sant'Elia a Pi**	**1.81**	**131**	P	**Pg**	**23 18 44.1**	**-1.3**
PIGN	**Pignataro Magg**	**1.85**	**153**	P	**Pg**	**23 18 43.8**	**-2.1**
MELA	**Melanico ??? S**	**1.91**	**126**	P	**Pg**	**23 18 44.6**	**-2.6**
APRC	**Apricena**	**2.14**	**120**	P	**Pb**	**23 18 47.7**	**-1.5**
MAIM	**Mastiano**	**2.16**	**300**	P	**Pn**	**23 18 47.0**	**+0.6**
MAIM				AML	AML		
	comp=E,106µm,0.9s						
MAIM				AML	AML		
	comp=N,112µm,1.0s						
RIY	**Rijeka**	**2.67**	**22**	*e*Pn	**Pn**	**23 18 53.6**	**+0.1**
RIY				*e*Sn	**Sn**	**23 19 26.5**	**+0.7**
PGF	**Pioggiola**	**3.02**	**266**	*e*P	**Pn**	**23 18 59.4**	**+1.1**
PGF				*e*Sn	**Sn**	**23 19 30.6**	**-3.8**
	comp=N,102nm,1.3s						
ROVR	**Rover Verones**	**3.14**	**333**	P	**Pn**	**23 19 01.6**	**+1.6**
SABO	**M.te Sabotino**	**3.15**	**7**	P	**Pn**	**23 18 59.8**	**-0.3**
SABO				AML	AML		
	comp=E,213µm,0.8s						
SABO				AML	AML		
	comp=N,1004µm,0.9s						
SABO				AML	AML		
	comp=E,964µm,0.8s						
SABO				AML	AML		
	comp=N,256µm,0.6s						
CGRP	**Cima Grappa**	**3.16**	**344**	P	**Pn**	**23 19 01.9**	**+1.5**
AMUR	**Altamura**	**3.28**	**125**	P	**Pn**	**23 19 03.3**	**+1.5**
SALO	**Salr**	**3.32**	**327**	P	**Pn**	**23 19 04.0**	**+1.6**
CTI	**Castel Tesino**	**3.35**	**343**	P	**Pn**	**23 19 03.8**	**+0.9**
LJU	**Ljubljana**	**3.36**	**18**	AML	AML		
	comp=E,834µm,0.6s						
LJU				AML	AML		
	comp=N,845µm,0.6s						
MPRI	**Monte Prat**	**3.39**	**359**	P	**Pn**	**23 19 03.8**	**+0.5**
MPRI				AML	AML		
	comp=E,202µm,0.7s						
MPRI				AML	AML		
	comp=N,254µm,0.6s						
STON	**Ston**	**3.40**	**88**	*e*Pn	**Pn**	**23 19 05.8**	**+2.3**
STON				*e*Sn	**Sn**	**23 19 43.2**	**-0.5**
STON	**Ston**	**3.40**	**88**	AML	AML		
	comp=E,72µm,1.4s						
STON				AML	AML		
	comp=N,87µm,1.4s						
LUSI	**Trento, Gardas**	**3.46**	**335**	P	**Pn**	**23 19 05.8**	**+1.5**
CIMO	**Cimolais**	**3.49**	**353**	P	**Pn**	**23 19 04.8**	**+0.1**
CIMO				AML	AML		
	comp=N,61µm,0.8s						
CIMO				AML	AML		
	comp=E,39µm,1.0s						
BLY	**Banja Luka**	**3.53**	**56**	*e*Pn	**Pn**	**23 19 07.2**	**+2.0**
ZONE	**Zone**	**3.60**	**325**	P	**Pn**	**23 19 07.4**	**+1.1**
NOCI	**Noci**	**3.63**	**123**	P	**Pn**	**23 19 08.2**	**+1.6**
MABI	**Malga Bissina**	**3.69**	**331**	P	**Pn**	**23 19 09.4**	**+1.8**
ZOU	**Zoufplan**	**3.71**	**359**	P	**Pn**	**23 19 08.1**	**+0.3**
ZOU				AML	AML		
	comp=N,132µm,1.1s						
ZOU				AML	AML		
	comp=E,131µm,1.3s						
ACOM	**Acomizza, Ital**	**3.71**	**5**	P	**Pn**	**23 19 08.7**	**+0.8**
KOSI	**Kohlern**	**3.81**	**342**	P	**Pn**	**23 19 10.6**	**+1.4**
TREB	**Trebinje**	**3.89**	**90**	*e*Pn	**Pn**	**23 19 12.7**	**+2.5**
TREB				*e*Sn	**Sn**	**23 19 54.6**	**-1.1**
ABTA	**Abfaltersbach**	**3.92**	**354**	Pn	**Pn**	**23 19 12.1**	**+1.5**
	comp=E,12nm,0.4s,SNR=7.1						
RISI	**Rein**	**4.16**	**351**	P	**Pn**	**23 19 15.3**	**+1.3**
MUGIO	**Muggio**	**4.21**	**318**	P	**Pn**	**23 19 16.2**	**+1.6**
SBF	**Sospel**	**4.23**	**286**	*e*Pn	**Pn**	**23 19 13.0**	**-1.9**
SBF	**Sospel**	**4.23**	**286**	*e*P	**Pn**	**23 19 16.4**	**+1.5**
VSL	**Villasalto**	**4.36**	**221**	P	**Pn**	**23 19 15.8**	**-0.9**
FETA	**Feichten**	**4.49**	**339**	Pn	**Pn**	**23 19 21.0**	**+2.5**
	comp=E,3.5nm,0.6s,SNR=6.7						
WTTA	**Wattenberg**	**4.53**	**348**	Pn	**Pn**	**23 19 22.0**	**+2.9**
	comp=E,2.7nm,0.3s,SNR=6.5						
DAVOX	**Davos/Dischmat**	**4.54**	**331**	Pn	**Pn**	**23 19 21.9**	**+2.6**
	comp=E,1.6nm,0.3s,baz=147,slow=17,SNR=10						
DAVOX				Sn	**Sn**	**23 20 15.1**	**+3.1**
	comp=E,0.4nm,0.3s,baz=108,slow=19,SNR=8.8						
SQTA	**Sankt Quirin**	**4.56**	**344**	Pn	**Pn**	**23 19 22.8**	**+3.2**
	comp=E,4.7nm,0.2s,SNR=5.3						
PDG	**Podgorica**	**4.58**	**93**	*e*Pn	**Pn**	**23 19 21.4**	**+1.7**
PDG				*e*Sn	**Sn**	**23 20 12.2**	**-0.6**
WATA	**Walderalm**	**4.61**	**347**	Pn	**Pn**	**23 19 23.9**	**+3.7**
	comp=E,2.4nm,0.2s,SNR=7.4						
MOTA	**Moosalm**	**4.70**	**343**	*e*Pn	**Pn**	**23 19 25.0**	**+3.5**
	comp=E,3.3nm,0.4s						
ARSA	**Arzberg**	**4.73**	**21**	*e*Pn	**Pn**	**23 19 22.9**	**+1.2**
	comp=E,3.2nm,0.4s						
BBLS	**Lazići**	**4.73**	**75**	*e*Pn	**Pn**	**23 19 23.1**	**+1.3**
BBLS				*e*Sn	**Sn**	**23 20 14.2**	**-2.4**
LMR	**La Mourre**	**4.83**	**278**	*e*P	**Pn**	**23 19 23.7**	**+0.6**
BIOA	**Bad Ischl, Aus**	**4.86**	**5**	*e*Pn	**Pn**	**23 19 24.6**	**+1.1**
	comp=E,16nm,0.4s						
RETA	**Reutte**	**4.91**	**341**	Pn	**Pn**	**23 19 27.2**	**+2.9**
	comp=E,1.2nm,0.2s,SNR=5.1						
MBDF	**Montbardon**	**4.93**	**294**	*e*Pn	**Pn**	**23 19 21.8**	**-2.8**
MBDF	**Montbardon**	**4.93**	**294**	*e*P	**Pn**	**23 19 26.1**	**+1.5**
MOA	**Molln**	**5.07**	**9**	*e*Pn	**Pn**	**23 19 27.0**	**+0.6**
MOA				*e*Sn	**Sn**	**23 20 22.8**	**-2.1**
MOA	**Molln**	**5.07**	**9**	*e*Pn	**Pn**	**23 19 27.4**	**+1.0**
	comp=E,0.8nm,0.2s						
SJES	**Sjenica**	**5.08**	**83**	*e*Pn	**Pn**	**23 19 28.7**	**+2.1**
SJES				*e*Sn	**Sn**	**23 20 23.3**	**-1.9**
DIVS	**Divibare**	**5.19**	**74**	*e*Pn	**Pn**	**23 19 29.5**	**+1.4**
IVAS	**Ivanjica**	**5.23**	**80**	*e*Pn	**Pn**	**23 19 29.4**	**+0.8**
IVAS				*e*Sn	**Sn**	**23 20 27.1**	**-1.7**
LPG	**La Plagne**	**5.26**	**302**	*e*Pn	**Pn**	**23 19 26.5**	**-2.7**
LPG	**La Plagne**	**5.26**	**302**	*e*P	**Pn**	**23 19 31.0**	**+1.8**
LPG				*e*Sn	**Sn**	**23 20 24.2**	**-5.7**
	comp=E,1.2nm,0.3s						
TIR	**Tirane**	**5.27**	**104**	*e*Pn	**Pn**	**23 19 30.3**	**+1.1**
TIR				*e*Sn	**Sn**	**23 20 29.4**	**-0.5**
LPL	**La Plagne**	**5.28**	**302**	*e*Pn	**Pn**	**23 19 27.1**	**-2.4**
LPL	**La Plagne**	**5.28**	**302**	*e*P	**Pn**	**23 19 31.2**	**+1.7**
LPL				*e*Sn	**Sn**	**23 20 23.2**	**-7.1**
	comp=E,3.4nm,0.5s						
RONA	**Rosalia, Austr**	**5.36**	**24**	*e*Pn	**Pn**	**23 19 30.8**	**+0.5**
	comp=E,0.6nm,0.2s						
CONA	**Conrad Observa**	**5.44**	**20**	*e*Pn	**Pn**	**23 19 31.6**	**0.0**
	comp=E,2.2nm,0.2s						
TRUS	**Trudelj**	**5.51**	**73**	*e*Pn	**Pn**	**23 19 33.1**	**+0.7**
SMRF	**Simiane la Rot**	**5.57**	**284**	*e*P	**Pn**	**23 19 35.8**	**+2.4**
ORIF	**Oris-en-Rattie**	**5.59**	**294**	*e*Pn	**Pn**	**23 19 31.2**	**-2.4**
ORIF	**Oris-en-Rattie**	**5.59**	**294**	*e*P	**Pn**	**23 19 37.3**	**+3.7**
ORIF				*e*Sn	**Sn**	**23 20 31.9**	**-6.0**
	comp=E,5.0nm,0.6s						
GRUS	**Gruza**	**5.67**	**77**	*e*Pn	**Pn**	**23 19 35.4**	**+0.8**
SELS	**Selova**	**5.91**	**84**	*e*Pn	**Pn**	**23 19 38.5**	**+0.5**
GERES	**GERESS Array B**	**6.01**	**4**	Pn	**Pn**	**23 19 38.8**	**-0.6**
	comp=E,0.4nm,0.3s,baz=184,slow=11,SNR=7.7						
GERES				Sn	**Sn**	**23 20 46.1**	**-2.1**
	comp=E,1.1nm,0.3s,baz=184,slow=26,SNR=5.6						
	comp=E,0.7nm,0.4s						
CKRC	**Cesky Krumlov**	**6.03**	**8**	*e*PN	**Pn**	**23 19 38.6**	**-1.0**
CKRC				*e*SN	**Sn**	**23 20 45.0**	**-3.6**
CABF	**La Chapelle**	**6.23**	**309**	*e*Pn	**Pn**	**23 19 38.9**	**-3.5**
CABF	**La Chapelle**	**6.23**	**309**	*e*P	**Pn**	**23 19 44.4**	**+2.0**
CABF				*e*Sn	**Sn**	**23 20 47.0**	**-6.6**
	comp=E,4.5nm,0.6s						
KHC	**Kasperske Hory**	**6.29**	**3**	*e*PN	**Pn**	**23 19 43.3**	**+0.1**
KHC				*e*SN	**Sn**	**23 20 52.9**	**-2.1**
VIVF	**Saint-Julien-l**	**6.39**	**291**	*e*Pn	**Pn**	**23 19 42.1**	**-2.5**
VIVF	**Saint-Julien-l**	**6.39**	**291**	*e*P	**Pn**	**23 19 46.8**	**+2.2**
BARS	**Barje**	**6.43**	**87**	*e*Pn	**Pn**	**23 19 46.2**	**+1.1**
HINF	**Hinteralfeld**	**6.62**	**321**	*e*P	**Pn**	**23 19 49.2**	**+1.5**
HINF				*e*Sn	**Sn**	**23 20 55.9**	**-7.2**
	comp=E,3.6nm,0.3s						
ZAGS	**Zajecar**	**6.75**	**79**	*e*Pn	**Pn**	**23 19 50.5**	**+1.0**
LASF	**Ste Croix**	**6.81**	**283**	*e*P	**Pn**	**23 19 52.7**	**+2.3**
CDF	**Champ du Feu**	**6.88**	**326**	*e*P	**Pn**	**23 19 53.1**	**+1.7**
CDF				*e*Sn	Sn	23 21 02.1	-7.6
	comp=E,4.8nm,0.5s						
VRAC	**Vranov**	**6.91**	**20**	Pn	**Pn**	**23 19 51.2**	**-0.4**
	comp=E,0.2nm,0.3s,baz=153,slow=19,SNR=1.4						
VRAC				Sn	**Sn**	**23 21 09.9**	**-0.2**
	comp=E,0.4nm,0.3s,baz=49,slow=19,SNR=3.0						
	comp=E,0.7nm,0.3s						
HAU	**Haudompre**	**6.99**	**320**	*e*P	**Pn**	**23 19 54.2**	**+1.4**
HAU				*e*Sn	Sn	23 21 04.5	-7.7
	comp=E,6.2nm,0.3s						
ZAPS	**Zavoj**	**7.02**	**83**	*e*Pn	**Pn**	**23 19 54.4**	**+1.2**
ZAPS				*e*Sn	**Sn**	**23 21 09.4**	**-3.5**
SMF	**Signal de Mont**	**7.58**	**303**	*e*P	**Pn**	**23 20 03.2**	**+2.3**
KEST	**Kesra**	**7.67**	**203**	Pn	**Pn**	**23 20 05.0**	**+2.8**
	comp=E,0.1nm,0.3s,baz=12,slow=14,SNR=1.6						
	comp=E,4.8nm,1.0s						
PAGF	**Fort de Pagny**	**7.68**	**321**	*e*P	**Pn**	**23 20 04.4**	**+2.2**
	baz=141						
SFTF	**Sexfontaines**	**7.77**	**316**	*e*P	**Pn**	**23 20 05.7**	**+2.2**
	baz=136						
LOR	**Lormes**	**7.87**	**307**	*e*P	**Pn**	**23 20 07.5**	**+2.6**
	baz=126						
LOR				*e*Sn	Sn	23 21 26.0	-7.9
	comp=E,1.8nm,0.4s						
AVF	**Avril sur Loir**	**7.95**	**303**	*e*P	**Pn**	**23 20 07.0**	**+1.1**
MTLF	**Montolieu**	**7.96**	**277**	*e*P	**Pn**	**23 20 09.1**	**+3.0**
MEZF	**Maizieres J'vi**	**7.96**	**318**	*e*Pn	**Pn**	**23 20 02.5**	**-3.6**
MEZF	**Maizieres J'v

T1216	**Preci, Frazion**	**0.07**	**304**	⇑P	Pg	23 22 14.4 +0.2
T1216				S	Sg	23 22 15.8 +0.1
T1216				AML	AML	
	comp=E,27750μm,0.3s					
T1216				AML	AML	
	comp=N,34200μm,0.4s					
T1216				AML	AML	
	comp=N,34250μm,0.4s					
T1216				AML	AML	
	comp=E,27750μm,0.3s					
T1216				AML	AML	
	comp=N,34226μm,0.4s					
T1216				AML	AML	
	comp=E,27736μm,0.3s					
T1216				AML	AML	
	comp=N,34200μm,1.6s					
MC2	**Monte Cornacci**	**0.09**	**48**	P	Pg	23 22 14.8 +0.2
MC2				S	Sg	23 22 17.0 +0.5
MMO1	**Montemonaco**	**0.17**	**74**	P	Pg	23 22 16.3 +0.6
MMO1				S	Sg	23 22 19.2 +0.8
T1215	**Vallo di Nera,**	**0.17**	**254**	⇑P	Pg	23 22 16.5 +0.8
T1215				S	Sg	23 22 19.6 +1.3
T1215				AML	AML	
	comp=E,8895μm,0.4s					
T1215				AML	AML	
	comp=N,6615μm,1.3s					
T1215				AML	AML	
	comp=N,6390μm,1.3s					
T1215				AML	AML	
	comp=E,8890μm,0.4s					
T1215				AML	AML	
	comp=E,9155μm,0.4s					
T1215				AML	AML	
	comp=N,6385μm,1.3s					
T1215				AML	AML	
	comp=E,8895μm,0.3s					
T1215				AML	AML	
	comp=N,6620μm,1.3s					
T1215				AML	AML	
	comp=E,9155μm,0.4s					
T1215				AML	AML	
	comp=N,6380μm,1.3s					
T1215				AML	AML	
	comp=N,4646μm,0.1s					
T1215				AML	AML	
	comp=E,9155μm,0.4s					
T1215				AML	AML	
	comp=N,4465μm,0.1s					
T1215				AML	AML	
	comp=E,8893μm,0.4s					
FDMO	**Fiordimonte**	**0.18**	**358**	⇑P	Pg	23 22 16.6 +0.7
FDMO				S	Sg	23 22 19.6 +1.0
FDMO				AML	AML	
	comp=E,7630μm,0.3s					
FDMO				AML	AML	
	comp=N,6105μm,0.3s					
FDMO				AML	AML	
	comp=E,7630μm,1.7s					
FDMO				AML	AML	
	comp=N,6105μm,0.3s					
FDMO				AML	AML	
	comp=N,6105μm,1.7s					
T1217	**Poggiodomo (PG**	**0.18**	**221**	⇓P	Pg	23 22 16.7 +0.8
T1217				S	Sg	23 22 20.1 +1.5
T1217				AML	AML	
	comp=E,4030μm,0.4s					
T1217				AML	AML	
	comp=N,6850μm,0.2s					
T1217				AML	AML	
	comp=N,6850μm,0.2s					
T1217				AML	AML	
	comp=E,3880μm,0.4s					
T1217				AML	AML	
	comp=N,6685μm,0.2s					
T1217				AML	AML	
	comp=E,4030μm,0.4s					
T1217				AML	AML	
	comp=E,3880μm,0.4s					
T1217				AML	AML	
	comp=N,6855μm,0.2s					
T1217				AML	AML	
	comp=E,3782μm,0.2s					
T1217				AML	AML	
	comp=N,6683μm,0.1s					
T1217				AML	AML	
	comp=N,6853μm,0.2s					
T1217				AML	AML	
	comp=E,3792μm,0.2s					
CESI	**CESI - Serrava**	**0.21**	**317**	⇑P	Pg	23 22 17.0 +0.7
CESI				S	Sg	23 22 20.5 +1.2
CESI				AML	AML	
	comp=N,9545μm,0.3s					
CESI				AML	AML	
	comp=E,4990μm,0.6s					
CESI				AML	AML	
	comp=N,9540μm,0.3s					
CESI				AML	AML	
	comp=E,4264μm,0.4s					
CESI				AML	AML	
	comp=N,9542μm,0.3s					
AM05	**Amandola Campo**	**0.23**	**56**	⇑P	Pg	23 22 17.3 +0.7
AM05				S	Sg	23 22 21.1 +1.4
AM05				AML	AML	
	comp=E,926μm,0.8s					
AM05				AML	AML	
	comp=N,1009μm,0.9s					
AM05				AML	AML	
	comp=E,3480μm,1.3s					
AM05				AML	AML	
	comp=E,927μm,0.8s					
AM05				AML	AML	
	comp=N,1010μm,0.9s					
AM05				AML	AML	
	comp=N,250μm,0.5s					
AM05				AML	AML	
	comp=E,930μm,0.8s					
AM05				AML	AML	
	comp=E,3475μm,1.3s					
AM05				AML	AML	
	comp=N,250μm,0.5s					
AM05				AML	AML	
	comp=N,1006μm,0.9s					
AM05				AML	AML	
	comp=E,3475μm,0.7s					
AM05				AML	AML	
	comp=E,2785μm,0.1s					
AM05				AML	AML	
	comp=N,247μm,0.1s					
AM05				AML	AML	
	comp=E,763μm,0.2s					
AM05				AML	AML	
	comp=N,965μm,0.3s					
T1204	**Amatrice, Fraz**	**0.24**	**137**	⇑P	Pg	23 22 17.6 +0.7
T1204				S	Sg	23 22 21.7 +1.5
T1204				AML	AML	
	comp=N,3190μm,1.1s					
T1204				AML	AML	
	comp=E,4019μm,0.1s					
T1204				AML	AML	
	comp=E,5235μm,1.0s					
T1204				AML	AML	
	comp=N,2765μm,0.3s					
T1241	**Roccafluvione,**	**0.25**	**89**	⇑P	Pg	23 22 17.9 +1.0
T1241				S	Sg	23 22 22.2 +1.9
T1241				AML	AML	
	comp=N,2615μm,0.7s					
T1241				AML	AML	
	comp=N,2620μm,0.7s					
T1241				AML	AML	
	comp=E,3805μm,0.5s					
T1241				AML	AML	
	comp=E,3805μm,1.5s					
T1241				AML	AML	
	comp=E,3489μm,0.5s					
T1241				AML	AML	
	comp=E,3899μm,6.1s					
T1241				AML	AML	
	comp=N,2485μm,0.4s					
LNSS	**Leonessa**	**0.25**	**190**	⇓P	Pg	23 22 17.8 +0.7
LNSS				AML	AML	
	comp=E,3425μm,0.4s					
LNSS				AML	AML	
	comp=N,4550μm,0.1s					
LNSS				AML	AML	
	comp=N,4555μm,0.1s					
LNSS				AML	AML	
	comp=E,3280μm,0.1s					
CSP1	**Cessapalombo**	**0.25**	**18**	⇑P	Pg	23 22 17.8 +0.6
CSP1				S	Sb	23 22 22.0 -1.3
CSP1				AML	AML	
	comp=E,6205μm,1.5s					
CSP1				AML	AML	
	comp=N,5545μm,0.4s					
CSP1				AML	AML	
	comp=N,5550μm,0.4s					
CSP1				AML	AML	
	comp=E,6200μm,1.5s					
CSP1				AML	AML	
	comp=E,5516μm,0.4s					
CSP1				AML	AML	
	comp=N,5547μm,0.4s					
GUMA	**Gualdo di Mace**	**0.27**	**39**	⇑P	Pb	23 22 18.4 -0.7
GUMA				S	Sb	23 22 23.5 -0.4
GUMA				AML	AML	
	comp=E,11700μm,0.6s					
GUMA				AML	AML	
	comp=N,10085μm,1.4s					
GUMA				AML	AML	
	comp=N,10100μm,1.4s					
GUMA				AML	AML	
	comp=E,11650μm,0.6s					
GUMA				AML	AML	
	comp=E,14200μm,0.5s					
GUMA				AML	AML	
	comp=N,10080μm,1.4s					
GUMA				AML	AML	
	comp=N,14000μm,0.5s					
GUMA				AML	AML	
	comp=E,14212μm,0.5s					
GUMA				AML	AML	
	comp=N,14006μm,0.5s					
GUMA				AML	AML	
	comp=N,9826μm,0.5s					
GUMA				AML	AML	
	comp=E,11680μm,0.6s					
GUMA				AML	AML	
	comp=N,10080μm,0.6s					
SMA1	**SAN MARTINO**	**0.28**	**141**	⇑P	Pg	23 22 18.2 +0.6
SMA1				S	Sb	23 22 23.9 -0.1
SMA1				AML	AML	
	comp=E,3575μm,1.2s					
SMA1				AML	AML	
	comp=N,3235μm,0.9s					
SMA1				AML	AML	
	comp=E,3570μm,1.2s					
SMA1				AML	AML	
	comp=N,3238μm,0.9s					
SMA1				AML	AML	
	comp=N,3240μm,0.9s					
SMA1				AML	AML	
	comp=E,3547μm,0.1s					
T1243	**Rocca Santa Ma**	**0.30**	**121**	⇑P	Pg	23 22 18.4 +0.4
T1243				S	Sg	23 22 23.3 +1.3
SEF1	**Sefro**	**0.32**	**340**	⇓P	Pb	23 22 19.2 -0.6
SEF1				AML	AML	
	comp=N,4860μm,1.6s					
SEF1				AML	AML	
	comp=E,6475μm,0.3s					
SEF1				AML	AML	
	comp=E,6475μm,0.3s					
SEF1				AML	AML	
	comp=N,4811μm,0.3s					
SEF1				AML	AML	
	comp=N,4860μm,0.4s					
RM33	**Pellescritta (**	**0.35**	**166**	⇑P	Pg	23 22 19.5 +0.5
RM33				S	Sb	23 22 25.0 -1.1
RM33				AML	AML	
	comp=N,2425μm,0.4s					
RM33				AML	AML	
	comp=E,2455μm,0.6s					
RM33				AML	AML	
	comp=N,2420μm,0.4s					
RM33				AML	AML	
	comp=E,2455μm,0.6s					
RM33				AML	AML	
	comp=N,2500μm,0.4s					
RM33				AML	AML	
	comp=E,2455μm,0.6s					
RM33				AML	AML	
	comp=N,2182μm,0.1s					
RM33				AML	AML	
	comp=E,2429μm,0.1s					
RM33				AML	AML	
	comp=N,2134μm,0.1s					
RM33				AML	AML	
	comp=N,2500μm,1.6s					
RM33				AML	AML	
	comp=N,2420μm,0.4s					
RM33				AML	AML	
	comp=E,2455μm,1.4s					
RM33				AML	AML	
	comp=E,2455μm,1.4s					
RM33				AML	AML	
	comp=E,2351μm,0.1s					
T1211	**Morro Reatino**	**0.36**	**209**	⇓P	Pg	23 22 19.8 +0.7
T1211				AML	AML	
	comp=N,2615μm,0.4s					
T1211				AML	AML	
	comp=E,1905μm,1.0s					
T1211				AML	AML	
	comp=N,2575μm,0.4s					
T1211				AML	AML	
	comp=E,1855μm,1.0s					
T1211				AML	AML	
	comp=N,2610μm,0.4s					
T1211				AML	AML	
	comp=E,1905μm,1.0s					
T1211				AML	AML	
	comp=E,1898μm,1.0s					
T1211				AML	AML	
	comp=N,2610μm,0.4s					
T1211				AML	AML	
	comp=N,2575μm,0.4s					
T1211				AML	AML	
	comp=E,1850μm,1.0s					
T1211				AML	AML	
	comp=N,2496μm,0.1s					
T1211				AML	AML	
	comp=N,2489μm,0.1s					
T1211				AML	AML	
	comp=E,1784μm,0.1s					
T1211				AML	AML	
	comp=E,1743μm,0.1s					
ARRO	**Arrone**	**0.37**	**222**	⇑P	Pb	23 22 19.9 -0.7
ARRO				AML	AML	
	comp=E,1310μm,0.5s					
ARRO				AML	AML	
	comp=N,1250μm,1.1s					
ASSB	**Assisi San Ben**	**0.38**	**301**	⇑P	Pg	23 22 20.0 +0.6
ASSB				AML	AML	
	comp=N,2250μm,0.4s					
ASSB				AML	AML	
	comp=E,1945μm,0.2s					
ASSB				AML	AML	
	comp=E,1946μm,0.2s					
ASSB				AML	AML	
	comp=N,2250μm,0.4s					
CAMP	**Campotosto**	**0.39**	**144**	⇑P	Pg	23 22 20.1 +0.4
SNTG	**Esanatoglia**	**0.42**	**344**	⇑P	Pg	23 22 20.8 +0.6
SNTG				AML	AML	
	comp=N,970μm,0.4s					
SNTG				AML	AML	
	comp=N,968μm,0.4s					
SNTG				AML	AML	
	comp=E,979μm,0.7s					
SNTG				AML	AML	
	comp=N,1018μm,0.4s					
SNTG				AML	AML	
	comp=N,971μm,0.4s					
SNTG				AML	AML	
	comp=E,1050μm,0.5s					
SNTG				AML	AML	
	comp=N,1020μm,0.4s					
SNTG				AML	AML	
	comp=N,969μm,0.4s					
SNTG				AML	AML	
	comp=E,1051μm,0.5s					
SNTG				AML	AML	
	comp=E,976μm,0.5s					
T1247	**Pizzolo (AQ)**	**0.43**	**160**	P	Pg	23 22 21.0 +0.5
T1247				AML	AML	
	comp=E,2420μm,0.9s					
T1247				AML	AML	
	comp=N,2215μm,0.9s					
T1247				AML	AML	
	comp=N,2215μm,1.1s					
T1247				AML	AML	
	comp=E,2192μm,0.1s					
T1247				AML	AML	
	comp=N,2188μm,0.1s					
TERO	**Teramo**	**0.44**	**121**	⇑P	Pg	23 22 20.8 +0.3
TERO				AML	AML	
	comp=N,2255μm,1.2s					
TERO				AML	AML	
	comp=E,1254μm,1.1s					
TERO				AML	AML	
	comp=N,2250μm,1.2s					
TERO				AML	AML	
	comp=E,1395μm,0.4s					
TERO				AML	AML	
	comp=N,2475μm,1.0s					
TERO				AML	AML	
	comp=E,1255μm,1.1s					
TERO				AML	AML	
	comp=N,2188μm,0.3s					
TERO				AML	AML	
	comp=E,1255μm,0.9s					
TERO				AML	AML	
	comp=N,2342μm,0.3s					
TERO				AML	AML	
	comp=E,1200μm,0.1s					
TERO				AML	AML	
	comp=E,1343μm,0.1s					
OFFI	**Offida**	**0.44**	**79**	⇑P	Pb	23 22 21.9 +0.1
OFFI				AML	AML	
	comp=E,2420μm,0.6s					
OFFI				AML	AML	
	comp=N,2195μm,0.4s					
OFFI				AML	AML	
	comp=N,2194μm,0.4s					
OFFI				AML	AML	
	comp=E,2416μm,0.6s					
OFFI				AML	AML	
	comp=E,2420μm,1.4s					
CESX	**Cesi**	**0.45**	**238**	⇑P	Pg	23 22 21.3 +0.5
CESX				AML	AML	
	comp=E,1600μm,0.3s					
CESX				AML	AML	
	comp=N,1610μm,0.4s					
CESX				AML	AML	
	comp=E,1598μm,0.3s					
CESX				AML	AML	
	comp=E,1600μm,1.7s					
CESX				AML	AML	
	comp=N,1610μm,1.6s					
CESX				AML	AML	
	comp=N,1607μm,0.4s					
ATCC	**AVT- Casa Cast**	**0.47**	**315**	⇑P	Pb	23 22 21.9 -0.6
ATCC				AML	AML	
	comp=N,2100μm,1.4s					
ATCC				AML	AML	
	comp=E,2370μm,0.6s					
ATCC				AML	AML	
	comp=N,2013μm,0.5s					
ATCC				AML	AML	
	comp=E,2370μm,0.6s					
ATCC				AML	AML	
	comp=N,2100μm,0.6s					
EL6	**Elcito**	**0.48**	**0**	⇓P	Pg	23 22 21.7 +0.4
EL6				S	Sb	23 22 31.0 +1.3
EL6				AML	AML	
	comp=N,2260μm,0.4s					
EL6				AML	AML	
	comp=E,1970μm,1.5s					
EL6				AML	AML	
	comp=N,2255μm,0.4s					
EL6				AML	AML	
	comp=N,2257μm,0.4s					
EL6				AML	AML	
	comp=E,1890μm,0.3s					
EL6				AML	AML	
	comp=E,1970μm,0.5s					
FOSV	**Fossato di Vic**	**0.51**	**331**	⇓P	Pg	23 22 22.3 +0.5
FOSV				AML	AML	
	comp=N,1112μm,0.7s					
FOSV				AML	AML	
	comp=E,1820μm,0.3s					
FOSV				AML	AML	
	comp=N,1110μm,0.7s					
FOSV				AML	AML	
	comp=N,1108μm,0.7s					
FOSV				AML	AML	
	comp=N,1111μm,0.7s					
FOSV				AML	AML	
	comp=E,1822μm,0.3s					
CING	**Cingoli**	**0.53**	**8**	P	Pb	23 22 22.9 -0.5
CING				AML	AML	
	comp=N,509μm,0.5s					
CING				AML	AML	
	comp=N,510μm,0.5s					
CING				AML	AML	
	comp=N,492μm,0.5s					
CING				AML	AML	
	comp=E,885μm,0.7s					
CING				AML	AML	
	comp=E,908μm,0.7s					
GIGS	**Gran Sasso**	**0.53**	**139**	⇓P	Pg	23 22 22.4 +0.2
GIGS				AML	AML	
	comp=E,365μm,0.4s					
GIGS				AML	AML	
	comp=N,231μm,0.4s					
GIGS				AML	AML	
	comp=E,315μm,0.2s					
GIGS				AML	AML	
	comp=N,208μm,0.1s					
GIGS				AML	AML	
	comp=E,366μm,0.4s					
FIAM	**Fiamignano**	**0.58**	**179**	P	Pg	23 22 23.5 +0.3
FIAM				S	Sb	23 22 33.0 +0.3
FIAM				AML	AML	
	comp=N,423μm,0.4s					
FIAM				AML	AML	
	comp=N,424μm,0.4s					
FIAM				AML	AML	
	comp=E,554μm,0.4s					
FIAM				AML	AML	
	comp=E,554μm,0.4s					
FIAM				AML	AML	
	comp=N,307μm,0.2s					
MURB	**Monte Urbino**	**0.59**	**315**	⇑P	Pb	23 22 24.0 -0.4
MURB				AML	AML	
	comp=E,3070μm,0.3s					
MURB				AML	AML	
	comp=N,3385μm,0.4s					
MURB				AML	AML	
	comp=E,3070μm,0.4s					
MURB				AML	AML	
	comp=E,3390μm,0.3s					
MURB				AML	AML	
	comp=N,3390μm,0.4s					
MURB				AML	AML	
	comp=E,3393μm,0.3s					
MURB				AML	AML	
	comp=E,3069μm,0.3s					
MURB				AML	AML	
	comp=N,3294μm,0.4s					
MURB				AML	AML	
	comp=N,3387μm,0.4s					
MURB				AML	AML	
	comp=N,3290μm,0.4s					
TRTR	**Tortoreto Alta**	**0.60**	**94**	⇓P	Pb	23 22 25.2 +0.6
TRTR				AML	AML	
	comp=N,1640μm,1.1s					
TRTR				AML	AML	
	comp=E,2600μm,0.5s					
TRTR				AML	AML	
	comp=E,2600μm,1.5s					
TRTR				AML	AML	
	comp=E,2602μm,0.5s					
TRTR				AML	AML	
	comp=N,1515μm,0.4s					
TRTR				AML	AML	
	comp=N,1640μm,0.9s					
ATFO	**Monte Foce - G**	**0.64**	**323**	⇓P	Pb	23 22 25.0 -0.4
ATFO				AML	AML	
	comp=N,715μm,1.1s					
ATFO				AML	AML	
	comp=N,716μm,1.1s					
ATFO				AML	AML	
	comp=E,642μm,1.2s					
ATFO				AML	AML	
	comp=E,577μm,0.5s					

ATFO				AML	AML	
	comp=N,705μm,0.3s					
ATFO				AML	AML	
	comp=E,642μm,0.8s					
PP3	**Marolino**	**0.65**	**35**	⇑P	Pb	23 22 26.0 +0.6
PP3				AML	AML	
	comp=E,1670μm,0.8s					
PP3				AML	AML	
	comp=E,1675μm,0.8s					
PP3				AML	AML	
	comp=N,1715μm,0.8s					
PP3				AML	AML	
	comp=N,1700μm,0.8s					
PP3				AML	AML	
	comp=E,1476μm,0.4s					
PP3				AML	AML	
	comp=N,1400μm,0.4s					
PP3				AML	AML	
	comp=E,1524μm,0.3s					
PP3				AML	AML	
	comp=E,1670μm,1.2s					
PP3				AML	AML	
	comp=E,1675μm,1.2s					
PP3				AML	AML	
	comp=N,1715μm,1.2s					
PP3				AML	AML	
	comp=N,1700μm,1.2s					
PP3				AML	AML	
	comp=N,1413μm,0.4s					
ARVD	**Arcevia**	**0.66**	**350**	⇓P	Pg	23 22 24.9 +0.3
ARVD				S	Sb	23 22 36.0 +1.2
ARVD				AML	AML	
	comp=E,479μm,0.3s					
ARVD				AML	AML	
	comp=E,480μm,0.3s					
ARVD				AML	AML	
	comp=N,378μm,0.6s					
ARVD				AML	AML	
	comp=N,378μm,1.4s					
ARVD				AML	AML	
	comp=N,340μm,0.6s					
ARVD				AML	AML	
	comp=E,479μm,0.3s					
FAGN	**Fagnano**	**0.69**	**148**	⇑P	Pg	23 22 25.2 0.0
FAGN				AML	AML	
	comp=E,1230μm,0.5s					
FAGN				AML	AML	
	comp=N,845μm,0.3s					
FAGN				AML	AML	
	comp=E,1190μm,2.5s					
FAGN				AML	AML	
	comp=N,845μm,0.3s					
FAGN				AML	AML	
	comp=N,845μm,1.7s					
VCEL	**Villa Celiera**	**0.71**	**130**	⇑P	Pg	23 22 26.0 +0.3
VCEL				AML	AML	
	comp=N,1092μm,1.0s					
VCEL				AML	AML	
	comp=E,870μm,0.6s					
VCEL				AML	AML	
	comp=N,1095μm,1.0s					
VCEL				AML	AML	
	comp=E,872μm,16.1s					
VCEL				AML	AML	
	comp=N,757μm,0.3s					
FRON	**Frontone**	**0.72**	**338**	⇑P	Pg	23 22 25.9 +0.1
FRON				AML	AML	
	comp=E,495μm,0.5s					
FRON				AML	AML	
	comp=N,622μm,0.3s					
FRON				AML	AML	
	comp=N,622μm,0.3s					
FRON				AML	AML	
	comp=E,495μm,0.5s					
MGAB	**Montegabbione**	**0.73**	**275**	P	Pb	23 22 26.8 0.0
MGAB				AML	AML	
	comp=E,984μm,0.7s					
MGAB				AML	AML	
	comp=N,1164μm,0.4s					
MGAB				AML	AML	
	comp=E,1180μm,0.7s					
MGAB				AML	AML	
	comp=N,1162μm,0.4s					
MGAB				AML	AML	
	comp=E,982μm,0.7s					
MGAB				AML	AML	
	comp=N,1086μm,0.4s					
MGAB				AML	AML	
	comp=N,1085μm,0.4s					
MGAB				AML	AML	
	comp=E,982μm,0.7s					
MGAB				AML	AML	
	comp=N,1163μm,0.4s					
MGAB				AML	AML	
	comp=E,1182μm,0.7s					
ATVO	**AVT- Monte Val**	**0.73**	**317**	⇓P	Pg	23 22 25.9 -0.2
ATVO				AML	AML	
	comp=E,463μm,0.4s					
ATVO				AML	AML	
	comp=N,412μm,0.4s					
ATVO				AML	AML	
	comp=E,463μm,0.4s					
ATVO				AML	AML	
	comp=N,412μm,0.4s					
ATVO				AML	AML	
	comp=N,412μm,1.6s					
ATMI	**Monte Miggiano**	**0.78**	**309**	⇑P	Pn	23 22 29.3 +0.2
ATPI	**Pietralunga -**	**0.79**	**320**	⇓P	Pb	23 22 27.9 +0.1
ATPI				S	Sn	23 22 40.0 -1.1
ATPI				AML	AML	
	comp=N,360μm,0.4s					
ATPI				AML	AML	
	comp=N,360μm,1.6s					
ATPI				AML	AML	
	comp=E,426μm,0.8s					
ATPI				AML	AML	
	comp=N,360μm,0.4s					
ATPI				AML	AML	
	comp=E,426μm,0.8s					
PIEI	**Pieia**	**0.80**	**329**	⇓P	Pg	23 22 27.6 +0.3
PIEI				S	Sn	23 22 41.0 -0.4
PIEI				AML	AML	
	comp=N,404μm,0.4s					
PIEI				AML	AML	
	comp=N,404μm,0.4s					
PIEI				AML	AML	
	comp=E,456μm,0.3s					
T0110	**Collepietro**	**0.80**	**141**	⇓P	Pg	23 22 27.3 -0.1
T0110				AML	AML	
	comp=E,936μm,0.5s					
T0110				AML	AML	
	comp=N,863μm,0.4s					
T0110				AML	AML	
	comp=N,862μm,0.4s					
T0110				AML	AML	
	comp=E,936μm,0.5s					
T0110				AML	AML	
	comp=E,777μm,0.5s					
T0110				AML	AML	
	comp=N,863μm,0.4s					
MPAG	**Monte Paganucc**	**0.82**	**343**	⇑P	Pg	23 22 27.9 +0.2
MPAG				AML	AML	
	comp=N,440μm,0.4s					
MPAG				AML	AML	
	comp=N,1027μm,0.9s					
MPAG				AML	AML	
	comp=N,441μm,0.5s					
MPAG				AML	AML	
	comp=E,474μm,0.4s					
MPAG				AML	AML	
	comp=E,474μm,0.4s					
FSSB	**Fossombrone**	**0.87**	**345**	⇑P	Pg	23 22 29.0 +0.2
FSSB				AML	AML	
	comp=E,999μm,0.4s					
FSSB				AML	AML	
	comp=N,2245μm,0.4s					
FSSB				AML	AML	
	comp=E,998μm,0.4s					
CERT	**Cerreto**	**0.91**	**185**	⇑P	Pb	23 22 30.3 +0.5
CERT				AML	AML	
	comp=E,469μm,0.4s					
CERT				AML	AML	
	comp=N,278μm,1.5s					
CERT				AML	AML	
	comp=E,469μm,0.4s					
CERT				AML	AML	
	comp=N,278μm,0.5s					
CERT				AML	AML	
	comp=N,218μm,0.4s					
CAFI	**Castiglion Fio**	**0.96**	**300**	⇓P	Pn	23 22 31.6 0.0
CAFI				AML	AML	
	comp=E,328μm,0.6s					
CAFI				AML	AML	
	comp=N,338μm,0.8s					
CAFI				AML	AML	
	comp=E,328μm,0.6s					
CAFI				AML	AML	
	comp=N,295μm,0.8s					
CAFI				AML	AML	
	comp=N,338μm,0.8s					
INTR	**Introdacqua**	**1.03**	**144**	⇓P	Pg	23 22 29.2 -2.5
MCIV	**Monte Civitell**	**1.05**	**267**	P	Pn	23 22 34.0 +1.2
PIGN	**Pignataro Magg**	**1.84**	**154**	S	Sg	23 23 10.0 -1.0
MYKA	**Terra Mystica**	**3.80**	**6**	*e*Pn	Pn	23 23 13.4 +2.8
	comp=N,2.3nm,0.4s					
ABTA	**Abfaltersbach**	**3.92**	**354**	*e*Pn	Pn	23 23 14.6 +2.3
	comp=N,3.6nm,0.5s					
FETA	**Feichten**	**4.50**	**339**	*e*Pn	Pn	23 23 23.5 +3.2
	comp=N,1.8nm,0.7s					
BIOA	**Bad Ischl, Aus**	**4.86**	**4**	Pn	Pn	23 23 26.9 +1.8
	comp=N,2.6nm,0.3s					
MOA	**Molln**	**5.07**	**9**	*e*Pn	Pn	23 23 30.7 +2.7
	comp=N,1.3nm,0.4s					
KHC	**Kasperske Hory**	**6.29**	**3**	*e*PN	Pn	23 23 46.7 +1.9
KHC				*e*SN	Sn	23 24 56.5 -0.3

ROM 28 23:23:10.1±0.1, 42°.761N±0°.003×13°.183E±0°.004, h10km, ML1.9/4, 9C-11D, Error ellipse: s-maj=0.3km s-min=0.2km az=8.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**2**	P	Pg	23 23 12.1	-0.7
T1245				S	Sg	23 23 15.3	+0.6
T1204	**Amatrice, Fraz**	**0.13**	**131**	P	Pg	23 23 13.9	+0.6
T1204				S	Sg	23 23 16.5	+1.0
T1204				AML	AML		
	comp=E,779μm,0.3s						
T1204				AML	AML		
	comp=N,682μm,0.1s						
SMA1	**SAN MARTINO**	**0.17**	**139**	⇓P	Pg	23 23 14.5	+0.6
SMA1				S	Sg	23 23 17.5	+1.0
MMO1	**Montemonaco**	**0.17**	**37**	⇑P	Pg	23 23 14.4	+0.4
MMO1				S	Sg	23 23 17.6	+1.0
T1216	**Preci, Frazion**	**0.18**	**317**	⇓P	Pg	23 23 14.6	+0.6
T1216				S	Sg	23 23 17.6	+1.0
LNSS	**Leonessa**	**0.19**	**214**	⇑P	Pg	23 23 14.8	+0.6
LNSS				S	Sg	23 23 18.2	+1.2
LNSS				AML	AML		
	comp=N,736μm,1.5s						
LNSS				AML	AML		
	comp=E,723μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**255**	P	Pg	23 23 14.6	+0.4
T1217				S	Sg	23 23 18.5	+1.5
T1241	**Roccafluvione,**	**0.21**	**62**	⇑P	Pg	23 23 15.3	+0.9
T1241				S	Sg	23 23 19.0	+1.6
T1241				AML	AML		
	comp=E,570μm,0.4s						
T1241				AML	AML		
	comp=N,397μm,1.1s						
T1243	**Rocca Santa Ma**	**0.21**	**108**	⇑P	Pg	23 23 14.9	+0.4
T1243				S	Sg	23 23 18.3	+0.9
T1215	**Vallo di Nera,**	**0.23**	**280**	⇑P	Pg	23 23 15.5	+0.5
T1215				S	Sg	23 23 20.0	+1.7
AM05	**Amandola Campo**	**0.25**	**30**	P	Pg	23 23 15.6	+0.4
AM05				S	Sg	23 23 20.6	+2.0
AM05				AML	AML		
	comp=N,241μm,0.9s						
AM05				AML	AML		
	comp=E,218μm,0.6s						
AM05				AML	AML		
	comp=E,984μm,0.1s						
AM05				AML	AML		
	comp=N,75μm,0.1s						
RM33	**Pellescritta (**	**0.25**	**175**	⇑P	Pg	23 23 15.8	+0.5
CAMP	**Campotosto**	**0.28**	**143**	⇓P	Pg	23 23 16.4	+0.5
FDMO	**Fiordimonte**	**0.28**	**346**	P	Pg	23 23 15.5	-0.4
FDMO				AML	AML		
	comp=E,1580μm,0.2s						
FDMO				AML	AML		
	comp=N,1445μm,0.1s						
FDMO				AML	AML		
	comp=E,3565μm,0.2s						
FDMO				AML	AML		
	comp=N,2650μm,0.5s						
CESI	**CESI - Serrava**	**0.32**	**320**	⇓P	Pg	23 23 17.2	+0.6
CESI				S	Sb	23 23 22.3	-1.0
GUMA	**Gualdo di Mace**	**0.32**	**20**	⇓P	Pb	23 23 17.5	-0.6
CSP1	**Cessapalombo**	**0.33**	**3**	⇓P	Pg	23 23 17.3	+0.5
T1247	**Pizzolo (AQ)**	**0.33**	**165**	⇓P	Pg	23 23 17.3	+0.6
T1211	**Morro Reatino**	**0.33**	**227**	⇓P	Pg	23 23 17.0	+0.2
T1211				S	Sb	23 23 22.8	-0.9
TERO	**Teramo**	**0.34**	**114**	⇓P	Pg	23 23 17.2	+0.3
GIGS	**Gran Sasso**	**0.42**	**137**	⇑P	Pg	23 23 18.7	+0.3
CESX	**Cesi**	**0.47**	**251**	⇓P	Pb	23 23 20.2	-0.3
ASSB	**Assisi San Ben**	**0.48**	**306**	⇑P	Pg	23 23 19.8	+0.3
FIAM	**Fiamignano**	**0.49**	**186**	S	Sg	23 23 27.0	+0.7
SNTG	**Esanatoglia**	**0.53**	**340**	⇑P	Pg	23 23 20.7	+0.4
EL6	**Elcito**	**0.57**	**354**	⇓P	Pb	23 23 21.9	-0.4
EL6				S	Sb	23 23 32.0	+1.4
ARVD	**Arcevia**	**0.76**	**347**	S	Sn	23 23 38.0	-0.5

HEL 28 23:29:54.4, 67°.84N×19°.98E, h0km, ML1.4, Explosion

UPP 28 23:29:55.1±0.7, 67°.83N×20°.20E, h1km±4km, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**23**	P	Pg	23 29 57.8	+0.1
KUA	**Kurravaara**	**0.14**	**23**	*i* P	Pg	23 29 57.8	+0.1
KOVU	**Salmi**	**0.40**	**358**	P	Pg	23 30 02.6	0.0
KOVU				S	Sg	23 30 07.9	+0.1
KOVU	**Salmi**	**0.40**	**358**	*i* P	Pg	23 30 02.6	0.0
KOVU				*i* S	Sg	23 30 07.9	+0.1
NIKU	**Nikkaluokta**	**0.44**	**276**	P	Pg	23 30 03.5	0.0
NIKU	**Nikkaluokta**	**0.44**	**276**	*i* P	Pg	23 30 03.5	0.0
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 30 08.4	-0.3
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 30 08.5	-0.2
LANU				*e*S	Sg	23 30 18.5	+0.6
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 30 08.5	-0.4
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	23 30 08.5	-0.4
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	23 30 09.9	-0.2
MASU	**Masugnsbyn**	**0.78**	**118**	*i* P	Pg	23 30 09.9	-0.2
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pg	23 30 18.3	+0.2
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PB	Pb	23 30 18.4	-0.2
KIF				MSG		23 30 32.0	
	comp=Z,3.8nm,0.2s						
KIF				*e*SB	Sb	23 30 34.5	-0.1
PAJU	**Pajala**	**1.39**	**124**	P	Pn	23 30 20.3	-1.2
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pn	23 30 20.3	-1.3
	baz=301						
PAJU				*e*SB	Sg	23 30 39.1	-0.5
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 30 21.5	-0.5
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 30 21.3	-0.7
HEF				MSG		23 30 39.2	
	comp=Z,1.8nm,0.2s						
HEF				*e*SB	Sg	23 30 40.4	-0.3
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	23 30 22.7	-0.4
ERTU				*e*SN	Sb	23 30 43.1	0.0
KLF	**Kolari**	**1.57**	**111**	*e*PG	Pn	23 30 23.8	-0.2
KLF				*e*SN	Sg	23 30 45.3	0.0
KTK1	**Kautokeino**	**1.64**	**42**	*e*PG	Pn	23 30 25.0	0.0
KTK1				*e*SN	Sg	23 30 48.2	+0.7
KALU	**Kalix**	**2.34**	**146**	P	Pn	23 30 35.7	+1.1
KALU	**Kalix**	**2.34**	**146**	*e*PB	Pn	23 30 35.8	+1.2
	baz=330						
KALU				*e*S	Sn	23 31 02.9	-1.0
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 30 36.9	+1.6
TOF				*e*S	Sn	23 31 04.2	-1.0
TOF				MSG		23 31 07.2	
	comp=Z,1.1nm,0.2s						
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pb	23 30 38.4	-1.5
SGF				*e*S	Sn	23 31 05.5	-1.2
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pb	23 30 40.0	-1.9
OBF8	**Ulkokalla**	**3.75**	**158**	*e*SG	Sg	23 31 53.3	-2.2

UPP 28 23:30:22.2±0.2, 67°.85N×20°.22E, h1km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.24**	**265**	P	Pg	23 30 26.8	0.0
RATU				S	Sg	23 30 30.1	+0.2
KOVU	**Salmi**	**0.38**	**357**	P	Pg	23 30 29.4	-0.1
KOVU				S	Sg	23 30 34.4	0.0
NIKU	**Nikkaluokta**	**0.45**	**273**	P	Pg	23 30 30.7	-0.1
NIKU				S	Sg	23 30 36.9	+0.3
PAJU	**Pajala**	**1.39**	**125**	P	Pn	23 30 47.7	-1.0

SOME 28 23:40:01.7, 42°.25N×74°.13E, h10km
KNET 28 23:40:01.1±0.5, 42°.26N×74°.13E, h14km±5km, ml1.2, Error ellipse: s-maj=3.9km s-min=2.0km az=140.0
NNC 28 23:40:02.3±0.9, 42°.31N×74°.14E, h0km, mb2.4, mpv2.6, Error ellipse: s-maj=8.3km s-min=3.0km az=179.0

ISC 28 23:40:01.7±1.1, 42°.26N±0°.04×74°.14E±0°.02, h10km±11km, n30, σ0s66/54, 12C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**0.28**	**95**	⇑P	**Pg**	**23 40 07.6**	**0.0**
	2.5nm,0.1s,SNR=19						
UCH				⇑S	**Sg**	**23 40 11.8**	**+0.3**
	27nm,0.3s						
AML	**Almayashu**	**0.35**	**250**	⇑P	**Pg**	**23 40 08.7**	**-0.2**
	7.0nm,0.1s,SNR=39						
AML				⇑S	**Sg**	**23 40 13.3**	**-0.3**
	32nm,0.1s						
AAK	**Ala-Archa**	**0.47**	**34**	⇓P	**Pg**	**23 40 11.0**	**+0.1**
	7.9nm,0.1s,SNR=7.2						
AAK				⇑S	**Sg**	**23 40 17.5**	**+0.5**
	25nm,0.3s						
EKS2	**Erkin-Say**	**0.49**	**327**	⇓P	**Pg**	**23 40 11.2**	**-0.1**
	2.0nm,0.2s,SNR=15						
EKS2				⇑S	**Sg**	**23 40 18.0**	**+0.3**
	6.0nm,0.1s						
KBK	**Karagaybulak**	**0.72**	**56**	⇑P	**Pg**	**23 40 15.7**	**0.0**
	4.3nm,0.1s,SNR=9.7						
KBK				⇑S	**Sg**	**23 40 25.7**	**+0.5**
	12nm,0.1s						
MRKS	**Merke**	**0.83**	**306**	*e*P	**Pg**	**23 40 17.5**	**-0.3**
	2.3nm,0.2s						
MRKS				*e*S	**Sg**	**23 40 28.6**	**-0.2**
	22nm,0.2s						
MRKS	**Merke**	**0.83**	**306**	P	**Pg**	**23 40 17.5**	**-0.3**
	2.3nm,0.2s						
MRKS				S	**Sg**	**23 40 28.5**	**-0.2**
	22nm,0.2s						
CHMS	**Chumysh**	**0.87**	**31**	⇓P	**Pg**	**23 40 18.2**	**-0.3**
	1.9nm,0.1s,SNR=6.4						
CHMS				⇑S	**Sg**	**23 40 29.8**	**-0.1**
	6.6nm,0.2s						
USP	**Ospenovka**	**1.05**	**15**	⇓P	**Pg**	**23 40 21.3**	**-0.6**
	1.7nm,0.1s,SNR=16						
USP				⇑S	**Sg**	**23 40 35.5**	**0.0**
	3.3nm,0.1s						
SGDS	**Sogindy**	**1.25**	**17**	*e*P	**Pn**	**23 40 25.1**	**-0.3**
	4.4nm,0.1s						
SGDS				*e*S	**Sg**	**23 40 41.8**	**-0.2**
	2.0nm,0.1s						
SGDS	**Sogindy**	**1.25**	**17**	P	**Pn**	**23 40 25.0**	**-0.3**
	4.4nm,0.1s						
SGDS				S	**Sg**	**23 40 41.8**	**-0.2**
	2.0nm,0.1s						
TKM2	**Tokmak 2**	**1.27**	**58**	⇓P	**Pn**	**23 40 25.4**	**-0.3**
	2.1nm,0.1s,SNR=6.4						
TKM2				⇑S	**Sb**	**23 40 41.9**	**-0.3**
TKM2	**Tokmak 2**	**1.27**	**58**	⇓P	**Pn**	**23 40 25.4**	**-0.3**
	0.6nm,0.5s						
TKM2				⇑S	**Sb**	**23 40 42.1**	**-0.1**
	2.5nm,0.5s						
DGS	**Degeres**	**1.56**	**50**	*e*P	**Pb**	**23 40 30.4**	**-0.3**
	0.9nm,0.3s						
DGS				*e*S	**Sb**	**23 40 51.0**	**+0.5**
	5.5nm,0.4s						
DGS	**Degeres**	**1.56**	**50**	P	**Pb**	**23 40 30.4**	**-0.3**
	0.9nm,0.3s						
DGS				S	**Sb**	**23 40 51.0**	**+0.5**
	5.5nm,0.4s						
KST	**Kastek**	**1.56**	**59**	*e*P	**Pb**	**23 40 30.9**	**+0.1**
	0.7nm,0.2s						
KST				*e*S	**Sg**	**23 40 51.8**	**-0.1**
	6.2nm,0.2s						
KST	**Kastek**	**1.56**	**59**	P	**Pb**	**23 40 30.9**	**+0.1**
	0.7nm,0.2s						
KST				S	**Sg**	**23 40 51.8**	**-0.1**
	6.2nm,0.2s						
KRBS	**Karabastau**	**1.83**	**38**	*e*P	**Pb**	**23 40 35.5**	**+0.1**
	1.3nm,0.2s						
KRBS				*e*S	**Sg**	**23 40 59.9**	**-0.7**
	10nm,0.2s						
KRBS	**Karabastau**	**1.83**	**38**	P	**Pb**	**23 40 35.4**	**+0.1**
	1.3nm,0.2s						
KRBS				S	**Sg**	**23 40 59.9**	**-0.7**
	10nm,0.2s						
MTBS	**Maitube**	**1.90**	**62**	*e*P	**Pb**	**23 40 36.9**	**+0.3**
MTBS				*e*S	**Sg**	**23 41 02.0**	**-0.9**
MTBS	**Maitube**	**1.90**	**62**	P	**Pb**	**23 40 36.9**	**+0.3**
MTBS				S	**Sg**	**23 41 02.0**	**-0.9**
KUU	**Kurty**	**2.30**	**44**	*e*P	**Pb**	**23 40 43.5**	**+0.2**
KUU				*e*S	**Sb**	**23 41 13.3**	**+1.5**
KUU	**Kurty**	**2.30**	**44**	Pg	**Pb**	**23 40 43.5**	**+0.2**
KUU				Lg	Lg	23 41 13.3	
MDOK	**Medeo**	**2.33**	**66**	*e*P	**Pb**	**23 40 44.5**	**+0.6**
	1.2nm,0.3s						
MDOK				*e*S	**Sg**	**23 41 14.9**	**-1.6**
	3.6nm,0.6s						
MDOK	**Medeo**	**2.33**	**66**	Pg	**Pb**	**23 40 44.5**	**+0.6**
	1.2nm,0.3s						
MDOK				Lg	Lg	23 41 15.0	
	3.6nm,0.6s						
KTBS	**Karatobe**	**2.37**	**51**	*e*P	**Pb**	**23 40 44.7**	**+0.2**
	0.6nm,0.4s						
KTBS				*e*S	**Sg**	**23 41 15.9**	**-1.9**
	8.5nm,0.4s						
KTBS	**Karatobe**	**2.37**	**51**	Pg	**Pb**	**23 40 44.7**	**+0.2**
	0.6nm,0.4s						
KTBS				Lg	Lg	23 41 15.9	
	8.5nm,0.4s						
CHKK	**Chushkaly**	**2.63**	**52**	*e*P	**Pb**	**23 40 49.6**	**+0.7**
	1.3nm,0.1s						
CHKK				*e*S	**Sb**	**23 41 23.7**	**+2.4**
	3.5nm,0.2s						
CHKK	**Chushkaly**	**2.63**	**52**	Pg	**Pb**	**23 40 49.6**	**+0.7**
	1.3nm,0.1s						
CHKK				Lg	Lg	23 41 23.7	
	3.5nm,0.2s						
KK31	**Karatay Array**	**2.81**	**289**	⇓Lg	Lg	23 41 31.2	
	0.4nm,0°.3s,baz=103,slow=29,SNR=8.5						

IDC 28 23:43:39.1±3.4, 2°.54S×136°.19E, h0km, mb3.2/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=140.9km s-min=31.8km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.39**	**186**	P	Pn	23 47 43.9	+0.6
	0.1nm,0.3s,baz=7.2,slow=12,SNR=5.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**21.11**	**186**	P	P	23 48 25.0	-0.5
	0.5nm,0.5s,baz=8.1,slow=11,SNR=9.1						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**68.14**	**323**	P	P	23 54 41.3	+0.2
	0.2nm,0.7s,baz=106,slow=5.1,SNR=1.7						
	0.2nm,0.7s						

NEIC 28 23:45:45.7±1.0, 17°.5S±0°.2×178°.7W±0°.2, h588km±11km, mb4.0/24, Error ellipse: s-maj=25.8km s-min=19.2km az=140.0
IDC 28 23:45:46.3±2.2, 17°.55S×178°.76W, h596km±13km, mb3.0/7, mbtmp3.9/9, Error ellipse: s-maj=97.6km s-min=17.2km az=152.0

ISC 28 23:45:46.2±0.6, 17°.6S±0°.1×178°.7W±0°.1, h600km, n43, σ0s86/44, mb4.0/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.13**	**267**	P	**P**	**23 47 05.6**	**-0.7**
	6.9nm,0.5s,baz=143,slow=5.1,SNR=6.8						
MSVF				S	**S**	**23 48 10.3**	**-1.1**
	5.5nm,1.0s,baz=78,slow=20,SNR=1.3						
MSVF	**Nonsavu**	**3.13**	**267**	P	**P**	**23 47 05.3**	**-0.9**

NIUE	Niue	8.43	101	P	P	23 47 47.1	-2.5
DZM	Mont Dzumac	14.70	250	P	P	23 48 51.0	-0.7
4.0nm,0.7s,baz=104,slow=17,SNR=2.2							
DZM	Mont Dzumac	14.70	250	P	P	23 48 52.7	+0.9
TUWZ	Tuamarina	24.58	193	P	P	23 50 21.3	+0.8
MQZ	McQueen's Vall	27.04	194	P	P	23 50 42.5	+0.4
FOZ	Fox Glacier	27.63	198	P	P	23 50 46.2	-1.1
LBZ	Lake Benmore	28.31	197	P	P	23 50 53.8	+0.6
ODZ	Otahua Downs	28.79	196	P	P	23 50 59.0	+1.7
CTA	Charters Tower	33.26	260	P	P	23 51 35.5	-0.3
1.5nm,0.2s,baz=96,slow=9.2,SNR=1.7							
1.5nm,0.2s							
WB0	Warramunga Arr	44.41	260	P	P	23 53 05.1	-0.3
WB0				IAmb	IAmb	23 53 24.8	
comp=Z,4.2nm,1.1s							
WB2	Warramunga Arr	44.44	259	P	P	23 53 05.2	-0.4
WB2				IAmb	IAmb	23 53 48.6	
comp=Z,5.5nm,1.2s							
WRA	Warramunga Arr	44.45	259	P	P	23 53 05.2	-0.5
comp=Z,0.6nm,0.5s,baz=97,slow=6.9,SNR=18							
comp=Z,0.6nm,0.5s							
WRA	Warramunga Arr	44.45	259	P	P	23 53 05.1	-0.6
AS31	Alice Springs	44.64	254	P	P	23 53 07.3	+0.2
ASAR	Alice Springs	44.64	254	P	P	23 53 06.8	-0.4
comp=Z,4.7nm,0.5s,baz=88,slow=8.7,SNR=81							
comp=Z,4.7nm,0.5s							
ASAR	Alice Springs	44.64	254	P	P	23 53 06.4	-0.8
VNDA	Vanda	60.73	185	P	P	23 55 01.5	+1.1
NVAR	Mina Array Bea	79.37	44	P	P	23 56 51.9	+0.5
comp=Z,0.4nm,0.7s,baz=222,slow=8.9,SNR=3.6							
comp=Z,0.4nm,0.7s							
M19K	Big River Lodg	81.55	11	P	P	23 57 02.3	+0.5
I07A	Izee	81.72	39	P	P	23 57 03.7	+0.4
U15A	North Rim	82.50	48	P	P	23 57 08.2	+0.6
GHO	Glory Hole Cre	82.57	14	P	P	23 57 06.9	-0.2
GHO				IAmb	IAmb	23 57 35.4	
comp=Z,9.6nm,1.2s							
K20K	Telida	82.95	11	P	P	23 57 09.2	+0.3
K20K				IAmb	IAmb	23 57 28.3	
comp=Z,10nm,1.3s							
SCM	Sheep Creek Mo	82.99	14	P	P	23 57 09.9	+0.7
CAST	Castle Rocks	83.38	12	P	P	23 57 11.1	0.0
CAST				IAmb	IAmb	23 57 22.0	
comp=Z,5.8nm,1.4s							
N25K	Chitina, Valde	83.47	16	P	P	23 57 12.2	+0.6
N25K				IAmb	IAmb	23 57 56.0	
comp=Z,6.4nm,1.2s							
J20K	Nowinta River	83.69	11	P	P	23 57 14.0	+1.5
J20K				IAmb	IAmb	23 57 53.7	
comp=Z,12nm,1.4s							
TRF	Thorofare Moun	83.76	12	P	P	23 57 13.4	+0.3
TRF				IAmb	IAmb	23 57 52.7	
comp=Z,11nm,1.5s							
DHY	Denali Highway	84.06	14	P	P	23 57 14.9	+0.3
DHY				IAmb	IAmb	23 57 44.6	
comp=Z,7.3nm,1.5s							
CCB	Clear Creek Bu	85.34	13	P	P	23 57 20.4	-0.1
CCB				IAmb	IAmb	23 57 21.4	
comp=Z,6.0nm,1.4s							
IMAR	Indian Mountai	85.42	10	P	P	23 57 21.5	+0.6
ILAR	Eielson Array	85.64	13	P	P	23 57 22.1	+0.2
comp=Z,0.3nm,0.4s,baz=219,slow=4.7,SNR=9.6							
comp=Z,0.3nm,0.4s							
ILAR	Eielson Array	85.64	13	P	P	23 57 20.4	-1.6
J25K	Salcha River,	85.84	14	P	P	23 57 23.5	+0.5
TXAR	Lajitas Array	86.04	58	P	P	23 57 25.5	+0.7
comp=Z,0.4nm,0.6s,baz=228,slow=6.2,SNR=6.2							
comp=Z,0.4nm,0.6s							
TXAR	Lajitas Array	86.04	58	P	P	23 57 26.0	+1.2
J26L	Joseph Creek	86.17	14	P	P	23 57 25.8	+1.2
J26L				IAmb	IAmb	23 57 50.9	
comp=Z,2.2nm,1.1s							
M30M	Minto, Yukon	86.42	18	P	P	23 57 26.3	+0.5
M30M				IAmb	IAmb	23 57 27.2	
comp=Z,2.4nm,1.1s							
PDAR	Pinedale Array	87.30	44	P	P	23 57 30.8	+0.2
comp=Z,0.3nm,0.7s,baz=207,slow=3.7,SNR=2.0							
comp=Z,0.3nm,0.7s							
BMAR	Burnt Mountain	88.41	12	P	P	23 57 35.9	+0.9
GERES	GERESS Array B	147.25	345	PKPbc	PKPbc	00 04 23.1	-0.2
comp=Z,0.4nm,0.6s,baz=27,slow=6.6,SNR=3.9							

PRU ***28*** *23:46:01.1±0.0, 43°.11N×13°.75E, h0km*
ROM 28 23:45:59.1±0.1, 43°.001N±0°.003×13°.078E±0°.004, h9km, ML2.9/49, 33C-14D, Error ellipse: s-maj=0.3km s-min=0.2km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.04	12	P	Pg	23 46 00.9	0.0
FDMO				S	Sg	23 46 01.9	-0.2
FDMO				AML	AML		
FDMO				AML	AML		
FEMA	Monte Fema	0.04	207	⇑P	Pg	23 46 01.2	+0.1
FEMA				S	Sg	23 46 02.6	+0.1
FEMA				AML	AML		
comp=E,97400μm,0.2s							
FEMA				AML	AML		
comp=E,97400μm,0.3s							
FEMA				AML	AML		
comp=N,64200μm,0.3s							
FEMA				AML	AML		
comp=E,97450μm,0.2s							
FEMA				AML	AML		
comp=N,64200μm,0.3s							
T1216	Preci, Frazion	0.12	201	⇑P	Pg	23 46 02.3	+0.5
T1216				S	Sg	23 46 04.7	+0.9
T1216				AML	AML		
comp=E,22300μm,0.8s							
T1216				AML	AML		
comp=E,22300μm,0.9s							
T1216				AML	AML		
comp=N,28400μm,0.2s							
T1216				AML	AML		
comp=E,22250μm,0.8s							
T1216				AML	AML		
comp=N,28400μm,0.2s							
MC2	Monte Cornacci	0.12	137	⇑P	Pg	23 46 02.4	+0.3
MC2				S	Sg	23 46 05.1	+1.0
CESI	CESI - Serrava	0.13	272	⇑P	Pg	23 46 02.6	+0.5
CESI				S	Sg	23 46 05.1	+1.0
CESI				AML	AML		
comp=E,18100μm,0.4s							
CESI				AML	AML		
comp=N,21550μm,0.3s							
T1245	Castelsantange	0.17	151	P	Pg	23 46 03.2	+0.5
T1245				S	Sg	23 46 06.4	+1.2
T1245				AML	AML		
comp=E,11150μm,0.3s							
T1245				AML	AML		
comp=N,16650μm,0.5s							
T1245				AML	AML		
comp=E,10900μm,0.3s							
T1245				AML	AML		
comp=N,16650μm,0.5s							
T1245				AML	AML		
comp=N,16350μm,0.5s							
SEF1	Sefro	0.17	327	P	Pg	23 46 03.5	+0.7
SEF1				S	Sg	23 46 06.6	+1.3
SEF1				AML	AML		
comp=E,20800μm,1.2s							
SEF1				AML	AML		
comp=N,24250μm,0.2s							
SEF1				AML	AML		
comp=E,20850μm,1.2s							
SEF1				AML	AML		
comp=N,24300μm,0.2s							
SEF1				AML	AML		
comp=E,20850μm,1.2s							
SEF1				AML	AML		
comp=N,24300μm,0.2s							
PIO1	Pioraco	0.19	339	⇓P	Pg	23 46 03.8	+0.7
PIO1				S	Sg	23 46 07.2	+1.4
PIO1				AML	AML		
comp=E,7030μm,0.3s							
PIO1				AML	AML		
comp=N,14800μm,0.3s							
PIO1				AML	AML		
comp=N,14750μm,0.3s							
GUMA	Gualdo di Mace	0.20	72	⇑P	Pg	23 46 04.0	+0.8
GUMA				S	Sg	23 46 08.0	+2.0
GUMA				AML	AML		
comp=E,24100μm,0.6s							
GUMA				AML	AML		
comp=E,20900μm,0.3s							
GUMA				AML	AML		
comp=N,22100μm,0.6s							
GUMA				AML	AML		
comp=N,26500μm,0.4s							
AM05	Amandola Campo	0.20	97	⇑P	Pg	23 46 03.9	+0.6
AM05				S	Sg	23 46 07.6	+1.4
AM05				AML	AML		
comp=E,2680μm,0.5s							
AM05				AML	AML		
comp=E,13500μm,0.3s							
AM05				AML	AML		
comp=N,4665μm,0.3s							
AM05				AML	AML		
comp=N,1160μm,1.0s							
AM05				AML	AML		
comp=E,13550μm,0.3s							
AM05				AML	AML		
comp=N,1165μm,1.0s							
MMO1	Montemonaco	0.21	119	⇑P	Pg	23 46 03.9	+0.4
MMO1				S	Sg	23 46 07.4	+1.1
FIU1	Fiuminata	0.22	330	⇑P	Pg	23 46 04.2	+0.7
FIU1				S	Sg	23 46 07.8	+1.2
FIU1				AML	AML		
comp=N,5410μm,1.1s							
FIU1				AML	AML		
comp=E,4395μm,1.0s							
SSM1	San Severino M	0.24	18	P	Pg	23 46 04.6	+0.7
T1215	Vallo di Nera,	0.25	218	⇑P	Pg	23 46 04.8	+0.6
T1215				S	Sb	23 46 09.1	-1.2
T1215				AML	AML		
comp=E,2790μm,0.7s							
T1215				AML	AML		
comp=N,3870μm,0.2s							
T1215				AML	AML		
comp=E,2940μm,0.5s							
T1215				AML	AML		
comp=N,3835μm,0.2s							
T1215				AML	AML		
comp=N,3865μm,0.2s							
T1215				AML	AML		
comp=E,2945μm,0.5s							
T1215				AML	AML		
comp=N,3840μm,0.2s							
T1215				AML	AML		
comp=N,3835μm,0.2s							
T1215				AML	AML		
comp=E,2785μm,0.7s							
SNTG	Esanatoglia	0.27	338	⇑P	Pg	23 46 05.1	+0.5
SNTG				S	Sb	23 46 10.0	-1.0
SNTG				AML	AML		
comp=E,5160μm,1.2s							
SNTG				AML	AML		
comp=N,4745μm,0.3s							
SNTG				AML	AML		
comp=E,5115μm,1.2s							
SNTG				AML	AML		
comp=N,5140μm,0.7s							
T1241	Roccafluvione,	0.30	119	⇑P	Pg	23 46 05.8	+0.8
T1241				S	Sb	23 46 10.9	-0.8
T1241				AML	AML		
comp=E,2485μm,0.6s							
T1241				AML	AML		
comp=N,3385μm,0.6s							
T1241				AML	AML		
comp=E,2790μm,0.7s							
T1241				AML	AML		
comp=N,3305μm,0.4s							
T1241				AML	AML		
comp=E,2485μm,0.6s							
T1241				AML	AML		
comp=N,3385μm,0.6s							
T1241				AML	AML		
comp=N,3300μm,0.4s							
T1241				AML	AML		
comp=E,2785μm,0.7s							
T1217	Poggiodomo (PG	0.31	200	⇓P	Pg	23 46 05.8	+0.6
T1217				S	Sb	23 46 11.3	-0.7
T1217				AML	AML		
comp=E,2945μm,0.2s							
T1217				AML	AML		
comp=N,3220μm,1.1s							
T1217				AML	AML		
comp=E,2915μm,0.2s							
T1217				AML	AML		
comp=N,3160μm,0.5s							
T1217				AML	AML		
comp=E,2940μm,0.2s							
ASSB	Assisi San Ben	0.31	278	⇑P	Pg	23 46 05.8	+0.5
ASSB				AML	AML		
comp=E,8560μm,0.4s							
ASSB				AML	AML		
comp=N,6000μm,0.8s							
MNTP	Montappone	0.32	64	⇓P	Pb	23 46 06.5	-0.4
EL6	Elcito	0.33	3	P	Pg	23 46 04.8	-0.9
T1204	Amatrice, Fraz	0.37	151	⇑P	Pg	23 46 06.9	+0.4
T1204				S	Sb	23 46 13.1	-0.8
T1204				AML	AML		
comp=E,3065μm,0.3s							
T1204				AML	AML		
comp=N,2485μm,0.9s							
T1204				AML	AML		
comp=N,2480μm,0.9s							
FOSV	Fossato di Vic	0.37	322	⇑P	Pg	23 46 07.0	+0.5
FOSV				AML	AML		
comp=N,2865μm,0.3s							
FOSV				AML	AML		
comp=E,2685μm,1.0s							
CING	Cingoli	0.38	13	⇑P	Pg	23 46 07.0	+0.4
CING				AML	AML		
comp=E,2925μm,0.4s							
CING				AML	AML		
comp=N,2075μm,0.3s							
LNSS	Leonessa	0.40	184	⇓P	Pg	23 46 07.2	+0.3
LNSS				S	Sb	23 46 14.2	-0.4
LNSS				AML	AML		
comp=E,2640μm,0.5s							
LNSS				AML	AML		
comp=N,2760μm,1.0s							
T1243	Rocca Santa Ma	0.41	138	⇑P	Pg	23 46 07.3	+0.2
T1243				S	Sb	23 46 13.9	-1.0
SMA1	SAN MARTINO	0.42	153	⇑P	Pg	23 46 07.5	+0.3
SMA1				S	Sb	23 46 14.7	-0.5
SMA1				AML	AML		
comp=E,2405μm,0.9s							
SMA1				AML	AML		
comp=N,2190μm,0.5s							
MMUR	Monte Murano	0.44	352	S	Sb	23 46 17.0	+1.0
OFFI	Offida	0.45	98	⇑P	Pb	23 46 09.3	0.0
OFFI				AML	AML		
comp=N,3395μm,0.8s							
OFFI				AML	AML		
comp=E,2190μm,1.5s							
ARRO	Arrone	0.48	209	⇑P	Pg	23 46 08.8	+0.4
ARRO				S	Sb	23 46 16.5	-0.4
ARRO				AML	AML		
comp=N,1100μm,0.6s							
ARRO				AML	AML		
comp=E,1235μm,0.7s							
MURB	Monte Urbino	0.48	303	⇑P	Pg	23 46 09.0	+0.5
MURB				S	Sb	23 46 18.0	+0.9
MURB				AML	AML		
comp=E,6040μm,0.3s							
MURB				AML	AML		
comp=N,3970μm,0.4s							
MURB				AML	AML		
comp=E,6435μm,0.3s							
MURB				AML	AML		
comp=N,3985μm,1.0s							
T1211	Morro Reatino	0.50	199	P	Pg	23 46 09.1	+0.3
T1211				S	Sb	23 46 18.0	+0.6
T1211				AML	AML		
comp=E,1340μm,1.5s							
T1211				AML	AML		
comp=N,1885μm,0.6s							
RM33	Pellescritta (	0.50	168	⇓P	Pg	23 46 09.0	+0.1
RM33				S	Sb	23 46 18.0	+0.4
RM33				AML	AML		
comp=E,990μm,0.8s							
RM33				AML	AML		
comp=N,833μm,0.5s							
RM33				AML	AML		
comp=E,960μm,0.8s							
RM33				AML	AML		
comp=N,823μm,0.4s							
RM33				AML	AML		
comp=E,960μm,0.8s							
RM33				AML	AML		
comp=N,822μm,0.4s							
RM33				AML	AML		
comp=E,992μm,0.8s							
ARVD	Arcevia	0.51	349	⇑P	Pg	23 46 09.3	+0.3
ARVD				S	Sb	23 46 19.0	+1.3
ARVD				AML	AML		
comp=E,1295μm,1.2s							
ARVD				AML	AML		
comp=N,834μm,0.8s							
ATFO	Monte Foce - G	0.52	315	⇑P	Pg	23 46 09.7	+0.4
ATFO				AML	AML		
comp=N,1078μm,0.4s							
ATFO				AML	AML		
comp=E,1225μm,1.1s							
CAMP	Campotosto	0.53	152	⇓P	Pg	23 46 09.3	0.0
CAMP				AML	AML		
comp=E,830μm,0.2s							
CAMP				AML	AML		
comp=N,608μm,1.2s							
CESX	Cesi	0.54	223	⇑P	Pg	23 46 09.7	+0.2
CESX				S	Sb	23 46 19.0	+0.5
CESX				AML	AML		
comp=N,2275μm,0.4s							
CESX				AML	AML		
comp=E,2265μm,1.4s							
PP3	Marolino	0.54	46	⇓P	Pb	23 46 10.9	+0.1
PP3				AML	AML		
comp=N,2335μm,0.8s							
PP3				AML	AML		
comp=E,1550μm,1.6s							
PP3				AML	AML		
comp=N,2255μm,0.8s							
PP3				AML	AML		
comp=E,1610μm,1.6s							
TERO	Teramo	0.54	134	⇑P	Pg	23 46 09.7	+0.1
TERO				AML	AML		
comp=E,1340μm,0.8s							
TERO				AML	AML		
comp=N,1414μm,0.7s							
TERO				AML	AML		
comp=E,1420μm,0.8s							
TERO				AML	AML		
comp=N,1450μm,0.7s							
TERO				AML	AML		
comp=N,1410μm,0.7s							
ATTE	AVT- Monte Tez	0.56	291	P	Pg	23 46 10.4	+0.3
ATTE				AML	AML		
comp=E,729μm,0.4s							
ATTE				AML	AML		
comp=N,716μm,0.6s							
FRON	Frontone	0.58	334	P	Pg	23 46 10.5	+0.2
FRON				AML	AML		
comp=E,885μm,0.4s							
FRON				AML	AML		
comp=N,1525μm,0.8s							
T1247	Pizzolo (AQ)	0.58	164	⇑P	Pg	23 46 10.4	0.0
T1247				AML	AML		
comp=N,1099μm,0.9s							
T1247				AML	AML		
comp=E,1090μm,0.6s							
ATVO	AVT- Monte Val	0.62	308	⇑P	Pg	23 46 11.3	+0.2
ATVO				AML	AML		
comp=E,509μm,1.3s							
ATVO				AML	AML		
comp=N,788μm,0.7s							
TRTR	Tortoreto Alta	0.64	107	P	Pb	23 46 13.3	+0.8
GIGS	Gran Sasso	0.66	147	P	Pg	23 46 11.9	0.0
GIGS				AML	AML		
comp=E,230μm,0.6s							
GIGS				AML	AML		
comp=N,240μm,0.4s							
GIGS				AML	AML		
comp=E,231μm,0.6s							
PIEI	Pieia	0.67	324	P	Pg	23 46 12.1	+0.1
PIEI				S	Sb	23 46 23.0	+0.7
PIEI				AML	AML		
comp=E,668μm,0.4s							
PIEI				AML	AML		
comp=N,546μm,0.4s							
PIEI				AML	AML		
comp=E,668μm,0.4s							
ATPI	Pietralunga -	0.67	313	⇓P	Pg	23 46 12.3	+0.3
ATPI				S	Sb	23 46 23.0	+0.6
ATPI				AML	AML		
comp=E,671μm,0.5s							
ATPI				AML	AML		
comp=N,536μm,0.6s							
AOI	Ancona	0.67	35	⇓P	Pb	23 46 12.7	-0.3
AOI				AML	AML		
comp=E,640μm,0.5s							
AOI				AML	AML		
comp=N,542μm,0.8s							
MPAG	Monte Paganucc	0.67	340	P	Pg	23 46 12.5	+0.4
MPAG				AML	AML		
comp=N,798μm,1.1s							
MPAG				AML	AML		
comp=E,1106μm,0.7s							
ATMI	Monte Miggiano	0.68	300	⇑P	Pb	23 46 12.8	-0.3
ATMI				AML	AML		
comp=E,1480μm,0.8s							
ATMI				AML	AML		
comp=N,1845μm,0.6s							
SENI	Senigallia	0.71	9	⇑P	Pn	23 46 14.6	-0.8
SENI				AML	AML		
comp=N,3090μm,0.6s							
SENI				AML	AML		
comp=E,3300μm,0.4s							
MGAB	Montegabbione	0.71	263	⇓P	Pg	23 46 13.2	+0.3
MGAB				AML	AML		
comp=E,1595μm,0.5s							
MGAB				AML	AML		
comp=N,1650μm,0.6s							
MGAB				AML	AML		
comp=N,1645μm,0.6s							
MGAB				AML	AML		
comp=E,1890μm,0.5s							
MGAB				AML	AML		
comp=N,1710μm,0.5s							
FSSB	Fossombrone	0.72	343	P	Pb	23 46 13.6	-0.4
FSSB				S	Sn	23 46 26.0	-0.8
FSSB				AML	AML		
comp=N,2995μm,0.4s							
FSSB				AML	AML		
comp=E,2605μm,0.4s							
FIAM	Fiamignano	0.73	178	⇑P	Pg	23 46 13.1	-0.2
FIAM				S	Sb	23 46 25.0	+0.7
FIAM				AML	AML		
comp=N,414μm,0.8s							
FIAM				AML	AML		
comp=E,428μm,0.9s							
APEC	Apecchio	0.73	319	⇓P	Pb	23 46 14.1	-0.1
APEC				S	Sn	23 46 27.0	-0.1
BADI	Badiali	0.79	310	⇓P	Pg	23 46 14.7	+0.3
PE3	Peglio	0.81	329	⇓P	Pg	23 46 15.1	+0.3
FAGN	Fagnano	0.82	153	⇑P	Pg	23 46 14.8	-0.2
FAGN				AML	AML		
comp=E,1265μm,0.6s							
FAGN				AML	AML		
comp=N,880μm,0.4s							
VCEL	Villa Celiera	0.83	137	⇓P	Pg	23 46 15.2	+0.2
VCEL				AML	AML		
comp=E,1005μm,0.4s							
VCEL				AML	AML		
comp=N,1076μm,0.7s							
VCEL				AML	AML		
comp=N,1074μm,0.7s							
VCEL				AML	AML		
comp=E,1004μm,0.4s							
SRES	S.Oreste - Sor	0.87	209	⇑P	Pb	23 46 16.2	-0.2
SRES				AML	AML		
comp=E,439μm,1.4s							
SRES				AML	AML		
comp=N,336μm,0.6s							
CAFI	Castiglion Fio	0.88	292	P	Pg	23 46 16.1	+0.1
CAFI				AML	AML		
comp=N,420μm,0.7s							
CAFI				AML	AML		
comp=E,394μm,0.7s							
CAFI				AML	AML		
comp=N,421μm,0.7s							
MCIV	Monte Civitell	1.05	258	⇑P	Pn	23 46 20.5	+0.3
INTR	Introdacqua	1.16	148	⇑P	Pb	23 46 19.3	-2.1
TOLF	Tolfa	1.23	221	P	Pn	23 46 21.3	-1.2
TOLF				AML	AML		
comp=E,174μm,0.7s							

TOLF AML AML
comp=N,188μm,0.8s
VITU Vitulano (BN) 2.15 147 P Pn 23 46 32.9 -2.4
PAOL Paolisi 2.26 150 S Sb 23 47 09.0 +0.8
OBKA Obir 3.66 16 *e*Pn Pn 23 46 57.5 +1.5
comp=N,1.3nm,0.2s
ABTA Abfaltersbach 3.77 354 *e*Pn Pn 23 46 59.4 +1.9
comp=N,4.6nm,0.5s
FETA Feichten 4.35 338 *e*Pn Pn 23 47 08.9 +3.3
comp=N,1.4nm,0.4s
SQTA Sankt Quirin 4.42 343 *e*Pn Pn 23 47 09.9 +3.5
comp=N,3.8nm,0.4s
MOTA Moosalm 4.56 343 *e*Pn Pn 23 47 11.0 +2.6
comp=N,2.3nm,0.4s
RETA Reutte 4.77 341 *e*Pn Pn 23 47 14.4 +3.1
comp=N,1.2nm,0.3s
DAVA Damuels 4.84 333 *e*Pn Pn 23 47 17.1 +4.7
comp=N,3.9nm,0.6s
MOA Molln 4.92 9 *e*Pn Pn 23 47 14.9 +1.6
comp=N,1.4nm,0.3s
CKRC Cesky Krumlov 5.88 8 *e*PN Pn 23 47 25.8 -0.7
CKRC *e*SN Sn 23 48 31.1 -2.9
KHC Kasperske Hory 6.14 3 *e*PN Pn 23 47 30.4 +0.4
KHC *e*SN Sn 23 48 37.7 -2.7

*IDC **28** 23:47:02.4±1.3, 14°.52N×56°.50E, h0km, mb3.5/6, mbtmp3.5/6, MS3.2/3, Error ellipse: s-maj=42.4km s-min=30.1km az=60.0*

ISC 28 23:47:05.4±1.3, 14°.5N±0°.2×56°.5E±0°.3, h19km, n14, σ0.96/8, mb3.6/6, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.90**	**13**	LR	LR	23 52 31.0	
	comp=Z,100nm,21.1s,baz=188,slow=37						
GEYT	**Alibeck**	**23.35**	**3**	P	**P**	**23 52 14.0**	**+1.3**
	1.0nm,0.6s,baz=182,slow=7.2,SNR=5.0 1.0nm,0.6s						
MKAR	**Makanchi Array**	**38.73**	**29**	P	**P**	**23 54 27.8**	**-0.5**
	0.2nm,0.7s,baz=236,slow=6.8,SNR=1.6 0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**45.17**	**23**	P	**P**	**23 55 19.8**	**-1.1**
	0.7nm,0.8s,baz=219,slow=11,SNR=2.1 0.7nm,0.8s						
LBTB	**Lobatse**	**49.52**	**218**	LR	LR	00 15 29.4	
	comp=Z,23nm,18.3s,baz=40,slow=34						
TSUM	**Tsumeb**	**50.90**	**230**	LR	LR	00 18 18.5	
	comp=Z,44nm,18.7s,baz=152,slow=37						
ESDC	**Sonseca Array**	**58.19**	**308**	P	**P**	**23 56 58.4**	**-0.1**
	0.3nm,0.7s,baz=84,slow=5.9,SNR=5.2 0.3nm,0.7s						
H01W3	**Cape Leeuwin H**	**73.50**	**134**	T	T	01 18 54.4	
	baz=302,slow=75,SNR=4.8						
H01W2	**Cape Leeuwin H**	**73.50**	**134**	T	T	01 18 53.0	
	baz=302,slow=75,SNR=5.9						
H01W1	**Cape Leeuwin H**	**73.51**	**134**	T	T	01 18 50.9	
	baz=302,slow=75,SNR=5.0						
WRA	**Warramunga Arr**	**83.85**	**112**	P	**P**	**23 59 35.1**	**+0.7**
	0.5nm,0.7s,baz=298,slow=4.4,SNR=5.0 0.5nm,0.7s						
ASAR	**Alice Springs**	**84.61**	**116**	P	**P**	**23 59 38.1**	**-0.1**
	0.5nm,0.7s,baz=294,slow=5.0,SNR=4.8 0.5nm,0.7s						
PDAR	**Pinedale Array**	**121.56**	**348**	PKP	**PKPdf**	**00 05 57.6**	**-0.8**
	0.2nm,0.4s,baz=71,slow=3.3,SNR=1.9						
NVAR	**Mina Array Bea**	**127.10**	**355**	PKP	**PKiKP**	**00 06 10.1**	**+0.5**
	0.3nm,0.6s,baz=276,slow=3.2,SNR=3.7						

*NEIC **29** 00:25:54.8±2.2, 26°.48S±0°.09×75°.2E±0°.1, h10km±1km, mb4.8/29, Error ellipse: s-maj=18.1km s-min=14.3km az=69.0*

*IDC **29** 00:25:54.7±1.1, 26°.44S×75°.28E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=39.2km s-min=26.8km az=49.0*

ISC 29 00:25:54.5±0.5, 26°.46S±0°.09×75°.12E±0°.09, h10km, n46, σ1.27/40, mb4.7/18, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**11.50**	**170**	Pn	**Pn**	**00 28 36.6**	**-2.1**
ROCAM	**Rodrigues Isla**	**12.70**	**299**	Pn	**Pn**	**00 28 52.7**	**-2.6**
RER	**Riviere de l'E**	**18.49**	**282**	P	**Pn**	**00 30 12.5**	**+1.5**
RER				IAmb	IAmb	00 30 16.1	
	comp=Z,72nm,1.3s						
H08S2	**Diego Garcia H**	**18.87**	**352**	T	T	00 49 52.1	
	baz=173,slow=76,SNR=18						
H08S1	**Diego Carcia H**	**18.88**	**352**	T	T	00 49 53.4	
	baz=173,slow=76,SNR=6.0						
H08S3	**Diego Garcia H**	**18.89**	**352**	T	T	00 49 53.1	
	baz=173,slow=76,SNR=23						
DGAR	**Diego Garcia**	**19.11**	**352**	P	**P**	**00 30 17.2**	**-0.4**
DGAR				IAmb	IAmb	00 30 21.3	
	comp=Z,138nm,1.1s						
ABPO	**Ambohimpanom**	**26.73**	**280**	P	**P**	**00 31 33.4**	**-1.2**
H01W2	**Cape Leeuwin H**	**34.42**	**114**	T	T	01 08 43.3	
	baz=273,slow=75,SNR=6.2						
H01W3	**Cape Leeuwin H**	**34.42**	**114**	T	T	01 08 43.3	
	baz=273,slow=75,SNR=5.9						
H01W1	**Cape Leeuwin H**	**34.44**	**114**	T	T	01 08 45.4	
	baz=273,slow=75,SNR=6.2						
RPSI	**Rantau Prapat**	**37.00**	**42**	P	**P**	**00 33 04.3**	**-0.1**
IPM	**Ipoh**	**39.68**	**43**	P	**P**	**00 33 27.1**	**+0.1**
IPM				IAmb	IAmb	00 33 39.8	
	comp=Z,24nm,1.5s						
KULM	**Kulim**	**40.10**	**42**	P	**P**	**00 33 29.6**	**-0.9**
PBA	**Port Blair**	**41.58**	**27**	P	**P**	**00 33 41.0**	**-1.6**
CASY	**Casey**	**45.51**	**161**	P	**P**	**00 34 13.8**	**0.0**
CASY				IAmb	IAmb	00 34 20.3	
	comp=Z,24nm,1.4s						
LODK	**Lodwar**	**48.57**	**302**	P	**P**	**00 34 37.0**	**-1.5**
ATD	**Arta Tunnel**	**49.09**	**316**	P	**P**	**00 34 42.8**	**+0.4**
ATD				IAmb	IAmb	00 34 51.7	
	comp=Z,21nm,1.2s						
ASAR	**Alice Springs**	**52.92**	**101**	P	**P**	**00 35 11.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=250,slow=6.3,SNR=5.5 comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**54.42**	**96**	P	**P**	**00 35 22.8**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=254,slow=7.3,SNR=12 comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**54.42**	**96**	P	**P**	**00 35 21.4**	**-0.9**
WB2	**Warramunga Arr**	**54.43**	**96**	P	**P**	**00 35 21.3**	**-1.0**
WB0	**Warramunga Arr**	**54.52**	**96**	P	**P**	**00 35 22.1**	**-0.9**
WB0				IAmb	IAmb	00 35 49.0	
	comp=Z,9.1nm,1.4s						
FAKI	**Fak Fak**	**59.45**	**77**	P	**P**	**00 35 56.9**	**-1.1**
FAKI				IAmb	IAmb	00 36 16.7	
	comp=Z,10.0nm,1.2s						
VNDA	**Vanda**	**63.67**	**166**	P	**P**	**00 36 27.6**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=276,slow=8.6,SNR=5.2 comp=Z,1.0nm,0.9s						
CHGR	**Chuyangaron**	**65.01**	**355**	P	**P**	**00 36 34.6**	**-0.2**
CHGR				IAmb	IAmb	00 36 38.5	
	comp=Z,8.4nm,1.4s						
NRN	**Naryn**	**67.55**	**1**	P	**P**	**00 36 51.5**	**+0.2**
KKAR	**Karatay Array**	**69.34**	**356**	P	**P**	**00 37 04.0**	**+1.8**
MKAR	**Makanchi Array**	**73.19**	**5**	P	**P**	**00 37 27.4**	**+2.1**
	comp=Z,1.4nm,0.7s,baz=185,slow=6.5,SNR=10.0 comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**73.19**	**5**	P	**P**	**00 37 26.4**	**+1.1**
BR131	**Keskin Array S**	**76.36**	**328**	P	**P**	**00 37 44.8**	**+0.8**
BR131				IAmb	IAmb	00 37 52.5	
	comp=Z,9.3nm,1.3s						
BRTR	**Keskin Array B**	**76.36**	**328**	P	**P**	**00 37 44.9**	**+0.9**
ABKAR	**Akbulak array**	**76.58**	**350**	P	**P**	**00 37 46.0**	**+1.2**
ILGA	**Ilgaz**	**77.37**	**329**	P	**P**	**00 37 49.0**	**-0.7**
IDI	**Anoyia**	**77.62**	**320**	P	**P**	**00 37 52.0**	**+0.8**
ZALV	**Zalesovo Beam**	**80.51**	**6**	P	**P**	**00 38 08.3**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=185,slow=3.9,SNR=4.7 comp=Z,0.6nm,0.5s						
KS19	**Wonju Array Si**	**80.62**	**40**	P	**P**	**00 38 09.1**	**+1.7**
BFZ	**Birch Farm**	**81.02**	**131**	P	**P**	**00 38 08.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**81.43**	**289**	P	**P**	**00 38 14.3**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=109,slow=4.4,SNR=3.9 comp=Z,0.5nm,0.7s						
KEK	**Kerkira**	**83.60**	**320**	P	**P**	**00 38 22.5**	**-0.5**
PMSA	**Palmer Station**	**83.70**	**196**	P	**P**	**00 38 24.3**	**+1.1**
PMSA				IAmb	IAmb	00 38 33.8	
	comp=Z,12nm,1.1s						
ARU	**Arti**	**83.75**	**351**	P	**P**	**00 38 24.5**	**+1.2**
ARU				IAmb	IAmb	00 38 43.2	
	comp=Z,9.0nm,1.5s						
DBIC	**Dimbokro**	**84.04**	**280**	P	**P**	**00 38 26.0**	**+0.2**
DBIC				IAmb	IAmb	00 38 33.2	
	comp=Z,11nm,1.2s						
INU	**Inuyama**	**84.83**	**46**	P	**P**	**00 38 28.6**	**-0.8**
AKBB	**Malin Array Si**	**86.86**	**333**	P	**P**	**00 38 38.3**	**-0.7**
AKBB				IAmb	IAmb	00 38 42.9	
	comp=Z,3.4nm,0.8s						
PSZ	**Piszkesteto**	**89.08**	**326**	P	**P**	**00 38 48.6**	**-1.2**
PSZ				IAmb	IAmb	00 39 10.3	
	comp=Z,5.9nm,1.1s						

*JMA **29** 00:31:17.9±0.2, 40°.2N±0°.5×142°.8E±1°.0, h21km±2km, MV3.8/37, NE OFF IWATE PREF*

*NIED **29** 00:31:17.9, 40°.24N×142°.82E, h21km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=5.43; Mθθ=6.20; Mφφ=-0.77; Mrθ=2.51; Mθφ=2.56; Mφr=0.37; Fault plane solution: M0=6.73000×10^14 NP1: φs=246.00000°, δ=34.00000°, λ=-99.00000°. NP2: φs=77.00000°, δ=56.00000°, λ=-84.00000°.*

*IDC **29** 00:31:23.8±3.0, 40°.20N×142°.80E, h76km±27km, mb3.5/18, mbtmp3.8/20, MS2.9/3 Error ellipse: s-maj=18.7km s-min=16.7km az=100.0*

ISC 29 00:31:16.4±0.6, 40°.31N±0°.05×142°.85E±0°.05, h12km, n49, σ1.35/43, mb3.8/18, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.84**	**244**	*e*P	**Pb**	**00 31 32.9**	**0.0**
JKEN	**Kujiedanarisaw**	**0.88**	**263**	*e*P	**Pb**	**00 31 33.6**	**0.0**
JANG	**Nango**	**1.02**	**274**	*i* P	**Pg**	**00 31 36.2**	**+0.2**
JANG				S	**Sb**	**00 31 49.1**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.08**	**227**	P	**Pb**	**00 31 36.2**	**-0.8**
JKZ	**Kuzumaki**	**1.21**	**255**	*e*P	**Pn**	**00 31 39.1**	**-0.1**
JARK	**Aomorirokkasho**	**1.32**	**302**	P	**Pb**	**00 31 41.2**	**+0.1**
JTM	**Tenmabayashi**	**1.44**	**290**	P	**Pb**	**00 31 43.3**	**+0.2**
JTM	**Tenmabayashi**	**1.44**	**290**	*i* P	**Pb**	**00 31 43.1**	**0.0**
JTM				S	**Sn**	**00 32 00.9**	**-0.1**
JOM	**Ohasama**	**1.46**	**235**	P	**Pn**	**00 31 42.4**	**-0.2**
JAH	**Hinai**	**1.70**	**267**	*e*P	**Pb**	**00 31 47.0**	**-0.5**
ERM	**Erimo**	**1.72**	**8**	P	**Pb**	**00 31 48.1**	**+0.3**
JEM	**Erimo**	**1.72**	**8**	P	**Pb**	**00 31 48.1**	**+0.3**
JOT	**Ohata**	**1.73**	**309**	P	**Pb**	**00 31 47.5**	**-0.6**
JMK	**Ichinoseki**	**1.85**	**223**	P	**Pb**	**00 31 49.4**	**-0.8**
JEW	**Eniwo**	**2.73**	**338**	P	**Pb**	**00 32 03.8**	**-1.4**
JMM	**Marumori**	**2.92**	**214**	P	**Pn**	**00 32 03.8**	**+1.2**
JSD	**Sado**	**4.23**	**239**	P	**Pn**	**00 32 24.5**	**+3.9**
JYT	**Yasato**	**4.58**	**208**	P	**Pn**	**00 32 28.4**	**+2.9**
MJAR	**Matsushiro Arr**	**5.24**	**226**	P	**Pn**	**00 32 37.7**	**+3.2**
	11nm,0.7s,baz=36,slow=13,SNR=18						
MJAR				LR	LR	00 34 58.5	
	comp=Z,103nm,21.8s,baz=34,slow=42						
JGF	**Kuroka**	**6.40**	**224**	P	**Pn**	**00 32 53.7**	**+3.2**
USRK	**Ussuriysk Ar.**	**8.94**	**299**	P	Pn	00 33 30.3	+5.0
	7.8nm,0.9s,baz=96,slow=13,SNR=5.2						
KSRS	**Korea Array**	**11.98**	**261**	LR	LR	00 38 34.1	
	comp=Z,36nm,18.4s,baz=45,slow=36						
SEY	**Seymchan**	**23.36**	**11**	P	**P**	**00 36 27.1**	**+2.7**
	2.9nm,0.7s,baz=209,slow=1.3,SNR=4.5 2.9nm,0.7s						
SHEM	**Shemya Is, Ala**	**24.62**	**49**	LR	LR	00 48 46.8	
	comp=Z,37nm,19.1s,baz=112,slow=42						
SONM	**Songino Array**	**27.05**	**298**	P	**P**	**00 36 59.4**	**+0.8**
	0.8nm,0.7s,baz=96,slow=8.7,SNR=6.4 0.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.07**	**128**	T	T	01 07 29.2	
	baz=321,slow=75,SNR=46						
H11N1	**WAKE ISLAND Hy**	**29.08**	**128**	T	T	01 07 32.6	
	baz=321,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**29.08**	**128**	T	T	01 07 34.3	
	baz=321,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**29.89**	**130**	T	T	01 08 35.4	
	baz=322,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**29.89**	**130**	T	T	01 08 35.3	
	baz=322,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**29.91**	**130**	T	T	01 08 34.3	
	baz=322,slow=76,SNR=16						
ZALV	**Zalesovo Beam**	**40.61**	**310**	P	**P**	**00 38 56.2**	**+0.5**
	1.4nm,0.4s,baz=92,slow=7.9,SNR=8.3						
ZALV				PcP	**PcP**	**00 40 57.4**	**-0.2**
	0.3nm,0.4s,baz=82,slow=3.1,SNR=3.9 1.4nm,0.4s						
MKAR	**Makanchi Array**	**43.41**	**299**	P	**P**	**00 39 18.9**	**+0.1**
	1.0nm,0.6s,baz=85,slow=10,SNR=8.5 1.0nm,0.6s						
ILAR	**Eielson Array**	**46.14**	**34**	P	**P**	**00 39 41.0**	**+0.8**
	0.8nm,0.7s,baz=263,slow=6.1,SNR=8.2 0.8nm,0.7s						
INK	**Inuvik**	**50.97**	**28**	P	**P**	**00 40 17.6**	**+0.3**
	1.2nm,0.5s,baz=273,slow=5.4,SNR=7.4 1.2nm,0.5s						
WRA	**Warramunga Arr**	**60.47**	**189**	P	**P**	**00 41 24.9**	**-1.1**
	0.4nm,0.6s,baz=6.9,slow=7.0,SNR=6.8 0.4nm,0.6s						
GEYT	**Alibeck**	**63.26**	**298**	P	**P**	**00 41 44.4**	**-0.4**
	0.9nm,0.7s,baz=34,slow=5.4,SNR=3.2 0.9nm,0.7s						
ASAR	**Alice Springs**	**64.19**	**189**	P	**P**	**00 41 49.5**	**-1.4**
	0.5nm,0.8s,baz=7.7,slow=7.5,SNR=2.8 0.5nm,0.8s						
FINES	**FINESS Array B**	**66.44**	**332**	P	**P**	**00 42 04.3**	**-0.7**
	2.5nm,0.8s,baz=69,slow=4.6,SNR=5.7 2.5nm,0.8s						
KBZ	**Khabaz**	**69.63**	**310**	P	**P**	**00 42 25.6**	**+0.2**
	0.5nm,0.5s,baz=171,slow=12,SNR=1.9 0.5nm,0.5s						
NOA	**NORSAR Array B**	**71.60**	**337**	P	**P**	**00 42 35.7**	**-1.4**
	1.0nm,0.8s,baz=36,slow=6.1,SNR=2.3 1.0nm,0.8s						
NVAR	**Mina Array Bea**	**72.15**	**55**	P	**P**	**00 42 41.9**	**+0.7**
	0.4nm,0.8s,baz=316,slow=3.8,SNR=2.6 0.4nm,0.8s						
AKASG	**Malin Array Be**	**72.39**	**322**	P	**P**	**00 42 41.5**	**-0.6**
	0.2nm,0.3s,baz=40,slow=6.9,SNR=1.6 0.2nm,0.3s						
PDAR	**Pinedale Array**	**74.59**	**47**	P	**P**	**00 42 55.2**	**-0.3**
	0.1nm,0.3s,baz=260,slow=5.4,SNR=1.8 0.1nm,0.3s						
BRTR	**Keskin Array B**	**77.51**	**312**	P	**P**	**00 43 12.4**	**+0.4**
	0.4nm,0.7s,baz=72,slow=4.7,SNR=1.9 0.4nm,0.7s						
GERES	**GERESS Array B**	**80.51**	**329**	P	**P**	**00 43 27.7**	**-0.6**
	0.2nm,0.4s,baz=30,slow=8.0,SNR=1.7 0.2nm,0.4s						
TXAR	**Lajitas Array**	**87.25**	**53**	P	**P**	**00 44 02.7**	**-0.3**
	0.8nm,1.1s,baz=282,slow=4.3,SNR=3.9 0.8nm,1.1s						
SNAA	**Sanae**	**144.21**	**198**	PKP	**PKPab**	**00 50 48.3**	**-0.4**
	1.5nm,0.9s,baz=178,slow=2.2,SNR=2.7						
PMSA	**Palmer Station**	**150.99**	**156**	PKPbc	**PKPbc**	**00 51 05.4**	**-2.6**
	3.1nm,0.9s,baz=301,slow=11,SNR=2.6						

*BJI **29** 00:33:45.0±0.0, 47°.40S×32°.40E, h5km, mb5.6/8, mB5.7/7, Ms5.1/7, Ms7 4.8/8*

*IDC **29** 00:33:45.3±0.4, 47°.33S×32°.59E, h0km, mb4.8/23, mbtmp4.8/24, ML4.0/1, MS4.7/50, Error ellipse: s-maj=17.4km s-min=11.2km az=85.0*

*MOS **29** 00:33:46.2±1.0, 47°.46S×32°.65E, h10km, mb5.5/33, Error ellipse: s-maj=18.0km s-min=8.6km az=81.9*

*GCMT **29** 00:33:47.0±0.2, 47°.33S±0°.01×32°.67E±0°.02, h12km, MW5.2/126, Moment Tensor Solution. s55, c69; s126, c214; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.78±.01; Mθθ-0.62±.01; Mφφ-0.15±.01; Mrθ-0.54±.04; Mθφ-0.27±.01; Mφr-0.03±.04; Best double couple: M0.93700×10^17 NP1: φ=257.00000°, δ=63.00000°, λ=100.00000°. NP2: φ=55.00000°, δ=29.00000°, λ=71.00000°. Principal axes: T 0.9690, Plg70.0000°, Azm189.0000°; N -0.0660, Plg9.0000°, Azm72.0000°; P -0.9040, Plg17.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 00:33:48.0±1.9, 47°.37S±0°.08×32°.5E±0°.1, h10km±1km, mb5.5/205, Mwc5.2(GCMT) Error ellipse: s-maj=16.1km s-min=14.2km az=83.0*

ISC 29 00:33:46.4±0.5, 47°.31S±0°.04×32°.41E±0°.06, h5km±2km, h5km: pP-P, n731, σ1.56/682, mb5.5/190, MS4.8/58, 15C-31D, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUFB	**Buffelsbos**	**14.36**	**334**	*e*P	Pn	00 37 05.1	-5.3
KROM	**Kromhout**	**14.41**	**333**	*e*P	**P**	**00 37 15.0**	**-3.0**
ROSN	**Rosenhof**	**14.47**	**333**	*e*P	**P**	**00 37 15.7**	**-3.0**
SOE	**Somerset East**	**15.49**	**338**		**Pn**	**00 37 24.9**	**-0.6**
SOE	**Somerset East**	**15.49**	**338**	*e*P	**Pn**	**00 37 24.0**	**-1.6**
ELIM	**Elim**	**15.87**	**319**	*e*P	**Pn**	**00 37 28.3**	**-2.2**
ELIM				IAmb	IAmb	00 37 35.5	
	comp=Z,782nm,2.5s						
GRAF	**Camdeboo Natio**	**16.19**	**335**	*e*P	**Pn**	**00 37 30.2**	**-4.5**
ROOI	**Rooidraai Farm**	**16.27**	**332**	*e*P	**Pn**	**00 37 32.6**	**-3.1**
MERW	**Merweville**	**16.81**	**327**	*e*P	**Pn**	**00 37 40.3**	**-2.3**
BFON	**Badsfontein, M**	**16.87**	**334**	*e*P	**Pn**	**00 37 40.4**	**-3.1**
GRAN	**Grantham**	**16.91**	**329**	*e*P	**P**	**00 37 47.0**	**+1.1**
CER	**Ceres**	**17.12**	**320**	*e*P	**Pn**	**00 37 43.8**	**-2.6**
BRAK	**Brakfontein**	**17.14**	**331**	⇓*i*P	**P**	**00 37 49.4**	**+1.0**
SUR	**Sutherland**	**17.34**	**325**	P	**Pn**	**00 37 46.9**	**-2.5**
	comp=Z,31nm,1.0s,baz=146,slow=14,SNR=17						
SUR				S	**Sn**	**00 40 57.1**	**-5.6**
	comp=Z,14nm,1.0s,baz=178,slow=8.2,SNR=2.0						
SUR				LR	LR	00 43 25.6	
	comp=Z,5μm,19.8s,baz=159,slow=33						
SUR	**Sutherland**	**17.34**	**325**	P	**Pn**	**00 37 49.5**	**+0.1**
SUR	**Sutherland**	**17.34**	**325**	P	**Pn**	**00 37 47.6**	**-1.8**
SUR				P	**Pn**	**00 37 47.6**	**-1.8**
HVD	**Gariep Dam**	**17.52**	**340**	*e*P	**Pn**	**00 37 49.7**	**-1.8**
FRAZ	**Fraserburg**	**17.52**	**327**	*e*P	**Pn**	**00 37 50.2**	**-1.3**
CVNA	**Calvinia**	**18.55**	**324**	*e*P	**P**	**00 38 03.9**	**-0.1**
PKA	**Prieska**	**19.14**	**334**	*e*P	**P**	**00 38 08.3**	**-2.2**
SNKL	**Senekal, Frees**	**19.35**	**348**	*e*P	**P**	**00 38 10.6**	**-2.3**
BOSA	**Boshof**	**19.49**	**341**	P	**P**	**00 38 13.3**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=177,slow=11,SNR=9.1						
BOSA				S	**Sn**	**00 41 49.2**	**-5.3**
	comp=Z,9.2nm,1.2s,baz=323,slow=8.1,SNR=1.8						
BOSA				LR	LR	00 44 40.5	
	comp=Z,4μm,19.2s,baz=148,slow=34 comp=Z,13nm,1.0s						
BOSA	**Boshof**	**19.49**	**341**	P	**P**	**00 38 12.7**	**-1.6**
BOSA	**Boshof**	**19.49**	**341**	⇓*i*P	**P**	**00 38 13.1**	**-1.2**
BOSA	**Boshof**	**19.49**	**341**	*i* P	**P**	**00 38 13.0**	**-1.4**
BOSA	**Boshof**	**19.49**	**341**	P	**P**	**00 38 12.7**	**-1.6**
BOSA				pmax	pmax		
	comp=Z,77nm,1.4s						
BOSA	**Boshof**	**19.49**	**341**	*i* P	**P**	**00 38 13.0**	**-1.4**
NWCL	**Newcastle**	**19.64**	**353**	*e*P	**P**	**00 38 14.9**	**-1.2**
POGA	**Pongola**	**19.94**	**358**		**P**	**00 38 18.9**	**-0.2**
POGA	**Pongola**	**19.94**	**358**	*e*P	**P**	**00 38 19.5**	**+0.3**
POGA				IAmb	IAmb	00 38 21.2	
	comp=Z,223nm,2.0s						
KEIM	**Keimoes**	**20.61**	**330**	*e*P	**P**	**00 38 25.8**	**-0.7**
KEIM				IAmb	IAmb	00 38 27.7	
	comp=Z,48nm,1.1s						
PRYS	**Parys**	**20.74**	**347**	⇓*i*P	**P**	**00 38 26.8**	**-1.2**
PRYS				IAmb	IAmb	00 38 28.3	
	comp=Z,531nm,2.1s						
UPI	**Upington**	**20.83**	**331**	*e*P	**P**	**00 38 27.7**	**-1.2**
SWZ	**Schweizer**	**20.85**	**342**	*e*P	**P**	**00 38 27.7**	**-1.5**
SWZ				IAmb	IAmb	00 38 31.7	
	comp=Z,652nm,2.2s						
AUGR	**Augrabies**	**20.93**	**329**	*e*P	**P**	**00 38 29.1**	**-0.9**
AUGR				IAmb	IAmb	00 38 31.1	
	comp=Z,467nm,2.1s						
KOMG	**Komaggas**	**20.96**	**321**	*e*P	**P**	**00 38 25.7**	**-4.6**
CRLN	**Carolina, Mapu**	**21.36**	**354**	⇓*i*P	**P**	**00 38 33.7**	**-1.1**
CRLN				IAmb	IAmb	00 38 37.4	
	comp=Z,707nm,2.8s						
SLR	**Silverton**	**21.78**	**350**	⇓*i*P	**P**	**00 38 37.8**	**-1.5**
SLR				IAmb	IAmb	00 38 40.2	
	comp=Z,762nm,2.2s						
KSR	**Koster**	**21.86**	**347**	*e*P	**P**	**00 38 36.7**	**-3.5**
LBTB	**Lobatse**	**22.91**	**344**	P	**P**	**00 38 49.8**	**-1.4**
	comp=Z,20nm,0.9s,baz=170,slow=11,SNR=8.1						
LBTB				S	**S**	**00 42 53.5**	**-8.2**
	comp=Z,4.2nm,1.0s,baz=242,slow=19,SNR=1.9						
LBTB				LR	LR	00 46 44.5	
	comp=Z,3μm,18.9s,baz=162,slow=34 comp=Z,20nm,0.9s						
LBTB	**Lobatse**	**22.91**	**344**	P	**P**	**00 38 48.9**	**-2.3**
LBTB	**Lobatse**	**22.91**	**344**	P	**P**	**00 38 48.9**	**-2.3**
LBTB				pmax	pmax		
	comp=Z,39nm,1.1s						
LEPH	**Lephalale, Lim**	**23.70**	**349**	⇓*i*P	**P**	**00 38 57.4**	**-1.8**
LEPH				IAmb	IAmb	00 38 59.0	
	comp=Z,1μm,2.3s						
MOPA	**Mopani**	**23.76**	**358**	⇓*i*P	**P**	**00 38 57.2**	**-2.5**
MOPA				IAmb	IAmb	00 39 00.1	
	comp=Z,44nm,2.4s						
MOPA	**Mopani**	**23.76**	**358**	*i* P	**P**	**00 38 59.5**	**-0.2**
MOPA	**Mopani**	**23.76**	**358**	*i* P	**P**	**00 38 59.5**	**-0.2**
MUSN	**Musina, Limpop**	**25.05**	**354**	⇓*i*P	**P**	**00 39 10.4**	**-1.2**
MUSN				IAmb	IAmb	00 39 13.0	
	comp=Z,621nm,2.3s						
MUSN	**Musina, Limpop**	**25.05**	**354**	*i* P	**P**	**00 39 10.7**	**-1.0**
MUSN	**Musina, Limpop**	**25.05**	**354**	*i* P	**P**	**00 39 10.7**	**-1.0**
NVL	**N'lazarevskaya**	**25.51**	**196**	*e*P	**P**	**00 39 11.1**	**-4.2**
NVL				pmax	pmax		
	comp=Z,164nm,1.5s						
NVL				MLR	MLR		
	comp=Z,698nm,18.0s						
MAW	**Mawson**	**25.63**	**153**	P	**P**	**00 39 16.2**	**-0.2**
	comp=Z,68nm,1.0s,baz=302,slow=8.4,SNR=57 comp=Z,68nm,1.0s						
MAW	**Mawson**	**25.63**	**153**	P	**P**	**00 39 16.3**	**-0.2**
MAW	**Mawson**	**25.63**	**153**	P	**P**	**00 39 16.3**	**-0.1**
MAW				pmax	pmax		

comp=Z,134nm,1.2s
CASY Casey 43.38 145 P **P 00 41 48.8 -0.5**
CASY IAmb IAmb 00 41 50.3
comp=Z,134nm,1.5s
KIBK Kibwezi 45.06 8 P **P 00 42 03.4 0.0**
KIBK Kibwezi 45.06 8 P **P 00 42 04.3 +0.9**
SNR=15
KMBO Kilima Mbogo 46.20 7 P **P 00 42 12.9 +0.3**
comp=Z,0.3nm,0.8s,baz=172,slow=23,SNR=9.8
KMBO LR LR 00 59 39.3
comp=Z,38nm,22.0s,baz=175,slow=34
KMBO Kilima Mbogo 46.20 7 P **P 00 42 13.2 +0.6**
KMBO Kilima Mbogo 46.20 7 *e*P **P 00 42 14.9 +2.4**
KMBO Kilima Mbogo 46.20 7 P **P 00 42 13.2 +0.6**
KMBO pmax pmax
comp=Z,36nm,1.4s
KMBO Kilima Mbogo 46.20 7 P **P 00 42 13.9 +1.3**
KMBO Kilima Mbogo 46.20 7 P **P 00 42 13.0 +0.5**
MBAR Mbarara 46.55 358 LR LR 01 01 35.9
comp=Z,2μm,18.2s,baz=154,slow=36
MBAR Mbarara 46.55 358 P **P 00 42 16.2 +0.9**
MBAR IAmb IAmb 00 42 25.1
comp=Z,86nm,1.6s
MBAR Mbarara 46.55 358 P **P 00 42 16.2 +0.9**
MBAR pmax pmax
comp=Z,86nm,1.7s
MBAR Mbarara 46.55 358 P **P 00 42 16.4 +1.2**
MBAR Mbarara 46.55 358 *e*P **P 00 42 11.3 -3.9**
MBAR *e*S S 00 48 30.0 -35
MBAR Mbarara 46.55 358 *e*P **P 00 42 11.3 -3.9**
MBAR *e*S S 00 48 30.0 -35
SMAI San Martin Ant 50.41 209 P **P 00 42 44.5 +0.3**
SMAI IAmb IAmb 00 42 46.8
comp=Z,86nm,1.3s
LODK Lodwar 50.59 4 P **P 00 42 47.2 +1.0**
LODK Lodwar 50.59 4 P **P 00 42 46.8 +0.6**
SNR=13
LODK Lodwar 50.59 4 *e*P P 00 42 38.3 -7.9
LODK *e*S **S 00 49 56.4 -4.9**
LODK Lodwar 50.59 4 *e*P P 00 42 38.3 -7.9
LODK *e*S **S 00 49 56.4 -4.9**
PMSA Palmer Station 51.00 213 P **P 00 42 49.1 +0.4**
comp=Z,23nm,1.0s,baz=122,slow=5.8,SNR=11
PMSA LR LR 01 00 11.5
comp=Z,837nm,20.6s,baz=122,slow=31
comp=Z,23nm,1.0s
PMSA Palmer Station 51.00 213 P **P 00 42 49.4 +0.7**
PMSA IAmb IAmb 00 42 50.9
comp=Z,84nm,1.4s
VNDA Vanda 51.59 168 P **P 00 42 52.5 -0.5**
comp=Z,31nm,0.9s,baz=243,slow=8.3,SNR=134
VNDA LR LR 01 03 09.2
comp=Z,2μm,21.6s,baz=210,slow=34
comp=Z,31nm,0.9s
VNDA Vanda 51.59 168 P **P 00 42 52.5 -0.5**
VNDA IAmb IAmb 00 42 54.0
comp=Z,63nm,1.1s
VNDA Vanda 51.59 168 P **P 00 42 52.5 -0.5**
VNDA pmax pmax
comp=Z,63nm,1.1s
SBA Scott Base 52.02 169 P **P 00 42 56.6 +0.4**
SBA Scott Base 52.02 169 P **P 00 42 56.6 +0.4**
SBA pmax pmax
comp=Z,187nm,1.2s
H10S2 ASCENSION HYDR 55.15 298 T T 01 42 58.1
baz=141,slow=74,SNR=506
H10S3 ASCENSION HYDR 55.17 298 T T 01 43 00.2
baz=79,slow=74,SNR=852
EFI East Falkland 55.26 229 *e*P **P 00 43 20.4 +0.2**
EFI pmax pmax
comp=Z,83nm,1.6s
FURI Furi 56.24 7 P **P 00 43 29.2 +1.2**
FURI Furi 56.24 7 *e*P P 00 43 14.8 -13
FURI *e*S **S 00 51 18.6 +0.1**
FURI Furi 56.24 7 *e*P P 00 43 14.8 -13
FURI *e*S **S 00 51 18.6 +0.1**
AAE Adis Abeba 56.38 8 *e*P P 00 43 22.7 -6.3
AAE *e*S S 00 51 29.4 +9.1
AAE Adis Abeba 56.38 8 *e*P P 00 43 22.7 -6.3
AAE *e*S S 00 51 29.4 +9.1
MG01 Puerto William 57.99 222 P **P 00 43 40.0 +0.3**
ATD Arta Tunnel 59.32 12 LR LR 01 10 01.2
comp=Z,306nm,18.1s,baz=171,slow=37
ATD Arta Tunnel 59.32 12 P **P 00 43 49.4 +0.1**
ATD IAmb IAmb 00 44 00.6
comp=Z,74nm,1.5s
H01W2 Cape Leeuwin H 60.14 110 T T 01 49 20.0
baz=229,slow=75,SNR=6.2
H01W3 Cape Leeuwin H 60.15 110 T T 01 49 21.0
baz=229,slow=75,SNR=8.7
H01W1 Cape Leeuwin H 60.16 110 T T 01 49 21.3
baz=229,slow=75,SNR=7.5
GO10 Punta Arenas 60.68 222 P **P 00 43 59.3 +0.9**
MG04 Isla Riesco 61.12 222 P **P 00 44 01.8 +0.5**
MG05 Puerto Natales 62.33 223 P **P 00 44 08.9 -0.5**
MG05 IAmb IAmb 00 45 07.0
comp=Z,73nm,1.6s
DBIC Dimbokro 63.04 318 P **P 00 44 14.1 -0.6**
comp=Z,4.9nm,0.8s,baz=127,slow=7.4,SNR=6.7
DBIC LR LR 01 07 37.0
comp=Z,651nm,20.5s,baz=120,slow=32
comp=Z,4.9nm,0.8s
DBIC Dimbokro 63.04 318 P **P 00 44 14.0 -0.6**
DBIC IAmb IAmb 00 44 35.1
comp=Z,35nm,1.4s
DBIC Dimbokro 63.04 318 *e*P **P 00 44 14.3 -0.3**
DBIC Dimbokro 63.04 318 P **P 00 44 14.0 -0.6**
DBIC pmax pmax
comp=Z,35nm,1.5s
NWAO Narrogin (SRO) 63.38 110 P **P 00 44 15.9 -0.9**
NWAO Narrogin (SRO) 63.38 110 P **P 00 44 15.9 -0.9**
NWAO pmax pmax
comp=Z,220nm,2.0s
MORW Morawa 65.15 107 P **P 00 44 27.7 -0.7**
MORW IAmb IAmb 00 44 46.5
comp=Z,57nm,1.4s
TRQA Tornquist 65.87 240 P **P 00 44 32.6 -0.4**
TRQA Tornquist 65.87 240 P **P 00 44 32.6 -0.4**
TRQA pmax pmax
comp=Z,71nm,1.2s
MNCI Minicoy 66.04 45 P **P 00 44 34.0 -0.2**
TOA0 Torodi Ar. Sit 66.16 327 IAmb IAmb 00 44 42.3
comp=Z,49nm,1.6s
TOA0 Torodi Ar. Sit 66.16 327 P **P 00 44 34.8 -0.1**
SNR=5.2
TORD Torodi Ar. Bea 66.16 327 P **P 00 44 34.8 -0.1**
comp=Z,4.5nm,0.9s,baz=166,slow=6.9,SNR=22
TORD LR LR 01 12 08.4
comp=Z,383nm,21.2s,baz=196,slow=35
comp=Z,4.5nm,0.9s
TORD Torodi Ar. Bea 66.16 327 IAmb IAmb 00 44 42.6
comp=Z,33nm,1.5s
COYC Coyhaique 66.30 228 P **P 00 44 35.6 0.0**
COYC IAmb IAmb 00 44 46.2
comp=Z,63nm,1.2s
ABTO Aybut 67.05 22 P **P 00 44 40.9 +0.3**
SNR=6.0
AY01 Puyuhuapi 67.39 229 P **P 00 44 42.2 -0.3**
WHFO Wadi Hawf 67.71 22 P **P 00 44 45.0 +0.2**
DMTO DMTO 67.83 23 P **P 00 44 45.4 -0.1**
LL02 Futaleuf 67.84 230 P **P 00 44 44.8 -0.6**
LL02 IAmb IAmb 00 44 52.2
comp=Z,78nm,1.8s
ITQB Itaqui 68.23 250 P **P 00 44 48.1 +0.1**
DOK Doka 68.48 22 P **P 00 44 49.9 +0.4**
GO07 Milladeo Hill, 68.83 229 P **P 00 44 51.6 0.0**
PLCA Paso Flores 68.88 233 P **P 00 44 51.8 -0.3**
comp=Z,13nm,1.0s,baz=116,slow=6.5,SNR=13
comp=Z,13nm,1.0s
PLCA Paso Flores 68.88 233 P **P 00 44 51.4 -0.7**
PLCA IAmb IAmb 00 44 59.4
comp=Z,31nm,1.2s
PLCA Paso Flores 68.88 233 P **P 00 44 51.4 -0.7**
PLCA pmax pmax
comp=Z,31nm,1.2s
PALK Pallekele 69.09 52 LR LR 01 09 31.4
comp=Z,331nm,18.6s,baz=313,slow=31
LL03 Petrohue 69.58 231 P **P 00 44 55.7 -0.6**
LL03 IAmb IAmb 00 45 06.5
comp=Z,55nm,1.0s
LL04 Puerto Octay 69.75 231 IAmb IAmb 00 45 25.1
comp=Z,68nm,1.9s
GO06 Curarrehue 70.19 233 P **P 00 44 59.7 -0.6**
GO06 IAmb IAmb 00 45 07.4
comp=Z,44nm,1.2s

DQM DQM 70.65 25 P **P 00 45 03.3 +0.4**
CPUP Villa Florida 70.97 252 P **P 00 45 05.2 +0.2**
comp=Z,9.5nm,1.0s,baz=116,slow=6.1,SNR=6.4
CPUP LR LR 01 10 17.4
comp=Z,163nm,21.8s,baz=157,slow=31
comp=Z,9.5nm,1.0s
LR04 Corral 71.03 232 P **P 00 45 05.4 +0.2**
LR04 IAmb IAmb 00 45 12.6
comp=Z,55nm,1.1s
RCBR Riachuelo 71.09 282 LR LR 01 08 28.5
comp=Z,421nm,20.9s,baz=278,slow=29
RAYN Ar Rayn 71.49 13 P **P 00 45 08.7 +0.7**
RAYN Ar Rayn 71.49 13 P **P 00 45 08.7 +0.7**
RAYN pmax pmax
comp=Z,25nm,1.4s
RAYN Ar Rayn 71.49 13 P **P 00 45 08.7 +0.7**
RAYN Ar Rayn 71.49 13 P **P 00 45 07.8 -0.2**
MHTO MHTO 71.78 25 P **P 00 45 09.6 -0.1**
SNR=20
BDFB Brasilia 72.22 266 LR LR 01 10 53.9
comp=Z,462nm,19.0s,baz=137,slow=31
MZR Muzera 72.52 20 P **P 00 45 14.4 +0.3**
SNR=5.5
MZR Muzera 72.52 20 *i* P **P 00 45 13.6 -0.5**
SNR=6.6
PSA00 Pilbara Seismi 72.77 103 IAmb IAmb 00 45 16.0
comp=Z,64nm,1.6s
PSA00 Pilbara Seismi 72.77 103 IAmb IAmb 00 45 16.0
comp=Z,67nm,1.8s
MBWA Marble Bar 72.99 103 P **P 00 45 16.0 -1.2**
MBWA IAmb IAmb 00 45 16.4
comp=Z,53nm,1.6s
MBWA Marble Bar 72.99 103 P **P 00 45 16.4 -0.8**
JMDO Jabal Madar 73.13 25 P **P 00 45 16.1 -1.7**
BI05 Punta Hualpn 73.17 234 P **P 00 45 17.9 -0.1**
BSY Bisya 73.23 24 P **P 00 45 18.4 0.0**
SNR=13
BO02 Sierra Bellavi 73.23 237 P **P 00 45 18.2 -0.4**
LMEL Las Melosas 73.58 238 P **P 00 45 20.9 +0.1**
LMEL IAmb IAmb 00 45 42.4
comp=Z,70nm,1.6s
WBK Wadi Bani Khal 73.61 26 P **P 00 45 21.6 +1.0**
ARQ Araqi 73.61 23 P **P 00 45 20.8 +0.2**
SMRA Abu-Samra 73.62 17 P **P 00 45 21.4 +0.8**
BO04 La Punta 73.71 237 IAmb IAmb 00 45 33.6
comp=Z,54nm,1.2s
GO05 Huala 73.73 236 P **P 00 45 20.7 -0.7**
GO05 IAmb IAmb 00 45 22.4
comp=Z,59nm,1.4s
SMDO Samad 73.76 25 P **P 00 45 21.0 -0.6**
SNR=11
KASI Kota Agung 73.84 80 P **P 00 45 21.0 -1.3**
comp=Z,49nm,1.1s
TAM Tamanrasset 73.87 334 P **P 00 45 23.4 +1.1**
TAM Tamanrasset 73.87 334 P **P 00 45 23.4 +1.1**
TAM pmax pmax
comp=Z,45nm,1.7s
KSI Kapahiang 73.95 78 P **P 00 45 22.3 -0.7**
comp=Z,12μmcomp=Z,99nm,0.8s
AQDB Aquidauana 73.98 257 P **P 00 45 23.9 +0.8**
AQDB IAmb IAmb 00 45 34.2
comp=Z,60nm,1.4s
MT03 Universidad Ad 74.01 238 P **P 00 45 23.0 -0.3**
MT03 IAmb IAmb 00 45 33.1
comp=Z,83nm,1.5s
HOQ Hoqain 74.06 24 P **P 00 45 23.2 0.0**
SNR=18
MT09 Talagante 74.08 237 IAmb IAmb 00 45 39.0
comp=Z,74nm,1.7s
MASI Maura Aman, Be 74.09 77 P **P 00 45 22.5 -1.3**
comp=Z,2μmcomp=Z,96nm,1.7s
ALNE Al Ain 74.09 22 P **P 00 45 24.3 +0.9**
SNR=5.9
WSAR Wadi Sarin 74.10 25 LR LR 01 14 38.6
comp=Z,152nm,18.1s,baz=208,slow=33
WSAR Wadi Sarin 74.10 25 P **P 00 45 24.0 +0.5**
SKJI Sukabumi 74.14 83 P **P 00 45 22.5 -1.6**
comp=Z,65nm,0.5s
MT05 Renca 74.22 238 P **P 00 45 24.4 +0.1**
MT05 IAmb IAmb 00 45 57.0
comp=Z,84nm,1.5s
BIDO Bidbid 74.22 24 P **P 00 45 25.7 +1.5**
CNJI Cibinong 74.31 84 P **P 00 45 23.9 -1.1**
comp=Z,573nmcomp=Z,43nm,1.8s
ZON Zonda 74.35 240 P **P 00 45 25.5 +0.4**
ZON Zonda 74.35 240 P **P 00 45 25.5 +0.4**
ZON pmax pmax
comp=Z,156nm,0.5s
GSI Gunungsitoli 74.39 70 P **P 00 45 25.6 +0.2**
GSI IAmb IAmb 00 45 33.1
comp=Z,85nm,1.5s
GSI Gunungsitoli 74.39 70 P **P 00 45 24.3 -1.2**
comp=Z,36nm,1.6s
SBJI Serang 74.50 82 P **P 00 45 25.3 -0.8**
comp=Z,187nm,1.2s
VA05 Santo Domingo 74.53 237 IAmb IAmb 00 45 32.9
comp=Z,80nm,1.2s
ASUD Al Ashush, Dub 74.53 22 P **P 00 45 25.5 -0.4**
VA03 San Esteban 74.56 238 P **P 00 45 26.5 0.0**
VA03 IAmb IAmb 00 45 36.5
comp=Z,68nm,1.3s
ROC1 El Roble 74.68 238 P **P 00 45 28.0 +0.7**
FAQ Al Faqa, Dubai 74.71 22 P **P 00 45 27.6 +0.6**
SAKB Bahrain 74.76 17 P **P 00 45 28.3 +1.0**
CBJI Citeko 74.77 83 P **P 00 45 26.4 -1.3**
comp=Z,11μmcomp=Z,81nm,0.9s
ASHO Ashiyiah 74.77 22 P **P 00 45 27.5 +0.1**
SNR=14
ASHO Ashiyiah 74.77 22 *i* P **P 00 45 27.0 -0.4**
SNR=11
HATD Hatta, Dubai 74.93 22 *i* P **P 00 45 27.7 -0.6**
SNR=8.9
BBOO Buckleboo 74.93 122 P **P 00 45 27.3 -1.2**
BBOO IAmb IAmb 00 45 28.4
comp=Z,83nm,1.4s
LEM Lembang 74.99 84 LR LR 01 11 53.4
comp=Z,381nm,20.9s,baz=237,slow=31
LEM Lembang 74.99 84 P **P 00 45 27.8 -1.4**
comp=Z,2μmcomp=Z,134nm,1.7s
VA06 Catapilco 75.14 238 P **P 00 45 29.1 -0.6**
SDSI Sungai Dareh 75.20 75 P **P 00 45 28.5 -1.7**
MNSI Mandailing Nat 75.30 72 P **P 00 45 29.7 -1.0**
comp=Z,34nm,0.5s
MSFE Esma-Masafi 75.44 22 P **P 00 45 29.3 -2.0**
MASF Masafi 75.45 22 P **P 00 45 29.7 -1.6**
BBTS Babate 75.62 311 LR LR 01 12 39.4
comp=Z,1μm,19.9s,baz=156,slow=31
BKNI Bangkinang 75.89 74 P **P 00 45 34.8 +0.7**
BKNI Bangkinang 75.89 74 P **P 00 45 32.8 -1.3**
comp=Z,3μmcomp=Z,79nm,0.5s
MLSI Meulaboh, Aceh 75.92 68 P **P 00 45 33.2 -1.0**
comp=Z,23nm,0.6s
CTJI Waduk Cacaban 75.92 85 P **P 00 45 33.1 -1.2**
comp=Z,48nm,1.1s
BANOM Banah 76.02 22 P **P 00 45 30.7 -3.8**
BJII Banjamegara 76.04 86 P **P 00 45 33.7 -1.4**
comp=Z,709nmcomp=Z,26nm,0.6s
CO03 El Pedregal 76.04 240 P **P 00 45 34.7 -0.3**
CO03 IAmb IAmb 00 47 33.0
comp=Z,44nm,1.1s
SHME Shamm 76.10 22 P **P 00 45 34.3 -0.7**
SHME Shamm 76.10 22 P **P 00 45 33.3 -1.6**
KCSI Kotacane, Aceh 76.21 69 P **P 00 45 34.8 -1.1**
comp=Z,4μmcomp=Z,54nm,1.6s
RPSI Rantau Prapat 76.31 71 P **P 00 45 36.6 +0.1**
RPSI IAmb IAmb 00 45 38.2
comp=Z,37nm,1.2s
PSI Prapat 76.39 70 P **P 00 45 36.6 -0.5**
PSI pmax pmax
comp=Z,37nm,1.2s
PSI Prapat 76.39 70 P **pP 00 45 35.4 -2.4**
comp=Z,30nm,1.4s,comp=Z,361nm,1.4s,comp=Z,18nm,1.4s
PSI P **P 00 45 35.3 -1.8**
comp=Z,30nm,1.4s,comp=Z,361nm,1.4s,comp=Z,18nm,1.4s
PCJI Pacitan 76.41 87 P **P 00 45 35.9 -1.2**
comp=Z,134nm,1.6s
TOO Toolangi 76.53 131 P **P 00 45 37.6 0.0**
TOO IAmb IAmb 00 45 38.6
comp=Z,59nm,1.2s
TOO Toolangi 76.53 131 P **P 00 45 37.6 0.0**
TOO pmax pmax
comp=Z,59nm,1.3s
HYBB Hyderabad (bro 76.58 45 *e*P **P 00 45 38.7 +0.8**
GO04 Tololo Observa 76.59 240 P **P 00 45 37.8 -0.5**
EIL Elat 76.66 2 LR LR 01 20 05.0
comp=Z,497nm,18.2s,baz=192,slow=36

CO06 Fray Jorge 76.72 239 P **P 00 45 38.8 +0.1**
CO06 IAmb IAmb 00 47 30.1
comp=Z,20nm,0.7s
SMRI Semarang 76.74 86 P **P 00 45 39.5 +0.4**
SMRI Semarang 76.74 86 P **P 00 45 37.9 -1.1**
comp=Z,137nm,1.8s
PWJI Pagerwojo 76.96 88 P **P 00 45 39.0 -1.2**
comp=Z,51nm,1.6s
LHMI Lhok Sumawe 77.00 67 P **P 00 45 40.5 +0.1**
LHMI Lhok Sumawe 77.00 67 P **P 00 45 39.2 -1.2**
comp=Z,156nm,1.5s
CO05 La Serena 77.04 240 P **P 00 45 40.0 -0.5**
NGJI Ngawi 77.20 87 P **P 00 45 40.3 -1.3**
AC05 El Transito 77.26 241 P **P 00 45 41.7 -0.2**
KRKI Karangkates 77.31 88 P **P 00 45 41.0 -1.1**
comp=Z,2μmcomp=Z,39nm,0.7s
LCO Las Campanas 77.38 241 P **P 00 45 43.0 +0.2**
LCO Las Campanas 77.38 241 P **P 00 45 43.0 +0.2**
LCO pmax pmax
comp=Z,141nm,0.6s
PPBI Pangkal Pinang 77.41 79 P **P 00 45 41.4 -1.3**
comp=Z,11μmcomp=Z,28nm,1.7s
DSRI Dabo 77.62 77 P **P 00 45 42.6 -1.3**
TPI Tanjungpandan 77.99 81 P **P 00 45 44.7 -1.3**
comp=Z,13nm,1.9s
AC02 Maricunga 78.03 244 P **P 00 45 46.8 +0.1**
AC02 IAmb IAmb 00 47 48.2
comp=Z,39nm,0.9s
JAGI Jajag, Banyuwa 78.24 90 P **P 00 45 46.5 -0.9**
JAGI IAmb IAmb 00 45 58.2
comp=Z,64nm,1.4s
JAGI Jajag, Banyuwa 78.24 90 P **P 00 45 46.0 -1.4**
comp=Z,31nm,1.2s
GHAJ Ghor Haditha 78.31 3 P **P 00 45 48.2 +1.0**
TPRI Tanjung Pinang 78.63 76 P **P 00 45 48.4 -1.1**
comp=Z,6μmcomp=Z,48nm,0.9s
IGBI Denpasar 78.66 91 P **P 00 45 48.6 -1.1**
comp=Z,110nm,0.5s
STKA Stephens Creek 78.76 125 P **P 00 45 48.9 -1.3**
comp=Z,19nm,0.9s,baz=220,slow=5.0,SNR=22
STKA LR LR 01 13 34.0
comp=Z,664nm,21.1s,baz=206,slow=30
comp=Z,19nm,0.9s
STKA Stephens Creek 78.76 125 P **P 00 45 48.8 -1.3**
STKA Stephens Creek 78.76 125 P **P 00 45 48.8 -1.3**
STKA pmax pmax
comp=Z,10.0nm,1.1s
ABJI Asem Bagus 78.78 89 P **P 00 45 49.0 -1.3**
comp=Z,54nm,1.5s
MYKOM Kota Tinggi 78.83 75 P **P 00 45 50.5 -0.1**
MYKOM Kota Tinggi 78.83 75 P **P 00 45 49.6 -1.0**
IPM Ipoh 79.02 71 P **P 00 45 50.6 -1.0**
IPM IAmb IAmb 00 45 55.9
comp=Z,75nm,1.8s
IPM Ipoh 79.02 71 P **P 00 45 50.7 -1.0**
comp=Z,474nmcomp=Z,21nm,1.9s
BWJI Bawean 79.11 87 P **P 00 45 50.6 -1.6**
comp=Z,137nm,1.3s
KMMI Kalianget 79.14 89 P **P 00 45 51.0 -1.3**
comp=Z,55nm,1.8s
KULM Kulim 79.39 70 P **P 00 45 53.3 -0.4**
KULM Kulim 79.39 70 P **P 00 45 52.5 -1.2**
comp=Z,30nm,1.4s
AC01 Pan de Azucar 79.42 243 P **P 00 45 53.5 -0.2**
PBA Port Blair 79.47 60 P **P 00 45 53.0 -1.0**
GO02 Mina Guanaco 79.53 244 P **P 00 45 55.2 +0.4**
KLNI Mataram 79.59 91 P **P 00 45 53.2 -1.6**
comp=Z,3μmcomp=Z,24nm,1.1s
SACV Santiago Islan 79.66 305 P **P 00 45 55.7 +0.7**
SACV IAmb IAmb 00 48 07.8
comp=Z,66nm,1.4s
TWSI Taliwang, Sumb 79.90 92 P **P 00 45 55.0 -1.5**
comp=Z,40nm,1.9s
CAN Canberra 80.06 132 IAmb IAmb 00 45 58.5
comp=Z,81nm,1.6s
ASAR Alice Springs 80.32 114 P **P 00 45 56.6 -2.1**
comp=Z,16nm,0.9s,baz=215,slow=5.6,SNR=70
ASAR LR LR 01 14 54.3
comp=Z,531nm,19.7s,baz=190,slow=31
comp=Z,16nm,0.9s
PLAI Plampang 80.44 93 P **P 00 45 58.2 -1.2**
comp=Z,50nm,1.6s
SIV San Ignacio 80.74 257 LR LR 01 15 56.7
comp=Z,350nm,19.9s,baz=115,slow=31
PB15 IPOC Station P 80.89 246 IAmb IAmb 00 46 12.7
comp=Z,37nm,1.0s
LVC Limon Verde 80.98 247 LR LR 01 17 05.0
comp=Z,99nm,20.1s,baz=162,slow=32
LVC Limon Verde 80.98 247 P **P 00 46 03.2 +0.6**
LVC Limon Verde 80.98 247 P **P 00 46 03.3 +0.6**
LVC pmax pmax
comp=Z,32nm,1.0s
SRIT Nakonsritamara 81.26 67 P **P 00 46 03.5 -0.2**
SRIT IAmb IAmb 00 46 04.3
comp=Z,84nm,1.5s
PB06 IPOC Station P 81.32 246 P **P 00 46 03.6 -0.6**
PB06 IAmb IAmb 00 46 13.0
comp=Z,70nm,1.4s
PB10 IPOC Station P 81.34 245 P **P 00 46 04.4 +0.3**
PB10 IAmb IAmb 00 46 12.1
comp=Z,75nm,1.5s
PB09 IPOC Station P 81.79 247 P **P 00 46 06.2 -0.5**
PB09 IAmb IAmb 00 48 42.2
comp=Z,44nm,1.2s
CSS Mathiatis 81.91 1 P **P 00 46 08.4 +1.8**
PB03 IPOC Station P 81.92 246 P **P 00 46 07.5 +0.1**
PB03 IAmb IAmb 00 46 15.3
comp=Z,44nm,1.3s
PB04 IPOC Station P 81.96 246 P **P 00 46 08.1 +0.5**
PB04 IAmb IAmb 00 46 15.7
comp=Z,60nm,1.4s
PB07 IPOC Station P 82.24 246 P **P 00 46 09.4 +0.2**
PB07 IAmb IAmb 00 46 17.9
comp=Z,65nm,1.5s
RPZ Rata Peaks 82.28 151 LR LR 01 20 19.6
comp=Z,484nm,19.1s,baz=223,slow=34
RPZ Rata Peaks 82.28 151 P **P 00 46 08.3 -0.5**
BBKI Banjar Baru 82.33 87 P **P 00 46 08.3 -1.1**
PB01 IPOC Station P 82.50 247 P **P 00 46 10.7 +0.3**
PB01 IAmb IAmb 00 48 45.1
comp=Z,29nm,1.0s
PB02 IPOC Station P 82.55 247 P **P 00 46 10.9 +0.3**
PB02 IAmb IAmb 00 48 45.3
comp=Z,43nm,1.2s
KARP Karpathos 82.62 356 P **P 00 46 11.8 +1.5**
MQZ McQueen's Vall 82.81 152 P **P 00 46 10.6 -0.9**
KNRA Kununurra 82.86 105 P **P 00 46 11.4 -0.8**
KNRA IAmb IAmb 00 46 12.5
comp=Z,82nm,1.5s
KSM Kuching 82.89 80 P **P 00 46 10.9 -1.4**
comp=Z,768nmcomp=Z,30nm,2.0s
PB08 IPOC Station P 82.95 248 P **P 00 46 13.3 +0.2**
PB08 IAmb IAmb 00 48 50.7
comp=Z,29nm,1.2s
PATCX Punta Patache 83.08 247 P **P 00 46 14.1 +0.8**
PATCX IAmb IAmb 00 46 21.5
comp=Z,52nm,1.4s
AKAS Kas 83.21 358 P **P 00 46 14.4 +0.9**
ARG Arkhangelos 83.24 357 P **P 00 46 14.4 +0.9**
ARG Arkhangelos 83.24 357 P **P 00 46 14.4 +0.9**
ARG pmax pmax
comp=Z,122nm,1.5s
TA01 Diego Aracena 83.28 247 P **P 00 46 14.3 0.0**
TA01 IAmb IAmb 00 46 27.8
comp=Z,41nm,1.2s
GO01 Chusmiza 83.33 248 P **P 00 46 15.0 -0.1**
GO01 IAmb IAmb 00 48 53.8
comp=Z,30nm,0.8s
WRA Warramunga Arr 83.33 112 P **P 00 46 12.5 -2.1**
comp=Z,17nm,1.1s,baz=220,slow=4.2,SNR=53
WRA LR LR 01 17 26.5
comp=Z,882nm,19.9s,baz=225,slow=32
comp=Z,17nm,1.1s
WRAB Tennant Creek 83.35 112 P **P 00 46 13.2 -1.5**
WRAB pmax pmax
comp=Z,56nm,1.3s
BATI Baumata 83.44 98 P **P 00 46 14.0 -1.2**
comp=Z,22nm,0.6s
WR0 Warramunga Arr 83.45 112 IAmb IAmb 00 46 14.5
comp=Z,50nm,1.4s
WB0 Warramunga Arr 83.50 112 IAmb IAmb 00 46 14.8
comp=Z,48nm,1.3s
PB11 IPOC Station P 83.55 248 P **P 00 46 16.3 +0.4**
MMRI Maumere 83.61 96 P **P 00 46 15.5 -0.6**
MMRI Maumere 83.61 96 P **P 00 46 14.6 -1.5**
comp=Z,91nm,0.8s

ELL	**Elmali**	**83.72**	**358**	P	**P**	**00 46 17.4**	**+1.4**
ELL	**Elmali**	**83.72**	**358**	P	**P**	**00 46 17.5**	**+1.4**
SOEI	**Soe**	**84.17**	**98**	P	**P**	**00 46 19.2**	**+0.1**
SOEI	**Soe**	**84.17**	**98**	P	**P**	**00 46 17.6**	**-1.5**
	comp=Z,46µmcomp=Z,9µmcomp=Z,61nm,0.5s						
GAZ	**Gaziantep**	**84.22**	**4**	P	**P**	**00 46 19.7**	**+1.1**
BSSI	**Bau Bau, Buton**	**84.23**	**93**	P	**P**	**00 46 17.2**	**-2.0**
	comp=Z,15nm,1.9s						
PB16	**IPOC Station P**	**84.51**	**249**	P	**P**	**00 46 21.3**	**0.0**
PB16				IAmb	IAmb	00 46 30.3	
	comp=Z,47nm,1.5s						
KAPI	**Kappang**	**84.55**	**91**	P	**P**	**00 46 20.1**	**-0.7**
KAPI				IAmb	IAmb	00 46 21.0	
	comp=Z,75nm,1.7s						
KAPI	**Kappang**	**84.55**	**91**	P	**P**	**00 46 20.1**	**-0.7**
KAPI				pmax	pmax		
	comp=Z,75nm,1.7s						
KAPI	**Kappang**	**84.55**	**91**	P	**P**	**00 46 18.8**	**-2.0**
	comp=Z,426nmcomp=Z,22nm,1.8s						
BKSI	**Bulukumba**	**84.58**	**92**	P	**P**	**00 46 19.1**	**-1.9**
	comp=Z,986nmcomp=Z,40nm,1.6s						
MARD	**Mardin**	**84.58**	**7**	P	**P**	**00 46 22.4**	**+1.9**
MARD				IAmb	IAmb	00 46 24.5	
	comp=Z,52nm,2.0s						
ISP	**Isparta**	**84.78**	**359**	P	**P**	**00 46 22.2**	**+0.8**
ISP	**Isparta**	**84.78**	**359**	P	**P**	**00 46 22.2**	**+0.8**
ISP				pmax	pmax		
	comp=Z,130nm,1.8s						
PB12	**IPOC Station P**	**84.82**	**248**	P	**P**	**00 46 22.3**	**0.0**
SBUM	**Sibu**	**84.89**	**81**	P	**P**	**00 46 20.9**	**-1.6**
	comp=Z,258nmcomp=Z,13nm,1.5s						
LPAZ	**La Paz**	**85.14**	**251**	P	**P**	**00 46 24.8**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=91,slow=4.1,SNR=9.2						
LPAZ				LR	LR	01 21 15.7	
	comp=Z,242nm,18.9s,baz=115,slow=33						
	comp=Z,3.1nm,0.9s						
LPAZ	**La Paz**	**85.14**	**251**	P	**P**	**00 46 24.9**	**+0.4**
LPAZ				IAmb	IAmb	00 49 16.4	
	comp=Z,28nm,0.8s						
LPAZ	**La Paz**	**85.14**	**251**	P	**P**	**00 46 25.0**	**+0.4**
LPAZ				pmax	pmax		
	comp=Z,28nm,0.8s						
KEST	**Kesra**	**85.22**	**341**	P	**P**	**00 46 23.4**	**-0.3**
	comp=Z,6.7nm,0.9s,baz=118,slow=2.8,SNR=4.0						
KEST				LR	LR	01 24 31.5	
	comp=Z,943nm,21.0s,baz=137,slow=36						
	comp=Z,6.7nm,0.9s						
KEST	**Kesra**	**85.22**	**341**	P	**P**	**00 46 24.1**	**+0.4**
BNSI	**Bone**	**85.23**	**91**	P	**P**	**00 46 23.2**	**-1.1**
	comp=Z,15nm,1.9s						
TUWZ	**Tuamarina**	**85.27**	**152**	P	**P**	**00 46 22.9**	**-1.2**
ARMA	**Armidale**	**85.28**	**131**	P	**P**	**00 46 23.5**	**-1.0**
ARMA				IAmb	IAmb	00 46 25.4	
	comp=Z,54nm,1.6s						
SPSI	**Sidrap Palu**	**85.32**	**91**	P	**P**	**00 46 23.7**	**-1.0**
	comp=Z,838nmcomp=Z,13nm,1.2s						
MANT	**Manisa**	**85.50**	**357**	P	**P**	**00 46 27.7**	**+2.6**
HRA	**Herat**	**85.63**	**24**	IAmb	IAmb	00 46 27.3	
	comp=Z,75nm,1.9s						
GEVA	**Gevas**	**85.78**	**8**	P	**P**	**00 46 28.0**	**+1.4**
GEVA				IAmb	IAmb	00 46 36.4	
	comp=Z,52nm,1.3s						
BNN	**Bunyan**	**85.84**	**3**	P	**P**	**00 46 27.3**	**+0.5**
VAE	**Valguarnera**	**85.94**	**346**	LR	LR	01 26 54.5	
	comp=Z,2µm,18.0s,baz=164,slow=37						
BBSI	**Bau Bau**	**86.12**	**94**	P	**P**	**00 46 27.5**	**-1.2**
	comp=Z,1µmcomp=Z,13nm,0.8s						
MDT	**Midelt**	**86.43**	**329**	LR	LR	01 25 39.0	
	comp=Z,437nm,18.8s,baz=158,slow=36						
BR131	**Keskin Array S**	**86.67**	**1**⇑	*e*P	**P**	**00 46 31.0**	**+0.2**
BR131	**Keskin Array S**	**86.67**	**1**	P	**P**	**00 46 31.2**	**+0.4**
	SNR=6.3						
BRTR	**Keskin Array B**	**86.67**	**1**	P	**P**	**00 46 30.5**	**-0.3**
	comp=Z,5.1nm,0.9s,baz=179,slow=6.6,SNR=22						
	comp=Z,5.1nm,0.9s						
BRTR	**Keskin Array B**	**86.67**	**1**	*c*e*P*	**P**	**00 46 30.8**	**0.0**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BR231	**Keskin MP Arra**	**86.78**	**0**	P	**P**	**00 46 31.7**	**+0.4**
ANTO	**Ankara**	**86.80**	**0**	P	**P**	**00 46 32.7**	**+1.3**
ANTO	**Ankara**	**86.80**	**0**	P	**P**	**00 46 32.7**	**+1.3**
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
BORA	**Eskisehir**	**86.83**	**358**	P	**P**	**00 46 33.2**	**+1.6**
BORA				IAmb	IAmb	00 46 35.0	
	comp=Z,30nm,1.0s						
KOPT	**Kop Dagi**	**87.25**	**6**	P	**P**	**00 46 34.8**	**+0.9**
KOPT				IAmb	IAmb	00 46 43.0	
	comp=Z,37nm,1.3s						
TOKA	**Tokat**	**87.33**	**3**	P	**P**	**00 46 34.6**	**+0.7**
TOKA				IAmb	IAmb	00 46 47.0	
	comp=Z,53nm,2.0s						
MDUB	**Mudurnu**	**87.41**	**359**	P	**P**	**00 46 35.2**	**+0.9**
GNI	**Garni**	**87.77**	**9**	P	**P**	**00 46 36.8**	**+0.6**
GNI				IAmb	IAmb	00 48 09.3	
	comp=Z,42nm,1.6s						
GNI	**Garni**	**87.77**	**9**⇑	*e*P	**P**	**00 46 37.8**	**+1.6**
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
KBL	**Kabul**	**87.87**	**30**	P	**P**	**00 46 36.7**	**-0.2**
KBL	**Kabul**	**87.87**	**30**	P	**P**	**00 46 36.7**	**-0.2**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GEYT	**Alibeck**	**87.92**	**20**	P	**P**	**00 46 37.0**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=212,slow=5.3,SNR=17						
	comp=Z,5.1nm,0.9s						
GEYT	**Alibeck**	**87.92**	**20**	P	**P**	**00 46 37.0**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**87.92**	**20**	IAmb	IAmb	00 46 45.3	
	comp=Z,64nm,1.8s						
ILGA	**Ilgaz**	**87.99**	**1**	P	**P**	**00 46 38.5**	**+1.2**
KARS	**Kars**	**88.07**	**8**	P	**P**	**00 46 39.5**	**+1.9**
KARS	**Kars**	**88.07**	**8**	P	**P**	**00 46 39.5**	**+1.9**
KARS				pmax	pmax		
	comp=Z,307nm,1.9s						
RDO	**Rodhopi**	**88.29**	**355**	P	**P**	**00 46 39.3**	**+0.9**
RDO				IAmb	IAmb	00 46 41.3	
	comp=Z,51nm,1.6s						
CM31	**Chiang Mai Arr**	**88.48**	**61**	P	**P**	**00 46 39.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**88.48**	**61**	P	**P**	**00 46 39.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=232,slow=5.1,SNR=14						
CMAR				LR	LR	01 21 08.9	
	comp=Z,65nm,18.1s,baz=225,slow=32						
	comp=Z,1.1nm,0.3s						
MPSI	**Mapaga**	**88.54**	**88**	P	**P**	**00 46 39.0**	**-1.4**
	comp=Z,8.4nm,1.3s						
NIL	**Nilore**	**88.56**	**33**	P	**P**	**00 46 40.5**	**+0.6**
NIL	**Nilore**	**88.56**	**33**	P	**P**	**00 46 40.5**	**+0.6**
NIL				pmax	pmax		
	comp=Z,17nm,1.2s						
CHTO	**Chiang Mai**	**88.76**	**60**	P	**P**	**00 46 40.7**	**-0.5**
CHTO	**Chiang Mai**	**88.76**	**60**	P	**P**	**00 46 40.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
EIDS	**Eidsvold**	**89.03**	**127**	IAmb	IAmb	00 46 42.7	
	comp=Z,56nm,1.9s						
URZ	**Urewera**	**89.16**	**153**	LR	LR	01 23 39.4	
	comp=Z,597nm,19.7s,baz=294,slow=34						
AKT	**Akhty**	**89.45**	**11**	*e*P	**P**	**00 46 45.4**	**+1.4**
AKT				*e*		00 50 17.6	
AKT				pmax	pmax		
	comp=Z,33nm,1.3s						
LUWI	**Luwuk**	**89.49**	**91**	P	**P**	**00 46 44.9**	**0.0**
LUWI	**Luwuk**	**89.49**	**91**	P	**P**	**00 46 43.8**	**-1.0**
	comp=Z,2µmcomp=Z,34nm,1.9s						
CART	**Cartagena**	**89.65**	**334**	P	**P**	**00 46 46.3**	**+1.4**
CART				IAmb	IAmb	00 47 58.1	
	comp=Z,33nm,1.1s						
TOLI2	**Tolitoli**	**89.70**	**88**	P	**P**	**00 46 44.9**	**-1.0**
VTS	**Vitosha**	**89.92**	**353**	⇓P	**P**	**00 46 48.8**	**+2.6**
UBPT	**Khong Chiam**	**90.04**	**67**	P	**P**	**00 46 46.8**	**-0.4**
UBPT				IAmb	IAmb	00 46 48.0	
	comp=Z,48nm,1.7s						
ONI	**Oni**	**90.05**	**8**	P	**P**	**00 46 48.3**	**+1.5**
ONI	**Oni**	**90.05**	**8**	P	**P**	**00 46 48.3**	**+1.5**
ONI				pmax	pmax		
	comp=Z,20nm,1.4s						
ZEI	**Tsey**	**90.29**	**8**	*e*P	**P**	**00 46 48.7**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDP	**Montagnes des**	**90.36**	**277**	LR	LR	01 20 45.9	
	comp=Z,254nm,21.2s,baz=144,slow=31						
INTR	**Introdacqua**	**90.44**	**346**	P	**P**	**00 46 49.7**	**+1.1**
INTR				IAmb	IAmb	00 48 11.4	
	comp=Z,28nm,0.7s						
CTA	**Charters Tower**	**90.48**	**121**	LR	LR	01 23 16.6	
	comp=Z,554nm,18.2s,baz=244,slow=33						
SOC	**Sochi**	**90.74**	**5**	*e*P	**P**	**00 46 50.4**	**+0.6**
SOC				*e*		00 50 29.4	
SOC				*e*S	S	00 57 21.9	-24
SOC				*e*SSS	SSS	01 07 32.3	
SOC				pmax	pmax		
	comp=Z,14nm,0.9s						
MAK	**Makhachkala**	**90.88**	**11**	*e*P	**P**	**00 46 46.1**	**-4.4**
MAK				*e*		00 50 24.5	
SANI	**Sanana**	**90.94**	**94**	P	**P**	**00 46 50.4**	**-1.2**
	comp=Z,1µmcomp=Z,38nm,1.9s						
BLKB	**Belogradchik**	**90.96**	**353**	⇓P	**P**	**00 46 52.1**	**+1.2**
NCK	**Nalchik**	**90.97**	**8**⇓	*i* P	**P**	**00 46 53.1**	**+2.2**
NCK				pmax	pmax		
	comp=Z,25nm,1.4s						
BOVS	**Bovan**	**91.06**	**352**	⇓P	**P**	**00 46 52.8**	**+1.5**
MYLDM	**Lahad Datu**	**91.12**	**84**	P	**P**	**00 46 51.6**	**-0.8**
MYLDM				IAmb	IAmb	00 46 57.1	
	comp=Z,46nm,1.4s						
KBZ	**Khabaz**	**91.13**	**8**	P	**P**	**00 46 52.5**	**+0.9**
	comp=Z,8.5nm,1.0s,baz=251,slow=3.4,SNR=12						
KBZ				LR	LR	01 27 50.3	
	comp=Z,282nm,20.1s,baz=186,slow=36						
	comp=Z,8.5nm,1.0s						
KBZ	**Khabaz**	**91.13**	**8**	*c i* P	**P**	**00 46 53.3**	**+1.7**
KBZ				pmax	pmax		
	comp=Z,23nm,1.3s						
KIV	**Kislovodsk**	**91.34**	**7**	⇑P	**P**	**00 46 54.4**	**+1.7**
KIV	**Kislovodsk**	**91.34**	**7**	P	**P**	**00 46 53.0**	**+0.3**
KIV				IAmb	IAmb	00 46 55.8	
	comp=Z,29nm,1.3s						
KIV	**Kislovodsk**	**91.34**	**7**	*e*P	**P**	**00 46 54.1**	**+1.4**
KIV				*e*		00 57 26.1	
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				pmax	pmax		
	comp=Z,29nm,3.8s						
KIV				MLR	MLR		
	comp=Z,184nm,20.0s						
KIV	**Kislovodsk**	**91.34**	**7**	P	**P**	**00 46 53.7**	**+1.0**
KIV	**Kislovodsk**	**91.34**	**7**	P	**P**	**00 46 51.3**	**-1.4**
KVAR	**Kislovodsk Arr**	**91.34**	**7**	LR	LR	01 28 28.2	
	comp=Z,202nm,18.0s,baz=95,slow=36						
KRAI	**Karang Ratu**	**91.65**	**97**	P	**P**	**00 46 52.9**	**-2.0**
	comp=Z,10.0nm,1.0s						
DIVS	**Divibare**	**91.69**	**351**	P	**P**	**00 46 55.3**	**+0.9**
DIVS				IAmb	IAmb	00 47 03.6	
	comp=Z,30nm,1.5s						
HUMR	**Humele**	**91.69**	**355**	⇑P	**P**	**00 46 56.2**	**+2.0**
MSAI	**Masohi**	**91.99**	**97**	P	**P**	**00 46 54.9**	**-1.6**
MDVR	**Moldovita**	**92.19**	**352**	⇓P	**P**	**00 46 58.3**	**+1.7**
HERR	**Herculane**	**92.23**	**353**	⇓P	**P**	**00 46 58.0**	**+1.3**
GAR	**Garm**	**92.35**	**29**	P	**P**	**00 46 59.3**	**+1.7**
ESDC	**Sonseca Array**	**92.47**	**333**	P	**P**	**00 46 59.6**	**+1.6**
	comp=Z,2.7nm,1.0s,baz=158,slow=4.2,SNR=14						
ESDC				LR	LR	01 30 09.9	
	comp=Z,712nm,18.2s,baz=146,slow=37						
	comp=Z,2.7nm,1.0s						
ESDC	**Sonseca Array**	**92.47**	**333**	P	**P**	**00 46 59.7**	**+1.6**
ESDC				IAmb	IAmb	00 47 07.6	
	comp=Z,28nm,1.6s						
ESBB	**Sonseca Array**	**92.47**	**333**	P	**P**	**00 47 00.1**	**+2.1**
ESBB				IAmb	IAmb	00 47 07.7	
	comp=Z,36nm,1.8s						
ARR	**Arges**	**92.55**	**355**	⇓P	**P**	**00 46 59.3**	**+1.0**
VOIR		**92.59**	**355**	⇓P	**P**	**00 46 59.2**	**+0.7**
MLR	**Muntele Rosu**	**92.59**	**355**	⇓P	**P**	**00 46 59.6**	**+1.0**
MLR	**Muntele Rosu**	**92.59**	**355**	LR	LR	01 30 57.9	
	comp=Z,495nm,19.4s,baz=208,slow=37						
MLR	**Muntele Rosu**	**92.59**	**355**	IAmb	IAmb	00 47 00.8	
	comp=Z,22nm,1.2s						
LOT	**Lotru**	**92.69**	**354**	⇓P	**P**	**00 47 00.9**	**+1.9**
GZR	**Gura Zlata**	**92.71**	**353**	⇑P	**P**	**00 46 59.9**	**+0.9**
FRGS	**Fruska Gora**	**92.75**	**351**	⇑P	**P**	**00 47 01.0**	**+1.8**
PLOR	**Plostina**	**92.92**	**356**	⇓P	**P**	**00 47 00.3**	**+0.4**
VRI	**Vrincioaia**	**92.93**	**356**	⇓P	**P**	**00 47 00.6**	**+0.7**
LSA	**Lhasa**	**93.10**	**48**	P	**P**	**00 47 00.9**	**-0.8**
LSA				IAmb	IAmb	00 47 03.1	
	comp=Z,17nm,1.2s						
LSA	**Lhasa**	**93.10**	**48**	P	**P**	**00 47 00.9**	**-0.8**
LSA				pmax	pmax		
	comp=Z,17nm,1.2s						
DEV	**Deva**	**93.19**	**353**	⇓P	**P**	**00 47 02.9**	**+1.8**
SIRR	**Siria**	**93.67**	**353**	⇑P	**P**	**00 47 04.4**	**+1.0**
PRMA	**PARMA**	**93.73**	**344**	P	**P**	**00 47 05.3**	**+1.7**
PRMA				IAmb	IAmb	00 47 06.8	
	comp=Z,26nm,1.1s						
NNA	**Nana**	**93.91**	**248**	LR	LR	01 22 33.2	
	comp=Z,48nm,20.8s,baz=140,slow=31						
NNA	**Nana**	**93.91**	**248**⇓	*e*P	**P**	**00 47 05.7**	**+0.3**
NNA				pmax	pmax		
	comp=Z,28nm,1.1s						
MORH	**Mrgy, Hungar**	**93.92**	**350**	⇓P	**P**	**00 47 05.9**	**+1.5**
TNTI	**Ternate**	**93.94**	**93**	P	**P**	**00 47 05.7**	**+0.3**
TNTI				IAmb	IAmb	00 47 48.1	
	comp=Z,22nm,0.8s						
CJR	**Cluj-Napoca**	**93.96**	**354**	⇑P	**P**	**00 47 06.9**	**+2.2**
DRGR		**94.11**	**353**	⇓P	**P**	**00 47 06.6**	**+1.2**
OBKA	**Obir**	**94.74**	**348**	*e*P	**P**	**00 47 11.1**	**+2.8**
	comp=Z,4.8nm,0.7s						
CTI	**Castel Tesino**	**94.74**	**346**	P	**P**	**00 47 09.7**	**+1.3**
CTI				IAmb	IAmb	00 47 21.0	
	comp=Z,29nm,1.8s						
CTI	**Castel Tesino**	**94.74**	**346**	P	**P**	**00 47 09.7**	**+1.3**
CTI				pmax	pmax		
	comp=Z,29nm,1.8s						
BURAR	**Bucovina Array**	**94.75**	**355**	⇑P	**P**	**00 47 09.6**	**+1.2**
BURAR	**Bucovina Array**	**94.75**	**355**	P	**P**	**00 47 09.6**	**+1.2**
STAL	**STALIGIAL**	**94.78**	**346**	P	**P**	**00 47 10.1**	**+1.6**
STAL				IAmb	IAmb	00 47 17.9	
	comp=Z,26nm,1.5s						
SOKA	**Soboth**	**94.84**	**348**	*i* P	**P**	**00 47 11.5**	**+2.7**
	comp=Z,1.1nm,0.2s						
CLUD	**Cludinico**	**94.94**	**347**	P	**P**	**00 47 10.7**	**+1.5**
CLUD				IAmb	IAmb	00 47 12.8	
	comp=Z,14nm,1.1s						
ABTA	**Abfaltersbach**	**95.28**	**346**	*i* P	**P**	**00 47 13.6**	**+2.7**
	comp=Z,1.0nm,0.4s						
ARSA	**Arzberg**	**95.33**	**349**	*e*P	**P**	**00 47 13.9**	**+2.9**
	comp=Z,3.4nm,0.8s						
SIJI	**Sorong**	**95.38**	**97**	LR	LR	01 26 16.7	
	comp=Z,69nm,18.2s,baz=27,slow=33						
QIZ	**Qiongzhong**	**95.59**	**68**	P	**P**	**00 47 13.8**	**+1.0**
QIZ				S	**S**	**00 58 29.8**	**-0.6**
QIZ				LR	LR		
	comp=Z,190nm,14.7s						
QIZ				LR	LR		
	comp=Z,150nm,19.0s						
QIZ				LR	LR		
	comp=Z,230nm,19.6s						
DAVOX	**Davos/Dischmat**	**95.76**	**345**	LR	LR	01 33 45.4	
	comp=Z,849nm,19.3s,baz=168,slow=38						
FETA	**Feichten**	**95.84**	**345**	*e*P	**P**	**00 47 15.9**	**+2.4**
	comp=Z,3.2nm,0.9s						
KMI	**Kunming**	**95.84**	**59**	⇓P	**P**	**00 47 14.3**	**+0.2**
KMI				pP	pwP	00 47 18.3	+0.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				LR	LR		
	comp=Z,170nm,16.8s						
KMI				LR	LR		
	comp=Z,140nm,17.1s						
KMI				LR	LR		
	comp=Z,200nm,20.4s						
CONA	**Conrad Observa**	**95.95**	**349**	*i* P	**P**	**00 47 16.7**	**+2.9**
	comp=Z,0.1nm,0.2s						
UZH	**Uzhgorod**	**95.97**	**353**	*e*P	**P**	**00 47 13.8**	**0.0**
MOA	**Molln**	**96.09**	**348**	*e*P	**P**	**00 47 17.1**	**+2.6**
	comp=Z,2.2nm,0.7s						
KK31	**Karatay Array**	**96.13**	**27**	P	**P**	**00 47 15.1**	**+0.4**
KK31	**Karatay Array**	**96.13**	**27**	P	**P**	**00 47 15.1**	**+0.4**
KK31				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KKAR	**Karatay Array**	**96.13**	**27**	P	**P**	**00 47 14.8**	**+0.1**
KKAR	**Karatay Array**	**96.13**	**27**	P	**P**	**00 47 14.8**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VYHS	**Vyhne**	**96.15**	**351**	*e*P	**P**	**00 47 16.4**	**+1.7**
RETA	**Reutte**	**96.29**	**345**	*i* P	**P**	**00 47 18.0**	**+2.6**
	comp=Z,1.2nm,0.5s						
PZH	**PanZhiHua**	**96.32**	**58**	P	**P**	**00 47 20.0**	**+3.9**
PZH				S	**S**	**00 58 36.3**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
PZH				LR	LR		
	comp=Z,350nm,20.6s						
PZH				LR	LR		
	comp=Z,410nm,19.0s						
PZH				LR	LR		
	comp=Z,350nm,18.6s						
AAK	**Ala-Archa**	**97.00**	**30**		Pdif	00 47 20.0	+1.0
AAK				IAmb	IAmb	00 47 36.6	
	comp=Z,17nm,1.9s						
AAK	**Ala-Archa**	**97.00**	**30**	P	Pdif	00 47 20.0	+1.0
AAK				pmax	pmax		
	comp=Z,17nm,1.9s						
GERES	**GERESS Array B**	**97.14**	**348**	LR	LR	01 35 03.8	
	comp=Z,477nm,18.8s,baz=167,slow=38						
VRAC	**Vranov**	**97.21**	**350**	LR	LR	01 35 42.6	
	comp=Z,333nm,18.4s,baz=184,slow=38						
DAV	**Davao City (W)**	**97.30**	**88**	LR	LR	01 29 20.4	
	comp=Z,121nm,18.4s,baz=174,slow=34						
AKASG	**Malin Array Be**	**97.67**	**358**	P	Pdif	00 47 22.4	+0.9
	comp=Z,0.1nm,0.3s,baz=183,slow=3.7,SNR=4.1						
AKASG				LR	LR	01 32 34.2	
	comp=Z,202nm,21.8s,baz=225,slow=36						
	comp=Z,0.1nm,0.3s						
AKASG	**Malin Array Be**	**97.67**	**358**	*c e*P		Pdif	00 47 22.6	+1.1
RPN	**Rapa Nui**	**98.27**	**214**	LR	LR	01 22 01.6	
	comp=Z,242nm,19.6s,baz=126,slow=30						
ATAH	**Atahualpa**	**98.59**	**250**	LR	LR	01 28 35.0	
	comp=Z,157nm,21.9s,baz=126,slow=33						
PMG	**Port Moresby**	**99.33**	**115**	LR	LR	01 27 02.2	
	comp=Z,622nm,20.2s,baz=213,slow=32						
DZM	**Mont Dzumac**	**99.50**	**137**	*e*LR	LR	01 19 51.4	
	comp=Z,472nm,22.8s						
DZM	**Mont Dzumac**	**99.50**	**137**	LR	LR	01 26 46.5	
	comp=Z,259nm,18.1s,baz=217,slow=32						
GOMU	**GeErMu**	**100.14**	**47**	P	**Pdif**	**00 47 37.3**	**+3.9**
GOMU				AMB	AMB		
	comp=Z,77nm,4.4s						
GOMU				LR	LR		
	comp=Z,140nm,16.7s						
GOMU				LR	LR		
	comp=Z,160nm,15.5s						
GOMU				LR	LR		
	comp=Z,190nm,18.2s						
CD2	**Chengdu**	**100.81**	**56**	P	**Pdif**	**00 47 36.8**	**+0.7**
MNK	**Minsk**	**101.51**	**357**	*i* P	**Pdif**	**00 47 43.4**	**+5.0**
MNK				*i*		00 51 53.9	
MNK				*i* PPP	PPP	00 54 02.8	
MNK				*i* S	**SKSac**	**00 58 22.9**	**+5.2**
MNK				*i* PS	**PS**	**01 00 59.1**	**+7.2**
MNK				*i* SS	**SS**	**01 06 29.1**	**+7.5**
MNK				*i* SSS	SSS	01 10 21.4	
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,107nm,13.0s						
MNK				MLR	MLR		
	comp=E,117nm,15.0s						
MNK				MLR	MLR		
	comp=N,1µm,15.0s						
MNK	**Minsk**	**101.51**	**357**	*i* P	**Pdif**	**00 47 43.5**	**+5.0**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**Pdif**	**00 47 43.5**	**+5.0**
	comp=N,21nm,0.8s						
MNK				*i* P	**Pdif**	**00 47 43.5**	**+5.0**
	comp=Z,6.0nm,0.8s,baz=177						
MNK				*i* PP	**PP**	**00 51 54.0**	**+4.9**
MNK				*i* PPP	PPP	00 54 02.9	
MNK				*i* S	**SKSac**	**00 58 22.9**	**+5.2**
MNK				*i* PS	**PS**	**01 00 59.2**	**+7.2**
MNK				*i* SS	**SS**	**01 06 29.1**	**+7.5**
MNK				*i* SSS	SSS	01 10 21.5	
MNK				*i* LQ	LQ	01 27 18.5	
MNK				*i* LR	LR	01 33 00.6	
MNK				*i* LRM	MLR	01 34 05.9	
	comp=Z,107nm,13.4s						
MNK				*i* LRM	MLR	01 34 10.9	
	comp=E,117nm,14.7s						
MNK				*i* LRM	MLR	01 34 15.3	
	comp=N,1µm,14.7s						
TBI	**Tubuai**	**109.65**	**178**	*e*LR	LR	01 24 34.0	
	comp=N,5µm,25.5s						
TBI				*e*LR	LR	01 24 34.2	
	comp=N,18µm,24.0s						
ZALV	**Zalesovo Beam**	**110.23**	**30**	PKKPbc	PKKPbc	01 03 20.2	+0.4
	comp=N,1.8nm,0.2s,baz=64,slow=3.4,SNR=11						
HHC	**Hu-ho-hao-te**	**112.36**	**54**	*e*PKP	**PKiKP**	**00 52 20.0**	**-3.0**
SONM	**Songino Array**	**114.52**	**45**	PKKPbc	PKKPbc	01 03 05.6	+0.3
	comp=N,0.8nm,0.7s,baz=54,slow=1.1,SNR=3.6						
PPT2	**Papeete2**	**115.37**	**178**	*e*LR	LR	01 27 13.6	
	comp=N,1µm,24.0s						
PPT2				*e*LR	LR	01 27 14.0	
	comp=N,2µm,24.0s						
CN2	**Changchun**	**122.11**	**59**	*e*PKP	**PKiKP**	**00 52 43.0**	**+1.3**
NRIK	**Noril'sk**	**123.17**	**20**⇓	*i*PKIKP	**PKiKP**	**00 52 46.4**	**+3.4**
TAOE	**Nuku Hiva Isla**	**123.69**	**189**	*e*LR	LR	01 31 05.4	
	comp=N,443nm,24.0s						
MCWV	**Mont Chateau**	**131.66**	**287**	P	**PKiKP**	**00 53 00.6**	**-0.3**
	baz=123						
P52A	**Corning**	**133.14**	**286**	P	**PKiKP**	**00 53 03.3**	**-0.5**
	baz=122						
T50A	**Nancy**	**133.52**	**281**		**PKiKP**	**00 53 05.8**	**+1.1**
U49A	**Red Boiling Sp**	**133.87**	**280**	PKPdf	**PKP

BNM	Barren Site	146.68	262		PKPbc	00 53 29.4 +0.1
319A	Douglas	146.75	255		PKPbc	00 53 29.6 +0.2
T25A	Trinidad	146.83	268		PKPbc	00 53 29.2 -0.5
T25A	Trinidad	146.83	268	P	PKPbc	00 53 29.8 +0.2
	baz=122					
Y22D	IRIS PASSCAL I	146.83	261	P	PKPbc	00 53 30.2 +0.6
	baz=126					
Y22F	Passcal Instru	146.83	261	P	PKPab	00 53 30.4 -0.5
	baz=126					
LENM	Lemitar	146.92	261		PKPab	00 53 30.8 -0.5
ANMO	Albuquerque	147.02	263		PKPbc	00 53 29.4 -0.8
ANMO	Albuquerque	147.02	263	PKP2	PKPbc	00 53 29.4 -0.8
ANMO	Albuquerque	147.02	263	P	PKPbc	00 53 30.4 +0.2
	baz=125					
OGNE	Ogallala	147.06	276	P	PKPbc	00 53 30.7 +0.7
	baz=117					
SDCO	Great Sand Dun	147.88	268	P	PKPbc	00 53 33.1 +0.5
	baz=121					
MDND	Maddock	148.03	289	P	PKiKP	00 53 33.8 -0.4
	baz=107					
Q24A	Divide	148.25	270	P	PKPbc	00 53 33.6 0.0
	baz=119					
TUC	Tucson	148.33	255		PKPdf	00 53 31.5 +1.2
TUC	Tucson	148.33	255	PKIKP	PKPdf	00 53 31.5 +1.2
TUC	Tucson	148.33	255	P	PKPbc	00 53 34.0 +0.3
	baz=129					
S22A	4UR Ranch, Cre	148.79	267	P	PKiKP	00 53 35.7 -0.7
	baz=121,SNR=60					
BILL	Bilibino	148.91	32		PKiKP	00 53 34.9 -0.3
BILL	Bilibino	148.91	32	ePKP2	PKPbc	00 53 33.6 -0.3
BILL				e		00 57 02.2
BILL				pmax	pmax	
	comp=Z,78nm,1.8s					
W18A	Petrified Fore	149.32	260	P	PKPbc	00 53 36.3 0.0
	baz=125					
214A	Organ Pipe Nat	149.43	252	P	PKPbc	00 53 36.6 +0.2
	baz=130,SNR=9.8					
MVCO	Mesa Verde	149.64	265		PKiKP	00 53 38.0 -0.1
MVCO	Mesa Verde	149.64	265	P	PKPbc	00 53 37.2 +0.2
	baz=122					
N23A	Red Feather La	149.69	273	pPKPdf	PKiKP	00 53 38.5 +0.3
N23A	Red Feather La	149.69	273	P	PKPbc	00 53 37.0 -0.1
	baz=116					
RSSD	Black Hills	149.72	280	PKPdf	PKPdf	00 53 33.0 +0.7
RSSD					pPKPbc	00 53 37.2 0.0
RSSD	Black Hills	149.72	280	PKHKP	PKPpre	00 53 33.0
RSSD	Black Hills	149.72	280	P	PKPbc	00 53 36.7 -0.3
	baz=112					
PV15	Paradox Valley	150.21	267	PKPbc	PKiKP	00 53 39.7 +0.4
PV13	Radium Mtn., P	150.35	266		PKPbc	00 53 39.0 +0.3
PV07	Paradox Valley	150.37	267	PKPbc	PKiKP	00 53 39.9 +0.3
PV11	David Mesa, Pa	150.46	267	PKPbc	PKiKP	00 53 40.2 +0.6
113A	Mohawk Valley,	150.57	253	PKPbc	PKiKP	00 53 40.5 +0.8
PV10	Paradox Valley	150.61	267	PKPbc	PKiKP	00 53 40.9 +0.8
PV23	Carpenter Ridg	150.63	267	PKPbc	PKiKP	00 53 40.2 +0.1
WUAZ	Wupatki	150.65	260	P	PKPbc	00 53 39.5 +0.1
	baz=125					
K22A	Casper	150.83	276	PKPbc	PKiKP	00 53 40.4 +0.1
K22A	Casper	150.83	276	P	PKPbc	00 53 38.9 -0.8
	baz=114					
RWWY	Rawlins	150.90	274	PKPbc	PKiKP	00 53 40.8 +0.2
O20A	White River Ci	150.91	270	PKPbc	PKiKP	00 53 40.8 +0.2
O20A	White River Ci	150.91	270	P	PKPbc	00 53 39.3 -0.6
	baz=118,SNR=23					
DGMT	Dagmar	151.16	289		PKiKP	00 53 41.0 +0.4
DGMT	Dagmar	151.16	289	P	PKPbc	00 53 40.1 +0.1
	baz=104					
GLA	Glamis	151.44	252	P	PKPbc	00 53 40.8 -0.4
	baz=130,SNR=9.2					
PDMCI	Parker Dam,Lak	151.77	255	P	PKPbc	00 53 41.1 -0.7
	baz=128					
SWSC	Sam W. Stewart	152.00	251	P	PKPbc	00 53 42.5 +0.1
	baz=130					
IKP	In-Ko-Pah, Jac	152.01	250	P	PKiKP	00 53 43.1 +0.2
	baz=131					
LAO	LASA Array	152.01	284	P	PKPbc	00 53 42.1 0.0
	baz=107					
BC3	Big Chuckawall	152.23	252	P	PKiKP	00 53 43.3 -0.1
	baz=129,SNR=11					
IRM	Iron Mountain	152.34	253	P	PKiKP	00 53 43.4 -0.1
	baz=128,SNR=14					
MONP2	Monument Peak	152.36	250	P	PKiKP	00 53 43.8 0.0
	baz=131					
NEE2	Needles Airpor	152.37	255	P	PKPbc	00 53 43.1 -0.1
	baz=127					
109C	Camp Elliot, M	152.80	249	P	PKiKP	00 53 44.4 0.0
	baz=131					
BELC	Belle Mtn. Jos	152.80	252	P	PKiKP	00 53 44.6 0.0
	baz=129,SNR=10					
TPFO	Pinon Flats	152.84	251	P	PKPbc	00 53 44.6 +0.1
	baz=130					
PFO	Pinyon Flats O	152.85	251	PKP	PKPdf	00 53 37.6 +0.3
	comp=Z,4.7nm,1.1s,baz=164,slow=3.0,SNR=6.2					
PFO				PKPbc	PKPbc	00 53 44.5 +0.1
	comp=Z,8.0nm,0.9s,baz=50,slow=3.5,SNR=8.4					
PFO	Pinyon Flats O	152.85	251	PKPdf	PKPdf	00 53 38.5 +1.2
PFO				PKPbc	sPKPbc	00 53 45.1 +0.3
PFO	Pinyon Flats O	152.85	251	P	PKPbc	00 53 44.6 +0.1
	baz=130					
BW06	Boulder Array	152.93	274	PKPbc	PKPbc	00 53 44.4 -0.1
BW06	Boulder Array	152.93	274	P	PKPbc	00 53 44.1 -0.4
	baz=113					
PD31	Pinedale Array	152.93	274	PKPbc	PKPbc	00 53 44.3 -0.2
PDAR	Pinedale Array	152.93	274	PKP	PKPdf	00 53 37.2 -0.1
	comp=Z,6.8nm,1.3s,baz=144,slow=1.7,SNR=13					
PDAR				PKPbc	PKPbc	00 53 43.6 -0.9
	comp=Z,11nm,1.0s,baz=118,slow=3.3,SNR=33					
PDAR	Pinedale Array	152.93	274	PKPbc	PKPbc	00 53 44.6 +0.1
GMRC	Granite Mounta	153.06	254	P	PKiKP	00 53 45.3 +0.3
	baz=128,SNR=11					
MPU	Maple Canyon	153.16	267	PKPbc	PKiKP	00 53 45.8 +0.6
JLU	Jordanelle	153.31	269	PKPbc	PKiKP	00 53 46.8 +1.2
MURC	Murrieta	153.31	250	P	PKPbc	00 53 45.2 -0.1
	baz=130					
NLU	North Lily Min	153.44	267	PKPbc	PKiKP	00 53 47.2 +1.4
ELS	Elsinore Mount	153.49	250	PKPdf	PKPdf	00 53 38.5 +0.4
HEC	Hector,Ludlow	153.53	253	P	PKiKP	00 53 46.2 +0.2
	baz=126,SNR=5.6					
RLMT	Red Lodge	153.57	280	PKPbc	PKiKP	00 53 46.3 +0.4
RLMT	Red Lodge	153.57	280	P	PKPbc	00 53 45.8 0.0
	baz=109					
TUQ	Turquoise Moun	153.62	255	P	PKiKP	00 53 46.2 0.0
	baz=127					
SCI2	San Clemente I	153.77	247	P	PKiKP	00 53 46.5 +0.1
	baz=132					
HWUT	Hardware Ranch	153.82	271	PKPbc	PKiKP	00 53 47.2 +0.7
AHID	Auburn Hatcher	153.97	273	PKPbc	PKiKP	00 53 47.1 +0.3
SNOW	Snow King Moun	154.00	275	PKPab	PKPab	00 53 58.1 -2.2
BFSC	Mount Baldy Ra	154.02	251	P	PKPbc	00 53 46.8 -0.2
	baz=130					
GCMT	Greycliff	154.04	281	PKPbc	PKiKP	00 53 47.2 +0.5
DUG	Dugway, Tooele	154.05	267	P	PKiKP	00 53 47.2 +0.2
	baz=118,SNR=7.1					
SHOC	Shoshone, Teco	154.13	255	P	PKPbc	00 53 47.0 -0.1
	baz=126					
TPAW	Teton Pass	154.15	275	PKPbc	PKiKP	00 53 47.9 +0.7
FXWY	Fox Creek	154.25	275	PKPbc	PKiKP	00 53 47.8 +0.4
SNCC	San Nicolas Is	154.56	247	P	PKiKP	00 53 48.2 +0.1
	baz=132					
EDW2	Edwards Air Fo	154.63	251	P	PKiKP	00 53 48.3 +0.1
	baz=129					
EGMT	Eagleton	154.67	286	P	PKiKP	00 53 48.8 +0.9
	baz=103					
TPNV	Topopah Spring	154.71	257	P	PKiKP	00 53 48.8 +0.3
	baz=124					
QLMT	Earthquake Lak	154.93	278	PKPbc	PKiKP	00 53 51.0 +2.3
MPMC	Manual Prospec	155.01	254	P	PKPdf	00 53 49.5 +9.1
	baz=126					
R11A	Troy Canyon, C	155.02	261	PKPbc	PKPdf	00 53 50.0 +10
R11A	Troy Canyon, C	155.02	261	P	PKPdf	00 53 49.4 +9.1
	baz=122					
GRAC	Grapevine Rang	155.47	256	P	PKPab	00 54 06.7 +0.2
	baz=125					
VES	Vestal, Richgr	155.93	252	P	PKPab	00 54 08.2 -0.2
	baz=128					
SMMC	Simmler	156.19	250	P	PKPab	00 54 10.2 +0.7
	baz=129					
NVAR	Mina Array Bea	156.88	258	PKP	PKPdf	00 53 42.1 -0.7
	comp=Z,3.8nm,1.1s,baz=116,slow=2.1,SNR=17					
NVAR				PKPab	sPKPab	00 54 13.6 +0.5
	comp=Z,4.7nm,1.0s,baz=127,slow=6.0,SNR=6.1					
MSO	Missoula	157.17	281	P	PKPab	00 54 14.9 +1.3
	baz=104					
C23K	Itkillik River	157.36	3	P	PKPab	00 54 14.7 +1.1
	baz=355					
C24K	Franklin Bluff	157.52	1	P	PKPab	00 54 15.9 +1.7
	baz=358					
C27K	Jago River	157.54	356	P	PKPab	00 54 16.5 +2.1
	baz=6.8					
INK	Inuvik	157.77	346	PKPab	PKPab	00 54 15.2 -0.1
	comp=Z,14nm,0.9s,baz=24,slow=8.8,SNR=17					
INK	Inuvik	157.77	346	PKPdf	PKPdf	00 53 45.8 +3.2
INK					sPKPab	00 54 16.9 +1.2
INK	Inuvik	157.77	346	P	PKPab	00 54 16.8 +1.5
	baz=26					
D23K	Nanushuk River	158.23	3	P	PKPab	00 54 18.1 +0.7
	baz=354					
F31M	Tsiigehtchic	158.59	345	P	PKPab	00 54 20.8 +2.0
	baz=26					
TOLK	Toolik Lake Re	158.59	2	P	PKPab	00 54 20.3 +1.3
	baz=356					
GAMB	Gambell	158.82	30	P	PKPab	00 54 21.4 +1.4
	baz=310					
E27K	Coleen River	158.85	354	P	PKPab	00 54 21.5 +1.4
	baz=11					
E25K	Arctic Village	159.11	358	P	PKPab	00 54 22.8 +1.6
	baz=3.8					
G30M	tAoh Zraii Nji	159.41	347	P	PKPab	00 54 23.7 +1.1
	baz=22					
F26K	Sheenjek River	159.49	356	P	PKPab	00 54 24.2 +1.3
	baz=6.6					
NEW	Newport	159.56	284	P	PKPab	00 54 24.8 +1.0
	baz=99					
F22K	John River	159.61	5	P	PKPab	00 54 25.5 +2.0
	baz=351					
F25K	Christian Rive	159.64	358	P	PKPab	00 54 24.7 +1.1
	baz=3.7					
F24K	Squaw Lake	159.74	0	P	PKPab	00 54 25.5 +1.5
	baz=359					
BMAR	Burnt Mountain	159.77	357	PKPdf	PKPdf	00 53 46.9 +1.7
BMAR					sPKPab	00 54 26.6 +2.1
F21K	Alatna River	159.80	7	P	PKPab	00 54 25.4 +1.2
	baz=348					
COLD	Coldfoot	159.99	3	P	PKPab	00 54 26.6 +1.6
	baz=355					
EPYK	Eagle Plains	160.05	347	PKPdf	PKPdf	00 53 48.6 +3.2
EPYK					sPKPab	00 54 26.9 +1.2
EPYK	Eagle Plains	160.05	347	P	PKPab	00 54 26.8 +1.4
	baz=22					
ANM	Nome	160.18	23	P	PKPab	00 54 26.7 +0.8
	baz=322					
G27K	Doyon Strip	160.21	353	P	PKPab	00 54 27.8 +1.8
	baz=12					
G26K	Porcupine Rive	160.21	356	P	PKPab	00 54 27.5 +1.5
	baz=7.6					
G22K	Bettles	160.23	5	P	PKPab	00 54 28.5 +2.5
	baz=352					
G25K	Bearman Lake	160.48	358	P	PKPab	00 54 28.1 +0.9
	baz=2.9					
G21K	Allakaket	160.50	7	P	PKPab	00 54 28.3 +1.1
	baz=348					
G23K	Bananza Creek	160.51	3	P	PKPab	00 54 28.8 +1.5
	baz=355					
H27K	Steamboat Moun	160.76	353	P	PKPab	00 54 30.3 +1.8
	baz=12					
I29M	Ogilvie Camp,	161.23	348	PKPdf	PKPdf	00 53 49.6 +2.8
I29M					sPKPab	00 54 32.5 +1.6
I29M	Ogilvie Camp,	161.23	348	P	PKPab	00 54 30.8 +0.3
	baz=20					
H22K	Ishtalitna Cre	161.26	5	P	PKPab	00 54 32.2 +1.5
	baz=352					
I27K	Kandik River	161.39	352	P	PKPab	00 54 32.5 +1.3
	baz=13					
H21K	Melozitna Rive	161.40	7	PKPdf	PKPdf	00 53 49.6 +2.7
H21K					sPKPab	00 54 33.2 +1.7
H21K	Melozitna Rive	161.40	7	P	PKPab	00 54 32.3 +1.0
	baz=349					
H23K	Yukon River	161.41	3	P	PKPab	00 54 33.1 +1.8
	baz=356					
H24K	Noodor Dome	161.43	0	P	PKPab	00 54 33.0 +1.6
	baz=359					
I26K	Coal Creek Min	161.80	354	P	PKPab	00 54 34.1 +1.1
	baz=9.6					
GCSA	Galena City Sc	161.81	13	P	PKPab	00 54 34.2 +1.2
	baz=339					
I23K	Minto, Yukon-K	162.10	2	P	PKPab	00 54 35.0 +0.8
	baz=356					
MMPY	Sheldon Lake,	162.12	335	P	PKPab	00 54 35.2 +0.7
	baz=38					
EGAK	Eagle	162.15	351	P	PKPab	00 54 36.0 +1.5
	baz=14					
MLY	Manley	162.16	4	P	PKPab	00 54 35.5 +0.9
	baz=353					
MDM	Murphy Dome	162.31	1	PKPdf	PKPdf	00 53 48.7 +0.8
MDM					sPKPab	00 54 36.0 +0.4
ILAR	Eielson Array	162.50	359	PKP	PKPdf	00 53 45.6 -2.4
	comp=Z,0.8nm,1.1s,baz=347,slow=3.7,SNR=5.8					
ILAR				PKPab	PKPab	00 54 35.8 -0.3
	comp=Z,1.5nm,0.9s,baz=344,slow=2.9,SNR=6.6					
K29M	Barlow Dome	162.52	345	P	PKPab	00 54 37.8 +1.5
	baz=23					
DAWY	Dawson	162.61	348		pPKPab	00 54 38.5 +1.6
DAWY	Dawson	162.61	348	P	PKPab	00 54 38.2 +1.6
	baz=19					
J26L	Joseph Creek	162.63	354	P	PKPab	00 54 37.8 +1.0
	baz=9.1					
J20K	Nowinta River	162.72	10	P	PKPab	00 54 38.1 +1.1
	baz=345					
HDA	Harding Lake	162.86	359	P	PKPab	00 54 38.5 +0.8
	baz=1.4					
K27K	Chicken	162.97	352	P	PKPab	00 54 39.3 +1.2
	baz=13					
FARO	Faro, Yukon	163.01	337	P	PKPab	00 54 39.8 +1.4
	baz=35					
SCRK	Sand Creek	163.18	354	P	PKPab	00 54 40.6 +1.4
	baz=8.4					
CHUM	Lake Minchumin	163.19	7	P	PKPab	00 54 40.3 +1.2
	baz=349					
M31M	Drury Creek, Y	163.31	338	P	PKPab	00 54 41.4 +1.7
	baz=33					
L29M	L29M	163.31	345	P	PKPab	00 54 41.4 +1.7
	baz=23					
K24K	Donnelly Dome	163.44	357	P	PKPab	00 54 41.5 +1.3
	baz=4.2					
K20K	Telida	163.52	10	P	PKPab	00 54 41.7 +1.1
	baz=344					
TRF	Thorofare Moun	163.76	4	P	PKPab	00 54 43.2 +1.4
	baz=353					
L27K	Beaver Creek,	163.89	351	P	PKPab	00 54 43.7 +1.4
	baz=14					
M29M	Somme Creek	163.98	344	P	PKPab	00 54 44.2 +1.4
	baz=23					
R33M	Jennings River	164.41	327	P	PKPab	00 54 45.8 +0.9
	baz=46					
P33M	Teslin, Yukon	164.46	332	P	PKPab	00 54 46.4 +1.4
	baz=40					
M27K	Edge Creek, AK	164.58	350	P	PKPab	00 54 47.0 +1.6
	baz=15					
N30M	Aishikik Lake	164.59	341	P	PKPab	00 54 47.2 +1.7
	baz=28					
M26K	Nabesna, AK	164.66	352	P	PKPab	00 54 47.3 +1.7
	baz=12					
DLBC	Dease Lake	164.68	323	P	PKPab	00 54 47.5 +1.5
	baz=51					
WAT6	Susitna Watana	164.70	0	P	PKPab	00 54 46.8 +0.8
	baz=360					
WHY	Whitehorse	164.72	336	P	PKPab	00 54 47.6 +1.5
	baz=35					
HARP	HAARP	164.82	356	P	PKPab	00 54 47.5 +1.2
	baz=6.2					
YUK3	Moose Creek	164.94	347	P	PKPab	00 54 48.7 +1.6
	baz=19					
O30N	Mendenhall	164.96	338	P	PKPab	00 54 49.1 +2.0
	baz=31					
YUK4	Talbot Arm	165.03	343	P	PKPab	00 54 48.5 +1.0
	baz=24					
M20K	Styx River	165.06	10	P	PKPab	00 54 48.7 +1.2
	baz=345					
HYT	Haines Junctio	165.25	340	PKPab	PKPab	00 54 51.1 +2.7
HYT	Haines Junctio	165.25	340	P	PKPab	00 54 50.5 +2.0
	baz=28					
N16K	Nishlik Lake	165.29	22	P	PKPab	00 54 50.8 +2.3
	baz=328					
YUK6	Outpost Mounta	165.34	342	P	PKPab	00 54 50.8 +1.8
	baz=25					
S34M	Telegraph Cree	165.46	323	P	PKPab	00 54 51.6 +2.2
	baz=50					
KLU	Klutina	165.76	357	P	PKPab	00 54 52.4 +1.8
	baz=4.5					
SPCR	Spurr Chakacha	165.83	9	P	PKPab	00 54 52.4 +1.5
	baz=347					
O28M	Mount Upton	165.85	345	P	PKPab	00 54 52.8 +1.5
	baz=21					
KNK	Knik Glacier	165.86	2	P	PKPab	00 54 52.2 +1.3
	baz=357					
N19K	Bonanza Creek	165.90	14	P	PKPab	00 54 52.9 +1.7
	baz=340					
O29M	Mount Kennedy	165.96	341	P	PKPab	00 54 53.6 +2.0
	baz=26					
RC01	Rabbit Creek A	166.14	4	P	PKPab	00 54 53.9 +1.7
	baz=354					
BMRM	Bremner River	166.21	354	P	PKPab	00 54 54.6 +2.0
	baz=8.4					
PINM	Pinnacle	166.49	344	P	PKPab	00 54 55.9 +2.1
	baz=22					
EYAK	Cordova Ski Ar	166.69	356	P	PKPab	00 54 55.9 +1.3
	baz=5.3					
PNL	Peninsula	166.71	342	P	PKPab	00 54 56.7 +1.9
	baz=25					
O20K	Slope Mountain	166.87	11	P	PKPab	00 54 57.7 +2.2
	baz=345					

NEIC ***29*** *00:36:07.0±1.8, 51°.8N±0°.1×178°.46E±0°.10, h102km±7km, mb4.3/202, ML3.8(AEIC), Error ellipse: s-maj=17.8km s-min=8.6km az=181.0*

IDC ***29*** *00:36:06.9±0.7, 51°.99N×178°.49E, h105km±5km, mb3.8/23, mbtmp4.2/26, MS4.2/3, Error ellipse: s-maj=14.5km s-min=8.2km az=0.0*

AEIC ***29*** *00:36:07±1.8, 51°.8N±0°.1×178°.49E±0°.10, h103km±5km, Error ellipse: s-maj=17.1km s-min=8.6km az=182.0*

ISC 29 00:36:06.6±0.6, 51°.84N±0°.08×178°.47E±0°.04, h106km±4km, n434, σ1§01/418, mb4.3/99, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.69	131	Pn	Pn	00 36 24.5	+0.1
AMKA				Sn	Sn	00 36 37.1	-0.7
KIWB	Kanaga Island	2.72	88		Pn	00 36 48.4	-0.3
SHEM	Shemya Is, Ala	2.83	290	P	Pn	00 36 49.4	-0.7
	376nm,0.5s,baz=54,slow=4.5,SNR=32						
SHEM				S	Sn	00 37 23.2	-0.4
	151nm,0.4s,baz=290,slow=20,SNR=7.2						
SHEM				LR	LR	00 37 44.2	
	comp=Z,208nm,19.8s,baz=298,slow=35						
SMY	Shemya	2.83	290	Pn	Pn	00 36 49.3	-0.8
ADK	Adak	3.00	87	Pn	Pn	00 36 51.9	-0.6
GSTR	Great Sitkin T	3.39	84	Pn	Pn	00 36 57.4	-0.3
NIKH	Nikolski High	7.84	77		Pn	00 37 58.6	+0.9
NIKH	Nikolski High	7.84	77	P	Pn	00 37 58.8	+1.1
	baz=267						
SPIA	Saint Paul Isl	8.46	46	Pn	Pn	00 38 07.9	+1.7
SPIA	Saint Paul Isl	8.46	46	P	Pn	00 38 08.3	+2.1
	baz=235						
UNV	Unalaska Valle	9.31	72	Pn	Pn	00 38 18.8	+1.0
UNV	Unalaska Valle	9.31	72	P	Pn	00 38 19.3	+1.6
	baz=264						
AKUT	Akutan	9.78	70	Pn	Pn	00 38 25.4	+1.4
PEA0B	Petropavlovsk-	12.72	284	Pn	Pn	00 39 04.2	+0.7
PETK	Petropavlovsk-	12.72	284	P	Pn	00 39 04.2	+0.7
	10nm,0.9s,baz=104,slow=15,SNR=5.3						
PETK				S	Sn	00 41 19.6	-3.7
	2.5nm,0.7s,baz=82,slow=39,SNR=2.1						
PETK	Petropavlovsk-	12.72	284	Pn	Pn	00 39 05.1	+1.6
SDPT	Sand Point	12.98	66	Pn	Pn	00 39 05.3	-1.5
SDPT				P	P	00 39 13.9	+0.7
GAMB	Gambell	13.04	20	P	Pn	00 39 10.2	+2.7
	baz=208						
O16K	Kokwok River B	15.25	50	P	P	00 39 39.2	+0.8
	baz=250						
P17K	Kvichak River	15.93	53	P	P	00 39 46.3	+0.4
	baz=253						
Q18K	Katmai Hardscr	16.51	55	P	P	00 39 53.2	+0.8
	baz=257						
SII	Sitkinak Islan	16.62	63	P	P	00 39 55.1	+1.4
	baz=265						
N18K	Kilae Creek	16.67	48	P	P	00 39 56.0	+1.9
N18K				IAmb	IAmb	00 39 59.3	
	comp=Z,12nm,0.7s						
N18K	Kilae Creek	16.67	48	P	P	00 39 55.7	+1.6
	baz=249						
O18K	Koktuh Hills	16.72	51	P	P	00 39 55.9	+1.2
O18K	Koktuh Hills	16.72	51	P	P	00 39 56.0	+1.2
	baz=253						
SVW2	Sparrevohn	16.96	47	P	P	00 39 58.5	+1.2
SVW2				IAmb	IAmb	00 40 01.4	
	comp=Z,10.0nm,0.8s						
OHAK	Old Harbor	17.18	61	P	Pn	00 39 57.4	-2.3
OHAK				IAmb	IAmb	00 39 59.2	
	comp=Z,14nm,0.4s						
OHAK	Old Harbor	17.18	61	P	Pn	00 39 58.2	-1.5
	baz=264						
Q19K	Cape Douglas,	17.26	55	P	P	00 40 00.8	+0.1
Q19K	Cape Douglas,	17.26	55	P	Pn	00 40 01.4	+0.6
	baz=258						
N19K	Bonanza Creek	17.36	48		Pn	00 40 04.9	+2.8
N19K	Bonanza Creek	17.36	48	P	Pn	00 40 05.2	+3.1
	baz=251,SNR=5.8						
KDAK	Kodiak Island	17.62	59	P	P	00 40 02.0	-2.6
	comp=Z,12nm,0.5s,baz=179,slow=0.9,SNR=28						
KDAK	Kodiak Island	17.62	59		P	00 40 02.3	-2.2
KDAK				IAmb	IAmb	00 40 07.0	
	comp=Z,14nm,0.7s						
KDAK	Kodiak Island	17.62	59	P	P	00 40 03.6	-1.0
	baz=263						
P19K	Oil Pt	17.63	53	P	Pn	00 40 06.0	+0.8
P19K	Oil Pt	17.63	53	P	Pn	00 40 05.8	+0.5
	baz=256						
L19K	White Mountain	17.70	44	P	Pn	00 40 06.6	+0.6
L19K	White Mountain	17.70	44	P	Pn	00 40 06.7	+0.7
	baz=246						
M19K	Big River Lodg	17.79	45	P	Pn	00 40 07.8	+0.7
M19K				IAmb	IAmb	00 40 12.9	
	comp=Z,15nm,1.1s						
M19K	Big River Lodg	17.79	45	P	Pn	00 40 08.9	+1.7
	baz=248						
Q20K	Shuyak Island	17.84	56	P	P	00 40 07.4	+0.4
	baz=260						
O20K	Slope Mountain	18.04	52	P	Pn	00 40 10.7	+0.6
	baz=256						
RSO	Redoubt South	18.07	50	P	P	00 40 08.8	-0.9
GCSA	Galena City Sc	18.14	35	P	Pn	00 40 11.9	+0.7
	baz=236						
M20K	Styx River	18.34	46	P	Pn	00 40 14.4	+0.6
M20K				IAmb	IAmb	00 40 20.3	
	comp=Z,19nm,0.8s						
M20K	Styx River	18.34	46	P	Pn	00 40 15.4	+1.7
	baz=250						
K20K	Telida	18.52	41	P	Pn	00 40 15.8	-0.1
K20K				IAmb	IAmb	00 40 18.4	
	comp=Z,14nm,1.1s						
K20K	Telida	18.52	41	P	Pn	00 40 15.7	-0.1
	baz=244						
N20K	Mount Spurr	18.54	48	P	Pn	00 40 16.7	+0.6
	baz=253,SNR=6.7						
SPCR	Spurr Chakacha	18.54	48	P	Pn	00 40 16.1	0.0
	baz=253,SNR=5.6						
CNPM	China Poot	18.60	54	P	P	00 40 15.2	-0.1

SEW	Seward	19.59	53	P	P	00 40 27.0 +0.9
SEW				IAmb	IAmb	00 40 31.5
	comp=Z,27nm,1.0s					
SEW	Seward	19.59	53	P	Pn	00 40 27.6 -0.8
	baz=259					
M22K	Willow	19.66	47	P	P	00 40 27.5 +0.8
	baz=254					
RC01	Rabbit Creek A	19.66	50	P	P	00 40 27.8 +0.9
RC01				IAmb	IAmb	00 40 30.9
	comp=Z,13nm,0.6s					
RC01	Rabbit Creek A	19.66	50	P	P	00 40 27.9 +1.1
	baz=256					
CUT	Chulitna	19.78	46	P	Pn	00 40 31.4 +0.9
CUT				IAmb	IAmb	00 40 33.8
	comp=Z,25nm,1.1s					
CUT	Chulitna	19.78	46	P	Pn	00 40 31.6 +1.1
	baz=252					
KTH	Kantishna Hill	19.89	42	P	Pn	00 40 31.2 -0.8
KTH				IAmb	IAmb	00 40 33.7
	comp=Z,18nm,1.0s					
IMAR	Indian Mountai	19.91	34	P	P	00 40 30.7 +1.2
PMR	Palmer	20.07	48	P	P	00 40 31.3 +0.1
	baz=256					
H21K	Melozitna Rive	20.08	35	P	P	00 40 32.6 +1.3
H21K				IAmb	IAmb	00 40 33.4
	comp=Z,12nm,0.8s					
H21K	Melozitna Rive	20.08	35	P	P	00 40 32.8 +1.5
	baz=240,SNR=7.0					
TRF	Thorofare Moun	20.12	43	P	P	00 40 33.0 +1.1
TRF				IAmb	IAmb	00 40 35.3
	comp=Z,16nm,0.8s					
TRF	Thorofare Moun	20.12	43	P	P	00 40 33.5 +1.6
	baz=249,SNR=8.3					
I21K	Tanana	20.15	37	P	P	00 40 33.2 +1.2
I21K				IAmb	IAmb	00 40 34.2
	comp=Z,15nm,0.8s					
I21K	Tanana	20.15	37	P	P	00 40 33.7 +1.6
	baz=242,SNR=7.6					
GHO	Glory Hole Cre	20.21	48	P	P	00 40 34.2 +1.4
GHO				IAmb	IAmb	00 40 34.5
	comp=Z,13nm,0.9s					
PWL	Port Wells	20.28	51	P	P	00 40 33.6 0.0
PWL	Port Wells	20.28	51	P	P	00 40 32.9 -0.6
	baz=258,SNR=7.5					
G21K	Allakaket	20.28	33	P	P	00 40 33.9 +0.5
	baz=237					
KNK	Knik Glacier	20.34	49	IAmb	IAmb	00 40 35.7
	comp=Z,16nm,0.8s					
KNK	Knik Glacier	20.34	49	P	P	00 40 35.0 +0.8
	baz=257					
SML	Sawmill	20.49	48	IAmb	IAmb	00 40 39.0
	comp=Z,15nm,0.8s					
SML	Sawmill	20.49	48	P	P	00 40 36.7 +0.9
	baz=256,SNR=8.0					
MLY	Manley	20.56	38	P	P	00 40 37.7 +1.2
MLY	Manley	20.56	38	P	P	00 40 37.1 +0.6
	baz=245					
P23K	Montague Islan	20.59	53	P	P	00 40 37.3 +0.5
	baz=262					
WAT1	Susitna Watana	20.66	45	P	P	00 40 38.4 +0.7
	baz=253					
F21K	Alatna River	20.68	31	P	P	00 40 39.0 +1.2
	baz=236,SNR=5.8					
H22K	Ishtalitna Cre	20.71	36	P	P	00 40 39.1 +1.0
	baz=242					
RND	Reindeer	20.71	43	P	P	00 40 38.6 +0.5
M23K	Glacier View	20.77	48	P	P	00 40 39.0 +0.3
	baz=257					
MCK	McKinley	20.78	42	P	P	00 40 39.8 +0.9
MCK	McKinley	20.78	42	P	P	00 40 39.3 +0.4
	baz=250					
GLI	Glacier Island	20.88	51	P	P	00 40 39.8 -0.1
GLI	Glacier Island	20.88	51	P	P	00 40 39.5 -0.4
	baz=260,SNR=6.0					
WAT6	Susitna Watana	20.96	46	P	P	00 40 42.1 +1.1
	baz=255,SNR=14					
SCM	Sheep Creek Mo	20.96	48	P	P	00 40 41.1 +0.3
SCM				IAmb	IAmb	00 40 59.5
	comp=Z,20nm,1.1s					
SCM	Sheep Creek Mo	20.96	48	P	P	00 40 41.0 +0.1
	baz=257,SNR=5.4					
NEA2	Nenana	21.04	40	P	P	00 40 42.3 +0.7
NEA2	Nenana	21.04	40	P	P	00 40 41.5 0.0
	baz=248					
HIN	Hinchinbrook I	21.09	52	P	P	00 40 42.2 0.0
I23K	Minto, Yukon-K	21.14	39	P	P	00 40 43.4 +0.8
I23K	Minto, Yukon-K	21.14	39	P	P	00 40 43.0 +0.3
	baz=246					
FID	Port Fidalgo	21.16	51	P	P	00 40 41.9 -1.0
G22K	Bettles	21.17	33	P	P	00 40 43.8 +0.8
	baz=239					
DHY	Denali Highway	21.25	45	IAmb	IAmb	00 40 47.4
	comp=Z,13nm,0.5s					
DHY	Denali Highway	21.25	45	P	P	00 40 43.9 -0.1
	baz=254,SNR=12					
F22K	John River	21.26	31	P	P	00 40 44.2 +0.2
	baz=237					
H23K	Yukon River	21.35	37	P	P	00 40 46.9 +1.9
H23K				IAmb	IAmb	00 40 47.9
	comp=Z,12nm,1.1s					
H23K	Yukon River	21.35	37	P	P	00 40 45.9 +1.0
	baz=244					
WRH	Wood River Hil	21.39	41	P	P	00 40 46.1 +0.8
EYAK	Cordova Ski Ar	21.48	52	P	P	00 40 46.4 0.0
EYAK				IAmb	IAmb	00 40 48.6
	comp=Z,18nm,1.0s					
EYAK	Cordova Ski Ar	21.48	52	P	P	00 40 47.2 +0.8
	baz=262					
KLU	Klutina	21.55	50	P	P	00 40 47.3 +0.1
KLU				IAmb	IAmb	00 40 49.2
	comp=Z,14nm,0.9s					
KLU	Klutina	21.55	50	P	P	00 40 48.3 +1.2
	baz=260,SNR=6.2					
M24K	Tolsona, Glenn	21.55	48	P	P	00 40 48.0 +0.9
	baz=258					
DIV	Divide	21.56	51	P	P	00 40 47.6 +0.4
DIV				IAmb	IAmb	00 40 49.2
	comp=Z,18nm,1.1s					
CCB	Clear Creek Bu	21.56	41	P	P	00 40 47.2 0.0
G23K	Bananza Creek	21.58	34	P	P	00 40 48.1 +0.7
	baz=242,SNR=7.8					
E22K	Anaktuvuk Pass	21.72	30	P	P	00 40 50.6 +1.7
	baz=236					
COLD	Coldfoot	21.77	33	P	P	00 40 49.6 +0.3
HDA	Harding Lake	21.83	42	P	P	00 40 50.0 -0.1
	baz=251					
POKR	Poker Plat Res	21.88	40	P	P	00 40 51.2 +0.6
POKR	Poker Plat Res	21.88	40	P	P	00 40 50.3 -0.3
	baz=249					
ILAR	Eielson Array	21.98	41	P	P	00 40 50.0 -1.6
	comp=Z,2.0nm,0.7s,baz=241,slow=9.4,SNR=20					
ILAR				PcP	PcP	00 44 44.4 -1.3
	comp=Z,0.3nm,0.5s,baz=265,slow=3.5,SNR=4.6					
ILAR				ScP	ScP	00 48 10.9 -2.1
	comp=Z,0.6nm,0.7s,baz=275,slow=3.2,SNR=5.9					
	comp=Z,2.0nm,0.7s					
ILAR	Eielson Array	21.98	41	P	P	00 40 52.1 +0.5
H24K	Noodor Dome	21.98	38	IAmb	IAmb	00 40 54.7
	comp=Z,12nm,1.1s					
H24K	Noodor Dome	21.98	38	P	P	00 40 52.2 +0.6
	baz=247					
PAX	Paxson	22.06	46	P	P	00 40 53.3 +0.7
	baz=256,SNR=5.1					
KAIM	Kayak Island	22.07	54	P	P	00 40 53.6 +1.0
KAIM	Kayak Island	22.07	54	P	P	00 40 53.7 +1.1
	baz=265					
HARP	HAARP	22.08	47	P	P	00 40 53.6 +0.9
	baz=258					
BMRM	Bremner River	22.09	51	P	P	00 40 52.3 -0.6
BMRM				IAmb	IAmb	00 40 53.3
	comp=Z,24nm,1.2s					
BMRM	Bremner River	22.09	51	P	P	00 40 52.4 -0.6
	baz=262					
K24K	Donnelly Dome	22.14	43	P	P	00 40 53.4 0.0
	baz=254					
N25K	Chitina, Valde	22.19	49	P	P	00 40 53.8 -0.1
N25K	Chitina, Valde	22.19	49	P	P	00 40 54.0 0.0
	baz=261					
E23K	Chandalar	22.38	31	P	P	00 40 55.7 -0.1
	baz=239,SNR=5.4					
SUCK	Suckling Hills	22.41	54	P	P	00 40 56.8 +0.7
BERG	Berg Lake	22.47	53	P	P	00 40 57.5 +0.8
BERG				IAmb	IAmb	00 40 59.4
	comp=Z,18nm,0.7s					
G24K	Hadweenzic Riv	22.48	36	P	P	00 40 57.3 +0.5
	baz=245,SNR=7.8					
RIDG	Independent Ri	22.52	44	P	P	00 40 57.8 +0.4
RIDG				IAmb	IAmb	00 40 58.8
	comp=Z,15nm,1.2s					
RIDG	Independent Ri	22.52	44	P	P	00 40 57.0 -0.3
	baz=255					
D23K	Nanushuk River	22.53	29	P	P	00 40 57.3 0.0
	baz=236					
GLB	Gilahina Butte	22.54	50	IAmb	IAmb	00 41 00.2
	comp=Z,8.9nm,0.8s					
VRDI	Verde Repeater	22.68	51	IAmb	IAmb	00 41 00.9
	comp=Z,19nm,1.0s					
F24K	Squaw Lake	22.70	34	P	P	00 40 59.5 +0.5
	baz=243					
TOLK	Toolik Lake Re	22.70	30	IAmb	IAmb	00 41 01.3
	comp=Z,12nm,0.7s					
TOLK	Toolik Lake Re	22.70	30	P	P	00 40 59.5 +0.5
	baz=238,SNR=5.9					
E24K	Your Creek	22.76	32	P	P	00 41 00.6 +1.0
	baz=241					
PRP	Porcupine Dome	22.77	39	P	P	00 40 60.0 +0.1
PRP	Porcupine Dome	22.77	39	P	P	00 41 00.3 +0.4
	baz=250,SNR=6.3					
DOT	Dot Lake	22.84	44	P	P	00 40 59.9 -0.6
DOT				IAmb	IAmb	00 41 01.7
	comp=Z,11nm,0.9s					
SNH	Sunshine Point	22.88	53	P	P	00 41 00.8 -0.1
WAX	Waxell Ridge	22.90	53	IAmb	IAmb	00 41 02.0
	comp=Z,18nm,0.7s					
MCARA	McCarthy VSAT	22.91	50	P	P	00 41 01.3 +0.2
	baz=263,SNR=15					
H25K	Birch Creek	22.92	37	P	P	00 41 01.5 +0.3
	baz=248					
SCRK	Sand Creek	22.95	44	P	P	00 41 00.1 -1.5
	baz=256					
G25K	Bearman Lake	23.01	36	P	P	00 41 02.5 +0.5
	baz=247					
L26K	Log Cabin Wild	23.02	46	P	P	00 41 03.1 +0.8
	baz=259					
C23K	Itkillik River	23.05	27	P	P	00 41 03.5 +1.2
	baz=234					
M26K	Nabesna, AK	23.07	48	P	P	00 41 03.4 +0.7
M26K	Nabesna, AK	23.07	48	P	P	00 41 03.8 +1.1
	baz=260					
ISLE	Juniper Island	23.16	52	IAmb	IAmb	00 41 22.6
	comp=Z,18nm,1.0s					
D24K	Happy Valley	23.20	29	P	P	00 41 04.5 +0.8
	baz=238					
J26L	Joseph Creek	23.26	42	P	P	00 41 03.6 -0.9
J26L				IAmb	IAmb	00 41 04.2
	comp=Z,6.1nm,0.6s					
J26L	Joseph Creek	23.26	42	P	P	00 41 03.8 -0.8
	baz=255,SNR=8.4					
MESA	MESA	23.32	54	P	P	00 41 05.3 +0.1
	baz=267,SNR=6.6					
YAH	Yahtse	23.44	53	IAmb	IAmb	00 41 07.4
	comp=Z,10.0nm,0.7s					
F25K	Christian Rive	23.50	34	P	P	00 41 07.1 +0.4
	baz=246					
C24K	Franklin Bluff	23.54	28	P	P	00 41 07.5 +0.7
	baz=237					
M27K	Edge Creek, AK	23.58	48	P	P	00 41 08.6 +1.2
M27K				IAmb	IAmb	00 41 09.9
	comp=Z,13nm,1.0s					
M27K	Edge Creek, AK	23.58	48	P	P	00 41 08.5 +1.0
	baz=262,SNR=5.9					
I26K	Coal Creek Min	23.65	41	P	P	00 41 08.2 +0.3
I26K	Coal Creek Min	23.65	41	P	P	00 41 07.7 -0.2
	baz=254					
L27K	Beaver Creek,	23.71	46	P	P	00 41 09.7 +1.1
L27K				IAmb	IAmb	00 41 10.4
	comp=Z,14nm,1.0s					
L27K	Beaver Creek,	23.71	46	P	P	00 41 09.4 +0.9
	baz=260,SNR=14					
TABL	Table Mountain	23.74	53	P	P	00 41 08.9 -0.1
E25K	Arctic Village	23.75	33	P	P	00 41 09.3 +0.5
	baz=245,SNR=5.2					
K27K	Chicken	23.79	44	P	P	00 41 09.2 0.0
	baz=258					
BMAR	Burnt Mountain	23.81	35	P	P	00 41 10.0 +0.6
G26K	Porcupine Rive	23.93	36	P	P	00 41 11.3 +0.9
	baz=249,SNR=10					
D25K	Kavik River	24.04	30	P	P	00 41 11.6 +0.2
	baz=241					
BVCY	Beaver Creek	24.05	48	P	P	00 41 12.5 +0.9
	baz=263					
F26K	Sheenjek River	24.07	35	P	P	00 41 13.6 +1.8
	baz=247,SNR=8.4					
PINM	Pinnacle	24.17	54	P	P	00 41 12.4 -0.3
	baz=268					
YUK3	Moose Creek	24.17	50	P	P	00 41 13.7 +0.8
	baz=264,SNR=21					
O28M	Mount Upton	24.23	52	P	P	00 41 14.7 +1.2
	baz=267,SNR=9.5					
EGAK	Eagle	24.34	42	P	P	00 41 14.0 -0.1
EGAK	Eagle	24.34	42	P	P	00 41 13.8 -0.3
	baz=257,SNR=14					
YUK8	Steele Glacier	24.46	51	P	P	00 41 17.6 +2.0
	baz=266,SNR=20					
PNL	Peninsula	24.60	55	P	P	00 41 16.3 -0.3
	baz=270					
G27K	Doyon Strip	24.67	37	P	P	00 41 17.5 +0.3
	baz=252					
C26K	Camden Bay	24.77	29	P	P	00 41 19.0 +1.0
	baz=242,SNR=6.3					
DAWY	Dawson	24.95	44	P	P	00 41 20.2 +0.4
DAWY				IAmb	IAmb	00 41 22.5
	comp=Z,8.8nm,0.6s					
DAWY	Dawson	24.95	44	P	P	00 41 20.1 +0.4
	baz=261,SNR=10					
YUK4	Talbot Arm	25.01	51	P	P	00 41 23.4 +2.9
	baz=267,SNR=34					
C27K	Jago River	25.01	31	P	P	00 41 20.6 +0.4
	baz=244					
O29M	Mount Kennedy	25.01	53	P	P	00 41 21.0 +0.5
	baz=270					
YUK6	Outpost Mounta	25.13	52	P	P	00 41 23.8 +2.2
	baz=268,SNR=6.3					
E27K	Coleen River	25.15	34	P	P	00 41 22.9 +1.4
	baz=250					
M29M	Somme Creek	25.17	48	P	P	00 41 21.8 0.0
	baz=265,SNR=9.4					
L29M	L29M	25.38	47	P	P	00 41 24.0 +0.3
	baz=264					
P29M	Windy Craggy	25.44	55	P	P	00 41 24.9 +0.6
P29M				IAmb	IAmb	00 41 42.1
	comp=Z,6.2nm,0.7s					
P29M	Windy Craggy	25.44	55	P	P	00 41 24.4 +0.1
	baz=272					
HYT	Haines Junctio	25.55	52	P	P	00 41 27.1 +1.9
	baz=269,SNR=13					
I29M	Ogilvie Camp,	25.64	42	P	P	00 41 26.4 +0.4
	baz=259					
K29M	Barlow Dome	25.74	45	P	P	00 41 27.5 +0.5
	baz=263					
N30M	Aishihik Lake	25.76	51	P	P	00 41 29.3 +2.2
	baz=268,SNR=14					
P30M	Million Dollar	25.82	54	P	P	00 41 28.5 +0.8
	baz=271					
M30M	Minto, Yukon	25.95	48	P	P	00 41 32.8 +3.9
M30M				IAmb	IAmb	00 41 33.6
	comp=Z,7.7nm,0.8s					
M30M	Minto, Yukon	25.95	48	P	P	00 41 32.3 +3.4
	baz=266,SNR=8.4					
S31K	Pelican	26.34	59	P	P	00 41 33.2 +1.0
	baz=276					
EPYK	Eagle Plains	26.47	40	P	P	00 41 33.2 -0.3
	baz=259					
SKAG	Skagway	26.67	55	P	P	00 41 35.6 +0.3
	baz=274					
G30M	tAoh Zraii Nji	26.79	38	P	P	00 41 36.7 +0.4
	baz=258					
WHY	Whitehorse	26.84	52	P	P	00 41 37.1 +0.2
M31M	Drury Creek, Y	27.05	49	P	P	00 41 40.4 +1.6
M31M				IAmb	IAmb	00 41 44.1
	comp=Z,5.9nm,0.9s					
M31M	Drury Creek, Y	27.05	49	P	P	00 41 39.6 +0.9
	baz=269					
R32K	Eaglecrest	27.21	58	P	P	00 41 40.3 +0.2
	baz=277					
S32K	Killisnoo	27.29	59	P	P	00 41 40.8 0.0
	baz=278					
P32M	Atlin	27.48	55	P	P	00 41 43.0 +0.4
	baz=275					
F31M	Tsiigehtchic	27.83	38	P	P	00 41 45.6 +0.1
	baz=260					
P33M	Teslin, Yukon	27.88	53	P	P	00 41 46.8 +0.6
	baz=274					
INK	Inuvik	28.07	36	P	P	00 41 47.8 +0.1
	comp=Z,1.0nm,0.3s,baz=255,slow=8.8,SNR=7.6					
	comp=Z,1.0nm,0.3s					
INK	Inuvik	28.07	36	P	P	00 41 48.1 +0.5
INK	Inuvik	28.07	36	P	P	00 41 48.0 +0.4
	baz=258					
Q32M	Nakina River	28.29	56	P	P	00 41 50.9 +1.0
	baz=277					
MMPY	Sheldon Lake,	28.51	48	P	P	00 41 52.4 +0.7
	baz=271					
R33M	Jennings River	28.90	55	P	P	00 41 56.1 +0.8
	baz=277					
KLR	Kul'dur	29.42	284	P	P	00 42 00.3 +0.5
	comp=Z,1.8nm,0.6s,baz=53,slow=9.6,SNR=4.5					
	comp=Z,1.8nm,0.6s					
DLBC	Dease Lake	29.53	57	P	P	00 42 01.2 +0.4
	comp=Z,1.9nm,0.6s,baz=288,slow=7.7,SNR=7.7					
DLBC				LR	LR	00 52 46.4
	comp=Z,94nm,18.1s,baz=139,slow=34					
	comp=Z,1.9nm,0.6s					
DLBC	Dease Lake	29.53	57	P	P	00 42 02.5 +1.7
DLBC	Dease Lake	29.53	57	P	P	00 42 01.2 +0.4
	baz=280					
T35M	Bob Quinn	29.69	60	P	P	00 42 02.8 +0.7
	baz=282					
FLDN	Fort Liard	32.49	52	P	P	00 42 25.9 -0.7
	baz=281					
H11N2	WAKE ISLAND Hy	33.30	200	T	T	01 18 11.7
	baz=11,slow=76,SNR=18					
H11N3	WAKE ISLAND Hy	33.31	200	T	T	01 18 13.8
	baz=11,slow=76,SNR=22					
H11N1	WAKE ISLAND Hy	33.32	200	T	T	01 18 13.6
	baz=11,slow=76,SNR=22					
H11S1	WAKE ISLAND Hy	34.53	200	T	T	01 19 29.2
	baz=11,slow=76,SNR=5.4					
H11S3	WAKE ISLAND Hy	34.55	200	T	T	01 19 38.6
	baz=11,slow=76,SNR=4.6					
H11S2	WAKE ISLAND Hy	34.55	200	T	T	01 19 34.4
	baz=11,slow=76,SNR=1.4					
YKA	Yellowknife Ar	36.15	46	P	P	00 42 58.2 0.0
	comp=Z,1.9nm,0.7s,baz=278,slow=8.6,SNR=6.7					
	comp=Z,1.9nm,0.7s					
NLWA	Neilton Lookou	36.78	73	P	P	00 43 04.6 +0.8
NLWA				IAmb	IAmb	00 43 17.9
	comp=Z,4.2nm,0.9s					
LTY	Liberty	38.74	72	P	P	00 43 20.0 -0.3
BUCK	Buck Mountain	38.95	77	P	P	00 43 22.6 +0.5
BUCK				IAmb	IAmb	00 43 26.7
	comp=Z,4.8nm,1.0s					
B08A	Colville Reser	38.98	70	P	P	00 43 21.7 -0.5
H04A	Detroit Lake	39.17	76	P	P	00 43 24.8 +0.9
H04A				IAmb	IAmb	00 43 25.6
	comp=Z,4.9nm,0.7s					
KBO	Bosley Butte	39.29	81	P	P	00 43 26.0 +1.0
DBO	Dodson Butte	39.38	79	P	P	00 43 26.7 +1.0
DBO				IAmb	IAmb	00 43 46.7
	comp=Z,2.7nm,0.8s					
HUMO	Hull Mountain	39.84	80	P	P	00 43 30.7 +1.2
KRMB	Red Mountain	39.88	82	P	P	00 43 31.3 +1.4
KRMB				IAmb	IAmb	00 43 31.8
	comp=Z,3.0nm,0.6s					
KRPM	Rodgers	40.02	82	P	P	00 43 32.0 +1.1
EDM	Edmonton	40.07	60	P	P	00 43 31.0 -0.2
EUNU	Eureka	40.30	16	P	P	00 43 33.3 +0.4
NEW	Newport	40.31	69	P	P	00 43 32.6 -0.7
NEW				IAmb	IAmb	00 43 33.6
	comp=Z,2.3nm,0.5s					
NEW	Newport	40.31	69	P	P	00 43 32.3 -1.0
	baz=300					
KHMM	Horse Mountain	40.36	82	P	P	00 43 35.7 +1.8
KMPM	Mount Pierce	40.39	83	P	P	00 43 36.3 +2.2
KMPM				IAmb	IAmb	00 43 41.4
	comp=Z,6.8nm,0.9s					
YBH	Yreka Blue Hor	40.49	80	IAmb	IAmb	00 43 37.1
	comp=Z,4.0nm,0.7s					
KMRM	Mail Ridge	40.76	83	P	P	00 43 39.1 +2.0
KMRM				IAmb	IAmb	00 43 41.0
	comp=Z,5.5nm,0.8s					
K05A	Summer Lake	41.03	78	P	P	00 43 40.6 +1.1
K05A				IAmb	IAmb	00 43 40.7
	comp=Z,3.3nm,0.6s					
I07A	Izee	41.11	75	P	P	00 43 40.1 +0.1
KCPM	Cahto Peak	41.16	84	P	P	00 43 42.1 +1.7
WALA	Waterton Lakes	41.75	66	P	P	00 43 44.4 -0.7
WALA				IAmb	IAmb	00 43 45.2
	comp=Z,6.5nm,1.0s					
MOD	Modoc Plateau	41.86	79	P	P	00 43 46.6 +0.4
MOD				IAmb	IAmb	00 43 48.2
	comp=Z,2.7nm,0.7s					
HOPS	Hopland Field	41.89	84	P	P	00 43 47.5 +1.2
HOPS				IAmb	IAmb	00 43 55.1
	comp=Z,5.1nm,0.9s					
BMO	Blue Mountains	42.00	73	P	P	00 43 47.3 0.0
PLID	Pearl Lake	42.64	72	P	P	00 43 51.3 -1.3
MSO	Missoula	42.90	69	P	P	00 43 53.7 -0.8
MSO				IAmb	IAmb	00 43 56.0
	comp=Z,4.8nm,1.1s					
MSO	Missoula	42.90	69	P	P	00 43 53.5 -1.0
	baz=303					
BEKR	Beckworth	43.03	81	IAmb	IAmb	00 43 56.8
	comp=Z,2.8nm,0.5s					
PAHR	Pah Rah Range	43.73	81	P	P	00 44 01.9 +0.6
PAHR				IAmb	IAmb	00 44 02.1
	comp=Z,3.4nm,0.7s					
VCNR	Virginia City	43.81	81	IAmb	IAmb	00 44 03.6
	comp=Z,4.4nm,0.7s					
CMB	Columbia Colle	44.14	83	P	P	00 44 05.3 +0.9
HRY	Holter Researc	44.18	68	P	P	00 44 04.3 -0.5
YERR	Yerington	44.26	81	P	P	00 44 06.3 +0.7
YERR				IAmb	IAmb	00 44 06.9
	comp=Z,4.1nm,0.7s					
LRM	Limekiln Ridge	44.31	69	P	P	00 44 04.9 -1.1
WAKR	Walker	44.43	82	P	P	00 44 08.1 +1.1
WAKR				IAmb	IAmb	00 44 08.7
	comp=Z,4.9nm,0.7s					
HLID	Hailey	44.44	73	P	P	00 44 06.8 -0.2
HLID	Hailey	44.44	73	P	P	00 44 06.6 -0.4
	baz=305					
BMN	Battle Mountai	44.61	78	P	P	00 44 08.7 +0.4
BMN				IAmb	IAmb	00 44 09.9
	comp=Z,3.4nm,0.7s					
BBGB	Big Mountain B	44.66	85	P	P	00 44 10.4 +1.8
KVN	Kaiserville	44.91	81	P	P	00 44 11.1 +0.4
KVN				IAmb	IAmb	00 44 11.5
	comp=Z,2.1nm,0.6s					
SONM	Songino Array	44.91	295	P	P	00 44 11.2 +0.6
	comp=Z,0.9nm,0.6s,baz=61,slow=8.3,SNR=8.0					
SONM				pP	pP	00 44 35.3 +0.3
	comp=Z,0.9nm,0.6s,baz=62,slow=6.6,SNR=4.3					
SONM				PcP	PcP	00 45 50.3 +0.1
	comp=Z,1.2nm,0.6s,baz=58,slow=3.1,SNR=8.2					
SONM				ScP	ScP	00 49 32.2 -0.5
	comp=Z,0.5nm,0.5s,baz=56,slow=5.4,SNR=4.1					
	comp=Z,0.9nm,0.6s					
SONM	Songino Array	44.91	295	P	P	00 44 11.4 +0.8
BOZ	Bozeman (W)	44.92	69	IAmb	IAmb	00 44 10.2
	comp=Z,3.0nm,0.6s					
BOZ	Bozeman (W)	44.92	69	P	P	00 44 09.5 -1.2
	baz=304					
RYN	Ryan	44.92	81	IAmb	IAmb	00 44 12.0
	comp=Z,4.2nm,0.6s					
LHV	Little Huntoon	45.16	82	P	P	00 44 13.6 +1.1
NVAR	Mina Array Bea	45.17	81	P	P	00 44 13.6 +0.7
	comp=Z,3.1nm,0.6s,baz=298,slow=7.5,SNR=33					
NVAR				PcP	PcP	00 45 51.8 +0.4
	comp=Z,0.2nm,0.3s,baz=236,slow=4.2,SNR=2.0					
NVAR				ScP	ScP	00 49 33.2 -0.8
	comp=Z,0.3nm,0.6s,baz=275,slow=3.2,SNR=3.8					
	comp=Z,3.1nm,0.6s					
NVAR	Mina Array Bea	45.17	81	P	P	00 44 14.0 +1.1
OMMB	Old Mammoth Mi	45.26	83	P	P	00 44 14.4 +0.7
OMMB				IAmb	IAmb	00 44 17.8
	comp=Z,6.1nm,1.2s					
YHL	Hebgen Lake	45.60	70	IAmb	IAmb	00 44 16.1
	comp=Z,3.4nm,1.0s					
ELK	Elko	45.62	77	IAmb	IAmb	00 44 17.0

HVU	Hansel Valley	46.47	74	IAmb	IAmb	00 44 23.3
	comp=Z,3.5nm,0.5s					
GMN	Gold Mountain	46.53	82	P	P	00 44 24.4 +0.9
GMN				IAmb	IAmb	00 44 24.8
	comp=Z,2.7nm,0.6s					
TPAW	Teton Pass	46.53	71	P	P	00 44 23.5 0.0
RLMT	Red Lodge	46.55	68	P	P	00 44 22.6 -1.1
	baz=306					
CWC	Cottonwood Cre	46.57	83	P	P	00 44 23.8 -0.1
	baz=310					
BGU	Big Grassy Mou	46.84	75	P	P	00 44 25.6 -0.2
R11A	Troy Canyon, C	46.89	80	IAmb	IAmb	00 44 26.9
	comp=Z,2.3nm,0.6s					
R11A	Troy Canyon, C	46.89	80	P	P	00 44 26.3 0.0
	baz=309,SNR=8.6					
MPMC	Manual Prospec	47.18	83	P	P	00 44 29.0 +0.3
	baz=311					
SCZ2	Santa Cruz Isl	47.21	87	P	P	00 44 29.2 +0.6
	baz=312					
WCT	Wildcat Mounta	47.24	82	P	P	00 44 29.5 +0.6
FURC	Furnace Creek,	47.30	82	P	P	00 44 29.8 +0.5
	baz=310					
TPNV	Topopah Spring	47.37	82	IAmb	IAmb	00 44 31.2
	comp=Z,5.1nm,0.8s					
TPNV	Topopah Spring	47.37	82	P	P	00 44 30.3 +0.2
	baz=310,SNR=5.9					
DUG	Dugway, Tooele	47.42	76	IAmb	IAmb	00 44 30.9
	comp=Z,4.3nm,0.6s					
DUG	Dugway, Tooele	47.42	76	P	P	00 44 30.6 +0.2
	baz=308,SNR=5.0					
GWY	Greenwater Val	47.61	83	P	P	00 44 32.7 +0.9
GWY				IAmb	IAmb	00 44 32.9
	comp=Z,3.6nm,0.7s					
BW06	Boulder Array	47.78	71	P	P	00 44 32.3 -0.9
	baz=307					
PDAR	Pinedale Array	47.78	71	P	P	00 44 32.3 -0.9
	comp=Z,1.8nm,0.7s,baz=306,slow=3.4,SNR=18					
	comp=Z,1.8nm,0.7s					
PRN	Pahroc Range	47.81	80	P	P	00 44 34.2 +0.8
PRN				IAmb	IAmb	00 44 35.9
	comp=Z,5.8nm,1.2s					
PSUT	Pine Spring	47.83	78	IAmb	IAmb	00 44 34.1
	comp=Z,3.6nm,0.6s					
SHOC	Shoshone, Teco	48.03	83	P	P	00 44 34.7 -0.2
	baz=311					
GSC	Goldstone, Bar	48.10	84	P	P	00 44 35.5 -0.2
GSC	Goldstone, Bar	48.10	84	P	P	00 44 35.4 -0.2
	baz=311					
TUQ	Turquoise Moun	48.55	83	P	P	00 44 39.0 -0.2
	baz=311					
CCUT	Cedar City	48.75	79	P	P	00 44 41.0 +0.3
TMUT	Trail Mountain	48.94	76	IAmb	IAmb	00 44 42.9
	comp=Z,2.8nm,0.7s					
V12A	Nelson	49.02	82	P	P	00 44 43.5 +0.9
RDMU	Red Mountain	49.12	73	IAmb	IAmb	00 44 45.0
	comp=Z,4.4nm,0.7s					
GMRC	Granite Mounta	49.15	83	P	P	00 44 43.7 +0.1
	baz=312					
MTPU	Mount Pierson	49.15	78	P	P	00 44 44.3 +0.4
LCMT	Little Creek M	49.17	79	P	P	00 44 44.3 +0.5
P18A	Preston Nutter	49.31	75	P	P	00 44 47.2 +2.1
KNB	Kanab	49.42	79	IAmb	IAmb	00 44 47.4
	comp=Z,3.0nm,0.6s					
PFO	Pinyon Flats O	49.43	85	P	P	00 44 45.6 -0.2
	baz=312					
TPFO	Pinon Flats	49.44	85	P	P	00 44 45.7 -0.2
	baz=312					
BELC	Belle Mtn. Jos	49.46	84	P	P	00 44 45.8 -0.3
	baz=312					
PKCU	Pink Cliffs	49.46	78	P	P	00 44 46.5 +0.3
PKCU				IAmb	IAmb	00 45 01.7
	comp=Z,2.2nm,0.8s					
SRU	San Rafael Swe	49.47	75	P	P	00 44 46.4 +0.3
SRU				IAmb	IAmb	00 44 46.9
	comp=Z,2.5nm,0.6s					
SPITS	Spitsbergen Ar	49.79	355	P	P	00 44 47.3 -0.5
	comp=Z,1.7nm,0.4s,baz=44,slow=7.3,SNR=7.6					
	comp=Z,1.7nm,0.4s					
SPB2	Spitsbergen Ar	49.79	355	P	P	00 44 47.7 -0.1
IRM	Iron Mountain	49.88	84	P	P	00 44 49.3 +0.2
	baz=312					
MONP2	Monument Peak	49.94	86	P	P	00 44 49.5 -0.3
	baz=313					
BC3	Big Chuckawall	50.02	84	P	P	00 44 49.7 -0.6
	baz=312					
W13A	Hualapai Mount	50.03	82	IAmb	IAmb	00 44 51.1
	comp=Z,2.0nm,0.8s					
U15A	North Rim	50.13	79	P	P	00 44 51.9 +0.6
U15A				IAmb	IAmb	00 44 52.0
	comp=Z,2.8nm,0.6s					
RSSD	Black Hills	50.15	66	P	P	00 44 50.1 -1.1
	baz=308					
O20A	White River Ci	50.19	73	P	P	00 44 50.8 -0.7
O20A				IAmb	IAmb	00 44 51.8
	comp=Z,3.7nm,1.0s					
O20A	White River Ci	50.19	73	P	P	00 44 50.5 -1.0
	baz=309					
IKP	In-Ko-Pah, Jac	50.30	86	P	P	00 44 52.4 +0.1
	baz=313					
PDMCI	Parker Dam,Lak	50.40	83	P	P	00 44 52.7 -0.3
	baz=312					
GLA	Glamis	50.82	84	P	P	00 44 56.7 +0.5
GLA	Glamis	50.82	84	P	P	00 44 56.5 +0.3
	baz=313					
ESJX	Sierra Juarez	50.84	86	P	P	00 44 57.0 +0.5
ESJX				IAmb	IAmb	00 44 57.8
	comp=Z,2.5nm,0.8s					
PV11	David Mesa, Pa	50.98	75	P	P	00 44 57.5 -0.1
N23A	Red Feather La	51.06	71	P	P	00 44 58.2 0.0
	baz=310					
WUAZ	Wupatki	51.29	80	P	P	00 44 59.8 0.0
	baz=312					
ZALV	Zalesovo Beam	52.47	312	P	P	00 45 06.9 -1.2
	comp=Z,0.3nm,0.5s,baz=57,slow=5.3,SNR=1.7					
ZALV				PcP	PcP	00 46 17.9 +0.6
	comp=Z,1.8nm,0.7s,baz=34,slow=4.5,SNR=10.0					
	comp=Z,0.3nm,0.5s					
S22A	4UR Ranch, Cre	52.57	74	P	P	00 45 09.3 -0.1
	baz=311					
214A	Organ Pipe Nat	52.81	84	P	P	00 45 11.2 +0.2
	baz=314					
SDCO	Great Sand Dun	53.36	73	P	P	00 45 14.8 -0.5
	baz=312					
T25A	Trinidad	54.41	73	P	P	00 45 22.6 -0.3
	baz=312					
ARCES	ARCESS Array B	57.33	349	P	P	00 45 42.9 0.0
	comp=Z,1.4nm,0.8s,baz=33,slow=7.6,SNR=6.2					
	comp=Z,1.4nm,0.8s					
MSTX	Muleshoe	57.54	75	P	P	00 45 44.5 -0.5
	baz=314					
WMQ	Urumqi	57.65	301	eP	P	00 45 47.8 +2.2
MK31	Makanchi Array	58.40	307	P	P	00 45 50.0 -0.7
MKAR	Makanchi Array	58.40	307	P	P	00 45 50.2 -0.6
	comp=Z,1.1nm,0.5s,baz=51,slow=6.1,SNR=13					
	comp=Z,1.1nm,0.5s					
MKAR	Makanchi Array	58.40	307	P	P	00 45 50.4 -0.4
MAKZ	Makanchi	58.55	307	P	P	00 45 51.1 -0.7
MAKZ				IAmb	IAmb	00 45 52.2
	comp=Z,2.3nm,0.8s					
WMOK	Wichita Mounta	59.38	72	P	P	00 45 57.0 -0.7
	baz=314					
BRVK	Borovoye	59.44	318	P	P	00 45 58.3 +0.5
TX31	Lajitas Ar. Si	60.25	79	P	P	00 46 04.0 +0.1
TX32	Lajitas Array	60.25	79	P	P	00 46 04.0 +0.2
TX32				IAmb	IAmb	00 46 04.5
	comp=Z,1.9nm,0.7s					
TXAR	Lajitas Array	60.26	79	P	P	00 46 03.9 +0.1
	comp=Z,1.2nm,0.5s,baz=306,slow=4.9,SNR=24					
TXAR				pP	pP	00 46 29.1 -0.4
	comp=Z,0.7nm,0.6s,baz=300,slow=5.3,SNR=4.2					
TXAR				ScP	ScP	00 50 38.2 -1.0
	comp=Z,0.1nm,0.4s,baz=316,slow=7.6,SNR=2.8					
	comp=Z,1.2nm,0.5s					
TXAR	Lajitas Array	60.26	79	P	P	00 46 04.0 +0.1
ARU	Arti	61.30	327	P	P	00 46 11.0 +0.6
PZH	PanZhiHua	61.59	277	P	P	00 46 14.0 +1.0
FCAR	Ozark Folk Cen	62.42	66	P	P	00 46 16.4 -1.8
MIAR	Mount Ida	62.55	68	P	P	00 46 18.6 -0.5
MIAR				IAmb	IAmb	00 46 19.1
	comp=Z,3.9nm,0.8s					
MIAR	Mount Ida	62.55	68	P	P	00 46 18.7 -0.5
	baz=316					
ERPA	Erie	64.43	54	P	P	00 46 31.0 -0.4
	baz=318					
FINES	FINESS Array B	64.94	346	P	P	00 46 32.9 -1.4
	comp=Z,0.9nm,0.6s,baz=9.9,slow=8.9,SNR=6.0					
	comp=Z,0.9nm,0.6s					
OXF	Oxford	64.95	66	P	P	00 46 33.7 -1.1
	baz=317					
AAK	Ala-Archa	65.25	308	P	P	00 46 37.5 +0.6
AAK				IAmb	IAmb	00 46 38.1
	comp=Z,2.4nm,0.8s					
K57A	Scipio Center	65.68	51	P	P	00 46 38.5 -1.0
E62A	Clayton Lake	65.92	44	P	P	00 46 40.2 -0.7
ABKAR	Akbulak array	66.53	321	P	P	00 46 45.4 +0.6
ABKAR				IAmb	IAmb	00 46 46.1
	comp=Z,3.1nm,1.1s					
Z47A	Carrollton	66.67	66	P	P	00 46 44.9 -0.9
H62A	Milan	66.79	47	P	P	00 46 45.3 -1.1
KK31	Karatay Array	66.81	311	P	P	00 46 46.9 +0.2
KK31				IAmb	IAmb	00 46 47.5
	comp=Z,1.8nm,0.7s					
KKAR	Karatay Array	66.81	311	P	P	00 46 46.5 -0.1
KKAR				IAmb	IAmb	00 46 47.6
	comp=Z,1.8nm,0.7s					
KKAR	Karatay Array	66.81	311	P	P	00 46 47.1 +0.5
KSH	Kashi	66.85	305	P	P	00 46 51.5 +4.4
BATG	Bathurst New B	66.88	42	P	P	00 46 46.5 -0.5
BATG				IAmb	IAmb	00 47 01.7
	comp=Z,6.5nm,1.1s					
CPCT	Cooper Cave	66.98	62	P	P	00 46 46.5 -1.4
NOA	NORSAR Array B	67.01	353	P	P	00 46 45.9 -1.8
	comp=Z,0.5nm,0.6s,baz=3.1,slow=5.6,SNR=2.0					
	comp=Z,0.5nm,0.6s					
FAKI	Fak Fak	67.10	232	P	P	00 46 49.2 +0.4
CMAR	Chiang Mai Arr	69.28	274	P	P	00 47 03.1 +0.7
	comp=Z,1.4nm,0.3s,baz=28,slow=6.6,SNR=5.3					
	comp=Z,1.4nm,0.3s					
TAPN	Taplejung	69.45	288	eP	P	00 47 04.1 +0.4
GAR	Garm	70.07	308	P	P	00 47 07.8 +0.7
GAR				IAmb	IAmb	00 47 08.0
	comp=Z,6.4nm,0.5s					
GUN	Gumba	70.10	290	eP	P	00 47 08.4 +0.6
	comp=Z,28nm,0.4s					
JIRN	Jiri	70.11	290	eP	P	00 47 08.6 +0.8
RAMN	Ramite	70.40	289	eP	P	00 47 10.2 +0.7
	comp=Z,16nm,0.5s					
PKI	Pulchoki	70.63	290	eP	P	00 47 11.1 +0.1
	comp=Z,11nm,0.6s					
PKIN	Phulchoki	70.63	290	eP	P	00 47 11.3 +0.4
	comp=Z,13nm,0.5s					
GKN	Gorkha	70.75	291	eP	P	00 47 12.2 +0.7
	comp=Z,13nm,0.4s					
DMN	Daman	70.78	290	eP	P	00 47 12.2 +0.4
CHGR	Chuyangaron	70.90	309	P	P	00 47 12.8 +0.7
DANN	Dangsing	71.00	292	eP	P	00 47 13.7 +0.5
	comp=Z,22nm,0.8s					
AKASG	Malin Array Be	74.56	340	P	P	00 47 32.8 -0.7
	comp=Z,0.5nm,0.3s,baz=22,slow=6.7,SNR=4.1					
AKASG				pP	pP	00 47 58.2 -1.6
	comp=Z,0.7nm,0.5s,baz=22,slow=6.4,SNR=2.3					
	comp=Z,0.5nm,0.3s					
GEYT	Alibeck	76.58	315	P	P	00 47 46.0 +0.7
	comp=Z,1.1nm,0.7s,baz=44,slow=5.3,SNR=1.1					
	comp=Z,1.1nm,0.7s					
KBZ	Khabaz	77.35	329	P	P	00 47 50.4 +1.0
	comp=Z,1.4nm,0.8s,baz=180,slow=1.0,SNR=0.9					
	comp=Z,1.4nm,0.8s					
HRA	Herat	77.64	311	P	P	00 47 52.5 +1.0
HRA				IAmb	IAmb	00 47 58.3
	comp=Z,4.2nm,1.1s					
WRA	Warramunga Arr	81.20	222	P	P	00 48 10.7 +0.2
	comp=Z,3.3nm,0.7s,baz=31,slow=6.0,SNR=28					
	comp=Z,3.3nm,0.7s					
BRTR	Keskin Array B	83.80	333	P	P	00 48 24.8 +0.7
	comp=Z,0.5nm,0.5s,baz=28,slow=1.9,SNR=4.2					
BRTR				LR	LR	01 29 34.4
	comp=Z,424nm,18.9s,baz=217,slow=38					
	comp=Z,0.5nm,0.5s					
ASAR	Alice Springs	84.71	220	P	P	00 48 29.2 +0.7
	comp=Z,2.1nm,0.7s,baz=23,slow=5.2,SNR=17					
	comp=Z,2.1nm,0.7s					
STKA	Stephens Creek	89.42	211	P	P	00 48 52.6 +1.6
	comp=Z,4.1nm,0.6s,baz=358,slow=7.7,SNR=6.4					
	comp=Z,4.1nm,0.6s					
SDV	Santo Domingo	95.64	68	LR	LR	01 32 11.5
	comp=Z,148nm,21.9s,baz=119,slow=35					
TORD	Torodi Ar. Bea	115.23	357	PKP	PKiKP	00 54 34.5 -1.2
	comp=Z,0.5nm,0.5s,baz=348,slow=2.3,SNR=10.0					
DBIC	Dimbokro	121.65	4	PKP	PKPdf	00 54 47.6 -0.5
	comp=Z,1.6nm,0.8s,baz=327,slow=1.8,SNR=3.5					
CPUP	Villa Florida	131.22	81	PKP	PKPdf	00 55 05.7 -0.2
	comp=Z,3.6nm,1.1s,baz=236,slow=19,SNR=2.1					
CPUP				SKPbc	SKPbc	00 58 20.2 -0.8
	comp=Z,6.3nm,1.2s,baz=305,slow=3.2,SNR=3.8					
PLCA	Paso Flores	132.73	105	SKPbc	SKPbc	00 58 26.4 +0.4
	comp=Z,1.7nm,1.0s,baz=299,slow=6.6,SNR=3.4					
MAW	Mawson	145.80	218	PKPbc	PKPab	00 55 32.7 +0.2
	comp=Z,2.8nm,0.5s,baz=64,slow=5.7,SNR=7.7					
MAW				pPKPbc	pPKPab	00 56 00.8 +0.4
	comp=Z,2.3nm,0.8s,baz=132,slow=13,SNR=2.2					
PMSA	Palmer Station	146.23	137	PKPbc	PKPbc	00 55 33.5 +0.2
	comp=Z,1.6nm,0.4s,baz=307,slow=5.1,SNR=2.2					

PRU **29** *00:36:57.0±0.0, 42°.92N×13°.81E, h0km*
ROM 29 00:36:57.6±0.1, 43°.017N±0°.004×13°.126E±0°.005,
h8km, ML2.6/24, 4C-5D, Error ellipse: s-maj=0.3km
s-min=0.3km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.03	304		AML	AML		
	comp=N,40400μm,0.9s							
FDMO					AML	AML		
	comp=N,37270μm,0.3s							
FDMO					AML	AML		
	comp=N,40400μm,1.1s							
FDMO					AML	AML		
	comp=E,58882μm,0.2s							
FDMO					AML	AML		
	comp=E,58900μm,0.2s							
FEMA	Monte Fema	0.08	226		AML	AML		
	comp=N,15700μm,1.4s							
FEMA					AML	AML		
	comp=E,23450μm,0.8s							
FEMA					AML	AML		
	comp=N,15700μm,1.4s							
FEMA					AML	AML		
	comp=E,23450μm,0.8s							
FEMA					AML	AML		
	comp=E,19895μm,0.2s							
FEMA					AML	AML		
	comp=N,13688μm,0.6s							
T1216	Preci, Frazion	0.15	212	P		Pg	00 37 01.3	+0.5
T1216				S		Sg	00 37 04.4	+1.4
T1216					AML	AML		
	comp=N,9165μm,1.6s							
T1216					AML	AML		
	comp=E,10850μm,0.3s							
T1216					AML	AML		
	comp=N,9150μm,1.6s							
T1216					AML	AML		
	comp=N,9155μm,1.6s							
T1216					AML	AML		
	comp=E,10800μm,0.3s							
T1216					AML	AML		
	comp=N,9082μm,0.3s							
T1216					AML	AML		
	comp=E,10829μm,0.3s							
GUMA	Gualdo di Mace	0.16	73	P		Pg	00 37 01.6	+0.6
GUMA				S		Sg	00 37 05.1	+1.8
GUMA					AML	AML		
	comp=E,23350μm,0.7s							
GUMA					AML	AML		
	comp=N,16150μm,0.9s							
GUMA					AML	AML		
	comp=E,28200μm,0.8s							
GUMA					AML	AML		
	comp=N,11150μm,0.9s							
GUMA					AML	AML		
	comp=N,11091μm,0.7s							
GUMA					AML	AML		
	comp=E,28180μm,0.8s							
GUMA					AML	AML		
	comp=E,23343μm,0.7s							
GUMA					AML	AML		
	comp=N,15242μm,0.5s							
T1245	Castelsantange	0.17	164	P		Pg	00 37 01.6	+0.4
T1245				S		Sg	00 37 05.0	+1.4
T1245					AML	AML		
	comp=N,14800μm,1.0s							
T1245					AML	AML		
	comp=E,7220μm,1.3s							
T1245					AML	AML		
	comp=N,14750μm,1.0s							
T1245					AML	AML		
	comp=E,7650μm,0.2s							
T1245					AML	AML		
	comp=N,13950μm,1.0s							
T1245					AML	AML		
	comp=N,12210μm,0.3s							
T1245					AML	AML		
	comp=E,7648μm,0.2s							
T1245					AML	AML		
	comp=E,7153μm,0.2s							
T1245					AML	AML		
	comp=N,11116μm,0.3s							
AM05	Amandola Campo	0.17	103	P		Pg	00 37 01.5	+0.3
AM05				S		Sg	00 37 05.1	+1.5
AM05					AML	AML		
	comp=E,986μm,0.9s							
AM05					AML	AML		
	comp=N,282μm,0.1s							
AM05					AML	AML		
	comp=N,282μm,0.1s							
AM05					AML	AML		
	comp=N,1130μm,1.0s							
AM05					AML	AML		
	comp=E,3450μm,0.7s							
AM05					AML	AML		
	comp=E,986μm,0.9s							
AM05					AML	AML		
	comp=N,923μm,0.5s							
AM05					AML	AML		
	comp=E,976μm,0.2s							
AM05					AML	AML		
	comp=N,282μm,0.1s							
AM05					AML	AML		
	comp=E,3203μm,0.3s							
SEF1	Sefro	0.18	315	P		Pg	00 37 01.7	+0.2
SEF1				S		Sg	00 37 06.0	+2.0
MMO1	Montemonaco	0.19	129	P		Pg	00 37 01.9	+0.3
MMO1				S		Sg	00 37 05.3	+1.2
SNTG	Esanatoglia	0.27	330	P		Pg	00 37 03.2	+0.1
SNTG				S		Sb	00 37 08.8	-1.0
T1241	Roccafluvione,	0.28	126	P		Pg	00 37 03.9	+0.8
T1241				S		Sb	00 37 08.8	-0.9
T1241					AML	AML		
	comp=N,1865μm,0.5s							
T1241					AML	AML		
	comp=E,1780μm,0.7s							
T1241					AML	AML		
	comp=N,1885μm,0.5s							
T1241					AML	AML		
	comp=E,1755μm,0.8s							
T1241					AML	AML		
	comp=N,1870μm,0.5s							
T1241					AML	AML		
	comp=N,1890μm,0.5s							
T1241					AML	AML		
	comp=E,1775μm,0.7s							
T1241					AML	AML		
	comp=N,1867μm,0.5s							
T1241					AML	AML		
	comp=E,1755μm,0.8s							
T1241					AML	AML		
	comp=N,1888μm,0.5s							
T1241					AML	AML		
	comp=E,1711μm,0.4s							
T1215	Vallo di Nera,	0.29	221	P		Pg	00 37 03.9	+0.5
T1215				S		Sb	00 37 08.9	-1.1
T1215					AML	AML		
	comp=E,1335μm,0.4s							
T1215					AML	AML		
	comp=N,1175μm,0.3s							
T1215					AML	AML		
	comp=E,1340μm,0.4s							
T1215					AML	AML		
	comp=N,1170μm,0.3s							
T1215					AML	AML		
	comp=N,951μm,0.2s							
T1215					AML	AML		
	comp=E,1338μm,0.4s							
T1215					AML	AML		
	comp=E,1328μm,0.4s							
T1215					AML	AML		
	comp=N,959μm,0.6s							
EL6	Elcito	0.31	357	P		Pg	00 37 04.1	+0.2
EL6				S		Sb	00 37 10.2	-0.7
T1217	Poggiodomo (PG	0.34	205	P		Pg	00 37 04.9	+0.6
T1217				S		Sb	00 37 11.1	-0.4
T1217					AML	AML		
	comp=N,1415μm,1.1s							
T1217					AML	AML		
	comp=E,1195μm,0.6s							
T1217					AML	AML		
	comp=N,1420μm,1.1s							
T1217					AML	AML		
	comp=E,1148μm,0.6s							
T1217					AML	AML		
	comp=N,1172μm,0.7s							
T1217					AML	AML		
	comp=E,1195μm,0.7s							
T1217					AML	AML		
	comp=N,1081μm,0.4s							
T1217					AML	AML		
	comp=N,1276μm,0.4s							
T1217					AML	AML		
	comp=E,1156μm,0.5s							
T1217					AML	AML		
	comp=E,1084μm,0.5s							
ASSB	Assisi San Ben	0.34	274	P		Pg	00 37 05.0	+0.6
ASSB				S		Sb	00 37 11.2	-0.6
CING	Cingoli	0.36	8	P		Pg	00 37 05.4	+0.6
CING				S		Sb	00 37 11.7	-0.6
T1204	Amatrice, Fraz	0.37	158	P		Pg	00 37 05.2	+0.2
T1204					AML	AML		
	comp=E,1954μm,0.4s							
T1204					AML	AML		
	comp=N,1116μm,0.6s							
ATCC	AVT- Casa Cast	0.39	295	P		Pb	00 37 06.2	-0.7
ATCC				S		Sb	00 37 13.3	+0.1
T1243	Rocca Santa Ma	0.40	143	P		Pb	00 37 06.8	-0.2
T1243				S		Sb	00 37 13.0	-0.4
SMA1	SAN MARTINO	0.42	158	P		Pg	00 37 06.2	+0.4
SMA1				S		Sb	00 37 13.2	-0.6
SMA1					AML	AML		
	comp=E,1355μm,1.3s							
SMA1					AML	AML		
	comp=N,1155μm,1.5s							
SMA1					AML	AML		
	comp=N,1154μm,1.5s							
SMA1					AML	AML		
	comp=E,1350μm,1.3s							
SMA1					AML	AML		
	comp=N,1143μm,0.4s							
SMA1					AML	AML		
	comp=E,1292μm,0.8s							
LNSS	Leonessa	0.42	189	P		Pb	00 37 06.8	-0.6
LNSS				S		Sb	00 37 13.5	-0.4
LNSS					AML	AML		
	comp=N,1250μm,0.8s							
LNSS					AML	AML		
	comp=N,1245μm,0.8s							
LNSS					AML	AML		
	comp=E,1235μm,1.5s							
LNSS					AML	AML		
	comp=E,1177μm,0.3s							
LNSS					AML	AML		
	comp=N,946μm,0.2s							
OFFI	Offida	0.42	101	⇑P		Pb	00 37 07.2	-0.1
OFFI					AML	AML		
	comp=E,1478μm,1.3s							
OFFI					AML	AML		
	comp=N,1685μm,0.6s							
OFFI					AML	AML		
	comp=E,1479μm,1.3s							
OFFI					AML	AML		
	comp=E,1345μm,0.5s							
OFFI					AML	AML		
	comp=N,1688μm,0.6s							
ARVD	Arcevia	0.50	344		AML	AML		
	comp=E,942μm,0.6s							
ARVD					AML	AML		
	comp=N,570μm,1.0s							
ARVD					AML	AML		
	comp=N,570μm,1.0s							
PP3	Marolino	0.51	44	S		Sg	00 37 09.0	-5.1
ARRO	Arrone	0.51	211	AML	AML			
	comp=E,440μm,0.2s							

ARRO			AML	AML		
	comp=E,440μm,0.2s					
ARRO			AML	AML		
	comp=N,598μm,0.2s					
ARRO			AML	AML		
	comp=N,599μm,0.2s					
RM33	**Pellescritta (**	**0.51 173**	⇓P	Pg	00 37 07.9	+0.3
RM33			AML	AML		
	comp=E,694μm,0.8s					
RM33			AML	AML		
	comp=N,690μm,0.6s					
RM33			AML	AML		
	comp=E,614μm,0.8s					
RM33			AML	AML		
	comp=E,694μm,0.8s					
RM33			AML	AML		
	comp=N,691μm,0.6s					
RM33			AML	AML		
	comp=E,614μm,0.8s					
RM33			AML	AML		
	comp=N,668μm,0.3s					
RM33			AML	AML		
	comp=N,656μm,0.3s					
RM33			AML	AML		
	comp=N,669μm,0.3s					
RM33			AML	AML		
	comp=E,497μm,0.3s					
RM33			AML	AML		
	comp=E,498μm,0.3s					
CAMP	**Campotosto**	**0.52 157**	⇓P	Pg	00 37 08.0	+0.2
CAMP			AML	AML		
	comp=E,716μm,0.2s					
CAMP			AML	AML		
	comp=N,528μm,0.3s					
CAMP			AML	AML		
	comp=E,716μm,0.2s					
CAMP			AML	AML		
	comp=N,527μm,0.3s					
T1211	**Morro Reatino**	**0.52 203**	AML	AML		
	comp=E,685μm,0.8s					
T1211			AML	AML		
	comp=N,880μm,0.9s					
T1211			AML	AML		
	comp=E,676μm,0.8s					
T1211			AML	AML		
	comp=N,877μm,1.0s					
T1211			AML	AML		
	comp=N,880μm,0.9s					
T1211			AML	AML		
	comp=N,874μm,1.0s					
T1211			AML	AML		
	comp=E,675μm,0.8s					
T1211			AML	AML		
	comp=N,880μm,1.1s					
T1211			AML	AML		
	comp=N,874μm,1.0s					
TERO	**Teramo**	**0.53 138**	AML	AML		
	comp=N,714μm,0.3s					
TERO			AML	AML		
	comp=E,658μm,0.5s					
TERO			AML	AML		
	comp=E,658μm,1.5s					
T1247	**Pizzolo (AQ)**	**0.59 168**	⇑P	Pg	00 37 09.1	0.0
T1247			AML	AML		
	comp=N,779μm,1.0s					
T1247			AML	AML		
	comp=N,780μm,1.0s					
T1247			AML	AML		
	comp=E,789μm,1.0s					
T1247			AML	AML		
	comp=N,746μm,0.3s					
T1247			AML	AML		
	comp=E,722μm,0.5s					
GIGS	**Gran Sasso**	**0.65 150**	⇓P	Pg	00 37 10.2	-0.1
GIGS			AML	AML		
	comp=E,206μm,1.0s					
GIGS			AML	AML		
	comp=N,170μm,0.3s					
GIGS			AML	AML		
	comp=N,170μm,0.3s					
GIGS			AML	AML		
	comp=E,202μm,0.3s					
FIAM	**Fiamignano**	**0.75 181**	⇓P	Pg	00 37 11.5	-0.6
FIAM			AML	AML		
	comp=E,236μm,0.6s					
FIAM			AML	AML		
	comp=N,213μm,0.4s					
FIAM			AML	AML		
	comp=N,213μm,0.4s					
FIAM			AML	AML		
	comp=E,235μm,0.6s					
FAGN	**Fagnano**	**0.82 156**	⇓P	Pg	00 37 13.5	0.0
FAGN			AML	AML		
	comp=E,596μm,0.4s					
FAGN			AML	AML		
	comp=N,704μm,1.4s					
FAGN			AML	AML		
	comp=E,597μm,0.4s					
FAGN			AML	AML		
	comp=N,659μm,0.4s					
FAGN			AML	AML		
	comp=E,597μm,0.4s					
T0110	**Collepietro**	**0.93 148**	⇑P	Pg	00 37 15.1	-0.4
T0110			AML	AML		
	comp=E,496μm,1.0s					
T0110			AML	AML		
	comp=N,388μm,0.5s					
T0110			AML	AML		
	comp=E,413μm,0.5s					
T0110			AML	AML		
	comp=N,388μm,0.5s					
INTR	**Introdacqua**	**1.16 150**	⇑P	Pg	00 37 17.3	-2.6
INTR			AML	AML		
	comp=E,190μm,0.9s					
INTR			AML	AML		
	comp=N,362μm,0.7s					
INTR			AML	AML		
	comp=E,184nm,0.9s					
INTR			AML	AML		
	comp=N,362μm,0.7s					
INTR			AML	AML		
	comp=N,221nm,0.6s					
INTR			AML	AML		
	comp=E,190μm,0.9s					
SAMA	**S.Maria delle**	**1.30 198**	P	Pn	00 37 15.6	-6.5
SAMA			AML	AML		
	comp=E,309μm,1.3s					
SAMA			AML	AML		
	comp=N,472μm,1.5s					
VITU	**Vitulano (BN)**	**2.15 148**	P	Pn	00 37 29.1	-4.8
VITU			S	Sg	00 38 10.0	+3.4
ABTA	**Abfaltersbach**	**3.75 354**	*i* Pn	Pn	00 37 57.5	+1.6
	comp=N,0.2nm,0.1s					
FETA	**Feichten**	**4.35 338**	*i* Pn	Pn	00 38 05.5	+1.3
	comp=N,0.6nm,0.3s					
WTTA	**Wattenberg**	**4.38 347**	*i* Pn	Pn	00 38 05.4	+0.9
	comp=N,1.1nm,0.3s					
SQTA	**Sankt Quirin**	**4.42 343**	*i* Pn	Pn	00 38 06.5	+1.5
	comp=N,1.3nm,0.3s					
KHC	**Kasperske Hory**	**6.12 3**	*e*PN	Pn	00 38 28.7	+0.3
KHC			*e*SN	Sn	00 39 38.4	-0.3

*IDC **29** 00:40:02.6±0.6, 56°.63S×25°.24W, h0km, mb4.4/10, mbtmp4.4/11, ML4.1/1, MS4.1/8, Error ellipse: s-maj=20.7km s-min=18.8km az=31.0*
*NEIC **29** 00:40:04.4±0.8, 56°.58S±0°.09×25°.2W±0°.2, h10km±1km, mb5.0/45, Error ellipse: s-maj=15.9km s-min=15.1km az=93.0*
*GCMT **29** 00:40:09.4±0.4, 57°.00S±0°.05×25°.00W±0°.04, h28km±1km, MW4.9/62, Moment Tensor Solution. s19,c22; s62,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.00±.27; $M_{\theta\theta}$-0.69±.20; $M_{\phi\phi}$-2.31±.16; $M_{r\theta}$1.38±.32; $M_{\theta\phi}$1.03±.08; $M_{r\phi}$0.64±.20; Best double couple: $M_0$3.20900×10^{16} NP1:ϕ_s134.00000°, δ49.00000°, λ61.00000°. NP2: ϕ_s354.00000°, δ49.00000°, λ120.00000°. Principal axes: T 3.6080, Plg68.0000°, Azm335.0000°; N -0.7980, Plg22.0000°, Azm154.0000°; P -2.8110, Plg0.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 00:40:03.9±0.4, 56°.58S±0°.09×25°.26W±0°.09, h10km, n87, σ0°.82/72, mb4.9/24, MS4.3/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.79**	**285**		**Pn**	**00 41 42.8**	**-0.6**
HOPE	**Hope Point**	**6.79**	**285**	P	**Pn**	**00 41 42.8**	**-0.6**
HOPE	**Hope Point**	**6.79**	**285**	P	**Pn**	**00 41 42.8**	**-0.6**
VNA1	**Neumayer--Stat**	**15.91**	**159**	P	**Pn**	**00 43 46.7**	**-0.7**
VNA3	**Neumayer Olymp**	**16.14**	**162**	P	**Pn**	**00 43 49.5**	**-0.9**
VNA2	**Neumayer--Watz**	**16.30**	**159**	P	**Pn**	**00 43 51.7**	**-0.8**
	baz=321,slow=15						
SNAA	**Sanae**	**17.82**	**157**	P	**P**	**00 44 12.5**	**+0.1**
SNAA	**Sanae**	**17.82**	**157**	P	**Pn**	**00 44 11.6**	**0.0**
	0.6nm,0.3s,baz=48,slow=13,SNR=36						
SNAA				S	Sn	00 47 15.6	-14
	1.7nm,1.0s,baz=182,slow=20,SNR=1.5						
	4.0nm,0.5s						
SNAA	**Sanae**	**17.82**	**157**		**P**	**00 44 13.1**	**+0.7**
TROLL	**Troll, Antarti**	**19.29**	**154**	P	**Pn**	**00 44 33.0**	**+3.4**
PMSA	**Palmer Station**	**20.37**	**230**	P	Pn	00 44 40.8	-1.4
	9.4nm,0.8s,baz=73,slow=6.7,SNR=2.9						
	9.4nm,0.8s						
PMSA	**Palmer Station**	**20.37**	**230**	P	Pn	00 44 40.9	-1.4
BELA	**Belgrano 2**	**21.64**	**185**	P	**P**	**00 44 52.4**	**-1.4**
TRQA	**Tornquist**	**30.52**	**292**	P	**P**	**00 46 16.2**	**-0.8**
TRQA				IAmb	IAmb	00 46 44.2	
	comp=Z,26nm,1.5s						
PLCA	**Paso Flores**	**33.15**	**279**	LR	LR	01 01 51.8	
	comp=Z,228nm,18.1s,baz=136,slow=40						
PLCA	**Paso Flores**	**33.15**	**279**	P	**P**	**00 46 40.9**	**+0.8**
PLCA				IAmb	IAmb	00 46 58.9	
	comp=Z,19nm,1.5s						
QSPA	**South Pole Qui**	**33.67**	**180**	P	**P**	**00 46 45.0**	**+0.4**
QSPA				IAmb	IAmb	00 46 53.5	
	comp=Z,34nm,1.4s						
ITQB	**Itaqui**	**34.77**	**307**	P	**P**	**00 46 54.3**	**+0.1**
ITQB				IAmb	IAmb	00 46 55.9	
	comp=Z,27nm,1.1s						
ITAB	**Concordia**	**35.05**	**316**	P	**P**	**00 46 56.4**	**-0.3**
CPUP	**Villa Florida**	**37.97**	**309**	P	**P**	**00 47 21.8**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=140,slow=11,SNR=6.3						
	comp=Z,7.6nm,0.9s						
CPUP	**Villa Florida**	**37.97**	**309**	P	**P**	**00 47 21.9**	**+0.2**
CPUP				IAmb	IAmb	00 47 23.3	
	comp=Z,22nm,1.2s						
BO04	**La Punta**	**38.13**	**287**	P	**P**	**00 47 21.8**	**-1.1**
MAW	**Mawson**	**39.08**	**143**	P	**P**	**00 47 30.7**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=292,slow=5.4,SNR=2.4						
MAW				LR	LR	01 03 15.3	
	comp=Z,158nm,18.0s,baz=256,slow=36						
	comp=Z,1.7nm,0.7s						
MAW	**Mawson**	**39.08**	**143**	LR	LR	00 47 31.0	
	comp=Z,2μm,18.9s,baz=312,slow=32						
SUR	**Sutherland**	**39.76**	**72**	LR	LR	01 00 21.2	
	comp=Z,465nm,18.6s,baz=236,slow=31						
GO02	**Mina Guanaco**	**44.69**	**296**	P	**P**	**00 48 17.6**	**+0.5**
GO02				IAmb	IAmb	00 48 36.6	
	comp=Z,14nm,0.7s						
BOSA	**Boshof**	**45.08**	**73**	P	**P**	**00 48 20.1**	**+0.1**
	comp=Z,5.9nm,0.9s,baz=208,slow=6.5,SNR=6.1						
BOSA				LR	LR	01 05 10.7	
	comp=Z,454nm,18.3s,baz=218,slow=34						
	comp=Z,5.9nm,0.9s						
BOSA	**Boshof**	**45.08**	**73**	P	**P**	**00 48 19.5**	**-0.5**
BOSA				IAmb	IAmb	00 48 20.9	
	comp=Z,15nm,1.1s						
PB14	**IPOC Station P**	**45.54**	**295**	P	**P**	**00 48 24.4**	**+0.5**
VNDA	**Vanda**	**46.09**	**182**	P	**P**	**00 48 26.7**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=185,slow=6.2,SNR=8.8						
	comp=Z,3.3nm,1.0s						
VNDA	**Vanda**	**46.09**	**182**	P	**P**	**00 48 28.3**	**+1.0**
LVC	**Limon Verde**	**46.50**	**298**	P	**P**	**00 48 31.8**	**+0.2**
PB04	**IPOC Station P**	**47.34**	**297**	P	**P**	**00 48 37.7**	**-0.1**
PB09	**IPOC Station P**	**47.35**	**299**	P	**P**	**00 48 38.4**	**+0.4**
PB03	**IPOC Station P**	**47.38**	**298**	P	**P**	**00 48 38.2**	**-0.1**
PB03				IAmb	IAmb	00 48 39.0	
	comp=Z,24nm,1.2s						
PB07	**IPOC Station P**	**47.72**	**298**	P	**P**	**00 48 40.6**	**-0.3**
PB07				IAmb	IAmb	00 48 41.8	
	comp=Z,20nm,1.0s						
PB02	**IPOC Station P**	**48.07**	**298**	P	**P**	**00 48 43.5**	**0.0**
PB01	**IPOC Station P**	**48.11**	**299**	P	**P**	**00 48 44.1**	**+0.4**
LBTB	**Lobatse**	**48.15**	**71**	P	**P**	**00 48 44.5**	**+0.3**
	comp=Z,4.8nm,0.8s,baz=217,slow=6.7,SNR=5.4						
LBTB				LR	LR	01 06 26.6	
	comp=Z,247nm,18.4s,baz=219,slow=33						
	comp=Z,4.8nm,0.8s						
PATCX	**Punta Patache**	**48.62**	**298**	P	**P**	**00 48 47.1**	**-0.6**
PB08	**IPOC Station P**	**48.72**	**300**	P	**P**	**00 48 49.3**	**+0.5**
TA01	**Diego Aracena**	**48.85**	**299**	P	**P**	**00 48 49.2**	**-0.2**
TA01				IAmb	IAmb	00 48 50.8	
	comp=Z,18nm,1.1s						
TSUM	**Tsumeb**	**49.03**	**58**	LR	LR	01 05 08.7	
	comp=Z,124nm,21.4s,baz=174,slow=31						
TA02	**Huaiquique**	**49.08**	**299**	P	**P**	**00 48 51.0**	**-0.1**
TA02				IAmb	IAmb	00 49 09.8	
	comp=Z,18nm,0.9s						
GO01	**Chusmiza**	**49.14**	**300**	P	**P**	**00 48 52.3**	**+0.1**
PB11	**IPOC Station P**	**49.28**	**300**	P	**P**	**00 48 53.4**	**+0.5**
H10N1	**ASCENSION HYDR**	**49.35**	**14**	T	T	01 42 57.2	
	baz=188,slow=74						
H10N3	**ASCENSION HYDR**	**49.35**	**14**	T	T	01 42 55.5	
	baz=188,slow=74						
H10N2	**ASCENSION HYDR**	**49.36**	**14**	T	T	01 42 57.6	
	baz=188,slow=74						
PB16	**IPOC Station P**	**50.43**	**301**	P	**P**	**00 49 02.4**	**+0.3**
PB16				IAmb	IAmb	00 49 03.8	
	comp=Z,15nm,1.1s						
LPAZ	**La Paz**	**51.56**	**303**	P	**P**	**00 49 11.7**	**+1.0**
	comp=Z,24nm,0.7s,baz=150,slow=5.5,SNR=48						
	comp=Z,24nm,0.7s						
LPAZ	**La Paz**	**51.56**	**303**	P	**P**	**00 49 11.1**	**+0.4**
MATP	**Matopo**	**53.43**	**70**	P	**P**	**00 49 23.7**	**-0.3**
	comp=Z,4.5nm,1.1s,baz=222,slow=10.0,SNR=5.7						
	comp=Z,4.5nm,1.1s						
LSZ	**Lusaka**	**57.58**	**67**	LR	LR	01 13 42.1	
	comp=Z,174nm,18.0s,baz=242,slow=35						
VOI	**Vohitsoka**	**62.14**	**88**	P	**P**	**00 50 23.2**	**-2.0**
VOI				IAmb	IAmb	00 50 39.2	
	comp=Z,11nm,1.3s						
OPO	**Ambohidratompo**	**65.04**	**86**	LR	LR	01 12 59.0	
	comp=Z,126nm,21.1s,baz=342,slow=30						
BOSC	**San Juan Bosco**	**67.90**	**300**	P	**P**	**00 51 02.9**	**+0.1**
SLOR	**San Lorenzo -**	**70.02**	**302**	P	**P**	**00 51 16.6**	**+0.4**
SLOR				IAmb	IAmb	00 51 40.6	
	comp=Z,4.7nm,0.6s						
TULM	**Tulcn-Chalpat**	**70.95**	**303**	P	**P**	**00 51 22.5**	**+0.5**
TULM				IAmb	IAmb	00 51 39.4	
	comp=Z,16nm,0.9s						
GARC	**Garzon, Huila**	**71.21**	**306**	*e*P	**P**	**00 51 22.5**	**-0.7**
CHIC	**Chingaza**	**72.61**	**309**	*e*P	**P**	**00 51 31.2**	**-0.6**
ORTC	**Ortega, Tolima**	**72.63**	**307**	*e*P	**P**	**00 51 32.0**	**+0.5**
TOA0	**Torodi Ar. Sit**	**73.01**	**28**	P	**P**	**00 51 34.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**73.01**	**28**	P	**P**	**00 51 34.5**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=198,slow=6.6,SNR=10.0						
	comp=Z,1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.01**	**28**	P	**P**	**00 51 33.9**	**+0.4**
SPBC	**San Pablo de B**	**73.67**	**309**	*e*P	**P**	**00 51 36.5**	**-1.2**
GUY2C	**Guyana, Caldas**	**73.85**	**307**	*e*P	**P**	**00 51 39.8**	**+0.6**
BAUV	**El Baul**	**74.18**	**316**	P	**P**	**00 51 41.3**	**+0.8**
BAUV				IAmb	IAmb	00 51 42.4	
	comp=Z,23nm,1.0s						
PTBC	**PUERTO BERRIO,**	**74.63**	**309**	*e*P	**P**	**00 51 40.5**	**-2.6**
SDV	**Santo Domingo**	**75.15**	**313**	P	**P**	**00 51 46.9**	**+0.5**
SDV				IAmb	IAmb	00 51 51.3	
	comp=Z,7.2nm,0.8s						
LODK	**Lodwar**	**77.20**	**63**	P	**P**	**00 51 57.0**	**-1.0**
TBI	**Tubuai**	**87.57**	**230**	*e*LR	LR	01 20 39.2	
	comp=Z,893nm,31.0s						
PPT2	**Papeete2**	**92.71**	**232**	*e*LR	LR	01 23 02.3	
	comp=Z,204nm,28.8s						
ASAR	**Alice Springs**	**98.15**	**161**	P	**P**	**00 53 40.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=185,slow=4.4,SNR=4.8						
	comp=Z,0.5nm,0.7s						
DZM	**Mont Dzumac**	**101.03**	**191**	*e*LR	LR	01 26 52.9	
	comp=Z,146nm,22.9s						
WRA	**Warramunga Arr**	**101.86**	**160**	P	**Pdif**	**00 53 56.6**	**-0.9**
	comp=Z,0.5nm,1.0s,baz=193,slow=4.3,SNR=2.3						
PZH	**PanZhiHua**	**131.93**	**106**	PKP	**PKiKP**	**00 59 19.0**	**+0.8**
MKAR	**Makanchi Array**	**136.04**	**71**	PKP	**PKPdf**	**00 59 23.5**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=297,slow=0.6,SNR=1.8						
CD2	**Chengdu**	**136.49**	**104**	PKP	**PKPdf**	**00 59 26.3**	**+0.8**
ZALV	**Zalesovo Beam**	**141.64**	**63**	PKhKP	PKPpre	00 59 30.6	
	comp=Z,0.5nm,0.5s,baz=242,slow=3.1,SNR=2.0						
INK	**Inuvik**	**146.90**	**320**	PKPbc	**PKPdf**	**00 59 43.6**	**+0.9**
	comp=Z,6.3nm,1.1s,baz=53,slow=4.2,SNR=11						
DAWY	**Dawson**	**147.95**	**311**		**PKPbc**	**00 59 48.0**	**+0.2**
BCAR	**Beaver Creek A**	**148.66**	**308**		**PKPbc**	**00 59 50.3**	**+0.6**
NRIK	**Noril'sk**	**148.75**	**39**	PKPbc	**PKPbc**	**00 59 50.5**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=221,slow=19,SNR=2.0						
SONM	**Songino Array**	**149.69**	**86**	PKPbc	**PKPbc**	**00 59 53.0**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=226,slow=2.7,SNR=9.9						
ILAR	**Eielson Array**	**151.27**	**311**	PKPbc	**PKPbc**	**00 59 56.0**	**+0.1**
	comp=Z,8.2nm,1.0s,baz=120,slow=1.3,SNR=39						
TOLK	**Toolik Lake Re**	**152.79**	**319**		**PKiKP**	**00 59 59.9**	**+0.4**

*ISK **29** 00:58:07.9, 39°.02N×26°.28E, h14km, ML3.1/12*
*ATH **29** 00:58:08.3, 39°.02N×26°.27E, h18km±4km, ML2.5/2, Error ellipse: s-maj=5.2km s-min=2.2km az=27.0*
*DDA **29** 00:58:08.2±0.0, 39°.01N×26°.29E, h7km±2km, ML2.5*
*THE **29** 00:58:08.5, 39°.01N×26°.29E, h5km±2km, ML2.7/4, Error ellipse: s-maj=2.3km s-min=0.6km az=307.0*
ISC 29 00:58:08.3±0.9, 39°.01N±0°.02×26°.29E±0°.02, h12km±8km, n38, σ0°.45/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.23**	**356**	P	**Pb**	**00 58 14.2**	**-0.2**
PRK				S	**Sg**	**00 58 16.8**	**+0.2**
	3μm,0.3s						
PRK	**Paraskevi**	**0.23**	**356**	P	**Pb**	**00 58 14.3**	**-0.2**
PRK				S	**Sg**	**00 58 16.4**	**-0.2**
PRK				AML	AML	00 58 18.9	
	comp=E,5628μm,0.2s						
PRK				AML	AML	00 58 20.1	
	comp=N,7342μm,0.4s						
SIGR	**SIGRI**	**0.39**	**301**	PG	**Pg**	**00 58 16.1**	**0.0**
SIGR				SG	**Sg**	**00 58 21.8**	**+0.4**
SIGR	**SIGRI**	**0.39**	**301**	P	**Pg**	**00 58 16.4**	**+0.3**
SIGR				S	**Sg**	**00 58 21.8**	**+0.4**
	comp=N,520nm,0.5s						
SIGR	**SIGRI**	**0.39**	**301**	P	**Pg**	**00 58 16.4**	**+0.3**
SIGR				S	**Sg**	**00 58 20.4**	**-1.0**
SIGR				AML	AML	00 58 21.8	
	comp=E,788μm,0.2s						
SIGR				AML	AML	00 58 23.8	
	comp=N,955μm,0.6s						
AYVA	**Ayvalik**	**0.43**	**46**	P	**Pg**	**00 58 17.0**	**+0.2**
AYVA				*i* AML	AML	00 58 23.0	
	comp=N,1μm,0.4s						
AYVA				*i* AML	AML	00 58 23.0	
	comp=N,611nm,0.3s						
AYVA				S	**Sb**	**00 58 23.2**	**-0.9**
FOCM	**Foa**	**0.45**	**131**	PG	**Pg**	**00 58 17.5**	**+0.3**
DKL	**Dikili**	**0.48**	**83**	PG	**Pg**	**00 58 17.9**	**+0.2**
DKL				SG	**Sb**	**00 58 25.1**	**-0.6**
KOCA	**Canakkale, Ayv**	**0.50**	**346**	P	**Pg**	**00 58 18.4**	**+0.3**
KOCA				S	**Sb**	**00 58 25.9**	**-0.4**
KOCA				*i* AML	AML	00 58 26.0	
	comp=N,364nm,0.6s						
KOCA				*i* AML	AML	00 58 31.0	
	comp=N,458nm,0.2s						
ZEDA	**zmir-Bergama**	**0.61**	**94**	P	**Pg**	**00 58 20.2**	**0.0**
ZEDA				S	**Sg**	**00 58 27.9**	**-0.4**
ZEDA				*i* AML	AML	00 58 29.0	
	comp=N,162nm,0.3s						
ZEDA				*i* AML	AML	00 58 29.0	
	comp=N,127nm,0.2s						
CHOS	**Chios island**	**0.65**	**197**	PG	**Pg**	**00 58 21.1**	**+0.2**
CHOS	**Chios island**	**0.65**	**197**	P	**Pg**	**00 58 20.6**	**-0.3**
CHOS				S	**Sb**	**00 58 30.9**	**+0.3**
URLA	**Izmir**	**0.69**	**160**	PG	**Pg**	**00 58 20.3**	**-1.4**
URLA	**Izmir**	**0.69**	**160**	P	**Pg**	**00 58 20.7**	**-1.0**
URLA				S	**Sg**	**00 58 30.5**	**-0.4**
URLA				*i* AML	AML	00 58 33.0	
	comp=N,324nm,0.6s						
URLA				*i* AML	AML	00 58 34.0	
	comp=N,425nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.76**	**15**	P	**Pg**	**00 58 22.5**	**-0.4**
BAYC				*i* AML	AML	00 58 35.0	
	comp=N,555nm,0.3s						
BAYC				*i* AML	AML	00 58 36.0	
	comp=N,277nm,0.3s						
BUHA	**Balikesir, Bur**	**0.78**	**51**	P	**Pg**	**00 58 23.3**	**-0.1**
BUHA				S	**Sb**	**00 58 34.5**	**+0.2**
BUHA				*i* AML	AML	00 58 37.0	
	comp=N,276nm,0.4s						
BUHA				*i* AML	AML	00 58 39.0	
	comp=N,208nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.79**	**168**	P	**Pg**	**00 58 23.1**	**-0.4**
ZEYE				S	**Sb**	**00 58 35.4**	**+0.9**
ZEYE				*i* AML	AML	00 58 36.0	
	comp=N,286nm,0.5s						
ZEYE				*i* AML	AML	00 58 36.0	
	comp=N,772nm,0.3s						
EZN	**Ezine**	**0.81**	**2**	PG	**Pg**	**00 58 23.9**	**-0.1**
EZN	**Ezine**	**0.81**	**2**	P	**Pg**	**00 58 23.8**	**-0.2**
EZN				S	**Sb**	**00 58 35.7**	**+0.5**
	comp=N,670nm,0.6s						
BOZC	**Bozcaada**	**0.85**	**347**	PG	**Pg**	**00 58 24.5**	**-0.2**
BOZC				SG	**Sb**	**00 58 36.7**	**+0.4**
BLCB	**Balcova**	**0.86**	**137**	PG	**Pb**	**00 58 25.4**	**+0.3**
BLCB	**Balcova**	**0.86**	**137**	P	**Pb**	**00 58 25.3**	**+0.2**
BLCB				S	**Sb**	**00 58 36.9**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.17**	**71**	P	**Pg**	**00 58 30.8**	**+0.1**
STEP				S	**Sn**	**00 58 46.9**	**+0.6**
STEP				*i* AML	AML	00 58 48.0	
	comp=N,230nm,0.4s						
STEP				*i* AML	AML	00 58 50.0	
	comp=N,200nm,0.4s						
AKS	**Akhisar**	**1.19**	**96**	PN	**Pb**	**00 58 30.8**	**0.0**
GADA	**Gvkgeada**	**1.22**	**346**	PN	**Pb**	**00 58 30.9**	**-0.3**
GADA				SN	**Sn**	**00 58 46.9**	**-0.5**
BALY	**Balya**	**1.26**	**54**	P	**Pn**	**00 58 31.0**	**-0.7**
BALY				S	**Sg**	**00 58 49.4**	**+0.6**
BALY				*i* AML	AML	00 58 51.0	
	comp=N,150nm,0.4s						
BALY				*i* AML	AML	00 58 51.0	
	comp=N,70nm,0.5s						
GOMA	**Golmarmara-Man**	**1.30**	**103**	PN	**Pn**	**00 58 32.2**	**-0.1**
SMG	**Samos**	**1.37**	**162**	P	**Pn**	**00 58 32.9**	**-0.3**
SMG				S	**Sg**	**00 58 52.7**	**+0.3**
	comp=N,328nm,0.4s						
SMG	**Samos**	**1.37**	**162**	P	**Pn**	**00 58 32.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.39**	**6**	PN	**Pn**	**00 58 33.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.49**	**46**	PN	**Pn**	**00 58 35.0**	**+0.1**
GCAM	**G?zelcaml?**	**1.50**	**150**	PN	**Pn**	**00 58 35.1**	**+0.1**
SMTH	**Samothraki Isl**	**1.57**	**338**	P	**Pn**	**00 58 36.2**	**+0.2**
SMTH	**Samothraki Isl**	**1.57**	**338**	P	**Pn**	**00 58 35.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**130**	PN	**Pn**	**00 58 37.1**	**0.0**
EDC	**Edincik**	**1.80**	**42**	PN	**Pn**	**00 58 39.3**	**+0.2**
APE	**Apeiranthos**	**2.03**	**197**	PN	**Pn**	**00 58 42.5**	**+0.2**
YER	**Yerkesik**	**2.45**	**139**	PN	**Pn**	**00 58 48.6**	**+0.6**

*NIED **29** 01:23:59.7, 25°.73N×125°.09E, h26km, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.09; $M_{\theta\theta}$3.87; $M_{\phi\phi}$-1.78; $M_{r\theta}$-0.23; $M_{\theta\phi}$1.57; $M_{r\phi}$0.63; Fault plane solution: $M_0$3.54000×10^{14} NP1: ϕ_s219.00000°, δ61.00000°, λ-147.00000°. NP2: ϕ_s112.00000°, δ62.00000°, λ-34.00000°.*
JMA 29 01:23:59.7±0.2, 25°.7N±0°.5×125°.1E±0°.6, h26km±2km, MV3.7/12, NW OFF MIYAKOJIMA ISLAND, Southwestern Ryukyu Islands

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC | Time h

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUNRC	North Rockhamp baz=2.4	2.39	131	P	Pn	01 27 42.9	+1.0
AUNRC				S	Sb	01 28 15.2	-0.2
CTA	Charters Tower baz=2.7	2.75	308	P	Pn	01 27 44.7	-2.2
AUMOU	Moura State Hi baz=3.1	3.07	155	P	Pn	01 27 48.3	-3.0
EIDS	Eidsvold baz=4.3,SNR=7.3	4.25	148	P	Pn	01 28 06.8	-0.7
EIDS				S	Sn	01 28 58.3	+0.6
JAY	Jayapura baz=21,SNR=3.4	20.63	337	S	S	01 35 26.9	-7.4

*IDC **29** 01:27:52.2±1.6, 41˚.48N×145˚.38E, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=62.6km s-min=21.4km az=76.0*
*JMA **29** 01:27:53.7±0.2, 41˚.8N±0˚.7×14˚6E±˚, h37km±1km, MV4.2/39, OFF NEMURO PENINSULA*
ISC 29 01:27:52.8±2.4, 41˚.82N±0˚.08×145˚.57E±0˚.08, h5km±13km, n24, σ1§33/24, mb4.0/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	1.30	347	eP	Pg	01 28 17.5	-0.2
JKHN				eS	Sg	01 28 34.6	0.0
JAK	Akkeshi	1.34	331	eP	Pn	01 28 18.0	-0.2
JAK				eS	Sg	01 28 36.3	+0.3
JAK	Akkeshi comp=E,4.0nm,0.6s,comp=E,2.0nm,0.3s	1.34	331	A	A	01 28 18.0	
NEM2	Nemuro 2	1.55	5	eP	Pn	01 28 20.7	-0.3
NEM2				eS	Sn	01 28 40.5	-1.1
JOB	Onbets	1.68	311	eP	Pn	01 28 22.9	0.0
JOB				eS	Sn	01 28 44.0	-0.8
JTHR	Tokachihiroo	1.76	286	eP	Pn	01 28 23.7	-0.3
JTHR				eS	Sn	01 28 45.0	-1.6
JEM	Erimo	1.81	277	eP	Pn	01 28 24.8	+0.1
JCH	Churui	1.82	297	P	Pn	01 28 24.6	-0.3
JNK	Nakash	1.87	341	eP	Pn	01 28 24.8	-0.8
JNK				eS	Sn	01 28 47.5	-2.0
JAR	Ashorobuto	1.99	319	P	Pn	01 28 26.6	-0.5
JAR				eS	Sn	01 28 50.9	-1.5
SONM	Songino Array 2.4nm,0.8s,baz=81,slow=8.8,SNR=9.8 2.4nm,0.8s	28.20	296	P	P	01 33 46.9	+0.5
H11N2	WAKE ISLAND Hy baz=327,slow=76	28.50	134	T	T	02 05 15.8	
H11N1	WAKE ISLAND Hy baz=327,slow=76	28.51	134	T	T	02 05 16.3	
H11N3	WAKE ISLAND Hy baz=327,slow=76	28.51	134	T	T	02 05 14.5	
H11S1	WAKE ISLAND Hy baz=328,slow=76	29.40	136	T	T	02 06 20.9	
H11S3	WAKE ISLAND Hy baz=328,slow=76	29.40	136	T	T	02 06 05.8	
H11S2	WAKE ISLAND Hy baz=328,slow=76	29.42	136	T	T	02 06 16.8	
MKAR	Makanchi Array 0.3nm,0.5s,baz=77,slow=9.5,SNR=2.7 0.3nm,0.5s	44.47	299	P	P	01 36 04.6	-0.3
ARCES	ARCESS Array B 5.5nm,1.0s,baz=44,slow=7.9,SNR=5.3 5.5nm,1.0s	60.65	340	P	P	01 38 04.7	+0.4
WRA	Warramunga Arr 0.6nm,0.6s,baz=10,slow=6.8,SNR=7.1 0.6nm,0.6s	62.32	192	P	P	01 38 13.3	-2.8
ASAR	Alice Springs 0.3nm,0.6s,baz=9.0,slow=5.5,SNR=6.6 0.3nm,0.6s	66.05	192	P	P	01 38 38.9	-1.7
FINES	FINESS Array B 2.3nm,0.4s,baz=43,slow=8.0,SNR=33 2.3nm,0.4s	66.06	333	P	P	01 38 43.0	+2.8
KBZ	Khabaz 1.1nm,0.8s,baz=131,slow=19,SNR=2.4 1.1nm,0.8s	70.20	311	P	P	01 39 07.7	+1.1
AKASG	Malin Array Be 0.5nm,0.4s,baz=44,slow=6.6,SNR=6.1 0.5nm,0.4s	72.44	323	P	P	01 39 21.7	+1.8

*ANF **29** 01:33:34.3±0.2, 67˚.18N×138˚.99W, h0km, ML3.8/51, ML3.8/52, Error ellipse: s-maj=2.1km s-min=1.7km az=43.0*
*IDC **29** 01:33:34.5±0.9, 67˚.31N×138˚.77W, h0km, mb3.7/4, mbtmp3.6/8, ML3.5/4, Error ellipse: s-maj=14.2km s-min=12.2km az=145.0*
*PGC **29** 01:33:35.2±0.1, 67˚.19N×138˚.98W, h4km, ML3.4, ML3.7/4, 197km west of Fort McPherson, Nt Northern Yukon Territory, Canada*
ISC 29 01:33:34.0±1.2, 67˚.14N±0˚.03×138˚.87W±0˚.02, h2km±9km, n134, σ1§25/181, mb3.9/4, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G30M	tAoh Zraii Nji baz=282,SNR=1000	1.05	98	P	Pg	01 33 54.4	+0.2
G30M				S	Sg	01 34 10.2	+2.5
G27K	Doyon Strip baz=282	1.14	254	P	Pg	01 33 55.3	-0.7
G27K				S	Sg	01 34 10.9	+0.2
G27K	Doyon Strip baz=69,SNR=397	1.14	254	P	Pg	01 33 55.1	-0.8
G27K				S	Sg	01 34 10.9	+0.2
EPYK	Eagle Plains baz=69	1.15	131	P	Pb	01 33 56.9	+0.2
EPYK				S	Sb	01 34 13.3	+1.2
EPYK	Eagle Plains baz=313,SNR=122	1.15	131	P	Pb	01 33 56.9	+0.2
EPYK				S	Sb	01 34 13.3	+1.2
H27K	Steamboat Moun baz=313	1.40	230	Pn	Pn	01 34 00.4	-0.2
H27K				Sn	Sg	01 34 19.8	+1.0
H27K	Steamboat Moun baz=46,SNR=1000	1.40	230	P	Pn	01 33 59.9	-0.7
H27K				S	Sg	01 34 19.9	+1.1
E27K	Coleen River baz=46	1.48	317	P	Pn	01 34 00.6	-1.2
E27K				S	Sg	01 34 21.1	-0.4
I29M	Ogilvie Camp, baz=134	1.80	172	Pn	Pn	01 34 06.4	+0.2
I29M				Sn	Sb	01 34 32.4	+1.7
I29M	Ogilvie Camp, baz=352,SNR=42	1.80	172	P	Pn	01 34 06.2	+0.1
I29M				S	Sb	01 34 31.7	+1.0
I27K	Kandik River baz=352	1.90	217	Pn	Pn	01 34 08.3	+0.8
I27K				Sn	Sb	01 34 34.0	+0.5
I27K	Kandik River baz=33,SNR=527	1.90	217	P	Pn	01 34 08.2	+0.8
G26K	Porcupine Rive baz=81,SNR=33	1.94	267	P	Pn	01 34 07.3	-0.6
F31M	Tsiigehtchic baz=265,SNR=25	2.01	79	P	Pn	01 34 09.1	+0.2
F31M				S	Sn	01 34 36.6	+1.9
F26K	Sheenjek River baz=265	2.11	288	P	Pn	01 34 09.6	-0.8
INK	Inuvik baz=102,SNR=164	2.35	58	Pn	Pn	01 34 14.5	+0.8
INK				Lg	Lg	01 34 44.5	
INK	Inuvik 10.0nm,0.3s,baz=241,slow=16,SNR=190 16nm,0.3s,baz=209,slow=6.2,SNR=16 25nm,0.3s	2.35	58	Pn	Pn	01 34 14.4	+0.8
INK				Sn	Sn	01 34 43.9	+0.9
INK	Inuvik baz=244,SNR=136	2.35	58	P	Pn	01 34 14.4	+0.8
INK				S	Sn	01 34 44.2	+1.2
I26K	Coal Creek Min baz=244	2.53	225	P	Pn	01 34 16.6	+0.5
I26K				S	Sn	01 34 49.0	+1.5
EGAK	Eagle baz=40	2.55	203	P	Pn	01 34 16.8	+0.4
EGAK				S	Sn	01 34 49.9	+2.0
F25K	Christian Rive baz=19,SNR=22	2.66	283	P	Pn	01 34 17.6	-0.3
J29M	Klondike Camp baz=96,SNR=102	2.71	174	Pn	Pn	01 34 19.9	+1.2
J29M				Pg	Pb	01 34 25.5	+2.2
J29M				Sn	Sn	01 34 54.2	+2.1
J29M	Klondike Camp baz=19	2.71	174	Pb	Pb	01 34 24.0	+0.8
J29M				S	Sn	01 34 54.6	+2.5
E25K	Arctic Village baz=354	2.75	294	P	Pn	01 34 19.2	+0.1
G25K	Bearman Lake baz=108	2.87	266	P	Pn	01 34 20.9	+0.1
H25K	Birch Creek baz=78,SNR=18	2.90	256	P	Pn	01 34 20.9	-0.2
C27K	Jago River baz=68,SNR=18	3.07	327	P	Pn	01 34 23.7	+0.1
DAWY	Dawson baz=142,SNR=68	3.10	184	Pn	Pn	01 34 24.2	+0.3
DAWY				Sn	Sn	01 35 01.1	-0.3
DAWY	Dawson baz=2.9,SNR=79	3.10	184	P	Pn	01 34 24.4	+0.5
DAWY				S	Sn	01 35 01.6	+0.1
PRP	Porcupine Dome baz=2.9	3.14	242	P	Pn	01 34 24.7	+0.1
J26L	Joseph Creek baz=55,SNR=16	3.28	218	P	Pn	01 34 26.9	+0.5
J26L				S	Sn	01 35 06.6	+0.6
K29M	Barlow Dome baz=33	3.36	170	Pn	Pn	01 34 28.6	+1.1
K29M				Sn	Sn	01 35 08.6	+0.5
K29M				Sg	Sg	01 35 23.4	+1.6
K29M	Barlow Dome baz=350,SNR=64	3.36	170	P	Pn	01 34 28.7	+1.1
K27K	Chicken baz=350	3.40	205	Pn	Pn	01 34 28.5	+0.5
K27K				Sn	Sn	01 35 08.1	-0.7
K27K				Sg	Sg	01 35 21.5	-1.4
K27K	Chicken baz=21	3.40	205	P	Pn	01 34 28.6	+0.6
G24K	Hadweenzic Riv baz=78	3.42	267	P	Pn	01 34 28.5	+0.2
F24K	Squaw Lake baz=92,SNR=47	3.51	280	P	Pn	01 34 29.3	-0.4
C26K	Camden Bay baz=139,SNR=39	3.57	324	P	Pn	01 34 30.8	+0.5
J25K	Salcha River, baz=43,SNR=58	3.68	229	P	Pn	01 34 32.7	+0.7
E24K	Your Creek baz=100	3.80	289	P	Pn	01 34 33.4	-0.2
SCRK	Sand Creek baz=31,SNR=143	3.82	216	P	Pn	01 34 35.1	+1.1
H24K	Noodor Dome baz=65,SNR=9.4	3.84	254	P	Pn	01 34 33.5	-0.7
POKR	Poker Plat Res baz=55	4.03	244	P	Pn	01 34 36.2	-0.5
ILAR	Eielson Array 0.8nm,0.3s,baz=48,slow=13,SNR=59	4.05	238	Pn	Pn	01 34 37.5	+0.5
ILAR				Sn	Sn	01 35 24.9	0.0
ILAR	1.7nm,0.3s,baz=336,slow=20,SNR=5.8 3.8nm,0.3s,baz=48,slow=29,SNR=9.4 5.2nm,0.7s			Lg	Lg	01 35 41.4	
L29M	L29M	4.06	175	Pn	Pn	01 34 37.7	+0.5
L29M	L29M baz=355,SNR=37	4.06	175	P	Pn	01 34 37.8	+0.6
DOT	Dot Lake	4.12	214	Pn	Pn	01 34 39.1	+1.1
DOT				Sg	Sg	01 35 45.6	-0.7
E23K	Chandalar baz=97	4.21	288	P	Pn	01 34 38.6	-0.7
RIDG	Independent Ri baz=33	4.23	219	P	Pn	01 34 40.2	+0.7
L27K	Beaver Creek, baz=15,SNR=47	4.28	198	Pn	Pn	01 34 40.4	+0.2
L27K	Beaver Creek, baz=46,SNR=14	4.28	198	P	Pn	01 34 41.0	+0.8
HDA	Harding Lake baz=105,SNR=29	4.31	234	P	Pn	01 34 41.4	+0.8
TOLK	Toolik Lake Re baz=79	4.32	295	P	Pn	01 34 40.8	+0.2
G23K	Bananza Creek baz=37,SNR=5.2	4.41	270	P	Pn	01 34 42.0	0.0
K24K	Donnelly Dome baz=121	4.42	224	P	Pn	01 34 43.1	+1.1
C24K	Franklin Bluff baz=67	4.46	310	P	Pn	01 34 42.8	+0.2
H23K	Yukon River baz=67	4.47	258	P	Pn	01 34 42.7	-0.2
L26K	Log Cabin Wild baz=22	4.54	207	P	Pn	01 34 43.0	-0.8
M30M	Minto, Yukon baz=350,SNR=35	4.67	168	Pn	Pn	01 34 46.2	+0.7
M30M				Sn	Sn	01 35 38.8	-1.4
M30M				Sg	Sg	01 36 04.2	+0.4
M30M	Minto, Yukon baz=355,SNR=37	4.67	168	P	Pn	01 34 46.2	+0.7
M29M	Somme Creek baz=358,SNR=68	4.72	178	Pn	Pn	01 34 46.8	+0.5
M29M				Sn	Sn	01 35 40.5	-1.1
M29M	Somme Creek baz=358,SNR=68	4.72	178	P	Pn	01 34 47.1	+0.8
BVCY	Beaver Creek baz=8.6	4.82	191	Pn	Pn	01 34 48.8	+1.2
BVCY				Sn	Sn	01 35 45.1	+1.1
BVCY	Beaver Creek baz=13,SNR=55	4.82	191	P	Pn	01 34 48.6	+1.0
M27K	Edge Creek, AK baz=13	4.97	196	Pn	Pn	01 34 50.4	+0.6
M27K				Sn	Sn	01 35 47.2	-0.6
M27K	Edge Creek, AK baz=13,SNR=55	4.97	196	P	Pn	01 34 50.5	+0.8
M27K				S	Sn	01 35 47.2	-0.6
PAX	Paxson baz=30,SNR=11	5.03	217	P	Pn	01 34 52.2	+1.7
M26K	Nabesna, AK baz=18,SNR=42	5.07	202	P	Pn	01 34 52.5	+1.4
C23K	Itkillik River baz=116,SNR=37	5.10	307	P	Pn	01 34 52.1	+0.8
H22K	Ishtalitna Cre baz=70	5.16	262	P	Pn	01 34 52.0	-0.2
MLY	Manley baz=60	5.27	252	P	Pn	01 34 54.4	+0.6
M31M	Drury Creek, Y baz=340	5.32	157	Pn	Pn	01 34 54.4	0.0
M31M				Sn	Sn	01 35 55.1	-1.1
M31M	Drury Creek, Y baz=340	5.32	157	P	Pn	01 34 55.3	+0.9
MCK	McKinley baz=46	5.41	236	P	Pn	01 34 56.3	+0.6
YUK3	Moose Creek baz=6.0,SNR=66	5.43	188	Pn	Pn	01 34 56.6	+0.5
YUK3	Moose Creek baz=37	5.43	188	P	Pn	01 34 56.8	+0.7
DHY	Denali Highway baz=37	5.43	225	P	Pn	01 34 57.7	+1.6
YUK2	White River baz=26	5.44	190	Pn	Pn	01 34 56.7	+0.5
HARP	HAARP baz=353,SNR=23	5.46	212	P	Pn	01 34 57.7	+1.3
FARO	Faro, Yukon baz=336	5.47	152	Pn	Pn	01 34 57.2	+0.7
FARO				Sn	Sn	01 35 58.5	-1.4
FARO	Faro, Yukon baz=358,SNR=127	5.47	152	P	Pn	01 34 57.5	+1.0
MMPY	Sheldon Lake, baz=348	5.57	141	Pn	Pn	01 34 59.5	+1.5
MMPY				Sn	Sn	01 36 00.8	-1.7
MMPY				Sg	Sg	01 36 31.9	-1.0
MMPY	Sheldon Lake, baz=328,SNR=29	5.57	141	P	Pn	01 34 59.6	+1.6
F21K	Alatna River baz=84	5.69	278	P	Pn	01 35 00.2	+0.7
N30M	Aishikik Lake baz=353,SNR=23	5.76	171	Pn	Pn	01 35 01.1	+0.7
N30M				Sn	Sn	01 36 04.5	-2.5
N30M	Aishikik Lake baz=353,SNR=23	5.76	171	P	Pn	01 35 01.1	+0.7
YUK4	Talbot Arm baz=358,SNR=127	5.82	179	Pn	Pn	01 35 00.9	-0.6
YUK4	Talbot Arm baz=348	5.82	179	P	Pn	01 35 01.1	-0.4
N31M	Braeburn, Yuko baz=348	5.83	165	Sg	Sg	01 36 40.4	-0.8
N31M	Braeburn, Yuko baz=328	5.83	165	P	Pn	01 35 02.8	+1.3
YUK8	Steele Glacier baz=2.9,SNR=24	5.89	184	Pn	Pn	01 35 03.0	+0.5
YUK8				Sn	Sn	01 36 09.9	-0.8
YUK8				Sg	Sg	01 36 41.4	-1.7
YUK8	Steele Glacier baz=47	5.89	184	P	Pn	01 35 03.5	+1.0
C36M	Paulatuk baz=256,SNR=68	5.93	61	Pn	Pn	01 35 01.9	-0.8
C36M				Sn	Sn	01 36 06.5	-4.6
C36M	Paulatuk baz=256	5.93	61	P	Pn	01 35 02.3	-0.4
C36M				S	Sn	01 36 08.5	-2.6
M24K	Tolsona, Glenn baz=28	5.95	215	P	Pn	01 35 04.5	+1.5
WAT1	Susitna Watana baz=39	5.96	228	P	Pn	01 35 04.6	+1.3
TRF	Thorofare Moun baz=47	6.05	238	P	Pn	01 35 04.4	-0.2
YUK5	Granite Creek baz=15	6.05	175	Pn	Pn	01 35 05.4	+0.8
MCARA	McCarthy VSAT baz=15	6.05	199	P	Pn	01 35 05.7	+1.2
YUK6	Outpost Mounta baz=358,SNR=30	6.23	178	Pn	Pn	01 35 08.2	+1.2
YUK6	Outpost Mounta baz=30	6.23	178	P	Pn	01 35 08.5	+1.4
BALM	Baldy baz=346	6.31	196	Pn	Pn	01 35 09.2	+1.0
HYT	Haines Junctio baz=346	6.37	174	Pn	Pn	01 35 08.1	-0.8
HYT				Sg	Sg	01 36 53.8	-4.5
HYT	Haines Junctio baz=355,SNR=9.4	6.37	174	P	Pn	01 35 10.6	+1.6
O28M	Mount Upton baz=58	6.42	186	Pn	Pn	01 35 10.8	+1.0
KIAG	Kiagna River baz=58	6.42	195	Pn	Pn	01 35 11.2	+1.5
KIAG				Sg	Sg	01 37 00.3	+0.1
O30N	Mendenhall baz=350,SNR=14	6.51	168	P	Pn	01 35 12.1	+1.3
M23K	Glacier View baz=31	6.59	220	P	Pn	01 35 11.2	-0.6
YUK7	Dusty Glacier baz=31	6.64	177	Pn	Pn	01 35 14.2	+1.5
YUK7				Sg	Sg	01 37 01.5	-5.7
WHY	Whitehorse baz=346	6.74	163	Pn	Pn	01 35 14.2	+0.2
WHY	Whitehorse baz=346	6.74	163	P	Pn	01 35 15.2	+1.2
TABL	Table Mountain baz=33	6.80	190	Pn	Pn	01 35 16.2	+1.3
O29M	Mount Kennedy baz=33	6.87	179	Pn	Pn	01 35 16.9	+1.1
O29M	Mount Kennedy baz=359,SNR=9.2	6.87	179	P	Pn	01 35 17.1	+1.3
J20K	Nowinta River baz=58	6.97	252	P	Pn	01 35 17.3	+0.2
KNK	Knik Glacier baz=31	7.09	220	P	Pn	01 35 21.9	+3.1
TGTN	Hyland Airport baz=325	7.27	136	Pn	Pn	01 35 21.8	+0.7
TGTN	Hyland Airport baz=325	7.27	136	P	Pn	01 35 23.5	+2.4
P33M	Teslin, Yukon baz=341	7.45	156	Pn	Pn	01 35 22.1	-1.6
P33M	Teslin, Yukon baz=356	7.45	156	P	Pn	01 35 24.0	+0.2
P29M	Windy Craggy baz=308,SNR=6.9	7.56	176	P	Pn	01 35 24.8	-0.3
WRGLY	Wrigley baz=325	7.57	114	P	Pn	01 35 24.6	-0.6
SKAG	Skagway baz=343	7.87	167	P	Pn	01 35 29.3	-0.1
P32M	Atlin baz=343	7.92	161	Pn	Pn	01 35 30.6	+0.5
Q32M	Nakina River baz=32	8.73	157	P	Pn	01 35 43.1	+1.7
HOM	Homer baz=339	9.42	223	P	Pn	01 35 50.9	+0.3
DLBC	Dease Lake 0.3nm,0.3s,baz=325,slow=13,SNR=4.9	9.61	151	Pn	Pn	01 35 53.5	+0.2
DLBC				Sn	Sn	01 37 41.0	-0.9
DLBC	0.1nm,0.3s,baz=276,slow=18,SNR=1.8 0.4nm,0.3s,baz=66,slow=22,SNR=6.6 1.6nm,0.6s			Lg	Lg	01 38 39.2	
DLBC	Dease Lake baz=342	9.61	151	P	Pn	01 35 53.5	+0.2
S34M	Telegraph Cree baz=342	9.92	155	P	Pn	01 35 59.1	+1.7
YKA	Yellowknife Ar 0.4nm,0.3s,baz=304,slow=13,SNR=11	11.29	103	Pn	Pn	01 36 12.3	-3.8
YKA				Sn	Sn	01 38 12.3	-10
TXAR	Lajitas Array 0.2nm,0.7s,baz=340,slow=7.8,SNR=1.7 0.2nm,0.7s	43.33	133	P	P	01 41 38.4	+1.1
FINES	FINESS Array B 4.2nm,1.0s,baz=342,slow=8.7,SNR=6.9 4.2nm,1.0s	51.24	9	P	P	01 42 38.1	-0.3
AKASG	Malin Array Be 1.0nm,0.7s,baz=356,slow=6.6,SNR=4.7 1.0nm,0.7s	62.14	9	P	P	01 43 55.3	-0.7
MKAR	Makanchi Array 0.3nm,0.6s,baz=40,slow=7.7,SNR=2.4 0.3nm,0.6s	62.18	329	P	P	01 43 57.0	+0.6

*IDC **29** 01:39:13.2±17.0, 50˚.94N×178˚.48W, h0km, mb3.4/3, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=423.2km s-min=85.7km az=118.0*
*NEIC **29** 01:39:19.8±1.8, 50˚.98N±0˚.04×178˚.99W±0˚.07, h35km±23km, ML3.3(AEIC), Error ellipse: s-maj=7.6km s-min=3.9km az=128.0*
*AEIC **29** 01:39:21±1.8, 52˚N±1˚×179˚.2W±0˚.4, h71km±9km, Error ellipse: s-maj=151.2km s-min=3.3km az=166.0*
ISC 29 01:39:16.2±1.3, 52˚.5N±0˚.1×179˚.60W±0˚.08, h35km, n14, σ1§52/11, mb3.5/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	1.29	212	Pn	Pn	01 39 39.2	+1.5
AMKA				Sn	Sn	01 39 53.0	-0.7
KIWB	Kanaga Island	1.64	112	Pn	Pn	01 39 44.2	+1.8
KIWB				Sn	Sn	01 40 01.6	-0.6
ADK	Adak	1.89	107	Pn	Pn	01 39 47.2	+1.2
ADK				Sn	Sn	01 40 07.4	-1.2
GSTR	Great Sitkin T	2.21	99	Pn	Pn	01 39 52.4	+2.0
KDAK	Kodiak Island 0.5nm,0.3s,baz=304,slow=4.7,SNR=9.4 6.1nm,0.8s	16.27	60	Pn	P	01 43 04.8	+0.3
H11N2	WAKE ISLAND Hy baz=16,slow=76	34.34	203	T	T	02 21 30.3	
H11N3	WAKE ISLAND Hy baz=16,slow=76	34.34	203	T	T	02 21 30.3	
H11N1	WAKE ISLAND Hy baz=16,slow=76	34.35	203	T	T	02 21 31.4	
H11S1	WAKE ISLAND Hy baz=16,slow=76	35.56	203	T	T	02 23 12.4	
H11S2	WAKE ISLAND Hy baz=16,slow=76	35.58	203	T	T	02 23 14.4	
H11S3	WAKE ISLAND Hy baz=16,slow=76	35.58	203	T	T	02 23 15.5	
NVAR	Mina Array Bea 0.3nm,0.6s,baz=294,slow=6.8,SNR=3.9 0.3nm,0.6s	43.91	83	P	P	01 47 17.4	-2.1
PDAR	Pinedale Array 0.5nm,0.6s,baz=288,slow=4.3,SNR=6.2 0.5nm,0.6s	46.45	73	P	P	01 47 40.0	+0.4
TXAR	Lajitas Array 0.2nm,0.5s,baz=309,slow=5.7,SNR=6.1 0.2nm,0.5s	58.98	81	P	P	01 49 11.5	-0.7

*ISN **29** 01:59:23.6±0.8, 33˚.56N×46˚.04E, h11km±5km, ML2.7*
*TEH **29** 01:59:24.4, 33˚.57N×46˚.05E, h19km, ML3.0*
ISC 29 01:59:24.3±1.4, 33˚.56N±0˚.04×46˚.03E±0˚.05, h4km±14km, n27, σ0§67/32, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	Badra	0.46	190	ePg	Pg	01 59 33.0	0.0
IBDR				eSg	Sg	01 59 39.0	0.0
IBDR				AML	AML	01 59 48.0	
IBDR	comp=N,453nm,0.5s comp=E,477nm,0.6s			AML	AML	01 59 48.2	
IGHG	Ghaleghazi	0.89	30	ePg	Pb	01 59 41.4	-1.0
KCHF	Cheshme Sefid,	1.10	49	ePg	Pb	01 59 44.5	-1.6
KCHF				e		01 59 51.7	
IDHR	comp=Z,2μm,0.2s Dehrash	1.18	15	ePg	Pn	01 59 46.4	-1.3
KER	Kermanshah	1.23	48	ePg	Pn	01 59 47.7	-0.7
KER				eSg	Sg	02 00 05.1	+1.1
DHL1	Dehloran	1.37	129	ePg	Pn	01 59 50.4	+0.3
DHL1	comp=Z,4μm,0.4s			e		02 00 17.2	
IKOM	Komasi	1.38	63	ePg	Pn	01 59 49.9	-0.5
IKOM	comp=Z,6μm,0.6s			e		02 00 12.6	
IKFM	Kafar-mosalman	1.52	91	ePg	Pn	01 59 52.4	+0.2
IKFM				eSg	Sg	02 00 14.0	+0.9
ILIN	Lien	1.56	29	ePg	Pb	01 59 54.5	+0.6
ILIN	comp=Z,1μm,0.4s			e		02 00 18.2	
IBZA	Bozab	1.77	59	ePn	Pn	01 59 56.5	+0.5
IBZA	comp=Z,1μm,0.3s			e		02 00 00.9	
IDOB	Doab	1.81	82	ePn	Pn	01 59 56.2	-0.2
RAFI	Al-Rafai	1.83	178	ePn	Pn	01 59 57.0	+0.5
RAFI				eSn	Sb	02 00 21.0	-0.6
RAFI	comp=E,84nm,0.3s			AML	AML	02 00 29.1	
SNGE	Sanandaj	1.88	35	ePn	Pn	01 59 58.3	+0.9
IKMR	Kamar-syah	1.96	91	ePn	Pn	01 59 58.1	-0.2
IKMR				e		02 00 29.3	

comp=Z,2μm,0.5s
HSAM Samen 2.24 72 *e* 02 00 08.6
comp=Z,541nm,0.6s
HSAM *e*Pn **Pn** **02 00 02.4 0.0**
IKRK Kirkuk 2.31 323 *e*Pn **Pn** **02 00 03.0 0.0**
IKRK *e*Sn **Sn** **02 00 33.0 +1.1**
HAGD Aghdareh 2.87 63 *e*Pn **Pn** **02 00 11.2 +0.2**
HAGD *e* 02 00 56.5
comp=Z,321nm,0.4s
KHMZ Khomeyn 3.28 86 *e*Pn **Pn** **02 00 16.7 0.0**
ASAO Ashtian 3.46 72 *e*Pn **Pn** **02 00 19.2 0.0**
QABG Abgarm-Qazvin 3.63 53 *e*Pn **Pn** **02 00 21.2 -0.3**
IRAZ Razeghan 3.71 59 *e*Pn **Pn** **02 00 22.8 +0.2**
IRAZ *e* 02 01 30.0
comp=Z,183nm,0.6s
IPIR Pirpir 4.17 101 *e*Pn **Pn** **02 00 29.1 +0.1**
GHVR GHOM 4.47 77 *e*Pn **Pn** **02 00 32.3 -0.6**
IKLH Kolahrood 4.65 91 *e*Pn **Pn** **02 00 35.7 +0.2**
CHTH Charan 4.81 59 *e*Pn **Pn** **02 00 37.9 +0.2**
IRAM Ramesheh 5.63 106 *e*Pn **Pn** **02 00 48.6 -0.4**
NASN Na'in 5.74 96 *e*Pn **Pn** **02 00 50.6 +0.1**

NOU 29 02:00:54.0, 15°.38S×167°.52E, h24km, MLv4.1/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.42**	**165**	P	Pn	02 01 32.9	+0.8
DZM	**Mont Dzumac**	**6.73**	**189**	P	Pn	02 02 30.8	-0.7
NOUC	**Port Laguerre**	**6.78**	**190**	P	Pn	02 02 32.3	+0.2

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*IDC **29** 02:08:09.4±1.1, 0°.40N×122°.72E, h0km, mb3.8/6, mbtmp3.9/6, Error ellipse: s-maj=101.5km s-min=17.6km az=60.0*
*DJA **29** 02:08:24.4±0.4, 0°.N±4°×12°.3E±°, h103km±8km, M4.1/11, mb4.2/6, mB5.2/2, MLv4.0/11, Mw(mB)4.5/2*
ISC 29 02:08:22.9±0.8, 0°.27N±0°.08×122°.53E±0°.08, h114km, n16, σ1§34/16, **mb3.8/6, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.61**	**53**	P	**Pn**	**02 08 42.7**	**+1.7**
MRSI	**Marisa**	**0.62**	**290**	P	**Pn**	**02 08 41.7**	**+0.6**
LUWI	**Luwuk**	**1.32**	**169**	P	**Pn**	**02 08 49.9**	**+1.9**
APSI	**Ampana**	**1.46**	**217**	P	**Pn**	**02 08 51.3**	**+1.8**
MPSI	**Mapaga**	**2.63**	**272**	P	**Pn**	**02 09 05.4**	**+1.2**
SANI	**Sanana**	**4.16**	**124**	P	**Pn**	**02 09 24.5**	**0.0**
LBMI	**Labuha**	**5.05**	**100**	P	**Pn**	**02 09 37.8**	**+1.2**
0.5nm2μm38nm,0.6s
NLAI Namlea 5.75 127 P **Pn** **02 09 47.8 +1.9**
0.2nm4μm14nm,0.5s
MYLDM Lahad Datu 6.32 321 P **Pn** **02 09 55.1 +1.4**
0.3nm22nm,1.2s
KKM Kota Kinabalu 8.52 312 P **Pn** **02 10 24.9 +1.3**
WRA Warramunga Arr 23.18 151 P **P** **02 13 18.9 -0.9**
3.6nm,0.8s,baz=328,slow=10,SNR=35
3.6nm,0.8s
ASAR Alice Springs 26.23 156 P **P** **02 13 46.4 -1.1**
0.6nm,0.6s,baz=344,slow=14,SNR=17
0.6nm,0.6s
CMAR Chiang Mai Arr 29.38 309 P **P** **02 14 15.6 0.0**
1.1nm,0.5s,baz=123,slow=8.4,SNR=6.3
1.1nm,0.5s
STKA Stephens Creek 36.71 152 P **P** **02 15 18.3 -0.9**
1.7nm,0.6s,baz=321,slow=14,SNR=3.6
1.7nm,0.6s
SONM Songino Array 49.41 346 P **P** **02 17 00.8 -0.5**
0.4nm,0.5s,baz=170,slow=8.8,SNR=2.2
0.4nm,0.5s
MKAR Makanchi Array 58.14 328 P **P** **02 18 04.4 -0.3**
0.4nm,0.4s,baz=129,slow=8.8,SNR=8.2
0.4nm,0.4s

IDC 29 02:10:08.7±2.7, 9°.22S×112°.09E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=129.6km s-min=23.6km az=50.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.99**	**119**	P	P	02 15 25.3	0.0
0.7nm,0.8s,baz=292,slow=12,SNR=6.1
0.7nm,0.8s
ASAR Alice Springs 25.32 127 P P 02 15 37.8 +0.3
0.4nm,0.6s,baz=309,slow=8.8,SNR=4.1
0.4nm,0.6s
SONM Songino Array 57.03 355 P P 02 19 57.0 +0.4
0.4nm,0.6s,baz=166,slow=7.0,SNR=2.5
0.4nm,0.6s
MKAR Makanchi Array 61.78 337 P P 02 20 28.8 -0.4
0.6nm,0.3s,baz=152,slow=7.1,SNR=13
0.6nm,0.3s

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*IDC **29** 02:13:37.7±0.7, 31°.92S×57°.36E, h0km, mb4.1/9, mbtmp4.1/10, ML3.9/1, MS3.6/6, Error ellipse: s-maj=22.7km s-min=20.4km az=36.0*
*NEIC **29** 02:13:39.0±1.0, 31°.7S±0°.1×57°.66E±0°.07, h10km±1km, mb4.4/12, Error ellipse: s-maj=20.7km s-min=7.7km az=157.0*
ISC 29 02:13:39.0±0.6, 31°.64S±0°.10×57°.4E±0°.1, h10km, n41, σ1§47/32, **mb4.2/13, MS3.6/6, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.55**	**351**	Pn	**Pn**	**02 16 09.8**	**-0.6**
VOI	**Vohitsoka**	**13.56**	**313**		**Pn**	**02 16 53.3**	**+1.7**
ABPO	**Ambohimpanom**	**15.57**	**321**	Pn	**Pn**	**02 17 19.5**	**+0.6**
OPO	**Ambohidratompo**	**15.96**	**322**	Pn	**Pn**	**02 17 25.7**	**+1.8**
baz=126,slow=4.5,SNR=5.0
OPO Sn **Sn** **02 20 16.3 -4.8**
baz=239,slow=12,SNR=2.8
3.3nm,0.6s
H08S1 Diego Carcia H 27.70 34 T T 02 48 51.6
baz=207,slow=74
H08S2 Diego Garcia H 27.70 34 T T 02 48 48.4
baz=207,slow=74
H08S3 Diego Garcia H 27.71 34 T T 02 48 49.5
baz=207
BOSA Boshof 27.93 268 P **P** **02 19 28.5 -1.2**
1.8nm,0.7s,baz=127,slow=7.1,SNR=6.7
1.8nm,0.7s
BOSA Boshof 27.93 268 P **P** **02 19 29.8 +0.1**
BOSA IAmb IAmb 02 19 34.6
comp=Z,6.9nm,1.1s
MBAR Mbarara 39.87 316 LR LR 02 36 19.4
comp=Z,77nm,21.0s,baz=118,slow=34
ATD Arta Tunnel 45.14 340 LR LR 02 38 32.1
comp=Z,54nm,18.3s,baz=11,slow=33
H01W2 Cape Leeuwin H 46.99 110 T T 03 12 23.9
baz=257,slow=75
H01W3 Cape Leeuwin H 46.99 110 T T 03 12 25.4
baz=257,slow=75
H01W1 Cape Leeuwin H 47.01 110 T T 03 12 26.3
baz=257,slow=75
SNAA Sanae 51.02 201 P **P** **02 22 40.3 -0.5**
SNAA Sanae 51.02 201 P **P** **02 22 39.3 -1.5**
comp=Z,2.3nm,0.8s,baz=62,slow=4.6,SNR=7.3
comp=Z,2.3nm,0.8s
SNAA Sanae 51.02 201 P **P** **02 22 40.5 -0.3**
SNAA IAmb IAmb 02 22 45.3
comp=Z,4.0nm,1.0s
VNA2 Neumayer--Watz 52.24 202 P **P** **02 22 49.7 -0.2**
baz=81,slow=8.0
VNA3 Neumayer Olymp 53.03 202 P **P** **02 22 55.3 -0.5**
WSAR Wadi Sarin 54.58 1 LR LR 02 41 56.1
comp=Z,48nm,18.1s,baz=202,slow=31
QSPA South Pole Qui 58.53 180 P **P** **02 23 34.2 -1.2**
comp=Z,3.7nm,0.7s,baz=276,slow=2.8,SNR=13
QSPA LR LR 02 47 01.3
comp=Z,51nm,19.3s,baz=296,slow=34
comp=Z,3.7nm,0.7s
QSPA South Pole Qui 58.53 180 P **P** **02 23 34.9 -0.5**
VNDA Vanda 62.40 166 LR LR 02 48 03.5
comp=Z,68nm,19.3s,baz=252,slow=33
CMAR Chiang Mai Arr 63.78 45 P **P** **02 24 13.6 +2.2**
comp=Z,1.0nm,0.3s,baz=220,slow=7.1,SNR=5.8
CMAR LR LR 02 49 27.5
comp=Z,26nm,18.2s,baz=205,slow=34
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 63.78 45 P **P** **02 24 10.1 -1.3**
CHTO Chiang Mai 64.05 44 P **P** **02 24 12.0 -1.2**
ASAR Alice Springs 66.97 104 P **P** **02 24 31.9 -0.3**
comp=Z,0.9nm,0.7s,baz=240,slow=5.8,SNR=9.5
comp=Z,0.9nm,0.7s
WRA Warramunga Arr 68.98 101 P **P** **02 24 44.8 -0.2**
comp=Z,1.3nm,0.8s,baz=240,slow=5.4,SNR=7.1
comp=Z,1.3nm,0.8s
TOA0 Torodi Ar. Sit 69.52 301 P **P** **02 24 49.2 +1.0**
TORD Torodi Ar. Bea 69.52 301 P **P** **02 24 49.1 +0.9**
comp=Z,1.0nm,0.7s,baz=133,slow=5.8,SNR=8.7
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 69.52 301 P **P** **02 24 48.9 +0.7**
BRTR Keskin Array B 74.36 341 P **P** **02 25 19.0 +2.1**
comp=Z,1.2nm,0.8s,baz=161,slow=8.8,SNR=5.9
comp=Z,1.2nm,0.8s
KK31 Karatay Array 75.34 10 P **P** **02 25 22.5 +0.2**
KK31 IAmb IAmb 02 25 38.0
comp=Z,4.7nm,1.4s
KKAR Karatay Array 75.34 10 P **P** **02 25 22.3 -0.1**
KKAR IAmb IAmb 02 25 38.1
comp=Z,4.7nm,1.4s
AAK Ala-Archa 75.56 13 P **P** **02 25 24.8 +1.0**
AAK IAmb IAmb 02 25 40.9
comp=Z,5.6nm,1.4s
MAKZ Makanchi 81.17 17 P **P** **02 25 54.1 -0.4**
MKAR Makanchi Array 81.24 17 P **P** **02 25 53.9 -1.0**
BVAR Borovoye Array 85.06 8 P **P** **02 26 17.1 +2.7**
comp=Z,0.7nm,0.8s,baz=155,slow=4.8,SNR=2.5
comp=Z,0.7nm,0.8s
BRVK Borovoye 85.09 8 P **P** **02 26 14.0 -0.5**
BRVK IAmb IAmb 02 26 23.6
comp=Z,3.3nm,1.1s
ILAR Eielson Array 143.59 17 PKP **PKPdf** **02 33 12.0 -1.3**
comp=Z,0.2nm,0.5s,baz=299,slow=3.7,SNR=4.2
YKA Yellowknife Ar 148.71 353 PKPbc **PKPbc** **02 33 26.3 +0.5**
comp=Z,2.3nm,0.8s,baz=0.0,slow=3.8,SNR=3.4

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*IDC **29** 02:14:00.7±0.8, 8°.53S×111°.88E, h0km, mb3.9/8, mbtmp4.1/10, ML4.5/2, MS3.1/3, Error ellipse: s-maj=39.4km s-min=15.7km az=43.0*
*DJA **29** 02:14:05.7±0.4, 9°.S±5°×11°.2E±°, h40km, M4.5/13, mb4.7/2, mB5.0/1, MLv4.4/13, Mw(mB)4.3/1*
*NEIC **29** 02:14:07.0±2.1, 9°.0S±0°.1×111°.54E±0°.08, h59km±11km, mb4.0/7, Error ellipse: s-maj=20.0km s-min=8.9km az=206.0*
ISC 29 02:14:07.1±0.6, 8°.93S±0°.07×111°.58E±0°.05, h58km, n45, σ1§38/50, **mb4.0/11, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.92**	**14**	P	**Pn**	**02 14 22.1**	**-2.0**
PWJI S **Sn** **02 14 35.4 -1.2**
KRKI Karangkates 1.15 49 P **Pn** **02 14 26.2 -0.9**
KRKI S **Sn** **02 14 42.5 +0.6**
UGM Wanagama 1.45 314 **Pn** **02 14 29.8 -1.4**
UGM Wanagama 1.45 314 P **Pn** **02 14 29.4 -1.7**
UGM S **Sn** **02 14 48.1 -1.1**
NGJI Ngawi 1.55 356 P **Pn** **02 14 33.2 +0.7**
YOGI Yogyakarta 1.68 311 P **Pn** **02 14 32.8 -1.4**
YOGI S **Sn** **02 14 54.0 -0.7**
SMRI Semarang 2.18 329 **Pn** **02 14 42.0 +1.0**
SMRI Semarang 2.18 329 P **Pn** **02 14 40.0 -1.0**
JAGI Jajag, Banyuwa 2.58 80 **Pn** **02 14 46.8 +0.3**
JAGI Jajag, Banyuwa 2.58 80 P **Pn** **02 14 45.4 -1.1**
SCJI Gunung Srandil 2.69 297 P **Pn** **02 14 45.6 -2.3**
KMMI Kalianget 3.01 52 P **Pn** **02 14 52.0 -0.4**
CTJI Waduk Cacaban 3.04 309 P **Pn** **02 14 51.3 -1.5**
RTBI Rangdo, Negare 3.36 82 P **Pn** **02 14 57.2 +0.1**
SRBI Singaraja 3.69 77 P **Pn** **02 15 02.0 +0.3**
LEM Lembang 4.44 298 Pn **Pn** **02 15 12.3 +0.1**
10nm,0.3s,baz=127,slow=7.2,SNR=6.3
LEM Sn **Sn** **02 16 05.2 +2.5**
5.6nm,0.3s,baz=318,slow=5.8,SNR=4.2
LEM LR LR 02 17 05.5
comp=Z,174nm,20.3s,baz=227,slow=41
44nm,0.6s
KLNI Mataram 4.49 84 P **Pn** **02 15 12.6 -0.1**
CNJI Cibinong 4.69 290 P **Pn** **02 15 12.7 -2.7**
TWSI Taliwang, Sumb 5.24 88 P **Pn** **02 15 22.9 -0.1**
0.3nm1μm56nm,1.0s
PLAI Plampang 6.12 90 P **Pn** **02 15 35.5 +0.4**
KAPI Kappang 8.99 65 LR LR 02 19 50.8
comp=Z,88nm,19.1s,baz=278,slow=41
KAPI Kappang 8.99 65 Pn **Pn** **02 16 14.6 +0.2**
MMRI Maumere 10.54 89 Pn **Pn** **02 16 33.5 -2.0**
BATI Baumata 11.99 97 Pn Pn 02 16 49.2 -6.1
8.2nm,0.3s,baz=291,slow=11,SNR=1.9
16nm,0.3s
SOEI Soe 12.55 95 **Pn** **02 17 01.4 -1.7**
PSA00 Pilbara Seismi 14.88 149 Pn **Pn** **02 17 32.1 -2.1**
KNRA Kununurra 18.07 113 P **P** **02 18 13.3 -0.7**
KNRA IAmb IAmb 02 18 17.2
comp=Z,12nm,0.8s
MTN Manton Dam 19.59 103 P **P** **02 18 30.1 -0.6**
WB0 Warramunga Arr 24.56 119 P **P** **02 19 21.9 +0.2**
WB0 IAmb IAmb 02 19 58.7
comp=Z,8.6nm,1.2s
WRA Warramunga Arr 24.58 119 P **P** **02 19 22.6 +0.7**
comp=Z,2.4nm,1.0s,baz=294,slow=12,SNR=27
WRA PcP **PcP** **02 23 01.0 +2.1**
comp=Z,0.1nm,0.5s,baz=291,slow=4.2,SNR=1.2
WRA LR LR 02 29 38.1
comp=Z,56nm,19.4s,baz=54,slow=38
comp=Z,2.4nm,1.0s
WB2 Warramunga Arr 24.59 119 P **P** **02 19 21.8 -0.3**
WB2 IAmb IAmb 02 19 25.7
comp=Z,4.1nm,0.8s
AS31 Alice Springs 25.90 127 P **P** **02 19 33.6 -0.3**
ASAR Alice Springs 25.90 127 P **P** **02 19 34.8 +0.8**
comp=Z,1.5nm,0.7s,baz=301,slow=8.4,SNR=19
ASAR PcP **PcP** **02 23 04.4 +2.7**
comp=Z,0.3nm,0.6s,baz=330,slow=2.1,SNR=2.8
comp=Z,1.5nm,0.7s
ASAR Alice Springs 25.90 127 P **P** **02 19 33.3 -0.6**
STKA Stephens Creek 36.02 134 P **P** **02 21 04.0 +1.1**
comp=Z,3.1nm,0.9s,baz=311,slow=12,SNR=5.2
comp=Z,3.1nm,0.9s
STKA Stephens Creek 36.02 134 P **P** **02 21 02.8 0.0**
STKA IAmb IAmb 02 21 06.6
comp=Z,1.1nm,1.1s
SONM Songino Array 56.70 356 P **P** **02 23 44.4 -0.4**
comp=Z,0.6nm,0.5s,baz=180,slow=7.8,SNR=6.2
comp=Z,0.6nm,0.5s
MK31 Makanchi Array 61.31 337 P **P** **02 24 15.8 -0.8**
MK31 IAmb IAmb 02 24 17.5
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 61.31 337 P **P** **02 24 16.0 -0.6**
comp=Z,0.8nm,0.5s,baz=149,slow=7.4,SNR=13
comp=Z,0.8nm,0.5s
MKAR Makanchi Array 61.31 337 P **P** **02 24 15.8 -0.8**
KKAR Karatay Array 63.85 328 P **P** **02 24 32.5 -1.1**
ZALV Zalesovo Beam 66.60 343 P **P** **02 24 49.1 -2.0**
comp=Z,0.7nm,0.3s,baz=148,slow=9.0,SNR=2.1
comp=Z,0.7nm,0.3s
ABKAR Akbulak array 73.42 328 P **P** **02 25 33.4 +0.3**
BRTR Keskin Array B 86.50 311 P **P** **02 26 46.5 +2.4**
comp=Z,1.3nm,1.2s,baz=140,slow=7.6,SNR=1.4
comp=Z,1.3nm,1.2s
SNAA Sanae 89.03 197 P **P** **02 26 58.6 +3.0**
comp=Z,0.8nm,0.9s,baz=160,slow=12,SNR=1.5
comp=Z,0.8nm,0.9s

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*NEIC **29** 02:22:43.4±1.9, 46°.5S±0°.1×31°.3E±0°.3, h10km±2km, mb4.3/10, Error ellipse: s-maj=43.5km s-min=8.7km az=292.0*
*IDC **29** 02:22:48.5±0.7, 47°.24S×32°.64E, h0km, mb4.1/10, mbtmp4.1/12, ML2.8/2, MS3.5/9, Error ellipse: s-maj=33.8km s-min=16.0km az=69.0*
ISC 29 02:22:49.8±0.7, 47°.11S±0°.08×32°.9E±0°.2, h10km, n37, σ1§39/25, **mb4.2/13, MS3.5/7, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.37**	**324**	P	**Pn**	**02 26 51.0**	**-1.4**
0.1nm,0.3s,baz=142,slow=17,SNR=1.7
SUR LR LR 02 32 18.4
comp=Z,196nm,19.8s,baz=148,slow=33
5.7nm,0.9s
BOSA Boshof 19.41 339 P **Pn** **02 27 16.6 -0.6**
baz=169,slow=16,SNR=1.6
BOSA LR LR 02 33 53.7
comp=Z,142nm,18.3s,baz=188,slow=34
2.6nm,0.9s
LBTB Lobatse 22.80 343 P **P** **02 27 53.3 +0.6**
2.5nm,0.8s,baz=154,slow=14,SNR=2.7
LBTB LR LR 02 35 17.6
comp=Z,125nm,21.6s,baz=154,slow=33
2.5nm,0.8s
MAW Mawson 25.66 154 P **P** **02 28 20.3 +1.0**
4.4nm,0.8s,baz=315,slow=12,SNR=6.8
4.4nm,0.8s
MAW Mawson 25.66 154 P **P** **02 28 22.2 +2.9**
VOI Vohitsoka 27.54 29 P P 02 28 28.3 -8.5
VOI IAmb IAmb 02 28 47.0
comp=Z,8.0nm,1.2s
TROLL Troll, Antarti 28.67 199 P **P** **02 28 46.4 -0.1**
SNAA Sanae 29.74 202 P **P** **02 28 54.8 -1.1**
SNAA Sanae 29.74 202 P **P** **02 28 54.5 -1.4**
comp=Z,3.1nm,1.1s,baz=75,slow=7.1,SNR=4.0
SNAA LR LR 02 38 48.7
comp=Z,105nm,19.8s,baz=10,slow=32
comp=Z,3.1nm,1.1s
SNAA Sanae 29.74 202 P P 02 28 50.1 -5.8
SNAA IAmb IAmb 02 29 32.9
comp=Z,9.9nm,1.5s
TSUM Tsumeb 30.53 331 LR LR 02 40 34.5
comp=Z,145nm,19.6s,baz=156,slow=35
VNA2 Neumayer--Watz 30.56 205 P **P** **02 29 02.2 -0.8**
baz=58,slow=10.0
VNA1 Neumayer--Stat 30.68 205 P **P** **02 29 04.7 +0.7**
OPO Ambohidratompo 30.79 27 LR LR 02 40 03.2
comp=Z,30nm,18.4s,baz=344,slow=33
VNA3 Neumayer Olymp 31.37 205 P **P** **02 29 11.6 +1.4**
RER Riviere de l'E 31.83 43 P **P** **02 29 11.6 -3.2**
LSZ Lusaka 31.98 351 LR LR 02 41 13.9
comp=Z,88nm,18.3s,baz=202,slow=34
BELA Belgrano 2 39.73 198 P P 02 30 15.1 -6.8
BELA IAmb IAmb 02 30 29.4
comp=Z,6.8nm,1.4s
QSPA South Pole Qui 43.11 180 P **P** **02 30 48.3 -1.5**
comp=Z,8.0nm,1.1s,baz=249,slow=4.7,SNR=14
comp=Z,8.0nm,1.1s
QSPA South Pole Qui 43.11 180 P **P** **02 30 48.4 -1.5**
QSPA IAmb IAmb 02 30 50.2
comp=Z,13nm,1.2s
KIBK Kibwezi 44.82 7 P P 02 30 53.3 -11
KIBK IAmb IAmb 02 31 21.5
comp=Z,3.3nm,1.2s
MBAR Mbarara 46.36 357 LR LR 02 49 37.5
comp=Z,59nm,19.1s,baz=124,slow=35
VNDA Vanda 51.72 168 P **P** **02 31 56.2 -0.3**
comp=Z,4.7nm,0.8s,baz=252,slow=8.4,SNR=33
comp=Z,4.7nm,0.8s
VNDA Vanda 51.72 168 P **P** **02 31 57.0 +0.5**
VNDA IAmb IAmb 02 31 58.5
comp=Z,5.6nm,0.9s
SBA Scott Base 52.15 169 P **P** **02 31 58.9 -0.8**
H10S2 ASCENSION HYDR 55.35 298 T T 03 32 02.3
baz=141,slow=74,SNR=99
H10S3 ASCENSION HYDR 55.37 298 T T 03 32 03.0
baz=79,slow=74,SNR=169
TORD Torodi Ar. Bea 66.17 327 P **P** **02 33 38.8 +1.3**
comp=Z,0.6nm,0.9s,baz=169,slow=6.8,SNR=3.8
comp=Z,0.6nm,0.9s
STKA Stephens Creek 78.61 125 P **P** **02 34 52.4 +0.7**
comp=Z,2.9nm,0.8s,baz=254,slow=4.2,SNR=5.2
comp=Z,2.9nm,0.8s
ASAR Alice Springs 80.10 114 P **P** **02 35 00.8 +0.7**
comp=Z,2.6nm,0.9s,baz=214,slow=6.0,SNR=19
comp=Z,2.6nm,0.9s
ASAR Alice Springs 80.10 114 P **P** **02 35 01.2 +1.2**
AS31 Alice Springs 80.10 114 P **P** **02 35 01.5 +1.5**
SIV San Ignacio 81.11 256 LR LR 03 07 45.1
comp=Z,49nm,20.7s,baz=252,slow=33
WRA Warramunga Arr 83.10 112 P **P** **02 35 16.4 +0.5**
comp=Z,1.7nm,1.0s,baz=220,slow=4.9,SNR=10
comp=Z,1.7nm,1.0s
BRTR Keskin Array B 86.46 1 P **P** **02 35 33.7 +1.4**
comp=Z,0.8nm,0.9s,baz=211,slow=8.2,SNR=4.4
comp=Z,0.8nm,0.9s
TXAR Lajitas Array 142.10 258 PKhKP PKPpre 02 42 18.8
comp=Z,1.4nm,1.0s,baz=73,slow=6.1,SNR=7.0
PDAR Pinedale Array 153.24 275 PKPbc **PKiKP** **02 42 47.5 -0.3**
comp=Z,2.7nm,1.0s,baz=116,slow=3.4,SNR=12

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*JMA **29** 02:28:38.5±0.3, 25°.8N±0°.8×125°.1E±1°.0, h27km±4km, MV3.4/11, NW OFF MIYAKOJIMA ISLAND*
*IDC **29** 02:28:57.1±0.9, 26°.86N×127°.56E, h208km±32km, mb3.0/5, mbtmp3.5/5, Error ellipse: s-maj=162.9km s-min=16.5km az=65.0*
ISC 29 02:28:40.0±1.8, 25°.67N±0°.06×125°.16E±0°.07, h26km±15km, n16, σ0§65/19, **mb3.5/5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.75**	**174**	*i* P	**Pb**	**02 28 54.0**	**-0.3**
JIKM S **Sb** **02 29 05.1 +0.9**
JIRB Irabujima 0.84 179 P **Pn** **02 28 55.1 -1.0**
JIRB S **Sb** **02 29 07.0 +0.3**
JOGS Gusukube 0.93 166 P **Pn** **02 28 57.1 -0.3**
JOGS S **Sn** **02 29 10.3 +0.3**
JMJ2 Miyako jima3 0.94 170 P **Pn** **02 28 57.3 -0.2**
JMJ2 S **Sn** **02 29 10.5 +0.5**
JTJ Tarama 1.10 202 P **Pn** **02 28 58.7 -1.1**
JTJ *e*S **Sn** **02 29 13.6 -0.6**
JISG Ishigakijimahi 1.32 216 P **Pn** **02 29 02.2 -0.6**
JIJ Ishigaki jima 1.59 215 P **Pn** **02 29 06.2 -0.3**
JIJ S **Sn** **02 29 25.6 -0.6**
JKE Kume jima 2 1.61 66 *e*P **Pn** **02 29 05.7 -1.0**
JKRS Kuro-shima 1.76 216 P **Pn** **02 29 09.0 +0.1**
IRIF Iriomote-Funau 1.85 225 P **Pn** **02 29 10.0 -0.1**
JOW Kunigami 3.03 67 P **Pn** **02 29 26.2 -0.1**
10nm,0.4s,baz=263,slow=16,SNR=1.6
JOW S Sn 02 29 48.6 -13
11nm,0.3s,baz=190,slow=12,SNR=2.2
SONM Songino Array 26.61 331 P **P** **02 34 16.9 +0.5**
0.6nm,0.8s,baz=148,slow=8.5,SNR=3.0
0.6nm,0.8s
MKAR Makanchi Array 39.87 313 P P 02 36 18.0 +6.5
0.4nm,0.6s,baz=99,slow=9.5,SNR=3.2
0.4nm,0.6s
ZALV Zalesovo Beam 41.05 324 P **P** **02 36 21.5 +0.4**
0.9nm,0.5s,baz=100,slow=6.2,SNR=3.9
0.9nm,0.5s
WRA Warramunga Arr 46.21 168 P P 02 37 06.9 +3.9
0.4nm,0.6s,baz=350,slow=9.0,SNR=7.0
0.4nm,0.6s
ASAR Alice Springs 49.77 169 P P 02 37 35.2 +4.7
0.4nm,0.6s,baz=355,slow=10,SNR=5.2
0.4nm,0.6s

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*PRU **29** 02:41:30.8±0.0, 42°.86N×13°.73E, h0km*
ROM 29 02:41:29.4±0.1, 42°.862N±0°.003×13°.038E±0°.004, h10km, ML2.8/53, 28C-9D, Error ellipse: s-maj=0.3km s-min=0.2km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**335**	P	Pg	02 41 31.6	+0.3
T1216 S Sg 02 41 32.9 +0.3
T1216 AML AML
comp=E,69250μm,0.4s
T1216 AML AML
comp=E,69250μm,0.4s
T1216 AML AML
comp=N,38700μm,0.3s
T1216 AML AML
comp=E,69200μm,0.4s
T1216 AML AML
comp=N,38650μm,0.3s
FEMA Monte Fema 0.10 5 ||P Pg 02 41 32.5 +0.4
FEMA S Sg 02 41 34.6 +0.5
FEMA AML AML
comp=E,40900μm,0.2s
FEMA AML AML
comp=N,30700μm,0.4s
FEMA AML AML
comp=E,40850μm,0.2s
FEMA AML AML
comp=N,30700μm,1.6s
T1245 Castelsantange 0.11 93 P Pg 02 41 32.7 +0.4
T1245 S Sg 02 41 35.0 +0.7
T1245 AML AML
comp=N,38000μm,0.3s
T1245 AML AML
comp=E,39150μm,0.6s
T1245 AML AML
comp=N,37350μm,0.3s
T1245 AML AML

	comp=E,41500µm,0.6s					
MC2	**Monte Cornacci**	**0.12**	**66**	P	Pg	02 41 32.9 +0.5
MC2				S	Sg	02 41 35.4 +0.7
T1215	**Vallo di Nera,**	**0.14**	**244**	P	Pg	02 41 33.1 +0.5
T1215				S	Sg	02 41 35.6 +0.9
T1215				AML	AML	
	comp=N,5860µm,0.5s					
T1215				AML	AML	
	comp=N,5555µm,1.2s					
T1215				AML	AML	
	comp=E,7155µm,0.5s					
T1215				AML	AML	
	comp=E,7760µm,0.5s					
T1215				AML	AML	
	comp=N,5570µm,1.2s					
T1215				AML	AML	
	comp=E,7755µm,0.5s					
T1215				AML	AML	
	comp=N,5560µm,1.2s					
T1215				AML	AML	
	comp=N,5560µm,0.8s					
T1217	**Poggiodomo (PG**	**0.17**	**208**	⇑P	Pg	02 41 33.7 +0.6
T1217				S	Sg	02 41 36.8 +1.2
T1217				AML	AML	
	comp=E,8835µm,1.4s					
T1217				AML	AML	
	comp=N,6585µm,0.5s					
T1217				AML	AML	
	comp=E,8500µm,1.4s					
T1217				AML	AML	
	comp=N,6515µm,0.5s					
T1217				AML	AML	
	comp=E,8820µm,1.4s					
T1217				AML	AML	
	comp=E,8850µm,1.4s					
T1217				AML	AML	
	comp=N,6590µm,0.5s					
T1217				AML	AML	
	comp=E,8805µm,1.4s					
T1217				AML	AML	
	comp=E,8520µm,1.4s					
T1217				AML	AML	
	comp=N,6520µm,0.5s					
T1217				AML	AML	
	comp=E,8520µm,0.6s					
T1217				AML	AML	
	comp=E,8805µm,0.6s					
CESI	**CESI - Serrava**	**0.17**	**326**	⇓P	Pg	02 41 33.6 +0.5
CESI				S	Sg	02 41 36.1 +0.4
CESI				AML	AML	
	comp=E,14950µm,0.2s					
CESI				AML	AML	
	comp=N,33450µm,0.3s					
CESI				AML	AML	
	comp=N,33450µm,1.7s					
FDMO	**Fiordimonte**	**0.18**	**12**	⇓P	Pg	02 41 33.7 +0.4
FDMO				S	Sg	02 41 36.8 +1.0
FDMO				AML	AML	
	comp=E,18950µm,0.2s					
FDMO				AML	AML	
	comp=N,11300µm,0.3s					
MMO1	**Montemonaco**	**0.22**	**80**	⇑P	Pg	02 41 34.4 +0.5
MMO1				S	Sg	02 41 38.0 +1.0
T1201	**Domo (RI)**	**0.26**	**142**	P	Pg	02 41 35.3 +0.7
T1201				S	Sb	02 41 40.1 -0.6
AM05	**Amandola Campo**	**0.26**	**63**	⇑P	Pg	02 41 35.2 +0.5
AM05				S	Sg	02 41 39.4 +1.2
AM05				AML	AML	
	comp=E,1680µm,0.2s					
AM05				AML	AML	
	comp=N,610µm,0.1s					
AM05				AML	AML	
	comp=N,1775µm,0.8s					
AM05				AML	AML	
	comp=N,610µm,0.1s					
AM05				AML	AML	
	comp=E,8255µm,1.3s					
AM05				AML	AML	
	comp=E,1685µm,0.2s					
AM05				AML	AML	
	comp=N,1770µm,0.8s					
AM05				AML	AML	
	comp=E,8255µm,0.7s					
LNSS	**Leonessa**	**0.26**	**180**	⇑P	Pg	02 41 35.1 +0.5
LNSS				S	Sb	02 41 39.7 -1.1
LNSS				AML	AML	
	comp=N,5495µm,0.5s					
LNSS				AML	AML	
	comp=E,6325µm,1.2s					
LNSS				AML	AML	
	comp=E,6320µm,1.2s					
LNSS				AML	AML	
	comp=N,5490µm,0.5s					
LNSS				AML	AML	
	comp=N,5490µm,1.5s					
T1204	**Amatrice, Fraz**	**0.28**	**132**	P	Pg	02 41 35.5 +0.5
T1204				S	Sb	02 41 40.2 -1.2
T1204				AML	AML	
	comp=E,5170µm,0.2s					
T1204				AML	AML	
	comp=N,3440µm,0.6s					
T1204				AML	AML	
	comp=N,3445µm,0.6s					
T1204				AML	AML	
	comp=E,5165µm,0.2s					
T1204				AML	AML	
	comp=N,3445µm,1.4s					
T1241	**Roccafluvione,**	**0.29**	**91**	⇑P	Pb	02 41 36.0 -0.7
T1241				S	Sb	02 41 40.7 -0.9
T1241				AML	AML	
	comp=E,4825µm,0.5s					
T1241				AML	AML	
	comp=N,5785µm,0.2s					
T1241				AML	AML	
	comp=E,4645µm,0.5s					
T1241				AML	AML	
	comp=E,4825µm,1.5s					
T1241				AML	AML	
	comp=N,5500µm,0.2s					
T1241				AML	AML	
	comp=E,4645µm,1.5s					
SEF1	**Sefro**	**0.29**	**347**	P	Pg	02 41 35.5 +0.3
SEF1				S	Sg	02 41 40.2 +1.0
SEF1				AML	AML	
	comp=E,5345µm,1.6s					
SEF1				AML	AML	
	comp=N,6410µm,1.2s					
SEF1				AML	AML	
	comp=E,5345µm,1.6s					
SEF1				AML	AML	
	comp=N,6405µm,1.2s					
SEF1				AML	AML	
	comp=N,6405µm,0.8s					
SEF1				AML	AML	
	comp=E,5345µm,0.4s					
GUMA	**Gualdo di Mace**	**0.30**	**47**	⇑P	Pg	02 41 36.0 +0.7
GUMA				S	Sb	02 41 41.1 -0.8
GUMA				AML	AML	
	comp=E,10750µm,0.4s					
GUMA				AML	AML	
	comp=N,9865µm,0.4s					
GUMA				AML	AML	
	comp=N,9925µm,0.9s					
GUMA				AML	AML	
	comp=E,12450µm,0.5s					
GUMA				AML	AML	
	comp=N,9865µm,1.6s					
GUMA				AML	AML	
	comp=N,9925µm,1.1s					
SMA1	**SAN MARTINO**	**0.32**	**136**	⇑P	Pg	02 41 36.1 +0.4
SMA1				S	Sb	02 41 41.4 -1.1
SMA1				AML	AML	
	comp=E,2795µm,0.5s					
SMA1				AML	AML	
	comp=N,2030µm,0.9s					
SMA1				AML	AML	
	comp=N,2035µm,0.9s					
SMA1				AML	AML	
	comp=E,2790µm,0.5s					
SMA1				AML	AML	
	comp=N,2035µm,1.1s					
SMA1				AML	AML	
	comp=E,2790µm,1.5s					
ASSB	**Assisi San Ben**	**0.33**	**303**	⇑P	Pg	02 41 36.2 +0.2
ASSB				S	Sg	02 41 41.5 +1.1
ASSB				AML	AML	
	comp=E,3410µm,0.2s					
ASSB				AML	AML	
	comp=N,3350µm,0.3s					
MDAR	**Monte D'Aria**	**0.34**	**13**	P	Pg	02 41 36.4 +0.2
MDAR				S	Sg	02 41 41.7 +1.0
MDAR				AML	AML	
	comp=E,2200µm,0.6s					
MDAR				AML	AML	
	comp=N,4405µm,0.4s					
T1243	**Rocca Santa Ma**	**0.34**	**118**	⇑P	Pg	02 41 36.4 +0.1
ARRO	**Arrone**	**0.35**	**215**	⇑P	Pg	02 41 36.7 +0.4
ARRO				S	Sb	02 41 42.0 -1.2
ARRO				AML	AML	
	comp=N,1905µm,0.3s					
ARRO				AML	AML	
	comp=E,2370µm,0.2s					
ARRO				AML	AML	
	comp=N,1910µm,0.3s					
T1211	**Morro Reatino**	**0.35**	**202**	⇑P	Pg	02 41 36.7 +0.3
T1211				S	Sb	02 41 42.7 -0.9
T1211				AML	AML	
	comp=E,2510µm,0.5s					
T1211				AML	AML	
	comp=N,4420µm,1.4s					
T1211				AML	AML	
	comp=E,2460µm,1.0s					
T1211				AML	AML	
	comp=N,4500µm,0.4s					
T1211				AML	AML	
	comp=E,2515µm,0.4s					
T1211				AML	AML	
	comp=N,4430µm,1.4s					
T1211				AML	AML	
	comp=N,4440µm,1.4s					
T1211				AML	AML	
	comp=E,2515µm,0.5s					
T1211				AML	AML	
	comp=E,2455µm,1.0s					
T1211				AML	AML	
	comp=N,4495µm,0.4s					
RM33	**Pellescritta (**	**0.38**	**160**	⇑P	Pg	02 41 37.1 +0.2
RM33				S	Sb	02 41 43.2 -1.0
RM33				AML	AML	
	comp=E,1215µm,1.1s					
RM33				AML	AML	
	comp=N,1165µm,0.8s					
RM33				AML	AML	
	comp=N,1225µm,0.7s					
RM33				AML	AML	
	comp=E,1210µm,1.1s					
RM33				AML	AML	
	comp=E,1195µm,1.0s					
RM33				AML	AML	
	comp=N,1166µm,0.7s					
RM33				AML	AML	
	comp=N,1166µm,1.3s					
RM33				AML	AML	
	comp=E,1195µm,1.0s					
RM33				AML	AML	
	comp=N,1225µm,1.3s					
RM33				AML	AML	
	comp=E,1210µm,0.9s					
GAG1	**Gagliole**	**0.38**	**3**	P	Pg	02 41 37.4 +0.6
SNTG	**Esanatoglia**	**0.40**	**350**	P	Pg	02 41 37.4 +0.1
SNTG				S	Sb	02 41 43.7 -1.1
SNTG				AML	AML	
	comp=E,1020µm,1.1s					
SNTG				AML	AML	
	comp=N,1505µm,0.6s					
SNTG				AML	AML	
	comp=E,1016µm,1.1s					
SNTG				AML	AML	
	comp=E,1029µm,1.2s					
SNTG				AML	AML	
	comp=N,1510µm,0.6s					
SNTG				AML	AML	
	comp=N,1605µm,0.6s					
CESX	**Cesi**	**0.42**	**233**	⇑P	Pg	02 41 37.8 +0.1
CESX				S	Sb	02 41 44.4 -1.0
CESX				AML	AML	
	comp=E,1655µm,0.3s					
CESX				AML	AML	
	comp=N,3175µm,0.8s					
CAMP	**Campotosto**	**0.43**	**140**	⇑P	Pg	02 41 37.9 +0.1
CAMP				S	Sb	02 41 44.6 -1.1
CAMP				AML	AML	
	comp=E,761µm,1.0s					
CAMP				AML	AML	
	comp=N,769µm,1.2s					
CAMP				AML	AML	
	comp=N,770µm,1.2s					
CAMP				AML	AML	
	comp=E,760µm,1.0s					
ATCC	**AVT- Casa Cast**	**0.43**	**318**	⇑P	Pg	02 41 38.1 +0.2
ATCC				S	Sb	02 41 45.1 -0.8
ATCC				AML	AML	
	comp=E,2030µm,0.6s					
ATCC				AML	AML	
	comp=N,2035µm,0.6s					
T1247	**Pizzolo (AQ)**	**0.46**	**155**	⇓P	Pg	02 41 38.6 +0.2
T1247				S	Sb	02 41 46.5 -0.2
T1247				AML	AML	
	comp=E,1470µm,0.8s					
T1247				AML	AML	
	comp=E,1465µm,0.8s					
T1247				AML	AML	
	comp=N,1830µm,0.4s					
EL6	**Elcito**	**0.47**	**6**	P	Pg	02 41 38.6 0.0
EL6				S	Sb	02 41 47.0 +0.1
EL6				AML	AML	
	comp=N,2940µm,0.2s					
EL6				AML	AML	
	comp=N,2940µm,1.8s					
EL6				AML	AML	
	comp=E,2519µm,0.2s					
FOSV	**Fossato di Vic**	**0.48**	**335**	⇑P	Pg	02 41 38.9 +0.2
FOSV				S	Sb	02 41 46.3 -0.8
FOSV				AML	AML	
	comp=E,920µm,0.5s					
FOSV				AML	AML	
	comp=N,838µm,0.4s					
TERO	**Teramo**	**0.48**	**120**	⇑P	Pg	02 41 38.7 -0.1
TERO				S	Sb	02 41 46.4 -0.8
TERO				AML	AML	
	comp=E,1325µm,1.5s					
TERO				AML	AML	
	comp=N,1430µm,0.3s					
TERO				AML	AML	
	comp=N,1485µm,0.3s					
TERO				AML	AML	
	comp=E,1380µm,0.4s					
TERO				AML	AML	
	comp=E,1325µm,0.5s					
TERO				AML	AML	
	comp=N,1485µm,1.7s					
TERO				AML	AML	
	comp=N,1430µm,1.7s					
OFFI	**Offida**	**0.48**	**81**	⇑P	Pb	02 41 39.8 -0.2
OFFI				S	Sb	02 41 49.2 +2.0
OFFI				AML	AML	
	comp=N,2420µm,0.5s					
OFFI				AML	AML	
	comp=N,2415µm,0.5s					
OFFI				AML	AML	
	comp=E,2155µm,0.7s					
CING	**Cingoli**	**0.53**	**13**	⇑P	Pg	02 41 39.6 0.0
CING				S	Sb	02 41 47.9 -0.6
CING				AML	AML	
	comp=N,708µm,0.2s					
CING				AML	AML	
	comp=E,960µm,0.2s					
MURB	**Monte Urbino**	**0.55**	**317**	⇑P	Pg	02 41 40.1 0.0
MURB				AML	AML	
	comp=E,2560µm,0.2s					
MURB				AML	AML	
	comp=N,2805µm,0.3s					
MURB				AML	AML	
	comp=E,2930µm,0.2s					
MURB				AML	AML	
	comp=N,2775µm,0.3s					
MURB				AML	AML	
	comp=E,2930µm,1.8s					
MURB				AML	AML	
	comp=N,2775µm,1.7s					
MURB				AML	AML	
	comp=N,2805µm,1.7s					
MURB				AML	AML	
	comp=E,2560µm,1.8s					
GIGS	**Gran Sasso**	**0.57**	**136**	P	Pg	02 41 40.2 -0.2
GIGS				S	Sg	02 41 48.5 +0.6
GIGS				AML	AML	
	comp=E,363µm,0.8s					
GIGS				AML	AML	
	comp=N,276µm,0.5s					
AQU	**L'Aquila**	**0.57**	**152**	P	Pg	02 41 40.8 +0.2
AQU				AML	AML	
	comp=E,532µm,0.7s					
AQU				AML	AML	
	comp=E,532µm,0.7s					
AQU				AML	AML	
	comp=N,600µm,0.2s					
AQU				AML	AML	
	comp=N,650µm,0.3s					
AQU				AML	AML	
	comp=E,574µm,0.8s					
FIAM	**Fiamignano**	**0.60**	**174**	⇓P	Pg	02 41 40.9 -0.1
FIAM				S	Sb	02 41 50.1 -0.4
FIAM				AML	AML	
	comp=E,872µm,0.3s					
FIAM				AML	AML	
	comp=E,872µm,0.3s					
FIAM				AML	AML	
	comp=N,688µm,0.9s					
FIAM				AML	AML	
	comp=N,688µm,1.1s					
ATTE	**AVT- Monte Tez**	**0.60**	**304**	P	Pg	02 41 41.1 0.0
ATFO	**Monte Foce - G**	**0.61**	**326**	P	Pg	02 41 41.4 +0.2
ATFO				S	Sb	02 41 51.2 +0.3
ATFO				AML	AML	
	comp=N,594µm,0.5s					
ATFO				AML	AML	
	comp=E,731µm,1.2s					
ATFO				AML	AML	
	comp=E,731µm,0.8s					
ARVD	**Arcevia**	**0.64**	**354**	⇑P	Pg	02 41 41.7 -0.1
ARVD				S	Sb	02 41 51.7 -0.1
ARVD				AML	AML	
	comp=E,452µm,0.7s					
ARVD				AML	AML	
	comp=E,453µm,0.7s					
ARVD				AML	AML	
	comp=N,334µm,0.8s					
ARVD				AML	AML	
	comp=E,453µm,1.3s					
TRTR	**Tortoreto Alta**	**0.65**	**94**	⇑P	Pb	02 41 43.1 +0.3
TRTR				AML	AML	
	comp=E,2960µm,0.7s					
TRTR				AML	AML	
	comp=N,2340µm,0.5s					
TRTR				AML	AML	
	comp=E,2960µm,1.3s					
TRTR				AML	AML	
	comp=N,2340µm,1.5s					
PP3	**Marolino**	**0.66**	**39**	⇑P	Pb	02 41 43.0 0.0
PP3				S	Sn	02 41 55.0 -0.4
PP3				AML	AML	
	comp=E,1445µm,0.4s					
PP3				AML	AML	
	comp=N,1415µm,1.0s					
PP3				AML	AML	
	comp=E,1410µm,0.4s					
PP3				AML	AML	
	comp=E,1410µm,1.6s					
PP3				AML	AML	
	comp=N,1435µm,1.0s					
PP3				AML	AML	
	comp=E,1445µm,1.6s					
MGAB	**Montegabbione**	**0.68**	**275**	⇑P	Pg	02 41 42.6 +0.1
MGAB				AML	AML	
	comp=E,1225µm,0.6s					
MGAB				AML	AML	
	comp=N,1765µm,0.4s					
MGAB				AML	AML	
	comp=E,1465µm,0.7s					
MGAB				AML	AML	
	comp=E,1470µm,0.7s					
MGAB				AML	AML	
	comp=N,1850µm,0.4s					
MGAB				AML	AML	
	comp=N,1850µm,1.6s					
MGAB				AML	AML	
	comp=E,1225µm,1.4s					
MGAB				AML	AML	
	comp=E,1470µm,1.3s					
MGAB				AML	AML	
	comp=N,1765µm,1.6s					
FRON	**Frontone**	**0.69**	**341**	P	Pg	02 41 42.6 -0.2
FRON				AML	AML	
	comp=N,594µm,0.3s					
FRON				AML	AML	
	comp=E,414µm,0.3s					
FRON				AML	AML	
	comp=N,594µm,1.7s					
ATVO	**AVT- Monte Val**	**0.70**	**319**	P	Pg	02 41 42.5 -0.3
ATVO				AML	AML	
	comp=E,465µm,0.9s					
ATVO				AML	AML	
	comp=N,420µm,0.5s					
ATVO				AML	AML	
	comp=N,420µm,1.5s					
ATMI	**Monte Miggiano**	**0.73**	**310**	P	Pb	02 41 44.5 +0.2
ATMI				S	Sb	02 41 55.0 +0.5
ATMI				AML	AML	
	comp=E,2040µm,0.8s					
ATMI				AML	AML	
	comp=N,1970µm,0.4s					
ATMI				AML	AML	
	comp=E,2040µm,1.2s					
SRES	**S.Oreste - Sor**	**0.74**	**212**	⇓P	Pg	02 41 43.6 +0.1
SRES				S	Sb	02 41 54.5 +0.1
SRES				AML	AML	
	comp=N,857µm,0.4s					
SRES				AML	AML	
	comp=E,676µm,0.7s					
SRES				AML	AML	
	comp=E,676µm,1.3s					
ATPI	**Pietralunga -**	**0.75**	**322**	P	Pg	02 41 43.6 -0.2
ATPI				AML	AML	
	comp=E,449µm,0.8s					
ATPI				AML	AML	
	comp=N,432µm,0.5s					
ATPI				AML	AML	
	comp=E,449µm,1.2s					
VCEL	**Villa Celiera**	**0.75**	**128**	P	Pg	02 41 43.8 -0.1
VCEL				S	Sb	02 41 56.4 +1.3
VCEL				AML	AML	
	comp=E,1005µm,0.4s					
VCEL				AML	AML	
	comp=E,1008µm,0.4s					
VCEL				AML	AML	
	comp=N,1210µm,0.3s					
PIEI	**Pieia**	**0.77**	**332**	P	Pg	02 41 44.5 +0.3
PIEI				S	Sb	02 41 56.1 +0.7
PIEI				AML	AML	
	comp=N,307µm,0.4s					
PIEI				AML	AML	
	comp=E,306µm,0.3s					
MPAG	**Monte Paganucc**	**0.79**	**345**	⇑P	Pg	02 41 44.7 0.0
MPAG				AML	AML	
	comp=N,358µm,0.4s					
MPAG				AML	AML	
	comp=N,358µm,1.6s					
MPAG				AML	AML	
	comp=E,445µm,0.9s					
SACS	**San Casciano d**	**0.83**	**270**	⇑P	Pg	02 41 45.5 +0.1
T0110	**Collepietro**	**0.84**	**139**	P	Pg	02 41 44.8 -0.7
T0110				AML	AML	
	comp=E,832µm,0.5s					
T0110				AML	AML	
	comp=E,833µm,0.5s					
T0110				AML	AML	
	comp=N,1108µm,0.4s					
T0110				AML	AML	
	comp=E,833µm,1.5s					
FSSB	**Fossombrone**	**0.85**	**347**	P	Pg	02 41 45.6 -0.2
FSSB				S	Sn	02 41 59.4 -0.7
FSSB				AML	AML	
	comp=E,1152µm,0.5s					
FSSB				AML	AML	
	comp=N,1200µm,0.5s					
FSSB				AML	AML	
	comp=E,1154µm,0.5s					
CAFI	**Castiglion Fio**	**0.91**	**301**	P	Pg	02 41 46.7 -0.2
CAFI				S	Sn	02 42 00.7 -0.9
CAFI				AML	AML	

comp=N,483μm,0.5s
CAFI AML AML
comp=N,506μm,0.5s
CAFI AML AML
comp=E,460μm,0.6s
CAFI AML AML
comp=E,474μm,0.6s
CERT Cerreto 0.91 183 ⇑P Pg 02 41 46.8 -0.1
CERT AML AML
comp=E,650μm,1.1s
CERT AML AML
comp=N,395μm,0.7s
CERT AML AML
comp=E,650μm,0.9s
PE3 Peglio 0.92 335 P Pb 02 41 47.5 -0.1
MCIV Monte Civitell 1.00 266 P Pg 02 41 48.7 0.0
MCIV AML AML
comp=N,178μm,1.2s
MCIV AML AML
comp=E,244μm,0.3s
SF04 Casetta 1.01 269 ⇓P Pn 02 41 49.7 -0.1
TOLF Tolfa 1.11 224 P Pg 02 41 50.0 -0.6
TOLF AML AML
comp=E,284μm,0.5s
TOLF AML AML
comp=N,262μm,0.4s
ARCI Arcidosso 1.15 270 ⇓P Pn 02 41 52.1 +0.4
ARCI AML AML
comp=E,89μm,0.9s
ARCI AML AML
comp=N,68μm,1.1s
ARCI AML AML
comp=E,89μm,1.1s
ARCI AML AML
comp=N,68μm,0.9s
POFI Posta Fibreno 1.25 156 P Pg 02 41 54.3 +1.0
GIUL Giuliano Di Ro 1.31 173 P Pg 02 41 54.7 +0.1
RUFI Rufina 1.48 312 ⇓P Pb 02 41 57.0 -0.1
CASP Castiglione de 1.60 268 ⇑P Pn 02 41 58.0 +0.2
MODR Mondragone 1.82 160 S Sg 02 42 30.0 +2.0
PAOL Paolisi 2.16 148 P Pn 02 42 04.7 -0.7
MSSA Maissana 2.94 301 S Sn 02 42 51.0 -0.7
ABTA Abfaltersbach 3.90 355 *e*Pn Pn 02 42 32.0 +2.5
comp=N,1.6nm,0.4s
SQTA Sankt Quirin 4.55 344 *i* Pn Pn 02 42 41.2 +2.8
comp=N,0.5nm,0.2s
WATA Walderalm 4.59 347 *i* Pn Pn 02 42 42.5 +3.5
comp=N,0.5nm,0.2s
RETA Reutte 4.90 342 *i* Pn Pn 02 42 46.1 +2.9
comp=N,0.2nm,0.2s
CKRC Cesky Krumlov 6.03 8 *e*SN Sn 02 44 07.2 -0.4
KHC Kasperske Hory 6.28 3 *e*SN Sn 02 44 12.1 -1.9

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*IDC **29** 02:54:53.5±1.1, 8.°00N×82.°48W, h0km, mb3.7/8, mbtmp3.8/12, ML2.7/3, MS3.1/6, Error ellipse: s-maj=38.9km s-min=17.2km az=36.0*
*UPA **29** 02:54:59.2±1.9, 7.°95N×82.°51W, h31km±9km, MW4.4*
*NEIC **29** 02:55:01.1±1.4, 8.°11N±0.°07×82.°56W±0.°09, h47km±9km, mb4.2/3, Error ellipse: s-maj=15.3km s-min=7.4km az=56.0*
*UCR **29** 02:55:03.9±1.4, 8.°24N×82.°74W, h22km±4km, MW4.5, mb4.2(NEIC)*

ISC 29 02:54:58.5±1.1, 8.°00N±0.°05×82.°51W±0.°03, h31km±4km, n109, σ1°55/118, mb3.9/9, MS3.1/3, 5C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR3	**Chiriqui UPA,**	**0.43**	**25**	⇑*e*P	**Pn**	**02 55 10.5**	**+1.9**
CHIR3				*e*S	**Sn**	**02 55 17.3**	**+1.9**
DVD	**David**	**0.44**	**8**	⇓*i*P	**Pb**	**02 55 08.7**	**+0.6**
DVD				*e*S	**Sn**	**02 55 16.3**	**+0.7**
CCOL	**Caracol de Cor**	**0.61**	**312**	*e*P	**Pb**	**02 55 11.5**	**+0.7**
CDITO	**Canoas**	**0.67**	**328**	*e*P	**Pb**	**02 55 11.7**	**-0.1**
CDITO	**Canoas**	**0.67**	**328**	*e*P	**Pb**	**02 55 11.9**	**0.0**
CDITO				*e*S	**Sb**	**02 55 19.0**	**-1.9**
REME3	**Remedios, Chir**	**0.71**	**71**	*e*P	**Pb**	**02 55 12.2**	**-0.3**
REME3				*e*S	**Sb**	**02 55 22.5**	**+0.5**
BCO2	**Palmira**	**0.72**	**359**	⇑*i*P	**Pb**	**02 55 12.7**	**0.0**
BCO2				*e*S	**Sn**	**02 55 23.2**	**+0.6**
BRU2	**Volcan**	**0.81**	**348**		**Pb**	**02 55 14.0**	**-0.3**
BRU2	**Volcan**	**0.81**	**348**	*e*P	**Pb**	**02 55 13.9**	**-0.4**
BRU2	**Volcan**	**0.81**	**348**	⇑*i*P	**Pb**	**02 55 14.0**	**-0.3**
BRU2				*e*S	**Sn**	**02 55 25.6**	**+0.7**
BC3P	**Paso Ancho**	**0.82**	**353**	⇑*i*P	**Pb**	**02 55 15.0**	**+0.6**
BC3P				*e*S	**Sn**	**02 55 26.7**	**+1.5**
PIRO	**Carate, Puerto**	**0.91**	**296**	*e*P	**Pn**	**02 55 15.0**	**-0.1**
EDSV	**San Vito**	**0.93**	**331**	*e*P	**Pn**	**02 55 16.0**	**+0.4**
PTJ1	**Puerto Jimnez**	**0.95**	**304**	*e*P	**Pn**	**02 55 16.0**	**+0.4**
POTG	**Potrero Grande**	**1.21**	**330**	*e*P	**Pn**	**02 55 19.9**	**+0.6**
EDPN	**Palmar Norte**	**1.34**	**316**	*e*P	**Pn**	**02 55 21.9**	**+0.9**
RSUS3	**Rio de Jesus,**	**1.34**	**91**	*e*P	**Pn**	**02 55 21.0**	**-0.1**
RSUS3				*e*S	**Sn**	**02 55 38.3**	**+0.4**
EDBA	**Buenos Aires**	**1.38**	**327**	*e*P	**Pn**	**02 55 23.0**	**+1.3**
CNI2	**El Empalme, Bo**	**1.42**	**2**	*e*P	**Pn**	**02 55 23.7**	**+1.6**
CNI2				*e*S	**Sb**	**02 55 41.9**	**-0.2**
SRBA	**San Rafael, Bu**	**1.48**	**326**		**Pn**	**02 55 23.7**	**+0.5**
SRBA	**San Rafael, Bu**	**1.48**	**326**	*e*P	**Pn**	**02 55 23.6**	**+0.5**
RGM0	**Gandoca**	**1.58**	**357**	*e*P	**Pn**	**02 55 26.5**	**+2.1**
PEZE	**Perez Zeledon,**	**1.79**	**320**		**Pn**	**02 55 28.5**	**+1.1**
EDDO	**Dominical**	**1.83**	**313**	*e*P	**Pn**	**02 55 28.8**	**+1.1**
CDM	**Cerro de Muert**	**1.98**	**321**	*e*P	**Pn**	**02 55 31.1**	**+0.9**
CHIT3	**Chitre**	**2.08**	**91**	*e*P	**Pn**	**02 55 31.5**	**+0.3**
CHIT3				*e*S	**Sn**	**02 55 56.9**	**+0.9**
TOSI3	**Tonosi**	**2.14**	**106**	*e*P	**Pn**	**02 55 33.4**	**+1.4**
TOSI3				*e*S	**Sn**	**02 55 58.1**	**+0.6**
RIMA	**Rio Macho**	**2.21**	**323**		**Pn**	**02 55 34.4**	**+1.2**
PNME	**Penonome**	**2.22**	**77**	*e*P	**Pn**	**02 55 34.1**	**+1.0**
PNME				*e*S	**Sn**	**02 55 60.0**	**+0.5**
AZU	**Azuero**	**2.23**	**95**	*e*P	**Pn**	**02 55 33.7**	**+0.4**
AZU				*e*S	**Sn**	**02 55 59.0**	**-0.8**
BATAN	**Batan**	**2.25**	**338**	*e*P	**Pn**	**02 55 36.9**	**+3.2**
BATAN				*e*S	**Sn**	**02 56 02.9**	**+2.5**
LCR2	**La Lucha 2**	**2.27**	**320**	*e*P	**Pn**	**02 55 35.1**	**+1.0**
CVTR	**Volcan Turrial**	**2.36**	**329**	Pn	**Pn**	**02 55 36.3**	**+0.8**
HAYA	**Volcan Irazu**	**2.37**	**326**	*e*P	**Pn**	**02 55 37.5**	**+1.9**
VTON	**El Valle, Cocl**	**2.45**	**75**	*e*P	**Pn**	**02 55 38.0**	**+1.5**
VTON				*e*S	**Sn**	**02 56 06.5**	**+1.1**
HDC3	**Heredia 3**	**2.54**	**322**	*e*P	**Pn**	**02 55 39.7**	**+2.0**
HDC	**Heredia**	**2.54**	**322**		**Pn**	**02 55 39.1**	**+1.4**
HDC	**Heredia**	**2.54**	**322**	*e*P	**Pn**	**02 55 39.9**	**+2.1**
HDC				*e*S	**Sn**	**02 56 10.0**	**+2.3**
JACO	**JACO, Garabito**	**2.69**	**308**		**Pn**	**02 55 39.8**	**+0.1**
JACO	**JACO, Garabito**	**2.69**	**308**	*e*P	**Pn**	**02 55 39.3**	**-0.3**
RIFO	**Rio Frio, Sara**	**2.69**	**329**	*e*P	**Pn**	**02 55 41.8**	**+2.1**
BCIP	**Isla Barro Col**	**2.89**	**66**		**Pn**	**02 55 44.1**	**+1.7**
BCIP	**Isla Barro Col**	**2.89**	**66**	*e*P	**Pn**	**02 55 43.9**	**+1.5**
BCIP				*e*S	**Sn**	**02 56 16.1**	**-0.1**
UPA	**Univ. de Panam**	**3.10**	**71**	*e*P	**Pn**	**02 55 47.4**	**+2.1**
UPA				*e*S	**Sn**	**02 56 23.5**	**+2.1**
FORC	**Fortuna**	**3.25**	**319**	*e*P	**Pn**	**02 55 49.3**	**+1.9**
CASO	**Castillo**	**3.27**	**318**	*e*P	**Pn**	**02 55 49.7**	**+2.1**
CEDE	**Laguna Cedeo**	**3.29**	**319**	*e*P	**Pn**	**02 55 49.6**	**+1.7**
JTS	**Las Juntas de**	**3.31**	**314**	Pn	**Pn**	**02 55 48.8**	**+0.6**
	219nm,0.4s,baz=344,slow=9.2,SNR=147						
JTS				Sn	**Sn**	**02 56 27.3**	**+0.7**
	baz=18,slow=19						
JTS				LR	LR	02 57 00.5	
	comp=Z,58nm,21.6s,baz=110,slow=38						
JTS	**Las Juntas de**	**3.31**	**314**		**Pn**	**02 55 48.7**	**+0.5**
JTS	**Las Juntas de**	**3.31**	**314**	*e*P	**Pn**	**02 55 48.9**	**+0.6**
JTS				*e*S	**Sn**	**02 56 27.3**	**+0.7**
DUNO	**Dulce Nombre,**	**3.60**	**305**		**Pn**	**02 55 52.4**	**+0.2**
ACAL	**Aguas Claras**	**3.61**	**317**	*e*P	**Pn**	**02 55 53.8**	**+1.4**
PTEN	**Parque Tenorio**	**3.64**	**318**	*e*P	**Pn**	**02 55 54.6**	**+1.8**
CUI	**Cuipilapa**	**3.72**	**316**	*e*P	**Pn**	**02 55 55.7**	**+1.9**
ORTG	**Ortega, Santa**	**3.74**	**309**		**Pn**	**02 55 55.3**	**+1.1**
COLC	**Colonia**	**3.75**	**315**	*e*P	**Pn**	**02 55 56.0**	**+1.7**
HORNC	**Hornillas**	**3.77**	**316**	*e*P	**Pn**	**02 55 56.0**	**+1.5**
MESS	**Mesas**	**3.80**	**316**	*e*P	**Pn**	**02 55 57.2**	**+2.2**
GUAB	**Guayabo de Bag**	**3.80**	**315**	*e*P	**Pn**	**02 55 57.4**	**+2.4**
LIM1	**Limonal**	**3.81**	**315**	*e*P	**Pn**	**02 55 57.0**	**+1.9**
GPS2	**Hotel Rincn d**	**3.92**	**315**	*e*P	**Pn**	**02 55 58.6**	**+2.0**
GPS3	**Bodega del ICE**	**3.93**	**314**	*e*P	**Pn**	**02 55 58.7**	**+2.0**
LAPC	**Finca la Perla**	**3.98**	**314**	*e*P	**Pn**	**02 55 59.2**	**+1.7**
BUEV	**Buena Vista**	**3.99**	**314**	*e*P	**Pn**	**02 55 59.6**	**+2.0**
BUAI	**Buenos Aires**	**3.99**	**316**	⇑*e*P	**Pn**	**02 55 59.7**	**+2.1**
GB1A	**Borinquen Arri**	**3.99**	**315**	*e*P	**Pn**	**02 56 00.0**	**+2.3**
GBS3	**Finca Las Img**	**4.01**	**314**	*e*P	**Pn**	**02 55 59.8**	**+2.0**
ACON	**Acoyapa**	**4.74**	**327**		**Pn**	**02 56 08.4**	**+0.6**
PTAC	**Punta Ardita,**	**4.74**	**100**	*e*P	Pn	02 56 04.8	-3.0
BOAB	**BOACO BROADBAN**	**5.40**	**325**		**Pn**	**02 56 17.1**	**+0.1**
PRVC	**Isla de Provid**	**5.46**	**12**	*e*P	**Pn**	**02 56 18.3**	**+0.5**
PRVC	**Isla de Provid**	**5.46**	**12**	*e*P	**Pn**	**02 56 18.6**	**+0.8**
MATN	**Matagalpa**	**5.94**	**326**		**Pn**	**02 56 25.2**	**+0.8**
CNGN	**Cerro Negro**	**6.08**	**318**		**Pn**	**02 56 27.1**	**+0.8**
PLMC	**San Jos del P**	**6.91**	**116**	*e*P	Pn	02 56 31.7	-6.1
YOTC	**Yotoco, Valle**	**7.32**	**123**	*e*P	**Pn**	**02 56 42.3**	**-1.1**
SJCC	**San Jacinto, C**	**7.49**	**75**	*e*P	**Pn**	**02 56 46.1**	**+0.5**
GUY2C	**Guyana, Caldas**	**7.62**	**111**	*e*P	Pn	02 56 44.2	-3.6
BBAC	**Balboa, Cauca**	**7.92**	**138**	*e*P	Pn	02 56 42.3	-9.5
NORC	**Norcasia**	**7.97**	**107**	*e*P	**Pn**	**02 56 54.8**	**+2.5**
PTBC	**PUERTO BERRIO,**	**8.12**	**100**	*e*P	Pn	02 56 51.9	-2.5
ORTC	**Ortega, Tolima**	**8.29**	**119**	*e*P	**Pn**	**02 56 57.7**	**+1.0**
TULM	**Tulcn-Chalpat**	**8.63**	**147**	Pn	**Pn**	**02 57 05.0**	**+3.3**
ROSC	**El Rosal**	**8.72**	**111**	Pn	**Pn**	**02 57 02.2**	**-0.7**
	0.9nm,0.3s,baz=37,slow=20,SNR=1.5						
ROSC				LR	LR	03 00 17.9	
	comp=Z,104nm,20.6s,baz=240,slow=37						
	5.0nm,0.4s						
ROSC	**El Rosal**	**8.72**	**111**		**Pn**	**02 57 06.7**	**+3.7**
PULU	**Pululahua**	**8.88**	**153**	Pn	**Pn**	**02 57 08.2**	**+3.2**
VILC	**Villavicencio,**	**9.58**	**113**	*e*P	**Pn**	**02 57 16.9**	**+2.4**
RUSC	**La Rusia**	**9.59**	**102**	*e*P	**Pn**	**02 57 16.9**	**+1.9**
PORT	**Chimborazo Vol**	**10.11**	**158**	Pn	**Pn**	**02 57 26.6**	**+4.4**
COHC	**Cochancay**	**10.89**	**163**		**Pn**	**02 57 35.8**	**+3.5**
BOSC	**San Juan Bosco**	**11.78**	**160**		**Pn**	**02 57 47.5**	**+2.9**
SDV	**Santo Domingo**	**11.79**	**85**	Pn	**Pn**	**02 57 44.2**	**-0.5**
	0.4nm,0.3s,baz=287,slow=11,SNR=1.5						
	1.9nm,0.3s						
CMIG	**Matias Romero**	**15.07**	**308**	Pn	**Pn**	**02 58 28.3**	**-1.1**
	0.1nm,0.3s,baz=351,slow=12,SNR=3.6						
	1.5nm,0.6s						
ATAH	**Atahualpa**	**15.58**	**165**	LR	LR	03 03 54.5	
	comp=Z,118nm,20.3s,baz=6:1,slow=35						
TKL	**Tuckaleechee C**	**27.55**	**358**	LR	LR	03 10 56.6	
	comp=Z,46nm,18.3s,baz=195,slow=35						
LCAR	**Lake Charles**	**29.04**	**345**	P	**P**	**03 00 55.1**	**-0.7**
LCAR				IAmb	IAmb	03 00 56.1	
	comp=Z,8.3nm,1.2s						
TXAR	**Lajitas Array**	**29.09**	**320**	P	**P**	**03 00 55.6**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=119,slow=7.3,SNR=4.4						
TXAR				LR	LR	03 15 31.7	
	comp=Z,29nm,19.0s,baz=9.5,slow=42						
	comp=Z,0.4nm,0.8s						
H03N2	**Juan Fernandez**	**41.35**	**175**	T	T	03 46 34.7	
	baz=355,slow=76						
H03N1	**Juan Fernandez**	**41.35**	**175**	T	T	03 46 33.0	
	baz=355,slow=76						
H03N3	**Juan Fernandez**	**41.37**	**175**	T	T	03 46 29.9	
	baz=355,slow=76						
PDAR	**Pinedale Array**	**42.00**	**330**	P	**P**	**03 02 47.6**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=144,slow=6.3,SNR=2.0						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**44.23**	**319**	P	**P**	**03 03 06.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=129,slow=6.9,SNR=6.6						
	comp=Z,0.5nm,0.6s						
YBH	**Yreka Blue Hor**	**48.86**	**320**	LR	LR	03 27 23.1	
	comp=Z,88nm,21.6s,baz=343,slow=40						
PLCA	**Paso Flores**	**49.73**	**168**	P	**P**	**03 03 47.3**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=346,slow=9.2,SNR=3.4						
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**59.20**	**343**	P	**P**	**03 04 54.8**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=144,slow=7.0,SNR=4.0						
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	**72.03**	**336**	P	**P**	**03 06 18.4**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=108,slow=4.5,SNR=24						
	comp=Z,0.8nm,0.6s						
ESDC	**Sonseca Array**	**76.14**	**51**	P	**P**	**03 06 44.0**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=277,slow=5.4,SNR=19						
	comp=Z,2.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.61**	**78**	P	**P**	**03 07 18.3**	**-1.1**
	comp=Z,0.3nm,0.9s,baz=263,slow=5.4,SNR=2.1						
	comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**142.41**	**248**	PKP	**PKPdf**	**03 14 29.7**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=93,slow=2.5,SNR=2.5						

NOU 29 02:58:39.5, 15.°33S×168.°11E, h4km, MLv3.7/4, Vanuatu Islands, Vanuatu Islands

*IDC **29** 03:21:26.8±0.4, 14.°68S×166.°94E, h0km, mb4.6/22, mbtmp4.6/23, ML5.5/2, MS4.3/43, Error ellipse: s-maj=16.0km s-min=13.8km az=96.0*
*NOU **29** 03:21:30.2, 14.°76S×166.°66E, h0km, mb5.2/33, Vanuatu Islands*
*MOS **29** 03:21:31.5±1.1, 14.°71S×166.°74E, h33km, mb5.4/41, Error ellipse: s-maj=9.2km s-min=7.7km az=39.9*
*BJI **29** 03:21:31.9±0.0, 14.°58S×167.°02E, h39km, mb5.0/56, mB5.1/27, Ms4.9/8, Ms7 4.5/10*
*GCMT **29** 03:21:32.3±0.2, 14.°81S±0.°02×166.°62E±0.°01, h32km, MW5.1/91, Moment Tensor Solution. s73,c94; s91,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.86±.18; $M_{\theta\theta}$-0.21±.15; $M_{\phi\phi}$-4.65±.12; $M_{r\theta}$2.48±.21; $M_{r\phi}$2.30±.12; $M_{\theta\phi}$-0.85±.14; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s137.00000°, δ58.00000°, λ66.00000°. NP2: ϕ_s357.00000°, δ39.00000°, λ122.00000°. Principal axes: T 5.8710, Plg68.0000°, Azm359.0000°; N 0.0530, Plg20.0000°, Azm151.0000°; P -5.9290, Plg10.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **29** 03:21:33.3±2.0, 14.°80S±0.°08×166.°9E±0.°1, h31km±3km, mb5.1/116 Error ellipse: s-maj=14.7km s-min=11.7km az=99.0*

ISC 29 03:21:33.0±0.5, 14.°83S±0.°04×166.°77E±0.°04, h34km±1km, h33km:pP-P, n473, σ1°36/460, mb5.0/106, MS4.4/51, 14C-14D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.18**	**155**	P	**Pn**	**03 22 23.3**	**+2.6**
RTV	**Rentapao**	**3.34**	**152**	P	**Pn**	**03 22 24.8**	**+1.8**
LIFNC	**LIFOU**	**5.93**	**176**	Pn	**Pn**	**03 22 58.1**	**-0.4**
LIFNC				Sn	**Sn**	**03 24 00.8**	**-4.5**
LIFNC	**LIFOU**	**5.93**	**176**	P	**Pn**	**03 22 59.5**	**+1.0**
KOUNC	**Koumac, New Ca**	**6.16**	**202**	Pn	**Pn**	**03 23 02.2**	**+0.5**
KOUNC				Sn	**Sn**	**03 24 07.6**	**-3.4**
KOUNC	**Koumac, New Ca**	**6.16**	**202**	P	**Pn**	**03 23 03.5**	**+1.8**
MARNC	**Mare, Loyalty**	**6.72**	**170**		**Pn**	**03 23 10.1**	**+0.7**
DZM	**Mont Dzumac**	**7.21**	**182**	*e*Pn	**Pn**	**03 23 16.7**	**+0.5**
	376nm,1.2s						
DZM				*e*Sn	**Sn**	**03 24 34.9**	**-2.0**
	404nm,1.0s						
DZM				*e*LR	LR	03 24 54.3	
	comp=Z,5μm,24.2s						
DZM	**Mont Dzumac**	**7.21**	**182**	Pn	**Pn**	**03 23 16.9**	**+0.8**
	14nm,0.3s,baz=322,slow=18,SNR=98						
DZM				Sn	**Sn**	**03 24 36.0**	**-0.9**
	8.6nm,0.3s,baz=321,slow=23,SNR=1.5						
DZM				LR	LR	03 25 57.4	
	comp=Z,4μm,18.6s,baz=360,slow=37						
	80nm,0.7s						
DZM	**Mont Dzumac**	**7.21**	**182**	Pn	**Pn**	**03 23 17.1**	**+0.9**
DZM	**Mont Dzumac**	**7.21**	**182**	P	**Pn**	**03 23 17.3**	**+1.1**
NOUC	**Port Laguerre**	**7.24**	**183**	P	**Pn**	**03 23 18.4**	**+1.8**
HNR	**Honiara**	**8.56**	**308**	Pn	**Pn**	**03 23 34.2**	**-0.5**
	302nm,0.3s,baz=231,slow=13,SNR=1.8						
HNR				Sn	**Sn**	**03 25 07.8**	**-2.5**
	277nm,0.3s,baz=342,slow=20,SNR=1.1						
HNR				LR	LR	03 26 41.3	
	comp=Z,32μm,19.4s,baz=153,slow=37						
MSVF	**Nonsavu**	**11.21**	**106**	Pn	**Pn**	**03 24 14.8**	**+3.8**
	0.3nm,0.3s,baz=248,slow=5.1,SNR=9.0						
MSVF				LR	LR	03 27 32.2	
	comp=Z,3μm,19.4s,baz=273,slow=33						
MSVF	**Nonsavu**	**11.21**	**106**	Pn	**Pn**	**03 24 15.0**	**+4.0**
MSVF	**Nonsavu**	**11.21**	**106**	P	**Pn**	**03 24 15.0**	**+4.0**
TARA	**Tarawa**	**17.20**	**21**		**P**	**03 25 33.9**	**+1.7**
TARA				IAmb	IAmb	03 25 36.2	
	comp=Z,164nm,1.2s						
EIDS	**Eidsvold**	**18.07**	**232**	P	**P**	**03 25 44.2**	**+2.5**
	baz=18,SNR=7.6						
EIDS	**Eidsvold**	**18.07**	**232**		**Pn**	**03 25 41.2**	**-0.3**
EIDS	**Eidsvold**	**18.07**	**232**	P	**P**	**03 25 42.2**	**+0.5**
TV1H	**Townsville Har**	**19.60**	**254**	P	**Pn**	**03 26 01.1**	**+1.0**
PMG	**Port Moresby**	**19.91**	**283**	P	**P**	**03 26 02.3**	**+0.3**
	comp=Z,21nm,0.8s,baz=118,slow=11,SNR=5.7						
PMG				LR	LR	03 32 53.0	
	comp=Z,370nm,19.9s,baz=56,slow=34						
	comp=Z,21nm,0.8s						
PMG	**Port Moresby**	**19.91**	**283**	P	**P**	**03 26 02.8**	**+0.7**
PMG				IAmb	IAmb	03 26 13.9	
	comp=Z,139nm,1.4s						
PMG	**Port Moresby**	**19.91**	**283**	P	**P**	**03 26 02.8**	**+0.7**
PMG				pmax	pmax		
	comp=Z,139nm,1.5s						
PMG	**Port Moresby**	**19.91**	**283**	P	**P**	**03 26 02.8**	**+0.7**
	comp=Z,58nm,2.1s						
CTA	**Charters Tower**	**20.25**	**252**	P	Pn	03 26 07.3	-0.5
	comp=Z,50nm,0.9s,baz=78,slow=12,SNR=38						
CTA				LR	LR	03 33 21.9	
	comp=Z,1μm,18.7s,baz=84,slow=35						
	comp=Z,50nm,0.9s						
CTA	**Charters Tower**	**20.25**	**252**	P	Pn	03 26 07.6	-0.2
CTAO	**Charters Tower**	**20.25**	**252**	P	**P**	**03 26 05.7**	**-0.1**
CTAO				IAmb	IAmb	03 26 14.6	
	comp=Z,80nm,0.9s						
CTAO	**Charters Tower**	**20.25**	**252**	P	**P**	**03 26 05.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,80nm,0.9s						
CTAO	**Charters Tower**	**20.25**	**252**	P	Pn	03 26 07.6	-0.2
RMQ	**Roma**	**20.43**	**233**	P	Pn	03 26 09.9	0.0
	baz=21,SNR=3.8						
AFI	**Afiamalu**	**20.80**	**90**	LR	LR	03 32 20.3	
	comp=Z,708nm,20.0s,baz=248,slow=32						
ARMA	**Armidale**	**20.84**	**219**	P	Pn	03 26 14.3	-0.4
	baz=21,SNR=7.3						
ARMA	**Armidale**	**20.84**	**219**	P	Pn	03 26 13.7	-1.0
MTSU	**Mount Surprise**	**21.78**	**258**	P	**P**	**03 26 23.7**	**+1.5**
	baz=22,SNR=15						
COEN	**Coen**	**22.87**	**269**	P	**P**	**03 26 36.0**	**+2.1**
	baz=23,SNR=10						
COEN	**Coen**	**22.87**	**269**	P	**P**	**03 26 34.7**	**+0.8**
COEN				IAmb	IAmb	03 26 42.4	
	comp=Z,76nm,1.3s						
PATS	**Pohnpei**	**23.11**	**338**	P	**P**	**03 26 36.4**	**+0.2**
	baz=23,SNR=13						
PATS	**Pohnpei**	**23.11**	**338**	P	**P**	**03 26 35.9**	**-0.3**
KUZ	**Kuaotunu**	**23.24**	**162**	P	**P**	**03 26 39.6**	**+2.3**
MKAZ	**Moumakai**	**23.41**	**163**	P	**P**	**03 26 43.5**	**+4.5**
QLP	**Quilpie**	**24.06**	**237**	P	**P**	**03 26 46.2**	**+0.9**
	baz=24,SNR=5.9						
TOZ	**Tahuroa Road**	**24.09**	**163**	P	**P**	**03 26 49.5**	**+4.1**
HIZ	**Hauiti**	**24.64**	**165**	P	**P**	**03 26 54.8**	**+4.2**
HIZ	**Hauiti**	**24.64**	**165**	P	**P**	**03 26 54.2**	**+3.6**
HAZ	**Te Kaha**	**24.83**	**159**	P	**P**	**03 26 55.0**	**+2.8**
MXZ	**Matakaoa Point**	**24.85**	**158**	P	**P**	**03 26 54.1**	**+1.7**
MXZ	**Matakaoa Point**	**24.85**	**158**	P	**P**	**03 26 56.0**	**+3.6**
RUGZ	**Raukumara Rang**	**24.98**	**159**	P	**P**	**03 26 56.2**	**+2.5**
PKGZ	**Pakihiroa**	**25.05**	**159**	P	**P**	**03 26 57.4**	**+3.1**
URZ	**Urewera**	**25.06**	**161**	P	**P**	**03 26 55.6**	**+1.3**
	comp=Z,54nm,0.9s,baz=17,slow=4.2,SNR=18						
	comp=Z,54nm,0.9s						
URZ	**Urewera**	**25.06**	**161**	P	**P**	**03 26 55.6**	**+1.3**
URZ	**Urewera**	**25.06**	**161**	P	**P**	**03 26 57.2**	**+2.9**
WMGZ	**Waiomatatini S**	**25.11**	**158**	P	**P**	**03 26 56.5**	**+1.7**
TWGZ	**Tauwhareparae**	**25.28**	**159**	P	**P**	**03 26 56.5**	**+0.2**
PUZ	**Puketiti**	**25.28**	**158**	P	**P**	**03 26 55.9**	**-0.5**
CMSA	**Cobar Meteorol**	**25.46**	**226**	P	**P**	**03 26 59.1**	**+1.1**
	baz=26,SNR=9.5						
CMSA	**Cobar Meteorol**	**25.46**	**226**	P	**P**	**03 26 59.7**	**+1.7**
SNGZ	**Shannon Statio**	**25.61**	**161**	P	**P**	**03 27 01.6**	**+2.2**
RIGZ	**Rimuhau**	**25.68**	**160**	P	**P**	**03 26 59.7**	**-0.3**
BKZ	**Black Stump Fm**	**25.70**	**162**	P	**P**	**03 27 01.9**	**+1.7**
BKZ	**Black Stump Fm**	**25.70**	**162**	P	**P**	**03 27 03.4**	**+3.2**
QIS	**Mount Isa**	**26.48**	**254**	P	**P**	**03 27 08.1**	**+0.7**
	baz=27,SNR=7.0						
QIS	**Mount Isa**	**26.48**	**254**	P	**P**	**03 27 07.8**	**+0.3**
BFZ	**Birch Farm**	**27.05**	**164**	P	**P**	**03 27 14.8**	**+2.5**
INKA	**Innaminka**	**27.37**	**238**	P	**P**	**03 27 16.5**	**+1.2**
STKA	**Stephens Creek**	**28.56**	**229**	P	**P**	**03 27 26.5**	**+0.6**
	comp=Z,4.7nm,0.6s,baz=35,slow=6.6,SNR=9.2						
STKA				LR	LR	03 38 28.5	
	comp=Z,969nm,20.5s,baz=61,slow=36						
	comp=Z,4.7nm,0.6s						
STKA	**Stephens Creek**	**28.56**	**229**	P	**P**	**03 27 26.9**	**+1.0**
	baz=29,SNR=8.3						
STKA	**Stephens Creek**	**28.56**	**229**	P	**P**	**03 27 26.9

MMRI	Maumere	43.98	273	P	P	03 29 39.3 +1.7
MBWA	Marble Bar	45.05	255	P	P	03 29 46.8 +0.7
MBWA	Marble Bar	45.05	255	P	P	03 29 46.1 +0.1
MBWA				sP	sP	03 30 00.5 +0.8
LUWI	Luwuk	45.56	283	P	P	03 29 52.2 +2.1
LUWI				IAmb	IAmb	03 30 03.5
	comp=Z,46nm,1.0s					
DAV	Davao City (W)	46.28	295	LR	LR	03 49 40.8
	comp=Z,78nm,18.3s,baz=170,slow=36					
MEEK	Meekatharra	46.30	247	P	P	03 29 56.1 +0.2
	baz=46,SNR=14					
KAPI	Kappang	47.24	277	P	P	03 30 03.3 -0.1
KAPI	Kappang	47.24	277	P	P	03 30 03.3 -0.1
KAPI				pmax	pmax	
	comp=Z,56nm,1.3s					
KAPI	Kappang	47.24	277	P	P	03 30 04.4 +1.0
	comp=Z,540nmcomp=Z,33nm,1.8s					
KAPI	Kappang	47.24	277	P	P	03 30 04.1 +0.8
KAPI				sP	sP	03 30 18.1 +0.9
NWAO	Narrogin (SRO)	48.28	239	LR	LR	03 51 07.3
	comp=Z,969nm,18.5s,baz=286,slow=37					
NWAO	Narrogin (SRO)	48.28	239	P	P	03 30 12.8 +1.6
NWAO	Narrogin (SRO)	48.28	239	P	P	03 30 12.8 +1.6
NWAO				pmax	pmax	
	comp=Z,40nm,1.0s					
MORW	Morawa	48.79	244	P	P	03 30 15.7 +0.5
	baz=49,SNR=4.2					
MORW	Morawa	48.79	244	P	P	03 30 15.9 +0.7
MORW				IAmb	IAmb	03 30 31.5
	comp=Z,25nm,0.9s					
JAGI	Jajag, Banyuwa	51.83	271	P	P	03 30 37.7 -0.7
TAOE	Nuku Hiva Isla	52.19	90	eS	S	03 38 02.3 -1.7
	comp=Z,179nm,28.6s					
TAOE				eSS	SS	03 41 41.0 -0.9
	comp=Z,106nm,27.9s					
TAOE				eLR	LR	03 45 42.3
	comp=Z,378nm,27.0s					
JHJ	Hachijo jima 2	54.21	332	LR	LR	03 54 10.0
	comp=Z,72nm,19.1s,baz=97,slow=36					
DRV	Dumont d'Urvil	54.74	193	P	P	03 30 58.9 0.0
DRV				pP	pP	03 31 08.8 -0.6
DRV				sP	sP	03 31 14.6 +1.9
JOW	Kunigami	55.80	318	LR	LR	03 51 59.4
	comp=Z,146nm,21.8s,baz=272,slow=33					
SBUM	Sibu	56.66	283	P	P	03 31 14.3 +0.7
SBUM	Sibu	56.66	283	P	P	03 31 14.5 +0.9
	comp=Z,7.4nm,2.0s					
MJAR	Matsushiro Arr	57.78	333	P	P	03 31 18.7 -2.3
	comp=Z,6.7nm,0.9s,baz=166,slow=7.5,SNR=11					
MJAR				LR	LR	03 56 23.8
	comp=Z,39nm,19.3s,baz=140,slow=36					
	comp=Z,6.7nm,0.9s					
MAJO	Matsushiro	57.78	333	iP	P	03 31 19.6 -1.4
MAJO				pmax	pmax	
	comp=Z,42nm,1.7s					
KSM	Kuching	58.16	281	P	P	03 31 24.3 +0.1
KSM				IAmb	IAmb	03 31 25.5
	comp=Z,21nm,1.2s					
LEM	Lembang	58.51	271	LR	LR	03 58 16.7
	comp=Z,122nm,18.1s,baz=210,slow=38					
VNDA	Vanda	62.75	181	P	P	03 31 54.8 +0.3
	comp=Z,3.6nm,0.8s,baz=7.2,slow=6.2,SNR=31					
VNDA				LR	LR	03 55 51.8
	comp=Z,116nm,21.2s,baz=22,slow=33					
	comp=Z,3.6nm,0.8s					
VNDA	Vanda	62.75	181	P	P	03 31 55.1 +0.7
VNDA				IAmb	IAmb	03 31 56.0
	comp=Z,37nm,1.8s					
VNDA	Vanda	62.75	181	P	P	03 31 55.1 +0.7
VNDA				pmax	pmax	
	comp=Z,37nm,1.8s					
VNDA	Vanda	62.75	181	P	P	03 31 54.4 0.0
SBA	Scott Base	63.03	180	P	P	03 31 56.9 +0.6
SBA				IAmb	IAmb	03 31 58.9
	comp=Z,28nm,1.0s					
SBA	Scott Base	63.03	180	P	P	03 31 56.9 +0.6
SBA				pmax	pmax	
	comp=Z,28nm,1.0s					
SBA	Scott Base	63.03	180	P	P	03 31 57.6 +1.3
SBA				pP	pP	03 32 06.8 +0.2
CASY	Casey	63.25	202	P	P	03 32 03.9 +6.0
MYKOM	Kota Tinggi	64.40	279	P	P	03 32 04.7 -1.7
CCD	Concordia, Ant	64.71	191	P	P	03 32 07.8 -0.1
YSS	Yuzh-Sakhalins	65.18	342⇓	eP	P	03 32 11.5 +0.8
YSS				pmax	pmax	
	comp=Z,141nm,1.5s					
QIZ	Qiongzhong	65.37	299	P	P	03 32 13.5 +0.9
QIZ				S	S	03 40 56.5 +1.7
NJ2	Nanjing	65.42	316	eP	P	03 32 13.0 +0.4
NJ2				pmax	pmax	
	comp=Z,8.0nm,0.5s					
MSHR	Mys Shultsa	65.85	332⇓	eP	P	03 32 15.7 +0.6
MSHR				pmax	pmax	
	comp=Z,35nm,1.5s					
BKNI	Bangkinang	66.67	277	P	P	03 32 22.0 +0.9
USA0B	Ussuriysk Arra	66.76	333	P	P	03 32 21.6 +0.6
USA0B	Ussuriysk Arra	66.76	333	P	P	03 32 21.6 +0.6
USA0B				pmax	pmax	
	comp=Z,44nm,1.3s					
USRK	Ussuriysk Ar.	66.76	333	P	P	03 32 20.9 0.0
	comp=Z,14nm,0.9s,baz=149,slow=5.6,SNR=17					
	comp=Z,14nm,0.9s					
USRK	Ussuriysk Ar.	66.76	333	P	P	03 32 21.0 0.0
USRK	Ussuriysk Ar.	66.76	333	P	P	03 32 21.0 0.0
WHN	Wuhan	67.66	312	⇓P	P	03 32 27.0 0.0
PEA0B	Petropavlovsk-	68.11	354	P	P	03 32 30.6 +1.2
PEA0B	Petropavlovsk-	68.11	354	P	P	03 32 30.6 +1.2
PEA0B				pmax	pmax	
	comp=Z,83nm,1.3s					
PETK	Petropavlovsk-	68.11	354	P	P	03 32 28.3 -1.1
	comp=Z,21nm,1.1s,baz=126,slow=7.5,SNR=7.5					
PETK				LR	LR	03 56 38.8
	comp=Z,178nm,21.9s,baz=169,slow=31					
	comp=Z,21nm,1.1s					
MDJ	Mudanjiang	68.15	332	P	P	03 32 29.4 -0.3
MDJ				IAmb	IAmb	03 32 35.2
	comp=Z,32nm,1.1s					
TYV	Tymovskoe	68.74	344	eP	P	03 32 33.1 -0.2
TYV				eS	S	03 41 34.5 +0.3
TYV				pmax	pmax	
	comp=Z,21nm,1.4s					
TYV				pmax	pmax	
	comp=Z,500nm,3.7s					
TYV				smax	smax	
	comp=N,600nm,5.8s					
TYV				smax	smax	
	comp=E,700nm,5.8s					
RPSI	Rantau Prapat	69.37	279	P	P	03 32 37.8 -0.2
RPSI				IAmb	IAmb	03 32 45.8
	comp=Z,22nm,1.3s					
PSI	Prapat	69.40	279	P	P	03 32 37.8 -0.6
PSI				pmax	pmax	
	comp=Z,22nm,1.3s					
PSI	Prapat	69.40	279	P	P	03 32 38.2 -0.2
	comp=Z,15nm,1.5s,comp=Z,5.8nm,1.3s					
PSI				P	P	03 32 38.1 -0.3
	comp=Z,15nm,1.5s,comp=Z,5.8nm,1.3s					
BNX	BinXian	70.00	332	⇑P	P	03 32 40.5 -0.7
BNX				pmax	pmax	
	comp=Z,13nm,0.7s					
BNX				pmax	pmax	
	comp=Z,140nm,4.1s					
GRNR	Gornyy	70.52	340⇑	iP	P	03 32 43.9 -0.4
GRNR				pmax	pmax	
	comp=Z,20nm,1.2s					
KLR	Kul'dur	70.91	337	LR	LR	04 00 33.2
	comp=Z,116nm,21.1s,baz=228,slow=33					
KLR	Kul'dur	70.91	337	ceP	P	03 32 46.6 -0.1
KLR				pmax	pmax	
	comp=Z,34nm,1.6s					
ENH	Enshi	71.06	310	P	P	03 32 47.5 -0.6
LYN	LuoYang	71.21	315	⇑P	P	03 32 49.0 +0.1
LYN				pmax	pmax	
	comp=Z,20nm,1.0s					
LYN				pmax	pmax	
	comp=Z,130nm,4.7s					
HNS	HongShan	71.36	318	⇓P	P	03 32 50.5 +0.8
HNS				pP	pP	03 32 59.8 -0.1
HNS				eS	S	03 42 03.0 -2.5
HNS				pmax	pmax	
	comp=Z,18nm,1.1s					
HNS				LR	LR	
	comp=Z,280nm,12.0s					
BJT	Baijiatuau	72.04	321	P	P	03 32 53.7 0.0
BJT				IAmb	IAmb	03 32 55.0
	comp=Z,18nm,1.0s					
BJT	Baijiatuau	72.04	321	P	P	03 32 53.7 0.0
BJT				pmax	pmax	
	comp=Z,18nm,1.0s					
BJI	Beijing	72.05	321	P	P	03 32 53.5 -0.2
BJI				sP	PcP	03 33 13.0 +0.9
BJI				PP	PP	03 35 36.0 +1.7
BJI				S	S	03 42 19.0 +5.7
BJI				pmax	pmax	
	comp=Z,18nm,1.1s					
TIY	Taiyuan	73.01	318	eP	P	03 33 00.8 +1.1
TIY				pmax	pmax	
	comp=Z,32nm,0.8s					
XAN	Xi'an	73.41	313	P	P	03 33 02.3 +0.2
XAN				pP	PcP	03 33 19.3 +1.1
XAN				pmax	pmax	
	comp=Z,19nm,1.1s					
PHRA	Phrae	73.44	295	P	P	03 33 03.2 +0.7
KMI	Kunming	73.95	302	⇑P	P	03 33 06.5 +0.8
KMI				pmax	pmax	
	comp=Z,29nm,1.2s					
KMI				LR	LR	
	comp=Z,200nm,17.2s					
XLT	XiLinHaoTe	74.51	325⇓	iP	P	03 33 09.0 +0.6
XLT				pmax	pmax	
	comp=Z,24nm,1.0s					
XLT				pmax	pmax	
	comp=Z,120nm,5.1s					
CM31	Chiang Mai Arr	74.55	294	P	P	03 33 09.7 +0.7
CM31				IAmb	IAmb	03 33 21.7
	comp=Z,20nm,1.1s					
CMAR	Chiang Mai Arr	74.55	294	P	P	03 33 09.9 +0.8
	comp=Z,8.1nm,1.0s,baz=121,slow=4.6,SNR=30					
	comp=Z,8.1nm,1.0s					
CMAR	Chiang Mai Arr	74.55	294	P	P	03 33 09.4 +0.3
CHTO	Chiang Mai	74.68	295	P	P	03 33 10.1 +0.3
CHTO	Chiang Mai	74.68	295	P	P	03 33 10.1 +0.3
QSPA	South Pole Qui	75.19	180	P	P	03 33 11.9 -0.1
QSPA				IAmb	IAmb	03 33 24.0
	comp=Z,28nm,1.0s					
MA2	Magadan	75.28	352	LR	LR	04 02 07.3
	comp=Z,214nm,20.6s,baz=144,slow=32					
PZH	PanZhiHua	75.35	303	P	P	03 33 13.8 +0.2
PZH				pmax	pmax	
	comp=Z,10.0nm,0.9s					
PZH				pmax	pmax	
	comp=Z,110nm,5.8s					
HHC	Hu-ho-hao-te	75.35	320	eP	P	03 33 14.5 +1.2
HHC				pmax	pmax	
	comp=Z,39nm,0.8s					
BTO	Baotou	76.19	319	eP	P	03 33 20.0 +1.9
ZEA	Zeya	76.20	337	eP	P	03 33 18.3 +0.6
ZEA				pmax	pmax	
	comp=Z,20nm,0.9s					
LZH	Lanzhou	78.03	312	eP	P	03 33 29.8 +1.1
LZH				pP	sP	03 33 42.5 -0.3
LZH				sP	pP	03 33 48.5 +9.2
LZH				pmax	pmax	
	comp=Z,43nm,1.1s					
LZH				LR	LR	
	comp=Z,210nm,15.1s					
LZH				LR	LR	
	comp=Z,180nm,12.4s					
LZH				LR	LR	
	comp=Z,220nm,15.6s					
SEY	Seymchan	78.33	353⇓	eP	P	03 33 29.1 -0.3
SEY				pmax	pmax	
	comp=Z,51nm,1.7s					
Q18K	Katmai Hardscr	79.61	19	P	P	03 33 36.7 0.0
	baz=217					
KDAK	Kodiak Island	79.73	21	LR	LR	04 03 22.7
	comp=Z,340nm,19.0s,baz=228,slow=32					
N19K	Bonanza Creek	81.49	18	P	P	03 33 45.9 -0.8
	baz=218					
MAW	Mawson	81.61	202	P	P	03 33 47.6 +0.4
	comp=Z,1.5nm,0.5s,baz=74,slow=12,SNR=1.6					
MAW				LR	LR	04 04 51.5
	comp=Z,226nm,21.4s,baz=95,slow=32					
	comp=Z,1.5nm,0.5s					
ULN	Ulaanbaatar	81.94	324	P	P	03 33 49.3 -0.1
ULN				IAmb	IAmb	03 33 50.7
	comp=Z,15nm,1.1s					
ULN	Ulaanbaatar	81.94	324	P	P	03 33 49.3 -0.1
ULN				pmax	pmax	
	comp=Z,15nm,1.2s					
ULN	Ulaanbaatar	81.94	324	P	P	03 33 49.4 -0.1
	comp=Z,46nm,1.0s					
YAK	Yakutsk	81.99	343	deP	P	03 33 48.9 -0.3
YAK				pmax	pmax	
	comp=Z,78nm,1.3s					
SONM	Songino Array	82.30	324	P	P	03 33 50.3 -1.1
	comp=Z,2.4nm,0.8s,baz=130,slow=5.9,SNR=18					
	comp=Z,2.4nm,0.8s					
SONM	Songino Array	82.30	324	P	P	03 33 50.9 -0.4
SONM				IAmb	IAmb	03 33 56.9
	comp=Z,36nm,1.8s					
SONM	Songino Array	82.30	324	P	P	03 33 50.9 -0.4
SONM				pmax	pmax	
	comp=Z,36nm,1.8s					
GTA	Gaotai	82.39	314	eP	P	03 33 52.5 +0.5
GTA				pP	pP	03 34 01.3 -1.5
GTA				sP	sP	03 34 05.5 -0.7
GTA				pmax	pmax	
	comp=Z,18nm,1.3s					
GTA				pmax	pmax	
	comp=Z,73nm,4.6s					
GTA				LR	LR	
	comp=Z,64nm,17.1s					
GTA				LR	LR	
	comp=Z,240nm,21.8s					
GTA				LR	LR	
	comp=Z,210nm,19.6s					
L19K	White Mountain	82.47	17	P	P	03 33 52.8 +1.0
	baz=217					
N20K	Mount Spurr	82.49	19	P	P	03 33 52.6 +0.7
	baz=220					
SPCR	Spurr Chakacha	82.49	19	P	P	03 33 52.9 +1.0
	baz=220					
CAPN	Captain Cook N	82.49	19	P	P	03 33 52.8 +1.0
	baz=221					
SEW	Seward	82.55	20	P	P	03 33 52.2 +0.1
SEW				IAmb	IAmb	03 33 55.9
	comp=Z,30nm,1.3s					
SEW	Seward	82.55	20	P	P	03 33 52.6 +0.4
	baz=222					
BILL	Biiibino	82.64	360	P	P	03 33 52.6 +0.1
BILL				IAmb	IAmb	03 33 56.3
	comp=Z,31nm,1.0s					
BILL	Biiibino	82.64	360	diP	P	03 33 51.5 -1.0
BILL				e		03 37 09.3
BILL				eS	PnS	03 45 05.1 +4.4
BILL				pmax	pmax	
	comp=Z,40nm,1.1s					
O22K	Cooper Landing	82.74	20	P	P	03 33 53.4 +0.3
	baz=222					
SUA	Susitna One	83.14	19	P	P	03 33 54.5 -0.9
SUA	Susitna One	83.14	19	P	P	03 33 55.2 -0.2
	baz=221					
P23K	Montague Islan	83.18	21	P	P	03 33 54.8 -0.7
	baz=224					
RC01	Rabbit Creek A	83.19	20	P	P	03 33 55.2 -0.3
	baz=222					
SHL	Shillong	83.19	299	P	P	03 33 56.1 -0.4
SHL	Shillong	83.19	299	P	P	03 33 56.1 -0.4
SHL				pmax	pmax	
	comp=Z,47nm,1.2s					
SKT	Skwentna	83.29	18	P	P	03 33 54.4 -1.7
	baz=220					
PWL	Port Wells	83.48	20	P	P	03 33 56.0 -1.0
	baz=223					
M22K	Willow	83.56	19	P	P	03 33 56.3 -1.0
	baz=222					
K20K	Telida	83.63	17	P	P	03 33 57.3 -0.4
	baz=218					
PMR	Palmer	83.76	20	P	P	03 33 57.8 -0.5
	baz=222					
KNK	Knik Glacier	83.85	20	P	P	03 33 58.0 -0.9
	baz=223					
GLI	Glacier Island	83.92	21	P	P	03 33 57.3 -2.0
	baz=224					
GHO	Glory Hole Cre	83.96	20	IAmb	IAmb	03 34 00.2
	comp=Z,28nm,1.1s					
CUT	Chulitna	84.00	19	P	P	03 33 58.3 -1.3
	baz=221					
EYAK	Cordova Ski Ar	84.15	21	P	P	03 33 59.0 -1.4
	baz=226					
SML	Sawmill	84.17	20	P	P	03 33 59.3 -1.3
	baz=223					
KAIM	Kayak Island	84.20	22	P	P	03 33 59.4 -1.3
	baz=227					
CAST	Castle Rocks	84.23	17	P	P	03 33 59.4 -1.4
	baz=220,SNR=11					
J20K	Nowinta River	84.25	16	P	P	03 33 59.8 -1.0
	baz=218					
M23K	Glacier View	84.36	20	P	P	03 34 00.5 -1.0
	baz=224					
SCM	Sheep Creek Mo	84.52	20	P	P	03 34 01.8 -0.6
	baz=224					
CHUM	Lake Minchumin	84.53	17	P	P	03 34 01.4 -0.8
	baz=219					
KTH	Kantishna Hill	84.67	18	P	P	03 34 02.1 -1.0
GOMU	GeErMu	84.68	309	P	P	03 34 06.3 +2.1
GOMU				S	S	03 44 33.0 +3.1
GOMU				pmax	pmax	
	comp=Z,4.0nm,0.5s					
GOMU				LR	LR	
	comp=Z,59nm,12.3s					
GOMU				LR	LR	
	comp=Z,100nm,12.1s					
GOMU				LR	LR	
	comp=Z,130nm,14.9s					
KLU	Klutina	84.75	21	P	P	03 34 02.7 -0.8
	baz=225					
TRF	Thorofare Moun	84.78	18	IAmb	IAmb	03 34 03.7
	comp=Z,14nm,1.0s					
TRF	Thorofare Moun	84.78	18	P	P	03 34 02.2 -1.6
	baz=221					
BMRM	Bremner River	84.85	22	P	P	03 34 03.0 -1.1
	baz=227					
WAT1	Susitna Watana	84.85	19	P	P	03 34 02.8 -1.2
	baz=223					
WAT6	Susitna Watana	84.93	19	P	P	03 34 04.1 -0.4
	baz=224					
BPAW	Bear Paw Mtn.	85.07	17	P	P	03 34 04.2 -0.8
	baz=221					
M24K	Tolsona, Glenn	85.10	20	P	P	03 34 04.3 -0.9
	baz=225					
RND	Reindeer	85.18	18	IAmb	IAmb	03 34 06.0
	comp=Z,16nm,1.0s					
PKM	Mcpherson Peak	85.29	52	P	P	03 34 04.9 -2.2
	baz=248					
N25K	Chitina, Valde	85.29	21	P	P	03 34 05.4 -0.9
	baz=227					
ZAK	Zakamensk	85.36	325	eP	P	03 34 05.0 -1.9
ZAK				pmax	pmax	
	comp=Z,15nm,1.3s					
MCK	McKinley	85.40	18	P	P	03 34 06.0 -0.7
	baz=222					
DHY	Denali Highway	85.40	19	IAmb	IAmb	03 34 17.7
	comp=Z,24nm,1.4s					
DHY	Denali Highway	85.40	19	P	P	03 34 06.0 -0.9
	baz=224					
I21K	Tanana	85.62	16	P	P	03 34 07.9 +0.2
	baz=220,SNR=8.3					
HARP	HAARP	85.65	20	P	P	03 34 08.1 +0.1
	baz=226					
MCARA	McCarthy VSAT	85.70	22	P	P	03 34 07.1 -1.1
	baz=228					
H21K	Melozitna Rive	85.78	16	P	P	03 34 07.4 -1.1
	baz=219,SNR=6.8					
IMAR	Indian Mountai	85.79	15	P	P	03 34 08.1 -0.5
YBH	Yreka Blue Hor	85.83	45	P	P	03 34 07.9 -1.5
	comp=Z,1.2nm,0.5s,baz=166,slow=8.3,SNR=4.0					
YBH				LR	LR	04 04 28.6
	comp=Z,178nm,20.8s,baz=279,slow=30					
	comp=Z,1.2nm,0.5s					
MLY	Manley	85.85	17	IAmb	IAmb	03 34 09.4
	comp=Z,14nm,1.2s					
MLY	Manley	85.85	17	P	P	03 34 08.2 -0.7
	baz=221,SNR=5.3					
AFDM	Forest Hills D	85.95	48	IAmb	IAmb	03 34 11.8
	comp=Z,12nm,1.5s					
BARN	Barnard Glacie	85.98	22	IAmb	IAmb	03 34 19.8
	comp=Z,13nm,1.2s					
NEA2	Nenana	86.00	18	IAmb	IAmb	03 34 09.7
	comp=Z,40nm,1.8s					
NEA2	Nenana	86.00	18	P	P	03 34 08.8 -0.8
	baz=222					
G21K	Allakaket	86.27	15	P	P	03 34 10.1 -0.8
	baz=218					
I23K	Minto, Yukon-K	86.33	17	P	P	03 34 10.5 -0.7
	baz=222					
H22K	Ishtalitna Cre	86.33	16	P	P	03 34 10.9 -0.3
	baz=220,SNR=7.8					
O28M	Mount Upton	86.34	23	P	P	03 34 10.4 -1.3
	baz=231					
M26K	Nabesna, AK	86.39	21	IAmb	IAmb	03 34 22.1
	comp=Z,9.3nm,1.2s					
M26K	Nabesna, AK	86.39	21	P	P	03 34 10.8 -0.9
	baz=228					
CCB	Clear Creek Bu	86.41	18	IAmb	IAmb	03 34 11.0
	comp=Z,22nm,1.5s					
K24K	Donnelly Dome	86.43	19	P	P	03 34 10.4 -1.4
	baz=225					
HDA	Harding Lake	86.49	18	IAmb	IAmb	03 34 12.5
	comp=Z,26nm,1.2s					
HDA	Harding Lake	86.49	18	P	P	03 34 10.5 -1.6
	baz=224					
MDM	Murphy Dome	86.51	18	IAmb	IAmb	03 34 12.1
	comp=Z,26nm,1.3s					
TCOL	CIGO, UAF Yank	86.56	18	IAmb	IAmb	03 34 12.4
	comp=Z,16nm,1.0s					
TCOL	CIGO, UAF Yank	86.56	18	P	P	03 34 10.7 -1.6
	baz=224					
COLA	College	86.56	18	P	P	03 34 12.0 -0.3
COLA				IAmb	IAmb	03 34 12.4
	comp=Z,15nm,0.9s					
COLA	College	86.56	18	P	P	03 34 12.0 -0.3
COLA				pmax	pmax	
	comp=Z,15nm,1.0s					
COLA	College	86.56	18	P	P	03 34 10.7 -1.6
	baz=224					
ISA	Isabella, Lake	86.59	52	P	P	03 34 12.5 -0.8
ISA	Isabella, Lake	86.59	52	P	P	03 34 12.5 -0.8
ISA				pmax	pmax	
	comp=Z,7.0nm,1.1s					
P29M	Windy Craggy	86.60	25	P	P	03 34 11.5 -1.2
	baz=233					
BELA	Belgrano 2	86.66	176	IAmb	IAmb	03 34 13.2
	comp=Z,18nm,1.0s					
EDW2	Edwards Air Fo	86.68	53	P	P	03 34 12.0 -1.8
	baz=249					
L26K	Log Cabin Wild	86.69	20	P	P	03 34 12.2 -0.8
	baz=228					
M27K	Edge Creek, AK	86.75	21	P	P	03 34 12.9 -0.7
	baz=229					
IL31		86.77	18	IAmb	IAmb	03 34 13.4
	comp=Z,6.7nm,0.9s					
ILAR	Eielson Array	86.77	18	P	P	03 34 11.0 -2.4
	comp=Z,4.1nm,0.7s,baz=238,slow=4.8,SNR=44					
ILAR				LR	LR	04 08 03.2
	comp=Z,317nm,19.8s,baz=222,slow=32					
	comp=Z,4.1nm,0.7s					
H23K	Yukon River	86.78	17	P	P	03 34 13.1 -0.3
	baz=222					
YUK8	Steele Glacier	86.83	23	P	P	03 34 13.8 -0.4
	baz=231					
F21K	Alatna River	86.83	14	P	P	03 34 13.6 -0.1
	baz=218,SNR=6.4					
DOT	Dot Lake	86.87	20	IAmb	IAmb	03 34 18.1
	comp=Z,12nm,1.2s					
YUK3	Moose Creek	86.88	22	P	P	03 34 13.5 -0.8
	baz=230					
PLBC	Pleasant Camp	87.06	25	P	P	03 34 14.3 -0.6
	baz=234					
G22K	Bettles	87.09	15	P	P	03 34 15.3 +0.4
	baz=220					
SCRK	Sand Creek	87.12	20	P	P	03 34 15.5 +0.2
	baz=227					
J25K	Salcha River,	87.12	19	P	P	03 34 14.7 -0.5
	baz=226					
BBB	Bella Bella	87.13	34	LR	LR	04 04 54.3
	comp=Z,241nm,21.1s,baz=243,slow=30					
CWC	Cottonwood Cre	87.16	51	P	P	03 34 14.6 -1.6
	baz=249					
L27K	Beaver Creek,	87.23	21	P	P	03 34 15.9 +0.1
	baz=229					
YUK4	Talbot Arm	87.29	23	P	P	03 34 16.4 +0.1
	baz=232					
G23K	Bananza Creek	87.31	16	P	P	03 34 16.1 0.0
	baz=221					
F22K	John River	87.37	15	P	P	03 34 16.3 0.0
	baz=219					
RMX	La Rumorosa	87.41	55	P	P	03 34 17.4 -0.1

RMX IAmb IAmb 03 34 32.7
comp=Z,11nm,1.1s
PFO Pinyon Flats O 87.44 54 LR LR 04 05 19.2
comp=Z,353nm,20.3s,baz=247,slow=30
J26L Joseph Creek 87.61 19 P **P 03 34 17.3 -0.4**
baz=227
COLD Coldfoot 87.66 15 IAmb IAmb 03 34 28.0
comp=Z,8.1nm,1.0s
COLD Coldfoot 87.66 15 P **P 03 34 17.3 -0.4**
baz=221
NVAR Mina Array Bea 87.70 49 P **P 03 34 17.1 -1.8**
comp=Z,2.3nm,1.0s,baz=228,slow=7.5,SNR=7.0
NVAR LR LR 04 05 53.2
comp=Z,428nm,20.4s,baz=270,slow=30
comp=Z,2.3nm,1.0s
NVAR Mina Array Bea 87.70 49 P **P 03 34 17.6 -1.2**
K27K Chicken 87.78 20 IAmb IAmb 03 34 23.1
comp=Z,14nm,1.4s
K27K Chicken 87.78 20 P **P 03 34 18.3 0.0**
baz=229
O30N Mendenhall 87.94 24 P **P 03 34 18.7 -0.5**
baz=234
E22K Anaktuvuk Pass 87.95 14 P **P 03 34 18.9 -0.2**
baz=220
G24K Hadweenzic Riv 87.99 17 P **P 03 34 18.7 -0.6**
baz=224
KVN Kaiserville 88.07 49 IAmb IAmb 03 34 35.8
comp=Z,13nm,1.8s
I26K Coal Creek Min 88.29 19 IAmb IAmb 03 34 23.8
comp=Z,21nm,1.6s
I26K Coal Creek Min 88.29 19 P **P 03 34 19.6 -1.0**
baz=228
WCT Wildcat Mounta 88.38 51 IAmb IAmb 03 34 25.4
comp=Z,9.7nm,1.4s
E23K Chandalar 88.43 15 P **P 03 34 20.3 -1.1**
baz=222
F24K Squaw Lake 88.48 16 P **P 03 34 21.6 0.0**
baz=223
S34M Telegraph Cree 88.48 28 P **P 03 34 21.5 -0.3**
baz=239
Q32M Nakina River 88.53 27 P **P 03 34 22.6 +0.4**
baz=238
EGAK Eagle 88.57 20 P **P 03 34 21.6 -0.5**
EGAK IAmb IAmb 03 34 22.8
comp=Z,11nm,1.2s
EGAK Eagle 88.57 20 P **P 03 34 22.0 0.0**
baz=230
IRM Iron Mountain 88.66 54 P **P 03 34 22.6 -0.7**
baz=251
DAWY Dawson 88.71 21 P **P 03 34 22.8 +0.1**
baz=231
E24K Your Creek 88.73 15 P **P 03 34 23.1 +0.3**
baz=223
D23K Nanushuk River 88.85 14 P **P 03 34 23.7 +0.4**
baz=221,SNR=6.1
TOLK Toolik Lake Re 88.88 15 P **P 03 34 23.6 +0.1**
baz=222
BMN Battle Mountai 89.19 48 IAmb IAmb 03 34 29.7
comp=Z,8.3nm,1.3s
G26K Porcupine Rive 89.21 17 P **P 03 34 25.2 +0.2**
baz=227
DLBC Dease Lake 89.25 28 LR LR 04 07 43.9
comp=Z,145nm,19.5s,baz=264,slow=31
DLBC Dease Lake 89.25 28 P **P 03 34 25.6 +0.2**
baz=240
R33M Jennings River 89.33 27 P **P 03 34 25.9 0.0**
baz=239
D24K Happy Valley 89.44 15 P **P 03 34 26.4 +0.4**
baz=222
C23K Itkillik River 89.53 14 P **P 03 34 26.8 +0.4**
baz=221,SNR=5.2
LPIG La Paz 89.68 65 LR LR 04 08 10.7
comp=Z,101nm,18.1s,baz=223,slow=31
G08A Pilot Rock 89.72 43 P **P 03 34 27.3 -0.7**
G08A IAmb IAmb 03 34 27.6
comp=Z,12nm,1.5s
G27K Doyon Strip 89.74 18 P **P 03 34 27.1 -0.4**
baz=229
PRN Pahroc Range 89.78 51 IAmb IAmb 03 34 32.2
comp=Z,8.7nm,1.0s
C24K Franklin Bluff 89.89 14 P **P 03 34 28.3 +0.2**
baz=223
TIXI Tiksi 89.98 349 LR LR 04 11 32.4
comp=Z,81nm,19.2s,baz=359,slow=34
TIXI Tiksi 89.98 349 P **P 03 34 27.8 -0.6**
TIXI IAmb IAmb 03 34 31.3
comp=Z,10.0nm,1.1s
TIXI Tiksi 89.98 349 *ce*P **P 03 34 27.5 -0.9**
TIXI pmax pmax
comp=Z,14nm,1.4s
ELK Elko 90.71 48 P **P 03 34 30.4 -2.5**
comp=Z,1.8nm,0.9s,baz=276,slow=3.6,SNR=3.8
ELK LR LR 04 07 03.0
comp=Z,226nm,21.4s,baz=260,slow=30
comp=Z,1.8nm,0.9s
C26K Camden Bay 90.95 15 P **P 03 34 34.9 +1.9**
baz=226
TUC Tucson 91.58 57 P **P 03 34 35.6 -1.4**
TUC Tucson 91.58 57 P **P 03 34 35.6 -1.4**
TUC pmax pmax
comp=Z,2.0nm,1.4s
TUC Tucson 91.58 57 P **P 03 34 36.6 -0.3**
baz=253
PMSA Palmer Station 91.83 161 P **P 03 34 35.8 -1.6**
comp=Z,9.8nm,0.9s,baz=263,slow=4.0,SNR=6.7
comp=Z,9.8nm,0.9s
PMSA Palmer Station 91.83 161 P **P 03 34 36.7 -0.6**
PMSA IAmb IAmb 03 34 37.9
comp=Z,16nm,1.1s
NEW Newport 91.95 40 P **P 03 34 35.7 -2.5**
comp=Z,1.6nm,0.8s,baz=225,slow=5.1,SNR=3.8
NEW LR LR 04 14 37.2
comp=Z,129nm,18.0s,baz=250,slow=35
comp=Z,1.6nm,0.8s
WMQ Urumqi 92.46 315 *e*P **P 03 34 42.3 +1.6**
WMQ LR LR
comp=Z,140nm,19.7s
TROLL Troll, Antarti 92.72 185 P **P 03 34 40.8 -0.8**
INK Inuvik 93.14 19 LR LR 04 09 53.9
comp=Z,187nm,20.8s,baz=204,slow=31
SNAA Sanae 93.42 183 P **P 03 34 43.2 -1.6**
SNAA Sanae 93.42 183 P **P 03 34 44.0 -0.7**
SNAA IAmb IAmb 03 34 56.8
comp=Z,12nm,1.1s
SNAA Sanae 93.42 183 P **P 03 34 44.0 -0.7**
SNAA pmax pmax
comp=Z,12nm,1.1s
VNA3 Neumayer Olymp 94.10 181 P **P 03 34 46.2 -1.6**
VNA2 Neumayer--Watz 94.36 182 P **P 03 34 47.6 -1.4**
baz=176,slow=5.0
DGZ Jazzator, Alta 94.44 320⇑ *e*P **P 03 34 48.8 -1.0**
DGZ pmax pmax
comp=Z,8.0nm,1.3s
VNA1 Neumayer--Stat 94.66 182 P **P 03 34 47.5 -2.8**
PDAR Pinedale Array 95.37 47 LR LR 04 09 42.4
comp=Z,136nm,21.8s,baz=282,slow=30
ANMO Albuquerque 95.76 56 LR LR 04 09 49.1
comp=Z,160nm,21.2s,baz=276,slow=30
TXAR Lajitas Array 96.75 62 P **P 03 34 58.1 -2.6**
comp=Z,0.1nm,0.6s,baz=218,slow=6.8,SNR=2.0
TXAR LR LR 04 12 39.4
comp=Z,108nm,19.2s,baz=286,slow=32
comp=Z,0.1nm,0.6s
MK31 Makanchi Array 96.95 316 P **P 03 35 00.9 -0.3**
MK31 IAmb IAmb 03 35 06.3
comp=Z,4.2nm,0.9s
MK31 Makanchi Array 96.95 316 P **P 03 35 00.9 -0.3**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 96.95 316 P **P 03 35 00.4 -0.8**
comp=Z,2.3nm,0.7s,baz=101,slow=6.5,SNR=17
MKAR LR LR 04 21 27.5
comp=Z,45nm,18.5s,baz=110,slow=37
comp=Z,2.3nm,0.7s
MKAR Makanchi Array 96.95 316 *ce*P **P 03 35 00.9 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MAKZ Makanchi 97.16 316 P **P 03 35 01.9 -0.2**
MAKZ IAmb IAmb 03 35 07.2
comp=Z,15nm,1.5s
MAKZ Makanchi 97.16 316 P **P 03 35 01.9 -0.2**
MAKZ pmax pmax
comp=Z,15nm,1.5s
ZAA0 Zalesovo Array 97.19 324 P **P 03 35 00.7 -1.4**
ZAA0 IAmb IAmb 03 35 05.7
comp=Z,4.5nm,0.8s
ZALV Zalesovo Beam 97.19 324 P **P 03 34 59.7 -2.3**
comp=Z,2.6nm,0.8s,baz=108,slow=4.8,SNR=11

ZALV LR LR 04 18 11.0
comp=Z,87nm,21.1s,baz=82,slow=35
comp=Z,2.6nm,0.8s
YKA Yellowknife Ar 97.86 27 LR LR 04 10 59.0
comp=Z,94nm,21.6s,baz=299,slow=30
PHWY Pilot Hill 97.98 49 IAmb IAmb 03 35 03.5
comp=Z,7.1nm,1.3s
NRIK Noril'sk 100.00 339 LR LR 04 23 06.0
comp=Z,61nm,18.0s,baz=93,slow=37
NRIK Noril'sk 100.00 339⇓ *e*P **Pdif 03 35 12.9 -1.4**
NRIK pmax pmax
comp=Z,8.0nm,1.4s
KURK Kurchatov 100.17 320⇑ *e*P **Pdif 03 35 16.6 +1.2**
KURK pmax pmax
comp=Z,3.0nm,0.9s
SPITS Spitsbergen Ar 114.98 354 PKKPbc PKKPbc 03 50 45.3 -3.6
comp=Z,12nm,1.0s,baz=345,slow=2.6,SNR=3.7
LPAZ La Paz 117.59 118 PKP **PKPdf 03 40 15.7 -1.5**
comp=Z,1.0nm,0.8s,baz=162,slow=9.4,SNR=3.1
ARCES ARCESS Array B 120.23 345 PKP **PKPdf 03 40 18.8 -1.3**
comp=Z,2.8nm,0.6s,baz=82,slow=2.0,SNR=33
KLMR Klimovskoe 120.56 333 *e*PKIKP **PKPdf 03 40 18.2 -2.6**
KLMR *e* 03 41 49.4
KLMR pmax pmax
comp=Z,29nm,1.4s
KLMR Klimovskoe 120.56 333 *e*PKPdf **PKPdf 03 40 18.3 -2.6**
KLMR AMP 03 40 24.7
comp=Z,29nm,1.4s
KLMR *e*PP **PP 03 41 49.4 +1.3**
GROC Groznyy 122.51 312 *i* PKIKP **PKPdf 03 40 22.2 -3.0**
GROC pmax pmax
comp=Z,28nm,0.9s
VRH Novokhopyorsk 123.17 322 *e*PKIKP **PKPdf 03 40 24.5 -1.6**
VRH pmax pmax
comp=Z,8.0nm,0.5s
SIV San Ignacio 123.68 121 PKP **PKPdf 03 40 26.9 -1.3**
comp=Z,0.9nm,0.7s,baz=261,slow=3.5,SNR=4.9
ZEI Tsey 123.96 312 *i* PKIKP **PKiKP 03 40 28.5 0.0**
ZEI pmax pmax
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 124.18 289 PKPdf **PKPdf 03 40 27.4 -1.6**
RAYN Ar Rayn 124.18 289 PKIKP **PKPdf 03 40 27.4 -1.6**
LPSR Galich'ya Gora 124.30 324 *e*PKIKP **PKPdf 03 40 26.1 -2.2**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ONI Oni 124.32 312 **PKPdf 03 40 28.7 -0.1**
ONI Oni 124.32 312 PKIKP **PKPdf 03 40 28.7 -0.1**
VORR Voronezh 124.49 323 *e*PKIKP **PKPdf 03 40 28.7 0.0**
OBN Obninsk 124.53 328 PKPdf **PKPdf 03 40 27.5 -1.1**
OBN Obninsk 124.53 328⇓ *e*PKIKP **PKPdf 03 40 27.6 -1.0**
OBN *e* 03 42 16.0
OBN *e*PPP PPP 03 44 56.0
OBN *e* 03 47 31.5
OBN pmax pmax
comp=Z,23nm,1.4s
KIV Kislovodsk 124.57 313 *i* PKIKP **PKPdf 03 40 28.2 -1.0**
KIV pmax pmax
comp=Z,7.0nm,1.1s
VSR Storozhevoye 124.68 323 *e*PKIKP **PKPdf 03 40 26.8 -2.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s
NEY Neytrino 124.70 313⇓ *i*PKIKP **PKiKP 03 40 31.1 +1.2**
GEVA Gevas 125.40 307 **PKPdf 03 40 30.8 -0.3**
FINES FINESS Array B 125.64 338 PKP **PKPdf 03 40 29.6 -0.9**
comp=Z,2.4nm,0.6s,baz=28,slow=1.6,SNR=15
FINES FINESS Array B 125.64 338 *c i*PKIKP **PKPdf 03 40 28.3 -2.3**
FINES pmax pmax
comp=Z,2.0nm,0.6s
GURO Guroymak-BITLI 126.16 307 **PKPdf 03 40 32.2 -0.3**
TRCB Terra Rica 126.27 133 **PKPdf 03 40 32.0 -1.1**
KIBK Kibwezi 126.46 256 **PKPdf 03 40 32.9 -0.8**
KMBO Kilima Mbogo 127.61 257 PKPdf **PKPdf 03 40 35.7 -0.5**
KMBO Kilima Mbogo 127.61 257 PKIKP **PKPdf 03 40 35.7 -0.5**
MNK Minsk 129.17 330 *i* PKIKP **PKiKP 03 40 40.8 +2.6**
MNK *i* 03 42 46.5
MNK *i* PPP PPP 03 45 32.0
MNK *i* 03 47 49.8
MNK *i* PS **PS 03 52 54.2 -1.3**
MNK *i* SS SS 04 00 02.2 -1.3
MNK *i* SSS SSS 04 04 47.5
MNK pmax pmax
comp=Z,11nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=N,39nm,0.9s
MNK MLR MLR
comp=N,932nm,20.0s
MNK MLR MLR
comp=E,25nm,20.0s
MNK MLR MLR
comp=Z,101nm,17.0s
MNK Minsk 129.17 330 *i* PKP **PKiKP 03 40 40.9 +2.6**
comp=E,3.0nm,0.8s
MNK *i* PKP **PKiKP 03 40 40.9 +2.6**
comp=N,39nm,0.9s
MNK *i* PKP **PKiKP 03 40 40.9 +2.6**
comp=Z,11nm,0.9s,baz=56
MNK *i* PP **PP 03 42 46.6 +0.8**
MNK *i* PPP PPP 03 45 32.0
MNK *i* SKS **SKSdf 03 47 49.8 +3.2**
MNK *i* PS **PS 03 52 54.3 -1.3**
MNK *i* SS **SS 04 00 02.2 -1.3**
MNK *i* SSS SSS 04 04 47.5
MNK *i* LR LR 04 30 06.3
MNK *i* LRM MLR 04 35 32.7
comp=N,932nm,19.8s
MNK *i* LRM MLR 04 36 06.6
comp=E,25nm,19.8s
MNK *i* LRM MLR 04 36 11.1
comp=Z,101nm,16.6s
NACGM Naroch 129.46 331 *e*PKP **PKiKP 03 40 39.3 +0.5**
comp=Z,17nm,1.1s,baz=53
HUMP Col San Antoni 129.57 79 **PKPdf 03 40 37.9 -1.5**
AKASG Malin Array Be 130.55 326 PKP **PKPdf 03 40 39.6 -0.7**
comp=Z,0.8nm,0.4s,baz=61,slow=1.7,SNR=10
AKASG Malin Array Be 130.55 326 PKPdf **PKPdf 03 40 40.5 +0.3**
AKASG Malin Array Be 130.55 326 *c i*PKIKP **PKPdf 03 40 40.2 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 130.55 326⇓ *e*PKIKP **PKPdf 03 40 39.1 -1.2**
NB2 NORSAR Subarra 130.60 345 SKPa 03 44 03.8
comp=Z,6.9nm,1.0s,baz=38,slow=4.8
NB2 NORSAR Subarra 130.60 345 SKPa 03 44 03.8
baz=38,slow=4.8
NOA NORSAR Array B 130.60 345 PKP **PKPdf 03 40 38.8 -1.4**
comp=Z,1.7nm,0.8s,baz=36,slow=2.2,SNR=3.6
NOA SKPbc **SKPab 03 44 03.9 +2.5**
comp=Z,3.3nm,0.9s,baz=32,slow=3.0,SNR=4.8
HFS Hagfors 130.68 343 PKP **PKPdf 03 40 38.4 -1.8**
comp=Z,1.7nm,0.8s,baz=144,slow=5.2,SNR=1.1
HFS SKPbc **SKPab 03 44 04.2 +2.6**
comp=Z,2.9nm,0.9s,baz=74,slow=6.2,SNR=4.7
BRTR Keskin Array B 132.21 311 PKP **PKPdf 03 40 42.2 -1.8**
comp=Z,1.0nm,0.8s,baz=113,slow=3.3,SNR=4.3
BRTR Keskin Array B 132.21 311 *c i*PKIKP **PKPdf 03 40 42.7 -1.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BDFB Brasilia 134.19 130 PKP **PKPdf 03 40 46.2 -2.1**
comp=Z,1.8nm,0.6s,baz=172,slow=3.8,SNR=3.7
BURAR Bucovina Array 134.41 324 PKPdf **PKPdf 03 40 48.4 +0.5**
KOLS Kolonicke sedl 135.27 327 *e*PKIKP **PKiKP 03 40 50.8 0.0**
UZH Uzhgorod 135.44 327 *e*PKIKP **PKPdf 03 40 45.2 -4.4**
UZH *i* 03 40 54.6
CRVS Cervenica-Dubn 135.72 327 *e*PKIKP **PKPdf 03 40 50.7 +0.6**
MORC Moravsky Berou 137.09 331 *e*PKP **PKPdf 03 40 52.3 -0.4**
VYHS Vyhne 137.32 329 *e*PKIKP **PKiKP 03 40 54.8 -0.2**
JAVC Velka Javorina 137.65 330 *e*PKP **PKPdf 03 40 53.9 +0.1**
BRG Berggiesshubel 137.90 334 *e*PKIKP **PKPdf 03 40 54.4 +0.3**
BRG pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 137.95 336 *e*PKIKP **PKPdf 03 40 55.0 +0.9**
CLL *e* 03 41 08.0
CLL pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 137.95 336 *e*PKPdf **PKPdf 03 40 55.0 +0.9**
comp=Z,7.0nm,1.2s
CLL *e*PKiKP **PKiKP 03 40 57.0 +0.9**
comp=Z,18nm,1.5s
CLL *ep*PKiKP **sPKPdf 03 41 08.0 -0.9**
CLL *e*PP **PP 03 43 43.0 +1.5**
CLL *e*PKSdf **PKSdf 03 44 31.0 +0.9**
CLL Lm MLR 04 43 00.0
comp=Z,200nm,19.9s
KRUC Moravsky 138.12 331 *e*PKP **PKPdf 03 40 53.6 -0.9**

MODS Modra-Piesok 138.17 330 *e*PKIKP **PKiKP 03 40 58.0 +1.3**
RONA Rosalia, Austr 139.12 329 *i* P **PKiKP 03 40 59.2 +0.5**
comp=Z,1.6nm,0.4s
CONA Conrad Observa 139.17 330 *e*P **PKiKP 03 40 59.0 +0.1**
comp=Z,0.7nm,0.3s
DIVS Divibare 139.41 323 **PKPdf 03 40 55.7 -1.4**
GEC2 GERESS Array S 139.51 333 **PKPdf 03 40 56.4 -0.8**
GERES GERESS Array B 139.51 333 PKhKP PKPpre 03 40 49.4
comp=Z,0.1nm,0.4s,baz=356,slow=40,SNR=2.4
GERES PKP **PKPdf 03 40 56.2 -1.0**
comp=Z,1.6nm,0.7s,baz=56,slow=1.8,SNR=12
GERES GERESS Array B 139.51 333 PKPdf **PKPdf 03 40 57.0 -0.2**
GERES GERESS Array B 139.51 333 PKIKP **PKPdf 03 40 57.0 -0.2**
MOA Molln 139.98 331 *e*P **PKPdf 03 40 57.4 -0.6**
comp=Z,1.2nm,0.7s
ABTA Abfaltersbach 141.60 331 *i* P **PKPdf 03 41 00.2 -0.9**
comp=Z,0.3nm,0.3s
WTTA Wattenberg 141.62 333 *i* P **PKPdf 03 41 00.8 -0.4**
comp=Z,1.6nm,0.3s
BMRD Maredsous 141.72 341 *d*PKIKP **PKiKP 03 41 03.6 -0.3**
SQTA Sankt Quirin 141.84 333 *i* P **PKPdf 03 41 01.3 -0.2**
comp=Z,0.2nm,0.2s
DOU Dourbes 141.96 341 *d*PKIKP **PKiKP 03 41 03.7 -0.7**
FETA Feichten 142.21 333 *e*P **PKPdf 03 41 00.8 -1.4**
comp=Z,1.1nm,0.6s
MURB Monte Urbino 144.10 327 PKPdf **PKPdf 03 41 05.8 +0.2**
AQU L'Aquila 144.25 325 PKPdf **PKPdf 03 41 06.2 +0.4**
AQU L'Aquila 144.25 325 PKIKP **PKPdf 03 41 06.2 +0.4**
MSSA Maissana 144.82 331 PKPdf **PKPab 03 41 04.2 -1.6**
CASP Castiglione de 145.29 328 PKPbc **PKPbc 03 41 06.5 -0.8**
SSB Saint Sauveur 146.14 337 PKPbc **PKPbc 03 41 09.7 -0.2**
SSB Saint Sauveur 146.14 337 PKP2 **PKPbc 03 41 09.7 -0.2**
RCBR Riachuelo 149.56 131 PKPbc **PKPbc 03 41 18.6 -1.5**
comp=Z,5.5nm,0.8s,baz=2.2,slow=2.9,SNR=5.1
KEST Kesra 150.98 320 PKPbc **PKPbc 03 41 21.9 -1.0**
comp=Z,30nm,0.9s,baz=49,slow=1.2,SNR=15
PBRG Braganca 152.54 349 *e*PKPbc **PKiKP 03 41 26.8 +0.3**
PGAV Gavieira, Arco 152.62 352 *e*PKPbc **PKiKP 03 41 27.1 +0.3**
POLO Lamas de Olo 153.14 351 *e*PKPbc **PKiKP 03 41 27.7 -0.1**
POLO Lamas de Olo 153.14 351 *e*PKPab **PKPab 03 41 39.5 +0.3**
MVO Moncorvo 153.22 350 *e*PKPbc **PKiKP 03 41 28.2 +0.2**
PVRL Vila Real 153.22 351 *e*PKPbc **PKiKP 03 41 28.1 +0.2**
PVIS Viseu 153.80 351 *e*PKPbc **PKiKP 03 41 29.4 +0.3**
ESDC Sonseca Array 153.95 344 PKPbc **PKPbc 03 41 29.0 -0.4**
comp=Z,1.7nm,0.9s,baz=0.5,slow=1.5,SNR=9.2
ESDC Sonseca Array 153.95 344 **PKPbc 03 41 27.8 -1.6**
MTE Manteigas 154.05 350 *e*PKPbc **PKiKP 03 41 29.8 +0.1**
PCBR Castelo Branco 154.58 350 *e*PKPbc **PKiKP 03 41 30.8 +0.1**
PSBE So Bento 155.11 352 *e*PKPab **PKPab 03 41 48.2 +0.7**
PMTG Montargil 155.46 351 *e*PKPdf **PKPdf 03 41 25.4 +2.0**
PMTG Montargil 155.46 351 *e*PKPab **PKPab 03 41 51.4 +2.5**
PESTR Estremoz 155.55 349 *e*PKPab **PKPab 03 41 52.3 +2.9**
PBEJ Beja 156.41 349 *e*PKPab **PKPab 03 41 53.7 +0.6**
PCVE Castro Verde 156.83 349 *e*PKPab **PKPab 03 41 56.0 +1.1**
TORD Torodi Ar. Bea 165.42 265 PKP **PKPdf 03 41 34.0 -1.1**
comp=Z,1.4nm,0.9s,baz=116,slow=1.6,SNR=6.4
TORD PKPab **PKPab 03 42 31.9 -1.4**
comp=Z,1.3nm,0.9s,baz=92,slow=3.9,SNR=4.9
TORD Torodi Ar. Bea 165.42 265 **PKPdf 03 41 33.0 -2.1**
TORD PKPab **PKPab 03 42 31.9 -1.4**

*IDC **29** 03:30:16.7±0.7, 27°.51S×176°.54W, h0km, mb4.1/8, mbtmp4.1/10, ML4.1/2, MS3.9/7, Error ellipse: s-maj=23.3km s-min=18.7km az=125.0*
*NEIC **29** 03:30:20.0±2.0, 27°.80S±0°.05×176°.1W±0°.1, h7km±4km, mb4.5/15, Error ellipse: s-maj=13.9km s-min=7.7km az=90.0*
ISC 29 03:30:17.8±0.5, **27°.48S**±0°.08×**176°.6W**±0°.1, **h10**km, **n54**, σ1§**44**/48, **mb4.3**/16, **MS4.0**/6, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.10**	**213**	Pn	**Pb**	**03 30 55.5**	**-0.5**
72nm,0.3s,baz=88,slow=23,SNR=3.7							
RAO				Sn	**Sb**	**03 31 22.7**	**+0.7**
146nm,0.3s,baz=234,slow=20,SNR=5.0							
334nm,0.2s							
RAO	**Raoul Island**	**2.10**	**213**		**Pb**	**03 30 54.0**	**-1.9**
RAO				Sn	**Sg**	**03 31 23.8**	**-1.5**
URZ	**Urewera**	**11.96**	**204**	Pn	**Pn**	**03 33 09.1**	**+0.8**
0.8nm,0.3s,baz=349,slow=5.2,SNR=1.7							
URZ				Sn	Sn	03 35 10.6	-11
1.6nm,0.3s,baz=218,slow=18,SNR=7.7							
4.0nm,0.5s							
AFI	**Afiamalu**	**14.24**	**19**	Pn	**P**	**03 33 44.6**	**-2.6**
CMWZ	**Cape Campbell**	**16.09**	**205**		**P**	**03 34 08.6**	**+1.2**
DZM	**Mont Dzumac**	**16.29**	**286**	LR	LR	03 39 30.0	
comp=Z,258nm,18.9s,baz=140,slow=34							
DZM	**Mont Dzumac**	**16.29**	**286**		P	03 34 19.4	+10
KOUNC	**Koumac, New Ca**	**18.74**	**287**	P	Pn	03 34 46.9	+10
KOUNC				IAmb	IAmb	03 34 53.4	
comp=Z,70nm,1.3s							
CTA	**Charters Tower**	**34.66**	**274**	P	**P**	**03 37 07.9**	**+0.2**
comp=Z,4.2nm,0.8s,baz=98,slow=12,SNR=2.7							
comp=Z,4.2nm,0.8s							
AS31	**Alice Springs**	**44.55**	**263**	P	P	03 38 35.5	+5.3
ASAR	**Alice Springs**	**44.56**	**263**	P	**P**	**03 38 31.6**	**+1.4**
comp=Z,1.0nm,0.6s,baz=93,slow=6.6,SNR=18							
comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**44.56**	**263**	P	**P**	**03 38 31.8**	**+1.6**
WB2	**Warramunga Arr**	**45.27**	**269**	P	**P**	**03 38 39.0**	**+3.1**
WB2				IAmb	IAmb	03 38 50.5	
comp=Z,2.6nm,0.9s							
WRA	**Warramunga Arr**	**45.28**	**269**	P	**P**	**03 38 36.9**	**+0.8**
comp=Z,1.4nm,0.7s,baz=111,slow=7.0,SNR=16							
comp=Z,1.4nm,0.7s							
WRA	**Warramunga Arr**	**45.28**	**269**	P	**P**	**03 38 39.1**	**+3.1**
SBA	**Scott Base**	**51.03**	**184**	P	**P**	**03 39 21.0**	**+1.5**
SBA				IAmb	IAmb	03 39 30.2	
comp=Z,5.9nm,1.0s							
VNDA	**Vanda**	**51.11**	**186**	P	**P**	**03 39 20.6**	**+0.4**
comp=Z,0.8nm,1.0s,baz=10,slow=8.3,SNR=2.8							
comp=Z,0.8nm,1.0s							
GUMO	**Guam**	**55.33**	**313**	LR	LR	04 02 38.1	
comp=Z,40nm,19.0s,baz=110,slow=35							
BATI	**Baumata**	**58.54**	**275**	LR	LR	04 05 58.3	
comp=Z,230nm,18.1s,baz=147,slow=36							
QSPA	**South Pole Qui**	**62.62**	**180**	P	**P**	**03 40 42.0**	**-0.1**
comp=Z,10nm,1.1s,baz=18,slow=1.6,SNR=13							
comp=Z,10nm,1.1s							
QSPA	**South Pole Qui**	**62.62**	**180**	P	**P**	**03 40 42.1**	**-0.1**
TROLL	**Troll, Antarti**	**80.78**	**180**	P	**P**	**03 42 30.6**	**-0.7**
SNAA	**Sanae**	**81.02**	**178**	P	**P**	**03 42 31.9**	**-0.7**
SNAA	**Sanae**	**81.02**	**178**	P	**P**	**03 42 33.5**	**+0.9**
SNAA				IAmb	IAmb	03 42 35.7	
comp=Z,7.4nm,1.3s							
VNA3	**Neumayer Olymp**	**81.12**	**176**	P	**P**	**03 42 31.2**	**-1.7**
VNA2	**Neumayer--Watz**	**81.57**	**176**	P	**P**	**03 42 34.3**	**-1.0**
baz=160,slow=4.0							
VNA1	**Neumayer--Stat**	**81.79**	**176**	P	**P**	**03 42 35.3**	**-1.2**
ISA	**Isabella, Lake**	**83.38**	**44**	P	**P**	**03 42 47.0**	**+1.7**
ISA				IAmb	IAmb	03 42 47.8	
comp=Z,3.7nm,1.3s							
PLCA	**Paso Flores**	**83.60**	**133**	P	**P**	**03 42 46.0**	**-0.6**
comp=Z,1.6nm,0.9s,baz=246,slow=8.4,SNR=3.8							
PLCA				LR	LR	04 12 34.0	
comp=Z,110nm,20.7s,baz=239,slow=30							
comp=Z,1.6nm,0.9s							
GSC	**Goldstone, Bar**	**84.19**	**45**	P	**P**	**03 42 51.1**	**+1.6**
NVAR	**Mina Array Bea**	**85.28**	**42**	P	**P**	**03 42 56.5**	**+1.3**
comp=Z,1.2nm,1.0s,baz=225,slow=8.9,SNR=6.7							
comp=Z,1.2nm,1.0s							
NV11	**Mina Array Sit**	**85.37**	**42**	P	**P**	**03 42 57.0**	**+1.5**
NV11				IAmb	IAmb	03 43 02.8	
comp=Z,4.5nm,1.4s							
TUC	**Tucson**	**86.35**	**51**	P	**P**	**03 43 01.7**	**+1.3**
TUC				IAmb	IAmb	03 43 04.4	
comp=Z,6.9nm,1.4s							
319A	**Douglas**	**86.86**	**52**	P	**P**	**03 43 05.5**	**+2.5**
G08A	**Pilot Rock**	**89.41**	**37**	P	**P**	**03 43 16.4**	**+1.6**
G08A				IAmb	IAmb	03 43 27.4	
comp=Z,4.3nm,1.4s							
TXAR	**Lajitas Array**	**89.79**	**57**	P	**P**	**03 43 18.7**	**+1.8**
comp=Z,0.8nm,1.1s,baz=217,slow=2.8,SNR=3.9							
comp=Z,0.8nm,1.1s							
YHH	**Holmes Hill**	**93.60**	**41**	P	**P**	**03 43 36.2**	**+1.7**
YHH				IAmb	IAmb	03 43 46.4	
comp=Z,2.0nm,1.4s							
ATAH	**Atahualpa**	**93.99**	**100**	LR	LR	04 16 12.2	
comp=Z,133nm,21.7s,baz=240,slow=29							
LVC	**Limon Verde**	**94.26**	**118**	LR	LR	04 19 04.7	
comp=Z,38nm,18.8s,baz=247,slow=31							
LPAZ	**La Paz**	**98.20**	**113**	LR	LR	04 22 19.6	
comp=Z,34nm,18.7s,baz=294,slow=32							

MKAR Makanchi Array 116.80 311 PKP **PKiKP 03 49 02.4 0.0**
comp=Z,0.3nm,0.5s,baz=80,slow=1.6,SNR=2.5
KURBB Kurchatov Arra 119.92 315 PKPdf **03 49 07.2 -1.0**
comp=Z,1.1nm,1.0s,baz=63,slow=3.0,SNR=3.3
ONI Oni 144.25 306 **PKiKP 03 49 56.3 -1.4**
KARS Kars 144.88 302 PKPbc **PKiKP 03 49 58.6 -0.6**
GEVA Gevas 145.21 298 **PKiKP 03 49 58.1 -1.9**
GURO Guroymak-BITLI 145.98 299 **PKiKP 03 50 01.4 -0.1**
NB2 NORSAR Subarra146.03 353 PKP **PKiKP 03 49 58.4 -2.3**
comp=Z,1.1nm,0.7s,baz=8,2,slow=3.6
NOA NORSAR Array B 146.03 353 PKPbc **PKPab 03 49 58.3 +0.3**
comp=Z,2.5nm,0.8s,baz=10,slow=2.3,SNR=4.7
HFS Hagfors 146.60 351 PKPbc **PKPab 03 49 59.3 -0.7**
comp=Z,7.1nm,0.8s,baz=54,slow=2.7,SNR=2.6
MARD Mardin 147.11 297 PKPbc **PKiKP 03 50 02.9 -1.0**
AKASG Malin Array Be 149.62 327 PKPbc **PKPbc 03 50 06.2 -1.1**
comp=Z,3.1nm,0.8s,baz=44,slow=3.0,SNR=9.4
BRTR Keskin Array B 152.13 304 PKPbc **PKiKP 03 50 14.4 +0.3**
comp=Z,0.5nm,0.6s,baz=145,slow=5.3,SNR=2.6
BRTR PKPab **pPKPab 03 50 24.6 -1.3**
comp=Z,1.0nm,1.0s,baz=26,slow=1.2,SNR=3.2
IDI Anoyia 160.08 298 PKPdf **PKPdf 03 50 16.8 -0.8**
TORD Torodi Ar. Bea 165.65 173 PKPab **PKPab 03 51 21.9 -0.2**
comp=Z,1.9nm,1.0s,baz=179,slow=2.5,SNR=6.6

*IDC **29** 03:36:19.8±4.4,20°.21N×146°.82E,h58km±41km,mb3.7/14, mbtmp4.0/16,ML4.7/1,MS3.8/6,Error ellipse: s-maj=23.3km s-min=17.5km az=75.0*

ISC 29 03:36:17.5±0.8,20°.30N±0°.10×146°.9E±0°.2,h35km,n28, σ0°94/16,mb4.1/14,MS3.7/6,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.95**	**196**	P	**Pn**	**03 37 58.4**	**+1.5**
14nm,0.3s,baz=185,slow=23,SNR=6.3 31nm,0.3s							
MJAR	**Matsushiro Arr**	**17.87**	**337**	P	**Pn**	**03 40 23.5**	**+0.1**
1.8nm,0.8s,baz=117,slow=12,SNR=1.5							
H11S3	**WAKE ISLAND Hy**	**18.77**	**92**	T	T	03 59 47.3	
baz=279,slow=75,SNR=42							
H11S1	**WAKE ISLAND Hy**	**18.78**	**92**	T	T	03 59 44.5	
baz=279,slow=75,SNR=38							
H11S2	**WAKE ISLAND Hy**	**18.78**	**92**	T	T	03 59 47.7	
baz=279,slow=75,SNR=31							
H11N1	**WAKE ISLAND Hy**	**18.81**	**88**	T	T	03 59 46.2	
baz=275,slow=75,SNR=56							
H11N2	**WAKE ISLAND Hy**	**18.81**	**88**	T	T	03 59 46.4	
baz=275,slow=75,SNR=34							
H11N3	**WAKE ISLAND Hy**	**18.83**	**88**	T	T	03 59 47.5	
baz=275,slow=75,SNR=39							
KSRS	**Korea Array**	**23.75**	**320**	P	**P**	**03 41 27.3**	**+0.7**
1.5nm,0.7s,baz=153,slow=9.1,SNR=4.2 1.5nm,0.7s							
PMG	**Port Moresby**	**29.52**	**179**	LR	LR	03 54 02.6	
comp=Z,190nm,19.7s,baz=57,slow=36							
WRA	**Warramunga Arr**	**41.84**	**198**	P	**P**	**03 44 02.9**	**-1.5**
1.0nm,0.9s,baz=12,slow=8,9,SNR=11 1.0nm,0.9s							
SONM	**Songino Array**	**42.62**	**320**	P	**P**	**03 44 11.6**	**+1.0**
0.3nm,0.5s,baz=129,slow=7.1,SNR=2.3 0.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**45.14**	**276**	P	**P**	**03 44 30.1**	**-0.9**
1.1nm,0.3s,baz=66,slow=8.0,SNR=4.4 1.1nm,0.3s							
ASAR	**Alice Springs**	**45.50**	**197**	P	**P**	**03 44 32.4**	**-1.4**
0.4nm,0.8s,baz=14,slow=7.2,SNR=6.2 0.4nm,0.8s							
DZM	**Mont Dzumac**	**46.25**	**155**	LR	LR	04 03 22.3	
comp=Z,41nm,20.1s,baz=213,slow=35							
STKA	**Stephens Creek**	**52.13**	**186**	LR	LR	04 07 58.3	
comp=Z,67nm,20.6s,baz=22,slow=36							
ZALV	**Zalesovo Beam**	**57.44**	**322**	P	**P**	**03 46 02.4**	**-0.3**
1.9nm,0.6s,baz=106,slow=6.8,SNR=5.4 1.9nm,0.6s							
MKAR	**Makanchi Array**	**58.18**	**313**	P	**P**	**03 46 07.5**	**-0.6**
1.3nm,0.6s,baz=90,slow=9.5,SNR=10 1.3nm,0.6s							
KURBB	**Kurchatov Arra**	**60.89**	**317**	P	**P**	**03 46 26.8**	**+0.1**
1.9nm,0.5s,baz=90,slow=8.1,SNR=20 1.9nm,0.5s							
ILAR	**Eielson Array**	**61.72**	**26**	P	**P**	**03 46 31.1**	**-0.9**
0.8nm,0.9s,baz=255,slow=5.8,SNR=5.3 0.8nm,0.9s							
BVAR	**Borovoye Array**	**65.97**	**320**	P	**P**	**03 47 00.7**	**+0.5**
2.8nm,0.4s,baz=86,slow=7.2,SNR=19 2.8nm,0.4s							
YKA	**Yellowknife Ar**	**76.05**	**28**	P	**P**	**03 48 01.1**	**0.0**
1.7nm,0.7s,baz=286,slow=6.1,SNR=3.9 1.7nm,0.7s							
RES	**Resolute Bay**	**77.61**	**14**	LR	LR	04 21 27.2	
comp=Z,99nm,21.9s,baz=274,slow=35							
SPITS	**Spitsbergen Ar**	**77.77**	**351**	LR	LR	04 24 51.6	
comp=Z,36nm,20.9s,baz=30,slow=37							
NVAR	**Mina Array Bea**	**81.28**	**52**	P	**P**	**03 48 31.9**	**+1.3**
1.4nm,0.7s,baz=267,slow=6.3,SNR=13 1.4nm,0.7s							
FINES	**FINESS Array B**	**85.90**	**336**	P	**P**	**03 48 53.5**	**-0.1**
1.5nm,0.6s,baz=66,slow=4.8,SNR=9.8 1.5nm,0.6s							
PDAR	**Pinedale Array**	**85.91**	**46**	P	**P**	**03 48 54.4**	**0.0**
0.2nm,0.5s,baz=130,slow=0.7,SNR=4.6 0.2nm,0.5s							
SFJD	**Kangerlussuaq**	**91.98**	**7**	LR	LR	04 28 29.3	
comp=Z,91nm,21.2s,baz=336,slow=34							

*IDC **29** 03:39:13.3±2.1,46°.36N×53°.20E,h0km,mb3.4/3, mbtmp3.5/4,ML3.6/1,Error ellipse: s-maj=52.8km s-min=17.9km az=152.0*

ISC 29 03:39:14.2±1.0,46°.3N±0°.1×53°.15E±0°.07,h10km,n7, σ1°37/10,mb3.4/3,4C,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AB31	**Akbulak array**	**5.45**	**55**	⇑Pn	**Pn**	**03 40 35.3**	**0.0**
0.3nm,0.3s,baz=235,slow=13,SNR=21							
AB31				⇑Pg	**Pb**	**03 40 50.0**	**+0.7**
0.7nm,0.4s,baz=229,slow=14,SNR=3.9							
AB31				⇑Sn	**Sn**	**03 41 36.2**	**-1.8**
1.4nm,0.4s							
AB31				⇑Lg	Lg	03 42 01.2	
1.2nm,0.3s							
BELG	**Belogornoye**	**7.08**	**331**	Sn	**Sn**	**03 42 17.8**	**-0.2**
1.6nm,0.3s,baz=355,slow=23,SNR=8.9							
KBZ	**Khabaz**	**7.71**	**254**	Pn	**Pn**	**03 41 07.8**	**+1.4**
0.8nm,0.3s,baz=144,slow=1.2,SNR=22							
KBZ				Sn	**Sn**	**03 42 33.0**	**-0.6**
0.5nm,0.3s,baz=180,slow=20,SNR=2.2 2.9nm,0.4s							
KVAR	**Kislovodsk Arr**	**7.76**	**256**	Sn	**Sn**	**03 42 32.5**	**-2.6**
baz=36,slow=19							
ZALV	**Zalesovo Beam**	**21.55**	**58**	P	**P**	**03 44 03.5**	**+0.1**
0.4nm,0.5s,baz=277,slow=12,SNR=2.0 0.4nm,0.5s							
FINES	**FINESS Array B**	**21.77**	**324**	P	**P**	**03 44 06.0**	**+0.3**
4.0nm,0.9s,baz=132,slow=12,SNR=11 4.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**54.29**	**250**	P	**P**	**03 48 40.4**	**-0.2**
0.4nm,1.1s,baz=37,slow=7.1,SNR=1.5 0.4nm,1.1s							

*IDC **29** 03:43:29.2±2.6,30°.42S×138°.89E,h0km,mbtmp3.8/4, ML3.6/4,Error ellipse: s-maj=51.2km s-min=13.8km az=47.0*

*AUST **29** 03:43:29.9±1.1,30°.63S×138°.75E,h10km±7km,Error ellipse: s-maj=5.3km s-min=4.5km az=26.0*

*NOU **29** 03:43:30.0,30°.63S×138°.73E,h6km,MLv4.0/16,South Australia*

ISC 29 03:43:30.6±1.2,30°.60S±0°.05×138°.70E±0°.04,h26km±11km, n37,σ1°94/51,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**0.45**	**290**	P	**Pb**	**03 43 39.3**	**-0.7**
baz=0.5,SNR=401							
LCRK				S	**Sb**	**03 43 45.9**	**-0.4**
baz=0.5							
LCRK	**Leigh Creek**	**0.45**	**290**	P	**Pb**	**03 43 39.7**	**-0.3**
AUJCS	**Jamestown Cent**	**2.59**	**182**	P	**Pn**	**03 44 11.9**	**+0.9**
baz=2.6							
AUJCS				S	**Sn**	**03 44 44.6**	**+2.9**
baz=2.6							
WHYH	**Whyalla**	**2.61**	**201**	P	**Pn**	**03 44 13.5**	**+2.4**
STKA	**Stephens Creek**	**2.79**	**118**	Pn	**Pn**	**03 44 13.9**	**+0.3**
2.8nm,0.3s,baz=304,slow=13,SNR=21							
STKA				Pg	**Pb**	**03 44 20.8**	**+1.1**
12nm,0.3s,baz=299,slow=16,SNR=24							
STKA				Sn	**Sn**	**03 44 46.6**	**+0.2**
27nm,0.3s,baz=207,slow=22,SNR=7.2							
STKA				Lg	Lg	03 44 55.0	
47nm,0.3s,baz=205,slow=22,SNR=7.9 7.6nm,0.3s							
STKA	**Stephens Creek**	**2.79**	**118**	P	**Pn**	**03 44 13.8**	**+0.3**
baz=2.7,SNR=16							
STKA				S	**Sn**	**03 44 46.9**	**+0.6**
baz=2.7							
STKA	**Stephens Creek**	**2.79**	**118**	P	**Pn**	**03 44 14.5**	**+1.0**
HTT	**Hallett**	**2.83**	**176**	P	**Pn**	**03 44 15.3**	**+1.1**
baz=2.8,SNR=26							
HTT				S	**Sn**	**03 44 48.5**	**+1.0**
baz=2.8							
HTT	**Hallett**	**2.83**	**176**	P	**Pn**	**03 44 15.5**	**+1.3**
BBOO	**Buckleboo**	**3.15**	**225**	P	**Pn**	**03 44 20.1**	**+1.5**
baz=3.2,SNR=28							
BBOO				S	**Sn**	**03 44 58.8**	**+3.4**
baz=3.2							
BBOO	**Buckleboo**	**3.15**	**225**	P	**Pn**	**03 44 20.9**	**+2.3**
INKA	**Innaminka**	**3.36**	**33**	P	**Pn**	**03 44 23.4**	**+2.0**
baz=3.4,SNR=6.1							
INKA				S	**Sn**	**03 45 03.8**	**+3.3**
baz=3.4							
INKA	**Innaminka**	**3.36**	**33**	P	**Pn**	**03 44 24.5**	**+3.1**
OOD	**Oodnadatta**	**3.84**	**316**	P	**Pn**	**03 44 30.8**	**+2.8**
baz=3.9,SNR=20							
OOD				S	**Sn**	**03 45 15.8**	**+3.4**
baz=3.9							
OOD	**Oodnadatta**	**3.84**	**316**	P	**Pn**	**03 44 31.2**	**+3.1**
MULG	**Mulgathing**	**4.02**	**273**	P	**Pn**	**03 44 32.4**	**+1.8**
baz=4.1,SNR=31							
MULG				S	**Sn**	**03 45 20.2**	**+3.3**
baz=4.1							
MULG	**Mulgathing**	**4.02**	**273**	P	**Pn**	**03 44 32.8**	**+2.2**
CMSA	**Cobar Meteorol**	**6.07**	**101**	P	**Pn**	**03 44 58.9**	**+0.3**
baz=6.0							
CMSA	**Cobar Meteorol**	**6.07**	**101**	P	**Pn**	**03 44 59.2**	**+0.5**
QLP	**Quilpie**	**6.30**	**52**	P	**Pn**	**03 45 02.0**	**+0.2**
baz=6.3,SNR=4.4							
AS01	**Alice Springs**	**8.10**	**327**	P	**Pn**	**03 45 28.4**	**+1.8**
ASAR	**Alice Springs**	**8.12**	**327**	Pn	**Pn**	**03 45 27.2**	**+0.3**
0.7nm,0.3s,baz=152,slow=12,SNR=33							
ASAR				Sn	**Sn**	**03 46 54.2**	**-3.7**
1.3nm,0.3s,baz=150,slow=22,SNR=6.0							
ASAR				Lg	Lg	03 47 46.3	
baz=145,slow=21 2.7nm,0.6s							
ASPA	**Alice Springs**	**8.12**	**327**	P	**Pn**	**03 45 29.5**	**+2.6**
baz=8.2							
ASPA				S	**Sn**	**03 46 58.3**	**+0.3**
baz=8.2							
TOO	**Toolangi**	**8.94**	**143**	P	**Pn**	**03 45 37.9**	**-0.3**
baz=8.9,SNR=6.1							
TOO	**Toolangi**	**8.94**	**143**	P	**Pn**	**03 45 38.3**	**+0.1**
FORT	**Forrest**	**9.17**	**266**	P	**Pn**	**03 45 42.2**	**+1.0**
baz=9.2,SNR=6.7							
FORT				S	**Sn**	**03 47 20.7**	**-2.9**
baz=9.2							
FORT	**Forrest**	**9.17**	**266**	P	**Pn**	**03 45 41.8**	**+0.6**
RMQ	**Roma**	**9.74**	**68**	P	**Pn**	**03 45 50.1**	**+1.0**
baz=9.7							
CAN	**Canberra**	**9.85**	**121**	P	**Pn**	**03 45 51.4**	**+0.9**
AUMTS	**Mt Stromlo**	**9.85**	**121**	P	**Pn**	**03 45 50.7**	**+0.2**
baz=9.8							
CNB	**Canberra Magne**	**10.11**	**121**	P	**Pn**	**03 45 54.9**	**+0.7**
WRKA	**Warakurna**	**10.75**	**299**	P	**Pn**	**03 46 03.3**	**+0.3**
baz=11,SNR=5.9							
WRKA	**Warakurna**	**10.75**	**299**	P	**Pn**	**03 46 03.5**	**+0.6**
MGCD	**Mangrove Creek**	**10.86**	**107**	P	**Pn**	**03 46 04.8**	**+0.4**
baz=11,SNR=6.1							
WRA	**Warramunga Arr**	**11.32**	**339**	Pn	**Pn**	**03 46 09.7**	**-1.1**
0.7nm,0.3s,baz=154,slow=13,SNR=31							
WRA				Sn	**Sn**	**03 48 11.8**	**-4.7**
0.3nm,0.3s,baz=162,slow=23,SNR=3.4							
WRA				Lg	Lg	03 49 27.0	
baz=158,slow=26 1.6nm,0.4s							
WRAB	**Tennant Creek**	**11.32**	**339**	P	**Pn**	**03 46 12.2**	**+1.4**
CTA	**Charters Tower**	**12.49**	**35**	Pn	**Pn**	**03 46 25.9**	**-0.9**
0.6nm,0.3s,baz=207,slow=13,SNR=6.0							
CTA				Sn	Sn	03 48 38.5	-6.6
0.2nm,0.3s,baz=311,slow=18,SNR=1.7 2.0nm,0.4s							

*SKHL **29** 04:10:36.8±0.3,48°.60N×150°.00E,h436km±11km, mb4.7/10,msh5.3/3*

*MOS **29** 04:10:38.6±0.9,48°.93N×149°.49E,h412km,mb3.9/16, Error ellipse: s-maj=12.4km s-min=9.3km az=91.2*

*IDC **29** 04:10:39.7±1.7,48°.96N×149°.40E,h411km±18km, mb3.3/15,mbtmp4.1/22,Error ellipse: s-maj=13.9km s-min=9.4km az=155.0*

*NEIC **29** 04:10:42.2±1.0,49°.1N±0°.2×149°.3E±0°.2,h427km±3km, mb4.0/26,Error ellipse: s-maj=22.5km s-min=15.7km az=162.0*

ISC 29 04:10:38.7±0.5,48°.81N±0°.06×149°.62E±0°.06,h400km, n107,σ1°37/114,mb3.9/35,6C-8D,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.77**	**199**	*e*P	**Pn**	**04 11 48.7**	**0.0**
KUR				AMB	AMB	04 11 52.0	
80nm,0.4s							
KUR				*e*S	**S**	**04 12 44.9**	**-0.5**
KUR				A	A	04 12 52.0	
90nm,0.4s							
KUR				A	A	04 12 52.0	
70nm,0.4s							
SKR	**Severo-Kuril's**	**4.61**	**64**	*e*P	**Pn**	**04 11 56.9**	**+0.3**
SKR				AMB	AMB	04 11 57.8	
70nm,0.5s							
SKR				*e*S	**S**	**04 12 59.4**	**-0.6**
SKR				A	A	04 13 02.4	
130nm,0.6s							
SKR				A	A	04 13 02.4	
90nm,0.6s							
YSS	**Yuzh-Sakhalins**	**4.98**	**251**	P	**Pn**	**04 12 01.7**	**+1.2**
YSS	**Yuzh-Sakhalins**	**4.98**	**251**	*e*PN	**Pn**	**04 12 02.1**	**+1.7**
YSS				*e*S	**S**	**04 13 08.2**	**+1.3**
YSS				pmax	pmax		
comp=Z,60nm,0.8s							
YSS				smax	smax		
comp=E,20nm,0.9s							
YSS	**Yuzh-Sakhalins**	**4.98**	**251**	*e*P	**Pn**	**04 12 02.3**	**+1.9**
YSS				AMB	AMB	04 12 02.8	
comp=E,60nm,0.8s							
YSS				*e*S	**S**	**04 13 09.3**	**+2.4**
YSS				A	A	04 13 19.3	
comp=E,60nm,0.8s							
YSS				A	A	04 13 19.3	
comp=E,20nm,0.8s							
UGL	**Uglegorsk**	**4.98**	**276**	*e*P	**Pn**	**04 12 05.0**	**+4.6**
UGL				AMB	AMB	04 12 05.9	
comp=E,70nm,0.5s							
PAU	**Pauzhetka**	**5.34**	**57**	*e*P	**Pn**	**04 12 03.4**	**-0.6**
PAU				AMB	AMB	04 12 06.5	
comp=E,20nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.44**	**210**	*e*P	**Pn**	**04 12 04.9**	**-0.4**
YUK				AMB	AMB	04 12 07.4	
comp=E,150nm,0.4s							
YUK				*e*S	**S**	**04 13 13.9**	**-1.8**
YUK				A	A	04 13 17.4	
comp=E,240nm,0.5s							
YUK				A	A	04 13 17.4	
comp=E,260nm,0.5s							
NMR	**Nemuro--Hokkai**	**6.08**	**208**	*e*P	**Pn**	**04 12 09.9**	**-2.3**
PEA0B	**Petropavlovsk-**	**6.67**	**47**	P	**Pn**	**04 12 19.6**	**+1.1**
PEA0B	**Petropavlovsk-**	**6.67**	**47**	⇓*e*PN	**Pn**	**04 12 19.5**	**+0.9**
PETK	**Petropavlovsk-**	**6.67**	**47**	P	**Pn**	**04 12 18.4**	**-0.2**
comp=E,2.1nm,0.5s,baz=224,slow=8.4,SNR=9.6							
PETK	**Petropavlovsk-**	**6.67**	**47**	P	**Pn**	**04 12 19.4**	**+0.8**
AKK	**Akkeshi**	**6.68**	**212**	*e*P	**Pn**	**04 12 17.9**	**-0.9**
ERM	**Erimo**	**8.17**	**216**	P	**Pn**	**04 12 35.8**	**+0.1**
ERM	**Erimo**	**8.17**	**216**	PN	**Pn**	**04 12 35.8**	**+0.1**
MA2	**Magadan**	**10.81**	**3**	P	**P**	**04 13 05.9**	**+1.0**
comp=E,12nm,0.8s,baz=195,slow=9.7,SNR=4.0							
KBG	**Krutoberegovo**	**10.90**	**42**	*e*P	**P**	**04 13 06.3**	**+0.3**
KBG				AMB	AMB	04 13 08.2	
comp=E,10.0nm,0.6s							
KLR	**Kul'dur**	**11.74**	**279**	P	**P**	**04 13 15.6**	**+0.2**
comp=E,2.1nm,0.6s,baz=134,slow=3.2,SNR=5.9							
KLR	**Kul'dur**	**11.74**	**279**	⇓*e*PN	**P**	**04 13 16.9**	**+1.5**
KLR	**Kul'dur**	**11.74**	**279**	*e*P	**Pn**	**04 13 18.0**	**+1.3**
USRK	**Ussuriysk Ar.**	**12.98**	**256**	P	**P**	**04 13 29.4**	**+0.3**
comp=E,1.7nm,0.5s,baz=90,slow=4.0,SNR=4.2							
SEY	**Seymchan**	**14.24**	**5**	P	**P**	**04 13 43.3**	**+0.8**
comp=E,2.2nm,0.6s,baz=198,slow=12,SNR=5.4							
SEY	**Seymchan**	**14.24**	**5**	⇑*e*P	**P**	**04 13 44.0**	**+1.5**
SEY				pmax	pmax		
comp=Z,24nm,2.6s							
SEY	**Seymchan**	**14.24**	**5**	*e*P	**P**	**04 13 44.0**	**+1.5**
ZEA	**Zeya**	**14.81**	**298**	*e*P	**P**	**04 13 49.1**	**+0.2**
ZEA				pmax	pmax		
comp=Z,10.0nm,0.8s							
ZEA	**Zeya**	**14.81**	**298**	*e*P	**P**	**04 13 52.2**	**+3.3**
ZEA				AMB	AMB	04 13 55.6	
comp=Z,40nm,0.7s							
YAK	**Yakutsk**	**17.31**	**327**	P	**P**	**04 14 13.2**	**-2.3**
comp=Z,11nm,0.3s,baz=169,slow=5.2,SNR=5.1							
YAK	**Yakutsk**	**17.31**	**327**	*de*P	**P**	**04 14 14.3**	**-1.2**
YAK				pmax	pmax		
comp=Z,21nm,0.6s							
KSRS	**Korea Array**	**19.41**	**242**	P	**P**	**04 14 38.3**	**+0.8**
comp=Z,1.8nm,0.5s,baz=51,slow=9.1,SNR=4.3							
TIXI	**Tiksi**	**24.84**	**345**	*de*P	**P**	**04 15 25.0**	**-1.3**
TIXI				pmax	pmax		
comp=Z,1.0nm,0.6s							
TIXI	**Tiksi**	**24.84**	**345**	*e*P	**P**	**04 15 25.0**	**-1.3**
HNS	**HongShan**	**27.68**	**259**	⇑P	**P**	**04 15 52.8**	**+0.8**
SONM	**Songino Array**	**28.47**	**285**	P	**P**	**04 15 57.4**	**-1.5**
comp=Z,1.2nm,0.8s,baz=50,slow=9.9,SNR=6.9 comp=Z,1.2nm,0.8s							
SONM	**Songino Array**	**28.47**	**285**	*e*P	**P**	**04 15 59.4**	**+0.4**
SONM				pmax	pmax		
comp=Z,1.0nm,0.8s							
J20K	**Nowinta River**	**33.34**	**41**	P	**P**	**04 16 42.7**	**+2.0**
IMAR	**Indian Mountai**	**33.55**	**38**	P	**P**	**04 16 42.8**	**+0.3**
H21K	**Melozitna Rive**	**33.93**	**39**	P	**P**	**04 16 46.0**	**+0.3**
H21K				IAmb	IAmb	04 16 47.1	
comp=Z,4.0nm,0.9s							
SPU	**Mount Spurr**	**34.46**	**47**	P	**P**	**04 16 52.4**	**+2.0**
I23K	**Minto, Yukon-K**	**35.37**	**40**	P	**P**	**04 16 58.8**	**+0.9**
I23K				IAmb	IAmb	04 17 13.8	
comp=Z,10nm,1.4s							
MDM	**Murphy Dome**	**35.86**	**40**	P	**P**	**04 17 02.6**	**+0.5**
MDM				IAmb	IAmb	04 17 04.6	
comp=Z,5.7nm,1.2s							
SEW	**Seward**	**35.88**	**48**	P	**P**	**04 17 02.5**	**+0.3**
COLA	**College**	**36.03**	**40**	⇑*i*P	**P**	**04 17 04.3**	**+0.9**
COLA				pmax	pmax		
comp=Z,6.0nm,0.9s							
SML	**Sawmill**	**36.15**	**45**	P	**P**	**04 17 05.5**	**+0.9**
DHY	**Denali Highway**	**36.42**	**43**	P	**P**	**04 17 08.0**	**+1.0**
ILAR	**Eielson Array**	**36.45**	**40**	P	**P**	**04 17 06.7**	**-0.3**
comp=Z,1.7nm,0.8s,baz=276,slow=8.3,SNR=19 comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**36.45**	**40**	*e*P	**P**	**04 17 07.9**	**+0.9**
ILAR				pmax	pmax		
comp=Z,2.0nm,0.7s							
BMAR	**Burnt Mountain**	**37.18**	**36**	P	**P**	**04 17 13.9**	**+0.9**
M26K	**Nabesna, AK**	**38.52**	**44**	P	**P**	**04 17 25.3**	**+1.1**
L27K	**Beaver Creek,**	**38.91**	**42**	P	**P**	**04 17 29.2**	**+1.8**
ZALV	**Zalesovo Beam**	**39.50**	**303**	P	**P**	**04 17 30.2**	**-2.0**
comp=Z,2.6nm,0.5s,baz=62,slow=6.2,SNR=7.8 comp=Z,2.6nm,0.5s							
ZALV	**Zalesovo Beam**	**39.50**	**303**	P	**P**	**04 17 31.1**	**-1.1**
ZALV	**Zalesovo Beam**	**39.50**	**303**	*e*P	**P**	**04 17 30.9**	**-1.3**
ZALV				pmax	pmax		
comp=Z,3.0nm,0.4s							
DGZ	**Jazzator, Alta**	**39.56**	**296**	⇑*e*P	**P**	**04 17 33.3**	**+0.3**
DGZ				pmax	pmax		
comp=Z,2.0nm,1.0s							
HYT	**Haines Junctio**	**41.46**	**45**	P	**P**	**04 17 49.6**	**+1.5**
HYT				IAmb	IAmb	04 17 51.5	
comp=Z,6.1nm,0.9s							
MK31	**Makanchi Array**	**43.92**	**294**	P	**P**	**04 18 06.0**	**-1.7**
MK31	**Makanchi Array**	**43.92**	**294**	P	**P**	**04 18 06.0**	**-1.7**
MK31				pmax	pmax		
comp=Z,3.0nm,0.7s							
MKAR	**Makanchi Array**	**43.92**	**294**	P	**P**	**04 18 06.2**	**-1.5**
comp=Z,2.3nm,0.6s,baz=70,slow=8.4,SNR=19							
MKAR				PcP	**PcP**	**04 19 45.3**	**-0.1**
comp=Z,0.3nm,0.4s,baz=53,slow=5.6,SNR=2.1 comp=Z,2.3nm,0.6s							
MKAR	**Makanchi Array**	**43.92**	**294**	*e*P	**P**	**04 18 06.9**	**-0.8**
MKAR				pmax	pmax		
comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**43.92**	**294**	*e*P	**P**	**04 18 06.9**	**-0.8**
KURK	**Kurchatov**	**44.27**	**301**	P	**P**	**04 18 08.7**	**-1.6**
KURK				IAmb	IAmb	04 18 10.1	
comp=Z,5.9nm,0.8s							
KURK	**Kurchatov**	**44.27**	**301**	*de*P	**P**	**04 18 09.1**	**-1.2**
KURK				pmax	pmax		
comp=Z,7.0nm,0.8s							
KURK	**Kurchatov**	**44.27**	**301**	*e*P	**P**	**04 18 09.1**	**-1.2**
BRVK	**Borovoye**	**47.77**	**307**	P	**P**	**04 18 35.8**	**-1.4**
BRVK				IAmb	IAmb	04 18 37.3	
comp=Z,5.3nm,0.6s							
BRVK	**Borovoye**	**47.77**	**307**	⇓*i*P	**P**	**04 18 36.5**	**-0.7**
BRVK				pmax	pmax		
comp=Z,4.0nm,0.6s							
BRVK	**Borovoye**	**47.77**	**307**	*e*P	**P**	**04 18 36.5**	**-0.7**
BOOM	**Boomskoye usch**	**50.03**	**292**	P	**P**	**04 18 53.9**	**-0.6**
BOOM				IAmb	IAmb	04 18 54.7	
comp=Z,3.2nm,0.6s							
BOOM	**Boomskoye usch**	**50.03**	**292**	P	**P**	**04 18 53.9**	**-0.6**
BOOM				pmax	pmax		
comp=Z,3.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**50.67**	**252**	P	**P**	**04 18 59.9**	**+0.6**
comp=Z,0.9nm,0.4s,baz=36,slow=9.3,SNR=4.2 comp=Z,0.9nm,0.4s							
CMAR	**Chiang Mai Arr**	**50.67**	**252**	*e*P	**P**	**04 19 00.4**	**+1.1**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
YKA	**Yellowknife Ar**	**50.68**	**37**	P	**P**	**04 18 58.1**	**-0.6**
comp=Z,0.8nm,0.6s,baz=299,slow=6.8

comp=Z,1.3nm,0.5s
SRU San Rafael Swe 67.46 56 IAmb IAmb 04 20 54.9
comp=Z,2.6nm,0.7s
KBZ Khabaz 67.73 311 P **P** **04 20 53.2 -1.1**
comp=Z,2.4nm,0.7s,baz=315,slow=1.4,SNR=8.2
comp=Z,2.4nm,0.7s
KBZ Khabaz 67.73 311 ⇓ *i*P **P** **04 20 54.0 -0.3**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 68.50 324 P **P** **04 20 57.2 -1.7**
comp=Z,1.6nm,0.5s,baz=34,slow=6.2,SNR=4.8
comp=Z,1.6nm,0.5s
AKASG Malin Array Be 68.50 324 *i* P **P** **04 20 57.7 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 69.79 195 P **P** **04 21 06.6 -0.5**
comp=Z,0.6nm,0.6s,baz=12,slow=6.2,SNR=17
comp=Z,0.6nm,0.6s
WRA Warramunga Arr 69.79 195 *i* P **P** **04 21 07.1 0.0**
WRA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 73.50 195 P **P** **04 21 29.7 +0.8**
comp=Z,0.6nm,0.4s,baz=11,slow=5.7,SNR=12
comp=Z,0.6nm,0.4s
TX32 Lajitas Array 78.48 59 P **P** **04 21 57.3 +0.4**
TX32 IAmb IAmb 04 21 58.6
comp=Z,1.9nm,0.8s
TXAR Lajitas Array 78.48 59 P **P** **04 21 57.3 +0.4**
comp=Z,1.5nm,0.7s,baz=297,slow=4.3,SNR=25
comp=Z,1.5nm,0.7s
QSPA South Pole Qui 138.55 180 PKP **PKPdf** **04 29 17.3 +1.0**
comp=Z,0.4nm,0.5s,baz=0.0,slow=1.0,SNR=1.6
QSPA South Pole Qui 138.55 180 PKPdf **PKPdf** **04 29 17.1 +0.8**
PB07 IPOC Station P 138.63 63 **PKPdf** **04 29 16.5 -1.5**
PB09 IPOC Station P 139.06 63 **PKPdf** **04 29 18.5 -0.2**
AC05 El Transito 143.61 72 PKPab 04 29 25.7 +0.9
PLCA Paso Flores 150.65 89 PKPbc **PKPbc** **04 29 43.7 0.0**
comp=Z,2.5nm,0.7s,baz=264,slow=3.0,SNR=15

*VIE **29** 04:41:04.4±0.9, 51°.42N×16°.03E, h0km, mb2.4/2, ml2.5/3, Error ellipse: s-maj=9.3km s-min=7.1km az=67.0 77 km WNW of Wroclaw Suspected Mining induced.*
*PRU **29** 04:41:04.1±0.0, 51°.45N×16°.07E, h0km*
ISC 29 04:41:01.9±1.3, 51°.55N±0°.06×16°.13E±0°.03, h0km, n21, σ0=92/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**04 41 15.9**	**+0.3**
KSP				*e*Sg	**Sg**	**04 41 24.4**	**-0.4**
CHVC	**Chvalec**	**0.96**	**183**	*e*PG	**Pg**	**04 41 20.6**	**+0.3**
CHVC				*e*SG	**Sg**	**04 41 32.3**	**-0.5**
OSTC	**Ostas**	**0.99**	**177**	*e*PG	**Pg**	**04 41 21.5**	**+0.6**
OSTC				*e*SG	**Sg**	**04 41 32.4**	**-1.4**
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**04 41 21.7**	**-0.2**
UPC				*e*SG	**Sg**	**04 41 33.8**	**-1.6**
comp=Z,71nm,0.5s							
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**04 41 24.9**	**-0.1**
DPC				*e*SG	**Sg**	**04 41 38.8**	**-1.8**
comp=Z,16nm,0.4s							
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pn**	**04 41 29.4**	**+0.4**
PVCC				*e*SG	**Sg**	**04 41 47.6**	**+0.1**
KRLC	**Kraliky**	**1.53**	**164**	*e*PG	**Pn**	**04 41 31.0**	**+0.5**
KRLC				*e*SG	**Sg**	**04 41 49.3**	**-1.8**
comp=Z,26nm,0.6s							
GOPC	**GO Pecny, Ondr**	**1.84**	**208**	*e*PG	**Pn**	**04 41 36.1**	**+1.3**
PRU	**Pruhonice**	**1.86**	**214**	*e*PG	**Pn**	**04 41 36.1**	**+1.1**
PRU				*e*SG	**Sb**	**04 42 00.7**	**+0.2**
comp=Z,16nm,0.5s							
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**04 41 36.0**	**-0.6**
CLL				*e*Pg	**Pb**	**04 41 39.0**	**+0.3**
CLL				*ex*	x	04 41 43.0	
CLL				*e*Sg	**Sb**	**04 42 04.0**	**+0.2**
comp=Z,9.0nm,0.6s							
CLL				Lm	MLR	08 07 00.0	
comp=Z,500nm,18.7s							
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN	**Pn**	**04 41 36.7**	**-0.1**
MORC				*e*SG	**Sb**	**04 42 04.0**	**-0.3**
VRAC	**Vranov**	**2.26**	**172**	*e*PN	**Pn**	**04 41 40.6**	**0.0**
VRAC				*e*SG	**Sb**	**04 42 11.3**	**-0.8**
KRUC	**Moravsky**	**2.49**	**176**	*e*PN	**Pn**	**04 41 43.9**	**+0.2**
KRUC				*e*SG	**Sb**	**04 42 18.1**	**-0.7**
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**04 41 52.9**	**-0.3**
OJC				*e*Sg	**Sg**	**04 42 27.6**	**-0.3**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	**04 41 47.0**	**+0.7**
NKC				*e*PG	**Pg**	**04 41 52.9**	**-0.3**
NKC				*e*SG	**Sg**	**04 42 27.1**	**-0.8**
comp=Z,16nm,0.6s							
JAVC	**Velka Javorina**	**2.87**	**159**	*e*PN	**Pn**	**04 41 51.4**	**+2.5**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**04 41 49.8**	**+0.2**
KHC				*e*PG	**Pb**	**04 41 55.6**	**+0.7**
KHC				*e*SN	**Sn**	**04 42 24.3**	**-1.1**
KHC				*e*SG	**Sg**	**04 42 34.5**	**-1.2**
comp=Z,9.7nm,0.6s							
CKRC	**Cesky Krumlov**	**2.97**	**204**	*e*PN	**Pn**	**04 41 51.4**	**+1.1**
CKRC				*e*PG	**Pb**	**04 41 56.6**	**+0.9**
CONA	**Conrad Observa**	**3.63**	**183**	*e*Pn	**Pn**	**04 42 00.1**	**+0.7**
comp=Z,0.7nm,0.3s							
MOA	**Molln**	**3.90**	**199**	*i* Pn	**Pn**	**04 42 03.2**	**+0.2**
MOA				*e*Sg	**Sg**	**04 43 08.1**	**+1.1**
comp=Z,0.4nm,0.2s							
comp=Z,2.8nm,0.4s							
ARSA Arzberg	**4.32**	**186**	*i* Pn	**Pn**	**04 42 10.5**	**+1.6**
ARSA				Sg	**Sg**	**04 43 20.2**	**-0.4**
comp=Z,1.5nm,0.4s							

*IDC **29** 04:43:36.1±0.8, 35°.33N×133°.78E, h0km, mb3.8/9, mbtmp3.9/14, ML3.2/5, MS3.5/16, Error ellipse: s-maj=18.3km s-min=15.4km az=19.0*
*JMA **29** 04:43:37.8±0.0, 35°.4N±0°.1×133°.89E±0°.08, h7km, MD4.5/20, MW4.2/20, EASTERN TOTTORI PREF*
JMA Felt IV J1 at EASTERN TOTTORI PREF.
*NIED **29** 04:43:37.8, 35°.39N×133°.89E, h7km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.47; $M_{\theta\theta}$=1.63; $M_{\phi\phi}$=-1.16; $M_{r\theta}$=0.80; $M_{\theta\phi}$=-1.50; $M_{r\phi}$=0.86; Fault plane solution: M_0=2.40000×10^{15} NP1: ϕ_s=155.00000°, δ=63.00000°, λ=-16.00000°. NP2: ϕ_s=252.00000°, δ=76.00000°, λ=-152.00000°.*
*NEIC **29** 04:43:39.4±1.5, 35°.37N±0°.04×133°.75E±0°.06, h10km±1km, mb4.2/7 Error ellipse: s-maj=9.1km s-min=4.7km az=121.0*
ISC 29 04:43:37.9±0.8, 35°.35N±0°.05×133°.78E±0°.05, h8km±5km, n87, σ0=97/44, mb4.0/13, MS3.6/11, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.04**	**48**	P	**Pg**	**04 43 39.4**	**-0.2**
JKR				*e*S	**Sg**	**04 43 40.7**	**-0.1**
JKR	**Kurayoshi**	**0.04**	**48**	A	A	04 43 39.4	
comp=E,465nm,0.6s,comp=E,656nm,1.3s							
JAD	**Aida**	**0.52**	**142**	⇓P	**Pg**	**04 43 47.5**	**-0.5**
JAD				⇓S	**Sg**	**04 43 54.4**	**-0.4**
JAD	**Aida**	**0.52**	**142**	A	A	04 43 47.5	
comp=E,49nm,3.2s,comp=E,33nm,3.3s							
JNM	**Ikuma**	**0.63**	**284**	A	A	04 43 51.6	
comp=E,22nm,0.6s,comp=E,21nm,3.1s							
JHS	**Saijyo**	**0.65**	**237**	Pg	**Pb**	**04 43 51.7**	**+0.3**
JHS	**Saijyo**	**0.65**	**237**	A	A	04 43 52.1	
comp=E,14nm,3.2s,comp=E,35nm,3.2s							
JKSM	**Kasumi**	**0.76**	**71**	A	A	04 43 50.6	
comp=E,17nm,4.1s,comp=E,41nm,4.2s							
JISK	**Izumosakaura**	**0.78**	**282**	A	A	04 43 54.2	
comp=E,12nm,0.8s,comp=E,18nm,5.2s							
JJG	**Jouge**	**0.87**	**216**	A	A	04 43 56.0	
comp=E,9.0nm,2.6s,comp=E,23nm,2.5s							
JKS	**Kasai**	**0.95**	**112**	A	A	04 43 54.5	
comp=E,13nm,3.5s,comp=E,13nm,3.6s							
JJS	**Sakaide**	**0.98**	**173**	A	A	04 43 56.9	
comp=E,32nm,3.6s,comp=E,11nm,0.6s							
JOI	**OKI**	**1.03**	**336**	A	A	04 43 57.5	
comp=E,29nm,0.9s,comp=E,31nm,0.5s							
JGT2	**ShimaneMisato**	**1.08**	**255**	A	A	04 43 59.9	
comp=E,8.0nm,3.5s,comp=E,22nm,4.1s							
JKY	**Yasaka**	**1.12**	**75**	A	A	04 43 57.0	
comp=E,18nm,4.5s,comp=E,35nm,1.3s							
JMIK	**Miki**	**1.18**	**117**	A	A	04 43 58.7	
comp=E,31nm,3.3s,comp=E,27nm,4.9s							
JAWN	**Awajishima-nag**	**1.26**	**133**	A	A	04 44 00.6	
comp=E,14nm,5.7s,comp=E,14nm,0.8s							
JHT	**Toyohira**	**1.31**	**239**	A	A	04 44 03.6	
comp=E,9.0nm,1.0s,comp=E,15nm,2.1s							
JMAF	**Mimaanabuki**	**1.34**	**167**	A	A	04 44 02.9	
comp=E,29nm,1.0s,comp=E,15nm,1.1s							
JHM	**Kurahashi**	**1.59**	**221**	A	A	04 44 07.8	
comp=E,10.0nm,0.9s,comp=E,9.0nm,1.1s							
JMN	**Monobe**	**1.62**	**177**		**Pb**	**04 44 08.4**	**+0.3**
JMN	**Monobe**	**1.62**	**177**	A	A	04 44 07.4	
comp=E,21nm,5.6s,comp=E,12nm,1.1s							
JAI	**Aioi**	**1.65**	**160**	A	A	04 44 07.4	
comp=E,20nm,2.0s,comp=E,13nm,1.8s							
JET	**Tanbara**	**1.68**	**201**	A	A	04 44 08.9	
comp=E,4.0nm,0.7s,comp=E,5.0nm,4.3s							
JHE	**Heguri**	**1.71**	**113**	A	A	04 44 07.3	
comp=E,7.0nm,1.6s,comp=E,4.0nm,4.6s							
JHIK	**Hikimi**	**1.73**	**242**	A	A	04 44 10.0	
comp=E,8.0nm,0.9s,comp=E,15nm,4.7s							
JFM	**Mihama**	**1.81**	**84**	A	A	04 44 08.3	
comp=E,6.0nm,1.2s,comp=E,11nm,0.9s							
JKHR	**Kochiharuno**	**1.85**	**187**	A	A	04 44 11.1	
comp=E,12nm,4.5s,comp=E,6.0nm,4.1s							
MRT2	**Murotomisaki 2**	**1.98**	**171**	A	A	04 44 12.6	
comp=E,13nm,4.2s,comp=E,6.0nm,4.0s							
JWM	**Minabe**	**1.98**	**139**	A	A	04 44 11.8	
comp=E,5.0nm,5.6s,comp=E,4.0nm,3.6s							
JKD	**Kudamatsu**	**2.03**	**231**	A	A	04 44 14.5	
comp=E,9.0nm,5.2s,comp=E,12nm,4.6s							
JEG	**Eigenji**	**2.15**	**95**	A	A	04 44 13.4	
comp=E,5.0nm,0.6s,comp=E,4.0nm,2.3s							
JHGM	**Hagimishima**	**2.24**	**256**	A	A	04 44 17.5	
comp=E,6.0nm,4.8s,comp=E,10.0nm,1.9s							
JYTA	**Yamagatataniai**	**2.42**	**83**	A	A	04 44 17.4	
comp=E,7.0nm,0.7s,comp=E,7.0nm,1.6s							
JTY	**Toyota**	**2.48**	**245**	A	A	04 44 21.0	
comp=E,5.0nm,5.1s,comp=E,8.0nm,4.5s							
JKI	**Kunimi**	**2.50**	**227**	A	A	04 44 21.2	
comp=E,11nm,1.0s,comp=E,9.0nm,1.4s							
INU	**Inuyama**	**2.65**	**89**	Pn	**Pn**	**04 44 22.4**	**+1.5**
JBEP	**Beppuamama**	**2.81**	**225**	A	A	04 44 25.6	
comp=E,11nm,1.1s,comp=E,14nm,0.9s							
JUS	**Usuki**	**2.83**	**217**	A	A	04 44 25.8	
comp=E,3.0nm,1.4s,comp=E,4.0nm,1.0s							
JAO	**Obara**	**2.85**	**91**	A	A	04 44 23.4	
comp=E,3.0nm,0.7s,comp=E,5.0nm,1.1s							
JGF	**Kuroka**	**2.93**	**84**	Pn	**Pn**	**04 44 26.9**	**+2.1**
JNU	**Nakatsue**	**3.27**	**228**		**Pn**	**04 44 31.2**	**+1.7**
JNY	**Yasuok**	**3.34**	**89**	A	A	04 44 30.4	
comp=E,4.0nm,2.1s,comp=E,6.0nm,2.5s							
SHZ3	**Shizuoka 3**	**3.64**	**93**	A	A	04 44 34.7	
comp=E,3.0nm,1.4s,comp=E,4.0nm,1.2s							
JTU	**Tsushima**	**3.69**	**258**	Pn	**Pn**	**04 44 37.1**	**+1.9**
MJB9	**Matsu-Tunnel**	**3.78**	**70**	Pn	**Pn**	**04 44 36.9**	**+0.4**
MAJO	**Matsushiro**	**3.79**	**70**	Pn	**Pn**	**04 44 36.4**	**-0.2**
MJAR	**Matsushiro Arr**	**3.79**	**70**	Pn	**Pn**	**04 44 36.5**	**-0.1**
0.5nm,0.3s,baz=254,slow=12,SNR=12							
MJAR				Lg	Lg	04 45 37.0	
1.4nm,0.3s,baz=232,slow=28,SNR=8.9							
MJAR				LR	LR	04 46 15.5	
comp=Z,404nm,18.1s,baz=244,slow=42							
9.8nm,0.6s							
JSU	**Suzuyama**	**4.73**	**217**	Pn	**Pn**	**04 44 50.2**	**+0.6**
KSRS	**Korea Array**	**5.17**	**296**	Pn	**Pn**	**04 44 56.2**	**+0.6**
1.8nm,0.3s,baz=109,slow=14,SNR=14							
KSRS				Sn	**Sn**	**04 45 55.6**	**+0.3**
3.7nm,0.3s,baz=112,slow=24,SNR=7.8							
KSRS				LR	LR	04 47 01.3	
comp=Z,406nm,19.4s,baz=110,slow=39							
5.9nm,0.6s							
KSAR	**Wonju Array Be**	**5.19**	**295**	Pn	**Pn**	**04 44 55.2**	**-0.7**
JYT	**Yasato**	**5.29**	**79**	Pn	**Pn**	**04 44 58.5**	**+1.3**
JHJ	**Hachijo jima 2**	**5.45**	**112**	Pn	**Pn**	**04 44 58.8**	**-0.6**
10nm,0.3s,baz=212,slow=16,SNR=4.0							
JHJ				LR	LR	04 47 09.8	
comp=Z,476nm,18.1s,baz=298,slow=39							
69nm,0.5s							
JTM	**Tenmabayashi**	**7.91**	**44**	Pn	**Pn**	**04 45 33.5**	**+0.3**
USRK	**Ussuriysk Ar.**	**8.95**	**352**	Pn	**Pn**	**04 45 48.0**	**+0.6**
0.4nm,0.3s,baz=169,slow=13,SNR=5.0							
USRK				LR	LR	04 48 48.6	
comp=Z,158nm,19.6s,baz=167,slow=35							
3.3nm,0.7s							
JCJ	**Chichijima**	**10.92**	**137**	LR	LR	04 49 58.6	
comp=Z,22nm,20.9s,baz=290,slow=35							
KLR	**Kul'dur**	**13.95**	**354**	Pn	**Pn**	**04 46 56.6**	**+0.7**
0.2nm,0.3s,baz=154,slow=16,SNR=4.1							
KLR				LR	LR	04 52 17.0	
comp=Z,101nm,18.4s,baz=316,slow=37							
3.5nm,0.9s							
BJT	**Baijiatuau**	**14.70**	**294**	Pn	**Pn**	**04 47 05.7**	**-0.4**
HIA	**Hailar**	**17.31**	**328**	Pn	**Pn**	**04 47 39.5**	**-0.4**
ULN	**Ulaanbaatar**	**23.44**	**310**	P	**P**	**04 48 47.7**	**0.0**
ULN				IAmb	IAmb	04 48 51.9	
comp=Z,10nm,1.1s							
SONM	**Songino Array**	**23.84**	**310**	P	**P**	**04 48 52.7**	**+1.1**
comp=Z,6.0nm,0.9s,baz=121,slow=8.8,SNR=20							
SONM				LR	LR	04 57 34.2	
comp=Z,84nm,19.6s,baz=22,slow=35							
comp=Z,6.0nm,0.9s							
SONM	**Songino Array**	**23.84**	**310**	P	**P**	**04 48 51.5**	**-0.1**
SONM				IAmb	IAmb	04 48 55.3	
comp=Z,6.7nm,1.0s							
PETK	**Petropavlovsk-**	**24.49**	**36**	LR	LR	04 59 11.8	
comp=Z,73nm,18.0s,baz=237,slow=38							
MA2	**Magadan**	**26.66**	**19**	LR	LR	05 00 12.4	
comp=Z,59nm,18.1s,baz=50,slow=37							
YAK	**Yakutsk**	**26.83**	**356**	LR	LR	04 59 52.5	
comp=Z,84nm,18.8s,baz=264,slow=36							
TIXI	**Tiksi**	**36.46**	**357**	LR	LR	05 06 24.4	
comp=Z,95nm,18.2s,baz=182,slow=38							
ZALV	**Zalesovo Beam**	**38.57**	**314**	PcP	**PcP**	**04 53 13.6**	**+0.2**
comp=Z,0.7nm,0.6s,baz=85,slow=3.6,SNR=4.2							
MKAR	**Makanchi Array**	**39.81**	**303**	P	**P**	**04 51 09.7**	**-1.7**
comp=Z,0.5nm,0.8s,baz=96,slow=12,SNR=4.0							
MKAR				LR	LR	05 08 26.3	
comp=Z,98nm,19.3s,baz=121,slow=37							
comp=Z,0.5nm,0.8s							
MKAR	**Makanchi Array**	**39.81**	**303**	P	**P**	**04 51 12.2**	**+0.8**
KURK	**Kurchatov**	**42.14**	**309**	P	**P**	**04 51 31.2**	**+0.7**
KURK				IAmb	IAmb	04 51 33.4	
comp=Z,3.2nm,1.1s							
PSI	**Prapat**	**45.73**	**233**	LR	LR	05 12 03.0	
comp=Z,76nm,18.3s,baz=142,slow=37							
AAK	**Ala-Archa**	**45.83**	**298**	LR	LR	05 14 43.9	
comp=Z,84nm,18.2s,baz=97,slow=41							
BVAR	**Borovoye Array**	**47.14**	**313**	LR	LR	05 11 47.7	
comp=Z,80nm,19.0s,baz=59,slow=36							
KK31	**Karatay Array**	**48.59**	**299**	P	**P**	**04 52 22.4**	**+0.5**
KK31				IAmb	IAmb	04 52 23.9	
comp=Z,2.9nm,1.1s							
KKAR	**Karatay Array**	**48.59**	**299**	P	**P**	**04 52 22.6**	**+0.8**
KKAR				IAmb	IAmb	04 52 23.9	
comp=Z,2.9nm,1.1s							
ILAR	**Eielson Array**	**54.18**	**31**	P	**P**	**04 53 03.1**	**-0.3**
comp=Z,0.5nm,0.8s,baz=281,slow=7.1,SNR=6.6							
ILAR				LR	LR	05 19 25.9	
comp=Z,54nm,18.0s,baz=158,slow=40							
comp=Z,0.5nm,0.8s							
ABKAR	**Akbulak array**	**54.25**	**309**	P	**P**	**04 53 04.3**	**+0.1**
BMAR	**Burnt Mountain**	**54.75**	**28**	P	**P**	**04 53 09.3**	**+1.7**
WRA	**Warramunga Arr**	**54.99**	**179**	P	**P**	**04 53 08.9**	**-0.8**
comp=Z,2.7nm,1.1s,baz=353,slow=7.8,SNR=12							
comp=Z,2.7nm,1.1s							
WR0	**Warramunga Arr**	**55.01**	**179**	P	**P**	**04 53 11.6**	**+1.7**
BCAR	**Beaver Creek A**	**56.71**	**33**	P	**P**	**04 53 22.6**	**+0.9**
ASAR	**Alice Springs**	**58.69**	**180**	P	**P**	**04 53 35.9**	**-0.1**
comp=Z,0.8nm,0.8s,baz=11,slow=14,SNR=9.6							
comp=Z,0.8nm,0.8s							
FINES	**FINESS Array B**	**67.31**	**330**	P	**P**	**04 54 31.6**	**-1.3**
comp=Z,5.7nm,1.1s,baz=146,slow=15,SNR=3.6							
comp=Z,5.7nm,1.1s							
NOA	**NORSAR Array B**	**73.20**	**335**	LR	LR	05 30 47.3	
comp=Z,24nm,20.1s,baz=0.0,slow=39							
BRTR	**Keskin Array B**	**75.19**	**308**	P	**P**	**04 55 19.6**	**-1.5**
comp=Z,0.8nm,0.9s,baz=61,slow=12,SNR=2.8							
comp=Z,0.8nm,0.9s							
NVAR	**Mina Array Bea**	**80.85**	**49**	P	**P**	**04 55 51.6**	**-1.1**
comp=Z,0.1nm,0.5s,baz=332,slow=5.1,SNR=1.9							
comp=Z,0.1nm,0.5s							
TXAR	**Lajitas Array**	**95.93**	**48**	P	**P**	**04 57 05.5**	**-0.2**
comp=Z,0.2nm,0.8s,baz=328,slow=3.2,SNR=2.3							
comp=Z,0.2nm,0.8s							

*IDC **29** 04:58:55.4±1.1, 20°.07S×69°.00W, h117km±11km, mb3.2/5, mbtmp3.7/9, Error ellipse: s-maj=22.5km s-min=8.8km az=100.0*
*GUC **29** 04:58:55.5±0.7, 20°.09S×69°.23W, h92km±2km, ML3.8*
ISC 29 04:58:53.4±0.8, 20°.06S±0°.04×69°.22W±0°.06, h97km±6km, n26, σ1=84/39, mb3.3/3, 3C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.10**	**144**	⇓ *i*P	**Pn**	**04 59 08.6**	**+1.1**
PB08				*i* S	**Sn**	**04 59 19.1**	**+1.1**
PB08				IAML		04 59 20.4	
comp=E,6μm,0.2s							
GO01	**Chusmiza**	**0.39**	**3**	⇓ *i*P	**Pn**	**04 59 10.0**	**+1.2**
GO01				*i* S	**Sn**	**04 59 21.8**	**+1.6**
GO01				IAML		04 59 22.4	
comp=E,12μm,0.2s							
PB11	**IPOC Station P**	**0.51**	**306**	⇓ *i*P	**Pn**	**04 59 10.1**	**+0.9**
PB11				*i* S	**Sn**	**04 59 22.0**	**+1.1**
PB11				IAML		04 59 22.9	
comp=E,10μm,0.5s							
TA02	**Huaiquique**	**0.89**	**256**	*e*P	**Pn**	**04 59 13.2**	**+0.8**
TA02				*i* S	**Sn**	**04 59 26.9**	**+0.3**
TA02				IAML		04 59 29.3	
PB01	**IPOC Station P**	**1.01**	**195**	⇓ *i*P	**Pn**	**04 59 14.6**	**+0.7**
PB01				*i* S	**Sn**	**04 59 30.0**	**+0.7**
PB01				IAML		04 59 31.3	
comp=E,5μm,0.3s							
TA01	**Diego Aracena**	**1.04**	**241**	⇑ *i*P	**Pn**	**04 59 14.4**	**+0.4**
TA01				*i* S	**Sn**	**04 59 29.4**	**-0.1**
TA01				IAML		04 59 33.2	
comp=E,2μm,0.3s							
PATCX	**Punta Patache**	**1.16**	**229**	⇑ *i*P	**Pn**	**04 59 16.0**	**+0.5**
PATCX				*i* S	**Sn**	**04 59 32.3**	**+0.1**
PATCX				IAML		04 59 35.6	
comp=E,2μm,0.3s							
PB09	**IPOC Station P**	**1.73**	**181**	⇓ *i*P	**Pn**	**04 59 24.1**	**+1.5**
PB09				*i* S	**Sn**	**04 59 46.2**	**+1.4**
PB09				IAML		04 59 51.9	
comp=E,757nm,0.5s							
PB16	**IPOC Station P**	**1.74**	**351**	⇓ *i*P	**Pn**	**04 59 26.0**	**+2.9**
PB16				*i* S	**Sn**	**04 59 49.6**	**+4.0**
PB16				IAML		04 59 54.1	
comp=E,624nm,0.9s							
PB12	**IPOC Station P**	**1.78**	**324**	⇑ *i*P	**Pn**	**04 59 24.4**	**+1.2**
PB12				*i* S	**Sn**	**04 59 47.4**	**+1.6**
PB12				IAML		04 59 52.3	
comp=E,793nm,0.6s							
PB03	**IPOC Station P**	**2.04**	**194**	*e*P	**Pn**	**04 59 27.3**	**+0.7**
PB03				IAML		04 59 58.9	
comp=E,564nm,0.2s							
PB04	**IPOC Station P**	**2.42**	**201**	*e*P	**Pn**	**04 59 32.7**	**+1.1**
PB04				IAML		05 00 09.3	
comp=N,638nm,0.2s							
LVC	**Limon Verde**	**2.55**	**174**	P	**Pn**	**04 59 35.7**	**+2.2**
comp=N,37nm,0.3s,baz=356,slow=9.1,SNR=89							
LVC				S	**Sn**	**05 00 07.2**	**+3.0**
comp=N,101nm,0.3s,baz=262,slow=23,SNR=17							
LVC	**Limon Verde**	**2.55**	**174**	*e*P	**Pn**	**04 59 35.3**	**+1.8**
LVC				*i* S	**Sn**	**05 00 06.1**	**+1.9**
PB06	**IPOC Station P**	**2.65**	**187**	*e*P	**Pn**	**04 59 35.2**	**+0.5**
PB06				IAML		05 00 16.6	
comp=E,531nm,0.3s							
PB15	**IPOC Station P**	**3.14**	**184**	*e*P	**Pn**	**04 59 42.9**	**+1.7**
PB15				*i* S	**Sn**	**05 00 19.2**	**+1.1**
LPAZ	**La Paz**	**3.89**	**16**	P	**Pn**	**04 59 54.5**	**+2.8**
comp=E,11nm,0.6s,baz=202,slow=6.4,SNR=48							
LPAZ				S	**Sn**	**05 00 39.2**	**+2.5**
comp=E,8.3nm,0.8s,baz=216,slow=14,SNR=1.6							
SIV	**San Ignacio**	**8.74**	**64**	P	**Pn**	**05 00 55.9**	**-1.1**
comp=E,9.4nm,0.5s,baz=257,slow=9.2,SNR=71							
SIV				S	**Sn**	**05 02 29.1**	**-4.8**
comp=E,0.7nm,0.6s,baz=343,slow=23,SNR=1.5							
CPUP	**Villa Florida**	**12.58**	**122**	P	**Pn**	**05 01 48.5**	**-0.4**
comp=E,1.1nm,0.7s,baz=296,slow=13,SNR=3.3							
PLCA	**Paso Flores**	**20.64**	**183**	P	Pn	05 03 26.8	-1.6
comp=E,0.9nm,0.6s,baz=0.3,slow=9.2,SNR=5.4							
comp=E,0.9nm,0.6s							
BDFB	**Brasilia**	**20.65**	**81**	P	Pn	05 03 25.9	-2.8
comp=E,2.2nm,0.8s,baz=245,slow=9.2,SNR=3.6							
comp=E,2.2nm,0.8s							
TXAR	**Lajitas Array**	**59.29**	**325**	P	**P**	**05 08 46.0**	**+0.8**
comp=E,0.2nm,0.8s,baz=145,slow=8.3,SNR=2.3							
comp=E,0.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.15**	**71**	P	**P**	**05 10 35.6**	**-1.4**
comp=E,0.2nm,0.4s,baz=252,slow=5.8,SNR=6.6							
comp=E,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**05 11 38.9**	**-1.5**
comp=E,1.4nm,0.7s,baz=134,slow=4.5,SNR=3.5							
comp=E,1.4nm,0.7s							
MKAR	**Makanchi Array**	**144.63**	**34**	PKP	**PKPdf**	**05 18 16.7**	**-2.0**
comp=E,0.2nm,0.5s,baz=288,slow=3.1,SNR=2.0							
**S

ZUR 29 05:16:41.4, 46°58′N×8°78′E, h6km, MLh0.8/15, 2D, Error ellipse: s-maj=1.7km s-min=0.8km az=150.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NALPS	Val Nalps	0.02	308	⇓Pg	Pg	05 16 43.3	+0.4
NALPS				Sg	Sg	05 16 44.3	+0.4
FUSIO	Fusio	0.15	211	Pg	Pg	05 16 45.0	+0.5
FUSIO				Sg	Sg	05 16 47.2	+0.7
LLS	Linth-Limmern	0.31	31	Sg	Sg	05 16 52.0	+0.3
BNALP	Bannalp	0.38	320	⇓Pg	Pg	05 16 49.1	+0.4
MUO	Muotathal	0.40	346	Pg	Pg	05 16 49.7	+0.5
VDL	Val di Lei	0.48	102	Pg	Pg	05 16 50.8	+0.2

ZUR 29 05:16:48.0, 46°26N×7°40E, h8km±1km, MLh0.3/6, 2C-1D, Error ellipse: s-maj=1.8km s-min=0.8km az=155.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIOV	Sion-Valere	0.04	225	⇑Pg	Pg	05 16 49.9	+0.2
SIOV				Sg	Sg	05 16 50.9	+0.1
SENIN	Lac Senin/Sane	0.12	325	⇓Pg	Pg	05 16 51.2	+0.2
SENIN				Sg	Sg	05 16 53.2	+0.2
DIX	Grande Dixence	0.18	179	Sg	Sg	05 16 54.9	+0.4
LKBD	Leukerbad	0.20	51	Sg	Sg	05 16 55.4	+0.4
GRYON	Gryon	0.20	267	⇑Pg	Pg	05 16 52.4	+0.2
GRYON				Sg	Sg	05 16 55.3	+0.3
LKBD2	Leukerbad 2	0.20	56	Pg	Pg	05 16 52.7	+0.4
LKBD2				Sg	Sg	05 16 55.6	+0.5

*IDC **29** 06:06:00.5±1.1, 36°45N×96°95W, h0km, mb3.4/1, mbtmp3.1/5, ML3.3/4, Error ellipse: s-maj=15.6km s-min=10.0km az=170.0*
*TUL **29** 06:06:01.8±0.7, 36°40N±0°02×96°89W±0°02, h5km±2km, ML3.3, mb_Lg3.3/81(NEIC), Error ellipse: s-maj=2.4km s-min=1.7km az=222.0*
*ANF **29** 06:06:02.6±0.3, 36°39N×96°85W, h5km, ML3.8/17, Error ellipse: s-maj=3.0km s-min=2.7km az=49.0*
*NEIC **29** 06:06:02.6±0.4, 36°39N±0°01×96°89W±0°01, h1km±5km, Error ellipse: s-maj=2.0km s-min=1.6km az=156.0*

ISC 29 06:06:02.1±0.8, 36°40N±0°02×96°89W±0°02, h7km±4km, n99, σ1°11/76, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK046	Pawnee Station	0.01	262		Pg	06 06 02.9	-0.6
OK046				Sg	Sg	06 06 03.8	-0.7
OK048	Pawnee Station	0.05	291		Pg	06 06 03.4	-0.4
OK048				Sg	Sg	06 06 04.5	-0.5
OK045	Pawnee Station	0.06	329		Pg	06 06 03.5	-0.3
OK045				Sg	Sg	06 06 04.8	-0.3
OK050	Pawnee Station	0.07	266		Pg	06 06 03.8	-0.3
OK044	Pawnee Station	0.08	110	Pg	Pg	06 06 03.9	-0.3
OK051	E0350 and S346	0.11	22	Pg	Pg	06 06 04.5	-0.2
OK049	E0420 Rd and N	0.34	271	Pg	Pg	06 06 08.7	0.0
OK033	Mehan	0.36	186	Pg	Pg	06 06 09.1	0.0
OK034	N. Norfolk Rd.	0.41	160	Pg	Pg	06 06 10.2	0.0
OK031	S. Brethren Rd	0.45	175	Pg	Pg	06 06 10.8	0.0
T35A	Sooner Cattle	0.60	30		Pg	06 06 13.4	-0.3
T35B	Sooner Cattle	0.60	30	P	Pg	06 06 13.3	-0.4
T35B	baz=210,SNR=100			S	Sg	06 06 21.1	-0.4
	baz=210						
OK029	Liberty Lake	0.76	217	Pg	Pg	06 06 16.6	-0.1
KAN13	South Haven SW	0.77	322		Pg	06 06 16.7	-0.3
OK025	Westminster Rd	0.89	204	Pg	Pg	06 06 18.8	-0.5
KAN09	Caldwell North	0.94	322		Pg	06 06 19.9	-0.3
KAN17	Caldwell West	0.95	313		Pg	06 06 20.2	-0.3
KS20	Mayfield South	0.99	327		Pg	06 06 20.6	-0.5
TUL1	Leonard	1.01	118		Pg	06 06 21.0	-0.6
TUL1	Leonard	1.01	118	P	Pg	06 06 21.0	-0.6
TUL1	baz=299,SNR=420			S	Sg	06 06 34.0	-0.8
	baz=299						
KAN01	Argonia South	1.03	317		Pg	06 06 21.4	-0.4
KAN14	Manchester OK	1.03	303		Pg	06 06 21.6	-0.3
KS21	Milan North St	1.08	325		Pg	06 06 22.5	-0.4
OKCSW	OKLAHOMA CITY	1.09	204	Pg	Pg	06 06 22.1	-0.9
OK032	Salt Plains WL	1.14	291		Pg	06 06 23.3	-0.7
KAN06	Argonia West S	1.15	318		Pg	06 06 23.7	-0.5
KAN08	Anthony NE Sta	1.20	314		Pg	06 06 24.5	-0.6
FNO	Franklin	1.21	200	Pg	Pg	06 06 24.1	-1.3
KAN16	Harper SW Stat	1.25	311		Pg	06 06 25.5	-0.7
KAN12	Harper NE Stat	1.26	316		Pg	06 06 25.7	-0.7
OK038	West end E0370	1.50	274		Pn	06 06 28.6	-0.8
OK035	E0210 Rd and N	1.50	282		Pn	06 06 29.6	+0.2
U32A	Winter Ranch,	1.71	270		Pn	06 06 32.9	+0.7
U32A				IAmb_Lg		06 06 59.8	
	comp=Z,150nm,1.0s						
U32A	Winter Ranch,	1.71	270	P	Pn	06 06 33.1	+0.9
	baz=89,SNR=19						
U32A				S	Sb	06 06 56.3	+0.9
	baz=89						
X34A	Smith Ranch, M	1.95	204	Pn	Pn	06 06 36.9	+1.3
U38A	Gravette	2.02	88		Pn	06 06 37.6	+1.1
U38A	Gravette	2.02	88	P	Pn	06 06 37.6	+1.1
	baz=270,SNR=273						
U38A				S	Sb	06 07 04.7	+0.3
	baz=270						
X37A	Clayton	2.19	145	Pn	Pn	06 06 39.6	+0.7
X37A	Clayton	2.19	145	P	Pn	06 06 39.5	+0.7
	baz=326,SNR=148						
WMOK	Wichita Mounta	2.27	223	Pn	Pn	06 06 40.6	+0.7
WMOK	Wichita Mounta	2.27	223	P	Pn	06 06 40.7	+0.7
	baz=42,SNR=31						
WMOK				S	Sn	06 07 09.9	+1.8
	baz=42						
R32A	Long Quarter,	2.49	325		Pn	06 06 43.3	+0.3
R32A	Long Quarter,	2.49	325	P	Pn	06 06 44.3	+1.3
	baz=144						
R32A				S	Sb	06 07 18.8	+0.9
	baz=144						
KSU1	Kansas State U	2.71	5	P	Pn	06 06 47.3	+1.3
	baz=185						
Z35A	Perchaven, San	3.08	186	P	Pn	06 06 52.0	+0.9
	baz=5.5,SNR=9.4						
Z35A				S	Sn	06 07 30.8	+2.7
	baz=5.5						
S39A	Bolivar	3.13	65	IAmb_Lg		06 07 43.4	
	comp=Z,80nm,0.8s						
MIAR	Mount Ida	3.27	123		Pn	06 06 54.2	+0.4
MIAR	Mount Ida	3.27	123	P	Pn	06 06 54.4	+0.5
	baz=306,SNR=40						
MIAR				S	Sn	06 07 34.8	+1.8
	baz=306						
CBKS	Cedar Bluff	3.31	318	P	Pn	06 06 54.9	+0.6
	baz=136						
MGMO	Mountain Grove	3.79	77	IAmb_Lg		06 08 07.1	
	comp=Z,66nm,1.0s						
FCAR	Ozark Folk Cen	3.89	96		Pn	06 07 03.1	+0.9
FCAR				IAmb_Lg		06 08 09.7	
	comp=Z,68nm,0.7s						
WHAR	Wooly Hollow	3.90	105	IAmb_Lg		06 08 05.0	
	comp=Z,100nm,1.1s						
UALR	University of	4.04	112		Pn	06 07 05.0	+0.6
UALR				IAmb_Lg		06 08 19.6	
	comp=Z,64nm,0.8s						
WLAR	White Oak Lake	4.11	130	IAmb_Lg		06 08 14.0	
	comp=Z,52nm,0.8s						
R40A	Maddies Statio	4.14	61	IAmb_Lg		06 08 14.9	
	comp=Z,79nm,0.7s						
R40A	Maddies Statio	4.14	61	P	Pn	06 07 06.4	+0.7
	baz=244,SNR=27						
N33B	J Bar K, Exete	4.35	354	P	Pn	06 07 09.8	+1.1
	baz=174						
N33A	J Bar K, Exete	4.36	354	IAmb_Lg		06 08 30.4	
	comp=Z,53nm,0.7s						
WHTX	Lake Whitney,	4.42	186	P	Pn	06 07 09.8	+0.2
	baz=6.0,SNR=9.6						
237A	Washetta, Mont	4.48	168		Pn	06 07 10.6	+0.3
237A	Washetta, Mont	4.48	168	P	Pn	06 07 10.5	+0.1
	baz=349,SNR=11						
CCAR	Cane Creek	4.87	119	IAmb_Lg		06 08 46.0	
	comp=Z,43nm,0.9s						
P40A	Paris	4.94	49	IAmb_Lg		06 08 36.0	
	comp=Z,53nm,0.7s						
BGNE	Belgrade	5.10	349	IAmb_Lg		06 08 57.5	
	comp=Z,67nm,0.7s						
BGNE	Belgrade	5.10	349	P	Pn	06 07 19.2	+0.3
	baz=168,SNR=6.6						
PBMO	Poplar Bluff	5.21	84	IAmb_Lg		06 08 52.8	
	comp=Z,76nm,0.8s						
N38A	Joes South For	5.24	32	IAmb_Lg		06 08 54.9	
	comp=Z,64nm,0.8s						
KSCO	Kaye Shedlock'	5.24	302	P	Pn	06 07 21.5	+0.5
	baz=118						
L34A	Svendsen Farm,	5.57	4	IAmb_Lg		06 09 08.9	
	comp=Z,62nm,0.8s						
PEBM	Pemiscott Bayo	5.69	91	IAmb_Lg		06 09 16.4	
	comp=Z,59nm,0.7s						
SLM	Saint Louis	5.74	65	IAmb_Lg		06 09 07.8	
	comp=Z,45nm,0.8s						
143A	Socs Landing,	5.84	128	IAmb_Lg		06 09 22.4	
	comp=Z,34nm,0.7s						
OGNE	Ogallala	6.07	320	IAmb_Lg		06 09 21.7	
	comp=Z,42nm,0.8s						
HALT	Halls	6.13	92	IAmb_Lg		06 09 18.1	
	comp=Z,54nm,0.9s						
GLAT	Glass	6.14	89	IAmb_Lg		06 09 21.5	
	comp=Z,58nm,0.7s						
SCIA	State Center	6.20	26	IAmb_Lg		06 09 27.1	
	comp=Z,35nm,0.8s						
K31A	O'Neill	6.38	348	IAmb_Lg		06 09 39.5	
	comp=Z,41nm,0.7s						
W45A	Hickory Valley	6.38	99	IAmb_Lg		06 09 22.3	
	comp=Z,54nm,0.7s						
JCT	Junction City	6.39	203	IAmb_Lg		06 09 31.8	
	comp=Z,32nm,0.8s						
OXF	Oxford	6.39	105	IAmb_Lg		06 09 24.7	
	comp=Z,50nm,0.8s						
Y45A	Yeager Farm, C	6.53	111	IAmb_Lg		06 09 39.6	
	comp=Z,35nm,1.0s						
K38A	Parkersburg	7.00	26	IAmb_Lg		06 10 03.2	
	comp=Z,44nm,1.1s						
L40A	Anamosa	7.16	36	IAmb_Lg		06 09 53.2	
	comp=Z,34nm,0.8s						
BRIGG	Briggsdale	7.17	308	IAmb_Lg		06 09 53.1	
	comp=Z,45nm,0.8s						
HDIL	Hopedale	7.26	53	IAmb_Lg		06 10 03.5	
	comp=Z,50nm,0.7s						
PLAL	Pickwick Lake	7.31	99	IAmb_Lg		06 09 58.5	
	comp=Z,26nm,1.1s						
USIN	University of	7.53	75	IAmb_Lg		06 10 07.6	
	comp=Z,44nm,1.0s						
O44A	Mansfield	7.61	58	IAmb_Lg		06 10 08.3	
	comp=Z,35nm,0.7s						
T47A	Sharon Grove	7.88	83	IAmb_Lg		06 10 15.3	
	comp=Z,26nm,0.8s						
L42A	Oliver, Polo	7.92	43	IAmb_Lg		06 10 14.8	
	comp=Z,31nm,0.8s						
ANMO	Albuquerque	7.92	262	Pn	Pn	06 07 57.7	-0.2
	comp=Z,0.1nm,0.3s,baz=74,slow=17,SNR=1.5						
ANMO				Pg	Pb	06 08 23.2	+3.4
	comp=Z,0.2nm,0.3s,baz=79,slow=16,SNR=2.5						
ANMO				Lg	Lg	06 10 08.3	
	comp=Z,0.3nm,0.3s,baz=100,slow=16,SNR=1.6						
	comp=Z,0.3nm,0.4s						
X48A	Hartselle	8.27	101	IAmb_Lg		06 10 21.9	
	comp=Z,22nm,0.9s						
N23A	Red Feather La	8.38	305	IAmb_Lg		06 10 40.4	
	comp=Z,36nm,1.0s						
SFIN	Lafayette	8.65	60	IAmb_Lg		06 10 41.7	
	comp=Z,37nm,0.7s						
TXAR	Laitas Array	9.06	221	Pn	Pn	06 08 11.0	-2.3
	baz=48,slow=15,SNR=2.1						
TXAR				Sn	Sn	06 09 50.6	-5.1
	comp=Z,0.2nm,0.3s,baz=45,slow=13,SNR=1.4						
TXAR				Lg	Lg	06 10 39.8	
	comp=Z,0.2nm,0.3s,baz=44,slow=25,SNR=1.9						
	comp=Z,0.2nm,0.8s						
K22A	Casper	9.71	313	IAmb_Lg		06 11 21.0	
	comp=Z,15nm,0.9s						
TKL	Tuckaleechee C	10.65	90	Pn	Pn	06 08 35.5	+0.4
	comp=Z,0.1nm,0.3s,baz=286,slow=19,SNR=2.1						
TKL				Sn	Sn	06 10 33.2	-1.3
	comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=1.5						
TKL				Lg	Lg	06 11 29.7	
	comp=Z,0.5nm,0.3s,baz=235,slow=13,SNR=2.2						
	comp=Z,3.3nm,1.0s						
PDAR	Pinedale Array	11.65	307	Pn	Pn	06 08 48.2	-0.8
	comp=Z,0.1nm,0.3s,baz=115,slow=14,SNR=3.7						
PDAR				Lg	Lg	06 12 02.8	
	comp=Z,0.1nm,0.3s,baz=115,slow=26,SNR=1.5						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	40.88	330	P	P	06 13 42.8	-1.5
	comp=Z,0.4nm,0.7s,baz=98,slow=6.8,SNR=4.8						
	comp=Z,0.4nm,0.7s						

*IDC **29** 06:09:06.6±1.9, 9°25S×75°38W, h0km, mb3.5/2, mbtmp3.4/3, MS2.6/1, Error ellipse: s-maj=83.7km s-min=35.3km az=42.0*
*ARE **29** 06:09:09±2.0, 9°39S±0°06×75°50W±0°06, h9km±7km, Error ellipse: s-maj=9.1km s-min=7.7km az=221.0*
*NEIC **29** 06:09:10.0±1.5, 9°29S±0°07×75°48W±0°07, h10km±2km, mb4.2/5, ML4.6(ARE), Error ellipse: s-maj=13.5km s-min=10.4km az=131.0*

ISC 29 06:09:12.4±0.8, 9°25S±0°08×75°4W±0°1, h41km, n19, σ0°70/18, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.08	208	LR	LR	06 11 24.4	
	comp=Z,106nm,19.9s,baz=28,slow=45						
NNA	Nana	3.08	208		Pn	06 09 58.7	+0.1
BOSC	San Juan Bosco	6.81	333		Pn	06 10 48.1	-1.9
ARNL	Arenillas	7.34	320	Pn	Pn	06 10 56.7	-0.3
COHC	Cochancay	7.77	330		Pn	06 11 02.6	-0.3
PORT	Chimborazo Vol	8.44	336		Pn	06 11 13.1	+0.4
SLOR	San Lorenzo -	9.02	340	Pn	Pn	06 11 21.0	+0.5
LPAZ	La Paz	9.94	135	Pn	Pn	06 11 32.3	-1.0
	0.4nm,0.5s,baz=310,slow=7.9,SNR=1.5						
LPAZ				Lg	Lg	06 14 16.4	
	0.3nm,0.3s,baz=298,slow=15,SNR=4.3						
LPAZ	La Paz	9.94	135	Pn	Pn	06 11 33.5	+0.2
PB16	IPOC Station P	10.68	148	Pn	Pn	06 11 44.1	+0.8
TA01	Diego Aracena	12.31	157	Pn	Pn	06 12 06.1	+0.9
PB08	IPOC Station P	12.38	152	Pn	Pn	06 12 06.0	-0.5
PB09	IPOC Station P	13.80	155	Pn	Pn	06 12 25.3	-0.4
BAUV	El Baul	19.50	22	P	Pn	06 13 37.5	-0.1
BAUV				IAmb	IAmb	06 13 47.9	
	comp=Z,21nm,1.5s						
STVI	Saint Thomas	29.29	21	P	P	06 15 11.3	+0.3
TXAR	Jajitas Array	47.06	326	P	P	06 17 40.7	+0.3
	comp=Z,0.2nm,0.7s,baz=150,slow=9.3,SNR=2.3						
	comp=Z,0.2nm,0.7s						
TORD	Torodi Ar. Bea	79.69	75	P	P	06 21 16.8	+0.3
	comp=Z,0.9nm,0.9s,baz=257,slow=4.7,SNR=5.2						
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	136.53	221	PKP	PKPdf	06 28 30.6	-0.3
	comp=Z,0.4nm,0.8s,baz=111,slow=1.3,SNR=2.3						
WRA	Warramunga Arr	138.80	225	PKP	PKPdf	06 28 35.0	-0.1
	comp=Z,0.2nm,0.5s,baz=123,slow=1.9,SNR=0.9						

IDC 29 06:13:37.5±4.7, 18°81N×145°54E, h189km±37km, mb3.5/4, mbtmp4.1/5, Error ellipse: s-maj=115.5km s-min=18.9km az=116.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.24	187	P	Pn	06 14 55.9	+1.1
	31nm,0.6s,baz=50,slow=16,SNR=1.5						
GUMO				S	Sn	06 15 55.3	-0.3
	76nm,1.0s,baz=31,slow=19,SNR=1.6						
WRA	Warramunga Arr	40.05	197	P	P	06 20 54.3	-0.2
	4.9nm,0.6s,baz=21,slow=9.1,SNR=113						
	4.9nm,0.6s						
ASAR	Alice Springs	43.72	196	P	P	06 21 24.1	-0.2
	0.9nm,0.7s,baz=20,slow=8.3,SNR=15						
	0.9nm,0.7s						
ILAR	Eielson Array	63.61	26	P	P	06 23 47.3	-0.7
	0.4nm,0.6s,baz=256,slow=5.1,SNR=5.3						
	0.4nm,0.6s						
NVAR	Mina Array Bea	83.19	52	P	P	06 25 43.5	+0.5
	1.1nm,0.6s,baz=269,slow=5.8,SNR=15						
	1.1nm,0.6s						

ROM 29 06:40:35.8±0.1, 42°880N±0°003×13°084E±0°004, h9km, ML1.5/5, 1C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=147.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.05	282	P	Pg	06 40 38.1	+0.4
T1216				S	Sg	06 40 39.5	+0.4
T1216				AML	AML		
	comp=N,1253μm,0.3s						
T1216				AML	AML		
	comp=E,1030μm,1.0s						
FDMO	Fiordimonte	0.16	1	⇓P	Pg	06 40 39.8	+0.6
FDMO				S	Sg	06 40 42.4	+0.9
FDMO				AML	AML		
	comp=N,368μm,0.4s						
FDMO				AML	AML		
	comp=E,360μm,0.3s						
FDMO				AML	AML		
	comp=N,368μm,1.6s						
T1215	Vallo di Nera,	0.18	244	P	Pg	06 40 40.1	+0.6
MMO1	Montemonaco	0.18	84	P	Pg	06 40 40.1	+0.5
MMO1				S	Sg	06 40 43.2	+1.0
CESI	CESI - Serrava	0.18	314	P	Pg	06 40 40.2	+0.6
CESI				S	Sg	06 40 43.4	+1.1
CESI				AML	AML		
	comp=N,502μm,0.1s						
CESI				AML	AML		
	comp=E,240μm,0.4s						
T1217	Poggiodomo (PG	0.20	214	P	Pg	06 40 40.6	+0.6
T1217				S	Sg	06 40 44.1	+1.3
T1241	Roccafluvione,	0.26	95	P	Pg	06 40 41.5	+0.6
T1241				S	Sb	06 40 46.1	-1.1
T1241				AML	AML		
	comp=N,110μm,0.3s						
T1241				AML	AML		
	comp=E,131μm,0.2s						
GUMA	Gualdo di Mace	0.26	45	P	Pg	06 40 41.8	+0.8
GUMA				S	Sb	06 40 46.4	-0.8
LNSS	Leonessa	0.28	187	P	Pb	06 40 42.5	-0.5
LNSS				S	Sb	06 40 46.8	-1.0
T1243	Rocca Santa Ma	0.33	124	⇓P	Pg	06 40 42.8	+0.5
ASSB	Assisi San Ben	0.35	298	P	Pg	06 40 43.2	+0.5
ASSB				S	Sg	06 40 48.6	+1.2
SNTG	Esanatoglia	0.39	344	P	Pb	06 40 44.6	-0.2
TERO	Teramo	0.46	124	⇑P	Pg	06 40 45.0	+0.2

*THE **29** 06:41:43.9, 38°71N×20°58E, h7km±1km, ML2.8/6, Error ellipse: s-maj=1.4km s-min=0.5km az=95.0*
*ATH **29** 06:41:44.0, 38°70N×20°58E, h7km±1km, ML2.6/8, Error ellipse: s-maj=1.5km s-min=0.7km az=137.0*

ISC 29 06:41:43.9±0.9, 38°70N±0°02×20°60E±0°03, h9km±4km, n27, σ0°54/49, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	221	P	Pg	06 41 45.2	-0.4
DRAG				S	Sg	06 41 46.2	-0.6
NYDR	Nydri-Lefkada	0.08	83	P	Pg	06 41 45.9	-0.2
NYDR				S	Sg	06 41 47.4	-0.3
	26μm,0.2s						
EVGI	Lefkada island	0.10	151	P	Pg	06 41 46.4	+0.1
EVGI				S	Sg	06 41 48.4	+0.4
	13μm,0.3s						
EVGI	Lefkada island	0.10	151	P	Pg	06 41 46.4	+0.1
EVGI				S	Sg	06 41 48.4	+0.4
TSLK	Tsoukalades, L	0.13	21	P	Pg	06 41 46.8	-0.1
TSLK				S	Sg	06 41 49.4	+0.5
	11μm,0.3s						
TSLK	Tsoukalades, L	0.13	21	P	Pg	06 41 46.8	-0.1
TSLK				S	Sg	06 41 49.1	+0.2
TSLK				AML	AML	06 41 50.4	
	comp=E,27304μm,0.3s						
TSLK				AML	AML	06 41 51.7	
	comp=N,21151μm,0.4s						
FSK	Fiskardo	0.24	186	P	Pg	06 41 48.9	0.0
FSK				S	Sg	06 41 52.6	+0.5
FSK				AML	AML	06 41 53.5	
	comp=N,3480μm,0.4s						
FSK				AML	AML	06 41 54.4	
	comp=E,7253μm,0.2s						
KEF4	Livadi, Kephal	0.47	197	P	Pg	06 41 52.8	-0.1
KEF4				S	Sg	06 42 00.1	+1.1
KEF4	Livadi, Kephal	0.47	197	P	Pg	06 41 52.6	-0.3
KEF4				S	Sg	06 41 59.5	+0.5
DMLN	Damoulianata-K	0.50	201	P	Pg	06 41 53.3	-0.2
DMLN				S	Sg	06 42 00.9	+0.9
	comp=E,1μm,0.4s						
VLS	Valsamata	0.53	181	P	Pg	06 41 53.7	-0.3
VLS				S	Sg	06 42 01.9	+0.9
	comp=E,688nm,0.3s						
VLS	Valsamata	0.53	181	P	Pg	06 41 53.8	-0.3
VLS				S	Sg	06 42 01.6	+0.7
VLS				AML	AML	06 42 06.0	
	comp=N,1805μm,0.3s						
VLS				AML	AML	06 42 06.2	
	comp=E,1042μm,0.3s						
KEF3	Kipouria, Keph	0.54	201	P	Pg	06 41 53.3	-1.0
KEF3				S	Sg	06 42 01.8	+0.5
KEF3	Kipouria, Keph	0.54	201	P	Pg	06 41 53.3	-1.0
KEF3				S	Sg	06 42 00.4	-0.9
PSDA	Pessada-Kefalo	0.59	181	P	Pg	06 41 55.0	-0.3
PSDA				S	Sb	06 42 04.1	-0.6
	comp=E,808nm,0.2s						
PSDA	Pessada-Kefalo	0.59	181	P	Pg	06 41 54.9	-0.3
PVO	Paravola	0.73	97	P	Pg	06 41 58.2	+0.2
PVO				S	Sg	06 42 08.7	+1.1
RLS	Riolos of Patr	0.94	133	P	Pg	06 42 01.6	-0.4
RLS				S	Sb	06 42 15.1	+0.2
RLS				AML	AML	06 42 24.1	
	comp=E,361μm,0.5s						
RLS				AML	AML	06 42 24.8	
	comp=N,307μm,0.3s						
EVR	Evrytania	0.97	77	P	Pg	06 42 02.1	-0.5
EVR				S	Sg	06 42 15.9	+0.7
EVR				AML	AML	06 42 25.1	
	comp=N,220μm,0.5s						
EVR				AML	AML	06 42 26.6	
	comp=E,260μm,0.5s						
JAN	Janina	0.97	12	P	Pg	06 42 02.4	-0.2
JAN				S	Sg	06 42 15.2	-0.1
JAN				AML	AML	06 42 19.3	
	comp=E,778μm,0.8s						
JAN				AML	AML	06 42 20.2	
	comp=N,526μm,0.3s						
EFP	Efpalio	1.06	105	P	Pg	06 42 03.5	-0.7
LAKA	Lakka	1.18	113	P	Pg	06 42 05.5	-1.0
KEK	Kerkira	1.18	329	⇑P	Pb	06 42 06.7	+0.2
KEK	Kerkira	1.18	329	P	Pg	06 42 06.5	-0.1
KEK				S	Sb	06 42 22.4	+0.5
MAKR	Makrakomi, Fth	1.24	75	P	Pn	06 42 07.1	-0.3
MAKR				S	Sg	06 42 23.2	-0.5
MAKR				AML	AML	06 42 31.6	
	comp=N,481μm,0.7s						
MAKR				AML	AML	06 42 33.5	
	comp=E,539μm,0.3s						
THL	Klokotos Trika	1.40	52	P	Pn	06 42 09.5	-0.1
THL				S	Sb	06 42 28.0	-0.1
THL				AML	AML	06 42 35.3	
	comp=N,418μm,0.7s						
THL				AML	AML	06 42 35.5	
	comp=E,629μm,0.6s						
ITM	Ithomi	1.85	145	P	Pn	06 42 15.8	+0.1

TAP 29 06:44:05.2, 24°71N×121°55E, h32km, ML3.6, 15C-9D, B, Taiwan

| Code | Station Name | Δ° | AZ° |

	baz=250							
NSK				*i* S	Sb	06 44 14.5	-1.1
	baz=250							
LATG	**Datong**	**0.18**	**186**	⇓*i*P	Pn	06 44 12.0	+0.2
LATG	baz=193			*i* S	Sn	06 44 16.4	+0.6
	baz=193							
ILA	**Ilan**	**0.19**	**74**	P	Pn	06 44 12.0	+0.1
ILA	baz=75			*i* S	Sn	06 44 16.7	+0.7
	baz=75							
NHDH	**Xindian Distri**	**0.25**	**356**	⇓*i*S	Pb	06 44 12.2	+0.1
NHDH				*i* S	Sn	06 44 17.3	-0.3
TATO	**Taipei**	**0.27**	**349**	P	Pb	06 44 12.3	0.0
TATO	baz=353			S	Sb	06 44 17.4	+0.2
	baz=353							
TWA	**Mucha**	**0.27**	**7**	⇓*i*P	Pb	06 44 12.5	+0.1
TWA	baz=9.0			*i* S	Sb	06 44 17.4	0.0
	baz=9.0							
NTC	**Toucheng**	**0.29**	**61**	P	Pb	06 44 12.9	+0.3
NTC	baz=56			S	Sn	06 44 18.3	-0.3
	baz=56							
TWC	**Suao**	**0.29**	**110**	⇑*i*P	Pn	06 44 13.1	-0.1
TWC	baz=110			S	Sn	06 44 18.5	-0.1
	baz=110							
BACT	**New Taipei Cit**	**0.30**	**342**	P	Pb	06 44 12.9	+0.1
BACT	baz=344			*e*S	Sn	06 44 19.0	+0.2
	baz=344							
NNS	**Nan Shan**	**0.31**	**210**	⇑*i*P	Pb	06 44 12.3	-0.7
NNS	baz=217			*i* S	Sb	06 44 17.6	-0.9
	baz=217							
NNSB	**Datong**	**0.32**	**208**	⇑P	Pb	06 44 13.3	+0.2
NNSB	baz=216			S	Sb	06 44 18.4	-0.1
	baz=216							
NHY	**Taipei**	**0.33**	**4**	*e*P	Pn	06 44 14.7	+0.9
NHY	baz=2.0			*e*S	Sn	06 44 20.7	+1.3
	baz=2.0							
TAP	**Taipei**	**0.33**	**354**	P	Pb	06 44 13.1	0.0
TAP	baz=1.0			*i* S	Sn	06 44 19.2	-0.2
	baz=1.0							
ENA	**Nanau**	**0.33**	**148**	⇑*i*P	Pb	06 44 13.5	+0.2
ENA	baz=148			S	Sn	06 44 19.5	-0.1
	baz=148							
TIPB	**Shuangxi**	**0.36**	**45**	⇑*i*P	Pb	06 44 13.8	+0.2
TIPB	baz=37			*i* S	Sb	06 44 19.4	-0.1
	baz=37							
NTY	**Taoyuan**	**0.36**	**322**	*e*P	Pb	06 44 13.9	+0.2
NTY	baz=321			*e*S	Sn	06 44 20.6	+0.3
	baz=321							
EGS		**0.38**	**69**	⇑*i*P	Pn	06 44 14.5	+0.1
EGS	baz=70			S	Sn	06 44 20.3	-0.3
	baz=70							
NFF	**Wufeng Townshi**	**0.40**	**258**	P	Pb	06 44 13.4	-0.7
NFF	baz=258			S	Sb	06 44 19.7	-0.6
	baz=258							
TWS1	**Kuangyinshan**	**0.40**	**343**	⇑*i*P	Pb	06 44 14.3	+0.1
TWS1	baz=346			*i* S	Sn	06 44 21.5	+0.1
	baz=346							
NCU	**National Centr**	**0.41**	**308**	P	Pb	06 44 14.6	+0.2
NCU	baz=297			S	Sn	06 44 21.8	+0.2
	baz=297							
NCUH	**Zhongli**	**0.41**	**308**	P	Pb	06 44 14.5	+0.2
NCUH	baz=296			S	Sb	06 44 20.9	+0.3
	baz=296							
NJD	**Zhudong**	**0.42**	**273**	*e*P	Pn	06 44 14.9	-0.1
NJD	baz=264			*e*S	Sn	06 44 22.3	+0.7
	baz=264							
NWF	**Wu-fen Shan**	**0.42**	**31**	*e*P	Pb	06 44 14.6	+0.1
NWF	baz=30			*e*S	Sb	06 44 20.8	0.0
	baz=30							
WFSB	**Wu-fen Shan**	**0.42**	**31**	*e*P	Pb	06 44 14.5	+0.1
WFSB	baz=30			*e*S	Sb	06 44 20.8	+0.1
	baz=30							
YM01	**YM01**	**0.43**	**3**	P	Pb	06 44 14.4	-0.3
YM01	baz=1.0			S	Sb	06 44 21.0	-0.2
	baz=1.0							
NTST	**Danshui**	**0.46**	**349**	*e*P	Pb	06 44 15.0	0.0
NTST	baz=355			*e*S	Sn	06 44 22.8	+0.1
	baz=355							
ANP	**Anpu**	**0.47**	**357**	*e*P	Pb	06 44 14.8	-0.5
ANP	baz=3.0			*e*S	Sb	06 44 22.0	-0.3
	baz=3.0							
YM08	**YM08**	**0.48**	**5**	*e*P	Pb	06 44 14.6	-0.7
SXI1	**Grass Mountain**	**0.48**	**38**	*e*P	Pn	06 44 15.8	-0.2
SXI1	baz=32			*e*S	Sb	06 44 22.3	-0.3
	baz=32							
LIOB	**Emei**	**0.49**	**262**	⇑*i*P	Pn	06 44 15.8	-0.1
LIOB	baz=256			S	Sn	06 44 23.6	+0.2
	baz=256							
TWB1	**Santiao Chiao**	**0.50**	**54**	⇑*i*P	Pb	06 44 15.7	+0.1
TWB1	baz=54			*e*S	Sb	06 44 22.7	-0.1
	baz=54							
NSTT	**Nanjuang**	**0.50**	**261**	⇑*i*P	Pb	06 44 15.9	+0.2
NSTT	baz=254			*i* S	Sn	06 44 23.6	-0.1
	baz=254							
ETLH	**Xiulin Townshi**	**0.51**	**187**	P	Pn	06 44 16.1	-0.1
ETLH	baz=193			*e*S	Sn	06 44 23.7	-0.3
	baz=193							
SBCB	**Hsinchu**	**0.52**	**279**	P	Pb	06 44 15.9	0.0
SBCB	baz=278			S	Sn	06 44 24.5	+0.4
	baz=278							
HSN	**Hsinchu**	**0.53**	**280**	P	Pb	06 44 15.8	-0.3
HSN	baz=282			S	Sb	06 44 24.0	+0.3
	baz=282							
FUSS	**Fushou**	**0.54**	**211**	P	Pb	06 44 16.6	+0.1
FUSS	baz=211			*e*S	Sn	06 44 24.7	-0.3
	baz=211							
NACB	**Ninganchiao**	**0.54**	**175**	P	Pb	06 44 16.2	-0.1
NACB	baz=183			S	Sb	06 44 24.2	+0.3
	baz=183							
NHW	**Xinwu Township**	**0.54**	**303**	P	Pb	06 44 16.2	-0.1
NHW	baz=302			*e*S	Sn	06 44 24.5	-0.1
	baz=302							
ETL	**Fush Village**	**0.56**	**173**	*e*P	Pn	06 44 16.9	-0.1
ETL	baz=181			*e*S	Sn	06 44 24.8	-0.3
	baz=181							
TWY	**Chenhua**	**0.56**	**5**	*e*P	Pb	06 44 16.6	-0.1
TDCB	**Techi**	**0.58**	**218**	⇑P	Pb	06 44 17.1	+0.1
TDCB	baz=224			S	Sb	06 44 24.9	-0.3
	baz=224							
WHF	**Hehuan Shan**	**0.62**	**204**	⇑P	Pn	06 44 18.2	0.0
WHF	baz=205			*e*S	Sn	06 44 27.5	+0.2
	baz=205							
TWD	**Chiawan**	**0.63**	**176**	⇑P	Pb	06 44 17.6	-0.2
TWD	baz=182			*e*S	Sn	06 44 26.9	+0.1
	baz=182							
WHP	**Taichung City**	**0.70**	**232**	⇑*i*P	Pb	06 44 19.4	+0.5
WHP	baz=232			S	Sn	06 44 29.3	+0.6
	baz=232							
NMLH	**Miaoli**	**0.71**	**256**	P	Pb	06 44 19.3	+0.2
NMLH	baz=256			*e*S	Sn	06 44 29.9	+1.1
	baz=256							
CHGB	**Renai**	**0.73**	**208**	⇑P	Pb	06 44 19.7	+0.1
CHGB	baz=215			S	Sb	06 44 29.5	0.0
	baz=215							
HWA	**Hwalien**	**0.73**	**176**	*e*P	Pb	06 44 19.8	+0.2
HWA	baz=186			*e*S	Sn	06 44 30.2	+0.8
	baz=186							
NSY	**Sanyi**	**0.77**	**248**	*e*P	Pb	06 44 20.3	+0.2
NSY	baz=259			*e*S	Sn	06 44 32.2	+1.7
	baz=259							
TWQ1	**Liyutan**	**0.79**	**243**	*e*P	Pb	06 44 20.5	0.0
TWQ1	baz=255			*e*S	Sb	06 44 31.8	+0.9
	baz=255							
WUSB	**Renai**	**0.82**	**209**	*e*P	Pb	06 44 20.9	0.0
WUSB	baz=216			*e*S	Sb	06 44 32.6	+0.8
	baz=216							
OWD	**Renai**	**0.83**	**204**	P	Pb	06 44 21.2	+0.1
OWD	baz=211			*e*S	Sb	06 44 33.1	+1.1
	baz=211							
WCS	**Beigang Elemen**	**0.87**	**222**	*e*P	Pn	06 44 21.4	+0.1
WCS	baz=226			*e*S	Sn	06 44 32.9	+0.1
	baz=226							
ESL	**Shilin**	**0.90**	**187**	*e*P	Pn	06 44 21.1	-0.6
ESL	baz=173			*e*S	Sb	06 44 33.9	0.0
	baz=173							
WDJ	**Dajia District**	**0.90**	**246**	*e*P	Pn	06 44 21.9	+0.3
WDJ	baz=247			*e*S	Sb	06 44 35.5	+1.6
	baz=247							
TCU	**Taichung**	**0.97**	**235**	*e*P	Pn	06 44 23.0	+0.4
TCU	baz=235			*e*S	Sb	06 44 38.4	+2.4
	baz=235							
SMLT	**Sun Moon Lake**	**1.01**	**216**	P	Pb	06 44 24.5	+0.2
SMLT	baz=229			*e*S	Sb	06 44 38.5	+1.2
	baz=229							
TYC	**Yuchr**	**1.02**	**218**	P	Pb	06 44 24.4	+0.1
TYC	baz=230			*e*S	Sb	06 44 38.2	+0.8
	baz=230							
VWDT	**VWDT**	**1.02**	**201**	P	Pb	06 44 24.5	+0.2
VWDT	baz=203			*e*S	Sb	06 44 37.3	-0.2
	baz=203							
EGFH	**Guangfu**	**1.04**	**186**	*e*P	Pb	06 44 24.2	-0.5
EGFH	baz=176			*e*S	Sb	06 44 37.9	-0.1
	baz=176							
SSLB	**Suanglung**	**1.07**	**210**	*e*P	Pb	06 44 25.1	-0.1
SSLB	baz=206			*e*S	Sb	06 44 38.5	-0.3
	baz=206							
WCHH	**Zhanghua**	**1.10**	**235**	*e*P	Pn	06 44 24.5	+0.2
WCHH	baz=236			*e*S	Sb	06 44 41.6	+2.0
	baz=236							
WJS	**Zhushan**	**1.16**	**220**	*e*P	Pb	06 44 26.6	0.0
WJS	baz=235			*e*S	Sb	06 44 43.1	+1.8
	baz=235							
WHYT	**Xinyi Township**	**1.19**	**212**	P	Pb	06 44 27.2	-0.1
WHYT	baz=226			*e*S	Sb	06 44 44.4	+2.1
	baz=226							
EHY	**Hungye**	**1.22**	**190**	*e*P	Pb	06 44 26.9	-0.7
HGSD	**Ruisui**	**1.22**	**185**	P	Pn	06 44 25.9	-0.2
	baz=190							
YUS	**Yu-Shan**	**1.33**	**204**	P	Pb	06 44 30.1	+0.2
YUS	baz=221			*e*S	Sb	06 44 48.0	+1.2
	baz=221							
YULB	**Yu-li**	**1.33**	**190**	*e*P	Pn	06 44 27.9	+0.2
YULB	baz=178			*e*S	Sn	06 44 44.7	+0.4
	baz=178							
WRL	**Guolierlin Hig**	**1.34**	**233**	*e*P	Pn	06 44 26.5	-1.1
CHN5	**Tsauling**	**1.36**	**216**	*e*P	Pb	06 44 30.0	-0.2
CHN5	baz=230			*e*S	Sb	06 44 48.5	+1.2
	baz=230							
TWF1	**Yuli**	**1.37**	**190**	*e*P	Pn	06 44 29.0	+0.9
TWF1	baz=180			*e*S	Sb	06 44 47.4	0.0
	baz=180							
ALS	**Alishan**	**1.37**	**210**	*e*P	Pb	06 44 29.8	-0.6
ALS	baz=223			*e*S	Sb	06 44 50.2	+2.4
	baz=223							
EYUL	**Yuli**	**1.37**	**189**	*e*P	Pn	06 44 28.2	0.0
FULB	**Fuli**	**1.52**	**189**	*e*P	Pn	06 44 31.0	+0.7
	baz=179							
EHD	**Haiduan**	**1.59**	**191**	*e*P	Pn	06 44 30.2	-0.9
	baz=184							
ELDTW	**Lidau**	**1.59**	**198**	*e*P	Pn	06 44 32.1	+0.9
	baz=188							
CHN4	**Tsaushan**	**1.61**	**213**	*e*P	Pn	06 44 31.9	+0.5
	baz=230							
TPUB	**Ta-pu**	**1.64**	**211**	*e*P	Pn	06 44 32.8	+1.0
	baz=228							
STYH	**Taoyuan**	**1.69**	**205**	*e*P	Pb	06 44 34.1	-1.5
STYH	baz=221			*e*S	Sb	06 44 56.7	+0.2
	baz=221							
TWK	**Hsinying**	**1.73**	**214**	*e*P	Pn	06 44 34.6	+1.5
	baz=231							
EDH	**Donghe**	**1.75**	**187**	*e*P	Pn	06 44 32.5	-0.7
	baz=178							
CHN1	**Nanshi**	**1.78**	**212**	*e*P	Pn	06 44 35.2	+1.4
	baz=227							
CHN1				*e*S	Sb	06 45 01.2	+2.0
	baz=227							
SGST	**Jiashian**	**1.85**	**209**	*e*P	Pb	06 44 37.5	-0.7
	baz=226							
TWG	**Pinlang**	**1.93**	**193**	*e*P	Pn	06 44 35.9	0.0
	baz=184							
TWGBT	**Beinan**	**1.93**	**193**	*e*P	Pn	06 44 35.1	-0.7
	baz=184							

*FUNV **29** 06:56:51.5, 10.°51N×72.°45W, h5km, MW3.8*
*RSNC **29** 06:56:51.8±0.9, 10.°50N×72.°51W, h4km±4km, ML2.9*
ISC 29 06:56:50.3±1.8, 10.°50N±0.°04×72.°46W±0.°03, h6km±14km, n26, σ1§66/40, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRJC	**Cerrejon, Guaj**	**0.66**	**322**	⇓*i*P	**Pg**	**06 57 02.9**	**-0.1**
CRJC				*e*S	**Sg**	**06 57 12.2**	**+0.6**
CRJC				*i*		06 57 13.8	
	comp=Z,470nm,0.2s						
URIC	**Uribia, Colomb**	**1.28**	**21**	⇑*e*P	**Pn**	**06 57 14.4**	**-0.3**
URIC				*e*S	**Sn**	**06 57 32.2**	**0.0**
URIC				*i*		06 57 34.2	
	comp=Z,367nm,0.3s						
LL1C	**La Loma 1 Cana**	**1.44**	**229**	*e*P	**Pn**	**06 57 14.4**	**-2.4**
LL1C				*e*S	**Sb**	**06 57 33.2**	**-2.8**
DABV	**Dabajuro**	**1.84**	**77**	*e*P	**Pn**	**06 57 23.1**	**+0.7**
DABV				*e*S	**Sn**	**06 57 46.6**	**+0.5**
ARGC	**Ariguani, Magd**	**1.87**	**250**	*e*P	**Pn**	**06 57 22.0**	**-0.8**
ARGC				*e*S	**Sn**	**06 57 46.3**	**-0.4**
ARGC				*i*		06 57 50.5	
	comp=Z,100nm,0.3s						
CURV	**Curarigua**	**2.51**	**101**	*e*P	**Pn**	**06 57 32.9**	**+1.2**
CURV				*e*S	**Sn**	**06 58 02.6**	**-0.1**
SIQV	**Siquisique**	**2.62**	**86**	*e*P	**Pn**	**06 57 33.1**	**0.0**
SIQV				*e*S	**Sn**	**06 58 04.6**	**-0.6**
CAPV	**Capacho**	**2.62**	**177**	*e*P	**Pn**	**06 57 33.1**	**-0.3**
CAPV				*e*S	**Sn**	**06 58 05.5**	**-0.1**
SOCV	**Socops**	**2.71**	**144**	*e*P	**Pn**	**06 57 34.0**	**-0.4**
SOCV				*e*S	**Sn**	**06 58 07.8**	**+0.2**
SJCC	**San Jacinto, C**	**2.74**	**258**	*e*P	**Pn**	**06 57 35.8**	**+1.0**
SJCC				*e*S	**Sn**	**06 58 10.8**	**+2.4**
SJCC				*i*		06 58 29.5	
	comp=Z,29nm,0.4s						
PAMC	**Pamplona, Colo**	**3.15**	**184**	*e*P	**Pn**	**06 57 42.1**	**+1.2**
BRRC	**Barranca, Sant**	**3.59**	**200**	*e*P	**Pn**	**06 57 46.3**	**-0.2**
BRRC				*e*S	**Sn**	**06 58 28.3**	**-0.9**
BRRC				*i*		06 58 49.6	
	comp=Z,40nm,0.6s						
JACV	**Jacura**	**3.62**	**80**	*e*P	**Pn**	**06 57 47.4**	**+0.5**
MAPV	**Macapo**	**4.00**	**99**	*e*P	**Pn**	**06 57 52.6**	**+0.5**
MAPV				*e*S	**Sn**	**06 58 36.5**	**-2.8**
TAMC	**Tame, Arauca**	**4.09**	**171**	*e*P	**Pn**	**06 57 52.9**	**-0.5**
PTBC	**PUERTO BERRIO,**	**4.40**	**207**	*e*P	**Pn**	**06 57 58.6**	**+0.9**
PTBC				*e*S	**Sn**	**06 58 50.5**	**+1.2**
RUSC	**La Rusia**	**4.62**	**188**	*e*P	**Pn**	**06 58 01.9**	**+0.8**
BAUV	**El Baul**	**4.62**	**109**	*e*P	**Pn**	**06 57 60.0**	**-0.8**
BAUV				*e*S	**Sn**	**06 58 52.1**	**-2.7**
BENV	**Beln**	**4.82**	**96**	*e*P	**Pn**	**06 58 03.5**	**0.0**
HELC	**Santa Helena**	**5.25**	**216**	*e*P	**Pn**	**06 58 12.0**	**+2.4**
NORC	**Norcasia**	**5.45**	**206**	*e*P	**Pn**	**06 58 13.2**	**+1.1**
CBOC	**Ciudad Bolivar**	**5.79**	**218**	*e*P	**Pn**	**06 58 18.5**	**+1.5**
CHIC	**Chingaza**	**5.96**	**192**	*e*P	**Pn**	**06 58 20.0**	**+0.4**
GUY2C	**Guyana, Caldas**	**5.98**	**209**	*e*P	**Pn**	**06 58 20.6**	**+0.9**
CACV	**CAÍCARA DEL OR**	**6.54**	**116**	*e*P	Pn	06 58 31.8	+4.8
CACV				*e*S	**Sn**	**06 59 48.2**	**+6.3**
PRAC	**Prado**	**7.16**	**200**	*e*P	**Pn**	**06 58 37.1**	**+1.5**

*NAO **29** 06:56:51.9±1.2, 77.°06N×19.°21E, h8km±8km, ML2.8*
*BER **29** 06:56:53.9±1.8, 77.°02N×19.°14E, h19km±6km, ML2.4, ML2.8(NAO), Confirmed Earthquake*
*IEPN **29** 06:56:53.0, 76.°93N×19.°63E, h10km*
*KOLA **29** 06:56:55.4, 76.°80N×20.°34E, h0km, ML2.1*
ISC 29 06:56:51.9±0.9, 77.°07N±0.°04×19.°50E±0.°04, h10km, n26, σ1§72/45, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**1.30**	**330**	Pn	**Pn**	**06 57 15.4**	**-0.7**
SPA0	baz=152,slow=22			Pg	**Pb**	**06 57 16.2**	**-0.2**
SPA0	baz=152,slow=22			Lg	Lg	06 57 32.7	
SPA0	**Spitsbergen Ar**	**1.30**	**330**	Pn	**Pn**	**06 57 15.4**	**-0.7**
SPA0	baz=150,slow=37			*e*Pg	**Pb**	**06 57 16.4**	**0.0**
SPA0				*e*S	**Sb**	**06 57 32.2**	**-0.9**
SPA0				*e*Sg	**Sn**	**06 57 34.7**	**+1.2**
SPA0				IAML		06 57 36.2	
	comp=Z,38nm,0.5s						
SPA0	**Spitsbergen Ar**	**1.30**	**330**	⇑*i*P	**Pn**	**06 57 15.3**	**-0.7**
SPA0				*e*S	**Sb**	**06 57 34.2**	**+1.1**
HOPEN	**Hopen**	**1.39**	**111**	Pg	**Pn**	**06 57 19.1**	**+1.9**
HOPEN				Lg	Lg	06 57 37.4	
HOPEN	**Hopen**	**1.39**	**111**	*e*Pg	**Pn**	**06 57 19.0**	**+1.9**
HOPEN				*e*Sg	**Sn**	**06 57 37.4**	**+1.9**
HOPEN				IAML		06 57 40.9	
	comp=Z,267nm,0.3s						
HOPEN	**Hopen**	**1.39**	**111**	*e*P	**Pn**	**06 57 18.5**	**+1.3**
HOPEN				*e*S	**Sn**	**06 57 36.5**	**+1.0**
BRBA	**Barentsburg A**	**1.52**	**314**	Pn	**Pn**	**06 57 19.4**	**+0.5**
BRBA				Sn	**Sn**	**06 57 39.2**	**+0.5**
BRBA	**Barentsburg A**	**1.52**	**314**	*e*Pg	**Pn**	**06 57 19.5**	**+0.5**
BRBA				*e*Sg	**Sn**	**06 57 38.9**	**+0.2**
BRBA				IAML		06 57 41.2	
	comp=Z,85nm,0.2s						
BRBB	**Barentsburg B**	**1.54**	**314**	Pn	**Pn**	**06 57 19.9**	**+0.6**
BRBB				Sn	**Sn**	**06 57 39.8**	**+0.5**
BRBB	**Barentsburg B**	**1.54**	**314**	*e*Pg	**Pn**	**06 57 19.9**	**+0.6**
BRBB				*e*Sg	**Sn**	**06 57 39.5**	**+0.3**
KBS	**Kingsbay**	**2.44**	**323**	Pn	**Pn**	**06 57 30.3**	**-1.4**
KBS				Pg	**Pb**	**06 57 36.3**	**+0.5**
KBS				Lg	Lg	06 58 06.7	
KBS	**Kingsbay**	**2.44**	**323**	*e*P	**Pn**	**06 57 30.2**	**-1.4**
KBS				*e*Pg	**Pb**	**06 57 36.0**	**+0.2**
KBS				*e*Sg	**Sb**	**06 58 06.7**	**+0.8**
KBS				IAML		06 58 12.5	
	comp=Z,59nm,0.4s						
KBS	**Kingsbay**	**2.44**	**323**	*e*P	**Pn**	**06 57 29.9**	**-1.7**
KBS				*e*S	**Sn**	**06 58 00.8**	**-0.7**
BJO1	**Bjornoya**	**2.59**	**183**	*e*Pg	**Pn**	**06 57 37.0**	**+3.3**
BJO1				*e*S	**Sn**	**06 58 00.9**	**-4.1**
BJO1				*e*Sg	**Sb**	**06 58 09.5**	**-0.5**
BJO1				IAML		06 58 11.2	
	comp=Z,28nm,0.8s						
BJO1	**Bjornoya**	**2.59**	**183**	P	**Pn**	**06 57 36.7**	**+3.1**
BJO1				S	**Sn**	**06 58 07.1**	**+2.0**
ZFI	**Zemlya Franca-**	**6.50**	**42**	P	**Pn**	**06 58 29.0**	**+1.7**
ZFI				*e*S	**Sn**	**06 59 38.2**	**-3.2**
	comp=Z,29nm,1.6s						
OMEGA	**Omega**	**6.51**	**42**	P	**Pn**	**06 58 29.6**	**+2.1**
OMEGA				*e*S	**Sn**	**06 59 38.0**	**-3.6**
	comp=Z,52nm,1.5s						
KEV	**Kevo**	**7.65**	**160**	*e*P	**Pn**	**06 58 41.4**	**-1.7**
KEV				*e*S	Sn	06 59 59.2	-10
ARA0	**ARCESS Array S**	**7.76**	**164**	Pn	**Pn**	**06 58 43.9**	**-0.9**
ARA0	baz=356,slow=10			Sn	Sn	07 00 01.4	-11
	baz=1.5,slow=22						
ARA0	**ARCESS Array S**	**7.76**	**164**	Pn	**Pn**	**06 58 43.9**	**-0.9**
	slow=10						
ARCES	**ARCESS Array B**	**7.76**	**164**	P	**Pn**	**06 58 43.5**	**-1.2**
ARCES				S	Sn	07 00 03.7	-8.9
KIF	**Kilpisjarvi**	**8.12**	**177**	Pn	**Pn**	**06 58 47.2**	**-2.4**
KIF				Sn	Sn	07 00 12.1	-9.1
KIF	**Kilpisjarvi**	**8.12**	**177**	Pn	**Pn**	**06 58 47.2**	**-2.4**
KIF				Sn	Sn	07 00 12.1	-9.1
PRVG	**Vayda Guba**	**8.18**	**147**	P	**Pn**	**06 58 49.1**	**-1.3**
PRVG				S	Sn	07 00 14.4	-8.2
HEF	**Hetta**	**8.79**	**170**	*e*P	**Pn**	**06 58 56.7**	**-2.1**
HEF				*e*S	Sn	07 00 27.5	-10
TERR	**Teriberka**	**9.06**	**142**	P	Pn	06 58 58.8	-3.7
TERR				S	Sn	07 00 33.8	-11

IDC 29 07:06:26.5±3.5, 53.°54N×90.°87E, h0km, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=32.1km s-min=23.9km az=33.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.61**	**279**	I		07 33 10.0	
	baz=91,slow=335,SNR=2.5						
ZALV	**Zalesovo Beam**	**3.61**	**279**	Pn	Pn	07 07 25.1	+1.5
ZALV	0.6nm,0.3s,baz=96,slow=16,SNR=5.5			Lg	Lg	07 08 18.7	
	1.6nm,0.3s,baz=96,slow=29,SNR=7.9						
	1.5nm,0.3s						
KURBB	**Kurchatov Arra**	**8.14**	**254**	Pn	Pn	07 08 25.1	-0.7
KURBB	0.1nm,0.3s,baz=65,slow=15,SNR=4.4			Sn	Sn	07 09 57.9	-0.5
	baz=68,slow=27,SNR=11						
KURBB				Lg	Lg	07 10 44.5	
	baz=66,slow=30,SNR=7.0						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**8.71**	**223**	Pn	Pn	07 08 34.4	+0.8
MKAR	0.2nm,0.3s,baz=34,slow=13,SNR=8.3			Lg	Lg	07 11 01.3	
	baz=43,slow=26,SNR=2.2						
	0.3nm,0.4s						
SONM	**Songino Array**	**11.38**	**114**	Lg	Lg	07 12 28.3	
	0.1nm,0.3s,baz=316,slow=27,SNR=4.0						

*NOU **29** 07:14:27.8, 37.°18S×179.°57E, h0km, MLv3.8/7, Off E. Coast of N. Island, N.Z.*
*WEL **29** 07:14:33.5±1.2, 37.°5S±5.°×17.°9E±.°, h16km±8km, M3.3/14, ML3.6/18, MLv3.3/14, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6*
ISC 29 07:14:32.0±2.7, 37.°16S±0.°07×179.°2E±0.°1, h10km±11km, n45, σ0§87/54, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.82**	**240**	P	**Pg**	**07 14 47.8**	**0.0**
MXZ				S	**Sg**	**07 14 58.1**	**-0.5**
MXZ	**Matakaoa Point**	**0.82**	**240**	P	**Pg**	**07 14 47.9**	**0.0**
WMGZ	**Waiomatatini S**	**0.91**	**223**	P	**Pn**	**07 14 51.3**	**+0.4**
WMGZ				S	**Sb**	**07 15 04.2**	**+2.0**
PKGZ	**Pakihiroa**	**1.16**	**231**	P	**Pn**	**07 14 54.2**	**-0.1**
PKGZ				S	**Sb**	**07 15 09.5**	**+0.2**
PUZ	**Puketiti**	**1.19**	**219**	P	**Pg**	**07 14 55.0**	**+0.2**
PUZ				S	**Sb**	**07 15 10.7**	**+0.7**

HAZ	Te Kaha	1.28 242	P	Pn	07 14 54.8	-1.1
HAZ			S	Sb	07 15 13.1	+0.4
TWGZ	Tauwhareparae	1.41 223	P	Pb	07 14 58.5	+0.1
TWGZ			S	Sb	07 15 17.5	+1.1
RUGZ	Raukumara Rang	1.46 236	P	Pn	07 14 58.9	+0.4
RUGZ			S	Sn	07 15 17.9	+0.1
CNGZ	Carnagh Statio	1.54 211	P	Pn	07 14 59.8	+0.3
MWZ	Matawai	1.78 228	P	Pn	07 15 03.2	+0.4
RIGZ	Rimuhau	1.92 216	P	Pn	07 15 05.0	+0.2
RAGZ	Rawiri	1.95 226	P	Pn	07 15 05.5	+0.3
URZ	Urewera	2.00 236	P	Pn	07 15 06.0	+0.2
URZ			S	Sn	07 15 29.7	-1.0
URZ	Urewera	2.00 236	P	Pn	07 15 06.1	+0.4
SNGZ	Shannon Statio	2.19 222	P	Pn	07 15 09.0	+0.5
SNGZ			S	Sn	07 15 34.8	-0.9
MHGZ	Mahia Peninsul	2.24 207	P	Pn	07 15 09.3	+0.2
RTZ	Ruatahuna	2.29 230	P	Pn	07 15 09.9	+0.1
MUGZ	Murupara	2.34 235	P	Pn	07 15 10.3	-0.2
RAHZ	Arahi	2.43 223	P	Pn	07 15 12.0	+0.3
MTHZ	Maungataniwha	2.52 227	P	Pn	07 15 13.3	+0.3
HSRZ	Hossack Road	2.62 243	P	Pn	07 15 11.4	-2.9
NMHZ	Naumai	2.71 224	P	Pn	07 15 15.8	+0.2
ARHZ	Aropaoanui	2.73 219	P	Pn	07 15 15.7	-0.1
KUZ	Kuaotunu	2.82 277	P	Pn	07 15 15.7	-1.4
KUZ	Kuaotunu	2.82 277	P	Pn	07 15 16.9	-0.2
BKZ	Black Stump Fm	2.93 226	P	Pn	07 15 18.5	-0.2
BKZ	Black Stump Fm	2.93 226	P	Pn	07 15 18.5	-0.2
MCHZ	McNeill Hill	3.02 220	P	Pn	07 15 19.4	-0.4
KWHZ	Kaweka Forest	3.15 223	P	Pn	07 15 21.1	-0.6
KAHZ	Kahuranaki	3.21 214	P	Pn	07 15 21.1	-1.4
MKAZ	Moumakai	3.23 270	P	Pn	07 15 21.8	-1.0
ETVZ	East Tongariro	3.39 233	P	Pn	07 15 24.8	-0.2
BHHZ	Black Hill Sta	3.40 226	P	Pn	07 15 24.9	-0.2
OTVZ	Oturere	3.44 233	P	Pn	07 15 25.0	-0.7
NNVZ	North Ngauruho	3.45 234	P	Pn	07 15 25.8	-0.1
SNVZ	South Ngauruho	3.47 233	P	Pn	07 15 25.5	-0.7
NGZ	Ngauruhoe	3.48 234	P	Pn	07 15 25.8	-0.6
MOVZ	Moawhango	3.53 229	P	Pn	07 15 26.2	-0.7
PNHZ	Pukenui	3.62 220	P	Pn	07 15 26.2	-2.0
HIZ	Hauiti	3.70 247	P	Pn	07 15 30.5	+1.3
HIZ	Hauiti	3.70 247	P	Pn	07 15 30.5	+1.3
WCZ	Waipu Caves	4.10 286	P	Pn	07 15 34.5	-0.1
BFZ	Birch Farm	4.21 212	P	Pn	07 15 34.5	-1.7
OUZ	Omahuta	4.93 291	P	Pn	07 15 46.4	+0.3
OUZ	Omahuta	4.93 291	P	Pn	07 15 47.3	+1.2

*IDC **29** 07:17:10.3±0.6, 39°.35N×143°.42E, h0km, mb4.3/25, mbtmp4.3/31, ML3.4/5, MS4.2/74, Error ellipse: s-maj=15.2km s-min=13.0km az=130.0*

*NIED **29** 07:17:11.9, 39°.36N×143°.58E, h37km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr1.73; Mθθ-0.00; Mφφ-1.72; Mrθ0.48; Mθφ-0.63; Mφr1.02; Fault plane solution: M0 2.15000×10^16^ NP1: φs193.00000°, δ29.00000°, λ82.00000°. NP2: φs22.00000°, δ61.00000°, λ94.00000°.*

*JMA **29** 07:17:11.9±0.2, 39°.4N±0°.6×143°.6E±1°.0, h37km, MD4.8/35, MW4.8/35, FAR E OFF SANRIKU*

JMA Felt I J1 at FAR E OFF SANRIKU .

*MOS **29** 07:17:11.0±0.9, 39°.36N×143°.44E, h16km, mb4.8/33, MS4.4/6, Error ellipse: s-maj=7.8km s-min=5.0km az=102.9*

*BJI **29** 07:17:12.1±0.0, 39°.47N×143°.12E, h10km, mb4.6/56, mB5.0/34, Ms4.8/53, Ms7 4.8/49*

*NEIC **29** 07:17:13.0±1.8, 39°.35N±0°.06×143°.4E±0°.1, h14km±5km, mb4.7/44, Mwr4.7/14, Error ellipse: s-maj=12.0km s-min=8.0km az=114.0*

*NEIC **29** 07:17:13.3, 39°.34N×143°.46E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.99; Mθθ0.23; Mφφ-1.23; Mrθ0.41; Mθφ0.62; Mφr0.75; Fault plane solution: M0 1.55000×10^16^ NP1: φs7.40000°, δ64.44000°, λ123.21000°. NP2: φs130.78000°, δ41.00000°, λ41.13000°. Principal axes: T 1.4971, Plg57.0000°, Azm323.0000°; N 0.0932, Plg30.0000°, Azm172.0000°; P -1.5903, Plg13.0000°, Azm74.0000°;*

*GCMT **29** 07:17:19.0±0.3, 39°.47N±0°.03×143°.60E±0°.03, h28km±1km, MW5.0/89, Moment Tensor Solution. s29,c31; s89,c112; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.33±.17; Mθθ-0.19±.10; Mφφ-2.14±.11; Mrθ0.62±.15; Mθφ-0.49±.07; Mφr2.28±.15; Best double couple: M0 3.29300×10^16^ NP1: φs15.00000°, δ68.00000°, λ91.00000°. NP2: φs192.00000°, δ22.00000°, λ88.00000°. Principal axes: T 3.3310, Plg67.0000°, Azm287.0000°; N -0.0760, Plg1.0000°, Azm194.0000°; P -3.2560, Plg23.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 07:17:11.5±0.4, 39°.33N±0°.04×143°.54E±0°.04, h11km, n318, σ1§69/256, mb4.6/77, MS4.5/90, 14C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.36 281		P	Pg	07 17 35.5	-2.0
MIYJ				eS	Sg	07 17 52.6	-2.5
MIYJ	Miyakonagasawa	1.36 281		A	A	07 17 35.5	
	comp=E,18nm,4.0s,comp=E,17nm,2.4s						
JTH	Tanohata	1.43 296		P	Pb	07 17 36.4	-1.8
JTH	Tanohata	1.43 296		A	A	07 17 36.4	
	comp=E,14nm,2.9s,comp=E,22nm,4.5s						
OFUJ	Ofunato	1.48 261		P	Pb	07 17 37.4	-1.5
OFUJ	Ofunato	1.48 261		A	A	07 17 37.4	
	comp=E,14nm,7.1s,comp=E,12nm,1.7s						
JKEN	Kujiedanarisaw	1.66 302		A	A	07 17 39.6	
	comp=E,20nm,0.7s,comp=E,24nm,0.5s						
JKMT	Kesennumamotoy	1.69 253		A	A	07 17 40.5	
	comp=E,8.0nm,2.7s,comp=E,15nm,5.7s						
JOM	Ohasama	1.75 275		i P	Pb	07 17 41.6	-2.0
JKZ	Kuzumaki	1.83 292		A	A	07 17 42.2	
	comp=E,15nm,4.1s,comp=E,10.0nm,0.5s						
JMK	Ichinoseki	1.84 259		i P	Pb	07 17 43.0	-2.2
JMK	Ichinoseki	1.84 259		A	A	07 17 43.0	
	comp=E,8.0nm,3.3s,comp=E,12nm,1.7s						
JANG	Nango	1.88 304		P	Pn	07 17 42.0	-1.5
JIO	Ouri	1.92 244		i P	Pn	07 17 43.6	-0.5
JIO				eS	Sn	07 18 06.7	-1.6
JIO	Ouri	1.92 244		A	A	07 17 43.6	
	comp=E,13nm,5.1s,comp=E,11nm,6.3s						
JSZI	Iwateshizukuis	2.04 282		A	A	07 17 45.4	
	comp=E,39nm,2.1s,comp=E,41nm,2.4s						
JOFO	Osakifurukawao	2.17 251		A	A	07 17 47.5	
	comp=E,75nm,3.1s,comp=E,68nm,2.4s						
JRG	Rokugo	2.25 273		A	A	07 17 48.5	
	comp=E,20nm,3.0s,comp=E,16nm,4.2s						
JTM	Tenmabayashi	2.39 308		Pn	Pn	07 17 49.8	-0.8
JTM	Tenmabayashi	2.39 308		P	Pn	07 17 50.5	-0.1
JAH	Hinai	2.40 292		A	A	07 17 50.4	
	comp=E,14nm,5.1s,comp=E,13nm,2.9s						
JOU	Okura	2.44 248		A	A	07 17 51.4	
	comp=E,17nm,2.8s,comp=E,16nm,3.7s						
JYK	Kaneyama	2.51 262		i P	Pn	07 17 52.6	+0.4
JYK	Kaneyama	2.51 262		A	A	07 17 52.6	
	comp=E,12nm,2.8s,comp=E,11nm,4.1s						
JAHD	Aomorihigashid	2.56 320		A	A	07 17 52.4	
	comp=E,13nm,4.1s,comp=E,15nm,0.8s						
JYW	Yuwa	2.59 276		A	A	07 17 53.3	
	comp=E,25nm,4.5s,comp=E,35nm,2.7s						
JMM	Marumori	2.60 237		P	Pn	07 17 52.6	-0.9
JMM	Marumori	2.60 237		P	Pn	07 17 53.7	+0.2
JMST	Minamisoumatoc	2.63 233		A	A	07 17 54.0	
	comp=E,6.0nm,2.0s,comp=E,7.0nm,2.7s						
ERM	Erimo	2.70 354		Pn	Pn	07 17 55.0	+0.2
ERM	Erimo	2.70 354		P	Pn	07 17 55.0	+0.2
ERM	Erimo	2.70 354		P	Pn	07 17 55.1	+0.3
JEM	Erimo	2.70 354		P	Pn	07 17 55.1	+0.3
JNTW	Noshirotokiwa	2.77 291		A	A	07 17 55.6	
	comp=E,36nm,3.1s,comp=E,56nm,2.6s						
JHHS	Hirosakihyakuz	2.78 299		A	A	07 17 55.7	
	comp=E,29nm,3.6s,comp=E,38nm,5.1s						
JOT	Ohata	2.80 318		eP	Pn	07 17 55.7	-0.5
JOT				eS	Sn	07 18 27.7	-2.2
JOT	Ohata	2.80 318		A	A	07 17 55.7	
	comp=E,7.0nm,4.1s,comp=E,6.0nm,3.2s						
JYYZ	Yamagatayuza	2.82 265		A	A	07 17 56.7	
	comp=E,29nm,2.8s,comp=E,48nm,3.0s						
JFK	Kawauchi	2.87 228		A	A	07 17 57.5	
	comp=E,7.0nm,5.0s,comp=E,8.0nm,3.8s						
JYS	Shiratake	2.93 249		A	A	07 17 58.3	
	comp=E,10.0nm,5.7s,comp=E,16nm,4.0s						
JSI2	Shiura 2	2.95 307		A	A	07 17 58.1	
	comp=E,6.0nm,2.5s,comp=E,6.0nm,9.6s						
JIW	Iwasaki	3.00 296		A	A	07 17 58.8	
	comp=E,8.0nm,5.2s,comp=E,8.0nm,5.1s						
JNBK	Urakawa-nobuka	3.01 349		P	Pn	07 17 59.4	+0.3
JNBK	Urakawa-nobuka	3.01 349		A	A	07 17 59.4	
	comp=E,7.0nm,5.4s,comp=E,9.0nm,4.7s						
JYAR	Yonezawaarcadi	3.01 243		A	A	07 17 59.5	
	comp=E,11nm,4.3s,comp=E,11nm,0.9s						
JYA	Atsumi	3.07 257		A	A	07 18 00.3	
	comp=E,10.0nm,2.2s,comp=E,10.0nm,6.9s						
JOTO	OTAMA OYAMA	3.08 236		P	Pn	07 18 00.5	+0.5
JOTO	OTAMA OYAMA	3.08 236		A	A	07 18 00.5	
	comp=E,8.0nm,2.6s,comp=E,13nm,3.3s						
JCH	Churui	3.28 358		eP	Pn	07 18 02.2	-0.7
JCH				S	Sn	07 18 38.5	-3.4
JAW	Awa shima	3.46 257		P	Pn	07 18 06.2	+0.9
JOG3	Oga3	3.50 281		A	A	07 17 58.2	
	comp=E,17nm,3.2s,comp=E,17nm,2.5s						
JIAM	Iburiatsuma	3.51 340		A	A	07 18 05.6	
	comp=E,17nm,6.5s,comp=E,16nm,5.6s						
JFY	Yanaizu	3.57 239		A	A	07 18 07.4	
	comp=E,4.0nm,6.7s,comp=E,6.0nm,7.7s						
JNS	Sasagawa	3.64 247		A	A	07 18 08.3	
	comp=E,5.0nm,7.8s,comp=E,6.0nm,5.2s						
JEW	Eniwo	3.85 336		Pn	Pn	07 18 12.1	+1.5
JEW	Eniwo	3.85 336		P	Pn	07 18 12.7	+2.1
JEW	Eniwo	3.85 336		A	A	07 18 10.4	
	comp=E,6.0nm,3.9s,comp=E,7.0nm,3.9s						
JYT	Yasato	4.08 222		Pn	Pn	07 18 13.6	-0.2
JYT	Yasato	4.08 222		P	Pn	07 18 14.4	+0.7
JSD	Sado	4.33 254		Pn	Pn	07 18 17.4	+0.2
NMR	Nemuro--Hokkai	4.36 21		eP	Pn	07 18 16.2	-1.4
NMR				eS	Sn	07 19 02.1	-6.3
JHU	Hanno	4.85 226		A	A	07 18 25.3	
	comp=E,3.0nm,9.8s,comp=E,4.0nm,4.2s						
RUSJ	Misakicho	4.94 14		eP	Pn	07 18 24.4	-1.2
YUK	Yuzh-Kuril'sk	5.01 20		eP	Pn	07 18 25.3	-1.3
YUK				eS	Sn	07 19 18.2	-6.3
YUK				pmax	pmax		
	comp=Z,536nm,0.3s						
YUK				pmax	pmax		
	comp=N,119nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK				smax	smax		
	comp=E,448nm,0.2s						
MAJO	Matsushiro	5.05 238		Pn	Pn	07 18 28.4	+1.2
MAJO	Matsushiro	5.05 238		c iP	Pn	07 18 28.8	+1.6
MAJO	Matsushiro	5.05 238		P	Pn	07 18 29.4	+2.2
MJAR	Matsushiro Arr	5.05 238		Pn	Pn	07 18 28.0	+0.8
	comp=E,6.4nm,0.3s,baz=32,slow=13,SNR=113						
MJAR				LR	LR	07 20 41.2	
	comp=E,3μm,18.2s,baz=170,slow=42 comp=E,56nm,0.4s						
MJB9	Matsu-Tunnel	5.05 238		Pn	Pn	07 18 29.4	+2.2
JGF	Kuroka	6.17 235		Pn	Pn	07 18 43.8	+1.2
JGF	Kuroka	6.17 235		P	Pn	07 18 44.5	+2.0
INU	Inuyama	6.54 235		Pn	Pn	07 18 48.6	+1.0
INU	Inuyama	6.54 235		P	Pn	07 18 49.4	+1.8
KUR	Kuril'sk	6.71 27		eP	Pn	07 18 52.3	+2.4
KUR				eS	Sn	07 20 02.2	-4.2
KUR				pmax	pmax		
	comp=Z,136nm,0.8s						
KUR				smax	smax		
	comp=N,331μm,0.5s						
KUR				smax	smax		
	comp=E,176nm,0.6s						
KUR				MLR	MLR		
	comp=Z,3μm,12.0s						
JHJ2	Mitsune	6.90 207		Pn	Pn	07 18 51.9	-0.6
JHJ2	Mitsune	6.90 207		P	Pn	07 18 53.4	+0.9
JHJ	Hachijo jima 2	6.90 207		Pn	Pn	07 18 52.3	-0.3
	comp=Z,80nm,0.3s,baz=118,slow=22,SNR=10						
JHJ				Sn	Sn	07 20 05.9	-5.2
	comp=Z,68nm,0.3s,baz=59,slow=23,SNR=8.0						
JHJ				LR	LR	07 21 34.9	
	comp=Z,820nm,20.6s,baz=52,slow=38						
YSS	Yuzh-Sakhalins	7.64 356		Pn	Pn	07 19 03.3	+0.6
YSS	Yuzh-Sakhalins	7.64 356		eP	Pn	07 19 03.9	+1.2
YSS				eS	Sn	07 20 27.5	-1.7
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,4μm,13.0s						
YSS				MLR	MLR		
	comp=N,3μm,16.0s						
TEY	Ternei	7.68 320	⇑	eP	Pn	07 19 04.6	+1.4
TEY				pmax	pmax		
	comp=N,20nm,0.5s						
TEY				pmax	pmax		
	comp=E,40nm,0.5s						
TEY				pmax	pmax		
	comp=Z,50nm,0.5s						
TEY				MLR	MLR		
	comp=E,200nm,13.0s						
TEY				MLR	MLR		
	comp=N,100nm,18.0s						
TEY				MLR	MLR		
	comp=Z,200nm,15.0s						
JHS	Saijyo	9.38 246		Pn	Pn	07 19 28.3	+1.8
JHS	Saijyo	9.38 246		P	Pn	07 19 29.7	+3.2
JMN	Monobe	9.57 237		Pn	Pn	07 19 29.7	+0.4
JMN	Monobe	9.57 237		P	Pn	07 19 30.4	+1.1
USA0B	Ussuriysk Arra	9.90 303			Pn	07 19 35.4	+1.7
USA0B	Ussuriysk Arra	9.90 303		P	Pn	07 19 35.4	+1.7
USRK	Ussuriysk Ar.	9.90 303		Pn	Pn	07 19 34.8	+1.1
	comp=Z,1.3nm,0.3s,baz=108,slow=13,SNR=14						
USRK				LR	LR	07 23 12.5	
	comp=Z,2μm,20.5s,baz=105,slow=37 comp=Z,16nm,0.7s						
MSHR	Mys Shultsa	9.91 293		ceP	Pn	07 19 36.6	+2.7
MSHR				pmax	pmax		
	comp=Z,14nm,0.6s						
MDJ	Mudanjiang	11.64 301		P	Pn	07 19 59.0	+1.5
MDJ				pmax	pmax		
	comp=Z,14nm,1.7s						
MDJ				LR	LR		
	comp=Z,1μm,17.3s						
MDJ				LR	LR		
	comp=Z,5μm,15.4s						
MDJ				LR	LR		
	comp=Z,6μm,14.5s						
JCJ	Chichijima	12.25 186		Pn	Pn	07 20 02.7	-3.2
	comp=Z,3.7nm,0.3s,baz=139,slow=19,SNR=2.2						
JCJ				Sn	Sn	07 22 10.8	-12
	comp=Z,7.3nm,0.3s,baz=118,slow=23,SNR=2.8						
JCJ	Chichijima	12.25 186		P	Pn	07 20 03.3	-2.6
KSRS	Korea Array	12.40 266		Pn	Pn	07 20 07.7	-0.2
	comp=Z,0.5nm,0.3s,baz=82,slow=12,SNR=7.1						
KSRS				LR	LR	07 24 35.1	
	comp=Z,2μm,18.7s,baz=75,slow=36 comp=Z,3.2nm,0.8s						
KLR	Kul'dur	13.00 323		Pn	Pn	07 20 14.3	-1.6
	comp=Z,0.2nm,0.3s,baz=113,slow=12,SNR=3.8						
KLR				LR	LR	07 25 32.9	
	comp=Z,2μm,18.1s,baz=114,slow=39 comp=Z,2.0nm,0.8s						
KLR	Kul'dur	13.00 323		i P	Pn	07 20 17.0	+1.0
KLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNX	BinXian	13.50 304	⇓	P	Pn	07 20 23.0	+0.1
BNX				pP	P	07 20 31.8	-0.4
BNX				S	Sn	07 22 53.5	+0.6
BNX				pmax	pmax		
	comp=Z,15nm,0.6s						
BNX				pmax	pmax		
	comp=Z,400nm,9.8s						
BNX				LR	LR		
	comp=Z,2μm,14.6s						
BNX				LR	LR		
	comp=Z,2μm,15.5s						
BNX				LR	LR		
	comp=Z,4μm,15.1s						
OKH	Okha	14.23 359		deP	Pn	07 20 23.0	-10
OKH				pmax	pmax		
	comp=Z,200nm,13.5s						
OKH				MLR	MLR		
	comp=N,3μm,18.0s						
OKH				MLR	MLR		
	comp=Z,2μm,17.0s						
CN2	Changchun	14.26 294		eP	Pn	07 20 34.5	+1.2
CN2				sP	P	07 20 41.0	+0.4
CN2				S	Sn	07 23 13.0	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=Z,1μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
PETK	Petropavlovsk-	16.86 31		Pn	Pn	07 21 06.9	-0.4
	comp=Z,0.1nm,0.3s,baz=214,slow=10,SNR=1.9						
PETK				LR	LR	07 28 49.2	
	comp=Z,354nm,18.2s,baz=219,slow=41 comp=Z,4.1nm,0.9s						
PETK	Petropavlovsk-	16.86 31		Pn	P	07 21 08.2	-1.2
PETK	Petropavlovsk-	16.86 31		P	P	07 21 08.2	-1.2
PET	Petropavlovsk	17.18 32		eP	P	07 21 14.2	+1.3
PET				eS	Sn	07 24 22.5	+0.2
PET				pmax	pmax		
	comp=Z,107nm,1.1s						
PET				MLR	MLR		
	comp=Z,2μm,15.0s						
PET				MLR	MLR		
	comp=Z,900nm,15.0s						
ZEA	Zeya	18.19 328		eP	Pn	07 21 22.4	-1.4
ZEA				pmax	pmax		
	comp=N,200nm,4.6s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=E,1μm,14.0s						
ZEA				MLR	MLR		
	comp=N,1μm,17.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,13.0s						
SSE	Sheshan	19.99 253		P	Pn	07 21 44.3	-1.4
SSE				S	S	07 25 27.0	-1.7
SSE				pmax	pmax		
	comp=Z,24nm,0.7s						
SSE				pmax	pmax		
	comp=Z,230nm,4.2s						
SSE				LR	LR		
	comp=Z,580nm,14.8s						
SSE				LR	LR		
	comp=Z,600nm,14.1s						
MA2	Magadan	20.78 10		P	P	07 21 52.0	-0.3
	comp=Z,9.1nm,0.8s,baz=190,slow=12,SNR=7.7						
MA2				LR	LR	07 30 48.3	
	comp=Z,375nm,18.3s,baz=202,slow=39 comp=Z,9.1nm,0.8s						
MA2	Magadan	20.78 10		P	Pn	07 21 53.3	-1.4
MA2				IAmb	IAmb	07 22 20.5	
	comp=Z,19nm,0.8s						
MA2	Magadan	20.78 10		i P	Pn	07 21 54.1	-0.6
MA2				pmax	pmax		
	comp=Z,12nm,0.9s						
XLT	XiLinHaoTe	20.99 291		eP	P	07 21 51.5	-3.3
XLT				SS	Sn	07 26 11.5	+17
XLT				pmax	pmax		
	comp=Z,13nm,1.5s						
XLT				pmax	pmax		
	comp=Z,280nm,5.9s						
XLT				LR	LR		
	comp=Z,1μm,14.3s						
XLT				LR	LR		
	comp=Z,1μm,16.0s						
BJI	Beijing	21.05 281		P	P	07 21 53.0	-2.3
BJI				S	S	07 25 46.3	-3.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,220nm,10.5s						
BJI				LR	LR		
	comp=Z,2μm,15.1s						
BJI				LR	LR		
	comp=Z,2μm,15.9s						
BJT	Baijiatuau	21.05 281		P	P	07 21 52.7	-2.8
BJT	Baijiatuau	21.05 281		P	P	07 21 52.7	-2.8
BJT				pmax	pmax		
	comp=Z,13nm,0.7s						
NJ2	Nanjing	21.29 258		eP	P	07 21 57.0	-1.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,780nm,11.4s						
NJ2				LR	LR		
	comp=Z,1μm,15.1s						
NJ2				LR	LR		
	comp=Z,1μm,14.0s						
HNS	HongShan	22.65 274	⇑	P	P	07 22 09.8	-2.8
HNS				S	S	07 26 17.0	-3.5
HNS				pmax	pmax		
	comp=Z,11nm,0.6s						
HNS				LR	LR		
	comp=Z,580nm,14.1s						
HNS				LR	LR		
	comp=Z,2μm,14.7s						
HNS				LR	LR		
	comp=Z,3μm,14.5s						
SEY	Seymchan	24.23 10		P	P	07 22 27.8	-0.2
	comp=Z,20nm,0.9s,baz=195,slow=8.1,SNR=28 comp=Z,20nm,0.9s						
SEY	Seymchan	24.23 10		ceP	P	07 22 29.7	+1.7
SEY				pmax	pmax		
	comp=Z,17nm,0.7s						
YAK	Yakutsk	24.26 344		P	P	07 22 27.3	-1.0
	comp=Z,9.8nm,0.3s,baz=332,slow=5.4,SNR=4.8 comp=Z,9.8nm,0.3s						
YAK	Yakutsk	24.26 344		P	P	07 22 27.1	-1.2
YAK	Yakutsk	24.26 344		eP	P	07 22 27.6	-0.7
YAK				e*PP	pwP	07 22 34.5	-0.2
YAK				eS	S	07 26 45.1	-1.5
YAK				e*SS	sS	07 26 55.9	+5.4
YAK				pmax	pmax		
	comp=Z,26nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				smax	smax		
	comp=E,118nm,3.4s						
YAK				smax	smax		
	comp=N,121nm,3.0s						
YAK				MLR	MLR		
	comp=Z,802nm,13.0s						
YAK				MLR	MLR		
	comp=N,763nm,13.0s						
YAK				MLR	MLR		
	comp=E,271nm,13.0s						
HHC	Hu-ho-hao-te	24.44 284		eP	P	07 22 32.0	+1.7
HHC				S	S	07 26 48.5	-1.7
HHC				pmax	pmax		
	comp=E,18nm,0.9s						
HHC				pmax	pmax		
	comp=E,240nm,6.2s						
HHC				LR	LR		
	comp=E,850nm,14.0s						
HHC				LR	LR		
	comp=E,4μm,16.7s						
HHC				LR	LR		
	comp=E,6μm,16.8s						
SHEM	Shemya Is, Ala	24.87 47		LR	LR	07 30 56.8	
	comp=E,141nm,21.2s,baz=314,slow=33						
LYN	LuoYang	25.22 269		eP	P	07 22 37.0	-0.3
LYN				sP	pwP	07 22 42.0	-1.3
LYN				S	S	07 27 02.3	-0.2
LYN				pmax	pmax		
	comp=E,10.0nm,0.9s						
LYN				pmax	pmax		
	comp=E,220nm,5.7s						
LYN				LR	LR		
	comp=E,1μm,14.2s						
LYN				LR	LR		
	comp=E,2μm,13.5s						
LYN				LR	LR		
	comp=E,2μm,14.1s						
WHN	Wuhan	25.40 259	⇑	P	P	07 22 38.8	-0.1
WHN				S	S	07 27 08.5	+3.1
WHN				LR	LR		
	comp=E,2μm,13.1s						
WHN				LR	LR		
	comp=E,4μm,14.9s						
WHN				LR	LR		

comp=E,4μm,15.1s
GUMO Guam 25.67 177 LR LR 07 31 42.8
comp=E,269nm,20.9s,baz=5.0,slow=34
BOD Bodaibo 26.57 324 *e*P **P** **07 22 50.5 +1.2**
BOD pmax pmax
comp=Z,23nm,1.8s
ULN Ulaanbaatar 27.56 300 P **P** **07 22 58.2 -0.3**
ULN IAmb IAmb 07 23 00.7
comp=Z,14nm,1.1s
ULN Ulaanbaatar 27.56 300 *ce*P **P** **07 22 58.9 +0.4**
ULN pmax pmax
comp=Z,14nm,1.3s
SONM Songino Array 28.00 300 P **P** **07 23 01.6 -0.7**
comp=Z,2.9nm,0.5s,baz=93,slow=9.0,SNR=22
SONM LR LR 07 34 45.2
comp=Z,2μm,18.7s,baz=84,slow=38
comp=Z,2.9nm,0.5s
SONM Songino Array 28.00 300 P **P** **07 23 02.0 -0.4**
SONM Songino Array 28.00 300 P **P** **07 23 02.0 -0.4**
SONM pmax pmax
comp=Z,7.0nm,0.8s
H11N2 WAKE ISLAND Hy 28.04 127 T T 07 52 26.9
baz=318,slow=75,SNR=322
H11N1 WAKE ISLAND Hy 28.05 127 T T 07 52 23.6
baz=318,slow=75,SNR=258
H11N3 WAKE ISLAND Hy 28.06 127 T T 07 52 26.3
baz=318,slow=75,SNR=244
XAN Xi'an 28.15 270 P **P** **07 23 05.3 +1.6**
XAN pP pwP 07 23 11.3 +1.5
XAN pmax pmax
comp=Z,14nm,1.3s
XAN LR LR
comp=Z,740nm,18.2s
XAN LR LR
comp=Z,1μm,19.0s
XAN LR LR
comp=Z,2μm,13.6s
H11S1 WAKE ISLAND Hy 28.86 129 T T 07 53 29.0
baz=319,SNR=43
H11S3 WAKE ISLAND Hy 28.86 129 T T 07 53 26.3
baz=319,slow=74,SNR=30
H11S2 WAKE ISLAND Hy 28.87 129 T T 07 53 30.6
baz=319,slow=74,SNR=28
ZAK Zakamensk 30.25 305 *e*P **P** **07 23 21.7 -0.6**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
LZH Lanzhou 31.40 277 *e*P P 07 23 37.5 +4.8
LZH sP pwP 07 23 41.5 +2.6
LZH sS sS 07 28 48.8 +4.6
LZH SS **SnSn** **07 30 16.8 -7.0**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,92nm,4.8s
LZH LR LR
comp=Z,1μm,12.9s
LZH LR LR
comp=Z,3μm,14.8s
LZH LR LR
comp=Z,3μm,15.3s
MOY Mondy 31.82 307 *e*P P 07 23 42.4 +6.3
TIXI Tiksi 33.24 352 LR LR 07 39 05.8
comp=Z,552nm,18.8s,baz=268,slow=40
GYA Guiyang 33.29 259 ⇑P **P** **07 23 50.5 +1.2**
GYA pmax pmax
comp=Z,26nm,0.8s
GTA Gaotai 33.56 284 *e*P **P** **07 23 52.5 +1.0**
GTA pP pwP 07 23 56.8 -0.9
GTA sP sP 07 23 59.3 +4.2
GTA S **S** **07 29 17.0 +3.4**
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,100nm,7.2s
GTA LR LR
comp=Z,760nm,16.4s
GTA LR LR
comp=Z,2μm,16.7s
GTA LR LR
comp=Z,3μm,17.1s
QIZ Qiongzhong 35.41 245 P **P** **07 24 08.3 +0.8**
QIZ S **S** **07 29 44.3 +2.0**
QIZ LR LR
comp=Z,620nm,14.0s
QIZ LR LR
comp=Z,690nm,13.6s
QIZ LR LR
comp=Z,1μm,15.7s
DAV Davao City (W) 35.96 211 LR LR 07 36 45.1
comp=Z,276nm,21.6s,baz=160,slow=33
KMI Kunming 36.99 260 ⇑P **P** **07 24 23.3 +2.0**
KMI S **S** **07 30 10.0 +3.2**
KMI pmax pmax
comp=Z,9.0nm,0.7s
KMI LR LR
comp=Z,650nm,14.7s
KMI LR LR
comp=Z,830nm,15.1s
KMI LR LR
comp=Z,620nm,17.2s
PZH PanZhiHua 37.03 263 P **P** **07 24 21.0 -0.5**
PZH S **S** **07 30 08.0 +0.8**
PZH sS **sS** **07 30 13.8 +2.4**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,170nm,4.9s
PZH LR LR
comp=Z,530nm,14.2s
PZH LR LR
comp=Z,690nm,14.0s
PZH LR LR
comp=Z,940nm,13.1s
GOMU GeErMu 38.28 281 P **P** **07 24 32.3 0.0**
GOMU pP pwP 07 24 36.5 -2.0
GOMU sP sP 07 24 38.3 +2.4
GOMU pmax pmax
comp=Z,14nm,0.7s
GOMU pmax pmax
comp=Z,140nm,4.1s
GOMU LR LR
comp=Z,470nm,16.3s
GOMU LR LR
comp=Z,340nm,17.3s
GOMU LR LR
comp=Z,480nm,17.3s
DGZ Jazzator, Alta 40.46 304 *i* P **P** **07 24 50.5 +0.4**
DGZ pmax pmax
comp=Z,15nm,0.6s
WMQ Urumqi 41.35 295 *e*P **P** **07 24 59.5 +2.1**
WMQ sP pwP 07 25 07.3 +3.7
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ LR LR
comp=Z,650nm,10.7s
WMQ LR LR
comp=Z,480nm,14.5s
SIJI Sorong 41.56 199 LR LR 07 40 26.2
comp=Z,203nm,18.6s,baz=49,slow=34
ZAA0 Zalesovo Array 41.65 311 P **P** **07 24 59.3 -0.3**
ZAA0 IAmb IAmb 07 25 25.2
comp=Z,8.2nm,0.8s
ZALV Zalesovo Beam 41.65 311 P **P** **07 24 59.8 +0.1**
comp=Z,5.2nm,0.4s,baz=85,slow=8.2,SNR=17
ZALV LR LR 07 43 02.2
comp=Z,517nm,18.6s,baz=78,slow=37
comp=Z,5.2nm,0.4s
ZALV Zalesovo Beam 41.65 311 P **P** **07 24 58.9 -0.7**
NRIK Noril'sk 41.92 334 P **P** **07 25 02.5 +0.9**
comp=Z,1.3nm,0.3s,baz=177,slow=4.8,SNR=4.0
NRIK LR LR 07 43 33.2
comp=Z,803nm,18.1s,baz=102,slow=38
comp=Z,1.3nm,0.3s
NRIK Noril'sk 41.92 334 *i* P **P** **07 25 00.8 -0.8**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
J20K Nowinta River 43.51 34 P **P** **07 25 16.4 +1.8**
J20K IAmb IAmb 07 25 31.2
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 43.71 255 P **P** **07 25 16.9 +0.1**
comp=Z,1.0nm,0.3s,baz=36,slow=6.7,SNR=1.7
CMAR LR LR 07 45 24.6
comp=Z,229nm,18.7s,baz=60,slow=39
comp=Z,1.0nm,0.3s
H21K Melozitna Rive 44.18 32 P **P** **07 25 21.8 +1.8**
H21K IAmb IAmb 07 25 41.4
comp=Z,14nm,1.4s

KDAK Kodiak Island 44.28 44 LR LR 07 41 07.2
comp=Z,160nm,21.9s,baz=231,slow=32
KDAK Kodiak Island 44.28 44 P **P** **07 25 21.9 +1.1**
KDAK Kodiak Island 44.28 44 P **P** **07 25 21.9 +1.1**
KDAK pmax pmax
comp=Z,39nm,1.3s
MK31 Makanchi Array 44.36 301 P **P** **07 25 21.1 -0.6**
MK31 IAmb IAmb 07 25 39.7
comp=Z,7.2nm,0.8s
MK31 Makanchi Array 44.36 301 P **P** **07 25 21.1 -0.6**
MK31 pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 44.36 301 P **P** **07 25 21.5 -0.2**
comp=Z,4.5nm,0.6s,baz=84,slow=8.2,SNR=22
MKAR LR LR 07 44 42.7
comp=Z,948nm,18.3s,baz=120,slow=37
comp=Z,4.5nm,0.6s
CAST Castle Rocks 44.38 35 P **P** **07 25 23.7 +2.1**
MAKZ Makanchi 44.57 301 P **P** **07 25 23.3 0.0**
MAKZ IAmb IAmb 07 25 36.7
comp=Z,7.7nm,0.8s
MAKZ Makanchi 44.57 301 P **P** **07 25 23.3 0.0**
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
SHL Shillong 45.13 268 P **P** **07 25 28.2 -0.1**
SHL IAmb IAmb 07 25 40.5
comp=Z,7.6nm,0.5s
SHL Shillong 45.13 268 P **P** **07 25 28.2 -0.1**
SHL pmax pmax
comp=Z,8.0nm,0.5s
H23K Yukon River 45.54 32 P **P** **07 25 32.4 +1.6**
H23K IAmb IAmb 07 25 45.0
comp=Z,18nm,1.2s
TOLK Toolik Lake Re 45.66 28 P **P** **07 25 32.2 +0.4**
TOLK IAmb IAmb 07 25 44.6
comp=Z,6.3nm,0.8s
KURK Kurchatov 45.87 307 P **P** **07 25 33.4 -0.1**
KURK Kurchatov 45.87 307 *ce*P **P** **07 25 33.5 -0.1**
KURK pmax pmax
comp=Z,13nm,0.7s
GHO Glory Hole Cre 45.88 38 P **P** **07 25 35.2 +1.6**
GHO IAmb IAmb 07 25 45.3
comp=Z,10nm,0.8s
KURBB Kurchatov Arra 45.95 307 P **P** **07 25 34.0 -0.2**
comp=Z,9.7nm,0.6s,baz=81,slow=8.3,SNR=58
comp=Z,9.7nm,0.6s
MDM Murphy Dome 46.08 33 P **P** **07 25 36.9 +1.8**
MDM IAmb IAmb 07 25 59.8
comp=Z,14nm,1.3s
H24K Noodor Dome 46.22 32 P **P** **07 25 38.0 +1.7**
H24K IAmb IAmb 07 26 18.1
comp=Z,4.8nm,0.8s
HDA Harding Lake 46.65 34 P **P** **07 25 39.9 +0.4**
HDA IAmb IAmb 07 25 51.2
comp=Z,6.8nm,0.6s
IL31 46.66 34 P **P** **07 25 40.3 +0.7**
IL31 IAmb IAmb 07 25 55.5
comp=Z,7.7nm,0.8s
ILAR Eielson Array 46.66 34 P **P** **07 25 40.6 +1.0**
comp=Z,3.7nm,0.7s,baz=262,slow=6.1,SNR=44
comp=Z,3.7nm,0.7s
GLI Glacier Island 46.82 39 P **P** **07 25 42.6 +1.7**
BRDH Bariadhala 46.84 265 LR LR 07 48 10.9
comp=Z,246nm,18.2s,baz=79,slow=40
PDGK Podgornoye 47.22 297 *i* P **P** **07 25 44.2 -0.2**
PDGK pmax pmax
comp=Z,9.0nm,0.8s
KLU Klutina 47.33 38 P **P** **07 25 46.0 +1.0**
BMAR Burnt Mountain 47.51 30 P **P** **07 25 47.3 +1.0**
SCRK Sand Creek 47.97 34 P **P** **07 25 50.6 +0.6**
SCRK IAmb IAmb 07 26 01.5
comp=Z,5.6nm,0.6s
J26L Joseph Creek 48.10 34 P **P** **07 25 52.0 +1.0**
J26L IAmb IAmb 07 26 04.3
comp=Z,3.2nm,0.7s
RAMN Ramite 48.53 273 *e*P **P** **07 25 54.9 -0.1**
GUN Gumba 48.62 275 *e*P **P** **07 25 56.0 +0.3**
comp=Z,41nm,0.4s
MCARA McCarthy VSAT 48.72 38 P **P** **07 25 57.3 +1.7**
K27K Chicken 48.80 34 P **P** **07 25 58.1 +1.8**
K27K IAmb IAmb 07 26 14.2
comp=Z,5.3nm,0.8s
PKI Pulchoki 49.15 275 *e*P **P** **07 25 59.5 -0.3**
comp=Z,12nm,0.6s
PKIN Phulchoki 49.15 275 *e*P **P** **07 25 59.1 -0.7**
comp=Z,8.3nm,0.5s
KAPI Kappang 49.29 212 LR LR 07 48 25.0
comp=Z,69nm,18.5s,baz=30,slow=38
DMN Daman 49.36 275 *e*P **P** **07 26 01.5 +0.1**
GKN Gorkha 49.53 276 *e*P **P** **07 26 02.6 +0.1**
comp=Z,18nm,0.5s
DANN Dangsing 50.04 276 *e*P **P** **07 26 07.0 +0.4**
comp=Z,80nm,0.6s
TKM2 Tokmak 2 50.04 297 *i* P **P** **07 26 06.2 -0.1**
TKM2 pmax pmax
comp=Z,12nm,1.0s
BVA0 Borovoye Array 50.30 311 *i* P **P** **07 26 07.6 -0.2**
BVAR Borovoye Array 50.30 311 LR LR 07 49 21.4
comp=Z,452nm,18.4s,baz=73,slow=38
BRVK Borovoye 50.35 311 P **P** **07 26 08.4 +0.2**
BRVK IAmb IAmb 07 26 18.8
comp=Z,7.2nm,0.8s
BRVK Borovoye 50.35 311 *ce*P **P** **07 26 08.4 +0.2**
BRVK pmax pmax
comp=Z,11nm,1.7s
KOLN Koldanda 50.45 276 *e*P **P** **07 26 08.7 -0.8**
OTUK Ortayu 50.47 305 P **P** **07 26 08.6 -0.6**
EPYK Eagle Plains 50.70 31 P **P** **07 26 12.7 +2.0**
PYUN Piuthan 50.76 277 *e*P **P** **07 26 12.1 +0.2**
comp=Z,15nm,0.4s
HNR Honiara 50.85 159 LR LR 07 45 29.2
comp=Z,2μm,22.0s,baz=324,slow=33
AAK Ala-Archa 50.90 297 LR LR 07 48 57.4
comp=Z,610nm,19.2s,baz=84,slow=38
AAK Ala-Archa 50.90 297 P **P** **07 26 13.8 +1.0**
AAK Ala-Archa 50.90 297 *i* P **P** **07 26 12.4 -0.3**
AAK pmax pmax
comp=Z,7.0nm,1.5s
KSH Kashi 51.02 293 P P 07 26 18.8 +5.1
INK Inuvik 51.58 28 P **P** **07 26 18.7 +1.5**
comp=Z,3.5nm,0.8s,baz=326,slow=9.1,SNR=4.7
INK LR LR 07 51 26.4
comp=Z,164nm,19.5s,baz=270,slow=40
comp=Z,3.5nm,0.8s
INK Inuvik 51.58 28 P **P** **07 26 18.6 +1.5**
INK IAmb IAmb 07 26 29.7
comp=Z,7.2nm,0.7s
INK Inuvik 51.58 28 P **P** **07 26 18.6 +1.5**
INK pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 53.45 299 *i* P **P** **07 26 35.1 +3.6**
PSI Prapat 54.40 240 LR LR 07 50 58.7
comp=Z,164nm,19.1s,baz=43,slow=37
SVE Sverdlovsk 54.55 318 *e*P **P** **07 26 40.0 +0.7**
SVE pmax pmax
comp=Z,27nm,0.8s
SVE MLR MLR
comp=Z,2μm,15.0s
ARU Arti 55.77 318 LR LR 07 53 03.8
comp=Z,675nm,20.0s,baz=62,slow=39
ARU Arti 55.77 318 *d i*P **P** **07 26 48.0 -0.1**
ARU 07 27 44.6
ARU 07 28 50.6
ARU S **S** **07 34 33.5 -1.0**
ARU SS **SS** **07 38 15.1 -4.3**
ARU pmax pmax
comp=Z,12nm,1.1s
ARU MLR MLR
comp=Z,1μm,15.0s
DLBC Dease Lake 55.79 39 LR LR 07 49 53.8
comp=Z,56nm,21.6s,baz=308,slow=35
DLBC Dease Lake 55.79 39 P **P** **07 26 50.8 +2.5**
AB31 Akbulak array 57.76 310 *i* P **P** **07 27 02.1 -0.2**
ABKAR Akbulak array 57.76 310 P **P** **07 27 02.1 -0.2**
ABKAR Akbulak array 57.76 310 P **P** **07 27 01.9 -0.4**
ABKAR IAmb IAmb 07 27 17.1
comp=Z,13nm,0.6s
AKTO Aktyubinsk 58.40 312 LR LR 07 55 36.1
comp=Z,158nm,18.4s,baz=358,slow=40
SPITS Spitsbergen Ar 58.60 349 LR LR 07 55 09.3
comp=Z,317nm,18.6s,baz=359,slow=39
KBS Kingsbay 58.68 350 P **P** **07 27 08.3 0.0**
KBS Kingsbay 58.68 350 P **P** **07 27 08.3 0.0**
BBB Bella Bella 59.26 46 LR LR 07 55 21.3
comp=Z,43nm,18.7s,baz=302,slow=39
KIRV Kirov 59.44 323 LR LR 07 55 08.9

comp=Z,230nm,19.4s,baz=46,slow=38
KIRV Kirov 59.44 323 *ce*P **P** **07 27 15.0 +1.2**
WR0 Warramunga Arr 59.58 190 P **P** **07 27 15.2 +0.1**
WR0 IAmb IAmb 07 27 23.4
comp=Z,5.4nm,0.7s
WRAB Tennant Creek 59.58 190 *i* P **P** **07 27 15.0 -0.2**
WRAB pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 59.59 190 P **P** **07 27 15.1 -0.2**
comp=Z,2.2nm,0.5s,baz=8.6,slow=6.9,SNR=80
comp=Z,2.2nm,0.5s
WRA Warramunga Arr 59.59 190 P **P** **07 27 15.0 -0.2**
RES Resolute Bay 59.96 15 LR LR 07 57 18.4
comp=Z,150nm,18.4s,baz=284,slow=40
YKA Yellowknife Ar 60.98 31 P **P** **07 27 25.9 +1.5**
comp=Z,1.4nm,0.8s,baz=304,slow=6.6,SNR=2.3
comp=Z,1.4nm,0.8s
ARCES ARCESS Array B 62.44 340 P **P** **07 27 34.3 +0.2**
comp=Z,3.5nm,1.0s,baz=17,slow=5.1,SNR=5.3
ARCES LR LR 08 00 47.5
comp=Z,321nm,18.3s,baz=42,slow=42
comp=Z,3.5nm,1.0s
WAPA Wapiti River 62.53 40 P **P** **07 27 35.5 +0.5**
BELG Belogornoye 63.27 317 LR LR 07 57 35.2
comp=Z,492nm,18.3s,baz=60,slow=38
BELG Belogornoye 63.27 317 *i* P **P** **07 27 40.8 +1.0**
BELG pmax pmax
comp=Z,2.0nm,1.0s
ASAR Alice Springs 63.31 190 P **P** **07 27 40.9 +0.5**
comp=Z,1.2nm,0.8s,baz=11,slow=6.2,SNR=13
ASAR LR LR 07 55 18.7
comp=Z,62nm,19.9s,baz=1.5,slow=36
comp=Z,1.2nm,0.8s
GEYT Alibeck 64.19 299 P **P** **07 27 46.4 +0.1**
comp=Z,2.0nm,0.6s,baz=300,slow=2.9,SNR=4.1
GEYT LR LR 07 57 34.1
comp=Z,308nm,18.0s,baz=98,slow=38
comp=Z,2.0nm,0.6s
PALK Pallekele 64.49 258 LR LR 07 57 47.5
comp=Z,129nm,19.2s,baz=151,slow=38
DZM Mont Dzumac 64.73 156 *e*LR LR 07 47 13.0
comp=Z,260nm,22.0s
DZM Mont Dzumac 64.73 156 LR LR 07 51 20.6
comp=Z,148nm,21.7s,baz=20,slow=32
MSVF Nonsavu 65.29 144 LR LR 07 52 02.9
comp=Z,167nm,19.6s,baz=14,slow=32
OBN Obninsk 67.26 323 ⇑ *e*P **P** **07 28 03.8 -1.9**
OBN *e* 07 30 39.6
OBN *e*S **S** **07 37 05.2 +5.0**
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,888nm,16.0s
NEW Newport 67.32 46 LR LR 07 56 00.6
comp=Z,35nm,21.3s,baz=293,slow=35
AFI Afiamalu 67.37 132 LR LR 07 54 02.9
comp=Z,129nm,20.1s,baz=340,slow=33
FINES FINESS Array B 67.56 333 P **P** **07 28 07.5 0.0**
comp=Z,2.6nm,0.7s,baz=52,slow=3.1,SNR=7.0
FINES LR LR 08 00 37.3
comp=Z,804nm,18.3s,baz=41,slow=39
comp=Z,2.6nm,0.7s
FINES FINESS Array B 67.56 333 *i* P **P** **07 28 10.8 +3.3**
FINES pmax pmax
comp=Z,2.0nm,0.6s
YBH Yreka Blue Hor 67.63 54 LR LR 07 52 14.9
comp=Z,48nm,21.1s,baz=327,slow=31
ZEI Tsey 70.63 310 *e*P **P** **07 28 25.7 -1.5**
ZEI pmax pmax
comp=Z,2.0nm,0.6s
KIV Kislovodsk 70.66 311 *e*P **P** **07 28 29.0 +1.8**
KIV pmax pmax
comp=Z,17nm,1.1s
KBZ Khabaz 70.67 311 P **P** **07 28 28.0 +0.9**
comp=Z,5.2nm,0.8s,baz=52,slow=2.5,SNR=10
KBZ LR LR 08 05 03.9
comp=Z,250nm,18.3s,baz=33,slow=41
comp=Z,5.2nm,0.8s
KBZ Khabaz 70.67 311 *ce*P **P** **07 28 28.2 +1.1**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
SHA1 Shidzhatmaz 70.81 311 *i* P **P** **07 28 28.8 +0.5**
STKA Stephens Creek 70.87 182 LR LR 07 59 06.6
comp=Z,57nm,21.2s,baz=22,slow=36
ONI Oni 71.02 310 P **P** **07 28 31.3 +1.9**
HRY Holter Researc 71.14 45 P **P** **07 28 31.5 +1.4**
CMB Columbia Colle 71.19 56 P **P** **07 28 32.1 +1.7**
CMB Columbia Colle 71.19 56 P **P** **07 28 32.2 +1.7**
CMB pmax pmax
comp=Z,3.0nm,0.8s
MNK Minsk 71.53 326 *i* P **P** **07 28 32.0 -0.1**
MNK *i* 07 28 51.0
MNK *i* 07 31 10.7
MNK *i* PPP PPP 07 32 54.5
MNK *i* S **S** **07 37 49.3 -1.3**
MNK *i* 07 38 34.3
MNK *i* SS **SS** **07 42 25.7 +1.1**
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=N,24nm,0.7s
MNK pmax pmax
comp=Z,11nm,0.7s
MNK MLR MLR
comp=E,60nm,18.0s
MNK MLR MLR
comp=N,442nm,17.0s
MNK MLR MLR
comp=Z,591nm,17.0s
MNK Minsk 71.53 326 *i* P **P** **07 28 32.0 -0.1**
comp=E,4.0nm,0.9s
MNK *i* P **P** **07 28 32.0 -0.1**
comp=N,24nm,0.7s
MNK *i* P **P** **07 28 32.0 -0.1**
comp=Z,11nm,0.7s,baz=227
MNK *i* PcP **PcP** **07 28 51.0 -0.5**
MNK *i* PP **PP** **07 31 10.8 +0.6**
MNK *i* PPP PPP 07 32 54.5
MNK *i* S **S** **07 37 49.3 -1.3**
MNK *i* SS **SS** **07 42 25.7 +1.1**
MNK *i* SSS SSS 07 45 45.6
MNK *i* LQ LQ 07 55 07.5
MNK *i* LR LR 08 00 39.3
MNK *i* LRM MLR 08 02 47.1
comp=E,60nm,17.9s
MNK *i* LRM MLR 08 02 56.7
comp=N,442nm,16.6s
MNK *i* LRM MLR 08 03 01.2
comp=Z,591nm,16.6s
GNI Garni 71.67 307 LR LR 08 04 07.4
comp=Z,217nm,18.6s,baz=59,slow=39
NACGM Naroch 71.72 327 *e*P **P** **07 28 35.4 +2.1**
comp=Z,22nm,1.0s,baz=47
WSAR Wadi Sarin 71.88 285 LR LR 08 04 20.0
comp=Z,185nm,18.1s,baz=97,slow=39
NVAR Mina Array Bea 72.28 55 P **P** **07 28 39.2 +1.9**
comp=Z,2.2nm,0.8s,baz=286,slow=6.3,SNR=20
comp=Z,2.2nm,0.8s
YHL Hebgen Lake 72.64 46 P **P** **07 28 41.5 +2.1**
YHL IAmb IAmb 07 28 52.2
comp=Z,4.3nm,0.8s
HFS Hagfors 72.68 336 LR LR 08 03 55.8
comp=Z,389nm,18.9s,baz=29,slow=39
NB2 NORSAR Subarra 72.71 338 P **P** **07 28 39.2 +0.1**
comp=Z,7.7nm,0.9s,baz=36,slow=6.2
NOA NORSAR Array B 72.71 338 P **P** **07 28 39.0 -0.2**
comp=Z,1.4nm,0.8s,baz=38,slow=6.0,SNR=3.6
NOA LR LR 08 04 36.8
comp=Z,243nm,19.4s,baz=35,slow=39
comp=Z,1.4nm,0.8s
NOA NORSAR Array B 72.71 338 P **P** **07 28 39.0 -0.2**
ELK Elko 72.80 51 LR LR 07 58 34.2
comp=Z,30nm,20.0s,baz=320,slow=34
SFJD Kangerlussuaq 73.45 6 LR LR 08 04 07.7
comp=Z,209nm,19.1s,baz=343,slow=38
AKASG Malin Array Be 73.50 323 P **P** **07 28 43.4 -0.5**
comp=Z,1.4nm,0.6s,baz=45,slow=6.2,SNR=8.4
AKASG LR LR 08 05 01.6
comp=Z,256nm,18.7s,baz=58,slow=39
comp=Z,1.4nm,0.6s
AKASG Malin Array Be 73.50 323 *i* P **P** **07 28 44.2 +0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
R11A Troy Canyon, C 74.04 53 P **P** **07 28 49.1 +1.5**
FRB Frobisher Bay 74.15 14 LR LR 08 06 16.2
comp=Z,218nm,18.3s,baz=7.5,slow=40
DUG Dugway, Tooele 74.59 51 P **P** **07 28 52.5 +1.7**

DUG	**Dugway, Tooele**	**74.59**	**51**	P	**P**	**07 28 52.5**	**+1.7**
DUG				pmax	pmax		
comp=Z,3.0nm,0.7s							
PD31	**Pinedale Array**	**74.87**	**47**	P	**P**	**07 28 52.9**	**+0.5**
PDAR	**Pinedale Array**	**74.87**	**47**	P	**P**	**07 28 53.6**	**+1.2**
comp=Z,2.2nm,0.8s,baz=264,slow=2.0,SNR=20							
PDAR				LR	LR	08 00 37.8	
comp=Z,30nm,20.0s,baz=334,slow=35							
comp=Z,2.2nm,0.8s							
PDAR	**Pinedale Array**	**74.87**	**47**	P	**P**	**07 28 53.2**	**+0.8**
PFO	**Pinyon Flats O**	**76.38**	**58**	LR	LR	07 55 19.5	
comp=Z,76nm,21.1s,baz=320,slow=30							
BRTR	**Keskin Array B**	**78.57**	**312**	P	**P**	**07 29 13.1**	**-0.2**
comp=Z,1.1nm,0.9s,baz=96,slow=1.2,SNR=4.3							
BRTR				LR	LR	08 08 40.5	
comp=Z,287nm,18.1s,baz=35,slow=39							
comp=Z,1.1nm,0.9s							
BRTR	**Keskin Array B**	**78.57**	**312**	*i* P	**P**	**07 29 15.8**	**+2.6**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.5s							
MLR	**Muntele Rosu**	**78.70**	**321**	LR	LR	08 07 31.9	
comp=Z,311nm,19.3s,baz=39,slow=38							
VRAC	**Vranov**	**80.09**	**328**	LR	LR	08 08 08.3	
comp=Z,638nm,18.0s,baz=24,slow=38							
RAR	**Rarotonga**	**80.19**	**128**	LR	LR	07 57 45.1	
comp=Z,149nm,21.2s,baz=290,slow=30							
RAYN	**Ar Rayn**	**81.32**	**293**	P	**P**	**07 29 28.2**	**-0.1**
RAYN				pmax	pmax		
comp=Z,1.0nm,0.9s							
KHC	**Kasperske Hory**	**81.44**	**329**	*e*P	**P**	**07 29 29.0**	**+0.5**
KHC				*e*		07 29 35.8	
KHC	**Kasperske Hory**	**81.44**	**329**	*e*P	**P**	**07 29 29.0**	**+0.5**
KHC				*e*pP	**pwP**	**07 29 35.8**	**+0.6**
EKA	**Eskdalemuir Ar**	**81.51**	**342**	LR	LR	08 10 38.6	
comp=Z,141nm,18.0s,baz=352,slow=39							
GERES	**GERESS Array B**	**81.62**	**329**	P	**P**	**07 29 29.9**	**+0.4**
comp=Z,0.5nm,0.5s,baz=39,slow=6.8,SNR=4.6							
GERES				LR	LR	08 09 13.4	
comp=Z,350nm,18.3s,baz=11,slow=38							
comp=Z,0.5nm,0.5s							
ANMO	**Albuquerque**	**81.84**	**51**	LR	LR	08 04 46.7	
comp=Z,36nm,18.7s,baz=334,slow=35							
MMAI	**Mount Meron Ar**	**81.98**	**306**	LR	LR	08 10 11.7	
comp=Z,334nm,19.0s,baz=297,slow=39							
SCHQ	**Schefferville**	**82.66**	**17**	LR	LR	08 09 49.8	
comp=Z,103nm,19.1s,baz=36,slow=38							
PPT	**Papeete**	**84.20**	**118**	LR	LR	08 05 05.1	
comp=Z,135nm,19.1s,baz=287,slow=34							
PPT2	**Papeete2**	**84.21**	**118**	*e*LR	LR	07 56 16.0	
comp=Z,302nm,22.8s							
EIL	**Elat**	**84.51**	**304**	LR	LR	08 12 18.9	
comp=Z,197nm,18.3s,baz=57,slow=39							
FUORN	**Ofenpass-Fuorn**	**84.79**	**330**	P	**P**	**07 29 46.4**	**+0.3**
DAVOX	**Davos/Dischmat**	**84.80**	**330**	LR	LR	08 11 15.9	
comp=Z,393nm,19.6s,baz=36,slow=38							
TAOE	**Nuku Hiva Isla**	**85.13**	**105**	*e*LR	LR	07 56 40.8	
comp=Z,229nm,21.2s							
RPZ	**Rata Peaks**	**86.33**	**160**	LR	LR	08 04 43.1	
comp=Z,123nm,19.3s,baz=352,slow=33							
LPIG	**La Paz**	**86.61**	**62**	LR	LR	08 06 08.7	
comp=Z,71nm,18.1s,baz=290,slow=34							
TXAR	**Lajitas Array**	**87.40**	**54**	P	**P**	**07 29 59.9**	**+0.8**
comp=Z,0.6nm,0.7s,baz=294,slow=3.5,SNR=7.1							
TXAR				LR	LR	08 04 57.4	
comp=Z,42nm,22.0s,baz=328,slow=33							
comp=Z,0.6nm,0.7s							
SADO	**Sadowa**	**87.88**	**29**	LR	LR	08 14 03.4	
comp=Z,78nm,18.2s,baz=4.5,slow=39							
TBI	**Tubuai**	**88.29**	**122**	*e*LR	LR	07 58 09.6	
comp=Z,578nm,23.0s							
TKL	**Tuckaleechee C**	**93.55**	**37**	LR	LR	08 14 02.6	
comp=Z,51nm,21.2s,baz=331,slow=36							
KEST	**Kesra**	**94.18**	**324**	LR	LR	08 17 55.9	
comp=Z,297nm,18.3s,baz=326,slow=39							
ESDC	**Sonseca Array**	**95.94**	**335**	LR	LR	08 19 14.5	
comp=Z,281nm,18.4s,baz=6.5,slow=39							
TROLL	**Troll, Antarti**	**141.94**	**198**	PKPdf	**PKPdf**	**07 36 37.8**	**-4.5**
SNAA	**Sanae**	**143.43**	**197**	PKPdf	PKPbc	07 36 42.2	0.0
LPAZ	**La Paz**	**144.08**	**59**	PKP	**PKPdf**	**07 36 47.8**	**-0.6**
comp=Z,0.7nm,0.6s,baz=54,slow=10,SNR=4.0							
VNA2	**Neumayer--Watz**	**144.99**	**196**	PKPdf	**PKPdf**	**07 36 47.7**	**+0.2**
baz=134,slow=3.0							
VNA3	**Neumayer Olymp**	**145.21**	**195**	PKPdf	**PKPdf**	**07 36 48.1**	**+0.1**
VNA1	**Neumayer--Stat**	**145.38**	**196**	PKPdf	**PKPab**	**07 36 47.9**	**-0.4**

*IDC **29** 07:24:04.5±1.2, 34°.47N×141°.70E, h0km, mb3.5/4, mbtmp3.7/7, ML2.9/2, Error ellipse: s-maj=26.5km s-min=19.7km az=93.0*
*JMA **29** 07:24:04.7±0.5, 35°.N±1°.×14°.2E±°, h31km±2km, MV3.0/23, FAR SE OFF BOSO PEN*
ISC 29 07:24:07.5±1.0, 34°.49N±0°.05×141°.62E±0°.08, h27km, n13, σ1§70/18, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.56**	**287**	P	**Pb**	**07 24 17.1**	**-1.3**
BSO1				X		07 24 27.8	
BSO3	**Boso 3**	**0.97**	**289**	*e*P	**Pn**	**07 24 23.8**	**-1.3**
BSO4	**Boso 4**	**1.17**	**296**	P	**Pn**	**07 24 27.1**	**-0.9**
JKUC	**kamogawauchiur**	**1.35**	**300**	*e*P	**Pn**	**07 24 28.9**	**-1.6**
JKUC				*e*S	**Sn**	**07 24 46.6**	**-0.9**
CHOJ	**Chosi**	**1.36**	**333**	*e*P	**Pn**	**07 24 28.4**	**-2.4**
JMKN	**Mikurajimanish**	**1.79**	**251**	*e*P	**Pn**	**07 24 36.1**	**-0.5**
JMKN				*e*S	**Sn**	**07 24 58.8**	**+0.4**
JHJ	**Hachijo jima 2**	**2.05**	**229**	Pn	**Pn**	**07 24 40.5**	**+0.2**
31nm,0.3s,baz=306,slow=23,SNR=8.5							
JHJ				Sn	**Sb**	**07 25 07.4**	**-1.8**
70nm,0.3s,baz=72,slow=22,SNR=8.2							
114nm,0.4s							
MJAR	**Matsushiro Arr**	**3.46**	**307**	Pn	**Pn**	**07 24 59.7**	**+0.1**
0.3nm,0.3s,baz=230,slow=14,SNR=5.9							
MJAR				Sn	**Sn**	**07 25 41.3**	**+1.7**
0.4nm,0.3s,baz=158,slow=20,SNR=5.4							
2.0nm,0.4s							
JCJ	**Chichijima**	**7.39**	**176**	Pn	**Pn**	**07 25 54.0**	**+0.4**
24nm,0.3s,baz=307,slow=21,SNR=7.7							
JCJ				Sn	**Sn**	**07 27 13.2**	**-3.3**
4.2nm,0.3s,baz=200,slow=18,SNR=1.8							
MKAR	**Makanchi Array**	**45.65**	**304**	P	**P**	**07 32 29.0**	**+3.3**
0.4nm,0.7s,baz=82,slow=13,SNR=3.2							
0.4nm,0.7s							
ILAR	**Eielson Array**	**51.56**	**31**	P	**P**	**07 33 10.9**	**+0.1**
0.7nm,0.8s,baz=268,slow=5.8,SNR=7.1							
0.7nm,0.8s							
WRA	**Warramunga Arr**	**54.57**	**188**	P	**P**	**07 33 34.1**	**+0.6**
0.3nm,0.4s,baz=1.2,slow=7.6,SNR=17							
0.3nm,0.4s							
ASAR	**Alice Springs**	**58.30**	**188**	P	**P**	**07 34 00.9**	**+0.9**
0.3nm,0.8s,baz=358,slow=5.7,SNR=5.0							
0.3nm,0.8s							

*BUL **29** 07:50:11.3±1.3, 26°.42S×30°.36E, h10km, MD3.4*
EAF 29 07:50:07.4±1.6, 26°.52S×30°.69E, h10km, MD3.4, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.05**	**12**	*i* P	Pn	07 50 53.5	-2.3
MOPA				*i* S	Sn	07 51 26.7	-5.7
MOPA	**Mopani**	**3.05**	**12**	*i* P	Pn	07 50 55.2	-0.6
MOPA				*e*S	Sn	07 51 29.8	-2.7
MOPA	**Mopani**	**3.05**	**12**	*i* P	Pn	07 50 55.2	-0.6
MOPA				*e*S	Sn	07 51 29.8	-2.7
MUSN	**Musina, Limpop**	**4.28**	**350**	*i* P	Pn	07 51 12.4	-0.3
MUSN				*i* S	Sn	07 51 59.1	-3.5
MUSN	**Musina, Limpop**	**4.28**	**350**	*i* P	Pn	07 51 13.4	+0.7
MUSN				*e*S	Sn	07 51 59.7	-3.0
MUSN	**Musina, Limpop**	**4.28**	**350**	*i* P	Pn	07 51 13.4	+0.7
MUSN				*e*S	Sn	07 51 59.7	-3.0
BOSA	**Boshof**	**5.26**	**245**	*i* P	Pn	07 51 24.5	-1.7
BOSA				*i* S	Sn	07 52 20.0	-7.0
BOSA	**Boshof**	**5.26**	**245**	*i* P	Pn	07 51 26.1	-0.1
BOSA				*i* S	Sn	07 52 21.7	-5.3
BOSA	**Boshof**	**5.26**	**245**	*i* P	Pn	07 51 26.1	-0.1
BOSA				*i* S	Sn	07 52 21.7	-5.3
MATP	**Matopo**	**6.39**	**341**	*i* P	Pn	07 51 40.7	-1.0
MATP				*i* S	Sn	07 52 47.0	-7.8
MATP	**Matopo**	**6.39**	**341**	*i* P	Pn	07 51 42.7	+1.0
MATP				*e*S	Sn	07 52 49.0	-5.8
MATP	**Matopo**	**6.39**	**341**	*i* P	Pn	07 51 42.7	+1.0
MATP				*e*S	Sn	07 52 49.0	-5.8

IDC 29 07:50:26.0±8.2, 18°.13S×177°.16W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=356.1km s-min=41.9km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.76**	**260**	P	P	07 58 49.7	0.0
0.4nm,0.9s,baz=97,slow=7.6,SNR=6.9							
0.4nm,0.9s							
ASAR	**Alice Springs**	**45.88**	**254**	P	P	07 58 50.4	-0.2
0.4nm,0.6s,baz=85,slow=8.9,SNR=6.1							
0.4nm,0.6s							
ILAR	**Eielson Array**	**85.84**	**13**	P	P	08 03 07.0	-0.1
0.5nm,1.0s,baz=215,slow=6.2,SNR=2.1							
0.5nm,1.0s							

*IDC **29** 08:02:15.6±1.2, 17°.64S×178°.90W, h516km±14km, mb3.3/10, mbtmp4.2/13, Error ellipse: s-maj=19.0km s-min=12.3km az=137.0*
ISC 29 08:02:16.4±0.6, 17°.5S±0°.2×178°.9W±0°.1, h539km, n15, σ1§96/17, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.95**	**265**	P	**P**	**08 03 29.1**	**-1.1**
28nm,0.7s,baz=72,slow=5.9,SNR=17							
AFI	**Afiamalu**	**7.71**	**63**	P	**P**	**08 04 09.1**	**-2.0**
83nm,0.6s,baz=44,slow=5.4,SNR=15							
AFI				S	**S**	**08 05 41.0**	**-4.1**
23nm,0.4s,baz=114,slow=16,SNR=4.2							
DZM	**Mont Dzumac**	**14.54**	**249**	P	**P**	**08 05 19.7**	**-1.7**
2.1nm,0.4s,baz=332,slow=13,SNR=1.6							
URZ	**Urewera**	**20.96**	**189**	P	**P**	**08 06 19.1**	**-2.4**
4.7nm,0.3s,baz=325,slow=2.8,SNR=15							
4.7nm,0.3s							
STKA	**Stephens Creek**	**38.43**	**241**	P	**P**	**08 08 53.0**	**+0.9**
2.8nm,0.3s,baz=84,slow=9.6,SNR=16							
2.8nm,0.3s							
WRA	**Warramunga Arr**	**44.27**	**259**	P	**P**	**08 09 37.8**	**-0.7**
0.9nm,0.8s,baz=97,slow=7.5,SNR=18							
0.9nm,0.8s							
ASAR	**Alice Springs**	**44.48**	**254**	P	**P**	**08 09 40.4**	**+0.3**
6.1nm,0.4s,baz=90,slow=8.1,SNR=127							
ASAR				S	**S**	**08 15 34.9**	**-1.4**
1.8nm,1.2s,baz=86,slow=17,SNR=5.7							
6.1nm,0.4s							
VNDA	**Vanda**	**60.79**	**185**	P	**P**	**08 11 36.8**	**+1.1**
1.0nm,1.0s,baz=354,slow=4.6,SNR=5.0							
1.0nm,1.0s							
QSPA	**South Pole Qui**	**72.53**	**180**	P	**P**	**08 12 49.7**	**+1.2**
4.3nm,1.0s,baz=353,slow=0.4,SNR=17							
4.3nm,1.0s							
NVAR	**Mina Array Bea**	**79.45**	**44**	P	**P**	**08 13 28.9**	**+1.6**
1.7nm,0.9s,baz=225,slow=9.7,SNR=11							
1.7nm,0.9s							
ILAR	**Eielson Array**	**85.61**	**13**	P	**P**	**08 13 58.1**	**+0.7**
1.3nm,0.9s,baz=224,slow=5.1,SNR=18							
1.3nm,0.9s							
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**08 14 04.2**	**+3.2**
1.3nm,0.8s,baz=222,slow=6.6,SNR=13							
1.3nm,0.8s							
PDAR	**Pinedale Array**	**87.38**	**44**	P	**P**	**08 14 08.4**	**+1.8**
0.4nm,0.4s,baz=208,slow=2.2,SNR=6.6							
0.4nm,0.4s							
BRTR	**Keskin Array B**	**144.20**	**315**	PKP	**PKPdf**	**08 20 52.3**	**+0.9**
0.8nm,0.4s,baz=139,slow=3.6,SNR=5.0							
GERES	**GERESS Array B**	**147.13**	**345**	PKPbc	**PKiKP**	**08 21 00.7**	**-0.2**
0.6nm,0.4s,baz=44,slow=6.5,SNR=5.6							

*IDC **29** 08:05:19.3±3.1, 33°.21S×178°.71W, h0km, mb3.6/2, mbtmp3.8/3, ML4.0/1, MS3.4/3, Error ellipse: s-maj=72.5km s-min=36.1km az=115.0*
*WEL **29** 08:05:23.3±0.8, 33°.S±4°.×17°.9W±°, h137km±31km, M4.4/10, mB4.8/7, ML4.8/7, MLv4.6/10, Mw(mB)4.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1*
ISC 29 08:05:24.4±1.2, 33°.08S±0°.07×178°.8W±0°.1, h35km, n29, σ1§68/35, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.88**	**11**	P	**Pn**	**08 06 20.2**	**-1.2**
GLKZ				S	**Sn**	**08 07 07.2**	**+1.4**
MXZ	**Matakaoa Point**	**5.07**	**207**	P	**Pn**	**08 06 38.6**	**+0.8**
MXZ				S	**Sn**	**08 07 33.5**	**-1.6**
WMGZ	**Waiomatatini S**	**5.25**	**205**	P	**Pn**	**08 06 42.2**	**+1.8**
WMGZ				S	**Sn**	**08 07 42.4**	**+2.7**
PKGZ	**Pakihiroa**	**5.44**	**207**	P	**Pn**	**08 06 42.5**	**-0.6**
PKGZ				S	**Sn**	**08 07 44.4**	**0.0**
HAZ	**Te Kaha**	**5.44**	**210**	P	**Pn**	**08 06 44.4**	**+1.4**
HAZ				S	**Sn**	**08 07 47.4**	**+3.0**
PUZ	**Puketiti**	**5.54**	**205**	P	**Pn**	**08 06 44.8**	**+0.5**
PUZ				S	**Sn**	**08 07 44.7**	**-2.0**
RUGZ	**Raukumara Rang**	**5.67**	**210**	P	**Pn**	**08 06 46.3**	**+0.1**
RUGZ				S	**Sn**	**08 07 50.9**	**+0.8**
TWGZ	**Tauwhareparae**	**5.73**	**206**	P	**Pn**	**08 06 48.5**	**+1.5**
TWGZ				S	**Sn**	**08 07 51.5**	**0.0**
TKGZ	**Te Karaka**	**6.01**	**206**	P	**Pn**	**08 06 52.2**	**+1.4**
TKGZ				S	**Sn**	**08 07 56.3**	**-2.0**
MWZ	**Matawai**	**6.04**	**209**	P	**Pn**	**08 06 49.3**	**-2.0**
MWZ				S	**Sn**	**08 07 57.9**	**-1.3**
URZ	**Urewera**	**6.15**	**212**	Pn	**Pn**	**08 06 51.7**	**-1.1**
4.0nm,0.3s,baz=2.0,slow=6.1,SNR=18							
URZ				Sn	**Sn**	**08 07 59.0**	**-2.9**
2.6nm,0.3s,baz=205,slow=9.5,SNR=8.2							
15nm,0.5s							
URZ	**Urewera**	**6.15**	**212**	P	**Pn**	**08 06 52.1**	**-0.6**
URZ				S	**Sn**	**08 08 02.0**	**+0.1**
RAGZ	**Rawiri**	**6.22**	**209**	P	**Pn**	**08 06 54.5**	**+0.7**
RAGZ				S	**Sn**	**08 08 02.6**	**-1.2**
RIGZ	**Rimuhau**	**6.28**	**206**	P	**Pn**	**08 06 55.2**	**+0.8**
RIGZ				S	**Sn**	**08 08 05.1**	**+0.1**
RTZ	**Ruatahuna**	**6.51**	**211**	P	**Pn**	**08 06 56.4**	**-1.3**
RTZ				S	**Sn**	**08 08 08.4**	**-2.4**
OUZ	**Omahuta**	**6.67**	**249**	P	**Pn**	**08 07 03.0**	**+3.2**
OUZ				S	**Sn**	**08 08 11.1**	**-3.5**
CTZ	**Chatham Island**	**10.78**	**172**	S	Sn	08 09 44.5	-11
DZM	**Mont Dzumac**	**17.05**	**306**	LR	LR	08 14 33.5	
comp=Z,150nm,21.1s,baz=104,slow=32							
CTA	**Charters Tower**	**33.67**	**284**	LR	LR	08 25 00.0	
comp=Z,52nm,18.6s,baz=81,slow=35							
ASAR	**Alice Springs**	**42.37**	**270**	P	**P**	**08 13 16.4**	**+0.9**
0.5nm,0.7s,baz=113,slow=7.2,SNR=4.4							
0.5nm,0.7s							
WRA	**Warramunga Arr**	**43.60**	**275**	P	**P**	**08 13 25.7**	**+0.2**
0.8nm,0.6s,baz=118,slow=7.7,SNR=6.8							
0.8nm,0.6s							
MAW	**Mawson**	**69.58**	**201**	LR	LR	08 45 32.5	
comp=Z,30nm,19.3s,baz=61,slow=35							
H03S2	**Juan Fernandez**	**79.55**	**124**	T	T	09 45 56.2	
baz=235,slow=74,SNR=3.8							
H03S1	**Juan Fernandez**	**79.56**	**124**	T	T	09 46 02.4	
baz=235							
H03S3	**Juan Fernandez**	**79.57**	**123**	T	T	09 46 05.4	
baz=235,slow=74,SNR=3.1							
H03N3	**Juan Fernandez**	**79.76**	**123**	T	T	09 46 08.8	
baz=240,slow=72,SNR=5.0							
H03N2	**Juan Fernandez**	**79.76**	**123**	T	T	09 46 10.8	
baz=240,slow=72,SNR=4.2							
H03N1	**Juan Fernandez**	**79.77**	**123**	T	T	09 46 06.2	
baz=240,slow=72,SNR=5.6							
FINES	**FINESS Array B**	**147.40**	**338**	PKPbc	**PKPbc**	**08 25 03.7**	**0.0**
2.2nm,0.8s,baz=29,slow=4.4,SNR=5.9							

*IDC **29** 08:07:31.2±0.6, 57°.89S×25°.75W, h58km±5km, mb4.2/12, mbtmp4.4/14, MS3.5/18, Error ellipse: s-maj=16.0km s-min=13.7km az=74.0*
*NEIC **29** 08:07:32.4±1.9, 57°.89S±0°.09×25°.5W±0°.2, h70km±6km, mb4.6/37, Error ellipse: s-maj=20.3km s-min=9.2km az=57.0*
ISC 29 08:07:29.5±0.4, 57°.96S±0°.07×25°.41W±0°.08, h49km, n218, σ1§13/205, mb4.6/24, MS3.5/17, 2C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.20**	**296**	Pn	**Pn**	08 09 15.3	+3.2
VNA1	**Neumayer--Stat**	**14.65**	**157**	P	**Pn**	**08 10 54.5**	**+1.1**
VNA3	**Neumayer Olymp**	**14.86**	**160**	P	**Pn**	**08 10 56.7**	**+0.5**
VNA2	**Neumayer--Watz**	**15.05**	**157**	P	**Pn**	**08 10 59.3**	**+0.6**
baz=317,slow=14							
SNAA	**Sanae**	**16.59**	**155**	P	**P**	**08 11 20.3**	**+0.1**
SNAA	**Sanae**	**16.59**	**155**	P	**P**	**08 11 20.8**	**+0.5**
17nm,0.5s,baz=326,slow=18,SNR=277							
SNAA				S	**Sn**	**08 14 12.7**	**-8.7**
1.4nm,0.5s,baz=304,slow=14,SNR=2.8							
SNAA				LR	LR	08 16 26.0	
comp=Z,190nm,21.4s,baz=10.0,slow=32							
SNAA	**Sanae**	**16.59**	**155**	P	**P**	**08 11 20.4**	**+0.1**
SNAA				IAmb	IAmb	08 11 23.1	
comp=Z,22nm,0.5s							
TROLL	**Troll, Antarti**	**18.09**	**152**	P	**Pn**	**08 11 39.3**	**+2.3**
PMSA	**Palmer Station**	**19.46**	**233**	P	**Pn**	**08 11 52.2**	**-1.0**
comp=Z,4.9nm,0.7s,baz=90,slow=6.6,SNR=6.4							
PMSA	**Palmer Station**	**19.46**	**233**	P	**Pn**	**08 11 54.1**	**+0.9**
BELA	**Belgrano 2**	**20.25**	**186**	P	Pn	08 12 01.3	-1.2
BELA				IAmb	IAmb	08 12 17.7	
comp=Z,43nm,1.5s							
SMAI	**San Martin Ant**	**21.00**	**224**	P	**P**	**08 12 11.2**	**+2.9**
SMAI				IAmb	IAmb	08 12 30.9	
comp=Z,18nm,0.8s							
MG02	**Cerro Sombrero**	**25.07**	**263**	P	**P**	**08 12 48.9**	**-0.1**
MG05	**Puerto Natales**	**27.37**	**263**	P	**P**	**08 13 12.0**	**+2.3**
GO09	**Cerro Castillo**	**27.50**	**264**	P	**P**	**08 13 11.3**	**+0.4**
GO09				IAmb	IAmb	08 13 39.9	
comp=Z,30nm,1.3s							
QSPA	**South Pole Qui**	**32.28**	**180**	P	**P**	**08 13 55.1**	**+1.8**
comp=Z,3.3nm,0.7s,baz=213,slow=2.0,SNR=17							
QSPA				LR	LR	08 26 19.7	
comp=Z,118nm,20.8s,baz=242,slow=35							
comp=Z,3.3nm,0.7s							
QSPA	**South Pole Qui**	**32.28**	**180**	P	**P**	**08 13 54.9**	**+1.6**
PLTB	**Pedras Altas**	**32.50**	**311**	P	**P**	**08 13 54.4**	**-1.0**
PLTB				IAmb	IAmb	08 14 00.5	
comp=Z,22nm,1.3s							
PLCA	**Paso Flores**	**33.31**	**281**	P	**P**	**08 14 00.8**	**-1.6**
comp=Z,4.7nm,1.2s,baz=197,slow=4.8,SNR=7.0							
comp=Z,4.7nm,1.2s							
PLCA	**Paso Flores**	**33.31**	**281**	P	**P**	**08 14 01.8**	**-0.6**
PLCA				IAmb	IAmb	08 14 02.0	
comp=Z,15nm,1.4s							
MAW	**Mawson**	**38.03**	**142**	P	**P**	**08 14 44.5**	**+2.1**
comp=Z,3.3nm,0.7s,baz=223,slow=9.2,SNR=8.4							
MAW				LR	LR	08 28 49.1	
comp=Z,62nm,19.5s,baz=272,slow=34							
comp=Z,3.3nm,0.7s							
MAW	**Mawson**	**38.03**	**142**	P	**P**	**08 14 43.1**	**+0.7**
GO05	**Huala**	**38.34**	**286**	P	**P**	**08 14 45.8**	**+0.3**
CPUP	**Villa Florida**	**38.80**	**311**	P	**P**	**08 14 47.7**	**-1.7**
comp=Z,1.1nm,0.5s,baz=132,slow=8.9,SNR=3.8							
CPUP				LR	LR	08 29 06.6	
comp=Z,60nm,19.3s,baz=198,slow=34							
comp=Z,1.1nm,0.5s							
CPUP	**Villa Florida**	**38.80**	**311**	P	**P**	**08 14 48.9**	**-0.4**
CPUP				IAmb	IAmb	08 15 07.9	
comp=Z,7.0nm,1.1s							
MT09	**Talagante**	**38.83**	**288**	P	**P**	**08 14 49.2**	**-0.5**
MT09				IAmb	IAmb	08 15 23.7	
comp=Z,12nm,1.4s							
MT02	**Curacav**	**39.32**	**289**	P	**P**	**08 14 53.6**	**0.0**
MT02				IAmb	IAmb	08 15 11.2	
comp=Z,12nm,0.9s							
SUR	**Sutherland**	**40.27**	**71**	LR	LR	08 28 47.4	
comp=Z,33nm,19.1s,baz=128,slow=32							
GO04	**Tololo Observa**	**41.64**	**292**	P	**P**	**08 15 14.1**	**+1.0**
GO04				IAmb	IAmb	08 15 44.2	
comp=Z,10nm,1.3s							
AC05	**El Transito**	**42.48**	**294**	P	**P**	**08 15 19.6**	**-0.2**
AC05				IAmb	IAmb	08 15 38.6	
comp=Z,6.1nm,0.7s							
AC04	**Llanos de Chal**	**43.40**	**293**	P	**P**	**08 15 26.8**	**-0.3**
AC04				IAmb	IAmb	08 15 45.7	
comp=Z,8.9nm,0.8s							
AC02	**Maricunga**	**43.60**	**296**	P	**P**	**08 15 29.5**	**+0.2**
VNDA	**Vanda**	**44.70**	**182**	P	**P**	**08 15 39.0**	**+2.1**
comp=Z,1.3nm,0.6s,baz=190,slow=5.2,SNR=14							
VNDA				LR	LR	08 33 37.5	
comp=Z,33nm,19.7s,baz=204,slow=35							
comp=Z,1.3nm,0.6s							
VNDA	**Vanda**	**44.70**	**182**	P	**P**	**08 15 39.0**	**+2.1**
BDFB	**Brasilia**	**45.51**	**329**	P	**P**	**08 15 44.0**	**-0.1**
comp=Z,7.0nm,0.8s,baz=115,slow=2.4,SNR=6.8							
comp=Z,7.0nm,0.8s							
BDFB	**Brasilia**	**45.51**	**329**	P	**P**	**08 15 44.8**	**+0.6**
BDFB				IAmb	IAmb	08 15 46.0	
comp=Z,8.3nm,1.0s							
BOSA	**Boshof**	**45.56**	**72**	P	**P**	**08 15 45.8**	**+1.3**
comp=Z,8.9nm,0.9s,baz=207,slow=7.3,SNR=9.0							
BOSA				LR	LR	08 31 56.2	
comp=Z,48nm,20.4s,baz=11,slow=32							
comp=Z,8.9nm,0.9s							
LVC	**Limon Verde**	**47.10**	**300**	LR	LR	08 37 18.2	
comp=Z,53nm,18.7s,baz=292,slow=38							
LBTB	**Lobatse**	**48.69**	**70**	P	**P**	**08 16 10.3**	**+1.4**
comp=Z,6.2nm,0.8s,baz=211,slow=7.6,SNR=8.3							
LBTB				LR	LR	08

MIAR	Mount Ida baz=149	108.30 306	P	PKiKP	08 25 52.0	+0.5
O53A	New Philadelph baz=152	108.38 318	P	PKiKP	08 25 52.3	+0.8
SDCO	Great Sand Dun baz=144	116.30 299	P	PKiKP	08 26 06.8	-0.3
MONP2	Monument Peak baz=143	117.72 288	P	PKiKP	08 26 09.7	-0.2
EYMN	Ely baz=146	118.76 315	P	PKiKP	08 26 11.7	+0.6
N23A	Red Feather La baz=143	119.03 301	P	PKiKP	08 26 12.6	+0.4
FMP	Fort Macarthur baz=142	119.33 287	P	PKiKP	08 26 12.6	0.0
O20A	White River Ci baz=143	119.49 299	P	PKiKP	08 26 13.1	0.0
EDW2	Edwards Air Fo baz=142	120.09 288	P	PKiKP	08 26 14.4	+0.2
TPNV	Topopah Spring baz=142	120.84 291	P	PKiKP	08 26 15.4	-0.3
ISA	Isabella, Lake baz=142	120.95 289	P	PKiKP	08 26 15.7	-0.2
R11A	Troy Canyon, C baz=141	121.61 293	P	PKiKP	08 26 16.9	-0.4
DUG	Dugway, Tooele baz=141	121.70 296	P	PKiKP	08 26 17.1	-0.2
PDAR	Pinedale Array comp=Z,0.4nm,0.6s,baz=155,slow=4.2,SNR=6.6	122.17 300	PKP	PKiKP	08 26 17.1	-1.1
NVAR	Mina Array Bea comp=Z,0.4nm,0.6s,baz=139,slow=3.3,SNR=6.1	123.02 291	PKP	PKiKP	08 26 20.7	+0.6
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,baz=227,slow=4.8,SNR=1.8	123.49 110	PKP	PKiKP	08 26 21.9	+0.6
CMAR			pPKP	sPKPdf	08 26 38.2	-1.4
	comp=Z,0.7nm,0.3s,baz=231,slow=3.3,SNR=1.9					
LAO	LASA Array baz=141	123.72 305	P	PKiKP	08 26 20.9	-0.1
RLMT	Red Lodge baz=140	123.86 302	P	PKiKP	08 26 21.1	-0.4
DGMT	Dagmar baz=141	124.23 308	P	PKiKP	08 26 21.6	-0.3
FINES	FINESS Array B comp=Z,2.2nm,0.5s,baz=122,slow=2.2,SNR=9.8	125.63 28	PKP	PKiKP	08 26 23.9	-0.3
FINES			pPKP	sPKPdf	08 26 40.8	-1.6
	comp=Z,3.5nm,0.9s,baz=141,slow=6.4,SNR=1.8					
EGMT	Eagleton baz=139	126.29 304	P	PKiKP	08 26 25.4	-0.7
MSO	Missoula baz=138	127.28 300	P	PKiKP	08 26 27.8	-0.3
PZH	PanZhiHua	131.61 107	PKP	PKiKP	08 26 37.5	0.0
ARCES	ARCESS Array B comp=Z,2.3nm,0.9s,baz=0.0,slow=0.0,SNR=5.5	132.37 22	PKP	PKiKP	08 26 36.3	-1.2
YKA	Yellowknife Ar comp=Z,1.4nm,0.6s,baz=129,slow=3.0,SNR=5.6	138.24 316	PKP	PKiKP	08 26 47.5	-2.0
R32K	Eaglecrest baz=121	144.15 302	P	PKPdf	08 26 57.0	-1.3
P33M	Teslin, Yukon baz=119	144.36 305	P	PKPdf	08 26 57.3	-1.4
MMPY	Sheldon Lake, baz=117	144.84 309	P	PKPdf	08 26 58.5	-1.0
N32M	Quiet Lake baz=118	144.93 306	P	PKPdf	08 26 59.2	-0.4
SKAG	Skagway baz=119	145.10 303	P	PKPdf	08 26 59.3	-0.6
WHY	Whitehorse baz=118	145.47 305	P	PKPab	08 27 00.9	-0.3
FARO	Faro, Yukon baz=116	145.53 308	P	PKPab	08 27 01.2	0.0
PLBC	Pleasant Camp baz=118	145.57 302	P	PKPab	08 27 01.3	-0.1
M31M	Drury Creek, Y baz=116	145.96 308	P	PKPab	08 27 01.9	-0.9
O30N	Mendenhall baz=117	146.05 305	P	PKPab	08 27 02.9	-0.4
N31M	Braeburn, Yuko baz=116	146.24 306	P	PKPab	08 27 02.6	-1.3
P29M	Windy Craggy baz=117	146.27 302	P	PKPab	08 27 03.2	-0.9
A36M	Sachs Harbour baz=109	146.35 326	P	PKiKP	08 27 03.7	-2.3
HYT	Haines Junctio baz=116	146.70 304	P	PKiKP	08 27 05.3	-1.9
N30M	Aishikik Lake baz=115	146.79 305	P	PKPab	08 27 05.1	-1.0
PNL	Peninsula baz=116	147.03 302	P	PKiKP	08 27 06.2	-1.6
M30M	Minto, Yukon baz=114	147.13 307	P	PKPab	08 27 05.8	-1.6
MAYO	Mayo, Yukon baz=113	147.16 309	P	PKiKP	08 27 06.4	-1.5
YUK4	Talbot Arm baz=114	147.42 305	P	PKPab	08 27 07.0	-1.8
PINM	Pinnacle baz=115	147.61 302	P	PKiKP	08 27 07.4	-1.7
F31M	Tsiigehtchic baz=109	147.70 317	P	PKiKP	08 27 07.0	-1.8
M29M	Somme Creek baz=113,SNR=6.6	147.79 307	P	PKiKP	08 27 08.0	-1.4
O28M	Mount Upton baz=114	147.87 303	P	PKiKP	08 27 08.7	-1.1
YUK8	Steele Glacier baz=114	147.89 304	P	PKiKP	08 27 07.9	-1.9
INK	Inuvik baz=108	147.89 318	P	PKiKP	08 27 07.5	-1.8
L29M	L29M baz=112,SNR=9.8	147.91 308	P	PKiKP	08 27 08.1	-1.4
K29M	Barlow Dome baz=112	147.93 309	P	PKiKP	08 27 07.9	-1.8
YUK3	Moose Creek baz=113	148.39 305	P	PKiKP	08 27 09.1	-1.7
MESA	MESA baz=114	148.42 301	P	PKiKP	08 27 09.3	-1.5
EPYK	Eagle Plains baz=108	148.47 314	P	PKiKP	08 27 09.3	-1.3
G30M	tAoh Zraii Nji baz=108	148.47 315	P	PKiKP	08 27 09.3	-1.3
I29M	Ogilvie Camp, baz=109	148.77 312	P	PKiKP	08 27 09.3	-1.9
DAWY	Dawson baz=110,SNR=7.4	148.78 309	P	PKiKP	08 27 09.8	-1.5
BVCY	Beaver Creek baz=112	148.81 306	P	PKiKP	08 27 10.3	-1.1
M27K	Edge Creek, AK baz=111	149.23 305	P	PKiKP	08 27 11.4	-1.0
MCARA	McCarthy VSAT baz=112	149.38 303	P	PKiKP	08 27 11.7	-0.9
L27K	Beaver Creek, baz=110,SNR=7.5	149.46 307	P	PKiKP	08 27 11.8	-0.9
BJI	Beijing	149.63 109	PKPbc	PKPbc	08 27 10.0	-2.7
M26K	Nabesna, AK baz=110	149.73 305	P	PKiKP	08 27 12.6	-0.8
EGAK	Eagle baz=108	149.74 310	P	PKiKP	08 27 12.9	-0.3
SONM	Songino Array comp=Z,2.5nm,0.5s,baz=229,slow=3.1,SNR=11	149.84 88	PKPbc	PKiKP	08 27 13.8	-0.3
SONM			pPKPbc	sPKPbc	08 27 30.5	-1.2
	comp=Z,2.8nm,0.5s,baz=216,slow=4.3,SNR=7.5					
K27K	Chicken baz=108	149.88 308	P	PKiKP	08 27 13.6	+0.1
BMRM	Bremner River baz=112	149.93 302	P	PKiKP	08 27 13.8	0.0
L26K	Log Cabin Wild baz=109	150.10 306	P	PKiKP	08 27 13.7	-0.3
I27K	Kandik River baz=106,SNR=5.7	150.16 311	P	PKiKP	08 27 14.1	0.0
N25K	Chitina, Valde baz=111	150.16 303	P	PKiKP	08 27 14.4	+0.1
H27K	Steamboat Moun baz=105,SNR=16	150.29 313	P	PKiKP	08 27 14.1	-0.3
EYAK	Cordova Ski Ar baz=112	150.30 301	P	PKiKP	08 27 14.5	0.0
G27K	Doyon Strip baz=104	150.49 314	P	PKiKP	08 27 14.5	-0.2
J26L	Joseph Creek baz=106,SNR=14	150.64 309	P	PKiKP	08 27 15.2	0.0
SCRK	Sand Creek baz=107	150.67 308	P	PKiKP	08 27 15.7	+0.4
HARP	HAARP baz=109	150.68 304	P	PKiKP	08 27 15.1	-0.2
I26K	Coal Creek Min baz=105	150.70 311	P	PKiKP	08 27 15.5	+0.4
KLU	Klutina baz=110	150.72 302	P	PKiKP	08 27 15.4	0.0
E27K	Coleen River baz=102,SNR=5.9	150.77 317	P	PKiKP	08 27 15.3	0.0
P23K	Montague Islan baz=112	150.86 299	P	PKiKP	08 27 15.9	+0.3
RIDG	Independent Ri baz=107	150.96 307	P	PKiKP	08 27 16.5	+0.7
PAX	Paxson baz=108	151.00 305	P	PKiKP	08 27 16.2	+0.2
GLI	Glacier Island baz=110	151.03 301	P	PKiKP	08 27 15.9	-0.1
M24K	Tolsona, Glenn baz=109	151.03 303	P	PKiKP	08 27 16.7	+0.7
G26K	Porcupine Rive baz=102,SNR=7.4	151.34 314	P	PKiKP	08 27 16.3	-0.1
K24K	Donnelly Dome baz=106	151.38 307	P	PKiKP	08 27 16.6	-0.1
J25K	Salcha River, baz=105	151.43 309	P	PKiKP	08 27 17.3	+0.5
SCM	Sheep Creek Mo baz=109	151.46 303	P	PKiKP	08 27 17.5	+0.5
PWL	Port Wells baz=110	151.60 300	P	PKiKP	08 27 17.2	+0.1
F26K	Sheenjek River baz=100,SNR=9.2	151.62 315	P	PKiKP	08 27 17.9	+0.9
M23K	Glacier View baz=108	151.63 302	P	PKiKP	08 27 17.7	+0.5
PRP	Porcupine Dome baz=103	151.71 310	P	PKiKP	08 27 17.7	+0.3
C27K	Jago River baz=97	151.77 319	P	PKiKP	08 27 17.8	+0.6
KNK	Knik Glacier baz=109	151.84 301	P	PKiKP	08 27 18.1	+0.4
SEW	Seward baz=110	151.85 298	P	PKiKP	08 27 18.0	+0.3
DHY	Denali Highway baz=106	151.86 305	P	PKiKP	08 27 18.1	+0.3
WAT6	Susitna Watana baz=107	151.88 304	P	PKiKP	08 27 18.2	+0.3
SML	Sawmill baz=108	151.91 302	P	PKiKP	08 27 17.9	+0.1
H25K	Birch Creek baz=112	151.99 312	P	PKiKP	08 27 18.6	+0.8
HDA	Harding Lake baz=104	152.03 308	P	PKiKP	08 27 18.5	+0.5
ILAR	Eielson Array comp=Z,9.2nm,0.8s,baz=137,slow=4.6,SNR=80	152.10 309	PKPbc	PKiKP	08 27 17.8	-0.3
F25K	Christian Rive baz=99,SNR=5.8	152.17 315	P	PKiKP	08 27 18.8	+0.5
PMR	Palmer baz=108	152.20 301	P	PKiKP	08 27 18.7	+0.4
G25K	Bearman Lake baz=100,SNR=5.5	152.20 313	P	PKiKP	08 27 19.4	+1.2
C26K	Camden Bay baz=96	152.21 320	P	PKiKP	08 27 18.5	+0.3
E25K	Arctic Village baz=98,SNR=8.3	152.23 316	P	PKiKP	08 27 18.5	+0.2
WAT1	Susitna Watana baz=106	152.31 304	P	PKiKP	08 27 18.3	-0.3
BRSE	Bradley Lake S baz=110	152.34 297	P	PKiKP	08 27 18.7	-0.1
KDAK	Kodiak Island baz=113	152.50 292	P	PKiKP	08 27 19.0	0.0
COLA	College baz=103	152.52 309	P	PKiKP	08 27 18.6	-0.3
TCOL	CIGO, UAF Yank baz=103	152.53 309	P	PKiKP	08 27 18.2	-0.8
M22K	Willow baz=107	152.70 301	P	PKiKP	08 27 20.0	+0.7
MCK	McKinley baz=104	152.71 306	P	PKiKP	08 27 20.0	+0.6
G24K	Hadweenzic Riv baz=100,SNR=5.5	152.73 313	P	PKiKP	08 27 19.9	+0.6
H24K	Noodor Dome baz=101	152.73 311	P	PKiKP	08 27 19.4	-0.1
SII	Sitkinak Islan baz=114	152.80 289	P	PKiKP	08 27 19.5	-0.3
SUA	Susitna One baz=107	152.90 301	P	PKiKP	08 27 19.4	-0.6
CUT	Chulitna baz=106	152.95 303	P	PKiKP	08 27 20.0	+0.2
NEA2	Nenana baz=102	152.97 308	P	PKiKP	08 27 19.7	-0.2
F24K	Squaw Lake baz=98	153.01 314	P	PKiKP	08 27 20.9	+1.0
I23K	Minto, Yukon-K baz=101	153.21 309	P	PKiKP	08 27 20.8	+0.5
TRF	Thorofare Moun baz=104	153.23 305	P	PKiKP	08 27 20.5	-0.1
E24K	Your Creek baz=96	153.31 316	P	PKiKP	08 27 21.3	+0.8
H23K	Yukon River baz=100	153.41 310	P	PKiKP	08 27 21.4	+0.6
SKT	Skwentna baz=106	153.41 302	P	PKiKP	08 27 21.4	+0.5
N20K	Mount Spurr baz=107	153.50 300	P	PKiKP	08 27 20.9	-0.2
SPCR	Spurr Chakacha baz=107	153.50 300	P	PKiKP	08 27 21.5	+0.3
C24K	Franklin Bluff baz=93	153.51 319	P	PKiKP	08 27 21.5	+0.7
D24K	Happy Valley baz=94	153.52 318	P	PKiKP	08 27 21.1	+0.2
BPAW	Bear Paw Mtn. baz=102	153.68 306	P	PKiKP	08 27 21.5	+0.1
E23K	Chandalar baz=95	153.73 315	P	PKiKP	08 27 21.6	+0.1
G23K	Bananza Creek baz=98	153.73 312	P	PKiKP	08 27 22.0	+0.6
TOLK	Toolik Lake Re baz=94	153.76 317	P	PKiKP	08 27 22.2	+0.7
COLD	Coldfoot baz=96	153.86 313	P	PKiKP	08 27 22.2	+0.6
PPLA	Purkeypile baz=104	153.94 303	P	PKiKP	08 27 21.9	-0.2
CAST	Castle Rocks baz=103	154.01 305	P	PKiKP	08 27 21.9	-0.2
M20K	Styx River baz=105	154.11 301	P	PKiKP	08 27 21.9	-0.5
H22K	Ishtalitna Cre baz=98	154.16 310	P	PKiKP	08 27 23.6	+1.2
C23K	Itkillik River baz=91	154.18 319	P	PKiKP	08 27 22.7	+0.5
G22K	Bettles baz=96	154.34 313	P	PKiKP	08 27 23.8	+1.2
F22K	John River baz=94	154.65 314	P	PKiKP	08 27 24.1	+0.8
M19K	Big River Lodg baz=104	154.69 301	P	PKiKP	08 27 24.4	+0.9
H21K	Melozitna Rive baz=98	154.71 310	P	PKiKP	08 27 23.7	+0.2
Q16K	King Salmon baz=110	154.83 293	P	PKPab	08 27 39.1	-0.3

IDC ***29*** *08:27:46.4±1.6, 39°.23N×143°.69E, h0km, mb3.4/4, mbtmp3.4/5, ML2.9/1, MS2.6/2, Error ellipse: s-maj=39.7km s-min=30.9km az=117.0*

JMA ***29*** *08:27:48.9±0.2, 39°.4N±0°.6×143°.6E±0°.9, h30km, MV3.6/31, FAR E OFF SANRIKU*

NIED ***29*** *08:27:48.9, 39°.36N×143°.56E, h30km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.99; $M_{\theta\theta}$0.72; $M_{\phi\phi}$-2.71; $M_{r\theta}$1.50; $M_{\theta\phi}$-0.49; $M_{\phi r}$1.76; Fault plane solution: $M_0$3.38000×10^{14} NP1: ϕ_s161.00000°, δ31.00000°, λ44.00000°. NP2:ϕ_s32.00000°, δ69.00000°, λ114.00000°.*

ISC 29 08:27:48.4±1.2, 39°.39N±0°.07×143°.51E±0°.09, h11km, n16, σ1§02/18, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.32	279	P	Pn	08 28 12.6	-0.2
MIYJ				eS	Sn	08 28 29.6	-0.8
JTH	Tanohata	1.38	294	P	Pn	08 28 13.5	-0.2
OFUJ	Ofunato	1.46	258	P	Pn	08 28 14.5	-0.3
JOM	Ohasama	1.72	273	i P	Pn	08 28 18.7	+0.4
JOM				eS	Sn	08 28 40.2	0.0
JANG	Nango	1.82	303	P	Pn	08 28 19.3	-0.4
JMK	Ichinoseki	1.83	257	i P	Pn	08 28 20.0	+0.2
JMK				eS	Sn	08 28 42.8	-0.3
JIO	Ouri	1.93	242	eS	Sn	08 28 43.9	-1.5
JYK	Kaneyama	2.50	260	P	Pn	08 28 29.9	+0.9
JNBK	Urakawa-nobuka	2.94	349	eS	Sn	08 29 11.3	+0.9
JCH	Churui	3.22	358	S	Sn	08 29 15.5	-1.8
MJAR	Matsushiro Arr 0.5nm,0.3s,baz=42,slow=13,SNR=19	5.06	237	Pn	Pn	08 29 05.5	+1.3
MJAR				LR	LR	08 30 54.2	
	comp=Z,42nm,21.3s,baz=148,slow=37 3.5nm,0.4s						
KSRS	Korea Array comp=Z,33nm,18.8s,baz=330,slow=32	12.38	266	LR	LR	08 34 27.0	
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=99,slow=7.7,SNR=2.2	41.60	310	P	P	08 35 37.1	+1.0
	0.6nm,0.5s						
MKAR	Makanchi Array 0.6nm,0.8s,baz=92,slow=11,SNR=4.0 0.6nm,0.8s	44.31	300	P	P	08 35 59.2	+1.0
ILAR	Eielson Array 0.2nm,0.6s,baz=268,slow=5.4,SNR=2.1 0.2nm,0.6s	46.62	34	P	P	08 36 16.9	+0.6
WRA	Warramunga Arr 0.2nm,0.6s,baz=6.0,slow=6.7,SNR=2.1 0.2nm,0.6s	59.64	190	P	P	08 37 50.8	-1.7

ROM ***29*** *08:48:54.7±0.0, 42°.991N±0°.002×13°.058E±0°.003, h10km, ML3.5/74, Error ellipse: s-maj=0.2km s-min=0.1km az=63.0*

PRU ***29*** *08:48:55.2±0.0, 43°.07N×13°.99E, h0km*

LDG ***29*** *08:48:56.2±0.2, 42°.90N×13°.15E, h9km, Ml3.1/5, Error ellipse: s-maj=5.8km s-min=4.0km az=51.0*

ISC 29 08:48:54.6±0.5, 42°.97N±0°.01×13°.06E±0°.01, h12km±3km, n201, σ1§15/236, 30C-20D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	Monte Fema	0.01	224	⇓P	Pg	08 48 57.0	+0.2
FEMA				S	Sg	08 48 58.2	-0.2
FDMO	Fiordimonte	0.07	16	⇓P	Pg	08 48 57.1	0.0
FDMO				S	Sg	08 48 58.4	-0.6
FDMO				AML	AML		
FDMO				AML	AML		
T1216	Preci, Frazion	0.09	201	⇑P	Pg	08 48 57.9	+0.6
T1216				S	Sg	08 48 59.9	+0.6
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
CESI	CESI - Serrava	0.12	286	⇑P	Pg	08 48 58.2	+0.4
CESI				S	Sg	08 49 00.5	+0.4
CESI				AML	AML		
	comp=E,60900μm,0.6s						
CESI				AML	AML		
	comp=N,77400μm,0.4s						
T1256	Bolognola (MC)	0.12	74	⇑P	Pg	08 48 58.2	+0.3
T1256				S	Sg	08 49 00.5	+0.2
CSP1	Cessapalombo	0.16	41	P	Pg	08 48 58.6	+0.3
CSP1				S	Sg	08 49 01.2	+0.1
SEF1	Sefro	0.19	334	P	Pg	08 48 59.0	+0.2
SEF1				S	Sg	08 49 02.1	+0.2
SEF1				AML	AML		
	comp=E,46200μm,0.2s						
SEF1				AML	AML		
	comp=N,41250μm,0.2s						
MMO1	Montemonaco	0.21	110	⇑P	Pg	08 48 59.8	+0.7
MMO1				S	Sg	08 49 03.2	+1.0
AM05	Amandola Campo	0.21	88	⇑P	Pg	08 48 59.9	+0.7
AM05				S	Sg	08 49 03.5	+1.2
AM05				AML	AML		
	comp=N,8715μm,0.5s						
AM05				AML	AML		
	comp=E,32800μm,0.7s						
AM05				AML	AML		
	comp=N,1935μm,1.4s						
AM05				AML	AML		
	comp=N,1940μm,1.4s						
AM05				AML	AML		
	comp=E,8510μm,1.0s						
AM05				AML	AML		
	comp=N,8720μm,0.5s						
PIO1	Pioraco	0.21	345	⇓P	Pg	08 48 59.4	+0.1
PIO1				S	Sg	08 49 02.5	+0.1
PIO1				AML	AML		
	comp=N,15250μm,0.3s						
PIO1				AML	AML		
	comp=E,15200μm,0.8s						
GUMA	Gualdo di Mace	0.22	65	⇑P	Pg	08 49 00.1	+0.8
GUMA				S	Sg	08 49 03.9	+1.4
GUMA				AML	AML		
	comp=E,48400μm,0.6s						
GUMA				AML	AML		
	comp=N,65900μm,0.2s						
GUMA				AML	AML		
	comp=N,50300μm,0.3s						
GUMA				AML	AML		
	comp=E,53050μm,0.4s						
T1215	Vallo di Nera,	0.22	220	⇑P	Pg	08 49 00.2	+0.9
T1215				S	Sg	08 49 03.9	+1.3
T1215				AML	AML		
	comp=E,20450μm,0.2s						
T1215				AML	AML		
	comp=N,25850μm,0.5s						
T1215				AML	AML		
	comp=E,19800μm,0.2s						
T1215				AML	AML		
	comp=N,25850μm,0.4s						
T1215				AML	AML		
	comp=E,20400μm,0.2s						
T1215				AML	AML		
	comp=N,25900μm,0.4s						
T1215				AML	AML		
	comp=E,19850μm,0.2s						
T1215				AML	AML		
	comp=N,25850μm,0.5s						
MDAR	Monte D'Aria	0.23	15	⇑P	Pg	08 48 59.7	+0.2
MDAR				S	Sg	08 49 03.3	+0.4
MDAR				AML	AML		
	comp=N,64900μm,0.2s						
MDAR				AML	AML		
	comp=E,60500μm,0.3s						
FIU1	Fiuminata	0.24	336	P	Pg	08 48 59.8	+0.2
FIU1				S	Sg	08 49 03.5	+0.5
FIU1				AML	AML		
	comp=E,13300μm,0.3s						
FIU1				AML	AML		
	comp=N,9565μm,0.7s						
GAG1	Gagliole	0.27	1	P	Pg	08 49 00.5	+0.4
GAG1				S	Sg	08 49 04.8	+1.0
GAG1				AML	AML		
	comp=E,54800μm,1.4s						
GAG1				AML	AML		
	comp=N,39400μm,1.6s						
SSM1	San Severino M	0.27	18	⇑P	Pg	08 49 00.4	+0.2
SSM1				S	Sg	08 49 04.6	+0.7
T1244	Arquata del Tr	0.28	141	⇑P	Pg	08 49 01.2	+0.9
T1217	Poggiodomo (PG	0.28	200	⇑P	Pb	08 49 01.3	-0.2
T1217				S	Sb	08 49 05.8	-0.4
T1217				AML	AML		
	comp=E,36250μm,0.2s						
T1217				AML	AML		
	comp=E,35650μm,0.2s						
T1217				AML	AML		
	comp=N,42750μm,1.5s						
T1217				AML	AML		
	comp=E,35650μm,0.2s						
T1217				AML	AML		
	comp=E,36250μm,0.2s						
T1217				AML	AML		
	comp=N,42550μm,1.5s						
MTL1	Matelica	0.29	352	P	Pg	08 49 00.8	+0.3
MTL1				S	Sg	08 49 05.3	+0.8
MTL1				AML	AML		
	comp=E,37150μm,0.2s						
MTL1				AML	AML		
	comp=N,37450μm,0.3s						
T1241	Roccafluvione,	0.29	113	⇑P	Pb	08 49 01.5	-0.3
T1241				S	Sb	08 49 06.5	-0.1
T1241				AML	AML		
	comp=E,20700μm,0.5s						
T1241				AML	AML		
	comp=N,24900μm,0.2s						
T1241				AML	AML		
	comp=E,20400μm,0.6s						
T1241				AML	AML		
	comp=N,24700μm,0.3s						
SNTG	Esanatoglia	0.30	343	⇓P	Pg	08 49 00.8	+0.1
SNTG				S	Sg	08 49 05.3	+0.5
SNTG				AML	AML		
	comp=N,7525μm,0.7s						
SNTG				AML	AML		
	comp=E,7190μm,1.2s						
SNTG				AML	AML		
	comp=N,7150μm,0.7s						
SNTG				AML	AML		
	comp=E,7095μm,1.2s						
ASSB	Assisi San Ben	0.30	284	⇑P	Pg	08 49 01.2	+0.4
ASSB				S	Sg	08 49 05.7	+0.7
ASSB				AML	AML		
	comp=N,14650μm,0.6s						

ASSB AML AML
comp=E,12600µm,0.3s
MNTP Montappone 0.34 61 P **Pb 08 49 02.4 -0.2**
T1201 Domo (RI) 0.34 156 P **Pb 08 49 02.6 -0.1**
T1201 S **Sb 08 49 08.6 +0.5**
T1204 Amatrice, Fraz 0.35 148 ⇓P **Pb 08 49 02.5 -0.3**
T1204 AML AML
comp=N,12430µm,1.3s
T1204 AML AML
comp=E,18600µm,1.3s
T1204 AML AML
comp=N,12420µm,1.3s
EL6 Elcito 0.36 5 ⇑P **Pg 08 49 02.0 +0.1**
EL6 S **Sg 08 49 07.1 +0.4**
EL6 AML AML
comp=E,27300µm,0.4s
EL6 AML AML
comp=N,25600µm,0.4s
LNSS Leonessa 0.37 182 ⇓P **Pb 08 49 02.7 -0.4**
LNSS S **Sb 08 49 08.6 -0.3**
LNSS AML AML
comp=E,25900µm,0.7s
LNSS AML AML
comp=N,27650µm,0.2s
ATCC AVT- Casa Cast 0.38 305 ⇑P **Pg 08 49 02.5 +0.4**
ATCC S **Sg 08 49 08.0 +0.9**
ATCC AML AML
comp=E,18600µm,0.3s
ATCC AML AML
comp=N,9315µm,0.9s
TRE1 Treia 0.39 28 P **Pg 08 49 02.9 +0.6**
TRE1 S **Sg 08 49 08.8 +1.3**
TRE1 AML AML
comp=E,18500µm,1.0s
TRE1 AML AML
comp=N,13400µm,0.3s
FOSV Fossato di Vic 0.39 326 P **Pg 08 49 02.6 +0.2**
FOSV S **Sg 08 49 08.3 +0.7**
FOSV AML AML
comp=E,7285µm,0.3s
FOSV AML AML
comp=N,13550µm,0.4s
T1243 Rocca Santa Ma 0.40 134 ⇑P **Pb 08 49 03.0 -0.5**
T1243 S **Sb 08 49 09.4 -0.2**
SMA1 SAN MARTINO 0.40 149 ⇓P **Pb 08 49 03.1 -0.4**
SMA1 S **Sb 08 49 09.3 -0.3**
SMA1 AML AML
comp=E,8875µm,0.9s
SMA1 AML AML
comp=N,9400µm,0.2s
SMA1 AML AML
comp=N,9405µm,0.2s
SMA1 AML AML
comp=E,8870µm,0.9s
CING Cingoli 0.42 14 ⇑P **Pg 08 49 03.0 +0.1**
CING S **Sg 08 49 09.2 +0.8**
CING AML AML
comp=E,10750µm,0.1s
CING AML AML
comp=N,11380µm,0.5s
ARRO Arrone 0.45 209 ⇑P **Pb 08 49 04.2 -0.2**
ARRO S **Sb 08 49 11.4 +0.4**
ARRO AML AML
comp=E,18850µm,0.2s
ARRO AML AML
comp=N,13550µm,0.2s
OFFI Offida 0.46 94 P **Pb 08 49 04.7 +0.1**
OFFI AML AML
comp=N,19950µm,0.5s
OFFI AML AML
comp=E,14450µm,0.5s
T1211 Morro Reatino 0.46 199 P **Pb 08 49 04.5 -0.2**
T1211 S **Sb 08 49 11.8 +0.2**
T1211 AML AML
comp=E,10075µm,1.3s
T1211 AML AML
comp=N,13850µm,0.3s
T1211 AML AML
comp=E,10220µm,1.3s
T1211 AML AML
comp=N,13750µm,0.3s
T1211 AML AML
comp=N,13750µm,0.3s
T1211 AML AML
comp=E,10230µm,1.3s
T1211 AML AML
comp=N,13850µm,0.3s
T1211 AML AML
comp=E,10105µm,1.3s
MMUR Monte Murano 0.47 354 P **Pg 08 49 04.0 +0.1**
RM33 Pellescritta (0.48 166 ⇓P **Pb 08 49 04.5 -0.4**
RM33 S **Sb 08 49 12.5 +0.6**
RM33 AML AML
comp=E,7405µm,0.2s
RM33 AML AML
comp=N,7615µm,0.2s
RM33 AML AML
comp=E,7410µm,0.2s
RM33 AML AML
comp=E,7385µm,0.2s
RM33 AML AML
comp=N,7615µm,0.2s
RM33 AML AML
comp=N,7610µm,0.2s
MURB Monte Urbino 0.49 307 ⇑P **Pg 08 49 04.5 +0.3**
MURB S **Sg 08 49 11.9 +1.2**
MURB AML AML
comp=N,18950µm,0.9s
MURB AML AML
comp=E,16550µm,1.1s
MURB AML AML
comp=E,15300µm,1.1s
MURB AML AML
comp=N,18350µm,0.9s
T1246 Crognaleto (TE 0.50 141 ⇑P **Pb 08 49 04.9 -0.4**
T1246 S **Sb 08 49 12.5 -0.2**
CAMP Campotosto 0.51 149 ⇓P **Pb 08 49 05.0 -0.5**
CAMP S **Sb 08 49 12.7 -0.1**
CAMP AML AML
comp=N,2825µm,0.2s
CAMP AML AML
comp=E,4485µm,0.2s
CESX Cesi 0.51 225 ⇑P **Pg 08 49 05.0 +0.5**
CESX S **Sg 08 49 12.2 +1.0**
CESX AML AML
comp=N,16000µm,0.3s
CESX AML AML
comp=E,17250µm,0.4s
ATSC Scheggia e Pas 0.53 329 P **Pg 08 49 04.9 -0.1**
TERO Teramo 0.53 131 P **Pb 08 49 05.2 -0.6**
TERO S **Sb 08 49 13.8 +0.4**
TERO AML AML
comp=E,12375µm,0.2s
TERO AML AML
comp=E,12930µm,0.2s
TERO AML AML
comp=N,16350µm,0.4s
TERO AML AML
comp=E,12370µm,0.2s
TERO AML AML
comp=N,15400µm,0.4s
ARVD Arcevia 0.53 351 ⇓P **Pg 08 49 05.0 0.0**
ARVD AML AML
comp=N,2395µm,0.1s
ARVD AML AML
comp=E,4195µm,0.3s
ATFO Monte Foce - G 0.53 318 ⇑P **Pg 08 49 05.2 +0.1**
ATFO AML AML
comp=E,3220µm,0.5s
ATFO AML AML
comp=N,2595µm,1.0s
CIMA Civitanova Mar 0.56 53 P **Pb 08 49 06.5 +0.2**
T1247 Pizzolo (AQ) 0.56 162 P **Pb 08 49 06.1 -0.2**
T1247 S **Sb 08 49 14.8 +0.6**
T1247 AML AML
comp=E,6620µm,0.4s
T1247 AML AML
comp=N,6635µm,1.2s
T1247 AML AML
comp=E,6615µm,0.4s
CADA Capodarco di F 0.56 66 P **Pg 08 49 05.4 -0.1**
ATTE AVT- Monte Tez 0.57 294 ⇑P **Pg 08 49 05.8 +0.1**
ATTE AML AML
comp=N,2405µm,0.6s
ATTE AML AML
comp=E,2555µm,1.6s

PP3 Marolino 0.57 44 P **Pb 08 49 06.6 +0.1**
PP3 AML AML
comp=N,8070µm,0.8s
PP3 AML AML
comp=N,8580µm,0.8s
PP3 AML AML
comp=E,9565µm,1.4s
PP3 AML AML
comp=E,9345µm,1.4s
FRON Frontone 0.60 336 ⇓P **Pg 08 49 06.1 -0.2**
FRON AML AML
comp=N,3375µm,0.9s
FRON AML AML
comp=E,2675µm,0.2s
TB01 Gubbio 0.61 312 ⇑P **Pg 08 49 06.5 -0.1**
ATBU Serra di Buran 0.63 323 P **Pg 08 49 06.5 -0.3**
ATVO AVT- Monte Val 0.63 311 ⇑P **Pg 08 49 06.8 -0.1**
ATVO S **Sg 08 49 16.1 +0.9**
ATVO AML AML
comp=N,2365µm,1.1s
ATVO AML AML
comp=E,2415µm,1.6s
GIGS Gran Sasso 0.64 144 ⇓P **Pb 08 49 07.0 -0.7**
GIGS S **Sb 08 49 16.7 0.0**
GIGS AML AML
comp=N,1230µm,1.4s
GIGS AML AML
comp=E,1415µm,0.6s
TB03 Pietralunga 0.64 312 ⇑P **Pg 08 49 07.0 -0.1**
TRTR Tortoreto Alta 0.65 104 P **Pb 08 49 08.2 +0.5**
TRTR AML AML
comp=E,13400µm,0.4s
TRTR AML AML
comp=N,13750µm,0.5s
AQU L'Aquila 0.67 158 P **Pb 08 49 07.8 -0.3**
AQU AML AML
comp=E,2660µm,0.8s
AQU AML AML
comp=N,2150µm,1.4s
AQU AML AML
comp=E,2605µm,0.8s
AQU AML AML
comp=N,2195µm,1.4s
ATPC Poggio Castell 0.67 319 P **Pg 08 49 06.5 -1.1**
ATPI Pietralunga - 0.68 315 P **Pg 08 49 07.7 -0.1**
ATPI AML AML
comp=E,1835µm,0.8s
ATPI AML AML
comp=N,1680µm,0.6s
PIEI Pieia 0.68 326 P **Pg 08 49 07.5 -0.3**
PIEI AML AML
comp=E,2265µm,0.4s
PIEI AML AML
comp=N,1395µm,1.2s
ATMI Monte Miggiano 0.69 302 P **Pg 08 49 08.2 +0.3**
ATMI AML AML
comp=N,5440µm,0.9s
ATMI AML AML
comp=E,4830µm,0.6s
AOI Ancona 0.70 34 ⇑P **Pg 08 49 08.4 +0.2**
AOI AML AML
comp=E,3045µm,0.5s
AOI AML AML
comp=N,2480µm,0.4s
MGAB Montegabbione 0.70 266 P **Pg 08 49 08.4 +0.2**
MGAB AML AML
comp=E,6695µm,0.5s
MGAB AML AML
comp=E,5195µm,0.6s
MGAB AML AML
comp=N,6265µm,1.0s
MGAB AML AML
comp=N,6230µm,0.5s
FIAM Fiamignano 0.70 177 ⇓P **Pb 08 49 08.6 -0.2**
FIAM AML AML
comp=E,2945µm,1.2s
FIAM AML AML
comp=N,2535µm,0.5s
FSSB Fossombrone 0.75 344 ⇑P **Pg 08 49 09.0 -0.1**
FSSB AML AML
comp=N,9480µm,0.2s
FSSB AML AML
comp=E,5650µm,0.2s
ATMC Monte Cedrone 0.79 307 P **Pg 08 49 08.8 -1.1**
FAGN Fagnano 0.80 151 P **Pb 08 49 10.4 -0.1**
BADI Badiali 0.80 312 P **Pg 08 49 10.1 0.0**
VCEL Villa Celiera 0.81 135 P **Pb 08 49 10.6 -0.1**
VCEL AML AML
comp=E,5580µm,0.5s
VCEL AML AML
comp=N,5290µm,0.5s
VCEL AML AML
comp=N,5295µm,0.5s
PE3 Peglio 0.83 331 P **Pg 08 49 10.9 +0.2**
PE3 AML AML
comp=E,23µm,0.5s
PE3 AML AML
comp=N,38µm,0.2s
SRES S.Oreste - Sor 0.84 209 P **Pg 08 49 10.9 +0.1**
SRES AML AML
comp=N,3115µm,1.2s
SRES AML AML
comp=E,2855µm,0.5s
SACS San Casciano d 0.85 262 P **Pg 08 49 11.3 +0.2**
SACS AML AML
comp=E,2375µm,0.7s
SACS AML AML
comp=N,2410µm,0.8s
SACS AML AML
comp=E,2370µm,0.7s
SACS AML AML
comp=N,2190µm,1.6s
SACS AML AML
comp=E,2130µm,0.6s
CAFI Castiglion Fio 0.88 294 ⇑P **Pg 08 49 11.4 -0.1**
CAFI AML AML
comp=N,1305µm,1.2s
CAFI AML AML
comp=E,1210µm,0.9s
T0110 Collepietro 0.91 144 ⇓P **Pb 08 49 12.2 -0.2**
T0110 AML AML
comp=N,4770µm,0.5s
T0110 AML AML
comp=E,5350µm,0.7s
MTCE Montecelio 0.98 194 ⇓P **Pb 08 49 13.4 -0.1**
MTCE AML AML
comp=N,2000µm,1.4s
MTCE AML AML
comp=E,2545µm,0.8s
PTQR Pietraquaria 0.98 165 P **Pb 08 49 13.4 -0.2**
LATE Laterza 0.99 249 P **Pg 08 49 13.4 -0.2**
SF11 Podere del Sol 1.02 265 P **Pg 08 49 14.0 -0.2**
CERT Cerreto 1.02 183 P **Pb 08 49 14.2 0.0**
CERT AML AML
comp=E,2525µm,0.4s
CERT AML AML
comp=N,1415µm,1.4s
MCIV Monte Civitell 1.04 260 P **Pg 08 49 14.7 +0.2**
MCIV AML AML
comp=N,675µm,0.7s
MCIV AML AML
comp=E,978µm,0.9s
CRE Caprese Michel 1.04 309 P **Pg 08 49 14.1 -0.5**
SF04 Casetta 1.04 263 P **Pg 08 49 14.3 -0.2**
SF04 AML AML
comp=E,888µm,0.9s
SF04 AML AML
comp=N,1049µm,0.8s
SF13 Bagnolo 1.07 262 P **Pg 08 49 15.1 -0.1**
SF14 Selvena 1.09 259 P **Pg 08 49 14.8 -0.6**
RCAV Rocca di Cave 1.13 184 P **Pg 08 49 15.4 -0.8**
RCAV AML AML
comp=E,1570µm,1.0s
RCAV AML AML
comp=N,2210µm,0.5s
INTR Introdacqua 1.14 147 ⇓P **Pg 08 49 14.0 -2.6**
ARCI Arcidosso 1.17 265 P **Pg 08 49 15.9 -1.2**
VVLD Villa Vallelon 1.18 159 P **Pg 08 49 16.5 -0.7**
RMP Rome, Mte Porz 1.19 193 P **Pb 08 49 17.4 +0.4**
GUAR Guarcino 1.19 171 ⇑P **Pn 08 49 19.9 +2.9**
GUAR AML AML
comp=N,1630µm,0.4s
GUAR AML AML
comp=E,1355µm,0.6s
RDP Rocca di Papa 1.24 192 P **Pb 08 49 18.1 +0.2**
SAMA S.Maria delle 1.24 196 P **Pn 08 49 18.6 +0.9**

LPEL Lama dei Pelig 1.24 138 P **Pb 08 49 17.9 0.0**
LPEL AML AML
comp=N,1330µm,0.9s
LPEL AML AML
comp=E,1670µm,1.5s
ASQU Asqua 1.24 312 P **Pg 08 49 16.9 -1.5**
ASQU AML AML
comp=N,462µm,0.6s
ASQU AML AML
comp=E,524µm,1.1s
SFI Santa Sofia 1.29 317 P **Pn 08 49 17.9 -0.5**
POFI Posta Fibreno 1.34 159 ⇓P **Pb 08 49 22.8 +3.1**
CSNT Castellina Chi 1.39 292 P **Pn 08 49 19.8 +0.1**
CSNT AML AML
comp=E,302µm,0.6s
CSNT AML AML
comp=N,290µm,1.3s
FROS Frosini 1.42 280 P **Pn 08 49 20.4 +0.3**
FROS AML AML
comp=E,752µm,1.2s
FROS AML AML
comp=N,600µm,1.4s
GIUL Giuliano Di Ro 1.42 174 P **Pn 08 49 20.7 +0.5**
RUFI Rufina 1.43 308 P **Pn 08 49 20.1 -0.1**
OSSC Osservatorio P 1.44 293 P **Pn 08 49 20.7 +0.3**
OSSC AML AML
comp=E,300µm,1.0s
OSSC AML AML
comp=N,551µm,0.9s
LATB Latina 1.48 183 P **Pn 08 49 21.6 +0.7**
LMD Lutirano 1.48 319 P **Pn 08 49 21.7 +0.6**
CERA Filignano 1.54 152 P **Pg 08 49 23.5 -0.7**
TRIF Trifonti 1.59 276 P **Pn 08 49 23.3 +0.7**
TRIF AML AML
comp=N,294µm,0.7s
TRIF AML AML
comp=E,222µm,1.2s
CASP Castiglione de 1.62 264 P **Pn 08 49 23.0 0.0**
TRIV Trivento 1.63 137 P **Pb 08 49 24.3 -0.3**
MPPT Montemurlo 1.74 305 P **Pn 08 49 25.1 +0.4**
VAGA Valle Agricola 1.78 150 P **Pn 08 49 25.9 +0.7**
BSSO Busso 1.82 141 P **Pb 08 49 27.8 0.0**
MTCR Monte La Croce 1.83 306 P **Pn 08 49 26.6 +0.6**
CIGN Sant'Elia a Pi 1.90 133 P **Pn 08 49 27.8 +1.0**
BRJN Brijuni 2.00 14 P **Pn 08 49 28.8 +0.7**
MAIM Mastiano 2.10 298 P **Pn 08 49 30.2 +0.8**
TEOL Teolo 2.59 338 P **Pb 08 49 42.7 +1.8**
GRAM Graiana 2.65 306 P **Pn 08 49 37.4 +0.3**
CEY Cerknica 2.94 19 *e*Pn **Pn 08 49 41.3 +0.3**
PGF Pioggiola 3.02 263 *e*Pn **Pn 08 49 43.8 +1.5**
PGF Pioggiola 3.02 263 *e*P **Pn 08 49 46.4 +4.1**
ROVR Rover Verones 3.03 333 P **Pn 08 49 42.7 +0.2**
SABO M.te Sabotino 3.03 7 P **Pn 08 49 43.1 +0.7**
SABO AML AML
comp=E,1345µm,0.4s
SABO AML AML
comp=E,338µm,0.4s
SABO AML AML
comp=N,1020µm,1.0s
SABO AML AML
comp=N,274µm,1.0s
CGRP Cima Grappa 3.04 343 P **Pn 08 49 43.7 +1.0**
CGRP AML AML
comp=E,259µm,0.5s
CGRP AML AML
comp=N,216µm,0.5s
SRKY Kupres RS 3.18 68 *e*Pn **Pn 08 49 46.5 +2.0**
CTI Castel Tesino 3.24 342 P **Pn 08 49 46.0 +0.8**
CTI AML AML
comp=N,187µm,0.3s
CTI AML AML
comp=E,177µm,1.5s
LJU Ljubljana 3.25 18 P **Pn 08 49 46.4 +1.1**
LJU AML AML
comp=E,724µm,1.3s
LJU AML AML
comp=N,982µm,1.3s
MGRS Mrkonjic Grad 3.25 62 *e*Pn **Pn 08 49 47.8 +2.4**
MPRI Monte Prat 3.27 359 P **Pn 08 49 46.7 +1.0**
MPRI AML AML
comp=E,180µm,1.6s
MPRI AML AML
comp=N,225µm,1.3s
STAL STALIGIAL 3.30 356 P **Pn 08 49 46.8 +0.8**
STAL AML AML
comp=E,176µm,0.8s
STAL AML AML
comp=N,138µm,0.3s
LUSI Trento, Gardas 3.35 334 P **Pn 08 49 46.7 -0.1**
CIMO Cimolais 3.37 353 P **Pn 08 49 47.8 +0.8**
CIMO AML AML
comp=E,40µm,1.6s
CIMO AML AML
comp=N,38µm,0.9s
STON Ston 3.41 90 *e*Pn **Pn 08 49 46.4 -1.1**
STON Ston 3.41 90 P **Pn 08 49 48.0 +0.5**
PTCC Patocco-Chiusa 3.44 3 P **Pn 08 49 48.6 +0.6**
PTCC AML AML
comp=N,87µm,0.3s
PTCC AML AML
comp=E,136µm,0.4s
A051A Mrakovica 3.44 52 *e*Pn **Pn 08 49 49.7 +1.6**
GAGG Gaggia 3.46 335 ⇓P **Pn 08 49 51.7 +3.4**
BLY Banja Luka 3.47 58 *e*Pn **Pn 08 49 50.3 +1.9**
CLUD Cludinico 3.49 358 P **Pn 08 49 49.3 +0.6**
CLUD AML AML
comp=N,93µm,1.0s
CLUD AML AML
comp=E,93µm,0.8s
SCHR S. Chirico Rap 3.58 140 P **Pb 08 49 59.4 +1.7**
MABI Malga Bissina 3.58 330 P **Pn 08 49 50.2 +0.1**
ZOU Zoufplan 3.59 359 P **Pn 08 49 51.0 +0.9**
ZOU AML AML
comp=N,111µm,1.5s
ZOU AML AML
comp=E,105µm,1.1s
ZOU AML AML
comp=E,88µm,1.0s
ZOU AML AML
comp=N,114µm,1.2s
ACOM Acomizza, Ital 3.59 5 P **Pn 08 49 51.2 +1.0**
ACOM AML AML
comp=E,174µm,0.4s
ACOM AML AML
comp=N,136µm,1.3s
MYKA Terra Mystica 3.68 6 *i* Pn **Pn 08 49 53.3 +2.0**
comp=N,5.4nm,0.2s,SNR=6.9
KOSI Kohlern 3.69 342 P **Pn 08 49 52.0 +0.4**
OBKA Obir 3.69 16 *e*Pn **Pn 08 49 50.6 -0.9**
OBKA Obir 3.69 16 *i* Pn **Pn 08 49 52.1 +0.6**
comp=N,3.3nm,0.3s,SNR=12
ABTA Abfaltersbach 3.80 354 *i* Pn **Pn 08 49 55.1 +2.1**
comp=N,2.2nm,0.2s,SNR=17
TREB Trebinje 3.90 92 *e*Pn **Pn 08 49 55.6 +1.4**
BRY Bratogost 4.02 89 *e*Pn **Pn 08 49 54.8 -1.3**
RISI Rein 4.04 350 ⇓P **Pn 08 50 00.2 +3.9**
MUGIO Muggio 4.12 317 P **Pn 08 49 58.5 +1.1**
MUGIO AML AML
comp=N,34µm,1.6s
MUGIO AML AML
comp=E,30µm,0.6s
ROSI Rosskopf 4.13 344 P **Pn 08 49 58.1 +0.6**
TDS Terranova Siba 4.13 142 S **Sg 08 51 06.0 -1.1**
SBF Sospel 4.20 284 *e*Pn **Pn 08 50 00.0 +1.6**
SBF Sospel 4.20 284 *e*P Pn 08 50 03.5 +5.1
UPM Unac-Piva 4.29 85 *e*Pn **Pn 08 50 02.6 +2.9**
FETA Feichten 4.37 339 *e*Pn **Pn 08 50 04.1 +3.2**
comp=E,5.2nm,0.4s,SNR=6.0
WTTA Wattenberg 4.41 347 *i* Pn **Pn 08 50 03.8 +2.4**
comp=E,1.8nm,0.2s
HAPS Han Pijesak,Bl 4.42 73 *e*Pn **Pn 08 50 03.3 +1.7**
SPS2 Spezzano della 4.43 145 ⇓P **Pb 08 50 13.0 +0.7**
SQTA Sankt Quirin 4.45 343 *i* Pn **Pn 08 50 04.4 +2.5**
comp=E,5.6nm,0.3s
WATA Walderalm 4.49 347 *i* Pn **Pn 08 50 05.0 +2.5**
comp=E,2.8nm,0.2s
TRAV Traversella 4.59 305 S **Sn 08 50 58.0 +1.0**
MOTA Moosalm 4.59 343 *i* Pn **Pn 08 50 06.2 +2.3**
comp=E,1.3nm,0.2s
DRME Dracevica, Mon 4.59 98 *e*Pn **Pn 08 50 05.6 +1.9**
ARSA Arzberg 4.62 21 *i* Pn **Pn 08 50 06.3 +2.2**
comp=E,2.8nm,0.2s
RUDO Rudo 4.65 80 *e*Pn **Pn 08 50 05.0 +0.4**
BBLS Lazići 4.71 77 *e*Pn **Pn 08 50 04.7 -0.7**
BIOA Bad Ischl, Aus 4.74 5 *i* Pn **Pn 08 50 07.6 +1.8**

```
                comp=E,11nm,0.3s,SNR=8.7
RETA  Reutte          4.80 341  i Pn      Pn     08 50 09.5 +2.8
                comp=E,2.7nm,0.3s,SNR=6.6
LMR   La Mourre       4.81 277  ePn       Pn     08 50 07.8 +1.1
LMR   La Mourre       4.81 277  eP        Pn     08 50 12.1 +5.4
DAVA  Damuels         4.87 334  i Pn      Pn     08 50 09.7 +2.0
                comp=E,3.1nm,0.4s
MBDF  Montbardon      4.88 293  ePn       Pn     08 50 09.4 +1.6
MBDF  Montbardon      4.88 293  eP        Pn     08 50 13.3 +5.5
MOA   Molln           4.95   9  i Pn      Pn     08 50 09.8 +1.1
                comp=E,4.3nm,0.4s,SNR=12
DIVS  Divibare        5.16  75  ePn       Pn     08 50 10.2 -1.5
LPG   La Plagne       5.19 301  ePn       Pn     08 50 14.1 +1.8
LPG   La Plagne       5.19 301  eP        Pn     08 50 18.2 +5.9
RONA  Rosalia, Austr  5.25  25  i Pn      Pn     08 50 14.0 +1.1
                comp=E,2.3nm,0.3s
CONA  Conrad Observa  5.33  21  i Pn      Pn     08 50 14.8 +0.8
                comp=E,3.1nm,0.3s,SNR=9.2
ORIF  Oris-en-Rattie  5.54 293  ePn       Pn     08 50 18.4 +1.5
ORIF  Oris-en-Rattie  5.54 293  eP        Pn     08 50 22.8 +5.9
SMRF  Simiane la Rot  5.54 283  ePn       Pn     08 50 18.3 +1.5
SMRF  Simiane la Rot  5.54 283  eP        Pn     08 50 22.4 +5.6
CKRC  Cesky Krumlov   5.91   8  ePN       Pn     08 50 22.3 +0.4
CABF  La Chapelle     6.15 309  ePn       Pn     08 50 26.5 +1.2
CABF                            eSn       Sn     08 51 35.2 -0.4
                comp=E,0.4nm,0.2s
KHC   Kasperske Hory  6.17   3  ePN       Pn     08 50 25.8 +0.3
KHC                             eSN       Sn     08 51 33.8 -2.2
VIVF  Saint-Julien-l  6.35 290  ePn       Pn     08 50 29.3 +1.4
VIVF  Saint-Julien-l  6.35 290  eP        Pn     08 50 34.1 +6.2
HINF  Hinteralfeld    6.52 320  ePn       Pn     08 50 31.9 +1.6
HINF  Hinteralfeld    6.52 320  eP        Pn     08 50 37.0 +6.7
HINF                            eSn       Sn     08 51 42.8 -1.9
                comp=E,5.7nm,0.3s
CDF   Champ du Feu    6.78 325  ePn       Pn     08 50 35.1 +1.2
CDF                             eSn       Sn     08 51 48.6 -2.5
                comp=E,4.0nm,0.4s
LASF  Ste Croix       6.78 283  ePn       Pn     08 50 34.4 +0.5
LASF  Ste Croix       6.78 283  eP        Pn     08 50 39.9 +6.0
HAU   Haudompre       6.90 319  ePn       Pn     08 50 37.6 +2.1
HAU   Haudompre       6.90 319  eP        Pn     08 50 42.1 +6.6
HAU                             eSn       Sn     08 51 51.1 -2.7
                comp=E,6.7nm,0.3s
PRU   Pruhonice       7.09   8  eSN       Sn     08 51 54.4 -4.2
LOR   Lormes          7.80 307  ePn       Pn     08 50 48.8 +1.0
                baz=109
LOR   Lormes          7.80 307  eP        Pn     08 50 53.7 +5.9
```

IDC 29 08:50:30.7±3.1, 74°.64N×133°.79E, h0km, mb3.5/4, mbtmp3.5/5, ML4.0/1, MS3.2/2, Error ellipse: s-maj=154.2km s-min=32.4km az=130.0, Laptev Sea

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Code  Station Name    Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
TIXI  Tiksi           3.33 208  Pn    Pn          08 51 24.4 +0.4
                65nm,0.3s,baz=90,slow=24,SNR=2.4
                2.4nm,0.2s
ILAR  Eielson Array  26.87  69  P     P           08 56 11.8 -0.8
                0.6nm,0.6s,baz=324,slow=7.0,SNR=5.7
ILAR                            LR    LR          09 08 14.4
                comp=Z,70nm,20.6s,baz=154,slow=40
                0.6nm,0.6s
ARU   Arti           32.95 279  LR    LR          09 13 50.6
                comp=Z,28nm,21.9s,baz=323,slow=42
PDAR  Pinedale Array 55.66  53  P     P           09 00 08.1 -0.2
                0.3nm,0.7s,baz=358,slow=2.2,SNR=2.4
                0.3nm,0.7s
NVAR  Mina Array Bea 57.84  62  P     P           09 00 24.9 +1.1
                0.7nm,0.7s,baz=348,slow=4.5,SNR=7.3
                0.7nm,0.7s
TXAR  Lajitas Array  69.84  52  P     P           09 01 42.0 -0.7
                0.4nm,0.8s,baz=358,slow=4.5,SNR=2.9
                0.4nm,0.8s
```

*SOME **29** 09:15:18.0, 40°.32N×73°.55E, h10km*
*NNC **29** 09:15:19.4±1.5, 40°.38N×73°.59E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=11.3km s-min=6.2km az=176.0*
*KRNET **29** 09:15:21.0±0.1, 40°.38N×73°.55E, h16km, mb2.7*
*ISU **29** 09:15:22, 40°.12N×73°.44E, h5km*
ISC 29 09:15:20.1±1.9, 40°.40N±0°.08×73°.64E±0°.04, h4km±14km, n22, σ1°31/35, 13C-5D, Kyrgyzstan

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Code  Station Name    Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
OHH   Osh             0.67 281  ⇑iP       Pg     09 15 32.6 -0.2
                baz=84
OHH                             ⇑iS       Sg     09 15 41.0 -0.5
                baz=84
FRG   Fergana         1.42 270  P         Sn     09 16 06.1 +0.2
ARLS  Aral            1.55  19  ⇑iP       Pg     09 15 50.2 +0.4
                baz=21
ARLS                            ⇑iS       Sg     09 16 11.5 +1.7
                baz=21
UCH   Uchtor          1.94  19  ⇑iP       Pb     09 15 56.8 +0.5
                baz=21
UCH                             ⇑iS       Sg     09 16 22.9 +0.4
                baz=21
MINT  Mingtut         2.04 273  P         Sg     09 16 26.0 +0.5
EKS2  Erkin-Say       2.26   3  ⇑eP       Pb     09 16 00.8 -0.8
                baz=4.0
EKS2                            ⇑iS       Sb     09 16 29.9 -0.1
                baz=4.0
AAK   Ala-Archa       2.33  16  ⇑iP       Pb     09 16 01.9 -0.8
                baz=17
AAK                             ⇑iS       Sb     09 16 31.7 -0.2
                baz=17
MRKS  Merke           2.37 353  eP        Pb     09 16 02.6 -0.8
                3.7nm,0.1s
MRKS                            eS        Sg     09 16 35.0 -1.0
                17nm,0.0s
MRKS  Merke           2.37 353  Pg        Pb     09 16 02.6 -0.8
                3.8nm,0.6s
MRKS                            Lg        Lg     09 16 35.0
                17nm,0.5s
KBK   Karagaybulak    2.46  23  ⇑eP       Pb     09 16 03.9 -1.1
                baz=24
KBK                             ⇑iS       Sb     09 16 35.2 -0.5
                baz=24
ULHL  Ulahol          2.69  46  ⇓iP       Pb     09 16 07.3 -1.6
                baz=46
ULHL                            ⇓iS       Sb     09 16 41.1 -1.3
                baz=46
TKM2  Tokmak 2        2.91  30  ⇓Pg       Pb     09 16 13.8 +1.0
                0.7nm,0.4s
TKM2                            ⇑Lg       Lg     09 16 54.4
                6.9nm,0.6s
KST   Kastek          3.16  33  eP        Pb     09 16 17.8 +0.9
                1.3nm,0.0s
KST                             eS        Sg     09 17 00.9 -0.7
                8.9nm,0.2s
KST   Kastek          3.16  33  Pg        Pb     09 16 17.8 +0.9
                1.3nm,0.6s
KST                             Lg        Lg     09 17 00.9
                9.1nm,1.1s
KK31  Karatay Array   3.58 320  ⇓Pg       Pb     09 16 24.5 +0.6
                0.3nm,0.3s
KK31                            ⇓Lg       Lg     09 17 12.4
                0.6nm,0.3s,baz=145,slow=31,SNR=4.0
TNSS  Tian-Shan       3.62  42  eP        Pb     09 16 25.1 +0.3
                1.1nm,0.1s
TNSS                            eS        Sg     09 17 13.9 -2.3
                2.7nm,0.1s
TNSS  Tian-Shan       3.62  42  Pg        Pb     09 16 25.1 +0.3
                1.2nm,1.1s
TNSS                            Lg        Lg     09 17 13.9
                2.7nm,0.6s
KRBS  Karabastau      3.63  24  eP        Pb     09 16 26.7 +1.9
                0.9nm,0.1s
KRBS                            eS        Sg     09 17 15.9 -0.6
                2.6nm,0.4s
KRBS  Karabastau      3.63  24  Pg        Pb     09 16 26.7 +1.9
                1.0nm,0.4s
KRBS                            Lg        Lg     09 17 15.9
                1.4nm,0.5s
KTBS  Karatobe        4.01  33  eP        Pb     09 16 33.9 +2.6
                1.0nm,0.1s
KTBS                            eS        Sg     09 17 28.2 -0.6
                5.9nm,0.0s
KUU   Kurty           4.03  29  eP        Pb     09 16 34.4 +2.8
                0.9nm,0.0s
KUU                             eS        Sg     09 17 29.1 -0.2
                3.5nm,0.0s
KUU   Kurty           4.03  29  Pg        Pb     09 16 34.4 +2.8
                0.9nm,0.2s
KUU                             Lg        Lg     09 17 29.1
                3.3nm,0.9s
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*JMA **29** 09:21:43.9±1.0, 45°.3N×150°.05E±°, h30km, MD5.1/19, MV5.4/19, KURILE ISLANDS REGION*
*NIED **29** 09:21:43.9, 45°.27N×150°.44E, h30km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr=1.73; Mθθ=4.12; Mφφ=-2.40; Mrθ=2.43; Mφθ=-2.21; Mφr=5.26; Fault plane solution: M0=7.16000×10^15 NP1: φs=249.00000°, δ=34.00000°, λ=-165.00000°. NP2: φs=147.00000°, δ=82.00000°, λ=-56.00000°.*
*MOS **29** 09:21:44.4±1.1, 45°.06N×150°.27E, h51km, mb4.8/29 Error ellipse: s-maj=6.8km s-min=6.1km az=92.1*
*BJI **29** 09:21:44.5±0.0, 45°.02N×150°.31E, h57km, mb4.8/49, mB4.9/26, Ms4.3/16, Ms7 4.1/18*
*SKHL **29** 09:21:45.7±0.6, 45°.10N×150°.30E, h57km±2km, mb5.4/9*
*IDC **29** 09:21:46.5±0.7, 45°.31N×150°.08E, h46km±4km, mb4.0/21, mbtmp4.3/28, MS3.8/39, Error ellipse: s-maj=19.7km s-min=10.5km az=167.0*
*NEIC **29** 09:21:47.4±1.3, 45°.2N±0°.1×150°.1E±0°.1, h54km±8km, mb4.6/89, Error ellipse: s-maj=17.0km s-min=10.2km az=143.0*
ISC 29 09:21:47.2±0.6, 44°.99N±0°.05×150°.23E±0°.05, h61km±4km, h61km: pP-P, n304, σ1°71/278, mb4.5/90, 13C-5D, East of Kuril Islands

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Code  Station Name    Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
KUR   Kuril'sk        1.69 279  d iPN     Pn     09 22 13.2 -1.2
KUR                             eS        Sn     09 22 33.2 -1.8
KUR                             pmax      pmax
                comp=Z,4μm,0.3s
KUR                             pmax      pmax
                comp=N,2μm,0.2s
KUR                             smax      smax
                comp=N,22μm,0.6s
KUR                             smax      smax
                comp=E,11μm,0.5s
KUR   Kuril'sk        1.69 279  i P       Pn     09 22 13.1 -1.3
KUR                             AMB       AMB    09 22 14.3
                comp=E,4μm,0.5s
KUR                             eS        Sn     09 22 33.2 -1.8
KUR                             A         A      09 22 35.3
                comp=E,22μm,0.6s
KUR                             A         A      09 22 35.3
                comp=E,11μm,0.6s
YUK   Yuzh-Kuril'sk   3.27 255  ePN       Pn     09 22 36.1 +0.2
YUK                             eS        Sn     09 23 15.0 +1.5
YUK                             pmax      pmax
                comp=E,855nm,0.5s
YUK                             pmax      pmax
                comp=Z,2μm,0.5s
YUK                             pmax      pmax
                comp=N,597nm,0.1s
YUK                             smax      smax
                comp=N,3μm,0.3s
YUK                             smax      smax
                comp=E,9μm,0.4s
YUK   Yuzh-Kuril'sk   3.27 255  eP        Pn     09 22 36.2 +0.3
YUK                             AMB       AMB    09 22 39.5
                comp=E,2μm,0.5s
YUK                             eS        Sn     09 23 14.0 +0.5
YUK                             A         A      09 23 23.3
                comp=E,3μm,0.5s
YUK                             A         A      09 23 23.3
                comp=E,9μm,0.5s
NEM2  Nemuro 2        3.61 245  eP        Pn     09 22 40.1 -0.5
NEM2                            eS        Sn     09 23 21.4 -0.6
NMR   Nemuro--Hokkai  3.62 245  ⇑iPN      Pn     09 22 40.1 -0.6
NMR                             eS        Sn     09 23 22.3 +0.1
NMR   Nemuro--Hokkai  3.62 245  i P       Pn     09 22 41.1 +0.4
NMR                             eS        Sn     09 23 22.3 +0.1
RUSJ  Misakicho       3.67 258  ePN       Pn     09 22 39.0 -2.4
RUSJ                            S         Sn     09 23 22.8 -0.6
JRA   Rausu           3.80 256  P         Pn     09 22 44.9 +1.6
JKHN  Kushirohamanak  4.12 244  A         A      09 22 47.5
                comp=E,5.0nm,1.1s
JNK   Nakash          4.20 252  eP        Pn     09 22 49.7 +1.1
JNK                             eS        Sn     09 23 37.3 +0.9
JAK   Akkeshi         4.46 245  eP        Pn     09 22 52.2  0.0
JAK                             eS        Sn     09 23 43.5 +0.7
JAK   Akkeshi         4.46 245  A         A      09 22 52.2
                comp=E,5.0nm,0.6s
JTKR  Abashiri--Toko  4.64 260  eP        Pn     09 22 56.1 +1.4
JAR   Ashorobuto      4.95 252  eP        Pn     09 23 01.0 +2.1
JAR   Ashorobuto      4.95 252  A         A      09 23 01.0
                comp=E,4.0nm,0.8s,comp=E,3.0nm,2.8s
JOB   Onbets          5.07 248  eP        Pn     09 23 01.6 +1.1
JOB                             eS        Sn     09 23 58.9 +1.2
JOB   Onbets          5.07 248  A         A      09 23 01.6
                comp=E,7.0nm,4.1s,comp=E,6.0nm,1.1s
JKK2  Kamakawa 2      5.47 261  eP        Pn     09 23 08.6 +2.5
JCH   Churui          5.51 247  eP        Pn     09 23 06.9 +0.3
JCH                             eS        Sn     09 24 09.8 +1.2
JCH   Churui          5.51 247  A         A      09 23 06.9
                comp=E,4.0nm,0.6s,comp=E,5.0nm,0.7s
YSS   Yuzh-Sakhalins  5.57 293  Pn        Pn     09 23 06.2 -1.2
YSS   Yuzh-Sakhalins  5.57 293  i PN      Pn     09 23 06.9 -0.5
YSS                             i S       Sn     09 24 09.0 -0.9
YSS   Yuzh-Sakhalins  5.57 293  eP        Pn     09 23 07.1 -0.3
YSS                             AMB       AMB    09 23 14.4
                comp=E,100nm,0.6s
YSS                             eS        Sn     09 24 07.9 -2.0
YSS                             A         A      09 24 11.4
                comp=E,90nm,0.6s
YSS                             A         A      09 24 11.4
                comp=E,50nm,0.6s
YSS                             AMS       AMS    09 25 02.0
                comp=E,1μm,14.0s
JTHR  Tokachihiroo    5.71 244  A         A      09 23 09.3
                comp=E,5.0nm,2.7s,comp=E,4.0nm,3.4s
JWK2  Keihoku         5.90 276  eP        Pn     09 23 15.0 +3.0
JAB   Ashibetsu       5.94 258  eP        Pn     09 23 15.8 +3.3
JEM   Erimo           5.94 242  A         A      09 23 12.6
                comp=E,7.0nm,1.9s,comp=E,8.0nm,1.1s
ERM   Erimo           5.94 242  Pn        Pn     09 23 13.6 +1.1
ERM   Erimo           5.94 242  dePN      Pn     09 23 14.8 +2.3
ERM                             pmax      pmax
                comp=Z,332nm,0.6s
JNBK  Urakawa-nobuka  6.06 246  eP        Pn     09 23 14.5 +0.3
JNBK                            eS        Sn     09 24 22.8 +0.6
JNBK  Urakawa-nobuka  6.06 246  A         A      09 23 14.5
                comp=Z,11nm,0.7s,comp=Z,5.0nm,1.1s
JSHD  Hidakashinhida  6.19 248  A         A      09 23 15.7
                comp=Z,6.0nm,3.8s
JIAM  Iburiatsuma     6.46 251  A         A      09 23 19.3
                comp=Z,6.0nm,5.1s,comp=Z,6.0nm,1.0s
JRBN  Rebuntou        6.49 277  eP        Pn     09 23 22.2 +2.2
JEW   Eniwo           6.69 254  Pn        Pn     09 23 23.6 +0.8
UGL   Uglegorsk       6.91 309  ePN       Pn     09 23 34.3 +8.5
UGL                             S         Sn     09 24 51.2 +8.3
UGL                             pmax      pmax
                comp=Z,260nm,0.9s
UGL                             smax      smax
                comp=N,154nm,1.2s
UGL                             smax      smax
                comp=E,232nm,1.2s
UGL   Uglegorsk       6.91 309  eP        Pn     09 23 26.0 +0.2
UGL                             AMB       AMB    09 23 35.0
                comp=E,260nm,0.9s
UGL                             eS        Sn     09 24 40.3 -2.6
UGL                             A         A      09 24 56.2
                comp=E,2μm,3.0s
UGL                             A         A      09 24 56.2
                comp=E,4μm,3.0s
UGL                             A         A      09 24 57.5
                comp=E,160nm,0.9s
UGL                             A         A      09 24 57.5
                comp=E,23μm,0.9s
SKR   Severo-Kuril's  6.94  33  ePN       Pn     09 23 25.3 -0.8
SKR                             eS        Sn     09 24 49.3 +5.8
SKR                             pmax      pmax
                comp=Z,65nm,0.7s
SKR                             smax      smax
                comp=E,112nm,0.9s
SKR                             smax      smax
                comp=N,118nm,0.8s
SKR                             MLR       MLR
                comp=Z,400nm,14.0s
SKR   Severo-Kuril's  6.94  33  eP        Pn     09 23 23.9 -2.2
SKR                             AMB       AMB    09 23 25.8
                comp=Z,70nm,0.3s
SKR                             eS        Sn     09 24 37.9 -5.6
SKR                             A         A      09 24 54.4
                comp=Z,120nm,0.9s
SKR                             A         A      09 24 54.4
                comp=Z,110nm,0.9s
SKR                             AMS       AMS    09 26 08.8
                comp=Z,400nm,14.0s
JAHD  Aomorihigashid  7.49 243  A         A      09 23 33.6
                comp=Z,5.0nm,3.9s
TYV   Tymovskoe       7.77 322  ePN       Pn     09 23 36.4 -1.1
TYV                             pmax      pmax
                comp=Z,200nm,1.9s
TYV                             pmax      pmax
                comp=Z,58nm,0.6s
TYV   Tymovskoe       7.77 322  eP        Pn     09 23 36.4 -1.1
TYV                             AMB       AMB    09 23 40.0
                comp=Z,200nm,2.0s
TYV                             AMB       AMB    09 23 40.1
                comp=Z,60nm,0.6s
TYV                             eS        Sn     09 24 59.2 -4.7
TYV                             A         A      09 25 01.9
                comp=Z,30nm,0.8s
TYV                             A         A      09 25 01.9
                comp=Z,50nm,0.8s
TYV                             A         A      09 25 09.0
                comp=Z,400nm,3.0s
TYV                             A         A      09 25 09.0
                comp=Z,390nm,3.0s
PAU   Pauzhetka       7.83  32  eP        Pn     09 23 37.0 -1.3
PAU                             AMB       AMB    09 23 39.4
                comp=Z,30nm,0.4s
PAU                             eS        Sn     09 25 00.7 -4.6
PAU                             A         A      09 25 13.7
                comp=Z,80nm,0.6s
PAU                             A         A      09 25 13.7
                comp=Z,110nm,0.6s
JANG  Nango           7.90 237  eP        Pn     09 23 37.8 -1.6
JANG                            eS        Sn     09 25 02.0 -5.4
JTM   Tenmabayashi    7.93 241  Pn        Pn     09 23 39.5 -0.2
JTH   Tanohata        7.98 234  eP        Pn     09 23 38.7 -1.7
JTH                             eS        Sn     09 24 59.6  -10
PEA0B Petropavlovsk-  9.48  28  Pn        Pn     09 23 59.3 -1.6
PEA0B Petropavlovsk-  9.48  28  PN        Pn     09 23 59.3 -1.6
PETK  Petropavlovsk-  9.48  28  P         Pn     09 23 57.7 -3.2
                comp=Z,9.6nm,0.6s,baz=191,slow=15,SNR=24
PETK                            LR        LR     09 27 37.4
                comp=Z,342nm,18.0s,baz=217,slow=38
PETK  Petropavlovsk-  9.48  28  Pn        Pn     09 23 59.7 -1.2
TEY   Ternei          9.65 275  ⇑ePN      Pn     09 24 08.4 +5.1
TEY                             pmax      pmax
                comp=E,100nm,0.9s
TEY                             pmax      pmax
                comp=Z,90nm,0.9s
TEY   Ternei          9.65 275  eP        Pn     09 24 04.8 +1.5
TEY                             AMB       AMB    09 24 09.6
                comp=Z,90nm,0.9s
JMM   Marumori       10.04 228              Pn     09 24 07.7 -0.8
JSD   Sado           11.34 236  Pn        Pn     09 24 25.1 -1.3
JYT   Yasato         11.60 224  Pn        Pn     09 24 28.6 -1.3
MJAR  Matsushiro Arr 12.41 231  P         Pn     09 24 40.4 -0.6
                comp=Z,9.1nm,0.7s,baz=29,slow=13,SNR=30
MJB9  Matsu-Tunnel   12.41 231              Pn     09 24 41.8 +0.8
MAJO  Matsushiro     12.41 231  Pn        Pn     09 24 40.9 -0.1
MAJO  Matsushiro     12.41 231  PN        Pn     09 24 40.9 -0.1
USA0B Ussuriysk Arra 13.03 273  Pn        Pn     09 24 48.1 -1.2
USA0B Ussuriysk Arra 13.03 273  PN        Pn     09 24 48.1 -1.2
USRK  Ussuriysk Ar.  13.03 273  P         Pn     09 24 48.1 -1.2
                comp=Z,23nm,0.8s,baz=85,slow=14,SNR=19
USRK                            LR        LR     09 29 56.0
                comp=Z,403nm,18.9s,baz=69,slow=38
USRK  Ussuriysk Ar.  13.03 273              Pn     09 24 48.4 -0.9
USRK  Ussuriysk Ar.  13.03 273  PN        Pn     09 24 48.4 -0.9
KLR   Kul'dur        13.27 295  P         Pn     09 24 50.3 -2.3
                comp=Z,10nm,1.1s,baz=63,slow=9.0,SNR=3.6
KLR                             LR        LR     09 30 24.6
                comp=Z,372nm,18.0s,baz=135,slow=40
KLR   Kul'dur        13.27 295  i PN      Pn     09 24 54.0 +1.4
KLR                             pmax      pmax
                comp=Z,15nm,1.1s
KLR                             MLR       MLR
                comp=Z,310nm,16.0s
KLR   Kul'dur        13.27 295  eP        Pn     09 24 51.3 -1.3
JGF   Kuroka         13.57 231  Pn        Pn     09 24 57.0 +0.3
KBG   Krutoberegovo  13.75  30  eP        Pn     09 24 53.7  -5.3
KBG                             AMB       AMB    09 24 54.7
                comp=Z,60nm,0.7s
INU   Inuyama        13.94 231  Pn        Pn     09 25 02.3 +0.7
MSHR  Mys Shultsa    13.99 267  i P       Pn     09 25 02.5 +0.3
MSHR                            pmax      pmax
                comp=Z,13nm,1.0s
MSHR                            MLR       MLR
                comp=Z,57nm,17.0s
MA2   Magadan        14.61   1  P         Pn     09 25 07.3 -3.0
                comp=Z,6.3nm,0.7s,baz=220,slow=23,SNR=4.2
MA2   Magadan        14.61   1  Pn        Pn     09 25 07.8 -2.5
MA2   Magadan        14.61   1  P         Pn     09 25 07.8 -2.5
MDJ   Mudanjiang     14.66 276              Pn     09 25 09.6 -1.4
MDJ   Mudanjiang     14.66 276  P         P      09 25 14.0 -1.8
MDJ                             pmax      pmax
                comp=Z,16nm,1.5s
MDJ                             pmax      pmax
                comp=Z,130nm,6.7s
BNX   BinXian        16.05 281  ⇑P        P      09 25 31.0 -0.3
BNX                             pmax      pmax
                comp=Z,13nm,0.7s
BNX                             pmax      pmax
                comp=Z,110nm,4.5s
JHS   Saijyo         16.45 239              Pn     09 25 35.0 +1.0
JHS                             IAmb      IAmb   09 25 44.6
                comp=Z,50nm,1.1s
JMN   Monobe         16.89 234  Pn        Pn     09 25 39.7 +0.3
JMN                             IAmb      IAmb   09 25 59.1
                comp=Z,52nm,1.1s
ZEA   Zeya           17.27 309  eP        Pn     09 25 42.8 -1.2
ZEA                             pmax      pmax
                comp=E,10.0nm,0.9s
ZEA                             pmax      pmax
                comp=N,10.0nm,0.3s
ZEA                             pmax      pmax
                comp=Z,20nm,1.1s
ZEA                             MLR       MLR
                comp=E,200nm,16.0s
ZEA                             MLR       MLR
                comp=Z,200nm,16.0s
ZEA   Zeya           17.27 309  eP        Pn     09 25 40.5 -3.5
ZEA                             AMB       AMB    09 25 45.0
                comp=Z,10.0nm,0.9s
SHEM  Shemya Is, Ala 17.45  55  LR        LR     09 33 11.1
                comp=Z,51nm,18.6s,baz=114,slow=39
SEY   Seymchan       18.02   3  P         P      09 25 50.6 -2.2
                comp=Z,1.4nm,0.5s,baz=168,slow=8.8,SNR=6.3
SEY   Seymchan       18.02   3  i P       P      09 25 52.5 -0.3
SEY                             pmax      pmax
                comp=Z,4.0nm,1.0s
SEY                             MLR       MLR
                comp=Z,260nm,18.0s
KSRS  Korea Array    18.36 254  P         Pn     09 25 57.5 +0.2
                comp=Z,9.1nm,0.6s,baz=58,slow=11,SNR=45
KSRS                            LR        LR     09 33 01.4
                comp=Z,192nm,18.8s,baz=55,slow=37
KSAR  Wonju Array Be 18.39 254  P         Pn     09 25 57.9 +0.2
KSAR  Wonju Array Be 18.39 254  P         Pn     09 25 57.9 +0.2
KSAR  Wonju Array Be 18.39 254  eP        Pn     09 25 57.9 +0.2
TJN   Taejon         19.31 251  ceP       Pn     09 26 09.0 +0.3
YAK   Yakutsk        20.83 332  P         P      09 26 21.9 -1.5
                comp=Z,66nm,0.8s,baz=86,slow=2.0,SNR=33
                comp=Z,66nm,0.8s
YAK   Yakutsk        20.83 332              P      09 26 22.2 -1.2
YAK   Yakutsk        20.83 332  i P       P      09 26 24.0 +0.6
YAK                             pmax      pmax
                comp=Z,131nm,0.8s
YAK                             MLR       MLR
                comp=Z,339nm,16.0s
YAK   Yakutsk        20.83 332  eP        P      09 26 24.0 +0.6
BILL  Bilibino       24.58  14  ⇑eP       P      09 27 01.9 +0.8
BILL                            e         P      09 27 35.2
BILL                            eS        S      09 32 10.4  +53
BILL                            pmax      pmax
                comp=Z,29nm,2.6s
BILL                            MLR       MLR
                comp=Z,140nm,21.0s
BILL  Bilibino       24.58  14  eP        P      09 27 01.9 +0.8
NJ2   Nanjing        27.55 253  eP        P      09 27 28.3 +0.1
NJ2                             pmax      pmax
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comp=Z,30nm,0.7s
HNS HongShan 27.61 267 ⇑P **P 09 27 29.5 +0.8**
HNS pmax pmax
comp=Z,15nm,0.8s
HHC Hu-ho-hao-te 28.43 275 *e*P **P 09 27 37.0 +0.9**
HHC pmax pmax
comp=Z,64nm,0.9s
HHC pmax pmax
comp=Z,270nm,6.2s
HHC LR LR
comp=Z,540nm,15.8s
HHC LR LR
comp=Z,520nm,18.4s
HHC LR LR
comp=Z,810nm,17.7s
TIXI Tiksi 28.64 346 LR LR 09 39 22.1
comp=Z,109nm,20.3s,baz=346,slow=37
TIXI Tiksi 28.64 346 *i* P **P 09 27 39.0 +1.5**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI MLR MLR
comp=Z,96nm,19.0s
TIXI Tiksi 28.64 346 *e*P **P 09 27 39.0 +1.5**
H11N2 WAKE ISLAND Hy 28.74 146 T T 09 58 26.3
baz=335,slow=76,SNR=8704
H11N1 WAKE ISLAND Hy 28.75 146 T T 09 58 27.2
baz=335,slow=76,SNR=6188
H11N3 WAKE ISLAND Hy 28.76 146 T T 09 58 27.5
baz=335,slow=76,SNR=8049
H11S1 WAKE ISLAND Hy 29.77 147 T T 09 59 41.9
baz=336,slow=76
H11S3 WAKE ISLAND Hy 29.78 147 T T 09 59 43.4
baz=336,slow=76,SNR=8975
H11S2 WAKE ISLAND Hy 29.79 147 T T 09 59 40.6
baz=336,slow=76,SNR=7762
SONM Songino Array 30.05 291 P **P 09 27 51.1 +0.6**
comp=Z,0.7nm,0.4s,baz=60,slow=8.5,SNR=2.3
SONM LR LR 09 40 58.6
comp=Z,177nm,18.1s,baz=86,slow=39
comp=Z,0.7nm,0.4s
LYN LuoYang 30.59 263 ⇑P **P 09 27 56.3 +1.1**
LYN pmax pmax
comp=Z,10.0nm,0.6s
LYN pmax pmax
comp=Z,130nm,8.0s
WHN Wuhan 31.53 255 ⇑P **P 09 28 04.0 +0.5**
XAN Xi'an 33.36 265 P **P 09 28 20.0 +0.4**
XAN pmax pmax
comp=Z,17nm,1.2s
ENH Enshi 35.06 259 P **P 09 28 33.5 -0.8**
LZH Lanzhou 35.93 272 *e*P **P 09 28 42.8 +0.9**
LZH pP pP 09 28 55.0 -1.9
LZH sP sP 09 29 00.3 -3.6
LZH pmax pmax
comp=Z,28nm,1.0s
LZH LR LR
comp=Z,200nm,13.8s
LZH LR LR
comp=Z,190nm,14.5s
LZH LR LR
comp=Z,120nm,14.2s
K20K Telida 35.98 39 P **P 09 28 41.7 -0.1**
K20K IAmb IAmb 09 28 53.1
comp=Z,8.9nm,1.1s
J20K Nowinta River 36.01 38 P **P 09 28 42.3 +0.3**
J20K IAmb IAmb 09 29 01.2
comp=Z,5.4nm,0.8s
IMAR Indian Mountai 36.37 35 P **P 09 28 44.6 -0.5**
H21K Melozitna Rive 36.72 36 P **P 09 28 48.0 -0.1**
KDAK Kodiak Island 36.78 49 P **P 09 28 47.6 -1.0**
comp=Z,8.1nm,0.8s,baz=183,slow=3.2,SNR=6.4
comp=Z,8.1nm,0.8s
KDAK Kodiak Island 36.78 49 P **P 09 28 47.9 -0.7**
KDAK Kodiak Island 36.78 49 P **P 09 28 47.9 -0.7**
KDAK pmax pmax
comp=Z,80nm,1.5s
CAST Castle Rocks 36.88 39 P **P 09 28 50.3 +0.9**
CAST IAmb IAmb 09 29 06.7
comp=Z,4.1nm,0.8s
GTA Gaotai 37.26 280 *e*P **P 09 28 53.8 +0.7**
GTA pP pP 09 29 08.3 +0.2
GTA sP sP 09 29 14.0 -1.1
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,110nm,5.3s
GTA LR LR
comp=Z,87nm,13.8s
GTA LR LR
comp=Z,130nm,14.5s
GTA LR LR
comp=Z,150nm,14.2s
BPAW Bear Paw Mtn. 37.39 38 P **P 09 28 54.1 +0.3**
BPAW IAmb IAmb 09 29 08.5
comp=Z,5.9nm,0.9s
KTH Kantishna Hill 37.40 39 P **P 09 28 54.1 +0.1**
TRF Thorofare Moun 37.68 39 P **P 09 28 57.0 +0.6**
COLD Coldfoot 37.91 33 P **P 09 28 58.0 -0.1**
COLD IAmb IAmb 09 28 58.6
comp=Z,5.1nm,0.8s
H23K Yukon River 38.08 35 P **P 09 28 59.7 +0.2**
H23K IAmb IAmb 09 29 00.7
comp=Z,8.3nm,1.1s
TOLK Toolik Lake Re 38.30 31 P **P 09 29 01.1 -0.3**
TOLK IAmb IAmb 09 29 05.7
comp=Z,13nm,1.3s
MDM Murphy Dome 38.60 37 P **P 09 29 04.4 +0.5**
SML Sawmill 38.63 42 P **P 09 29 04.0 -0.2**
ILAR Eielson Array 39.17 37 P **P 09 29 07.1 -1.6**
comp=Z,1.1nm,0.6s,baz=265,slow=8.3,SNR=14
comp=Z,1.1nm,0.6s
NRIK Noril'sk 39.25 330 LR LR 09 46 29.0
comp=Z,78nm,18.3s,baz=69,slow=38
NRIK Noril'sk 39.25 330 *i* P **P 09 29 10.9 +1.6**
NRIK pmax pmax
comp=Z,13nm,2.1s
NRIK MLR MLR
comp=Z,74nm,16.0s
GYA Guiyang 39.36 257 ⇓*i*P **P 09 29 11.5 +0.7**
GYA pmax pmax
comp=Z,20nm,0.9s
KLU Klutina 39.80 42 P **P 09 29 14.2 +0.2**
KLU IAmb IAmb 09 29 15.3
comp=Z,6.7nm,1.0s
BMAR Burnt Mountain 40.10 33 P **P 09 29 17.1 +0.7**
N25K Chitina, Valde 40.42 42 P **P 09 29 19.3 +0.2**
N25K IAmb IAmb 09 29 41.5
comp=Z,14nm,1.5s
VRDI Verde Repeater 41.01 42 P **P 09 29 24.1 -0.1**
VRDI IAmb IAmb 09 29 35.0
comp=Z,11nm,1.2s
M26K Nabesna, AK 41.08 41 P **P 09 29 25.4 +0.9**
M26K IAmb IAmb 09 29 26.2
comp=Z,7.8nm,0.9s
K27K Chicken 41.30 38 IAmb IAmb 09 29 40.2
comp=Z,10nm,1.1s
L27K Beaver Creek, 41.53 40 P **P 09 29 29.0 +0.8**
L27K IAmb IAmb 09 29 43.5
comp=Z,8.5nm,0.8s
BCAR Beaver Creek A 41.55 40 P **P 09 29 29.2 +0.8**
DGZ Jazzator, Alta 41.71 300 *i* P **P 09 29 31.5 +1.5**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
DGZ MLR MLR
comp=Z,117nm,19.0s
BARN Barnard Glacie 41.90 43 P **P 09 29 32.1 +0.7**
BARN IAmb IAmb 09 29 32.9
comp=Z,7.7nm,0.8s
ZALV Zalesovo Beam 42.02 307 P **P 09 29 30.4 -1.9**
comp=Z,0.6nm,0.5s,baz=56,slow=11,SNR=2.4
ZALV PcP **PcP 09 31 26.8 +0.6**
comp=Z,3.0nm,0.7s,baz=82,slow=3.0,SNR=8.9
ZALV pPcP 09 31 39.0
comp=Z,2.0nm,0.6s,baz=69,slow=3.6,SNR=6.3
ZALV LR LR 09 48 07.6
comp=Z,161nm,18.7s,baz=64,slow=38
comp=Z,0.6nm,0.5s
ZALV Zalesovo Beam 42.02 307 P **P 09 29 31.3 -1.0**
GOMU GeErMu 42.26 278 P **P 09 29 35.3 +0.4**
GOMU S **S 09 35 43.0 -8.3**
GOMU pmax pmax
comp=Z,8.0nm,0.8s
GOMU pmax pmax
comp=Z,48nm,4.8s
GOMU LR LR
comp=Z,150nm,19.2s
GOMU LR LR
comp=Z,160nm,18.0s
GOMU LR LR
comp=Z,220nm,16.2s
I29M Ogilvie Camp, 42.75 36 P **P 09 29 38.5 +0.4**
PZH PanZhiHua 42.76 261 P **P 09 29 39.3 +0.5**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,120nm,5.4s
KMI Kunming 42.93 259 ⇓P **P 09 29 41.8 +1.5**
KMI pmax pmax
comp=Z,14nm,0.9s
KMI LR LR
comp=Z,110nm,18.8s
WMQ Urumqi 43.69 292 *e*P **P 09 29 46.8 +0.8**
WMQ LR LR
comp=Z,81nm,21.9s
HYT Haines Junctio 43.93 42 P **P 09 29 48.7 +0.9**
HYT IAmb IAmb 09 30 03.1
comp=Z,11nm,1.1s
P29M Windy Craggy 44.10 44 P **P 09 29 50.6 +1.6**
P29M IAmb IAmb 09 29 51.2
comp=Z,9.1nm,0.8s
INK Inuvik 44.21 31 P **P 09 29 48.4 -1.3**
comp=Z,2.0nm,0.7s,baz=338,slow=5.4,SNR=1.8
comp=Z,2.0nm,0.7s
N31M Braeburn, Yuko 44.59 41 P **P 09 29 54.4 +1.4**
N31M IAmb IAmb 09 30 08.2
comp=Z,18nm,1.3s
MK31 Makanchi Array 45.97 298 P **P 09 30 03.9 -0.1**
MK31 Makanchi Array 45.97 298 P **P 09 30 03.9 -0.1**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 45.97 298 P **P 09 30 02.6 -1.4**
comp=Z,1.2nm,0.6s,baz=74,slow=7.6,SNR=10
MKAR PcP **PcP 09 31 39.8 0.0**
comp=Z,1.8nm,0.8s,baz=17,slow=0.7,SNR=3.3
MKAR pPcP 09 31 52.7
comp=Z,1.4nm,0.6s,baz=75,slow=3.7,SNR=4.6
MKAR LR LR 09 50 31.9
comp=Z,275nm,18.7s,baz=82,slow=38
comp=Z,1.2nm,0.6s
MKAR Makanchi Array 45.97 298 P **P 09 30 03.3 -0.7**
MKAR Makanchi Array 45.97 298 *ce*P **P 09 30 03.5 -0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 45.97 298 *e*P **P 09 30 04.0 0.0**
KURK Kurchatov 46.67 304 P **P 09 30 08.2 -1.2**
KURK IAmb IAmb 09 30 10.0
comp=Z,7.2nm,1.2s
KURK Kurchatov 46.67 304 *ce*P **P 09 30 08.6 -0.8**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KURK MLR MLR
comp=Z,69nm,16.0s
KURK Kurchatov 46.67 304 *e*P **P 09 30 08.6 -0.8**
KURBB Kurchatov Arra 46.76 304 P **P 09 30 07.8 -2.3**
comp=Z,1.6nm,0.5s,baz=76,slow=8.5,SNR=14
KURBB PcP **PcP 09 31 41.8 -0.7**
comp=Z,1.5nm,0.7s,baz=75,slow=2.9,SNR=6.4
comp=Z,1.6nm,0.5s
DLBC Dease Lake 48.26 44 P **P 09 30 21.5 -0.3**
comp=Z,1.6nm,0.5s,baz=297,slow=14,SNR=5.4
DLBC LR LR 09 51 51.1
comp=Z,52nm,18.1s,baz=292,slow=38
comp=Z,1.6nm,0.5s
PHRA Phrae 49.08 254 P **P 09 30 30.4 +2.0**
CHTO Chiang Mai 49.74 256 P **P 09 30 33.2 -0.3**
CHTO Chiang Mai 49.74 256 P **P 09 30 33.2 -0.3**
CMAR Chiang Mai Arr 49.98 255 P **P 09 30 35.6 +0.3**
comp=Z,1.3nm,0.4s,baz=37,slow=7.0,SNR=13
CMAR pP **pP 09 30 48.6 -1.7**
comp=Z,1.6nm,0.6s,baz=38,slow=7.4,SNR=2.7
CMAR LR LR 09 53 30.6
comp=Z,84nm,19.4s,baz=70,slow=38
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 49.98 255 P **P 09 30 37.1 +1.7**
CMAR Chiang Mai Arr 49.98 255 *i* P **P 09 30 37.0 +1.7**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
GRNB Grenville Isla 50.06 50 P **P 09 30 37.0 +1.5**
SHL Shillong 50.30 268 P **P 09 30 36.4 -1.5**
SHL Shillong 50.30 268 P **P 09 30 36.4 -1.5**
SHL pmax pmax
comp=Z,16nm,0.9s
BVAR Borovoye Array 50.42 310 LR LR 09 53 07.3
comp=Z,111nm,18.5s,baz=41,slow=38
BRVK Borovoye 50.46 310 P **P 09 30 38.1 -0.4**
BRVK Borovoye 50.46 310 *ce*P **P 09 30 38.8 +0.3**
BRVK pmax pmax
comp=Z,10.0nm,2.5s
BRVK Borovoye 50.46 310 *e*P **P 09 30 38.8 +0.3**
BRDH Bariadhala 52.29 265 LR LR 09 54 08.7
comp=Z,72nm,19.1s,baz=118,slow=37
AAK Ala-Archa 52.80 296 LR LR 09 54 33.3
comp=Z,130nm,18.0s,baz=48,slow=37
AAK Ala-Archa 52.80 296 P **P 09 30 56.1 -0.2**
AAK Ala-Archa 52.80 296 P **P 09 30 56.2 -0.2**
AAK pmax pmax
comp=Z,2.0nm,0.9s
AAK Ala-Archa 52.80 296 *e*P **P 09 30 57.4 +1.1**
RES Resolute Bay 53.13 18 LR LR 09 56 40.7
comp=Z,78nm,18.3s,baz=16,slow=40
GUN Gumba 53.13 274 *e*P **P 09 30 59.6 +0.4**
comp=Z,54nm,0.9s
RAMN Ramite 53.20 273 *e*P **P 09 31 00.0 +0.4**
comp=Z,44nm,0.6s
YKA Yellowknife Ar 53.53 35 P **P 09 31 00.5 -0.6**
comp=Z,1.9nm,0.7s,baz=295,slow=7.3,SNR=3.8
YKA pP **pP 09 31 13.6 -2.9**
comp=Z,3.8nm,0.8s,baz=294,slow=7.4,SNR=5.2
comp=Z,1.9nm,0.7s
KKN Kakani 53.63 275 *e*P **P 09 31 03.3 +0.6**
PKI Pulchoki 53.67 274 *e*P **P 09 31 03.4 +0.3**
PKIN Phulchoki 53.68 274 *e*P **P 09 31 03.4 +0.3**
DMN Daman 53.86 275 *e*P **P 09 31 05.0 +0.6**
GKN Gorkha 53.96 275 *e*P **P 09 31 05.5 +0.5**
DANN Dangsing 54.37 276 *e*P **P 09 31 08.9 +0.8**
comp=Z,60nm,0.9s
KOLN Koldanda 54.83 276 *e*P **P 09 31 12.1 +0.7**
comp=Z,4.6nm,0.9s
HNR Honiara 54.88 168 LR LR 09 51 39.3
comp=Z,782nm,22.0s,baz=340,slow=32
ARU Arti 54.94 317 LR LR 09 55 13.1
comp=Z,127nm,18.4s,baz=42,slow=37
ARU Arti 54.94 317 P **P 09 31 09.7 -1.8**
ARU IAmb IAmb 09 31 11.7
comp=Z,5.1nm,0.7s
ARU Arti 54.94 317 *d i*P **P 09 31 11.4 0.0**
ARU *PP pP 09 31 22.6 -4.8
ARU 09 32 11.8
ARU 09 33 10.4
ARU S **S 09 38 48.4 0.0**
ARU SS **SS 09 42 29.6 -2.3**
ARU pmax pmax
comp=Z,4.0nm,0.6s
ARU Arti 54.94 317 *e*P **P 09 31 11.5 0.0**
PYUN Piuthan 55.06 276 *e*P **P 09 31 13.5 +0.5**
comp=Z,77nm,1.0s
KK31 Karatay Array 55.07 298 P **P 09 31 12.3 -0.4**
KK31 IAmb IAmb 09 31 13.0
comp=Z,3.0nm,0.7s
KK31 Karatay Array 55.07 298 P **P 09 31 12.3 -0.4**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 55.07 298 P **P 09 31 12.2 -0.5**
KKAR Karatay Array 55.07 298 IAmb IAmb 09 31 13.0
comp=Z,3.0nm,0.7s
KKAR Karatay Array 55.07 298 P **P 09 31 12.2 -0.5**
GAR Garm 57.42 294 P **P 09 31 29.6 0.0**
KIRV Kirov 57.96 323 LR LR 09 58 23.2
comp=Z,145nm,20.0s,baz=27,slow=38
ABKAR Akbulak array 57.99 309 P **P 09 31 33.0 -0.3**
AKTO Aktyubinsk 58.39 311 LR LR 09 59 04.1
comp=Z,129nm,18.1s,baz=35,slow=38
NIL Nilore 58.53 288 P **P 09 31 37.7 +0.4**
NIL Nilore 58.53 288 P **P 09 31 37.7 +0.4**
NIL pmax pmax
comp=Z,16nm,0.9s
ARCES ARCESS Array B 58.84 340 LR LR 10 03 19.2
comp=Z,39nm,19.0s,baz=226,slow=43
PINE Pine Mountain 60.24 57 IAmb IAmb 09 32 02.2
comp=Z,4.5nm,0.8s
KBL Kabul 60.83 291 P **P 09 31 52.3 -1.0**
KBL Kabul 60.83 291 P **P 09 31 52.3 -1.0**
KBL pmax pmax
comp=Z,11nm,0.8s
PSI Prapat 61.49 243 LR LR 10 00 13.3
comp=Z,74nm,18.0s,baz=74,slow=37
MOD Modoc Plateau 61.72 58 IAmb IAmb 09 32 13.9
comp=Z,6.1nm,1.2s
PLID Pearl Lake 62.34 53 IAmb IAmb 09 32 20.8
comp=Z,3.3nm,0.8s
WVOR Wild Horse Val 62.40 57 IAmb IAmb 09 32 05.7
comp=Z,6.0nm,1.1s
MSO Missoula 62.43 50 P **P 09 32 04.2 +0.3**
MSO IAmb IAmb 09 32 25.7
comp=Z,5.9nm,1.1s
BELG Belogornoye 62.49 318 LR LR 10 00 13.3
comp=Z,102nm,19.5s,baz=151,slow=37
BEKR Beckworth 62.91 60 IAmb IAmb 09 32 21.2
comp=Z,5.1nm,1.0s
PAHR Pah Rah Range 63.60 59 IAmb IAmb 09 32 27.0
comp=Z,6.0nm,1.1s
PNTR Pine Nut 63.84 60 P **P 09 32 14.5 +1.1**
PNTR IAmb IAmb 09 32 15.5
comp=Z,4.1nm,0.8s
CMB Columbia Colle 64.00 61 P **P 09 32 14.8 +0.5**
CMB Columbia Colle 64.00 61 P **P 09 32 14.8 +0.5**
CMB pmax pmax
comp=Z,3.0nm,1.0s
FINES FINESS Array B 64.75 334 P **P 09 32 16.4 -2.2**
comp=Z,5.0nm,0.6s,baz=29,slow=4.4,SNR=16
FINES pP pP 09 32 29.4 -5.5
comp=Z,5.5nm,0.7s,baz=46,slow=8.2,SNR=3.8
FINES LR LR 10 02 34.0
comp=Z,125nm,18.5s,baz=27,slow=38
comp=Z,5.0nm,0.6s
FINES FINESS Array B 64.75 334 *i* P **P 09 32 16.3 -2.4**
FINES pmax pmax
comp=Z,5.0nm,0.6s
KVN Kaiserville 64.79 59 IAmb IAmb 09 32 34.4
comp=Z,5.5nm,1.0s
RYN Ryan 64.79 60 IAmb IAmb 09 32 34.9
comp=Z,5.7nm,1.2s
LHV Little Huntoon 65.03 60 IAmb IAmb 09 32 36.6
comp=Z,10nm,1.1s
NVAR Mina Array Bea 65.05 60 P **P 09 32 21.9 +0.6**
comp=Z,2.7nm,0.7s,baz=297,slow=6.9,SNR=30
comp=Z,2.7nm,0.7s
NV11 Mina Array Sit 65.14 60 IAmb IAmb 09 32 41.1
comp=Z,7.8nm,1.4s
ELK Elko 65.45 56 LR LR 09 59 29.4
comp=Z,16nm,19.5s,baz=313,slow=35
OBN Obninsk 65.60 325 *i* P **P 09 32 23.5 -0.7**
OBN *e* 09 34 46.3
OBN *e*S S 09 40 55.3 -9.4
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,135nm,19.0s
OBN Obninsk 65.60 325 *e*P **P 09 32 24.4 +0.2**
GEYT Alibeck 65.75 300 P **P 09 32 25.7 +0.1**
comp=Z,4.7nm,0.5s,baz=25,slow=3.9,SNR=9.6
comp=Z,4.7nm,0.5s
WCT Wildcat Mounta 67.11 60 IAmb IAmb 09 32 49.1
comp=Z,5.8nm,1.1s
TPNV Topopah Spring 67.24 60 IAmb IAmb 09 32 37.2
comp=Z,4.8nm,1.0s
FRB Frobisher Bay 67.35 18 LR LR 10 04 59.5
comp=Z,61nm,18.9s,baz=272,slow=39
PDAR Pinedale Array 67.42 52 P **P 09 32 36.6 +0.2**
comp=Z,1.1nm,0.8s,baz=270,slow=0.7,SNR=10
PDAR LR LR 10 00 42.0
comp=Z,29nm,20.9s,baz=300,slow=35
comp=Z,1.1nm,0.8s
AFI Afiamalu 68.00 140 LR LR 09 55 25.7
comp=Z,50nm,21.7s,baz=1.0,slow=30
DZM Mont Dzumac 68.36 164 *e*LR LR 09 53 32.4
comp=Z,91nm,21.8s
DZM Mont Dzumac 68.36 164 LR LR 09 56 11.7
comp=Z,43nm,21.4s,baz=38,slow=30
RDMU Red Mountain 68.85 53 IAmb IAmb 09 32 59.7
comp=Z,6.5nm,0.9s
NOA NORSAR Array B 69.22 340 P **P 09 32 45.6 -1.5**
comp=Z,2.8nm,0.8s,baz=30,slow=6.3,SNR=3.6
comp=Z,2.8nm,0.8s
KNB Kanab 69.29 58 IAmb IAmb 09 33 04.0
comp=Z,6.6nm,1.1s
MNK Minsk 69.46 328 *i* P **P 09 32 50.3 +1.7**
MNK *i* *PP **pP 09 33 04.5 -0.5**
MNK *i* 09 33 13.5
MNK *i* 09 35 23.6
MNK *i* PPP PPP 09 37 04.5
MNK *i* S **S 09 41 53.4 +2.4**
MNK *i* *SS **pS 09 42 17.7 +6.9**
MNK *i* 09 42 46.8
MNK *i* SS **SS 09 46 21.7 +3.6**
MNK pmax pmax
comp=N,27nm,0.7s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK MLR MLR
comp=Z,137nm,13.0s
MNK MLR MLR
comp=E,32nm,15.0s
MNK MLR MLR
comp=N,243nm,14.0s
MNK Minsk 69.46 328 *i* P **P 09 32 50.4 +1.7**
comp=E,2.0nm,0.8s
MNK *i* P **P 09 32 50.4 +1.7**
comp=N,27nm,0.7s
MNK *i* P **P 09 32 50.4 +1.7**
comp=Z,8.0nm,0.7s,baz=220
MNK *i* pP **pP 09 33 04.5 -0.5**
MNK *i* PP **PP 09 35 23.7 +1.6**
MNK *i* PPP PPP 09 37 04.6
MNK *i* S **S 09 41 53.5 +2.4**
MNK *i* sS **pS 09 42 17.8 +6.9**
MNK *i* SS **SS 09 46 21.8 +3.6**
MNK *i* SSS SSS 09 49 39.3
MNK *i* LR LR 10 01 54.8
MNK *i* LRM MLR 10 05 53.7
comp=Z,137nm,13.1s
MNK *i* LRM MLR 10 06 06.0
comp=E,32nm,15.1s
MNK *i* LRM MLR 10 06 11.3
comp=N,243nm,13.8s
KVAR Kislovodsk Arr 70.55 313 LR LR 10 08 04.6
comp=N,125nm,18.6s,baz=276,slow=40
KIV Kislovodsk 70.55 313 *e*P **P 09 32 56.9 +1.2**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,102nm,18.0s
KIV Kislovodsk 70.55 313 *e*P **P 09 32 56.9 +1.2**
KBZ Khabaz 70.60 313 P **P 09 32 55.0 -0.8**
comp=Z,9.7nm,0.8s,baz=69,slow=3.9,SNR=23
KBZ LR LR 10 07 31.8
comp=Z,243nm,18.7s,baz=46,slow=39
comp=Z,9.7nm,0.8s
KBZ Khabaz 70.60 313 *ce*P **P 09 32 56.0 +0.2**
KBZ pmax pmax
comp=Z,14nm,1.0s
KBZ Khabaz 70.60 313 *e*P **P 09 32 56.0 +0.2**
SHA1 Shidzhatmaz 70.72 313 *i* P **P 09 32 57.2 +0.3**
ZEI Tsey 70.73 312 *e*P **P 09 32 55.5 -1.4**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
ONI Oni 71.10 312 P **P 09 32 59.2 +0.2**
ONI IAmb IAmb 09 33 01.5
comp=Z,12nm,1.1s
ONI Oni 71.10 312 P **P 09 32 59.2 +0.2**
ONI pmax pmax
comp=Z,12nm,1.1s
AKASG Malin Array Be 71.86 325 P **P 09 33 02.0 -1.3**
comp=Z,1.5nm,0.5s,baz=37,slow=6.2,SNR=9.0
AKASG LR LR 10 05 49.3
comp=Z,88nm,18.6s,baz=49,slow=37
comp=Z,1.5nm,0.5s
GNI Garni 72.10 309 LR LR 10 07 45.6
comp=Z,67nm,18.1s,baz=26,slow=38
GNI Garni 72.10 309 *ce*P **P 09 33 06.6 +1.4**
GNI pmax pmax
comp=Z,20nm,1.7s
ANMO Albuquerque 74.48 56 *i* P **P 09 33 20.4 +1.1**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
BUR08 Bucovina Ar. S 75.89 325 P **P 09 33 25.5 -1.6**
BURAR Bucovina Array 75.91 325 P **P 09 33 26.3 -0.9**

BURAR IAmb IAmb 09 33 27.5
comp=Z,4.0nm,0.7s
STHS Stebnicka Huta 75.99 328 *e*P **P 09 33 26.5 -1.0**
KOLS Kolonicke sedl 76.00 328 *e*P **P 09 33 26.8 -0.7**
KOLS pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 77.20 334 *e*P **P 09 33 33.0 -1.2**
CLL *e**PP **PcP 09 33 47.0 +2.3**
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 77.20 334 *e*P **P 09 33 33.0 -1.2**
comp=Z,9.0nm,1.2s
CLL *e*(pP) **PcP 09 33 47.0 +2.3**
CLL *e*PP **PP 09 36 24.0 -3.9**
MLR Muntele Rosu 77.31 323 LR LR 10 08 45.5
comp=Z,46nm,18.6s,baz=49,slow=37
VYHS Vyhne 77.64 329 *e*P **P 09 33 36.0 -0.8**
BRTR Keskin Array B 78.25 315 P **P 09 33 40.5 -0.1**
comp=Z,2.1nm,0.9s,baz=83,slow=4.0,SNR=6.8
comp=Z,2.1nm,0.9s
KHC Kasperske Hory 78.91 333 P **P 09 33 42.9 -0.9**
KHC IAmb IAmb 09 33 44.1
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 78.91 333 P **P 09 33 42.9 -0.9**
KHC pmax pmax
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 78.91 333 *e*P **P 09 33 43.1 -0.7**
GERES GERESS Array B 79.12 332 P **P 09 33 44.1 -0.9**
comp=Z,1.1nm,0.5s,baz=37,slow=5.2,SNR=8.6
comp=Z,1.1nm,0.5s
TXAR Lajitas Array 80.12 58 P **P 09 33 51.5 +0.6**
comp=Z,2.5nm,0.7s,baz=301,slow=4.2,SNR=38
TXAR pP **pP 09 34 05.0 -2.0**
comp=Z,2.9nm,0.5s,baz=298,slow=4.0,SNR=11
comp=Z,2.5nm,0.7s
VTS Vitosha 80.78 323 P **P 09 33 54.2 0.0**
VTS IAmb IAmb 09 33 54.8
comp=Z,7.9nm,0.8s
VTS Vitosha 80.78 323 P **P 09 33 54.2 0.0**
VTS pmax pmax
comp=Z,8.0nm,0.8s
TAOE Nuku Hiva Isla 82.16 111 *e*LR LR 09 59 54.8
comp=Z,96nm,26.8s
MMAI Mount Meron Ar 82.43 310 LR LR 10 16 07.6
comp=Z,56nm,19.1s,baz=256,slow=40
PPT Papeete 82.82 123 LR LR 10 04 14.3
comp=Z,34nm,19.7s,baz=282,slow=31
PPT2 Papeete2 82.83 123 *e*LR LR 10 00 14.2
comp=Z,110nm,25.8s
PPT2 Papeete2 82.83 123 *e*T T 11 05 49.1
comp=Z,4.4nm,0.3s
TIAR Tiarei 82.94 123 *e*T T 11 05 52.3
comp=Z,1.6nm,0.3s
RAYN Ar Rayn 83.45 297 P **P 09 34 08.8 +0.4**
RAYN IAmb IAmb 09 34 10.0
comp=Z,4.6nm,1.1s
RAYN Ar Rayn 83.45 297 P **P 09 34 08.8 +0.4**
RAYN pmax pmax
comp=Z,5.0nm,1.1s
TBI Tubuai 87.40 127 *e*LR LR 10 02 21.0
comp=Z,327nm,26.5s
TBI Tubuai 87.40 127 *e*T T 11 11 34.6
comp=Z,8.5nm,0.2s
KEST Kesra 92.19 329 LR LR 10 20 52.8
comp=Z,96nm,18.0s,baz=244,slow=39
ATD Arta Tunnel 93.89 290 LR LR 10 23 32.4
comp=Z,57nm,19.8s,baz=23,slow=40
MDT Midelt 99.25 339 LR LR 10 25 06.5
comp=Z,25nm,21.4s,baz=77,slow=38
H03N2 Juan Fernandez 140.76 90 T T 12 18 25.8
baz=306,slow=77,SNR=20
H03N3 Juan Fernandez 140.77 90 T T 12 18 21.7
baz=306,slow=77,SNR=20
H03N1 Juan Fernandez 140.77 90 T T 12 18 32.7
baz=306,slow=77,SNR=18
BDFB Brasilia 146.94 34 PKPbc **PKPab 09 41 24.0 -0.6**
comp=Z,1.5nm,0.4s,baz=236,slow=3.6,SNR=1.7
BDFB Brasilia 146.94 34 PKP2 **PKPab 09 41 24.0 -0.6**
TROLL Troll, Antarti 148.88 199 PKPbc **PKiKP 09 41 28.8 +0.7**
PLCA Paso Flores 150.04 96 PKPbc **PKiKP 09 41 31.8 +0.4**
comp=Z,1.2nm,0.6s,baz=168,slow=1.0,SNR=6.9
PLCA pPKPbc **pPKPdf 09 41 46.0 +4.0**
comp=Z,5.7nm,0.8s,baz=247,slow=2.4,SNR=8.0
SNAA Sanae 150.29 197 PKPbc **PKPbc 09 41 30.2 0.0**
CPUP Villa Florida 151.09 59 PKPbc **PKiKP 09 41 34.3 +0.4**
comp=Z,1.1nm,0.6s,baz=0.0,slow=2.0,SNR=2.0
CPUP pPKPbc **pPKPdf 09 41 48.3 +3.8**
comp=Z,2.4nm,0.8s,baz=303,slow=5.3,SNR=3.1
VNA2 Neumayer--Watz 151.78 195 PKPbc **PKiKP 09 41 35.3 +1.3**
baz=122,slow=1.0

*IDC **29** 09:27:00.8±0.9, 0°.26N×125°.88E, h0km, mb4.0/7, mbtmp4.0/7, MS3.1/5, Error ellipse: s-maj=69.5km s-min=18.2km az=72.0*
*NEIC **29** 09:27:04.6±1.2, 0°.24N±0°.09×126°.32E±0°.06, h10km±2km, mb4.1/11, Error ellipse: s-maj=15.1km s-min=9.7km az=0.0*
*DJA **29** 09:27:05.1±0.3, 0°N±5°×12°6E±°, h10km, M4.0/11, mb4.2/2, MLv3.9/11*
ISC 29 09:27:07.3±0.7, 0°.24N±0°.07×126°.17E±0°.07, h44km, n39, σ1°08/36, mb4.1/12, MS3.2/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**66**		**Pn**	**09 27 27.4**	**-1.7**
TNTI	**Ternate**	**1.31**	**66**	P	**Pn**	**09 27 30.7**	**+1.5**
LBMI	**Labuha**	**1.59**	**123**	P	**Pn**	**09 27 34.1**	**+1.0**
GAMI	**Galela, Maluku**	**2.27**	**46**	P	**Pn**	**09 27 44.0**	**+1.7**
SANI	**Sanana**	**2.29**	**185**	P	**Pn**	**09 27 42.2**	**-0.4**
GTOI	**Gorontalo**	**3.18**	**277**	P	**Pn**	**09 27 54.7**	**-0.2**
LUWI	**Luwuk**	**3.63**	**249**		**Pn**	**09 28 03.0**	**+2.0**
LUWI	**Luwuk**	**3.63**	**249**	P	**Pn**	**09 28 00.5**	**-0.5**
KRAI	**Karang Ratu**	**4.18**	**148**	P	**Pn**	**09 28 10.6**	**+2.0**
MRSI	**Marisa**	**4.23**	**273**	P	**Pn**	**09 28 09.0**	**-0.3**
APSI	**Ampana**	**4.66**	**256**	P	**Pn**	**09 28 15.2**	**0.0**
TOLI2	**Tolitoli**	**5.45**	**279**		**Pn**	**09 28 25.9**	**-0.3**
DAV	**Davao City (W)**	**6.81**	**355**	Pn	**Pn**	**09 28 44.4**	**-0.3**
BKSI	**Bulukumba**	**8.19**	**227**	P	**Pn**	**09 29 03.3**	**-0.3**
MYLDM	**Lahad Datu**	**9.09**	**303**	Pn	**Pn**	**09 29 17.8**	**+1.7**
KKM	**Kota Kinabalu**	**11.48**	**300**	Pn	**Pn**	**09 29 50.0**	**+1.1**
KSM	**Kuching**	**15.90**	**274**		**Pn**	**09 30 49.2**	**+0.9**
KSM				IAmb	IAmb	09 30 54.2	
comp=Z,15nm,1.1s							
FITZ	**Fitzroy Crossi**	**18.23**	**182**	P	**Pn**	**09 31 17.5**	**+0.3**
WB0	**Warramunga Arr**	**21.46**	**158**	P	**P**	**09 31 52.1**	**-0.1**
WRAB	**Tennant Creek**	**21.60**	**159**	P	**P**	**09 31 53.5**	**-0.1**
WRAB				IAmb	IAmb	09 31 58.6	
comp=Z,8.0nm,0.7s							
WRA	**Warramunga Arr**	**21.60**	**159**	P	**P**	**09 31 52.6**	**-1.1**
comp=Z,6.5nm,0.8s,baz=337,slow=11,SNR=31							
comp=Z,6.5nm,0.8s							
WRA	**Warramunga Arr**	**21.60**	**159**	P	**P**	**09 31 52.3**	**-1.4**
WB2	**Warramunga Arr**	**21.61**	**159**	P	**P**	**09 31 52.7**	**-1.0**
WB2				IAmb	IAmb	09 31 58.4	
comp=Z,9.4nm,0.8s							
WR0	**Warramunga Arr**	**21.69**	**158**	P	**P**	**09 31 54.3**	**-0.3**
WR0				IAmb	IAmb	09 32 11.5	
comp=Z,12nm,1.2s							
COEN	**Coen**	**21.97**	**131**	P	**P**	**09 31 55.9**	**-1.8**
COEN				IAmb	IAmb	09 32 04.5	
comp=Z,15nm,1.1s							
GUMO	**Guam**	**22.78**	**54**	LR	LR	09 40 39.7	
comp=Z,45nm,18.8s,baz=12,slow=36							
AS31	**Alice Springs**	**24.93**	**163**	P	**P**	**09 32 27.3**	**+0.7**
AS31				IAmb	IAmb	09 32 48.0	
comp=Z,1.5nm,0.8s							
ASAR	**Alice Springs**	**24.93**	**163**	P	**P**	**09 32 27.8**	**+1.2**
comp=Z,2.2nm,0.8s,baz=352,slow=15,SNR=21							
comp=Z,2.2nm,0.8s							
ASAR	**Alice Springs**	**24.93**	**163**	P	**P**	**09 32 27.1**	**+0.5**
FORT	**Forrest**	**30.91**	**177**	P	**P**	**09 33 21.3**	**+1.4**
STKA	**Stephens Creek**	**35.13**	**157**	P	**P**	**09 33 57.2**	**+0.4**
comp=Z,1.9nm,0.6s,baz=315,slow=9.7,SNR=5.7							
STKA				LR	LR	09 48 00.9	
comp=Z,44nm,20.0s,baz=24,slow=36							
comp=Z,1.9nm,0.6s							
STKA	**Stephens Creek**	**35.13**	**157**	P	**P**	**09 33 57.5**	**+0.7**
STKA				IAmb	IAmb	09 34 15.9	
comp=Z,2.8nm,1.3s							
KSRS	**Korea Array**	**37.06**	**2**	LR	LR	09 50 19.0	
comp=Z,9.7nm,20.6s,baz=200,slow=38							
SONM	**Songino Array**	**50.42**	**343**	LR	LR	09 59 02.1	
comp=Z,24nm,18.5s,baz=266,slow=38							
PETK	**Petropavlovsk-**	**58.85**	**22**	P	**P**	**09 37 01.8**	**+0.3**
comp=Z,1.8nm,0.8s,baz=207,slow=6.0,SNR=1.0							
comp=Z,1.8nm,0.8s							
MKAR	**Makanchi Array**	**60.11**	**327**	P	**P**	**09 37 08.5**	**-1.8**
comp=Z,0.6nm,0.5s,baz=119,slow=8.4,SNR=9.2							
comp=Z,0.6nm,0.5s							
NRIK	**Noril'sk**	**73.66**	**347**	P	**P**	**09 38 35.7**	**-0.3**
comp=Z,2.1nm,0.7s,baz=135,slow=2.8,SNR=3.5							
comp=Z,2.1nm,0.7s							
VNDA	**Vanda**	**80.06**	**173**	P	**P**	**09 39 11.8**	**-0.1**
comp=Z,0.5nm,0.8s,baz=306,slow=5.2,SNR=3.6							
VNDA				LR	LR	10 13 16.7	
comp=Z,25nm,19.8s,baz=180,slow=35							
comp=Z,0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**123.39**	**286**	PKP	**PKPdf**	**09 46 00.8**	**+0.1**
comp=Z,0.2nm,0.5s,baz=63,slow=0.6,SNR=2.2							

*FUNV **29** 09:31:35.3, 10°.84N×61°.98W, h16km, MW3.5*
*TRN **29** 09:31:37.8, 10°.98N×62°.08W, h82km, MD3.3*
ISC 29 09:31:34.8±1.5, 10°.88N±0°.06×62°.09W±0°.05, h107km±13km, n17, σ1°54/33, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.72**	**109**	⇑*i*P	**Pn**	**09 31 54.8**	**+1.8**
TRN				*e*S	**Sn**	**09 32 06.5**	**-0.2**
CRUV	**Carupano**	**1.14**	**260**	*e*P	**Pn**	**09 31 58.0**	**+0.8**
CRUV				*e*S	**Sn**	**09 32 13.6**	**-0.6**
GRFF	**Grenada Fort F**	**1.21**	**17**	*e*P	**Pn**	**09 31 58.3**	**+0.2**
GRFF				*e*S	**Sn**	**09 32 13.7**	**-1.9**
GRGR	**Grenville**	**1.31**	**19**	*e*P	**Pn**	**09 31 59.3**	**0.0**
GRGR				*e*S	**Sn**	**09 32 16.1**	**-1.6**
TOSP	**Speyside**	**1.58**	**75**	*e*P	**Pn**	**09 32 03.1**	**+0.7**
TOSP				*e*S	**Sn**	**09 32 23.2**	**-0.2**
GCMP	**Grenada, Carri**	**1.72**	**22**	*e*P	**Pn**	**09 32 04.3**	**+0.1**
GCMP				*e*S	**Sn**	**09 32 24.5**	**-2.0**
SVB	**Belmont**	**2.51**	**19**	*e*P	**Pn**	**09 32 16.3**	**+1.9**
SVB				*e*S	**Sn**	**09 32 44.1**	**-0.6**
PCRV	**Puerto La Cruz**	**2.60**	**255**	*e*P	**Pn**	**09 32 17.4**	**+1.9**
PCRV				*e*S	**Sn**	**09 32 46.6**	**-0.1**
MCLT	**Moule a Chique**	**3.03**	**22**	*e*P	**Pn**	**09 32 22.5**	**+1.4**
MCLT				*e*S	**Sn**	**09 32 55.7**	**-1.1**
SLBI	**Saint Lucia, B**	**3.31**	**19**	*e*P	**Pn**	**09 32 26.6**	**+1.7**
SLBI				*e*S	**Sn**	**09 33 02.4**	**-1.0**
MPOM	**Morne Pois Mar**	**3.74**	**19**	*e*P	**Pn**	**09 32 32.9**	**+2.3**
MPOM				*e*S	**Sn**	**09 33 12.4**	**-1.4**
BIM	**Bigot**	**3.75**	**15**	*e*P	**Pn**	**09 32 32.5**	**+1.7**
BIM				*e*S	**Sn**	**09 33 11.8**	**-2.3**
TACV	**Tcata**	**4.91**	**262**	*e*P	**Pn**	**09 32 48.0**	**+1.6**
TACV				*e*S	**Sn**	**09 33 43.0**	**+0.9**
CACV	**CAICARA DEL OR**	**5.49**	**233**	*e*P	**Pn**	**09 32 50.6**	**-3.7**
CACV				*e*S	Sn	09 33 46.9	-9.3
BENV	**Beln**	**5.49**	**261**	*e*P	**Pn**	**09 32 55.4**	**+1.0**
BENV				*e*S	**Sn**	**09 33 56.6**	**+0.3**
BAUV	**El Baul**	**6.17**	**252**	*e*P	**Pn**	**09 33 04.2**	**+0.8**
BAUV				*e*S	**Sn**	**09 34 11.0**	**-1.7**
MAPV	**Macapo**	**6.35**	**261**	*e*P	**Pn**	**09 33 06.4**	**+0.5**
MAPV				*e*S	**Sn**	**09 34 16.4**	**-0.7**

*IDC **29** 09:32:17.3±3.5, 28°.42N×55°.75E, h0km, mb3.4/3, mbtmp3.5/3, MS3.3/1, Error ellipse: s-maj=89.3km s-min=36.7km az=153.0*
*TEH **29** 09:32:20.9, 28°.52N×55°.74E, h11km, ML3.6*
*DSN **29** 09:32:23.6±1.6, 28°.20N×55°.13E, h10km, ML3.2/6, Error ellipse: s-maj=28.7km s-min=13.2km az=92.0*
ISC 29 09:32:22.1±0.8, 28°.49N±0°.04×55°.73E±0°.04, h22km, n46, σ1°62/46, mb3.6/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.26**	**145**	*e*Pg	**Pn**	**09 32 44.7**	**+0.4**
IBND				*e*Sg	**Sb**	**09 33 03.6**	**+2.8**
IBND				*e*		09 33 14.3	
comp=Z,18μm,0.4s							
NGRK	**Negar Kerman**	**1.45**	**37**	*e*Pn	**Pn**	**09 32 45.3**	**-2.0**
NGRK				*e*		09 33 10.9	
comp=Z,5μm,0.6s							
LAR1	**LAR**	**1.45**	**236**	*e*Pg	**Pb**	**09 32 48.2**	**-0.2**
LAR1				*e*		09 33 24.0	
comp=Z,19μm,0.7s							
KRBR	**Kerman**	**1.74**	**31**	*e*Pg	**Pn**	**09 32 50.6**	**-0.7**
TVBK	**TV Kerman**	**1.74**	**31**	*e*Pn	**Pn**	**09 32 51.4**	**+0.1**
TVBK				*e*		09 33 23.6	
comp=Z,8μm,0.5s							
KHNJ	**Kahnooj**	**1.82**	**107**	*e*Pn	**Pn**	**09 32 53.5**	**+1.4**
KHNJ				*e*		09 32 57.9	
comp=Z,4μm,0.4s							
JHRM	**Jahrom**	**1.90**	**271**	*e*Pn	**Pb**	**09 32 54.9**	**-1.2**
JHRM				*e*		09 33 59.0	
comp=Z,16μm,0.3s							
KHGB	**Koh Gabri**	**1.99**	**19**	*e*Pn	**Pn**	**09 32 56.0**	**+1.4**
KHGB				*e*		09 33 28.3	
comp=Z,3μm,0.5s							
CHMN	**Cheshme madani**	**2.09**	**49**	*e*Pn	**Pn**	**09 32 57.9**	**+1.8**
CHMN				*e*		09 33 30.6	
comp=Z,3μm,0.6s							
QIR1	**Qir**	**2.37**	**270**	*e*Pn	**Pn**	**09 33 02.0**	**+2.3**
KBAM	**BAM**	**2.47**	**74**	*e*		09 33 05.0	
comp=Z,3μm,0.3s							
KBAM				*e*Pn	**Pn**	**09 33 02.9**	**+1.8**
LMD1	**Lamerd**	**2.54**	**244**	*e*Pn	**Pn**	**09 33 04.6**	**+2.5**
BANOM	**Banah**	**2.60**	**169**	*e*Pn	**Pn**	**09 33 04.5**	**+1.6**
BANOM	**Banah**	**2.60**	**169**	P	**Pn**	**09 33 04.2**	**+1.3**
IMEH	**Mehriz**	**3.05**	**342**	*e*Pn	**Pn**	**09 33 11.3**	**+2.0**
IMEH				*e*		09 34 10.3	
comp=Z,1μm,1.2s							
IBAF	**Bafgh**	**3.10**	**357**	*e*Pn	**Pn**	**09 33 11.4**	**+1.6**
IBAF				*e*		09 34 00.7	
comp=Z,824nm,0.8s							
MSFE	**Esma-Masafi**	**3.14**	**173**	*e*Pn	**Pn**	**09 33 10.9**	**+0.6**
MSFE	**Esma-Masafi**	**3.14**	**173**	P	**Pn**	**09 33 10.7**	**+0.5**
JASK	**Jask - Hormozg**	**3.23**	**143**	*e*		09 34 18.7	
comp=Z,1μm,0.8s							
ESRB	**Sir Abu**	**3.52**	**203**	*e*Pn	**Pn**	**09 33 12.7**	**-2.7**
HATD	**Hatta, Dubai**	**3.67**	**174**	*e*Pn	**Pn**	**09 33 17.4**	**-0.1**
HATD	**Hatta, Dubai**	**3.67**	**174**	P	**Pn**	**09 33 17.1**	**-0.4**
FAQ	**Al Faqa, Dubai**	**3.73**	**182**	*e*Pn	**Pn**	**09 33 17.5**	**-0.8**
ASHO	**Ashiyiah**	**3.80**	**176**	*e*Pn	**Pn**	**09 33 19.8**	**+0.4**
ASHO	**Ashiyiah**	**3.80**	**176**	P	**Pn**	**09 33 19.7**	**+0.3**
ASHO				S	**Sn**	**09 34 04.3**	**+0.9**
ASUD	**Al Ashush, Dub**	**3.86**	**185**	*e*Pn	**Pn**	**09 33 18.2**	**-2.0**
ASUD	**Al Ashush, Dub**	**3.86**	**185**	P	**Pn**	**09 33 20.9**	**+0.7**
YZKH	**Yazd**	**4.01**	**346**	*e*Pn	**Pn**	**09 33 24.9**	**+2.6**
KLNJ	**Kolanjah**	**4.39**	**306**	*e*Pn	**Pn**	**09 33 29.5**	**+1.8**
SOHO	**SOHO**	**4.39**	**170**	*e*Pn	**Pn**	**09 33 27.8**	**+0.3**
IRAM	**Ramesheh**	**4.40**	**320**	*e*Pn	**Pn**	**09 33 28.9**	**+1.1**
IRAM				*e*		09 34 26.8	
comp=Z,208nm,0.4s							
BSRN	**Basiran**	**4.54**	**39**	*e*Pn	**Pn**	**09 33 30.0**	**+0.3**
ZHSF	**Zahedan**	**4.55**	**75**	*e*Pn	**Pn**	**09 33 30.7**	**+0.9**
TPRV	**Parvadeh(Tabas**	**4.60**	**10**	*e*Pn	**Pn**	**09 33 31.8**	**+1.4**
NHDN	**Nehbandan**	**4.74**	**51**	*e*Pn	**Pn**	**09 33 34.9**	**+2.6**
NHDN				*e*		09 35 07.4	
comp=Z,784nm,0.5s							
NASN	**Na'in**	**4.98**	**330**	*e*Pn	**Pn**	**09 33 38.4**	**+2.5**
ANAR	**Anarak**	**4.99**	**340**	*e*Pn	**Pn**	**09 33 37.9**	**+2.1**
TABS	**Tabas**	**5.28**	**13**	*e*Pn	**Pn**	**09 33 40.9**	**+1.1**
BIDO	**Bidbid**	**5.39**	**156**	*e*Pn	**Pn**	**09 33 43.4**	**+2.2**
AFRZ	**Afriz**	**5.67**	**29**	*e*Pn	**Pn**	**09 33 47.5**	**+2.3**
UMZA	**Um Al Zommool**	**5.77**	**185**	*e*Pn	**Pn**	**09 33 45.0**	**-1.4**
IPIR	**Pirpir**	**5.91**	**316**	*e*Pn	**Pn**	**09 33 50.1**	**+1.5**
BRTR	**Keskin Array B**	**21.40**	**307**	P	**P**	**09 37 07.3**	**-1.1**
comp=Z,0.3nm,0.4s,baz=124,slow=13,SNR=2.9							
comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**33.13**	**32**	P	**P**	**09 38 55.4**	**-1.1**
comp=Z,0.7nm,0.5s,baz=251,slow=11,SNR=3.7							
comp=Z,0.7nm,0.5s							
LSZ	**Lusaka**	**51.02**	**215**	LR	LR	10 06 43.4	
comp=Z,30nm,20.5s,baz=174,slow=40							
TORD	**Torodi Ar. Bea**	**52.35**	**265**	P	**P**	**09 41 31.4**	**-1.4**
comp=Z,0.5nm,0.6s,baz=62,slow=6.5,SNR=4.1							
comp=Z,0.5nm,0.6s							

*IDC **29** 09:54:09.7±2.2, 18°.17S×177°.84W, h617km±18km, mb2.8/4, mbtmp3.9/6, Error ellipse: s-maj=102.4km s-min=19.3km az=154.0*
ISC 29 09:54:08.6±1.7, 17°.8S±0°.7×178°.1W±0°.3, h590km, n6, σ0°99/6, mb3.4/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.63**	**270**	P	P	09 55 37.0	+6.1
23nm,0.6s,baz=157,slow=23,SNR=22							
AFI	**Afiamalu**	**7.24**	**59**	P	**P**	**09 56 01.0**	**+0.4**
8.7nm,0.5s,baz=20,slow=5.2,SNR=4.1							
WRA	**Warramunga Arr**	**44.91**	**259**	P	**P**	**10 01 32.8**	**+0.6**
0.8nm,0.4s,baz=97,slow=7.1,SNR=60							
0.8nm,0.4s							
ASAR	**Alice Springs**	**45.07**	**254**	P	**P**	**10 01 34.1**	**+0.6**
1.6nm,0.4s,baz=92,slow=7.8,SNR=27							
ASAR				PcP	**PcP**	**10 03 00.1**	**-1.4**
0.3nm,0.5s,baz=107,slow=3.8,SNR=4.8							
1.6nm,0.4s							
ILAR	**Eielson Array**	**85.71**	**13**	P	**P**	**10 05 45.3**	**-0.3**
0.2nm,0.4s,baz=216,slow=5.3,SNR=5.2							
0.2nm,0.4s							
TXAR	**Lajitas Array**	**85.72**	**58**	P	**P**	**10 05 46.5**	**-0.1**
0.4nm,0.9s,baz=207,slow=5.8,SNR=2.9							
0.4nm,0.9s							

*IDC **29** 09:57:18.9±1.6, 20°.96S×178°.89W, h586km±18km, mb3.5/12, mbtmp4.4/14, Error ellipse: s-maj=18.3km s-min=13.7km az=137.0*
*NEIC **29** 09:57:19.4±1.3, 21°.0S±0°.2×178°.88W±0°.10, h585km±10km, mb4.2/21, Error ellipse: s-maj=29.9km s-min=11.5km az=164.0*
ISC 29 09:57:19.7±0.6, 21°.24S±0°.08×178°.83W±0°.09, h600km, n69, σ1°31/71, mb4.2/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.56**	**319**	P	P	09 58 45.9	-3.6
29nm,0.5s,baz=256,slow=23,SNR=60							
GLKZ	**Green Lake**	**8.03**	**174**	S	**S**	**10 00 55.5**	**-1.7**
AFI	**Afiamalu**	**9.91**	**44**	P	P	09 59 29.4	-8.4
21nm,0.7s,baz=234,slow=6.3,SNR=4.9							
MARNC	**Mare, Loyalty**	**12.25**	**266**	P	**P**	**09 59 59.2**	**-1.8**
DZM	**Mont Dzumac**	**13.72**	**264**	P	**P**	**10 00 15.5**	**-0.5**
6.4nm,0.6s,baz=135,slow=15,SNR=6.5							
OUZ	**Omahuta**	**15.44**	**204**	P	**P**	**10 00 34.2**	**+2.5**
GRZ	**Great Barrier**	**15.77**	**197**	P	**P**	**10 00 36.3**	**+1.5**
KUZ	**Kuaotunu**	**16.17**	**196**	P	**P**	**10 00 40.0**	**+1.6**
WIAZ	**Waiheke Island**	**16.37**	**197**	P	**P**	**10 00 42.6**	**+2.3**
MBAZ	**Motutapu North**	**16.41**	**198**	P	**P**	**10 00 43.1**	**+2.5**
MXZ	**Matakaoa Point**	**16.46**	**188**	P	**P**	**10 00 40.2**	**-0.8**
RVAZ	**Riverhead Bore**	**16.51**	**199**	P	**P**	**10 00 44.3**	**+2.8**
ETAZ	**East Tamaki Re**	**16.58**	**198**	P	**P**	**10 00 44.7**	**+2.6**
WTAZ	**Waiatarua**	**16.66**	**199**	P	**P**	**10 00 45.6**	**+2.6**
WMGZ	**Waiomatatini S**	**16.70**	**188**	P	**P**	**10 00 42.0**	**-1.2**
HAZ	**Te Kaha**	**16.72**	**189**	P	**P**	**10 00 42.5**	**-0.9**
HAZ				S	**S**	**10 03 25.8**	**-3.5**
AWAZ	**Awhitu Peninsu**	**16.76**	**198**	P	**P**	**10 00 46.3**	**+2.4**
PKGZ	**Pakihiroa**	**16.81**	**188**	P	**P**	**10 00 43.5**	**-0.9**
PUZ	**Puketiti**	**16.97**	**188**	P	**P**	**10 00 44.9**	**-0.9**
PUZ				S	**S**	**10 03 33.0**	**-0.4**
URZ	**Urewera**	**17.32**	**191**	P	**P**	**10 00 47.8**	**-1.1**
14nm,0.3s,baz=356,slow=3.1,SNR=61							
MCHZ	**McNeill Hill**	**18.55**	**191**	P	**P**	**10 00 59.5**	**-0.6**
RPZ	**Rata Peaks**	**23.95**	**198**	P	**P**	**10 01 49.3**	**+0.9**
7.0nm,0.5s,baz=48,slow=2.5,SNR=7.6							
7.0nm,0.5s							
EIDS	**Eidsvold**	**27.91**	**256**	P	**P**	**10 02 24.1**	**+0.6**
EIDS				IAmb	IAmb	10 02 34.5	
comp=Z,8.0nm,1.2s							
ARMA	**Armidale**	**28.05**	**245**	P	**P**	**10 02 26.5**	**+1.7**
CTA	**Charters Tower**	**32.66**	**266**	P	**P**	**10 03 03.9**	**-0.3**
comp=Z,3.4nm,0.3s,baz=89,slow=12,SNR=4.3							
comp=Z,3.4nm,0.3s							
CTAO	**Charters Tower**	**32.66**	**266**	P	**P**	**10 03 04.3**	**+0.1**
CTAO				IAmb	IAmb	10 03 04.9	
comp=Z,9.9nm,0.9s							
PMG	**Port Moresby**	**34.77**	**285**	P	**P**	**10 03 21.3**	**-0.6**
STKA	**Stephens Creek**	**36.77**	**245**	P	**P**	**10 03 39.2**	**+1.0**
comp=Z,2.0nm,0.5s,baz=88,slow=11,SNR=9.5							
comp=Z,2.0nm,0.5s							
STKA	**Stephens Creek**	**36.77**	**245**	P	**P**	**10 03 39.3**	**+1.0**
COEN	**Coen**	**36.87**	**275**	P	**P**	**10 03 39.5**	**+0.3**
COEN				IAmb	IAmb	10 03 39.6	
comp=Z,8.6nm,0.9s							
BBOO	**Buckleboo**	**41.53**	**244**	P	**P**	**10 04 16.5**	**+0.2**
WR0	**Warramunga Arr**	**43.55**	**263**	P	**P**	**10 04 31.5**	**-0.7**
AS31	**Alice Springs**	**43.60**	**258**	P	**P**	**10 04 32.7**	**0.0**
AS31				IAmb	IAmb	10 04 33.1	
comp=Z,2.2nm,0.7s							
ASAR	**Alice Springs**	**43.60**	**258**	P	**P**	**10 04 32.5**	**-0.1**
comp=Z,7.2nm,0.5s,baz=96,slow=7.9,SNR=122							
ASAR				PcP	**PcP**	**10 06 06.1**	**-0.3**
comp=Z,1.1nm,0.6s,baz=107,slow=4.0,SNR=8.2							
ASAR				S	**S**	**10 10 19.6**	**-0.3**
comp=Z,0.8nm,0.8s,baz=91,slow=15,SNR=5.3							
comp=Z,7.2nm,0.5s							
ASAR	**Alice Springs**	**43.60**	**258**	P	**P**	**10 04 32.4**	**-0.2**
WB0	**Warramunga Arr**	**43.72**	**263**	P	**P**	**10 04 33.2**	**-0.3**
WB0				IAmb	IAmb	10 04 33.4	
comp=Z,6.9nm,0.5s							
WB2	**Warramunga Arr**	**43.73**	**263**	P	**P**	**10 04 32.9**	**-0.7**
WB2				IAmb	IAmb	10 04 33.2	

DAVOX	**Davos/Dischmat**	**153.55**	**346**	PKPbc	**PKPbc**	**10 16 10.0**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=3.6,slow=1.2,SNR=5.8						
TORD	**Torodi Ar. Bea**	**171.94**	**184**	PKP	**PKPdf**	**10 16 19.9**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=17,slow=1.5,SNR=2.9						

*NEIC **29** 10:07:13.3±0.8, 51.5°N±0.6×178.7°W±0.2, h53km±53km, Error ellipse: s-maj=89.0km s-min=7.7km az=168.0*

AEIC 29 10:07:11±0.8, 51.7°N±0.8×178.6°W±0.2, h80km±9km, ML3.8, Error ellipse: s-maj=115.1km s-min=4.8km az=169.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**0.94**	**80**		Pn	10 07 31.1	+1.9
ADK	**Adak**	**1.23**	**81**		Pn	10 07 34.4	+1.6
ADK				Sn	Sn	10 07 50.7	+1.6
AMKA	**Amchitka**	**1.33**	**257**		Pn	10 07 35.1	+1.0
GSTR	**Great Sitkin T**	**1.64**	**75**		Pn	10 07 40.1	+2.0
UNV	**Unalaska Valle**	**7.67**	**69**	Pn	Pn	10 09 03.4	+3.6

*HVO **29** 10:15:02.4±1.1, 19.27°N±0.01×155.85°W±0.02, h6km±7km, Md2.0/14, ML2.5/38(NEIC), Error ellipse: s-maj=3.0km s-min=1.5km az=84.0*

NEIC 29 10:15:02.6±1.0, 19.29°N±0.01×155.83°W±0.02, h11km±5km, Error ellipse: s-maj=2.5km s-min=1.7km az=88.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.20**	**103**		Pg	10 15 07.4	+0.2
KHU					Sg	10 15 10.6	+0.4
CPH	**Captain Cook**	**0.21**	**336**		Sg	10 15 10.3	+0.1
MWH	**Moku'aweowe**	**0.29**	**49**	Pg	Pg	10 15 08.8	0.0
MWH				IAML		10 15 17.5	
	comp=E,419nm,1.0s						
MWH				IAML		10 15 18.2	
	comp=N,365nm,0.3s						
KHLU	**Kahalu`u**	**0.30**	**348**		Pg	10 15 08.7	-0.2
KHLU					Sg	10 15 12.9	-0.1
MLOA	**Mauna Loa Obse**	**0.34**	**44**		Pg	10 15 09.6	+0.1
MLOA				IAML		10 15 14.7	
	comp=N,358nm,0.9s						
AIN	**Ainahou**	**0.36**	**77**		Pg	10 15 09.7	-0.1
AIN					Sg	10 15 14.7	+0.1
HUH	**Hualalai**	**0.39**	**359**		Pg	10 15 10.4	0.0
HUH				IAML		10 15 22.0	
	comp=E,267nm,0.9s						
HTC	**Hot Caves**	**0.41**	**98**		Pg	10 15 10.9	+0.2
HMH	**Humu'ula Sheep**	**0.45**	**47**		Pg	10 15 11.2	-0.3
HMH				IAML		10 15 15.4	
	comp=N,322nm,4.9s						
HMH				IAML		10 15 26.4	
	comp=E,305nm,2.2s						
MLH	**Mauna Loa**	**0.46**	**64**		Pg	10 15 11.4	-0.3
MLH					Sg	10 15 18.2	+0.3
MLH				IAML		10 15 19.3	
	comp=N,297nm,2.8s						
HLP	**Hilina Pali**	**0.49**	**90**	Pg	Pg	10 15 12.1	-0.1
HLP				IAML		10 15 15.1	
	comp=E,502nm,3.8s						
HLP				IAML		10 15 21.3	
	comp=N,431nm,2.3s						
WRMHI	**West Rim**	**0.51**	**77**		Pg	10 15 12.2	-0.4
SDHHI	**Sand Hill**	**0.51**	**79**		Pg	10 15 12.2	-0.4
UWE	**Uwekahuna**	**0.52**	**76**		Pg	10 15 12.5	-0.3
OBL	**Observatory Le**	**0.53**	**76**		Pg	10 15 12.5	-0.4
OBL					Sg	10 15 20.1	+0.1
RIM	**Rim**	**0.53**	**79**	Pg	Pg	10 15 12.2	-0.8
RIM				IAML		10 15 15.1	
	comp=E,442nm,1.7s						
UWB	**Uwekahuna B**	**0.53**	**76**		Pg	10 15 12.3	-0.8
UWB				IAML		10 15 18.4	
	comp=N,273nm,1.7s						
UWB				IAML		10 15 19.1	
	comp=E,208nm,2.2s						
KKO	**Keanakako`i**	**0.54**	**79**		Pg	10 15 12.3	-0.9
RSD	**Rainshed**	**0.54**	**72**		Pg	10 15 13.0	-0.3
RSD					Sg	10 15 20.8	+0.2
SBLHI	**Steaming Bluff**	**0.54**	**76**		Pg	10 15 12.5	-0.8
SBLHI				IAML		10 15 20.9	
	comp=E,254nm,0.9s						
SBLHI				IAML		10 15 24.6	
	comp=N,444nm,1.5s						
BYL	**Byron's Ledge**	**0.55**	**78**	Pg	Pg	10 15 12.8	-0.5
BYL				IAML		10 15 16.5	
	comp=N,323nm,1.7s						
BYL				IAML		10 15 22.6	
	comp=E,283nm,1.1s						
HATHI	**Halema'uma'u T**	**0.55**	**76**		Pg	10 15 12.4	-1.0
HATHI				IAML		10 15 25.2	
	comp=E,418nm,0.8s						
HATHI				IAML		10 15 25.8	
	comp=N,384nm,1.6s						
PUH	**Pauahi**	**0.58**	**82**	Pg	Pg	10 15 12.8	-1.1
PUH				IAML		10 15 27.9	
	comp=E,185nm,3.1s						
PUH				IAML		10 15 32.6	
	comp=N,198nm,1.5s						

*PRU **29** 10:16:23.6±0.0, 42.79°N×13.10°E, h0km*
*ROM **29** 10:16:25.2±0.0, 42.848°N±0.001×13.158°E±0.003, h9km, ML3.6/121, Error ellipse: s-maj=0.2km s-min=0.1km az=72.0*
*BEO **29** 10:16:25.7±0.7, 42.81°N×13.10°E, h0km, ML3.7/14*
*STR **29** 10:16:25.0, 42.85°N×13.15°E, h9km, MLv3.9/8, preliminary*
*BGR **29** 10:16:26.3±0.8, 42.72°N×13.27°E, h10km, ML3.8/8, Error ellipse: s-maj=16.7km s-min=11.1km az=101.0*
*PDG **29** 10:16:26.0±0.6, 42.87°N×13.17°E, h11km, ML3.9/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*IDC **29** 10:16:26.2±1.4, 42.94°N×13.00°E, h0km, mb3.7/5, mbtmp3.8/9, ML4.0/4, Error ellipse: s-maj=31.7km s-min=14.9km az=87.0*
*LDG **29** 10:16:26.3±0.1, 42.76°N×13.06°E, h9km, Ml3.4/13, Error ellipse: s-maj=5.4km s-min=3.3km az=41.0*

ISC 29 10:16:26.4±0.7, 42.86N±0.01×13.12E±0.01, h10km±4km, n327, σ1$68/413, mb3.8/4, 53C-31D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.08**	**294**	⇑P	**Pg**	**10 16 28.4**	**-0.4**
T1216				S	**Sg**	**10 16 30.2**	**-0.3**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.12**	**333**	⇑P	**Pg**	**10 16 28.8**	**-0.6**
FEMA				S	**Sg**	**10 16 31.2**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
MMO1	**Montemonaco**	**0.16**	**74**	⇓P	**Pg**	**10 16 28.6**	**-1.2**
MMO1				S	**Sg**	**10 16 31.0**	**-1.3**
T1244	**Arquata del Tr**	**0.16**	**128**	⇓P	**Pg**	**10 16 29.1**	**-0.9**
T1244				S	**Sg**	**10 16 31.2**	**-1.3**
T1256	**Bolognola (MC)**	**0.17**	**27**	⇑P	**Pg**	**10 16 29.2**	**-0.9**
T1256				S	**Sg**	**10 16 32.3**	**-0.4**
FDMO	**Fiordimonte**	**0.18**	**352**	⇑P	**Pg**	**10 16 29.7**	**-0.5**
FDMO				S	**Sg**	**10 16 33.2**	**+0.2**
FDMO				AML	AML		
	comp=N,89300μm,0.3s						
FDMO				AML	AML		
	comp=E,54550μm,0.6s						
T1215	**Vallo di Nera,**	**0.19**	**254**	⇑P	**Pg**	**10 16 30.5**	**0.0**
T1215				S	**Sg**	**10 16 34.2**	**+0.9**
T1215				AML	AML		
	comp=N,21000μm,0.7s						
T1215				AML	AML		
	comp=E,19300μm,0.5s						
T1215				AML	AML		
	comp=N,19700μm,0.7s						
T1215				AML	AML		
	comp=E,19300μm,0.5s						
T1215				AML	AML		
	comp=N,19750μm,0.7s						
T1215				AML	AML		
	comp=N,21050μm,0.7s						
T1215				AML	AML		
	comp=E,17700μm,0.5s						
T1217	**Poggiodomo (PG**	**0.20**	**224**	⇑P	**Pg**	**10 16 30.5**	**-0.1**
T1217				S	**Sg**	**10 16 34.3**	**+0.7**
T1217				AML	AML		
	comp=N,22700μm,0.9s						
T1217				AML	AML		
	comp=E,16200μm,0.8s						
T1217				AML	AML		
	comp=N,22300μm,0.4s						
T1217				AML	AML		
	comp=N,22700μm,0.8s						
T1217				AML	AML		
	comp=E,15700μm,0.8s						
AM05	**Amandola Campo**	**0.21**	**55**	⇓P	**Pg**	**10 16 29.9**	**-0.8**
AM05				S	**Sg**	**10 16 33.1**	**-0.6**
AM05				AML	AML		
	comp=E,52350μm,0.6s						
AM05				AML	AML		
	comp=E,13800μm,0.8s						
AM05				AML	AML		
	comp=N,8170μm,0.7s						
AM05				AML	AML		
	comp=E,52300μm,0.6s						
AM05				AML	AML		
	comp=E,13850μm,0.8s						
AM05				AML	AML		
	comp=N,1420μm,0.9s						
AM05				AML	AML		
	comp=N,8165μm,0.7s						
CESI	**CESI - Serrava**	**0.22**	**313**	⇑P	**Pg**	**10 16 30.7**	**-0.2**
CESI				S	**Sg**	**10 16 34.7**	**+0.7**
CESI				AML	AML		
	comp=E,48900μm,0.6s						
CESI				AML	AML		
T1201	**Domo (RI)**	**0.22**	**155**	⇓P	**Pg**	**10 16 30.4**	**-0.5**
T1201				S	**Sg**	**10 16 34.1**	**0.0**
T1241	**Roccafluvione,**	**0.23**	**90**	⇓P	**Pg**	**10 16 30.1**	**-1.0**
T1241				S	**Sg**	**10 16 33.7**	**-0.6**
T1241				AML	AML		
	comp=E,38350μm,1.5s						
T1241				AML	AML		
	comp=N,44500μm,0.4s						
T1241				AML	AML		
	comp=N,42250μm,0.4s						
T1241				AML	AML		
	comp=N,44300μm,0.4s						
T1241				AML	AML		
	comp=E,41650μm,1.5s						
T1241				AML	AML		
	comp=E,41700μm,1.5s						
T1241				AML	AML		
	comp=N,42200μm,0.4s						
T1204	**Amatrice, Fraz**	**0.23**	**142**	⇓P	**Pg**	**10 16 30.4**	**-0.8**
T1204				S	**Sg**	**10 16 33.9**	**-0.5**
T1204				AML	AML		
	comp=E,34050μm,0.9s						
T1204				AML	AML		
	comp=N,43600μm,0.6s						
T1204				AML	AML		
	comp=N,43650μm,0.6s						
T1204				AML	AML		
	comp=E,34100μm,0.9s						
CSP1	**Cessapalombo**	**0.24**	**15**	⇑P	**Pg**	**10 16 30.7**	**-0.7**
CSP1				S	**Sg**	**10 16 35.0**	**+0.2**
GUMA	**Gualdo di Mace**	**0.26**	**37**	⇓P	**Pg**	**10 16 31.1**	**-0.5**
GUMA				S	**Sg**	**10 16 35.7**	**+0.5**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
LNSS	**Leonessa**	**0.26**	**193**	⇓P	**Pg**	**10 16 31.2**	**-0.5**
LNSS				S	**Sg**	**10 16 35.6**	**+0.3**
LNSS				AML	AML		
	comp=E,29850μm,0.2s						
LNSS				AML	AML		
	comp=N,24700μm,0.6s						
SMA1	**SAN MARTINO**	**0.28**	**145**	⇓P	**Pg**	**10 16 31.1**	**-0.9**
SMA1				S	**Sg**	**10 16 35.2**	**-0.5**
SMA1				AML	AML		
	comp=E,33750μm,0.6s						
SMA1				AML	AML		
	comp=N,41500μm,0.5s						
SMA1				AML	AML		
	comp=N,41450μm,0.5s						
T1243	**Rocca Santa Ma**	**0.29**	**124**	⇓P	**Pg**	**10 16 31.1**	**-1.1**
T1243				S	**Sg**	**10 16 35.4**	**-0.7**
SEF1	**Sefro**	**0.32**	**336**	⇑P	**Pg**	**10 16 32.3**	**-0.4**
SEF1				S	**Sg**	**10 16 37.7**	**+0.7**
SEF1				AML	AML		
	comp=N,38750μm,1.1s						
SEF1				AML	AML		
	comp=E,37150μm,1.3s						
SEF1				AML	AML		
	comp=N,38700μm,1.1s						
MDAR	**Monte D'Aria**	**0.34**	**3**	⇑P	**Pg**	**10 16 32.4**	**-0.7**
MDAR				S	**Sg**	**10 16 37.7**	**+0.1**
MDAR				AML	AML		
	comp=E,20400μm,0.3s						
MDAR				AML	AML		
	comp=N,27050μm,0.5s						
PIO1	**Pioraco**	**0.34**	**343**	⇑P	**Pg**	**10 16 32.6**	**-0.5**
PIO1				S	**Sb**	**10 16 38.8**	**-1.1**
RM33	**Pellescritta (**	**0.35**	**169**	⇓P	**Pg**	**10 16 32.6**	**-0.8**
RM33				S	**Sg**	**10 16 38.4**	**+0.3**
RM33				AML	AML		
	comp=E,12650μm,0.6s						
RM33				AML	AML		
	comp=E,12200μm,0.5s						
RM33				AML	AML		
	comp=N,12380μm,0.4s						
RM33				AML	AML		
	comp=N,12720μm,0.4s						
RM33				AML	AML		
	comp=N,12385μm,0.4s						
FIU1	**Fiuminata**	**0.36**	**337**	P	**Pg**	**10 16 33.1**	**-0.4**
FIU1				S	**Sg**	**10 16 39.2**	**+0.9**
FIU1				AML	AML		
	comp=E,12050μm,0.6s						
FIU1				AML	AML		
	comp=N,12925μm,1.2s						
FIU1				AML	AML		
	comp=E,12075μm,0.6s						
FIU1				AML	AML		
	comp=N,12905μm,1.2s						
SSM1	**San Severino M**	**0.37**	**6**	P	**Pg**	**10 16 33.2**	**-0.6**
SSM1				S	**Sb**	**10 16 39.6**	**-1.4**
MNTP	**Montappone**	**0.38**	**42**	P	**Pg**	**10 16 33.5**	**-0.3**
MNTP				AML	AML		
	comp=E,20050μm,0.8s						
MNTP				AML	AML		
	comp=N,23450μm,0.3s						
MNTP				AML	AML		
	comp=N,23500μm,0.3s						
MNTP				AML	AML		
	comp=E,20050μm,0.8s						
T1211	**Morro Reatino**	**0.38**	**211**	⇓P	**Pg**	**10 16 33.5**	**-0.4**
T1211				S	**Sg**	**10 16 39.7**	**+0.8**
T1211				AML	AML		
	comp=E,8695μm,0.4s						
T1211				AML	AML		
	comp=N,14700μm,0.4s						
T1211				AML	AML		
	comp=E,8920μm,0.4s						
T1211				AML	AML		
	comp=N,14650μm,0.4s						
T1211				AML	AML		
	comp=N,14700μm,0.3s						
T1211				AML	AML		
	comp=N,14650μm,0.3s						
T1211				AML	AML		
	comp=E,8665μm,0.4s						
T1211				AML	AML		
	comp=E,8925μm,0.4s						
ARRO	**Arrone**	**0.38**	**223**	⇑P	**Pg**	**10 16 33.6**	**-0.2**
ARRO				S	**Sg**	**10 16 39.6**	**+0.6**
ARRO				AML	AML		
	comp=E,7755μm,0.2s						
ARRO				AML	AML		
	comp=N,7380μm,0.2s						
GAG1	**Gagliole**	**0.38**	**354**	⇑P	**Pg**	**10 16 33.5**	**-0.5**
GAG1				AML	AML		
	comp=N,58400μm,0.4s						
GAG1				AML	AML		
	comp=E,50500μm,0.4s						
CAMP	**Campotosto**	**0.39**	**147**	⇓P	**Pg**	**10 16 32.9**	**-1.1**
CAMP				S	**Sg**	**10 16 38.5**	**-0.6**
CAMP				AML	AML		
	comp=N,8360μm,0.7s						
CAMP				AML	AML		
	comp=E,8985μm,1.1s						
ASSB	**Assisi San Ben**	**0.39**	**299**	P	**Pg**	**10 16 33.7**	**-0.3**
ASSB				S	**Sg**	**10 16 40.3**	**+1.1**
T1246	**Crognaleto (TE**	**0.39**	**135**	⇓P	**Pg**	**10 16 32.9**	**-1.2**
T1246				S	**Sg**	**10 16 38.7**	**-0.5**
MTL1	**Matelica**	**0.41**	**348**	P	**Pg**	**10 16 34.0**	**-0.4**
MTL1				S	**Sb**	**10 16 41.0**	**-1.0**
MTL1				AML	AML		
	comp=E,34000μm,1.6s						
MTL1				AML	AML		
	comp=N,57250μm,0.6s						
MTL1				AML	AML		
	comp=E,34050μm,1.6s						
SNTG	**Esanatoglia**	**0.42**	**342**	⇑P	**Pg**	**10 16 34.0**	**-0.6**
SNTG				S	**Sg**	**10 16 40.6**	**+0.4**
SNTG				AML	AML		
	comp=N,12950μm,0.7s						
SNTG				AML	AML		
	comp=E,11350μm,0.3s						
OFFI	**Offida**	**0.42**	**79**	⇓P	**Pg**	**10 16 34.4**	**-0.2**
OFFI				AML	AML		
	comp=E,25050μm,0.6s						
OFFI				AML	AML		
	comp=N,24000μm,0.5s						
TERO	**Teramo**	**0.43**	**123**	⇓P	**Pg**	**10 16 33.4**	**-1.3**
TERO				S	**Sg**	**10 16 39.7**	**-0.6**
TERO				AML	AML		
	comp=E,15750μm,1.0s						
TERO				AML	AML		
	comp=N,14750μm,0.4s						
TERO				AML	AML		
	comp=N,15300μm,0.4s						
TERO				AML	AML		
	comp=E,15700μm,1.0s						
TERO				AML	AML		
	comp=E,16300μm,1.0s						
T1247	**Pizzolo (AQ)**	**0.43**	**163**	⇓P	**Pg**	**10 16 34.0**	**-0.9**
T1247				S	**Sg**	**10 16 40.7**	**0.0**
T1247				AML	AML		
	comp=E,18200μm,0.5s						
T1247				AML	AML		
	comp=N,15800μm,1.5s						
CESX	**Cesi**	**0.47**	**238**	⇑P	**Pg**	**10 16 35.1**	**-0.5**
CESX				S	**Sg**	**10 16 42.7**	**+1.0**
CESX				AML	AML		
	comp=E,11065μm,0.3s						
CESX				AML	AML		
	comp=N,7255μm,1.0s						
EL6	**Elcito**	**0.47**	**358**	⇑P	**Pg**	**10 16 34.9**	**-0.7**
EL6				S	**Sg**	**10 16 42.6**	**+0.7**
EL6				AML	AML		
	comp=E,22950μm,0.8s						
EL6				AML	AML		
	comp=N,37650μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.48**	**313**	⇑P	**Pg**	**10 16 35.5**	**-0.3**
ATCC				S	**Sg**	**10 16 42.8**	**+0.7**
ATCC				AML	AML		
	comp=N,24150μm,0.7s						
ATCC				AML	AML		
	comp=E,24550μm,0.8s						
FOSV	**Fossato di Vic**	**0.51**	**329**	⇑P	**Pg**	**10 16 35.8**	**-0.5**
FOSV				AML	AML		
	comp=E,14250μm,0.7s						
FOSV				AML	AML		
	comp=N,10350μm,0.4s						
FOSV				AML	AML		
	comp=E,14300μm,0.7s						
CING	**Cingoli**	**0.52**	**6**	⇑P	**Pg**	**10 16 35.7**	**-0.8**
CING				S	**Sg**	**10 16 43.9**	**+0.5**
CING				AML	AML		
	comp=N,5590μm,0.5s						
CING				AML	AML		
	comp=E,8040μm,0.5s						
GIGS	**Gran Sasso**	**0.52**	**141**	⇓P	**Pg**	**10 16 34.9**	**-1.6**
GIGS				S	**Sg**	**10 16 42.8**	**-0.7**
GIGS				AML	AML		
	comp=N,1955μm,0.5s						
GIGS				AML	AML		
	comp=E,1436μm,0.4s						
AQU	**L'Aquila**	**0.54**	**158**	⇓P	**Pg**	**10 16 35.8**	**-1.1**
AQU				AML	AML		
	comp=N,8720μm,0.6s						
AQU				AML	AML		
	comp=E,7440μm,0.9s						
AQU				AML	AML		
	comp=E,7735μm,0.9s						
AQU				AML	AML		
	comp=N,8745μm,0.6s						
AQU				AML	AML		
	comp=N,8975μm,0.6s						
TRTR	**Tortoreto Alta**	**0.58**	**95**	P	**Pg**	**10 16 37.2**	**-0.5**
TRTR				AML	AML		
	comp=N,22050μm,0.5s						
TRTR				AML	AML		
	comp=E,22350μm,0.5s						
FIAM	**Fiamignano**	**0.59**	**180**	⇓P	**Pg**	**10 16 36.7**	**-1.1**
FIAM				AML	AML		
	comp=E,4990μm,0.9s						
FIAM				AML	AML		
	comp=N,3980μm,0.9s						
MURB	**Monte Urbino**	**0.60**	**313**	P	**Pg**	**10 16 37.3**	**-0.6**
MURB				AML	AML		
	comp=E,23600μm,0.2s						
MURB				AML	AML		
	comp=N,17500μm,0.8s						
MURB				AML	AML		
	comp=E,25650μm,0.2s						
MURB				AML	AML		
	comp=N,18300μm,0.8s						
MURB				AML	AML		
	comp=E,23650μm,0.2s						
PP3	**Marolino**	**0.63**	**34**	P	**Pg**	**10 16 38.2**	**-0.4**
PP3				AML	AML		
	comp=N,13700μm,0.4s						
PP3				AML	AML		
	comp=N,13350μm,1.3s						
PP3				AML	AML		
	comp=E,25300μm,1.1s						
PP3				AML	AML		
	comp=E,24950μm,1.1s						
ATFO	**Monte Foce - G**	**0.65**	**322**	⇑P	**Pg**	**10 16 38.4**	**-0.6**
ATFO				AML	AML		
	comp=E,5385μm,0.7s						
ATFO				AML	AML		
	comp=N,4840μm,0.5s						
ATFO				AML	AML		
	comp=N,4835μm,0.5s						
ARVD	**Arcevia**	**0.65**	**348**	⇑P	**Pg**	**10 16 38.2**	**-0.8**
ARVD				AML	AML		
	comp=N,4425μm,0.5s						
ARVD				AML	AML		
	comp=E,5480μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.66**	**301**	⇑P	**Pg**	**10 16 38.5**	**-0.6**
ATTE				AML	AML		
	comp=E,3925μm,0.7s						
ATTE				AML	AML		
	comp=N,3690μm,0.9s						
FAGN	**Fagnano**	**0.68**	**150**	⇓P	**Pg**	**10 16 37.8**	**-1.7**
FAGN				AML	AML		
	comp=N,8985μm,0.4s						
FAGN				AML	AML		
	comp=E,10225μm,0.4s						
VCEL	**Villa Celiera**	**0.70**	**131**	P	**Pg**	**10 16 38.7**	**-1.3**
VCEL				AML	AML		
	comp=E,6745μm,0.9s						
VCEL				AML	AML		
	comp=E,6740μm,0.9s						
VCEL				AML	AML		
	comp=N,7510μm,1.1s						
FRON	**Frontone**	**0.72**	**336**	⇑P	**Pg**	**10 16 39.4**	**-0.9**
FRON				S	**Sg**	**10 16 50.3**	**+0.6**
FRON				AML	AML		
	comp=E,5860μm,0.9s						
FRON				AML	AML		
	comp=N,8475μm,0.2s						
FRON				AML	AML		
	comp=E,5855μm,0.9s						
FRON				AML	AML		
	comp=N,8435μm,0.2s						
ATVO	**AVT- Monte Val**	**0.74**	**315**	⇑P	**Pg**	**10 16 39.9**	**-0.8**
ATVO				AML	AML		
	comp=E,3445μm,1.2s						
ATVO				AML	AML		
	comp=N,3550μm,0.3s						

MGAB	**Montegabbione**	**0.74 275**	⇑P	**Pg**	**10 16 40.3**	**-0.4**	
MGAB			AML	AML			
	comp=E,5080μm,0.4s						
MGAB			AML	AML			
	comp=N,9335μm,1.2s						
MGAB			AML	AML			
	comp=N,8360μm,1.2s						
MGAB			AML	AML			
	comp=E,4980μm,0.4s						
SRES	**S.Oreste - Sor**	**0.77 216**	P	**Pg**	**10 16 39.8**	**-1.4**	
SRES			AML	AML			
	comp=E,2540μm,0.4s						
SRES			AML	AML			
	comp=N,1860μm,0.4s						
AOI	**Ancona**	**0.78 27**	⇑P	**Pg**	**10 16 40.5**	**-0.8**	
AOI			AML	AML			
	comp=N,4480μm,0.5s						
AOI			AML	AML			
	comp=E,3840μm,0.3s						
ATMI	**Monte Miggiano**	**0.79 308**	P	**Pg**	**10 16 41.0**	**-0.6**	
ATMI			AML	AML			
	comp=E,9600μm,0.6s						
ATMI			AML	AML			
	comp=N,9805μm,0.8s						
ATPI	**Pietralunga -**	**0.79 319**	⇑P	**Pg**	**10 16 40.9**	**-0.7**	
ATPI			AML	AML			
	comp=E,4045μm,0.7s						
ATPI			AML	AML			
	comp=N,3475μm,1.5s						
T0110	**Collepietro**	**0.80 142**	⇓P	**Pg**	**10 16 39.9**	**-1.8**	
T0110			AML	AML			
	comp=E,6455μm,0.5s						
T0110			AML	AML			
	comp=N,7265μm,0.4s						
PIEI	**Pieia**	**0.80 328**	⇑P	**Pg**	**10 16 40.8**	**-1.1**	
PIEI			AML	AML			
	comp=E,3095μm,0.3s						
PIEI			AML	AML			
	comp=N,2770μm,0.3s						
MPAG	**Monte Paganucc**	**0.82 341**	P	**Pg**	**10 16 41.1**	**-1.0**	
MPAG			AML	AML			
	comp=E,4855μm,0.5s						
MPAG			AML	AML			
	comp=N,4235μm,0.9s						
SENI	**Senigallia**	**0.85 5**	P	**Pg**	**10 16 41.5**	**-1.3**	
SENI			AML	AML			
	comp=E,19700μm,1.5s						
SENI			AML	AML			
	comp=E,3940μm,1.5s						
SENI			AML	AML			
	comp=N,3250μm,0.9s						
SENI			AML	AML			
	comp=N,20200μm,0.3s						
SENI			AML	AML			
	comp=E,3945μm,1.5s						
SENI			AML	AML			
	comp=N,3245μm,0.9s						
PTQR	**Pietraquaria**	**0.86 166**	P	**Pg**	**10 16 41.0**	**-1.9**	
PTQR			AML	AML			
	comp=N,1270μm,1.2s						
PTQR			AML	AML			
	comp=E,1430μm,0.6s						
FSSB	**Fossombrone**	**0.87 343**	⇑P	**Pg**	**10 16 42.2**	**-1.0**	
FSSB			AML	AML			
	comp=E,11950μm,0.5s						
FSSB			AML	AML			
	comp=N,16000μm,0.3s						
MTCE	**Montecelio**	**0.88 199**	P	**Pg**	**10 16 41.6**	**-1.7**	
MTCE			AML	AML			
	comp=E,2670μm,0.5s						
MTCE			AML	AML			
	comp=N,1390μm,0.8s						
SACS	**San Casciano d**	**0.89 270**	⇑P	**Pg**	**10 16 43.0**	**-0.5**	
SACS			AML	AML			
	comp=E,1870μm,1.3s						
SACS			AML	AML			
	comp=N,2185μm,1.6s						
SACS			AML	AML			
	comp=E,1920μm,1.3s						
SACS			AML	AML			
	comp=N,2220μm,0.5s						
CERT	**Cerreto**	**0.91 187**	P	**Pg**	**10 16 42.0**	**-1.9**	
CERT			AML	AML			
	comp=E,4185μm,0.4s						
CERT			AML	AML			
	comp=N,2855μm,1.1s						
BADI	**Badiali**	**0.92 316**	⇓P	**Pg**	**10 16 43.3**	**-0.7**	
BADI			AML	AML			
	comp=E,118μm,1.5s						
BADI			AML	AML			
	comp=N,1854μm,1.4s						
PE3	**Peglio**	**0.95 332**	P	**Pg**	**10 16 43.8**	**-0.9**	
CAFI	**Castiglion Fio**	**0.97 300**	P	**Pg**	**10 16 44.1**	**-0.9**	
CAFI			AML	AML			
	comp=E,2220μm,0.8s						
CAFI			AML	AML			
	comp=N,2095μm,0.8s						
LATE	**Laterza**	**1.00 256**	P	**Pg**	**10 16 44.9**	**-0.7**	
RCAV	**Rocca di Cave**	**1.02 187**	P	**Pg**	**10 16 44.0**	**-1.9**	
RCAV			AML	AML			
	comp=E,3355μm,1.1s						
RCAV			AML	AML			
	comp=N,4025μm,1.3s						
INTR	**Introdacqua**	**1.02 145**	P	**Pg**	**10 16 41.7**	**-4.4**	
VVLD	**Villa Vallelon**	**1.05 159**	P	**Pg**	**10 16 44.5**	**-2.1**	
VVLD			AML	AML			
	comp=E,1550μm,1.5s						
VVLD			AML	AML			
	comp=N,1960μm,0.9s						
MCIV	**Monte Civitell**	**1.07 266**	P	**Pg**	**10 16 45.0**	**-1.8**	
MCIV			AML	AML			
	comp=E,1032μm,0.5s						
MCIV			AML	AML			
	comp=N,718μm,0.8s						
SF04	**Casetta**	**1.07 269**	P	**Pg**	**10 16 45.5**	**-1.5**	
CPGN	**Carpegna, Ital**	**1.11 328**	P	**Pg**	**10 16 46.2**	**-1.5**	
LPEL	**Lama dei Pelig**	**1.13 136**	P	**Pg**	**10 16 45.2**	**-2.8**	
LPEL			AML	AML			
	comp=E,2045μm,0.3s						
LPEL			AML	AML			
	comp=N,1825μm,0.8s						
CRE	**Caprese Michel**	**1.15 312**	P	**Pg**	**10 16 47.5**	**-0.9**	
CRE			AML	AML			
	comp=N,1615μm,0.3s						
CRE			AML	AML			
	comp=E,1082μm,1.6s						
ARCI	**Arcidosso**	**1.21 270**	P	**Pg**	**10 16 47.4**	**-2.3**	
ARCI			AML	AML			
	comp=N,358μm,0.8s						
ARCI			AML	AML			
	comp=E,399μm,0.8s						
POFI	**Posta Fibreno**	**1.22 159**	P	**Pg**	**10 16 47.4**	**-2.4**	
POFI			AML	AML			
	comp=E,1595μm,1.3s						
POFI			AML	AML			
	comp=N,1168μm,0.7s						
LRP	**Arpino**	**1.26 164**	⇑P	**Pn**	**10 16 51.3**	**+1.4**	
LRP			AML	AML			
	comp=N,250μm,0.6s						
LRP			AML	AML			
	comp=E,958μm,1.4s						
GIUL	**Giuliano Di Ro**	**1.30 176**	P	**Pg**	**10 16 48.9**	**-2.5**	
GIUL			AML	AML			
	comp=E,929μm,0.5s						
GIUL			AML	AML			
	comp=N,1135μm,0.5s						
ASQU	**Asqua**	**1.35 314**	P	**Pn**	**10 16 50.7**	**-0.7**	
ASQU			AML	AML			
	comp=E,958μm,1.0s						
ASQU			AML	AML			
	comp=N,927μm,0.6s						
RNI2	**Rionero Sannit**	**1.39 146**	P	**Pn**	**10 16 50.1**	**-1.7**	
RNI2			AML	AML			
	comp=N,2160μm,1.0s						
RNI2			AML	AML			
	comp=E,1855μm,0.6s						
RNI2			AML	AML			
	comp=N,2175μm,1.0s						
RNI2			AML	AML			
	comp=E,1790μm,0.6s						
LIK	**San Giovanni I**	**1.39 166**	P	**Pn**	**10 16 50.5**	**-1.3**	
LIK			AML	AML			
	comp=E,1900μm,0.5s						
LIK			AML	AML			
	comp=N,2105μm,0.7s						
SFI	**Santa Sofia**	**1.40 319**	P	**Pn**	**10 16 51.5**	**-0.5**	
SFI			AML	AML			
	comp=E,658μm,0.6s						
SFI			AML	AML			
	comp=E,758μm,0.7s						
SFI			AML	AML			
	comp=N,884μm,0.9s						
SFI			AML	AML			
	comp=N,838μm,0.8s						
CERA	**Filignano**	**1.42 152**	P	**Pn**	**10 16 50.4**	**-1.9**	
CERA			AML	AML			
	comp=N,1445μm,0.7s						
CERA			AML	AML			
	comp=E,1960μm,0.8s						
CERA			AML	AML			
	comp=N,1490μm,0.7s						
CERA			AML	AML			
	comp=E,2010μm,0.8s						
TRIV	**Trivento**	**1.52 135**	P	**Pn**	**10 16 52.6**	**-1.0**	
TRIV			AML	AML			
	comp=N,1330μm,0.9s						
TRIV			AML	AML			
	comp=E,1560μm,0.9s						
MAON	**Monte Argentar**	**1.53 254**	P	**Pn**	**10 16 53.3**	**-0.4**	
MAON			AML	AML			
	comp=E,261μm,0.6s						
MAON			AML	AML			
	comp=N,210μm,1.2s						
RUFI	**Rufina**	**1.53 310**	P	**Pn**	**10 16 53.8**	**0.0**	
LMD	**Lutirano**	**1.60 320**	P	**Pn**	**10 16 54.7**	**+0.1**	
LMD			AML	AML			
	comp=E,857μm,0.4s						
LMD			AML	AML			
	comp=N,669μm,1.3s						
TRIF	**Trifonti**	**1.65 280**	P	**Pn**	**10 16 55.1**	**-0.3**	
TRIF			AML	AML			
	comp=E,431μm,0.3s						
TRIF			AML	AML			
	comp=N,350μm,0.6s						
CASP	**Castiglione de**	**1.66 268**	P	**Pn**	**10 16 54.9**	**-0.6**	
CASP			AML	AML			
	comp=N,144μm,0.9s						
CASP			AML	AML			
	comp=E,186μm,0.7s						
VAGA	**Valle Agricola**	**1.66 150**	P	**Pn**	**10 16 54.8**	**-0.8**	
BSSO	**Busso**	**1.71 140**	P	**Pn**	**10 16 54.8**	**-1.5**	
BSSO			AML	AML			
	comp=N,269μm,1.0s						
BSSO			AML	AML			
	comp=E,256μm,1.3s						
BRIS	**BRISIGHELLA**	**1.75 318**	P	**Pn**	**10 16 55.4**	**-1.3**	
BRIS			AML	AML			
	comp=E,1445μm,0.5s						
BRIS			AML	AML			
	comp=N,1303μm,1.2s						
CIGN	**Sant'Elia a Pi**	**1.79 132**	P	**Pn**	**10 16 55.2**	**-2.1**	
CIGN			AML	AML			
	comp=E,470μm,1.5s						
CIGN			AML	AML			
	comp=N,446μm,1.1s						
MPPT	**Montemurlo**	**1.84 307**	P	**Pn**	**10 16 57.9**	**-0.2**	
MPPT			AML	AML			
	comp=E,445μm,1.4s						
MPPT			AML	AML			
	comp=N,472μm,0.6s						
MTCR	**Monte La Croce**	**1.94 308**	P	**Pn**	**10 16 59.1**	**-0.4**	
PII	**Pisa**	**2.08 295**	P	**Pn**	**10 17 01.1**	**-0.2**	
PII			AML	AML			
	comp=E,343μm,0.7s						
PII			AML	AML			
	comp=N,340μm,1.0s						
POPM	**Popiglio**	**2.09 305**	P	**Pn**	**10 17 01.2**	**-0.3**	
POPM			AML	AML			
	comp=E,292μm,1.5s						
POPM			AML	AML			
	comp=N,290μm,0.9s						
BRJN	**Brijuni**	**2.10 12**	P	**Pn**	**10 17 01.2**	**-0.3**	
APRC	**Apricena**	**2.11 121**	P	**Pn**	**10 17 01.0**	**-0.7**	
APRC			AML	AML			
	comp=E,578μm,0.4s						
APRC			AML	AML			
	comp=N,1050μm,0.4s						
PAOL	**Paolisi**	**2.12 149**	P	**Pb**	**10 17 04.3**	**-0.5**	
PAOL			AML	AML			
	comp=E,244μm,0.8s						
PAOL			AML	AML			
	comp=N,234μm,0.7s						
PAOL			AML	AML			
	comp=N,344μm,0.9s						
PAOL			AML	AML			
	comp=E,268μm,1.6s						
MAIM	**Mastiano**	**2.19 300**	P	**Pn**	**10 17 02.7**	**-0.1**	
MAIM			AML	AML			
	comp=N,226μm,0.8s						
MAIM			AML	AML			
	comp=E,224μm,1.0s						
SGRT	**San Giovanni R**	**2.23 119**	P	**Pn**	**10 17 02.5**	**-1.0**	
CARD	**Cardoso**	**2.25 302**	P	**Pn**	**10 17 03.4**	**-0.2**	
CARD			AML	AML			
	comp=N,266μm,0.5s						
CARD			AML	AML			
	comp=E,274μm,0.7s						
VLC	**Villacollemand**	**2.38 304**	P	**Pn**	**10 17 05.0**	**-0.5**	
VLC			AML	AML			
	comp=N,168μm,0.9s						
VLC			AML	AML			
	comp=N,166μm,0.8s						
VLC			AML	AML			
	comp=E,155μm,1.4s						
VLC			AML	AML			
	comp=E,148μm,1.4s						
SGTA	**Sant Agata di**	**2.40 135**	P	**Pn**	**10 17 05.1**	**-0.6**	
SGTA			AML	AML			
	comp=E,324μm,0.5s						
SGTA			AML	AML			
	comp=N,300μm,1.2s						
HVAR	**Hvar**	**2.46 81**	P	**Pn**	**10 17 06.0**	**-0.5**	
EQUI	**Equi**	**2.52 302**	P	**Pn**	**10 17 07.3**	**-0.1**	
EQUI			AML	AML			
	comp=E,93μm,1.4s						
EQUI			AML	AML			
	comp=N,149μm,0.9s						
CAPA	**Cerignola FG**	**2.63 129**	P	**Pn**	**10 17 08.3**	**-0.5**	
CAPA			AML	AML			
	comp=E,710μm,1.4s						
CAPA			AML	AML			
	comp=N,704μm,0.9s						
RIY	**Rijeka**	**2.66 21**	*e*Pn	**Pn**	**10 17 09.3**	**+0.1**	
RIY			*e*Sn	**Sn**	**10 17 43.0**	**+1.6**	
VULT	**Monte Vulture**	**2.66 135**	P	**Pn**	**10 17 10.6**	**+1.2**	
VULT			AML	AML			
	comp=N,546μm,0.4s						
VULT			AML	AML			
	comp=E,388μm,0.8s						
PLMA	**Palmaria, Port**	**2.66 298**	P	**Pn**	**10 17 09.2**	**-0.1**	
PLMA			AML	AML			
	comp=E,87μm,0.7s						
PLMA			AML	AML			
	comp=N,103μm,0.6s						
GRAM	**Graiana**	**2.75 307**	P	**Pn**	**10 17 10.3**	**-0.4**	
GRAM			AML	AML			
	comp=E,296μm,1.6s						
GRAM			AML	AML			
	comp=N,368μm,1.2s						
PALZ	**Palazzo San Ge**	**2.85 131**	P	**Pn**	**10 17 10.8**	**-1.2**	
CDRU	**Civita di Ruta**	**2.88 145**	P	**Pn**	**10 17 10.6**	**-1.7**	
MRVN	**Minervino Murg**	**2.91 127**	P	**Pn**	**10 17 11.6**	**-1.1**	
MRVN			AML	AML			
	comp=E,163μm,0.9s						
MRVN			AML	AML			
	comp=N,116μm,0.7s						
ACER	**Acerenza**	**2.95 134**	P	**Pn**	**10 17 12.3**	**-1.0**	
ACER			AML	AML			
	comp=N,260μm,0.7s						
ACER			AML	AML			
	comp=E,242μm,1.0s						
MSSA	**Maissana**	**3.00 300**	P	**Pn**	**10 17 14.1**	**+0.1**	
MSSA			AML	AML			
	comp=N,132μm,0.6s						
MSSA			AML	AML			
	comp=E,104μm,1.3s						
PGF	**Pioggiola**	**3.05 266**	*e*P	**Pn**	**10 17 15.5**	**+0.7**	
PGF			*e*Sn	**Sn**	**10 17 47.5**	**-3.9**	
	comp=E,7.0nm,0.3s						
SABO	**M.te Sabotino**	**3.14 6**	⇑P	**Pn**	**10 17 15.6**	**-0.3**	
SABO			AML	AML			
	comp=E,2155μm,1.6s						
SABO			AML	AML			
	comp=E,486μm,1.6s						
SABO			AML	AML			
	comp=N,742μm,0.6s						
SABO			AML	AML			
	comp=N,2745μm,0.6s						
ROVR	**Rover Verones**	**3.15 333**	P	**Pn**	**10 17 15.9**	**-0.2**	
ROVR			AML	AML			
	comp=N,148μm,0.3s						
ROVR			AML	AML			
	comp=E,108μm,0.7s						
CGRP	**Cima Grappa**	**3.17 343**	P	**Pn**	**10 17 16.0**	**-0.4**	
CGRP			AML	AML			
	comp=N,540μm,0.4s						
CGRP			AML	AML			
	comp=E,500μm,0.4s						
CGRP			AML	AML			
	comp=E,517μm,0.4s						
CGRP			AML	AML			
	comp=N,534μm,0.5s						
SRKY	**Kupres RS**	**3.18 66**	*e*Pn	**Pn**	**10 17 17.9**	**+1.4**	
VARN	**Col Varnada, M**	**3.22 347**	P	**Pn**	**10 17 16.3**	**-0.7**	
VARN			AML	AML			
	comp=E,667μm,0.8s						
VARN			AML	AML			
	comp=N,470μm,0.5s						
VARN			AML	AML			
	comp=E,679μm,0.8s						
VARN			AML	AML			
	comp=N,466μm,0.5s						
AMUR	**Altamura**	**3.25 126**	P	**Pn**	**10 17 15.8**	**-1.5**	
AMUR			AML	AML			
	comp=E,167μm,0.9s						
AMUR			AML	AML			
	comp=N,166μm,1.3s						
MGRS	**Mrkonjic Grad**	**3.27 60**	*e*Pn	**Pn**	**10 17 18.7**	**+1.0**	
SALO	**Salr**	**3.33 327**	P	**Pn**	**10 17 18.5**	**-0.1**	
SALO			AML	AML			
	comp=E,264μm,0.8s						
SALO			AML	AML			
	comp=N,374μm,1.1s						
LJU	**Ljubljana**	**3.34 17**	P	**Pn**	**10 17 18.2**	**-0.4**	
LJU			AML	AML			
	comp=E,1830μm,0.8s						
LJU			AML	AML			
	comp=N,2390μm,0.4s						
CTI	**Castel Tesino**	**3.36 342**	P	**Pn**	**10 17 19.0**	**0.0**	
CTI			AML	AML			
	comp=N,393μm,0.4s						
CTI			AML	AML			
	comp=E,342μm,1.3s						
STON	**Ston**	**3.37 88**	*e*Pn	**Pn**	**10 17 17.9**	**-1.1**	
STON	**Ston**	**3.37 88**	*e*Pn	**Pn**	**10 17 17.8**	**-1.1**	
STON			*e*Sn	**Sn**	**10 17 59.1**	**+0.2**	
STON	**Ston**	**3.37 88**	P	**Pn**	**10 17 17.8**	**-1.1**	
STON			AML	AML			
	comp=N,94μm,1.6s						
STON			AML	AML			
	comp=E,116μm,1.6s						
MPRI	**Monte Prat**	**3.38 358**	P	**Pn**	**10 17 19.4**	**+0.1**	
MPRI			AML	AML			
	comp=N,592μm,0.5s						
MPRI			AML	AML			
	comp=E,404μm,0.6s						
CADS	**Cadrg**	**3.40 7**	*i* Pn	**Pn**	**10 17 19.0**	**-0.5**	
STAL	**STALIGIAL**	**3.42 355**	P	**Pn**	**10 17 19.6**	**-0.1**	
STAL			AML	AML			
	comp=N,369μm,0.3s						
STAL			AML	AML			
	comp=E,515μm,0.5s						
MATE	**Matera**	**3.47 128**	⇑P	**Pn**	**10 17 21.3**	**+0.9**	
LUSI	**Trento, Gardas**	**3.47 334**	P	**Pn**	**10 17 20.6**	**+0.2**	
LUSI			AML	AML			
	comp=E,244μm,0.5s						
LUSI			AML	AML			
	comp=N,365μm,0.5s						
A051A	**Mrakovica**	**3.48 50**	*e*Pn	**Pn**	**10 17 21.6**	**+1.0**	
CIMO	**Cimolais**	**3.49 352**	⇑P	**Pn**	**10 17 20.5**	**-0.1**	
CIMO			AML	AML			
	comp=N,110μm,0.9s						
CIMO			AML	AML			
	comp=E,97μm,0.9s						
BLY	**Banja Luka**	**3.50 56**	*e*Pn	**Pn**	**10 17 22.1**	**+1.4**	
BLY	**Banja Luka**	**3.50 56**	*e*Pn	**Pn**	**10 17 22.1**	**+1.4**	
BLY			*e*Sn	**Sn**	**10 18 05.7**	**+3.6**	
AGOR	**Agordo**	**3.51 348**	P	**Pn**	**10 17 20.4**	**-0.5**	
AGOR			AML	AML			
	comp=N,133μm,0.7s						
AGOR			AML	AML			
	comp=E,146μm,1.0s						
PTCC	**Patocco-Chiusa**	**3.55 3**	⇑P	**Pn**	**10 17 21.2**	**-0.4**	
PTCC			AML	AML			
	comp=E,181μm,1.4s						
PTCC			AML	AML			
	comp=N,144μm,0.7s						
GAGG	**Gaggia**	**3.58 335**	P	**Pn**	**10 17 21.4**	**-0.7**	
GAGG			AML	AML			
	comp=N,224μm,0.6s						
GAGG			AML	AML			
	comp=E,301μm,1.0s						
CLUD	**Cludinico**	**3.60 357**	⇑P	**Pn**	**10 17 22.2**	**-0.1**	
CLUD			AML	AML			
	comp=E,270μm,0.7s						
CLUD			AML	AML			
	comp=N,244μm,0.7s						
CLUD			AML	AML			
	comp=N,240μm,0.8s						
CLUD			AML	AML			
	comp=E,266μm,1.0s						
ZAG	**Zagreb**	**3.61 34**	P	**Pg**	**10 17 33.2**	**-2.3**	
ZOU	**Zoufplan**	**3.70 358**	P	**Pn**	**10 17 23.8**	**+0.1**	
ZOU			AML	AML			
	comp=N,298μm,0.8s						
ZOU			AML	AML			
	comp=E,292μm,0.6s						
ZOU			AML	AML			
	comp=E,303μm,0.6s						
ZOU			AML	AML			
	comp=N,300μm,0.9s						
ACOM	**Acomizza, Ital**	**3.70 4**	P	**Pn**	**10 17 23.6**	**-0.2**	
ACOM			AML	AML			
	comp=E,352μm,0.7s						
ACOM			AML	AML			
	comp=N,296μm,0.7s						
ACOM			AML	AML			
	comp=N,328μm,0.7s						
ACOM			AML	AML			
	comp=E,353μm,0.7s						
MABI	**Malga Bissina**	**3.70 331**	P	**Pn**	**10 17 23.8**	**0.0**	
MABI			AML	AML			
	comp=E,88μm,0.9s						
MABI			AML	AML			
	comp=N,96μm,0.9s						
FVI	**Forni Avoltri**	**3.75 356**	P	**Pn**	**10 17 24.2**	**-0.1**	
FVI			AML	AML			
	comp=N,170μm,0.6s						
FVI			AML	AML			
	comp=E,164μm,0.6s						
MYKA	**Terra Mystica**	**3.79 5**	*e*Pn	**Pn**	**10 17 25.4**	**+0.5**	
	comp=E,13nm,0.2s,SNR=19						
MYKA			*i* Sn	**Sn**	**10 18 10.2**	**+0.7**	
	comp=E,13nm,0.3s						
OBKA	**Obir**	**3.79 15**	*i* Pn	**Pn**	**10 17 25.2**	**+0.4**	
	comp=E,8.5nm,0.5s						
OBKA	**Obir**	**3.79 15**	*e*Pn	**Pn**	**10 17 25.3**	**+0.4**	
KOSI	**Kohlern**	**3.81 342**	P	**Pn**	**10 17 25.4**	**+0.1**	
KOSI			AML	AML			
	comp=N,264μm,0.5s						
KOSI			AML	AML			
	comp=E,284μm,0.7s						
TREB	**Trebinje**	**3.85 90**	*e*Pn	**Pn**	**10 17 25.6**	**0.0**	
TREB	**Trebinje**	**3.85 90**	*e*Pn	**Pn**	**10 17 25.9**	**+0.3**	
TREB			*e*Sn	**Sn**	**10 18 11.6**	**+0.7**	
APPI	**Appiano**	**3.87 340**	P	**Pn**	**10 17 25.8**	**-0.1**	
APPI			AML	AML			
	comp=N,222μm,1.6s						
APPI			AML	AML			
	comp=E,276μm,0.5s						
ABTA	**Abfaltersbach**	**3.91 354**	*e*Pn	**Pn**	**10 17 27.7**	**+1.1**	
	comp=E,62nm,0.5s,SNR=34						
BRES	**Bressanone**	**3.97 346**	⇑P	**Pn**	**10 17 28.2**	**+0.8**	
BRY	**Bratogost**	**3.98 88**	*e*Pn	**Pn**	**10 17 27.5**	**-0.1**	
BRY	**Bratogost**	**3.98 88**	⇓*i* Pn	**Pn**	**10 17 27.7**	**+0.1**	
BRY			*i* Sn	**Sn**	**10 18 14.8**	**+0.5**	
HCY	**Herceg Novi**	**3.98 94**	*e*Pn	**Pn**	**10 17 27.4**	**-0.1**	
HCY	**Herceg Novi**	**3.98 94**	*e*Pn	**Pn**	**10 17 27.8**	**+0.3**	

HCY *i* Sn **Sn** **10 18 14.8 +0.6**
SOKA Soboth 4.05 19 *i* Pn **Pn** **10 17 28.6 +0.1**
comp=E,3.1nm,0.3s
BRMO Bormio 4.12 332 P **Pn** **10 17 29.0 -0.3**
RISI Rein 4.16 350 ⇑P **Pn** **10 17 31.4 +1.4**
RISI AML AML
comp=E,762μm,0.5s
RISI AML AML
comp=N,553μm,0.4s
SAOF Saorge 4.21 287 P Pn 10 17 35.7 +5.1
MUGIO Muggio 4.24 318 P **Pn** **10 17 31.2 +0.3**
MUGIO AML AML
comp=E,93μm,0.5s
MUGIO AML AML
comp=N,81μm,0.6s
ROSI Rosskopf 4.25 344 P **Pn** **10 17 31.2 0.0**
ROSI AML AML
comp=N,357μm,0.4s
ROSI AML AML
comp=E,274μm,1.0s
UPM Unac-Piva 4.25 83 *e*Pn **Pn** **10 17 31.5 +0.2**
UPM *i* Sn **Sn** **10 18 21.4 +0.3**
SBF Sospel 4.27 286 *e*Pn **Pn** **10 17 28.1 -3.3**
SBF Sospel 4.27 286 *e*P **Pn** **10 17 31.9 +0.5**
SBF *e*Sn **Sn** **10 18 16.3 -5.0**
comp=E,34nm,0.5s
CEME Cevo 4.28 92 ⇓*i*Pn **Pn** **10 17 31.9 +0.3**
CEME *i* Sn **Sn** **10 18 22.1 +0.4**
NKME Niksic 4.29 89 *e*Pn **Pn** **10 17 32.0 +0.3**
NKME *i* Sn **Sn** **10 18 22.3 +0.5**
BUM Brajici-Budva 4.30 95 ⇓*i*Pn **Pn** **10 17 32.2 +0.4**
BUM *i* Sn **Sn** **10 18 22.4 +0.4**
HAPS Han Pijesak,BI 4.42 72 *e*Pn **Pn** **10 17 35.1 +1.6**
FETA Feichten 4.50 339 *e*Pn **Pn** **10 17 36.6 +2.0**
comp=E,6.0nm,0.4s,SNR=12
WTTA Wattenberg 4.53 347 *i* Pn **Pn** **10 17 36.7 +1.6**
comp=E,9.5nm,0.3s,SNR=12
WTTA Wattenberg 4.53 347 *e*Pn **Pn** **10 17 36.8 +1.6**
WTTA Wattenberg 4.53 347 ⇑P **Pn** **10 17 37.3 +2.1**
DRME Dracevica, Mon 4.53 96 *e*Pn **Pn** **10 17 35.3 +0.3**
DRME Dracevica, Mon 4.53 96 ⇑*i*Pn **Pn** **10 17 35.4 +0.4**
DRME *i* Sn **Sn** **10 18 28.2 +0.5**
PDG Podgorica 4.54 93 ⇑P **Pn** **10 17 35.3 +0.2**
PDG Podgorica 4.54 93 *e*Pn **Pn** **10 17 35.9 +0.8**
PDG *e*Sn **Sn** **10 18 27.8 -0.2**
TTG Podgorica 4.54 93 *e*Pn **Pn** **10 17 35.6 +0.5**
TTG *i* Sn **Sn** **10 18 28.4 +0.4**
DAVOX Davos/Dischmat 4.55 331 Pn **Pn** **10 17 37.0 +1.6**
comp=E,7.7nm,0.3s,baz=103,slow=8,7,SNR=59
DAVOX Sn **Sn** **10 18 31.4 +3.0**
comp=E,3.7nm,0.3s,baz=142,slow=20,SNR=4.1
comp=E,28nm,0.4s
SQTA Sankt Quirin 4.57 343 *i* Pn **Pn** **10 17 37.5 +1.9**
comp=E,16nm,0.2s,SNR=15
WATA Walderalm 4.61 347 *e*Pn **Pn** **10 17 38.1 +1.9**
comp=E,19nm,0.4s,SNR=16
CALF Calern 4.61 283 P **Pn** **10 17 37.2 +1.0**
ULC Ulcinj 4.62 99 ⇓*i*Pn **Pn** **10 17 36.6 +0.4**
ULC *i* Sn **Sn** **10 18 30.3 +0.4**
RUDO Rudo 4.63 78 *e*Pn **Pn** **10 17 34.4 -1.9**
BBLS Lazići 4.69 75 *e*Pn **Pn** **10 17 38.3 +1.1**
BBLS Lazići 4.69 75 *e*Pn **Pn** **10 17 37.9 +0.7**
BBLS *e*Sn **Sn** **10 18 31.5 -0.2**
KOME Kolasin 4.70 88 *e*Pn **Pn** **10 17 37.7 +0.3**
KOME *i* Sn **Sn** **10 18 32.1 +0.1**
MOTA Moosalm 4.71 343 *i* Pn **Pn** **10 17 39.5 +2.0**
comp=E,15nm,0.4s,SNR=16
ARSA Arzberg 4.71 20 *e*Pn **Pn** **10 17 37.0 -0.4**
comp=E,1.9nm,0.2s
ARSA *e*Sn **Sn** **10 18 30.0 -2.1**
comp=E,6.8nm,0.4s
ARSA Arzberg 4.71 20 *e*Pn **Pn** **10 17 37.6 +0.1**
ARSA *e*Sn **Sn** **10 18 30.1 -2.1**
FUSIO Fusio 4.80 320 P **Pn** **10 17 38.6 -0.2**
SATI Passo dei Sala 4.83 310 ⇓P **Pn** **10 17 42.5 +3.1**
BIOA Bad Ischl, Aus 4.85 4 *i* Pn **Pn** **10 17 40.1 +0.8**
comp=E,21nm,0.3s,SNR=25
PART Garmisch-Parte 4.85 344 *e*Pn **Pn** **10 17 42.1 +2.7**
SURF Saint Ours 4.86 292 P **Pn** **10 17 41.0 +1.4**
LMR La Mourre 4.87 278 *e*Pn **Pn** **10 17 36.9 -2.7**
LMR La Mourre 4.87 278 *e*P **Pn** **10 17 39.3 -0.3**
LMR *e*Sn **Sn** **10 18 29.8 -6.1**
comp=E,20nm,1.0s
RJOB Jochberg 4.88 357 *e*Pn **Pn** **10 17 40.7 +0.8**
RETA Reutte 4.92 341 *i* Pn **Pn** **10 17 42.4 +2.1**
comp=E,12nm,0.3s,SNR=8.8
MBDF Montbardon 4.96 294 *e*Pn **Pn** **10 17 38.0 -3.0**
MBDF Montbardon 4.96 294 *e*P **Pn** **10 17 42.5 +1.5**
MBDF *e*Sn **Sn** **10 18 33.6 -4.9**
comp=E,8.3nm,0.5s
IVA Berane 4.98 88 *e*Pn **Pn** **10 17 41.6 +0.4**
IVA *i* Sn **Sn** **10 18 38.8 0.0**
TRIGF Trigance 4.98 283 P **Pn** **10 17 42.8 +1.5**
DAVA Damuels 4.99 334 *e*Pn **Pn** **10 17 43.7 +2.3**
comp=E,18nm,0.4s,SNR=16
DAVA Damuels 4.99 334 *e*Pn **Pn** **10 17 43.7 +2.3**
CREF Crivoux 5.01 292 P **Pn** **10 17 45.9 +4.2**
SJES Sjenica 5.04 83 *e*Pn **Pn** **10 17 43.4 +1.4**
SJES *e*Sn **Sn** **10 18 40.4 +0.1**
PVY Plav 5.04 91 *e*Pn **Pn** **10 17 42.5 +0.4**
PVY *i* Sn **Sn** **10 18 40.4 -0.1**
MOA Molln 5.06 9 *e*Pn **Pn** **10 17 42.8 +0.6**
MOA *e*Sn **Sn** **10 18 41.6 +0.9**
MOA Molln 5.06 9 *i* Pn **Pn** **10 17 42.7 +0.6**
comp=E,5.8nm,0.2s,SNR=7.3
MOA *i* Sn **Sn** **10 18 41.7 +1.0**
comp=E,6.3nm,0.2s
MOA Molln 5.06 9 *e*Pn **Pn** **10 17 42.8 +0.6**
DIVS Divibare 5.15 74 *e*Pn **Pn** **10 17 43.1 -0.5**
DIVS Divibare 5.15 74 *e*Pn **Pn** **10 17 44.1 +0.5**
MORH Mrgy, Hungar 5.18 48 ⇑P **Pn** **10 17 45.9 +2.0**
IVAS Ivanjica 5.19 80 *e*Pn **Pn** **10 17 44.3 +0.2**
IVAS *e*Sn **Sn** **10 18 42.5 -1.5**
REMY Saint-Rhmy-en 5.21 307 P **Pn** **10 17 44.3 -0.3**
BNALP Bannalp 5.22 322 ⇓P **Pn** **10 17 47.5 +3.0**
TIR Tirane 5.24 104 ⇑P **Pn** **10 17 44.8 +0.1**
TIR Tirane 5.24 104 P **Pn** **10 17 45.1 +0.4**
TIR Tirane 5.24 104 *e*Pn **Pn** **10 17 45.2 +0.5**
TIR *e*Sn **Sn** **10 18 44.8 -0.3**
LPG La Plagne 5.29 302 *e*Pn **Pn** **10 17 42.7 -2.9**
LPG La Plagne 5.29 302 *e*P **Pn** **10 17 48.1 +2.5**
LPL La Plagne 5.31 302 *e*P **Pn** **10 17 48.0 +2.2**
LPL *e*Sn **Sn** **10 18 41.3 -5.8**
comp=E,5.1nm,0.3s
RONA Rosalia, Austr 5.33 24 *i* Pn **Pn** **10 17 46.0 -0.1**
comp=E,1.1nm,0.2s
RONA *i* Sn **Sn** **10 18 48.4 +0.8**
comp=E,2.5nm,0.2s
FRGS Fruska Gora 5.34 62 ⇑P **Pn** **10 17 47.6 +1.4**
FRGS Fruska Gora 5.34 62 *e*Pn **Pn** **10 17 44.0 -2.2**
FRGS Fruska Gora 5.34 62 *e*Pn **Pn** **10 17 45.8 -0.4**
CONA Conrad Observa 5.42 20 *i* Pn **Pn** **10 17 47.4 0.0**
comp=E,1.9nm,0.1s
CONA *e*Sn **Sn** **10 18 48.8 -1.0**
comp=E,10nm,0.6s
TRUS Trudelj 5.47 73 *e*Pn **Pn** **10 17 47.6 -0.2**
PHP Peshkopia 5.55 100 P **Pn** **10 17 50.9 +1.8**
GDM Grand'Maison 5.57 297 P Pn 10 17 55.4 +6.0
SMRF Simiane la Rot 5.61 284 *e*Pn **Pn** **10 17 47.3 -2.5**
SMRF Simiane la Rot 5.61 284 *e*P **Pn** **10 17 51.7 +1.9**
SMRF *e*Sn **Sn** **10 18 48.1 -6.2**
comp=E,3.7nm,0.5s
ORIF Oris-en-Rattie 5.62 294 *e*P **Pn** **10 17 52.7 +2.6**
ORIF *e*Sn **Sn** **10 18 48.6 -6.2**
comp=E,7.8nm,0.7s
ORIF Oris-en-Rattie 5.62 294 P Pn 10 17 55.2 +5.1
GRUS Gruza 5.63 77 *e*Pn **Pn** **10 17 50.4 +0.3**
RUSF Rustrel 5.67 284 P **Pn** **10 17 54.0 +3.3**
GRN Grenoble 5.83 297 P **Pn** **10 17 57.3 +4.5**
KEK Kerkira 5.93 120 P **Pn** **10 17 55.0 +0.8**
KEK Kerkira 5.93 120 ⇑P **Pn** **10 17 55.2 +1.1**
SRN Sarande 5.97 118 P **Pn** **10 17 55.4 +0.7**
OHR Ohrid 5.98 104 *i* Pn **Pn** **10 17 56.4 +1.5**
OGSM Saint Maurice 6.00 300 P **Pn** **10 17 59.2 +4.0**
GEC2 GERESS Array S 6.00 4 *e*Pn **Pn** **10 17 54.7 -0.5**
GEC2 *e*Sn **Sn** **10 19 03.1 -1.0**
GERES GERESS Array B 6.00 4 Pn **Pn** **10 17 54.8 -0.5**
comp=E,2.3nm,0.3s,baz=172,slow=13,SNR=50
GERES Sn **Sn** **10 19 03.6 -0.4**
comp=E,4.1nm,0.3s,baz=177,slow=25,SNR=8.8
comp=E,2.4nm,0.3s
CKRC Cesky Krumlov 6.02 8 *e*PN **Pn** **10 17 54.9 -0.5**
CKRC *e*SN **Sn** **10 19 03.2 -1.2**
SKO Skopje 6.22 95 *i* Pn **Pn** **10 17 59.1 +0.9**
CABF La Chapelle 6.26 309 *e*P **Pn** **10 17 59.8 +1.0**
OG35 Corcelles 6.27 303 P Pb 10 18 10.0 -5.7
KHC Kasperske Hory 6.28 3 *e*PN **Pn** **10 17 58.5 -0.6**
KHC *e*SN **Sn** **10 19 08.6 -2.3**
WET Wettzell 6.29 359 *e*Pn **Pn** **10 17 58.5 -0.7**
WET *e*Sn **Sn** **10 19 08.7 -2.3**
BOVS Bovan 6.32 80 ⇓P **Pn** **10 17 59.2 -0.2**
BOVS Bovan 6.32 80 *e*Pn **Pn** **10 17 59.3 -0.2**
IGT Igoumenitsa 6.37 119 P **Pn** **10 18 01.4 +1.1**
BARS Barje 6.39 87 *e*Pn **Pn** **10 18 00.7 +0.2**
BARS *e*Sn **Sn** **10 19 11.8 -1.8**
NEST Nestorio 6.42 110 P **Pn** **10 18 02.6 +1.6**
BFO Black Forest 6.42 330 *e*Pn **Pn** **10 18 01.9 +1.0**
VIVF Saint-Julien-l 6.43 291 *e*P **Pn** **10 18 02.6 +1.6**
MDVR Moldovita 6.50 70 ⇑P **Pn** **10 18 03.5 +1.3**
PENT Pentalofos 6.58 111 P **Pn** **10 18 04.6 +1.4**
HINF Hinteralfeld 6.64 320 *e*P **Pn** **10 18 04.5 +0.5**
HINF *e*Sn **Sn** **10 19 13.7 -6.0**
comp=E,25nm,0.4s
BZS Buzias 6.70 63 ⇑P **Pn** **10 18 06.2 +1.6**
ZAGS Zajecar 6.71 79 *e*Pn **Pn** **10 18 04.7 -0.2**
STIP Stip 6.82 97 *i* Pn **Pn** **10 18 08.6 +2.2**
LASF Ste Croix 6.85 283 *e*P **Pn** **10 18 09.4 +2.5**
VRAC Vranov 6.89 19 ⇑P **Pn** **10 18 11.2 +3.8**
CDF Champ du Feu 6.90 326 *e*P **Pn** **10 18 07.8 +0.2**
ROTZ Rotzenmuhle 6.94 355 *e*Sn **Sn** **10 19 22.9 -4.1**
GRF Grafenberg Arr 6.96 350 *e*Sn **Sn** **10 19 24.2 -3.3**
ZAPS Zavoj 6.98 83 *e*Pn **Pn** **10 18 09.6 +1.0**
ZAPS *e*Sn **Sn** **10 19 25.4 -2.7**
TSLK Tsoukalades, L 6.99 123 P **Pn** **10 18 10.0 +1.3**
HAU Haudompre 7.01 320 *e*P **Pn** **10 18 09.3 +0.2**
HAU *e*Sn **Sn** **10 19 22.7 -6.1**
comp=E,22nm,0.4s
HERR Herculane 7.01 70 ⇑P **Pn** **10 18 09.4 +0.3**
BLKB Belogradchik 7.02 80 ⇑P **Pn** **10 18 09.2 0.0**
NYDR Nydri-Lefkada 7.08 123 P **Pn** **10 18 10.7 +0.7**
MANZ Manzenberg 7.17 355 *e*Sn **Sn** **10 19 28.9 -3.7**
GRG Griva 7.18 102 P **Pn** **10 18 11.9 +0.5**
VAY Valandovo 7.19 99 *i* Pn **Pn** **10 18 12.0 +0.5**
PRU Pruhonice 7.20 7 *e*PN **Pn** **10 18 10.4 -1.2**
PRU *e*SN **Sn** **10 19 31.5 -1.9**
KEF3 Kipouria, Keph 7.20 128 P **Pn** **10 18 13.2 +1.5**
VLS Valsamata 7.36 127 P **Pn** **10 18 14.5 +0.6**
VTS Vitosha 7.45 88 ⇓P **Pn** **10 18 14.7 -0.5**
VTS Vitosha 7.45 88 ⇑P **Pn** **10 18 15.8 +0.6**
MORC Moravsky Berou 7.57 22 ⇑P **Pn** **10 18 19.7 +3.1**
SMF Signal de Mont 7.61 303 *e*Pn **Pn** **10 18 14.0 -3.3**
SMF Signal de Mont 7.61 303 *e*P **Pn** **10 18 17.4 +0.1**
SMF *e*Sn **Sn** **10 19 37.0 -6.6**
comp=E,2.9nm,0.4s
PAGF Fort de Pagny 7.70 320 *e*Pn **Pn** **10 18 16.4 -2.0**
PAGF Fort de Pagny 7.70 320 *e*P **Pn** **10 18 20.1 +1.7**
baz=142
SFTF Sexfontaines 7.79 316 *e*Pn **Pn** **10 18 17.6 -2.2**
baz=134
SFTF Sexfontaines 7.79 316 *e*P **Pn** **10 18 21.1 +1.3**
baz=122
MAKR Makrakomi, Fth 7.83 116 P **Pn** **10 18 22.9 +2.6**
MOX Moxa 7.86 353 *e*Pn **Pn** **10 18 19.7 -0.9**
MOX *e*Sn **Sn** **10 19 45.8 -3.8**
LOR Lormes 7.90 307 *e*P **Pn** **10 18 22.3 +1.1**
baz=125
LOR *e*Sn **Sn** **10 19 43.3 -7.4**
comp=E,4.5nm,0.3s
AVF Avril sur Loir 7.98 303 *e*Pn **Pn** **10 18 19.8 -2.5**
AVF Avril sur Loir 7.98 303 *e*P **Pn** **10 18 25.0 +2.7**
MEZF Maizieres J'vi 7.98 318 *e*Pn **Pn** **10 18 20.3 -2.0**
baz=139
MEZF Maizieres J'vi 7.98 318 *e*P **Pn** **10 18 23.3 +1.0**
baz=140
SSF Saint Saulge 8.01 305 *e*Pn **Pn** **10 18 20.2 -2.5**
SSF Saint Saulge 8.01 305 *e*P **Pn** **10 18 24.0 +1.3**
SSF *e*Sn Sn 10 19 44.2 -9.1
comp=E,4.8nm,0.6s
SAVF Savonnieres en 8.03 319 *e*Pn **Pn** **10 18 20.8 -2.1**
SAVF Savonnieres en 8.03 319 *e*P **Pn** **10 18 23.3 +0.4**
TNS Taunus Mts 8.04 338 *e*Pn **Pn** **10 18 24.3 +1.1**
BGF Bois d'Agland 8.20 300 *e*P **Pn** **10 18 26.6 +1.3**
CAF Calviac 8.25 288 *e*P **Pn** **10 18 28.1 +2.0**
CLL Collm 8.46 359 *e*Pn **Pn** **10 18 28.0 -0.8**
CLL *e*Pg Pg 10 19 03.0 -5.1
CLL *e*Sn **Sn** **10 19 59.0 -5.2**
CLL *ex* x 10 20 47.0
CLL *e*Sg **Sg** **10 20 56.0 -1.5**
TCF Toulx Ste Croi 8.51 297 *e*Pn **Pn** **10 18 26.8 -2.8**
TCF Toulx Ste Croi 8.51 297 *e*P **Pn** **10 18 32.6 +3.0**
VOIR 8.96 69 ⇑P **Pn** **10 18 36.1 +0.3**
IDI Anoyia 11.86 126 Pn **Pn** **10 19 17.8 +2.3**
comp=E,0.4nm,0.3s,baz=315,slow=14,SNR=1.4
comp=E,7.2nm,0.7s
EKA Eskdalemuir Ar 16.36 325 Pn **Pn** **10 20 17.5 +1.6**
baz=140,slow=14
comp=E,0.3nm,0.3s
FINES FINESS Array B 20.17 18 P **P** **10 21 01.0 +0.4**
comp=E,3.2nm,0.8s,baz=213,slow=10,SNR=6.7
comp=E,3.2nm,0.8s
TORD Torodi Ar. Bea 31.21 202 P **P** **10 22 46.9 +1.0**
comp=E,0.5nm,0.7s,baz=18,slow=10,SNR=4.5
comp=E,0.5nm,0.7s
ZALV Zalesovo Beam 46.91 50 P **P** **10 24 59.7 +3.0**
comp=E,0.8nm,0.7s,baz=289,slow=9.0,SNR=2.4
comp=E,0.8nm,0.7s
MKAR Makanchi Array 47.77 60 P **P** **10 25 05.4 +1.9**
comp=E,0.4nm,0.6s,baz=282,slow=5.8,SNR=3.7
comp=E,0.4nm,0.6s
SONM Songino Array 61.80 50 P **P** **10 26 46.9 +1.6**
comp=E,1.1nm,0.8s,baz=273,slow=9.5,SNR=2.3
comp=E,1.1nm,0.8s

ROM 29 10:22:06.7±0.0, 42°.834N±0°.002×13°.065E±0°.004,
h9km, ML2.5/16, 5C-1D, Error ellipse: s-maj=0.2km
s-min=0.2km az=271.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**329**	⇓P	Pg	10 22 09.3	+0.5
T1216				S	Sg	10 22 11.0	+0.6
T1216				AML	AML		
	comp=E,6725μm,0.5s						
T1216				AML	AML		
	comp=N,5565μm,0.7s						
T1216				AML	AML		
	comp=E,6725μm,0.5s						
T1216				AML	AML		
	comp=N,5570μm,0.7s						
T1216				AML	AML		
	comp=E,14200μm,0.4s						
T1216				AML	AML		
	comp=N,12550μm,0.4s						
T1216				AML	AML		
	comp=N,4967μm,0.4s						
T1216				AML	AML		
	comp=E,6315μm,0.3s						
T1215	**Vallo di Nera,**	**0.15**	**257**	⇑P	Pg	10 22 10.7	+0.7
T1215				S	Sg	10 22 13.3	+1.0
T1215				AML	AML		
	comp=N,1290μm,1.0s						
T1215				AML	AML		
	comp=E,1362μm,1.0s						
T1215				AML	AML		
	comp=N,1196μm,1.0s						
T1215				AML	AML		
	comp=E,1315μm,1.0s						
T1215				AML	AML		
	comp=E,1368μm,1.0s						
T1215				AML	AML		
	comp=N,1195μm,1.0s						
T1215				AML	AML		
	comp=E,1680μm,0.3s						
T1215				AML	AML		
	comp=N,1810μm,0.8s						
T1215				AML	AML		
	comp=E,1714μm,0.3s						
T1215				AML	AML		
	comp=N,1715μm,0.2s						
T1215				AML	AML		
	comp=E,1029μm,0.1s						
T1215				AML	AML		
	comp=N,924μm,0.1s						
T1215				AML	AML		
	comp=N,935μm,0.1s						
T1215				AML	AML		
	comp=E,970μm,0.1s						
T1217	**Poggiodomo (PG**	**0.16**	**219**	⇑P	Pg	10 22 10.9	+0.7
T1217				S	Sg	10 22 13.7	+1.1
T1217				AML	AML		
	comp=E,1780μm,0.4s						
T1217				AML	AML		
	comp=N,2035μm,0.5s						
T1217				AML	AML		
	comp=E,2140μm,1.3s						
T1217				AML	AML		
	comp=N,3285μm,0.4s						
T1217				AML	AML		
	comp=E,2130μm,1.3s						
T1217				AML	AML		
	comp=N,3260μm,0.4s						
T1217				AML	AML		
	comp=E,2130μm,1.3s						
T1217				AML	AML		
	comp=N,3254μm,0.4s						
T1217				AML	AML		
	comp=E,1686μm,0.2s						
T1217				AML	AML		
	comp=E,1748μm,0.2s						
T1217				AML	AML		
	comp=N,1521μm,0.1s						
T1217				AML	AML		
	comp=N,1498μm,0.2s						
FDMO	**Fiordimonte**	**0.20**	**5**	P	Pg	10 22 10.9	0.0
FDMO				AML	AML		
	comp=E,898μm,0.2s						
FDMO				AML	AML		
	comp=N,1240μm,0.3s						
FDMO				AML	AML		
	comp=E,898μm,0.2s						
FDMO				AML	AML		
	comp=N,2030μm,1.1s						
FDMO				AML	AML		
	comp=E,2685μm,0.3s						
FDMO				AML	AML		
	comp=N,1242μm,0.3s						
FDMO				AML	AML		
	comp=E,897μm,0.2s						
CESI	**CESI - Serrava**	**0.21**	**325**	⇑P	Pg	10 22 11.7	+0.6
CESI				S	Sg	10 22 15.0	+1.0
CESI				AML	AML		
	comp=N,2050μm,0.3s						
CESI				AML	AML		
	comp=E,1055μm,0.4s						
CESI				AML	AML		
	comp=E,3315μm,1.4s						
CESI				AML	AML		
	comp=N,5465μm,0.3s						
CESI				AML	AML		
	comp=E,802μm,0.3s						
CESI				AML	AML		
	comp=N,2048μm,0.3s						
LNSS	**Leonessa**	**0.23**	**184**	⇑P	Pg	10 22 12.2	+0.7
LNSS				S	Sg	10 22 16.0	+1.3
LNSS				AML	AML		
	comp=E,2410μm,1.0s						
LNSS				AML	AML		
	comp=N,2630μm,0.1s						
LNSS				AML	AML		
	comp=E,5875μm,0.2s						
LNSS				AML	AML		
	comp=N,6520μm,0.4s						
LNSS				AML	AML		
	comp=E,2260μm,0.3s						
LNSS				AML	AML		
	comp=N,2629μm,0.1s						
T1204	**Amatrice, Fraz**	**0.24**	**130**	P	Pg	10 22 12.5	+0.8
T1204				S	Sg	10 22 16.7	+1.6
AM05	**Amandola Campo**	**0.26**	**56**	P	Pg	10 22 12.6	+0.7
AM05				S	Sb	10 22 16.7	-1.3
T1241	**Roccafluvione,**	**0.27**	**85**	P	Pg	10 22 12.9	+0.8
T1241				S	Sb	10 22 17.4	-1.1
SMA1	**SAN MARTINO**	**0.28**	**136**	P	Pb	10 22 13.7	-0.3
SMA1				S	Sb	10 22 17.7	-1.2
GUMA	**Gualdo di Mace**	**0.30**	**41**	P	Pg	10 22 13.6	+0.8
GUMA				S	Sb	10 22 19.0	-0.4
T1243	**Rocca Santa Ma**	**0.31**	**116**	P	Pg	10 22 13.6	+0.5
T1243				S	Sb	10 22 18.6	-1.2
SEF1	**Sefro**	**0.32**	**345**	S	Sg	10 22 18.0	+0.5
ARRO	**Arrone**	**0.34**	**221**	P	Pg	10 22 14.0	+0.6
ARRO				S	Sb	10 22 19.3	-1.1
ARRO				AML	AML		
	comp=E,832μm,1.3s						
ARRO				AML	AML		
	comp=N,1010μm,0.2s						
ARRO				AML	AML		
	comp=E,832μm,1.3s						
ARRO				AML	AML		
	comp=N,1006μm,0.2s						
ARRO				AML	AML		
	comp=E,791μm,0.1s						
ARRO				AML	AML		
	comp=N,1008μm,0.2s						
T1211	**Morro Reatino**	**0.34**	**207**	P	Pg	10 22 14.0	+0.6
T1211				S	Sb	10 22 19.7	-0.8
T1211				AML	AML		
	comp=E,982μm,0.1s						
T1211				AML	AML		
	comp=N,1490μm,1.4s						
T1211				AML	AML		
	comp=E,1630μm,1.3s						
T1211				AML	AML		
	comp=N,2520μm,0.3s						
T1211				AML	AML		
	comp=E,1630μm,1.3s						
T1211				AML	AML		
	comp=E,1013μm,0.1s						
T1211				AML	AML		
	comp=E,981μm,0.1s						
T1211				AML	AML		
	comp=N,1174μm,0.2s						
T1211				AML	AML		
	comp=N,1131μm,0.2s						
RM33	**Pellescritta (**	**0.34**	**161**	P	Pb	10 22 14.7	-0.3
RM33				S	Sb	10 22 19.7	-0.9
RM33				AML	AML		
	comp=E,526μm,0.1s						
RM33				AML	AML		
	comp=N,407μm,1.1s						
RM33				AML	AML		
	comp=E,526μm,0.1s						
RM33				AML	AML		
	comp=N,386μm,0.4s						
RM33				AML	AML		
	comp=E,1850μm,0.6s						
RM33				AML	AML		
	comp=N,1745μm,1.1s						
RM33				AML	AML		
	comp=E,1825μm,0.6s						
RM33				AML	AML		
	comp=N,1800μm,1.1s						
RM33				AML	AML		
	comp=E,1820μm,0.6s						
RM33				AML	AML		
	comp=N,1745μm,1.0s						
RM33				AML	AML		
	comp=N,1795μm,1.1s						
RM33				AML	AML		
	comp=N,360μm,0.2s						
RM33				AML	AML		
	comp=E,525μm,0.1s						
RM33				AML	AML		
	comp=N,368μm,0.2s						
RM33				AML	AML		
	comp=E,526μm,0.1s						
ASSB	**Assisi San Ben**	**0.36**	**305**	⇑P	Pg	10 22 14.2	+0.3
ASSB				S	Sb	10 22 20.1	-1.1
ASSB				AML	AML		
	comp=E,432μm,0.2s						
ASSB				AML	AML		
	comp=N,384μm,0.8s						
ASSB				AML	AML		
	comp=E,1017μm,0.2s						
ASSB				AML	AML		
	comp=N,882μm,0.6s						
ASSB				AML	AML		
	comp=N,352μm,0.2s						
ASSB				AML	AML		
	comp=E,432μm,0.2s						
CAMP	**Campotosto**	**0.39**	**139**	P	Pg	10 22 14.9	+0.4
CAMP				S	Sb	10 22 21.0	-1.1
CESX	**Cesi**	**0.42**	**238**	P	Pg	10 22 15.2	+0.2
CESX				S	Sb	10 22 21.9	-0.9
CESX				AML	AML		

```
     comp=E,378µm,0.4s
CESX                          AML   AML
     comp=N,374µm,0.4s
CESX                          AML   AML
     comp=E,728µm,0.8s
CESX                          AML   AML
     comp=N,646µm,0.5s
CESX                          AML   AML
     comp=E,303µm,0.5s
CESX                          AML   AML
     comp=N,374µm,0.4s
SNTG Esanatoglia      0.43 348 P     Pg    10 22 15.6 +0.4
SNTG                          S     Sb    10 22 22.4 -0.7
SNTG                          AML   AML
     comp=E,137µm,1.4s
SNTG                          AML   AML
     comp=N,164µm,1.5s
SNTG                          AML   AML
     comp=N,626µm,0.4s
SNTG                          AML   AML
     comp=E,561µm,0.4s
SNTG                          AML   AML
     comp=N,653µm,0.6s
SNTG                          AML   AML
     comp=E,562µm,0.4s
SNTG                          AML   AML
     comp=E,565µm,0.3s
SNTG                          AML   AML
     comp=N,188µm,0.6s
SNTG                          AML   AML
     comp=N,144µm,0.2s
SNTG                          AML   AML
     comp=E,141µm,0.5s
SNTG                          AML   AML
     comp=E,106µm,0.3s
TERO Teramo           0.45 118 P     Pg    10 22 16.0 +0.5
TERO                          S     Sb    10 22 22.8 -0.8
ATCC AVT- Casa Cast   0.47 319 P     Pg    10 22 16.3 +0.5
ATCC                          S     Sb    10 22 23.7 -0.5
ATCC                          AML   AML
     comp=E,270µm,0.2s
ATCC                          AML   AML
     comp=N,350µm,0.5s
ATCC                          AML   AML
     comp=E,1320µm,0.6s
ATCC                          AML   AML
     comp=N,1120µm,1.4s
ATCC                          AML   AML
     comp=N,1125µm,1.4s
ATCC                          AML   AML
     comp=E,1316µm,0.6s
ATCC                          AML   AML
     comp=N,351µm,0.5s
ATCC                          AML   AML
     comp=E,205µm,0.3s
EL6  Elcito           0.50   3 P     Pg    10 22 16.7 +0.3
EL6                           S     Sb    10 22 24.9 -0.2
EL6                           AML   AML
     comp=N,1520µm,0.5s
EL6                           AML   AML
     comp=E,1156µm,0.5s
EL6                           AML   AML
     comp=E,326µm,0.3s
EL6                           AML   AML
     comp=N,410µm,0.4s
GIGS Gran Sasso       0.54 136 P     Pb    10 22 17.9 -0.4
CING Cingoli          0.55  10 P     Pg    10 22 17.8 +0.4
CING                          S     Sb    10 22 26.4 -0.2
CING                          AML   AML
     comp=E,176µm,0.9s
CING                          AML   AML
     comp=N,122µm,0.2s
CING                          AML   AML
     comp=E,540µm,0.5s
CING                          AML   AML
     comp=N,292µm,1.4s
CING                          AML   AML
     comp=N,122µm,0.2s
CING                          AML   AML
     comp=E,130µm,0.2s
FIAM Fiamignano       0.57 176 P     Pg    10 22 18.2 +0.5
FIAM                          S     Sb    10 22 27.0 -0.1
FIAM                          AML   AML
     comp=E,161µm,0.9s
FIAM                          AML   AML
     comp=N,130µm,0.4s
FIAM                          AML   AML
     comp=E,516µm,0.6s
FIAM                          AML   AML
     comp=N,428µm,0.4s
FIAM                          AML   AML
     comp=N,428µm,0.4s
FIAM                          AML   AML
     comp=E,516µm,0.6s
FIAM                          AML   AML
     comp=E,139µm,0.5s
FIAM                          AML   AML
     comp=N,127µm,0.3s
```

ROM 29 10:22:54.9±0.0, 42°.857N±0'.003×13°.168E±0'.004,
h10km, ML2.6/34, 13C-16D, Error ellipse: s-maj=0.2km
s-min=0.2km az=26.0, Central Italy

```
Code Station Name     Δ°   AZ°  Phase ID        Time      Res
                                Op    ISC       h m s     ISC
FEMA Monte Fema       0.14 320  P     Pg    10 22 58.8 +0.7
FEMA                            S     Sg    10 23 01.0 +0.6
AM05 Amandola Campo   0.18  48 ⇓P     Pg    10 22 59.5 +0.7
AM05                            S     Sg    10 23 02.7 +1.2
AM05                            AML   AML
     comp=E,900µm,0.4s
AM05                            AML   AML
     comp=N,218µm,0.1s
AM05                            AML   AML
     comp=E,902µm,0.4s
AM05                            AML   AML
     comp=E,3955µm,0.3s
AM05                            AML   AML
     comp=N,219µm,0.1s
AM05                            AML   AML
     comp=N,1445µm,0.3s
FDMO Fiordimonte      0.19 342  P     Pg    10 22 59.5 +0.5
FDMO                            S     Sg    10 23 02.9 +1.2
FDMO                            AML   AML
     comp=N,2030µm,1.1s
FDMO                            AML   AML
     comp=E,2685µm,0.3s
T1241 Roccafluvione,  0.19  90 ⇑P     Pg    10 22 59.7 +0.7
T1241                           S     Sg    10 23 03.3 +1.5
T1241                           AML   AML
     comp=E,12500µm,0.8s
T1241                           AML   AML
     comp=N,5650µm,0.4s
T1241                           AML   AML
     comp=E,12500µm,1.2s
T1204 Amatrice, Fraz  0.21 149 ⇓P     Pg    10 22 60.0 +0.6
T1204                           S     Sg    10 23 04.0 +1.6
T1204                           AML   AML
     comp=N,2855µm,0.5s
T1204                           AML   AML
     comp=E,4760µm,1.2s
T1204                           AML   AML
     comp=N,2860µm,0.5s
T1204                           AML   AML
     comp=N,2860µm,1.5s
T1217 Poggiodomo (PG  0.23 230 ⇓P     Pg    10 23 00.3 +0.7
T1217                           S     Sg    10 23 04.2 +1.4
T1217                           AML   AML
     comp=E,2129µm,1.3s
T1217                           AML   AML
     comp=N,3255µm,0.3s
T1217                           AML   AML
     comp=E,2130µm,1.3s
T1217                           AML   AML
     comp=N,3260µm,0.4s
T1217                           AML   AML
     comp=N,3254µm,0.4s
T1217                           AML   AML
     comp=E,2130µm,1.3s
T1217                           AML   AML
     comp=E,2130µm,0.7s
GUMA Gualdo di Mace   0.24  31 P     Pg    10 23 00.8 +0.9
GUMA                            S     Sg    10 23 05.2 +2.1
GUMA                            AML   AML
     comp=E,6635µm,0.4s
GUMA                            AML   AML
     comp=N,7040µm,0.4s
GUMA                            AML   AML
     comp=E,5715µm,0.5s
GUMA                            AML   AML
     comp=N,6010µm,0.4s
GUMA                            AML   AML
     comp=E,5715µm,1.5s
GUMA                            AML   AML
     comp=E,6635µm,1.6s
CESI CESI - Serrava   0.24 307 ⇑P     Pg    10 23 00.5 +0.5
CESI                            S     Sg    10 23 05.0 +1.7
CESI                            AML   AML
     comp=E,3315µm,1.4s
CESI                            AML   AML
     comp=N,5465µm,0.3s
CESI                            AML   AML
     comp=E,3315µm,0.6s
CESI                            AML   AML
     comp=N,5465µm,1.7s
SMA1 SAN MARTINO      0.26 151 ⇓P     Pg    10 23 00.7 +0.5
SMA1                            S     Sb    10 23 05.1 -1.2
SMA1                            AML   AML
     comp=N,3680µm,0.6s
SMA1                            AML   AML
     comp=E,6735µm,0.3s
T1243 Rocca Santa Ma  0.26 128 ⇓P     Pg    10 23 00.7 +0.4
T1243                           S     Sg    10 23 05.0 +1.1
LNSS Leonessa         0.27 200 ⇑P     Pg    10 23 01.0 +0.5
LNSS                            S     Sb    10 23 05.6 -1.0
LNSS                            AML   AML
     comp=N,6520µm,0.4s
LNSS                            AML   AML
     comp=E,5875µm,0.2s
RM33 Pellescritta (   0.35 174 P     Pg    10 23 02.1 +0.2
RM33                            S     Sb    10 23 08.1 -0.8
RM33                            AML   AML
     comp=N,1745µm,1.0s
RM33                            AML   AML
     comp=E,1825µm,0.6s
RM33                            AML   AML
     comp=N,1745µm,1.1s
RM33                            AML   AML
     comp=N,1800µm,1.1s
RM33                            AML   AML
     comp=E,1850µm,0.6s
RM33                            AML   AML
     comp=E,1820µm,0.6s
RM33                            AML   AML
     comp=N,1795µm,1.1s
CAMP Campotosto       0.37 151 ⇓P     Pg    10 23 02.5 +0.3
CAMP                            S     Sb    10 23 08.3 -1.1
CAMP                            AML   AML
     comp=E,818µm,0.7s
CAMP                            AML   AML
     comp=N,1250µm,0.5s
CAMP                            AML   AML
     comp=N,1250µm,1.5s
OFFI Offida           0.39  78 ⇓P     Pb    10 23 04.1 +0.2
OFFI                            AML   AML
     comp=E,2635µm,0.4s
OFFI                            AML   AML
     comp=N,2815µm,0.6s
T1211 Morro Reatino   0.40 216 P     Pg    10 23 03.3 +0.5
T1211                           S     Sb    10 23 09.9 -0.4
T1211                           AML   AML
     comp=E,1630µm,1.3s
T1211                           AML   AML
     comp=N,2520µm,0.3s
T1211                           AML   AML
     comp=N,2515µm,0.3s
T1211                           AML   AML
     comp=E,1630µm,1.3s
T1211                           AML   AML
     comp=E,1630µm,0.7s
TERO Teramo           0.40 126 P     Pg    10 23 03.1 +0.4
TERO                            S     Sb    10 23 09.4 -0.9
ARRO Arrone           0.41 227 P     Pg    10 23 03.4 +0.5
ARRO                            S     Sb    10 23 10.2 -0.3
ARRO                            AML   AML
     comp=E,640µm,0.7s
ARRO                            AML   AML
     comp=N,882µm,0.4s
ARRO                            AML   AML
     comp=E,640µm,1.3s
ASSB Assisi San Ben   0.42 297 ⇑P     Pg    10 23 03.4 +0.3
ASSB                            S     Sb    10 23 10.0 -0.9
ASSB                            AML   AML
     comp=E,1017µm,0.2s
ASSB                            AML   AML
     comp=N,882µm,0.6s
T1247 Pizzolo (AQ)    0.43 167 ⇓P     Pg    10 23 03.7 +0.5
T1247                           S     Sb    10 23 10.9 -0.2
T1247                           AML   AML
     comp=N,2645µm,1.0s
T1247                           AML   AML
     comp=E,2060µm,1.5s
T1247                           AML   AML
     comp=E,2060µm,0.5s
SNTG Esanatoglia      0.43 337 P     Pg    10 23 03.8 +0.4
SNTG                            AML   AML
     comp=E,561µm,0.4s
SNTG                            AML   AML
     comp=E,565µm,0.3s
SNTG                            AML   AML
     comp=N,653µm,0.6s
SNTG                            AML   AML
     comp=N,626µm,0.4s
SNTG                            AML   AML
     comp=N,653µm,1.4s
SNTG                            AML   AML
     comp=E,562µm,0.4s
EL6  Elcito           0.47 354 ⇑P     Pg    10 23 04.6 +0.4
CESX Cesi             0.50 240 P     Pg    10 23 04.8 +0.2
CESX                            S     Sb    10 23 13.0 -0.1
CESX                            AML   AML
     comp=N,646µm,0.5s
CESX                            AML   AML
     comp=E,728µm,0.8s
GIGS Gran Sasso       0.50 144 P     Pg    10 23 04.9 +0.2
GIGS                            S     Sb    10 23 12.9 -0.4
GIGS                            AML   AML
     comp=N,384µm,0.1s
GIGS                            AML   AML
     comp=E,252µm,0.7s
ATCC AVT- Casa Cast   0.51 310 P     Pg    10 23 05.3 +0.5
ATCC                            AML   AML
     comp=E,1316µm,0.6s
ATCC                            AML   AML
     comp=N,1120µm,1.4s
ATCC                            AML   AML
     comp=E,1320µm,0.6s
ATCC                            AML   AML
     comp=N,1125µm,1.4s
ATCC                            AML   AML
     comp=N,1125µm,0.6s
ATCC                            AML   AML
     comp=E,1316µm,0.6s
CING Cingoli          0.52   2 ⇓P     Pb    10 23 05.6 -0.6
CING                            AML   AML
     comp=N,292µm,1.4s
CING                            AML   AML
     comp=E,540µm,0.5s
FOSV Fossato di Vic   0.53 326 ⇑P     Pg    10 23 05.5 +0.3
FOSV                            S     Sb    10 23 15.0 +0.9
FOSV                            AML   AML
     comp=N,1615µm,0.4s
FOSV                            AML   AML
     comp=E,930µm,0.3s
TRTR Tortoreto Alta   0.55  95 ⇓P     Pb    10 23 07.5 +0.9
TRTR                            AML   AML
     comp=N,2330µm,1.2s
TRTR                            AML   AML
     comp=E,2430µm,0.8s
TRTR                            AML   AML
     comp=N,2330µm,0.8s
FIAM Fiamignano       0.59 184 ⇓P     Pg    10 23 06.3  0.0
FIAM                            S     Sb    10 23 17.0 +1.1
FIAM                            AML   AML
     comp=E,516µm,0.6s
FIAM                            AML   AML
     comp=N,428µm,0.4s
FIAM                            AML   AML
     comp=E,516µm,0.6s
FIAM                            AML   AML
     comp=N,428µm,0.4s
FIAM                            AML   AML
     comp=N,428µm,1.6s
MURB Monte Urbino     0.62 311 ⇓P     Pg    10 23 07.4 +0.4
MURB                            S     Sb    10 23 18.0 +1.2
MURB                            AML   AML
     comp=N,1300µm,1.0s
MURB                            AML   AML
     comp=E,1270µm,1.1s
MURB                            AML   AML
     comp=N,1300µm,1.0s
MURB                            AML   AML
     comp=E,1270µm,0.9s
ARVD Arcevia          0.66 346 ⇑P     Pb    10 23 08.5 -0.1
ARVD                            S     Sn    10 23 20.0 -0.9
ARVD                            AML   AML
     comp=E,229µm,0.6s
ARVD                            AML   AML
     comp=N,197µm,1.4s
FAGN Fagnano          0.67 152 ⇑P     Pb    10 23 08.2 -0.4
FAGN                            AML   AML
     comp=N,1230µm,0.3s
FAGN                            AML   AML
     comp=E,1077µm,0.3s
FAGN                            AML   AML
     comp=N,1230µm,1.7s
ATFO Monte Foce - G   0.67 320 ⇓P     Pg    10 23 08.2 +0.2
ATFO                            AML   AML
     comp=N,283µm,0.4s
ATFO                            AML   AML
     comp=E,393µm,0.4s
ATFO                            AML   AML
     comp=N,284µm,0.4s
VCEL Villa Celiera    0.68 133 ⇑P     Pb    10 23 08.5 -0.4
VCEL                            S     Sn    10 23 21.0 -0.4
VCEL                            AML   AML
     comp=E,1050µm,0.3s
VCEL                            AML   AML
     comp=N,809µm,0.5s
VCEL                            AML   AML
     comp=N,809µm,1.5s
ATVO AVT- Monte Val   0.77 314 ⇓P     Pg    10 23 09.8 +0.1
ATVO                            AML   AML
     comp=E,260µm,0.3s
ATVO                            AML   AML
     comp=N,258µm,0.4s
T0110 Collepietro     0.78 144 ⇑P     Pg    10 23 09.7 -0.2
T0110                           AML   AML
     comp=E,630µm,1.5s
T0110                           AML   AML
     comp=N,708µm,0.3s
MGAB Montegabbione    0.78 274 ⇑P     Pg    10 23 10.1 +0.1
MGAB                            AML   AML
     comp=E,408µm,0.4s
MGAB                            AML   AML
     comp=N,640µm,1.1s
PIEI Pieia            0.82 326 ⇑P     Pg    10 23 10.8 +0.1
PIEI                            AML   AML
     comp=N,200µm,1.0s
PIEI                            AML   AML
     comp=E,222µm,0.3s
MPAG Monte Paganucc   0.83 339 S     Sn    10 23 25.0 -0.1
NARO Abbazia di Nar   0.87 331 P     Pb    10 23 12.1 +0.1
NARO                            AML   AML
     comp=N,125µm,0.9s
NARO                            AML   AML
     comp=E,198µm,0.8s
NARO                            AML   AML
     comp=N,125µm,1.1s
FSSB Fossombrone      0.88 341 ⇓P     Pb    10 23 12.4 +0.1
FSSB                            AML   AML
     comp=E,670µm,1.3s
FSSB                            AML   AML
     comp=N,1100µm,0.4s
FSSB                            AML   AML
     comp=E,670µm,1.3s
FSSB                            AML   AML
     comp=E,670µm,0.7s
PE3  Peglio           0.97 330 ⇓P     Pn    10 23 15.0 +0.3
INTR Introdacqua      1.01 147 ⇑P     Pg    10 23 12.1 -2.2
MTCR Monte La Croce   1.97 307 P     Pg    10 23 32.6  0.0
```

ROM 29 10:23:37.4±0.0, 42°.836N±0'.002×13°.062E±0'.004,
h10km, ML2.4/4, 11C-6D, Error ellipse: s-maj=0.2km
s-min=0.2km az=294.0, Central Italy

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Code Station Name     Δ°   AZ°  Phase ID        Time      Res
                                Op    ISC       h m s     ISC
T1216 Preci, Frazion  0.06 330  P     Pg    10 23 40.0 +0.5
T1216                           S     Sg    10 23 41.2 +0.1
T1216                           AML   AML
     comp=N,7490µm,0.7s
T1216                           AML   AML
     comp=E,6700µm,0.4s
T1216                           AML   AML
     comp=N,7490µm,0.2s
T1216                           AML   AML
     comp=N,6534µm,0.2s
T1216                           AML   AML
     comp=E,4796µm,0.2s
FEMA Monte Fema       0.13 356  P     Pg    10 23 41.1 +0.6
FEMA                            S     Sg    10 23 43.3 +0.7
FEMA                            AML   AML
     comp=E,3783µm,0.1s
FEMA                            AML   AML
     comp=N,2543µm,0.2s
T1215 Vallo di Nera,  0.15 256 ⇑P     Pg    10 23 41.3 +0.7
T1215                           S     Sg    10 23 43.9 +0.9
T1215                           AML   AML
     comp=E,1415µm,0.5s
T1215                           AML   AML
     comp=N,963µm,0.5s
T1215                           AML   AML
     comp=N,964µm,0.5s
T1215                           AML   AML
     comp=E,1412µm,0.5s
T1215                           AML   AML
     comp=E,940µm,0.3s
T1215                           AML   AML
     comp=E,1533µm,0.5s
T1215                           AML   AML
     comp=N,821µm,0.1s
T1215                           AML   AML
     comp=N,737µm,0.1s
T1217 Poggiodomo (PG  0.16 218 ⇑P     Pg    10 23 41.6 +0.7
T1217                           S     Sg    10 23 44.3 +1.0
T1217                           AML   AML
     comp=E,898µm,0.2s
T1217                           AML   AML
     comp=E,885µm,0.2s
T1217                           AML   AML
     comp=N,1202µm,0.2s
T1217                           AML   AML
     comp=N,1202µm,0.2s
FDMO Fiordimonte      0.20   5 P     Pg    10 23 42.3 +0.7
FDMO                            S     Sg    10 23 45.6 +1.2
FDMO                            AML   AML
     comp=E,1320µm,1.4s
FDMO                            AML   AML
     comp=N,2020µm,0.2s
FDMO                            AML   AML
     comp=E,1345µm,0.1s
FDMO                            AML   AML
     comp=N,2023µm,0.2s
FDMO                            AML   AML
     comp=E,1146µm,0.1s
CESI CESI - Serrava   0.20 326 ⇑P     Pg    10 23 42.4 +0.7
CESI                            S     Sg    10 23 45.7 +1.1
CESI                            AML   AML
     comp=E,1380µm,0.5s
CESI                            AML   AML
     comp=N,3355µm,0.3s
CESI                            AML   AML
     comp=N,3353µm,0.3s
CESI                            AML   AML
     comp=E,1194µm,0.1s
LNSS Leonessa         0.23 184 ⇓P     Pg    10 23 42.9 +0.7
LNSS                            S     Sg    10 23 46.8 +1.4
LNSS                            AML   AML
     comp=N,1012µm,0.1s
LNSS                            AML   AML
     comp=E,1285µm,0.2s
T1204 Amatrice, Fraz  0.25 130 ⇑P     Pg    10 23 43.2 +0.7
T1204                           S     Sg    10 23 47.4 +1.5
T1204                           AML   AML
     comp=E,1517µm,0.3s
T1204                           AML   AML
     comp=N,530µm,0.2s
```

T1241	**Roccafluvione,**	**0.27**	**86**	⇑P	Pg	10 23 43.6	+0.7
T1241				S	Sb	10 23 48.1	-1.1
T1241				AML	AML		
	comp=N,809μm,0.2s						
T1241				AML	AML		
	comp=E,594μm,0.2s						
T1241				AML	AML		
	comp=N,850μm,0.2s						
T1241				AML	AML		
	comp=E,621μm,0.2s						
SMA1	**SAN MARTINO**	**0.29**	**135**	⇑P	Pb	10 23 44.5	-0.2
SMA1				AML	AML		
	comp=E,641μm,0.4s						
SMA1				AML	AML		
	comp=N,492μm,0.2s						
GUMA	**Gualdo di Mace**	**0.30**	**42**	⇑P	Pb	10 23 44.3	-0.6
GUMA				S	Sb	10 23 49.6	-0.5
GUMA				AML	AML		
	comp=N,1835μm,0.5s						
GUMA				AML	AML		
	comp=E,1585μm,0.3s						
GUMA				AML	AML		
	comp=E,1399μm,0.4s						
GUMA				AML	AML		
	comp=N,1898μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**116**	⇑P	Pg	10 23 44.0	+0.2
T1243				S	Sb	10 23 49.3	-1.2
ARRO	**Arrone**	**0.34**	**220**	⇓P	Pg	10 23 44.6	+0.5
ARRO				S	Sb	10 23 50.1	-0.8
ARRO				AML	AML		
	comp=E,435μm,0.2s						
ARRO				AML	AML		
	comp=N,395μm,0.2s						
T1211	**Morro Reatino**	**0.34**	**207**	⇓P	Pg	10 23 44.9	+0.7
T1211				S	Sb	10 23 50.0	-1.1
T1211				AML	AML		
	comp=N,785μm,0.2s						
T1211				AML	AML		
	comp=E,430μm,0.1s						
T1211				AML	AML		
	comp=E,463μm,0.1s						
T1211				AML	AML		
	comp=N,814μm,0.2s						
RM33	**Pellescritta (**	**0.35**	**161**	P	Pg	10 23 44.9	+0.6
RM33				AML	AML		
	comp=E,238μm,0.4s						
RM33				AML	AML		
	comp=N,237μm,0.3s						
ASSB	**Assisi San Ben**	**0.36**	**305**	⇑P	Pg	10 23 44.9	+0.3
ASSB				S	Sb	10 23 50.6	-1.2
CAMP	**Campotosto**	**0.40**	**139**	⇓P	Pg	10 23 45.8	+0.6
CAMP				S	Sb	10 23 51.8	-1.0
CAMP				AML	AML		
	comp=N,148μm,0.4s						
CAMP				AML	AML		
	comp=E,160μm,0.2s						
CESX	**Cesi**	**0.42**	**238**	⇑P	Pg	10 23 45.9	+0.3
CESX				S	Sb	10 23 52.9	-0.5
CESX				AML	AML		
	comp=N,219μm,0.4s						
CESX				AML	AML		
	comp=E,255μm,0.5s						
SNTG	**Esanatoglia**	**0.43**	**348**	⇓P	Pb	10 23 46.5	-0.6
SNTG				AML	AML		
	comp=E,165μm,0.2s						
SNTG				AML	AML		
	comp=N,203μm,0.6s						
SNTG				AML	AML		
	comp=E,144μm,0.2s						
SNTG				AML	AML		
	comp=N,148μm,0.2s						
TERO	**Teramo**	**0.45**	**118**	⇓P	Pg	10 23 46.6	+0.4
TERO				AML	AML		
	comp=E,219μm,0.1s						
TERO				AML	AML		
	comp=N,285μm,0.1s						
TERO				AML	AML		
	comp=E,216μm,0.2s						
TERO				AML	AML		
	comp=N,320μm,0.1s						
GIGS	**Gran Sasso**	**0.54**	**136**	⇑P	Pg	10 23 48.3	+0.4
GIGS				AML	AML		
	comp=E,45μm,0.1s						
GIGS				AML	AML		
	comp=N,48μm,0.2s						
FIAM	**Fiamignano**	**0.57**	**176**	S	Sb	10 23 59.0	+1.2
ARVD	**Arcevia**	**0.67**	**352**	S	Sb	10 24 02.0	+1.4
CRE	**Caprese Michel**	**1.13**	**314**	S	Sn	10 24 15.0	-0.1
BRSN	**Barisano**	**1.61**	**334**	P	Pb	10 24 07.0	-0.3
BRSN				AML	AML		
	comp=E,409μm,0.6s						
BRSN				AML	AML		
	comp=N,266μm,0.4s						
IMOL	**Imola, Italy**	**1.80**	**328**	S	Sg	10 24 36.0	+0.8

*IDC **29** 10:27:31.0±4.0, 14°.39N×92°.46W, h0km, mb3.7/3, mbtmp3.5/5, ML3.4/2, MS3.3/2, Error ellipse: s-maj=149.4km s-min=55.5km az=41.0*
*MEX **29** 10:27:31.7±0.4, 13°.87N×93°.01W, h15km, MD4.1*
*GCG **29** 10:27:39.6±0.5, 14°.39N×92°.59W, h35km±.999km, MD4.1*
ISC 29 10:27:32.9±2.9, 14°.12N±0°.08×92°.90W±0°.05, h17km±16km, n20, σ1°.44/28, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.00**	**38**	*e*P	**Pb**	**10 27 51.6**	**-0.2**
THIG				*e*S	**Sb**	**10 28 04.8**	**+0.1**
PATR	**El Naranjo**	**1.19**	**33**	*i* P	**Pn**	**10 27 54.0**	**-1.0**
PATR				*e*S	**Sg**	**10 28 11.8**	**+0.3**
CHUJ	**Union Juarez**	**1.24**	**38**	*i* P	**Pn**	**10 27 54.8**	**-0.9**
CHUJ				*e*S	**Sb**	**10 28 11.3**	**-0.4**
PAVE	**Pavencul**	**1.28**	**33**	*e*P	**Pn**	**10 27 55.4**	**-0.9**
PAVE				*e*S	**Sn**	**10 28 13.8**	**+0.7**
STG3	**Santiaguito 3,**	**1.42**	**65**	*e*P	**Pn**	**10 27 58.2**	**+0.1**
STG3				*e*S	**Sb**	**10 28 17.8**	**+0.9**
PCIG		**1.61**	**349**	*e*P	**Pn**	**10 27 59.3**	**-1.3**
PCIG				*e*S	**Sn**	**10 28 18.7**	**-2.2**
FUG	**Fuego 3**	**2.02**	**80**	*e*P	**Pn**	**10 28 05.4**	**-1.0**
FUG				*e*S	**Sn**	**10 28 28.9**	**-2.5**
PCG	**Pacaya**	**2.24**	**83**	*e*S	**Sn**	**10 28 36.7**	**-0.2**
CCIG	**Comitan**	**2.27**	**19**	*e*P	**Pb**	**10 28 12.7**	**-0.9**
CCIG				*e*S	**Sb**	**10 28 43.4**	**+1.8**
NBG	**Las Nubes**	**2.52**	**79**	*e*P	**Pn**	**10 28 14.6**	**+1.3**
TGIG		**2.65**	**355**	*e*P	**Pn**	**10 28 16.2**	**+1.1**
TGIG				*e*S	**Sn**	**10 28 49.0**	**+2.1**
UXUV	**UXUV**	**3.40**	**340**	*e*P	**Pn**	**10 28 27.5**	**+2.3**
UXUV				*e*S	**Sb**	**10 29 10.7**	**-3.2**
CMIG	**Matias Romero**	**3.52**	**327**	Pn	**Pn**	**10 28 26.3**	**-0.5**
	2.9nm,0.3s,baz=164,slow=12,SNR=32 7.3nm,0.3s						
TXAR	**Lajitas Array**	**18.13**	**328**	P	**P**	**10 31 44.5**	**+0.1**
	baz=138,slow=9.6,SNR=2.4 0.1nm,0.6s						
TKL	**Tuckaleechee C**	**22.96**	**19**	LR	LR	10 42 58.5	
	comp=Z,54nm,18.1s,baz=180,slow=41						
NVAR	**Mina Array Bea**	**33.03**	**322**	P	**P**	**10 34 09.6**	**+1.9**
	0.6nm,0.6s,baz=138,slow=8.1,SNR=7.6 0.6nm,0.6s						
SCHQ	**Schefferville**	**45.42**	**21**	LR	LR	10 57 25.6	
	comp=Z,39nm,19.8s,baz=154,slow=40						
YKA	**Yellowknife Ar**	**50.71**	**347**	P	**P**	**10 36 31.1**	**-0.4**
	2.5nm,0.8s,baz=152,slow=7.0,SNR=4.2 2.5nm,0.8s						
ILAR	**Eielson Array**	**62.39**	**337**	P	**P**	**10 37 54.6**	**0.0**
	0.3nm,0.8s,baz=127,slow=6.9,SNR=3.0 0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**145.59**	**340**	PKPbc	**PKPdf**	**10 47 10.8**	**-0.6**
	0.4nm,0.3s,baz=346,slow=4.2,SNR=4.9						

ROM 29 10:41:13.8±0.2, 42°.878N±0°.010×13°.18E±0°.01, h9km±1km, ML1.9/1, 1C-3D, Error ellipse: s-maj=1.1km s-min=0.7km az=318.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.12**	**276**	P	Pg	10 41 17.0	+0.4
T1216				S	Sg	10 41 19.1	+0.6
T1216				AML	AML		
	comp=N,663μm,1.1s						
T1216				AML	AML		
	comp=E,1145μm,0.3s						
T1241	**Roccafluvione,**	**0.19**	**97**	⇓P	Pg	10 41 18.7	+1.1
T1241				AML	AML		
	comp=E,156μm,0.8s						
T1241				AML	AML		
	comp=N,188μm,0.6s						
GUMA	**Gualdo di Mace**	**0.22**	**32**	P	Pg	10 41 19.4	+1.1
GUMA				S	Sg	10 41 23.2	+2.0
T1204	**Amatrice, Fraz**	**0.23**	**154**	⇑P	Pg	10 41 19.4	+1.0
T1204				S	Sg	10 41 23.5	+2.0
T1215	**Vallo di Nera,**	**0.24**	**252**	P	Pg	10 41 19.6	+0.9
T1215				S	Sg	10 41 23.6	+1.6
T1217	**Poggiodomo (PG**	**0.25**	**228**	P	Pg	10 41 19.8	+1.0
T1217				S	Sg	10 41 24.1	+1.9
SMA1	**SAN MARTINO**	**0.27**	**155**	⇓P	Pb	10 41 20.3	-0.6
SMA1				AML	AML		
	comp=E,102μm,1.5s						
SMA1				AML	AML		
	comp=N,125μm,0.6s						
LNSS	**Leonessa**	**0.29**	**201**	P	Pb	10 41 20.7	-0.6
EL6	**Elcito**	**0.45**	**353**	⇓P	Pg	10 41 23.2	+0.5
TRTR	**Tortoreto Alta**	**0.54**	**97**	P	Pg	10 41 23.8	-0.5

ROM 29 10:42:04.8±0.1, 43°.044N±0°.004×13°.100E±0°.007, h7km, ML1.8/5, 3C-1D, Error ellipse: s-maj=0.6km s-min=0.2km az=115.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**234**	P	Pg	10 42 06.1	0.0
FDMO	**Fiordimonte**	**0.01**	**234**	P	Pg	10 42 06.1	0.0
FDMO				S	Sg	10 42 06.6	-0.4
T1216	**Preci, Frazion**	**0.16**	**201**	P	Pg	10 42 09.4	+1.2
T1216				S	Sg	10 42 12.0	+1.5
GUMA	**Gualdo di Mace**	**0.17**	**84**	P	Pg	10 42 09.2	+0.9
GUMA				S	Sg	10 42 12.4	+1.6
GUMA				AML	AML		
	comp=E,505μm,0.6s						
GUMA				AML	AML		
	comp=N,484μm,0.4s						
SNTG	**Esanatoglia**	**0.24**	**331**	P	Pg	10 42 10.7	+1.1
EL6	**Elcito**	**0.29**	**0**	P	Pg	10 42 11.2	+0.7
EL6				S	Sb	10 42 16.1	-1.3
T1215	**Vallo di Nera,**	**0.29**	**215**	P	Pg	10 42 11.5	+0.9
T1215				S	Sb	10 42 16.2	-1.4
T1215				AML	AML		
	comp=E,86μm,1.6s						
T1215				AML	AML		
	comp=N,90μm,1.6s						
T1241	**Roccafluvione,**	**0.31**	**127**	P	Pg	10 42 11.6	+0.7
ASSB	**Assisi San Ben**	**0.32**	**270**	P	Pb	10 42 12.1	-0.9
ASSB				S	Sb	10 42 17.7	-0.8
CING	**Cingoli**	**0.34**	**12**	P	Pb	10 42 12.5	-0.8
CING				S	Sb	10 42 17.9	-1.0
CING				AML	AML		
	comp=E,79μm,1.6s						
CING				AML	AML		
	comp=N,54μm,1.6s						
CING				AML	AML		
	comp=E,35μm,0.3s						
T1243	**Rocca Santa Ma**	**0.43**	**143**	P	Pg	10 42 13.7	+0.5
TERO	**Teramo**	**0.56**	**138**	P	Pg	10 42 16.0	+0.4
LATE	**Laterza**	**1.05**	**246**	S	Sn	10 42 44.0	+3.2
TOLF	**Tolfa**	**1.27**	**220**	S	Sg	10 42 46.0	+0.3
LMD	**Lutirano**	**1.45**	**316**	S	Sg	10 42 56.0	+4.6
POPM	**Popiglio**	**1.98**	**301**	P	Pg	10 42 44.0	+1.4
POPM				AML	AML		
	comp=N,156μm,1.1s						
POPM				AML	AML		
	comp=E,173μm,0.2s						
ZCCA	**Zocca**	**2.02**	**311**	⇑P	Pb	10 42 40.9	-1.1
ZCCA				AML	AML		
	comp=N,86μm,0.8s						
ZCCA				AML	AML		
	comp=E,72μm,1.4s						
BDI	**Bagni Di Lucca**	**2.09**	**300**	⇑P	Pg	10 42 45.0	+0.3
BDI				AML	AML		
	comp=E,16μm,0.1s						
BDI				AML	AML		
	comp=N,18μm,1.4s						
PAOL	**Paolisi**	**2.29**	**151**	S	Sb	10 43 16.0	+1.0
RNCA	**Ronca, Sant'Ol**	**3.33**	**297**	⇓P	Pn	10 43 00.5	+3.2
ZONE	**Zone**	**3.46**	**323**	⇑P	Pb	10 43 06.2	-0.2
EUCT	**Pavia**	**3.58**	**308**	P	Pb	10 43 07.6	-0.8
EUCT				AML	AML		
	comp=E,1270μm,0.1s						
EUCT				AML	AML		
	comp=N,1490μm,0.9s						
MILN	**Milano**	**3.69**	**313**	P	Pg	10 43 13.9	-1.7
HAGA	**Augusta**	**5.96**	**164**	P	Pb	10 43 53.4	+4.3

*IDC **29** 10:53:49.4±2.0, 59°.93N×153°.31W, h103km±28km, mb3.6/2, mbtmp3.9/6, MS3.3/1, Error ellipse: s-maj=33.5km s-min=17.6km az=111.0*
*NEIC **29** 10:53:49.5±1.2, 59°.79N±0°.05×153°.37W±0°.09, h133km±7km, Error ellipse: s-maj=7.8km s-min=6.8km az=159.0*
*ANF **29** 10:53:50.8±0.2, 59°.86N×153°.32W, h118km±2km, ML3.6/50, Error ellipse: s-maj=2.1km s-min=1.5km az=158.0*
*AEIC **29** 10:53:51±1.3, 59°.83N±0°.05×153°.25W±0°.07, h119km±6km, ML3.2, ML3.4/120(NEIC), Error ellipse: s-maj=7.5km s-min=4.7km az=191.0*
ISC 29 10:53:50.4±0.9, 59°.83N±0°.03×153°.32W±0°.04, h127km±6km, n199, σ0°.83/221, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.18**	**167**	Pn	**Pn**	**10 54 07.6**	**-0.2**
P19K	**Oil Pt**	**0.18**	**167**	P	**Pn**	**10 54 07.7**	**-0.2**
	baz=354,SNR=5.7						
P19K				S	**Sn**	**10 54 20.7**	**-0.2**
	baz=354						
O20K	**Slope Mountain**	**0.43**	**54**	P	**Pn**	**10 54 08.7**	**-0.1**
	baz=231,SNR=6.7						
O20K				S	**Sn**	**10 54 22.6**	**-0.1**
	baz=231						
O19K	**Port Alsworth**	**0.62**	**306**		**Pn**	**10 54 09.5**	**-0.3**
O19K	**Port Alsworth**	**0.62**	**306**	P	**Pn**	**10 54 09.5**	**-0.3**
	baz=125						
O19K				S	**Sn**	**10 54 23.5**	**-1.0**
	baz=125						
RSO	**Redoubt South**	**0.69**	**24**		**Pn**	**10 54 10.5**	**0.0**
HOM	**Homer**	**0.86**	**101**	Pn	**Pn**	**10 54 11.6**	**-0.1**
HOM				Sn	**Sn**	**10 54 28.1**	**+0.3**
HOM				IAML		10 54 29.2	
	comp=E,968nm,0.8s						
HOM				IAML		10 54 30.1	
	comp=N,958nm,0.9s						
HOM	**Homer**	**0.86**	**101**	P	**Pn**	**10 54 11.8**	**+0.1**
	baz=282						
HOM				S	**Sn**	**10 54 27.5**	**-0.3**
	baz=282						
Q19K	**Cape Douglas,**	**0.92**	**191**	Pn	**Pn**	**10 54 12.0**	**-0.2**
Q19K				IAML		10 54 30.0	
	comp=E,692nm,0.7s						
Q19K				IAML		10 54 33.4	
	comp=N,990nm,0.9s						
Q19K	**Cape Douglas,**	**0.92**	**191**	P	**Pn**	**10 54 12.1**	**-0.2**
	baz=12,SNR=14						
Q19K				S	**Sn**	**10 54 28.2**	**-0.5**
	baz=12						
O18K	**Koktuh Hills**	**0.96**	**272**		**Pn**	**10 54 12.1**	**-0.4**
O18K	**Koktuh Hills**	**0.96**	**272**	P	**Pn**	**10 54 12.1**	**-0.4**
	baz=91						
O18K				S	**Sn**	**10 54 28.3**	**-1.1**
	baz=91						
P18K	**Big Mountain,**	**1.07**	**247**	Pn	**Pn**	**10 54 13.1**	**-0.5**
P18K	**Big Mountain,**	**1.07**	**247**	P	**Pn**	**10 54 12.7**	**-0.9**
	baz=66						
P18K				S	**Sn**	**10 54 30.0**	**-1.3**
	baz=66						
CNPM	**China Poot**	**1.10**	**105**	Pn	**Pn**	**10 54 13.6**	**-0.3**
CNPM				IAML		10 54 31.8	
	comp=N,423nm,0.4s						
CNPM				IAML		10 54 33.3	
	comp=E,499nm,0.4s						
N19K	**Bonanza Creek**	**1.15**	**330**	Pn	**Pn**	**10 54 14.4**	**-0.1**
N19K	**Bonanza Creek**	**1.15**	**330**	P	**Pn**	**10 54 14.4**	**-0.1**
	baz=148,SNR=13						
N19K				S	**Sn**	**10 54 31.7**	**-1.1**
	baz=148						
BRLK	**Bradley Lake**	**1.23**	**92**		**Pn**	**10 54 14.9**	**-0.4**
BRLK				IAML		10 54 33.6	
	comp=N,671nm,0.3s						
BRLK				IAML		10 54 34.1	
	comp=E,546nm,0.1s						
BRSE	**Bradley Lake S**	**1.30**	**93**	P	**Pn**	**10 54 15.8**	**-0.3**
	baz=275,SNR=14						
BRSE				S	**Sn**	**10 54 34.4**	**-1.2**
	baz=275						
Q20K	**Shuyak Island**	**1.31**	**158**	P	**Pn**	**10 54 16.1**	**0.0**
	baz=340,SNR=7.3						
Q20K				S	**Sn**	**10 54 35.0**	**-0.7**
	baz=340						
CAPN	**Captain Cook N**	**1.43**	**48**	Pn	**Pn**	**10 54 19.1**	**+1.8**
CAPN	**Captain Cook N**	**1.43**	**48**	P	**Pn**	**10 54 19.1**	**+1.8**
	baz=229						
Q18K	**Katmai Hardscr**	**1.47**	**217**	P	**Pn**	**10 54 17.9**	**-0.1**
	baz=36,SNR=19						
Q18K				S	**Sn**	**10 54 37.7**	**-1.3**
	baz=36						
N20K	**Mount Spurr**	**1.48**	**21**	P	**Pn**	**10 54 18.1**	**+0.1**
	baz=201,SNR=20						
N20K				S	**Sn**	**10 54 38.4**	**-0.8**
	baz=201						
SPCR	**Spurr Chakacha**	**1.48**	**21**	P	**Pn**	**10 54 18.1**	**+0.1**
	baz=201,SNR=17						
SPU	**Mount Spurr**	**1.49**	**24**		**Pn**	**10 54 18.4**	**+0.2**
N18K	**Kilae Creek**	**1.54**	**305**	Pn	**Pn**	**10 54 18.5**	**-0.2**
N18K	**Kilae Creek**	**1.54**	**305**	P	**Pn**	**10 54 18.3**	**-0.4**
	baz=122						
N18K				S	**Sn**	**10 54 39.1**	**-1.2**
	baz=122						
SVW2	**Sparrevohn**	**1.70**	**320**	Pn	**Pn**	**10 54 20.2**	**-0.3**
P17K	**Kvichak River**	**1.71**	**250**	P	**Pn**	**10 54 21.0**	**+0.3**
	baz=68,SNR=16						
P17K				S	**Sn**	**10 54 43.0**	**-0.7**
	baz=68						
O17K	**Koliganek Bris**	**1.91**	**270**	P	**Pn**	**10 54 23.4**	**+0.4**
	baz=87						
O17K				S	**Sn**	**10 54 47.4**	**-0.5**
	baz=87						
O22K	**Cooper Landing**	**1.91**	**68**		**Pn**	**10 54 23.0**	**0.0**
O22K	**Cooper Landing**	**1.91**	**68**	P	**Pn**	**10 54 23.0**	**0.0**
	baz=251						
SEW	**Seward**	**1.96**	**80**	Pn	**Pn**	**10 54 23.3**	**-0.2**
SEW	**Seward**	**1.96**	**80**	P	**Pn**	**10 54 23.4**	**-0.2**
	baz=263,SNR=8.2						
Q17K	**Contact Creek**	**2.06**	**221**	P	**Pn**	**10 54 24.9**	**0.0**
	baz=40,SNR=10						
M20K	**Styx River**	**2.06**	**2**		**Pn**	**10 54 25.2**	**+0.3**
M20K	**Styx River**	**2.06**	**2**	P	**Pn**	**10 54 25.3**	**+0.3**
	baz=182						
Q16K	**King Salmon**	**2.07**	**238**	P	**Pn**	**10 54 25.2**	**+0.3**
	baz=55,SNR=10						
SUA	**Susitna One**	**2.07**	**37**	Pn	**Pn**	**10 54 25.4**	**+0.3**
SUA				IAML		10 54 52.5	
	comp=N,170nm,0.9s						
SUA				IAML		10 54 53.5	
	comp=E,329nm,0.9s						
SUA	**Susitna One**	**2.07**	**37**	P	**Pn**	**10 54 25.4**	**+0.3**
	baz=218,SNR=48						
SUA				S	**Sn**	**10 54 51.5**	**-0.2**
	baz=218						
KDAK	**Kodiak Island**	**2.09**	**169**	P	**Pn**	**10 54 24.0**	**-1.1**
	comp=E,34nm,0.3s,baz=25,slow=10,SNR=61						
KDAK				S	**Sn**	**10 54 49.2**	**-2.6**
	comp=E,87nm,0.3s,baz=139,slow=22,SNR=73						
KDAK	**Kodiak Island**	**2.09**	**169**	Pn	**Pn**	**10 54 24.1**	**-1.1**
KDAK				IAML		10 54 51.2	
	comp=E,351nm,0.4s						
KDAK				IAML		10 54 51.6	
	comp=E,344nm,0.4s						
KDAK	**Kodiak Island**	**2.09**	**169**	P	**Pn**	**10 54 26.4**	**+1.2**
	baz=350						
M19K	**Big River Lodg**	**2.15**	**346**		**Pn**	**10 54 26.1**	**+0.2**
M19K	**Big River Lodg**	**2.15**	**346**	P	**Pn**	**10 54 25.8**	**-0.2**
	baz=165,SNR=14						
M19K				S	**Sn**	**10 54 52.3**	**-0.9**
	baz=165						
RC01	**Rabbit Creek A**	**2.18**	**53**		**Pn**	**10 54 26.0**	**-0.3**
RC01				IAML		10 54 53.4	
	comp=E,450nm,0.3s						
RC01	**Rabbit Creek A**	**2.18**	**53**	P	**Pn**	**10 54 26.0**	**-0.3**
	baz=235,SNR=8.0						
SKT	**Skwentna**	**2.33**	**21**		**Pn**	**10 54 28.5**	**+0.3**
SKT	**Skwentna**	**2.33**	**21**	P	**Pn**	**10 54 28.3**	**+0.1**
	baz=202,SNR=9.9						
O16K	**Kokwok River B**	**2.43**	**267**	P	**Pn**	**10 54 29.9**	**+0.4**
	baz=83						
O16K				S	**Sn**	**10 54 59.4**	**-0.2**
	baz=83						
L19K	**White Mountain**	**2.48**	**343**	Pn	**Pn**	**10 54 30.1**	**0.0**
L19K	**White Mountain**	**2.48**	**343**	P	**Pn**	**10 54 29.9**	**-0.2**
	baz=161,SNR=9.2						
L19K				S	**Sn**	**10 54 59.6**	**-1.0**
	baz=161						
M22K	**Willow**	**2.49**	**38**		**Pn**	**10 54 30.4**	**+0.3**
M22K				IAML		10 55 03.0	
	comp=N,305nm,0.4s						
M22K				IAML		10 55 06.7	
	comp=E,260nm,0.5s						
M22K	**Willow**	**2.49**	**38**	P	**Pn**	**10 54 30.1**	**0.0**
	baz=220,SNR=8.7						
M22K				S	**Sn**	**10 55 00.4**	**-0.3**
	baz=220						
P16K	**Nushagak River**	**2.52**	**254**	P	**Pn**	**10 54 31.4**	**+0.8**
	baz=70						
OHAK	**Old Harbor**	**2.61**	**180**	Pn	**Pn**	**10 54 30.2**	**-1.6**
OHAK				IAML		10 55 02.7	
	comp=N,77nm,0.3s						
OHAK				IAML		10 55 02.8	
	comp=E,111nm,0.3s						
OHAK	**Old Harbor**	**2.61**	**180**	P	**Pn**	**10 54 30.2**	**-1.6**
	baz=0.2						
L20K	**Farewell, AK**	**2.67**	**354**	P	**Pn**	**10 54 32.5**	**-0.1**
	baz=173						
PWL	**Port Wells**	**2.68**	**65**		**Pn**	**10 54 31.8**	**-0.9**
PWL				IAML		10 55 04.8	
	comp=N,214nm,0.4s						
PWL				IAML		10 55 07.6	
	comp=E,172nm,0.5s						
PWL	**Port Wells**	**2.68**	**65**	P	**Pn**	**10 54 31.6**	**-1.1**
	baz=249						
PMR	**Palmer**	**2.71**	**47**		**Pn**	**10 54 32.0**	**-1.0**
PMR				IAML		10 55 04.5	
	comp=E,102nm,0.5s						
PMR				IAML		10 55 07.3	
	comp=N,95nm,0.4s						
PMR	**Palmer**	**2.71**	**47**	P	**Pn**	**10 54 32.0**	**-1.0**
	baz=231						
N16K	**Nishlik Lake**	**2.80**	**286**	P	**Pn**	**10 54 34.9**	**+0.6**
	baz=101						
KNK	**Knik Glacier**	**2.87**	**54**		**Pn**	**10 54 34.2**	**-1.0**
KNK				IAML		10 55 14.3	
	comp=N,185nm,0.4s						
KNK				IAML		10 55 15.1	
	comp=E,170nm,0.4s						
KNK	**Knik Glacier**	**2.87**	**54**	P	**Pn**	**10 54 34.1**	**-1.0**
	baz=238						
GHO	**Glory Hole Cre**	**2.90**	**46**		**Pn**	**10 54 34.6**	**-1.0**
GHO				IAML		10 55 08.6	
	comp=E,107nm,0.3s						
GHO				IAML		10 55 18.4	
	comp=N,104nm,0.6s						
CUT	**Chulitna**	**2.98**	**28**		**Pn**	**10 54 36.2**	**-0.2**
CUT				IAML		10 55 16.5	
	comp=E,84nm,0.4s						
CUT				IAML		10 55 27.2	
	comp=N,86nm,3.0s						
CUT	**Chulitna**	**2.98**	**28**	P	**Pn**	**10 54 36.3**	**-0.2**
	baz=211,SNR=18						
P23K	**Montague Islan**	**2.98**	**84**	P	**Pn**	**10 54 36.5**	**0.0**
	baz=269						
PPLA	**Purkeypile**	**3.13**	**9**		**Pn**	**10 54 39.7**	**+1.2**
PPLA	**Purkeypile**	**3.13**	**9**	P	**Pn**	**10 54 39.4**	**+0.9**
	baz=190,SNR=6.6						
SML	**Sawmill**	**3.15**	**49**		**Pn**	**10 54 37.6**	**-1.1**
SML				IAML		10 55 16.0	
	comp=N,92nm,0.9s						
SML				IAML		10 55 22.8	
	comp=E,82nm,1.0s						
SML	**Sawmill**	**3.15**	**49**	P	**Pn**	**10 54 37.6**	**-1.1**
	baz=233						
GLI	**Glacier Island**	**3.27**	**68**	Pn	**Pn**	**10 54 39.6**	**-0.6**
GLI				IAML		10 55 18.4	
	comp=N,84nm,0.5s						
GLI				IAML		10 55 19.8	
	comp=E,118nm,0.6s						
GLI	**Glacier Island**	**3.27**	**68**	P	**Pn**	**10 54 40.1**	**-0.1**
	baz=254						

baz=236,SNR=8.5
HIN Hinchinbrook I 3.46 78 Pn Pn 10 54 42.6 -0.2
FID Port Fidalgo 3.53 72 Pn Pn 10 54 42.4 -1.3
SCM Sheep Creek Mo 3.55 53 Pn 10 54 43.3 -0.8
SCM IAML 10 55 27.3
comp=N,84nm,0.8s
SCM IAML 10 55 28.4
comp=E,67nm,0.3s
SCM Sheep Creek Mo 3.55 53 P Pn 10 54 43.1 -1.0
baz=238,SNR=8.0
K20K Telida 3.56 355 Pn 10 54 44.4 +0.2
K20K Telida 3.56 355 P Pn 10 54 44.0 -0.1
baz=174
Q23K Middleton Isla 3.56 93 Pn Pn 10 54 44.0 -0.1
MID Middleton Isla 3.57 93 Pn Pn 10 54 43.9 -0.3
CAST Castle Rocks 3.65 9 Pn Pn 10 54 45.7 +0.4
CAST Castle Rocks 3.65 9 P Pn 10 54 45.5 +0.2
baz=189,SNR=17
WAT1 Susitna Watana 3.79 35 P Pn 10 54 46.4 -0.7
baz=219
EYAK Cordova Ski Ar 3.85 76 P Pn 10 54 47.7 -0.1
baz=262
WAT6 Susitna Watana 3.86 42 P Pn 10 54 47.3 -0.9
baz=226,SNR=15
KTH Kantishna Hill 3.91 16 Pn 10 54 48.7 -0.1
KTH IAML 10 57 06.2
comp=N,26nm,3.5s
TRF Thorofare Moun 3.91 20 Pn 10 54 48.7 -0.2
TRF IAML 10 55 46.1
comp=E,38nm,2.9s
TRF IAML 10 55 56.7
comp=N,42nm,3.2s
TRF Thorofare Moun 3.91 20 P Pn 10 54 48.4 -0.5
baz=203,SNR=8.6
DIV Divide 3.95 67 Pn 10 54 48.6 -0.8
KLU Klutina 4.00 62 Pn 10 54 49.0 -1.1
KLU IAML 10 55 36.9
comp=E,92nm,0.4s
KLU Klutina 4.00 62 P Pn 10 54 48.9 -1.1
baz=248,SNR=24
CHUM Lake Minchumin 4.10 6 P Pn 10 54 51.2 +0.1
baz=187,SNR=5.9
M24K Tolsona, Glenn 4.16 54 Pn 10 54 51.8 -0.4
M24K IAML 10 55 43.2
comp=E,78nm,1.1s
M24K Tolsona, Glenn 4.16 54 P Pn 10 54 51.7 -0.4
baz=240,SNR=9.9
RND Reindeer 4.17 29 Pn 10 54 51.8 -0.5
RND IAML 10 55 38.1
comp=E,26nm,4.1s
CHIR Chirikof Islan 4.20 198 Pn Pn 10 54 51.3 -1.4
CHIR Chirikof Islan 4.20 198 P Pn 10 54 51.2 -1.4
baz=16
DHY Denali Highway 4.33 39 Pn 10 54 53.8 -0.6
DHY IAML 10 55 46.5
comp=E,30nm,0.3s
DHY IAML 10 57 32.5
comp=N,28nm,3.3s
DHY Denali Highway 4.33 39 P Pn 10 54 53.8 -0.6
baz=224,SNR=5.8
J20K Nowinta River 4.38 355 Pn Pn 10 54 55.3 +0.3
J20K IAML 10 56 20.4
comp=E,26nm,3.5s
J20K IAML 10 57 05.0
comp=N,26nm,4.0s
J20K Nowinta River 4.38 355 P Pn 10 54 54.9 -0.1
baz=174,SNR=12
BPAW Bear Paw Mtn. 4.42 13 Pn Pn 10 54 54.9 -0.7
BPAW IAML 10 57 39.4
comp=E,24nm,3.3s
BPAW Bear Paw Mtn. 4.42 13 P Pn 10 54 55.1 -0.5
baz=195
MCK McKinley 4.43 26 Pn Pn 10 54 55.6 -0.1
MCK IAML 10 57 35.3
comp=E,27nm,3.3s
MCK IAML 10 57 38.5
comp=N,31nm,3.3s
MCK McKinley 4.43 26 P Pn 10 54 55.5 -0.2
baz=210,SNR=8.2
CHGN Chignik 4.45 220 Pn Pn 10 54 56.1 +0.1
CHGN IAML 10 56 09.8
comp=N,58nm,1.3s
CHGN Chignik 4.45 220 P Pn 10 54 55.9 -0.1
baz=36
BMRM Bremner River 4.47 71 Pn 10 54 55.6 -0.6
BMRM Bremner River 4.47 71 P Pn 10 54 56.1 -0.1
baz=259
KAIM Kayak Island 4.48 85 Pn Pn 10 54 56.7 +0.3
KAIM IAML 10 57 26.5
comp=N,62nm,2.0s
KAIM Kayak Island 4.48 85 P Pn 10 54 56.4 0.0
baz=272
N25K Chitina, Valde 4.64 64 Pn Pn 10 54 57.8 -0.7
N25K IAML 10 55 52.2
comp=E,50nm,0.5s
N25K IAML 10 55 53.9
comp=N,38nm,0.6s
N25K Chitina, Valde 4.64 64 P Pn 10 54 57.8 -0.7
baz=251,SNR=22
BWN Browne 4.72 21 Pn 10 54 59.8 +0.3
HARP HAARP 4.72 53 P Pn 10 54 59.1 -0.4
baz=240
SUCK Suckling Hills 4.80 83 Pn Pn 10 55 00.7 +0.1
SUCK IAML 10 56 14.1
comp=E,47nm,3.3s
PAX Paxson 4.91 47 Pn 10 55 01.8 -0.4
PAX Paxson 4.91 47 P Pn 10 55 01.6 -0.5
baz=233
GLB Gilahina Butte 4.95 67 Pn 10 55 02.4 -0.3
VRDI Verde Repeater 5.07 70 Pn 10 55 04.2 -0.2
VRDI IAML 10 56 00.3
comp=E,30nm,0.5s
VRDI IAML 10 56 02.0
comp=N,29nm,0.3s
NEA2 Nenana 5.18 21 Pn 10 55 05.2 -0.4
NEA2 IAML 10 56 53.1
comp=E,24nm,1.4s
NEA2 IAML 10 57 08.8
comp=N,23nm,3.3s
NEA2 Nenana 5.18 21 P Pn 10 55 04.9 -0.7
baz=204,SNR=13
WRH Wood River Hil 5.26 25 Pn Pn 10 55 06.0 -0.7
WAX Waxell Ridge 5.27 79 Pn Pn 10 55 06.8 -0.2
SNH Sunshine Point 5.27 82 Pn Pn 10 55 07.5 +0.6
MCARA McCarthy VSAT 5.30 68 Pn 10 55 07.8 +0.4
MCARA McCarthy VSAT 5.30 68 P Pn 10 55 07.8 +0.4
baz=257
K24K Donnelly Dome 5.35 39 P Pn 10 55 08.6 +0.5
baz=225
MLY Manley 5.36 12 Pn Pn 10 55 07.3 -0.8
MLY IAML 10 57 01.5
comp=N,24nm,4.4s
MLY Manley 5.36 12 P Pn 10 55 07.2 -0.8
baz=194,SNR=7.7
I21K Tanana 5.41 6 P Pn 10 55 08.6 -0.1
baz=187
CCB Clear Creek Bu 5.48 26 Pn 10 55 08.7 -0.9
HDA Harding Lake 5.48 30 Pn 10 55 09.0 -0.7
HDA Harding Lake 5.48 30 P Pn 10 55 08.8 -0.9
baz=216,SNR=13
MENT Mentasta 5.57 52 Pn 10 55 11.0 +0.1
M26K Nabesna, AK 5.63 58 Pn 10 55 12.0 +0.2
M26K Nabesna, AK 5.63 58 P Pn 10 55 11.7 0.0
baz=247,SNR=12
I23K Minto, Yukon-K 5.64 17 Pn 10 55 11.2 -0.6
I23K Minto, Yukon-K 5.64 17 P Pn 10 55 11.2 -0.6
baz=200,SNR=11
TCOL CIGO, UAF Yank 5.66 24 Pn 10 55 11.8 -0.3
TCOL CIGO, UAF Yank 5.66 24 P Pn 10 55 11.5 -0.6
baz=209,SNR=12
MDM Murphy Dome 5.66 22 Pn 10 55 11.5 -0.6
COLA College 5.67 24 Pn 10 55 11.8 -0.3
COLA College 5.67 24 P Pn 10 55 11.4 -0.7
baz=209
MESA MESA 5.71 82 Pn 10 55 13.2 +0.1
MESA MESA 5.71 82 P Pn 10 55 12.9 -0.2
baz=271
IL31 5.79 28 Pn 10 55 13.2 -0.6
ILAR Eielson Array 5.79 28 P Pn 10 55 12.7 -1.2
comp=N,14nm,0.6s,baz=217,slow=14,SNR=210
ILAR S Sn 10 56 15.3 -3.8
comp=N,9.3nm,0.7s,baz=6.5,slow=25,SNR=5.6
ILAR Eielson Array 5.79 28 Pn 10 55 13.2 -0.7
YAH Yahtse 5.81 80 Pn 10 55 15.2 +0.8
H21K Melozitna Rive 5.86 2 Pn 10 55 15.0 +0.2
H21K Melozitna Rive 5.86 2 P Pn 10 55 14.3 -0.4
baz=182,SNR=5.3
BARN Barnard Glacie 5.90 73 Pn 10 55 16.6 +1.1
POKR Poker Plat Res 5.96 25 P Pn 10 55 15.1 -1.1
baz=210,SNR=5.6
SCRK Sand Creek 6.06 43 Pn 10 55 16.7 -0.9
SCRK Sand Creek 6.06 43 P Pn 10 55 16.3 -1.3
baz=231,SNR=6.0
J25K Salcha River, 6.07 34 Pn 10 55 17.0 -0.6
J25K Salcha River, 6.07 34 P Pn 10 55 16.8 -0.9
baz=221,SNR=14
M27K Edge Creek, AK 6.10 61 Pn 10 55 18.2 0.0
M27K Edge Creek, AK 6.10 61 P Pn 10 55 18.7 +0.6
baz=250,SNR=7.0
TABL Table Mountain 6.11 79 Pn Pn 10 55 18.9 +0.4
H22K Ishtalitna Cre 6.15 7 P Pn 10 55 18.5 -0.3
baz=189
IMAR Indian Mountai 6.18 358 Pn Pn 10 55 19.6 +0.5
J26L Joseph Creek 6.54 40 Pn 10 55 23.4 -0.6
J26L Joseph Creek 6.54 40 P Pn 10 55 23.4 -0.6
baz=228,SNR=5.1
PCA Pinnacle 6.56 82 Pn 10 55 24.5 +0.2
BVCY Beaver Creek 6.56 61 P Pn 10 55 24.6 +0.3
baz=252,SNR=5.3
PINM Pinnacle 6.57 82 P Pn 10 55 24.8 +0.4
baz=273
YUK3 Moose Creek 6.59 67 P Pn 10 55 25.2 +0.4
baz=258,SNR=8.3
O28M Mount Upton 6.59 76 P Pn 10 55 25.4 +0.5
baz=267,SNR=8.3
YUK8 Steele Glacier 6.84 72 P Pn 10 55 29.0 +0.8
baz=264
PNL Peninsula 7.04 85 P Pn 10 55 30.7 +0.1
baz=277,SNR=7.6
YUK4 Talbot Arm 7.38 72 P Pn 10 55 36.9 +1.4
baz=264
O29M Mount Kennedy 7.39 80 P Pn 10 55 36.3 +0.8
baz=273
YUK6 Outpost Mounta 7.49 75 P Pn 10 55 37.9 +0.9
baz=268
M29M Somme Creek 7.65 64 P Pn 10 55 39.6 +0.6
baz=256,SNR=13
P29M Windy Craggy 7.88 85 Pn 10 55 42.4 +0.4
P29M Windy Craggy 7.88 85 P Pn 10 55 42.8 +0.8
baz=278,SNR=11
L29M L29M 7.97 59 P Pn 10 55 43.7 +0.4
baz=252
N30M Aishikik Lake 8.14 71 P Pn 10 55 44.8 -0.8
baz=265
P30M Million Dollar 8.21 81 P Pn 10 55 47.9 +1.4
baz=275
PLBC Pleasant Camp 8.59 85 P Pn 10 55 52.6 +1.0
baz=280,SNR=6.2
S31K Pelican 9.04 95 P Pn 10 55 58.0 +0.4
baz=289
SKAG Skagway 9.11 85 P Pn 10 56 00.2 +1.6
baz=280
R32K Eaglecrest 9.80 91 P Pn 10 56 09.8 +1.9
baz=287
FARO Faro, Yukon 9.97 67 P Pn 10 56 10.7 +0.5
baz=265
S32K Killisnoo 10.04 95 P Pn 10 56 12.0 +0.9
baz=292
Q32M Nakina River 10.76 86 P Pn 10 56 23.6 +2.7
baz=284
S34M Telegraph Cree 11.63 90 P Pn 10 56 36.0 +3.8
baz=289
DLBC Dease Lake 12.02 87 P Pn 10 56 38.9 +1.4
comp=N,1.0nm,0.3s,baz=281,slow=6.7,SNR=20
YKA Yellowknife Ar 18.67 65 P P 10 57 56.8 -1.3
comp=N,1.2nm,0.6s,baz=277,slow=10,SNR=2.7
ANMO Albuquerque 39.12 108 LR LR 11 17 40.5
comp=N,36nm,18.6s,baz=336,slow=37
SONM Songino Array 54.76 306 P P 11 03 08.1 +1.6
comp=N,0.7nm,0.6s,baz=53,slow=7.6,SNR=2.7
comp=N,0.7nm,0.6s
ZALV Zasovo Beam 57.42 323 P P 11 03 25.9 +0.8
comp=N,1.2nm,0.5s,baz=35,slow=7.3,SNR=5.3
comp=N,1.2nm,0.5s

*NEIC **29** 10:54:19.9±2.2,69.°1N±0.°1×144.°8W±0.°2, h7km±9km, Error ellipse: s-maj=14.8km s-min=9.4km az=178.0*
*AEIC **29** 10:54:21±1.6, 68.°87N±0.°09×144.°9W±0.°2, h15km±8km, ML3.2, ML3.4/42(NEIC), Error ellipse: s-maj=13.4km s-min=8.7km az=206.0*
*ANF **29** 10:54:22.0±0.2, 68.°87N×144.°91W, h0km±1km, ML3.5/38, Error ellipse: s-maj=1.5km s-min=1.0km az=41.0*
ISC 29 10:54:21.6±1.3, 68.°92N±0.°03×144.°82W±0.°03, h1km±11km, n88, σ0=72/105, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
D25K	**Kavik River** baz=130,SNR=50	**0.69**	**306**	P		**Pg**	**10 54 34.9**	**+0.1**
D25K				S		**Sg**	**10 54 44.0**	**+0.3**
C27K	**Jago River** baz=210,SNR=565	**0.81**	**29**	P		**Pn**	**10 54 38.9**	**-1.2**
C27K				S		**Sb**	**10 54 49.7**	**-0.2**
E25K	**Arctic Village** baz=18,SNR=754	**0.85**	**199**	P		**Pg**	**10 54 37.5**	**-0.3**
E25K				S		**Sg**	**10 54 48.0**	**-0.8**
C26K	**Camden Bay** baz=180,SNR=296	**1.00**	**358**	P		**Pn**	**10 54 42.6**	**-0.1**
C26K				S		**Sn**	**10 54 56.4**	**-1.0**
F26K	**Sheenjek River** baz=347,SNR=290	**1.26**	**168**	P		**Pg**	**10 54 45.4**	**-0.3**
F26K				S		**Sg**	**10 55 02.1**	**+0.1**
F25K	**Christian Rive** baz=12,SNR=480	**1.37**	**193**	P		**Pn**	**10 54 46.8**	**-1.0**
F25K				S		**Sg**	**10 55 04.8**	**-0.7**
E27K	**Coleen River** baz=301,SNR=287	**1.40**	**120**	P		**Pb**	**10 54 48.3**	**-0.1**
E27K				S		**Sn**	**10 55 07.8**	**+0.6**
D24K	**Happy Valley** baz=100	**1.46**	**281**	P		**Pn**	**10 54 48.7**	**-0.3**
D24K				S		**Sg**	**10 55 09.2**	**+0.8**
BMAR	**Burnt Mountain**	**1.50**	**177**			**Pn**	**10 54 49.5**	**-0.2**
C24K	**Franklin Bluff** baz=120,SNR=74	**1.60**	**302**	P		**Pb**	**10 54 51.5**	**-0.3**
C24K				S		**Sg**	**10 55 13.5**	**+0.7**
E24K	**Your Creek** baz=57,SNR=441	**1.60**	**240**	P		**Pn**	**10 54 49.9**	**-1.0**
E24K				S		**Sn**	**10 55 11.9**	**-0.3**
TOLK	**Toolik Lake Re**	**1.75**	**263**			**Pb**	**10 54 54.0**	**-0.5**
TOLK				IAML			10 55 20.3	
TOLK	comp=E,512nm,0.8s			IAML			10 55 20.8	
TOLK	comp=N,334nm,0.8s **Toolik Lake Re** baz=80,SNR=432	**1.75**	**263**	P		**Pn**	**10 54 52.8**	**-0.3**
TOLK				S		**Sb**	**10 55 16.9**	**-0.1**
F24K	baz=80 **Squaw Lake** baz=38,SNR=408	**1.82**	**221**	P		**Pn**	**10 54 53.5**	**-0.5**
F24K				S		**Sn**	**10 55 16.7**	**-0.8**
E23K	baz=38 **Chandalar** baz=63	**1.97**	**246**	P		**Pn**	**10 54 55.9**	**-0.2**
E23K				S		**Sn**	**10 55 20.9**	**-0.6**
G26K	baz=63 **Porcupine Rive** baz=348,SNR=111	**2.02**	**168**	P		**Pn**	**10 54 56.5**	**-0.1**
G26K				Sb		**Sb**	**10 55 25.2**	**+0.6**
D23K	baz=348 **Nanushuk River** baz=90	**2.12**	**274**	P		**Pn**	**10 54 58.3**	**+0.3**
G25K	**Bearman Lake** baz=12,SNR=117	**2.22**	**193**	P		**Pn**	**10 54 59.2**	**-0.2**
C23K	**Itkillik River** baz=113,SNR=72	**2.25**	**297**	P		**Pn**	**10 55 00.7**	**+0.8**
C23K				Sb		**Sg**	**10 55 33.3**	**-0.4**
FYU	baz=113 **Fort Yukon**	**2.37**	**184**			**Pn**	**10 55 01.3**	**-0.2**
FYU				IAML			10 55 47.3	
FYU	comp=N,264nm,1.0s			IAML			10 55 49.2	
	comp=E,250nm,1.3s							
G27K	**Doyon Strip** baz=331	**2.44**	**149**	P		**Pn**	**10 55 02.3**	**-0.1**
G24K	**Hadweenzic Riv** baz=23,SNR=54	**2.45**	**206**	P		**Pn**	**10 55 02.1**	**-0.5**
COLD	**Coldfoot**	**2.64**	**232**			**Pn**	**10 55 05.7**	**+0.5**
COLD	**Coldfoot** baz=48	**2.64**	**232**	P		**Pn**	**10 55 05.4**	**+0.1**
COLD				S		**Sn**	**10 55 37.5**	**-0.3**
E22K	**Anaktuvuk Pass** baz=71	**2.69**	**256**	P		**Pn**	**10 55 06.4**	**+0.4**
H25K	**Birch Creek** baz=7.2,SNR=34	**2.69**	**189**	P		**Pn**	**10 55 05.7**	**-0.2**
G23K	**Bananza Creek** baz=40	**2.97**	**224**	P		**Pn**	**10 55 10.1**	**+0.3**
G23K				Sb		**Sb**	**10 55 53.6**	**+1.6**
H27K	baz=40 **Steamboat Moun** baz=336,SNR=7.5	**2.98**	**153**	P		**Pn**	**10 55 09.8**	**-0.2**
F22K	**John River** baz=60	**3.09**	**246**	P		**Pn**	**10 55 11.8**	**+0.4**
F22K				Sb		**Sb**	**10 55 55.4**	**0.0**
G22K	baz=60 **Bettles** baz=49	**3.23**	**235**	P		**Pn**	**10 55 13.2**	**-0.1**
H24K	**Noodor Dome**	**3.32**	**202**			**Pn**	**10 55 14.1**	**-0.4**
H24K				IAML			10 56 07.4	
H24K	comp=N,78nm,1.2s			IAML			10 56 09.4	
H24K	comp=E,85nm,1.0s **Noodor Dome** baz=19,SNR=43	**3.32**	**202**	P		**Pn**	**10 55 14.2**	**-0.4**
PRP	**Porcupine Dome**	**3.43**	**185**			**Pn**	**10 55 16.8**	**+0.6**
PRP	**Porcupine Dome** baz=3.8,SNR=8.3	**3.43**	**185**	P		**Pn**	**10 55 15.9**	**-0.3**
PRP				S		**Sn**	**10 55 56.9**	**-0.6**
I27K	baz=3.8 **Kandik River** baz=340,SNR=51	**3.56**	**158**	P		**Pn**	**10 55 18.6**	**+0.7**
H23K	**Yukon River**	**3.61**	**213**			**Pn**	**10 55 18.8**	**+0.3**
H23K				IAML			10 56 17.2	
H23K	comp=E,83nm,0.8s							
H23K	**Yukon River** baz=28,SNR=11	**3.61**	**213**	P		**Pn**	**10 55 18.3**	**-0.2**
F21K	**Alatna River** baz=59,SNR=10	**3.67**	**246**	P		**Pn**	**10 55 19.2**	**-0.2**
I26K	**Coal Creek Min**	**3.69**	**169**			**Pn**	**10 55 20.1**	**+0.5**
I26K				IAML			10 56 27.7	
I26K	comp=E,108nm,0.8s **Coal Creek Min** baz=350	**3.69**	**169**	P		**Pn**	**10 55 19.3**	**-0.3**
G30M	**tAoh Zraii Nji** baz=304,SNR=21	**3.78**	**117**	P		**Pn**	**10 55 21.2**	**+0.3**
POKR	**Poker Plat Res**	**3.96**	**196**			Pn	10 55 15.8	-7.6
POKR				IAML			10 56 43.1	
EPYK	comp=E,44nm,0.8s **Eagle Plains**	**4.01**	**126**			**Pn**	**10 55 25.3**	**+1.2**
EPYK	**Eagle Plains** baz=312	**4.01**	**126**	P		**Pn**	**10 55 24.7**	**+0.5**
G21K	**Allakaket** baz=50	**4.10**	**238**	P		**Pn**	**10 55 24.8**	**-0.4**
INK	**Inuvik**	**4.18**	**93**	Pn		**Pn**	**10 55 24.8**	**-1.5**
I29M	**Ogilvie Camp,**	**4.38**	**142**			**Pn**	**10 55 30.2**	**+1.0**
I29M				IAML			10 56 46.1	
I29M	comp=E,40nm,1.2s			IAML			10 56 48.6	
I29M	comp=N,33nm,1.1s **Ogilvie Camp,** baz=327	**4.38**	**142**	P		**Pn**	**10 55 29.0**	**-0.2**
EGAK	**Eagle** baz=342,SNR=11	**4.41**	**159**	P		**Pn**	**10 55 29.6**	**+0.1**
CCB	**Clear Creek Bu**	**4.45**	**197**	Pn		**Pn**	**10 55 30.2**	**+0.1**
H21K	**Melozitna Rive**	**4.51**	**227**	Pn		**Pn**	**10 55 32.0**	**+1.1**
H21K				IAML			10 57 01.8	
H21K	comp=E,34nm,1.0s							
IMAR	**Indian Mountai**	**4.53**	**234**	Pn		**Pb**	**10 55 42.2**	**+0.5**
MLY	**Manley**	**4.55**	**214**	Pn		**Pn**	**10 55 32.1**	**+0.6**
MLY				IAML			10 56 51.6	
HDA	comp=E,32nm,1.3s							
HDA	**Harding Lake**	**4.61**	**192**	Pn		**Pn**	**10 55 33.0**	**+0.7**
HDA				IAML			10 56 57.8	
HDA	comp=N,41nm,1.1s							
WRH	**Wood River Hil**	**4.66**	**198**	Pn		**Pn**	**10 55 33.6**	**+0.7**
WRH				IAML			10 56 32.8	
WRH	comp=E,34nm,3.1s			IAML			10 57 05.1	
WRH	comp=N,33nm,2.4s							
NEA2	**Nenana**	**4.66**	**203**	Pn		**Pn**	**10 55 32.8**	**-0.2**
I21K	**Tanana**	**4.69**	**220**	Pn		**Pn**	**10 55 31.3**	**-2.0**
SCRK	**Sand Creek**	**4.98**	**176**	Pn		**Pn**	**10 55 39.1**	**+1.6**
SCRK				IAML			10 57 05.3	
SCRK	comp=E,29nm,1.2s			IAML			10 57 14.1	
SCRK	comp=N,24nm,2.2s							
J29M	**Klondike Camp**	**5.20**	**147**	Pn		**Pn**	**10 55 40.6**	**+0.2**
DOT	**Dot Lake**	**5.31**	**176**	Pn		**Pn**	**10 55 41.3**	**-0.5**
DAWY	**Dawson**	**5.34**	**153**			**Pn**	**10 55 41.3**	**-0.9**
DAWY				IAML			10 57 23.9	
DAWY	comp=E,18nm,3.5s			IAML			10 57 24.0	
DAWY	comp=N,19nm,0.8s							
DAWY	**Dawson** baz=338,SNR=8.9	**5.34**	**153**	P		**Pn**	**10 55 41.2**	**-1.1**
BPAW	**Bear Paw Mtn.**	**5.43**	**210**	Pn		**Pn**	**10 55 43.3**	**-0.2**
BPAW				IAML			10 57 29.6	
BPAW	comp=N,28nm,3.1s			IAML			10 59 04.1	
BPAW	comp=E,25nm,3.8s							
MCK	**McKinley**	**5.47**	**200**	Pn		**Pn**	**10 55 42.5**	**-1.6**
RND	**Reindeer**	**5.78**	**198**	Pn		Pn	10 55 36.9	-11
K29M	**Barlow Dome** baz=333,SNR=14	**5.88**	**147**	P		**Pn**	**10 55 49.9**	**+0.1**
L26K	**Log Cabin Wild** baz=354	**5.95**	**174**	P		**Pn**	**10 55 51.0**	**+0.3**
BCAR	**Beaver Creek A**	**6.01**	**167**	Pn		**Pn**	**10 55 51.5**	**0.0**
L27K	**Beaver Creek,**	**6.01**	**167**			**Pn**	**10 55 52.4**	**+0.9**
L27K	**Beaver Creek,** baz=349	**6.01**	**167**	P		**Pn**	**10 55 51.8**	**+0.3**
MENT	**Mentasta**	**6.03**	**175**	Pn		**Pn**	**10 55 51.2**	**-0.5**
MAYO	**Mayo, Yukon**	**6.44**	**142**			**Pn**	**10 55 58.3**	**+0.9**
MAYO	**Mayo, Yukon** baz=330	**6.44**	**142**	P		**Pn**	**10 55 57.5**	**+0.1**
M27K	**Edge Creek, AK**	**6.70**	**168**			**Pn**	**10 56 02.4**	**+1.3**
M27K	**Edge Creek, AK** baz=350,SNR=6.8	**6.70**	**168**	P		**Pn**	**10 56 02.0**	**+0.9**
BVCY	**Beaver Creek** baz=347,SNR=6.4	**6.74**	**164**	P		**Pn**	**10 56 02.4**	**+1.0**
M29M	**Somme Creek** baz=340,SNR=7.0	**7.01**	**155**	P		**Pn**	**10 56 06.1**	**+0.8**
M30M	**Minto, Yukon** baz=336	**7.17**	**149**	P		**Pn**	**10 56 07.6**	**+0.2**
YUK4	**Talbot Arm** baz=343	**8.04**	**158**	P		**Pn**	**10 56 18.8**	**-0.7**
N30M	**Aishikik Lake** baz=340	**8.16**	**153**	P		**Pn**	**10 56 21.6**	**+0.6**
N31M	**Braeburn, Yuko** baz=337	**8.36**	**149**	P		**Pn**	**10 56 24.9**	**+1.1**
MMPY	**Sheldon Lake,** baz=324,SNR=14	**8.41**	**132**	P		**Pn**	**10 56 24.5**	**+0.1**
HYT	**Haines Junctio** baz=342	**8.70**	**156**	P		**Pn**	**10 56 28.6**	**+0.2**
O30N	**Mendenhall** baz=339	**8.97**	**151**	P		**Pn**	**10 56 32.8**	**+0.6**
PINM	**Pinnacle** baz=349	**9.07**	**165**	P		**Pn**	**10 56 33.8**	**+0.2**
WHY	**Whitehorse** baz=337	**9.30**	**148**	P		**Pn**	**10 56 35.7**	**-1.0**
WTLY	**Watson Lake, Y** baz=329	**11.17**	**134**	P		**Pn**	**10 57 04.5**	**+2.4**
Q32M	**Nakina River** baz=336	**11.38**	**145**	P		**Pn**	**10 57 05.4**	**+0.1**

ROM 29 11:06:42.9±0.0, 43.°015N±0.°003×13.°073E±0.°004, h9km, ML2.6/30, 14C-11D, Error ellipse: s-maj=0.3km s-min=0.1km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**25**	P		Pg	11 06 44.6	-0.1
FDMO				S		Sg	11 06 45.4	-0.4
FDMO				AML		AML		
FDMO	comp=E,44150μm,0.2s			AML		AML		
FDMO	comp=N,36850μm,0.4s			AML		AML		
	comp=E,40687μm,0.1s							

FDMO				AML	AML	
	comp=N,32588µm,0.2s					
FEMA	**Monte Fema**	**0.06**	**198**	P	Pg	11 06 45.3 +0.3
FEMA				S	Sg	11 06 46.8 +0.3
FEMA				AML	AML	
	comp=E,42900µm,0.4s					
FEMA				AML	AML	
	comp=N,34100µm,0.4s					
FEMA				AML	AML	
	comp=E,42950µm,0.4s					
FEMA				AML	AML	
	comp=N,29423µm,0.2s					
FEMA				AML	AML	
	comp=E,42933µm,0.5s					
T1216	**Preci, Frazion**	**0.13**	**198**	P	Pg	11 06 46.5 +0.7
T1216				S	Sg	11 06 49.1 +1.2
T1216				AML	AML	
	comp=E,12100µm,0.3s					
T1216				AML	AML	
	comp=N,8345µm,1.0s					
T1216				AML	AML	
	comp=E,12100µm,0.3s					
T1216				AML	AML	
	comp=N,8340µm,1.0s					
T1216				AML	AML	
	comp=N,8345µm,1.0s					
T1216				AML	AML	
	comp=N,7881µm,0.2s					
T1216				AML	AML	
	comp=E,12107µm,0.3s					
MC2	**Monte Cornacci**	**0.13**	**140**	P	Pg	11 06 46.6 +0.6
MC2				S	Sg	11 06 48.7 +0.4
SEF1	**Sefro**	**0.16**	**325**	⇓P	Pg	11 06 47.0 +0.6
SEF1				S	Sg	11 06 49.9 +1.1
SEF1				AML	AML	
	comp=E,10435µm,0.2s					
SEF1				AML	AML	
	comp=N,10110µm,0.3s					
SEF1				AML	AML	
	comp=N,10115µm,0.3s					
SEF1				AML	AML	
	comp=E,10445µm,0.2s					
SEF1				AML	AML	
	comp=N,10100µm,0.3s					
SEF1				AML	AML	
	comp=E,10431µm,0.2s					
SEF1				AML	AML	
	comp=N,10108µm,0.3s					
PIO1	**Pioraco**	**0.18**	**338**	P	Pg	11 06 47.3 +0.6
PIO1				S	Sg	11 06 50.5 +1.3
PIO1				AML	AML	
	comp=E,2812µm,0.5s					
PIO1				AML	AML	
	comp=N,5114µm,0.4s					
T1245	**Castelsantange**	**0.18**	**152**	⇑P	Pg	11 06 47.4 +0.6
T1245				S	Sg	11 06 50.6 +1.2
T1245				AML	AML	
	comp=N,6455µm,0.3s					
T1245				AML	AML	
	comp=N,6545µm,1.2s					
T1245				AML	AML	
	comp=E,7050µm,0.7s					
T1245				AML	AML	
	comp=N,6550µm,1.2s					
T1245				AML	AML	
	comp=N,6455µm,0.3s					
T1245				AML	AML	
	comp=E,6840µm,0.7s					
T1245				AML	AML	
	comp=E,7050µm,0.7s					
T1245				AML	AML	
	comp=E,6116µm,0.2s					
T1245				AML	AML	
	comp=N,6418µm,0.3s					
T1245				AML	AML	
	comp=E,6278µm,0.2s					
T1245				AML	AML	
	comp=N,6455µm,0.3s					
MDAR	**Monte D'Aria**	**0.18**	**16**	P	Pg	11 06 47.3 +0.5
MDAR				AML	AML	
	comp=E,2045µm,0.3s					
MDAR				AML	AML	
	comp=N,2825µm,0.4s					
MDAR				AML	AML	
	comp=E,2040µm,0.3s					
MDAR				AML	AML	
	comp=N,2774µm,0.3s					
MDAR				AML	AML	
	comp=E,1533µm,0.2s					
GUMA	**Gualdo di Mace**	**0.20**	**76**	P	Pg	11 06 47.9 +0.8
GUMA				S	Sg	11 06 51.6 +1.8
FIU1	**Fiuminata**	**0.20**	**329**	P	Pg	11 06 47.6 +0.5
AM05	**Amandola Campo**	**0.21**	**100**	⇑P	Pg	11 06 47.9 +0.7
AM05				S	Sg	11 06 51.4 +1.3
AM05				AML	AML	
	comp=E,1650µm,0.1s					
AM05				AML	AML	
	comp=N,2615µm,0.4s					
AM05				AML	AML	
	comp=E,8820µm,0.2s					
AM05				AML	AML	
	comp=E,1645µm,0.1s					
AM05				AML	AML	
	comp=N,2610µm,0.4s					
AM05				AML	AML	
	comp=N,546µm,0.1s					
AM05				AML	AML	
	comp=E,8815µm,0.2s					
AM05				AML	AML	
	comp=N,546µm,0.1s					
AM05				AML	AML	
	comp=N,546µm,0.1s					
AM05				AML	AML	
	comp=E,1649µm,0.1s					
AM05				AML	AML	
	comp=E,8817µm,0.2s					
AM05				AML	AML	
	comp=N,2451µm,0.1s					
GAG1	**Gagliole**	**0.22**	**359**	P	Pg	11 06 48.3 +0.8
GAG1				AML	AML	
	comp=N,4240µm,0.6s					
GAG1				AML	AML	
	comp=N,4240µm,0.6s					
GAG1				AML	AML	
	comp=E,5010µm,0.4s					
GAG1				AML	AML	
	comp=N,3704µm,0.4s					
GAG1				AML	AML	
	comp=E,5010µm,0.4s					
SSM1	**San Severino M**	**0.23**	**20**	P	Pg	11 06 48.1 +0.6
MTL1	**Matelica**	**0.25**	**349**	P	Pg	11 06 48.7 +0.8
SNTG	**Esanatoglia**	**0.26**	**338**	⇓P	Pg	11 06 48.8 +0.6
SNTG				S	Sg	11 06 53.1 +1.4
SNTG				AML	AML	
	comp=E,2910µm,0.2s					
SNTG				AML	AML	
	comp=N,2155µm,0.2s					
SNTG				AML	AML	
	comp=N,2570µm,0.2s					
SNTG				AML	AML	
	comp=E,2915µm,0.2s					
SNTG				AML	AML	
	comp=E,2795µm,0.2s					
SNTG				AML	AML	
	comp=N,2160µm,0.2s					
SNTG				AML	AML	
	comp=E,2792µm,0.2s					
SNTG				AML	AML	
	comp=N,2571µm,0.2s					
SNTG				AML	AML	
	comp=E,2913µm,0.2s					
SNTG				AML	AML	
	comp=N,2158µm,0.2s					
T1215	**Vallo di Nera,**	**0.26**	**215**	⇑P	Pg	11 06 49.0 +0.8
T1215				S	Sb	11 06 53.4 -1.0
T1215				AML	AML	
	comp=E,1390µm,0.9s					
T1215				AML	AML	
	comp=N,1575µm,0.3s					
T1215				AML	AML	
	comp=E,1375µm,0.9s					
T1215				AML	AML	
	comp=N,1574µm,0.3s					
T1215				AML	AML	
	comp=E,1385µm,0.9s					
T1215				AML	AML	
	comp=E,1380µm,0.9s					
T1215				AML	AML	
	comp=N,1574µm,0.3s					
T1215				AML	AML	
	comp=E,1378µm,0.9s					
T1215				AML	AML	
	comp=N,1575µm,0.3s					
T1215				AML	AML	
	comp=N,1574µm,0.2s					
T1215				AML	AML	
	comp=E,1329µm,0.3s					
T1215				AML	AML	
	comp=E,1348µm,0.3s					
T1215				AML	AML	
	comp=N,1573µm,0.3s					
T1215				AML	AML	
	comp=N,1577µm,0.3s					
ASSB	**Assisi San Ben**	**0.30**	**275**	⇑P	Pg	11 06 49.7 +0.7
ASSB				S	Sb	11 06 54.7 -1.0
ASSB				AML	AML	
	comp=E,3765µm,0.3s					
ASSB				AML	AML	
	comp=N,3390µm,0.3s					
ASSB				AML	AML	
	comp=N,3391µm,0.3s					
ASSB				AML	AML	
	comp=E,3307µm,0.3s					
T1241	**Roccafluvione,**	**0.31**	**121**	⇓P	Pg	11 06 49.8 +0.7
T1241				S	Sb	11 06 54.8 -1.0
T1241				AML	AML	
	comp=N,809µm,0.2s					
T1241				AML	AML	
	comp=E,1131µm,0.5s					
EL6	**Elcito**	**0.32**	**4**	⇓P	Pg	11 06 49.8 +0.6
EL6				S	Sb	11 06 54.9 -1.2
EL6				AML	AML	
	comp=E,2565µm,0.4s					
EL6				AML	AML	
	comp=N,2110µm,0.2s					
EL6				AML	AML	
	comp=E,2560µm,0.4s					
EL6				AML	AML	
	comp=N,2116µm,0.2s					
EL6				AML	AML	
	comp=E,2570µm,0.4s					
EL6				AML	AML	
	comp=N,2105µm,0.2s					
EL6				AML	AML	
	comp=E,2455µm,0.3s					
EL6				AML	AML	
	comp=N,2110µm,0.2s					
MNTP	**Montappone**	**0.32**	**67**	P	Pg	11 06 49.7 +0.6
T1217	**Poggiodomo (PG**	**0.32**	**199**	⇑P	Pg	11 06 50.0 +0.7
T1217				S	Sb	11 06 55.0 -1.2
T1217				AML	AML	
	comp=E,1525µm,1.6s					
T1217				AML	AML	
	comp=N,2132µm,0.3s					
T1217				AML	AML	
	comp=E,1522µm,1.6s					
T1217				AML	AML	
	comp=N,2135µm,0.3s					
T1217				AML	AML	
	comp=N,2131µm,0.3s					
T1217				AML	AML	
	comp=N,2153µm,0.3s					
T1217				AML	AML	
	comp=E,1519µm,0.4s					
T1217				AML	AML	
	comp=E,1489µm,0.3s					
ATCC	**AVT- Casa Cast**	**0.36**	**298**	⇓P	Pb	11 06 50.8 -0.7
ATCC				S	Sb	11 06 56.9 -0.5
ATCC				AML	AML	
	comp=E,2295µm,0.8s					
ATCC				AML	AML	
	comp=N,3035µm,0.3s					
ATCC				AML	AML	
	comp=E,2227µm,0.1s					
ATCC				AML	AML	
	comp=N,3037µm,0.3s					
FOSV	**Fossato di Vic**	**0.36**	**321**	⇑P	Pb	11 06 51.0 -0.6
FOSV				S	Sb	11 06 56.6 -0.8
FOSV				AML	AML	
	comp=E,1170µm,0.5s					
FOSV				AML	AML	
	comp=E,1170µm,0.5s					
FOSV				AML	AML	
	comp=N,1225µm,0.9s					
FOSV				AML	AML	
	comp=N,1057µm,0.3s					
FOSV				AML	AML	
	comp=E,990µm,0.3s					
T1204	**Amatrice, Fraz**	**0.38**	**152**	⇓P	Pg	11 06 51.1 +0.6
T1204				AML	AML	
	comp=E,2420µm,0.3s					
T1204				AML	AML	
	comp=N,1016µm,1.0s					
T1204				AML	AML	
	comp=E,2424µm,0.3s					
T1204				AML	AML	
	comp=N,1017µm,1.0s					
T1204				AML	AML	
	comp=N,872µm,0.3s					
T1204				AML	AML	
	comp=E,2424µm,0.3s					
LNSS	**Leonessa**	**0.41**	**183**	⇑P	Pg	11 06 51.5 +0.5
LNSS				AML	AML	
	comp=E,1750µm,0.2s					
LNSS				AML	AML	
	comp=N,1500µm,0.7s					
LNSS				AML	AML	
	comp=N,1505µm,0.7s					
LNSS				AML	AML	
	comp=E,1752µm,0.2s					
LNSS				AML	AML	
	comp=N,1302µm,0.6s					
T1243	**Rocca Santa Ma**	**0.42**	**139**	⇓P	Pg	11 06 51.6 +0.4
SMA1	**SAN MARTINO**	**0.43**	**153**	⇓P	Pg	11 06 51.8 +0.5
SMA1				AML	AML	
	comp=E,949µm,1.3s					
SMA1				AML	AML	
	comp=N,888µm,1.0s					
SMA1				AML	AML	
	comp=N,892µm,1.0s					
SMA1				AML	AML	
	comp=E,946µm,1.3s					
SMA1				AML	AML	
	comp=E,839µm,0.6s					
SMA1				AML	AML	
	comp=N,851µm,0.4s					
OFFI	**Offida**	**0.46**	**100**	P	Pb	11 06 53.3 +0.2
OFFI				AML	AML	
	comp=E,1185µm,0.4s					
OFFI				AML	AML	
	comp=N,1380µm,0.3s					
OFFI				AML	AML	
	comp=N,1379µm,0.3s					
OFFI				AML	AML	
	comp=E,1184µm,0.4s					
MURB	**Monte Urbino**	**0.47**	**302**	P	Pg	11 06 52.8 +0.7
MURB				AML	AML	
	comp=N,1880µm,0.4s					
MURB				AML	AML	
	comp=E,2715µm,0.4s					
MURB				AML	AML	
	comp=E,2336µm,0.3s					
MURB				AML	AML	
	comp=E,2711µm,0.4s					
MURB				AML	AML	
	comp=N,1384µm,0.3s					
MURB				AML	AML	
	comp=N,1448µm,0.2s					
ARRO	**Arrone**	**0.49**	**208**	⇑P	Pg	11 06 53.0 +0.6
ARRO				AML	AML	
	comp=E,832µm,0.2s					
ARRO				AML	AML	
	comp=N,841µm,0.3s					
ARRO				AML	AML	
	comp=N,840µm,0.3s					
ARRO				AML	AML	
	comp=E,833µm,0.2s					
ARRO				AML	AML	
	comp=N,841µm,0.3s					
ARRO				AML	AML	
	comp=E,833µm,0.2s					
ARVD	**Arcevia**	**0.49**	**349**	P	Pg	11 06 51.3 -1.2
ATFO	**Monte Foce - G**	**0.51**	**314**	P	Pg	11 06 53.3 +0.5
ATFO				AML	AML	
	comp=E,433µm,0.6s					
ATFO				AML	AML	
	comp=N,338µm,0.3s					
ATFO				AML	AML	
	comp=N,338µm,0.3s					
ATFO				AML	AML	
	comp=N,338µm,0.3s					
ATFO				AML	AML	
	comp=E,433µm,0.6s					
T1211	**Morro Reatino**	**0.51**	**199**	⇑P	Pg	11 06 53.3 +0.5
T1211				AML	AML	
	comp=E,661µm,1.0s					
T1211				AML	AML	
	comp=N,760µm,0.4s					
T1211				AML	AML	
	comp=N,781µm,0.4s					
T1211				AML	AML	
	comp=E,571µm,0.2s					
T1211				AML	AML	
	comp=N,765µm,0.4s					
T1211				AML	AML	
	comp=E,562µm,0.2s					
RM33	**Pellescritta (**	**0.52**	**168**	P	Pg	11 06 53.0 0.0
RM33				S	Sb	11 07 02.0 +0.1
PP3	**Marolino**	**0.53**	**47**	⇓P	Pb	11 06 54.4 -0.1
PP3				AML	AML	
	comp=N,668µm,0.6s					
PP3				AML	AML	
	comp=E,595µm,0.3s					
PP3				AML	AML	
	comp=E,590µm,1.6s					
PP3				AML	AML	
	comp=N,732µm,0.5s					
CAMP	**Campotosto**	**0.54**	**153**	⇓P	Pg	11 06 53.6 +0.2
CAMP				AML	AML	
	comp=E,414µm,0.3s					
CAMP				AML	AML	
	comp=N,300µm,0.4s					
CAMP				AML	AML	
	comp=N,300µm,0.4s					
CAMP				AML	AML	
	comp=E,414µm,0.3s					
CESX	**Cesi**	**0.54**	**222**	⇑P	Pg	11 06 53.8 +0.3
CESX				AML	AML	
	comp=N,1370µm,0.3s					
CESX				AML	AML	
	comp=E,1270µm,0.4s					
CESX				AML	AML	
	comp=E,1273µm,0.4s					
CESX				AML	AML	
	comp=N,1366µm,0.3s					
TERO	**Teramo**	**0.55**	**135**	⇑P	Pg	11 06 53.9 +0.2
TERO				AML	AML	
	comp=E,494µm,1.3s					
TERO				AML	AML	
	comp=E,495µm,1.3s					
TERO				AML	AML	
	comp=N,526µm,1.4s					
TERO				AML	AML	
	comp=N,463µm,0.1s					
TERO				AML	AML	
	comp=N,507µm,0.1s					
TERO				AML	AML	
	comp=E,367µm,0.3s					
TERO				AML	AML	
	comp=E,390µm,0.2s					
ATTE	**AVT- Monte Tez**	**0.56**	**289**	AML	AML	
	comp=E,202µm,0.5s					
ATTE				AML	AML	
	comp=N,222µm,1.5s					
ATTE				AML	AML	
	comp=N,217µm,0.5s					
ATTE				AML	AML	
	comp=E,202µm,0.5s					
FRON	**Frontone**	**0.56**	**333**	P	Pg	11 06 54.2 +0.3
FRON				AML	AML	
	comp=N,495µm,0.4s					
FRON				AML	AML	
	comp=E,448µm,0.9s					
FRON				AML	AML	
	comp=E,356µm,0.3s					
FRON				AML	AML	
	comp=N,486µm,0.3s					
T1247	**Pizzolo (AQ)**	**0.60**	**164**	P	Pg	11 06 54.5 0.0
ATVO	**AVT- Monte Val**	**0.61**	**307**	P	Pg	11 06 55.0 +0.3
ATVO				AML	AML	
	comp=E,203µm,1.1s					
ATVO				AML	AML	
	comp=N,197µm,0.8s					
ATVO				AML	AML	
	comp=E,202µm,0.3s					
ATVO				AML	AML	
	comp=N,197µm,0.8s					
PIEI	**Pieia**	**0.65**	**323**	P	Pg	11 06 55.8 +0.2
PIEI				AML	AML	
	comp=E,355µm,1.5s					
PIEI				AML	AML	
	comp=N,206µm,1.3s					
PIEI				AML	AML	
	comp=E,326µm,0.2s					
PIEI				AML	AML	
	comp=N,195µm,0.2s					
MPAG	**Monte Paganucc**	**0.66**	**340**	P	Pb	11 06 56.3 -0.3
MPAG				AML	AML	
	comp=N,322µm,0.6s					
MPAG				AML	AML	
	comp=E,366µm,0.3s					
MPAG				AML	AML	
	comp=N,322µm,0.6s					
MPAG				AML	AML	
	comp=E,365µm,0.3s					
MPAG				AML	AML	
	comp=N,1435µm,0.7s					
MPAG				AML	AML	
	comp=N,296µm,0.4s					
MPAG				AML	AML	
	comp=E,1142µm,0.7s					
ATPI	**Pietralunga -**	**0.66**	**312**	P	Pg	11 06 56.1 +0.5
ATPI				AML	AML	
	comp=E,192µm,0.6s					
ATPI				AML	AML	
	comp=N,167µm,0.7s					
GIGS	**Gran Sasso**	**0.67**	**147**	P	Pg	11 06 55.9 0.0
GIGS				AML	AML	
	comp=E,81µm,0.9s					
GIGS				AML	AML	
	comp=E,81µm,0.9s					
GIGS				AML	AML	
	comp=N,101µm,1.0s					
GIGS				AML	AML	
	comp=E,76µm,0.4s					
GIGS				AML	AML	
	comp=N,84µm,0.2s					
AQU	**L'Aquila**	**0.70**	**160**	S	Sb	11 07 08.0 +0.8
FSSB	**Fossombrone**	**0.71**	**342**	⇑P	Pb	11 06 57.2 -0.4
FSSB				AML	AML	
	comp=E,1080µm,1.0s					
FSSB				AML	AML	
	comp=N,2220µm,0.3s					
FSSB				AML	AML	
	comp=N,2220µm,0.3s					
FSSB				AML	AML	
	comp=E,1049µm,0.4s					
FIAM	**Fiamignano**	**0.75**	**178**	P	Pg	11 06 57.2 -0.1
FIAM				AML	AML	
	comp=E,248µm,1.1s					
FIAM				AML	AML	
	comp=N,198µm,0.8s					
FIAM				AML	AML	
	comp=E,247µm,1.1s					
FIAM				AML	AML	
	comp=N,198µm,0.8s					
BADI	**Badiali**	**0.78**	**310**	P	Pb	11 06 58.4 -0.3
BADI				AML	AML	
	comp=N,478µm,3.1s					
BADI				AML	AML	
	comp=E,691µm,3.3s					
CAFI	**Castiglion Fio**	**0.87**	**292**	⇓P	Pb	11 07 00.1 -0.1
CAFI				AML	AML	
	comp=E,118µm,0.3s					
PESA	**Pesaro**	**0.94**	**350**	⇑P	Pn	11 07 02.2 -0.2
PESA				AML	AML	
	comp=E,560µm,0.8s					
PESA				AML	AML	
	comp=N,520µm,0.8s					
PESA				AML	AML	
	comp=E,561µm,0.8s					

PESA			AML	AML		
	comp=N,360μm,0.6s					
PESA			AML	AML		
	comp=E,389μm,0.6s					
CERT	**Certeto**	**1.07 184**	⇑P	Pg	11 07 00.7	-2.7
RMP	**Rome, Mte Porz**	**1.23 193**	P	Pn	11 07 04.0	-2.3
VENL	**Venezia Lido**	**2.45 348**	P	Pg	11 07 29.2	-0.7

ROM 29 11:07:41.2±0.0, 42°.870N±0°.003×13°.057E±0°.003, h10km, ML2.1/2, Error ellipse: s-maj=0.3km s-min=0.2km az=346.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.04**	**306**	P	Pg	11 07 43.5	+0.3
T1216				S	Sg	11 07 44.8	+0.1
T1216				AML	AML		
	comp=E,2025μm,0.3s						
T1216				AML	AML		
	comp=N,2420μm,0.3s						
T1216				AML	AML		
	comp=E,2020μm,0.3s						
T1245	**Castelsantange**	**0.10**	**98**	P	Pg	11 07 44.4	+0.4
T1245				S	Sg	11 07 46.3	+0.3
T1245				AML	AML		
	comp=E,1254μm,0.9s						
T1245				AML	AML		
	comp=N,1710μm,0.3s						
T1245				AML	AML		
	comp=E,1178μm,1.5s						
T1245				AML	AML		
	comp=N,1710μm,0.3s						
T1245				AML	AML		
	comp=N,1730μm,0.3s						
T1245				AML	AML		
	comp=E,1178μm,1.5s						
T1245				AML	AML		
	comp=E,1257μm,0.9s						
MC2	**Monte Cornacci**	**0.11**	**66**	P	Pg	11 07 44.5	+0.4
MC2				S	Sg	11 07 46.7	+0.5
T1215	**Vallo di Nera,**	**0.15**	**244**	P	Pg	11 07 45.3	+0.6
T1215				S	Sg	11 07 48.0	+0.9
T1215				AML	AML		
	comp=E,115μm,0.5s						
T1215				AML	AML		
	comp=N,202μm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**210**	P	Pg	11 07 45.9	+0.7
T1217				S	Sg	11 07 49.0	+1.1
AM05	**Amandola Campo**	**0.24**	**64**	P	Pg	11 07 46.8	+0.6
LNSS	**Leonessa**	**0.27**	**183**	P	Pb	11 07 47.6	-0.5
LNSS				S	Sb	11 07 51.8	-0.9
T1204	**Amatrice, Fraz**	**0.27**	**135**	P	Pg	11 07 47.3	+0.5
T1204				S	Sb	11 07 51.8	-1.1
T1241	**Roccafluvione,**	**0.28**	**93**	P	Pg	11 07 47.4	+0.6
T1241				S	Sb	11 07 51.9	-1.0
T1243	**Rocca Santa Ma**	**0.34**	**121**	P	Pg	11 07 48.2	+0.2
T1243				S	Sb	11 07 53.6	-1.1
ASSB	**Assisi San Ben**	**0.34**	**301**	P	Pg	11 07 48.4	+0.4
ASSB				S	Sb	11 07 53.9	-0.9
T1211	**Morro Reatino**	**0.37**	**204**	S	Sb	11 07 55.0	-0.6
TERO	**Teramo**	**0.47**	**121**	P	Pg	11 07 50.6	+0.1
TERO				S	Sb	11 07 57.8	-0.8

ROM 29 11:08:31.9±0.1, 42°.985N±0°.003×13°.053E±0°.004, h10km, ML1.5/2, Error ellipse: s-maj=0.4km s-min=0.3km az=153.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.06**	**26**	P	Pg	11 08 34.2	+0.2
FDMO				S	Sg	11 08 35.8	+0.3
FDMO				AML	AML		
	comp=E,198μm,0.1s						
FDMO				AML	AML		
	comp=N,268μm,0.2s						
FDMO				AML	AML		
	comp=N,327μm,0.7s						
FDMO				AML	AML		
	comp=E,609μm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**195**	P	Pg	11 08 35.0	+0.6
T1216				S	Sg	11 08 37.0	+0.8
AM05	**Amandola Campo**	**0.22**	**92**	P	Pg	11 08 37.2	+0.7
AM05				AML	AML		
	comp=E,539μm,0.1s						
AM05				AML	AML		
	comp=N,90μm,0.1s						
T1215	**Vallo di Nera,**	**0.23**	**217**	P	Pg	11 08 37.3	+0.7
T1215				S	Sg	11 08 41.0	+1.3
ASSB	**Assisi San Ben**	**0.29**	**281**	P	Pg	11 08 38.5	+0.6
ASSB				S	Sb	11 08 43.5	-0.8
T1241	**Roccafluvione,**	**0.31**	**115**	P	Pg	11 08 38.8	+0.7
T1241				S	Sb	11 08 43.7	-1.0

IDC 29 11:18:39.2±8.5, 34°.98N×77°.85E, h0km, mb3.9/1, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=146.1km s-min=50.1km az=134.0, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.27**	**15**	Pn	Pn	11 21 36.2	+1.0
	0.1nm,0.3s,baz=194,slow=11,SNR=4.2						
MKAR				Sn	Sn	11 23 49.0	-3.7
	0.1nm,0.3s,baz=197,slow=22,SNR=3.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**15.65**	**2**	Pn	Pn	11 22 21.3	+0.3
	0.1nm,0.3s,baz=194,slow=11,SNR=2.9						
	0.5nm,0.2s						
BVAR	**Borovoye Array**	**18.81**	**346**	P	Pn	11 23 00.9	+0.4
	0.1nm,0.3s,baz=148,slow=12,SNR=6.6						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**19.59**	**12**	P	P	11 23 09.2	+0.4
	0.2nm,0.3s,baz=213,slow=11,SNR=2.2						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**41.87**	**326**	P	P	11 26 30.0	-0.8
	1.6nm,0.8s,baz=105,slow=10,SNR=1.0						
	1.6nm,0.8s						

IDC 29 11:26:48.1±1.6, 32°.75N×94°.65E, h0km, mb3.3/4, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=75.4km s-min=23.4km az=65.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**17.49**	**27**	P	Pn	11 30 53.3	-0.2
	0.3nm,0.3s,baz=211,slow=14,SNR=5.2						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**21.45**	**331**	P	P	11 31 37.0	-0.8
	2.1nm,0.7s,baz=138,slow=11,SNR=17						
	2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**22.32**	**345**	P	P	11 31 48.1	+1.0
	0.3nm,0.3s,baz=140,slow=11,SNR=2.4						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**64.69**	**138**	P	P	11 37 27.1	-1.0
	0.2nm,0.9s,baz=328,slow=8.1,SNR=1.3						
	0.2nm,0.9s						
ASAR	**Alice Springs**	**67.46**	**141**	P	P	11 37 46.8	+0.9
	0.2nm,0.8s,baz=322,slow=6.3,SNR=4.2						
	0.2nm,0.8s						

DJA 29 11:37:51.7±0.3, 11°.S±5°×12°.5E±°, h91km±15km, M4.3/7, mB5.2/1, mb4.2/7, MLv4.3/6, Mw(mB)4.5/1, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.68**	**324**	P	Pn	11 38 19.6	-0.3
BATI	**Baumata**	**1.82**	**300**	P	Pn	11 38 21.5	-0.1
MMRI	**Maumere**	**3.87**	**310**	P	Pn	11 38 48.8	-0.3
BSSI	**Bau Bau, Buton**	**6.84**	**316**	P	Pn	11 39 30.1	+0.6
	0.1nm22nm,0.7s						
PLAI	**Plampang**	**7.72**	**287**	P	Pn	11 39 41.1	-0.3
	0.1nm24nm,0.9s						
TWSI	**Taliwang, Sumb**	**8.59**	**285**	P	Pn	11 39 53.4	+0.1
	16nm,1.3s						
FAKI	**Fak Fak**	**10.70**	**41**	P	Pn	11 40 21.6	-0.6
	9.3nm,1.1s						

NOU 29 11:40:09.6, 14°.36S×167°.27E, h0km, MLv4.4/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.46**	**165**	P	Pn	11 41 04.1	-0.7
KOUNC	**Koumac, New Ca**	**6.78**	**204**	P	Pn	11 41 50.2	-0.3
DZM	**Mont Dzumac**	**7.71**	**186**	P	Pn	11 42 03.0	-0.3
NOUC	**Port Laguerre**	**7.75**	**187**	P	Pn	11 42 04.0	+0.2

*NEIC **29** 11:49:17.8±1.3, 24°.2N±0°.1×121°.76E±0°.09, h24km±7km, mb4.5/16, ML4.3(TAP), Error ellipse: s-maj=17.2km s-min=7.5km az=213.0*
*ASIES **29** 11:49:18.8, 24°.18N×121°.63E, h23km, MW3.8*
*TAP **29** 11:49:18.9, 24°.19N×121°.65E, h32km, ML4.3, C*
*IDC **29** 11:49:20.4±4.0, 24°.16N×121°.83E, h54km±39km, mb3.4/7, mbtmp3.8/8, ML3.6/1, MS3.0/4, Error ellipse: s-maj=25.1km s-min=19.4km az=70.0*

ISC 29 11:49:18.3±0.7, 24°.16N±0°.02×121°.70E±0°.02, h31km±4km, n198, ₙ0°88/268, mb4.4/15, 22C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.07**	**266**	*i* P	**Pb**	**11 49 24.2**	**+0.5**
	baz=229						
ETL				S	**Sb**	**11 49 28.2**	**+0.8**
	baz=229						
NACB	**Ninganchiao**	**0.10**	**276**	⇓*i* P	**Pb**	**11 49 24.2**	**+0.4**
	baz=250						
NACB				*i* S	**Sb**	**11 49 28.1**	**+0.6**
	baz=250						
TWD	**Chiawan**	**0.13**	**229**	⇓*i* P	**Pn**	**11 49 24.5**	**+0.4**
	baz=209						
TWD				*i* S	**Sb**	**11 49 28.7**	**+0.9**
	baz=209						
EHP	**Heping Village**	**0.15**	**14**	P	**Pn**	**11 49 25.0**	**+0.5**
	baz=38						
EHP				S	**Sb**	**11 49 29.3**	**+1.1**
	baz=38						
ETLH	**Xiulin Townshi**	**0.20**	**282**	⇓*i* P	**Pb**	**11 49 25.0**	**+0.2**
	baz=275						
ETLH				S	**Sb**	**11 49 29.1**	**-0.1**
	baz=275						
HWA	**Hwalien**	**0.21**	**205**	P	**Pn**	**11 49 25.8**	**+0.5**
	baz=196						
HWA				*e*S	**Sn**	**11 49 32.0**	**+2.4**
	baz=196						
ENA	**Nanau**	**0.27**	**8**	⇓*i* P	**Pn**	**11 49 26.1**	**0.0**
	baz=15						
ENA				S	**Sn**	**11 49 30.8**	**-0.3**
	baz=15						
ETM	**Tongmen**	**0.28**	**224**	P	**Pb**	**11 49 25.7**	**+0.2**
	baz=213						
ETM				*e*S	**Sb**	**11 49 30.8**	**+0.3**
	baz=213						
EWUT	**Wuta**	**0.29**	**14**	P	**Pb**	**11 49 25.2**	**-0.5**
	baz=20						
EWUT				S	**Sb**	**11 49 30.7**	**-0.1**
	baz=20						
TEYL	**Yanliau Villag**	**0.31**	**198**	P	**Pn**	**11 49 26.8**	**+0.1**
	baz=195						
TEYL				S	**Sn**	**11 49 33.6**	**+1.5**
	baz=195						
NNSB	**Datong**	**0.39**	**312**	⇓*i* P	**Pb**	**11 49 27.3**	**0.0**
	baz=314						
NNSB				S	**Sb**	**11 49 33.0**	**-0.4**
	baz=314						
WHF	**Hehuan Shan**	**0.40**	**267**	⇓*i* P	**Pb**	**11 49 27.6**	**0.0**
	baz=262						
WHF				*i* S	**Sb**	**11 49 33.7**	**-0.3**
	baz=262						
LATG	**Datong**	**0.40**	**337**	⇓*i* P	**Pb**	**11 49 27.4**	**-0.1**
	baz=340						
LATG				*i* S	**Sb**	**11 49 33.3**	**-0.4**
	baz=340						
NNS	**Nan Shan**	**0.41**	**313**	⇓*i* P	**Pb**	**11 49 26.4**	**-1.1**
	baz=314						
NNS				*i* S	**Sb**	**11 49 32.9**	**-0.9**
	baz=314						
ESL	**Shilin**	**0.43**	**215**	⇑*i* P	**Pb**	**11 49 27.4**	**-0.3**
	baz=207						
FUSS	**Fushou**	**0.43**	**281**	⇓P	**Pb**	**11 49 28.0**	**+0.2**
	baz=281						
FUSS				S	**Sb**	**11 49 34.4**	**0.0**
	baz=281						
TWC	**Suao**	**0.46**	**17**	*i* P	**Pn**	**11 49 28.9**	**+0.1**
	baz=20						
TWC				*i* S	**Sn**	**11 49 35.7**	**-0.3**
	baz=20						
TEGC	**Jichi Village**	**0.48**	**198**	*e*P	**Pn**	**11 49 29.2**	**+0.2**
	baz=202						
ENTT	**Nioudou**	**0.49**	**345**	⇓*i* P	**Pb**	**11 49 27.7**	**-1.0**
	baz=355						
ENTT				*e*S	**Sb**	**11 49 34.8**	**-1.0**
	baz=355						
CHGB	**Renai**	**0.49**	**258**	P	**Pb**	**11 49 29.1**	**+0.3**
	baz=247						
CHGB				S	**Sb**	**11 49 36.0**	**0.0**
	baz=247						
TDCB	**Techi**	**0.50**	**280**	P	**Pb**	**11 49 29.2**	**+0.2**
	baz=277						
TDCB				*i* S	**Sb**	**11 49 35.9**	**-0.4**
	baz=277						
OWD	**Renai**	**0.52**	**247**	⇑P	**Pb**	**11 49 29.4**	**+0.1**
	baz=236						
OWD				*e*S	**Sb**	**11 49 36.3**	**-0.5**
	baz=236						
EGFH	**Guangfu**	**0.55**	**207**	*e*P	**Pb**	**11 49 29.6**	**-0.1**
	baz=209						
TWE	**Neicheng**	**0.56**	**357**	⇓*i* P	**Pb**	**11 49 29.8**	**+0.1**
	baz=2.0						
TWE				S	**Sn**	**11 49 38.2**	**-0.1**
	baz=2.0						
WUSB	**Renai**	**0.56**	**252**	⇑*i* P	**Pb**	**11 49 30.1**	**+0.3**
	baz=243						
WUSB				*i* S	**Sb**	**11 49 37.5**	**-0.2**
	baz=243						
YHNB	**Yeheng**	**0.58**	**330**	⇓*i* P	**Pb**	**11 49 30.3**	**+0.1**
	baz=324						
YHNB				*i* S	**Sb**	**11 49 37.8**	**-0.6**
	baz=324						
NSK	**Sanguang**	**0.60**	**329**	⇓*i* P	**Pb**	**11 49 29.4**	**-1.0**
	baz=323						
NSK				*i* S	**Sb**	**11 49 36.9**	**-1.8**
	baz=323						
ILA	**Ilan**	**0.60**	**4**	P	**Pn**	**11 49 30.9**	**+0.2**
	baz=3.0						
ILA				S	**Sn**	**11 49 39.9**	**+0.5**
	baz=3.0						
FUSB	**Fushanzhiwuyua**	**0.60**	**350**	⇓*i* P	**Pb**	**11 49 30.4**	**-0.1**
	baz=353						
FUSB				S	**Sb**	**11 49 38.7**	**-0.2**
	baz=353						
VWDT	**VWDT**	**0.66**	**232**	⇑*i* P	**Pn**	**11 49 31.5**	**0.0**
	baz=223						
VWDT				S	**Sb**	**11 49 40.5**	**+0.3**
	baz=223						
NTC	**Toucheng**	**0.70**	**10**	*e*P	**Pb**	**11 49 32.9**	**+0.9**
	baz=4.0						
WPL	**Puli Township**	**0.70**	**258**	P	**Pn**	**11 49 32.1**	**+0.1**
	baz=250						
WHP	**Taichung City**	**0.70**	**279**	⇑*i* P	**Pb**	**11 49 32.5**	**+0.3**
	baz=277						
WHP				*i* S	**Sb**	**11 49 41.4**	**-0.2**
	baz=277						
NFF	**Wufeng Townshi**	**0.71**	**311**	P	**Pn**	**11 49 31.5**	**-0.8**
	baz=314						
NFF				*e*S	**Sb**	**11 49 40.1**	**-1.7**
	baz=314						
EGS		**0.71**	**17**	P	**Pb**	**11 49 33.0**	**+0.8**
	baz=16						
EGS				*e*S	**Sn**	**11 49 43.8**	**+1.7**
	baz=16						
HGSD	**Ruisui**	**0.72**	**201**	P	**Pn**	**11 49 32.3**	**0.0**
	baz=210						
HGSD				*e*S	**Sn**	**11 49 43.6**	**+1.4**
	baz=210						
DPDB	**Guoxing**	**0.72**	**260**	⇑P	**Pb**	**11 49 32.7**	**+0.2**
	baz=252						
DPDB				*e*S	**Sn**	**11 49 42.6**	**+0.1**
	baz=252						
WCS	**Beigang Elemen**	**0.73**	**262**	⇑*i* P	**Pn**	**11 49 31.7**	**-0.8**
	baz=254						
EHY	**Hungye**	**0.74**	**208**	*e*P	**Pn**	**11 49 31.4**	**-1.3**
	baz=204						
SSLB	**Suanglung**	**0.78**	**241**	⇑*i* P	**Pn**	**11 49 33.2**	**0.0**
	baz=235						
SSLB				S	**Sn**	**11 49 42.6**	**-1.2**
	baz=235						
SMLT	**Sun Moon Lake**	**0.79**	**249**	⇑*i* P	**Pn**	**11 49 33.6**	**+0.3**
	baz=244						
SMLT				S	**Sn**	**11 49 44.0**	**-0.1**
	baz=244						
LIOB	**Emei**	**0.79**	**308**	*i* P	**Pb**	**11 49 34.2**	**+0.6**
	baz=307						
LIOB				*i* S	**Sb**	**11 49 44.4**	**+0.4**
	baz=307						
NSTT	**Nanjuang**	**0.79**	**306**	*i* P	**Pb**	**11 49 34.1**	**+0.5**
	baz=306						
NSTT				*i* S	**Sb**	**11 49 44.1**	**+0.1**
	baz=306						
NJD	**Zhudong**	**0.80**	**316**	*e*P	**Pb**	**11 49 34.3**	**+0.6**
	baz=316						
NHDH	**Xindian Distri**	**0.81**	**349**	P	**Pb**	**11 49 34.3**	**+0.4**
	baz=350						
NHDH				S	**Sn**	**11 49 44.4**	**-0.2**
	baz=350						
TIPB	**Shuangxi**	**0.81**	**8**	P	**Pb**	**11 49 34.1**	**+0.1**
TIPB				*e*S	**Sb**	**11 49 45.9**	**+1.2**
TYC	**Yuchr**	**0.81**	**252**	⇑*i* P	**Pn**	**11 49 33.9**	**+0.3**
	baz=246						
TYC				S	**Sn**	**11 49 44.6**	**-0.1**
	baz=246						
TWA	**Mucha**	**0.82**	**353**	⇓P	**Pb**	**11 49 34.5**	**+0.3**
	baz=354						
TWA				*i* S	**Sb**	**11 49 45.1**	**+0.2**
	baz=354						
TATO	**Taipei**	**0.83**	**347**	Pn	**Pb**	**11 49 34.5**	**+0.2**
TATO	**Taipei**	**0.83**	**347**	⇓*i* P	**Pb**	**11 49 34.5**	**+0.2**
	baz=348						
TATO				*i* S	**Sn**	**11 49 44.8**	**-0.3**
	baz=348						
YULB	**Yu-li**	**0.85**	**206**	*e*P	**Pn**	**11 49 33.4**	**-0.8**
	baz=203						
BACT	**New Taipei Cit**	**0.86**	**344**	*e*P	**Pb**	**11 49 35.0**	**+0.2**
	baz=353						
TWQ1	**Liyutan**	**0.87**	**282**	⇑*i* P	**Pb**	**11 49 35.8**	**+0.9**
	baz=280						
TWQ1				*i* S	**Sb**	**11 49 47.0**	**+0.8**
	baz=280						
HSN1	**Hsinchu**	**0.87**	**315**	P	**Pb**	**11 49 35.8**	**+0.8**
	baz=315						
HSN1				*e*S	**Sb**	**11 49 48.7**	**+2.4**
	baz=315						
ECBN	**Changbin**	**0.88**	**195**	*e*P	**Pn**	**11 49 34.4**	**-0.1**
	baz=207						
TWB1	**Santiao Chiao**	**0.88**	**17**	P	**Pb**	**11 49 35.6**	**+0.5**
	baz=24						
TWB1				S	**Sb**	**11 49 47.9**	**+1.3**
	baz=24						
EYUL	**Yuli**	**0.89**	**203**	*e*P	**Pb**	**11 49 35.5**	**+0.3**
	baz=209						
TAP1	**Taipei**	**0.89**	**349**	*e*P	**Pb**	**11 49 35.6**	**+0.4**
	baz=350						
TAP1				S	**Sb**	**11 49 46.6**	**-0.1**
	baz=350						
TAP	**Taipei**	**0.89**	**348**	P	**Pb**	**11 49 35.8**	**+0.5**
	baz=350						
TAP				*i* S	**Sb**	**11 49 47.2**	**+0.4**
	baz=350						
TWF1	**Yuli**	**0.89**	**205**	*e*P	**Pn**	**11 49 33.3**	**-1.4**
	baz=203						
NSY	**Sanyi**	**0.89**	**286**	⇑P	**Pb**	**11 49 36.2**	**+0.9**
	baz=285						
NSY				S	**Sb**	**11 49 48.5**	**+1.6**
	baz=285						
SBCB	**Hsinchu**	**0.90**	**314**	⇑P	**Pb**	**11 49 36.1**	**+0.6**
	baz=314						
SBCB				*i* S	**Sb**	**11 49 48.3**	**+1.0**
	baz=314						
WHYT	**Xinyi Township**	**0.91**	**239**	⇑*e*P	**Pb**	**11 49 35.8**	**+0.2**
	baz=236						
WHYT				*e*S	**Sb**	**11 49 48.1**	**+0.8**
	baz=236						
NWF	**Wu-fen Shan**	**0.91**	**5**	*e*P	**Pb**	**11 49 36.0**	**+0.4**
	baz=353						
NWF				S	**Sb**	**11 49 48.4**	**+1.0**
	baz=353						
WFSB	**Wu-fen Shan**	**0.91**	**5**	⇓*e*P	**Pb**	**11 49 35.9**	**+0.4**
	baz=355						
WFSB				S	**Sb**	**11 49 47.8**	**+0.5**
	baz=355						
NMLH	**Miaoli**	**0.91**	**294**	*e*P	**Pb**	**11 49 36.6**	**+1.0**
	baz=293						
NTY	**Taoyuan**	**0.91**	**336**	P	**Pb**	**11 49 36.0**	**+0.4**
	baz=337						
NTY				*e*S	**Sb**	**11 49 49.0**	**+1.6**
	baz=337						
NJN	**Zhunan**	**0.92**	**304**	*e*P	**Pb**	**11 49 35.5**	**-0.2**
	baz=304						
HSN	**Hsinchu**	**0.92**	**314**	P	**Pb**	**11 49 36.1**	**+0.3**
	baz=317						
HSN				S	**Sb**	**11 49 48.8**	**+1.1**
	baz=317						
WWF	**Wufeng**	**0.93**	**263**	⇑P	**Pb**	**11 49 36.1**	**+0.2**
	baz=258						
WWF				*e*S	**Sb**	**11 49 49.7**	**+1.9**
	baz=258						
NCUH	**Zhongli**	**0.93**	**330**	⇓*e*P	**Pb**	**11 49 36.3**	**+0.4**
	baz=330						
NCUH				*e*S	**Sb**	**11 49 48.8**	**+0.9**
	baz=330						
NCU	**National Centr**	**0.93**	**330**	⇓P	**Pb**	**11 49 36.3**	**+0.3**
	baz=330						
NCU				S	**Sb**	**11 49 48.6**	**+0.6**
	baz=330						
TCU	**Taichung**	**0.94**	**269**	*e*P	**Pb**	**11 49 36.9**	**+0.9**
	baz=266						
TCU				*e*S	**Sb**	**11 49 49.5**	**+1.3**
	baz=266						
SXI1	**Grass Mountain**	**0.94**	**10**	P	**Pb**	**11 49 36.6**	**+0.5**
	baz=358						
SXI1				S	**Sb**	**11 49 49.7**	**+1.4**
	baz=358						
WJS	**Zhushan**	**0.95**	**249**	*e*P	**Pb**	**11 49 37.0**	**+0.7**
	baz=246						
YUS	**Yu-Shan**	**0.96**	**226**	⇑P	**Pn**	**11 49 36.4**	**+0.3**
	baz=215						
TWS1	**Kuangyinshan**	**0.97**	**345**	*e*P	**Pb**	**11 49 36.5**	**-0.1**
	baz=354						
TWS1				*e*S	**Sb**	**11 49 49.4**	**+0.4**
	baz=354						
WNT1	**Nantou City**	**0.97**	**255**	*e*P	**Pb**	**11 49 37.5**	**+0.9**
	baz=252						
WNT	**Mingjian**	**0.97**	**253**	*e*P	**Pb**	**11 49 37.4**	**+0.8**
	baz=250						
TNOU	**National Taiwa**	**0.98**	**4**	*e*P	**Pb**	**11 49 36.7**	**-0.1**
	baz=354						
TNOU				*e*S	**Sb**	**11 49 50.9**	**+1.4**
	baz=354						
YM01	**YM01**	**0.98**	**353**	*e*P	**Pn**	**11 49 36.4**	**+0.3**
	baz=355						
WDJ	**Dajia District**	**0.99**	**281**	⇑P	**Pb**	**11 49 37.4**	**+0.5**
	baz=279						
WDJ				*e*S	**Sb**	**11 49 50.9**	**+1.4**
	baz=279						
NTST	**Danshui**	**1.02**	**347**	*e*P	**Pb**	**11 49 37.6**	**+0.2**
	baz=347						
YM08	**YM08**	**1.02**	**354**	*e*P	**Pn**	**11 49 36.5**	**-0.1**
	baz=342						
NHW	**Xinwu Township**	**1.03**	**325**	*e*P	**Pb**	**11 49 37.6**	**0.0**
	baz=325						
NHW				*e*S	**Sb**	**11 49 51.5**	**+0.7**
	baz=325						
ANP	**Anpu**	**1.03**	**351**	*e*P	**Pn**	**11 49 37.1**	**+0.4**
	baz=352						
FULB	**Fuli**	**1.03**	**201**	*e*P	**Pb**	**11 49 37.8**	**+0.1**
	baz=208						
NWRT	**Kuosheng**	**1.03**	**358**	*e*P	**Pb**	**11 49 38.2**	**+0.5**
	baz=358						
WYL	**Yuanlin Townsh**	**1.04**	**259**	*e*P	**Pb**	**11 49 38.9**	**+1.1**
	baz=256						
ALS	**Alishan**	**1.05**	**232**	⇑P	**Pb**	**11 49 38.0**	**-0.1**
	baz=220						
WCHH	**Zhanghua**	**1.05**	**266**	*e*P	**Pb**	**11 49 39.0**	**+1.1**
	baz=263						
CHN5	**Tsauling**	**1.09**	**239**	*e*P	**Pn**	**11 49 38.2**	**+0.6**
	baz=236						
CHKT	**Chengkung**	**1.10**	**196**	*e*P	**Pn**	**11 49 37.3**	**-0.3**
	baz=207						
EHD	**Haiduan**	**1.11**	**204**	*e*P	**Pn**	**11 49 37.0**	**-0.7**
	baz=204						
TWY	**Chenhua**	**1.11**	**355**	*e*P	**Pb**	**11 49 38.4**	**-0.6**
	baz=344						
WGK	**Gukeng**	**1.15**	**246**	*e*P	**Pb**	**11 49 39.9**	**+0.3**
	baz=242						
ECS	**Chishang**	**1.15**	**203**	*e*P	**Pb**	**11 49 40.0**	**+0.3**
	baz=202						
ELDTW	**Lidau**	**1.16**	**213**	*e*P	**Pn**	**11 49 38.1**	**-0.3**

baz=202
WDLH Douliu 1.17 246 *e*P **Pb 11 49 40.5 +0.6**
baz=243
YOJ Yonaguni jima 1.23 76 Pn **Pn 11 49 39.6 +0.2**
YOJ Yonaguni jima 1.23 76 *i* P **Pb 11 49 40.7 -0.2**
baz=76
YOJ *e*S **Sb 11 49 56.9 +0.3**
baz=76
WCKO Fanlu 1.24 235 *e*P **Pb 11 49 40.6 -0.5**
baz=232
WRL Guolierlin Hig 1.24 258 *e*P **Pb 11 49 40.6 -0.5**
baz=255
EDH Donghe 1.24 197 *e*P **Pn 11 49 40.3 +0.8**
baz=197
CHN2 Minshiung 1.29 241 *e*P **Pb 11 49 42.5 +0.5**
baz=228
WTK Tuku 1.29 249 *e*P **Pb 11 49 41.9 -0.1**
baz=245
CHN4 Tsaushan 1.30 232 *e*P **Pb 11 49 41.6 -0.6**
baz=229
STYH Taoyuan 1.30 221 *e*P **Pn 11 49 40.7 +0.3**
baz=212
TPUB Ta-pu 1.30 229 ⇑P **Pb 11 49 42.0 -0.2**
baz=219
TPUB S **Sb 11 49 59.0 +0.4**
baz=219
STYT Tauyuan 1.32 221 *e*P **Pn 11 49 41.8 +1.1**
baz=212
WTCT Ta-ch'eng 1.33 257 *e*P **Pb 11 49 42.5 -0.2**
baz=254
CHY Chiayi 1.34 241 *e*P **Pb 11 49 43.5 +0.5**
baz=238
WTP Ta-pu 1.35 228⇑*e*P **Pb 11 49 43.0 -0.1**
baz=215
LONT Longtian 1.36 203 *e*P **Pn 11 49 40.9 -0.3**
baz=193
WMLT Mailiao 1.40 255 *e*P **Pb 11 49 43.4 -0.4**
baz=252
TWK Hsinying 1.43 231 ⇑P **Pb 11 49 44.0 -0.4**
baz=220
TWK *e*S **Sb 11 50 02.0 -0.1**
baz=220
SNST Tainan City 1.45 230 *e*P **Pb 11 49 46.0 +1.3**
baz=227
CHN1 Nanshi 1.45 228 *e*P **Pb 11 49 44.7 -0.1**
baz=226
WSF Szhu 1.45 249 *e*P **Pb 11 49 44.3 -0.4**
baz=246
WSF *e*S **Sb 11 50 03.1 +0.3**
baz=246
TWG Pinlang 1.46 204 *e*P **Pb 11 49 45.0 +0.2**
baz=193
TWGBT Beinan 1.46 203 *e*P **Pn 11 49 41.6 -0.9**
baz=193
SGST Jiashian 1.49 224 ⇑P **Pn 11 49 44.1 +1.1**
baz=214
SGST *e*S **Sb 11 50 03.8 0.0**
baz=214
TTN Taitung 1.49 200 *e*P **Pb 11 49 45.6 +0.2**
baz=190
WSL Shuilin Townsh 1.49 245 *e*P **Pn 11 49 44.4 +1.4**
baz=242
WSL *e*S **Sb 11 50 04.4 +0.4**
baz=242
PCYT Pengchaiyu 1.50 13 *e*P **Pb 11 49 44.8 -0.7**
baz=12
LDUT Ludao 1.50 188 *e*P **Pn 11 49 43.7 +0.6**
baz=190
SLGT Liugui 1.52 220 *e*P **Pb 11 49 45.2 -0.6**
baz=219
ICHU Yijhu 1.53 239 *e*P **Pb 11 49 45.7 -0.3**
baz=222
CHN8 Yiju 1.59 239 *e*P **Pb 11 49 46.2 -0.8**
baz=225
CHN8 *e*S **Sb 11 50 07.3 +0.6**
baz=225
SSHA Shanhua 1.65 232 *e*P **Pb 11 49 47.6 -0.5**
baz=230
SHHT Tainan City 1.68 228 *e*P **Pb 11 49 48.1 -0.5**
baz=226
SCST Cishan 1.69 221 *e*P **Pb 11 49 48.0 -0.7**
baz=221
ECL Taimali 1.70 204 *e*P **Pn 11 49 47.3 +1.4**
baz=196
SSD Sandimen 1.72 215 *e*P **Pb 11 49 48.6 -0.7**
baz=216
TSMG Majia 1.75 214 *e*P **Pb 11 49 48.5 -1.2**
baz=216
TWM1 Shoushan 1.78 222 *e*P **Pb 11 49 49.8 -0.5**
baz=221
TSCK Chigu Township 1.79 236 *e*P **Pn 11 49 48.2 +1.1**
baz=232
SGLT Jiouru 1.81 218 *e*P **Pb 11 49 50.0 -0.9**
baz=219
EAST Anshuo 1.94 204 *e*P **Pb 11 49 51.5 -1.5**
baz=199
TAW Tawu 1.94 203 *e*P **Pn 11 49 51.1 +1.9**
baz=197
TAWH Dawu Township 1.96 203 *e*P **Pn 11 49 51.0 +1.5**
baz=198
SCZT Fangliau 2.04 209 *e*P **Pb 11 49 53.2 -1.6**
baz=214
SCZT *e*S **Sb 11 50 19.8 0.0**
baz=214
PNG Penghu 2.05 254 *e*P **Pn 11 49 51.3 +0.6**
baz=250
PHUB P'eng-hu 2.06 252 *e*P **Pn 11 49 51.3 +0.6**
baz=249
PHUB *e*S **Sn 11 50 16.8 +1.6**
baz=249
WDGT Dungji 2.08 245 *e*P **Pn 11 49 52.3 +1.3**
baz=241
SLIU Shizi 2.11 203 *e*P **Pn 11 49 53.6 +2.2**
baz=197
LAY Lan-yu 2.12 184 *e*P **Pn 11 49 51.6 -0.1**
baz=187
LYUB Lan-yu 2.15 183 *e*P **Pn 11 49 51.9 -0.2**
baz=187
VWUC VWUC 2.21 292 *e*P **Pn 11 49 52.8 0.0**
baz=290
SMST Manzhou Townsh 2.28 201 *e*P **Pb 11 49 56.5 -2.2**
baz=195
VCHM Qimei 2.29 246 *e*P **Pn 11 49 55.0 +1.0**
baz=229
TWK1 Hengchun 2.36 201 *e*P **Pn 11 49 57.0 +2.1**
baz=195
TWKBT Hengchun 2.36 200 *e*P **Pb 11 49 57.8 -2.3**
baz=195
PTMZ Houxiangcun 2.51 291 *e*P **Pn 11 49 56.9 0.0**
baz=289
MATB Ma-tsu 2.54 322 *e*P **Pn 11 49 57.2 -0.2**
baz=321
MSUT Lienchiang 2.57 321 *e*P **Pn 11 49 58.0 +0.3**
baz=321
LYJJ Jianjiangzhen 2.96 324 *e*P **Pn 11 50 03.1 0.0**
baz=324
KNM Kinmen 2.99 275 *e*P **Pn 11 50 05.5 +1.9**
baz=271
KNMB Chin-men Tao 3.04 276 *e*P **Pn 11 50 04.5 +0.3**
baz=272
XPSS Dashiqiu 3.07 334 *e*P **Pn 11 50 04.3 -0.4**
baz=334
MHZQ Yeshan 3.10 309 *e*P **Pn 11 50 05.1 +0.1**
baz=309
JMJ Miyako jima 2 3.34 78 *e*P **Pn 11 50 11.6 +3.3**
baz=79
JMJ *e*S **Sn 11 50 50.2 +3.3**
baz=79
AXDP Jialang 3.48 283 *e*P **Pn 11 50 10.4 +0.2**
baz=280
ZPLA Ao Xicun 3.62 267 *e*P **Pn 11 50 12.4 +0.1**
baz=261
DSXP Dongshan 3.94 264 *e*P **Pn 11 50 16.8 +0.2**
baz=257
SXFK Yanhouchang 4.29 302 *e*P **Pn 11 50 21.4 -0.1**
baz=302
JOW Kunigami 6.51 65 P **Pn 11 50 52.3 +0.4**
3.2nm,0.3s,baz=211,slow=16,SNR=4.2
JOW LR LR 11 53 20.1
comp=Z,117nm,21.2s,baz=319,slow=37
7.3nm,0.3s
JSU Suzuyama 10.65 45 Pn **Pn 11 51 45.1 -3.6**
KSRS Korea Array 14.28 20 P **P 11 52 43.2 -1.9**
3.3nm,0.6s,baz=202,slow=12,SNR=10
MJAR Matsushiro Arr 18.81 45 LR LR 12 01 00.3
comp=Z,60nm,18.9s,baz=218,slow=37
CMAR Chiang Mai Arr 21.94 259 P **P 11 54 11.1 +1.7**
0.8nm,0.3s,baz=66,slow=7.9,SNR=4.8
CMAR LR LR 12 03 16.7
comp=Z,47nm,18.6s,baz=205,slow=38
0.8nm,0.3s
GUMO Guam 24.28 111 LR LR 12 04 33.8
comp=Z,23nm,18.9s,baz=34,slow=38
MTN Manton Dam 37.92 165 P **P 11 56 31.2 -1.8**
MTN IAmb IAmb 11 56 43.7
comp=Z,6.8nm,1.1s
MKAR Makanchi Array 38.68 316 P **P 11 56 39.7 +0.5**
comp=Z,1.5nm,1.0s,baz=104,slow=10,SNR=5.6
comp=Z,1.5nm,1.0s
MKAR Makanchi Array 38.68 316 P **P 11 56 39.5 +0.3**
KNRA Kununurra 40.19 169 P **P 11 56 51.8 -0.2**
KNRA IAmb IAmb 11 57 28.2
comp=Z,18nm,1.4s
ZALV Zalesovo Beam 40.52 327 P **P 11 56 53.6 -0.8**
comp=Z,1.7nm,0.8s,baz=119,slow=8.6,SNR=5.8
comp=Z,1.7nm,0.8s
COEN Coen 43.31 149 P **P 11 57 17.9 +0.4**
COEN IAmb IAmb 11 57 56.9
comp=Z,7.1nm,0.9s
WB0 Warramunga Arr 45.38 163 P **P 11 57 33.3 -0.7**
WB0 IAmb IAmb 11 57 53.3
comp=Z,10nm,1.4s
PSA00 Pilbara Seismi 45.50 182 P **P 11 57 33.9 -1.1**
WRAB Tennant Creek 45.53 163 P **P 11 57 35.1 -0.1**
WRAB IAmb IAmb 11 58 02.2
comp=Z,9.7nm,1.4s
WRA Warramunga Arr 45.54 163 P **P 11 57 34.1 -1.2**
comp=Z,0.5nm,0.6s,baz=345,slow=8.7,SNR=9.7
comp=Z,0.5nm,0.6s
WB2 Warramunga Arr 45.54 163 P **P 11 57 34.6 -0.7**
WR0 Warramunga Arr 45.61 163 P **P 11 57 35.5 -0.3**
ASAR Alice Springs 49.00 165 P **P 11 58 01.5 -0.7**
comp=Z,0.4nm,0.6s,baz=339,slow=6.3,SNR=6.9
comp=Z,0.4nm,0.6s
ABKAR Akbulak array 53.79 314 P **P 11 58 38.9 +1.0**
H21K Melozitna Rive 66.41 27 P **P 12 00 04.3 +0.1**
H21K IAmb IAmb 12 00 43.7
comp=Z,6.0nm,1.2s
TOLK Toolik Lake Re 67.28 23 P **P 12 00 08.3 -1.3**
H23K Yukon River 67.72 26 P **P 12 00 12.0 -0.5**
H23K IAmb IAmb 12 00 43.2
comp=Z,7.0nm,1.5s
ILAR Eielson Array 69.01 27 P **P 12 00 19.6 -0.9**
comp=Z,0.4nm,0.8s,baz=298,slow=8.6,SNR=6.2
comp=Z,0.4nm,0.8s
BMAR Burnt Mountain 69.35 24 P **P 12 00 23.0 +0.4**
M24K Tolsona, Glenn 69.92 30 P **P 12 00 25.7 -0.6**
M26K Nabesna, AK 71.28 29 P **P 12 00 34.4 -0.1**
M26K IAmb IAmb 12 00 42.0
comp=Z,8.0nm,1.5s
EGAK Eagle 71.39 27 P **P 12 00 34.9 -0.2**
BCAR Beaver Creek A 71.63 28 P **P 12 00 36.7 +0.1**
DAWY Dawson 72.34 27 P **P 12 00 40.8 -0.1**
YKA Yellowknife Ar 82.80 23 P **P 12 01 38.8 -0.4**
comp=Z,0.8nm,0.6s,baz=301,slow=4.9,SNR=2.4
comp=Z,0.8nm,0.6s
DSB Dublin 90.75 332 P **P 12 02 19.9 +1.6**

NEIC 29 11:49:25.4±0.7, 36°.568N±0°.010×97°.40W±0°.01, h7km±5km, mb_Lg2.5/8, Error ellipse: s-maj=1.6km s-min=1.1km az=208.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	E0420 Rd and N	0.18	156	Pg	Pg	11 49 29.1	+0.1
OK049				Sg	Sg	11 49 31.8	+0.4
OK050	Pawnee Station	0.38	117	Pg	Pg	11 49 32.6	-0.1
OK048	Pawnee Station	0.39	113	Pg	Pg	11 49 33.2	+0.1
OK045	Pawnee Station	0.40	107		Pg	11 49 33.3	+0.1
OK046	Pawnee Station	0.43	113		Pg	11 49 33.7	-0.1
OK051	E0350 and S346	0.45	98	Pg	Pg	11 49 34.3	+0.1
OK044	Pawnee Station	0.52	112	Pg	Pg	11 49 35.3	-0.2
OK032	Salt Plains WL	0.70	290	Pg	Pg	11 49 38.6	-0.2
OK031	S. Brethren Rd	0.76	144	Pg	Pg	11 49 40.1	0.0
OK029	Liberty Lake	0.77	184	Pg	Pg	11 49 40.2	-0.1
OK034	N. Norfolk Rd.	0.78	135	Pg	Pg	11 49 40.3	-0.2
T35A	Sooner Cattle	0.79	64	Pg	Pg	11 49 40.2	-0.4
OK025	Westminster Rd	0.99	177	Pg	Pg	11 49 44.2	-0.1
OK038	West end E0370	1.09	266	Pg	Pg	11 49 44.8	-1.6
OKCSW	OKLAHOMA CITY	1.16	182	Pg	Pg	11 49 47.1	-0.6
FNO	Franklin	1.31	180		Pn	11 49 49.5	-0.6
U32A	Winter Ranch,	1.31	262	Pn	Pn	11 49 49.5	-0.7
U32A					Pb	11 49 49.6	-0.8
TUL1	Leonard	1.45	116	Pn	Pn	11 49 51.9	-0.3
X34A	Smith Ranch, M	2.00	190		Pb	11 50 01.4	-0.7
R32A	Long Quarter,	2.13	331		Pn	11 50 01.4	-0.1
WMOK	Wichita Mounta	2.15	212		Pn	11 50 03.0	+1.2
U38A	Gravette	2.43	92		Pn	11 50 07.3	+1.7
MIAR	Mount Ida	3.71	122	IAmb_Lg		11 51 24.2	
WHAR	Wooly Hollow	4.33	106	IAmb_Lg		11 51 46.8	
N35A	Tabor	4.50	17	IAmb_Lg		11 51 57.1	
WHTX	Lake Whitney,	4.57	181	IAmb_Lg		11 51 58.9	

comp=Z,15nm,0.8s
comp=Z,5.4nm,0.8s

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*TUL **29** 11:50:23.3±0.9, 36°.57N±0°.02×97°.38W±0°.01, h8km±3km, ML3.2, mb_Lg3.0/61(NEIC), Error ellipse: s-maj=2.4km s-min=1.1km az=186.0*

NEIC 29 11:50:23.4±0.5, 36°.56N±0°.01×97°.400W±0°.007, h8km±6km, Error ellipse: s-maj=2.1km s-min=0.8km az=175.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	E0420 Rd and N	0.17	153	Pg	Pg	11 50 27.2	+0.3
OK050	Pawnee Station	0.37	115		Pg	11 50 30.9	+0.1
OK050				Sg	Sg	11 50 35.7	0.0
OK048	Pawnee Station	0.39	111	Pg	Pg	11 50 31.1	0.0
OK045	Pawnee Station	0.40	106		Pg	11 50 31.3	+0.1
OK046	Pawnee Station	0.43	112		Pg	11 50 31.8	0.0
OK051	E0350 and S346	0.46	96	Pg	Pg	11 50 32.2	-0.1
OK044	Pawnee Station	0.52	110	Pg	Pg	11 50 33.5	0.0
OK033	Mehan	0.63	144		Pg	11 50 35.8	+0.1
OK032	Salt Plains WL	0.70	291		Pg	11 50 36.7	-0.2
OK031	S. Brethren Rd	0.75	143		Pg	11 50 37.9	0.0
OK029	Liberty Lake	0.76	183		Pg	11 50 38.1	+0.1
OK034	N. Norfolk Rd.	0.78	134		Pg	11 50 38.4	0.0
T35A	Sooner Cattle	0.80	63		Pg	11 50 38.4	-0.5
OK025	Westminster Rd	0.97	177		Pg	11 50 42.1	-0.1
OK035	E0210 Rd and N	1.06	279		Pg	11 50 43.3	-0.6
OK038	West end E0370	1.08	266	Pg	Pg	11 50 42.8	-1.5
OKCSW	OKLAHOMA CITY	1.15	182	Pg	Pg	11 50 45.1	-0.4
FNO	Franklin	1.29	180	Pn	Pn	11 50 47.6	-0.3
U32A	Winter Ranch,	1.30	263	Pn	Pn	11 50 47.6	-0.4
TUL1	Leonard	1.45	116		Pn	11 50 50.1	+0.2
TUL1				IAmb_Lg		11 51 11.4	
X34A	Smith Ranch, M	1.98	190		Pb	11 50 58.9	-0.8
WMOK	Wichita Mounta	2.13	212	Pn	Pn	11 51 00.5	+1.1
WMOK				IAmb_Lg		11 51 33.5	
U38A	Gravette	2.43	92	IAmb_Lg		11 51 39.5	
S39A	Bolivar	3.45	70	IAmb_Lg		11 52 18.9	
MIAR	Mount Ida	3.71	122	IAmb_Lg		11 52 21.9	
Z38A	Mt. Pleasant	3.84	148	IAmb_Lg		11 52 34.1	
AMTX	Amarillo	3.86	246	IAmb_Lg		11 52 30.3	
MGMO	Mountain Grove	4.16	80	IAmb_Lg		11 52 36.3	
N33A	J Bar K, Exete	4.18	359	IAmb_Lg		11 52 37.4	
P38A	Dawn	4.32	44	IAmb_Lg		11 52 44.9	
WHAR	Wooly Hollow	4.34	105	IAmb_Lg		11 52 39.3	
R40A	Maddies Statio	4.44	65	IAmb_Lg		11 52 47.8	
UALR	University of	4.48	112	IAmb_Lg		11 52 56.2	
WLAR	White Oak Lake	4.53	128	IAmb_Lg		11 52 57.2	
KSCO	Kaye Shedlock'	4.81	302	IAmb_Lg		11 53 02.5	
BGNE	Belgrade	4.88	353	IAmb_Lg		11 53 10.2	

comp=Z,4nm,1.1s
comp=Z,22nm,1.1s
comp=Z,19nm,0.9s

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comp=Z,38nm,0.8s
CCM Cathedral Cave 5.13 71 IAmb_Lg **11 53 11.1**
comp=Z,29nm,0.9s
P40A Paris 5.16 53 IAmb_Lg **11 53 14.5**
comp=Z,31nm,0.8s
NATX Nacogdoches 5.29 154 IAmb_Lg **11 53 23.5**
comp=Z,32nm,1.1s
PBMO Poplar Bluff 5.61 86 IAmb_Lg **11 53 23.4**
comp=Z,27nm,0.7s
T25A Trinidad 5.65 278 IAmb_Lg **11 53 26.1**
comp=Z,17nm,0.9s
OGNE Ogallala 5.69 322 IAmb_Lg **11 53 38.6**
comp=Z,24nm,0.8s
435B Jarrell 5.76 182 IAmb_Lg **11 53 36.0**
comp=Z,23nm,1.1s
SCIA State Center 6.25 30 IAmb_Lg **11 53 51.1**
comp=Z,27nm,0.8s
143A Socs Landing, 6.26 126 IAmb_Lg **11 53 58.9**
comp=Z,15nm,0.8s
JCT Junction City 6.38 199 IAmb_Lg **11 53 48.7**
comp=Z,24nm,1.1s
S44A Carbondale 6.61 78 IAmb_Lg **11 53 55.4**
comp=Z,22nm,0.7s
SUSD Miller 7.97 352 IAmb_Lg **11 54 43.4**
comp=Z,13nm,0.7s
K22A Casper 9.30 314 IAmb_Lg **11 55 44.9**
comp=Z,12nm,0.9s

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*IDC **29** 11:50:28.2±1.7, 35°.27N×133°.81E, h0km, mb3.4/2, mbtmp3.3/4, ML2.6/2, MS2.8/5, Error ellipse: s-maj=38.0km s-min=18.9km az=153.0*
*NIED **29** 11:50:29.4, 35°.39N×133°.89E, h8km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.05; $M_{\theta\theta}$4.93; $M_{\phi\phi}$-3.88; $M_{r\theta}$-2.62; $M_{\theta\phi}$-2.76; $M_{\phi r}$-0.15; Fault plane solution: $M_0$5.72000×10^{14} NP1: ϕ_s333.00000°, δ66.00000°, λ3.00000°. NP2:ϕ_s242.00000°, δ88.00000°, λ156.00000°.*
*JMA **29** 11:50:29.4±0.0, 35°.4N±0°.1×133°.89E±0°.08, h8km, MV3.7/20, EASTERN TOTTORI PREF*
JMA Felt II J1 at EASTERN TOTTORI PREF .

ISC 29 11:50:27.9±1.0, 35°.44N±0°.07×133°.96E±0°.06, h10km, n10, σ1§71/9, 2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.13	240	P	Pg	11 50 31.1	+0.1
JKR				S	Sg	11 50 32.4	-0.8
JAD	Aida	0.53	161	⇓P	Pb	11 50 39.1	-0.2
JAD				⇓S	Sb	11 50 45.9	-1.1
MJAR	Matsushiro Arr	3.62	71	Pn	Pb	11 51 28.9	-3.1
	0.2nm,0.3s,baz=253,slow=14,SNR=11						
MJAR				Pg	Pg	11 51 39.3	+2.1
	0.6nm,0.3s,baz=243,slow=15,SNR=19						
MJAR				Lg	Lg	11 52 27.5	
	0.4nm,0.3s,baz=232,slow=27,SNR=5.9						
	1.6nm,0.4s						
KSRS	Korea Array	5.26	294	Pn	Pn	11 51 47.8	+1.1
	0.6nm,0.3s,baz=109,slow=14,SNR=7.0						
KSRS				LR	LR	11 53 53.3	
	comp=Z,81nm,18.9s,baz=110,slow=39						
	1.6nm,0.3s						
JHJ	Hachijo jima 2	5.35	114	LR	LR	11 53 25.8	
	comp=Z,55nm,21.5s,baz=334,slow=33						
USRK	Ussuriysk Ar.	8.88	351	LR	LR	11 55 39.1	
	comp=Z,92nm,19.2s,baz=181,slow=34						
KLR	Kul'dur	13.87	354	LR	LR	11 58 12.5	
	comp=Z,63nm,18.1s,baz=226,slow=33						
MA2	Magadan	26.52	19	LR	LR	12 06 08.3	
	comp=Z,22nm,18.2s,baz=312,slow=35						
WRA	Warramunga Arr	55.08	180	P	P	12 00 00.4	+0.3
	0.3nm,0.6s,baz=354,slow=7.7,SNR=6.1						
	0.3nm,0.6s						
ASAR	Alice Springs	58.79	180	P	P	12 00 27.1	+0.7
	0.2nm,0.6s,baz=14,slow=12,SNR=1.9						
	0.2nm,0.6s						

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*JMA **29** 11:56:13.4±0.3, 38°N±1°×13°5E±°, h393km±3km, MV3.0/27, SEA OF JAPAN*
*IDC **29** 11:56:14.3±1.3, 37°.45N×134°.63E, h389km±16km, mb2.6/2, mbtmp3.4/6, Error ellipse: s-maj=28.6km s-min=21.9km az=88.0*

ISC 29 11:56:14.1±0.9, 37°.47N±0°.09×134°.64E±0°.09, h385km, n24, σ0§58/24, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	Yasaka	1.88	168	P	Pn	11 57 08.6	+0.5
JKSM	Kasumi	1.88	180	*e*P	Pn	11 57 08.2	+0.2
JSZ	Suzu	2.16	90	S	S	11 57 54.8	+0.2
JWT	Wachi	2.27	164	P	Pn	11 57 11.4	+0.7
JYTA	Yamagatataniai	2.52	137	P	Pn	11 57 13.2	+0.8
JHS	Saijyo	2.76	207	P	Pn	11 57 14.9	+0.5
JHS	Saijyo	2.76	207	*e*P	Pn	11 57 14.5	+0.2
INU	Inuyama	2.86	137	P	Pn	11 57 15.6	+0.5
JGF	Kuroka	2.88	130	P	Pn	11 57 15.8	+0.5
JSD	Sado	2.92	78	P	Pn	11 57 16.4	+0.9
JSD	Sado	2.92	78	P	Pn	11 57 15.7	+0.2
MAT	Matsushiro	3.00	107	*e*P	Pn	11 57 16.9	+0.7
MJAR	Matsushiro Arr	3.00	107	P	Pn	11 57 17.1	+0.9
	4.8nm,0.7s,baz=290,slow=11,SNR=14						
JYT	Yasato	4.62	104	P	Pn	11 57 31.3	-0.2
JMM	Marumori	4.89	84	P	Pn	11 57 34.7	+0.5
KSRS	Korea Array	5.35	272	P	Pn	11 57 39.9	+0.8
	2.1nm,0.6s,baz=93,slow=11,SNR=7.8						
JTM	Tenmabayashi	5.99	54	P	Pn	11 57 46.7	+0.7
USRK	Ussuriysk Ar.	7.01	344	P	P	11 57 57.7	-0.6
	2.9nm,0.5s,baz=161,slow=11,SNR=5.5						
JEW	Eniwo	7.47	42	P	P	11 58 02.9	-0.5
ERM	Erimo	7.97	53	P	Pn	11 58 08.2	-0.2
JEM	Erimo	7.97	53	P	Pn	11 58 08.1	-0.3
KLR	Kul'dur	11.94	351	P	P	11 58 53.3	-0.1
	0.8nm,0.4s,baz=176,slow=11,SNR=4.5						
ILAR	Eielson Array	52.01	32	P	P	12 04 45.4	+0.1
	0.3nm,0.6s,baz=299,slow=8.3,SNR=6.0						
	0.3nm,0.6s						
WRA	Warramunga Arr	57.11	180	P	P	12 05 21.5	-0.5
	0.3nm,0.8s,baz=360,slow=7.4,SNR=1.5						
	0.3nm,0.8s						

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*NEIC **29** 11:57:39.7±2.3, 30°.43S±0°.05×71°.8W±0°.2, h24km±9km, Error ellipse: s-maj=22.5km s-min=6.4km az=97.0*
*GUC **29** 11:57:40.5±0.9, 30°.48S×71°.55W, h22km±4km, ML4.0*

ISC 29 11:57:40.3±1.1, 30°.46S±0°.03×71°.68W±0°.07, h25km±8km, n28, σ1§23/40, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.22	170	Pg	Pb	11 57 46.2	0.0
CO06	Fray Jorge	0.22	170	*e*P	Pb	11 57 46.4	+0.1
CO06				*e*S	Sb	11 57 50.5	+0.1
CO06				IAML		11 57 52.4	
	comp=N,19μm,0.2s						
CO05	La Serena	0.66	36		Pb	11 57 53.1	-0.1
CO05	La Serena	0.66	36⇑	*e*P	Pb	11 57 53.3	+0.1
CO05				*e*S	Sb	11 58 01.1	-0.8
GO04	Tololo Observa	0.81	70		Pn	11 57 56.1	-0.3
GO04	Tololo Observa	0.81	70	*e*P	Pn	11 57 55.8	-0.6
GO04				*e*S	Sb	11 58 06.4	-0.2
GO04				IAML		11 58 10.5	
	comp=E,14μm,0.5s						
CO03	El Pedregal	0.94	114⇓	*e*P	Pn	11 57 57.7	-0.2
CO03				*e*S	Sb	11 58 09.2	-0.8
CO03				IAML		11 58 10.8	
	comp=E,6μm,0.2s						
CO02	Combarbal	0.95	142⇑	*i*P	Pb	11 57 57.9	-0.3
CO02				*e*S	Sn	11 58 10.8	-0.2
CO02				IAML		11 58 14.9	
	comp=N,13μm,0.2s						
CO01	Juntas del Tor	1.45	71	*e*P	Pb	11 58 06.2	-0.6
CO01				*e*S	Sb	11 58 25.1	+0.1
LCO	Las Campanas	1.67	31		Pn	11 58 09.0	+0.8
LCO	Las Campanas	1.67	31⇑	*e*P	Pn	11 58 09.0	+0.8
LCO				*e*S	Sb	11 58 31.5	+0.2
AC05	El Transito	2.02	38	Pn	Pn	11 58 14.3	+1.4
VA06	Catapilco	2.12	171	Pn	Pn	11 58 15.0	+0.8
VA06	Catapilco	2.12	171	*e*P	Pn	11 58 14.4	+0.2
VA06				*e*S	Sn	11 58 37.5	-2.3
VA06				IAML		11 58 51.6	
	comp=N,1μm,0.5s						
VA03	San Esteban	2.50	158	*e*P	Pn	11 58 21.6	+2.1

VA03			*e*S	Sb	11 58 52.7	-2.1
VA03			IAML		11 59 01.4	
	comp=E,1μm,0.5s					
ROCH	**El Roble**	**2.57 167**	*e*P	Pn	11 58 21.1	+0.5
ROCH			*e*S	Sn	11 58 52.9	+1.7
ROCH			IAML		11 59 02.1	
	comp=N,986nm,0.5s					
ROC1	**El Roble**	**2.58 167**		Pn	11 58 21.3	+0.6
PEL	**Peldehue**	**2.81 163**	*e*P	Pn	11 58 24.7	+1.0
PEL			*e*S	Sn	11 58 58.5	+1.7
PEL			IAML		11 59 12.6	
	comp=E,410nm,0.5s					
MT02	**Curacav**	**2.83 171**	Pn	Pn	11 58 23.6	-0.4
MT05	**Renca**	**3.04 165**	*e*P	Pn	11 58 29.2	+2.4
MT05			*e*S	Sn	11 59 05.4	+3.1
MT05			IAML		11 59 21.7	
	comp=E,1μm,0.4s					
GO03	**Copiap**	**3.12 24**		Pn	11 58 28.4	+0.5
MT03	**Universidad Ad**	**3.19 162**		Pn	11 58 27.8	-1.1
AC02	**Maricunga**	**4.25 32**	Pn	Pn	11 58 42.8	-1.0
BO02	**Sierra Bellavi**	**4.39 170**		Pn	11 58 44.3	-1.1
AC01	**Pan de Azucar**	**4.40 13**		Pn	11 58 43.6	-1.8
PB15	**IPOC Station P**	**7.48 16**	Pn	Pn	11 59 27.3	-0.7
TRQA	**Tornquist**	**11.04 136**	Pn	Pn	12 00 18.4	+1.8
SNAA	**Sanae**	**54.76 159**	P	P	12 07 07.2	-0.2
SNAA			IAmb	IAmb	12 07 26.1	
	comp=Z,3.5nm,1.3s					

ROM ***29*** *11:58:04.7±0.2,39.°951N±0.°009×15.°84E±0.°02, h276km±1km, ML4.1/85, Error ellipse: s-maj=1.3km s-min=0.9km az=88.0*
PDG ***29*** *11:58:04.2±2.0,40.°03N×15.°63E, h0km±11km, ML4.0/13, Error ellipse: s-maj=5.1km s-min=3.0km az=90.0*
LDG ***29*** *11:58:06.5±0.1,40.°04N×15.°76E, h261km, Ml4.0/2, Error ellipse: s-maj=3.2km s-min=1.9km az=8.0*
NEIC ***29*** *11:58:06.9±1.4,40.°03N±0.°06×15.°79E±0.°08, h264km±6km, Error ellipse: s-maj=9.4km s-min=9.2km az=223.0*
IDC ***29*** *11:58:06.8±0.6,40.°07N×15.°72E, h269km±6km, mb3.7/16, mbtmp4.4/27, Error ellipse: s-maj=10.4km s-min=7.9km az=111.0*
MED_RC ***29*** *11:58:07.0±1.6,40.°04N×15.°95E, h262km±12km, MW4.4/7, Moment Tensor Solution. Mantle waves: s7,c9; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}~4.29±.72; $M_{\theta\theta}$3.21±.59; $M_{\phi\phi}$1.08±.76; $M_{r\theta}$1.04±.86; $M_{\phi\theta}$-3.20±1.16; $M_{\phi r}$~2.01±.87; Best double couple: $M_0$5.44000×10^{15} NP1:ϕ_s320.00000°,δ58.00000°,λ-73.00000°. NP2: ϕ_s110.00000°,δ36.00000°,λ-115.00000°. Principal axes: T 5.9200, Plg11.0000°, Azm37.0000°; N -0.9600, Plg14.0000°, Azm130.0000°; P -4.9600, Plg71.0000°, Azm271.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
PRU ***29*** *11:58:32.2±0.0,41.°94N×15.°35E, h230km, M4.4*
ISC 29 11:58:06.6±0.4,40.°04N±0.°04×15.°83E±0.°04,h268km±4km, n445,σ1§20/479,mb4.5/25,50C-76D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUC	**Castrocucco**	**0.05**	**188**		**Pn**	**11 58 40.5**	**-0.5**
CUC	**Castrocucco**	**0.05**	**188**	⇓P	**Pn**	**11 58 40.5**	**-0.5**
CUC				S	**S**	**11 59 06.3**	**-1.8**
CUC				AML	AML		
	comp=E,885μm,0.6s						
CUC				AML	AML		
	comp=N,764μm,0.8s						
CUC				AML	AML		
	comp=E,1105μm,0.6s						
CUC				AML	AML		
	comp=E,1350μm,0.6s						
CUC				AML	AML		
	comp=N,924μm,0.8s						
CUC				AML	AML		
	comp=E,1355μm,0.6s						
CUC				AML	AML		
	comp=E,1660μm,0.6s						
SIRI	**Monte Sirino -**	**0.14**	**13**	⇓P	**Pn**	**11 58 40.8**	**-0.2**
SIRI				AML	AML		
	comp=E,2025μm,0.3s						
SIRI				AML	AML		
	comp=N,2620μm,1.0s						
SIRI				AML	AML		
	comp=E,2075μm,0.6s						
SIRI				AML	AML		
	comp=N,2570μm,1.0s						
MMN	**Mormanno**	**0.20**	**140**	⇓P	**Pn**	**11 58 40.6**	**-0.3**
MMN				S	**S**	**11 59 06.7**	**-1.3**
MMN				AML	AML		
	comp=E,530μm,0.2s						
MMN				AML	AML		
	comp=N,751μm,0.6s						
MMN				AML	AML		
	comp=N,1033μm,0.3s						
MMN				AML	AML		
	comp=E,910μm,0.3s						
MGR	**Morigerati**	**0.23**	**294**	⇓P	**Pn**	**11 58 40.8**	**-0.1**
MGR				S	**S**	**11 59 07.7**	**-0.3**
MGR				AML	AML		
	comp=E,1108μm,0.5s						
MGR				AML	AML		
	comp=N,1470μm,0.5s						
MGR				AML	AML		
	comp=E,1190μm,1.1s						
MGR				AML	AML		
	comp=N,1475μm,0.5s						
MTSN	**Montesano sull**	**0.23**	**346**	⇓P	**Pn**	**11 58 40.8**	**-0.3**
MTSN				AML	AML		
	comp=E,1140μm,0.3s						
MTSN				AML	AML		
	comp=N,1370μm,0.5s						
SCHR	**S. Chirico Rap**	**0.25**	**51**	⇓P	**Pn**	**11 58 41.2**	**+0.1**
SCHR				S	**S**	**11 59 08.4**	**+0.1**
SCHR				AML	AML		
	comp=N,804μm,0.6s						
SCHR				AML	AML		
	comp=N,804μm,0.6s						
SCHR				AML	AML		
	comp=E,1065μm,0.8s						
SCHR				AML	AML		
	comp=N,804μm,0.6s						
MCEL	**Monticello**	**0.28**	**356**	⇓P	**Pn**	**11 58 41.5**	**+0.4**
MCEL				S	**S**	**11 59 09.3**	**+0.9**
MCEL				AML	AML		
	comp=N,1495μm,0.9s						
MCEL				AML	AML		
	comp=N,1550μm,0.9s						
MCEL				AML	AML		
	comp=N,1645μm,0.8s						
MCEL				AML	AML		
	comp=N,1675μm,0.8s						
MCEL				AML	AML		
	comp=E,1875μm,0.5s						
MCEL				AML	AML		
	comp=E,1840μm,0.5s						
AG11	**Viggiano (PZ)**	**0.30**	**19**	⇓P	**Pn**	**11 58 41.5**	**+0.4**
AG11				AML	AML		
	comp=E,1242μm,0.5s						
AG11				AML	AML		
	comp=N,1525μm,0.5s						
AG11				AML	AML		
	comp=E,1640μm,1.3s						
AG11				AML	AML		
	comp=N,2038μm,0.6s						
SALB	**San Lorenzo Be**	**0.43**	**112**	⇓P	**Pn**	**11 58 41.1**	**-0.4**
SALB				S	**S**	**11 59 07.3**	**-1.7**
SALB				AML	AML		
	comp=E,1510μm,0.7s						
SALB				AML	AML		
	comp=N,1355μm,0.3s						
SALB				AML	AML		
	comp=E,1640μm,0.7s						
SALB				AML	AML		
	comp=N,1330μm,0.2s						
SALB				AML	AML		
	comp=E,2270μm,0.3s						
SALB				AML	AML		
	comp=N,2125μm,0.6s						
SALB				AML	AML		
	comp=E,2285μm,0.3s						
SALB				AML	AML		
	comp=N,2050μm,0.6s						
SALB				AML	AML		
	comp=N,2130μm,0.6s						
ORI	**Oriolo Calabro**	**0.48**	**87**	⇓P	**Pn**	**11 58 41.6**	**+0.1**
ORI				AML	AML		
	comp=N,9045μm,0.4s						
ORI				AML	AML		
	comp=E,9300μm,0.4s						
CMPR	**Campora**	**0.48**	**305**	⇓P	**Pn**	**11 58 41.6**	**0.0**
CMPR				AML	AML		
	comp=E,881μm,0.5s						
CMPR				AML	AML		
	comp=N,1265μm,1.3s						
CET2	**Cetraro**	**0.52**	**169**	⇓P	**Pn**	**11 58 41.0**	**-0.8**
CET2				S	**S**	**11 59 06.9**	**-2.5**
CET2				AML	AML		
	comp=N,17700μm,0.5s						
CET2				AML	AML		
	comp=E,14650μm,0.6s						
TDS	**Terranova Siba**	**0.55**	**134**	⇓P	**Pn**	**11 58 42.0**	**+0.3**
TDS				S	**S**	**11 59 08.6**	**-0.8**
TDS				AML	AML		
	comp=E,3565μm,0.8s						
TDS				AML	AML		
	comp=N,3255μm,1.0s						
CRAC	**Craco**	**0.57**	**55**	P	**Pn**	**11 58 41.8**	**+0.1**
CRAC				AML	AML		
	comp=E,2845μm,0.3s						
CRAC				AML	AML		
	comp=N,3025μm,1.0s						
CDRU	**Civita di Ruta**	**0.60**	**318**	⇓P	**Pn**	**11 58 42.1**	**+0.2**
CDRU				AML	AML		
	comp=N,712μm,1.4s						
CDRU				AML	AML		
	comp=E,972μm,1.2s						
CDRU				AML	AML		
	comp=N,712μm,1.4s						
PZUN	**Potenza**	**0.60**	**359**	⇓P	**Pn**	**11 58 41.8**	**+0.1**
PZUN				AML	AML		
	comp=E,243μm,1.0s						
PZUN				AML	AML		
	comp=N,234μm,0.8s						
MIGL	**Miglionico**	**0.73**	**40**	⇓P	**Pn**	**11 58 42.2**	**-0.1**
MIGL				AML	AML		
	comp=E,3185μm,0.9s						
MIGL				AML	AML		
	comp=N,3725μm,0.9s						
ACER	**Acerenza**	**0.75**	**7**	⇓P	**Pn**	**11 58 42.1**	**-0.3**
ACER				AML	AML		
	comp=E,782μm,0.4s						
ACER				AML	AML		
	comp=N,1205μm,0.5s						
ACER				AML	AML		
	comp=E,828μm,0.4s						
ACER				AML	AML		
	comp=N,1285μm,0.5s						
ACER				AML	AML		
	comp=E,828μm,0.4s						
ACER				AML	AML		
	comp=N,1200μm,0.5s						
ACER				AML	AML		
	comp=E,781μm,0.4s						
MRLC	**Muro Lucano**	**0.76**	**340**	⇓P	**Pn**	**11 58 42.5**	**+0.1**
MRLC				AML	AML		
	comp=E,593μm,0.5s						
MRLC				AML	AML		
	comp=N,619μm,0.5s						
MRLC				AML	AML		
	comp=E,592μm,0.5s						
MRLC				AML	AML		
	comp=N,620μm,0.5s						
CELI	**Celico**	**0.83**	**140**	⇓P	**Pn**	**11 58 43.3**	**+0.4**
CELI				S	**S**	**11 59 11.0**	**-0.6**
CELI				AML	AML		
	comp=N,14000μm,0.6s						
CELI				AML	AML		
	comp=E,18050μm,0.4s						
CAR1	**CAROLEI**	**0.84**	**159**	⇓P	**Pn**	**11 58 41.8**	**-1.2**
CAR1				S	**S**	**11 59 08.4**	**-3.1**
CAR1				AML	AML		
	comp=E,7580μm,0.4s						
CAR1				AML	AML		
	comp=N,10800μm,0.4s						
CAR1				AML	AML		
	comp=N,9260μm,0.4s						
CAR1				AML	AML		
	comp=E,7580μm,0.3s						
CAR1				AML	AML		
	comp=N,10810μm,0.4s						
CAR1				AML	AML		
	comp=E,8430μm,0.8s						
MCRV	**Calabrutti - M**	**0.89**	**326**	⇓P	**Pn**	**11 58 43.5**	**+0.4**
MCRV				AML	AML		
	comp=E,1075μm,1.3s						
MCRV				AML	AML		
	comp=N,1375μm,1.5s						
MATE	**Matera**	**0.90**	**48**	⇓P	**Pn**	**11 58 43.0**	**0.0**
MATE				S	**S**	**11 59 10.5**	**-1.2**
MATE				AML	AML		
	comp=N,2405μm,0.6s						
MATE				AML	AML		
	comp=E,1675μm,0.8s						
PALZ	**Palazzo San Ge**	**0.91**	**6**	⇓P	**Pn**	**11 58 43.0**	**-0.1**
PALZ				AML	AML		
	comp=E,1265μm,1.2s						
PALZ				AML	AML		
	comp=N,1092μm,0.8s						
VULT	**Monte Vulture**	**0.92**	**350**	⇓P	**Pn**	**11 58 43.1**	**-0.1**
LTRZ	**Laterza**	**0.94**	**53**	⇓P	**Pn**	**11 58 43.1**	**-0.1**
SNAL	**S. Angelo Dei**	**1.00**	**332**	⇓P	**Pn**	**11 58 44.1**	**+0.6**
SNAL				AML	AML		
	comp=N,1410μm,1.0s						
SNAL				AML	AML		
	comp=N,1370μm,1.0s						
SNAL				AML	AML		
	comp=E,1047μm,0.5s						
SNAL				AML	AML		
	comp=E,1012μm,0.5s						
AMUR	**Altamura**	**1.05**	**34**	⇓P	**Pn**	**11 58 44.0**	**+0.2**
AMUR				AML	AML		
	comp=E,1205μm,0.4s						
AMUR				AML	AML		
	comp=N,1240μm,0.4s						
MRVN	**Minervino Murg**	**1.05**	**15**	⇓P	**Pn**	**11 58 43.9**	**+0.1**
MRVN				AML	AML		
	comp=N,1505μm,0.8s						
MRVN				AML	AML		
	comp=E,866μm,0.7s						
CAFE	**Carife**	**1.08**	**336**	⇓P	**Pn**	**11 58 44.9**	**+0.9**
CAFE				S	**S**	**11 59 14.4**	**+0.8**
CAFE				AML	AML		
	comp=E,1555μm,1.0s						
CAFE				AML	AML		
	comp=N,1100μm,1.4s						
CAFE				AML	AML		
	comp=N,1085μm,0.6s						
CAFE				AML	AML		
	comp=E,1605μm,1.0s						
CAFE				AML	AML		
	comp=N,1095μm,1.4s						
CAPA	**Cerignola FG**	**1.11**	**360**	⇓P	**Pn**	**11 58 44.3**	**+0.2**
CAPA				AML	AML		
	comp=N,1010μm,1.5s						
CAPA				AML	AML		
	comp=E,1305μm,1.3s						
TIP	**Timpagrande**	**1.12**	**140**		**Pn**	**11 58 44.4**	**+0.1**
TIP	**Timpagrande**	**1.12**	**140**	⇓P	**Pn**	**11 58 44.2**	**-0.1**
TIP				S	**S**	**11 59 12.2**	**-1.9**
TIP				AML	AML		
	comp=E,4010μm,1.4s						
TIP				AML	AML		
	comp=N,4310μm,0.3s						
TIP				AML	AML		
	comp=N,3395μm,0.3s						
TIP				AML	AML		
	comp=E,3420μm,1.4s						
SGTA	**Sant Agata di**	**1.15**	**342**	⇓P	**Pn**	**11 58 44.9**	**+0.6**
SGTA				AML	AML		
	comp=E,1025μm,0.4s						
SGTA				AML	AML		
	comp=E,1075μm,0.9s						
SGTA				AML	AML		
	comp=N,691μm,0.6s						
SGTA				AML	AML		
	comp=N,661μm,0.6s						
SGTA				AML	AML		
	comp=E,1028μm,0.4s						
LADO	**San Nicola del**	**1.17**	**130**	⇓P	**Pn**	**11 58 44.4**	**-0.2**
LADO				AML	AML		
	comp=N,382μm,0.5s						
LADO				AML	AML		
	comp=E,662μm,0.5s						
LADO				AML	AML		
	comp=N,382μm,0.5s						
NOCI	**Noci**	**1.20**	**51**	⇓P	**Pn**	**11 58 44.8**	**+0.2**
NOCI				AML	AML		
	comp=E,1511μm,0.3s						
NOCI				AML	AML		
	comp=N,2275μm,1.2s						
SERS	**Sersale**	**1.21**	**146**	⇓P	**Pn**	**11 58 44.7**	**-0.2**
SERS				AML	AML		
	comp=E,8020μm,0.9s						
SERS				AML	AML		
	comp=N,9010μm,0.9s						
SERS				AML	AML		
	comp=E,7300μm,0.3s						
SERS				AML	AML		
	comp=E,8035μm,0.9s						
SERS				AML	AML		
	comp=N,7725μm,0.3s						
MRB1	**Monte Rocchett**	**1.26**	**329**	⇓P	**Pn**	**11 58 45.7**	**+0.7**
MRB1				AML	AML		
	comp=E,858μm,1.3s						
MRB1				AML	AML		
	comp=N,1030μm,0.6s						
MRB1				AML	AML		
	comp=E,858μm,1.3s						
BIOG	**Biogem**	**1.27**	**336**	⇓P	**Pn**	**11 58 46.8**	**+1.7**
BIOG				AML	AML		
	comp=N,1745μm,0.8s						
BIOG				AML	AML		
	comp=N,2015μm,1.0s						
BIOG				AML	AML		
	comp=N,1740μm,0.8s						
BIOG				AML	AML		
	comp=E,1905μm,0.7s						
BIOG				AML	AML		
	comp=E,1815μm,0.9s						
IST3	**Stromboli F**	**1.33**	**201**	⇑P	**Pn**	**11 58 45.1**	**-0.4**
IST3				AML	AML		
	comp=E,1550μm,0.5s						
IST3				AML	AML		
	comp=N,2800μm,0.7s						
ISTR	**Stromboli Gino**	**1.35**	**202**	P	**Pn**	**11 58 45.0**	**-0.7**
PAOL	**Paolisi**	**1.38**	**316**		**Pn**	**11 58 46.2**	**+0.4**
PAOL	**Paolisi**	**1.38**	**316**	⇓P	**Pn**	**11 58 46.1**	**+0.4**
PSB1	**Pescosannita**	**1.41**	**327**	⇓P	**Pn**	**11 58 46.6**	**+0.6**
PSB1				AML	AML		
	comp=E,330μm,0.9s						
PSB1				AML	AML		
	comp=N,258μm,0.9s						
MOCO	**Biccari - m.te**	**1.42**	**339**	⇓P	**Pn**	**11 58 47.0**	**+0.8**
JOPP	**Joppolo**	**1.44**	**178**	⇑P	**Pn**	**11 58 45.1**	**-1.2**
JOPP				S	**S**	**11 59 13.9**	**-3.7**
JOPP				AML	AML		
	comp=E,9810μm,0.5s						
JOPP				AML	AML		
	comp=N,5545μm,0.3s						
VITU	**Vitulano (BN)**	**1.46**	**322**	⇓P	**Pn**	**11 58 46.8**	**+0.5**
VITU				AML	AML		
	comp=N,576μm,0.4s						
VITU				AML	AML		
	comp=E,562μm,0.8s						
SACR	**S. Croce Del S**	**1.60**	**328**	P	**Pn**	**11 58 47.8**	**+0.5**
GATE	**Gambatesa**	**1.62**	**335**	P	**Pn**	**11 58 48.8**	**+1.3**
GATE				AML	AML		
	comp=N,509μm,0.9s						
GATE				AML	AML		
	comp=E,279μm,0.7s						
GATE				AML	AML		
	comp=N,432μm,1.0s						
GATE				AML	AML		
	comp=E,412μm,1.3s						
MESG	**Mesagne**	**1.64**	**70**	⇓P	**Pn**	**11 58 47.8**	**+0.3**
MESG				S	**S**	**11 59 18.3**	**-1.7**
MESG				AML	AML		
	comp=N,1180μm,0.4s						
MESG				AML	AML		
	comp=E,1700μm,0.8s						
PLAC	**Placanica**	**1.66**	**163**	⇑P	**Pn**	**11 58 47.1**	**-0.8**
PLAC				S	**S**	**11 59 17.5**	**-3.1**
PLAC				AML	AML		
	comp=E,13950μm,0.3s						
PLAC				AML	AML		
	comp=N,13550μm,0.4s						
PLAC				AML	AML		
	comp=N,13500μm,0.3s						
PLAC				AML	AML		
	comp=E,13450μm,0.3s						
PIGN	**Pignataro Magg**	**1.70**	**313**	⇓P	**Pn**	**11 58 48.8**	**+0.7**
PIGN				S	**S**	**11 59 21.4**	**+0.5**
SGRT	**San Giovanni R**	**1.71**	**358**		**Pn**	**11 58 48.3**	**+0.1**
SGRT	**San Giovanni R**	**1.71**	**358**	⇓P	**Pn**	**11 58 48.3**	**+0.1**
SGRT				AML	AML		
	comp=E,498μm,0.8s						
SGRT				AML	AML		
	comp=N,724μm,1.2s						
LLI	**Lipari**	**1.74**	**203**	P	**Pn**	**11 58 48.2**	**-0.3**
LLI				AML	AML		
	comp=E,8090μm,0.5s						
LLI				AML	AML		
	comp=N,11950μm,0.5s						
MELA	**Melanico ??? S**	**1.74**	**343**	⇓P	**Pn**	**11 58 48.7**	**+0.4**
MELA				AML	AML		
	comp=E,670μm,0.8s						
MELA				AML	AML		
	comp=N,863μm,0.8s						
MELA				AML	AML		
	comp=N,847μm,1.6s						
MELA				AML	AML		
	comp=E,668μm,0.8s						
BSSO	**Busso**	**1.77**	**328**	P	**Pn**	**11 58 49.6**	**+1.0**
BSSO				AML	AML		
	comp=N,216μm,1.0s						
BSSO				AML	AML		
	comp=E,188μm,1.6s						
IFIL	**Filicudi I Eol**	**1.77**	**214**	P	**Pn**	**11 58 48.4**	**-0.3**
CEL	**Celeste**	**1.78**	**178**		**Pn**	**11 58 46.8**	**-2.2**
CEL	**Celeste**	**1.78**	**178**	⇑P	**Pn**	**11 58 47.4**	**-1.5**
CEL				AML	AML		
	comp=E,6300μm,0.5s						
CEL				AML	AML		
	comp=N,4845μm,0.4s						
CEL				AML	AML		
	comp=E,5235μm,0.5s						
CEL				AML	AML		
	comp=N,3940μm,0.4s						
VPL	**Vulcano Piano**	**1.79**	**202**	⇑P	**Pn**	**11 58 48.5**	**-0.4**
VPL				AML	AML		
	comp=E,4100μm,0.7s						
VPL				AML	AML		
	comp=N,3125μm,0.4s						
MSRU	**Castanea**	**1.79**	**188**	⇑P	**Pn**	**11 58 47.4**	**-1.6**
MSRU				S	**S**	**11 59 18.5**	**-4.0**
MSRU				AML	AML		
	comp=N,4570μm,0.4s						
MSRU				AML	AML		
	comp=E,3600μm,0.4s						
MSCL	**Scilla**	**1.81**	**181**	⇑P	**Pn**	**11 58 47.4**	**-1.7**
MSCL				AML	AML		
	comp=E,6855μm,0.6s						
MSCL				AML	AML		
	comp=N,7940μm,0.6s						
VAGA	**Valle Agricola**	**1.83**	**319**	⇓P	**Pn**	**11 58 49.9**	**+0.8**
VAGA				AML	AML		
	comp=E,234μm,1.4s						
VAGA				AML	AML		
	comp=N,402μm,0.9s						
MILZ	**Milazzo**	**1.83**	**195**	⇑P	**Pn**	**11 58 48.2**	**-1.0**
MILZ				S	**S**	**11 59 19.6**	**-3.3**
MILZ				AML	AML		
	comp=E,6190μm,0.4s						
MILZ				AML	AML		
	comp=N,4435μm,0.5s						
GMB	**Gambarie**	**1.87**	**180**	P	**Pn**	**11 58 48.1**	**-1.7**
GMB				AML	AML		
	comp=N,17000μm,0.8s						
GMB				AML	AML		
	comp=E,21350μm,0.3s						
SOI	**Samo**	**1.98**	**175**	P	**Pn**	**11 58 49.2**	**-1.2**
SOI				AML	AML		
	comp=E,2485μm,1.6s						
SOI				AML	AML		
	comp=N,2615μm,0.5s						
SCTE	**Santa Cesarea**	**2.03**	**88**	Pn	**Pn**	**11 58 51.2**	**+0.3**
SCTE	**Santa Cesarea**	**2.03**	**88**	⇓P	**Pn**	**11 58 51.1**	**+0.3**

SCTE S **S** **11 59 23.8 -1.9**
SCTE AML AML
comp=N,2345µm,1.0s
SCTE AML AML
comp=E,2565µm,0.9s
RNI2 Rionero Sannit 2.09 323 P **Pn** **11 58 52.8 +1.4**
RNI2 AML AML
comp=E,414µm,1.2s
RNI2 AML AML
comp=N,511µm,1.0s
AIO Antillo 2.12 193 ⇑P **Pn** **11 58 51.1 -0.7**
AIO S **S** **11 59 24.3 -3.2**
AIO AML AML
comp=E,1155µm,0.7s
AIO AML AML
comp=N,1140µm,0.8s
MSFR San Fratello 2.23 206 ⇑P **Pn** **11 58 52.6 -0.1**
MSFR AML AML
comp=E,350µm,1.5s
MSFR AML AML
comp=N,402µm,1.6s
MNO Monte Soro 2.29 203 P **Pn** **11 58 53.4 0.0**
MNO AML AML
comp=E,666µm,0.7s
MNO AML AML
comp=N,826µm,0.9s
POFI Posta Fibreno 2.32 317 ⇑P **Pn** **11 58 54.2 +0.8**
POFI AML AML
comp=N,146µm,1.6s
POFI AML AML
comp=E,165µm,1.2s
EMSG Monte Spagnolo 2.32 197 P **Pn** **11 58 54.3 +0.6**
EMSG AML AML
comp=N,1800µm,0.9s
EMSG AML AML
comp=E,1850µm,0.7s
EPZF Pizzo Felice 2.34 199 P **Pn** **11 58 54.1 +0.2**
EPZF AML AML
comp=E,1039µm,0.6s
EPZF AML AML
comp=N,1460µm,1.0s
INTR Introdacqua 2.44 324 **Pn** **11 58 53.7 -0.9**
CSLB Castelbuono 2.51 214 ⇑P **Pn** **11 58 55.1 -0.3**
CSLB AML AML
comp=E,184µm,0.4s
CSLB AML AML
comp=N,164µm,0.3s
GALF Gagliano Caste 2.53 203 P **Pn** **11 58 56.8 +1.2**
GALF AML AML
comp=N,638µm,0.7s
GALF AML AML
comp=E,1055µm,0.6s
ESML S. M. di Licod 2.53 197 P **Pn** **11 58 55.8 +0.3**
ESML AML AML
comp=E,671µm,1.4s
ESML AML AML
comp=N,666µm,1.2s
PETRA Petralia Sopra 2.58 212 P **Pn** **11 58 56.1 0.0**
PETRA AML AML
comp=E,522µm,0.5s
PETRA AML AML
comp=N,628µm,0.3s
CAGR Agira 2.63 204 P **Pn** **11 58 57.5 +0.9**
CAGR AML AML
comp=E,1595µm,1.2s
CAGR AML AML
comp=N,1730µm,0.8s
T0110 Collepietro 2.67 325 P **Pn** **11 58 57.8 +0.9**
T0110 AML AML
comp=N,340µm,0.7s
T0110 AML AML
comp=E,322µm,0.9s
VAE Valguarnera 2.79 204 P **Pn** **11 58 59.1 +0.9**
comp=E,106nm,0.4s,baz=340,slow=3.8,SNR=32
HLNI Lentini 2.79 196 P **Pn** **11 58 56.9 -1.2**
HLNI AML AML
comp=E,362µm,1.5s
HLNI AML AML
comp=N,332µm,1.6s
HAGA Augusta 2.80 191 P **Pn** **11 58 56.7 -1.5**
VLO Vlora 2.84 80 **Pn** **11 58 59.5 +1.0**
VLO Vlora 2.84 80 P **Pn** **11 58 59.2 +0.7**
CORL Corleone 2.91 223 ⇑P **Pn** **11 59 00.0 +0.6**
AQU L'Aquila 2.94 322 **Pn** **11 59 00.5 +0.9**
SSY Sortino 2.94 192 P **Pn** **11 58 58.0 -1.7**
FIAM Fiamignano 3.02 318 ⇑P **Pn** **11 59 01.9 +1.5**
FIAM AML AML
comp=N,254µm,0.6s
FIAM AML AML
comp=E,238µm,1.1s
RAFF Raffo Rosso 3.04 203 **Pn** **11 59 01.0 +0.3**
KEK Kerkira 3.08 95 Pn **Pn** **11 59 01.7 +0.8**
KEK Kerkira 3.08 95 P **Pn** **11 59 01.3 +0.4**
KEK Kerkira 3.08 95 ⇓P **Pn** **11 59 01.4 +0.4**
KEK AML AML
comp=E,90µm,0.7s
KEK AML AML
comp=N,83µm,1.6s
CAMP Campotosto 3.08 325 **Pn** **11 59 02.4 +1.3**
HCY Herceg Novi 3.13 39 ⇓*i*Pn **Pn** **11 59 02.0 +0.5**
HCY Herceg Novi 3.13 39 ⇓*i*Pn **Pn** **11 59 00.9 -0.6**
HCY *i* Sn **S** **11 59 41.9 -3.3**
STON Ston 3.16 26 ⇓*i*Pn **Pn** **11 59 01.0 -0.7**
HMDC Modica 3.19 195 P **Pn** **11 59 01.6 -0.7**
HMDC AML AML
comp=E,635µm,1.6s
HMDC AML AML
comp=N,918µm,1.3s
CLTB Caltabellotta 3.20 220 **Pn** **11 59 02.7 +0.3**
ULC Ulcinj 3.22 52 *e*Pn **Pn** **11 59 01.9 -0.6**
ULC *i* Sn **S** **11 59 43.8 -3.2**
CLTA Licata 3.23 207 P **Pn** **11 59 02.6 -0.1**
CLTA AML AML
comp=N,1140µm,0.3s
CLTA AML AML
comp=E,1040µm,0.3s
BUM Brajici-Budva 3.23 45 *e*Pn **Pn** **11 59 02.0 -0.7**
BUM *i* Sn **S** **11 59 43.9 -3.4**
FAVR Favara 3.25 212 P **Pn** **11 59 03.7 +0.8**
MMGO Monte Magaggia 3.26 224 P **Pn** **11 59 02.9 -0.1**
TREB Trebinje 3.28 35 ⇓*i*Pn **Pn** **11 59 03.5 +0.4**
LNSS Leonessa 3.31 322 ⇑P **Pn** **11 59 04.4 +0.9**
LNSS AML AML
comp=E,703µm,0.2s
LNSS AML AML
comp=N,476µm,1.4s
DRME Dracevica, Mon 3.32 49 ⇓*i*Pn **Pn** **11 59 04.5 +1.0**
DRME Dracevica, Mon 3.32 49 ⇑*i*Pn **Pn** **11 59 03.0 -0.5**
DRME *i* Sn **S** **11 59 45.7 -3.2**
TIR Tirane 3.34 66 ⇓P **Pn** **11 59 04.7 +1.0**
TIR Tirane 3.34 66 Pn **Pn** **11 59 04.3 +0.6**
TIR Tirane 3.34 66 P **Pn** **11 59 04.8 +1.1**
CEME Cevo 3.42 42 ⇑*i*Pn **Pn** **11 59 04.0 -0.7**
CEME *i* Sn **S** **11 59 47.5 -3.4**
ARRO Arrone 3.42 319 ⇑P **Pn** **11 59 05.9 +1.2**
ARRO AML AML
comp=E,222µm,0.7s
ARRO AML AML
comp=N,220µm,1.2s
BRY Bratogost 3.51 35 ⇓*i*Pn **Pn** **11 59 06.3 +0.6**
BRY Bratogost 3.51 35 *e*Pn **Pn** **11 59 05.0 -0.7**
BRY *i* Sn **S** **11 59 49.2 -3.6**
IGT Igoumenitsa 3.51 97 P **Pn** **11 59 06.5 +0.8**
PDG Podgorica 3.52 46 ⇓P **Pn** **11 59 06.5 +0.8**
PDG Podgorica 3.52 46 Pn **Pn** **11 59 06.5 +0.8**
TTG Podgorica 3.52 46 *e*Pn **Pn** **11 59 05.2 -0.5**
TTG *i* Sn **S** **11 59 49.5 -3.2**
TOLF Tolfa 3.53 306 ⇑P **Pn** **11 59 06.9 +1.1**
TOLF AML AML
comp=E,168µm,0.6s
TOLF AML AML
comp=N,132µm,0.5s
CESX Cesi 3.54 317 **Pn** **11 59 06.8 +0.9**
FEMA Monte Fema 3.58 325 AML AML
comp=N,8465µm,0.3s
FEMA AML AML
comp=E,7555µm,0.7s
NKME Niksic 3.60 40 ⇓*i*Pn **Pn** **11 59 06.0 -0.6**
NKME *i* Sn **S** **11 59 51.0 -3.4**
FDMO Fiordimonte 3.63 326 AML AML
comp=E,3840µm,0.2s
FDMO AML AML
comp=N,4375µm,0.3s
LSK Leskovik 3.66 87 P **Pn** **11 59 07.9 +0.4**
CESI CESI - Serrava 3.68 324 AML AML
comp=E,1410µm,0.6s
CESI AML AML
comp=N,1925µm,0.3s
KBN Korca 3.84 80 **Pn** **11 59 10.8 +1.5**
KBN Korca 3.84 80 P **Pn** **11 59 10.9 +1.5**
EL6 Elcito 3.86 329 ⇑P **Pn** **11 59 09.7 0.0**
EL6 AML AML
comp=E,430µm,0.8s
EL6 AML AML
comp=N,459µm,0.5s
PHP Peshkopia 3.86 63 P **Pn** **11 59 10.8 +1.1**
CING Cingoli 3.87 330 ⇑P **Pn** **11 59 09.5 -0.2**
SNTG Esanatoglia 3.87 327 AML AML
comp=N,249µm,0.5s
SNTG AML AML
comp=E,222µm,0.7s
JAN Janina 3.89 94 P **Pn** **11 59 10.3 +0.3**
UPM Unac-Piva 3.91 35 ⇓*i*Pn **Pn** **11 59 11.6 +1.3**
UPM Unac-Piva 3.91 35 *e*Pn **Pn** **11 59 09.7 -0.6**
UPM *i* Sn **S** **11 59 57.4 -3.7**
OHR Ohrid 3.94 73 *i* P **Pn** **11 59 12.2 +1.7**
KOME Kolasin 3.94 43 ⇓*i*Pn **Pn** **11 59 10.2 -0.4**
KOME *i* Sn **S** **11 59 58.2 -3.4**
DMLN Damoulianata-K 3.97 116 P **Pn** **11 59 10.9 0.0**
KEF3 Kipouria, Keph 3.97 116 P **Pn** **11 59 11.0 +0.1**
LATE Laterza 3.97 312 **Pn** **11 59 12.1 +1.2**
FOSV Fossato di Vic 3.98 326 AML AML
comp=E,234µm,0.7s
FOSV AML AML
comp=N,300µm,1.1s
KEF4 Livadi, Kephal 4.00 115 P **Pn** **11 59 11.0 -0.2**
MGAB Montegabbione 4.00 317 ⇑P **Pn** **11 59 12.3 +1.2**
MGAB AML AML
comp=E,210µm,1.2s
MGAB AML AML
comp=N,193µm,0.4s
NYDR Nydri-Lefkada 4.00 108 P **Pn** **11 59 11.6 +0.4**
PVY Plav 4.02 49 *e*Pn **Pn** **11 59 11.1 -0.4**
PVY *i* Sn **S** **12 00 00.0 -3.3**
MURB Monte Urbino 4.06 324 **Pn** **11 59 12.4 +0.6**
MURB Monte Urbino 4.06 324 AML AML
comp=N,606µm,1.0s
MURB AML AML
comp=E,670µm,0.3s
ARVD Arcevia 4.07 329 ⇑P **Pn** **11 59 12.1 +0.2**
ARVD AML AML
comp=E,160µm,0.8s
ARVD AML AML
comp=N,246µm,0.7s
ATFO Monte Foce - G 4.12 325 AML AML
comp=N,241µm,0.6s
ATFO AML AML
comp=E,212µm,0.8s
SRKY Kupres RS 4.14 13 ⇑*i*Pn **Pn** **11 59 14.5 +1.6**
VLS Valsamata 4.15 115 P **Pn** **11 59 12.8 -0.2**
IVA Berane 4.16 46 *e*Pn **Pn** **11 59 12.8 -0.3**
IVA *i* Sn **S** **12 00 02.7 -3.4**
ATVO AVT- Monte Val 4.20 324 AML AML
comp=E,387µm,0.5s
ATVO AML AML
comp=N,404µm,0.8s
PLE Pljevlja 4.23 38 *e*Pn **Pn** **11 59 13.6 -0.3**
PLE *i* Sn **S** **12 00 04.1 -3.5**
MPAG Monte Paganucc 4.25 328 ⇑P **Pn** **11 59 14.3 +0.2**
KPRO Kipourio 4.25 89 P **Pn** **11 59 15.8 +1.6**
PIEI Pieia 4.27 326 ⇑P **Pn** **11 59 15.0 +0.7**
PIEI AML AML
comp=E,260µm,0.6s
PIEI AML AML
comp=N,151µm,0.5s
CAFI Castiglion Fio 4.37 320 ⇑P **Pn** **11 59 16.3 +0.8**
CAFI AML AML
comp=E,122µm,0.6s
CAFI AML AML
comp=N,107µm,0.7s
RUDO Rudo 4.45 35 ⇓*i*Pn **Pn** **11 59 16.8 +0.5**
MGRS Mrkonjic Grad 4.47 12 ⇓*i*Pn **Pn** **11 59 18.2 +1.6**
KZN Kozani 4.56 85 P **Pn** **11 59 19.1 +1.3**
CASP Castiglione de 4.63 308 **Pn** **11 59 19.5 +1.0**
BBLS Lazići 4.66 34 ⇓*i*Pn **Pn** **11 59 19.9 +1.0**
HAPS Han Pijesak,Bl 4.66 29 ⇓*i*Pn **Pn** **11 59 19.8 +0.9**
SKO Skopje 4.66 64 *i* P **Pn** **11 59 19.9 +0.9**
EVR Evrytania 4.76 102 P **Pn** **11 59 22.1 +1.8**
TRIF Trifonti 4.80 311 ⇑P **Pn** **11 59 21.7 +1.2**
TRIF AML AML
comp=N,212µm,0.6s
TRIF AML AML
comp=E,184µm,1.1s
BLY Banja Luka 4.81 12 ⇑*i*Pn **Pn** **11 59 20.9 +0.3**
OSSC Osservatorio P 4.88 317 Pn **Pn** **11 59 22.1 +0.6**
A051A Mrakovica 5.03 9 ⇑*i*Pn **Pn** **11 59 23.6 +0.3**
LMD Lutirano 5.06 324 ⇑P **Pn** **11 59 24.4 +0.8**
GRG Griva 5.09 78 P **Pn** **11 59 24.6 +0.5**
STIP Stip 5.10 69 *i* P **Pn** **11 59 26.9 +2.8**
DIVS Divibare 5.10 36 Pn **Pn** **11 59 24.6 +0.4**
DIVS Divibare 5.10 36 ⇓*i*Pn **Pn** **11 59 24.4 +0.2**
LAKA Lakka 5.11 109 P **Pn** **11 59 26.1 +1.8**
VAY Valandovo 5.28 74 *i* P **Pn** **11 59 26.9 +0.5**
MTCR Monte La Croce 5.36 319 P **Pn** **11 59 27.2 -0.1**
MTRZ Monterenzio 5.41 325 P **Pn** **11 59 28.9 +1.1**
MTRZ Monterenzio 5.41 325 ⇑P **Pn** **11 59 28.9 +1.1**
AXAR Agios Charalam 5.44 101 P **Pn** **11 59 30.0 +1.7**
BOJS Bojanci 5.47 356 *i* P **Pn** **11 59 29.4 +0.8**
BOJS *i* S **S** **12 00 33.2 -1.0**
BOJS *e* 12 00 53.4
ITM Ithomi 5.57 119 Pn **Pn** **11 59 30.3 +0.5**
ITM Ithomi 5.57 119 P **Pn** **11 59 29.9 0.0**
ZCCA Zocca 5.61 322 **Pn** **11 59 31.5 +1.2**
ZCCA Zocca 5.61 322 P **Pn** **11 59 31.6 +1.2**
SKDS Skadanscina 5.66 347 *i* P **Pn** **11 59 31.2 +0.4**
BOVS Bovan 5.67 49 ⇓P **Pn** **11 59 31.3 +0.3**
PGF Pioggiola 5.72 298 *e*P **Pn** **11 59 31.6 -0.1**
VLC Villacollemand 5.77 317 **Pn** **11 59 32.1 -0.1**
VLC Villacollemand 5.77 317 P **Pn** **11 59 32.2 -0.1**
SARO Sassorosso 5.78 317 P **Pn** **11 59 32.2 -0.1**
CEY Cerknica 5.78 350 ⇑*i*Pn **Pn** **11 59 32.8 +0.4**
KKB Krupnik 5.79 69 *i* P **Pn** **11 59 34.0 +1.5**
RAVA Ravarino 5.86 325 P **Pn** **11 59 34.3 +1.1**
EQUI Equi 5.89 316 P **Pn** **11 59 33.6 -0.1**
FRGS Fruska Gora 5.89 29 ⇓P **Pn** **11 59 34.6 +0.9**
FRGS Fruska Gora 5.89 29 ⇑*i*Pn **Pn** **11 59 33.7 0.0**
PAIG Paliouri 6.03 89 P **Pn** **11 59 35.0 -0.5**
LJU Ljubljana 6.07 351 *i* P **Pn** **11 59 36.8 +0.9**
LJU *e*S **S** **12 00 48.6 +1.0**
LJU *i* 12 01 08.6
TEOL Teolo 6.13 331 **Pn** **11 59 36.2 -0.4**
VTS Vitosha 6.14 63 ⇑P **Pn** **11 59 38.5 +1.5**
VTS Vitosha 6.14 63 Pn **Pn** **11 59 38.1 +1.2**
VTS Vitosha 6.14 63 *i* P **Pn** **11 59 37.7 +0.8**
MMB Musomiste 6.19 73 *i* P **Pn** **11 59 38.4 +0.9**
PRMA PARMA 6.24 321 **Pn** **11 59 38.3 +0.4**
BLKB Belogradchik 6.24 53 ⇑P **Pn** **11 59 39.5 +1.5**
KOVH Kovagotottos 6.27 15 P **Pn** **11 59 38.2 0.0**
KOVH S **S** **12 00 49.1 -2.8**
KRND KRANIDI 6.31 113 P **Pn** **11 59 39.2 +0.2**
MSSA Maissana 6.34 314 Pn **Pn** **11 59 39.2 0.0**
MDVR Moldovita 6.43 41 ⇑P **Pn** **11 59 42.1 +1.7**
ATH Athens Observa 6.48 106 P **Pn** **11 59 41.6 +0.5**
VLI Veliai 6.50 118 P **Pn** **11 59 42.8 +1.5**
MORH Mrgy, Hungar 6.50 18 ⇑P **Pn** **11 59 41.9 +0.7**
MORH Mrgy, Hungar 6.50 18 P **Pn** **11 59 41.9 +0.7**
OBKA Obir 6.53 352 ⇑*i*Pn **Pn** **11 59 42.0 +0.3**
OBKA Obir 6.53 352 *e*Pn **Pn** **11 59 41.9 +0.3**
comp=E,34nm,0.7s,SNR=17
ATHU Athens Univers 6.54 106 P **Pn** **11 59 42.3 +0.5**
VLY Voula,Athens 6.58 107 P **Pn** **11 59 42.5 +0.2**
PRED Cave del Predi 6.61 346 **Pn** **11 59 43.3 +0.8**
STAL STALIGIAL 6.62 341 **Pn** **11 59 42.6 0.0**
SOKA Soboth 6.66 355 *i* Pn **Pn** **11 59 43.7 +0.5**
comp=E,21nm,0.5s
KEST Kesra 6.69 232 P **Pn** **11 59 43.5 -0.2**
comp=E,15nm,0.9s,baz=333,slow=4.7,SNR=8.1
KEST Kesra 6.69 232 Pn **Pn** **11 59 42.4 -1.3**
CTI Castel Tesino 6.73 334 **Pn** **11 59 43.9 -0.3**
CLUD Cludinico 6.76 342 Pn **Pn** **11 59 44.6 +0.2**
MYKA Terra Mystica 6.77 347 *e*Pn **Pn** **11 59 45.4 +0.8**
comp=E,14nm,0.4s,SNR=15
SALO Salr 6.80 327 Pn **Pn** **11 59 43.9 -1.0**
KTHR Kythira 6.80 121 P **Pn** **11 59 46.0 +0.9**
KTHA Kythira Island 6.84 121 P **Pn** **11 59 46.6 +1.0**
HERR Herculane 6.86 43 ⇑P **Pn** **11 59 48.3 +2.6**
RZN Rozhen 6.94 73 *i* P **Pn** **11 59 47.4 +0.6**
BZS Buzias 7.01 35 ⇓P **Pn** **11 59 50.1 +2.7**
TIH Tihany 7.02 12 P **Pn** **11 59 50.8 +3.2**
ABTA Abfaltersbach 7.12 341 *i* Pn **Pn** **11 59 49.5 +0.6**
comp=E,74nm,0.6s,SNR=48
ARSA Arzberg 7.21 358 *e*Pn **Pn** **11 59 50.5 +0.5**
comp=E,6.4nm,0.4s,SNR=14
MPLH Magyarpolny 7.23 9 P **Pn** **11 59 51.0 +0.8**
SBF Sospel 7.33 304 *e*P **Pn** **11 59 51.9 +0.4**
GZR Gura Zlata 7.40 41 ⇓P **Pn** **11 59 55.0 +2.5**
RDO Rodhopi 7.47 78 Pn **Pn** **11 59 53.8 +0.5**
SOP Sopron 7.66 4 P **Pn** **11 59 56.6 +1.1**
RONA Rosalia, Austr 7.66 2 *i* Pn **Pn** **11 59 56.7 +1.1**
comp=E,20nm,0.7s
LMR La Mourre 7.71 298 *e*P **Pn** **11 59 56.1 -0.1**
FUORN Ofenpass-Fuorn 7.72 330 Pn **Pn** **11 59 57.5 +0.9**
BIOA Bad Ischl, Aus 7.81 349 *i* Pn **Pn** **11 59 58.3 +0.8**
comp=E,30nm,0.8s,SNR=20
WTTA Wattenberg 7.83 339 *e*Pn **Pn** **11 59 58.7 +0.8**
comp=E,15nm,0.4s,SNR=15
CONA Conrad Observa 7.88 0 *e*Pn **Pn** **11 59 59.3 +0.8**
comp=E,6.0nm,0.5s,SNR=11
MOA Molln 7.88 352 *e*Pn **Pn** **11 59 59.4 +1.0**
comp=E,18nm,0.6s,SNR=27
FETA Feichten 7.89 334 *i* Pn **Pn** **11 59 59.2 +0.5**
comp=E,90nm,0.9s,SNR=72
WATA Walderalm 7.91 339 *e*Pn **Pn** **12 00 00.0 +1.2**
comp=E,5.8nm,0.3s,SNR=13
SQTA Sankt Quirin 7.92 337 *i* Pn **Pn** **11 59 59.8 +0.9**
comp=E,34nm,0.4s,SNR=33
TUE Stuetta 7.97 326 Pn **Pn** **11 59 59.6 -0.1**
DAVOX Davos/Dischmat 8.00 329 P **Pn** **12 00 00.0 -0.1**
comp=E,35nm,0.5s,baz=149,slow=11,SNR=54
MOTA Moosalm 8.06 336 *i* Pn **Pn** **12 00 01.8 +1.1**
comp=E,70nm,0.7s,SNR=35
MBDF Montbardon 8.17 308 *e*P **Pn** **12 00 02.9 +0.7**
RETA Reutte 8.29 335 *i* Pn **Pn** **12 00 05.0 +1.4**
comp=E,37nm,0.5s,SNR=30
ARR Arges 8.38 48 ⇑P **Pn** **12 00 08.0 +3.2**
PSZ Piszkesteto 8.40 19 ⇓P **Pn** **12 00 06.0 +1.1**
PSZ Piszkesteto 8.40 19 Pn **Pn** **12 00 05.7 +0.8**
PSZ Piszkesteto 8.40 19 P **Pn** **12 00 05.4 +0.5**
DAVA Damuels 8.42 331 *i* Pn **Pn** **12 00 06.0 +0.7**
comp=E,42nm,0.5s,SNR=32
SMRF Simiane la Rot 8.58 301 *e*P **Pn** **12 00 08.7 +1.5**
IDI Anoyia 8.61 121 ⇑P **Pn** **12 00 09.0 +1.3**
IDI Anoyia 8.61 121 P **Pn** **12 00 06.2 -1.5**
comp=E,10nm,0.3s,baz=255,slow=7.1,SNR=29
IDI Anoyia 8.61 121 Pn **Pn** **12 00 06.8 -0.9**
LPG La Plagne 8.61 312 *e*P **Pn** **12 00 09.2 +1.4**
LPL La Plagne 8.63 312 *e*P **Pn** **12 00 09.0 +1.0**
VOIR 8.66 49 ⇑P **Pn** **12 00 10.4 +2.2**
RAZG Razgrad 8.72 63 ⇓P **Pn** **12 00 10.7 +1.8**
ORIF Oris-en-Rattie 8.81 307 *e*P **Pn** **12 00 10.8 +0.6**
CKRC Cesky Krumlov 8.84 353 *e*P **Pn** **12 00 11.0 +0.6**
SENIN Lac Senin/Sane 8.87 318 Pn **Pn** **12 00 10.3 -0.6**
JAVC Velka Javorina 8.91 8 *e*P **Pn** **12 00 12.6 +1.3**
GEC2 GERESS Array S 8.93 351 **Pn** **12 00 12.0 +0.4**
GERES GERESS Array B 8.93 351 P **Pn** **12 00 10.3 -1.3**
comp=E,31nm,0.7s,baz=201,slow=22,SNR=151
GERES GERESS Array B 8.93 351 **Pn** **12 00 11.9 +0.4**
KRUC Moravsky 9.03 2 *e*P **Pn** **12 00 13.4 +0.7**
DOPR Dopca 9.17 47 ⇓P **Pn** **12 00 16.6 +2.1**
MLR Muntele Rosu 9.22 50 ⇑P **P** **12 00 19.0 -2.4**
MLR Muntele Rosu 9.22 50 P **Pn** **12 00 17.2 +1.9**
comp=E,5.6nm,0.7s,baz=265,slow=11,SNR=6.4
MLR Muntele Rosu 9.22 50 Pn **Pn** **12 00 18.2 +2.9**
KHC Kasperske Hory 9.22 351 Pn **Pn** **12 00 15.6 +0.4**
KHC Kasperske Hory 9.22 351 *e*P **Pn** **12 00 15.5 +0.3**
KHC *ex* x 12 00 22.0
VRAC Vranov 9.28 3 ⇓P **Pn** **12 00 17.1 +1.3**
VRAC Vranov 9.28 3 P **Pn** **12 00 16.2 +0.3**
comp=E,13nm,0.7s,baz=184,slow=11,SNR=16
VRAC Vranov 9.28 3 *e*P **Pn** **12 00 16.5 +0.7**
MAUC Maruska 9.43 8 *e*P **Pn** **12 00 20.2 +2.5**
OZUR 9.47 47 ⇑P **Pn** **12 00 20.3 +2.0**
VIVF Saint-Julien-l 9.54 304 *e*P **Pn** **12 00 18.9 -0.3**
CABF La Chapelle 9.66 316 *e*P **Pn** **12 00 19.9 -0.8**
CABF *e*Sn **S** **12 02 06.7 -3.0**
comp=E,28nm,1.1s
LASF Ste Croix 9.77 298 *e*P **Pn** **12 00 21.7 -0.3**
MORC Moravsky Berou 9.81 7 ⇓P **Pn** **12 00 24.5 +2.0**
MORC Moravsky Berou 9.81 7 Pn **Pn** **12 00 23.8 +1.3**
MORC Moravsky Berou 9.81 7 *e*P **Pn** **12 00 23.2 +0.7**
SSB Saint Sauveur 9.82 306 Pn **Pn** **12 00 22.1 -0.5**
PLOR Plostina 9.83 50 ⇓P **Pn** **12 00 25.2 +2.5**
BFO Black Forest 9.87 329 Pn **Pn** **12 00 23.3 0.0**
VRI Vrincioaia 9.88 50 ⇑P **P** **12 00 27.1 -1.5**
GOPC GO Pecny, Ondr 9.90 356 *e*P **Pn** **12 00 24.8 +1.2**
PRU Pruhonice 9.98 355 *e*P **Pn** **12 00 26.2 +1.6**
PRU *ex* x 12 00 31.4
KARP Karpathos 10.03 113 Pn **Pn** **12 00 23.6 -1.8**
KRLC Kraliky 10.05 4 *e*P **Pn** **12 00 27.2 +1.7**
KRLC *ex* x 12 00 32.5
HINF Hinteralfeld 10.11 323 *e*P **Pn** **12 00 25.3 -0.9**
BURAR Bucovina Array 10.16 39 ⇑P **P** **12 00 30.9 -0.8**
GRFO Grafenberg 10.18 343 **Pn** **12 00 27.5 +0.4**
GRA1 Grafenberg Arr 10.18 343 **Pn** **12 00 26.9 -0.3**
ECH Echery 10.27 326 **Pn** **12 00 28.0 -0.2**
DPC Dobruska-Polom 10.31 2 *e*P **Pn** **12 00 29.9 +1.1**
DPC *ex* x 12 00 35.0
CDF Champ du Feu 10.37 327 *e*P **Pn** **12 00 29.7 +0.2**
CFR Carcaliu 10.42 56 ⇑P **P** **12 00 34.0 -0.5**
NKC Novy Kostel 10.46 348 *e*P **Pn** **12 00 31.1 +0.5**
HAU Haudompre 10.48 323 *e*P **Pn** **12 00 30.2 -0.6**
OSTC Ostas 10.52 1 *e*P **Pn** **12 00 32.3 +1.0**
PVCC Panska Ves 10.52 356 *e*P **Pn** **12 00 32.8 +1.5**
CHVC Chvalec 10.55 1 *e*P **Pn** **12 00 32.7 +1.1**
OJC Ojcow 10.55 14 **Pn** **12 00 31.8 +0.1**
SMF Signal de Mont 10.93 311 *e*P **Pn** **12 00 34.6 -1.9**
PAGF Fort de Pagny 11.16 323 *e*P **Pn** **12 00 39.3 0.0**
SFTF Sexfontaines 11.24 320 *e*P **Pn** **12 00 39.4 -0.9**
baz=134
CAF Calviac 11.27 300 *e*P **Pn** **12 00 41.3 +0.6**
LOR Lormes 11.27 314 *e*P **Pn** **12 00 38.8 -1.9**
baz=131
AVF Avril sur Loir 11.29 311 *e*P **Pn** **12 00 39.3 -1.6**
SSF Saint Saulge 11.35 312 *e*P **Pn** **12 00 39.8 -1.9**
CLL Collm 11.44 351 **Pn** **12 00 44.2 +1.6**
CLL Collm 11.44 351 *i* P **P** **12 00 44.6 -1.1**
comp=Z,28nm,0.8s
CLL *i* Pmax 12 00 47.5
comp=Z,49nm,1.0s
CLL Collm 11.44 351 *e*Px Px 12 01 35.0
MEZF Maizieres J'vi 11.44 321 *e*P **Pn** **12 00 42.4 -0.3**
baz=139
BGF Bois d'Agland 11.47 309 *e*P **Pn** **12 00 41.8 -1.4**
SAVF Savonnieres en 11.48 322 *e*P **Pn** **12 00 43.3 0.0**
baz=146
AKAS Kas 11.50 105 **Pn** **12 00 45.1 +1.3**
MILM Milestii Mici 11.66 50 ⇓P **P** **12 00 49.8 +1.5**
MILM Milestii Mici 11.66 50 *e*P **P** **12 00 49.0 +0.7**
comp=Z,40nm,0.4s
TCF Toulx Ste Croi 11.73 307 *e*P **Pn** **12 00 46.1 -0.3**
RJF Les Rejaudoux 11.77 301 *e*P **Pn** **12 00 47.8 +1.0**
WLF Walferdange 11.81 328 **P** **12 00 49.8 -0.1**
ETSF Etsaut 12.62 288 *e*P **Pn** **12 00 57.6 +0.2**
ETSF *e*Sn **S** **12 03 17.8 +0.2**
comp=Z,8.8nm,1.3s
GIVF Givet 12.70 326 *e*P **P** **12 00 59.2 -0.6**
BAIF Baives 12.94 325 *e*P **P** **12 01 02.3 -0.1**
SJPF Ste Jean 13.13 289 *e*P **P** **12 01 04.5 -0.2**
MFF Saint Martin d 13.34 305 *e*P **P** **12 01 06.6 -0.3**
BRTR Keskin Array B 13.69 86 P **P** **12 01 11.6 +0.6**
comp=Z,1.2nm,0.8s,baz=283,slow=11,SNR=4.3
BRTR Keskin Array B 13.69 86 P **Pn** **12 01 10.4 -0.1**
AKASG Malin Array Be 14.20 37 P **Pn** **12 01 16.2 -0.1**
comp=Z,8.3nm,0.6s,baz=230,slow=10,SNR=40
AKASG S **S** **12 03 50.8 -2.1**
comp=Z,2.4nm,0.8s,baz=230,slow=19,SNR=4.8
AKASG Malin Array Be 14.20 37 P **Pn** **12 01 15.8 -0.6**
AKBB Malin Array Si 14.20 37 P **P** **12 01 16.8 +0.5**
LDF La Druitiere 14.24 312 *e*P **P** **12 01 16.1 -0.8**
FLN La Foliniere 14.53 312 *e*P **P** **12 01 18.9 -1.2**
GRR Gorron 14.56 310 *e*P **P** **12 01 19.9 -0.5**
CSS Mathiatis 14.79 105 **Pn** **12 01 24.2 +0.6**
ESBB Sonseca Array 15.20 275 P **Pn** **12 01 29.5 +0.9**
ESBB IAmb IAmb 12 01 30.8
comp=Z,6.9nm,0.6s
ESDC Sonseca Array 15.21 275 P **P** **12 01 27.8 +0.1**
comp=Z,4.4nm,0.5s,baz=74,slow=10,SNR=40
ESDC Sonseca Array 15.21 275 P **Pn** **12 01 29.3 +0.7**
PAB San Pablo 15.52 275 P **P** **12 01 31.0 -0.1**
PAB IAmb IAmb 12 01 34.3

comp=Z,7.9nm,0.8s
PABE Paberze 16.39 17 P **P 12 01 41.0 +0.6**
PABE Paberze 16.39 17 *eP* **Pn 12 01 41.6 -0.6**
PBUR Paburge 16.49 12 *eP* **P 12 01 42.1 +0.6**
VSVD Vaisvydziai 16.82 16 *eP* **Pn 12 01 46.6 -0.7**
ISAL Salakas 16.98 20 *eP* **P 12 01 47.4 +0.6**
PBRG Braganca 17.14 283 *eP* **P 12 01 48.6 -0.2**
comp=Z,16nm,0.9s
MVO Moncorvo 17.39 281 *eP* **P 12 01 51.8 +0.3**
comp=Z,17nm,1.6s
PBAR Barrancos 17.84 271 *eP* **P 12 01 57.1 +0.8**
comp=Z,26nm,1.6s
MTE Manteigas 17.84 279 P **P 12 01 56.0 -0.5**
MTE IAmb IAmb 12 02 01.5
comp=Z,6.7nm,0.8s
PMRV Marv??o 17.86 276 *eP* **P 12 01 57.1 +0.5**
comp=Z,28nm,1.6s
PCBR Castelo Branco 17.87 277 *eP* **P 12 01 57.8 +1.2**
comp=Z,16nm,2.0s
MDT Midelt 17.93 253 P **P 12 01 56.0 -1.6**
comp=Z,3.8nm,0.7s,baz=88,slow=13,SNR=7.2
SLIT Slitere, Latvi 18.09 11 *eP* **P 12 01 58.6 -0.2**
PESTR Estremoz 18.11 274 *eP* **P 12 02 00.0 +0.7**
comp=Z,22nm,1.4s
PESTR Estremoz 18.11 274 P **P 12 01 59.0 -0.3**
PVAQ Vaqueiros 18.55 269 *eP* **P 12 02 04.5 +0.5**
comp=Z,63nm,1.8s
PVAQ Vaqueiros 18.55 269 P **P 12 02 03.7 -0.3**
PVAQ IAmb IAmb 12 02 38.6
comp=Z,29nm,1.5s
PMTG Montargil 18.56 275 *eP* **P 12 02 02.7 -1.4**
comp=Z,20nm,1.3s
PCAS Casmilo, Conde 18.61 278 *eP* **P 12 02 05.4 +0.7**
PCVE Castro Verde 18.74 270 *eP* **P 12 02 07.6 +1.6**
EIL Elat 18.76 118 P **P 12 02 07.7 +1.3**
comp=Z,5.3nm,0.7s,baz=201,slow=7.6,SNR=4.2
PNCL Nicolau / Gran 19.00 272 *eP* **P 12 02 08.3 -0.5**
SNART Snartemo 19.13 346 *eP* **P 12 02 11.2 +1.3**
VSU Vasula 19.71 17 *eP* **P 12 02 15.9 -0.2**
EKA Eskdalemuir Ar 19.83 327 P **P 12 02 16.9 -0.5**
comp=Z,1.3nm,0.3s,baz=117,slow=8.6,SNR=52
ESK Eskdalemuir 19.84 327 P **P 12 02 16.8 -0.7**
ESK IAmb IAmb 12 02 26.5
comp=Z,12nm,1.1s
KONO Kongsberg 20.02 351 P **P 12 02 18.6 -0.7**
KONO Kongsberg 20.02 351 *eP* **P 12 02 18.4 -0.9**
HFS Hagfors 20.16 357 P **P 12 02 20.1 -0.7**
comp=Z,28nm,0.5s,baz=163,slow=10,SNR=68
comp=Z,28nm,0.5s
OSL Oslo 20.17 353 *eP* **P 12 02 21.9 +0.9**
OSL IAmb IAmb 12 02 22.0
comp=Z,30nm,0.6s
BLS5 Blasjo 20.28 346 *eP* **P 12 02 22.2 0.0**
BLS5 IAmb IAmb 12 02 24.7
comp=Z,46nm,1.2s
AAL Aland 20.32 6 *eP* **P 12 02 22.0 -0.6**
KMY Karmoy 20.33 344 *eP* **P 12 02 22.4 -0.3**
KBZ Khabaz 20.45 71 P **P 12 02 24.9 +0.7**
comp=Z,1.2nm,0.8s,baz=154,slow=14,SNR=2.8
KBZ pP **pP 12 03 11.1 +4.9**
comp=Z,1.9nm,0.9s,baz=270,slow=7.5,SNR=3.1
comp=Z,1.2nm,0.8s
NC602 NORSAR Array S 20.89 354 P **P 12 02 27.1 -1.3**
NC602 NORSAR Array S 20.89 354 *eP* **P 12 02 26.9 -1.5**
SKAR Skarslia 21.18 350 *eP* **P 12 02 31.3 -0.1**
NB2 NORSAR Subarra 21.21 354 P **P 12 02 30.4 -1.2**
comp=Z,5.4nm,0.6s,baz=170,slow=11
NB2 NORSAR Subarra 21.21 354 P **P 12 02 30.4 -1.2**
baz=170,slow=11
NOA NORSAR Array B 21.21 354 P **P 12 02 30.5 -1.2**
comp=Z,2.8nm,0.4s,baz=168,slow=10,SNR=17
comp=Z,2.8nm,0.4s
BER Bergen 21.39 346 *eP* **P 12 02 33.1 -0.1**
HYA Hoyanger 21.97 347 *eP* **P 12 02 39.4 +1.0**
FINES FINESS Array B 22.33 13 P **P 12 02 41.8 0.0**
comp=Z,16nm,0.6s,baz=188,slow=8.8,SNR=75
comp=Z,16nm,0.6s
FINES FINESS Array B 22.33 13 P **P 12 02 41.9 +0.1**
FIA1 FINESS Array S 22.33 13 P **P 12 02 41.9 +0.1**
KTK1 Kautokeino 29.30 5 *eP* **P 12 03 43.9 -0.2**
TOA0 Torodi Ar. Sit 29.54 209 P **P 12 03 45.9 -0.9**
TOA0 IAmb IAmb 12 03 46.5
comp=Z,8.5nm,0.5s
TORD Torodi Ar. Bea 29.54 209 P **P 12 03 46.2 -0.6**
comp=Z,5.7nm,0.5s,baz=18,slow=9.4,SNR=18
comp=Z,5.7nm,0.5s
ARA0 ARCESS Array S 30.00 7 *eP* **P 12 03 49.5 -0.7**
ARCES ARCESS Array B 30.00 7 P **P 12 03 49.8 -0.5**
comp=Z,5.4nm,0.7s,baz=188,slow=8.9,SNR=19
comp=Z,5.4nm,0.7s
ARCES ARCESS Array B 30.00 7 P **P 12 03 49.5 -0.8**
ARCES IAmb IAmb 12 03 50.5
comp=Z,12nm,1.1s
ABKAR Akbulak array 32.30 59 P **P 12 04 10.6 0.0**
ABKAR PcP **PcP 12 06 51.7 +0.1**
DBIC Dimbokro 38.06 215 P **P 12 04 59.0 -0.9**
comp=Z,16nm,0.4s,baz=7.6,slow=8.6,SNR=54
comp=Z,16nm,0.4s
DBIC Dimbokro 38.06 215 P **P 12 04 58.8 -1.0**
TIC Toumodi 38.16 215⇑ *iP* **P 12 04 59.8 -0.9**
comp=Z,6.7nm,0.3s
KIC Kosan Boka 38.29 214⇑ *iP* **P 12 05 01.0 -0.8**
comp=Z,25nm,0.2s
LIC Lamto 38.53 215⇓ *iP* **P 12 05 02.9 -0.9**
comp=Z,48nm,0.3s
BRVK Borovoye 38.71 52 P **P 12 05 05.3 +0.4**
CHGR Chuyangaron 40.75 74 P **P 12 05 21.1 -0.8**
CHGR IAmb IAmb 12 05 28.7
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 47.19 49 P **P 12 06 13.5 +1.1**
comp=Z,0.7nm,0.4s,baz=289,slow=8.6,SNR=4.3
ZALV pP **pP 12 07 08.8 +0.2**
comp=Z,1.6nm,0.6s,baz=283,slow=8.0,SNR=5.0
comp=Z,0.7nm,0.4s
MK31 Makanchi Array 47.45 59 **P 12 06 15.1 +0.5**
MKAR Makanchi Array 47.45 59 P **P 12 06 15.2 +0.6**
comp=Z,1.2nm,0.4s,baz=281,slow=7.1,SNR=22
MKAR pP **pP 12 07 11.2 +0.3**
comp=Z,3.4nm,0.7s,baz=284,slow=6.1,SNR=11
comp=Z,1.2nm,0.4s
MKAR Makanchi Array 47.45 59 **P 12 06 15.1 +0.5**
DRLN Deer Lake 51.07 306 **P 12 06 41.2 -0.6**
DRLN IAmb IAmb 12 06 43.2
comp=Z,29nm,1.1s
EUNU Eureka 52.93 348 **P 12 06 55.9 +0.8**
SCHQ Schefferville 54.59 315 P **P 12 07 07.0 -0.4**
comp=Z,1.8nm,0.3s,baz=72,slow=4.2,SNR=5.2
comp=Z,1.8nm,0.3s
SCHQ Schefferville 54.59 315 P **P 12 07 06.8 -0.5**
SCHQ IAmb IAmb 12 07 29.5
comp=Z,19nm,1.3s
HAL Halifax 56.67 303 **P 12 07 21.6 -0.6**
BATG Bathurst New B 57.10 307 **P 12 07 24.8 -0.4**
E62A Clayton Lake 59.52 307 **P 12 07 41.7 -0.2**
E62A IAmb IAmb 12 08 17.4
comp=Z,20nm,1.3s
SONM Songino Array 62.07 50 pP pP 12 08 59.0 +0.2
comp=Z,0.8nm,0.6s,baz=300,slow=6.7,SNR=3.3
LBTB Lobatse 65.36 170 P **P 12 08 21.1 +0.5**
LBTB IAmb IAmb 12 08 21.3
comp=Z,17nm,1.2s
VOI Vohitsoka 68.06 149 P **P 12 08 38.2 +0.4**
VOI IAmb IAmb 12 09 09.7
comp=Z,11nm,1.3s
BOSA Boshof 68.87 171 P **P 12 08 42.9 +0.3**
comp=Z,7.6nm,0.5s,baz=346,slow=6.2,SNR=32
comp=Z,7.6nm,0.5s
BOSA Boshof 68.87 171 P **P 12 08 42.8 +0.3**
BOSA IAmb IAmb 12 08 43.6
comp=Z,7.3nm,0.7s
CMAR Chiang Mai Arr 73.20 80 P **P 12 09 09.1 +0.3**
comp=Z,0.5nm,0.3s,baz=305,slow=6.0,SNR=4.6
comp=Z,0.5nm,0.3s
DAWY Dawson 74.39 349 P **P 12 09 15.9 +1.0**
J26L Joseph Creek 74.53 351 P **P 12 09 16.9 +1.2**
BCAR Beaver Creek A 75.68 350 P **P 12 09 23.3 +1.0**
ECSD EROS Data Cent 76.76 317 P **P 12 09 28.8 +0.2**
X48A Hartselle 77.32 304 P **P 12 09 31.9 0.0**
X48A IAmb IAmb 12 09 32.7
comp=Z,7.8nm,0.7s
KSRS Korea Array 80.89 48 P **P 12 09 51.2 +0.1**
comp=Z,0.7nm,0.5s,baz=334,slow=3.9,SNR=2.0
comp=Z,0.7nm,0.5s
BDFB Brasilia 81.12 241 P **P 12 09 52.7 +0.1**
comp=Z,4.4nm,0.4s,baz=359,slow=0.8,SNR=6.5
comp=Z,4.4nm,0.4s
BDFB Brasilia 81.12 241 P **P 12 09 53.4 +0.7**
BDFB IAmb IAmb 12 09 54.4
comp=Z,16nm,1.2s
PDAR Pinedale Array 83.90 323 P **P 12 10 07.3 +0.5**
comp=Z,0.4nm,0.6s,baz=70,slow=6.9,SNR=6.7
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 91.01 311 P **P 12 10 42.2 +1.3**
comp=Z,1.0nm,0.9s,baz=55,slow=3.6,SNR=9.0
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 124.20 88 PKP **PKPdf 12 16 33.0 -0.7**
comp=Z,0.5nm,0.4s,baz=322,slow=1.7,SNR=25
ASAR Alice Springs 125.95 92 PKP **PKPdf 12 16 36.3 -0.7**
comp=Z,0.8nm,0.5s,baz=308,slow=1.5,SNR=12

IDC 29 12:01:22.2±7.5, 2°.00N×124°.63E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=191.0km s-min=117.9km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.80**	**157**	P	P	12 06 37.1	+0.2
	0.7nm,0.3s,baz=335,slow=10,SNR=34						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**27.06**	**161**	P	P	12 07 06.5	-0.1
	0.5nm,0.5s,baz=336,slow=7.2,SNR=16						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**37.34**	**156**	P	P	12 08 36.3	-0.2
	0.7nm,0.3s,baz=336,slow=12,SNR=2.8						
	0.7nm,0.3s						

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*IDC **29** 12:20:10.9±0.5, 29°.84N×42°.69W, h0km, mb4.7/34, mbtmp4.7/34, MS4.4/82, Error ellipse: s-maj=14.7km s-min=12.0km az=166.0*

*BJI **29** 12:20:12.0±0.0, 29°.90N×42°.50W, h10km, mb5.0/14, Ms4.9/1, Ms7 4.7/5*

*MOS **29** 12:20:12.2±1.1, 29°.84N×42°.47W, h12km, mb5.3/82, MS4.4/4, Error ellipse: s-maj=7.9km s-min=4.7km az=47.8*

*NEIC **29** 12:20:15.1±2.1, 29°.97N±0°.10×42°.5W±0°.1, h10km±1km, mb5.2/160, Error ellipse: s-maj=16.6km s-min=14.7km az=159.0*

*GCMT **29** 12:20:15.1±0.1, 29°.91N±0°.01×42°.66W±0°.01, h12km, MW5.2/148, Moment Tensor Solution. s76,c97; s148,c243; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.77±.01; $M_{\theta\theta}$0.17±.01; $M_{\phi\phi}$0.59±.01; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$0.34±.01; $M_{\phi r}$-0.17±.03; Best double couple: $M_0$0.80000×10^{17} NP1:ϕ_s17.00000°, δ50.00000°, λ-106.00000°. NP2:ϕ_s221.00000°, δ43.00000°, λ-72.00000°. Principal axes: T 0.7930, Plg4.0000°, Azm118.0000°; N 0.0140, Plg12.0000°, Azm27.0000°; P -0.8070, Plg77.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 12:20:14.2±0.3, 29°.91N±0°.06×42°.60W±0°.04, h14km, n860, σ1°38/826, mb5.1/184, MS4.4/92, 26C-31D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**14.75**	**50**	Pn	**Pn**	**12 23 38.7**	**-3.7**
BBSR	**BB Station**	**19.07**	**283**	P	**Pn**	**12 24 42.2**	**+5.1**
BBSR				IAmb	IAmb	12 24 43.3	
	comp=Z,181nm,1.5s						
H05N1	**Guadeloupe/Mar**	**21.67**	**235**	T	T	12 46 59.2	
	SNR=11						
PMOZ	**Porto Moniz, M**	**21.87**	**76**	*eS*	**S**	**12 29 09.4**	**+1.3**
PMOZ				A	A	12 31 18.5	
	comp=Z,988nm,20.0s						
PMAR	**Madeira**	**22.11**	**76**	*eP*	**P**	**12 25 09.3**	**-0.1**
DRLN	**Deer Lake**	**22.40**	**334**	P	**P**	**12 25 12.8**	**+0.6**
PMPST	**Porto Santo, M**	**22.60**	**75**	*eP*	**P**	**12 25 15.1**	**+0.6**
	comp=Z,221nm,1.6s						
H05S1	**Guadeloupe/Mar**	**22.82**	**231**	T	T	12 48 22.4	
	SNR=29						
SACV	**Santiago Islan**	**22.95**	**126**	P	**P**	**12 25 21.3**	**+3.0**
SJG	**San Juan**	**24.46**	**247**	LR	LR	12 33 03.4	
	comp=Z,407nm,21.9s,baz=62,slow=32						
CRPR	**Cabo Rojo, PR**	**25.28**	**248**	P	**P**	**12 25 44.6**	**+4.3**
CRPR				IAmb	IAmb	12 25 46.6	
	comp=Z,117nm,1.6s						
MDP	**Montagnes des**	**26.44**	**203**	LR	LR	12 34 25.7	
	comp=Z,265nm,19.0s,baz=302,slow=32						
L61B	**Northampton**	**27.16**	**306**	P	**P**	**12 25 57.4**	**+0.2**
	baz=107						
LBNH	**Lisbon**	**27.25**	**310**	P	**P**	**12 25 57.5**	**-0.4**
	baz=112						
PAL	**Palisades**	**27.66**	**302**	P	**P**	**12 26 02.7**	**+1.1**
PAL				IAmb	IAmb	12 26 05.3	
	comp=Z,37nm,1.1s						
PAL	**Palisades**	**27.66**	**302**	P	**P**	**12 26 02.7**	**+1.1**
PAL				pmax	pmax		
	comp=Z,37nm,1.2s						
PAL	**Palisades**	**27.66**	**302**	P	**P**	**12 26 01.5**	**-0.1**
	baz=104						
TRNY	**Table Rock, Ra**	**27.93**	**302**	P	**P**	**12 26 07.6**	**+3.6**
TRNY				IAmb	IAmb	12 26 08.7	
	comp=Z,87nm,1.4s						
TRY	**Troy**	**27.94**	**306**	P	**P**	**12 26 06.4**	**+2.2**
TRY				IAmb	IAmb	12 26 09.6	
	comp=Z,88nm,1.4s						
BRNJ	**Basking Ridge**	**28.07**	**301**	P	**P**	**12 26 09.4**	**+4.1**
SDDR	**Presa de Saban**	**28.22**	**254**	P	**P**	**12 26 10.7**	**+3.8**
SDDR				IAmb	IAmb	12 26 11.5	
	comp=Z,75nm,1.8s						
BBTS	**Babate**	**28.40**	**117**	LR	LR	12 34 33.1	
	comp=Z,3μm,21.3s,baz=242,slow=30						
LUPA	**Lehigh Univers**	**28.66**	**301**	P	**P**	**12 26 14.1**	**+3.6**
LUPA				IAmb	IAmb	12 26 15.5	
	comp=Z,57nm,1.5s						
LATQ	**La Tuque**	**29.07**	**315**	P	**P**	**12 26 14.8**	**+0.7**
LATQ				IAmb	IAmb	12 26 17.9	
	comp=Z,46nm,1.1s						
LONY	**Lake Ozonia**	**29.16**	**309**	P	**P**	**12 26 15.3**	**+0.3**
	baz=109						
MVL	**Millersville**	**29.29**	**299**	P	**P**	**12 26 17.7**	**+1.6**
BINY	**Binghamton**	**29.46**	**304**	P	**P**	**12 26 20.9**	**+3.2**
BINY				IAmb	IAmb	12 26 22.8	
	comp=Z,55nm,1.1s						
BINY	**Binghamton**	**29.46**	**304**	P	**P**	**12 26 20.4**	**+2.8**
	baz=104,SNR=5.0						
BINY	**Binghamton**	**29.46**	**304**	P	**P**	**12 26 18.9**	**+1.3**
	baz=104,SNR=5.0						
PVAQ	**Vaqueiros**	**29.85**	**66**	*eS*	S	12 31 25.9	+8.2
PVAQ				A	A	12 35 18.1	
	comp=Z,1μm,22.0s						
K57A	**Scipio Center**	**29.97**	**305**	P	**P**	**12 26 24.0**	**+1.8**
PGAV	**Gavieira, Arco**	**30.09**	**57**	*eS*	**S**	**12 31 26.9**	**+5.4**
PGAV				A	A	12 35 14.6	
	comp=Z,417nm,22.0s						
M57A	**Sunshine Farm,**	**30.11**	**302**	P	**P**	**12 26 23.7**	**+0.3**
M57A				IAmb	IAmb	12 26 27.9	
	comp=Z,43nm,1.2s						
PVIS	**Viseu**	**30.12**	**60**	*eP*	**P**	**12 26 24.3**	**+0.7**
JSRW	**J. Sargeant Re**	**30.19**	**294**	P	**P**	**12 26 27.5**	**+3.4**
R58B	**Mineral**	**30.21**	**295**	P	**P**	**12 26 26.6**	**+2.3**
R58B				IAmb	IAmb	12 26 29.1	
	comp=Z,41nm,1.1s						
R58B	**Mineral**	**30.21**	**295**	P	**P**	**12 26 26.8**	**+2.5**
	baz=95,SNR=8.7						
R58B				P	**P**	**12 26 26.8**	**+2.5**
	baz=95,SNR=8.7						
PCBR	**Castelo Branco**	**30.30**	**61**	*eP*	**P**	**12 26 25.5**	**+0.4**
	comp=Z,27nm,1.6s						
PMRV	**Marv??o**	**30.31**	**62**	*eP*	**P**	**12 26 25.7**	**+0.5**
	comp=Z,44nm,1.7s						
PMRV				*eS*	**S**	**12 31 30.1**	**+5.2**
PMRV				A	A	12 35 32.7	
	comp=Z,624nm,22.0s						
POLO	**Lamas de Olo**	**30.32**	**58**	*eP*	**P**	**12 26 26.2**	**+0.9**
	comp=Z,13nm,1.7s						
MTE	**Manteigas**	**30.33**	**60**	*eP*	**P**	**12 26 25.8**	**+0.3**
	comp=Z,50nm,1.8s						
MTE				*eS*	**S**	**12 31 29.6**	**+4.3**
MTE				A	A	12 35 44.7	
	comp=Z,816nm,20.0s						
MTE	**Manteigas**	**30.33**	**60**	P	**P**	**12 26 25.3**	**-0.2**
MTE				IAmb	IAmb	12 26 34.3	
	comp=Z,36nm,1.4s						
PVRL	**Vila Real**	**30.36**	**59**	*eP*	**P**	**12 26 26.6**	**+1.0**
	comp=Z,36nm,1.5s						
SCHQ	**Schefferville**	**30.37**	**332**	P	**P**	**12 26 25.6**	**0.0**
	comp=Z,25nm,1.0s,baz=142,slow=9.2,SNR=8.3						
SCHQ				LR	LR	12 37 18.4	
	comp=Z,1μm,21.5s,baz=131,slow=34						
	comp=Z,25nm,1.0s						
SCHQ	**Schefferville**	**30.37**	**332**	P	**P**	**12 26 25.3**	**-0.2**
SCHQ				IAmb	IAmb	12 26 29.4	
	comp=Z,43nm,1.1s						
SSPA	**Standing Stone**	**30.55**	**300**	P	**P**	**12 26 30.2**	**+2.9**
SSPA				IAmb	IAmb	12 26 32.1	
	comp=Z,54nm,1.2s						
SSPA	**Standing Stone**	**30.55**	**300**	P	**P**	**12 26 29.8**	**+2.5**
	baz=99,SNR=7.0						
SSPA	**Standing Stone**	**30.55**	**300**	P	**P**	**12 26 28.1**	**+0.8**
	baz=99						
MVO	**Moncorvo**	**30.84**	**59**	*eP*	**P**	**12 26 30.6**	**+0.6**
	comp=Z,26nm,1.4s						
MVO				*eS*	**S**	**12 31 38.9**	**+5.6**
MVO				A	A	12 36 01.5	
	comp=Z,605nm,22.0s						
S57A	**Dark Hollow, R**	**31.05**	**294**	P	**P**	**12 26 32.9**	**+1.2**
S57A				IAmb	IAmb	12 26 35.8	
	comp=Z,37nm,1.3s						
V58A	**Windy Hill, Pi**	**31.11**	**291**	P	**P**	**12 26 35.1**	**+2.9**
V58A				IAmb	IAmb	12 26 37.1	
	comp=Z,39nm,1.2s						
PBRG	**Braganca**	**31.17**	**58**	*eP*	**P**	**12 26 33.6**	**+0.8**
	comp=Z,31nm,1.4s						
T57A	**Hurt**	**31.25**	**293**	P	**P**	**12 26 36.7**	**+3.2**
T57A				IAmb	IAmb	12 26 38.2	
	comp=Z,36nm,1.4s						
PSDB	**Penn State Uni**	**31.27**	**301**	P	**P**	**12 26 34.9**	**+1.2**
	baz=99						
Q56A	**Snyder Ridge,**	**31.33**	**297**	P	**P**	**12 26 37.4**	**+3.1**
Q56A				IAmb	IAmb	12 26 39.7	
	comp=Z,40nm,1.1s						
Q56A	**Snyder Ridge,**	**31.33**	**297**	P	**P**	**12 26 37.4**	**+3.1**
	baz=96,SNR=5.4						
Q56A				P	**P**	**12 26 37.4**	**+3.1**
	baz=96,SNR=5.4						
M55A	**Ridgway**	**31.34**	**301**	P	**P**	**12 26 37.6**	**+3.3**
M55A				IAmb	IAmb	12 27 44.6	
	comp=Z,38nm,1.4s						
M55A	**Ridgway**	**31.34**	**301**	P	**P**	**12 26 37.4**	**+3.1**
	baz=100,SNR=6.6						
M55A				P	**P**	**12 26 37.4**	**+3.1**
	baz=100,SNR=6.6						
BAUV	**El Baul**	**31.65**	**234**	P	**P**	**12 26 37.6**	**+0.4**
W57A	**Gilead**	**31.83**	**289**	P	**P**	**12 26 38.8**	**+0.2**
W57A	**Gilead**	**31.83**	**289**	P	**P**	**12 26 38.7**	**0.0**
	baz=89,SNR=8.1						
W57A				P	**P**	**12 26 38.7**	**0.0**
	baz=89,SNR=8.1						
MCWV	**Mont Chateau**	**31.91**	**298**	P	**P**	**12 26 40.6**	**+1.4**
MCWV	**Mont Chateau**	**31.91**	**298**	P	**P**	**12 26 38.8**	**-0.5**
	baz=96						
U56A	**King**	**32.14**	**292**	P	**P**	**12 26 42.5**	**+1.1**
U56A				IAmb	IAmb	12 26 46.9	
	comp=Z,57nm,1.6s						
BLA	**Blacksburg**	**32.19**	**293**	P	**P**	**12 26 43.6**	**+1.8**
BLA	**Blacksburg**	**32.19**	**293**	P	**P**	**12 26 43.6**	**+1.8**
BLA				pmax	pmax		
	comp=Z,97nm,1.7s						
BLA	**Blacksburg**	**32.19**	**293**	P	**P**	**12 26 42.5**	**+0.7**
	baz=92						
BIRD	**Birdtown, Kers**	**32.23**	**288**	P	**P**	**12 26 44.5**	**+2.3**
BIRD				IAmb	IAmb	12 26 47.2	
	comp=Z,33nm,1.2s						
SADO	**Sadowa**	**32.32**	**307**	LR	LR	12 37 29.8	
	comp=Z,2μm,21.8s,baz=152,slow=32						
ERPA	**Erie**	**32.35**	**302**	P	**P**	**12 26 43.8**	**+0.6**
	baz=100						
O54A	**Avella**	**32.37**	**299**	P	**P**	**12 26 45.8**	**+2.4**
O54A				IAmb	IAmb	12 26 47.9	
	comp=Z,39nm,1.1s						
MDT	**Midelt**	**32.45**	**75**	LR	LR	12 36 49.5	
	comp=Z,945nm,20.9s,baz=286,slow=31						
Q54A	**Coxs Mills**	**32.61**	**296**	P	**P**	**12 26 47.3**	**+1.8**
Q54A				IAmb	IAmb	12 26 50.5	
	comp=Z,40nm,1.2s						
Q54A	**Coxs Mills**	**32.61**	**296**	P	**P**	**12 26 48.1**	**+2.7**
	baz=94						
Q54A				P	**P**	**12 26 48.1**	**+2.7**
	baz=94						
PAB	**San Pablo**	**32.66**	**62**	P	**P**	**12 26 45.8**	**-0.2**
PAB	**San Pablo**	**32.66**	**62**	P	**P**	**12 26 45.8**	**-0.2**
PAB				pmax	pmax		
	comp=Z,24nm,1.5s						
M53A	**WI Miller and**	**32.75**	**301**	P	**P**	**12 26 47.4**	**+0.7**
	baz=98						
V55A	**Taylorsville**	**32.81**	**291**	P	**P**	**12 26 50.0**	**+2.7**
V55A				IAmb	IAmb	12 26 52.6	
	comp=Z,37nm,1.4s						
JSC	**Jenkinsville**	**32.91**	**288**	P	**P**	**12 26 51.3**	**+3.2**
JSC				IAmb	IAmb	12 26 53.2	
	comp=Z,52nm,1.5s						
JSC	**Jenkinsville**	**32.91**	**288**	P	**P**	**12 26 51.3**	**+3.2**
JSC				pmax	pmax		
	comp=Z,52nm,1.5s						
KMSC	**Kings Mountain**	**32.93**	**289**	P	**P**	**12 26 48.4**	**+0.1**
	baz=88						
ESDC	**Sonseca Array**	**32.97**	**62**	P	**P**	**12 26 48.2**	**-0.5**
	comp=Z,6.9nm,1.3s,baz=260,slow=8.1,SNR=16						
ESDC				PcP	**PcP**	**12 29 32.0**	**-0.5**
	comp=Z,1.5nm,1.0s,baz=293,slow=3.7,SNR=4.6						
ESDC				LR	LR	12 37 02.3	
	comp=Z,692nm,21.4s,baz=261,slow=31						
	comp=Z,6.9nm,1.3s						
ESDC	**Sonseca Array**	**32.97**	**62**	P	**P**	**12 26 48.0**	**-0.6**
ESBB	**Sonseca Array**	**32.97**	**62**	P	**P**	**12 26 48.5**	**-0.2**
O53A	**New Philadelph**	**33.01**	**299**	P	**P**	**12 26 48.8**	**-0.2**
	baz=96,SNR=5.6						
PAULI	**Pauline**	**33.34**	**289**	P	**P**	**12 26 53.4**	**+1.6**
	baz=87						
SDV	**Santo Domingo**	**33.55**	**237**	LR	LR	12 38 28.1	
	comp=Z,364nm,21.7s,baz=44,slow=33						
P52A	**Corning**	**33.66**	**298**	P	**P**	**12 26 54.2**	**-0.4**
	baz=94,SNR=5.2						
Q52A	**Bidwell**	**33.72**	**296**	P	**P**	**12 26 54.8**	**-0.3**
	baz=93,SNR=8.5						
Q52A				P	**P**	**12 26 54.8**	**-0.3**
	baz=93,SNR=8.5						
DWPF	**Disney Wildern**	**33.90**	**277**	P	**P**	**12 26 57.4**	**+0.5**
	baz=77						
CASEE	**Lake Jocassee**	**34.24**	**289**	P	**P**	**12 26 59.6**	**-0.2**
	baz=87,SNR=5.9						
ACSO	**Alum Creek Sta**	**34.36**	**298**	P	**P**	**12 27 00.0**	**-0.7**
	baz=94,SNR=6.9						
ACSO	**Alum Creek Sta**	**34.36**	**298**	P	**P**	**12 26 60.0**	**-0.7**
	baz=94,SNR=6.9						
P51A	**Williamsport**	**34.37**	**297**	P	**P**	**12 27 03.2**	**+2.5**
	baz=93,SNR=5.1						
P51A				P	**P**	**12 27 03.2**	**+2.5**
	baz=93,SNR=5.1						
Q51A	**Peebles**	**34.56**	**296**	P	**P**	**12 27 02.0**	**-0.5**
	baz=92,SNR=6.4						
Q51A				P	**P**	**12 27 02.0**	**-0.5**
	baz=92,SNR=6.4						
TZTN	**Tazewell**	**34.69**	**292**	P	**P**	**12 27 06.4**	**+2.8**
TZTN				IAmb	IAmb	12 27 08.5	
	comp=Z,30nm,1.2s						
TZTN	**Tazewell**	**34.69**	**292**	P	**P**	**12 27 04.3**	**+0.6**
	baz=89						
S51A	**Beattyville**	**34.72**	**294**	P	**P**	**12 27 06.3**	**+2.5**
S51A				IAmb	IAmb	12 27 07.8	
	comp=Z,36nm,1.4s						
GOGA	**Godfrey**	**34.80**	**286**	P	**P**	**12 27 05.9**	**+1.3**
GOGA				IAmb	IAmb	12 27 09.9	
	comp=Z,58nm,1.6s						
GOGA	**Godfrey**	**34.80**	**286**	P	**P**	**12 27 05.9**	**+1.3**
GOGA				pmax	pmax		
	comp=Z,58nm,1.6s						
GOGA	**Godfrey**	**34.80**	**286**	P	**P**	**12 27 05.0**	**+0.4**
	baz=84						
TKL	**Tuckaleechee C**	**34.90**	**290**	LR	LR	12 38 23.2	
	comp=Z,1μm,21.5s,baz=92,slow=31						
TKL	**Tuckaleechee C**	**34.90**	**290**	P	**P**	**12 27 07.1**	**+1.7**
TKL				IAmb

comp=Z,145nm,1.5s
AAM Ann Arbor 35.08 302 P P 12 27 07.5 +0.6
baz=97
CART Cartagena 35.20 66 P P 12 27 07.6 -0.4
CART IAmb IAmb 12 27 08.9
comp=Z,48nm,1.2s
R50A Paris 35.31 295 P P 12 27 10.8 +1.9
R50A Paris 35.31 295 P P 12 27 09.0 +0.1
baz=91,SNR=9.2
R50A P **P 12 27 09.0 +0.1**
baz=91,SNR=9.2
V51A Loudon 35.36 291 P P 12 27 10.3 +0.9
baz=87,SNR=5.4
P49A Miami Univ. Ec 35.65 297 P P 12 27 11.0 -0.8
baz=92,SNR=8.2
P49A Miami Univ. Ec 35.65 297 P P 12 27 11.2 -0.6
baz=92,SNR=8.2
T50A Nancy 35.72 293 P P 12 27 11.9 -0.6
baz=89
T50A P **P 12 27 11.9 -0.6**
baz=89
O48B Farmland 36.02 298 P P 12 27 17.1 +2.1
baz=93,SNR=6.6
O48B Farmland 36.02 298 P P 12 27 14.9 -0.1
baz=93,SNR=6.6
RCBR Riachuelo 36.11 169 LR LR 12 38 04.2
comp=Z,785nm,20.8s,baz=136,slow=30
GLMI Grayling 36.14 306 P P 12 27 15.4 -0.6
baz=100
P48A Milroy 36.19 297 P P 12 27 18.0 +1.5
baz=92,SNR=5.6
P48A P **P 12 27 18.0 +1.5**
baz=92,SNR=5.6
U49A Red Boiling Sp 36.49 292 P P 12 27 21.5 +2.5
baz=88,SNR=6.2
MFF Saint Martin d 36.77 51 *e*P **P 12 27 21.5 +0.2**
MFF pmax pmax
comp=Z,38nm,1.2s
WCI Wyandotte Cave 36.86 295 P P 12 27 24.7 +2.6
WCI IAmb IAmb 12 27 27.0
comp=Z,55nm,1.4s
WCI Wyandotte Cave 36.86 295 P P 12 27 24.7 +2.6
WCI pmax pmax
comp=Z,55nm,1.4s
WCI Wyandotte Cave 36.86 295 P P 12 27 22.1 -0.1
baz=90
CLTN Cedars of Leba 36.95 291 P P 12 27 25.1 +2.1
L46A Eue Claire 37.00 301 P P 12 27 25.5 +2.2
L46A IAmb IAmb 12 27 27.9
comp=Z,54nm,1.0s
BLO Bloomington 37.04 296 P P 12 27 26.2 +2.5
BLO IAmb IAmb 12 27 27.8
comp=Z,75nm,1.4s
BLO Bloomington 37.04 296 P P 12 27 26.2 +2.5
BLO pmax pmax
comp=Z,75nm,1.4s
LFF La Frestale 37.08 54 *e*P **P 12 27 23.8 -0.2**
LFF pmax pmax
comp=Z,22nm,0.9s
Y49A Blount Mountai 37.20 288 P P 12 27 25.0 -0.2
baz=84
BORG Borgarnes 37.32 15 LR LR 12 37 44.2
comp=Z,174nm,20.2s,baz=219,slow=28
SFJD Kangerlussuaq 37.43 355 LR LR 12 39 33.2
comp=Z,475nm,21.8s,baz=180,slow=31
SFIN Lafayette 37.51 298 P P 12 27 30.0 +2.3
SFIN Lafayette 37.51 298 P P 12 27 29.8 +2.2
baz=92,SNR=5.3
SFIN Lafayette 37.51 298 P P 12 27 26.8 -0.8
baz=92,SNR=5.3
FRB Frobisher Bay 37.66 341 LR LR 12 41 13.2
comp=Z,424nm,21.9s,baz=154,slow=34
EKA Eskdalemuir Ar 37.78 36 LR LR 12 40 26.7
comp=Z,445nm,18.5s,baz=238,slow=32
LRAL Lakeview Retre 37.79 286 P P 12 27 31.5 +1.4
baz=82
LRAL Lakeview Retre 37.79 286 P P 12 27 30.4 +0.3
baz=82
BRAL Brewton 38.11 283 P P 12 27 32.5 -0.4
baz=80
WVT Waverly 38.16 292 P P 12 27 34.5 +1.3
WVT Waverly 38.16 292 P P 12 27 34.5 +1.3
WVT pmax pmax
comp=Z,39nm,1.3s
WVT Waverly 38.16 292 P P 12 27 32.6 -0.6
baz=86,SNR=8.5
WVT Waverly 38.16 292 P P 12 27 32.9 -0.3
baz=86
L44A Lake County Fo 38.21 301 P P 12 27 32.9 -0.6
baz=94
PLAL Pickwick Lake 38.46 290 P P 12 27 37.4 +1.6
CLF Chambon-Foret 38.66 49 P P 12 27 37.8 +0.6
CLF IAmb IAmb 12 27 41.1
comp=Z,35nm,0.9s
Z47A Carrollton 38.66 287 P P 12 27 37.3 -0.2
baz=82,SNR=5.9
ROSC El Rosal 38.97 236 LR LR 12 45 32.7
comp=Z,252nm,18.1s,baz=26,slow=39
Q44A Meyer Farm, Va 38.98 296 P P 12 27 42.3 +2.2
baz=89,SNR=6.5
HDIL Hopedale 39.19 299 P P 12 27 41.5 -0.3
baz=90
S44A Carbondale 39.21 294 P P 12 27 42.0 0.0
baz=87
P43A Skaggs, Pawnee 39.36 297 P P 12 27 45.3 +2.1
baz=89
GUY2C Guyana, Caldas 39.47 238⇑ *e*P **P 12 27 43.3 -1.7**
COWI Conover 39.47 307 P P 12 27 45.1 +1.0
baz=97
CBOC Ciudad Bolivar 39.53 239 *e*P **P 12 27 43.3 -1.8**
OXF Oxford 39.60 289 P P 12 27 44.1 -1.2
baz=83
JFWS Jewell Farm 39.98 302 P P 12 27 47.8 -0.5
baz=93
G40A Rib Lake 40.12 306 P P 12 27 51.7 +2.2
baz=96,SNR=5.5
ORTC Ortega, Tolima 40.27 236 *e*P **P 12 27 48.7 -2.4**
I40A Norwalk 40.30 304 P P 12 27 50.8 -0.3
baz=94
PLMC San Jos del P 40.36 239 *e*P **P 12 27 54.2 +2.3**
SNF Seneffe 40.47 46 *d*P **P 12 27 52.2 0.0**
DOU Dourbes 40.58 47 *d*P **P 12 27 53.3 +0.1**
BMRD Maredsous 40.73 46 *d*P **P 12 27 54.0 -0.4**
CCM Cathedral Cave 40.76 295 P P 12 27 55.3 +0.4
CCM Cathedral Cave 40.76 295 P P 12 27 55.3 +0.4
CCM pmax pmax
comp=Z,32nm,1.3s
CCM Cathedral Cave 40.76 295 P P 12 27 54.0 -1.0
baz=86
CCM Cathedral Cave 40.76 295 P P 12 27 54.1 -0.8
baz=86
VBMS Vicksburg 40.85 286 P P 12 27 57.5 +1.9
VBMS IAmb IAmb 12 28 00.2
comp=Z,50nm,1.1s
VBMS Vicksburg 40.85 286 P P 12 27 54.9 -0.7
baz=80
LCAR Lake Charles 40.85 292 P P 12 27 57.5 +1.9
LCAR IAmb IAmb 12 27 59.9
comp=Z,48nm,1.4s
LCAR Lake Charles 40.85 292 P P 12 27 57.5 +1.9
baz=84,SNR=9.0
BGES Gesves 40.94 46 *d*P **P 12 27 55.7 -0.5**
RCHB Rochefort 40.99 47 *d*P **P 12 27 56.1 -0.5**
BCLA Clavier 41.09 46 *d*P **P 12 27 57.1 -0.3**
BSTI Sart Tilman 41.28 46 *d*P **P 12 27 59.3 +0.3**
P40A Paris 41.32 297 P P 12 28 01.1 +1.6
P40A IAmb IAmb 12 28 03.8
comp=Z,73nm,1.1s
P40A Paris 41.32 297 P P 12 28 58.6 -0.8
baz=88,SNR=7.0
EYMN Ely 41.32 310 P P 12 27 58.3 -1.1
baz=98
EYMN Ely 41.32 310 P P 12 27 58.5 -0.9
baz=98
LPL La Plagne 41.35 54 *e*P **P 12 28 00.7 +0.8**
LPL pmax pmax
comp=Z,6.0nm,0.8s
WLF Walferdange 41.48 48 P P 12 28 00.2 -0.5
WLF Walferdange 41.48 48 P P 12 28 00.2 -0.5
WLF pmax pmax
comp=Z,17nm,1.0s
WLF Walferdange 41.48 48 *d*P **P 12 28 00.8 +0.1**
BHOU Houvegnez 41.51 46 *d*P **P 12 28 01.4 +0.5**
R40A Maddies Statio 41.55 295 P P 12 27 59.7 -1.7
baz=86,SNR=5.1
MEM Membach 41.56 46 *d*P **P 12 28 01.2 -0.1**

CCAR Cane Creek 41.62 289 P P 12 28 03.9 +1.9
CCAR IAmb IAmb 12 28 06.6
comp=Z,71nm,1.2s
FCAR Ozark Folk Cen 41.65 292 P P 12 28 02.4 +0.1
SENIN Lac Senin/Sane 41.82 53 P P 12 28 03.3 -0.4
WHAR Wooly Hollow 41.85 291 P P 12 28 05.6 +1.7
WHAR IAmb IAmb 12 28 07.2
comp=Z,53nm,1.4s
SPMN Marine on St. 41.95 306 P P 12 28 03.6 -1.0
baz=94
UALR University of 41.97 290 P P 12 28 06.5 +1.6
UALR IAmb IAmb 12 28 09.1
comp=Z,74nm,1.2s
SCIA State Center 42.15 301 P P 12 28 08.7 +2.4
SCIA State Center 42.15 301 P P 12 28 06.0 -0.2
baz=90,SNR=6.1
SCIA State Center 42.15 301 P P 12 28 05.4 -0.9
baz=90,SNR=6.1
N38A Joes South For 42.18 299 P P 12 28 08.7 +2.2
N38A Joes South For 42.18 299 P P 12 28 06.8 +0.3
baz=88,SNR=5.1
TIC Toumodi 42.22 116⇑ *i*P **P 12 28 07.9 +0.8**
comp=Z,3.7nm,0.3s
I37A Lemond, Waseca 42.31 304 P P 12 28 09.4 +1.8
I37A IAmb IAmb 12 28 12.5
comp=Z,112nm,1.6s
DBIC Dimbokro 42.33 115 P P 12 28 07.8 -0.2
comp=Z,6.0nm,1.0s,baz=280,slow=9.2,SNR=5.7
DBIC LR LR 12 43 40.2
comp=Z,2μm,19.3s,baz=264,slow=33
comp=Z,6.0nm,1.0s
DBIC Dimbokro 42.33 115 P P 12 28 08.8 +0.8
DBIC Dimbokro 42.33 115 P P 12 28 08.8 +0.8
DBIC pmax pmax
comp=Z,36nm,1.5s
S39A Bolivar 42.43 294 P P 12 28 10.3 +1.7
S39A Bolivar 42.43 294 P P 12 28 10.0 +1.4
baz=85,SNR=6.2
P38A Dawn 42.46 297 P P 12 28 07.7 -1.1
baz=87,SNR=10
LIC Lamto 42.47 116⇑ *e*P **P 12 28 08.4 -0.7**
comp=Z,41nm,0.7s
KIC Kosan Boka 42.61 116⇑ *i*P **P 12 28 09.7 -0.6**
comp=Z,1.7nm,0.4s
BFO Black Forest 42.72 50 P P 12 28 10.6 -0.2
BFO Black Forest 42.72 50 P P 12 28 10.6 -0.2
BFO pmax pmax
comp=Z,26nm,1.2s
WLAR White Oak Lake 42.76 289 P P 12 28 13.9 +2.6
WLAR IAmb IAmb 12 28 16.4
comp=Z,91nm,1.4s
SUMG Summit 42.78 2 *i*P **P 12 28 09.7 -1.7**
SUMG IAmb IAmb 12 28 15.0
comp=Z,23nm,0.9s
MIAR Mount Ida 43.00 290 P P 12 28 12.2 -1.1
baz=81
MIAR Mount Ida 43.00 290 P P 12 28 11.8 -1.5
baz=81
HHAR Hobbs 43.07 292 P P 12 28 15.4 +1.6
U38A Gravette 43.41 293 P P 12 28 18.3 +1.8
U38A IAmb IAmb 12 28 19.9
comp=Z,44nm,1.2s
SAML Samuel 43.42 210 P P 12 28 14.7 -2.0
SAML Samuel 43.42 210 P P 12 28 14.7 -2.0
SAML pmax pmax
comp=Z,11nm,1.1s
TAM Tamanrasset 43.45 88 P P 12 28 18.4 +1.2
TAM Tamanrasset 43.45 88 P P 12 28 18.4 +1.2
TAM pmax pmax
comp=Z,38nm,1.7s
KEST Kesra 43.62 68 P P 12 28 19.0 +0.6
comp=Z,12nm,0.8s,baz=208,slow=9.3,SNR=8.0
KEST LR LR 12 43 45.6
comp=Z,350nm,21.5s,baz=196,slow=32
comp=Z,12nm,0.8s
KEST Kesra 43.62 68 P P 12 28 19.8 +1.5
KEST IAmb IAmb 12 28 21.9
comp=Z,45nm,1.3s
KEST Kesra 43.62 68 P P 12 28 19.1 +0.7
KEST P **P 12 28 19.1 +0.7**
DAVOX Davos/Dischmat 43.63 52 LR LR 12 43 04.4
comp=Z,450nm,21.5s,baz=260,slow=31
DAVA Damuels 43.66 51 *e*P **P 12 28 18.9 +0.3**
comp=Z,2.5nm,0.5s,SNR=10
JTS Las Juntas de 43.99 253 LR LR 12 45 34.5
comp=Z,372nm,18.8s,baz=116,slow=35
SALO Salr 44.02 54 P P 12 28 20.6 -0.8
TOA0 Torodi Ar. Sit 44.15 102 P P 12 28 21.7 -1.0
TOA0 Torodi Ar. Sit 44.15 102 P P 12 28 21.0 -1.7
SNR=15
TORD Torodi Ar. Bea 44.15 102 P P 12 28 21.7 -1.0
comp=Z,25nm,1.1s,baz=306,slow=5.2,SNR=35
TORD LR LR 12 46 01.3
comp=Z,668nm,18.7s,baz=244,slow=35
comp=Z,25nm,1.1s
TORD Torodi Ar. Bea 44.15 102 P P 12 28 22.4 -0.3
TORD IAmb IAmb 12 28 24.8
comp=Z,75nm,1.6s
FETA Feichten 44.22 52 *e*P **P 12 28 23.4 +0.3**
comp=Z,5.1nm,0.9s,SNR=7.7
AGMN Agassiz Nation 44.27 310 P P 12 28 22.2 -1.0
baz=94,SNR=7.5
AGMN Agassiz Nation 44.27 310 P P 12 28 21.5 -1.8
baz=94,SNR=7.5
RETA Reutte 44.27 51 *i*P **P 12 28 23.5 +0.1**
comp=Z,5.1nm,0.8s,SNR=9.2
ULM Lac du Bonnet 44.46 313 *i*P **P 12 28 23.1 -1.7**
comp=Z,16nm,0.9s,baz=91,slow=9.1,SNR=6.7
ULM LR LR 12 45 10.4
comp=Z,698nm,21.2s,baz=76,slow=34
comp=Z,16nm,0.9s
ULM Lac du Bonnet 44.46 313 *i*P **P 12 28 26.1 +1.3**
MOTA Moosalm 44.49 51 *e*P **P 12 28 25.4 +0.1**
comp=Z,2.0nm,0.5s,SNR=6.2
L34A Svendsen Farm, 44.51 301 P P 12 28 26.0 +0.7
SQTA Sankt Quirin 44.56 52 *i*P **P 12 28 26.3 +0.5**
comp=Z,2.9nm,0.5s,SNR=9.5
TUL1 Leonard 44.60 292 P P 12 28 24.0 -2.1
baz=82,SNR=5.6
ECSD EROS Data Cent 44.64 303 P P 12 28 29.1 +2.8
ECSD IAmb IAmb 12 28 29.7
comp=Z,69nm,1.8s
ECSD EROS Data Cent 44.64 303 P P 12 28 23.7 -2.6
baz=89
ECSD EROS Data Cent 44.64 303 P P 12 28 23.3 -3.0
baz=89
GRFO Grafenberg 44.75 48 P P 12 28 28.0 +0.9
GRFO IAmb IAmb 12 28 30.6
comp=Z,34nm,1.3s
GRFO Grafenberg 44.75 48 P P 12 28 28.0 +0.9
GRFO pmax pmax
comp=Z,34nm,1.3s
WATA Walderalm 44.81 51 *i*P **P 12 28 27.9 +0.1**
comp=Z,2.7nm,0.3s,SNR=6.8
WTTA Wattenberg 44.85 52 *e*P **P 12 28 28.3 +0.1**
comp=Z,5.0nm,0.6s,SNR=9.5
KSU1 Kansas State U 44.88 297 P P 12 28 25.6 -2.6
baz=84
T35B Sooner Cattle 45.04 294 P P 12 28 28.0 -1.6
baz=82,SNR=9.9
JMIC Jan Mayen 45.22 15 LR LR 12 41 22.0
comp=Z,54nm,19.4s,baz=230,slow=28
OK051 E0350 and S346 45.35 293 P 12 28 33.9 +1.8
ABTA Abfaltersbach 45.43 52 *e*P **P 12 28 32.3 -0.4**
comp=Z,11nm,0.9s,SNR=12
STAL STALIGIAL 45.56 53 P P 12 28 32.2 -1.5
BDFB Brasilia 45.59 187 P P 12 28 32.6 -1.6
comp=Z,3.4nm,0.5s,baz=43,slow=9.0,SNR=5.1
BDFB LR LR 12 44 53.7
comp=Z,667nm,18.9s,baz=331,slow=33
comp=Z,3.4nm,0.5s
BDFB Brasilia 45.59 187 P P 12 28 32.6 -1.6
NKC Novy Kostel 45.59 47 *e*P **P 12 28 34.6 +0.8**
NKC Novy Kostel 45.59 47 *e*P **P 12 28 34.6 +0.8**
MTO3 Montecristo 45.66 261 P P 12 28 34.9 -0.1
KONO Kongsberg 45.76 34 P P 12 28 35.5 +0.6
KONO Kongsberg 45.76 34 P P 12 28 35.5 +0.6
KONO pmax pmax
comp=Z,54nm,1.2s
HKT Hockley 45.77 284 P P 12 28 36.8 +1.4
HKT Hockley 45.77 284 P P 12 28 36.8 +1.4
HKT pmax pmax
comp=Z,24nm,1.3s
BGNE Belgrade 45.86 300 P P 12 28 35.6 -0.5
BGNE Belgrade 45.86 300 P P 12 28 34.0 -2.1
baz=86

CLL Collm 46.04 46 *i*P **P 12 28 37.0 -0.3**
CLL *e* 12 28 41.0
CLL pmax pmax
comp=Z,29nm,1.5s
CLL MLR MLR
comp=Z,400nm,21.5s
CLL Collm 46.04 46 *i*P **P 12 28 37.0 -0.3**
comp=Z,29nm,1.5s
CLL *ex* x 12 28 41.0
CLL *e*S **S 12 35 18.0 -4.1**
CLL *e*SS **SS 12 38 48.0 +1.2**
CLL *e*SSS SSS 12 39 36.0
CLL LmV 12 44 00.0
comp=Z,400nm,21.5s
BIOA Bad Ischl, Aus 46.23 51 *i*P **P 12 28 39.2 +0.3**
comp=Z,1.6nm,0.3s,SNR=7.1
H10N2 ASCENSION HYDR 46.24 140 T T 13 17 49.8
baz=325,slow=75
H10N3 ASCENSION HYDR 46.24 140 T T 13 17 50.0
baz=325,slow=75
KHC Kasperske Hory 46.24 49 *e*P **P 12 28 38.3 -0.7**
KHC Kasperske Hory 46.24 49 *e*P **P 12 28 38.3 -0.7**
KHC *ex* x 12 28 53.0
H10N1 ASCENSION HYDR 46.26 140 T T 13 17 51.2
baz=325,slow=75
SUSD Miller 46.31 304 P P 12 28 38.2 -1.4
baz=88
GEC2 GERESS Array S 46.31 49 P P 12 28 39.6 0.0
GERES GERESS Array B 46.31 49 P P 12 28 38.5 -1.1
comp=Z,3.3nm,0.9s,baz=269,slow=6.7,SNR=19
GERES LR LR 12 45 17.9
comp=Z,237nm,19.9s,baz=230,slow=32
comp=Z,3.3nm,0.9s
GERES GERESS Array B 46.31 49 P P 12 28 38.7 -0.9
GERES GERESS Array B 46.31 49 P P 12 28 38.7 -0.9
R32A Long Quarter, 46.58 296 P P 12 28 39.4 -2.4
baz=83,SNR=5.7
BRG Berggiesshubel 46.59 47 *e*P **P 12 28 41.5 -0.2**
BRG pmax pmax
comp=Z,15nm,1.5s
MOA Molln 46.65 51 *i*P **P 12 28 41.7 -0.6**
comp=Z,2.4nm,0.6s,SNR=5.8
WHTX Lake Whitney, 46.67 287 P P 12 28 41.4 -1.1
baz=77
CKRC Cesky Krumlov 46.71 50 *e*P **P 12 28 42.1 -0.6**
MDND Maddock 46.75 309 P P 12 28 40.8 -2.2
baz=91
OBKA Obir 46.83 53 *i*P **P 12 28 43.0 -0.7**
comp=Z,18nm,0.7s,SNR=9.6
PRU Pruhonice 46.92 48 *e*P **P 12 28 44.3 +0.1**
PRU Pruhonice 46.92 48 *e*P **P 12 28 44.3 +0.1**
NB2 NORSAR Subarra 46.93 33 P P 12 28 44.3 +0.1
comp=Z,186nm,2.0s,baz=255,slow=7.9
NB2 NORSAR Subarra 46.93 33 P P 12 28 44.3 +0.1
baz=255,slow=7.9
NOA NORSAR Array B 46.93 33 P P 12 28 44.7 +0.5
comp=Z,26nm,1.3s,baz=254,slow=8.0,SNR=7.9
NOA LR LR 12 44 46.0
comp=Z,201nm,21.5s,baz=245,slow=31
comp=Z,26nm,1.3s
NOA NORSAR Array B 46.93 33 P P 12 28 44.7 +0.5
H10S3 ASCENSION HYDR 47.07 141 T T 13 18 55.6
baz=255,slow=74,SNR=3706
GOPC GO Pecny, Ondr 47.07 48 *e*P **P 12 28 45.4 -0.1**
GOPC GO Pecny, Ondr 47.07 48 *e*P **P 12 28 45.4 -0.1**
H10S2 ASCENSION HYDR 47.08 141 T T 13 18 55.4
baz=325,slow=74,SNR=1024
WMOK Wichita Mounta 47.20 291 P P 12 28 45.5 -1.2
baz=79,SNR=8.0
WMOK Wichita Mounta 47.20 291 P P 12 28 45.5 -1.2
baz=79,SNR=8.0
CBKS Cedar Bluff 47.33 297 P P 12 28 46.2 -1.5
baz=82,SNR=6.1
CBKS Cedar Bluff 47.33 297 P P 12 28 46.2 -1.5
baz=82,SNR=6.1
VAE Valguarnera 47.41 65 LR LR 12 45 18.6
comp=Z,543nm,21.9s,baz=166,slow=32
E28A Huff 47.49 307 P P 12 28 47.3 -1.5
baz=89
ARSA Arzberg 47.50 52 *i*P **P 12 28 47.7 -1.1**
comp=Z,4.0nm,0.6s,SNR=6.7
CONA Conrad Observa 47.73 51 *i*P **P 12 28 49.7 -1.0**
comp=Z,2.1nm,0.8s,SNR=5.3
NEEM North Greenlan 47.78 358 *e*P **P 12 28 48.1 -2.8**
NEEM IAmb IAmb 12 28 49.6
comp=Z,24nm,1.0s
HFS Hagfors 47.88 34 LR LR 12 45 45.9
comp=Z,269nm,18.7s,baz=250,slow=32
UPC Upice 47.88 47 *e*P **P 12 28 51.8 0.0**
UPC MLR MLR
comp=Z,700nm,19.5s
UPC Upice 47.88 47 *e*P **P 12 28 51.8 0.0**
UPC AMS AMS 12 46 40.0
comp=Z,700nm,19.5s
CHVC Chvalec 47.92 47 *e*P **P 12 28 52.0 0.0**
OSTC Ostas 48.02 47 *e*P **P 12 28 52.7 -0.1**
RONA Rosalia, Austr 48.02 51 *i*P **P 12 28 52.8 -0.1**
comp=Z,0.4nm,0.2s
DPC Dobruska-Polom 48.08 48 *e*P **P 12 28 53.0 -0.3**
DPC Dobruska-Polom 48.08 48 *e*P **P 12 28 53.0 -0.3**
KRUC Moravsky 48.09 49 *e*P **P 12 28 52.5 -0.9**
VRAC Vranov 48.23 49 LR LR 12 46 36.8
comp=Z,244nm,18.8s,baz=263,slow=33
VRAC Vranov 48.23 49 *e*P **P 12 28 54.1 -0.3**
DAG Danmarks Havn 48.27 7 *i*P **P 12 28 53.0 -1.3**
DAG IAmb IAmb 12 28 58.2
comp=Z,12nm,1.0s
ABTX Abilene, Hawle 48.34 289 P P 12 28 55.2 -0.4
baz=77,SNR=6.8
ABTX Abilene, Hawle 48.34 289 P P 12 28 53.4 -2.1
baz=77,SNR=6.8
KRLC Kraliky 48.36 48 *e*P **P 12 28 55.4 -0.1**
KRLC Kraliky 48.36 48 *e*P **P 12 28 55.4 -0.1**
ZST Bratislava 48.56 50 *e*P **P 12 28 56.8 -0.2**
FFC Flin Flon 48.65 318 P P 12 28 57.3 -0.2
FFC IAmb IAmb 12 29 01.5
comp=Z,21nm,0.9s
FFC Flin Flon 48.65 318 P P 12 28 57.3 -0.2
FFC pmax pmax
comp=Z,21nm,1.0s
MODS Modra-Piesok 48.67 50 *e*P **P 12 28 57.6 -0.3**
MODS pmax pmax
comp=Z,41nm,1.5s
OGNE Ogallala 48.83 300 P P 12 28 58.7 -0.6
baz=83,SNR=6.4
OGNE Ogallala 48.83 300 P P 12 28 56.9 -2.4
baz=83,SNR=6.4
MORC Moravsky Berou 48.85 48 ⇑P **P 12 28 60.0 +0.7**
MORC Moravsky Berou 48.85 48 P P 12 28 59.0 -0.3
MORC Moravsky Berou 48.85 48 P P 12 28 59.0 -0.3
MORC pmax pmax
comp=Z,12nm,1.3s
MORC Moravsky Berou 48.85 48 *e*P **P 12 28 59.0 -0.3**
MPLH Magyarpolny 48.88 52 P P 12 28 58.5 -1.0
JCT Junction City 48.97 286 P P 12 28 58.9 -1.6
baz=75,SNR=8.3
JCT Junction City 48.97 286 P P 12 28 58.5 -2.0
baz=75,SNR=8.3
SIV San Ignacio 48.99 204 LR LR 12 47 54.1
comp=Z,268nm,19.9s,baz=62,slow=34
MAUC Maruska 49.03 49 *e*P **P 12 29 01.2 +0.5**
833A Chaparral WMA, 49.20 283 P P 12 29 00.7 -1.5
baz=74
CMIG Matias Romero 49.24 267 LR LR 12 47 29.0
comp=Z,429nm,21.3s,baz=75,slow=33
KOVH Kovagotottos 49.31 53 P P 12 29 00.9 -1.8
AMTX Amarillo 49.52 292 P P 12 29 02.9 -1.8
baz=78
KSCO Kaye Shedlock' 49.54 297 P P 12 29 02.9 -1.9
baz=81
VYHS Vyhne 49.71 50 *e*P **P 12 29 05.1 -0.7**
DGMT Dagmar 49.82 310 P P 12 29 04.8 -1.8
baz=88
RSSD Black Hills 49.97 304 P P 12 29 09.3 +1.2
RSSD Black Hills 49.97 304 P P 12 29 09.3 +1.2
RSSD pmax pmax
comp=Z,11nm,1.2s
RSSD Black Hills 49.97 304 P P 12 29 05.8 -2.3
baz=85
ATAH Atahualpa 50.39 229 LR LR 12 51 35.1
comp=Z,189nm,20.3s,baz=25,slow=38
PSZ Piszkesteto 50.44 51 P P 12 29 10.0 -1.4
PDG Podgorica 50.45 58 ⇑P **P 12 29 11.5 +0.1**
MSTX Muleshoe 50.59 291 P P 12 29 12.0 -0.8
baz=77,SNR=5.5
MSTX Muleshoe 50.59 291 P P 12 29 11.3 -1.6

baz=77,SNR=5.5
T25A Trinidad 51.24 295 P **P 12 29 16.2 -1.7**
baz=79,SNR=8.2
LAO LASA Array 51.29 308 P **P 12 29 16.6 -1.2**
baz=85
LAO LASA Array 51.29 308 P **P 12 29 16.0 -1.9**
baz=85
CRVS Cervenica-Dubn 51.43 49 *e*P **P 12 29 17.5 -1.3**
Q24A Divide 51.48 298 P **P 12 29 17.8 -1.9**
baz=80,SNR=8.6
ISCO Idaho Springs 51.70 299 P **P 12 29 19.5 -1.8**
baz=80
RES Resolute Bay 51.73 344 LR LR 12 48 49.2
comp=Z,306nm,21.6s,baz=106,slow=33
SIRR Siria 51.76 53 ⇑P **P 12 29 20.4 -0.9**
N23A Red Feather La 51.77 300 P **P 12 29 22.9 +1.1**
N23A IAmb IAmb 12 29 26.0
comp=Z,34nm,1.4s
N23A Red Feather La 51.77 300 P **P 12 29 19.8 -2.0**
baz=81
BZS Buzias 51.79 54 ⇓P **P 12 29 21.3 -0.2**
BZS Buzias 51.79 54 ⇓P **P 12 29 21.3 -0.2**
K22A Casper 51.94 303 P **P 12 29 21.1 -1.8**
baz=82
MDVR Moldovita 51.95 55 ⇓P **P 12 29 22.5 -0.3**
SDCO Great Sand Dun 51.98 296 P **P 12 29 23.7 +0.3**
baz=79,SNR=6.6
SDCO Great Sand Dun 51.98 296 P **P 12 29 22.9 -0.5**
baz=79,SNR=6.6
UZH Uzhgorod 52.00 50 *e*P **P 12 29 20.5 -2.5**
UZH *i* 12 29 22.8
BOVS Bovan 52.08 56 ⇓P **P 12 29 23.9 +0.1**
LPAZ La Paz 52.12 212 P **P 12 29 22.6 -2.3**
comp=Z,4.2nm,0.9s,baz=358,slow=7.5,SNR=12
LPAZ LR LR 12 50 58.4
comp=Z,260nm,18.2s,baz=22,slow=36
comp=Z,4.2nm,0.9s
LPAZ La Paz 52.12 212 P **P 12 29 22.6 -2.3**
TRPA Tarpa 52.20 50 ⇑P **P 12 29 24.0 -0.5**
TRPA Tarpa 52.20 50 P **P 12 29 25.3 +0.9**
DRGR 52.43 52 ⇑P **P 12 29 25.2 -1.2**
DRGR 52.43 52 ⇑P **P 12 29 25.2 -1.2**
TXAR Lajitas Array 52.51 286 P **P 12 29 25.4 -1.9**
comp=Z,5.2nm,1.0s,baz=99,slow=7.7,SNR=18
TXAR LR LR 12 50 45.8
comp=Z,291nm,20.1s,baz=76,slow=35
comp=Z,5.2nm,1.0s
TXAR Lajitas Array 52.51 286 P **P 12 29 27.9 +0.6**
TXAR Lajitas Array 52.51 286 P **P 12 29 27.9 +0.6**
TX31 Lajitas Ar. Si 52.51 286 P **P 12 29 27.9 +0.7**
TX31 IAmb IAmb 12 29 31.1
comp=Z,22nm,1.1s
TX31 Lajitas Ar. Si 52.51 286 P **P 12 29 25.7 -1.6**
baz=73,SNR=5.3
GZR Gura Zlata 52.63 54 ⇓P **P 12 29 28.3 +0.5**
MARR Marisel-Cluj 52.72 52 P **P 12 29 28.9 +0.3**
NOR Nord 52.73 5 *i* P **P 12 29 26.8 -1.1**
NOR IAmb IAmb 12 29 31.6
comp=Z,14nm,0.9s
BLKB Belogradchik 52.78 56 P **P 12 29 29.3 +0.3**
S22A 4UR Ranch, Cre 53.01 297 P **P 12 29 30.0 -1.1**
baz=78,SNR=7.5
LVV L'vov 53.05 48 *e*P **P 12 29 31.4 +0.6**
NNA Nana 53.14 223 *i* P **P 12 29 30.4 -1.5**
NNA pmax pmax
comp=Z,18nm,1.0s
EUNU Eureka 53.31 351 P **P 12 29 32.9 +0.6**
EUNU IAmb IAmb 12 29 38.1
comp=Z,78nm,1.9s
LOT Lotru 53.31 54 P **P 12 29 33.0 0.0**
ANMO Albuquerque 53.33 293 LR LR 12 50 07.6
comp=Z,982nm,21.8s,baz=83,slow=34
ANMO Albuquerque 53.33 293 P **P 12 29 34.4 +1.0**
ANMO IAmb IAmb 12 29 38.0
comp=Z,28nm,1.4s
ANMO Albuquerque 53.33 293 P **P 12 29 34.4 +1.0**
ANMO pmax pmax
comp=Z,28nm,1.5s
ANMO Albuquerque 53.33 293 P **P 12 29 32.9 -0.4**
baz=76,SNR=8.4
ANMO Albuquerque 53.33 293 P **P 12 29 33.0 -0.4**
baz=76
VTS Vitosha 53.34 57 ⇓P **P 12 29 33.9 +0.7**
VTS Vitosha 53.34 57 ⇓P **P 12 29 33.9 +0.7**
ARCR ARCALIA 53.52 51 ⇑P **P 12 29 36.1 +1.8**
EGMT Eagleton 53.56 310 P **P 12 29 35.8 +1.1**
EGMT Eagleton 53.56 310 P **P 12 29 33.9 -0.7**
baz=84,SNR=7.9
RLMT Red Lodge 53.57 306 P **P 12 29 33.3 -1.7**
baz=82
O20A White River Ci 53.62 300 P **P 12 29 33.7 -1.7**
baz=79,SNR=6.2
BNM Barren Site 53.66 292 P **P 12 29 35.6 -0.2**
ZAIG Zacatecas 53.70 277 P **P 12 29 39.8 +3.5**
Y22D IRIS PASSCAL I 53.92 292 P **P 12 29 38.1 +0.5**
baz=75
Y22F Passcal Instru 53.92 292 P **P 12 29 36.6 -1.0**
baz=75
ARR Arges 53.93 54 ⇓P **P 12 29 37.3 -0.1**
Y22A Socorro 53.99 292 P **P 12 29 37.7 -0.5**
baz=75,SNR=7.0
BUR08 Bucovina Ar. S 54.03 51 P **P 12 29 38.7 +0.5**
BUR08 IAmb IAmb 12 29 39.0
comp=Z,62nm,1.9s
BURAR Bucovina Array 54.04 51 ⇓P **P 12 29 39.2 +0.9**
BURAR Bucovina Array 54.04 51 P **P 12 29 37.9 -0.4**
BURAR Bucovina Array 54.04 51 ⇓P **P 12 29 39.2 +0.9**
FINES FINESS Array B 54.07 34 P **P 12 29 37.5 -0.5**
comp=Z,33nm,1.1s,baz=256,slow=5.1,SNR=14
FINES LR LR 12 48 46.5
comp=Z,312nm,21.1s,baz=260,slow=32
comp=Z,33nm,1.1s
FINES FINESS Array B 54.07 34 P **P 12 29 38.1 +0.1**
FINES FINESS Array B 54.07 34 P **P 12 29 38.1 +0.1**
FIA1 FINESS Array S 54.07 34 P **P 12 29 39.2 +1.2**
PD31 Pinedale Array 54.13 303 P **P 12 29 37.9 -1.3**
PD31 IAmb IAmb 12 29 43.3
comp=Z,39nm,1.1s
PDAR Pinedale Array 54.13 303 P **P 12 29 37.4 -1.8**
comp=Z,25nm,1.1s,baz=79,slow=7.7,SNR=38
PDAR LR LR 12 51 29.5
comp=Z,2μm,19.3s,baz=116,slow=35
comp=Z,25nm,1.1s
PDAR Pinedale Array 54.13 303 P **P 12 29 37.6 -1.5**
BW06 Boulder Array 54.13 303 P **P 12 29 38.1 -1.1**
BW06 Boulder Array 54.13 303 P **P 12 29 37.8 -1.4**
baz=80,SNR=34
VOIR 54.21 53 ⇑P **P 12 29 39.0 -0.5**
VOIR 54.21 53 ⇑P **P 12 29 39.0 -0.5**
KBS Kingsbay 54.25 11 *ce*P **P 12 29 40.5 +1.3**
KBS pmax pmax
comp=Z,140nm,2.5s
VSU Vasula 54.33 37 *i* P **P 12 29 40.7 +0.7**
VSU pmax pmax
comp=Z,103nm,0.9s
DOPR Dopca 54.37 53 ⇑P **P 12 29 41.5 +0.9**
MVCO Mesa Verde 54.42 296 P **P 12 29 40.4 -1.0**
baz=77,SNR=8.1
NACGM Naroch 54.43 42 *e*P **P 12 29 40.9 +0.1**
comp=Z,29nm,0.9s,baz=272
RDMU Red Mountain 54.54 301 P **P 12 29 41.2 -0.9**
H17A Grant Village 54.60 305 P **P 12 29 42.2 -0.4**
baz=81
ARCES ARCESS Array B 54.66 24 P **P 12 29 41.2 -1.1**
comp=Z,15nm,0.8s,baz=254,slow=7.4,SNR=13
ARCES LR LR 12 48 50.0
comp=Z,111nm,20.5s,baz=282,slow=31
comp=Z,15nm,0.8s
ARCES ARCESS Array B 54.66 24 P **P 12 29 41.2 -1.1**
SPITS Spitsbergen Ar 54.70 13 LR LR 12 48 22.9
comp=Z,119nm,18.6s,baz=202,slow=31
BIZ Bicaz 54.73 51 ⇓P **P 12 29 44.9 +1.8**
YPP Pitchstone Pla 54.78 305 P **P 12 29 45.5 +1.6**
YPP IAmb IAmb 12 29 50.4
comp=Z,41nm,1.5s
MLR Muntele Rosu 54.83 53 ⇓P **P 12 29 45.3 +1.3**
MLR Muntele Rosu 54.83 53 LR LR 12 51 40.9
comp=Z,299nm,19.4s,baz=256,slow=34
MLR Muntele Rosu 54.83 53 ⇓P **P 12 29 45.3 +1.3**
SNOW Snow King Moun 54.88 304 P **P 12 29 44.8 +0.2**
SNOW IAmb IAmb 12 29 48.7
comp=Z,46nm,1.3s
121A Cookes Peak, D 55.02 291 P **P 12 29 45.2 -0.5**
baz=74
MNK Minsk 55.09 42 *i* P **P 12 29 44.0 -1.6**

MNK *i* 12 30 45.0
MNK *i* 12 31 47.4
MNK *i* PPP PPP 12 32 58.6
MNK *i* S **S 12 37 27.7 0.0**
MNK *i* 12 39 33.3
MNK *i* SS **SS 12 41 13.2 +2.0**
MNK pmax pmax
comp=E,10.0nm,1.1s
MNK pmax pmax
comp=N,19nm,0.6s
MNK pmax pmax
comp=Z,40nm,0.8s
MNK MLR MLR
comp=Z,166nm,16.0s
MNK MLR MLR
comp=E,31nm,18.0s
MNK MLR MLR
comp=N,392nm,20.0s
MNK Minsk 55.09 42 *i* P **P 12 29 44.0 -1.6**
comp=E,10.0nm,1.1s
MNK *i* P **P 12 29 44.0 -1.6**
comp=N,19nm,0.7s
MNK *i* P **P 12 29 44.0 -1.6**
comp=Z,40nm,0.8s,baz=274
MNK *i* PcP **PcP 12 30 45.1 -1.8**
MNK *i* PP **PP 12 31 47.4 -1.2**
MNK *i* PPP PPP 12 32 58.7
MNK *i* S **S 12 37 27.8 0.0**
MNK *i* ScS **ScS 12 39 33.4 -1.0**
MNK *i* SS **SS 12 41 13.2 +2.0**
MNK *i* SSS SSS 12 43 19.5
MNK *i* LQ LQ 12 48 59.8
MNK *i* LR LR 12 53 35.3
MNK *i* LRM MLR 12 55 54.9
comp=E,31nm,17.8s
MNK *i* LRM MLR 12 55 54.9
comp=Z,166nm,16.1s
MNK *i* LRM MLR 12 56 03.0
comp=N,392nm,20.4s
BOZ Bozeman (W) 55.15 307 P **P 12 29 44.6 -1.8**
baz=81
TESR Tescani 55.16 52 ⇓P **P 12 29 47.3 +1.0**
KEV Kevo 55.22 23 P **P 12 29 45.8 -0.4**
KEV Kevo 55.22 23 P **P 12 29 45.8 -0.4**
KEV pmax pmax
comp=Z,63nm,1.3s
PLOR Plostina 55.26 53 ⇑P **P 12 29 47.5 +0.5**
PLOR Plostina 55.26 53 ⇑P **P 12 29 47.5 +0.5**
VRI Vrincioaia 55.31 53 ⇓P **P 12 29 47.6 +0.2**
VRI Vrincioaia 55.31 53 ⇓P **P 12 29 47.6 +0.2**
YKA Yellowknife Ar 55.67 328 P **P 12 29 48.0 -1.6**
comp=Z,13nm,1.0s,baz=91,slow=7.2,SNR=13
YKA LR LR 12 53 06.5
comp=Z,1μm,19.5s,baz=87,slow=36
comp=Z,13nm,1.0s
YKA Yellowknife Ar 55.67 328 P **P 12 29 50.6 +1.0**
YKA Yellowknife Ar 55.67 328 *i* P **P 12 29 50.5 +0.9**
YKA pmax pmax
comp=Z,11nm,1.0s
W18A Petrified Fore 55.90 294 P **P 12 29 51.5 -0.4**
baz=75
Q16A Castle Valley 56.09 299 P **P 12 29 53.7 +0.4**
Q16A IAmb IAmb 12 29 58.1
comp=Z,24nm,1.4s
IDI Anoyia 56.13 66 LR LR 12 52 25.7
comp=Z,106nm,21.5s,baz=280,slow=34
WALA Waterton Lakes 56.17 311 P **P 12 29 53.9 +0.2**
WALA IAmb IAmb 12 29 56.8
comp=Z,33nm,1.2s
AKASG Malin Array Be 56.28 47 P **P 12 29 52.9 -1.3**
comp=Z,9.8nm,0.8s,baz=276,slow=6.1,SNR=35
AKASG LR LR 12 52 37.1
comp=Z,310nm,18.4s,baz=254,slow=34
comp=Z,9.8nm,0.8s
AKASG Malin Array Be 56.28 47 *i* P **P 12 29 53.2 -1.0**
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKBB Malin Array Si 56.28 47 *ce*P **P 12 29 53.7 -0.5**
AKBB pmax pmax
comp=Z,18nm,1.0s
VALR Valaam 56.38 34 *i* P **P 12 29 57.2 +2.5**
VALR pmax pmax
comp=Z,58nm,1.0s
MSO Missoula 56.53 309 P **P 12 29 54.7 -1.5**
baz=80
MILM Milestii Mici 56.56 51 ⇓P **P 12 29 55.9 -0.4**
MILM Milestii Mici 56.56 51 ⇓P **P 12 29 55.9 -0.4**
HILA High Level 56.99 323 P **P 12 29 59.5 +0.4**
DUG Dugway, Tooele 57.04 301 P **P 12 29 58.4 -1.6**
baz=77,SNR=24
WUAZ Wupatki 57.09 295 P **P 12 29 59.8 -0.7**
baz=74
APA Apatity 57.40 26 ⇓*i* P **P 12 30 00.2 -1.7**
APA pmax pmax
comp=Z,17nm,0.7s
PB09 IPOC Station P 57.45 210 P **P 12 30 03.9 +0.9**
PB09 IAmb IAmb 12 30 20.3
comp=Z,48nm,1.9s
HLID Hailey 57.47 305 P **P 12 30 00.9 -2.2**
baz=78
TUC Tucson 57.51 291 P **P 12 30 06.4 +3.0**
TUC Tucson 57.51 291 P **P 12 30 06.4 +3.0**
TUC pmax pmax
comp=Z,4.0nm,1.5s
TUC Tucson 57.51 291 P **P 12 30 00.8 -2.6**
baz=73
CPUP Villa Florida 57.68 196 LR LR 12 53 54.6
comp=Z,135nm,18.9s,baz=21,slow=35
LVZ Lovozero 57.87 26 *i* P **P 12 30 07.1 +1.8**
LVZ pmax pmax
comp=Z,13nm,1.0s
LVC Limon Verde 58.03 209 LR LR 12 54 34.1
comp=Z,228nm,18.2s,baz=358,slow=36
LVC Limon Verde 58.03 209 P **P 12 30 06.9 -0.3**
LVC Limon Verde 58.03 209 P **P 12 30 06.9 -0.3**
LVC pmax pmax
comp=Z,8.0nm,0.9s
NEW Newport 58.40 311 LR LR 12 53 30.6
comp=Z,763nm,21.3s,baz=78,slow=34
NEW Newport 58.40 311 P **P 12 30 07.7 -1.6**
baz=79,SNR=12
ELK Elko 58.71 302 LR LR 12 54 10.1
comp=Z,1μm,19.8s,baz=78,slow=35
214A Organ Pipe Nat 59.26 291 P **P 12 30 13.3 -2.2**
baz=72,SNR=5.2
R11A Troy Canyon, C 59.58 299 P **P 12 30 16.2 -1.7**
baz=74,SNR=19
PDMCI Parker Dam,Lak 59.61 294 P **P 12 30 17.4 -0.4**
baz=72
WRGLY Wrigley 59.68 329 P **P 12 30 16.0 -1.8**
baz=83
NEE2 Needles Airpor 59.85 295 P **P 12 30 18.2 -1.3**
baz=73
OBN Obninsk 60.01 41 LR LR 12 54 07.2
comp=Z,30nm,18.3s,baz=258,slow=34
OBN Obninsk 60.01 41 ⇑*e*P **P 12 30 20.3 +0.1**
OBN *e* 12 31 08.3
OBN *e* 12 32 36.6
OBN *e*S S 12 38 55.1 +23
OBN pmax pmax
comp=Z,89nm,1.7s
FLDN Fort Liard 60.09 325 P **P 12 30 18.8 -1.8**
baz=81
G08A Pilot Rock 60.27 308 P **P 12 30 23.1 +0.8**
KOTAN Kotaneelee Air 60.39 325 P **P 12 30 20.3 -2.4**
baz=81
IRM Iron Mountain 60.45 295 P **P 12 30 21.4 -2.2**
baz=72,SNR=5.1
TPNV Topopah Spring 60.48 298 P **P 12 30 22.4 -1.6**
baz=73
MOS Moscow 60.49 40 *e*P **P 12 30 21.3 -2.2**
MOS pmax pmax
comp=Z,40nm,0.8s
GLA Glamis 60.53 293 P **P 12 30 21.6 -2.7**
baz=72
KLMR Klimovskoe 60.60 34 *e*P **P 12 30 21.5 -2.6**
KLMR pmax pmax
comp=Z,59nm,1.3s
KLMR Klimovskoe 60.60 34 *e*P **P 12 30 21.6 -2.6**
KLMR AMP 12 30 25.2
comp=Z,59nm,1.3s
GMRC Granite Mounta 60.66 295 P **P 12 30 23.1 -2.2**
baz=72
TUQ Turquoise Moun 60.67 296 P **P 12 30 23.6 -1.7**
baz=72,SNR=7.1
BC3 Big Chuckawall 60.84 294 P **P 12 30 24.4 -2.1**

baz=72
FURC Furnace Creek, 61.09 298 P **P 12 30 26.5 -1.4**
baz=72
BELC Belle Mtn. Jos 61.17 295 P **P 12 30 26.3 -2.4**
baz=72
HEC Hector,Ludlow 61.18 296 P **P 12 30 26.8 -1.9**
baz=72
GRAC Grapevine Rang 61.32 298 P **P 12 30 27.2 -2.3**
baz=72
SWSC Sam W. Stewart 61.34 293 P **P 12 30 28.2 -1.5**
baz=71
GSC Goldstone, Bar 61.40 296 P **P 12 30 28.5 -1.7**
baz=72
LIRD Liard River Hi 61.53 325 P **P 12 30 28.5 -2.1**
baz=79
NVAR Mina Array Bea 61.61 300 P **P 12 30 30.0 -1.7**
comp=Z,6.4nm,1.0s,baz=72,slow=6.7,SNR=18
NVAR PP **PP 12 32 50.7 +3.6**
comp=Z,1.1nm,0.8s,baz=84,slow=8.1,SNR=3.7
NVAR LR LR 12 55 34.0
comp=Z,872nm,21.1s,baz=73,slow=34
comp=Z,6.4nm,1.0s
NVAR Mina Array Bea 61.61 300 P **P 12 30 31.4 -0.4**
BR131 Keskin Array S 61.63 58 P **P 12 30 31.6 -0.2**
BR131 IAmb IAmb 12 30 32.6
comp=Z,38nm,1.4s
BR131 Keskin Array S 61.63 58 P **P 12 30 31.6 -0.2**
BR131 pmax pmax
comp=Z,38nm,1.4s
BR131 Keskin Array S 61.63 58 P **P 12 30 31.9 +0.1**
SNR=5.1
BRTR Keskin Array B 61.63 58 P **P 12 30 30.9 -0.9**
comp=Z,8.9nm,1.1s,baz=285,slow=4.9,SNR=23
BRTR LR LR 12 55 43.7
comp=Z,250nm,19.8s,baz=294,slow=34
comp=Z,8.9nm,1.1s
BRTR Keskin Array B 61.63 58 P **P 12 30 30.9 -0.9**
BRTR Keskin Array B 61.63 58 *i* P **P 12 30 31.5 -0.2**
BRTR pmax pmax
comp=Z,9.0nm,1.1s
TPFO Pinon Flats 61.65 294 P **P 12 30 29.6 -2.4**
baz=71
PFO Pinyon Flats O 61.66 294 LR LR 12 55 03.4
comp=Z,909nm,21.3s,baz=76,slow=34
PFO Pinyon Flats O 61.66 294 P **P 12 30 34.6 +2.6**
PFO IAmb IAmb 12 30 37.1
comp=Z,19nm,1.6s
PFO Pinyon Flats O 61.66 294 P **P 12 30 34.6 +2.6**
PFO pmax pmax
comp=Z,19nm,1.6s
PFO Pinyon Flats O 61.66 294 P **P 12 30 30.1 -1.9**
baz=71
IKP In-Ko-Pah, Jac 61.69 293 P **P 12 30 30.9 -1.3**
baz=71
MPMC Manual Prospec 61.70 297 P **P 12 30 31.5 -0.8**
baz=72
MONP2 Monument Peak 61.86 294 P **P 12 30 32.3 -1.2**
baz=71
LPSR Galich'ya Gora 61.89 43 *e*P **P 12 30 32.4 -0.6**
LPSR pmax pmax
comp=Z,60nm,1.2s
CWC Cottonwood Cre 62.03 298 P **P 12 30 33.1 -1.4**
baz=72
TGTN Hyland Airport 62.17 327 P **P 12 30 34.0 -0.8**
baz=78,SNR=7.7
MURC Murrieta 62.24 295 P **P 12 30 35.3 -0.6**
baz=71
MLAC Mammoth, Mammo 62.25 299 P **P 12 30 35.2 -0.9**
baz=72
VORR Voronezh 62.27 44 *e*P **P 12 30 35.6 0.0**
VORR pmax pmax
comp=Z,36nm,1.5s
VSR Storozhevoye 62.36 45 *e*P **P 12 30 34.4 -1.8**
VSR pmax pmax
comp=Z,40nm,1.3s
PNTR Pine Nut 62.38 301 P **P 12 30 39.3 +2.4**
BFSC Mount Baldy Ra 62.40 295 P **P 12 30 36.8 -0.2**
baz=71
EDW2 Edwards Air Fo 62.45 296 P **P 12 30 37.0 -0.3**
baz=71,SNR=7.7
ISA Isabella, Lake 62.58 297 P **P 12 30 37.8 -0.3**
baz=71,SNR=5.8
WTLY Watson Lake, Y 62.72 326 P **P 12 30 37.7 -0.9**
baz=77
ANN Anapa 62.91 52 *e*P **P 12 30 36.3 -3.7**
ANN *e**PP **pP 12 30 39.3 -4.4**
ANN *e*S S 12 39 05.9 -3.4
ANN pmax pmax
comp=Z,39nm,1.0s
INK Inuvik 62.91 335 LR LR 12 57 36.2
comp=Z,917nm,18.6s,baz=87,slow=36
INK Inuvik 62.91 335 P **P 12 30 40.4 +0.8**
INK Inuvik 62.91 335 P **P 12 30 40.4 +0.8**
INK pmax pmax
comp=Z,48nm,1.2s
INK Inuvik 62.91 335 P **P 12 30 38.8 -0.8**
baz=77,SNR=9.1
VES Vestal, Richgr 62.99 298 P **P 12 30 40.9 +0.1**
baz=71
ARVC Arvin 63.03 297 P **P 12 30 40.2 -0.8**
baz=71
F31M Tsiigehtchic 63.19 334 P **P 12 30 40.3 -1.2**
baz=76
MMPY Sheldon Lake, 63.30 329 P **P 12 30 40.7 -1.7**
baz=76,SNR=7.4
PRGR Permogore 63.33 32 *e*P **P 12 30 40.0 -2.5**
PRGR pmax pmax
comp=Z,29nm,1.4s
DLBC Dease Lake 63.74 324 LR LR 12 57 47.7
comp=Z,2μm,20.4s,baz=82,slow=35
DLBC Dease Lake 63.74 324 P **P 12 30 43.9 -1.4**
baz=75
YBH Yreka Blue Hor 63.86 305 LR LR 12 57 26.7
comp=Z,690nm,20.1s,baz=62,slow=35
VRH Novokhopyorsk 63.91 44 *e*P **P 12 30 44.7 -1.8**
VRH pmax pmax
comp=Z,40nm,0.9s
R33M Jennings River 63.96 325 P **P 12 30 45.6 -1.3**
baz=75,SNR=16
T35M Bob Quinn 64.23 323 P **P 12 30 47.9 -0.7**
baz=74
G30M tAoh Zraii Nji 64.24 334 P **P 12 30 48.3 -0.2**
baz=74
FARO Faro, Yukon 64.34 329 P **P 12 30 48.6 -0.6**
baz=74,SNR=20
BBB Bella Bella 64.36 317 LR LR 12 57 26.7
comp=Z,956nm,21.2s,baz=75,slow=35
S34M Telegraph Cree 64.44 324 P **P 12 30 48.7 -1.2**
baz=74
N32M Quiet Lake 64.51 328 P **P 12 30 49.2 -1.2**
baz=74
EPYK Eagle Plains 64.60 334 P **P 12 30 49.4 -1.5**
baz=73
P33M Teslin, Yukon 64.64 326 P **P 12 30 50.1 -1.3**
baz=74
Q32M Nakina River 64.73 325 P **P 12 30 50.4 -1.6**
baz=74
M31M Drury Creek, Y 64.81 329 P **P 12 30 51.2 -1.1**
baz=73,SNR=11
CO01 Juntas del Tor 65.07 206 P **P 12 30 54.7 +0.1**
CO01 IAmb IAmb 12 31 12.5
comp=Z,22nm,1.5s
MAYO Mayo, Yukon 65.07 331 P **P 12 30 55.5 +1.5**
MAYO Mayo, Yukon 65.07 331 P **P 12 30 53.2 -0.7**
baz=73
V35K Ketchikan 65.44 321 P **P 12 30 55.3 -1.1**
baz=72
WHY Whitehorse 65.49 327 P **P 12 30 55.0 -1.9**
baz=72
WRAK Wrangell Islan 65.50 322 P **P 12 30 56.5 -0.3**
baz=72
I29M Ogilvie Camp, 65.53 333 P **P 12 30 55.3 -1.6**
baz=72
N31M Braeburn, Yuko 65.66 328 P **P 12 30 57.3 -0.6**
baz=72,SNR=21
K29M Barlow Dome 65.68 331 P **P 12 30 57.5 -0.6**
baz=72,SNR=6.0
T33K Petersburg 65.70 323 P **P 12 30 57.6 -0.5**
baz=72
M30M Minto, Yukon 65.77 330 P **P 12 30 58.1 -0.4**
baz=72
E27K Coleen River 65.83 336 P **P 12 30 58.4 -0.4**
baz=70,SNR=8.7
KIRV Kirov 66.00 35 LR LR 12 56 17.4
comp=Z,230nm,21.9s,baz=289,slow=33
KIRV Kirov 66.00 35 *ce*P **P 12 30 59.5 -0.5**
O30N Mendenhall 66.03 328 P **P 12 30 59.7 -0.5**

baz=71,SNR=21
C27K Jago River 66.04 338 P P 12 30 59.3 -0.8
baz=69,SNR=7.7
R32K Eaglecrest 66.05 325 P P 12 30 59.3 -1.1
baz=72
SKAG Skagway 66.08 326 P P 12 30 59.3 -1.2
baz=71
L29M L29M 66.18 330 P P 12 30 59.8 -1.4
baz=71
N30M Aishikik Lake 66.26 328 P P 12 30 60.0 -1.8
baz=71,SNR=14
CO06 Fray Jorge 66.29 207 P P 12 31 02.4 +0.3
C26K Camden Bay 66.32 338 P P 12 31 00.6 -1.3
baz=68
G27K Doyon Strip 66.33 335 P P 12 31 01.3 -0.7
baz=69,SNR=8.2
S32K Killisnoo 66.34 324 P P 12 31 01.1 -1.1
baz=71
DAWY Dawson 66.39 332 P P 12 31 01.7 -0.8
baz=70,SNR=7.9
H27K Steamboat Moun 66.49 334 P P 12 31 01.7 -1.3
baz=69
M29M Somme Creek 66.55 330 P P 12 31 02.8 -0.8
baz=70
PLBC Pleasant Camp 66.58 326 P P 12 31 02.7 -1.0
baz=71
P30M Million Dollar 66.64 327 P P 12 31 04.0 -0.2
baz=70
HYT Haines Junctio 66.66 328 P P 12 31 03.8 -0.6
baz=70
I27K Kandik River 66.75 333 P P 12 31 04.8 0.0
baz=69,SNR=11
KIV Kislovodsk 66.75 52 P P 12 31 06.2 +1.0
KIV IAmb IAmb 12 31 06.9
comp=Z,29nm,1.3s
KIV Kislovodsk 66.75 52 eP P 12 31 05.1 -0.1
KIV pmax pmax
comp=Z,16nm,1.0s
SHA1 Shidzhatmaz 66.80 52 i P P 12 31 06.0 +0.3
EGAK Eagle 66.86 333 P P 12 31 05.1 -0.3
baz=69
F26K Sheenjek River 66.91 336 P P 12 31 05.8 +0.1
baz=68,SNR=19
KBZ Khabaz 66.97 52 P P 12 31 05.9 -0.5
comp=Z,6.8nm,0.9s,baz=283,slow=5.4,SNR=9.6
comp=Z,6.8nm,0.9s
KBZ Khabaz 66.97 52 ceP P 12 31 07.0 +0.6
KBZ pmax pmax
comp=Z,20nm,1.3s
YUK4 Talbot Arm 67.01 329 P P 12 31 05.3 -1.4
baz=70
NEY Neytrino 67.01 52 i P P 12 31 07.7 +0.7
NEY pmax pmax
comp=Z,3.0nm,1.1s
S31K Pelican 67.02 325 P P 12 31 05.6 -0.9
baz=70
YUK6 Outpost Mounta 67.02 328 P P 12 31 05.7 -1.1
baz=70,SNR=5.9
D25K Kavik River 67.02 338 P P 12 31 05.2 -1.2
baz=66
BELG Belogornoye 67.04 42 P P 12 31 06.0 -0.7
comp=Z,25nm,0.5s,baz=87,slow=4.0,SNR=11
BELG LR LR 12 57 58.9
comp=Z,262nm,20.7s,baz=312,slow=34
comp=Z,25nm,0.5s
BELG Belogornoye 67.04 42 i P P 12 31 07.3 +0.6
BELG pmax pmax
comp=Z,11nm,1.2s
G26K Porcupine Rive 67.06 335 P P 12 31 06.2 -0.4
baz=68,SNR=24
BMAR Burnt Mountain 67.16 336 P P 12 31 07.9 +0.5
P29M Windy Craggy 67.18 327 P P 12 31 07.7 +0.1
P29M IAmb IAmb 12 31 14.0
comp=Z,26nm,1.1s
P29M Windy Craggy 67.18 327 P P 12 31 06.8 -0.8
baz=70
E25K Arctic Village 67.23 337 P P 12 31 06.8 -1.0
baz=66,SNR=6.5
O29M Mount Kennedy 67.34 328 P P 12 31 07.6 -1.2
baz=69
I26K Coal Creek Min 67.45 333 P P 12 31 08.7 -0.5
baz=67
F25K Christian Rive 67.47 336 P P 12 31 09.2 -0.1
baz=66,SNR=8.9
K27K Chicken 67.51 332 P P 12 31 09.0 -0.6
baz=68
NCK Nalchik 67.53 52 i P P 12 31 10.8 +0.7
NCK pmax pmax
comp=Z,18nm,0.9s
YUK8 Steele Glacier 67.53 329 P P 12 31 09.1 -1.0
baz=69
C24K Franklin Bluff 67.60 339 P P 12 31 10.0 0.0
baz=64
BVCY Beaver Creek 67.60 330 P P 12 31 09.7 -0.5
baz=68
YUK3 Moose Creek 67.66 329 P P 12 31 10.0 -0.8
baz=68
MARD Mardin 67.71 59 P P 12 31 12.0 +0.5
BCAR Beaver Creek A 67.75 331 P P 12 31 11.2 0.0
L27K Beaver Creek, 67.77 331 P P 12 31 10.3 -1.0
baz=68
D24K Happy Valley 67.89 338 P P 12 31 11.1 -0.7
baz=64
O28M Mount Upton 67.91 328 P P 12 31 11.2 -1.3
baz=68
J26L Joseph Creek 67.93 333 P P 12 31 11.8 -0.5
baz=67
PNL Peninsula 67.95 327 P P 12 31 11.9 -0.5
baz=68
G25K Bearman Lake 67.97 335 P P 12 31 12.1 -0.3
baz=66
ZEI Tsey 67.98 52 eP P 12 31 12.4 -0.8
ZEI pmax pmax
comp=Z,18nm,1.2s
M27K Edge Creek, AK 68.06 330 P P 12 31 12.6 -0.6
baz=67
H25K Birch Creek 68.08 335 P P 12 31 13.1 0.0
baz=66
C23K Itkillik River 68.14 339 P P 12 31 12.7 -0.7
baz=63
GURO Guroymak-BITLI 68.18 57 P P 12 31 15.0 +0.5
GURO IAmb IAmb 12 31 16.8
comp=Z,23nm,1.1s
PINM Pinnacle 68.19 328 P P 12 31 13.8 -0.2
baz=68
E24K Your Creek 68.25 337 P P 12 31 14.0 -0.2
baz=64,SNR=8.4
PRP Porcupine Dome 68.28 334 P P 12 31 13.7 -0.9
baz=66
F24K Squaw Lake 68.29 336 P P 12 31 14.8 +0.4
baz=64
SCRK Sand Creek 68.31 332 P P 12 31 14.1 -0.6
baz=66
TOLK Toolik Lake Re 68.36 338 P P 12 31 15.6 +0.7
baz=63
L26K Log Cabin Wild 68.42 331 P P 12 31 14.9 -0.5
baz=66
G24K Hadweenzic Riv 68.50 336 P P 12 31 16.1 +0.4
baz=64,SNR=10
M26K Nabesna, AK 68.53 331 P P 12 31 15.3 -0.8
baz=66
D23K Nanushuk River 68.57 338 P P 12 31 15.1 -1.1
baz=62
J25K Salcha River, 68.59 333 P P 12 31 16.0 -0.5
baz=65
E23K Chandalar 68.64 337 P P 12 31 16.0 -0.6
baz=63
MCARA McCarthy VSAT 68.95 330 P P 12 31 18.4 -0.2
baz=66
MESA MESA 68.95 328 P P 12 31 18.9 0.0
baz=66
H24K Noodor Dome 69.02 335 P P 12 31 18.7 -0.3
baz=64
K24K Donnelly Dome 69.10 332 P P 12 31 19.0 -0.5
baz=65
IL31 69.12 334 P P 12 31 20.5 +1.0
ILAR Eielson Array 69.12 334 P P 12 31 19.5 -0.1
comp=Z,13nm,1.0s,baz=64,slow=4.6,SNR=27
ILAR LR LR 13 01 58.1
comp=Z,756nm,18.5s,baz=62,slow=36
comp=Z,13nm,1.0s
ILAR Eielson Array 69.12 334 P P 12 31 19.9 +0.3
ILAR Eielson Array 69.12 334 P P 12 31 19.9 +0.3
POKR Poker Plat Res 69.17 334 P P 12 31 19.2 -0.7
baz=64
COLD Coldfoot 69.22 337 P P 12 31 20.3 +0.1
baz=62
HDA Harding Lake 69.30 333 P P 12 31 20.7 0.0
baz=64
E22K Anaktuvuk Pass 69.33 338 P P 12 31 20.9 0.0
baz=61
PAX Paxson 69.33 332 P P 12 31 21.5 +0.5
baz=65
G23K Bananza Creek 69.40 336 P P 12 31 21.7 +0.4
baz=62
COLA College 69.44 334 P P 12 31 22.6 +1.0
COLA College 69.44 334 P P 12 31 22.6 +1.0
COLA pmax pmax
comp=Z,37nm,1.2s
COLA College 69.44 334 P P 12 31 21.9 +0.4
baz=63
HARP HAARP 69.44 331 P P 12 31 21.2 -0.5
baz=65
TCOL CIGO, UAF Yank 69.45 334 P P 12 31 21.4 -0.2
baz=63
GNI Garni 69.54 55 LR LR 13 02 26.4
comp=Z,70nm,19.6s,baz=290,slow=36
GNI Garni 69.54 55 P P 12 31 23.7 +0.8
GNI Garni 69.54 55 deP P 12 31 22.7 -0.2
GNI pmax pmax
comp=Z,91nm,1.7s
GNI Garni 69.54 55 P P 12 31 23.7 +0.8
N25K Chitina, Valde 69.54 330 P P 12 31 21.7 -0.7
baz=65
H23K Yukon River 69.64 335 P P 12 31 23.0 +0.1
baz=62
F22K John River 69.76 337 P P 12 31 24.0 +0.5
baz=60
G22K Bettles 69.81 337 P P 12 31 23.9 +0.1
baz=61
BMRM Bremner River 69.82 329 P P 12 31 23.6 -0.4
baz=65
I23K Minto, Yukon-K 69.89 334 P P 12 31 24.5 +0.2
baz=62,SNR=6.7
M24K Tolsona, Glenn 70.00 331 P P 12 31 25.4 +0.2
baz=64
NEA2 Nenana 70.04 334 P P 12 31 25.1 -0.2
baz=62
DHY Denali Highway 70.06 332 P P 12 31 25.1 -0.6
baz=63
KLU Klutina 70.16 330 P P 12 31 25.5 -0.7
baz=64
H22K Ishtalitna Cre 70.27 336 P P 12 31 26.9 +0.2
baz=61
F21K Alatna River 70.34 337 P P 12 31 26.5 -0.6
baz=59
MCK McKinley 70.39 333 P P 12 31 26.8 -0.7
baz=62
WAT6 Susitna Watana 70.44 332 P P 12 31 27.5 -0.5
baz=63
MLY Manley 70.46 335 P P 12 31 28.4 +0.5
baz=61
EYAK Cordova Ski Ar 70.50 329 P P 12 31 28.5 +0.3
baz=64
WAT1 Susitna Watana 70.66 332 P P 12 31 28.2 -1.0
baz=62
G21K Allakaket 70.71 337 P P 12 31 29.1 -0.2
baz=59
I21K Tanana 70.84 335 P P 12 31 29.8 -0.4
baz=60
H21K Melozitna Rive 70.90 336 P P 12 31 30.6 +0.1
baz=59
GLI Glacier Island 70.95 330 P P 12 31 30.7 -0.2
baz=63
BPAW Bear Paw Mtn. 71.01 334 P P 12 31 31.1 -0.1
baz=60
SML Sawmill 71.04 331 P P 12 31 30.8 -0.8
baz=62
TRF Thorofare Moun 71.05 333 P P 12 31 31.4 -0.3
baz=61
IMAR Indian Mountai 71.06 336 P P 12 31 31.9 +0.3
AKT Akhty 71.11 53 eP P 12 31 29.9 -2.5
AKT e 12 31 49.9
AKT pmax pmax
comp=Z,30nm,1.4s
KNK Knik Glacier 71.28 331 P P 12 31 32.8 -0.1
baz=62
ARU Arti 71.38 35 P P 12 31 32.6 -1.0
comp=Z,6.7nm,0.9s,baz=288,slow=5.5,SNR=15
ARU LR LR 12 59 35.5
comp=Z,242nm,21.7s,baz=294,slow=33
comp=Z,6.7nm,0.9s
ARU Arti 71.38 35 P P 12 31 33.6 -0.1
ARU IAmb IAmb 12 31 35.3
comp=Z,34nm,1.3s
ARU Arti 71.38 35 c iP P 12 31 33.7 +0.1
ARU 12 31 52.0
ARU S S 12 40 52.7 +1.6
ARU SS SS 12 45 24.5 -0.4
ARU pmax pmax
comp=Z,39nm,1.5s
PMR Palmer 71.48 331 P P 12 31 33.3 -0.8
baz=61
PWL Port Wells 71.49 330 P P 12 31 33.7 -0.5
baz=62
CUT Chulitna 71.56 332 P P 12 31 34.8 +0.2
baz=61
CHUM Lake Minchumin 71.62 334 P P 12 31 34.8 -0.1
baz=59
CAST Castle Rocks 71.77 333 P P 12 31 35.3 -0.6
baz=59
M22K Willow 71.82 331 P P 12 31 36.4 +0.3
baz=60
RC01 Rabbit Creek A 71.98 331 P P 12 31 36.0 -1.1
baz=61
PPLA Purkeypile 72.08 333 P P 12 31 37.1 -0.7
baz=59
J20K Nowinta River 72.16 335 P P 12 31 37.4 -0.8
baz=58
SUA Susitna One 72.22 331 P P 12 31 38.2 -0.5
baz=60
SVE Sverdlovsk 72.23 34 eP P 12 31 38.6 -0.1
SVE pmax pmax
comp=Z,32nm,1.4s
SKT Skwentna 72.28 332 P P 12 31 39.2 +0.2
baz=59
H09N1 TRISTAN DA CUN 72.43 155 T T 13 50 38.1
SNR=14
H09W1 TRISTAN DA CUN 72.45 155 T T 13 50 34.7
SNR=8.3
K20K Telida 72.57 334 P P 12 31 40.5 -0.1
baz=58
SPCR Spurr Chakacha 72.96 332 P P 12 31 42.0 -1.1
baz=59
L20K Farewell, AK 72.96 333 P P 12 31 42.4 -0.6
baz=58
N20K Mount Spurr 72.96 332 P P 12 31 41.6 -1.4
baz=59
M20K Styx River 72.98 332 P P 12 31 42.3 -0.9
baz=58
M19K Big River Lodg 73.47 333 P P 12 31 47.0 +1.0
M19K IAmb IAmb 12 31 51.1
comp=Z,20nm,1.0s
M19K Big River Lodg 73.47 333 P P 12 31 45.4 -0.6
baz=57
L19K White Mountain 73.51 333 P P 12 31 45.4 -0.8
baz=57
O20K Slope Mountain 73.72 331 P P 12 31 47.6 0.0
baz=58
AKTO Aktyubinsk 73.79 41 P P 12 31 47.7 -0.4
comp=Z,3.1nm,0.8s,baz=276,slow=6.4,SNR=14
AKTO LR LR 13 03 01.7
comp=Z,86nm,18.0s,baz=258,slow=35
comp=Z,3.1nm,0.8s
AKTO Aktyubinsk 73.79 41 P P 12 31 47.7 -0.4
O19K Port Alsworth 74.38 331 P P 12 31 52.4 +1.2
baz=57
NRIK Noril'sk 74.62 16 P P 12 31 53.0 +0.4
comp=Z,21nm,1.1s,baz=321,slow=3.9,SNR=15
comp=Z,21nm,1.1s
NRIK Noril'sk 74.62 16 P P 12 31 53.8 +1.3
NRIK Noril'sk 74.62 16 ceP P 12 31 53.8 +1.3
NRIK pmax pmax
comp=Z,48nm,1.2s
PLCA Paso Flores 74.91 202 P P 12 31 53.3 -1.3
comp=Z,4.5nm,1.0s,baz=8.4,slow=7.3,SNR=6.5
PLCA LR LR 13 06 21.6
comp=Z,146nm,18.3s,baz=20,slow=37
comp=Z,4.5nm,1.0s
PLCA Paso Flores 74.91 202 P P 12 31 55.0 +0.4
PLCA IAmb IAmb 12 31 57.1
comp=Z,23nm,1.4s
PLCA Paso Flores 74.91 202 P P 12 31 55.0 +0.4
PLCA pmax pmax
comp=Z,23nm,1.4s
KDAK Kodiak Island 74.93 329 LR LR 13 06 15.8
comp=Z,2μm,18.1s,baz=81,slow=37
KDAK Kodiak Island 74.93 329 P P 12 31 55.1 +0.6
baz=58
O18K Koktuh Hills 74.94 331 P P 12 31 54.6 0.0
baz=56
ABKAR Akbulak array 75.44 41 P P 12 31 57.2 -0.5
O17K Koliganek Bris 75.77 332 P P 12 32 00.2 +0.8
baz=54
TSUM Tsumeb 75.77 122 LR LR 12 58 18.5
comp=Z,413nm,21.9s,baz=329,slow=30
MBAR Mbarara 75.89 99 LR LR 13 03 20.0
comp=Z,335nm,21.6s,baz=316,slow=34
MBAR Mbarara 75.89 99 P P 12 32 01.6 +0.6
MBAR IAmb IAmb 12 32 02.5
comp=Z,38nm,1.9s
MBAR Mbarara 75.89 99 P P 12 32 01.6 +0.6
MBAR pmax pmax
comp=Z,38nm,1.9s
MBAR Mbarara 75.89 99 P P 12 32 01.2 +0.2
N16K Nishlik Lake 76.03 333 P P 12 32 02.2 +1.4
baz=53
Q17K Contact Creek 76.13 330 P P 12 32 01.9 +0.4
baz=55
Q16K King Salmon 76.22 331 P P 12 32 02.1 +0.2
baz=55
RAYN Ar Rayn 77.10 70 P P 12 32 07.7 +0.1
RAYN Ar Rayn 77.10 70 P P 12 32 07.7 +0.1
RAYN pmax pmax
comp=Z,11nm,1.4s
RAYN Ar Rayn 77.10 70 P P 12 32 07.9 +0.3
LODK Lodwar 77.86 93 P P 12 32 12.1 +0.1
LODK Lodwar 77.86 93 P P 12 32 11.7 -0.4
SNR=7.3
TIXI Tiksi 78.54 3 P P 12 32 15.5 +0.8
comp=Z,9.0nm,1.0s,baz=270,slow=23,SNR=8.7
TIXI LR LR 13 02 01.2
comp=Z,103nm,21.8s,baz=271,slow=32
comp=Z,9.0nm,1.0s
TIXI Tiksi 78.54 3 P P 12 32 15.2 +0.6
TIXI IAmb IAmb 12 32 16.2
comp=Z,55nm,1.8s
TIXI Tiksi 78.54 3 ceP P 12 32 15.6 +0.9
TIXI pmax pmax
comp=Z,21nm,1.3s
BRVK Borovoye 78.94 35 P P 12 32 17.3 0.0
BRVK IAmb IAmb 12 32 18.8
comp=Z,36nm,1.6s
BRVK Borovoye 78.94 35 P P 12 32 17.3 0.0
BRVK pmax pmax
comp=Z,36nm,1.7s
BRVK Borovoye 78.94 35 P P 12 32 17.2 0.0
BVAR Borovoye Array 79.01 35 P P 12 32 17.8 +0.2
comp=Z,5.2nm,1.1s,baz=298,slow=3.2,SNR=20
BVAR LR LR 13 05 17.6
comp=Z,160nm,18.2s,baz=298,slow=34
comp=Z,5.2nm,1.1s
BVAR Borovoye Array 79.01 35 P P 12 32 17.8 +0.2
GEYT Alibeck 79.86 52 P P 12 32 22.9 +0.3
comp=Z,4.4nm,0.8s,baz=297,slow=6.5,SNR=11
comp=Z,4.4nm,0.8s
GEYT Alibeck 79.86 52 P P 12 32 22.4 -0.2
GYA0B ALIBECK ARRAY 79.86 52 P P 12 32 23.0 +0.4
BILL Bilibino 79.99 349 eP P 12 32 23.0 +0.3
BILL e 12 32 28.7
BILL e 12 35 34.0
BILL eS S 12 42 39.9 +14
BILL pmax pmax
comp=Z,16nm,1.2s
BILL MLR MLR
comp=Z,232nm,20.0s
ATD Arta Tunnel 80.44 82 LR LR 13 07 37.0
comp=Z,413nm,18.9s,baz=328,slow=35
LSZ Lusaka 81.61 113 LR LR 13 08 04.6
comp=Z,390nm,18.8s,baz=330,slow=35
LSZ Lusaka 81.61 113 P P 12 32 33.0 +0.7
LSZ pmax pmax
comp=Z,17nm,1.2s
KMBO Kilima Mbogo 81.76 96 LR LR 13 08 12.5
comp=Z,24nm,19.1s,baz=276,slow=35
KMBO Kilima Mbogo 81.76 96 P P 12 32 34.3 +0.9
KMBO Kilima Mbogo 81.76 96 P P 12 32 34.3 +0.9
KMBO pmax pmax
comp=Z,15nm,1.7s
JRN Qarnain Island 82.34 66 P P 12 32 34.8 -1.2
KIBK Kibwezi 83.06 97 P P 12 32 41.4 +1.5
KIBK IAmb IAmb 12 32 43.2
comp=Z,46nm,1.9s
MZWR Madinat Zayed 83.74 66 P P 12 32 45.3 +2.1
MZR Muzera 83.79 67 P P 12 32 43.9 +0.4
SHME Shamm 84.37 63 P P 12 32 47.0 +0.5
KURK Kurchatov 84.44 33 P P 12 32 46.1 -0.2
KURK Kurchatov 84.44 33 P P 12 32 46.1 -0.2
KURK pmax pmax
comp=Z,51nm,1.8s
KURBB Kurchatov Arra 84.46 33 P P 12 32 46.0 -0.4
comp=Z,5.7nm,0.9s,baz=311,slow=5.7,SNR=28
comp=Z,5.7nm,0.9s
BANOM Banah 84.56 63 P P 12 32 46.4 -1.1
MASF Masafi 84.73 64 P P 12 32 50.1 +1.8
SNR=5.4
MATP Matopo 84.74 117 LR LR 13 04 34.1
comp=Z,423nm,21.3s,baz=242,slow=31
ZAA0 Zalesovo Array 84.93 28 P P 12 32 48.5 -0.2
ZAA0 IAmb IAmb 12 32 49.5
comp=Z,23nm,1.5s
ZALV Zalesovo Beam 84.93 28 P P 12 32 48.4 -0.3
comp=Z,11nm,1.1s,baz=292,slow=4.7,SNR=24
ZALV LR LR 13 09 37.5
comp=Z,102nm,19.5s,baz=308,slow=35
comp=Z,11nm,1.1s
ZALV Zalesovo Beam 84.93 28 P P 12 32 48.3 -0.3
ZALV Zalesovo Beam 84.93 28 P P 12 32 48.4 -0.3
KK31 Karatay Array 84.94 43 P P 12 32 49.4 +0.3
KK31 IAmb IAmb 12 32 54.5
comp=Z,17nm,1.5s
KK31 Karatay Array 84.94 43 P P 12 32 49.4 +0.3
KK31 pmax pmax
comp=Z,17nm,1.5s
KKAR Karatay Array 84.94 43 P P 12 32 48.7 -0.3
KKAR Karatay Array 84.94 43 P P 12 32 48.7 -0.3
ASHO Ashiyiah 85.00 65 P P 12 32 54.1 +4.4
SNR=5.2
LBTB Lobatse 85.18 122 LR LR 13 04 03.7
comp=Z,467nm,21.9s,baz=314,slow=31
UMZA Um Al Qammool 85.28 67 P P 12 32 51.4 +0.3
RPN Rapa Nui 85.38 235 LR LR 13 04 42.3
comp=Z,101nm,19.7s,baz=66,slow=31
SOHO SOHO 85.65 65 P P 12 32 53.3 +0.4
JASK Jask - Hormozg 85.80 63 P P 12 32 56.7 +3.1
ARQ Araqi 86.05 65 P P 12 32 54.5 -0.4
SUR Sutherland 86.31 131 LR LR 13 03 04.3
comp=Z,455nm,21.9s,baz=318,slow=30
SUR Sutherland 86.31 131 P P 12 32 60.0 +3.9
ABTO Aybut 86.45 72 P P 12 32 58.2 +1.2
DOK Doka 86.50 71 P P 12 32 57.3 +0.1
HOQ Hoqain 86.54 65 P P 12 32 56.2 -1.1
SNR=8.4
WHFO Wadi Hawf 86.56 71 P P 12 32 56.8 -0.7
SEY Seymchan 86.70 353 P P 12 32 56.9 -0.5
comp=Z,3.0nm,0.6s,baz=23,slow=4.1,SNR=4.1
comp=Z,3.0nm,0.6s
SEY Seymchan 86.70 353 ceP P 12 32 57.9 +0.6
SEY pmax pmax
comp=Z,15nm,1.3s
CHGR Chuyangaron 86.75 47 P P 12 32 58.5 +0.3
CHGR Chuyangaron 86.75 47 P P 12 32 58.5 +0.3
CHGR pmax pmax
comp=Z,38nm,0.9s
BSY Bisya 86.88 66 P P 12 32 59.3 +0.3
BOSA Boshof 87.06 125 LR LR 13 07 33.7
comp=Z,194nm,18.5s,baz=344,slow=33
GAR Garm 87.27 46 P P 12 33 01.4 +0.6
SMDO Samad 87.39 65 P P 12 33 02.1 +0.5
AAK Ala-Archa 87.53 41 P P 12 33 01.2 -0.8
comp=Z,2.7nm,1.0s,baz=294,slow=4.3,SNR=7.3
AAK LR LR 13 12 57.3
comp=Z,123nm,18.6s,baz=316,slow=36
comp=Z,2.7nm,1.0s
AAK Ala-Archa 87.53 41 P P 12 33 02.8 +0.8
AAK IAmb IAmb 12 33 08.5
comp=Z,14nm,1.4s
AAK Ala-Archa 87.53 41 P P 12 33 02.8 +0.8
AAK pmax pmax
comp=Z,14nm,1.4s
AAK Ala-Archa 87.53 41 P P 12 33 03.1 +1.1
DMTO DMTO 87.63 71 P P 12 33 01.3 -1.3

WSAR	**Wadi Sarin**	**87.76**	**65**	LR	LR	13 14 32.0	
	comp=Z,112nm,19.5s,baz=288,slow=37						
WSAR	**Wadi Sarin**	**87.76**	**65**	P	**P**	**12 33 03.6**	**+0.4**
YAK	**Yakutsk**	**88.17**	**4**	P	**P**	**12 33 04.5**	**+0.1**
	comp=Z,3.0nm,0.4s,baz=290,slow=2.1,SNR=6.7						
	comp=Z,3.0nm,0.4s						
YAK	**Yakutsk**	**88.17**	**4**	P	**P**	**12 33 04.8**	**+0.4**
YAK	**Yakutsk**	**88.17**	**4**	*e*P	**P**	**12 33 04.3**	**-0.1**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
WBK	**Wadi Bani Khal**	**88.35**	**65**	P	**P**	**12 33 06.3**	**+0.2**
MHTO	**MHTO**	**88.40**	**67**	P	**P**	**12 33 07.1**	**+0.8**
	SNR=5.9						
BOOM	**Boomskoye usch**	**88.44**	**41**	P	**P**	**12 33 06.8**	**+0.4**
BOOM	**Boomskoye usch**	**88.44**	**41**	P	**P**	**12 33 06.8**	**+0.4**
BOOM				pmax	pmax		
	comp=Z,13nm,1.7s						
MAKZ	**Makanchi**	**88.73**	**34**	P	**P**	**12 33 07.1**	**-0.3**
MAKZ				IAmb	IAmb	12 33 08.1	
	comp=Z,22nm,1.6s						
MAKZ	**Makanchi**	**88.73**	**34**	P	**P**	**12 33 07.1**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.6s						
MK31	**Makanchi Array**	**88.89**	**34**	P	**P**	**12 33 08.1**	**-0.1**
MK31	**Makanchi Array**	**88.89**	**34**	P	**P**	**12 33 08.1**	**-0.1**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MKAR	**Makanchi Array**	**88.89**	**34**	P	**P**	**12 33 06.3**	**-1.9**
	comp=Z,5.1nm,1.1s,baz=333,slow=4.5,SNR=14						
MKAR				LR	LR	13 11 24.3	
	comp=Z,208nm,21.3s,baz=308,slow=34						
	comp=Z,5.1nm,1.1s						
MKAR	**Makanchi Array**	**88.89**	**34**	P	**P**	**12 33 07.7**	**-0.5**
MKAR	**Makanchi Array**	**88.89**	**34**	P	**P**	**12 33 07.7**	**-0.5**
DGZ	**Jazzator, Alta**	**89.15**	**30**	*d* P	**P**	**12 33 09.2**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,17nm,1.5s						
NRN	**Naryn**	**89.16**	**41**	P	**P**	**12 33 10.8**	**+0.8**
NRN				IAmb	IAmb	12 33 12.0	
	comp=Z,23nm,1.7s						
NRN	**Naryn**	**89.16**	**41**	P	**P**	**12 33 10.8**	**+0.8**
NRN				pmax	pmax		
	comp=Z,23nm,1.7s						
KSH	**Kashi**	**90.39**	**43**	P	**P**	**12 33 16.5**	**+1.0**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**92.41**	**49**	P	**P**	**12 33 24.7**	**-0.2**
NIL	**Nilore**	**92.41**	**49**	P	**P**	**12 33 24.7**	**-0.2**
NIL				pmax	pmax		
	comp=Z,18nm,1.2s						
NIL	**Nilore**	**92.41**	**49**	P	**P**	**12 33 25.9**	**+1.0**
WMQ	**Urumqi**	**93.67**	**34**	*e*P	**P**	**12 33 32.3**	**+1.8**
WMQ				pP	pwP	12 33 36.5	-1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				LR	LR		
	comp=Z,270nm,26.3s						
PETK	**Petropavlovsk-**	**95.45**	**348**	LR	LR	13 15 59.0	
	comp=Z,162nm,21.6s,baz=32,slow=35						
PMSA	**Palmer Station**	**95.86**	**189**	LR	LR	13 15 37.8	
	comp=Z,57nm,20.2s,baz=323,slow=35						
OPO	**Ambohidratompo**	**98.86**	**106**	LR	LR	13 15 42.3	
	comp=Z,264nm,21.9s,baz=164,slow=34						
TAOE	**Nuku Hiva Isla**	**100.87**	**266**	*e*LR	LR	13 07 02.9	
	comp=Z,413nm,31.8s						
GOMU	**GeErMu**	**103.02**	**34**	Pdif	**Pdif**	**12 34 14.8**	**+1.7**
GOMU				LR	LR		
	comp=Z,150nm,15.2s						
GOMU				LR	LR		
	comp=Z,78nm,15.2s						
GOMU				LR	LR		
	comp=Z,130nm,16.1s						
CD2	**Chengdu**	**111.57**	**31**	PKP	**PKiKP**	**12 38 49.0**	**+0.3**
PPT2	**Papeete2**	**113.01**	**262**	*e*LR	LR	13 12 40.4	
	comp=Z,211nm,25.5s						
PZH	**PanZhiHua**	**114.32**	**35**	PKP	PKPdf	12 38 54.3	+0.1
TBI	**Tubuai**	**115.28**	**257**	*e*LR	LR	13 13 43.7	
	comp=Z,1μm,34.5s						
NJ2	**Nanjing**	**115.91**	**17**	*e*PKP	**PKiKP**	**12 38 55.0**	**-1.9**
CMAR	**Chiang Mai Arr**	**119.29**	**43**	PKP	**PKPdf**	**12 39 02.9**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=303,slow=2.9,SNR=5.4						
CMAR	**Chiang Mai Arr**	**119.29**	**43**	PKIKP	**PKPdf**	**12 39 02.9**	**-0.9**
VNDA	**Vanda**	**131.01**	**187**	PKP	**PKPdf**	**12 39 23.8**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=205,slow=1.9,SNR=9.4						
VNDA	**Vanda**	**131.01**	**187**		**PKiKP**	**12 39 25.7**	**+0.4**
VNDA	**Vanda**	**131.01**	**187**	PKIKP	**PKiKP**	**12 39 25.7**	**+0.4**
MPSI	**Mapaga**	**145.60**	**32**	PKP	**PKPdf**	**12 39 51.9**	**-1.0**
MRSI	**Marisa**	**146.37**	**29**	PKP	**PKPdf**	**12 39 53.1**	**-1.1**
SANI	**Sanana**	**150.24**	**23**	PKP	**PKPdf**	**12 39 59.2**	**-1.4**
SIJI	**Sorong**	**150.53**	**13**	PKPbc	**PKPbc**	**12 40 04.5**	**-1.9**
	comp=Z,11nm,0.9s,baz=15,slow=5.9,SNR=6.9						
SIJI	**Sorong**	**150.53**	**13**	PKP	**PKPdf**	**12 40 03.2**	**+2.2**
DZM	**Mont Dzumac**	**152.81**	**280**	*e*LR	LR	13 31 06.6	
	comp=Z,312nm,22.2s						
WRA	**Warramunga Arr**	**169.69**	**16**	PKP	**PKPdf**	**12 40 20.6**	**-1.4**
	comp=Z,1.4nm,1.3s,baz=321,slow=1.1,SNR=4.9						
WRA				PKPab	**PKPab**	**12 41 34.4**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=355,slow=4.7,SNR=5.7						
WRA				PP	**PP**	**12 45 22.6**	**-1.6**
	comp=Z,3.1nm,1.1s,baz=349,slow=5.7,SNR=6.6						
WRA	**Warramunga Arr**	**169.69**	**16**	PKIKP	**PKPdf**	**12 40 20.6**	**-1.4**
WRA						12 41 34.4	
ASAR	**Alice Springs**	**173.04**	**27**	PKP	**PKPdf**	**12 40 21.4**	**-2.2**
	comp=Z,1.0nm,0.8s,baz=192,slow=0.7,SNR=5.5						
ASAR				PKPab	**PKPab**	**12 41 49.7**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=343,slow=4.7,SNR=5.7						
ASAR				PP	**PP**	**12 45 39.4**	**-1.8**
	comp=Z,7.2nm,1.3s,baz=340,slow=4.9,SNR=10						
ASAR	**Alice Springs**	**173.04**	**27**	PKIKP	**PKPdf**	**12 40 21.4**	**-2.2**
ASAR						12 41 49.7	

*INET **29** 12:23:17.9±0.5, 11°.76N×86°.50W, h78km±2km, MW3.4*
*UCR **29** 12:23:18.3±1.4, 11°.79N×86°.49W, h67km±14km, ML4.2, MW3.7*
*SNET **29** 12:23:18.8±0.7, 11°.96N×86°.41W, h77km±72km, ML4.5*
ISC 29 12:23:18.9±1.3, 11°.77N±0°.06×86°.50W±0°.06, h68km±13km, n48, σ0°.71/65, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASN	**Masaya**	**0.41**	**58**	*e*P	**Pn**	**12 23 29.7**	**-1.0**
COPN	**Copaltepe**	**0.42**	**348**	*e*P	**Pn**	**12 23 30.7**	**0.0**
MGAN	**Managua**	**0.45**	**34**	*e*P	**Pn**	**12 23 31.0**	**0.0**
MGAN				*e*P	**Pn**	**12 23 31.0**	**0.0**
WILN	**Americas 2**	**0.50**	**38**	*e*P	**Pn**	**12 23 31.2**	**-0.2**
WILN				*e*S	**Sn**	**12 23 41.9**	**+1.2**
MOMN	**Momotombo**	**0.64**	**357**	*e*P	**Pn**	**12 23 32.6**	**-0.4**
MOMN				*e*S	**Sn**	**12 23 43.7**	**+0.4**
HUEN		**0.65**	**30**	*e*P	**Pn**	**12 23 32.8**	**-0.3**
HUEN				*e*S	**Sn**	**12 23 44.6**	**+1.2**
CNGN	**Cerro Negro**	**0.75**	**345**	*e*P	**Pn**	**12 23 32.9**	**-1.4**
CNGN				*e*S	**Sn**	**12 23 45.1**	**-0.5**
CONN	**Concepcion**	**0.88**	**103**	*e*P	**Pn**	**12 23 35.2**	**-0.6**
BRAN	**Las Pilas**	**0.96**	**9**	*e*P	Pn	12 23 31.0	-5.7
BOAB	**BOACO BROADBAN**	**.06**	**50**	*e*P	**Pn**	**12 23 37.3**	**-0.7**
CRIN	**San Cristobal**	**1.07**	**330**	*e*P	**Pn**	**12 23 37.8**	**-0.4**
CRIN	**San Cristobal**	**1.07**	**330**	*e*P	**Pn**	**12 23 37.7**	**-0.4**
CRIN				*e*S	**Sn**	**12 23 53.1**	**+0.6**
MATN	**Matagalpa**	**1.28**	**26**	*e*P	**Pn**	**12 23 40.4**	**-0.6**
ACON	**Acoyapa**	**1.31**	**81**	*e*P	**Pn**	**12 23 40.6**	**-0.7**
ACON	**Acoyapa**	**1.31**	**81**	*e*P	**Pn**	**12 23 40.5**	**-0.8**
GBS3	**Finca Las Img**	**1.42**	**134**	*e*P	**Pn**	**12 23 42.1**	**-0.6**
GB1A	**Borinquen Arri**	**1.44**	**131**	*i* P	**Pn**	**12 23 42.8**	**-0.3**
GB1A				*e*S	**Sn**	**12 24 00.1**	**-1.1**
BUEV	**Buena Vista**	**1.45**	**132**	*e*P	**Pn**	**12 23 42.5**	**-0.6**
LAPC	**Finca la Perla**	**1.45**	**133**	*e*P	**Pn**	**12 23 42.1**	**-1.0**
BUAI	**Buenos Aires**	**1.45**	**128**	*e*P	**Pn**	**12 23 42.5**	**-0.6**
BUAI				*e*S	**Sn**	**12 24 01.4**	**0.0**
GPS3	**Bodega del ICE**	**1.50**	**132**	*e*P	**Pn**	**12 23 43.3**	**-0.6**
GPS2	**Hotel Rincn d**	**1.52**	**132**	*e*P	**Pn**	**12 23 43.8**	**-0.3**
LIM1	**Limonal**	**1.62**	**131**	*e*P	**Pn**	**12 23 45.5**	**0.0**
LIM1				*e*S	**Sn**	**12 24 05.7**	**+0.1**
GUAB	**Guayabo de Bag**	**1.64**	**130**	*e*P	**Pn**	**12 23 44.9**	**-0.8**
MESS	**Mesas**	**1.64**	**128**	*e*P	**Pn**	**12 23 44.9**	**-0.9**
MESS				*e*S	**Sn**	**12 24 06.7**	**+0.7**
VMAR	**Armenia, Volca**	**1.66**	**125**	*e*P	**Pn**	**12 23 45.1**	**-0.8**
VMAR				*e*S	**Sn**	**12 24 06.8**	**+0.5**
HORNC	**Hornillas**	**1.67**	**129**	*e*P	**Pn**	**12 23 45.5**	**-0.6**
COLC	**Colonia**	**1.68**	**131**	*e*P	**Pn**	**12 23 46.0**	**-0.2**
CUI	**Cuipilapa**	**1.72**	**130**	*e*P	**Pn**	**12 23 46.5**	**-0.2**
CUI				*e*S	**Sn**	**12 24 08.5**	**+0.7**
PTEN	**Parque Tenorio**	**1.82**	**125**	*e*P	**Pn**	**12 23 47.4**	**-0.7**
ACAL	**Aguas Claras**	**1.83**	**128**	*e*P	**Pn**	**12 23 47.8**	**-0.4**
SAJU	**San Juanillo,**	**1.86**	**155**	*e*P	**Pn**	**12 23 48.0**	**-0.7**
CNCH	**Conchagua**	**1.98**	**319**	*e*P	**Pn**	**12 23 50.0**	**-0.3**
CNCH				*e*S	**Sn**	**12 24 14.0**	**-0.3**
CNCH	**Conchagua**	**1.98**	**319**	*e*P	**Pn**	**12 23 50.0**	**-0.3**
CNCH				*e*S	**Sn**	**12 24 14.0**	**-0.3**
GRZA	**Playa Garza**	**2.03**	**155**	*e*P	**Pn**	**12 23 50.3**	**-0.6**
LCND	**La Caada**	**2.04**	**319**	*e*P	**Pn**	**12 23 50.4**	**-0.7**
LCND				*e*S	**Sn**	**12 24 15.7**	**+0.1**
LCND	**La Caada**	**2.04**	**319**	*e*P	**Pn**	**12 23 50.4**	**-0.7**
LCND				*e*S	**Sn**	**12 24 15.7**	**+0.1**
CEDE	**Laguna Cedeo**	**2.18**	**126**	*e*P	**Pn**	**12 23 54.0**	**+1.0**
CASO	**Castillo**	**2.19**	**127**	*e*P	**Pn**	**12 23 55.8**	**+2.8**
PACA	**Pacayal**	**2.45**	**314**	*e*P	**Pn**	**12 23 57.0**	**+0.3**
PACA				*e*S	**Sn**	**12 24 26.2**	**+0.5**
PACA				IAML		12 24 33.2	
	comp=Z,2μm,0.3s						
PACA	**Pacayal**	**2.45**	**314**	*e*P	**Pn**	**12 23 57.0**	**+0.3**
PACA				*e*S	**Sn**	**12 24 26.2**	**+0.5**
PACA				IAML		12 24 33.2	
	comp=Z,2μm,0.3s						
PQSS	**Presa 15 de Se**	**2.73**	**313**	*e*P	**Pn**	**12 23 60.0**	**-0.4**
PQSS	**Presa 15 de Se**	**2.73**	**313**	*e*P	**Pn**	**12 23 60.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**2.90**	**312**	*e*P	**Pn**	**12 24 03.2**	**+0.4**
SCLA	**Alcaldia de Sa**	**2.90**	**312**	*e*P	**Pn**	**12 24 03.2**	**+0.4**
P5NO	**Presa 5 de nov**	**3.11**	**315**	*e*P	**Pn**	**12 24 05.2**	**-0.5**
NUBE	**Las Nubes**	**3.83**	**304**	*e*P	**Pn**	**12 24 15.6**	**-0.1**
NUBE	**Las Nubes**	**3.83**	**304**	*e*P	**Pn**	**12 24 15.6**	**-0.1**

IDC 29 12:31:25.4±3.3, 4°.93S×153°.48E, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=156.1km s-min=46.7km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.87**	**230**	P	P	12 36 41.6	+0.8
	0.8nm,0.5s,baz=58,slow=11,SNR=26						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.52**	**223**	P	P	12 37 06.2	+1.3
	0.2nm,0.2s,baz=57,slow=9.2,SNR=2.1						
	0.2nm,0.2s						
TORD	**Torodi Ar. Bea**	**150.99**	**288**	PKPbc	PKPbc	12 51 19.6	-1.7
	0.2nm,0.4s,baz=78,slow=3.1,SNR=6.9						

*ATH **29** 12:40:33.5, 38°.90N×23°.89E, h7km±2km, ML3.3/10, Error ellipse: s-maj=2.1km s-min=0.6km az=94.0*
*THE **29** 12:40:33.7, 38°.87N×23°.86E, h7km±1km, ML3.3/12, Error ellipse: s-maj=1.5km s-min=0.5km az=78.0*
*ISK **29** 12:40:36.3, 39°.23N×24°.10E, h13km, ML2.9/12*
ISC 29 12:40:33.0±1.0, 38°.91N±0°.02×23°.91E±0°.02, h19km±2km, n50, σ0°.76/76, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.24**	**351**	P	**Pb**	**12 40 38.4**	**-0.1**
ALNA				S	**Sb**	**12 40 42.3**	**+0.3**
ALNA				AML	AML	12 40 44.1	
	comp=E,11160μm,0.5s						
ALNA				AML	AML	12 40 44.5	
	comp=N,12692μm,0.7s						
KYMI	**Kymi, Euboea I**	**0.31**	**152**	P	**Pg**	**12 40 39.8**	**-0.1**
KYMI				S	**Sg**	**12 40 44.5**	**0.0**
	comp=N,4μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.31**	**152**	P	**Pg**	**12 40 39.9**	**+0.1**
KYMI				S	**Sg**	**12 40 44.2**	**-0.3**
KYMI				AML	AML	12 40 44.9	
	comp=E,8688μm,0.4s						
KYMI				AML	AML	12 40 44.9	
	comp=N,5982μm,0.4s						
NEO	**Neokhori**	**0.67**	**307**	P	**Pb**	**12 40 46.1**	**+0.1**
NEO				S	**Sn**	**12 40 56.5**	**-0.9**
	comp=N,5μm,0.4s						
NEO	**Neokhori**	**0.67**	**307**	P	**Pg**	**12 40 46.2**	**0.0**
NEO				S	**Sg**	**12 40 55.2**	**0.0**
NEO				AML	AML	12 40 58.5	
	comp=E,14585μm,0.4s						
NEO				AML	AML	12 40 58.9	
	comp=N,7868μm,0.4s						
XOR	**Xorichti**	**0.72**	**309**	P	**Pg**	**12 40 47.6**	**+0.3**
XOR				S	**Sn**	**12 40 58.2**	**-0.6**
	comp=N,3μm,0.6s						
XOR	**Xorichti**	**0.72**	**309**	P	**Pb**	**12 40 47.1**	**+0.1**
XOR				S	**Sg**	**12 40 56.8**	**-0.1**
XOR				AML	AML	12 40 59.0	
	comp=N,7604μm,0.4s						
XOR				AML	AML	12 40 59.8	
	comp=E,2925μm,0.8s						
DION	**Dionisos Attik**	**0.83**	**179**	P	**Pb**	**12 40 48.8**	**-0.1**
DION				S	**Sg**	**12 41 00.2**	**-0.1**
	comp=E,12μm,0.5s						
DION	**Dionisos Attik**	**0.83**	**179**	P	**Pb**	**12 40 48.9**	**+0.1**
DION				S	**Sg**	**12 41 00.3**	**-0.1**
DION				AML	AML	12 41 02.8	
	comp=E,21951μm,0.5s						
DION				AML	AML	12 41 03.6	
	comp=N,11610μm,0.5s						
PTL	**Penteli**	**0.86**	**183**	P	**Pb**	**12 40 49.2**	**-0.2**
PTL				S	**Sg**	**12 41 01.2**	**-0.1**
	comp=N,4μm,0.2s						
PTL	**Penteli**	**0.86**	**183**	P	**Pb**	**12 40 49.4**	**0.0**
PTL				S	**Sg**	**12 41 01.0**	**-0.2**
PTL				AML	AML	12 41 03.5	
	comp=E,12069μm,0.5s						
PTL				AML	AML	12 41 04.1	
	comp=N,4271μm,0.6s						
VIL2	**Platees**	**0.86**	**216**	P	**Pb**	**12 40 49.3**	**0.0**
VIL2				S	**Sg**	**12 41 01.1**	**-0.2**
VIL2				AML	AML	12 41 04.4	
	comp=N,5482μm,0.6s						
VIL2				AML	AML	12 41 06.4	
	comp=E,5361μm,0.5s						
VILL	**Villia**	**0.88**	**213**	P	**Pb**	**12 40 48.5**	**-1.2**
VILL				S	**Sg**	**12 41 01.8**	**-0.1**
	comp=E,3μm,0.7s						
ATHU	**Athens Univers**	**0.95**	**186**	P	**Pb**	**12 40 50.8**	**0.0**
ATHU				S	**Sb**	**12 41 03.5**	**+0.5**
	comp=E,960nm,0.6s						
ATHU	**Athens Univers**	**0.95**	**186**	P	**Pb**	**12 40 50.7**	**-0.2**
ATHU				S	**Sb**	**12 41 03.4**	**+0.4**
ATHU				AML	AML	12 41 06.2	
	comp=E,1661μm,0.7s						
ATHU				AML	AML	12 41 06.4	
	comp=N,2196μm,0.4s						
ATH	**Athens Observa**	**0.95**	**189**	P	**Pb**	**12 40 50.8**	**0.0**
ATH				S	**Sg**	**12 41 03.9**	**-0.1**
	comp=N,3μm,0.5s						
ATH	**Athens Observa**	**0.95**	**189**	P	**Pb**	**12 40 51.0**	**+0.2**
ATH				S	**Sg**	**12 41 04.0**	**0.0**
ATH				AML	AML	12 41 08.1	
	comp=N,5585μm,0.4s						
ATH				AML	AML	12 41 08.3	
	comp=E,5330μm,0.5s						
AXAR	**Agios Charalam**	**0.99**	**262**	P	**Pg**	**12 40 52.1**	**-0.2**
AXAR				S	**Sg**	**12 41 04.7**	**-0.6**
	comp=E,2μm,0.8s						
AXAR	**Agios Charalam**	**0.99**	**262**	P	**Pb**	**12 40 51.7**	**+0.2**
PAIG	**Paliouri**	**1.03**	**350**	P	**Pn**	**12 40 52.6**	**+0.1**
PAIG	**Paliouri**	**1.03**	**350**	P	**Pn**	**12 40 52.9**	**+0.4**
PAIG				S	**Sg**	**12 41 07.5**	**+0.8**
PAIG				AML	AML	12 41 09.5	
	comp=E,1260μm,0.5s						
PAIG				AML	AML	12 41 09.7	
	comp=N,854μm,0.8s						
VLY	**Voula,Athens**	**1.06**	**185**	P	**Pb**	**12 40 52.9**	**+0.2**
VLY				S	**Sg**	**12 41 07.6**	**+0.1**
	comp=N,2μm,0.6s						
VLY	**Voula,Athens**	**1.06**	**185**	P	**Pb**	**12 40 52.9**	**+0.2**
THAL	**Thalero**	**1.31**	**229**	P	**Pb**	**12 40 57.3**	**+0.3**
THAL				S	**Sg**	**12 41 14.5**	**-1.0**
	comp=N,1μm,0.8s						
THAL	**Thalero**	**1.31**	**229**	P	**Pb**	**12 40 57.4**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.39**	**275**	P	**Pb**	**12 40 58.5**	**+0.1**
MAKR				S	**Sg**	**12 41 17.2**	**-0.9**
	comp=N,345nm,0.7s						
MAKR	**Makrakomi, Fth**	**1.39**	**275**	P	**Pb**	**12 40 58.7**	**+0.3**
OUR	**Ouranopolis**	**1.42**	**2**	PN	**Pn**	**12 40 58.3**	**+0.5**
OUR				SN	**Sn**	**12 41 13.7**	**-2.3**
THL	**Klokotos Trika**	**1.61**	**294**	P	**Pb**	**12 41 01.5**	**-0.7**
THL	**Klokotos Trika**	**1.61**	**294**	P	**Pn**	**12 41 01.3**	**+0.8**
KRND	**KRANIDI**	**1.64**	**202**	P	**Pb**	**12 41 02.0**	**-0.6**
LAKA	**Lakka**	**1.66**	**247**	P	**Pb**	**12 41 02.5**	**-0.5**
CHOS	**Chios island**	**1.76**	**107**	PN	**Pg**	**12 41 07.1**	**+0.3**
HORT	**Hortiatis**	**1.80**	**340**	PN	**Pn**	**12 41 04.3**	**+1.2**
HORT				SN	**Sn**	**12 41 25.4**	**0.0**
HORT	**Hortiatis**	**1.80**	**340**	P	**Pn**	**12 41 04.1**	**+1.0**
HORT	**Hortiatis**	**1.80**	**340**	P	**Pn**	**12 41 04.3**	**+1.2**
BOZC	**Bozcaada**	**1.90**	**60**	PN	**Pn**	**12 41 05.4**	**+1.0**
BOZC				SN	**Sn**	**12 41 26.7**	**-1.1**
KOKK	**Kokkinochori,**	**1.91**	**2**	P	**Pn**	**12 41 05.4**	**+0.9**
SOH	**Sokhos**	**1.96**	**347**	P	**Pn**	**12 41 06.6**	**+1.3**
GADA	**Gvkgeada**	**2.00**	**50**	PN	**Pn**	**12 41 06.4**	**+0.7**
GADA				SN	**Sn**	**12 41 27.9**	**-2.3**
EZN	**Ezine**	**2.08**	**63**	PN	**Pn**	**12 41 08.4**	**+1.5**
URLA	**Izmir**	**2.17**	**104**	PN	**Pb**	**12 41 12.4**	**+0.7**
DKL	**Dikili**	**2.34**	**85**	PN	**Pb**	**12 41 13.0**	**-1.5**
GELI	**Tayfur-Gelibol**	**2.47**	**52**	PN	**Pn**	**12 41 13.6**	**+1.3**
RDO	**Rodhopi**	**2.56**	**29**	PN	**Pn**	**12 41 13.7**	**+0.3**
MMB	**Musomiste**	**2.68**	**357**	*i* P	**Pn**	**12 41 15.9**	**+0.7**
RZN	**Rozhen**	**2.84**	**12**	*i* P	**Pn**	**12 41 18.9**	**+1.4**
KDZ	**Kurdzhali**	**2.97**	**22**	PN	**Pn**	**12 41 19.2**	**+0.1**
KKB	**Krupnik**	**3.02**	**348**	*i* P	**Pn**	**12 41 21.0**	**+1.2**
RKY	**Sarkoy-Tekirda**	**3.08**	**54**	PN	**Pn**	**12 41 21.8**	**+1.1**

*NEIC **29** 12:51:36.0±1.2, 31°.07N±0°.04×103°.32W±0°.03, h5km±2km, mb_Lg3.0/32, Error ellipse: s-maj=7.3km s-min=3.5km az=12.0*
*ANF **29** 12:51:36.5±0.7, 31°.00N×103°.31W, h5km, ML3.8/6, Error ellipse: s-maj=12.1km s-min=6.9km az=111.0*
ISC 29 12:51:35.4±1.0, 31°.02N±0°.05×103°.26W±0°.05, h10km, n32, σ1°.37/25, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNB	**Carlsbad**	**1.35**	**337**		**Pn**	**12 52 00.6**	**+0.2**
CLN7	**Carlsbad 7**	**1.46**	**342**		**Pn**	**12 52 02.4**	**+0.4**
HTMS	**Hat Mesa**	**1.48**	**348**		**Pn**	**12 52 03.1**	**+0.9**
GDL2	**Guadalupe Moun**	**1.51**	**322**		**Pn**	**12 52 02.5**	**-0.1**
TX31	**Lajitas Ar. Si**	**1.72**	**192**		**Pb**	**12 52 06.8**	**-0.3**
TX31				Sn	**Sg**	**12 52 31.1**	**+0.4**
TX31	**Lajitas Ar. Si**	**1.72**	**192**	P	**Pb**	**12 52 06.9**	**-0.3**
	baz=9.6						
TX31				S	**Sg**	**12 52 30.4**	**-0.3**
	baz=9.6						
TX32	**Lajitas Array**	**1.72**	**192**		**Pb**	**12 52 06.8**	**-0.3**
TX32				Sn	**Sg**	**12 52 31.1**	**+0.4**
TXAR	**Lajitas Array**	**1.72**	**192**		**Pb**	**12 52 06.7**	**-0.4**
CPRX	**Cap Rock**	**2.07**	**346**		**Pn**	**12 52 11.1**	**+0.7**
MSTX	**Muleshoe**	**2.97**	**8**		**Pn**	**12 52 26.3**	**+3.6**
MSTX	**Muleshoe**	**2.97**	**8**	S	**Sb**	**12 53 06.1**	**+1.2**
	baz=189						
JCT	**Junction City**	**3.02**	**99**		**Pb**	**12 52 26.5**	**-2.8**
JCT				IAmb_Lg		12 53 18.5	
	comp=Z,60nm,0.8s						
JCT	**Junction City**	**3.02**	**99**	P	**Pb**	**12 52 26.6**	**-2.8**
	baz=282						
ABTX	**Abilene, Hawle**	**3.47**	**62**		**Pn**	**12 52 30.6**	**+1.1**
ABTX				IAmb_Lg		12 53 30.9	
	comp=Z,54nm,0.8s						
ABTX	**Abilene, Hawle**	**3.47**	**62**	P	**Pn**	**12 52 31.1**	**+1.7**
	baz=245						
AMTX	**Amarillo**	**4.07**	**19**	IAmb_Lg		12 53 55.5	
	comp=Z,32nm,0.7s						
121A	**Cookes Peak, D**	**4.14**	**293**		**Pn**	**12 52 39.3**	**+0.5**
121A	**Cookes Peak, D**	**4.14**	**293**	P	**Pn**	**12 52 39.4**	**+0.6**
	baz=110						
BNM	**Barren Site**	**4.22**	**319**		**Pn**	**12 52 39.1**	**-0.9**
SBM	**South Baldy**	**4.43**	**313**		**Pn**	**12 52 42.2**	**-0.9**
ANMO	**Albuquerque**	**4.75**	**326**	IAmb_Lg		12 54 03.9	
	comp=Z,13nm,0.8s						
ANMO				IAmb_Lg		12 54 03.9	
	comp=Z,13nm,0.8s						
WHTX	**Lake Whitney,**	**5.05**	**77**		**Pn**	**12 52 52.2**	**+1.1**
WMOK	**Wichita Mounta**	**5.28**	**44**		**Pn**	**12 52 55.3**	**+0.9**
WMOK				IAmb_Lg		12 54 34.9	
	comp=Z,17nm,0.8s						
WMOK	**Wichita Mounta**	**5.28**	**44**	P	**Pn**	**12 52 55.4**	**+0.9**
	baz=227						
FNO	**Franklin**	**6.48**	**48**	IAmb_Lg		12 55 06.9	
	comp=Z,31nm,0.9s						
OK038	**West end E0370**	**6.62**	**33**	IAmb_Lg		12 55 10.6	
	comp=Z,23nm,0.7

PTL			S	Sb	13 37 52.0	+0.5
PTL			AML	AML	13 37 53.1	
	comp=N,2707μm,0.6s					
PTL			AML	AML	13 37 53.7	
	comp=E,6740μm,0.5s					
VILL	**Villia**	**0.87 212**	P	**Pg**	**13 37 39.3**	**-1.1**
VILL			S	**Sb**	**13 37 52.1**	**+0.1**
	comp=E,3μm,0.4s					
ATHU	**Athens Univers**	**0.94 185**	P	**Pg**	**13 37 41.0**	**-0.8**
ATHU			S	**Sb**	**13 37 54.2**	**+0.2**
	comp=E,862nm,0.4s					
ATHU	**Athens Univers**	**0.94 185**	P	**Pg**	**13 37 41.1**	**-0.8**
ATHU			S	**Sb**	**13 37 54.8**	**+0.8**
ATHU			AML	AML	13 37 56.1	
	comp=N,2336μm,0.4s					
ATHU			AML	AML	13 37 56.3	
	comp=E,1107μm,0.4s					
ATH	**Athens Observa**	**0.94 189**	P	**Pg**	**13 37 41.0**	**-0.8**
ATH			S	**Sb**	**13 37 54.8**	**+0.8**
	comp=E,2μm,0.3s					
ATH	**Athens Observa**	**0.94 189**	P	**Pg**	**13 37 41.4**	**-0.5**
ATH			S	**Sb**	**13 37 54.8**	**+0.8**
ATH			AML	AML	13 37 56.4	
	comp=E,4274μm,0.3s					
ATH			AML	AML	13 37 56.7	
	comp=N,4718μm,0.3s					
AXAR	**Agios Charalam**	**0.97 262**	P	**Pg**	**13 37 42.2**	**-0.2**
AXAR			S	**Sn**	**13 37 56.3**	**-0.2**
	comp=N,1μm,0.4s					
AXAR	**Agios Charalam**	**0.97 262**	P	**Pb**	**13 37 42.4**	**+0.2**
PAIG	**Paliouri**	**1.03 351**	P	**Pg**	**13 37 43.2**	**-0.4**
PAIG			S	**Sb**	**13 37 57.3**	**+0.6**
	comp=N,335nm,0.3s					
PAIG	**Paliouri**	**1.03 351**	P	**Pb**	**13 37 43.3**	**+0.1**
PAIG			S	**Sb**	**13 37 57.7**	**+1.0**
PAIG			AML	AML	13 38 00.2	
	comp=N,762μm,0.5s					
PAIG			AML	AML	13 38 02.0	
	comp=E,648μm,0.8s					
VLY	**Voula,Athens**	**1.05 184**	P	**Pg**	**13 37 43.0**	**-0.9**
VLY			S	**Sb**	**13 37 57.7**	**+0.5**
	comp=E,2μm,0.4s					
VLY	**Voula,Athens**	**1.05 184**	P	**Pg**	**13 37 43.2**	**-0.7**
VLY			S	**Sb**	**13 37 57.8**	**+0.6**
VLY			AML	AML	13 38 00.6	
	comp=N,3000μm,0.5s					
VLY			AML	AML	13 38 01.4	
	comp=E,3828μm,0.4s					
LOUT	**Loutraki**	**1.17 219**	P	**Pb**	**13 37 44.5**	**-1.0**
LOUT			S	**Sn**	**13 38 02.0**	**+0.8**
	comp=E,1μm,0.5s					
LOUT	**Loutraki**	**1.17 219**	P	**Pb**	**13 37 45.3**	**-0.2**
LOUT			S	**Sn**	**13 38 01.7**	**+0.5**
LOUT			AML	AML	13 38 07.3	
	comp=N,555μm,0.3s					
LOUT			AML	AML	13 38 07.8	
	comp=E,674μm,0.6s					
THAL	**Thalero**	**1.30 228**	P	**Pn**	**13 37 47.0**	**-0.2**
THAL	**Thalero**	**1.30 228**	P	**Pn**	**13 37 47.1**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.38 275**	P	**Pn**	**13 37 48.7**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.38 275**	P	**Pb**	**13 37 49.1**	**-0.1**
OUR	**Ouranopolis**	**1.43 3**	PN	**Pn**	**13 37 47.8**	**-1.3**
OUR			SN	**Sn**	**13 38 07.2**	**-0.4**
OUR	**Ouranopolis**	**1.43 3**	P	**Pn**	**13 37 49.0**	**-0.1**
THL	**Klokotos Trika**	**1.60 295**	P	**Pn**	**13 37 51.9**	**+0.5**
THL	**Klokotos Trika**	**1.60 295**	P	**Pn**	**13 37 51.8**	**+0.4**
EVR	**Evrytania**	**1.63 271**	P	**Pn**	**13 37 52.0**	**+0.1**
EVR	**Evrytania**	**1.63 271**	P	**Pn**	**13 37 52.5**	**+0.6**
KRND	**KRANIDI**	**1.63 201**	P	**Pn**	**13 37 52.3**	**+0.4**
KRND	**KRANIDI**	**1.63 201**	P	**Pn**	**13 37 52.2**	**+0.4**
LAKA	**Lakka**	**1.64 247**	P	**Pn**	**13 37 52.9**	**+0.8**
CHOS	**Chios island**	**1.77 106**	PN	**Pg**	**13 37 56.8**	**-0.8**
HORT	**Hortiatis**	**1.80 340**	P	**Pn**	**13 37 54.6**	**+0.3**
HORT	**Hortiatis**	**1.80 340**	P	**Pn**	**13 37 54.5**	**+0.3**
HORT			S	**Sn**	**13 38 16.4**	**-0.5**
HORT			AML	AML	13 38 17.5	
	comp=E,195μm,0.4s					
HORT			AML	AML	13 38 17.9	
	comp=N,134μm,0.2s					
GPNR	**Gulpinar-Canak**	**1.83 72**	PN	**Pg**	**13 37 57.7**	**-0.9**
KOKK	**Kokkinochori,**	**1.91 2**	P	**Pn**	**13 37 55.5**	**-0.2**
BOZC	**Bozcaada**	**1.92 60**	PN	**Pb**	**13 37 58.7**	**+0.4**
SOH	**Sokhos**	**1.96 348**	P	**Pn**	**13 37 56.5**	**+0.1**
SMTH	**Samothraki Isl**	**2.01 38**	P	**Pn**	**13 37 56.4**	**-0.7**
GADA	**Gvkgeada**	**2.01 50**	PN	**Pb**	**13 37 59.4**	**-0.6**
GADA			SN	**Sg**	**13 38 27.7**	**-0.6**
EZN	**Ezine**	**2.10 63**	PN	**Pb**	**13 38 01.3**	**-0.1**
URLA	**Izmir**	**2.19 104**	PN	**Pb**	**13 38 02.8**	**-0.1**
SRS	**Serrai**	**2.22 354**	P	**Pn**	**13 38 00.2**	**+0.2**
SRS			S	**Sn**	**13 38 26.2**	**-1.0**
SRS			AML	AML	13 38 28.0	
	comp=E,163μm,0.5s					
SRS			AML	AML	13 38 28.9	
	comp=N,127μm,0.3s					
APE	**Apeiranthos**	**2.24 144**	PN	**Pn**	**13 38 00.8**	**+0.5**
KNT	**Kendrikon**	**2.38 342**	P	**Pn**	**13 38 02.9**	**+0.7**
GELI	**Tayfur-Gelibol**	**2.49 52**	PN	**Pn**	**13 38 04.2**	**+0.6**
MMB	**Musomiste**	**2.68 357**	*i* P	**Pb**	**13 38 09.3**	**-2.1**
SANT	**Santorini**	**2.82 153**	PN	**Pn**	**13 38 08.7**	**+0.5**
RZN	**Rozhen**	**2.85 12**	*e*P	**Pn**	**13 38 07.3**	**-1.5**
KDZ	**Kurdzhali**	**2.98 23**	*e*P	**Pn**	**13 38 11.2**	**+0.8**
RKY	**Sarkoy-Tekirda**	**3.09 54**	PN	**Pn**	**13 38 15.0**	**+3.0**
MRMT	**Marmara Adasi**	**3.32 58**	PN	**Pn**	**13 38 18.6**	**+3.5**

ROM 29 13:55:47.7±0.1, 42°.975N±0°.005×13°.135E±0°.005, h9km, Md1.2/3, 9C-17D, Error ellipse: s-maj=0.5km s-min=0.4km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**258**	P	Pg	13 55 49.8	0.0
FEMA				AML	AML		
	comp=N,11345μm,0.8s						
FEMA				AML	AML		
	comp=E,13150μm,0.3s						
FEMA				AML	AML		
	comp=N,11300μm,0.8s						
FEMA				AML	AML		
	comp=N,11340μm,0.8s						
FDMO	**Fiordimonte**	**0.07**	**330**	P	Pg	13 55 49.5	-0.3
FDMO				AML	AML		
	comp=E,4860μm,0.7s						
FDMO				AML	AML		
	comp=N,5580μm,0.9s						
FDMO				END			
MC2	**Monte Cornacci**	**0.07**	**147**	⇓P	Pg	13 55 50.0	0.0
MC2				S	Sg	13 55 51.8	+0.1
MC2				END			
T1216	**Preci, Frazion**	**0.12**	**225**	⇑P	Pg	13 55 51.0	+0.5
T1216				S	Sg	13 55 53.5	+1.1
T1216				AML	AML		
	comp=E,16700μm,0.5s						
T1216				AML	AML		
	comp=N,19100μm,0.4s						
T1216				AML	AML		
	comp=E,16700μm,0.5s						
T1216				END			
T1245	**Castelsantange**	**0.12**	**162**	⇓P	Pg	13 55 51.0	+0.3
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
AM05	**Amandola Campo**	**0.16**	**89**	P	Pg	13 55 51.6	+0.5
AM05				S	Sg	13 55 54.5	+1.0
AM05				AML	AML		
	comp=E,1280μm,0.9s						
AM05				AML	AML		
	comp=N,1290μm,0.3s						
AM05				AML	AML		
	comp=E,4545μm,0.8s						
AM05				AML	AML		
	comp=N,1295μm,0.3s						
AM05				AML	AML		
	comp=N,240μm,0.4s						
GUMA	**Gualdo di Mace**	**0.17**	**59**	⇑P	Pg	13 55 52.0	+0.6
GUMA				S	Sg	13 55 55.5	+1.7
GUMA				AML	AML		
	comp=E,13700μm,0.4s						
GUMA				AML	AML		
	comp=N,11250μm,0.4s						
GUMA				AML	AML		
	comp=E,11950μm,0.4s						
GUMA				AML	AML		
	comp=N,11200μm,0.4s						
GUMA				AML	AML		
	comp=E,13650μm,0.5s						
GUMA				AML	AML		
	comp=N,11270μm,0.4s						
CESI	**CESI - Serrava**	**0.17**	**280**	⇑P	Pg	13 55 51.8	+0.4
CESI				S	Sg	13 55 55.2	+1.4
CESI				AML	AML		
	comp=E,5890μm,0.7s						
CESI				AML	AML		
	comp=N,9420μm,0.2s						
T1241	**Roccafluvione,**	**0.25**	**119**	⇓P	Pg	13 55 53.1	+0.5
T1241				AML	AML		
	comp=E,3575μm,0.6s						
T1241				AML	AML		
	comp=N,2345μm,1.1s						
T1241				AML	AML		
	comp=E,3510μm,0.6s						
T1241				AML	AML		
	comp=E,3575μm,0.5s						
T1241				AML	AML		
	comp=N,2345μm,1.1s						
T1241				AML	AML		
	comp=E,3505μm,0.6s						
T1241				AML	AML		
	comp=N,2580μm,0.6s						
T1241				AML	AML		
	comp=E,3580μm,0.5s						
T1241				AML	AML		
	comp=N,2585μm,0.6s						
T1215	**Vallo di Nera,**	**0.26**	**229**	P	Pg	13 55 53.5	+0.5
T1215				S	Sb	13 55 58.2	-1.0
T1215				AML	AML		
	comp=E,3515μm,0.3s						
T1215				AML	AML		
	comp=N,2980μm,0.4s						
T1217	**Poggiodomo (PG**	**0.30**	**210**	⇓P	Pg	13 55 54.3	+0.6
T1217				S	Sb	13 55 59.9	-0.5
T1217				AML	AML		
	comp=E,2275μm,0.6s						
T1217				AML	AML		
	comp=N,4985μm,0.4s						
T1217				AML	AML		
	comp=E,2245μm,0.6s						
T1217				AML	AML		
	comp=N,5130μm,0.4s						
T1217				AML	AML		
	comp=N,4990μm,0.4s						
T1217				AML	AML		
	comp=E,2252μm,0.6s						
T1217				AML	AML		
	comp=N,5135μm,0.4s						
SNTG	**Esanatoglia**	**0.31**	**333**	AML	AML		
SNTG	comp=E,932μm,0.8s			AML	AML		
	comp=N,540μm,0.6s						
SNTG				AML	AML		
	comp=N,592μm,1.4s						
SNTG				AML	AML		
	comp=N,628μm,0.8s						
SNTG				AML	AML		
	comp=E,933μm,0.8s						
SNTG				AML	AML		
	comp=N,593μm,1.4s						
SNTG				AML	AML		
	comp=E,917μm,0.8s						
T1204	**Amatrice, Fraz**	**0.33**	**156**	⇓P	Pg	13 55 54.7	+0.5
T1204				AML	AML		
	comp=E,3680μm,1.2s						
T1204				AML	AML		
	comp=N,2825μm,1.2s						
T1204				AML	AML		
	comp=N,2830μm,1.2s						
EL6	**Elcito**	**0.35**	**356**	⇑P	Pg	13 55 54.8	+0.1
EL6				AML	AML		
	comp=E,1250μm,0.5s						
EL6				AML	AML		
	comp=N,1140μm,0.7s						
ASSB	**Assisi San Ben**	**0.36**	**281**	P	Pg	13 55 54.7	0.0
T1243	**Rocca Santa Ma**	**0.36**	**140**	⇓P	Pg	13 55 55.1	+0.3
SMA1	**SAN MARTINO**	**0.38**	**157**	⇓P	Pg	13 55 55.4	+0.3
SMA1				AML	AML		
	comp=N,2680μm,0.6s						
SMA1				AML	AML		
	comp=E,3120μm,0.5s						
SMA1				AML	AML		
	comp=N,2685μm,0.6s						
LNSS	**Leonessa**	**0.38**	**191**	⇓P	Pg	13 55 55.5	+0.4
LNSS				AML	AML		
	comp=N,2385μm,0.6s						
LNSS				AML	AML		
	comp=E,2450μm,0.6s						
LNSS				AML	AML		
	comp=N,2390μm,0.6s						
CING	**Cingoli**	**0.40**	**6**	⇓P	Pg	13 55 55.8	+0.2
CING				AML	AML		
	comp=E,470μm,0.5s						
CING				AML	AML		
	comp=N,402μm,0.3s						
OFFI	**Offida**	**0.41**	**95**	⇑P	Pb	13 55 57.2	+0.2
OFFI				AML	AML		
	comp=E,2565μm,0.8s						
OFFI				AML	AML		
	comp=N,1910μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.42**	**300**	⇓P	Pg	13 55 56.3	+0.4
ATCC				AML	AML		
	comp=E,2005μm,0.5s						
ATCC				AML	AML		
	comp=N,1890μm,0.8s						
ATCC				AML	AML		
	comp=E,2010μm,0.5s						
ATCC				AML	AML		
	comp=N,1895μm,0.8s						
FOSV	**Fossato di Vic**	**0.42**	**320**	P	Pg	13 55 54.7	-1.3
RM33	**Pellescritta (**	**0.47**	**173**	⇓P	Pg	13 55 57.0	+0.2
RM33				AML	AML		
	comp=E,988μm,0.1s						
RM33				AML	AML		
	comp=N,854μm,0.4s						
RM33				AML	AML		
	comp=E,997μm,0.1s						
RM33				AML	AML		
	comp=E,988μm,0.1s						
RM33				AML	AML		
	comp=E,1000μm,0.1s						
RM33				AML	AML		
	comp=N,872μm,0.4s						
CAMP	**Campotosto**	**0.48**	**155**	⇓P	Pg	13 55 57.2	+0.1
CAMP				AML	AML		
	comp=E,911μm,1.1s						
CAMP				AML	AML		
	comp=N,755μm,0.6s						
CAMP				AML	AML		
	comp=E,910μm,1.1s						
T1211	**Morro Reatino**	**0.49**	**205**	⇑P	Pb	13 55 58.3	-0.1
T1211				AML	AML		
	comp=E,1095μm,1.4s						
T1211				AML	AML		
	comp=E,1095μm,1.4s						
T1211				AML	AML		
	comp=N,1725μm,0.9s						
TERO	**Teramo**	**0.49**	**135**	⇓P	Pg	13 55 57.3	+0.1
TERO				AML	AML		
	comp=N,3370μm,0.4s						
TERO				AML	AML		
	comp=E,2110μm,0.4s						
TERO				AML	AML		
	comp=E,1985μm,0.4s						
TERO				AML	AML		
	comp=N,3365μm,0.4s						
TERO				AML	AML		
	comp=N,3535μm,0.4s						
MURB	**Monte Urbino**	**0.53**	**303**	⇓P	Pg	13 55 58.6	+0.6
MURB				AML	AML		
	comp=E,1735μm,0.7s						
MURB				AML	AML		
	comp=N,1445μm,1.0s						
MURB				AML	AML		
	comp=E,1840μm,0.7s						
MURB				AML	AML		
	comp=N,1505μm,1.0s						
CESX	**Cesi**	**0.55**	**228**	⇑P	Pg	13 55 58.5	+0.2
CESX				AML	AML		
	comp=E,1021μm,0.4s						
CESX				AML	AML		
	comp=N,749μm,1.0s						
ATFO	**Monte Foce - G**	**0.57**	**314**	⇓P	Pg	13 55 58.9	+0.2
ATFO				AML	AML		
	comp=E,512μm,1.1s						
ATFO				AML	AML		
	comp=N,462μm,1.0s						
FRON	**Frontone**	**0.62**	**331**	⇑P	Pg	13 56 00.0	+0.3
FRON				AML	AML		
	comp=E,410μm,1.5s						
FRON				AML	AML		
	comp=N,466μm,0.8s						
ATVO	**AVT- Monte Val**	**0.67**	**308**	⇑P	Pg	13 56 00.7	+0.1
ATVO				AML	AML		
	comp=E,341μm,0.7s						
ATVO				AML	AML		
	comp=N,371μm,0.5s						
MPAG	**Monte Paganucc**	**0.71**	**337**	⇓P	Pg	13 56 01.7	+0.3
MPAG				AML	AML		
	comp=E,314μm,0.4s						
MPAG				AML	AML		
	comp=E,314μm,0.4s						
MPAG				AML	AML		
	comp=N,293μm,0.8s						
PIEI	**Pieia**	**0.71**	**322**	⇓P	Pg	13 56 01.6	+0.2
PIEI				AML	AML		
	comp=E,279μm,1.4s						
PIEI				AML	AML		
	comp=N,228μm,0.4s						
PIEI				AML	AML		
	comp=E,278μm,1.4s						
KHC	**Kasperske Hory**	**6.17**	**3**	*e*PN	Pb	13 57 35.0	-0.2
KHC				*e*SN	Sb	13 58 45.0	-4.0

ROM 29 13:56:01.0±0.1, 42°.854N±0°.004×13°.125E±0°.004, h9km, ML2.7/18, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=4.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**87**	P	Pg	13 56 03.0	0.0
T1245				S	Sg	13 56 04.2	-0.2
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.08**	**40**	P	Pg	13 56 03.6	+0.2
MC2				S	Sg	13 56 05.3	+0.2
T1216	**Preci, Frazion**	**0.09**	**295**	P	Pg	13 56 03.6	+0.3
T1216				S	Sg	13 56 05.4	+0.4
T1216				AML	AML		
	comp=E,16700μm,0.5s						
T1216				AML	AML		
	comp=E,16700μm,0.5s						
T1216				AML	AML		
	comp=N,19100μm,0.4s						
T1216				AML	AML		
	comp=E,16700μm,1.5s						
FEMA	**Monte Fema**	**0.12**	**333**	P	Pg	13 56 04.4	+0.5
FEMA				S	Sg	13 56 06.6	+0.6
FEMA				AML	AML		
	comp=N,11345μm,0.8s						
FEMA				AML	AML		
	comp=E,13150μm,0.3s						
FEMA				AML	AML		
	comp=N,11300μm,0.8s						
FEMA				AML	AML		
	comp=N,11340μm,0.8s						
FEMA				AML	AML		
	comp=E,13200μm,0.3s						
FEMA				AML	AML		
	comp=N,11335μm,0.8s						
FEMA				AML	AML		
	comp=N,11335μm,1.2s						
FDMO	**Fiordimonte**	**0.18**	**351**	P	Pg	13 56 05.5	+0.7
T1215	**Vallo di Nera,**	**0.20**	**255**	P	Pg	13 56 05.6	+0.6
T1215				S	Sg	13 56 09.1	+1.3
T1215				AML	AML		
	comp=E,3515μm,0.3s						
T1215				AML	AML		
	comp=N,2980μm,0.4s						
T1215				AML	AML		
	comp=E,3510μm,0.3s						
T1215				AML	AML		
	comp=N,2975μm,0.4s						
T1217	**Poggiodomo (PG**	**0.20**	**225**	P	Pg	13 56 05.8	+0.6
T1217				S	Sg	13 56 09.5	+1.5
T1217				AML	AML		
	comp=E,2270μm,0.6s						
T1217				AML	AML		
	comp=E,2245μm,0.6s						
T1217				AML	AML		
	comp=N,5135μm,0.4s						
T1217				AML	AML		
	comp=E,2275μm,0.6s						
T1217				AML	AML		
	comp=N,4985μm,0.4s						
T1217				AML	AML		
	comp=N,5130μm,0.4s						
T1217				AML	AML		
	comp=E,2252μm,0.6s						
T1217				AML	AML		
	comp=N,5135μm,0.5s						
T1217				AML	AML		
	comp=E,2246μm,0.6s						
T1217				AML	AML		
	comp=E,2246μm,1.4s						
T1217				AML	AML		
	comp=E,2270μm,1.4s						
T1217				AML	AML		
	comp=N,4985μm,0.4s						
AM05	**Amandola Campo**	**0.21**	**54**	P	Pg	13 56 06.0	+0.7
AM05				S	Sg	13 56 09.6	+1.4
AM05				AML	AML		
	comp=E,4545μm,0.8s						
AM05				AML	AML		
	comp=E,1280μm,0.9s						
AM05				AML	AML		
	comp=N,1290μm,0.3s						
AM05				AML	AML		
	comp=N,240μm,0.4s						
AM05				AML	AML		
	comp=E,1280μm,1.1s						
AM05				AML	AML		
	comp=E,4545μm,1.2s						
AM05				AML	AML		
	comp=N,240μm,1.6s						
AM05				AML	AML		
	comp=N,1295μm,0.3s						
CESI	**CESI - Serrava**	**0.22**	**313**	P	Pg	13 56 06.1	+0.5
CESI				S	Sg	13 56 10.0	+1.4
CESI				AML	AML		
	comp=N,9420μm,0.2s						
CESI				AML	AML		
	comp=E,5890μm,0.7s						
T1241	**Roccafluvione,**	**0.23**	**89**	P	Pg	13 56 06.1	+0.5
T1241				S	Sg	13 56 10.3	+1.6
T1241				AML	AML		
	comp=E,3575μm,0.6s						
T1241				AML	AML		
	comp=E,3575μm,0.5s						
T1241				AML	AML		
	comp=N,2345μm,1.1s						
T1241				AML	AML		
	comp=E,3505μm,0.6s						
T1241				AML	AML		
	comp=N,2580μm,0.6s						
T1241				AML	AML		
	comp=E,3580μm,0.5s						
T1241				AML	AML		
	comp=N,2345μm,1.1s						
T1241				AML	AML		
	comp=N,2585μm,0.6s						
T1241				AML	AML		
	comp=E,3510μm,0.6s						
T1241				AML	AML		
	comp=E,3510μm,1.4s						
T1241				AML	AML		
	comp=N,2340μm,1.1s						
T1241				AML	AML		
	comp=E,3580μm,1.5s						
T1241				AML	AML		
	comp=N,2585μm,1.4s						

T1204	**Amatrice, Fraz**	**0.23**	**142**	P	Pg	13 56 06.3 +0.7
T1204				S	Sg	13 56 10.5 +1.7
T1204				AML	AML	
	comp=N,2825μm,1.2s					
T1204				AML	AML	
	comp=E,3680μm,1.2s					
T1204				AML	AML	
	comp=N,2830μm,1.2s					
T1204				AML	AML	
	comp=E,3670μm,1.2s					
T1204				AML	AML	
	comp=N,2825μm,0.8s					
LNSS	**Leonessa**	**0.26**	**194**	P	Pg	13 56 06.8 +0.6
LNSS				AML	AML	
	comp=N,2385μm,0.6s					
LNSS				AML	AML	
	comp=N,2390μm,0.6s					
LNSS				AML	AML	
	comp=N,2390μm,1.4s					
LNSS				AML	AML	
	comp=E,2450μm,0.6s					
T1243	**Rocca Santa Ma**	**0.29**	**123**	P	Pg	13 56 07.2 +0.5
T1243				S	Sg	13 56 11.9 +1.3
T1211	**Morro Reatino**	**0.38**	**212**	P	Pg	13 56 09.2 +0.7
T1211				S	Sb	13 56 15.2 -0.7
ARRO	**Arrone**	**0.38**	**224**	P	Pb	13 56 09.8 -0.1
ARRO				S	Sb	13 56 15.2 -0.8
ARRO				AML	AML	
	comp=N,788μm,0.4s					
ARRO				AML	AML	
	comp=E,636μm,1.1s					
ASSB	**Assisi San Ben**	**0.39**	**299**	P	Pg	13 56 09.1 +0.4
OFFI	**Offida**	**0.42**	**79**	P	Pb	13 56 10.5 -0.1
OFFI				AML	AML	
	comp=N,1910μm,0.7s					
OFFI				AML	AML	
	comp=E,2565μm,0.8s					
OFFI				AML	AML	
	comp=N,1910μm,1.3s					
TERO	**Teramo**	**0.42**	**123**	P	Pg	13 56 09.4 +0.2
TERO				AML	AML	
	comp=E,1985μm,0.4s					
TERO				AML	AML	
	comp=N,3365μm,0.4s					
TERO				AML	AML	
	comp=E,2110μm,0.4s					
TERO				AML	AML	
	comp=N,3535μm,0.4s					
TERO				AML	AML	
	comp=N,3370μm,0.4s					
SNTG	**Esanatoglia**	**0.42**	**341**	P	Pb	13 56 10.1 -0.6
SNTG				AML	AML	
	comp=E,933μm,0.8s					
SNTG				AML	AML	
	comp=N,592μm,1.4s					
SNTG				AML	AML	
	comp=N,593μm,1.4s					
SNTG				AML	AML	
	comp=N,628μm,0.8s					
SNTG				AML	AML	
	comp=E,917μm,0.8s					
SNTG				AML	AML	
	comp=E,932μm,0.8s					
SNTG				AML	AML	
	comp=N,628μm,1.2s					
SNTG				AML	AML	
	comp=E,917μm,1.2s					
SNTG				AML	AML	
	comp=N,592μm,0.6s					
SNTG				AML	AML	
	comp=E,932μm,1.2s					
T1247	**Pizzolo (AQ)**	**0.43**	**163**	P	Pb	13 56 10.5 -0.3
T1247				AML	AML	
	comp=N,930μm,0.4s					
T1247				AML	AML	
	comp=N,930μm,1.6s					
T1247				AML	AML	
	comp=E,1106μm,0.5s					
CESX	**Cesi**	**0.47**	**239**	P	Pg	13 56 10.4 +0.2
CESX				S	Sb	13 56 18.0 -0.5
EL6	**Elcito**	**0.47**	**358**	S	Sb	13 56 19.0 +0.2
ATCC	**AVT- Casa Cast**	**0.49**	**313**	P	Pg	13 56 10.9 +0.4
ATCC				AML	AML	
	comp=E,2005μm,0.5s					
ATCC				AML	AML	
	comp=N,1890μm,0.8s					
ATCC				AML	AML	
	comp=E,2010μm,0.5s					
ATCC				AML	AML	
	comp=N,1895μm,0.8s					
FOSV	**Fossato di Vic**	**0.52**	**329**	S	Sb	13 56 20.0 +0.1
GIGS	**Gran Sasso**	**0.52**	**141**	P	Pb	13 56 12.2 -0.2
GIGS				AML	AML	
	comp=E,254μm,0.5s					
GIGS				AML	AML	
	comp=N,239μm,0.7s					
GIGS				AML	AML	
	comp=N,240μm,0.7s					
FIAM	**Fiamignano**	**0.59**	**181**	P	Pg	13 56 12.4 0.0
FIAM				AML	AML	
	comp=E,360μm,0.6s					
FIAM				AML	AML	
	comp=E,360μm,0.6s					
FIAM				AML	AML	
	comp=N,294μm,0.5s					
FIAM				AML	AML	
	comp=N,294μm,1.5s					
FIAM				AML	AML	
	comp=E,360μm,1.4s					
MURB	**Monte Urbino**	**0.60**	**313**	S	Sb	13 56 23.0 +0.6
PP3	**Marolino**	**0.63**	**34**	S	Sn	13 56 26.0 -0.4
ARVD	**Arcevia**	**0.66**	**348**	S	Sb	13 56 25.0 +1.0
ATTE	**AVT- Monte Tez**	**0.66**	**302**	S	Sb	13 56 25.0 +0.9
VCEL	**Villa Celiera**	**0.70**	**131**	⇑P	Pg	13 56 14.7 +0.2
VCEL				AML	AML	
	comp=E,846μm,1.1s					
VCEL				AML	AML	
	comp=N,991μm,0.5s					
VCEL				AML	AML	
	comp=E,844μm,1.1s					
VCEL				AML	AML	
	comp=N,989μm,0.5s					
VCEL				AML	AML	
	comp=E,844μm,0.9s					
FRON	**Frontone**	**0.72**	**336**	S	Sb	13 56 27.0 +1.1
T0110	**Collepietro**	**0.79**	**142**	⇓P	Pg	13 56 16.5 +0.3
T0110				AML	AML	
	comp=N,717μm,0.4s					
T0110				AML	AML	
	comp=N,718μm,0.4s					
T0110				AML	AML	
	comp=E,798μm,0.5s					
T0110				AML	AML	
	comp=N,718μm,1.6s					
T0110				AML	AML	
	comp=E,798μm,1.5s					
PIEI	**Pieia**	**0.81**	**328**	S	Sn	13 56 30.0 -0.8
FSSB	**Fossombrone**	**0.88**	**343**	S	Sn	13 56 33.0 +0.6
PE3	**Peglio**	**0.96**	**332**	⇑P	Pn	13 56 20.5 -0.2
PE3				AML	AML	
	comp=E,10μm,0.8s					
PE3				AML	AML	
	comp=N,5μm,1.6s					
LPEL	**Lama dei Pelig**	**1.12**	**135**	P	Pn	13 56 24.4 +1.4
LPEL				AML	AML	
	comp=N,190μm,0.7s					
LPEL				AML	AML	
	comp=E,314μm,1.6s					
LPEL				AML	AML	
	comp=E,314μm,0.4s					

*GUC **29** 14:25:40.3±0.7, 20.°43S×69.°08W, h110km±3km, ML3.5*
*IDC **29** 14:25:41.7±1.3, 20.°50S×68.°68W, h108km±15km, mb3.5/3, mbtmp3.7/6, Error ellipse: s-maj=51.4km s-min=9.2km az=98.0*

ISC 29 14:25:40.1±0.9, 20.°44S±0.°03×69.°14W±0.°07, h109km±7km, n22, σ0.88/39, 7C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.30**	**357**	⇓*i*P	**Pn**	**14 25 56.4**	**+0.1**
PB08				*e*S	**Sn**	**14 26 08.4**	**+0.1**
PB01	**IPOC Station P**	**0.68**	**209**	⇑*i*P	**Pn**	**14 25 58.4**	**+0.1**
PB01				*e*S	**Sn**	**14 26 12.9**	**+0.9**
PB01				IAML		14 26 14.1	
	comp=N,2μm,0.3s						
HMBC	**Humberstone**	**0.72**	**283**	*e*P	**Pn**	**14 25 58.8**	**+0.1**
HMBC				*e*S	**Sn**	**14 26 12.8**	**+0.2**
GO01	**Chusmiza**	**0.77**	**356**	*e*P	**Pn**	**14 25 59.6**	**0.0**
GO01				*e*S	**Sn**	**14 26 14.9**	**+0.7**
TA02	**Huaiquique**	**0.95**	**280**	*e*P	**Pn**	**14 26 01.1**	**+0.4**
TA02				*e*S	**Sn**	**14 26 17.0**	**+0.8**
TA01	**Diego Aracena**	**0.98**	**263**	⇑*i*P	**Pn**	**14 26 01.0**	**-0.1**
TA01				*e*S	**Sn**	**14 26 16.9**	**+0.1**
TA01				IAML		14 26 17.6	
	comp=E,1μm,0.2s						
PATCX	**Punta Patache**	**1.02**	**248**	⇑*i*P	**Pn**	**14 26 01.7**	**+0.1**
PATCX				*e*S	**Sn**	**14 26 18.1**	**+0.4**
PB02	**IPOC Station P**	**1.12**	**219**	⇑*i*P	**Pn**	**14 26 03.0**	**+0.3**
PB02				*e*S	**Sn**	**14 26 20.4**	**+0.7**
PB02				IAML		14 26 21.1	
	comp=N,1μm,0.3s						
PB09	**IPOC Station P**	**1.35**	**184**	⇑*i*P	**Pn**	**14 26 05.7**	**+0.4**
PB09				*e*S	**Sn**	**14 26 25.3**	**+0.9**
PB07	**IPOC Station P**	**1.46**	**209**	⇑*i*P	**Pn**	**14 26 06.5**	**0.0**
PB07				*e*S	**Sn**	**14 26 26.4**	**-0.1**
PB07				IAML		14 26 30.0	
	comp=E,695nm,0.2s						
PB03	**IPOC Station P**	**1.70**	**200**	⇑*i*P	**Pn**	**14 26 09.2**	**-0.2**
PB03				*e*S	**Sn**	**14 26 31.4**	**-0.3**
PB03				IAML		14 26 32.5	
	comp=E,464nm,0.2s						
PB16	**IPOC Station P**	**2.13**	**350**	*e*P	**Pn**	**14 26 16.1**	**+0.8**
PB16				*e*S	**Sn**	**14 26 43.8**	**+1.8**
PB16				IAML		14 26 45.6	
	comp=N,201nm,0.5s						
PB12	**IPOC Station P**	**2.14**	**328**	*e*P	**Pn**	**14 26 14.3**	**-0.7**
PB12				*e*S	**Sn**	**14 26 41.4**	**-0.1**
PB12				IAML		14 26 42.5	
	comp=E,256nm,0.1s						
LVC	**Limon Verde**	**2.17**	**174**	P	**Pn**	**14 26 16.4**	**+0.8**
	comp=E,13nm,0.2s,baz=27,slow=8.6,SNR=34						
LVC				S	**Sn**	**14 26 43.3**	**+0.7**
	comp=E,133nm,0.4s,baz=4.9,slow=18,SNR=55						
LVC	**Limon Verde**	**2.17**	**174**	*e*P	**Pn**	**14 26 16.4**	**+0.8**
LVC				*e*S	**Sn**	**14 26 43.3**	**+0.7**
PB06	**IPOC Station P**	**2.29**	**190**	*e*P	**Pn**	**14 26 16.7**	**-0.2**
PB06				IAML		14 26 50.7	
	comp=E,384nm,0.3s						
PB15	**IPOC Station P**	**2.77**	**186**	*e*P	**Pn**	**14 26 23.6**	**+0.3**
PB15				*e*S	**Sn**	**14 26 56.2**	**-0.2**
LPAZ	**La Paz**	**4.24**	**13**	P	**Pn**	**14 26 45.3**	**+1.9**
	comp=E,3.6nm,0.3s,baz=205,slow=5.4,SNR=21						
LPAZ				S	**Sn**	**14 27 33.4**	**+1.1**
	comp=E,3.6nm,0.5s,baz=227,slow=9.3,SNR=2.2						
SIV	**San Ignacio**	**8.85**	**61**	P	**Pn**	**14 27 42.1**	**-3.2**
	comp=E,1.5nm,0.4s,baz=248,slow=12,SNR=12						
PLCA	**Paso Flores**	**20.26**	**183**	P	**P**	**14 30 07.5**	**+0.5**
	comp=E,2.6nm,0.9s,baz=15,slow=13,SNR=6.1						
	comp=E,2.6nm,0.9s						
DBIC	**Dimbokro**	**68.64**	**74**	P	**P**	**14 36 31.7**	**-0.5**
	comp=E,1.6nm,0.6s,baz=270,slow=6.1,SNR=1.9						
	comp=E,1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.21**	**71**	P	**P**	**14 37 22.2**	**-0.5**
	comp=E,0.2nm,0.4s,baz=262,slow=6.2,SNR=5.6						
	comp=E,0.2nm,0.4s						

*PRU **29** 14:28:54.7±0.0, 43.°15N×13.°51E, h0km*

ROM 29 14:28:27.6±0.1, 42.°814N±0.°003×13.°140E±0.°003, h11km, Md1.3/10, 6C-5D, Error ellipse: s-maj=0.3km s-min=0.0km az=148.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**40**	⇑P	Pg	14 28 30.2	+0.2
T1245				S	Sg	14 28 31.7	-0.1
T1245				AML	AML		
	comp=E,2540μm,0.8s						
T1245				AML	AML		
	comp=N,1850μm,0.8s						
T1245				AML	AML		
	comp=E,2405μm,0.8s						
T1245				AML	AML		
	comp=N,1835μm,0.3s						
T1245				AML	AML		
	comp=E,23400μm,0.3s						
T1245				AML	AML		
	comp=N,31350μm,0.3s						
T1245				AML	AML		
	comp=E,22350μm,0.3s						
T1245				AML	AML		
	comp=N,30150μm,0.3s						
T1245				END			
MC2	**Monte Cornacci**	**0.10**	**21**	P	Pg	14 28 31.1	+0.5
MC2				S	Sg	14 28 33.4	+0.6
T1216	**Preci, Frazion**	**0.12**	**311**	P	Pg	14 28 31.2	+0.6
T1216				S	Sg	14 28 33.2	+0.5
T1216				AML	AML		
	comp=E,34900μm,0.7s						
T1216				AML	AML		
	comp=N,22550μm,0.6s						
T1216				END			
T1217	**Poggiodomo (PG**	**0.18**	**236**	P	Pg	14 28 32.2	+0.6
T1217				S	Sg	14 28 35.4	+0.9
T1204	**Amatrice, Fraz**	**0.19**	**137**	P	Pg	14 28 32.2	+0.4
T1204				S	Sg	14 28 35.6	+0.9
T1204				AML	AML		
	comp=E,9815μm,1.2s						
T1204				AML	AML		
	comp=N,6650μm,0.7s						
T1204				END			
T1215	**Vallo di Nera,**	**0.20**	**267**	P	Pg	14 28 32.5	+0.6
T1215				S	Sg	14 28 36.0	+1.1
T1215				END			
T1241	**Roccafluvione,**	**0.22**	**79**	⇑P	Pg	14 28 32.8	+0.6
T1241				S	Sg	14 28 36.7	+1.3
T1241				AML	AML		
	comp=E,5480μm,0.6s						
T1241				AML	AML		
	comp=N,4995μm,0.4s						
FDMO	**Fiordimonte**	**0.23**	**350**	AML	AML		
FDMO				AML	AML		
AM05	**Amandola Campo**	**0.23**	**44**	⇓P	Pb	14 28 33.1	-0.6
AM05				S	Sg	14 28 36.9	+1.3
AM05				AML	AML		
	comp=E,5915μm,1.0s						
AM05				AML	AML		
	comp=N,5330μm,1.4s						
AM05				AML	AML		
	comp=E,24250μm,1.0s						
AM05				AML	AML		
	comp=N,1150μm,1.6s						
AM05				END			
SMA1	**SAN MARTINO**	**0.23**	**142**	⇓P	Pg	14 28 33.0	+0.5
SMA1				S	Sg	14 28 36.9	+1.1
SMA1				AML	AML		
	comp=E,5630μm,1.1s						
SMA1				AML	AML		
	comp=N,6710μm,0.7s						
T1243	**Rocca Santa Ma**	**0.26**	**117**	⇑P	Pg	14 28 33.2	+0.3
T1243				S	Sg	14 28 37.3	+0.8
T1243				END			
CESI	**CESI - Serrava**	**0.26**	**318**	P	Pb	14 28 33.8	-0.5
CESI				S	Sg	14 28 36.9	+0.4
CESI				AML	AML		
	comp=E,23900μm,0.7s						
CESI				AML	AML		
	comp=N,15650μm,1.1s						
CESI				END			
GUMA	**Gualdo di Mace**	**0.29**	**30**	⇓P	Pb	14 28 34.5	-0.3
GUMA				AML	AML		
	comp=E,74100μm,0.4s						
GUMA				AML	AML		
	comp=N,57700μm,0.4s						
GUMA				AML	AML		
	comp=E,60200μm,0.4s						
GUMA				AML	AML		
	comp=N,67350μm,0.3s						
RM33	**Pellescritta (**	**0.31**	**170**	P	Pg	14 28 34.3	+0.4
RM33				S	Sb	14 28 39.3	-1.0
RM33				AML	AML		
	comp=E,253μm,0.2s						
RM33				AML	AML		
	comp=N,420μm,1.2s						
RM33				AML	AML		
	comp=E,270μm,0.7s						
RM33				AML	AML		
	comp=N,328μm,1.2s						
RM33				AML	AML		
	comp=E,2245μm,0.5s						
RM33				AML	AML		
	comp=N,2335μm,0.3s						
RM33				AML	AML		
	comp=E,2185μm,0.5s						
RM33				AML	AML		
	comp=N,2365μm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.34**	**144**	P	Pg	14 28 34.8	+0.3
CAMP				S	Sg	14 28 40.1	+1.0
CAMP				AML	AML		
	comp=E,3045μm,0.3s						
CAMP				AML	AML		
	comp=N,1845μm,0.6s						
TERO	**Teramo**	**0.39**	**119**	⇑P	Pg	14 28 35.5	+0.2
TERO				S	Sb	14 28 41.6	-1.0
TERO				AML	AML		
	comp=E,3125μm,0.7s						
TERO				AML	AML		
	comp=N,2465μm,0.3s						
TERO				AML	AML		
	comp=E,3265μm,0.7s						
TERO				AML	AML		
	comp=N,2615μm,0.4s						
TERO				END			
ASSB	**Assisi San Ben**	**0.42**	**303**	S	Sg	14 28 37.0	-4.5
SNTG	**Esanatoglia**	**0.46**	**342**	S	Sg	14 28 38.0	-4.9
GIGS	**Gran Sasso**	**0.48**	**139**	⇑P	Pg	14 28 37.3	+0.2
GIGS				S	Sg	14 28 44.1	+0.7
GIGS				AML	AML		
	comp=E,754μm,0.5s						
GIGS				AML	AML		
	comp=N,710μm,0.3s						
EL6	**Elcito**	**0.52**	**357**	⇑P	Pg	14 28 33.4	-4.3
EL6				AML	AML		
	comp=E,5730μm,0.8s						
EL6				AML	AML		
	comp=N,6315μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.52**	**315**	S	Sg	14 28 39.0	-5.7
FIAM	**Fiamignano**	**0.55**	**182**	P	Pg	14 28 38.3	0.0
FIAM				S	Sb	14 28 46.5	-0.6
FIAM				AML	AML		
	comp=E,1180μm,0.6s						
FIAM				AML	AML		
	comp=N,881μm,1.6s						
LIK	**San Giovanni I**	**1.34**	**166**	⇓P	Pg	14 28 55.0	+1.6
IMOL	**Imola, Italy**	**1.85**	**327**	⇓P	Pn	14 28 56.4	-2.8
OBKA	**Obir**	**3.83**	**15**	*i* Pn	Pg	14 29 49.7	+8.7
	comp=N,1.0nm,0.2s						
MYKA	**Terra Mystica**	**3.83**	**5**	*e*Pn	Pg	14 29 49.5	+8.6
	comp=N,5.4nm,0.5s						
ABTA	**Abfaltersbach**	**3.96**	**354**	*i* Pn	Pg	14 29 51.6	+8.2
	comp=N,1.5nm,0.5s						
FETA	**Feichten**	**4.54**	**339**	*i* Pn	Pg	14 30 00.7	+6.1
	comp=N,4.6nm,0.7s						
WTTA	**Wattenberg**	**4.58**	**347**	*e*Pn	Pg	14 30 01.1	+5.9
	comp=N,0.8nm,0.2s						
SQTA	**Sankt Quirin**	**4.61**	**343**	*i* Pn	Pg	14 30 01.7	+5.8
	comp=N,7.8nm,0.5s						
WATA	**Walderalm**	**4.66**	**347**	*i* Pn	Pg	14 30 02.3	+5.6
	comp=N,4.6nm,0.4s						
MOTA	**Moosalm**	**4.75**	**343**	*e*Pn	Pg	14 30 02.8	+4.2
	comp=N,3.0nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.89**	**4**	*i* Pn	Pg	14 30 02.5	+1.3
	comp=N,4.1nm,0.4s						
MOA	**Molln**	**5.10**	**9**	*e*Pn	Pg	14 30 07.0	+1.8
	comp=N,1.3nm,0.3s						
RONA	**Rosalia, Austr**	**5.37**	**23**	*i* Pn	Pg	14 30 11.8	+1.4
	comp=N,2.0nm,0.5s						
CONA	**Conrad Observa**	**5.46**	**20**	*i* Pn	Pg	14 30 12.6	+0.4
	comp=N,0.4nm,0.2s						
CKRC	**Cesky Krumlov**	**6.06**	**7**	*e*SN	Sb	14 31 24.6	-1.1
KHC	**Kasperske Hory**	**6.33**	**3**	*e*PN	Pb	14 30 22.5	+4.8
KHC				*e*SN	Sb	14 31 29.9	-3.4

ROM 29 14:28:51.4±0.0, 43.°020N±0.°003×13.°100E±0.°004, h9km, ML3.1/37, 17C-8D, Error ellipse: s-maj=0.3km s-min=0.2km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**330**	P	Pg	14 28 52.6	-0.5
FEMA	**Monte Fema**	**0.07**	**212**	P	Pg	14 28 53.9	+0.2
FEMA				S	Sg	14 28 55.7	+0.4
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,77750μm,0.6s						
FEMA				AML	AML		
	comp=N,77750μm,1.4s						
MC2	**Monte Cornacci**	**0.13**	**148**	P	Pg	14 28 55.0	+0.5
MC2				S	Sg	14 28 57.5	+0.9
T1216	**Preci, Frazion**	**0.14**	**205**	P	Pg	14 28 55.2	+0.6
T1216				S	Sg	14 28 58.0	+1.2
T1216				AML	AML		
	comp=N,22550μm,0.6s						
T1216				AML	AML		
	comp=E,34900μm,0.7s						
T1216				AML	AML		
	comp=N,22550μm,0.6s						
T1216				AML	AML		
	comp=E,34850μm,0.7s						
CESI	**CESI - Serrava**	**0.14**	**264**	P	Pg	14 28 55.3	+0.6
CESI				S	Sg	14 28 58.2	+1.3
CESI				AML	AML		
	comp=N,15650μm,1.1s						
CESI				AML	AML		
	comp=E,23900μm,0.7s						
CESI				AML	AML		
	comp=N,15650μm,0.9s						
SEF1	**Sefro**	**0.17**	**319**	P	Pg	14 28 55.6	+0.5
SEF1				S	Sg	14 28 58.9	+1.3
SEF1				AML	AML		
	comp=N,9955μm,0.3s						
SEF1				AML	AML		
	comp=N,9955μm,1.7s						
SEF1				AML	AML		
	comp=E,14700μm,0.3s						
MDAR	**Monte D'Aria**	**0.17**	**10**	P	Pg	14 28 55.5	+0.3
T1245	**Castelsantange**	**0.18**	**158**	P	Pg	14 28 55.8	+0.6
T1245				S	Sg	14 28 59.2	+1.4
T1245				AML	AML		
	comp=E,23400μm,0.3s						
T1245				AML	AML		
	comp=E,23400μm,0.3s						
T1245				AML	AML		
	comp=N,31300μm,0.3s						
T1245				AML	AML		
	comp=E,22350μm,0.3s						
T1245				AML	AML		
	comp=N,30150μm,0.3s						
GUMA	**Gualdo di Mace**	**0.18**	**76**	P	Pg	14 28 55.9	+0.7
GUMA				S	Sg	14 28 59.1	+1.3
GUMA				AML	AML		
	comp=E,74100μm,0.4s						
GUMA				AML	AML		
	comp=E,60200μm,0.4s						
GUMA				AML	AML		
	comp=E,74100μm,0.4s						
GUMA				AML	AML		
	comp=N,67350μm,0.3s						
GUMA				AML	AML		
	comp=N,57700μm,0.4s						
PIO1	**Pioraco**	**0.18**	**332**	P	Pg	14 28 55.6	+0.4
AM05	**Amandola Campo**	**0.19**	**103**	P	Pg	14 28 56.0	+0.6
AM05				S	Sg	14 28 59.4	+1.3
AM05				AML	AML		
	comp=N,5330μm,1.4s						
AM05				AML	AML		
	comp=E,24250μm,1.0s						
AM05				AML	AML		
	comp=E,5915μm,1.0s						
AM05				AML	AML		
	comp=N,5335μm,1.4s						
AM05				AML	AML		
	comp=N,1150μm,1.6s						
AM05				AML	AML		
	comp=E,5920μm,1.0s						
AM05				AML	AML		
	comp=N,1145μm,1.6s						
AM05				AML	AML		
	comp=N,5330μm,0.6s						
AM05				AML	AML		
	comp=N,1145μm,0.4s						
FIU1	**Fiuminata**	**0.21**	**324**	P	Pg	14 28 56.1	+0.3
SSM1	**San Severino M**	**0.22**	**15**	⇑P	Pg	14 28 56.9	+1.0

GAG1	**Gagliole**	**0.22 354**	⇑P	Pg	14 28 56.6	+0.7
GAG1			AML	AML		
	comp=N,11200μm,0.9s					
GAG1			AML	AML		
	comp=E,12800μm,1.3s					
MTL1	**Matelica**	**0.24 344**	P	Pg	14 28 57.1	+0.7
SNTG	**Esanatoglia**	**0.26 334**	P	Pg	14 28 57.1	+0.4
SNTG			AML	AML		
	comp=E,1825μm,0.3s					
SNTG			AML	AML		
	comp=N,1685μm,0.8s					
SNTG			AML	AML		
	comp=E,1815μm,0.3s					
SNTG			AML	AML		
	comp=N,1875μm,0.8s					
T1215	**Vallo di Nera,**	**0.28 218**	P	Pg	14 28 57.7	+0.7
T1215			S	Sb	14 29 02.5	-0.8
T1215			AML	AML		
	comp=N,6035μm,0.5s					
T1215			AML	AML		
	comp=E,5415μm,0.6s					
T1215			AML	AML		
	comp=N,6090μm,0.5s					
T1215			AML	AML		
	comp=E,5520μm,0.6s					
T1215			AML	AML		
	comp=N,6035μm,0.5s					
T1215			AML	AML		
	comp=E,5420μm,0.6s					
T1215			AML	AML		
	comp=N,6095μm,0.5s					
T1215			AML	AML		
	comp=E,5520μm,1.4s					
T1215			AML	AML		
	comp=E,5420μm,1.4s					
T1215			AML	AML		
	comp=N,6035μm,1.5s					
T1215			AML	AML		
	comp=N,6095μm,1.5s					
T1241	**Roccafluvione,**	**0.29 124**	P	Pg	14 28 57.7	+0.4
T1241			S	Sb	14 29 03.1	-0.7
T1241			AML	AML		
	comp=E,5480μm,0.6s					
T1241			AML	AML		
	comp=N,4995μm,0.4s					
T1241			AML	AML		
	comp=E,5485μm,0.6s					
MNTP	**Montappone**	**0.29 66**	P	Pb	14 28 58.5	-0.3
MNTP			AML	AML		
	comp=E,13750μm,0.6s					
MNTP			AML	AML		
	comp=N,8105μm,1.4s					
EL6	**Elcito**	**0.31 0**	⇓P	Pg	14 28 58.0	+0.4
EL6			AML	AML		
	comp=E,5730μm,0.8s					
EL6			AML	AML		
	comp=E,5720μm,0.8s					
EL6			AML	AML		
	comp=N,6315μm,0.4s					
ASSB	**Assisi San Ben**	**0.33 274**	P	Pg	14 28 58.4	+0.5
TRE1	**Treia**	**0.33 28**	P	Pb	14 28 59.0	-0.4
TRE1			S	Sb	14 29 04.5	-0.4
T1217	**Poggiodomo (PG**	**0.33 202**	P	Pg	14 28 58.7	+0.6
T1217			S	Sb	14 29 04.2	-0.7
T1217			AML	AML		
	comp=N,9425μm,0.5s					
T1217			AML	AML		
	comp=E,5425μm,0.7s					
T1217			AML	AML		
	comp=N,9295μm,0.5s					
T1217			AML	AML		
	comp=N,9420μm,0.5s					
T1217			AML	AML		
	comp=E,5565μm,0.7s					
T1217			AML	AML		
	comp=N,9405μm,0.5s					
T1217			AML	AML		
	comp=N,9280μm,0.5s					
T1217			AML	AML		
	comp=E,5420μm,0.7s					
T1217			AML	AML		
	comp=N,9280μm,1.5s					
T1217			AML	AML		
	comp=N,9405μm,1.5s					
CING	**Cingoli**	**0.36 11**	⇑P	Pg	14 28 59.1	+0.5
CING			AML	AML		
	comp=N,2270μm,1.6s					
CING			AML	AML		
	comp=E,1965μm,1.2s					
CING			AML	AML		
	comp=E,1965μm,0.8s					
FOSV	**Fossato di Vic**	**0.37 318**	⇑P	Pg	14 28 59.2	+0.5
FOSV			AML	AML		
	comp=E,2055μm,0.8s					
FOSV			AML	AML		
	comp=N,3620μm,0.3s					
FOSV			AML	AML		
	comp=N,3620μm,1.7s					
FOSV			AML	AML		
	comp=E,2055μm,1.2s					
ATCC	**AVT- Casa Cast**	**0.38 296**	P	Pg	14 28 59.4	+0.6
ATCC			S	Sb	14 29 05.8	-0.4
ATCC			AML	AML		
	comp=E,5660μm,0.3s					
ATCC			AML	AML		
	comp=N,5145μm,0.3s					
T1201	**Domo (RI)**	**0.38 163**	P	Pg	14 28 59.6	+0.7
T1204	**Amatrice, Fraz**	**0.38 155**	P	Pg	14 28 59.4	+0.5
T1204			S	Sb	14 29 05.7	-0.7
T1204			AML	AML		
	comp=E,9775μm,1.2s					
T1204			AML	AML		
	comp=N,6645μm,0.7s					
T1204			AML	AML		
	comp=E,9750μm,1.2s					
T1204			AML	AML		
	comp=E,9815μm,1.2s					
T1204			AML	AML		
	comp=E,9805μm,1.2s					
T1204			AML	AML		
	comp=N,6650μm,0.7s					
T1243	**Rocca Santa Ma**	**0.41 142**	P	Pg	14 28 59.8	+0.3
T1243			S	Sb	14 29 06.6	-0.7
SMA1	**SAN MARTINO**	**0.43 156**	P	Pg	14 29 00.1	+0.3
SMA1			S	Sb	14 29 07.1	-0.7
SMA1			AML	AML		
	comp=E,5630μm,1.1s					
SMA1			AML	AML		
	comp=N,6710μm,0.7s					
SMA1			AML	AML		
	comp=E,5630μm,0.9s					
SMA1			AML	AML		
	comp=N,6715μm,0.7s					
MMUR	**Monte Murano**	**0.43 350**	P	Pg	14 29 00.2	+0.4
MMUR			S	Sb	14 29 07.5	-0.2
OFFI	**Offida**	**0.44 101**	P	Pb	14 29 01.1	-0.2
OFFI			AML	AML		
	comp=N,7200μm,0.6s					
OFFI			AML	AML		
	comp=E,6330μm,1.3s					
OFFI			AML	AML		
	comp=E,6330μm,0.7s					
MURB	**Monte Urbino**	**0.49 300**	⇑P	Pb	14 29 01.6	-0.6
MURB			S	Sb	14 29 10.0	+0.6
MURB			AML	AML		
	comp=N,3650μm,0.2s					
MURB			AML	AML		
	comp=E,5240μm,0.3s					
MURB			AML	AML		
	comp=N,4195μm,1.6s					
MURB			AML	AML		
	comp=E,4860μm,0.3s					
ARVD	**Arcevia**	**0.49 346**	⇑P	Pg	14 29 01.4	+0.4
ARVD			S	Sb	14 29 10.0	+0.4
ARVD			AML	AML		
	comp=E,1480μm,0.7s					
ARVD			AML	AML		
	comp=N,937μm,0.5s					
ARVD			AML	AML		
	comp=E,1480μm,1.3s					
ARRO	**Arrone**	**0.51 209**	P	Pg	14 29 01.6	+0.4
ARRO			S	Sb	14 29 09.7	-0.2
ARRO			AML	AML		
	comp=E,2475μm,0.2s					
ARRO			AML	AML		
	comp=N,2210μm,1.1s					
PP3	**Marolino**	**0.52 46**	⇑P	Pb	14 29 02.5	-0.1
PP3			AML	AML		
	comp=N,4060μm,0.7s					
PP3			AML	AML		
	comp=E,3825μm,0.9s					
PP3			AML	AML		
	comp=E,3925μm,0.8s					
PP3			AML	AML		
	comp=N,4245μm,0.3s					
PP3			AML	AML		
	comp=N,4060μm,1.3s					
RM33	**Pellescritta (**	**0.52 171**	P	Pg	14 29 01.7	+0.2
RM33			S	Sb	14 29 10.2	-0.1
RM33			AML	AML		
	comp=E,2185μm,0.5s					
RM33			AML	AML		
	comp=N,2360μm,0.3s					
RM33			AML	AML		
	comp=N,2335μm,0.3s					
RM33			AML	AML		
	comp=N,2365μm,0.3s					
RM33			AML	AML		
	comp=E,2180μm,0.5s					
RM33			AML	AML		
	comp=E,2245μm,0.5s					
RM33			AML	AML		
	comp=N,2340μm,0.3s					
ATFO	**Monte Foce - G**	**0.52 312**	⇓P	Pg	14 29 02.0	+0.4
ATFO			AML	AML		
	comp=E,1310μm,0.6s					
ATFO			AML	AML		
	comp=N,1280μm,1.6s					
ATFO			AML	AML		
	comp=N,1280μm,0.4s					
T1211	**Morro Reatino**	**0.52 200**	P	Pg	14 29 01.5	-0.1
T1211			AML	AML		
	comp=E,3360μm,0.4s					
T1211			AML	AML		
	comp=E,3445μm,0.4s					
T1211			AML	AML		
	comp=N,3645μm,0.9s					
T1211			AML	AML		
	comp=N,3640μm,0.9s					
T1211			AML	AML		
	comp=N,3520μm,0.9s					
T1211			AML	AML		
	comp=E,3360μm,0.4s					
T1211			AML	AML		
	comp=N,3640μm,1.1s					
T1211			AML	AML		
	comp=N,3520μm,1.1s					
T1211			AML	AML		
	comp=E,3440μm,0.4s					
T1246	**Crognaleto (TE**	**0.52 146**	P	Pg	14 29 01.7	+0.1
CAMP	**Campotosto**	**0.54 155**	P	Pg	14 29 01.9	+0.1
CAMP			AML	AML		
	comp=N,1845μm,0.6s					
CAMP			AML	AML		
	comp=N,1845μm,1.4s					
CAMP			AML	AML		
	comp=E,3045μm,0.3s					
TERO	**Teramo**	**0.54 137**	P	Pg	14 29 01.9	-0.1
TERO			AML	AML		
	comp=E,3125μm,0.7s					
TERO			AML	AML		
	comp=E,3265μm,0.7s					
TERO			AML	AML		
	comp=E,3120μm,0.7s					
TERO			AML	AML		
	comp=N,2615μm,0.4s					
TERO			AML	AML		
	comp=N,2465μm,0.3s					
CESX	**Cesi**	**0.56 223**	P	Pg	14 29 02.5	+0.2
CESX			AML	AML		
	comp=E,5685μm,0.5s					
CESX			AML	AML		
	comp=N,4805μm,0.3s					
FRON	**Frontone**	**0.57 331**	P	Pg	14 29 02.6	+0.2
FRON			AML	AML		
	comp=N,1375μm,0.4s					
FRON			AML	AML		
	comp=E,1050μm,0.7s					
FRON			AML	AML		
	comp=N,1375μm,1.6s					
FRON			AML	AML		
	comp=E,1050μm,1.3s					
ATTE	**AVT- Monte Tez**	**0.57 288**	⇑P	Pn	14 29 06.2	+0.3
T1247	**Pizzolo (AQ)**	**0.60 166**	P	Pg	14 29 03.1	+0.1
T1247			AML	AML		
	comp=E,2725μm,0.8s					
T1247			AML	AML		
	comp=N,3525μm,0.4s					
T1247			AML	AML		
	comp=E,2725μm,1.2s					
ATVO	**AVT- Monte Val**	**0.62 306**	⇑P	Pg	14 29 03.8	+0.3
ATVO			AML	AML		
	comp=E,822μm,1.6s					
ATVO			AML	AML		
	comp=N,741μm,0.7s					
TRTR	**Tortoreto Alta**	**0.63 109**	P	Pb	14 29 05.4	+0.8
TRTR			AML	AML		
	comp=E,6575μm,0.6s					
TRTR			AML	AML		
	comp=N,4855μm,0.7s					
AOI	**Ancona**	**0.64 35**	P	Pb	14 29 05.3	+0.5
AOI			AML	AML		
	comp=E,876μm,0.3s					
AOI			AML	AML		
	comp=N,835μm,1.6s					
PIEI	**Pieia**	**0.66 322**	⇑P	Pg	14 29 04.3	+0.1
PIEI			AML	AML		
	comp=N,406μm,1.5s					
PIEI			AML	AML		
	comp=E,580μm,1.2s					
PIEI			AML	AML		
	comp=E,580μm,0.8s					
GIGS	**Gran Sasso**	**0.67 149**	P	Pg	14 29 04.3	0.0
GIGS			S	Sb	14 29 14.2	-0.4
GIGS			AML	AML		
	comp=E,754μm,0.5s					
GIGS			AML	AML		
	comp=N,710μm,0.3s					
GIGS			AML	AML		
	comp=E,753μm,0.5s					
ATPI	**Pietralunga -**	**0.67 310**	⇑P	Pg	14 29 04.7	+0.3
ATPI			S	Sb	14 29 16.0	+1.4
ATPI			AML	AML		
	comp=E,862μm,0.6s					
ATPI			AML	AML		
	comp=E,862μm,1.4s					
ATPI			AML	AML		
	comp=N,748μm,0.8s					
FSSB	**Fossombrone**	**0.71 341**	⇓P	Pb	14 29 06.0	0.0
FSSB			S	Sn	14 29 18.0	-0.8
FSSB			AML	AML		
	comp=E,2135μm,1.3s					
FSSB			AML	AML		
	comp=N,3315μm,0.4s					
MGAB	**Montegabbione**	**0.73 262**	⇓P	Pb	14 29 07.0	+0.7
MGAB			S	Sn	14 29 19.0	-0.3
MGAB			AML	AML		
	comp=E,1335μm,0.5s					
MGAB			AML	AML		
	comp=E,1340μm,0.5s					
MGAB			AML	AML		
	comp=E,1244μm,0.5s					
MGAB			AML	AML		
	comp=N,1895μm,0.4s					
MGAB			AML	AML		
	comp=N,1895μm,0.4s					
MGAB			AML	AML		
	comp=N,1895μm,1.6s					
MGAB			AML	AML		
	comp=E,1340μm,1.5s					
MGAB			AML	AML		
	comp=E,1244μm,1.5s					
MGAB			AML	AML		
	comp=N,1895μm,1.6s					
FIAM	**Fiamignano**	**0.75 179**	⇑P	Pg	14 29 05.8	-0.2
FIAM			AML	AML		
	comp=E,1180μm,0.6s					
FIAM			AML	AML		
	comp=N,881μm,1.6s					
FIAM			AML	AML		
	comp=E,1180μm,0.6s					
FIAM			AML	AML		
	comp=N,880μm,1.6s					
FIAM			AML	AML		
	comp=N,880μm,0.4s					
BADI	**Badiali**	**0.79 308**	⇓P	Pb	14 29 07.2	-0.2
VCEL	**Villa Celiera**	**0.83 139**	⇑P	Pg	14 29 07.6	+0.2
VCEL			AML	AML		
	comp=E,1970μm,0.5s					
VCEL			AML	AML		
	comp=E,1965μm,0.5s					
VCEL			AML	AML		
	comp=N,1570μm,1.2s					
VCEL			AML	AML		
	comp=N,1570μm,0.8s					
FAGN	**Fagnano**	**0.83 154**	⇑P	Pn	14 29 09.0	-0.4
FAGN			AML	AML		
	comp=E,3725μm,0.6s					
FAGN			AML	AML		
	comp=N,2540μm,0.4s					
CAFI	**Castiglion Fio**	**0.89 291**	⇓P	Pb	14 29 09.0	0.0
CAFI			AML	AML		
	comp=E,586μm,1.0s					
CAFI			AML	AML		
	comp=N,421μm,0.8s					
CAFI			AML	AML		
	comp=N,421μm,1.2s					
CAFI			AML	AML		
	comp=E,586μm,1.0s					
SACS	**San Casciano d**	**0.89 259**	⇑P	Pn	14 29 09.8	-0.4
SACS			AML	AML		
	comp=E,693μm,1.3s					
SACS			AML	AML		
	comp=N,668μm,1.4s					
SACS			AML	AML		
	comp=N,682μm,0.8s					
SACS			AML	AML		
	comp=E,630μm,1.3s					
SACS			AML	AML		
	comp=E,693μm,0.7s					
SACS			AML	AML		
	comp=N,668μm,0.6s					
SACS			AML	AML		
	comp=E,630μm,0.7s					
SRES	**S.Oreste - Sor**	**0.90 209**	⇑P	Pg	14 29 08.7	+0.1
SRES			AML	AML		
	comp=E,908μm,1.1s					
SRES			AML	AML		
	comp=N,1024μm,0.5s					
T0110	**Collepietro**	**0.94 147**	⇓P	Pg	14 29 08.9	-0.6
T0110			S	Sn	14 29 25.0	+0.6
T0110			AML	AML		
	comp=E,2055μm,0.6s					
T0110			AML	AML		
	comp=N,1720μm,0.4s					
T0110			AML	AML		
	comp=N,1720μm,1.6s					
CRE	**Caprese Michel**	**1.03 306**	⇓P	Pn	14 29 13.9	+1.7
CERT	**Cerreto**	**1.07 185**	⇑P	Pn	14 29 13.9	+1.2
INTR	**Introdacqua**	**1.17 149**	P	Pb	14 29 10.9	-2.9
TOLF	**Tolfa**	**1.25 221**	P	Pg	14 29 15.7	+0.2
TOLF			AML	AML		
	comp=E,365μm,1.0s					
TOLF			AML	AML		
	comp=N,276μm,0.5s					
TOLF			AML	AML		
	comp=E,365μm,1.0s					
TOLF			AML	AML		
	comp=N,276μm,1.5s					
LRP	**Arpino**	**1.42 165**	P	Pg	14 29 19.2	+0.5

*NOU **29** 14:39:29.8, 19°.82S×133°.89E, h0km, mb4.0/13, Northern Territory, Australia*
*IDC **29** 14:39:31.1±2.5, 19°.92S×133°.95E, h0km, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=14.6km s-min=3.7km az=95.0*
ISC 29 14:39:30.8±1.0, **19°.80S**±0°.07×**133°.95E**±0°.08, **h12**km, **n16,** σ1§**19**/17, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**0.40**	**112**	Pg	**Pg**	**14 39 38.1**	**-0.6**
	7.0nm,0.3s,baz=278,slow=18,SNR=411						
WRA				Lg	Lg	14 39 43.5	
	30nm,0.3s,baz=272,slow=32,SNR=58						
WRAB	**Tennant Creek**	**0.41**	**110**	P	**Pg**	**14 39 38.7**	**-0.2**
WB1	**Warramunga Ar.**	**0.41**	**114**	P	**Pg**	**14 39 38.4**	**-0.6**
AS01	**Alice Springs**	**3.85**	**180**	P	**Pn**	**14 40 31.6**	**+1.7**
ASAR	**Alice Springs**	**3.85**	**181**	Pn	**Pn**	**14 40 31.1**	**+1.1**
	1.3nm,0.3s,baz=7.0,slow=8.4,SNR=119						
ASAR				Sn	**Sn**	**14 41 16.2**	**+1.0**
	1.3nm,0.3s,baz=2.0,slow=29,SNR=2.8 1.5nm,0.3s						
QIS	**Mount Isa**	**5.37**	**99**	P	**Pn**	**14 40 52.0**	**+1.2**
KNRA	**Kununurra**	**6.42**	**309**	P	**Pn**	**14 41 06.0**	**+0.8**
KDU	**Kakadu**	**7.21**	**348**	P	**Pn**	**14 41 16.2**	**+0.2**
WRKA	**Warakurna**	**7.38**	**224**	P	**Pn**	**14 41 17.3**	**-1.2**
MTN	**Manton Dam**	**7.42**	**338**	P	**Pn**	**14 41 19.7**	**+0.7**
OOD	**Oodnadatta**	**8.12**	**169**	P	**Pn**	**14 41 29.8**	**+1.2**
MULG	**Mulgathing**	**10.44**	**179**	P	**Pn**	**14 42 00.0**	**-0.4**
COEN	**Coen**	**10.57**	**58**	P	**Pn**	**14 42 02.3**	**+0.1**
LCRK	**Leigh Creek**	**11.29**	**161**	P	**Pn**	**14 42 11.5**	**-0.5**
FORT	**Forrest**	**12.16**	**205**	P	**Pn**	**14 42 21.8**	**-2.1**
STKA	**Stephens Creek**	**13.86**	**152**	Pn	**Pn**	**14 42 45.1**	**-1.9**
	0.1nm,0.3s,baz=325,slow=16,SNR=2.3 1.8nm,0.7s						

*IDC **29** 15:04:18.5±0.7, 58°.00S×25°.99W, h72km±6km, mb3.6/6, mbtmp3.8/6, MS3.4/1, Error ellipse: s-maj=30.7km s-min=21.8km az=62.0*
ISC 29 15:04:17.7±0.7, **58°.0S**±0°.1×**26°.0W**±0°.2, **h64**km, **n17,** σ1§**22**/17, **mb3.9/6, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.73**	**157**	P	**Pn**	**15 07 41.0**	**-1.1**
VNA3	**Neumayer Olymp**	**14.92**	**159**	P	**Pn**	**15 07 43.2**	**-1.4**
VNA3				S	Sn	15 10 10.7	-18
VNA2	**Neumayer--Watz**	**15.12**	**156**	P	**Pn**	**15 07 45.8**	**-1.4**
	baz=322,slow=13						
SNAA	**Sanae**	**16.68**	**154**	P	**Pn**	**15 08 07.3**	**+0.4**
SNAA				S	Sn	15 10 53.9	-17
TROLL	**Troll, Antarti**	**18.20**	**152**	P	**Pn**	**15 08 28.3**	**+2.7**
PLCA	**Paso Flores**	**33.03**	**282**	P	**P**	**15 10 46.8**	**0.0**
	1.0nm,0.7s,baz=169,slow=5.2,SNR=3.6 1.0nm,0.7s						
MAW	**Mawson**	**38.18**	**142**	P	**P**	**15 11 30.5**	**+0.1**
	1.9nm,0.8s,baz=208,slow=6.3,SNR=2.5 1.9nm,0.8s						
SUR	**Sutherland**	**40.56**	**71**	LR	LR	15 24 45.8	
	comp=Z,43nm,18.2s,baz=202,slow=30						
VNDA	**Vanda**	**44.64**	**182**	P	**P**	**15 12 24.2**	**+1.1**
	0.5nm,0.7s,baz=182,slow=6.9,SNR=7.2 0.5nm,0.7s						
H10N1	**ASCENSION HYDR**	**50.82**	**15**	T	T	16 08 13.3	
	baz=187						
H10N3	**ASCENSION HYDR**	**50.83**	**15**	T	T	16 08 12.2	
	baz=187						
H10N2	**ASCENSION HYDR**	**50.84**	**15**	T	T	16 08 15.5	
	baz=187						
LPAZ	**La Paz**	**52.06**	**305**	P	**P**	**15 13 21.1**	**-0.4**
	0.7nm,0.5s,baz=166,slow=4.2,SNR=2.3 0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.45**	**28**	P	**P**	**15 15 48.4**	**-0.4**
	0.6nm,0.6s,baz=196,slow=6.0,SNR=4.3						
TORD				pP	**pwP**	**15 16 09.5**	**+0.3**
	1.1nm,0.7s,baz=205,slow=6.3,SNR=5.8 0.6nm,0.6s						
ASAR	**Alice Springs**	**96.92**	**161**	P	**P**	**15 17 41.2**	**-0.7**
	0.5nm,0.9s,baz=188,slow=3.5,SNR=1.9						
ASAR				pP	**pP**	**15 17 59.7**	**+0.6**
	0.6nm,0.9s,baz=184,slow=5.6,SNR=3.1 0.5nm,0.9s						
SONM	**Songino Array**	**150.13**	**89**	PKPbc	**PKPbc**	**15 23 59.5**	**-0.7**
	0.4nm,0.5s,baz=240,slow=4.6,SNR=2.5						
SONM				pPKPbc	**sPKPdf**	**15 24 19.7**	**+0.4**
	0.7nm,0.6s,baz=231,slow=2.2,SNR=3.6						
ILAR	**Eielson Array**	**151.90**	**309**	PKPbc	**PKPbc**	**15 24 03.1**	**-0.6**
	0.7nm,0.4s,baz=126,slow=1.6,SNR=24						
ILAR				pPKPbc	**pPKPbc**	**15 24 23.4**	**+2.2**
	0.7nm,0.9s,baz=150,slow=3.8,SNR=3.8						

*THE **29** 15:04:58.8, 38°.93N×23°.92E, h14km, ML2.5/10, Error ellipse: s-maj=1.1km s-min=0.4km az=63.0*
ATH 29 15:04:59.3, 38°.92N×23°.94E, h16km±1km, **ML2.5**/13, **Error**

ellipse: s-maj=2.2km s-min=0.6km az=71.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.24**	**347**	P	Pg	15 05 04.5	-0.1
ALNA				S	Sg	15 05 08.3	+0.1
KYMI	**Kymi, Euboea I**	**0.31**	**156**	P	Pg	15 05 05.7	-0.2
KYMI				S	Sg	15 05 10.4	+0.1
	478nm,0.3s						
KYMI	**Kymi, Euboea I**	**0.31**	**156**	P	Pg	15 05 05.7	-0.2
KYMI				S	Sg	15 05 10.5	+0.1
KYMI				AML	AML	15 05 11.5	
	comp=N,880μm,0.3s						
KYMI				AML	AML	15 05 11.5	
	comp=E,1026μm,0.3s						
NEO	**Neokhori**	**0.68**	**305**	P	Pg	15 05 11.7	-0.9
NEO				S	Sg	15 05 20.9	-0.7
	comp=E,840nm,0.3s						
NEO	**Neokhori**	**0.68**	**305**	P	Pg	15 05 12.6	0.0
NEO				S	Sg	15 05 21.6	0.0
NEO				AML	AML	15 05 24.3	
	comp=E,2281μm,0.4s						
NEO				AML	AML	15 05 25.6	
	comp=N,1138μm,0.4s						
XOR	**Xorichti**	**0.73**	**308**	P	Pg	15 05 12.5	-1.1
XOR				S	Sg	15 05 22.9	-0.4
	comp=N,458nm,0.3s						
XOR	**Xorichti**	**0.73**	**308**	P	Pg	15 05 13.5	-0.1
XOR				S	Sg	15 05 23.2	-0.1
XOR				AML	AML	15 05 25.7	
	comp=E,726μm,0.3s						
XOR				AML	AML	15 05 25.9	
	comp=N,1096μm,0.3s						
DION	**Dionisos Attik**	**0.84**	**180**	P	Pb	15 05 14.9	-0.6
DION				S	Sn	15 05 27.6	-0.9
	comp=N,1μm,0.5s						
DION	**Dionisos Attik**	**0.84**	**180**	P	Pb	15 05 14.9	-0.6
DION				S	Sg	15 05 26.7	+0.1
DION				AML	AML	15 05 28.4	
	comp=E,2052μm,0.5s						
DION				AML	AML	15 05 29.2	
	comp=N,1219μm,0.6s						
PTL	**Penteli**	**0.87**	**184**	P	Pb	15 05 15.2	-0.9
PTL				S	Sn	15 05 28.5	-0.8
	comp=N,382nm,0.5s						
PTL	**Penteli**	**0.87**	**184**	P	Pb	15 05 15.5	-0.6
PTL				S	Sb	15 05 27.3	-0.1
PTL				AML	AML	15 05 29.1	
	comp=E,1180μm,0.5s						
PTL				AML	AML	15 05 29.7	
	comp=N,361μm,0.3s						
VIL2	**Platees**	**0.88**	**217**	P	Pb	15 05 15.7	-0.5
VIL2				S	Sg	15 05 28.3	+0.5
VIL2				AML	AML	15 05 30.7	
	comp=N,748μm,0.3s						
VIL2				AML	AML	15 05 34.4	
	comp=E,685μm,0.6s						
VILL	**Villia**	**0.90**	**213**	P	Pb	15 05 15.7	-0.9
VILL				S	Sg	15 05 28.5	0.0
	comp=E,372nm,0.5s						
ATHU	**Athens Univers**	**0.96**	**187**	P	Pb	15 05 16.5	-1.0
ATHU				S	Sg	15 05 30.5	+0.1
	comp=E,92nm,0.5s						
ATHU	**Athens Univers**	**0.96**	**187**	P	Pb	15 05 16.6	-1.0
ATHU				S	Sb	15 05 29.8	-0.1
ATHU				AML	AML	15 05 31.2	
	comp=E,141μm,0.6s						
ATHU				AML	AML	15 05 31.5	
	comp=N,230μm,0.4s						
ATH	**Athens Observa**	**0.96**	**190**	P	Pb	15 05 16.9	-0.7
ATH				S	Sg	15 05 30.9	+0.4
	comp=N,335nm,0.3s						
ATH	**Athens Observa**	**0.96**	**190**	P	Pb	15 05 17.2	-0.3
ATH				S	Sb	15 05 29.7	-0.3
ATH				AML	AML	15 05 32.5	
	comp=N,724μm,0.2s						
ATH				AML	AML	15 05 32.6	
	comp=E,633μm,0.2s						
PAIG	**Paliouri**	**1.03**	**349**	P	Pb	15 05 17.8	-1.0
PAIG				S	Sg	15 05 32.4	-0.3
PAIG	**Paliouri**	**1.03**	**349**	P	Pb	15 05 18.0	-0.7
PAIG				S	Sg	15 05 32.4	-0.3
PAIG				AML	AML	15 05 33.3	
	comp=N,112μm,0.3s						
PAIG				AML	AML	15 05 35.3	
	comp=E,150μm,0.3s						
VLY	**Voula,Athens**	**1.07**	**186**	P	Pb	15 05 18.4	-1.1
VLY				S	Sg	15 05 33.9	0.0
	comp=E,260nm,0.4s						
VLY	**Voula,Athens**	**1.07**	**186**	P	Pb	15 05 19.0	-0.4
VLY				S	Sb	15 05 33.1	-0.1
VLY				AML	AML	15 05 36.0	
	comp=E,499μm,0.5s						
VLY				AML	AML	15 05 36.0	
	comp=N,569μm,0.4s						
LOUT	**Loutraki**	**1.20**	**219**	P	Pn	15 05 20.9	-0.5
LOUT				S	Sn	15 05 37.6	+0.2
	comp=N,235nm,0.5s						

*IDC **29** 15:34:58.9±1.2, 35°.26N×4°.13W, h0km, mb3.4/6, mbtmp3.5/9, ML3.8/3, MS2.7/3, Error ellipse: s-maj=40.4km s-min=18.6km az=98.0*
*MDD **29** 15:35:00.6±0.3, 35°.23N×4°.03W, h0km, mb_Lg3.5/29, Error ellipse: s-maj=2.9km s-min=1.9km az=175.0*
*SFS **29** 15:35:00.0, 35°.20N×4°.00W, h17km, ML4.0, ALBORAN SUR*
*CNRM **29** 15:35:01.4, 35°.32N×4°.02W, h0km, ml4.0*
*INMG **29** 15:35:01.7±1.2, 35°.20N×4°.04W, h12km±4km, ML3.2, Error ellipse: s-maj=2.6km s-min=2.0km az=125.0*
*CRAAG **29** 15:35:01.9, 35°.34N×4°.01W, Ml3.5*
*LDG **29** 15:35:02.0±0.3, 35°.16N×4°.00W, h9km, Ml3.4/3, Error ellipse: s-maj=6.7km s-min=3.6km az=6.0*

ISC 29 15:35:01.4±0.9, 35°.25N±0°.02×4°.02W±0°.02, h19km±2km, n115, σ1φ58/197, mb3.6/4, 1C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.08**	**119**	P	**Pg**	**15 35 04.2**	**-0.9**
PALE				S	**Sg**	**15 35 07.5**	**-0.1**
PVLZ	**Peæn de**	**0.24**	**251**	P	**Pg**	**15 35 05.9**	**-1.2**
PVLZ				S	**Sb**	**15 35 10.3**	**-0.2**
AKLM	**AKL**	**0.75**	**170**	P	**Pb**	**15 35 15.0**	**-1.0**
AKLM				S	**Sb**	**15 35 23.3**	**-2.6**
GOG	**Mont Gurugu**	**0.84**	**92**	P	**Pb**	**15 35 17.1**	**-0.3**
GOG				S	**Sg**	**15 35 29.3**	**+0.3**
EMEL	**Melilla**	**0.87**	**87**	⇑Pg	**Pb**	**15 35 17.6**	**-0.3**
EMEL				Sg	**Sg**	**15 35 30.1**	**+0.1**
WMELI	**Melilla**	**0.88**	**86**	P	**Pb**	**15 35 17.7**	**-0.3**
WMELI				S	**Sn**	**15 35 31.5**	**+0.6**
EALB	**Alboran**	**1.06**	**49**	Pg	**Pb**	**15 35 20.3**	**-0.7**
EALB				Sg	**Sg**	**15 35 35.7**	**-0.2**
EALB				*i* Vmb_Lg		15 35 37.0	
CHEFC	**Chefchaouen**	**1.09**	**263**	P	**Pn**	**15 35 21.7**	**0.0**
CHEFC				S	**Sb**	**15 35 34.9**	**-0.6**
CEU	**Ceuta**	**1.28**	**301**	P	**Pn**	**15 35 21.1**	**-3.1**
ECEU	**Ceuta**	**1.28**	**301**	Pg	**Pn**	**15 35 21.9**	**-2.3**
ECEU				Sg	**Sn**	**15 35 37.7**	**-3.1**
ECEU				*i* Vmb_Lg		15 35 44.8	
CHAS	**Isla Isabel II**	**1.30**	**93**	P	**Pn**	**15 35 23.5**	**-1.1**
CHAS				S	**Sn**	**15 35 40.9**	**-0.6**
TAF	**Taforalt**	**1.39**	**108**	P	**Pn**	**15 35 25.7**	**-0.2**
TAF				S	**Sb**	**15 35 45.0**	**+0.8**
EMIJ	**Mijas**	**1.44**	**335**	Pg	**Pn**	**15 35 25.1**	**-1.5**
EMIJ				Sg	**Sn**	**15 35 43.3**	**-1.7**
EMIJ				*i* Vmb_Lg		15 35 52.9	
JBK	**JBK**	**1.51**	**127**	P	**Pb**	**15 35 30.0**	**+1.1**
JBK	**JBK**	**1.51**	**127**	P	**Pn**	**15 35 27.2**	**-0.4**
JBK				S	**Sn**	**15 35 47.7**	**+0.9**
EMAL	**Malaga-Limoner**	**1.54**	**348**	P	**Pn**	**15 35 27.5**	**-0.3**
EMAL				S	**Sb**	**15 35 49.6**	**+1.2**
ELGU	**Los Guajares,**	**1.64**	**11**	Pg	**Pn**	**15 35 28.8**	**-0.5**
ELGU				Sg	**Sn**	**15 35 49.9**	**-0.1**
ELGU				*i* Vmb_Lg		15 35 56.9	
EJIF	**Jimena Fronter**	**1.68**	**316**	Pg	**Pn**	**15 35 30.0**	**+0.3**
LCRM	**LCR**	**1.71**	**204**	P	**Pn**	**15 35 32.4**	**+2.1**
LCRM				S	**Sb**	**15 35 55.4**	**+1.9**
EGOR	**Sierra Gorda,**	**1.85**	**358**	Pn	**Pn**	**15 35 32.2**	**-0.1**
EGOR				Sn	**Sb**	**15 35 56.9**	**-0.7**
EGOR				*i* Vmb_Lg		15 36 19.2	
EBER	**Berja**	**1.88**	**29**	Pn	**Pn**	**15 35 31.9**	**-0.7**
EBER				Sn	**Sn**	**15 35 55.1**	**-0.9**
EBER				*i* Vmb_Lg		15 36 09.5	
IFR	**Ifrane**	**1.96**	**208**	P	**Pn**	**15 35 34.2**	**+0.4**
IFR				S	Sn	15 35 49.6	-8.3
EQUE	**Quentar**	**2.00**	**13**	Pn	**Pn**	**15 35 35.5**	**+1.2**
EQUE				Sn	**Sn**	**15 35 59.6**	**+0.7**
EQUE				*i* Vmb_Lg		15 36 27.4	
ESPR	**Espera**	**2.19**	**318**	Pn	**Pn**	**15 35 38.4**	**+1.6**
ESPR				Sn	**Sn**	**15 36 05.2**	**+1.9**
ESPR				*i* Vmb_Lg		15 36 17.3	
ENIJ	**Nijar**	**2.26**	**40**	Pn	**Pn**	**15 35 37.3**	**-0.4**
ENIJ				Sn	**Sn**	**15 36 04.0**	**-1.0**
ENIJ				*i* Vmb_Lg		15 36 04.5	
CZD	**Col de Zad**	**2.37**	**201**	P	**Pb**	**15 35 44.0**	**+0.3**
CZD	**Col de Zad**	**2.37**	**201**	P	**Pn**	**15 35 41.0**	**+1.4**
CZD				S	**Sn**	**15 36 10.8**	**+2.6**
MD31	**MD31**	**2.46**	**195**	P	**Pn**	**15 35 41.4**	**+0.9**
MD31				S	**Sn**	**15 36 10.2**	**+0.1**
MDT	**Midelt**	**2.48**	**191**	Pn	**Pn**	**15 35 40.8**	**-0.1**
	12nm,0.3s,baz=144,slow=8.9,SNR=171						
MDT				Sn	**Sn**	**15 36 06.5**	**-4.2**
	34nm,0.3s,baz=209,slow=10.0,SNR=7.1						
MDT				LR	LR	15 36 54.1	
	comp=Z,66nm,19.7s,baz=166,slow=47						
	29nm,0.3s						
MDT	**Midelt**	**2.48**	**191**	P	**Pn**	**15 35 44.0**	**+3.2**
MDT	**Midelt**	**2.48**	**191**	P	**Pn**	**15 35 41.4**	**+0.5**
MDT				S	**Sn**	**15 36 12.1**	**+1.4**
EQES	**Quesada**	**2.66**	**16**	Pn	**Pn**	**15 35 45.5**	**+2.2**
EQES				Sn	**Sn**	**15 36 15.7**	**+0.7**
EQES				*i* Vmb_Lg		15 36 21.0	
EADA	**Adamuz**	**2.94**	**351**	Pn	**Pn**	**15 35 48.6**	**+1.4**
EADA				Sn	**Sn**	**15 36 24.3**	**+2.3**
EADA				*i* Vmb_Lg		15 36 31.5	
ELOR	**Lorca, Murcia**	**3.00**	**37**	Sn	**Sn**	**15 36 23.6**	**+0.1**
ECAB	**El Cabril**	**3.03**	**339**	Pn	**Pn**	**15 35 49.0**	**+0.6**
ECAB				Sn	**Sn**	**15 36 24.6**	**+0.4**
ECAB				*i* Vmb_Lg		15 36 30.0	
ODJA	**Bouhanifia**	**3.17**	**88**	P	**Pg**	**15 36 02.0**	**-0.1**
EZAR	**Zarzadilla de**	**3.22**	**35**	Pn	**Pn**	**15 35 50.9**	**-0.1**
EZAR				Sn	**Sn**	**15 36 26.9**	**-2.0**
EMIN	**Mina Concepcio**	**3.29**	**320**	Pn	**Pn**	**15 35 51.8**	**-0.2**
EMIN				Sn	**Sn**	**15 36 30.3**	**-0.3**
EMIN				*i* Vmb_Lg		15 36 43.7	
CART	**Cartagena**	**3.37**	**45**	P	**Pn**	**15 35 52.2**	**-0.8**
CART				S	**Sn**	**15 36 29.2**	**-3.2**
CART	**Cartagena**	**3.37**	**45**	P	**Pn**	**15 35 52.7**	**-0.3**
CART				S	**Sn**	**15 36 32.8**	**+0.4**
EMUR	**La Murta**	**3.42**	**40**	Pn	**Pn**	**15 35 51.2**	**-2.5**
EMUR				Sn	**Sn**	**15 36 31.1**	**-2.6**
EMUR				*i* Vmb_Lg		15 36 33.9	
EGRO	**El Granado**	**3.60**	**310**	Pn	**Pn**	**15 35 55.7**	**-0.5**
EGRO				Sn	**Sn**	**15 36 36.9**	**-1.3**
EGRO				*i* Vmb_Lg		15 36 39.0	
PVAQ	**Vaqueiros**	**3.67**	**307**	*e*Pn	**Pn**	**15 35 56.9**	**-0.3**
PVAQ				*e*Sn	**Sn**	**15 36 39.1**	**-0.9**
PVAQ				A	A	15 36 43.3	
	67nm,0.6s						
PVAQ	**Vaqueiros**	**3.67**	**307**	P	**Pn**	**15 35 56.7**	**-0.5**
PVAQ				S	**Sn**	**15 36 40.7**	**+0.7**
PBAR	**Barrancos**	**3.79**	**321**	*e*Pn	**Pn**	**15 35 59.0**	**+0.2**
PBAR				*e*Sn	**Sn**	**15 36 42.0**	**-0.8**
PBAR				A	A	15 36 57.0	
	23nm,0.4s						
FIGM	**Figuig**	**3.87**	**143**	P	**Pn**	**15 36 03.0**	**+3.0**
FIGM	**Figuig**	**3.87**	**143**	P	**Pn**	**15 36 01.4**	**+1.4**
FIGM				S	**Sn**	**15 36 46.5**	**+1.5**
ETOB	**Tobarra**	**3.92**	**30**	Pn	**Pn**	**15 36 03.1**	**+2.4**
ETOB				Sn	**Sn**	**15 36 46.7**	**+0.5**
ETOB				*i* Vmb_Lg		15 36 52.9	
PCVE	**Castro Verde**	**4.01**	**307**	*e*Pn	**Pn**	**15 36 02.5**	**+0.6**
PCVE				*e*Sn	**Sn**	**15 36 48.0**	**-0.4**
PCVE				A	A	15 36 50.4	
	44nm,0.4s						
PBEJ	**Beja**	**4.15**	**313**	*e*Pn	**Pn**	**15 36 02.9**	**-0.8**
PBEJ				*e*Sn	**Sn**	**15 36 51.2**	**-0.5**
PBEJ				A	A	15 36 54.9	
	26nm,0.6s						
EBAD	**Badajoz**	**4.24**	**326**	Pn	**Pn**	**15 36 05.4**	**+0.5**
EBAD				Sn	**Sn**	**15 36 52.6**	**-1.2**
EBAD				*i* Vmb_Lg		15 36 55.2	
SRHM	**Skhour des Reh**	**4.25**	**230**	P	**Pn**	**15 36 08.8**	**+3.6**
SRHM				S	**Sn**	**15 37 01.2**	**+6.8**
MORF	**Marmelete**	**4.26**	**300**	*e*P	**Pn**	**15 36 05.4**	**+0.1**
MORF				*e*S	**Sn**	**15 36 52.4**	**-2.1**
MORF				IAML		15 36 58.2	
	comp=N,71nm,0.5s						
MORF	**Marmelete**	**4.26**	**300**	*e*Pn	**Pn**	**15 36 05.6**	**+0.3**
MORF				*e*Sn	**Sn**	**15 36 54.3**	**-0.3**
MORF				A	A	15 37 01.3	
	comp=N,22nm,0.7s						
PAB	**San Pablo**	**4.29**	**357**	Pn	**Pn**	**15 36 07.0**	**+1.3**
PAB				Sn	**Sn**	**15 36 52.9**	**-2.4**
PAB				*i* Vmb_Lg		15 37 16.2	
PAB	**San Pablo**	**4.29**	**357**	P	**Pn**	**15 36 07.0**	**+1.3**
PFVI	**Vila Bisbo**	**4.32**	**297**	*e*Pn	**Pn**	**15 36 07.0**	**+1.0**
PFVI				*e*Sn	**Sn**	**15 36 54.5**	**-1.3**
PFVI	**Vila Bisbo**	**4.32**	**297**	P	**Pn**	**15 36 07.2**	**+1.3**
PFVI				S	**Sn**	**15 36 56.1**	**+0.4**
AFON	**Font Roja**	**4.40**	**38**	Sn	**Sn**	**15 36 58.0**	**0.0**
AFON				*i* Vmb_Lg		15 37 03.5	
ESDC	**Sonseca Array**	**4.41**	**1**	Pn	**Pn**	**15 36 08.7**	**+1.4**
	comp=N,2.6nm,0.3s,baz=184,slow=12,SNR=123						
ESDC				Sn	**Sn**	**15 36 58.8**	**+0.5**
	comp=N,1.0nm,0.3s,baz=186,slow=22,SNR=4.2						
ESDC				LR	LR	15 38 05.1	
	comp=N,67nm,20.9s,baz=228,slow=42						
	comp=N,15nm,0.5s						
ESDC	**Sonseca Array**	**4.41**	**1**	Pn	**Pn**	**15 36 09.0**	**+1.6**
ESDC				Sn	**Sn**	**15 36 58.4**	**+0.2**
ESDC				*i* Vmb_Lg		15 37 45.0	
PTEO	**Sao Teotonio**	**4.43**	**302**	*e*Pn	**Pn**	**15 36 07.8**	**+0.3**
PTEO				*e*Sn	**Sn**	**15 36 57.6**	**-1.0**
PTEO				A	A	15 37 03.6	
	comp=N,29nm,0.3s						
EVO	**Evora**	**4.58**	**317**	P	**Pn**	**15 36 10.0**	**+0.5**
EVO				S	**Sn**	**15 37 03.5**	**+1.3**
EVO	**Evora**	**4.58**	**317**	*e*Pn	**Pn**	**15 36 10.1**	**+0.5**
EVO				*e*Sn	**Sn**	**15 37 01.3**	**-0.9**
EVO				A	A	15 37 04.4	
	comp=N,32nm,0.4s						
PESTR	**Estremoz**	**4.60**	**323**	*e*Pn	**Pn**	**15 36 10.8**	**+0.9**
PESTR				*e*Sn	**Sn**	**15 37 02.6**	**-0.2**
PESTR				A	A	15 37 10.2	
	comp=N,20nm,0.6s						
PESTR	**Estremoz**	**4.60**	**323**	P	**Pn**	**15 36 12.0**	**+2.1**
PESTR	**Estremoz**	**4.60**	**323**	P	**Pn**	**15 36 12.0**	**+2.1**
PESTR				S	**Sn**	**15 37 01.5**	**-1.3**
PNCL	**Nicolau / Gran**	**4.61**	**310**	*e*Pn	**Pn**	**15 36 09.9**	**-0.1**
PNCL				*e*Sn	**Sn**	**15 37 01.7**	**-1.3**
PNCL				A	A	15 37 07.0	
	comp=N,17nm,0.3s						
EVIV	**Cofrentes, Val**	**4.63**	**29**	P	**Pn**	**15 36 12.8**	**+2.5**
PMRV	**Marv??o**	**4.96**	**328**	*e*Pn	**Pn**	**15 36 15.3**	**+0.5**
PMRV				*e*Sn	**Sn**	**15 37 10.9**	**-0.7**
PMRV				A	A	15 37 25.3	
	comp=N,22nm,0.6s						
EPLA	**Plasencia**	**5.07**	**342**	Pn	**Pn**	**15 36 17.1**	**+0.7**
EPLA				Sn	**Sn**	**15 37 13.8**	**-0.7**
EPLA				*i* Vmb_Lg		15 37 25.0	
PMTG	**Montargil**	**5.08**	**320**	*e*Pn	**Pn**	**15 36 17.0**	**+0.6**
PMTG				*e*Sn	**Sn**	**15 37 13.7**	**-0.8**
PMTG				A	A	15 37 28.7	
	comp=N,17nm,0.5s						
UCM	**Universidad Co**	**5.08**	**7**	P	**Pn**	**15 36 17.9**	**+1.3**
UCM				S	**Sn**	**15 37 14.1**	**-0.6**
OUK	**Oukaimeden**	**5.16**	**220**	P	**Pn**	**15 36 17.9**	**-0.1**
OUK				S	**Sn**	**15 37 16.9**	**-0.3**
PACT	**Alcochete**	**5.21**	**314**	*e*Pn	**Pn**	**15 36 18.9**	**+0.7**
PACT				*e*Sn	**Sn**	**15 37 17.8**	**+0.1**
PACT				A	A	15 37 36.9	
	comp=N,34nm,0.5s						
PCBR	**Castelo Branco**	**5.34**	**330**	*e*Pn	**Pn**	**15 36 21.3**	**+1.3**
PCBR				*e*Sn	**Sn**	**15 37 19.8**	**-1.2**
PCBR				A	A	15 37 22.7	
	comp=N,16nm,0.4s						
GUD	**Guadarrama**	**5.38**	**359**	Pn	**Pn**	**15 36 21.8**	**+1.0**
GUD				Sn	**Sn**	**15 37 22.6**	**+0.3**
PMAFR	**Mafra**	**5.60**	**313**	*e*Pn	**Pn**	**15 36 24.9**	**+1.3**
PMAFR				*e*Sn	**Sn**	**15 37 26.9**	**-0.5**
PMAFR				A	A	15 37 40.8	
	comp=N,23nm,0.3s						
PSBE	**So Bento**	**5.70**	**320**	*e*Pn	**Pn**	**15 36 26.0**	**+0.9**
EIBI	**Ibiza**	**5.70**	**47**	Pn	**Pn**	**15 36 25.2**	**+0.1**
EIBI				Sn	**Sn**	**15 37 27.0**	**-3.0**
EIBI				*i* Vmb_Lg		15 37 32.7	
ETOR	**Torete**	**5.77**	**15**	Pn	**Pn**	**15 36 27.5**	**+1.5**
ETOR				Sn	**Sn**	**15 37 28.9**	**-2.8**
ETOR				*i* Vmb_Lg		15 38 10.6	
MTE	**Manteigas**	**5.84**	**333**	*e*Pn	**Pn**	**15 36 28.1**	**+1.0**
MTE				*e*Sn	**Sn**	**15 37 32.5**	**-1.0**
MTE				A	A	15 37 36.5	
	comp=N,20nm,0.5s						
ECOL	**Islas Columbre**	**5.95**	**37**	Pn	**Pn**	**15 36 29.1**	**+0.6**
PCAS	**Casmilo, Conde**	**5.96**	**325**	*e*Pn	**Pn**	**15 36 30.0**	**+1.4**
PCAS				*e*Sn	**Sn**	**15 37 35.5**	**-0.9**
PCAS				A	A	15 37 55.3	
	comp=N,16nm,0.5s						
PVIS	**Viseu**	**6.25**	**332**	*e*Pn	**Pn**	**15 36 34.4**	**+1.8**
PVIS				*e*Sn	**Sn**	**15 37 42.3**	**-1.2**
PVIS				A	A	15 37 56.2	
	comp=N,10.0nm,0.6s						
MVO	**Moncorvo**	**6.36**	**339**	*e*Pn	**Pn**	**15 36 35.1**	**+1.0**
MVO				*e*Sn	**Sn**	**15 37 45.4**	**-0.8**
MVO				A	A	15 37 53.3	
	comp=N,19nm,0.5s						
PVRL	**Vila Real**	**6.68**	**335**	*e*Pn	**Pn**	**15 36 39.5**	**+1.0**
PVRL				*e*Sn	**Sn**	**15 37 51.7**	**-2.3**
PVRL				A	A	15 37 58.6	
	comp=N,17nm,0.5s						
POLO	**Lamas de Olo**	**6.79**	**335**	*e*Pn	**Pn**	**15 36 41.4**	**+1.3**
POLO				*e*Sn	**Sn**	**15 37 55.2**	**-1.7**
POLO				A	A	15 37 58.7	
	comp=N,5.9nm,0.7s						
PBRG	**Braganca**	**6.88**	**343**	*e*Pn	**Pn**	**15 36 42.6**	**+1.4**
PBRG				*e*Sn	**Sn**	**15 37 58.6**	**-0.4**
PBRG				A	A	15 38 07.3	
	comp=N,10nm,0.5s						
ECAL	**Calabor**	**7.01**	**343**	Pn	**Pn**	**15 36 44.2**	**+1.2**
ECAL				Sn	**Sn**	**15 37 59.7**	**-2.5**
ECAL				*i* Vmb_Lg		15 38 04.8	
ETOS	**Mallorca**	**7.06**	**48**	Pn	**Pn**	**15 36 44.5**	**+0.8**
ETOS				Sn	**Sn**	**15 38 00.9**	**-2.5**
ETOS				*i* Vmb_Lg		15 38 05.1	
PCAB	**Cabril**	**7.17**	**335**	*e*Pn	**Pn**	**15 36 46.3**	**+1.1**
PCAB				*e*Sn	**Sn**	**15 38 03.9**	**-2.2**
ELOB	**Lobios**	**7.32**	**336**	Pn	**Pn**	**15 36 48.2**	**+0.9**
ELOB				Sn	**Sn**	**15 38 06.1**	**-3.8**
ELOB				*i* Vmb_Lg		15 38 12.1	
PGAV	**Gavieira, Arco**	**7.48**	**335**	*e*Pn	**Pn**	**15 36 50.3**	**+0.8**
PGAV				*e*Sn	**Sn**	**15 38 10.8**	**-3.0**
PGAV				A	A	15 38 29.9	
	comp=N,9.3nm,0.5s						
EORO	**Oroz-Betelu**	**7.91**	**15**	Pn	**Pn**	**15 36 58.3**	**+2.9**
ELAN	**Lanestosa**	**7.98**	**3**	Pn	**Pn**	**15 36 57.5**	**+1.1**
EARI	**Arriondas**	**8.09**	**354**	Pn	**Pn**	**15 36 59.3**	**+1.5**
EARI				Sn	**Sn**	**15 38 27.1**	**-1.6**
ETSF	**Etsaut**	**8.09**	**18**	*e*Pn	**Pn**	**15 36 58.9**	**+1.0**
ETSF				*e*Sn	**Sn**	**15 38 24.6**	**-4.3**
	comp=N,2.1nm,0.4s						
SJPF	**Ste Jean**	**8.14**	**15**	*e*Pn	**Pn**	**15 36 59.4**	**+0.9**
SJPF				*e*Sn	**Sn**	**15 38 26.9**	**-3.1**
	comp=N,3.5nm,0.6s						
EALK	**Alkurruntz**	**8.19**	**13**	Pn	**Pn**	**15 37 01.2**	**+1.9**
EALK				Sn	**Sn**	**15 38 28.6**	**-2.7**
EALK				*i* Vmb_Lg		15 38 43.9	
EPON	**Pontenova**	**8.42**	**344**	Pn	**Pn**	**15 37 03.5**	**+1.2**
EPON				*i* Vmb_Lg		15 38 38.9	
EPF	**Esparros**	**8.47**	**22**	*e*Pn	**Pn**	**15 37 03.8**	**+0.7**
VIVF	**Saint-Julien-l**	**11.67**	**32**	*e*Sn	**Sn**	**15 39 50.3**	**-6.3**
	comp=N,2.4nm,0.4s						
PGF	**Pioggiola**	**12.48**	**50**	*e*Pn	**Pn**	**15 37 57.7**	**-0.3**
QUIF	**Quistinic**	**12.67**	**3**	*e*Pn	**Pn**	**15 38 01.1**	**+0.7**
SGMF	**Saint Gilles**	**13.04**	**4**	*e*Pn	**Pn**	**15 38 05.2**	**-0.3**
ROSF	**Rostrenen**	**13.08**	**2**	*e*Pn	**Pn**	**15 38 06.5**	**+0.4**
GERES	**GERESS Array B**	**18.85**	**38**	P	**P**	**15 39 20.4**	**+0.2**
	comp=N,0.1nm,0.3s,baz=234,slow=11,SNR=2.1						
	comp=N,0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**20.09**	**1**	P	**P**	**15 39 33.2**	**-0.4**
	comp=N,1.1nm,0.7s,baz=179,slow=12,SNR=2.9						
	comp=N,1.1nm,0.7s						
VRAC	**Vranov**	**20.64**	**41**	P	**P**	**15 39 39.7**	**0.0**
	comp=N,1.8nm,0.4s,baz=96,slow=22,SNR=3.6						
	comp=N,1.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**22.61**	**165**	P	**P**	**15 40 01.1**	**0.0**
	comp=N,0.3nm,0.8s,baz=345,slow=12,SNR=3.7						
	comp=N,0.3nm,0.8s						
NOA	**NORSAR Array B**	**27.59**	**16**	LR	LR	15 53 08.7	
	comp=N,56nm,19.5s,baz=275,slow=40						
ZALV	**Zalesovo Beam**	**61.75**	**42**	P	**P**	**15 45 20.3**	**+1.9**
	comp=N,0.3nm,0.3s,baz=300,slow=6.5,SNR=1.3						
	comp=N,0.3nm,0.3s						
MKAR	**Makanchi Array**	**63.02**	**50**	P	**P**	**15 45 28.1**	**+1.0**
	comp=N,0.6nm,0.8s,baz=312,slow=5.0,SNR=1.5						
	comp=N,0.6nm,0.8s						
PDAR	**Pinedale Array**	**76.86**	**313**	P	**P**	**15 46 52.4**	**0.0**

0.3nm,0.4s
WRA Warramunga Arr 42.43 275 P P 15 50 59.3 -8.9
0.7nm,0.3s,baz=112,slow=7.9,SNR=42
0.7nm,0.3s
BVAR Borovoye Array 126.30 315 PKP PKPpre 16 01 58.4
0.2nm,0.4s,baz=77,slow=3.1,SNR=2.9
FINES FINESS Array B 146.00 338 PKPbc PKPpre 16 02 36.4
1.8nm,0.4s,baz=35,slow=3.4,SNR=26
HFS Hagfors 150.42 346 PKPbc **PKPdf 16 02 47.7 -4.1**
6.3nm,1.1s,baz=42,slow=2.3,SNR=2.2

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*IDC **29** 15:51:29.4±5.4, 10°.64S×122°.56E, h69km±56km, mb3.5/3, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=67.6km s-min=31.4km az=81.0*
ISC 29 15:51:29.0±0.8, 10°.46S±0°.08×122°.52E±0°.07, h35km, n16, σ2§23/17, mb3.7/3, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.15**	**77**	P	**Pn**	**15 51 49.9**	**+1.3**
	552nm,0.3s,baz=289,slow=4.5,SNR=221						
BATI				S	**Sn**	**15 52 05.5**	**+2.4**
	583nm,0.5s,baz=293,slow=22,SNR=9.8						
MMRI	**Maumere**	**1.83**	**351**	P	**Pn**	**15 51 59.9**	**+1.9**
SOEI	**Soe**	**1.85**	**68**	P	**Pn**	**15 52 00.1**	**+1.7**
PLAI	**Plampang**	**4.95**	**289**	P	**Pn**	**15 52 44.1**	**+3.1**
KNRA	**Kununurra**	**7.99**	**131**	P	**Pn**	**15 53 22.7**	**0.0**
MTN	**Manton Dam**	**8.76**	**107**	P	**Pn**	**15 53 33.0**	**-0.3**
MBWA	**Marble Bar**	**10.97**	**194**	P	**Pn**	**15 54 05.6**	**+2.0**
PSA00	**Pilbara Seismi**	**11.35**	**193**	P	**Pn**	**15 54 09.7**	**+1.0**
FAKI	**Fak Fak**	**12.22**	**53**	P	**Pn**	**15 54 21.0**	**+0.3**
GIRL	**Giralia**	**14.48**	**212**	P	**Pn**	**15 54 53.1**	**+1.6**
	136nm,1.5s						
WRA	**Warramunga Arr**	**14.79**	**131**	P	**Pn**	**15 54 51.5**	**-4.2**
	0.5nm,0.3s,baz=307,slow=14,SNR=33						
WRA				S	Sn	15 57 23.0	-15
	0.9nm,0.7s,baz=309,slow=24,SNR=2.7						
	1.2nm,0.6s						
WRKA	**Warakurna**	**15.50**	**160**	P	**Pn**	**15 55 05.2**	**+0.1**
ASAR	**Alice Springs**	**17.04**	**142**	P	**Pn**	**15 55 22.8**	**-1.9**
	0.2nm,0.3s,baz=316,slow=12,SNR=18						
ASAR				S	Sn	15 58 21.4	-12
	2.2nm,0.7s,baz=314,slow=23,SNR=11						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**67.36**	**331**	P	**P**	**16 02 18.7**	**-1.9**
	0.8nm,0.7s,baz=126,slow=6.4,SNR=6.6						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**71.67**	**338**	P	**P**	**16 02 44.1**	**-3.0**
	0.3nm,0.3s,baz=131,slow=6.8,SNR=1.9						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**71.84**	**332**	P	**P**	**16 02 46.1**	**-2.0**
	0.3nm,0.4s,baz=132,slow=6.5,SNR=1.8						
	0.3nm,0.4s						

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*IDC **29** 15:59:03.2±1.1, 16°.35S×176°.36W, h392km±20km, mb3.6/4, mbtmp4.3/7, Error ellipse: s-maj=35.6km s-min=20.4km az=159.0*
ISC 29 15:59:03.1±0.9, 16°.5S±0°.3×176°.4W±0°.2, h379km, n7, σ1§04/9, mb3.9/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.11**	**61**	P	**Pn**	**16 00 25.5**	**+0.2**
	34nm,0.4s,baz=154,slow=1.6,SNR=16						
AFI				S	**S**	**16 01 32.2**	**+0.2**
	8.7nm,0.5s,baz=241,slow=19,SNR=1.0						
MSVF	**Nonsavu**	**5.49**	**256**	P	**Pn**	**16 00 31.0**	**+1.6**
	5.2nm,0.6s,baz=69,slow=17,SNR=8.0						
DZM	**Mont Dzumac**	**17.16**	**248**	P	**P**	**16 02 40.2**	**+0.4**
	3.8nm,0.7s,baz=84,slow=19,SNR=1.8						
URZ	**Urewera**	**22.46**	**194**	P	**P**	**16 03 31.7**	**+0.5**
	8.2nm,0.7s,baz=34,slow=7.3,SNR=5.8						
	8.2nm,0.7s						
STKA	**Stephens Creek**	**41.03**	**240**	P	**P**	**16 06 10.1**	**-1.1**
	1.0nm,0.4s,baz=90,slow=10,SNR=4.8						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**46.83**	**258**	P	**P**	**16 06 55.7**	**-1.2**
	0.8nm,0.2s,baz=96,slow=7.8,SNR=88						
	0.8nm,0.2s						
ASAR	**Alice Springs**	**47.07**	**253**	P	**P**	**16 06 58.1**	**-0.6**
	5.1nm,0.3s,baz=89,slow=7.5,SNR=287						
ASAR				PcP	**PcP**	**16 08 23.4**	**-0.4**
	0.3nm,0.8s,baz=101,slow=3.9,SNR=1.7						
	5.1nm,0.3s						

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*HLW **29** 16:01:21.0, 32°.01N×30°.91E, h25km±7km, Md3.2, Ml3.5*
*NIC **29** 16:01:22.9±0.0, 31°.91N×31°.14E, h32km±55km, Ml3.4/5*
*GII **29** 16:01:23.7±0.0, 31°.83N×31°.03E, h31km, MD2.0/3, Mm2.4/2*
ISC 29 16:01:19.0±1.3, 31°.87N±0°.03×31°.03E±0°.05, h10km, n45, σ1§26/62, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSC2	**CSNet OBS 4**	**1.59**	**41**	S	**Sn**	**16 02 04.1**	**-3.7**
OSC1	**CSNet OBS 1**	**1.64**	**7**	P	**Pn**	**16 01 48.4**	**+0.7**
OSC1				S	**Sn**	**16 02 07.8**	**-1.1**
KOT	**Kottamia**	**2.06**	**160**	P	**Pn**	**16 01 54.8**	**+1.2**
	baz=158						
KOT				S	**Sn**	**16 02 19.1**	**-0.4**
	baz=158						
HMYD	**Mayadein**	**2.08**	**185**	P	**Pn**	**16 01 54.7**	**+0.8**
	baz=183						
HHAG	**Hagoal**	**2.12**	**154**	P	**Pn**	**16 01 56.0**	**+1.5**
	baz=153						
HNAT	**Natroun**	**2.26**	**189**	P	**Pn**	**16 01 57.0**	**+0.6**
	baz=187						
HSAF	**As Saff**	**2.29**	**168**	P	**Pn**	**16 01 57.9**	**+1.0**
	baz=166						
GLL	**Jalalah**	**2.36**	**165**	P	**Pn**	**16 01 58.9**	**+1.1**
	baz=163						
SUZ	**Suez**	**2.55**	**142**	P	**Pn**	**16 02 01.8**	**+1.4**
	baz=142						
SUZ				S	**Sn**	**16 02 31.2**	**-0.3**
	baz=142						
RYAN	**Fayoum**	**2.86**	**193**	P	**Pn**	**16 02 05.0**	**+0.4**
	baz=191						
ZAF	**Zafarana**	**2.90**	**153**	P	**Pn**	**16 02 06.7**	**+1.5**
	baz=152						
KZIT	**Kziot**	**3.04**	**108**	P	**Pn**	**16 02 07.9**	**+0.8**
KZIT				S	**Sn**	**16 02 41.6**	**-2.0**
KZIT				AML	AML	16 02 43.8	
	0.2nm,0.2s						
KZIT				AML	AML	16 02 43.8	
	0.2nm,0.2s						
KZIT				AML	AML	16 02 44.0	
	0.2nm,0.2s						
KZIT				AML	AML	16 02 44.0	
	0.2nm,0.2s						
KZIT	**Kziot**	**3.04**	**108**	Pn	**Pn**	**16 02 07.9**	**+0.8**
KZIT				Sn	**Sn**	**16 02 42.3**	**-1.3**
NATA	**Nata**	**3.17**	**24**	P	**Pn**	**16 02 10.5**	**+1.5**
NBNS	**Bani Suef**	**3.25**	**176**	P	**Pn**	**16 02 10.0**	**0.0**
	baz=174						
SZAC	**Souni**	**3.27**	**28**	P	**Pn**	**16 02 11.9**	**+1.6**
SZAC				S	**Sn**	**16 02 49.2**	**0.0**
SZAC				AML	AML	16 02 54.0	
	0.4nm,0.2s						
SZAC				AML	AML	16 02 54.0	
	0.4nm,0.2s						
SZAC				AML	AML	16 02 54.1	
	0.3nm,0.2s						
SZAC				AML	AML	16 02 54.1	
	0.3nm,0.2s						
AKMS	**Akamas**	**3.32**	**19**	P	**Pn**	**16 02 12.6**	**+1.6**
AKMS				AML	AML	16 02 50.0	
	0.3nm,0.6s						
AKMS				AML	AML	16 02 52.0	
	0.2nm,0.3s						
AMAZ	**Amatzia**	**3.33**	**95**	S	**Sn**	**16 02 50.1**	**-0.7**
AMAZ	**Amatzia**	**3.33**	**95**	Pn	**Pn**	**16 02 11.1**	**-0.1**
AMAZ				Sn	**Sn**	**16 02 50.1**	**-0.7**
SLTI	**Sal'it**	**3.43**	**83**	Pn	**Pn**	**16 02 12.9**	**+0.4**
SLTI				Sn	**Sn**	**16 02 52.5**	**-0.7**
OFRI	**`Ofer**	**3.44**	**76**	Pn	**Pn**	**16 02 12.4**	**-0.2**
ASGA	**Asgata**	**3.45**	**32**	P	**Pn**	**16 02 15.5**	**+2.7**
ASGA				S	**Sn**	**16 02 52.9**	**-0.8**
ASGA				AML	AML	16 02 58.0	
	0.2nm,0.6s						
ASGA				AML	AML	16 02 58.0	
	0.2nm,0.6s						
ASGA				AML	AML	16 02 58.1	
	0.3nm,0.5s						
ASGA				AML	AML	16 02 58.1	
	0.3nm,0.5s						
YTIR	**Yattir**	**3.53**	**97**	Pn	**Pn**	**16 02 15.3**	**+1.4**
YTIR				Sn	**Sn**	**16 02 55.1**	**-0.6**
KRMI	**Paran Flat**	**3.63**	**118**	Pn	**Pn**	**16 02 15.9**	**+0.7**
KRMI				Sn	**Sn**	**16 02 55.8**	**-2.3**
CSS	**Mathiatis**	**3.63**	**31**	P	**Pn**	**16 02 15.4**	**+0.1**
HNTI	**Hanita**	**3.71**	**70**	Pn	**Pn**	**16 02 17.3**	**+1.0**
HRDS	**Abu Rudays**	**3.71**	**147**	P	**Pn**	**16 02 17.1**	**+0.8**
	baz=147						
DSI	**Dead Sea**	**3.72**	**94**	Pn	**Pn**	**16 02 17.5**	**+1.0**
DSI				Sn	**Sn**	**16 03 00.2**	**-0.2**
PRNI	**Paran**	**3.73**	**113**	Pn	**Pn**	**16 02 18.0**	**+1.3**
MMLI	**Mount Malkishu**	**3.77**	**80**	P	**Pn**	**16 02 17.8**	**+0.6**
MMLI				S	**Sn**	**16 03 01.3**	**-0.4**
MMLI				AML	AML	16 03 02.5	
	0.1nm,0.2s						
MMLI				AML	AML	16 03 02.5	
	0.1nm,0.2s						
MMLI				AML	AML	16 03 03.2	
	0.1nm,0.4s						
MMLI				AML	AML	16 03 03.2	
	0.1nm,0.4s						
MMLI	**Mount Malkishu**	**3.77**	**80**	Pn	**Pn**	**16 02 17.8**	**+0.6**
MMLI				Sn	**Sn**	**16 03 00.9**	**-0.8**
ZFRI	**Zfri**	**3.79**	**109**	Pn	**Pn**	**16 02 18.0**	**+0.6**
MVOU	**Mavrovouni**	**3.82**	**34**	S	**Sn**	**16 03 01.6**	**-1.2**
HMDT	**Nahal Hemdat**	**3.84**	**83**	Pn	**Pn**	**16 02 18.9**	**+0.8**
HMDT				Sn	**Sn**	**16 03 03.0**	**-0.3**
GRB	**Gharib**	**3.90**	**157**	P	**Pn**	**16 02 19.7**	**+0.7**
	baz=155						
HRFI	**Mount Harif**	**3.90**	**117**	Pn	**Pn**	**16 02 19.8**	**+0.8**
MBRI	**Mt Berech**	**3.93**	**121**	Pn	**Pn**	**16 02 20.3**	**+0.8**
MBRI				Sn	**Sn**	**16 03 03.5**	**-2.3**
EIL	**Elat**	**4.03**	**122**	Pn	**Pn**	**16 02 21.7**	**+1.0**
GEM	**Giv'at Ha'Em**	**4.14**	**70**	Pn	**Pn**	**16 02 23.7**	**+1.5**
TR2	**Tor 2**	**4.19**	**145**	P	**Pn**	**16 02 23.7**	**+0.8**
	baz=145						
KSHT	**Keshet**	**4.19**	**73**	Pn	**Pn**	**16 02 24.8**	**+1.8**
NATI	**Neve Ativ**	**4.21**	**70**	Pn	**Pn**	**16 02 24.5**	**+1.3**
NATI				Sn	**Sn**	**16 03 11.8**	**-0.6**
HKAT	**Jabal Katrina**	**4.21**	**142**	P	**Pn**	**16 02 24.2**	**+0.8**
	baz=141						
HHRG	**Al Ghardaqah**	**5.14**	**154**	P	**Pn**	**16 02 38.7**	**+2.7**
	baz=153						
SWA2		**5.47**	**243**	P	**Pn**	**16 02 39.0**	**-1.6**
	baz=242						

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*MAN **29** 16:13:53.9, 11°.40N×125°.70E, h41km, mb4.5, ML3.4, MS3.2*
*IDC **29** 16:14:54.5±9.2, 4°.02N×129°.53E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=210.7km s-min=146.9km az=85.0*
ISC 29 16:13:51.7±2.1, 11°.5N±0°.1×125°.82E±0°.10, h35km, n10, σ1§61/14, mb3.4/3, 3C-3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.64**	**215**	⇓*i*P	**Pn**	**16 14 18.7**	**+0.7**
MSLP				*i* S	**Sn**	**16 14 37.8**	**-0.1**
SCPH	**Surigao**	**1.72**	**191**	*e*P	**Pn**	**16 14 19.8**	**+0.7**
SCPH				*e*S	**Sn**	**16 14 37.5**	**-2.4**
TABP	**Talibon, Bohol**	**2.01**	**227**	⇑*i*P	**Pn**	**16 14 23.4**	**+0.3**
TABP				*i* S	Sn	16 15 24.5	+37
GHBP	**Garcia Hernand**	**2.35**	**219**	⇑*i*P	**Pn**	**16 14 29.7**	**+1.8**
GHBP				*i* S	**Sn**	**16 14 56.1**	**+0.5**
CGP	**Cagayan de Oro**	**3.20**	**200**	⇑*e*P	**Pn**	**16 14 41.5**	**+1.9**
CGP				*e*S	**Sn**	**16 15 14.3**	**-2.2**
BIPH	**Bislig**	**3.32**	**171**	⇓*i*P	**Pn**	**16 14 41.3**	**+0.1**
BIPH				*i* S	**Sn**	**16 15 22.4**	**+2.9**
CNOP	**Candoni, Negro**	**3.53**	**243**	⇓*i*P	**Pn**	**16 14 44.7**	**+0.7**
CNOP				*i* S	Sn	16 14 54.1	-30
WRA	**Warramunga Arr**	**32.33**	**165**	P	P	16 20 13.5	-4.3
	0.5nm,1.0s,baz=349,slow=9.8,SNR=1.9						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**35.82**	**167**	P	**P**	**16 20 47.0**	**-1.1**
	0.3nm,0.8s,baz=350,slow=7.1,SNR=6.4						
	0.3nm,0.8s						
STKA	**Stephens Creek**	**45.69**	**161**	P	**P**	**16 22 09.2**	**-0.1**
	3.2nm,1.0s,baz=340,slow=7.7,SNR=3.4						
	3.2nm,1.0s						

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*SNET **29** 16:18:58.0±0.7, 12°.69N×88°.72W, h60km±11km, ML3.6*
*INET **29** 16:19:00.5±0.7, 12°.78N×88°.64W, h33km±111km, MW3.5*
ISC 29 16:19:00.2±1.7, 12°.8N±0°.1×88°.63W±0°.08, h54km±32km, n25, σ0§33/31, 2C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.52**	**6**	*i* P	**Pn**	**16 19 11.9**	**-0.1**
COEB	**Comit de Eme**	**0.69**	**8**	⇑*i*P	**Pn**	**16 19 14.1**	**-0.1**
COEB				*e*S	**Sn**	**16 19 24.6**	**+0.3**
COEB				IAML		16 19 26.4	
	comp=Z,1μm,0.2s						
PACA	**Pacayal**	**0.72**	**24**	*e*P	**Pn**	**16 19 14.5**	**0.0**
PACA				*e*S	**Sn**	**16 19 25.5**	**+0.5**
PACA	**Pacayal**	**0.72**	**24**	*e*P	**Pn**	**16 19 14.6**	**0.0**
PQSS	**Presa 15 de Se**	**0.81**	**5**	⇑*e*P	**Pn**	**16 19 15.5**	**-0.2**
PQSS				IAML		16 19 28.4	
	comp=Z,2μm,0.2s						
COEG	**Centro de Oper**	**0.84**	**343**	*e*P	**Pn**	**16 19 15.7**	**-0.3**
COEG				*e*S	**Sn**	**16 19 27.5**	**-0.2**
LCND	**La Caada**	**0.88**	**55**	*e*P	**Pn**	**16 19 16.2**	**-0.2**
LCND				*e*S	**Sn**	**16 19 28.4**	**+0.1**
LCND				IAML		16 19 30.2	
	comp=Z,2μm,0.3s						
SJTE	**Alcalda de S**	**0.88**	**335**	⇓*i*P	**Pn**	**16 19 16.1**	**-0.5**
SJTE				*e*S	**Sn**	**16 19 28.1**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.89**	**354**	*e*P	**Pn**	**16 19 17.0**	**+0.3**
CNCH	**Conchagua**	**0.90**	**59**	*e*P	**Pn**	**16 19 16.7**	**-0.2**
LFRS	**El Faro**	**0.91**	**333**	⇓*i*P	**Pn**	**16 19 16.7**	**-0.3**
PAVA	**Las Pavas**	**0.95**	**342**	*e*P	**Pn**	**16 19 17.3**	**-0.1**
BOQS	**Boqueron**	**1.12**	**326**	*e*P	**Pn**	**16 19 19.9**	**0.0**
P5NO	**Presa 5 de nov**	**1.18**	**354**	⇓*i*P	**Pn**	**16 19 20.1**	**-0.3**
CEVE	**Cerro Verde**	**1.40**	**316**	*e*P	**Pn**	**16 19 24.1**	**+0.4**
CEVE				IAML		16 19 44.2	
	comp=Z,679nm,0.3s						
SBLS	**San Blas**	**1.41**	**317**	*e*P	**Pn**	**16 19 24.1**	**+0.3**
CRIN	**San Cristobal**	**1.54**	**94**	*e*P	**Pn**	**16 19 25.8**	**+0.3**
CRIN				*e*S	**Sn**	**16 19 45.1**	**+0.6**
NUBE	**Las Nubes**	**1.56**	**314**	*e*P	**Pn**	**16 19 25.8**	**+0.1**
MTO3	**Montecristo**	**1.73**	**336**	⇓*i*P	**Pn**	**16 19 28.1**	**-0.1**
MTO3	**Montecristo**	**1.73**	**336**	*e*P	**Pn**	**16 19 28.2**	**0.0**
TEL3	**Telica 3**	**1.76**	**97**	*e*P	**Pn**	**16 19 28.2**	**-0.1**
MOMN	**Momotombo**	**2.08**	**101**	*e*P	**Pn**	**16 19 32.3**	**-0.4**
COPN	**Copaltepe**	**2.08**	**107**	*e*P	**Pn**	**16 19 32.2**	**-0.5**
HUEN		**2.44**	**101**	*e*P	**Pn**	**16 19 37.6**	**-0.1**
BOAB	**BOACO BROADBAN**	**2.91**	**97**	*e*P	**Pn**	**16 19 43.7**	**-0.4**

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*BGR **29** 16:24:31.1±0.7, 42°.55N×13°.57E, h10km, ML4.6/14, Error ellipse: s-maj=22.2km s-min=11.1km az=86.0*
*STR **29** 16:24:32.2±1.9, 42°.N±23°.×1°.2E±1°.6, h10km, mb4.6/6*
*IDC **29** 16:24:32.3±0.5, 42°.77N×12°.93E, h0km, mb4.2/24, mbtmp4.1/36, ML3.5/11, MS3.2/18, Error ellipse: s-maj=12.4km s-min=11.0km az=1.0*
*PDG **29** 16:24:33.6±0.7, 42°.82N×13°.10E, h13km, ML4.3/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*MED_RC **29** 16:24:33.0±1.1, 42°.81N×13°.10E, h11km±2km, MW4.3/6, Moment Tensor Solution.Mantle waves: s6,c7; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.41±.74; $M_{\theta\theta}$2.85±.62; $M_{\phi\phi}$1.56±.48; $M_{r\theta}$0.85±1.73; $M_{\theta\phi}$-1.46±.29; $M_{\phi r}$0.18±1.03; Best double couple: $M_0$4.19000×10^{15} NP1:ϕ_s296.00000°, δ50.00000°, λ-99.00000°. NP2: ϕ_s130.00000°, δ41.00000°, λ-80.00000°. Principal axes: T 3.8500, Plg4.0000°, Azm32.0000°; N 0.6800, Plg7.0000°, Azm302.0000°; P -4.5300, Plg82.0000°, Azm154.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **29** 16:24:33.1±1.2, 42°.88N×13°.03E, h12km, mb4.6/30 Error ellipse: s-maj=5.4km s-min=3.3km az=73.2*
*NEIC **29** 16:24:33.7, 42°.79N×13°.02E, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.37; $M_{\theta\theta}$1.54; $M_{\phi\phi}$0.84; $M_{r\theta}$0.88; $M_{\theta\phi}$-1.37; $M_{\phi r}$-0.02; Fault plane solution: $M_0$2.65000×10^{15} NP1:ϕ_s140.39000°, δ38.40000°, λ-70.21000°. NP2:ϕ_s295.72000°, δ54.24000°, λ-105.02000°. Principal axes: T 2.7050, Plg8.0000°, Azm36.0000°; N -0.1176, Plg12.0000°, Azm305.0000°; P -2.5874, Plg75.0000°, Azm159.0000°;*
*PRU **29** 16:24:33.6±0.0, 42°.79N×13°.37E, h0km, M4.4*
*NEIC **29** 16:24:33.8±2.0, 42°.81N±0°.05×13°.04E±0°.07, h10km±1km, Error ellipse: s-maj=10.3km s-min=6.6km az=216.0*
*ROM **29** 16:24:33.2±0.0, 42°.811N±0°.001×13°.095E±0°.003, h11km, ML4.2/103, Mw4.1, Error ellipse: s-maj=0.1km s-min=0.1km az=257.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.77; $M_{\theta\theta}$0.43; $M_{\phi\phi}$1.34; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.77831×10^{15} NP1:ϕ_s153.00000°, δ44.00000°, λ-85.00000°. NP2:ϕ_s327.00000°, δ46.00000°, λ-94.00000°.*
*LDG **29** 16:24:34.1±0.1, 42°.71N×13°.02E, h10km, Ml4.1/17 Error ellipse: s-maj=5.7km s-min=3.3km az=42.0*
*BEO **29** 16:24:35.7±0.7, 42°.86N×13°.14E, h12km±2km, ML4.4/15*
ISC 29 16:24:34.2±0.6, 42°.81N±0°.01×13°.07E±0°.01, h11km±3km, n643, σ1§62/753, mb4.4/46, MS3.3/9, 107C-29D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.09**	**334**	⇓P	**Pg**	**16 24 36.3**	**-0.7**
T1216				S	**Sg**	**16 24 38.3**	**-0.6**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.10**	**61**	⇑P	**Pg**	**16 24 36.2**	**-1.0**
T1245				S	**Sg**	**16 24 38.0**	**-1.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.14**	**40**	⇑P	**Pg**	**16 24 36.8**	**-0.9**
MC2				S	**Sg**	**16 24 39.2**	**-0.9**
T1217	**Poggiodomo (PG**	**0.14**	**227**	⇑P	**Pg**	**16 24 37.4**	**-0.3**
T1217				S	**Sg**	**16 24 40.5**	**+0.4**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1215	**Vallo di Nera,**	**0.15**	**267**	⇑P	**Pg**	**16 24 37.5**	**-0.3**
T1215				S	**Sg**	**16 24 40.4**	**+0.1**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
FEMA	**Monte Fema**	**0.15**	**354**	P	**Pg**	**16 24 37.2**	**-0.7**
FEMA				S	**Sg**	**16 24 40.1**	**-0.4**
T1244	**Arquata del Tr**	**0.17**	**107**	⇑P	**Pg**	**16 24 37.4**	**-0.7**
T1244				S	**Sg**	**16 24 40.5**	**-0.4**
T1201	**Domo (RI)**	**0.20**	**139**	⇑P	**Pg**	**16 24 38.1**	**-0.5**
T1201				S	**Sg**	**16 24 41.8**	**+0.2**
LNSS	**Leonessa**	**0.21**	**187**	⇑P	**Pg**	**16 24 38.3**	**-0.5**
LNSS				S	**Sg**	**16 24 42.1**	**+0.3**
LNSS				AML	AML		
LNSS				AML	AML		
T1204	**Amatrice, Fraz**	**0.22**	**126**	⇑P	**Pg**	**16 24 38.3**	**-0.7**
T1204				S	**Sg**	**16 24 42.2**	**-0.1**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1256	**Bolognola (MC)**	**0.23**	**30**	⇑P	**Pg**	**16 24 38.2**	**-0.9**
T1256				S	**Sg**	**16 24 41.8**	**-0.7**
FDMO	**Fiordimonte**	**0.23**	**3**	P	**Pg**	**16 24 37.3**	**-1.7**
FDMO	**Fiordimonte**	**0.23**	**3**	⇑P	**Pg**	**16 24 38.3**	**-0.7**
FDMO				S	**Sg**	**16 24 42.0**	**-0.4**
FDMO				AML	AML		
FDMO				AML	AML		
CESI	**CESI - Serrava**	**0.23**	**328**	⇓P	**Pg**	**16 24 38.7**	**-0.5**
CESI				S	**Sg**	**16 24 42.6**	**+0.1**
CESI				AML	AML		
CESI				AML	AML		
SMA1	**SAN MARTINO**	**0.26**	**133**	⇑P	**Pg**	**16 24 38.9**	**-0.8**
SMA1				S	**Sg**	**16 24 43.1**	**-0.3**
SMA1				AML	AML		
SMA1				AML	AML		
SMA1				AML	AML		
AM05	**Amandola Campo**	**0.27**	**51**	⇑P	**Pg**	**16 24 38.9**	**-0.8**
AM05				S	**Sg**	**16 24 42.9**	**-0.5**
AM05				AML	AML		
	comp=E,37350μm,0.6s						
AM05				AML	AML		
	comp=N,44600μm,0.4s						
AM05				AML	AML		
	comp=N,9430μm,0.1s						
AM05				AML	AML		
	comp=N,9435μm,0.1s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9425μm,0.1s						
AM05				AML	AML		
	comp=N,44650μm,0.4s						
AM05				AML	AML		
	comp=E,37400μm,0.6s						
T1241	**Roccafluvione,**	**0.27**	**80**	⇑P	**Pg**	**16 24 38.6**	**-1.2**
T1241				S	**Sg**	**16 24 42.7**	**-0.8**
T1243	**Rocca Santa Ma**	**0.30**	**112**	⇑P	**Pg**	**16 24 39.2**	**-1.1**
T1243				S	**Sg**	**16 24 43.6**	**-0.8**
RM33	**Pellescritta (**	**0.32**	**161**	⇑P	**Pg**	**16 24 39.9**	**-0.8**
RM33				S	**Sg**	**16 24 45.3**	**+0.3**
RM33				AML	AML		
	comp=E,62450μm,1.0s						
RM33				AML	AML		
	comp=N,60750μm,0.9s						
RM33				AML	AML		
	comp=E,62450μm,1.1s						
RM33				AML	AML		
	comp=N,60800μm,1.0s						
RM33				AML	AML		
	comp=E,63250μm,1.5s						
RM33				AML	AML		
	comp=N,59350μm,1.0s						
RM33				AML	AML		
	comp=E,62400μm,1.1s						
RM33				AML	AML		
	comp=N,59300μm,1.0s						
RM33				AML	AML		
	comp=N,60750μm,1.0s						
GUMA	**Gualdo di Mace**	**0.32**	**37**	⇑P	**Pg**	**16 24 40.1**	**-0.6**
GUMA				S	**Sg**	**16 24 45.2**	**+0.2**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		

SEF1				AML	AML		
CAMP	**Campotosto**	**0.37**	**138**		**Pg**	**16 24 40.5**	**-1.2**
CAMP	**Campotosto**	**0.37**	**138**	⇑P	**Pg**	**16 24 40.6**	**-1.0**
CAMP				S	**Sg**	**16 24 46.2**	**-0.4**
CAMP				AML	AML		
comp=E,35600µm,1.1s							
CAMP				AML	AML		
comp=N,25750µm,0.9s							
PIO1	**Pioraco**	**0.38**	**350**	P	**Pg**	**16 24 40.8**	**-0.9**
PIO1				S	**Sg**	**16 24 46.9**	**+0.2**
PIO1				AML	AML		
comp=E,47700µm,0.7s							
PIO1				AML	AML		
comp=N,83500µm,0.5s							
PIO1				AML	AML		
comp=E,47750µm,0.7s							
ASSB	**Assisi San Ben**	**0.38**	**308**	⇑P	**Pg**	**16 24 41.3**	**-0.6**
ASSB				S	**Sg**	**16 24 47.1**	**+0.1**
T1246	**Crognaleto (TE**	**0.38**	**126**	⇑P	**Pg**	**16 24 40.8**	**-1.1**
T1246				S	**Sg**	**16 24 46.5**	**-0.5**
MDAR	**Monte D'Aria**	**0.39**	**8**	⇑P	**Pg**	**16 24 41.0**	**-1.0**
MDAR				S	**Sg**	**16 24 46.9**	**-0.2**
MDAR				AML	AML		
comp=E,52750µm,0.6s							
MDAR				AML	AML		
FIU1	**Fiuminata**	**0.39**	**345**	P	**Pg**	**16 24 41.2**	**-0.8**
FIU1				S	**Sg**	**16 24 47.3**	**0.0**
FIU1				AML	AML		
comp=E,68250µm,0.3s							
FIU1				AML	AML		
comp=N,56650µm,0.3s							
T1247	**Pizzolo (AQ)**	**0.40**	**156**	⇑P	**Pg**	**16 24 41.3**	**-0.9**
T1247				S	**Sg**	**16 24 47.3**	**-0.3**
T1247				AML	AML		
comp=N,54850µm,0.4s							
T1247				AML	AML		
comp=E,84050µm,0.6s							
CESX	**Cesi**	**0.41**	**241**		**Pg**	**16 24 41.5**	**-1.0**
CESX				Sg	**Sg**	**16 24 47.9**	**0.0**
CESX	**Cesi**	**0.41**	**241**	⇑P	**Pg**	**16 24 41.9**	**-0.6**
CESX				S	**Sg**	**16 24 47.8**	**0.0**
CESX				AML	AML		
comp=N,60550µm,0.6s							
CESX				AML	AML		
comp=E,45700µm,0.6s							
SSM1	**San Severino M**	**0.43**	**10**	P	**Pg**	**16 24 41.7**	**-1.0**
GAG1	**Gagliole**	**0.43**	**359**	⇑P	**Pg**	**16 24 41.9**	**-0.8**
GAG1				S	**Sg**	**16 24 48.8**	**+0.3**
GAG1				AML	AML		
GAG1				AML	AML		
TERO	**Teramo**	**0.43**	**115**	⇑P	**Pg**	**16 24 41.5**	**-1.3**
TERO				S	**Sg**	**16 24 48.0**	**-0.5**
TERO				AML	AML		
comp=E,39400µm,0.3s							
TERO				AML	AML		
comp=N,46700µm,0.7s							
TERO				AML	AML		
comp=N,46650µm,0.7s							
TERO				AML	AML		
comp=E,41550µm,0.3s							
TERO				AML	AML		
comp=N,48550µm,0.7s							
MNTP	**Montappone**	**0.44**	**41**	P	**Pg**	**16 24 42.3**	**-0.6**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MTL1	**Matelica**	**0.45**	**354**	⇑P	**Pg**	**16 24 42.3**	**-0.8**
MTL1				S	**Sg**	**16 24 49.4**	**+0.3**
MTL1				AML	AML		
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.46**	**348**	⇑P	**Pg**	**16 24 42.2**	**-1.0**
SNTG				S	**Sg**	**16 24 49.4**	**+0.1**
SNTG				AML	AML		
comp=N,36750µm,0.6s							
SNTG				AML	AML		
comp=E,33500µm,0.2s							
SNTG				AML	AML		
comp=E,32550µm,0.9s							
SNTG				AML	AML		
comp=N,37700µm,0.6s							
OFFI	**Offida**	**0.47**	**74**	⇑P	**Pg**	**16 24 43.0**	**-0.4**
OFFI				AML	AML		
OFFI				AML	AML		
comp=E,71300µm,0.7s							
ATCC	**AVT- Casa Cast**	**0.49**	**320**	P	**Pg**	**16 24 43.2**	**-0.6**
ATCC				S	**Sg**	**16 24 50.7**	**+0.2**
ATCC				AML	AML		
comp=E,75950µm,0.2s							
ATCC				AML	AML		
comp=N,69000µm,0.7s							
GIGS	**Gran Sasso**	**0.51**	**134**	⇑P	**Pg**	**16 24 42.8**	**-1.5**
GIGS				S	**Sg**	**16 24 50.3**	**-0.7**
GIGS				AML	AML		
comp=N,8145µm,0.6s							
GIGS				AML	AML		
comp=E,6670µm,0.3s							
AQU	**L'Aquila**	**0.52**	**152**		**Pg**	**16 24 42.8**	**-1.5**
AQU	**L'Aquila**	**0.52**	**152**	P	**Pg**	**16 24 42.8**	**-1.5**
AQU	**L'Aquila**	**0.52**	**152**	P	**Pg**	**16 24 43.2**	**-1.2**
AQU				AML	AML		
comp=E,20100µm,0.9s							
AQU				AML	AML		
comp=N,21700µm,0.8s							
AQU				AML	AML		
comp=E,19250µm,1.3s							
AQU				AML	AML		
comp=N,21800µm,0.7s							
AQU				AML	AML		
comp=E,20150µm,0.9s							
EL6	**Elcito**	**0.52**	**2**	⇑P	**Pg**	**16 24 43.4**	**-1.1**
TRE1	**Treia**	**0.53**	**19**	⇑P	**Pg**	**16 24 44.0**	**-0.7**
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
FOSV	**Fossato di Vic**	**0.54**	**335**	⇑P	**Pg**	**16 24 43.8**	**-1.0**
FOSV				AML	AML		
comp=E,27450µm,1.3s							
FOSV				AML	AML		
comp=N,32000µm,1.3s							
FIAM	**Fiamignano**	**0.54**	**176**	⇑P	**Pg**	**16 24 43.7**	**-1.1**
FIAM				S	**Sg**	**16 24 52.0**	**0.0**
FIAM				AML	AML		
comp=N,18300µm,1.0s							
FIAM				AML	AML		
comp=E,22400µm,1.1s							
CING	**Cingoli**	**0.57**	**9**	⇑P	**Pg**	**16 24 44.2**	**-1.2**
CING				AML	AML		
comp=E,43350µm,0.8s							
CING				AML	AML		
comp=N,27300µm,0.4s							
MURB	**Monte Urbino**	**0.61**	**319**		**Pg**	**16 24 45.1**	**-0.9**
MURB				Sg	**Sb**	**16 24 55.5**	**0.0**
MURB	**Monte Urbino**	**0.61**	**319**	P	**Pg**	**16 24 45.4**	**-0.7**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
TRTR	**Tortoreto Alta**	**0.62**	**90**	⇑P	**Pg**	**16 24 46.0**	**-0.2**
TRTR				AML	AML		
comp=E,62900µm,0.5s							
TRTR				AML	AML		
comp=N,84600µm,0.9s							
TRTR				AML	AML		
comp=E,62950µm,0.5s							
CADA	**Capodarco di F**	**0.64**	**52**	P	**Pg**	**16 24 46.5**	**-0.1**
MMUR	**Monte Murano**	**0.64**	**355**	P	**Pg**	**16 24 45.5**	**-1.1**
MMUR				AML	AML		
comp=E,65250µm,0.2s							
MMUR				AML	AML		
comp=N,34200µm,0.2s							
ATTE	**AVT- Monte Tez**	**0.66**	**307**	⇑P	**Pg**	**16 24 46.1**	**-0.9**
ATTE				AML	AML		
comp=E,26100µm,0.3s							
ATTE				AML	AML		
comp=N,23950µm,0.3s							
FAGN	**Fagnano**	**0.66**	**145**	P	**Pg**	**16 24 45.4**	**-1.6**
FAGN				AML	AML		
comp=N,40000µm,0.5s							
FAGN				AML	AML		
comp=E,29800µm,0.5s							
CIMA	**Civitanova Mar**	**0.66**	**41**	P	**Pg**	**16 24 46.8**	**-0.3**
ATFO	**Monte Foce - G**	**0.67**	**327**	P	**Pg**	**16 24 46.4**	**-0.9**
ATFO				AML	AML		
comp=E,29250µm,0.4s							
ATFO				AML	AML		
comp=N,39850µm,0.3s							
PP3	**Marolino**	**0.69**	**34**	P	**Pg**	**16 24 47.1**	**-0.5**
PP3				AML	AML		
comp=N,73600µm,0.6s							
PP3				AML	AML		
comp=N,70850µm,0.6s							
PP3				AML	AML		
comp=E,68500µm,0.6s							
PP3				AML	AML		
comp=E,65900µm,0.6s							
ARVD	**Arcevia**	**0.70**	**352**	⇑P	**Pg**	**16 24 46.5**	**-1.3**
ARVD				AML	AML		
comp=N,14550µm,1.3s							
ARVD				AML	AML		
comp=E,17750µm,1.2s							
VCEL	**Villa Celiera**	**0.70**	**126**	P	**Pg**	**16 24 46.5**	**-1.4**
VCEL				AML	AML		
comp=E,27700µm,0.5s							
VCEL				AML	AML		
comp=N,24150µm,0.4s							
SRES	**S.Oreste - Sor**	**0.71**	**216**	⇑P	**Pg**	**16 24 46.9**	**-1.1**
SRES				AML	AML		
comp=N,16900µm,0.7s							
SRES				AML	AML		
comp=E,20700µm,0.8s							
MGAB	**Montegabbione**	**0.71**	**279**	⇑P	**Pg**	**16 24 47.3**	**-0.7**
MGAB				AML	AML		
comp=N,48550µm,0.5s							
MGAB				AML	AML		
comp=E,65800µm,1.3s							
MGAB				AML	AML		
comp=N,48800µm,0.7s							
MGAB				AML	AML		
comp=E,55550µm,1.3s							
ATVO	**AVT- Monte Val**	**0.75**	**320**	⇑P	**Pg**	**16 24 47.6**	**-1.2**
ATVO				AML	AML		
comp=E,22150µm,0.9s							
ATVO				AML	AML		
comp=N,18350µm,1.0s							
FRON	**Frontone**	**0.75**	**340**	⇑P	**Pg**	**16 24 47.4**	**-1.4**
FRON				AML	AML		
comp=N,22900µm,0.5s							
FRON				AML	AML		
comp=E,19100µm,1.3s							
T0110	**Collepietro**	**0.78**	**138**	P	**Pg**	**16 24 47.5**	**-1.9**
T0110				AML	AML		
comp=E,25550µm,1.3s							
T0110				AML	AML		
comp=N,24200µm,0.4s							
ATMI	**Monte Miggiano**	**0.79**	**312**	P	**Pg**	**16 24 49.1**	**-0.4**
ATMI				AML	AML		
comp=E,51550µm,0.7s							
ATMI				AML	AML		
comp=N,56900µm,0.9s							
ATPI	**Pietralunga -**	**0.81**	**323**	⇑P	**Pg**	**16 24 48.7**	**-1.1**
ATPI				AML	AML		
comp=E,18250µm,0.5s							
ATPI				AML	AML		
comp=N,14000µm,0.8s							
MTCE	**Montecelio**	**0.82**	**197**	⇑P	**Pg**	**16 24 48.3**	**-1.8**
MTCE				AML	AML		
comp=E,12050µm,0.5s							
MTCE				AML	AML		
comp=N,11000µm,1.0s							
PTQR	**Pietraquaria**	**0.82**	**163**	⇑P	**Pg**	**16 24 48.3**	**-1.9**
PTQR				AML	AML		
comp=E,8945µm,1.6s							
PTQR				AML	AML		
comp=N,7955µm,1.3s							
PIEI	**Pieia**	**0.83**	**332**	⇑P	**Pg**	**16 24 48.9**	**-1.3**
PIEI				AML	AML		
comp=N,11550µm,1.5s							
PIEI				AML	AML		
comp=E,10960µm,0.3s							
AOI	**Ancona**	**0.84**	**27**	⇑P	**Pg**	**16 24 49.0**	**-1.3**
AOI				AML	AML		
comp=E,29250µm,0.8s							
AOI				AML	AML		
comp=N,24550µm,0.8s							
MPAG	**Monte Paganucc**	**0.85**	**345**	⇑P	**Pg**	**16 24 49.3**	**-1.4**
MPAG				AML	AML		
comp=E,16500µm,0.5s							
MPAG				AML	AML		
comp=N,16100µm,0.6s							
MPAG				AML	AML		
comp=E,16350µm,0.4s							
MPAG				AML	AML		
comp=N,15650µm,0.6s							
SACS	**San Casciano d**	**0.86**	**273**	P	**Pg**	**16 24 50.0**	**-0.8**
SACS				AML	AML		
comp=E,23900µm,1.3s							
SACS				AML	AML		
comp=N,25100µm,0.9s							
SACS				AML	AML		
comp=E,23350µm,1.3s							
SACS				AML	AML		
comp=N,24000µm,1.0s							
CERT	**Cerreto**	**0.86**	**184**	⇑P	**Pg**	**16 24 49.0**	**-1.9**
CERT				AML	AML		
comp=N,12700µm,0.6s							
CERT				AML	AML		
comp=E,26500µm,1.0s							
PCRO	**Pietralacroce**	**0.87**	**23**	P	**Pg**	**16 24 50.1**	**-0.9**
APEC	**Apecchio**	**0.89**	**328**	P	**Pg**	**16 24 50.1**	**-1.2**
APEC				AML	AML		
comp=E,3655µm,0.6s							
APEC				AML	AML		
comp=N,3520µm,1.3s							
SENI	**Senigallia**	**0.90**	**7**	P	**Pg**	**16 24 50.1**	**-1.6**
SENI				AML	AML		
comp=E,91000µm,0.7s							
SENI				AML	AML		
comp=N,56000µm,0.5s							
SENI				AML	AML		
comp=N,56050µm,0.5s							
SENI				AML	AML		
comp=E,91050µm,0.6s							
FSSB	**Fossombrone**	**0.91**	**346**	⇑P	**Pg**	**16 24 50.3**	**-1.4**
FSSB				AML	AML		
comp=E,45950µm,0.4s							
FSSB				AML	AML		
comp=N,47850µm,0.4s							
LATE	**Laterza**	**0.95**	**259**		**Pg**	**16 24 51.5**	**-1.1**
LATE	**Laterza**	**0.95**	**259**	P	**Pg**	**16 24 51.6**	**-1.1**
CAFI	**Castiglion Fio**	**0.96**	**303**	P	**Pg**	**16 24 51.7**	**-1.1**
CAFI				AML	AML		
comp=E,16050µm,0.6s							
CAFI				AML	AML		
comp=N,18100µm,0.7s							
CAFI				AML	AML		
comp=N,17500µm,0.7s							
CAFI				AML	AML		
comp=E,16550µm,0.6s							
PE3	**Peglio**	**0.98**	**335**	P	**Pb**	**16 24 51.8**	**-1.4**
PE3				AML	AML		
comp=E,98µm,0.9s							
PE3				AML	AML		
comp=N,114µm,0.5s							
INTR	**Introdacqua**	**1.01**	**142**	Pg	**Pb**	**16 24 49.1**	**-4.6**
VVLD	**Villa Vallelon**	**1.02**	**156**	P	**Pb**	**16 24 52.1**	**-1.9**
VVLD				AML	AML		
comp=N,9170µm,0.7s							
VVLD				AML	AML		
comp=E,7895µm,0.7s							
MCIV	**Monte Civitell**	**1.03**	**269**	⇑P	**Pb**	**16 24 52.7**	**-1.3**
MCIV				AML	AML		
comp=N,6055µm,0.7s							
MCIV				AML	AML		
comp=E,7045µm,0.3s							
GUAR	**Guarcino**	**1.03**	**170**	P	**Pb**	**16 24 52.7**	**-1.3**
GUAR				AML	AML		
comp=N,16700µm,0.7s							
GUAR				AML	AML		
comp=E,12600µm,0.7s							
SSP9	**Sansepolcro**	**1.03**	**318**	P	**Pb**	**16 24 53.3**	**-0.7**
SSP9				AML	AML		
comp=E,8060µm,1.0s							
SSP9				AML	AML		
comp=N,11545µm,1.5s							
RMP	**Rome, Mte Porz**	**1.03**	**196**	P	**Pb**	**16 24 52.4**	**-1.7**
RMP				AML	AML		
comp=N,22950µm,0.7s							
RMP				AML	AML		
comp=E,17450µm,0.7s							
SF04	**Casetta**	**1.04**	**272**	AML	AML		
comp=N,7745µm,0.6s							
SF04				AML	AML		
comp=E,7610µm,0.3s							
VIVA	**Pratoni del Vi**	**1.08**	**192**	P	**Pb**	**16 24 53.7**	**-1.3**
VIVA				AML	AML		
comp=E,26650µm,0.6s							
VIVA				AML	AML		
comp=N,21450µm,1.6s							
RDP	**Rocca di Papa**	**1.08**	**194**	P	**Pb**	**16 24 53.4**	**-1.6**
RDP				AML	AML		
comp=N,33900µm,0.7s							
RDP				AML	AML		
comp=E,30500µm,0.5s							
TOLF	**Tolfa**	**1.09**	**227**	P	**Pb**	**16 24 53.4**	**-1.6**
TOLF				AML	AML		
comp=N,10800µm,0.5s							
TOLF				AML	AML		
comp=E,12500µm,0.9s							
CAFR	**Castel Frentan**	**1.11**	**121**	P	**Pb**	**16 24 53.4**	**-1.9**
CAFR				AML	AML		
comp=E,10175µm,0.3s							
CAFR				AML	AML		
comp=N,9825µm,0.7s							
SF01	**Poggio Pratacc**	**1.11**	**271**	AML	AML		
comp=E,11500µm,0.8s							
SF01				AML	AML		
comp=N,8350µm,0.8s							
LPEL	**Lama dei Pelig**	**1.12**	**132**	P	**Pb**	**16 24 53.2**	**-2.4**
LPEL				AML	AML		
comp=E,16850µm,1.0s							
LPEL				AML	AML		
comp=N,10035µm,0.8s							
CPGN	**Carpegna, Ital**	**1.13**	**331**	P	**Pb**	**16 24 55.5**	**-0.4**
CPGN				AML	AML		
comp=E,16300µm,1.0s							
CPGN				AML	AML		
comp=N,21250µm,0.7s							
CRE	**Caprese Michel**	**1.15**	**315**	P	**Pb**	**16 24 54.9**	**-1.3**
CRE				AML	AML		
comp=N,7475µm,1.3s							
CRE				AML	AML		
comp=E,5540µm,0.4s							
LAV9	**Lanuvio**	**1.16**	**194**	P	**Pb**	**16 24 55.5**	**-0.8**
LAV9				AML	AML		
comp=E,18000µm,1.0s							
LAV9				AML	AML		
comp=N,21200µm,0.6s							
LAV9				AML	AML		
comp=N,20300µm,0.6s							
LAV9				AML	AML		
comp=E,18700µm,1.1s							
ARCI	**Arcidosso**	**1.18**	**273**	P	**Pb**	**16 24 55.2**	**-1.4**
ARCI				AML	AML		
comp=E,3675µm,0.8s							
ARCI				AML	AML		
comp=N,3225µm,0.9s							
POFI	**Posta Fibreno**	**1.19**	**156**	P	**Pb**	**16 24 54.8**	**-2.0**
POFI				AML	AML		
comp=E,6595µm,1.4s							
POFI				AML	AML		
comp=E,6990µm,1.4s							
POFI				AML	AML		
comp=N,5115µm,1.1s							
POFI				AML	AML		
comp=N,4990µm,1.0s							
GIUL	**Giuliano Di Ro**	**1.26**	**174**	P	**Pn**	**16 24 55.9**	**-1.8**
LATB	**Latina**	**1.32**	**184**	P	**Pn**	**16 24 56.2**	**-2.3**
LATB				AML	AML		
comp=N,2650µm,1.2s							
LATB				AML	AML		
comp=E,2455µm,1.1s							
ASQU	**Asqua**	**1.36**	**317**	P	**Pn**	**16 24 57.9**	**-1.3**
ASQU				AML	AML		
comp=E,4070µm,1.1s							
ASQU				AML	AML		
comp=N,5720µm,0.5s							
RNI2	**Rionero Sannit**	**1.37**	**144**	P	**Pn**	**16 24 57.9**	**-1.4**
RNI2				AML	AML		
comp=E,12285µm,0.8s							
RNI2				AML	AML		
comp=N,8895µm,0.8s							
RNI2				AML	AML		
comp=E,12610µm,0.8s							
RNI2				AML	AML		
comp=N,8580µm,0.8s							
CERA	**Filignano**	**1.40**	**150**	P	**Pn**	**16 24 58.5**	**-1.2**
CERA				AML	AML		
comp=E,6970µm,0.8s							
CERA				AML	AML		
comp=N,7090µm,0.8s							
CERA				AML	AML		
comp=E,6730µm,0.8s							
CERA				AML	AML		
comp=N,6890µm,0.8s							
FRES	**Fresagrandinar**	**1.45**	**125**	P	**Pn**	**16 24 59.1**	**-1.2**
FRES				AML	AML		
comp=E,5975µm,0.9s							
FRES				AML	AML		
comp=N,2980µm,0.9s							
FROS	**Frosini**	**1.46**	**287**	P	**Pn**	**16 24 59.9**	**-0.6**
FROS				AML	AML		
comp=E,7190µm,0.6s							
FROS				AML	AML		
comp=N,5290µm,1.0s							
MAON	**Monte Argentar**	**1.48**	**256**	⇑P	**Pn**	**16 24 59.9**	**-0.9**
MAON				AML	AML		
comp=E,2045µm,1.0s							
MAON				AML	AML		
comp=N,2505µm,1.5s							
TRIV	**Trivento**	**1.51**	**133**	P	**Pb**	**16 25 01.7**	**-0.6**
TRIV				AML	AML		
comp=E,6475µm,1.1s							
TRIV				AML	AML		
comp=N,5710µm,1.3s							
OSSC	**Osservatorio P**	**1.52**	**299**	Pn	**Pn**	**16 25 00.3**	**-1.0**
OSSC	**Osservatorio P**	**1.52**	**299**	⇑P	**Pn**	**16 25 00.3**	**-1.0**
OSSC				AML	AML		
comp=N,3535µm,0.9s							
OSSC				AML	AML		
comp=N,2360µm,1.2s							
OSSC				AML	AML		
comp=E,3555µm,0.9s							
OSSC				AML	AML		
comp=E,2385µm,1.2s							
RUFI	**Rufina**	**1.54**	**313**	P	**Pn**	**16 25 01.0**	**-0.6**
LMD	**Lutirano**	**1.61**	**322**	P	**Pn**	**16 25 02.5**	**-0.1**
LMD				AML	AML		
comp=N,3620µm,0.6s							
LMD				AML	AML		
comp=E,3290µm,1.3s							
TRIF	**Trifonti**	**1.62**	**282**	⇑P	**Pn**	**16 25 02.1**	**-0.6**
TRIF				AML	AML		
comp=N,3360µm,0.8s							
TRIF				AML	AML		
comp=E,2100µm,0.7s							
CASP	**Castiglione de**	**1.62**	**270**		**Pn**	**16 25 01.8**	**-1.0**
CASP	**Castiglione de**	**1.62**	**270**	⇑P	**Pn**	**16 25 01.9**	**-0.9**
CASP				AML	AML		
comp=E,1121µm,0.9s							
CASP				AML	AML		
comp=N,1215µm,0.7s							
VAGA	**Valle Agricola**	**1.64**	**148**	P	**Pn**	**16 25 03.0**	**0.0**
BSSO	**Busso**	**1.69**	**138**	P	**Pb**	**16 25 04.6**	**-0.8**
BRIS	**BRISIGHELLA**	**1.76**	**320**	P	**Pn**	**16 25 04.2**	**-0.4**
BRIS				AML	AML		
comp=N,5220µm,0.5s							
BRIS				AML	AML		
comp=E,5450µm,1.5s							
MODR	**Mondragone**	**1.77**	**160**	P	**Pn**	**16 25 04.4**	**-0.3**
CIGN	**Sant'Elia a Pi**	**1.78**	**130**	P	**Pb**	**16 25 05.9**	**-1.0**
CIGN				AML	AML		
comp=E,2450µm,0.9s							
CIGN				AML	AML		
comp=N,2375µm,1.0s							
PTRJ	**Pietraroja**	**1.81**	**143**	AML	AML		
comp=N,3185µm,1.1s							
PTRJ				AML	AML		
comp=E,3100µm,1.2s							
PTRJ				AML	AML		
comp=E,3545µm,1.2s							
PTRJ				AML	AML		
comp=N,3020µm,1.1s							
MPPT	**Montemurlo**	**1.85**	**309**	P	**Pn**	**16 25 05.8**	**-0.1**
MPPT				AML	AML		
comp=E,2555µm,1.0s							
MPPT				AML	AML		
comp=N,1990µm,0.5s							

DUGI Dugi Otok 1.87 50 *e*Pn **Pn 16 25 05.2 -0.9**
DUGI Sn **Sb 16 25 31.1 -0.6**
GATE Gambatesa 1.88 133 P **Pb 16 25 07.9 -0.7**
MELA Melanico ??? S 1.88 125 P **Pn 16 25 06.5 +0.3**
MELA AML AML
comp=E,5470µm,1.2s
MELA AML AML
comp=N,7180µm,1.0s
MELA AML AML
comp=E,5720µm,1.2s
MELA AML AML
comp=N,7395µm,1.0s
TREM Isole Tremiti 1.93 110 P **Pn 16 25 07.1 +0.2**
TREM AML AML
comp=N,6585µm,0.8s
TREM AML AML
comp=E,5960µm,0.9s
MTCR Monte La Croce 1.94 310 P **Pn 16 25 06.4 -0.8**
MTCR AML AML
comp=E,2530µm,1.6s
MTCR AML AML
comp=N,3645µm,1.6s
VITU Vitulano (BN) 2.00 144 P **Pn 16 25 07.6 -0.3**
ZIRJ Zirje 2.06 65 *e*Pn **Pn 16 25 08.1 -0.6**
ZIRJ Sn **Sn 16 25 35.5 +1.1**
VIRC Vir 2.07 43 *i* Pn **Pn 16 25 08.2 -0.6**
VIRC Sn **Sn 16 25 34.8 +0.3**
PII Pisa 2.07 297 P **Pn 16 25 08.6 -0.2**
PII AML AML
comp=N,1980µm,0.5s
PII AML AML
comp=E,1945µm,0.5s
POPM Popiglio 2.09 307 P **Pn 16 25 08.4 -0.8**
POPM AML AML
comp=E,1330µm,1.2s
POPM AML AML
comp=N,1590µm,1.1s
PAOL Paolisi 2.10 147 Pn **Pn 16 25 07.9 -1.3**
CELB S.Piero in Cam 2.11 269 ⇑P **Pn 16 25 08.4 -1.0**
CELB AML AML
comp=N,586µm,0.8s
CELB AML AML
comp=E,618µm,0.9s
APRC Apricena 2.11 119 P **Pn 16 25 09.1 -0.4**
APRC AML AML
comp=N,3685µm,0.9s
APRC AML AML
comp=E,2570µm,0.4s
MOCO Biccari - m.te 2.12 132 P **Pn 16 25 10.9 +1.3**
BRJN Brijuni 2.15 13 ⇑P **Pn 16 25 09.1 -0.9**
ZCCA Zocca 2.17 316 **Pn 16 25 11.4 +1.2**
MAIM Mastiano 2.18 301 P **Pn 16 25 10.1 -0.3**
MAIM AML AML
comp=E,1104µm,0.9s
MAIM AML AML
comp=N,1315µm,0.8s
NVLJ Novalja 2.19 36 *e*Pn **Pn 16 25 09.6 -0.8**
NVLJ Sn **Sn 16 25 37.4 -0.1**
SGRT San Giovanni R 2.25 117 **Pn 16 25 11.7 +0.3**
CARD Cardoso 2.25 304 P **Pn 16 25 10.8 -0.5**
CARD AML AML
comp=N,1425µm,1.2s
CARD AML AML
comp=E,1540µm,0.3s
RABC Rab 2.30 32 *i* Pn **Pn 16 25 11.5 -0.5**
RABC Sn **Sn 16 25 40.8 +0.5**
GSCL Gusciola 2.37 311 P **Pn 16 25 13.1 0.0**
VLC Villacollemand 2.38 306 **Pn 16 25 11.1 -2.0**
VLC Villacollemand 2.38 306 P **Pn 16 25 12.1 -1.0**
VLC AML AML
comp=N,1136µm,0.9s
VLC AML AML
comp=E,941µm,0.9s
VLC AML AML
comp=N,1144µm,0.9s
VLC AML AML
comp=E,960µm,0.9s
EQUI Equi 2.52 304 P **Pn 16 25 14.7 -0.3**
EQUI AML AML
comp=E,804µm,0.9s
EQUI AML AML
comp=N,787µm,1.1s
UDBI Udbina 2.60 48 *e*Pn **Pn 16 25 16.7 +0.5**
UDBI Sn **Sn 16 25 49.4 +1.5**
CAPA Cerignola FG 2.63 128 P **Pn 16 25 15.6 -0.9**
CAPA AML AML
comp=E,4580µm,1.3s
CAPA AML AML
comp=N,4205µm,0.9s
VULT Monte Vulture 2.65 133 P **Pn 16 25 16.0 -1.0**
VULT AML AML
comp=E,1620µm,1.2s
VULT AML AML
comp=N,2125µm,0.7s
VULT AML AML
comp=E,1645µm,1.3s
VULT AML AML
comp=N,2205µm,0.7s
PLMA Palmaria, Port 2.66 299 P **Pn 16 25 16.4 -0.4**
PLMA AML AML
comp=E,479µm,0.7s
PLMA AML AML
comp=N,566µm,0.7s
RIY Rijeka 2.71 22 *i* Pn **Pn 16 25 17.4 -0.3**
RIY Sn **Sn 16 25 51.1 +0.6**
RIY Rijeka 2.71 22 *e*Pn **Pn 16 25 17.4 -0.3**
RIY *e*Sn **Sn 16 25 50.0 -0.5**
TEOL Teolo 2.74 339 **Pn 16 25 18.4 +0.3**
GRAM Graiana 2.75 309 P **Pn 16 25 18.5 +0.2**
GRAM AML AML
comp=E,1835µm,0.9s
GRAM AML AML
comp=N,2070µm,0.7s
PLIT Plitvice 2.77 41 *e*Pn **Pn 16 25 18.5 0.0**
PLIT Sn **Sn 16 25 53.6 +1.6**
LSTV Lastovo 2.81 90 *e*Pn **Pn 16 25 18.6 -0.5**
LSTV Sn **Sn 16 25 53.3 +0.4**
SKDS Skadanscina 2.82 14 *i* Pn **Pn 16 25 18.2 -0.9**
SKDS *e*Sn **Sn 16 25 53.0 -0.2**
SKDS IAML 16 25 54.5
comp=Z,362nm,0.3s
PALZ Palazzo San Ge 2.85 130 P **Pn 16 25 19.7 +0.1**
SMPL Sampolo 2.89 257 AML AML
comp=N,164µm,0.8s
SMPL AML AML
comp=E,219µm,0.7s
MRVN Minervino Murg 2.91 126 P **Pn 16 25 20.5 0.0**
MSSA Maissana 2.99 301 **Pn 16 25 21.2 -0.4**
MSSA Maissana 2.99 301 P **Pn 16 25 21.4 -0.2**
MSSA AML AML
comp=E,784µm,0.9s
MSSA AML AML
comp=N,598µm,1.0s
PGF Pioggiola 3.02 266 *e*P **Pn 16 25 22.1 +0.2**
RICI Ricice 3.05 76 *e*Pn **Pn 16 25 23.4 +1.1**
RICI Sn **Sn 16 26 00.6 +1.8**
CEY Cerknica 3.09 18 *e*Pn **Pn 16 25 22.1 -0.8**
CEY Cerknica 3.09 18 *i* Pn **Pn 16 25 22.1 -0.8**
ROVR Rover Verones 3.18 334 P **Pn 16 25 24.2 -0.1**
ROVR AML AML
comp=E,389µm,0.8s
ROVR AML AML
comp=N,564µm,0.8s
SABO M.te Sabotino 3.19 7 ⇑P **Pn 16 25 23.7 -0.6**
SABO AML AML
comp=E,10215µm,0.7s
SABO AML AML
comp=N,11935µm,0.7s
SABO AML AML
comp=E,2075µm,0.6s
SABO AML AML
comp=N,3335µm,0.7s
CGRP Cima Grappa 3.20 344 P **Pn 16 25 24.4 -0.2**
CGRP AML AML
comp=E,2375µm,1.0s
CGRP AML AML
comp=N,2145µm,0.7s
CGRP AML AML
comp=E,2400µm,1.0s
CGRP AML AML
comp=N,2160µm,0.7s
SRKY Kupres RS 3.23 66 *e*Pn **Pn 16 25 26.0 +1.0**
AMUR Altamura 3.25 125 P **Pn 16 25 25.4 +0.2**
AMUR AML AML
comp=E,1137µm,0.7s
AMUR AML AML
comp=N,872µm,0.7s
VARN Col Varnada, M 3.26 348 P **Pn 16 25 25.3 0.0**
VARN AML AML
comp=E,3220µm,0.8s
VARN AML AML
comp=N,2115µm,1.1s
VARN AML AML
comp=E,3195µm,0.8s
VARN AML AML
comp=N,2090µm,1.1s
OZLJ Ozalj 3.29 31 *e*Pn **Pn 16 25 25.6 0.0**
OZLJ Sn **Sn 16 26 05.4 +0.7**
AJAC Base Areonaval 3.31 256 AML AML
comp=E,510µm,0.3s
AJAC AML AML
comp=N,292µm,0.4s
MGRS Mrkonjic Grad 3.33 60 *e*Pn **Pn 16 25 27.3 +1.1**
SALO Salr 3.35 328 Pn **Pn 16 25 27.4 +0.9**
SALO Salr 3.35 328 P **Pn 16 25 27.4 +0.9**
SALO AML AML
comp=E,1300µm,0.6s
SALO AML AML
comp=N,1665µm,1.5s
SALO AML AML
comp=E,1270µm,0.6s
SALO AML AML
comp=N,1630µm,1.4s
CTI Castel Tesino 3.40 343 **Pn 16 25 27.2 0.0**
CTI Castel Tesino 3.40 343 P **Pn 16 25 27.2 0.0**
CTI Castel Tesino 3.40 343 P **Pn 16 25 27.4 +0.2**
CTI AML AML
comp=E,1130µm,0.2s
CTI AML AML
comp=N,1340µm,0.6s
LJU Ljubljana 3.40 17 ⇑P **Pn 16 25 27.1 0.0**
LJU AML AML
comp=E,10145µm,1.1s
LJU AML AML
comp=N,10850µm,1.0s
STON Ston 3.40 87 *e*Pn **Pn 16 25 25.5 -1.7**
STON Ston 3.40 87 *e*Pn **Pn 16 26 26.0 -1.2**
STON *e*Sn **Sn 16 26 06.4 -1.1**
PRIJ Prijedor 3.41 49 *e*Pn **Pb 16 25 31.6 -3.0**
RNCA Ronca, Sant'Ol 3.42 300 P **Pn 16 25 27.4 -0.1**
RNCA AML AML
comp=E,132µm,1.5s
RNCA AML AML
comp=N,123µm,0.8s
MPRI Monte Prat 3.43 359 P **Pn 16 25 27.6 -0.1**
MPRI AML AML
comp=E,1900µm,0.6s
MPRI AML AML
comp=N,1685µm,0.6s
MPRI AML AML
comp=E,2480µm,0.6s
MPRI AML AML
comp=N,2215µm,0.6s
CADS Cadrg 3.45 8 *i* Pn **Pn 16 25 27.1 -0.7**
STAL STALIGIAL 3.46 356 **Pn 16 25 27.6 -0.4**
STAL STALIGIAL 3.46 356 P **Pn 16 25 27.7 -0.4**
STAL AML AML
comp=E,1565µm,0.7s
STAL AML AML
comp=N,1225µm,0.4s
STAL AML AML
comp=E,1990µm,0.7s
STAL AML AML
comp=N,1410µm,0.9s
MATE Matera 3.47 127 ⇓P **Pn 16 25 28.9 +0.8**
MATE Matera 3.47 127 P **Pn 16 25 28.9 +0.8**
MATE AML AML
comp=E,758µm,0.7s
MATE AML AML
comp=N,809µm,0.6s
CUC Castrocucco 3.49 143 **Pn 16 25 29.9 +1.4**
LUSI Trento, Gardas 3.50 335 P **Pn 16 25 28.3 -0.3**
LUSI AML AML
comp=E,962µm,0.7s
LUSI AML AML
comp=N,1104µm,0.5s
CIMO Cimolais 3.53 353 P **Pn 16 25 28.5 -0.5**
CIMO AML AML
comp=E,492µm,0.7s
CIMO AML AML
comp=N,602µm,0.7s
CIMO AML AML
comp=E,490µm,0.7s
CIMO AML AML
comp=N,598µm,0.7s
A051A Mrakovica 3.54 50 *e*Pn **Pn 16 25 28.9 -0.2**
BLY Banja Luka 3.55 56 *e*Pn **Pn 16 25 29.2 0.0**
BLY Banja Luka 3.55 56 *e*Pn **Pn 16 25 30.7 +1.5**
BLY *e*Sn **Sn 16 26 10.9 -0.3**
LTRZ Laterza 3.57 127 AML AML
comp=E,529µm,0.8s
LTRZ AML AML
comp=N,5400µm,1.6s
NOCI Noci 3.60 123 P **Pn 16 25 30.2 +0.3**
NOCI AML AML
comp=E,696µm,0.5s
NOCI AML AML
comp=N,915µm,1.2s
PTCC Patocco-Chiusa 3.60 3 ⇑P **Pn 16 25 29.2 -0.8**
PTCC AML AML
comp=E,737µm,0.7s
PTCC AML AML
comp=N,664µm,1.1s
GAGG Gaggia 3.61 336 P **Pn 16 25 30.4 +0.3**
GAGG AML AML
comp=E,1285µm,0.9s
GAGG AML AML
comp=N,1505µm,0.9s
GAGG AML AML
comp=E,1555µm,0.9s
GAGG AML AML
comp=N,1295µm,0.8s
ZONE Zone 3.64 325 P **Pn 16 25 30.7 +0.2**
ZONE AML AML
comp=E,652µm,0.5s
ZONE AML AML
comp=N,1137µm,0.6s
CLUD Cludinico 3.65 358 **Pn 16 25 30.2 -0.4**
CLUD Cludinico 3.65 358 ⇑P **Pn 16 25 30.2 -0.4**
CLUD AML AML
comp=E,1430µm,0.8s
CLUD AML AML
comp=N,964µm,0.9s
CLUD AML AML
comp=E,1425µm,0.8s
CLUD AML AML
comp=N,954µm,0.9s
PRED Cave del Predi 3.65 5 **Pn 16 25 30.2 -0.5**
PCP Piancastagn 3.71 299 P **Pn 16 25 30.7 -0.8**
PCP AML AML
comp=E,156µm,1.1s
PCP AML AML
comp=N,166µm,1.2s
MABI Malga Bissina 3.73 331 P **Pn 16 25 32.0 +0.2**
MABI AML AML
comp=E,468µm,0.8s
MABI AML AML
comp=N,388µm,0.7s
ZOU Zoufplan 3.75 359 ⇑P **Pn 16 25 31.9 -0.2**
ZOU AML AML
comp=E,1200µm,1.1s
ZOU AML AML
comp=N,1235µm,1.6s
ZOU AML AML
comp=E,1175µm,1.1s
ZOU AML AML
comp=N,1210µm,1.6s
ACOM Acomizza, Ital 3.75 5 ⇑P **Pn 16 25 31.7 -0.5**
ACOM AML AML
comp=E,1705µm,1.0s
ACOM AML AML
comp=N,1960µm,0.6s
ACOM AML AML
comp=E,1690µm,1.0s
ACOM AML AML
comp=N,1905µm,0.6s
QLNO Quiliano 3.75 295 P **Pn 16 25 31.8 -0.2**
FVI Forni Avoltri 3.79 357 P **Pn 16 25 32.4 -0.3**
FVI AML AML
comp=E,780µm,0.8s
FVI AML AML
comp=N,992µm,0.8s
MYKA Terra Mystica 3.84 6 *e*Pn **Pn 16 25 33.6 +0.3**
comp=N,67nm,0.4s,SNR=30
MYKA *e*Sn **Sn 16 26 19.9 +1.5**
comp=N,72nm,0.3s
OBKA Obir 3.85 15 *e*Pn **Pn 16 25 33.5 +0.1**
OBKA Obir 3.85 15 *e*Pn **Pn 16 25 32.9 -0.5**
comp=N,98nm,0.6s,SNR=12
KOSI Kohlern 3.85 342 P **Pn 16 25 34.3 +0.9**
KOSI AML AML
comp=E,1525µm,1.2s
KOSI AML AML
comp=N,1315µm,1.6s
MOSL Moslavina 3.86 42 *i* Pn **Pn 16 25 32.5 -0.9**
MOSL Sn **Sn 16 26 18.6 0.0**
TREB Trebinje 3.89 90 *e*Pn **Pn 16 25 34.1 +0.3**
TREB Trebinje 3.89 90 *e*Pn **Pn 16 25 34.1 +0.3**
TREB *e*Sn **Sn 16 26 19.1 -0.3**
TAR1 Taranto 3.89 124 AML AML
comp=E,626µm,0.6s
TAR1 AML AML
comp=N,688µm,0.6s
APPI Appiano 3.90 341 P **Pn 16 25 34.8 +0.7**
APPI AML AML
comp=E,932µm,0.5s
APPI AML AML
comp=N,816µm,0.4s
A052A Srbac 3.94 53 *e*Pn **Pn 16 25 34.0 -0.6**
ABTA Abfaltersbach 3.96 354 *i* Pn **Pn 16 25 35.6 +0.7**
comp=N,208nm,0.6s,SNR=170
BRES Bressanone 4.00 347 AML AML
comp=N,1009µm,0.9s
BRES AML AML
comp=E,915µm,1.1s
HCY Herceg Novi 4.02 93 *e*Pn **Pn 16 25 35.6 0.0**
HCY Herceg Novi 4.02 93 ⇑*i*Pn **Pn 16 25 35.8 +0.2**
HCY *i* Sn **Sn 16 26 22.7 +0.1**
BRY Bratogost 4.02 87 *e*Pn **Pn 16 25 35.7 0.0**
BRY Bratogost 4.02 87 ⇑*i*Pn **Pn 16 25 35.8 0.0**
BRY *i* Sn **Sn 16 26 23.7 +0.8**
MGRO Montegrosso 4.03 290 P **Pn 16 25 35.7 -0.2**
MGRO AML AML
comp=E,204µm,0.8s
MGRO AML AML
comp=N,170µm,0.9s
SOKA Soboth 4.11 19 *e*Pn **Pn 16 25 36.5 -0.5**
comp=N,6.9nm,0.2s,SNR=14
BRMO Bormio 4.14 333 P **Pn 16 25 39.0 +1.5**
BERNI Berninapass 4.21 330 P **Pn 16 25 39.6 +1.1**
SBF Sospel 4.25 286 *e*Pn **Pn 16 25 39.4 +0.6**
SBF *e*Sn **Sn 16 26 25.2 -3.2**
comp=N,94nm,0.4s
MUGIO Muggio 4.25 319 P **Pn 16 25 38.6 -0.2**
MUGIO AML AML
comp=E,313µm,0.6s
MUGIO AML AML
comp=N,217µm,1.1s
ROSI Rosskopf 4.29 345 P **Pn 16 25 40.3 +0.8**
ROSI AML AML
comp=E,1320µm,1.4s
ROSI AML AML
comp=N,1250µm,0.9s
KOGS Kog 4.29 31 P **Pn 16 25 38.4 -1.0**
UPM Unac-Piva 4.30 83 *e*Pn **Pn 16 25 41.3 +1.7**
UPM Unac-Piva 4.30 83 *e*Pn **Pn 16 25 39.6 0.0**
UPM *i* Sn **Sn 16 26 30.3 +0.5**
FUORN Ofenpass-Fuorn 4.30 333 Pn **Pn 16 25 40.7 +0.9**
CEME Cevo 4.32 91 ⇓*i*Pn **Pn 16 25 40.0 +0.2**
CEME *i* Sn **Sn 16 26 31.0 +0.9**
NKME Niksic 4.33 89 ⇑*i*Pn **Pn 16 25 40.1 +0.2**
NKME *i* Sn **Sn 16 26 31.2 +0.8**
VSL Villasalto 4.33 221 P **Pn 16 25 40.0 +0.1**
BUM Brajici-Budva 4.33 95 *e*Pn **Pn 16 25 40.2 +0.2**
BUM *i* Sn **Sn 16 26 31.2 +0.7**
HAPS Han Pijesak,BI 4.47 71 *e*Pn **Pn 16 25 42.4 +0.5**
BEHE Becsehely 4.51 35 P **Pn 16 25 44.6 +2.2**
TUE Stuetta 4.53 325 Pn **Pn 16 25 41.0 -1.8**
FETA Feichten 4.53 339 *e*Pn **Pn 16 25 44.3 +1.5**
comp=N,0.6nm,0.1s,SNR=34
DRME Dracevica, Mon 4.56 96 *e*Pn **Pn 16 25 43.5 +0.3**
DRME Dracevica, Mon 4.56 96 ⇓*i*Pn **Pn 16 25 43.4 +0.3**
DRME *i* Sn **Sn 16 26 36.8 +0.7**
WTTA Wattenberg 4.57 348 *i* Pn **Pn 16 25 44.9 +1.6**
comp=N,22nm,0.2s,SNR=38
WTTA Wattenberg 4.57 348 P **Pn 16 25 44.0 +0.6**
DAVOX Davos/Dischmat 4.58 331 Pn **Pn 16 25 44.8 +1.4**
comp=N,9.0nm,0.3s,baz=140,slow=12,SNR=115
DAVOX Sn **Sn 16 26 36.0 -0.7**
comp=N,7.9nm,0.3s,baz=282,slow=23,SNR=5.5
DAVOX LR LR 16 27 45.6
comp=N,143nm,20.9s,baz=110,slow=42
comp=N,52nm,0.6s
DAVOX Davos/Dischmat 4.58 331 P **Pn 16 25 45.0 +1.6**
TIP Timpagrande 4.58 141 ⇓P **Pn 16 25 44.7 +1.4**
TIP Timpagrande 4.58 141 **Pn 16 25 44.9 +1.5**
PDG Podgorica 4.58 93 ⇑P **Pn 16 25 43.7 +0.3**
PDG Podgorica 4.58 93 Pn **Pn 16 25 43.1 -0.3**
PDG Podgorica 4.58 93 *e*Pn **Pn 16 25 43.9 +0.6**
PDG *e*Sn **Sn 16 26 34.6 -1.8**
TTG Podgorica 4.58 93 ⇓*i*Pn **Pn 16 25 43.6 +0.3**
TTG *i* Sn **Sn 16 26 37.3 +0.9**
SQTA Sankt Quirin 4.61 344 **Pn 16 25 45.6 +1.8**
SQTA Sankt Quirin 4.61 344 P **Pn 16 25 45.6 +1.8**
SQTA Sankt Quirin 4.61 344 *i* Pn **Pn 16 25 45.6 +1.8**
comp=N,39nm,0.3s,SNR=52
ULC Ulcinj 4.65 98 *e*Pn **Pn 16 25 44.6 +0.3**
ULC *i* Sn **Sn 16 26 37.1 -1.2**
WATA Walderalm 4.65 347 **Pn 16 25 46.3 +1.8**
WATA Walderalm 4.65 347 P **Pn 16 25 46.3 +1.8**
WATA Walderalm 4.65 347 *i* Pn **Pn 16 25 46.3 +1.8**
comp=N,26nm,0.2s,SNR=34
PLE Pljevlja 4.66 81 ⇑*i*Pn **Pn 16 25 44.7 +0.2**
PLE *i* Sn **Sn 16 26 39.1 +0.5**
RUDO Rudo 4.67 78 *e*Pn **Pn 16 25 44.3 -0.4**
BBLS Lazići 4.74 75 *e*Pn **Pn 16 25 45.7 +0.1**
BBLS Lazići 4.74 75 *e*Pn **Pn 16 25 46.4 +0.8**
BBLS *e*Sn **Sn 16 26 37.9 -2.6**
KOME Kolasin 4.74 87 *e*Pn **Pn 16 25 45.8 +0.2**
KOME *i* Sn **Sn 16 26 41.1 +0.5**
MOTA Moosalm 4.75 344 **Pn 16 25 47.8 +2.0**
MOTA Moosalm 4.75 344 P **Pn 16 25 47.8 +2.0**
MOTA Moosalm 4.75 344 *e*Pn **Pn 16 25 47.8 +2.0**
comp=N,40nm,0.4s,SNR=31
ARSA Arzberg 4.77 21 *i* Pn **Pn 16 25 45.3 -0.7**
comp=N,8.2nm,0.3s,SNR=12
ARSA Arzberg 4.77 21 P **Pn 16 25 44.7 -1.2**
FUSIO Fusio 4.81 321 P **Pn 16 25 46.1 -0.6**
LMR La Mourre 4.84 278 *e*P **Pn 16 25 46.3 -0.6**
KOVH Kovagotottos 4.87 46 P **Pn 16 25 46.2 -1.1**
KOVH S **Sn 16 26 39.9 -3.7**
SCTE Santa Cesarea 4.89 122 Pn **Pn 16 25 47.6 0.0**
BIOA Bad Ischl, Aus 4.90 4 **Pn 16 25 48.4 +0.6**
BIOA **Sn 16 26 43.2 -1.2**
BIOA Bad Ischl, Aus 4.90 4 *i* Pn **Pn 16 25 48.4 +0.6**
comp=N,60nm,0.3s,SNR=48
BIOA *e*Sn **Sn 16 26 43.2 -1.2**
comp=N,254nm,0.6s
BLJ Bijeljina 4.90 64 *e*Pn **Pn 16 25 45.9 -1.8**
RJOB Jochberg 4.93 358 *e*Pn **Pn 16 25 49.1 +0.8**
RJOB *e*Sn **Sn 16 26 46.1 +0.8**
MBDF Montbardon 4.95 295 *e*P **Pn 16 25 49.3 +0.7**
MBDF *e*Sn **Sn 16 26 41.8 -4.0**
comp=N,131nm,0.8s
RETA Reutte 4.96 342 *i* Pn **Pn 16 25 50.6 +2.0**
comp=N,30nm,0.4s,SNR=30
TEKS Tekeris 5.00 67 *e*Pn **Pn 16 25 45.5 -3.6**
DAVA Damuels 5.02 334 *e*Pn **Pn 16 25 51.5 +2.0**
comp=N,34nm,0.4s,SNR=34
IVA Berane 5.02 87 *e*Pn **Pn 16 25 49.7 +0.3**
IVA *i* Sn **Sn 16 26 47.8 +0.4**
LSD Lago del Serru 5.03 304 P **Pn 16 25 48.8 -1.0**
PVY Plav 5.08 90 *e*Pn **Pn 16 25 50.6 +0.3**
PVY *i* Sn **Sn 16 26 49.3 +0.3**
SJES Sjenica 5.08 83 *e*Pn **Pn 16 25 51.3 +1.0**
SJES *e*Sn **Sn 16 26 45.8 -3.2**
MOA Molln 5.11 9 *e*Pn **Pn 16 25 50.7 0.0**
MOA *e*Sn **Sn 16 26 47.7 -1.9**
MOA Molln 5.11 9 *i* Pn **Pn 16 25 51.0 +0.3**
comp=N,7.6nm,0.2s,SNR=16
MOA *e*Sn **Sn 16 26 50.2 +0.6**
comp=N,53nm,0.4s
DIVS Divibare 5.20 73 **Pn 16 25 51.8 -0.2**
DIVS Divibare 5.20 73 *e*Pn **Pn 16 25 52.1 +0.2**

DIVS Divibare 5.20 73 *e*Pn **Pn 16 25 52.1 +0.2**
MORH Mrgy, Hungar 5.24 48 ⇑P **Pn 16 25 51.9 -0.5**
MORH Mrgy, Hungar 5.24 48 P **Pn 16 25 51.6 -0.8**
TIR Tirane 5.26 104 Pn 16 25 52.8 +0.1
TIR Tirane 5.26 104 P **Pn 16 25 53.3 +0.6**
TIR Tirane 5.26 104 *e*Pn **Pn 16 25 53.3 +0.6**
TIR *e*Sn **Sn 16 26 52.0 -1.3**
TIR Tirane 5.26 104 P **Pn 16 25 52.8 +0.1**
LPG La Plagne 5.28 303 *e*P **Pn 16 25 55.1 +1.8**
LPG La Plagne 5.28 303 *e*Pg **Pg 16 26 13.2 -2.2**
UBR Ueberruh 5.30 338 *e*Pn **Pn 16 25 54.7 +1.4**
UBR *e*Sn **Sn 16 26 57.1 +2.7**
LPL La Plagne 5.30 303 *e*P **Pn 16 25 54.9 +1.4**
LPL *e*Sn **Sn 16 26 49.7 -5.0**
comp=N,88nm,0.7s
LPL La Plagne 5.30 303 P **Pn 16 25 53.7 +0.2**
TIH Tihany 5.34 38 P **Pn 16 25 56.0 +2.3**
MPLH Magyarpolny 5.39 34 P **Pn 16 25 53.3 -1.2**
RONA Rosalia, Austr 5.39 24 Pn 16 25 54.2 -0.4
RONA **Sn 16 26 56.8 +0.2**
RONA Rosalia, Austr 5.39 24 *i* Pn **Pn 16 25 54.2 -0.4**
comp=N,14nm,0.5s,SNR=14
RONA *e*Sn **Sn 16 26 56.8 +0.2**
comp=N,16nm,0.3s
FRGS Fruska Gora 5.40 62 ⇓P **Pn 16 25 56.7 +2.0**
FRGS Fruska Gora 5.40 62 *e*Pn **Pn 16 25 53.8 -0.8**
FRGS Fruska Gora 5.40 62 *e*Pn **Pn 16 25 54.2 -0.4**
VAE Valguarnera 5.42 169 Pn **Pn 16 25 54.8 -0.2**
comp=N,1.0nm,0.3s,baz=333,slow=18,SNR=2.2
comp=N,12nm,0.7s
SENIN Lac Senin/Sane 5.44 313 Pn **Pn 16 25 56.9 +1.5**
SOP Sopron 5.46 26 P **Pn 16 25 54.7 -0.7**
CONA Conrad Observa 5.48 20 *i* Pn **Pn 16 25 55.4 -0.5**
comp=N,12nm,0.3s,SNR=26
CONA *e*Sn **Sn 16 26 57.5 -1.3**
comp=N,12nm,0.3s
FUR Furstenfeldbru 5.50 347 *e*Sn **Sn 16 26 59.6 +0.3**
EGYH Egyhazaskeszo 5.51 32 P **Pn 16 25 55.8 -0.3**
TRUS Trudelj 5.52 73 *e*Pn **Pn 16 25 56.2 0.0**
PHP Peshkopia 5.58 99 P **Pn 16 25 58.6 +1.4**
SMRF Simiane la Rot 5.59 285 *e*P **Pn 16 25 58.4 +1.2**
ORIF Oris-en-Rattie 5.61 295 *e*P **Pn 16 25 59.7 +2.1**
ORIF *e*Sn **Sn 16 26 56.1 -6.0**
comp=N,97nm,0.8s
GRUS Gruza 5.68 76 *e*Pn **Pn 16 25 58.8 +0.4**
SELS Selova 5.91 83 *e*Pn **Pn 16 26 01.4 -0.3**
SELS *e*Sn **Sn 16 27 07.3 -2.1**
KEK Kerkira 5.94 119 Pn 16 26 03.0 +1.0
KEK Kerkira 5.94 119 P **Pn 16 26 02.9 +0.9**
SRN Sarande 5.98 117 P **Pn 16 26 03.4 +0.9**
OHR Ohrid 6.00 104 *i* Pn **Pn 16 26 04.3 +1.4**
GEC2 GERESS Array S 6.05 4 Pn 16 26 02.9 -0.7
GEC2 GERESS Array S 6.05 4 *e*Pn **Pn 16 26 02.9 -0.7**
GEC2 *e*Sn **Sn 16 27 11.8 -1.1**
GERES GERESS Array B 6.05 4 Pn **Pn 16 26 00.5 -3.2**
comp=N,2.6nm,0.3s,baz=173,slow=13,SNR=78
GERES Sn **Sn 16 27 10.8 -2.2**
comp=N,8.5nm,0.3s,baz=180,slow=24,SNR=3.9
GERES LR LR 16 29 13.1
comp=N,158nm,21.4s,baz=190,slow=46
GERES GERESS Array B 6.05 4 Pn 16 26 01.9 -1.8
GERES GERESS Array B 6.05 4 P **Pn 16 26 01.9 -1.8**
CKRC Cesky Krumlov 6.07 8 *e*PN **Pn 16 26 02.9 -1.0**
CKRC *e*SN **Sn 16 27 10.5 -2.8**
ZST Bratislava 6.09 26 *e* **Pn 16 26 03.2 -0.8**
ZST 16 27 10.1
LSK Leskovik 6.25 113 P **Pn 16 26 07.0 +0.7**
SKO Skopje 6.25 95 *i* Pn **Pn 16 26 07.1 +0.8**
CABF La Chapelle 6.26 310 *e*P **Pn 16 26 08.3 +1.8**
MODS Modra-Piesok 6.30 26 *e*P **Pn 16 26 05.7 -1.3**
KHC Kasperske Hory 6.33 3 Pn 16 26 06.4 -1.1
KHC Kasperske Hory 6.33 3 P **Pn 16 26 06.4 -1.1**
KHC Kasperske Hory 6.33 3 *e*PN **Pn 16 26 06.4 -1.1**
KHC *e*SN **Sn 16 27 18.3 -1.4**
WET Wettzell 6.34 359 *e*Pn **Pn 16 26 06.4 -1.1**
WET *e*Sn **Sn 16 27 15.9 -3.9**
BOVS Bovan 6.36 80 ⇓P **Pn 16 26 07.5 -0.3**
IGT Igoumenitsa 6.38 118 P **Pn 16 26 09.1 +1.0**
VIVF Saint-Julien-l 6.41 291 *e*P **Pn 16 26 09.8 +1.3**
VIVF *e*Sn **Sn 16 27 19.6 -2.1**
comp=N,11nm,0.6s
BARS Barje 6.43 87 *e*Pn **Pn 16 26 08.7 -0.1**
NEST Nestorio 6.44 109 P **Pn 16 26 10.6 +1.6**
BFO Black Forest 6.45 331 Pn 16 26 07.0 -2.0
BFO Black Forest 6.45 331 P **Pn 16 26 07.0 -2.0**
BFO Black Forest 6.45 331 *e*Pn **Pn 16 26 08.8 -0.2**
BFO Black Forest 6.45 331 P **Pn 16 26 10.7 +1.7**
KUBS Kucevo 6.45 73 *e*Pn **Pn 16 26 09.3 +0.3**
SMOL Smolenice 6.47 27 *e*P **Pn 16 26 09.5 +0.2**
SMOL *e* 16 27 22.0
MDVR Moldovita 6.56 70 ⇑P **Pn 16 26 12.9 +2.4**
PENT Pentalofos 6.59 111 P **Pn 16 26 13.3 +2.2**
SSB Saint Sauveur 6.62 295 Pn 16 26 12.1 +0.6
SSB Saint Sauveur 6.62 295 P **Pn 16 26 12.1 +0.6**
HINF Hinteralfeld 6.66 321 *e*P **Pn 16 26 12.1 +0.2**
HINF *e*Sn **Sn 16 27 24.5 -3.2**
comp=N,81nm,0.6s
JAN Janina 6.66 116 P **Pn 16 26 12.4 +0.5**
KRUC Moravsky 6.67 19 *e*PN **Pn 16 26 10.3 -1.7**
KRUC *e*SN **Sn 16 27 25.0 -2.9**
BZS Buzias 6.75 63 ⇑P **Pn 16 26 14.7 +1.6**
BZS Buzias 6.75 63 ⇑P **Pn 16 26 14.7 +1.6**
ZAGS Zajecar 6.76 78 *e*Pn **Pn 16 26 12.2 -1.0**
ZAGS *e*Sn **Sn 16 27 26.0 -4.1**
ECH Echery 6.82 325 Pn 16 26 13.9 -0.2
ECH Echery 6.82 325 P **Pn 16 26 13.9 -0.2**
LASF Ste Croix 6.83 284 *e*P **Pn 16 26 14.9 +0.7**
JAVC Velka Javorina 6.85 26 *e*PN **Pn 16 26 14.0 -0.6**
KPRO Kipourio 6.86 112 P **Pn 16 26 16.6 +1.9**
CDF Champ du Feu 6.92 326 *e*P **Pn 16 26 15.1 -0.5**
CDF *e*Sn **Sn 16 27 28.9 -5.4**
comp=N,72nm,0.6s
VRAC Vranov 6.95 19 Pn **Pn 16 26 14.4 -1.4**
comp=N,0.6nm,0.3s,baz=205,slow=12,SNR=8.1
VRAC Sn **Sn 16 27 30.9 -3.9**
comp=N,1.7nm,0.3s,baz=281,slow=19,SNR=4.4
VRAC LR LR 16 28 45.9
comp=N,85nm,20.0s,baz=216,slow=36
VRAC Vranov 6.95 19 *e*PN **Pn 16 26 13.4 -2.4**
VRAC *e*SN **Sn 16 27 30.2 -4.6**
VYHS Vyhne 6.97 33 *e*P **Pn 16 26 16.8 +0.6**
VYHS *e* 16 27 34.5
KZN Kozani 6.99 108 P **Pn 16 26 17.0 +0.5**
ROTZ Rotzenmuhle 6.99 355 *e*Pn **Pn 16 26 15.4 -0.9**
ROTZ *e*Sn **Sn 16 27 34.0 -5.1**
TSLK Tsoukalades, L 6.99 122 P **Pn 16 26 18.2 +1.7**
GRF Grafenberg Arr 7.00 350 *e*Sn **Sn 16 27 33.9 -2.3**
ZAPS Zavoj 7.02 83 *e*Pn **Pn 16 26 17.3 +0.4**
ZAPS *e*Sn **Sn 16 27 33.6 -3.1**
HAU Haudompre 7.03 320 *e*P **Pn 16 26 16.9 -0.1**
HAU *e*Sn **Sn 16 27 31.2 -5.6**
comp=N,35nm,0.3s
DRAG Dragano-Lefkad 7.03 123 P **Pn 16 26 18.1 +1.1**
BLKB Belogradchik 7.06 80 ⇓P **Pn 16 26 18.0 +0.5**
HERR Herculane 7.07 70 ⇓P **Pn 16 26 18.9 +1.4**
NYDR Nydri-Lefkada 7.09 123 P **Pn 16 26 18.9 +1.1**
DJES Djerdap 7.09 72 ⇓P **Pn 16 26 20.1 +2.2**
EVGI Lefkada island 7.12 123 P **Pn 16 26 19.2 +1.0**
KEF3 Kipouria, Keph 7.20 127 P **Pn 16 26 20.8 +1.4**
GRG Griva 7.20 102 P **Pn 16 26 19.9 +0.5**
GOPC GO Pecny, Ondr 7.21 9 *e*P **Pn 16 26 17.8 -1.6**
GOPC GO Pecny, Ondr 7.21 9 *e*PN **Pn 16 26 17.8 -1.6**
MANZ Manzenberg 7.21 355 *e*Pn **Pn 16 26 19.9 +0.4**
MANZ *e*Sn **Sn 16 27 36.8 -4.6**
VAY Valandovo 7.22 99 *i* Pn **Pn 16 26 20.3 +0.6**
MAHO Mahon 7.24 249 Pn **Pn 16 26 20.1 +0.3**
PRU Pruhonice 7.25 8 *e*P **Pn 16 26 18.6 -1.4**
PRU *e* 16 27 40.1
PRU Pruhonice 7.25 8 *e*PN **Pn 16 26 18.6 -1.4**
PRU *e*SN **Sn 16 27 40.1 -2.2**
MAUC Maruska 7.34 25 *e*PN **Pn 16 26 20.9 -0.4**
VLS Valsamata 7.36 126 P **Pn 16 26 22.6 +1.0**
PSDA Pessada-Kefalo 7.40 127 P **Pn 16 26 23.1 +1.0**
NKC Novy Kostel 7.44 357 *e*P **Pn 16 26 22.5 -0.1**
NKC *e* 16 27 45.8
NKC Novy Kostel 7.44 357 *e*PN **Pn 16 26 22.5 -0.1**
NKC *e*SN **Sn 16 27 45.8 -1.1**
GZR Gura Zlata 7.45 66 ⇑P **Pn 16 26 24.6 +1.8**
KKB Krupnik 7.48 94 *e*P **Pn 16 26 24.1 +0.9**
THL Klokotos Trika 7.48 113 P **Pn 16 26 25.3 +2.1**
VTS Vitosha 7.49 88 ⇑P **Pn 16 26 23.9 +0.5**
VTS Vitosha 7.49 88 ⇑P **Pn 16 26 23.5 0.0**
VTS Vitosha 7.49 88 ⇑P **Pn 16 26 23.9 +0.5**
VTS Vitosha 7.49 88 *e*P **Pn 16 26 24.2 +0.8**
WERN Wernitzgruen 7.50 357 *e*Pn **Pn 16 26 23.5 +0.1**
KNT Kendrikon 7.50 99 P **Pn 16 26 23.1 -0.4**
GUNZ Gunzen 7.58 356 *e*Pn **Pn 16 26 23.9 -0.6**
GUNZ *e*Sn **Sn 16 27 49.4 -0.9**
SMF Signal de Mont 7.61 303 *e*P **Pn 16 26 24.2 -0.8**
SMF *e*Sn **Sn 16 27 46.1 -5.0**
comp=N,42nm,0.7s
TANN Tannenbergstha 7.62 357 *e*Pn **Pn 16 26 25.6 +0.4**
TANN *e*Sn **Sn 16 27 49.2 -2.2**
MORC Moravsky Berou 7.62 22 ⇑P **Pn 16 26 25.2 0.0**
MORC Moravsky Berou 7.62 22 Pn 16 26 22.9 -2.3
MORC Moravsky Berou 7.62 22 ⇑P **Pn 16 26 25.2 0.0**
MORC Moravsky Berou 7.62 22 *e*PN **Pn 16 26 23.1 -2.1**
MORC *e*SN **Sn 16 27 49.5 -2.0**
KEST Kesra 7.63 203 Pn **Pn 16 26 25.1 -0.3**
comp=N,0.1nm,0.3s,baz=43,slow=19,SNR=0.8
comp=N,2.0nm,0.6s
WERD Werda 7.66 356 *e*Pn **Pn 16 26 25.6 0.0**
EVR Evrytania 7.68 118 P **Pn 16 26 28.3 +2.3**
DEV Deva 7.69 63 ⇓P **Pn 16 26 27.7 +1.7**
DEV Deva 7.69 63 ⇓P **Pn 16 26 27.7 +1.7**
KECS Kecovo 7.69 40 *e*P **Pn 16 26 28.1 +2.1**
PLN Plauen 7.71 356 *e*Pn **Pn 16 26 26.2 -0.1**
KRLC Kraliky 7.71 18 *e*P **Pn 16 26 26.0 -0.3**
KRLC Kraliky 7.71 18 *e*PN **Pn 16 26 26.0 -0.3**
PAGF Fort de Pagny 7.71 321 *e*P **Pn 16 26 26.9 +0.6**
baz=143
PAGF *e*Sn **Sn 16 27 47.5 -6.1**
comp=N,136nm,1.0s
SFTF Sexfontaines 7.80 316 *e*P **Pn 16 26 27.4 -0.2**
baz=132
SFTF *e*Sn **Sn 16 27 49.8 -6.1**
comp=N,40nm,0.7s
MPEP Malo Peshtene 7.83 82 *e*P **Pn 16 26 28.6 +0.6**
MAKR Makrakomi, Fth 7.84 116 P **Pn 16 26 29.7 +1.6**
DPC Dobruska-Polom 7.87 15 *e*P **Pn 16 26 27.3 -1.2**
DPC Dobruska-Polom 7.87 15 *e*PN **Pn 16 26 27.3 -1.2**
LOR Lormes 7.90 308 *e*P **Pn 16 26 29.0 0.0**
baz=125
LOR *e*Sn **Sn 16 27 51.6 -6.7**
comp=N,20nm,0.4s
MOX Moxa 7.90 353 P **Pn 16 26 28.7 -0.3**
MOX Moxa 7.90 353 *e*Pn **Pn 16 26 28.0 -1.0**
MOX *e*Sn **Sn 16 27 53.4 -4.9**
DRGR 7.93 57 ⇑P **Pn 16 26 30.6 +1.3**
DRGR 7.93 57 ⇑P **Pn 16 26 30.6 +1.3**
UPC Upice 7.96 14 *e*P **Pn 16 26 29.4 -0.4**
UPC Upice 7.96 14 *e*PN **Pn 16 26 29.4 -0.4**
MTLF Montolieu 7.97 278 *e*P **Pn 16 26 32.6 +2.7**
AVF Avril sur Loir 7.97 303 *e*P **Pn 16 26 30.1 +0.2**
MEZF Maizieres J'vi 8.00 318 *e*P **Pn 16 26 30.5 +0.3**
baz=137
MEZF *e*Sn **Sn 16 27 53.7 -6.9**
comp=N,77nm,0.9s
MMB Musomiste 8.01 95 *e*P **Pn 16 26 31.4 +1.0**
SSF Saint Saulge 8.01 305 *e*P **Pn 16 26 30.2 -0.2**
SSF *e*Sn **Sn 16 27 55.3 -5.6**
comp=N,11nm,0.5s
SRS Serrai 8.02 99 P **Pn 16 26 31.1 +0.5**
SAVF Savonnieres en 8.04 319 *e*P **Pn 16 26 33.3 +2.5**
baz=131
SAVF *e*Sn **Sn 16 27 55.0 -6.6**
comp=N,7.6nm,0.4s
OSTC Ostas 8.04 14 *e*PN **Pn 16 26 30.2 -0.7**
BRG Berggiesshubel 8.09 4 *e*P **Pn 16 26 29.6 -1.9**
BRG *e* 16 27 59.5
BRG pmax pmax
comp=Z,3.0nm,0.7s
BRG MLR MLR
comp=Z,456nm,17.9s
BRG MLR MLR
comp=N,193nm,18.5s
BRG MLR MLR
comp=E,301nm,19.5s
BRG Berggiesshubel 8.09 4 *e*Pn **Pn 16 26 31.9 +0.4**
FBE Freiberg 8.12 1 *e*Pn **Pn 16 26 31.0 -0.9**
FBE *e*Sn **Sn 16 27 58.0 -5.6**
NVR Nevrokopi 8.16 97 P **Pn 16 26 32.7 +0.2**
CAF Calviac 8.23 289 *e*P **Pn 16 26 34.3 +0.7**
CAF Calviac 8.23 289 P **Pn 16 26 34.2 +0.7**
MESR Meseseni 8.24 55 ⇑P **Pn 16 26 35.6 +2.1**
WLF Walferdange 8.37 327 Pn 16 26 35.3 0.0
WLF Walferdange 8.37 327 P **Pn 16 26 35.3 0.0**
WLF Walferdange 8.37 327 *d*P **Pn 16 26 34.9 -0.3**
WLF Walferdange 8.37 327 *e*Pn **Pn 16 26 37.3 +2.0**
PLVB Pleven 8.47 82 ⇑P **Pn 16 26 37.5 +0.7**
TCF Toulx Ste Croi 8.50 298 *e*P **Pn 16 26 40.0 +2.8**
CLL Collm 8.50 360 Pn 16 26 36.5 -0.6
CLL Collm 8.50 360 *e*P **Pn 16 26 36.0 -1.2**
CLL Collm 8.50 360 *e*Pn **Pn 16 26 36.0 -1.2**
CLL *ex* x 16 26 39.0
CLL *ex* x 16 26 49.0
CLL *e*Sn Sn 16 27 58.0 -15
CLL *ex* x 16 28 12.0
CLL *ex* x 16 28 22.0
CLL *ex* x 16 28 45.0
CLL *e*Sg **Sg 16 29 02.0 -4.9**
comp=Z,37nm,1.1s
CLL *e*Sgmax 16 29 15.0
comp=Z,93nm,1.2s
CLL Collm 8.50 360 *e*Pn **Pn 16 26 36.6 -0.6**
TRPA Tarpa 8.52 48 ⇓P **Pn 16 26 39.2 +1.8**
TRPA Tarpa 8.52 48 P **Pn 16 26 41.5 +4.2**
UZH Uzhgorod 8.69 45 *e*P **Pn 16 26 43.7 +4.0**
UZH *i* S **Sn 16 28 22.0 +4.5**
RJF Les Rejaudoux 8.69 291 *e*P **Pn 16 26 41.5 +1.7**
ARR Arges 8.71 69 ⇑P **Pn 16 26 43.2 +3.1**
STHS Stebnicka Huta 8.71 38 *e*P **Pn 16 26 40.5 +0.5**
RZN Rozhen 8.71 93 *e*P **Pn 16 26 40.6 +0.4**
KOLS Kolonicke sedl 8.87 43 *e*P **Pn 16 26 46.4 +4.2**
BHOU Houvegnez 8.98 330 *dx* x 16 26 48.4
BHOU *d*PP Pg 16 27 11.2 -15
KASTN Kahler Asten 8.98 341 *e*Pn **Pn 16 26 44.3 +0.6**
VOIR 9.01 69 ⇑P **Pn 16 26 46.7 +2.5**
VOIR 9.01 69 ⇑P **Pn 16 26 46.7 +2.5**
ARCR ARCALIA 9.07 58 ⇑P **Pn 16 26 47.5 +2.5**
RCHB Rochefort 9.12 326 *d*P **Pn 16 26 46.0 +0.4**
LFF La Frestale 9.16 288 *e*P **Pn 16 26 47.8 +1.6**
LFF La Frestale 9.16 288 P **Pn 16 26 48.0 +1.8**
MEM Membach 9.19 331 *d*P **Pn 16 26 48.0 +1.5**
DIM Dimitrovgrad 9.25 90 *e*P **Pn 16 26 48.2 +0.8**
GIVF Givet 9.25 325 *e*P **Pn 16 26 49.1 +1.7**
BCLA Clavier 9.30 328 *d*P **Pn 16 26 49.2 +1.2**
DOU Dourbes 9.34 324 *d*P **Pn 16 26 49.5 +0.8**
EPF Esparros 9.35 276 *e*P **Pn 16 26 51.3 +2.5**
DOPR Dopca 9.37 66 ⇑P **Pn 16 26 51.3 +2.3**
BMRD Maredsous 9.42 326 *d*P **Pn 16 26 50.5 +0.8**
BAIF Baives 9.48 323 *e*P **Pn 16 26 54.7 +4.1**
MLR Muntele Rosu 9.63 69 ⇑P **Pn 16 26 54.7 +1.9**
MLR Muntele Rosu 9.63 69 Pn Pn 16 26 56.0 +3.2
comp=Z,0.7nm,0.3s,baz=191,slow=10,SNR=9.3
MLR LR LR 16 30 34.0
comp=Z,222nm,21.7s,baz=262,slow=37
comp=Z,7.8nm,0.7s
MLR Muntele Rosu 9.63 69 ⇑P **Pn 16 26 54.7 +1.9**
OZUR 9.67 66 ⇑P **Pn 16 26 55.5 +2.4**
BURAR Bucovina Array 9.82 57 ⇑P **Pn 16 26 58.1 +2.7**
BURAR Bucovina Array 9.82 57 ⇑P **Pn 16 26 58.1 +2.7**
RAZG Razgrad 9.85 81 ⇓P **Pn 16 26 55.8 +0.2**
NEHR Nehoiu 9.86 70 ⇓P **Pn 16 26 59.9 +4.0**
ETSF Etsaut 10.01 275 *e*P Pn 16 27 03.9 +5.9
BIZ Bicaz 10.13 61 ⇓P **Pn 16 27 01.8 +2.3**
BISRR Bisoca 10.17 70 ⇑P **Pn 16 26 58.8 -1.4**
PLOR Plostina 10.19 68 ⇑P **Pn 16 27 02.7 +2.3**
PLOR Plostina 10.19 68 ⇑P **Pn 16 27 02.7 +2.3**
VRI Vrincioaia 10.25 68 ⇑P **Pn 16 27 02.0 +0.9**
VRI Vrincioaia 10.25 68 ⇑P **Pn 16 27 02.0 +0.9**
LVV L'vov 10.32 43 *e*P **Pn 16 26 59.7 -2.3**
LVV MLR MLR
comp=Z,600nm,7.0s
SJPF Ste Jean 10.49 277 *e*P **Pn 16 27 07.5 +3.1**
CFR Carcaliu 11.11 73 ⇓P **Pn 16 27 13.1 +0.2**
CFR Carcaliu 11.11 73 ⇓P **Pn 16 27 13.1 +0.2**
TPGR Topolog 11.28 74 ⇓P **Pn 16 27 17.1 +1.9**
IDI Anoyia 11.86 125 Pn **Pn 16 27 21.8 -1.4**
comp=Z,0.5nm,0.3s,baz=318,slow=14,SNR=2.0
IDI Sn **Sn 16 29 29.1 -6.4**
comp=Z,0.6nm,0.3s,baz=319,slow=20,SNR=1.2
IDI LR LR 16 33 17.8
comp=Z,104nm,18.2s,baz=301,slow=44
comp=Z,7.1nm,0.8s
ESDC Sonseca Array 13.20 262 Pn **Pn 16 27 39.3 -2.2**
comp=Z,0.1nm,0.3s,baz=64,slow=14,SNR=9.5
ESDC LR LR 16 32 05.8
comp=Z,168nm,21.0s,baz=78,slow=35
comp=Z,1.2nm,0.8s
AKASG Malin Array Be 13.58 49 Pn **Pn 16 27 46.7 +0.2**
comp=Z,1.2nm,0.7s,baz=244,slow=12,SNR=2.0
AKASG LR LR 16 32 47.6
comp=Z,122nm,19.4s,baz=234,slow=36
AKBB Malin Array Si 13.58 49 *i* P **Pn 16 27 48.2 +1.6**
ISP Isparta 14.21 105 *i* P **Pn 16 27 58.8 +3.4**
ISP pmax pmax
comp=Z,19nm,2.4s
NACGM Naroch 15.06 32 *e*P **Pn 16 28 07.3 +0.6**
comp=Z,8.0nm,0.9s,baz=221
MNK Minsk 15.21 35 *i* P Pn 16 27 57.0 -12
MNK *i* SS **Sn 16 30 51.5 -5.6**
MNK pmax pmax
comp=N,16nm,0.8s
MNK pmax pmax
comp=Z,4.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK MLR MLR
comp=N,166nm,14.0s
MNK MLR MLR
comp=Z,139nm,12.0s
MNK MLR MLR
comp=E,19nm,10.0s
BR131 Keskin Array S 15.77 94 *i* P **P 16 28 18.2 -2.0**
BRTR Keskin Array B 15.77 94 Pn **P 16 28 18.6 -1.6**
comp=E,0.1nm,0.3s,baz=290,slow=12,SNR=4.2
BRTR LR LR 16 34 11.4
comp=E,100nm,21.5s,baz=300,slow=36
comp=E,0.8nm,0.7s
EKA Eskdalemuir Ar 16.38 326 Pn **Pn 16 28 22.9 -1.0**
baz=135,slow=14
comp=E,0.4nm,0.4s
KONO Kongsberg 17.00 354 *i* P **P 16 28 33.1 -0.4**
KONO pmax pmax
comp=Z,17nm,1.2s
HFS Hagfors 17.35 1 P **P 16 28 37.7 +0.3**
comp=Z,0.2nm,0.3s,baz=170,slow=8.8,SNR=3.3
comp=Z,3.4nm,0.9s
ANN Anapa 17.68 75 *e*P **Pn 16 28 38.6 -1.7**
ANN pmax pmax
comp=Z,101nm,1.1s
VSU Vasula 17.85 24 *i* P **P 16 28 44.5 +1.6**
VSU pmax pmax
comp=Z,37nm,0.9s
NOA NORSAR Array B 18.29 357 P **P 16 28 48.0 +0.1**
baz=176,slow=11,SNR=6.1
NOA LR LR 16 36 39.0
comp=Z,68nm,18.3s,baz=285,slow=40
comp=Z,2.3nm,0.9s
NOA NORSAR Array B 18.29 357 P **P 16 28 48.0 +0.1**
VSR Storozhevoye 19.60 56 *e*P **P 16 29 01.0 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s
OBN Obninsk 19.62 43 P **P 16 29 02.3 0.0**
comp=Z,0.4nm,0.3s,baz=234,slow=14,SNR=2.0
OBN LR LR 16 38 33.1
comp=Z,29nm,18.6s,baz=178,slow=43
comp=Z,3.1nm,0.5s
OBN Obninsk 19.62 43⇑*e*P **Pn 16 29 04.3 +0.6**
OBN pmax pmax
comp=Z,35nm,1.3s
OBN MLR MLR
comp=Z,123nm,17.0s
OBN Obninsk 19.62 43 P **Pn 16 29 08.7 +4.9**
VORR Voronezh 19.75 54 *e*P **P 16 28 58.3 -5.5**
VORR pmax pmax
comp=Z,80nm,0.5s
LPSR Galich'ya Gora 19.87 52 *e*P **Pn 16 29 06.0 -0.7**
LPSR pmax pmax
comp=Z,9.0nm,0.5s
MMAI Mount Meron Ar 20.10 112 P **P 16 29 08.5 +0.6**
comp=Z,8.1nm,0.6s
comp=Z,8.1nm,0.6s
FINES FINESS Array B 20.23 18 P **P 16 29 08.9 0.0**
comp=Z,4.9nm,0.7s,baz=202,slow=8.3,SNR=14
comp=Z,4.9nm,0.7s
MOS Moscow 20.45 42 *e*P **P 16 29 11.6 +0.2**
MOS pmax pmax
comp=Z,37nm,1.2s
VRH Novokhopyorsk 21.16 57 *e*P **P 16 29 19.7 +0.6**
VRH pmax pmax
comp=Z,40nm,0.8s
VALR Valaam 21.43 24 *i* P **P 16 29 23.4 +1.5**
VALR pmax pmax
comp=Z,39nm,0.9s
KIV Kislovodsk 21.51 77 P **P 16 29 23.0 0.0**
KIV IAmb IAmb 16 29 31.3
comp=Z,36nm,1.2s
KIV Kislovodsk 21.51 77 *e*P **P 16 29 24.1 +1.1**
KIV pmax pmax
comp=Z,29nm,1.1s
KIV MLR MLR
comp=Z,25nm,14.0s
KIV Kislovodsk 21.51 77 P **P 16 29 26.0 +2.9**
SHA1 Shidzhatmaz 21.51 77 *i* P **P 16 29 25.0 +1.7**
ASF Jabal al Asfar 21.61 112 P **P 16 29 25.6 +1.3**
comp=Z,6.1nm,0.7s,baz=307,slow=6.5,SNR=11
comp=Z,6.1nm,0.7s
NEY Neytrino 21.63 79 *i* P **P 16 29 26.2 +1.7**
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 21.69 77 P **P 16 29 25.7 +0.8**
comp=Z,7.7nm,0.9s,baz=314,slow=7.5,SNR=10
KBZ LR LR 16 39 02.3
comp=Z,56nm,18.5s,baz=314,slow=40
comp=Z,7.7nm,0.9s
KBZ Khabaz 21.69 77*ce*P **P 16 29 26.6 +1.8**
KBZ pmax pmax
comp=Z,13nm,1.0s
EIL Elat 21.91 120 P **P 16 29 28.0 +0.7**
comp=Z,3.8nm,0.9s,baz=336,slow=12,SNR=2.1
comp=Z,3.8nm,0.9s
ZEI Tsey 22.56 79 *e*P **P 16 29 38.9 +4.4**
ZEI pmax pmax
comp=Z,14nm,1.5s
GNI Garni 23.80 86 P **P 16 29 48.4 +1.3**
comp=Z,3.2nm,0.6s,baz=288,slow=3.2,SNR=3.3
comp=Z,3.2nm,0.6s
GNI Garni 23.80 86 P **P 16 29 44.8 -2.3**
GNI Garni 23.80 86*ce*P **P 16 29 46.9 -0.2**
GNI pmax pmax
comp=Z,13nm,1.7s
GNI Garni 23.80 86 P P 16 29 56.5 +9.4
KLMR Klimovskoe 24.08 32 *e*P **P 16 29 48.6 -0.7**
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 24.08 32 *e*P **P 16 29 48.6 -0.7**
KLMR AMP 16 29 58.3
comp=Z,25nm,1.4s
BELG Belogornoye 24.98 55 P **P 16 29 59.4 +1.9**
comp=Z,53nm,0.8s,baz=271,slow=3.3,SNR=10
BELG Belogornoye 24.98 55 *i* P **P 16 29 59.4 +1.9**
BELG pmax pmax
comp=Z,11nm,0.9s
AKT Akhty 25.63 81 *e*P **P 16 30 07.1 +3.4**
AKT *e* 16 30 43.7
AKT pmax pmax
comp=Z,18nm,1.3s
PRGR Permogore 26.99 34 *e*P **P 16 30 12.5 -3.1**
PRGR pmax pmax
comp=Z,12nm,1.4s
KIRV Kirov 27.47 42 *i* P **P 16 30 21.8 +1.9**
TOA0 Torodi Ar. Sit 31.15 202 P **P 16 30 50.8 -2.2**
TOA0 IAmb IAmb 16 30 54.1
comp=Z,6.9nm,1.1s
TORD Torodi Ar. Bea 31.15 202 P **P 16 30 53.2 +0.1**
comp=Z,3.3nm,0.8s,baz=17,slow=8.9,SNR=18
TORD PcP **PcP 16 33 46.3 -1.8**
comp=Z,0.4nm,0.7s,baz=8.5,slow=2.9,SNR=2.8
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 31.15 202 P **P 16 30 52.6 -0.4**
TORD IAmb IAmb 16 30 54.5
comp=Z,5.2nm,1.1s
AKTO Aktyubinsk 31.39 60 LR LR 16 45 52.0
comp=Z,29nm,18.5s,baz=139,slow=41
ARU Arti 31.83 49 LR LR 16 46 35.6
comp=Z,122nm,18.9s,baz=264,slow=41
ARU Arti 31.83 49 P **P 16 30 58.7 +0.1**
ARU Arti 31.83 49*c i*P **P 16 30 59.3 +0.6**

ARU 16 32 00.6
ARU S **S** **16 36 10.4 +1.7**
ARU SS **SnSn** **16 37 54.6 -1.5**
ARU pmax pmax
comp=Z,11nm,0.8s
ABKAR Akbulak array 32.74 62 P **P** **16 31 06.7 0.0**
SVE Sverdlovsk 33.01 48 *e*P **P** **16 31 09.6 +0.6**
GEYT Alibeck 34.35 83 P **P** **16 31 22.4 +1.5**
comp=Z,3.2nm,0.7s,baz=282,slow=8.9,SNR=7.0
comp=Z,3.2nm,0.7s
GEYT Alibeck 34.35 83 P **P** **16 31 21.1 +0.2**
GEYT IAmb IAmb 16 31 47.3
comp=Z,6.0nm,1.1s
BRVK Borovoye 38.70 54 P **P** **16 31 57.7 -0.1**
BRVK IAmb IAmb 16 32 00.8
comp=Z,10nm,0.7s
BRVK Borovoye 38.70 54*c*e**P** **P** **16 31 59.4 +1.6**
BRVK pmax pmax
comp=Z,14nm,1.0s
BRVK Borovoye 38.70 54 P **P** **16 31 59.9 +2.0**
KK31 Karatay Array 41.31 69 P **P** **16 32 20.8 +1.1**
KK31 Karatay Array 41.31 69 P **P** **16 32 20.8 +1.1**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.31 69 P **P** **16 32 20.4 +0.7**
KKAR Karatay Array 41.31 69 P **P** **16 32 20.4 +0.7**
WSAR Wadi Sarin 42.30 103 LR LR 16 54 43.9
comp=Z,37nm,18.1s,baz=358,slow=43
AAK Ala-Archa 44.22 68 LR LR 16 54 28.9
comp=Z,44nm,18.0s,baz=265,slow=40
AAK Ala-Archa 44.22 68 *i* P **P** **16 32 45.1 +1.7**
AAK pmax pmax
comp=Z,3.0nm,0.9s
AAK Ala-Archa 44.22 68 P **P** **16 32 48.0 +4.6**
KURK Kurchatov 44.25 56*c*e**P** **P** **16 32 45.0 +1.7**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 44.25 56 P **P** **16 32 44.8 +1.5**
BOOM Boomskoye usch 45.26 68 P **P** **16 32 50.3 -1.4**
BOOM Boomskoye usch 45.26 68 P **P** **16 32 50.3 -1.4**
BOOM pmax pmax
comp=Z,2.0nm,0.9s
NRIK Noril'sk 45.34 29 P **P** **16 32 51.0 -0.8**
comp=Z,4.2nm,0.7s,baz=252,slow=3.2,SNR=3.8
comp=Z,4.2nm,0.7s
NRIK Noril'sk 45.34 29*c*e**P** **P** **16 32 54.7 +2.9**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
KSH Kashi 46.49 72 P **P** **16 33 03.8 +2.3**
ZALV Zalesovo Beam 46.97 50 P **P** **16 33 04.5 -0.3**
comp=Z,2.7nm,0.8s,baz=296,slow=7.8,SNR=8.0
ZALV LR LR 16 55 42.9
comp=Z,24nm,20.9s,baz=298,slow=40
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 46.97 50 P **P** **16 33 03.1 -1.7**
ZALV Zalesovo Beam 46.97 50 *i* P **P** **16 33 06.3 +1.5**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
NIL Nilore 47.26 80 P **P** **16 33 10.4 +3.0**
MK31 Makanchi Array 47.83 60 P **P** **16 33 11.5 -0.1**
MK31 IAmb IAmb 16 33 21.9
comp=Z,7.1nm,1.2s
MK31 Makanchi Array 47.83 60 P **P** **16 33 11.5 -0.1**
MK31 pmax pmax
comp=Z,7.0nm,1.3s
MKAR Makanchi Array 47.83 60 P **P** **16 33 12.2 +0.6**
comp=Z,4.2nm,0.6s,baz=279,slow=7.4,SNR=28
MKAR LR LR 16 56 01.7
comp=Z,38nm,18.6s,baz=307,slow=39
comp=Z,4.2nm,0.6s
MKAR Makanchi Array 47.83 60 P **P** **16 33 10.9 -0.8**
MKAR Makanchi Array 47.83 60 *i* P **P** **16 33 12.8 +1.2**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
EUNU Eureka 49.78 347 P **P** **16 33 25.5 -0.8**
DGZ Jazzator, Alta 49.93 55 *i* P **P** **16 33 29.6 +1.7**
DGZ pmax pmax
comp=Z,3.0nm,0.6s
SCHQ Schefferville 51.18 313 P **P** **16 33 36.7 -0.3**
comp=Z,2.6nm,0.7s,baz=82,slow=14,SNR=1.7
comp=Z,2.6nm,0.7s
WMQ Urumqi 52.52 62 *e*P **P** **16 33 50.3 +3.0**
TIXI Tiksi 57.26 20 *i* P **P** **16 34 23.4 +2.3**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
PYUN Piuthan 57.28 80 *e*P **P** **16 34 21.8 -0.4**
comp=Z,44nm,1.2s
DANN Dangsing 57.70 80 *e*P **P** **16 34 25.4 +0.2**
comp=Z,11nm,0.6s
KOLN Koldanda 57.91 80 *e*P **P** **16 34 25.9 -0.7**
GKN Gorkha 58.53 80 *e*P **P** **16 34 30.1 -0.8**
comp=Z,30nm,1.2s
DMN Daman 59.10 80 *e*P **P** **16 34 34.5 -0.4**
PKIN Phulchoki 59.33 80 *e*P **P** **16 34 36.2 -0.3**
comp=Z,14nm,0.9s
PKI Pulchoki 59.34 80 *e*P **P** **16 34 35.8 -0.9**
comp=Z,20nm,1.1s
GUN Gumba 59.48 79 *e*P **P** **16 34 37.7 0.0**
comp=Z,25nm,0.9s
JIRN Jiri 59.85 79 *e*P **P** **16 34 40.1 -0.2**
comp=Z,27nm,1.1s
RAMN Ramite 60.56 79 *e*P **P** **16 34 44.1 -0.9**
comp=Z,20nm,0.8s
TAPN Taplejung 61.13 78 *e*P **P** **16 34 47.8 -1.1**
SONM Songino Array 61.86 50 P **P** **16 34 54.3 +0.9**
comp=Z,5.6nm,0.9s,baz=291,slow=7.6,SNR=21
comp=Z,5.6nm,0.9s
SONM Songino Array 61.86 50 P **P** **16 34 53.3 -0.1**
SONM Songino Array 61.86 50 P **P** **16 34 53.3 -0.1**
SONM pmax pmax
comp=Z,8.0nm,1.2s
ULN Ulaanbaatar 62.21 49*c*e**P** **P** **16 34 56.1 +0.3**
ULN pmax pmax
comp=Z,12nm,2.5s
GTA Gaotai 62.58 61 *e*P P 16 34 52.3 -6.0
GTA pP pP 16 34 59.3 -3.1
GTA sP sP 16 35 02.0 -1.9
YAK Yakutsk 63.79 28*c*e**P** **P** **16 35 06.3 +0.6**
YAK pmax pmax
comp=Z,31nm,2.5s
YAK Yakutsk 63.79 28 P **P** **16 35 06.8 +1.0**
INK Inuvik 66.41 347 P **P** **16 35 22.5 -0.2**
comp=Z,1.7nm,0.5s,baz=37,slow=8.7,SNR=4.3
comp=Z,1.7nm,0.5s
YKA Yellowknife Ar 66.99 336 P **P** **16 35 26.4 -0.1**
comp=Z,3.5nm,0.9s,baz=38,slow=5.4,SNR=5.6
comp=Z,3.5nm,0.9s
BILL Bilibino 67.65 11⇑*e*P **P** **16 35 31.7 +1.1**
BILL *e* 16 38 01.7
BILL *e*S S 16 44 56.3 +29
BILL pmax pmax
comp=Z,8.0nm,1.0s
HHC Hu-ho-hao-te 68.98 53 *e*P **P** **16 35 38.8 -0.7**
SEY Seymchan 69.71 19 *i* P **P** **16 35 46.0 +2.5**
SEY pmax pmax
comp=Z,6.0nm,1.0s
PZH PanZhiHua 71.59 71 P **P** **16 35 55.8 +0.1**
ILAR Eielson Array 71.61 351 P **P** **16 35 55.9 +0.8**
comp=Z,0.8nm,0.8s,baz=358,slow=6.3,SNR=4.1
comp=Z,0.8nm,0.8s
COLA College 71.62 352 *i* P **P** **16 35 57.8 +2.7**
XAN Xi'an 71.64 61 P **P** **16 35 56.3 +0.5**
XAN pP pP 16 36 00.5 +0.6
BOSA Boshof 71.95 169 P **P** **16 35 57.0 -0.5**
comp=Z,2.2nm,0.8s,baz=342,slow=6.0,SNR=4.0
BOSA LR LR 17 08 38.4
comp=Z,30nm,19.3s,baz=12,slow=37
comp=Z,2.2nm,0.8s
KLR Kul'dur 73.75 37 *i* P **P** **16 36 09.7 +1.6**
KLR pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 74.73 79 P **P** **16 36 13.7 -0.5**
comp=Z,4.3nm,0.8s,baz=306,slow=7.4,SNR=48
comp=Z,4.3nm,0.8s
CMAR Chiang Mai Arr 74.73 79 P **P** **16 36 12.5 -1.8**
CMAR Chiang Mai Arr 74.73 79 *i* P **P** **16 36 14.1 -0.2**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
USRK Ussuriysk Ar. 77.61 40 P **P** **16 36 30.3 0.0**
comp=Z,3.2nm,0.8s,baz=316,slow=6.0,SNR=5.6
comp=Z,3.2nm,0.8s
PDAR Pinedale Array 80.45 321 P **P** **16 36 46.5 +0.4**
comp=Z,0.3nm,0.5s,baz=42,slow=8.6,SNR=2.8
comp=Z,0.3nm,0.5s
KSRS Korea Array 80.57 47 P **P** **16 36 46.7 +0.2**
comp=Z,1.8nm,0.8s,baz=318,slow=3.3,SNR=5.7
comp=Z,1.8nm,0.8s
BDFB Brasilia 80.71 239 P **P** **16 36 46.6 -1.0**
comp=Z,3.6nm,0.8s,baz=76,slow=8.3,SNR=3.3
comp=Z,3.6nm,0.8s
TXAR Lajitas Array 87.66 309 P **P** **16 37 23.1 +0.2**
comp=Z,0.2nm,0.6s,baz=57,slow=3.5,SNR=2.9
comp=Z,0.2nm,0.6s
NVAR Mina Array Bea 87.88 324 P **P** **16 37 24.0 0.0**
comp=Z,0.3nm,0.7s,baz=33,slow=5.4,SNR=2.0
comp=Z,0.3nm,0.7s
ASAR Alice Springs 128.03 88 PKP **PKPdf** **16 43 39.1 -1.2**
comp=Z,0.4nm,0.8s,baz=321,slow=1.8,SNR=5.9

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*ATH **29** 16:25:21.4, 38.°91N×23.°91E, h11km±1km, ML2.2/10, Error ellipse: s-maj=2.1km s-min=0.6km az=71.0*
*THE **29** 16:25:21.4, 38.°89N×23.°87E, h11km±1km, ML2.4/7, Error ellipse: s-maj=2.2km s-min=0.6km az=57.0*
ISC 29 16:25:21.2±1.1, 38.°91N±0.°03×23.°90E±0.°05, h14km±11km, n22, σ0.°48/40, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.24**	**354**	P	**Pg**	**16 25 26.2**	**-0.2**
ALNA				S	**Sg**	**16 25 30.1**	**+0.1**
KYMI	**Kymi, Euboea I**	**0.31**	**150**	P	**Pg**	**16 25 27.7**	**0.0**
KYMI				S	**Sg**	**16 25 32.3**	**+0.2**
225nm,0.2s							
KYMI	**Kymi, Euboea I**	**0.31**	**150**	P	**Pg**	**16 25 27.6**	**0.0**
KYMI				S	**Sg**	**16 25 32.5**	**+0.4**
KYMI				AML	AML	16 25 33.3	
comp=N,466μm,0.2s							
KYMI				AML	AML	16 25 33.8	
comp=E,521μm,0.2s							
NEO	**Neokhori**	**0.66**	**308**	P	**Pg**	**16 25 33.9**	**-0.2**
NEO				S	**Sg**	**16 25 42.9**	**0.0**
comp=E,420nm,0.3s							
NEO	**Neokhori**	**0.66**	**308**	P	**Pg**	**16 25 34.1**	**-0.1**
NEO				S	**Sg**	**16 25 42.9**	**0.0**
NEO				AML	AML	16 25 46.6	
comp=E,868μm,0.3s							
NEO				AML	AML	16 25 47.1	
comp=N,811μm,0.3s							
XOR	**Xorichti**	**0.72**	**310**	P	**Pg**	**16 25 35.0**	**-0.2**
XOR				S	**Sg**	**16 25 45.0**	**+0.3**
comp=N,230nm,0.3s							
XOR	**Xorichti**	**0.72**	**310**	P	**Pg**	**16 25 35.3**	**+0.1**
XOR				S	**Sg**	**16 25 44.9**	**+0.3**
XOR				AML	AML	16 25 47.5	
comp=E,312μm,0.2s							
XOR				AML	AML	16 25 47.8	
comp=N,609μm,0.3s							
DION	**Dionisos Attik**	**0.83**	**178**	P	**Pg**	**16 25 37.2**	**0.0**
DION				S	**Sg**	**16 25 48.4**	**+0.3**
comp=N,538nm,0.6s							
DION	**Dionisos Attik**	**0.83**	**178**	P	**Pg**	**16 25 37.0**	**-0.2**
DION				S	**Sg**	**16 25 48.4**	**+0.3**
DION				AML	AML	16 25 51.1	
comp=E,685μm,0.3s							
DION				AML	AML	16 25 51.3	
comp=N,745μm,0.4s							
VIL2	**Platees**	**0.85**	**216**	P	**Pg**	**16 25 37.5**	**-0.2**
VIL2				S	**Sb**	**16 25 50.2**	**+1.2**
VIL2				AML	AML	16 25 52.7	
comp=N,487μm,0.5s							
VIL2				AML	AML	16 25 53.6	
comp=E,532μm,0.6s							
PTL	**Penteli**	**0.85**	**182**	P	**Pg**	**16 25 37.0**	**-0.8**
PTL				S	**Sb**	**16 25 50.0**	**+0.8**
comp=E,175nm,0.4s							
PTL	**Penteli**	**0.85**	**182**	P	**Pg**	**16 25 37.4**	**-0.4**
PTL				S	**Sb**	**16 25 49.6**	**+0.4**
PTL				AML	AML	16 25 51.7	
comp=E,514μm,0.6s							
PTL				AML	AML	16 25 52.4	
comp=N,226μm,0.3s							
VILL	**Villia**	**0.87**	**212**	P	**Pg**	**16 25 36.7**	**-1.4**
VILL				S	**Sb**	**16 25 50.0**	**+0.3**
comp=N,285nm,0.5s							
ATHU	**Athens Univers**	**0.94**	**186**	P	**Pg**	**16 25 39.0**	**-0.4**
ATHU				S	**Sb**	**16 25 52.1**	**+0.4**
ATHU				AML	AML	16 25 53.9	
comp=E,83μm,0.2s							
ATHU				AML	AML	16 25 54.2	
comp=N,144μm,0.5s							
ATH	**Athens Observa**	**0.94**	**189**	P	**Pg**	**16 25 39.0**	**-0.5**
ATH				S	**Sg**	**16 25 51.7**	**0.0**
ATH				AML	AML	16 25 54.9	
comp=E,434μm,0.2s							
ATH				AML	AML	16 25 56.3	
comp=N,490μm,0.4s							
AXAR	**Agios Charalam**	**0.98**	**262**	P	**Pg**	**16 25 40.0**	**-0.1**
AXAR	**Agios Charalam**	**0.98**	**262**	P	**Pg**	**16 25 40.0**	**-0.1**
PAIG	**Paliouri**	**1.03**	**351**	P	**Pg**	**16 25 40.4**	**-0.8**
VLY	**Voula,Athens**	**1.05**	**185**	P	**Pb**	**16 25 40.9**	**-0.3**
VLY				S	**Sb**	**16 25 55.5**	**+0.6**
comp=N,190nm,0.6s							
VLY	**Voula,Athens**	**1.05**	**185**	P	**Pb**	**16 25 40.7**	**-0.5**
VLY				S	**Sg**	**16 25 55.2**	**-0.1**
VLY				AML	AML	16 25 57.6	
comp=E,396μm,0.4s							
VLY				AML	AML	16 25 58.7	
comp=N,372μm,0.4s							
LOUT	**Loutraki**	**1.17**	**219**	P	**Pb**	**16 25 42.7**	**-0.5**
LOUT	**Loutraki**	**1.17**	**219**	P	**Pb**	**16 25 43.4**	**+0.2**
LOUT				S	**Sg**	**16 25 58.8**	**-0.1**
LOUT				AML	AML	16 26 05.1	
comp=N,62μm,0.4s							
LOUT				AML	AML	16 26 05.9	
comp=E,84μm,0.5s							

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*IDC **29** 16:36:23.8±7.0, 7.°15N×75.°06W, h134km±58km, mbtmp3.7/1, Error ellipse: s-maj=86.4km s-min=76.2km az=95.0*
*RSNC **29** 16:36:25.7±1.1, 6.°76N×73.°11W, h142km±5km, ML2.8*
ISC 29 16:36:23.9±1.1, 6.°85N±0.°03×73.°07W±0.°04, h151km±7km, n27, σ1.°77/49, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**204**⇑	*i*P	**Pn**	**16 36 44.4**	**-0.4**
BARC				*e*S	**Sn**	**16 37 00.2**	**-0.4**
BARC				*i*		16 37 00.7	
comp=Z,313nm,0.3s							
PAMC	**Pamplona, Colo**	**0.61**	**37**	*e*P	**Pn**	**16 36 47.3**	**+0.7**
PAMC				*e*S	**Sn**	**16 37 04.7**	**+0.9**
PAMC				*i*		16 37 07.0	
comp=Z,97nm,0.5s							
BRRC	**Barranca, Sant**	**0.69**	**292**⇑	*i*P	**Pn**	**16 36 46.2**	**-0.2**
BRRC				*e*S	**Sn**	**16 37 03.4**	**-0.1**
BRRC				*i*		16 37 07.7	
comp=Z,111nm,0.3s							
RUSC	**La Rusia**	**0.95**	**181**	*e*P	**Pn**	**16 36 48.5**	**-0.4**
RUSC				*e*S	**Sn**	**16 37 06.4**	**-1.5**
RUSC				*i*		16 37 08.1	
comp=Z,81nm,0.5s							
TAMC	**Tame, Arauca**	**1.33**	**108**⇓	*i*P	**Pn**	**16 36 52.9**	**+1.0**
TAMC				*e*S	**Sn**	**16 37 14.1**	**+0.9**
TAMC				*i*		16 37 15.3	
comp=Z,29nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	*e*P	**Pn**	**16 36 51.2**	**-1.4**
PTBC				*e*S	**Sn**	**16 37 12.1**	**-2.5**
PTBC				*i*		16 37 17.8	
comp=Z,103nm,0.1s							
SPBC	**San Pablo de B**	**1.55**	**220**	*e*P	**Pn**	**16 36 53.5**	**-0.7**
SPBC				*e*S	**Sn**	**16 37 15.1**	**-2.2**
SPBC				*i*		16 37 17.9	
comp=Z,150nm,0.3s							
NORC	**Norcasia**	**2.20**	**235**	*e*P	**Pn**	**16 37 01.1**	**-0.3**
NORC				*e*S	**Sn**	**16 37 28.1**	**-2.2**
NORC				*i*		16 37 34.8	
comp=Z,40nm,0.2s							
CHIC	**Chingaza**	**2.30**	**197**⇑	*i*P	**Pn**	**16 37 02.8**	**-0.3**
CHIC				*e*S	**Sn**	**16 37 31.8**	**-1.4**
CHIC				*i*		16 37 34.3	
comp=Z,32nm,0.4s							
ROSC	**El Rosal**	**2.35**	**212**	P	**Pn**	**16 37 03.5**	**-0.1**
comp=Z,26nm,0.3s,baz=78,slow=19,SNR=27							
ROSC				S	**Sn**	**16 37 34.4**	**+0.2**
comp=Z,89nm,0.3s,baz=342,slow=22,SNR=16							
ROSC	**El Rosal**	**2.35**	**212**	*e*P	**Pn**	**16 37 04.6**	**+0.9**
ROSC				*e*S	**Sn**	**16 37 34.9**	**+0.8**
ROSC				*i*		16 37 39.1	
comp=Z,84nm,0.3s							
HELC	**Santa Helena**	**2.53**	**255**	*e*P	**Pn**	**16 37 06.6**	**+0.8**
HELC				*e*S	**Sn**	**16 37 39.9**	**+1.9**
HELC				*i*		16 37 43.8	
comp=Z,29nm,0.5s							
LL1C	**La Loma 1 Cana**	**2.72**	**350**	*e*P	**Pn**	**16 37 09.5**	**+1.7**
LL1C				*e*S	**Sn**	**16 37 44.9**	**+3.2**
VILC	**Villavicencio,**	**2.79**	**193**	*e*P	**Pn**	**16 37 06.9**	**-1.9**
VILC				*e*S	**Sn**	**16 37 41.0**	**-2.4**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*e*P	**Pn**	**16 37 07.6**	**-1.1**
PTGC				*e*S	**Sn**	**16 37 40.4**	**-2.9**
PTGC				*i*		16 37 43.2	
comp=Z,24nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P	**Pn**	**16 37 09.7**	**+0.5**
GUY2C				*e*S	**Sn**	**16 37 45.7**	**+1.6**
GUY2C				*i*		16 37 53.0	
comp=Z,26nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*e*P	**Pn**	**16 37 13.3**	**+0.8**
CBOC				*e*S	**Sn**	**16 37 49.2**	**-0.9**
CBOC				*i*		16 38 00.6	
comp=Z,7.6nm,0.7s							
ANIL	**Santa Ana**	**3.30**	**225**	*e*P	**Pn**	**16 37 16.0**	**+0.6**
ANIL				*e*S	**Sn**	**16 37 55.3**	**+0.1**
ANIL				*i*		16 38 01.0	
comp=Z,74nm,0.3s							
PRAC	**Prado**	**3.60**	**210**	*e*P	**Pn**	**16 37 18.2**	**-0.8**
PRAC				*e*S	**Sn**	**16 37 59.5**	**-2.3**
PRAC				*i*		16 38 04.7	
comp=Z,26nm,0.6s							
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P	**Pn**	**16 37 18.1**	**-1.4**
ORTC				*e*S	**Sn**	**16 38 02.5**	**-0.1**
ORTC				*i*		16 38 07.0	
comp=Z,16nm,0.5s							
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**16 37 18.0**	**-2.1**
SJCC				*e*S	**Sn**	**16 37 59.1**	**-4.6**
SJCC				*i*		16 38 06.3	
comp=Z,12nm,0.3s							
LCBC	**Los crdobas,**	**3.83**	**302**	*e*S	**Sn**	**16 38 05.7**	**-1.4**
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*e*P	**Pn**	**16 37 24.9**	**-1.4**
CRJC				*e*S	**Sn**	**16 38 12.9**	**-1.9**
CRJC				*i*		16 38 17.4	
comp=Z,14nm,0.5s							
YOTC	**Yotoco, Valle**	**4.33**	**229**	*e*S	**Sn**	**16 38 20.7**	**+1.8**
URIC	**Uribia, Colomb**	**4.94**	**12**	*e*P	Pn	16 37 34.6	-2.0
URIC				*e*S	**Sn**	**16 38 29.2**	**-4.1**
URIC				*i*		16 38 37.4	
comp=Z,2.7nm,0.4s							
ASAR	**Alice Springs**	**149.17**	**234**	PKPbc	**PKPdf**	**16 55 52.8**	**+1.8**
comp=Z,0.8nm,1.2s,baz=108,slow=3.7,SNR=2.1							
WRA	**Warramunga Arr**	**150.39**	**241**	PKPbc	**PKPdf**	**16 55 55.9**	**+2.8**
comp=Z,0.3nm,1.0s,baz=108,slow=2.8,SNR=5.4							

IDC 29 16:38:21.1±3.8, 49.°80S×109.°92E, h0km, mb4.1/2, mbtmp4.1/2, MS3.2/3, Error ellipse: s-maj=165.7km s-min=50.9km az=115.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.21**	**13**	T	T	16 56 44.9	
baz=194,slow=74,SNR=65							
H01W1	**Cape Leeuwin H**	**15.22**	**13**	T	T	16 56 47.5	
baz=194,slow=74,SNR=58							
H01W3	**Cape Leeuwin H**	**15.22**	**13**	T	T	16 56 48.7	
baz=194,slow=74,SNR=34							
STKA	**Stephens Creek**	**29.61**	**65**	LR	LR	16 54 01.0	
comp=Z,37nm,20.7s,baz=203,slow=32							
ASAR	**Alice Springs**	**32.13**	**44**	P	P	16 44 50.4	+0.2
1.8nm,0.8s,baz=210,slow=8.4,SNR=16							
ASAR				LR	LR	16 57 00.3	
comp=Z,46nm,18.4s,baz=227,slow=35							
1.8nm,0.8s							
WRA	**Warramunga Arr**	**35.58**	**42**	P	P	16 45 19.8	-0.4
2.5nm,0.8s,baz=208,slow=8.4,SNR=13							
2.5nm,0.8s							
LEM	**Lembang**	**42.87**	**357**	LR	LR	17 01 22.0	
comp=Z,37nm,21.1s,baz=340,slow=32							
NVAR	**Mina Array Bea**	**144.15**	**90**	PKP	PKPdf	16 57 59.5	+1.0
0.3nm,0.5s,baz=210,slow=5.2,SNR=2.9							
TXAR	**Lajitas Array**	**147.41**	**116**	PKPbc	PKPdf	16 58 05.3	+1.1
0.2nm,0.7s,baz=193,slow=3.7,SNR=1.9							

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*IDC **29** 16:48:27.9±0.9, 41.°33N×131.°88E, h537km±9km, mb2.8/4, mbtmp3.5/9, Error ellipse: s-maj=22.6km s-min=16.5km az=80.0*
ISC 29 16:48:28.3±0.9, 41.°4N±0.°1×131.°9E±0.°2, h550km, n9, σ1.°24/10, mb3.2/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.**	**2.83**	**2**	P	**P**	**16 49 40.8**	**-1.3**
3.7nm,0.4s,baz=188,slow=5.0,SNR=24							
USRK				S	**S**	**16 50 40.4**	**-2.1**
1.1nm,0.7s,baz=185,slow=23,SNR=1.5							
KSRS	**Korea Array**	**4.97**	**219**	P	**P**	**16 49 57.5**	**-0.3**
9.1nm,0.6s,baz=35,slow=8.5,SNR=37							
MJAR	**Matsushiro Arr**	**6.89**	**132**	P	**P**	**16 50 14.8**	**-0.5**
0.4nm,0.4s,baz=302,slow=10,SNR=4.5							
KLR	**Kul'dur**	**7.86**	**359**	P	**P**	**16 50 24.0**	**-0.4**
0.7nm,0.4s,baz=180,slow=11,SNR=2.3							
SONM	**Songino Array**	**19.21**	**298**	P	**P**	**16 52 18.4**	**+1.3**
2.2nm,0.8s,baz=108,slow=8.7,SNR=12							
ILAR	**Eielson Array**	**49.91**	**34**	P	**P**	**16 56 32.8**	**+1.6**
0.2nm,0.4s,baz=293,slow=8.1,SNR=6.3							
0.2nm,0.4s							
ARCES	**ARCESS Array B**	**57.20**	**336**	P	**P**	**16 57 22.9**	**+0.2**
3.0nm,1.1s,baz=69,slow=7.9,SNR=5.1							
3.0nm,1.1s							
FINES	**FINESS Array B**	**61.39**	**328**	P	**P**	**16 57 50.8**	**+0.1**
1.7nm,0.8s,baz=74,slow=6.8,SNR=6.9							
1.7nm,0.8s							
ASAR	**Alice Springs**	**64.73**	**178**	P	**P**	**16 58 12.5**	**-0.2**
0.3nm,0.8s,baz=355,slow=6.9,SNR=5.0							
0.3nm,0.8s							

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*NOU **29** 16:59:54.8, 41.°05S×176.°96E, h11km, MLv3.5/6, Off E. Coast of N. Island, N.Z.*
*WEL **29** 16:59:58.6±0.4, 41.°5±3.°3×17.°7E±.°, h33km, M3.2/27, ML3.5/28, MLv3.2/27, Error ellipse: s-maj=0.0km s-min=0.0km az=122.2*
ISC 29 16:59:57.7±1.3, 40.°97S±0.°04×176.°79E±0.°05, h29km±12km, n59, σ0.°69/68, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPWZ	**Castlepoint**	**0.45**	**278**	P	**Pn**	**17 00 08.6**	**+0.3**
BFZ	**Birch Farm**	**0.51**	**305**	P	**Pb**	**17 00 08.0**	**-0.2**
BFZ				S	**Sb**	**17 00 15.6**	**+0.3**
BFZ	**Birch Farm**	**0.51**	**305**	P	**Pb**	**17 00 08.0**	**-0.2**
ANWZ	**Angora Road**	**0.57**	**335**	P	**Pb**	**17 00 08.9**	**-0.2**
ANWZ				S	**Sb**	**17 00 17.2**	**+0.2**
TMWZ	**Te Maipa**	**0.70**	**259**	P	**Pn**	**17 00 12.2**	**+0.6**
PRHZ	**Porangahau**	**0.71**	**350**	P	**Pb**	**17 00 11.7**	**0.0**
PRHZ				S	**Sb**	**17 00 21.6**	**+0.4**
TIWZ	**Tintock**	**0.72**	**286**	P	**Pb**	**17 00 11.8**	**+0.1**
PRWZ	**Pori Road**	**0.75**	**303**	P	**Pb**	**17 00 12.2**	**0.0**
DVHZ	**Dannevirke**	**0.82**	**324**	P	**Pb**	**17 00 12.8**	**-0.7**
DVHZ				S	**Sb**	**17 00 23.1**	**-1.2**
TRWZ	**Traveller**	**0.94**	**243**	P	**Pb**	**17 00 15.6**	**+0.3**
PXZ	**Pawanui**	**0.94**	**3**	P	**Pn**	**17 00 15.1**	**+0.1**
WPHZ	**Waipukurau**	**0.95**	**343**	P	**Pn**	**17 00 15.0**	**-0.1**
HOWZ	**Holdsworth Sta**	**0.97**	**274**	P	**Pn**	**17 00 15.4**	**0.0**
HOWZ				S	**Sb**	**17 00 27.9**	**-0.6**
POWZ	**Post Office Ro**	**0.97**	**306**	P	**Pn**	**17 00 15.3**	**-0.1**
MRZ	**Mangatainoka R**	**0.97**	**288**	P	**Pn**	**17 00 15.2**	**-0.2**
MTW	**Mount Morrison**	**0.99**	**259**	P	**Pn**	**17 00 16.0**	**+0.3**
PAWZ	**Paruwai Farm**	**1.11**	**248**	P	**Pb**	**17 00 17.8**	**-0.5**
TSZ	**Takapari Road**	**1.11**	**325**	P	**Pn**	**17 00 17.2**	**-0.2**
PNHZ	**Pukenui**	**1.15**	**337**	P	**Pn**	**17 00 17.8**	**-0.1**
KAHZ	**Kahuranaki**	**1.18**	**3**	P	**Pn**	**17 00 18.4**	**+0.2**
OGWZ	**Otaki Gorge**	**1.24**	**277**	P	**Pn**	**17 00 19.3**	**+0.3**
MSWZ	**Moikau Station**	**1.25**	**249**	P	**Pn**	**17 00 19.4**	**+0.2**
PLWZ	**Palliser**	**1.30**	**242**	P	**Pn**	**17 00 20.1**	**+0.1**
CAW	**Cannon Point**	**1.31**	**264**	P	**Pn**	**17 00 20.4**	**+0.3**
OHWZ	**Oh

MOVZ	**Moawhango**	**1.75 333**	P	**Pn**	**17 00 27.0 +0.7**
BKZ	**Black Stump Fm**	**1.82 353**	P	**Pn**	**17 00 27.3 +0.2**
BKZ			S	**Sn**	**17 00 48.0 -1.2**
BKZ	**Black Stump Fm**	**1.82 353**	P	**Pn**	**17 00 27.5 +0.4**
WAZ	**Wanganui**	**1.84 311**	P	**Pn**	**17 00 29.1 +1.7**
NMHZ	**Naumai**	**1.87 0**	P	**Pn**	**17 00 28.8 +1.0**
TCW	**Tory Channel**	**1.92 262**	P	**Pn**	**17 00 28.7 +0.3**
TCW			S	**Sn**	**17 00 50.5 -1.0**
OTVZ	**Oturere**	**2.00 334**	P	**Pn**	**17 00 31.5 +1.8**
PKVZ	**Pokaka**	**2.01 326**	P	**Pn**	**17 00 29.9 +0.1**
MTHZ	**Maungataniwha**	**2.12 1**	P	**Pn**	**17 00 31.7 +0.6**
MTHZ			S	**Sn**	**17 00 56.5 -0.1**
RITZ	**Rihia Road**	**2.12 340**	P	**Pn**	**17 00 33.3 +2.2**
TWVZ	**Taurewa**	**2.17 331**	P	**Pn**	**17 00 33.2 +1.3**
DUWZ	**D'Urville Isla**	**2.18 274**	P	**Pn**	**17 00 33.1 +1.0**
BSWZ	**Blackbirch Sta**	**2.32 250**	P	**Pn**	**17 00 34.1 +0.2**
RTZ	**Ruatahuna**	**2.36 4**	P	**Pn**	**17 00 34.9 +0.3**
VRZ	**Vera Road**	**2.42 319**	P	**Pn**	**17 00 37.0 +1.7**
MUGZ	**Murupara**	**2.49 360**	P	**Pn**	**17 00 36.5 +0.2**
NNZ	**Nelson**	**2.59 263**	P	**Pn**	**17 00 38.3 +0.7**
URZ	**Urewera**	**2.72 5**	P	**Pn**	**17 00 39.1 -0.4**
URZ	**Urewera**	**2.72 5**	P	**Pn**	**17 00 39.4 0.0**
TARZ	**Mount Tarawera**	**2.74 355**	P	**Pn**	**17 00 40.3 +0.5**
TLZ	**Tolley Road**	**2.81 339**	P	**Pn**	**17 00 41.2 +0.5**
KHZ	**Kahutara**	**2.83 238**	P	**Pn**	**17 00 40.9 0.0**
TKNZ	**Takaka Hill**	**2.90 268**	P	**Pn**	**17 00 42.8 +0.9**
MRNZ	**Matariki Terra**	**3.08 261**	P	**Pn**	**17 00 44.8 +0.5**
QRZ	**Quartz Range**	**3.23 271**	P	**Pn**	**17 00 47.0 +0.5**
QRZ	**Quartz Range**	**3.23 271**	P	**Pn**	**17 00 47.2 +0.7**
CTZ	**Chatham Island**	**5.61 122**	P	Pn	17 01 22.2 +3.1
CTZ			S	**Sn**	**17 02 22.7 +0.2**

*LDG **29** 17:11:29.5±0.1, 43.°75N×10.°35E, h11km, Ml3.0/12, Error ellipse: s-maj=3.2km s-min=2.4km az=12.0*
*GEN **29** 17:11:29.5, 43.°79N×10.°39E, h6km±1km, Ml2.9*
*IDC **29** 17:11:30.6±3.3, 43.°74N×11.°25E, h0km, mb3.7/1, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=48.0km s-min=26.4km az=78.0*
*PRU **29** 17:11:33.5±0.0, 43.°92N×10.°68E, h0km*
*STR **29** 17:11:39.0±1.1, 43°N±4°×±°, h11km±5km, MLv2.4/23, Error ellipse: s-maj=0.0km s-min=0.0km az=52.1, preliminary*

ISC 29 17:11:29.8±0.6, **43.°76N**±0.°01×**10.°34E**±0.°01, **h16**km±4km, **n155**, σ1$**86**/208, **3C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PII	**Pisa**	**0.14**	**106**	P	**Pg**	**17 11 33.2**	**-0.5**
PII				S	**Sg**	**17 11 35.2**	**-1.0**
PII	**Pisa**	**0.14**	**106**	P	**Pg**	**17 11 33.1**	**-0.5**
PII				S	**Sg**	**17 11 35.2**	**-1.0**
MAIM	**Mastiano**	**0.19**	**36**	P	**Pg**	**17 11 33.7**	**-0.7**
MAIM				S	**Sg**	**17 11 36.1**	**-1.4**
MAIM	**Mastiano**	**0.19**	**36**	P	**Pg**	**17 11 33.6**	**-0.7**
MAIM				S	**Sg**	**17 11 36.1**	**-1.4**
MAIM				AML	AML		
	comp=E,31400μm,0.1s						
MAIM				AML	AML		
	comp=N,26500μm,0.1s						
CARD	**Cardoso**	**0.28**	**22**	P	**Pg**	**17 11 35.2**	**-0.7**
CARD				S	**Sg**	**17 11 39.0**	**-1.2**
CARD	**Cardoso**	**0.28**	**22**	P	**Pg**	**17 11 35.2**	**-0.7**
CARD				S	**Sg**	**17 11 39.2**	**-1.0**
CARD				AML	AML		
	comp=E,20450μm,1.4s						
CARD				AML	AML		
	comp=N,34100μm,0.2s						
CARD				AML	AML		
	comp=E,20450μm,0.6s						
A319A	**Santa Luce (PI**	**0.33**	**148**	P	**Pb**	**17 11 36.9**	**-0.5**
A319A				S	**Sb**	**17 11 42.0**	**-0.5**
BDI	**Bagni Di Lucca**	**0.35**	**32**	P	**Pg**	**17 11 36.4**	**-0.8**
BDI				S	**Sg**	**17 11 41.2**	**-1.0**
BDI				AML	AML		
	comp=N,4575μm,1.0s						
BDI				AML	AML		
	comp=E,6325μm,1.3s						
BDI				AML	AML		
	comp=N,2090μm,0.4s						
BDI				AML	AML		
	comp=E,2395μm,1.3s						
BDI				AML	AML		
	comp=E,6325μm,0.7s						
BDI				AML	AML		
	comp=N,4575μm,1.0s						
BDI				AML	AML		
	comp=E,2395μm,0.7s						
VLC	**Villacollemand**	**0.40**	**5**	P	**Pg**	**17 11 37.4**	**-0.6**
VLC				S	**Sg**	**17 11 42.4**	**-1.2**
VLC	**Villacollemand**	**0.40**	**5**	P	**Pg**	**17 11 37.4**	**-0.6**
VLC				S	**Sg**	**17 11 42.9**	**-0.6**
VLC				AML	AML		
	comp=E,1605μm,0.6s						
VLC				AML	AML		
	comp=E,1710μm,0.6s						
VLC				AML	AML		
	comp=N,1890μm,1.1s						
VLC				AML	AML		
	comp=N,1875μm,1.1s						
VLC				AML	AML		
	comp=E,1605μm,1.4s						
VLC				AML	AML		
	comp=E,1710μm,1.4s						
VLC				AML	AML		
	comp=N,1875μm,0.9s						
VLC				AML	AML		
	comp=N,1890μm,0.9s						
SARO	**Sassorosso**	**0.42**	**6**	P	**Pg**	**17 11 37.8**	**-0.6**
SARO				S	**Sg**	**17 11 42.8**	**-1.6**
EQUI	**Equi**	**0.43**	**342**	P	**Pg**	**17 11 38.0**	**-0.4**
EQUI				S	**Sg**	**17 11 43.5**	**-0.8**
EQUI	**Equi**	**0.43**	**342**	P	**Pg**	**17 11 38.0**	**-0.4**
EQUI				S	**Sg**	**17 11 43.7**	**-0.6**
EQUI				AML	AML		
	comp=E,2005μm,0.5s						
EQUI				AML	AML		
	comp=N,1610μm,1.4s						
EQUI				AML	AML		
	comp=N,1610μm,0.6s						
PLMA	**Palmaria, Port**	**0.46**	**310**	P	**Pg**	**17 11 39.0**	**0.0**
PLMA				S	**Sg**	**17 11 44.9**	**-0.2**
PLMA	**Palmaria, Port**	**0.46**	**310**	P	**Pg**	**17 11 39.0**	**0.0**
PLMA				AML	AML		
	comp=N,1445μm,0.3s						
PLMA				AML	AML		
	comp=E,702μm,0.8s						
CRMI	**Carmignano**	**0.46**	**86**	P	**Pg**	**17 11 38.8**	**-0.3**
CRMI				S	**Sb**	**17 11 44.9**	**-1.3**
CRMI	**Carmignano**	**0.46**	**86**	P	**Pg**	**17 11 38.7**	**-0.3**
CRMI				S	**Sb**	**17 11 44.8**	**-1.3**
CRMI				AML	AML		
	comp=E,130μm,0.3s						
CRMI				AML	AML		
	comp=N,116μm,0.4s						
CRMI				AML	AML		
	comp=N,116μm,0.4s						
CRMI				AML	AML		
	comp=N,116μm,0.4s						
GROG	**Isola di Gorgo**	**0.47**	**224**	P	**Pg**	**17 11 39.7**	**+0.5**
GROG	**Isola di Gorgo**	**0.47**	**224**	P	**Pg**	**17 11 39.6**	**+0.5**
GROG				AML	AML		
	comp=E,1180μm,0.9s						
GROG				AML	AML		
	comp=N,806μm,0.9s						
GROG				AML	AML		
	comp=E,1180μm,1.1s						
FIVI	**Fivizzano**	**0.50**	**342**	P	**Pg**	**17 11 39.7**	**-0.2**
FIVI				S	**Sg**	**17 11 46.8**	**+0.3**
FIVI	**Fivizzano**	**0.50**	**342**	P	**Pg**	**17 11 39.6**	**-0.2**
FIVI				S	**Sg**	**17 11 46.3**	**-0.3**
FIVI				AML	AML		
	comp=E,2740μm,0.3s						
FIVI				AML	AML		
	comp=N,3245μm,0.6s						
FIVI				AML	AML		
	comp=E,2740μm,1.7s						
MTCR	**Monte La Croce**	**0.55**	**61**	P	**Pg**	**17 11 40.1**	**-0.7**
MTCR	**Monte La Croce**	**0.55**	**61**	P	**Pg**	**17 11 40.0**	**-0.7**
MTCR				AML	AML		
	comp=E,2550μm,0.4s						
MTCR				AML	AML		
	comp=N,2275μm,0.3s						
MPPT	**Montemurlo**	**0.58**	**70**	P	**Pg**	**17 11 40.4**	**-0.9**
MPPT				AML	AML		
	comp=N,1565μm,0.6s						
MPPT				AML	AML		
	comp=E,1655μm,0.3s						
MPPT				AML	AML		
	comp=E,1650μm,0.3s						
MPPT				AML	AML		
	comp=N,1570μm,0.6s						
GSCL	**Gusciola**	**0.62**	**17**	P	**Pg**	**17 11 41.7**	**-0.3**
GSCL				S	**Sg**	**17 11 49.9**	**-0.3**
GSCL	**Gusciola**	**0.62**	**17**	P	**Pg**	**17 11 41.5**	**-0.5**
GSCL				AML	AML		
	comp=N,2810μm,0.2s						
GSCL				AML	AML		
	comp=E,3380μm,0.4s						
A318A	**Donoratico (LI**	**0.66**	**165**	P	**Pg**	**17 11 42.7**	**-0.1**
A318A				S	**Sb**	**17 11 52.2**	**+0.2**
FNVD	**Fontana Vidola**	**0.70**	**54**	P	**Pg**	**17 11 42.8**	**-0.7**
FNVD				AML	AML		
	comp=E,1860μm,0.5s						
FNVD				AML	AML		
	comp=N,1855μm,0.6s						
OSSC	**Osservatorio P**	**0.70**	**109**	P	**Pg**	**17 11 42.6**	**-0.9**
OSSC				S	**Sg**	**17 11 51.9**	**-0.9**
OSSC	**Osservatorio P**	**0.70**	**109**	P	**Pg**	**17 11 42.5**	**-1.0**
OSSC				S	**Sg**	**17 11 52.0**	**-0.9**
OSSC				AML	AML		
	comp=E,728μm,1.0s						
OSSC				AML	AML		
	comp=N,873μm,0.5s						
OSSC				AML	AML		
	comp=E,728μm,0.9s						
OSSC				AML	AML		
	comp=N,872μm,0.5s						
OSSC				AML	AML		
	comp=N,736μm,0.4s						
OSSC				AML	AML		
	comp=E,828μm,0.5s						
OSSC				AML	AML		
	comp=E,728μm,0.9s						
OSSC				AML	AML		
	comp=N,874μm,0.5s						
OSSC				AML	AML		
	comp=N,736μm,1.6s						
ZCCA	**Zocca**	**0.75**	**38**	P	**Pb**	**17 11 45.0**	**+0.4**
ZCCA	**Zocca**	**0.75**	**38**	AML	AML		
	comp=N,830μm,0.6s						
ZCCA				AML	AML		
	comp=E,552μm,0.3s						
ZCCA				AML	AML		
	comp=N,859μm,0.3s						
ZCCA				AML	AML		
	comp=E,576μm,0.4s						
ZCCA				AML	AML		
	comp=E,552μm,0.3s						
ZCCA				AML	AML		
	comp=N,858μm,0.3s						
ZCCA				AML	AML		
	comp=N,830μm,1.4s						
CSNT	**Castellina Chi**	**0.75**	**112**	P	**Pb**	**17 11 44.2**	**-0.4**
CSNT				S	**Sb**	**17 11 53.8**	**-0.8**
CSNT	**Castellina Chi**	**0.75**	**112**	P	**Pg**	**17 11 44.0**	**-0.5**
CSNT				AML	AML		
	comp=E,477μm,1.0s						
CSNT				AML	AML		
	comp=N,563μm,1.0s						
CSNT				AML	AML		
	comp=E,477μm,1.0s						
GRAM	**Graiana**	**0.76**	**345**	P	**Pg**	**17 11 44.5**	**-0.1**
GRAM				S	**Sg**	**17 11 54.5**	**-0.1**
GRAM	**Graiana**	**0.76**	**345**	P	**Pg**	**17 11 44.3**	**-0.3**
GRAM				AML	AML		
	comp=N,2190μm,0.3s						
GRAM				AML	AML		
	comp=E,3045μm,0.3s						
TRIF	**Trifonti**	**0.77**	**147**	P	**Pb**	**17 11 44.8**	**-0.1**
TRIF				AML	AML		
	comp=E,256μm,0.8s						
TRIF				AML	AML		
	comp=N,346μm,0.8s						
TRIF				AML	AML		
	comp=E,257μm,0.8s						
TRIF				AML	AML		
	comp=N,346μm,0.8s						
TRIF				AML	AML		
	comp=N,346μm,1.2s						
TRIF				AML	AML		
	comp=E,257μm,1.2s						
SEI	**Scarperia**	**0.79**	**68**	S	**Sb**	**17 11 56.2**	**+0.4**
A306A	**Viano (RE)**	**0.80**	**13**	P	**Pg**	**17 11 44.1**	**-1.3**
MSSA	**Maissana**	**0.81**	**313**	P	**Pg**	**17 11 45.5**	**-0.1**
MSSA				S	**Sg**	**17 11 55.8**	**-0.6**
MSSA	**Maissana**	**0.81**	**313**	P	**Pg**	**17 11 45.5**	**-0.1**
MSSA				AML	AML		
	comp=N,356μm,1.0s						
MSSA				AML	AML		
	comp=N,356μm,1.0s						
MSSA				AML	AML		
	comp=E,216μm,1.4s						
FROS	**Frosini**	**0.81**	**132**	P	**Pb**	**17 11 45.5**	**-0.2**
FROS				S	**Sb**	**17 11 56.4**	**+0.1**
FROS	**Frosini**	**0.81**	**132**	P	**Pb**	**17 11 45.4**	**-0.2**
RUFI	**Rufina**	**0.85**	**84**	P	**Pg**	**17 11 45.6**	**-0.8**
RUFI				S	**Sb**	**17 11 57.2**	**-0.3**
RUFI	**Rufina**	**0.85**	**84**	P	**Pg**	**17 11 45.2**	**-1.2**
RUFI				S	**Sg**	**17 11 56.6**	**-1.0**
BRIS	**BRISIGHELLA**	**0.93**	**65**	P	**Pn**	**17 11 50.2**	**+1.9**
PRMA	**PARMA**	**1.00**	**359**	P	**Pg**	**17 11 47.7**	**-1.5**
CELB	**S.Piero in Cam**	**1.02**	**185**	S	**Sg**	**17 12 01.7**	**-1.1**
CELB	**S.Piero in Cam**	**1.02**	**185**	P	**Pg**	**17 11 48.9**	**-0.7**
MTRZ	**Monterenzio**	**1.02**	**53**	P	**Pb**	**17 11 49.4**	**+0.3**
MTRZ	**Monterenzio**	**1.02**	**53**	P	**Pg**	**17 11 47.0**	**-2.6**
MTRZ				AML	AML		
	comp=E,720μm,0.6s						
MTRZ				AML	AML		
	comp=N,680μm,0.6s						
LMD	**Lutirano**	**1.04**	**72**	P	**Pg**	**17 11 49.1**	**-0.8**
LMD	**Lutirano**	**1.04**	**72**	P	**Pg**	**17 11 48.5**	**-1.4**
LMD				AML	AML		
	comp=E,339μm,1.6s						
LMD				AML	AML		
	comp=N,278μm,0.6s						
LMD				AML	AML		
	comp=E,339μm,0.4s						
CASP	**Castiglione de**	**1.04**	**158**	P	**Pg**	**17 11 48.8**	**-1.2**
CASP				AML	AML		
	comp=N,155μm,0.5s						
CASP				AML	AML		
	comp=E,141μm,0.5s						
CASP				AML	AML		
	comp=N,155μm,1.5s						
CASP				AML	AML		
	comp=E,141μm,1.5s						
ASQU	**Asqua**	**1.05**	**88**	P	**Pg**	**17 11 49.5**	**-0.7**
ASQU				S	**Sb**	**17 12 03.0**	**-0.3**
ASQU	**Asqua**	**1.05**	**88**	P	**Pg**	**17 11 48.5**	**-1.7**
ASQU				AML	AML		
	comp=N,358μm,0.7s						
ASQU				AML	AML		
	comp=E,394μm,0.3s						
ASQU				AML	AML		
	comp=E,394μm,1.7s						
ASQU				AML	AML		
	comp=N,358μm,1.3s						
MORSI	**Morsiglia**	**1.08**	**222**	Pg	**Pg**	**17 11 49.2**	**-1.4**
SFI	**Santa Sofia**	**1.10**	**82**	P	**Pg**	**17 11 49.6**	**-1.5**
SFI				AML	AML		
	comp=E,344μm,1.1s						
SFI				AML	AML		
	comp=E,345μm,1.1s						
SFI				AML	AML		
	comp=N,398μm,0.3s						
SFI				AML	AML		
	comp=E,345μm,0.9s						
SFI				AML	AML		
	comp=N,398μm,1.7s						
GORR	**Gorreto**	**1.13**	**319**	P	**Pg**	**17 11 50.5**	**-1.2**
RAVA	**Ravarino**	**1.14**	**29**	⇑P	**Pn**	**17 11 54.5**	**+3.3**
RAVA				AML	AML		
	comp=E,1228μm,0.8s						
RAVA				AML	AML		
	comp=N,1004μm,1.1s						
RAVA				AML	AML		
	comp=N,1005μm,1.1s						
RAVA				AML	AML		
	comp=E,1226μm,0.8s						
RAVA				AML	AML		
	comp=N,1005μm,0.9s						
CRE	**Caprese Michel**	**1.18**	**96**	P	**Pg**	**17 11 50.9**	**-1.7**
CRE				AML	AML		
	comp=E,129μm,0.9s						
CRE				AML	AML		
	comp=N,126μm,0.3s						
CRE				AML	AML		
	comp=E,276μm,0.6s						
CRE				AML	AML		
	comp=N,370μm,0.3s						
BOB	**Bobbio (Coli)**	**1.19**	**328**	P	**Pg**	**17 11 52.8**	**-0.1**
BOB	**Bobbio (Coli)**	**1.19**	**328**	P	**Pg**	**17 11 52.0**	**-0.8**
BOB				S	**Sg**	**17 12 08.0**	**-0.4**
CAFI	**Castiglion Fio**	**1.26**	**109**	P	**Pg**	**17 11 52.5**	**-1.6**
CAFI				AML	AML		
	comp=N,88μm,1.6s						
CAFI				AML	AML		
	comp=E,87μm,0.7s						
CAFI				AML	AML		
	comp=N,88μm,1.6s						
CAFI				AML	AML		
	comp=E,87μm,1.3s						
CAFI				AML	AML		
	comp=N,88μm,0.4s						
SF13	**Bagnolo**	**1.33**	**135**	P	**Pb**	**17 11 54.6**	**+0.2**
SERM	**Sermide**	**1.43**	**28**	P	**Pn**	**17 11 55.2**	**+0.1**
MAON	**Monte Argentar**	**1.45**	**156**	P	**Pn**	**17 11 55.9**	**+0.5**
QLNO	**Quiliano**	**1.54**	**292**	P	**Pn**	**17 11 57.7**	**+1.0**
QLNO				AML	AML		
	comp=E,76μm,0.5s						
QLNO				AML	AML		
	comp=N,102μm,0.5s						
QLNO				AML	AML		
	comp=N,102μm,1.5s						
QLNO				AML	AML		
	comp=E,76μm,0.5s						
PGF	**Pioggiola**	**1.56**	**219**	*e*P	**Pn**	**17 11 57.2**	**+0.2**
PGF				*e*Sn	**Sn**	**17 12 15.4**	**-1.5**
	comp=E,41nm,0.4s						
PGF	**Pioggiola**	**1.56**	**219**	P	**Pn**	**17 11 57.2**	**+0.2**
PGF				AML	AML		
	comp=E,77μm,0.6s						
PGF				AML	AML		
	comp=N,59μm,1.0s						
PGF	**Pioggiola**	**1.56**	**219**	Pg	**Pn**	**17 11 57.2**	**+0.2**
A313A	**Volta Mantovan**	**1.57**	**8**	P	**Pn**	**17 11 57.0**	**-0.1**
CORF	**Corte**	**1.70**	**211**	Pg	**Pb**	**17 12 02.1**	**+1.3**
CORF				Sg	**Sn**	**17 12 17.7**	**-2.6**
FRON	**Frontone**	**1.75**	**97**	P	**Pn**	**17 11 59.8**	**+0.2**
FRON				AML	AML		
	comp=E,118μm,0.6s						
FRON				AML	AML		
	comp=N,123μm,1.1s						
FRON				AML	AML		
	comp=N,123μm,0.9s						
FSSB	**Fossombrone**	**1.77**	**91**	P	**Pn**	**17 12 00.5**	**+0.7**
SMPL	**Sampolo**	**1.84**	**205**	Pn	**Pn**	**17 12 01.5**	**+0.7**
SMPL				Sn	**Sn**	**17 12 23.1**	**-0.6**
MGRO	**Montegrosso**	**1.85**	**280**	P	**Pn**	**17 12 00.8**	**-0.3**
MGRO				AML	AML		
	comp=E,64μm,0.6s						
MGRO				AML	AML		
	comp=N,77μm,1.5s						
MGRO				AML	AML		
	comp=N,77μm,0.5s						
TEOL	**Teolo**	**1.86**	**30**	P	**Pn**	**17 12 02.0**	**+1.0**
TEOL				AML	AML		
	comp=E,990μm,0.8s						
TEOL				AML	AML		
	comp=N,896μm,0.5s						
SALO	**Salr**	**1.86**	**4**	P	**Pn**	**17 12 02.4**	**+1.3**
SALO				AML	AML		
	comp=N,594μm,0.7s						
SALO				AML	AML		
	comp=E,481μm,1.1s						
MILN	**Milano**	**1.89**	**336**	AML	AML		
	comp=N,507μm,0.4s						
MILN				AML	AML		
	comp=E,596μm,0.2s						
ROVR	**Rover Verones**	**1.96**	**15**	P	**Pn**	**17 12 02.8**	**+0.3**
ROVR				AML	AML		
	comp=E,94μm,0.9s						
ROVR				AML	AML		
	comp=N,206μm,0.3s						
ZONE	**Zone**	**2.01**	**356**	P	**Pn**	**17 12 04.1**	**+0.9**
ZONE				AML	AML		
	comp=E,154μm,1.0s						
ZONE				AML	AML		
	comp=N,145μm,0.8s						
SAOF	**Saorge**	**2.02**	**277**	Pn	**Pn**	**17 12 03.5**	**+0.2**
SAOF				Sn	**Sn**	**17 12 24.7**	**-3.6**
SAOF				Sg	**Sb**	**17 12 26.8**	**-4.4**
T1215	**Vallo di Nera,**	**2.08**	**117**	S	**Sn**	**17 12 30.0**	**+0.2**
T1215				S	**Sg**	**17 12 40.0**	**+3.2**
SBF	**Sospel**	**2.10**	**274**	*e*P	**Pn**	**17 12 04.6**	**+0.1**
SBF				*e*Sn	**Sn**	**17 12 28.6**	**-1.7**
	comp=N,38nm,0.4s						
FDMO	**Fiordimonte**	**2.13**	**109**	S	**Sb**	**17 12 35.0**	**+0.7**
TURF	**col de Turini**	**2.14**	**277**	Pn	**Pn**	**17 12 04.3**	**-0.8**
TURF				Sg	**Sn**	**17 12 30.5**	**-1.0**
T1216	**Preci, Frazion**	**2.14**	**113**	S	**Sg**	**17 12 39.0**	**+0.3**
T1217	**Poggiodomo (PG**	**2.17**	**118**	S	**Sg**	**17 12 43.0**	**+3.5**
LUSI	**Trento, Gardas**	**2.24**	**11**	P	**Pn**	**17 12 07.1**	**+0.8**
LUSI				AML	AML		
	comp=E,224μm,0.4s						
LUSI				AML	AML		
	comp=N,391μm,1.2s						
MC2	**Monte Cornacci**	**2.25**	**111**	S	**Sn**	**17 12 35.0**	**+0.9**
SPIF	**crte de Spivo**	**2.26**	**279**	Pn	**Pn**	**17 12 09.0**	**+2.3**
LNSS	**Leonessa**	**2.29**	**119**	S	**Sg**	**17 12 44.0**	**+0.5**
ISO	**Isola**	**2.41**	**281**	Pn	**Pn**	**17 12 10.9**	**+2.2**
ISO				Sg	**Sn**	**17 12 41.1**	**+3.1**
T1204	**Amatrice, Fraz**	**2.43**	**115**	S	**Sb**	**17 12 44.0**	**+0.9**
CALF	**Calern**	**2.47**	**271**	Pn	**Pn**	**17 12 09.5**	**-0.1**
CALF				Sn	**Sn**	**17 12 34.0**	**-5.6**
SAMA	**S.Maria delle**	**2.58**	**139**	S	**Sg**	**17 12 50.0**	**-2.8**
MA9	**Marino**	**2.62**	**139**	S	**Sg**	**17 12 54.0**	**-0.1**
SURF	**Saint Ours**	**2.64**	**287**	Pn	**Pn**	**17 12 13.2**	**+1.3**
SURF				Sg	**Sn**	**17 12 49.0**	**+5.3**
TERO	**Teramo**	**2.65**	**114**	S	**Sn**	**17 12 44.0**	**+0.3**
JAUF	**Jausiers**	**2.67**	**286**	Pn	**Pn**	**17 12 14.7**	**+2.3**
MBDF	**Montbardon**	**2.74**	**292**	*e*P	**Pn**	**17 12 13.8**	**+0.5**
CREF	**Crivoux**	**2.79**	**288**	Pn	**Pn**	**17 12 16.8**	**+2.9**
KOSI	**Kohlern**	**2.80**	**15**	P	**Pn**	**17 12 15.1**	**+1.0**
KOSI				AML	AML		
	comp=E,91μm,0.9s						
KOSI				AML	AML		
	comp=N,96μm,0.5s						
KOSI				AML	AML		
	comp=E,91μm,1.1s						
LMR	**La Mourre**	**2.82**	**263**	*e*P	**Pn**	**17 12 13.7**	**-0.5**
LMR				*e*Sn	**Sn**	**17 12 45.8**	**-2.0**
	comp=E,5.6nm,0.3s						
OGAG	**Argentiere**	**2.82**	**286**	Pn	**Pn**	**17 12 18.8**	**+4.4**
TRIGF	**Trigance**	**2.85**	**271**	Pn	**Pn**	**17 12 15.5**	**+0.8**
FLAF	**Flassans-sur-I**	**2.99**	**264**	Pn	**Pn**	**17 12 16.6**	**-0.1**
FLAF				Sg	**Sn**	**17 12 55.1**	**+2.9**
STAL	**STALIGIAL**	**3.01**	**33**	⇑P	**Pn**	**17 12 18.7**	**+1.8**
STAL				AML	AML		
	comp=E,140μm,0.2s						
STAL				AML	AML		
	comp=N,84μm,0.3s						
DAVOX	**Davos/Dischmat**	**3.04**	**354**	Pn	**Pn**	**17 12 20.6**	**+3.2**
	comp=N,3.2nm,0.3s,baz=161,slow=16,SNR=35						
DAVOX				Sn	**Sn**	**17 12 53.9**	**+0.3**
	comp=N,3.1nm,0.3s,baz=336,slow=20,SNR=7.1						
	comp=N,7.8nm,0.4s						
LPG	**La Plagne**	**3.09**	**305**	*e*P	**Pn**	**17 12 22.7**	**+4.4**
BLAF	**les Blancs**	**3.11**	**275**	Pg	**Pb**	**17 12 25.9**	**+1.1**
LPL	**La Plagne**	**3.11**	**306**	*e*P	**Pn**	**17 12 22.3**	**+3.8**
ASEAF	**Site Antares,**	**3.20**	**254**	Pn	**Pn**	**17 12 19.6**	**+0.4**
ASEAF				Sg	**Sn**	**17 13 00.8**	**+4.0**
SABO	**M.te Sabotino**	**3.21**	**45**	⇓P	**Pn**	**17 12 20.1**	**+0.5**
SABO				S	**Sn**	**17 12 58.0**	**+0.4**
SABO				AML	AML		
	comp=E,78μm,0.4s						
SABO				AML	AML		
	comp=N,84μm,0.6s						
SABO				AML	AML		
	comp=E,78μm,1.6s						
FETA	**Feichten**	**3.27**	**5**	*e*Pn	**Pn**	**17 12 22.9**	**+2.2**
	comp=E,1.1nm,0.3s						
RSL	**Roselend**	**3.27**	**307**	Pn	Pn	17 12 25.7	+5.1

ARTF Artigues 3.29 269 Pn **Pn 17 12 22.3 +1.5**
CAFR Castel Frentan 3.32 116 S **Sn 17 13 02.0 +1.8**
GDM Grand'Maison 3.35 297 Pn Pn 17 12 26.2 +4.6
ABTA Abfaltersbach 3.36 26 *i* Pn **Pn 17 12 23.9 +2.2**
comp=E,0.9nm,0.2s,SNR=8.4
BSTF la Bastide-des 3.40 274 Pn **Pn 17 12 23.3 +1.1**
ORIF Oris-en-Rattie 3.40 291 *e*P **Pn 17 12 25.0 +2.6**
ORIF *e*Sn **Sn 17 13 02.3 -0.1**
comp=E,11nm,0.5s
ORIF Oris-en-Rattie 3.40 291 Pn **Pn 17 12 24.9 +2.6**
RISI Rein 3.42 20 ⇑P **Pn 17 12 25.5 +2.9**
RISI S **Sn 17 13 06.0 +3.1**
RISI AML AML
comp=E,122μm,1.2s
RISI AML AML
comp=N,194μm,0.4s
RISI AML AML
comp=E,122μm,0.8s
SMRF Simiane la Rot 3.45 275 *e*P **Pn 17 12 24.6 +1.6**
SQTA Sankt Quirin 3.51 10 *e*Pn **Pn 17 12 26.8 +2.9**
comp=E,4.3nm,0.2s,SNR=18
RUSF Rustrel 3.52 275 Pn **Pn 17 12 24.9 +1.1**
DAVA Damuels 3.54 355 *i* Pn **Pn 17 12 28.2 +3.9**
comp=E,4.0nm,0.3s,SNR=9.6
WTTA Wattenberg 3.62 14 *i* Pn **Pn 17 12 28.3 +2.9**
comp=E,2.4nm,0.2s,SNR=18
WTTA Wattenberg 3.62 14 ⇓P **Pn 17 12 29.6 +4.1**
WTTA AML AML
comp=E,67μm,0.4s
WTTA AML AML
comp=N,58μm,0.8s
MOTA Moosalm 3.62 8 *i* Pn **Pn 17 12 28.8 +3.4**
comp=N,3.6nm,0.3s,SNR=10.0
WATA Walderalm 3.68 13 *i* Pn **Pn 17 12 29.5 +3.3**
comp=N,3.3nm,0.2s,SNR=16
RETA Reutte 3.74 4 *i* Pn **Pn 17 12 30.0 +3.1**
comp=N,1.1nm,0.2s,SNR=6.5
CABF La Chapelle 4.14 315 *e*P **Pn 17 12 34.8 +2.3**
VIVF Saint-Julien-l 4.21 287 *e*P **Pn 17 12 35.9 +2.5**
VIVF *e*Sn **Sn 17 13 19.4 -2.9**
comp=N,72nm,2.0s
LASF Ste Croix 4.69 276 *e*P **Pn 17 12 41.1 +1.1**
HINF Hinteralfeld 4.73 330 *e*P **Pn 17 12 43.7 +3.1**
HINF *e*Sn **Sn 17 13 34.2 -0.9**
comp=N,5.4nm,0.4s
MOA Molln 4.92 33 *i* Pn **Pn 17 12 44.9 +1.7**
comp=N,0.9nm,0.2s
ARSA Arzberg 5.04 44 *i* Pn **Pn 17 12 46.0 +1.1**
comp=N,1.1nm,0.2s
HAU Haudompre 5.08 328 *e*P **Pn 17 12 47.4 +2.1**
HAU *e*Sn **Sn 17 13 38.5 -5.1**
comp=N,17nm,0.6s
CDF Champ du Feu 5.12 336 *e*P **Pn 17 12 46.8 +0.9**
CDF *e*Sn **Sn 17 13 41.3 -3.3**
comp=N,5.3nm,0.5s
SMF Signal de Mont 5.42 304 *e*P **Pn 17 12 53.2 +3.2**
SMF *e*Sn **Sn 17 13 48.9 -3.1**
GERES GERESS Array B 5.59 23 Pn **Pn 17 12 53.0 +0.6**
comp=N,0.4nm,0.3s,baz=196,slow=14,SNR=11
GERES Sn **Sn 17 13 53.1 -3.4**
comp=N,0.8nm,0.3s,baz=203,slow=24,SNR=5.9
comp=N,0.5nm,0.3s
CONA Conrad Observa 5.68 41 *i* Pn **Pn 17 12 55.3 +1.7**
comp=N,1.0nm,0.3s
LOR Lormes 5.75 310 *e*P **Pn 17 12 58.3 +3.8**
baz=132
LOR *e*Sn **Sn 17 13 56.1 -4.0**
comp=N,5.4nm,0.7s
CKRC Cesky Krumlov 5.76 27 *e*PN **Pn 17 12 54.9 +0.2**
CKRC *e*SN **Sn 17 13 58.8 -1.6**
PAGF Fort de Pagny 5.77 328 *e*P **Pn 17 12 57.9 +3.2**
baz=151
PAGF *e*Sn **Sn 17 13 57.0 -3.5**
comp=N,9.9nm,0.7s
AVF Avril sur Loir 5.79 304 *e*P **Pn 17 12 57.9 +2.9**
KHC Kasperske Hory 5.82 21 *e*PN **Pn 17 12 56.0 +0.5**
KHC *e*SN **Sn 17 13 59.4 -2.5**
MTLF Montolieu 5.92 269 *e*P **Pn 17 12 57.6 +0.8**
BGF Bois d'Agland 5.99 300 *e*P **Pn 17 13 01.2 +3.4**
TCF Toulx Ste Croi 6.29 297 *e*P **Pn 17 13 05.1 +3.2**
BRTR Keskin Array B 17.83 95 P Pn 17 15 30.3 -7.1
baz=295,slow=11,SNR=1.6
comp=N,0.7nm,0.9s
MKAR Makanchi Array 49.08 60 P **P 17 20 14.8 -1.4**
comp=N,1.1nm,1.0s,baz=282,slow=7.2,SNR=2.0
comp=N,1.1nm,1.0s

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*IDC **29** 17:47:06.8±1.3,21°.68N×93°.55E,h0km,mb3.6/5,*
mbtmp3.6/7,ML3.8/2,MS2.5/1,Error ellipse: s-maj=49.0km
s-min=18.8km az=54.0
*NEIC **29** 17:47:11.7±2.4,21°.70N±0°.08×93°.47E±0°.10,h62km±10km,*
mb4.4/6,Error ellipse: s-maj=16.2km s-min=6.3km
az=48.0
*NDI **29** 17:47:12.6±3.5,21°.79N×93°.55E,h31km±14km,ML3.9,*
mb4.4(NEIC)
ISC 29 17:47:10.9±0.6,21°.72N±0°.06×93°.41E±0°.05,h49km,n45,
σ2°34/64,mb3.7/7,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**0.85**	**333**	*e*P	**Pn**	**17 47 28.7**	**+1.9**
SAIH				*e*S	**Sn**	**17 47 41.4**	**+3.0**
SAIH				IAML		17 47 43.7	
comp=E,14μm,0.5s							
BRDH	**Bariadhala**	**1.89**	**301**	Pn	**Pn**	**17 47 43.7**	**+3.0**
comp=E,21nm,0.3s,baz=110,slow=11,SNR=3.7							
BRDH				Lg	Lg	17 48 07.8	
comp=E,121nm,0.3s,baz=271,slow=21,SNR=7.1							
comp=E,97nm,0.3s							
KOHI	**KOHIMA**	**4.03**	**9**	*e*P	**Pn**	**17 48 10.2**	**0.0**
SHL	**Shillong**	**4.07**	**340**		**Pn**	**17 48 11.0**	**+0.2**
SHL	**Shillong**	**4.07**	**340**	*e*P	**Pn**	**17 48 12.9**	**+2.0**
SHL				*e*S	**Sn**	**17 48 54.9**	**-2.4**
SHL				IAML		17 49 00.3	
comp=E,133nm,0.2s							
MOKO	**MOKOCHONG**	**4.69**	**12**	*e*P	**Pn**	**17 48 20.9**	**+1.6**
MOKO				*e*S	**Sn**	**17 49 16.2**	**+3.7**
TEZP	**TEZPUR**	**4.90**	**354**	*e*P	**Pn**	**17 48 22.5**	**+0.4**
TEZP				*e*S	**Sn**	**17 49 13.5**	**-4.0**
DHUB	**DHUBRI**	**5.29**	**325**	*e*P	**Pn**	**17 48 31.6**	**+4.2**
DHUB				*e*S	**Sn**	**17 49 26.2**	**-0.9**
DHUB				IAML		17 49 29.3	
comp=E,150nm,0.1s							
ITAN	**ITANAGAR**	**5.41**	**3**	*e*P	**Pn**	**17 48 30.1**	**+1.1**
ITAN				*e*S	**Sn**	**17 49 26.7**	**-3.1**
ZIRO	**ZIRO**	**5.79**	**4**	*e*P	**Pn**	**17 48 34.8**	**+0.3**
ZIRO				*e*S	**Sn**	**17 49 37.3**	**-2.4**
ZIRO				IAML		17 49 42.8	
comp=E,280nm,0.4s							
CHTO	**Chiang Mai**	**5.95**	**118**		**Pn**	**17 48 37.2**	**+0.7**
CM31	**Chiang Mai Arr**	**6.13**	**121**		**Pn**	**17 48 39.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**6.13**	**121**	Pn	**Pn**	**17 48 38.9**	**-0.1**
comp=E,0.8nm,0.3s,baz=297,slow=14,SNR=30							
CMAR				Lg	Lg	17 50 08.6	
comp=E,0.3nm,0.3s,baz=291,slow=30,SNR=2.6							
CMAR				LR	LR	17 51 35.2	
comp=E,48nm,19.9s,baz=275,slow=45							
comp=E,3.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**6.13**	**121**		**Pn**	**17 48 39.1**	**+0.1**
GTK	**Tadong**	**7.08**	**323**	*e*P	Pn	17 48 57.1	+5.0
GTK				*e*S	**Sn**	**17 50 09.5**	**-1.8**
PHRA	**Phrae**	**7.17**	**115**		**Pn**	**17 48 53.2**	**0.0**
BOK	**Bokaro**	**7.24**	**288**	*e*P	**Pn**	**17 48 55.2**	**+1.1**
BOK				*e*S	**Sn**	**17 50 13.8**	**-1.2**
RAMN	**Ramite**	**8.10**	**311**	*e*Pg	**Pn**	**17 49 07.0**	**+0.9**
RAMN				*e*Sn	**Sn**	**17 50 34.2**	**-2.2**
comp=E,41nm,0.3s							
LSA	**Lhasa**	**8.20**	**346**	Pn	**Pn**	**17 49 09.5**	**+1.8**
JIRN	**Jiri**	**8.83**	**313**	*e*Pg	**Pn**	**17 49 17.4**	**+1.2**
JIRN				*e*Sn	**Sn**	**17 50 52.6**	**-1.9**
comp=E,33nm,0.3s							
GUN	**Gumba**	**9.20**	**314**	*e*Pg	**Pn**	**17 49 23.4**	**+2.1**
GUN				*e*Sn	**Sn**	**17 51 01.8**	**-1.8**
comp=E,48nm,0.6s							
PKI	**Pulchoki**	**9.31**	**310**	*e*Pg	**Pn**	**17 49 23.9**	**+1.1**
PKI				*e*Sn	**Sn**	**17 51 03.9**	**-2.5**
comp=E,28nm,0.3s							
PKIN	**Phulchoki**	**9.33**	**310**	*e*Pg	**Pn**	**17 49 23.7**	**+0.7**
PKIN				*e*Sn	**Sn**	**17 51 04.2**	**-2.4**
comp=E,24nm,0.2s							
KKN	**Kakani**	**9.54**	**311**	*e*Pn	**Pn**	**17 49 27.5**	**+1.7**
KKN				*e*Sn	**Sn**	**17 51 09.4**	**-2.3**
DMN	**Daman**	**9.55**	**309**	*e*Pg	**Pn**	**17 49 27.2**	**+1.1**
DMN				*e*Sn	**Sn**	**17 51 09.3**	**-2.9**
comp=E,20nm,0.3s							
PBA	**Port Blair**	**10.03**	**184**	Pn	**Pn**	**17 49 33.0**	**+0.6**
GKN	**Gorkha**	**10.12**	**310**	*e*Pg	**Pn**	**17 49 33.8**	**+0.1**
GKN				*e*Sn	**Sn**	**17 51 21.3**	**-4.6**
comp=E,44nm,0.3s							
KOLN	**Koldanda**	**10.75**	**306**	*e*Pn	**Pn**	**17 49 42.6**	**+0.2**
KOLN				*e*Sn	**Sn**	**17 51 35.4**	**-6.0**
DANN	**Dangsing**	**10.95**	**309**	*e*Pn	**Pn**	**17 49 44.7**	**-0.5**
DANN				*e*Sn	**Sn**	**17 51 40.9**	**-5.6**
comp=E,26nm,0.3s							
PYUN	**Piuthan**	**11.38**	**306**	*e*Pg	**Pn**	**17 49 50.4**	**-0.6**
PYUN				*e*Sn	**Sn**	**17 51 51.3**	**-5.6**
comp=E,29nm,0.3s							
HYBB	**Hyderabad (bro**	**14.64**	**256**	*e*P	**P**	**17 50 41.2**	**+0.9**
HYBB				*es*P	Pn	17 51 01.2	+26
HYBB				*e*S	**S**	**17 53 33.7**	**+0.6**
MK31	**Makanchi Array**	**26.59**	**343**	P	**P**	**17 52 44.5**	**0.0**
MK31				IAmb	IAmb	17 53 19.5	
comp=E,7.1nm,1.4s							
MKAR	**Makanchi Array**	**26.59**	**343**	P	**P**	**17 52 46.5**	**+2.1**
comp=Z,0.7nm,0.7s,baz=165,slow=10.0,SNR=3.8							
comp=Z,0.7nm,0.7s							
MKAR	**Makanchi Array**	**26.59**	**343**	P	**P**	**17 52 44.7**	**+0.3**
SONM	**Songino Array**	**28.07**	**19**	P	**P**	**17 53 00.8**	**+2.9**
comp=Z,0.2nm,0.4s,baz=202,slow=11,SNR=2.4							
comp=Z,0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**32.83**	**351**	P	**P**	**17 53 42.1**	**+2.5**
comp=Z,0.3nm,0.4s,baz=184,slow=11,SNR=2.0							
comp=Z,0.3nm,0.4s							
ABKAR	**Akbulak array**	**38.16**	**324**	P	**P**	**17 54 26.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**38.88**	**46**	P	**P**	**17 54 30.6**	**-0.9**
JWT	**Wachi**	**39.02**	**60**	P	**P**	**17 54 30.6**	**-2.2**
KNRA	**Kununurra**	**50.83**	**134**	P	**P**	**17 56 04.8**	**-2.0**
WB0	**Warramunga Arr**	**57.50**	**133**	P	**P**	17 56 50.5	-4.9
WB0				IAmb	IAmb	17 56 52.7	
comp=Z,4.3nm,1.1s							
WRA	**Warramunga Arr**	**57.58**	**133**	P	**P**	**17 56 57.8**	**+1.8**
comp=Z,0.4nm,0.5s,baz=323,slow=7.4,SNR=5.2							
comp=Z,0.4nm,0.5s							
WB2	**Warramunga Arr**	**57.59**	**133**	P	**P**	**17 56 52.1**	**-4.0**
ASAR	**Alice Springs**	**59.91**	**137**	P	**P**	**17 57 13.2**	**+1.1**
comp=Z,0.6nm,0.7s,baz=321,slow=6.9,SNR=10							
comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**59.91**	**137**	P	**P**	**17 57 10.5**	**-1.7**

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*NEIC **29** 17:53:24.9±1.8,18°.25S±0°.1×178°.3W±0°.1,h579km±8km,*
mb4.4/40,Error ellipse: s-maj=20.3km s-min=15.7km
az=150.0
*IDC **29** 17:53:28.7±1.2,17°.80S×178°.68W,h616km±10km,*
mb3.2/11,mbtmp4.2/13,Error ellipse: s-maj=35.3km
s-min=11.5km az=150.0
ISC 29 17:53:26.3±0.5,18°.1S±0°.1×178°.45W±0°.09,h600km,n67,
σ0°96/68,mb4.2/30,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.35**	**276**	P	**P**	**17 54 48.7**	**+1.1**
58nm,0.6s,baz=141,slow=3.2,SNR=64							
MSVF				S	**S**	**17 55 57.7**	**+3.8**
8.0nm,1.0s,baz=119,slow=22,SNR=0.9							
MSVF	**Nonsavu**	**3.35**	**276**	P	**P**	**17 54 48.2**	**+0.6**
AFI	**Afiamalu**	**7.65**	**58**	P	**P**	**17 55 20.7**	**-1.7**
11nm,0.4s,baz=67,slow=18,SNR=1.8							
AFI				S	S	17 56 51.3	-6.2
15nm,0.7s,baz=164,slow=22,SNR=1.9							
AFI	**Afiamalu**	**7.65**	**58**	P	P	17 55 19.9	-2.5
NIUE	**Niue**	**8.14**	**98**	P	P	17 55 22.8	-4.2
MARNC	**Mare, Loyalty**	**13.16**	**253**	P	**P**	**17 56 15.6**	**-1.2**
LIFNC	**LIFOU**	**13.76**	**256**	P	**P**	**17 56 21.3**	**-1.5**
DZM	**Mont Dzumac**	**14.73**	**252**	P	**P**	**17 56 32.0**	**-0.1**
7.7nm,0.8s,baz=117,slow=15,SNR=9.2							
DZM	**Mont Dzumac**	**14.73**	**252**	P	**P**	**17 56 31.8**	**-0.4**
QRZ	**Quartz Range**	**23.95**	**197**	P	**P**	**17 57 54.0**	**-1.0**
THZ	**Tophouse**	**24.72**	**196**	P	**P**	**17 58 00.8**	**-1.2**
LTZ	**Lake Taylor**	**25.84**	**196**	P	**P**	**17 58 10.6**	**-1.1**
FOZ	**Fox Glacier**	**27.23**	**199**	P	**P**	**17 58 23.2**	**-0.6**
LBZ	**Lake Benmore**	**27.90**	**198**	P	P	17 58 28.0	-1.7
ARMA	**Armidale**	**29.81**	**240**	P	**P**	**17 58 46.4**	**-0.3**
ARMA				IAmb	IAmb	17 59 14.7	
comp=Z,15nm,1.4s							
WHZ	**Wether Hill Ro**	**29.93**	**199**	P	**P**	**17 58 47.5**	**+0.3**
CTA	**Charters Tower**	**33.38**	**261**	P	**P**	**17 59 17.0**	**+0.1**
comp=Z,1.4nm,0.4s,baz=90,slow=11,SNR=6.5							
comp=Z,1.4nm,0.4s							
CTAO	**Charters Tower**	**33.38**	**261**	P	**P**	**17 59 17.1**	**+0.2**
CTAO				IAmb	IAmb	17 59 34.0	
comp=Z,32nm,1.5s							
CAN	**Canberra**	**33.56**	**233**	P	**P**	**17 59 18.3**	**0.0**
PMG	**Port Moresby**	**34.45**	**280**	P	**P**	**17 59 25.9**	**0.0**
PMG				IAmb	IAmb	17 59 54.9	
comp=Z,18nm,1.0s							
TOO	**Toolangi**	**37.02**	**231**	P	**P**	**17 59 47.8**	**+1.0**
TOO				IAmb	IAmb	17 59 48.6	
comp=Z,12nm,1.0s							
COEN	**Coen**	**37.07**	**271**	P	**P**	**17 59 48.4**	**+1.0**
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 59 59.4**	**+0.5**
comp=Z,3.2nm,0.7s,baz=78,slow=7.2,SNR=6.9							
comp=Z,3.2nm,0.7s							
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 59 59.2**	**+0.3**
MCQ	**Macquarie Isla**	**40.27**	**200**	P	**P**	**18 00 12.2**	**-0.3**
BBOO	**Buckleboo**	**43.28**	**241**	P	**P**	**18 00 35.7**	**-0.9**
BBOO				IAmb	IAmb	18 01 04.9	
comp=Z,25nm,1.4s							
WR0	**Warramunga Arr**	**44.37**	**260**	P	**P**	**18 00 44.3**	**-0.9**
WR0				IAmb	IAmb	18 01 23.9	
comp=Z,9.3nm,1.4s							
WB0	**Warramunga Arr**	**44.53**	**260**	P	**P**	**18 00 45.6**	**-0.7**
WB2	**Warramunga Arr**	**44.55**	**260**	P	**P**	**18 00 46.0**	**-0.5**
WB2				IAmb	IAmb	18 00 56.2	
comp=Z,7.2nm,1.2s							
WRA	**Warramunga Arr**	**44.56**	**260**	P	**P**	**18 00 46.3**	**-0.3**
comp=Z,0.9nm,0.3s,baz=96,slow=8.0,SNR=72							
WRA				PcP	**PcP**	**18 02 16.5**	**+0.1**
comp=Z,0.2nm,0.4s,baz=96,slow=4.7,SNR=2.1							
WRA				S	**S**	**18 06 39.0**	**-1.1**
comp=Z,0.3nm,0.8s,baz=99,slow=9.1,SNR=1.8							
comp=Z,0.9nm,0.3s							
AS31	**Alice Springs**	**44.70**	**254**	P	**P**	**18 00 46.5**	**-1.2**
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**18 00 48.0**	**+0.3**
comp=Z,4.0nm,0.5s,baz=88,slow=9.3,SNR=144							
ASAR				PcP	**PcP**	**18 02 16.4**	**-0.5**
comp=Z,0.7nm,0.6s,baz=94,slow=3.8,SNR=5.8							
ASAR				S	**S**	**18 06 41.3**	**-0.7**
comp=Z,0.3nm,0.8s,baz=84,slow=15,SNR=2.1							
comp=Z,4.0nm,0.5s							
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**18 00 47.4**	**-0.3**
MTN	**Manton Dam**	**48.75**	**269**	P	**P**	**18 01 17.9**	**-0.2**
MTN				IAmb	IAmb	18 01 24.0	
comp=Z,14nm,1.2s							
FORT	**Forrest**	**49.89**	**245**	P	**P**	**18 01 26.1**	**-0.2**
KNRA	**Kununurra**	**50.43**	**264**	P	**P**	**18 01 30.0**	**-0.4**
KNRA				IAmb	IAmb	18 01 44.7	
comp=Z,29nm,1.5s							
PSA00	**Pilbara Seismi**	**57.82**	**256**	P	**P**	**18 02 21.9**	**-0.3**
PSA00				IAmb	IAmb	18 02 47.8	
comp=Z,31nm,1.4s							
MBWA	**Marble Bar**	**57.99**	**256**	P	**P**	**18 02 23.0**	**-0.3**
MBWA				IAmb	IAmb	18 02 52.0	
comp=Z,30nm,1.5s							
MJAR	**Matsushiro Arr**	**68.03**	**323**	P	**P**	**18 03 26.3**	**-0.9**
comp=Z,0.7nm,0.6s,baz=160,slow=6.2,SNR=5.0							
comp=Z,0.7nm,0.6s							
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**18 03 50.9**	**+0.8**
PETK	**Petropavlovsk-**	**73.85**	**345**	P	**P**	**18 03 59.0**	**-1.8**
comp=Z,2.5nm,0.7s,baz=147,slow=8.2,SNR=7.0							
comp=Z,2.5nm,0.7s							
HUMO	**Hull Mountain**	**79.07**	**38**	P	**P**	**18 04 31.3**	**+1.8**
NVAR	**Mina Array Bea**	**79.58**	**44**	P	**P**	**18 04 33.5**	**+0.9**
comp=Z,1.0nm,0.7s,baz=228,slow=8.5,SNR=7.1							
comp=Z,1.0nm,0.7s							
K05A	**Summer Lake**	**80.37**	**39**	P	**P**	**18 04 37.6**	**+1.0**
PRN	**Pahroc Range**	**81.23**	**46**	P	**P**	**18 04 41.0**	**-0.1**
I07A	**Izee**	**81.98**	**39**	P	**P**	**18 04 45.5**	**+0.9**
BELA	**Belgrano 2**	**81.99**	**173**	P	**P**	**18 04 44.2**	**+0.2**
BMRM	**Bremner River**	**83.34**	**16**	P	**P**	**18 04 50.9**	**-0.1**
BMRM				IAmb	IAmb	18 05 32.6	
comp=Z,14nm,1.3s							
K20K	**Telida**	**83.39**	**11**	P	**P**	**18 04 50.7**	**-0.4**
K20K				IAmb	IAmb	18 04 51.3	
comp=Z,4.5nm,0.9s							
SCM	**Sheep Creek Mo**	**83.42**	**14**	P	**P**	**18 04 51.1**	**-0.3**
SCM				IAmb	IAmb	18 05 08.9	
comp=Z,18nm,1.2s							
N25K	**Chitina, Valde**	**83.89**	**16**	P	**P**	**18 04 53.4**	**-0.3**
N25K				IAmb	IAmb	18 05 03.3	
comp=Z,7.2nm,1.3s							
M24K	**Tolsona, Glenn**	**83.93**	**15**	P	**P**	**18 04 53.9**	**0.0**
M24K				IAmb	IAmb	18 05 22.4	
comp=Z,28nm,1.5s							
GLB	**Gilahina Butte**	**83.95**	**16**	P	**P**	**18 04 53.5**	**-0.6**
J20K	**Nowinta River**	**84.14**	**10**	P	**P**	**18 04 54.8**	**+0.1**
J20K				IAmb	IAmb	18 04 55.9	
comp=Z,13nm,1.5s							
TRF	**Thorofare Moun**	**84.20**	**12**	P	**P**	**18 04 54.4**	**-0.9**
TRF				IAmb	IAmb	18 04 58.8	
comp=Z,5.0nm,1.0s							
ILAR	**Eielson Array**	**86.08**	**13**	P	**P**	**18 05 03.1**	**-1.0**
comp=Z,0.7nm,0.5s,baz=219,slow=5.0,SNR=12							
comp=Z,0.7nm,0.5s							
TX31	**Lajitas Ar. Si**	**86.13**	**58**	P	**P**	**18 05 06.3**	**+0.9**
TX31				IAmb	IAmb	18 05 07.9	
comp=Z,13nm,1.2s							
TX32	**Lajitas Array**	**86.13**	**58**	P	**P**	**18 05 05.6**	**+0.2**
TX32				IAmb	IAmb	18 05 07.9	
comp=Z,4.1nm,1.1s							
TXAR	**Lajitas Array**	**86.13**	**58**	P	**P**	**18 05 06.9**	**+1.6**
comp=Z,1.0nm,0.7s,baz=220,slow=6.1,SNR=14							
comp=Z,1.0nm,0.7s							
PDAR	**Pinedale Array**	**87.51**	**43**	P	**P**	**18 05 11.8**	**+0.2**
comp=Z,0.8nm,0.7s,baz=212,slow=2.7,SNR=7.6							
comp=Z,0.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**88.91**	**290**	P	**P**	**18 05 18.7**	**+0.3**
comp=Z,0.7nm,0.9s,baz=106,slow=3.3,SNR=4.8							
comp=Z,0.7nm,0.9s							
BNN	**Bunyan**	**143.75**	**312**		PKPab	18 11 53.1	-0.7
BRTR	**Keskin Array B**	**144.88**	**315**	PKP	**PKPdf**	**18 11 57.2**	**+0.8**
comp=Z,0.7nm,0.5s,baz=111,slow=3.0,SNR=6.6							
CLL	**Collm**	**145.63**	**347**		**PKPdf**	**18 11 58.8**	**+1.7**
CLL	**Collm**	**145.63**	**347**	*e*PKPbc	**PKPdf**	**18 11 59.0**	**+1.9**
comp=Z,7.0nm,0.8s							
GERES	**GERESS Array B**	**147.78**	**345**	PKPbc	**PKPbc**	**18 12 05.0**	**+0.3**
comp=Z,1.6nm,0.6s,baz=26,slow=3.4,SNR=14							
FUORN	**Ofenpass-Fuorn**	**150.66**	**348**		**PKPbc**	**18 12 11.9**	**0.0**

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*ISK **29** 17:56:42.7,38°.96N×23°.92E,h5km,ML3.0/13*
*ATH **29** 17:56:44.1,38°.91N×23°.89E,h14km±1km,ML3.3/13,Error*
ellipse: s-maj=1.9km s-min=0.6km az=59.0
*THE **29** 17:56:44.1,38°.91N×23°.89E,h4km±1km,ML3.4/11,Error*
ellipse: s-maj=1.3km s-min=0.4km az=195.0
*SOF **29** 17:56:45.7,39°.20N×23°.96E,h5km,MD3.0*
*DDA **29** 17:56:46.2±0.0,39°.00N×24°.18E,h1km±2km,ML2.8*
ISC 29 17:56:44.1±0.9,38°.91N±0°.02×23°.87E±0°.02,h11km±7km,
n69,σ0°66/108,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALNA	**Alonissos**	**0.24**	**359**	P	**Pg**	**17 56 49.5**	**+0.3**
ALNA				S	**Sg**	**17 56 52.7**	**+0.2**
ALNA				AML	AML	17 56 53.6	
comp=N,14536μm,0.4s							
ALNA				AML	AML	17 56 53.7	
comp=E,11418μm,0.2s							
KYMI	**Kymi, Euboea I**	**0.33**	**147**	P	**Pg**	**17 56 50.5**	**-0.2**
KYMI				S	**Sg**	**17 56 55.4**	**+0.4**
comp=E,5μm,0.3s							
KYMI	**Kymi, Euboea I**	**0.33**	**147**	P	**Pg**	**17 56 50.5**	**-0.2**
KYMI				S	**Sg**	**17 56 54.9**	**-0.1**
KYMI				AML	AML	17 56 56.8	
comp=N,9982μm,0.2s							
KYMI				AML	AML	17 56 56.8	
comp=E,8511μm,0.4s							
NEO	**Neokhori**	**0.65**	**309**	P	**Pg**	**17 56 56.8**	**+0.2**
NEO				S	**Sg**	**17 57 05.8**	**+0.7**
comp=E,8μm,0.5s							
NEO	**Neokhori**	**0.65**	**309**	P	**Pg**	**17 56 56.9**	**+0.2**
NEO				S	**Sg**	**17 57 05.3**	**+0.2**
NEO				AML	AML	17 57 09.8	
comp=N,11757μm,0.3s							
NEO				AML	AML	17 57 10.0	
comp=E,18690μm,0.4s							
XOR	**Xorichti**	**0.70**	**311**	P	**Pg**	**17 56 57.7**	**0.0**
XOR				S	**Sg**	**17 57 07.3**	**+0.4**
comp=E,6μm,0.5s							
XOR	**Xorichti**	**0.70**	**311**	P	**Pg**	**17 56 57.9**	**+0.2**
XOR				S	**Sg**	**17 57 07.5**	**+0.6**
XOR				AML	AML	17 57 11.1	
comp=E,8291μm,0.5s							
XOR				AML	AML	17 57 11.2	
comp=N,14012μm,0.4s							
DION	**Dionisos Attik**	**0.83**	**177**	P	**Pg**	**17 56 59.5**	**-0.6**
DION				S	**Sg**	**17 57 11.5**	**+0.6**
comp=N,9μm,0.4s							
DION	**Dionisos Attik**	**0.83**	**177**	P	**Pg**	**17 56 59.9**	**-0.2**
DION				S	**Sg**	**17 57 11.5**	**+0.6**
DION				AML	AML	17 57 13.5	
comp=E,10017μm,0.5s							
DION				AML	AML	17 57 14.0	
comp=N,13494μm,0.4s							
VIL2	**Platees**	**0.84**	**215**	P	**Pg**	**17 56 59.9**	**-0.4**
VIL2				S	**Sb**	**17 57 12.2**	**+0.1**
VIL2				AML	AML	17 57 14.7	
comp=E,13823μm,0.6s							
VIL2				AML	AML	17 57 15.9	
comp=N,9209μm,0.5s							
PTL	**Penteli**	**0.86**	**180**	P	**Pg**	**17 56 59.9**	**-0.8**
PTL				S	**Sb**	**17 57 13.1**	**+0.5**
comp=N,2μm,0.6s							
PTL	**Penteli**	**0.86**	**180**	P	**Pg**	**17 57 00.1**	**-0.6**
VILL	**Villia**	**0.86**	**211**	P	**Pg**	**17

AGG				SN	Sn	17 57 24.4	+0.9
THAL	Thalero	1.29	228	P	Pn	17 57 07.7	-0.4
THAL	Thalero	1.29	228	P	Pn	17 57 07.9	-0.1
MAKR	Makrakomi, Fth	1.36	275	P	Pn	17 57 09.5	+0.3
OUR	Ouranopolis	1.43	3	PN	Pn	17 57 09.4	-0.6
OUR				SN	Sn	17 57 27.9	-0.9
OUR	Ouranopolis	1.43	3	P	Pn	17 57 09.7	-0.3
OUR	Ouranopolis	1.43	3	P	Pn	17 57 09.5	-0.6
THL	Klokotos Trika	1.59	295	P	Pn	17 57 12.1	-0.1
EVR	Evrytania	1.61	271	P	Pn	17 57 12.8	+0.1
EVR	Evrytania	1.61	271	P	Pn	17 57 13.0	+0.3
KRND	KRANIDI	1.62	201	P	Pn	17 57 12.9	+0.2
KRND				S	Sn	17 57 34.4	+0.7
KRND	KRANIDI	1.62	201	P	Pn	17 57 13.0	+0.3
KRND				S	Sb	17 57 34.7	+0.1
KRND				AML	AML	17 57 38.6	
	comp=E,2093μm,0.8s						
KRND				AML	AML	17 57 43.1	
	comp=N,1285μm,0.6s						
CHOS	Chios island	1.79	106	PN	Pn	17 57 14.7	-0.3
HORT	Hortiatis	1.79	341	PN	Pn	17 57 14.8	-0.3
HORT				SN	Sn	17 57 37.4	-0.5
HORT	Hortiatis	1.79	341	P	Pn	17 57 15.0	-0.1
KOCA	Canakkale, Ayv	1.86	71	P	Pn	17 57 16.5	+0.6
BOZC	Bozcaada	1.93	60	PN	Pn	17 57 16.4	-0.5
BOZC	Bozcaada	1.93	60	P	Pn	17 57 16.6	-0.3
BOZC				S	Sn	17 57 41.6	+0.3
SOH	Sokhos	1.95	348	P	Pn	17 57 17.4	+0.1
GADA	Gvkgeada	2.02	50	PN	Pn	17 57 17.7	-0.5
GOKA	anakkale-Gk	2.03	50	P	Pb	17 57 20.5	-0.5
GOKA				*i* AML	AML	17 57 58.0	
	comp=N,226nm,0.5s						
GOKA				*i* AML	AML	17 57 59.0	
	comp=N,202nm,0.6s						
ECEA	Canakkale, Ece	2.11	57	P	Pb	17 57 22.7	+0.2
ECEA				S	Sb	17 57 48.0	-0.7
ECEA				*i* AML	AML	17 58 13.0	
	comp=N,103nm,0.9s						
ZEYE	Izmir, Urla-Ze	2.17	107	P	Pg	17 57 27.5	+1.8
ZEYE				S	Sg	17 57 54.9	+1.2
URLA	Izmir	2.20	104	PN	Pn	17 57 19.9	-0.8
URLA	Izmir	2.20	104	P	Pb	17 57 23.9	-0.1
URLA				S	Sb	17 57 52.3	+1.0
URLA				*i* AML	AML	17 57 59.0	
	comp=N,58nm,0.6s						
SRS	Serrai	2.22	354	P	Pn	17 57 21.0	+0.1
AYVA	Ayvalik	2.23	79	P	Pn	17 57 19.5	-1.5
BAYC	CANAKKALE_Bayr	2.23	67	P	Pn	17 57 19.9	-1.2
GRG	Griva	2.34	332	PN	Pn	17 57 22.5	-0.1
GRG				SN	Sn	17 57 51.6	+0.2
KNT	Kendrikon	2.37	342	PN	Pn	17 57 22.8	-0.3
GELI	Tayfur-Gelibol	2.50	53	PN	Pn	17 57 24.4	-0.4
GELI				SN	Sn	17 57 55.1	-0.2
CAVK	Edirne/Enez-Ca	2.51	44	P	Pb	17 57 27.8	-1.4
CAVK				S	Sb	17 58 01.3	+1.2
BUHA	Balikesir, Bur	2.56	76	P	Pn	17 57 27.4	+1.8
BUHA				S	Sg	17 58 05.1	-1.3
RDO	Rodhopi	2.58	29	PN	Pn	17 57 25.0	-0.8
RDO				SN	Sn	17 57 56.9	-0.2
MMB	Musomiste	2.68	358	*i* P	Pn	17 57 26.7	-0.6
RZN	Rozhen	2.85	13	*i* P	Pn	17 57 29.7	-0.1
KESN	Edirne-Kesan	2.89	48	P	Pn	17 57 30.6	+0.1
KESN				*i* AML	AML	17 58 26.0	
	comp=N,45nm,0.8s						
KESN				*i* AML	AML	17 58 27.0	
	comp=N,47nm,0.6s						
KDZ	Kurdzhali	2.98	23	PN	Pn	17 57 29.6	-1.9
KKB	Krupnik	3.02	349	*i* P	Pn	17 57 31.9	0.0
PLD	Plovdiv	3.26	11	PN	Pn	17 57 36.0	+0.8
EDRB	Edirne	3.67	36	PN	Pn	17 57 40.9	+0.1
VTS	Vitosha	3.74	353	*e*P	Pn	17 57 40.8	-1.2
MPEP	Malo Peshtene	4.45	359	*e*P	Pn	17 57 52.9	+1.4

RSNC 29 18:05:58.8±1.1, 6°.82N×73°.12W, h148km±5km, ML3.1, Mw3.7, 6C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	195	⇑*i*P	Pn	18 06 18.6	-0.7
BARC				*e*S	Sn	18 06 34.2	-0.7
BARC				*i*		18 06 35.0	
	comp=Z,355nm,0.2s						
BRRC	Barranca, Sant	0.65	296	⇑*i*P	Pn	18 06 20.4	-0.4
BRRC				*e*S	Sn	18 06 37.4	-0.1
BRRC				*i*		18 06 40.7	
	comp=Z,128nm,0.2s						
PAMC	Pamplona, Colo	0.67	39	⇑*i*P	Pn	18 06 21.5	0.0
PAMC				*e*S	Sn	18 06 38.4	-0.3
PAMC				*i*		18 06 40.6	
	comp=Z,144nm,0.5s						
RUSC	La Rusia	0.92	178	⇑*i*P	Pn	18 06 22.4	-0.9
RUSC				*e*S	Sn	18 06 41.3	-0.8
RUSC				*i*		18 06 42.3	
	comp=Z,58nm,0.2s						
PTBC	PUERTO BERRIO,	1.35	258	*e*P	Pn	18 06 25.2	-1.6
PTBC				*e*S	Sn	18 06 46.3	-1.8
PTBC				*i*		18 06 53.9	
	comp=Z,134nm,0.4s						
TAMC	Tame, Arauca	1.38	106	⇑*i*P	Pn	18 06 26.9	-0.2
TAMC				*i*		18 06 47.5	
	comp=Z,77nm,0.3s						
TAMC				*e*S	Sn	18 06 48.5	0.0
SPBC	San Pablo de B	1.50	219	*e*P	Pn	18 06 27.7	-0.6
SPBC				*e*S	Sn	18 06 49.4	-1.4
SPBC				*i*		18 06 56.7	
	comp=Z,156nm,0.2s						
NORC	Norcasia	2.14	234	*e*P	Pn	18 06 34.7	-0.8
NORC				*e*S	Sn	18 07 02.7	-1.1
NORC				*i*		18 07 08.5	
	comp=Z,106nm,0.5s						
CHIC	Chingaza	2.26	196	*i* P	Pn	18 06 36.8	-0.6
CHIC				*e*S	Sn	18 07 05.5	-1.5
ROSC	El Rosal	2.30	211	*e*P	Pn	18 06 38.4	+0.6
ROSC				*e*S	Sn	18 07 09.1	+1.3
ROSC				*i*		18 07 16.5	
	comp=Z,176nm,0.4s						
HELC	Santa Helena	2.47	255	*e*P	Pn	18 06 40.3	+0.4
HELC				*e*S	Sn	18 07 11.5	+0.1
HELC				*i*		18 07 17.1	
	comp=Z,64nm,0.3s						
GUY2C	Guyana, Caldas	2.74	235	*e*P	Pn	18 06 42.8	-0.4
GUY2C				*e*S	Sn	18 07 18.0	+0.5
GUY2C				*i*		18 07 25.2	
	comp=Z,129nm,0.4s						
PTGC	Puerto Gaitan,	2.78	159	⇑*e*P	Pn	18 06 41.6	-1.8
PTGC				*e*S	Sn	18 07 14.8	-3.1
PTGC				*i*		18 07 24.1	
	comp=Z,54nm,0.3s						
CBOC	Ciudad Bolivar	3.02	252	*e*P	Pn	18 06 46.2	-0.4
CBOC				*e*S	Sn	18 07 21.5	-2.0
DBBC	Dabeiba	3.07	274	*e*P	Pn	18 06 47.2	+0.1
DBBC				*e*S	Sn	18 07 22.6	-1.8
ANIL	Santa Ana	3.24	225	*e*P	Pn	18 06 49.7	+0.3
ANIL				*e*S	Sn	18 07 29.1	+0.4
ANIL				*i*		18 07 35.0	
	comp=Z,135nm,0.4s						
PRAC	Prado	3.55	210	*e*P	Pn	18 06 52.1	-1.2
PRAC				*e*S	Sn	18 07 33.9	-1.6
PRAC				*i*		18 07 41.2	
	comp=Z,96nm,0.3s						
ORTC	Ortega, Tolima	3.58	216	*e*P	Pn	18 06 52.8	-0.9
ORTC				*e*S	Sn	18 07 35.9	-0.3
ORTC				*i*		18 07 42.9	
	comp=Z,62nm,0.3s						
SJCC	San Jacinto, C	3.67	326	⇓*i*P	Pn	18 06 52.9	-1.9
SJCC				*e*S	Sn	18 07 34.0	-4.3
SJCC				*i*		18 07 38.6	
	comp=Z,14nm,0.3s						
PLMC	San Jos del P	3.67	239	*e*P	Pn	18 06 54.3	-0.5
PLMC				*e*S	Sn	18 07 35.6	-2.7
PLMC				*i*		18 07 46.1	
	comp=Z,17nm,0.6s						
CRJC	Cerrejon, Guaj	4.18	3	*e*P	Pn	18 06 59.0	-2.5
CRJC				*e*S	Sn	18 07 45.4	-4.8
CRJC				*i*		18 07 52.2	
	comp=Z,17nm,0.2s						
YOTC	Yotoco, Valle	4.27	229	*e*P	Pn	18 07 01.1	-1.6
YOTC				*e*S	Sn	18 07 56.7	+4.3
BBAC	Balboa, Cauca	6.29	221	*e*P	Pn	18 07 29.0	-0.7
BBAC				*e*S	Sn	18 08 37.8	-2.9

*BJI **29** 18:10:56.2±0.0, 58°.17N×149°.03E, h9km, mb4.4/30, mB4.9/18, Ms4.5/15, Ms7 4.1/12*
*IDC **29** 18:10:57.0±0.5, 58°.22N×148°.75E, h0km, mb4.0/23, mbtmp4.0/29, ML3.4/5, MS3.4/21, Error ellipse: s-maj=13.8km s-min=8.6km az=139.0*
*MOS **29** 18:10:57.3±1.2, 58°.16N×148°.94E, h12km, mb4.8/32, Error ellipse: s-maj=10.4km s-min=6.3km az=83.9*
MOS Felt (III) at Magadan.
*NEIC **29** 18:11:00.5±1.6, 58°.15N±0°.06×149°.0E±0°.1, h17km±4km, mb4.8/144, Error ellipse: s-maj=11.1km s-min=8.2km az=104.0*
*NERS **29** 18:11:00.4±0.0, 58°.32N×149°.04E, h26km*
ISC 29 18:10:58.4±2.6, 58°.14N±0°.04×149°.01E±0°.04, h6km±16km, n265, σ1$24/273, mb4.8/106, MS3.5/21, 5C, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MA2	Magadan	1.71	32	Pn	Pn	18 11 27.1	-1.6
	60nm,0.3s,baz=216,slow=17,SNR=178						
MA2				Sn	Sn	18 11 51.0	+0.4
	108nm,0.3s,baz=224,slow=16,SNR=7.8						
MA2				LR	LR	18 12 14.6	
	comp=Z,1μm,19.7s,baz=178,slow=45						
MA2	Magadan	1.71	32	Pn	Pn	18 11 27.0	-1.6
MA2				Sn	Sn	18 11 46.2	-4.4
MA2	Magadan	1.71	32	⇑*i*P	Pn	18 11 27.0	-1.6
MA2				*e*SG	Sb	18 11 51.6	-0.1
MA2				pmax	pmax		
	comp=Z,140nm,0.2s						
MA2	Magadan	1.71	32	⇑*i*P	Pn	18 11 27.0	-1.6
MA2				*e*Pg	Pb	18 11 29.5	-0.6
MA2				Pgmax		18 11 30.4	
	comp=Z,140nm,0.2s						
MA2				*e*Sg	Sb	18 11 51.6	-0.1
MA2				Sgmax		18 11 52.8	
	comp=Z,1μm,0.3s						
MA2				Sgmax		18 11 52.8	
	comp=Z,3μm,0.3s						
GADL	Gadlja	1.94	37	*e*P	Pn	18 11 30.9	-0.9
GADL				*e*Pg	Pb	18 11 33.7	-0.4
GADL				Pgmax		18 11 38.3	
	comp=Z,810nm,0.2s						
GADL				*e*Sg	Sb	18 11 59.6	+1.0
GADL				Sgmax		18 12 01.8	
	comp=Z,40μm,0.2s						
GADL				Sgmax		18 12 01.8	
	comp=Z,5μm,0.2s						
MGD	Magadan 1	2.11	24	*e*P	Pn	18 11 31.8	-2.3
MGD				*e*Pg	Pb	18 11 35.6	-1.3
MGD				Pgmax		18 11 35.6	
	comp=Z,320nm,0.3s						
MGD				*e*Sg	Sb	18 12 02.5	-0.8
MGD				Sgmax		18 12 04.9	
	comp=Z,5μm,0.3s						
MGD				Sgmax		18 12 04.9	
	comp=Z,3μm,0.3s						
TLAR	Talaya	3.46	28	*e*P	Pn	18 11 52.5	-0.2
TLAR				*e*Pg	Pb	18 11 59.8	-0.1
TLAR				Pgmax		18 12 02.6	
	comp=Z,80nm,0.3s						
TLAR				*e*Sg	Sb	18 12 44.1	+1.9
TLAR				Sgmax		18 12 48.1	
	comp=Z,3μm,0.3s						
TLAR				Sgmax		18 12 48.1	
	comp=Z,2μm,0.3s						
SUUS	Susuman	4.67	355	*e*P	Pn	18 12 07.7	-1.7
SUUS	Susuman	4.67	355	*e*P	Pn	18 12 07.7	-1.7
SUUS				*e*		18 12 25.4	
SUUS				Pgmax		18 12 29.4	
	comp=Z,30nm,0.3s						
SUUS				*e*Sg	Sb	18 13 23.0	+5.9
SUUS				Sgmax		18 13 30.6	
	comp=Z,890nm,0.4s						
SEY	Seymchan	5.09	18	Pn	Pn	18 12 14.0	-1.0
	comp=Z,1.8nm,0.3s,baz=212,slow=23,SNR=24						
SEY				Lg	Lg	18 13 34.8	
	comp=Z,25nm,0.3s,baz=154,slow=18,SNR=4.7						
	comp=Z,12nm,0.2s						
SEY	Seymchan	5.09	18	*e*P	Pn	18 12 14.5	-0.5
SEY	Seymchan	5.09	18	*e*P	Pn	18 12 14.5	-0.5
SEY				*e*Pg	Pb	18 12 31.3	+3.6
SEY				Pgmax		18 12 40.8	
	comp=Z,20nm,0.3s						
SEY				*e*Sg	Sb	18 13 33.8	+4.8
SEY				Sgmax		18 13 39.7	
	comp=Z,390nm,0.3s						
SEY				Sgmax		18 13 39.7	
	comp=Z,50nm,0.3s						
OMS	Omsukchan	5.53	35	*e*P	Pn	18 12 19.5	-1.6
OMS				*e*Sg	Sb	18 13 46.0	+4.4
OMS				Sgmax		18 13 54.4	
	comp=Z,180nm,0.4s						
OMS				Sgmax		18 13 54.4	
	comp=Z,210nm,0.4s						
PEA0B	Petropavlovsk-	7.04	132	Pn	Pn	18 12 43.5	+1.6
PEA0B				Sn	Sn	18 14 01.2	-0.9
PEA0B	Petropavlovsk-	7.04	132	P	Pn	18 12 43.5	+1.6
PEA0B						18 14 01.2	
PETK	Petropavlovsk-	7.04	132	Pn	Pn	18 12 42.6	+0.8
	comp=Z,4.4nm,0.3s,baz=333,slow=8.5,SNR=271						
PETK				Sn	Sn	18 14 04.2	+2.2
	baz=2.5,slow=13						
PETK				LR	LR	18 15 11.9	
	comp=Z,75nm,18.9s,baz=3.6,slow=35						
	comp=Z,7.4nm,0.3s						
PET	Petropavlovsk	7.49	129	Pn	Pn	18 12 46.5	-1.4
PET	Petropavlovsk	7.49	129	*e*P	Pn	18 12 49.0	+1.1
PET				*e*S	Sn	18 14 12.4	-0.6
PET				pmax	pmax		
	comp=Z,14nm,0.8s						
PET				MLR	MLR		
	comp=Z,500nm,13.0s						
YAK	Yakutsk	10.40	300	Pn	Pn	18 13 24.8	-2.9
	baz=296,slow=2.2,SNR=1.2						
YAK				Lg	Lg	18 16 17.7	
	baz=135,slow=12						
	comp=Z,1.5nm,0.4s						
BILL	Bilibino	12.58	31	⇑*e*P	Pn	18 13 56.9	-0.6
BILL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,995nm,11.0s						
ZEA	Zeya	12.95	259	*i* P	Pn	18 14 02.2	-0.4
KLR	Kul'dur	13.54	236	Pn	Pn	18 14 09.7	-1.0
	comp=Z,0.2nm,0.3s,baz=46,slow=10.0,SNR=3.9						
KLR				LR	LR	18 19 56.8	
	comp=Z,190nm,18.1s,baz=42,slow=40						
	comp=Z,1.0nm,0.4s						
KLR	Kul'dur	13.54	236	*e*P	Pn	18 14 11.7	+1.0
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLR				MLR	MLR		
	comp=Z,238nm,14.0s						
TIXI	Tiksi	15.88	337	Pn	Pn	18 14 39.5	-2.6
	comp=Z,2.3nm,0.3s,baz=90,slow=24,SNR=2.4						
TIXI	Tiksi	15.88	337		Pn	18 14 42.5	+0.4
TIXI	Tiksi	15.88	337	*e*P	Pn	18 14 43.1	+1.0
TIXI				pmax	pmax		
	comp=Z,23nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,261nm,12.0s						
USRK	Ussuriysk Ar.	17.49	224	P	Pn	18 15 01.8	-0.9
	comp=Z,0.2nm,0.3s,baz=37,slow=15,SNR=4.5						
USRK				LR	LR	18 22 33.9	
	comp=Z,184nm,21.5s,baz=18,slow=40						
	comp=Z,4.7nm,1.0s						
USRK	Ussuriysk Ar.	17.49	224		P	18 15 04.2	+0.4
USRK	Ussuriysk Ar.	17.49	224	P	P	18 15 04.2	+0.4
BNX	BinXian	18.10	236	⇑P	Pn	18 15 09.5	-0.7
BNX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,180nm,5.6s						
BOD	Bodaibo	18.45	284	*e*P	P	18 15 13.9	-0.3
BOD				pmax	pmax		
	comp=Z,26nm,1.8s						
JMM	Marumori	20.99	198	P	P	18 15 41.2	-0.8
JMM				IAmb	IAmb	18 15 46.4	
	comp=Z,62nm,1.2s						
MJB9	Matsu-Tunnel	22.75	203		P	18 16 01.4	+0.4
MAJO	Matsushiro	22.76	203		P	18 16 00.6	-0.5
MAJO	Matsushiro	22.76	203	P	P	18 16 00.6	-0.5
MAJO				pmax	pmax		
	comp=Z,32nm,1.6s						
MJAR	Matsushiro Arr	22.76	203	P	P	18 15 59.4	-1.7
	comp=Z,2.5nm,0.8s,baz=21,slow=6.2,SNR=9.0						
MJAR				LR	LR	18 24 06.7	
	comp=Z,110nm,21.9s,baz=12,slow=35						
	comp=Z,2.5nm,0.8s						
JGF	Kuroka	23.84	204	P	P	18 16 10.2	-1.9
NIKH	Nikolski High	24.07	84	P	P	18 16 11.7	-2.4
INU	Inuyama	24.16	205	P	P	18 16 13.6	-1.4
KSRS	Korea Array	24.88	223	P	P	18 16 20.3	-1.2
	comp=Z,2.0nm,0.8s,baz=25,slow=9.2,SNR=5.0						
KSRS				LR	LR	18 26 46.7	
	comp=Z,172nm,18.7s,baz=30,slow=38						
	comp=Z,2.0nm,0.8s						
ULN	Ulaanbaatar	26.83	266	*e*P	P	18 16 37.6	-1.7
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ULN				MLR	MLR		
	comp=Z,118nm,7.0s						
IMAR	Indian Mountai	27.01	49	P	P	18 16 39.7	-0.9
SONM	Songino Array	27.20	266	P	P	18 16 39.9	-2.7
	comp=Z,0.3nm,0.4s,baz=40,slow=11,SNR=2.7						
SONM				LR	LR	18 26 31.0	
	comp=Z,47nm,21.2s,baz=57,slow=34						
	comp=Z,0.3nm,0.4s						
J20K	Nowinta River	27.23	53	P	P	18 16 42.8	+0.3
J20K				IAmb	IAmb	18 16 49.8	
	comp=Z,31nm,1.7s						
L19K	White Mountain	27.46	58	P	P	18 16 45.4	+0.7
N18K	Kilae Creek	27.46	61	P	P	18 16 43.2	-1.5
N18K				IAmb	IAmb	18 17 25.8	
	comp=Z,23nm,1.4s						
M19K	Big River Lodg	27.75	58	P	P	18 16 47.5	+0.2
M19K				IAmb	IAmb	18 17 18.1	
	comp=Z,32nm,1.6s						
TOLK	Toolik Lake Re	28.14	43	P	P	18 16 50.4	-0.4
CAST	Castle Rocks	28.32	54	P	P	18 16 52.5	+0.2
PPLA	Purkeypile	28.43	55	P	P	18 16 53.1	-0.4
PPLA				IAmb	IAmb	18 16 59.7	
	comp=Z,40nm,1.5s						
MLY	Manley	28.44	51	P	P	18 16 53.5	0.0
MLY				IAmb	IAmb	18 17 08.2	
	comp=Z,36nm,1.9s						
KTH	Kantishna Hill	28.77	54	P	P	18 16 57.8	+1.3
KTH				IAmb	IAmb	18 17 49.9	
	comp=Z,42nm,1.8s						
I23K	Minto, Yukon-K	28.98	50	P	P	18 16 57.5	-0.6
I23K				IAmb	IAmb	18 17 38.4	
	comp=Z,28nm,1.8s						
TRF	Thorofare Moun	29.08	54	P	P	18 16 60.0	+0.7
Q19K	Cape Douglas,	29.16	64	P	P	18 16 59.8	-0.1
BWN	Browne	29.21	52	P	P	18 17 01.5	+1.3
HHC	Hu-ho-hao-te	29.33	250	*e*P	P	18 17 02.5	+0.8
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=Z,450nm,12.2s						
HHC				LR	LR		
	comp=Z,580nm,10.1s						
MCK	McKinley	29.57	53	P	P	18 17 04.1	+0.7
MCK				IAmb	IAmb	18 17 09.8	
	comp=Z,20nm,1.2s						
MCK	McKinley	29.57	53	P	P	18 17 04.1	+0.7
MCK				pmax	pmax		
	comp=Z,19nm,1.2s						
WRH	Wood River Hil	29.69	51	P	P	18 17 03.8	-0.7
WRH				IAmb	IAmb	18 17 06.3	
	comp=Z,16nm,1.2s						
IL31		30.09	50	P	P	18 17 07.7	-0.3
IL31				IAmb	IAmb	18 17 13.4	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	30.09	50	P	P	18 17 08.0	0.0
	comp=Z,3.6nm,0.9s,baz=280,slow=8.6,SNR=22						
ILAR				LR	LR	18 30 24.5	
	comp=Z,47nm,20.2s,baz=161,slow=39						
	comp=Z,3.6nm,0.9s						
ILAR	Eielson Array	30.09	50	P	P	18 17 07.2	-0.8
BRLK	Bradley Lake	30.12	61	P	P	18 17 07.3	-1.0
RC01	Rabbit Creek A	30.13	58	P	P	18 17 08.4	0.0
KDAK	Kodiak Island	30.15	65	LR	LR	18 29 43.5	
	comp=Z,82nm,19.1s,baz=307,slow=37						
HDA	Harding Lake	30.18	51	P	P	18 17 08.3	-0.5
BMAR	Burnt Mountain	30.23	45	P	P	18 17 09.6	+0.3
GHO	Glory Hole Cre	30.24	57	P	P	18 17 11.3	+1.8
BTO	Baotou	30.29	252	*e*P	P	18 17 12.5	+2.4
BTO				LR	LR		
	comp=Z,1μm,10.0s						
BTO				LR	LR		
	comp=Z,1μm,12.2s						
PRP	Porcupine Dome	30.41	48	P	P	18 17 11.1	+0.1
DHY	Denali Highway	30.45	54	P	P	18 17 11.8	+0.5
DHY				IAmb	IAmb	18 17 15.6	
	comp=Z,24nm,1.8s						
SML	Sawmill	30.49	56	P	P	18 17 11.9	+0.3
SML				IAmb	IAmb	18 17 17.5	
	comp=Z,11nm,0.9s						
SML	Sawmill	30.49	56	P	P	18 17 11.9	+0.3
SML				pmax	pmax		
	comp=Z,11nm,0.9s						
KNK	Knik Glacier	30.58	57	P	P	18 17 13.0	+0.6
KNK				IAmb	IAmb	18 17 18.0	
	comp=Z,15nm,0.8s						
PWL	Port Wells	30.85	58	P	P	18 17 14.2	-0.6
PWL				IAmb	IAmb	18 17 20.6	
	comp=Z,15nm,1.1s						
SCM	Sheep Creek Mo	30.92	56	P	P	18 17 16.0	+0.6
SCM				IAmb	IAmb	18 17 21.7	
	comp=Z,31nm,1.4s						
SCM	Sheep Creek Mo	30.92	56	P	P	18 17 16.0	+0.6
SCM				pmax	pmax		
	comp=Z,31nm,1.4s						
M24K	Tolsona, Glenn	31.32	55	P	P	18 17 21.5	+2.6
JCJ	Chichijima	31.40	192	LR	LR	18 31 14.8	
	comp=Z,19nm,21.0s,baz=348,slow=39						
SCRK	Sand Creek	31.55	51	P	P	18 17 20.3	-0.7
L26K	Log Cabin Wild	32.17	52	P	P	18 17 27.1	+0.7
N25K	Chitina, Valde	32.20	55	P	P	18 17 25.6	-1.1
N25K				IAmb	IAmb	18 17 44.5	
	comp=Z,18nm,1.4s						
EGAK	Eagle	32.40	49	P	P	18 17 27.0	-1.3
EGAK				IAmb	IAmb	18 17 33.8	
	comp=Z,17nm,1.2s						
BMRM	Bremner River	32.47	56	P	P	18 17 29.2	+0.1
M26K	Nabesna, AK	32.57	53	P	P	18 17 30.7	+0.8
M26K				IAmb	IAmb	18 17 35.6	
	comp=Z,12nm,1.1s						
RAGM	Ragged Mountai	32.69	57	P	P	18 17 31.5	+0.5
L27K	Beaver Creek,	32.79	52	P	P	18 17 32.0	+0.2
L27K				IAmb	IAmb	18 17 38.2	
	comp=Z,17nm,1.2s						
BCAR	Beaver Creek A	32.81	52	P	P	18 17 31.9	-0.1
VRDI	Verde Repeater	32.86	55	P	P	18 17 33.0	+0.4
VRDI				IAmb	IAmb	18 17 44.1	
	comp=Z,15nm,1.3s						
MCARA	McCarthy VSAT	32.98	55	P	P	18 17 34.7	+1.2
M27K	Edge Creek, AK	33.06	53	P	P	18 17 34.8	+0.4
M27K				IAmb	IAmb	18 17 50.2	
	comp=Z,28nm,1.8s						
DAWY	Dawson

comp=Z,30nm,1.4s
GTA Gaotai 36.43 261 *e*P **P 18 18 03.0 -0.7**
GTA pP pP 18 18 08.5 +2.9
GTA sP sP 18 18 11.3 +4.9
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,49nm,5.6s
GTA LR LR
comp=Z,250nm,13.8s
GTA LR LR
comp=Z,290nm,15.6s
GTA LR LR
comp=Z,270nm,13.5s
FARO Faro, Yukon 36.66 50 P **P 18 18 06.0 +0.7**
FARO IAmb IAmb 18 18 11.4
comp=Z,15nm,1.2s
WHY Whitehorse 36.82 53 P **P 18 18 07.9 +1.2**
SKAG Skagway 37.26 55 P **P 18 18 11.2 +0.9**
SKAG IAmb IAmb 18 18 17.9
comp=Z,33nm,1.6s
JIS Juneau Island 38.31 56 P **P 18 18 18.2 -1.0**
JIS IAmb IAmb 18 19 41.8
comp=Z,24nm,1.7s
EUNU Eureka 38.51 13 P **P 18 18 21.1 +0.3**
EUNU IAmb IAmb 18 18 26.1
comp=Z,21nm,1.1s
WTLY Watson Lake, Y 39.66 51 P **P 18 18 31.5 +1.0**
WMQ Urumqi 39.72 276 *e*P **P 18 18 31.3 +0.1**
WMQ pP pP 18 18 34.5 +1.3
WMQ sP sP 18 18 39.3 +5.3
WMQ pmax pmax
comp=Z,16nm,1.5s
WMQ LR LR
comp=Z,500nm,5.7s
WMQ LR LR
comp=Z,200nm,5.9s
KURK Kurchatov 39.87 291 P **P 18 18 32.6 +0.3**
KURK Kurchatov 39.87 291 P **P 18 18 32.6 +0.3**
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra 39.97 291 P **P 18 18 31.7 -1.4**
comp=Z,3.1nm,0.8s,baz=55,slow=8.6,SNR=12
comp=Z,3.1nm,0.8s
DLBC Dease Lake 40.11 54 P **P 18 18 35.2 +0.9**
MK31 Makanchi Array 40.54 284 P **P 18 18 36.9 -1.1**
MK31 Makanchi Array 40.54 284 P **P 18 18 36.9 -1.1**
MK31 pmax pmax
comp=Z,6.0nm,1.2s
MKAR Makanchi Array 40.54 284 P **P 18 18 36.4 -1.6**
comp=Z,2.0nm,0.8s,baz=46,slow=7.0,SNR=5.2
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 40.54 284 P **P 18 18 36.8 -1.1**
BRVK Borovoye 42.40 299 P **P 18 18 54.4 +1.3**
BRVK Borovoye 42.40 299 P **P 18 18 54.4 +1.3**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
RUBB Prince Rupert 42.52 59 P **P 18 18 54.4 +0.4**
RUBB IAmb IAmb 18 19 56.2
comp=Z,38nm,1.5s
YKA Yellowknife Ar 43.66 42 P **P 18 19 04.2 +1.0**
comp=Z,1.3nm,0.7s,baz=304,slow=6.6,SNR=2.6
comp=Z,1.3nm,0.7s
ARU Arti 45.37 309 P **P 18 19 17.2 +0.3**
ARU IAmb IAmb 18 19 21.3
comp=Z,18nm,1.5s
ARU Arti 45.37 309 P **P 18 19 19.1 +2.2**
PZH PanZhiHua 45.67 247 P **P 18 19 20.8 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,90nm,4.9s
MANA Manning 46.26 49 P **P 18 19 24.6 +0.6**
ARCES ARCESS Array B 46.32 336 P **P 18 19 22.6 -1.7**
comp=Z,3.3nm,0.8s,baz=32,slow=8.7,SNR=1.9
ARCES LR LR 18 41 42.3
comp=Z,81nm,19.2s,baz=320,slow=40
comp=Z,3.3nm,0.8s
KMI Kunming 46.35 245 ⇑P **P 18 19 28.0 +2.8**
KMI pmax pmax
comp=Z,7.0nm,0.6s
WAPA Wapiti River 46.75 52 P **P 18 19 27.8 -0.1**
WAPA IAmb IAmb 18 19 33.9
comp=Z,14nm,1.2s
BOOM Boomskoye usch 46.78 284 P **P 18 19 30.6 +2.1**
BOOM Boomskoye usch 46.78 284 P **P 18 19 30.6 +2.1**
BOOM pmax pmax
comp=Z,5.0nm,1.2s
AAK Ala-Archa 47.42 285 LR LR 18 38 48.4
comp=Z,31nm,18.5s,baz=146,slow=35
AAK Ala-Archa 47.42 285 P **P 18 19 32.7 -0.7**
AAK Ala-Archa 47.42 285 P **P 18 19 32.7 -0.7**
AAK pmax pmax
comp=Z,3.0nm,0.9s
NRN Naryn 47.52 283 P **P 18 19 36.1 +1.7**
NRN Naryn 47.52 283 P **P 18 19 36.1 +1.7**
NRN pmax pmax
comp=Z,4.0nm,1.4s
LSA Lhasa 48.44 260 P **P 18 19 41.5 -0.3**
LSA IAmb IAmb 18 19 46.6
comp=Z,6.1nm,0.6s
LSA Lhasa 48.44 260 P **P 18 19 41.5 -0.3**
LSA pmax pmax
comp=Z,6.0nm,0.6s
KK31 Karatay Array 49.11 288 P **P 18 19 45.3 -1.0**
KK31 Karatay Array 49.11 288 P **P 18 19 45.3 -1.0**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 49.11 288 P **P 18 19 44.8 -1.4**
KKAR Karatay Array 49.11 288 P **P 18 19 44.8 -1.4**
ABKAR Akbulak array 49.75 301 P **P 18 19 50.1 -0.9**
ABKAR PcP **PcP 18 21 13.7 +1.8**
LTY Liberty 51.78 60 P **P 18 20 05.1 -1.4**
LTY IAmb IAmb 18 20 12.3
comp=Z,14nm,1.4s
GAR Garm 52.24 285 P **P 18 20 09.1 -1.0**
GAR IAmb IAmb 18 20 14.4
comp=Z,16nm,1.1s
FINES FINESS Array B 52.78 330 P **P 18 20 12.2 -1.4**
comp=Z,1.6nm,0.7s,baz=32,slow=8.2,SNR=1.5
comp=Z,1.6nm,0.7s
CHGR Chuyangaron 53.09 285 P **P 18 20 15.5 -0.8**
CHGR IAmb IAmb 18 20 20.4
comp=Z,20nm,1.3s
CHGR Chuyangaron 53.09 285 P **P 18 20 15.5 -0.8**
CHGR pmax pmax
comp=Z,20nm,1.3s
PHRA Phrae 53.20 243 P **P 18 20 15.8 -1.3**
WALA Waterton Lakes 53.45 54 P **P 18 20 18.0 -0.9**
E09A Wood Farm, Sta 53.49 59 P **P 18 20 17.8 -1.2**
E09A IAmb IAmb 18 20 25.8
comp=Z,23nm,1.9s
CMAR Chiang Mai Arr 53.85 244 P **P 18 20 20.8 -1.2**
comp=Z,0.7nm,0.6s,baz=9.8,slow=7.6,SNR=4.6
CMAR LR LR 18 46 55.7
comp=Z,41nm,18.3s,baz=300,slow=40
comp=Z,0.7nm,0.6s
DAV Davao City (W) 54.08 209 LR LR 18 44 48.1
comp=Z,14nm,18.7s,baz=79,slow=38
NIL Nilore 54.80 278 P **P 18 20 28.7 -0.1**
NIL IAmb IAmb 18 20 33.4
comp=Z,9.9nm,1.0s
NIL Nilore 54.80 278 P **P 18 20 28.7 -0.1**
NIL pmax pmax
comp=Z,10.0nm,1.0s
BMO Blue Mountains 55.13 60 P **P 18 20 31.2 0.0**
BMO IAmb IAmb 18 20 38.2
comp=Z,15nm,1.9s
BMO Blue Mountains 55.13 60 P **P 18 20 31.2 0.0**
BMO pmax pmax
comp=Z,15nm,1.9s
HRY Holter Researc 56.15 55 P **P 18 20 38.9 +0.4**
WVOR Wild Horse Val 56.37 63 P **P 18 20 40.8 +0.7**
WVOR Wild Horse Val 56.37 63 P **P 18 20 40.8 +0.7**
WVOR pmax pmax
comp=Z,33nm,2.0s
NOA NORSAR Array B 56.68 337 P **P 18 20 40.7 -1.2**
comp=Z,0.7nm,0.5s,baz=41,slow=6.2,SNR=3.1
NOA LR LR 18 47 12.1
comp=Z,41nm,18.2s,baz=0.0,slow=38
comp=Z,0.7nm,0.5s
NBO00 NORSAR Array S 56.78 337 P **P 18 20 42.6 0.0**
DLMT Dillon 56.86 56 P **P 18 20 42.2 -1.4**
DLMT IAmb IAmb 18 20 49.9
comp=Z,11nm,1.1s
MCMT McKenzie Canyo 57.17 57 P **P 18 20 46.5 +0.6**

ORV Oroville 57.22 67 P **P 18 20 47.6 +1.5**
ORV Oroville 57.22 67 P **P 18 20 47.6 +1.5**
ORV pmax pmax
comp=Z,7.0nm,1.3s
HLID Hailey 57.45 59 P **P 18 20 48.4 +0.5**
QLMT Earthquake Lak 57.79 56 P **P 18 20 49.4 -0.9**
GCMT Greycliff 57.80 54 P **P 18 20 50.4 +0.2**
YHH Holmes Hill 58.08 56 P **P 18 20 53.2 +0.9**
PAHR Pah Rah Range 58.13 65 P **P 18 20 52.6 0.0**
RLMT Red Lodge 58.51 54 P **P 18 20 56.0 +0.7**
BMN Battle Mountai 58.60 63 P **P 18 20 57.0 +1.1**
BMN IAmb IAmb 18 23 04.2
comp=Z,6.7nm,0.5s
BMN Battle Mountai 58.60 63 P **P 18 20 57.0 +1.1**
BMN pmax pmax
comp=Z,7.0nm,0.5s
FLWY Flagg Ranch 58.70 56 P **P 18 20 57.8 +1.2**
FLWY IAmb IAmb 18 21 33.3
comp=Z,13nm,1.3s
IMW Indian Meadow 58.75 56 P **P 18 20 56.8 -0.2**
FXWY Fox Creek 58.91 57 P **P 18 20 58.4 +0.2**
LOHW Long Hollow 59.12 56 P **P 18 20 59.4 -0.2**
SNOW Snow King Moun 59.17 57 P **P 18 20 59.3 -0.7**
GEYT Alibeck 59.18 293 P **P 18 20 59.2 -0.6**
comp=Z,4.9nm,0.8s,baz=28,slow=6.5,SNR=4.1
comp=Z,4.9nm,0.8s
GEYT Alibeck 59.18 293 P **P 18 21 00.0 +0.2**
GEYT IAmb IAmb 18 21 04.4
comp=Z,6.4nm,0.9s
REDW Red Top Meadow 59.21 57 P **P 18 21 00.6 +0.5**
REDW IAmb IAmb 18 21 34.0
comp=Z,17nm,1.4s
KVN Kaiserville 59.26 65 P **P 18 21 00.9 +0.4**
KVN Kaiserville 59.26 65 P **P 18 21 01.0 +0.4**
KVN pmax pmax
comp=Z,10.0nm,0.9s
ELK Elko 59.28 62 P **P 18 21 01.9 +1.3**
ELK Elko 59.28 62 P **P 18 21 02.0 +1.3**
ELK pmax pmax
comp=Z,4.0nm,0.9s
AHID Auburn Hatcher 59.57 57 P **P 18 21 02.8 +0.1**
HVU Hansel Valley 59.60 59 P **P 18 21 03.7 +0.9**
HVU Hansel Valley 59.60 59 P **P 18 21 03.7 +0.9**
HVU pmax pmax
comp=Z,5.0nm,0.8s
NVAR Mina Array Bea 59.65 65 P **P 18 21 04.0 +0.7**
comp=Z,1.3nm,0.8s,baz=306,slow=6.1,SNR=7.9
comp=Z,1.3nm,0.8s
NVAR Mina Array Bea 59.65 65 P **P 18 21 03.5 +0.2**
LHV Little Huntoon 59.70 66 P **P 18 21 03.2 -0.1**
NV11 Mina Array Sit 59.72 65 P **P 18 21 04.1 +0.4**
SPUT South Promonto 60.12 59 P **P 18 21 07.2 +0.8**
SPUT IAmb IAmb 18 21 09.2
comp=Z,14nm,1.5s
BGU Big Grassy Mou 60.16 60 P **P 18 21 07.1 +0.4**
BW06 Boulder Array 60.26 56 P **P 18 21 07.4 0.0**
PD31 Pinedale Array 60.26 56 P **P 18 21 07.8 +0.5**
PDAR Pinedale Array 60.26 56 P **P 18 21 08.5 +1.1**
comp=Z,2.1nm,0.7s,baz=20,slow=2.3,SNR=20
comp=Z,2.1nm,0.7s
PDAR Pinedale Array 60.26 56 P **P 18 21 08.2 +0.8**
HWUT Hardware Ranch 60.29 58 P **P 18 21 08.9 +1.4**
TPH Tonopah 60.45 65 P **P 18 21 10.2 +1.4**
TPH Tonopah 60.45 65 P **P 18 21 10.2 +1.4**
TPH pmax pmax
comp=Z,16nm,0.8s
SIJI Sorong 60.51 200 LR LR 18 45 17.2
comp=Z,26nm,21.1s,baz=247,slow=34
DUG Dugway, Tooele 60.84 60 P **P 18 21 12.7 +1.4**
DUG IAmb IAmb 18 21 41.4
comp=Z,8.9nm,1.1s
DUG Dugway, Tooele 60.84 60 P **P 18 21 12.7 +1.4**
DUG pmax pmax
comp=Z,9.0nm,1.1s
AKASG Malin Array Be 60.88 321 P **P 18 21 09.9 -1.2**
comp=Z,1.4nm,0.5s,baz=34,slow=7.3,SNR=11
comp=Z,1.4nm,0.5s
LCH Last Change Ra 60.92 66 P **P 18 21 13.1 +1.3**
LCH IAmb IAmb 18 22 18.2
comp=Z,12nm,1.5s
AK05 Malin Array Si 60.95 321 P **P 18 21 13.6 +1.9**
AK05 IAmb IAmb 18 21 15.4
comp=Z,8.9nm,1.0s
GMN Gold Mountain 61.05 65 P **P 18 21 13.9 +1.0**
NLU North Lily Min 61.38 60 P **P 18 21 16.1 +1.1**
KIV Kislovodsk 61.40 308 P **P 18 21 15.4 +0.4**
KIV IAmb IAmb 18 21 22.2
comp=Z,5.8nm,0.6s
KIV Kislovodsk 61.40 308 P **P 18 21 15.4 +0.4**
KIV pmax pmax
comp=Z,6.0nm,0.6s
KBZ Khabaz 61.50 308 LR LR 18 49 27.2
comp=Z,28nm,18.6s,baz=28,slow=38
RSSD Black Hills 61.53 52 P **P 18 21 15.7 -0.3**
RSSD Black Hills 61.53 52 P **P 18 21 15.7 -0.3**
RSSD pmax pmax
comp=Z,4.0nm,0.8s
K22A Casper 61.67 54 P **P 18 21 16.7 -0.2**
K22A IAmb IAmb 18 21 21.8
comp=Z,13nm,1.4s
PSUT Pine Spring 61.69 62 P **P 18 21 18.0 +0.8**
PSUT IAmb IAmb 18 21 55.8
comp=Z,11nm,1.5s
WCT Wildcat Mounta 61.76 65 P **P 18 21 17.7 +0.2**
B35A Bob, Littlefor 61.99 42 P **P 18 21 19.3 +0.6**
RDMU Red Mountain 62.02 58 P **P 18 21 20.1 +0.7**
PRN Pahroc Range 62.02 64 P **P 18 21 19.9 +0.6**
PRN IAmb IAmb 18 21 59.4
comp=Z,6.2nm,1.1s
ONI Oni 62.19 306 P **P 18 21 21.9 +1.7**
ONI IAmb IAmb 18 21 25.7
comp=Z,8.5nm,1.2s
ONI Oni 62.19 306 P **P 18 21 22.0 +1.7**
ONI pmax pmax
comp=Z,8.0nm,1.2s
TMUT Trail Mountain 62.30 60 P **P 18 21 22.1 +0.7**
TMUT IAmb IAmb 18 21 40.3
comp=Z,17nm,1.5s
P17A Butcher Ranch, 62.37 59 P **P 18 21 22.4 +0.8**
P18A Preston Nutter 62.47 59 P **P 18 21 23.6 +1.1**
MVU Marysvale 62.48 61 P **P 18 21 23.8 +1.3**
MSU Marysvale 62.49 61 P **P 18 21 22.8 +0.3**
MSU Marysvale 62.49 61 P **P 18 21 22.8 +0.3**
Q16A Castle Valley 62.62 60 P **P 18 21 23.0 -0.4**
Q16A IAmb IAmb 18 21 40.6
comp=Z,7.4nm,1.0s
SRU San Rafael Swe 62.76 59 P **P 18 21 24.3 0.0**
SRU IAmb IAmb 18 21 37.2
comp=Z,12nm,1.1s
SRU San Rafael Swe 62.76 59 P **P 18 21 24.3 0.0**
SRU pmax pmax
comp=Z,12nm,1.1s
KNB Kanab 63.39 62 P **P 18 21 29.2 +0.8**
KNB IAmb IAmb 18 21 35.5
comp=Z,13nm,1.3s
KNB Kanab 63.39 62 P **P 18 21 29.3 +0.8**
KNB pmax pmax
comp=Z,13nm,1.3s
GNI Garni 63.62 304 LR LR 18 51 02.6
comp=Z,33nm,20.9s,baz=351,slow=38
PV23 Carpenter Ridg 63.99 59 P **P 18 21 33.2 +0.6**
PV22 Blue Mesa, Par 64.02 59 P **P 18 21 32.8 +0.1**
PV10 Paradox Valley 64.04 59 P **P 18 21 33.2 +0.4**
PV20 West Nyswonger 64.10 59 P **P 18 21 32.9 -0.2**
U15A North Rim 64.12 62 P **P 18 21 34.2 +0.8**
U15A IAmb IAmb 18 21 36.2
comp=Z,5.9nm,1.0s
PV07 Paradox Valley 64.16 58 P **P 18 21 33.7 +0.1**
PV07 IAmb IAmb 18 21 39.6
comp=Z,7.5nm,0.9s
PV11 David Mesa, Pa 64.17 59 P **P 18 21 34.2 +0.6**
OJC Ojcow 64.26 326 P **P 18 21 35.2 +1.4**
OJC IAmb IAmb 18 21 36.3
comp=Z,6.7nm,1.0s
OJC Ojcow 64.26 326 P **P 18 21 35.2 +1.4**
OJC pmax pmax
comp=Z,7.0nm,1.0s
SMCO Snowmass 64.31 57 P **P 18 21 35.3 +0.5**
PV13 Radium Mtn., P 64.31 59 P **P 18 21 35.4 +0.8**
PV13 IAmb IAmb 18 21 40.8
comp=Z,12nm,1.1s
PV15 Paradox Valley 64.32 58 P **P 18 21 35.3 +0.7**
PV15 IAmb IAmb 18 21 40.7
comp=Z,12nm,1.0s

BURAR Bucovina Array 64.87 322 P **P 18 21 38.1 +0.2**
BURAR Bucovina Array 64.87 322 P **P 18 21 40.1 +2.1**
BURAR pmax pmax
comp=Z,2.0nm,0.8s
CLL Collm 65.14 331 *i* P **P 18 21 42.6 +3.1**
CLL *i* 18 21 48.8
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 65.14 331 *e*Px Px 18 21 43.0
CLL *i* sP sP 18 21 48.8 +6.5
comp=Z,7.0nm,1.4s
WUAZ Wupatki 65.29 62 P **P 18 21 41.0 0.0**
WUAZ IAmb IAmb 18 21 47.7
comp=Z,9.0nm,1.0s
S22A 4UR Ranch, Cre 65.55 58 **P 18 21 43.3 +0.6**
ESJX Sierra Juarez 65.95 68 P **P 18 21 46.1 +0.8**
ESJX IAmb IAmb 18 21 47.8
comp=Z,7.9nm,1.3s
SDCO Great Sand Dun 66.14 57 P **P 18 21 47.5 +1.0**
KAPI Kappang 67.21 212 LR LR 18 52 16.3
comp=Z,20nm,19.6s,baz=0.0,slow=37
GERES GERESS Array B 67.21 330 P **P 18 21 51.9 -1.1**
comp=Z,0.2nm,0.6s,baz=40,slow=7.7,SNR=1.7
comp=Z,0.2nm,0.6s
BRTR Keskin Array B 68.63 312 P **P 18 22 02.8 +0.7**
comp=Z,1.1nm,1.0s,baz=76,slow=6.1,SNR=4.2
comp=Z,1.1nm,1.0s
SADO Sadowa 69.94 34 LR LR 18 56 46.6
comp=Z,43nm,18.5s,baz=172,slow=39
TXAR Lajitas Array 74.02 60 P **P 18 22 35.6 +0.8**
comp=Z,0.9nm,0.9s,baz=313,slow=3.3,SNR=5.7
comp=Z,0.9nm,0.9s
WRA Warramunga Arr 78.74 194 P **P 18 23 00.9 -0.4**
comp=Z,1.7nm,0.5s,baz=8.8,slow=5.8,SNR=36
comp=Z,1.7nm,0.5s
ESDC Sonseca Array 79.96 339 P **P 18 23 07.8 -0.2**
comp=Z,1.5nm,0.8s,baz=1.7,slow=4.4,SNR=4.7
comp=Z,1.5nm,0.8s
ASAR Alice Springs 82.46 194 P **P 18 23 21.0 -0.2**
comp=Z,0.9nm,0.5s,baz=5.4,slow=4.8,SNR=4.0
comp=Z,0.9nm,0.5s
SJG San Juan 98.65 34 LR LR 19 12 00.5
comp=Z,18nm,20.7s,baz=338,slow=37
PLCA Paso Flores 149.52 73 PKPbc **PKPbc 18 30 47.5 -0.2**
comp=Z,4.7nm,0.9s,baz=344,slow=4.5,SNR=6.0

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*IDC **29** 18:11:51.9±0.8, 29°.69N×42°.75W, h0km, mb4.2/19, mbtmp4.2/19, MS3.8/57, Error ellipse: s-maj=24.5km s-min=15.1km az=174.0*
*NEIC **29** 18:11:53.9±1.1, 29°.76N±0°.03×42°.7W±0°.1, h10km±1km, mb4.9/94, Error ellipse: s-maj=18.8km s-min=4.0km az=100.0*
*GCMT **29** 18:11:54.9±0.3, 30°.03N±0°.04×42°.71W±0°.03, h18km±1km, MW4.8/86, Moment Tensor Solution. s17,c17; s86,c100; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.08±.15; Mθθ0.88±.10; Mφφ1.20±.09; Mrθ0.97±.30; Mφθ0.71±.06; Mφr0.10±.23; Best double couple: M0=2.13700×10^16 NP1:φs=235.00000°, δ57.00000°, λ-74.00000°. NP2: φs=27.00000°, δ36.00000°, λ-113.00000°. Principal axes: T 1.8980, Plg11.0000°, Azm313.0000°; N 0.4800, Plg13.0000°, Azm46.0000°; P -2.3750, Plg73.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 18:11:53.4±0.5, 29.74N±0°.10×42.75W±0°.08, h10km, n167, σ0.75/119, mb4.8/65, MS3.7/57, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSR	**BB Station**	**18.99**	**284**	P	**P**	**18 16 12.8**	**-2.2**
BBSR				IAmb	IAmb	18 16 21.8	
comp=Z,94nm,1.5s							
DRLN	**Deer Lake**	**22.50**	**334**	P	**P**	**18 16 53.3**	**+0.4**
SJG	**San Juan**	**24.27**	**247**	LR	LR	18 24 52.4	
comp=Z,57nm,20.4s,baz=62,slow=32							
EMMW	**East Machias**	**24.58**	**314**	P	**P**	**18 17 13.5**	**+0.1**
G65A	**Princeton**	**24.89**	**315**	P	**P**	**18 17 14.9**	**-1.3**
PCDR	**Punta Cana, DR**	**25.87**	**250**	P	**P**	**18 17 25.4**	**+0.1**
PQI	**Presque Isle**	**25.91**	**318**	P	**P**	**18 17 24.8**	**-0.7**
MDP	**Montagnes des**	**26.23**	**103**	LR	LR	18 26 17.6	
comp=Z,51nm,18.6s,baz=52,slow=33							
D62A	**Allapoint, All**	**26.73**	**318**	P	**P**	**18 17 33.2**	**+0.2**
D62A				IAmb	IAmb	18 17 37.7	
comp=Z,38nm,1.6s							
BBTS	**Babate**	**28.44**	**116**	LR	LR	18 26 15.4	
comp=Z,470nm,20.9s,baz=254,slow=30							
SCHQ	**Schefferville**	**30.46**	**332**	LR	LR	18 29 08.8	
comp=Z,210nm,20.3s,baz=167,slow=34							
BAUV	**El Baul**	**31.45**	**234**	P	**P**	**18 18 15.6**	**+0.5**
SADO	**Sadowa**	**32.32**	**308**	LR	LR	18 29 20.3	
comp=Z,287nm,21.1s,baz=150,slow=32							
MDT	**Midelt**	**32.62**	**75**	LR	LR	18 28 22.1	
comp=Z,155nm,21.6s,baz=298,slow=30							
ESDC	**Sonseca Array**	**33.16**	**62**	P	**P**	**18 18 31.4**	**+1.3**
comp=Z,0.6nm,1.0s,baz=280,slow=9.9,SNR=3.1							
ESDC				LR	LR	18 28 34.4	
comp=Z,105nm,21.7s,baz=260,slow=30							
comp=Z,0.6nm,1.0s							
SDV	**Santo Domingo**	**33.35**	**237**	LR	LR	18 30 17.8	
comp=Z,41nm,21.8s,baz=46,slow=33							
TKL	**Tuckaleechee C**	**34.84**	**291**	LR	LR	18 30 03.1	
comp=Z,187nm,21.3s,baz=86,slow=31							
RCBR	**Riachuelo**	**35.97**	**168**	LR	LR	18 29 23.8	
comp=Z,253nm,20.6s,baz=136,slow=29							
SFJD	**Kangerlussuaq**	**37.59**	**355**	LR	LR	18 30 27.4	
comp=Z,130nm,21.0s,baz=156,slow=30							
FRB	**Frobisher Bay**	**37.79**	**342**	LR	LR	18 32 53.2	
comp=Z,87nm,21.0s,baz=149,slow=33							
ROSC	**El Rosal**	**38.77**	**236**	LR	LR	18 34 18.7	
comp=Z,82nm,22.0s,baz=37,slow=35							
P40A	**Paris**	**41.28**	**297**	P	**P**	**18 19 39.3**	**+0.4**
DBIC	**Dimbokro**	**42.38**	**115**	LR	LR	18 35 13.1	
comp=Z,271nm,19.6s,baz=280,slow=33							
BFO	**Black Forest**	**42.92**	**50**	P	**P**	**18 19 52.0**	**-0.3**
SAML	**Samuel**	**43.21**	**210**	P	**P**	**18 19 55.0**	**+0.2**
KEST	**Kesra**	**43.80**	**68**	LR	LR	18 35 26.3	
comp=Z,76nm,19.1s,baz=214,slow=32							
JTS	**Las Juntas de**	**43.81**	**253**	LR	LR	18 36 32.7	
comp=Z,90nm,20.5s,baz=94,slow=34							
DAVOX	**Davos/Dischmat**	**43.83**	**52**	LR	LR	18 34 57.4	
comp=Z,96nm,19.1s,baz=247,slow=32							
DAVA	**Damuels**	**43.87**	**51**	*e*P	**P**	**18 20 00.5**	**+0.5**
comp=Z,0.9nm,0.3s							
TOA0	**Torodi Ar. Sit**	**44.24**	**102**	P	**P**	**18 20 02.1**	**-1.1**
TOA0				IAmb	IAmb	18 20 07.8	
comp=Z,28nm,1.9s							
TORD	**Torodi Ar. Bea**	**44.24**	**102**	P	**P**	**18 20 02.5**	**-0.7**
comp=Z,3.8nm,1.1s,baz=303,slow=5.9,SNR=12							
TORD				LR	LR	18 37 44.2	
comp=Z,97nm,18.8s,baz=238,slow=35							
comp=Z,3.8nm,1.1s							
ULM	**Lac du Bonnet**	**44.48**	**313**	LR	LR	18 37 00.9	
comp=Z,117nm,20.7s,baz=44,slow=34							
MOTA	**Moosalm**	**44.70**	**51**	*e*P	**P**	**18 20 05.7**	**-1.0**
T35A	**Sooner Cattle**	**44.99**	**294**	P	**P**	**18 20 09.4**	**+0.4**
T35A				IAmb	IAmb	18 20 10.2	
comp=Z,14nm,0.8s							
CTI	**Castel Tesino**	**45.02**	**53**	P	**P**	**18 20 08.2**	**-1.0**
BDFB	**Brasilia**	**45.40**	**187**	LR	LR	18 37 06.0	
comp=Z,116nm,20.1s,baz=48,slow=33							
JMIC	**Jan Mayen**	**45.42**	**15**	LR	LR	18 35 00.7	
comp=Z,67nm,20.8s,baz=248,slow=30							
ABTA	**Abfaltersbach**	**45.64**	**52**	*e*P	**P**	**18 20 12.9**	**-1.2**
comp=Z,3.3nm,0.7s							
CLUD	**Cludinico**	**45.89**	**53**	P	**P**	**18 20 15.4**	**-0.6**
CLUD				IAmb	IAmb	18 20 19.0	
comp=Z,8.9nm,1.0s							
H10N2	**ASCENSION HYDR**	**46.19**	**139**	T	T	19 09 28.5	
baz=326,slow=75,SNR=2083							
H10N3	**ASCENSION HYDR**	**46.20**	**139**	T	T	19 09 34.0	
baz=326,slow=75,SNR=1768							
H10N1	**ASCENSION HYDR**	**46.21**	**139**	T	T	19 09 29.9	
baz=326,slow=75,SNR=2323							
CLL	**Collm**	**46.25**	**46**	*e*P	**P**	**18 20 20.0**	**+1.3**
CLL				*ex*	x	18 20 31.0	
KHC	**Kasperske Hory**	**46.45**	**49**	*e*P	**P**	**18 20 20.5**	**+0.1**
GERES	**GERESS Array B**	**46.52**	**49**	P	**P**	**18 20 20.9**	**-0.1**
comp=Z,1.0nm,0.8s,baz=260,slow=8.0,SNR=6.8							
comp=Z,1.0nm,0.8s							
CKRC	**Cesky Krumlov**	**46.92**	**49**	*e*P	**P**	**18 20 25.0**	**+0.9**
OBKA	**Obir**	**47.04**	**53**	*e*P	**P**	**18 20 25.4**	**+0.3**
comp=Z,0.3nm,0.2s							

NOA NORSAR Array B 47.14 32 P P 18 20 25.4 -0.2
comp=Z,1.8nm,0.9s,baz=256,slow=8.2,SNR=3.1
NOA LR LR 18 36 15.1
comp=Z,42nm,19.6s,baz=295,slow=31
comp=Z,1.8nm,0.9s
BOSC San Juan Bosco 47.33 233 P P 18 20 27.2 -0.6
BOSC IAmb IAmb 18 20 28.2
comp=Z,10.0nm,0.9s
VAE Valguarnera 47.60 65 LR LR 18 37 47.2
comp=Z,62nm,21.6s,baz=339,slow=33
SIV San Ignacio 48.78 204 LR LR 18 40 24.4
comp=Z,74nm,18.1s,baz=56,slow=35
JCT Junction City 48.90 286 P P 18 20 40.3 +0.6
JCT IAmb IAmb 18 20 47.4
comp=Z,8.4nm,0.9s
CMIG Matias Romero 49.10 267 LR LR 18 38 57.8
comp=Z,86nm,22.0s,baz=28,slow=33
ATAH Atahualpa 50.18 229 LR LR 18 42 38.9
comp=Z,69nm,19.0s,baz=27,slow=37
MSTX Muleshoe 50.53 291 P P 18 20 52.6 +0.4
T25A Trinidad 51.20 296 P P 18 20 57.4 +0.1
RES Resolute Bay 51.86 345 LR LR 18 42 02.0
comp=Z,60nm,19.0s,baz=94,slow=35
LPAZ La Paz 51.90 212 P P 18 21 02.4 -0.7
comp=Z,5.4nm,1.1s,baz=6.6,slow=9.7,SNR=9.2
LPAZ LR LR 18 42 06.2
comp=Z,61nm,18.5s,baz=43,slow=35
comp=Z,5.4nm,1.1s
LPAZ La Paz 51.90 212 P P 18 21 02.5 -0.5
SDCO Great Sand Dun 51.94 296 P P 18 21 03.7 +0.8
TXAR Lajitas Array 52.44 286 P P 18 21 06.9 +0.4
comp=Z,1.8nm,0.9s,baz=103,slow=9.1,SNR=12
TXAR LR LR 18 41 52.8
comp=Z,46nm,20.1s,baz=62,slow=34
comp=Z,1.8nm,0.9s
S22A 4UR Ranch, Cre 52.97 297 P P 18 21 11.5 +0.9
S22A IAmb IAmb 18 21 48.8
comp=Z,13nm,1.1s
ANMO Albuquerque 53.28 293 LR LR 18 41 47.7
comp=Z,157nm,21.9s,baz=82,slow=34
ANMO Albuquerque 53.28 293 P P 18 21 13.4 +0.7
EGMT Eagleton 53.57 310 P P 18 21 14.7 +0.2
EGMT IAmb IAmb 18 21 15.9
comp=Z,15nm,1.2s
O20A White River Ci 53.60 300 P P 18 21 15.3 +0.3
O20A IAmb IAmb 18 21 34.1
comp=Z,19nm,1.1s
BNM Barren Site 53.61 292 P P 18 21 16.1 +0.9
PD31 Pinedale Array 54.12 303 P P 18 21 18.7 -0.2
PD31 IAmb IAmb 18 21 25.9
comp=Z,14nm,1.1s
PDAR Pinedale Array 54.12 303 P P 18 21 19.1 +0.2
comp=Z,4.5nm,0.9s,baz=78,slow=7.9,SNR=15
PDAR LR LR 18 42 50.0
comp=Z,293nm,20.0s,baz=116,slow=34
comp=Z,4.5nm,0.9s
FINES FINESS Array B 54.28 33 P P 18 21 19.2 -0.2
comp=Z,6.5nm,0.9s,baz=240,slow=6.4,SNR=5.6
comp=Z,6.5nm,0.9s
NACGM Naroch 54.65 42 eP P 18 21 22.7 +0.5
comp=Z,11nm,0.7s,baz=272
SNOW Snow King Moun 54.87 304 P P 18 21 24.8 +0.5
SNOW IAmb IAmb 18 21 32.4
comp=Z,12nm,1.1s
ARCES ARCESS Array B 54.87 24 P P 18 21 22.7 -0.9
comp=Z,5.7nm,0.8s,baz=275,slow=7.2,SNR=5.3
comp=Z,5.7nm,0.8s
IMW Indian Meadow 54.93 305 P P 18 21 25.4 +0.6
IMW IAmb IAmb 18 21 32.3
comp=Z,15nm,1.2s
YHB Horse Butte 54.98 306 P P 18 21 24.2 -0.8
YHB IAmb IAmb 18 21 33.1
comp=Z,18nm,1.3s
MLR Muntele Rosu 55.03 53 LR LR 18 43 14.2
comp=Z,59nm,18.2s,baz=267,slow=34
MLR Muntele Rosu 55.03 53 P P 18 21 26.1 +0.8
MLR IAmb IAmb 18 21 34.0
comp=Z,17nm,1.3s
FXWY Fox Creek 55.03 305 P P 18 21 24.5 -1.0
FXWY IAmb IAmb 18 21 32.7
comp=Z,12nm,1.5s
AHID Auburn Hatcher 55.24 304 P P 18 21 27.2 +0.2
AHID IAmb IAmb 18 21 34.2
comp=Z,17nm,1.3s
GO01 Chusmiza 55.34 211 P P 18 21 28.1 0.0
YKA Yellowknife Ar 55.75 328 P P 18 21 29.4 -0.6
comp=Z,3.7nm,1.0s,baz=94,slow=7.1,SNR=4.0
YKA LR LR 18 44 36.7
comp=Z,236nm,19.9s,baz=5.5,slow=35
comp=Z,3.7nm,1.0s
HWUT Hardware Ranch 55.80 302 P P 18 21 31.4 +0.5
HWUT IAmb IAmb 18 21 38.8
comp=Z,9.1nm,1.1s
IDI Anoyia 56.32 65 LR LR 18 44 53.9
comp=Z,22nm,18.7s,baz=274,slow=35
AKASG Malin Array Be 56.49 46 P P 18 21 34.4 -1.1
comp=Z,1.2nm,0.6s,baz=279,slow=5.8,SNR=8.0
AKASG LR LR 18 43 06.4
comp=Z,44nm,18.9s,baz=314,slow=33
comp=Z,1.2nm,0.6s
NLU North Lily Min 56.52 300 P P 18 21 36.6 +0.4
NLU IAmb IAmb 18 21 44.0
comp=Z,12nm,1.2s
PB01 IPOC Station P 56.68 210 P P 18 21 36.8 -0.4
PB01 IAmb IAmb 18 21 42.3
comp=Z,6.3nm,0.8s
MSU Marysvale 56.92 299 P P 18 21 39.2 +0.2
MVU Marysvale 56.95 299 P P 18 21 38.4 -0.9
BGU Big Grassy Mou 57.02 302 P P 18 21 38.9 -0.8
BGU IAmb IAmb 18 21 46.4
comp=Z,15nm,1.5s
PB02 IPOC Station P 57.10 210 P P 18 21 38.3 -2.0
CPUP Villa Florida 57.48 196 LR LR 18 43 54.9
comp=Z,54nm,21.4s,baz=39,slow=34
PB03 IPOC Station P 57.68 210 P P 18 21 44.1 -0.2
PB03 IAmb IAmb 18 21 45.3
comp=Z,16nm,1.1s
LVC Limon Verde 57.82 209 LR LR 18 46 15.1
comp=Z,31nm,19.8s,baz=341,slow=36
CCUT Cedar City 58.07 298 P P 18 21 47.8 +0.6
CCUT IAmb IAmb 18 21 49.8
comp=Z,9.2nm,1.2s
PLID Pearl Lake 58.27 307 P P 18 21 48.2 -0.3
NEW Newport 58.42 311 LR LR 18 45 32.0
comp=Z,120nm,20.7s,baz=69,slow=35
NEW Newport 58.42 311 P P 18 21 49.2 0.0
NEW IAmb IAmb 18 21 55.4
comp=Z,25nm,1.6s
MFID Camas Ranch 58.50 305 P P 18 21 50.0 0.0
MFID IAmb IAmb 18 21 57.5
comp=Z,14nm,1.4s
WAPA Wapiti River 58.62 319 P P 18 21 50.2 -0.3
WAPA IAmb IAmb 18 21 51.0
comp=Z,8.6nm,0.8s
PRN Pahroc Range 59.40 298 P P 18 21 55.8 -0.6
R11A Troy Canyon, C 59.55 299 P P 18 21 57.0 -0.4
GO02 Mina Guanaco 60.36 208 P P 18 22 02.0 -1.1
GO02 IAmb IAmb 18 22 03.9
comp=Z,6.6nm,0.9s
J08A Circle Bar Ran 60.39 306 P P 18 22 03.3 +0.3
J08A IAmb IAmb 18 22 05.5
comp=Z,17nm,1.4s
WCT Wildcat Mounta 60.78 298 P P 18 22 05.6 -0.1
KLMR Klimovskoe 60.81 34 eP P 18 22 02.6 -2.8
KLMR AMP 18 22 06.5
comp=Z,41nm,1.6s
KLMR LR eP cP **PcP 18 22 51.6 +2.5**
KVN Kaiserville 61.26 301 P P 18 22 09.1 0.0
KVN IAmb IAmb 18 22 51.6
comp=Z,10nm,0.9s
NV11 Mina Array Sit 61.47 300 P P 18 22 10.2 -0.3
NV11 IAmb IAmb 18 22 57.8
comp=Z,10nm,0.8s
NVAR Mina Array Bea 61.58 300 P P 18 22 11.6 +0.2
comp=Z,3.3nm,1.1s,baz=84,slow=6.8,SNR=8.0
comp=Z,3.3nm,1.1s
BR131 Keskin Array S 61.83 58 P P 18 22 12.7 -0.3
BR131 IAmb IAmb 18 22 16.7
comp=Z,11nm,1.3s
BRTR Keskin Array B 61.83 58 P P 18 22 14.1 +1.2
comp=Z,3.1nm,1.0s,baz=270,slow=4.7,SNR=10.0
BRTR LR LR 18 47 25.2
comp=Z,53nm,18.9s,baz=245,slow=34
comp=Z,3.1nm,1.0s
BRTR Keskin Array B 61.83 58 P P 18 22 12.6 -0.3
PAHR Pah Rah Range 62.02 302 P P 18 22 14.6 +0.4

ISA Isabella, Lake 62.54 297 P P 18 22 17.9 +0.2
ISA IAmb IAmb 18 22 26.4
comp=Z,6.4nm,1.1s
INK Inuvik 63.01 335 P P 18 22 20.3 +0.2
comp=Z,7.8nm,0.8s,baz=67,slow=9.2,SNR=8.8
INK LR LR 18 48 38.2
comp=Z,169nm,20.1s,baz=82,slow=35
comp=Z,7.8nm,0.8s
INK Inuvik 63.01 335 P P 18 22 19.8 -0.3
INK IAmb IAmb 18 22 21.2
comp=Z,11nm,0.9s
CMB Columbia Colle 63.27 300 P P 18 22 23.2 +0.8
CMB IAmb IAmb 18 23 30.5
comp=Z,4.5nm,0.8s
BNN Bunyan 63.72 59 P P 18 22 24.7 -0.8
DLBC Dease Lake 63.80 324 LR LR 18 49 38.2
comp=Z,290nm,20.2s,baz=86,slow=36
YBH Yreka Blue Hor 63.85 305 LR LR 18 49 06.3
comp=Z,125nm,19.9s,baz=75,slow=35
BBB Bella Bella 64.39 317 LR LR 18 49 06.8
comp=Z,136nm,21.8s,baz=61,slow=35
FARO Faro, Yukon 64.42 329 P P 18 22 29.7 +0.1
FARO IAmb IAmb 18 22 31.4
comp=Z,7.2nm,1.0s
CO01 Juntas del Tor 64.86 206 P P 18 22 33.0 0.0
M31M Drury Creek, Y 64.90 329 P P 18 22 33.1 +0.5
M31M IAmb IAmb 18 22 34.4
comp=Z,6.7nm,1.0s
N31M Braeburn, Yuko 65.74 328 P P 18 22 37.8 -0.3
M30M Minto, Yukon 65.86 330 P P 18 22 39.0 +0.2
DAWY Dawson 66.48 332 P P 18 22 43.0 +0.2
KBZ Khabaz 67.18 52 P P 18 22 48.5 +0.9
comp=Z,3.9nm,1.1s,baz=252,slow=11,SNR=4.1
comp=Z,3.9nm,1.1s
FYU Fort Yukon 67.84 335 P P 18 22 51.9 +0.5
ONI Oni 67.95 53 P P 18 22 52.4 -0.2
ONI IAmb IAmb 18 22 56.4
comp=Z,5.1nm,0.9s
PRP Porcupine Dome 68.38 334 P P 18 22 55.2 +0.2
PRP IAmb IAmb 18 22 57.0
comp=Z,11nm,1.1s
BARN Barnard Glacie 68.55 329 P P 18 22 56.7 +0.5
BARN IAmb IAmb 18 22 57.5
comp=Z,5.8nm,0.8s
MT09 Talagante 68.59 205 P P 18 22 57.3 +0.7
IL31 69.21 334 P P 18 22 59.8 -0.1
ILAR Eielson Array 69.21 334 P P 18 23 00.6 +0.6
comp=Z,3.6nm,1.0s,baz=65,slow=4.8,SNR=20
ILAR LR LR 18 53 28.9
comp=Z,150nm,18.6s,baz=70,slow=36
comp=Z,3.6nm,1.0s
ILAR Eielson Array 69.21 334 P P 18 22 59.9 -0.1
CCB Clear Creek Bu 69.62 334 P P 18 23 03.0 +0.4
CCB IAmb IAmb 18 23 04.1
comp=Z,9.8nm,1.0s
MDM Murphy Dome 69.65 334 P P 18 23 02.7 0.0
H23K Yukon River 69.74 335 P P 18 23 04.1 +0.8
GNI Garni 69.74 55 P P 18 23 02.6 -1.3
GNI IAmb IAmb 18 23 08.4
comp=Z,14nm,1.1s
WRH Wood River Hil 69.81 334 P P 18 23 04.1 +0.4
WRH IAmb IAmb 18 23 05.2
comp=Z,16nm,1.2s
I23K Minto, Yukon-K 69.99 334 P P 18 23 05.4 +0.7
I23K IAmb IAmb 18 23 12.8
comp=Z,17nm,1.2s
I21K Tanana 70.94 335 P P 18 23 11.1 +0.5
I21K IAmb IAmb 18 23 12.6
comp=Z,12nm,0.8s
KTH Kantishna Hill 71.35 333 P P 18 23 13.2 0.0
ARU Arti 71.60 35 P P 18 23 14.7 -0.1
ARU IAmb IAmb 18 23 15.7
comp=Z,9.9nm,1.3s
PLCA Paso Flores 74.71 202 LR LR 18 57 42.7
comp=Z,40nm,18.9s,baz=4.0,slow=37
NRIK Noril'sk 74.82 16 P P 18 23 34.9 +1.4
comp=Z,7.2nm,1.0s,baz=348,slow=3.1,SNR=6.2
comp=Z,7.2nm,1.0s
NRIK Noril'sk 74.82 16 P P 18 23 34.5 +1.0
NRIK IAmb IAmb 18 23 36.0
comp=Z,17nm,1.2s
KDAK Kodiak Island 75.01 329 LR LR 18 57 46.7
comp=Z,294nm,18.1s,baz=84,slow=37
TSUM Tsumeb 75.79 122 LR LR 18 49 49.6
comp=Z,73nm,21.5s,baz=326,slow=30
MBAR Mbarara 75.99 99 LR LR 18 57 48.3
comp=Z,43nm,18.1s,baz=295,slow=36
BRVK Borovoye 79.15 34 P P 18 23 58.2 0.0
BVAR Borovoye Array 79.22 34 LR LR 18 55 52.6
comp=Z,43nm,18.9s,baz=323,slow=33
GEYT Alibeck 80.06 52 P P 18 24 04.7 +1.2
comp=Z,1.0nm,0.5s,baz=273,slow=8.6,SNR=5.0
comp=Z,1.0nm,0.5s
ATD Arta Tunnel 80.59 82 LR LR 18 59 29.6
comp=Z,58nm,18.9s,baz=345,slow=36
KURK Kurchatov 84.65 33 P P 18 24 27.0 -0.2
KURK IAmb IAmb 18 24 28.3
comp=Z,5.4nm,1.0s
ZAA0 Zalesovo Array 85.14 28 P P 18 24 29.6 0.0
ZALV Zalesovo Beam 85.14 28 P P 18 24 30.4 +0.8
comp=Z,1.9nm,0.7s,baz=302,slow=6.8,SNR=11
comp=Z,1.9nm,0.7s
ZALV Zalesovo Beam 85.14 28 P P 18 24 29.6 0.0
LBTB Lobatse 85.20 122 LR LR 18 55 11.7
comp=Z,85nm,22.0s,baz=320,slow=30
SUR Sutherland 86.29 131 LR LR 18 54 34.9
comp=Z,90nm,21.9s,baz=320,slow=30
CHGR Chuyangaron 86.96 47 P P 18 24 38.6 -0.4
BOSA Boshof 87.06 125 LR LR 19 00 56.3
comp=Z,35nm,18.7s,baz=1.0,slow=34
GAR Garm 87.48 46 P P 18 24 42.0 +0.4
AAK Ala-Archa 87.74 41 LR LR 19 02 01.0
comp=Z,21nm,21.1s,baz=332,slow=34
WSAR Wadi Sarin 87.94 64 LR LR 19 04 32.0
comp=Z,26nm,21.3s,baz=316,slow=36
PETK Petropavlovsk- 95.60 348 LR LR 19 07 39.1
comp=Z,25nm,21.5s,baz=41,slow=35
PMSA Palmer Station 95.67 189 LR LR 19 10 10.1
comp=Z,17nm,18.1s,baz=30,slow=37

*NEIC **29** 18:29:40.1±2.5, 14°.00N±0°.06×92°.91W±0°.04, h10km±2km, mb4.2/6, Md4.3/30(MEX), Error ellipse: s-maj=10.2km s-min=6.7km az=200.0*
*IDC **29** 18:29:41.4±2.7, 14°.54N×92°.26W, h0km, mb3.7/6, mbtmp3.7/9, ML3.7/3, MS3.4/2, Error ellipse: s-maj=102.1km s-min=19.5km az=36.0*
*MEX **29** 18:29:44.9±0.8, 14°.03N×92°.93W, h18km±122km, MD4.3*
*GCG **29** 18:29:46.8±0.7, 14°.39N×92°.83W, h53km±59km, MD4.0*
ISC 29 18:29:38.6±2.9, 13°.95N±0°.06×92°.97W±0°.04, h4km±20km, n63, σ1°.94/83, mb3.9/9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.17**	**36**		**Pn**	**18 30 00.6**	**-1.2**
THIG		**1.17**	**36**	*eP*	**Pn**	**18 30 00.6**	**-1.2**
PATR	**El Naranjo**	**1.36**	**32**	*i P*	**Pn**	**18 30 04.6**	**0.0**
PATR				*eS*	**Sb**	**18 30 21.6**	**-1.1**
RTAL	**Retalhuleu**	**1.36**	**65**		**Pn**	**18 30 05.3**	**+0.8**
RTAL				Sn	**Sn**	**18 30 19.0**	**-4.0**
CHUJ	**Union Juarez**	**1.41**	**36**	*i P*	**Pn**	**18 30 05.4**	**0.0**
CHUJ				*eS*	**Sn**	**18 30 22.8**	**-1.7**
PAVE	**Pavencul**	**1.46**	**32**	*i P*	**Pn**	**18 30 06.0**	**+0.1**
STG3	**Santiaguito 3,**	**1.56**	**61**	*eP*	**Pb**	**18 30 08.6**	**+0.5**
PCIG		**1.76**	**352**		**Pn**	**18 30 09.7**	**-0.2**
PCIG					**Sn**	**18 30 30.1**	**-2.7**
PCIG		**1.76**	**352**	*eP*	**Pn**	**18 30 09.7**	**-0.2**
PCIG				*i S*	**Sn**	**18 30 30.1**	**-2.7**
HUEH	**Huehuetenango**	**1.97**	**46**		**Pn**	**18 30 14.5**	**+1.5**
FUG	**Fuego 3**	**2.12**	**76**	*eS*	**Sn**	**18 30 42.2**	**+0.2**
PCG	**Pacaya**	**2.34**	**79**	*eP*	**Pb**	**18 30 20.8**	**-0.6**
PCG				*eS*	**Sn**	**18 30 48.0**	**+0.6**
CCIG	**Comitan**	**2.45**	**19**		**Pn**	**18 30 22.0**	**+2.4**
CCIG	**Comitan**	**2.45**	**19**	*eP*	**Pb**	**18 30 22.9**	**-0.5**
CCIG				*eS*	**Sn**	**18 30 49.0**	**-1.2**
NBG	**Las Nubes**	**2.62**	**76**	*eP*	**Pb**	**18 30 25.4**	**-0.9**
TGIG		**2.81**	**357**		**Pn**	**18 30 26.2**	**+1.8**
TGIG		**2.81**	**357**	*eP*	**Pn**	**18 30 26.2**	**+1.8**
HUIG	**Huatulco**	**3.53**	**301**		**Pn**	**18 30 31.8**	**-2.5**
HUIG					**Sn**	**18 31 13.1**	**-3.4**
HUIG	**Huatulco**	**3.53**	**301**	*eP*	**Pn**	**18 30 31.8**	**-2.5**
HUIG				*eS*	**Sn**	**18 31 13.1**	**-3.4**
MTO3	**Montecristo**	**3.53**	**82**		**Pn**	**18 30 34.9**	**+0.4**
UXUV	**UXUV**	**3.53**	**341**	*eP*	**Pn**	**18 30 37.1**	**+2.8**
UXUV				*eS*	**Sn**	**18 31 16.3**	**-0.3**
ESQI	**Esquipulas**	**3.57**	**80**		**Pn**	**18 30 36.1**	**+1.1**
CMIG	**Matias Romero**	**3.62**	**330**	Pn	**Pn**	**18 30 37.6**	**+2.1**
CMIG				Sn	**Sn**	**18 31 22.5**	**+3.7**
CMIG	**Matias Romero**	**3.62**	**330**		**Pn**	**18 30 36.0**	**+0.5**
CMIG					**Sn**	**18 31 18.3**	**-0.5**
CMIG	**Matias Romero**	**3.62**	**330**	*eP*	**Pn**	**18 30 36.0**	**+0.5**
CMIG				*eS*	**Sn**	**18 31 18.3**	**-0.5**
PETF	**Flores**	**4.20**	**45**		**Pn**	**18 30 43.0**	**-0.6**
PEIG	**Puerto Escondi**	**4.52**	**297**		**Pn**	**18 30 49.0**	**+1.1**
PEIG					**Sn**	**18 31 34.0**	**-7.0**
PEIG	**Puerto Escondi**	**4.52**	**297**	*eP*	**Pn**	**18 30 49.0**	**+1.1**
PEIG				*e*		18 31 34.0	
NEUV	**Arroyo Zacate**	**4.62**	**324**	*eP*	**Pn**	**18 30 50.5**	**+1.2**
YOIG	**Yosondua**	**5.27**	**304**		**Pn**	**18 30 59.4**	**+1.0**
YOIG					**Sn**	**18 31 58.3**	**-1.6**
YOIG	**Yosondua**	**5.27**	**304**	*eP*	**Pn**	**18 30 59.4**	**+1.0**
YOIG				*eS*	**Sn**	**18 31 58.3**	**-1.6**
TGUH	**Tegucigalpa,Un**	**5.53**	**88**	Pn	**Pn**	**18 31 03.1**	**+1.1**
PNIG	**Pinotepa**	**5.54**	**297**		**Pn**	**18 31 03.0**	**+1.1**
PNIG					Sn	18 31 56.5	-10
PNIG	**Pinotepa**	**5.54**	**297**	*eP*	**Pn**	**18 31 03.0**	**+1.1**
PNIG				*e*		18 31 56.5	
TOIG	**Toxpalan**	**5.70**	**317**		**Pn**	**18 31 04.2**	**+0.1**
TOIG					**Sn**	**18 32 11.1**	**+1.0**
TOIG	**Toxpalan**	**5.70**	**317**	*eP*	**Pn**	**18 31 04.2**	**+0.1**
TOIG				*eS*	**Sn**	**18 32 11.1**	**+1.0**
CRIN	**San Cristobal**	**5.90**	**101**	Pn	**Pn**	**18 31 07.0**	**+0.1**
CNGN	**Cerro Negro**	**6.28**	**103**	Pn	**Pn**	**18 31 12.5**	**+0.3**
FTIG	**Fresnillo de T**	**6.33**	**309**		**Pn**	**18 31 15.6**	**+2.7**
FTIG					**Sn**	**18 32 26.2**	**+0.3**
FTIG	**Fresnillo de T**	**6.33**	**309**	*eP*	**Pn**	**18 31 15.6**	**+2.7**
FTIG				*eS*	**Sn**	**18 32 26.2**	**+0.3**
JAUV	**Jalcomulco**	**6.51**	**326**	*eP*	**Pn**	**18 31 15.2**	**-0.2**
JAUV				*eS*	**Sn**	**18 32 29.9**	**-0.4**
TEIG	**Tepich**	**7.69**	**35**		**Pn**	**18 31 31.0**	**-0.4**
ORTG	**Ortega, Santa**	**8.17**	**115**	Pn	**Pn**	**18 31 39.8**	**+1.7**
JTS	**Las Juntas de**	**8.64**	**114**	Pn	**Pn**	**18 31 43.4**	**-1.2**
JTS				Lg	Lg	18 34 04.6	
RIMA	**Rio Macho**	**9.84**	**114**	Pn	**Pn**	**18 32 01.5**	**+0.4**
SRBA	**San Rafael, Bu**	**10.52**	**115**	Pn	**Pn**	**18 32 09.5**	**-1.0**
TXAR	**Lajitas Array**	**18.23**	**329**	Pn	**P**	**18 33 57.5**	**+4.4**
TXAR	**Lajitas Array**	**18.23**	**329**	P	**Pn**	**18 33 51.8**	**-1.0**
TX31	**Lajitas Ar. Si**	**18.23**	**329**	P	**Pn**	**18 33 52.1**	**-0.7**
TX31				IAmb	IAmb	18 34 08.0	
TX32	**Lajitas Array**	**18.23**	**329**	P	**Pn**	**18 33 51.6**	**-1.2**
AMTX	**Amarillo**	**22.27**	**341**	P	**P**	**18 34 37.1**	**+0.1**
AMTX				IAmb	IAmb	18 34 48.0	
OK051	**E0350 and S346**	**22.72**	**352**	P	**P**	**18 34 38.9**	**-2.7**
121A	**Cookes Peak, D**	**22.91**	**326**	P	**P**	**18 34 41.6**	**-2.3**
121A				IAmb	IAmb	18 35 01.3	
TKL	**Tuckaleechee C**	**23.14**	**19**	LR	LR	18 44 14.1	
ANMO	**Albuquerque**	**24.19**	**332**	P	**P**	**18 35 02.3**	**+5.8**
PDAR	**Pinedale Array**	**32.08**	**337**	P	**P**	**18 36 07.9**	**+0.9**
NVAR	**Mina Array Bea**	**33.12**	**322**	P	**P**	**18 36 19.6**	**+3.4**
SNOW	**Snow King Moun**	**33.14**	**336**	P	**P**	**18 36 14.6**	**-1.7**
YKA	**Yellowknife Ar**	**50.86**	**347**	P	**P**	**18 38 41.5**	**+1.2**
YKA				LR	LR	19 03 16.9	
INK	**Inuvik**	**60.22**	**344**	P	**P**	**18 39 47.5**	**0.0**
ILAR	**Eielson Array**	**62.51**	**337**	P	**P**	**18 40 04.7**	**+1.5**
ESDC	**Sonseca Array**	**80.48**	**51**	P	**P**	**18 41 50.6**	**-1.6**
CMAR	**Chiang Mai Arr**	**145.72**	**340**	PKPbc	**PKPab**	**18 49 21.5**	**+1.5**

comp=Z,1.2nm,0.6s,baz=343,slow=3.0,SNR=11

NOU 29 18:30:58.1, 18°.86S×169°.53E, h241km, MLv3.9/11,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.49**	**315**	P	Pn	18 31 35.6	+0.1
DVP	**Devils Point**	**1.70**	**311**	P	Pn	18 31 37.5	+0.3
LIFNC	**LIFOU**	**2.88**	**228**	P	Pn	18 31 47.7	-1.0
MARNC	**Mare, Loyalty**	**2.96**	**208**	P	Pn	18 31 49.2	-0.4
DZM	**Mont Dzumac**	**4.31**	**222**	P	Pn	18 32 05.6	+0.3
NOUC	**Port Laguerre**	**4.42**	**223**	P	Pn	18 32 07.0	+0.5
KOUNC	**Koumac, New Ca**	**5.22**	**250**	P	Pn	18 32 16.9	+0.6

*IDC **29** 18:57:51.4±6.6, 15°.10N×96°.05W, h0km, mb3.4/2, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=115.8km s-min=36.9km az=148.0*
*MEX **29** 18:58:04.2±0.4, 16°.01N×96°.53W, h50km±6km, MD4.3*
ISC 29 18:58:03.7±0.9, 15°.99N±0°.04×96°.54W±0°.02, h42km±11km, n42, σ2°.07/78, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	**Puerto Angel**	**0.32**	**168**	*eP*	**Pn**	**18 58 12.5**	**+0.2**
PANG				*eS*	**Sn**	**18 58 18.7**	**+0.2**
HUIG	**Huatulco**	**0.47**	**117**	*i P*	**Pn**	**18 58 13.6**	**-0.6**
HUIG				*i S*	**Sn**	**18 58 21.1**	**-0.4**
PEIG	**Puerto Escondi**	**0.58**	**271**	*i P*	**Pn**	**18 58 14.8**	**-0.8**
PEIG				*i S*	**Sn**	**18 58 23.8**	**-0.4**
OXLC	**Oaxaca**	**1.08**	**352**	*eP*	**Pn**	**18 58 21.1**	**-1.6**
OXLC				*eS*	**Sn**	**18 58 34.3**	**-2.3**
OXBJ	**Oaxaca**	**1.09**	**351**	*eP*	**Pn**	**18 58 21.1**	**-1.6**
OXBJ				*eS*	**Sn**	**18 58 34.5**	**-2.3**
VHO	**Vista Hermosa**	**1.10**	**350**	*i P*	**Pn**	**18 58 21.3**	**-1.5**
VHO				*eS*	**Sn**	**18 58 34.9**	**-2.0**
YOIG	**Yosondua**	**1.30**	**312**	*i P*	**Pn**	**18 58 25.2**	**-0.4**
YOIG				*eS*	**Sn**	**18 58 40.5**	**-1.4**
PNIG	**Pinotepa**	**1.58**	**285**	*eP*	**Pn**	**18 58 28.1**	**-1.1**
PNIG				*eS*	**Sn**	**18 58 46.4**	**-2.0**
TXIG	**Tlaxiaco**	**1.73**	**317**	*i P*	**Pn**	**18 58 31.4**	**-0.1**
TXIG				*eS*	**Sn**	**18 58 50.0**	**-2.4**
NEUV	**Arroyo Zacate**	**1.86**	**22**	*eP*	**Pn**	**18 58 31.7**	**-1.3**
NEUV				*eS*	**Sn**	**18 58 55.0**	**-0.3**
CMIG	**Matias Romero**	**1.93**	**55**	Pn	**Pn**	**18 58 31.4**	**-2.7**
CMIG				Sn	**Sn**	**18 58 58.4**	**+1.2**
CMIG	**Matias Romero**	**1.93**	**55**	*eP*	**Pn**	**18 58 32.7**	**-1.4**
CMIG				*eS*	**Sn**	**18 58 54.1**	**-3.1**
NILT	**Santiago Nilte**	**1.94**	**72**	*eP*	**Pn**	**18 58 33.1**	**-1.0**
NILT				*eS*	**Sn**	**18 58 55.9**	**-1.3**
TOIG	**Toxpalan**	**2.16**	**347**	*eP*	**Pn**	**18 58 37.3**	**0.0**
TOIG				*eS*	**Sn**	**18 59 02.1**	**-0.8**
MGIG	**Malinaltepec**	**2.36**	**302**	*eP*	**Pn**	**18 58 40.4**	**+0.3**
FTIG	**Fresnillo de T**	**2.44**	**322**	*eP*	**Pn**	**18 58 41.4**	**+0.1**
TLIG	**Tlapa**	**2.50**	**309**	*eP*	**Pn**	**18 58 42.2**	**+0.2**
TLIG				*eS*	**Sn**	**18 59 10.5**	**-0.7**
TPIG	**Tehuac#an**	**2.54**	**342**	*eP*	**Pn**	**18 58 44.2**	**+1.6**
TPIG				*eS*	**Sn**	**18 59 11.1**	**-1.4**
CRIG	**Cruz Grande**	**2.60**	**287**	*eP*	**Pn**	**18 58 42.2**	**-0.9**
CRIG				*eS*	**Sn**	**18 59 08.9**	**-4.6**
UXUV	**UXUV**	**2.65**	**60**	*eP*	**Pn**	**18 58 42.3**	**-1.6**
UXUV				*eS*	**Sn**	**18 59 12.3**	**-2.6**
DAIG	**Los Arroyos**	**3.16**	**289**	*eP*	**Pn**	**18 58 49.6**	**-1.3**
DAIG				*eS*	**Sn**	**18 59 22.7**	**-4.7**
PCIG		**3.21**	**95**	*eP*	**Pn**	**18 58 50.4**	**-1.2**
PCIG				*eS*	**Sn**	**18 59 26.0**	**-2.7**
JAUV	**Jalcomulco**	**3.37**	**356**	*eP*	**Pn**	**18 58 52.2**	**-1.8**
JAUV				*eS*	**Sn**	**18 59 31.1**	**-1.6**
MEIG	**Mezcala**	**3.52**	**304**	*eP*	**Pn**	**18 58 56.3**	**+0.3**
MEIG				*eS*	**Sn**	**18 59 35.7**	**-0.7**

PPM	**Popocatepetl**	**3.65 327**	*i* P	**Pn**	**18 58 59.9**	**+1.7**
PPM			*e*S	**Sn**	**18 59 38.9**	**-1.4**
PLIG	**Plataniillo**	**3.71 311**	*e*P	**Pn**	**18 58 57.9**	**-0.7**
PLIG			*e*S	**Sn**	**18 59 38.7**	**-2.4**
CAIG	**El Cayaco**	**3.73 287**	*e*P	**Pn**	**18 58 56.6**	**-2.1**
CAIG			*i* S	**Sn**	**18 59 36.0**	**-5.4**
YAIG	**Yautepec**	**3.74 320**	*e*P	**Pn**	**18 58 59.6**	**+0.5**
YAIG			*e*S	**Sn**	**18 59 39.2**	**-2.8**
TLVM	**San Miguel Top**	**4.06 323**	*e*P	**Pn**	**18 59 04.0**	**+0.3**
TLVM			*e*S	**Sn**	**18 59 53.0**	**+2.9**
MAVM	**Malinalco, Edo**	**4.08 317**	*e*P	**Pn**	**18 59 05.5**	**+1.6**
MAVM			*e*S	**Sn**	**18 59 50.9**	**+0.4**
AOVM	**Tlapan**	**4.21 321**	*e*P	**Pn**	**18 59 05.7**	**0.0**
AOVM			*e*S	**Sn**	**18 59 53.1**	**-0.8**
PATR	**El Naranjo**	**4.24 101**	*e*P	**Pn**	**18 59 05.6**	**-0.4**
PATR			*e*S	**Sn**	**18 59 51.3**	**-3.1**
INVM	**La Marquesa**	**4.26 321**	*e*P	Pn	18 59 01.5	-5.0
INVM			*e*S	**Sn**	**18 59 52.9**	**-2.2**
PAVE	**Pavencul**	**4.28 100**	*e*P	**Pn**	**18 59 07.0**	**+0.5**
PAVE			*e*S	**Sn**	**18 59 50.8**	**-4.5**
CXUV	**Coxquihui**	**4.28 347**	*e*P	**Pn**	**18 59 05.9**	**-0.5**
CXUV			*e*S	**Sn**	**18 59 52.3**	**-2.9**
ARIG	**Puente Sto Nin**	**4.30 303**	*e*P	**Pn**	**18 59 05.8**	**-0.8**
ARIG			*e*S	**Sn**	**18 59 52.7**	**-2.8**
CHUJ	**Union Juarez**	**4.36 101**	*e*P	**Pn**	**18 59 07.5**	**-0.2**
CHUJ			*e*S	**Sn**	**18 59 57.3**	**-0.2**
TOVM	**TOLUCA**	**4.44 318**	*e*P	**Pn**	**18 59 10.9**	**+2.1**
TOVM			*e*S	**Sn**	**19 00 00.5**	**+1.0**
ZIIG	**Zihuatanejo**	**4.98 290**	*e*P	**Pn**	**18 59 15.9**	**-0.1**
ZIIG			*e*S	**Sn**	**19 00 05.6**	**-6.8**
TXAR	**Lajitas Array**	**14.82 335**	Pn	**P**	**19 01 37.8**	**+2.1**
	0.1nm,0.3s,baz=156,slow=13,SNR=7.9					
	0.5nm,0.6s					
NVAR	**Mina Array Bea**	**29.43 324**	P	**P**	**19 04 06.1**	**+2.5**
	0.4nm,0.7s,baz=135,slow=9.0,SNR=4.2					
	0.4nm,0.7s					
ILAR	**Eielson Array**	**59.31 337**	P	**P**	**19 08 01.0**	**0.0**
	0.3nm,0.6s,baz=140,slow=5.1,SNR=4.6					
	0.3nm,0.6s					

*IDC **29** 19:13:01.8±3.3, 15°.86S×173°.89W, h85km±32km, mb3.7/4, mbtmp4.1/5, Error ellipse: s-maj=146.0km s-min=23.3km az=140.0*

*NEIC **29** 19:13:01.7±0.9, 15°.86S±0°.03×173°.9W±0°.1, h80km±13km, mb4.5/12, Error ellipse: s-maj=20.5km s-min=4.3km az=82.0*

ISC 29 19:13:02.3±0.6, 15°.81S±0°.10×173°.78W±0°.09, h100km, n25, σ1§11/25, mb4.3/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.71**	**46**	P	**Pn**	**19 13 45.0**	**+0.7**
	124nm,0.3s,baz=172,slow=1.4,SNR=36						
AFI				S	**Sn**	**19 14 13.8**	**-2.7**
	760nm,0.3s,baz=290,slow=23,SNR=21						
NIUE	**Niue**	**4.91**	**132**	Pn	**Pn**	**19 14 13.4**	**-0.3**
MARNC	**Mare, Loyalty**	**18.13**	**249**	P	**P**	**19 17 03.5**	**-3.2**
DZM	**Mont Dzumac**	**19.70**	**249**	P	**Pn**	**19 17 24.9**	**-1.5**
DZM				IAmb	IAmb	19 17 29.5	
	comp=Z,23nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**39.13**	**330**	T	T	20 01 28.8	
	baz=146,slow=76,SNR=8.7						
H11S3	**WAKE ISLAND Hy**	**39.14**	**330**	T	T	20 01 35.5	
	baz=146,slow=76,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**39.15**	**330**	T	T	20 01 34.6	
	baz=146,slow=76,SNR=7.5						
COEN	**Coen**	**41.59**	**267**	P	**P**	**19 20 42.1**	**+1.4**
COEN				IAmb	IAmb	19 21 11.9	
	comp=Z,19nm,1.3s						
STKA	**Stephens Creek**	**43.51**	**240**	P	**P**	**19 20 55.9**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=101,slow=5.2,SNR=3.3						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**43.51**	**240**	P	**P**	**19 20 56.3**	**+0.2**
BBOO	**Buckleboo**	**48.29**	**240**	P	**P**	**19 21 33.5**	**-0.1**
WR0	**Warramunga Arr**	**49.20**	**257**	P	**P**	**19 21 40.9**	**+0.1**
WR0				IAmb	IAmb	19 21 58.2	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**49.39**	**257**	P	**P**	**19 21 42.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=91,slow=6.7,SNR=32						
WRA				PcP	**PcP**	**19 23 03.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=99,slow=3.5,SNR=1.0						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**49.39**	**257**	P	**P**	**19 21 41.9**	**-0.4**
AS31	**Alice Springs**	**49.63**	**252**	P	**P**	**19 21 44.0**	**-0.1**
AS31				IAmb	IAmb	19 21 45.3	
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**49.63**	**252**	P	**P**	**19 21 43.9**	**-0.2**
	comp=Z,4.0nm,0.5s,baz=88,slow=7.4,SNR=110						
ASAR				PcP	**PcP**	**19 23 04.7**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=93,slow=4.1,SNR=1.4						
	comp=Z,4.0nm,0.5s						
ASAR	**Alice Springs**	**49.63**	**252**	P	**P**	**19 21 43.6**	**-0.4**
PSA00	**Pilbara Seismi**	**62.74**	**254**	P	**P**	**19 23 17.0**	**-0.3**
PSA00				IAmb	IAmb	19 23 47.7	
	comp=Z,7.9nm,1.2s						
PSA00	**Pilbara Seismi**	**62.74**	**254**	P	**P**	**19 23 17.6**	**+0.3**
PSA00				IAmb	IAmb	19 23 25.3	
	comp=Z,21nm,1.2s						
MBWA	**Marble Bar**	**62.89**	**254**	P	**P**	**19 23 18.3**	**0.0**
VNDA	**Vanda**	**62.93**	**186**	P	**P**	**19 23 19.1**	**+1.4**
QSPA	**South Pole Qui**	**74.24**	**180**	P	**P**	**19 24 28.7**	**+0.5**
QSPA				IAmb	IAmb	19 24 36.3	
	comp=Z,8.0nm,1.4s						
ILAR	**Eielson Array**	**82.92**	**11**	P	**P**	**19 25 16.6**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=224,slow=5.2,SNR=4.8						
	comp=Z,0.2nm,0.7s						
BRTR	**Keskin Array B**	**146.24**	**320**	PKPbc	**PKPab**	**19 32 32.6**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=70,slow=2.2,SNR=5.0						
GERES	**GERESS Array B**	**146.49**	**351**	PKPbc	**PKPab**	**19 32 32.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=25,slow=4.1,SNR=2.4						

*NEIC **29** 19:19:55.7±1.6, 4°.76S±0°.07×149°.59E±0°.08, h586km±4km, mb4.7/111, Error ellipse: s-maj=13.5km s-min=8.0km az=50.0*

*DJA **29** 19:19:55.4±0.3, 5°.S±3°×15°.0E±°, h586km±4km, M4.6/44, mb4.8/44, mB5.1/15, MLv4.8/3, Mw(mB)4.4/15, MwMwp5.2/1, Mwp5.5/1*

*IDC **29** 19:19:56.1±0.6, 4°.79S×149°.57E, h596km±7km, mb4.0/26, mbtmp5.0/31, Error ellipse: s-maj=8.4km s-min=6.3km az=85.0*

ISC 29 19:19:55.8±0.3, 4°.75S±0°.04×149°.62E±0°.05, h600km, n391, σ1§06/412, mb4.8/99, 7C-7D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.60**	**78**	P	**P**	**19 21 10.2**	**-2.6**
MANU	**Manus Island**	**3.51**	**320**	P	**P**	**19 21 17.7**	**-0.3**
MANU	**Manus Island**	**3.51**	**320**	P	**P**	**19 21 17.8**	**-0.3**
PMG	**Port Moresby**	**5.23**	**208**	P	**P**	**19 21 31.0**	**+0.5**
	192nm,0.5s,baz=36,slow=5.2,SNR=118						
PMG				S	**S**	**19 22 47.4**	**-0.5**
	129nm,1.0s,baz=342,slow=23,SNR=15						
PMG	**Port Moresby**	**5.23**	**208**	P	**P**	**19 21 30.9**	**+0.3**
PMG	**Port Moresby**	**5.23**	**208**	P	**P**	**19 21 30.8**	**+0.3**
	1.5nm3μm378nm,1.1s						
PMG	**Port Moresby**	**5.23**	**208**	P	**P**	**19 21 31.0**	**+0.5**
GENI	**Genyem**	**9.67**	**282**	P	**P**	**19 22 10.8**	**-0.6**
	2μm152nm,0.7s						
GENI	**Genyem**	**9.67**	**282**	P	**P**	**19 22 11.0**	**-0.4**
COEN	**Coen**	**11.14**	**214**	P	**P**	**19 22 26.6**	**+0.6**
	baz=11,SNR=33						
COEN				S	**S**	**19 24 30.3**	**+1.1**
	baz=11						
COEN	**Coen**	**11.14**	**214**	P	**P**	**19 22 26.1**	**+0.2**
COEN	**Coen**	**11.14**	**214**	P	**P**	**19 22 26.6**	**+0.6**
SMPI	**Sarmi**	**11.23**	**284**	P	**P**	**19 22 25.8**	**-1.1**
	2μm216nm,1.1s						
HNR	**Honiara**	**11.25**	**115**	P	**P**	**19 22 28.3**	**+1.2**
	1μm,0.5s,baz=353,slow=5.1,SNR=4.1						
HNR	**Honiara**	**11.25**	**115**	P	**P**	**19 22 26.2**	**-0.9**
MTSU	**Mount Surprise**	**14.28**	**201**	P	**P**	**19 22 58.4**	**+1.0**
	baz=14,SNR=73						
MTSU	**Mount Surprise**	**14.28**	**201**	P	**P**	**19 22 58.3**	**+1.0**
PATS	**Pohnpei**	**14.41**	**37**	P	**P**	**19 22 58.1**	**-0.5**
	baz=14,SNR=9.1						
PATS	**Pohnpei**	**14.41**	**37**	P	**P**	**19 22 57.8**	**-0.9**
PATS	**Pohnpei**	**14.41**	**37**	P	**P**	**19 22 58.2**	**-0.5**
TV1H	**Townsville Har**	**14.68**	**191**	P	**P**	**19 23 01.9**	**+0.8**
CTA	**Charters Tower**	**15.59**	**192**	P	**P**	**19 23 10.8**	**+1.3**
	23nm,0.7s,baz=5.9,slow=12,SNR=26						
CTA				S	**S**	**19 25 48.7**	**+1.3**
	10nm,0.9s,baz=241,slow=19,SNR=3.1						
CTA	**Charters Tower**	**15.59**	**192**	P	**P**	**19 23 10.9**	**+1.5**
CTAO	**Charters Tower**	**15.59**	**192**	P	**P**	**19 23 10.7**	**+1.3**
CTAO				IAmb	IAmb	19 23 11.9	
	comp=Z,52nm,1.1s						
CTAO	**Charters Tower**	**15.59**	**192**	P	**P**	**19 23 11.1**	**+1.7**
FAKI	**Fak Fak**	**17.43**	**275**	P	**P**	**19 23 26.2**	**-0.1**
FAKI				IAmb	IAmb	19 23 28.7	
	comp=Z,30nm,0.8s						
FAKI	**Fak Fak**	**17.43**	**275**	P	**P**	**19 23 26.3**	**-0.1**
QIS	**Mount Isa**	**18.49**	**211**	P	**P**	**19 23 36.4**	**+0.6**
	baz=19,SNR=58						
QIS	**Mount Isa**	**18.49**	**211**	P	**P**	**19 23 36.5**	**+0.6**
KDU	**Kakadu**	**18.68**	**244**	P	**P**	**19 23 37.4**	**-0.4**
	baz=19,SNR=12						
KDU	**Kakadu**	**18.68**	**244**	P	**P**	**19 23 37.3**	**-0.4**
SIJI	**Sorong**	**18.73**	**281**	P	**P**	**19 23 38.6**	**+0.3**
	comp=Z,14nm,0.7s,baz=83,slow=7.4,SNR=14						
SIJI				S	**S**	**19 26 38.6**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=211,slow=24,SNR=5.9						
SIJI	**Sorong**	**18.73**	**281**	P	**P**	**19 23 38.5**	**+0.3**
	comp=Z,18nm,0.8s						
GUMO	**Guam**	**18.82**	**346**	P	**P**	**19 23 39.4**	**+0.4**
	comp=Z,101nm,0.7s,baz=160,slow=16,SNR=5.8						
GUMO	**Guam**	**18.82**	**346**	P	**P**	**19 23 38.7**	**-0.3**
EIDS	**Eidsvold**	**20.55**	**176**	P	**P**	**19 23 54.9**	**+0.4**
EIDS				IAmb	IAmb	19 24 01.2	
	comp=Z,7.2nm,0.8s						
WB0	**Warramunga Arr**	**21.04**	**224**	P	**P**	**19 23 59.1**	**+0.1**
WR0	**Warramunga Arr**	**21.07**	**223**	P	**P**	**19 23 59.4**	**+0.1**
WRAB	**Tennant Creek**	**21.19**	**223**	P	**P**	**19 24 00.6**	**+0.3**
WRAB	**Tennant Creek**	**21.19**	**223**	P	**P**	**19 24 00.8**	**+0.5**
WB2	**Warramunga Arr**	**21.19**	**223**	P	**P**	**19 24 00.7**	**+0.3**
	baz=21						
WRA	**Warramunga Arr**	**21.20**	**223**	P	**P**	**19 24 00.7**	**+0.2**
	comp=Z,39nm,0.3s,baz=46,slow=9.5,SNR=475						
WRA				S	**S**	**19 27 16.5**	**-1.0**
	comp=Z,5.3nm,0.7s,baz=47,slow=16,SNR=8.8						
WRA				PcP	**PcP**	**19 27 40.8**	**+0.9**
	comp=Z,11nm,0.8s,baz=30,slow=1.9,SNR=8.5						
WRA				ScP	**ScP**	**19 30 22.3**	**+1.4**
	comp=Z,6.1nm,0.9s,baz=44,slow=2.8,SNR=8.5						
	comp=Z,39nm,0.3s						
WRA	**Warramunga Arr**	**21.20**	**223**	P	**P**	**19 23 59.3**	**-1.2**
RMQ	**Roma**	**21.63**	**182**	P	**P**	**19 24 04.9**	**+0.8**
	baz=22,SNR=6.9						
RMQ	**Roma**	**21.63**	**182**	P	**P**	**19 24 05.1**	**+0.9**
QLP	**Quilpie**	**22.31**	**193**	P	**P**	**19 24 10.8**	**+0.6**
	baz=22,SNR=7.4						
QLP	**Quilpie**	**22.31**	**193**	P	**P**	**19 24 11.2**	**+1.0**
LBMI	**Labuha**	**22.46**	**280**	P	**P**	**19 24 13.2**	**+1.4**
	comp=Z,64nm,0.9s						
NLAI	**Namlea**	**22.52**	**273**	P	**P**	**19 24 13.4**	**+1.2**
	comp=Z,40nm,0.7s						
KNRA	**Kununurra**	**23.19**	**241**	P	**P**	**19 24 17.8**	**-0.4**
	baz=23,SNR=8.3						
KNRA	**Kununurra**	**23.19**	**241**	P	**P**	**19 24 17.8**	**-0.4**
KNRA				IAmb	IAmb	19 24 18.7	
	comp=Z,44nm,1.2s						
KNRA	**Kununurra**	**23.19**	**241**	P	**P**	**19 24 18.1**	**-0.1**
LIFNC	**LIFOU**	**23.39**	**134**	P	**P**	**19 24 19.4**	**-0.4**
DZM	**Mont Dzumac**	**23.71**	**138**	P	**P**	**19 24 23.1**	**+0.3**
	comp=Z,12nm,0.5s,baz=249,slow=10,SNR=35						
	comp=Z,12nm,0.5s						
DZM	**Mont Dzumac**	**23.71**	**138**	P	**P**	**19 24 22.9**	**+0.2**
DZM				IAmb	IAmb	19 24 23.6	
	comp=Z,19nm,0.6s						
SANI	**Sanana**	**23.74**	**276**	P	**P**	**19 24 23.0**	**-0.1**
	comp=Z,25nm,1.2s						
SANI	**Sanana**	**23.74**	**276**	P	**P**	**19 24 23.2**	**+0.1**
AS01	**Alice Springs**	**24.12**	**217**	P	**P**	**19 24 26.4**	**0.0**
AS31	**Alice Springs**	**24.15**	**217**	P	**P**	**19 24 26.7**	**0.0**
ASAR	**Alice Springs**	**24.15**	**217**	P	**P**	**19 24 26.7**	**0.0**
	comp=Z,44nm,0.6s,baz=46,slow=8.5,SNR=769						
ASAR				PcP	**PcP**	**19 27 47.1**	**+1.0**
	comp=Z,5.8nm,0.7s,baz=54,slow=2.9,SNR=8.3						
ASAR				S	**S**	**19 28 02.6**	**-1.4**
	comp=Z,4.7nm,0.8s,baz=40,slow=13,SNR=5.4						
ASAR				ScP	**ScP**	**19 30 30.4**	**+1.7**
	comp=Z,4.3nm,0.8s,baz=49,slow=3.3,SNR=7.8						
	comp=Z,44nm,0.6s						
INKA	**Innaminka**	**24.38**	**199**	P	**P**	**19 24 28.6**	**+0.1**
AULRC	**Lightning Ridg**	**24.59**	**183**	P	**P**	**19 24 31.0**	**+0.6**
	comp=Z,52nm,1.1s						
ARMA	**Armidale**	**25.60**	**176**	P	**P**	**19 24 41.4**	**+2.0**
	baz=26,SNR=7.7						
ARMA	**Armidale**	**25.60**	**176**	P	**P**	**19 24 40.6**	**+1.2**
ARMA				IAmb	IAmb	19 25 22.1	
	comp=Z,20nm,1.3s						
SOEI	**Soe**	**25.63**	**257**	P	**P**	**19 24 40.2**	**+0.3**
SOEI	**Soe**	**25.63**	**257**	P	**P**	**19 24 41.3**	**+1.4**
	comp=Z,52nm,0.9s						
SOEI	**Soe**	**25.63**	**257**	P	**P**	**19 24 40.5**	**+0.6**
BATI	**Baumata**	**26.29**	**257**	P	**P**	**19 24 47.0**	**+1.4**
	comp=Z,41nm,0.5s,baz=116,slow=2.5,SNR=19						
	comp=Z,41nm,0.5s						
BATI	**Baumata**	**26.29**	**257**	P	**P**	**19 24 46.6**	**+1.0**
	comp=Z,3μmcomp=Z,77nm,0.9s						
OOD	**Oodnadatta**	**26.48**	**209**	P	**P**	**19 24 46.9**	**-0.1**
CMSA	**Cobar Meteorol**	**26.90**	**187**	P	**P**	**19 24 51.0**	**+0.3**
	baz=27,SNR=26						
CMSA	**Cobar Meteorol**	**26.90**	**187**	P	**P**	**19 24 51.1**	**+0.4**
BBSI	**Bau Bau**	**26.95**	**267**	P	**P**	**19 24 54.4**	**+3.0**
	comp=Z,524nmcomp=Z,27nm,1.0s						
LUWI	**Luwuk**	**27.06**	**277**	P	**P**	**19 24 52.4**	**0.0**
LUWI	**Luwuk**	**27.06**	**277**	P	**P**	**19 24 53.0**	**+0.7**
	comp=Z,505nmcomp=Z,47nm,1.1s						
LUWI	**Luwuk**	**27.06**	**277**	P	**P**	**19 24 53.2**	**+0.9**
GTOI	**Gorontalo**	**27.12**	**281**	P	**P**	**19 24 54.7**	**+1.9**
	comp=Z,18nm,0.7s						
AUDCS	**Dubbo College**	**27.35**	**182**	P	**P**	**19 24 56.1**	**+1.5**
	comp=Z,33nm,1.0s						
MMRI	**Maumere**	**27.46**	**260**	P	**P**	**19 24 54.8**	**-1.0**
MMRI	**Maumere**	**27.46**	**260**	P	**P**	**19 24 55.7**	**-0.1**
	comp=Z,890nmcomp=Z,66nm,0.7s						
MMRI	**Maumere**	**27.46**	**260**	P	**P**	**19 24 56.0**	**+0.2**
LCRK	**Leigh Creek**	**27.73**	**202**	P	**P**	**19 24 57.7**	**-0.2**
KKSI	**Kolaka, Sulawe**	**27.89**	**270**	P	**P**	**19 25 00.3**	**+0.7**
	comp=Z,41nm,1.1s						
STKA	**Stephens Creek**	**28.02**	**195**	P	**P**	**19 24 59.6**	**-0.7**
	comp=Z,14nm,0.8s,baz=0.9,slow=9.5,SNR=13						
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**28.02**	**195**	P	**P**	**19 25 00.1**	**-0.3**
	baz=28,SNR=4.4						
STKA	**Stephens Creek**	**28.02**	**195**	P	**P**	**19 25 00.1**	**-0.3**
STKA	**Stephens Creek**	**28.02**	**195**	P	**P**	**19 25 00.4**	**0.0**
APSI	**Ampana**	**28.19**	**277**	P	**P**	**19 25 02.9**	**+0.7**
	comp=Z,838nmcomp=Z,65nm,0.5s						
WRKA	**Warakurna**	**28.74**	**223**	P	**P**	**19 25 06.3**	**-0.5**
	baz=29,SNR=283						
WRKA	**Warakurna**	**28.74**	**223**	P	**P**	**19 25 06.3**	**-0.5**
BSSI	**Bau Bau, Buton**	**29.03**	**266**	P	**P**	**19 25 10.2**	**+0.8**
	comp=Z,45nm,1.2s						
MULG	**Mulgathing**	**29.34**	**208**	P	**P**	**19 25 11.3**	**-0.5**
BKSI	**Bulukumba**	**29.39**	**268**	P	**P**	**19 25 12.7**	**+0.2**
	comp=Z,364nmcomp=Z,22nm,0.9s						
TOLI2	**Tolitoli**	**29.39**	**281**	P	**P**	**19 25 11.4**	**-1.2**
TOLI2				IAmb	IAmb	19 25 14.9	
	comp=Z,7.5nm,0.7s						
BNSI	**Bone**	**29.42**	**269**	P	**P**	**19 25 13.6**	**+0.8**
	comp=Z,350nmcomp=Z,35nm,0.8s						
KAPI	**Kappang**	**29.76**	**268**	P	**P**	**19 25 16.0**	**+0.3**
	comp=Z,22nm,0.5s,baz=111,slow=5.2,SNR=20						
	comp=Z,22nm,0.5s						
KAPI	**Kappang**	**29.76**	**268**	P	**P**	**19 25 15.2**	**-0.5**
KAPI	**Kappang**	**29.76**	**268**	P	**P**	**19 25 16.0**	**+0.3**
	comp=Z,42nm,0.8s						
KAPI	**Kappang**	**29.76**	**268**	P	**P**	**19 25 16.1**	**+0.4**
	comp=Z,46nm,0.8s						
SPSI	**Sidrap Palu**	**29.77**	**270**	P	**P**	**19 25 15.8**	**0.0**
	comp=Z,40nm,0.7s						
MPSI	**Mapaga**	**30.12**	**279**	P	**P**	**19 25 18.3**	**-0.5**
	comp=Z,554nmcomp=Z,37nm,0.8s						
HTT	**Hallett**	**30.23**	**198**	P	**P**	**19 25 19.7**	**+0.2**
	baz=30,SNR=11						
HTT	**Hallett**	**30.23**	**198**	P	**P**	**19 25 19.7**	**+0.2**
WHYH	**Whyalla**	**30.30**	**200**	P	**P**	**19 25 20.2**	**+0.2**
CNB	**Canberra Magne**	**30.41**	**180**	P	**P**	**19 25 22.5**	**+1.4**
	baz=31,SNR=6.5						
CAN	**Canberra**	**30.43**	**181**	P	**P**	**19 25 21.7**	**+0.6**
CAN				IAmb	IAmb	19 26 01.0	
	comp=Z,36nm,1.5s						
BBOO	**Buckleboo**	**30.66**	**203**	P	**P**	**19 25 22.7**	**-0.5**
	baz=31,SNR=6.0						
BBOO	**Buckleboo**	**30.66**	**203**	P	**P**	**19 25 22.6**	**-0.6**
BBOO				IAmb	IAmb	19 25 23.7	
	comp=Z,21nm,0.8s						
MSVF	**Nonsavu**	**30.66**	**117**	P	**P**	**19 25 24.4**	**+0.9**
	comp=Z,19nm,0.9s,baz=276,slow=5.4,SNR=7.1						
	comp=Z,19nm,0.9s						
MSVF	**Nonsavu**	**30.66**	**117**	P	**P**	**19 25 24.9**	**+1.5**
MSVF				IAmb	IAmb	19 25 26.2	
	comp=Z,31nm,1.1s						
MSVF	**Nonsavu**	**30.66**	**117**	P	**P**	**19 25 25.2**	**+1.7**
PLAI	**Plampang**	**31.87**	**261**	P	**P**	**19 25 32.0**	**-1.7**
	comp=Z,1μmcomp=Z,104nm,0.7s						
PLAI	**Plampang**	**31.87**	**261**	P	**P**	**19 25 32.0**	**-1.7**
JCJ	**Chichijima**	**32.47**	**348**	P	**P**	**19 25 36.6**	**-1.9**
	comp=Z,73nm,0.6s,baz=253,slow=4.1,SNR=14						
JCJ	**Chichijima**	**32.47**	**348**	P	**P**	**19 25 36.7**	**-1.8**
MYLDM	**Lahad Datu**	**32.61**	**287**	P	**P**	**19 25 40.6**	**+0.6**
MYLDM				IAmb	IAmb	19 25 42.5	
	comp=Z,17nm,1.1s						
ARPS	**Mount Arapiles**	**32.66**	**192**	P	**P**	**19 25 40.7**	**+0.7**
	baz=33,SNR=8.7						
TWSI	**Taliwang, Sumb**	**32.74**	**261**	P	**P**	**19 25 40.4**	**-0.7**
	comp=Z,58nm,0.9s						
TOO	**Toolangi**	**32.88**	**186**	P	**P**	**19 25 43.5**	**+1.5**
	baz=33,SNR=9.8						
TOO	**Toolangi**	**32.88**	**186**	P	**P**	**19 25 43.2**	**+1.2**
TOO	**Toolangi**	**32.88**	**186**	P	**P**	**19 25 42.9**	**+0.9**
FORT	**Forrest**	**32.90**	**216**	P	**P**	**19 25 41.9**	**-0.4**
	baz=33,SNR=30						
FORT	**Forrest**	**32.90**	**216**	P	**P**	**19 25 41.8**	**-0.4**
FORT	**Forrest**	**32.90**	**216**	P	**P**	**19 25 41.8**	**-0.4**
MBWA	**Marble Bar**	**33.28**	**238**	P	**P**	**19 25 44.6**	**-0.9**
PSA00	**Pilbara Seismi**	**33.36**	**237**	P	**P**	**19 25 45.2**	**-1.0**
PSA00	**Pilbara Seismi**	**33.36**	**237**	P	**P**	**19 25 45.3**	**-0.8**
PSA00				IAmb	IAmb	19 25 47.0	
	comp=Z,17nm,1.1s						
PSA00	**Pilbara Seismi**	**33.36**	**237**	P	**P**	**19 25 45.4**	**-0.8**
KLNI	**Mataram**	**33.49**	**262**	P	**P**	**19 25 45.9**	**-1.5**
	comp=Z,62nm,1.0s						
BBKI	**Banjar Baru**	**34.71**	**271**	P	**P**	**19 25 59.4**	**+1.8**
	comp=Z,2μmcomp=Z,67nm,0.7s						
MTKI	**Muara Teweh, K**	**34.88**	**275**	P	**P**	**19 26 00.0**	**+1.0**
	comp=Z,21nm,0.9s						
KKM	**Kota Kinabalu**	**35.04**	**287**	P	**P**	**19 25 59.8**	**-0.6**
KKM				IAmb	IAmb	19 26 01.2	
	comp=Z,8.6nm,0.7s						
JAGI	**Jajag, Banyuwa**	**35.41**	**262**	P	**P**	**19 26 01.5**	**-1.9**
JAGI	**Jajag, Banyuwa**	**35.41**	**262**	P	**P**	**19 26 05.9**	**+2.5**
	comp=Z,42nm,1.0s						
JAGI				pP	**pP**	**19 27 37.9**	**-5.5**
	comp=Z,42nm,1.0s						
JAGI	**Jajag, Banyuwa**	**35.41**	**262**	P	**P**	**19 26 01.7**	**-1.7**
MEEK	**Meekatharra**	**36.75**	**230**	P	**P**	**19 26 13.5**	**-0.7**
	baz=37,SNR=18						
MEEK	**Meekatharra**	**36.75**	**230**	P	**P**	**19 26 13.9**	**-0.3**
JOW	**Kunigami**	**37.58**	**328**	P	**P**	**19 26 21.7**	**+0.8**
	comp=Z,63nm,0.6s,baz=156,slow=10,SNR=13						
	comp=Z,63nm,0.6s						
JOW	**Kunigami**	**37.58**	**328**	P	**P**	**19 26 21.4**	**+0.5**
SBUM	**Sibu**	**38.05**	**280**	P	**P**	**19 26 25.1**	**+0.2**
TAU	**Tasmania Unive**	**38.05**	**183**	P	**P**	**19 26 25.3**	**+0.8**
TAU				IAmb	IAmb	19 26 37.1	
	comp=Z,34nm,1.1s						
PCJI	**Pacitan**	**38.34**	**263**	P	**P**	**19 26 26.9**	**-0.3**
	comp=Z,154nm,0.8s						
GIRL	**Giralia**	**38.55**	**239**	P	**P**	**19 26 29.4**	**+0.6**
	baz=39,SNR=3.9						
GIRL	**Giralia**	**38.55**	**239**	P	**P**	**19 26 28.8**	**0.0**
UGM	**Wanagama**	**38.97**	**263**	P	**P**	**19 26 31.9**	**-0.5**
MORW	**Morawa**	**39.95**	**229**	P	**P**	**19 26 39.2**	**-0.7**
	baz=40,SNR=17						
MORW	**Morawa**	**39.95**	**229**	P	**

ENH Enshi 51.84 315 P P 19 28 11.0 +1.1
YSS Yuzh-Sakhalins 51.84 354 P P 19 28 09.9 +0.4
YSS IAmb IAmb 19 28 15.5
comp=Z,44nm,1.2s
MDJ Mudanjiang 52.33 342 P P 19 28 13.5 +0.5
MDJ IAmb IAmb 19 28 14.9
comp=Z,20nm,1.0s
MDJ Mudanjiang 52.33 342 P P 19 28 14.2 +1.1
GSI Gunungsitoli 52.34 275 P P 19 28 12.9 -0.9
GSI IAmb IAmb 19 28 13.7
comp=Z,35nm,1.1s
LYN LuoYang 52.47 321⇑ iP P 19 28 14.5 +0.2
HNS HongShan 53.05 325 ⇑P P 19 28 18.8 +0.5
PHRA Phrae 53.87 297 P P 19 28 25.2 +0.8
PHRA IAmb IAmb 19 28 26.7
comp=Z,33nm,0.8s
MLSI Meulaboh, Aceh 53.91 279 P P 19 28 24.0 -0.8
comp=Z,56nm,0.7s
BNX BinXian 54.03 341 ⇑P P 19 28 25.3 +0.3
BJT Baijiatuau 54.13 329 P P 19 28 26.0 +0.1
BJI Beijing 54.15 329 P P 19 28 25.8 -0.2
XAN Xi'an 54.44 318 P P 19 28 28.5 +0.3
XAN pP PcP 19 28 33.5 -49
CMAR Chiang Mai Arr 55.00 296 P P 19 28 33.7 +1.3
comp=Z,2.0nm,0.5s,baz=114,slow=5.3,SNR=22
CMAR PcP **PcP 19 29 25.6 +0.8**
comp=Z,1.8nm,0.8s,baz=96,slow=2.4,SNR=7.4
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 55.00 296 P P 19 28 33.1 +0.7
CHTO Chiang Mai 55.12 297 P P 19 28 33.6 +0.4
PZH PanZhiHua 55.77 306 P P 19 28 38.3 +0.6
KLR Kul'dur 55.97 346 P P 19 28 39.3 +0.8
comp=Z,12nm,0.7s,baz=177,slow=3.9,SNR=33
KLR ScP **ScP 19 32 31.4 +1.2**
comp=Z,1.9nm,0.8s,baz=240,slow=0.7,SNR=7.7
comp=Z,12nm,0.7s
XLT XiLinHaoTe 57.07 332 ||iP P 19 28 47.0 +0.8
HHC Hu-ho-hao-te 57.20 326 eP P 19 28 49.0 +1.8
PEA0B Petropavlovsk- 58.05 6 P P 19 28 53.5 +1.0
PEA0B IAmb IAmb 19 28 54.1
comp=Z,41nm,0.9s
PETK Petropavlovsk- 58.05 6 P P 19 28 53.3 +0.8
comp=Z,24nm,0.9s,baz=157,slow=6.5,SNR=38
comp=Z,24nm,0.9s
PETK Petropavlovsk- 58.05 6 P P 19 28 52.9 +0.4
PET Petropavlovsk 58.06 6 P P 19 28 53.1 +0.5
PET IAmb IAmb 19 28 53.8
comp=Z,21nm,0.8s
LZH Lanzhou 59.02 317 eP P 19 29 01.5 +1.9
LZH sP sP 19 31 54.3 -4.1
LZH S **S 19 36 22.3 +0.7**
LZH Lanzhou 59.02 317 sS sS 19 39 50.0 +2.6
LZH Lanzhou 59.02 317 SS SS 19 40 33.0 +3.0
HIA Hailar 59.74 338 P P 19 29 04.6 +0.6
HIA IAmb IAmb 19 29 05.6
comp=Z,27nm,0.7s
HIA Hailar 59.74 338 P P 19 29 05.2 +1.2
GTA Gaotai 63.50 319 ⇑P P 19 29 30.0 +1.3
GTA pP pP 19 31 28.8 +2.6
GTA sP sP 19 32 37.0 +7.4
GTA S **S 19 37 17.0 +0.5**
GTA ScS **ScS 19 38 25.5 +2.0**
SHL Shillong 63.56 301 P P 19 29 29.8 +0.4
MA2 Magadan 64.13 1 P P 19 29 32.4 +0.3
comp=Z,17nm,0.7s,baz=155,slow=6.7,SNR=12
comp=Z,17nm,0.7s
MA2 Magadan 64.13 1 P P 19 29 32.7 +0.6
MA2 IAmb IAmb 19 29 34.1
comp=Z,38nm,1.2s
ULN Ulaanbaatar 64.32 330 P P 19 29 34.6 +0.9
ULN Ulaanbaatar 64.32 330 P P 19 29 35.0 +1.3
comp=Z,63nm,0.9s
SONM Songino Array 64.63 329 P P 19 29 36.7 +1.0
comp=Z,8.4nm,0.6s,baz=150,slow=4.0,SNR=52
comp=Z,8.4nm,0.6s
SONM Songino Array 64.63 329 P P 19 29 36.7 +1.0
SONM IAmb IAmb 19 29 38.0
comp=Z,23nm,1.2s
LSA Lhasa 65.61 305 P P 19 29 42.9 +0.2
CASY Casey 67.16 196 P P 19 29 50.8 0.0
CASY IAmb IAmb 19 29 52.0
comp=Z,24nm,0.8s
TAPN Taplejung 67.68 302 eP P 19 29 55.6 +0.4
YAK Yakutsk 68.34 350 P P 19 29 58.7 +0.8
comp=Z,5.0nm,0.7s,baz=202,slow=11,SNR=5.7
comp=Z,5.0nm,0.7s
YAK Yakutsk 68.34 350 P P 19 29 58.4 +0.4
YAK IAmb IAmb 19 30 00.2
comp=Z,43nm,1.5s
JIRN Jiri 69.06 302 eP P 19 30 04.2 +0.6
comp=Z,8.1nm,0.4s
GUN Gumba 69.40 302 eP P 19 30 06.5 +0.9
comp=Z,26nm,0.5s
PKI Pulchoki 69.70 302 eP P 19 30 07.7 +0.4
comp=Z,6.3nm,0.3s
PKIN Phulchoki 69.71 302 eP P 19 30 07.8 +0.5
comp=Z,7.7nm,0.4s
PALK Pallekele 69.80 279 P P 19 30 07.4 -0.4
PALK IAmb IAmb 19 30 14.0
comp=Z,34nm,1.4s
KKN Kakani 69.87 302 eP P 19 30 08.9 +0.7
DMN Daman 69.96 301 eP P 19 30 09.6 +0.8
GKN Gorkha 70.47 302 eP P 19 30 12.2 +0.5
comp=Z,19nm,0.5s
KOLN Koldanda 71.29 301 eP P 19 30 16.7 +0.2
comp=Z,2.8nm,0.8s
DANN Dangsing 71.31 302 eP P 19 30 17.0 +0.2
comp=Z,19nm,0.6s
PYUN Piuthan 71.90 301 eP P 19 30 20.2 +0.1
comp=Z,39nm,0.8s
VNDA Vanda 73.01 177 P P 19 30 26.1 +0.8
comp=Z,18nm,0.8s,baz=332,slow=6.7,SNR=128
comp=Z,18nm,0.8s
VNDA Vanda 73.01 177 P P 19 30 26.2 +1.0
VNDA IAmb IAmb 19 30 27.1
comp=Z,20nm,0.8s
WMQ Urumqi 73.58 318 eP P 19 30 31.3 +2.1
SBA Scott Base 73.61 176 P P 19 30 30.4 +1.8
SBA IAmb IAmb 19 30 31.8
comp=Z,17nm,1.1s
MK31 Makanchi Array 78.22 320 P P 19 30 55.4 +0.8
MKAR Makanchi Array 78.22 320 P P 19 30 55.4 +0.8
comp=Z,1.3nm,0.4s,baz=97,slow=8.1,SNR=38
comp=Z,1.3nm,0.4s
MKAR Makanchi Array 78.22 320 P P 19 30 55.2 +0.6
ZAA0 Zalesovo Array 79.37 327 P P 19 30 60.0 -0.5
ZALV Zalesovo Beam 79.37 327 P P 19 31 00.2 -0.3
comp=Z,2.1nm,0.4s,baz=122,slow=5.5,SNR=12
comp=Z,2.1nm,0.4s
ZALV Zalesovo Beam 79.37 327 P P 19 30 59.8 -0.6
KSH Kashi 80.51 311 P P 19 31 09.8 +2.9
CAST Castle Rocks 80.67 23 P P 19 31 07.3 +0.2
KTH Kantishna Hill 81.19 23 P P 19 31 09.7 -0.1
BOOM Boomskoye usch 81.27 314 P P 19 31 11.8 +0.9
NIL Nilore 81.34 305 P P 19 31 11.9 +0.7
NIL IAmb IAmb 19 31 12.6
comp=Z,30nm,0.7s
IMAR Indian Mountai 81.41 20 P P 19 31 11.8 +1.0
GLI Glacier Island 81.52 26 P P 19 31 12.2 +0.7
GLI IAmb IAmb 19 31 20.9
comp=Z,52nm,1.2s
TKM2 Tokmak 2 81.62 314 P P 19 31 14.1 +1.4
SNR=5.2
KURK Kurchatov 81.79 323 P P 19 31 13.1 +0.1
MLY Manley 81.99 22 P P 19 31 13.4 -0.5
MCK McKinley 82.05 23 P P 19 31 13.9 -0.2
UCH Uchtor 82.23 314 P P 19 31 17.7 +1.6
SNR=8.2
CHMS Chumysh 82.25 314 P P 19 31 16.9 +1.4
SNR=5.2
AAK Ala-Archa 82.34 314 P P 19 31 18.0 +1.7
SNR=7.7
AAK Ala-Archa 82.34 314 P P 19 31 16.5 +0.2
AAK IAmb IAmb 19 31 18.4
comp=Z,6.9nm,0.7s
USP Ospenovka 82.49 315 P P 19 31 17.5 +0.6
SNR=16
AML Almayashu 82.80 313 P P 19 31 20.3 +1.4
SNR=32
EKS2 Erkin-Say 82.86 314 P P 19 31 20.3 +1.5
SNR=22
CCB Clear Creek Bu 82.91 23 P P 19 31 17.6 -0.7
IL31 83.32 23 P P 19 31 19.6 -0.8
ILAR Eielson Array 83.32 23 P P 19 31 19.9 -0.5
comp=Z,2.6nm,0.6s,baz=252,slow=4.6,SNR=39
comp=Z,2.6nm,0.6s
ILAR Eielson Array 83.32 23 P P 19 31 19.8 -0.7
DRK Karamyk 83.65 310 P P 19 31 22.4 -0.6
J25K Salcha River, 83.84 23 P P 19 31 22.9 -0.2
TOLK Toolik Lake Re 84.17 19 P P 19 31 25.6 +1.0
TOLK IAmb IAmb 19 31 54.7
comp=Z,16nm,1.4s
MAW Mawson 84.40 203 P P 19 31 26.1 +0.4
comp=Z,14nm,0.9s,baz=105,slow=6.0,SNR=25
comp=Z,14nm,0.9s
MAW Mawson 84.40 203 P P 19 31 26.3 +0.7
baz=84,SNR=17
MAW Mawson 84.40 203 P P 19 31 26.6 +0.9
M27K Edge Creek, AK 84.40 26 P P 19 31 27.1 +1.1
M27K IAmb IAmb 19 31 28.8
comp=Z,8.1nm,1.0s
BTK Batken 84.50 311 P P 19 31 27.0 +0.1
L27K Beaver Creek, 84.68 25 P P 19 31 28.1 +0.9
GAR Garm 84.69 310 P P 19 31 27.9 0.0
GAR IAmb IAmb 19 31 28.9
comp=Z,9.1nm,1.1s
BCAR Beaver Creek A 84.70 25 P P 19 31 28.7 +1.4
KBL Kabul 84.94 305 P P 19 31 28.4 -0.9
QSPA South Pole Qui 85.21 180 P P 19 31 30.0 +0.2
QSPA IAmb IAmb 19 31 31.1
comp=Z,21nm,0.8s
KK31 Karatay Array 85.30 314 P P 19 31 31.0 +0.4
KK31 IAmb IAmb 19 31 32.0
comp=Z,9.7nm,1.0s
KKAR Karatay Array 85.30 314 P P 19 31 30.9 +0.3
BMAR Burnt Mountain 85.31 21 P P 19 31 31.0 +0.9
CHGR Chuyangaron 85.52 309 P P 19 31 31.7 -0.1
CHGR IAmb IAmb 19 31 36.1
comp=Z,12nm,1.1s
HYT Haines Junctio 85.87 28 P P 19 31 34.4 +1.3
HYT IAmb IAmb 19 31 35.5
comp=Z,7.7nm,0.7s
DAWY Dawson 86.05 25 P P 19 31 34.4 +0.7
WHY Whitehorse 87.06 29 P P 19 31 39.1 +0.5
EPYK Eagle Plains 87.84 23 P P 19 31 42.5 +0.5
EPYK IAmb IAmb 19 31 54.1
comp=Z,21nm,1.5s
GEYT Alibeck 94.07 308 P P 19 32 11.2 -0.2
comp=Z,1.2nm,0.6s,baz=183,slow=2.5,SNR=4.8
comp=Z,1.2nm,0.6s
NVAR Mina Array Bea 94.55 52 P P 19 32 14.9 +1.1
comp=Z,0.3nm,0.5s,baz=251,slow=5.5,SNR=2.9
comp=Z,0.3nm,0.5s
TROLL Troll, Antarti 100.47 190 Pdiff **Pdif 19 32 39.5 0.0**
PDAR Pinedale Array 101.16 47 P **Pdif 19 32 43.5 +0.3**
comp=Z,0.3nm,0.5s,baz=222,slow=2.0,SNR=4.1
PDAR PKKPbc **PKKPbc 19 48 51.2 -1.3**
comp=Z,0.3nm,0.5s,baz=108,slow=4.8,SNR=3.8
SNAA Sanae 101.63 189 Pdiff **Pdif 19 32 44.4 -0.1**
VNA3 Neumayer Olymp 102.93 187 Pdiff **Pdif 19 32 50.0 -0.2**
VNA2 Neumayer--Watz 102.94 188 Pdiff **Pdif 19 32 50.4 +0.1**
baz=170,slow=5.0
ARCES ARCESS Array B 105.88 342 PKKPbc PKKPbc 19 48 35.8 -3.4
comp=Z,3.7nm,1.0s,baz=241,slow=3.0,SNR=7.4
FINES FINESS Array B 109.68 335 PKiKP **PKiKP 19 37 18.8 -0.3**
comp=Z,2.8nm,1.0s,baz=114,slow=3.5,SNR=1.3
AKASG Malin Array Be 112.59 324 PKiKP **PKiKP 19 37 24.6 -0.3**
comp=Z,1.0nm,0.5s,baz=62,slow=2.2,SNR=4.6
BRTR Keskin Array B 112.90 311 PKiKP **PKiKP 19 37 25.6 -0.5**
comp=Z,1.1nm,0.8s,baz=54,slow=1.2,SNR=6.8
NOA NORSAR Array B 115.76 339 SKP 19 40 08.6
comp=Z,1.5nm,0.8s,baz=55,slow=1.6,SNR=3.2
BOSA Boshof 117.09 235 PKP **PKPdf 19 37 33.6 -0.9**
comp=Z,3.4nm,0.8s,baz=105,slow=2.8,SNR=7.5
VTS Vitosha 119.47 317 PKPdf **PKiKP 19 37 38.3 -0.5**
MAUC Maruska 119.77 326 *e*PKPDF **PKiKP 19 37 39.6 +0.6**
OSTC Ostas 120.01 328 *e*PKPDF **PKiKP 19 37 39.4 0.0**
T50A Nancy 120.86 49 PKiKP 19 37 41.1 -0.3
PVCC Panska Ves 120.90 328 *e*PKPDF **PKiKP 19 37 41.5 +0.4**
DIVS Divibare 121.00 320 PKPdf **PKiKP 19 37 41.7 +0.1**
PRU Pruhonice 121.22 328 *e*PKPDF **PKiKP 19 37 41.6 -0.2**
CLL Collm 121.25 330 *e*PKPdf **PKiKP 19 37 42.0 +0.2**
comp=Z,5.0nm,0.7s
S51A Beattyville 121.59 48 PKiKP 19 37 42.5 -0.4
PLCA Paso Flores 121.68 145 PKP **PKiKP 19 37 43.9 +0.8**
comp=Z,5.4nm,0.7s,baz=220,slow=1.8,SNR=17
CKRC Cesky Krumlov 122.01 327 *e*PKPDF **PKiKP 19 37 43.6 +0.2**
SCHQ Schefferville 122.06 24 PKP **PKiKP 19 37 43.2 -0.1**
comp=Z,2.7nm,0.6s,baz=177,slow=1.5,SNR=4.2
NKC Novy Kostel 122.17 329 *e*PKPDF **PKiKP 19 37 43.7 0.0**
V52A Sevierville 122.20 50 PKiKP 19 37 43.9 -0.2
KHC Kasperske Hory 122.23 327 PKPdf **PKiKP 19 37 43.6 -0.3**
KHC Kasperske Hory 122.23 327 *e*PKPDF **PKiKP 19 37 43.8 0.0**
GEC2 GERESS Array S 122.32 327 PKiKP 19 37 43.6 -0.5
GERES GERESS Array B 122.32 327 PKP **PKiKP 19 37 44.2 +0.1**
comp=Z,3.8nm,0.6s,baz=84,slow=1.8,SNR=45
GERES SKP 19 40 24.2
comp=Z,0.9nm,0.6s,baz=86,slow=1.4,SNR=8.8
GERES PKKPbc **PKKPbc 19 47 41.9 -1.7**
comp=Z,0.1nm,0.3s,baz=204,slow=2.9,SNR=3.7
GERES GERESS Array B 122.32 327 PKiKP 19 37 44.0 -0.1
SOKA Soboth 122.78 324 *i* P **PKiKP 19 37 45.2 +0.2**
comp=Z,0.6nm,0.3s,SNR=4.4
V53A Saluda 122.86 50 PKiKP 19 37 45.5 0.0
OBKA Obir 123.15 324 *e*P **PKiKP 19 37 45.8 0.0**
comp=Z,0.8nm,0.5s
ABTA Abfaltersbach 124.18 326 *e*P **PKiKP 19 37 47.7 -0.2**
comp=Z,4.5nm,0.7s,SNR=6.3
STAL STALIGIAL 124.35 325 PKiKP 19 37 47.9 -0.2
WATA Walderalm 124.36 327 *i* P **PKiKP 19 37 48.1 -0.2**
comp=Z,1.8nm,0.5s,SNR=6.3
WTTA Wattenberg 124.37 326 *e*P **PKiKP 19 37 48.1 -0.2**
comp=Z,4.0nm,0.4s,SNR=11
MOTA Mosalm 124.61 327 *e*P **PKiKP 19 37 48.6 -0.2**
comp=Z,5.5nm,0.5s,SNR=12
SQTA Sankt Quirin 124.63 327 *i* P **PKiKP 19 37 48.7 -0.1**
comp=Z,5.5nm,0.8s
FETA Feichten 125.01 327 *i* P **PKiKP 19 37 49.4 -0.2**
comp=Z,5.4nm,0.9s
BTNL Ternell 125.03 332 *d*PKiKP **PKiKP 19 37 49.4 +0.1**
MEM Membach 125.07 332 *d*PKiKP **PKiKP 19 37 49.5 +0.1**
BO02 Sierra Bellavi 125.30 139 PKiKP 19 37 50.6 +0.2
DAVA Damuels 125.31 327 *e*P **PKiKP 19 37 50.1 -0.1**
comp=Z,4.4nm,0.7s,SNR=6.4
FUORN Ofenpass-Fuorn 125.51 327 PKPdf **PKiKP 19 37 50.3 -0.4**
RCHB Rochefort 125.75 333 *d*PKPab **PKiKP 19 37 50.6 -0.1**
BMRD Maredsous 125.85 333 *d*PKiKP **PKiKP 19 37 50.9 0.0**
SNF Seneffe 125.92 333 *d*PKiKP **PKiKP 19 37 51.6 +0.6**
DOU Dourbes 126.08 333 *d*PKiKP **PKiKP 19 37 51.6 +0.2**
ROC1 El Roble 126.24 137 PKiKP 19 37 52.4 -0.2
ZCCA Zocca 126.44 324 PKiKP 19 37 53.0 +0.6
CO02 Combarbal 127.28 135 PKiKP 19 37 54.8 +0.2
CO03 El Pedregal 127.71 135 PKiKP 19 37 54.9 -0.5
GO04 Tololo Observa 128.02 135 PKPdf **PKiKP 19 37 55.7 -0.5**
CO01 Juntas del Tor 128.63 135 PKiKP 19 37 57.8 +0.3
LCO Las Campanas 128.74 133 PKiKP 19 37 58.0 +0.2
AC05 El Transito 129.15 133 PKPdf **PKiKP 19 37 58.6 +0.2**
BOSC San Juan Bosco 131.29 98 PKiKP 19 38 02.6 -0.6
KEST Kesra 132.18 315 PKP **PKiKP 19 38 03.5 -0.8**
comp=Z,4.2nm,0.9s,baz=315,slow=1.4,SNR=5.1
KEST SKPbc **SKPab 19 40 34.9 -1.4**
comp=Z,9.4nm,1.0s,baz=121,slow=6.6,SNR=6.0
YOTC Yotoco, Valle 134.17 89 *e*P **PKiKP 19 38 08.4 -0.5**
PB08 IPOC Station P 134.58 124 PKPdf 19 38 08.3 0.0
PB16 IPOC Station P 135.12 122 PKiKP 19 38 10.1 -1.2
GUY2C Guyana, Caldas 135.19 87 *e*P **PKPdf 19 38 05.5 -4.3**
ORTC Ortega, Tolima 135.26 89 *e*P **PKPdf 19 38 03.1 -6.3**
PRAC Prado 135.61 90 *e*P **PKPdf 19 38 04.5 -5.5**
NORC Norcasia 135.69 87 *e*P **PKPdf 19 38 05.9 -4.2**
SPBC San Pablo de B 136.49 87 *e*P **PKPdf 19 38 07.6 -4.1**
RUSC La Rusia 137.47 86 *e*P PKPdf 19 38 04.8 -9.2
ESDC Sonseca Array 137.83 329 PKP **PKPdf 19 38 13.1 -0.3**
comp=Z,0.1nm,0.4s,baz=21,slow=1.3,SNR=5.9
ESDC SKPbc **SKPbc 19 40 52.1 +0.3**
comp=Z,1.0nm,0.8s,baz=22,slow=2.4,SNR=9.1
MVO Moncorvo 138.14 333 *e*PKPdf **PKiKP 19 38 15.1 -1.1**
POLO Lamas de Olo 138.31 334 *e*PKPdf **PKiKP 19 38 17.2 +0.7**
MTE Manteigas 138.99 333 *e*PKPdf **PKiKP 19 38 16.0 -1.9**
PCBR Castelo Branco 139.41 333 *e*PKPdf **PKiKP 19 38 17.0 -1.7**
CPUP Villa Florida 139.55 141 PKPdf **PKiKP 19 38 17.4 -2.0**
SDV Santo Domingo 139.84 82 PKPdf **PKPdf 19 38 17.6 -0.3**
PESTR Estremoz 140.24 332 *e*PKPdf **PKiKP 19 38 18.8 -1.7**
PCVE Castro Verde 141.43 331 *e*PKPdf **PKiKP 19 38 21.0 -1.9**
HUMP Col San Antoni 142.87 66 PKPdf 19 38 20.7 -2.2
MTP Monte Pirata 143.15 66 PKPbc 19 38 21.8 -0.1
STVI Saint Thomas 143.62 65 PKPdf 19 38 23.5 -0.7
CDVI St. Croix 143.97 66 PKPdf 19 38 24.1 -0.7
SAML Samuel 144.58 113 PKPab 19 38 26.6 -0.5
AQDB Aquidauana 144.69 136 PKPab 19 38 26.8 -0.5
TRCB Terra Rica 145.03 142 PKPab 19 38 27.8 -0.8
SMRT St. Maarten 145.41 65 PKPbc 19 38 28.6 -0.1
TOA0 Torodi Ar. Sit 147.27 287 PKPbc 19 38 32.4 -1.5
TORD Torodi Ar. Bea 147.27 287 PKPbc **PKPbc 19 38 33.6 -0.3**
comp=Z,30nm,0.6s,baz=74,slow=2.6,SNR=177
TORD Torodi Ar. Bea 147.27 287 PKPdf 19 38 29.8 -0.8
PMPST Porto Santo, M 148.92 337 *e*PKPbc **PKiKP 19 38 38.9 +0.4**
PMPS Porto Santo 148.94 337 *e*PKPbc **PKiKP 19 38 38.7 +0.2**
PMAR Madeira 149.46 337 *e*PKPbc **PKiKP 19 38 40.1 +0.3**
BDFB Brasilia 153.25 140 PKP **PKPdf 19 38 41.3 +1.4**
comp=Z,5.0nm,1.0s,baz=130,slow=1.7,SNR=4.9
BDFB PKPbc **PKiKP 19 38 48.6 +0.6**
comp=Z,8.0nm,0.5s,baz=224,slow=1.0,SNR=14
BDFB PKPab **PKPab 19 39 03.6 +0.8**
comp=Z,7.2nm,0.8s,baz=221,slow=2.1,SNR=6.6
DBIC Dimbokro 154.53 276 PKPbc **PKPbc 19 38 50.6 0.0**
comp=Z,6.1nm,0.8s,baz=51,slow=3.2,SNR=7.2
DBIC PKPab **PKPab 19 39 08.8 +0.4**
comp=Z,9.5nm,0.6s,baz=84,slow=3.7,SNR=12

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*IDC **29** 19:38:14.0±6.3, 19°.12N×145°.29E, h121km±53km, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=125.4km s-min=27.7km az=113.0*
*NEIC **29** 19:38:20.4±0.8, 18°.93N±0°.05×145°.3E±0°.3, h172km±9km, mb4.2/12, Error ellipse: s-maj=45.7km s-min=7.4km az=89.0*
ISC 29 19:38:17.5±0.8, 18°.94N±0°.08×145°.4E±0°.3, h150km, n19, σ0$87/19, mb4.2/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.34**	**185**	P	Pn	19 39 32.3	-3.3
42nm,0.9s,baz=36,slow=23,SNR=1.5							
GUMO				S	**Sn**	**19 40 38.3**	**+1.8**
33nm,0.7s,baz=190,slow=19,SNR=1.7							
GUMO	**Guam**	**5.34**	**185**	Pn	**Pn**	**19 39 34.3**	**-1.3**
JMN	**Monobe**	**17.94**	**327**		**P**	**19 42 16.6**	**+0.3**
MAJO	**Matsushiro**	**18.63**	**342**	P	**P**	**19 42 23.5**	**-0.1**
MAJO				IAmb	IAmb	19 42 46.3	
comp=Z,21nm,1.4s							
WB0	**Warramunga Arr**	**39.94**	**196**	P	**P**	**19 45 37.3**	**0.0**
WRAB	**Tennant Creek**	**40.11**	**196**	P	**P**	**19 45 37.8**	**-1.0**
WRAB				IAmb	IAmb	19 45 40.1	
comp=Z,6.7nm,1.2s							
WRA	**Warramunga Arr**	**40.13**	**196**	P	**P**	**19 45 38.9**	**0.0**
comp=Z,0.4nm,0.3s,baz=22,slow=8.6,SNR=8.6							
comp=Z,0.4nm,0.3s							
WRA	**Warramunga Arr**	**40.13**	**196**	P	**P**	**19 45 38.3**	**-0.6**
ARMA	**Armidale**	**49.44**	**173**	P	**P**	**19 46 52.9**	**+0.4**
CAST	**Castle Rocks**	**61.03**	**27**	P	**P**	**19 48 15.7**	**+0.7**
H21K	**Melozitna Rive**	**61.39**	**25**	P	**P**	**19 48 18.1**	**+0.7**
I23K	**Minto, Yukon-K**	**62.63**	**26**	P	**P**	**19 48 26.5**	**+0.9**
I23K				IAmb	IAmb	19 48 52.3	
comp=Z,6.8nm,1.4s							
COLD	**Coldfoot**	**62.86**	**23**	P	**P**	**19 48 28.1**	**+1.0**
COLD				IAmb	IAmb	19 48 57.2	
comp=Z,3.1nm,1.1s							
MDM	**Murphy Dome**	**63.05**	**26**	P	**P**	**19 48 29.3**	**+0.8**
MDM				IAmb	IAmb	19 48 39.6	
comp=Z,3.5nm,1.2s							
H24K	**Noodor Dome**	**63.40**	**25**	P	**P**	**19 48 30.4**	**-0.4**
H24K				IAmb	IAmb	19 48 52.9	
comp=Z,8.1nm,1.4s							
ILAR	**Eielson Array**	**63.57**	**26**	P	**P**	**19 48 30.7**	**-1.2**
comp=Z,0.4nm,0.7s,baz=251,slow=5.6,SNR=4.3							
comp=Z,0.4nm,0.7s							
BMAR	**Burnt Mountain**	**65.02**	**24**	P	**P**	**19 48 42.1**	**+0.8**
BCAR	**Beaver Creek A**	**65.52**	**29**	P	**P**	**19 48 44.6**	**0.0**
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**19 50 27.5**	**-0.3**
comp=Z,0.7nm,0.7s,baz=264,slow=4.7,SNR=4.7							
comp=Z,0.7nm,0.7s							

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*IDC **29** 20:15:26.1±0.6, 39°.97N×19°.73E, h0km, mb4.4/24, mbtmp4.3/37, ML3.9/11, MS3.4/30, Error ellipse: s-maj=11.0km s-min=9.8km az=164.0*
*MOS **29** 20:15:26.5±1.1, 39°.98N×19°.60E, h14km, mb4.7/29, Error ellipse: s-maj=4.7km s-min=3.3km az=79.0*
*PDG **29** 20:15:27.3±0.5, 39°.97N×19°.63E, h9km±1km, MD4.2/2, ML4.1/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*BEO **29** 20:15:28.5±0.6, 39°.83N×19°.63E, h26km±3km, ML4.1/21*
*TIR **29** 20:15:28.2, 39°.89N×19°.78E, h4km±1km, Md3.9, Ml4.2*
*MED_RC **29** 20:15:28.0±1.0, 39°.82N×19°.63E, h22km±2km, MW4.1/7, Moment Tensor Solution. Mantle waves: s7, c11; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.46±.37; $M_{\theta\theta}$-0.12±.25; $M_{\phi\phi}$-1.34±.27; $M_{r\theta}$0.78±.28; $M_{\theta\phi}$0.92±.14; $M_{\phi r}$-0.68±.28; Best double couple: $M_0$1.96000×10^{15} NP1: ϕ_s139.00000°, δ62.00000°, λ75.00000°. NP2: ϕ_s348.00000°, δ32.00000°, λ115.00000°. Principal axes: T 1.8100, Plg70.0000°, Azm18.0000°; N 0.2900, Plg13.0000°, Azm146.0000°; P -2.1000, Plg15.0000°, Azm239.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*HLW **29** 20:15:29.0, 40°.19N×20°.56E, h22km±37km, Md5.9, Ml5.0*
*NEIC **29** 20:15:28.7±1.8, 39°.98N±0°.03×19°.73E±0°.06, h12km±4km, mb4.5/52, ML4.0(THE), ML4.1(TIR), Error ellipse: s-maj=6.8km s-min=4.0km az=118.0*
*LDG **29** 20:15:29.2±0.2, 39°.95N×19°.77E, h10km, Ml4.3/15, Error ellipse: s-maj=5.2km s-min=3.5km az=16.0*
*ATH **29** 20:15:29.7, 39°.92N×19°.78E, h10km±31km, ML4.1/13, Error ellipse: s-maj=31.6km s-min=1.8km az=0.0*
*THE **29** 20:15:29.1, 39°.91N×19°.77E, h0km±1km, ML4.0/15, Error ellipse: s-maj=1.4km s-min=0.5km az=296.0*
ISC 29 20:15:28.5±0.7, 39°.92N±0°.02×19°.74E±0°.02, h15km±4km, n576, σ1$60/641, mb4.5/65, MS3.5/22, 46C-21D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.21**	**102**	P	**Pg**	**20 15 32.4**	**-0.8**
SRN				S	**Sg**	**20 15 35.9**	**-0.4**
60μm,0.4s							
SRN	**Sarande**	**0.21**	**102**	P	**Pg**	**20 15 32.0**	**-1.2**
baz=92							
SRN				S	**Sg**	**20 15 34.8**	**-1.6**
baz=92							
SRN				AMP			
comp=N,269nm,0.3s,baz=92							
KEK	**Kerkira**	**0.22**	**168**	Pg	**Pg**	**20 15 33.2**	**-0.1**
KEK	**Kerkira**	**0.22**	**168**	P	**Pg**	**20 15 33.7**	**+0.4**
KEK				S	**Sg**	**20 15 37.0**	**+0.4**
comp=N,39μm,0.4s							
KEK	**Kerkira**	**0.22**	**168**	P	**Pg**	**20 15 33.3**	**-0.1**
KEK				S	**Sg**	**20 15 38.1**	**+1.5**
KEK				AML	AML	20 15 42.5	
comp=N,87526μm,0.4s							
KEK				AML	AML	20 15 47.9	
VLO	**Vlora**	**0.57**	**341**		**Pg**	**20 15 39.5**	**-0.2**
VLO	**Vlora**	**0.57**	**341**	P	**Pb**	**20 15 40.2**	**0.0**
VLO				S	**Sb**	**20 15 49.8**	**+1.6**
comp=N,41μm,0.5s							
VLO	**Vlora**	**0.57**	**341**	P	**Pg**	**20 15 39.6**	**-0.2**
VLO				S	**Sb**	**20 15 49.8**	**+1.6**
IGT	**Igoumenitsa**	**0.60**	**130**	P	**Pg**	**20 15 40.3**	**0.0**
IGT				S	**Sg**	**20 15 48.8**	**+0.5**
comp=N,16μm,0.6s							
IGT	**Igoumenitsa**	**0.60**	**130**	P	**Pg**	**20 15 40.3**	**0.0**
IGT				S	**Sg**	**20 15 48.8**	**+0.5**
IGT	**Igoumenitsa**	**0.60**	**130**	P	**Pg**	**20 15 40.2**	**-0.1**
baz=129							
IGT				S	**Sb**	**20 15 50.1**	**+1.0**
baz=129							
IGT	**Igoumenitsa**	**0.60**	**130**	P	**Pg**	**20 15 40.3**	**0.0**
IGT				S	**Sg**	**20 15 48.1**	**-0.2**
IGT				AML	AML	20 15 51.5	
comp=N,28831μm,0.3s							
IGT				AML	AML	20 15 56.9	
comp=E,28758μm,0.6s							
LSK	**Leskovik**	**0.70**	**71**	P	**Pg**	**20 15 41.2**	**-0.9**
LSK				S	**Sb**	**20 15 52.1**	**+0.2**
comp=E,24μm,0.6s							
LSK	**Leskovik**	**0.70**	**71**	P	**Pg**	**20 15 40.4**	**-1.8**
baz=67							
LSK				S	**Sb**	**20 15 52.4**	**+0.5**
baz=67							
JAN	**Janina**	**0.90**	**107**	P	**Pg**	**20 15 45.0**	**-0.9**
JAN				S	**Sb**	**20 15 58.6**	**+1.0**
comp=E

JAN S **Sb** **20 15 58.6 +1.0**
JAN Janina 0.90 107 P **Pg** **20 15 44.5 -1.4**
JAN AML AML 20 16 02.7
comp=E,41729µm,0.4s
JAN AML AML 20 16 05.1
comp=N,34792µm,0.4s
SCTE Santa Cesarea 0.99 279 **Pb** **20 15 47.5 +0.2**
SCTE Santa Cesarea 0.99 279 P **Pn** **20 15 48.2 +0.4**
baz=282
SCTE Santa Cesarea 0.99 279 P **Pn** **20 15 48.0 +0.2**
SCTE S **Sn** **20 16 02.7 +1.2**
SCTE AML AML 20 16 03.5
comp=N,11050µm,0.5s
SCTE AML AML 20 16 03.8
comp=E,15915µm,0.4s
KBN Korca 1.06 49 **Pg** **20 15 48.0 -1.1**
KBN Korca 1.06 49 P **Pg** **20 15 48.5 -0.5**
KBN S **Sn** **20 16 05.0 +1.5**
comp=E,7µm,0.5s
KBN Korca 1.06 49 P **Pg** **20 15 47.0 -2.0**
KBN S **Sn** **20 16 05.0 +1.5**
KBN Korca 1.06 49 P **Pn** **20 15 51.0 +2.0**
baz=46
KBN S **Sn** **20 16 05.1 +1.5**
baz=46
PENT Pentalofos 1.11 75 P **Pg** **20 15 49.3 -0.6**
PENT S **Sn** **20 16 06.1 +1.4**
comp=E,8µm,0.8s
PENT Pentalofos 1.11 75 P **Pg** **20 15 49.4 -0.4**
PENT AML AML 20 16 10.3
comp=E,26822µm,0.8s
PENT AML AML 20 16 10.5
comp=N,6425µm,0.9s
NEST Nestorio 1.12 64 P **Pn** **20 15 50.3 +0.6**
NEST S **Sn** **20 16 06.6 +1.7**
comp=N,6µm,0.5s
NEST Nestorio 1.12 64 P **Pg** **20 15 49.2 -0.8**
NEST AML AML 20 16 12.7
comp=N,21640µm,0.6s
NEST AML AML 20 16 15.1
comp=E,13487µm,0.5s
KPRO Kipourio 1.25 88 P **Pn** **20 15 52.2 +0.7**
KPRO S **Sn** **20 16 10.0 +1.9**
comp=E,11µm,0.4s
KPRO Kipourio 1.25 88 P **Pn** **20 15 51.9 +0.4**
KPRO S **Sb** **20 16 07.9 +0.2**
KPRO AML AML 20 16 14.9
comp=N,26451µm,0.5s
KPRO AML AML 20 16 19.0
comp=E,18404µm,0.5s
TSLK Tsoukalades, L 1.31 147 P **Pn** **20 15 53.3 +1.1**
TSLK S **Sg** **20 16 12.4 +1.7**
comp=E,8µm,0.5s
TSLK Tsoukalades, L 1.31 147 P **Pb** **20 15 53.5 +0.7**
TSLK AML AML 20 16 20.2
comp=N,19298µm,0.5s
TSLK AML AML 20 16 21.6
comp=E,22095µm,0.4s
DRAG Dragano-Lefkad 1.40 152 P **Pn** **20 15 54.6 +1.1**
DRAG S **Sg** **20 16 15.3 +1.8**
comp=E,64µm,0.5s
NYDR Nydri-Lefkada 1.42 148 P **Pn** **20 15 55.1 +1.4**
NYDR S **Sg** **20 16 14.9 +0.7**
comp=E,7µm,0.5s
TIR Tirane 1.43 4 ⇓P **Pb** **20 15 54.8 0.0**
TIR Tirane 1.43 4 **Pb** **20 15 54.8 0.0**
TIR Tirane 1.43 4 P **Pg** **20 15 55.4 -0.5**
TIR S **Sg** **20 16 16.7 +2.3**
comp=E,3µm,0.5s
TIR Tirane 1.43 4 *e*Pg **Pg** **20 15 55.3 -0.6**
TIR *e*Sg **Sg** **20 16 18.0 +3.6**
TIR Tirane 1.43 4 P **Pb** **20 15 54.8 0.0**
TIR Tirane 1.43 4 P **Pg** **20 15 55.3 -0.6**
baz=2.0
TIR S **Sg** **20 16 17.2 +2.8**
baz=2.0
TIR AMP
comp=N,12nm,0.6s,baz=2.0
OHR Ohrid 1.44 34 *e*Pg **Pg** **20 15 56.3 +0.2**
OHR *e*Sg **Sg** **20 16 18.2 +3.4**
OHR Ohrid 1.44 34 *i* Pn **Pn** **20 15 54.7 +0.7**
EVGI Lefkada island 1.48 151 P **Pn** **20 15 55.7 +1.1**
EVGI S **Sg** **20 16 16.8 +0.5**
comp=E,6µm,0.6s
EVGI Lefkada island 1.48 151 P **Pn** **20 15 55.9 +1.3**
EVGI S **Sn** **20 16 14.3 +0.5**
FSK Fiskardo 1.60 156 P **Pn** **20 15 57.3 +1.1**
FSK AML AML 20 16 27.6
comp=N,9726µm,0.9s
FSK AML AML 20 16 29.1
comp=E,11565µm,0.7s
KZN Kozani 1.60 76 P **Pb** **20 15 58.5 +0.6**
KZN Kozani 1.60 76 P **Pb** **20 15 57.9 +0.1**
KZN Kozani 1.60 76 P **Pb** **20 15 58.0 +0.1**
KZN AML AML 20 16 26.7
comp=E,11483µm,0.4s
KZN AML AML 20 16 27.1
comp=N,9631µm,0.8s
KEF4 Livadi, Kephal 1.75 162 P **Pn** **20 15 59.4 +1.2**
KEF4 Livadi, Kephal 1.75 162 P **Pn** **20 15 59.3 +1.1**
DMLN Damoulianata-K 1.75 163 P **Pn** **20 15 59.4 +1.0**
KEF3 Kipouria, Keph 1.78 164 P **Pn** **20 15 59.4 +0.7**
KEF3 Kipouria, Keph 1.78 164 P **Pn** **20 15 59.6 +0.8**
THL Klokotos Trika 1.79 101 P **Pb** **20 16 01.1 +0.1**
THL AML AML 20 16 30.3
comp=E,8659µm,0.6s
THL AML AML 20 16 30.5
comp=N,8715µm,1.0s
PHP Peshkopia 1.84 17 P **Pb** **20 16 01.2 -0.6**
PHP Peshkopia 1.84 17 P **Pb** **20 16 01.2 -0.6**
baz=15
PHP S **Sg** **20 16 29.3 +1.7**
baz=15
PHP AMP
comp=N,16nm,0.8s,baz=15
VLS Valsamata 1.87 159 P **Pn** **20 16 00.6 +0.7**
KTI Kastanea 1.88 75 P **Pn** **20 16 01.4 +1.2**
EVR Evrytania 1.89 121 P **Pn** **20 16 02.1 +1.8**
EVR AML AML 20 16 34.8
comp=E,6325µm,0.6s
EVR AML AML 20 16 51.1
comp=N,7110µm,0.9s
PVO Paravola 1.91 133 P **Pb** **20 16 02.6 -0.3**
PSDA Pessada-Kefalo 1.92 160 P **Pn** **20 16 01.8 +1.1**
PSDA Pessada-Kefalo 1.92 160 P **Pn** **20 16 01.8 +1.1**
ULC Ulcinj 2.07 350 ⇑*i*Pn **Pn** **20 16 02.8 0.0**
ULC *i* Sn **Sb** **20 16 29.9 -1.5**
AGG Agios Georgios 2.20 113 P **Pb** **20 16 07.4 -0.6**
GRG Griva 2.28 62 P **Pn** **20 16 07.4 +1.8**
GRG Griva 2.28 62 P **Pn** **20 16 07.4 +1.8**
DRME Dracevica, Mon 2.30 350 ⇑*i*Pn **Pn** **20 16 06.1 +0.2**
DRME Dracevica, Mon 2.30 350 *e*Pn **Pn** **20 16 05.9 0.0**
DRME *i* Sn **Sn** **20 16 35.5 +1.6**
SKO Skopje 2.42 32 *e*Pn **Pn** **20 16 09.1 +1.6**
SKO *e*Sn **Sn** **20 16 38.4 +1.6**
SKO Skopje 2.42 32 *i* Pn **Pn** **20 16 09.3 +1.8**
TIP Timpagrande 2.42 253 ⇓P **Pn** **20 16 08.1 +0.6**
TIP Timpagrande 2.42 253 Pn **Pn** **20 16 08.0 +0.4**
MATE Matera 2.43 288 ⇑P **Pn** **20 16 07.7 0.0**
BCI Bajram Curri 2.45 6 P **Pn** **20 16 09.6 +1.6**
baz=4.0
BCI S **Sg** **20 16 44.9 -2.4**
baz=4.0
BUM Brajici-Budva 2.46 345 ⇑*i*Pn **Pn** **20 16 08.0 -0.1**
BUM *i* Sn **Sn** **20 16 39.1 +1.2**
PDG Podgorica 2.53 352 ⇑P **Pn** **20 16 09.2 +0.2**
PDG Podgorica 2.53 352 Pn **Pn** **20 16 09.1 +0.1**
PDG Podgorica 2.53 352 *e*Pn **Pn** **20 16 09.7 +0.7**
PDG *e*Sn **Sn** **20 16 40.7 +1.1**
TTG Podgorica 2.53 352 ⇑*i*Pn **Pn** **20 16 09.2 +0.2**
TTG *i* Sn **Sn** **20 16 41.1 +1.5**
THE Thessaloniki 2.57 73 P **Pn** **20 16 10.9 +1.3**
VAY Valandovo 2.57 56 *e*Pn **Pn** **20 16 11.2 +1.7**
VAY Valandovo 2.57 56 *i* Pn **Pn** **20 16 11.2 +1.7**
HORT Hortiatis 2.66 74 P **Pn** **20 16 12.3 +1.4**
HORT AML AML 20 16 50.9
comp=E,1130µm,0.9s
HORT AML AML 20 16 58.6
comp=N,1684µm,0.8s
PVY Plav 2.67 3 *e*Pn **Pn** **20 16 11.4 +0.3**
PVY *i* Sn **Sn** **20 16 44.9 +1.6**
HCY Herceg Novi 2.69 340 *e*Pn **Pn** **20 16 10.8 -0.4**
HCY Herceg Novi 2.69 340 *e*Pn **Pn** **20 16 11.1 -0.1**
HCY *i* Sn **Sn** **20 16 44.6 +1.0**

CEME Cevo 2.69 347 *e*Pn **Pn** **20 16 11.3 0.0**
CEME *i* Sn **Sn** **20 16 44.9 +1.2**
KNT Kendrikon 2.71 62 P **Pn** **20 16 12.5 +1.0**
XOR Xorichti 2.72 101 P **Pn** **20 16 13.5 +1.8**
NKME Niksic 2.90 348 *e*Pn **Pn** **20 16 14.2 0.0**
NKME *i* Sn **Sn** **20 16 49.9 +1.1**
SOH Sokhos 2.90 71 P **Pn** **20 16 16.3 +2.1**
KOME Kolasin 2.93 357 ⇓*i*Pn **Pn** **20 16 14.8 +0.2**
KOME *i* Sn **Sn** **20 16 50.9 +1.3**
IVA Berane 2.95 2 *e*Pn **Pn** **20 16 15.1 +0.2**
IVA *i* Sn **Sn** **20 16 51.5 +1.5**
TREB Trebinje 2.98 340 *e*Pn **Pn** **20 16 14.6 -0.6**
TREB Trebinje 2.98 340 *e*Pn **Pn** **20 16 14.9 -0.3**
TREB *e*Sn **Sn** **20 16 50.5 -0.2**
CUC Castrocucco 3.02 273 Pn **Pn** **20 16 17.0 +1.3**
BRY Bratogost 3.11 344 *e*Pn **Pn** **20 16 16.5 -0.6**
BRY Bratogost 3.11 344 ⇑*i*Pn **Pn** **20 16 17.0 -0.1**
BRY *i* Sn **Sn** **20 16 54.8 +0.7**
SRS Serrai 3.17 67 *e*Pn **Pn** **20 16 19.4 +1.6**
SRS *e*Sn **Sn** **20 16 55.3 -0.1**
SRS Serrai 3.17 67 P **Pn** **20 16 19.1 +1.3**
KKB Krupnik 3.19 51 *e*P **Pn** **20 16 19.8 +1.6**
ITM Ithomi 3.23 147 **Pn** **20 16 21.0 +2.2**
BARS Barje 3.29 28 *e*Pn **Pn** **20 16 20.6 +1.2**
STON Ston 3.32 333 *e*Pn **Pn** **20 16 18.3 -1.6**
STON Ston 3.32 333 *e*Pn **Pn** **20 16 18.3 -1.6**
STON *e*Sn **Sn** **20 16 59.1 +0.1**
UPM Unac-Piva 3.33 349 *e*Pn **Pn** **20 16 20.2 -0.1**
UPM Unac-Piva 3.33 349 ⇑*i*Pn **Pn** **20 16 20.2 -0.1**
UPM *i* Sn **Sn** **20 17 00.5 +0.8**
SJES Sjenica 3.34 3 *e*Pn **Pn** **20 16 21.7 +1.4**
KOKK Kokkinochori, 3.38 73 P **Pn** **20 16 22.5 +1.9**
PLE Pljevlja 3.41 356 *e*Pn **Pn** **20 16 21.4 +0.1**
PLE *i* Sn **Sn** **20 17 02.6 +1.0**
CEL Celeste 3.42 242 **Pn** **20 16 21.7 +0.4**
SELS Selova 3.45 17 *e*Pn **Pn** **20 16 21.9 +0.2**
MMB Musomiste 3.46 60 *e*P **Pn** **20 16 23.7 +1.9**
SGRT San Giovanni R 3.54 302 Pn **Pn** **20 16 23.0 0.0**
RUDO Rudo 3.70 356 *e*Pn **Pn** **20 16 25.3 +0.2**
VTS Vitosha 3.77 43 ⇑P **Pn** **20 16 27.6 +1.4**
VTS Vitosha 3.77 43 Pn **Pn** **20 16 27.5 +1.4**
VTS Vitosha 3.77 43 P **Pn** **20 16 27.5 +1.4**
VTS Vitosha 3.77 43 *e*P **Pn** **20 16 27.9 +1.7**
BBLS Lazići 3.95 356 ⇑*i*Pn **Pn** **20 16 29.1 +0.5**
BBLS Lazići 3.95 356 *e*Pn **Pn** **20 16 29.2 +0.6**
BBLS *e*Sn **Sn** **20 17 14.5 -0.1**
BOVS Bovan 3.99 21 ⇑P **Pn** **20 16 29.3 +0.2**
BOVS Bovan 3.99 21 *e*Pn **Pn** **20 16 29.2 +0.2**
ZAPS Zavoj 3.99 32 *e*Pn **Pn** **20 16 30.5 +1.4**
GRUS Gruza 4.03 10 *e*Pn **Pn** **20 16 30.0 +0.4**
GRUS *e*Sn **Sn** **20 17 15.7 -0.8**
PAOL Paolisi 4.10 287 **Pn** **20 16 32.0 +1.4**
RZN Rozhen 4.17 63 *e*P **Pn** **20 16 33.9 +2.2**
DIVS Divibare 4.17 3 Pn **Pn** **20 16 31.6 -0.1**
DIVS Divibare 4.17 3 ⇑*i*Pn **Pn** **20 16 31.7 0.0**
DIVS Divibare 4.17 3 *e*Pn **Pn** **20 16 31.7 0.0**
DIVS *e*Sn **Sn** **20 17 19.1 -1.2**
HAPS Han Pijesak,Bl 4.20 352 *e*Pn **Pn** **20 16 32.8 +0.7**
BLKB Belogradchik 4.30 30 ⇑P **Pn** **20 16 34.7 +1.3**
ZAGS Zajecar 4.31 25 *e*Pn **Pn** **20 16 34.1 +0.6**
ZAGS *e*Sn **Sn** **20 17 24.1 +0.7**
TRUS Trudelj 4.33 6 *e*Pn **Pn** **20 16 34.0 +0.3**
TRUS *e*Sn **Sn** **20 17 22.9 -1.0**
PLD Plovdiv 4.34 58 *e*P **Pn** **20 16 35.8 +1.9**
MPEP Malo Peshtene 4.55 40 *e*P **Pn** **20 16 38.4 +1.5**
SRKY Kupres RS 4.56 336 *e*Pn **Pn** **20 16 38.1 +1.0**
RDO Rodhopi 4.58 73 Pn **Pn** **20 16 38.2 +1.0**
TEKS Tekeris 4.62 358 *e*Pn **Pn** **20 16 36.5 -1.3**
TEKS Tekeris 4.62 358 *e*Pn **Pn** **20 16 37.1 -0.7**
TEKS *e*Sn **Sn** **20 17 31.0 -0.3**
KUBS Kucevo 4.71 17 *e*Pn **Pn** **20 16 38.5 -0.5**
KUBS *e*Sn **Sn** **20 17 32.9 -0.5**
VAE Valguarnera 4.83 241 Pn **Pn** **20 16 43.0 +2.3**
comp=N,13nm,0.9s,baz=117,slow=14,SNR=2.2
VAE Sn **Sn** **20 17 41.1 +4.7**
comp=N,2.5nm,0.3s,baz=31,slow=18,SNR=1.4
BLJ Bijeljina 4.87 356 *e*Pn **Pn** **20 16 37.8 -3.3**
INTR Introdacqua 4.88 297 **Pn** **20 16 41.0 -0.4**
MGRS Mrkonjic Grad 4.90 337 *e*Pn **Pn** **20 16 43.1 +1.4**
RAFF Raffo Rosso 5.00 239 **Pn** **20 16 41.8 -1.2**
PLVB Pleven 5.03 45 ⇓P **Pn** **20 16 45.4 +1.9**
MDVR Moldovita 5.07 16 ⇓P **Pn** **20 16 44.3 +0.3**
DJES Djerdap 5.17 23 ⇑P **Pn** **20 16 46.5 +1.2**
BLY Banja Luka 5.18 339 *e*Pn **Pn** **20 16 45.9 +0.5**
BLY Banja Luka 5.18 339 *e*Pn **Pn** **20 16 45.9 +0.5**
BLY *e*Sn **Sn** **20 17 42.7 -2.2**
FRGS Fruska Gora 5.23 1 ⇑P **Pn** **20 16 45.7 -0.5**
FRGS Fruska Gora 5.23 1 ⇑*i*Pn **Pn** **20 16 45.6 -0.5**
FRGS Fruska Gora 5.23 1 *e*Pn **Pn** **20 16 45.5 -0.7**
FRGS *e*Sn **Sn** **20 17 43.3 -2.9**
HERR Herculane 5.33 21 ⇑P **Pn** **20 16 48.2 +0.6**
APE Apeiranthos 5.36 120 ⇓P **Pn** **20 16 50.7 +2.7**
APE Apeiranthos 5.36 120 *d*iP **Pn** **20 16 49.6 +1.6**
AQU L'Aquila 5.36 299 **Pn** **20 16 47.5 -0.5**
AQU L'Aquila 5.36 299 P **Pn** **20 16 47.5 -0.5**
A052A Srbac 5.43 343 *e*Pn **Pn** **20 16 46.6 -2.2**
CAMP Campotosto 5.44 301 **Pn** **20 16 49.9 +0.8**
A051A Mrakovica 5.50 339 *e*Pn **Pn** **20 16 49.9 0.0**
PRIJ Prijedor 5.52 337 *e*Pn **Pn** **20 16 50.8 +0.7**
CLTB Caltabellotta 5.61 247 Pn **Pn** **20 16 52.3 +0.9**
SZH Strazhica 5.72 52 *e*P **Pn** **20 16 55.6 +2.7**
SANT Santorini 5.74 126 Pn **Pn** **20 16 54.7 +1.6**
BZS Buzias 5.86 13 ⇓P **Pn** **20 16 54.4 -0.3**
FDMO Fiordimonte 5.88 304 **Pn** **20 16 56.3 +1.2**
GZR Gura Zlata 5.91 21 ⇑P **Pn** **20 16 56.7 +1.2**
CESX Cesi 6.02 299 **Pn** **20 16 58.2 +1.2**
HUMR Humele 6.03 39 ⇓P **Pn** **20 16 58.5 +1.5**
IDI Anoyia 6.17 137 Pn **Pn** **20 16 59.3 +0.1**
comp=N,3.6nm,0.3s,baz=288,slow=17,SNR=12
IDI Sn **Sn** **20 18 03.1 -6.5**
comp=N,18nm,0.3s,baz=285,slow=20,SNR=13
IDI LR LR 20 20 34.5
comp=N,35nm,19.5s,baz=316,slow=50
comp=N,8.5nm,0.4s
RAZG Razgrad 6.23 52 ⇑P **Pn** **20 17 02.1 +2.2**
LOT Lotru 6.27 27 ⇓P **Pn** **20 17 02.3 +1.8**
KOVH Kovagotottos 6.28 350 P **Pn** **20 16 59.8 -0.7**
KOVH S **Sn** **20 18 06.3 -5.6**
SGRR Singureni 6.32 45 ⇑P **Pn** **20 17 03.2 +2.1**
MORH Mrgy, Hungar 6.34 353 ⇓P **Pn** **20 17 00.9 -0.5**
MORH Mrgy, Hungar 6.34 353 P **Pn** **20 17 00.6 -0.7**
MORH S **Sn** **20 18 07.5 -5.9**
MURB Monte Urbino 6.35 304 **Pn** **20 17 01.8 +0.2**
BOJS Bojanci 6.48 331 *i* Pn **Pn** **20 17 03.9 +0.6**
BOJS *e*Sn **Sn** **20 18 15.6 -1.4**
SIRR Siria 6.49 12 ⇑P **Pn** **20 17 03.6 +0.1**
ARR Arges 6.53 32 ⇑P **Pn** **20 17 05.8 +1.8**
MTUR Matau 6.60 35 ⇑P **Pn** **20 17 06.0 +1.1**
VOIR 6.76 34 ⇑P **Pn** **20 17 08.6 +1.4**
BEHE Becsehely 6.89 343 P **Pn** **20 17 09.6 +0.7**
CEY Cerknica 7.00 328 ⇑*i*Pn **Pn** **20 17 10.4 0.0**
DRGR 7.20 17 ⇑P **Pn** **20 17 13.4 +0.2**
MLR Muntele Rosu 7.20 37 ⇓P **Pn** **20 17 15.6 +2.4**
MLR Muntele Rosu 7.20 37 Pn **Pn** **20 17 15.5 +2.2**
comp=N,1.0nm,0.3s,baz=190,slow=8.1,SNR=29
MLR LR LR 20 21 04.2
comp=N,267nm,20.8s,baz=232,slow=47
comp=N,38nm,0.9s
MLR Muntele Rosu 7.20 37 Pn **Pn** **20 17 14.5 +1.2**
LJU Ljubljana 7.21 330 *i* Pn **Pn** **20 17 13.0 -0.3**
LJU *i* Sn **Sn** **20 18 32.5 -2.5**
ISR Istrita 7.22 42 ⇑P **Pn** **20 17 16.2 +2.6**
CASP Castiglione de 7.26 296 Pn **Pn** **20 17 15.1 +1.0**
OSSC Osservatorio P 7.30 302 Pn **Pn** **20 17 14.0 -0.5**
NEHR Nehoiu 7.32 39 ⇑P **Pn** **20 17 17.9 +3.1**
ICOR Ion Corvin 7.32 52 ⇓P **Pn** **20 17 17.2 +2.5**
DOPR Dopca 7.32 33 ⇑P **Pn** **20 17 16.9 +2.0**
KARP Karpathos 7.33 124 Pn **Pn** **20 17 15.8 +0.8**
MPLH Magyarpolny 7.42 348 P **Pn** **20 17 16.7 +0.5**
SOKA Soboth 7.57 335 *e*Pn **Pn** **20 17 17.9 -0.4**
comp=N,6.6nm,0.3s,SNR=13
ARG Arkhangelos 7.58 117 Pn **Pn** **20 17 20.4 +2.0**
ARG Arkhangelos 7.58 117 P **Pn** **20 17 20.4 +2.0**
OBKA Obir 7.59 332 *e*Pn **Pn** **20 17 16.6 -2.0**
OBKA Obir 7.59 332 *e*Pn **Pn** **20 17 18.4 -0.3**
comp=N,13nm,0.4s,SNR=15
OBKA *e*Sn **Sn** **20 18 45.2 +0.8**
comp=N,16nm,0.4s
OZUR 7.59 34 ⇓P **Pn** **20 17 20.8 +2.2**
TLBR Topalu 7.70 50 ⇓P **Pn** **20 17 22.5 +2.5**

HARR Harsova 7.71 49 ⇑P **Pn** **20 17 22.7 +2.5**
PLOR Plostina 7.80 38 ⇑P **Pn** **20 17 24.3 +2.8**
PLOR Plostina 7.80 38 P **Pn** **20 17 24.2 +2.8**
VRI Vrincioaia 7.84 39 ⇑P **Pn** **20 17 24.8 +2.7**
VRI Vrincioaia 7.84 39 P **Pn** **20 17 25.2 +3.2**
TIRR Tirgusor 7.87 52 **Pn** **20 17 22.7 +0.3**
TIRR Tirgusor 7.87 52 P **Pn** **20 17 22.7 +0.3**
PRED Cave del Predi 7.92 327 Pn **Pn** **20 17 22.4 -0.7**
ARSA Arzberg 7.94 339 *i* Pn **Pn** **20 17 23.5 +0.2**
comp=N,4.9nm,0.5s,SNR=12
PSZ Piszkesteto 7.99 1 ⇑P **Pn** **20 17 23.9 -0.2**
PSZ Piszkesteto 7.99 1 Pn **Pn** **20 17 23.9 -0.2**
PSZ Piszkesteto 7.99 1 P **Pn** **20 17 23.9 -0.2**
PSZ Piszkesteto 7.99 1 P **Pn** **20 17 23.9 -0.5**
MYKA Terra Mystica 8.04 328 *i* Pn **Pn** **20 17 25.6 +0.8**
comp=N,2.8nm,0.4s
TEOL Teolo 8.05 315 **Pn** **20 17 23.6 -1.2**
TPGR Topolog 8.10 50 ⇓P **Pn** **20 17 27.5 +2.0**
CFR Carcaliu 8.12 47 ⇑P **Pn** **20 17 27.0 +1.2**
STAL STALIGIAL 8.15 323 **Pn** **20 17 25.4 -0.8**
RONA Rosalia, Austr 8.16 343 *e*Pn **Pn** **20 17 26.1 -0.3**
comp=N,1.0nm,0.3s
BMR Baia Mare 8.21 18 ⇓P **Pn** **20 17 27.8 +0.8**
CLUD Cludinico 8.23 325 **Pn** **20 17 26.2 -1.1**
BORA Eskisehir 8.24 87 Pn **Pn** **20 17 29.6 +2.0**
ABAH Abaujker 8.44 7 P **Pn** **20 17 30.4 +0.3**
TRPA Tarpa 8.45 13 ⇑P **Pn** **20 17 31.2 +1.0**
TRPA Tarpa 8.45 13 P **Pn** **20 17 30.9 +0.6**
CONA Conrad Observa 8.47 342 *i* Pn **Pn** **20 17 32.2 +1.4**
comp=N,1.5nm,0.3s
PGF Pioggiola 8.51 291 *e*Pn **Pn** **20 17 33.2 +2.0**
VLDR Vladesti 8.51 43 ⇓P **Pn** **20 17 33.8 +2.6**
CTI Castel Tesino 8.52 319 **Pn** **20 17 30.4 -0.9**
CTI Castel Tesino 8.52 319 P **Pn** **20 17 30.4 -0.9**
KECS Kecovo 8.57 3 *e*P **Pn** **20 17 33.1 +1.1**
KECS *e* 20 18 59.9
VYHS Vyhne 8.59 356 *e*P **Pn** **20 17 33.1 +0.8**
VYHS *e* 20 19 04.6
AKAS Kas 8.61 112 Pn **Pn** **20 17 35.8 +3.1**
ABTA Abfaltersbach 8.61 325 *e*Pn **Pn** **20 17 32.1 -0.6**
comp=N,6.6nm,0.5s,SNR=11
ABTA *e*Sn **Sn** **20 19 06.3 -3.2**
comp=N,18nm,0.6s
MODS Modra-Piesok 8.63 349 *e*P **Pn** **20 17 34.7 +1.9**
BURAR Bucovina Array 8.65 25 ⇑P **Pn** **20 17 35.6 +2.4**
BURAR Bucovina Array 8.65 25 **Pn** **20 17 33.7 +0.6**
BURAR Bucovina Array 8.65 25 P **Pn** **20 17 35.5 +2.4**
BUR08 Bucovina Ar. S 8.67 25 Pn **Pn** **20 17 34.6 +1.2**
ISP Isparta 8.67 101 Pn **Pn** **20 17 35.4 +2.0**
ISP Isparta 8.67 101 *i* P **Pn** **20 17 37.0 +3.5**
MSSA Maissana 8.77 303 Pn **Pn** **20 17 35.1 +0.4**
MDUB Mudurnu 8.79 83 **Pn** **20 17 36.2 +1.1**
MOA Molln 8.85 335 *e*Pn **Pn** **20 17 34.4 -1.4**
MOA *e*Sn **Sn** **20 19 09.9 -5.4**
MOA Molln 8.85 335 *e*Pn **Pn** **20 17 36.0 +0.2**
comp=N,3.3nm,0.2s,SNR=23
MOA Sn **Sn** **20 19 13.8 -1.5**
comp=N,7.2nm,0.4s
UZH Uzhgorod 8.89 11 *e*P **Pn** **20 17 40.5 +4.1**
BIOA Bad Ischl, Aus 8.93 332 *e*Pn **Pn** **20 17 37.0 +0.1**
comp=N,9.5nm,0.4s,SNR=13
JAVC Velka Javorina 9.05 351 *e*PN **Pn** **20 17 39.2 +0.6**
CRVS Cervenica-Dubn 9.06 7 *e*P **Pn** **20 17 39.6 +0.9**
KOLS Kolonicke sedl 9.19 11 *e*P **Pn** **20 17 41.8 +1.4**
KEST Kesra 9.22 246 Pn **Pn** **20 17 43.1 +2.1**
comp=N,0.4nm,0.3s,baz=218,slow=3.8,SNR=11
KEST LR LR 20 21 20.8
comp=N,112nm,19.7s,baz=314,slow=38
KEST Kesra 9.22 246 P Pn 20 17 35.7 -5.3
WTTA Wattenberg 9.40 324 *e*Pn **Pn** **20 17 45.0 +1.5**
comp=N,7.9nm,0.3s
WTTA *e*Sn **Sn** **20 19 24.4 -4.5**
comp=N,23nm,0.6s
KRUC Moravsky 9.44 346 *e*PN **Pn** **20 17 43.4 -0.5**
WATA Walderalm 9.48 324 *e*Pn **Pn** **20 17 44.5 0.0**
comp=N,16nm,0.6s
WATA *e*Sn **Sn** **20 19 26.0 -4.8**
comp=N,7.6nm,0.5s
MAUC Maruska 9.54 352 *e*PN **Pn** **20 17 46.3 +1.1**
STHS Stebnicka Huta 9.55 6 *e*P **Pn** **20 17 42.8 -2.6**
SQTA Sankt Quirin 9.56 323 *i* Pn **Pn** **20 17 47.1 +1.4**
comp=N,6.6nm,0.3s,SNR=11
SQTA *e*Sn **Sn** **20 19 29.9 -2.9**
comp=N,14nm,0.4s
FUORN Ofenpass-Fuorn 9.61 317 Pn **Pn** **20 17 47.2 +0.7**
VRAC Vranov 9.65 348 Pn **Pn** **20 17 44.8 -1.9**
comp=N,0.2nm,0.3s,baz=186,slow=12,SNR=5.4
comp=N,2.2nm,0.7s
VRAC Vranov 9.65 348 *e*PN **Pn** **20 17 46.3 -0.4**
FETA Feichten 9.65 320 *e*Pn **Pn** **20 17 49.5 +2.6**
comp=N,3.5nm,0.4s
MOTA Moosalm 9.70 323 *e*Pn **Pn** **20 17 48.0 +0.4**
comp=N,16nm,0.7s,SNR=29
MOTA *e*Sn **Sn** **20 19 35.6 -0.7**
comp=N,17nm,0.5s
CKRC Cesky Krumlov 9.70 338 *e*PN **Pn** **20 17 47.1 -0.4**
GEC2 GERESS Array S 9.91 336 **Pn** **20 17 50.1 -0.3**
GERES GERESS Array B 9.91 336 Pn **Pn** **20 17 49.1 -1.3**
comp=N,1.2nm,0.3s,baz=153,slow=13,SNR=48
GERES Sn **Sn** **20 19 36.4 -4.9**
comp=N,0.9nm,0.3s,baz=154,slow=23,SNR=4.3
GERES LR LR 20 22 59.2
comp=N,163nm,20.9s,baz=158,slow=46
comp=N,1.9nm,0.4s
GERES GERESS Array B 9.91 336 **Pn** **20 17 49.5 -0.8**
GERES GERESS Array B 9.91 336 P **Pn** **20 17 49.5 -0.8**
DAVOX Davos/Dischmat 9.92 317 Pn **Pn** **20 17 51.3 +0.7**
comp=N,0.4nm,0.3s,baz=178,slow=21,SNR=8.0
DAVOX Sn **Sn** **20 19 38.6 -3.1**
comp=N,1.5nm,0.3s,baz=177,slow=22,SNR=5.6
DAVOX LR LR 20 22 15.1
comp=N,113nm,19.4s,baz=122,slow=41
comp=N,3.2nm,0.6s
RETA Reutte 9.96 322 *e*Pn **Pn** **20 17 51.6 +0.5**
comp=N,2.2nm,0.5s,SNR=5.3
MORC Moravsky Berou 9.97 352 Pn **Pn** **20 17 52.6 +1.4**
MORC Moravsky Berou 9.97 352 P **Pn** **20 17 52.6 +1.4**
MORC Moravsky Berou 9.97 352 *e*PN **Pn** **20 17 52.1 +0.9**
OKC Ostrava-Krasne 9.98 354 *e*P **Pn** **20 17 52.1 +0.9**
OKC Ostrava-Krasne 9.98 354 *e*PN **Pn** **20 17 52.1 +0.9**
SBF Sospel 9.98 297 *e*Pn **Pn** **20 17 52.0 +0.6**
SBF Sospel 9.98 297 *e*P Pn 20 17 56.5 +5.1
SBF *e*Sn **Sn** **20 19 35.6 -7.5**
comp=N,13nm,0.6s
KHC Kasperske Hory 10.20 337 Pn **Pn** **20 17 53.7 -0.6**
KHC Kasperske Hory 10.20 337 *e*P **Pn** **20 17 53.5 -0.8**
KHC *e* 20 19 44.2
KHC Kasperske Hory 10.20 337 *e*PN **Pn** **20 17 53.5 -0.8**
KHC *e*SN **Sn** **20 19 44.2 -4.1**
DAVA Damuels 10.25 319 *i* Pn **Pn** **20 17 56.5 +1.3**
comp=N,3.9nm,0.4s
DAVA *e*Sn **Sn** **20 19 47.6 -2.3**
comp=N,7.8nm,0.3s
LMR La Mourre 10.47 293 *e*Pn **Pn** **20 17 58.6 +0.6**
LMR La Mourre 10.47 293 *e*P Pn 20 18 04.4 +6.4
BR131 Keskin Array S 10.70 87 **Pn** **20 18 03.3 +2.1**
BR131 Keskin Array S 10.70 87 P **Pn** **20 18 03.3 +2.1**
BR131 Keskin Array S 10.70 87 P **Pn** **20 18 04.9 +3.6**
BRTR Keskin Array B 10.70 87 Pn **Pn** **20 18 04.2 +2.9**
comp=N,0.2nm,0.3s,baz=267,slow=13,SNR=13
BRTR LR LR 20 21 58.3
comp=N,70nm,20.4s,baz=280,slow=37
comp=N,2.1nm,0.8s
BRTR Keskin Array B 10.70 87 Pn **Pn** **20 18 03.8 +2.6**
PRU Pruhonice 10.71 342 *e*P **Pn** **20 18 00.5 -0.8**
PRU Pruhonice 10.71 342 *e*PN **Pn** **20 18 00.5 -0.8**
MBDF Montbardon 10.73 301 *e*Pn **Pn** **20 18 01.8 +0.1**
MBDF Montbardon 10.73 301 *e*P Pn 20 18 07.1 +5.4
MBDF *e*Sn Sn 20 19 49.6 -12
comp=N,8.5nm,0.6s
LPG La Plagne 11.05 304 *e*Pn **Pn** **20 18 06.1 -0.2**
LPG *e*Sn Sn 20 19 45.9 -24
comp=N,16nm,0.5s
LPL La Plagne 11.07 305 *e*Pn **Pn** **20 18 06.1 -0.4**
LPL La Plagne 11.07 305 *e*P Pn 20 18 11.9 +5.4
LPL *e*Sn Sn 20 19 46.7 -23
comp=N,17nm,0.5s
SENIN Lac Senin/Sane 11.13 309 Pn **Pn** **20 18 07.8 +0.6**
SMRF Simiane la Rot 11.30 296 *e*P Pn 20 18 15.6 +6.3
ORIF Oris-en-Rattie 11.39 300 *e*P Pn 20 18 15.7 +5.0
ORIF *e*Sn **Sn** **20 20 09.9 -7.8**
comp=N,9.9nm,0.6s
GRA1 Grafenberg Arr 11.48 331 Pn **Pn** **20 18 10.7 -1.1**
**GRF Grafenberg

STU Stuttgart 11.62 323 Pn **Pn 20 18 12.2 -1.5**
STU Stuttgart 11.62 323 P **Pn 20 18 12.2 -1.5**
SWA2 11.65 154 P **Pn 20 18 12.7 -1.4**
baz=158
SWA2 S Sn 20 20 11.3 -13
baz=158
BFO Black Forest 11.73 320 Pn **Pn 20 18 14.1 -1.1**
BFO Black Forest 11.73 320 P **Pn 20 18 14.1 -1.1**
CSS Mathiatis 11.88 110 Pn **Pn 20 18 18.2 +0.9**
CABF La Chapelle 11.98 308 *e*Pn **Pn 20 18 17.4 -1.3**
CABF *e*Sn **Sn 20 20 24.1 -7.9**
comp=N,25nm,1.0s
MOX Moxa 12.14 335 P **Pn 20 18 18.9 -1.9**
HINF Hinteralfeld 12.18 315 *e*Pn **Pn 20 18 20.2 -1.2**
HINF *e*Sn Sn 20 20 24.5 -12
comp=N,12nm,0.6s
ECH Echery 12.26 317 Pn **Pn 20 18 21.6 -0.8**
ECH Echery 12.26 317 P **Pn 20 18 21.6 -0.8**
CLL Collm 12.31 340 *e*P Pn 20 18 14.0 -9.2
CLL pmax pmax
comp=Z,1µm,5.4s
CDF Champ du Feu 12.32 318 *e*Pn **Pn 20 18 22.5 -0.8**
CDF *e*Sn **Sn 20 20 32.4 -7.9**
comp=Z,3.8nm,0.5s
BNN Bunyan 12.51 90 Pn **Pn 20 18 26.8 +0.7**
HAU Haudompre 12.57 314 *e*Pn **Pn 20 18 26.4 -0.3**
HAU *e*Sn Sn 20 20 34.8 -12
comp=Z,20nm,0.4s
AKASG Malin Array Be 12.66 29 Pn **Pn 20 18 28.1 +0.1**
comp=Z,1.2nm,0.3s,baz=222,slow=11,SNR=8.6
AKASG LR LR 20 23 56.9
comp=Z,111nm,18.5s,baz=246,slow=40
comp=Z,1.7nm,0.6s
AKASG Malin Array Be 12.66 29 Pn **Pn 20 18 27.8 -0.1**
AKBB Malin Array Si 12.66 29 *i* P **Pn 20 18 28.9 +1.0**
PAGF Fort de Pagny 13.23 315 *e*Pn **Pn 20 18 34.2 -1.4**
SMF Signal de Mont 13.38 305 *e*Pn **Pn 20 18 36.8 -0.9**
SMF *e*Sn Sn 20 20 54.1 -12
comp=Z,98nm,1.9s
SFTF Sexfontaines 13.41 313 *e*Pn **Pn 20 18 35.7 -2.4**
SAVF Savonnieres en 13.59 315 *e*Pn **Pn 20 18 39.0 -1.6**
LOR Lormes 13.63 308 *e*Pn **Pn 20 18 41.3 +0.1**
LOR *e*Sn Sn 20 21 02.3 -10
comp=Z,9.8nm,0.4s
WLF Walferdange 13.69 320 *d*PP **Pn 20 18 46.6 +4.7**
AVF Avril sur Loir 13.74 305 *e*Pn **Pn 20 18 41.4 -1.3**
SSF Saint Saulge 13.76 307 *e*Pn **Pn 20 18 42.4 -0.5**
SSF *e*Sn Sn 20 21 05.9 -10
comp=Z,13nm,0.7s
SSF Saint Saulge 13.76 307 *e*P **Pn 20 18 42.2 -0.7**
RYAN Fayoum 13.86 138 P **Pn 20 18 41.0 -3.3**
baz=141
BGF Bois d'Agland 13.97 304 *e*Pn **Pn 20 18 46.2 +0.4**
BGF *e*Sn Sn 20 21 11.3 -9.3
comp=Z,14nm,0.7s
GLL Jalalah 14.25 133 P Pn 20 18 45.4 -4.3
baz=136
MEM Membach 14.38 322 *d*PP **P 20 19 01.6 +3.2**
BCLA Clavier 14.59 321 *d*P **Pn 20 18 53.0 -1.3**
NBNS Bani Suef 14.76 136 P Pn 20 18 52.3 -4.4
baz=139
BAIF Baives 14.92 318 *e*Pn **Pn 20 18 57.8 -0.9**
GHAJ Ghor Haditha 15.46 119 Pn **Pn 20 19 04.9 -1.1**
ETSF Etsaut 15.51 288 *e*Pn **Pn 20 19 09.0 +2.3**
MNK Minsk 15.58 18 *i* P **Pn 20 19 04.6 -2.8**
MNK *i* S **Sn 20 21 58.1 -1.5**
MNK pmax pmax
comp=Z,103nm,0.9s
MNK pmax pmax
comp=N,71nm,1.0s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=Z,157nm,16.0s
MNK MLR MLR
comp=E,19nm,14.0s
MNK MLR MLR
comp=N,505nm,18.0s
MNK Minsk 15.58 18 *i* P **Pn 20 19 04.6 -2.8**
comp=E,5.0nm,0.9s
MNK *i* P **Pn 20 19 04.6 -2.8**
comp=N,71nm,1.0s
MNK *i* P **Pn 20 19 04.6 -2.8**
comp=Z,103nm,0.9s,baz=204
MNK *i* PP **P 20 19 12.9 +1.3**
MNK *i* PPP PPP 20 19 20.6
MNK *i* S **Sn 20 21 58.2 -1.5**
MNK *i* SS **SnSn 20 22 12.3 -0.2**
MNK *i* SSS SSS 20 22 24.9
MNK *i* LR LR 20 23 53.7
MNK *i* LRM MLR 20 25 50.5
comp=Z,157nm,16.1s
MNK *i* LRM MLR 20 26 07.7
comp=E,19nm,14.2s
MNK *i* LRM MLR 20 26 10.3
comp=N,505nm,18.1s
NACGM Naroch 15.71 15 *e*P **Pn 20 19 09.2 0.0**
comp=Z,53nm,0.8s,baz=201
PABE Paberze 15.84 9 Pn **Pn 20 19 09.0 -1.8**
PABE IAmb IAmb 20 19 16.0
comp=Z,57nm,0.9s
PABE Paberze 15.84 9 *e*P **Pn 20 19 09.9 -0.8**
ASF Jabal al Asfar 15.87 114 Pn **Pn 20 19 11.1 -0.3**
comp=Z,0.4nm,0.3s,baz=313,slow=14,SNR=6.5
comp=Z,1.5nm,0.5s
SJPF Ste Jean 16.02 288 *e*Pn **Pn 20 19 15.0 +1.8**
EIL Elat 16.13 125 Pn **Pn 20 19 11.2 -3.4**
comp=Z,0.3nm,0.3s,baz=340,slow=15,SNR=2.3
ISAL Salakas 16.22 13 *e*P **P 20 19 18.6 -0.1**
TR2 Tor 2 16.30 131 P **Pn 20 19 12.8 -4.0**
baz=133
VSVD Vaisvydziai 16.30 8 *e*P **Pn 20 19 18.3 +1.6**
HKAT Jabal Katrina 16.36 130 P **Pn 20 19 14.7 -3.0**
baz=132
NUB Nuweibaa 16.39 127 P **Pn 20 19 15.0 -2.9**
baz=130
HDK1 Dakhla 16.47 148 P **Pn 20 19 16.9 -2.2**
baz=150
MARD Mardin 16.65 92 Pn **Pn 20 19 21.4 0.0**
GURO Guroymak-BITLI 17.32 87 Pn **Pn 20 19 30.1 +0.2**
SHA1 Shidzhatmaz 17.49 70 *i* P **P 20 19 33.6 +0.5**
NEY Neytrino 17.50 72 *i* P **P 20 19 34.4 +1.2**
NEY pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 17.53 69 **Pn 20 19 32.4 +0.1**
KIV Kislovodsk 17.53 69 *e*P **P 20 19 35.2 +1.8**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,29nm,14.0s
VSR Storozhevoye 17.62 44 *e*P **Pn 20 19 33.2 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.4s
KBZ Khabaz 17.66 70 P **P 20 19 35.2 +0.6**
comp=Z,0.4nm,0.3s,baz=291,slow=8.4,SNR=17
comp=Z,8.9nm,0.9s
KBZ Khabaz 17.66 70*ce*P **P 20 19 35.9 +1.2**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
VORR Voronezh 17.89 43 *e*P **Pn 20 19 35.1 -1.5**
VORR pmax pmax
comp=Z,50nm,0.4s
GOF Gofitskoye 17.91 66↑ *e*P **P 20 19 38.3 +0.8**
ONI Oni 18.02 74 **Pn 20 19 39.0 +0.7**
ONI Oni 18.02 74 P **Pn 20 19 39.1 +0.7**
ONI pmax pmax
comp=Z,6.0nm,0.7s
ESBB Sonseca Array 18.21 277 **Pn 20 19 40.8 +0.1**
ESDC Sonseca Array 18.21 277 P **Pn 20 19 40.7 +0.1**
comp=Z,0.1nm,0.3s,baz=75,slow=11,SNR=26
ESDC LR LR 20 26 44.2
comp=Z,89nm,18.0s,baz=60,slow=37
comp=Z,2.5nm,0.8s
LPSR Galich'ya Gora 18.28 40 *e*P **Pn 20 19 41.1 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.7s
ZEI Tsey 18.35 73 *e*P **P 20 19 46.3 +3.7**
ZEI pmax pmax
comp=Z,9.0nm,0.8s
PAB San Pablo 18.52 277 P **P 20 19 43.8 -0.6**
PAB San Pablo 18.52 277 P **P 20 19 43.8 -0.6**
PAB pmax pmax
comp=Z,13nm,1.3s
OBN Obninsk 18.90 31 P **P 20 19 47.6 -0.6**
comp=Z,1.5nm,0.3s,baz=225,slow=23,SNR=5.9
comp=Z,4.3nm,0.4s
OBN Obninsk 18.90 31 P **P 20 19 47.2 -1.0**
OBN IAmb IAmb 20 19 48.8
comp=Z,29nm,0.9s
OBN Obninsk 18.90 31*ce*P **P 20 19 47.2 -1.0**
OBN pmax pmax
comp=Z,40nm,1.3s
OBN MLR MLR
comp=Z,157nm,16.0s
VRH Novokhopyorsk 19.00 46 *e*P **P 20 19 48.9 -0.5**
VRH pmax pmax
comp=Z,50nm,1.6s
VSU Vasula 19.09 11 *e*P **P 20 19 51.0 +0.7**
VSU Vasula 19.09 11 *i* P **Pn 20 19 51.2 +0.1**
VSU pmax pmax
comp=Z,66nm,0.8s
GNI Garni 19.13 81 P **Pn 20 19 52.6 +0.6**
comp=Z,9.7nm,0.7s,baz=352,slow=3.8,SNR=5.8
GNI Garni 19.13 81 P **P 20 19 51.6 +0.4**
GNI IAmb IAmb 20 19 59.4
comp=Z,22nm,0.8s
GNI Garni 19.13 81 *i* P **Pn 20 19 52.8 +0.8**
GNI pmax pmax
comp=Z,21nm,0.9s
GNI Garni 19.13 81 P **Pn 20 19 52.9 +0.8**
MOS Moscow 19.77 31 *e*P **P 20 19 56.6 -1.1**
MOS pmax pmax
comp=Z,48nm,0.9s
PBRG Braganca 20.09 284 *e*P **P 20 20 02.0 +0.5**
GANJ Ganja 20.27 79 P Pn 20 20 06.5 +1.1
MVO Moncorvo 20.36 282 *e*P **P 20 20 05.6 +1.2**
comp=Z,13nm,1.2s
ZKTA Zakatala 20.40 76 P Pn 20 20 07.0 0.0
HFS Hagfors 20.58 351 P **P 20 20 06.1 -0.5**
comp=Z,10nm,0.5s,baz=162,slow=11,SNR=60
comp=Z,10nm,0.5s
KONO Kongsberg 20.76 345 *e*P **P 20 20 08.0 -0.5**
MDT Midelt 20.81 258 P **P 20 20 09.4 0.0**
comp=Z,3.0nm,0.8s,baz=97,slow=10,SNR=6.6
MDT LR LR 20 27 48.9
comp=Z,77nm,18.4s,baz=54,slow=36
comp=Z,3.0nm,0.8s
OSL Oslo 20.82 347 *e*P **P 20 20 08.7 -0.5**
OSL IAmb IAmb 20 20 12.0
comp=Z,26nm,0.8s
MTE Manteigas 20.83 280 *e*P **P 20 20 10.9 +1.4**
comp=Z,18nm,1.8s
PBAR Barrancos 20.85 274 *e*P **P 20 20 10.6 +1.0**
comp=Z,26nm,1.3s
PCBR Castelo Branco 20.86 279 *e*P **P 20 20 10.6 +0.8**
comp=Z,14nm,1.9s
PVRL Vila Real 20.86 283 *e*P **P 20 20 11.0 +1.2**
PMRV Marv??o 20.86 277 *e*P **P 20 20 11.0 +1.1**
comp=Z,19nm,2.2s
SEKA Sheki 20.87 78 P Pn 20 20 12.5 0.0
TAM Tamanrasset 20.91 219 P **P 20 20 10.3 -0.3**
TAM Tamanrasset 20.91 219 P **P 20 20 10.3 -0.3**
TAM pmax pmax
comp=Z,4.0nm,0.7s
POLO Lamas de Olo 20.91 283 *e*P Pn 20 20 13.4 +0.4
comp=Z,7.0nm,1.9s
PUL Pulkovo 20.96 15*ce*P **P 20 20 10.4 -0.2**
PUL pmax pmax
comp=Z,88nm,0.4s
PVIS Viseu 21.06 281 *e*P **P 20 20 12.7 +0.7**
comp=Z,15nm,1.7s
PESTR Estremoz 21.12 276 *e*P **P 20 20 13.3 +0.7**
comp=Z,19nm,1.3s
PESTR Estremoz 21.12 276 P **P 20 20 12.6 0.0**
RAF Rauma 21.16 3 *e*P **P 20 20 11.8 -1.0**
AKT Akhty 21.25 77 *e*P **P 20 20 17.7 +3.6**
AKT *e* 20 20 36.5
AKT pmax pmax
comp=Z,37nm,0.6s
NC602 NORSAR Array S 21.45 349 *e*P **P 20 20 15.6 -0.3**
NC602 IAmb IAmb 20 20 16.4
comp=Z,28nm,0.6s
EVO Evora 21.51 275 *e*P **P 20 20 18.1 +1.3**
PMTG Montargil 21.57 277 *e*P **P 20 20 18.1 +0.7**
comp=Z,19nm,1.5s
PCAS Casmilo, Conde 21.60 279 *e*P **P 20 20 18.7 +0.9**
comp=Z,19nm,1.4s
NAO01 NORSAR Array S 21.65 348 P **P 20 20 17.6 -0.5**
EKA Eskdalemuir Ar 21.66 323 P **P 20 20 18.0 -0.2**
comp=Z,8.6nm,0.8s,baz=120,slow=9.0,SNR=22
comp=Z,8.6nm,0.8s
ESK Eskdalemuir 21.67 323 P **P 20 20 18.4 0.0**
ESK IAmb IAmb 20 20 25.3
comp=Z,14nm,0.8s
ESK Eskdalemuir 21.67 323 P **P 20 20 18.4 0.0**
ESK pmax pmax
comp=Z,14nm,0.9s
PCVE Castro Verde 21.74 273 *e*P **P 20 20 20.3 +1.0**
NB2 NORSAR Subarra 21.79 349 P **P 20 20 18.8 -0.8**
comp=Z,25nm,0.8s,baz=164,slow=11
NB2 NORSAR Subarra 21.79 349 P **P 20 20 18.8 -0.8**
baz=164,slow=11
NOA NORSAR Array B 21.79 349 P **P 20 20 18.6 -1.0**
comp=Z,14nm,0.8s,baz=161,slow=11,SNR=26
NOA LR LR 20 29 06.3
comp=Z,48nm,18.7s,baz=170,slow=38
comp=Z,14nm,0.8s
FINES FINESS Array B 21.90 8 P **P 20 20 19.4 -1.3**
comp=Z,14nm,0.8s,baz=178,slow=11,SNR=37
FINES LR LR 20 29 50.7
comp=Z,199nm,18.9s,baz=208,slow=40
comp=Z,14nm,0.8s
FINES FINESS Array B 21.90 8 P **P 20 20 19.5 -1.2**
FINES FINESS Array B 21.90 8 *i* P **P 20 20 19.5 -1.2**
FINES pmax pmax
comp=Z,15nm,0.8s
FIA1 FINESS Array S 21.90 8 P **P 20 20 19.6 -1.1**
FIA1 IAmb IAmb 20 20 20.4
comp=Z,55nm,1.4s
PSBE So Bento 21.92 278 *e*P **P 20 20 22.4 +1.2**
SKAR Skarslia 21.96 345 *e*P **P 20 20 22.5 +1.0**
PNCL Nicolau / Gran 22.00 274 *e*P **P 20 20 22.8 +0.7**
comp=Z,23nm,1.2s
BELG Belogornoye 22.83 48 P **P 20 20 30.4 -0.3**
comp=Z,18nm,0.4s,baz=241,slow=11,SNR=6.9
BELG LR LR 20 30 23.8
comp=Z,98nm,19.7s,baz=144,slow=39
comp=Z,18nm,0.4s
BELG Belogornoye 22.83 48 *i* P **P 20 20 32.2 +1.5**
BELG pmax pmax
comp=Z,6.0nm,0.9s
DOMB Dombas 23.08 347 *e*P **P 20 20 34.9 +1.6**
DOMB IAmb IAmb 20 20 41.1
comp=Z,58nm,1.2s
KLMR Klimovskoe 24.27 24 *e*P **P 20 20 41.6 -3.1**
KLMR pmax pmax
comp=Z,23nm,0.8s
KLMR Klimovskoe 24.27 24 *e*P **P 20 20 41.6 -3.1**
KLMR AMP 20 20 44.5
comp=Z,23nm,0.8s
NSS Namsos 25.06 352 *e*P **P 20 20 52.7 +0.8**
KIRV Kirov 26.56 35 P **P 20 21 04.6 -0.9**
comp=Z,12nm,0.6s,baz=225,slow=9.7,SNR=5.1
KIRV LR LR 20 32 15.7
comp=Z,197nm,19.3s,baz=262,slow=38
comp=Z,12nm,0.6s
PRGR Permogore 26.87 27 *e*P **P 20 21 06.0 -2.3**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
RAYN Ar Rayn 27.21 119 P **P 20 21 12.4 +0.7**
RAYN IAmb IAmb 20 21 22.8
comp=Z,7.5nm,1.4s
RAYN Ar Rayn 27.21 119 P **P 20 21 12.5 +0.7**
RAYN pmax pmax
comp=Z,7.0nm,1.4s
RAYN Ar Rayn 27.21 119 P **P 20 21 12.9 +1.1**
AKTO Aktyubinsk 28.66 56 P **P 20 21 23.4 -1.1**
comp=Z,4.0nm,0.5s,baz=237,slow=8.3,SNR=32
AKTO LR LR 20 36 27.7
comp=Z,47nm,18.7s,baz=50,slow=44
comp=Z,4.0nm,0.5s
KTK1 Kautokeino 29.21 3 *e*P **P 20 21 29.1 -0.1**
KTK1 IAmb IAmb 20 21 32.6
comp=Z,15nm,0.8s
GEYT Alibeck 29.77 81 P **P 20 21 34.3 -0.2**
comp=Z,2.2nm,0.4s,baz=280,slow=8.9,SNR=9.5
comp=Z,2.2nm,0.4s
GEYT Alibeck 29.77 81 P **P 20 21 34.8 +0.3**
GEYT IAmb IAmb 20 21 35.8
comp=Z,3.8nm,0.7s
GYA0 ALIBECK ARRAY 29.77 81 P **P 20 21 34.7 +0.2**
GYA0 pmax pmax
comp=Z,4.0nm,0.7s
GYA0B ALIBECK ARRAY 29.77 81 P **P 20 21 34.7 +0.2**
GYA0B IAmb IAmb 20 21 35.8
comp=Z,3.8nm,0.7s
TRO Tromso 29.77 359 *e*P **P 20 21 33.4 -0.7**
ABKAR Akbulak array 29.80 58 P **P 20 21 33.6 -1.0**
ARA0 ARCESS Array S 29.83 4 *e*P **P 20 21 33.9 -0.8**
ARCES ARCESS Array B 29.83 4 P **P 20 21 33.5 -1.2**
comp=Z,7.4nm,0.9s,baz=190,slow=9.9,SNR=15
ARCES LR LR 20 34 50.6
comp=Z,161nm,18.4s,baz=184,slow=39
comp=Z,7.4nm,0.9s
ARCES ARCESS Array B 29.83 4 P **P 20 21 33.2 -1.4**
ARCES IAmb IAmb 20 21 35.4
comp=Z,13nm,1.0s
ARCES ARCESS Array B 29.83 4 P **P 20 21 33.2 -1.4**
ARCES pmax pmax
comp=Z,13nm,1.0s
KEV Kevo 30.14 5 P **P 20 21 36.4 -1.0**
KEV Kevo 30.14 5 P **P 20 21 36.4 -1.0**
KEV pmax pmax
comp=Z,30nm,1.5s
ARU Arti 30.19 44 LR LR 20 34 33.2
comp=Z,89nm,18.1s,baz=288,slow=38
ARU Arti 30.19 44 P **P 20 21 37.1 -0.8**
ARU IAmb IAmb 20 21 38.8
comp=Z,12nm,1.4s
ARU Arti 30.19 44*c i*P **P 20 21 39.4 +1.4**
ARU 20 22 34.0
ARU S **S 20 26 41.8 +5.3**
ARU SS **SnSn 20 28 11.6 +1.7**
TOA0 Torodi Ar. Sit 31.05 216 P **P 20 21 46.1 +0.2**
TOA0 IAmb IAmb 20 21 49.9
comp=Z,3.6nm,0.8s
TOA0 Torodi Ar. Sit 31.05 216 P **P 20 21 44.3 -1.6**
TORD Torodi Ar. Bea 31.05 216 P **P 20 21 45.1 -0.7**
comp=Z,2.1nm,0.8s,baz=22,slow=6.9,SNR=14
TORD LR LR 20 35 10.1
comp=Z,44nm,21.7s,baz=226,slow=38
comp=Z,2.1nm,0.8s
TORD Torodi Ar. Bea 31.05 216 P **P 20 21 46.1 +0.3**
SVE Sverdlovsk 31.40 44 *e*P **P 20 21 48.4 -0.2**
SVE pmax pmax
comp=Z,14nm,1.1s
SHME Shamm 33.28 103 P **P 20 22 05.0 -0.4**
BANOM Banah 33.47 103 P **P 20 22 06.2 -1.0**
ASHO Ashiyiah 33.99 105 P **P 20 22 10.5 -1.2**
HRA Herat 34.08 86 P **P 20 22 13.1 +0.5**
ALNE Al Ain 34.13 107 P **P 20 22 12.0 -0.8**
UMZA Um Al Zommool 34.51 109 P **P 20 22 15.5 -0.6**
ARQ Araqi 35.12 107 P **P 20 22 20.6 -0.9**
SNR=9.5
BSY Bisya 35.98 107 P **P 20 22 27.8 -1.0**
SMDO Samad 36.42 106 P **P 20 22 31.2 -1.5**
DOK Doka 36.42 116 P **P 20 22 32.1 -0.5**
BRVK Borovoye 36.43 52 P **P 20 22 32.0 -0.3**
BRVK Borovoye 36.43 52 P **P 20 22 32.0 -0.3**
BRVK pmax pmax
comp=Z,20nm,1.4s
BRVK Borovoye 36.43 52 P **P 20 22 32.0 -0.3**
BVAR Borovoye Array 36.49 52 LR LR 20 38 45.5
comp=Z,29nm,21.0s,baz=275,slow=38
WHFO Wadi Hawf 36.66 117 P **P 20 22 34.3 -0.3**
ABTO Aybut 36.72 118 P **P 20 22 35.4 +0.2**
SNR=8.8
WSAR Wadi Sarin 36.74 105 P **P 20 22 35.3 -0.1**
JMDO Jabal Madar 36.87 107 P **P 20 22 35.4 -1.0**
WBK Wadi Bani Khal 37.37 106 P **P 20 22 40.3 -0.4**
SNR=8.4
DMTO DMTO 37.60 116 P **P 20 22 42.0 -0.7**
MHTO MHTO 37.62 109 P **P 20 22 41.5 -1.2**
KK31 Karatay Array 37.68 68 P **P 20 22 42.7 -0.5**
KK31 IAmb IAmb 20 22 49.5
comp=Z,3.4nm,0.6s
KK31 Karatay Array 37.68 68 P **P 20 22 42.7 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 37.68 68 P **P 20 22 42.2 -0.9**
KKAR Karatay Array 37.68 68 P **P 20 22 42.2 -0.9**
CHGR Chuyangaron 37.88 76 P **P 20 22 44.4 -0.5**
CHGR Chuyangaron 37.88 76 P **P 20 22 44.4 -0.5**
CHGR pmax pmax
comp=Z,10.0nm,0.5s
DQM DQM 37.98 110 P **P 20 22 44.8 -1.0**
GAR Garm 38.63 75 P **P 20 22 50.9 -0.4**
GAR IAmb IAmb 20 22 52.6
comp=Z,15nm,1.2s
BTK Batken 38.69 73 P **P 20 22 51.3 -0.4**
BTK Batken 38.69 73 P **P 20 22 51.3 -0.4**
BTK pmax pmax
comp=Z,4.0nm,1.0s
DBIC Dimbokro 39.80 220 P **P 20 23 01.0 0.0**
comp=Z,4.6nm,0.9s,baz=6.0,slow=3.9,SNR=3.3
DBIC LR LR 20 40 45.9
comp=Z,55nm,18.9s,baz=1.5,slow=38
comp=Z,4.6nm,0.9s
DBIC Dimbokro 39.80 220 P **P 20 23 01.3 +0.3**
DBIC IAmb IAmb 20 23 03.9
comp=Z,13nm,1.4s
DBIC Dimbokro 39.80 220 P **P 20 23 01.3 +0.3**
DBIC pmax pmax
comp=Z,13nm,1.4s
AAK Ala-Archa 40.63 68 LR LR 20 43 24.4
comp=Z,28nm,18.9s,baz=350,slow=41
AAK Ala-Archa 40.63 68 P **P 20 23 08.2 +0.2**
AAK Ala-Archa 40.63 68 P **P 20 23 08.2 +0.2**
AAK pmax pmax
comp=Z,7.0nm,1.3s
BOOM Boomskoye usch 41.70 68 P **P 20 23 16.1 -0.7**
BOOM Boomskoye usch 41.70 68 P **P 20 23 16.1 -0.7**
BOOM pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 41.75 55 P **P 20 23 16.0 -0.8**
KURK IAmb IAmb 20 23 17.1
comp=Z,7.1nm,1.1s
KURK Kurchatov 41.75 55*ce*P **P 20 23 16.8 0.0**
KURK pmax pmax
comp=Z,8.0nm,1.7s
KSH Kashi 42.63 72 P **P 20 23 22.5 -1.9**
MK31 Makanchi Array 44.93 60 P **P 20 23 42.2 -0.4**
MK31 Makanchi Array 44.93 60 P **P 20 23 42.2 -0.4**
MK31 pmax pmax
comp=Z,12nm,0.8s
MKAR Makanchi Array 44.93 60 P **P 20 23 42.1 -0.5**
comp=Z,16nm,0.6s,baz=282,slow=7.4,SNR=190
MKAR LR LR 20 44 41.2
comp=Z,58nm,18.1s,baz=276,slow=39
comp=Z,16nm,0.6s
MKAR Makanchi Array 44.93 60*ce*P **P 20 23 42.0 -0.6**
MKAR pmax pmax
comp=Z,16nm,0.6s
ZAA0 Zalesovo Array 45.00 49 P **P 20 23 42.5 -0.6**
ZALV Zalesovo Beam 45.00 49 P **P 20 23 42.2 -0.8**
comp=Z,11nm,0.6s,baz=278,slow=8.8,SNR=51
comp=Z,11nm,0.6s
ZALV Zalesovo Beam 45.00 49 P **P 20 23 42.4 -0.6**
ZALV Zalesovo Beam 45.00 49 *i* P **P 20 23 42.5 -0.5**
ZALV pmax pmax
comp=Z,11nm,0.6s
DGZ Jazzator, Alta 47.49 55 *i* P **P 20 24 02.1 -0.8**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
WMQ Urumqi 49.46 62 *e*P **P 20 24 20.5 +2.5**
PYUN Piuthan 52.75 82 *e*P **P 20 24 41.6 -1.5**
comp=Z,19nm,0.6s
DANN Dangsing 53.21 82 *e*P **P 20 24 45.2 -1.4**
comp=Z,24nm,0.7s
KOLN Koldanda 53.38 82 *e*P **P 20 24 45.8 -2.0**
GKN Gorkha 54.05 82 *e*P **P 20 24 50.8 -1.9**
DMN Daman 54.61 82 *e*P **P 20 24 55.2 -1.6**
comp=Z,7.7nm,0.3s
KKN Kakani 54.65 81 *e*P **P 20 24 55.0 -2.1**
PKIN Phulchoki 54.85 82 *e*P **P 20 24 56.6 -2.0**
comp=Z,6.0nm,0.6s
PKI Pulchoki 54.86 82 *e*P **P 20 24 56.8 -1.9**
GUN Gumba 55.05 81 *e*P **P 20 24 58.6 -1.5**
JIRN Jiri 55.41 81 *e*P **P 20 25 01.3 -1.4**
comp=Z,7.7nm,0.4s
RAMN Ramite 56.09 82 *e*P **P 20 25 05.5 -2.0**
comp=Z,15nm,0.6s
TAPN Taplejung 56.72 80 *e*P **P 20 25 10.7 -1.4**
comp=Z,12nm,0.6s
SCHQ Schefferville 56.77 316 P **P 20 25 13.0 +1.4**
comp=Z,2.7nm,0.6s,baz=76,slow=12,SNR=1.6

comp=Z,2.7nm,0.6s
TIXI Tiksi 58.23 21 *ce*P **P 20 25 21.2 -0.4**
TIXI pmax pmax
comp=Z,4.0nm,1.3s
SONM Songino Array 59.83 51 P **P 20 25 32.9 -0.3**
comp=Z,1.8nm,0.8s,baz=289,slow=8.7,SNR=13
comp=Z,1.8nm,0.8s
SONM Songino Array 59.83 51 P **P 20 25 33.1 -0.2**
SONM IAmb IAmb 20 25 33.7
comp=Z,2.0nm,0.9s
SONM Songino Array 59.83 51 P **P 20 25 33.1 -0.2**
SONM pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 60.21 51 *ce*P **P 20 25 35.0 -0.9**
ULN pmax pmax
comp=Z,9.0nm,2.5s
YAK Yakutsk 63.89 30 LR LR 20 57 04.5
comp=Z,56nm,19.1s,baz=270,slow=39
YAK Yakutsk 63.89 30 P **P 20 25 59.7 -0.5**
LBTB Lobatse 64.83 174 LR LR 20 55 56.2
comp=Z,45nm,18.9s,baz=356,slow=38
HHC Hu-ho-hao-te 66.55 56 *e*P **P 20 26 18.5 +0.5**
PZH PanZhiHua 67.69 74 P **P 20 26 26.5 +1.1**
BOSA Boshof 68.38 175 P **P 20 26 30.4 +1.0**
BOSA Boshof 68.38 175 P **P 20 26 30.5 +1.0**
BOSA pmax pmax
comp=Z,10.0nm,1.2s
BILL Bilibino 69.45 13⇑ *e*P **P 20 26 37.2 +1.6**
BILL *e* 20 29 06.6
BILL pmax pmax
comp=Z,11nm,1.2s
CMAR Chiang Mai Arr 70.25 82 P **P 20 26 39.9 -1.4**
comp=Z,0.9nm,0.6s,baz=302,slow=7.2,SNR=10
CMAR LR LR 21 05 50.5
comp=Z,17nm,18.2s,baz=215,slow=43
comp=Z,0.9nm,0.6s
CMAR Chiang Mai Arr 70.25 82 *i* P **P 20 26 40.0 -1.4**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
SUR Sutherland 71.95 179 LR LR 21 00 48.8
comp=Z,52nm,18.1s,baz=3.0,slow=38
BMAR Burnt Mountain 72.31 354 P **P 20 26 53.5 +0.5**
COLD Coldfoot 72.90 356 P **P 20 26 57.4 +0.9**
COLD IAmb IAmb 20 26 59.5
comp=Z,7.5nm,1.1s
KLR Kul'dur 72.92 39 LR LR 21 01 14.4
comp=Z,38nm,18.4s,baz=1.5,slow=38
KLR Kul'dur 72.92 39 *i* P **P 20 26 58.3 +1.4**
KLR pmax pmax
comp=Z,3.0nm,1.2s
MA2 Magadan 72.94 24 LR LR 21 02 04.3
comp=Z,19nm,18.6s,baz=328,slow=38
MA2 Magadan 72.94 24 P **P 20 26 56.9 +0.1**
MA2 Magadan 72.94 24 P **P 20 26 56.9 +0.1**
MA2 pmax pmax
comp=Z,38nm,1.4s
ULM Lac du Bonnet 73.94 323 P **P 20 27 03.4 +0.5**
comp=Z,4.9nm,0.6s,baz=80,slow=6.1,SNR=3.9
comp=Z,4.9nm,0.6s
IMAR Indian Mountai 74.30 357 P **P 20 27 06.0 +1.3**
H21K Melozitna Rive 74.59 357 P **P 20 27 08.4 +2.0**
MDM Murphy Dome 75.03 355 P **P 20 27 09.8 +0.8**
MDM IAmb IAmb 20 27 15.2
comp=Z,8.8nm,1.2s
DAWY Dawson 75.04 351 P **P 20 27 10.1 +0.9**
DAWY IAmb IAmb 20 27 14.9
comp=Z,10nm,1.2s
J26L Joseph Creek 75.08 353 P **P 20 27 10.4 +1.0**
J26L IAmb IAmb 20 27 11.3
comp=Z,3.9nm,0.8s
ILAR Eielson Array 75.11 354 P **P 20 27 10.6 +1.1**
comp=Z,1.1nm,0.8s,baz=2.3,slow=4.8,SNR=12
comp=Z,1.1nm,0.8s
ILAR Eielson Array 75.11 354 P **P 20 27 09.4 -0.1**
K27K Chicken 75.39 352 P **P 20 27 12.8 +1.7**
K27K IAmb IAmb 20 27 13.8
comp=Z,9.5nm,1.2s
BPAW Bear Paw Mtn. 76.06 356 P **P 20 27 15.3 +0.4**
BPAW IAmb IAmb 20 27 31.8
comp=Z,6.1nm,1.2s
BCAR Beaver Creek A 76.29 351 P **P 20 27 17.9 +1.6**
USRK Ussuriysk Ar. 76.43 43 P **P 20 27 15.4 -2.0**
comp=Z,3.5nm,0.8s,baz=296,slow=4.7,SNR=3.8
comp=Z,3.5nm,0.8s
KS19 Wonju Array Si 78.63 50 P **P 20 27 30.3 +0.5**
KS19 IAmb IAmb 20 27 50.8
comp=Z,9.5nm,1.1s
KSAR Wonju Array Be 78.68 50 P **P 20 27 29.4 -0.6**
KSAR Wonju Array Be 78.68 50 P **P 20 27 29.4 -0.6**
KSRS Korea Array 78.69 50 P **P 20 27 29.9 -0.2**
comp=Z,3.8nm,0.7s,baz=313,slow=4.5,SNR=14
comp=Z,3.8nm,0.7s
KULM Kulim 79.66 92 P **P 20 27 34.6 -1.1**
BDFB Brasilia 83.73 244 P **P 20 27 59.0 +1.9**
comp=Z,2.7nm,0.6s,baz=32,slow=9.5,SNR=3.0
comp=Z,2.7nm,0.6s
BDFB Brasilia 83.73 244 P **P 20 27 58.2 +1.0**
BDFB IAmb IAmb 20 28 21.0
comp=Z,6.6nm,1.3s
BDFB Brasilia 83.73 244 P **P 20 27 58.2 +1.0**
BDFB pmax pmax
comp=Z,7.0nm,1.3s
MJAR Matsushiro Arr 85.20 45 P **P 20 28 04.7 +0.3**
comp=Z,2.3nm,0.8s,baz=333,slow=5.4,SNR=4.8
comp=Z,2.3nm,0.8s
ANMO Albuquerque 90.49 318 LR LR 21 08 59.7
comp=Z,44nm,18.0s,baz=28,slow=36
SIV San Ignacio 93.26 252 LR LR 21 10 35.2
comp=Z,31nm,18.4s,baz=176,slow=36
TXAR Lajitas Array 93.33 313 P **P 20 28 44.9 +1.7**
comp=Z,0.9nm,0.9s,baz=72,slow=4.1,SNR=4.6
comp=Z,0.9nm,0.9s
CPUP Villa Florida 97.33 242 LR LR 21 13 55.1
comp=Z,25nm,18.0s,baz=52,slow=36
WRA Warramunga Arr 121.19 91 PKP **PKPdf 20 34 18.8 -2.3**
comp=Z,0.6nm,1.0s,baz=316,slow=1.7,SNR=6.0
ASAR Alice Springs 122.94 95 PKP **PKPdf 20 34 24.0 -0.4**
comp=Z,0.4nm,0.7s,baz=300,slow=1.6,SNR=5.6

*IDC **29** 20:40:50.4±3.5, 15°.52S×173°.79W, h0km, mb4.3/2, mbtmp4.3/3, ML4.3/1, MS2.6/1, Error ellipse: s-maj=218.0km s-min=26.9km az=148.0*
*NEIC **29** 20:40:56.8±1.6, 15°.56S±0°.10×173°.4W±0°.2, h57km±18km, mb4.4/6, Error ellipse: s-maj=24.5km s-min=14.0km az=93.0*
ISC 29 20:40:55.0±0.8,**15°.5S**±0°.1×**173°.5W**±0°.1,**h42**km,**n16,**
σ1s**20/16,mb4.5/5,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.33**	**47**	Pn	**Pn**	**20 41 32.7**	**+1.8**
	57nm,0.3s,baz=207,slow=6.8,SNR=60						
AFI				Sn	**Sn**	**20 41 56.2**	**-2.1**
	234nm,0.3s,baz=210,slow=20,SNR=24						
AFI				LR	LR	20 42 30.3	
	comp=Z,128nm,21.4s,baz=328,slow=40						
	154nm,0.4s						
AFI	**Afiamalu**	**2.33**	**47**		**Pn**	**20 41 32.8**	**+1.9**
AFI				Sn	**Sn**	**20 41 56.8**	**-1.6**
NIUE	**Niue**	**4.95**	**136**		**Pn**	**20 42 07.8**	**+1.0**
DZM	**Mont Dzumac**	**20.04**	**248**	P	**Pn**	**20 45 27.4**	**+0.6**
DZM				IAmb	IAmb	20 45 43.8	
	comp=Z,26nm,1.4s						
H11N3	**WAKE ISLAND Hy**	**39.94**	**331**	T	T	21 31 11.7	
	baz=150,slow=76						
H11N1	**WAKE ISLAND Hy**	**39.94**	**331**	T	T	21 31 11.1	
	baz=150,slow=76						
H11N2	**WAKE ISLAND Hy**	**39.96**	**331**	T	T	21 31 13.2	
	baz=150,slow=76						
COEN	**Coen**	**41.85**	**266**	P	**P**	**20 48 41.5**	**+0.2**
COEN				IAmb	IAmb	20 48 51.2	
	comp=Z,23nm,1.4s						
WB0	**Warramunga Arr**	**49.66**	**257**	P	**P**	**20 49 42.4**	**-0.6**
WB0				IAmb	IAmb	20 49 53.8	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**49.70**	**257**	P	**P**	**20 49 42.5**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=92,slow=6.7,SNR=26						
WRA				PcP	**PcP**	**20 51 04.2**	**0.0**
	comp=Z,0.2nm,0.5s,baz=90,slow=3.9,SNR=1.8						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**49.70**	**257**	P	**P**	**20 49 42.3**	**-1.1**
AS31	**Alice Springs**	**49.95**	**252**	P	**P**	**20 49 44.7**	**-0.5**
AS31				IAmb	IAmb	20 49 46.2	
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**49.96**	**252**	P	**P**	**20 49 45.0**	**-0.3**
	comp=Z,7.0nm,0.6s,baz=87,slow=8.2,SNR=102						
	comp=Z,7.0nm,0.6s						
ASAR	**Alice Springs**	**49.96**	**252**	P	**P**	**20 49 44.4**	**-0.9**
PSA00	**Pilbara Seismi**	**63.05**	**253**	P	**P**	**20 51 18.2**	**-0.3**
BRTR	**Keskin Array B**	**146.16**	**321**	PKPbc	**PKPab**	**21 00 32.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=51,slow=2.1,SNR=4.8						

*ATH **29** 21:07:53.9, 38°.91N×23°.89E, h19km±7km, ML2.6/8, Error ellipse: s-maj=7.8km s-min=1.1km az=103.0*
*ISK **29** 21:07:54.8, 38°.90N×23°.85E, h26km, ML2.6/9*
*THE **29** 21:07:54.2, 38°.91N×23°.88E, h8km±1km, ML2.7/10, Error ellipse: s-maj=1.4km s-min=0.4km az=76.0*
*DDA **29** 21:07:59.0±0.0, 38°.35N×25°.05E, h8km±3km, ML1.7*
ISC 29 21:07:53.8±1.1,**38°.90N**±0°.02×**23°.91E**±0°.02,**h13**km±9km,
n38,σ0s**90/61,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYMI	**Kymi, Euboea I**	**0.30**	**150**	P	**Pb**	**21 08 00.7**	**-0.4**
KYMI				S	**Sb**	**21 08 05.6**	**-0.4**
	1μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.30**	**150**	P	**Pb**	**21 08 00.8**	**-0.4**
KYMI				S	**Sb**	**21 08 05.7**	**-0.4**
KYMI				AML	AML	21 08 07.0	
	comp=E,2366μm,0.5s						
KYMI				AML	AML	21 08 09.9	
	comp=N,1059μm,0.5s						
NEO	**Neokhori**	**0.67**	**308**	P	**Pg**	**21 08 07.1**	**+0.2**
NEO				S	**Sg**	**21 08 16.0**	**+0.2**
NEO	**Neokhori**	**0.67**	**308**	P	**Pb**	**21 08 07.3**	**0.0**
NEO				S	**Sg**	**21 08 16.3**	**+0.6**
NEO				AML	AML	21 08 19.6	
	comp=E,5879μm,0.2s						
NEO				AML	AML	21 08 19.9	
	comp=N,4918μm,0.2s						
XOR	**Xorichti**	**0.73**	**310**	P	**Pg**	**21 08 08.1**	**+0.2**
XOR				S	**Sg**	**21 08 17.2**	**-0.3**
	comp=N,938nm,0.3s						
LKR	**Lokris**	**0.75**	**251**	P	**Pg**	**21 08 07.1**	**-1.3**
LKR				S	**Sg**	**21 08 18.3**	**0.0**
LKR				AML	AML	21 08 21.1	
	comp=E,789μm,0.2s						
LKR				AML	AML	21 08 22.4	
	comp=N,782μm,0.2s						
DION	**Dionisos Attik**	**0.82**	**179**	P	**Pb**	**21 08 09.9**	**0.0**
DION				S	**Sb**	**21 08 21.5**	**+0.7**
	comp=N,2μm,0.3s						
PTL	**Penteli**	**0.85**	**182**	P	**Pb**	**21 08 10.2**	**-0.2**
PTL				S	**Sn**	**21 08 23.0**	**-0.7**
	comp=N,630nm,0.4s						
VIL2	**Platees**	**0.85**	**216**	P	**Pb**	**21 08 10.2**	**-0.2**
VIL2				S	**Sn**	**21 08 23.6**	**-0.1**
VIL2				AML	AML	21 08 24.8	
	comp=E,2652μm,0.6s						
VIL2				AML	AML	21 08 26.0	
	comp=N,2419μm,0.4s						
VILL	**Villia**	**0.87**	**213**	P	**Pg**	**21 08 10.0**	**-0.6**
VILL				S	**Sn**	**21 08 23.6**	**-0.7**
	comp=N,1μm,0.6s						
ATHU	**Athens Univers**	**0.93**	**186**	P	**Pb**	**21 08 11.8**	**-0.1**
ATHU				S	**Sn**	**21 08 25.3**	**-0.6**
	comp=N,235nm,0.3s						
ATHU	**Athens Univers**	**0.93**	**186**	P	**Pb**	**21 08 12.0**	**+0.1**
ATHU				S	**Sn**	**21 08 25.3**	**-0.6**
ATHU				AML	AML	21 08 26.8	
	comp=N,577μm,0.3s						
ATHU				AML	AML	21 08 26.9	
	comp=E,360μm,0.3s						
ATH	**Athens Observa**	**0.94**	**189**	P	**Pb**	**21 08 11.9**	**0.0**
ATH				S	**Sn**	**21 08 25.5**	**-0.3**
	comp=E,652nm,0.7s						
AXAR	**Agios Charalam**	**0.98**	**263**	P	**Pg**	**21 08 12.1**	**-0.7**
AXAR				S	**Sb**	**21 08 26.3**	**+0.7**
	comp=E,355nm,0.5s						
AXAR	**Agios Charalam**	**0.98**	**263**	P	**Pb**	**21 08 12.7**	**0.0**
AXAR				S	**Sg**	**21 08 25.4**	**-0.3**
AXAR				AML	AML	21 08 30.5	
	comp=E,868μm,0.4s						
AXAR				AML	AML	21 08 33.3	
	comp=N,807μm,0.5s						
PAIG	**Paliouri**	**1.04**	**350**	P	**Pg**	**21 08 13.8**	**-0.1**
PAIG				S	**Sb**	**21 08 28.0**	**+0.7**
	comp=N,118nm,0.4s						
PAIG	**Paliouri**	**1.04**	**350**	P	**Pg**	**21 08 13.6**	**-0.3**
PAIG				S	**Sg**	**21 08 27.7**	**+0.2**
PAIG				AML	AML	21 08 30.8	
	comp=N,254μm,0.5s						
PAIG				AML	AML	21 08 36.8	
	comp=E,199μm,0.6s						
VLY	**Voula,Athens**	**1.05**	**185**	P	**Pb**	**21 08 13.8**	**0.0**
LOUT	**Loutraki**	**1.17**	**219**	P	**Pb**	**21 08 15.8**	**0.0**
LOUT				S	**Sn**	**21 08 32.1**	**+0.5**
	comp=E,495nm,0.5s						
LOUT	**Loutraki**	**1.17**	**219**	P	**Pn**	**21 08 15.9**	**+0.1**
LOUT				S	**Sn**	**21 08 32.9**	**+1.3**
LOUT				AML	AML	21 08 35.6	
	comp=N,222μm,0.3s						
LOUT				AML	AML	21 08 37.7	
	comp=E,307μm,0.3s						
THAL	**Thalero**	**1.30**	**229**	P	**Pn**	**21 08 17.7**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.39**	**275**	P	**Pn**	**21 08 19.4**	**+0.5**
OUR	**Ouranopolis**	**1.44**	**2**	PN	**Pn**	**21 08 19.7**	**+0.2**
OUR				SN	**Sn**	**21 08 37.8**	**-0.4**
OUR	**Ouranopolis**	**1.44**	**2**	P	**Pn**	**21 08 19.7**	**+0.2**
KRND	**KRANIDI**	**1.62**	**202**	P	**Pn**	**21 08 22.7**	**+0.6**
CHOS	**Chios island**	**1.76**	**106**	PN	**Pb**	**21 08 24.9**	**-1.0**
HORT	**Hortiatis**	**1.81**	**340**	PN	**Pn**	**21 08 24.9**	**+0.2**
KOCA	**Canakkale, Ayv**	**1.84**	**70**	P	**Pg**	**21 08 28.6**	**-0.4**
KOCA				*i* AML	AML	21 09 00.0	
	comp=E,12nm,0.4s						
KOCA				*i* AML	AML	21 09 02.0	
	comp=E,16nm,0.5s						
BOZC	**Bozcaada**	**1.91**	**60**	PN	**Pb**	**21 08 27.3**	**-1.2**
BOZC	**Bozcaada**	**1.91**	**60**	P	**Pb**	**21 08 28.7**	**+0.1**
BOZC				S	**Sb**	**21 08 51.6**	**-0.7**
BOZC				*i* AML	AML	21 08 58.0	
	comp=E,21nm,0.8s						
BOZC				*i* AML	AML	21 08 59.0	
	comp=E,6.5nm,0.4s						
GADA	**Gvkgeada**	**2.01**	**49**	PN	**Pn**	**21 08 27.8**	**+0.4**
GOKA	**anakkale-Gk**	**2.02**	**50**	P	**Pg**	**21 08 32.3**	**-0.2**
GOKA				S	**Sb**	**21 08 56.6**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**2.21**	**67**	P	**Pn**	**21 08 30.4**	**+0.1**
BAYC				S	**Sn**	**21 08 53.5**	**-4.0**
APE	**Apeiranthos**	**2.23**	**144**	PN	**Pn**	**21 08 31.5**	**+1.0**
GRG	**Griva**	**2.36**	**331**	PN	**Pn**	**21 08 32.3**	**0.0**
KNT	**Kendrikon**	**2.39**	**341**	PN	**Pn**	**21 08 33.1**	**+0.4**
BUHA	**Balikesir, Bur**	**2.54**	**75**	P	**Pg**	**21 08 45.9**	**+3.5**
RDO	**Rodhopi**	**2.57**	**29**	PN	**Pn**	**21 08 36.2**	**+1.1**

*IDC **29** 21:17:10.4±1.2, 20°.93S×66°.53W, h248km±18km, mb3.0/2, mbtmp3.5/5, Error ellipse: s-maj=29.0km s-min=14.1km az=116.0*
*SCB **29** 21:17:14.7±1.4, 21°.13S×66°.67W, h204km±4km, ML3.3/2, MW3.2, Error ellipse: s-maj=7.5km s-min=6.9km az=2.0*
ISC 29 21:17:09.3±1.0,**21°.09S**±0°.06×**66°.55W**±0°.07,**h243**km,**n16,**
σ2s**30/21,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.87**	**101**	P	**Pn**	**21 17 44.1**	**+0.6**
MOCB				S	**S**	**21 18 04.9**	**-5.3**
MOCB				IAML		21 18 10.0	
	226nm,0.3s						
YJA	**Yavi**	**1.45**	**139**	P	**Pn**	**21 17 48.0**	**+0.9**
LVC	**Limon Verde**	**2.67**	**235**	P	**Pn**	**21 17 59.0**	**+0.8**
	13nm,0.3s,baz=55,slow=10,SNR=42						
LVC				S	**S**	**21 18 36.3**	**-0.4**
	13nm,0.3s,baz=255,slow=21,SNR=11						
LVC	**Limon Verde**	**2.67**	**235**	P	**Pn**	**21 17 58.6**	**+0.4**
GO01	**Chusmiza**	**2.85**	**299**	P	**Pn**	**21 18 01.4**	**+1.1**
PB02	**IPOC Station P**	**3.13**	**265**	P	**Pn**	**21 18 03.8**	**+0.9**
PB06	**IPOC Station P**	**3.24**	**240**	P	**Pn**	**21 18 05.7**	**+1.5**
PB15	**IPOC Station P**	**3.43**	**231**	P	**Pn**	**21 18 07.4**	**+1.0**
TA01	**Diego Aracena**	**3.43**	**278**	P	**Pn**	**21 18 06.3**	**+0.1**
TA02	**Huaiquique**	**3.45**	**283**	P	**Pn**	**21 18 06.9**	**+0.5**
PB04	**IPOC Station P**	**3.57**	**249**	P	**Pn**	**21 18 08.5**	**+0.5**
PB04				S	**S**	**21 18 47.9**	**-6.4**
PB04				IAML		21 18 57.5	
	43nm,0.5s						
GO02	**Mina Guanaco**	**4.93**	**214**	P	**Pn**	**21 18 24.9**	**+0.6**
LPAZ	**La Paz**	**5.00**	**342**	P	**Pn**	**21 18 27.0**	**+1.4**
	0.4nm,0.3s,baz=166,slow=12,SNR=2.1						
LPAZ				S	**S**	**21 19 25.1**	**-1.1**
	1.5nm,0.8s,baz=24,slow=20,SNR=2.2						
SIV	**San Ignacio**	**7.26**	**47**	P	**Pn**	**21 18 52.3**	**-1.0**
	3.1nm,0.6s,baz=229,slow=11,SNR=14						
SIV				S	**S**	**21 20 16.9**	**+0.2**
	0.4nm,0.4s,baz=189,slow=22,SNR=1.2						
PLCA	**Paso Flores**	**19.88**	**189**	P	**P**	**21 21 26.2**	**+3.7**
	0.5nm,0.4s,baz=3.1,slow=11,SNR=4.9						
	0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**75.15**	**69**	P	**P**	**21 28 25.1**	**-0.4**
	0.6nm,0.4s,baz=254,slow=6.1,SNR=14						
	0.6nm,0.4s						

*DDA **29** 21:31:04.1±0.0, 39°.10N×29°.13E, h7km±4km, ML2.0*
ISK 29 21:31:04.6, 39°.18N×29°.15E, h7km, ML2.1/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.15**	**240**	PG	Pg	21 31 08.2	+0.5
SMAA				SG	Sg	21 31 10.7	+0.8
GEDZ	**Gediz**	**0.24**	**123**	PG	Pg	21 31 10.1	+0.7
GEDZ				SG	Sg	21 31 13.8	+1.1
GDZ	**Gediz**	**0.27**	**108**	P	Pg	21 31 09.6	-0.4
GDZ				S	Sg	21 31 13.6	0.0
GDZ				*i* AML	AML	21 31 14.0	
	comp=E,190nm,0.3s						
GDZ				*i* AML	AML	21 31 14.0	
	comp=N,251nm,0.2s						
DEMI	**Demirci**	**0.36**	**249**	P	Pg	21 31 11.4	-0.2
DEMI				S	Sg	21 31 15.7	-0.8
TVSB	**Tavsanli**	**0.37**	**41**	PG	Pg	21 31 11.9	+0.1
TVSB				SG	Sg	21 31 17.8	+1.1
USAK	**Uak-Merkez**	**0.47**	**193**	P	Pg	21 31 13.1	-0.6
USAK				*i* AML	AML	21 31 18.0	
	comp=E,188nm,0.2s						
USAK				S	Sg	21 31 18.7	-1.2
USAK				*i* AML	AML	21 31 19.0	
	comp=N,187nm,0.1s						
DST	**Dursunbey**	**0.59**	**316**	PG	Pg	21 31 16.6	+0.5
ANDZ	**Kutahya, Merke**	**0.67**	**60**	P	Pb	21 31 18.2	-0.5
ANDZ				S	Sb	21 31 27.9	-0.3
DURS	**Dursunbey**	**0.67**	**309**	P	Pb	21 31 18.3	-0.5
DURS				*i* AML	AML	21 31 32.0	
	comp=E,85nm,0.5s						
DURS				*i* AML	AML	21 31 32.0	
	comp=N,52nm,0.2s						
MANT	**Manisa**	**0.82**	**214**	P	Pg	21 31 19.1	-1.4
MANT				S	Sg	21 31 29.0	-2.1
PASA	**Karahalli, USA**	**0.87**	**162**	P	Pg	21 31 20.5	-0.8
PASA				S	Sg	21 31 30.8	-1.8
ULDT	**Uludag**	**0.97**	**359**	P	Pb	21 31 24.0	+0.2
ULDT				S	Sb	21 31 36.4	-0.5
AUBOZ	**BOZOYUK**	**1.00**	**43**	P	Pg	21 31 23.7	-0.2
BILE	**Bilecik/Merkez**	**1.13**	**29**	P	Pn	21 31 27.5	+0.5
BILE				S	Sn	21 31 43.8	+0.9
BILE				*i* AML	AML	21 31 48.0	
	comp=E,28nm,0.2s						
CAVI	**Cavuskoy**	**1.16**	**27**	PN	Pn	21 31 28.2	+0.9
KZIL	**AFYON_Kizioren**	**1.20**	**139**	P	Pg	21 31 27.3	-0.3
KZIL				S	Sg	21 31 42.6	-0.6
MDNY	**Mudanya-Bursa**	**1.21**	**350**	PN	Pn	21 31 28.2	+0.3
SHUT	**Suhut-Afyon**	**1.26**	**119**	PN	Pg	21 31 29.0	+0.3
ADVT	**Abdulvahap**	**1.34**	**20**	PN	Pb	21 31 30.0	0.0
YLV	**Yalova**	**1.40**	**7**	PN	Pb	21 31 30.9	-0.2
CIFT	**Cifteler, Eski**	**1.50**	**82**	PN	Pn	21 31 32.0	0.0

*ISK **29** 21:31:08.7, 40°.15N×31°.72E, h5km, ML2.1/9*
DDA 29 21:31:09.5±0.0,**40°.14N**×**31°.74E,h7**km±3km,**ML1.6,**
Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIBS	**BOLU**	**0.29**	**18**	P	Pg	21 31 15.4	+0.2
KIBS				S	Sg	21 31 20.5	+1.3
KIBS				*i* AML	AML	21 31 23.0	
	comp=E,84nm,0.5s						
AUMIH	**MIHALICIK**	**0.34**	**215**	P	Pg	21 31 16.0	-0.1
AUMIH				S	Sg	21 31 21.7	+1.1
MDUB	**Mudurnu**	**0.53**	**309**	PG	Pg	21 31 19.4	-0.3
MDUB				SG	Sb	21 31 28.2	-0.8
CMDR	**Camlidere-ANKA**	**0.67**	**58**	P	Pg	21 31 22.0	-0.3
CMDR				S	Sg	21 31 32.0	+1.0
CMDR				*i* AML	AML	21 31 35.0	
	comp=E,36nm,0.4s						
CMDR				*i* AML	AML	21 31 37.0	
	comp=N,40nm,0.3s						
BTAS	**Taskesti**	**0.71**	**307**	P	Pg	21 31 23.5	+0.4
BTAS				S	Sn	21 31 37.7	+0.5
BTAS				*i* AML	AML	21 31 42.0	
	comp=E,38nm,0.6s						
BTAS				*i* AML	AML	21 31 44.0	
	comp=N,21nm,0.7s						
SVRH	**Sivrihisar-ESK**	**0.71**	**193**	PG	Pg	21 31 23.5	+0.3
SVRH				SG	Sb	21 31 34.8	+0.4
BCAM	**Yenicaga**	**0.72**	**20**	P	Pg	21 31 23.1	-0.3
BCAM				S	Sg	21 31 30.4	-2.3
LOD	**Lodumlu**	**0.83**	**107**	PG	Pb	21 31 26.0	-0.3
YIGI	**Dzce**	**0.85**	**345**	P	Pg	21 31 25.3	-0.5
SGAZ	**Eskisehir, Sey**	**0.92**	**229**	P	Pb	21 31 28.2	+0.3
SGAZ				*i* AML	AML	21 31 50.0	
	comp=N,14nm,0.4s						
SGAZ				*i* AML	AML	21 31 52.0	
	comp=E,15nm,0.5s						
CIFT	**Cifteler, Eski**	**0.94**	**214**	PG	Pb	21 31 28.0	-0.1
CIFT				SG	Sn	21 31 42.1	-0.8
SAHE	**Sakarya_HENDEK**	**0.98**	**317**	P	Pg	21 31 28.4	+0.1
SAHE				S	Sn	21 31 45.2	+1.4
SAHE				*i* AML	AML	21 31 49.0	
	comp=E,14nm,0.6s						
GULT	**Gulveren**	**0.98**	**288**	PG	Pb	21 31 28.6	-0.2
DEVR	**Zonguldak/Devr**	**1.01**	**10**	P	Pg	21 31 28.0	-1.0
BORA	**Eskisehir**	**1.02**	**255**	P	Pg	21 31 28.7	-0.4
BORA				S	Sn	21 31 45.2	+0.3
BORA				*i* AML	AML	21 31 47.0	
	comp=E,29nm,0.2s						
BORA				*i* AML	AML	21 31 49.0	
	comp=N,25nm,0.3s						
BORA	**Eskisehir**	**1.02**	**255**	P	Pg	21 31 28.7	-0.4
BORA				S	Sn	21 31 45.4	+0.5
BORA				*i* AML	AML	21 31 47.0	
	comp=E,29nm,0.2s						
BORA				*i* AML	AML	21 31 47.0	
	comp=N,38nm,0.2s						
GEYV	**SAKARYA_Geyve**	**1.15**	**288**	P	Pn	21 31 32.5	+0.5
GEYV				*i* AML	AML	21 32 00.0	
	comp=E,13nm,0.6s						
GEYV				*i* AML	AML	21 32 00.0	
	comp=N,19nm,0.5s						
BBAL	**Bala**	**1.23**	**119**	P	Pn	21 31 33.9	+0.7
BBAL				S	Sn	21 31 51.5	+1.5
KIZT	**Kizilcal**	**1.27**	**175**	PN	Pg	21 31 34.1	+0.3
KKUL	**Konya-Kulu**	**1.33**	**136**	P	Pg	21 31 35.8	+0.7
KKUL				S	Sn	21 31 54.6	+2.0
KKUL				*i* AML	AML	21 32 06.0	
	comp=N,8.1nm,0.6s						
KAYN	**Sakarya, Kayna**	**1.34**	**308**	P	Pn	21 31 34.6	-0.1
KAYN				S	Sn	21 31 54.2	+1.4
KULU	**Kulu**	**1.47**	**138**	PN	Pg	21 31 37.7	0.0
PELI	**Kastamonı-Ara**	**1.67**	**45**	P	Pb	21 31 40.6	+0.1
DELI	**KIRIKKALE**	**1.68**	**94**	P	Pn	21 31 39.9	+

T1216			S	Sg	21 34 29.6	+0.7
T1216			AML	AML		
	comp=N,24350µm,0.2s					
T1216			AML	AML		
	comp=E,35000µm,0.4s					
T1216			AML	AML		
	comp=N,24400µm,0.2s					
T1216			AML	AML		
	comp=E,34950µm,0.4s					
T1216			AML	AML		
	comp=N,24400µm,0.2s					
FEMA	**Monte Fema**	**0.13 323**	⇑P	Pg	21 34 28.1	+0.5
FEMA			S	Sg	21 34 30.4	+0.7
FEMA			AML	AML		
	comp=E,15650µm,0.3s					
FEMA			AML	AML		
	comp=N,18500µm,0.3s					
AM05	**Amandola Campo**	**0.19 50**	⇑P	Pg	21 34 29.0	+0.7
AM05			S	Sg	21 34 32.1	+1.1
AM05			AML	AML		
	comp=N,2200µm,0.4s					
AM05			AML	AML		
	comp=E,6475µm,0.4s					
AM05			AML	AML		
	comp=N,414µm,1.1s					
AM05			AML	AML		
	comp=N,414µm,1.1s					
AM05			AML	AML		
	comp=E,6470µm,0.4s					
AM05			AML	AML		
	comp=E,1400µm,0.4s					
AM05			AML	AML		
	comp=E,6470µm,1.6s					
FDMO	**Fiordimonte**	**0.19 344**	P	Pg	21 34 28.9	+0.5
FDMO			S	Sg	21 34 31.9	+0.9
T1241	**Roccafluvione,**	**0.20 90**	P	Pg	21 34 29.0	+0.5
T1241			S	Sg	21 34 32.5	+1.2
T1241			AML	AML		
	comp=N,6285µm,0.6s					
T1241			AML	AML		
	comp=N,6290µm,0.6s					
T1241			AML	AML		
	comp=E,16450µm,0.2s					
T1204	**Amatrice, Fraz**	**0.21 147**	P	Pg	21 34 29.7	+0.9
T1204			S	Sg	21 34 33.7	+1.8
T1204			AML	AML		
	comp=E,7105µm,0.2s					
T1204			AML	AML		
	comp=N,4865µm,1.2s					
T1204			AML	AML		
	comp=N,4865µm,0.8s					
T1204			AML	AML		
	comp=E,7110µm,0.2s					
T1215	**Vallo di Nera,**	**0.22 256**	P	Pg	21 34 29.8	+0.8
T1215			S	Sg	21 34 33.6	+1.6
T1215			AML	AML		
	comp=E,4455µm,0.4s					
T1215			AML	AML		
	comp=E,4645µm,0.4s					
T1215			AML	AML		
	comp=N,4055µm,0.3s					
T1215			AML	AML		
	comp=N,4060µm,0.3s					
T1215			AML	AML		
	comp=N,4170µm,0.3s					
T1217	**Poggiodomo (PG**	**0.22 229**	⇑P	Pg	21 34 29.9	+0.9
T1217			S	Sg	21 34 33.7	+1.6
T1217			AML	AML		
	comp=E,4530µm,0.2s					
T1217			AML	AML		
	comp=E,4430µm,0.2s					
T1217			AML	AML		
	comp=N,4670µm,0.2s					
T1217			AML	AML		
	comp=N,4675µm,0.2s					
T1217			AML	AML		
	comp=N,4555µm,0.2s					
T1217			AML	AML		
	comp=E,4425µm,0.2s					
T1217			AML	AML		
	comp=N,4675µm,1.8s					
CESI	**CESI - Serrava**	**0.24 308**	P	Pg	21 34 29.9	+0.6
CESI			S	Sg	21 34 33.9	+1.3
CESI			AML	AML		
	comp=N,10985µm,0.2s					
CESI			AML	AML		
	comp=E,6600µm,0.2s					
GUMA	**Gualdo di Mace**	**0.24 32**	⇑P	Pg	21 34 30.2	+0.9
GUMA			S	Sg	21 34 34.5	+1.8
GUMA			AML	AML		
	comp=E,5650µm,0.6s					
GUMA			AML	AML		
	comp=N,9090µm,0.4s					
GUMA			AML	AML		
	comp=E,6550µm,0.5s					
GUMA			AML	AML		
	comp=N,9090µm,0.4s					
GUMA			AML	AML		
	comp=N,8345µm,0.4s					
GUMA			AML	AML		
	comp=N,9090µm,1.6s					
SMA1	**SAN MARTINO**	**0.26 150**	⇑P	Pg	21 34 30.4	+0.7
SMA1			S	Sb	21 34 34.8	-1.2
SMA1			AML	AML		
	comp=E,3725µm,1.3s					
SMA1			AML	AML		
	comp=N,3080µm,0.7s					
SMA1			AML	AML		
	comp=E,3730µm,1.3s					
SMA1			AML	AML		
	comp=N,3075µm,0.7s					
SMA1			AML	AML		
	comp=E,3730µm,0.7s					
T1243	**Rocca Santa Ma**	**0.27 127**	⇑P	Pg	21 34 30.4	+0.6
T1243			S	Sb	21 34 34.8	-1.3
LNSS	**Leonessa**	**0.27 199**	⇑P	Pg	21 34 30.6	+0.8
LNSS			S	Sb	21 34 35.2	-1.0
LNSS			AML	AML		
	comp=E,3595µm,0.1s					
LNSS			AML	AML		
	comp=N,4665µm,0.7s					
LNSS			AML	AML		
	comp=E,3595µm,1.9s					
LNSS			AML	AML		
	comp=N,4665µm,1.3s					
SEF1	**Sefro**	**0.33 332**	P	Pg	21 34 31.5	+0.5
SEF1			S	Sb	21 34 37.1	-0.9
SEF1			AML	AML		
	comp=E,4720µm,0.2s					
SEF1			AML	AML		
	comp=N,3045µm,1.2s					
SEF1			AML	AML		
	comp=N,3040µm,1.2s					
SEF1			AML	AML		
	comp=E,4725µm,0.2s					
RM33	**Pellescritta (**	**0.35 173**	⇑P	Pg	21 34 32.0	+0.7
RM33			S	Sb	21 34 38.0	-0.6
RM33			AML	AML		
	comp=N,1290µm,0.4s					
RM33			AML	AML		
	comp=E,1750µm,0.6s					
RM33			AML	AML		
	comp=E,1765µm,0.6s					
RM33			AML	AML		
	comp=N,1291µm,0.4s					
RM33			AML	AML		
	comp=N,1293µm,0.4s					
RM33			AML	AML		
	comp=E,1765µm,0.6s					
RM33			AML	AML		
	comp=E,1755µm,0.6s					
RM33			AML	AML		
	comp=N,1300µm,0.4s					
MNTP	**Montappone**	**0.36 39**	P	Pg	21 34 32.3	+0.7
MNTP			AML	AML		
	comp=E,1930µm,0.5s					
MNTP			AML	AML		
	comp=N,2195µm,0.4s					
MNTP			AML	AML		
	comp=E,1935µm,0.5s					
CAMP	**Campotosto**	**0.37 150**	⇑P	Pg	21 34 32.2	+0.5
CAMP			S	Sb	21 34 38.1	-1.0
CAMP			AML	AML		
	comp=E,2385µm,0.2s					
CAMP			AML	AML		
	comp=N,1475µm,0.4s					
OFFI	**Offida**	**0.39 78**	⇑P	Pb	21 34 33.5	-0.1
OFFI			AML	AML		
	comp=N,2205µm,0.6s					
OFFI			AML	AML		
	comp=E,2430µm,1.3s					
T1211	**Morro Reatino**	**0.39 215**	P	Pg	21 34 32.9	+0.7
ARRO	**Arrone**	**0.40 226**	⇑P	Pg	21 34 33.0	+0.7
ARRO			AML	AML		
	comp=N,1266µm,0.2s					
ARRO			AML	AML		
	comp=E,1310µm,0.9s					
ARRO			AML	AML		
	comp=N,1265µm,0.2s					
TERO	**Teramo**	**0.40 125**	P	Pg	21 34 32.6	+0.3
TERO			S	Sb	21 34 39.2	-0.8
TERO			AML	AML		
	comp=N,3220µm,0.5s					
TERO			AML	AML		
	comp=N,3535µm,0.5s					
TERO			AML	AML		
	comp=E,4355µm,0.2s					
TERO			AML	AML		
	comp=E,4040µm,0.2s					
TERO			AML	AML		
	comp=N,3535µm,1.5s					
TERO			AML	AML		
	comp=N,3220µm,1.5s					
ASSB	**Assisi San Ben**	**0.41 297**	P	Pg	21 34 33.0	+0.5
ASSB			S	Sb	21 34 39.4	-0.9
ASSB			AML	AML		
	comp=N,3860µm,0.2s					
ASSB			AML	AML		
	comp=E,3150µm,0.3s					
ASSB			AML	AML		
	comp=N,3860µm,1.8s					
T1247	**Pizzolo (AQ)**	**0.43 166**	⇑P	Pg	21 34 33.4	+0.6
T1247			AML	AML		
	comp=N,2280µm,0.1s					
T1247			AML	AML		
	comp=E,1950µm,1.0s					
T1247			AML	AML		
	comp=N,2275µm,0.1s					
SNTG	**Esanatoglia**	**0.43 338**	⇓P	Pg	21 34 33.1	+0.3
SNTG			S	Sb	21 34 40.3	-0.6
SNTG			AML	AML		
	comp=N,818µm,0.4s					
SNTG			AML	AML		
	comp=N,818µm,0.4s					
SNTG			AML	AML		
	comp=E,679µm,1.1s					
SNTG			AML	AML		
	comp=N,822µm,0.4s					
SNTG			AML	AML		
	comp=E,740µm,1.1s					
SNTG			AML	AML		
	comp=E,679µm,0.9s					
SNTG			AML	AML		
	comp=E,740µm,0.9s					
EL6	**Elcito**	**0.47 355**	⇓P	Pg	21 34 34.0	+0.3
EL6			S	Sb	21 34 43.0	+0.8
EL6			AML	AML		
	comp=E,1290µm,1.3s					
EL6			AML	AML		
	comp=N,1705µm,0.2s					
EL6			AML	AML		
	comp=E,1288µm,1.3s					
EL6			AML	AML		
	comp=N,1704µm,0.2s					
EL6			AML	AML		
	comp=E,1288µm,0.7s					
CESX	**Cesi**	**0.49 240**	P	Pg	21 34 34.4	+0.4
CESX			S	Sb	21 34 42.0	-0.6
CESX			AML	AML		
	comp=N,1265µm,0.6s					
CESX			AML	AML		
	comp=E,1110µm,0.6s					
CESX			AML	AML		
	comp=E,1110µm,1.4s					
ATCC	**AVT- Casa Cast**	**0.50 311**	⇓P	Pg	21 34 34.7	+0.5
ATCC			AML	AML		
	comp=N,1945µm,1.2s					
ATCC			AML	AML		
	comp=E,1800µm,1.0s					
ATCC			AML	AML		
	comp=N,1950µm,1.2s					
ATCC			AML	AML		
	comp=E,1800µm,1.0s					
ATCC			AML	AML		
	comp=N,1950µm,0.8s					
GIGS	**Gran Sasso**	**0.51 143**	P	Pg	21 34 34.4	+0.1
GIGS			AML	AML		
	comp=E,510µm,1.1s					
GIGS			AML	AML		
	comp=N,522µm,0.1s					
CING	**Cingoli**	**0.52 3**	P	Pg	21 34 35.0	+0.4
CING			AML	AML		
	comp=E,523µm,0.6s					
CING			AML	AML		
	comp=N,378µm,0.4s					
CING			AML	AML		
	comp=E,523µm,1.4s					
FOSV	**Fossato di Vic**	**0.53 326**	⇓P	Pg	21 34 35.0	+0.3
FOSV			S	Sb	21 34 43.2	-0.4
FOSV			AML	AML		
	comp=N,1068µm,0.4s					
FOSV			AML	AML		
	comp=E,1325µm,0.5s					
FOSV			AML	AML		
	comp=N,1066µm,0.4s					
TRTR	**Tortoreto Alta**	**0.56 95**	⇑P	Pb	21 34 36.8	+0.5
TRTR			AML	AML		
	comp=E,2255µm,0.6s					
TRTR			AML	AML		
	comp=N,1905µm,1.4s					
TRTR			AML	AML		
	comp=N,1905µm,0.6s					
FIAM	**Fiamignano**	**0.59 183**	⇑P	Pg	21 34 36.1	+0.2
FIAM			AML	AML		
	comp=N,280µm,0.7s					
FIAM			AML	AML		
	comp=E,400µm,0.8s					
FIAM			AML	AML		
	comp=N,279µm,0.7s					
FIAM			AML	AML		
	comp=N,279µm,1.3s					
PP3	**Marolino**	**0.62 32**	⇑P	Pb	21 34 37.7	+0.4
PP3			AML	AML		
	comp=E,970µm,0.3s					
PP3			AML	AML		
	comp=N,934µm,0.6s					
PP3			AML	AML		
	comp=E,1032µm,0.3s					
PP3			AML	AML		
	comp=N,914µm,0.6s					
PP3			AML	AML		
	comp=E,971µm,0.3s					
PP3			AML	AML		
	comp=N,914µm,0.6s					
PP3			AML	AML		
	comp=N,932µm,0.6s					
PP3			AML	AML		
	comp=E,1034µm,0.3s					
MURB	**Monte Urbino**	**0.62 311**	P	Pg	21 34 36.7	+0.3
MURB			AML	AML		
	comp=E,2535µm,0.9s					
MURB			AML	AML		
	comp=E,2540µm,0.9s					
MURB			AML	AML		
	comp=E,2920µm,0.8s					
MURB			AML	AML		
	comp=N,2745µm,0.3s					
MURB			AML	AML		
	comp=E,2920µm,1.2s					
MURB			AML	AML		
	comp=E,2540µm,1.1s					
MURB			AML	AML		
	comp=N,2585µm,0.2s					
ARVD	**Arcevia**	**0.66 346**	P	Pg	21 34 35.0	-2.2
ARVD			S	Sb	21 34 48.0	+0.5
ATFO	**Monte Foce - G**	**0.67 320**	⇓P	Pg	21 34 37.5	+0.2
ATFO			AML	AML		
	comp=E,458µm,0.9s					
ATFO			AML	AML		
	comp=N,462µm,0.4s					
ATFO			AML	AML		
	comp=N,462µm,0.4s					
FAGN	**Fagnano**	**0.67 152**	⇑P	Pg	21 34 37.2	-0.2
FAGN			S	Sb	21 34 49.0	+1.3
FAGN			AML	AML		
	comp=E,1340µm,1.0s					
FAGN			AML	AML		
	comp=N,1083µm,0.3s					
FAGN			AML	AML		
	comp=E,1340µm,1.0s					
VCEL	**Villa Celiera**	**0.68 132**	⇑P	Pg	21 34 38.0	+0.4
VCEL			AML	AML		
	comp=N,1560µm,1.1s					
VCEL			AML	AML		
	comp=E,1680µm,1.2s					
VCEL			AML	AML		
	comp=N,1560µm,0.9s					
VCEL			AML	AML		
	comp=E,1680µm,0.8s					
ATTE	**AVT- Monte Tez**	**0.68 300**	⇑P	Pg	21 34 37.9	+0.3
ATTE			AML	AML		
	comp=E,422µm,1.2s					
ATTE			AML	AML		
	comp=N,320µm,0.3s					
ATTE			AML	AML		
	comp=E,422µm,1.2s					
ATTE			AML	AML		
	comp=E,422µm,0.8s					
FRON	**Frontone**	**0.73 334**	⇓P	Pg	21 34 38.5	-0.1
FRON			AML	AML		
	comp=E,326µm,0.6s					
FRON			AML	AML		
	comp=N,478µm,0.9s					
FRON			AML	AML		
	comp=N,478µm,1.1s					
ATVO	**AVT- Monte Val**	**0.76 314**	⇓P	Pg	21 34 39.1	0.0
ATVO			S	Sn	21 34 52.0	-1.1
ATVO			AML	AML		
	comp=E,386µm,0.3s					
ATVO			AML	AML		
	comp=N,289µm,1.3s					
ATVO			AML	AML		
	comp=N,289µm,0.7s					
MGAB	**Montegabbione**	**0.77 275**	⇓P	Pg	21 34 39.6	+0.3
MGAB			AML	AML		
	comp=N,844µm,0.4s					
MGAB			AML	AML		
	comp=E,696µm,0.3s					
MGAB			AML	AML		
	comp=N,794µm,0.5s					
MGAB			AML	AML		
	comp=E,583µm,0.4s					
MGAB			AML	AML		
	comp=E,583µm,1.6s					
T0110	**Collepietro**	**0.78 144**	⇑P	Pg	21 34 39.2	-0.2
T0110			S	Sn	21 34 53.0	-0.5
T0110			AML	AML		
	comp=E,996µm,0.3s					
T0110			AML	AML		
	comp=E,997µm,0.3s					
T0110			AML	AML		
	comp=N,1043µm,0.7s					
T0110			AML	AML		
	comp=N,1043µm,1.3s					
SRES	**S.Oreste - Sor**	**0.78 218**	⇓P	Pb	21 34 40.8	+0.6
SRES			AML	AML		
	comp=N,176µm,0.4s					
SRES			AML	AML		
	comp=E,203µm,0.2s					
ATMI	**Monte Miggiano**	**0.81 306**	⇑P	Pb	21 34 40.9	+0.2
ATMI			AML	AML		
	comp=N,1084µm,0.3s					
ATMI			AML	AML		
	comp=E,756µm,0.6s					
ATMI			AML	AML		
	comp=N,1084µm,0.3s					
ATPI	**Pietralunga -**	**0.81 317**	⇓P	Pg	21 34 40.1	0.0
ATPI			S	Sn	21 34 54.0	-0.3
ATPI			AML	AML		
	comp=E,306µm,0.7s					
ATPI			AML	AML		
	comp=N,328µm,0.3s					
MPAG	**Monte Paganucc**	**0.83 339**	⇑P	Pg	21 34 40.5	+0.1
MPAG			AML	AML		
	comp=E,296µm,0.4s					
MPAG			AML	AML		
	comp=E,296µm,0.4s					
MPAG			AML	AML		
	comp=N,264µm,1.2s					
FSSB	**Fossombrone**	**0.88 342**	⇑P	Pg	21 34 41.5	+0.1
FSSB			S	Sn	21 34 56.0	0.0
FSSB			AML	AML		
	comp=N,970µm,0.4s					
FSSB			AML	AML		
	comp=E,733µm,1.1s					
FSSB			AML	AML		
	comp=E,733µm,0.9s					
APEC	**Apecchio**	**0.89 323**	S	Sg	21 34 53.0	0.0
SACS	**San Casciano d**	**0.92 270**	⇑P	Pb	21 34 42.9	+0.3
SACS			AML	AML		
	comp=N,208µm,0.9s					
SACS			AML	AML		
	comp=E,233µm,0.7s					
SACS			AML	AML		
	comp=N,208µm,1.1s					
BADI	**Badiali**	**0.94 315**	⇑P	Pg	21 34 42.5	+0.1
PE3	**Peglio**	**0.97 330**	P	Pb	21 34 43.6	+0.2
CAFI	**Castiglion Fio**	**0.99 299**	⇓P	Pg	21 34 43.5	-0.1
CAFI			AML	AML		
	comp=E,202µm,1.5s					
CAFI			AML	AML		
	comp=N,189µm,0.4s					
CAFI			AML	AML		
	comp=E,202µm,0.5s					
INTR	**Introdacqua**	**1.01 147**	⇑P	Pg	21 34 40.9	-2.9
MCIV	**Monte Civitell**	**1.09 266**	P	Pn	21 34 46.4	+0.4
MCIV			AML	AML		
	comp=E,80µm,0.2s					
MCIV			AML	AML		
	comp=N,104µm,1.3s					
LPEL	**Lama dei Pelig**	**1.11 137**	S	Sn	21 35 03.0	+1.4
CPGN	**Carpegna, Ital**	**1.12 327**	P	Pn	21 34 48.7	+2.2
VIVA	**Pratoni del Vi**	**1.14 195**	P	Pg	21 34 46.3	0.0
VIVA			AML	AML		
	comp=E,332µm,0.5s					
VIVA			AML	AML		
	comp=N,454µm,0.4s					
VIVA			AML	AML		
	comp=E,332µm,1.5s					
TRIV	**Trivento**	**1.50 136**	⇓P	Pg	21 34 54.3	+1.1
ABTA	**Abfaltersbach**	**3.92 353**	*i* Pn	Pn	21 35 26.7	+1.9
	comp=E,0.8nm,0.3s					
WTTA	**Wattenberg**	**4.54 347**	*i* Pn	Pn	21 35 36.3	+2.9
	comp=E,0.3nm,0.2s					
SQTA	**Sankt Quirin**	**4.58 343**	*i* Pn	Pn	21 35 36.3	+2.3
	comp=E,3.2nm,0.6s					
WATA	**Walderalm**	**4.62 346**	*i* Pn	Pn	21 35 37.1	+2.6
	comp=E,0.2nm,0.1s					
MOTA	**Moosalm**	**4.72 343**	*e*Pn	Pn	21 35 37.7	+1.8
	comp=E,1.1nm,0.5s					

ROM 29 21:35:13.7±0.1, 42°.908N±0°.003×13°.161E±0°.004, h8km, ML2.1/5, 1C, Error ellipse: s-maj=0.3km s-min=0.2km az=34.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.02**	**78**	⇑P	Pg	21 35 15.2	-0.3
MC2				S	Sg	21 35 15.8	-0.9
T1245	**Castelsantange**	**0.06**	**159**	P	Pg	21 35 15.9	+0.3
T1245				S	Sg	21 35 17.5	+0.4
T1245				AML	AML		
	comp=E,12350µm,0.2s						
T1245				AML	AML		
	comp=N,18350µm,1.2s						
T1245				AML	AML		
	comp=E,12200µm,0.9s						
T1245				AML	AML		
	comp=N,17900µm,1.2s						
T1245				AML	AML		
	comp=N,3520µm,0.2s						
T1245				AML	AML		
	comp=E,2557µm,0.2s						
T1245				AML	AML		
	comp=N,3616µm,0.1s						
T1245				AML	AML		
	comp=E,2641µm,0.1s						
T1245				AML	AML		
	comp=E,2403µm,0.1s						
FEMA	**Monte Fema**	**0.10**	**304**	P	Pg	21 35 16.5	+0.3

FEMA			S	Sg	21 35 18.3	+0.4
T1216	**Preci, Frazion**	**0.11 261**	P	Pg	21 35 16.7	+0.5
T1216			S	Sg	21 35 18.8	+0.8
T1216			AML	AML		
	comp=E,1425μm,0.2s					
T1216			AML	AML		
	comp=N,1665μm,0.6s					
T1216			AML	AML		
	comp=E,3355μm,1.0s					
T1216			AML	AML		
	comp=N,2582μm,0.2s					
T1216			AML	AML		
	comp=N,1667μm,0.6s					
T1216			AML	AML		
	comp=N,1224μm,0.1s					
T1216			AML	AML		
	comp=E,1428μm,0.2s					
FDMO	**Fiordimonte**	**0.14 337**	P	Pg	21 35 17.1	+0.4
FDMO			S	Sg	21 35 19.8	+0.9
FDMO			AML	AML		
	comp=E,994μm,0.1s					
FDMO			AML	AML		
	comp=N,1107μm,1.4s					
FDMO			AML	AML		
	comp=E,1098μm,0.6s					
FDMO			AML	AML		
	comp=N,1330μm,0.6s					
FDMO			AML	AML		
	comp=N,1076μm,0.2s					
FDMO			AML	AML		
	comp=E,739μm,0.2s					
AM05	**Amandola Campo**	**0.16 64**	P	Pg	21 35 17.8	+0.7
AM05			S	Sg	21 35 20.5	+1.2
GUMA	**Gualdo di Mace**	**0.20 40**	P	Pg	21 35 18.7	+0.9
GUMA			S	Sg	21 35 22.4	+1.8
T1241	**Roccafluvione,**	**0.20 105**	P	Pg	21 35 18.5	+0.6
T1241			S	Sg	21 35 22.1	+1.4
T1241			AML	AML		
	comp=E,930μm,0.9s					
T1241			AML	AML		
	comp=N,1072μm,0.7s					
T1241			AML	AML		
	comp=N,246μm,0.7s					
T1241			AML	AML		
	comp=E,315μm,0.5s					
T1241			AML	AML		
	comp=E,231μm,0.2s					
CESI	**CESI - Serrava**	**0.21 297**	P	Pg	21 35 18.8	+0.7
CESI			S	Sg	21 35 22.4	+1.4
T1215	**Vallo di Nera,**	**0.24 244**	P	Pg	21 35 19.3	+0.8
T1215			S	Sg	21 35 23.5	+1.7
T1215			AML	AML		
	comp=E,210μm,0.2s					
T1215			AML	AML		
	comp=E,216μm,0.2s					
T1215			AML	AML		
	comp=N,179μm,0.3s					
T1215			AML	AML		
	comp=N,202μm,0.3s					
T1204	**Amatrice, Fraz**	**0.26 154**	P	Pg	21 35 19.8	+0.9
T1204			AML	AML		
	comp=E,278μm,0.2s					
T1204			AML	AML		
	comp=N,159μm,0.2s					
T1243	**Rocca Santa Ma**	**0.30 135**	P	Pg	21 35 20.4	+0.7
LNSS	**Leonessa**	**0.32 196**	P	Pg	21 35 20.8	+0.8
LNSS			S	Sb	21 35 26.2	-0.8
LNSS			AML	AML		
	comp=E,1070μm,1.1s					
LNSS			AML	AML		
	comp=N,1210μm,0.4s					
LNSS			AML	AML		
	comp=E,683μm,0.1s					
LNSS			AML	AML		
	comp=N,459μm,0.2s					
SNTG	**Esanatoglia**	**0.38 335**	P	Pb	21 35 22.0	-0.7
SNTG			S	Sb	21 35 28.0	-0.8
ASSB	**Assisi San Ben**	**0.39 290**	P	Pg	21 35 21.8	+0.4
ASSB			S	Sb	21 35 28.3	-0.9
RM33	**Pellescritta (**	**0.40 174**	P	Pb	21 35 22.4	-0.7
RM33			AML	AML		
	comp=N,186μm,0.3s					
RM33			AML	AML		
	comp=E,174μm,0.2s					
EL6	**Elcito**	**0.42 354**	P	Pg	21 35 22.3	+0.3
EL6			S	Sb	21 35 29.4	-0.6
TERO	**Teramo**	**0.43 131**	P	Pg	21 35 22.6	+0.4
TERO			S	Sb	21 35 30.0	-0.3
TERO			AML	AML		
	comp=E,122μm,0.1s					
T1211	**Morro Reatino**	**0.44 211**	P	Pb	21 35 23.1	-0.6
T1211			S	Sb	21 35 30.3	-0.2
ATCC	**AVT- Casa Cast**	**0.47 306**	P	Pg	21 35 23.3	+0.5
ATCC			S	Sb	21 35 31.2	-0.2
CESX	**Cesi**	**0.52 235**	S	Sb	21 35 33.0	+0.2

ROM 29 21:36:06.8±0.1, 42°.859N±0°.004×13°.152E±0°.003, h8km, ML2.0/16, 2C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=167.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**95**	P	Pg	21 36 08.7	+0.1
T1245				S	Sg	21 36 09.7	-0.1
T1245				AML	AML		
	comp=E,12350μm,0.2s						
T1245				AML	AML		
	comp=N,17950μm,1.2s						
T1245				AML	AML		
	comp=E,12200μm,0.9s						
T1245				AML	AML		
	comp=N,17900μm,1.2s						
T1245				AML	AML		
	comp=N,18350μm,1.2s						
T1245				AML	AML		
	comp=N,17217μm,0.2s						
T1245				AML	AML		
	comp=E,12345μm,0.2s						
T1245				AML	AML		
	comp=E,11856μm,0.2s						
T1245				AML	AML		
	comp=N,16532μm,0.2s						
MC2	**Monte Cornacci**	**0.06**	**28**	P	Pg	21 36 09.0	+0.1
MC2				S	Sg	21 36 10.4	-0.1
T1216	**Preci, Frazion**	**0.10**	**288**	P	Pg	21 36 09.8	+0.5
T1216				S	Sg	21 36 11.8	+0.7
T1216				AML	AML		
	comp=E,3355μm,1.0s						
T1216				AML	AML		
	comp=N,2585μm,0.2s						
T1216				AML	AML		
	comp=E,3360μm,1.0s						
T1216				AML	AML		
	comp=N,2582μm,0.2s						
T1216				AML	AML		
	comp=N,2584μm,0.2s						
T1216				AML	AML		
	comp=E,2936μm,0.3s						
T1216				AML	AML		
	comp=N,2583μm,0.2s						
FDMO	**Fiordimonte**	**0.18**	**345**	P	Pg	21 36 11.1	+0.5
FDMO				S	Sg	21 36 14.2	+1.0
FDMO				AML	AML		
	comp=E,1098μm,0.6s						
FDMO				AML	AML		
	comp=N,1330μm,0.6s						
FDMO				AML	AML		
	comp=E,1098μm,0.6s						
FDMO				AML	AML		
	comp=N,1335μm,0.6s						
FDMO				AML	AML		
	comp=N,920μm,0.2s						
FDMO				AML	AML		
	comp=E,736μm,0.4s						
AM05	**Amandola Campo**	**0.19**	**51**	P	Pg	21 36 11.4	+0.7
AM05				S	Sg	21 36 14.7	+1.3
AM05				AML	AML		
	comp=E,340μm,1.0s						
AM05				AML	AML		
	comp=E,1655μm,0.1s						
AM05				AML	AML		
	comp=N,111μm,0.1s						
AM05				AML	AML		
	comp=N,434μm,0.1s						
AM05				AML	AML		
	comp=E,1653μm,0.1s						
T1241	**Roccafluvione,**	**0.20**	**91**	P	Pg	21 36 11.6	+0.5
T1241				S	Sg	21 36 15.2	+1.4
T1241				AML	AML		
	comp=E,931μm,0.9s						
T1241				AML	AML		
	comp=N,1074μm,0.7s						
T1241				AML	AML		
	comp=E,930μm,0.9s						
T1241				AML	AML		
	comp=N,1072μm,0.7s						
T1241				AML	AML		
	comp=E,932μm,0.9s						
T1241				AML	AML		
	comp=N,1076μm,0.7s						
T1241				AML	AML		
	comp=N,867μm,0.3s						
T1241				AML	AML		
	comp=N,823μm,0.3s						
T1241				AML	AML		
	comp=E,785μm,0.2s						
T1241				AML	AML		
	comp=E,824μm,0.1s						
T1215	**Vallo di Nera,**	**0.22**	**255**	P	Pg	21 36 12.0	+0.8
T1215				S	Sg	21 36 15.8	+1.6
T1215				AML	AML		
	comp=E,337μm,0.4s						
T1215				AML	AML		
	comp=N,527μm,1.2s						
T1215				AML	AML		
	comp=N,466μm,0.1s						
T1215				AML	AML		
	comp=E,270μm,0.1s						
T1215				AML	AML		
	comp=E,293μm,0.1s						
T1215				AML	AML		
	comp=N,463μm,0.1s						
T1204	**Amatrice, Fraz**	**0.22**	**146**	S	Sg	21 36 13.0	-1.4
T1217	**Poggiodomo (PG**	**0.22**	**228**	S	Sg	21 36 13.0	-1.3
CESI	**CESI - Serrava**	**0.23**	**309**	P	Pg	21 36 12.3	+0.8
CESI				S	Sg	21 36 16.0	+1.3
CESI				AML	AML		
	comp=E,872μm,0.4s						
CESI				AML	AML		
	comp=N,1475μm,0.2s						
CESI				AML	AML		
	comp=N,1473μm,0.2s						
CESI				AML	AML		
	comp=E,852μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**33**	P	Pg	21 36 12.6	+0.8
GUMA				S	Sg	21 36 17.0	+1.9
GUMA				AML	AML		
	comp=N,1505μm,1.0s						
GUMA				AML	AML		
	comp=E,1445μm,0.6s						
GUMA				AML	AML		
	comp=E,1130μm,0.5s						
GUMA				AML	AML		
	comp=N,1150μm,0.5s						
GUMA				AML	AML		
	comp=E,1101μm,0.3s						
GUMA				AML	AML		
	comp=E,1319μm,0.5s						
GUMA				AML	AML		
	comp=N,1341μm,0.2s						
GUMA				AML	AML		
	comp=N,968μm,0.3s						
SMA1	**SAN MARTINO**	**0.27**	**149**	⇑P	Pg	21 36 09.7	-2.5
SMA1				AML	AML		
	comp=N,410μm,0.4s						
SMA1				AML	AML		
	comp=E,360μm,1.0s						
SMA1				AML	AML		
	comp=N,410μm,0.4s						
SMA1				AML	AML		
	comp=E,350μm,0.4s						
LNSS	**Leonessa**	**0.27**	**198**	⇑P	Pg	21 36 09.8	-2.4
LNSS				AML	AML		
	comp=E,1070μm,1.1s						
LNSS				AML	AML		
	comp=N,1210μm,0.4s						
LNSS				AML	AML		
	comp=E,1075μm,1.1s						
LNSS				AML	AML		
	comp=N,1185μm,0.1s						
LNSS				AML	AML		
	comp=E,983μm,0.1s						
T1243	**Rocca Santa Ma**	**0.27**	**126**	⇓P	Pg	21 36 09.4	-2.8
ASSB	**Assisi San Ben**	**0.41**	**297**	P	Pg	21 36 15.3	+0.5
ASSB				S	Sb	21 36 21.7	-1.0
ASSB				AML	AML		
	comp=E,234μm,1.3s						
ASSB				AML	AML		
	comp=N,270μm,0.4s						
ASSB				AML	AML		
	comp=E,213μm,0.2s						
ASSB				AML	AML		
	comp=N,261μm,0.2s						
TERO	**Teramo**	**0.41**	**125**	⇓P	Pg	21 36 11.7	-3.1
TERO				AML	AML		
	comp=E,188μm,0.9s						
TERO				AML	AML		
	comp=N,220μm,0.4s						
TERO				AML	AML		
	comp=N,151μm,0.1s						
TERO				AML	AML		
	comp=E,142μm,0.1s						
TERO				AML	AML		
	comp=E,155μm,0.1s						
TERO				AML	AML		
	comp=N,169μm,0.1s						
SNTG	**Esanatoglia**	**0.42**	**339**	P	Pb	21 36 15.9	-0.7
SNTG				S	Sb	21 36 22.4	-0.9
SNTG				AML	AML		
	comp=N,179μm,0.2s						
SNTG				AML	AML		
	comp=E,150μm,0.8s						
SNTG				AML	AML		
	comp=E,144μm,0.2s						
SNTG				AML	AML		
	comp=N,179μm,0.2s						
SNTG				AML	AML		
	comp=E,137μm,0.1s						
EL6	**Elcito**	**0.47**	**356**	P	Pg	21 36 16.3	+0.3
EL6				S	Sb	21 36 24.1	-0.6
EL6				AML	AML		
	comp=E,694μm,0.2s						
EL6				AML	AML		
	comp=N,716μm,0.2s						
EL6				AML	AML		
	comp=E,694μm,0.2s						
EL6				AML	AML		
	comp=N,714μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.50**	**311**	P	Pg	21 36 17.0	+0.5
ATCC				S	Sb	21 36 25.1	-0.2
ATCC				AML	AML		
	comp=N,150μm,0.6s						
ATCC				AML	AML		
	comp=E,182μm,0.8s						
ATCC				AML	AML		
	comp=E,178μm,0.2s						
ATCC				AML	AML		
	comp=N,121μm,0.3s						
GIGS	**Gran Sasso**	**0.51**	**143**	P	Pg	21 36 13.5	-3.3
GIGS				AML	AML		
	comp=E,36μm,1.1s						
GIGS				AML	AML		
	comp=N,43μm,0.8s						
GIGS				AML	AML		
	comp=N,38μm,0.1s						
GIGS				AML	AML		
	comp=E,31μm,0.3s						
CING	**Cingoli**	**0.52**	**4**	P	Pg	21 36 17.4	+0.5
CING				S	Sb	21 36 25.5	-0.4
CING				AML	AML		
	comp=E,164μm,0.2s						
CING				AML	AML		
	comp=N,160μm,1.1s						
CING				AML	AML		
	comp=N,140μm,0.2s						
CING				AML	AML		
	comp=E,164μm,0.2s						
FOSV	**Fossato di Vic**	**0.52**	**327**	P	Pg	21 36 17.3	+0.4
FOSV				S	Sb	21 36 25.5	-0.5

SJA ***29*** *22:01:32.9±1.1, 33°.89S×72°.87W, h4km±9km, ML5.1, MW4.7*

MOS ***29*** *22:01:38.0±1.2, 33°.82S×72°.48W, h10km, mb5.2/36, Error ellipse: s-maj=12.4km s-min=7.2km az=96.3*

IDC ***29*** *22:01:38.5±0.5, 33°.80S×72°.27W, h0km, mb4.6/18, mbtmp4.5/21, ML4.1/3, MS4.5/46, Error ellipse: s-maj=19.8km s-min=13.0km az=86.0*

GUC ***29*** *22:01:38.2±0.8, 33°.83S×72°.71W, h26km±4km, ML4.9*

NEIC ***29*** *22:01:39, 33°.84S×72°.56W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.53; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-1.83; $M_{r\theta}$-0.28; $M_{\theta\phi}$0.18; $M_{\phi r}$-2.12; Fault plane solution: $M_0$2.73000×10^{16} NP1:ϕ_s341.75000°, δ20.46000°, λ67.54000°. NP2:ϕ_s185.56000°, δ71.15000°, λ98.11000°. Principal axes: T 2.6035, Plg63.0000°, Azm108.0000°; N 0.2454, Plg8.0000°, Azm3.0000°; P -2.8488, Plg26.0000°, Azm269.0000°;*

NEIC ***29*** *22:01:39.3±1.8, 33°.84S±0°.04×72°.59W±0°.05, h10km±1km, mb5.2/93, Mwr4.9/30, Mww5.2, Mwr5.0(GUC) Error ellipse: s-maj=6.9km s-min=5.5km az=312.0*

BJI ***29*** *22:01:41.0±0.0, 33°.80S×72°.50W, h10km, mB5.4/2, Ms5.3/1, Ms7 5.0/3*

GCMT ***29*** *22:01:44.3±0.2, 33°.96S±0°.01×72°.71W±0°.02, h14km, MW5.1/108, Moment Tensor Solution. s54,c68; s108,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.88±.16; $M_{\theta\theta}$-0.23±.09; $M_{\phi\phi}$-3.64±.12; $M_{r\theta}$-0.14±.19; $M_{\theta\phi}$-0.56±.06; $M_{\phi r}$-4.80±.36; Best double couple: $M_0$6.12600×10^{16} NP1:ϕ_s183.00000°, δ71.00000°, λ86.00000°. NP2:ϕ_s14.00000°, δ19.00000°, λ100.00000°. Principal axes: T 6.2190, Plg64.0000°, Azm88.0000°; N -0.1780, Plg3.0000°, Azm185.0000°; P -6.0330, Plg26.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *22:01:44, 33°.83S×72°.80W, h26km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.08; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-4.14; $M_{r\theta}$-1.12; $M_{\theta\phi}$-0.51; $M_{\phi r}$-6.88; Fault plane solution: $M_0$8.11000×10^{16} NP1:ϕ_s4.00000°, δ15.00000°, λ86.00000°. NP2:ϕ_s189.00000°, δ75.00000°, λ91.00000°. Principal axes: T 8.0510, Plg60.0000°, Azm101.0000°; N 0.1148, Plg1.0000°, Azm9.0000°; P -8.1658, Plg30.0000°, Azm278.0000°;*

ISC 29 22:01:38.9±0.9, 33°.87S±0°.03×72°.56W±0°.03, h10km±5km, n364, σ1s14/373, mb5.1/63, MS4.6/50, 21C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.80**	**142**	*e*P	**Pb**	**22 01 55.2**	**+0.4**
BO03				*i* S	**Sb**	**22 02 06.8**	**+1.1**
BO03				IAML		22 02 10.7	
	comp=E,69μm,0.5s						
VA05	**Santo Domingo**	**0.81**	**75**		**Pb**	**22 01 55.4**	**+0.4**
VA05	**Santo Domingo**	**0.81**	**75**	⇓*i*P	**Pb**	**22 01 55.3**	**+0.3**
VA05				*i* S	**Sn**	**22 02 07.7**	**-0.7**
MT01	**Popeta**	**1.09**	**90**		**Pg**	**22 01 59.3**	**-0.5**
MT01				Sn	**Sb**	**22 02 13.9**	**-0.1**
MT01	**Popeta**	**1.09**	**90**	⇑*i*P	**Pg**	**22 01 59.5**	**-0.3**
MT01				*i* S	**Sn**	**22 02 14.9**	**-0.3**
MT01	**Popeta**	**1.09**	**90**	*i* P	**Pg**	**22 01 59.5**	**-0.3**
MT01				*e*S	**Sn**	**22 02 15.3**	**+0.1**
MT01				IAML		22 02 17.4	
	comp=Z,34μm,0.9s						
GO05	**Huala**	**1.25**	**156**	Pn	**Pn**	**22 02 01.8**	**-0.7**
GO05				Sn	**Sb**	**22 02 18.2**	**-0.6**
GO05	**Huala**	**1.25**	**156**	⇑*i*P	**Pn**	**22 02 01.8**	**-0.7**
GO05				*i* S	**Sb**	**22 02 18.8**	**-0.1**
GO05				IAML		22 02 28.1	
	comp=E,113μm,0.9s						
GO05	**Huala**	**1.25**	**156**	*i* P	**Pn**	**22 02 02.0**	**-0.5**
GO05				*e*S	**Sb**	**22 02 18.4**	**-0.5**
MT09	**Talagante**	**1.31**	**87**		**Pn**	**22 02 02.6**	**-0.7**
MT09	**Talagante**	**1.31**	**87**	⇑*i*P	**Pn**	**22 02 02.6**	**-0.7**
MT09				*i* S	**Sn**	**22 02 21.9**	**+1.1**
MT09				IAML		22 02 28.7	
	comp=N,20μm,0.7s						
BO01	**Tunca**	**1.33**	**114**	Pn	**Pn**	**22 02 02.7**	**-0.7**
BO01	**Tunca**	**1.33**	**114**	⇑*i*P	**Pn**	**22 02 02.9**	**-0.6**
BO01				*i* S	**Sb**	**22 02 19.5**	**-1.5**
BO01	**Tunca**	**1.33**	**114**	*i* P	**Pn**	**22 02 02.9**	**-0.6**
BO01				*e*S	**Sb**	**22 02 20.5**	**-0.5**
BO01				IAML		22 02 29.2	
	comp=Z,10μm,0.9s						
MT02	**Curacav**	**1.33**	**63**	Pn	**Pn**	**22 02 02.9**	**-0.6**
MT02	**Curacav**	**1.33**	**63**	⇑*i*P	**Pn**	**22 02 02.9**	**-0.6**
MT02				*i* S	**Sn**	**22 02 21.7**	**+0.5**
MT02				IAML		22 02 29.6	
	comp=N,18μm,0.8s						
MT02	**Curacav**	**1.33**	**63**	*i* P	**Pn**	**22 02 03.0**	**-0.6**
MT02				*e*S	**Sn**	**22 02 24.5**	**+3.3**
MT02				IAML		22 02 28.6	
	comp=Z,28μm,0.9s						
ROC1	**El Roble**	**1.56**	**56**		**Pn**	**22 02 06.6**	**-0.3**
ROC1	**El Roble**	**1.56**	**56**	*i* P	**Pn**	**22 02 06.9**	**-0.1**
ROCH	**El Roble**	**1.57**	**56**	⇑*i*P	**Pn**	**22 02 06.5**	**-0.4**
ROCH				⇑*i*P	**Pb**	**22 02 06.8**	**-1.4**
ROCH				*i* S	**Sb**	**22 02 28.1**	**0.0**
ROCH				*i* S	**Sg**	**22 02 28.4**	**-1.1**
ROCH				IAML		22 02 42.5	
	comp=N,19μm,0.7s						
ROCH				IAML		22 02 42.6	
	comp=N,48μm,0.9s						
MT05	**Renca**	**1.59**	**73**	Pn	**Pn**	**22 02 06.8**	**-0.3**
MT05	**Renca**	**1.59**	**73**	⇑*i*P	**Pn**	**22 02 07.3**	**+0.2**
MT05				*i* S	**Sg**	**22 02 31.9**	**+1.9**
MT05	**Renca**	**1.59**	**73**	*i* P	**Pn**	**22 02 07.0**	**-0.1**
MT05				*e*S	Sg	22 02 39.4	+9.4
MT05				IAML		22 02 40.6	
	comp=Z,10μm,1.4s						
BO04	**La Punta**	**1.62**	**95**		**Pn**	**22 02 07.8**	**+0.2**
BO04	**La Punta**	**1.62**	**95**	⇑*i*P	**Pn**	**22 02 07.8**	**+0.2**
BO04				*i* S	**Sg**	**22 02 30.7**	**-0.4**
BO04				IAML		22 02 45.1	
	comp=E,7μm,0.5s						
VA06	**Catapilco**	**1.68**	**39**	Pn	**Pn**	**22 02 07.4**	**-0.7**
VA06	**Catapilco**	**1.68**	**39**	⇑*i*P	**Pn**	**22 02 07.5**	**-0.7**
VA06				*i* S	**Sg**	**22 02 36.5**	**+3.8**
VA06				IAML		22 02 42.3	
	comp=E,18μm,0.3s						
PEL	**Peldehue**	**1.72**	**66**	⇑*i*P	**Pn**	**22 02 09.3**	**+0.4**
PEL				*i* S	**Sb**	**22 02 32.2**	**-0.1**
PEL				IAML		22 02 40.4	
	comp=E,20μm,0.9s						
PEL	**Peldehue**	**1.72**	**66**	*i* P	**Pn**	**22 02 09.5**	**+0.6**
PEL				*e*S	**Sg**	**22 02 37.1**	**+2.8**
BO02	**Sierra Bellavi**	**1.74**	**123**		**Pn**	**22 02 09.3**	**+0.2**
BO02	**Sierra Bellavi**	**1.74**	**123**	⇑*i*P	**Pn**	**22 02 09.5**	**+0.4**
BO02				*i* S	**Sb**	**22 02 32.3**	**-0.5**
BO02	**Sierra Bellavi**	**1.74**	**123**	*i* P	**Pn**	**22 02 09.7**	**+0.5**
BO02				*e*S	**Sb**	**22 02 32.6**	**-0.1**
BO02				IAML		22 02 42.6	
	comp=Z,28μm,0.7s						
MT03	**Universidad Ad**	**1.75**	**78**		**Pn**	**22 02 09.2**	**-0.1**
MT03	**Universidad Ad**	**1.75**	**78**	⇑*i*P	**Pn**	**22 02 09.4**	**+0.1**
MT03				*i* S	**Sg**	**22 02 34.1**	**-1.0**
MT03				IAML		22 02 51.6	
	comp=N,9μm,0.3s						
MT03	**Universidad Ad**	**1.75**	**78**	*i* P	**Pn**	**22 02 09.4**	**+0.1**
MT03				*e*S	**Sg**	**22 02 35.5**	**+0.5**
MT03				IAML		22 02 38.7	
	comp=Z,10μm,0.8s						
LMEL	**Las Melosas**	**1.96**	**90**		**Pn**	**22 02 12.7**	**+0.4**
LMEL	**Las Melosas**	**1.96**	**90**	⇑*i*P	**Pn**	**22 02 12.7**	**+0.4**
LMEL				*i* S	**Sb**	**22 02 40.4**	**+1.2**
LMEL				IAML		22 02 47.9	
	comp=E,10μm,0.7s						
FCH	**Farellones**	**1.97**	**75**	⇑*i*P	**Pn**	**22 02 12.8**	**+0.3**
FCH				*i* S	**Sg**	**22 02 41.4**	**-0.7**
VA03	**San Esteban**	**2.01**	**57**		**Pn**	**22 02 12.9**	**+0.1**
VA03	**San Esteban**	**2.01**	**57**	*e*P	**Pn**	**22 02 13.3**	**+0.5**
VA03				*i* S	**Sg**	**22 02 47.0**	**+3.6**
VA03				IAML		22 02 52.1	
	comp=E,15μm,0.3s						

VA03 San Esteban 2.01 57 *i* P **Pn 22 02 13.0 +0.1**
VA03 *e*S **Sg 22 02 46.7 +3.3**
VA03 IAML 22 02 51.0
comp=Z,36µm,1.0s
ML02 Panimavida 2.11 154 Pn 22 02 14.9 +0.7
ML02 Panimavida 2.11 154 *e*P **Pn 22 02 15.7 +1.5**
ML02 *i* S **Sb 22 02 42.7 -0.8**
ML02 IAML 22 03 02.7
comp=E,30µm,0.6s
BI05 Punta Hualpn 2.92 190 Pn **Pn 22 02 24.4 -1.0**
BI05 Punta Hualpn 2.92 190⇓*i*P **Pn 22 02 24.4 -1.0**
BI05 *i* S **Sg 22 03 13.4 +0.6**
BI05 IAML 22 03 27.3
comp=N,4µm,0.5s
CO02 Combarbal 2.96 27 Pn 22 02 25.7 -0.3
CO02 Combarbal 2.96 27 *e*P **Pn 22 02 25.5 -0.5**
CO02 *i* S **Sg 22 03 15.8 +1.7**
CO02 IAML 22 03 28.4
comp=E,5µm,0.8s
CO02 Combarbal 2.96 27 *i* P **Pn 22 02 25.8 -0.3**
CO02 IAML 22 03 20.7
comp=Z,7µm,1.1s
CO06 Fray Jorge 3.28 14 Pn **Pn 22 02 29.0 -1.2**
CO03 El Pedregal 3.41 28 Pn 22 02 32.1 -0.1
CO03 El Pedregal 3.41 28⇑*i*P **Pn 22 02 32.0 -0.1**
CO03 *i* S **Sg 22 03 28.9 +0.6**
CO03 IAML 22 03 36.3
comp=E,3µm,0.8s
CO03 El Pedregal 3.41 28 *i* P **Pn 22 02 32.1 -0.1**
CO03 IAML 22 03 44.5
comp=Z,3µm,1.0s
RTLS Leoncito 3.43 54 *i* P **Pn 22 02 35.0 +2.3**
RTLS IAML 22 03 34.0
comp=Z,2µm,1.6s
RFA San Rafael 3.50 106 *i* P **Pn 22 02 35.5 +2.1**
RFA IAML 22 03 37.4
comp=Z,4µm,0.9s
GO04 Tololo Observa 3.97 23 Pn 22 02 39.5 -0.5
GO04 Tololo Observa 3.97 23 *i* P **Pn 22 02 39.5 -0.5**
ZON Zonda 4.00 56 Pn 22 02 41.8 +1.5
ZON Zonda 4.00 56 P **Pn 22 02 41.8 +1.5**
CO05 La Serena 4.09 16 Pn 22 02 40.7 -0.7
RTLL Cerro Villicun 4.27 55 *i* P **Pn 22 02 45.8 +1.8**
CO01 Juntas del Tor 4.41 29 Pn 22 02 46.1 +0.2
CO01 Juntas del Tor 4.41 29 *i* P **Pn 22 02 47.0 +1.0**
CO01 IAML 22 04 08.7
comp=Z,2µm,1.1s
LC02 Puerto Saavedr 4.96 187 Pn 22 02 52.7 -0.6
LCO Las Campanas 5.09 19 Pn 22 02 54.3 -1.1
LCO Las Campanas 5.09 19 *e*P **Pn 22 02 54.3 -1.1**
LCO Las Campanas 5.09 19 *i* P **Pn 22 02 54.6 -0.9**
VA04 Juan Fernndez 5.23 271 Pn 22 02 56.0 -1.0
H03S1 Juan Fernandez 5.28 268 Pn **Pn 22 02 56.8 -0.7**
baz=52,slow=15
H03S3 Juan Fernandez 5.29 269 Pn **Pn 22 02 56.8 -0.8**
baz=52,slow=15
H03S2 Juan Fernandez 5.30 269 Pn **Pn 22 02 56.8 -1.0**
baz=52,slow=15
H03N1 Juan Fernandez 5.32 273 Pn **Pn 22 02 59.0 +1.0**
H03N1 T T 22 08 55.9
baz=92
H03N3 Juan Fernandez 5.33 273 Pn **Pn 22 02 59.0 +0.9**
H03N3 T T 22 09 06.1
baz=92
H03N2 Juan Fernandez 5.33 273 Pn **Pn 22 02 59.0 +0.8**
H03N2 T T 22 08 53.7
baz=92
AC05 El Transito 5.38 22 Pn 22 02 59.2 -0.1
AC05 El Transito 5.38 22 *i* P **Pn 22 02 59.0 -0.3**
AC05 IAML 22 04 48.1
comp=Z,2µm,1.1s
LR03 Panguipulli 5.76 178 Pn 22 03 03.8 -0.6
GO06 Curarrehue 5.77 172 Pn 22 03 05.0 +0.3
AC04 Llanos de Chal 5.78 13 Pn 22 03 03.5 -1.2
LR04 Corral 6.04 186 Pn 22 03 07.4 -0.9
GO03 Copiap 6.56 18 Pn 22 03 14.1 -1.4
LL04 Puerto Octay 7.03 179 Pn 22 03 21.8 0.0
PLCA Paso Flores 7.04 167 Pn **Pn 22 03 23.0 +1.0**
comp=Z,1.0nm,0.3s,baz=333,slow=13,SNR=57
PLCA Lg Lg 22 05 17.2
comp=Z,2.1nm,0.3s,baz=254,slow=20,SNR=3.4
PLCA LR LR 22 06 12.5
comp=Z,4µm,19.1s,baz=350,slow=39
comp=Z,23nm,0.6s
PLCA Paso Flores 7.04 167 Pn 22 03 22.5 +0.5
PLCA Paso Flores 7.04 167 *e*P **Pn 22 03 22.5 +0.5**
LL05 Los Muermos 7.56 185 Pn 22 03 28.8 -0.3
AC02 Maricunga 7.61 24 Pn 22 03 29.2 -1.0
AC01 Pan de Azucar 7.88 13 Pn 22 03 30.3 -3.1
GO02 Mina Guanaco 9.05 17 Pn 22 03 47.0 -2.8
GO07 Milladeo Hill, 9.28 185 Pn 22 03 52.3 -0.3
LL02 Futaleuf 9.33 177 Pn 22 03 53.7 +0.4
TRQA Tornquist 9.54 119 Pn **Pn 22 03 57.0 +0.7**
TRQA Tornquist 9.54 119 P **Pn 22 03 57.0 +0.7**
AY01 Puyuhuapi 10.54 180 Pn 22 04 10.6 +0.7
LVC Limon Verde 11.66 17 Pn **Pn 22 04 22.0 -3.7**
comp=Z,0.5nm,0.3s,baz=270,slow=7.6,SNR=1.8
LVC LR LR 22 09 10.8
comp=Z,2µm,20.4s,baz=219,slow=39
COYC Coyhaique 11.70 178 Pn 22 04 25.5 -0.2
LPA La Plata 12.13 99*de*P **Pn 22 04 28.0 -3.7**
LPA PPP PPP 22 05 22.2
LPA SS Sn 22 07 05.6 +19
LPA SSS SSS 22 07 50.6
PB07 IPOC Station P 12.32 12 Pn 22 04 34.9 +0.4
PB01 IPOC Station P 13.06 13 Pn 22 04 44.6 +0.1
PB08 IPOC Station P 14.00 13 Pn 22 04 57.6 0.0
ITQB Itaqui 14.18 77 Pn 22 05 00.3 +0.5
GO01 Chusmiza 14.45 13 Pn 22 05 03.1 -0.9
CPUP Villa Florida 15.16 64 Pn **Pn 22 05 10.0 -3.0**
comp=Z,0.1nm,0.3s,baz=228,slow=16,SNR=3.1
CPUP Sn **Sn 22 07 58.2 -2.7**
comp=Z,0.1nm,0.3s,baz=288,slow=16,SNR=3.1
CPUP LR LR 22 11 27.9
comp=Z,1µm,18.5s,baz=242,slow=40
comp=Z,1.8nm,0.8s
CPUP Villa Florida 15.16 64 Pn 22 05 13.1 +0.1
CPUP Villa Florida 15.16 64 P **Pn 22 05 13.1 +0.1**
CPUP pmax pmax
comp=Z,17nm,1.2s
PB12 IPOC Station P 15.32 8 Pn 22 05 14.1 -1.2
PB16 IPOC Station P 15.71 11 Pn 22 05 20.3 -0.5
PLTB Pedras Altas 16.07 88 Pn 22 05 23.4 -1.6
LPAZ La Paz 17.95 14 P **Pn 22 05 49.6 +0.4**
comp=Z,0.4nm,0.3s,baz=178,slow=7.8,SNR=16
comp=Z,5.7nm,0.7s
LPAZ La Paz 17.95 14 Pn 22 05 47.7 -1.5
LPAZ La Paz 17.95 14 *e*P **Pn 22 05 49.4 +0.2**
ITAB Concordia 18.78 75 P **P 22 05 57.4 -0.8**
AQDB Aquidauana 20.03 53 P **P 22 06 10.1 -1.8**
AQDB IAmb IAmb 22 06 21.5
comp=Z,184nm,1.5s
SIV San Ignacio 20.59 33 P **P 22 06 17.3 -0.8**
comp=Z,20nm,0.8s,baz=214,slow=11,SNR=37
SIV LR LR 22 15 47.1
comp=Z,3µm,18.0s,baz=230,slow=42
comp=Z,20nm,0.8s
EFI East Falkland 20.67 154 P **P 22 06 17.4 -1.2**
EFI IAmb IAmb 22 06 33.1
comp=Z,97nm,0.8s
EFI East Falkland 20.67 154 *i* P **P 22 06 18.7 +0.1**
EFI pmax pmax
comp=Z,139nm,2.2s
TRCB Terra Rica 20.68 63 P **P 22 06 16.9 -2.2**
TRCB IAmb IAmb 22 06 26.9
comp=Z,170nm,1.0s
NNA Nana 22.13 349 P **P 22 06 36.2 +1.6**
comp=Z,4.7nm,0.3s,baz=193,slow=12,SNR=4.6
NNA LR LR 22 13 18.0
comp=Z,1µm,20.4s,baz=176,slow=32
comp=Z,4.7nm,0.3s
NNA Nana 22.13 349 *i* P **P 22 06 34.2 -0.5**
NNA pmax pmax
comp=Z,34nm,1.0s
ATAH Atahualpa 27.14 347 LR LR 22 16 52.0
comp=Z,727nm,20.3s,baz=186,slow=34
BDFB Brasilia 28.62 57 P **P 22 07 34.4 -1.3**
BDFB LR LR 22 20 31.5
comp=Z,9.9nm,0.7s,baz=221,slow=9.9,SNR=16
comp=Z,2µm,21.8s,baz=228,slow=40
comp=Z,9.9nm,0.7s
BDFB Brasilia 28.62 57 P **P 22 07 34.3 -1.3**
BDFB IAmb IAmb 22 07 49.9
comp=Z,27nm,1.0s
BDFB Brasilia 28.62 57 P **P 22 07 34.3 -1.3**
BDFB pmax pmax
comp=Z,27nm,1.0s
BOSC San Juan Bosco 31.06 348 P **P 22 07 56.3 -1.0**
PMSA Palmer Station 31.37 173 LR LR 22 21 04.1
comp=Z,1µm,18.1s,baz=319,slow=37
COHC Cochancay 31.86 347 P **P 22 08 04.4 +0.2**
RPN Rapa Nui 32.27 272 LR LR 22 18 04.9
comp=Z,1µm,18.5s,baz=88,slow=30
HOPE Hope Point 32.47 140 P **P 22 08 09.6 +0.5**
HOPE Hope Point 32.47 140 *i* P **P 22 08 09.6 +0.5**
SDV Santo Domingo 42.55 3 LR LR 22 28 28.9
comp=Z,656nm,20.2s,baz=204,slow=38
BAUV El Baul 42.79 7 P **P 22 09 35.8 -1.0**
BAUV IAmb IAmb 22 09 45.8
comp=Z,45nm,1.0s
MDP Montagnes des 43.09 30 P **P 22 09 39.2 -0.1**
comp=Z,6.7nm,0.7s,baz=212,slow=8.4,SNR=4.1
MDP LR LR 22 28 49.0
comp=Z,1µm,18.6s,baz=198,slow=38
comp=Z,6.7nm,0.7s
RCBR Riachuelo 43.94 59 LR LR 22 30 17.9
comp=Z,905nm,19.5s,baz=7.5,slow=39
JTS Las Juntas de 45.47 343 *i* P **P 22 09 57.1 -1.2**
JTS pmax pmax
comp=Z,8.0nm,1.2s
COVE Coope Vega, Sa 45.75 344 P **P 22 09 59.6 -0.8**
TOSP Speyside 46.35 16 P **P 22 10 05.0 -0.2**
BELA Belgrano 2 47.09 170 P **P 22 10 11.4 +1.0**
VNA3 Neumayer Olymp 49.65 158 P **P 22 10 31.5 +1.4**
VNA1 Neumayer--Stat 49.97 157 P **P 22 10 34.3 +1.8**
VNA2 Neumayer--Watz 50.30 157 P **P 22 10 36.5 +1.3**
baz=278,slow=8.0
MLPR Magueyes Islan 51.81 7 P **P 22 10 46.1 -0.8**
SNAA Sanae 51.87 158 P **P 22 10 48.3 +1.3**
SNAA Sanae 51.87 158 P **P 22 10 48.3 +1.3**
comp=Z,18nm,0.8s,baz=275,slow=7.4,SNR=70
SNAA LR LR 22 33 10.1
comp=Z,499nm,18.0s,baz=303,slow=36
comp=Z,18nm,0.8s
SNAA Sanae 51.87 158 P **P 22 10 47.6 +0.6**
SNAA IAmb IAmb 22 11 09.3
comp=Z,39nm,0.9s
SNAA Sanae 51.87 158*ce*P **P 22 10 48.5 +1.5**
SNAA pmax pmax
comp=Z,52nm,1.7s
CELP Cerrillos 51.96 7 P **P 22 10 47.7 -0.5**
SJG San Juan 52.05 8 P **P 22 10 48.6 -0.1**
SJG IAmb IAmb 22 10 57.2
comp=Z,22nm,0.8s
SJG San Juan 52.05 8 P **P 22 10 48.6 -0.1**
SJG pmax pmax
comp=Z,22nm,0.9s
MTP Monte Pirata 52.10 8 P **P 22 10 48.2 -0.9**
MTP IAmb IAmb 22 11 10.8
comp=Z,22nm,1.2s
UUPR Utuado, UPR, P 52.12 7 P **P 22 10 49.7 +0.4**
UUPR IAmb IAmb 22 10 57.4
comp=Z,23nm,0.9s
CBYP Canovanas 52.24 8 P **P 22 10 50.0 -0.2**
CBYP IAmb IAmb 22 10 58.5
comp=Z,21nm,0.8s
DR12 Loma Pena Alta 52.45 4 P **P 22 10 51.0 -0.7**
TROLL Troll, Antarti 53.58 158 P **P 22 11 01.0 +1.3**
CMIG Matias Romero 54.96 334 LR LR 22 30 02.0
comp=Z,258nm,18.4s,baz=150,slow=31
TEIG Tepich 55.84 342 P **P 22 11 16.6 +0.2**
QSPA South Pole Qui 56.37 180 P **P 22 11 21.5 +1.6**
comp=Z,12nm,0.9s,baz=140,slow=3.6,SNR=23
QSPA LR LR 22 34 11.9
comp=Z,393nm,19.4s,baz=166,slow=35
comp=Z,12nm,0.9s
QSPA South Pole Qui 56.37 180 P **P 22 11 20.2 +0.2**
QSPA IAmb IAmb 22 11 31.6
comp=Z,23nm,1.0s
NVL N'lazarevskaya 56.61 157 *e*P **P 22 11 19.3 -2.1**
NVL *e*S **S 22 19 12.6 -0.4**
NVL *e*SS **SS 22 22 56.3 -3.6**
NVL pmax pmax
comp=Z,10.0nm,0.8s
SBA Scott Base 63.12 192 P **P 22 12 07.0 +0.9**
SBA IAmb IAmb 22 12 20.6
comp=Z,19nm,1.2s
SBA Scott Base 63.12 192 P **P 22 12 07.0 +0.9**
SBA pmax pmax
comp=Z,19nm,1.2s
VNDA Vanda 64.15 191 P **P 22 12 16.2 +3.4**
comp=Z,1.0nm,1.1s,baz=128,slow=5.8,SNR=3.0
comp=Z,1.0nm,1.1s
VNDA Vanda 64.15 191 P **P 22 12 13.2 +0.3**
VNDA Vanda 64.15 191 P **P 22 12 13.2 +0.3**
VNDA pmax pmax
comp=Z,13nm,1.4s
TAOE Nuku Hiva Isla 66.53 275 *e*S **S 22 21 20.9 +0.4**
comp=Z,239nm,24.2s
TAOE Nuku Hiva Isla 66.53 275 *e*LR LR 22 32 28.0
comp=Z,414nm,22.4s
833A Chaparral WMA, 66.87 334 P **P 22 12 30.8 -0.2**
TBI Tubuai 66.93 257 *e*S **S 22 21 25.4 +0.4**
comp=Z,647nm,24.5s
TBI Tubuai 66.93 257 *e*LR LR 22 32 39.4
comp=Z,4µm,26.5s
TBI LR LR 22 32 39.5
comp=Z,13µm,24.8s
HKT Hockley 67.18 338 *i* P **P 22 12 34.9 +2.1**
HKT pmax pmax
comp=Z,17nm,1.5s
LPIG La Paz 67.92 323 LR LR 22 36 51.7
comp=Z,91nm,18.3s,baz=144,slow=31
HPIG 68.14 328 P **P 22 12 39.6 +0.3**
HPIG IAmb IAmb 22 13 08.4
comp=Z,13nm,1.1s
Y52A Lilburn 68.23 350 P **P 22 12 39.7 +0.2**
Y52A IAmb IAmb 22 12 51.5
comp=Z,26nm,1.3s
JCT Junction City 68.98 335 P **P 22 12 44.8 +0.5**
JCT IAmb IAmb 22 13 07.4
comp=Z,23nm,1.1s
JCT Junction City 68.98 335 P **P 22 12 44.8 +0.5**
JCT pmax pmax
comp=Z,23nm,1.1s
BG3 Lake Jocassee 69.19 351 P **P 22 12 45.9 +0.4**
BG3 IAmb IAmb 22 12 57.0
comp=Z,14nm,1.0s
Y45A Yeager Farm, C 69.24 345 P **P 22 12 46.8 +1.0**
TXAR Lajitas Array 69.41 331 P **P 22 12 48.6 +1.5**
comp=Z,1.8nm,0.7s,baz=151,slow=8.0,SNR=19
TXAR LR LR 22 39 02.2
comp=Z,485nm,18.0s,baz=144,slow=32
comp=Z,1.8nm,0.7s
TXAR Lajitas Array 69.41 331 P **P 22 12 48.0 +0.9**
TXAR Lajitas Array 69.41 331 P **P 22 12 48.0 +0.9**
TX32 Lajitas Array 69.41 331 P **P 22 12 47.9 +0.8**
PPT2 Papeete2 69.83 262 *e*S **S 22 22 00.2 +0.4**
comp=Z,257nm,22.2s
PPT2 Papeete2 69.83 262 *e*LR LR 22 34 00.3
comp=Z,663nm,27.8s
PPT2 *e*LR LR 22 34 00.4
comp=Z,488nm,30.0s
OXF Oxford 69.83 345 P **P 22 12 50.0 +0.6**
OXF Oxford 69.83 345 P **P 22 12 50.0 +0.6**
OXF pmax pmax
comp=Z,37nm,1.0s
PPT Papeete 69.84 262 LR LR 22 35 54.0
comp=Z,255nm,18.1s,baz=167,slow=29
SWET Sewanee 69.85 348 P **P 22 12 50.0 +0.4**
SWET IAmb IAmb 22 12 55.0
comp=Z,16nm,0.8s
CPCT Cooper Cave 69.86 350 P **P 22 12 50.6 +1.0**
CPCT IAmb IAmb 22 13 01.5
comp=Z,14nm,1.0s
TKL Tuckaleechee C 69.95 350 P **P 22 12 50.6 +0.4**
TKL IAmb IAmb 22 12 57.1
comp=Z,18nm,1.1s
TKL Tuckaleechee C 69.95 350 P **P 22 12 50.6 +0.4**
TKL pmax pmax
comp=Z,17nm,1.2s
PLAL Pickwick Lake 70.02 346 P **P 22 12 50.9 +0.4**
PLAL IAmb IAmb 22 13 01.9
comp=Z,17nm,0.9s
CLTN Cedars of Leba 70.78 348 P **P 22 12 56.0 +0.8**
ABTX Abilene, Hawle 70.88 336 P **P 22 12 55.8 -0.2**
ABTX IAmb IAmb 22 13 08.7
comp=Z,22nm,1.0s
WVT Waverly 71.08 347 P **P 22 12 56.9 -0.1**
WVT Waverly 71.08 347 P **P 22 12 56.9 -0.1**
WVT pmax pmax
comp=Z,45nm,0.9s
U49A Red Boiling Sp 71.10 349 P **P 22 12 57.9 +0.8**
U49A IAmb IAmb 22 13 09.2
comp=Z,30nm,1.6s
WHAR Wooly Hollow 71.23 343 P **P 22 12 56.5 -1.5**
WHAR IAmb IAmb 22 13 20.4
comp=Z,39nm,1.5s
JSRW J. Sargeant Re 71.37 356 P **P 22 12 58.0 -0.7**
LCAR Lake Charles 71.71 344 P **P 22 13 01.2 +0.4**
LCAR IAmb IAmb 22 13 12.7
comp=Z,24nm,0.9s
FCAR Ozark Folk Cen 71.77 343 P **P 22 13 01.5 +0.3**
BBTS Babate 71.91 58 LR LR 22 45 07.8
comp=Z,401nm,18.4s,baz=234,slow=36
OK025 Westminster Rd 72.87 339 P 22 13 08.5 +0.7
MSTX Muleshoe 73.20 334 P **P 22 13 09.9 0.0**
MSTX IAmb IAmb 22 13 22.4
comp=Z,16nm,0.9s
MAW Mawson 73.43 164 P **P 22 13 12.3 +1.5**
comp=Z,7.0nm,0.8s,baz=226,slow=4.9,SNR=11
MAW LR LR 22 47 21.7
comp=Z,802nm,18.1s,baz=232,slow=37
comp=Z,7.0nm,0.8s
MAW Mawson 73.43 164 P **P 22 13 11.7 +0.9**
MAW Mawson 73.43 164 P **P 22 13 11.7 +0.9**
MAW pmax pmax
comp=Z,4.0nm,0.9s
OK051 E0350 and S346 73.58 340 P **P 22 13 11.9 -0.1**
AMTX Amarillo 73.63 335 P **P 22 13 12.0 -0.5**
AMTX IAmb IAmb 22 13 27.3
comp=Z,19nm,1.0s
CCM Cathedral Cave 73.64 345 P **P 22 13 11.8 -0.4**
CCM IAmb IAmb 22 13 24.4
comp=Z,25nm,0.9s
CCM Cathedral Cave 73.64 345 P **P 22 13 11.9 -0.4**
CCM pmax pmax
comp=Z,25nm,0.9s
121A Cookes Peak, D 73.90 330 P **P 22 13 14.2 0.0**
121A IAmb IAmb 22 13 43.0
comp=Z,20nm,1.1s
ACSO Alum Creek Sta 74.36 352 P **P 22 13 16.9 +0.4**
ACSO IAmb IAmb 22 13 28.0
comp=Z,18nm,0.7s
TUC Tucson 75.02 327 P **P 22 13 21.8 +1.2**
TUC Tucson 75.02 327 P **P 22 13 21.8 +1.2**
TUC pmax pmax
comp=Z,7.0nm,1.1s
LIC Lamto 75.14 72⇑*e*P **P 22 13 21.7 +0.1**
comp=Z,27nm,0.6s
SUR Sutherland 75.27 119 LR LR 22 44 50.7
comp=Z,146nm,18.2s,baz=232,slow=34
SUR Sutherland 75.27 119 P **P 22 13 23.4 +1.0**
TIC Toumodi 75.40 72⇑*e*P **P 22 13 22.9 -0.2**
comp=Z,2.8nm,0.3s
KIC Kosan Boka 75.45 72⇑*e*P **P 22 13 23.7 +0.3**
comp=Z,4.9nm,0.5s
ANMO Albuquerque 75.46 332 LR LR 22 42 39.7
comp=Z,407nm,18.1s,baz=152,slow=33
ANMO Albuquerque 75.46 332 P **P 22 13 23.6 +0.4**
ANMO Albuquerque 75.46 332 P **P 22 13 23.6 +0.4**
ANMO pmax pmax
comp=Z,10.0nm,1.2s
DBIC Dimbokro 75.55 72 P **P 22 13 24.1 +0.1**
comp=Z,9.5nm,0.8s,baz=210,slow=6.4,SNR=11
DBIC LR LR 22 45 16.9
comp=Z,179nm,18.4s,baz=210,slow=35
comp=Z,9.5nm,0.8s
DBIC Dimbokro 75.55 72 P **P 22 13 24.0 +0.1**
DBIC IAmb IAmb 22 13 32.9
comp=Z,19nm,0.9s
DBIC Dimbokro 75.55 72 P **P 22 13 24.0 +0.1**
DBIC pmax pmax
comp=Z,19nm,0.9s
PIX Pinacate 75.64 325 P **P 22 13 24.6 +0.6**
RAR Rarotonga 76.28 254 LR LR 22 38 38.1
comp=Z,158nm,20.7s,baz=120,slow=29
SDCO Great Sand Dun 77.56 334 P **P 22 13 36.2 +1.1**
SADO Sadowa 78.49 355 LR LR 22 52 34.2
comp=Z,122nm,18.6s,baz=170,slow=39
SOE Somerset East 78.51 122 P **P 22 13 41.4 +0.9**
PFO Pinyon Flats O 78.77 324 LR LR 22 41 40.8
comp=Z,214nm,19.8s,baz=146,slow=30
PFO Pinyon Flats O 78.77 324 *i* P **P 22 13 41.6 -0.1**
PFO pmax pmax
comp=Z,10.0nm,0.9s
SMCO Snowmass 79.36 333 P **P 22 13 45.1 -0.1**
SMCO IAmb IAmb 22 14 01.7
comp=Z,21nm,1.3s
TSUM Tsumeb 79.67 106 LR LR 22 44 41.7
comp=Z,377nm,19.7s,baz=239,slow=32
TSUM Tsumeb 79.67 106 P **P 22 13 47.0 -0.2**
V12A Nelson 79.73 326 P **P 22 13 47.3 +0.4**
KNB Kanab 79.88 328 P **P 22 13 48.5 +0.7**
KNB IAmb IAmb 22 14 04.5
comp=Z,20nm,1.1s
KNB Kanab 79.88 328 P **P 22 13 48.5 +0.7**
KNB pmax pmax
comp=Z,20nm,1.1s
CASY Casey 80.15 181 P **P 22 13 49.4 +0.7**
ECSD EROS Data Cent 80.29 343 P **P 22 13 50.4 +0.7**
ECSD IAmb IAmb 22 14 01.8
comp=Z,15nm,0.9s
BOSA Boshof 80.51 118 P **P 22 13 52.0 +0.4**
comp=Z,6.1nm,0.8s,baz=138,slow=5.4,SNR=8.4
BOSA LR LR 22 47 07.7
comp=Z,134nm,18.6s,baz=214,slow=34
comp=Z,6.1nm,0.8s
BOSA Boshof 80.51 118 P **P 22 13 51.4 -0.2**
BOSA IAmb IAmb 22 14 03.4
comp=Z,26nm,1.0s
BOSA Boshof 80.51 118 P **P 22 13 51.4 -0.2**
BOSA pmax pmax
comp=Z,26nm,1.0s
SRU San Rafael Swe 80.68 331 P **P 22 13 52.8 +0.7**
SRU San Rafael Swe 80.68 331 P **P 22 13 52.8 +0.7**
SRU pmax pmax
comp=Z,8.0nm,1.0s
ISA Isabella, Lake 81.41 324 P **P 22 13 56.3 +0.4**
ISA Isabella, Lake 81.41 324 P **P 22 13 56.3 +0.4**
ISA pmax pmax
comp=Z,8.0nm,1.0s
DUG Dugway, Tooele 82.54 330 P **P 22 14 02.1 +0.3**
DUG IAmb IAmb 22 14 18.2
comp=Z,12nm,1.1s
DUG Dugway, Tooele 82.54 330 P **P 22 14 02.1 +0.3**
DUG pmax pmax
comp=Z,12nm,1.1s
LBTB Lobatse 82.75 115 LR LR 22 48 56.4
comp=Z,278nm,18.1s,baz=230,slow=34
LBTB Lobatse 82.75 115 P **P 22 14 03.6 +0.2**
LBTB IAmb IAmb 22 14 12.5
comp=Z,27nm,1.0s
LBTB Lobatse 82.75 115 P **P 22 14 03.6 +0.2**
LBTB pmax pmax
comp=Z,27nm,1.0s
HWUT Hardware Ranch 83.22 332 P **P 22 14 05.8 +0.4**
HWUT IAmb IAmb 22 14 17.5
comp=Z,16nm,1.1s
URZ Urewera 83.43 228 LR LR 22 42 10.1
comp=Z,305nm,21.3s,baz=238,slow=29
PDAR Pinedale Array 83.45 334 P **P 22 14 08.8 +2.2**
comp=Z,1.4nm,0.8s,baz=152,slow=4.0,SNR=3.3
PDAR LR LR 22 47 51.8
comp=Z,288nm,18.0s,baz=142,slow=33
comp=Z,1.4nm,0.8s
RPZ Rata Peaks 83.47 221 LR LR 22 43 12.0
comp=Z,267nm,19.2s,baz=127,slow=30
NVAR Mina Array Bea 83.53 326 P **P 22 14 09.3 +2.2**
comp=Z,2.5nm,0.8s,baz=150,slow=5.4,SNR=11
NVAR LR LR 22 45 34.3
comp=Z,101nm,21.8s,baz=96,slow=32
comp=Z,2.5nm,0.8s
NVAR Mina Array Bea 83.53 326 P **P 22 14 08.2 +1.1**
ELK Elko 84.02 329 P **P 22 14 11.4 +1.9**
comp=Z,4.8nm,0.9s,baz=124,slow=2.2,SNR=15
ELK LR LR 22 48 49.7
comp=Z,215nm,18.5s,baz=134,slow=34
comp=Z,4.8nm,0.9s
ELK Elko 84.02 329 P **P 22 14 10.8 +1.2**
ELK Elko 84.02 329 P **P 22 14 10.8 +1.2**
ELK pmax pmax
comp=Z,7.0nm,1.1s
TOA0 Torodi Ar. Sit 84.57 70 P **P 22 14 12.7 0.0**
TORD Torodi Ar. Bea 84.57 70 P **P 22 14 12.9 +0.3**
comp=Z,6.4nm,0.8s,baz=256,slow=4.8,SNR=43

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TORD                                    LR      LR      22 50 35.5
     comp=Z,168nm,19.0s,baz=222,slow=35
     comp=Z,6.4nm,0.8s
TORD Torodi Ar. Bea     84.57  70  P       P       22 14 13.2 +0.5
TORD                                    IAmb    IAmb    22 14 21.7
     comp=Z,19nm,0.9s
FLWY Flagg Ranch        85.00 333  P       P       22 14 15.6 +1.1
RAO  Raoul Island       85.58 238  LR      LR      22 43 12.6
     comp=Z,93nm,19.9s,baz=174,slow=29
ORV  Oroville           85.94 324  P       P       22 14 19.9 +0.9
ORV                                     IAmb    IAmb    22 14 35.6
     comp=Z,21nm,1.2s
ORV  Oroville           85.94 324  P       P       22 14 19.9 +0.9
ORV                                     pmax    pmax
     comp=Z,21nm,1.3s
HLID Hailey             86.01 331  P       P       22 14 20.1 +0.7
HLID                                    IAmb    IAmb    22 14 32.3
     comp=Z,28nm,1.8s
BCYI Bear Canyon        86.23 332  P       P       22 14 21.4 +0.9
ULM  Lac du Bonnet      86.26 345  P       P       22 14 20.4 +0.2
     comp=Z,4.9nm,0.8s,baz=158,slow=7.2,SNR=2.7
     comp=Z,4.9nm,0.8s
ULM  Lac du Bonnet      86.26 345  i P     P       22 14 20.6 +0.4
MCMT McKenzie Canyo     86.45 333  P       P       22 14 21.5 -0.1
PLID Pearl Lake         87.91 331  P       P       22 14 29.0 +0.4
PLID                                    IAmb    IAmb    22 14 39.1
     comp=Z,12nm,1.0s
YBH  Yreka Blue Hor     88.21 325  P       P       22 14 31.3 +1.3
     comp=Z,5.1nm,0.8s,baz=86,slow=1.5,SNR=12
YBH                                     LR      LR      22 48 13.6
     comp=Z,206nm,20.3s,baz=139,slow=32
     comp=Z,5.1nm,0.8s
SCHQ Schefferville      88.47   3  LR      LR      22 56 07.9
     comp=Z,74nm,20.1s,baz=187,slow=37
AFI  Afiamalu           89.83 253  LR      LR      22 45 54.7
     comp=Z,277nm,19.4s,baz=116,slow=30
LSZ  Lusaka             90.26 109  LR      LR      22 51 31.9
     comp=Z,368nm,19.2s,baz=231,slow=33
LSZ  Lusaka             90.26 109  P       P       22 14 40.9 +0.5
LSZ                                     pmax    pmax
     comp=Z,33nm,1.6s
NEW  Newport            90.95 332  LR      LR      22 52 50.0
     comp=Z,167nm,18.8s,baz=139,slow=34
MDT  Midelt             92.07  51  LR      LR      22 56 06.3
     comp=Z,477nm,19.8s,baz=245,slow=36
TAM  Tamanrasset        93.16  65  P       P       22 14 53.5 -0.1
TAM                                     IAmb    IAmb    22 15 03.3
     comp=Z,7.7nm,1.1s
TAM  Tamanrasset        93.16  65  P       P       22 14 53.5 -0.1
TAM                                     pmax    pmax
     comp=Z,8.0nm,1.1s
MSVF Nonsavu            95.47 245  LR      LR      22 47 55.5
     comp=Z,102nm,22.0s,baz=135,slow=29
MSVF Nonsavu            95.47 245  i P     P       22 15 03.9 -0.5
MSVF                                    pmax    pmax
     comp=Z,9.0nm,1.2s
ESDC Sonseca Array      96.80  46  P       P       22 15 10.2 +0.5
     comp=Z,0.5nm,0.9s,baz=252,slow=5.0,SNR=3.5
ESDC                                    LR      LR      22 59 11.4
     comp=Z,430nm,18.1s,baz=235,slow=36
     comp=Z,0.5nm,0.9s
FRB  Frobisher Bay      97.33   2  LR      LR      22 59 38.4
     comp=Z,207nm,20.0s,baz=187,slow=36
BBB  Bella Bella        98.47 329  LR      LR      22 56 34.7
     comp=Z,72nm,19.4s,baz=136,slow=34
DZM  Mont Dzumac       100.97 234  eLR     LR      22 48 26.4
     comp=Z,323nm,29.0s
ABPO Ambohimpanom      102.20 123  i P     Pdif    22 15 31.2 -3.5
GERES GERESS Array B   112.37  45  PKiKP   PKiKP   22 20 17.2 +2.5
     comp=Z,0.3nm,0.7s,baz=191,slow=2.0,SNR=3.1
CLL  Collm             113.04  43  ePS     PS      22 30 45.0 +4.7
CLL                                ePPS    PPS     22 32 00.0
CLL                                Lm      MLR     23 07 00.0
     comp=N,200nm,18.2s
CLL                                Lm      MLR     23 07 00.0
     comp=E,300nm,20.8s
CLL                                Lm      MLR     23 07 00.0
     comp=Z,400nm,18.9s
ASAR Alice Springs     117.49 207  PKP     PKiKP   22 20 27.0 +1.6
     comp=Z,0.5nm,0.9s,baz=139,slow=2.1,SNR=2.4
ASAR Alice Springs     117.49 207  PKIKP   PKiKP   22 20 27.0 +1.6
WRA  Warramunga Arr    120.67 210  PKP     PKiKP   22 20 32.1 +0.4
     comp=Z,0.8nm,0.7s,baz=158,slow=1.7,SNR=7.4
BRTR Keskin Array B    122.14  61  PKP     PKiKP   22 20 34.4 +0.3
     comp=Z,1.1nm,0.8s,baz=195,slow=2.4,SNR=7.4
AKASG Malin Array Be   122.42  48  PKP     PKPdf   22 20 33.5 -0.2
     comp=Z,0.8nm,0.6s,baz=258,slow=3.0,SNR=4.8
AKASG Malin Array Be   122.42  48  i PKIKP PKiKP   22 20 34.2 +0.2
AKASG                              pmax    pmax
     comp=Z,1.0nm,0.6s
MNK  Minsk             122.58  43  i PKIKP PKPdf   22 20 32.6 -1.3
MNK                                i       22 22 09.5
MNK                                i PPP   PPP     22 24 45.6
MNK                                i       22 27 44.6
MNK                                i PS    PS      22 32 04.6 -1.9
MNK                                i SS    SS      22 38 52.5 -0.7
MNK                                i SSS   SSS     22 43 20.6
MNK                                pmax    pmax
     comp=N,28nm,0.8s
MNK                                pmax    pmax
     comp=Z,6.0nm,1.0s
MNK                                pmax    pmax
     comp=E,3.0nm,1.1s
MNK                                MLR     MLR
     comp=Z,112nm,17.0s
MNK                                MLR     MLR
     comp=N,641nm,20.0s
MNK                                MLR     MLR
     comp=E,45nm,20.0s
MNK  Minsk             122.58  43  i PKP   PKPdf   22 20 32.6 -1.3
     comp=E,3.0nm,1.1s
MNK                                i PKP   PKPdf   22 20 32.6 -1.3
     comp=N,28nm,0.8s
MNK                                i PKP   PKPdf   22 20 32.6 -1.3
     comp=Z,6.0nm,1.0s,baz=76
MNK                                i PP    PP      22 22 09.6 -2.1
MNK                                i PPP   PPP     22 24 45.7
MNK                                i SKS   SKSdf   22 27 44.6 -1.0
MNK                                i PS    PS      22 32 04.7 -1.9
MNK                                i SS    SS      22 38 52.5 -0.7
MNK                                i SSS   SSS     22 43 20.7
MNK                                i LQ    LQ      23 06 30.4
MNK                                i LR    LR      23 09 49.5
MNK                                i LRM   MLR     23 12 46.3
     comp=Z,112nm,17.2s
MNK                                i LRM   MLR     23 13 16.2
     comp=N,641nm,20.4s
MNK                                i LRM   MLR     23 13 18.1
     comp=E,45nm,19.7s
H11S2 WAKE ISLAND Hyl  125.34 270  T       T       00 40 06.1
     baz=118
H11S1 WAKE ISLAND Hyl  125.35 270  T       T       00 39 35.1
     baz=118
H11S3 WAKE ISLAND Hyl  125.36 270  T       T       00 40 07.7
     baz=118
OBN  Obninsk           127.63  43  ePKIKP  PKPdf   22 20 42.6 -1.0
OBN                                e       22 22 44.3
OBN                                e       22 27 42.0
OBN                                pmax    pmax
     comp=Z,8.0nm,1.2s
VORR Voronezh          128.76  48  ePKIKP  PKPdf   22 20 43.5 -2.4
KLMR Klimovskoe        129.55  36  ePKIKP  PKPdf   22 20 46.9 -0.2
KLMR                               pmax    pmax
     comp=Z,33nm,1.3s
KLMR Klimovskoe        129.55  36  ePKPdf  PKPdf   22 20 46.9 -0.2
KLMR                               AMP     22 20 58.0
     comp=Z,33nm,1.3s
KLMR                               ePP     PP      22 24 05.2 +67
KIV  Kislovodsk        129.79  58  i PKIKP PKiKP   22 20 49.8 +0.8
KIV                                pmax    pmax
     comp=Z,10.0nm,1.1s
ZEI  Tsey              130.41  60  i PKIKP PKiKP   22 20 50.6 +0.1
ZEI                                pmax    pmax
     comp=Z,5.0nm,1.3s
PRGR Permogore         132.45  35  ePKIKP  PKPdf   22 20 48.8 -3.8
PRGR                               pmax    pmax
     comp=Z,19nm,1.4s
BILL Bilibino          132.53 334  ePKIKP  PKPdf   22 20 50.3 -2.3
BILL                               pmax    pmax
     comp=Z,10.0nm,1.1s
BILL                               MLR     MLR
     comp=Z,62nm,14.0s
LEM  Lembang           139.53 180  PKP     PKPdf   22 21 08.8 +1.3
     comp=Z,8.7nm,0.4s,baz=139,slow=19,SNR=1.4
SEY  Seymchan          139.70 330  PKP     PKiKP   22 21 08.3 -0.1
     comp=Z,3.5nm,0.9s,baz=135,slow=5.7,SNR=2.4
ARU  Arti              139.92  41  i PKIKP PKPdf   22 21 07.1 +0.5
GEYT Alibeck           140.21  70  PKP     PKPdf   22 21 08.4 +0.6
     comp=Z,1.3nm,0.7s,baz=251,slow=4.5,SNR=4.5
TIXI Tiksi             140.48 350  i PKIKP PKPdf   22 21 07.8 +0.6
TIXI                               pmax    pmax
     comp=Z,2.0nm,1.0s
ABKAR Akbulak array    141.94  52  PKPdf   PKPdf   22 21 10.6 +0.1
NRIK Noril'sk          142.77  12  i PKIKP PKPdf   22 21 11.1 -0.3
NRIK                               pmax    pmax
     comp=Z,2.0nm,1.0s
HRA  Herat             142.82  76  PKPdf   PKPdf   22 21 12.0 -0.9
PCHI Peechi            143.26 122  eP      PKPbc   22 21 12.1 +1.2
PALK Pallekele         143.80 131  i PKIKP PKPbc   22 21 13.1 +0.6
POO  Poona             146.39 108  eP      PKPdf   22 21 16.0 -3.3
BRVK Borovoye          147.40  43          PKPbc   22 21 23.3 +1.0
BRVK Borovoye          147.40  43  PKP2    PKPbc   22 21 23.3 +1.0
BVAR Borovoye Array    147.47  43  PKPbc   PKPdf   22 21 21.5 +1.5
     comp=Z,2.6nm,0.8s,baz=276,slow=1.3,SNR=20
RPSI Rantau Prapat     147.99 164          PKPbc   22 21 24.8 -0.3
PSI  Prapat            148.09 164  PKPbc   PKPbc   22 21 25.2 -0.3
     comp=Z,13nm,0.8s,baz=175,slow=5.2,SNR=4.1
PSI  Prapat            148.09 164  PKP2    PKPbc   22 21 24.8 -0.7
SBUM Sibu              148.43 189          PKPbc   22 21 26.8 +0.6
YAK  Yakutsk           148.46 340  PKPbc   PKPbc   22 21 25.2 +0.4
     comp=Z,15nm,0.8s,baz=14,slow=1.1,SNR=6.8
YAK  Yakutsk           148.46 340          PKPbc   22 21 25.9 +1.0
YAK  Yakutsk           148.46 340  ePKP2   PKPbc   22 21 25.7 +0.9
YAK                                pmax    pmax
     comp=Z,39nm,0.9s
CHGR Chuyangaron       148.92  70          PKPbc   22 21 26.2 -0.7
CHGR Chuyangaron       148.92  70  PKP2    PKPbc   22 21 26.2 -0.7
HYBB Hyderabad (bro    149.38 115  ePKiKP  PKiKP   22 21 29.6 -0.1
KK31 Karatay Array     149.86  61          PKPbc   22 21 29.4 +0.4
KK31 Karatay Array     149.86  61  PKP2    PKPbc   22 21 29.4 +0.4
KKAR Karatay Array     149.86  61          PKPbc   22 21 29.1 +0.1
KKAR Karatay Array     149.86  61  PKP2    PKPbc   22 21 29.1 +0.1
DRK  Karamyk           151.00  68          PKPbc   22 21 32.7 +0.4
NIL  Nilore            151.65  81          PKPbc   22 21 33.6  0.0
NIL  Nilore            151.65  81  PKIKP   PKPbc   22 21 33.6  0.0
EKS2 Erkin-Say         152.29  62  P       PKiKP   22 21 35.6 +0.4
     SNR=9.5
AML  Almayashu         152.29  63  P       PKiKP   22 21 36.3 +0.7
     SNR=7.4
USP  Ospenovka         152.73  60  P       PKiKP   22 21 36.6 +0.7
     SNR=5.3
AAK  Ala-Archa         152.82  61  P       PKiKP   22 21 37.5 +1.2
     SNR=6.9
UCH  Uchtor            152.89  62  P       PKiKP   22 21 38.5 +1.7
     SNR=7.1
KURK Kurchatov         153.07  43          PKPbc   22 21 36.1  0.0
KURK Kurchatov         153.07  43  PKIKP   PKPbc   22 21 36.1  0.0
TKM2 Tokmak 2          153.58  61  P       PKiKP   22 21 39.0 +1.1
     SNR=5.1
NRN  Naryn             154.09  64          PKiKP   22 21 39.6 +0.5
NRN  Naryn             154.09  64  PKIKP   PKiKP   22 21 39.6 +0.5
KSH  Kashi             154.22  68  PKPbc   PKiKP   22 21 40.5 +1.3
KSH                                pPKP    sPKPbc  22 21 47.5 +4.5
KSH                                sPKP    22 22 01.0
ZAA0 Zalesovo Array    154.34  32          PKPbc   22 21 37.5 -1.3
ZALV Zalesovo Beam     154.34  32  PKP     PKPdf   22 21 31.1 +0.6
     comp=Z,0.5nm,0.5s,baz=304,slow=3.3,SNR=2.6
ZALV                               PKPbc   PKiKP   22 21 39.7 +0.9
     comp=Z,3.9nm,0.8s,baz=300,slow=3.3,SNR=11
ZALV Zalesovo Beam     154.34  32          PKPbc   22 21 37.2 -1.6
ZALV Zalesovo Beam     154.34  32  PKIKP   PKPbc   22 21 37.2 -1.6
MKAR Makanchi Array    157.00  48  PKPab   PKPab   22 22 05.1 +0.5
     comp=Z,1.9nm,0.7s,baz=300,slow=2.2,SNR=6.8
WMQ  Urumqi            161.72  51  ePKP    PKPdf   22 21 40.0  0.0
WMQ                                LR      LR
     comp=Z,270nm,29.9s
WMQ                                LR      LR
     comp=Z,410nm,29.3s
WMQ                                LR      LR
     comp=Z,170nm,19.1s
CMAR Chiang Mai Arr    162.88 152  PKP     PKPdf   22 21 43.0 +1.2
     comp=Z,0.7nm,0.3s,baz=255,slow=2.7,SNR=5.6
CMAR                               PKPab   PKPab   22 22 31.5 +0.8
     comp=Z,0.5nm,0.3s,baz=222,slow=2.4,SNR=1.2
SONM Songino Array     166.02   3  PKP     PKPdf   22 21 45.5 +1.6
     comp=Z,0.5nm,0.9s,baz=50,slow=2.3,SNR=2.9
SONM                               PKPab   pPKPab  22 22 45.5 -1.3
     comp=Z,1.1nm,1.0s,baz=356,slow=4.3,SNR=4.2
GOMU GeErMu            169.39  74  PKP     PKPdf   22 21 56.5 +10
NJ2  Nanjing           170.24 262  ePKP    PKPdf   22 21 45.0 -2.0
GTA  Gaotai            171.74  46  ePKPbc  PKPdf   22 21 57.0 +9.2
GTA                                PKPab   PKPab   22 23 10.0 +0.3
GTA                                PP      PP      22 27 03.0 +2.3
HHC  Hu-ho-hao-te      172.30 336  ePKP    PKPdf   22 21 44.0 -4.0
CD2  Chengdu           175.71 132  PKP     PKPdf   22 21 48.8 -0.6
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TAP 29 22:02:39.7,23.86N×121.84E,h45km,ML2.7,D,Taiwan

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Code Station Name       Δ°   AZ°  Phase ID        Time      Res
                                     Op    ISC    h m s     ISC
TEYL Yanliau Villag     0.22 272  eP      Pn      22 02 47.9 +0.4
     baz=281
HWA  Hwalien            0.24 299  P       Pn      22 02 48.1 +0.3
     baz=293
HWA                               eS      Sn      22 02 54.8 +1.3
     baz=293
TWD  Chiawan            0.31 315  i P     Pn      22 02 48.3 -0.1
     baz=311
TWD                               S       Sn      22 02 54.6  0.0
     baz=311
TEGC Jichi Village      0.31 241  i P     Pn      22 02 48.8 +0.4
     baz=247
TEGC                              S       Sn      22 02 55.6 +1.0
     baz=247
ETM  Tongmen            0.33 288  i P     Pn      22 02 48.7  0.0
     baz=288
ETM                               S       Sn      22 02 55.1 +0.1
     baz=288
ETL  Fush Village       0.35 327  i P     Pn      22 02 48.9  0.0
     baz=322
ETL                               S       Sn      22 02 55.3 -0.2
     baz=322
ESL  Shilin             0.37 263  i P     Pn      22 02 48.9 -0.2
     baz=262
ESL                               S       Sn      22 02 55.5 -0.3
     baz=262
NACB Ninganchiao        0.38 325  P       Pn      22 02 49.2 -0.1
     baz=321
NACB                              S       Sn      22 02 55.9 -0.1
     baz=321
EGFH Guangfu            0.42 243  P       Pn      22 02 49.8 +0.2
     baz=252
EGFH                              S       Sn      22 02 57.2 +0.5
     baz=252
ETLH Xiulin Townshi     0.47 317  eP      Pn      22 02 50.4  0.0
     baz=317
ETLH                              eS      Sn      22 02 57.7 -0.3
     baz=317
HGSD Ruisui             0.53 226  P       Pn      22 02 51.1 +0.1
     baz=223
HGSD                              eS      Sn      22 02 59.3 +0.3
     baz=223
ENA  Nanau              0.57 351  i P     Pn      22 02 51.9 +0.3
     baz=344
ENA                               S       Sn      22 03 00.3 +0.3
     baz=344
EWUT Wuta               0.58 355  eP      Pn      22 02 51.0 -0.8
     baz=347
EWUT                              eS      Sn      22 02 59.8 -0.5
     baz=347
EHY  Hungye             0.59 233  i P     Pn      22 02 51.4 -0.4
     baz=243
EHY                               eS      Sn      22 02 59.5 -1.0
     baz=243
OWD  Renai              0.61 279  eP      Pn      22 02 52.5 +0.3
     baz=279
OWD                               eS      Sn      22 03 00.8 -0.3
     baz=279
VWDT VWDT               0.65 261  eP      Pn      22 02 53.0 +0.5
     baz=254
VWDT                              eS      Sn      22 03 01.7  0.0
     baz=254
ECBN Changbin           0.65 213  P       Pn      22 02 51.9 -0.7
     baz=205
ECBN                              eS      Sn      22 03 01.2 -0.6
     baz=205
FUSS Fushou             0.66 306  P       Pn      22 02 53.2 +0.2
     baz=305
FUSS                              eS      Sn      22 03 03.3 +0.8
     baz=305
YULB Yu-li              0.68 227  eP      Pn      22 02 52.7 -0.3
     baz=237
EYUL Yuli               0.70 223  P       Pn      22 02 53.2  0.0
     baz=233
EYUL                              eS      Sn      22 03 05.0 +2.0
     baz=233
NNSB Datong             0.70 324  i P     Pn      22 02 53.7 +0.3
     baz=324
NNSB                              S       Sn      22 03 03.2  0.0
     baz=324
TWF1 Yuli               0.71 224  eP      Pn      22 02 53.2 -0.1
     baz=234
TWF1                              S       Sn      22 03 02.8 -0.4
     baz=234
NNS  Nan Shan           0.71 324  eP      Pn      22 02 52.9 -0.7
     baz=324
NNS                               S       Sn      22 03 02.6 -0.9
     baz=324
LATG Datong             0.73 337  eP      Pn      22 02 53.8 +0.1
     baz=337
LATG                              eS      Sn      22 03 04.3 +0.4
     baz=337
TDCB Techi              0.73 302  P       Pn      22 02 54.3 +0.5
     baz=302
TDCB                              S       Sn      22 03 03.8 -0.2
     baz=302
TWC  Suao               0.74   1  eP      Pn      22 02 54.2 +0.4
     baz=9.0
TWC                               eS      Sn      22 03 05.1 +1.0
     baz=9.0
NDT  Datong Townshi     0.79 338  eP      Pn      22 02 52.9 -1.7
     baz=338
NDT                               eS      Sn      22 03 03.5 -1.8
     baz=338
ENTT Nioudou            0.81 342  eP      Pn      22 02 54.3 -0.5
     baz=335
ENTT                              eS      Sn      22 03 05.5 -0.3
     baz=335
WPL  Puli Township      0.82 281  P       Pn      22 02 55.3 +0.5
     baz=275
WPL                               eS      Sn      22 03 06.3 +0.5
     baz=275
FULB Fuli               0.83 217  eP      Pn      22 02 55.8 +0.8
     baz=209
FULB                              eS      Sn      22 03 06.9 +0.8
     baz=209
WCS  Beigang Elemen     0.87 283  eP      Pn      22 02 55.3 -0.2
     baz=278
TWE  Neicheng           0.87 350  eP      Pn      22 02 56.2 +0.7
     baz=344
TWE                               eS      Sn      22 03 08.4 +1.3
     baz=344
CHKT Chengkung          0.87 210  P       Pn      22 02 54.6 -1.0
     baz=200
CHKT                              eS      Sn      22 03 05.4 -1.8
     baz=200
YUS  Yu-Shan            0.89 246  P       Pn      22 02 56.8 +0.6
     baz=245
YUS                               S       Sn      22 03 08.3  0.0
     baz=245
TYC  Yuchr              0.90 273  eP      Pn      22 02 57.5 +1.6
     baz=272
TYC                               eS      Sn      22 03 08.4 +0.7
     baz=272
YHNB Yeheng             0.91 333  P       Pn      22 02 56.8 +0.6
     baz=332
YHNB                              eS      Sn      22 03 08.5 +0.4
     baz=332
WHP  Taichung City      0.91 297  eP      Pn      22 02 58.1 +1.9
     baz=302
WHP                               eS      Sn      22 03 09.1 +0.8
     baz=302
WHYT Xinyi Township     0.91 260  eP      Pn      22 02 57.5 +1.3
     baz=254
WHYT                              eS      Sn      22 03 10.7 +2.4
     baz=254
EHD  Haiduan            0.92 219  eP      Pn      22 02 54.4 -1.8
     baz=229
EHD                               eS      Sn      22 03 06.5 -1.7
     baz=229
NSK  Sanguang           0.92 332  eP      Pn      22 02 55.9 -0.4
     baz=332
NSK                               eS      Sn      22 03 07.8 -0.7
     baz=332
FUSB Fushanzhiwuyua     0.92 346  eP      Pn      22 02 57.3 +1.0
     baz=336
FUSB                              eS      Sn      22 03 08.9 +0.4
     baz=336
ELDTW Lidau             1.01 228  eP      Pn      22 02 57.4 -0.1
     baz=228
ELDTW                             eS      Sn      22 03 10.4 -0.2
     baz=228
ALS  Alishan            1.01 250  eP      Pn      22 02 58.5 +0.8
     baz=249
ALS                               eS      Sn      22 03 13.2 +2.4
     baz=249
NFF  Wufeng Townshi     1.01 320  eP      Pn      22 02 57.6 +0.1
     baz=319
NFF                               eS      Sn      22 03 10.1 -0.4
     baz=319
EDH  Donghe             1.01 209  P       Pn      22 02 57.0 -0.4
     baz=200
EDH                               S       Sn      22 03 09.9 -0.6
     baz=200
WWF  Wufeng             1.05 280  P       Pn      22 02 59.0 +1.0
     baz=280
NSTT Nanjuang           1.08 315  eP      Pn      22 03 00.2 +1.8
     baz=315
NSTT                              eS      Sn      22 03 13.6 +1.3
     baz=315
LIOB Emei               1.08 316  eP      Pn      22 03 00.4 +2.0
     baz=316
LIOB                              eS      Sn      22 03 14.3 +2.0
     baz=316
TWQ1 Liyutan            1.08 297  P       Pn      22 03 00.0 +1.6
     baz=296
TWQ1                              S       Sn      22 03 14.6 +2.3
     baz=296
TIPB Shuangxi           1.10 360  eP      Pn      22 03 00.3 +1.6
     baz=10.0
TIPB                              S       Sn      22 03 14.7 +1.8
     baz=10.0
NHDH Xindian Distri     1.13 346  eP      Pn      22 03 00.6 +1.5
     baz=335
NHDH                              eS      Sn      22 03 14.7 +1.2
     baz=335
WCHH Zhanghua           1.19 281  eP      Pn      22 03 01.5 +1.6
     baz=280
WCHH                              eS      Sn      22 03 18.7 +3.9
     baz=280
STYH Taoyuan            1.19 235  P       Pn      22 02 60.0 +0.1
     baz=228
STYH                              eS      Sn      22 03 15.8 +0.9
     baz=228
WDLH Douliu             1.20 262  eP      Pn      22 03 02.6 +2.6
     baz=262
WCKO Fanlu              1.20 250  eS      Sn      22 03 17.6 +2.3
     baz=249
SXI1 Grass Mountain     1.23   2  eP      Pn      22 03 03.2 +2.7
     baz=16
SXI1                              eS      Sn      22 03 20.1 +4.1
     baz=16
TPUB Ta-pu              1.24 243  eP      Pn      22 03 02.2 +1.6
     baz=243
TPUB                              eS      Sn      22 03 18.6 +2.5
     baz=243
CHN4 Tsaushan           1.25 246  eP      Pn      22 03 01.9 +1.2
     baz=246
CHN4                              eS      Sn      22 03 18.6 +2.2
     baz=246
WTP  Ta-pu              1.28 242  eS      Sn      22 03 19.7 +2.6
     baz=241
WRL  Guolierlin Hig     1.33 272  eP      Pn      22 03 02.1 +0.3
     baz=282
WRL                               eS      Sn      22 03 19.6 +1.2
     baz=282
TWK  Hsinying           1.37 245  eP      Pn      22 03 04.1 +1.7
     baz=244
TWK                               eS      Sn      22 03 22.1 +2.7
     baz=244
CHN1 Nanshi             1.38 241  eS      Sn      22 03 22.3 +2.8
     baz=240
TSMG Majia              1.59 224  eP      Pn      22 03 07.9 +2.5
     baz=223
TSMG                              eS      Sn      22 03 28.0 +3.3
     baz=223
```

NNC 29 22:51:03.0±3.2,37.11N×71.00E,h200km±55km,mb2.5,

mpv3.6,2C-4D,Error ellipse: s-maj=33.3km s-min=18.1km az=23.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.00**	**357**	⇓P	Pn	22 52 29.8	-0.4
	1.8nm,0.2s,baz=175,slow=12,SNR=140						
KK31				⇓S	S	22 53 40.0	+1.0
	1.3nm,0.3s						
CHMS	**Chumysh**	**6.55**	**25**	⇑P	Pn	22 52 37.4	+0.1
	2.4nm,0.3s						
TKM2	**Tokmak 2**	**6.79**	**30**	⇑P	Pn	22 52 40.5	-0.2
	1.0nm,0.3s						
TKM2				⇓S	S	22 53 58.7	+0.8
	1.2nm,0.6s						
AB31	**Akbulak array**	**14.55**	**330**	P	P	22 54 20.8	+0.1
	0.2nm,0.4s,baz=151,slow=12,SNR=13						
AB31				⇓S	S	22 56 59.3	-1.8
	0.2nm,0.3s,baz=158,slow=23,SNR=4.2						

ROM 29 23:00:47.6±0.1,42.°866N±0.°004×13.°221E±0.°004, h8^{km},ML1.5/6,1C,Error ellipse: s-maj=0.3km s-min=0.3km az=258.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**249**	P	Pg	23 00 49.4	0.0
T1245				S	Sg	23 00 50.1	-0.5
MC2	**Monte Cornacci**	**0.05**	**334**	P	Pg	23 00 49.7	+0.1
MC2				S	Sg	23 00 50.9	-0.2
AM05	**Amandola Campo**	**0.15**	**41**	P	Pg	23 00 51.5	+0.7
AM05				S	Sg	23 00 54.0	+1.0
AM05				AML	AML		
	comp=E,560μm,0.1s						
AM05				AML	AML		
	comp=N,106μm,0.1s						
AM05				AML	AML		
	comp=E,10720μm,0.2s						
AM05				AML	AML		
	comp=N,7635μm,0.2s						
AM05				AML	AML		
	comp=E,39050μm,0.2s						
AM05				AML	AML		
	comp=N,1520μm,1.6s						
AM05				AML	AML		
	comp=E,113μm,0.1s						
AM05				AML	AML		
	comp=E,396μm,0.1s						
AM05				AML	AML		
	comp=N,67μm,0.2s						
AM05				AML	AML		
	comp=N,210μm,0.1s						
T1216	**Preci, Frazion**	**0.15**	**280**	P	Pg	23 00 51.6	+0.8
T1216				AML	AML		
	comp=E,62200μm,1.1s						
T1216				AML	AML		
	comp=N,71750μm,0.3s						
T1241	**Roccafluvione,**	**0.15**	**93**	⇑P	Pg	23 00 51.4	+0.5
T1241				S	Sg	23 00 54.1	+0.9
T1241				AML	AML		
	comp=E,363μm,0.5s						
T1241				AML	AML		
	comp=N,757μm,0.6s						
T1241				AML	AML		
	comp=N,7270μm,0.6s						
T1241				AML	AML		
	comp=E,8860μm,0.3s						
T1241				AML	AML		
	comp=N,6695μm,0.5s						
T1241				AML	AML		
	comp=E,8885μm,0.3s						
T1241				AML	AML		
	comp=E,8615μm,0.3s						
T1241				AML	AML		
	comp=N,7265μm,0.5s						
T1204	**Amatrice, Fraz**	**0.20**	**160**	P	Pg	23 00 52.7	+0.9
T1204				S	Sg	23 00 56.4	+1.7
T1204				AML	AML		
	comp=E,22300μm,0.3s						
T1204				AML	AML		
	comp=N,8860μm,0.3s						
T1204				AML	AML		
	comp=E,22250μm,0.3s						
T1204				AML	AML		
	comp=N,8890μm,0.3s						
GUMA	**Gualdo di Mace**	**0.21**	**23**	P	Pg	23 00 53.0	+1.0
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.24**	**135**	P	Pg	23 00 53.1	+0.7
T1243				S	Sg	23 00 57.3	+1.6
SMA1	**SAN MARTINO**	**0.25**	**160**	P	Pg	23 00 53.4	+0.7
SMA1				S	Sg	23 00 57.7	+1.7
SMA1				AML	AML		
	comp=E,7330μm,0.5s						
SMA1				AML	AML		
	comp=N,8755μm,0.6s						
SMA1				AML	AML		
	comp=E,226μm,0.2s						
SMA1				AML	AML		
	comp=N,147μm,0.3s						
T1217	**Poggiodomo (PG**	**0.26**	**234**	P	Pg	23 00 53.7	+0.8
T1217				AML	AML		
	comp=E,7590μm,1.2s						
T1217				AML	AML		
	comp=N,11205μm,0.4s						
T1217				AML	AML		
	comp=E,7470μm,1.2s						
T1217				AML	AML		
	comp=N,10980μm,0.4s						
T1217				AML	AML		
	comp=N,10990μm,0.4s						
T1217				AML	AML		
	comp=E,7450μm,1.2s						
T1217				AML	AML		
	comp=N,11220μm,0.4s						
T1215	**Vallo di Nera,**	**0.27**	**256**	P	Pg	23 00 53.8	+0.8
T1215				AML	AML		
	comp=E,4075μm,0.5s						
T1215				AML	AML		
	comp=N,4650μm,0.9s						
T1215				AML	AML		
	comp=E,4300μm,0.4s						
T1215				AML	AML		
	comp=E,4070μm,0.5s						
T1215				AML	AML		
	comp=N,4610μm,0.3s						
LNSS	**Leonessa**	**0.29**	**207**	P	Pb	23 00 54.4	-0.8
LNSS				S	Sb	23 00 59.6	-0.7
LNSS				AML	AML		
	comp=E,8700μm,0.4s						
LNSS				AML	AML		
	comp=N,10200μm,0.9s						
LNSS				AML	AML		
	comp=E,367μm,0.2s						
LNSS				AML	AML		
	comp=N,358μm,0.3s						
RM33	**Pellescritta (**	**0.36**	**181**	P	Pb	23 00 55.7	-0.5
RM33				S	Sb	23 01 01.4	-0.7
RM33				AML	AML		
	comp=E,107μm,0.3s						
RM33				AML	AML		
	comp=N,87μm,1.5s						
RM33				AML	AML		
	comp=E,4135μm,0.3s						
RM33				AML	AML		
	comp=N,3565μm,0.4s						
RM33				AML	AML		
	comp=E,4150μm,0.3s						
RM33				AML	AML		
	comp=N,3600μm,0.4s						
RM33				AML	AML		
	comp=E,130μm,0.3s						
RM33				AML	AML		
	comp=E,107μm,0.3s						
RM33				AML	AML		
	comp=N,70μm,0.2s						
RM33				AML	AML		
	comp=N,88μm,0.2s						
CAMP	**Campotosto**	**0.36**	**157**	P	Pg	23 00 55.2	+0.5
CAMP				S	Sb	23 01 01.1	-1.0
CAMP				AML	AML		
	comp=E,7695μm,0.3s						
CAMP				AML	AML		
	comp=N,3145μm,0.3s						
CAMP				AML	AML		
	comp=E,143μm,0.2s						
CAMP				AML	AML		
	comp=N,85μm,0.2s						
TERO	**Teramo**	**0.37**	**131**	P	Pg	23 00 55.5	+0.6
TERO				S	Sb	23 01 01.7	-0.7
TERO				AML	AML		
	comp=E,3390μm,0.8s						
TERO				AML	AML		
	comp=N,2920μm,0.3s						
TERO				AML	AML		
	comp=E,3560μm,0.8s						
TERO				AML	AML		
	comp=N,3050μm,0.3s						
TERO				AML	AML		
	comp=N,93μm,0.3s						
TERO				AML	AML		
	comp=E,129μm,0.2s						
TERO				AML	AML		
	comp=E,144μm,0.2s						
TERO				AML	AML		
	comp=N,107μm,0.3s						
T1211	**Morro Reatino**	**0.43**	**219**	S	Sb	23 01 05.0	+0.9
T1247	**Pizzolo (AQ)**	**0.43**	**172**	S	Sb	23 01 04.0	-0.1
ARRO	**Arrone**	**0.44**	**230**	P	Pg	23 00 56.9	+0.7
ARRO				AML	AML		
	comp=E,3660μm,0.9s						
ARRO				AML	AML		
	comp=N,2260μm,0.5s						
ARRO				AML	AML		
	comp=N,2265μm,0.5s						
FIAM	**Fiamignano**	**0.60**	**187**	P	Pg	23 00 59.2	-0.1
FIAM				S	Sb	23 01 08.8	-0.3
FIAM				AML	AML		
	comp=N,1640μm,0.6s						
FIAM				AML	AML		
	comp=E,1465μm,0.4s						
ARVD	**Arcevia**	**0.66**	**342**	S	Sn	23 01 13.0	-1.0

*PRU **29** 23:01:32.8±0.0,43.°07N×12.°91E,h0^{km}*
*IDC **29** 23:01:33.1±1.9,43.°06N×13.°65E,h0^{km},mb3.2/1, mbtmp3.4/6,ML3.5/4,MS3.3/1,Error ellipse: s-maj=37.8km s-min=15.9km az=103.0*
*ROM **29** 23:01:34.1±0.0,43.°065N±0.°003×13.°067E±0.°004, h9^{km},ML3.3/69,Error ellipse: s-maj=0.3km s-min=0.2km az=60.0*

ISC 29 23:01:34.4±0.7,43.°07N±0.°01×13.°11E±0.°02,h10^{km}±4^{km}, n128,σ1°30/162,38C-19D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**205**	P	**Pg**	**23 01 35.9**	**-0.4**
FDMO				S	**Sg**	**23 01 36.8**	**-1.0**
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
CSP1	**Cessapalombo**	**0.07**	**73**	P	**Pg**	**23 01 37.0**	**+0.2**
CSP1				S	**Sg**	**23 01 38.9**	**+0.3**
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
FEMA	**Monte Fema**	**0.12**	**202**	⇑P	**Pg**	**23 01 37.4**	**0.0**
FEMA				S	**Sg**	**23 01 39.7**	**+0.2**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,58150μm,0.9s						
FEMA				AML	AML		
	comp=N,58150μm,0.9s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,47047μm,0.2s						
FEMA				AML	AML		
MDAR	**Monte D'Aria**	**0.12**	**11**	P	**Pg**	**23 01 37.6**	**+0.2**
MDAR				S	**Sg**	**23 01 40.0**	**+0.3**
MDAR				AML	AML		
	comp=E,30650μm,0.4s						
MDAR				AML	AML		
	comp=N,28750μm,0.6s						
MDAR				AML	AML		
	comp=E,30700μm,0.4s						
MDAR				AML	AML		
	comp=N,28750μm,0.6s						
MDAR				AML	AML		
	comp=E,28415μm,0.2s						
MDAR				AML	AML		
	comp=N,26374μm,0.6s						
PIO1	**Pioraco**	**0.14**	**319**	P	**Pg**	**23 01 37.6**	**-0.1**
PIO1				S	**Sg**	**23 01 39.9**	**-0.1**
PIO1				AML	AML		
	comp=E,17500μm,0.7s						
PIO1				AML	AML		
	comp=N,24900μm,0.7s						
PIO1				AML	AML		
	comp=E,17550μm,0.7s						
PIO1				AML	AML		
	comp=E,17524μm,0.7s						
PIO1				AML	AML		
	comp=N,24875μm,0.7s						
SEF1	**Sefro**	**0.14**	**303**	P	**Pg**	**23 01 37.5**	**-0.2**
SEF1				S	**Sg**	**23 01 39.6**	**-0.4**
SEF1				AML	AML		
	comp=E,60050μm,1.6s						
SEF1				AML	AML		
	comp=E,60050μm,1.6s						
SEF1				AML	AML		
	comp=N,56200μm,0.2s						
SEF1				AML	AML		
	comp=N,56209μm,0.2s						
SEF1				AML	AML		
	comp=E,51891μm,0.3s						
GUMA	**Gualdo di Mace**	**0.17**	**93**	P	**Pb**	**23 01 39.0**	**-0.5**
GUMA				S	**Sg**	**23 01 42.7**	**+2.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SSM1	**San Severino M**	**0.17**	**17**	P	**Pg**	**23 01 38.5**	**+0.4**
MC2	**Monte Cornacci**	**0.17**	**159**	⇑P	**Pg**	**23 01 38.5**	**+0.3**
MC2				S	**Sg**	**23 01 41.8**	**+1.0**
GAG1	**Gagliole**	**0.17**	**350**	⇑P	**Pg**	**23 01 38.5**	**+0.3**
GAG1				S	**Sg**	**23 01 41.7**	**+1.0**
GAG1				AML	AML		
	comp=N,57500μm,1.0s						
GAG1				AML	AML		
	comp=E,66250μm,0.6s						
GAG1				AML	AML		
	comp=E,66250μm,0.7s						
GAG1				AML	AML		
	comp=N,57450μm,1.0s						
GAG1				AML	AML		
	comp=E,66243μm,0.7s						
GAG1				AML	AML		
	comp=N,55130μm,0.4s						
FIU1	**Fiuminata**	**0.18**	**312**	P	**Pg**	**23 01 38.1**	**-0.1**
FIU1				S	**Sg**	**23 01 41.0**	**+0.1**
FIU1				AML	AML		
	comp=N,10750μm,0.4s						
FIU1				AML	AML		
	comp=E,9000μm,0.4s						
FIU1				AML	AML		
	comp=N,10700μm,0.4s						
FIU1				AML	AML		
	comp=N,10735μm,0.4s						
FIU1				AML	AML		
	comp=N,9143μm,0.3s						
FIU1				AML	AML		
	comp=E,7971μm,0.3s						
MTL1	**Matelica**	**0.20**	**339**	P	**Pg**	**23 01 38.9**	**+0.2**
MTL1				S	**Sg**	**23 01 42.5**	**+1.0**
MTL1				AML	AML		
	comp=E,43250μm,0.6s						
MTL1				AML	AML		
	comp=N,37900μm,0.4s						
MTL1				AML	AML		
	comp=E,43300μm,0.6s						
MTL1				AML	AML		
	comp=E,43291μm,0.6s						
MTL1				AML	AML		
	comp=N,37897μm,0.4s						
AM05	**Amandola Campo**	**0.20**	**118**	⇓P	**Pb**	**23 01 39.4**	**-0.7**
AM05				S	**Sg**	**23 01 43.2**	**+1.7**
AM05				AML	AML		
	comp=E,10715μm,0.2s						
AM05				AML	AML		
	comp=N,7640μm,0.2s						
AM05				AML	AML		
	comp=E,39050μm,0.2s						
AM05				AML	AML		
	comp=N,7635μm,0.2s						
AM05				AML	AML		
	comp=N,1520μm,1.6s						
AM05				AML	AML		
	comp=E,10725μm,0.2s						
AM05				AML	AML		
	comp=E,10710μm,0.2s						
AM05				AML	AML		
	comp=E,39062μm,0.1s						
AM05				AML	AML		
	comp=N,1476μm,0.1s						
AM05				AML	AML		
	comp=N,7637μm,0.2s						
SNTG	**Esanatoglia**	**0.22**	**326**	P	**Pg**	**23 01 39.0**	**0.0**
SNTG				S	**Sg**	**23 01 42.8**	**+0.6**
SNTG				AML	AML		
	comp=E,6815μm,0.6s						
SNTG				AML	AML		
	comp=N,8285μm,0.7s						
SNTG				AML	AML		
	comp=E,6660μm,0.5s						
SNTG				AML	AML		
	comp=N,8290μm,0.7s						
SNTG				AML	AML		
	comp=N,9050μm,0.7s						
SNTG				AML	AML		
	comp=N,6683μm,0.2s						
SNTG				AML	AML		
	comp=E,4749μm,0.2s						
SNTG				AML	AML		
	comp=E,4715μm,0.1s						
SNTG				AML	AML		
	comp=N,7077μm,0.3s						
T1245	**Castelsantange**	**0.22**	**165**	P	**Pg**	**23 01 39.4**	**+0.3**
T1245				S	**Sg**	**23 01 43.5**	**+1.3**
T1245				AML	AML		
	comp=N,47300μm,0.2s						
T1245				AML	AML		
	comp=N,44900μm,0.2s						
T1245				AML	AML		
	comp=E,49200μm,0.6s						
T1245				AML	AML		
	comp=N,48300μm,1.2s						
T1245				AML	AML		
	comp=E,47800μm,0.6s						
T1245				AML	AML		
	comp=N,46750μm,1.2s						
T1245				AML	AML		
	comp=N,44926μm,0.2s						
T1245				AML	AML		
	comp=E,42239μm,0.2s						
T1245				AML	AML		
	comp=E,42485μm,0.2s						
T1245				AML	AML		
	comp=N,47338μm,0.2s						
EL6	**Elcito**	**0.26**	**359**	P	**Pg**	**23 01 40.0**	**+0.3**
EL6				S	**Sg**	**23 01 44.5**	**+1.2**
EL6				AML	AML		
	comp=E,24700μm,0.2s						
EL6				AML	AML		
	comp=N,31300μm,0.3s						
EL6				AML	AML		
	comp=N,31286μm,0.3s						
EL6				AML	AML		
	comp=E,24690μm,0.2s						
MNTP	**Montappone**	**0.27**	**76**	P	**Pb**	**23 01 41.3**	**-0.1**
MNTP				AML	AML		
	comp=E,30200μm,0.2s						
MNTP				AML	AML		
	comp=N,25700μm,0.3s						
MNTP				AML	AML		
	comp=N,25654μm,0.3s						
MNTP				AML	AML		
	comp=E,30237μm,0.2s						
TRE1	**Treia**	**0.28**	**32**	P	**Pb**	**23 01 41.1**	**-0.5**
TRE1				AML	AML		
	comp=E,25500μm,0.5s						
TRE1				AML	AML		
	comp=N,21950μm,0.4s						
TRE1				AML	AML		
	comp=N,21950μm,0.4s						
TRE1				AML	AML		
	comp=E,25500μm,0.5s						
TRE1				AML	AML		
	comp=E,25530μm,0.5s						
TRE1				AML	AML		
	comp=N,21954μm,0.4s						
CING	**Cingoli**	**0.31**	**12**	⇑P	**Pg**	**23 01 41.1**	**+0.4**
CING				S	**Sb**	**23 01 46.4**	**-0.8**
CING				AML	AML		
	comp=N,9945μm,0.2s						
CING				AML	AML		
	comp=E,18400μm,0.2s						
CING				AML	AML		
	comp=N,9936μm,0.2s						
CING				AML	AML		
	comp=E,18421μm,0.2s						
T1241	**Roccafluvione,**	**0.32**	**132**	P	**Pg**	**23 01 41.1**	**+0.3**
T1241				AML	AML		
	comp=E,8625μm,0.3s						
T1241				AML	AML		
	comp=N,7270μm,0.6s						
T1241				AML	AML		
	comp=E,8880μm,0.3s						
T1241				AML	AML		
	comp=N,6695μm,0.5s						
T1241				AML	AML		
	comp=E,8860μm,0.3s						
T1241				AML	AML		
	comp=N,7265μm,0.5s						
T1241				AML	AML		
	comp=E,8650μm,0.3s						
T1241				AML	AML		
	comp=E,8885μm,0.3s						
T1241				AML	AML		
	comp=E,8882μm,0.3s						
T1241				AML	AML		
	comp=N,6256μm,0.5s						
T1241				AML	AML		
	comp=E,8639μm,0.3s						
T1241				AML	AML		
	comp=N,6263μm,0.4s						
T1215	**Vallo di Nera,**	**0.32**	**213**	⇑P	**Pg**	**23 01 40.9**	**+0.1**
T1215				S	**Sg**	**23 01 46.0**	**+0.9**
T1215				AML	AML		
	comp=E,4075μm,0.5s						
T1215				AML	AML		
	comp=E,4300μm,0.4s						
T1215				AML	AML		
	comp=N,4605μm,0.3s						
T1215				AML	AML		
	comp=N,4650μm,1.0s						
T1215				AML	AML		
	comp=N,4600μm,0.3s						
T1215				AML	AML		
	comp=E,4295μm,0.4s						
T1215				AML	AML		
	comp=E,4070μm,0.5s						
T1215				AML	AML		
	comp=E,3402μm,0.2s						
T1215				AML	AML		
	comp=E,3452μm,0.2s						
T1215				AML	AML		
	comp=N,4576μm,0.3s						
T1215				AML	AML		
	comp=N,4605μm,0.3s						
ASSB	**Assisi San Ben**	**0.33**	**265**	⇑P	**Pg**	**23 01 40.9**	**-0.1**
ASSB				S	**Sg**	**23 01 46.1**	**+0.6**
ASSB				AML	AML		
	comp=N,14150μm,0.4s						
ASSB				AML	AML		
	comp=E,12100μm,0.5s						

ASSB				AML	AML		
	comp=E,11676µm,0.4s						
ASSB				AML	AML		
	comp=N,12998µm,0.2s						
FOSV	**Fossato di Vic**	**0.34**	**311**	⇑P	**Pg**	**23 01 41.2**	**0.0**
FOSV				S	**Sg**	**23 01 46.6**	**+0.9**
FOSV				AML	AML		
	comp=E,5865µm,0.4s						
FOSV				AML	AML		
	comp=N,5000µm,1.4s						
FOSV				AML	AML		
	comp=N,4463µm,0.4s						
FOSV				AML	AML		
	comp=E,5865µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.36**	**289**	⇑P	**Pg**	**23 01 41.6**	**0.0**
ATCC				S	**Sg**	**23 01 47.5**	**+1.1**
ATCC				AML	AML		
	comp=E,12650µm,0.3s						
ATCC				AML	AML		
	comp=N,9300µm,0.4s						
ATCC				AML	AML		
	comp=E,12700µm,0.3s						
ATCC				AML	AML		
	comp=N,9310µm,0.4s						
ATCC				AML	AML		
	comp=N,8681µm,0.2s						
ATCC				AML	AML		
	comp=E,8946µm,0.4s						
MMUR	**Monte Murano**	**0.38**	**348**	P	**Pg**	**23 01 42.3**	**+0.4**
MMUR				AML	AML		
	comp=E,16500µm,0.3s						
MMUR				AML	AML		
	comp=E,16450µm,0.3s						
MMUR				AML	AML		
	comp=N,12350µm,1.1s						
MMUR				AML	AML		
	comp=N,11081µm,0.3s						
MMUR				AML	AML		
	comp=E,16468µm,0.3s						
T1217	**Poggiodomo (PG**	**0.38**	**200**	P	**Pg**	**23 01 42.1**	**+0.1**
T1217				S	**Sg**	**23 01 48.3**	**+1.2**
T1217				AML	AML		
	comp=E,7590µm,1.2s						
T1217				AML	AML		
	comp=N,11220µm,0.4s						
T1217				AML	AML		
	comp=E,7460µm,1.2s						
T1217				AML	AML		
	comp=N,10965µm,0.4s						
T1217				AML	AML		
	comp=N,11205µm,0.4s						
T1217				AML	AML		
	comp=E,7470µm,1.2s						
T1217				AML	AML		
	comp=N,10980µm,0.4s						
T1217				AML	AML		
	comp=E,7450µm,1.2s						
T1217				AML	AML		
	comp=N,10990µm,0.4s						
T1217				AML	AML		
	comp=N,11202µm,0.4s						
T1217				AML	AML		
	comp=N,10987µm,0.4s						
T1217				AML	AML		
	comp=E,6797µm,0.3s						
T1217				AML	AML		
	comp=E,6557µm,0.3s						
T1204	**Amatrice, Fraz**	**0.42**	**159**	⇓P	**Pg**	**23 01 43.1**	**+0.4**
T1204				S	**Sb**	**23 01 50.2**	**-0.3**
T1204				AML	AML		
	comp=E,22250µm,0.3s						
T1204				AML	AML		
	comp=N,8875µm,0.3s						
T1204				AML	AML		
	comp=E,22300µm,0.3s						
T1204				AML	AML		
	comp=N,8860µm,0.3s						
T1204				AML	AML		
	comp=N,8890µm,0.3s						
T1204				AML	AML		
	comp=N,8878µm,0.3s						
T1204				AML	AML		
	comp=E,22279µm,0.3s						
ARVD	**Arcevia**	**0.44**	**344**	⇑P	**Pg**	**23 01 43.2**	**0.0**
ARVD				AML	AML		
	comp=N,2950µm,0.7s						
ARVD				AML	AML		
	comp=E,5725µm,0.3s						
ARVD				AML	AML		
	comp=N,2692µm,0.3s						
ARVD				AML	AML		
	comp=E,5723µm,0.3s						
OFFI	**Offida**	**0.44**	**108**	P	**Pb**	**23 01 44.7**	**+0.4**
OFFI				AML	AML		
	comp=E,8690µm,1.0s						
OFFI				AML	AML		
	comp=N,14850µm,0.6s						
OFFI				AML	AML		
	comp=E,8148µm,0.3s						
OFFI				AML	AML		
	comp=N,14878µm,0.6s						
T1243	**Rocca Santa Ma**	**0.45**	**146**	P	**Pg**	**23 01 43.4**	**+0.2**
MURB	**Monte Urbino**	**0.47**	**294**	P	**Pg**	**23 01 43.5**	**0.0**
MURB				AML	AML		
	comp=E,9645µm,0.3s						
MURB				AML	AML		
	comp=N,6240µm,0.8s						
MURB				AML	AML		
	comp=E,10300µm,0.3s						
MURB				AML	AML		
	comp=E,9640µm,0.3s						
MURB				AML	AML		
	comp=N,6435µm,1.4s						
MURB				AML	AML		
	comp=N,6240µm,0.8s						
MURB				AML	AML		
	comp=N,6378µm,0.4s						
MURB				AML	AML		
	comp=N,5911µm,0.3s						
MURB				AML	AML		
	comp=E,10302µm,0.3s						
MURB				AML	AML		
	comp=E,9642µm,0.3s						
LNSS	**Leonessa**	**0.47**	**186**	⇑P	**Pg**	**23 01 43.6**	**0.0**
LNSS				AML	AML		
	comp=N,10200µm,0.9s						
LNSS				AML	AML		
	comp=E,8700µm,0.4s						
LNSS				AML	AML		
	comp=N,8837µm,0.4s						
LNSS				AML	AML		
	comp=E,8723µm,0.4s						
SMA1	**SAN MARTINO**	**0.47**	**159**	⇓P	**Pg**	**23 01 43.8**	**+0.2**
SMA1				AML	AML		
	comp=N,8755µm,0.6s						
SMA1				AML	AML		
	comp=E,7330µm,0.5s						
SMA1				AML	AML		
	comp=E,7335µm,0.5s						
SMA1				AML	AML		
	comp=N,8750µm,0.6s						
SMA1				AML	AML		
	comp=N,8761µm,0.6s						
SMA1				AML	AML		
	comp=E,7332µm,0.5s						
PP3	**Marolino**	**0.48**	**50**	P	**Pb**	**23 01 45.2**	**+0.4**
PP3				AML	AML		
	comp=E,13400µm,0.2s						
PP3				AML	AML		
	comp=N,14800µm,0.3s						
PP3				AML	AML		
	comp=N,14400µm,0.3s						
PP3				AML	AML		
	comp=E,13350µm,0.2s						
PP3				AML	AML		
	comp=E,13350µm,1.3s						
PP3				AML	AML		
	comp=E,12853µm,0.2s						
PP3				AML	AML		
	comp=N,14389µm,0.3s						
PP3				AML	AML		
	comp=N,14789µm,0.3s						
PP3				AML	AML		
	comp=E,13383µm,0.2s						
ATFO	**Monte Foce - G**	**0.49**	**307**	⇑P	**Pg**	**23 01 44.0**	**-0.1**
ATFO				AML	AML		
	comp=E,3355µm,0.6s						
ATFO				AML	AML		
	comp=N,3510µm,0.8s						
ATFO				AML	AML		
	comp=E,3352µm,0.6s						
ATFO				AML	AML		
	comp=N,3510µm,0.8s						
FRON	**Frontone**	**0.53**	**328**	⇑P	**Pg**	**23 01 44.5**	**-0.2**
FRON				AML	AML		
	comp=E,3110µm,0.7s						
FRON				AML	AML		
	comp=N,4320µm,0.3s						
FRON				AML	AML		
	comp=N,4318µm,0.3s						
FRON				AML	AML		
	comp=E,2472µm,0.3s						
ARRO	**Arrone**	**0.55**	**207**	⇑P	**Pg**	**23 01 45.0**	**-0.2**
ARRO				AML	AML		
	comp=E,3660µm,0.9s						
ARRO				AML	AML		
	comp=N,2265µm,0.5s						
ARRO				AML	AML		
	comp=N,2260µm,0.5s						
ARRO				AML	AML		
	comp=E,3450µm,0.3s						
ARRO				AML	AML		
	comp=N,1828µm,0.2s						
RM33	**Pellescritta (**	**0.57**	**172**	⇑P	**Pg**	**23 01 45.3**	**-0.1**
RM33				S	**Sb**	**23 01 55.0**	**+0.4**
RM33				AML	AML		
	comp=E,4135µm,0.3s						
RM33				AML	AML		
	comp=N,3565µm,0.4s						
RM33				AML	AML		
	comp=N,3600µm,0.4s						
RM33				AML	AML		
	comp=E,4150µm,0.3s						
RM33				AML	AML		
	comp=E,4145µm,0.3s						
RM33				AML	AML		
	comp=N,3565µm,0.4s						
RM33				AML	AML		
	comp=E,4140µm,0.3s						
RM33				AML	AML		
	comp=E,4136µm,0.3s						
RM33				AML	AML		
	comp=N,3601µm,0.4s						
RM33				AML	AML		
	comp=N,3228µm,0.3s						
RM33				AML	AML		
	comp=E,4147µm,0.3s						
ATTE	**AVT- Monte Tez**	**0.57**	**283**	⇑P	**Pg**	**23 01 45.1**	**-0.3**
ATTE				AML	AML		
	comp=E,1845µm,0.4s						
ATTE				AML	AML		
	comp=E,1850µm,0.4s						
ATTE				AML	AML		
	comp=N,1350µm,0.6s						
ATTE				AML	AML		
	comp=E,1849µm,0.4s						
ATTE				AML	AML		
	comp=N,1349µm,0.6s						
T1211	**Morro Reatino**	**0.57**	**199**	⇑P	**Pg**	**23 01 45.3**	**-0.2**
T1211				S	**Sb**	**23 01 55.0**	**+0.3**
T1211				AML	AML		
	comp=E,4280µm,0.4s						
T1211				AML	AML		
	comp=N,6755µm,1.5s						
T1211				AML	AML		
	comp=N,6800µm,1.5s						
T1211				AML	AML		
	comp=N,6745µm,1.5s						
T1211				AML	AML		
	comp=E,4330µm,0.4s						
T1211				AML	AML		
	comp=E,4275µm,0.4s						
T1211				AML	AML		
	comp=E,4327µm,0.4s						
T1211				AML	AML		
	comp=E,4277µm,0.4s						
T1211				AML	AML		
	comp=N,6684µm,0.3s						
T1211				AML	AML		
	comp=N,6699µm,0.3s						
TERO	**Teramo**	**0.58**	**141**	P	**Pg**	**23 01 45.5**	**-0.1**
TERO				AML	AML		
	comp=E,3395µm,0.8s						
TERO				AML	AML		
	comp=N,2920µm,0.3s						
TERO				AML	AML		
	comp=E,3560µm,0.8s						
TERO				AML	AML		
	comp=N,3050µm,0.3s						
TERO				AML	AML		
	comp=E,3390µm,0.8s						
TERO				AML	AML		
	comp=N,3050µm,0.3s						
TERO				AML	AML		
	comp=N,2920µm,0.3s						
TERO				AML	AML		
	comp=E,3046µm,0.3s						
TERO				AML	AML		
	comp=E,3258µm,0.3s						
CAMP	**Campotosto**	**0.58**	**157**	⇓P	**Pg**	**23 01 45.6**	**-0.1**
CAMP				AML	AML		
	comp=E,7695µm,0.3s						
CAMP				AML	AML		
	comp=N,3145µm,0.3s						
CAMP				AML	AML		
	comp=N,3145µm,0.3s						
CAMP				AML	AML		
	comp=E,7692µm,0.3s						
AOI	**Ancona**	**0.60**	**37**	⇑P	**Pb**	**23 01 46.7**	**-0.3**
AOI				AML	AML		
	comp=E,3740µm,0.3s						
AOI				AML	AML		
	comp=N,2760µm,0.3s						
AOI				AML	AML		
	comp=E,3745µm,0.3s						
AOI				AML	AML		
	comp=E,3742µm,0.3s						
AOI				AML	AML		
	comp=N,2761µm,0.3s						
ATVO	**AVT- Monte Val**	**0.60**	**301**	⇑P	**Pg**	**23 01 45.8**	**-0.3**
ATVO				AML	AML		
	comp=N,1795µm,0.6s						
ATVO				AML	AML		
	comp=E,1305µm,0.4s						
ATVO				AML	AML		
	comp=N,1796µm,0.6s						
ATVO				AML	AML		
	comp=E,1307µm,0.4s						
CESX	**Cesi**	**0.60**	**220**	⇑P	**Pg**	**23 01 45.7**	**-0.4**
CESX				AML	AML		
	comp=E,3925µm,0.4s						
CESX				AML	AML		
	comp=N,3350µm,0.3s						
CESX				AML	AML		
	comp=N,3352µm,0.3s						
CESX				AML	AML		
	comp=E,3928µm,0.4s						
MPAG	**Monte Paganucc**	**0.61**	**336**	⇑P	**Pg**	**23 01 46.2**	**-0.1**
MPAG				S	**Sb**	**23 01 57.0**	**+1.0**
MPAG				AML	AML		
	comp=E,2630µm,0.4s						
MPAG				AML	AML		
	comp=N,2520µm,1.2s						
MPAG				AML	AML		
	comp=E,2885µm,0.5s						
MPAG				AML	AML		
	comp=E,2890µm,0.5s						
MPAG				AML	AML		
	comp=N,2105µm,0.3s						
MPAG				AML	AML		
	comp=N,2202µm,0.3s						
MPAG				AML	AML		
	comp=N,2105µm,0.3s						
MPAG				AML	AML		
	comp=E,2634µm,0.4s						
MPAG				AML	AML		
	comp=E,2886µm,0.5s						
PIEI	**Pieia**	**0.63**	**318**	⇑P	**Pg**	**23 01 46.1**	**-0.4**
PIEI				S	**Sb**	**23 01 57.0**	**+0.7**
PIEI				AML	AML		
	comp=N,1520µm,0.4s						
PIEI				AML	AML		
	comp=E,1715µm,1.3s						
PIEI				AML	AML		
	comp=E,1690µm,0.2s						
PIEI				AML	AML		
	comp=N,1516µm,0.4s						
ATPI	**Pietralunga -**	**0.64**	**307**	⇑P	**Pg**	**23 01 46.6**	**-0.2**
ATPI				AML	AML		
	comp=N,1510µm,1.1s						
ATPI				AML	AML		
	comp=N,1515µm,1.1s						
ATPI				AML	AML		
	comp=E,1250µm,0.6s						
ATPI				AML	AML		
	comp=E,1250µm,0.6s						
ATPI				AML	AML		
	comp=N,1417µm,0.4s						
SENI	**Senigallia**	**0.64**	**8**	⇑P	**Pb**	**23 01 47.9**	**+0.3**
SENI				AML	AML		
	comp=E,13750µm,0.4s						
SENI				AML	AML		
	comp=E,13800µm,0.4s						
SENI				AML	AML		
	comp=N,15400µm,0.4s						
SENI				AML	AML		
	comp=E,3032µm,0.8s						
SENI				AML	AML		
	comp=E,13760µm,0.4s						
SENI				AML	AML		
	comp=N,2282µm,0.7s						
SENI				AML	AML		
	comp=N,15405µm,0.4s						
T1247	**Pizzolo (AQ)**	**0.64**	**167**	⇓P	**Pg**	**23 01 46.7**	**-0.1**
T1247				AML	AML		
	comp=E,4605µm,1.2s						
T1247				AML	AML		
	comp=E,4600µm,1.2s						
T1247				AML	AML		
	comp=N,3765µm,0.5s						
T1247				AML	AML		
	comp=N,3763µm,0.5s						
T1247				AML	AML		
	comp=E,3521µm,0.5s						
TRTR	**Tortoreto Alta**	**0.65**	**114**	P	**Pn**	**23 01 48.6**	**-1.0**
TRTR				AML	AML		
	comp=E,9295µm,0.5s						
TRTR				AML	AML		
	comp=N,8315µm,0.6s						
TRTR				AML	AML		
	comp=E,9294µm,0.5s						
TRTR				AML	AML		
	comp=N,8319µm,0.6s						
FSSB	**Fossombrone**	**0.67**	**339**	⇑P	**Pg**	**23 01 47.2**	**-0.1**
FSSB				S	**Sb**	**23 01 59.0**	**+1.5**
FSSB				AML	AML		
	comp=E,6740µm,0.4s						
FSSB				AML	AML		
	comp=N,10770µm,0.3s						
FSSB				AML	AML		
	comp=E,6745µm,0.4s						
FSSB				AML	AML		
	comp=E,6744µm,0.4s						
FSSB				AML	AML		
	comp=N,10776µm,0.3s						
ATMI	**Monte Miggiano**	**0.67**	**293**	⇓P	**Pb**	**23 01 49.0**	**+0.8**
ATMI				AML	AML		
	comp=E,2850µm,0.4s						
ATMI				AML	AML		
	comp=N,2825µm,0.3s						
ATMI				AML	AML		
	comp=N,2825µm,0.3s						
ATMI				AML	AML		
	comp=E,2850µm,0.4s						
APEC	**Apecchio**	**0.70**	**314**	⇓P	**Pg**	**23 01 48.4**	**+0.4**
APEC				AML	AML		
	comp=E,433µm,0.3s						
APEC				AML	AML		
	comp=N,1602µm,0.6s						
APEC				AML	AML		
	comp=N,549µm,0.6s						
GIGS	**Gran Sasso**	**0.71**	**151**	P	**Pg**	**23 01 47.7**	**-0.3**
GIGS				S	**Sn**	**23 01 60.0**	**-1.5**
AQU	**L'Aquila**	**0.75**	**163**	S	**Sn**	**23 02 02.0**	**-0.5**
MGAB	**Montegabbione**	**0.75**	**258**	⇑P	**Pg**	**23 01 48.3**	**-0.5**
MGAB				AML	AML		
	comp=E,2440µm,0.5s						
MGAB				AML	AML		
	comp=N,2150µm,0.3s						
MGAB				AML	AML		
	comp=N,2195µm,0.5s						
MGAB				AML	AML		
	comp=E,2100µm,0.4s						
MGAB				AML	AML		
	comp=E,2438µm,0.5s						
MGAB				AML	AML		
	comp=E,2101µm,0.4s						
MGAB				AML	AML		
	comp=N,2149µm,0.3s						
MGAB				AML	AML		
	comp=N,2197µm,0.5s						
PE3	**Peglio**	**0.77**	**325**	⇑P	**Pg**	**23 01 49.2**	**0.0**
PE3				AML	AML		
	comp=E,16µm,0.4s						
PE3				AML	AML		
	comp=N,19µm,0.5s						
PE3				AML	AML		
	comp=N,20µm,0.5s						
PE3				AML	AML		
	comp=E,16µm,0.4s						
PE3				AML	AML		
	comp=E,15µm,0.1s						
PE3				AML	AML		
	comp=N,19µm,0.1s						
BADI	**Badiali**	**0.77**	**305**	⇑P	**Pg**	**23 01 49.0**	**-0.3**
BADI				AML	AML		
	comp=E,86µm,0.3s						
BADI				AML	AML		
	comp=N,1008µm,0.5s						
BADI				AML	AML		
	comp=E,88µm,0.3s						
BADI				AML	AML		
	comp=N,1004µm,0.5s						
FIAM	**Fiamignano**	**0.80**	**180**	⇑P	**Pg**	**23 01 49.1**	**-0.7**
FIAM				S	**Sb**	**23 02 02.0**	**+0.6**
FIAM				AML	AML		
	comp=N,1645µm,0.6s						
FIAM				AML	AML		
	comp=N,1640µm,0.6s						
FIAM				AML	AML		
	comp=E,1590µm,0.6s						
FIAM				AML	AML		
	comp=N,1640µm,0.6s						
FIAM				AML	AML		
	comp=E,1587µm,0.6s						
VCEL	**Villa Celiera**	**0.86**	**141**	⇓P	**Pg**	**23 01 51.0**	**-0.1**
VCEL				AML	AML		
	comp=E,3035µm,1.6s						
VCEL				AML	AML		
	comp=N,2440µm,0.4s						
VCEL				AML	AML		
	comp=E,2839µm,0.4s						
VCEL				AML	AML		
	comp=N,2438µm,0.4s						
SSP9	**Sansepolcro**	**0.87**	**306**	⇑P	**Pg**	**23 01 51.2**	**0.0**
SSP9				AML	AML		
	comp=N,1135µm,0.6s						
SSP9				AML	AML		
	comp=E,897µm,0.6s						
CAFI	**Castiglion Fio**	**0.88**	**288**	P	**Pg**	**23 01 50.9**	**-0.4**
CAFI				AML	AML		
	comp=E,850µm,0.5s						
CAFI				AML	AML		
	comp=N,857µm,0.5s						
CAFI				AML	AML		
	comp=N,836µm,0.5s						
CAFI				AML	AML		
	comp=N,857µm,0.5s						
CAFI				AML	AML		
	comp=E,849µm,0.5s						
CAFI				AML	AML		
	comp=E,831µm,0.5s						
FAGN	**Fagnano**	**0.88**	**156**	⇓P	**Pg**	**23 01 50.5**	**-0.8**
FAGN				AML	AML		
	comp=E,4725µm,0.5s						
FAGN				AML	AML		
	comp=N,4550µm,1.5s						
FAGN				AML	AML		
	comp=N,4447µm,0.4s						
FAGN				AML	AML		
	comp=E,4721µm,0.5s						
SACS	**San Casciano d**	**0.91**	**256**	⇑P	**Pg**	**23 01 51.9**	**0.0**

SACS AML AML
comp=E,752μm,0.5s
SACS AML AML
comp=E,734μm,0.5s
SACS AML AML
comp=E,752μm,0.5s
SACS AML AML
comp=E,735μm,0.5s
SACS AML AML
comp=N,1260μm,0.4s
SACS AML AML
comp=E,752μm,0.5s
SACS AML AML
comp=N,1205μm,0.4s
SACS AML AML
comp=E,735μm,0.5s
CPGN Carpegna, Ital 0.93 322 ⇑P **Pn 23 01 53.4 -0.2**
CPGN AML AML
comp=N,1434μm,0.7s
CPGN AML AML
comp=E,1290μm,0.6s
CPGN AML AML
comp=E,1435μm,0.5s
CPGN AML AML
comp=N,1455μm,0.5s
CPGN AML AML
comp=E,1291μm,0.6s
CPGN AML AML
comp=E,1434μm,0.5s
CPGN AML AML
comp=N,1454μm,0.5s
CPGN AML AML
comp=N,1436μm,0.7s
SRES S.Oreste - Sor 0.94 208 P **Pg 23 01 51.5 -1.0**
SRES AML AML
comp=N,1105μm,1.3s
SRES AML AML
comp=E,1520μm,1.6s
SRES AML AML
comp=N,1098μm,0.6s
SRES AML AML
comp=E,1361μm,0.6s
T0110 Collepietro 0.98 149 ⇓P **Pg 23 01 52.5 -0.8**
T0110 AML AML
comp=N,3040μm,0.4s
T0110 AML AML
comp=E,2805μm,0.5s
T0110 AML AML
comp=N,3041μm,0.4s
CRE Caprese Michel 1.01 303 ⇑P **Pb 23 01 54.1 +0.1**
CRE AML AML
comp=N,768μm,0.5s
CRE AML AML
comp=E,526μm,0.8s
CRE AML AML
comp=N,768μm,1.5s
PTQR Pietraquaria 1.07 168 P **Pb 23 01 54.7 -0.3**
PTQR AML AML
comp=N,751μm,0.8s
PTQR AML AML
comp=E,586μm,1.0s
PTQR AML AML
comp=E,564μm,0.7s
PTQR AML AML
comp=N,751μm,0.8s
MTCE Montecelio 1.08 195 P **Pb 23 01 53.7 -1.5**
MTCE AML AML
comp=E,1485μm,0.5s
MTCE AML AML
comp=N,737μm,0.8s
MTCE AML AML
comp=E,1485μm,0.5s
MTCE AML AML
comp=N,737μm,0.8s
MCIV Monte Civitell 1.09 255 P **Pn 23 01 56.3 +0.5**
MCIV AML AML
comp=N,296μm,0.6s
MCIV AML AML
comp=E,389μm,0.7s
MCIV AML AML
comp=N,295μm,0.6s
MCIV AML AML
comp=E,389μm,0.7s
CERT Cerreto 1.12 185 ⇓P **Pb 23 01 55.3 -0.6**
CERT AML AML
comp=E,1685μm,1.2s
CERT AML AML
comp=N,1225μm,0.5s
CERT AML AML
comp=E,1627μm,0.5s
CERT AML AML
comp=N,1227μm,0.5s
BLLA Bellaria 1.17 337 ⇑P **Pg 23 01 58.1 +1.3**
ASQU Asqua 1.21 307 ⇓P **Pn 23 01 57.4 +0.1**
ASQU AML AML
comp=E,454μm,1.0s
ASQU AML AML
comp=N,331μm,0.5s
ASQU AML AML
comp=N,331μm,0.5s
ASQU AML AML
comp=E,402μm,0.8s
CAFR Castel Frentan 1.24 132 ⇑P **Pg 23 02 00.0 +1.8**
LPEL Lama dei Pelig 1.29 142 ⇓P **Pg 23 02 00.3 +1.0**
TOLF Tolfa 1.30 220 ⇓P **Pn 23 01 58.1 -0.5**
TOLF AML AML
comp=E,430μm,0.9s
TOLF AML AML
comp=N,446μm,0.4s
TOLF AML AML
comp=N,446μm,0.4s
TOLF AML AML
comp=E,414μm,0.5s
RDP Rocca di Papa 1.34 193 ⇑P **Pb 23 01 59.6 -0.1**
RDP AML AML
comp=E,2430μm,0.5s
RDP AML AML
comp=N,2900μm,0.5s
RDP AML AML
comp=N,2901μm,0.5s
RDP AML AML
comp=E,2430μm,1.5s
RUFI Rufina 1.40 304 ⇓P **Pg 23 02 02.4 +1.2**
LMD Lutirano 1.43 315 ⇓P **Pg 23 02 02.6 +0.7**
TRIV Trivento 1.68 140 ⇑P **Pg 23 02 07.1 +0.4**
MTCR Monte La Croce 1.81 303 ⇓P **Pn 23 02 06.6 +0.9**
VAGA Valle Agricola 1.85 153 ⇑P **Pg 23 02 10.2 +0.2**
BRJN Brijuni 1.89 14 ⇓P **Pn 23 02 07.7 +1.0**
PAOL Paolisi 2.31 151 S **Sn 23 02 41.0 0.0**
SGRT San Giovanni R 2.35 123 ⇑P **Pb 23 02 15.1 -1.8**
CEY Cerknica 2.83 19 *e*Pn **Pn 23 02 20.0 +0.4**
SABO M.te Sabotino 2.93 7 ⇓P **Pn 23 02 21.9 +0.8**
SABO AML AML
comp=E,1072μm,0.5s
SABO AML AML
comp=E,240μm,0.7s
SABO AML AML
comp=N,381μm,1.6s
SABO AML AML
comp=N,1500μm,1.6s
SRKY Kupres RS 3.11 70 *e*Pn **Pn 23 02 26.2 +2.6**
MGRS Mrkonjic Grad 3.18 64 *e*Pn **Pn 23 02 25.7 +1.3**
A051A Mrakovica 3.36 53 *e*Pn **Pb 23 02 30.3 -3.7**
STON Ston 3.38 92 *e*Pn **Pn 23 02 26.9 -0.2**
BLY Banja Luka 3.39 59 *e*Pn **Pb 23 02 31.6 -2.9**
MYKA Terra Mystica 3.58 6 *i* Pn **Pn 23 02 31.7 +1.7**
comp=N,1.9nm,0.2s
OBKA Obir 3.59 16 *e*Pn **Pn 23 02 31.3 +1.2**
OBKA Obir 3.59 16 *i* Pn **Pn 23 02 31.6 +1.5**
comp=N,0.9nm,0.2s,SNR=10
ABTA Abfaltersbach 3.70 354 *i* Pn **Pn 23 02 33.7 +2.0**
comp=N,7.2nm,0.3s,SNR=12
TREB Trebinje 3.87 93 *e*Pn **Pn 23 02 36.1 +2.2**
BRY Bratogost 3.99 91 *e*Pn **Pn 23 02 38.1 +2.4**
FETA Feichten 4.29 338 Pn **Pn 23 02 43.0 +3.1**
comp=N,9.2nm,0.5s,SNR=16
WTTA Wattenberg 4.32 347 *i* Pn **Pn 23 02 43.2 +3.0**
comp=N,2.9nm,0.2s
DAVOX Davos/Dischmat 4.36 329 Pn **Pn 23 02 44.1 +3.3**
comp=N,4.5nm,0.3s,baz=145,slow=15,SNR=30
DAVOX Sn **Sb 23 03 38.4 -5.5**
comp=N,0.2nm,0.3s,baz=114,slow=20,SNR=1.5
comp=N,11nm,0.4s
SQTA Sankt Quirin 4.36 343 *e*Pn **Pn 23 02 43.8 +3.0**
comp=N,4.5nm,0.3s,SNR=17
HAPS Han Pijesak,BI 4.36 75 *e*Pn **Pn 23 02 41.2 +0.4**
WATA Walderalm 4.40 346 *e*Pn **Pn 23 02 44.0 +2.7**
comp=N,6.4nm,0.3s
ARSA Arzberg 4.51 21 *i* Pn **Pn 23 02 43.4 +0.6**
comp=N,1.4nm,0.2s,SNR=6.0
DRME Dracevica, Mon 4.57 99 *e*Pn **Pn 23 02 45.0 +1.5**
RUDO Rudo 4.60 81 *e*Pn **Pn 23 02 45.4 +1.5**
BIOA Bad Ischl, Aus 4.64 4 *i* Pn **Pn 23 02 46.8 +2.4**
comp=N,7.4nm,0.3s,SNR=5.0
BBLS Lazići 4.65 78 *e*Pn **Pn 23 02 46.7 +2.0**
RETA Reutte 4.72 340 *i* Pn **Pn 23 02 48.9 +3.2**
comp=N,2.9nm,0.3s,SNR=7.3
DAVA Damuels 4.79 333 *e*Pn **Pn 23 02 50.5 +3.7**
comp=N,5.7nm,0.5s,SNR=11
MOA Molln 4.85 9 *i* Pn **Pn 23 02 49.0 +1.6**
comp=N,2.1nm,0.3s,SNR=11
DIVS Divibare 5.10 76 *e*Pn **Pn 23 02 53.7 +2.8**
CONA Conrad Observa 5.23 21 *i* Pn **Pn 23 02 53.7 +1.0**
comp=N,1.3nm,0.2s,SNR=8.1
FRGS Fruska Gora 5.26 64 *e*Pn **Pn 23 02 50.1 -2.9**
GERES GERESS Array B 5.79 4 Pn **Pn 23 03 01.4 +1.1**
comp=N,0.9nm,0.3s,baz=175,slow=13,SNR=27
GERES Sn **Sn 23 04 06.0 -0.9**
comp=N,1.8nm,0.3s,baz=176,slow=26,SNR=9.5
comp=N,0.9nm,0.3s
CKRC Cesky Krumlov 5.81 8 *e*PN **Pn 23 03 00.9 +0.3**
CKRC *e*SN **Sn 23 04 05.6 -1.6**
KHC Kasperske Hory 6.07 3 *e*PN **Pn 23 03 05.2 +1.0**
KHC *e*SN **Sn 23 04 11.7 -2.0**
VRAC Vranov 6.69 20 Pn **Pn 23 03 12.1 -0.5**
comp=N,0.2nm,0.3s,baz=203,slow=13,SNR=1.5
VRAC Sn **Sn 23 04 26.4 -2.5**
comp=N,0.2nm,0.3s,baz=283,slow=20,SNR=1.7
comp=N,0.5nm,0.3s
PRU Pruhonice 6.99 8 *e*SN **Sn 23 04 33.6 -2.6**
NKC Novy Kostel 7.18 357 *e*SN **Sn 23 04 40.5 -0.4**
CLL Collm 8.24 360 *e*Pn **Pn 23 03 33.0 -0.9**
CLL *e*x x 23 03 39.0
CLL *e*Sn Sn 23 04 47.0 -20
CLL *e*x x 23 05 13.0
CLL *e*x x 23 05 31.0
CLL *e*Sg **Sg 23 05 57.0 -1.7**
EKA Eskdalemuir Ar 16.18 325 Pn **P 23 05 24.2 -0.7**
baz=134,slow=14
comp=N,0.4nm,0.6s
NOA NORSAR Array B 18.03 357 P **P 23 05 46.3 +0.9**
comp=N,1.1nm,0.8s,baz=176,slow=11,SNR=2.0
MMAI Mount Meron Ar 20.17 112 LR LR 23 15 00.2
comp=N,94nm,20.0s,baz=113,slow=41
TORD Torodi Ar. Bea 31.41 202 P **P 23 07 56.6 +1.0**
comp=N,0.2nm,0.5s,baz=13,slow=8.9,SNR=2.1
comp=N,0.2nm,0.5s

*IDC **29** 23:02:44.6±2.1, 27°.77N×140°.02E, h454km±52km, mb2.7/3, mbtmp3.5/5, Error ellipse: s-maj=160.7km s-min=20.6km az=81.0*
*JMA **29** 23:02:47.6±0.2, 28°N±2°×14°1E±°, h463km, MV3.7/17, W OFF OGASAWARA*
ISC 29 23:02:45.1±1.0, 27°.7N±0°.1×139°.8E±0°.2, h450km, n10, σ1°69/12, mb2.8/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.21**	**105**	*e*P	**P**	**23 03 47.9**	**+1.0**
CBIJ				*e*S	**S**	**23 04 35.3**	**-1.6**
JCJ	**Chichijima**	**2.21**	**105**	P	**P**	**23 03 47.6**	**+0.7**
23nm,0.4s,baz=253,slow=18,SNR=62							
JCJ				S	**S**	**23 04 35.4**	**-1.6**
132nm,0.4s,baz=270,slow=20,SNR=19							
JHH2	**Haha-jima-NKT2**	**2.37**	**115**	*e*S	**S**	**23 04 38.4**	**-0.3**
JIE	**Ise**	**7.20**	**339**	*e*P	**P**	**23 04 35.8**	**+4.0**
JAG	**Ashikaga**	**8.73**	**358**	*e*P	**P**	**23 04 47.1**	**-1.2**
JHO	**Hitachi**	**8.93**	**4**	*e*P	**P**	**23 04 50.6**	**+0.2**
MJAR	**Matsushiro Arr**	**8.94**	**352**	P	**P**	**23 04 50.1**	**-0.5**
0.8nm,0.4s,baz=167,slow=12,SNR=4.3							
WRA	**Warramunga Arr**	**47.63**	**187**	P	**P**	**23 10 38.9**	**-0.3**
0.2nm,0.6s,baz=4.4,slow=7.6,SNR=4.7							
0.2nm,0.6s							
ASAR	**Alice Springs**	**51.36**	**187**	P	**P**	**23 11 07.0**	**+0.2**
0.1nm,0.4s,baz=18,slow=13,SNR=1.5							
0.1nm,0.4s							
FINES	**FINESS Array B**	**76.47**	**333**	P	**P**	**23 13 46.1**	**-1.1**
0.6nm,0.3s,baz=68,slow=4.9,SNR=6.5							
0.6nm,0.3s							

*IDC **29** 23:04:12.5±0.3, 2°.88N×99°.24E, h174km±3km, mb3.7/19, mbtmp4.1/20, Error ellipse: s-maj=17.4km s-min=9.6km az=57.0*
*DJA **29** 23:04:13.3±0.2, 3°N±4°×9°9E±°, h175km±3km, M4.1/10, mb4.4/8, mB5.9/1, MLv3.9/10, Mw(mB)5.5/1, MwMwp5.9/1, Mwp5.9/1*
*NEIC **29** 23:04:13.4±1.2, 2°.84N±0°.06×99°.18E±0°.06, h180km±4km, mb4.3/39, Error ellipse: s-maj=9.4km s-min=8.5km az=115.0*
ISC 29 23:04:12.8±0.5, 2°.83N±0°.04×99°.15E±0°.04, h180km±4km, n98, σ1°19/118, mb4.1/37, 2C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.23**	**263**	P	**Pn**	**23 04 37.4**	**+0.5**
998nm,0.3s,baz=20,slow=12,SNR=1033							
PSI				S	**Sn**	**23 04 55.5**	**+0.2**
115nm,0.7s,baz=205,slow=21,SNR=41							
PSI	**Prapat**	**0.23**	**263**	P	**Pn**	**23 04 37.2**	**+0.3**
RPSI	**Rantau Prapat**	**0.26**	**240**		**Pn**	**23 04 37.7**	**+0.8**
RPSI				Sn	**Sn**	**23 04 55.5**	**+0.3**
RPSI	**Rantau Prapat**	**0.26**	**240**		**Pn**	**23 04 37.4**	**+0.6**
TRSI	**Tarutung**	**0.82**	**194**	P	**Pn**	**23 04 40.2**	**+0.7**
TSI	**Tuntungan**	**0.89**	**319**	P	**Pn**	**23 04 40.1**	**+0.4**
SBSI	**Sibolga**	**1.30**	**192**	P	**Pn**	**23 04 44.9**	**+1.9**
KCSI	**Kotacane, Aceh**	**1.54**	**297**	P	**Pn**	**23 04 45.4**	**+0.2**
KCSI				S	**Sn**	**23 05 09.3**	**-0.9**
MNSI	**Mandailing Nat**	**2.06**	**168**	P	**Pn**	**23 04 51.5**	**+0.9**
GSI	**Gunungsitoli**	**2.19**	**226**	Pn	**Pn**	**23 04 52.2**	**+0.3**
GSI				Sn	**Sn**	**23 05 20.3**	**-2.0**
GSI	**Gunungsitoli**	**2.19**	**226**	P	**Pn**	**23 04 51.9**	**0.0**
GSI				S	**Sn**	**23 05 21.1**	**-1.2**
IPM	**Ipoh**	**2.49**	**49**	Pn	**Pn**	**23 04 56.3**	**+0.9**
IPM				Sn	**Sn**	**23 05 27.5**	**-1.1**
KULM	**Kulim**	**2.87**	**31**	Pn	**Pn**	**23 04 59.8**	**0.0**
MLSI	**Meulaboh, Aceh**	**3.09**	**298**	P	**Pn**	**23 05 02.5**	**-0.1**
MLSI				S	**Sn**	**23 05 39.4**	**-2.0**
BKNI	**Bangkinang**	**3.12**	**143**		**Pn**	**23 05 03.5**	**+0.6**
BKNI	**Bangkinang**	**3.12**	**143**	P	**Pn**	**23 05 04.0**	**+1.1**
BKNI				S	**Sn**	**23 05 42.6**	**+0.5**
LHMI	**Lhok Sumawe**	**3.24**	**317**	Pn	**Pn**	**23 05 05.6**	**+1.1**
LHMI	**Lhok Sumawe**	**3.24**	**317**	P	**Pn**	**23 05 05.0**	**+0.5**
SDSI	**Sungai Dareh**	**4.37**	**149**	P	**Pn**	**23 05 19.2**	**+0.5**
DSRI	**Dabo**	**6.34**	**121**	P	**Pn**	**23 05 46.1**	**+1.8**
0.1nm44nm,0.8s							
MNAI	**Manna**	**8.09**	**152**	Pn	**Pn**	**23 06 04.6**	**-2.8**
PBA	**Port Blair**	**10.83**	**324**	Pn	**Pn**	**23 06 39.9**	**-3.3**
TNG	**Tangerang**	**11.66**	**140**	P	**Pn**	**23 06 55.6**	**+1.6**
37μm8μm425nm,0.5s							
CMAR	**Chiang Mai Arr**	**15.54**	**359**	P	**P**	**23 07 44.8**	**+1.7**
1.5nm,0.5s,baz=190,slow=11,SNR=11							
JAGI	**Jajag, Banyuwa**	**18.70**	**127**	P	**P**	**23 08 18.8**	**+1.0**
JAGI				IAmb	IAmb	23 08 40.2	
comp=Z,27nm,1.3s							
PALK	**Pallekele**	**18.90**	**284**	P	**Pn**	**23 08 22.5**	**-0.2**
comp=Z,6.1nm,0.7s,baz=194,slow=19,SNR=2.1							
PALK				S	**S**	**23 11 43.0**	**-2.4**
comp=Z,5.9nm,0.8s,baz=114,slow=20,SNR=2.2							
PALK	**Pallekele**	**18.90**	**284**	P	**P**	**23 08 21.0**	**+1.0**
PALK				IAmb	IAmb	23 08 32.0	
comp=Z,22nm,1.2s							
SRBI	**Singaraja**	**19.34**	**124**	P	**Pn**	**23 08 26.9**	**-1.0**
comp=Z,30nm,0.6s							
TWSI	**Taliwang, Sumb**	**21.08**	**123**	P	**P**	**23 08 43.4**	**+0.1**
comp=Z,9.9nm,0.5s							
TOLI2	**Tolitoli**	**21.68**	**94**	P	**P**	**23 08 49.4**	**-0.3**
TOLI2				IAmb	IAmb	23 08 58.3	
comp=Z,7.0nm,0.8s							
PLAI	**Plampang**	**21.88**	**122**	P	**P**	**23 08 51.7**	**0.0**
comp=Z,24nm,0.7s							
BKSI	**Bulukumba**	**22.46**	**111**	P	**P**	**23 08 59.3**	**+2.1**
comp=Z,30nm,0.8s							
BSSI	**Bau Bau, Buton**	**23.10**	**113**	P	**P**	**23 09 03.7**	**+0.7**
WB0	**Warramunga Arr**	**41.25**	**124**	P	**P**	**23 11 40.1**	**-0.5**
WB0				IAmb	IAmb	23 11 58.7	
comp=Z,8.2nm,1.3s							
WRA	**Warramunga Arr**	**41.29**	**125**	P	**P**	**23 11 40.5**	**-0.5**
comp=Z,2.4nm,0.5s,baz=300,slow=9.3,SNR=41							
WRA				PcP	**PcP**	**23 13 36.0**	**-0.2**
comp=Z,0.7nm,0.7s,baz=309,slow=2.9,SNR=3.6
WRA ScP **ScP 23 17 08.6 -0.7**
comp=Z,0.6nm,0.9s,baz=318,slow=3.4,SNR=2.4
WRA S **S 23 17 36.0 -5.8**
comp=Z,0.5nm,0.9s,baz=302,slow=15,SNR=2.6
comp=Z,2.4nm,0.5s
WRA Warramunga Arr 41.29 125 P **P 23 11 40.5 -0.5**
AS31 Alice Springs 42.87 130 P **P 23 11 53.3 -0.5**
ASAR Alice Springs 42.87 130 P **P 23 11 53.4 -0.3**
comp=Z,1.0nm,0.4s,baz=302,slow=7.7,SNR=28
ASAR PcP **PcP 23 13 41.4 0.0**
comp=Z,0.5nm,0.8s,baz=317,slow=3.9,SNR=3.0
ASAR ScP **ScP 23 17 14.7 -0.8**
comp=Z,0.3nm,0.7s,baz=308,slow=4.6,SNR=2.1
ASAR S **S 23 17 59.8 -5.1**
comp=Z,0.3nm,0.7s,baz=306,slow=15,SNR=2.9
comp=Z,1.0nm,0.4s
KSRS Korea Array 43.41 34 P **P 23 11 57.6 -0.2**
comp=Z,0.8nm,0.5s,baz=239,slow=7.5,SNR=2.8
comp=Z,0.8nm,0.5s
NRN Naryn 43.71 335 P **P 23 12 00.6 +0.1**
DRK Karamyk 44.14 329 P **P 23 12 04.4 +0.4**
GAR Garm 44.56 328 P **P 23 12 06.9 -0.1**
GAR IAmb IAmb 23 12 08.9
comp=Z,4.5nm,0.6s
BTK Batken 45.08 329 P **P 23 12 11.9 +0.8**
BTK IAmb IAmb 23 12 16.5
comp=Z,2.9nm,0.6s
SONM Songino Array 45.27 7 P **P 23 12 12.8 +0.3**
comp=Z,1.3nm,0.7s,baz=192,slow=9.7,SNR=8.1
SONM pP **pP 23 12 50.6 -1.3**
comp=Z,0.6nm,0.5s,baz=188,slow=8.6,SNR=4.2
SONM PcP **PcP 23 13 49.8 +0.5**
comp=Z,0.6nm,0.4s,baz=197,slow=4.4,SNR=6.6
comp=Z,1.3nm,0.7s
SONM Songino Array 45.27 7 P **P 23 12 12.5 0.0**
ULN Ulaanbaatar 45.38 7 P **P 23 12 14.1 +0.7**
MK31 Makanchi Array 46.18 344 P **P 23 12 19.6 0.0**
MK31 IAmb IAmb 23 12 25.8
comp=Z,9.2nm,1.3s
MKAR Makanchi Array 46.18 344 P **P 23 12 19.7 +0.1**
comp=Z,0.9nm,0.4s,baz=156,slow=8.5,SNR=25
MKAR pP **pP 23 12 59.1 -0.1**
comp=Z,2.1nm,0.8s,baz=147,slow=7.2,SNR=3.6
MKAR PcP **PcP 23 13 53.2 +0.9**
comp=Z,0.6nm,0.7s,baz=144,slow=3.0,SNR=1.8
comp=Z,0.9nm,0.4s
MKAR Makanchi Array 46.18 344 P **P 23 12 19.4 -0.1**
KK31 Karatay Array 47.52 332 P **P 23 12 30.5 +0.5**
KKAR Karatay Array 47.52 332 P **P 23 12 30.3 +0.4**
KURK Kurchatov 50.77 343 P **P 23 12 54.5 +0.1**
GEYT Alibeck 51.26 318 P **P 23 12 58.9 +0.4**
comp=Z,1.5nm,0.7s,baz=116,slow=6.8,SNR=4.7
comp=Z,1.5nm,0.7s
ZALV Zalesovo Beam 52.30 349 P **P 23 13 05.5 -0.2**
comp=Z,1.0nm,0.5s,baz=187,slow=7.2,SNR=5.3
ZALV pP **pP 23 13 45.4 -0.9**
comp=Z,0.8nm,0.4s,baz=172,slow=7.1,SNR=2.4
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 52.30 349 P **P 23 13 05.9 +0.1**
STKA Stephens Creek 53.04 134 P **P 23 13 11.4 -0.1**
comp=Z,2.3nm,0.5s,baz=292,slow=7.5,SNR=5.8
comp=Z,2.3nm,0.5s
STKA Stephens Creek 53.04 134 P **P 23 13 10.5 -1.1**
BRVK Borovoye 55.46 339 P **P 23 13 28.3 -0.3**
BRVK IAmb IAmb 23 13 28.6
comp=Z,3.1nm,0.4s
RAYN Ar Rayn 55.75 297 P **P 23 13 31.7 +0.4**
RAYN IAmb IAmb 23 13 33.2
comp=Z,2.5nm,1.1s
VOI Vohitsoka 56.75 242 P **P 23 13 39.5 +1.0**
VOI IAmb IAmb 23 13 59.5
comp=Z,10nm,1.4s
ABKAR Akbulak array 57.04 330 P **P 23 13 39.7 -0.2**
EIDS Eidsvold 57.57 122 P **P 23 13 43.8 -0.2**
EIDS IAmb IAmb 23 14 11.0
comp=Z,8.5nm,1.1s
AKTO Aktyubinsk 58.75 331 P **P 23 13 51.2 -0.7**
comp=Z,0.2nm,0.3s,baz=157,slow=7.7,SNR=2.3
comp=Z,0.2nm,0.3s
GURO Guroymak-BITLI 62.90 312 P **P 23 14 21.1 +0.9**
GURO IAmb IAmb 23 14 21.9
comp=Z,1.7nm,0.9s
MMAI Mount Meron Ar 66.56 305 P **P 23 14 45.4 +1.5**
comp=Z,0.7nm,0.7s,baz=108,slow=9.4,SNR=2.4
comp=Z,0.7nm,0.7s
BNN Bunyan 67.61 311 P **P 23 14 49.8 -0.7**
BNN IAmb IAmb 23 14 50.6
comp=Z,7.4nm,0.7s
CASY Casey 69.43 175 P **P 23 15 02.0 +1.0**
CASY IAmb IAmb 23 15 03.3
comp=Z,2.6nm,0.8s
BR131 Keskin Array S 69.48 311 P **P 23 15 01.6 -0.6**
BR131 IAmb IAmb 23 15 02.6
comp=Z,4.9nm,0.8s
BRTR Keskin Array B 69.48 311 P **P 23 15 01.8 -0.4**
comp=Z,2.2nm,0.6s,baz=128,slow=7.2,SNR=20
comp=Z,2.2nm,0.6s
MDUB Mudurnu 71.48 312 P **P 23 15 13.9 -0.3**
ELL Elmali 71.73 308 P **P 23 15 15.6 -0.2**
TIRR Tirgusor 74.33 315 P **P 23 15 30.5 -0.2**
MAW Mawson 74.74 194 P **P 23 15 34.5 +2.0**
comp=Z,1.5nm,0.6s,baz=336,slow=10.0,SNR=4.2
comp=Z,1.5nm,0.6s
MAW Mawson 74.74 194 P **P 23 15 34.5 +2.0**
AKASG Malin Array Be 75.18 322 P **P 23 15 34.8 -0.7**
comp=Z,1.1nm,0.4s,baz=86,slow=5.5,SNR=9.1
comp=Z,1.1nm,0.4s
VRI Vrincioaia 75.77 317 ⇓P **P 23 15 39.8 +0.9**
TESR Tescani 75.95 317 ⇑P **P 23 15 40.7 +0.8**
MLR Muntele Rosu 76.24 316 ⇓P **P 23 15 42.9 +1.1**
BURAR Bucovina Array 77.11 318 ⇑P **P 23 15 47.9 +1.4**
BURAR Bucovina Array 77.11 318 P **P 23 15 47.5 +0.9**
BURAR IAmb IAmb 23 15 48.3
comp=Z,3.1nm,0.7s
BUR08 Bucovina Ar. S 77.13 318 P **P 23 15 47.8 +1.1**
BUR08 IAmb IAmb 23 15 48.5
comp=Z,6.0nm,0.9s
ITM Ithomi 78.12 307 P **P 23 15 51.8 -0.5**
RPZ Rata Peaks 78.97 135 P **P 23 15 57.2 +0.4**
comp=Z,5.2nm,0.6s,baz=325,slow=7.1,SNR=1.7
comp=Z,5.2nm,0.6s
RPZ Rata Peaks 78.97 135 P **P 23 15 56.7 -0.1**
QRZ Quartz Range 79.34 132 P **P 23 15 59.3 +0.5**
QRZ IAmb IAmb 23 16 24.6
comp=Z,24nm,1.2s
FIA1 FINESS Array S 79.47 332 P **P 23 15 59.0 0.0**
FINES FINESS Array B 79.47 332 P **P 23 15 59.1 +0.1**
comp=Z,1.5nm,0.4s,baz=107,slow=5.6,SNR=24
comp=Z,1.5nm,0.4s
ARCES ARCESS Array B 81.67 340 P **P 23 16 10.8 +0.2**
comp=Z,1.6nm,0.6s,baz=93,slow=2.4,SNR=8.3
comp=Z,1.6nm,0.6s
BKZ Black Stump Fm 81.99 130 P **P 23 16 12.3 -0.7**
GERES GERESS Array B 84.89 319 P **P 23 16 28.0 +0.4**
comp=Z,0.4nm,0.4s,baz=97,slow=6.1,SNR=9.2
comp=Z,0.4nm,0.4s
GERES GERESS Array B 84.89 319 P **P 23 16 27.6 0.0**
HFS Hagfors 85.30 330 P **P 23 16 29.5 +0.3**
baz=90,slow=5.8
NOA NORSAR Array B 86.54 331 P **P 23 16 35.3 -0.2**
comp=Z,0.9nm,0.9s,baz=98,slow=5.8,SNR=1.2
comp=Z,0.9nm,0.9s
KEST Kesra 88.21 306 P **P 23 16 45.6 +1.6**
comp=Z,2.5nm,0.7s,baz=293,slow=2.5,SNR=5.7
comp=Z,2.5nm,0.7s
KEST Kesra 88.21 306 **P 23 16 45.2 +1.2**
PDAR Pinedale Array 127.73 27 PKP **PKiKP 23 22 57.8 -0.3**
comp=Z,0.2nm,0.5s,baz=199,slow=1.9,SNR=2.1
BDFB Brasilia 145.25 246 PKPbc **PKPab 23 23 31.2 +0.6**
comp=Z,2.7nm,0.7s,baz=157,slow=7.8,SNR=3.4
CPUP Villa Florida 147.51 222 PKPbc **PKPbc 23 23 36.7 +0.3**
comp=Z,1.3nm,0.6s,baz=135,slow=4.3,SNR=3.7

*IDC **29** 23:17:29.0±0.9, 12°.81N×87°.58W, h66km±7km, mb3.7/14, mbtmp4.0/15, MS3.1/13, Error ellipse: s-maj=28.0km s-min=13.3km az=54.0*
*UCR **29** 23:17:30.1±1.6, 12°.63N×88°.08W, h35km±900km, ML4.5, MW4.0, mb4.4(NEIC)*
*INET **29** 23:17:30.0±1.0, 12°.64N×88°.00W, h28km±13km, MW4.7*
*GCG **29** 23:17:30.6±0.3, 12°.92N×88°.12W, h164km±47km, MD4.3*
*NEIC **29** 23:17:31.7±1.9, 12°.70N±0°.06×87°.86W±0°.06, h72km±8km, mb4.4/67, Md4.7(SNET), Error ellipse: s-maj=10.5km s-min=6.2km az=224.0*

SNET 29 23:17:31.0±1.0, 12°.81N×87°.96W, h44km±5km, ML4.7
ISC 29 23:17:29.4±0.6, 12°.68N±0°.04×87°.99W±0°.03, h67km±5km, n225, σ1$42/257, mb4.4/44, 5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.61**	**14**	‖ *i* P	**Pn**	**23 17 43.3**	**0.0**
CNCH				*e*S	**Sn**	**23 17 53.9**	**+0.5**
CNCH	**Conchagua**	**0.61**	**14**	‖ *i* P	**Pn**	**23 17 43.3**	**0.0**
CNCH				*e*S	**Sn**	**23 17 53.9**	**+0.5**
LCND	**La Caada**	**0.63**	**9**	*i* P	**Pn**	**23 17 43.3**	**0.0**
LCND				*e*S	**Sn**	**23 17 54.0**	**+0.4**
LCND				IAML		23 17 56.0	
	comp=Z,39μm,0.3s						
LCND	**La Caada**	**0.63**	**9**	*i* P	**Pn**	**23 17 43.3**	**0.0**
LCND				*e*S	**Sn**	**23 17 54.0**	**+0.4**
LCND				IAML		23 17 56.0	
	comp=Z,39μm,0.3s						
VSM	**San Miguel**	**0.80**	**340**	*e*P	**Pn**	**23 17 45.6**	**+0.1**
VSM	**San Miguel**	**0.80**	**340**	*e*P	**Pn**	**23 17 45.6**	**+0.1**
PACA	**Pacayal**	**0.85**	**337**	*e*P	**Pn**	**23 17 46.2**	**+0.2**
PACA				*e*S	**Sn**	**23 17 58.6**	**+0.3**
PACA	**Pacayal**	**0.85**	**337**	*e*P	**Pn**	**23 17 46.2**	**+0.2**
PACA				*e*S	**Sn**	**23 17 58.6**	**+0.3**
PACA	**Pacayal**	**0.85**	**337**	*e*P	**Pn**	**23 17 46.1**	**+0.1**
PACA				*e*S	**Sn**	**23 17 58.2**	**0.0**
ALJI	**Alcalda de J**	**0.86**	**319**	*i* P	**Pn**	**23 17 45.6**	**-0.3**
ALJI				*e*S	**Sn**	**23 17 57.0**	**-1.2**
ALJI				IAML		23 17 57.7	
	comp=Z,17μm,0.2s						
ALJI	**Alcalda de J**	**0.86**	**319**	*i* P	**Pn**	**23 17 45.6**	**-0.3**
ALJI				*e*S	**Sn**	**23 17 57.0**	**-1.2**
ALJI				IAML		23 17 57.7	
	comp=Z,17μm,0.2s						
CRIN	**San Cristobal**	**0.92**	**89**	Pn	**Pn**	**23 17 47.0**	**+0.2**
CRIN				Sn	**Sn**	**23 18 00.6**	**+1.0**
CRIN	**San Cristobal**	**0.92**	**89**	*e*P	**Pn**	**23 17 47.1**	**+0.3**
CRIN				*e*S	**Sn**	**23 18 00.7**	**+1.1**
COEB	**Comit de Eme**	**0.97**	**327**	*e*P	**Pn**	**23 17 47.5**	**+0.1**
COEB				*e*S	**Sn**	**23 18 00.5**	**-0.4**
COEB	**Comit de Eme**	**0.97**	**327**	*e*P	**Pn**	**23 17 47.5**	**+0.1**
COEB				*e*S	**Sn**	**23 18 00.5**	**-0.4**
PQSS	**Presa 15 de Se**	**1.09**	**329**	*e*P	**Pn**	**23 17 49.2**	**+0.3**
PQSS				*e*S	**Sn**	**23 18 03.9**	**+0.5**
PQSS	**Presa 15 de Se**	**1.09**	**329**	*e*P	**Pn**	**23 17 49.2**	**+0.3**
PQSS				*e*S	**Sn**	**23 18 03.9**	**+0.5**
SNVI	**San Vicente**	**1.24**	**318**	*e*P	**Pn**	**23 17 51.0**	**0.0**
SNVI	**San Vicente**	**1.24**	**318**	*e*P	**Pn**	**23 17 51.0**	**0.0**
SCLA	**Alcaldia de Sa**	**1.25**	**325**	*e*P	**Pn**	**23 17 51.2**	**+0.3**
SCLA				*e*S	**Sn**	**23 18 08.1**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.25**	**325**	*e*P	**Pn**	**23 17 51.2**	**+0.3**
SCLA				*e*S	**Sn**	**23 18 08.1**	**+1.0**
CNGN	**Cerro Negro**	**1.27**	**98**	Pn	**Pn**	**23 17 49.8**	**-1.5**
CNGN				Sn	**Sn**	**23 18 05.8**	**-1.9**
CNGN	**Cerro Negro**	**1.27**	**98**	*e*P	**Pn**	**23 17 49.8**	**-1.5**
CNGN				*e*S	**Sn**	**23 18 06.2**	**-1.4**
COEG	**Centro de Oper**	**1.28**	**317**	*e*P	**Pn**	**23 17 51.4**	**0.0**
COEG				*e*S	**Sn**	**23 18 07.2**	**-0.7**
COEG	**Centro de Oper**	**1.28**	**317**	*e*P	**Pn**	**23 17 51.4**	**0.0**
COEG				*e*S	**Sn**	**23 18 07.2**	**-0.7**
SJTE	**Alcalda de S**	**1.36**	**313**	*e*P	**Pn**	**23 17 52.4**	**0.0**
SJTE				*e*S	**Sn**	**23 18 09.2**	**-0.6**
SJTE				IAML		23 18 11.1	
	comp=Z,6μm,0.2s						
SJTE	**Alcalda de S**	**1.36**	**313**	*e*P	**Pn**	**23 17 52.4**	**0.0**
SJTE				*e*S	**Sn**	**23 18 09.2**	**-0.6**
SJTE				IAML		23 18 11.1	
	comp=Z,6μm,0.2s						
PAVA	**Las Pavas**	**1.38**	**318**	*e*P	**Pn**	**23 17 53.4**	**+0.6**
PAVA				*e*S	**Sn**	**23 18 11.3**	**+0.9**
PAVA	**Las Pavas**	**1.38**	**318**	*e*P	**Pn**	**23 17 53.4**	**+0.6**
PAVA				*e*S	**Sn**	**23 18 11.3**	**+0.9**
LFRS	**El Faro**	**1.41**	**312**	*e*P	**Pn**	**23 17 53.1**	**0.0**
LFRS	**El Faro**	**1.41**	**312**	*e*P	**Pn**	**23 17 53.1**	**0.0**
MOMN	**Momotombo**	**1.44**	**101**	*e*P	**Pn**	**23 17 53.1**	**-0.3**
MOMN				*e*S	**Sn**	**23 18 10.7**	**-0.9**
COPN	**Copaltepe**	**1.45**	**110**	*e*P	**Pn**	**23 17 53.0**	**-0.6**
LBRS	**Las Brisas**	**1.47**	**316**	*e*P	**Pn**	**23 17 54.1**	**+0.2**
LBRS	**Las Brisas**	**1.47**	**316**	*e*P	**Pn**	**23 17 54.1**	**+0.2**
P5NO	**Presa 5 de nov**	**1.50**	**330**	*e*P	**Pn**	**23 17 54.5**	**+0.2**
P5NO				*e*S	**Sn**	**23 18 13.6**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.54**	**27**	Pn	**Pn**	**23 17 55.9**	**+1.0**
TGUH				Sn	**Sn**	**23 18 16.2**	**+2.1**
TGUH	**Tegucigalpa,Un**	**1.54**	**27**	‖ *i* P	**Pn**	**23 17 55.9**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.54**	**27**	‖ *i* P	**Pn**	**23 17 55.9**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.54**	**27**	*e*P	**Pn**	**23 17 55.9**	**+1.0**
SNET	**Serv Nac Est T**	**1.57**	**310**	Pn	**Pn**	**23 17 55.1**	**-0.2**
SNET	**Serv Nac Est T**	**1.57**	**310**	*e*S	**Sn**	**23 18 14.0**	**-0.8**
SNET				IAML		23 18 20.4	
	comp=Z,6μm,0.2s						
SNET	**Serv Nac Est T**	**1.57**	**310**	*e*S	**Sn**	**23 18 14.0**	**-0.8**
SNET				IAML		23 18 20.4	
	comp=Z,6μm,0.2s						
SNET	**Serv Nac Est T**	**1.57**	**310**	*e*P	**Pn**	**23 17 55.3**	**0.0**
UEES	**Universidad Ev**	**1.60**	**310**	*e*P	**Pn**	**23 17 55.3**	**-0.4**
UEES				*e*S	**Sn**	**23 18 15.7**	**+0.2**
UEES	**Universidad Ev**	**1.60**	**310**	*e*P	**Pn**	**23 17 55.3**	**-0.4**
UEES				*e*S	**Sn**	**23 18 15.7**	**+0.2**
BRAN	**Las Pilas**	**1.60**	**88**	*e*P	**Pn**	**23 17 56.8**	**+1.2**
BOQS	**Boqueron**	**1.64**	**310**	*e*P	**Pn**	**23 17 56.9**	**+0.5**
BOQS	**Boqueron**	**1.64**	**310**	*e*P	**Pn**	**23 17 56.9**	**+0.5**
MGAN	**Managua**	**1.78**	**107**	*e*P	**Pn**	**23 17 57.8**	**-0.2**
MGAN				*e*P		23 17 58.0	
HUEN		**1.81**	**101**	*e*P	**Pn**	**23 17 58.2**	**-0.2**
WILN	**Americas 2**	**1.83**	**106**	*e*P	**Pn**	**23 17 58.6**	**-0.1**
CEVE	**Cerro Verde**	**1.96**	**306**	*e*P	**Pn**	**23 18 01.8**	**+1.1**
CEVE				IAML		23 18 32.1	
	comp=Z,6μm,0.3s						
CEVE	**Cerro Verde**	**1.96**	**306**	*e*P	**Pn**	**23 18 01.8**	**+1.1**
CEVE				IAML		23 18 32.1	
	comp=Z,6μm,0.3s						
SBLS	**San Blas**	**1.97**	**306**	*e*P	**Pn**	**23 18 01.2**	**+0.5**
SBLS	**San Blas**	**1.97**	**306**	*e*P	**Pn**	**23 18 01.2**	**+0.5**
RTR	**El Retiro**	**2.02**	**307**	*e*P	**Pn**	**23 18 02.3**	**+0.9**
RTR	**El Retiro**	**2.02**	**307**	*e*P	**Pn**	**23 18 02.3**	**+0.9**
MATN	**Matagalpa**	**2.03**	**83**	Pn	**Pn**	**23 18 01.3**	**-0.1**
MATN				Sn	**Sn**	**23 18 25.5**	**-0.3**
MATN	**Matagalpa**	**2.03**	**83**	*e*P	**Pn**	**23 18 01.5**	**+0.1**
NUBE	**Las Nubes**	**2.13**	**305**	*e*P	**Pn**	**23 18 03.2**	**+0.4**
NUBE				*e*S	**Sn**	**23 18 28.0**	**-0.3**
NUBE	**Las Nubes**	**2.13**	**305**	*e*P	**Pn**	**23 18 03.2**	**+0.4**
NUBE				*e*S	**Sn**	**23 18 28.0**	**-0.3**
MTO3	**Montecristo**	**2.17**	**322**	Pn	**Pn**	**23 18 03.9**	**+0.4**
MTO3	**Montecristo**	**2.17**	**322**	*e*P	**Pn**	**23 18 04.0**	**+0.6**
MTO3	**Montecristo**	**2.17**	**322**	*e*P	**Pn**	**23 18 04.0**	**+0.6**
MTO3	**Montecristo**	**2.17**	**322**	*e*P	**Pn**	**23 18 03.9**	**+0.4**
SLOZ	**Alcaldia de Sa**	**2.20**	**308**	*e*P	**Pn**	**23 18 04.0**	**+0.3**
BOAB	**BOACO BROADBAN**	**2.28**	**95**		**Pn**	**23 18 04.3**	**-0.4**
BOAB	**BOACO BROADBAN**	**2.28**	**95**	‖ *i* P	**Pn**	**23 18 04.4**	**-0.4**
ESQI	**Esquipulas**	**2.29**	**325**	Pn	**Pn**	**23 18 05.6**	**+0.7**
ESQI	**Esquipulas**	**2.29**	**325**	*i* P	**Pn**	**23 18 06.0**	**+1.1**
CONN	**Concepcion**	**2.56**	**115**	*e*P	**Pn**	**23 18 08.3**	**-0.3**
ACON	**Acoyapa**	**2.84**	**104**	Pn	**Pn**	**23 18 11.1**	**-1.3**
ACON	**Acoyapa**	**2.84**	**104**	*e*P	**Pn**	**23 18 11.6**	**-0.8**
MRL	**Marmol**	**2.90**	**326**	*e*P	**Pn**	**23 18 15.5**	**+2.1**
NBG	**Las Nubes**	**2.98**	**310**	*e*P	**Pn**	**23 18 16.9**	**+2.4**
PCG	**Pacaya**	**3.06**	**304**	*e*S	**Sn**	**23 18 55.1**	**+3.8**
GBS3	**Finca Las Img**	**3.12**	**127**	*e*P	**Pn**	**23 18 17.3**	**+1.1**
GB1A	**Borinquen Arri**	**3.14**	**126**	*e*P	**Pn**	**23 18 18.4**	**+1.9**
LAPC	**Finca la Perla**	**3.14**	**127**	*e*P	**Pn**	**23 18 17.9**	**+1.4**
BUEV	**Buena Vista**	**3.14**	**126**	*e*P	**Pn**	**23 18 18.0**	**+1.4**
BUEV				*e*S	**Sn**	**23 18 56.2**	**+3.1**
BUAI	**Buenos Aires**	**3.16**	**124**	*e*P	**Pn**	**23 18 18.2**	**+1.5**
VRLE	**La Escondida,**	**3.18**	**126**	*e*P	**Pn**	**23 18 17.5**	**+0.3**
LIM1	**Limonal**	**3.33**	**126**	*e*P	**Pn**	**23 18 20.6**	**+1.5**
GUAB	**Guayabo de Bag**	**3.34**	**126**	*e*P	**Pn**	**23 18 21.7**	**+2.5**
MESS	**Mesas**	**3.35**	**125**	*e*P	**Pn**	**23 18 19.6**	**+0.3**
VMAR	**Armenia, Volca**	**3.37**	**123**	*e*P	**Pn**	**23 18 19.0**	**-0.6**
HORNC	**Hornillas**	**3.38**	**125**	*e*P	**Pn**	**23 18 20.9**	**+1.2**
COLC	**Colonia**	**3.38**	**126**	*e*P	**Pn**	**23 18 22.5**	**+2.7**
ORTG	**Ortega, Santa**	**3.38**	**133**	Pn	**Pn**	**23 18 20.6**	**+0.8**
ORTG	**Ortega, Santa**	**3.38**	**133**	*e*P	**Pn**	**23 18 20.7**	**+0.9**
CUI	**Cuipilapa**	**3.42**	**126**	*e*P	**Pn**	**23 18 21.5**	**+1.2**
SAJU	**San Juanillo,**	**3.42**	**139**	*e*P	**Pn**	**23 18 20.5**	**+0.2**
PTEN	**Parque Tenorio**	**3.53**	**123**	*e*P	**Pn**	**23 18 23.5**	**+1.6**
ACAL	**Aguas Claras**	**3.54**	**125**	*e*P	**Pn**	**23 18 23.5**	**+1.5**
DUNO	**Dulce Nombre,**	**3.56**	**136**	Pn	**Pn**	**23 18 23.1**	**+0.9**
GRZA	**Playa Garza**	**3.59**	**140**	*e*P	**Pn**	**23 18 23.1**	**+0.5**
INDI	**Punta indio, G**	**3.71**	**139**	*e*P	**Pn**	**23 18 25.3**	**+1.0**
POPE	**POPE, Guanacas**	**3.73**	**134**	*e*P	**Pn**	**23 18 25.4**	**+0.9**
JTS	**Las Juntas de**	**3.81**	**128**	P	**Pn**	**23 18 26.2**	**+0.6**
	comp=Z,21nm,0.3s,baz=17,slow=18,SNR=26						
JTS				S	**Sn**	**23 19 07.3**	**-1.9**
	comp=Z,47nm,0.4s,baz=358,slow=19,SNR=1.0						
JTS				LR	LR	23 19 27.3	
	comp=Z,42nm,18.3s,baz=358,slow=33						
JTS	**Las Juntas de**	**3.81**	**128**	Pn	**Pn**	**23 18 27.6**	**+2.0**
JTS	**Las Juntas de**	**3.81**	**128**	*e*P	**Pn**	**23 18 28.4**	**+2.8**
CEDE	**Laguna Cedeo**	**3.89**	**124**	*e*P	**Pn**	**23 18 30.5**	**+3.8**
CASO	**Castillo**	**3.89**	**125**	*e*P	**Pn**	**23 18 28.1**	**+1.3**
STG3	**Santiaguito 3,**	**4.03**	**301**	*e*P	**Pn**	**23 18 30.4**	**+1.6**
STG3				*e*S	**Sn**	**23 19 15.7**	**+0.9**
RTAL	**Retalhuleu**	**4.04**	**297**	Pn	**Pn**	**23 18 31.8**	**+3.0**
JACO	**JACO, Garabito**	**4.43**	**132**	Pn	**Pn**	**23 18 36.2**	**+2.1**
JACO	**JACO, Garabito**	**4.43**	**132**	*e*P	**Pn**	**23 18 36.6**	**+2.5**
PETF	**Flores**	**4.59**	**337**	Pn	**Pn**	**23 18 38.8**	**+2.5**
OCM	**Ochomogo**	**4.82**	**125**	*e*P	**Pn**	**23 18 43.7**	**+4.0**
LCR2	**La Lucha 2**	**4.88**	**126**	*e*P	**Pn**	**23 18 44.1**	**+3.7**
RIMA	**Rio Macho**	**4.97**	**125**	Pn	**Pn**	**23 18 44.1**	**+2.4**
RIMA	**Rio Macho**	**4.97**	**125**	*e*P	**Pn**	**23 18 45.4**	**+3.7**
RIMA	**Rio Macho**	**4.97**	**125**	*e*P	**Pn**	**23 18 45.4**	**+3.7**
CDM	**Cerro de Muert**	**5.18**	**126**	*e*P	**Pn**	**23 18 47.9**	**+3.1**
CDM	**Cerro de Muert**	**5.18**	**126**	*e*P	**Pn**	**23 18 47.7**	**+2.9**
MRVA	**Moravia de Chi**	**5.29**	**122**	*e*P	**Pn**	**23 18 50.1**	**+4.1**
PEZE	**Perez Zeledon,**	**5.35**	**127**	Pn	**Pn**	**23 18 49.0**	**+2.2**
SRBA	**San Rafael, Bu**	**5.69**	**127**	Pn	**Pn**	**23 18 53.5**	**+2.0**
SRBA	**San Rafael, Bu**	**5.69**	**127**	*e*P	**Pn**	**23 18 53.9**	**+2.4**
POTG	**Potrero Grande**	**5.99**	**127**	*e*P	**Pn**	**23 18 58.5**	**+3.0**
PIRO	**Carate, Puerto**	**6.24**	**132**	*e*P	**Pn**	**23 19 02.3**	**+3.4**
BRU2	**Volcan**	**6.48**	**126**	Pn	**Pn**	**23 19 04.1**	**+1.8**
TEIG	**Tepich**	**7.51**	**358**	Pn	**Pn**	**23 19 19.4**	**+3.1**
CMIG	**Matias Romero**	**7.98**	**304**	P	**Pn**	**23 19 25.1**	**+2.4**
	comp=Z,3.0nm,0.3s,baz=155,slow=10,SNR=15						
CMIG				S	**Sn**	**23 20 49.5**	**-2.0**
	comp=Z,2.6nm,0.3s,baz=108,slow=20,SNR=1.6						
CMIG				LR	LR	23 23 03.0	
	comp=Z,111nm,20.6s,baz=126,slow=40						
BCIP	**Isla Barro Col**	**8.73**	**113**	Pn	**Pn**	**23 19 34.8**	**+1.8**
SOR	**Soroa**	**11.12**	**25**	Pn	**Pn**	**23 20 08.0**	**+2.4**
MTDJ	**Mount Denham**	**11.49**	**68**	Pn	**Pn**	**23 20 12.0**	**+1.3**
GTBY	**Guantanamo Bay**	**14.30**	**58**		**P**	**23 20 52.2**	**-1.6**
SDV	**Santo Domingo**	**17.46**	**101**	LR	LR	23 28 13.8	
	comp=Z,58nm,19.3s,baz=260,slow=38						
344A	**Westbrook Farm**	**18.86**	**353**	P	**Pn**	**23 21 45.6**	**+0.3**
344A				IAmb	IAmb	23 21 49.6	
	comp=Z,15nm,0.6s						
833A	**Chaparral WMA,**	**18.86**	**327**	P	**Pn**	**23 21 46.2**	**+0.9**
833A				IAmb	IAmb	23 21 47.6	
	comp=Z,14nm,0.6s						
VBMS	**Vicksburg**	**19.59**	**354**	P	**Pn**	**23 21 54.6**	**+0.7**
BAUV	**El Baul**	**19.94**	**99**	P	**P**	**23 21 54.9**	**-1.1**
BAUV				IAmb	IAmb	23 21 57.5	
	comp=Z,15nm,0.6s						
152A	**Waverly Hall**	**20.12**	**8**	P	**Pn**	**23 22 00.3**	**+0.1**
152A				IAmb	IAmb	23 22 19.7	
	comp=Z,13nm,0.7s						
LRAL	**Lakeview Retre**	**20.28**	**2**	P	Pn	23 22 01.9	-0.2
JCT	**Junction City**	**20.81**	**330**	P	Pn	23 22 08.8	+0.3
GOGA	**Godfrey**	**21.05**	**11**	P		23 22 09.8	
GOGA				IAmb	IAmb	23 22 12.2	
	comp=Z,18nm,0.6s						
Y49A	**Blount Mountai**	**21.13**	**4**	P	**P**	**23 22 10.2**	**+1.5**
X48A	**Hartselle**	**21.69**	**2**	P	**P**	**23 22 15.8**	**+1.1**
X48A				IAmb	IAmb	23 22 35.7	
	comp=Z,17nm,1.0s						
SJG	**San Juan**	**21.73**	**73**	LR	LR	23 30 34.3	
	comp=Z,54nm,22.0s,baz=284,slow=37						
FPAL	**Fort Paine**	**21.87**	**5**	P	**P**	**23 22 18.0**	**+1.3**
FPAL				IAmb	IAmb	23 22 37.7	
	comp=Z,15nm,1.1s						
ATAH	**Atahualpa**	**21.87**	**154**	LR	LR	23 30 25.1	
	comp=Z,51nm,18.1s,baz=348,slow=36						
TXAR	**Lajitas Array**	**22.07**	**321**	P	**P**	**23 22 19.9**	**+0.9**
	comp=Z,3.8nm,0.5s,baz=140,slow=10,SNR=61						
TXAR				pP	**pP**	**23 22 34.8**	**+1.6**
	comp=Z,3.3nm,0.9s,baz=140,slow=10.0,SNR=5.0						
TXAR				LR	LR	23 31 40.8	
	comp=Z,30nm,18.4s,baz=74,slow=38						
	comp=Z,3.8nm,0.5s						
TXAR	**Lajitas Array**	**22.07**	**321**	P	**P**	**23 22 20.4**	**+1.5**
TX32	**Lajitas Array**	**22.07**	**321**	P	**P**	**23 22 20.7**	**+1.8**
HODGE	**Hodges**	**22.08**	**13**	P	**P**	**23 22 20.4**	**+1.5**
HODGE				IAmb	IAmb	23 22 40.6	
	comp=Z,15nm,0.8s						
MTP	**Monte Pirata**	**22.28**	**73**	P	**P**	**23 22 21.4**	**+0.2**
MTP				IAmb	IAmb	23 22 36.7	
	comp=Z,16nm,1.3s						
MIAR	**Mount Ida**	**22.35**	**348**	P	**P**	**23 22 23.1**	**+1.2**
MIAR				IAmb	IAmb	23 22 25.4	
	comp=Z,21nm,1.1s						
ABTX	**Abilene, Hawle**	**22.54**	**334**	P	**P**	**23 22 25.8**	**+1.9**
BG3	**Lake Jocassee**	**22.68**	**11**	P	**P**	**23 22 27.1**	**+1.7**
BG3				IAmb	IAmb	23 22 28.1	
	comp=Z,11nm,0.6s						
STVI	**Saint Thomas**	**22.89**	**73**	P	**P**	**23 22 27.5**	**-0.2**
BIRD	**Birdtown, Kers**	**22.91**	**16**	P	**P**	**23 22 29.1**	**+1.4**
BIRD				IAmb	IAmb	23 22 29.8	
	comp=Z,10nm,0.6s						
KMSC	**Kings Mountain**	**23.16**	**14**	P	**P**	**23 22 31.3**	**+1.1**
KMSC				IAmb	IAmb	23 22 32.2	
	comp=Z,11nm,0.6s						
TKL	**Tuckaleechee C**	**23.19**	**9**	P	**P**	**23 22 31.5**	**+1.0**
	comp=Z,3.4nm,0.4s,baz=183,slow=5.8,SNR=10						
TKL				LR	LR	23 30 51.2	
	comp=Z,44nm,20.5s,baz=214,slow=35						
CLTN	**Cedars of Leba**	**23.36**	**3**	P	**P**	**23 22 32.6**	**+0.5**
X34A	**Smith Ranch, M**	**23.58**	**339**	P	**P**	**23 22 35.6**	**+1.4**
X34A				IAmb	IAmb	23 22 36.8	
	comp=Z,15nm,0.8s						
HHAR	**Hobbs**	**24.11**	**348**	P	**P**	**23 22 39.4**	**+0.6**
HHAR				IAmb	IAmb	23 22 41.1	
	comp=Z,6.8nm,0.5s						
TUL1	**Leonard**	**24.18**	**344**	P	**P**	**23 22 40.6**	**+1.2**
TUL1				IAmb	IAmb	23 22 42.9	
	comp=Z,11nm,0.8s						
OK046	**Pawnee Station**	**24.94**	**343**	P	**P**	**23 22 47.9**	**+1.4**
OK046				IAmb	IAmb	23 22 50.5	
	comp=Z,9.2nm,0.6s						
MSTX	**Muleshoe**	**25.11**	**330**	P	**P**	**23 22 48.9**	**+0.8**
MSTX				IAmb	IAmb	23 22 49.8	
	comp=Z,10nm,0.5s						
AMTX	**Amarillo**	**25.35**	**333**	P	**P**	**23 22 51.7**	**+1.4**
AMTX				IAmb	IAmb	23 22 55.8	
	comp=Z,10nm,0.6s						
CCM	**Cathedral Cave**	**25.44**	**354**	P	**P**	**23 22 51.2**	**+0.3**
CCM				IAmb	IAmb	23 22 51.8	
	comp=Z,6.2nm,0.6s						
WCI	**Wyandotte Cave**	**25.49**	**3**	P	**P**	**23 22 51.6**	**+0.2**
WCI				IAmb	IAmb	23 22 53.5	
	comp=Z,7.8nm,0.8s						
ANMO	**Albuquerque**	**27.77**	**326**	P	**P**	**23 23 14.7**	**+2.5**
	comp=Z,0.9nm,0.6s,baz=139,slow=9.2,SNR=3.8						
	comp=Z,0.9nm,0.6s						
MCWV	**Mont Chateau**	**27.82**	**14**	P	**P**	**23 23 13.0**	**+0.7**
MVL	**Millersville**	**29.09**	**19**	P	**P**	**23 23 25.1**	**+1.6**
SSPA	**Standing Stone**	**29.23**	**16**	P	**P**	**23 23 25.2**	**+0.4**
SSPA				IAmb	IAmb	23 23 55.1	
	comp=Z,9.6nm,1.1s						
SDCO	**Great Sand Dun**	**29.46**	**331**	P	**P**	**23 23 29.1**	**+1.9**
S22A	**4UR Ranch, Cre**	**30.10**	**329**	P	**P**	**23 23 34.9**	**+1.9**
MVCO	**Mesa Verde**	**30.56**	**327**	P	**P**	**23 23 38.1**	**+1.1**
BINY	**Binghamton**	**31.21**	**17**	P	**P**	**23 23 42.4**	**+0.1**
SMCO	**Snowmass**	**31.30**	**331**	P	**P**	**23 23 45.4**	**+1.8**
L59A	**Walton**	**31.49**	**19**	P	**P**	**23 23 45.2**	**+0.4**
L59A				IAmb	IAmb	23 23 47.1	
	comp=Z,7.4nm,0.8s						
PV11	**David Mesa, Pa**	**31.57**	**328**	P	**P**	**23 23 47.6**	**+1.8**
KSCT	**Kent School, K**	**31.59**	**21**	P	**P**	**23 23 46.6**	**+1.0**
ECSD	**EROS Data Cent**	**31.82**	**348**	P	**P**	**23 23 47.9**	**+0.2**
ECSD				IAmb	IAmb	23 23 53.8	
	comp=Z,6.3nm,1.3s						
W13A	**Hualapai Mount**	**32.36**	**318**	P	**P**	**23 23 54.3**	**+1.5**
L61B	**Northampton**	**32.51**	**21**	P	**P**	**23 23 53.5**	**-0.2**
O20A	**White River Ci**	**32.65**	**331**	P	**P**	**23 23 57.2**	**+1.9**
O20A				IAmb	IAmb	23 23 58.6	
	comp=Z,6.3nm,0.8s						
SADO	**Sadowa**	**32.86**	**12**	P	**P**	**23 23 56.3**	**-0.5**
SRU	**San Rafael Swe**	**33.04**	**327**	P	**P**	**23 24 00.2**	**+1.6**
SRU				IAmb	IAmb	23 24 01.0	
	comp=Z,3.8nm,0.6s						
LPAZ	**La Paz**	**34.84**	**145**	P	**P**	**23 24 12.6**	**-2.3**
	comp=Z,0.8nm,0.5s,baz=323,slow=5.0,SNR=1.9						
	comp=Z,0.8nm,0.5s						
PD31	**Pinedale Array**	**35.33**	**332**	P	**P**	**23 24 19.4**	**+1.0**
PDAR	**Pinedale Array**	**35.33**	**332**	P	**P**	**23 24 19.3**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=125,slow=10,SNR=18						
PDAR				PcP	**PcP**	**23 26 47.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=132,slow=5.0,SNR=3.0						
	comp=Z,1.4nm,0.6s						
HWUT	**Hardware Ranch**	**35.41**	**329**	P	**P**	**23 24 20.1**	**+1.0**
MDP	**Montagnes des**	**35.69**	**99**	LR	LR	23 38 34.1	
	comp=Z,16nm,21.6s,baz=212,slow=36						
PB16	**IPOC Station P**	**35.81**	**149**	P	**P**	**23 24 24.5**	**+1.3**
PB16				IAmb	IAmb	23 24 29.2	
	comp=Z,4.0nm,0.7s						
AHID	**Auburn Hatcher**	**36.05**	**331**	P	**P**	**23 24 25.9**	**+1.3**
HVU	**Hansel Valley**	**36.15**	**328**	P	**P**	**23 24 26.6**	**+1.2**
HVU				IAmb	IAmb	23 24 27.5	
	comp=Z,2.6nm,0.6s						
REDW	**Red Top Meadow**	**36.38**	**331**	P	**P**	**23 24 28.8**	**+1.3**
RLMT	**Red Lodge**	**37.08**	**335**	P	**P**	**23 24 34.1**	**+0.8**
RLMT				IAmb	IAmb	23 24 36.2	
	comp=Z,2.9nm,0.5s						
GO01	**Chusmiza**	**37.09**	**150**	P	**P**	**23 24 35.4**	**+1.4**
GO01				IAmb	IAmb	23 24 36.5	
	comp=Z,8.7nm,1.4s						
NV11	**Mina Array Sit**	**37.09**	**319**	P	**P**	**23 24 34.9**	**+1.4**
NVAR	**Mina Array Bea**	**37.19**	**319**	P	**P**	**23 24 36.4**	**+2.0**
	comp=Z,0.9nm,0.6s,baz=127,slow=8.2,SNR=6.6						
NVAR				PcP	**PcP**	**23 26 54.0**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=116,slow=4.1,SNR=5.7						
	comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**37.19**	**319**	P	**P**	**23 24 36.6**	**+2.3**
KVN	**Kaiserville**	**37.42**	**320**	P	**P**	**23 24 37.8**	**+1.5**
YHH	**Holmes Hill**	**37.49**	**333**	P	**P**	**23 24 38.6**	**+1.7**
ULM	**Lac du Bonnet**	**38.02**	**352**	P	**P**	**23 24 39.8**	**-1.2**
	comp=Z,4.9nm,0.5s,baz=170,slow=7.8,SNR=4.3						
ULM				LR	LR	23 41 11.3	
	comp=Z,61nm,19.0s,baz=22,slow=38						
	comp=Z,4.9nm,0.5s						
HLID	**Hailey**	**38.27**	**329**	P	**P**	**23 24 45.0**	**+1.6**
MCMT	**McKenzie Cany

JCNP	Jose Panganiba	1.63	357	⇓P	Pb	23 35 56.8	-0.1
JCNP				*i* S	Sg	23 36 18.6	+0.2
LQP	Lukban	1.90	320	⇑*e*P	Pg	23 36 03.0	+0.6
LQP				*e*S	Sg	23 36 31.2	+4.2
LLP	Lapu-Lapu	2.59	154	*e*P	Pn	23 36 10.5	+1.5
LLP				*e*S	Sb	23 36 46.2	+0.6

TAP 29 23:51:46.1, 24°.16N×121°.49E, h6km, ML0.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.05**	**347**	P	Pg	23 51 47.5	-0.1
	baz=347						
ETLH				S	Sg	23 51 48.5	-0.2
	baz=347						
NACB	**Ninganchiao**	**0.09**	**80**	*e*P	Pg	23 51 48.2	0.0
	baz=80						
NACB				*e*S	Sg	23 51 50.2	+0.6
	baz=80						
TWD	**Chiawan**	**0.12**	**130**	P	Pg	23 51 48.8	+0.1
	baz=127						
TWD				S	Sg	23 51 50.7	+0.3
	baz=127						

JMA 29 23:51:46.7±0.1, 24°.6N±0°.8×123°.5E±0°.2, h12km±3km, MV1.8/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.28**	**138**	P	Pg	23 51 52.4	-0.1
IRIF				S	Sg	23 51 56.8	+0.4
YOJ	**Yonaguni jima**	**0.48**	**260**	*e*P	Pg	23 51 56.1	0.0
YOJ				*e*S	Sg	23 52 02.4	0.0
JKRS	**Kuro-shima**	**0.54**	**125**	P	Pg	23 51 57.1	-0.2
HATJ	**Hateruma jima**	**0.55**	**152**	*e*S	Sg	23 52 05.0	+0.2
JIJ	**Ishigaki jima**	**0.59**	**108**	P	Pg	23 51 58.0	-0.3
JIJ				S	Sg	23 52 06.0	-0.1
JISG	**Ishigakijimahi**	**0.72**	**87**	*e*P	Pg	23 52 00.7	+0.1
JISG				S	Sb	23 52 11.0	+0.1
JTJ	**Tarama**	**1.07**	**85**	*e*S	Sg	23 52 21.8	+0.4

*NNC **30** 00:34:20.9±10.0, 38°.46N×72°.70E, h0km, mb3.8, mpv3.2, Error ellipse: s-maj=84.7km s-min=54.8km az=171.0*
*SOME **30** 00:34:23.3, 39°.32N×73°.62E, h0km*
ISC 30 00:34:23.7±2.6, 38°.6N±0°.1×73°.03E±0°.07, h10km, n17, σ3§12/25, 4C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.56**	**8**	P	**Pn**	**00 35 20.2**	**+0.9**
	SNR=22						
UCH	**Uchtor**	**3.79**	**17**	P	**Pn**	**00 35 23.0**	**+0.4**
	SNR=8.4						
EKS2	**Erkin-Say**	**4.10**	**8**	P	**Pn**	**00 35 27.6**	**+1.1**
	SNR=33						
MRKS	**Merke**	**4.14**	**2**	*e*P	**Pn**	**00 35 29.5**	**+2.5**
	17nm,0.2s						
MRKS				*e*S	**Sn**	**00 36 15.7**	**+0.1**
	34nm,0.3s						
AAK	**Ala-Archa**	**4.18**	**15**	P	**Pn**	**00 35 29.5**	**+1.8**
	SNR=6.2						
ULHL	**Ulahol**	**4.39**	**33**	P	**Pn**	**00 35 28.8**	**-1.7**
	SNR=9.3						
DZA	**Taraz**	**4.48**	**344**	*e*P	Pb	00 35 35.9	-6.4
	52nm,0.1s						
DZA				*e*S	**Sn**	**00 36 26.6**	**+2.9**
	126nm,0.4s						
CHM	**Chimkent**	**4.54**	**326**	*e*P	**Pb**	**00 35 43.7**	**+0.2**
	27nm,0.5s						
CHM				*e*S	**Sb**	**00 36 39.9**	**+1.6**
	117nm,0.3s						
TKM2	**Tokmak 2**	**4.73**	**23**	⇓P	**Pn**	**00 35 34.3**	**-0.9**
	0.8nm,0.4s						
TKM2				⇑S	**Sn**	**00 36 38.5**	**+8.2**
	4.6nm,0.6s						
KK31	**Karatay Array**	**4.89**	**338**	⇑P	**Pn**	**00 35 38.9**	**+1.7**
	2.6nm,0.3s,baz=151,slow=16,SNR=102						
KK31				⇑S	**Sn**	**00 36 33.7**	**-0.2**
	26nm,0.8s,baz=155,slow=24,SNR=17						
KST	**Kastek**	**4.96**	**26**	*e*P	**Pn**	**00 35 40.4**	**+2.0**
	1.1nm,0.5s						
KST				*e*S	**Sn**	**00 36 34.4**	**-1.5**
	18nm,0.4s						
SGDS	**Sogindy**	**4.99**	**13**	*e*P	**Pn**	**00 35 43.4**	**+4.7**
	1.1nm,0.3s						
SGDS				*e*S	**Sn**	**00 36 39.5**	**+2.9**
	1.8nm,0.6s						
DGS	**Degeres**	**5.08**	**23**	*e*P	**Pn**	**00 35 42.0**	**+2.1**
	1.1nm,0.9s						
DGS				*e*S	**Sn**	**00 36 37.1**	**-1.6**
	5.3nm,0.5s						
MDOK	**Medeo**	**5.48**	**32**	*e*P	**Pn**	**00 35 49.9**	**+4.4**
	0.8nm,0.4s						
MDOK				*e*S	**Sn**	**00 36 50.3**	**+1.7**
	4.1nm,0.5s						
BTLS	**Baital**	**6.48**	**6**	*e*P	Pb	00 36 11.9	-4.5
	1.2nm,0.5s						
BTLS				*e*S	**Sb**	**00 37 28.1**	**-5.8**
	3.4nm,0.6s						
AB31	**Akbulak array**	**14.20**	**323**	P	**Pn**	**00 37 41.9**	**-2.9**
	0.7nm,0.5s,baz=129,slow=13,SNR=21						
AKTO	**Aktyubinsk**	**15.92**	**323**	⇑P	**Pn**	**00 38 04.4**	**-3.3**
	3.2nm,1.3s						

*TIR **30** 00:59:24.3, 41°.59N×20°.16E, h2km±1km, Md2.7, Ml2.7*
*RHSSO **30** 00:59:24.8±0.6, 41°.55N×20°.31E, h2km, ML3.0/9*
*PDG **30** 00:59:25.2±0.4, 41°.60N×20°.22E, h6km, MD3.2/1, ML3.1/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*THE **30** 00:59:25.5, 41°.60N×20°.17E, h3km±1km, ML2.5/4, Error ellipse: s-maj=2.1km s-min=0.9km az=322.0*
*SKO **30** 00:59:26.0, 41°.61N×20°.19E, h0km*
*BEO **30** 00:59:25.5±0.2, 41°.56N×20°.23E, h11km±2km, ML2.5/15*
ISC 30 00:59:25.5±0.9, 41°.58N±0°.02×20°.22E±0°.02, h10km±7km, n83, σ0§89/138, 3C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.20**	**56**	P	**Pg**	**00 59 29.9**	**+0.2**
PHP				S	**Sg**	**00 59 33.4**	**+1.0**
PHP	**Peshkopia**	**0.20**	**56**	P	**Pg**	**00 59 29.8**	**+0.2**
	baz=64						
PHP				S	**Sg**	**00 59 33.2**	**+0.8**
	baz=64						
PHP				AMP			
	comp=N,23nm,0.1s,baz=64						
TIR	**Tirane**	**0.35**	**230**	P	**Pg**	**00 59 31.7**	**-0.7**
TIR				S	**Sg**	**00 59 37.4**	**+0.2**
	comp=N,965nm,0.2s						
TIR	**Tirane**	**0.35**	**230**	*e*Pg	**Pg**	**00 59 31.8**	**-0.7**
TIR				*e*Sg	**Sg**	**00 59 37.5**	**+0.2**
TIR	**Tirane**	**0.35**	**230**	*i* Pg	**Pg**	**00 59 31.8**	**-0.7**
TIR				*i* Sg	**Sg**	**00 59 37.4**	**+0.2**
TIR	**Tirane**	**0.35**	**230**	P	**Pg**	**00 59 31.5**	**-1.0**
	baz=224						
TIR				S	**Sg**	**00 59 36.8**	**-0.4**
	baz=224						
TIR				AMP			
	comp=N,3.9nm,0.1s,baz=224						
OHR	**Ohrid**	**0.64**	**137**	*e*Pg	**Pg**	**00 59 36.9**	**-0.9**
OHR				*e*Sg	**Sg**	**00 59 46.4**	**+0.3**
OHR	**Ohrid**	**0.64**	**137**	*i* Pg	**Pb**	**00 59 38.7**	**0.0**
OHR				*i* Sg	**Sb**	**00 59 47.1**	**-0.6**
OHR				*e*Lg	Lg	00 59 47.3	
	comp=N,71nm,0.3s						
OHR				*e*Lg	Lg	00 59 48.7	
	comp=E,230nm,0.5s						
BCI	**Bajram Curri**	**0.80**	**352**	P	**Pg**	**00 59 40.0**	**-0.9**
	baz=355						
BCI				S	**Sb**	**00 59 52.7**	**+0.3**
	baz=355						
BCI				AMP			
	comp=N,1.3nm,0.6s,baz=355						
ULC	**Ulcinj**	**0.83**	**298**	*i* Pg	**Pg**	**00 59 40.3**	**-1.2**
ULC	**Ulcinj**	**0.83**	**298**	⇓*i* Pg	**Pg**	**00 59 40.3**	**-1.2**
ULC				*i* Sg	**Sb**	**00 59 53.2**	**-0.1**
DRME	**Dracevica, Mon**	**0.99**	**308**	⇑*i* Pg	**Pg**	**00 59 42.8**	**-1.7**
DRME				*e*Sg	**Sb**	**00 59 58.2**	**+0.4**
DRME	**Dracevica, Mon**	**0.99**	**308**	*e*Pg	**Pg**	**00 59 43.1**	**-1.4**
DRME				*i* Sg	**Sb**	**00 59 58.5**	**+0.7**
SKO	**Skopje**	**0.99**	**66**	*e*Pg	**Pg**	**00 59 43.9**	**-0.6**
SKO				*e*Sg	**Sg**	**00 59 57.7**	**+0.3**
SKO	**Skopje**	**0.99**	**66**	*i* Pg	**Pg**	**00 59 44.1**	**-0.4**
SKO				*i* Sg	**Sg**	**00 59 57.4**	**0.0**
PVY	**Plav**	**1.04**	**349**	*e*Pg	**Pg**	**00 59 44.0**	**-1.4**
PVY				*i* Sg	**Sb**	**01 00 00.0**	**+0.7**
KBN	**Korca**	**1.04**	**156**	P	**Pg**	**00 59 45.5**	**-0.1**
KBN				S	**Sn**	**01 00 01.2**	**+0.2**
	comp=N,245nm,0.8s						
KBN	**Korca**	**1.04**	**156**	P	**Pg**	**00 59 45.4**	**-0.1**
	baz=153						
KBN				S	**Sn**	**01 00 01.4**	**+0.5**
	baz=153						
PDG	**Podgorica**	**1.12**	**320**	*e*Pg	**Pb**	**00 59 45.6**	**-1.3**
PDG				*e*Sg	**Sb**	**01 00 02.0**	**+0.5**
PDG	**Podgorica**	**1.12**	**320**	*i* Pg	**Pb**	**00 59 45.4**	**-1.5**
PDG				*i* Sg	**Sn**	**01 00 03.4**	**+0.7**
TTG	**Podgorica**	**1.12**	**320**	⇑*i*Pg	**Pb**	**00 59 45.4**	**-1.5**
TTG				*i* Sg	**Sn**	**01 00 02.9**	**+0.2**
BUM	**Brajici-Budva**	**1.23**	**307**	*e*Pg	**Pn**	**00 59 47.5**	**-1.3**
BUM				*i* Sg	**Sn**	**01 00 06.7**	**+1.2**
BEY	**Berane**	**1.32**	**349**	*i* Pg	**Pg**	**00 59 52.0**	**+1.2**
IVA	**Berane**	**1.32**	**349**	*e*Pg	**Pn**	**00 59 49.0**	**-1.1**
IVA				*i* Sg	**Sg**	**01 00 09.5**	**+1.6**
NEST	**Nestorio**	**1.32**	**151**	P	**Pn**	**00 59 50.0**	**-0.1**
NEST				S	**Sg**	**01 00 10.3**	**+2.4**
	comp=N,125nm,0.4s						
CEME	**Cevo**	**1.37**	**315**	⇓*i*Pg	**Pn**	**00 59 50.1**	**-0.7**
CEME				*i* Sg	**Sg**	**01 00 11.4**	**+1.7**
KOME	**Kolasin**	**1.38**	**338**	*e*Pg	**Pn**	**00 59 50.1**	**-0.8**
KOME				*i* Sg	**Sg**	**01 00 11.5**	**+1.7**
LSK	**Leskovik**	**1.45**	**169**	P	**Pn**	**00 59 51.5**	**-0.4**
LSK	**Leskovik**	**1.45**	**169**	P	**Pg**	**00 59 53.2**	**-0.2**
	baz=166						
LSK				S	**Sg**	**01 00 14.0**	**+1.7**
	baz=166						
NKME	**Niksic**	**1.52**	**322**	*e*Pg	**Pn**	**00 59 52.7**	**-0.1**
NKME				*i* Sg	**Sg**	**01 00 16.3**	**+2.0**
PENT	**Pentalofos**	**1.54**	**153**	P	**Pb**	**00 59 53.9**	**-0.4**
HCY	**Herceg Novi**	**1.56**	**305**	⇑*i*Pg	**Pn**	**00 59 53.1**	**-0.2**
HCY				*e*Sg	**Sg**	**01 00 16.0**	**+0.5**
HCY	**Herceg Novi**	**1.56**	**305**	*e*Pg	**Pn**	**00 59 53.2**	**-0.1**
HCY				*i* Sg	**Sg**	**01 00 17.4**	**+1.9**
SJES	**Sjenica**	**1.69**	**354**	*e*Pn	**Pb**	**00 59 56.4**	**-0.4**
SJES				*e*Sn	**Sb**	**01 00 18.8**	**+0.6**
SJES	**Sjenica**	**1.69**	**354**	*e*Pg	**Pb**	**00 59 56.8**	**0.0**
SJES				*e*Sg	**Sg**	**01 00 20.5**	**+0.6**
SRN	**Sarande**	**1.70**	**186**	P	**Pn**	**00 59 56.1**	**+0.8**
SRN	**Sarande**	**1.70**	**186**	P	**Pb**	**00 59 56.3**	**-0.6**
	baz=185						
SRN				S	**Sb**	**01 00 19.1**	**+0.7**
	baz=185						
BARS	**Barje**	**1.71**	**43**	*e*Pn	**Pn**	**00 59 55.6**	**+0.2**
KZN	**Kozani**	**1.73**	**137**	P	**Pn**	**00 59 56.0**	**+0.3**
KZN				S	**Sg**	**01 00 21.0**	**0.0**
	comp=N,138nm,0.5s						
GRG	**Griva**	**1.75**	**110**	P	**Pn**	**00 59 55.7**	**-0.3**
GRG	**Griva**	**1.75**	**110**	*i* Pn	**Pn**	**00 59 55.6**	**-0.3**
SELS	**Selova**	**1.77**	**22**	*e*Pn	**Pn**	**00 59 55.3**	**-0.9**
VAY	**Valandovo**	**1.78**	**97**	*e*Pn	**Pn**	**00 59 56.1**	**-0.3**
VAY				*e*Sn	**Sn**	**01 00 18.1**	**-1.0**
VAY	**Valandovo**	**1.78**	**97**	*i* Pn	**Pn**	**00 59 56.5**	**+0.2**
TREB	**Trebinje**	**1.80**	**310**	*e*Pn	**Pn**	**00 59 57.4**	**+0.8**
TREB				*e*Sn	**Sb**	**01 00 21.6**	**+0.4**
BRY	**Bratogost**	**1.82**	**317**	*e*Pn	**Pn**	**00 59 58.0**	**+0.9**
BRY				*e*Sn	**Sb**	**01 00 22.5**	**+0.5**
BRY	**Bratogost**	**1.82**	**317**	*e*Pn	**Pn**	**00 59 58.0**	**+0.9**
BRY				*i* Sn	**Sg**	**01 00 23.8**	**-0.3**
KTI	**Kastanea**	**1.86**	**129**	P	**Pn**	**00 59 57.3**	**-0.2**
PLE	**Pljevlja**	**1.86**	**341**	*e*Pn	**Pn**	**00 59 58.4**	**+0.9**
PLE				*i* Sn	**Sg**	**01 00 24.5**	**-0.7**
UPM	**Unac-Piva**	**1.90**	**329**	*e*Pn	**Pb**	**00 59 59.3**	**-1.0**
UPM				*e*Sn	**Sb**	**01 00 24.3**	**+0.1**
UPM	**Unac-Piva**	**1.90**	**329**	*e*Pn	**Pn**	**00 59 59.0**	**+0.9**
UPM				*i* Sn	**Sg**	**01 00 25.5**	**-1.0**
IGT	**Igoumenitsa**	**2.04**	**178**	*e*Pn	**Pn**	**01 00 00.3**	**+0.3**
IGT				*e*Sn	**Sn**	**01 00 25.6**	**0.0**
KNT	**Kendrikon**	**2.06**	**101**	*i* Pn	**Pn**	**00 59 59.3**	**-0.9**
RUDO	**Rudo**	**2.13**	**343**	*e*Pn	**Pn**	**01 00 02.3**	**+1.1**
RUDO				*e*Sn	**Sn**	**01 00 29.1**	**+1.3**
KKB	**Krupnik**	**2.16**	**81**	*e*P	**Pb**	**01 00 03.9**	**-0.8**
STON	**Ston**	**2.28**	**305**	*e*Pn	**Pn**	**01 00 04.5**	**+1.3**
STON				*e*Sn	**Sb**	**01 00 33.9**	**-1.0**
BOVS	**Bovan**	**2.33**	**28**	*e*Pn	**Pn**	**01 00 03.3**	**-0.6**
BOVS				*e*Sn	**Sn**	**01 00 31.9**	**-0.7**
GRUS	**Gruza**	**2.34**	**9**	*e*Pn	**Pn**	**01 00 04.8**	**+0.8**
BBLS	**Lazići**	**2.37**	**345**	*e*Pn	**Pn**	**01 00 05.2**	**+0.7**
BBLS				*e*Sn	**Sn**	**01 00 34.9**	**+1.3**
BBLS	**Lazići**	**2.37**	**345**	*e*Pn	**Pn**	**01 00 03.6**	**-0.9**
BBLS				*e*Sn	**Sn**	**01 00 33.7**	**+0.1**
VTS	**Vitosha**	**2.47**	**64**	*e*Pn	**Pn**	**01 00 05.9**	**-0.1**
VTS				*e*Sn	**Sn**	**01 00 35.4**	**-0.9**
VTS	**Vitosha**	**2.47**	**64**	*i* Pn	**Pb**	**01 00 09.7**	**-0.4**
VTS	**Vitosha**	**2.47**	**64**	*e*P	**Pb**	**01 00 09.7**	**-0.4**
DIVS	**Divibare**	**2.53**	**356**	*e*Pn	**Pn**	**01 00 06.4**	**-0.3**
DIVS				*e*Sn	**Sn**	**01 00 39.0**	**+1.4**
DIVS	**Divibare**	**2.53**	**356**	*e*Pn	**Pn**	**01 00 07.8**	**+1.1**
DIVS				*e*Sn	**Sn**	**01 00 37.9**	**+0.3**
MMB	**Musomiste**	**2.63**	**89**	*e*P	**Pn**	**01 00 07.9**	**-0.1**
TRUS	**Trudelj**	**2.65**	**3**	*e*Pn	**Pn**	**01 00 08.5**	**+0.2**
HAPS	**Han Pijesak,Bl**	**2.68**	**340**	*e*Pn	**Pn**	**01 00 10.0**	**+1.2**
HAPS				*e*Sn	**Sn**	**01 00 43.3**	**+2.0**
ZAGS	**Zajecar**	**2.68**	**33**	*e*Pn	**Pn**	**01 00 08.5**	**-0.2**
KUBS	**Kucevo**	**3.03**	**20**	*e*Pn	**Pn**	**01 00 14.3**	**+0.8**
MPEP	**Malo Peshtene**	**3.15**	**54**	*e*P	**Pb**	**01 00 18.6**	**-3.0**
SRKY	**Kupres RS**	**3.36**	**319**	*e*Pn	**Pn**	**01 00 18.9**	**+0.8**
SRKY				*e*Sn	**Sn**	**01 00 59.4**	**+1.3**
FRGS	**Fruska Gora**	**3.59**	**355**	*e*Pn	**Pn**	**01 00 21.3**	**0.0**
FRGS				*e*Sn	**Sn**	**01 01 03.7**	**-0.1**
FRGS	**Fruska Gora**	**3.59**	**355**	*e*Pn	**Pn**	**01 00 21.6**	**+0.3**
BLY	**Banja Luka**	**3.87**	**326**	*e*Pn	**Pn**	**01 00 25.1**	**0.0**
BLY				*e*Sn	**Sn**	**01 01 11.2**	**+0.6**
A051A	**Mrakovica**	**4.20**	**326**	*e*Pn	**Pn**	**01 00 30.1**	**+0.4**
A051A				*e*Sn	**Sn**	**01 01 19.7**	**+0.8**
CEY	**Cerknica**	**5.91**	**317**	*e*Pn	**Pn**	**01 00 54.0**	**+0.8**
CEY				*e*Sn	**Sn**	**01 02 00.7**	**-0.3**
SOKA	**Soboth**	**6.32**	**326**	*e*Pn	**Pn**	**01 00 59.5**	**+0.7**
	comp=N,0.2nm,0.2s						
OBKA	**Obir**	**6.41**	**322**	*e*Pn	**Pn**	**01 01 00.0**	**0.0**
OBKA	**Obir**	**6.41**	**322**	*e*Pn	**Pn**	**01 01 00.5**	**+0.5**
	comp=N,0.4nm,0.3s						
ABTA	**Abfaltersbach**	**7.58**	**316**	*e*Pn	**Pn**	**01 01 16.2**	**+0.1**
	comp=N,0.5nm,0.2s						
WTTA	**Wattenberg**	**8.37**	**316**	*e*Pn	**Pn**	**01 01 28.0**	**+1.0**
	comp=N,0.6nm,0.2s						
SQTA	**Sankt Quirin**	**8.57**	**314**	*i* Pn	**Pn**	**01 01 30.2**	**+0.6**
	comp=N,0.3nm,0.2s						

*DJA **30** 01:00:20.3±0.2, 7°.S±2°×13°.0E±°, h162km±3km, M4.8/19, mb4.8/19, mB5.3/12, MLv4.9/15, Mw(mB)4.7/12, MwMwp5.7/1, Mwp5.8/1*
*IDC **30** 01:00:20.6±1.9, 6°.57S×129°.91E, h162km±18km, mb3.9/16, mbtmp4.4/21, MS3.3/2, Error ellipse: s-maj=17.2km s-min=12.2km az=68.0*
*NEIC **30** 01:00:21.4±2.0, 6°.58S±0°.08×129°.98E±0°.10, h175km±5km, mb4.4/17, Error ellipse: s-maj=14.3km s-min=11.5km az=81.0*
ISC 30 01:00:21.1±0.4, 6°.65S±0°.04×129°.94E±0°.05, h175km, n127, σ1§85/132, mb4.3/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.90**	**135**	Pn	**Pn**	**01 00 57.4**	**+0.7**
SAUI	**Saumlaki**	**1.90**	**135**	P	**Pn**	**01 00 57.2**	**+0.5**
SAUI	**Saumlaki**	**1.90**	**135**	P	**Pn**	**01 00 57.7**	**+1.0**
BNDI	**Bandanaira**	**2.11**	**359**	P	**Pn**	**01 00 59.2**	**+0.1**
BNDI	**Bandanaira**	**2.11**	**359**	P	**Pn**	**01 00 59.5**	**+0.4**
AAI	**Ambon**	**3.41**	**329**	P	**Pn**	**01 01 14.3**	**-0.4**
MSAI	**Masohi**	**3.43**	**343**	P	**Pn**	**01 01 15.5**	**+0.6**
KRAI	**Karang Ratu**	**3.65**	**335**	P	**Pn**	**01 01 18.6**	**+1.0**
KRAI				S	**Sn**	**01 02 03.3**	**+1.5**
FAKI	**Fak Fak**	**4.36**	**32**	Pn	**Pn**	**01 01 24.4**	**-2.4**
FAKI	**Fak Fak**	**4.36**	**32**	P	**Pn**	**01 01 24.5**	**-2.3**
FAKI				S	**Sn**	**01 02 12.4**	**-5.8**
FAKI	**Fak Fak**	**4.36**	**32**	P	**Pn**	**01 01 24.8**	**-2.0**
NLAI	**Namlea**	**4.41**	**320**	P	**Pn**	**01 01 31.3**	**+3.9**
SIJI	**Sorong**	**5.89**	**13**	P	**Pn**	**01 01 44.6**	**-2.1**
	109nm,0.3s,baz=215,slow=8.2,SNR=26						
SIJI				S	**Sn**	**01 02 46.5**	**-7.5**
	56nm,0.3s,baz=207,slow=23,SNR=11						
SIJI	**Sorong**	**5.89**	**13**	P	**Pn**	**01 01 44.4**	**-2.3**
SANI	**Sanana**	**6.03**	**319**	P	**Pn**	**01 01 48.7**	**+0.2**
	0.2nm56nm,0.7s						
SANI				S	**Sn**	**01 02 54.8**	**-2.4**
	0.2nm56nm,0.7s						
MTN	**Manton Dam**	**6.27**	**169**	Pn	**Pn**	**01 01 50.7**	**-0.9**
MTN	**Manton Dam**	**6.27**	**169**	P	**Pn**	**01 01 50.9**	**-0.8**
SOEI	**Soe**	**6.41**	**241**		**Pn**	**01 01 52.6**	**-1.0**
SOEI	**Soe**	**6.41**	**241**	P	**Pn**	**01 01 52.6**	**-1.0**
	1.3nm2µm138nm,0.7s						
SOEI	**Soe**	**6.41**	**241**	P	**Pn**	**01 01 53.6**	**0.0**
LBMI	**Labuha**	**6.44**	**338**	P	**Pn**	**01 01 53.5**	**-0.5**
	1.4nm5µm507nm,0.9s						
KDU	**Kakadu**	**6.50**	**158**	P	**Pn**	**01 01 53.9**	**-0.8**
RKPI	**Ransiki, Papua**	**6.63**	**40**	P	**Pn**	**01 01 55.6**	**-0.8**
	6.3nm22µm2µm,0.8s						
MWPI	**Manokwari, Pap**	**7.00**	**36**	P	**Pn**	**01 02 01.6**	**+0.3**
	4µm419nm,0.9s						
BATI	**Baumata**	**7.14**	**240**	P	**Pn**	**01 02 02.4**	**-0.7**
	143nm,0.4s,baz=133,slow=2.0,SNR=27						
BATI				S	**Sn**	**01 03 17.1**	**-6.7**
	198nm,0.4s,baz=30,slow=21,SNR=12						
BATI	**Baumata**	**7.14**	**240**	P	**Pn**	**01 02 02.5**	**-0.7**
	1.0nm3µm151nm,0.5s						
BBSI	**Bau Bau**	**7.42**	**279**	P	**Pn**	**01 02 08.7**	**+1.9**
	0.2nm68nm,1.0s						
MMRI	**Maumere**	**7.88**	**255**		**Pn**	**01 02 12.1**	**-0.8**
KNRA	**Kununurra**	**9.05**	**187**	Pn	**Pn**	**01 02 26.0**	**-2.3**
KNRA	**Kununurra**	**9.05**	**187**	P	**Pn**	**01 02 26.3**	**-2.0**
LUWI	**Luwuk**	**9.06**	**308**	Pn	**Pn**	**01 02 27.7**	**-0.8**
APSI	**Ampana**	**10.04**	**304**	P	**Pn**	**01 02 44.4**	**+3.0**
	757nm66nm,1.0s						
KAPI	**Kappang**	**10.26**	**279**	P	**Pn**	**01 02 43.9**	**-0.4**
	4.1nm,0.6s,baz=63,slow=9.7,SNR=2.7						
MRSI	**Marisa**	**10.66**	**311**	P	**Pn**	**01 02 50.8**	**+1.3**
	652nm72nm,1.0s						
TOLI2	**Tolitoli**	**11.95**	**310**		**Pn**	**01 03 05.2**	**-1.0**
MPSI	**Mapaga**	**12.19**	**304**	P	**P**	**01 03 12.2**	**-2.3**
	3µm21nm,1.0s						
PLAI	**Plampang**	**12.24**	**259**	P	**Pn**	**01 03 06.5**	**-3.4**
WB0	**Warramunga Arr**	**13.74**	**162**	Pn	**Pn**	**01 03 25.7**	**-3.2**
WRAB	**Tennant Creek**	**13.89**	**162**	P	**Pn**	**01 03 27.7**	**-3.0**
WRA	**Warramunga Arr**	**13.89**	**162**	P	**Pn**	**01 03 27.5**	**-3.3**
	6.3nm,0.3s,baz=345,slow=13,SNR=62						
WRA				S	Sn	01 05 55.3	-10
	29nm,0.5s,baz=336,slow=22,SNR=12						
WRA	**Warramunga Arr**	**13.89**	**162**	Pn	**Pn**	**01 03 27.1**	**-3.6**
WB2	**Warramunga Arr**	**13.89**	**162**		**Pn**	**01 03 27.8**	**-3.0**
WB1	**Warramunga Ar.**	**13.91**	**162**	P	**Pn**	**01 03 28.1**	**-2.9**
BKB	**Balikpapan**	**14.06**	**292**	P	**Pn**	**01 03 33.9**	**+1.0**
COEN	**Coen**	**14.91**	**120**	Pn	**Pn**	**01 03 41.6**	**-1.8**
COEN	**Coen**	**14.91**	**120**	P	**Pn**	**01 03 44.0**	**+0.6**
BBKI	**Banjar Baru**	**15.36**	**281**	P	**P**	**01 03 50.2**	**+0.4**
	128nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.75**	**262**	P	**Pn**	**01 03 51.3**	**-2.5**
	30nm,0.6s						
QIS	**Mount Isa**	**16.71**	**147**	P	**Pn**	**01 04 06.1**	**+0.8**
PMG	**Port Moresby**	**17.27**	**100**	P	**Pn**	**01 04 13.0**	**+1.0**
	15nm,0.7s,baz=257,slow=6.7,SNR=2.5						
AS31	**Alice Springs**	**17.35**	**168**	P	**P**	**01 04 11.7**	**+0.1**
AS31				IAmb	IAmb	01 04 15.8	
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**17.35**	**168**	P	**P**	**01 04 12.9**	**+1.3**
	comp=Z,26nm,0.6s,baz=339,slow=9.5,SNR=84						
ASAR				S	**S**	**01 07 17.4**	**-5.9**
	comp=Z,4.7nm,0.6s,baz=352,slow=26,SNR=2.1						
ASAR				LR	LR	01 12 19.1	
	comp=Z,70nm,20.0s,baz=350,slow=41						
ASAR	**Alice Springs**	**17.35**	**168**		**P**	**01 04 12.2**	**+0.6**
AS01	**Alice Springs**	**17.36**	**168**	P	**P**	**01 04 13.1**	**+1.4**
MBWA	**Marble Bar**	**17.48**	**213**	P	**P**	**01 04 13.8**	**+0.7**
PSA00	**Pilbara Seismi**	**17.76**	**212**	P	**P**	**01 04 15.5**	**-0.6**
PSA00	**Pilbara Seismi**	**17.76**	**212**	P	**P**	**01 04 16.8**	**+0.7**
WRKA	**Warakurna**	**18.36**	**185**	P	**P**	**01 04 23.8**	**+1.2**
SBUM	**Sibu**	**19.86**	**297**	P	**P**	**01 04 39.6**	**+0.7**
SBUM	**Sibu**	**19.86**	**297**	P	**P**	**01 04 40.9**	**+1.

AAK	**Ala-Archa**	**70.23 320**	P	**P**	**01 11 15.2**	**-0.3**
AAK			IAmb	IAmb	01 11 17.6	
	comp=Z,3.3nm,0.7s					
KBL	**Kabul**	**70.49 310**	P	**P**	**01 11 16.4**	**-0.8**
KBL			IAmb	IAmb	01 11 19.8	
	comp=Z,2.5nm,0.6s					
ZALV	**Zalesovo Beam**	**71.24 334**	P	**P**	**01 11 20.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=125,slow=4.7,SNR=5.4					
	comp=Z,1.1nm,0.5s					
ZALV	**Zalesovo Beam**	**71.24 334**	P	**P**	**01 11 20.7**	**-0.3**
GAR	**Garm**	**71.37 315**	P	**P**	**01 11 22.3**	**-0.1**
GAR			IAmb	IAmb	01 11 24.6	
	comp=Z,7.6nm,0.8s					
KURK	**Kurchatov**	**72.19 329**	P	**P**	**01 11 27.1**	**+0.4**
KURK			IAmb	IAmb	01 11 28.7	
	comp=Z,8.3nm,1.4s					
VNDA	**Vanda**	**72.80 173**	P	**P**	**01 11 31.4**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=297,slow=21,SNR=5.0					
	comp=Z,0.6nm,0.6s					
KK31	**Karatay Array**	**73.03 319**	P	**P**	**01 11 31.9**	**-0.1**
KKAR	**Karatay Array**	**73.03 319**	P	**P**	**01 11 31.9**	**-0.1**
BRVK	**Borovoye**	**77.80 328**	P	**P**	**01 11 59.4**	**+0.5**
GEYT	**Alibeck**	**79.94 310**	P	**P**	**01 12 11.6**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=145,slow=5.4,SNR=4.3					
	comp=Z,1.5nm,0.6s					
ABKAR	**Akbulak array**	**82.19 322**	P	**P**	**01 12 20.6**	**-2.0**
AKTO	**Aktyubinsk**	**83.76 322**	P	**P**	**01 12 30.6**	**0.0**
	comp=Z,1.1nm,0.6s,baz=135,slow=12,SNR=2.9					
	comp=Z,1.1nm,0.6s					
ARU	**Arti**	**85.37 328**	P	**P**	**01 12 38.3**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=232,slow=21,SNR=2.5					
	comp=Z,1.2nm,0.3s					
RAYN	**Ar Rayn**	**87.55 294**	P	**P**	**01 12 50.0**	**+0.1**
BELA	**Belgrano 2**	**95.17 183**	P	**P**	**01 13 26.9**	**+2.8**
TORD	**Torodi Ar. Bea**	**128.68 281**	PKP	**PKPdf**	**01 19 09.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=97,slow=3.5,SNR=2.5					

*MOS **30** 01:31:13.0±1.6, 43°.04N×149°.13E, h45km, mb4.4/3, Error ellipse: s-maj=22.1km s-min=12.6km az=125.7*
*JMA **30** 01:31:15.1±0.8, 43°N±3°×14°9E±°, h30km, MV4.5/13, SE OFF ETOROFU*
*SKHL **30** 01:31:16.1±0.4, 43°.10N×148°.90E, h52km±2km, mb4.9/2*
*IDC **30** 01:31:28.8±5.0, 44°.53N×148°.39E, h89km±48km, mb3.6/9, mbtmp3.9/10, MS2.8/1, Error ellipse: s-maj=42.7km s-min=26.7km az=83.0*
ISC 30 01:31:13.7±1.1, 43°.03N±0°.07×149°.08E±0°.08, h35km, n42, σ1§47/51, mb3.8/9, 4C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.37**	**339**	*e*PN	**Pn**	**01 31 50.7**	**+0.7**
KUR				*i* S	**Sn**	**01 32 15.0**	**-2.9**
KUR				pmax	pmax		
	comp=Z,212nm,0.5s						
KUR				smax	smax		
	comp=N,772nm,0.7s						
KUR				smax	smax		
	comp=E,633nm,0.7s						
KUR	**Kuril'sk**	**2.37**	**339**	*e*P	**Pn**	**01 31 50.8**	**+0.7**
KUR				AMB	AMB	01 31 51.0	
	comp=E,210nm,0.5s						
KUR				*i* S	**Sn**	**01 32 16.5**	**-1.4**
KUR				A	A	01 32 20.4	
	comp=E,780nm,0.5s						
KUR				A	A	01 32 20.4	
	comp=E,630nm,0.5s						
NEM2	**Nemuro 2**	**2.46**	**279**	*e*P	**Pn**	**01 31 51.7**	**+0.4**
NEM2				*e*S	**Sn**	**01 32 18.9**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.47**	**279**	*e*PN	**Pn**	**01 31 51.7**	**+0.2**
NMR				*e*S	**Sn**	**01 32 19.0**	**-1.4**
NMR	**Nemuro--Hokkai**	**2.47**	**279**	*e*P	**Pn**	**01 31 51.7**	**+0.2**
NMR				*e*S	**Sn**	**01 32 18.0**	**-2.4**
YUK	**Yuzh-Kuril'sk**	**2.54**	**294**	*d i*PN	**Pn**	**01 31 52.7**	**+0.2**
YUK				*e*S	**Sn**	**01 32 20.6**	**-1.6**
YUK				pmax	pmax		
	comp=Z,282nm,0.3s						
YUK				pmax	pmax		
	comp=N,49nm,0.2s						
YUK				pmax	pmax		
	comp=E,33nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.3s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.54**	**294**	*i* P	**Pn**	**01 31 52.7**	**+0.2**
YUK				AMB	AMB	01 31 53.8	
	comp=N,180nm,0.3s						
YUK				*e*S	**Sn**	**01 32 20.4**	**-1.8**
YUK				A	A	01 32 25.5	
	comp=N,1μm,0.5s						
YUK				A	A	01 32 25.5	
	comp=N,790nm,0.5s						
RUSJ	**Misakicho**	**2.98**	**292**	⇑*i*PN	**Pn**	**01 31 59.6**	**+1.1**
RUSJ				*e*S	**Sn**	**01 32 34.0**	**+1.0**
JRA	**Rausu**	**3.02**	**289**	*e*P	**Pn**	**01 31 59.8**	**+0.9**
JRA				*e*S	**Sn**	**01 32 33.1**	**-0.8**
AKK	**Akkeshi**	**3.10**	**271**	*e*P	**Pn**	**01 32 01.3**	**+1.1**
AKK				*e*S	**Sn**	**01 32 34.5**	**-1.5**
JAK	**Akkeshi**	**3.21**	**271**	*e*P	**Pn**	**01 32 02.8**	**+1.1**
JAK				*e*S	**Sn**	**01 32 37.2**	**-1.5**
JNK	**Nakash**	**3.23**	**281**	*e*P	**Pn**	**01 32 02.4**	**+0.5**
JNK				*e*S	**Sn**	**01 32 37.5**	**-1.6**
JOB	**Onbets**	**3.85**	**270**	*e*P	**Pn**	**01 32 11.6**	**+1.3**
JTKR	**Abashiri--Toko**	**3.88**	**286**	*e*P	**Pn**	**01 32 12.6**	**+1.8**
JTKR				*e*S	**Sn**	**01 32 55.8**	**+0.8**
JAR	**Ashorobuto**	**3.89**	**276**	*e*P	**Pn**	**01 32 12.8**	**+1.8**
JAR				*e*S	**Sn**	**01 32 54.8**	**-0.6**
JCH	**Churui**	**4.22**	**266**	*e*P	**Pn**	**01 32 17.3**	**+1.7**
JCH				*e*S	**Sn**	**01 33 02.4**	**-1.2**
JKK2	**Kamakawa 2**	**4.68**	**283**	*e*P	**Pn**	**01 32 24.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**5.96**	**313**	*e*P	**Pn**	**01 32 40.5**	**+1.2**
YSS				AMB	AMB	01 32 41.2	
	comp=N,20nm,0.4s						
YSS				*e*S	**Sn**	**01 33 44.0**	**-2.3**
YSS				A	A	01 33 48.2	
	comp=N,30nm,0.5s						
YSS				A	A	01 33 48.2	
	comp=N,30nm,0.5s						
JANG	**Nango**	**6.25**	**247**	*e*P	**Pn**	**01 32 43.4**	**0.0**
JANG				*e*S	**Sn**	**01 33 50.0**	**-3.6**
PETK	**Petropavlovsk-**	**11.61**	**27**	P	**Pn**	**01 33 56.7**	**0.0**
	comp=N,3.7nm,0.9s,baz=204,slow=10,SNR=4.9						
JOW	**Kunigami**	**23.40**	**233**	LR	LR	01 45 44.7	
	comp=N,22nm,21.4s,baz=118,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.65**	**142**	T	T	02 08 34.3	
	baz=334,slow=76,SNR=9.4						
H11N1	**WAKE ISLAND Hy**	**27.66**	**142**	T	T	02 08 42.1	
	baz=334,slow=76,SNR=9.4						
H11N3	**WAKE ISLAND Hy**	**27.67**	**142**	T	T	02 08 41.5	
	baz=334,slow=76,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**28.63**	**143**	T	T	02 09 52.3	
	baz=327						
H11S3	**WAKE ISLAND Hy**	**28.64**	**143**	T	T	02 09 50.3	
	baz=327,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.65**	**143**	T	T	02 09 48.6	
	baz=327,slow=74						
SONM	**Songino Array**	**30.05**	**294**	P	**P**	**01 37 19.8**	**+0.3**
	comp=N,0.5nm,0.8s,baz=101,slow=7.8,SNR=2.6						
	comp=N,0.5nm,0.8s						
MKAR	**Makanchi Array**	**46.16**	**299**	P	**P**	**01 39 35.4**	**+0.7**
	comp=N,0.8nm,0.7s,baz=80,slow=9.2,SNR=3.1						
	comp=N,0.8nm,0.7s						
MKAR	**Makanchi Array**	**46.16**	**299**	*e*P	**P**	**01 39 35.1**	**+0.4**
KURK	**Kurchatov**	**47.09**	**305**	P	**P**	**01 39 42.3**	**+0.4**
KURK	**Kurchatov**	**47.09**	**305**	*e*P	**P**	**01 39 42.3**	**+0.4**
KURBB	**Kurchatov Arra**	**47.18**	**305**	P	**P**	**01 39 42.3**	**-0.3**
	comp=N,1.4nm,0.3s,baz=71,slow=9.4,SNR=4.2						
	comp=N,1.4nm,0.3s						
ARCES	**ARCESS Array B**	**60.40**	**340**	P	**P**	**01 41 16.1**	**-2.9**
	comp=N,3.4nm,0.9s,baz=48,slow=8.6,SNR=2.3						
	comp=N,3.4nm,0.9s						
ARCES	**ARCESS Array B**	**60.40**	**340**	*e*P	**P**	**01 41 21.6**	**+2.6**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WRA	**Warramunga Arr**	**64.11**	**195**	P	P	01 42 02.0	+18
	comp=Z,0.5nm,0.6s,baz=11,slow=6.8,SNR=5.4						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**66.15**	**334**	P	**P**	**01 41 56.8**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=51,slow=6.5,SNR=11						
	comp=Z,2.2nm,0.6s						
FINES	**FINESS Array B**	**66.15**	**334**	*e*P	**P**	**01 41 59.5**	**+2.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**70.77**	**340**	P	**P**	**01 42 25.7**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=32,slow=6.6,SNR=2.1						
	comp=Z,0.9nm,0.8s						
AKASG	**Malin Array Be**	**72.98**	**325**	P	**P**	**01 42 38.9**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=38,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.3s						
BRTR	**Keskin Array B**	**79.05**	**315**	P	**P**	**01 43 14.8**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=40,slow=6.4,SNR=3.6						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**79.05**	**315**	*ce*P	**P**	**01 43 15.6**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 30 01:40:59.3±2.4, 11°.54S×167°.52E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=119.4km s-min=27.5km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.31**	**226**	P	P	01 47 21.9	+0.5
	2.7nm,0.5s,baz=30,slow=8.1,SNR=6.0						
	2.7nm,0.5s						
WRA	**Warramunga Arr**	**32.95**	**251**	P	P	01 47 36.1	+0.1
	0.4nm,0.4s,baz=83,slow=8.5,SNR=9.5						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**34.14**	**245**	P	P	01 47 45.6	-0.7
	0.7nm,0.6s,baz=74,slow=8.9,SNR=13						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**83.44**	**18**	P	P	01 53 28.4	0.0
	1.6nm,0.7s,baz=235,slow=6.4,SNR=17						
	1.6nm,0.7s						

*IDC **30** 01:43:10.9±2.2, 12°.82N×143°.29E, h154km±28km, mb3.2/7, mbtmp3.7/7, Error ellipse: s-maj=43.9km s-min=15.7km az=88.0*
ISC 30 01:43:10.7±0.8, 12°.8N±0°.1×143°.2E±0°.1, h150km, n8, σ0§57/9, mb3.5/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**64**	P	**Pn**	**01 43 43.9**	**+0.7**
	38nm,0.8s,baz=239,slow=5.9,SNR=1.7						
GUMO				S	**Sn**	**01 44 07.8**	**-0.5**
	56nm,0.3s,baz=168,slow=20,SNR=9.4						
CTA	**Charters Tower**	**32.82**	**175**	P	**P**	**01 49 30.3**	**+0.2**
	1.3nm,0.5s,baz=338,slow=11,SNR=1.0						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**33.70**	**195**	P	**P**	**01 49 37.0**	**-0.6**
	0.7nm,0.8s,baz=14,slow=9.5,SNR=6.9						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**37.38**	**194**	P	**P**	**01 50 09.2**	**+0.2**
	0.3nm,0.6s,baz=18,slow=12,SNR=6.9						
	0.3nm,0.6s						
SONM	**Songino Array**	**46.47**	**326**	P	**P**	**01 51 22.7**	**0.0**
	0.4nm,0.4s,baz=145,slow=7.8,SNR=2.8						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**60.95**	**317**	P	**P**	**01 53 08.6**	**+0.6**
	0.4nm,0.6s,baz=101,slow=6.8,SNR=1.9						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**64.19**	**320**	P	**P**	**01 53 29.1**	**-0.2**
	1.9nm,0.6s,baz=105,slow=6.7,SNR=16						
	1.9nm,0.6s						
ILAR	**Eielson Array**	**69.96**	**25**	P	**P**	**01 54 04.9**	**-0.6**
	0.2nm,0.6s,baz=241,slow=6.8,SNR=1.6						
	0.2nm,0.6s						

*MDD **30** 01:53:16.6±0.4, 28°.44N×15°.97W, h36km±7km, mb_Lg3.8/21, Error ellipse: s-maj=7.4km s-min=2.4km az=175.0*
*INMG **30** 01:53:18.2±1.1, 28°.47N×15°.96W, h27km±6km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.7km az=168.0*
*CNRM **30** 01:53:19.1, 28°.77N×15°.80W, h34km, ml3.8*
ISC 30 01:53:14.2±1.1, 28°.52N±0°.04×15°.97W±0°.03, h32km±10km, n34, σ1§52/67, 2C-11D, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBAJ	**Bajamar**	**0.33**	**274**	⇓P	**Pn**	**01 53 24.6**	**+1.8**
EBAJ				S	**Sn**	**01 53 29.3**	**+0.7**
EBAJ				*i* Vmb_Lg		01 53 30.2	
CGUI	**Guimar, Teneri**	**0.46**	**245**	⇓P	**Pn**	**01 53 25.8**	**+1.1**
CGUI				S	**Sn**	**01 53 31.4**	**-0.5**
CGUI				*i* Vmb_Lg		01 53 32.8	
GGC	**Guia, Gran Can**	**0.49**	**144**	⇑P	**Pn**	**01 53 25.5**	**+0.5**
GGC				S	**Sn**	**01 53 31.3**	**-1.2**
GGC				*i* Vmb_Lg		01 53 31.9	
MACI	**Morro de la Ar**	**0.55**	**241**	⇓P	**Pn**	**01 53 26.8**	**+0.9**
MACI				S	**Sb**	**01 53 33.5**	**0.0**
MACI				*i* Vmb_Lg		01 53 33.9	
EOSO	**Osorio**	**0.57**	**140**	⇑P	**Pn**	**01 53 26.6**	**+0.4**
EOSO				S	**Sb**	**01 53 33.0**	**-1.1**
EOSO				*i* Vmb_Lg		01 53 34.1	
CRAJ	**Montana Rajada**	**0.61**	**246**	⇓P	**Pn**	**01 53 27.4**	**+0.5**
CRAJ				S	**Sb**	**01 53 34.7**	**-0.6**
CRAJ				*i* Vmb_Lg		01 53 42.9	
CCAN	**Las Canadas**	**0.64**	**243**	⇓P	**Pn**	**01 53 27.6**	**+0.4**
CCAN				S	**Sb**	**01 53 35.1**	**-0.9**
CCAN				*i* Vmb_Lg		01 53 35.8	
CNOR	**Icod de los Vi**	**0.64**	**252**	⇓P	**Pn**	**01 53 28.1**	**+0.9**
CNOR				S	**Sb**	**01 53 35.6**	**-0.5**
CVIL	**Vilaflor**	**0.69**	**239**	⇓P	**Pn**	**01 53 28.2**	**+0.3**
CVIL				S	**Sb**	**01 53 36.1**	**-1.4**
CBOL	**Buenavista del**	**0.79**	**255**	⇓P	**Pb**	**01 53 29.9**	**+0.3**
CBOL				S	**Sb**	**01 53 38.9**	**-1.1**
CBOL				*i* Vmb_Lg		01 53 41.7	
EGOM	**La Gomera**	**1.15**	**252**	⇓P	**Pn**	**01 53 34.5**	**+0.5**
EGOM				S	**Sn**	**01 53 47.6**	**-1.1**
EGOM				*i* Vmb_Lg		01 53 48.8	
EHIG	**Higuera**	**1.62**	**272**	P	**Pn**	**01 53 41.7**	**+1.1**
EHIG				S	**Sn**	**01 53 59.2**	**-1.2**
EHIG				*i* Vmb_Lg		01 54 03.5	
CFTV	**Fuerteventura**	**1.66**	**93**	P	**Pn**	**01 53 41.7**	**+0.6**
CFTV				S	**Sn**	**01 53 59.3**	**-2.0**
CFTV				*i* Vmb_Lg		01 54 00.4	
TBT	**Taburiente**	**1.72**	**276**	P	**Pn**	**01 53 42.3**	**+0.4**
TBT				S	**Sn**	**01 54 00.3**	**-2.5**
TBT				*i* Vmb_Lg		01 54 03.9	
CFUE	**Fuerteventura**	**1.79**	**85**	⇓P	**Pn**	**01 53 43.5**	**+0.6**
CFUE				S	**Sn**	**01 54 02.7**	**-1.8**
CFUE				*i* Vmb_Lg		01 54 04.5	
CTIG	**El Hierro**	**1.87**	**248**	P	**Pn**	**01 53 44.2**	**+0.2**
CTIG				S	**Sn**	**01 54 05.3**	**-1.2**
CTIG				*i* Vmb_Lg		01 54 09.9	
CCUM	**Cumbre, El Hie**	**1.98**	**248**	P	**Pn**	**01 53 45.6**	**+0.1**
CCUM				S	**Sn**	**01 54 07.2**	**-2.0**
CCUM				*i* Vmb_Lg		01 54 09.3	
CMCL	**Mercadel, El H**	**1.98**	**247**	P	**Pn**	**01 53 46.0**	**+0.4**
CMCL				S	**Sn**	**01 54 07.6**	**-1.8**
CNAO	**La Restinga, E**	**1.99**	**245**	P	**Pn**	**01 53 46.3**	**+0.7**
CNAO				S	**Sn**	**01 54 07.7**	**-1.6**
CNAO				*i* Vmb_Lg		01 54 09.9	
CTAN	**El Hierro**	**2.00**	**248**	P	**Pn**	**01 53 45.9**	**+0.3**
CTAN				S	**Sn**	**01 54 07.5**	**-2.0**
CTAN				*i* Vmb_Lg		01 54 12.3	
CTAD	**Las Tabladas,**	**2.02**	**248**	P	**Pn**	**01 53 46.6**	**+0.5**
CTAD				S	**Sn**	**01 54 08.9**	**-1.3**
CTAD				*i* Vmb_Lg		01 54 12.2	
CJUL	**El Julan, El H**	**2.03**	**248**	P	**Pn**	**01 53 46.3**	**+0.1**
CJUL				S	**Sn**	**01 54 08.8**	**-1.7**
CJUL				*i* Vmb_Lg		01 54 14.6	
CCAL	**Punta Orchilla**	**2.09**	**248**	P	**Pn**	**01 53 48.2**	**+1.2**
CCAL				S	**Sn**	**01 54 10.9**	**-0.9**
CCAL				*i* Vmb_Lg		01 54 14.6	
EFAM	**Famara**	**2.22**	**74**	⇓P	**Pn**	**01 53 50.0**	**+1.2**
EFAM				S	**Sn**	**01 54 14.6**	**-0.6**
EFAM				*i* Vmb_Lg		01 54 15.7	
TANT	**Tantan**	**4.17**	**90**	P	**Pn**	**01 54 18.1**	**+2.6**
TANT				S	**Sn**	**01 55 06.3**	**+3.1**
PMAR	**Madeira**	**4.27**	**349**	*e*P	**Pn**	**01 54 18.0**	**+0.8**
PMAR				*e*S	**Sn**	**01 55 03.5**	**-2.5**
PMAR				A	A	01 55 08.6	
	32nm,0.2s						
PMAR	**Madeira**	**4.27**	**349**	P	**Pn**	**01 54 18.5**	**+1.3**
PMAR				S	**Sn**	**01 55 05.8**	**-0.2**
PMOZ	**Porto Moniz, M**	**4.42**	**346**	*e*P	**Pn**	**01 54 20.8**	**+1.6**
PMOZ				*e*S	**Sn**	**01 55 06.0**	**-3.6**
PMOZ				A	A	01 55 10.4	
	41nm,0.4s						
PMOZ	**Porto Moniz, M**	**4.42**	**346**	P	**Pn**	**01 54 21.2**	**+2.1**
PMOZ				S	**Sn**	**01 55 09.9**	**+0.3**
PMPS	**Porto Santo**	**4.54**	**356**	*e*P	**Pn**	**01 54 21.3**	**+0.7**
PMPS				*e*S	**Sn**	**01 55 08.4**	**-3.8**
PMPS				A	A	01 55 12.4	
	9.1nm,0.3s						
PMPST	**Porto Santo, M**	**4.56**	**356**	*e*S	**Sn**	**01 55 09.3**	**-3.5**
PMPST				A	A	01 55 12.2	
	24nm,0.3s						
OUK	**Oukaimeden**	**7.53**	**67**	P	**Pn**	**01 55 03.5**	**+1.5**
OUK				S	**Sn**	**01 56 24.9**	**-1.6**
MD31	**MD31**	**10.57**	**63**	P	**Pn**	**01 55 44.4**	**+0.8**
MD31				S	**Sn**	**01 57 39.8**	**-1.1**
MDT	**Midelt**	**10.68**	**64**	P	**Pn**	**01 55 47.7**	**+2.7**
MDT				S	**Sn**	**01 57 44.2**	**+0.8**

*IDC **30** 02:23:13.0±0.7, 22°.47S×68°.64W, h89km±8km, mb3.4/3, mbtmp3.8/4, Error ellipse: s-maj=39.4km s-min=20.6km az=154.0*
*GUC **30** 02:23:14.1±0.8, 22°.63S×68°.80W, h103km±4km, ML3.9*
ISC 30 02:23:13.1±0.8, 22°.62S±0°.05×68°.73W±0°.05, h100km±6km, n24, σ1§31/36, 9C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.16**	**273**	P	**Pn**	**02 23 27.9**	**+0.2**
	4μm,0.3s,baz=68,slow=4.3						
LVC				S	**Sn**	**02 23 38.5**	**-0.1**
	4μm,0.3s,baz=30,slow=20,SNR=49						
LVC	**Limon Verde**	**0.16**	**273**	*e*P	**Pn**	**02 23 27.9**	**+0.2**
LVC				*i* S	**Sn**	**02 23 38.2**	**-0.4**
AF01	**San Pedro de A**	**0.61**	**123**	⇓*i*P	**Pn**	**02 23 31.5**	**+1.3**
AF01				*i* S	**Sn**	**02 23 44.6**	**+1.7**
PB06	**IPOC Station P**	**0.78**	**263**	⇑*i*P	**Pn**	**02 23 31.5**	**-0.1**
PB06				*i* S	**Sn**	**02 23 45.3**	**-0.1**
PB06				IAML		02 23 48.5	
	comp=N,7μm,0.1s						
PB15	**IPOC Station P**	**0.90**	**229**	⇑*i*P	**Pn**	**02 23 33.1**	**+0.3**
PB15				*i* S	**Sn**	**02 23 47.8**	**+0.3**
PB09	**IPOC Station P**	**0.94**	**330**	⇑*i*P	**Pn**	**02 23 34.6**	**+1.3**
PB09				*i* S	**Sn**	**02 23 49.7**	**+1.4**
PB09				IAML		02 23 51.8	
	comp=E,3μm,0.4s						
PB03	**IPOC Station P**	**1.10**	**301**	⇑*i*P	**Pn**	**02 23 35.2**	**+0.3**
PB03				*i* S	**Sn**	**02 23 51.0**	**-0.2**
PB04	**IPOC Station P**	**1.34**	**282**	⇑*i*P	**Pn**	**02 23 37.6**	**-0.1**
PB04				*i* S	**Sn**	**02 23 56.4**	**+0.2**
PB04				IAML		02 23 58.0	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**1.39**	**309**	⇑*i*P	**Pn**	**02 23 38.8**	**+0.5**
PB07				*i* S	**Sn**	**02 23 57.3**	**0.0**
PB07				IAML		02 23 58.6	
	comp=E,3μm,0.4s						
PB02	**IPOC Station P**	**1.68**	**320**	⇑*i*P	**Pn**	**02 23 42.6**	**+0.7**
PB02				*i* S	**Sn**	**02 24 04.0**	**+0.4**
PB02				IAML		02 24 08.3	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	**1.72**	**336**	⇓*i*P	**Pn**	**02 23 43.2**	**+1.0**
PB01				*i* S	**Sn**	**02 24 05.4**	**+1.1**
PB01				IAML		02 24 08.9	
	comp=E,2μm,0.1s						
PB10	**IPOC Station P**	**1.90**	**242**	*e*P	**Pn**	**02 23 43.6**	**-0.8**
PB10				IAML		02 24 07.2	
	comp=E,714nm,0.4s						
PATCX	**Punta Patache**	**2.22**	**323**	⇓*i*P	**Pn**	**02 23 48.6**	**-0.1**
PATCX				IAML		02 24 21.5	
	comp=N,607nm,0.8s						
TA01	**Diego Aracena**	**2.45**	**326**	⇑*i*P	**Pn**	**02 23 51.3**	**-0.3**
PB08	**IPOC Station P**	**2.50**	**351**	⇓*i*P	**Pn**	**02 23 54.1**	**+1.5**
HMBC	**Humberstone**	**2.56**	**335**	*e*P	**Pn**	**02 23 53.1**	**-0.2**
GO02	**Mina Guanaco**	**2.65**	**197**	⇑*i*P	**Pn**	**02 23 54.4**	**-0.2**
GO01	**Chusmiza**	**2.97**	**352**	*e*P	**Pn**	**02 23 59.9**	**+1.0**
SIV	**San Ignacio**	**9.78**	**49**	P	**Pn**	**02 25 28.9**	**-2.1**
	comp=N,3.3nm,0.6s,baz=262,slow=11,SNR=23						
SIV				S	**Sn**	**02 27 13.4**	**-5.7**
	comp=N,0.6nm,0.3s,baz=286,slow=15,SNR=2.0						
BDFB	**Brasilia**	**20.75**	**74**	P	**P**	**02 27 46.7**	**+0.5**
	comp=N,1.6nm,0.4s,baz=224,slow=8.3,SNR=5.1						
	comp=N,1.6nm,0.4s						
TXAR	**Lajitas Array**	**61.64**	**325**	P	**P**	**02 33 21.6**	**+1.1**
	comp=N,0.4nm,0.9s,baz=142,slow=10,SNR=3.1						
	comp=N,0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**77.58**	**70**	P	**P**	**02 34 59.1**	**+0.4**
	comp=N,0.6nm,0.5s,baz=262,slow=6.4,SNR=12						
	comp=N,0.6nm,0.5s						
WRA	**Warramunga Arr**	**132.07**	**210**	PKP	**PKPdf**	**02 42 16.6**	**+0.7**
	comp=N,0.5nm,1.0s,baz=155,slow=1.6,SNR=5.9						
MKAR	**Makanchi Array**	**146.43**	**37**	PKPbc	**PKPdf**	**02 42 41.4**	**+0.3**
	comp=N,0.9nm,0.8s,baz=311,slow=4.2,SNR=2.1						

*JMA **30** 02:25:27.5±0.2, 38°N±1°×14°5E±°, h43km, MV3.9/26, FAR E OFF NORTH HONSHU*
*IDC **30** 02:25:28.4±5.5, 36°.51N×144°.50E, h0km, mb3.7/2, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=113.6km s-min=35.5km az=27.0*
ISC 30 02:25:26.4±1.4, 37°.58N±0°.07×144°.72E±0°.09, h35km, n18, σ1§94/25, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.68**	**287**	P	**Pn**	**02 26 07.6**	**+0.6**
JIKH				S	**Sn**	**02 26 37.5**	**-0.7**
JIO	**

SDV	Santo Domingo	33.43 237	LR	LR	02 52 30.3	
	comp=Z,26nm,21.2s,baz=84,slow=34					
TKL	Tuckaleechee C	34.88 291	LR	LR	02 51 50.7	
	comp=Z,101nm,18.5s,baz=96,slow=31					
FRB	Frobisher Bay	37.75 342	LR	LR	02 54 31.9	
	comp=Z,34nm,20.6s,baz=185,slow=33					
ROSC	El Rosal	38.84 236	LR	LR	02 55 23.2	
	comp=Z,38nm,21.9s,baz=29,slow=34					
DBIC	Dimbokro	42.35 115	LR	LR	02 57 09.4	
	comp=Z,106nm,18.4s,baz=285,slow=33					
DAVOX	Davos/Dischmat	43.75 52	LR	LR	02 56 45.4	
	comp=Z,52nm,19.1s,baz=266,slow=32					
JTS	Las Juntas de	43.89 253	LR	LR	02 59 12.2	
	comp=Z,30nm,19.7s,baz=94,slow=35					
TORD	Torodi Ar. Bea	44.19 102	P	P	02 41 50.9	-0.1
	1.8nm,0.8s,baz=302,slow=5.9,SNR=8.2					
	1.8nm,0.8s					
ULM	Lac du Bonnet	44.49 313	LR	LR	02 58 50.9	
	comp=Z,45nm,21.3s,baz=26,slow=34					
H10N2	ASCENSION HYDR	46.20 140	T	T	03 31 14.6	
	baz=325,slow=75,SNR=1277					
H10N3	ASCENSION HYDR	46.20 140	T	T	03 31 16.9	
	baz=325,slow=75,SNR=1135					
H10N1	ASCENSION HYDR	46.21 140	T	T	03 31 12.9	
	baz=325,slow=75,SNR=1239					
GERES	GERESS Array B	46.44 49	P	P	02 42 08.7	+0.2
	0.2nm,0.3s,baz=286,slow=7.0,SNR=3.9					
	0.2nm,0.3s					
H10S3	ASCENSION HYDR	47.02 141	T	T	03 32 20.8	
	baz=325,slow=74,SNR=644					
H10S2	ASCENSION HYDR	47.04 141	T	T	03 32 18.1	
	baz=255,slow=74,SNR=231					
NOA	NORSAR Array B	47.06 32	LR	LR	02 58 05.0	
	comp=Z,29nm,20.7s,baz=345,slow=31					
CMIG	Matias Romero	49.17 267	LR	LR	03 00 47.4	
	comp=Z,26nm,21.4s,baz=48,slow=33					
ATAH	Atahualpa	50.26 229	LR	LR	03 03 44.8	
	comp=Z,24nm,20.4s,baz=6.6,slow=36					
TXAR	Lajitas Array	52.48 286	P	P	02 42 54.7	-0.2
	0.3nm,0.8s,baz=98,slow=9.0,SNR=3.5					
TXAR			LR	LR	03 04 37.8	
	comp=Z,24nm,19.4s,baz=59,slow=35					
	0.3nm,0.8s					
NNA	Nana	53.01 223	LR	LR	03 05 51.9	
	comp=Z,14nm,20.8s,baz=14,slow=36					
ANMO	Albuquerque	53.32 293	LR	LR	03 03 37.0	
	comp=Z,56nm,21.8s,baz=74,slow=34					
PDAR	Pinedale Array	54.14 303	P	P	02 43 06.9	-0.3
	1.7nm,0.9s,baz=85,slow=9.1,SNR=11					
PDAR			LR	LR	03 05 26.7	
	comp=Z,91nm,18.1s,baz=88,slow=35					
	1.7nm,0.9s					
FINES	FINESS Array B	54.20 34	P	P	02 43 06.2	-0.8
	3.3nm,0.9s,baz=290,slow=8.8,SNR=3.7					
	3.3nm,0.9s					
ARCES	ARCESS Array B	54.80 24	P	P	02 43 10.8	-0.4
	4.9nm,1.0s,baz=307,slow=8.9,SNR=2.5					
	4.9nm,1.0s					
YKA	Yellowknife Ar	55.73 328	LR	LR	03 06 36.6	
	comp=Z,58nm,18.9s,baz=274,slow=36					
AKASG	Malin Array Be	56.41 47	P	P	02 43 22.9	-0.1
	0.7nm,0.6s,baz=286,slow=4.5,SNR=4.9					
	0.7nm,0.6s					
NEW	Newport	58.43 311	LR	LR	03 08 14.3	
	comp=Z,34nm,18.8s,baz=61,slow=36					
ELK	Elko	58.71 302	LR	LR	03 07 49.5	
	comp=Z,55nm,19.5s,baz=60,slow=35					
NVAR	Mina Array Bea	61.61 300	P	P	02 43 59.7	+0.1
	0.4nm,0.7s,baz=98,slow=6.8,SNR=1.8					
NVAR			LR	LR	03 09 24.0	
	comp=Z,52nm,21.1s,baz=93,slow=35					
	0.4nm,0.7s					
PFO	Pinyon Flats O	61.64 294	LR	LR	03 08 41.7	
	comp=Z,76nm,19.2s,baz=46,slow=34					
BRTR	Keskin Array B	61.75 58	P	P	02 44 00.5	0.0
	1.7nm,1.0s,baz=293,slow=6.8,SNR=5.3					
	1.7nm,1.0s					
DLBC	Dease Lake	63.79 324	LR	LR	03 11 06.7	
	comp=Z,107nm,20.4s,baz=108,slow=35					
YBH	Yreka Blue Hor	63.87 305	LR	LR	03 10 55.7	
	comp=Z,54nm,19.2s,baz=66,slow=35					
BBB	Bella Bella	64.39 317	LR	LR	03 12 03.0	
	comp=Z,43nm,18.4s,baz=80,slow=36					
BELG	Belogornoye	67.18 42	LR	LR	03 11 03.7	
	comp=Z,28nm,18.9s,baz=325,slow=33					
ILAR	Eielson Array	69.19 334	P	P	02 44 48.3	+0.3
	1.0nm,1.0s,baz=46,slow=4.3,SNR=5.1					
ILAR			LR	LR	03 15 28.3	
	comp=Z,53nm,18.4s,baz=126,slow=36					
	1.0nm,1.0s					
TSUM	Tsumeb	75.77 122	LR	LR	03 11 37.1	
	comp=Z,29nm,19.6s,baz=329,slow=30					
MBAR	Mbarara	75.94 99	LR	LR	03 19 25.5	
	comp=Z,33nm,18.2s,baz=288,slow=36					
ZALV	Zalesovo Beam	85.06 28	P	P	02 46 18.2	+0.9
	0.6nm,0.5s,baz=307,slow=5.2,SNR=2.4					
	0.6nm,0.5s					
LBTB	Lobatse	85.18 122	LR	LR	03 17 33.5	
	comp=Z,27nm,21.5s,baz=322,slow=31					
SUR	Sutherland	86.28 131	LR	LR	03 16 53.7	
	comp=Z,32nm,21.5s,baz=306,slow=30					
BOSA	Boshof	87.04 125	LR	LR	03 20 22.3	
	comp=Z,23nm,19.2s,baz=339,slow=32					
SHEM	Shemya Is, Ala	91.77 339	LR	LR	03 33 21.1	
	comp=Z,6.3nm,18.3s,baz=316,slow=39					

ROM 30 02:56:44.8±0.1, 42°.829N±0°.003×13°.158E±0°.004,
h9km, Md1.5/5, 14C-12D, Error ellipse: s-maj=0.3km
s-min=0.3km az=86.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T1245	Castelsantange	0.04	38	P	Pg		02 56 46.9	0.0
T1245				S	Sg		02 56 48.0	-0.3
T1245				AML	AML			
	comp=E,6565μm,1.1s							
T1245				AML	AML			
	comp=N,8310μm,0.1s							
T1245				AML	AML			
	comp=N,8705μm,0.1s							
T1245				AML	AML			
	comp=E,7120μm,1.1s							
T1245				AML	AML			
	comp=N,8700μm,0.1s							
T1245				AML	AML			
	comp=E,6570μm,1.2s							
T1245				AML	AML			
	comp=N,8305μm,0.1s							
T1245				AML	AML			
	comp=N,8703μm,0.1s							
T1245				AML	AML			
	comp=E,5794μm,0.1s							
T1245				AML	AML			
	comp=N,8309μm,0.1s							
T1245				AML	AML			
	comp=E,5956μm,0.1s							
T1245				END				
MC2	Monte Cornacci	0.09	16	P	Pg		02 56 47.6	+0.2
MC2				S	Sg		02 56 49.4	+0.1
MC2				END				
T1216	Preci, Frazion	0.12	301	⇓P	Pg		02 56 48.2	+0.5
T1216				AML	AML			
	comp=E,20050μm,1.1s							
T1216				AML	AML			
	comp=N,14650μm,1.2s							
T1216				AML	AML			
	comp=E,20050μm,1.1s							
T1216				AML	AML			
	comp=N,14600μm,1.2s							
T1216				AML	AML			
	comp=N,810μm,0.2s							
T1216				AML	AML			
	comp=E,697μm,0.2s							
T1216				END				
MMO1	Montemonaco	0.14	60	⇑P	Pg		02 56 48.6	+0.5
MMO1				END				
FEMA	Monte Fema	0.15	329	⇑P	Pg		02 56 48.9	+0.5
FEMA				AML	AML			
	comp=E,1170μm,0.3s							
FEMA				AML	AML			
	comp=N,1310μm,0.5s							
FEMA				AML	AML			
	comp=N,81250μm,0.4s							
FEMA				AML	AML			
	comp=E,84250μm,0.4s							
FEMA				AML	AML			
	comp=N,81300μm,0.4s							
FEMA				AML	AML			
	comp=N,1115μm,0.1s							
FEMA				AML	AML			
	comp=E,787μm,0.1s							
T1204	Amatrice, Fraz	0.19	143	⇓P	Pg		02 56 49.7	+0.8
T1204				S	Sg		02 56 53.6	+1.9
T1204				AML	AML			
	comp=E,1710μm,0.6s							
T1204				AML	AML			
	comp=N,1138μm,0.9s							
T1204				AML	AML			
	comp=N,263μm,0.1s							
T1204				AML	AML			
	comp=E,494μm,0.2s							
T1204				END				
T1217	Poggiodomo (PG	0.20	235	⇑P	Pg		02 56 49.8	+0.7
T1217				S	Sg		02 56 53.4	+1.4
T1217				AML	AML			
	comp=E,432μm,0.8s							
T1217				AML	AML			
	comp=N,360μm,1.5s							
T1217				AML	AML			
	comp=E,1490μm,0.6s							
T1217				AML	AML			
	comp=N,2910μm,0.4s							
T1217				AML	AML			
	comp=E,1510μm,0.6s							
T1217				AML	AML			
	comp=N,2845μm,0.4s							
T1217				AML	AML			
	comp=E,2175μm,0.5s							
T1217				AML	AML			
	comp=N,2905μm,0.4s							
T1217				AML	AML			
	comp=E,2105μm,0.5s							
T1217				AML	AML			
	comp=N,2840μm,0.4s							
T1217				AML	AML			
	comp=E,350μm,0.1s							
T1217				AML	AML			
	comp=E,350μm,0.1s							
T1217				AML	AML			
	comp=N,252μm,0.3s							
T1217				AML	AML			
	comp=N,316μm,0.3s							
AM05	Amandola Campo	0.21	44	⇑P	Pg		02 56 49.8	+0.7
AM05				S	Sg		02 56 53.1	+1.1
AM05				AML	AML			
	comp=N,1415μm,1.0s							
AM05				AML	AML			
	comp=E,5950μm,0.7s							
AM05				AML	AML			
	comp=N,326μm,0.5s							
AM05				AML	AML			
	comp=E,1680μm,0.7s							
AM05				AML	AML			
	comp=E,5945μm,0.7s							
AM05				AML	AML			
	comp=E,206μm,0.1s							
AM05				AML	AML			
	comp=N,167μm,0.1s							
AM05				AML	AML			
	comp=E,821μm,0.1s							
AM05				AML	AML			
	comp=N,64μm,0.1s							
FDMO	Fiordimonte	0.21	346	⇑P	Pg		02 56 49.7	+0.4
FDMO				AML	AML			
FDMO				AML	AML			
	comp=N,86800μm,0.4s							
FDMO				AML	AML			
	comp=E,312μm,0.2s							
FDMO				AML	AML			
	comp=N,306μm,0.2s							
T1215	Vallo di Nera,	0.21	263	⇓P	Pg		02 56 50.0	+0.7
T1215				S	Sg		02 56 53.6	+1.3
T1215				AML	AML			
	comp=E,2295μm,0.4s							
T1215				AML	AML			
	comp=N,2475μm,0.4s							
T1215				AML	AML			
	comp=E,2360μm,0.4s							
T1215				AML	AML			
	comp=N,2400μm,0.5s							
T1215				AML	AML			
	comp=E,2290μm,0.4s							
T1215				AML	AML			
	comp=N,2475μm,0.4s							
T1215				AML	AML			
	comp=E,2375μm,0.4s							
T1215				AML	AML			
	comp=N,2390μm,0.5s							
T1215				AML	AML			
	comp=N,301μm,0.1s							
T1215				AML	AML			
	comp=N,292μm,0.1s							
T1215				AML	AML			
	comp=E,268μm,0.1s							
T1215				AML	AML			
	comp=E,261μm,0.1s							
SMA1	SAN MARTINO	0.24	147	⇑P	Pg		02 56 50.4	+0.7
SMA1				S	Sg		02 56 54.6	+1.7
SMA1				AML	AML			
	comp=E,579μm,1.5s							
SMA1				AML	AML			
	comp=N,670μm,0.8s							
SMA1				AML	AML			
	comp=E,1405μm,0.5s							
SMA1				AML	AML			
	comp=N,1515μm,0.5s							
SMA1				AML	AML			
	comp=N,366μm,0.2s							
SMA1				AML	AML			
	comp=E,282μm,0.6s							
LNSS	Leonessa	0.24	201	⇑P	Pg		02 56 50.5	+0.7
LNSS				S	Sg		02 56 54.9	+1.8
LNSS				AML	AML			
	comp=E,584μm,0.2s							
LNSS				AML	AML			
	comp=N,460μm,0.2s							
LNSS				AML	AML			
	comp=E,2345μm,1.0s							
LNSS				AML	AML			
	comp=N,1965μm,1.0s							
LNSS				AML	AML			
	comp=N,2635μm,0.8s							
LNSS				AML	AML			
	comp=E,584μm,0.2s							
LNSS				AML	AML			
	comp=N,460μm,0.2s							
T1243	Rocca Santa Ma	0.25	122	⇓P	Pg		02 56 50.4	+0.5
T1243				S	Sg		02 56 54.6	+1.3
GUMA	Gualdo di Mace	0.27	29	⇑P	Pb		02 56 51.1	-0.8
GUMA				AML	AML			
	comp=E,16900μm,0.4s							
GUMA				AML	AML			
	comp=N,14400μm,0.4s							
GUMA				AML	AML			
	comp=N,18600μm,0.5s							
GUMA				AML	AML			
	comp=E,16900μm,0.4s							
GUMA				AML	AML			
	comp=N,14350μm,0.4s							
GUMA				AML	AML			
	comp=E,19700μm,0.4s							
GUMA				AML	AML			
	comp=E,451μm,0.5s							
GUMA				AML	AML			
	comp=E,472μm,0.3s							
GUMA				AML	AML			
	comp=N,510μm,0.4s							
GUMA				AML	AML			
	comp=N,583μm,0.4s							
RM33	Pellescritta (	0.32	173	⇑P	Pg		02 56 51.8	+0.6
RM33				S	Sb		02 56 57.5	-0.6
RM33				AML	AML			
	comp=E,509μm,0.5s							
RM33				AML	AML			
	comp=N,418μm,0.5s							
RM33				AML	AML			
	comp=E,480μm,0.5s							
RM33				AML	AML			
	comp=N,426μm,0.7s							
RM33				AML	AML			
	comp=E,794μm,1.5s							
RM33				AML	AML			
	comp=N,698μm,0.8s							
RM33				AML	AML			
	comp=E,790μm,1.5s							
RM33				AML	AML			
	comp=N,692μm,0.9s							
RM33				AML	AML			
	comp=E,122μm,0.2s							
RM33				AML	AML			
	comp=N,134μm,0.6s							
RM33				AML	AML			
	comp=N,114μm,0.2s							
RM33				AML	AML			
	comp=E,146μm,0.1s							
CAMP	Campotosto	0.35	148	P	Pg		02 56 52.0	+0.3
CAMP				S	Sb		02 56 57.8	-1.1
CAMP				AML	AML			
	comp=E,279μm,1.0s							
CAMP				AML	AML			
	comp=N,347μm,0.8s							
CAMP				AML	AML			
	comp=E,423μm,1.0s							
CAMP				AML	AML			
	comp=N,440μm,0.9s							
CAMP				AML	AML			
	comp=E,74μm,0.2s							
CAMP				AML	AML			
	comp=N,46μm,0.7s							
T1211	Morro Reatino	0.37	217	⇑P	Pg		02 56 52.9	+0.7
T1211				S	Sb		02 56 58.5	-1.0
T1211				AML	AML			
	comp=E,616μm,0.9s							
T1211				AML	AML			
	comp=N,1123μm,1.1s							
T1211				AML	AML			
	comp=E,980μm,0.8s							
T1211				AML	AML			
	comp=N,1780μm,0.4s							
T1211				AML	AML			
	comp=N,209μm,0.2s							
T1211				AML	AML			
	comp=E,175μm,0.2s							
T1211				AML	AML			
	comp=N,213μm,0.2s							
T1211				AML	AML			
	comp=E,190μm,0.1s							
ARRO	Arrone	0.38	229	⇓P	Pg		02 56 53.0	+0.6
ARRO				S	Sb		02 56 58.9	-0.9
ARRO				AML	AML			
	comp=E,536μm,0.8s							
ARRO				AML	AML			
	comp=N,490μm,0.3s							
ARRO				AML	AML			
	comp=E,615μm,1.4s							
ARRO				AML	AML			
	comp=N,850μm,0.2s							
ARRO				AML	AML			
	comp=E,100μm,0.2s							
ARRO				AML	AML			
	comp=N,74μm,0.1s							
TERO	Teramo	0.39	122	P	Pg		02 56 52.7	+0.2
TERO				S	Sb		02 56 59.3	-0.7
TERO				AML	AML			
	comp=E,557μm,1.2s							
TERO				AML	AML			
	comp=N,812μm,0.4s							
TERO				AML	AML			
	comp=E,558μm,1.2s							
TERO				AML	AML			
	comp=E,809μm,0.9s							
TERO				AML	AML			
	comp=N,894μm,0.4s							
TERO				AML	AML			
	comp=N,160μm,0.1s							
TERO				AML	AML			
	comp=E,161μm,0.1s							
TERO				AML	AML			
	comp=N,131μm,0.1s							
T1247	Pizzolo (AQ)	0.40	165	⇓P	Pg		02 56 53.3	+0.6
T1247				S	Sb		02 56 59.8	-0.5
T1247				AML	AML			
	comp=E,190μm,1.4s							
T1247				AML	AML			
	comp=N,236μm,1.0s							
T1247				AML	AML			
	comp=E,831μm,0.9s							
T1247				AML	AML			
	comp=N,956μm,0.7s							
T1247				AML	AML			
	comp=N,152μm,0.2s							
T1247				AML	AML			
	comp=E,150μm,0.2s							
OFFI	Offida	0.40	75	⇓P	Pb		02 56 54.2	+0.1
OFFI				AML	AML			
	comp=E,2515μm,0.9s							
OFFI				AML	AML			
	comp=N,4055μm,0.4s							
OFFI				AML	AML			
	comp=E,3090μm,0.3s							
OFFI				AML	AML			
	comp=N,4545μm,0.4s							
ASSB	Assisi San Ben	0.42	300	⇓P	Pg		02 56 53.5	+0.3
ASSB				AML	AML			
	comp=E,3505μm,1.2s							
ASSB				AML	AML			
	comp=N,5215μm,0.4s							
ASSB				AML	AML			
	comp=N,151μm,0.2s							
ASSB				AML	AML			
	comp=E,116μm,0.1s							
SNTG	Esanatoglia	0.46	340	⇑P	Pg		02 56 54.3	+0.5
SNTG				AML	AML			
	comp=N,2385μm,0.7s							
SNTG				AML	AML			
	comp=E,4150μm,0.1s							
SNTG				AML	AML			
	comp=N,2380μm,0.7s							
SNTG				AML	AML			
	comp=E,4190μm,0.1s							
SNTG				AML	AML			
	comp=N,2505μm,0.7s							
SNTG				AML	AML			
	comp=N,86μm,0.1s							
SNTG				AML	AML			
	comp=E,120μm,0.1s							
GIGS	Gran Sasso	0.48	141	P	Pg		02 56 54.5	+0.2
GIGS				AML	AML			
	comp=E,52μm,0.2s							
GIGS				AML	AML			
	comp=N,56μm,0.2s							
GIGS				AML	AML			
	comp=E,168μm,0.4s							
GIGS				AML	AML			
	comp=N,148μm,0.7s							
GIGS				AML	AML			
	comp=E,15μm,0.1s							
GIGS				AML	AML			
	comp=N,17μm,0.1s							
EL6	Elcito	0.50	355	⇓P	Pg		02 56 55.0	+0.3
EL6				S	Sb		02 57 04.0	+0.7
EL6				AML	AML			
	comp=E,9345μm,0.3s							
EL6				AML	AML			
	comp=N,10450μm,0.3s							
EL6				AML	AML			
	comp=E,9355μm,0.3s							
EL6				AML	AML			
	comp=N,10500μm,0.3s							
EL6				AML	AML			
	comp=E,148μm,0.2s							
EL6				AML	AML			
	comp=N,164μm,0.2s							
CING	Cingoli	0.55	3	⇓P	Pg		02 56 55.7	+0.2
CING				AML	AML			
	comp=E,5900μm,0.9s							
CING				AML	AML			
	comp=N,4335μm,0.6s							
CING				AML	AML			
	comp=N,81μm,0.1s							
CING				AML	AML			
	comp=E,82μm,0.2s							
FOSV	Fossato di Vic	0.55	328	⇑P	Pg		02 56 55.8	+0.3
FOSV				AML	AML			
	comp=E,1825μm,0.4s							
FOSV				AML	AML			
	comp=E,1830μm,0.4s							
FOSV				AML	AML			
	comp=N,2480μm,0.3s							
FOSV				AML	AML			
	comp=N,98μm,0.3s							

FOSV			AML	AML		
	comp=E,70μm,0.2s					
FIAM	**Fiamignano**	**0.56 183**	⇑P	Pg	02 56 55.9	+0.1
FIAM			AML	AML		
	comp=E,94μm,0.4s					
FIAM			AML	AML		
	comp=N,103μm,1.2s					
FIAM			AML	AML		
	comp=E,746μm,0.5s					
FIAM			AML	AML		
	comp=N,452μm,0.4s					
VCEL	**Villa Celiera**	**0.67 131**	⇓P	Pb	02 56 58.3	-0.3
VCEL			AML	AML		
	comp=E,198μm,0.5s					
VCEL			AML	AML		
	comp=N,168μm,1.0s					
VCEL			AML	AML		
	comp=E,702μm,0.4s					
VCEL			AML	AML		
	comp=N,488μm,0.7s					
ARVD	**Arcevia**	**0.69 347**	P	Pg	02 56 58.5	+0.4
ARVD			S	Sb	02 57 10.0	+1.4
ARVD			AML	AML		
	comp=E,2155μm,0.8s					
ARVD			AML	AML		
	comp=N,1355μm,1.3s					
ARVD			AML	AML		
	comp=E,48μm,0.1s					
FRON	**Frontone**	**0.76 335**	P	Pg	02 56 59.6	+0.1
FRON			AML	AML		
	comp=E,1041μm,0.6s					
FRON			AML	AML		
	comp=N,1540μm,0.4s					
FRON			AML	AML		
	comp=E,57μm,0.2s					
FRON			AML	AML		
	comp=N,69μm,0.2s					
MGAB	**Montegabbione**	**0.77 277**	⇑P	Pn	02 57 02.6	+0.7
ATVO	**AVT- Monte Val**	**0.78 315**	P	Pg	02 56 59.9	0.0
ATVO			AML	AML		
	comp=E,636μm,0.3s					
ATVO			AML	AML		
	comp=N,602μm,0.6s					
ATVO			AML	AML		
	comp=E,637μm,0.5s					
ATVO			AML	AML		
	comp=N,601μm,0.6s					
PIEI	**Pieia**	**0.84 327**	S	Sn	02 57 15.0	-0.4
FSSB	**Fossombrone**	**0.91 342**	S	Sn	02 57 18.0	+1.0
TRIF	**Trifonti**	**1.68 281**	⇓P	Pn	02 57 14.3	-0.1
TRIF			AML	AML		
	comp=E,84μm,1.3s					
TRIF			AML	AML		
	comp=N,80μm,0.7s					

PRU ***30*** *02:57:27.2±0.0, 43°.03N×13°.68E, h0km*
ROM 30 02:57:26.0±0.0, 42°.972N±0°.002×13°.092E±0°.003, h10km, ML2.9/53, 33C-12D, Error ellipse: s-maj=0.2km s-min=0.2km az=80.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**253**	P	Pg	02 57 28.2	+0.2
FEMA				S	Sg	02 57 29.5	-0.1
FEMA				AML	AML		
	comp=E,84300μm,0.3s						
FEMA				AML	AML		
	comp=E,84250μm,0.4s						
FEMA				AML	AML		
	comp=N,81250μm,0.4s						
FDMO	**Fiordimonte**	**0.07**	**357**	P	Pg	02 57 28.5	+0.2
FDMO				S	Sg	02 57 29.9	0.0
MC2	**Monte Cornacci**	**0.09**	**129**	P	Pg	02 57 29.1	+0.3
MC2				S	Sg	02 57 30.9	+0.2
T1216	**Preci, Frazion**	**0.10**	**213**	P	Pg	02 57 29.1	+0.5
T1216				S	Sg	02 57 31.1	+0.6
T1216				AML	AML		
	comp=E,20050μm,1.1s						
T1216				AML	AML		
	comp=N,14650μm,1.2s						
T1216				AML	AML		
	comp=E,20050μm,1.1s						
T1216				AML	AML		
	comp=N,14650μm,1.2s						
T1216				AML	AML		
	comp=E,20050μm,0.9s						
T1245	**Castelsantange**	**0.14**	**148**	P	Pg	02 57 29.7	+0.5
T1245				S	Sg	02 57 32.6	+1.0
T1245				AML	AML		
	comp=E,6785μm,0.3s						
T1245				AML	AML		
	comp=N,8045μm,0.3s						
T1245				AML	AML		
	comp=N,7985μm,0.3s						
T1245				AML	AML		
	comp=N,8050μm,0.3s						
T1245				AML	AML		
	comp=E,6570μm,1.2s						
T1245				AML	AML		
	comp=E,6570μm,0.8s						
T1245				AML	AML		
	comp=E,6790μm,0.3s						
CSP1	**Cessapalombo**	**0.15**	**35**	P	Pg	02 57 29.9	+0.5
CSP1				S	Sg	02 57 32.5	+0.7
MMO1	**Montemonaco**	**0.19**	**113**	P	Pg	02 57 30.6	+0.5
MMO1				S	Sg	02 57 33.8	+1.0
AM05	**Amandola Campo**	**0.19**	**88**	⇑P	Pg	02 57 30.8	+0.7
AM05				S	Sg	02 57 34.0	+1.1
AM05				AML	AML		
	comp=E,1675μm,0.7s						
AM05				AML	AML		
	comp=N,1415μm,1.0s						
AM05				AML	AML		
	comp=E,5945μm,0.7s						
AM05				AML	AML		
	comp=N,326μm,0.5s						
AM05				AML	AML		
	comp=N,326μm,0.5s						
AM05				AML	AML		
	comp=E,1680μm,0.7s						
GUMA	**Gualdo di Mace**	**0.20**	**63**	⇑P	Pb	02 57 31.1	-0.6
GUMA				S	Sg	02 57 34.9	+1.8
GUMA				AML	AML		
	comp=E,16900μm,0.4s						
GUMA				AML	AML		
	comp=N,18600μm,0.5s						
GUMA				AML	AML		
	comp=E,16950μm,0.4s						
GUMA				AML	AML		
	comp=N,14350μm,0.4s						
GUMA				AML	AML		
	comp=N,14400μm,0.4s						
GUMA				AML	AML		
	comp=E,19700μm,0.4s						
SEF1	**Sefro**	**0.20**	**329**	P	Pg	02 57 30.9	+0.5
SEF1				S	Sg	02 57 34.4	+1.1
SEF1				AML	AML		
	comp=E,14450μm,1.5s						
SEF1				AML	AML		
	comp=N,11140μm,1.0s						
SEF1				AML	AML		
	comp=E,14450μm,0.5s						
SEF1				AML	AML		
	comp=N,11130μm,1.0s						
MDAR	**Monte D'Aria**	**0.22**	**10**	P	Pg	02 57 31.2	+0.5
MDAR				S	Sg	02 57 35.0	+1.1
MDAR				AML	AML		
	comp=N,20850μm,0.2s						
MDAR				AML	AML		
	comp=E,20950μm,0.5s						
T1215	**Vallo di Nera,**	**0.24**	**224**	⇑P	Pg	02 57 31.5	+0.7
T1215				S	Sg	02 57 35.5	+1.4
T1215				AML	AML		
	comp=N,2475μm,0.4s						
T1215				AML	AML		
	comp=E,2365μm,0.4s						
T1215				AML	AML		
	comp=N,2395μm,0.5s						
T1215				AML	AML		
	comp=N,2475μm,0.4s						
T1215				AML	AML		
	comp=E,2290μm,0.4s						
T1215				AML	AML		
	comp=E,2295μm,0.4s						
T1215				AML	AML		
	comp=E,2295μm,1.6s						
FIU1	**Fiuminata**	**0.25**	**332**	P	Pg	02 57 31.7	+0.7
FIU1				S	Sg	02 57 35.9	+1.4
SSM1	**San Severino M**	**0.27**	**14**	P	Pg	02 57 31.9	+0.5
SSM1				S	Sb	02 57 36.4	-1.1
GAG1	**Gagliole**	**0.27**	**356**	P	Pg	02 57 32.1	+0.7
GAG1				AML	AML		
	comp=E,13550μm,0.4s						
GAG1				AML	AML		
	comp=N,16050μm,1.1s						
GAG1				AML	AML		
	comp=E,13600μm,0.4s						
GAG1				AML	AML		
	comp=N,16050μm,0.9s						
T1241	**Roccafluvione,**	**0.28**	**115**	⇑P	Pg	02 57 31.8	+0.2
T1241				S	Sg	02 57 36.3	+1.0
T1241				AML	AML		
	comp=E,2855μm,0.7s						
T1241				AML	AML		
	comp=N,1925μm,0.5s						
T1241				AML	AML		
	comp=E,2755μm,0.6s						
T1241				AML	AML		
	comp=N,1935μm,0.5s						
T1241				AML	AML		
	comp=N,1930μm,0.5s						
T1241				AML	AML		
	comp=E,2760μm,0.6s						
T1217	**Poggiodomo (PG**	**0.28**	**205**	⇑P	Pg	02 57 32.4	+0.6
T1217				S	Sb	02 57 37.1	-0.9
T1217				AML	AML		
	comp=N,2905μm,0.4s						
T1217				AML	AML		
	comp=N,2845μm,0.4s						
T1217				AML	AML		
	comp=E,2175μm,0.5s						
T1217				AML	AML		
	comp=N,2910μm,0.4s						
T1217				AML	AML		
	comp=E,2105μm,0.5s						
T1217				AML	AML		
	comp=N,2840μm,0.4s						
T1217				AML	AML		
	comp=E,2110μm,0.5s						
T1217				AML	AML		
	comp=N,2835μm,0.4s						
T1217				AML	AML		
	comp=E,2180μm,0.4s						
T1217				AML	AML		
	comp=E,2110μm,1.5s						
MTL1	**Matelica**	**0.29**	**348**	P	Pg	02 57 32.5	+0.6
MTL1				S	Sb	02 57 37.5	-0.7
MTL1				AML	AML		
	comp=E,10840μm,0.5s						
MTL1				AML	AML		
	comp=N,11895μm,1.3s						
MTL1				AML	AML		
	comp=N,11890μm,1.3s						
MTL1				AML	AML		
	comp=E,10840μm,1.5s						
MTL1				AML	AML		
	comp=N,11890μm,0.7s						
SNTG	**Esanatoglia**	**0.30**	**339**	P	Pg	02 57 32.6	+0.4
SNTG				S	Sb	02 57 37.6	-1.0
SNTG				AML	AML		
	comp=E,4150μm,0.1s						
SNTG				AML	AML		
	comp=N,2385μm,0.7s						
SNTG				AML	AML		
	comp=E,4145μm,0.1s						
SNTG				AML	AML		
	comp=N,2380μm,0.8s						
SNTG				AML	AML		
	comp=E,4190μm,0.1s						
SNTG				AML	AML		
	comp=N,2505μm,0.7s						
SNTG				AML	AML		
	comp=N,2380μm,1.2s						
SNTG				AML	AML		
	comp=N,2505μm,1.3s						
MNTP	**Montappone**	**0.32**	**59**	P	Pb	02 57 33.6	-0.2
MNTP				AML	AML		
	comp=E,4910μm,0.3s						
MNTP				AML	AML		
	comp=N,3835μm,0.4s						
MNTP				AML	AML		
	comp=N,3840μm,0.4s						
MNTP				AML	AML		
	comp=E,4905μm,0.3s						
MNTP				AML	AML		
	comp=N,3840μm,1.6s						
ASSB	**Assisi San Ben**	**0.33**	**283**	⇑P	Pg	02 57 33.0	+0.5
ASSB				S	Sb	02 57 38.3	-0.9
ASSB				AML	AML		
	comp=E,3505μm,1.2s						
ASSB				AML	AML		
	comp=N,5215μm,0.4s						
ASSB				AML	AML		
	comp=E,3505μm,0.8s						
T1204	**Amatrice, Fraz**	**0.34**	**151**	P	Pg	02 57 33.3	+0.5
EL6	**Elcito**	**0.36**	**1**	⇑P	Pg	02 57 33.5	+0.4
EL6				AML	AML		
	comp=E,9345μm,0.3s						
EL6				AML	AML		
	comp=E,9355μm,0.3s						
EL6				AML	AML		
	comp=N,10500μm,0.3s						
EL6				AML	AML		
	comp=N,10450μm,0.3s						
EL6				AML	AML		
	comp=E,9350μm,0.3s						
LNSS	**Leonessa**	**0.37**	**186**	⇑P	Pg	02 57 33.8	+0.4
LNSS				AML	AML		
	comp=N,2635μm,0.8s						
LNSS				AML	AML		
	comp=E,2345μm,1.0s						
LNSS				AML	AML		
	comp=E,2345μm,1.0s						
T1243	**Rocca Santa Ma**	**0.38**	**136**	P	Pg	02 57 33.9	+0.4
SMA1	**SAN MARTINO**	**0.39**	**152**	P	Pg	02 57 34.1	+0.5
SMA1				AML	AML		
	comp=E,1405μm,0.5s						
SMA1				AML	AML		
	comp=N,1510μm,0.5s						
SMA1				AML	AML		
	comp=N,1515μm,0.5s						
SMA1				AML	AML		
	comp=N,1515μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.39**	**303**	⇑P	Pg	02 57 34.3	+0.6
FOSV	**Fossato di Vic**	**0.40**	**323**	P	Pg	02 57 34.5	+0.5
FOSV				AML	AML		
	comp=E,1825μm,0.4s						
FOSV				AML	AML		
	comp=N,2480μm,0.3s						
FOSV				AML	AML		
	comp=E,1830μm,0.4s						
CING	**Cingoli**	**0.41**	**11**	⇑P	Pg	02 57 34.5	+0.4
CING				AML	AML		
	comp=E,5900μm,0.9s						
CING				AML	AML		
	comp=N,4335μm,0.6s						
CING				AML	AML		
	comp=E,5900μm,1.1s						
CING				AML	AML		
	comp=N,4335μm,1.4s						
OFFI	**Offida**	**0.44**	**95**	⇑P	Pb	02 57 35.9	+0.2
OFFI				AML	AML		
	comp=E,2515μm,0.9s						
OFFI				AML	AML		
	comp=E,3090μm,0.3s						
OFFI				AML	AML		
	comp=N,4545μm,0.4s						
ARRO	**Arrone**	**0.46**	**212**	P	Pg	02 57 35.4	+0.5
ARRO				AML	AML		
	comp=N,850μm,0.2s						
ARRO				AML	AML		
	comp=E,615μm,1.4s						
RM33	**Pellescritta (**	**0.47**	**169**	⇑P	Pg	02 57 35.6	+0.4
RM33				AML	AML		
	comp=E,794μm,1.5s						
RM33				AML	AML		
	comp=N,698μm,0.8s						
RM33				AML	AML		
	comp=N,692μm,0.9s						
RM33				AML	AML		
	comp=E,790μm,1.5s						
RM33				AML	AML		
	comp=E,794μm,1.5s						
RM33				AML	AML		
	comp=E,790μm,1.5s						
RM33				AML	AML		
	comp=E,794μm,0.5s						
RM33				AML	AML		
	comp=E,790μm,0.5s						
RM33				AML	AML		
	comp=N,692μm,0.9s						
RM33				AML	AML		
	comp=N,698μm,0.8s						
T1211	**Morro Reatino**	**0.47**	**202**	⇑P	Pg	02 57 35.6	+0.4
T1211				AML	AML		
	comp=E,977μm,0.8s						
T1211				AML	AML		
	comp=N,1780μm,0.4s						
T1211				AML	AML		
	comp=E,1018μm,0.7s						
T1211				AML	AML		
	comp=N,1781μm,0.4s						
T1211				AML	AML		
	comp=N,1780μm,0.4s						
T1211				AML	AML		
	comp=E,980μm,0.7s						
T1211				AML	AML		
	comp=N,1780μm,1.6s						
MMUR	**Monte Murano**	**0.47**	**352**	⇑P	Pb	02 57 36.4	0.0
MMUR				AML	AML		
	comp=E,5255μm,0.2s						
MMUR				AML	AML		
	comp=N,4525μm,0.9s						
MMUR				AML	AML		
	comp=E,5250μm,0.2s						
MMUR				AML	AML		
	comp=N,4530μm,0.9s						
CAMP	**Campotosto**	**0.49**	**152**	P	Pg	02 57 35.8	+0.2
CAMP				AML	AML		
	comp=N,440μm,0.9s						
CAMP				AML	AML		
	comp=N,440μm,0.9s						
CAMP				AML	AML		
	comp=E,423μm,1.0s						
CAMP				AML	AML		
	comp=E,423μm,1.0s						
CAMP				AML	AML		
	comp=N,440μm,1.1s						
MURB	**Monte Urbino**	**0.51**	**305**	⇑P	Pg	02 57 36.4	+0.5
MURB				AML	AML		
	comp=E,5215μm,1.2s						
MURB				AML	AML		
	comp=N,4460μm,0.3s						
MURB				AML	AML		
	comp=E,4665μm,1.2s						
MURB				AML	AML		
	comp=N,4135μm,0.3s						
MURB				AML	AML		
	comp=E,4665μm,0.8s						
MURB				AML	AML		
	comp=E,5215μm,0.8s						
MURB				AML	AML		
	comp=N,4460μm,1.7s						
MURB				AML	AML		
	comp=N,4135μm,1.7s						
TERO	**Teramo**	**0.51**	**133**	P	Pg	02 57 36.1	+0.1
TERO				AML	AML		
	comp=E,809μm,0.9s						
TERO				AML	AML		
	comp=N,894μm,0.4s						
TERO				AML	AML		
	comp=E,808μm,0.9s						
TERO				AML	AML		
	comp=E,808μm,1.1s						
CESX	**Cesi**	**0.52**	**226**	P	Pg	02 57 36.3	+0.2
ARVD	**Arcevia**	**0.54**	**348**	⇑P	Pg	02 57 36.7	+0.3
ARVD				S	Sb	02 57 46.0	+0.7
ARVD				AML	AML		
	comp=N,1355μm,1.3s						
ARVD				AML	AML		
	comp=E,2155μm,0.8s						
ATFO	**Monte Foce - G**	**0.55**	**316**	⇓P	Pg	02 57 37.1	+0.5
ATFO				AML	AML		
	comp=E,773μm,0.7s						
ATFO				AML	AML		
	comp=N,1012μm,0.6s						
ATFO				AML	AML		
	comp=E,774μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.55**	**164**	P	Pg	02 57 36.9	+0.2
T1247				S	Sb	02 57 47.0	+1.3
T1247				AML	AML		
	comp=E,830μm,0.9s						
T1247				AML	AML		
	comp=E,831μm,0.9s						
T1247				AML	AML		
	comp=N,956μm,0.7s						
T1247				AML	AML		
	comp=N,955μm,0.7s						
T1247				AML	AML		
	comp=N,955μm,1.3s						
T1247				AML	AML		
	comp=E,831μm,1.1s						
PP3	**Marolino**	**0.56**	**43**	⇑P	Pb	02 57 38.0	+0.3
PP3				AML	AML		
	comp=N,2730μm,0.4s						
PP3				AML	AML		
	comp=N,2695μm,0.4s						
PP3				AML	AML		
	comp=N,2700μm,0.4s						
PP3				AML	AML		
	comp=E,2975μm,0.2s						
PP3				AML	AML		
	comp=N,2735μm,0.4s						
PP3				AML	AML		
	comp=E,3030μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.59**	**293**	⇑P	Pn	02 57 40.1	-0.3
FRON	**Frontone**	**0.61**	**334**	⇑P	Pg	02 57 37.9	+0.1
FRON				AML	AML		
	comp=E,1040μm,0.6s						
FRON				AML	AML		
	comp=E,1041μm,0.6s						
FRON				AML	AML		
	comp=E,1038μm,0.6s						
FRON				AML	AML		
	comp=E,1038μm,1.4s						
FRON				AML	AML		
	comp=N,1540μm,0.4s						
TRTR	**Tortoreto Alta**	**0.63**	**105**	⇑P	Pb	02 57 39.8	+0.8
TRTR				AML	AML		
	comp=E,2945μm,0.5s						
TRTR				AML	AML		
	comp=N,1905μm,0.5s						
GIGS	**Gran Sasso**	**0.63**	**146**	⇓P	Pg	02 57 38.4	+0.2
GIGS				AML	AML		
	comp=E,168μm,0.4s						
GIGS				AML	AML		
	comp=N,148μm,0.7s						
ATVO	**AVT- Monte Val**	**0.65**	**310**	⇑P	Pg	02 57 38.7	+0.2
ATVO				S	Sb	02 57 50.0	+1.5
ATVO				AML	AML		
	comp=E,636μm,0.5s						
ATVO				AML	AML		
	comp=N,602μm,0.6s						
ATVO				AML	AML		
	comp=N,601μm,0.6s						
ATVO				AML	AML		
	comp=E,637μm,0.5s						
ATVO				AML	AML		
	comp=E,637μm,1.5s						
AOI	**Ancona**	**0.69**	**33**	⇓P	Pb	02 57 39.8	-0.3
AOI				S	Sn	02 57 52.0	-0.5
AOI				AML	AML		
	comp=N,808μm,0.4s						
AOI				AML	AML		
	comp=E,1075μm,0.3s						
ATPI	**Pietralunga -**	**0.69**	**314**	P	Pg	02 57 39.6	+0.2
ATPI				S	Sb	02 57 51.0	+1.1
ATPI				AML	AML		
	comp=E,466μm,0.4s						
ATPI				AML	AML		
	comp=N,434μm,0.7s						
ATPI				AML	AML		
	comp=E,466μm,0.4s						
ATPI				AML	AML		
	comp=N,434μm,1.3s						
PIEI	**Pieia**	**0.70**	**324**	S	Sb	02 57 51.0	+1.1
MPAG	**Monte Paganucc**	**0.70**	**340**	⇑P	Pg	02 57 39.9	+0.3
MPAG				S	Sn	02 57 52.0	-0.9
MPAG				AML	AML		

*MOS **30** 03:18:30.5±0.0, 42°.10N×46°.06E, h18km, MPVA3.5*
*NORS **30** 03:18:30.0±0.0, 42°.05N×46°.17E, h23km, MPVA3.6*
*DRS **30** 03:18:31.9±0.0, 42°.08N×45°.96E, h16km*
*DDA **30** 03:18:31.9±0.0, 40°.32N×46°.14E, h6km±3km, ML2.6*

ISC 30 03:18:30.8±1.0, 42°.05N±0°.02×46°.03E±0°.01, h18km±3km, n88, σ1§12/159, 5C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.27**	**144**	P	**Pb**	**03 18 37.1**	**+0.1**
LGD				S	**Sb**	**03 18 41.8**	**+0.7**
LGD	**Lagodekhi**	**0.27**	**144**	PG	**Pb**	**03 18 37.1**	**+0.1**
LGD				S	**Sb**	**03 18 41.8**	**+0.7**
BTLR	**Botlikh**	**0.63**	**13**	*i* Pg	**Pb**	**03 18 43.3**	**-0.1**
BTLR				*e*Sg	**Sb**	**03 18 52.2**	**+0.5**
BTLR	**Botlikh**	**0.63**	**13**	⇓*i*PG	**Pb**	**03 18 43.2**	**-0.1**
BTLR				*e*S	**Sn**	**03 18 53.0**	**-1.6**
BTLR				pmax	pmax		
	comp=Z,66nm,0.4s						
BTLR				smax	smax		
	comp=E,192nm,0.2s						
XNZR	**Khunzakh**	**0.70**	**45**	*i* Pg	**Pn**	**03 18 45.2**	**-0.8**
XNZR				*e*Sg	**Sn**	**03 18 55.1**	**-1.3**
GNBR	**Gunib**	**0.77**	**64**	*i* Pg	**Pn**	**03 18 46.2**	**-0.7**
GNBR				*e*Sg	**Sn**	**03 18 57.2**	**-0.8**
GNBR	**Gunib**	**0.77**	**64**	⇓*i*PG	**Pn**	**03 18 46.2**	**-0.7**
GNBR				*e*S	**Sn**	**03 18 57.8**	**-0.2**
GNBR				pmax	pmax		
	comp=Z,55nm,0.1s						
GNBR				smax	smax		
	comp=E,270nm,0.3s						
KMKR	**Kumukh**	**0.80**	**84**	*e*Pg	**Pn**	**03 18 46.8**	**-0.6**
KMKR				*e*Sg	**Sn**	**03 18 57.8**	**-1.1**
KMKR	**Kumukh**	**0.80**	**84**	*e*PG	**Pn**	**03 18 46.8**	**-0.6**
KMKR				*e*S	**Sn**	**03 18 58.4**	**-0.5**
KMKR				pmax	pmax		
	comp=Z,16nm,0.1s						
KMKR				smax	smax		
	comp=N,197nm,0.3s						
UNCR	**Uncukul**	**0.87**	**40**	*e*Pg	**Pn**	**03 18 47.9**	**-0.3**
UNCR				*e*Sg	**Sn**	**03 19 00.1**	**-0.3**
UNCR	**Uncukul**	**0.87**	**40**	*e*PG	**Pn**	**03 18 47.9**	**-0.3**
UNCR				*e*S	**Sn**	**03 19 00.7**	**+0.2**
UNCR				pmax	pmax		
	comp=Z,16nm,0.1s						
UNCR				smax	smax		
	comp=N,678nm,0.4s						
SHTL	**Shatili**	**0.89**	**313**	P	**Pb**	**03 18 46.7**	**-1.2**
SHTL				S	**Sb**	**03 18 57.4**	**-2.0**
SHTL	**Shatili**	**0.89**	**313**	PG	**Pb**	**03 18 46.6**	**-1.2**
SHTL				S	**Sb**	**03 18 57.4**	**-2.0**
ARKR	**Arakani**	**0.90**	**52**	*e*Pg	**Pn**	**03 18 48.3**	**-0.4**
ARKR				*e*Sg	**Sn**	**03 19 01.1**	**-0.1**
ARKR	**Arakani**	**0.90**	**52**	*e*PG	**Pn**	**03 18 48.3**	**-0.4**
ARKR				*e*S	**Sn**	**03 19 01.5**	**+0.2**
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARKR				smax	smax		
	comp=E,166nm,0.4s						
DVE	**Vedeno**	**0.91**	**4**	*e*Pg	**Pg**	**03 18 48.3**	**-0.3**
DVE				*e*Sg	**Sn**	**03 19 01.4**	**0.0**
DVE	**Vedeno**	**0.91**	**4**	*e*PG	**Pg**	**03 18 48.3**	**-0.3**
DVE				*e*S	**Sn**	**03 19 01.4**	**0.0**
SEAG	**Tbilisi Sea**	**0.96**	**253**	P	**Pb**	**03 18 49.0**	**0.0**
SEAG				S	**Sb**	**03 19 02.0**	**+0.7**
SEAG	**Tbilisi Sea**	**0.96**	**253**	PG	**Pb**	**03 18 48.9**	**0.0**
SEAG				S	**Sb**	**03 19 01.9**	**+0.7**
BTNK	**Botanikuri**	**0.99**	**249**	P	Pb	03 18 41.8	-7.6
BTNK				S	**Sb**	**03 18 56.1**	**-6.0**
BTNK	**Botanikuri**	**0.99**	**249**	PG	Pb	03 18 41.8	-7.7
KRNR	**Karanay**	**1.01**	**40**	*e*Pg	**Pg**	**03 18 50.0**	**-0.5**
KRNR				*e*Sg	**Sn**	**03 19 03.8**	**-0.2**
KRNR	**Karanay**	**1.01**	**40**	*e*PG	**Pg**	**03 18 50.0**	**-0.5**
KRNR				*e*S	**Sn**	**03 19 04.3**	**+0.3**
KRNR				pmax	pmax		
	comp=Z,14nm,0.3s						
KRNR				smax	smax		
	comp=E,115nm,0.3s						
DLMR	**Dylym**	**1.11**	**23**	*e*Pg	**Pg**	**03 18 52.2**	**-0.2**
DLMR				*e*Sg	**Sg**	**03 19 08.0**	**+1.0**
DLMR	**Dylym**	**1.11**	**23**	*e*PG	**Pg**	**03 18 52.3**	**-0.1**
DLMR				*e*S	**Sg**	**03 19 08.8**	**+1.8**
DLMR				pmax	pmax		
	comp=Z,65nm,0.8s						
DLMR				smax	smax		
	comp=E,320nm,0.4s						
BUJR	**Buynaksk**	**1.11**	**46**	*e*Pg	**Pg**	**03 18 52.6**	**+0.1**
BUJR				*e*Sg	**Sg**	**03 19 08.2**	**+1.2**
BUJR	**Buynaksk**	**1.11**	**46**	*e*PG	**Pg**	**03 18 52.5**	**+0.1**
BUJR				*e*S	**Sg**	**03 19 09.1**	**+2.1**
BUJR				pmax	pmax		
	comp=Z,65nm,0.4s						
BUJR				smax	smax		
	comp=N,193nm,0.3s						
DBC	**Dubki**	**1.14**	**31**	*e*Pg	**Pg**	**03 18 52.4**	**-0.4**
DBC				*e*Sg	**Sg**	**03 19 07.9**	**+0.2**
DBC	**Dubki**	**1.14**	**31**	*e*PG	**Pg**	**03 18 52.6**	**-0.3**
DBC				*e*S	**Sg**	**03 19 08.6**	**+0.8**
DBC				pmax	pmax		
	comp=Z,27nm,0.3s						
DBC				smax	smax		
	comp=N,77nm,0.4s						
GROC	**Groznyy**	**1.16**	**352**	*i* Pg	**Pg**	**03 18 54.0**	**+0.6**
GROC				*e*Sg	**Sg**	**03 19 10.4**	**+1.8**
GROC	**Groznyy**	**1.16**	**352**	*i* PG	**Pg**	**03 18 54.0**	**+0.6**
GROC				*e*S	**Sg**	**03 19 10.4**	**+1.8**
URKR	**Urkarakh**	**1.20**	**84**	*e*Pg	**Pg**	**03 18 54.5**	**+0.5**
URKR				*e*Sg	**Sg**	**03 19 12.1**	**+2.4**
URKR	**Urkarakh**	**1.20**	**84**	*e*PG	**Pg**	**03 18 54.5**	**+0.5**
URKR				*e*S	**Sg**	**03 19 12.1**	**+2.4**
URKR				pmax	pmax		
	comp=N,16nm,0.2s						
URKR				smax	smax		
	comp=N,58nm,0.5s						
URKR				smax	smax		
	comp=E,53nm,0.2s						
URKR				smax	smax		
	comp=N,89nm,0.4s						
PNSH	**Pansheti**	**1.20**	**300**	P	**Pn**	**03 18 52.9**	**-0.1**
PNSH				S	**Sb**	**03 19 08.5**	**+0.1**
PNSH	**Pansheti**	**1.20**	**300**	PG	**Pn**	**03 18 52.8**	**-0.1**
PNSH				S	**Sb**	**03 19 08.4**	**+0.1**
GUDG	**Gudauri**	**1.23**	**290**	P	**Pn**	**03 18 53.0**	**-0.3**
GUDG				S	**Sn**	**03 19 09.7**	**+0.3**
GUDG	**Gudauri**	**1.23**	**290**	PG	**Pn**	**03 18 53.0**	**-0.3**
GUDG				S	**Sn**	**03 19 09.7**	**+0.3**
KMGR	**Komgaron**	**1.32**	**320**	*e*Pg	**Pb**	**03 18 55.1**	**-0.1**
KMGR				*e*Sg	**Sb**	**03 19 12.6**	**+0.8**
KMGR	**Komgaron**	**1.32**	**320**	*e*PG	**Pb**	**03 18 55.1**	**-0.1**
KMGR				*e*S	**Sb**	**03 19 12.6**	**+0.8**
AKT	**Akhty**	**1.39**	**114**	*e*Pg	**Pg**	**03 18 57.4**	**-0.3**
AKT				*e*Sg	**Sg**	**03 19 16.9**	**+0.9**
AKT	**Akhty**	**1.39**	**114**	*i* PG	**Pg**	**03 18 57.3**	**-0.4**
AKT				*e*S	**Sg**	**03 19 17.0**	**+1.1**
AKT				pmax	pmax		
	comp=Z,9.0nm,0.2s						
AKT				smax	smax		
	comp=E,63nm,0.3s						
AKT				smax	smax		
	comp=N,103nm,0.5s						
AKT				smax	smax		
	comp=N,126nm,0.6s						
VLKR	**Vladikavkaz**	**1.41**	**315**	*e*Pg	**Pg**	**03 18 59.5**	**+1.4**
VLKR				*e*Sg	**Sg**	**03 19 19.6**	**+3.1**
VLKR	**Vladikavkaz**	**1.41**	**315**	*e*PG	**Pg**	**03 18 59.3**	**+1.2**
VLKR				*e*S	**Sg**	**03 19 18.6**	**+2.1**
MAK	**Makhachkala**	**1.42**	**50**	*e*Pg	**Pg**	**03 18 57.4**	**-0.9**
MAK				*e*Sg	**Sg**	**03 19 17.2**	**+0.5**
MAK	**Makhachkala**	**1.42**	**50**	*e*PG	**Pg**	**03 18 57.5**	**-0.7**
MAK				*e*		03 19 17.3	
MAK				pmax	pmax		
	comp=Z,95nm,0.3s						
MAK				smax	smax		
	comp=N,269nm,0.7s						
MAK				smax	smax		
	comp=N,317nm,0.5s						
LACR	**Lac**	**1.50**	**302**	*e*Pg	**Pg**	**03 18 59.3**	**-0.5**
LACR				*e*Sg	**Sg**	**03 19 20.4**	**+1.1**
LACR	**Lac**	**1.50**	**302**	*e*PG	**Pg**	**03 18 59.3**	**-0.5**
LACR				*e*S	**Sg**	**03 19 20.4**	**+1.1**
DMNI	**Dmanisi**	**1.56**	**243**	P	**Pn**	**03 18 57.6**	**-0.1**
DMNI				S	**Sn**	**03 19 18.2**	**+0.7**
DMNI	**Dmanisi**	**1.56**	**243**	PG	**Pn**	**03 18 57.6**	**-0.1**
DMNI				S	**Sn**	**03 19 18.1**	**+0.7**
BRNG	**Burnasheti**	**1.70**	**256**	P	**Pn**	**03 19 00.6**	**+0.9**
BRNG				S	**Sb**	**03 19 23.2**	**+0.5**
BRNG	**Burnasheti**	**1.70**	**256**	PN	**Pn**	**03 19 00.6**	**+0.9**
BRNG				S	**Sb**	**03 19 23.2**	**+0.5**
ARNR	**Ardon**	**1.71**	**312**	*e*Pg	**Pg**	**03 19 03.1**	**-0.7**
ARNR				*e*Sg	**Sg**	**03 19 27.1**	**+1.0**
ARNR	**Ardon**	**1.71**	**312**	*e*PN	**Pg**	**03 19 03.1**	**-0.7**
ARNR				*e*S	**Sg**	**03 19 27.1**	**+1.0**
BTKR	**Batakoyurt**	**1.72**	**321**	*e*PN	**Pn**	**03 18 59.4**	**-0.4**
ZEI	**Tsey**	**1.74**	**296**	*e*Pg	**Pb**	**03 19 02.0**	**-0.3**
ZEI				*e*Sg	**Sb**	**03 19 25.3**	**+1.3**
ZEI	**Tsey**	**1.74**	**296**	*e*PN	**Pb**	**03 19 02.5**	**+0.1**
ZEI				*e*S	**Sb**	**03 19 25.7**	**+1.8**
ALIG	**Mtskhetisjvari**	**1.77**	**273**	P	**Pn**	**03 19 01.4**	**+0.8**
ALIG				S	**Sb**	**03 19 24.5**	**-0.3**
ALIG	**Mtskhetisjvari**	**1.77**	**273**	PN	**Pn**	**03 19 01.4**	**+0.8**
KORR	**Kora**	**1.78**	**306**	*e*Pg	**Pg**	**03 19 04.5**	**-0.6**
KORR				*e*Sg	**Sg**	**03 19 28.8**	**+0.5**
KORR	**Kora**	**1.78**	**306**	PN	**Pg**	**03 19 04.5**	**-0.6**
KORR				S	**Sg**	**03 19 28.8**	**+0.5**
STDR	**Stavd-Durt**	**1.96**	**313**	*e*Pg	**Pg**	**03 19 07.5**	**-1.0**
STDR				*e*Sg	**Sb**	**03 19 31.9**	**+1.8**
STDR	**Stavd-Durt**	**1.96**	**313**	*e*PN	**Pg**	**03 19 07.5**	**-1.0**
ONI	**Oni**	**1.99**	**287**	P	**Pb**	**03 19 05.8**	**-0.7**
ONI				S	**Sb**	**03 19 30.9**	**+0.1**
ONI	**Oni**	**1.99**	**287**	PN	**Pb**	**03 19 05.7**	**-0.7**
DIGR	**Digorskoe uzhe**	**2.00**	**296**	*e*Pg	**Pb**	**03 19 06.8**	**0.0**
DIGR				*e*Sg	**Sb**	**03 19 32.9**	**+1.4**
DIGR	**Digorskoe uzhe**	**2.00**	**296**	*e*PN	**Pb**	**03 19 06.8**	**0.0**
AKH	**Akhalkalaki**	**2.00**	**252**	P	**Pn**	**03 19 05.3**	**+1.3**
AKH				S	**Sb**	**03 19 30.6**	**-0.9**
AKH	**Akhalkalaki**	**2.00**	**252**	PN	**Pn**	**03 19 05.2**	**+1.3**
LSNR	**Lesken**	**2.04**	**308**	*e*Pg	**Pb**	**03 19 08.3**	**+1.0**
LSNR				*e*Sg	**Sg**	**03 19 35.1**	**-1.3**
LSNR	**Lesken**	**2.04**	**308**	*e*PN	**Pb**	**03 19 08.3**	**+1.0**
LSNR				*e*S	**Sg**	**03 19 35.1**	**-1.3**
GNI	**Garni**	**2.13**	**208**	*e*PN	**Pn**	**03 19 07.2**	**+1.5**
GNI				*e*S	**Sb**	**03 19 36.5**	**+1.3**
TKB	**Tkibuli**	**2.28**	**279**	P	**Pb**	**03 19 10.4**	**-1.0**
TKB				S	**Sb**	**03 19 38.9**	**-0.3**
TKB	**Tkibuli**	**2.28**	**279**	PN	**Pb**	**03 19 10.3**	**-1.0**
TKB				S	**Sb**	**03 19 38.8**	**-0.3**
EAK	**Akyaka**	**2.28**	**234**	P	**Pn**	**03 19 08.4**	**+0.7**
EAK				S	**Sn**	**03 19 35.9**	**+0.6**
EAK				*i* AML	AML	03 19 47.0	
	comp=N,52nm,0.6s						
EAK				*i* AML	AML	03 19 50.0	
	comp=N,50nm,0.6s						
NCK	**Nalchik**	**2.30**	**310**	⇑*e*PN	**Pn**	**03 19 09.3**	**+1.4**
NCK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABS	**Abastumani**	**2.42**	**264**	P	**Pb**	**03 19 12.1**	**-1.9**
ABS				S	**Sb**	**03 19 43.8**	**+0.3**
ABS	**Abastumani**	**2.42**	**264**	PN	**Pb**	**03 19 12.0**	**-1.9**
ABS				S	**Sb**	**03 19 43.7**	**+0.3**
KBZ	**Khabaz**	**2.85**	**307**	*e*PN	**Pn**	**03 19 16.6**	**+1.3**
KBZ				*e*S	**Sn**	**03 19 50.9**	**+1.8**
SHA1	**Shidzhatmaz**	**3.00**	**305**	⇑*e*PN	**Pn**	**03 19 16.5**	**-1.1**
KIV	**Kislovodsk**	**3.10**	**309**	*i* PN	**Pn**	**03 19 20.6**	**+1.6**
DAGI	**Agillar**	**3.24**	**254**	P	**Pb**	**03 19 26.9**	**-1.0**
DAGI				S	**Sb**	**03 20 08.1**	**+1.2**
DBOC	**Borcka**	**3.34**	**259**	P	**Pb**	**03 19 26.5**	**-3.1**
DBOC				S	**Sb**	**03 20 08.4**	**-1.5**
DBAD	**Bademkaya**	**3.41**	**254**	P	**Pb**	**03 19 29.5**	**-1.3**
DBAD				S	**Sb**	**03 20 13.3**	**+1.3**
DDEM	**Demirkent**	**3.42**	**252**	P	**Pb**	**03 19 29.5**	**-1.4**
DDEM				S	**Sb**	**03 20 11.3**	**-0.8**
DDEM				*i* AML	AML	03 20 21.0	
	comp=Z,18nm,0.6s						
DDEM				*i* AML	AML	03 20 21.0	
	comp=Z,21nm,0.5s						
GUZR	**Guzeripl'**	**4.75**	**296**	⇓*e*PN	**Pn**	**03 19 42.9**	**+1.3**
GUZR				pmax	pmax		
	comp=Z,131nm,0.8s						
ARU	**Arti**	**16.51**	**25**	⇑*e*P	**P**	**03 22 22.9**	**-0.9**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	**Borovoye**	**19.63**	**48**	⇑*e*P	**Pn**	**03 23 00.0**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**21.01**	**79**	⇑*e*P	**P**	**03 23 12.2**	**-1.2**

*TIF **30** 03:18:29.8, 42°.05N×46°.05E, h28km±2km*

*IDC **30** 03:52:09.9±2.9, 0°.06S×17°.83W, h0km, mb4.0/2, mbtmp4.2/3, ML4.6/1, MS3.1/4, Error ellipse: s-maj=67.7km s-min=28.2km az=91.0*

ISC 30 03:52:13.2±1.9, 0°.1S±0°.1×17°.6W±0°.2, h10km, n14, σ1§95/11, MS3.3/3, 2C-1D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.30**	**158**	Pn	**Pn**	**03 54 13.6**	**+0.1**
	baz=339,slow=12						
H10N2				T	T	04 02 37.6	
	baz=333						
H10N3	**ASCENSION HYDR**	**8.30**	**158**	Pn	**Pn**	**03 54 13.6**	**+0.1**
	baz=339,slow=12						
H10N3				T	T	04 02 42.0	
	baz=333,slow=74						
H10N1	**ASCENSION HYDR**	**8.32**	**158**	Pn	**Pn**	**03 54 12.5**	**-1.2**
	baz=339,slow=12						
H10N1				T	T	04 02 35.0	
	baz=333,slow=74						
H10S3	**ASCENSION HYDR**	**9.29**	**162**	Pn	**Pn**	**03 54 27.0**	**-0.2**
H10S3				T	T	04 03 47.1	
	baz=241,slow=74,SNR=27						
H10S2	**ASCENSION HYDR**	**9.30**	**162**	T	T	04 03 49.4	
	baz=339,slow=74,SNR=10						
LIC	**Lamto**	**13.99**	**63**	⇑*e*P	**P**	**03 55 39.7**	**0.0**
	5.0nm,0.2s						
TIC	**Toumodi**	**14.18**	**62**	⇑*i*P	**Pn**	**03 55 37.2**	**+2.8**
	13nm,0.2s						
KIC	**Kosan Boka**	**14.30**	**63**	⇓*i*P	**Pn**	**03 55 39.2**	**+3.2**
	8.1nm,0.3s						
DBIC	**Dimbokro**	**14.34**	**62**	Pn	**Pn**	**03 55 37.2**	**+0.7**
	2.6nm,0.3s,baz=236,slow=14,SNR=41						
DBIC				Sn	**Sn**	**03 58 12.8**	**-3.0**
	0.7nm,0.3s,baz=128,slow=16,SNR=4.1						
DBIC				LR	LR	04 00 48.2	
	comp=Z,52nm,19.3s,baz=213,slow=36						
	6.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.17**	**55**	P	**P**	**03 57 20.6**	**+0.3**
	3.1nm,0.9s,baz=234,slow=9.0,SNR=11						
	3.1nm,0.9s						
LBTB	**Lobatse**	**48.53**	**124**	LR	LR	04 17 26.4	
	comp=Z,13nm,19.7s,baz=310,slow=31						
NNA	**Nana**	**59.99**	**256**	LR	LR	04 26 35.7	
	comp=Z,20nm,18.5s,baz=58,slow=35						
HFS	**Hagfors**	**64.73**	**17**	LR	LR	04 31 34.7	
	comp=Z,23nm,18.2s,baz=272,slow=36						
FINES	**FINESS Array B**	**69.72**	**21**	P	**P**	**04 03 21.8**	**-1.3**
	2.2nm,0.9s,baz=223,slow=5.3,SNR=4.8						
	2.2nm,0.9s						

*IDC **30** 03:55:04.1±7.6, 17°.89S×178°.42W, h574km±90km, mb3.1/4, mbtmp4.1/5, Error ellipse: s-maj=139.1km s-min=40.9km az=160.0*

ISC 30 03:55:03.9±1.6, 17°.8S±0°.6×178°.4W±0°.4, h579km, n7, σ1§07/7, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.90**	**251**	P	**P**	**03 58 12.8**	**+0.9**
	2.1nm,0.5s,baz=128,slow=19,SNR=1.1						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**04 01 39.0**	**-0.4**
	3.1nm,0.9s,baz=59,slow=12,SNR=4.0						
	3.1nm,0.9s						
WRA	**Warramunga Arr**	**44.70**	**259**	P	**P**	**04 02 26.1**	**-0.5**
	0.5nm,0.4s,baz=97,slow=6.7,SNR=32						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**44.86**	**254**	P	**P**	**04 02 27.8**	**-0.1**
	4.1nm,0.5s,baz=89,slow=8.5,SNR=84						
	4.1nm,0.5s						
TXAR	**Lajitas Array**	**85.90**	**58**	P	**P**	**04 06 44.3**	**+0.6**
	0.7nm,1.0s,baz=222,slow=4.9,SNR=3.4						
	0.7nm,1.0s						
AKASG	**Malin Array Be**	**140.50**	**332**	PKP	**PKPdf**	**04 13 26.1**	**-1.7**
	0.2nm,0.2s,baz=70,slow=1.1,SNR=2.9						
BRTR	**Keskin Array B**	**144.75**	**315**	PKP	**PKPab**	**04 13 37.7**	**+0.5**
	0.6nm,0.8s,baz=115,slow=2.0,SNR=3.6						

*IDC **30** 04:00:58.7±1.2, 31.°19S×71.°59W, h0km, mb4.1/1, mbtmp3.7/3, ML3.4/2, MS2.6/1, Error ellipse: s-maj=52.0km s-min=23.7km az=152.0*
*GUC **30** 04:01:03.6±0.9, 31.°24S×71.°71W, h35km±2km, ML3.9*
*NEIC **30** 04:01:03±1.1, 31.°22S±0.°03×71.°86W±0.°08, h19km±10km, mb3.9/1, ML3.9(GUC), Error ellipse: s-maj=9.4km s-min=4.0km az=86.0*

ISC 30 04:01:02.6±1.3, 31.°24S±0.°03×71.°75W±0.°06, h27km±11km, n59, σ1§23/66, 7C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.57**	**10**	Pg	**Pn**	**04 01 15.2**	**+0.2**
CO06	**Fray Jorge**	**0.57**	**10**	⇓*i*P	**Pn**	**04 01 15.1**	**+0.1**
CO06				*i* S	**Sn**	**04 01 23.2**	**-0.4**
CO06				IAML		04 01 25.5	
	comp=N,6μm,0.2s						
CO02	**Combarbal**	**0.64**	**87**		**Pb**	**04 01 15.8**	**+0.4**
CO02	**Combarbal**	**0.64**	**87**	⇓*i*P	**Pb**	**04 01 15.8**	**+0.4**
CO02				*i* S	**Sb**	**04 01 24.2**	**+0.1**
CO02				IAML		04 01 24.9	
	comp=N,16μm,0.3s						
CO03	**El Pedregal**	**0.99**	**67**		**Pb**	**04 01 21.1**	**-0.2**
CO03	**El Pedregal**	**0.99**	**67**	⇓*i*P	**Pb**	**04 01 21.0**	**-0.2**
CO03				*i* S	**Sb**	**04 01 33.9**	**-0.1**
CO03				IAML		04 01 35.8	
	comp=N,82μm,0.0s						
GO04	**Tololo Observa**	**1.34**	**38**	Pn	**Pb**	**04 01 26.9**	**-0.4**
GO04	**Tololo Observa**	**1.34**	**38**	⇓*i*P	**Pb**	**04 01 26.8**	**-0.4**
GO04				*i* S	**Sb**	**04 01 43.9**	**-0.2**
VA06	**Catapilco**	**1.38**	**164**	Pn	**Pb**	**04 01 27.3**	**-0.4**
VA06	**Catapilco**	**1.38**	**164**	⇑*i*P	**Pb**	**04 01 27.3**	**-0.4**
VA06				*i* S	**Sb**	**04 01 44.9**	**+0.1**
VA06				IAML		04 01 48.8	
	comp=E,2μm,0.3s						
CO05	**La Serena**	**1.39**	**19**		**Pb**	**04 01 27.6**	**-0.3**
CO05	**La Serena**	**1.39**	**19**	*e*P	**Pb**	**04 01 27.4**	**-0.4**
CO05				*i* S	**Sb**	**04 01 45.2**	**0.0**
CO05				IAML		04 01 51.0	
	comp=E,2μm,0.4s						
VA03	**San Esteban**	**1.83**	**147**		**Pb**	**04 01 34.6**	**-1.0**
VA03	**San Esteban**	**1.83**	**147**	⇑*i*P	**Pb**	**04 01 34.5**	**-1.0**
VA03				*i* S	**Sb**	**04 01 58.0**	**-0.1**
VA03				IAML		04 02 01.4	
	comp=N,2μm,0.5s						
ROCH	**El Roble**	**1.84**	**160**	⇑*i*P	**Pn**	**04 01 34.2**	**+1.5**
ROCH				⇑*i*P	**Pn**	**04 01 34.2**	**+1.5**
ROCH				*i* S	**Sb**	**04 01 58.4**	**0.0**
ROCH				*i* S	**Sb**	**04 01 58.4**	**0.0**
ROCH				IAML		04 02 03.5	
	comp=N,2μm,0.4s						
ROCH				IAML		04 02 03.6	
	comp=N,2μm,0.5s						
ROC1	**El Roble**	**1.84**	**160**		**Pn**	**04 01 34.2**	**+1.4**
CO01	**Juntas del Tor**	**1.90**	**49**		**Pb**	**04 01 35.6**	**-1.1**
CO01	**Juntas del Tor**	**1.90**	**49**	⇓*i*P	**Pb**	**04 01 35.7**	**-1.1**
CO01				*i* S	**Sb**	**04 01 59.5**	**-0.7**
CO01				IAML		04 02 01.1	
	comp=N,1μm,0.4s						
MT02	**Curacav**	**2.08**	**166**		**Pn**	**04 01 37.0**	**+1.2**
MT02	**Curacav**	**2.08**	**166**	*e*P	**Pn**	**04 01 36.7**	**+0.9**
MT02				*i* S	**Sb**	**04 02 05.0**	**-0.1**
MT02				IAML		04 02 08.2	
	comp=E,372nm,0.4s						
PEL	**Peldehue**	**2.10**	**155**	⇑*i*P	**Pn**	**04 01 38.1**	**+1.9**
PEL				*i* S	**Sb**	**04 02 05.0**	**-0.8**
PEL				IAML		04 02 08.3	
	comp=E,929nm,0.5s						
MT05	**Renca**	**2.31**	**159**		**Pn**	**04 01 40.8**	**+1.7**
MT05	**Renca**	**2.31**	**159**	*e*P	**Pn**	**04 01 40.8**	**+1.7**
MT05				IAML		04 02 19.0	
	comp=E,1μm,0.4s						
LCO	**Las Campanas**	**2.40**	**23**		**Pn**	**04 01 41.7**	**+1.3**
LCO	**Las Campanas**	**2.40**	**23**	⇑*i*P	**Pn**	**04 01 41.6**	**+1.3**
LCO				*i* S	**Sn**	**04 02 11.6**	**+2.5**
VA05	**Santo Domingo**	**2.42**	**177**		**Pn**	**04 01 41.1**	**+0.7**
MT03	**Universidad Ad**	**2.48**	**155**		**Pn**	**04 01 43.7**	**+2.2**
MT09	**Talagante**	**2.61**	**166**		**Pn**	**04 01 45.4**	**+2.1**
MT09	**Talagante**	**2.61**	**166**	*e*P	**Pn**	**04 01 45.1**	**+1.9**
MT09				IAML		04 02 28.6	
	comp=N,548nm,0.6s						
ZON	**Zonda**	**2.65**	**97**		**Pb**	**04 01 47.8**	**-1.6**
MT01	**Popeta**	**2.65**	**171**		**Pn**	**04 01 44.9**	**+1.3**
MT01	**Popeta**	**2.65**	**171**	⇑*i*P	**Pn**	**04 01 44.8**	**+1.1**
MT01				IAML		04 02 27.2	
	comp=E,434nm,0.6s						
AC05	**El Transito**	**2.71**	**29**		**Pn**	**04 01 46.9**	**+2.3**
BO04	**La Punta**	**2.91**	**161**		**Pn**	**04 01 49.0**	**+1.8**
LMEL	**Las Melosas**	**2.91**	**154**	*e*P	**Pn**	**04 01 50.0**	**+2.7**
LMEL				IAML		04 02 36.0	
	comp=N,512nm,0.1s						
AC04	**Llanos de Chal**	**3.08**	**11**	Pn	**Pn**	**04 01 50.1**	**+0.6**
BO01	**Tunca**	**3.19**	**170**	Pn	**Pn**	**04 01 52.5**	**+1.3**
AC01	**Pan de Azucar**	**5.17**	**12**	Pn	**Pn**	**04 02 19.9**	**+1.6**
GO02	**Mina Guanaco**	**6.34**	**18**	Pn	**Pn**	**04 02 35.1**	**+0.4**
H03N1	**Juan Fernandez**	**6.45**	**248**	Pn	**Pn**	**04 02 36.5**	**+1.0**
H03N1				T	T	04 09 24.6	
	baz=76,slow=72,SNR=1474						
VA04	**Juan Fernndez**	**6.45**	**246**	Pn	**Pn**	**04 02 35.8**	**0.0**
H03N3	**Juan Fernandez**	**6.46**	**248**	Pn	**Pn**	**04 02 36.5**	**+0.7**
H03N3				T	T	04 09 23.9	
	baz=76,slow=72,SNR=1790						
H03N2	**Juan Fernandez**	**6.46**	**248**	Pn	**Pn**	**04 02 36.8**	**+1.0**
H03N2				T	T	04 09 25.7	
	baz=76,slow=72,SNR=1431						
H03S3	**Juan Fernandez**	**6.57**	**245**	Pn	**Pn**	**04 02 39.8**	**+2.5**
	baz=302,slow=74						
H03S1	**Juan Fernandez**	**6.58**	**245**	Pn	**Pn**	**04 02 37.2**	**-0.1**
H03S2	**Juan Fernandez**	**6.59**	**245**	Pn	**Pn**	**04 02 37.6**	**+0.1**
	baz=358,slow=74						
PB06	**IPOC Station P**	**8.72**	**13**	Pn	**Pn**	**04 03 07.8**	**+0.7**
LVC	**Limon Verde**	**8.96**	**17**	LR	LR	04 06 04.2	
	comp=N,41nm,19.7s,baz=218,slow=34						
PLCA	**Paso Flores**	**9.53**	**174**	Pn	**Pn**	**04 03 18.1**	**0.0**
	comp=N,0.1nm,0.3s,baz=346,slow=12,SNR=5.4						
	comp=N,3.4nm,1.2s						
CPUP	**Villa Florida**	**13.56**	**72**	Pn	Pn	04 04 08.9	-4.3
	baz=197,slow=20,SNR=1.3						
CPUP				Sn	**Sn**	**04 06 39.8**	**-3.2**
	comp=N,0.2nm,0.3s,baz=179,slow=15,SNR=1.9						
	comp=N,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.04**	**70**	P	**P**	**04 13 25.9**	**-0.2**
	comp=N,1.1nm,0.7s,baz=250,slow=5.9,SNR=7.3						
	comp=N,1.1nm,0.7s						
WRA	**Warramunga Arr**	**123.28**	**210**	PKP	**PKPdf**	**04 19 57.7**	**0.0**
	comp=N,0.2nm,0.5s,baz=153,slow=1.7,SNR=1.6						
H11S2	**WAKE ISLAND Hyl**	**26.01**	**271**	T	T	06 38 52.4	
	baz=115,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hyl**	**26.02**	**271**	T	T	06 38 51.5	
	baz=115,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hyl**	**26.03**	**271**	T	T	06 38 51.8	
	baz=115,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hyl**	**26.35**	**272**	T	T	06 39 12.3	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hyl**	**26.37**	**272**	T	T	06 39 20.2	
	baz=117						
H11N2	**WAKE ISLAND Hyl**	**26.37**	**272**	T	T	06 39 19.5	
	baz=117,slow=74						
ZALV	**Zalesovo Beam**	**151.74**	**30**	PKPbc	**PKPbc**	**04 20 54.8**	**+0.6**
	comp=N,2.4nm,0.5s,baz=295,slow=3.4,SNR=10						

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*IDC **30** 04:16:45.7±1.3, 31.°32S×178.°25W, h0km, mb4.5/4, mbtmp4.4/6, ML3.4/1, MS3.8/2, Error ellipse: s-maj=32.4km s-min=21.7km az=98.0*
*NEIC **30** 04:16:53.3±1.4, 31.°5S±0.°1×177.°9W±0.°2, h79km±14km, mb4.3/5, Error ellipse: s-maj=26.0km s-min=14.9km az=112.0*

ISC 30 04:16:48.7±0.9, 31.°50S±0.°08×177.°8W±0.°1, h35km, n24, σ1§80/17, mb4.5/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.25**	**357**	Pn	**Pn**	**04 17 23.0**	**-0.4**
	140nm,0.3s,baz=85,slow=22,SNR=1.3						
RAO				Sn	**Sn**	**04 17 49.2**	**-0.6**
	196nm,0.3s,baz=172,slow=18,SNR=5.4						
RAO	**Raoul Island**	**2.25**	**357**	Pn	Pn	04 17 27.8	+4.5
RAO				Sn	**Sn**	**04 17 48.8**	**-1.1**
URZ	**Urewera**	**7.94**	**211**	Pn	**Pn**	**04 18 40.0**	**-1.5**
	0.6nm,0.3s,baz=346,slow=5.0,SNR=2.3						
	6.5nm,0.6s						
OUZ	**Omahuta**	**8.11**	**241**		**Pn**	**04 18 47.1**	**+3.2**
NIUE	**Niue**	**14.26**	**32**		**P**	**04 20 16.6**	**+1.8**
CTA	**Charters Tower**	**34.18**	**281**	P	**P**	**04 23 30.9**	**+0.1**
	4.1nm,0.7s,baz=110,slow=8.3,SNR=6.0						
CTA				LR	LR	04 34 26.7	
	comp=Z,39nm,19.2s,baz=79,slow=31						
	4.1nm,0.7s						
AS31	**Alice Springs**	**43.25**	**268**	P	**P**	**04 24 45.6**	**-1.3**
AS31				IAmb	IAmb	04 24 46.1	
	comp=Z,2.6nm,0.4s						
ASAR	**Alice Springs**	**43.25**	**268**	P	**P**	**04 24 45.5**	**-1.5**
	comp=Z,4.8nm,0.5s,baz=105,slow=7.2,SNR=101						
	comp=Z,4.8nm,0.5s						
ASAR	**Alice Springs**	**43.25**	**268**	P	**P**	**04 24 44.9**	**-2.1**
WRAB	**Tennant Creek**	**44.34**	**273**	P	**P**	**04 24 54.3**	**-1.3**
WRA	**Warramunga Arr**	**44.34**	**273**	P	**P**	**04 24 54.0**	**-1.7**
	comp=Z,12nm,0.4s,baz=112,slow=7.9,SNR=321						
	comp=Z,12nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	**P**	**04 24 53.4**	**-2.3**
QSPA	**South Pole Qui**	**58.61**	**180**	P	P	04 26 46.4	+4.5
	comp=Z,0.9nm,0.7s,baz=354,slow=4.8,SNR=5.3						
	comp=Z,0.9nm,0.7s						
BELA	**Belgrano 2**	**68.67**	**172**	P	**P**	**04 27 47.4**	**-0.5**
BELA				IAmb	IAmb	04 28 25.7	
	comp=Z,7.0nm,1.5s						
SNAA	**Sanae**	**77.05**	**178**	P	P	04 28 45.9	+8.1
SNAA	**Sanae**	**77.05**	**178**	P	**P**	**04 28 37.8**	**0.0**
SNAA				IAmb	IAmb	04 28 44.1	
	comp=Z,3.7nm,1.3s						
VNA3	**Neumayer Olymp**	**77.20**	**176**	P	P	04 28 47.3	+8.8
VNA2	**Neumayer--Watz**	**77.63**	**177**	P	P	04 28 47.8	+6.9
	baz=182,slow=4.0						
H03S2	**Juan Fernandez**	**79.70**	**123**	T	T	05 57 46.8	
	baz=237,slow=74,SNR=24						
H03S1	**Juan Fernandez**	**79.71**	**123**	T	T	05 57 46.3	
	baz=237,slow=74,SNR=25						
H03S3	**Juan Fernandez**	**79.72**	**123**	T	T	05 57 46.0	
	baz=237,slow=74,SNR=35						
ATAH	**Atahualpa**	**94.25**	**101**	LR	LR	05 03 02.4	
	comp=Z,202nm,19.5s,baz=175,slow=29						
FINES	**FINESS Array B**	**146.24**	**340**	PKPbc	**PKPab**	**04 36 24.4**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=40,slow=4.4,SNR=21						
TORD	**Torodi Ar. Bea**	**161.72**	**178**	PKPab	**PKPab**	**04 37 34.7**	**+3.0**
	comp=Z,0.5nm,0.6s,baz=172,slow=5.1,SNR=2.3						

IDC 30 04:28:09.0±10.0, 30.°94S×179.°31W, h99km±98km, mb3.2/2, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=77.5km s-min=56.2km az=174.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.87**	**201**	P	Pn	04 30 01.8	+1.3
	0.6nm,0.3s,baz=351,slow=13,SNR=1.8						
URZ				S	Sn	04 31 26.9	-1.0
	6.3nm,0.5s,baz=108,slow=19,SNR=8.4						
	7.5nm,0.8s						
ASAR	**Alice Springs**	**41.95**	**268**	P	P	04 35 50.2	-0.1
	0.5nm,0.9s,baz=106,slow=7.1,SNR=5.5						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**42.99**	**273**	P	P	04 35 58.7	0.0
	0.5nm,0.5s,baz=111,slow=8.0,SNR=18						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**145.25**	**339**	PKPbc	PKPbc	04 47 33.0	-1.1
	2.8nm,1.0s,baz=48,slow=2.8,SNR=6.2						

ROM 30 04:32:25.8±0.0, 42.°870N±0.°003×13.°045E±0.°004, h11km, ML2.5/2, 10C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=338.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**317**	P	Pg	04 32 28.1	+0.3
T1216				S	Sg	04 32 29.3	0.0
T1216				AML	AML		
	comp=E,11015μm,0.3s						
T1216				AML	AML		
	comp=E,11040μm,0.3s						
T1216				AML	AML		
	comp=N,8465μm,0.2s						
T1216				AML	AML		
	comp=E,11030μm,0.3s						
T1216				AML	AML		
	comp=N,8463μm,0.2s						
T1216				AML	AML		
	comp=E,7330μm,0.1s						
FEMA	**Monte Fema**	**0.09**	**2**	P	Pg	04 32 28.9	+0.4
FEMA				S	Sg	04 32 30.9	+0.4
FEMA				AML	AML		
	comp=E,3980μm,0.9s						
FEMA				AML	AML		
	comp=N,3380μm,0.6s						
FEMA				AML	AML		
	comp=E,14800μm,1.6s						
FEMA				AML	AML		
	comp=N,9545μm,0.6s						
FEMA				AML	AML		
	comp=N,9535μm,0.5s						
FEMA				AML	AML		
	comp=E,14850μm,1.6s						
FEMA				AML	AML		
	comp=E,3218μm,0.1s						
FEMA				AML	AML		
	comp=N,3181μm,0.1s						
T1245	**Castelsantange**	**0.11**	**97**	P	Pg	04 32 29.1	+0.4
T1245				S	Sg	04 32 31.2	+0.4
T1245				AML	AML		
	comp=E,4735μm,0.6s						
T1245				AML	AML		
	comp=E,4740μm,0.6s						
T1245				AML	AML		
	comp=E,4465μm,0.2s						
T1245				AML	AML		
	comp=N,7175μm,0.6s						
T1245				AML	AML		
	comp=N,7090μm,0.6s						
T1245				AML	AML		
	comp=N,7095μm,0.6s						
T1245				AML	AML		
	comp=N,6704μm,0.1s						
T1245				AML	AML		
	comp=E,3632μm,0.2s						
T1245				AML	AML		
	comp=N,6767μm,0.1s						
T1245				AML	AML		
	comp=E,4449μm,0.1s						
MC2	**Monte Cornacci**	**0.12**	**68**	P	Pg	04 32 29.2	+0.4
MC2				S	Sg	04 32 31.6	+0.5
T1215	**Vallo di Nera,**	**0.15**	**243**	P	Pg	04 32 29.8	+0.6
T1215				S	Sg	04 32 32.4	+0.8
T1215				AML	AML		
	comp=E,841μm,1.1s						
T1215				AML	AML		
	comp=N,878μm,0.5s						
T1215				AML	AML		
	comp=E,837μm,1.1s						
T1215				AML	AML		
	comp=N,882μm,0.5s						
T1215				AML	AML		
	comp=E,842μm,1.1s						
T1215				AML	AML		
	comp=E,713μm,0.1s						
T1215				AML	AML		
	comp=N,861μm,0.1s						
T1215				AML	AML		
	comp=E,714μm,0.1s						
T1215				AML	AML		
	comp=N,900μm,0.1s						
FDMO	**Fiordimonte**	**0.17**	**10**	P	Pg	04 32 30.0	+0.5
FDMO				S	Sg	04 32 33.0	+0.8
FDMO				AML	AML		
	comp=E,1026μm,0.2s						
FDMO				AML	AML		
	comp=N,1115μm,0.3s						
FDMO				AML	AML		
	comp=E,25700μm,0.2s						
FDMO				AML	AML		
	comp=N,29550μm,0.2s						
FDMO				AML	AML		
	comp=E,1029μm,0.2s						
FDMO				AML	AML		
	comp=N,841μm,0.2s						
CESI	**CESI - Serrava**	**0.17**	**323**	⇑P	Pg	04 32 30.1	+0.6
CESI				S	Sg	04 32 33.2	+0.9
CESI				AML	AML		
	comp=E,1265μm,0.6s						
CESI				AML	AML		
	comp=N,1740μm,0.3s						
CESI				AML	AML		
	comp=E,5745μm,1.4s						
CESI				AML	AML		
	comp=N,5870μm,0.1s						
CESI				AML	AML		
	comp=E,842μm,0.1s						
CESI				AML	AML		
	comp=N,1267μm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**208**	⇑P	Pg	04 32 30.3	+0.6
T1217				S	Sg	04 32 33.5	+1.0
T1217				AML	AML		
	comp=E,942μm,0.8s						
T1217				AML	AML		
	comp=N,1460μm,0.4s						
T1217				AML	AML		
	comp=E,942μm,0.8s						
T1217				AML	AML		
	comp=E,579μm,0.1s						
T1217				AML	AML		
	comp=N,763μm,0.1s						
T1217				AML	AML		
	comp=N,790μm,0.1s						
T1217				AML	AML		
	comp=E,566μm,0.1s						
MMO1	**Montemonaco**	**0.21**	**82**	P	Pg	04 32 30.7	+0.4
MMO1				S	Sg	04 32 34.2	+0.9
AM05	**Amandola Campo**	**0.25**	**64**	P	Pg	04 32 31.5	+0.6
AM05				S	Sg	04 32 35.5	+1.1
AM05				AML	AML		
	comp=N,976μm,1.3s						
AM05				AML	AML		
	comp=N,295μm,0.1s						
AM05				AML	AML		
	comp=E,812μm,0.8s						
AM05				AML	AML		
	comp=E,4090μm,0.8s						
AM05				AML	AML		
	comp=E,1999μm,0.1s						
AM05				AML	AML		
	comp=N,170μm,0.1s						
AM05				AML	AML		
	comp=E,421μm,0.1s						
AM05				AML	AML		
	comp=N,494μm,0.1s						
LNSS	**Leonessa**	**0.27**	**181**	P	Pg	04 32 31.8	+0.5
LNSS				S	Sb	04 32 36.3	-1.0
LNSS				AML	AML		
	comp=E,848μm,0.4s						
LNSS				AML	AML		
	comp=N,796μm,1.0s						
LNSS				AML	AML		
	comp=E,962μm,0.3s						
LNSS				AML	AML		
	comp=N,800μm,1.0s						
LNSS				AML	AML		
	comp=N,379μm,0.1s						
LNSS				AML	AML		
	comp=E,421μm,0.2s						
T1204	**Amatrice, Fraz**	**0.28**	**134**	P	Pg	04 32 31.9	+0.5
T1204				S	Sb	04 32 36.8	-0.9
T1204				AML	AML		
	comp=E,565μm,0.1s						
T1204				AML	AML		
	comp=N,304μm,0.2s						
T1241	**Roccafluvione,**	**0.28**	**93**	⇑P	Pg	04 32 31.6	+0.1
T1241				S	Sg	04 32 36.3	+0.8
T1241				AML	AML		
	comp=E,1130μm,0.3s						
T1241				AML	AML		
	comp=N,1430μm,1.0s						
T1241				AML	AML		
	comp=E,1140μm,0.3s						
T1241				AML	AML		
	comp=N,1390μm,1.0s						
T1241				AML	AML		
	comp=N,1388μm,1.0s						
T1241				AML	AML		
	comp=N,1431μm,1.0s						
T1241				AML	AML		
	comp=E,1145μm,0.3s						
T1241				AML	AML		
	comp=E,1128μm,0.3s						
T1241				AML	AML		
	comp=E,1128μm,0.3s						
T1241				AML	AML		
	comp=N,494μm,0.2s						
T1241				AML	AML		
	comp=E,1143μm,0.3s						
T1241				AML	AML		
	comp=N,527μm,0.2s						
GUMA	**Gualdo di Mace**	**0.29**	**48**	P	Pb	04 32 32.3	-0.7
GUMA				S	Sb	04 32 37.3	-0.5
GUMA				AML	AML		
	comp=E,17650μm,0.3s						
GUMA				AML	AML		
	comp=E,31800μm,0.3s						
GUMA				AML	AML		
	comp=N,24050μm,0.2s						
GUMA				AML	AML		
	comp=E,17700μm,0.3s						
GUMA				AML	AML		
	comp=N,16800μm,0.3s						
GUMA				AML	AML		
	comp=N,974μm,0.5s						
GUMA				AML	AML		
	comp=E,991μm,0.5s						
GUMA				AML	AML		
	comp=E,901μm,0.3s						
GUMA				AML	AML		
	comp=N,979μm,0.4s						
ASSB	**Assisi San Ben**	**0.33**	**301**	⇑P	Pg	04 32 32.8	+0.3
ASSB				S	Sb	04 32 38.0	-1.1
ASSB				AML	AML		
	comp=E,3370μm,0.5s						
ASSB				AML	AML		
	comp=N,4210μm,0.2s						
ASSB				AML	AML		
	comp=N,499μm,0.1s						
ASSB				AML	AML		
	comp=E,459μm,0.1s						
T1243	**Rocca Santa Ma**	**0.34**	**120**	P	Pg	04 32 32.9	+0.2
T1243				S	Sg	04 32 38.3	+1.0
ARRO	**Arrone**	**0.36**	**215**	P	Pg	04 32 33.3	+0.5
ARRO				AML	AML		
	comp=N,374μm,0.8s						
ARRO				AML	AML		
	comp=E,446μm,0.2s						
ARRO				AML	AML		
	comp=N,374μm,0.8s						
ARRO				AML	AML		
	comp=N,194μm,0.2s						
ARRO				AML	AML		
	comp=E,187μm,0.3s						
T1211	**Morro Reatino**	**0.36**	**203**	P	Pg	04 32 33.6	+0.5
T1211				AML	AML		
	comp=E,530μm,0.5s						
T1211				AML	AML		
	comp=N,864μm,0.5s						
T1211				AML	AML		
	comp=E,193μm,0.1s						
T1211				AML	AML		
	comp=N,240μm,0.2s						
T1211				AML	AML		
	comp=E,210μm,0.1s						
T1211				AML	AML		
	comp=N,255μm,0.2s						
RM33	**Pellescritta (**	**0.38**	**161**	P	Pg	04 32 33.7	+0.4
RM33				AML	AML		
	comp=E,448μm,1.4s						
RM33				AML	AML		
	comp=N,456μm,1.6s						
RM33				AML	AML		
	comp=E,362μm,1.4s						
RM33				AML	AML		
	comp=N,372μm,0.3s						
RM33				AML	AML		
	comp=N,155μm,0.3s						
RM33				AML	AML		
	comp=E,160μm,0.3s						
RM33				AML	AML		
	comp=E,138μm,0.3s						
SNTG	**Esanatoglia**	**0.39**	**349**	⇓P	Pg	04 32 34.0	+0.4
SNTG				AML	AML		
	comp=E,5210μm,0.1s						
SNTG				AML	AML		

comp=N,4165μm,0.4s
SNTG AML AML
comp=N,4620μm,0.4s
SNTG AML AML
comp=N,4170μm,0.4s
SNTG AML AML
comp=E,5210μm,0.1s
SNTG AML AML
comp=E,5350μm,0.1s
SNTG AML AML
comp=E,96μm,0.2s
SNTG AML AML
comp=N,108μm,0.3s
SNTG AML AML
comp=N,204μm,0.8s
CAMP Campotosto 0.43 141 P Pg 04 32 34.4 +0.2
CAMP AML AML
comp=E,276μm,0.3s
CAMP AML AML
comp=N,304μm,0.5s
CAMP AML AML
comp=N,60μm,0.2s
CAMP AML AML
comp=E,74μm,0.2s
CESX Cesi 0.43 233 P Pg 04 32 34.5 +0.3
CESX AML AML
comp=N,700μm,0.6s
CESX AML AML
comp=E,678μm,1.5s
CESX AML AML
comp=N,245μm,0.2s
CESX AML AML
comp=E,204μm,0.2s
ATCC AVT- Casa Cast 0.43 317 P Pg 04 32 34.7 +0.4
ATCC AML AML
comp=E,4610μm,0.3s
ATCC AML AML
comp=N,3845μm,0.4s
ATCC AML AML
comp=E,201μm,0.1s
ATCC AML AML
comp=N,179μm,0.2s
EL6 Elcito 0.46 5 ⇓P Pg 04 32 35.1 +0.3
EL6 AML AML
comp=E,9805μm,1.4s
EL6 AML AML
comp=N,11850μm,1.1s
EL6 AML AML
comp=E,9795μm,1.4s
EL6 AML AML
comp=N,11900μm,1.1s
EL6 AML AML
comp=E,9820μm,1.4s
EL6 AML AML
comp=E,168μm,0.1s
EL6 AML AML
comp=N,187μm,0.4s
T1247 Pizzolo (AQ) 0.47 156 P Pb 04 32 35.8 -0.3
T1247 AML AML
comp=N,490μm,0.8s
T1247 AML AML
comp=E,440μm,0.4s
T1247 AML AML
comp=E,150μm,0.3s
T1247 AML AML
comp=N,134μm,0.1s
FOSV Fossato di Vic 0.47 334 ⇑P Pb 04 32 35.8 -0.3
FOSV AML AML
comp=E,1105μm,0.7s
FOSV AML AML
comp=N,1885μm,0.3s
FOSV AML AML
comp=E,54μm,0.1s
FOSV AML AML
comp=N,74μm,0.3s
OFFI Offida 0.47 82 P Pb 04 32 36.2 +0.1
OFFI AML AML
comp=N,2065μm,0.7s
OFFI AML AML
comp=E,1500μm,0.4s
OFFI AML AML
comp=E,274μm,0.7s
OFFI AML AML
comp=N,323μm,0.4s
TERO Teramo 0.48 121 P Pg 04 32 35.1 -0.1
TERO AML AML
comp=E,430μm,0.4s
TERO AML AML
comp=N,409μm,0.4s
TERO AML AML
comp=E,624μm,0.5s
TERO AML AML
comp=E,562μm,0.5s
TERO AML AML
comp=N,420μm,0.4s
TERO AML AML
comp=E,257μm,0.1s
TERO AML AML
comp=N,193μm,0.1s
TERO AML AML
comp=N,222μm,0.1s
TERO AML AML
comp=E,227μm,0.1s
CING Cingoli 0.52 12 P Pg 04 32 36.2 +0.3
CING AML AML
comp=N,3265μm,0.1s
CING AML AML
comp=E,3010μm,0.2s
CING AML AML
comp=E,102μm,0.2s
CING AML AML
comp=N,72μm,0.1s
MURB Monte Urbino 0.55 316 ⇓P Pg 04 32 36.8 +0.4
MURB S Sb 04 32 47.0 +1.6
MURB AML AML
comp=E,2465μm,0.3s
MURB AML AML
comp=E,2645μm,0.3s
MURB AML AML
comp=E,2465μm,0.3s
MURB AML AML
comp=N,1825μm,1.0s
MURB AML AML
comp=N,1940μm,0.3s
MURB AML AML
comp=E,300μm,0.3s
MURB AML AML
comp=N,271μm,0.2s
MURB AML AML
comp=E,279μm,0.2s
MURB AML AML
comp=N,289μm,0.2s
GIGS Gran Sasso 0.57 137 P Pg 04 32 36.9 0.0
GIGS AML AML
comp=E,94μm,1.6s
GIGS AML AML
comp=N,128μm,0.5s
GIGS AML AML
comp=E,39μm,0.1s
GIGS AML AML
comp=N,29μm,0.2s
FIAM Fiamignano 0.60 175 ⇑P Pg 04 32 37.8 +0.3
FIAM AML AML
comp=E,152μm,1.5s
FIAM AML AML
comp=N,117μm,0.9s
FIAM AML AML
comp=N,170μm,0.7s
FIAM AML AML
comp=E,228μm,0.6s
FIAM AML AML
comp=N,36μm,0.3s
FIAM AML AML
comp=E,44μm,0.5s
ARVD Arcevia 0.63 353 ⇑P Pb 04 32 38.6 -0.3
ARVD S Sn 04 32 50.0 -0.9
ARVD AML AML
comp=E,2055μm,0.5s
ARVD AML AML
comp=N,1082μm,0.1s
MGAB Montegabbione 0.69 274 P Pb 04 32 39.5 -0.3
MGAB AML AML
comp=N,455μm,0.4s
MGAB AML AML
comp=N,498μm,0.8s
MGAB AML AML
comp=E,452μm,0.5s
MGAB AML AML
comp=E,334μm,1.3s
MGAB AML AML
comp=E,121μm,0.3s
MGAB AML AML
comp=N,112μm,0.4s
MGAB AML AML
comp=E,122μm,0.3s
MGAB AML AML
comp=N,126μm,0.2s
ATVO AVT- Monte Val 0.69 318 ⇓P Pg 04 32 39.4 +0.2
ATVO AML AML
comp=E,382μm,0.6s
ATVO AML AML
comp=N,354μm,0.4s
ATVO AML AML
comp=E,382μm,0.6s
ATVO AML AML
comp=E,46μm,0.4s
ATVO AML AML
comp=N,39μm,0.3s
FAGN Fagnano 0.72 146 ⇑P Pn 04 32 41.3 -0.7
SRES S.Oreste - Sor 0.75 212 S Sn 04 32 53.0 -0.6
ATPI Pietralunga - 0.75 321 ⇓P Pb 04 32 40.7 -0.1
ATPI AML AML
comp=E,308μm,0.4s
ATPI AML AML
comp=N,279μm,1.1s
VCEL Villa Celiera 0.76 129 ⇑P Pb 04 32 40.7 -0.3
VCEL S Sn 04 32 53.0 -1.0
VCEL AML AML
comp=E,466μm,0.5s
VCEL AML AML
comp=N,409μm,1.1s
PIEI Pieia 0.76 331 ⇑P Pb 04 32 40.9 -0.2
PIEI S Sn 04 32 54.0 -0.1
PIEI AML AML
comp=E,496μm,0.7s
PIEI AML AML
comp=N,386μm,0.5s
NARO Abbazia di Nar 0.81 336 P Pg 04 32 41.5 0.0
NARO AML AML
comp=E,400μm,1.4s
NARO AML AML
comp=N,284μm,0.8s
FSSB Fossombrone 0.84 347 ⇓P Pb 04 32 42.4 -0.1
FSSB AML AML
comp=E,1190μm,0.4s
FSSB AML AML
comp=N,3765μm,0.3s
CAFI Castiglion Fio 0.91 301 S Sn 04 32 58.0 +0.2
SAMA S.Maria delle 1.14 197 S Sn 04 33 04.0 +0.7

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*IDC **30** 04:32:51.2±1.0, 31°.13S×176°.84W, h0km, mb3.9/5, mbtmp3.9/7, ML3.9/2, MS3.4/10, Error ellipse: s-maj=31.5km s-min=25.2km az=157.0*

ISC 30 04:32:56.3±0.8, 31°.13S±0°.07×177°.0W±0°.1, h35km, n24, σ1§28/19, mb3.9/5, MS3.4/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RAO	**Raoul Island**	**2.04**	**336**	Pn		**Pn**	**04 33 26.8**	**-1.3**
	69nm,0.3s,baz=282,slow=22,SNR=4.1							
RAO				Sn		**Sn**	**04 33 51.9**	**-0.4**
	218nm,0.3s,baz=114,slow=22,SNR=6.6							
URZ	**Urewera**	**8.62**	**213**	Pn		**Pn**	**04 34 57.4**	**-1.0**
	0.8nm,0.3s,baz=117,slow=11,SNR=1.1							
URZ				Sn		**Sn**	**04 36 33.9**	**-0.5**
	1.8nm,0.3s,baz=314,slow=20,SNR=9.6							
	1.6nm,0.3s							
MSVF	**Nonsavu**	**14.08**	**340**	LR		LR	04 41 30.4	
	comp=Z,60nm,18.1s,baz=126,slow=37							
RPZ	**Rata Peaks**	**15.73**	**214**	Pn		**Pn**	**04 36 32.1**	**-3.1**
	1.2nm,0.3s,baz=16,slow=2.4,SNR=6.4							
DZM	**Mont Dzumac**	**17.33**	**297**	LR		LR	04 41 24.9	
	comp=Z,39nm,19.9s,baz=40,slow=30							
PPT	**Papeete**	**28.29**	**68**	LR		LR	04 47 43.3	
	comp=Z,27nm,19.5s,baz=252,slow=32							
CTA	**Charters Tower**	**34.78**	**280**	P		**P**	**04 39 46.1**	**+2.4**
	3.2nm,0.7s,baz=104,slow=8.3,SNR=2.4							
CTA				LR		LR	04 54 04.7	
	comp=Z,75nm,18.1s,baz=80,slow=36							
	3.2nm,0.7s							
STKA	**Stephens Creek**	**35.17**	**258**	LR		LR	04 52 03.5	
	comp=Z,43nm,21.0s,baz=29,slow=33							
PMG	**Port Moresby**	**39.71**	**295**	LR		LR	04 53 33.1	
	comp=Z,58nm,21.8s,baz=64,slow=31							
ASAR	**Alice Springs**	**43.95**	**267**	P		**P**	**04 41 00.1**	**-0.1**
	1.3nm,0.9s,baz=104,slow=6.7,SNR=9.4							
ASAR				LR		LR	04 58 08.2	
	comp=Z,47nm,20.0s,baz=30,slow=34							
	1.3nm,0.9s							
WRA	**Warramunga Arr**	**45.00**	**272**	P		**P**	**04 41 09.4**	**+0.8**
	0.6nm,0.3s,baz=111,slow=8.1,SNR=24							
WRA				LR		LR	05 00 30.9	
	comp=Z,57nm,19.2s,baz=294,slow=37							
	0.6nm,0.3s							
JHJ	**Hachijo jima 2**	**75.84**	**324**	LR		LR	05 14 29.2	
	comp=Z,132nm,18.7s,baz=126,slow=33							
TROLL	**Troll, Antarti**	**77.15**	**180**	P		**P**	**04 44 47.2**	**+1.2**
SNAA	**Sanae**	**77.40**	**178**	P		**P**	**04 44 48.0**	**+0.6**
VNA3	**Neumayer Olymp**	**77.52**	**176**	P		**P**	**04 44 48.7**	**+0.8**
VNA2	**Neumayer--Watz**	**77.96**	**177**	P		**P**	**04 44 51.6**	**+1.2**
	baz=167,slow=6.0							
VNA1	**Neumayer--Stat**	**78.19**	**176**	P		**P**	**04 44 52.5**	**+0.9**
NVAR	**Mina Array Bea**	**88.18**	**42**	P		**P**	**04 45 44.2**	**+0.4**
	0.5nm,0.7s,baz=218,slow=8.6,SNR=4.5							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**92.05**	**57**	P		**P**	**04 46 00.7**	**-1.3**
	0.5nm,0.9s,baz=167,slow=7.7,SNR=3.4							
	0.5nm,0.9s							
CPUP	**Villa Florida**	**98.85**	**128**	LR		LR	05 24 28.0	
	comp=Z,39nm,18.3s,baz=101,slow=31							
FINES	**FINESS Array B**	**146.13**	**340**	PKPbc		**PKPab**	**04 52 32.3**	**-0.3**
	3.8nm,0.7s,baz=45,slow=2.9,SNR=19							
NOA	**NORSAR Array B**	**149.59**	**352**	PKPbc		**PKPbc**	**04 52 41.6**	**+0.2**
	0.7nm,0.9s,baz=20,slow=3.8,SNR=1.8							
AKASG	**Malin Array Be**	**152.41**	**323**	PKPab		**PKPab**	**04 52 58.9**	**+0.4**
	0.7nm,0.6s,baz=48,slow=3.4,SNR=4.0							
TORD	**Torodi Ar. Bea**	**162.06**	**176**	PKPab		**PKPab**	**04 53 41.3**	**+0.5**
	0.8nm,0.8s,baz=204,slow=5.8,SNR=5.5							

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*PRU **30** 04:33:01.7±0.0, 43°.22N×13°.19E, h0km*

ROM 30 04:32:57.7±0.0, 43°.061N±0°.002×13°.053E±0°.004, h10km, ML2.6/49, 25C-16D, Error ellipse: s-maj=0.3km s-min=0.1km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**135**	P		Pg	04 32 59.5	-0.1
FDMO				S		Sg	04 33 00.5	-0.4
FEMA	**Monte Fema**	**0.10**	**181**	⇑P		Pg	04 33 00.7	+0.4
FEMA				S		Sg	04 33 03.0	+0.8
FEMA				AML		AML		
	comp=E,14850μm,1.6s							
FEMA				AML		AML		
	comp=N,9535μm,0.6s							
FEMA				AML		AML		
	comp=E,14850μm,1.6s							
FEMA				AML		AML		
	comp=N,9545μm,0.6s							
FEMA				AML		AML		
	comp=N,9535μm,0.5s							
FEMA				AML		AML		
	comp=E,14850μm,0.4s							
SEF1	**Sefro**	**0.12**	**318**	⇓P		Pg	04 33 01.0	+0.5
SEF1				S		Sg	04 33 03.4	+0.9
SEF1				AML		AML		
	comp=E,13050μm,0.9s							
SEF1				AML		AML		
	comp=E,13100μm,0.9s							
SEF1				AML		AML		
	comp=N,14300μm,1.1s							
SEF1				AML		AML		
	comp=E,13100μm,0.9s							
SEF1				AML		AML		
	comp=N,14300μm,0.9s							
CESI	**CESI - Serrava**	**0.12**	**243**	P		Pg	04 33 01.2	+0.6
CESI				S		Sg	04 33 03.7	+1.0
CESI				AML		AML		
	comp=N,5870μm,0.1s							
CESI				AML		AML		
	comp=E,5745μm,1.4s							
CESI				AML		AML		
	comp=N,5870μm,1.9s							
CESI				AML		AML		
	comp=E,5745μm,0.6s							
PIO1	**Pioraco**	**0.13**	**337**	P		Pg	04 33 01.1	+0.4
PIO1				AML		AML		
	comp=E,4900μm,1.2s							
PIO1				AML		AML		
	comp=N,5215μm,0.8s							
PIO1				AML		AML		
	comp=N,5210μm,0.9s							
PIO1				AML		AML		
	comp=N,5210μm,1.1s							
PIO1				AML		AML		
	comp=E,4900μm,1.2s							
MDAR	**Monte D'Aria**	**0.15**	**26**	⇑P		Pg	04 33 01.4	+0.4
MDAR				S		Sg	04 33 04.1	+0.8
MDAR				AML		AML		
	comp=N,11300μm,0.8s							
MDAR				AML		AML		
	comp=N,11300μm,0.8s							
MDAR				AML		AML		
	comp=E,14250μm,0.5s							
FIU1	**Fiuminata**	**0.15**	**325**	P		Pg	04 33 01.6	+0.5
FIU1				S		Sg	04 33 04.5	+1.0
GAG1	**Gagliole**	**0.18**	**3**	P		Pg	04 33 02.2	+0.7
GAG1				S		Sg	04 33 05.4	+1.3
GAG1				AML		AML		
	comp=E,13800μm,0.4s							
GAG1				AML		AML		
	comp=N,21500μm,0.5s							
GAG1				AML		AML		
	comp=E,13850μm,0.4s							
GAG1				AML		AML		
	comp=N,21550μm,0.5s							
MC2	**Monte Cornacci**	**0.18**	**146**	P		Pg	04 33 02.3	+0.7
MC2				S		Sg	04 33 05.4	+1.1
SSM1	**San Severino M**	**0.19**	**28**	P		Pg	04 33 02.2	+0.5
SSM1				S		Sg	04 33 05.6	+1.2
MTL1	**Matelica**	**0.20**	**351**	⇓P		Pg	04 33 02.5	+0.7
MTL1				S		Sg	04 33 06.1	+1.4
MTL1				AML		AML		
	comp=E,11515μm,0.5s							
MTL1				AML		AML		
	comp=N,10315μm,1.4s							
MTL1				AML		AML		
	comp=N,10300μm,1.4s							
MTL1				AML		AML		
	comp=N,10300μm,0.6s							
GUMA	**Gualdo di Mace**	**0.21**	**89**	⇑P		Pg	04 33 02.7	+0.8
GUMA				S		Sg	04 33 06.6	+1.7
GUMA				AML		AML		
	comp=E,17700μm,0.3s							
GUMA				AML		AML		
	comp=N,24050μm,0.3s							
GUMA				AML		AML		
	comp=N,16800μm,0.3s							
GUMA				AML		AML		
	comp=E,17650μm,0.3s							
GUMA				AML		AML		
	comp=N,24100μm,0.3s							
GUMA				AML		AML		
	comp=E,17700μm,0.3s							
GUMA				AML		AML		
	comp=E,31800μm,0.3s							
GUMA				AML		AML		
	comp=E,17700μm,1.7s							
GUMA				AML		AML		
	comp=E,31800μm,1.7s							
SNTG	**Esanatoglia**	**0.21**	**337**	⇓P		Pg	04 33 02.6	+0.5
SNTG				S		Sg	04 33 06.2	+1.2
SNTG				AML		AML		
	comp=E,5210μm,0.1s							
SNTG				AML		AML		
	comp=N,4165μm,0.4s							
SNTG				AML		AML		
	comp=E,5210μm,0.1s							
SNTG				AML		AML		
	comp=N,4620μm,0.4s							
SNTG				AML		AML		
	comp=E,5350μm,0.1s							
SNTG				AML		AML		
	comp=N,4170μm,0.4s							
T1245	**Castelsantange**	**0.23**	**154**	⇑P		Pg	04 33 03.0	+0.6
T1245				S		Sg	04 33 06.8	+1.2
T1245				AML		AML		
	comp=E,2965μm,0.5s							
T1245				AML		AML		
	comp=N,3840μm,0.7s							
T1245				AML		AML		
	comp=N,3750μm,0.3s							
T1245				AML		AML		
	comp=E,2970μm,0.5s							
T1245				AML		AML		
	comp=E,2985μm,0.4s							
T1245				AML		AML		
	comp=E,2985μm,1.6s							
T1245				AML		AML		
	comp=E,2970μm,1.5s							
T1245				AML		AML		
	comp=N,3750μm,1.7s							
AM05	**Amandola Campo**	**0.23**	**111**	P		Pg	04 33 03.0	+0.6
AM05				S		Sg	04 33 07.5	+1.8
AM05				AML		AML		
	comp=E,812μm,0.8s							
AM05				AML		AML		
	comp=N,976μm,1.3s							
AM05				AML		AML		
	comp=E,4085μm,0.8s							
AM05				AML		AML		
	comp=E,812μm,0.8s							
AM05				AML		AML		
	comp=N,976μm,1.3s							
AM05				AML		AML		
	comp=N,295μm,0.1s							
AM05				AML		AML		
	comp=N,976μm,0.7s							
AM05				AML		AML		
	comp=E,4090μm,0.8s							
MMO1	**Montemonaco**	**0.26**	**129**	⇑P		Pg	04 33 03.4	+0.4
MMO1				S		Sg	04 33 07.7	+1.2
EL6	**Elcito**	**0.27**	**8**	⇑P		Pg	04 33 03.6	+0.5
EL6				S		Sb	04 33 08.5	-0.9
EL6				AML		AML		
	comp=E,9805μm,1.4s							
EL6				AML		AML		
	comp=N,11850μm,1.1s							
EL6				AML		AML		
	comp=E,9795μm,1.4s							
EL6				AML		AML		
	comp=E,9820μm,1.4s							
EL6				AML		AML		
	comp=N,11900μm,1.1s							
EL6				AML		AML		
	comp=E,9820μm,0.6s							
EL6				AML		AML		
	comp=N,11900μm,0.9s							
ASSB	**Assisi San Ben**	**0.29**	**266**	⇑P		Pg	04 33 04.1	+0.6
ASSB				S		Sb	04 33 09.0	-0.9
ASSB				AML		AML		
	comp=N,4210μm,0.2s							
ASSB				AML		AML		
	comp=E,3370μm,0.5s							
T1215	**Vallo di Nera,**	**0.29**	**208**	P		Pg	04 33 04.1	+0.5
T1215				S		Sb	04 33 09.0	-1.0
T1215				AML		AML		
	comp=E,841μm,1.1s							
T1215				AML		AML		
	comp=N,878μm,0.5s							
T1215				AML		AML		
	comp=E,780μm,0.5s							
T1215				AML		AML		
	comp=N,882μm,1.0s							
T1215				AML		AML		
	comp=N,882μm,0.5s							
T1215				AML		AML		
	comp=E,780μm,0.5s							
T1215				AML		AML		
	comp=N,885μm,1.0s							
T1215				AML		AML		
	comp=E,840μm,1.1s							
T1215				AML		AML		
	comp=E,782μm,0.5s							
T1215				AML		AML		
	comp=N,885μm,1.0s							
FOSV	**Fossato di Vic**	**0.32**	**318**	⇑P		Pg	04 33 04.5	+0.5
FOSV				AML		AML		
	comp=E,1105μm,0.7s							
FOSV				AML		AML		

	comp=N,1885μm,0.3s					
ATCC	**AVT- Casa Cast**	**0.33 292**	⇑P		Pg	04 33 04.9 +0.7
ATCC			AML		AML	
	comp=N,3845μm,0.4s					
ATCC			AML		AML	
	comp=E,4610μm,0.3s					
ATCC			AML		AML	
	comp=E,4610μm,1.7s					
CING	**Cingoli**	**0.33 18**	⇑P		Pg	04 33 04.7 +0.4
CING			AML		AML	
	comp=E,3010μm,0.2s					
CING			AML		AML	
	comp=N,3265μm,0.1s					
T1241	**Roccafluvione,**	**0.34 126**	⇑P		Pg	04 33 04.5 0.0
T1241			AML		AML	
	comp=E,1078μm,0.8s					
T1241			AML		AML	
	comp=N,1434μm,1.0s					
T1241			AML		AML	
	comp=E,1021μm,0.8s					
T1241			AML		AML	
	comp=N,1389μm,1.0s					
T1241			AML		AML	
	comp=N,1390μm,1.0s					
T1241			AML		AML	
	comp=N,1388μm,1.0s					
T1241			AML		AML	
	comp=E,1020μm,0.8s					
T1241			AML		AML	
	comp=N,1388μm,1.0s					
T1217	**Poggiodomo (PG**	**0.36 194**	⇑P		Pg	04 33 05.3 +0.5
T1217			AML		AML	
	comp=E,942μm,0.8s					
T1217			AML		AML	
	comp=E,869μm,0.8s					
T1217			AML		AML	
	comp=N,1475μm,0.5s					
T1217			AML		AML	
	comp=E,942μm,0.8s					
T1217			AML		AML	
	comp=E,875μm,0.8s					
T1217			AML		AML	
	comp=N,1460μm,0.4s					
T1217			AML		AML	
	comp=N,1472μm,0.5s					
MMUR	**Monte Murano**	**0.38 354**	⇑P		Pg	04 33 05.8 +0.5
MMUR			AML		AML	
	comp=N,4325μm,0.2s					
MMUR			AML		AML	
	comp=E,4085μm,0.7s					
MMUR			AML		AML	
	comp=E,4085μm,1.3s					
T1204	**Amatrice, Fraz**	**0.43 153**	P		Pg	04 33 06.2 +0.1
MURB	**Monte Urbino**	**0.44 298**	⇑P		Pg	04 33 06.8 +0.6
MURB			AML		AML	
	comp=N,1825μm,1.0s					
MURB			AML		AML	
	comp=E,2645μm,0.3s					
MURB			AML		AML	
	comp=N,1940μm,0.3s					
MURB			AML		AML	
	comp=E,2465μm,0.3s					
MURB			AML		AML	
	comp=N,1825μm,1.0s					
ARVD	**Arcevia**	**0.44 349**	⇑P		Pg	04 33 06.7 +0.3
ARVD			AML		AML	
	comp=E,2055μm,0.5s					
ARVD			AML		AML	
	comp=N,1082μm,0.1s					
LNSS	**Leonessa**	**0.46 181**	⇓P		Pg	04 33 07.0 +0.4
LNSS			AML		AML	
	comp=E,962μm,0.3s					
LNSS			AML		AML	
	comp=N,796μm,1.0s					
LNSS			AML		AML	
	comp=N,800μm,1.0s					
ATFO	**Monte Foce - G**	**0.47 311**	⇑P		Pg	04 33 07.3 +0.5
ATFO			AML		AML	
	comp=E,574μm,0.6s					
ATFO			AML		AML	
	comp=N,495μm,0.6s					
ATFO			AML		AML	
	comp=E,574μm,0.6s					
ATFO			AML		AML	
	comp=N,496μm,0.6s					
T1243	**Rocca Santa Ma**	**0.47 141**	P		Pg	04 33 07.0 +0.2
OFFI	**Offida**	**0.48 105**	⇑P		Pb	04 33 08.4 +0.2
OFFI			AML		AML	
	comp=N,2065μm,0.7s					
OFFI			AML		AML	
	comp=E,1500μm,0.4s					
OFFI			AML		AML	
	comp=N,2065μm,1.3s					
FRON	**Frontone**	**0.52 332**	⇓P		Pg	04 33 08.0 +0.3
FRON			AML		AML	
	comp=E,694μm,1.1s					
FRON			AML		AML	
	comp=N,1046μm,1.0s					
FRON			AML		AML	
	comp=E,694μm,1.1s					
FRON			AML		AML	
	comp=N,1046μm,1.0s					
FRON			AML		AML	
	comp=E,694μm,0.9s					
PP3	**Marolino**	**0.52 52**	⇑P		Pb	04 33 08.9 +0.1
PP3			S		Sn	04 33 19.2 -0.7
PP3			AML		AML	
	comp=E,1885μm,0.3s					
PP3			AML		AML	
	comp=N,1655μm,0.7s					
PP3			AML		AML	
	comp=E,1855μm,0.3s					
PP3			AML		AML	
	comp=N,1775μm,0.7s					
PP3			AML		AML	
	comp=E,1850μm,0.3s					
PP3			AML		AML	
	comp=N,1780μm,0.7s					
PP3			AML		AML	
	comp=N,1655μm,0.7s					
ARRO	**Arrone**	**0.53 204**	⇑P		Pg	04 33 08.2 +0.3
ARRO			S		Sb	04 33 18.0 +1.3
ARRO			AML		AML	
	comp=N,374μm,0.8s					
ARRO			AML		AML	
	comp=E,446μm,0.2s					
ARRO			AML		AML	
	comp=N,374μm,0.8s					
T1211	**Morro Reatino**	**0.55 196**	⇓P		Pg	04 33 08.7 +0.4
T1211			AML		AML	
	comp=E,493μm,0.5s					
T1211			AML		AML	
	comp=E,530μm,0.5s					
T1211			AML		AML	
	comp=N,868μm,0.5s					
T1211			AML		AML	
	comp=N,867μm,0.5s					
T1211			AML		AML	
	comp=E,492μm,0.5s					
T1211			AML		AML	
	comp=N,896μm,0.5s					
T1211			AML		AML	
	comp=E,525μm,0.5s					
RM33	**Pellescritta (**	**0.56 168**	⇑P		Pg	04 33 08.9 +0.3
RM33			S		Sb	04 33 17.8 -0.1
RM33			AML		AML	
	comp=E,363μm,1.4s					
RM33			AML		AML	
	comp=N,372μm,0.3s					
RM33			AML		AML	
	comp=E,362μm,1.4s					
RM33			AML		AML	
	comp=N,372μm,0.3s					
CESX	**Cesi**	**0.57 218**	⇑P		Pg	04 33 08.8 +0.1
CESX			AML		AML	
	comp=E,678μm,1.5s					
CESX			AML		AML	
	comp=N,700μm,0.6s					
CESX			AML		AML	
	comp=E,678μm,0.5s					
ATVO	**AVT- Monte Val**	**0.57 304**	⇑P		Pg	04 33 09.0 +0.3
ATVO			S		Sb	04 33 19.0 +0.9
ATVO			AML		AML	
	comp=E,382μm,0.6s					
ATVO			AML		AML	
	comp=N,354μm,0.4s					
ATVO			AML		AML	
	comp=E,382μm,0.6s					
ATVO			AML		AML	
	comp=E,382μm,1.4s					
CAMP	**Campotosto**	**0.59 153**	⇑P		Pg	04 33 09.1 0.0
CAMP			AML		AML	
	comp=N,304μm,0.5s					
CAMP			AML		AML	
	comp=E,276μm,0.3s					
TERO	**Teramo**	**0.60 137**	P		Pg	04 33 09.2 0.0
TERO			AML		AML	
	comp=E,562μm,0.5s					
TERO			AML		AML	
	comp=E,625μm,0.5s					
TERO			AML		AML	
	comp=N,420μm,0.4s					
TERO			AML		AML	
	comp=E,430μm,0.4s					
TERO			AML		AML	
	comp=E,624μm,0.5s					
TERO			AML		AML	
	comp=E,562μm,0.5s					
TERO			AML		AML	
	comp=N,409μm,0.4s					
MPAG	**Monte Paganucc**	**0.61 339**	P		Pb	04 33 10.0 -0.5
MPAG			AML		AML	
	comp=E,416μm,1.1s					
MPAG			AML		AML	
	comp=N,572μm,1.1s					
MPAG			AML		AML	
	comp=N,572μm,0.9s					
MPAG			AML		AML	
	comp=E,416μm,0.9s					
PIEI	**Pieia**	**0.61 322**	P		Pg	04 33 09.8 +0.3
PIEI			S		Sb	04 33 20.0 +0.9
PIEI			AML		AML	
	comp=N,386μm,0.5s					
PIEI			AML		AML	
	comp=E,496μm,0.7s					
ATPI	**Pietralunga -**	**0.61 310**	⇓P		Pg	04 33 10.0 +0.4
ATPI			S		Sn	04 33 21.0 -1.6
ATPI			AML		AML	
	comp=E,308μm,0.4s					
ATPI			AML		AML	
	comp=N,279μm,1.1s					
AOI	**Ancona**	**0.63 39**	P		Pb	04 33 10.4 -0.4
AOI			AML		AML	
	comp=E,426μm,0.3s					
AOI			AML		AML	
	comp=N,324μm,0.7s					
AOI			AML		AML	
	comp=N,324μm,0.7s					
T1247	**Pizzolo (AQ)**	**0.65 164**	⇓P		Pb	04 33 11.2 +0.1
T1247			AML		AML	
	comp=N,490μm,0.8s					
T1247			AML		AML	
	comp=E,440μm,0.4s					
NARO	**Abbazia di Nar**	**0.65 328**	⇓P		Pg	04 33 10.4 +0.2
NARO			S		Sn	04 33 22.0 -1.3
NARO			AML		AML	
	comp=E,400μm,1.4s					
NARO			AML		AML	
	comp=N,284μm,0.8s					
NARO			AML		AML	
	comp=E,400μm,0.6s					
FSSB	**Fossombrone**	**0.66 342**	⇓P		Pg	04 33 10.8 +0.3
FSSB			S		Sn	04 33 23.0 -0.7
FSSB			AML		AML	
	comp=E,1190μm,0.4s					
FSSB			AML		AML	
	comp=N,3765μm,0.3s					
APEC	**Apecchio**	**0.68 317**	S		Sn	04 33 24.0 -0.1
MGAB	**Montegabbione**	**0.71 258**	P		Pg	04 33 11.5 +0.2
MGAB			AML		AML	
	comp=N,498μm,0.8s					
MGAB			AML		AML	
	comp=N,498μm,0.8s					
MGAB			AML		AML	
	comp=E,452μm,0.5s					
MGAB			AML		AML	
	comp=N,455μm,0.4s					
MGAB			AML		AML	
	comp=E,334μm,1.3s					
MGAB			AML		AML	
	comp=N,455μm,1.6s					
MGAB			AML		AML	
	comp=E,334μm,0.7s					
GIGS	**Gran Sasso**	**0.72 148**	⇑P		Pg	04 33 11.5 -0.1
GIGS			S		Sb	04 33 22.6 +0.3
GIGS			AML		AML	
	comp=E,94μm,1.6s					
GIGS			AML		AML	
	comp=N,128μm,0.5s					
GIGS			AML		AML	
	comp=E,94μm,1.6s					
GIGS			AML		AML	
	comp=N,128μm,1.5s					
GIGS			AML		AML	
	comp=E,94μm,0.4s					
BADI	**Badiali**	**0.74 307**	⇓P		Pb	04 33 12.5 -0.2
BADI			S		Sn	04 33 25.0 -0.6
PE3	**Peglio**	**0.75 328**	⇓P		Pb	04 33 12.8 -0.2
PE3			AML		AML	
	comp=E,11μm,0.1s					
PE3			AML		AML	
	comp=N,17μm,0.1s					
PE3			AML		AML	
	comp=E,11μm,0.1s					
FIAM	**Fiamignano**	**0.79 177**	⇑P		Pg	04 33 12.8 -0.1
FIAM			AML		AML	
	comp=E,228μm,0.6s					
FIAM			AML		AML	
	comp=N,170μm,0.7s					
FIAM			AML		AML	
	comp=N,170μm,1.3s					
CAFI	**Castiglion Fio**	**0.84 289**	⇓P		Pb	04 33 14.3 0.0
CAFI			AML		AML	
	comp=E,186μm,0.8s					
CAFI			AML		AML	
	comp=N,192μm,0.6s					
CAFI			AML		AML	
	comp=E,186μm,0.8s					
CAFI			AML		AML	
	comp=N,192μm,1.4s					
CAFI			AML		AML	
	comp=E,186μm,1.2s					
SACS	**San Casciano d**	**0.87 256**	⇓P		Pb	04 33 15.4 +0.5
SACS			AML		AML	
	comp=E,176μm,1.3s					
SACS			AML		AML	
	comp=N,150μm,1.3s					
SACS			AML		AML	
	comp=N,150μm,0.7s					
SACS			AML		AML	
	comp=E,176μm,0.7s					
VCEL	**Villa Celiera**	**0.88 139**	⇓P		Pg	04 33 14.9 +0.2
VCEL			AML		AML	
	comp=E,466μm,0.5s					
VCEL			AML		AML	
	comp=N,409μm,1.1s					
VCEL			AML		AML	
	comp=N,409μm,0.9s					
CPGN	**Carpegna, Ital**	**0.91 324**	P		Pb	04 33 16.2 +0.5
T0110	**Collepietro**	**0.99 147**	⇓P		Pb	04 33 17.0 0.0
T0110			AML		AML	
	comp=N,430μm,0.5s					
T0110			AML		AML	
	comp=E,372μm,0.5s					
T0110			AML		AML	
	comp=E,372μm,1.5s					
T0110			AML		AML	
	comp=N,430μm,1.5s					
MA9	**Marino**	**1.32 193**	S		Sg	04 33 41.0 +0.8
PII	**Pisa**	**1.96 291**	P		Pg	04 33 34.6 -0.5
OBKA	**Obir**	**3.61 17**	*e*Pn		Pn	04 33 54.9 +1.1
	comp=N,0.6nm,0.3s					
ABTA	**Abfaltersbach**	**3.71 354**	*e*Pn		Pn	04 33 56.9 +1.8
	comp=N,1.4nm,0.3s					
SOKA	**Soboth**	**3.88 21**	*e*Pn		Pn	04 34 00.3 +2.8
	comp=N,0.6nm,0.4s					
WTTA	**Wattenberg**	**4.32 347**	*e*Pn		Pn	04 34 06.7 +3.1
	comp=N,0.5nm,0.3s					
SQTA	**Sankt Quirin**	**4.36 343**	*e*Pn		Pn	04 34 06.9 +2.9
	comp=N,2.5nm,0.4s					
WATA	**Walderalm**	**4.40 347**	*i* Pn		Pn	04 34 08.0 +3.3
	comp=N,2.1nm,0.5s					
MOTA	**Moosalm**	**4.50 343**	*e*Pn		Pn	04 34 11.2 +5.1
	comp=N,0.3nm,0.2s					
RETA	**Reutte**	**4.71 341**	*e*Pn		Pn	04 34 10.4 +1.5
	comp=N,0.3nm,0.2s					
MOA	**Molln**	**4.86 10**	*i* Pn		Pn	04 34 12.3 +1.4
	comp=N,0.6nm,0.3s					
CONA	**Conrad Observa**	**5.25 21**	*e*Pn		Pn	04 34 15.4 -0.9
	comp=N,0.4nm,0.3s					
CKRC	**Cesky Krumlov**	**5.83 8**	*e*SN		Sn	04 35 29.9 -1.1
KHC	**Kasperske Hory**	**6.08 3**	*e*PN		Pn	04 34 29.7 +2.0
KHC			*e*SN		Sn	04 35 35.3 -2.0

NIED ***30*** *04:40:49.3, 25°.69N×125°.02E, h17km, MW3.6, Moment Tensor Solution. s1 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.58; $M_{\theta\theta}$2.67; $M_{\phi\phi}$-0.09; $M_{r\theta}$-0.66; $M_{\theta\phi}$1.09; $M_{\phi r}$1.21; Fault plane solution: $M_0$3.16000×10^{14} NP1: ϕ_s227.00000°, δ48.00000°, λ-126.00000°. NP2: ϕ_s95.00000°, δ53.00000°, λ-57.00000°.*

JMA 30 04:40:49.3±0.4, 25°.7N±0°.9×12°.5E±°, h17km±4km, MV3.7/12, NW OFF MIYAKOJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.79**	**165**	P	Pb	04 41 04.3	-0.3
JIKM				*e*S	Sb	04 41 14.9	-0.1
JIRB	**Irabujima**	**0.87**	**171**	*i* P	Pb	04 41 05.4	-0.5
JIRB				S	Sb	04 41 16.7	-0.6
JMJ2	**Miyako jima3**	**0.99**	**164**	*i* P	Pb	04 41 07.7	-0.2
JMJ2				S	Sb	04 41 20.4	-0.2
JOGS	**Gusukube**	**0.99**	**159**	*i* P	Pb	04 41 07.6	-0.4
JOGS				S	Sb	04 41 20.5	-0.3
JTJ	**Tarama**	**1.09**	**196**	P	Pb	04 41 09.0	-0.6
JTJ				*e*S	Sb	04 41 23.5	0.0
JISG	**Ishigakijimahi**	**1.28**	**210**	P	Pn	04 41 12.4	+0.1
JISG				*e*S	Sn	04 41 29.1	+0.1
JIJ	**Ishigaki jima**	**1.54**	**211**	P	Pn	04 41 16.2	+0.2
JIJ				*e*S	Sb	04 41 36.2	-0.4
JKE	**Kume jima 2**	**1.71**	**68**	*e*P	Pn	04 41 18.6	+0.3
JKRS	**Kuro-shima**	**1.72**	**213**	P	Pn	04 41 19.3	+1.0
JKRS				S	Sb	04 41 42.1	+0.6
IRIF	**Iriomote-Funau**	**1.79**	**221**	P	Pn	04 41 20.4	+1.1
HATJ	**Hateruma jima**	**1.97**	**214**	*e*P	Pb	04 41 24.1	-0.5
HATJ				S	Sb	04 41 48.8	-0.1

DJA 30 04:42:45.2±0.4, 4°S±3°×12°2E±°, h10km, M4.2/12, mb4.5/2, MLv4.0/12, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKSI	**Kolaka, Sulawe**	**0.81**	**253**	P	Pg	04 43 00.3	-0.6
BBSI	**Bau Bau**	**1.55**	**175**	P	Pn	04 43 11.7	-1.2
BNSI	**Bone**	**2.36**	**259**	P	Pn	04 43 22.9	-1.2
SPSI	**Sidrap Palu**	**2.66**	**269**	P	Pn	04 43 28.6	+0.5
BKSI	**Bulukumba**	**2.68**	**239**	P	Pn	04 43 29.1	+0.6
KAPI	**Kappang**	**2.88**	**248**	P	Pn	04 43 31.8	+0.6
LUWI	**Luwuk**	**2.89**	**7**	P	Pn	04 43 30.6	-0.7
BSSI	**Bau Bau, Buton**	**2.93**	**221**	P	Pn	04 43 32.2	+0.4
APSI	**Ampana**	**3.10**	**345**	P	Pn	04 43 35.1	+0.9
PMSI	**Majene**	**3.53**	**277**	P	Pn	04 43 40.0	-0.2
GTOI	**Gorontalo**	**4.57**	**7**	P	Pn	04 43 55.3	+0.8
MPSI	**Mapaga**	**4.94**	**329**	P	Pn	04 44 03.9	+4.4
SOEI	**Soe**	**6.07**	**163**	P	Pn	04 44 15.7	+0.5
KSI	**Kapahiang**	**19.80**	**270**	P	Pn	04 47 27.3	+10

MOS ***30*** *04:49:39.1±1.3, 25°.23S×70°.25W, h49km, mb5.4/30, Error ellipse: s-maj=11.7km s-min=6.8km az=96.4*
VAO ***30*** *04:49:40.1±0.3, 25°.18S×70°.28W, h50km, mb5.5*
GUC ***30*** *04:49:40.6±0.8, 25°.18S×70°.39W, h61km±5km, ML5.4*
IDC ***30*** *04:49:41.7±0.3, 25°.15S×70°.18W, h60km±2km, mb4.7/19, mbtmp4.9/23, MS4.1/44, Error ellipse: s-maj=12.8km s-min=10.9km az=43.0*
BJI ***30*** *04:49:41.0±0.0, 25°.20S×70°.30W, h41km, mB4.9/6, Ms5.4/9, Ms7 5.0/10*
NEIC ***30*** *04:49:41.5±2.3, 25°.18S±0°.04×70°.37W±0°.06, h53km±4km, mb5.2/318, Mww5.3, Mwr5.3(GUC), Error ellipse: s-maj=7.7km s-min=5.3km az=113.0*
NEIC ***30*** *04:49:44, 25°.17S×70°.42W, h46km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.05; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$0.47; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.52; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.02000×10^{17} NP1: ϕ_s293.00000°, δ43.00000°, λ-176.00000°. NP2: ϕ_s200.00000°, δ87.00000°, λ-47.00000°. Principal axes: T 0.9680, Plg29.0000°, Azm257.0000°; N 0.0923, Plg43.0000°, Azm18.0000°; P -1.0603, Plg34.0000°, Azm146.0000°;*
GCMT ***30*** *04:49:45.5±0.1, 25°.21S±0°.01×70°.55W±0°.01, h51km±1km, MW5.3/125, Moment Tensor Solution. s88, c129; s125, c193; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.13±.02; $M_{\theta\theta}$-0.49±.02; $M_{\phi\phi}$0.61±.02; $M_{r\theta}$0.16±.01; $M_{\theta\phi}$-0.56±.01; $M_{\phi r}$0.73±.02; Best double couple: $M_0$1.08500×10^{17} NP1:ϕ_s198.00000°, δ87.00000°, λ-44.00000°. NP2:ϕ_s292.00000°, δ46.00000°, λ-176.00000°. Principal axes: T 1.1660, Plg27.0000°, Azm254.0000°; N -0.1630, Plg46.0000°, Azm15.0000°; P -1.0030, Plg32.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=50s. Triangular moment-rate function*

ISC 30 04:49:41.0±0.2, 25°.18S±0°.02×70°.36W±0°.04, h54km±1km, h54km:pP-P, n781, σ1§41/732, mb5.2/203, MS4.3/45, 14C-29D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.55**	**355**		**Pn**	**04 49 54.6**	**+1.2**
PB14	**IPOC Station P**	**0.55**	**355**	⇓*i*P	**Pn**	**04 49 54.6**	**+1.2**
PB14				*i* S	**Sn**	**04 50 04.0**	**+1.6**
PB14				IAML		04 50 05.0	
	comp=E,331μm,0.7s						
GO02	**Mina Guanaco**	**0.69**	**89**	Pn	**Pn**	**04 49 56.3**	**+1.1**
GO02	**Mina Guanaco**	**0.69**	**89**	⇑*i*P	**Pn**	**04 49 56.3**	**+1.1**
GO02				*i* S	**Sn**	**04 50 07.6**	**+2.1**
GO02				IAML		04 50 09.9	
	comp=E,226μm,0.4s						
AC01	**Pan de Azucar**	**0.99**	**193**		**Pn**	**04 49 59.2**	**+0.4**
AC01	**Pan de Azucar**	**0.99**	**193**	⇑*i*P	**Pn**	**04 49 59.2**	**+0.4**
AC01				*i* S	**Sn**	**04 50 12.4**	**+0.5**
AC01				IAML		04 50 13.4	
	comp=N,55μm,0.2s						
PB10	**IPOC Station P**	**1.66**	**354**		**Pn**	**04 50 08.1**	**+0.3**
PB10	**IPOC Station P**	**1.66**	**354**	⇓*i*P	**Pn**	**04 50 08.1**	**+0.3**
PB10				IAML		04 50 37.0	
	comp=E,19μm,0.6s						
AC02	**Maricunga**	**1.99**	**147**		**Pn**	**04 50 14.9**	**+2.2**
AC02	**Maricunga**	**1.99**	**147**	⇓*i*P	**Pn**	**04 50 14.9**	**+2.2**
AC02				*i* S	**Sn**	**04 50 39.2**	**+2.5**
AC02				IAML		04 50 41.2	
	comp=E,103μm,0.8s						
PB15	**IPOC Station P**	**2.12**	**23**	*e*P	**Pn**	**04 50 15.8**	**+1.6**
PB15				*i* S	**Sn**	**04 50 42.0**	**+2.5**
GO03	**Copiap**	**2.41**	**177**		**Pn**	**04 50 18.4**	**+0.2**
GO03	**Copiap**	**2.41**	**177**	⇓*i*P	**Pn**	**04 50 18.3**	**+0.2**
GO03				*i* S	**Sn**	**04 50 47.8**	**+1.3**
GO03				IAML		04 51 08.2	
	comp=E,10μm,0.4s						
PB06	**IPOC Station P**	**2.56**	**16**		**Pn**	**04 50 20.7**	**+0.4**
PB06	**IPOC Station P**	**2.56**	**16**	⇓*i*P	**Pn**	**04 50 20.9**	**+0.7**
PB06				*i* S	**Sn**	**04 50 51.7**	**+1.4**
PB06				IAML		04 51 10.5	
	comp=N,37μm,0.5s						
PB04	**IPOC Station P**	**2.83**	**4**		**Pn**	**04 50 23.6**	**-0.4**
PB04	**IPOC Station P**	**2.83**	**4**	⇓*i*P	**Pn**	**04 50 23.7**	**-0.4**
PB04				IAML		04 51 11.9	
	comp=N,31μm,0.7s						
LVC	**Limon Verde**	**2.88**	**28**	P	**Pn**	**04 50 23.9**	**-0.9**
	comp=N,151nm,0.3s,baz=224,slow=10,SNR=114						
LVC				LR	LR	04 51 46.8	
	comp=N,2μm,20.0s,baz=210,slow=45						
LVC	**Limon Verde**	**2.88**	**28**		**Pn**	**04 50 26.3**	**+1.6**
LVC	**Limon Verde**	**2.88**	**28**	*e*P	**Pn**	**04 50 26.3**	**+1.6**
LVC	**Limon Verde**	**2.88**	**28**	*e*P	**Pn**	**04 50 26.0**	**+1.3**
LVC				*i* S	**Sn**	**04 51 00.8**	**+2.5**
LVC	**Limon Verde**	**2.88**	**28**	*e*P	**Pn**	**04 50 26.0**	**+1.3**
AF01	**San Pedro de A**	**2.98**	**42**		**Pn**	**04 50 28.1**	**+2.1**
AF01	**San Pedro de A**	**2.98**	**42**	*e*P	**Pn**	**04 50 27.7**	**+1.7**
AF01				*i* S	**Sn**	**04 51 03.2**	**+2.6**
AC04	**Llanos de Chal**	**3.09**	**192**		**Pn**	**04 50 25.4**	**-1.8**

AC04 Llanos de Chal 3.09 192⇑ *iP* Pn 04 50 25.4 -1.8
AC04 IAML 04 51 19.4
comp=E,4µm,0.6s
PB03 IPOC Station P 3.16 10 IAML 04 51 20.9
comp=E,13µm,0.2s
PB07 IPOC Station P 3.46 7 Pn 04 50 32.0 -0.6
PB09 IPOC Station P 3.51 17⇓ *iP* Pn 04 50 34.4 +1.0
AC05 El Transito 3.65 179 Pn 04 50 35.4 +0.3
AC05 El Transito 3.65 179⇓ *iP* Pn 04 50 35.4 +0.3
AC05 *i* S **Sn 04 51 17.9 +0.9**
LCO Las Campanas 3.83 185 Pn 04 50 36.5 -1.3
LCO Las Campanas 3.83 185 P **Pn 04 50 36.5 -1.3**
LCO Las Campanas 3.83 185⇓ *eP* Pn 04 50 36.4 -1.3
PB02 IPOC Station P 3.86 6 Pn 04 50 37.0 -1.1
PB01 IPOC Station P 4.19 11 Pn 04 50 42.2 -0.3
PB01 IPOC Station P 4.19 11⇓ *iP* Pn 04 50 42.2 -0.3
PB01 *i* S **Sn 04 51 28.1 -2.1**
PATCX Punta Patache 4.34 2 Pn 04 50 42.9 -1.6
PATCX Punta Patache 4.34 2⇓ *iP* Pn 04 50 42.8 -1.7
TA01 Diego Aracena 4.59 2 Pn 04 50 46.0 -1.9
TA01 Diego Aracena 4.59 2⇓ *iP* Pn 04 50 45.9 -2.0
CO01 Juntas del Tor 4.79 177 Pn 04 50 50.9 0.0
CO01 Juntas del Tor 4.79 177⇓ *iP* Pn 04 50 50.8 0.0
CO05 La Serena 4.79 189 *eP* Pn 04 50 48.8 -1.8
CO02 Combarbal 6.03 185 Pn 04 51 05.5 -2.3
ZON Zonda 6.52 167 P **Pn 04 51 11.0 -3.4**
AP01 Chacalluta 6.77 0 Pn 04 51 16.5 -1.3
ML02 Panimavida 10.59 185 Pn 04 52 05.6 -4.4
H03N1 Juan Fernandez 11.11 220 P **Pn 04 52 15.0 -2.0**
baz=110,slow=15,SNR=129
H03N1 T T 05 03 06.0
baz=48,slow=72,SNR=120
H03N2 Juan Fernandez 11.12 220 P **Pn 04 52 14.8 -2.3**
baz=110,slow=15,SNR=111
H03N2 T T 05 03 02.2
baz=48,slow=72,SNR=118
H03N3 Juan Fernandez 11.13 220 P **Pn 04 52 14.6 -2.6**
baz=110,slow=15,SNR=186
H03N3 T T 05 02 57.3
baz=48,slow=72,SNR=112
VA04 Juan Fernndez 11.21 219 Pn 04 52 14.0 -4.5
H03S3 Juan Fernandez 11.39 219 P **Pn 04 52 16.9 -3.8**
baz=27,slow=20,SNR=381
H03S3 T T 05 04 28.7
baz=48,slow=76,SNR=14
H03S1 Juan Fernandez 11.40 219 P **Pn 04 52 16.6 -4.2**
baz=27,slow=20,SNR=237
H03S1 T T 05 04 18.6
baz=48,slow=76,SNR=47
H03S2 Juan Fernandez 11.41 219 P **Pn 04 52 17.1 -3.9**
baz=27,slow=20,SNR=411
H03S2 T T 05 04 20.1
baz=48,slow=76,SNR=21
CPUP Villa Florida 11.80 98 P **Pn 04 52 25.3 -1.2**
comp=E,11nm,0.7s,baz=265,slow=10,SNR=16
CPUP LR LR 04 57 29.5
comp=E,4µm,18.1s,baz=278,slow=40
CPUP Villa Florida 11.80 98 Pn **Pn 04 52 26.0 -0.6**
CPUP Villa Florida 11.80 98 P **Pn 04 52 26.0 -0.6**
BBRB Robore, Bolivi 11.96 57 *eP* Pn 04 52 26.6 -2.2
BBSD Serra de San D 12.07 51 *eP* Pn 04 52 27.2 -3.1
MURT Porto Murtinho 12.21 76 *eP* Pn 04 52 30.7 -1.6
SIV San Ignacio 12.61 45 P **Pn 04 52 33.3 -4.4**
comp=E,38nm,0.6s,baz=233,slow=11,SNR=258
SIV S Sn 04 54 44.9 -12
comp=E,30nm,0.8s,baz=308,slow=19,SNR=1.5
SIV LR LR 04 56 57.5
comp=E,389nm,19.5s,baz=238,slow=35
ITQB Itaqui 12.99 113 Pn **Pn 04 52 42.0 -0.8**
ITQB Itaqui 12.99 113 *eP* Pn 04 52 41.5 -1.3
AZCA Azaras, Argent 13.18 106 *eP* Pn 04 52 44.6 -0.8
ANTJ Antonio Joao (13.53 79 *eP* Pn 04 52 48.9 -1.4
UNIS Unistalda (Bra 14.15 109 *eP* Pn 04 52 56.4 -2.2
PTLB Pontes e Lacer 14.29 49 *eP* Pn 04 52 59.3 -1.2
AQDB Aquidauana 14.30 74 Pn **Pn 04 52 59.6 -1.0**
AQDB Aquidauana 14.30 74 *eP* Pn 04 52 59.7 -0.8
RODS Rosario do Sul 14.37 114 *eP* Pn 04 53 00.1 -1.4
GO06 Curarrehue 14.40 183 Pn **Pn 04 52 58.2 -3.7**
NNA Nana 14.48 334 P **Pn 04 53 03.7 +0.7**
comp=E,6.3nm,0.5s,baz=95,slow=19,SNR=6.2
NNA S **Sn 04 55 36.6 -5.7**
comp=E,25nm,0.4s,baz=151,slow=9.8,SNR=6.6
NNA LR LR 04 57 55.3
comp=E,940nm,20.7s,baz=156,slow=34
CRSM Crissiumal (Br 14.81 103 *eP* Pn 04 53 06.8 -0.4
MCR1 Marechal Candi 14.84 91 *eP* Pn 04 53 05.8 -1.8
VILB Vilhena 15.48 40 *eP* Pn 04 53 12.6 -3.3
PLCA Paso Flores 15.52 181 P **Pn 04 53 14.6 -1.8**
comp=E,39nm,1.0s,baz=1.8,slow=12,SNR=55
PLCA LR LR 04 59 13.0
comp=E,936nm,20.9s,baz=353,slow=37
PLCA Paso Flores 15.52 181 Pn **Pn 04 53 13.2 -3.2**
PLCA IAmb IAmb 04 53 21.6
comp=Z,192nm,1.2s
PLCA Paso Flores 15.52 181 P **Pn 04 53 13.2 -3.2**
PLCA pmax pmax
comp=Z,192nm,1.3s
PLCA Paso Flores 15.52 181 *eP* Pn 04 53 15.3 -1.1
FRBT Francisco Belt 15.63 97 *eP* Pn 04 53 16.9 -1.0
LL04 Puerto Octay 15.79 186 IAmb IAmb 04 53 24.1
comp=Z,372nm,1.1s
CPSB Cacapava Do Su 15.85 113 *eP* Pn 04 53 18.1 -2.4
ALGR Alto Alegre (B 15.86 107 *eP* Pn 04 53 19.3 -1.5
LL03 Petrohue 16.01 186 IAmb IAmb 04 53 29.3
comp=Z,294nm,0.8s
RPRD Ribas do Rio P 16.05 76 *eP* Pn 04 53 21.5 -1.7
PLTB Pedras Altas 16.12 118 IAmb IAmb 04 53 26.3
comp=Z,172nm,1.0s
PLTB Pedras Altas 16.12 118 *eP* Pn 04 53 21.3 -2.8
TRCB Terra Rica 16.37 85 *eP* Pn 04 53 25.9 -1.3
LL05 Los Muermos 16.39 188 IAmb IAmb 04 53 39.0
comp=Z,204nm,1.2s
ITAB Concordia 16.48 101 Pn 04 53 27.3 -1.4
ITAB Concordia 16.48 101 *eP* Pn 04 53 27.1 -1.6
SALV Santo Antonio 16.53 59 *eP* Pn 04 53 26.1 -3.1
PTGB Pitanga 16.60 92 *eP* Pn 04 53 29.0 -1.2
C2SB Chapadao do Su 17.45 72 *eP* Pn 04 53 39.8 -0.8
CZSB Cruzeiro do Su 17.49 352 *eP* Pn 04 53 41.3 +0.1
CNLB Canela 17.82 108 *eP* Pn 04 53 42.7 -2.6
PCMB Pacaembu 17.88 82 *eP* Pn 04 53 44.4 -1.6
GO07 Milladeo Hill, 18.10 188 P **P 04 53 47.3 -1.0**
GO07 IAmb IAmb 04 53 51.6
comp=Z,499nm,1.4s
FRTB Fartura 19.05 89 *eP* P 04 53 58.1 -0.7
TER01 Tubaro-SC 19.23 105 *eP* P 04 53 59.5 -1.2
ITRB Iturama 19.26 78 *eP* P 04 54 00.6 -0.6
TIJ01 Guaruva-PR 19.31 95 *eP* P 04 54 01.7 -0.1
ATAH Atahualpa 19.52 335 P **P 04 54 04.1 -0.3**
comp=Z,3.6nm,0.7s,baz=216,slow=5.6,SNR=2.8
ARAG Araguaiana, MT 19.74 65 *eP* P 04 54 04.7 -1.8
CLDB Colider 19.82 47 *eP* P 04 54 05.4 -1.9
COYC Coyhaique 20.40 183 P **P 04 54 12.4 -0.9**
COYC IAmb IAmb 04 54 17.7
comp=Z,147nm,0.9s
BB19B Bebedouro 20.48 83 *eP* P 04 54 13.1 -1.4
TBTG Tabatinga, AM 20.87 1 *eP* Pn 04 54 22.5 +0.9
TBTG Tabatinga, AM 20.87 1 *eP* P 04 54 18.8 +0.1
PET01 Itanhaem-SP 20.98 92 *eP* P 04 54 19.3 -0.6
RCLB Rio Claro- Sao 21.06 87 *eP* P 04 54 19.4 -1.4
VAO Valinhos 21.46 89 *eP* P 04 54 23.2 -1.9
IPMB Ipameri, GO 21.78 75 *eP* P 04 54 26.3 -2.2
SNDB Serra Nova Dou 22.30 57 *eP* P 04 54 31.8 -2.2
PARB Paraibuna 22.62 91 *eP* P 04 54 36.0 -1.5
BDFB Brasilia 22.96 70 P **P 04 54 38.5 -2.5**
comp=Z,49nm,0.8s,baz=241,slow=8.0,SNR=57
BDFB LR LR 05 04 48.4
comp=Z,766nm,21.1s,baz=249,slow=40
comp=Z,49nm,0.8s
BDFB Brasilia 22.96 70 P **P 04 54 38.9 -2.2**
BDFB IAmb IAmb 04 54 55.5
comp=Z,84nm,0.7s
BDFB Brasilia 22.96 70 P **P 04 54 38.9 -2.2**
BDFB pmax pmax
comp=Z,85nm,0.7s
BDFB Brasilia 22.96 70 *eP* P 04 54 38.6 -2.5
NPGB Novo Progresso 23.03 41 *eP* P 04 54 39.5 -2.3
PMNB Patos De Minas 23.14 78 *eP* P 04 54 40.2 -2.7
BOSC San Juan Bosco 23.26 339 P **P 04 54 43.1 -1.0**
BOSC IAmb IAmb 04 55 02.5
comp=Z,63nm,0.9s
MACA Manacapuru-AM 23.79 25 *eP* P 04 54 47.9 -0.9
BSCB Bom Sucesso 23.88 85 *eP* P 04 54 48.7 -1.1
COHC Cochancay 24.15 338 *eP* P 04 54 54.0 +1.8

MAN01 Angra dos Reis 24.20 90 *eP* P 04 54 51.7 -1.0
VAS01 Vassouras-RJ 24.79 89 *eP* P 04 54 57.4 -0.6
ITTB Itaituba 25.01 37 *eP* P 04 54 59.3 -0.7
SGCB São Gabriel d 25.11 8 *eP* P 04 55 00.0 -0.9
PIAT Ana Tenorio 25.22 341 *eP* P 04 55 18.0 +16
JANB Januaria 26.40 73 *eP* P 04 55 11.4 -1.3
CAM01 Campos-RJ 26.50 89 *eP* P 04 55 13.3 -0.2
TULM Tulcn-Chalpat 26.73 343 P **P 04 55 15.8 -0.3**
SMTB Santa Maria do 27.07 57 *eP* P 04 55 18.4 -0.3
FLOC Florencia 27.09 348 *eP* P 04 55 20.9 +2.1
GCUF Volcan Galeras 27.10 345 *eP* P 04 55 30.8 +11
SDBA SAO DESIDERIO 27.17 67 *eP* P 04 55 18.6 -1.1
PRPB Parauapebas 27.27 50 *eP* P 04 55 19.5 -1.0
ALF01 Guarapari-ES 27.64 87 *eP* P 04 55 22.9 -0.8
SJMB Sao Joao De Ma 27.78 82 *eP* P 04 55 24.2 -0.7
BBAC Balboa, Cauca 27.85 345 *eP* P 04 55 28.0 +2.2
MALB Monte Alegre 27.90 36 *eP* P 04 55 25.4 -0.7
EFI East Falkland 28.08 164 *ceP* P 04 55 27.4 +0.1
EFI pmax pmax
comp=Z,55nm,1.7s
RIB01 Linhares ES 28.30 84 *eP* P 04 55 28.9 -0.8
NAN01 Guarapari, ES 29.01 81 *eP* P 04 55 34.3 -1.6
BOAV Boa Vista 29.02 21 *eP* P 04 55 35.5 -0.5
PRAC Prado 29.05 351 *eP* P 04 55 41.6 +5.3
PTGC Puerto Gaitan, 29.25 356 *eP* P 04 55 37.9 -0.2
ORTC Ortega, Tolima 29.30 350 *eP* P 04 55 41.0 +2.5
YOTC Yotoco, Valle 29.56 348 *eP* P 04 55 42.5 +1.6
USHA Ushuaia 29.66 178 P **P 04 55 40.7 -0.5**
comp=Z,30nm,0.9s,baz=83,slow=2.6,SNR=3.5
comp=Z,30nm,0.9s
GUA01 Guaratinga, BA 29.74 79 *eP* P 04 55 41.5 -0.9
CHIC Chingaza 29.81 353 *eP* P 04 55 44.4 +1.0
ROSC El Rosal 30.08 352 P **P 04 55 45.5 -0.4**
comp=Z,3.1nm,0.4s,baz=101,slow=21,SNR=2.0
ROSC LR LR 05 09 06.3
comp=Z,639nm,18.9s,baz=197,slow=39
comp=Z,3.1nm,0.4s
ROSC El Rosal 30.08 352 *eP* P 04 55 47.8 +1.9
MCPB Macapa, AP 30.35 38 *eP* P 04 55 47.2 -0.6
PLMC San Jos del P 30.45 348 *eP* P 04 55 50.5 +1.7
CMC01 Camacan, BA 30.46 77 *eP* P 04 55 47.7 -1.1
GUY2C Guyana, Caldas 30.61 350 *eP* P 04 55 54.0 +3.5
SPBC San Pablo de B 30.85 353 *eP* P 04 55 55.5 +3.2
NORC Norcasia 30.87 351 *eP* P 04 55 54.1 +1.7
RUSC La Rusia 30.99 355 *eP* P 04 55 54.6 +0.6
GDU01 Guandu, BA 31.10 74 *eP* P 04 55 52.8 -1.7
TMAB Tom-Au,PA,Br 31.21 47 *eP* P 04 55 55.6 +0.2
CBOC Ciudad Bolivar 31.34 349 *eP* P 04 56 07.9 +11
HELC Santa Helena 31.58 350 *eP* P 04 55 59.1 +0.1
PTBC PUERTO BERRIO, 31.77 352 *eP* P 04 55 59.0 -1.3
BRRC Barranca, Sant 32.25 354 *eP* P 04 56 01.5 -3.0
PAMC Pamplona, Colo 32.40 356 *eP* P 04 56 20.7 +14
UREC San Jos de Ur 33.11 351 *eP* P 04 56 12.0 -0.1
SDV Santo Domingo 33.85 360 LR LR 05 10 51.5
comp=Z,446nm,18.2s,baz=178,slow=38
SDV Santo Domingo 33.85 360 P **P 04 56 16.9 -1.8**
BAUV El Baul 33.99 4 P **P 04 56 17.9 -1.8**
MDP Montagnes des 34.67 32 LR LR 05 11 14.6
comp=Z,629nm,18.8s,baz=204,slow=37
MPGF Montagnes des 34.68 32 P **P 04 56 25.4 -0.3**
MPGF pP **pP 04 56 40.0 -0.2**
MPGF sP **sP 04 56 46.5 -0.3**
RPN Rapa Nui 34.95 258 P **P 04 56 29.9 +2.0**
comp=Z,86nm,0.8s,baz=94,slow=4.9,SNR=4.1
comp=Z,86nm,0.8s
SJCC San Jacinto, C 35.17 352 *eP* P 04 56 26.8 -3.1
BCIP Isla Barro Col 35.36 344 *eP* P 04 56 33.4 +1.9
PCRV Puerto La Cruz 35.58 10 LR LR 05 12 09.8
comp=Z,717nm,21.2s,slow=38
JTS Las Juntas de 38.02 336 *iP* P 04 56 53.8 -0.3
JTS pmax pmax
comp=Z,11nm,1.6s
RCBR Riachuelo 38.18 66 P **P 04 56 54.9 -0.8**
comp=Z,58nm,0.7s,baz=355,slow=12,SNR=37
RCBR LR LR 05 13 48.7
comp=Z,404nm,18.7s,baz=16,slow=38
comp=Z,58nm,0.7s
RCBR Riachuelo 38.18 66 P **P 04 56 54.6 -1.0**
RCBR Riachuelo 38.18 66 P **P 04 56 54.7 -1.0**
RCBR pmax pmax
comp=Z,60nm,0.8s
RCBR Riachuelo 38.18 66 *eP* P 04 56 55.6 0.0
RCBR Riachuelo 38.18 66 P **P 04 56 55.2 -0.5**
RCBR pP **pP 04 57 10.6 +0.3**
RCBR sP **sP 04 57 17.3 +0.4**
COVE Coope Vega, Sa 38.22 337 P **P 04 56 55.7 0.0**
HOPE Hope Point 38.39 148 P **P 04 56 55.9 -0.9**
HOPE Hope Point 38.39 148 P **P 04 56 55.9 -0.9**
HOPE pmax pmax
comp=Z,189nm,0.8s
HOPE Hope Point 38.39 148 P **P 04 56 56.5 -0.3**
HOPE pP **pP 04 57 09.3 -1.8**
HOPE sP **sP 04 57 15.7 -2.0**
ESPN Las Esperanzas 39.55 338 P **P 04 57 06.1 -0.8**
ESPN IAmb IAmb 04 57 14.5
comp=Z,49nm,0.7s
PMSA Palmer Station 39.81 176 P **P 04 57 09.1 +0.5**
comp=Z,28nm,0.8s,baz=344,slow=5.1,SNR=6.6
PMSA LR LR 05 13 42.1
comp=Z,375nm,18.9s,baz=318,slow=36
comp=Z,28nm,0.8s
FDF Fort de France 40.67 14 P **P 04 57 15.7 -0.5**
FDF IAmb IAmb 04 57 28.4
comp=Z,31nm,0.6s
FDF Fort de France 40.67 14 P **P 04 57 15.7 -0.5**
FDF pmax pmax
comp=Z,31nm,0.6s
SNET Serv Nac Est T 42.79 332 P **P 04 57 32.4 -1.3**
MLPR Magueyes Islan 43.00 5 P **P 04 57 34.0 -1.2**
MLPR IAmb IAmb 04 57 50.5
comp=Z,43nm,0.8s
CRPR Cabo Rojo, PR 43.04 5 IAmb IAmb 04 57 53.9
comp=Z,45nm,0.8s
CELP Cerrillos 43.15 5 IAmb IAmb 04 57 52.3
comp=Z,39nm,0.8s
SJG San Juan 43.22 6 LR LR 05 17 57.4
comp=Z,220nm,20.9s,baz=190,slow=39
SJG San Juan 43.22 6 P **P 04 57 34.9 -2.1**
SJG IAmb IAmb 04 57 51.2
comp=Z,30nm,0.8s
SJG San Juan 43.22 6 P **P 04 57 34.9 -2.1**
SJG pmax pmax
comp=Z,30nm,0.8s
SJG San Juan 43.22 6 P **P 04 57 34.8 -2.1**
SJG pP **pP 04 57 49.6 -2.2**
SJG sP **sP 04 57 56.6 -1.8**
CBYP Canovanas 43.41 6 IAmb IAmb 04 57 53.2
comp=Z,34nm,0.9s
GCPR Guaynabo City 43.42 6 P **P 04 57 36.2 -2.4**
ESQI Esquipulas 43.62 333 P **P 04 57 39.3 -1.0**
ESQI IAmb IAmb 04 57 58.1
comp=Z,37nm,1.0s
PETF Flores 45.95 334 IAmb IAmb 04 58 16.0
comp=Z,30nm,1.0s
TEIG Tepich 48.38 337 P **P 04 58 17.0 -0.5**
TEIG pP **pP 04 58 31.9 -0.4**
TEIG sP **sP 04 58 39.5 +0.9**
TLIG Tlapa 50.59 324 P **P 04 58 35.5 +0.8**
TLIG IAmb IAmb 04 58 37.6
comp=Z,21nm,0.9s
DWPF Disney Wildern 54.04 348 P **P 04 59 01.8 +1.9**
baz=168
BELA Belgrano 2 55.32 171 P **P 04 59 08.7 +0.1**
ZAIG Zacatecas 56.99 324 P **P 04 59 22.2 +0.7**
ZAIG IAmb IAmb 04 59 24.8
comp=Z,25nm,1.0s
VNA3 Neumayer Olymp 57.06 160 P **P 04 59 20.6 -0.5**
VNA1 Neumayer--Stat 57.30 160 P **P 04 59 22.6 -0.2**
VNA2 Neumayer--Watz 57.66 160 P **P 04 59 24.8 -0.6**
baz=280,slow=8.0
BRAL Brewton 58.26 343 P **P 04 59 31.1 +1.2**
baz=162
BRAL Brewton 58.26 343 P **P 04 59 31.4 +1.5**
baz=162
RKT Rikitea 58.48 257 *eT* T 06 02 32.4
comp=Z,2.3nm,0.2s
NHSC New Hope 58.71 350 P **P 04 59 33.4 +0.4**
baz=170
154A Montrose 58.74 347 P **P 04 59 34.4 +1.1**
baz=167
250A Grady 58.83 344 P **P 04 59 34.5 +0.6**
152A Waverly Hall 59.13 346 IAmb IAmb 04 59 53.8
comp=Z,28nm,0.9s
SNAA Sanae 59.27 160 P **P 04 59 36.0 -0.7**

SNAA Sanae 59.27 160 LR LR 05 22 42.2
comp=Z,82nm,21.7s,baz=235,slow=33
SNAA Sanae 59.27 160 P **P 04 59 36.0 -0.7**
SNAA Sanae 59.27 160⇓ *iP* P 04 59 35.9 -0.7
SNAA IAmb IAmb 04 59 37.1
comp=Z,5µm,1.1s
SNAA Sanae 59.27 160 P **P 04 59 36.0 -0.7**
SNAA pmax pmax
comp=Z,68nm,1.0s
GOGA Godfrey 59.58 347 P **P 04 59 38.9 -0.2**
baz=166
X58A Rowland 60.01 351 IAmb IAmb 05 00 01.0
comp=Z,27nm,0.9s
HKT Hockley 60.01 334 P **P 04 59 42.4 +0.3**
HKT IAmb IAmb 05 00 01.2
comp=Z,26nm,1.3s
HKT Hockley 60.01 334 P **P 04 59 42.4 +0.3**
HKT pmax pmax
comp=Z,26nm,1.3s
HKT Hockley 60.01 334 P **P 04 59 42.4 +0.3**
HKT pP **pP 04 59 56.8 -0.4**
LRAL Lakeview Retre 60.02 344 P **P 04 59 43.5 +1.4**
baz=163
342B Flagon Creek P 60.03 338 P **P 04 59 43.5 +1.3**
baz=157
JSC Jenkinsville 60.03 350 P **P 04 59 43.6 +1.4**
baz=169
833A Chaparral WMA, 60.08 330 IAmb IAmb 04 59 59.5
comp=Z,22nm,0.8s
833A Chaparral WMA, 60.08 330 P **P 04 59 43.7 +1.0**
baz=150,SNR=8.4
833A Chaparral WMA, 60.08 330 P **P 04 59 43.4 +0.8**
baz=150
Y52A Lilburn 60.14 347 IAmb IAmb 05 00 00.8
comp=Z,19nm,0.9s
Y52A Lilburn 60.14 347 P **P 04 59 43.7 +0.7**
baz=166
Y52A P **P 04 59 43.7 +0.7**
baz=166
146A Union 60.19 342 P **P 04 59 43.8 +0.5**
baz=161
CNNC Cliffs of the 60.51 353 P **P 04 59 45.5 +0.2**
KMSC Kings Mountain 60.88 350 P **P 04 59 48.6 +0.6**
KMSC IAmb IAmb 05 00 05.2
comp=Z,18nm,1.0s
KMSC Kings Mountain 60.88 350 P **P 04 59 49.4 +1.4**
baz=169
KMSC Kings Mountain 60.88 350 P **P 04 59 48.6 +0.6**
baz=169
143A Socs Landing, 60.95 340 P **P 04 59 50.0 +1.5**
baz=158
TROLL Troll, Antarti 60.99 160 P **P 04 59 48.0 -0.5**
V58A Windy Hill, Pi 61.20 352 P **P 04 59 51.3 +1.2**
baz=171
V58A P **P 04 59 51.3 +1.2**
baz=171
W52A Murphy 61.30 347 P **P 04 59 52.3 +1.4**
baz=166
435B Jarrell 61.45 333 IAmb IAmb 05 00 09.0
comp=Z,9.9nm,0.8s
435B Jarrell 61.45 333 P **P 04 59 53.0 +1.1**
baz=152
CPCT Cooper Cave 61.77 347 IAmb IAmb 05 00 10.9
comp=Z,19nm,0.9s
TKL Tuckaleechee C 61.82 348 LR LR 05 28 17.5
comp=Z,80nm,20.8s,baz=164,slow=38
SWET Sewanee 61.85 346 IAmb IAmb 05 00 12.6
comp=Z,31nm,0.8s
SLBS Sierra La Lagu 61.89 319 P **P 04 59 54.6 -0.6**
SLBS IAmb IAmb 04 59 58.2
comp=Z,35nm,1.2s
SLBS Sierra La Lagu 61.89 319 P **P 04 59 56.7 +1.6**
SLBS pP **pP 05 00 12.0 +2.1**
SLBS sP **sP 05 00 19.5 +3.5**
U56A King 61.92 351 P **P 04 59 56.9 +2.0**
baz=170
U56A P **P 04 59 56.9 +2.0**
baz=170
V52A Sevierville 61.96 348 P **P 04 59 56.4 +1.1**
baz=166
HPIG 62.00 324 IAmb IAmb 04 59 58.5
comp=Z,20nm,1.0s
OXF Oxford 62.05 342 P **P 04 59 57.4 +1.5**
baz=161
OXF Oxford 62.05 342 P **P 04 59 56.4 +0.5**
baz=161
JCT Junction City 62.12 331 IAmb IAmb 05 00 13.4
comp=Z,26nm,0.7s
JCT Junction City 62.12 331 P **P 04 59 57.1 +0.7**
baz=150,SNR=11
JCT Junction City 62.12 331 P **P 04 59 56.8 +0.4**
baz=150
PLAL Pickwick Lake 62.14 344 IAmb IAmb 05 00 13.5
comp=Z,43nm,1.2s
T59A Double "B" Far 62.19 353 IAmb IAmb 05 00 14.3
comp=Z,37nm,1.1s
U54A Nelsons Funny 62.31 350 P **P 04 59 58.5 +0.8**
U54A IAmb IAmb 05 00 14.7
comp=Z,30nm,0.8s
LPIG La Paz 62.42 319 LR LR 05 21 40.5
comp=Z,39nm,21.6s,baz=158,slow=31
WHTX Lake Whitney, 62.46 334 IAmb IAmb 05 00 17.4
comp=Z,29nm,0.9s
WHTX Lake Whitney, 62.46 334 P **P 04 59 59.3 +0.6**
baz=152
WHTX Lake Whitney, 62.46 334 P **P 04 59 59.6 +0.9**
baz=152
TZTN Tazewell 62.64 348 P **P 05 00 00.7 +1.0**
baz=167
BLA Blacksburg 62.77 351 P **P 05 00 01.5 +0.8**
baz=170
TX31 Lajitas Ar. Si 62.94 327 IAmb IAmb 05 00 03.6
comp=Z,21nm,1.0s
TX31 Lajitas Ar. Si 62.94 327 P **P 05 00 03.1 +1.1**
baz=146
TX32 Lajitas Array 62.94 327 IAmb IAmb 05 00 22.9
comp=Z,32nm,1.8s
TXAR Lajitas Array 62.94 327 P **P 05 00 02.9 +0.8**
comp=Z,5.0nm,0.9s,baz=147,slow=8.6,SNR=34
TXAR pP **pP 05 00 17.8 +0.4**
comp=Z,4.0nm,0.8s,baz=143,slow=6.6,SNR=12
TXAR sP **sP 05 00 25.9 +2.2**
comp=Z,2.5nm,0.6s,baz=164,slow=8.1,SNR=5.6
TXAR LR LR 05 24 32.7
comp=Z,75nm,19.6s,baz=136,slow=33
comp=Z,5.0nm,0.9s
U49A Red Boiling Sp 63.06 346 IAmb IAmb 05 00 20.5
comp=Z,12nm,0.8s
S57A Dark Hollow, R 63.12 352 IAmb IAmb 05 00 20.6
comp=Z,32nm,1.1s
WVT Waverly 63.17 344 P **P 05 00 02.3 -1.0**
WVT IAmb IAmb 05 00 18.4
comp=Z,23nm,0.7s
WVT Waverly 63.17 344 P **P 05 00 02.3 -1.0**
WVT pmax pmax
comp=Z,23nm,0.7s
WVT Waverly 63.17 344 P **P 05 00 02.5 -0.8**
baz=162
WVT Waverly 63.17 344 P **P 05 00 02.0 -1.2**
WVT pP **pP 05 00 17.3 -1.1**
R58B Mineral 63.20 353 P **P 05 00 04.4 +0.9**
baz=172,SNR=6.9
R58B P **P 05 00 04.4 +0.9**
baz=172,SNR=6.9
MIAR Mount Ida 63.35 339 P **P 05 00 05.0 +0.5**
baz=157,SNR=7.4
MIAR Mount Ida 63.35 339 P **P 05 00 05.0 +0.5**
baz=157,SNR=7.4
T50A Nancy 63.35 347 IAmb IAmb 05 00 21.9
comp=Z,17nm,0.9s
T50A Nancy 63.35 347 P **P 05 00 05.1 +0.6**
baz=165
T50A P **P 05 00 05.1 +0.6**
baz=165
WHAR Wooly Hollow 63.62 340 IAmb IAmb 05 00 22.9
comp=Z,28nm,0.9s
T47A Sharon Grove 63.81 345 P **P 05 00 08.4 +0.9**
baz=163,SNR=7.4
NVL N'lazarevskaya 63.90 159 *eP* P 05 00 05.9 -1.8
NVL *eS* **S 05 08 45.7 +6.7**
NVL pmax pmax
comp=Z,100nm,1.1s
ABTX Abilene, Hawle 63.90 333 IAmb IAmb 05 00 27.8
comp=Z,48nm,1.1s
ABTX Abilene, Hawle 63.90 333 P **P 05 00 08.7 +0.5**
baz=151
ABTX Abilene, Hawle 63.90 333 P **P 05 00 08.5 +0.2**

baz=151
HICK Hickman 63.91 343 P P 05 00 08.8 +0.6
X37A Clayton 64.00 337 IAmb IAmb 05 00 26.8
comp=Z,38nm,1.1s
X37A Clayton 64.00 337 P P 05 00 09.4 +0.6
baz=155
LCAR Lake Charles 64.00 341 IAmb IAmb 05 00 26.4
comp=Z,67nm,1.5s
LCAR Lake Charles 64.00 341 P P 05 00 08.5 -0.3
baz=159
FCAR Ozark Folk Cen 64.13 340 IAmb IAmb 05 00 26.6
comp=Z,47nm,1.4s
P57A Homestead Farm 64.72 353 IAmb IAmb 05 00 32.2
comp=Z,54nm,1.1s
WCI Wyandotte Cave 64.82 346 P P 05 00 13.4 -0.7
WCI IAmb IAmb 05 00 31.4
comp=Z,32nm,0.8s
WCI Wyandotte Cave 64.82 346 P P 05 00 13.4 -0.7
WCI pmax pmax
comp=Z,32nm,0.8s
WCI Wyandotte Cave 64.82 346 P P 05 00 14.1 0.0
baz=164
WCI Wyandotte Cave 64.82 346 P P 05 00 14.7 +0.6
baz=164
WCI Wyandotte Cave 64.82 346 P P 05 00 12.9 -1.1
WCI pP pP 05 00 28.4 -1.3
GEDE Greenville 64.84 356 P P 05 00 14.6 +0.4
baz=175
QSPA South Pole Qui 65.03 180 LR LR 05 28 03.8
comp=Z,138nm,20.7s,baz=164,slow=35
QSPA South Pole Qui 65.03 180 P P 05 00 15.5 +0.1
QSPA South Pole Qui 65.03 180 ⇓P P 05 00 15.8 +0.4
QSPA pP pP 05 00 31.9 +1.3
HHAR Hobbs 65.06 339 IAmb IAmb 05 00 34.8
comp=Z,33nm,1.2s
HHAR Hobbs 65.06 339 P P 05 00 15.7 0.0
baz=157
MCWV Mont Chateau 65.10 352 P P 05 00 16.3 +0.4
baz=171
TUL1 Leonard 65.34 337 IAmb IAmb 05 00 35.0
comp=Z,38nm,1.0s
TUL1 Leonard 65.34 337 P P 05 00 17.6 +0.1
baz=155,SNR=6.2
TUL1 Leonard 65.34 337 P P 05 00 17.6 +0.1
baz=155,SNR=6.2
MGMO Mountain Grove 65.34 341 IAmb IAmb 05 00 35.6
comp=Z,36nm,1.1s
U38A Gravette 65.34 339 P P 05 00 17.7 +0.1
baz=156
WMOK Wichita Mounta 65.40 334 P P 05 00 17.6 -0.4
baz=152
WMOK Wichita Mounta 65.40 334 P P 05 00 17.9 0.0
baz=152
P52A Corning 65.40 350 IAmb IAmb 05 00 34.5
comp=Z,19nm,0.9s
P52A Corning 65.40 350 P P 05 00 18.2 +0.4
baz=168
P51A Williamsport 65.41 349 P P 05 00 18.7 +0.9
baz=167
P51A P P 05 00 18.7 +0.9
baz=167
BBTS Babate 65.72 59 LR LR 05 27 38.2
comp=Z,238nm,21.6s,baz=237,slow=35
OK031 S. Brethren Rd 65.75 337 IAmb IAmb 05 00 37.5
comp=Z,23nm,0.8s
OK034 N. Norfolk Rd. 65.75 337 IAmb IAmb 05 00 37.5
comp=Z,32nm,1.0s
P49A Miami Univ. Ec 65.76 348 P P 05 00 20.8 +0.7
baz=166
O52A Adamsville 65.83 350 IAmb IAmb 05 00 39.8
comp=Z,13nm,0.7s
OK029 Liberty Lake 65.83 336 IAmb IAmb 05 00 37.4
comp=Z,37nm,1.1s
SSPA Standing Stone 65.85 354 P P 05 00 21.1 +0.5
SSPA IAmb IAmb 05 00 38.0
comp=Z,31nm,1.1s
SSPA Standing Stone 65.85 354 P P 05 00 21.8 +1.1
baz=173
SSPA Standing Stone 65.85 354 P P 05 00 21.9 +1.1
SSPA pP pP 05 00 37.3 +1.1
SSPA sP sP 05 00 44.2 +1.7
O53A New Philadelph 65.87 351 P P 05 00 21.9 +1.1
baz=169
CCM Cathedral Cave 65.88 342 P P 05 00 21.0 0.0
CCM IAmb IAmb 05 00 38.9
comp=Z,45nm,1.1s
CCM Cathedral Cave 65.88 342 P P 05 00 21.0 0.0
CCM pmax pmax
comp=Z,45nm,1.1s
CCM Cathedral Cave 65.88 342 P P 05 00 20.9 0.0
baz=159,SNR=9.1
CCM Cathedral Cave 65.88 342 P P 05 00 21.9 +0.9
baz=159
CCM Cathedral Cave 65.88 342 P P 05 00 20.7 -0.3
CCM pP pP 05 00 36.1 0.0
CCM sP sP 05 00 42.8 +0.5
PAL Palisades 65.92 357 P P 05 00 22.2 +1.1
baz=177
UPAO U. Pittsburgh 65.94 352 P P 05 00 23.0 +1.8
baz=170
SRIG Santa Rosalia 65.98 319 P P 05 00 23.2 +1.4
SRIG IAmb IAmb 05 00 25.8
comp=Z,37nm,1.6s
Q44A Meyer Farm, Va 66.09 344 IAmb IAmb 05 00 40.2
comp=Z,24nm,0.9s
OK044 Pawnee Station 66.11 337 IAmb IAmb 05 00 41.7
comp=Z,52nm,1.1s
ACSO Alum Creek Sta 66.12 349 IAmb IAmb 05 00 39.1
comp=Z,38nm,1.1s
ACSO Alum Creek Sta 66.12 349 P P 05 00 23.6 +1.1
baz=168
S39A Bolivar 66.15 340 P P 05 00 22.9 +0.2
baz=157,SNR=7.6
R40A Maddies Statio 66.39 341 P P 05 00 24.5 +0.3
baz=158,SNR=16
MSTX Muleshoe 66.40 331 P P 05 00 25.0 +0.5
baz=148,SNR=12
MSTX Muleshoe 66.40 331 P P 05 00 24.8 +0.3
baz=148
M65A Busby, Falmout 66.40 360 P P 05 00 24.7 +0.5
baz=180
HSIG 66.52 322 P P 05 00 25.4 +0.2
HSIG IAmb IAmb 05 00 27.4
comp=Z,14nm,0.9s
O48B Farmland 66.54 348 P P 05 00 26.7 +1.6
baz=166
AMTX Amarillo 66.70 332 P P 05 00 26.9 +0.4
baz=149
M55A Ridgway 66.76 353 IAmb IAmb 05 00 44.1
comp=Z,47nm,0.9s
P43A Skaggs, Pawnee 66.92 344 IAmb IAmb 05 00 44.2
comp=Z,36nm,0.9s
P43A Skaggs, Pawnee 66.92 344 P P 05 00 28.2 +0.7
baz=161
M53A Wt Miller and 66.96 352 P P 05 00 29.6 +1.8
baz=170
N49A Columbus Grove 67.00 349 IAmb IAmb 05 00 44.8
comp=Z,33nm,0.9s
N49A Columbus Grove 67.00 349 P P 05 00 29.0 +1.0
baz=166
N49A P P 05 00 29.0 +1.0
baz=166
SFIN Lafayette 67.05 346 P P 05 00 30.7 +2.3
baz=164
L59A Walton 67.17 356 P P 05 00 30.1 +0.9
baz=176,SNR=5.9
L59A P P 05 00 30.1 +0.9
baz=176,SNR=5.9
BINY Binghamton 67.24 355 P P 05 00 30.4 +0.8
baz=175,SNR=5.3
BINY Binghamton 67.24 355 P P 05 00 31.2 +1.7
baz=175
N47A Urbana 67.25 347 P P 05 00 30.1 +0.5
N47A IAmb IAmb 05 00 46.0
comp=Z,48nm,1.4s
L56A Greenwood 67.30 354 IAmb IAmb 05 00 47.8
comp=Z,48nm,1.1s
L61B Northampton 67.32 358 P P 05 00 31.6 +1.6
baz=178
HRV Adam Dziewonsk 67.35 359 P P 05 00 32.1 +1.9
baz=179
319A Douglas 67.43 324 IAmb IAmb 05 00 34.0
comp=Z,25nm,0.8s
P40A Paris 67.48 342 P P 05 00 31.2 0.0
baz=159,SNR=7.0
ERPA Erie 67.54 352 P P 05 00 32.8 +1.3
baz=171

121A Cookes Peak, D 67.58 326 P P 05 00 33.8 +1.6
baz=144,SNR=11
121A Cookes Peak, D 67.58 326 P P 05 00 33.2 +1.1
baz=144
HCNY Howe Caverns 67.64 357 P P 05 00 32.8 +0.8
baz=176,SNR=5.9
WVNY West Valley, N 67.67 353 P P 05 00 32.8 +0.5
WVNY pP pP 05 00 48.1 +0.3
WVNY West Valley, N 67.67 353 P P 05 00 33.5 +1.2
baz=172,SNR=5.4
HDIL Hopedale 67.73 344 P P 05 00 33.7 +1.0
baz=162
TAOE Nuku Hiva Isla 68.04 270 eS S 05 09 29.8 -1.4
comp=Z,95nm,26.2s
TAOE Nuku Hiva Isla 68.04 270 eLR LR 05 21 10.0
comp=Z,628nm,26.9s
N41A Harden Midland 68.26 343 IAmb IAmb 05 00 54.3
comp=Z,73nm,1.4s
ACCN Adirondack Com 68.29 357 P P 05 00 37.4 +1.3
baz=177,SNR=5.6
Y22A Socorro 68.31 328 P P 05 00 38.5 +1.9
baz=145,SNR=8.8
J59A Piesco 68.41 357 IAmb IAmb 05 00 55.0
comp=Z,60nm,1.1s
J55A Hilton 68.45 354 P P 05 00 38.8 +1.7
baz=173
J55A P P 05 00 38.8 +1.7
baz=173
HNH Hanover 68.56 358 P P 05 00 39.6 +1.8
baz=178
R32A Long Quarter, 68.62 336 P P 05 00 39.1 +0.7
baz=153,SNR=6.6
ANMO Albuquerque 68.89 329 LR LR 05 27 22.9
comp=Z,148nm,21.4s,baz=144,slow=33
ANMO Albuquerque 68.89 329 P P 05 00 40.8 +0.5
ANMO IAmb IAmb 05 00 59.8
comp=Z,41nm,1.6s
ANMO Albuquerque 68.89 329 P P 05 00 40.8 +0.5
ANMO pmax pmax
comp=Z,41nm,1.6s
ANMO Albuquerque 68.89 329 P P 05 00 41.6 +1.3
baz=145,SNR=14
ANMO Albuquerque 68.89 329 P P 05 00 41.8 +1.5
baz=145
ANMO Albuquerque 68.89 329 P P 05 00 41.6 +1.3
ANMO pP pP 05 00 56.6 +0.8
ANMO sP PcP 05 01 03.8 -0.6
NCB Newcomb 68.90 357 P P 05 00 41.1 +1.1
baz=176,SNR=5.7
L44A Lake County Fo 68.95 346 P P 05 00 41.6 +1.4
baz=163
TUC Tucson 68.96 324 P P 05 00 40.3 -0.4
TUC Tucson 68.96 324 P P 05 00 40.3 -0.4
TUC pmax pmax
comp=Z,16nm,1.2s
TUC Tucson 68.96 324 P P 05 00 42.8 +2.2
baz=141
TUC Tucson 68.96 324 P P 05 00 42.0 +1.4
TUC pP pP 05 00 57.3 +1.2
TUC sP PcP 05 01 04.2 -0.4
LBNH Lisbon 69.09 359 P P 05 00 43.0 +1.9
baz=179
CBKS Cedar Bluff 69.34 336 P P 05 00 44.5 +1.7
baz=152
LONY Lake Ozonia 69.56 357 P P 05 00 45.5 +1.5
baz=176
L40A Anamosa 69.63 344 IAmb IAmb 05 01 03.1
comp=Z,77nm,1.2s
L40A Anamosa 69.63 344 P P 05 00 44.5 +0.1
baz=160,SNR=6.2
BMNY Brushton-Moira 69.78 357 P P 05 00 46.5 +1.2
baz=176,SNR=7.8
T25A Trinidad 69.78 332 IAmb IAmb 05 01 05.1
comp=Z,27nm,1.1s
T25A Trinidad 69.78 332 P P 05 00 47.3 +1.5
baz=147,SNR=5.7
214A Organ Pipe Nat 69.79 322 IAmb IAmb 05 01 04.3
comp=Z,62nm,1.5s
214A Organ Pipe Nat 69.79 322 P P 05 00 47.1 +1.3
baz=140,SNR=13
SADO Sadowa 70.07 353 LR LR 05 32 14.7
comp=Z,176nm,21.8s,baz=179,slow=36
PKME Peaks-Kenny Pk 70.11 1 P P 05 00 49.0 +1.7
baz=181
JFWS Jewell Farm 70.19 345 P P 05 00 49.8 +2.0
baz=161
W18A Petrified Fore 70.62 327 IAmb IAmb 05 01 11.1
comp=Z,36nm,1.1s
W18A Petrified Fore 70.62 327 P P 05 00 52.1 +1.2
baz=143,SNR=9.8
KSCO Kaye Shedlock' 70.63 334 IAmb IAmb 05 01 09.8
comp=Z,75nm,1.3s
KSCO Kaye Shedlock' 70.63 334 P P 05 00 52.0 +1.1
baz=149
KSCO Kaye Shedlock' 70.63 334 P P 05 00 52.7 +1.8
baz=149
LIC Lamto 70.70 73 ⇓iP P 05 00 51.1 -0.6
comp=Z,328nm,0.8s
SDCO Great Sand Dun 70.76 331 P P 05 00 52.4 +0.5
SDCO IAmb IAmb 05 01 11.2
comp=Z,37nm,1.2s
SDCO Great Sand Dun 70.76 331 P P 05 00 53.4 +1.5
baz=147,SNR=13
SDCO Great Sand Dun 70.76 331 P P 05 00 53.4 +1.5
baz=147,SNR=13
GLMI Grayling 70.87 349 P P 05 00 53.6 +1.6
baz=166
TIC Toumodi 70.91 73 ⇓iP P 05 00 52.5 -0.5
comp=Z,257nm,0.9s
KIC Kosan Boka 71.02 73 ⇓iP P 05 00 53.2 -0.4
comp=Z,41nm,0.5s
DBIC Dimbokro 71.07 73 P P 05 00 52.4 -1.5
comp=Z,57nm,0.7s,baz=217,slow=5.6,SNR=87
DBIC pP pP 05 01 09.8 +0.2
comp=Z,58nm,0.8s,baz=219,slow=5.0,SNR=13
DBIC sP sP 05 01 16.6 +0.6
comp=Z,185nm,0.8s,baz=210,slow=6.0,SNR=28
DBIC LR LR 05 29 38.9
comp=Z,354nm,21.6s,baz=208,slow=34
comp=Z,57nm,0.7s
DBIC Dimbokro 71.07 73 P P 05 00 53.7 -0.2
DBIC pP pP 05 01 09.1 -0.6
DBIC sP sP 05 01 17.3 +1.4
DBIC Dimbokro 71.07 73 P P 05 00 53.2 -0.7
DBIC pP pP 05 01 09.9 +0.2
DBIC sP sP 05 01 16.2 +0.2
BGNE Belgrade 71.08 338 P P 05 00 55.2 +1.8
baz=154
TBI Tubuai 71.09 253 eS S 05 10 05.8 -0.9
comp=Z,551nm,31.8s
TBI Tubuai 71.09 253 eLR LR 05 22 34.5
comp=Z,7μm,26.2s
TBI eLR LR 05 22 34.6
comp=Z,2μm,28.0s
TBI Tubuai 71.09 253 eT T 06 18 26.4
comp=Z,5.5nm,0.3s
S22A 4UR Ranch, Cre 71.36 330 P P 05 00 56.6 +1.1
baz=146
Q24A Divide 71.63 332 IAmb IAmb 05 01 16.3
comp=Z,30nm,0.9s
Q24A Divide 71.63 332 P P 05 00 58.7 +1.5
baz=147,SNR=13
MVCO Mesa Verde 71.69 329 IAmb IAmb 05 01 15.0
comp=Z,19nm,0.9s
MVCO Mesa Verde 71.69 329 P P 05 00 58.8 +1.4
baz=144,SNR=12
GLA Glamis 71.74 322 P P 05 00 59.1 +1.5
baz=138
WUAZ Wupatki 71.76 326 IAmb IAmb 05 01 18.2
comp=Z,28nm,1.0s
WUAZ Wupatki 71.76 326 P P 05 00 59.6 +1.9
baz=141,SNR=15
D62A Allapoint, All 71.93 1 P P 05 00 58.8 +0.5
D62A pP pP 05 01 14.7 +0.7
D62A IAmb IAmb 05 01 16.4
comp=Z,58nm,1.0s
D62A sP sP 05 01 21.1 +0.8
SBA Scott Base 71.99 191 P P 05 00 59.4 +1.0
SBA Scott Base 71.99 191 P P 05 00 59.4 +1.0
SBA pmax pmax
comp=Z,21nm,1.4s
SBA Scott Base 71.99 191 P P 05 00 59.5 +1.0
YUH Yuha Desert 72.06 321 P P 05 01 00.2 +0.8
YUH pP pP 05 01 14.6 -0.3
YUH sP sP 05 01 22.3 +1.2
OGNE Ogallala 72.06 335 P P 05 01 02.0 +2.6
baz=150

IKP In-Ko-Pah, Jac 72.17 321 P P 05 01 01.9 +1.6
baz=137,SNR=5.8
SWSC Sam W. Stewart 72.21 321 P P 05 01 01.6 +1.3
baz=138
CBX Cerro Bola 72.25 320 P P 05 00 59.8 -1.0
PDMCI Parker Dam,Lak 72.29 323 P P 05 01 02.7 +1.9
baz=139
BAR Barrett 72.52 320 IAmb IAmb 05 01 20.4
comp=Z,24nm,1.2s
MONP2 Monument Peak 72.53 321 P P 05 01 03.6 +1.1
baz=137,SNR=5.8
BC3 Big Chuckawall 72.53 322 P P 05 01 03.8 +1.4
baz=138,SNR=11
PV15 Paradox Valley 72.59 329 IAmb IAmb 05 01 23.3
comp=Z,21nm,1.0s
ECSD EROS Data Cent 72.69 340 P P 05 01 03.1 +0.2
baz=155
IRM Iron Mountain 72.73 322 P P 05 01 05.3 +1.8
baz=138,SNR=9.9
PV20 West Nyswonger 72.82 329 P P 05 01 05.3 +1.2
PV20 pP pP 05 01 20.4 +0.9
PV10 Paradox Valley 72.88 329 IAmb IAmb 05 01 21.5
comp=Z,19nm,1.0s
SPMN Marine on St. 72.99 344 IAmb IAmb 05 01 23.5
comp=Z,50nm,1.4s
SPMN Marine on St. 72.99 344 P P 05 01 06.3 +1.6
baz=159
VNDA Vanda 73.02 190 P P 05 01 04.7 +0.2
comp=Z,5.1nm,0.9s,baz=124,slow=4.4,SNR=28
comp=Z,5.1nm,0.9s
VNDA Vanda 73.02 190 P P 05 01 05.3 +0.7
VNDA Vanda 73.02 190 P P 05 01 05.3 +0.7
VNDA pmax pmax
comp=Z,8.0nm,1.0s
TPFO Pinon Flats 73.06 321 P P 05 01 06.2 +0.6
baz=137
PFO Pinyon Flats O 73.07 321 LR LR 05 26 53.1
comp=Z,183nm,21.4s,baz=136,slow=30
PFO Pinyon Flats O 73.07 321 P P 05 01 06.2 +0.6
PFO Pinyon Flats O 73.07 321 ceP P 05 01 06.7 +1.1
PFO pmax pmax
comp=Z,10.0nm,1.0s
PFO Pinyon Flats O 73.07 321 P P 05 01 06.2 +0.6
baz=137
BELC Belle Mtn. Jos 73.09 322 P P 05 01 07.4 +1.7
baz=138
PPT2 Papeete2 73.22 258 eS S 05 10 30.0 -1.4
comp=Z,234nm,30.0s
PPT2 Papeete2 73.22 258 eLR LR 05 23 33.5
comp=Z,1μm,31.8s
PPT2 eLR LR 05 23 33.7
comp=Z,2μm,29.8s
PPT Papeete 73.23 258 P P 05 01 08.7 +1.9
comp=Z,23nm,0.9s,baz=100,slow=17,SNR=3.9
comp=Z,23nm,0.9s
GMRC Granite Mounta 73.48 322 P P 05 01 10.0 +2.0
baz=138,SNR=15
MURC Murrieta 73.48 321 P P 05 01 09.1 +1.1
baz=137,SNR=7.3
N23A Red Feather La 73.58 333 P P 05 01 09.9 +1.3
baz=147
ELS Elsinore Mount 73.65 320 IAmb IAmb 05 01 11.7
comp=Z,18nm,0.8s
KNB Kanab 73.66 326 IAmb IAmb 05 01 30.0
comp=Z,43nm,1.1s
F36A Milaca 73.77 343 P P 05 01 09.4 +0.1
F36A IAmb IAmb 05 01 27.6
comp=Z,27nm,1.1s
BBRC Big Bear Solar 73.81 321 P P 05 01 11.9 +1.8
baz=137
HEC Hector,Ludlow 73.89 322 P P 05 01 12.5 +2.1
baz=138,SNR=19
O20A White River Ci 73.94 331 IAmb IAmb 05 01 30.6
comp=Z,50nm,1.1s
O20A White River Ci 73.94 331 P P 05 01 12.3 +1.7
baz=145,SNR=8.4
CIS Catalina Islan 74.05 320 P P 05 01 12.7 +1.4
baz=136
TUQ Turquoise Moun 74.11 323 P P 05 01 13.4 +1.7
baz=138,SNR=10
BFSC Mount Baldy Ra 74.21 321 P P 05 01 13.5 +1.2
baz=136,SNR=7.5
Q16A Castle Valley 74.32 328 IAmb IAmb 05 01 33.2
comp=Z,22nm,1.1s
CCUT Cedar City 74.34 326 IAmb IAmb 05 01 32.2
comp=Z,33nm,0.9s
P18A Preston Nutter 74.44 329 IAmb IAmb 05 01 32.1
comp=Z,23nm,1.0s
PASC Pasadena Art C 74.47 320 IAmb IAmb 05 01 32.0
comp=Z,26nm,1.2s
GSC Goldstone, Bar 74.50 322 P P 05 01 15.3 +1.4
GSC pP pP 05 01 29.9 +0.4
GSC Goldstone, Bar 74.50 322 P P 05 01 15.8 +1.9
baz=137,SNR=9.7
P17A Butcher Ranch, 74.55 329 IAmb IAmb 05 01 33.5
comp=Z,26nm,1.0s
DECC Green Verdugo 74.61 320 P P 05 01 16.2 +1.7
baz=136
SHOC Shoshone, Teco 74.64 323 P P 05 01 15.8 +1.2
baz=138
RWWY Rawlins 74.77 332 IAmb IAmb 05 01 34.8
comp=Z,27nm,0.9s
EDW2 Edwards Air Fo 74.86 321 P P 05 01 17.3 +1.3
baz=136,SNR=10
OSI Osito Audit: C 75.09 320 P P 05 01 18.6 +1.3
baz=136
PRN Pahroc Range 75.11 325 IAmb IAmb 05 01 36.4
comp=Z,30nm,1.2s
LRMC Laurel Mtn Rad 75.12 322 P P 05 01 19.0 +1.5
baz=137
SCZ2 Santa Cruz Isl 75.19 319 P P 05 01 19.3 +1.4
baz=135
EYMN Ely 75.22 345 P P 05 01 20.1 +2.4
baz=160
K22A Casper 75.28 333 IAmb IAmb 05 01 37.5
comp=Z,53nm,1.4s
K22A Casper 75.28 333 P P 05 01 19.4 +1.1
baz=147
K22A Casper 75.28 333 P P 05 01 20.1 +1.8
baz=147
PSUT Pine Spring 75.34 326 IAmb IAmb 05 01 23.4
comp=Z,17nm,0.8s
FURC Furnace Creek, 75.38 323 P P 05 01 20.9 +2.1
baz=137,SNR=7.5
TPNV Topopah Spring 75.40 324 P P 05 01 19.8 +0.6
TPNV pP pP 05 01 36.0 +1.3
TPNV IAmb IAmb 05 01 38.0
comp=Z,25nm,1.1s
TPNV Topopah Spring 75.40 324 P P 05 01 19.8 +0.6
TPNV *PP pP 05 01 36.0 +1.3
TPNV pmax pmax
comp=Z,25nm,1.1s
TPNV Topopah Spring 75.40 324 P P 05 01 20.7 +1.6
baz=138,SNR=10.0
MPMC Manual Prospec 75.43 322 P P 05 01 20.9 +1.5
baz=137,SNR=7.7
WCT Wildcat Mounta 75.49 323 IAmb IAmb 05 01 38.5
comp=Z,20nm,1.1s
ARVC Arvin 75.52 321 P P 05 01 22.2 +2.5
baz=136
SBC Santa Barbara 75.55 320 P P 05 01 20.9 +1.1
baz=135
RSSD Black Hills 75.55 336 P P 05 01 20.2 +0.3
RSSD Black Hills 75.55 336 P P 05 01 20.2 +0.3
RSSD pmax pmax
comp=Z,12nm,0.9s
RSSD Black Hills 75.55 336 P P 05 01 20.8 +0.9
baz=149
RSSD Black Hills 75.55 336 P P 05 01 21.5 +1.6
baz=149
S11A Rachel 75.65 324 IAmb IAmb 05 01 41.0
comp=Z,47nm,1.4s
ISA Isabella, Lake 75.70 321 P P 05 01 22.1 +1.3
baz=136,SNR=13
BCW Bitter Crk WRg 75.72 320 IAmb IAmb 05 01 39.5
comp=Z,40nm,1.1s
JLU Jordanelle 75.78 329 IAmb IAmb 05 01 41.5
comp=Z,57nm,1.8s
PKM Mcpherson Peak 75.92 320 P P 05 01 23.5 +1.3
baz=135,SNR=6.1
CWC Cottonwood Cre 76.03 322 P P 05 01 24.8 +2.0
baz=136
R11A Troy Canyon, C 76.09 325 P P 05 01 24.8 +1.7
baz=139,SNR=11
DUG Dugway, Tooele 76.11 328 P P 05 01 24.1 +1.0
DUG pP pP 05 01 40.0 +1.4
DUG IAmb IAmb 05 01 43.3
comp=Z,19nm,1.0s

DUG	Dugway, Tooele	76.11 328	P	P	05 01 24.9 +1.8
	baz=141,SNR=13				
B35A	Bob, Littlefor	76.14 344	IAmb	IAmb	05 01 39.6
	comp=Z,29nm,1.3s				
TCUT	Toone Canyon	76.17 329	IAmb	IAmb	05 01 42.7
	comp=Z,16nm,0.8s				
VES	Vestal, Richgr	76.17 321	P	P	05 01 25.0 +1.7
	baz=136,SNR=8.1				
SMMC	Simmler	76.32 320	P	P	05 01 25.8 +1.5
	baz=135,SNR=6.4				
CER	Ceres	76.34 121⇓	iP	P	05 01 24.8 +0.2
CER			IAmb	IAmb	05 01 25.7
	comp=Z,73nm,0.9s				
E28A	Huff	76.51 339	P	P	05 01 26.3 +1.2
	baz=152				
TIN	Tinemaha, Big	76.56 322	P	P	05 01 27.8 +2.1
	baz=136				
HWUT	Hardware Ranch	76.62 329	IAmb	IAmb	05 01 45.0
	comp=Z,16nm,0.8s				
AGMN	Agassiz Nation	76.63 343	IAmb	IAmb	05 01 42.7
	comp=Z,71nm,1.8s				
AGMN	Agassiz Nation	76.63 343	P	P	05 01 26.9 +1.3
	baz=156				
BW06	Boulder Array	76.65 331	P	P	05 01 27.5 +1.3
	baz=144				
PDAR	Pinedale Array	76.65 331	P	P	05 01 26.7 +0.5
	comp=Z,0.9nm,0.5s,baz=131,slow=7.0,SNR=11				
PDAR			pP	pP	05 01 43.5 +1.7
	comp=Z,2.8nm,0.8s,baz=154,slow=8.2,SNR=6.9				
PDAR			LR	LR	05 38 02.4
	comp=Z,34nm,18.3s,baz=156,slow=38				
	comp=Z,0.9nm,0.5s				
PDAR	Pinedale Array	76.65 331	P	P	05 01 26.4 +0.2
PDAR			pP	pP	05 01 41.0 -0.7
BGU	Big Grassy Mou	76.78 328	IAmb	IAmb	05 01 46.6
	comp=Z,28nm,1.6s				
SPUT	South Promonto	76.80 329	IAmb	IAmb	05 01 46.8
	comp=Z,32nm,1.1s				
MDND	Maddock	77.30 340	P	P	05 01 30.8 +1.3
	baz=153				
MDND	Maddock	77.30 340	P	P	05 01 30.6 +1.1
	baz=153				
HVU	Hansel Valley	77.32 329	IAmb	IAmb	05 01 48.9
	comp=Z,22nm,0.9s				
AHID	Auburn Hatcher	77.33 330	P	P	05 01 30.1 +0.1
AHID			IAmb	IAmb	05 01 49.0
	comp=Z,28nm,1.0s				
MATJ	Matjiesfontein	77.38 121⇓	iP	P	05 01 31.1 +0.6
MATJ			IAmb	IAmb	05 01 31.5
	comp=Z,59nm,0.8s				
OMMB	Old Mammoth Mi	77.39 322	IAmb	IAmb	05 01 48.9
	comp=Z,21nm,1.0s				
LHV	Little Huntoon	77.58 323	IAmb	IAmb	05 01 50.0
	comp=Z,18nm,1.0s				
NVAR	Mina Array Bea	77.60 323	P	P	05 01 32.6 +1.0
	comp=Z,3.6nm,0.7s,baz=155,slow=6.4,SNR=25				
NVAR			pP	pP	05 01 49.0 +1.8
	comp=Z,4.9nm,0.8s,baz=160,slow=6.2,SNR=10				
NVAR			LR	LR	05 31 24.2
	comp=Z,89nm,21.2s,baz=94,slow=32				
	comp=Z,3.6nm,0.7s				
REDW	Red Top Meadow	77.70 331	IAmb	IAmb	05 01 51.9
	comp=Z,27nm,1.1s				
ELK	Elko	77.72 327	LR	LR	05 32 35.1
	comp=Z,174nm,21.1s,baz=142,slow=33				
SNOW	Snow King Moun	77.73 331	IAmb	IAmb	05 01 51.6
	comp=Z,15nm,0.9s				
LOHW	Long Hollow	77.79 331	IAmb	IAmb	05 01 52.4
	comp=Z,16nm,0.8s				
TPAW	Teton Pass	77.84 331	IAmb	IAmb	05 01 52.8
	comp=Z,22nm,1.0s				
SUR	Sutherland	77.89 120	P	P	05 01 33.0 -0.6
IMW	Indian Meadow	78.16 331	IAmb	IAmb	05 01 54.6
	comp=Z,26nm,1.2s				
FLWY	Flagg Ranch	78.20 332	IAmb	IAmb	05 01 55.1
	comp=Z,43nm,1.1s				
H17A	Grant Village	78.40 332	P	P	05 01 37.5 +1.5
	baz=144				
ULM	Lac du Bonnet	78.43 344	P	P	05 01 36.3 +0.7
	comp=Z,5.0nm,0.7s,baz=148,slow=5.1,SNR=3.8				
ULM			LR	LR	05 38 38.2
	comp=Z,64nm,21.0s,baz=164,slow=37				
	comp=Z,5.0nm,0.7s				
ULM	Lac du Bonnet	78.43 344	P	P	05 01 36.0 +0.4
ULM			pP	pP	05 01 51.7 +0.1
ULM			IAmb	IAmb	05 01 55.0
	comp=Z,28nm,1.2s				
RLMT	Red Lodge	78.44 333	IAmb	IAmb	05 01 55.4
	comp=Z,28nm,1.1s				
RLMT	Red Lodge	78.44 333	P	P	05 01 37.1 +0.9
	baz=145				
YERR	Yerington	78.50 323	IAmb	IAmb	05 01 55.1
	comp=Z,22nm,1.0s				
FRAZ	Fraserburg	78.52 120⇓	iP	P	05 01 37.6 +0.6
FRAZ			IAmb	IAmb	05 01 38.5
	comp=Z,125nm,0.9s				
LAO	LASA Array	78.54 336	P	P	05 01 36.4 -0.1
LAO			pP	pP	05 01 52.3 +0.4
LAO			IAmb	IAmb	05 01 55.5
	comp=Z,28nm,1.1s				
LAO	LASA Array	78.54 336	P	P	05 01 37.6 +1.2
	baz=147				
LAO	LASA Array	78.54 336	P	P	05 01 37.9 +1.5
	baz=147				
PNTR	Pine Nut	78.77 323	IAmb	IAmb	05 01 56.7
	comp=Z,32nm,0.8s				
YMR	Madison River	78.79 332	IAmb	IAmb	05 01 58.6
	comp=Z,52nm,1.1s				
YHH	Holmes Hill	78.83 332	IAmb	IAmb	05 01 58.9
	comp=Z,41nm,1.2s				
AUGR	Augrabies	78.94 116	eP	P	05 01 39.1 -0.2
AUGR			IAmb	IAmb	05 01 40.3
	comp=Z,60nm,1.0s				
GRAN	Grantham	78.98 120	eP	P	05 01 39.9 +0.5
GRAN			IAmb	IAmb	05 01 40.7
	comp=Z,33nm,0.7s				
YHL	Hebgen Lake	79.03 332	IAmb	IAmb	05 02 00.2
	comp=Z,37nm,1.3s				
PAHR	Pah Rah Range	79.10 324	IAmb	IAmb	05 01 58.4
	comp=Z,35nm,0.9s				
DGMT	Dagmar	79.33 338	P	P	05 01 41.0 +0.3
DGMT			pP	pP	05 01 57.2 +1.0
DGMT	Dagmar	79.33 338	P	P	05 01 42.1 +1.4
	baz=149				
DGMT	Dagmar	79.33 338	P	P	05 01 42.4 +1.7
	baz=149				
KEIM	Keimoes	79.41 117⇓	iP	P	05 01 42.2 +0.3
KEIM			IAmb	IAmb	05 01 43.0
	comp=Z,136nm,1.3s				
HLID	Hailey	79.47 329	IAmb	IAmb	05 02 00.5
	comp=Z,21nm,0.9s				
HLID	Hailey	79.47 329	P	P	05 01 43.3 +1.6
	baz=140				
SCHQ	Schefferville	79.73 2	P	P	05 01 41.8 -1.0
	comp=Z,4.9nm,0.8s,baz=180,slow=6.1,SNR=2.1				
SCHQ			pP	pP	05 01 58.6 -0.1
	comp=Z,28nm,1.0s,baz=190,slow=6.1,SNR=8.4				
SCHQ			sP	sP	05 02 05.6 +0.8
	comp=Z,31nm,0.8s,baz=168,slow=4.9,SNR=9.8				
SCHQ			LR	LR	05 37 40.1
	comp=Z,76nm,20.7s,baz=192,slow=36				
	comp=Z,4.9nm,0.8s				
SCHQ	Schefferville	79.73 2	P	P	05 01 43.7 +1.0
SCHQ			pP	pP	05 01 58.3 -0.3
BRAK	Brakfontein	79.75 120	eP	P	05 01 43.0 -0.6
BRAK			IAmb	IAmb	05 01 44.0
	comp=Z,38nm,1.2s				
BOZ	Bozeman (W)	79.81 332	P	P	05 01 44.9 +1.4
	baz=143				
TORD	Torodi Ar. Bea	79.84 70	P	P	05 01 43.7 -0.5
	comp=Z,88nm,0.6s,baz=261,slow=5.5,SNR=747				
TORD			pP	pP	05 02 00.5 +0.3
	comp=Z,46nm,0.7s,baz=257,slow=5.0,SNR=12				
	comp=Z,88nm,0.6s				
TORD	Torodi Ar. Bea	79.84 70	P	P	05 01 43.2 -0.9
TORD			pP	pP	05 01 59.7 -0.5
TORD			sP	sP	05 02 06.9 +0.5
DLMT	Dillon	80.04 331	IAmb	IAmb	05 02 03.2
	comp=Z,27nm,1.1s				
ORV	Oroville	80.14 322	IAmb	IAmb	05 02 03.7
	comp=Z,33nm,1.1s				
TSUM	Tsumeb	80.26 107	P	P	05 01 46.0 -0.7
TSUM			pP	pP	05 02 02.5 -0.1
TSUM			sP	sP	05 02 08.9 +0.1
TSUM	Tsumeb	80.26 107⇓	iP	P	05 01 47.0 +0.3
TSUM			IAmb	IAmb	05 02 11.0
	comp=Z,154nm,1.6s				
BFON	Badsfontein, M	80.36 121⇓	iP	P	05 01 47.1 +0.1
PKA	Prieska	80.47 118	eP	P	05 01 46.8 -0.8
PKA			IAmb	IAmb	05 01 54.0
	comp=Z,7.9nm,0.7s				
RAR	Rarotonga	80.75 251	LR	LR	05 30 16.6
	comp=Z,130nm,20.8s,baz=112,slow=30				
EGMT	Eagleton	81.00 334	IAmb	IAmb	05 02 09.9
	comp=Z,31nm,1.1s				
EGMT	Eagleton	81.00 334	P	P	05 01 50.9 +1.1
	baz=144				
MOD	Modoc Plateau	81.15 325	IAmb	IAmb	05 02 09.0
	comp=Z,24nm,1.1s				
MAW	Mawson	81.20 164	P	P	05 01 50.9 +0.3
	comp=Z,66nm,0.8s,baz=214,slow=6.2,SNR=130				
MAW			LR	LR	05 38 03.4
	comp=Z,217nm,19.8s,baz=228,slow=36				
	comp=Z,66nm,0.8s				
MAW	Mawson	81.20 164	P	P	05 01 50.7 +0.1
MAW	Mawson	81.20 164	P	P	05 01 50.7 +0.1
MAW			pmax	pmax	
	comp=Z,17nm,0.9s				
J08A	Circle Bar Ran	81.27 327	IAmb	IAmb	05 02 09.7
	comp=Z,55nm,1.6s				
PLID	Pearl Lake	81.36 329	IAmb	IAmb	05 02 10.0
	comp=Z,33nm,0.9s				
MSO	Missoula	81.77 331	P	P	05 01 55.0 +1.1
	baz=141				
BMO	Blue Mountains	81.80 328	IAmb	IAmb	05 02 14.5
	comp=Z,38nm,1.6s				
K05A	Summer Lake	82.05 325	IAmb	IAmb	05 02 14.1
	comp=Z,43nm,1.0s				
HVD	Gariep Dam	82.26 120⇓	iP	P	05 01 56.8 -0.3
HVD			IAmb	IAmb	05 01 57.9
	comp=Z,188nm,1.5s				
YBH	Yreka Blue Hor	82.32 323	LR	LR	05 36 07.1
	comp=Z,78nm,20.1s,baz=145,slow=34				
PINE	Pine Mountain	82.83 326	IAmb	IAmb	05 02 18.1
	comp=Z,29nm,0.9s				
BOSA	Boshof	82.90 118	P	P	05 01 59.8 -0.6
	comp=Z,24nm,0.7s,baz=268,slow=4.0,SNR=41				
BOSA			sP	sP	05 02 23.5 +0.9
	comp=Z,20nm,0.8s,baz=243,slow=4.3,SNR=5.3				
	comp=Z,24nm,0.7s				
BOSA	Boshof	82.90 118	P	P	05 01 59.3 -1.1
BOSA	Boshof	82.90 118⇓	iP	P	05 01 59.7 -0.7
BOSA			IAmb	IAmb	05 02 00.6
	comp=Z,137nm,1.6s				
BOSA	Boshof	82.90 118	P	P	05 01 59.3 -1.1
BOSA			pmax	pmax	
	comp=Z,122nm,1.5s				
WALA	Waterton Lakes	83.49 333	IAmb	IAmb	05 02 20.7
	comp=Z,28nm,1.0s				
SWZ	Schweizer	83.56 117	eP	P	05 02 02.7 -1.2
SWZ			IAmb	IAmb	05 02 03.2
	comp=Z,36nm,0.7s				
HAWA	Hanford	83.99 328	IAmb	IAmb	05 02 25.1
	comp=Z,56nm,1.6s				
NEW	Newport	84.26 331	LR	LR	05 40 53.9
	comp=Z,43nm,18.7s,baz=136,slow=36				
NEW	Newport	84.26 331	P	P	05 02 08.6 +1.9
	baz=139				
C09A	Chrisman Ranch	84.44 330	IAmb	IAmb	05 02 25.4
	comp=Z,27nm,1.1s				
MORF	Marmelete	85.00 45	eP	P	05 02 11.1 +0.5
MORF			IAmb	IAmb	05 02 12.1
	comp=Z,35nm,1.2s				
MORF	Marmelete	85.00 45	eP	P	05 02 11.9 +1.3
	comp=Z,92nm,1.6s				
MORF			esP	sP	05 02 31.1 -2.1
MORF	Marmelete	85.00 45	eP	P	05 02 11.1 +0.5
SNKL	Senekal, Frees	85.04 119	eP	P	05 02 10.3 -1.1
SNKL			IAmb	IAmb	05 02 12.6
	comp=Z,106nm,1.4s				
PTEO	Sao Teotonio	85.09 45	eP	P	05 02 12.6 +1.6
	comp=Z,104nm,1.5s				
PTEO			esP	sP	05 02 32.7 -0.9
MDT	Midelt	85.11 50	LR	LR	05 41 30.8
	comp=Z,129nm,18.2s,baz=245,slow=37				
PRYS	Parys	85.30 117	eP	P	05 02 11.3 -1.4
PRYS			IAmb	IAmb	05 02 12.3
	comp=Z,255nm,2.3s				
PNCL	Nicolau / Gran	85.56 44	eP	P	05 02 14.2 +0.9
	comp=Z,28nm,1.3s				
PCVE	Castro Verde	85.58 45	eP	P	05 02 14.9 +1.4
	comp=Z,46nm,1.3s				
PVAQ	Vaqueiros	85.65 45	eP	P	05 02 15.1 +1.2
	comp=Z,96nm,1.6s				
PBEJ	Beja	85.93 45	eP	P	05 02 16.3 +1.1
	comp=Z,50nm,1.6s				
PBEJ			esP	sP	05 02 36.5 -1.2
HRAO	HartRAO	86.01 117	eP	P	05 02 16.3 0.0
EVO	Evora	86.13 44	eP	P	05 02 16.9 +0.7
	comp=Z,29nm,1.5s				
PSBE	So Bento	86.23 43	eP	P	05 02 17.6 +0.9
	comp=Z,50nm,2.3s				
PMTG	Montargil	86.32 44	eP	P	05 02 17.8 +0.7
	comp=Z,50nm,1.9s				
PMTG			esP	sP	05 02 38.3 -1.3
PBAR	Barrancos	86.54 45	eP	P	05 02 18.9 +0.7
	comp=Z,31nm,1.7s				
PBAR			esP	sP	05 02 39.3 -1.5
PESTR	Estremoz	86.60 44	eP	P	05 02 19.1 +0.6
	comp=Z,23nm,1.3s				
PESTR			esP	sP	05 02 40.2 -0.9
PESTR	Estremoz	86.60 44	P	P	05 02 18.6 0.0
PESTR			pP	pP	05 02 35.3 +0.5
PCAS	Casmilo, Conde	86.74 43	eP	P	05 02 19.8 +0.7
	comp=Z,25nm,1.2s				
PCAS			esP	sP	05 02 41.0 -0.7
LEPH	Lephalale, Lim	86.99 115⇓	iP	P	05 02 20.1 -0.9
LEPH			IAmb	IAmb	05 02 22.6
	comp=Z,24nm,1.1s				
PMRV	Marv??o	87.05 44	eP	P	05 02 21.4 +0.7
	comp=Z,17nm,1.8s				
PMRV			esP	sP	05 02 42.0 -1.3
PCBR	Castelo Branco	87.24 43	eP	P	05 02 22.2 +0.6
	comp=Z,17nm,2.3s				
MTE	Manteigas	87.53 43	eP	P	05 02 23.6 +0.5
	comp=Z,21nm,1.6s				
TAM	Tamanrasset	87.65 64	P	P	05 02 23.4 -0.7
TAM			sP	sP	05 02 46.8 +0.3
TAM	Tamanrasset	87.65 64	P	P	05 02 23.4 -0.7
TAM			*SP	sP	05 02 46.8 +0.3
TAM			pmax	pmax	
	comp=Z,7.0nm,0.9s				
PVRL	Vila Real	87.94 42	eP	P	05 02 25.5 +0.5
	comp=Z,21nm,1.6s				
PVRL			esP	sP	05 02 46.2 -1.4
POLO	Lamas de Olo	87.95 42	eP	P	05 02 25.7 +0.6
PCAB	Cabril	88.01 42	eP	P	05 02 25.2 -0.1
	comp=Z,22nm,2.5s				
PCAB			esP	sP	05 02 47.4 -0.5
MVO	Moncorvo	88.30 42	eP	P	05 02 27.9 +1.2
	comp=Z,17nm,1.9s				
FRB	Frobisher Bay	88.63 1	LR	LR	05 42 20.6
	comp=Z,118nm,22.0s,baz=184,slow=36				
CASY	Casey	88.83 180	P	P	05 02 29.1 +0.2
PBRG	Braganca	88.85 42	eP	P	05 02 30.0 +0.8
	comp=Z,24nm,1.6s				
PBRG			esP	sP	05 02 49.5 -2.3
PAB	San Pablo	89.05 45	P	P	05 02 29.8 -0.5
PAB			IAmb	IAmb	05 02 31.4
	comp=Z,9.0nm,1.1s				
PAB	San Pablo	89.05 45	P	P	05 02 29.8 -0.5
PAB			pmax	pmax	
	comp=Z,9.0nm,1.2s				
ESDC	Sonseca Array	89.37 45	P	P	05 02 31.6 -0.2
	comp=Z,2.7nm,1.0s,baz=250,slow=4.4,SNR=20				
ESDC			LR	LR	05 40 21.0
	comp=Z,185nm,21.3s,baz=231,slow=34				
	comp=Z,2.7nm,1.0s				
ESDC	Sonseca Array	89.37 45	P	P	05 02 30.9 -0.8
ESDC				pP	05 02 46.9 -1.2
MUSN	Musina, Limpop	89.39 114⇓	iP	P	05 02 32.6 +0.2
MUSN			IAmb	IAmb	05 02 34.4
	comp=Z,17nm,0.8s				
MOPA	Mopani	90.09 116	eP	P	05 02 35.1 -0.5
MOPA			IAmb	IAmb	05 02 36.6
	comp=Z,1.4nm,0.9s				
WAPA	Wapiti River	90.28 334	P	P	05 02 35.5 -0.1
WAPA			pP	pP	05 02 49.5 -1.8
URZ	Urewera	90.72 227	LR	LR	05 35 42.0
	comp=Z,156nm,19.1s,baz=224,slow=30				
LSZ	Lusaka	91.10 107	LR	LR	05 39 30.8
	comp=Z,265nm,21.7s,baz=263,slow=33				
LSZ	Lusaka	91.10 107	eP	P	05 02 42.1 +1.5
LSZ			IAmb	IAmb	05 02 42.4
	comp=Z,31nm,1.5s				
LSZ	Lusaka	91.10 107	P	P	05 02 40.2 -0.3
LSZ			pmax	pmax	
	comp=Z,34nm,1.6s				
RPZ	Rata Peaks	91.32 220	LR	LR	05 36 06.2
	comp=Z,148nm,18.2s,baz=104,slow=30				
SFJD	Kangerlussuaq	93.08 8	LR	LR	05 44 33.0
	comp=Z,56nm,21.9s,baz=178,slow=35				
AFI	Afiamalu	94.20 253	LR	LR	05 37 04.3
	comp=Z,94nm,19.1s,baz=102,slow=30				
YKA	Yellowknife Ar	94.20 341	P	P	05 02 54.1 +0.6
	comp=Z,2.3nm,0.8s,baz=128,slow=10,SNR=2.4				
YKA			pP	pP	05 03 09.8 +0.1
	comp=Z,9.0nm,0.8s,baz=143,slow=4.7,SNR=8.4				
YKA			sP	sP	05 03 16.8 +1.0
	comp=Z,9.1nm,0.8s,baz=141,slow=4.3,SNR=7.4				
YKA			LR	LR	05 48 57.8
	comp=Z,76nm,20.3s,baz=134,slow=38				
	comp=Z,2.3nm,0.8s				
FLDN	Fort Liard	95.47 336	P	P	05 03 00.8 +1.4
	baz=133				
DLBC	Dease Lake	96.84 333	LR	LR	05 48 47.3
	comp=Z,52nm,20.8s,baz=124,slow=37				
BORG	Borgarnes	97.31 19	LR	LR	05 44 00.3
	comp=Z,62nm,20.3s,baz=212,slow=34				
MBAR	Mbarara	99.78 95	LR	LR	05 46 21.2
	comp=Z,97nm,19.5s,baz=266,slow=34				
CLL	Collm	105.28 40	eP	Pdif	05 03 50.0 +6.6
CLL			e		05 08 15.0
ILAR	Eielson Array	106.96 334	PKKPbc	PKKPbc	05 19 15.6 -4.4
	comp=Z,0.3nm,0.5s,baz=310,slow=4.2,SNR=5.4				
DZM	Mont Dzumac	107.59 235	eLR	LR	05 39 29.4
	comp=Z,299nm,29.8s				
E25K	Arctic Village	107.79 338	P	PKiKP	05 08 02.4 +0.9
	baz=113				
R16K	Pilot Point	109.43 325	P	PKiKP	05 08 05.8 +1.0
	baz=106				
H21K	Melozitna Rive	109.61 334	P	PKiKP	05 08 05.4 +0.4
	baz=108				
NIKH	Nikolski High	114.70 319	P	PKPdf	05 08 14.7 -0.2
	baz=100				
AKASG	Malin Array Be	114.98 44	PKP	PKPdf	05 08 14.4 -1.2
	comp=Z,2.1nm,0.6s,baz=273,slow=2.7,SNR=12				
AKASG			pPKP	PKiKP	05 08 33.0 +17
	comp=Z,1.4nm,0.6s,baz=270,slow=2.7,SNR=3.4				
BRTR	Keskin Array B	115.99 56	PKP	PKPdf	05 08 17.4 -0.7
	comp=Z,1.4nm,0.8s,baz=236,slow=1.3,SNR=5.8				
OBN	Obninsk	119.85 39⇑	ePKIKP	PKPdf	05 08 23.1 -1.7
OBN			e		05 08 39.7
OBN			i		05 09 51.4
OBN			pmax	pmax	
	comp=Z,5.0nm,1.0s				
LPSR	Galich'ya Gora	121.18 42	ePKIKP	PKPdf	05 08 24.5 -2.9
LPSR			pmax	pmax	
	comp=Z,10.0nm,0.8s				
VSR	Storozhevoye	121.29 44	ePKIKP	PKPdf	05 08 24.3 -3.4
VSR			pmax	pmax	
	comp=Z,5.0nm,0.7s				
KLMR	Klimovskoe	121.31 33	ePKIKP	PKPdf	05 08 25.7 -1.7
KLMR			e		05 08 42.4
KLMR			pmax	pmax	
	comp=Z,32nm,1.3s				
KLMR	Klimovskoe	121.31 33	ePKPdf	PKPdf	05 08 25.7 -1.7
KLMR			epPKPdf	pPKPdf	05 08 42.5 -1.7
KLMR			AMP		05 08 46.1
	comp=Z,32nm,1.3s				
KLMR			e		05 10 31.2
VORR	Voronezh	121.33 43	ePKIKP	PKPdf	05 08 26.4 -1.3
VORR			pmax	pmax	
	comp=Z,30nm,0.5s				
RAYN	Ar Rayn	122.05 77	PKPdf	PKPdf	05 08 29.9 -0.2
RAYN	Ar Rayn	122.05 77	PKIKP	PKPdf	05 08 29.9 -0.2
GURO	Guroymak-BITLI	122.22 59	PKPdf	PKPdf	05 08 29.3 -0.8
VRH	Novokhopyorsk	122.89 44	ePKIKP	PKPdf	05 08 22.4 -8.3
VRH			pmax	pmax	
	comp=Z,9.0nm,0.6s				
KIV	Kislovodsk	123.28 53	i PKIKP	PKPdf	05 08 31.4 -0.5
KIV			pmax	pmax	
	comp=Z,10.0nm,1.1s				
KBZ	Khabaz	123.42 53	PKP	PKPdf	05 08 31.9 -0.1
	comp=Z,6.7nm,0.9s,baz=218,slow=3.0,SNR=7.6				
KBZ	Khabaz	123.42 53c	iPKIKP	PKiKP	05 08 32.8 +0.6
PRGR	Permogore	124.14 31	ePKIKP	PKPdf	05 08 32.3 -0.5
PRGR			e		05 08 49.3
PRGR			pmax	pmax	
	comp=Z,11nm,0.8s				
BILL	Bilibino	125.41 337	i PKIKP	PKiKP	05 08 35.8 +0.3
BILL			pmax	pmax	
	comp=Z,12nm,1.3s				
BILL			MLR	MLR	
	comp=Z,88nm,15.0s				
ASAR	Alice Springs	126.06 208	PKP	PKPdf	05 08 37.0 -0.9
	comp=Z,3.3nm,0.8s,baz=132,slow=1.7,SNR=29				
ASAR			pPKP	pPKPdf	05 08 55.8 +1.3
	comp=Z,2.8nm,0.7s,baz=129,slow=1.9,SNR=6.1				
ASAR			sPKP		05 09 02.2
	comp=Z,2.6nm,0.6s,baz=138,slow=1.5,SNR=4.4				
ASAR	Alice Springs	126.06 208	PKPdf	PKPdf	05 08 37.9 +0.1
H11S2	WAKE ISLAND Hyl	26.94 275	T	T	07 28 25.7
	baz=108,slow=75,SNR=576				
H11S1	WAKE ISLAND Hyl	26.95 275	T	T	07 28 26.6
	baz=108,slow=75,SNR=790				
H11S3	WAKE ISLAND Hyl	26.95 275	T	T	07 28 27.1
	baz=108,slow=75,SNR=698				
H11N3	WAKE ISLAND Hyl	27.12 276	T	T	07 28 37.2
	baz=108,slow=74,SNR=140				
H11N1	WAKE ISLAND Hyl	27.14 276	T	T	07 28 39.1
	baz=108,slow=74,SNR=81				
H11N2	WAKE ISLAND Hyl	27.14 276	T	T	07 28 39.4
	baz=108,slow=74,SNR=114				
WRA	Warramunga Arr	129.13 210	PKP	PKPdf	05 08 43.2 -0.5
	comp=Z,4.6nm,0.8s,baz=156,slow=1.7,SNR=22				
WRA			pPKP	pPKPdf	05 09 01.1 +0.8
	comp=Z,3.7nm,0.7s,baz=164,slow=1.7,SNR=7.4				
WRA	Warramunga Arr	129.13 210	PKPdf	PKPdf	05 08 42.7 -1.1
WRAB	Tennant Creek	129.13 210c	iPKIKP	PKiKP	05 08 44.9 +0.4
WRAB			pmax	pmax	
	comp=Z,14nm,2.5s				
ARU	Arti	131.91 36	PKPdf	PKPdf	05 08 48.0 +0.2
ARU	Arti	131.91 36	i PKIKP	PKiKP	05 08 48.9 +0.1
ARU					05 11 12.9
ARU			SS	SS	05 28 41.0 -0.3
TIXI	Tiksi	132.24 352	PKPdf	PKPdf	05 08 48.4 +0.4
TIXI	Tiksi	132.24 352c	iPKIKP	PKPdf	05 08 48.7 +0.7
TIXI			pmax	pmax	
	comp=Z,4.0nm,1.3s				
NRIK	Noril'sk	133.91 11c	iPKIKP	PKiKP	05 08 53.7 +1.2
NRIK			pmax	pmax	
	comp=Z,17nm,3.2s				
ABKAR	Akbulak array	134.71 45	PKPdf	PKPdf	05 08 53.0 -0.3
GEYT	Alibeck	134.81 61	PKP	PKPdf	05 08 53.9 0.0
	comp=Z,4.7nm,1.1s,baz=288,slow=5.9,SNR=3.8				
GYA0B	ALIBECK ARRAY	134.81 61	PKPdf	PKPdf	05 08 52.1 -1.8
BRVK	Borovoye	139.48 36	PKPdf	PKPdf	05 08 59.5 -2.6
BRVK	Borovoye	139.48 36c	iPKIKP	PKPdf	05 09 03.3 +1.3
BRVK			pmax	pmax	
	comp=Z,10.0nm,1.7s				
KK31	Karatay Array	143.40 51	PKPdf	PKPbc	05 09 07.0 +0.3
KK31	Karatay Array	143.40 51	PKIKP	PKPbc	05 09 07.0 +0.3
KBL	Kabul	143.77 65	PKPdf	PKPbc	05 09 09.2 +0.9
KBL	Kabul	143.77 65	PKIKP	PKPbc	05 09 09.3 +1.0
BTK	Batken	144.39 56		PKPab	05 09 09.8 +0.2
BTK	Batken	144.39 56	PKIKP	PKPab	05 09 09.8 +0.2
KURK	Kurchatov	145.10 35		PKPbc	05 09 11.9 +0.3
KURK	Kurchatov	145.10 35	i PKIKP	PKPab	05 09 12.2 +0.5
PCHI	Peechi	145.24 109⇓	eP	PKPbc	05 09 12.7 -0.4
PCHI			ex	x	05 21 29.3
EKS2	Erkin-Say	145.82 50	P	PKPab	05 09 15.0 +0.2
	SNR=29				
ZAA0	Zalesovo Array	145.82 26	PKPbc	PKPbc	05 09 14.1 +0.3
ZALV	Zalesovo Beam	145.82 26	PKPbc	PKPdf	05 09 13.6 +0

AAK	**Ala-Archa**	**146.33**	**50**	*c* PKP2	**PKPbc**	**05 09 16.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,67nm,1.3s						
CHMS	**Chumysh**	**146.38**	**49**	P	**PKPdf**	**05 09 15.4**	**+0.8**
	SNR=12						
UCH	**Uchtor**	**146.48**	**51**	P	**PKPbc**	**05 09 16.7**	**-0.1**
	SNR=58						
KBK	**Karagaybulak**	**146.63**	**50**	P	**PKPbc**	**05 09 16.7**	**-0.2**
	SNR=19						
TKM2	**Tokmak 2**	**146.99**	**49**	P	**PKPdf**	**05 09 16.6**	**+0.7**
	SNR=30						
BOD	**Bodaibo**	**147.23**	**356**	*e*PKP2	**PKPdf**	**05 09 16.6**	**+1.1**
BOD				pmax	pmax		
	comp=Z,112nm,1.5s						
BOOM	**Boomskoye usch**	**147.38**	**50**		**PKPdf**	**05 09 17.6**	**+1.1**
BOOM	**Boomskoye usch**	**147.38**	**50**	PKP2	**PKPdf**	**05 09 17.6**	**+1.1**
ULHL	**Ulahol**	**147.68**	**50**	P	**PKPdf**	**05 09 18.3**	**+1.3**
	SNR=27						
SMRI	**Semarang**	**147.96**	**181**	PKPbc	**PKPbc**	**05 09 20.6**	**-0.5**
KSH	**Kashi**	**148.37**	**55**	PKPbc	**PKPdf**	**05 09 19.5**	**+1.4**
ZEA	**Zeya**	**148.58**	**340**	*e*PKP2	**PKiKP**	**05 09 22.9**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
MAKZ	**Makanchi**	**149.17**	**38**		**PKPbc**	**05 09 22.6**	**-0.7**
MAKZ	**Makanchi**	**149.17**	**38**	PKP2	**PKPbc**	**05 09 22.6**	**-0.7**
MKAR	**Makanchi Array**	**149.35**	**38**	PKPbc	**PKPbc**	**05 09 23.8**	**0.0**
	comp=Z,29nm,0.7s,baz=311,slow=2.8,SNR=103						
MKAR				pPKPbc	**sPKPdf**	**05 09 41.5**	**-0.8**
	comp=Z,30nm,0.8s,baz=336,slow=2.7,SNR=14						
MKAR	**Makanchi Array**	**149.35**	**38**	PKPdf	**PKPdf**	**05 09 18.4**	**-1.0**
MKAR				PKPbc	**PKPbc**	**05 09 24.0**	**+0.2**
MKAR	**Makanchi Array**	**149.35**	**38**	PKiKP	**PKPdf**	**05 09 18.4**	**-1.0**
MKAR						05 09 24.0	
HYBB	**Hyderabad (bro**	**150.07**	**99**	*e*PKiKP	**PKPbc**	**05 09 26.6**	**+0.2**
HYBB				*ep*PKiKP	**sPKPdf**	**05 09 43.2**	**-0.8**
HYBB				*e*SKSdf	**SKSdf**	**05 16 25.7**	**+0.6**
LUWI	**Luwuk**	**151.00**	**208**		**PKPbc**	**05 09 28.4**	**-0.3**
IRK	**Irkutsk**	**152.66**	**7**	*e*PKIKP	**PKiKP**	**05 09 33.3**	**+1.8**
IRK				pmax	pmax		
	comp=Z,69nm,1.4s						
MOY	**Mondy**	**152.73**	**12**	*e*PKP2	**PKPab**	**05 09 49.6**	**+7.1**
MOY				pmax	pmax		
	comp=Z,57nm,2.0s						
MJAR	**Matsushiro Arr**	**153.09**	**302**	PKPbc	**PKiKP**	**05 09 34.1**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=76,slow=1.8,SNR=9.9						
MJAR				PKPab	**PKPab**	**05 09 43.9**	**-0.6**
	comp=Z,4.1nm,0.8s,baz=78,slow=4.4,SNR=7.8						
MAJO	**Matsushiro**	**153.09**	**302**		**PKPbc**	**05 09 32.8**	**+0.1**
MAJO	**Matsushiro**	**153.09**	**302**	PKIKP	**PKPbc**	**05 09 32.8**	**+0.1**
USRK	**Ussuriysk Ar.**	**153.73**	**322**	PKPbc	**PKPbc**	**05 09 34.3**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=45,slow=0.6,SNR=4.6						
USRK				pPKPbc	**pPKPbc**	**05 09 49.9**	**-0.6**
	comp=Z,9.6nm,0.9s,baz=22,slow=0.8,SNR=9.6						
WMQ	**Urumqi**	**154.19**	**38**	*e*PKPbc	**PKPdf**	**05 09 27.0**	**+0.2**
WMQ				LR	LR		
	comp=Z,84nm,21.7s						
ZAK	**Zakamensk**	**154.36**	**9**	*e*PKIKP	**PKPdf**	**05 09 27.3**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BNX	**BinXian**	**155.00**	**330**	⇑P	**PKPab**	**05 09 53.3**	**+1.1**
RPSI	**Rantau Prapat**	**155.38**	**154**	PKPdf	**PKPdf**	**05 09 28.9**	**-0.4**
RPSI				PKPab	pPKPbc	05 09 53.8	-1.2
PSI	**Prapat**	**155.47**	**153**	PKIKP	**PKPdf**	**05 09 28.9**	**-0.6**
PSI						05 09 53.8	
PYUN	**Piuthan**	**156.01**	**77**	*e*P	**PKPdf**	**05 09 29.4**	**-0.5**
	comp=Z,12nm,0.8s						
DANN	**Dangsing**	**156.69**	**76**	*e*P	**PKPdf**	**05 09 30.9**	**0.0**
	comp=Z,28nm,0.8s						
SONM	**Songino Array**	**157.24**	**6**	PKP	**PKPdf**	**05 09 30.4**	**-0.4**
	comp=Z,4.0nm,1.0s,baz=349,slow=1.5,SNR=13						
SONM				pPKP	**pPKPdf**	**05 09 47.2**	**-0.3**
	comp=Z,2.2nm,1.0s,baz=354,slow=3.1,SNR=3.5						
SONM				pPKPab	**pPKPab**	**05 10 19.2**	**+1.2**
	comp=Z,12nm,0.9s,baz=333,slow=4.8,SNR=12						
ULN	**Ulaanbaatar**	**157.26**	**5**	PKPdf	**PKPdf**	**05 09 30.2**	**-0.6**
ULN	**Ulaanbaatar**	**157.26**	**5**	PKIKP	**PKPdf**	**05 09 30.2**	**-0.6**
GKN	**Gorkha**	**157.47**	**77**	*e*P	**PKPdf**	**05 09 31.2**	**-0.6**
	comp=Z,8.3nm,0.5s						
PKIN	**Phulchoki**	**158.15**	**78**	*e*P	**PKPdf**	**05 09 32.0**	**-0.7**
	comp=Z,4.1nm,0.5s						
PKI	**Pulchoki**	**158.16**	**78**	*e*P	**PKPdf**	**05 09 32.0**	**-0.8**
JIRN	**Jiri**	**158.85**	**78**	*e*P	**PKPdf**	**05 09 32.9**	**-0.8**
	comp=Z,1.8nm,0.3s						
RAMN	**Ramite**	**159.22**	**80**	*e*P	**PKPdf**	**05 09 33.8**	**-0.2**
	comp=Z,46nm,1.3s						
KSRS	**Korea Array**	**160.20**	**313**	PKP	**PKPdf**	**05 09 33.4**	**-1.0**
	comp=Z,8.4nm,1.4s,baz=258,slow=1.2,SNR=5.3						
KSRS				pPKP	**pPKPdf**	**05 09 52.0**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=183,slow=2.4,SNR=4.7						
KSRS				PKPab	**PKPab**	**05 10 16.2**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=64,slow=5.3,SNR=4.9						
KSRS				pPKPab	**pPKPab**	**05 10 32.6**	**+1.8**
	comp=Z,4.6nm,0.8s,baz=49,slow=4.6,SNR=6.6						
GOMU	**GeErMu**	**163.19**	**46**	PKP	**PKPdf**	**05 09 39.5**	**+1.4**
GTA	**Gaotai**	**163.57**	**28**	*e*PKP	**PKPdf**	**05 09 39.0**	**+0.9**
GTA				pPKP	pPKPdf	05 09 56.0	+1.3
GTA				PKPab	**PKPab**	**05 10 29.8**	**+0.1**
GTA				LR	LR		
	comp=Z,81nm,20.4s						
GTA				LR	LR		
	comp=Z,110nm,18.9s						
GTA				LR	LR		
	comp=Z,170nm,22.9s						
SHL	**Shillong**	**163.94**	**85**	PKPdf	**PKPdf**	**05 09 37.8**	**-1.1**
SHL					**PKPab**	**05 10 30.6**	**-1.4**
SHL	**Shillong**	**163.94**	**85**	PKIKP	**PKPdf**	**05 09 37.8**	**-1.1**
SHL						05 10 30.6	
HHC	**Hu-ho-hao-te**	**164.29**	**355**	*e*PKP	**PKPdf**	**05 09 34.5**	**-4.1**
CMAR	**Chiang Mai Arr**	**168.03**	**122**	PKP	**PKPdf**	**05 09 42.0**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=254,slow=1.8,SNR=11						
CMAR				PKPab	**PKPab**	**05 10 48.4**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=247,slow=3.5,SNR=12						
LZH	**Lanzhou**	**168.03**	**23**	*e*PKP	**PKPdf**	**05 09 44.0**	**+2.2**
LZH				sPKP		05 10 01.8	
LZH				PKPab	**PKPab**	**05 10 55.5**	**+6.0**
LZH				LR	LR		
	comp=Z,340nm,14.9s						
LZH				LR	LR		
	comp=Z,290nm,14.4s						
LZH				LR	LR		
	comp=Z,230nm,14.9s						
CHTO	**Chiang Mai**	**168.23**	**120**	PKPdf	**PKPdf**	**05 09 41.0**	**-1.2**
CHTO					**PKPab**	**05 10 49.5**	**-1.3**
CHTO	**Chiang Mai**	**168.23**	**120**	PKIKP	**PKPdf**	**05 09 41.0**	**-1.2**
CHTO						05 10 49.5	
PHRA	**Phrae**	**169.02**	**125**	PKPdf	**PKPdf**	**05 09 42.3**	**-0.5**
PHRA				PKPab	**PKPab**	**05 10 53.1**	**-1.1**
XAN	**Xi'an**	**171.14**	**4**	PKP	**PKPdf**	**05 09 44.5**	**+0.9**
XAN				pPKP	pPKPdf	05 10 02.5	+2.2
PZH	**PanZhiHua**	**172.76**	**78**	PKP	**PKPdf**	**05 09 43.5**	**-1.2**
KMI	**Kunming**	**173.74**	**89**	⇑PKP	**PKPdf**	**05 09 45.3**	**+0.1**

*IDC **30** 05:23:10.8±1.2, 48°.10S×102°.72E, h0km, mb4.1/6, mbtmp4.1/6, MS3.7/7, Error ellipse: s-maj=46.6km s-min=21.8km az=100.0*

ISC 30 05:23:12.7±0.9, 48°.1S±0°.1×102°.9E±0°.3, h10km, n23, σ0°76/12, mb4.0/6, MS3.8/6, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.64**	**37**	T	T	05 42 50.8	
	baz=209,slow=74,SNR=90						
H01W1	**Cape Leeuwin H**	**15.65**	**37**	T	T	05 42 51.7	
	baz=209,slow=74,SNR=106						
H01W3	**Cape Leeuwin H**	**15.65**	**36**	T	T	05 42 51.8	
	baz=209,slow=74,SNR=110						
NWAO	**Narrogin (SRO)**	**18.63**	**41**	LR	LR	05 32 36.9	
	comp=Z,172nm,20.1s,baz=280,slow=30						
ASAR	**Alice Springs**	**34.63**	**56**	P	**P**	**05 30 02.0**	**-0.1**
	2.9nm,1.1s,baz=222,slow=6.8,SNR=7.8						
	2.9nm,1.1s						
VNDA	**Vanda**	**36.91**	**162**	P	**P**	**05 30 21.9**	**+0.8**
	1.8nm,0.9s,baz=289,slow=9.5,SNR=11						
VNDA				LR	LR	05 44 30.5	
	comp=Z,155nm,18.0s,baz=292,slow=35						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**37.86**	**53**	P	**P**	**05 30 30.2**	**+0.4**
	4.3nm,1.1s,baz=214,slow=7.9,SNR=11						
	4.3nm,1.1s						
QSPA	**South Pole Qui**	**42.03**	**180**	P	**P**	**05 31 03.1**	**-1.0**
	2.7nm,0.9s,baz=337,slow=5.5,SNR=4.4						
QSPA				LR	LR	05 47 28.1	
	comp=Z,99nm,18.6s,baz=312,slow=35						
	2.7nm,0.9s						
KAPI	**Kappang**	**45.30**	**24**	LR	LR	05 49 22.5	
	comp=Z,34nm,21.3s,baz=180,slow=35						
H08S2	**Diego Garcia H**	**47.84**	**317**	T	T	06 22 52.3	
	baz=154,slow=76						
H08S1	**Diego Garcia H**	**47.85**	**317**	T	T	06 22 52.5	
	baz=154						
H08S3	**Diego Garcia H**	**47.87**	**317**	T	T	06 22 53.9	
	baz=154,slow=76						
SNAA	**Sanae**	**49.71**	**204**	P	**P**	**05 32 05.1**	**+0.6**
SNAA	**Sanae**	**49.71**	**204**	LR	LR	05 51 19.5	
	comp=Z,108nm,19.7s,baz=151,slow=34						
VNA2	**Neumayer--Watz**	**51.35**	**203**	P	**P**	**05 32 17.1**	**+0.4**
	baz=111,slow=6.0						
VNA1	**Neumayer--Stat**	**51.74**	**203**	P	**P**	**05 32 20.3**	**+0.7**
VNA3	**Neumayer Olymp**	**51.75**	**202**	P	**P**	**05 32 19.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**66.36**	**356**	P	**P**	**05 34 00.9**	**-0.6**
	0.7nm,0.3s,baz=190,slow=7.1,SNR=5.1						
	0.7nm,0.3s						
PMSA	**Palmer Station**	**66.99**	**186**	LR	LR	06 03 54.5	
	comp=Z,77nm,18.1s,baz=149,slow=36						
PLCA	**Paso Flores**	**91.35**	**185**	LR	LR	06 17 35.5	
	comp=Z,47nm,18.5s,baz=176,slow=36						
SONM	**Songino Array**	**95.61**	**2**	P	**P**	**05 36 38.7**	**+0.9**
	0.3nm,0.6s,baz=213,slow=5.4,SNR=1.4						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**148.82**	**93**	PKPbc	**PKPbc**	**05 42 59.9**	**-0.4**
	4.0nm,1.0s,baz=219,slow=5.5,SNR=14						
TXAR	**Lajitas Array**	**152.28**	**123**	PKPbc	**PKPbc**	**05 43 07.6**	**-1.1**
	1.1nm,1.0s,baz=176,slow=2.4,SNR=6.9						

DDA 30 05:26:00.8±0.0, 39°.56N×43°.55E, h7km±2km, ML0.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.11**	**100**	P	Pg	05 26 03.2	-0.2
DYDN				S	Sg	05 26 05.8	+0.7
KOTA	**Agri, Merkez-K**	**0.36**	**312**	P	Pg	05 26 08.3	+0.4
KOTA				S	Sg	05 26 13.7	+1.1
KOTA				*i* AML	AML	05 26 16.0	
	comp=N,14nm,0.2s						
IGDI	**IGDIR**	**0.51**	**53**	P	Pb	05 26 12.3	+0.1
IGDI				*i* AML	AML	05 26 23.0	
	comp=N,7.9nm,0.7s						

*PRU **30** 05:26:59.8±0.0, 44°.27N×39°.74E, h0km, M4.6*
*BJI **30** 05:27:02.5±0.0, 44°.17N×39°.65E, h10km, mb4.7/23, mB5.0/10, Ms4.5/12, Ms7 4.1/12*
*IDC **30** 05:27:02.6±0.4, 44°.23N×39°.59E, h0km, mb4.3/25, mbtmp4.3/35, ML4.1/9, MS3.8/23, Error ellipse: s-maj=10.0km s-min=5.4km az=10.0*
*CFUSG **30** 05:27:03.1, 44°.39N×39°.70E, h10km, mb3.8/6, Krasnodar region Magtype MSH 4.0 from 6 stations*
*NEIC **30** 05:27:04.9±1.6, 44°.39N±0°.07×39°.56E±0°.06, h10km±1km, mb4.6/51, Error ellipse: s-maj=12.2km s-min=7.6km az=187.0*
*MED_RC **30** 05:27:05.0±0.3, 44°.24N×39°.64E, h21km±1km, MW4.6/22, Moment Tensor Solution. Mantle waves: s22, c32; Duration: 1*1 Moment tensor: Scale 10^16 Nm; Mrr=0.05±.13; Mθθ=0.98±.08; Mφφ=1.03±.08; Mrθ=0.12±.10; Mrφ=0.27±.05; Mθφ=0.31±.06; Best double couple: M0=1.09000×10^16 NP1:φs=53.00000°, δ83.00000°, λ14.00000°. NP2:φs=321.00000°, δ76.00000°, λ173.00000°. Principal axes: T 1.1500, Plg15.0000°, Azm278.0000°; N -0.1300, Plg74.0000°, Azm79.0000°; P -1.0300, Plg5.0000°, Azm187.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **30** 05:27:05.8±0.0, 44°.19N×39°.61E, h18km, MPVA5.3, Felt IV MSK at Neftegorsk, Krasnodar. region, III-IV MSK at Tuapse, Apsheronsk, II-III MSK at Lazarevskoe, II MSK at Stavropol*
*MCSM **30** 05:27:05.2±0.4, 44°N±5°×4°0E±°, h10km±2km, mb4.8*
*AZER **30** 05:27:06.9±2.0, 44°.29N×39°.57E, h10km, Error ellipse: s-maj=26.2km s-min=17.4km az=8.0*
*ISK **30** 05:27:08.9, 43°.72N×39°.41E, h5km, ML4.3/11*
*NNC **30** 05:27:09.0±2.1, 45°.02N×39°.92E, h0km, mb4.5, Error ellipse: s-maj=38.6km s-min=21.3km az=150.0*

ISC 30 05:27:05.6±0.8, 44°.29N±0°.02×39°.61E±0°.02, h15km±5km, n573, σ1§94/696, mb4.6/71, MS3.8/23, 81C-51D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOYR	**Goytkh**	**0.17**	**255**	*i* Pg	**Pb**	**05 27 10.4**	**0.0**
GOYR				*e*Sg	**Sg**	**05 27 13.9**	**+1.3**
GOYR	**Goytkh**	**0.17**	**255**	*i* PG	**Pb**	**05 27 10.6**	**+0.2**
GOYR				*i* S	**Sg**	**05 27 13.7**	**+1.1**
LZRR	**Lazarevskoye**	**0.39**	**205**	*i* Pg	**Pg**	**05 27 13.3**	**-0.2**
LZRR				*e*Sg	**Sg**	**05 27 18.8**	**-0.1**
LZRR	**Lazarevskoye**	**0.39**	**205**	*e*PG	**Pg**	**05 27 13.3**	**-0.2**
LZRR				*e*		05 27 19.0	
GUZR	**Guzeripl'**	**0.47**	**128**	*i* Pg	**Pg**	**05 27 13.4**	**-1.6**
GUZR				*e*Sg	**Sg**	**05 27 19.8**	**-1.6**
GUZR	**Guzeripl'**	**0.47**	**128**	*i* PG	**Pg**	**05 27 13.5**	**-1.5**
SOC	**Sochi**	**0.71**	**173**	*i* Pg	**Pg**	**05 27 18.4**	**-1.1**
SOC				*e*Sg	**Sg**	**05 27 28.2**	**-0.7**
SOC	**Sochi**	**0.71**	**173**	*i* PG	**Pg**	**05 27 18.5**	**-1.0**
SOC				*i* S	**Sg**	**05 27 28.0**	**-0.9**
KGUR	**Krasnodar**	**0.84**	**331**	*i* Pg	**Pn**	**05 27 24.9**	**+2.1**
KGUR				*e*Sg	**Sn**	**05 27 38.1**	**+3.3**
LABN	**Labinsk**	**0.87**	**66**	*i* Pg	**Pn**	**05 27 23.7**	**+0.4**
LABN				*e*Sg	**Sn**	**05 27 35.6**	**-0.2**
LABN	**Labinsk**	**0.87**	**66**	*i* PG	**Pn**	**05 27 23.7**	**+0.4**
LABN				*e*S	**Sn**	**05 27 35.6**	**-0.2**
VSLR	**Vesyoloye**	**0.89**	**159**	*i* Pg	**Pg**	**05 27 21.3**	**-1.5**
VSLR				*e*Sg	**Sg**	**05 27 33.3**	**-1.1**
VSLR	**Vesyoloye**	**0.89**	**159**	*i* PG	**Pg**	**05 27 21.6**	**-1.2**
VSLR				*i* S	**Sg**	**05 27 33.7**	**-0.7**
AHMR	**Akhmetovskaya**	**1.04**	**97**	*i* Pg	**Pb**	**05 27 24.4**	**-1.0**
AHMR				*e*Sg	**Sg**	**05 27 38.3**	**-1.1**
AHMR	**Akhmetovskaya**	**1.04**	**97**	*i* PG	**Pb**	**05 27 24.6**	**-0.7**
AHMR				*i* S	**Sg**	**05 27 38.4**	**-1.0**
GL1R	**Gelendzhik**	**1.13**	**284**	*e*Pg	**Pn**	**05 27 27.9**	**+1.1**
GL1R				*e*Sg	**Sn**	**05 27 45.2**	**+3.2**
GL1R	**Gelendzhik**	**1.13**	**284**	*e*PG	**Pn**	**05 27 27.9**	**+1.1**
GL1R				*e*S	**Sn**	**05 27 45.2**	**+3.2**
SPGR	**Shapsug**	**1.19**	**293**	*e*Pg	**Pg**	**05 27 29.7**	**+1.2**
SPGR				*e*Sg	**Sn**	**05 27 47.3**	**+3.9**
SPGR	**Shapsug**	**1.19**	**293**	*e*PG	**Pg**	**05 27 29.7**	**+1.2**
SPGR				*e*S	**Sn**	**05 27 47.3**	**+3.9**
ARXR	**Arkhyz**	**1.41**	**121**	*e*Pg	**Pn**	**05 27 29.1**	**-1.7**
ARXR				*e*Sg	**Sn**	**05 27 48.0**	**-1.2**
ARXR	**Arkhyz**	**1.41**	**121**	*i* PG	**Pn**	**05 27 29.9**	**-0.9**
ERBR	**Yeremizino-Bor**	**1.55**	**23**	*i* Pg	**Pg**	**05 27 35.1**	**-0.4**
ERBR				*e*Sg	**Sg**	**05 27 58.0**	**+2.3**
ERBR	**Yeremizino-Bor**	**1.55**	**23**	*i* PG	**Pg**	**05 27 35.1**	**-0.4**
ERBR				*e*S	**Sg**	**05 27 58.0**	**+2.3**
ANN	**Anapa**	**1.63**	**289**	*i* Pg	**Pg**	**05 27 36.6**	**-0.3**
ANN				*e*Sg	**Sg**	**05 28 00.8**	**+2.6**
ANN	**Anapa**	**1.63**	**289**	*i* PN	**Pg**	**05 27 36.7**	**-0.3**
ANN				*e*S	**Sg**	**05 28 00.8**	**+2.6**
NVNR	**Nevinnomyssk**	**1.72**	**78**	*e*Pg	**Pn**	**05 27 35.6**	**+0.7**
NVNR				*e*Sg	**Sn**	**05 27 57.4**	**+0.8**
NVNR	**Nevinnomyssk**	**1.72**	**78**	*i* PN	**Pn**	**05 27 35.9**	**+1.0**
DOMR	**Dombai**	**1.77**	**124**	*i* Pg	**Pn**	**05 27 35.2**	**-0.6**
DOMR				*e*Sg	**Sn**	**05 27 58.3**	**+0.2**
DOMR	**Dombai**	**1.77**	**124**	*i* PN	**Pn**	**05 27 35.4**	**-0.4**
KIV	**Kislovodsk**	**2.24**	**98**	Pn	**Pn**	**05 27 42.8**	**+0.5**
KIV				Sn	**Sn**	**05 28 09.9**	**+0.2**
KIV	**Kislovodsk**	**2.24**	**98**	*i* Pg	**Pn**	**05 27 42.8**	**+0.5**
KIV				*e*Sg	**Sn**	**05 28 10.8**	**+1.1**
KIV	**Kislovodsk**	**2.24**	**98**	*i* PN	**Pn**	**05 27 42.9**	**+0.7**
KIV				*e*S	**Sn**	**05 28 10.8**	**+1.1**
KIV0	**Kislovodsk Arr**	**2.25**	**98**	*i* Pg	**Pn**	**05 27 42.9**	**+0.5**
KIV0				*e*Sg	**Sn**	**05 28 10.8**	**+1.0**
KVAR	**Kislovodsk Arr**	**2.25**	**98**	Pn	**Pn**	**05 27 43.1**	**+0.8**
	baz=252,slow=20						
KVAR				Sn	**Sn**	**05 28 10.8**	**+1.0**
	baz=8.9,slow=16						
	324nm,0.4s						
SHA1	**Shidzhatmaz**	**2.27**	**103**	*e*Pg	**Pn**	**05 27 42.8**	**+0.1**
SHA1				*e*Sg	**Sn**	**05 28 12.1**	**+1.5**
SHA1	**Shidzhatmaz**	**2.27**	**103**	*i* PN	**Pn**	**05 27 43.5**	**+0.8**
SHA1				*e*S	**Sn**	**05 28 11.3**	**+0.8**
BEYR	**Belyy Ugol+**	**2.33**	**96**	*e*Pn	**Pn**	**05 27 44.6**	**+1.3**
BEYR				*e*Sn	**Sn**	**05 28 13.7**	**+2.0**
BEYR	**Belyy Ugol+**	**2.33**	**96**	*e*PN	**Pn**	**05 27 44.6**	**+1.3**
BEYR				*e*S	**Sn**	**05 28 13.7**	**+2.0**
ALER	**Alexandrovskoy**	**2.41**	**78**	*i* Pn	**Pn**	**05 27 45.8**	**+1.3**
ALER				*e*Sn	**Sn**	**05 28 15.9**	**+2.1**
ALER	**Alexandrovskoy**	**2.41**	**78**	*i* PN	**Pn**	**05 27 45.8**	**+1.3**
ALER				*e*S	**Sn**	**05 28 15.9**	**+2.1**
KBZ	**Khabaz**	**2.44**	**102**	Pn	**Pn**	**05 27 45.2**	**+0.4**
	57nm,0.3s,baz=301,slow=13,SNR=401						
KBZ				Sn	**Sn**	**05 28 16.6**	**+2.3**
	92nm,0.3s,baz=315,slow=16,SNR=12						
	334nm,0.5s						
KBZ	**Khabaz**	**2.44**	**102**	*i* Pn	**Pn**	**05 27 46.0**	**+1.2**
KBZ				*i* Sn	**Sn**	**05 28 16.1**	**+1.8**
KBZ	**Khabaz**	**2.44**	**102**	*i* PN	**Pn**	**05 27 46.3**	**+1.5**
KBZ				*i* S	**Sn**	**05 28 15.8**	**+1.4**
NEY	**Neytrino**	**2.49**	**114**	*e*Pn	**Pn**	**05 27 46.9**	**+1.2**
NEY				*e*Sn	**Sn**	**05 28 18.1**	**+2.3**
NEY	**Neytrino**	**2.49**	**114**	*e*PN	**Pn**	**05 27 46.8**	**+1.2**
NEY				*e*S	**Sn**	**05 28 18.1**	**+2.3**
GOF	**Gofitskoye**	**2.57**	**71**	*e*Pn	**Pn**	**05 27 48.4**	**+1.7**
GOF				*e*Sn	**Sb**	**05 28 20.9**	**-1.8**
GOF	**Gofitskoye**	**2.57**	**71**	⇑*e*PN	**Pn**	**05 27 48.3**	**+1.7**
GOF				*e*S	**Sb**	**05 28 22.7**	**0.0**
GOF				pmax	pmax		
	comp=Z,251nm,1.2s						
GOF				smax	smax		
	comp=N,8μm,0.8s						
GOF				smax	smax		
	comp=E,3μm,0.4s						
NCK	**Nalchik**	**2.99**	**104**	*e*Pn	**Pn**	**05 27 53.9**	**+1.5**
NCK				*e*Sn	**Sn**	**05 28 31.1**	**+3.0**
NCK	**Nalchik**	**2.99**	**104**	*e*PN	**Pn**	**05 27 53.9**	**+1.5**
NCK				*e*S	**Sn**	**05 28 31.1**	**+3.0**
FEO	**Feodosiya**	**3.10**	**285**	*i* P	**Pn**	**05 27 55.3**	**+1.5**
FEO				Pm		05 27 56.4	
	comp=Z,136nm,0.4s						
FEO				*i* S	**Sn**	**05 28 32.9**	**+2.4**
FEO				Sm		05 28 36.5	
	comp=N,445nm,0.3s						
FEO				Sm		05 28 36.5	
	comp=E,231nm,0.3s						
FEO	**Feodosiya**	**3.10**	**285**	*i* Pn	**Pn**	**05 27 55.3**	**+1.5**
FEO				*e*Sn	**Sn**	**05 28 32.9**	**+2.4**
FEO	**Feodosiya**	**3.10**	**285**	⇓*i* PN	**Pn**	**05 27 55.3**	**+1.5**
FEO				*i* S	**Sn**	**05 28 32.9**	**+2.4**
TKB	**Tkibuli**	**3.14**	**127**	PN	**Pn**	**05 27 56.3**	**+1.8**
TKB				S	**Sg**	**05 28 46.0**	**-0.5**
DIGR	**Digorskoe uzhe**	**3.21**	**114**	*e*Pn	**Pn**	**05 27 57.2**	**+1.6**
DIGR				*e*Sn	**Sn**	**05 28 34.5**	**+0.9**
DIGR	**Digorskoe uzhe**	**3.21**	**114**	*e*PN	**Pn**	**05 27 57.2**	**+1.6**
DIGR				*e*S	**Sn**	**05 28 34.5**	**+0.9**
LSNR	**Lesken**	**3.22**	**107**	*e*Pn	**Pn**	**05 27 57.9**	**+2.3**
LSNR				*e*Sn	**Sn**	**05 28 34.9**	**+1.2**
LSNR	**Lesken**	**3.22**	**107**	*e*PN	**Pn**	**05 27 57.9**	**+2.3**
LSNR				*e*S	**Sn**	**05 28 34.9**	**+1.2**
ONI	**Oni**	**3.28**	**120**		**Pn**	**05 27 58.3**	**+1.9**
ONI	**Oni**	**3.28**	**120**	PN	**Pn**	**05 28 00.1**	**+3.7**
ONI				S	**Sg**	**05 28 54.6**	**+3.8**
CHOM	**Cayeli-Rize**	**3.31**	**165**	PN	**Pn**	**05 27 56.6**	**-0.2**
KTUT	**Trabzon**	**3.31**	**178**	⇑P	Pg	05 28 14.3	+5.4
KTUT	**Trabzon**	**3.31**	**178**	PN	**Pn**	**05 27 55.6**	**-1.1**
SUDU	**Sudak**	**3.34**	**282**	*e*P	**Pn**	**05 27 58.2**	**+1.0**
SUDU				*i* P	Pb	05 27 58.6	-5.9
SUDU				Pm		05 28 03.9	
	comp=Z,348nm,0.3s						
SUDU				*e*S	**Sn**	**05 28 37.5**	**+0.9**
SUDU				Sm		05 28 43.8	
	comp=N,958nm,0.7s						
SUDU				Sm		05 28 43.8	
	comp=E,190nm,0.4s						
SUDU	**Sudak**	**3.34**	**282**	*e*Pn	**Pn**	**05 27 57.5**	**+0.3**
SUDU				*e*Sn	**Sn**	**05 28 36.9**	**+0.3**
SUDU	**Sudak**	**

BRNG S **Sg** **05 29 17.4 +0.5**
DIKM Dikmen 4.14 232 ⇑P **Pn** **05 28 08.3 +0.1**
DIKM Dikmen 4.14 232 Pn **Pn** **05 28 08.3 +0.1**
SENK Senkaya-Erzuru 4.25 150 PN **Pn** **05 28 11.3 +1.4**
SEV Sevastopol' 4.26 275 *i* P **Pn** **05 28 10.2 +0.4**
SEV Pm 05 28 12.1
comp=Z,53nm,0.4s
SEV *i* S **Sn** **05 28 59.2 -0.1**
SEV Sm 05 29 02.9
comp=N,171nm,0.4s
SEV Sm 05 29 02.9
comp=E,120nm,0.3s
SEV Sevastopol' 4.26 275 *e*Pn **Pn** **05 28 09.3 -0.5**
SEV *e*Sn **Sn** **05 28 58.3 -1.0**
SEV Sevastopol' 4.26 275 *i* PN **Pn** **05 28 09.3 -0.5**
SEV *i* S **Sn** **05 28 58.3 -1.0**
KOPT Kop Dagi 4.32 171 **Pn** **05 28 12.4 +1.4**
SHTL Shatili 4.36 110 PN **Pn** **05 28 13.7 +2.4**
SHTL S **Sg** **05 29 26.0 +0.6**
KARS Kars 4.47 144 PN **Pn** **05 28 15.6 +2.7**
KARS Kars 4.47 144 **Pn** **05 28 14.9 +2.0**
KARS Kars 4.47 144 PN **Pn** **05 28 14.9 +2.0**
DMNI Dmanisi 4.49 130 PN Pb 05 28 18.9 -5.2
SEAG Tbilisi Sea 4.57 122 PN **Pn** **05 28 18.5 +4.3**
TOKA Tokat 4.59 211 **Pn** **05 28 14.6 +0.1**
KOPR Koprukoy-ERZUR 4.61 158 PN **Pn** **05 28 15.6 +0.7**
BTNK Botanikuri 4.62 123 PN Pn 05 28 09.7 -5.1
BTNK S **Sb** **05 29 26.8 +5.2**
GROC Groznyy 4.62 101 *e*Pn **Pn** **05 28 17.9 +3.2**
GROC *e*Sn **Sn** **05 29 07.4 -0.6**
GROC Groznyy 4.62 101 *e*PN Pn 05 28 19.7 +5.0
GROC *e* 05 28 30.6
GROC *e*S **Sn** **05 29 14.5 +6.5**
GROC *e* 05 29 39.8
GROC pmax pmax
comp=Z,47nm,0.4s
GROC pmax pmax
comp=Z,87nm,1.2s
GROC smax smax
comp=N,222nm,0.5s
GROC smax smax
comp=E,359nm,0.5s
GROC smax smax
comp=E,359nm,0.5s
GROC smax smax
comp=N,213nm,0.6s
GROC MLR MLR
comp=Z,1μm,2.0s
ERZN Erzincan 4.70 179 PN **Pn** **05 28 15.5 -0.6**
BZK Bozkurt 4.72 242 ⇑P **Pn** **05 28 14.2 -1.9**
BZK Bozkurt 4.72 242 Pn **Pn** **05 28 14.6 -1.5**
YEDI Yedisu-Bingol 4.90 171 PN **Pn** **05 28 18.8 0.0**
DVE Vedeno 4.92 103 *e*Pn **Pn** **05 28 21.2 +2.2**
DVE *e*Sn **Sn** **05 29 17.3 +1.7**
DVE Vedeno 4.92 103 *e*PN **Pn** **05 28 21.2 +2.2**
DVE *e*S **Sn** **05 29 17.3 +1.7**
BTLR Botlikh 5.08 106 *e*Pn **Pn** **05 28 23.0 +1.8**
BTLR Botlikh 5.08 106 *e*PN **Pn** **05 28 23.0 +1.8**
BTLR *e*S **Sn** **05 29 23.3 +3.6**
QZX Qazax, Azerbai 5.34 125 P **Pn** **05 28 26.8 +2.0**
SNR=9.1
QZX S **Sn** **05 29 30.4 +4.5**
BNGB Bingl 5.36 171 PN **Pn** **05 28 25.3 +0.2**
DBC Dubki 5.39 101 *e*Pn **Pn** **05 28 27.1 +1.6**
DBC *e*Sn **Sn** **05 29 27.8 +0.5**
DBC Dubki 5.39 101 *e*P **Pn** **05 28 27.1 +1.6**
DBC *e*S **Sn** **05 29 27.8 +0.5**
PTK Pertek 5.40 182 PN **Pn** **05 28 25.4 -0.3**
ILGA Ilgaz 5.42 235 **Pn** **05 28 25.1 -0.8**
XNZR Khunzakh 5.46 106 *e*Pn **Pn** **05 28 28.3 +1.8**
UNCR Uncukul 5.46 104 *e*Pn **Pn** **05 28 28.3 +1.9**
UNCR Uncukul 5.46 104 *e*P **Pn** **05 28 28.3 +1.9**
UNCR *e*S **Sn** **05 29 30.9 +1.9**
KRNR Karanay 5.50 103 *e*Pn **Pn** **05 28 28.8 +1.7**
KRNR *e*Sn **Sn** **05 29 28.8 -1.3**
KRNR Karanay 5.50 103 *e*P **Pn** **05 28 28.8 +1.7**
KRNR *e*S **Sn** **05 29 28.8 -1.3**
TASB TASBURUN-IGDIR 5.51 140 PN **Pn** **05 28 30.5 +3.4**
GNI Garni 5.63 136 LR LR 05 30 51.3
comp=Z,698nm,20.6s,baz=318,slow=41
GNI Garni 5.63 136 *e*P **Pn** **05 28 33.1 +4.3**
GNI *e*S **Sn** **05 29 40.1 +6.9**
BUJR Buynaksk 5.65 102 *e*P **Pn** **05 28 31.8 +2.9**
BUJR *e*S **Sn** **05 29 34.9 +1.4**
GNBR Gunib 5.69 107 *e*P **Pn** **05 28 32.2 +2.6**
GNBR *e*S **Sn** **05 29 36.1 +1.4**
GDB GEDABAY 5.78 126 P **Pn** **05 28 33.1 +2.2**
SNR=9.0
GDB P **Pn** **05 28 33.1 +2.2**
SNR=9.0
GDB S **Sn** **05 29 41.5 +4.6**
GDB S **Sn** **05 29 41.5 +4.6**
ZKTA Zakatala 5.79 115 P Pn 05 28 37.2 +6.3
ZKTA Zakatala 5.79 115 P **Pn** **05 28 33.0 +2.1**
ZKTA S **Sn** **05 29 40.1 +3.0**
KANR Karaman 5.81 98 *e*P **Pn** **05 28 32.9 +1.7**
KANR *e*S **Sn** **05 29 40.6 +3.1**
KMKR Kumukh 5.89 109 *e*P **Pn** **05 28 33.2 +0.8**
KMKR *e*S **Sn** **05 29 42.4 +2.7**
MAK Makhachkala 5.89 100 *e*P **Pn** **05 28 28.1 -4.1**
MAK *e*S **Sn** **05 29 35.6 -3.7**
MAK pmax pmax
comp=Z,120nm,1.0s
MAK MLR MLR
comp=Z,410nm,9.0s
HYR Heyderabad 6.01 138 P **Pn** **05 28 36.0 +2.0**
HYR S **Sn** **05 29 46.4 +3.8**
GURO Guroymak-BITLI 6.02 162 **Pn** **05 28 33.8 -0.4**
BNN Bunyan 6.12 209 Pn **Pn** **05 28 36.3 +0.7**
GANJ Ganja 6.16 124 P **Pn** **05 28 38.6 +2.7**
GANJ S **Sn** **05 29 49.8 +3.7**
BR131 Keskin Array S 6.37 226 **Pn** **05 28 39.4 +0.4**
BR131 Keskin Array S 6.37 226 P **Pn** **05 28 39.4 +0.4**
BRTR Keskin Array B 6.37 226 Pn **Pn** **05 28 38.9 -0.1**
comp=Z,3.1nm,0.3s,baz=54,slow=12,SNR=104
BRTR Sn **Sn** **05 29 49.3 -2.1**
comp=Z,1.8nm,0.3s,baz=32,slow=21,SNR=11
BRTR LR LR 05 32 14.9
comp=Z,660nm,18.4s,baz=36,slow=49
comp=Z,24nm,0.7s
BRTR Keskin Array B 6.37 226 Pn **Pn** **05 28 39.4 +0.4**
BRTR Keskin Array B 6.37 226 P **Pn** **05 28 39.4 +0.4**
SEKA Sheki 6.38 116 P **Pn** **05 28 42.0 +2.9**
SEKA S **Sn** **05 29 55.2 +3.5**
AKT Akhty 6.60 112 *e*P Pn 05 28 46.7 +4.6
AKT *e*S **Sn** **05 30 04.2 +7.2**
AKT pmax pmax
comp=Z,16nm,0.4s
AKT smax smax
comp=E,44nm,0.5s
AKT smax smax
comp=N,28nm,0.5s
AKT smax smax
comp=E,53nm,0.5s
AKT MLR MLR
comp=Z,1μm,17.0s
SBZ Shahbuz 6.61 136 P **Pn** **05 28 44.7 +2.5**
SBZ P **Pn** **05 28 44.7 +2.5**
KDZE Karadeniz Ereo 6.70 246 ⇑P **Pn** **05 28 43.6 +0.2**
ANTO Ankara 6.72 231 ⇑P **Pn** **05 28 43.8 0.0**
ANTO Ankara 6.72 231 **Pn** **05 28 42.3 -1.4**
ANTO Ankara 6.72 231 ⇑P **Pn** **05 28 43.8 0.0**
NAX Nakhchivan 6.75 137 P **Pn** **05 28 46.4 +2.2**
BR231 Keskin MP Arra 6.75 231 **Pn** **05 28 44.0 -0.1**
VSR Storozhevoye 6.94 358 *e*P **Pn** **05 28 47.9 +1.4**
VSR pmax pmax
comp=Z,180nm,0.5s
VSR MLR MLR
comp=Z,280nm,7.0s
QSAR Qusar 6.94 111 P **Pn** **05 28 48.9 +2.2**
QSAR S **Sn** **05 30 07.8 +2.6**
XNQ Khinaliq 7.01 113 P **Pn** **05 28 49.7 +1.8**
SNR=5.4
XNQ S **Sn** **05 30 11.6 +4.2**
VRH Novokhopyorsk 7.06 11 *e*P **Pn** **05 28 50.2 +1.9**
VRH pmax pmax
comp=Z,310nm,0.6s
VRH MLR MLR
comp=Z,880nm,13.0s
QUBA Quba, Azerbaij 7.16 111 P **Pn** **05 28 51.7 +1.9**
QUBA S **Sn** **05 30 15.1 +4.3**
ORD Ordubad 7.18 136 P **Pn** **05 28 52.4 +2.3**

ZRD Zardab 7.21 121 S **Sn** **05 30 15.7 +3.9**
MDUB Mudurnu 7.30 241 **Pn** **05 28 51.6 -0.1**
GAZ Gaziantep 7.34 195 Pn **Pn** **05 28 53.5 +1.3**
VORR Voronezh 7.39 358 *e*P **Pn** **05 28 52.9 +0.1**
VORR pmax pmax
comp=Z,91nm,1.5s
JURR Jurilovca 7.68 277 ⇑P **Pn** **05 28 56.4 -0.4**
TSCT Constanta Port 7.87 273 ⇑P **Pn** **05 29 00.7 +1.3**
EFOR EFORIE 7.89 272 ⇑P **Pn** **05 28 59.1 -0.6**
TSMN Mangalia Port- 7.95 270 ⇓P **Pn** **05 28 59.8 -0.7**
MANR Mangalia 7.95 270 ⇓P **Pn** **05 28 59.6 -0.9**
TPGR Topolog 8.01 278 ⇓P **Pn** **05 29 01.1 -0.2**
MILM Milestii Mici 8.01 293 *e*P **Pn** **05 29 01.0 -0.3**
comp=Z,24nm,0.6s
MILM *e*S **Sn** **05 30 30.0 -1.6**
MILM *e*L L 05 31 41.0
comp=Z,2μm,3.8s
MILM LRM MLR 05 32 57.0
comp=Z,600nm,11.0s
MILM Milestii Mici 8.01 293 *e*P **Pn** **05 29 01.0 -0.3**
MILM *e*S **Sn** **05 30 30.0 -1.6**
MILM pmax pmax
comp=Z,20nm,0.6s
MILM MLR MLR
comp=Z,600nm,11.0s
TIRR Tirgusor 8.02 275 ⇑P **Pn** **05 29 00.2 -1.3**
TIRR Tirgusor 8.02 275 Pn **Pn** **05 29 00.2 -1.3**
TIRR Tirgusor 8.02 275 ⇑P **Pn** **05 29 00.2 -1.3**
KIS Kishinev 8.03 293 *e*P **Pn** **05 29 02.0 +0.4**
comp=Z,50nm,0.3s
KIS *e*S **Sn** **05 30 34.0 +2.0**
KIS LM 05 31 45.0
comp=Z,300nm,6.7s
KIS LRM MLR 05 33 00.0
comp=Z,200nm,10.5s
KIS Kishinev 8.03 293 *e*P **Pn** **05 29 02.0 +0.4**
KIS *e*S **Sn** **05 30 34.0 +2.0**
KIS pmax pmax
comp=Z,50nm,0.3s
KIS MLR MLR
comp=Z,300nm,6.7s
BORA Eskisehir 8.11 240 Pn **Pn** **05 29 03.1 +0.3**
GIUM Giurgiulesti 8.18 282 ⇓P Pn 05 29 11.7 +8.1
CFR Carcaliu 8.21 280 ⇑P **Pn** **05 29 03.0 -1.1**
CFR Carcaliu 8.21 280 ⇑P **Pn** **05 29 03.0 -1.1**
TLBR Topalu 8.28 276 ⇑P **Pn** **05 29 04.1 -0.9**
CVDA Cernavoda 8.30 274 ⇑P **Pn** **05 29 04.8 -0.5**
LPSR Galich'ya Gora 8.33 357 *e*P **Pn** **05 29 06.8 +1.2**
LPSR pmax pmax
comp=Z,150nm,0.6s
LPSR MLR MLR
comp=Z,180nm,5.0s
SCTR Scanteiesti 8.35 284 ⇓P **Pn** **05 29 06.2 +0.2**
HARR Harsova 8.36 277 ⇓P **Pn** **05 29 05.2 -0.9**
HARR Harsova 8.36 277 ⇓P **Pn** **05 29 05.2 -0.9**
YRD Yardimli 8.41 127 P **Pn** **05 29 09.0 +2.0**
YRD S **Sn** **05 30 45.0 +3.3**
VASR Vaslui 8.63 290 ⇑P **Pn** **05 29 10.5 +0.7**
BIR Birlad 8.68 287 ⇑P **Pn** **05 29 11.7 +1.3**
BIR Birlad 8.68 287 ⇑P **Pn** **05 29 11.7 +1.3**
AMRR Amara 8.79 276 ⇑P **Pn** **05 29 11.7 -0.2**
AMRR Amara 8.79 276 ⇑P **Pn** **05 29 11.7 -0.2**
PRD Provadia 8.90 267 *e*P **Pn** **05 29 12.1 -1.5**
PANC Panciu 8.96 285 ⇑P **Pn** **05 29 14.7 +0.4**
ODBI Odobesti 9.01 284 ⇓P **Pn** **05 29 17.0 +2.0**
GRER 9.04 281 ⇑P **Pn** **05 29 16.1 +0.6**
LEHL Lehliu 9.16 276 ⇓P **Pn** **05 29 16.7 -0.4**
BISRR Bisoca 9.24 282 ⇑P **Pn** **05 29 15.1 -3.1**
VRI Vrincioaia 9.25 284 ⇑P **Pn** **05 29 18.3 0.0**
VRI Vrincioaia 9.25 284 ⇑P **Pn** **05 29 18.3 0.0**
PLOR Plostina 9.30 284 ⇑P **Pn** **05 29 19.1 0.0**
PLOR Plostina 9.30 284 ⇑P **Pn** **05 29 19.1 0.0**
ISR Istrita 9.34 280 ⇑P **Pn** **05 29 20.2 +0.6**
ISR Istrita 9.34 280 ⇑P **Pn** **05 29 20.2 +0.6**
TESR Tescani 9.38 288 ⇑P **Pn** **05 29 19.8 -0.4**
ISP Isparta 9.42 230 Pn **Pn** **05 29 20.8 0.0**
ISP Isparta 9.42 230 P **Pn** **05 29 20.8 0.0**
AK07 Malin Array Si 9.42 315 Pn **Pn** **05 29 21.0 +0.3**
AK09 Malin Array Si 9.42 316 Pn **Pn** **05 29 21.0 +0.3**
AK10 Malin Array Si 9.43 316 Pn **Pn** **05 29 21.1 +0.4**
AK06 Malin Array Si 9.45 315 Pn **Pn** **05 29 20.8 -0.2**
RAZG Razgrad 9.48 270 ⇑P **Pn** **05 29 20.4 -1.1**
AKASG Malin Array Be 9.51 316 Pn **Pn** **05 29 20.4 -1.4**
comp=Z,15nm,0.5s,baz=117,slow=10,SNR=108
AKASG Sn **Sn** **05 31 00.5 -7.7**
comp=Z,16nm,0.3s,baz=127,slow=25,SNR=16
AKASG Lg Lg 05 32 04.3
comp=Z,8.2nm,0.3s,baz=123,slow=30,SNR=4.4
AKASG Malin Array Be 9.51 316 **Pn** **05 29 22.1 +0.3**
AKBB Malin Array Si 9.51 316 **Pn** **05 29 21.5 -0.3**
AKBB Malin Array Si 9.51 316 P **Pn** **05 29 21.5 -0.3**
AKBB Malin Array Si 9.51 316 Pn **Pn** **05 29 22.2 +0.4**
comp=Z,47nm,0.8s
AKBB pP 05 29 24.7
comp=Z,47nm,0.8s
NEHR Nehoiu 9.52 281 ⇓P **Pn** **05 29 22.5 +0.4**
SULR 9.55 277 ⇑P **Pn** **05 29 21.8 -0.7**
AK19 Malin Array Si 9.62 316 Pn **Pn** **05 29 23.3 -0.1**
AK20 Malin Array Si 9.64 316 Pn **Pn** **05 29 23.2 -0.4**
AK21 Malin Array Si 9.64 316 Pn **Pn** **05 29 23.2 -0.5**
BELG Belogornoye 9.70 30 *i* P **Pn** **05 29 23.7 -0.7**
BELG MLR MLR
comp=Z,106nm,10.0s
BUC1 Bucharest 9.73 275 ⇓P **Pn** **05 29 24.7 -0.2**
BUC1 Bucharest 9.73 275 ⇓P **Pn** **05 29 24.7 -0.2**
MLR Muntele Rosu 9.77 282 ⇑P **Pn** **05 29 26.0 +0.4**
MLR Muntele Rosu 9.77 282 Pn **Pn** **05 29 25.4 -0.1**
comp=Z,1.4nm,0.3s,baz=95,slow=2.4,SNR=33
MLR Sn **Sn** **05 31 11.8 -3.3**
comp=Z,5.4nm,0.3s,baz=115,slow=18,SNR=5.2
comp=Z,27nm,0.7s
MLR Muntele Rosu 9.77 282 Pn **Pn** **05 29 24.8 -0.9**
MLR Muntele Rosu 9.77 282 Pn **Pn** **05 29 25.5 -0.1**
LUBAR Lubar, Ukraine 9.84 309 Pn **Pn** **05 29 25.9 -0.5**
comp=Z,24nm,0.9s
LUBAR pP 05 29 29.1
comp=Z,24nm,0.9s
LUBAR sP 05 29 30.5
comp=Z,24nm,0.9s
OZUR 9.92 285 ⇓P **Pn** **05 29 27.1 -0.5**
SZH Strazhica 9.94 269 *e*P **Pn** **05 29 26.0 -1.9**
MI29 MI29, Kamyanyy 10.05 312 Pn **Pn** **05 29 29.2 -0.1**
MI29 pP 05 29 31.8
MI29 sP 05 29 33.1
MANT Manisa 10.12 239 Pn **Pn** **05 29 31.4 +0.9**
DOPR Dopca 10.19 284 ⇓P **Pn** **05 29 30.6 -0.6**
COPA Copaceanca 10.33 274 ⇑P **Pn** **05 29 32.3 -0.9**
MTUR Matau 10.39 280 ⇓P **Pn** **05 29 36.4 +2.4**
MTUR Matau 10.39 280 ⇓P **Pn** **05 29 36.4 +2.4**
VOIR 10.40 281 ⇓P **Pn** **05 29 33.7 -0.5**
VOIR 10.40 281 ⇓P **Pn** **05 29 33.7 -0.5**
HUMR Humele 10.47 276 ⇑P Pn 05 29 29.8 -5.3
ELL Elmali 10.54 228 Pn 05 29 41.7 +5.6
ELL Elmali 10.54 228 P Pn 05 29 41.7 +5.5
BURAR Bucovina Array 10.55 293 ⇓P **Pn** **05 29 35.9 -0.4**
BURAR Bucovina Array 10.55 293 **Pn** **05 29 34.5 -1.8**
BURAR Bucovina Array 10.55 293 ⇓P **Pn** **05 29 35.9 -0.4**
BUR08 Bucovina Ar. S 10.57 294 Pn **Pn** **05 29 35.4 -1.1**
ARR Arges 10.69 281 ⇓P **Pn** **05 29 37.6 -0.5**
KDZ Kurdzhali 10.73 261 *e*P **Pn** **05 29 37.2 -1.4**
RDO Rodhopi 10.82 258 Pn **Pn** **05 29 37.8 -2.0**
PLVB Pleven 10.87 270 ⇑P **Pn** **05 29 39.0 -1.4**
OBN Obninsk 11.01 351 Pn **Pn** **05 29 41.5 -0.8**
comp=Z,6.6nm,0.3s,baz=215,slow=1.8,SNR=18
OBN Sn **Sn** **05 31 43.6 -1.5**
comp=Z,2.6nm,0.3s,baz=74,slow=22,SNR=6.1
OBN Obninsk 11.01 351 **Pn** **05 29 40.8 -1.5**
OBN Obninsk 11.01 351 *ce*P **Pn** **05 29 42.0 -0.3**
OBN *i* S **Sn** **05 31 44.3 -0.7**
OBN pmax pmax
comp=Z,131nm,1.0s
OBN MLR MLR
comp=Z,532nm,12.0s
ARCR ARCALIA 11.03 290 ⇑P **Pn** **05 29 41.2 -1.5**
RZN Rozhen 11.21 262 *e*P **Pn** **05 29 43.6 -1.8**
LOT Lotru 11.30 281 ⇓P **Pn** **05 29 50.3 +3.8**
PGB Panagyurishte 11.37 267 *e*P Pn 05 29 37.9 -9.5
CJR Cluj-Napoca 11.49 288 ⇑P **Pn** **05 29 52.0 +2.9**
CJR Cluj-Napoca 11.49 288 ⇑P **Pn** **05 29 52.0 +2.9**
MPEP Malo Peshtene 11.50 271 *e*P **Pn** **05 29 46.9 -2.3**
MOS Moscow 11.53 354 *e*P **Pn** **05 29 47.3 -2.1**
MOS *e*S **Sn** **05 31 55.2 -2.6**

MOS pmax pmax
comp=Z,91nm,0.6s
MOS MLR MLR
comp=Z,600nm,13.0s
RNPP5 Staryi Chortor 11.54 312 Pn **Pn** **05 29 49.1 -0.5**
RNPP8 Varash 11.61 312 Pn **Pn** **05 29 50.2 -0.4**
RNPP9 Sopachiv 11.63 313 Pn **Pn** **05 29 50.8 -0.1**
BMR Baia Mare 11.71 292 ⇓P **Pn** **05 29 55.1 +3.2**
BMR Baia Mare 11.71 292 ⇓P **Pn** **05 29 55.1 +3.2**
DEV Deva 11.92 284 ⇓P **Pn** **05 29 59.4 +4.6**
DEV Deva 11.92 284 ⇓P **Pn** **05 29 59.4 +4.6**
LVV L'vov 11.97 303 *e*P **Pn** **05 29 58.0 +2.5**
LVV *i* S **Sn** **05 32 05.5 -3.1**
LVV MLR MLR
comp=Z,200nm,10.0s
GZR Gura Zlata 12.00 281 ⇑P **Pn** **05 29 56.5 +0.5**
VTS Vitosha 12.02 268 ⇑P **Pn** **05 29 58.5 +2.1**
VTS Vitosha 12.02 268 Pn **Pn** **05 29 55.2 -1.1**
VTS Vitosha 12.02 268 ⇑P **Pn** **05 29 58.5 +2.1**
VTS Vitosha 12.02 268 *e*P **Pn** **05 29 54.5 -1.9**
DRGR 12.11 288 ⇑P **Pn** **05 29 55.8 -1.7**
DRGR 12.11 288 ⇑P **Pn** **05 29 55.8 -1.7**
BLKB Belogradchik 12.22 273 ⇓P **Pn** **05 29 57.1 -2.0**
HERR Herculane 12.27 279 ⇓P **Pn** **05 29 59.6 -0.1**
TRPA Tarpa 12.43 294 ⇑P **Pn** **05 30 00.1 -1.6**
TRPA Tarpa 12.43 294 P **Pn** **05 30 00.3 -1.4**
UZH Uzhgorod 12.70 296 *e*P **Pn** **05 30 04.2 -1.2**
UZH *e*S **Sn** **05 32 23.7 -2.7**
UZH MLR MLR
comp=N,70nm,11.0s
UZH MLR MLR
comp=E,50nm,11.0s
UZH MLR MLR
comp=Z,50nm,11.0s
MNK Minsk 12.74 327 *i* P **Pn** **05 30 02.7 -3.2**
MNK *i* S **Sn** **05 32 24.6 -2.7**
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK pmax pmax
comp=Z,41nm,0.8s
MNK pmax pmax
comp=N,24nm,0.8s
MNK MLR MLR
comp=Z,244nm,15.0s
MNK MLR MLR
comp=N,353nm,15.0s
MNK MLR MLR
comp=E,57nm,15.0s
MDVR Moldovita 12.78 278 ⇑P **Pn** **05 30 05.6 -1.1**
KOLS Kolonicke sedl 12.78 297 *e*P **Pn** **05 30 07.5 +0.8**
KOLS *e* 05 32 24.3
SIRR Siria 12.79 285 ⇑P **Pn** **05 30 06.4 -0.4**
BZS Buzias 12.81 282 ⇓P **Pn** **05 30 08.6 +1.5**
BZS Buzias 12.81 282 ⇓P **Pn** **05 30 08.6 +1.5**
BOVS Bovan 12.92 273 ⇑P **Pn** **05 30 06.0 -2.5**
CRVS Cervenica-Dubn 13.29 297 *e*P **Pn** **05 30 13.6 0.0**
ABAH Abaujker 13.31 294 P **Pn** **05 30 14.0 +0.2**
NACGM Naroch 13.46 327 *e*P **Pn** **05 30 13.8 -2.1**
comp=Z,54nm,0.9s,baz=137
STHS Stebnicka Huta 13.56 299 *e*P **Pn** **05 30 16.4 -0.9**
STHS *e* 05 32 42.7
KECS Kecovo 13.84 294 *e*P **Pn** **05 30 22.7 +1.6**
KECS *e* 05 32 50.0
AKTO Aktyubinsk 13.89 57 Pn **Pn** **05 30 19.4 -2.4**
comp=Z,1.0nm,0.3s,baz=233,slow=7.1,SNR=21
AKTO Sn Sn 05 32 43.9 -12
comp=Z,1.3nm,0.3s,baz=356,slow=19,SNR=3.3
AKTO LR LR 05 37 29.3
comp=Z,132nm,20.9s,baz=204,slow=45
AKTO Aktyubinsk 13.89 57 ⇓P **Pn** **05 30 19.5 -2.3**
comp=Z,13nm,0.6s
AKTO ⇑S **Sn** **05 32 48.3 -7.4**
comp=Z,90nm,1.3s
DIVS Divibare 14.08 276 **Pn** **05 30 22.6 -1.8**
FRGS Fruska Gora 14.10 280 ⇑P **P** **05 30 34.9 +2.6**
PSZ Piszkesteto 14.14 292 ⇑P **Pn** **05 30 25.7 +0.5**
PSZ Piszkesteto 14.14 292 **Pn** **05 30 24.4 -0.8**
PSZ Piszkesteto 14.14 292 ⇑P **Pn** **05 30 25.7 +0.5**
PSZ Piszkesteto 14.14 292 P **Pn** **05 30 25.3 0.0**
IDI Anoyia 14.43 236 ⇓P **Pn** **05 30 32.0 +2.7**
BEL Belsk 14.64 308 *e*P **Pn** **05 30 32.5 +0.5**
OJC Ojcow 14.68 301 *e*P **Pn** **05 30 29.3 -3.3**
OJC Ojcow 14.68 301 **Pn** **05 30 28.1 -4.4**
OJC Ojcow 14.68 301 P **Pn** **05 30 28.1 -4.4**
AB31 Akbulak array 14.78 63 ⇑P **Pn** **05 30 31.5 -2.4**
comp=Z,7.8nm,0.6s,baz=252,slow=12,SNR=79
AB31 ⇓S **Sn** **05 33 10.3 -7.0**
comp=Z,27nm,0.9s,baz=245,slow=25,SNR=4.8
ABKAR Akbulak array 14.78 63 **Pn** **05 30 32.2 -1.6**
MORH Mrgy, Hungar 14.89 285 ⇑P **P** **05 30 41.4 +0.4**
MORH Mrgy, Hungar 14.89 285 P **Pn** **05 30 35.9 +0.6**
MORH PP **PnPn** **05 30 42.8 -0.3**
PDG Podgorica 14.92 270 ⇓P **P** **05 30 43.2 +1.8**
PDG Podgorica 14.92 270 **Pn** **05 30 35.1 -0.7**
VYHS Vyhne 14.92 294 *e*P **Pn** **05 30 36.3 +0.4**
VYHS *e* 05 33 17.1
PABE Paberze 15.04 324 **Pn** **05 30 35.2 -2.2**
PABE Paberze 15.04 324 *e*P **Pn** **05 30 34.5 -2.9**
EIL Elat 15.06 196 LR LR 05 37 30.7
comp=Z,220nm,18.9s,baz=298,slow=42
KOVH Kovagotottos 15.27 284 P **Pn** **05 30 41.2 +0.8**
KOVH PP **PnPn** **05 30 47.5 -0.8**
GEYT Alibeck 15.32 108 Pn **Pn** **05 30 38.2 -3.0**
comp=Z,0.5nm,0.3s,baz=293,slow=16,SNR=7.6
comp=Z,3.5nm,0.8s
GEYT Alibeck 15.32 108 **Pn** **05 30 41.3 +0.1**
GYA0 ALIBECK ARRAY 15.32 108 P **Pn** **05 30 41.7 +0.5**
GYA0B ALIBECK ARRAY 15.32 108 **Pn** **05 30 41.7 +0.5**
VSVD Vaisvydziai 15.38 325 *e*P **Pn** **05 30 39.5 -2.2**
TIH Tihany 15.41 287 PP **P** **05 30 50.0 +3.1**
KIRV Kirov 15.54 19 Pn Pn 05 30 36.5 -7.3
comp=Z,1.1nm,0.3s,baz=196,slow=20,SNR=2.6
KIRV LR LR 05 37 10.3
comp=Z,396nm,18.2s,baz=208,slow=39
comp=Z,20nm,0.6s
KIRV Kirov 15.54 19 *ce*P **Pn** **05 30 40.6 -3.2**
OKC Ostrava-Krasne 15.62 298 *e*P **P** **05 30 49.6 +0.5**
OKC Ostrava-Krasne 15.62 298 *e*P **P** **05 30 49.6 +0.5**
MPLH Magyarpolny 15.67 288 P **Pn** **05 30 46.7 +1.1**
MAUC Maruska 15.72 297 *e*P **P** **05 30 53.7 +3.3**
JAVC Velka Javorina 15.74 295 *e*PN **Pn** **05 30 46.8 +0.1**
MODS Modra-Piesok 15.94 293 *e*P **P** **05 30 57.5 +4.8**
MORC Moravsky Berou 15.99 298 ⇑P **Pn** **05 30 49.9 +0.1**
MORC Moravsky Berou 15.99 298 **Pn** **05 30 48.2 -1.6**
MORC Moravsky Berou 15.99 298 ⇑P **Pn** **05 30 49.9 +0.1**
MORC Moravsky Berou 15.99 298 *e*PN **Pn** **05 30 49.3 -0.5**
MORC Moravsky Berou 15.99 298 *e*SN Sn 05 33 33.4 -13
ZST Bratislava 16.04 292 *e*P **Pn** **05 30 49.1 -1.3**
PBUR Paburge 16.25 322 *e*P **Pn** **05 30 51.4 -1.7**
VSU Vasula 16.26 335 *e*P **Pn** **05 30 50.0 -3.2**
VSU Vasula 16.26 335 *i* P **Pn** **05 30 50.7 -2.4**
VSU pmax pmax
comp=Z,368nm,1.2s
VSU MLR MLR
comp=Z,1μm,11.0s
PUL Pulkovo 16.50 343 *ce*P **Pn** **05 30 53.7 -2.4**
PUL pmax pmax
comp=Z,169nm,0.7s
VRAC Vranov 16.51 296 ⇑P **P** **05 30 59.0 0.0**
VRAC Vranov 16.51 296 Pn **Pn** **05 30 55.8 -0.7**
comp=Z,0.1nm,0.3s,baz=92,slow=16,SNR=2.9
comp=Z,1.8nm,0.7s
VRAC Vranov 16.51 296 ⇑P **P** **05 30 59.0 0.0**
VRAC Vranov 16.51 296 *e*PN **Pn** **05 30 57.1 +0.6**
KRLC Kraliky 16.53 299 *e*P **Pn** **05 30 55.6 -1.1**
KRLC Kraliky 16.53 299 *e*P **Pn** **05 30 55.6 -1.1**
RONA Rosalía, Austr 16.54 290 *e*P **P** **05 31 01.0 +1.7**
comp=Z,9.9nm,1.0s
KLMR Klimovskoe 16.59 360 *e*P **Pn** **05 30 54.8 -2.5**
KLMR *e* 05 34 00.0
KLMR pmax pmax
comp=Z,243nm,1.3s
KLMR Klimovskoe 16.59 360 *e*Pn **Pn** **05 30 54.8 -2.5**
KLMR *e*Pn **Pn** **05 30 54.8 -2.5**
KLMR *e*Pn **Pn** **05 30 54.8 -2.5**
KLMR AMP 05 31 01.9
comp=Z,243nm,1.3s
KLMR *e*Sn **Sn** **05 34 00.1 -1.0**
KLMR *e*Sn **Sn** **05 34 00.1 -1.0**
KRUC Moravsky 16.60 295 *e*PN **Pn** **05 30 58.1 +0.5**
CONA Conrad Observa 16.84 291 *e*P **Pn** **05 30 58.8 -1.9**
comp=Z,24nm,0.9s
DPC Dobruska-Polom 16.87 299 *e*P **Pn** **05 30 59.3 -1.8**

DPC e 05 33 58.8
DPC Dobruska-Polom 16.87 299 eP **Pn 05 30 59.3 -1.8**
DPC ex x 05 33 58.8
OSTC Ostas 16.98 300 eP **Pn 05 31 00.7 -1.8**
OSTC ex x 05 34 01.4
KSP Ksiaz 17.00 301 eP **P 05 31 05.8 +1.3**
ARSA Arzberg 17.04 288 eP **Pn 05 31 03.5 +0.3**
comp=Z,9.4nm,1.2s
ARU Arti 17.07 38 Pn Pn 05 30 55.5 -7.9
baz=229,slow=9.6,SNR=18
ARU S Sn 05 34 01.4 -11
comp=Z,11nm,0.5s,baz=287,slow=19,SNR=2.8
ARU LR LR 05 38 21.1
comp=Z,218nm,18.6s,baz=243,slow=40
comp=Z,3.7nm,0.5s
ARU Arti 17.07 38 **Pn 05 30 59.2 -4.2**
ARU IAmb IAmb 05 31 06.8
comp=Z,26nm,0.8s
ARU Arti 17.07 38c iP **Pn 05 31 00.4 -3.0**
ARU S **Sn 05 34 11.3 -1.4**
ARU pmax pmax
comp=Z,26nm,1.0s
ARU MLR MLR
comp=Z,213nm,17.0s
CHVC Chvalec 17.09 300 eP **P 05 31 06.6 +1.1**
CHVC ex x 05 34 03.6
UPC Upice 17.10 300 eP **P 05 31 06.7 +1.1**
UPC Upice 17.10 300 eP **P 05 31 06.7 +1.1**
SOKA Soboth 17.38 287 eP **P 05 31 08.7 0.0**
comp=Z,4.4nm,0.8s
MTSE Matsula 17.40 332 eP **Pn 05 31 05.7 -1.8**
OBKA Obir 17.72 286 eP **P 05 31 13.1 +0.7**
comp=Z,16nm,1.5s
PRGR Permogore 17.73 9 eP **Pn 05 31 10.3 -1.3**
PRGR e 05 34 27.2
PRGR pmax pmax
comp=Z,29nm,0.6s
VALR Valaam 17.86 346 iP **Pn 05 31 13.4 +0.2**
VALR pmax pmax
comp=Z,69nm,1.0s
VALR MLR MLR
comp=Z,580nm,12.0s
MOA Molln 17.91 290 eP **Pn 05 31 13.2 -0.8**
comp=Z,13nm,1.2s,SNR=5.8
PRU Pruhonice 17.93 297 eP **P 05 31 19.9 +5.2**
PRU Pruhonice 17.93 297 eP **P 05 31 19.9 +5.2**
CKRC Cesky Krumlov 17.94 294 eP **P 05 31 15.0 +0.1**
PVCC Panska Ves 18.01 299 eP **P 05 31 16.8 +1.2**
PVCC Panska Ves 18.01 299 eP **P 05 31 16.8 +1.2**
SVE Sverdlovsk 18.23 39 eP **Pn 05 31 14.7 -3.1**
SVE eS **Sn 05 34 35.0 -5.8**
SVE pmax pmax
comp=Z,62nm,1.0s
SVE MLR MLR
comp=Z,275nm,12.0s
BIOA Bad Ischl, Aus 18.33 290 eP **Pn 05 31 17.9 -1.3**
comp=Z,2.1nm,0.7s
GERES GERESS Array B 18.34 294 P **Pn 05 31 17.8 -1.5**
comp=Z,0.2nm,0.3s,baz=90,slow=15,SNR=11
comp=Z,0.7nm,0.6s
GERES GERESS Array B 18.34 294 P **Pn 05 31 18.6 -0.7**
GERES GERESS Array B 18.34 294 P **Pn 05 31 18.7 -0.7**
MEF Metsahovi 18.39 335 eP **Pn 05 31 18.2 -1.5**
KHC Kasperske Hory 18.45 294 eP **Pn 05 31 21.7 +1.1**
KHC Kasperske Hory 18.45 294 eP **Pn 05 31 21.7 +1.1**
KHC ex x 05 31 27.6
BRG Berggiesshubel 18.46 300 eP **Pn 05 31 24.5 +3.8**
BRG S **S 05 34 51.8 +1.0**
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG smax smax
comp=N,7.0nm,0.9s
RUE Ruedersdorf 18.93 305 eP **Pn 05 31 27.0 +0.7**
FIA0 FINESS Array S 18.95 340 P **P 05 31 23.4 -2.4**
FIA0 FINESS Array S 18.95 340 P **P 05 31 23.4 -2.4**
FIA1 FINESS Array S 18.95 340 P **P 05 31 23.2 -2.6**
FIA1 IAmb IAmb 05 31 41.5
comp=Z,32nm,0.9s
FINES FINESS Array B 18.95 340 P **P 05 31 23.2 -2.6**
comp=Z,19nm,0.6s,baz=150,slow=13,SNR=27
FINES S Sn 05 34 43.3 -15
comp=Z,12nm,0.6s,baz=153,slow=17,SNR=3.1
FINES LR LR 05 39 29.0
comp=Z,458nm,18.1s,baz=164,slow=39
FINES FINESS Array B 18.95 340 P **P 05 31 23.1 -2.7**
ABTA Abfaltersbach 19.11 287 eP **Pn 05 31 29.2 +0.6**
comp=Z,7.3nm,1.0s
CLL Collm 19.13 301 P **P 05 31 26.7 -1.2**
CLL IAmb IAmb 05 31 37.6
comp=Z,22nm,0.8s
CLL Collm 19.13 301 eP **Pn 05 31 30.0 +1.3**
CLL eS **S 05 35 06.0 +1.8**
CLL pmax pmax
comp=Z,12nm,0.8s
CLL Collm 19.13 301 eP **Pn 05 31 30.0 +1.3**
comp=Z,12nm,0.8s
CLL iX x 05 31 35.6
comp=Z,27nm,0.8s
CLL ePP **PnPn 05 31 44.0 +2.7**
CLL e(PPP) 05 31 47.0
CLL eS **S 05 35 06.0 +1.8**
CLL e(SSS) 05 35 27.0
CLL LmV 05 45 00.0
comp=Z,200nm,21.4s
BSD Bornholm Skovb 19.19 313 iP **Pn 05 31 29.5 +0.1**
BSD IAmb IAmb 05 31 34.8
comp=Z,17nm,0.8s
BLEU Blekinge 19.26 317 iP **P 05 31 26.2 -3.0**
NKC Novy Kostel 19.30 298 eP **Pn 05 31 34.4 +3.5**
NKC Novy Kostel 19.30 298 eP **Pn 05 31 34.4 +3.5**
MURB Monte Urbino 19.55 276 IAmb IAmb 05 31 44.2
comp=Z,31nm,1.0s
WTTA Wattenberg 19.69 289 eP **Pn 05 31 35.1 -0.6**
comp=Z,5.1nm,0.4s,SNR=11
WATA Walderalm 19.73 289 eP **P 05 31 35.2 +0.5**
comp=Z,5.0nm,0.7s
AAL Aland 19.80 330 eP **P 05 31 35.1 0.0**
TEOL Teolo 19.81 283 IAmb IAmb 05 31 48.5
comp=Z,48nm,1.0s
RAF Rauma 19.83 334 eP **P 05 31 34.4 -1.0**
SQTA Sankt Quirin 19.98 288 eP **P 05 31 37.8 +0.4**
comp=Z,7.1nm,0.4s,SNR=8.5
VIKU Vikbolandet 20.02 323 eP **Pn 05 31 39.2 0.0**
GRFO Grafenberg 20.03 296 P **P 05 31 36.4 -1.4**
GRFO Grafenberg 20.03 296 P **P 05 31 36.4 -1.4**
GRFO pmax pmax
comp=Z,16nm,1.0s
MOTA Moosalm 20.05 289 eP **P 05 31 38.2 +0.1**
comp=Z,15nm,1.1s
LUNU Lund 20.16 314 iP **P 05 31 38.0 -1.1**
VAE Valguarnera 20.18 259 P **P 05 31 40.1 +0.6**
comp=Z,21nm,0.8s,baz=354,slow=18,SNR=4.6
comp=Z,21nm,0.8s
RETA Reutte 20.28 289 eP **P 05 31 40.5 0.0**
comp=Z,6.8nm,0.6s
FETA Feichten 20.32 288 eP **P 05 31 41.4 +0.3**
comp=Z,3.6nm,0.4s,SNR=5.8
OSSC Osservatorio P 20.41 278 P **P 05 31 41.8 -0.1**
OSSC IAmb IAmb 05 31 49.5
comp=Z,16nm,0.9s
UPP Uppsala 20.47 327 eP **P 05 31 42.7 +0.4**
BJUU Bjuv 20.56 314 iP **P 05 31 43.7 +0.4**
FUORN Ofenpass-Fuorn 20.66 287 P **P 05 31 44.4 -0.5**
FUORN IAmb IAmb 05 31 53.1
comp=Z,30nm,0.7s
CASP Castiglione de 20.85 276 P **P 05 31 46.0 -0.6**
CASP IAmb IAmb 05 31 55.0
comp=Z,23nm,0.9s
DAVA Damuels 20.88 289 eP **P 05 31 47.1 -0.1**
comp=Z,8.7nm,0.5s,SNR=12
VLC Villacollemand 20.90 280 P Pn 05 31 49.7 0.0
VLC IAmb IAmb 05 32 03.3
comp=Z,17nm,0.8s
DAVOX Davos/Dischmat 20.91 287 P **P 05 31 47.5 0.0**
comp=Z,12nm,0.4s,baz=76,slow=7.6,SNR=33
DAVOX S **S 05 35 37.8 -2.5**
comp=Z,2.8nm,0.8s,baz=3.9,slow=15,SNR=6.6
comp=Z,12nm,0.4s
FABU Falkenberg 21.10 317 iP **P 05 31 46.8 -2.4**
BORU Boraas 21.36 318 iP **P 05 31 52.3 +0.3**
MSSA Maissana 21.48 281 P **P 05 31 53.8 +0.3**
MSSA IAmb IAmb 05 32 08.6
comp=Z,24nm,0.9s
ONAU Onsala 21.66 317 iP **P 05 31 56.3 +1.0**
BFO Black Forest 21.89 292 P **P 05 31 56.5 -1.4**
BFO IAmb IAmb 05 32 08.6
comp=Z,33nm,1.4s
BFO Black Forest 21.89 292 P **P 05 31 56.5 -1.4**
BFO pmax pmax
comp=Z,33nm,1.4s
BRVK Borovoye 21.93 56 P **P 05 31 58.1 -0.1**
BRVK IAmb IAmb 05 32 00.4
comp=Z,27nm,0.7s
BRVK Borovoye 21.93 56ceP **P 05 31 59.2 +1.0**
BRVK pmax pmax
comp=Z,37nm,1.0s
BRVK Borovoye 21.93 56 ⇑P **P 05 31 59.2 +1.0**
comp=Z,20nm,0.6s
BRVK ⇓S **S 05 35 56.2 -3.5**
comp=Z,22nm,1.1s
BVA0 Borovoye Array 21.99 56 ⇑P **P 05 31 59.7 +0.9**
comp=Z,15nm,0.8s,baz=256,slow=8.2,SNR=50
BVA0 ⇑S **S 05 35 55.4 -5.4**
comp=Z,16nm,0.8s,baz=258,slow=24,SNR=10
BVAR Borovoye Array 21.99 56 P **P 05 31 59.8 +1.0**
comp=Z,7.1nm,0.7s,baz=260,slow=8.4,SNR=55
BVAR S **S 05 35 55.1 -5.8**
comp=Z,4.6nm,0.8s,baz=260,slow=24,SNR=5.6
BVAR LR LR 05 42 05.0
comp=Z,298nm,20.8s,baz=269,slow=41
comp=Z,7.1nm,0.7s
HFS Hagfors 22.22 325 P **P 05 32 01.3 +0.1**
comp=Z,36nm,0.6s,baz=128,slow=13,SNR=138
HFS PP **PnPn 05 32 19.4 -4.1**
comp=Z,20nm,0.8s,baz=129,slow=4.7,SNR=5.2
HFS S **S 05 35 56.6 -8.5**
comp=Z,5.5nm,0.8s,baz=137,slow=13,SNR=2.1
comp=Z,36nm,0.6s
KK31 Karatay Array 22.32 82 P **P 05 32 03.4 +0.9**
KK31 IAmb IAmb 05 32 10.3
comp=Z,21nm,0.8s
KK31 Karatay Array 22.32 82 P **P 05 32 03.4 +0.9**
KK31 pmax pmax
comp=Z,21nm,0.9s
KK31 Karatay Array 22.32 82 ⇑P **P 05 32 03.7 +1.3**
comp=Z,14nm,0.7s,baz=301,slow=9.2,SNR=83
KK31 ⇓S **S 05 36 09.9 +2.7**
comp=Z,5.9nm,0.8s
KKAR Karatay Array 22.32 82 P **P 05 32 03.3 +0.8**
KKAR Karatay Array 22.32 82 P **P 05 32 03.3 +0.8**
SENIN Lac Senin/Sane 22.73 287 P **P 05 32 06.3 -0.7**
SENIN IAmb IAmb 05 32 16.4
comp=Z,24nm,0.7s
OTUK Ortayu 22.87 68 ⇑P **P 05 32 08.9 +0.6**
comp=Z,21nm,1.1s
OTUK ⇓S **S 05 36 18.7 +1.5**
comp=Z,15nm,1.1s
LPL La Plagne 23.23 285 eP **P 05 32 11.2 -1.0**
LPL pmax pmax
comp=Z,22nm,0.7s
WLF Walferdange 23.32 295 dx x 05 32 20.2
BTNL Ternell 23.36 298 dx x 05 32 23.7
BTNL dPP P 05 32 39.2 +26
OSL Oslo 23.39 322 eP **P 05 32 13.8 +0.4**
OSL IAmb IAmb 05 32 14.5
comp=Z,33nm,0.7s
BTK Batken 23.44 89 IAmb IAmb 05 32 26.9
comp=Z,23nm,1.2s
MEM Membach 23.44 298 dx x 05 32 24.8
NC602 NORSAR Array S 23.44 324 eP **P 05 32 14.0 0.0**
GAR Garm 23.47 92 P **P 05 32 14.9 +0.3**
APA Apatity 23.57 354⇓iP **P 05 32 18.3 +3.2**
APA pmax pmax
comp=Z,30nm,0.8s
APA MLR MLR
comp=Z,500nm,12.0s
NC405 NORSAR Array S 23.57 325 P **P 05 32 13.7 -1.5**
HOMB Homborsund 23.69 317 eP **P 05 32 17.0 +0.7**
HOMB IAmb IAmb 05 32 31.5
comp=Z,238nm,2.4s
HOMB Homborsund 23.69 317 iP **P 05 32 16.6 +0.3**
NB201 NORSAR Array S 23.71 325 P **P 05 32 16.0 -0.6**
NB2 NORSAR Subarra 23.74 325 P **P 05 32 16.6 -0.3**
comp=Z,51nm,1.4s,baz=122,slow=9.3
NB2 NORSAR Subarra 23.74 325 P **P 05 32 16.6 -0.3**
baz=122,slow=9.3
NOA NORSAR Array B 23.74 325 P **P 05 32 16.6 -0.3**
comp=Z,6.2nm,0.7s,baz=127,slow=9.3,SNR=36
comp=Z,6.2nm,0.7s
KONO Kongsberg 23.75 321 P **P 05 32 16.6 -0.4**
KONO IAmb IAmb 05 32 24.8
comp=Z,30nm,1.1s
KONO Kongsberg 23.75 321 P **P 05 32 16.6 -0.4**
KONO pmax pmax
comp=Z,30nm,1.1s
KONO Kongsberg 23.75 321 eP **P 05 32 17.2 +0.2**
LVZ Lovozero 23.81 355 P **P 05 32 16.0 -1.5**
LVZ Lovozero 23.81 355 iP **P 05 32 17.9 +0.4**
LVZ pmax pmax
comp=Z,30nm,1.0s
LVZ MLR MLR
comp=Z,165nm,14.0s
BCLA Clavier 23.88 297 dx x 05 32 28.5
NBO00 NORSAR Array S 23.91 325 P **P 05 32 17.2 -1.3**
RCHB Rochefort 23.92 296 dP **P 05 32 18.0 -0.7**
RCHB dx x 05 32 32.8
BMRD Maredsous 24.22 297 dP **P 05 32 24.4 +2.9**
BMRD dx x 05 32 29.5
DOU Dourbes 24.33 296 dx x 05 32 29.8
SNART Snartemo 24.35 317 eP **P 05 32 22.9 +0.4**
SNART Snartemo 24.35 317 iP **P 05 32 23.8 +1.3**
KEST Kesra 24.59 260 P **P 05 32 25.6 +0.4**
comp=Z,2.3nm,0.8s,baz=106,slow=15,SNR=2.1
comp=Z,2.3nm,0.8s
SSB Saint Sauveur 24.79 285 IAmb IAmb 05 32 34.7
comp=Z,20nm,0.8s
SKAR Skarslia 24.80 322 eP **P 05 32 27.3 +0.6**
SKAR IAmb IAmb 05 32 43.0
comp=Z,56nm,1.4s
BLS5 Blasjo 25.11 319 eP **P 05 32 31.9 +2.4**
DOMB Dombas 25.14 326 eP **P 05 32 30.3 +0.5**
DOMB IAmb IAmb 05 32 45.5
comp=Z,40nm,0.9s
ODD1 Odda 25.22 320 eP **P 05 32 31.4 +0.9**
ODD1 IAmb IAmb 05 32 47.8
comp=Z,69nm,1.4s
SSF Saint Saulge 25.23 289 eP **P 05 32 30.5 -0.2**
SSF pmax pmax
comp=Z,5.0nm,0.8s
AAK Ala-Archa 25.27 81 P **P 05 32 31.4 +0.2**
comp=Z,4.6nm,0.8s,baz=245,slow=14,SNR=12
AAK LR LR 05 44 25.7
comp=Z,260nm,18.4s,baz=294,slow=41
comp=Z,4.6nm,0.8s
AAK Ala-Archa 25.27 81 P **P 05 32 33.3 +2.1**
AAK IAmb IAmb 05 32 39.7
comp=Z,17nm,1.1s
AAK Ala-Archa 25.27 81 P **P 05 32 33.3 +2.1**
AAK pmax pmax
comp=Z,17nm,1.1s
TBLU Trondheim 25.33 329 eP **P 05 32 31.8 +0.4**
NSS Namsos 25.50 332 eP **P 05 32 33.9 +1.0**
NSS IAmb IAmb 05 32 34.2
comp=Z,132nm,1.2s
MOR8 Moi Rana 25.85 337 eP **P 05 32 36.4 +0.3**
MOR8 IAmb IAmb 05 32 47.5
comp=Z,171nm,2.0s
TKM2 Tokmak 2 25.97 80 ⇓P **P 05 32 39.8 +2.1**
comp=Z,16nm,1.2s
BER Bergen 26.00 320 eP **P 05 32 38.7 +1.2**
AKN Aaknes 26.05 325 eP **P 05 32 39.6 +1.6**
AKN IAmb IAmb 05 32 40.0
comp=Z,26nm,0.9s
WSAR Wadi Sarin 26.17 137 P **P 05 32 39.9 +0.5**
comp=Z,0.9nm,0.4s,baz=255,slow=20,SNR=1.8
WSAR LR LR 05 45 52.5
comp=Z,78nm,19.3s,baz=306,slow=43
comp=Z,0.9nm,0.4s
KTK1 Kautokeino 26.18 347 eP **P 05 32 39.9 +0.9**
ARA0 ARCESS Array S 26.31 349 eP **P 05 32 41.2 +1.0**
ARCES ARCESS Array B 26.31 349 P **P 05 32 40.6 +0.4**
comp=Z,4.5nm,0.5s,baz=159,slow=9.2,SNR=31
comp=Z,4.5nm,0.5s
ARCES ARCESS Array B 26.31 349 P **P 05 32 41.3 +1.1**
ARCES IAmb IAmb 05 33 03.6
comp=Z,13nm,0.8s
ARCES ARCESS Array B 26.31 349 P **P 05 32 41.3 +1.1**
ARCES pmax pmax
comp=Z,13nm,0.8s
BOOM Boomskoye usch 26.33 81 IAmb IAmb 05 32 44.0
comp=Z,6.6nm,0.7s
STOK Stokkvaagen 26.37 336 eP **P 05 32 41.4 +0.6**
KONS Konsvik 26.46 336 eP **P 05 32 42.6 +1.1**
KONS IAmb IAmb 05 32 45.3
comp=Z,241nm,2.1s
FAUS Fauske 26.51 339 eP **P 05 32 43.0 +1.0**
FAUS IAmb IAmb 05 32 47.8
comp=Z,190nm,1.9s
KURBB Kurchatov Arra 26.83 62 P **P 05 32 45.3 +0.2**
comp=Z,7.6nm,0.8s,baz=278,slow=9.6,SNR=38
comp=Z,7.6nm,0.8s
KURBB Kurchatov Arra 26.83 62 ⇑P **P 05 32 45.9 +0.8**
comp=Z,13nm,0.9s
KURK Kurchatov 26.89 62 P **P 05 32 46.0 +0.4**
KURK Kurchatov 26.89 62ceP **P 05 32 45.8 +0.2**
KURK pmax pmax
comp=Z,11nm,1.3s
KURK MLR MLR
comp=Z,267nm,17.0s
KURK Kurchatov 26.89 62 ⇑P **P 05 32 46.2 +0.6**
comp=Z,9.0nm,1.1s
STEI Steigen 26.93 340 eP **P 05 32 46.8 +1.0**
STEI IAmb IAmb 05 32 48.6
comp=Z,101nm,1.7s
JETT Jettan, Norway 27.15 345 eP **P 05 32 48.8 +0.9**
JETT IAmb IAmb 05 33 04.4
comp=Z,559nm,2.4s
KSH Kashi 27.34 87 P **P 05 32 55.8 +5.9**
KSH PP **PP 05 33 43.8 -7.8**
TRO Tromso 27.49 344 eP **P 05 32 52.5 +1.7**
TRO IAmb IAmb 05 33 11.6
comp=Z,160nm,1.6s
LOF Lofoten 27.51 339 eP **P 05 32 53.0 +2.0**
MFF Saint Martin d 27.78 289 eP **P 05 32 55.5 +1.8**
MFF pmax pmax
comp=Z,12nm,0.8s
EKA Eskdalemuir Ar 29.27 307 P **P 05 33 06.9 +0.1**
comp=Z,1.4nm,0.6s,baz=111,slow=8.3,SNR=19
comp=Z,1.4nm,0.6s
ESK Eskdalemuir 29.29 307 P **P 05 33 05.6 -1.4**
ESK IAmb IAmb 05 33 12.7
comp=Z,25nm,1.4s
ESK Eskdalemuir 29.29 307 P **P 05 33 05.6 -1.4**
ESK pmax pmax
comp=Z,25nm,1.5s
MK31 Makanchi Array 29.73 70 P **P 05 33 12.2 +1.1**
comp=Z,1.2nm,0.6s,baz=289,slow=4.0,SNR=13
MKAR Makanchi Array 29.73 70 P **P 05 33 11.3 +0.2**
comp=Z,1.1nm,0.5s,baz=304,slow=3.3,SNR=12
MKAR LR LR 05 46 52.4
comp=Z,219nm,18.2s,baz=288,slow=40
comp=Z,1.1nm,0.5s
ZAA0 Zalesovo Array 30.64 55 P **P 05 33 18.7 -0.3**
ZAA0 IAmb IAmb 05 33 25.1
comp=Z,13nm,1.4s
ZALV Zalesovo Beam 30.64 55 P **P 05 33 18.7 -0.3**
comp=Z,2.9nm,0.6s,baz=269,slow=9.5,SNR=17
ZALV LR LR 05 47 51.5
comp=Z,128nm,19.6s,baz=268,slow=41
comp=Z,2.9nm,0.6s
ZALV Zalesovo Beam 30.64 55 P **P 05 33 18.2 -0.8**
ZALV Zalesovo Beam 30.64 55 iP **P 05 33 19.8 +0.8**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ESDC Sonseca Array 32.42 277 P **P 05 33 33.9 -1.0**
comp=Z,0.7nm,0.8s,baz=58,slow=8.6,SNR=11
comp=Z,0.7nm,0.8s
DGZ Jazzator, Alta 32.62 63 iP **P 05 33 36.7 +0.1**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
DGZ MLR MLR
comp=Z,198nm,17.0s
WMQ Urumqi 34.17 74 eP **P 05 33 50.8 +0.7**
WMQ pP pP 05 33 53.5 -1.4
WMQ pmax pmax
comp=Z,66nm,0.7s
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ LR LR
comp=Z,570nm,18.5s
WMQ LR LR
comp=Z,310nm,15.9s
WMQ LR LR
comp=Z,190nm,18.5s
NRIK Noril'sk 34.78 28 P **P 05 33 53.7 -1.3**
comp=Z,8.6nm,0.7s,baz=240,slow=6.7,SNR=9.0
NRIK LR LR 05 48 20.9
comp=Z,102nm,19.0s,baz=290,slow=37
comp=Z,8.6nm,0.7s
NRIK Noril'sk 34.78 28 **P 05 33 55.0 0.0**
NRIK IAmb IAmb 05 33 57.5
comp=Z,10nm,0.8s
NRIK Noril'sk 34.78 28ceP **P 05 33 56.5 +1.5**
NRIK pmax pmax
comp=Z,12nm,1.0s
SPA0 Spitsbergen Ar 35.21 352 eP **P 05 33 59.6 +1.0**
SPA0 IAmb IAmb 05 34 01.0
comp=Z,62nm,1.1s
SPITS Spitsbergen Ar 35.21 352 P **P 05 33 58.6 -0.1**
comp=Z,15nm,0.7s,baz=134,slow=12,SNR=10
comp=Z,15nm,0.7s
MDT Midelt 36.02 267 P **P 05 34 05.6 -0.6**
comp=Z,1.1nm,0.7s,baz=78,slow=13,SNR=4.8
comp=Z,1.1nm,0.7s
DAG Danmarks Havn 40.16 342 iP **P 05 34 41.0 +0.6**
GTA Gaotai 44.24 75 eP **P 05 35 15.8 +1.5**
GTA pP sP 05 35 20.3 -0.8
GTA sP pP 05 35 23.3 +4.1
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,86nm,4.9s
GTA LR LR
comp=Z,230nm,18.5s
GTA LR LR
comp=Z,170nm,17.8s
GTA LR LR
comp=Z,110nm,15.6s
TORD Torodi Ar. Bea 44.83 238 P **P 05 35 18.3 -0.7**
comp=Z,1.3nm,0.7s,baz=43,slow=7.7,SNR=26
comp=Z,1.3nm,0.7s
TORD Torodi Ar. Bea 44.83 238 P **P 05 35 19.4 +0.3**
SONM Songino Array 45.18 61 P **P 05 35 22.4 +0.7**
comp=Z,1.1nm,0.6s,baz=283,slow=8.0,SNR=8.0
SONM LR LR 05 56 06.6
comp=Z,193nm,20.0s,baz=349,slow=39
comp=Z,1.1nm,0.6s
ULN Ulaanbaatar 45.58 61ceP **P 05 35 25.5 +0.6**
ULN pmax pmax
comp=Z,5.0nm,1.7s
TIXI Tiksi 48.47 25 P **P 05 35 47.2 +0.3**
TIXI IAmb IAmb 05 35 50.1
comp=Z,5.6nm,1.1s
TIXI Tiksi 48.47 25ceP **P 05 35 48.0 +1.1**
TIXI pmax pmax
comp=Z,7.0nm,1.3s
SFJD Kangerlussuaq 50.30 329 LR LR 05 57 56.8
comp=Z,140nm,18.6s,baz=94,slow=37
HHC Hu-ho-hao-te 51.53 67 eP **P 05 36 09.8 -0.9**
HHC pmax pmax
comp=Z,29nm,1.0s
YAK Yakutsk 52.17 37 eP **P 05 36 15.3 +0.2**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
EUNU Eureka 52.27 350 P **P 05 36 15.8 +0.2**
EUNU IAmb IAmb 05 36 19.6
comp=Z,5.3nm,0.9s
PZH PanZhiHua 52.44 88 P **P 05 36 18.5 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.4s
PZH pmax pmax
comp=Z,90nm,3.7s
HNS HongShan 55.40 69 ⇑P **P 05 36 40.5 +1.5**
HNS S **S 05 44 23.0 +0.1**
HNS pmax pmax
comp=Z,11nm,0.6s
HNS LR LR
comp=Z,310nm,16.1s
HNS LR LR
comp=Z,250nm,17.1s
HNS LR LR
comp=Z,180nm,15.7s
CMAR Chiang Mai Arr 55.48 98 P **P 05 36 40.0 +0.1**
comp=Z,0.7nm,0.3s,baz=310,slow=7.1,SNR=7.2

comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 55.48 98 *i* P **P 05 36 40.9 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KLR Kul'dur 59.48 50 *ce* P **P 05 37 08.3 +0.7**
KLR pmax pmax
comp=Z,17nm,2.5s
SEY Seymchan 60.55 29 *ce* P **P 05 37 15.4 +0.6**
SEY pmax pmax
comp=Z,36nm,2.5s
BILL Bilibino 61.09 20 *i* P **P 05 37 17.6 -0.7**
BILL pmax pmax
comp=Z,11nm,1.2s
SCHQ Schefferville 63.25 322 LR LR 06 02 56.1
comp=Z,49nm,19.7s,baz=149,slow=34
KSAR Wonju Array Be 63.99 62 P **P 05 37 37.4 -0.8**
KSAR Wonju Array Be 63.99 62 P **P 05 37 37.4 -0.8**
KSRS Korea Array 64.01 62 P **P 05 37 37.5 -0.8**
comp=Z,6.3nm,0.8s,baz=308,slow=5.9,SNR=21
KSRS LR LR 06 10 01.8
comp=Z,58nm,18.3s,baz=65,slow=40
comp=Z,6.3nm,0.8s
TSUM Tsumeb 66.32 203 LR LR 06 09 04.2
comp=Z,58nm,18.1s,baz=331,slow=38
INK Inuvik 67.61 357 P **P 05 38 00.8 -0.2**
comp=Z,1.2nm,0.7s,baz=316,slow=9.3,SNR=6.4
comp=Z,1.2nm,0.7s
I29M Ogilvie Camp, 70.67 359 P **P 05 38 20.2 +0.1**
MJAR Matsushiro Arr 70.97 57 P **P 05 38 21.3 -1.1**
comp=Z,3.5nm,1.0s,baz=322,slow=6.3,SNR=5.8
comp=Z,3.5nm,1.0s
YKA Yellowknife Ar 71.57 348 P **P 05 38 25.2 -0.4**
comp=Z,6.3nm,0.7s,baz=15,slow=6.3,SNR=6.7
comp=Z,6.3nm,0.7s
YKA Yellowknife Ar 71.57 348 *i* P **P 05 38 25.8 +0.3**
YKA pmax pmax
comp=Z,6.0nm,0.7s
BOSA Boshof 73.73 193 P **P 05 38 38.2 -0.6**
comp=Z,5.9nm,1.2s,baz=326,slow=6.6,SNR=4.5
comp=Z,5.9nm,1.2s
WTLY Watson Lake, Y 75.52 354 P **P 05 38 50.8 +1.9**
SADO Sadowa 75.97 320 LR LR 06 12 20.0
comp=Z,44nm,19.2s,baz=30,slow=36
BBB Bella Bella 83.32 352 LR LR 06 18 15.1
comp=Z,49nm,18.6s,baz=196,slow=37
NEW Newport 85.59 345 LR LR 06 17 53.9
comp=Z,53nm,19.5s,baz=24,slow=36
NEW Newport 85.59 345 P **P 05 39 42.6 -0.5**
NEW IAmb IAmb 05 39 45.1
comp=Z,3.6nm,0.8s
NEW Newport 85.59 345 P **P 05 39 42.6 -0.5**
NEW pmax pmax
comp=Z,4.0nm,0.8s
SJG San Juan 88.31 294 LR LR 06 13 34.9
comp=Z,20nm,21.2s,baz=34,slow=32
PDAR Pinedale Array 89.04 338 LR LR 06 20 48.0
comp=Z,79nm,18.1s,baz=34,slow=36
URZ Urewera 147.78 94 PKPbc **PKPdf 05 46 47.5 +1.0**
comp=Z,10nm,0.7s,baz=252,slow=2.7,SNR=2.5

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*DNK **30** 05:36:11.0±1.0, 50°.65N×15°.70E, h0km, ML1.9(UPP), Suspected explosion*
*VIE **30** 05:36:22.4±0.5, 51°.43N×16°.32E, h0km, mb2.8/9, ml3.1/10, Error ellipse: s-maj=5.6km s-min=2.6km az=33.0 61 km NW of Wroclaw Suspected Mining induced.*
*IDC **30** 05:36:22.9±0.7, 51°.41N×16°.16E, h0km, mb3.4/1, mbtmp3.5/9, ML2.9/7, MS3.8/4, Error ellipse: s-maj=11.8km s-min=6.7km az=109.0*
*PRU **30** 05:36:23.0±0.0, 51°.44N×16°.16E, h0km*
*LDG **30** 05:36:23.1±0.4, 51°.39N×16°.31E, h1km, Ml3.7/8, Error ellipse: s-maj=8.4km s-min=3.9km az=19.0, Suspected Mining induced.*
*BGR **30** 05:36:24.6±0.5, 51°.31N×16°.14E, h1km, ML3.1/14, Error ellipse: s-maj=7.8km s-min=3.3km az=22.0*
*UPP **30** 05:36:29.0±3.3, 51°.92N×15°.54E, h0km, ML1.9, Suspected explosion*

ISC 30 05:36:20.3±0.6, 51°.54N±0°.03×16°.24E±0°.02, h0km, n84, σ1§61/127, MS3.7/4, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**177**	*e*Pg	**Pg**	**05 36 34.3**	**+0.6**
KSP				*e*Sg	**Sg**	**05 36 42.2**	**-0.5**
KSP	**Ksiaz**	**0.70**	**177**	*e*Pg	**Pg**	**05 36 34.3**	**+0.6**
KSP				*e*Sg	**Sg**	**05 36 41.7**	**-1.0**
CHVC	**Chvalec**	**0.96**	**187**	*e*PG	**Pg**	**05 36 39.0**	**+0.3**
CHVC				*e*SG	**Sg**	**05 36 50.5**	**-0.6**
comp=Z,108nm,0.4s							
OSTC	**Ostas**	**0.98**	**181**	*e*PG	**Pg**	**05 36 39.7**	**+0.5**
OSTC				*e*SG	**Sg**	**05 36 51.3**	**-0.6**
comp=Z,128nm,0.6s							
UPC	**Upice**	**1.04**	**188**	*e*PG	**Pg**	**05 36 40.7**	**+0.4**
UPC				*e*SG	**Sg**	**05 36 53.0**	**-0.8**
comp=Z,379nm,0.4s							
DPC	**Dobruska-Polom**	**1.19**	**177**	*e*PG	**Pg**	**05 36 42.9**	**-0.3**
DPC				*e*SG	**Sg**	**05 36 57.4**	**-1.2**
comp=Z,144nm,0.6s							
DPC	**Dobruska-Polom**	**1.19**	**177**	*e*Pg	**Pg**	**05 36 43.3**	**+0.2**
DPC				*e*Sg	**Sg**	**05 36 58.3**	**-0.3**
PVCC	**Panska Ves**	**1.46**	**227**	*e*PG	**Pn**	**05 36 48.1**	**+0.1**
PVCC				*e*SG	**Sg**	**05 37 06.8**	**-0.4**
comp=Z,506nm,0.5s							
KRLC	**Kraliky**	**1.51**	**167**	*e*PG	**Pn**	**05 36 48.7**	**+0.1**
KRLC				*e*SG	**Sg**	**05 37 07.0**	**-1.7**
comp=Z,88nm,0.6s							
BRG	**Berggiesshubel**	**1.59**	**246**	*e*Pn	**Pg**	**05 36 51.6**	**+0.8**
BRG				*e*Sg	**Sg**	**05 37 12.5**	**+1.1**
GOPC	**GO Pecny, Ondr**	**1.87**	**210**	*e*PG	**Pn**	**05 36 54.6**	**+1.0**
GOPC				*e*SG	**Sb**	**05 37 18.6**	**-0.7**
comp=Z,134nm,1.0s							
PRU	**Pruhonice**	**1.89**	**215**	*e*PG	**Pb**	**05 36 55.6**	**-0.1**
PRU				*e*SG	**Sb**	**05 37 19.5**	**-0.3**
comp=Z,81nm,0.6s							
FBE	**Freiberg**	**1.92**	**252**	*e*Pg	**Pg**	**05 36 58.2**	**+1.2**
FBE				*e*Sg	**Sg**	**05 37 22.4**	**+0.6**
MORC	**Moravsky Berou**	**1.95**	**154**	*e*PN	**Pn**	**05 36 54.9**	**+0.2**
MORC				*e*SG	**Sn**	**05 37 21.3**	**+1.3**
MORC	**Moravsky Berou**	**1.95**	**154**	*e*Pn	**Pn**	**05 36 55.2**	**+0.4**
MORC				*e*Sg	**Sn**	**05 37 19.7**	**-0.3**
CLL	**Collm**	**2.04**	**265**	*e*Pn	**Pn**	**05 36 57.0**	**+1.1**
CLL				*e*Pg	**Pg**	**05 37 00.0**	**+0.6**
CLL				*e*Sg	**Sg**	**05 37 26.0**	**+0.2**
comp=Z,58nm,0.8s							
CLL	**Collm**	**2.04**	**265**	*e*Pn	**Pn**	**05 36 56.8**	**+1.0**
CLL				*e*Sg	**Sg**	**05 37 26.9**	**+1.1**
OKC	**Ostrava-Krasne**	**2.09**	**144**	*e*PG	**Pb**	**05 36 59.6**	**+0.5**
OKC				*e*SG	**Sb**	**05 37 26.7**	**+1.0**
comp=Z,75nm,0.6s							
OKC	**Ostrava-Krasne**	**2.09**	**144**	*e*Pn	**Pb**	**05 37 00.5**	**+1.4**
OKC				*e*Sg	**Sb**	**05 37 25.9**	**+0.2**
VRAC	**Vranov**	**2.25**	**174**	Pn	**Pn**	**05 36 58.9**	**+0.1**
comp=Z,3.1nm,0.3s,baz=339,slow=14,SNR=15							
VRAC				Lg	Lg	05 37 28.1	
comp=Z,7.9nm,0.3s,baz=76,slow=22,SNR=9.6							
comp=Z,9.5nm,0.4s							
VRAC	**Vranov**	**2.25**	**174**	*e*PN	**Pn**	**05 36 59.4**	**+0.6**
VRAC				*e*SG	**Sb**	**05 37 30.3**	**+0.2**
TREC	**Trest**	**2.30**	**192**	*e*PG	**Pb**	**05 37 03.0**	**+0.3**
TREC				*e*SG	**Sb**	**05 37 31.8**	**+0.2**
comp=Z,50nm,0.6s							
MAUC	**Maruska**	**2.40**	**154**	*e*PG	**Pb**	**05 37 05.3**	**+0.8**
MAUC				*e*SG	**Sg**	**05 37 37.5**	**0.0**
comp=Z,159nm,0.8s							
KRUC	**Moravsky**	**2.48**	**178**	*e*PN	**Pn**	**05 37 03.1**	**+1.1**
KRUC				*e*SG	**Sg**	**05 37 38.7**	**-1.4**
OJC	**Ojcow**	**2.62**	**119**	*e*Pg	**Pb**	**05 37 09.8**	**+1.7**
OJC				*e*Sg	**Sg**	**05 37 43.9**	**-0.4**
TANN	**Tannenbergstha**	**2.64**	**246**	*e*Pn	**Pn**	**05 37 05.5**	**+1.3**
TANN				*e*Sg	**Sg**	**05 37 45.0**	**-0.1**
WERD	**Werda**	**2.71**	**248**	*e*Sg	**Sg**	**05 37 46.3**	**-1.2**
NKC	**Novy Kostel**	**2.73**	**243**	*e*PN	**Pn**	**05 37 06.6**	**+1.1**
NKC				*e*SG	**Sg**	**05 37 47.8**	**-0.3**
comp=Z,88nm,0.7s							
JAVC	**Velka Javorina**	**2.84**	**160**	*e*PN	**Pn**	**05 37 07.5**	**+0.6**
KHC	**Kasperske Hory**	**2.95**	**216**	*e*PN	**Pn**	**05 37 10.0**	**+1.5**
KHC				*e*PG	**Pb**	**05 37 14.9**	**+1.1**
KHC				*e*SN	**Sn**	**05 37 44.1**	**-0.5**
KHC				*e*SG	**Sb**	**05 37 52.6**	**+2.1**
comp=Z,50nm,0.8s							
CKRC	**Cesky Krumlov**	**2.99**	**205**	*e*PN	**Pn**	**05 37 10.0**	**+1.0**
CKRC				*e*PG	**Pb**	**05 37 15.6**	**+1.1**
CKRC				*e*SG	**Sg**	**05 37 54.0**	**-2.4**
MANZ	**Manzenberg**	**3.05**	**241**	*e*Pn	**Pn**	**05 37 11.0**	**+1.2**
MANZ				*e*Sg	**Sg**	**05 37 58.3**	**+0.1**
MOX	**Moxa**	**3.05**	**255**	*e*Sg	**Sg**	**05 37 58.5**	**+0.3**
ROTZ	**Rotzenmuhle**	**3.12**	**237**	*e*Pn	**Pn**	**05 37 12.1**	**+1.4**
ROTZ				*e*Sg	**Sg**	**05 37 58.1**	**-2.3**
GEC2	**GERESS Array S**	**3.15**	**212**	*e*Pg	**Pb**	**05 37 18.6**	**+1.4**
GEC2				*e*Sg	**Sb**	**05 37 58.1**	**+1.9**
GERES	**GERESS Array B**	**3.15**	**212**	Pn	**Pn**	**05 37 12.3**	**+1.1**
comp=Z,1.0nm,0.3s,baz=36,slow=13,SNR=27							
GERES				Pg	**Pb**	**05 37 18.7**	**+1.4**
comp=Z,9.1nm,0.3s,baz=30,slow=17,SNR=27							
GERES				Sn	**Sn**	**05 37 48.9**	**-0.7**
comp=Z,2.5nm,0.3s,baz=24,slow=31,SNR=5.3							
GERES				Lg	Lg	05 37 58.2	
comp=Z,12nm,0.3s,baz=36,slow=25,SNR=13							
comp=Z,2.4nm,0.5s							
WET	**Wettzell**	**3.22**	**223**	*e*Pn	**Pn**	**05 37 13.1**	**+0.9**
WET				*e*Sg	**Sg**	**05 38 01.6**	**-2.2**
CONA	**Conrad Observa**	**3.62**	**184**	*i* Pn	**Pn**	**05 37 18.5**	**+0.7**
comp=Z,0.5nm,0.1s							
RONA	**Rosalia, Austr**	**3.84**	**179**	*e*Pn	**Pn**	**05 37 21.5**	**+0.8**
comp=Z,0.5nm,0.2s							
MOA	**Molln**	**3.91**	**200**	*e*Pn	**Pn**	**05 37 22.8**	**+1.1**
comp=Z,4.1nm,0.4s							
BIOA	**Bad Ischl, Aus**	**4.21**	**205**	*i* Pn	**Pn**	**05 37 26.1**	**+0.4**
comp=Z,4.0nm,0.3s							
ARSA	**Arzberg**	**4.32**	**186**	*e*Pn	**Pn**	**05 37 28.8**	**+1.6**
comp=Z,1.9nm,0.4s							
LUNU	**Lund**	**4.42**	**339**	P	**Pn**	**05 37 30.4**	**+1.8**
LUNU	**Lund**	**4.42**	**339**	P	**Pn**	**05 37 30.4**	**+1.8**
BLEU	**Blekinge**	**4.78**	**357**	P	**Pn**	**05 37 35.6**	**+2.1**
BLEU				S	**Sn**	**05 38 27.7**	**-1.9**
BLEU	**Blekinge**	**4.78**	**357**	P	**Pn**	**05 37 35.6**	**+2.1**
BLEU				S	**Sn**	**05 38 27.7**	**-1.9**
BJUU	**Bjuv**	**4.93**	**339**	P	**Pn**	**05 37 36.3**	**+0.8**
BJUU	**Bjuv**	**4.93**	**339**	P	**Pn**	**05 37 36.3**	**+0.8**
SOKA	**Soboth**	**4.93**	**190**	*e*Pn	**Pn**	**05 37 37.1**	**+1.4**
comp=Z,0.6nm,0.3s							
WTTA	**Wattenberg**	**5.23**	**217**	*e*Pn	**Pn**	**05 37 41.3**	**+1.4**
comp=Z,2.5nm,0.5s							
MOTA	**Moosalm**	**5.37**	**221**	*e*Pn	**Pn**	**05 37 43.1**	**+1.3**
comp=Z,0.6nm,0.3s							
ABTA	**Abfaltersbach**	**5.38**	**208**	*e*Pn	**Pn**	**05 37 43.8**	**+1.9**
comp=Z,3.2nm,0.5s							
RETA	**Reutte**	**5.40**	**223**	*e*Pn	**Pn**	**05 37 42.8**	**+0.6**
comp=Z,1.1nm,0.3s							
VXJU	**Vaexsjoe**	**5.45**	**352**	P	**Pn**	**05 37 45.1**	**+2.5**
VXJU	**Vaexsjoe**	**5.45**	**352**	P	**Pn**	**05 37 45.1**	**+2.5**
OSKU	**Oskarshamn**	**5.67**	**359**	P	**Pn**	**05 37 48.5**	**+2.8**
OSKU	**Oskarshamn**	**5.67**	**359**	P	**Pn**	**05 37 48.5**	**+2.8**
EKSU	**Eksjoe**	**6.07**	**355**	P	**Pn**	**05 37 53.0**	**+1.8**
EKSU	**Eksjoe**	**6.07**	**355**	P	**Pn**	**05 37 53.0**	**+1.8**
VSTU	**Vaestervik**	**6.14**	**2**	P	**Pn**	**05 37 55.1**	**+3.0**
VSTU	**Vaestervik**	**6.14**	**2**	P	**Pn**	**05 37 55.1**	**+3.0**
DAVOX	**Davos/Dischmat**	**6.33**	**224**	Pn	**Pn**	**05 37 55.1**	**+0.1**
comp=Z,0.1nm,0.3s,baz=353,slow=11,SNR=2.9							
DAVOX				Lg	Lg	05 39 39.1	
comp=Z,0.6nm,0.3s,baz=29,slow=24,SNR=3.8							
comp=Z,1.1nm,0.6s							
CDF	**Champ du Feu**	**6.57**	**245**	*e*Pn	**Pn**	**05 37 59.3**	**+1.0**
CDF				*e*Sg	**Sg**	**05 39 53.1**	**+1.8**
comp=Z,27nm,0.9s							
HINF	**Hinteralfeld**	**7.14**	**242**	*e*Pn	**Pn**	**05 38 07.1**	**+1.1**
HINF				*e*Sg	**Sg**	**05 40 05.2**	**-4.2**
comp=Z,12nm,0.8s							
HAU	**Haudompre**	**7.31**	**245**	*e*Pn	**Pn**	**05 38 09.1**	**+0.7**
HAU				*e*Sg	**Sg**	**05 40 11.7**	**-3.4**
PAGF	**Fort de Pagny**	**7.40**	**250**	*e*Sg	**Sg**	**05 40 15.2**	**-2.6**
comp=Z,18nm,0.9s							
SAVF	**Savonnieres en**	**7.72**	**252**	*e*Pn	**Pn**	**05 38 15.8**	**+1.8**
SAVF				*e*Sg	**Sg**	**05 40 25.1**	**-3.2**
comp=Z,21nm,1.1s							
MEZF	**Maizieres J'vi**	**7.82**	**251**	*e*Pn	**Pn**	**05 38 18.3**	**+3.0**
MEZF				*e*Sg	**Sg**	**05 40 27.4**	**-3.9**
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**05 38 21.3**	**+0.6**
comp=Z,0.5nm,0.3s,baz=280,slow=12,SNR=2.6							
AKASG				Sn	**Sn**	**05 39 50.4**	**-3.8**
comp=Z,0.6nm,0.3s,baz=335,slow=29,SNR=2.0							
comp=Z,0.7nm,0.5s							
CABF	**La Chapelle**	**8.29**	**237**	*e*Pn	**Pn**	**05 38 21.9**	**+0.1**
CABF				*e*Sg	**Sg**	**05 40 40.8**	**-5.5**
HFS	**Hagfors**	**8.73**	**352**	Pn	**Pn**	**05 38 29.7**	**+2.0**
comp=Z,0.2nm,0.3s,baz=109,slow=27,SNR=1.5							
HFS				Sn	**Sn**	**05 40 02.9**	**-3.8**
baz=193,slow=32							
comp=Z,5.9nm,0.8s							
LOR	**Lormes**	**9.13**	**247**	*e*Sg	Sn	05 41 08.8	+52
comp=Z,6.6nm,0.8s							
SSF	**Saint Saulge**	**9.45**	**247**	*e*Pn	**Pn**	**05 38 38.3**	**+0.7**
SSF				*e*Sg	Sn	05 41 18.2	+54
comp=Z,17nm,1.1s							
SMF	**Signal de Mont**	**9.49**	**244**	*e*Pn	**Pn**	**05 38 37.0**	**-1.2**
SMF				*e*Sg	Sn	05 41 22.1	+57
comp=Z,10.0nm,1.0s							
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**Pn**	**05 38 45.3**	**+1.3**
comp=Z,0.9nm,0.7s,baz=202,slow=18,SNR=1.3							
NOA				Sn	**Sn**	**05 40 33.1**	**-2.9**
baz=81,slow=16							
BGF	**Bois d'Agland**	**10.10**	**246**	*e*Sg	Sn	05 41 39.0	+59
comp=Z,11nm,0.9s							
FINES	**FINESS Array B**	**11.30**	**25**	Pn	**Pn**	**05 39 03.2**	**+0.3**
comp=Z,0.2nm,0.3s,baz=224,slow=12,SNR=1.4							
comp=Z,4.4nm,0.8s							
EKA	**Eskdalemuir Ar**	**12.16**	**296**	Pn	**Pn**	**05 39 14.1**	**-0.6**
baz=101,slow=14							
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**05 40 36.9**	**-1.7**
comp=Z,0.2nm,0.3s,baz=196,slow=13,SNR=5.5							
comp=Z,6.7nm,0.9s							
KURBB	**Kurchatov Arra**	**38.09**	**66**	LR	LR	06 01 55.7	
comp=Z,74nm,20.4s,baz=142,slow=40							
TORD	**Torodi Ar. Bea**	**40.06**	**202**	P	**P**	**05 43 57.9**	**+0.6**
comp=Z,0.6nm,0.9s,baz=35,slow=7.8,SNR=3.8							
comp=Z,0.6nm,0.9s							
RES	**Resolute Bay**	**46.13**	**340**	LR	LR	06 02 29.6	
comp=Z,82nm,18.0s,baz=20,slow=34							
YKA	**Yellowknife Ar**	**59.86**	**336**	LR	LR	06 12 32.9	
comp=Z,51nm,19.6s,baz=339,slow=36							
BRDH	**Bariadhala**	**63.59**	**86**	LR	LR	06 16 32.3	
comp=Z,178nm,19.5s,baz=268,slow=38							

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*IDC **30** 05:38:03.1±1.9, 17°.33S×179°.03W, h568km±18km, mb2.9/6, mbtmp3.8/7, Error ellipse: s-maj=83.8km s-min=16.8km az=150.0*

ISC 30 05:38:01.3±1.4, 17°.6S±0°.5×178°.8W±0°.3, h550km, n8, σ1§08/10, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.03**	**267**	P	**P**	**05 39 18.7**	**+2.1**
31nm,0.8s,baz=117,slow=2.2,SNR=14							
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**05 44 36.5**	**-0.2**
2.9nm,0.6s,baz=92,slow=12,SNR=6.0							
2.9nm,0.6s							
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**05 45 22.2**	**-1.1**
1.8nm,0.7s,baz=97,slow=6.9,SNR=50							
WRA				PcP	**PcP**	**05 46 54.8**	**-0.5**
0.3nm,0.7s,baz=92,slow=4.2,SNR=1.7							
1.8nm,0.7s							
ASAR	**Alice Springs**	**44.54**	**254**	P	**P**	**05 45 24.2**	**-0.5**
17nm,0.6s,baz=88,slow=8.2,SNR=287							
ASAR				PcP	**PcP**	**05 46 55.3**	**-0.8**
0.4nm,0.5s,baz=93,slow=4.3,SNR=2.5							
NVAR	**Mina Array Bea**	**79.45**	**44**	P	**P**	**05 49 11.9**	**+0.7**
0.2nm,0.5s,baz=233,slow=8.9,SNR=1.7							
0.2nm,0.5s							
ILAR	**Eielson Array**	**85.67**	**13**	P	**P**	**05 49 40.7**	**-0.9**
0.2nm,0.4s,baz=224,slow=5.2,SNR=6.8							
0.2nm,0.4s							
TXAR	**Lajitas Array**	**86.13**	**58**	P	**P**	**05 49 45.1**	**+0.3**
0.5nm,0.7s,baz=212,slow=6.3,SNR=6.9							
0.5nm,0.7s							
PDAR	**Pinedale Array**	**87.37**	**44**	P	**P**	**05 49 50.3**	**-0.2**
0.4nm,0.5s,baz=213,slow=3.8,SNR=5.2							
0.4nm,0.5s							

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*NEIC **30** 06:04:01.3±0.9, 22°.88N±0°.04×144°.3E±0°.2, h40km±9km, mb4.5/20, Error ellipse: s-maj=23.7km s-min=3.6km az=77.0*
*IDC **30** 06:04:02.6±3.3, 22°.91N×143°.82E, h46km±30km, mb3.7/14, mbtmp3.9/17, ML4.1/1, MS3.3/2, Error ellipse: s-maj=25.6km s-min=16.0km az=90.0*

ISC 30 06:04:00.9±0.7, 22°.91N±0°.08×144°.0E±0°.1, h34km, n55, σ1§03/48, mb4.1/23, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.48**	**339**	P	**Pn**	**06 05 07.2**	**+0.8**
9.1nm,0.3s,baz=274,slow=22,SNR=20							
JCJ				S	**Sn**	**06 05 55.5**	**-2.0**
66nm,0.4s,baz=103,slow=24,SNR=11							
22nm,0.3s							
JCJ	**Chichijima**	**4.48**	**339**	Pn	**Pn**	**06 05 08.0**	**+1.6**
JHJ2	**Mitsune**	**10.81**	**341**	Pn	Pn	06 06 39.5	+6.2
MJAR	**Matsushiro Arr**	**14.48**	**341**	P	**Pn**	**06 07 23.8**	**+0.4**
0.9nm,0.4s,baz=151,slow=13,SNR=1.7							
JOW	**Kunigami**	**14.81**	**288**	LR	LR	06 12 29.7	
comp=Z,165nm,20.6s,baz=310,slow=35							
JMM	**Marumori**	**15.16**	**350**	Pn	**Pn**	**06 07 33.2**	**+0.7**
JMM				IAmb	IAmb	06 07 48.9	
comp=Z,19nm,1.0s							
KSRS	**Korea Array**	**20.05**	**320**	P	**P**	**06 08 31.8**	**+0.8**
comp=Z,1.2nm,0.8s,baz=145,slow=8.5,SNR=2.5							
H11N1	**WAKE ISLAND Hy**	**21.54**	**94**	T	T	06 31 00.8	
baz=283,slow=74,SNR=46							
H11N2	**WAKE ISLAND Hy**	**21.54**	**94**	T	T	06 31 00.6	
baz=283,slow=74,SNR=39							
H11N3	**WAKE ISLAND Hy**	**21.56**	**94**	T	T	06 31 01.9	
baz=283,slow=74,SNR=44							
H11S3	**WAKE ISLAND Hy**	**21.65**	**98**	T	T	06 31 19.2	
baz=282,slow=74,SNR=6.7							
H11S1	**WAKE ISLAND Hy**	**21.66**	**97**	T	T	06 31 19.3	
baz=282,slow=74,SNR=3.6							
H11S2	**WAKE ISLAND Hy**	**21.67**	**98**	T	T	06 31 18.3	
baz=282,slow=74,SNR=4.5							
USRK	**Ussuriysk Ar.**	**23.43**	**338**	P	**P**	**06 09 06.7**	**-0.2**
KLR	**Kul'dur**	**28.00**	**343**	P	**P**	**06 09 48.9**	**+0.4**
comp=Z,2.4nm,0.6s,baz=147,slow=7.7,SNR=8.2							
comp=Z,2.4nm,0.6s							
PEA0B	**Petropavlovsk-**	**31.90**	**16**	P	**P**	**06 10 21.7**	**-1.2**
PETK	**Petropavlovsk-**	**31.90**	**16**	LR	LR	06 21 43.7	
comp=Z,37nm,20.2s,baz=84,slow=33							
PETK	**Petropavlovsk-**	**31.90**	**16**	P	**P**	**06 10 21.5**	**-1.5**
SONM	**Songino Array**	**38.91**	**319**	P	**P**	**06 11 22.6**	**-0.8**
comp=Z,0.3nm,0.3s,baz=125,slow=8.0,SNR=2.1							
comp=Z,0.3nm,0.3s							
SONM	**Songino Array**	**38.91**	**319**	P	**P**	**06 11 24.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**42.28**	**273**	P	**P**	**06 11 51.1**	**-0.4**
comp=Z,0.8nm,0.4s,baz=68,slow=7.9,SNR=1.3							
comp=Z,0.8nm,0.4s							
WB0	**Warramunga Arr**	**43.45**	**193**	P	**P**	**06 11 59.7**	**-1.1**
WB0				IAmb	IAmb	06 12 12.5	
comp=Z,7.1nm,1.3s							
WR0	**Warramunga Arr**	**43.60**	**193**	P	**P**	**06 12 01.2**	**-0.9**
WB2	**Warramunga Arr**	**43.63**	**193**	P	**P**	**06 12 01.1**	**-1.1**
WB2				IAmb	IAmb	06 12 16.7	
comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**43.63**	**193**	P	**P**	**06 12 01.6**	**-0.6**
comp=Z,0.4nm,0.3s,baz=16,slow=8.4,SNR=42							
WRA				PcP	**PcP**	**06 13 50.0**	**+0.7**
comp=Z,0.8nm,0.9s,baz=10,slow=3.6,SNR=2.3							
comp=Z,0.4nm,0.3s							
WRA	**Warramunga Arr**	**43.63**	**193**	P	**P**	**06 12 02.1**	**-0.2**
KULM	**Kulim**	**45.34**	**254**	P	**P**	**06 12 16.9**	**+0.8**
KULM				IAmb	IAmb	06 12 44.2	
comp=Z,14nm,1.4s							
ASAR	**Alice Springs**	**47.33**	**193**	P	**P**	**06 12 31.2**	**-0.3**
comp=Z,0.7nm,0.6s,baz=15,slow=9.0,SNR=12							
comp=Z,0.7nm,0.6s							
GSI	**Gunungsitoli**	**49.91**	**251**	P	**P**	**06 12 51.5**	**-0.1**
ZALV	**Zalesovo Beam**	**53.75**	**321**	P	**P**	**06 13 17.8**	**-1.9**
comp=Z,0.7nm,0.6s,baz=101,slow=7.8,SNR=2.5							
comp=Z,0.7nm,0.6s							
MK31	**Makanchi Array**	**54.46**	**312**	P	**P**	**06 13 25.8**	**+0.8**
MK31				IAmb	IAmb	06 13 46.7	
comp=Z,6.1nm,1.1s							
MKAR	**Makanchi Array**	**54.46**	**312**	P	**P**	**06 13 24.8**	**-0.2**
comp=Z,1.0nm,0.6s,baz=86,slow=9.9,SNR=6.3							
comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**54.46**	**312**	P	**P**	**06 13 25.7**	**+0.7**
KURK	**Kurchatov**	**57.12**	**317**	P	**P**	**06 13 44.4**	**+0.4**
K20K	**Telida**	**57.23**	**28**	P	**P**	**06 13 47.6**	**+3.0**
K20K				IAmb	IAmb	06 13 49.6	
comp=Z,5.3nm,1.1s							
J20K	**Nowinta River**	**57.41**	**27**	P	**P**	**06 13 45.2**	**-0.5**
J20K				IAmb	IAmb	06 14 01.1	
comp=Z,9.6nm,1.4s							
IMAR	**Indian Mountai**	**58.06**	**25**	P	**P**	**06 13 50.1**	**-0.3**
CAST	**Castle Rocks**	**58.11**	**28**	P	**P**	**06 13 50.2**	**-0.6**
CAST				IAmb	IAmb	06 13 53.4	
comp=Z,2.9nm,0.8s							
SUA	**Susitna One**	**58.33**	**31**	P	**P**	**06 13 50.2**	**-2.2**
BOOM	**Boomskoye usch**	**58.99**	**307**	P	**P**	**06 13 58.8**	**+1.3**
BOOM				IAmb	IAmb	06 13 59

H08S1	**Diego Garcia H** baz=143	**69.61 284**	T	T	07 41 02.1
H08S3	**Diego Garcia H** baz=143	**69.61 284**	T	T	07 41 05.3
H03S1	**Juan Fernandez** baz=201,slow=74,SNR=4.4	**88.13 149**	T	T	08 04 34.0
H03S2	**Juan Fernandez** baz=201,slow=74,SNR=3.9	**88.13 149**	T	T	08 04 33.4
H03S3	**Juan Fernandez** baz=201,slow=74,SNR=3.9	**88.14 149**	T	T	08 04 37.1
ARCES	**ARCESS Array B 145.49 325** 1.1nm,0.7s,baz=76,slow=3.8,SNR=1.2	PKPbc	**PKPab**	**06 33 10.5 +0.4**	
GERES	**GERESS Array B 145.68 287** 0.4nm,0.6s,baz=107,slow=3.3,SNR=5.1	PKPbc	**PKPab**	**06 33 12.0 +0.5**	
ESDC	**Sonseca Array 151.58 259** 0.5nm,0.7s,baz=83,slow=1.5,SNR=6.1	PKPbc	**PKPbc**	**06 33 26.9 +0.1**	

IDC 30 06:25:39.6±2.7, 8°.74S×112°.51E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=153.8km s-min=26.3km az=48.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=293,slow=11,SNR=5.5 0.5nm,0.9s	**23.87**	**120**	P	P	06 30 55.3	+0.2
ASAR	**Alice Springs** 0.3nm,0.6s,baz=307,slow=9.1,SNR=4.8 0.3nm,0.6s	**25.29**	**128**	P	P	06 31 08.0	-0.1
H08S2	**Diego Garcia H** baz=94	**39.61**	**269**	T	T	07 14 21.8	
H08S3	**Diego Garcia H** baz=94	**39.62**	**269**	T	T	07 14 39.5	
H08S1	**Diego Garcia H** baz=94	**39.63**	**269**	T	T	07 14 09.4	
MKAR	**Makanchi Array** 0.5nm,0.4s,baz=153,slow=7.3,SNR=7.8 0.5nm,0.4s	**61.49**	**337**	P	P	06 35 58.2	-0.1

PRU ***30*** *06:40:16.8±0.0, 42°.83N×12°.76E, h0km, M6.1*
BJI ***30*** *06:40:16.0±0.0, 42°.90N×13°.10E, h5km, mb5.6/85, mB6.7/88, Ms6.9/93, Ms7 7.1/81*
IDC ***30*** *06:40:17.3±0.3, 42°.92N×13°.08E, h0km, mb5.6/38, mbtmp5.6/50, ML4.7/12, MS6.7/98, Error ellipse: s-maj=7.7km s-min=6.5km az=107.0*
BEO ***30*** *06:40:17.5±0.6, 42°.82N×12°.98E, h3km±2km, ML6.4/18*
ROM ***30*** *06:40:17.4±0.0, 42°.832N±0°.001×13°.111E±0°.003, h9km, ML6.1/141, Mw6.5, Error ellipse: s-maj=0.2km s-min=0.1km az=244.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-7.67; Mθθ2.54; Mφφ5.13; Mrθ-0.20; Mθφ-2.25; Mφr0.50; Fault plane solution: M0 7.06713×10^18 NP1:φs330.00000°, δ43.00000°, λ-91.00000°. NP2:φs151.00000°, δ47.00000°, λ-89.00000°.*
PDG ***30*** *06:40:17.7±0.7, 42°.87N×13°.14E, h13km, MD6.5/9, ML6.5/9 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
BGR ***30*** *06:40:17.0±0.5, 42°.72N×13°.52E, h10km, ML6.7/24, Error ellipse: s-maj=10.0km s-min=7.8km az=111.0*
LDG ***30*** *06:40:18.4±0.1, 42°.78N×13°.28E, h10km, Md6.0/5, Ml5.9/46, ms6.2/8, Error ellipse: s-maj=4.3km s-min=2.3km az=39.0*
MED_RC ***30*** *06:40:18.0±0.1, 42°.74N×13°.12E, h10km, MW6.6/43, Moment Tensor Solution. Body waves: s25,c48;Mantle waves: s43,c112; Duration: 4s5 Moment tensor: Scale 10^19Nm; Mrr-1.00±.01; Mθθ0.20±.01; Mφφ0.80±.01; Mrθ-0.10±.03; Mθφ-0.31±.01; Mφr-0.23±.03; Best double couple: M0 1.00000×10^19 NP1:φs346.00000°, δ51.00000°, λ-78.00000°. NP2:φs148.00000°, δ41.00000°, λ-104.00000°. Principal axes: T 0.9500, Plg5.0000°, Azm68.0000°; N 0.1000, Plg9.0000°, Azm159.0000°; P -1.0400, Plg80.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=40s.*
BGS ***30*** *06:40:18.4±2.7, 42°.85N×13°.10E, h10km, MW6.6(NEIC)*
NEIC ***30*** *06:40:18.7±1.4, 42°.86N±0°.05×13°.10E±0°.06, h8km±1km, mb6.1/630, Ms_20 6.6/409, Mwb6.5/32, Mwc6.6/118, Mwr6.6/72, Mww6.6, Mwr6.5(VIE), Mwr6.5(ROM), Error ellipse: s-maj=9.0km s-min=7.3km az=216.0*
MOS ***30*** *06:40:18.0±1.1, 42°.95N×13°.14E, h13km, mb6.3/92, MS6.6/82, Error ellipse: s-maj=4.2km s-min=2.6km az=67.8*
NEIC ***30*** *06:40:18.7, 42°.86N×13°.10E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-6.13; Mθθ1.49; Mφφ4.64; Mrθ1.83; Mθφ-3.33; Mφr0.18; Fault plane solution: M0 6.72000×10^18 NP1:φs312.93000°, δ50.63000°, λ-109.77000°. NP2:φs162.48000°, δ43.32000°, λ-67.59000°. Principal axes: T 6.7979, Plg4.0000°, Azm57.0000°; N -0.1663, Plg15.0000°, Azm326.0000°; P -6.6316, Plg74.0000°, Azm160.0000°;*
TIR ***30*** *06:40:19.5, 43°.40N×13°.15E, h17km±4km, Md6.5, Ml6.6*
NEIC ***30*** *06:40:19.2, 42°.85N×13°.09E, h5km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-8.09; Mθθ2.12; Mφφ5.97; Mrθ1.46; Mθφ-1.49; Mφr-4.45; Fault plane solution: M0 8.77000×10^18 NP1:φs160.97000°, δ28.62000°, λ-90.46000°. NP2:φs341.50000°, δ61.38000°, λ-89.75000°. Principal axes: T 7.8567, Plg16.0000°, Azm71.0000°; N 1.6102, Plg0.0000°, Azm161.0000°; P -9.4669, Plg74.0000°, Azm252.0000°;*
STR ***30*** *06:40:20.4±0.2, 43°N±3°×1°3E±°, h10km, Mwp6.3/40*
BNS ***30*** *06:40:21.2±0.3, 42°.82N×12°.92E, h10km, ML5.9/46*
GCMT ***30*** *06:40:23.7±0.0, 42°.75N×13°.16E, h12km, MW6.6/172, Moment Tensor Solution. s157,c417; s172,c809; Duration: 4s8 Moment tensor: Scale 10^19Nm; Mrr-0.95±.00; Mθθ0.19±.00; Mφφ0.76±.00; Mrθ0.03±.01; Mθφ-0.29±.00; Mφr-0.28±.01; Best double couple: M0 0.95800×10^19 NP1:φs342.00000°, δ53.00000°, λ-85.00000°. NP2:φs154.00000°, δ37.00000°, λ-96.00000°. Principal axes: T 0.9220, Plg8.0000°, Azm68.0000°; N 0.0730, Plg4.0000°, Azm159.0000°; P -0.9950, Plg81.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***30*** *06:40:25, 42°.76N×12°.95E, h16km, Moment Tensor Solution. Duration: 14s4 Moment tensor: Scale 10^19Nm; Mrr-0.91; Mθθ0.19; Mφφ0.72; Mrθ0.30; Mθφ-0.24; Mφr-0.56; Fault plane solution: M0 1.07000×10^19 NP1: φs162.00000°, δ27.00000°, λ-83.00000°. NP2: φs335.00000°, δ63.00000°, λ-93.00000°. Principal axes: T 1.0153, Plg18.0000°, Azm67.0000°; N 0.1031, Plg3.0000°, Azm336.0000°; P -1.1184, Plg72.0000°, Azm238.0000°;*
NEIC ***30*** *06:40:31.5, 43°.03N×13°.27E, h16km, Moment Tensor Solution. Duration: 11s5 Moment tensor: Scale 10^19Nm; Mrr-1.03; Mθθ0.29; Mφφ0.74; Mrθ-0.53; Mθφ-0.27; Mφr-0.48; Fault plane solution: M0 1.12000×10^19 NP1: φs138.88000°, δ40.94000°, λ-125.84000°. NP2:φs2.60000°, δ57.91000°, λ-63.07000°. Principal axes: T 0.8956, Plg9.0000°, Azm74.0000°; N 0.4578, Plg23.0000°, Azm168.0000°; P -1.3534, Plg65.0000°, Azm323.0000°;*

ISC 30 06:40:19.2±0.3, 42°.83N±0°.01×13°.10E±0°.01, h10km±1km, h10km:pP-P, n3174, σ1s97/3820, mb6.1/512, MS6.7/336, 274C-153D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**68**	⇓P	**Pg**	**06 40 19.8**	**-1.7**
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.09**	**313**	⇑P	**Pg**	**06 40 20.2**	**-1.3**
T1216				S	**Sg**	**06 40 21.8**	**-1.5**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**38**	⇑P	**Pg**	**06 40 20.4**	**-1.6**
FEMA	**Monte Fema**	**0.14**	**343**	⇓P	**Pg**	**06 40 21.0**	**-1.4**
FEMA				S	**Sg**	**06 40 23.6**	**-1.0**
T1244	**Arquata del Tr**	**0.16**	**118**	⇑P	**Pg**	**06 40 21.5**	**-1.2**
T1244				S	**Sg**	**06 40 23.9**	**-1.3**
T1215	**Vallo di Nera,**	**0.17**	**260**	⇑P	**Pg**	**06 40 21.9**	**-1.1**
T1215				S	**Sg**	**06 40 25.4**	**-0.1**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1217	**Poggiodomo (PG**	**0.17**	**227**	⇑P	**Pg**	**06 40 21.9**	**-1.0**
T1217				S	**Sg**	**06 40 25.4**	**-0.1**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1256	**Bolognola (MC)**	**0.20**	**27**	⇑P	**Pg**	**06 40 21.9**	**-1.5**
T1256				S	**Sg**	**06 40 25.0**	**-1.3**
FDMO	**Fiordimonte**	**0.20**	**357**		**Pg**	**06 40 22.1**	**-1.4**
FDMO	**Fiordimonte**	**0.20**	**357**	⇑P	**Pg**	**06 40 22.1**	**-1.4**
T1201	**Domo (RI)**	**0.21**	**148**	⇑P	**Pg**	**06 40 22.4**	**-1.0**
T1201				S	**Sg**	**06 40 26.0**	**-0.4**
T1204	**Amatrice, Fraz**	**0.22**	**135**	P	**Pg**	**06 40 22.6**	**-1.2**
CESI	**CESI - Serrava**	**0.23**	**320**	⇑P	**Pg**	**06 40 22.7**	**-1.1**
AM05	**Amandola Campo**	**0.23**	**51**	⇑P	**Pg**	**06 40 22.5**	**-1.5**
AM05				S	**Sg**	**06 40 26.9**	**-0.3**
AM05				AML	AML		
AM05				AML	AML		
LNSS	**Leonessa**	**0.23**	**192**	⇑P	**Pg**	**06 40 22.8**	**-1.2**
T1241	**Roccafluvione,**	**0.24**	**84**	⇑P	**Pg**	**06 40 23.2**	**-0.9**
T1241				S	**Sg**	**06 40 26.5**	**-1.0**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
SMA1	**SAN MARTINO**	**0.26**	**140**	⇑P	**Pg**	**06 40 23.1**	**-1.4**
GUMA	**Gualdo di Mace**	**0.29**	**36**	⇑P	**Pg**	**06 40 23.7**	**-1.3**
GUMA				S	**Sg**	**06 40 28.2**	**-0.6**
T1243	**Rocca Santa Ma**	**0.29**	**118**	⇑P	**Pg**	**06 40 23.4**	**-1.6**
RM33	**Pellescritta (**	**0.33**	**166**	P	**Pg**	**06 40 24.4**	**-1.5**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
SEF1	**Sefro**	**0.34**	**340**	P	**Pg**	**06 40 24.4**	**-1.4**
T1211	**Morro Reatino**	**0.35**	**212**	P	**Pg**	**06 40 24.9**	**-1.2**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
ARRO	**Arrone**	**0.35**	**225**	⇑P	**Pg**	**06 40 25.0**	**-1.2**
ARRO				AML	AML		
ARRO				AML	AML		
ARRO				AML	AML		
PIO1	**Pioraco**	**0.36**	**346**	P	**Pg**	**06 40 24.8**	**-1.5**
MDAR	**Monte D'Aria**	**0.36**	**5**	⇑P	**Pg**	**06 40 24.9**	**-1.4**
MDAR				S	**Sg**	**06 40 30.4**	**-0.8**
MDAR				AML	AML		
MDAR				AML	AML		
CAMP	**Campotosto**	**0.37**	**143**		**Pg**	**06 40 25.1**	**-1.5**
CAMP	**Campotosto**	**0.37**	**143**	⇑P	**Pg**	**06 40 25.1**	**-1.5**
CAMP				S	**Sg**	**06 40 31.3**	**-0.2**
FIU1	**Fiuminata**	**0.38**	**341**	P	**Pg**	**06 40 25.3**	**-1.4**
FIU1				S	**Sg**	**06 40 31.6**	**-0.1**
FIU1				AML	AML		
FIU1				AML	AML		
FIU1				AML	AML		
FIU1				AML	AML		
T1246	**Crognaleto (TE**	**0.38**	**131**	⇑P	**Pg**	**06 40 25.0**	**-1.7**
ASSB	**Assisi San Ben**	**0.39**	**303**	⇑P	**Pg**	**06 40 25.4**	**-1.4**
SSM1	**San Severino M**	**0.40**	**8**	⇑P	**Pg**	**06 40 25.5**	**-1.6**
SSM1				S	**Sg**	**06 40 32.0**	**-0.4**
GAG1	**Gagliole**	**0.41**	**356**	P	**Pg**	**06 40 26.0**	**-1.2**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
MNTP	**Montappone**	**0.41**	**41**	⇑P	**Pg**	**06 40 26.2**	**-1.0**
MNTP				S	**Sg**	**06 40 33.0**	**+0.5**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
T1247	**Pizzolo (AQ)**	**0.42**	**160**	⇑P	**Pg**	**06 40 26.5**	**-0.9**
TERO	**Teramo**	**0.42**	**119**	⇑P	**Pg**	**06 40 25.8**	**-1.7**
TERO				S	**Sg**	**06 40 32.4**	**-0.7**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
SNTG	**Esanatoglia**	**0.44**	**344**	⇑P	**Pg**	**06 40 26.2**	**-1.6**
SNTG				S	**Sg**	**06 40 33.4**	**-0.2**
SNTG				AML	AML		
SNTG				AML	AML		
SNTG				AML	AML		
SNTG				AML	AML		
SNTG				AML	AML		
SNTG	comp=E,88500μm,1.2s			AML	AML		
SNTG	comp=E,94200μm,1.1s			AML	AML		
OFFI	**Offida**	**0.44**	**76**	⇑P	**Pg**	**06 40 27.1**	**-0.7**
CESX	**Cesi**	**0.45**	**240**		**Pg**	**06 40 26.5**	**-1.4**
CESX	**Cesi**	**0.45**	**240**	⇑P	**Pg**	**06 40 26.5**	**-1.4**
ATCC	**AVT- Casa Cast**	**0.49**	**316**	P	**Pg**	**06 40 27.4**	**-1.3**
ATCC				AML	AML		
ATCC				AML	AML		
ATCC				AML	AML		
ATCC				AML	AML		
EL6	**Elcito**	**0.50**	**360**	⇑P	**Pg**	**06 40 27.2**	**-1.7**
EL6				S	**Sg**	**06 40 34.8**	**-0.7**
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
TRE1	**Treia**	**0.50**	**18**	⇑P	**Pg**	**06 40 27.7**	**-1.2**
TRE1				S	**Sg**	**06 40 35.8**	**+0.2**
TRE1				AML	AML		
TRE1				AML	AML		
GIGS	**Gran Sasso**	**0.51**	**138**	P	**Pg**	**06 40 28.0**	**-1.2**
GIGS				AML	AML		
GIGS				AML	AML		
AQU	**L'Aquila**	**0.53**	**155**		**Pg**	**06 40 28.3**	**-1.1**
AQU	**L'Aquila**	**0.53**	**155**	P	**Pg**	**06 40 28.3**	**-1.1**
AQU	**L'Aquila**	**0.53**	**155**	P	**Pg**	**06 40 28.2**	**-1.1**
AQU				AML	AML		
AQU				AML	AML		
FOSV	**Fossato di Vic**	**0.53**	**332**	⇑P	**Pg**	**06 40 27.9**	**-1.5**
FOSV				S	**Sg**	**06 40 36.5**	**+0.1**
FOSV				AML	AML		
FOSV				AML	AML		
FOSV				AML	AML		
CING	**Cingoli**	**0.55**	**7**	⇑P	**Pg**	**06 40 28.1**	**-1.7**
CING				S	**Sg**	**06 40 36.8**	**-0.3**
FIAM	**Fiamignano**	**0.56**	**179**	⇑P	**Pg**	**06 40 28.8**	**-1.3**
TRTR	**Tortoreto Alta**	**0.60**	**92**	⇑P	**Pg**	**06 40 30.0**	**-0.8**
CADA	**Capodarco di F**	**0.60**	**53**	⇑P	**Pg**	**06 40 30.4**	**-0.5**
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
MURB	**Monte Urbino**	**0.60**	**316**		**Pg**	**06 40 29.4**	**-1.5**
MURB	**Monte Urbino**	**0.60**	**316**	⇑P	**Pg**	**06 40 29.5**	**-1.4**
MURB				AML	AML		
MURB				AML	AML		
MMUR	**Monte Murano**	**0.61**	**353**	⇑P	**Pg**	**06 40 29.5**	**-1.6**
MMUR				S	**Sg**	**06 40 38.6**	**-0.6**
MMUR				AML	AML		
MMUR				AML	AML		
CIMA	**Civitanova Mar**	**0.63**	**41**	⇑P	**Pg**	**06 40 30.6**	**-0.8**
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
ATTE	**AVT- Monte Tez**	**0.66**	**304**	⇑P	**Pg**	**06 40 30.6**	**-1.3**
PP3	**Marolino**	**0.66**	**34**	⇑P	**Pg**	**06 40 31.1**	**-0.8**
PP3				AML	AML		
PP3				AML	AML		
ATFO	**Monte Foce - G**	**0.66**	**324**	⇑P	**Pg**	**06 40 30.6**	**-1.4**
FAGN	**Fagnano**	**0.67**	**148**	P	**Pg**	**06 40 30.1**	**-2.0**
ARVD	**Arcevia**	**0.68**	**350**	P	**Pg**	**06 40 30.4**	**-1.8**
VCEL	**Villa Celiera**	**0.70**	**129**	⇑P	**Pg**	**06 40 30.9**	**-1.8**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
MGAB	**Montegabbione**	**0.73**	**277**	⇑P	**Pg**	**06 40 31.9**	**-1.5**
MGAB				AML	AML		
MGAB				AML	AML		
FRON	**Frontone**	**0.74**	**338**	P	**Pg**	**06 40 31.7**	**-1.7**
FRON				AML	AML		
FRON				AML	AML		
SRES	**S.Oreste - Sor**	**0.74**	**217**	⇑P	**Pg**	**06 40 31.8**	**-1.6**
SRES				AML	AML		
SRES				AML	AML		
ATVO	**AVT- Monte Val**	**0.75**	**317**	⇑P	**Pg**	**06 40 32.1**	**-1.6**
T0110	**Collepietro**	**0.79**	**140**	P	**Pg**	**06 40 32.9**	**-1.4**
T0110				AML	AML		
T0110				AML	AML		
ATMI	**Monte Miggiano**	**0.79**	**310**	P	**Pg**	**06 40 33.1**	**-1.3**
ATPI	**Pietralunga -**	**0.80**	**321**	P	**Pg**	**06 40 33.1**	**-1.6**
ATPI				AML	AML		
ATPI				AML	AML		
ATPI				AML	AML		
AOI	**Ancona**	**0.81**	**27**	⇑P	**Pg**	**06 40 33.0**	**-1.7**
PIEI	**Pieia**	**0.82**	**330**	P	**Pg**	**06 40 34.0**	**-1.0**
MPAG	**Monte Paganucc**	**0.84**	**343**	P	**Pg**	**06 40 33.9**	**-1.4**
PCRO	**Pietralacroce**	**0.84**	**22**	⇑P	**Pg**	**06 40 33.9**	**-1.4**
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PTQR	**Pietraquaria**	**0.84**	**165**	P	**Pg**	**06 40 34.5**	**-0.9**
PTQR				AML	AML		
PTQR				AML	AML		
MTCE	**Montecelio**	**0.85**	**198**	⇑P	**Pg**	**06 40 33.8**	**-1.8**
MTCE				AML	AML		
MTCE				AML	AML		
SACS	**San Casciano d**	**0.88**	**272**	P	**Pg**	**06 40 36.0**	**-0.1**
SACS				AML	AML		
SACS				AML	AML		
SENI	**Senigallia**	**0.88**	**6**	⇑P	**Pg**	**06 40 35.0**	**-1.1**
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
APEC	**Apecchio**	**0.88**	**326**	P	**Pg**	**06 40 35.0**	**-1.2**
APEC				AML	AML		
APEC				AML	AML		
CERT	**Cerreto**	**0.89**	**186**	⇑P	**Pg**	**06 40 34.1**	**-2.1**
FSSB	**Fossombrone**	**0.89**	**345**	P	**Pg**	**06 40 34.6**	**-1.8**
CDCA	**Citt' di Caste**	**0.89**	**315**	P	**Pg**	**06 40 35.9**	**-0.4**
CDCA				AML	AML		
CDCA				AML	AML		
BADI	**Badiali**	**0.92**	**317**	AML	AML		
BADI				AML	AML		
BADI	comp=E,44450μm,1.0s			AML	AML		
BADI	comp=E,44550μm,1.0s			AML	AML		
CAFI	**Castiglion Fio**	**0.97**	**301**	⇑P	**Pg**	**06 40 36.4**	**-1.4**
PE3	**Peglio**	**0.97**	**333**	⇓P	**Pg**	**06 40 36.7**	**-1.2**
PE3	comp=E,4515μm,0.5s			AML	AML		
PE3	comp=N,4280μm,0.6s			AML	AML		
LATE	**Laterza**	**0.98**	**258**		**Pg**	**06 40 36.3**	**-1.8**
LATE	**Laterza**	**0.98**	**258**	⇑P	**Pg**	**06 40 36.8**	**-1.3**
RCAV	**Rocca di Cave**	**0.99**	**187**	P	**Pg**	**06 40 36.3**	**-1.9**
RCAV				AML	AML		
RCAV				AML	AML		
INTR	**Introdacqua**	**1.01**	**144**	P	Pg	06 40 33.4	-5.3
SSP9	**Sansepolcro**	**1.03**	**317**	P	**Pg**	**06 40 38.1**	**-0.8**
SSP9				AML	AML		
SSP9				AML	AML		
VVLD	**Villa Vallelon**	**1.03**	**158**	⇑P	**Pg**	**06 40 36.9**	**-2.1**
GUAR	**Guarcino**	**1.05**	**171**	⇑P	**Pg**	**06 40 38.8**	**-0.5**
MCIV	**Monte Civitell**	**1.05**	**268**	⇑P	**Pg**	**06 40 37.6**	**-1.8**
SF04	**Casetta**	**1.06**	**271**	AML	AML		
SF04				AML	AML		
RMP	**Rome, Mte Porz**	**1.06**	**196**	⇑P	**Pg**	**06 40 38.7**	**-0.8**
SF14	**Selvena**	**1.10**	**266**	⇑P	**Pg**	**06 40 38.7**	**-1.6**
CAFR	**Castel Frentan**	**1.10**	**123**	P	**Pg**	**06 40 37.7**	**-2.6**
CAFR				AML	AML		
CAFR				AML	AML		
VIVA	**Pratoni del Vi**	**1.11**	**193**	⇑P	**Pg**	**06 40 39.4**	**-1.1**
VIVA				AML	AML		
VIVA				AML	AML		
MA9	**Marino**	**1.11**	**197**	⇑P	**Pg**	**06 40 39.4**	**-1.1**
RDP	**Rocca di Papa**	**1.11**	**195**	⇑P	**Pg**	**06 40 38.1**	**-2.4**
LPEL	**Lama dei Pelig**	**1.12**	**134**	P	**Pg**	**06 40 38.7**	**-2.0**
TOLF	**Tolfa**	**1.12**	**227**	P	**Pb**	**06 40 39.4**	**-1.2**
CPGN	**Carpegna, Ital**	**1.12**	**330**	P	**Pg**	**06 40 40.1**	**-0.7**
SF01	**Poggio Pratacc**	**1.13**	**270**	AML	AML		
SF01				AML	AML		
CRE	**Caprese Michel**	**1.15**	**313**	P	**Pb**	**06 40 39.9**	**-1.4**
CRE				AML	AML		
CRE				AML	AML		
LAV9	**Lanuvio**	**1.19**	**195**	P	**Pb**	**06 40 41.0**	**-0.9**
LAV9				AML	AML		
LAV9				AML	AML		
RSM	**Repubblica di**	**1.20**	**337**	⇑P	**Pg**	**06 40 43.1**	**+1.0**
ARCI	**Arcidosso**	**1.20**	**272**	⇑P	**Pb**	**06 40 41.9**	**-0.1**
POFI	**Posta Fibreno**	**1.20**	**158**	⇑P	**Pb**	**06 40 41.6**	**-0.5**
POFI				AML	AML		
POFI				AML	AML		
LRP	**Arpino**	**1.24**	**163**	⇑P	**Pn**	**06 40 42.4**	**-0.2**
LRP				AML	AML		
LRP				AML	AML		
LATB	**Latina**	**1.34**	**185**	P	**Pn**	**06 40 41.9**	**-2.1**
LATB				AML	AML		
LATB				AML	AML		
ASQU	**Asqua**	**1.36**	**316**	⇑P	**Pn**	**06 40 44.2**	**-0.1**
ASQU				AML	AML		
ASQU				AML	AML		
LIK	**San Giovanni I**	**1.37**	**166**	P	**Pn**	**06 40 43.6**	**-0.8**
LIK				AML	AML		
LIK				AML	AML		
RNI2	**Rionero Sannit**	**1.37**	**145**	P	**Pn**	**06 40 44.0**	**-0.5**
RNI2				AML	AML		
RNI2				AML	AML		
BLLA	**Bellaria**	**1.39**	**341**	P	**Pn**	**06 40 44.9**	**+0.3**
BLLA				AML	AML		
BLLA				AML	AML		
CERA	**Filignano**	**1.41**	**151**	⇑P	**Pn**	**06 40 44.0**	**-1.0**
CERA				AML	AML		
CERA				AML	AML		
SFI	**Santa Sofia**	**1.41**	**320**	P	**Pg**	**06 40 46.1**	**-0.2**
SFI				AML	AML		
SFI				AML	AML		
FRES	**Fresagrandinar**	**1.44**	**126**	⇑P	**Pn**	**06 40 43.8**	**-1.6**
MIDA	**Miranda**	**1.46**	**144**	⇑P	**Pn**	**06 40 43.4**	**-2.3**
CSNT	**Castellina Chi**	**1.47**	**296**	P	**Pb**	**06 40 46.4**	**-0.3**
CSNT				AML	AML		
CSNT				AML	AML		
FROS	**Frosini**	**1.48**	**285**	P	**Pn**	**06 40 45.3**	**-0.6**
FROS				AML	AML		
FROS				AML	AML		
MAON	**Monte Argentar**	**1.51**	**255**	⇓P	**Pn**	**06 40 46.2**	**-0.1**
TRIV	**Trivento**	**1.51**	**134**	⇑P	**Pn**	**06 40 46.5**	**+0.1**
TRIV				AML	AML		
TRIV				AML	AML		
OSSC	**Osservatorio P**	**1.52**	**298**		**Pn**	**06 40 44.5**	**-2.0**
OSSC	**Osservatorio P**	**1.52**	**298**	⇑P	**Pn**	**06 40 46.1**	**-0.4**
OSSC				AML	AML		

OSSC				AML	AML	
OSSC				AML	AML	
OSSC				AML	AML	
RUFI	**Rufina**	**1.54**	**311**	P	**Pn**	**06 40 46.0 -0.7**
RUFI				AML	AML	
RUFI				AML	AML	
LMD	**Lutirano**	**1.61**	**321**	P	**Pb**	**06 40 49.2 +0.3**
LMD				AML	AML	
LMD				AML	AML	
TRIF	**Trifonti**	**1.64**	**281**	P	**Pn**	**06 40 47.6 -0.5**
TRIF				AML	AML	
TRIF				AML	AML	
VAGA	**Valle Agricola**	**1.65**	**149**	P	**Pg**	**06 40 50.4 -0.4**
VAGA				AML	AML	
VAGA				AML	AML	
CASP	**Castiglione de**	**1.65**	**269**	Pn	**Pn**	**06 40 46.6 -1.6**
CASP	**Castiglione de**	**1.65**	**269**	⇑P	**Pn**	**06 40 47.1 -1.1**
CASP				AML	AML	
CASP				AML	AML	
comp=N,96150µm,1.5s						
BSSO	**Busso**	**1.70**	**139**	P	**Pb**	**06 40 50.5 0.0**
BSSO				AML	AML	
BSSO				AML	AML	
BRIS	**BRISIGHELLA**	**1.75**	**319**	⇑P	**Pb**	**06 40 50.9 -0.6**
BRIS				AML	AML	
BRIS				AML	AML	
MODR	**Mondragone**	**1.78**	**161**	⇓P	**Pn**	**06 40 50.5 +0.4**
CIGN	**Sant'Elia a Pi**	**1.78**	**131**	P	**Pb**	**06 40 51.2 -0.8**
PTRJ	**Pietraroja**	**1.81**	**144**	P	**Pb**	**06 40 52.0 -0.4**
PIGN	**Pignataro Magg**	**1.82**	**153**	⇓P	**Pn**	**06 40 50.7 +0.1**
PIGN				AML	AML	
PIGN				AML	AML	
PIGN				AML	AML	
PIGN				AML	AML	
IMOL	**Imola, Italy**	**1.82**	**328**	P	**Pg**	**06 40 53.5 -0.5**
IMOL				AML	AML	
IMOL				AML	AML	
CRMI	**Carmignano**	**1.83**	**302**	AML	AML	
CRMI				AML	AML	
DUGI	**Dugi Otok**	**1.84**	**50**	*i* Pn	**Pn**	**06 40 49.2 -1.6**
DUGI				Sn	**Sb**	**06 41 16.1 +0.2**
MPPT	**Montemurlo**	**1.85**	**308**	P	**Pb**	**06 40 52.5 -0.7**
MPPT				AML	AML	
MPPT				AML	AML	
SACR	**S. Croce Del S**	**1.86**	**140**	P	**Pb**	**06 40 52.5 -0.9**
MELA	**Melanico ??? S**	**1.88**	**126**	⇑P	**Pn**	**06 40 51.8 +0.5**
MELA				AML	AML	
MELA				AML	AML	
GATE	**Gambatesa**	**1.88**	**134**	⇑P	**Pb**	**06 40 52.8 -0.9**
GATE				AML	AML	
GATE				AML	AML	
GATE				AML	AML	
GATE				AML	AML	
TREM	**Isole Tremiti**	**1.92**	**111**	⇑P	**Pn**	**06 40 51.6 -0.3**
TREM				AML	AML	
TREM				AML	AML	
MTCR	**Monte La Croce**	**1.94**	**309**	P	**Pn**	**06 40 51.1 -1.3**
MTCR				AML	AML	
MTCR				AML	AML	
MTRZ	**Monterenzio**	**1.95**	**323**	⇑P	**Pb**	**06 40 55.2 +0.3**
MTRZ				AML	AML	
MTRZ				AML	AML	
FNVD	**Fontana Vidola**	**1.96**	**313**	P	**Pn**	**06 40 53.5 +0.9**
FNVD				AML	AML	
FNVD				AML	AML	
VITU	**Vitulano (BN)**	**2.00**	**145**	⇓P	**Pb**	**06 40 54.7 -1.1**
VITU				AML	AML	
VITU				AML	AML	
VITU				AML	AML	
VITU				AML	AML	
ZIRJ	**Zirje**	**2.03**	**65**	*i* Pn	**Pn**	**06 40 52.1 -1.3**
ZIRJ				Sn	**Sn**	**06 41 19.9 +1.0**
VIRC	**Vir**	**2.04**	**43**	*i* Pn	**Pn**	**06 40 52.1 -1.4**
VIRC				Sn	**Sn**	**06 41 19.1 +0.1**
PSB1	**Pescosannita**	**2.05**	**141**	⇓P	**Pb**	**06 40 55.7 -0.8**
PSB1				AML	AML	
PSB1				AML	AML	
VENT	**Ventotene**	**2.05**	**173**	P	**Pn**	**06 40 54.6 +0.9**
VENT				AML	AML	
VENT				AML	AML	
PII	**Pisa**	**2.08**	**296**	⇑P	**Pn**	**06 40 54.8 +0.6**
PII				AML	AML	
PII				AML	AML	
POPM	**Popiglio**	**2.10**	**306**	P	**Pn**	**06 40 55.0 +0.6**
APRC	**Apricena**	**2.10**	**120**	P	**Pn**	**06 40 54.2 -0.3**
APRC				AML	AML	
APRC				AML	AML	
APRC				AML	AML	
APRC				AML	AML	
PAOL	**Paolisi**	**2.10**	**148**		**Pn**	**06 40 53.7 -0.8**
PAOL	**Paolisi**	**2.10**	**148**	⇓P	**Pn**	**06 40 55.3 +0.8**
PAOL				AML	AML	
PAOL				AML	AML	
PAOL				AML	AML	
PAOL				AML	AML	
MOCO	**Biccari - m.te**	**2.12**	**133**	P	**Pn**	**06 40 56.0 +1.3**
MOCO				AML	AML	
MOCO				AML	AML	
BRJN	**Brijuni**	**2.12**	**12**	*i* Pn	**Pn**	**06 40 53.0 -1.8**
BRJN				Sn	**Sn**	**06 41 21.5 +0.3**
BRJN	**Brijuni**	**2.12**	**12**	⇑P	**Pn**	**06 40 53.3 -1.4**
CELB	**S.Piero in Cam**	**2.13**	**269**	⇑P	**Pn**	**06 40 53.7 -1.2**
CELB				AML	AML	
comp=E,49550µm,1.6s						
CELB				AML	AML	
comp=N,48600µm,1.6s						
NVLJ	**Novalja**	**2.15**	**36**	*i* Pn	**Pn**	**06 40 53.6 -1.5**
NVLJ				Sn	**Sn**	**06 41 22.2 +0.3**
ZCCA	**Zocca**	**2.17**	**315**		**Pn**	**06 40 56.9 +1.5**
ZCCA	**Zocca**	**2.17**	**315**	⇑P	**Pb**	**06 40 58.0 -0.5**
ZCCA				AML	AML	
ZCCA				AML	AML	
MAIM	**Mastiano**	**2.19**	**300**	P	**Pn**	**06 40 56.6 +0.9**
MAIM				AML	AML	
MAIM				AML	AML	
BDI	**Bagni Di Lucca**	**2.20**	**305**	P	**Pn**	**06 40 55.2 -0.7**
BDI				AML	AML	
comp=E,67000µm,0.8s						
BDI				AML	AML	
BDI				AML	AML	
BDI				AML	AML	
comp=N,60250µm,1.5s						
MRB1	**Monte Rocchett**	**2.20**	**140**	P	**Pb**	**06 40 58.5 -0.7**
MRB1				AML	AML	
MRB1				AML	AML	
BIOG	**Biogem**	**2.22**	**136**	P	**Pn**	**06 40 57.3 +1.1**
BIOG				AML	AML	
BIOG				AML	AML	
OVO	**Vesuviano**	**2.23**	**154**	AML	AML	
OVO				AML	AML	
SGRT	**San Giovanni R**	**2.23**	**118**		**Pn**	**06 40 56.2 -0.2**
SGRT	**San Giovanni R**	**2.23**	**118**	⇑P	**Pn**	**06 40 56.3 0.0**
SGRT				AML	AML	
SGRT				AML	AML	
CARD	**Cardoso**	**2.25**	**303**	P	**Pn**	**06 40 55.6 -0.9**
CARD				AML	AML	
comp=E,92850µm,1.6s						
CARD				AML	AML	
comp=N,97050µm,1.1s						
VTIR	**Vesuvio Tirone**	**2.25**	**154**	AML	AML	
VTIR				AML	AML	
RABC	**Rab**	**2.27**	**32**	*i* Pn	**Pn**	**06 40 55.4 -1.4**
RABC				Sn	**Sn**	**06 41 25.8 +1.0**
SMRN	**Sveta Marina**	**2.33**	**19**	*i* Pn	**Pn**	**06 40 55.8 -1.8**
SMRN				Sn	**Sn**	**06 41 26.8 +0.5**
GSCL	**Gusciola**	**2.38**	**311**	⇑P	**Pn**	**06 40 59.9 +1.6**
GSCL				AML	AML	
GSCL				AML	AML	
VLC	**Villacollemand**	**2.38**	**305**		**Pn**	**06 40 57.0 -1.4**
VLC	**Villacollemand**	**2.38**	**305**	⇑P	**Pn**	**06 40 59.3 +0.9**
VLC				AML	AML	
VLC				AML	AML	
VLC				AML	AML	
VLC				AML	AML	
SGTA	**Sant Agata di**	**2.39**	**134**	⇑P	**Pb**	**06 41 01.0 -1.4**
SGTA				AML	AML	
SGTA				AML	AML	
RAVA	**Ravarino**	**2.40**	**324**	P	**Pb**	**06 41 01.3 -1.2**
RAVA				AML	AML	
RAVA				AML	AML	
CAFE	**Carife**	**2.41**	**138**	⇓P	**Pn**	**06 40 59.6 +0.8**
CAFE				AML	AML	
CAFE				AML	AML	
GROG	**Isola di Gorgo**	**2.42**	**285**	⇑P	**Pn**	**06 40 59.3 +0.4**
GROG				AML	AML	
comp=N,47750µm,1.6s						
GROG				AML	AML	
comp=E,61800µm,1.6s						
SNAL	**S. Angelo Dei**	**2.47**	**140**	⇓P	**Pn**	**06 41 01.6 +2.0**
SNAL				AML	AML	
SNAL				AML	AML	
HVAR	**Hvar**	**2.48**	**81**	*i* Pn	**Pn**	**06 40 58.5 -1.2**
HVAR				Sn	**Sn**	**06 41 31.4 +1.4**
EQUI	**Equi**	**2.53**	**303**	P	**Pn**	**06 41 00.1 -0.2**
EQUI				AML	AML	
comp=E,72750µm,1.6s						
EQUI				AML	AML	
comp=N,80450µm,1.5s						
CAVE	**Cavezzo**	**2.54**	**324**	P	**Pb**	**06 41 02.7 -2.1**
CAVE				AML	AML	
CAVE				AML	AML	
SERM	**Sermide**	**2.54**	**330**	P	**Pn**	**06 41 01.9 +1.5**
SERM				AML	AML	
SERM				AML	AML	
SERM				AML	AML	
SERM				AML	AML	
MCRV	**Calabrutti - M**	**2.56**	**142**	P	**Pn**	**06 41 02.8 +1.9**
MCRV				AML	AML	
MCRV				AML	AML	
UDBI	**Udbina**	**2.57**	**48**	*i* Pn	**Pn**	**06 41 00.7 -0.2**
UDBI				Sn	**Sn**	**06 41 34.3 +2.0**
CAPA	**Cerignola FG**	**2.62**	**129**	P	**Pn**	**06 41 01.9 +0.3**
CAPA				AML	AML	
CAPA				AML	AML	
VULT	**Monte Vulture**	**2.65**	**134**	⇑P	**Pn**	**06 41 03.0 +0.9**
VULT				AML	AML	
VULT				AML	AML	
PLMA	**Palmaria, Port**	**2.66**	**298**	P	**Pn**	**06 41 00.4 -1.7**
PLMA				AML	AML	
comp=E,41450µm,1.6s						
PLMA				AML	AML	
comp=N,54900µm,1.6s						
RIY	**Rijeka**	**2.68**	**21**	*i* Pn	**Pn**	**06 41 01.2 -1.3**
RIY				Sn	**Sn**	**06 41 35.0 0.0**
RIY	**Rijeka**	**2.68**	**21**	*e*Pn	**Pn**	**06 41 01.4 -1.0**
RIY				*e*Sn	**Sn**	**06 41 34.6 -0.4**
SBPO	**S.Benedetto Po**	**2.72**	**325**	AML	AML	
SBPO				AML	AML	
TEOL	**Teolo**	**2.73**	**338**		**Pn**	**06 41 02.5 -0.6**
TEOL	**Teolo**	**2.73**	**338**	⇓P	**Pn**	**06 41 02.5 -0.6**
TEOL				AML	AML	
TEOL				AML	AML	
MRLC	**Muro Lucano**	**2.73**	**139**	⇓P	**Pn**	**06 41 05.2 +2.0**
MRLC				AML	AML	
MRLC				AML	AML	
MRLC				AML	AML	
MRLC				AML	AML	
PLIT	**Plitvice**	**2.74**	**41**	*i* Pn	**Pn**	**06 41 02.5 -0.8**
PLIT				Sn	**Sn**	**06 41 37.5 +1.0**
GRAM	**Graiana**	**2.76**	**308**	P	**Pn**	**06 41 02.8 -0.7**
GRAM				AML	AML	
GRAM				AML	AML	
LSTV	**Lastovo**	**2.79**	**90**	*i* Pn	**Pn**	**06 41 02.8 -1.1**
SKDS	**Skadanscina**	**2.79**	**13**	⇑*i*Pn	**Pn**	**06 41 02.1 -1.8**
SKDS				*i* Sn	**Sn**	**06 41 38.0 +0.2**
SKDS				IAML		06 42 02.8
comp=Z,78µm,1.0s						
PRMA	**PARMA**	**2.79**	**315**		**Pn**	**06 41 05.9 +2.0**
OPPE	**Oppeano**	**2.84**	**331**	AML	AML	
OPPE				AML	AML	
PALZ	**Palazzo San Ge**	**2.85**	**131**	⇑P	**Pn**	**06 41 05.2 +0.5**
MNTV	**Mantova**	**2.86**	**325**	AML	AML	
MNTV				AML	AML	
CDRU	**Civita di Ruta**	**2.86**	**144**	⇓P	**Pn**	**06 41 04.8 -0.2**
MAKA	**Makarska**	**2.91**	**80**	*i* Pn	**Pn**	**06 41 04.5 -1.0**
MAKA				Sn	**Sn**	**06 41 42.0 +1.6**
MRVN	**Minervino Murg**	**2.91**	**126**	⇑P	**Pn**	**06 41 05.3 -0.2**
MRVN				AML	AML	
MRVN				AML	AML	
comp=N,88750µm,1.6s						
SMPL	**Sampolo**	**2.92**	**257**	⇑P	**Pn**	**06 41 06.2 +0.5**
ACER	**Acerenza**	**2.95**	**133**	P	**Pn**	**06 41 06.2 0.0**
ACER				AML	AML	
ACER				AML	AML	
ACER				AML	AML	
ACER				AML	AML	
CORF	**Corte**	**2.97**	**261**	⇑P	**Pn**	**06 41 05.6 -0.8**
CORF				AML	AML	
comp=E,14750µm,1.6s						
CORF				AML	AML	
comp=N,13250µm,1.6s						
PZUN	**Potenza**	**2.98**	**136**	⇑P	**Pn**	**06 41 09.2 +2.7**
PZUN				AML	AML	
PZUN				AML	AML	
PZUN				AML	AML	
PZUN				AML	AML	
MSSA	**Maissana**	**3.00**	**301**	Pn	**Pn**	**06 41 05.8 -1.1**
MSSA	**Maissana**	**3.00**	**301**	P	**Pn**	**06 41 06.8 0.0**
MSSA				AML	AML	
comp=E,61600µm,1.6s						
MSSA				AML	AML	
comp=N,56250µm,1.6s						
CMPR	**Campora**	**3.00**	**146**	⇓P	**Pn**	**06 41 06.8 -0.1**
RICI	**Ricice**	**3.02**	**76**	*e*Pn	**Pn**	**06 41 06.4 -0.7**
RICI				Sn	**Sn**	**06 41 44.8 +1.4**
TREG	**Tregnago**	**3.03**	**333**	AML	AML	
TREG				AML	AML	
PGF	**Pioggiola**	**3.04**	**266**	*e*Pn	**Pn**	**06 41 07.2 -0.2**
PGF	**Pioggiola**	**3.04**	**266**	*e*P	**Pn**	**06 41 10.3 +2.9**
PGF				*e*Sn	**Sn**	**06 41 42.9 -1.1**
comp=N,7µm,0.7s						
PGF	**Pioggiola**	**3.04**	**266**	AML	AML	
comp=E,19850µm,1.6s						
PGF				AML	AML	
comp=N,16250µm,1.3s						
CEY	**Cerknica**	**3.06**	**18**	⇑*i*Pn	**Pn**	**06 41 06.0 -1.6**
BOJS	**Bojanci**	**3.09**	**29**	⇑*i*Pn	**Pn**	**06 41 06.8 -1.2**
BOJS				*i* Pg	**Pg**	**06 41 18.5 +0.2**
BOJS				*e*Sn	**Sn**	**06 41 45.6 +0.6**
BOJS				IAML		06 42 40.1
comp=Z,1000µm,5.1s						
ASOL	**Asolo**	**3.09**	**344**	AML	AML	
ASOL				AML	AML	
CRND	**Cornuda**	**3.09**	**347**	P	**Pn**	**06 41 08.0 0.0**
CRND				AML	AML	
CRND				AML	AML	
SABO	**M.te Sabotino**	**3.17**	**6**	⇑P	**Pn**	**06 41 07.6 -1.5**
ROVR	**Rover Verones**	**3.17**	**333**	⇓P	**Pn**	**06 41 08.8 -0.5**
ROVR				AML	AML	
comp=E,35800µm,1.1s						
ROVR				AML	AML	
comp=E,90250µm,1.1s						
ROVR				AML	AML	
comp=N,88300µm,1.6s						
ROVR				AML	AML	
comp=N,35700µm,1.6s						
PTRP	**Pietrapertosa**	**3.20**	**135**	⇓P	**Pn**	**06 41 11.3 +1.7**
PTRP				AML	AML	
PTRP				AML	AML	
SRKY	**Kupres RS**	**3.21**	**66**	⇑*i*Pn	**Pn**	**06 41 09.9 +0.2**
CAE	**Caneva**	**3.21**	**352**	⇑P	**Pn**	**06 41 08.8 -1.0**
MCEL	**Monticello**	**3.22**	**140**	⇓P	**Pn**	**06 41 11.1 +1.1**
MCEL				AML	AML	
comp=N,80800µm,1.6s						
MCEL				AML	AML	
MCEL				AML	AML	
comp=N,79650µm,1.6s						
MCEL				AML	AML	
VARN	**Col Varnada, M**	**3.24**	**348**	P	**Pn**	**06 41 09.6 -0.6**
VARN				AML	AML	
VARN				AML	AML	
VARN				AML	AML	
VARN				AML	AML	
MTSN	**Montesano sull**	**3.24**	**141**	P	**Pn**	**06 41 11.2 +1.0**
MTSN				AML	AML	
comp=N,57900µm,1.6s						
MTSN				AML	AML	
comp=E,67250µm,1.6s						
AMUR	**Altamura**	**3.25**	**125**	⇑P	**Pn**	**06 41 09.6 -0.6**
AMUR				AML	AML	
comp=E,90450µm,1.0s						
AMUR				AML	AML	
comp=N,81350µm,0.7s						
OZLJ	**Ozalj**	**3.26**	**31**	*i* Pn	**Pn**	**06 41 09.5 -0.9**
OZLJ				Sn	**Sn**	**06 41 49.3 +0.1**
MGR	**Morigerati**	**3.26**	**145**	⇓P	**Pn**	**06 41 11.4 +1.0**
MGR				AML	AML	
comp=E,52350µm,1.6s						
MGR				AML	AML	
comp=N,36850µm,1.6s						
MGR				AML	AML	
comp=E,46650µm,1.6s						
MGR				AML	AML	
comp=N,38100µm,1.5s						
BOB	**Bobbio (Coli)**	**3.28**	**307**	AML	AML	
BOB				AML	AML	
BOB				AML	AML	
BOB				AML	AML	
GORR	**Gorreto**	**3.28**	**304**	⇑P	**Pn**	**06 41 12.2 +1.5**
GORR				AML	AML	
comp=E,47500µm,1.6s						
GORR				AML	AML	
comp=N,59900µm,1.4s						
AG11	**Viggiano (PZ)**	**3.29**	**138**	AML	AML	
AG11				AML	AML	
MGRS	**Mrkonjic Grad**	**3.30**	**60**	⇑*i*Pn	**Pn**	**06 41 11.1 +0.2**
AJAC	**Base Areonaval**	**3.34**	**256**	⇑P	**Pn**	**06 41 11.6 +0.1**
MIGL	**Miglionico**	**3.35**	**131**	⇑P	**Pn**	**06 41 12.1 +0.5**
SALO	**Salr**	**3.35**	**327**	Pn	**Pn**	**06 41 11.2 -0.4**
SALO	**Salr**	**3.35**	**327**	⇓P	**Pn**	**06 41 11.7 +0.1**
SALO				AML	AML	
SALO				AML	AML	
SALO				AML	AML	
SALO				AML	AML	
SIRI	**Monte Sirino -**	**3.36**	**141**	⇓P	**Pn**	**06 41 12.5 +0.6**
SIRI				AML	AML	
comp=E,93750µm,1.6s						
SIRI				AML	AML	
comp=E,92800µm,1.6s						
SIRI				AML	AML	
comp=N,59050µm,1.6s						
SIRI				AML	AML	
comp=N,59450µm,1.6s						
LJU	**Ljubljana**	**3.37**	**17**	⇑*i*Pn	**Pn**	**06 41 11.1 -0.8**
LJU				*e*Sn	**Sn**	**06 41 52.6 +0.7**
LJU				IAML		06 42 27.4
comp=Z,159µm,1.4s						
LJU	**Ljubljana**	**3.37**	**17**	⇑P	**Pn**	**06 41 11.0 -0.8**
LJU				AML	AML	
LJU				AML	AML	
PRIJ	**Prijedor**	**3.38**	**49**	*e*Pn	**Pn**	**06 41 13.4 +1.4**
CTI	**Castel Tesino**	**3.38**	**343**	P	**Pn**	**06 41 11.9 -0.3**
CTI				AML	AML	
CTI				AML	AML	
STON	**Ston**	**3.38**	**88**	⇑*i*Pn	**Pn**	**06 41 10.0 -2.0**
STON	**Ston**	**3.38**	**88**	*e*Pn	**Pn**	**06 41 09.9 -2.0**
STON				Sn	**Sn**	**06 41 51.8 -0.4**
STON	**Ston**	**3.38**	**88**	*e*Pn	**Pn**	**06 41 10.4 -1.6**
STON				*e*Sn	**Sn**	**06 41 54.5 +2.3**
STON	**Ston**	**3.38**	**88**	AML	AML	
comp=E,35850µm,1.6s						
STON				AML	AML	
comp=N,51200µm,1.1s						
MPRI	**Monte Prat**	**3.41**	**359**	⇑P	**Pn**	**06 41 11.6 -0.9**
MPRI				AML	AML	
MPRI				AML	AML	
MPRI				AML	AML	
MPRI				AML	AML	
CADS	**Cadrg**	**3.43**	**7**	⇑*i*Pn	**Pn**	**06 41 11.0 -1.7**
CADS				*i* Sn	**Sn**	**06 41 52.8 -0.6**
CADS				IAML		06 42 39.9
comp=Z,136µm,1.7s						
RNCA	**Ronca, Sant'Ol**	**3.43**	**300**	⇑P	**Pn**	**06 41 13.1 +0.4**
RNCA				AML	AML	
comp=E,12575µm,0.9s						
RNCA				AML	AML	
comp=N,23100µm,1.6s						
STAL	**STALIGIAL**	**3.44**	**355**		**Pn**	**06 41 11.8 -1.1**
STAL	**STALIGIAL**	**3.44**	**355**	⇑P	**Pn**	**06 41 11.8 -1.1**
STAL				AML	AML	
comp=N,83550µm,1.0s						
STAL				AML	AML	
STAL				AML	AML	
comp=N,95700µm,0.8s						
STAL				AML	AML	
ORZI	**Orzinuovi**	**3.44**	**319**	⇓P	**Pn**	**06 41 15.1 +2.3**
SCHR	**S. Chirico Rap**	**3.45**	**139**	AML	AML	
comp=N,53250µm,1.6s						
SCHR				AML	AML	
comp=E,58350µm,1.6s						
MATE	**Matera**	**3.47**	**128**	⇑P	**Pn**	**06 41 14.5 +1.4**
MATE	**Matera**	**3.47**	**128**	P	**Pn**	**06 41 13.0 -0.2**
MATE				AML	AML	
comp=E,87050µm,1.2s						
MATE				AML	AML	
comp=N,99200µm,0.8s						
LUSI	**Trento, Gardas**	**3.49**	**334**	AML	AML	
comp=N,89100µm,1.3s						
LUSI				AML	AML	
comp=E,95650µm,1.4s						
CUC	**Castrocucco**	**3.49**	**143**		**Pn**	**06 41 14.2 +0.5**
CUC	**Castrocucco**	**3.49**	**143**	AML	AML	
comp=E,61950µm,1.6s						
CUC				AML	AML	
comp=N,54300µm,1.6s						
CUC				AML	AML	
comp=N,44700µm,1.6s						
CUC				AML	AML	
comp=E,50250µm,1.6s						
A051A	**Mrakovica**	**3.51**	**50**	⇑*i*Pn	**Pn**	**06 41 13.2 -0.6**
CRAC	**Craco**	**3.51**	**133**	AML	AML	
CRAC				AML	AML	
CIMO	**Cimolais**	**3.51**	**352**	⇑P	**Pn**	**06 41 12.8 -1.1**
CIMO				AML	AML	
comp=N,43450µm,1.6s						
CIMO				AML	AML	
comp=N,44450µm,1.6s						
CIMO				AML	AML	
comp=E,50300µm,1.4s						
CIMO				AML	AML	
comp=E,49550µm,1.4s						
BLY	**Banja Luka**	**3.52**	**56**	⇑*i*Pn	**Pn**	**06 41 13.5 -0.5**
BLY	**Banja Luka**	**3.52**	**56**	*e*Pn	**Pn**	**06 41 14.9 +0.9**
BLY	**Banja Luka**	**3.52**	**56**	⇑P	**Pn**	**06 41 13.7 -0.3**
BLY				AML	AML	
BLY				AML	AML	
comp=N,96800µm,1.1s						
BLY				AML	AML	
comp=N,97300µm,1.1s						
BLY				AML	AML	
AGOR	**Agordo**	**3.53**	**348**	AML	AML	
comp=E,69100µm,1.0s						
AGOR				AML	AML	
comp=N,77650µm,1.3s						
AGOR				AML	AML	
comp=N,59050µm,1.3s						
AGOR				AML	AML	
comp=E,55850µm,1.0s						
LTRZ	**Laterza**	**3.56**	**127**	P	**Pn**	**06 41 14.6 0.0**
LTRZ				AML	AML	
comp=E,60250µm,1.3s						
LTRZ				AML	AML	
comp=N,78800µm,1.2s						
PTCC	**Patocco-Chiusa**	**3.58**	**3**	⇑P	**Pn**	**06 41 13.2 -1.6**
PTCC				AML	AML	
comp=N,59500µm,1.1s						
PTCC				AML	AML	
comp=E,68450µm,1.6s						
GAGG	**Gaggia**	**3.59**	**335**	AML	AML	
GAGG				AML	AML	
GAGG				AML	AML	
GAGG				AML	AML	
NOCI	**Noci**	**3.60**	**123**	⇑P	**Pn**	**06 41 14.6 -0.4**
NOCI				AML	AML	
comp=E,59250µm,0.8s						
NOCI				AML	AML	
comp=N,86400µm,1.2s						
PRED	**Cave del Predi**	**3.62**	**5**		**Pn**	**06 41 14.0 -1.4**
DGI	**Dorgali Grotta**	**3.63**	**227**	⇑P	**Pn**	**06 41 14.7 -0.8**
ZONE	**Zone**	**3.63**	**325**	AML	AML	
comp=N,13100µm,1.2s						
ZONE				AML	AML	
comp=E,11630µm,1.4s						
ZONE				AML	AML	
comp=E,47200µm,1.4s						
ZONE				AML	AML	
comp=N,49700µm,1.3s						

ZAG Zagreb 3.64 34 ePn Pn 06 41 14.3 -1.2
SARZ Sarezzano 3.65 305 AML AML
SARZ AML AML
SARZ AML AML
SARZ AML AML
MMN Mormanno 3.66 143 ⇓P Pn 06 41 17.1 +1.4
PTJ Puntijarka 3.70 33 i Pn Pn 06 41 14.7 -1.7
DBRK Dubrovnik 3.72 91 i Pn Pn 06 41 14.8 -1.8
MABI Malga Bissina 3.72 331 ⇓P Pn 06 41 16.7 -0.1
MABI AML AML
comp=E,34650μm,1.1s
MABI AML AML
comp=N,28000μm,0.6s
PCP Piancastagn 3.72 299 ⇑P Pn 06 41 16.4 -0.4
PCP AML AML
comp=N,23450μm,1.6s
PCP AML AML
comp=E,23650μm,1.6s
ZOU Zoufplan 3.73 359 AML AML
ZOU AML AML
ZOU AML AML
ZOU AML AML
ACOM Acomizza, Ital 3.73 4 ⇑P Pn 06 41 15.8 -1.2
ACOM AML AML
ACOM AML AML
ACOM AML AML
ACOM AML AML
ORI Oriolo Calabro 3.74 137 AML AML
comp=E,75200μm,1.0s
ORI AML AML
comp=N,77000μm,1.5s
FVI Forni Avoltri 3.77 357 ⇑P Pn 06 41 16.7 -0.8
FVI AML AML
comp=E,80350μm,1.3s
FVI AML AML
comp=N,91450μm,1.3s
CANO Canova, Maglio 3.80 293 ⇑P Pn 06 41 17.6 -0.2
CANO AML AML
comp=E,67750μm,1.0s
CANO AML AML
comp=N,28050μm,1.5s
MYKA Terra Mystica 3.82 6 ePn Pn 06 41 17.0 -1.1
comp=N,1μm,0.4s,SNR=1024
MYKA eSn Sn 06 42 03.8 +0.7
comp=N,10μm,0.7s
OBKA Obir 3.82 15 ⇑iPn Pn 06 41 16.6 -1.6
OBKA Obir 3.82 15 i Pn Pn 06 41 16.6 -1.6
comp=N,70nm,0.2s,SNR=189
OBKA Obir 3.82 15 ePn Pn 06 41 16.7 -1.4
MOSL Moslavina 3.82 42 i Pn Pn 06 41 16.3 -1.8
MOSL Sn Sn 06 42 03.8 +0.6
SALB San Lorenzo Be 3.83 139 ⇓P Pn 06 41 20.1 +1.8
KOSI Kohlern 3.83 342 ⇓P Pn 06 41 18.8 +0.4
KOSI AML AML
KOSI AML AML
comp=N,97600μm,1.4s
MILN Milano 3.84 315 AML AML
MILN AML AML
comp=E,53100μm,1.6s
MILN AML AML
MILN AML AML
comp=N,82000μm,1.6s
TREB Trebinje 3.86 90 ⇑iPn Pn 06 41 17.5 -1.2
TREB Trebinje 3.86 90 ePn Pn 06 41 18.7 0.0
TREB eSn Sn 06 42 04.9 +0.8
BOSI Bolzano 3.88 341 P Pn 06 41 19.2 +0.3
BOSI AML AML
BOSI AML AML
RORO Rocca Rossa 3.88 291 ⇓P Pn 06 41 19.8 +0.9
RORO AML AML
comp=E,9750μm,1.6s
RORO AML AML
comp=N,12616μm,1.6s
APPI Appiano 3.88 340 P Pn 06 41 19.0 0.0
APPI AML AML
comp=E,69800μm,1.5s
APPI AML AML
comp=N,81700μm,1.5s
TAR1 Taranto 3.89 125 AML AML
comp=N,92600μm,1.6s
TAR1 AML AML
comp=E,82250μm,1.6s
A052A Srbac 3.91 53 ⇑iPn Pn 06 41 17.9 -1.4
ABTA Abfaltersbach 3.94 354 i Pn Pn 06 41 19.3 -0.5
comp=E,5μm,0.5s,SNR=3829
CET2 Cetraro 3.94 146 ⇓P Pn 06 41 20.1 +0.3
LOBO Lobor 3.94 32 i Pn Pn 06 41 18.0 -1.7
IMI Imperia 3.95 288 ⇑P Pn 06 41 20.2 +0.3
IMI AML AML
comp=N,13935μm,1.6s
IMI AML AML
comp=E,10495μm,1.6s
ROTM Rocchetta Tana 3.98 302 AML AML
ROTM AML AML
HCY Herceg Novi 4.00 94 ⇑iPn Pn 06 41 20.0 -0.5
HCY Herceg Novi 4.00 94 ePn Pn 06 41 19.6 -0.9
HCY i Sn Sn 06 42 07.2 -0.2
BRY Bratogost 4.00 87 ⇑iPn Pn 06 41 20.1 -0.5
BRY Bratogost 4.00 87 ⇓iPn Pn 06 41 19.6 -1.0
BRY i Sn Sn 06 42 07.1 -0.5
TDS Terranova Siba 4.00 141 ⇓P Pn 06 41 22.5 +1.9
TDS AML AML
comp=E,29950μm,1.6s
TDS AML AML
comp=N,49750μm,1.6s
MGRO Montegrosso 4.04 289 ⇑P Pn 06 41 21.9 +0.6
KALN Kalnik 4.08 35 i Pn Pn 06 41 19.8 -1.9
SOKA Soboth 4.08 19 i Pn Pn 06 41 20.3 -1.5
comp=N,275nm,0.3s,SNR=245
DOB Doboj 4.09 61 ePn Pn 06 41 20.0 -1.7
BRMO Bormio 4.13 333 ⇓P Pn 06 41 23.2 +0.7
BURY Giardini Botan 4.16 285 P Pn 06 41 21.4 -1.3
RISI Rein 4.18 350 AML AML
RISI AML AML
MOSI Grossmontoni 4.20 335 ⇓P Pn 06 41 24.5 +1.0
MESG Mesagne 4.20 121 AML AML
comp=E,92900μm,1.0s
MESG AML AML
BERNI Berninapass 4.20 329 ⇓P Pn 06 41 24.3 +0.7
BERNI AML AML
comp=N,27800μm,1.5s
BERNI AML AML
comp=E,21750μm,1.6s
MUGIO Muggio 4.25 318 P Pn 06 41 22.7 -1.2
SBF Sospel 4.26 286 ePn Pn 06 41 23.8 -0.4
SBF Sospel 4.26 286 eP Pn 06 41 27.6 +3.4
SBF eSn Sn 06 42 12.3 -1.7
comp=E,5μm,0.6s
ROSI Rosskopf 4.27 344 P Pn 06 41 24.7 +0.3
UPM Unac-Piva 4.27 83 ePn Pn 06 41 25.3 +0.9
UPM Unac-Piva 4.27 83 ePn Pn 06 41 23.4 -1.0
UPM i Sn Sn 06 42 13.8 -0.6
CAR1 CAROLEI 4.28 146 ⇓P Pn 06 41 25.4 +1.0
CELI Celico 4.28 142 ⇓P Pn 06 41 25.9 +1.3
FUORN Ofenpass-Fuorn 4.29 333 ⇓P Pn 06 41 25.8 +1.0
CEME Cevo 4.29 92 ⇓iPn Pn 06 41 23.8 -0.9
CEME i Sn Sn 06 42 14.4 -0.5
NKME Niksic 4.30 89 ⇑iPn Pn 06 41 23.8 -1.0
NKME i Sn Sn 06 42 14.7 -0.4
BUM Brajici-Budva 4.31 95 ⇑iPn Pn 06 41 24.0 -0.9
BUM i Sn Sn 06 42 14.9 -0.3
VARE Varese 4.34 316 P Pn 06 41 25.0 -0.3
VARE AML AML
comp=E,37350μm,1.4s
VARE AML AML
comp=N,40700μm,1.6s
VSL Villasalto 4.36 221 ⇑P Pn 06 41 25.4 -0.1
VSL AML AML
comp=N,15305μm,1.6s
VSL AML AML
comp=E,14000μm,1.6s
IACL Alicudi 4.40 167 ⇓P Pn 06 41 26.6 +0.6
IFIL Filicudi I Eol 4.41 165 ⇓P Pn 06 41 26.5 +0.4
HAPS Han Pijesak,BI 4.44 72 ⇑iPn Pn 06 41 26.5 -0.2
BEHE Becsehely 4.48 34 P Pn 06 41 25.7 -1.5
FETA Feichten 4.51 339 ePn Pn 06 41 28.3 +0.5
comp=E,3μm,0.8s,SNR=2596
FETA eSn Sn 06 42 24.4 +4.0
comp=E,3μm,0.5s
TUE Stuetta 4.52 325 Pn 06 41 27.4 -0.5
DRME Dracevica, Mon 4.54 96 ⇑iPn Pn 06 41 27.8 -0.2
DRME Dracevica, Mon 4.54 96 ePn Pn 06 41 27.3 -0.7
DRME i Sn Sn 06 42 20.6 -0.2

WTTA Wattenberg 4.55 347 ePn Pn 06 41 28.7 +0.4
comp=E,2μm,0.5s,SNR=965
WTTA eSn Sn 06 42 23.2 +1.9
comp=E,12μm,0.5s
WTTA Wattenberg 4.55 347 ePn Pn 06 41 28.8 +0.5
PDG Podgorica 4.56 93 ⇑P Pn 06 41 29.3 +1.1
PDG Podgorica 4.56 93 Pn 06 41 28.1 -0.1
PDG Podgorica 4.56 93 ePn Pn 06 41 28.8 +0.6
PDG eSn Sn 06 42 21.1 -0.1
TTG Podgorica 4.56 93 ⇑iPn Pn 06 41 27.5 -0.7
TTG i Sn Sn 06 42 20.8 -0.4
DAVOX Davos/Dischmat 4.57 331 Pn Pn 06 41 29.4 +0.9
comp=E,252nm,0.3s,baz=146,slow=17,SNR=912
DAVOX Sn Sn 06 42 22.9 +1.2
comp=E,191nm,0.3s,baz=128,slow=16,SNR=3.3
TIP Timpagrande 4.58 142 ⇑P Pn 06 41 30.3 +1.8
TIP Timpagrande 4.58 142 Pn 06 41 28.8 +0.3
TIP Timpagrande 4.58 142 ⇓P Pn 06 41 30.7 +2.2
SQTA Sankt Quirin 4.59 344 Pn 06 41 29.5 +0.8
SQTA Sankt Quirin 4.59 344 P Pn 06 41 29.5 +0.8
SQTA Sankt Quirin 4.59 344 ePn Pn 06 41 29.5 +0.8
comp=E,4μm,0.7s,SNR=1809
LLI Lipari 4.60 162 ⇓P Pn 06 41 30.2 +1.4
ULC Ulcinj 4.63 99 ⇓iPn Pn 06 41 28.5 -0.7
ULC i Sn Sn 06 42 22.7 -0.4
PLE Pljevlja 4.63 82 ePn Pn 06 41 28.3 -1.0
PLE i Sn Sn 06 42 22.4 -0.8
WATA Walderalm 4.63 347 Pn 06 41 29.9 +0.5
WATA Walderalm 4.63 347 P Pn 06 41 29.9 +0.5
WATA Walderalm 4.63 347 ePn Pn 06 41 29.8 +0.5
comp=E,1μm,0.4s,SNR=2166
WATA eSn Sn 06 42 27.0 +3.7
comp=E,14μm,0.5s
RUDO Rudo 4.65 78 ePn Pn 06 41 28.8 -0.6
SERS Sersale 4.66 143 ⇓P Pn 06 41 31.9 +2.1
VPL Vulcano Piano 4.67 162 ⇓P Pn 06 41 30.9 +1.1
BBLS Lazići 4.71 75 ⇑iPn Pn 06 41 29.9 -0.5
BBLS Lazići 4.71 75 ePn Pn 06 41 30.5 +0.1
BBLS eSn Sn 06 42 25.2 +0.1
KOME Kolasin 4.71 88 ⇑iPn Pn 06 41 29.7 -0.8
KOME i Sn Sn 06 42 24.6 -0.7
JOPP Joppolo 4.72 152 ⇓P Pn 06 41 31.5 +1.0
MOTA Moosalm 4.73 343 Pn 06 41 31.6 +0.9
MOTA Moosalm 4.73 343 P Pn 06 41 31.6 +0.9
MOTA Moosalm 4.73 343 i Pn Pn 06 41 31.6 +0.9
comp=E,2μm,0.7s,SNR=2162
MOTA eSn Sn 06 42 30.7 +5.0
comp=E,8μm,0.6s
ARSA Arzberg 4.74 20 i Pn Pn 06 41 29.1 -1.6
comp=E,307nm,0.4s,SNR=397
ARSA eSn Sn 06 42 23.5 -2.3
comp=E,4μm,0.7s
ARSA Arzberg 4.74 20 ePn Pn 06 41 29.4 -1.4
ARSA eSn Sn 06 42 21.8 -4.0
SOLUN Solunto 4.75 176 ⇓P Pn 06 41 32.4 +1.5
FUSIO Fusio 4.81 320 ⇓P Pn 06 41 30.7 -1.1
MILZ Milazzo 4.83 160 ⇓P Pn 06 41 32.4 +0.4
KOVH Kovagotottos 4.84 46 P Pn 06 41 30.8 -1.2
LMR La Mourre 4.86 278 ePn Pn 06 41 31.2 -1.1
LMR La Mourre 4.86 278 eP Pn 06 41 34.9 +2.6
LMR eSn Sn 06 42 26.0 -2.6
comp=E,1μm,0.6s
BLJ Bijeljina 4.87 64 ⇑iPn Pn 06 41 30.2 -2.2
BIOA Bad Ischl, Aus 4.87 4 Pn 06 41 31.7 -0.9
BIOA Bad Ischl, Aus 4.87 4 i Pn Pn 06 41 31.7 -0.9
comp=E,596nm,0.4s,SNR=1612
BIOA eSn Sn 06 42 30.6 +1.5
comp=E,9μm,0.6s
SCTE Santa Cesarea 4.88 123 Pn Pn 06 41 33.4 +0.7
GIB Gibilmanna 4.89 171 ⇓P Pn 06 41 34.3 +1.4
PLLN Pollina 4.90 170 ⇓P Pn 06 41 34.1 +1.2
RJOB Jochberg 4.91 358 ePn Pn 06 41 32.8 -0.3
RJOB eSn Sn 06 42 29.8 -0.2
MSRU Castanea 4.92 157 ⇓P Pn 06 41 33.8 +0.6
MSFR San Fratello 4.93 166 ⇓P Pn 06 41 34.4 +1.0
CORL Corleone 4.94 178 ⇓P Pn 06 41 34.9 +1.5
RETA Reutte 4.94 341 i Pn Pn 06 41 34.5 +0.9
comp=E,1μm,0.4s,SNR=1120
RETA eSn Sn 06 42 32.9 +2.1
comp=E,4μm,0.7s
MBDF Montbardon 4.96 295 ePn Pn 06 41 33.8 -0.1
MBDF Montbardon 4.96 295 eP Pn 06 41 37.5 +3.6
MBDF eSn Sn 06 42 29.1 -2.3
comp=E,6μm,0.7s
TEKS Tekeris 4.96 68 ⇑iPn Pn 06 41 31.8 -2.0
TEKS Tekeris 4.96 68 ePn Pn 06 41 32.8 -1.0
PLONS Plons/SG 4.98 329 ePn Pn 06 41 36.2 +2.2
PLONS eSn Sn 06 42 32.9 +1.2
PLONS Plons/SG 4.98 329 ⇓P Pn 06 41 35.1 +1.0
IVA Berane 4.99 87 ePn Pn 06 41 33.5 -0.8
IVA i Sn Sn 06 42 31.3 -0.8
DAVA Damuels 5.00 334 ePn Pn 06 41 35.5 +1.0
comp=E,2μm,0.4s,SNR=1282
DAVA Damuels 5.00 334 ePn Pn 06 41 35.5 +1.0
CEL Celeste 5.04 154 Pn 06 41 35.2 +0.4
CEL Celeste 5.04 154 ⇓P Pn 06 41 35.4 +0.6
SJES Sjenica 5.05 83 ePn Pn 06 41 36.1 +1.0
SJES eSn Sn 06 42 32.1 -1.5
PVY Plav 5.06 90 ePn Pn 06 41 34.4 -0.8
PVY i Sn Sn 06 42 33.0 -0.7
PLAC Placanica 5.06 149 ⇓P Pn 06 41 37.2 +2.0
MOA Molln 5.08 9 ePn Pn 06 41 34.8 -0.7
MOA eSn Sn 06 42 33.4 -0.8
MOA Molln 5.08 9 i Pn Pn 06 41 34.6 -0.8
comp=E,722nm,0.5s,SNR=742
MOA eSn Sn 06 42 34.8 +0.6
comp=E,2μm,0.4s
MOA Molln 5.08 9 ePn Pn 06 41 34.7 -0.8
MOA eSn Sn 06 42 35.1 +0.9
DIVS Divibare 5.17 73 Pn 06 41 36.0 -0.7
DIVS Divibare 5.17 73 ⇑iPn Pn 06 41 35.6 -1.1
DIVS Divibare 5.17 73 ePn Pn 06 41 37.4 +0.7
MORH Mrgy, Hungar 5.21 48 P Pn 06 41 35.1 -2.0
BNALP Bannalp 5.23 322 ⇓P Pn 06 41 37.7 +0.1
TIR Tirane 5.25 104 ⇓P Pn 06 41 37.1 -0.6
TIR Tirane 5.25 104 Pn Pn 06 41 37.7 +0.1
TIR Tirane 5.25 104 P Pn 06 41 37.0 -0.6
TIR Tirane 5.25 104 ePn Pn 06 41 37.6 -0.1
TIR eSn Sn 06 42 36.9 -1.3
TIR Tirane 5.25 104 P Pn 06 41 37.7 +0.1
TIR Tirane 5.25 104 P Pn 06 41 36.8 -0.8
baz=100
TIR S Sn 06 42 36.6 -1.6
baz=100
SOI Samo 5.26 154 ⇓P Pn 06 41 39.9 +2.1
LPG La Plagne 5.29 302 ePn Pn 06 41 38.8 +0.3
LPG La Plagne 5.29 302 eP Pn 06 41 42.6 +4.1
LPG eSn Sn 06 42 35.7 -4.0
comp=E,2μm,0.6s
UBR Ueberruh 5.29 337 ePn Pn 06 41 38.6 +0.3
TIH Tihany 5.30 38 P Pn 06 41 36.9 -1.5
LPL La Plagne 5.31 303 ePn Pn 06 41 38.8 +0.1
LPL La Plagne 5.31 303 eP Pn 06 41 42.5 +3.8
LPL eSn Sn 06 42 38.0 -2.1
comp=E,857nm,0.4s
LPL La Plagne 5.31 303 P Pn 06 41 39.2 +0.5
VLO Vlora 5.34 114 Pn Pn 06 41 39.1 +0.2
VLO Vlora 5.34 114 P Pn 06 41 39.3 +0.4
VLO Vlora 5.34 114 P Pn 06 41 39.1 +0.2
MPLH Magyarpolny 5.36 34 P Pn 06 41 37.8 -1.4
RONA Rosalia, Austr 5.36 24 Pn 06 41 37.9 -1.4
RONA Rosalia, Austr 5.36 24 ePn Pn 06 41 37.9 -1.4
comp=E,587nm,0.5s,SNR=549
FRGS Fruska Gora 5.37 62 ⇑iPn Pn 06 41 37.9 -1.5
FRGS Fruska Gora 5.37 62 ePn Pn 06 41 38.4 -1.0
SOP Sopron 5.43 25 P Pn 06 41 39.1 -1.1
VAE Valguarnera 5.44 169 Pn Pn 06 41 44.5 +4.1
comp=E,5.8nm,0.3s,baz=88,slow=2.9,SNR=24
CONA Conrad Observa 5.45 20 i Pn Pn 06 41 39.1 -1.4
comp=E,272nm,0.3s,SNR=968
CONA eSn Sn 06 42 43.5 +0.1
comp=E,4μm,0.8s
WILA Wila 5.46 329 ePn Pn 06 41 41.2 +0.5
WILA eSn Sn 06 42 46.2 +2.7
EGYH Egyhazaskeszo 5.47 32 P Pn 06 41 39.4 -1.4
FUR Furstenfeldbru 5.49 347 ePn Pn 06 41 41.3 +0.3
TRUS Trudelj 5.49 73 ePn Pn 06 41 40.6 -0.4
TRUS eSn Sn 06 42 44.8 +0.6
PHP Peshkopia 5.56 99 P Pn 06 41 42.5 +0.4
PHP Peshkopia 5.56 99 P Pn 06 41 43.8 +1.7
baz=96
PHP S Sn 06 42 45.3 -0.9

baz=96
PHP AMP
comp=N,168nm,1.6s,baz=96
SMRF Simiane la Rot 5.60 284 ePn Pn 06 41 44.6 +2.0
SMRF Simiane la Rot 5.60 284 eP Pn 06 41 47.7 +5.1
SMRF eSn Sn 06 42 44.6 -2.5
comp=N,30μm,2.1s
ORIF Oris-en-Rattie 5.62 294 ePn Pn 06 41 45.1 +2.2
ORIF Oris-en-Rattie 5.62 294 eP Pn 06 41 48.0 +5.1
ORIF eSn Sn 06 42 45.5 -2.1
comp=N,8μm,0.9s
GRUS Gruza 5.65 77 ePn Pn 06 41 42.9 -0.3
GRUS eSn Sn 06 42 46.6 -1.5
WALHA Wallhausen, DE 5.67 332 ePn Pn 06 41 43.7 +0.3
BEO Beograd 5.69 67 ePn Pn 06 41 43.3 -0.4
CSKK Cskako 5.82 37 P Pn 06 41 44.0 -1.5
SULZ Cheisacher 5.87 325 ePn Pn 06 41 45.8 -0.5
EMING Emmingen-Lipti 5.88 331 ePn Pn 06 41 45.8 -0.7
SELS Selova 5.89 84 ePn Pn 06 41 45.9 -0.6
SELS eSn Sn 06 42 53.2 -0.9
SLE Schleitheim 5.91 328 ePn Pn 06 41 45.9 -0.9
KEK Kerkira 5.93 119 P Pn 06 41 47.9 +0.8
SRN Sarande 5.97 117 P Pn 06 41 47.5 -0.1
SRN Sarande 5.97 117 P Pn 06 41 47.9 +0.3
baz=113
SRN S Sn 06 42 53.1 -2.9
baz=113
SRN AMP
comp=N,63nm,7.8s,baz=113
OHR Ohrid 5.99 104 i Pn Pn 06 41 49.0 +1.0
GEC2 GERESS Array S 6.03 4 Pn 06 41 47.0 -1.5
GEC2 GERESS Array S 6.03 4 ePn Pn 06 41 46.9 -1.5
GEC2 eSn Sn 06 42 55.6 -2.0
GERES GERESS Array B 6.03 4 Pn Pn 06 41 47.2 -1.3
comp=N,40nm,0.3s,baz=185,slow=13,SNR=362
GERES Sn Sn 06 42 54.8 -2.8
comp=N,619nm,0.3s,baz=178,slow=21,SNR=11
GERES Lg Lg 06 43 32.4
baz=176,slow=23
GERES LR LR 06 44 35.8
comp=N,339μm,19.8s,baz=181,slow=44
comp=N,452nm,0.7s
GERES GERESS Array B 6.03 4 Pn 06 41 46.4 -2.1
I26DE FREYUNG INFRAS 6.04 4 Pn Pn 06 41 46.2 -2.4
baz=176,slow=22
I26DE Sn Sn 06 42 55.2 -2.6
baz=288,slow=130
I26DE I 07 11 30.0
comp=N,0.1nm,0.7s,baz=178,slow=334,SNR=2.0
CKRC Cesky Krumlov 6.05 8 ePN Pn 06 41 46.7 -2.0
CKRC eSN Sn 06 42 55.1 -2.9
ZST Bratislava 6.05 26 eP Pn 06 41 46.9 -1.9
ZST e 06 42 57.3
KBN Korca 6.16 108 P Pn 06 41 51.1 +0.8
KBN Korca 6.16 108 P Pn 06 41 52.0 +1.7
baz=105
KBN S Sn 06 43 00.3 -0.5
baz=105
KBN AMP
comp=N,129nm,0.9s,baz=105
SRO Srobarova 6.19 35 eP Pn 06 41 49.8 -0.8
SKO Skopje 6.23 95 i Pn Pn 06 41 51.3 +0.1
LSK Leskovik 6.23 113 P Pn 06 41 52.9 +1.6
LSK Leskovik 6.23 113 P Pn 06 41 49.9 -1.4
baz=109
LSK S Sn 06 43 00.5 -2.1
baz=109
BUD Budapest 6.26 40 P Pn 06 41 50.3 -1.2
CABF La Chapelle 6.26 309 ePn Pn 06 41 51.5 -0.2
CABF eSn Sn 06 43 00.5 -2.9
comp=N,5μm,0.8s
MODS Modra-Piesok 6.27 26 eP Pn 06 41 49.9 -1.8
MODS MLR MLR
comp=Z,1344μm,20.7s
KHC Kasperske Hory 6.31 3 Pn Pn 06 41 50.5 -1.8
KHC Kasperske Hory 6.31 3 eP Pn 06 41 51.1 -1.2
KHC e 06 43 01.3
KHC MLR MLR
comp=Z,581μm,13.2s
KHC Kasperske Hory 6.31 3 ePN Pn 06 41 51.1 -1.2
KHC eSN Sn 06 43 01.3 -3.1
KHC AMS AMS 06 44 20.0
comp=Z,581μm,13.2s
WET Wettzell 6.32 359 ePn Pn 06 41 50.4 -2.0
BANR Banloc 6.32 63 ⇑P Pn 06 41 52.3 0.0
BOVS Bovan 6.33 80 ePn Pn 06 41 51.9 -0.7
BOVS eSn Sn 06 43 04.4 -0.6
IGT Igoumenitsa 6.37 119 P Pn 06 41 54.3 +1.2
BARS Barje 6.41 87 ePn Pn 06 41 53.7 +0.1
KUBS Kucevo 6.42 73 ePn Pn 06 41 53.0 -0.8
VIVF Saint-Julien-I 6.42 291 ePn Pn 06 41 53.6 -0.3
VIVF Saint-Julien-I 6.42 291 eP Pn 06 41 58.0 +4.1
VIVF eSn Sn 06 43 04.3 -3.0
comp=Z,1μm,0.7s
NEST Nestorio 6.42 109 P Pn 06 41 55.7 +1.7
BFO Black Forest 6.44 330 Pn Pn 06 41 53.7 -0.4
BFO Black Forest 6.44 330 P Pn 06 41 53.7 -0.4
BFO Black Forest 6.44 330 ePn Pn 06 41 53.1 -0.9
BFO eSn Sn 06 43 09.3 +1.8
BFO Black Forest 6.44 330 P Pn 06 41 53.5 -0.5
SMOL Smolenice 6.44 27 eP Pn 06 41 52.3 -1.7
SMOL e 06 43 10.4
AMBH Ambrzfalva 6.48 55 ⇓P Pn 06 41 54.9 +0.4
AMBH Ambrzfalva 6.48 55 P Pn 06 41 55.1 +0.6
TIM Timisoara 6.51 61 ⇑P Pn 06 41 54.6 -0.4
MDVR Moldovita 6.53 70 ⇓P Pn 06 41 54.9 -0.4
STU Stuttgart 6.54 337 ePn Pn 06 41 55.4 0.0
PENT Pentalofos 6.58 111 P Pn 06 41 58.6 +2.5
SSB Saint Sauveur 6.64 295 Pn Pn 06 41 56.6 -0.2
SSB Saint Sauveur 6.64 295 P Pn 06 41 56.6 -0.2
KRUC Moravsky 6.64 19 ⇑iPN Pn 06 41 54.2 -2.6
KRUC eSN Sn 06 43 10.2 -2.3
JAN Janina 6.64 116 P Pn 06 41 58.0 +1.1
HINF Hinteralfeld 6.65 321 ePn Pn 06 41 56.4 -0.6
HINF eSn Sn 06 43 09.3 -3.6
comp=Z,15μm,1.0s
TREC Trest 6.67 14 eP Pn 06 41 56.2 -1.1
TREC MLR MLR
comp=Z,658μm,14.7s
TREC Trest 6.67 14 ePN Pn 06 41 56.2 -1.1
TREC AMS AMS 06 44 30.0
comp=Z,658μm,14.7s
BZS Buzias 6.72 63 ⇑P Pn 06 41 57.3 -0.6
ZAGS Zajecar 6.73 79 ePn Pn 06 41 57.2 -0.8
ZAGS eSn Sn 06 43 12.8 -2.0
JAVC Velka Javorina 6.82 26 ⇑iPN Pn 06 41 58.0 -1.3
KPRO Kipourio 6.84 112 P Pn 06 42 02.1 +2.4
LASF Ste Croix 6.84 284 ePn Pn 06 41 59.1 -0.5
LASF Ste Croix 6.84 284 eP Pn 06 42 03.9 +4.3
LASF eSn Sn 06 43 14.3 -3.3
comp=Z,1μm,0.9s
CDF Champ du Feu 6.91 326 ePn Pn 06 42 00.3 -0.3
CDF Champ du Feu 6.91 326 eP Pn 06 42 05.0 +4.4
CDF eSn Sn 06 43 16.6 -2.8
comp=Z,5μm,0.7s
VRAC Vranov 6.92 19 Pn Pn 06 41 59.4 -1.2
comp=Z,9.4nm,0.3s,baz=207,slow=14,SNR=37
VRAC Sn Sn 06 43 15.6 -3.7
comp=Z,137nm,0.3s,baz=122,slow=12,SNR=6.7
VRAC Lg Lg 06 43 53.2
comp=Z,25nm,0.3s,baz=151,slow=14,SNR=3.7
VRAC LR LR 06 45 20.4
comp=Z,540μm,18.4s,baz=206,slow=44
comp=Z,134nm,0.4s
VRAC Vranov 6.92 19 ⇑iPN Pn 06 41 58.3 -2.3
VRAC eSN Sn 06 43 19.0 -0.3
VYHS Vyhne 6.94 33 eP Pn 06 41 58.5 -2.4
VYHS e 06 43 18.6
VYHS MLR MLR
comp=Z,913μm,17.4s
ROTZ Rotzenmuhle 6.96 355 ePn Pn 06 41 58.5 -2.7
ROTZ eSn Sn 06 43 16.0 -4.5
KZN Kozani 6.97 108 P Pn 06 42 02.3 +0.9
PSZ Piszkesteto 6.98 41 ⇑P Pn 06 42 01.6 +0.1
PSZ Piszkesteto 6.98 41 Pn Pn 06 42 00.6 -0.9
PSZ Piszkesteto 6.98 41 P Pn 06 42 00.6 -0.9
PSZ Piszkesteto 6.98 41 P Pn 06 42 01.9 +0.4
GRFO Grafenberg 6.98 350 Pn Pn 06 42 00.8 -0.7
GRFO Grafenberg 6.98 350 P Pn 06 42 00.8 -0.7
TSLK Tsoukalades, L 6.99 122 P Pn 06 42 02.3 +0.7
ZAPS Zavoj 7.00 83 ePn Pn 06 42 02.3 +0.6
ZAPS eSn Sn 06 43 19.3 -2.1
LKD2 Lefkada island 7.01 123 P Pn 06 42 03.0 +1.1

SIRR	Siria	7.01	58	⇑P	Pn	06 42 01.4 -0.5
DRAG	Dragano-Lefkad	7.02	124	P	Pn	06 42 03.0 +0.9
HAU	Haudompre	7.02	320	*e*Pn	Pn	06 42 01.5 -0.6
HAU				*e*Sn	Sn	06 43 16.9 -5.1
	comp=Z,15μm,0.6s					
BLKB	Belogradchik	7.04	80	⇑P	Pn	06 42 02.2 -0.1
HERR	Herculane	7.04	70	⇓P	Pn	06 42 01.8 -0.5
DJES	Djerdap	7.06	72	⇑P	Pn	06 42 02.3 -0.3
DJES	Djerdap	7.06	72	*e*Pn	Pn	06 42 03.2 +0.6
NYDR	Nydri-Lefkada	7.08	123	P	Pn	06 42 03.4 +0.6
EVGI	Lefkada island	7.11	124	P	Pn	06 42 03.5 +0.2
GOPC	GO Pecny, Ondr	7.18	9	*e*P	Pn	06 42 01.6 -2.6
GOPC				*e*		06 43 21.8
GOPC				MLR	MLR	
	comp=Z,482μm,16.2s					
GOPC	GO Pecny, Ondr	7.18	9	*e*PN	Pn	06 42 01.6 -2.6
GOPC				*e*SN	Sn	06 43 21.8 -4.0
GOPC				AMS	AMS	06 44 40.0
	comp=Z,482μm,16.2s					
RMGR	Halanga-Turnu	7.18	72	⇑P	Pn	06 42 05.4 +1.1
GRG	Griva	7.19	102	P	Pn	06 42 03.9 -0.4
DMLN	Damoulianata-K	7.19	127	P	Pn	06 42 06.2 +1.8
MANZ	Manzenberg	7.19	355	*e*Pn	Pn	06 42 01.5 -2.9
MANZ				*e*Sn	Sn	06 43 21.3 -4.8
KEF3	Kipouria, Keph	7.20	128	P	Pn	06 42 05.5 +1.0
VAY	Valandovo	7.20	99	*i* Pn	Pn	06 42 04.4 -0.1
KEF4	Livadi, Kephal	7.21	127	P	Pn	06 42 05.3 +0.7
PRU	Pruhonice	7.23	7	*e*P	Pn	06 42 03.0 -1.8
PRU				*e*		06 43 22.6
PRU				MLR	MLR	
	comp=Z,526μm,15.2s					
PRU	Pruhonice	7.23	7	*e*PN	Pn	06 42 03.0 -1.8
PRU				*e*SN	Sn	06 43 22.6 -4.3
PRU				AMS	AMS	06 45 00.0
	comp=Z,526μm,15.2s					
MAHO	Mahon	7.26	249	P	Pn	06 42 05.6 +0.3
MAHO				S	Sb	06 43 47.1 -4.9
MAHO	Mahon	7.26	249	Pn	Pn	06 42 05.9 +0.5
PUNG	Punghina	7.29	75	⇑P	Pn	06 42 06.1 +0.5
MAUC	Maruska	7.31	25	*e*PN	Pn	06 42 05.8 -0.2
MAUC				AMS	AMS	06 45 10.0
	comp=Z,1202μm,16.3s					
VLS	Valsamata	7.36	127	P	Pn	06 42 07.1 +0.4
PSDA	Pessada-Kefalo	7.40	127	P	Pn	06 42 08.3 +1.1
NKC	Novy Kostel	7.42	357	*e*P	Pn	06 42 06.1 -1.4
NKC				*e*		06 43 27.4
NKC				MLR	MLR	
	comp=Z,640μm,14.0s					
NKC	Novy Kostel	7.42	357	*e*PN	Pn	06 42 06.1 -1.4
NKC				*e*SN	Sn	06 43 27.4 -4.3
NKC				AMS	AMS	06 45 10.0
	comp=Z,640μm,14.0s					
GZR	Gura Zlata	7.42	67	⇑P	Pn	06 42 08.2 +0.6
KKB	Krupnik	7.46	94	*i* P	Pn	06 42 08.6 +0.6
VTS	Vitosha	7.46	88	⇓P	Pn	06 42 08.5 +0.2
VTS	Vitosha	7.46	88	Pn	Pn	06 42 07.8 -0.5
VTS	Vitosha	7.46	88	P	Pn	06 42 07.8 -0.5
VTS	Vitosha	7.46	88	*e*P	Pn	06 42 08.0 -0.3
THL	Klokotos Trika	7.47	113	P	Pn	06 42 09.5 +1.3
WERN	Wernitzgruen	7.47	356	*e*Pn	Pn	06 42 06.2 -2.1
BORR	Bors	7.49	52	⇑P	Pn	06 42 09.2 +0.9
KNT	Kendrikon	7.49	100	P	Pn	06 42 06.9 -1.5
SRE	Strehaia	7.54	73	⇑P	Pn	06 42 10.3 +1.1
BAIL	Bailesti	7.55	77	⇑P	Pn	06 42 10.0 +0.7
GUNZ	Gunzen	7.55	356	*e*Pn	Pn	06 42 07.1 -2.3
GUNZ				*e*Sn	Sn	06 43 31.7 -3.3
MORC	Moravsky Berou	7.59	22	⇑P	Pn	06 42 09.1 -0.8
MORC	Moravsky Berou	7.59	22	Pn	Pn	06 42 08.9 -1.0
MORC	Moravsky Berou	7.59	22	P	Pn	06 42 08.9 -1.0
MORC	Moravsky Berou	7.59	22	⇑P	Pn	06 42 07.8 -2.1
TANN	Tannenbergstha	7.60	357	*e*Pn	Pn	06 42 08.2 -1.8
SMF	Signal de Mont	7.62	303	*e*Pn	Pn	06 42 09.4 -0.8
SMF	Signal de Mont	7.62	303	*e*P	Pn	06 42 15.7 +5.5
SMF				*e*Sn	Sn	06 43 32.8 -3.8
	comp=Z,3μm,0.8s					
WERD	Werda	7.64	356	*e*Sn	Sn	06 43 33.2 -3.9
DEV	Deva	7.66	63	⇓P	Pn	06 42 10.3 -0.4
KECS	Kecovo	7.66	40	*e*P	Pn	06 42 11.8 +1.0
KEST	Kesra	7.67	204	Pn	Pn	06 42 14.4 +3.4
	comp=Z,17nm,0.3s,baz=322,slow=4.0,SNR=104					
KEST				Sn	Sn	06 43 36.3 -1.6
	baz=26,slow=10					
KEST				LR	LR	06 45 25.5
	comp=Z,789μm,19.1s,baz=342,slow=40					
EVR	Evrytania	7.67	118	P	Pn	06 42 12.8 +1.8
KRLC	Kraliky	7.68	18	*e*P	Pn	06 42 09.9 -1.2
KRLC				MLR	MLR	
	comp=Z,390μm,15.0s					
KRLC	Kraliky	7.68	18	*e*PN	Pn	06 42 09.9 -1.2
KRLC				AMS	AMS	06 45 20.0
	comp=Z,390μm,15.0s					
LRSO	Larissa Observ	7.68	111	P	Pn	06 42 13.5 +2.5
PLN	Plauen	7.68	355	*e*Pn	Pn	06 42 09.5 -1.6
THE	Thessaloniki	7.70	103	P	Pn	06 42 10.9 -0.4
PAGF	Fort de Pagny	7.71	320	*e*Pn	Pn	06 42 11.4 0.0
	baz=139					
PAGF	Fort de Pagny	7.71	320	*e*P	Pn	06 42 15.6 +4.2
PAGF				*e*Sn	Sn	06 43 34.3 -4.5
	comp=Z,7μm,0.9s					
LTVH	Ltavrtes, Hu	7.71	51	⇑P	Pn	06 42 12.5 +1.0
PVCC	Panska Ves	7.76	7	*e*P	Pn	06 42 09.9 -2.3
PVCC				MLR	MLR	
	comp=Z,399μm,16.2s					
PVCC	Panska Ves	7.76	7	*e*PN	Pn	06 42 09.9 -2.3
PVCC				AMS	AMS	06 45 20.0
	comp=Z,399μm,16.2s					
HORT	Hortiatis	7.80	103	P	Pn	06 42 11.6 -1.3
MPEP	Malo Peshtene	7.80	83	*i* P	Pn	06 42 13.7 +0.9
SFTF	Sexfontaines	7.80	316	*e*Pn	Pn	06 42 12.6 -0.2
	baz=134					
SFTF				*e*Sn	Sn	06 43 36.3 -4.9
	comp=Z,4μm,0.7s					
OKC	Ostrava-Krasne	7.83	25	*e*P	Pn	06 42 12.4 -0.7
OKC				*e*		06 43 39.9
OKC				MLR	MLR	
	comp=Z,598μm,10.8s					
OKC	Ostrava-Krasne	7.83	25	*e*PN	Pn	06 42 12.4 -0.7
OKC				*e*SN	Sn	06 43 39.9 -1.8
OKC				AMS	AMS	06 45 30.0
	comp=Z,598μm,10.8s					
MAKR	Makrakomi, Fth	7.83	116	P	Pn	06 42 14.9 +1.8
DPC	Dobruska-Polom	7.84	15	*e*P	Pn	06 42 12.0 -1.3
DPC				MLR	MLR	
	comp=Z,589μm,16.8s					
DPC	Dobruska-Polom	7.84	15	*e*PN	Pn	06 42 12.0 -1.3
DPC				AMS	AMS	06 45 10.0
	comp=Z,589μm,16.8s					
MOX	Moxa	7.88	353	P	Pn	06 42 11.6 -2.2
MOX	Moxa	7.88	353	*e*Pn	Pn	06 42 10.8 -3.1
MOX				*e*Sn	Sn	06 43 38.2 -4.9
DRGR		7.89	57	⇑P	Pn	06 42 14.1 0.0
DRGR		7.89	57	P	Pn	06 42 14.7 +0.6
ABAH	Abaujker	7.90	43	P	Pn	06 42 13.3 -0.8
LOR	Lormes	7.91	307	*e*Pn	Pn	06 42 13.3 -0.9
	baz=124					
LOR	Lormes	7.91	307	*e*P	Pn	06 42 19.5 +5.3
LOR				*e*Sn	Sn	06 43 40.2 -3.5
	comp=Z,1μm,0.5s					
SOH	Sokhos	7.91	101	P	Pn	06 42 15.6 +1.3
UPC	Upice	7.93	14	*e*P	Pn	06 42 13.3 -1.2
UPC				MLR	MLR	
	comp=Z,620μm,13.9s					
UPC	Upice	7.93	14	*e*PN	Pn	06 42 13.3 -1.2
UPC				AMS	AMS	06 45 20.0
	comp=Z,620μm,13.9s					
RLS	Riolos of Patr	7.96	124	P	Pn	06 42 16.7 +1.8
AVF	Avril sur Loir	7.98	303	*e*Pn	Pn	06 42 14.5 -0.7
AVF	Avril sur Loir	7.98	303	*e*P	Pn	06 42 20.3 +5.1
AVF				*e*Sn	Sn	06 43 41.7 -3.8
	comp=Z,1μm,0.8s					
MMB	Musomiste	7.99	95	*i* P	Pn	06 42 16.0 +0.7
MTLF	Montolieu	7.99	277	*e*Pn	Pn	06 42 15.1 -0.2
MTLF	Montolieu	7.99	277	*e*P	Pn	06 42 19.8 +4.5
MTLF				*e*Sn	Sn	06 43 41.6 -4.1
	comp=Z,835nm,0.8s					
MEZF	Maizieres J'vi	7.99	318	*e*Pn	Pn	06 42 15.5 +0.1
	baz=139					
MEZF				*e*Sn	Sn	06 43 41.6 -4.2
	comp=Z,3μm,0.7s					
SRS	Serrai	8.00	99	P	Pn	06 42 15.0 -0.5
SSF	Saint Saulge	8.01	305	*e*Pn	Pn	06 42 15.3 -0.3
SSF	Saint Saulge	8.01	305	*e*P	Pn	06 42 21.1 +5.5
SSF				*e*Sn	Sn	06 43 42.0 -4.3
	comp=Z,769nm,0.4s					
OSTC	Ostas	8.02	14	*e*PN	Pn	06 42 14.3 -1.4
OSTC				AMS	AMS	06 45 20.0
	comp=Z,615μm,15.5s					
CHVC	Chvalec	8.02	14	*e*PN	Pn	06 42 14.3 -1.4
CHVC				AMS	AMS	06 45 20.0
	comp=Z,565μm,14.8s					
SAVF	Savonnieres en	8.04	319	*e*Pn	Pn	06 42 15.9 0.0
	baz=136					
SAVF	Savonnieres en	8.04	319	*e*P	Pn	06 42 20.9 +5.0
SAVF				*e*Sn	Sn	06 43 42.4 -4.4
	comp=Z,538nm,0.4s					
RAC	Raciborz	8.06	24	*e*PN	Pn	06 42 14.8 -1.4
RAC				*e*SN	Sn	06 43 47.7 +0.4
RAC				LMZ	LR	06 45 40.1
	comp=Z,681nm,17.5s					
RAC	Raciborz	8.06	24	*e*P	Pn	06 42 14.8 -1.4
RAC				*e*		06 43 47.7
RAC				MLR	MLR	
	comp=Z,681μm,17.5s					
TNS	Taunus Mts	8.06	338	*e*Pn	Pn	06 42 16.0 -0.3
BRG	Berggiesshubel	8.06	4	*i* P	Pn	06 42 13.5 -2.8
BRG				*e*		06 43 44.4
BRG				pmax	pmax	
	comp=Z,585nm,0.7s					
BRG				MLR	MLR	
	comp=E,472μm,14.5s					
BRG				MLR	MLR	
	comp=Z,453μm,13.4s					
BRG				MLR	MLR	
	comp=N,260μm,13.4s					
BRG	Berggiesshubel	8.06	4	*e*Pn	Pn	06 42 13.8 -2.6
FBE	Freiberg	8.09	1	*e*Pn	Pn	06 42 14.3 -2.4
FBE				*e*Sn	Sn	06 43 43.4 -4.8
LOT	Lotru	8.11	68	⇑P	Pn	06 42 18.0 +1.0
NVR	Nevrokopi	8.14	97	P	Pn	06 42 16.7 -0.7
PGB	Panagyurishte	8.16	88	*i* P	Pn	06 42 18.1 +0.4
LAKA	Lakka	8.17	121	P	Pn	06 42 19.3 +1.5
CEI	Carei	8.19	50	⇑P	Pn	06 42 18.7 +0.7
BGF	Bois d'Agland	8.20	301	*e*Pn	Pn	06 42 17.9 -0.3
BGF	Bois d'Agland	8.20	301	*e*P	Pn	06 42 24.2 +6.0
BGF				*e*Sn	Sn	06 43 46.4 -4.5
	comp=N,1μm,0.6s					
MESR	Meseseni	8.20	55	⇑P	Pn	06 42 19.3 +1.1
CAF	Calviac	8.24	288	*e*Pn	Pn	06 42 19.8 +0.9
CAF	Calviac	8.24	288	*e*P	Pn	06 42 24.7 +5.8
CAF				*e*Sn	Sn	06 43 48.1 -4.0
	comp=N,782nm,0.9s					
CAF	Calviac	8.24	288	P	Pn	06 42 19.2 +0.3
UBBA	Unterbreizbach	8.27	346	*e*Pn	Pn	06 42 18.9 -0.1
AXAR	Agios Charalam	8.31	116	P	Pn	06 42 21.4 +1.7
KSP	Ksiaz	8.31	14	*e*P	Pn	06 42 19.9 +0.3
KSP				*e*S	Sb	06 44 32.2 +10
KSP				*e*L	L	06 46 01.1
	comp=N,579μm,18.3s					
VLAD	Vladila	8.31	78	⇓P	Pn	06 42 20.3 +0.6
WLF	Walferdange	8.36	327	*d*P	Pn	06 42 20.7 +0.4
WLF	Walferdange	8.36	327	*e*Pn	Pn	06 42 20.8 +0.4
XOR	Xorichti	8.37	111	P	Pn	06 42 20.4 -0.1
BGG	Burgeitz	8.38	334	*e*Pn	Pn	06 42 21.2 +0.6
KOKK	Kokkinochori,	8.38	100	P	Pn	06 42 20.9 +0.2
CBBR	Cluj-Babes-Bol	8.40	59	⇓P	Pn	06 42 22.1 +1.1
CJR	Cluj-Napoca	8.41	59	⇑P	Pn	06 42 22.2 +1.0
CRVS	Cervenica-Dubn	8.41	41	*e*P	Pn	06 42 21.3 +0.2
CRVS				MLR	MLR	
	comp=Z,834μm,21.4s					
NEO	Neokhori	8.42	111	P	Pn	06 42 21.2 0.0
NEUB	Neuenburg	8.43	354	*e*Pn	Pn	06 42 19.8 -1.5
NEUB				*e*Sn	Sn	06 43 53.1 -3.3
KOE	Koeppel	8.45	336	*e*Pn	Pn	06 42 22.1 +0.5
PLVB	Pleven	8.45	82	⇓P	Pn	06 42 21.9 +0.3
PAIG	Paliouri	8.46	106	P	Pn	06 42 21.0 -0.8
CLL	Collm	8.48	360	*e*P	Pn	06 42 20.0 -2.0
CLL				MLR	MLR	
	comp=Z,430μm,19.1s					
CLL	Collm	8.48	360	*e*Pn	Pn	06 42 20.0 -2.0
CLL				*e*x	x	06 42 24.0
	comp=Z,325nm,0.9s					
CLL				*e*Pg	Pg	06 42 56.0 -5.4
CLL				*e*Sn	Sn	06 43 46.0 -12
CLL				*e*x	x	06 43 52.0
CLL				*e*x	x	06 44 07.0
CLL				*i* x	x	06 44 28.7
CLL				*e*Sg	Sg	06 44 48.0 -3.1
	comp=Z,32μm,1.9s					
CLL				LmV		06 45 00.0
	comp=Z,430μm,19.1s					
CLL				*e*x	x	06 45 01.0
CLL				Lmax		06 46 00.0
CLL				*e*PcP	PcP	06 48 51.0 -1.2
	comp=Z,26μm,3.4s					
CLL	Collm	8.48	360	*e*Pn	Pn	06 42 19.6 -2.4
TRPA	Tarpa	8.48	48	⇑P	Pn	06 42 21.5 -0.5
TRPA	Tarpa	8.48	48	P	Pn	06 42 20.9 -1.1
TCF	Toulx Ste Croi	8.51	298	*e*Pn	Pn	06 42 22.8 +0.3
TCF	Toulx Ste Croi	8.51	298	*e*P	Pn	06 42 28.3 +5.8
TCF				*e*Sn	Sn	06 43 54.0 -4.6
	comp=Z,865nm,0.7s					
OUR	Ouranopolis	8.53	103	P	Pn	06 42 21.5 -1.2
LKR	Lokris	8.59	116	P	Pn	06 42 23.7 +0.1
PLD	Plovdiv	8.61	91	*i* P	Pn	06 42 23.3 -0.5
HYF	Humbligny	8.63	305	*e*Sn	Sn	06 43 56.7 -4.8
UZH	Uzhgorod	8.65	45	⇑*i*P	Pn	06 42 23.9 -0.5
UZH				*e*S	Sn	06 44 01.1 -0.9
UZH				MLR	MLR	
	comp=N,106μm,14.0s					
UZH				MLR	MLR	
	comp=E,170μm,14.0s					
HILG	Hillesheim	8.67	332	*e*Pn	Pn	06 42 25.0 +0.3
STHS	Stebnicka Huta	8.68	38	*e*P	Pn	06 42 24.2 -0.5
ARR	Arges	8.68	69	⇑P	Pn	06 42 26.2 +1.4
RJF	Les Rejaudoux	8.70	290	*e*Pn	Pn	06 42 26.4 +1.3
RJF	Les Rejaudoux	8.70	290	*e*P	Pn	06 42 31.1 +6.0
RJF				*e*Sn	Sn	06 43 58.6 -4.7
	comp=E,2μm,1.4s					
OJC	Ojcow	8.71	30	*e*P	Pn	06 42 23.4 -1.7
OJC				*e*S	Sg	06 44 47.6 -11
OJC				*e*L	L	06 46 31.6
	comp=E,626μm,15.4s					
MDB	Medias	8.71	64	⇑P	Pn	06 42 26.1 +0.9
THAL	Thalero	8.72	120	P	Pn	06 42 26.3 +1.0
AHRW	Bad Neuenahr-A	8.75	334	*e*Pn	Pn	06 42 26.6 +0.9
HUMR	Humele	8.77	75	⇑P	Pn	06 42 25.8 -0.3
BMR	Baia Mare	8.78	53	⇓P	Pn	06 42 26.6 +0.4
STFAR	Stefanesti-Arg	8.81	73	⇑P	Pn	06 42 27.2 +0.6
ITM	Ithomi	8.81	127	P	Pn	06 42 27.6 +1.0
KOLS	Kolonicke sedl	8.84	43	*e*P	Pn	06 42 30.5 +3.6
STB	Steinbach	8.87	333	*e*Pn	Pn	06 42 27.9 +0.5
COPA	Copaceanca	8.90	77	⇑P	Pn	06 42 28.2 +0.4
TGMR	Targu Mures	8.93	62	⇑P	Pn	06 42 29.5 +1.3
MTUR	Matau	8.94	70	⇑P	Pn	06 42 29.0 +0.6
LOUT	Loutraki	8.95	119	P	Pn	06 42 28.1 -0.4
KASTN	Kahler Asten	8.96	341	*e*Pn	Pn	06 42 28.5 -0.2
BHOU	Houvegnez	8.97	329	*d*P	Pn	06 42 29.5 +0.7
KLMT	Kalamata	8.97	127	P	Pn	06 42 29.8 +1.0
GTTG	Gottingen	8.97	347	*e*Pn	Pn	06 42 28.3 -0.5
VOIR		8.98	69	⇑P	Pn	06 42 30.5 +1.5
ARCR	ARCALIA	9.04	58	⇑P	Pn	06 42 30.0 +0.3
HOBG	Hohbusch	9.06	336	*e*Pn	Pn	06 42 30.4 +0.5
VILL	Villia	9.06	118	P	Pn	06 42 30.0 -0.1
BNS	Bensberg	9.09	336	*e*Pn	Pn	06 42 30.9 +0.6
BNS				*e*Sn	Sn	06 44 09.6 -3.0
KLL	Kalltalsperre	9.10	332	*e*Pn	Pn	06 42 30.5 0.0
BTNL	Ternell	9.11	331	*d*P	Pn	06 42 30.0 -0.8
BTNL				*d*pP		06 42 31.8
RCHB	Rochefort	9.12	326	*d*P	Pn	06 42 30.6 -0.1
DREG	Dreilaegerbach	9.14	331	*e*Pn	Pn	06 42 31.5 +0.4
LFF	La Frestale	9.17	287	*e*Pn	Pn	06 42 32.5 +1.0
LFF	La Frestale	9.17	287	*e*P	Pn	06 42 37.4 +5.9
LFF				*e*Sn	Sn	06 44 10.2 -4.6
	comp=E,966nm,0.9s					
MEM	Membach	9.18	330	*d*P	Pn	06 42 31.3 -0.2
CLZ	Clausthal	9.20	349	*e*Pn	Pn	06 42 29.9 -2.0
KDZ	Kurdzhali	9.21	93	*i* P	Pn	06 42 31.8 -0.3
GIVF	Givet	9.24	325	*e*Pn	Pn	06 42 32.5 0.0
GIVF	Givet	9.24	325	*e*P	Pn	06 42 37.2 +4.7
GIVF				*e*Sn	Sn	06 44 11.2 -5.3
	comp=E,3μm,0.7s					
BCLA	Clavier	9.29	327	*d*P	Pn	06 42 33.1 0.0
BCLA				*d*S	Sn	06 44 13.1 -4.5
BSTI	Sart Tilman	9.32	329	*d*P	Pn	06 42 34.0 +0.5
DOPR	Dopca	9.34	66	⇓P	Pn	06 42 34.3 +0.5
DOU	Dourbes	9.34	324	*d*P	Pn	06 42 33.2 -0.5
DOU				*d*x	x	06 42 54.9
KYMI	Kymi, Euboea I	9.34	113	P	Pn	06 42 33.4 -0.5
BGES	Gesves	9.35	327	*d*P	Pn	06 42 33.6 -0.3
BGES				*d*pP		06 42 35.2
BGES				*d*sP		06 42 36.9
BGES				*d*S	Sn	06 44 16.5 -2.6
EPF	Esparros	9.37	276	*e*Pn	Pn	06 42 34.1 -0.2
EPF				*e*Sn	Sn	06 44 14.8 -4.9
	comp=E,1μm,1.5s					
RDO	Rodhopi	9.41	96	Pn	Pn	06 42 34.3 -0.5
RDO	Rodhopi	9.41	96	P	Pn	06 42 34.7 -0.1
BMRD	Maredsous	9.42	325	*d*P	Pn	06 42 35.2 +0.3
KRND	KRANIDI	9.42	122	P	Pn	06 42 35.2 +0.2
ATH	Athens Observa	9.44	117	P	Pn	06 42 34.3 -0.9
SGRR	Singureni	9.45	77	⇓P	Pn	06 42 36.1 +0.7
BAIF	Baives	9.48	323	*e*Pn	Pn	06 42 35.3 -0.4
BAIF	Baives	9.48	323	*e*P	Pn	06 42 40.7 +5.0
BAIF				*e*Sn	Sn	06 44 16.7 -5.6
	comp=E,12μm,1.9s					
BUG	Bochum--Univer	9.48	337	*e*Pn	Pn	06 42 37.1 +1.4
ATHU	Athens Univers	9.48	117	P	Pn	06 42 35.9 +0.1
PTL	Penteli	9.49	117	P	Pn	06 42 35.7 -0.3
LAUG	Laupendahl	9.50	336	*e*Pn	Pn	06 42 36.5 +0.6
BUC1	Bucharest	9.50	76	⇑P	Pn	06 42 36.8 +0.7
VLY	Voula,Athens	9.55	118	P	Pn	06 42 36.8 0.0
PLAR	PLOIESTI	9.56	73	⇓P	Pn	06 42 38.1 +1.2
SMTH	Samothraki Isl	9.60	100	P	Pn	06 42 36.9 -0.5
MLR	Muntele Rosu	9.61	70	Pn	Pn	06 42 38.2 +0.6
	comp=E,6.5nm,0.3s,baz=279,slow=7.5,SNR=41					
MLR				Lg	Lg	06 45 16.7
	comp=E,3.1nm,0.3s,baz=8.5,slow=19,SNR=1.9					
MLR				LR	LR	06 47 13.8
	comp=E,1813μm,20.7s,baz=258,slow=43					
	comp=E,209nm,0.9s					
OZUR		9.64	66	⇓P	Pn	06 42 39.3 +1.4
SULR		9.70	75	⇑P	Pn	06 42 39.5 +0.8
VLI	Veliai	9.72	126	P	Pn	06 42 42.9 +3.8
SNF	Seneffe	9.78	325	*d*P	Pn	06 42 39.6 -0.2
RAZG	Razgrad	9.82	81	⇓P	Pn	06 42 40.1 -0.4
NEHR	Nehoiu	9.84	70	⇓P	Pn	06 42 41.9 +1.2
NRDL	Niedersach Rie	9.88	349	*e*Pn	Pn	06 42 41.7 +0.6
GADA	Gvkgeada	9.95	101	*e*P	Pn	06 42 41.1 -1.1
ISR	Istrita	9.96	72	⇑P	Pn	06 42 43.6 +1.3
ETSF	Etsaut	10.03	275	*e*Pn	Pn	06 42 45.2 +1.8
ETSF	Etsaut	10.03	275	*e*P	Pn	06 42 49.7 +6.3
ETSF				*e*Sn	Sn	06 44 30.8 -5.3
	comp=E,289nm,0.8s					
KTHR	Kythira	10.07	127	P	Pn	06 42 45.0 +1.1
LEHL	Lehliu	10.08	76	⇓P	Pn	06 42 44.6 +0.6
KTHA	Kythira Island	10.11	127	P	Pn	06 42 45.8 +1.4
IBBN	Ibbenburen	10.14	341	*e*Pn	Pn	06 42 46.1 +1.4
BISRR	Bisoca	10.14	70	⇑P	Pn	06 42 44.8 -0.1
EDRB	Edirne	10.15	91	*e*P	Pn	06 42 44.9 0.0
EDRB	Edirne	10.15	91	P	Pn	06 42 44.1 -0.8
MFF	Saint Martin d	10.15	296	*e*Pn	Pn	06 42 46.2 +1.2
MFF	Saint Martin d	10.15	296	*e*P	Pn	06 42 51.0 +6.0
MFF				*e*Sn	Sn	06 44 33.5 -5.4
	comp=E,1μm,1.1s					
MFF	Saint Martin d	10.15	296	P	Pn	06 42 47.3 +2.3
PLOR	Plostina	10.16	68	⇑P	Pn	06 42 45.0 -0.1
BOZC	Bozcaada	10.19	103	*e*P	Pn	06 42 45.8 +0.4
VRI	Vrincioaia	10.22	68	⇑P	Pn	06 42 46.0 +0.1
RETH	Rethem/Aller,	10.22	347	*e*Pn	Pn	06 42 46.1 +0.2
LVV	L'vov	10.29	43	*e*P	Pn	06 42 49.5 +2.7
LVV				*e*S	Sn	06 44 46.7 +4.6
LVV				MLR	MLR	
	comp=Z,335μm,10.0s					
GRER		10.30	71	⇑P	Pn	06 42 48.3 +1.4
GELI	Tayfur-Gelibol	10.30	99	*e*P	Pn	06 42 46.1 -0.9
TESR	Tescani	10.32	64	⇓P	Pn	06 42 48.5 +1.2
EZN	Ezine	10.39	102	*e*P	Pn	06 42 46.0 -2.2
EZN	Ezine	10.39	102	P	Pn	06 42 47.4 -0.8
BEL	Belsk	10.40	27	*e*P	Pn	06 42 52.0 +3.7
ODBI	Odobesti	10.42	69	⇑P	Pn	06 42 50.0 +1.3
AMRR	Amara	10.46	75	⇑P	Pn	06 42 49.6 +0.5
PRD	Provadia	10.48	83	*i* P	Pn	06 42 49.4 0.0
SJPF	Ste Jean	10.51	276	*e*Pn	Pn	06 42 51.4 +1.6
SJPF	Ste Jean	10.51	276	*e*P	Pn	06 42 55.3 +5.5
SJPF				*e*Sn	Sn	06 44 41.7 -5.9
	comp=Z,523nm,1.2s					
ANKY	Antikythira Is	10.52	128	P	Pn	06 42 51.5 +1.5
PRK	Paraskevi	10.57	105	P	Pn	06 42 50.9 +0.2
MHLO	Agia Marina, M	10.64	121	P	Pn	06 42 51.2 -0.4
GHRR		10.72	68	⇑P	Pn	06 42 52.9 +0.1
RKY	Sarkoy-Tek

IDI Anoyia 11.85 126 P **Pn 06 43 07.2 -1.1**
HMNX Herstmonceux 11.86 317 *e*P **Pn 06 43 08.2 0.0**
HMNX IAmb IAmb 06 43 17.8
comp=Z,2μm,1.3s
HMNX IAMs_20 IAMs_20 06 48 48.0
comp=Z,394μm,14.9s
MILM Milestii Mici 11.87 64 ⇑P **Pn 06 43 08.8 +0.4**
MILM Milestii Mici 11.87 64 ⇓*i*P **Pn 06 43 07.6 -0.8**
comp=Z,37μm,5.9s
MILM *e*S **Sn 06 45 22.0 +1.2**
MILM *e*L L 06 47 12.0
MILM LqM 06 47 38.0
comp=Z,500μm,15.6s
MILM LRM MLR 06 48 40.0
comp=Z,464μm,10.5s
MILM Milestii Mici 11.87 64 *e*P **Pn 06 43 07.6 -0.8**
MILM *e*S **Sn 06 45 22.0 +1.2**
MILM pmax pmax
comp=Z,38μm,5.9s
MILM MLR MLR
comp=Z,1117μm,12.5s
MILM MLR MLR
comp=N,464μm,10.5s
MILM MLR MLR
comp=E,404μm,11.7s
HLG Helgoland 11.87 345 *e*Pn **Pn 06 43 08.2 -0.2**
KIS Kishinev 11.89 64 *e*P **Pn 06 43 08.3 -0.4**
comp=E,13μm,6.2s
KIS *e*S **Sn 06 45 22.0 +0.6**
KIS *e*L L 06 47 09.0
comp=E,20μm,13.4s
KIS LRM MLR 06 48 44.0
comp=E,458μm,12.0s
KIS Kishinev 11.89 64 *e*P **Pn 06 43 08.0 -0.7**
KIS *e*S **Sn 06 45 22.0 +0.6**
KIS pmax pmax
comp=Z,13μm,6.2s
KIS MLR MLR
comp=E,364μm,12.0s
KIS MLR MLR
comp=Z,458μm,12.0s
TMBK Timbaki Herakl 11.93 127 P Pn 06 43 14.5 +5.2
GCAM G?zelcaml? 11.95 111 *e*P **Pn 06 43 10.2 +0.7**
KLYT Kilyos 11.96 92 *e*P **Pn 06 43 10.5 +0.8**
HRKL Herakleio 11.96 125 P **Pn 06 43 08.5 -1.3**
CART Cartagena 11.98 249 P **Pn 06 43 12.2 +2.2**
CART S Sn 06 45 51.4 +28
ISK Istanbul-Kandi 12.01 93 *e*P **Pn 06 43 11.2 +0.8**
ISK Istanbul-Kandi 12.01 93 P **Pn 06 43 10.3 -0.1**
KAVV Kandilli-Istan 12.02 93 *e*P **Pn 06 43 11.3 +0.9**
MDNY Mudanya-Bursa 12.07 96 *e*P **Pn 06 43 13.0 +1.8**
SGMF Saint Gilles 12.24 302 *e*Pn **Pn 06 43 13.8 +0.3**
SGMF Saint Gilles 12.24 302 *e*P Pn 06 43 19.6 +6.1
SGMF *e*Sn **Sn 06 45 23.0 -6.9**
comp=Z,2μm,1.4s
AYDB Zeytinkoy-Aydi 12.28 108 *e*P **Pn 06 43 12.2 -2.0**
JQE Queens East 12.29 306 *e*P **Pn 06 43 13.1 -1.1**
BODT Bodrum 12.33 113 *e*P **Pn 06 43 14.4 -0.3**
BODT Bodrum 12.33 113 P **Pn 06 43 12.8 -1.9**
BSD Bornholm Skovb 12.35 5 *i* P **Pn 06 43 14.4 -0.5**
BSD IAmb IAmb 06 43 24.8
comp=Z,128nm,0.8s
ELMS Elmsett, Ipswi 12.35 323 *e*P **Pn 06 43 14.8 -0.2**
ELMS IAMs_20 IAMs_20 06 48 31.5
comp=Z,245μm,18.4s
JSA Saint Aubin 12.37 306 *e*P **Pn 06 43 14.6 -0.5**
JSA IAmb IAmb 06 43 25.9
comp=Z,382nm,1.2s
JSA IAMs_20 IAMs_20 06 48 21.9
comp=Z,250μm,13.2s
YLV Yalova 12.37 95 *e*P **Pn 06 43 15.9 +0.5**
JVM Valle D.L. Mar 12.40 306 *e*P **Pn 06 43 15.1 -0.6**
SILT Sile 12.42 92 *e*P **Pn 06 43 15.4 -0.6**
NISR Nisiros 12.45 115 P **Pn 06 43 14.3 -2.1**
NIS1 Nisyros Isl. 12.49 115 P **Pn 06 43 17.4 +0.4**
UCM Universidad Co 12.50 264 P **Pn 06 43 16.0 -1.2**
UCM S Sn 06 45 50.7 +14
QUIF Quistinic 12.51 300 *e*Pn **Pn 06 43 17.6 +0.4**
QUIF Quistinic 12.51 300 *e*P Pn 06 43 22.7 +5.5
QUIF *e*Sn **Sn 06 45 29.7 -6.9**
comp=Z,982nm,1.2s
HRT Hereke 12.52 94 *e*P **Pn 06 43 18.4 +1.0**
FRMA Ierapetra Chan 12.55 124 P **Pn 06 43 19.9 +2.2**
ROSF Rostrenen 12.72 301 *e*Pn **Pn 06 43 18.4 -1.6**
ROSF *e*Sn **Sn 06 45 34.2 -7.4**
comp=Z,994nm,1.1s
ZKR Zakros 12.78 123 P **Pn 06 43 18.6 -2.3**
TVSB Tavsanli 12.79 100 *e*P **Pn 06 43 21.7 +0.6**
LUNU Lund 12.81 1 *i* P **Pn 06 43 20.0 -1.3**
CAVI Cavuskoy 12.82 96 *e*P **Pn 06 43 23.5 +2.0**
COP Copenhagen 12.87 358 *i* P **Pn 06 43 24.5 +2.4**
COP IAmb IAmb 06 43 36.4
comp=Z,1μm,1.0s
GEDZ Gediz 12.90 102 *e*P **Pn 06 43 24.2 +1.6**
WOL Wolverton 12.92 316 *e*P **Pn 06 43 22.5 -0.2**
YER Yerkesik 12.95 111 *e*P **Pn 06 43 25.5 +2.2**
WACR West Acre 12.96 324 *e*P **Pn 06 43 22.5 -0.7**
WACR IAMs_20 IAMs_20 06 48 58.5
comp=Z,221μm,18.7s
SAUV Serdivan-Sakar 13.03 93 *e*P **Pn 06 43 25.4 +1.1**
KARP Karpathos 13.10 119 Pn **Pn 06 43 23.4 -1.9**
KARP Karpathos 13.10 119 P **Pn 06 43 23.1 -2.2**
TURN Turunc 13.11 112 *e*P **Pn 06 43 26.2 +0.8**
ESDC Sonseca Array 13.22 262 Pn **Pn 06 43 24.9 -2.2**
comp=Z,0.5nm,0.3s,baz=72,slow=8.0,SNR=66
ESDC LR LR 06 48 41.7
comp=Z,473μm,18.9s,baz=59,slow=38
comp=Z,24nm,0.8s
GULT Gulveren 13.25 95 *e*P **Pn 06 43 26.5 -0.8**
SWN1 Swindon 13.33 316 *e*P **Pn 06 43 27.4 -0.9**
SWN1 IAMs_20 IAMs_20 06 49 25.8
comp=Z,308μm,15.0s
ARG Arkhangelos 13.34 115 Pn **Pn 06 43 29.2 +0.7**
ARG Arkhangelos 13.34 115 P **Pn 06 43 28.7 +0.2**
ARG Arkhangelos 13.34 115 P **Pn 06 43 29.3 +0.7**
DALY Dalyan (Mula) 13.37 112 *e*P **Pn 06 43 29.9 +1.0**
SRCK Saricakaya, Es 13.44 96 *e*P **Pn 06 43 31.6 +1.7**
APMY Acipayam-Deniz 13.49 108 *e*P **Pn 06 43 31.8 +1.1**
AKASG Malin Array Be 13.55 49 Pn **Pn 06 43 29.1 -2.2**
comp=Z,0.9nm,0.3s,baz=241,slow=12,SNR=48
AKASG Lg Lg 06 47 15.3
baz=244,slow=31
AKASG LR LR 06 49 20.5
comp=Z,373μm,20.0s,baz=238,slow=40
comp=Z,219nm,1.1s
AKASG Malin Array Be 13.55 49 Pn **Pn 06 43 28.2 -3.1**
AKBB Malin Array Si 13.55 49 *c i*P **Pn 06 43 29.5 -1.8**
PAB San Pablo 13.55 262 Pn **Pn 06 43 29.8 -1.7**
PAB San Pablo 13.55 262 P **Pn 06 43 29.8 -1.7**
PAB San Pablo 13.55 262 P **Pn 06 43 29.7 -1.7**
STRD Stroud 13.66 316 *e*P **Pn 06 43 31.4 -1.5**
STRD IAMs_20 IAMs_20 06 49 37.4
comp=Z,333μm,12.9s
KDZE Karadeniz Ereo 13.71 90 *e*P **Pn 06 43 33.6 0.0**
MDUB Mudurnu 13.74 94 *e*P **Pn 06 43 33.2 -0.9**
MDUB Mudurnu 13.74 94 **Pn 06 43 32.2 -1.8**
FETY Fethiye 13.76 111 *e*P **Pn 06 43 35.2 +0.9**
OLDB Oldbury-Upon-S 13.80 315 *e*P **Pn 06 43 32.6 -2.1**
OLDB IAMs_20 IAMs_20 06 49 04.4
comp=Z,308μm,21.5s
MUD Monsted U'grnd 13.87 351 *i* P **Pn 06 43 36.6 +1.0**
MUD IAmb IAmb 06 43 46.9
comp=Z,402nm,1.3s
LMK Market Rasen 13.88 325 *e*P **Pn 06 43 35.7 -0.1**
LMK IAmb IAmb 06 43 44.6
comp=Z,2μm,1.0s
SHUT Suhut-Afyon 13.91 102 *e*P **Pn 06 43 36.9 +0.5**
DYA Yadsworthy 13.94 309 *e*P **Pn 06 43 35.6 -1.0**
DYA IAMs_20 IAMs_20 06 48 31.5
comp=Z,252μm,13.1s
CIFT Cifteler, Eski 13.98 98 *e*P **Pn 06 43 39.1 +1.7**
MONM Monmouth 14.03 315 *e*P **Pn 06 43 35.4 -2.4**
MONM IAmb IAmb 06 43 40.9
comp=Z,474nm,1.0s
MONM IAMs_20 IAMs_20 06 49 49.2
comp=Z,321μm,13.2s
ISP Isparta 14.19 105 Pn **Pn 06 43 39.5 -0.8**
ISP Isparta 14.19 105 ⇓*e*P **Pn 06 43 40.1 -0.2**
ISP pmax pmax
comp=Z,116nm,1.1s
ISP MLR MLR
comp=Z,416μm,13.0s
ELL Elmali 14.27 110 *e*P **Pn 06 43 43.7 +2.3**
CHAS Isla Isabel II 14.28 243 P **Pn 06 43 40.7 -0.7**

CHAS S **S 06 46 36.5 -3.8**
SVRH Sivrihisar-ESK 14.29 97 *e*P **Pn 06 43 41.4 -0.2**
AKAS Kas 14.33 112 *e*P **Pn 06 43 42.2 0.0**
AKAS Kas 14.33 112 **Pn 06 43 41.2 -1.0**
PBUR Paburge 14.38 20 *e*P **P 06 43 47.8 -1.9**
BCK Bucak 14.40 106 *e*P **Pn 06 43 44.9 +1.7**
GOET G??ttrup 14.43 351 *i* P **Pn 06 43 46.0 +2.7**
KORT Korkueli 14.45 108 *e*P **Pn 06 43 46.2 +2.3**
HLM1 Long Mynd 14.45 318 *e*P **Pn 06 43 41.1 -2.6**
HLM1 IAmb IAmb 06 43 50.9
comp=Z,434nm,1.1s
HLM1 IAMs_20 IAMs_20 06 50 20.9
comp=Z,440μm,16.0s
STNC Stoke 14.48 320 *e*P **Pn 06 43 41.8 -2.2**
STNC IAMs_20 IAMs_20 06 49 50.5
comp=Z,262μm,15.3s
TAF Taforalt 14.49 242 P **P 06 43 48.0 -3.1**
HTL Hartland 14.50 310 *e*P **Pn 06 43 43.3 -1.1**
HTL IAmb IAmb 06 43 58.4
comp=Z,361nm,1.0s
HTL IAMs_20 IAMs_20 06 50 09.0
comp=Z,246μm,15.5s
PABE Paberze 14.51 25 Pn **Pn 06 43 43.4 -1.1**
PABE Paberze 14.51 25 *e*P **Pn 06 43 47.4 +2.9**
WMELI Melilla 14.54 244 P **Pn 06 43 46.0 +1.0**
WMELI S **S 06 46 50.8 +5.0**
CCA1 Carnmenellis 14.59 307 *e*P **Pn 06 43 44.3 -1.2**
CCA1 IAMs_20 IAMs_20 06 49 47.2
comp=Z,272μm,15.5s
ANTB Antalya 14.71 108 *e*P **P 06 43 50.9 -2.6**
PBRG Braganca 14.72 273 ⇑*i*P **Pn 06 43 47.2 -0.3**
comp=Z,1μm,1.8s
PBRG *e*S **Sn 06 46 34.0 +3.4**
KIZT Kizilcal 14.74 99 *e*P **Pn 06 43 49.5 +1.6**
EMAL Malaga-Limoner 14.77 252 P **Pn 06 43 49.1 +1.0**
EMAL S **S 06 46 42.1 -8.3**
GDLE Glaisdale, N Y 14.77 327 *e*P **Pn 06 43 46.9 -1.1**
GDLE IAMs_20 IAMs_20 06 52 31.4
comp=Z,129μm,11.4s
HPK Haverah Park 14.78 324 *e*P **Pn 06 43 46.9 -1.3**
HPK IAmb IAmb 06 43 57.7
comp=Z,762nm,0.9s
HPK IAMs_20 IAMs_20 06 50 07.3
comp=Z,149μm,14.9s
FOEL Foel Wylfa 14.83 318 *e*P **Pn 06 43 46.9 -2.0**
FOEL IAMs_20 IAMs_20 06 50 31.8
comp=Z,398μm,15.6s
LPW Lampeter 14.83 315 *e*P **Pn 06 43 46.9 -2.0**
VSVD Vaisvydziai 14.90 24 *e*P **P 06 43 53.0 -2.5**
NACGM Naroch 15.03 32 *e*P **Pn 06 43 49.2 -2.3**
comp=Z,1μm,1.3s,baz=42
LLW Llanuwychllyn 15.04 318 *e*P **Pn 06 43 49.6 -1.9**
LOD Lodumlu 15.05 95 *e*P **Pn 06 43 51.5 -0.5**
MVO Moncorvo 15.06 270 ⇑*i*P **Pn 06 43 52.0 -0.1**
comp=Z,1μm,1.5s
MVO *e*S **S 06 46 51.6 -5.0**
MVO A A 06 50 09.6
comp=Z,347μm,20.0s
ANTO Ankara 15.08 95 ⇓P **Pn 06 43 53.0 +0.6**
ANTO Ankara 15.08 95 **Pn 06 43 52.9 +0.6**
ANTO Ankara 15.08 95 P **Pn 06 43 52.9 +0.6**
ANTO pmax pmax
comp=Z,149nm,0.9s
RSBS Rosebush, Pemb 15.11 313 *e*P **Pn 06 43 50.8 -1.7**
RSBS IAMs_20 IAMs_20 06 49 41.5
comp=Z,259μm,26.5s
MNK Minsk 15.18 35 *i* P **Pn 06 43 51.3 -2.2**
MNK *i* S **Sn 06 46 40.5 -1.1**
MNK pmax pmax
comp=N,214nm,0.9s
MNK pmax pmax
comp=E,45nm,0.9s
MNK pmax pmax
comp=Z,217nm,0.9s
MNK MLR MLR
comp=Z,117μm,15.0s
MNK MLR MLR
comp=N,71μm,15.0s
MNK Minsk 15.18 35 *i* P **Pn 06 43 51.4 -2.2**
comp=E,45nm,0.9s
MNK *i* P **Pn 06 43 51.4 -2.2**
comp=N,214nm,0.9s
MNK *i* P **Pn 06 43 51.4 -2.2**
comp=Z,217nm,0.9s,baz=226
MNK *i* PP **sP 06 44 03.8 +0.8**
MNK *i* S **Sn 06 46 40.6 -1.1**
MNK *i* SS **SnSn 06 46 54.5 +0.4**
MNK *i* LQ LQ 06 48 17.3
MNK *i* LR LR 06 49 34.1
MNK *i* LRM MLR 06 50 13.1
MNK *i* LRM MLR 06 50 18.5
comp=N,71μm,15.4s
MNK *i* LRM MLR 06 50 26.3
comp=E,29μm,15.4s
ISAL Salakas 15.29 29 *e*P **Pn 06 43 56.7 +1.8**
SIM Simferopol' 15.29 75 *i* P **Pn 06 43 54.0 -1.1**
SIM pmax pmax
comp=Z,1.0nm,1.5s
LADK Ladik-KONYA 15.36 101 *e*P **Pn 06 43 55.3 -0.7**
ILGA Ilgaz 15.44 90 **Pn 06 43 56.9 -0.4**
YLL Llanberis 15.45 318 *e*P **Pn 06 43 54.4 -2.7**
KONT Konya--Tatoy 15.46 102 *e*P **Pn 06 43 59.5 +2.2**
CANT Cankiri 15.48 91 *e*P **Pn 06 43 58.9 +1.3**
KULU Kulu 15.50 97 *e*P **P 06 44 00.2 -2.2**
PVLZ Peæn de 15.53 246 P **Pn 06 43 59.0 +0.8**
PVLZ S **S 06 47 05.4 -0.5**
EDMD Edmundbyers 15.53 326 *e*P **Pn 06 43 56.2 -1.9**
EDMD IAMs_20 IAMs_20 06 50 08.4
comp=Z,156μm,17.4s
PVRL Vila Real 15.54 271 ⇑*e*P **Pn 06 43 58.1 -0.3**
comp=Z,1μm,1.6s
POLO Lamas de Olo 15.58 272 ⇑*i*P **Pn 06 43 59.0 +0.1**
comp=Z,634nm,1.4s
POLO *e*S **S 06 47 10.4 +3.2**
CHBY Cihanbeyli 15.59 99 *e*P **Pn 06 44 00.4 +1.3**
MTE Manteigas 15.63 268 ⇑*i*P **Pn 06 43 58.5 -1.1**
comp=Z,1μm,1.2s
MTE *e*S **S 06 47 09.7 +1.5**
MTE A A 06 50 44.1
comp=Z,467μm,16.0s
MTE Manteigas 15.63 268 Pn **Pn 06 43 57.8 -1.8**
WLF1 Llynfaes 15.65 318 *e*P **Pn 06 43 57.3 -2.3**
WLF1 IAmb IAmb 06 44 09.6
comp=Z,1μm,1.3s
WLF1 IAMs_20 IAMs_20 06 51 06.3
comp=Z,734μm,15.1s
WME Myndd Eilian 15.67 318 *e*P **Pn 06 43 57.6 -2.3**
PCAB Cabril 15.68 273 *e*P **Pn 06 43 59.9 -0.3**
comp=Z,1μm,1.5s
YRC Rhosscolyn 15.72 318 *e*P **Pn 06 43 58.7 -1.8**
HOMB Homborsund 15.72 351 *e*P **Pn 06 44 01.5 +0.9**
HOMB IVmBBB 06 44 12.3
comp=Z,7μm,3.2s
HOMB *e* 06 47 09.5
PCBR Castelo Branco 15.74 266 ⇑*e*P **Pn 06 43 58.5 -2.4**
comp=Z,798nm,1.5s
BR131 Keskin Array S 15.74 94 **Pn 06 44 00.5 -0.6**
BR131 Keskin Array S 15.74 94 *c i*P **Pn 06 44 01.6 +0.5**
BR131 Keskin Array S 15.74 94 P **Pn 06 44 01.4 +0.3**
SNR=90
BR131 P **Pn 06 44 01.4 +0.3**
SNR=90
BR131 P **Pn 06 44 01.4 +0.3**
SNR=90
BRTR Keskin Array B 15.74 94 Pn **Pn 06 44 01.1 0.0**
comp=Z,1.0nm,0.3s,baz=290,slow=8.5,SNR=82
BRTR Lg Lg 06 48 46.8
comp=Z,0.2nm,0.3s,baz=197,slow=3.0,SNR=1.8
BRTR LR LR 06 51 21.3
comp=Z,790μm,18.6s,baz=294,slow=42
comp=Z,53nm,0.9s
BRTR Keskin Array B 15.74 94 Pn **Pn 06 44 00.1 -1.1**
BRTR Keskin Array B 15.74 94 *ce*P **Pn 06 44 01.2 0.0**
BRTR pmax pmax
comp=Z,52nm,0.9s
WPS Cemaes, Angles 15.76 318 *e*P **Pn 06 43 59.5 -1.6**
WPS IAmb IAmb 06 44 11.6
comp=Z,1μm,1.1s
PVIS Viseu 15.81 269 ⇑*e*P **Pn 06 44 01.8 0.0**
comp=Z,1μm,1.5s
PMRV Marv??o 15.81 265 ⇑*e*P **Pn 06 44 00.8 -1.0**
comp=Z,652nm,1.7s
PMRV *e*S **S 06 47 15.8 +4.0**
PMRV A A 06 50 35.0
comp=Z,390μm,20.0s

PGAV Gavieira, Arco 15.81 274 ⇑*e*P **Pn 06 44 02.0 0.0**
comp=Z,1μm,1.4s
PGAV *e*S **S 06 47 15.2 +3.2**
PGAV A A 06 50 43.8
comp=Z,327μm,22.0s
KESW Keswick, Cumbr 15.85 324 *e*P **Pn 06 44 00.2 -2.0**
KESW IAmb IAmb 06 44 08.4
comp=Z,485nm,1.0s
KESW IAMs_20 IAMs_20 06 50 08.1
comp=Z,137μm,15.1s
CEU Ceuta 15.86 250 P **Pn 06 44 02.1 -0.4**
CEU S **Sn 06 47 03.9 +5.5**
KAMT Kaman 15.91 96 *e*P **Pn 06 44 05.0 +1.7**
SLIT Slitere, Latvi 15.91 18 *e*P **P 06 44 05.7 -0.9**
SERE Sereflikochisa 15.95 97 *e*P **P 06 44 05.6 -1.7**
SNART Snartemo 15.96 349 *e*P **P 06 44 05.5 -1.7**
SNART IVmBBB 06 44 15.6
comp=Z,23μm,3.0s
SNART *e* 06 47 15.4
HDMB Hadim 15.98 105 *e*P **Pn 06 44 05.0 +0.8**
PBAR Barrancos 16.00 260 ⇑*i*P **Pn 06 44 03.9 -0.4**
comp=Z,1μm,1.8s
PBAR *e*S **S 06 47 20.6 +4.9**
YAYX Yaylak 16.13 97 *e*P **P 06 44 07.8 -1.6**
PESTR Estremoz 16.14 263 ⇑*e*P **Pn 06 44 05.0 -1.2**
comp=Z,1μm,1.6s
PESTR *e*S **S 06 47 13.7 -4.9**
SULT Sultanhani-AKS 16.19 100 *e*P **P 06 44 09.1 -0.9**
GAZI Gazipasa 16.20 108 *e*P **Pn 06 44 07.4 +0.5**
PTO Porto 16.23 271 *e*P **Pn 06 44 07.9 +0.8**
comp=Z,514nm,1.6s
ARNO Arenosillo 16.24 256 P **Pn 06 44 07.8 +0.5**
ARNO S **S 06 47 24.2 +3.7**
CHEFC Chefchaouen 16.27 248 P **P 06 44 12.0 +1.1**
WIM Isle of Man 16.29 320 *e*P **Pn 06 44 07.1 -0.8**
IOMK Kirk Michael 16.30 321 *e*P **Pn 06 44 07.2 -0.9**
IOMK IAmb IAmb 06 44 20.6
comp=Z,761nm,0.9s
IOMK IAMs_20 IAMs_20 06 51 30.9
comp=Z,503μm,11.4s
CORM Corum 16.34 92 *e*P **Pn 06 44 09.2 +0.4**
EKA Eskdalemuir Ar 16.38 325 Pn **Pn 06 44 07.2 -1.8**
baz=137,slow=14
EKA Sn **Sn 06 47 08.2 -2.4**
baz=139,slow=24
EKA Lg Lg 06 49 05.2
baz=261,slow=11
EKA LR LR 06 51 00.0
comp=Z,138μm,20.3s,baz=140,slow=39
comp=Z,84nm,0.8s
ESK Eskdalemuir 16.38 325 Pn **Pn 06 44 07.7 -1.4**
ESK Eskdalemuir 16.38 325 P **Pn 06 44 07.7 -1.4**
ESK pmax pmax
comp=Z,304nm,1.0s
ESK Eskdalemuir 16.38 325 P **Pn 06 44 09.6 +0.5**
PCAS Casmilo, Conde 16.43 268 ⇑*i*P **Pn 06 44 10.4 +0.6**
comp=Z,1μm,1.3s
PCAS *e*S **S 06 47 27.8 +3.4**
DIKM Dikmen 16.45 87 *e*P **Pn 06 44 09.1 -0.9**
YESY Yesilyurt 16.52 101 *e*P **P 06 44 13.8 +0.1**
PMTG Montargil 16.54 264 ⇑*e*P **Pn 06 44 10.1 -1.1**
comp=Z,2μm,1.4s
PMTG *e*S **S 06 47 25.9 -0.7**
ESY Stoneypath 16.57 328 *e*P **Pn 06 44 10.0 -1.4**
EVO Evora 16.57 262 P **Pn 06 44 09.9 -1.7**
EVO S **S 06 47 28.6 +1.2**
EVO Evora 16.57 262 ⇑*i*P **Pn 06 44 10.5 -1.1**
comp=Z,524nm,1.6s
DSB Dublin 16.62 316 ⇑*e*P **Pn 06 44 11.2 -1.0**
DSB Dublin 16.62 316 Pn **Pn 06 44 10.9 -1.2**
EBL Broad Law 16.63 327 *e*P **Pn 06 44 11.9 -0.4**
GULA Gulagac 16.66 98 *e*P **Pn 06 44 11.4 -1.4**
PBEJ Beja 16.66 260 ⇑*e*P **Pn 06 44 12.3 -0.4**
comp=Z,446nm,1.9s
NEWG New Galloway 16.69 323 *e*P **Pn 06 44 13.0 +0.1**
NEWG IAmb IAmb 06 44 20.2
comp=Z,320nm,0.9s
NEWG IAMs_20 IAMs_20 06 50 41.3
comp=Z,115μm,16.2s
GAL1 Galloway 16.75 322 *e*P **Pn 06 44 12.0 -1.6**
GAL1 IAMs_20 IAMs_20 06 51 19.1
comp=Z,138μm,16.4s
LCRM LCR 16.78 243 P **P 06 44 20.1 +3.5**
BERE Bereket-Mersin 16.79 106 *e*P **P 06 44 15.7 -1.0**
PVAQ Vaqueiros 16.81 258 ⇑*i*P **Pn 06 44 14.7 +0.1**
comp=Z,903nm,1.5s
PVAQ *e*S **S 06 47 35.8 +3.6**
PVAQ A A 06 50 54.3
comp=Z,246μm,20.0s
PSBE So Bento 16.81 266 ⇑*i*P **Pn 06 44 14.4 -0.3**
comp=Z,2μm,1.6s
PSBE *e*S **S 06 47 36.2 +4.0**
TEKE Tekeli-Mersin 16.81 107 *e*P **Pn 06 44 14.5 -0.1**
TEVE Tevekalti-Mers 16.90 105 *e*P **P 06 44 17.2 -0.7**
PCVE Castro Verde 16.95 259 ⇑*i*P **Pn 06 44 16.2 -0.1**
comp=Z,700nm,1.7s
PCVE *e*S **S 06 47 38.4 +3.4**
GMM Mts of Mourne 16.95 319 *e*P **Pn 06 44 16.3 +0.1**
KONO Kongsberg 16.98 354 Pn **Pn 06 44 14.5 -2.1**
KONO Kongsberg 16.98 354 ⇓*e*P **Pn 06 44 17.3 +0.7**
KONO pmax pmax
comp=Z,60nm,1.2s
KONO MLR MLR
comp=Z,192μm,16.0s
KONO Kongsberg 16.98 354 *e*P **Pn 06 44 16.8 +0.2**
KONO IVmBBB 06 44 27.1
comp=Z,9μm,3.0s
KONO *e*S **S 06 47 35.2 -0.1**
KONO Kongsberg 16.98 354 P **P 06 44 19.2 +0.7**
YOZ Yozgat 17.00 93 *e*P **P 06 44 18.4 -0.7**
IFR Ifrane 17.06 243 P **P 06 44 21.0 +1.3**
IFR S **S 06 47 37.5 -0.1**
PACT Alcochete 17.09 264 ⇑*i*P **Pn 06 44 17.9 -0.2**
comp=Z,2μm,1.6s
KEBE Keben-Mersin 17.09 105 *e*P **P 06 44 20.5 +0.5**
KMY Karmoy 17.11 346 *e*P **P 06 44 19.3 -0.6**
KMY IVmBBB 06 44 23.0
comp=Z,7μm,2.2s
PNCL Nicolau / Gran 17.11 261 ⇑*e*P **Pn 06 44 17.6 -0.8**
comp=Z,395nm,2.0s
PNCL *e*S **S 06 47 39.6 +1.3**
AKKU Akkuyu-Mersin 17.11 106 *e*P **Pn 06 44 18.5 +0.1**
BLS5 Blasjo 17.11 348 *e*P **P 06 44 20.8 +0.8**
BLS5 IVmBBB 06 44 33.8
comp=Z,10μm,2.6s
BLS5 *e* 06 47 38.3
KVT Kavak 17.15 88 *e*P **Pn 06 44 18.9 0.0**
IKL Isikli 17.17 106 *e*P **P 06 44 20.1 -0.6**
MDT Midelt 17.17 240 P **P 06 44 20.9 0.0**
comp=Z,0.4nm,0.3s,baz=74,slow=13,SNR=35
MDT S **S 06 47 39.3 -0.4**
comp=Z,14nm,0.9s,baz=116,slow=12,SNR=1.3
comp=Z,47nm,1.1s
EDU Dundee 17.17 329 *e*P **P 06 44 21.1 +0.4**
LEF Lefka 17.18 110 *e*P **Pn 06 44 17.8 -1.5**
OSL Oslo 17.19 356 *e*P **Pn 06 44 19.6 +0.4**
OSL IVmB_BB 06 44 31.9
comp=Z,20μm,4.1s
OSL *e*S **S 06 47 37.2 -2.4**
MTSE Matsula 17.25 19 *e*P **Pn 06 44 18.1 -1.9**
PGBU Glenifferbraes 17.26 325 *e*P **Pn 06 44 20.2 +0.1**
PGBU IAmb IAmb 06 44 30.1
comp=Z,526nm,1.1s
PGBU IAMs_20 IAMs_20 06 53 10.4
comp=Z,125μm,11.1s
UPP Uppsala 17.27 8 *e*P **P 06 44 22.9 +1.2**
SILI Silifke-Mersin 17.28 105 *e*P **P 06 44 22.8 +0.9**
CZD Col de Zad 17.31 242 P **P 06 44 25.0 +2.4**
HFS Hagfors 17.33 1 Pn **Pn 06 44 19.7 -1.3**
comp=Z,2.6nm,0.3s,baz=194,slow=6.8,SNR=25
HFS S **Sn 06 47 36.9 +3.3**
comp=Z,32nm,1.0s,baz=14,slow=6.7,SNR=1.2
HFS Lg Lg 06 49 29.4
comp=Z,0.5nm,0.3s,baz=220,slow=8.3,SNR=1.9
HFS LR LR 06 51 46.2
comp=Z,181μm,20.4s,baz=184,slow=40
comp=Z,69nm,0.8s
LIS Lisbon 17.34 264 *e*P **Pn 06 44 20.6 -0.6**
LIS *e*S **Sn 06 47 34.7 +0.6**
LIS IAMs_20 IAMs_20 06 51 17.2
comp=Z,328μm,18.7s
LIS Lisbon 17.34 264 ⇑*e*P **Pn 06 44 21.5 +0.3**
comp=Z,1μm,1.4s
LIS Lisbon 17.34 264 *e*P **Pn 06 44 20.6 -0.6**

LIS *e*S **Sn** **06 47 34.7 +0.6**
PMAFR Mafra 17.35 265⇑ *i*P **Pn** **06 44 21.0 -0.4**
comp=Z,858nm,1.4s
PMAFR *e*S **S** **06 47 44.6 +1.4**
PMST Lisbon--Monsan 17.36 264⇑ *e*P **Pn** **06 44 21.6 +0.2**
comp=Z,1μm,1.5s
KIZK Mersin 17.38 104 *e*P **P** **06 44 24.5 +1.4**
MERS Mersin 17.47 103 *e*P **P** **06 44 26.9 +2.7**
PTEO Sao Teotonio 17.48 260 *e*P **Pn** **06 44 22.6 -0.4**
comp=Z,996nm,1.9s
INVG Invergeldie, C 17.49 327 *e*P **Pn** **06 44 22.6 -0.4**
INVG IAmb IAmb 06 44 39.6
comp=Z,335nm,0.8s
CLGH Cloghs, Cushen 17.52 321 *e*P **Pn** **06 44 23.6 +0.2**
CLGH IAMs_20 IAMs_20 06 52 17.4
comp=Z,252μm,11.1s
MORF Marmelete 17.53 259 *e*P **Pn** **06 44 23.1 -0.6**
MORF *e*S **Sn** **06 47 39.3 +0.5**
MORF IAMs_20 IAMs_20 06 49 46.7
comp=Z,367μm,26.7s
MORF Marmelete 17.53 259⇑ *e*P **Pn** **06 44 23.8 +0.2**
comp=Z,1μm,1.8s
MORF *e*S **S** **06 47 45.6 -1.3**
MORF Marmelete 17.53 259 *e*P **Pn** **06 44 23.1 -0.6**
MORF *e*S **Sn** **06 47 39.3 +0.5**
LFK Lefkose 17.54 109 *e*P **Pn** **06 44 23.9 0.0**
ODD1 Odda 17.56 349 *e*P **P** **06 44 26.8 +1.9**
ODD1 IVmB_BB 06 44 37.7
comp=Z,20μm,4.6s
ODD1 *e*S **S** **06 47 47.2 0.0**
BNN Bunyan 17.65 95 *e*P **P** **06 44 26.9 +0.7**
ANN Anapa 17.66 75*c i*P **Pn** **06 44 21.6 -3.5**
ANN pmax pmax
comp=Z,1μm,0.9s
ANN MLR MLR
comp=Z,252μm,21.0s
KARA Karaisali 17.69 101 *e*P **P** **06 44 29.7 +3.2**
TOKT Tokat 17.71 90 *e*P **P** **06 44 28.4 +1.6**
PFVI Vila Bisbo 17.73 259⇑ *e*P **Pn** **06 44 26.4 +0.3**
comp=Z,1μm,1.6s
PFVI *e*S **S** **06 47 49.9 -0.9**
VSU Vasula 17.82 24 *e*P **Pn** **06 44 26.7 -0.3**
VSU Vasula 17.82 24*ce*P **Pn** **06 44 24.9 -2.1**
VSU pmax pmax
comp=Z,8μm,1.7s
VSU MLR MLR
comp=Z,430μm,16.0s
EREN Erenkoy 17.86 107 *e*P **Pn** **06 44 26.9 -0.8**
AAL Aland 17.87 11 *e*P **P** **06 44 28.9 +0.6**
LAWE Loch Awe, Argy 17.94 325 *e*P **P** **06 44 30.0 +0.9**
LAWE IAMs_20 IAMs_20 06 51 30.3
comp=Z,128μm,18.7s
NC602 NORSAR Array S 17.96 358 *e*P **Pn** **06 44 27.4 -1.3**
NC602 IVmBBB 06 44 40.0
comp=Z,8μm,1.7s
NC602 *e*S **S** **06 47 55.6 +0.5**
MCD Coleburn Disti 18.02 331 *e*P **Pn** **06 44 29.2 -0.4**
SKAR Skarslia 18.11 352 *e*P **P** **06 44 32.3 +1.2**
SKAR IVmBBB 06 44 43.8
comp=Z,7μm,4.7s
SKAR *e*S **S** **06 47 58.4 0.0**
KOZT Kozan 18.15 99 *e*P **P** **06 44 34.0 +2.4**
SVSK Karacayir 18.16 91 *e*P **P** **06 44 32.1 +0.5**
BER Bergen 18.20 348 *e*P **P** **06 44 32.3 +0.3**
BER IVmBBB 06 44 45.5
comp=Z,13μm,5.8s
BER *e*S **S** **06 48 00.1 -0.1**
SARI SarD1z-Kayseri 18.23 96 *e*P **P** **06 44 34.9 +2.3**
RSDY Resadiye-TOKAT 18.26 89 *e*P **P** **06 44 33.9 +1.0**
NB2 NORSAR Subarra 18.27 357 P **Pn** **06 44 32.3 -0.4**
comp=Z,2μm,2.5s,baz=171,slow=11
NB2 NORSAR Subarra 18.27 357 P **Pn** **06 44 32.3 -0.4**
baz=171,slow=11
NOA NORSAR Array B 18.27 357 P **Pn** **06 44 31.2 -1.4**
comp=Z,0.1nm,0.3s,baz=170,slow=13,SNR=100
NOA S **Sn** **06 47 55.4 -1.1**
comp=Z,4.0nm,0.8s,baz=166,slow=12,SNR=1.1
NOA Lg Lg 06 49 41.1
baz=258,slow=6.6
NOA LR LR 06 52 25.3
comp=Z,175μm,19.3s,baz=170,slow=40
comp=Z,59nm,0.8s
ASK Askoy 18.32 347 *e*P **Pn** **06 44 30.9 -2.3**
ASK IVmBBB 06 44 46.7
comp=Z,27μm,6.6s
ASK *e*S **S** **06 48 02.4 -0.2**
NC405 NORSAR Array S 18.33 358 IAmb IAmb 06 44 38.4
comp=Z,3μm,1.9s
NC204 NORSAR Array S 18.53 356 IAmb IAmb 06 44 44.5
comp=Z,1μm,1.1s
MLA1 Latheron 18.61 332 *e*P **Pn** **06 44 36.9 +0.2**
AVE Averroes 18.71 246 P **Pn** **06 44 40.8 +2.6**
AVE S **S** **06 48 10.2 -0.6**
MEF Metsahovi 18.72 18 *e*P **P** **06 44 37.1 -0.6**
KAC Achnashellach 18.73 328 *e*P **Pn** **06 44 38.2 -0.1**
KPL Plockton 18.76 327 *e*P **Pn** **06 44 39.9 +1.3**
KPL IAMs_20 IAMs_20 06 52 16.6
comp=Z,133μm,19.2s
HYA Hoyanger 18.83 350 *e*P **Pn** **06 44 40.6 +1.3**
HYA IVmB_BB 06 44 53.7
comp=Z,20μm,4.0s
HYA *e*S **S** **06 48 13.0 +0.2**
TAHT Tahtakopru-Hat 18.89 102 *e*P **Pn** **06 44 41.5 +1.2**
KMRS Kahramanmaras 18.92 98 *e*P **Pn** **06 44 42.8 +2.0**
SUE Sulen 18.93 347 *e*P **P** **06 44 38.3 -1.7**
SUE IVmBBB 06 44 43.9
comp=Z,17μm,5.5s
SUE *e*S **S** **06 48 14.9 0.0**
DARE Darende-Malaty 18.95 95 *e*P **Pn** **06 44 43.5 +2.4**
RAF Rauma 18.95 13 *e*P **P** **06 44 40.5 +0.3**
LZRR Lazarevskoye 19.11 78*ce*P **P** **06 44 40.9 -1.2**
LZRR pmax pmax
comp=Z,917nm,0.9s
ESPY Espiye-Giresun 19.16 87 *e*P **Pn** **06 44 45.2 +1.6**
GAZ Gaziantep 19.29 99 *e*P **Pn** **06 44 50.2 +5.0**
SOC Sochi 19.39 79*ce*P **P** **06 44 44.9 -0.3**
SOC pmax pmax
comp=Z,663nm,0.8s
SOC MLR MLR
comp=Z,147μm,17.0s
DOMB Dombas 19.39 354 *e*P **Pn** **06 44 47.6 +1.4**
DOMB IVmBBB 06 44 49.3
comp=Z,12μm,5.2s
DOMB *e*S **S** **06 48 24.4 +0.2**
LRW Lerwick 19.40 338 *e*P **Pn** **06 44 46.1 -0.2**
LRW IAmb IAmb 06 45 01.1
comp=Z,384nm,0.8s
LRW IAMs_20 IAMs_20 06 54 36.4
comp=Z,183μm,16.0s
FOO Floro 19.41 348 *e*P **P** **06 44 45.5 +0.4**
FOO IVmB_BB 06 44 59.6
comp=Z,16μm,7.2s
FOO *e*S **S** **06 48 24.4 +0.1**
VSR Storozhevoye 19.57 56 *e*P **P** **06 44 45.8 -1.2**
VSR *e*S **S** **06 48 19.5 -8.3**
VSR pmax pmax
comp=Z,2μm,1.8s
VSR smax smax
comp=N,15μm,7.4s
VSR MLR MLR
comp=Z,434μm,18.0s
OBN Obninsk 19.59 43 P **P** **06 44 46.6 -0.6**
comp=Z,4.1nm,0.3s,baz=57,slow=7.3,SNR=44
OBN S **S** **06 48 17.9 -10**
comp=Z,10nm,0.8s,baz=160,slow=22,SNR=1.3
OBN Lg Lg 06 50 48.7
comp=Z,2.1nm,0.3s,baz=230,slow=23,SNR=1.7
OBN LR LR 06 53 13.7
comp=Z,81μm,19.8s,baz=236,slow=40
comp=Z,293nm,1.1s
OBN Obninsk 19.59 43 P **P** **06 44 44.7 -2.5**
OBN IAmb IAmb 06 44 51.2
comp=Z,1μm,1.0s
OBN Obninsk 19.59 43*c i*P **P** **06 44 45.8 -1.4**
OBN *i*S **S** **06 48 19.9 -8.3**
OBN pmax pmax
comp=Z,1μm,1.0s
OBN MLR MLR
comp=Z,308μm,20.0s
OBN Obninsk 19.59 43 P **P** **06 44 46.5 -0.7**
GUZR Guzeripl' 19.63 77*d i*P **P** **06 44 47.0 -0.9**
GUZR pmax pmax
comp=Z,5μm,0.8s
GUZR MLR MLR
comp=Z,2539μm,18.0s

VSLR Vesyoloye 19.63 79*c i*P **Pn** **06 44 48.6 -0.6**
AKN Aaknes 19.71 351 *e*P **Pn** **06 44 52.2 +2.1**
AKN IVmB_BB 06 44 53.7
comp=Z,18μm,4.4s
AKN *e*S **Sn** **06 48 31.1 -0.1**
VORR Voronezh 19.71 54 *e*P **P** **06 44 47.4 -1.2**
VORR *e*S **S** **06 48 26.4 -4.4**
VORR pmax pmax
comp=Z,2μm,1.4s
VORR MLR MLR
comp=Z,142μm,13.0s
BHL Bhannes 19.76 109 *e*P **Pn** **06 44 50.8 -0.1**
LEWI Lewis, Hebride 19.79 328 *e*P **P** **06 44 50.1 +0.7**
LEWI IAmb IAmb 06 45 01.3
comp=Z,535nm,0.9s
LEWI IAMs_20 IAMs_20 06 52 48.3
comp=Z,106μm,15.9s
DQRL Deir Qamar 19.81 110 *e*P **Pn** **06 44 51.3 -0.2**
LPSR Galich'ya Gora 19.84 52 *e*P **P** **06 44 48.5 -1.4**
LPSR *e*S **S** **06 48 26.1 -7.1**
LPSR pmax pmax
comp=Z,1μm,0.8s
LPSR smax smax
comp=N,36μm,8.4s
LPSR MLR MLR
comp=Z,217μm,14.0s
KTUT Trabzon 19.90 86 *e*P **Pn** **06 44 52.3 -0.1**
QRWL Qaraoun 19.97 110 *e*P **P** **06 44 52.5 +0.8**
PUL Pulkovo 19.98 26*de*P **Pn** **06 44 53.3 +0.1**
PUL pmax pmax
comp=Z,2μm,1.0s
PUL MLR MLR
comp=Z,179μm,15.0s
MOL Molde 20.04 352 *e*P **P** **06 44 52.5 +0.4**
MOL IVmB_BB 06 44 56.5
comp=Z,14μm,4.0s
MOL *e*S **S** **06 48 37.3 +0.2**
RCY Rachaya 20.11 110 *e*P Pn 06 44 54.5 -0.5
FIA0 FINESS Array S 20.20 18 P **P** **06 44 53.7 -0.1**
FIA0 FINESS Array S 20.20 18 P **P** **06 44 53.7 -0.1**
FINES FINESS Array B 20.20 18 P **P** **06 44 52.8 -1.0**
comp=Z,159nm,0.8s,baz=193,slow=7.8,SNR=80
FINES S **S** **06 48 33.4 -6.9**
comp=Z,17nm,0.9s,baz=24,slow=10,SNR=0.9
FINES PcP **PcP** **06 49 06.8 -0.9**
comp=Z,24nm,0.6s,baz=202,slow=9.5,SNR=3.4
FINES Lg Lg 06 50 56.9
baz=147,slow=11
FINES LR LR 06 53 41.5
comp=Z,276μm,18.7s,baz=207,slow=40
comp=Z,159nm,0.8s
FINES FINESS Array B 20.20 18 P **P** **06 44 52.6 -1.2**
FIA1 FINESS Array S 20.20 18 P **P** **06 44 53.6 -0.2**
FIA1 IAmb IAmb 06 45 07.2
comp=Z,666nm,0.8s
PTK Pertek 20.24 92 *e*P Pn 06 44 57.7 +1.1
ERZN Erzincan 20.26 90 *e*P **P** **06 44 55.6 +0.8**
BAYT Aydıntepe-Bayb 20.33 88 *e*P Pn 06 44 57.4 -0.3
URFA Urfa 20.35 97 *e*P **P** **06 44 53.6 -2.2**
MOS Moscow 20.42 42 *e*P **P** **06 44 53.0 -3.3**
MOS *e* 06 45 16.3
MOS *e*S **S** **06 48 35.0 -10**
MOS pmax pmax
comp=Z,5μm,1.4s
MOS pmax pmax
comp=N,735nm,1.3s
MOS pmax pmax
comp=E,3μm,1.3s
MOS MLR MLR
comp=N,172μm,11.0s
MOS MLR MLR
comp=E,178μm,11.0s
MOS MLR MLR
comp=Z,279μm,11.0s
TBLU Trondheim 20.52 356 *e*P **P** **06 44 57.9 +0.6**
TBLU IVmB_BB 06 45 14.9
comp=Z,11μm,2.5s
TBLU *e*S Sn 06 48 49.6 -1.1
TBLU *e*ScP **ScP** **06 52 46.1 +1.4**
CHOM Cayeli-Rize 20.61 85 *e*P Pn 06 45 01.0 +0.3
I43RU DUBNA INFRASON 20.72 40 I 08 48 50.0
baz=232,slow=319,SNR=1.2
TAM Tamanrasset 20.96 200 P Pn 06 45 03.9 -1.2
TAM Tamanrasset 20.96 200 P Pn 06 45 03.9 -1.2
TAM pmax pmax
comp=Z,3μm,1.8s
TAM MLR MLR
comp=Z,464μm,18.0s
DYBB Diyarbakir 21.12 94 *e*P **P** **06 45 06.8 +2.7**
VRH Novokhopyorsk 21.12 57 *e*P **P** **06 45 03.4 -0.5**
VRH *e*S **S** **06 48 52.8 -6.0**
VRH pmax pmax
comp=Z,3μm,1.7s
VRH smax smax
comp=N,56μm,10.1s
VRH MLR MLR
comp=Z,475μm,19.0s
BNGB Bingl 21.15 91 *e*P **P** **06 45 06.9 +2.4**
KARO Karliova-Bingo 21.32 90 *e*P **P** **06 45 09.1 +2.7**
VALR Valaam 21.40 24*d i*P **P** **06 45 05.1 -1.6**
VALR pmax pmax
comp=Z,2μm,1.0s
VALR MLR MLR
comp=Z,70μm,13.0s
KIV Kislovodsk 21.48 77 P **P** **06 45 07.8 -0.1**
KIV IAmb IAmb 06 45 15.9
comp=Z,1μm,1.0s
KIV Kislovodsk 21.48 77 *e*P **P** **06 45 07.9 -0.1**
KIV *e*S **S** **06 49 06.7 +0.6**
KIV pmax pmax
comp=Z,1μm,1.1s
KIV pmax pmax
comp=Z,4μm,4.0s
KIV MLR MLR
comp=Z,112μm,14.0s
KIV Kislovodsk 21.48 77 *i* P **P** **06 45 07.2 -0.7**
SNR=147
KIV Kislovodsk 21.48 77 P **P** **06 45 08.6 +0.7**
KVAR Kislovodsk Arr 21.48 77 P **P** **06 45 08.9 +0.9**
comp=Z,87nm,0.8s,baz=302,slow=23,SNR=77
KVAR S **S** **06 49 06.8 +0.5**
comp=Z,59nm,1.1s,baz=354,slow=8.9,SNR=1.4
KVAR LR LR 06 55 37.0
comp=Z,135μm,18.4s,baz=226,slow=43
comp=Z,87nm,0.8s
SHA1 Shidzhatmaz 21.49 77*d i*P **P** **06 45 09.0 +0.8**
MAZI Mazidag 21.53 95 *e*P **P** **06 45 10.8 +2.2**
ASF Jabal al Asfar 21.60 112 P **P** **06 45 10.4 +1.1**
comp=Z,98nm,0.8s,baz=290,slow=3.8,SNR=33
ASF S **S** **06 49 12.0 +3.4**
comp=Z,12nm,1.0s,baz=338,slow=21,SNR=0.7
ASF LR LR 06 55 50.6
comp=Z,180μm,19.5s,baz=324,slow=43
comp=Z,98nm,0.8s
GOF Gofitskoye 21.62 74⇑ *e*P **P** **06 45 09.0 -0.3**
GOF *e*S Sn 06 49 16.3 -1.0
GOF pmax pmax
comp=Z,587nm,1.4s
KBZ Khabaz 21.66 77 P **P** **06 45 10.3 +0.6**
comp=Z,572nm,0.8s,baz=287,slow=10,SNR=103
KBZ LR LR 06 56 07.5
comp=Z,189μm,18.1s,baz=279,slow=44
comp=Z,572nm,0.8s
KBZ Khabaz 21.66 77*ce*P **P** **06 45 10.7 +1.0**
KBZ pmax pmax
comp=Z,1μm,0.9s
KBZ MLR MLR
comp=Z,233μm,22.0s
VRTB Varto-Mus 21.67 90 *e*P **P** **06 45 13.2 +3.1**
KOPR Koprukoy-ERZUR 21.70 88 *e*P **P** **06 45 13.2 +2.7**
NSS Namsos 21.75 359 *e*P **P** **06 45 10.9 +0.4**
NSS IVmBBB 06 45 16.4
comp=Z,9μm,2.2s
NSS *e*S **S** **06 49 10.7 -0.2**
SVAN Silvan-Diyarba 21.82 93 *e*P **P** **06 45 14.2 +2.6**
MARD Mardin 21.83 95 P **P** **06 45 11.8 -0.1**
MARD IAmb IAmb 06 45 24.4
comp=Z,661nm,0.9s
EIL Elat 21.90 120 P **P** **06 45 13.5 +1.1**
comp=Z,82nm,1.2s,baz=322,slow=7.6,SNR=40
EIL S **S** **06 49 07.9 -6.4**
comp=Z,48nm,1.0s,baz=115,slow=13,SNR=1.6
EIL LR LR 06 57 22.4
comp=Z,35μm,21.3s,baz=305,slow=47
comp=Z,82nm,1.2s
SENK Senkaya-Erzuru 21.91 86 *e*P **P** **06 45 15.6 +2.9**

NCK Nalchik 22.20 78*c i*P **P** **06 45 18.3 +2.7**
NCK pmax pmax
comp=Z,3μm,2.7s
NCK MLR MLR
comp=Z,172μm,23.0s
ONI Oni 22.25 80 IAmb IAmb 06 45 31.2
comp=Z,516nm,0.9s
GURO Guroymak-BITLI 22.30 91 *e*P **P** **06 45 19.3 +2.5**
GURO Guroymak-BITLI 22.30 91 P **P** **06 45 17.8 +1.0**
GURO IAmb IAmb 06 45 33.9
comp=Z,610nm,1.1s
KARS Kars 22.43 85 *e*P **P** **06 45 21.7 +3.5**
KARS Kars 22.43 85 P **P** **06 45 20.2 +2.0**
KARS Kars 22.43 85 P **P** **06 45 20.2 +2.0**
KARS pmax pmax
comp=Z,2μm,1.0s
ZEI Tsey 22.54 80 *e*P **P** **06 45 19.2 -0.2**
ZEI pmax pmax
comp=Z,440nm,0.9s
AGRB Hanur-Agry 22.67 88 *e*P **P** **06 45 22.3 +1.5**
AKDM Akdamar-Van 23.07 91 *e*P **P** **06 45 27.2 +2.2**
GEVA Gevas 23.13 91 P **P** **06 45 25.4 -0.2**
GEVA IAmb IAmb 06 45 48.3
comp=Z,681nm,1.2s
VANB Van 23.28 90 *e*P **P** **06 45 30.1 +3.0**
MOR8 Moi Rana 23.40 1 *e*P **P** **06 45 30.5 +2.5**
MOR8 IVmB_BB 06 45 39.0
comp=Z,18μm,3.1s
MOR8 *e*S **S** **06 49 43.3 +2.5**
TASB TASBURUN-IGDIR 23.46 86 *e*P **P** **06 45 31.1 +2.3**
CLDR Caldiran 23.48 89 *e*P **P** **06 45 30.6 +1.3**
STOK Stokkvaagen 23.55 360 *e*P **P** **06 45 33.1 +3.8**
STOK *e*S **S** **06 49 44.4 +1.3**
KONS Konsvik 23.72 0 *e*P **P** **06 45 33.3 +2.3**
KONS IVmB_BB 06 45 34.4
comp=Z,13μm,4.7s
KONS *e*S **S** **06 49 46.4 +0.6**
GNI Garni 23.78 86 P **P** **06 45 32.7 +0.6**
comp=Z,117nm,0.7s,baz=270,slow=0.7,SNR=51
GNI S **S** **06 49 45.7 -1.9**
comp=Z,12nm,0.7s,baz=128,slow=21,SNR=1.2
GNI LR LR 06 58 23.1
comp=Z,108μm,18.4s,baz=286,slow=46
comp=Z,117nm,0.7s
GNI Garni 23.78 86 P **P** **06 45 32.6 +0.5**
GNI IAmb IAmb 06 45 56.8
comp=Z,614nm,1.0s
GNI Garni 23.78 86*de*P **P** **06 45 33.5 +1.4**
GNI pmax pmax
comp=Z,625nm,1.1s
GNI MLR MLR
comp=Z,102μm,19.0s
GNI Garni 23.78 86 P **P** **06 45 33.4 +1.4**
GNI P **P** **06 45 33.4 +1.4**
GNI P **P** **06 45 33.4 +1.4**
GNI S **S** **06 49 46.5 -1.1**
GNI S **S** **06 49 46.5 -1.1**
GNI S **S** **06 49 46.5 -1.1**
GNI Garni 23.78 86 P **P** **06 45 33.5 +1.4**
GNI Garni 23.78 86 P **P** **06 45 33.4 +1.3**
GROC Groznyy 23.83 78 *e*P **P** **06 45 33.4 +1.1**
GROC *e* 06 46 03.0
GROC *e* 06 49 17.9
GROC *e*S **S** **06 49 50.9 +2.9**
GROC pmax pmax
comp=Z,3μm,1.4s
CUKT Cukurca 23.93 93 *e*P **P** **06 45 34.5 +1.0**
KLMR Klimovskoe 24.05 32*d i*P **P** **06 45 33.6 -0.6**
KLMR S **S** **06 49 50.6 -0.6**
KLMR pmax pmax
comp=Z,3μm,1.6s
KLMR pmax pmax
comp=Z,19μm,4.7s
KLMR MLR MLR
comp=Z,205μm,17.0s
KLMR Klimovskoe 24.05 32⇓ *i*P **P** **06 45 33.7 -0.5**
KLMR ⇑ *i*P **P** **06 45 33.7 -0.5**
KLMR ⇑ *i*P **P** **06 45 33.7 -0.5**
KLMR AMP 06 45 43.7
comp=Z,3μm,1.6s
KLMR AMP 06 45 59.7
comp=Z,19μm,4.7s
KLMR S **S** **06 49 50.7 -0.5**
KLMR S **S** **06 49 50.7 -0.5**
KLMR LQ LQ 06 53 10.4
KLMR LQ LQ 06 53 10.4
KLMR LR LR 06 53 34.3
KLMR AMP 06 56 09.0
comp=Z,205μm,16.7s
DVE Vedeno 24.11 78*d i*P **P** **06 45 36.2 +1.1**
DVE pmax pmax
comp=Z,974nm,0.9s
DVE MLR MLR
comp=Z,35μm,15.0s
TANT Tantan 24.35 242 P **P** **06 45 41.0 +3.6**
FAUS Fauske 24.63 2 *e*P **P** **06 45 37.1 -2.4**
FAUS IVmB_BB 06 45 43.4
comp=Z,11μm,4.0s
FAUS *e*S **S** **06 50 01.3 +0.8**
BELG Belogornoye 24.95 55 P **P** **06 45 42.5 0.0**
comp=Z,1μm,0.9s,baz=69,slow=1.6,SNR=60
BELG S **S** **06 50 06.2 +0.4**
comp=Z,76nm,1.0s,baz=103,slow=21,SNR=0.9
BELG LR LR 06 56 27.2
comp=Z,349μm,20.7s,baz=258,slow=39
BELG Belogornoye 24.95 55*c i*P **P** **06 45 42.4 0.0**
BELG pmax pmax
comp=Z,724nm,0.9s
BELG MLR MLR
comp=Z,50μm,19.0s
PMPST Porto Santo, M 25.06 257 *e*P **P** **06 45 45.0 +1.3**
comp=Z,1μm,1.5s
PMPS Porto Santo 25.07 257 *e*P **P** **06 45 44.9 +1.1**
comp=Z,2μm,1.5s
MAK Makhachkala 25.10 78*c i*P **P** **06 45 45.7 +1.7**
MAK *e* 06 46 14.9
MAK *e*S **S** **06 50 14.0 +5.5**
MAK pmax pmax
comp=Z,2μm,1.0s
MAK pmax pmax
comp=Z,13μm,2.8s
MAK MLR MLR
comp=N,306μm,15.0s
MAK MLR MLR
comp=E,198μm,15.0s
MAK MLR MLR
comp=Z,194μm,14.0s
STEI Steigen 25.18 2 *e*P **P** **06 45 44.9 +0.5**
STEI IVmBBB 06 45 57.0
comp=Z,7μm,2.2s
STEI *e*S **S** **06 50 09.9 +0.7**
LOF Lofoten 25.36 0 *e*P **P** **06 45 47.7 +1.7**
LOF IVmB_BB 06 45 57.0
comp=Z,9μm,2.6s
LOF *e*S **S** **06 50 12.7 +0.6**
AKT Akhty 25.60 81 *e*P **P** **06 45 50.0 +1.3**
AKT *e* 06 46 26.7
AKT *e*S **S** **06 50 19.7 +3.0**
AKT *e*SS **SnSn** **06 51 14.7 +4.6**
AKT pmax pmax
comp=Z,1μm,1.1s
PMAR Madeira 25.66 257 *e*P **P** **06 45 51.1 +1.7**
comp=Z,3μm,1.6s
FUL Funchal 25.69 257 *e*P **P** **06 45 52.1 +2.7**
comp=Z,2μm,1.3s
PMOZ Porto Moniz, M 25.81 257 *e*P **P** **06 45 51.5 +0.8**
comp=Z,2μm,1.3s
PMOZ *e*S **S** **06 50 25.0 +4.8**
PMOZ A A 06 54 46.0
comp=Z,68μm,24.0s
PMOZ Porto Moniz, M 25.81 257 P **P** **06 45 55.3 +4.7**
KTK1 Kautokeino 26.77 8 *e*P **P** **06 45 59.8 +1.0**
KTK1 IVmBBB 06 46 15.2
comp=Z,5μm,2.9s
KTK1 *e*S **S** **06 50 35.5 +1.0**
PRGR Permogore 26.95 34 *e*P **P** **06 46 00.3 -0.2**
PRGR pmax pmax
comp=Z,526nm,0.8s
TRO Tromso 27.04 4 *e*P **P** **06 45 59.2 -1.9**
TRO IVmBBB 06 46 17.7
comp=Z,6μm,3.0s
TRO *e*S **S** **06 50 39.2 +0.7**
JETT Jettan, Norway 27.05 6 *e*P **P** **06 46 03.0 +1.6**
JETT IVmBBB 06 46 18.0
comp=Z,5μm,1.6s

JETT *e*S **S** **06 50 39.2 +0.2**
APA Apatity 27.09 17⇓*i*P **P** **06 46 01.5 -0.2**
APA *i* 06 46 59.0
APA *i* S **S** **06 50 41.0 +1.5**
APA *i* SS **SnSn** **06 51 51.0 +5.3**
APA pmax pmax
comp=Z,93nm,0.7s
APA MLR MLR
comp=Z,293µm,12.0s
KIRV Kirov 27.44 42 P **P** **06 46 03.8 -1.1**
comp=Z,160nm,0.6s,baz=266,slow=3.1,SNR=26
KIRV S **S** **06 50 42.1 -2.9**
comp=Z,59nm,1.1s,baz=296,slow=20,SNR=1.4
KIRV LR LR 06 58 08.8
comp=Z,292µm,18.6s,baz=248,slow=39
comp=Z,160nm,0.6s
KIRV Kirov 27.44 42*c i*P **P** **06 46 03.5 -1.4**
ARA0 ARCESS Array S 27.53 9 *e*P **P** **06 46 03.3 -2.4**
ARA0 IVmB_BB 06 46 48.0
comp=Z,5µm,3.9s
ARA0 *e*S **S** **06 50 46.6 +0.2**
ARCES ARCESS Array B 27.53 9 P **P** **06 46 03.9 -1.7**
comp=Z,35nm,0.9s,baz=197,slow=7.6,SNR=36
ARCES PcP **PcP** **06 49 22.4 -0.8**
comp=Z,17nm,0.7s,baz=224,slow=2.5,SNR=2.1
ARCES S **S** **06 50 42.7 -3.7**
comp=Z,13nm,0.9s,baz=139,slow=26,SNR=1.4
ARCES LR LR 06 57 45.9
comp=Z,86µm,18.9s,baz=202,slow=38
comp=Z,35nm,0.9s
ARCES ARCESS Array B 27.53 9 P **P** **06 46 04.3 -1.3**
ARCES ARCESS Array B 27.53 9 P **P** **06 46 04.3 -1.3**
ARCES pmax pmax
comp=Z,145nm,1.1s
LVZ Lovozero 27.63 17 P **P** **06 46 05.8 -0.8**
LVZ IAmb IAmb 06 46 16.6
comp=Z,596nm,1.5s
LVZ Lovozero 27.63 17*de*P **P** **06 46 07.6 +1.0**
LVZ pmax pmax
comp=Z,457nm,1.5s
LVZ MLR MLR
comp=Z,200µm,17.0s
LVZ Lovozero 27.63 17 P **P** **06 46 08.1 +1.5**
KEV Kevo 27.92 10 P **P** **06 46 07.3 -1.8**
KEV IAMs_20 IAMs_20 06 57 57.8
comp=Z,152µm,18.0s
KEV Kevo 27.92 10 P **P** **06 46 07.3 -1.8**
KEV pmax pmax
comp=Z,279nm,1.3s
KEV MLR MLR
comp=Z,152µm,18.0s
KEV Kevo 27.92 10 P **P** **06 46 10.6 +1.5**
MACI Morro de la Ar 27.97 248 P **P** **06 46 09.6 -0.6**
HAMF Hammerfest 28.39 7 *e*P **P** **06 46 14.2 +0.9**
HAMF IVmBBB 06 46 23.8
comp=Z,5µm,3.3s
HAMF *e*S **S** **06 50 59.6 -0.2**
BORG Borgarnes 29.29 330 P **P** **06 46 18.6 -2.7**
comp=Z,17nm,0.9s,baz=300,slow=12,SNR=1.9
BORG LR LR 06 58 27.9
comp=Z,83µm,21.5s,baz=140,slow=37
comp=Z,17nm,0.9s
BART Pico Bartolome 29.44 273 *e*P **P** **06 46 25.7 +2.6**
comp=Z,341nm,1.6s
PGRON Lagoa das Cont 29.60 273 *e*P **P** **06 46 25.7 +1.3**
comp=Z,528nm,1.6s
PSMN Pico do Norte, 29.66 272 *e*P **P** **06 46 24.5 -0.5**
comp=Z,756nm,1.1s
PCALD Caldeiras da R 29.67 273 *e*P **P** **06 46 28.4 +3.4**
comp=Z,238nm,0.9s
CMLA Cha da Macela 29.71 273 *e*P **P** **06 46 29.0 +3.6**
comp=Z,765nm,1.4s
CMLA Cha da Macela 29.71 273 IAMs_20 IAMs_20 06 56 36.1
comp=Z,200µm,22.0s
PSMA Santa Maria 29.71 272 *e*P **P** **06 46 24.2 -1.2**
comp=Z,1µm,1.5s
PSET Sete Cidades 29.83 274 *e*P **P** **06 46 25.4 -1.1**
comp=Z,692nm,1.8s
MQOL MQOL 29.86 130⇑*i*P **P** **06 46 27.5 +0.7**
JMIC Jan Mayen 30.22 346 P **P** **06 46 29.3 -0.2**
comp=Z,37nm,0.7s,baz=170,slow=17,SNR=1.6
JMIC LR LR 07 00 11.2
comp=Z,52µm,18.3s,baz=144,slow=40
comp=Z,37nm,0.7s
JMIC Jan Mayen 30.22 346 *e*S **S** **06 51 29.0 +0.5**
PAGU Agualva, Azore 30.56 276 *e*P **P** **06 46 32.1 -0.8**
comp=Z,520nm,0.8s
ADH Angra Heroismo 30.64 276 *e*P **P** **06 46 32.6 -0.9**
PSBA Serra de Santa 30.66 276 *e*P **P** **06 46 35.8 +2.0**
comp=Z,506nm,1.2s
PGRA Graciosa 31.05 277 *e*P **P** **06 46 39.5 +2.3**
comp=Z,670nm,1.8s
SRBC Serra Branca 31.09 277 *e*P **P** **06 46 39.4 +1.8**
TORD Torodi Ar. Bea 31.18 202 P **P** **06 46 38.0 -0.5**
comp=Z,247nm,0.8s,baz=13,slow=8.5,SNR=154
TORD P3KPbc 07 18 21.1
comp=Z,3.0nm,0.9s,baz=202,slow=4.7,SNR=5.2
comp=Z,247nm,0.8s
TORD Torodi Ar. Bea 31.18 202 P **P** **06 46 37.9 -0.6**
TORD IAmb IAmb 06 46 53.5
comp=Z,371nm,1.0s
PMAN Manadas 31.27 276 *e*P **P** **06 46 41.3 +2.2**
comp=Z,673nm,1.7s
ROSA Rosais 31.35 277 *e*P **P** **06 46 39.7 -0.2**
comp=Z,166nm,1.2s
AKTO Aktyubinsk 31.36 60 LR LR 07 01 00.8
comp=Z,139µm,20.2s,baz=253,slow=40
AKTO Aktyubinsk 31.36 60 P **P** **06 46 40.3 +0.5**
PID Ribeirinha 31.36 276 *e*P **P** **06 46 42.0 +2.0**
comp=Z,545nm,1.1s
PPNO Prainha do Nor 31.46 276 *e*P **P** **06 46 43.5 +2.6**
comp=Z,525nm,0.8s
PICO Pico 31.56 276 *e*P **P** **06 46 42.0 +0.2**
comp=Z,496nm,1.1s
HOR Horta 31.70 277 *e*P **P** **06 46 46.2 +3.3**
comp=Z,427nm,0.9s
PCED Cedros 31.72 277 *e*P **P** **06 46 45.1 +2.0**
comp=Z,604nm,1.2s
CALA Caldeira 31.74 277 *e*P **P** **06 46 47.6 +4.2**
comp=Z,915nm,0.7s
PFCBR Castelo Branco 31.77 277 *e*P **P** **06 46 46.4 +2.9**
comp=Z,370nm,1.8s
ARU Arti 31.80 49 LR LR 07 00 10.0
comp=Z,167µm,20.3s,baz=253,slow=38
ARU Arti 31.80 49 P **P** **06 46 42.8 -0.9**
ARU IAMs_20 IAMs_20 06 59 57.1
comp=Z,158µm,19.0s
ARU Arti 31.80 49*d i*P **P** **06 46 42.7 -0.9**
ARU 06 47 46.7
ARU PPP PPP 06 47 58.6
ARU S **S** **06 51 53.2 -0.4**
ARU SS **SnSn** **06 53 38.1 -2.5**
ARU SSS SSS 06 54 08.2
ARU pmax pmax
comp=Z,944nm,1.0s
ARU pmax pmax
comp=Z,5µm,10.2s
ARU MLR MLR
comp=Z,264µm,16.0s
BJO1 Bjornoya 31.88 3 *e*P **P** **06 46 44.8 +0.7**
BJO1 *e*S **S** **06 51 55.3 +0.9**
JAWL J.Aulia 32.14 143 *e*P **P** **06 46 45.0 -2.0**
JAWL S **S** **06 52 05.6 +6.0**
AB31 Akbulak array 32.71 62 *i*P **P** **06 46 51.3 -0.4**
ABKAR Akbulak array 32.71 62 P **P** **06 46 50.7 -0.9**
SCO Scoresbysund 32.82 339 IAMs_20 IAMs_20 07 02 04.6
comp=Z,78µm,18.0s
SCO Scoresbysund 32.82 339 *i*P P 06 46 58.3 +5.9
SCO IAmb IAmb 06 46 59.0
comp=Z,403nm,1.1s
RAYN Ar Rayn 32.97 115 P **P** **06 46 54.2 -0.1**
RAYN IAmb IAmb 06 47 05.1
comp=Z,316nm,1.6s
RAYN Ar Rayn 32.97 115 P **P** **06 46 54.2 -0.1**
RAYN pmax pmax
comp=Z,316nm,1.7s
RAYN MLR MLR
comp=Z,73µm,20.0s
RAYN Ar Rayn 32.97 115 P **P** **06 46 55.8 +1.5**
RAYN S **S** **06 52 17.4 +4.8**
RAYN Ar Rayn 32.97 115 *i*P **P** **06 46 54.1 -0.1**
SNR=26
RAYN Ar Rayn 32.97 115 P **P** **06 46 55.4 +1.1**
SVE Sverdlovsk 32.98 48*ce*P **P** **06 46 53.6 -0.3**
SVE *e* 06 47 58.3
SVE *e*S **S** **06 52 13.7 +1.8**

SVE pmax pmax
comp=Z,794nm,0.9s
SVE pmax pmax
comp=Z,4µm,11.1s
SVE MLR MLR
comp=Z,253µm,16.0s
SVE MLR MLR
comp=E,197µm,15.0s
KSLA Kassala 33.87 137 P **P** **06 46 57.8 -4.3**
HOPEN Hopen 34.16 5 *e*S **S** **06 52 30.2 +0.3**
HSPB Hornsund (broa 34.29 1 *e*P **P** **06 47 08.5 +3.4**
HSPB *e*S **S** **06 52 35.2 +3.3**
HSPB *e*L L 07 00 10.3
comp=E,57µm,23.8s
GEYT Alibeck 34.32 83 P **P** **06 47 06.3 +0.4**
comp=E,159nm,0.8s,baz=292,slow=7.8,SNR=71
GEYT PcP **PcP** **06 49 41.5 -0.4**
comp=E,8.2nm,0.7s,baz=318,slow=1.9,SNR=1.0
GEYT S **S** **06 52 32.0 -1.3**
comp=E,5.2nm,1.0s,baz=97,slow=21,SNR=1.6
GEYT LR LR 07 05 19.3
comp=E,106µm,18.7s,baz=316,slow=44
comp=E,159nm,0.8s
GEYT Alibeck 34.32 83 P **P** **06 47 06.1 +0.2**
GEYT IAmb IAmb 06 47 13.2
comp=Z,185nm,0.8s
GYA0 ALIBECK ARRAY 34.32 83 P **P** **06 47 05.4 -0.5**
GYA0B ALIBECK ARRAY 34.32 83 P **P** **06 47 06.2 +0.2**
GYA0B IAmb IAmb 06 47 17.8
comp=Z,339nm,1.1s
SOEG Soedalen 34.47 332 *i*P **P** **06 47 07.9 +1.1**
SOEG IAmb IAmb 06 47 17.1
comp=Z,182nm,1.0s
DBG Daneborg 35.00 345 *i*P **P** **06 47 13.7 +2.4**
DBG IAmb IAmb 06 47 16.2
comp=Z,220nm,1.4s
SPB2 Spitsbergen Ar 35.48 1 P **P** **06 47 16.0 +0.6**
SPB2 IAmb IAmb 06 47 28.9
comp=Z,348nm,0.9s
SPA0 Spitsbergen Ar 35.48 1 *e*P **P** **06 47 17.0 +1.5**
SPA0 *e*S **S** **06 52 51.5 +1.2**
SPITS Spitsbergen Ar 35.48 1 P **P** **06 47 14.7 -0.7**
comp=Z,142nm,1.0s,baz=152,slow=16,SNR=25
SPITS PcP **PcP** **06 49 43.3 -1.2**
comp=Z,63nm,1.0s,baz=139,slow=3.3,SNR=2.2
SPITS LR LR 07 01 32.6
comp=Z,72µm,22.0s,baz=154,slow=36
comp=Z,142nm,1.0s
ANGG Ammassalik, Gr 35.95 327 IAMs_20 IAMs_20 07 03 12.6
comp=Z,95µm,18.0s
ANGG Ammassalik, Gr 35.95 327 *i*P **P** **06 47 20.6 +1.1**
KBS Kingsbay 36.22 360 IAMs_20 IAMs_20 07 03 53.9
comp=Z,67µm,19.0s
KBS Kingsbay 36.22 360*d i*P **P** **06 47 23.0 +1.3**
KBS pmax pmax
comp=Z,495nm,1.5s
KBS MLR MLR
comp=Z,63µm,20.0s
KBS Kingsbay 36.22 360 *e* **P** **06 47 21.1 -0.5**
KBS *e*P **P** **06 47 21.1 -0.5**
KBS *e*S **S** **06 53 01.7 +0.3**
KBS Kingsbay 36.22 360 P **P** **06 47 24.5 +2.8**
ISOG Isortoq, Green 36.48 326 *i*P **P** **06 47 25.9 +1.9**
ISOG IAmb IAmb 06 47 34.6
comp=Z,180nm,1.1s
DAG Danmarks Havn 36.56 348 *i*P **P** **06 47 24.9 +0.3**
DAG IAmb IAmb 06 47 33.1
comp=Z,116nm,1.1s
JRN Qarnain Island 37.10 106 P **P** **06 47 34.3 +4.5**
SNR=13
JRN P **P** **06 47 34.3 +4.5**
SNR=13
JRN P **P** **06 47 34.3 +4.5**
SNR=13
ICESG Greenland Ices 37.62 332 *i*P **P** **06 47 34.6 +0.4**
ICESG IAmb IAmb 06 47 38.1
comp=Z,332nm,1.1s
BBTS Babate 37.89 231 LR LR 07 04 06.2
comp=Z,172µm,18.2s,baz=48,slow=38
SUMG Summit 38.40 338 *i*P **P** **06 47 42.1 +1.4**
EKNA AfricaArray - 38.58 186⇓*i*P **P** **06 47 45.6 +3.2**
BRVK Borovoye 38.67 54 P **P** **06 47 42.5 -0.2**
BRVK Borovoye 38.67 54*c i*P **P** **06 47 42.9 +0.1**
BRVK pmax pmax
comp=Z,987nm,1.0s
BRVK MLR MLR
comp=Z,255µm,19.0s
BRVK Borovoye 38.67 54 P **P** **06 47 43.0 +0.2**
BVAR Borovoye Array 38.74 54 S **S** **06 53 36.8 -3.5**
comp=Z,4.1nm,0.9s,baz=273,slow=32,SNR=1.3
BVAR LR LR 07 05 01.3
comp=Z,282µm,18.8s,baz=277,slow=38
UMQ Umm Al-Quwin 38.75 103 P **P** **06 47 47.9 +4.2**
SNR=11
UMQ P **P** **06 47 47.9 +4.2**
SNR=11
UMQ P **P** **06 47 47.9 +4.2**
SNR=11
UMQ Umm Al-Quwin 38.75 103 *i*P **P** **06 47 44.5 +0.8**
SNR=17
MZR Muzera 38.78 108 P **P** **06 47 46.8 +2.8**
SNR=39
MZR P **P** **06 47 46.8 +2.8**
SNR=39
MZR Muzera 38.78 108 *i*P **P** **06 47 44.1 0.0**
SNR=58
SHME Shamm 38.78 101 P **P** **06 47 45.5 +1.5**
SNR=21
SHME P **P** **06 47 45.5 +1.5**
SNR=21
SHME P **P** **06 47 45.5 +1.5**
SNR=21
SHME Shamm 38.78 101 *i*P **P** **06 47 44.2 +0.2**
SNR=44
AJN Ajban 38.86 104 P **P** **06 47 47.8 +3.2**
SNR=23
AJN P **P** **06 47 47.8 +3.2**
SNR=23
AJN P **P** **06 47 47.8 +3.2**
SNR=23
AJN Ajban 38.86 104 *i*P **P** **06 47 45.4 +0.8**
SNR=9.7
NRS Narsarsuaq 38.86 319 P **P** **06 47 42.8 -1.4**
NRS Narsarsuaq 38.86 319 P **P** **06 47 42.8 -1.4**
NRS pmax pmax
comp=Z,87nm,0.7s
NRS MLR MLR
comp=Z,60µm,21.0s
NRS Narsarsuaq 38.86 319 *i*P **P** **06 47 44.0 -0.2**
BANOM Banah 38.97 101 P **P** **06 47 49.0 +3.3**
SNR=16
BANOM P **P** **06 47 49.0 +3.3**
SNR=16
BANOM P **P** **06 47 49.0 +3.3**
SNR=16
BANOM Banah 38.97 101 *i*P **P** **06 47 45.6 -0.1**
SNR=32
ASUD Al Ashush, Dub 39.06 104 *i*P **P** **06 47 46.7 +0.4**
SNR=18
NAZ Nazwa, Dubai 39.08 103 *i*P **P** **06 47 46.5 0.0**
SNR=52
DESE Dese 39.13 136 *e*P P 06 47 53.1 +5.8
FAQ Al Faqa, Dubai 39.18 104 *i*P **P** **06 47 47.0 -0.4**
SNR=14
MASF Masafi 39.20 102 P **P** **06 47 49.7 +2.1**
SNR=20
MASF P **P** **06 47 49.7 +2.1**
SNR=20
MASF P **P** **06 47 49.7 +2.1**
SNR=20
MSFE Esma-Masafi 39.21 102 *i*P **P** **06 47 47.8 +0.1**
SNR=32
DBIC Dimbokro 39.35 209 P **P** **06 47 47.9 -0.9**
comp=Z,74nm,0.9s,baz=353,slow=8.6,SNR=21
DBIC S **S** **06 53 45.6 -4.5**
comp=Z,8.6nm,1.0s,baz=81,slow=21,SNR=1.0
DBIC LR LR 07 04 31.7
comp=Z,165µm,21.6s,baz=360,slow=37
comp=Z,74nm,0.9s
DBIC Dimbokro 39.35 209 P **P** **06 47 47.6 -1.2**
DBIC IAmb IAmb 06 47 55.6
comp=Z,829nm,1.8s
DBIC Dimbokro 39.35 209⇓*i*P **P** **06 47 48.2 -0.6**
DBIC Dimbokro 39.35 209 P **P** **06 47 47.6 -1.2**
DBIC pmax pmax
comp=Z,829nm,1.8s
TIC Toumodi 39.43 209⇑*e*PKP1 **P** **06 47 51.3 +1.8**

comp=Z,55nm,0.4s
HATD Hatta, Dubai 39.51 103 *i*P **P** **06 47 49.4 -0.8**
SNR=78
ASHO Ashiyiah 39.55 103 P **P** **06 47 52.0 +1.5**
SNR=58
ASHO P **P** **06 47 52.0 +1.5**
SNR=58
ASHO P **P** **06 47 52.0 +1.5**
SNR=58
ASHO Ashiyiah 39.55 103 *i*P **P** **06 47 49.9 -0.6**
SNR=23
DY2G Dye2 39.57 327 *i*P **P** **06 47 50.3 0.0**
DY2G IAmb IAmb 06 47 54.4
comp=Z,483nm,1.4s
KIC Kosan Boka 39.60 209⇑*e*PKP1 **P** **06 47 51.4 +0.5**
comp=Z,103nm,0.5s
ALNE Al Ain 39.72 104 P **P** **06 47 52.2 +0.4**
SNR=110
ALNE P **P** **06 47 52.2 +0.4**
SNR=110
ALNE P **P** **06 47 52.2 +0.4**
SNR=110
ALNE Al Ain 39.72 104 *i*P **P** **06 47 51.5 -0.4**
SNR=49
LIC Lamto 39.83 209⇑*e*PKP1 **P** **06 47 52.3 -0.5**
comp=Z,408nm,0.5s
LIC Lamto 39.83 209 *e*P **P** **06 47 51.8 -1.0**
comp=Z,233nm,0.5s,baz=25
JASK Jask - Hormozg 40.14 100 P **P** **06 47 59.5 +4.1**
SNR=16
NOR Nord 40.19 354 *i*P **P** **06 47 55.2 +0.1**
NOR IAmb IAmb 06 47 58.9
comp=Z,447nm,1.7s
IVI Ivigtut 40.19 319 *i*P **P** **06 47 54.1 -1.2**
SOHO SOHO 40.23 103 *i*P **P** **06 47 55.0 -1.1**
SNR=113
ANKE Ethiopia-Afar 40.48 137 *e*P **P** **06 48 02.7 +4.1**
AAE Adis Abeba 40.49 139 *e*S **S** **06 54 12.8 +5.1**
AAE Adis Abeba 40.49 139 *e*P **P** **06 47 59.8 +1.2**
AAE Adis Abeba 40.49 139 *e*P **P** **06 47 59.8 +1.2**
AAE Adis Abeba 40.49 139 *e*P **P** **06 48 01.2 +2.6**
AAE Adis Abeba 40.49 139 *e*P **P** **06 48 02.7 +4.1**
AAE Adis Abeba 40.49 139 *e*S **S** **06 54 12.8 +5.1**
ATD Arta Tunnel 40.49 132 LR LR 07 05 56.1
comp=Z,14µm,21.1s,baz=336,slow=38
ATD Arta Tunnel 40.49 132 P **P** **06 48 00.7 +2.3**
SNR=17
FURI Furi 40.56 139 *e*S **S** **06 54 15.8 +7.0**
FURI Furi 40.56 139 *e*P **P** **06 48 01.4 +2.2**
FURI Furi 40.56 139 *e*P **P** **06 48 01.4 +2.2**
FURI Furi 40.56 139 *e*P P 06 48 05.2 +6.0
FURI Furi 40.56 139 *e*P **P** **06 48 02.7 +3.5**
FURI Furi 40.56 139 *e*S **S** **06 54 15.8 +7.0**
FURI Furi 40.56 139 P P 06 48 05.9 +6.6
ARQ Araqi 40.72 104 P **P** **06 48 01.2 +1.1**
SNR=101
ARQ P **P** **06 48 01.2 +1.1**
SNR=101
BRZS Berezniki 40.73 59 *e*P **P** **06 47 58.7 -1.2**
BRZS *e* 06 49 31.4
BRZS *e*S **S** **06 54 11.8 +1.6**
BRZS Berezniki 40.73 59 *e*P **P** **06 47 58.7 -1.2**
baz=58
BRZS *e*PP **PP** **06 49 31.4 -2.2**
baz=58
BRZS *e*S **S** **06 54 11.8 +1.6**
baz=58
CHM Chimkent 40.93 71 *e*P **P** **06 48 01.6 -0.1**
CHM *e*S **S** **06 54 13.2 -0.2**
CHM *e*SS **SS** **06 57 13.9 -0.8**
CHM Chimkent 40.93 71 *e*P **P** **06 48 01.7 -0.1**
baz=71
CHM *e*S **S** **06 54 13.3 -0.2**
baz=71
CHM *e*SS **SS** **06 57 13.9 -0.8**
baz=71
OTUK Ortayu 40.94 61 P **P** **06 47 59.3 -2.5**
TAS Tashkent 41.07 72 P **P** **06 48 04.4 +1.5**
TAS pmax pmax
comp=Z,259nm,0.8s
HOQ Hoqain 41.13 103 P **P** **06 48 05.0 +1.4**
SNR=69
HOQ P **P** **06 48 05.0 +1.4**
SNR=69
KK31 Karatay Array 41.29 69 IAmb IAmb 06 48 12.5
comp=Z,385nm,0.8s
KK31 Karatay Array 41.29 69 *i*P **P** **06 48 05.4 +0.7**
KKAR Karatay Array 41.29 69 P **P** **06 48 04.9 +0.2**
KKAR IAmb IAmb 06 48 12.5
comp=Z,385nm,0.8s
KKAR Karatay Array 41.29 69 P **P** **06 48 04.9 +0.2**
KKAR pmax pmax
comp=Z,385nm,0.8s
SFJD Kangerlussuaq 41.33 328 LR LR 07 06 10.4
comp=Z,67µm,19.7s,baz=100,slow=38
SFJD Kangerlussuaq 41.33 328 P **P** **06 48 04.9 +0.2**
SFJD IAmb IAmb 06 48 11.6
comp=Z,225nm,0.9s
SFJD Kangerlussuaq 41.33 328 IAMs_20 IAMs_20 07 06 07.8
comp=Z,66µm,20.0s
SFJD Kangerlussuaq 41.33 328 P **P** **06 48 04.9 +0.2**
SFJD pmax pmax
comp=Z,225nm,0.9s
SFJD MLR MLR
comp=Z,66µm,20.0s
SFJD Kangerlussuaq 41.33 328 *i*P **P** **06 48 04.6 -0.1**
SFJD IAmb IAmb 06 48 07.9
comp=Z,196nm,0.9s
SFJD Kangerlussuaq 41.33 328 P **P** **06 48 06.0 +1.3**
BSY Bisya 41.57 105 P **P** **06 48 08.0 +0.7**
SNR=77
BSY P **P** **06 48 08.0 +0.7**
SNR=77
BIDO Bidbid 41.75 103 P **P** **06 48 10.0 +1.4**
SNR=55
NUUK Nuuk 41.76 323 *i*P **P** **06 48 09.9 +1.8**
DZA Taraz 41.92 69 *e*P **P** **06 48 08.8 -1.1**
DZA *i*S **S** **06 54 27.9 -0.3**
DZA Taraz 41.92 69 *e*P **P** **06 48 08.8 -1.1**
baz=69
DZA *i*S **S** **06 54 27.9 -0.3**
baz=69
DZA *e*SS **SS** **06 57 36.0 +1.5**
baz=69
SACV Santiago Islan 41.94 240 IAMs_20 IAMs_20 07 05 59.3
comp=Z,53µm,19.0s
SMDO Samad 41.98 103 P **P** **06 48 11.0 +0.3**
SNR=81
SMDO P **P** **06 48 11.0 +0.3**
SNR=81
CHGR Chuyangaron 42.01 76 P **P** **06 48 11.3 +0.5**
CHGR IAmb IAmb 06 48 33.2
comp=Z,315nm,0.8s
CHGR Chuyangaron 42.01 76 P **P** **06 48 11.3 +0.5**
CHGR pmax pmax
comp=Z,315nm,0.8s
DOK Doka 42.16 112 P **P** **06 48 13.0 +1.0**
SNR=86
WSAR Wadi Sarin 42.29 103 LR LR 07 09 48.5
comp=Z,93µm,21.2s,baz=336,slow=42
WSAR Wadi Sarin 42.29 103 P **P** **06 48 14.5 +1.5**
SNR=61
WHFO Wadi Hawf 42.41 113 P **P** **06 48 15.0 +0.9**
SNR=42
WHFO P **P** **06 48 15.0 +0.9**
SNR=42
JMDO Jabal Madar 42.45 104 P **P** **06 48 16.0 +1.6**
SNR=67
JMDO P **P** **06 48 16.0 +1.6**
SNR=67
ABTO Aybut 42.48 114 P **P** **06 48 16.0 +1.3**
SNR=60
ABTO P **P** **06 48 16.0 +1.3**
SNR=60
WBK Wadi Bani Khal 42.92 103 P **P** **06 48 21.0 +2.7**
SNR=45
WBK P **P** **06 48 21.0 +2.7**
SNR=45
RBK Rabkut 42.99 113 P **P** **06 48 20.0 +1.2**
SNR=82
RBK P **P** **06 48 20.0 +1.2**
SNR=82
NEEM North Greenlan 43.02 343 *i*P **P** **06 48 19.0 +0.3**
NEEM IAmb IAmb 06 48 27.6
comp=Z,316nm,0.8s
BTLS Baital 43.03 65 *e*P **P** **06 48 17.9 -0.9**

BTLS e 06 49 57.3
BTLS eS S 06 54 43.8 -0.5
BTLS smax smax
comp=E,1μm,8.3s
BTLS Baital 43.03 65 eP P 06 48 18.0 -0.9
comp=E,871nm,4.2s,baz=65
BTLS ePP PP 06 49 57.4 -1.1
baz=65
BTLS eS S 06 54 43.9 -0.5
comp=E,1μm,8.3s,baz=65
BTLS eSS SS 06 58 00.1 +4.0
baz=65
MHTO MHTO 43.25 106 P P 06 48 22.0 +1.2
SNR=71
MHTO P P 06 48 22.0 +1.2
SNR=71
DMTO DMTO 43.35 112 P P 06 48 22.1 +0.5
SNR=47
UPNV Upernavik 43.59 336 *i* P P 06 48 24.4 +1.5
UPNV IAmb IAmb 06 48 30.3
comp=Z,238nm,1.2s
DQM DQM 43.64 107 P P 06 48 25.0 +1.0
SNR=50
DQM P P 06 48 25.0 +1.0
SNR=50
EKS2 Erkin-Say 43.69 69 P P 06 48 25.3 +1.0
SNR=174
KBL Kabul 43.74 82 P P 06 48 25.5 +0.5
SNR=36
KBL P P 06 48 25.5 +0.5
SNR=36
AML Almayashu 43.83 69 P P 06 48 27.1 +1.3
SNR=40
USP Ospenovka 43.95 68 P P 06 48 27.0 +0.6
SNR=34
LODK Lodwar 43.96 147 P P 06 48 26.1 -0.6
LODK Lodwar 43.96 147 P P 06 48 26.9 +0.2
SNR=132
LODK Lodwar 43.96 147 eS S 06 54 55.1 -3.5
LODK Lodwar 43.96 147 eP P 06 48 27.4 +0.8
LODK Lodwar 43.96 147 eP P 06 48 27.4 +0.8
LODK Lodwar 43.96 147 eP P 06 48 29.1 +2.4
LODK Lodwar 43.96 147 eP P 06 48 28.0 +1.4
LODK Lodwar 43.96 147 eS S 06 54 55.1 -3.5
SGDS Sogindy 43.98 67 eP P 06 48 26.0 -0.5
SGDS e 06 50 10.0
SGDS eS S 06 55 01.8 +3.5
SGDS eSS ScS 06 58 22.7 -2.9
SGDS Sogindy 43.98 67 eP P 06 48 26.1 -0.5
comp=Z,870nm,4.1s,baz=67
SGDS ePP PP 06 50 10.0 +1.2
baz=67
SGDS eS S 06 55 01.9 +3.5
baz=67
SGDS eSS ScS 06 58 22.8 -2.9
baz=67
KULLO Kullorsuaq 44.03 339 *i* P P 06 48 26.6 +0.1
KULLO IAmb IAmb 06 48 32.5
comp=Z,200nm,1.2s
AAK Ala-Archa 44.19 68 P P 06 48 29.2 +0.9
SNR=50
AAK Ala-Archa 44.19 68 LR LR 07 11 40.0
comp=Z,227μm,19.1s,baz=304,slow=43
AAK Ala-Archa 44.19 68 P P 06 48 27.9 -0.5
AAK IAmb IAmb 06 48 46.7
comp=Z,467nm,1.4s
AAK Ala-Archa 44.19 68*d i* P P 06 48 28.9 +0.5
AAK pmax pmax
comp=Z,453nm,1.6s
AAK MLR MLR
comp=Z,224μm,19.0s
AAK Ala-Archa 44.19 68 *i* P P 06 48 27.5 -0.9
SNR=97
AAK Ala-Archa 44.19 68 P P 06 48 29.6 +1.2
KURBB Kurchatov Arra 44.19 56 LR LR 07 08 24.5
comp=Z,248μm,18.3s,baz=283,slow=38
KURBB Kurchatov Arra 44.19 56 P P 06 48 27.9 -0.2
KURK Kurchatov 44.22 56 P P 06 48 27.9 -0.3
KURK IAmb IAmb 06 48 34.5
comp=Z,305nm,0.9s
KURK Kurchatov 44.22 56*c i* P P 06 48 28.1 -0.2
KURK pmax pmax
comp=Z,340nm,0.9s
KURK MLR MLR
comp=Z,226μm,17.0s
KURK Kurchatov 44.22 56 P P 06 48 27.7 -0.6
CHMS Chumysh 44.23 68 P P 06 48 30.4 +1.3
SNR=25
CHMS Chumysh 44.23 68 *i* P P 06 48 29.9 +1.4
CHMS pmax pmax
comp=Z,133nm,0.9s
UCH Uchtor 44.35 69 P P 06 48 32.1 +2.0
SNR=30
KBK Karagaybulak 44.49 68 P P 06 48 32.4 +1.5
SNR=17
TKM2 Tokmak 2 44.83 68 P P 06 48 34.8 +1.2
SNR=34
TKM2 Tokmak 2 44.83 68 *i* P P 06 48 33.4 -0.2
TKM2 pmax pmax
comp=Z,114nm,1.2s
KUU Kurty 44.97 66 eP P 06 48 33.7 -0.7
KUU eS S 06 55 11.9 -0.8
KUU smax smax
comp=E,2μm,4.1s
KUU Kurty 44.97 66 eP P 06 48 33.7 -0.7
comp=E,3μm,4.2s,baz=66
KUU eS S 06 55 12.0 -0.8
comp=E,2μm,4.1s,baz=66
KUU eSS SS 06 58 40.3 +6.4
baz=66
BOOM Boomskoye usch 45.23 68 P P 06 48 37.5 +0.8
BOOM pmax pmax
comp=Z,146nm,0.9s
NRIK Noril'sk 45.31 29 P P 06 48 35.9 -0.9
comp=Z,57nm,1.2s,baz=264,slow=2.8,SNR=23
NRIK S S 06 55 16.1 -0.9
comp=Z,4.9nm,0.8s,baz=262,slow=8.4,SNR=1.7
NRIK LR LR 07 10 28.6
comp=Z,95μm,19.1s,baz=272,slow=40
comp=Z,57nm,1.2s
NRIK Noril'sk 45.31 29 P P 06 48 37.0 +0.3
NRIK IAmb IAmb 06 48 50.2
comp=Z,197nm,0.9s
NRIK Noril'sk 45.31 29*d i* P P 06 48 37.0 +0.3
NRIK pmax pmax
comp=Z,235nm,1.0s
NRIK MLR MLR
comp=Z,90μm,19.0s
CHKK Chushkaly 45.42 66 eP P 06 48 36.7 -1.3
CHKK Chushkaly 45.42 66 eP P 06 48 36.8 -1.3
baz=66
ULHL Ulahol 45.53 68 P P 06 48 40.8 +1.6
SNR=27
AAA Alma-Ata 45.61 67 eP P 06 48 40.1 +0.5
AAA eS S 06 55 22.9 +0.8
AAA eSS SS 06 58 43.1 -2.5
AAA pmax pmax
comp=Z,790nm,1.3s
AAA Alma-Ata 45.61 67 eP P 06 48 40.2 +0.6
comp=Z,790nm,1.3s,baz=67
AAA eS S 06 55 23.0 +0.8
baz=67
AAA eSS SS 06 58 43.1 -2.5
baz=67
KNDC Almaty 45.65 67 P P 06 48 41.5 +1.6
TNSS Tian-Shan 45.70 67 eP P 06 48 40.8 +0.1
TNSS Tian-Shan 45.70 67 eP P 06 48 40.9 +0.1
baz=67
MDOK Medeo 45.72 67 eP P 06 48 40.7 +0.2
MDOK e 06 50 25.0
MDOK eS S 06 55 22.6 -1.2
MDOK eSS ScS 06 58 40.1 +3.2
MDOK MLR MLR
comp=Z,72μm,20.0s
MDOK Medeo 45.72 67 eP P 06 48 40.8 +0.2
baz=67
MDOK ePP PP 06 50 25.1 -2.3
baz=67
MDOK eS S 06 55 22.6 -1.2
baz=67
MDOK eSS ScS 06 58 40.2 +3.2
baz=67
MDOK eLR LR 07 08 35.8
comp=Z,72μm,19.7s,baz=67
TDK Taldyqorghan 45.94 64 eP P 06 48 42.0 -0.1
TDK e 06 50 28.8
TDK eS S 06 55 25.2 -1.4
TDK pmax pmax
comp=Z,833nm,2.4s
TDK MLR MLR
comp=Z,90μm,18.0s
TDK Taldyqorghan 45.94 64 eP P 06 48 42.0 -0.1
comp=Z,833nm,2.4s,baz=64
TDK ePP PP 06 50 28.8 -0.7
baz=64
TDK eS S 06 55 25.2 -1.4
baz=64
TDK eSS SS 06 58 51.6 +0.6
baz=64
TDK eLR LR 07 09 30.0
comp=Z,90μm,17.9s,baz=64
MBAR Mbarara 46.06 155 LR LR 07 11 38.1
comp=Z,32μm,19.0s,baz=328,slow=41
MBAR Mbarara 46.06 155 P P 06 48 42.8 -0.7
MBAR IAmb IAmb 06 48 49.7
comp=Z,335nm,1.7s
MBAR Mbarara 46.06 155 IAMs_20 IAMs_20 07 10 38.8
comp=Z,53μm,19.0s
MBAR Mbarara 46.06 155*ce*P P 06 48 43.7 +0.2
MBAR pmax pmax
comp=Z,295nm,2.5s
MBAR MLR MLR
comp=Z,61μm,19.0s
MBAR Mbarara 46.06 155 eS S 06 55 27.5 -1.6
MBAR Mbarara 46.06 155 eP P 06 48 43.8 +0.4
MBAR Mbarara 46.06 155 eP P 06 48 43.8 +0.4
MBAR Mbarara 46.06 155 eP P 06 48 39.1 -4.3
MBAR Mbarara 46.06 155 eP P 06 48 46.5 +3.1
MBAR Mbarara 46.06 155 eS S 06 55 27.5 -1.6
MBAR Mbarara 46.06 155 P P 06 48 43.6 +0.2
KSH Kashi 46.47 72 P P 06 48 47.0 +0.5
KSH sP sP 06 48 54.0 +2.9
KSH PP PP 06 50 35.8 +0.4
KSH S S 06 55 36.5 +1.9
KSH SS SS 06 58 51.5 -8.6
KSH pmax pmax
comp=Z,44nm,0.9s
KSH pmax pmax
comp=Z,13μm,5.5s
KSH LR LR
comp=Z,85μm,19.6s
KSH LR LR
comp=Z,133μm,15.8s
SATY Saty 46.68 66 eP P 06 48 47.8 -0.3
SATY e 06 50 37.7
SATY eS S 06 55 38.9 +1.4
SATY pmax pmax
comp=Z,243nm,1.7s
SATY Saty 46.68 66 eP P 06 48 47.8 -0.3
comp=Z,243nm,1.7s,baz=66
SATY ePP PP 06 50 37.8 +0.2
baz=66
SATY eS S 06 55 38.9 +1.4
baz=66
SATY eSS SS 06 59 06.8 +3.4
baz=66
KPKS Kokpek 46.70 66 eP P 06 48 47.3 -0.9
KPKS e 06 50 38.3
KPKS eS S 06 55 36.3 -1.5
KPKS pmax pmax
comp=Z,746nm,3.7s
KPKS Kokpek 46.70 66 eP P 06 48 47.4 -0.9
comp=Z,746nm,3.7s,baz=66
KPKS ePP PP 06 50 38.3 +0.5
baz=66
KPKS eS S 06 55 36.4 -1.5
baz=66
KPKS eSS SS 06 59 04.1 +0.4
baz=66
I46RU ZALESOVO INFRA 46.94 50 I 11 33 20.0
baz=273,slow=328,SNR=0.9
ZAA0 Zalesovo Array 46.94 50 P P 06 48 49.4 -0.4
ZAA0 IAmb IAmb 06 48 55.8
comp=Z,224nm,1.1s
ZALV Zalesovo Beam 46.94 50 P P 06 48 49.1 -0.7
comp=Z,41nm,0.7s,baz=287,slow=6.9,SNR=43
ZALV PP PP 06 50 40.4 +0.5
comp=Z,36nm,0.7s,baz=286,slow=9.9,SNR=4.8
ZALV S S 06 55 37.2 -3.4
comp=Z,0.9nm,0.5s,baz=285,slow=35,SNR=1.2
ZALV LR LR 07 10 27.5
comp=Z,137μm,18.5s,baz=278,slow=39
comp=Z,41nm,0.7s
ZALV Zalesovo Beam 46.94 50 P P 06 48 49.4 -0.4
ZALV Zalesovo Beam 46.94 50 *i* P P 06 48 49.2 -0.6
ZALV pmax pmax
comp=Z,43nm,0.6s
TULEG Thule 46.94 341 P P 06 48 49.3 -0.2
TULEG IAMs_20 IAMs_20 07 10 03.4
comp=Z,75μm,19.0s
TULEG Thule 46.94 341 *i* P P 06 48 49.4 -0.1
TULEG IAmb IAmb 06 48 52.2
comp=Z,170nm,1.3s
UZB Uzynbulak 47.06 66 eP P 06 48 50.7 -0.4
UZB e 06 50 42.5
UZB eS S 06 55 43.9 +0.9
UZB Uzynbulak 47.06 66 eP P 06 48 50.7 -0.4
baz=66
UZB ePP PP 06 50 42.6 +1.1
baz=66
UZB eS S 06 55 43.9 +0.9
baz=66
UZB eSS SS 06 59 15.8 +6.2
baz=66
PDGK Podgornoye 47.30 65 *i* P P 06 48 51.5 -1.4
PDGK pmax pmax
comp=Z,356nm,1.2s
SHLS Shalkode 47.35 66 eP P 06 48 55.1 +1.8
SHLS e 06 50 43.2
SHLS eS S 06 55 53.9 +6.8
SHLS pmax pmax
comp=Z,502nm,2.5s
SHLS Shalkode 47.35 66 eP P 06 48 55.1 +1.8
comp=Z,502nm,2.5s,baz=66
SHLS ePP PP 06 50 43.3 -1.0
baz=66
SHLS eS S 06 55 54.0 +6.8
baz=66
SHLS eSS SS 06 59 26.8 +13
baz=66
MAKZ Makanchi 47.59 60 P P 06 48 54.6 -0.4
MAKZ IAmb IAmb 06 49 01.1
comp=Z,194nm,1.2s
MAKZ Makanchi 47.59 60 P P 06 48 54.6 -0.4
MAKZ pmax pmax
comp=Z,194nm,1.2s
MAKZ MLR MLR
comp=Z,201μm,20.0s
MAKZ Makanchi 47.59 60 P P 06 48 56.0 +1.0
DRLN Deer Lake 47.80 303 P P 06 48 54.7 -1.9
DRLN IAmb IAmb 06 49 03.1
comp=Z,176nm,0.9s
MK31 Makanchi Array 47.80 60 P P 06 48 56.6 0.0
MK31 Makanchi Array 47.80 60 P P 06 48 56.6 0.0
MK31 pmax pmax
comp=Z,252nm,0.9s
MKAR Makanchi Array 47.80 60 P P 06 48 56.3 -0.3
comp=Z,113nm,0.7s,baz=285,slow=6.9,SNR=108
MKAR S S 06 55 48.5 -4.6
comp=Z,2.8nm,0.9s,baz=307,slow=35,SNR=1.5
MKAR LR LR 07 13 00.5
comp=Z,213μm,19.5s,baz=296,slow=41
comp=Z,113nm,0.7s
MKAR Makanchi Array 47.80 60*ce*P P 06 48 56.2 -0.4
MKAR pmax pmax
comp=Z,106nm,0.6s
KMBO Kilima Mbogo 48.86 147 P P 06 49 05.4 +0.1
comp=Z,0.9nm,0.8s,baz=325,slow=23,SNR=24
KMBO S S 06 56 08.7 -0.5
comp=Z,0.1nm,0.5s,baz=26,slow=24,SNR=1.3
KMBO LR LR 07 11 26.1
comp=Z,859nm,20.5s,baz=326,slow=38
KMBO Kilima Mbogo 48.86 147 P P 06 49 04.9 -0.5
KMBO Kilima Mbogo 48.86 147 || *i* P P 06 49 05.6 +0.3
KMBO Kilima Mbogo 48.86 147 P P 06 49 04.9 -0.5
KMBO pmax pmax
comp=Z,108nm,1.2s
KMBO Kilima Mbogo 48.86 147 eS S 06 56 14.7 +5.5
KMBO Kilima Mbogo 48.86 147 eP P 06 49 06.9 +1.6
KMBO Kilima Mbogo 48.86 147 eP P 06 49 06.9 +1.6
KMBO Kilima Mbogo 48.86 147 eP P 06 49 05.0 -0.3
KMBO Kilima Mbogo 48.86 147 eP P 06 49 07.8 +2.4
KMBO Kilima Mbogo 48.86 147 eS S 06 56 14.7 +5.5
KMBO Kilima Mbogo 48.86 147 *i* P P 06 49 05.7 +0.3
SNR=36
KMBO Kilima Mbogo 48.86 147 P P 06 49 05.7 +0.3
JMU Jammu 48.89 80 eP P 06 49 05.4 +0.2
JASL Jaisalmer 49.07 89 eP P 06 49 08.1 +1.4
FRB Frobisher Bay 49.14 324 LR LR 07 10 54.5
comp=Z,81μm,18.8s,baz=83,slow=38
ZSN Zaisan 49.18 58 eP P 06 49 07.1 -0.1
ZSN eS S 06 56 14.1 +1.5
ZSN eSS SS 06 59 43.7 +0.3
ZSN pmax pmax
comp=Z,1μm,2.9s
ZSN Zaisan 49.18 58 eP P 06 49 07.2 0.0
comp=Z,1μm,2.9s,baz=58
ZSN eS S 06 56 14.2 +1.5
baz=58
ZSN eSS SS 06 59 43.8 +0.3
baz=58
THN Thein Dam 49.63 80 eP P 06 49 11.3 +0.4
THN *i x* x 06 51 09.7
EUNU Eureka 49.77 347 P P 06 49 11.3 -0.1
EUNU IAmb IAmb 06 49 20.0
comp=Z,307nm,1.1s
DGZ Jazzator, Alta 49.89 55*de*P P 06 49 13.1 +0.3
DGZ pmax pmax
comp=Z,343nm,1.0s
DGZ MLR MLR
comp=Z,192μm,19.0s
KIBK Kibwezi 50.28 147 IAMs_20 IAMs_20 07 14 35.1
comp=Z,49μm,19.0s
KIBK Kibwezi 50.28 147 P P 06 49 16.2 +0.2
SNR=45
BHK Bhakra 50.67 81 eP P 06 49 18.8 +0.1
SCHQ Schefferville 51.18 313 P P 06 49 20.4 -1.9
comp=Z,72nm,0.8s,baz=71,slow=8.5,SNR=22
SCHQ LR LR 07 08 54.1
comp=Z,67μm,21.5s,baz=68,slow=34
comp=Z,72nm,0.8s
SCHQ Schefferville 51.18 313 IAmb IAmb 06 49 28.6
comp=Z,339nm,1.5s
GBN Guysborough 51.81 300 P P 06 49 25.1 -2.0
AJM Ajmer 52.08 87 eP P 06 49 30.4 +1.0
WMQ Urumqi 52.49 62 ⇑P P 06 49 33.3 +1.0
WMQ pP sP 06 49 37.0 0.0
WMQ sP pP 06 49 41.0 +5.3
WMQ PP PP 06 51 35.5 +4.6
WMQ S S 06 57 00.5 +1.7
WMQ pmax pmax
comp=Z,310nm,1.3s
WMQ pmax pmax
comp=Z,7μm,6.5s
WMQ LR LR
comp=Z,74μm,20.7s
WMQ LR LR
comp=Z,65μm,23.1s
BHGR Bahadurgarh 52.52 84 eP P 06 49 34.0 +1.4
SONA Sohna 52.87 84 eP P 06 49 33.8 -1.4
HAL Halifax 53.47 300 IAmb IAmb 06 49 48.6
comp=Z,299nm,1.4s
RES Resolute Bay 53.66 342 S S 06 57 11.8 -1.8
comp=Z,4.7nm,1.0s,baz=36,slow=20,SNR=1.5
RES LR LR 07 14 15.8
comp=Z,46μm,18.5s,baz=68,slow=38
RES Resolute Bay 53.66 342 P P 06 49 39.8 -0.5
RES IAmb IAmb 06 49 48.3
comp=Z,401nm,1.9s
RES Resolute Bay 53.66 342 P P 06 49 39.8 -0.5
RES pmax pmax
comp=Z,401nm,1.9s
BATG Bathurst New B 53.82 304 P P 06 49 39.6 -2.4
BATG IAmb IAmb 06 50 05.9
comp=Z,154nm,1.1s
PTH Pithoragarh 54.43 81 eP P 06 49 45.8 -1.1
LGTI Lohaghat 54.51 81 eP P 06 49 45.7 -1.5
PQI Presque Isle 55.29 304 P P 06 49 50.2 -2.4
PQI IAMs_20 IAMs_20 07 11 59.2
comp=Z,67μm,20.0s
JHNI Jhansi 55.52 86 eP P 06 49 52.4 -2.2
E63A Oxbow 55.66 304 P P 06 49 54.9 -0.4
baz=62
E63A P P 06 49 54.9 -0.4
baz=62
E63A S S 06 57 41.1 -0.2
baz=62
E63A S S 06 57 41.1 -0.2
baz=62
G65A Princeton 55.71 302 IAmb IAmb 06 50 19.6
comp=Z,428nm,1.9s
G65A Princeton 55.71 302 P P 06 49 54.4 -1.2
baz=61
G65A P P 06 49 54.4 -1.2
baz=61
G65A S S 06 57 39.3 -2.7
baz=61
G65A S S 06 57 39.3 -2.7
baz=61
D62A Allapoint, All 55.73 305 P P 06 49 56.0 +0.2
baz=62
D62A P P 06 49 56.0 +0.2
baz=62
D62A S S 06 57 41.1 -1.1
baz=62
D62A S S 06 57 41.1 -1.1
baz=62
F64A Sherman 55.88 303 P P 06 49 56.4 -0.4
baz=61
F64A P P 06 49 56.4 -0.4
baz=61
F64A S S 06 57 40.1 -4.1
baz=61
F64A S S 06 57 40.1 -4.1
baz=61
EMMW East Machias 55.88 302 IAMs_20 IAMs_20 07 11 48.8
comp=Z,48μm,20.0s
E62A Clayton Lake 56.23 305 P P 06 50 00.3 +0.9
baz=61
E62A P P 06 50 00.3 +0.9
baz=61
E62A S S 06 57 43.6 -5.3
baz=61
E62A S S 06 57 43.6 -5.3
baz=61
H10N2 ASCENSION HYDR 56.34 213 P P 06 50 00.8 +0.8
baz=23,slow=5.6,SNR=4.1
H10N1 ASCENSION HYDR 56.35 213 P P 06 50 00.5 +0.3
baz=23,slow=5.6,SNR=5.5
H10N3 ASCENSION HYDR 56.35 213 P P 06 50 01.1 +0.9
baz=23,slow=5.6,SNR=3.1
ASCN Ascension 56.38 213 IAMs_20 IAMs_20 07 14 19.5
comp=Z,37μm,20.0s
F63A Nahmakanta, Br 56.42 304 P P 06 50 00.7 -0.1
baz=61
F63A P P 06 50 00.7 -0.1
baz=61
F63A S S 06 57 52.7 +1.2
baz=61
F63A S S 06 57 52.7 +1.2
baz=61
BRCI Bahraich 56.54 82 eP P 06 50 01.8 0.0
PKME Peaks-Kenny Pk 56.75 303 IAMs_20 IAMs_20 07 12 33.7
comp=Z,77μm,20.0s
PKME Peaks-Kenny Pk 56.75 303 P P 06 50 02.7 -0.4
baz=61
PKME S S 06 57 54.9 -0.9
baz=61
PKME Peaks-Kenny Pk 56.75 303 P P 06 50 00.8 -2.3
baz=61
PKME S S 06 57 54.4 -1.3
baz=61
MOY Mondy 56.85 48 eP P 06 50 04.2 +0.3
MOY pmax pmax
comp=Z,501nm,2.7s
F62A Pittston Farm, 56.85 304 P P 06 50 04.0 +0.2
baz=61
F62A P P 06 50 04.0 +0.2
baz=61
F62A S S 06 57 57.0 -0.1
baz=61
F62A S S 06 57 57.0 -0.1
baz=61
TIXI Tiksi 57.23 20 LR LR 07 17 43.2
comp=Z,70μm,18.4s,baz=270,slow=39
TIXI Tiksi 57.23 20 P P 06 50 06.1 0.0
TIXI IAmb IAmb 06 50 12.5
comp=Z,143nm,1.0s
TIXI Tiksi 57.23 20*ce*P P 06 50 06.3 +0.2

TIXI				pmax	pmax		
	comp=Z,205nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,78μm,16.0s						
TIXI	**Tiksi**	**57.23**	**20**	P	**P**	**06 50 06.8**	**+0.7**
AKL	**Akola**	**57.25**	**91**	*e*P	**P**	**06 50 06.4**	**-0.6**
PYUN	**Piuthan**	**57.26**	**80**	*e*P	**P**	**06 50 06.6**	**-0.6**
	comp=Z,2μm,1.1s						
KAD	**Karad**	**57.31**	**97**	*e*P	**P**	**06 50 05.0**	**-2.4**
WVL	**Waterville**	**57.32**	**303**	IAMs_20	IAMs_20	07 13 10.9	
	comp=Z,54μm,20.0s						
G62A	**West of Eustis**	**57.53**	**304**	P	**P**	**06 50 09.5**	**+0.9**
	baz=60						
G62A				P	**P**	**06 50 09.5**	**+0.9**
	baz=60						
G62A				S	**S**	**06 58 06.8**	**+0.6**
	baz=60						
G62A				S	**S**	**06 58 06.8**	**+0.6**
	baz=60						
DANN	**Dangsing**	**57.67**	**80**	*e*P	**P**	**06 50 09.6**	**-0.6**
	comp=Z,563nm,0.9s						
KOLN	**Koldanda**	**57.89**	**80**	*e*P	**P**	**06 50 09.4**	**-2.3**
	comp=Z,209nm,1.9s						
ALBI	**Allahabad**	**58.01**	**84**	*e*P	**P**	**06 50 09.7**	**-2.5**
I63A	**Otisfield**	**58.15**	**302**	P	**P**	**06 50 09.0**	**-4.0**
	baz=59						
I63A				P	**P**	**06 50 09.0**	**-4.0**
	baz=59						
I63A				S	**S**	**06 58 15.1**	**+0.9**
	baz=59						
I63A				S	**S**	**06 58 15.1**	**+0.9**
	baz=59						
H62A	**Milan**	**58.24**	**303**	P	**P**	**06 50 11.4**	**-2.2**
	baz=59						
H62A				P	**P**	**06 50 11.4**	**-2.2**
	baz=59						
H62A				S	**S**	**06 58 17.7**	**+2.3**
	baz=59						
H62A				S	**S**	**06 58 17.7**	**+2.3**
	baz=59						
IRK	**Irkutsk**	**58.33**	**46**	*e*P	**P**	**06 50 14.0**	**-0.2**
IRK				*e*S	**S**	**06 58 18.2**	**+1.7**
IRK				pmax	pmax		
	comp=Z,700nm,3.9s						
VLK	**Valmikinagar**	**58.34**	**81**	*e*P	**P**	**06 50 13.4**	**-1.2**
NGP	**Nagpur**	**58.48**	**90**	*e*P	**P**	**06 50 12.3**	**-3.3**
GKN	**Gorkha**	**58.51**	**80**	*e*P	**P**	**06 50 15.3**	**-0.6**
	comp=Z,1μm,1.1s						
I62A	**Tamworth**	**58.71**	**303**	P	**P**	**06 50 16.6**	**-0.3**
	baz=59						
I62A				P	**P**	**06 50 16.6**	**-0.3**
	baz=59						
I62A				S	**S**	**06 58 21.2**	**-0.3**
	baz=59						
I62A				S	**S**	**06 58 21.2**	**-0.3**
	baz=59						
ZAK	**Zakamensk**	**58.74**	**48**	*e*P	**P**	**06 50 17.8**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,114nm,1.6s						
UNH	**University of**	**58.82**	**302**	P	**P**	**06 50 15.0**	**-2.7**
	baz=59						
UNH				S	**S**	**06 58 23.5**	**+0.6**
	baz=59						
LBNH	**Lisbon**	**58.88**	**303**	P	**P**	**06 50 15.4**	**-2.7**
	baz=59						
LBNH				S	**S**	**06 58 25.2**	**+1.3**
	baz=59						
LBNH	**Lisbon**	**58.88**	**303**	P	**P**	**06 50 16.0**	**-2.1**
	baz=59						
LBNH				S	**S**	**06 58 23.2**	**-0.6**
	baz=59						
VAR	**Varanasi**	**58.90**	**83**	*e*P	**P**	**06 50 18.2**	**-0.3**
DMN	**Daman**	**59.07**	**80**	*e*P	**P**	**06 50 19.6**	**-0.4**
	comp=Z,1μm,1.0s						
KKN	**Kakani**	**59.09**	**79**	*e*Pg	**P**	**06 50 17.7**	**-2.4**
	comp=Z,84nm,1.4s						
FFD	**Franklin Falls**	**59.12**	**302**	IAMs_20	IAMs_20	07 14 06.4	
	comp=Z,59μm,19.0s						
MNTQ	**Montreal, Queb**	**59.26**	**305**	IAmb	IAmb	06 50 27.7	
	comp=Z,134nm,1.4s						
PKIN	**Phulchoki**	**59.30**	**80**	*e*P	**P**	**06 50 20.4**	**-1.2**
	comp=Z,572nm,1.0s						
PKI	**Pulchoki**	**59.31**	**80**	*e*P	**P**	**06 50 20.5**	**-1.2**
	comp=Z,612nm,1.0s						
HNH	**Hanover**	**59.38**	**303**	IAMs_20	IAMs_20	07 13 14.5	
	comp=Z,52μm,22.0s						
BCX	**Boston College**	**59.41**	**301**	IAMs_20	IAMs_20	07 16 29.2	
	comp=Z,39μm,19.0s						
L64A	**Middleborough**	**59.41**	**300**	P	**P**	**06 50 20.3**	**-1.5**
	baz=58						
L64A				P	**P**	**06 50 20.3**	**-1.5**
	baz=58						
L64A				S	**S**	**06 58 34.9**	**+4.3**
	baz=58						
L64A				S	**S**	**06 58 34.9**	**+4.3**
	baz=58						
TRQ	**Mont Tremblant**	**59.44**	**306**	P	**P**	**06 50 20.5**	**-1.6**
GUN	**Gumba**	**59.46**	**79**	*e*P	**P**	**06 50 21.9**	**-0.9**
	comp=Z,2μm,1.0s						
LSZ	**Lusaka**	**59.46**	**163**	LR	LR	07 19 01.8	
	comp=Z,61μm,18.2s,baz=359,slow=39						
LSZ	**Lusaka**	**59.46**	**163**	*e*P	**P**	**06 50 22.7**	**+0.2**
LSZ				IAmb	IAmb	06 50 26.9	
	comp=Z,985nm,2.2s						
LSZ	**Lusaka**	**59.46**	**163**	*i* P	**P**	**06 50 21.4**	**-1.0**
LSZ	**Lusaka**	**59.46**	**163**	*i* P	**P**	**06 50 21.4**	**-1.0**
WES	**Weston**	**59.48**	**301**	IAMs_20	IAMs_20	07 14 46.0	
	comp=Z,41μm,19.0s						
HRV	**Adam Dziewonsk**	**59.56**	**301**	IAMs_20	IAMs_20	07 14 48.3	
	comp=Z,29μm,19.0s						
HRV	**Adam Dziewonsk**	**59.56**	**301**	P	**P**	**06 50 22.1**	**-0.7**
	baz=58						
HRV	**Adam Dziewonsk**	**59.56**	**301**	P	**P**	**06 50 21.6**	**-1.3**
	baz=58						
HRV				S	**S**	**06 58 34.4**	**+1.8**
	baz=58						
HRV	**Adam Dziewonsk**	**59.56**	**301**	P	P	06 50 33.5	+11
MCVT	**Middlebury Col**	**59.69**	**303**	S	**S**	**06 58 35.7**	**+1.4**
	baz=58						
J61A	**Chester**	**59.74**	**303**	P	**P**	**06 50 23.2**	**-0.8**
	baz=58						
J61A				P	**P**	**06 50 23.2**	**-0.8**
	baz=58						
J61A				S	**S**	**06 58 35.9**	**+1.0**
	baz=58						
J61A				S	**S**	**06 58 35.9**	**+1.0**
	baz=58						
JIRN	**Jiri**	**59.83**	**79**	*e*P	**P**	**06 50 24.3**	**-1.0**
	comp=Z,988nm,1.1s						
BRYW	**Bryant College**	**59.86**	**301**	IAMs_20	IAMs_20	07 12 55.2	
	comp=Z,49μm,22.0s						
K62A	**Royalston**	**59.90**	**302**	P	**P**	**06 50 22.9**	**-2.2**
	baz=58						
K62A				P	**P**	**06 50 22.9**	**-2.2**
	baz=58						
K62A				S	**S**	**06 58 39.1**	**+2.1**
	baz=58						
K62A				S	**S**	**06 58 39.1**	**+2.1**
	baz=58						
BMNY	**Brushton-Moira**	**60.14**	**305**	P	**P**	**06 50 26.4**	**-0.3**
	baz=58						
BMNY				S	**S**	**06 58 41.6**	**+1.6**
	baz=58						
BLSP	**Bilaspur**	**60.14**	**87**	*e*P	**P**	**06 50 24.4**	**-2.7**
BOD	**Bodaibo**	**60.15**	**37**	*e*P	**P**	**06 50 25.4**	**-1.2**
BOD				pmax	pmax		
	comp=Z,248nm,1.4s						
QUA2	**Belchertown**	**60.18**	**301**	IAMs_20	IAMs_20	07 15 16.6	
	comp=Z,39μm,20.0s						
L61B	**Northampton**	**60.29**	**302**	IAmb	IAmb	06 51 13.4	
	comp=Z,234nm,1.9s						
L61B				IAMs_20	IAMs_20	07 14 59.6	
	comp=Z,32μm,19.0s						
L61B	**Northampton**	**60.29**	**302**	P	**P**	**06 50 29.6**	**+1.8**
	baz=58						
L61B				S	**S**	**06 58 39.5**	**-2.6**
	baz=58						
L61B	**Northampton**	**60.29**	**302**	P	**P**	**06 50 26.2**	**-1.7**
	baz=58						
L61B				S	**S**	**06 58 39.9**	**-2.2**
	baz=58						
LONY	**Lake Ozonia**	**60.30**	**305**	IAMs_20	IAMs_20	07 14 34.8	
	comp=Z,38μm,20.0s						
LONY	**Lake Ozonia**	**60.30**	**305**	P	**P**	**06 50 27.4**	**-0.5**
	baz=58						
LONY				S	**S**	**06 58 41.7**	**-0.5**
	baz=58						
ACCN	**Adirondack Com**	**60.41**	**303**	P	**P**	**06 50 24.4**	**-4.2**
	baz=58						
ACCN				S	**S**	**06 58 45.6**	**+2.0**
	baz=58						
NCB	**Newcomb**	**60.43**	**304**	P	**P**	**06 50 29.9**	**+1.1**
	baz=58						
NCB				S	**S**	**06 58 43.6**	**-0.3**
	baz=58						
HYBB	**Hyderabad (bro**	**60.44**	**93**	*e*P	**P**	**06 50 28.6**	**-0.6**
HYBB				IVmB_BB		06 50 30.3	
	comp=Z,2μm,4.8s						
HYBB				*e*pP	**pP**	**06 50 31.1**	**-1.5**
HYBB				*e*sP	**sP**	**06 50 32.3**	**-1.6**
HYBB				*e*PcP	**PcP**	**06 51 13.8**	**-0.2**
HYBB				*e*PP	**PP**	**06 52 42.2**	**-0.2**
HYBB				*e*ScP	**ScP**	**06 55 14.7**	**-0.5**
HYBB				*e*PcS	**PcS**	**06 55 16.0**	**-0.8**
HYBB				*e*S	**S**	**06 58 45.3**	**+0.7**
HYBB				*e*ScS	SKKSac	07 00 19.9	-0.4
HYBB				IVMs_BB	IVMs_BB	07 18 49.0	
	comp=Z,7μm,23.5s						
M63A	**Gales Ferry**	**60.46**	**301**	P	**P**	**06 50 29.3**	**+0.4**
	baz=57						
M63A				P	**P**	**06 50 29.3**	**+0.4**
	baz=57						
M63A				S	**S**	**06 58 46.3**	**+2.2**
	baz=57						
M63A				S	**S**	**06 58 46.3**	**+2.2**
	baz=57						
BBSR	**BB Station**	**60.49**	**288**	IAMs_20	IAMs_20	07 11 37.7	
	comp=Z,54μm,21.0s						
BBSR	**BB Station**	**60.49**	**288**	P	**P**	**06 50 27.4**	**-2.0**
	baz=56						
BBSR	**BB Station**	**60.49**	**288**	P	P	06 50 42.6	+13
RAMN	**Ramite**	**60.53**	**79**	*e*P	**P**	**06 50 28.6**	**-1.4**
	comp=Z,803nm,0.9s						
MNGI	**Mangalore**	**60.62**	**100**	*e*P	**P**	**06 50 28.6**	**-1.9**
TRY	**Troy**	**60.76**	**303**	IAMs_20	IAMs_20	07 15 06.9	
	comp=Z,60μm,20.0s						
MSEY	**Mahe Island**	**60.87**	**130**	P	**P**	**06 50 29.6**	**-2.5**
MSEY				IAmb	IAmb	06 50 39.0	
	comp=Z,150nm,0.9s						
MSEY	**Mahe Island**	**60.87**	**130**	P	**P**	**06 50 29.6**	**-2.5**
MSEY				pmax	pmax		
	comp=Z,150nm,1.0s						
MSEY	**Mahe Island**	**60.87**	**130**	*i* P	**P**	**06 50 31.4**	**-0.7**
	SNR=20						
MSEY	**Mahe Island**	**60.87**	**130**	P	**P**	**06 50 33.3**	**+1.2**
J59A	**Piesco**	**60.88**	**304**	IAmb	IAmb	06 50 39.5	
	comp=Z,208nm,1.6s						
J59A	**Piesco**	**60.88**	**304**	P	**P**	**06 50 30.8**	**-1.1**
	baz=57						
J59A				P	**P**	**06 50 30.8**	**-1.1**
	baz=57						
J59A				S	**S**	**06 58 48.8**	**-0.8**
	baz=57						
J59A				S	**S**	**06 58 48.8**	**-0.8**
	baz=57						
GOMU	**GeErMu**	**61.05**	**66**	P	P	06 50 27.0	-6.6
GOMU				pP	pP	06 50 30.8	-6.2
GOMU				sP	sP	06 50 32.8	-5.5
YLE	**Yale**	**61.07**	**301**	IAMs_20	IAMs_20	07 13 40.8	
	comp=Z,49μm,22.0s						
ODAN	**Odare**	**61.16**	**79**	*e*P	**P**	**06 50 34.0**	**-0.3**
	comp=Z,195nm,1.3s						
HCNY	**Howe Caverns**	**61.23**	**303**	P	**P**	**06 50 32.2**	**-2.0**
	baz=57						
HCNY				S	**S**	**06 58 55.0**	**+1.0**
	baz=57						
WCNY	**West Carthage**	**61.30**	**305**	P	**P**	**06 50 33.4**	**-1.2**
	baz=57						
WCNY				S	**S**	**06 58 55.4**	**+0.6**
	baz=57						
J58A	**Remsen**	**61.41**	**304**	S	**S**	**06 58 56.2**	**-0.1**
	baz=57						
J58A				S	**S**	**06 58 56.2**	**-0.1**
	baz=57						
JHSG	**JHARSUGUGA**	**61.57**	**86**	*e*P	**P**	**06 50 34.8**	**-2.0**
N62A	**Caumsett State**	**61.61**	**301**	P	**P**	**06 50 34.5**	**-2.4**
	baz=56						
N62A				P	**P**	**06 50 34.5**	**-2.4**
	baz=56						
N62A				S	**S**	**06 59 00.4**	**+1.6**
	baz=56						
N62A				S	**S**	**06 59 00.4**	**+1.6**
	baz=56						
BRNY	**Black Rk. Fore**	**61.69**	**301**	P	**P**	**06 50 35.0**	**-2.4**
	baz=56						
BRNY				S	**S**	**06 59 02.7**	**+2.7**
	baz=56						
GTK	**Tadong**	**61.76**	**78**	*e*P	**P**	**06 50 37.8**	**-0.4**
GTK				IAmb	IAmb	06 50 47.9	
	comp=Z,474nm,1.1s						
GTK				*i* x	x	06 58 56.5	
A36M	**Sachs Harbour**	**61.79**	**346**	IAMs_20	IAMs_20	07 22 20.6	
	comp=Z,29μm,20.0s						
A36M	**Sachs Harbour**	**61.79**	**346**	P	**P**	**06 50 36.6**	**-0.9**
	baz=34,SNR=6.2						
A36M				S	**S**	**06 59 01.4**	**+1.2**
	baz=34						
J57A	**Williamstown**	**61.82**	**304**	P	**P**	**06 50 36.2**	**-2.0**
	baz=56						
J57A				P	**P**	**06 50 36.2**	**-2.0**
	baz=56						
J57A				S	**S**	**06 59 03.5**	**+2.0**
	baz=56						
J57A				S	**S**	**06 59 03.5**	**+2.0**
	baz=56						
SONM	**Songino Array**	**61.83**	**50**	P	**P**	**06 50 38.7**	**+0.3**
	comp=Z,211nm,0.9s,baz=289,slow=6.5,SNR=164						
SONM				S	**S**	**06 58 56.4**	**-5.3**
	comp=Z,0.3nm,0.4s,baz=41,slow=47,SNR=1.6						
SONM				LR	LR	07 19 41.0	
	comp=Z,146μm,20.2s,baz=302,slow=38						
	comp=Z,211nm,0.9s						
SONM	**Songino Array**	**61.83**	**50**	P	**P**	**06 50 38.1**	**-0.3**
SONM	**Songino Array**	**61.83**	**50**	P	**P**	**06 50 38.1**	**-0.3**
SONM				pmax	pmax		
	comp=Z,378nm,1.1s						
PAL	**Palisades**	**61.85**	**301**	IAmb	IAmb	06 51 12.9	
	comp=Z,189nm,1.8s						
PAL				IAMs_20	IAMs_20	07 14 14.9	
	comp=Z,38μm,22.0s						
PAL	**Palisades**	**61.85**	**301**	P	**P**	**06 50 39.4**	**+1.0**
	baz=56						
PAL				S	**S**	**06 59 05.1**	**+3.3**
	baz=56						
PAL	**Palisades**	**61.85**	**301**	P	**P**	**06 50 36.8**	**-1.6**
	baz=56						
PAL				S	**S**	**06 58 59.6**	**-2.2**
	baz=56						
TSUM	**Tsumeb**	**61.86**	**175**	LR	LR	07 18 58.3	
	comp=Z,55μm,20.6s,baz=356,slow=38						
TSUM	**Tsumeb**	**61.86**	**175**	P	**P**	**06 50 38.3**	**-0.4**
TSUM				IAmb	IAmb	06 50 45.6	
	comp=Z,106nm,1.1s						
TSUM	**Tsumeb**	**61.86**	**175**	IAMs_20	IAMs_20	07 18 45.8	
	comp=Z,59μm,21.0s						
TSUM	**Tsumeb**	**61.86**	**175**	*e*P	**P**	**06 50 38.0**	**-0.7**
TSUM				IAmb	IAmb	06 50 41.6	
	comp=Z,1μm,2.2s						
TSUM	**Tsumeb**	**61.86**	**175**	P	**P**	**06 50 38.6**	**-0.2**
L59A	**Walton**	**61.91**	**303**	P	**P**	**06 50 37.4**	**-1.5**
	baz=56						
L59A				P	**P**	**06 50 37.4**	**-1.5**
	baz=56						
L59A				S	**S**	**06 59 04.1**	**+1.4**
	baz=56						
L59A				S	**S**	**06 59 04.1**	**+1.4**
	baz=56						
FOR	**Fordham**	**61.91**	**301**	P	**P**	**06 50 36.7**	**-2.1**
	baz=56						
FOR				S	**S**	**06 59 02.7**	**0.0**
	baz=56						
KANON	**KANO**	**61.99**	**173**	*i* P	**P**	**06 50 41.7**	**+2.1**
SLGI	**Shiliguri**	**61.99**	**79**	*e*P	**P**	**06 50 40.0**	**+0.4**
ULN	**Ulaanbaatar**	**62.18**	**49**	P	**P**	**06 50 40.5**	**-0.3**
ULN				IAmb	IAmb	06 50 49.6	
	comp=Z,165nm,1.1s						
ULN	**Ulaanbaatar**	**62.18**	**49**	*d i* P	**P**	**06 50 40.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,329nm,1.7s						
ULN				MLR	MLR		
	comp=Z,105μm,18.0s						
ULN	**Ulaanbaatar**	**62.18**	**49**	P	**P**	**06 50 40.1**	**-0.7**
	comp=Z,88μmcomp=Z,30μmcomp=Z,747nm,1.4s						
ULN	**Ulaanbaatar**	**62.18**	**49**	P	**P**	**06 50 41.1**	**+0.3**
LSA	**Lhasa**	**62.19**	**74**	IAmb	IAmb	06 50 50.0	
	comp=Z,180nm,0.9s						
LSA				IAMs_20	IAMs_20	07 22 28.6	
	comp=Z,61μm,22.0s						
LSA	**Lhasa**	**62.19**	**74**	P	**P**	**06 50 41.3**	**-0.2**
LSA				S	S	06 58 55.5	-12
LSA				LR	LR		
	comp=Z,54μm,24.6s						
LSA				LR	LR		
	comp=Z,39μm,27.1s						
LSA				LR	LR		
	comp=Z,65μm,26.7s						
LSA	**Lhasa**	**62.19**	**74**	P	**P**	**06 50 41.0**	**-0.5**
ODNJ	**Ogdensburg**	**62.25**	**301**	P	**P**	**06 50 38.5**	**-2.6**
	baz=56						
ODNJ				S	**S**	**06 59 07.3**	**+0.3**
	baz=56						
J56A	**Wolcott**	**62.41**	**305**	P	**P**	**06 50 42.4**	**+0.2**
	baz=56						
J56A				P	**P**	**06 50 42.4**	**+0.2**
	baz=56						
J56A				S	**S**	**06 59 09.8**	**+0.9**
	baz=56						
J56A				S	**S**	**06 59 09.8**	**+0.9**
	baz=56						
BRNJ	**Basking Ridge**	**62.44**	**301**	P	**P**	**06 50 42.5**	**+0.1**
	baz=56						
BRNJ				S	**S**	**06 59 12.0**	**+2.6**
	baz=56						
BINY	**Binghamton**	**62.48**	**303**	IAMs_20	IAMs_20	07 16 08.5	
	comp=Z,59μm,21.0s						
BINY	**Binghamton**	**62.48**	**303**	P	**P**	**06 50 42.2**	**-0.5**
	baz=56						
BINY	**Binghamton**	**62.48**	**303**	P	**P**	**06 50 41.0**	**-1.7**
	baz=56						
BINY				S	**S**	**06 59 12.1**	**+2.1**
	baz=56						
K57A	**Scipio Center**	**62.51**	**304**	IAmb	IAmb	06 50 50.5	
	comp=Z,167nm,1.2s						
K57A	**Scipio Center**	**62.51**	**304**	P	**P**	**06 50 43.4**	**+0.5**
	baz=56						
K57A				S	**S**	**06 59 13.2**	**+3.0**
	baz=56						
GTA	**Gaotai**	**62.55**	**61**	⇓P	**P**	**06 50 43.5**	**+0.2**
GTA				pP	pP	06 50 46.5	-0.3
GTA				sP	sP	06 50 49.5	+1.4
GTA				PP	**PP**	**06 53 03.3**	**+2.7**
GTA				S	**S**	**06 59 08.8**	**-2.3**
GTA				sS	sS	06 59 23.0	+6.0
GTA				SS	**SS**	**07 03 13.0**	**-1.6**
GTA				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA				pmax	pmax		
	comp=Z,6μm,7.7s						
GTA				LR	LR		
	comp=Z,96μm,19.3s						
GTA				LR	LR		
	comp=Z,105μm,20.0s						
GTA				LR	LR		
	comp=Z,172μm,19.6s						
VJD	**Vijayawada**	**62.55**	**93**	*e*P	**P**	**06 50 41.4**	**-2.0**
KSPA	**Keystone Colle**	**62.71**	**302**	P	**P**	**06 50 43.8**	**-0.4**
	baz=56						
KSPA				S	**S**	**06 59 15.1**	**+2.4**
	baz=56						
RAGD	**RAYAGADA**	**62.89**	**88**	*e*P	**P**	**06 50 43.7**	**-2.0**
SADO	**Sadowa**	**62.94**	**307**	LR	LR	07 16 26.3	
	comp=Z,57μm,21.1s,baz=44,slow=34						
SADO	**Sadowa**	**62.94**	**307**	IAmb	IAmb	06 51 10.9	
	comp=Z,162nm,1.3s						
J55A	**Hilton**	**63.00**	**305**	P	**P**	**06 50 46.9**	**+0.8**
	baz=56						
J55A				P	**P**	**06 50 46.9**	**+0.8**
	baz=56						
J55A				S	**S**	**06 59 15.0**	**-1.3**
	baz=56						
J55A				S	**S**	**06 59 15.0**	**-1.3**
	baz=56						
P61A	**Hammonton**	**63.16**	**300**	P	**P**	**06 50 47.0**	**-0.2**
	baz=55						
P61A				P	**P**	**06 50 47.0**	**-0.2**
	baz=55						
P61A				S	**S**	**06 59 21.0**	**+2.6**
	baz=55						
P61A				S	**S**	**06 59 21.0**	**+2.6**
	baz=55						
GAMM	**Gam**	**63.17**	**172**	*i* P	P	06 50 53.2	+5.8
CIT	**Chita**	**63.25**	**43**	*e*P	**P**	**06 50 47.3**	**-0.4**
CIT				*e*		06 51 21.1	
PCHI	**Peechi**	**63.34**	**101**	⇓*e*P	**P**	**06 50 48.3**	**-0.5**
PCHI				*e*S	**S**	**06 59 18.9**	**-2.4**
L56A	**Greenwood**	**63.48**	**304**	IAmb	IAmb	06 51 14.7	
	comp=Z,138nm,1.4s						
L56A	**Greenwood**	**63.48**	**304**	P	**P**	**06 50 47.9**	**-1.5**
	baz=55						
L56A				P	**P**	**06 50 47.9**	**-1.5**
	baz=55						
L56A				S	**S**	**06 59 25.3**	**+2.7**
	baz=55						
L56A				S	**S**	**06 59 25.3**	**+2.7**
	baz=55						
J54A	**Appleton**	**63.49**	**305**	P	**P**	**06 50 47.9**	**-1.4**
	baz=55						
J54A				P	**P**	**06 50 47.9**	**-1.4**
	baz=55						
J54A				S	**S**	**06 59 23.4**	**+0.9**
	baz=55						
J54A				S	**S**	**06 59 23.4**	**+0.9**
	baz=55						
DHUB	**DHUBRI**	**63.53**	**78**	*e*P	**P**	**06 50 48.3**	**-1.6**
DHUB				*i* x	x	06 59 17.1	
GEDE	**Greenville**	**63.61**	**301**	P	**P**	**06 50 49.8**	**-0.4**
	baz=55						
GEDE				S	**S**	**06 59 25.3**	**+1.3**
	baz=55						
HMDM	**Hanimaadhoo**	**63.66**	**106**	IAMs_20	IAMs_20	07 20 41.0	
	comp=Z,54μm,20.0s						
HMDM	**Hanimaadhoo**	**63.66**	**106**	P	**P**	**06 50 49.6**	**-1.2**
	comp=Z,15μmcomp=Z,13μmcomp=Z,431nm,1.6s						
M57A	**Sunshine Farm,**	**63.67**	**303**	IAmb	IAmb	06 51 01.0	
	comp=Z,170nm,1.0s						
M57A	**Sunshine Farm,**	**63.67**	**303**	P	**P**	**06 50 51.8**	**+1.2**
	baz=55						
M57A				P	**P**	**06 50 51.8**	**+1.2**
	baz=55						
M57A				S	**S**	**06 59 24.9**	**0.0**
	baz=55						
M57A				S	**S**	**06 59 24.9**	**0.0**
	baz=55						
N58A	**Sunbury**	**63.70**	**302**	IAmb	IAmb	06 51 00.8	
	comp=Z,117nm,1.1s						
N58A	**Sunbury**	**63.70**	**302**	P	**P**	**06 50 50.1**	**-0.7**
	baz=55						
N58A				P	**P**	**06 50 50.1**	**-0.7**
	baz=55						
N58A				S	**S**	**06 59 25.9**	**+0.7**
	baz=55						
N58A				S	**S**	**06 59 25.9**	**+0.7**
	baz=55						
YAK	**Yakutsk**	**63.75**	**28**	LR	LR	07 22 19.0	
	comp=Z,51μm,19.0s,baz=312,slow=40						
YAK	**Yakutsk**	**63.75**	**28**	P	**P**	**06 50 49.7**	**-1.0**
YAK				IAMs_20	IAMs_20	07 21 38.0	
	comp=Z,55μm,19.0s						
YAK	**Yakutsk**	**63.75**	**28**	*e*P	**P**	**06 50 50.4**	**-0.4**
YAK				*e**PP	**sP**	**06 50 57.0**	**+1.4**
YAK				*e*		06 51 26.2	
YAK				*e*		06 53 10.1	
YAK				*e*PPP	PPP	06 54 43.7	
YAK				*e*S	**S**	**06 59 25.5**	**+0.4**
YAK				*e**SS	sS	06 59 54.3	+23
YAK				*e*		07 00 39.1	
YAK				*e*SSS	SSS	07 06 21.2	
YAK				pmax	pmax		
	comp=Z,256nm,0.9s						
YAK				pmax	pmax		
	comp=N,177nm,1.5s						
YAK				pmax	pmax		
	comp=E,187nm,1.5s						
YAK				pmax	pmax		
	comp=Z,1μm,3.4s						
YAK				pmax	pmax		
	comp=N,434nm,3.8s						
YAK				pmax	pmax		
	comp=E,280nm,2.5s						
YAK				smax	smax		
	comp=E,6μm,6.2s						

YAK				smax	smax	
	comp=N,2μm,5.1s					
YAK				MLR	MLR	
	comp=Z,53μm,19.0s					
YAK				MLR	MLR	
	comp=N,36μm,20.0s					
YAK	**Yakutsk**	**63.75**	**28**	P	**P**	**06 50 51.5 +0.8**
C36M	**Paulatuk**	**63.77**	**344**	IAMs_20	IAMs_20	07 20 49.1
	comp=Z,47μm,19.0s					
C36M	**Paulatuk**	**63.77**	**344**	P	**P**	**06 50 49.3 -1.4**
	baz=34,SNR=16					
C36M				S	**S**	**06 59 22.9 -2.2**
	baz=34					
WEWE	**WEWE**	**63.81**	**176**	*i* P	P	06 50 46.0 -5.7
WP01	**e3381**	**63.90**	**178**	*i* P	**P**	**06 50 48.2 -4.1**
SALM	**Salem**	**63.94**	**98**	*e*P	**P**	**06 50 50.2 -2.4**
WVNY	**West Valley, N**	**63.97**	**305**	IAmb	IAmb	06 51 00.1
	comp=Z,185nm,1.2s					
WVNY	**West Valley, N**	**63.97**	**305**	P	**P**	**06 50 53.5 +0.9**
	baz=55,SNR=14					
WVNY				S	**S**	**06 59 29.7 +1.3**
	baz=55					
BWNR	**Bhubaneshwar**	**63.97**	**86**	*e*P	**P**	**06 50 51.4 -1.4**
R61A	**Willards**	**64.27**	**299**	P	**P**	**06 50 55.0 +0.4**
	baz=55					
R61A				P	**P**	**06 50 55.0 +0.4**
	baz=55					
R61A				S	**S**	**06 59 36.7 +4.4**
	baz=55					
R61A				S	**S**	**06 59 36.7 +4.4**
	baz=55					
KOD	**Kodaikanal**	**64.35**	**100**	*e*P	**P**	**06 50 54.1 -1.6**
MATP	**Matopo**	**64.52**	**164**	*i* P	**P**	**06 50 55.7 -0.7**
MATP	**Matopo**	**64.52**	**164**	*i* P	**P**	**06 50 55.7 -0.7**
SSPA	**Standing Stone**	**64.55**	**303**	P	**P**	**06 50 55.8 -0.6**
SSPA				IAmb	IAmb	06 51 06.5
	comp=Z,96nm,0.9s					
SSPA	**Standing Stone**	**64.55**	**303**	IAMs_20	IAMs_20	07 17 13.2
	comp=Z,38μm,20.0s					
SSPA	**Standing Stone**	**64.55**	**303**	P	**P**	**06 50 54.2 -2.2**
	baz=54,SNR=14					
SSPA	**Standing Stone**	**64.55**	**303**	P	**P**	**06 50 54.1 -2.2**
	baz=54					
SSPA				S	**S**	**06 59 35.4 -0.3**
	baz=54					
SSPA	**Standing Stone**	**64.55**	**303**	P	**P**	**06 50 57.9 +1.6**
M55A	**Ridgway**	**64.61**	**304**	IAmb	IAmb	06 51 06.9
	comp=Z,142nm,1.2s					
M55A	**Ridgway**	**64.61**	**304**	P	**P**	**06 50 57.2 +0.5**
	baz=54,SNR=11					
M55A				P	**P**	**06 50 57.2 +0.5**
	baz=54,SNR=11					
M55A				S	**S**	**06 59 37.6 +1.1**
	baz=54					
M55A				S	**S**	**06 59 37.6 +1.1**
	baz=54					
ERPA	**Erie**	**64.97**	**305**	IAmb	IAmb	06 51 06.4
	comp=Z,234nm,1.4s					
ERPA				IAMs_20	IAMs_20	07 18 07.3
	comp=Z,64μm,21.0s					
ERPA	**Erie**	**64.97**	**305**	P	**P**	**06 50 58.0 -1.1**
	baz=54					
ERPA	**Erie**	**64.97**	**305**	P	**P**	**06 50 57.6 -1.5**
	baz=54					
ERPA				S	**S**	**06 59 40.9 0.0**
	baz=54					
E46A	**Sault Ste Mari**	**64.97**	**311**	IAmb	IAmb	06 51 14.3
	comp=Z,131nm,1.0s					
E46A	**Sault Ste Mari**	**64.97**	**311**	P	**P**	**06 50 60.0 +0.9**
	baz=54,SNR=9.0					
E46A				S	**S**	**06 59 41.6 +0.8**
	baz=54					
SHL	**Shillong**	**65.16**	**77**	P	**P**	**06 50 59.0 -1.8**
SHL				pmax	pmax	
	comp=Z,310nm,0.9s					
SHL	**Shillong**	**65.16**	**77**	P	**P**	**06 50 59.2 -1.6**
	SNR=113					
TEZP	**TEZPUR**	**65.19**	**76**	*e*P	**P**	**06 50 59.3 -1.4**
TEZP				*i* x	x	06 59 39.1
P57A	**Homestead Farm**	**65.30**	**302**	P	**P**	**06 51 00.6 -0.6**
P57A				IAmb	IAmb	06 51 11.5
	comp=Z,90nm,1.0s					
P57A	**Homestead Farm**	**65.30**	**302**	P	**P**	**06 51 00.8 -0.5**
	baz=54					
P57A				P	**P**	**06 51 00.8 -0.5**
	baz=54					
P57A				S	**S**	**06 59 45.8 +0.9**
	baz=54					
P57A				S	**S**	**06 59 45.8 +0.9**
	baz=54					
ALLY	**Alegheny Colle**	**65.34**	**305**	IAmb	IAmb	06 51 10.8
	comp=Z,123nm,0.9s					
ALLY	**Alegheny Colle**	**65.34**	**305**	P	**P**	**06 51 00.5 -1.0**
	baz=54,SNR=11					
ALLY				S	**S**	**06 59 45.5 +0.1**
	baz=54					
ZIRO	**ZIRO**	**65.39**	**75**	*e*P	**P**	**06 51 03.2 +0.9**
ZIRO				IAmb	IAmb	06 51 06.2
	comp=Z,486nm,1.5s					
ZIRO				*i* x	x	06 59 39.1
SBV	**Sambava**	**65.40**	**140**	*e*P	**P**	**06 51 01.6 -0.5**
SBV	**Sambava**	**65.40**	**140**	P	**P**	**06 51 01.8 -0.3**
	SNR=17					
ITAN	**ITANAGAR**	**65.53**	**75**	*e*P	**P**	**06 51 02.3 -0.6**
ITAN				IAmb	IAmb	06 51 12.8
	comp=Z,1μm,1.5s					
ITAN				*i* x	x	06 59 43.2
I49A	**Point Hope**	**65.57**	**308**	P	**P**	**06 51 01.6 -1.4**
I49A				IAmb	IAmb	06 51 18.2
	comp=Z,158nm,1.0s					
I49A	**Point Hope**	**65.57**	**308**	P	**P**	**06 50 58.3 -4.6**
	baz=53					
I49A				P	**P**	**06 50 58.3 -4.6**
	baz=53					
I49A				S	**S**	**06 59 47.4 -0.7**
	baz=53					
I49A				S	**S**	**06 59 47.4 -0.7**
	baz=53					
CBN	**Corbin Frederi**	**65.64**	**300**	IAMs_20	IAMs_20	07 17 24.4
	comp=Z,50μm,21.0s					
CBN	**Corbin Frederi**	**65.64**	**300**	P	**P**	**06 51 04.3 +0.8**
	baz=54					
CBN	**Corbin Frederi**	**65.64**	**300**	P	**P**	**06 51 02.1 -1.4**
	baz=54					
CBN				S	**S**	**06 59 48.1 -1.0**
	baz=54					
RCBR	**Riachuelo**	**65.68**	**235**	LR	LR	07 16 27.0
	comp=Z,50μm,20.9s,baz=200,slow=33					
RCBR	**Riachuelo**	**65.68**	**235**	IAMs_20	IAMs_20	07 16 05.6
	comp=Z,42μm,21.0s					
RCBR	**Riachuelo**	**65.68**	**235**	P	**P**	**06 51 06.8 +2.8**
RCBR	**Riachuelo**	**65.68**	**235**	*e*P	**P**	**06 51 05.4 +1.4**
M53A	**WI Miller and**	**65.78**	**305**	IAmb	IAmb	06 51 13.7
	comp=Z,91nm,0.9s					
M53A				IAMs_20	IAMs_20	07 18 40.8
	comp=Z,53μm,20.0s					
M53A	**WI Miller and**	**65.78**	**305**	P	**P**	**06 51 02.5 -1.9**
	baz=54					
M53A				S	**S**	**06 59 48.5 -2.4**
	baz=54					
T60A	**Surry**	**65.86**	**299**	P	**P**	**06 51 04.1 -0.8**
	baz=54					
T60A				P	**P**	**06 51 04.1 -0.8**
	baz=54					
T60A				S	**S**	**06 59 53.2 +1.3**
	baz=54					
T60A				S	**S**	**06 59 53.2 +1.3**
	baz=54					
A21K	**Barrow**	**65.92**	**356**	IAMs_20	IAMs_20	07 22 37.6
	comp=Z,23μm,19.0s					
A21K	**Barrow**	**65.92**	**356**	P	**P**	**06 51 04.9 +0.2**
	baz=8.3					
A21K				S	**S**	**06 59 52.4 +0.9**
	baz=8.3					
GLMI	**Grayling**	**66.07**	**310**	IAMs_20	IAMs_20	07 19 06.2
	comp=Z,43μm,19.0s					
GLMI	**Grayling**	**66.07**	**310**	P	**P**	**06 51 06.1 -0.1**
	baz=53,SNR=9.8					
GLMI				S	**S**	**06 59 50.9 -3.4**
	baz=53					
GLMI	**Grayling**	**66.07**	**310**	P	**P**	**06 51 05.4 -0.8**
	baz=53,SNR=9.8					
GLMI				S	**S**	**06 59 55.3 +1.0**
	baz=53					
R58B	**Mineral**	**66.11**	**300**	IAmb	IAmb	06 51 17.0
	comp=Z,74nm,0.8s					
R58B	**Mineral**	**66.11**	**300**	P	**P**	**06 51 07.2 +0.7**
	baz=53,SNR=14					
R58B				P	**P**	**06 51 07.2 +0.7**
	baz=53,SNR=14					
R58B				S	**S**	**06 59 56.0 +1.1**
	baz=53					
R58B				S	**S**	**06 59 56.0 +1.1**
	baz=53					
M52A	**Chesterland**	**66.14**	**305**	IAmb	IAmb	06 51 15.6
	comp=Z,142nm,0.8s					
M52A	**Chesterland**	**66.14**	**305**	P	**P**	**06 51 07.8 +1.2**
	baz=53,SNR=14					
M52A				P	**P**	**06 51 07.8 +1.2**
	baz=53,SNR=14					
M52A				S	**S**	**06 59 52.8 -2.3**
	baz=53					
M52A				S	**S**	**06 59 52.8 -2.3**
	baz=53					
JORH	**JORHAT**	**66.14**	**75**	*e*P	**P**	**06 51 08.1 +1.2**
K50A	**Casco**	**66.15**	**307**	P	**P**	**06 51 07.6 +0.9**
	baz=53					
K50A				P	**P**	**06 51 07.6 +0.9**
	baz=53					
K50A				S	**S**	**06 59 56.1 +0.8**
	baz=53					
K50A				S	**S**	**06 59 56.1 +0.8**
	baz=53					
DIBR	**DIBRUGARH**	**66.18**	**74**	*e*P	**P**	**06 51 08.6 +1.6**
N53A	**Lisbon**	**66.26**	**304**	IAmb	IAmb	06 51 17.1
	comp=Z,145nm,1.0s					
N53A	**Lisbon**	**66.26**	**304**	P	**P**	**06 51 06.3 -1.2**
	baz=53,SNR=13					
N53A				P	**P**	**06 51 06.3 -1.2**
	baz=53,SNR=13					
N53A				S	**S**	**06 59 57.3 +0.6**
	baz=53					
N53A				S	**S**	**06 59 57.3 +0.6**
	baz=53					
Q56A	**Snyder Ridge,**	**66.29**	**302**	IAmb	IAmb	06 51 17.9
	comp=Z,161nm,0.9s					
Q56A	**Snyder Ridge,**	**66.29**	**302**	P	**P**	**06 51 08.5 +0.8**
	baz=53,SNR=22					
Q56A				P	**P**	**06 51 08.5 +0.8**
	baz=53,SNR=22					
Q56A				S	**S**	**06 59 58.2 +1.0**
	baz=53					
Q56A				S	**S**	**06 59 58.2 +1.0**
	baz=53					
SILR	**SILCHAR**	**66.30**	**78**	*e*P	**P**	**06 51 08.7 +0.8**
MCWV	**Mont Chateau**	**66.34**	**303**	IAmb	IAmb	06 51 18.4
	comp=Z,129nm,0.9s					
MCWV				IAMs_20	IAMs_20	07 18 18.5
	comp=Z,51μm,20.0s					
MCWV	**Mont Chateau**	**66.34**	**303**	P	**P**	**06 51 06.4 -1.5**
	baz=53,SNR=16					
MCWV	**Mont Chateau**	**66.34**	**303**	P	**P**	**06 51 06.3 -1.7**
	baz=53,SNR=16					
MCWV				S	**S**	**06 59 58.9 +1.3**
	baz=53					
O54A	**Avella**	**66.35**	**303**	P	**P**	**06 51 09.0 +0.9**
	baz=53,SNR=12					
O54A				P	**P**	**06 51 09.0 +0.9**
	baz=53,SNR=12					
O54A				S	**S**	**07 00 00.6 +2.8**
	baz=53					
O54A				S	**S**	**07 00 00.6 +2.8**
	baz=53					
INK	**Inuvik**	**66.39**	**347**	LR	LR	07 23 41.2
	comp=Z,14μm,18.1s,baz=26,slow=39					
INK	**Inuvik**	**66.39**	**347**	P	**P**	**06 51 07.1 -0.7**
	baz=26,SNR=45					
INK				S	**S**	**06 59 56.4 -0.9**
	baz=26					
C26K	**Camden Bay**	**66.42**	**352**	P	**P**	**06 51 07.8 -0.1**
	baz=18,SNR=36					
C26K				S	**S**	**07 00 01.1 +3.5**
	baz=18					
E43A	**Lone Tree Farm**	**66.45**	**312**	IAmb	IAmb	06 51 17.9
	comp=Z,83nm,0.8s					
E43A	**Lone Tree Farm**	**66.45**	**312**	P	**P**	**06 51 09.3 +0.7**
	baz=52,SNR=7.6					
E43A				S	**S**	**06 59 59.0 +0.2**
	baz=52					
T59A	**Double "B" Far**	**66.49**	**299**	IAmb	IAmb	06 51 38.7
	comp=Z,217nm,1.9s					
T59A	**Double "B" Far**	**66.49**	**299**	P	**P**	**06 51 09.3 +0.3**
	baz=53					
T59A				P	**P**	**06 51 09.3 +0.3**
	baz=53					
T59A				S	**S**	**06 59 59.9 +0.4**
	baz=53					
T59A				S	**S**	**06 59 59.9 +0.4**
	baz=53					
G45A	**Suttons Bay**	**66.53**	**310**	P	**P**	**06 51 10.2 +1.1**
	baz=52					
G45A				P	**P**	**06 51 10.2 +1.1**
	baz=52					
G45A				S	**S**	**07 00 00.4 +0.6**
	baz=52					
G45A				S	**S**	**07 00 00.4 +0.6**
	baz=52					
V61A	**Roper**	**66.56**	**298**	P	**P**	**06 51 10.3 +0.8**
	baz=53					
V61A				P	**P**	**06 51 10.3 +0.8**
	baz=53					
V61A				S	**S**	**07 00 00.1 -0.4**
	baz=53					
V61A				S	**S**	**07 00 00.1 -0.4**
	baz=53					
C27K	**Jago River**	**66.57**	**351**	P	**P**	**06 51 07.6 -1.4**
	baz=18,SNR=161					
C27K				S	**S**	**07 00 01.2 +1.7**
	baz=18					
MOKO	**MOKOCHONG**	**66.59**	**75**	*e*P	**P**	**06 51 09.1 -0.9**
MOKO				IAmb	IAmb	06 51 13.9
	comp=Z,290nm,1.1s					
MOKO				*i* x	x	07 00 01.5
MUSN	**Musina, Limpop**	**66.61**	**163**	‖ *i*P	**P**	**06 51 09.2 -0.5**
MUSN				IAmb	IAmb	06 51 13.5
	comp=Z,692nm,1.9s					
MUSN	**Musina, Limpop**	**66.61**	**163**	*i* P	**P**	**06 51 09.0 -0.7**
MUSN	**Musina, Limpop**	**66.61**	**163**	*i* P	**P**	**06 51 09.0 -0.7**
KOHI	**KOHIMA**	**66.66**	**76**	*e*P	**P**	**06 51 09.1 -1.4**
KOHI				IAmb	IAmb	06 51 14.1
	comp=Z,99nm,0.8s					
BRDH	**Bariadhala**	**66.75**	**80**	P	**P**	**06 51 10.8 0.0**
	comp=Z,92nm,0.4s,baz=84,slow=5.0,SNR=14					
BRDH				S	**S**	**07 00 02.0 -1.1**
	comp=Z,55nm,0.3s,baz=91,slow=23,SNR=1.1					
BRDH				LR	LR	07 28 22.5
	comp=Z,98μm,18.8s,baz=324,slow=43					
	comp=Z,92nm,0.4s					
O53A	**New Philadelph**	**66.82**	**304**	IAmb	IAmb	06 51 20.8
	comp=Z,168nm,1.0s					
O53A	**New Philadelph**	**66.82**	**304**	P	**P**	**06 51 11.2 +0.2**
	baz=53,SNR=23					
O53A				S	**S**	**06 59 59.7 -3.8**
	baz=53					
D41A	**Chassel**	**66.88**	**313**	IAmb	IAmb	06 51 22.7
	comp=Z,99nm,0.9s					
D41A	**Chassel**	**66.88**	**313**	P	**P**	**06 51 12.6 +1.3**
	baz=52,SNR=13					
D41A				S	**S**	**07 00 07.2 +3.2**
	baz=52					
S57A	**Dark Hollow, R**	**66.91**	**301**	P	**P**	**06 51 11.4 -0.3**
	baz=53					
S57A				P	**P**	**06 51 11.4 -0.3**
	baz=53					
S57A				S	**S**	**07 00 06.2 +1.6**
	baz=53					
S57A				S	**S**	**07 00 06.2 +1.6**
	baz=53					
LKP	**Lekhapani**	**66.92**	**74**	*e*P	**P**	**06 51 12.8 +1.0**
LKP				*i* x	x	07 00 01.5
C24K	**Franklin Bluff**	**66.97**	**353**	P	**P**	**06 51 11.6 +0.1**
	baz=14					
C24K				S	**S**	**07 00 07.4 +3.1**
	baz=14					
YKA	**Yellowknife Ar**	**66.98**	**336**	P	**P**	**06 51 11.0 -0.6**
	comp=Z,126nm,1.0s,baz=42,slow=6.0,SNR=61					
YKA				S	**S**	**06 59 58.4 -6.3**
	comp=Z,4.2nm,1.0s,baz=344,slow=16,SNR=2.0					
YKA				PKP2bc		07 19 43.0
	comp=Z,8.0nm,1.0s,baz=209,slow=3.0,SNR=4.0					
YKA				LR	LR	07 20 40.2
	comp=Z,50μm,21.4s,baz=47,slow=36					
	comp=Z,126nm,1.0s					
YKA	**Yellowknife Ar**	**66.98**	**336**	P	**P**	**06 51 10.7 -0.9**
YKA	**Yellowknife Ar**	**66.98**	**336**	*i* P	**P**	**06 51 11.0 -0.6**
YKA				pmax	pmax	
	comp=Z,127nm,1.0s					
C23K	**Itkillik River**	**67.01**	**354**	P	**P**	**06 51 12.5 +0.8**
	baz=13,SNR=33					
C23K				S	**S**	**07 00 08.6 +3.8**
	baz=13					
AAM	**Ann Arbor**	**67.05**	**307**	IAMs_20	IAMs_20	07 17 56.1
	comp=Z,58μm,21.0s					
AAM	**Ann Arbor**	**67.05**	**307**	P	**P**	**06 51 12.6 +0.2**
	baz=52					
AAM	**Ann Arbor**	**67.05**	**307**	P	**P**	**06 51 11.0 -1.5**
	baz=52					
AAM				S	**S**	**07 00 03.4 -2.7**
	baz=52					
LZH	**Lanzhou**	**67.07**	**62**	‖ *i*P	**P**	**06 51 13.0 +0.1**
LZH				sP	sP	06 51 19.5 +1.8
LZH				PcP	**PcP**	**06 51 46.0 +4.8**
LZH				PP	**PP**	**06 53 43.5 +3.2**
LZH				S	**S**	**07 00 02.8 -4.2**
LZH				pmax	pmax	
	comp=Z,84nm,1.2s					
LZH				pmax	pmax	
	comp=Z,7μm,4.3s					
LZH				LR	LR	
	comp=Z,98μm,17.5s					
LZH				LR	LR	
	comp=Z,179μm,19.4s					
IMP	**Imphal**	**67.09**	**77**	*e*P	**P**	**06 51 11.9 -1.2**
IMP				*i* x	x	07 00 06.9
N51A	**Ashland**	**67.12**	**305**	IAmb	IAmb	06 51 22.3
	comp=Z,121nm,0.9s					
N51A	**Ashland**	**67.12**	**305**	P	**P**	**06 51 13.9 +0.9**
	baz=52,SNR=12					
N51A				P	**P**	**06 51 13.9 +0.9**
	baz=52,SNR=12					
N51A				S	**S**	**07 00 06.8 -0.3**
	baz=52					
N51A				S	**S**	**07 00 06.8 -0.3**
	baz=52					
D25K	**Kavik River**	**67.14**	**352**	P	**P**	**06 51 13.4 +0.8**
	baz=16,SNR=56					
D25K				S	**S**	**07 00 08.5 +2.0**
	baz=16					
J47A	**Sunmer**	**67.15**	**308**	IAmb	IAmb	06 51 22.6
	comp=Z,173nm,0.9s					
J47A	**Sunmer**	**67.15**	**308**	P	**P**	**06 51 13.5 +0.4**
	baz=52,SNR=32					
J47A				P	**P**	**06 51 13.5 +0.4**
	baz=52,SNR=32					
J47A				S	**S**	**07 00 08.9 +1.5**
	baz=52					
J47A				S	**S**	**07 00 08.9 +1.5**
	baz=52					
F31M	**Tsiigehtchic**	**67.21**	**347**	P	**P**	**06 51 12.9 -0.1**
	baz=26,SNR=153					
F31M				S	**S**	**07 00 07.6 +0.3**
	baz=26					
ANWB	**Willy Bob**	**67.22**	**273**	IAMs_20	IAMs_20	07 14 43.6
	comp=Z,43μm,22.0s					
ANWB	**Willy Bob**	**67.22**	**273**	*e*P	**P**	**06 51 13.6 -0.3**
ANWB	**Willy Bob**	**67.22**	**273**	*e*P	**P**	**06 51 13.5 -0.3**
M50A	**Fremont**	**67.23**	**306**	P	**P**	**06 51 13.7 +0.1**
	baz=52					
M50A				P	**P**	**06 51 13.7 +0.1**
	baz=52					
M50A				S	**S**	**07 00 09.0 +0.7**
	baz=52					
M50A				S	**S**	**07 00 09.0 +0.7**
	baz=52					
O52A	**Adamsville**	**67.28**	**304**	IAmb	IAmb	06 51 23.4
	comp=Z,140nm,0.9s					
O52A	**Adamsville**	**67.28**	**304**	P	**P**	**06 51 15.1 +1.1**
	baz=52,SNR=31					
O52A				P	**P**	**06 51 15.1 +1.1**
	baz=52,SNR=31					
O52A				S	**S**	**07 00 09.8 +0.7**
	baz=52					
O52A				S	**S**	**07 00 09.8 +0.7**
	baz=52					
R55A	**Marlinton**	**67.33**	**302**	IAmb	IAmb	06 51 59.8
	comp=Z,206nm,1.3s					
R55A	**Marlinton**	**67.33**	**302**	P	**P**	**06 51 13.3 -1.1**
	baz=53					
R55A				P	**P**	**06 51 13.3 -1.1**
	baz=53					
R55A				S	**S**	**07 00 11.2 +1.4**
	baz=53					
R55A				S	**S**	**07 00 11.2 +1.4**
	baz=53					
Q54A	**Coxs Mills**	**67.35**	**303**	P	**P**	**06 51 15.4 +0.9**
	baz=52,SNR=18					
Q54A				P	**P**	**06 51 15.4 +0.9**
	baz=52,SNR=18					
Q54A				S	**S**	**07 00 11.1 +1.2**
	baz=52					
Q54A				S	**S**	**07 00 11.1 +1.2**
	baz=52					
P53A	**Whipple**	**67.39**	**303**	IAmb	IAmb	06 51 25.1
	comp=Z,139nm,0.9s					
P53A	**Whipple**	**67.39**	**303**	P	**P**	**06 51 12.8 -1.9**
	baz=52,SNR=30					
P53A				P	**P**	**06 51 12.8 -1.9**
	baz=52,SNR=30					
P53A				S	**S**	**07 00 12.0 +1.6**
	baz=52					
P53A				S	**S**	**07 00 12.0 +1.6**
	baz=52					
F42A	**Maple Grove Fa**	**67.46**	**312**	P	**P**	**06 51 14.0 -1.0**
	baz=51					
F42A				S	**S**	**07 00 10.3 -0.7**
	baz=51					
I45A	**Fountain**	**67.47**	**310**	P	**P**	**06 51 16.2 +1.1**
	baz=52					
I45A				P	**P**	**06 51 16.2 +1.1**
	baz=52					
I45A				S	**S**	**07 00 11.5 +0.3**
	baz=52					
I45A				S	**S**	**07 00 11.5 +0.3**
	baz=52					
D24K	**Happy Valley**	**67.53**	**353**	P	**P**	**06 51 16.3 +1.3**
	baz=14					
D24K				S	**S**	**07 00 15.6 +4.4**
	baz=14					
H05N1	**Guadeloupe/Mar**	**67.55**	**272**	P	**P**	**06 51 15.9 -0.1**
GDSD	**La Dsirade Is**	**67.56**	**272**	IAMs_20	IAMs_20	07 15 43.5
	comp=Z,40μm,21.0s					
T57A	**Hurt**	**67.56**	**300**	IAmb	IAmb	06 52 07.9
	comp=Z,93nm,1.1s					
T57A	**Hurt**	**67.56**	**300**	P	**P**	**06 51 16.4 +0.6**
	baz=52,SNR=11					
T57A				P	**P**	**06 51 16.4 +0.6**
	baz=52,SNR=11					
T57A				S	**S**	**07 00 14.0 +1.5**
	baz=52					
T57A				S	**S**	**07 00 14.0 +1.5**
	baz=52					
ANBD	**Bethesda, Anti**	**67.60**	**273**	*e*P	**P**	**06 51 13.5 -2.8**
BILL	**Bilibino**	**67.62**	**11**	P	**P**	**06 51 15.3 -0.3**
BILL				IAMs_20	IAMs_20	07 26 15.8
	comp=Z,22μm,19.0s					
BILL	**Bilibino**	**67.62**	**11**	*d i*P	**P**	**06 51 16.1 +0.5**
BILL				*i*		06 51 42.5
BILL				*i* S	**S**	**07 00 06.4 -5.8**
BILL				pmax	pmax	
	comp=Z,280nm,0.9s					
BILL				MLR	MLR	
	comp=Z,23μm,21.0s					
E27K	**Coleen River**	**67.68**	**350**	P	**P**	**06 51 15.0 -1.1**
	baz=20,SNR=97					
E27K				S	**S**	**07 00 15.6 +2.5**
	baz=20					
L48A	**N Adams**	**67.72**	**307**	P	**P**	**06 51 17.6 +0.9**
	baz=52,SNR=19					
L48A				P	**P**	**06 51 17.6 +0.9**
	baz=52,SNR=19					
L48A				S	**S**	**07 00 12.5 -1.8**
	baz=52					
L48A				S	**S**	**07 00 12.5 -1.8**
	baz=52					
LEPH	**Lephalale, Lim**	**67.73**	**165**	*e*P	**P**	**06 51 15.6 -1.3**
LEPH				IAmb	IAmb	06 51 20.8
	comp=Z,1μm,2.4s					
CNNC	**Cliffs of the**	**67.75**	**298**	IAMs_20	IAMs_20	07 19 18.2
	comp=Z,34μm,20.0s					
CNNC	**Cliffs of the**	**67.75**	**298**	P	**P**	**06 51 17.1 +0.1**
	baz=52					
CNNC	**Cliffs of the**	**67.75**	**298**	P	**P**	**06 51 15.9 -1.1**
	baz=52					

P52A	**Corning**	**67.76 304**	IAmb	IAmb	06 51 26.2	
	comp=Z,129nm,0.9s					
P52A	**Corning**	**67.76 304**	P	**P**	**06 51 17.9**	**+0.9**
	baz=52,SNR=19					
P52A			S	**S**	**07 00 13.9**	**-0.8**
	baz=52					
ABD	**La Joyeuse, An**	**67.76 272**	IAMs_20	IAMs_20	07 15 38.0	
	comp=Z,58µm,22.0s					
ABD	**La Joyeuse, An**	**67.76 272**	*e*P	**P**	**06 51 17.5**	**+0.2**
COWI	**Conover**	**67.79 313**	IAmb	IAmb	06 51 26.5	
	comp=Z,86nm,0.9s					
COWI	**Conover**	**67.79 313**	P	**P**	**06 51 14.6**	**-2.5**
	baz=51					
SAIH	**SAIHA**	**67.84 79**	*e*P	**P**	**06 51 17.4**	**-0.5**
EYMN	**Ely**	**67.86 315**	IAMs_20	IAMs_20	07 19 32.3	
	comp=Z,45µm,20.0s					
EYMN	**Ely**	**67.86 315**	IAmb	IAmb	06 51 26.5	
	comp=Z,83nm,0.9s					
EYMN	**Ely**	**67.86 315**	P	**P**	**06 51 18.9**	**+1.4**
	baz=50,SNR=17					
EYMN	**Ely**	**67.86 315**	P	**P**	**06 51 18.0**	**+0.5**
	baz=50,SNR=17					
EYMN			S	**S**	**07 00 15.3**	**-0.5**
	baz=50					
D23K	**Nanushuk River**	**67.87 354**	P	**P**	**06 51 17.4**	**+0.1**
	baz=13,SNR=48					
D23K			S	**S**	**07 00 17.3**	**+2.0**
	baz=13					
ACSO	**Alum Creek Sta**	**67.91 305**	IAmb	IAmb	06 51 27.1	
	comp=Z,117nm,0.9s					
ACSO			IAMs_20	IAMs_20	07 17 57.0	
	comp=Z,53µm,22.0s					
ACSO	**Alum Creek Sta**	**67.91 305**	P	**P**	**06 51 18.4**	**+0.5**
	baz=52,SNR=25					
ACSO	**Alum Creek Sta**	**67.91 305**	P	**P**	**06 51 18.4**	**+0.5**
	baz=52,SNR=25					
ACSO			S	**S**	**07 00 14.9**	**-1.7**
	baz=52					
SMRT	**St. Maarten**	**67.92 274**	*e*P	**P**	**06 51 17.3**	**-1.0**
MAGL	**Barre de l'ile**	**67.95 272**	*e*P	**P**	**06 51 18.3**	**-0.2**
KAAM	**Kaadhehdhoo**	**67.99 111**	IAMs_20	IAMs_20	07 22 10.1	
	comp=Z,24µm,20.0s					
KAAM	**Kaadhehdhoo**	**67.99 111**	P	**P**	**06 51 18.1**	**-0.6**
	comp=Z,18µmcomp=Z,11µmcomp=Z,227nm,1.1s					
G30M	**tAoh Zraii Nji**	**68.04 348**	P	**P**	**06 51 16.9**	**-1.4**
	baz=24,SNR=33					
G30M			S	**S**	**07 00 17.4**	**0.0**
	baz=24					
HIA	**Hailar**	**68.05 43**	*d i*P	**P**	**06 51 19.0**	**+0.3**
HIA			pmax	pmax		
	comp=Z,292nm,1.6s					
HIA			MLR	MLR		
	comp=Z,178µm,18.0s					
HIA	**Hailar**	**68.05 43**	P	**P**	**06 51 20.2**	**+1.5**
	comp=Z,162nm,1.2s					
H43A	**Windswept, Lux**	**68.06 311**	P	**P**	**06 51 19.4**	**+0.5**
	baz=51					
H43A			S	**S**	**07 00 19.7**	**+1.4**
	baz=51					
GDHS	**Morne Mazeau,**	**68.09 272**	IAMs_20	IAMs_20	07 15 47.8	
	comp=Z,55µm,21.0s					
TOLK	**Toolik Lake Re**	**68.10 353**	P	**P**	**06 51 17.2**	**-1.5**
	baz=14,SNR=43					
TOLK			S	**S**	**07 00 21.9**	**+3.8**
	baz=14					
CBE	**Ff, Capester**	**68.11 272**	IAMs_20	IAMs_20	07 15 48.3	
	comp=Z,60µm,22.0s					
CBE	**Ff, Capester**	**68.11 272**	*e*P	**P**	**06 51 18.3**	**-1.2**
MBFL	**Flemmings, Mon**	**68.12 273**	*e*P	**P**	**06 51 20.3**	**+0.7**
MOPA	**Mopani**	**68.14 162**	*e*P	**P**	**06 51 20.3**	**+0.9**
MOPA			IAmb	IAmb	06 51 27.8	
	comp=Z,18nm,0.8s					
MOPA	**Mopani**	**68.14 162**	*i* P	**P**	**06 51 21.1**	**+1.7**
MOPA	**Mopani**	**68.14 162**	*i* P	**P**	**06 51 21.1**	**+1.7**
BLA	**Blacksburg**	**68.17 301**	IAMs_20	IAMs_20	07 21 36.2	
	comp=Z,38µm,19.0s					
BLA	**Blacksburg**	**68.17 301**	P	**P**	**06 51 20.0**	**+0.3**
	baz=52					
BLA	**Blacksburg**	**68.17 301**	P	**P**	**06 51 19.8**	**+0.1**
	baz=52					
BLA			S	**S**	**07 00 18.5**	**-1.4**
	baz=52					
BTO	**Baotou**	**68.18 55**	*e*P	**P**	**06 51 18.0**	**-1.8**
BTO			S	**S**	**07 00 18.0**	**-2.0**
N49A	**Columbus Grove**	**68.20 306**	IAmb	IAmb	06 51 26.9	
	comp=Z,133nm,0.8s					
N49A	**Columbus Grove**	**68.20 306**	P	**P**	**06 51 20.3**	**+0.5**
	baz=52,SNR=20					
N49A			P	**P**	**06 51 20.3**	**+0.5**
	baz=52,SNR=20					
N49A			S	**S**	**07 00 19.4**	**-0.6**
	baz=52					
N49A			S	**S**	**07 00 19.4**	**-0.6**
	baz=52					
V58A	**Windy Hill, Pi**	**68.20 299**	P	**P**	**06 51 21.3**	**+1.5**
	baz=52,SNR=12					
V58A			P	**P**	**06 51 21.3**	**+1.5**
	baz=52,SNR=12					
V58A			S	**S**	**07 00 20.4**	**+0.3**
	baz=52					
V58A			S	**S**	**07 00 20.4**	**+0.3**
	baz=52					
SEUS	**St. Eustatius**	**68.21 274**	*e*P	**P**	**06 51 20.7**	**+0.6**
E25K	**Arctic Village**	**68.21 352**	P	**P**	**06 51 18.6**	**-0.8**
	baz=17,SNR=44					
E25K			S	**S**	**07 00 21.7**	**+2.3**
	baz=17					
FFC	**Flin Flon**	**68.23 326**	P	**P**	**06 51 19.4**	**-0.3**
FFC			IAmb	IAmb	06 51 37.0	
	comp=Z,109nm,0.9s					
FFC	**Flin Flon**	**68.23 326**	P	**P**	**06 51 19.4**	**-0.3**
FFC			pmax	pmax		
	comp=Z,109nm,1.0s					
FFC	**Flin Flon**	**68.23 326**	P	**P**	**06 51 20.4**	**+0.7**
Q52A	**Bidwell**	**68.25 303**	IAmb	IAmb	06 51 27.4	
	comp=Z,169nm,0.9s					
Q52A	**Bidwell**	**68.25 303**	P	**P**	**06 51 20.1**	**0.0**
	baz=52,SNR=24					
Q52A			P	**P**	**06 51 20.1**	**0.0**
	baz=52,SNR=24					
Q52A			S	**S**	**07 00 14.9**	**-5.7**
	baz=52					
Q52A			S	**S**	**07 00 14.9**	**-5.7**
	baz=52					
MDVC	**Dominica, Viel**	**68.25 271**	*e*	**P**	**06 51 21.0**	**+0.6**
TDBA	**Terre de Bas,**	**68.27 272**	IAMs_20	IAMs_20	07 16 04.4	
	comp=Z,42µm,22.0s					
TDBA	**Terre de Bas,**	**68.27 272**	*e*P	**P**	**06 51 20.6**	**+0.1**
DLPL	**La Plaine**	**68.32 271**	*e*P	**P**	**06 51 22.6**	**+1.7**
S54A	**Dingess, Beckl**	**68.37 302**	IAmb	IAmb	06 52 12.6	
	comp=Z,140nm,1.5s					
S54A	**Dingess, Beckl**	**68.37 302**	P	**P**	**06 51 21.6**	**+0.7**
	baz=52,SNR=11					
S54A			P	**P**	**06 51 21.6**	**+0.7**
	baz=52,SNR=11					
S54A			S	**S**	**07 00 24.4**	**+2.2**
	baz=52					
S54A			S	**S**	**07 00 24.4**	**+2.2**
	baz=52					
DSLB	**Salisbury**	**68.38 271**	*e*P	**P**	**06 51 21.4**	**+0.2**
ILAM	**Ilet Lapin Mar**	**68.40 270**	IAMs_20	IAMs_20	07 14 11.1	
	comp=Z,26µm,22.0s					
ILAM	**Ilet Lapin Mar**	**68.40 270**	*e*P	**P**	**06 51 20.3**	**-1.0**
P51A	**Williamsport**	**68.42 304**	IAmb	IAmb	06 51 28.4	
	comp=Z,77nm,0.8s					
P51A	**Williamsport**	**68.42 304**	P	**P**	**06 51 21.0**	**-0.1**
	baz=52,SNR=13					
P51A			P	**P**	**06 51 21.0**	**-0.1**
	baz=52,SNR=13					
P51A			S	**S**	**07 00 21.6**	**-1.0**
	baz=52					
P51A			S	**S**	**07 00 21.6**	**-1.0**
	baz=52					
MDN	**Morne-Daniel**	**68.43 271**	*e*P	**P**	**06 51 23.5**	**+2.0**
R53A	**Hurricane**	**68.44 303**	IAmb	IAmb	06 51 28.7	
	comp=Z,201nm,1.1s					
R53A	**Hurricane**	**68.44 303**	P	**P**	**06 51 18.2**	**-3.1**
	baz=52,SNR=20					
R53A			P	**P**	**06 51 18.2**	**-3.1**
	baz=52,SNR=20					
R53A			S	**S**	**07 00 22.7**	**-0.3**
	baz=52					
R53A			S	**S**	**07 00 22.7**	**-0.3**
	baz=52					
F26K	**Sheenjek River**	**68.46 351**	P	**P**	**06 51 20.9**	**-0.1**
	baz=18,SNR=103					
F26K			S	**S**	**07 00 25.5**	**+3.2**
	baz=18					
LBTB	**Lobatse**	**68.48 168**	LR	LR	07 24 07.0	
	comp=Z,33µm,18.5s,baz=351,slow=38					
LBTB	**Lobatse**	**68.48 168**	*i* P	**P**	**06 51 20.6**	**-1.0**
LBTB	**Lobatse**	**68.48 168**	*i* P	**P**	**06 51 20.6**	**-1.0**
BBGH	**Gun Hill**	**68.49 268**	IAMs_20	IAMs_20	07 21 15.6	
	comp=Z,31µm,21.0s					
BBGH	**Gun Hill**	**68.49 268**	*e*P	**P**	**06 51 25.0**	**+3.1**
ZEA	**Zeya**	**68.52 36**	*e*P	**P**	**06 51 21.6**	**+0.1**
ZEA			*e*		06 53 48.7	
ZEA			*e*S	**S**	**07 00 24.5**	**+1.1**
ZEA			*e*		07 00 47.0	
ZEA			*e*SS	**SS**	**07 04 45.6**	**-0.8**
ZEA			pmax	pmax		
	comp=E,900nm,4.6s					
ZEA			pmax	pmax		
	comp=N,800nm,8.8s					
ZEA			pmax	pmax		
	comp=Z,3µm,6.8s					
ZEA			pmax	pmax		
	comp=E,20nm,0.7s					
ZEA			pmax	pmax		
	comp=Z,50nm,1.4s					
ZEA			pmax	pmax		
	comp=N,400nm,9.6s					
ZEA			pmax	pmax		
	comp=Z,800nm,12.0s					
ZEA			smax	smax		
	comp=N,2µm,9.7s					
ZEA			smax	smax		
	comp=E,6µm,9.2s					
ZEA			MLR	MLR		
	comp=N,44µm,17.0s					
ZEA			MLR	MLR		
	comp=E,66µm,17.0s					
ZEA			MLR	MLR		
	comp=Z,110µm,17.0s					
ULM	**Lac du Bonnet**	**68.54 319**	P	**P**	**06 51 20.6**	**-1.1**
	comp=Z,56nm,0.7s,baz=48,slow=6.4,SNR=20					
ULM			LR	LR	07 19 52.3	
	comp=Z,75µm,21.0s,baz=56,slow=35					
	comp=Z,56nm,0.7s					
ULM	**Lac du Bonnet**	**68.54 319**	IAmb	IAmb	06 51 30.5	
	comp=Z,110nm,1.0s					
ULM	**Lac du Bonnet**	**68.54 319**	*de*P	**P**	**06 51 21.8**	**+0.1**
E24K	**Your Creek**	**68.55 353**	P	**P**	**06 51 21.0**	**-0.6**
	baz=14,SNR=17					
E24K			S	**S**	**07 00 26.6**	**+3.1**
	baz=14					
SVN	**Savane Anatole**	**68.58 271**	IAMs_20	IAMs_20	07 14 13.6	
	comp=Z,23µm,21.0s					
MPOM	**Morne Pois Mar**	**68.61 270**	*e*P	**P**	**06 51 22.2**	**-0.4**
FDF	**Fort de France**	**68.63 270**	IAMs_20	IAMs_20	07 14 16.0	
	comp=Z,25µm,22.0s					
FDF	**Fort de France**	**68.63 270**	*e*P	**P**	**06 51 21.1**	**-1.7**
E23K	**Chandalar**	**68.67 353**	P	**P**	**06 51 23.0**	**+0.6**
	baz=14,SNR=62					
E23K			S	**S**	**07 00 28.2**	**+3.3**
	baz=14					
ROSB	**Rosrio**	**68.67 244**	*e*P	**P**	**06 51 24.0**	**+1.0**
U56A	**King**	**68.68 300**	P	**P**	**06 51 23.9**	**+1.1**
	baz=52,SNR=17					
U56A			P	**P**	**06 51 23.9**	**+1.1**
	baz=52,SNR=17					
U56A			S	**S**	**07 00 25.3**	**-0.6**
	baz=52					
U56A			S	**S**	**07 00 25.3**	**-0.6**
	baz=52					
EPYK	**Eagle Plains**	**68.68 347**	IAmb	IAmb	06 51 25.6	
	comp=Z,183nm,1.1s					
EPYK			IAMs_20	IAMs_20	07 24 03.7	
	comp=Z,22µm,19.0s					
EPYK	**Eagle Plains**	**68.68 347**	P	**P**	**06 51 22.3**	**-0.1**
	baz=23,SNR=55					
EPYK			S	**S**	**07 00 26.0**	**+1.0**
	baz=23					
PALK	**Pallekele**	**68.70 100**	LR	LR	07 26 08.8	
	comp=Z,28µm,19.4s,baz=65,slow=40					
PALK	**Pallekele**	**68.70 100**	P	**P**	**06 51 22.3**	**-0.9**
PALK			IAmb	IAmb	06 51 27.9	
	comp=Z,106nm,1.0s					
PALK	**Pallekele**	**68.70 100**	IAMs_20	IAMs_20	07 25 48.4	
	comp=Z,36µm,21.0s					
PALK	**Pallekele**	**68.70 100**	*de*P	**P**	**06 51 22.6**	**-0.6**
PALK			pmax	pmax		
	comp=Z,158nm,1.0s					
PALK			MLR	MLR		
	comp=Z,42µm,20.0s					
PALK	**Pallekele**	**68.70 100**	P	**P**	**06 51 22.3**	**-0.9**
	comp=Z,14µmcomp=Z,5µmcomp=Z,121nm,2.3s					
PALK	**Pallekele**	**68.70 100**	P	**P**	**06 51 25.5**	**+2.3**
BIM	**Bigot**	**68.71 270**	*e*P	**P**	**06 51 22.7**	**-0.6**
Y60A	**Bolivia**	**68.72 297**	P	**P**	**06 51 23.7**	**+0.7**
	baz=52					
Y60A			P	**P**	**06 51 23.7**	**+0.7**
	baz=52					
Y60A			S	**S**	**07 00 29.0**	**+2.8**
	baz=52					
Y60A			S	**S**	**07 00 29.0**	**+2.8**
	baz=52					
F25K	**Christian Rive**	**68.73 351**	P	**P**	**06 51 24.1**	**+1.4**
	baz=17,SNR=38					
F25K			S	**S**	**07 00 30.4**	**+4.8**
	baz=17					
B35A	**Bob, Littlefor**	**68.73 317**	IAmb	IAmb	06 51 30.3	
	comp=Z,108nm,1.1s					
B35A	**Bob, Littlefor**	**68.73 317**	P	**P**	**06 51 23.9**	**+1.0**
	baz=49,SNR=21					
B35A			S	**S**	**07 00 21.7**	**-4.4**
	baz=49					
O49A	**Covington**	**68.75 305**	P	**P**	**06 51 23.4**	**+0.2**
	baz=51,SNR=27					
O49A			P	**P**	**06 51 23.4**	**+0.2**
	baz=51,SNR=27					
O49A			S	**S**	**07 00 25.8**	**-0.7**
	baz=51					
O49A			S	**S**	**07 00 25.8**	**-0.7**
	baz=51					
E38A	**The Farm, Brul**	**68.76 314**	IAmb	IAmb	06 51 32.3	
	comp=Z,94nm,0.9s					
E38A	**The Farm, Brul**	**68.76 314**	P	**P**	**06 51 23.5**	**+0.3**
	baz=50					
E38A			S	**S**	**07 00 27.0**	**+0.5**
	baz=50					
L46A	**Eue Claire**	**68.77 308**	IAmb	IAmb	06 51 38.2	
	comp=Z,155nm,1.2s					
L46A	**Eue Claire**	**68.77 308**	P	**P**	**06 51 21.1**	**-2.2**
	baz=51					
L46A			P	**P**	**06 51 21.1**	**-2.2**
	baz=51					
L46A			S	**S**	**07 00 24.6**	**-2.1**
	baz=51					
L46A			S	**S**	**07 00 24.6**	**-2.1**
	baz=51					
WRGLY	**Wrigley**	**68.77 340**	P	**P**	**06 51 23.8**	**+0.8**
	baz=33,SNR=44					
WRGLY			S	**S**	**07 00 28.5**	**+2.4**
	baz=33					
E22K	**Anaktuvuk Pass**	**68.78 354**	P	**P**	**06 51 21.8**	**-1.1**
	baz=12					
E22K			S	**S**	**07 00 28.9**	**+2.7**
	baz=12					
MDP	**Montagnes des**	**68.85 257**	LR	LR	07 18 13.8	
	comp=Z,28µm,21.7s,baz=38,slow=33					
Q51A	**Peebles**	**68.87 304**	IAmb	IAmb	06 51 33.0	
	comp=Z,144nm,0.8s					
Q51A	**Peebles**	**68.87 304**	P	**P**	**06 51 22.8**	**-1.2**
	baz=52,SNR=35					
Q51A			P	**P**	**06 51 22.8**	**-1.2**
	baz=52,SNR=35					
Q51A			S	**S**	**07 00 26.6**	**-1.5**
	baz=52					
Q51A			S	**S**	**07 00 26.6**	**-1.5**
	baz=52					
G40A	**Rib Lake**	**68.89 313**	IAmb	IAmb	06 51 31.5	
	comp=Z,87nm,0.9s					
G40A	**Rib Lake**	**68.89 313**	P	**P**	**06 51 22.7**	**-1.3**
	baz=50,SNR=28					
G40A			S	**S**	**07 00 28.9**	**+0.8**
	baz=50					
HHC	**Hu-ho-hao-te**	**68.95 54**	*e*P	**P**	**06 51 24.5**	**-0.1**
HHC			S	**S**	**07 00 27.3**	**-1.8**
HHC			ScS	**SKSac**	**07 01 20.5**	**-3.9**
HHC			SS	**SS**	**07 04 51.3**	**-2.5**
HHC			pmax	pmax		
	comp=Z,240nm,1.3s					
HHC			pmax	pmax		
	comp=Z,10µm,5.7s					
SLBI	**Saint Lucia, B**	**68.96 270**	*e*P	**P**	**06 51 23.5**	**-1.3**
G27K	**Doyon Strip**	**68.99 350**	P	**P**	**06 51 23.7**	**-0.6**
	baz=20,SNR=88					
G27K			S	**S**	**07 00 33.4**	**+4.7**
	baz=20					
F24K	**Squaw Lake**	**69.03 352**	P	**P**	**06 51 25.4**	**+0.9**
	baz=15,SNR=60					
F24K			S	**S**	**07 00 33.7**	**+4.5**
	baz=15					
I42A	**Draeger Farm,**	**69.07 311**	P	**P**	**06 51 23.8**	**-1.3**
	baz=50,SNR=13					
I42A			S	**S**	**07 00 30.9**	**+0.7**
	baz=50					
ABPO	**Ambohimpanom**	**69.10 145**	P	**P**	**06 51 24.9**	**-0.8**
ABPO	**Ambohimpanom**	**69.10 145**	P	**P**	**06 51 24.9**	**-0.8**
ABPO			pmax	pmax		
	comp=Z,103nm,1.7s					
ABPO			MLR	MLR		
	comp=Z,19µm,20.0s					
ABPO	**Ambohimpanom**	**69.10 145**	P	**P**	**06 51 26.0**	**+0.4**
X58A	**Rowland**	**69.11 298**	P	**P**	**06 51 26.1**	**+0.6**
	baz=52,SNR=7.5					
X58A			P	**P**	**06 51 26.1**	**+0.6**
	baz=52,SNR=7.5					
X58A			S	**S**	**07 00 31.0**	**+0.1**
	baz=52					
X58A			S	**S**	**07 00 31.0**	**+0.1**
	baz=52					
N47A	**Urbana**	**69.12 307**	IAmb	IAmb	06 51 32.2	
	comp=Z,106nm,0.8s					
N47A	**Urbana**	**69.12 307**	P	**P**	**06 51 23.7**	**-1.8**
	baz=51,SNR=25					
N47A			P	**P**	**06 51 23.7**	**-1.8**
	baz=51,SNR=25					
N47A			S	**S**	**07 00 23.8**	**-7.2**
	baz=51					
N47A			S	**S**	**07 00 23.8**	**-7.2**
	baz=51					
G26K	**Porcupine Rive**	**69.13 350**	P	**P**	**06 51 24.8**	**-0.3**
	baz=18,SNR=136					
G26K			S	**S**	**07 00 36.1**	**+5.9**
	baz=18					
MCLT	**Moule a Chique**	**69.14 270**	*e*P	P	06 51 19.5	-6.4
Y59A	**Loris**	**69.15 297**	P	**P**	**06 51 25.8**	**+0.1**
	baz=52					
Y59A			P	**P**	**06 51 25.8**	**+0.1**
	baz=52					
Y59A			S	**S**	**07 00 31.6**	**+0.1**
	baz=52					
Y59A			S	**S**	**07 00 31.6**	**+0.1**
	baz=52					
W57A	**Gilead**	**69.16 299**	P	**P**	**06 51 24.6**	**-1.2**
	baz=52					
W57A			P	**P**	**06 51 24.6**	**-1.2**
	baz=52					
W57A			S	**S**	**07 00 30.7**	**-0.9**
	baz=52					
W57A			S	**S**	**07 00 30.7**	**-0.9**
	baz=52					
O48B	**Farmland**	**69.20 306**	P	**P**	**06 51 25.6**	**-0.4**
	baz=51,SNR=17					
O48B			S	**S**	**07 00 29.5**	**-2.4**
	baz=51					
O48B	**Farmland**	**69.20 306**	P	**P**	**06 51 24.8**	**-1.2**
	baz=51,SNR=17					
O48B			S	**S**	**07 00 28.9**	**-3.0**
	baz=51					
CUPR	**Culebra, Puert**	**69.38 276**	P	**P**	**06 51 26.7**	**-0.7**
P49A	**Miami Univ. Ec**	**69.39 305**	IAMs_20	IAMs_20	07 24 13.1	
	comp=Z,37µm,19.0s					
P49A	**Miami Univ. Ec**	**69.39 305**	P	**P**	**06 51 25.2**	**-2.0**
	baz=51,SNR=18					
P49A			S	**S**	**07 00 26.0**	**-8.1**
	baz=51					
P49A	**Miami Univ. Ec**	**69.39 305**	P	**P**	**06 51 25.7**	**-1.5**
	baz=51,SNR=18					
P49A			S	**S**	**07 00 32.4**	**-1.8**
	baz=51					
F22K	**John River**	**69.42 354**	P	**P**	**06 51 26.6**	**-0.3**
	baz=12					
F22K			S	**S**	**07 00 36.6**	**+2.8**
	baz=12					
U54A	**Nelsons Funny**	**69.48 301**	IAmb	IAmb	06 52 02.0	
	comp=Z,237nm,1.4s					
U54A	**Nelsons Funny**	**69.48 301**	P	**P**	**06 51 28.1**	**+0.2**
	baz=51					
U54A			P	**P**	**06 51 28.1**	**+0.2**
	baz=51					
U54A			S	**S**	**07 00 35.6**	**+0.1**
	baz=51					
U54A			S	**S**	**07 00 35.6**	**+0.1**
	baz=51					
K43A	**Burlington**	**69.50 310**	P	**P**	**06 51 26.5**	**-1.3**
	baz=50,SNR=11					
K43A			S	**S**	**07 00 35.1**	**-0.2**
	baz=50					
V55A	**Taylorsville**	**69.51 300**	P	**P**	**06 51 28.1**	**+0.1**
	baz=51,SNR=17					
V55A			P	**P**	**06 51 28.1**	**+0.1**
	baz=51,SNR=17					
V55A			S	**S**	**07 00 36.9**	**+1.2**
	baz=51					
V55A			S	**S**	**07 00 36.9**	**+1.2**
	baz=51					
KSR	**Koster**	**69.52 167**	*e*P	**P**	**06 51 28.1**	**0.0**
KSR			IAmb	IAmb	06 51 34.4	
	comp=Z,172nm,0.9s					
H27K	**Steamboat Moun**	**69.52 349**	P	**P**	**06 51 27.0**	**-0.6**
	baz=20,SNR=133					
H27K			S	**S**	**07 00 38.1**	**+3.1**
	baz=20					
G25K	**Bearman Lake**	**69.58 351**	P	**P**	**06 51 29.1**	**+1.3**
	baz=16,SNR=58					
L44A	**Lake County Fo**	**69.59 309**	IAMs_20	IAMs_20	07 21 26.4	
	comp=Z,55µm,20.0s					
L44A	**Lake County Fo**	**69.59 309**	P	**P**	**06 51 27.0**	**-1.4**
	baz=50					
L44A	**Lake County Fo**	**69.59 309**	P	**P**	**06 51 26.7**	**-1.7**
	baz=50					
L44A			S	**S**	**07 00 32.6**	**-3.8**
	baz=50					
XLT	**XiLinHaoTe**	**69.59 49**	*e*P	**P**	**06 51 28.5**	**0.0**
XLT			pP	sP	06 51 33.0	-0.3
XLT			sP	pP	06 51 35.5	+3.5
XLT			PcP	**PcP**	**06 51 53.3**	**+1.8**
XLT			S	**S**	**07 00 36.0**	**-0.6**
XLT			ScS	**SKKSac**	**07 01 29.5**	**+0.3**
XLT			SS	**SS**	**07 05 00.5**	**-3.1**
XLT			pmax	pmax		
	comp=Z,240nm,1.1s					
XLT			pmax	pmax		
	comp=Z,7µm,4.7s					
XLT			LR	LR		
	comp=Z,14µm,16.9s					
XLT			LR	LR		
	comp=Z,127µm,22.7s					
SLR	**Silverton**	**69.65 165**	*e*P	**P**	**06 51 29.4**	**+0.5**
SLR			IAmb	IAmb	06 51 32.5	
	comp=Z,1µm,2.2s					
SVB	**Belmont**	**69.66 269**	*e*P	**P**	**06 51 27.8**	**-1.4**
SEY	**Seymchan**	**69.68 19**	LR	LR	07 25 51.7	
	comp=Z,26µm,21.2s,baz=329,slow=39					
SEY	**Seymchan**	**69.68 19**	*e*P	**P**	**06 51 29.4**	**+0.9**
SEY			pmax	pmax		
	comp=Z,251nm,0.9s					
SEY			MLR	MLR		
	comp=Z,47µm,23.0s					
MTP	**Monte Pirata**	**69.71 276**	IAmb	IAmb	06 51 39.0	
	comp=Z,235nm,1.4s					
Y58A	**Scranton**	**69.72 298**	P	**P**	**06 51 30.2**	**+0.9**
	baz=51					
Y58A			P	**P**	**06 51 30.2**	**+0.9**
	baz=51					
Y58A			S	**S**	**07 00 36.6**	**-1.6**
	baz=51					
Y58A			S	**S**	**07 00 36.6**	**-1.6**
	baz=51					
BIRD	**Birdtown, Kers**	**69.78 299**	P	**P**	**06 51 31.3**	**+1.7**
	baz=51,SNR=7.3					
G24K	**Hadweenzic Riv**	**69.79 352**	P	**P**	**06 51 29.6**	**+0.4**
	baz=15,SNR=36					
G24K			S	**S**	**07 00 42.5**	**+4.5**
	baz=15					
F21K	**Alatna River**	**69.80 354**	P	**P**	**06 51 29.6**	**+0.3**
	baz=10,SNR=89					
F21K			S	**S**	**07 00 42.6**	**+4.4**
	baz=10					

AGMN	**Agassiz Nation**	**69.84 318**	P	**P**	**06 51 30.9**	**+1.1**
	baz=48,SNR=20					
AGMN			S	**S**	**07 00 41.4**	**+2.2**
	baz=48					
AGMN	**Agassiz Nation**	**69.84 318**	P	**P**	**06 51 30.3**	**+0.5**
	baz=48,SNR=20					
AGMN			S	**S**	**07 00 39.5**	**+0.3**
	baz=48					
P48A	**Milroy**	**69.86 305**	P	**P**	**06 51 27.9**	**-2.2**
	baz=51,SNR=17					
P48A			P	**P**	**06 51 27.9**	**-2.2**
	baz=51,SNR=17					
P48A			S	**S**	**07 00 36.4**	**-3.3**
	baz=51					
P48A			S	**S**	**07 00 36.4**	**-3.3**
	baz=51					
I29M	**Ogilvie Camp,**	**69.87 348**	IAmb	IAmb	06 51 33.1	
	comp=Z,215nm,1.1s					
I29M			IAMs_20	IAMs_20	07 24 51.1	
	comp=Z,21μm,19.0s					
I29M	**Ogilvie Camp,**	**69.87 348**	P	**P**	**06 51 29.3**	**-0.4**
	baz=22,SNR=131					
I29M			S	**S**	**07 00 40.7**	**+1.7**
	baz=22					
S51A	**Beattyville**	**69.89 303**	P	**P**	**06 51 30.8**	**+0.5**
	baz=51,SNR=5.4					
S51A			P	**P**	**06 51 30.8**	**+0.5**
	baz=51,SNR=5.4					
S51A			S	**S**	**07 00 38.1**	**-2.0**
	baz=51					
S51A			S	**S**	**07 00 38.1**	**-2.0**
	baz=51					
HUMP	**Col San Antoni**	**69.90 276**	IAmb	IAmb	06 51 45.8	
	comp=Z,174nm,1.1s					
R50A	**Paris**	**69.94 304**	P	**P**	**06 51 30.9**	**+0.4**
	baz=51,SNR=15					
R50A			P	**P**	**06 51 30.9**	**+0.4**
	baz=51,SNR=15					
R50A			S	**S**	**07 00 39.4**	**-1.2**
	baz=51					
R50A			S	**S**	**07 00 39.4**	**-1.2**
	baz=51					
G22K	**Bettles**	**69.94 354**	P	**P**	**06 51 30.1**	**0.0**
	baz=12					
G22K			S	**S**	**07 00 43.5**	**+3.7**
	baz=12					
GCPR	**Guaynabo City**	**69.96 277**	IAmb	IAmb	06 51 40.0	
	comp=Z,111nm,0.9s					
I40A	**Norwalk**	**70.01 312**	IAmb	IAmb	06 51 35.5	
	comp=Z,70nm,0.6s					
I40A	**Norwalk**	**70.01 312**	P	**P**	**06 51 31.9**	**+1.0**
	baz=49,SNR=24					
I40A			S	**S**	**07 00 39.5**	**-1.9**
	baz=49					
G23K	**Bananza Creek**	**70.02 353**	P	**P**	**06 51 31.1**	**+0.4**
	baz=13,SNR=58					
G23K			S	**S**	**07 00 43.9**	**+3.1**
	baz=13					
H25K	**Birch Creek**	**70.03 351**	P	**P**	**06 51 30.1**	**-0.5**
	baz=16,SNR=48					
H25K			S	**S**	**07 00 45.8**	**+5.0**
	baz=16					
KMSC	**Kings Mountain**	**70.03 300**	P	**P**	**06 51 31.7**	**+0.5**
	baz=51,SNR=18					
KMSC			S	**S**	**07 00 42.7**	**+0.9**
	baz=51					
KMSC	**Kings Mountain**	**70.03 300**	P	**P**	**06 51 31.4**	**+0.2**
	baz=51,SNR=18					
KMSC			S	**S**	**07 00 41.1**	**-0.8**
	baz=51					
Y57A	**Sumter**	**70.12 298**	P	**P**	**06 51 32.4**	**+0.6**
	baz=51					
Y57A			P	**P**	**06 51 32.4**	**+0.6**
	baz=51					
Y57A			S	**S**	**07 00 41.8**	**-1.1**
	baz=51					
Y57A			S	**S**	**07 00 41.8**	**-1.1**
	baz=51					
I27K	**Kandik River**	**70.13 349**	P	**P**	**06 51 30.5**	**-0.9**
	baz=20,SNR=53					
I27K			S	**S**	**07 00 45.0**	**+2.9**
	baz=20					
SJG	**San Juan**	**70.14 277**	LR	LR	07 17 27.7	
	comp=Z,43μm,21.9s,baz=84,slow=32					
SJG	**San Juan**	**70.14 277**	P	**P**	**06 51 31.8**	**-0.2**
SJG	**San Juan**	**70.14 277**	IAMs_20	IAMs_20	07 16 52.7	
	comp=Z,48μm,22.0s					
SJG	**San Juan**	**70.14 277**	P	**P**	**06 51 31.8**	**-0.2**
SJG			pmax	pmax		
	comp=Z,75nm,1.0s					
SJG	**San Juan**	**70.14 277**	P	**P**	**06 51 34.7**	**+2.7**
WDLM	**Western Deep L**	**70.16 166**	*e*P	**P**	**06 51 32.2**	**+0.1**
WDLM			IAmb	IAmb	06 51 38.4	
	comp=Z,72nm,0.8s					
M44A	**Midewin, Midew**	**70.17 308**	P	**P**	**06 51 30.8**	**-1.1**
M44A			IAmb	IAmb	06 51 39.5	
	comp=Z,324nm,1.7s					
M44A	**Midewin, Midew**	**70.17 308**	P	**P**	**06 51 32.4**	**+0.4**
	baz=50					
M44A			S	**S**	**07 00 42.3**	**-1.0**
	baz=50					
CD2	**Chengdu**	**70.18 66**	P	**P**	**06 51 32.5**	**+0.2**
CD2			PP	**PP**	**06 54 11.5**	**+4.3**
CD2			S	**S**	**07 00 42.8**	**-1.0**
CD2			SKS	**SKSac**	**07 01 32.5**	**-1.4**
CD2			SS	**SS**	**07 05 14.0**	**+0.8**
CD2			pmax	pmax		
	comp=Z,250nm,1.0s					
CD2			pmax	pmax		
	comp=Z,6μm,7.1s					
CD2			LR	LR		
	comp=Z,33μm,17.1s					
CD2			LR	LR		
	comp=Z,66μm,18.9s					
CRLN	**Carolina, Mapu**	**70.24 164**	*e*P	**P**	**06 51 33.5**	**+1.0**
CRLN			IAmb	IAmb	06 51 37.4	
	comp=Z,878nm,2.3s					
SFIN	**Lafayette**	**70.27 307**	P	**P**	**06 51 31.3**	**-1.2**
	baz=50,SNR=15					
SFIN			S	**S**	**07 00 42.9**	**-1.5**
	baz=50					
SFIN	**Lafayette**	**70.27 307**	P	**P**	**06 51 31.3**	**-1.2**
	baz=50,SNR=15					
SFIN			S	**S**	**07 00 41.4**	**-3.0**
	baz=50					
F36A	**Milaca**	**70.28 315**	P	**P**	**06 51 33.7**	**+1.2**
	baz=48,SNR=14					
F36A			S	**S**	**07 00 40.9**	**-3.5**
	baz=48					
GCMP	**Grenada, Carri**	**70.30 269**	*e*P	**P**	**06 51 29.8**	**-3.3**
SPMN	**Marine on St.**	**70.32 314**	P	**P**	**06 51 31.4**	**-1.4**
	baz=49,SNR=23					
SPMN			S	**S**	**07 00 44.3**	**-0.6**
	baz=49					
SPMN	**Marine on St.**	**70.32 314**	P	**P**	**06 51 31.3**	**-1.5**
	baz=49,SNR=23					
SPMN			S	**S**	**07 00 43.9**	**-1.0**
	baz=49					
MND	**Mandalay**	**70.40 78**	P	**P**	**06 51 31.6**	**-2.0**
	comp=Z,87nm,2.0s					
TOSP	**Speyside**	**70.42 267**	*e*P	**P**	**06 51 32.5**	**-1.3**
AOPR	**Arecibo Observ**	**70.43 277**	IAmb	IAmb	06 51 43.4	
	comp=Z,136nm,1.1s					
JFWS	**Jewell Farm**	**70.44 311**	P	**P**	**06 51 31.4**	**-2.2**
	baz=49,SNR=19					
JFWS	**Jewell Farm**	**70.44 311**	P	**P**	**06 51 31.3**	**-2.2**
	baz=49,SNR=19					
JFWS			S	**S**	**07 00 45.1**	**-1.3**
	baz=49					
R49A	**Shelbyville**	**70.44 304**	P	**P**	**06 51 34.1**	**+0.4**
	baz=50,SNR=23					
R49A			P	**P**	**06 51 34.1**	**+0.4**
	baz=50,SNR=23					
R49A			S	**S**	**07 00 46.0**	**-0.6**
	baz=50					
R49A			S	**S**	**07 00 46.0**	**-0.6**
	baz=50					
G21K	**Allakaket**	**70.50 354**	P	**P**	**06 51 32.9**	**-0.7**
	baz=10					
G21K			S	**S**	**07 00 51.9**	**+5.5**
	baz=10					
TZTN	**Tazewell**	**70.55 302**	P	**P**	**06 51 34.9**	**+0.5**
	baz=51,SNR=6.2					
TZTN	**Tazewell**	**70.55 302**	P	**P**	**06 51 33.2**	**-1.2**
	baz=51,SNR=6.2					
TZTN			S	**S**	**07 00 47.4**	**-0.5**
	baz=51					
NHSC	**New Hope**	**70.56 297**	IAMs_20	IAMs_20	07 20 59.5	
	comp=Z,28μm,20.0s					
NHSC	**New Hope**	**70.56 297**	P	**P**	**06 51 34.0**	**-0.5**
	baz=51,SNR=7.2					
NHSC			S	**S**	**07 00 48.0**	**0.0**
	baz=51					
NHSC	**New Hope**	**70.56 297**	P	**P**	**06 51 33.9**	**-0.5**
	baz=51,SNR=7.2					
NHSC			S	**S**	**07 00 47.6**	**-0.4**
	baz=51					
SWZ	**Schweizer**	**70.57 168**	*e*P	**P**	**06 51 33.5**	**-1.1**
SWZ			IAmb	IAmb	06 51 37.3	
	comp=Z,2μm,2.3s					
I26K	**Coal Creek Min**	**70.62 350**	P	**P**	**06 51 34.0**	**-0.3**
	baz=18,SNR=42					
I26K			S	**S**	**07 00 50.8**	**+3.0**
	baz=18					
V53A	**Saluda**	**70.64 301**	P	**P**	**06 51 33.6**	**-1.4**
	baz=51,SNR=13					
V53A			P	**P**	**06 51 33.6**	**-1.4**
	baz=51,SNR=13					
V53A			S	**S**	**07 00 46.4**	**-2.7**
	baz=51					
V53A			S	**S**	**07 00 46.4**	**-2.7**
	baz=51					
PRYS	**Parys**	**70.64 167**	*e*P	**P**	**06 51 35.1**	**+0.1**
PRYS			IAmb	IAmb	06 51 39.0	
	comp=Z,917nm,2.3s					
H24K	**Noodor Dome**	**70.67 352**	IAmb	IAmb	06 51 38.9	
	comp=Z,94nm,0.9s					
H24K	**Noodor Dome**	**70.67 352**	P	**P**	**06 51 33.2**	**-1.4**
	baz=15,SNR=48					
H24K			S	**S**	**07 00 51.1**	**+2.7**
	baz=15					
GRGR	**Grenville**	**70.69 269**	*e*P	**P**	**06 51 35.5**	**0.0**
J29M	**Klondike Camp**	**70.70 347**	IAmb	IAmb	06 52 06.3	
	comp=Z,206nm,1.2s					
J29M	**Klondike Camp**	**70.70 347**	P	**P**	**06 51 34.0**	**-0.9**
	baz=22,SNR=15					
J29M			S	**S**	**07 00 50.4**	**+1.5**
	baz=22					
BLO	**Bloomington**	**70.70 306**	IAmb	IAmb	06 51 42.0	
	comp=Z,96nm,0.8s					
L42A	**Oliver, Polo**	**70.71 310**	IAmb	IAmb	06 51 39.4	
	comp=Z,83nm,0.8s					
L42A	**Oliver, Polo**	**70.71 310**	P	**P**	**06 51 34.5**	**-0.7**
	baz=49,SNR=21					
L42A			S	**S**	**07 00 48.5**	**-1.0**
	baz=49					
PRP	**Porcupine Dome**	**70.71 351**	IAmb	IAmb	06 51 49.1	
	comp=Z,287nm,1.4s					
PRP	**Porcupine Dome**	**70.71 351**	P	**P**	**06 51 35.6**	**+0.5**
	baz=16,SNR=62					
PRP			S	**S**	**07 00 53.2**	**+4.0**
	baz=16					
GRFF	**Grenada Fort F**	**70.81 269**	*e*P	**P**	**06 51 37.7**	**+1.5**
P46A	**Rosedale**	**70.82 306**	P	**P**	**06 51 35.2**	**-0.7**
	baz=50,SNR=23					
P46A			S	**S**	**07 00 50.7**	**-0.2**
	baz=50					
EGAK	**Eagle**	**70.84 349**	IAmb	IAmb	06 51 48.9	
	comp=Z,361nm,1.6s					
EGAK	**Eagle**	**70.84 349**	P	**P**	**06 51 35.1**	**-0.6**
	baz=20,SNR=76					
EGAK			S	**S**	**07 00 53.1**	**+2.7**
	baz=20					
H23K	**Yukon River**	**70.84 353**	P	**P**	**06 51 35.9**	**+0.2**
	baz=13,SNR=62					
H23K			S	**S**	**07 00 55.4**	**+4.9**
	baz=13					
MLPR	**Magueyes Islan**	**70.88 277**	P	**P**	**06 51 35.8**	**-0.8**
MLPR			IAmb	IAmb	06 51 46.2	
	comp=Z,176nm,1.1s					
CRPR	**Cabo Rojo, PR**	**70.91 277**	IAmb	IAmb	06 51 46.3	
	comp=Z,234nm,1.0s					
H22K	**Ishlaltna Cre**	**70.94 353**	P	**P**	**06 51 37.2**	**+0.9**
	baz=12,SNR=36					
H22K			S	**S**	**07 00 56.9**	**+5.3**
	baz=12					
TMAB	**Tom-Au,PA,Br**	**70.96 248**	*e*P	**P**	**06 51 38.3**	**+1.3**
V52A	**Sevierville**	**71.02 301**	P	**P**	**06 51 36.0**	**-1.3**
	baz=50					
V52A			S	**S**	**07 00 50.4**	**-3.0**
	baz=50					
T50A	**Nancy**	**71.05 303**	P	**P**	**06 51 34.1**	**-3.3**
	baz=50					
T50A			P	**P**	**06 51 34.1**	**-3.3**
	baz=50					
T50A			S	**S**	**07 00 52.2**	**-1.4**
	baz=50					
T50A			S	**S**	**07 00 52.2**	**-1.4**
	baz=50					
MMPY	**Sheldon Lake,**	**71.08 343**	P	**P**	**06 51 37.8**	**+0.6**
	baz=27,SNR=60					
MMPY			S	**S**	**07 00 58.2**	**+4.9**
	baz=27					
MAYO	**Mayo, Yukon**	**71.09 346**	P	**P**	**06 51 37.4**	**+0.2**
	baz=24,SNR=20					
MAYO			S	**S**	**07 00 55.5**	**+2.2**
	baz=24					
K29M	**Barlow Dome**	**71.15 347**	P	**P**	**06 51 38.6**	**+0.9**
	baz=22,SNR=38					
K29M			S	**S**	**07 00 56.8**	**+2.5**
	baz=22					
WCI	**Wyandotte Cave**	**71.17 305**	P	**P**	**06 51 36.6**	**-1.4**
WCI			IAmb	IAmb	06 51 44.9	
	comp=Z,155nm,0.9s					
WCI	**Wyandotte Cave**	**71.17 305**	IAMs_20	IAMs_20	07 21 29.2	
	comp=Z,47μm,20.0s					
WCI	**Wyandotte Cave**	**71.17 305**	P	**P**	**06 51 36.6**	**-1.4**
WCI			pmax	pmax		
	comp=Z,155nm,0.9s					
WCI	**Wyandotte Cave**	**71.17 305**	P	**P**	**06 51 36.0**	**-2.0**
	baz=50,SNR=35					
WCI	**Wyandotte Cave**	**71.17 305**	P	**P**	**06 51 36.4**	**-1.7**
	baz=50					
WCI			S	**S**	**07 00 53.4**	**-1.6**
	baz=50					
WCI	**Wyandotte Cave**	**71.17 305**	P	**P**	**06 51 36.7**	**-1.4**
D32B	**Dogwood Acres,**	**71.20 317**	P	**P**	**06 51 37.1**	**-1.0**
	baz=47					
O44A	**Mansfield**	**71.22 308**	P	**P**	**06 51 38.4**	**0.0**
	baz=50,SNR=20					
O44A			S	**S**	**07 01 01.0**	**+5.6**
	baz=50					
UPI	**Upington**	**71.24 172**	*e*P	**P**	**06 51 38.8**	**+0.3**
DAWY	**Dawson**	**71.25 348**	P	**P**	**06 51 38.1**	**-0.1**
	baz=21,SNR=102					
DAWY			S	**S**	**07 00 57.8**	**+2.6**
	baz=21					
TKL	**Tuckaleechee C**	**71.25 301**	LR	LR	07 23 33.7	
	comp=Z,31μm,18.0s,baz=64,slow=36					
TKL	**Tuckaleechee C**	**71.25 301**	P	**P**	**06 51 38.9**	**+0.3**
	baz=50,SNR=13					
TKL			S	**S**	**07 00 53.3**	**-2.8**
	baz=50					
H21K	**Melozitna Rive**	**71.29 354**	P	**P**	**06 51 38.6**	**+0.2**
	baz=11,SNR=215					
H21K			S	**S**	**07 00 59.9**	**+4.3**
	baz=11					
FLDN	**Fort Liard**	**71.31 339**	P	**P**	**06 51 39.0**	**+0.5**
	baz=32,SNR=16					
FLDN			S	**S**	**07 01 00.5**	**+4.7**
	baz=32					
POKR	**Poker Plat Res**	**71.32 351**	P	**P**	**06 51 39.0**	**+0.4**
	baz=15,SNR=34					
POKR			S	**S**	**07 00 58.7**	**+2.8**
	baz=15					
AUGR	**Augrabies**	**71.38 173**	*e*P	**P**	**06 51 38.6**	**-0.7**
AUGR			IAmb	IAmb	06 51 43.1	
	comp=Z,730nm,2.0s					
TGTN	**Hyland Airport**	**71.39 342**	P	**P**	**06 51 39.2**	**+0.1**
	baz=29,SNR=5.8					
TGTN			S	**S**	**07 01 01.9**	**+5.0**
	baz=29					
HDIL	**Hopedale**	**71.43 308**	P	**P**	**06 51 38.2**	**-1.5**
HDIL			IAmb	IAmb	06 51 43.6	
	comp=Z,77nm,0.6s					
HDIL	**Hopedale**	**71.43 308**	P	**P**	**06 51 38.1**	**-1.5**
	baz=49,SNR=24					
HDIL			S	**S**	**07 00 58.0**	**0.0**
	baz=49					
HDIL	**Hopedale**	**71.43 308**	P	**P**	**06 51 39.2**	**-0.4**
	baz=49,SNR=24					
HDIL			S	**S**	**07 00 56.8**	**-1.2**
	baz=49					
I37B	**Waseca**	**71.44 313**	P	**P**	**06 51 37.2**	**-2.5**
	baz=48,SNR=13					
I37B			S	**S**	**07 01 01.4**	**+3.4**
	baz=48					
J26L	**Joseph Creek**	**71.44 350**	P	**P**	**06 51 38.5**	**-1.0**
	baz=18,SNR=116					
J26L			S	**S**	**07 01 01.8**	**+4.2**
	baz=18					
TIY	**Taiyuan**	**71.46 56**	⇓P	**P**	**06 51 41.0**	**+1.1**
TIY			S	**S**	**07 01 00.0**	**+1.5**
TIY			SS	**SS**	**07 05 37.3**	**+4.9**
TIY			pmax	pmax		
	comp=Z,84nm,0.9s					
TIY			pmax	pmax		
	comp=Z,4μm,4.3s					
TIY			LR	LR		
	comp=Z,76μm,16.5s					
TIY			LR	LR		
	comp=Z,130μm,18.5s					
TRN	**Trinidad (W)**	**71.49 267**	*e*P	**P**	**06 51 40.9**	**+0.6**
I23K	**Minto, Yukon-K**	**71.49 352**	IAmb	IAmb	06 51 53.2	
	comp=Z,265nm,1.4s					
I23K	**Minto, Yukon-K**	**71.49 352**	P	**P**	**06 51 39.3**	**-0.3**
	baz=14,SNR=60					
I23K			S	**S**	**07 01 01.6**	**+3.8**
	baz=14					
VOI	**Vohitsoka**	**71.51 147**	IAMs_20	IAMs_20	07 25 52.1	
	comp=Z,30μm,21.0s					
VOI	**Vohitsoka**	**71.51 147**	*e*P	**P**	**06 51 40.9**	**+0.5**
VOI	**Vohitsoka**	**71.51 147**	P	**P**	**06 51 39.5**	**-0.8**
	SNR=14					
VOI	**Vohitsoka**	**71.51 147**	P	**P**	**06 51 40.1**	**-0.2**
V51A	**Loudon**	**71.52 302**	IAmb	IAmb	06 51 47.4	
	comp=Z,106nm,1.1s					
V51A	**Loudon**	**71.52 302**	P	**P**	**06 51 38.1**	**-2.2**
	baz=50,SNR=20					
V51A			S	**S**	**07 00 56.6**	**-2.5**
	baz=50					
L40A	**Anamosa**	**71.54 310**	IAmb	IAmb	06 51 47.1	
	comp=Z,107nm,0.8s					
L40A	**Anamosa**	**71.54 310**	P	**P**	**06 51 37.2**	**-3.0**
	baz=49,SNR=25					
L40A			S	**S**	**07 00 58.7**	**-0.5**
	baz=49					
KEIM	**Keimoes**	**71.55 173**	*e*P	**P**	**06 51 39.5**	**-0.9**
KEIM			IAmb	IAmb	06 51 44.3	
	comp=Z,2μm,2.4s					
KOTAN	**Kotaneelee Air**	**71.55 339**	P	**P**	**06 51 41.2**	**+1.2**
	baz=32,SNR=30					
KOTAN			S	**S**	**07 01 02.5**	**+3.7**
	baz=32					
PZH	**PanZhiHua**	**71.56 71**	P	**P**	**06 51 40.5**	**-0.3**
PZH			pP	**pP**	**06 51 44.0**	**-0.3**
PZH			sP	**sP**	**06 51 46.5**	**+0.9**
PZH			PP	**PP**	**06 54 23.0**	**+3.7**
PZH			S	**S**	**07 00 59.5**	**-0.6**
PZH			SKS	**SKSac**	**07 01 41.3**	**-3.3**
PZH			SS	**SS**	**07 05 37.5**	**+2.8**
PZH			pmax	pmax		
	comp=Z,150nm,1.1s					
PZH			pmax	pmax		
	comp=Z,6μm,6.8s					
PZH			LR	LR		
	comp=Z,39μm,28.2s					
PZH			LR	LR		
	comp=Z,38μm,28.0s					
PZH			LR	LR		
	comp=Z,67μm,28.9s					
J25K	**Salcha River,**	**71.56 350**	IAmb	IAmb	06 51 56.2	
	comp=Z,378nm,1.9s					
J25K	**Salcha River,**	**71.56 350**	P	**P**	**06 51 40.4**	**+0.2**
	baz=16,SNR=44					
J25K			S	**S**	**07 01 01.6**	**+2.7**
	baz=16					
IL31		**71.59 351**	IAmb	IAmb	06 51 44.1	
	comp=Z,122nm,1.1s					
ILAR	**Eielson Array**	**71.59 351**	P	**P**	**06 51 40.2**	**0.0**
	comp=Z,60nm,0.9s,baz=4.9,slow=4.6,SNR=129					
ILAR			LR	LR	07 23 38.3	
	comp=Z,15μm,21.3s,baz=8.0,slow=36					
	comp=Z,60nm,0.9s					
GRTK	**Grand Turk**	**71.59 282**	IAMs_20	IAMs_20	07 17 60.0	
	comp=Z,27μm,22.0s					
COLA	**College**	**71.60 352**	P	**P**	**06 51 40.2**	**+0.1**
COLA			IAmb	IAmb	06 51 44.2	
	comp=Z,119nm,1.1s					
COLA	**College**	**71.60 352**	*de*P	**P**	**06 51 41.7**	**+1.5**
COLA			pmax	pmax		
	comp=Z,180nm,1.6s					
COLA	**College**	**71.60 352**	P	**P**	**06 51 40.7**	**+0.5**
	baz=15					
COLA			S	**S**	**07 01 03.2**	**+4.1**
	baz=15					
COLA	**College**	**71.60 352**	P	**P**	**06 51 41.0**	**+0.8**
	comp=Z,146nm,1.1s					
COLA	**College**	**71.60 352**	P	**P**	**06 51 41.1**	**+0.8**
TCOL	**CIGO, UAF Yank**	**71.60 352**	IAmb	IAmb	06 51 44.2	
	comp=Z,120nm,1.1s					
TCOL	**CIGO, UAF Yank**	**71.60 352**	P	**P**	**06 51 40.2**	**0.0**
	baz=15,SNR=15					
TCOL			S	**S**	**07 01 03.2**	**+4.1**
	baz=15					
XAN	**Xi'an**	**71.61 61**	P	**P**	**06 51 40.8**	**-0.1**
XAN			pP	pP	06 51 44.8	+0.4
XAN			PP	**PP**	**06 54 22.3**	**+2.9**
XAN			S	**S**	**07 00 57.5**	**-2.8**
XAN			pmax	pmax		
	comp=Z,44nm,1.4s					
XAN			pmax	pmax		
	comp=Z,9μm,11.7s					
XAN			LR	LR		
	comp=Z,86μm,19.5s					
XAN			LR	LR		
	comp=Z,144μm,19.6s					
K27K	**Chicken**	**71.69 349**	IAmb	IAmb	06 51 55.0	
	comp=Z,266nm,1.1s					
K27K	**Chicken**	**71.69 349**	P	**P**	**06 51 40.7**	**-0.1**
	baz=19					
K27K			S	**S**	**07 01 04.6**	**+4.4**
	baz=19					
I21K	**Tanana**	**71.70 353**	IAmb	IAmb	06 51 45.6	
	comp=Z,246nm,1.0s					
I21K	**Tanana**	**71.70 353**	P	**P**	**06 51 41.8**	**+1.0**
	baz=12,SNR=66					
I21K			S	**S**	**07 01 06.5**	**+6.3**
	baz=12					
W52A	**Murphy**	**71.71 301**	P	**P**	**06 51 39.6**	**-1.8**
	baz=50,SNR=12					
W52A			S	**S**	**07 01 00.4**	**-1.1**
	baz=50					
F33A	**5 Mile Ranch,**	**71.72 316**	IAmb	IAmb	06 51 49.1	
	comp=Z,438nm,1.9s					
F33A	**5 Mile Ranch,**	**71.72 316**	P	**P**	**06 51 41.0**	**-0.3**
	baz=47,SNR=22					
F33A			S	**S**	**07 01 01.6**	**+0.4**
	baz=47					
MLY	**Manley**	**71.73 353**	P	**P**	**06 51 40.7**	**-0.4**
	baz=12,SNR=114					
MLY			S	**S**	**07 01 07.2**	**+6.4**
	baz=12					
CCB	**Clear Creek Bu**	**71.81 351**	IAmb	IAmb	06 51 54.7	
	comp=Z,175nm,1.6s					
257A	**Skidaway Islan**	**71.82 297**	P	**P**	**06 51 42.6**	**+0.5**
	baz=50					
257A			S	**S**	**07 01 06.9**	**+4.2**
	baz=50					
FARO	**Faro, Yukon**	**71.86 344**	P	**P**	**06 51 42.5**	**+0.6**
	baz=25,SNR=92					
FARO			S	**S**	**07 01 06.6**	**+4.3**
	baz=25					
NWCL	**Newcastle**	**71.90 164**	*e*P	**P**	**06 51 42.3**	**-0.2**
POGA	**Pongola**	**71.90 163**	*e*P	**P**	**06 51 43.0**	**+0.6**
L29M	**L29M**	**71.94 347**	P	**P**	**06 51 43.1**	**+0.8**
	baz=22,SNR=29					
L29M			S	**S**	**07 01 07.0**	**+3.8**
	baz=22					
TNA	**Tin City**	**71.94 0**	P	**P**	**06 51 41.7**	**-0.5**
	baz=359					
TNA			S	**S**	**07 01 05.7**	**+2.7**
	baz=359					
HDA	**Harding Lake**	**71.95 351**	P	**P**	**06 51 41.9**	**-0.5**
	baz=15,SNR=101					
HDA			S	**S**	**07 01 04.8**	**+1.6**
	baz=15					
HDA			S	**S**	**07 01 04.8**	**+1.6**
	baz=15					
U49A	**Red Boiling Sp**	**71.95 303**	IAmb	IAmb	06 51 53.5	
	comp=Z,102nm,0.9s					
U49A	**Red Boiling Sp**	**71.95 303**	P	**P**	**06 51 43.1**	**+0.3**
	baz=50,SNR=29					

U49A				S	S	07 01 02.2	-1.9
	baz=50						
BOSA	**Boshof**	**71.97**	**169**	P	**P**	**06 51 41.9**	**-1.1**
	comp=Z,82nm,0.8s,baz=351,slow=6.2,SNR=39						
BOSA				S	S	07 01 01.8	-2.5
	comp=Z,2.9nm,1.0s,baz=235,slow=20,SNR=1.7						
BOSA				LR	LR	07 27 27.8	
	comp=Z,56μm,18.3s,baz=354,slow=39						
	comp=Z,82nm,0.8s						
BOSA	**Boshof**	**71.97**	**169**	P	**P**	**06 51 42.1**	**-0.8**
BOSA				IAmb	IAmb	06 51 49.0	
	comp=Z,178nm,1.0s						
BOSA	**Boshof**	**71.97**	**169**	⇓*i*P	**P**	**06 51 42.2**	**-0.7**
BOSA				IAmb	IAmb	06 51 45.7	
	comp=Z,2μm,2.2s						
BOSA	**Boshof**	**71.97**	**169**	*i*P	**P**	**06 51 42.1**	**-0.8**
BOSA	**Boshof**	**71.97**	**169**	P	**P**	**06 51 42.1**	**-0.8**
BOSA				pmax	pmax		
	comp=Z,178nm,1.0s						
BOSA	**Boshof**	**71.97**	**169**	*i*P	**P**	**06 51 42.1**	**-0.8**
MDND	**Maddock**	**71.98**	**319**	P	**P**	**06 51 42.9**	**+0.1**
	baz=45						
MDND				S	S	07 01 06.6	+2.5
	baz=45						
MDND	**Maddock**	**71.98**	**319**	P	**P**	**06 51 41.5**	**-1.3**
	baz=45						
MDND				S	S	07 01 04.8	+0.8
	baz=45						
SCRK	**Sand Creek**	**72.00**	**350**	IAmb	IAmb	06 51 47.2	
	comp=Z,158nm,1.2s						
SCRK	**Sand Creek**	**72.00**	**350**	P	**P**	**06 51 42.3**	**-0.5**
	baz=18,SNR=53						
SCRK				S	S	07 01 09.2	+5.2
	baz=18						
NEA2	**Nenana**	**72.00**	**352**	IAmb	IAmb	06 51 55.9	
	comp=Z,326nm,1.4s						
NEA2	**Nenana**	**72.00**	**352**	P	**P**	**06 51 41.1**	**-1.6**
	baz=14,SNR=56						
NEA2				S	S	07 01 06.5	+2.7
	baz=14						
K38A	**Parkersburg**	**72.01**	**312**	IAmb	IAmb	06 51 50.6	
	comp=Z,292nm,1.8s						
K38A	**Parkersburg**	**72.01**	**312**	P	**P**	**06 51 39.6**	**-3.5**
	baz=48						
K38A				S	S	07 01 06.3	+1.6
	baz=48						
WRH	**Wood River Hil**	**72.02**	**352**	IAmb	IAmb	06 51 55.1	
	comp=Z,292nm,1.4s						
SNKL	**Senekal, Frees**	**72.03**	**166**	*e*P	**P**	**06 51 42.6**	**-0.8**
SNKL				IAmb	IAmb	06 51 46.5	
	comp=Z,1μm,2.2s						
M31M	**Drury Creek, Y**	**72.09**	**345**	IAMs_20	IAMs_20	07 25 11.9	
	comp=Z,36μm,20.0s						
M31M	**Drury Creek, Y**	**72.09**	**345**	P	**P**	**06 51 44.3**	**+1.0**
	baz=24,SNR=56						
M31M				S	S	07 01 12.1	+7.2
	baz=24						
BJI	**Beijing**	**72.16**	**52**	P	**P**	**06 51 44.0**	**0.0**
BJI				pP	**pP**	**06 51 47.0**	**-0.5**
BJI				PcP	**PcP**	**06 52 01.5**	**-0.8**
BJI				PP	**PP**	**06 54 23.5**	**-0.3**
BJI				S	**S**	**07 01 06.0**	**-0.3**
BJI				ScS	**SKSac**	**07 01 47.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
BJI				pmax	pmax		
	comp=Z,5μm,4.3s						
BJI				LR	LR		
	comp=Z,26μm,17.8s						
BJI				LR	LR		
	comp=Z,158μm,17.5s						
MA2	**Magadan**	**72.16**	**21**	LR	LR	07 28 26.8	
	comp=Z,60μm,18.2s,baz=332,slow=40						
MA2	**Magadan**	**72.16**	**21**	P	**P**	**06 51 43.5**	**-0.2**
MA2	**Magadan**	**72.16**	**21**	*d*P	**P**	**06 51 44.0**	**+0.3**
MA2				pmax	pmax		
	comp=Z,477nm,1.0s						
MA2				MLR	MLR		
	comp=Z,72μm,17.0s						
MA2	**Magadan**	**72.16**	**21**	P	**P**	**06 51 44.7**	**+1.0**
	comp=Z,545nm,1.0s						
MA2	**Magadan**	**72.16**	**21**	P	**P**	**06 51 44.8**	**+1.0**
P43A	**Skaggs, Pawnee**	**72.16**	**308**	P	**P**	**06 51 41.2**	**-2.9**
	baz=49,SNR=25						
P43A				S	S	07 01 03.4	-3.1
	baz=49						
BJT	**Baijiatuau**	**72.17**	**52**	IAmb	IAmb	06 51 51.9	
	comp=Z,207nm,1.0s						
BJT	**Baijiatuau**	**72.17**	**52**	P	**P**	**06 51 45.0**	**+0.9**
	comp=Z,240nm,1.8s						
M30M	**Minto, Yukon**	**72.20**	**346**	IAMs_20	IAMs_20	07 25 53.7	
	comp=Z,38μm,20.0s						
M30M	**Minto, Yukon**	**72.20**	**346**	P	**P**	**06 51 44.7**	**+0.7**
	baz=23,SNR=16						
M30M				S	**SKiKP**	**07 01 14.6**	**-5.5**
	baz=23						
N41A	**Harden Midland**	**72.23**	**309**	IAmb	IAmb	06 51 51.7	
	comp=Z,153nm,1.1s						
N41A	**Harden Midland**	**72.23**	**309**	P	**P**	**06 51 43.6**	**-0.8**
	baz=48						
N41A				S	S	07 01 08.3	+1.2
	baz=48						
MCPB	**Macapa, AP**	**72.25**	**252**	*e*P	**P**	**06 51 44.3**	**-0.7**
RIDG	**Independent Ri**	**72.34**	**350**	P	**P**	**06 51 44.6**	**-0.2**
	baz=17,SNR=87						
RIDG				S	S	07 01 11.7	+3.9
	baz=17						
Q44A	**Meyer Farm, Va**	**72.35**	**307**	P	**P**	**06 51 43.5**	**-1.7**
	baz=49						
Q44A				S	S	07 01 07.7	-0.9
	baz=49						
KOMG	**Komaggas**	**72.38**	**176**	*e*P	**P**	**06 51 45.4**	**+0.2**
KOMG				IAmb	IAmb	06 51 49.0	
	comp=Z,1μm,2.3s						
K24K	**Donnelly Dome**	**72.40**	**350**	P	**P**	**06 51 45.4**	**+0.3**
	baz=16,SNR=54						
K24K				S	S	07 01 11.1	+2.7
	baz=16						
T47A	**Sharon Grove**	**72.46**	**304**	P	**P**	**06 51 45.2**	**-0.7**
	baz=49,SNR=106						
T47A				S	S	07 01 05.8	-4.0
	baz=49						
GCSA	**Galena City Sc**	**72.47**	**356**	P	**P**	**06 51 45.2**	**-0.3**
	baz=7.7,SNR=22						
GCSA				S	**SKiKP**	**07 01 14.8**	**-5.4**
	baz=7.7						
GOGA	**Godfrey**	**72.49**	**299**	IAMs_20	IAMs_20	07 20 59.7	
	comp=Z,52μm,21.0s						
GOGA	**Godfrey**	**72.49**	**299**	P	**P**	**06 51 46.7**	**+0.6**
	baz=50,SNR=13						
GOGA	**Godfrey**	**72.49**	**299**	P	**P**	**06 51 45.8**	**-0.3**
	baz=50,SNR=13						
GOGA				S	S	07 01 10.2	-0.1
	baz=50						
W50A	**Signal Mountai**	**72.51**	**302**	P	**P**	**06 51 46.7**	**+0.5**
	baz=50,SNR=27						
W50A				S	S	07 01 09.8	-0.8
	baz=50						
CLTN	**Cedars of Leba**	**72.57**	**303**	IAmb	IAmb	06 51 53.3	
	comp=Z,115nm,1.0s						
L27K	**Beaver Creek,**	**72.57**	**348**	IAmb	IAmb	06 52 00.2	
	comp=Z,174nm,1.2s						
L27K				IAMs_20	IAMs_20	07 27 40.5	
	comp=Z,23μm,19.0s						
L27K	**Beaver Creek,**	**72.57**	**348**	P	**P**	**06 51 46.5**	**+0.4**
	baz=19,SNR=65						
L27K				S	S	07 01 15.4	+5.0
	baz=19						
Y52A	**Lilburn**	**72.58**	**300**	IAmb	IAmb	06 51 53.8	
	comp=Z,138nm,1.2s						
Y52A	**Lilburn**	**72.58**	**300**	P	**P**	**06 51 45.8**	**-0.8**
	baz=50,SNR=27						
Y52A				P	**P**	**06 51 45.8**	**-0.8**
	baz=50,SNR=27						
Y52A				S	S	07 01 10.1	-1.3
	baz=50						
Y52A				S	S	07 01 10.1	-1.3
	baz=50						
M29M	**Somme Creek**	**72.61**	**347**	P	**P**	**06 51 47.5**	**+1.0**
	baz=22,SNR=74						
M29M				S	S	07 01 15.2	+4.1
	baz=22						
X51A	**Calhoun**	**72.63**	**301**	IAmb	IAmb	06 51 54.7	
	comp=Z,201nm,1.6s						
X51A	**Calhoun**	**72.63**	**301**	P	**P**	**06 51 47.3**	**+0.3**
	baz=50,SNR=8.0						
X51A				P	**P**	**06 51 47.3**	**+0.3**
	baz=50,SNR=8.0						
X51A				S	S	07 01 09.1	-2.9
	baz=50						
X51A				S	S	07 01 09.1	-2.9
	baz=50						
BPAW	**Bear Paw Mtn.**	**72.67**	**353**	P	**P**	**06 51 46.8**	**+0.1**
	baz=12,SNR=59						
BPAW				S	S	07 01 13.2	+1.7
	baz=12						
PKA	**Prieska**	**72.69**	**171**	*e*P	**P**	**06 51 49.9**	**+2.7**
PKA				IAmb	IAmb	06 52 01.2	
	comp=Z,25nm,0.9s						
LIRD	**Liard River Hi**	**72.70**	**340**	P	**P**	**06 51 47.6**	**+0.7**
	baz=30,SNR=52						
LIRD				S	S	07 01 16.3	+4.3
	baz=30						
SCIA	**State Center**	**72.75**	**311**	IAmb	IAmb	06 51 55.1	
	comp=Z,377nm,1.9s						
SCIA	**State Center**	**72.75**	**311**	P	**P**	**06 51 47.8**	**+0.3**
	baz=48,SNR=5.3						
SCIA				S	S	07 01 12.8	-0.4
	baz=48						
SCIA	**State Center**	**72.75**	**311**	P	**P**	**06 51 47.3**	**-0.2**
	baz=48,SNR=5.3						
SCIA				S	S	07 01 08.3	-4.9
	baz=48						
WTLY	**Watson Lake, Y**	**72.76**	**341**	IAmb	IAmb	06 52 01.2	
	comp=Z,198nm,1.1s						
WTLY	**Watson Lake, Y**	**72.76**	**341**	P	**P**	**06 51 47.4**	**+0.1**
	baz=28,SNR=123						
WTLY				S	S	07 01 16.6	+3.9
	baz=28						
154A	**Montrose**	**72.77**	**299**	P	**P**	**06 51 48.5**	**+0.7**
	baz=50						
154A				S	S	07 01 16.7	+3.1
	baz=50						
N32M	**Quiet Lake**	**72.78**	**344**	P	**P**	**06 51 47.6**	**+0.1**
	baz=25						
N32M				S	**SKiKP**	**07 01 18.5**	**-2.4**
	baz=25						
255A	**Hazlehurst**	**72.80**	**298**	S	S	07 01 14.8	+0.9
	baz=50						
L26K	**Log Cabin Wild**	**72.82**	**349**	P	**P**	**06 51 47.8**	**+0.1**
	baz=18,SNR=104						
L26K				S	**SKiKP**	**07 01 18.7**	**-2.2**
	baz=18						
MCK	**McKinley**	**72.83**	**352**	P	**P**	**06 51 46.8**	**-0.9**
	baz=14,SNR=90						
MCK				S	S	07 01 14.2	+0.9
	baz=14						
J20K	**Nowinta River**	**72.86**	**354**	IAmb	IAmb	06 52 01.7	
	comp=Z,337nm,1.4s						
J20K	**Nowinta River**	**72.86**	**354**	P	**P**	**06 51 48.6**	**+0.9**
	baz=9.8,SNR=48						
J20K				S	**SKiKP**	**07 01 17.6**	**-3.3**
	baz=9.8						
ANM	**Nome**	**72.94**	**359**	P	**P**	**06 51 47.7**	**-0.6**
	baz=1.2						
ANM				S	**SKiKP**	**07 01 19.9**	**-1.1**
	baz=1.2						
MENT	**Mentasta**	**72.96**	**349**	IAmb	IAmb	06 51 57.5	
	comp=Z,332nm,1.6s						
CHUM	**Lake Minchumin**	**73.00**	**353**	P	**P**	**06 51 49.0**	**+0.4**
	baz=11,SNR=128						
CHUM				S	**SKiKP**	**07 01 18.4**	**-2.7**
	baz=11						
N31M	**Braeburn, Yuko**	**73.02**	**345**	IAmb	IAmb	06 51 56.0	
	comp=Z,182nm,1.1s						
N31M				IAMs_20	IAMs_20	07 25 52.3	
	comp=Z,45μm,20.0s						
N31M	**Braeburn, Yuko**	**73.02**	**345**	P	**P**	**06 51 49.4**	**+0.6**
	baz=23,SNR=64						
N31M				S	**SKiKP**	**07 01 19.9**	**-1.4**
	baz=23						
HNS	**HongShan**	**73.03**	**55**	⇓P	**P**	**06 51 49.0**	**-0.2**
HNS				PP	**PP**	**06 54 33.0**	**+1.6**
HNS				S	**S**	**07 01 16.0**	**-0.4**
HNS				SKS	**SKSac**	**07 01 51.0**	**-4.1**
HNS				pmax	pmax		
	comp=Z,170nm,1.8s						
HNS				pmax	pmax		
	comp=Z,5μm,7.9s						
HNS				LR	LR		
	comp=Z,48μm,19.0s						
HNS				LR	LR		
	comp=Z,135μm,20.0s						
BVCY	**Beaver Creek**	**73.03**	**348**	P	**P**	**06 51 50.0**	**+1.1**
	baz=20,SNR=28						
BVCY				S	**SKiKP**	**07 01 21.8**	**+0.6**
	baz=20						
V48A	**Smith Brothers**	**73.10**	**303**	IAmb	IAmb	06 52 00.2	
	comp=Z,133nm,1.1s						
V48A	**Smith Brothers**	**73.10**	**303**	P	**P**	**06 51 48.3**	**-1.4**
	baz=49,SNR=32						
V48A				S	S	07 01 13.9	-3.3
	baz=49						
KMI	**Kunming**	**73.13**	**71**	⇑P	**P**	**06 51 50.5**	**+0.2**
KMI				pP	sP	06 51 54.5	-0.6
KMI				PP	**PP**	**06 54 33.8**	**+1.0**
KMI				S	**S**	**07 01 17.0**	**-1.3**
KMI				SKS	**SKSac**	**07 01 47.0**	**-10**
KMI				SS	**SS**	**07 06 01.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,130nm,2.3s						
KMI				pmax	pmax		
	comp=Z,6μm,6.3s						
KMI				LR	LR		
	comp=Z,31μm,24.7s						
KMI				LR	LR		
	comp=Z,79μm,22.2s						
PAX	**Paxson**	**73.16**	**350**	IAmb	IAmb	06 52 03.0	
	comp=Z,142nm,1.2s						
PAX	**Paxson**	**73.16**	**350**	P	**P**	**06 51 49.0**	**-0.7**
	baz=16,SNR=28						
PAX				S	**SKiKP**	**07 01 20.7**	**-0.8**
	baz=16						
KTH	**Kantishna Hill**	**73.20**	**353**	IAmb	IAmb	06 51 56.0	
	comp=Z,173nm,1.2s						
TRF	**Thorofare Moun**	**73.24**	**352**	P	**P**	**06 51 50.2**	**0.0**
	baz=13,SNR=48						
TRF				S	**SKiKP**	**07 01 20.7**	**-1.0**
	baz=13						
M27K	**Edge Creek, AK**	**73.24**	**348**	P	**P**	**06 51 51.3**	**+1.0**
	baz=19,SNR=52						
M27K				S	**SKiKP**	**07 01 26.3**	**+4.6**
	baz=19						
SLM	**Saint Louis**	**73.25**	**307**	IAmb	IAmb	06 51 58.0	
	comp=Z,334nm,1.5s						
SLM	**Saint Louis**	**73.25**	**307**	P	**P**	**06 51 49.8**	**-0.7**
	baz=48						
456A	**Hilliard**	**73.28**	**296**	P	**P**	**06 51 51.5**	**+0.7**
	baz=50						
456A				S	**SKiKP**	**07 01 22.3**	**-0.1**
	baz=50						
N30M	**Aishikik Lake**	**73.28**	**346**	P	**P**	**06 51 51.0**	**+0.6**
	baz=22,SNR=53						
N30M				S	**SKiKP**	**07 01 22.4**	**+0.7**
	baz=22						
S44A	**Carbondale**	**73.29**	**306**	P	**P**	**06 51 50.3**	**-0.5**
	baz=48,SNR=18						
S44A				S	S	07 01 14.2	-5.2
	baz=48						
DHY	**Denali Highway**	**73.29**	**351**	P	**P**	**06 51 50.8**	**+0.2**
	baz=15,SNR=186						
DHY				S	**SKiKP**	**07 01 22.0**	**+0.2**
	baz=15						
SDDR	**Presa de Saban**	**73.32**	**281**	IAMs_20	IAMs_20	07 23 51.8	
	comp=Z,43μm,19.0s						
ECSD	**EROS Data Cent**	**73.34**	**315**	IAmb	IAmb	06 52 00.4	
	comp=Z,117nm,0.9s						
ECSD	**EROS Data Cent**	**73.34**	**315**	P	**P**	**06 51 51.2**	**+0.2**
	baz=46,SNR=48						
ECSD	**EROS Data Cent**	**73.34**	**315**	P	**P**	**06 51 51.0**	**0.0**
	baz=46,SNR=48						
ECSD				S	**SKiKP**	**07 01 21.8**	**-0.5**
	baz=46						
M26K	**Nabesna, AK**	**73.37**	**349**	IAmb	IAmb	06 52 04.1	
	comp=Z,218nm,1.2s						
M26K	**Nabesna, AK**	**73.37**	**349**	P	**P**	**06 51 51.2**	**+0.3**
	baz=18,SNR=53						
M26K				S	**SKiKP**	**07 01 24.7**	**+2.9**
	baz=18						
T45B	**Paducah**	**73.37**	**305**	P	**P**	**06 51 51.0**	**-0.2**
	baz=49						
T45B				S	**S**	**07 01 14.2**	**-6.0**
	baz=49						
E28A	**Huff**	**73.40**	**319**	P	**P**	**06 51 50.8**	**-0.5**
	baz=44,SNR=51						
E28A				S	**SKiKP**	**07 01 22.1**	**-0.1**
	baz=44						
DGAR	**Diego Garcia**	**73.43**	**117**	IAMs_20	IAMs_20	07 24 23.6	
	comp=Z,25μm,22.0s						
CAST	**Castle Rocks**	**73.44**	**353**	IAmb	IAmb	06 52 04.6	
	comp=Z,255nm,1.2s						
CAST	**Castle Rocks**	**73.44**	**353**	P	**P**	**06 51 52.8**	**+1.5**
	baz=11,SNR=80						
CAST				S	S	07 01 20.5	+0.3
	baz=11						
WVT	**Waverly**	**73.46**	**304**	P	**P**	**06 51 49.3**	**-2.5**
	baz=49,SNR=57						
WVT	**Waverly**	**73.46**	**304**	P	**P**	**06 51 51.2**	**-0.6**
	baz=49						
WVT				S	S	07 01 16.3	-5.0
	baz=49						
WVT	**Waverly**	**73.46**	**304**	P	**P**	**06 51 50.7**	**-1.1**
N38A	**Joes South For**	**73.52**	**311**	IAmb	IAmb	06 51 55.8	
	comp=Z,131nm,0.6s						
N38A	**Joes South For**	**73.52**	**311**	P	**P**	**06 51 51.0**	**-1.1**
	baz=47,SNR=30						
N38A				S	S	07 01 21.6	-0.2
	baz=47						
LYN	**LuoYang**	**73.52**	**58**	⇓*i*P	**P**	**06 51 52.0**	**-0.2**
LYN				pP	sP	06 51 56.5	-0.5
LYN				PP	**PP**	**06 54 36.0**	**+0.3**
LYN				S	**SKiKP**	**07 01 24.3**	**+1.6**
LYN				SS	**SS**	**07 06 10.0**	**+6.0**
LYN				pmax	pmax		
	comp=Z,20nm,1.5s						
LYN				pmax	pmax		
	comp=Z,5μm,5.0s						
LYN				LR	LR		
	comp=Z,37μm,20.8s						
LYN				LR	LR		
	comp=Z,66μm,18.0s						
YUK3	**Moose Creek**	**73.57**	**347**	P	**P**	**06 51 52.5**	**+0.1**
	baz=20,SNR=85						
YUK3				S	**SKiKP**	**07 01 27.8**	**+5.4**
	baz=20						
P33M	**Teslin, Yukon**	**73.58**	**343**	IAmb	IAmb	06 52 05.9	
	comp=Z,129nm,0.9s						
P33M				IAMs_20	IAMs_20	07 26 50.2	
	comp=Z,26μm,20.0s						
P33M	**Teslin, Yukon**	**73.58**	**343**	P	**P**	**06 51 52.0**	**-0.2**
	baz=25,SNR=86						
P33M				S	**SKiKP**	**07 01 26.9**	**+4.7**
	baz=25						
WHY	**Whitehorse**	**73.60**	**344**	P	**P**	**06 51 52.4**	**0.0**
	baz=24,SNR=46						
WHY				S	S	07 01 25.7	+3.3
	baz=24						
H08S3	**Diego Garcia H**	**73.61**	**117**	P	**P**	**06 51 53.3**	**+0.7**
	baz=340,slow=71,SNR=3.4						
H08S1	**Diego Garcia H**	**73.62**	**117**	P	**P**	**06 51 53.3**	**+0.7**
	baz=340,slow=71,SNR=8.1						
H08S2	**Diego Garcia H**	**73.64**	**117**	P	**P**	**06 51 54.1**	**+1.4**
	baz=340,slow=71,SNR=6.4						
Z51A	**Franklin**	**73.64**	**300**	P	**P**	**06 51 52.9**	**-0.1**
	baz=49						
Z51A				S	**SKiKP**	**07 01 20.9**	**-2.0**
	baz=49						
K20K	**Telida**	**73.66**	**354**	IAmb	IAmb	06 51 56.7	
	comp=Z,170nm,1.1s						
K20K	**Telida**	**73.66**	**354**	P	**P**	**06 51 52.5**	**-0.1**
	baz=9.8,SNR=53						
K20K				S	S	07 01 26.0	+3.2
	baz=9.8						
WAT1	**Susitna Watana**	**73.67**	**351**	P	**P**	**06 51 51.2**	**-1.4**
	baz=14						
WAT1				S	S	07 01 23.7	+0.8
	baz=14						
GAMB	**Gambell**	**73.67**	**2**	P	**P**	**06 51 52.2**	**-0.3**
	baz=356						
GAMB				S	S	07 01 25.1	+2.4
	baz=356						
HARP	**HAARP**	**73.67**	**350**	P	**P**	**06 51 53.0**	**+0.4**
	baz=16,SNR=18						
HARP				S	S	07 01 28.3	+5.4
	baz=16						
YUK4	**Talbot Arm**	**73.67**	**346**	P	**P**	**06 51 52.7**	**-0.2**
	baz=21,SNR=44						
DGMT	**Dagmar**	**73.68**	**322**	IAMs_20	IAMs_20	07 26 39.7	
	comp=Z,31μm,18.0s						
DGMT	**Dagmar**	**73.68**	**322**	P	**P**	**06 51 53.6**	**+0.7**
	baz=43,SNR=21						
DGMT				S	S	07 01 27.9	+4.4
	baz=43						
DGMT	**Dagmar**	**73.68**	**322**	P	**P**	**06 51 53.1**	**+0.2**
	baz=43,SNR=21						
DGMT				S	S	07 01 28.2	+4.7
	baz=43						
P40A	**Paris**	**73.70**	**309**	P	**P**	**06 51 50.8**	**-2.4**
	baz=48,SNR=22						
P40A				S	**SKiKP**	**07 01 22.0**	**-0.8**
	baz=48						
KLR	**Kul'dur**	**73.72**	**37**	LR	LR	07 28 00.5	
	comp=Z,156μm,18.1s,baz=317,slow=39						
KLR	**Kul'dur**	**73.72**	**37**	*d*P	**P**	**06 51 52.7**	**-0.4**
KLR				pmax	pmax		
	comp=Z,351nm,1.7s						
KLR				MLR	MLR		
	comp=Z,150μm,17.0s						
O30N	**Mendenhall**	**73.73**	**345**	P	**P**	**06 51 51.9**	**-1.2**
	baz=23,SNR=77						
O30N				S	S	07 01 27.4	+3.6
	baz=23						
152A	**Waverly Hall**	**73.77**	**300**	P	**P**	**06 51 53.9**	**+0.1**
	baz=49,SNR=28						
152A				S	**SKiKP**	**07 01 22.9**	**-0.2**
	baz=49						
FVM	**French Village**	**73.79**	**307**	IAmb	IAmb	06 52 00.5	
	comp=Z,113nm,0.9s						
FVM	**French Village**	**73.79**	**307**	P	**P**	**06 51 52.1**	**-1.6**
	baz=48,SNR=21						
FVM				S	**SKiKP**	**07 01 23.4**	**+0.4**
	baz=48						
WAT6	**Susitna Watana**	**73.81**	**351**	P	**P**	**06 51 53.9**	**+0.2**
	baz=15,SNR=58						
WAT6				S	S	07 01 27.8	+3.0
	baz=15						
TIGA	**Tifton**	**73.84**	**298**	P	**P**	**06 51 52.6**	**-1.5**
	baz=49						
TIGA				S	S	07 01 25.1	-0.6
	baz=49						
TIGA	**Tifton**	**73.84**	**298**	P	**P**	**06 51 52.6**	**-1.5**
	baz=49						
TIGA				S	S	07 01 24.7	-1.0
	baz=49						
R33M	**Jennings River**	**73.91**	**342**	P	**P**	**06 51 55.5**	**+1.2**
	baz=27,SNR=85						
R33M				S	S	07 01 31.1	+5.3
	baz=27						
YUK8	**Steele Glacier**	**73.92**	**347**	P	**P**	**06 51 54.8**	**+0.3**
	baz=20,SNR=15						
YUK8				S	S	07 01 28.4	+2.2
	baz=20						
HYT	**Haines Junctio**	**73.95**	**346**	P	**P**	**06 51 55.1**	**+0.6**
	baz=22,SNR=80						
HYT				S	S	07 01 30.9	+4.6
	baz=22						
HVD	**Gariep Dam**	**73.96**	**169**	*e*P	**P**	**06 51 55.2**	**+0.5**
HVD				IAmb	IAmb	06 51 59.2	
	comp=Z,1μm,2.2s						
PPLA	**Purkeypile**	**73.96**	**353**	IAmb	IAmb	06 52 02.1	
	comp=Z,154nm,0.8s						
PPLA	**Purkeypile**	**73.96**	**353**	P	**P**	**06 51 54.5**	**0.0**
	baz=11,SNR=36						
PPLA				S	S	07 01 29.6	+3.1
	baz=11						
YUK6	**Outpost Mounta**	**74.00**	**346**	P	**P**	**06 51 55.5**	**+0.6**
	baz=21,SNR=91						
YUK6				S	S	07 01 30.7	+3.7
	baz=21						
SUSD	**Miller**	**74.05**	**316**	P	**P**	**06 51 55.3**	**+0.1**
	baz=45						
SUSD				S	S	07 01 30.2	+2.4
	baz=45						
SUSD	**Miller**	**74.05**	**316**	P	**P**	**06 51 53.9**	**-1.3**
	baz=45						
SUSD				S	S	07 01 27.8	0.0
	baz=45						
Y49A	**Blount Mountai**	**74.07**	**301**	P	**P**	**06 51 53.4**	**-2.1**
	baz=49,SNR=14						
Y49A				S	**SKiKP**	**07 01 24.4**	**+0.8**
	baz=49						
X48A	**Hartselle**	**74.08**	**302**	IAmb	IAmb	06 52 06.2	
	comp=Z,183nm,1.0s						
X48A	**Hartselle**	**74.08**	**302**	P	**P**	**06 51 55.5**	**0.0**

	baz=49,SNR=56					
X48A			S	**SKiKP**	**07 01 24.9**	**+1.3**
	baz=49					
M24K	**Tolsona, Glenn**	**74.08 350**	P	**P**	**06 51 55.2**	**+0.1**
	baz=16,SNR=14					
M24K			S	**S**	**07 01 30.3**	**+2.6**
	baz=16					
GDU01	**Guandu, BA**	**74.11 233**	*e*P	**P**	**06 51 55.9**	**+0.1**
PCRV	**Puerto La Cruz**	**74.18 269**	LR	LR	07 21 21.7	
	comp=Z,30μm,20.9s,slow=33					
CVNA	**Calvinia**	**74.20 174**	*e*P	**P**	**06 51 55.8**	**-0.2**
CVNA			IAmb	IAmb	06 52 00.1	
	comp=Z,2μm,2.3s					
CCM	**Cathedral Cave**	**74.22 307**	P	**P**	**06 51 54.1**	**-2.1**
	baz=48,SNR=61					
CCM	**Cathedral Cave**	**74.22 307**	P	**P**	**06 51 53.8**	**-2.5**
	baz=48					
CCM			S	**SKiKP**	**07 01 25.3**	**+1.6**
	baz=48					
CCM	**Cathedral Cave**	**74.22 307**	P	**P**	**06 51 54.5**	**-1.7**
TTA	**Tatalina**	**74.23 355**	IAmb	IAmb	06 52 10.1	
	comp=Z,277nm,1.3s					
TTA	**Tatalina**	**74.23 355**	P	**P**	**06 51 56.0**	**+0.1**
	baz=8.3,SNR=28					
TTA			S	**S**	**07 01 33.9**	**+4.6**
	baz=8.3					
BNX	**BinXian**	**74.25 42** ⇓	P	**P**	**06 51 56.0**	**-0.2**
BNX			pP	**pP**	**06 51 59.0**	**-0.8**
BNX			sP	**sP**	**06 52 04.0**	**+2.9**
BNX			S	**S**	**07 01 31.0**	**+1.2**
BNX			pmax	pmax		
	comp=Z,24nm,0.8s					
BNX			pmax	pmax		
	comp=Z,6μm,4.4s					
CUT	**Chulitna**	**74.26 352**	P	**P**	**06 51 55.5**	**-0.6**
	baz=13,SNR=8.0					
CUT			S	**S**	**07 01 28.6**	**-0.9**
	baz=13					
PARMO	**Parma**	**74.27 305**	P	**P**	**06 51 54.2**	**-2.3**
P32M	**Atlin**	**74.34 343**	P	**P**	**06 51 56.2**	**-0.4**
	baz=25					
P32M			S	**S**	**07 01 33.6**	**+3.1**
	baz=25					
MCARA	**McCarthy VSAT**	**74.34 348**	IAMs_20	IAMs_20	07 27 44.4	
	comp=Z,23μm,20.0s					
MCARA	**McCarthy VSAT**	**74.34 348**	P	**P**	**06 51 57.0**	**+0.4**
	baz=18,SNR=37					
MCARA			S	**S**	**07 01 35.9**	**+5.5**
	baz=18					
N25K	**Chitina, Valde**	**74.36 349**	IAmb	IAmb	06 52 10.1	
	comp=Z,224nm,1.2s					
N25K	**Chitina, Valde**	**74.36 349**	P	**P**	**06 51 56.3**	**-0.5**
	baz=17,SNR=46					
N25K			S	**S**	**07 01 34.2**	**+3.4**
	baz=17					
ENH	**Enshi**	**74.39 63**	P	**P**	**06 51 56.8**	**-0.6**
ENH	**Enshi**	**74.39 63**	P	**P**	**06 51 57.6**	**+0.2**
	comp=Z,381nm,1.0s					
L34A	**Svendsen Farm,**	**74.43 313**	IAmb	IAmb	06 52 04.2	
	comp=Z,153nm,0.7s					
L34A	**Svendsen Farm,**	**74.43 313**	P	**P**	**06 51 56.8**	**-0.7**
	baz=46,SNR=22					
L34A			S	**S**	**07 01 31.1**	**-1.0**
	baz=46					
BARN	**Barnard Glacie**	**74.44 348**	IAmb	IAmb	06 52 06.1	
	comp=Z,479nm,1.9s					
BARN			IAMs_20	IAMs_20	07 27 24.0	
	comp=Z,20μm,19.0s					
CHTO	**Chiang Mai**	**74.47 79**	P	**P**	**06 51 56.6**	**-1.4**
CHTO			IAmb	IAmb	06 52 06.3	
	comp=Z,178nm,1.0s					
CHTO	**Chiang Mai**	**74.47 79**	P	**P**	**06 51 56.6**	**-1.4**
CHTO			pmax	pmax		
	comp=Z,178nm,1.0s					
O28M	**Mount Upton**	**74.47 347**	P	**P**	**06 51 58.3**	**+0.6**
	baz=20,SNR=58					
O28M			S	**S**	**07 01 37.2**	**+4.6**
	baz=20					
P38A	**Dawn**	**74.48 310**	P	**P**	**06 51 57.4**	**-0.3**
	baz=47,SNR=46					
P38A			S	**S**	**07 01 29.6**	**-3.1**
	baz=47					
656A	**Willston**	**74.49 296**	P	**P**	**06 51 56.5**	**-1.4**
	baz=49					
656A			S	**S**	**07 01 32.8**	**-0.2**
	baz=49					
SCM	**Sheep Creek Mo**	**74.49 351**	P	**P**	**06 51 58.1**	**+0.6**
	baz=15,SNR=43					
SCM			S	**S**	**07 01 36.3**	**+4.1**
	baz=15					
P30M	**Million Dollar**	**74.50 345**	P	**P**	**06 51 57.9**	**+0.3**
	baz=22					
P30M			S	**S**	**07 01 39.2**	**+6.8**
	baz=22					
L20K	**Farewell, AK**	**74.52 354**	P	**P**	**06 51 58.2**	**+0.6**
	baz=9.9,SNR=30					
L20K			S	**S**	**07 01 33.3**	**+0.8**
	baz=9.9					
GRNR	**Gornyy**	**74.53 33** ⇓	*i*P	**P**	**06 51 57.9**	**0.0**
GRNR			*e*S	**S**	**07 01 36.3**	**+3.4**
GRNR			pmax	pmax		
	comp=N,10.0nm,1.0s					
GRNR			pmax	pmax		
	comp=E,10.0nm,1.0s					
GRNR			pmax	pmax		
	comp=Z,40nm,1.2s					
GRNR			smax	smax		
	comp=E,6.0nm,0.9s					
GRNR			MLR	MLR		
	comp=E,21μm,14.0s					
GRNR			MLR	MLR		
	comp=N,25μm,13.0s					
GRNR			MLR	MLR		
	comp=Z,27μm,15.0s					
060A	**Indiantown**	**74.54 293**	P	**P**	**06 52 00.4**	**+2.1**
	baz=50					
060A			S	**SKiKP**	**07 01 28.0**	**+3.6**
	baz=50					
DLBC	**Dease Lake**	**74.54 341**	LR	LR	07 27 18.3	
	comp=Z,84μm,19.8s,baz=30,slow=38					
DLBC	**Dease Lake**	**74.54 341**	P	**P**	**06 51 58.9**	**+1.1**
	baz=27,SNR=48					
DLBC			S	**S**	**07 01 38.5**	**+5.6**
	baz=27					
VRDI	**Verde Repeater**	**74.56 348**	IAmb	IAmb	06 52 11.3	
	comp=Z,229nm,1.4s					
VRDI			IAMs_20	IAMs_20	07 27 52.3	
	comp=Z,21μm,21.0s					
DWPF	**Disney Wildern**	**74.57 294**	IAMs_20	IAMs_20	07 19 05.0	
	comp=Z,40μm,22.0s					
DWPF	**Disney Wildern**	**74.57 294**	P	**P**	**06 51 58.6**	**+0.2**
	baz=49					
DWPF			S	**S**	**07 01 35.7**	**+1.7**
	baz=49					
DWPF	**Disney Wildern**	**74.57 294**	P	**P**	**06 51 58.7**	**+0.3**
	baz=49					
DWPF			S	**S**	**07 01 35.5**	**+1.5**
	baz=49					
M23K	**Glacier View**	**74.58 351**	P	**P**	**06 51 58.3**	**+0.4**
	baz=14,SNR=46					
M23K			S	**S**	**07 01 36.9**	**+3.7**
	baz=14					
KSTD	**Kokstad**	**74.59 166**	*e*P	**P**	**06 51 59.3**	**+0.9**
Q32M	**Nakina River**	**74.59 342**	P	**P**	**06 51 59.0**	**+0.7**
	baz=26,SNR=67					
Q32M			S	**S**	**07 01 39.7**	**+6.0**
	baz=26					
PBMO	**Poplar Bluff**	**74.60 306**	S	**S**	**07 01 33.3**	**-0.8**
	baz=48					
O29M	**Mount Kennedy**	**74.63 346**	P	**P**	**06 51 58.4**	**0.0**
	baz=21,SNR=44					
O29M			S	**S**	**07 01 37.6**	**+3.6**
	baz=21					
SML	**Sawmill**	**74.64 351**	P	**P**	**06 51 58.2**	**-0.2**
	baz=14,SNR=47					
SML			S	**S**	**07 01 36.7**	**+2.9**
	baz=14					
KLU	**Klutina**	**74.64 350**	IAmb	IAmb	06 52 11.8	
	comp=Z,250nm,1.2s					
KLU	**Klutina**	**74.64 350**	P	**P**	**06 51 58.7**	**+0.3**
	baz=16,SNR=49					
KLU			S	**S**	**07 01 36.3**	**+2.3**
	baz=16					
CN2	**Changchun**	**74.65 44**	*e*P	**P**	**06 51 55.0**	**-3.6**
CN2			S	**SKiKP**	**07 01 27.0**	**+2.8**
CN2			pmax	pmax		
	comp=Z,130nm,0.9s					
CN2			pmax	pmax		
	comp=Z,7μm,5.0s					
CN2			LR	LR		
	comp=Z,83μm,19.0s					
CN2			LR	LR		
	comp=Z,70μm,19.0s					
CN2			LR	LR		
	comp=Z,49μm,20.0s					
R40A	**Maddies Statio**	**74.66 308**	IAmb	IAmb	06 52 05.7	
	comp=Z,129nm,1.0s					
R40A	**Maddies Statio**	**74.66 308**	P	**P**	**06 51 57.2**	**-1.5**
	baz=47,SNR=49					
R40A			S	**S**	**07 01 33.6**	**-1.1**
	baz=47					
352A	**Blakely**	**74.68 299**	P	**P**	**06 51 57.8**	**-1.2**
	baz=49					
352A			S	**S**	**07 01 34.0**	**-1.1**
	baz=49					
PEBM	**Pemiscott Bayo**	**74.70 305**	P	**P**	**06 51 58.0**	**-1.1**
PEBM			IAmb	IAmb	06 52 08.2	
	comp=Z,180nm,0.8s					
CM31	**Chiang Mai Arr**	**74.70 79**	P	**P**	**06 51 58.4**	**-1.0**
CM31			IAmb	IAmb	06 52 06.1	
	comp=Z,228nm,0.9s					
CM31	**Chiang Mai Arr**	**74.70 79**	P	**P**	**06 51 59.2**	**-0.2**
	SNR=82					
CMAR	**Chiang Mai Arr**	**74.70 79**	P	**P**	**06 51 58.7**	**-0.6**
	comp=Z,96nm,1.0s,baz=305,slow=6.9,SNR=132					
CMAR			S	**S**	**07 01 34.0**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=311,slow=5.5,SNR=1.7					
CMAR			LR	LR	07 34 14.9	
	comp=Z,32μm,19.2s,baz=315,slow=43					
	comp=Z,96nm,1.0s					
CMAR	**Chiang Mai Arr**	**74.70 79**	*ce*P	**P**	**06 51 58.9**	**-0.4**
CMAR			pmax	pmax		
	comp=Z,99nm,1.0s					
GHO	**Glory Hole Cre**	**74.74 351**	IAmb	IAmb	06 52 13.9	
	comp=Z,261nm,1.2s					
FRAZ	**Fraserburg**	**74.79 173**	*e*P	**P**	**06 51 58.9**	**-0.5**
FRAZ			IAmb	IAmb	06 52 02.6	
	comp=Z,1μm,2.3s					
SKAG	**Skagway**	**74.79 344**	IAmb	IAmb	06 52 15.3	
	comp=Z,162nm,1.0s					
SKAG	**Skagway**	**74.79 344**	P	**P**	**06 51 59.4**	**+0.2**
	baz=24,SNR=38					
SKAG			S	**S**	**07 01 40.9**	**+5.4**
	baz=24					
BRAK	**Brakfontein**	**74.79 171**	*e*P	**P**	**06 51 58.9**	**-0.5**
N35A	**Tabor**	**74.80 312**	IAmb	IAmb	06 52 08.0	
	comp=Z,133nm,0.8s					
N35A	**Tabor**	**74.80 312**	P	**P**	**06 51 56.6**	**-3.0**
	baz=46,SNR=12					
N35A			S	**S**	**07 01 34.4**	**-1.9**
	baz=46					
SKT	**Skwentna**	**74.80 353**	IAmb	IAmb	06 52 11.5	
	comp=Z,264nm,1.3s					
SKT	**Skwentna**	**74.80 353**	P	**P**	**06 51 58.6**	**-0.6**
	baz=12,SNR=35					
SKT			S	**S**	**07 01 35.4**	**-0.2**
	baz=12					
MALB	**Monte Alegre**	**74.86 253**	*e*P	**P**	**06 52 00.6**	**+0.3**
M22K	**Willow**	**74.89 352**	P	**P**	**06 51 59.1**	**-0.5**
	baz=13,SNR=20					
M22K			S	**S**	**07 01 38.2**	**+1.8**
	baz=13					
L19K	**White Mountain**	**74.89 354**	IAmb	IAmb	06 52 13.4	
	comp=Z,242nm,1.4s					
L19K	**White Mountain**	**74.89 354**	P	**P**	**06 52 00.6**	**+0.9**
	baz=9.1,SNR=27					
L19K			S	**S**	**07 01 40.9**	**+4.3**
	baz=9.1					
PRPB	**Parauapebas**	**74.89 246**	*e*P	**P**	**06 52 00.6**	**+0.1**
GNAR	**Gosnell**	**74.89 305**	IAmb	IAmb	06 52 07.3	
	comp=Z,274nm,1.0s					
BFON	**Badsfontein, M**	**74.90 171** ⇓	*i*P	**P**	**06 52 00.8**	**+0.6**
W45A	**Hickory Valley**	**74.93 304**	IAmb	IAmb	06 52 14.6	
	comp=Z,226nm,1.1s					
W45A	**Hickory Valley**	**74.93 304**	P	**P**	**06 51 59.5**	**-1.0**
	baz=48					
W45A			S	**S**	**07 01 35.3**	**-2.5**
	baz=48					
PMR	**Palmer**	**74.94 351**	IAmb	IAmb	06 52 16.6	
	comp=Z,124nm,0.9s					
PMR	**Palmer**	**74.94 351**	P	**P**	**06 52 00.2**	**+0.2**
	baz=13,SNR=30					
PMR			S	**S**	**07 01 39.8**	**+2.9**
	baz=13					
TABL	**Table Mountain**	**74.94 347**	IAMs_20	IAMs_20	07 27 39.5	
	comp=Z,22μm,19.0s					
BMRM	**Bremner River**	**74.97 349**	P	**P**	**06 52 00.7**	**+0.4**
	baz=17,SNR=83					
BMRM			S	**S**	**07 01 40.0**	**+2.5**
	baz=17					
DIV	**Divide**	**74.97 350**	IAmb	IAmb	06 52 19.9	
	comp=Z,196nm,1.2s					
GYA	**Guiyang**	**74.97 68** ⇑	*i*P	**P**	**06 52 01.0**	**0.0**
GYA			PP	**PP**	**06 54 46.8**	**-1.6**
GYA			SKS	**SKSac**	**07 02 07.8**	**-2.5**
GYA			SS	**SS**	**07 06 28.0**	**+1.2**
GYA			pmax	pmax		
	comp=Z,40nm,1.4s					
GYA			pmax	pmax		
	comp=Z,8μm,8.1s					
GYA			LR	LR		
	comp=Z,12μm,24.1s					
GYA			LR	LR		
	comp=Z,16μm,25.5s					
GYA			LR	LR		
	comp=Z,20μm,32.3s					
LRAL	**Lakeview Retre**	**74.98 301**	IAmb	IAmb	06 52 11.6	
	comp=Z,215nm,1.4s					
LRAL	**Lakeview Retre**	**74.98 301**	P	**P**	**06 51 58.9**	**-1.8**
	baz=48,SNR=48					
LRAL	**Lakeview Retre**	**74.98 301**	P	**P**	**06 51 58.9**	**-1.8**
	baz=48,SNR=48					
LRAL			S	**S**	**07 01 34.9**	**-3.6**
	baz=48					
ISLE	**Juniper Island**	**74.98 348**	IAMs_20	IAMs_20	07 28 02.4	
	comp=Z,19μm,18.0s					
PLBC	**Pleasant Camp**	**75.00 344**	P	**P**	**06 52 01.9**	**+1.5**
	baz=23,SNR=40					
PLBC			S	**S**	**07 01 44.4**	**+6.5**
	baz=23					
KNK	**Knik Glacier**	**75.03 351**	IAmb	IAmb	06 52 14.1	
	comp=Z,296nm,1.1s					
KNK	**Knik Glacier**	**75.03 351**	P	**P**	**06 52 00.2**	**-0.4**
	baz=14,SNR=24					
KNK			S	**S**	**07 01 42.7**	**+4.5**
	baz=14					
M20K	**Styx River**	**75.05 353**	IAmb	IAmb	06 52 13.4	
	comp=Z,282nm,1.2s					
M20K	**Styx River**	**75.05 353**	P	**P**	**06 51 59.5**	**-1.2**
	baz=10					
M20K			S	**S**	**07 01 37.3**	**-1.2**
	baz=10					
SNY	**Shenyang**	**75.06 46** ⇑	P	**P**	**06 52 01.3**	**+0.3**
SNY			S	**S**	**07 01 42.3**	**+3.2**
SNY			pmax	pmax		
	comp=Z,59nm,1.2s					
SNY			pmax	pmax		
	comp=Z,8μm,5.9s					
SNY			LR	LR		
	comp=Z,58μm,13.1s					
SNY			LR	LR		
	comp=Z,132μm,15.1s					
P29M	**Windy Craggy**	**75.11 345**	IAMs_20	IAMs_20	07 27 28.5	
	comp=Z,43μm,20.0s					
P29M	**Windy Craggy**	**75.11 345**	P	**P**	**06 52 00.9**	**-0.1**
	baz=22					
P29M			S	**S**	**07 01 43.1**	**+4.0**
	baz=22					
YAH	**Yahtse**	**75.12 347**	IAMs_20	IAMs_20	07 27 46.1	
	comp=Z,32μm,19.0s					
PINM	**Pinnacle**	**75.12 347**	P	**P**	**06 52 02.0**	**+0.8**
	baz=20,SNR=56					
PINM			S	**S**	**07 01 44.6**	**+5.3**
	baz=20					
M19K	**Big River Lodg**	**75.13 354**	IAmb	IAmb	06 52 15.1	
	comp=Z,191nm,1.1s					
M19K			IAMs_20	IAMs_20	07 31 34.9	
	comp=Z,22μm,20.0s					
M19K	**Big River Lodg**	**75.13 354**	P	**P**	**06 52 02.3**	**+1.2**
	baz=9.5,SNR=46					
M19K			S	**S**	**07 01 41.9**	**+2.6**
	baz=9.5					
BCPM	**Bancas Point**	**75.15 346**	IAMs_20	IAMs_20	07 28 08.9	
	comp=Z,44μm,19.0s					
SUR	**Sutherland**	**75.18 173**	LR	LR	07 27 52.6	
	comp=Z,80μm,18.1s,baz=352,slow=38					
SUR	**Sutherland**	**75.18 173**	P	**P**	**06 52 01.2**	**-0.6**
SUR			IAmb	IAmb	06 52 03.6	
	comp=Z,451nm,1.9s					
SUR	**Sutherland**	**75.18 173**	P	**P**	**06 52 03.2**	**+1.4**
WAX	**Waxell Ridge**	**75.21 348**	IAMs_20	IAMs_20	07 28 02.4	
	comp=Z,21μm,19.0s					
250A	**Grady**	**75.21 300**	IAmb	IAmb	06 52 18.5	
	comp=Z,308nm,1.4s					
250A	**Grady**	**75.21 300**	P	**P**	**06 52 02.4**	**+0.3**
	baz=48,SNR=16					
250A			S	**S**	**07 01 40.7**	**-0.4**
	baz=48					
GRAN	**Grantham**	**75.23 172**	*e*P	**P**	**06 52 02.6**	**+0.7**
GRAN			IAmb	IAmb	06 52 08.1	
	comp=Z,59nm,0.8s					
K31A	**O'Neill**	**75.23 315**	P	**P**	**06 52 02.8**	**+0.7**
	baz=45					
K31A			S	**S**	**07 01 43.4**	**+2.3**
	baz=45					
SUA	**Susitna One**	**75.23 352**	P	**P**	**06 52 02.1**	**+0.3**
	baz=12,SNR=41					
SUA			S	**S**	**07 01 43.8**	**+3.2**
	baz=12					
TIA	**Tai'an**	**75.27 54** ⇓	P	**P**	**06 52 02.0**	**-0.4**
TIA			S	**S**	**07 01 43.0**	**+1.4**
TIA			pmax	pmax		
	comp=Z,29nm,1.3s					
TIA			pmax	pmax		
	comp=Z,5μm,6.1s					
TIA			LR	LR		
	comp=Z,45μm,17.5s					
TIA			LR	LR		
	comp=Z,122μm,20.1s					
S34M	**Telegraph Cree**	**75.27 341**	P	**P**	**06 52 03.6**	**+1.7**
	baz=26,SNR=52					
S34M			S	**S**	**07 01 48.3**	**+7.4**
	baz=26					
MESA	**MESA**	**75.33 347**	IAMs_20	IAMs_20	07 27 53.5	
	comp=Z,30μm,19.0s					
MESA	**MESA**	**75.33 347**	P	**P**	**06 52 03.2**	**+0.7**
	baz=19,SNR=41					
MESA			S	**S**	**07 01 44.9**	**+3.0**
	baz=19					
CMC01	**Camacan, BA**	**75.37 232**	*e*P	**P**	**06 52 03.6**	**+0.5**
PNL	**Peninsula**	**75.38 346**	P	**P**	**06 52 02.5**	**-0.1**
	baz=20,SNR=46					
PNL			S	**S**	**07 01 46.5**	**+4.5**
	baz=20					
PNL	**Peninsula**	**75.38 346**	P	**P**	**06 52 04.1**	**+1.5**
	comp=Z,345nm,1.2s					
GLI	**Glacier Island**	**75.39 350**	P	**P**	**06 52 02.0**	**-0.6**
	baz=15,SNR=9.1					
GLI			S	**S**	**07 01 43.4**	**+1.2**
	baz=15					
BERG	**Berg Lake**	**75.39 348**	IAMs_20	IAMs_20	07 28 28.2	
	comp=Z,26μm,19.0s					
SMTB	**Santa Maria do**	**75.39 243**	*e*P	**P**	**06 52 03.9**	**+0.6**
GTBY	**Guantanamo Bay**	**75.46 284**	IAMs_20	IAMs_20	07 19 59.3	
	comp=Z,37μm,22.0s					
SNH	**Sunshine Point**	**75.46 348**	IAMs_20	IAMs_20	07 28 19.2	
	comp=Z,26μm,19.0s					
GRAF	**Camdeboo Natio**	**75.47 170**	*e*P	**P**	**06 52 02.9**	**-0.4**
RC01	**Rabbit Creek A**	**75.49 351**	P	**P**	**06 52 03.6**	**+0.4**
	baz=13,SNR=25					
RC01			S	**S**	**07 01 45.4**	**+2.1**
	baz=13					
OXF	**Oxford**	**75.50 304**	P	**P**	**06 52 02.4**	**-1.2**
	baz=48					
OXF	**Oxford**	**75.50 304**	P	**P**	**06 52 03.1**	**-0.6**
	baz=48					
OXF			S	**S**	**07 01 38.3**	**-5.9**
	baz=48					
BESE	**Bessie Mountai**	**75.50 343**	IAmb	IAmb	06 52 17.5	
	comp=Z,127nm,0.9s					
LCAR	**Lake Charles**	**75.50 306**	P	**P**	**06 52 02.8**	**-0.9**
	baz=47,SNR=29					
LCAR			S	**S**	**07 01 44.4**	**+0.2**
	baz=47					
HMT	**Hamilton**	**75.53 349**	IAMs_20	IAMs_20	07 28 42.8	
	comp=Z,25μm,20.0s					
EYAK	**Cordova Ski Ar**	**75.53 349**	P	**P**	**06 52 05.3**	**+2.0**
	baz=16,SNR=17					
EYAK			S	**S**	**07 01 45.6**	**+1.9**
	baz=16					
EYAK	**Cordova Ski Ar**	**75.53 349**	P	**P**	**06 52 05.7**	**+2.3**
	comp=Z,181nm,1.4s					
MERW	**Merweville**	**75.53 173**	*e*P	**P**	**06 52 02.6**	**-1.1**
MERW			IAmb	IAmb	06 52 06.8	
	comp=Z,1μm,2.4s					
RAGM	**Ragged Mountai**	**75.54 349**	IAMs_20	IAMs_20	07 28 46.1	
	comp=Z,25μm,20.0s					
Z47A	**Carrollton**	**75.54 302**	P	**P**	**06 52 01.9**	**-2.1**
	baz=48,SNR=25					
Z47A			S	**S**	**07 01 41.6**	**-3.1**
	baz=48					
PWL	**Port Wells**	**75.56 351**	P	**P**	**06 52 03.0**	**-0.6**
	baz=14,SNR=21					
PWL			S	**S**	**07 01 43.0**	**-1.1**
	baz=14					
ROOI	**Rooidraai Farm**	**75.57 171**	*e*P	**P**	**06 52 03.8**	**-0.1**
BGLC	**Bering Glacier**	**75.59 348**	P	**P**	**06 52 05.2**	**+1.5**
	baz=18					
BGLC			S	**S**	**07 01 48.7**	**+4.4**
	baz=18					
N20K	**Mount Spurr**	**75.64 353**	P	**P**	**06 52 02.9**	**-1.2**
	baz=11,SNR=15					
N20K			S	**S**	**07 01 46.6**	**+1.6**
	baz=11					
SPCR	**Spurr Chakacha**	**75.64 353**	P	**P**	**06 52 03.2**	**-1.0**
	baz=11,SNR=11					
SPCR			S	**S**	**07 01 45.2**	**+0.2**
	baz=11					
061Z	**Ochoppi**	**75.67 292**	P	**P**	**06 52 06.3**	**+1.5**
	baz=49					
061Z			S	**S**	**07 01 41.3**	**-4.9**
	baz=49					
S39A	**Bolivar**	**75.68 308**	P	**P**	**06 52 04.6**	**-0.1**
	baz=47,SNR=39					
S39A			S	**S**	**07 01 42.2**	**-3.9**
	baz=47					
JIS	**Juneau Island**	**75.68 343**	IAmb	IAmb	06 52 22.2	
	comp=Z,170nm,1.4s					
JIS			IAMs_20	IAMs_20	07 28 33.0	
	comp=Z,30μm,19.0s					
JIS	**Juneau Island**	**75.68 343**	P	**P**	**06 52 06.6**	**+2.3**
	comp=Z,100nm,2.0s					
SUCK	**Suckling Hills**	**75.71 348**	IAMs_20	IAMs_20	07 28 37.6	
	comp=Z,37μm,19.0s					
R32K	**Eaglecrest**	**75.71 343**	P	**P**	**06 52 04.9**	**+0.4**
	baz=24,SNR=24					
R32K			S	**S**	**07 01 50.8**	**+5.0**
	baz=24					
BGNE	**Belgrade**	**75.77 314**	P	**P**	**06 52 02.1**	**-3.1**
	baz=45,SNR=26					
BGNE			S	**S**	**07 01 45.3**	**-1.8**
	baz=45					
BGNE	**Belgrade**	**75.77 314**	P	**P**	**06 52 04.6**	**-0.6**
	baz=45,SNR=26					
BGNE			S	**S**	**07 01 44.2**	**-2.9**
	baz=45					
451A	**Vernon**	**75.78 299**	P	**P**	**06 52 05.5**	**+0.1**
	baz=48					
451A			S	**S**	**07 01 47.8**	**+0.5**
	baz=48					
R31K	**City Hall, Gus**	**75.84 344**	P	**P**	**06 52 06.2**	**+1.0**
	baz=23					
R31K			S	**S**	**07 01 50.6**	**+3.5**
	baz=23					
N33A	**J Bar K, Exete**	**75.87 313**	P	**P**	**06 52 04.7**	**-1.1**
N33A			IAmb	IAmb	06 52 13.3	
	comp=Z,170nm,1.0s					
N33B	**J Bar K, Exete**	**75.87 313**	P	**P**	**06 52 05.6**	**-0.2**
	baz=45,SNR=8.9					
N33B			S	**S**	**07 01 47.4**	**-0.8**
	baz=45					
T35M	**Bob Quinn**	**75.89 340**	P	**P**	**06 52 05.7**	**+0.1**
	baz=27,SNR=35					
T35M			S	**S**	**07 01 55.0**	**+7.1**
	baz=27					
LAO	**LASA Array**	**75.92 322**	IAMs_20	IAMs_20	07 26 42.0	
	comp=Z,40μm,19.0s					
LAO	**LASA Array**	**75.92 322**	P	**P**	**06 52 06.4**	**+0.4**
	baz=41,SNR=65					
LAO			S	**S**	**07 01 51.6**	**+3.0**
	baz=41					
LAO	**LASA Array**	**75.92 322**	P	**P**	**06 52 05.6**	**-0.4**
	baz=41,SNR=65					
LAO			S	**S**	**07 01 54.1**	**+5.5**

	baz=41					
KAIM	**Kayak Island**	**75.94 349**	P	**P**	**06 52 06.3**	**+0.5**
KAIM			IAMs_20	IAMs_20	07 28 56.8	
	comp=Z,24μm,19.0s					
KAIM	**Kayak Island**	**75.94 349**	P	**P**	**06 52 07.7**	**+2.0**
	baz=17					
KAIM			S	**S**	**07 01 54.4**	**+6.1**
	baz=17					
CAPN	**Captain Cook N**	**75.96 352**	P	**P**	**06 52 06.8**	**+1.0**
	baz=12					
CAPN			S	**S**	**07 01 53.0**	**+4.7**
	baz=12					
Y45A	**Yeager Farm, C**	**76.01 303**	P	**P**	**06 52 03.5**	**-3.1**
	baz=48,SNR=86					
Y45A			S	**S**	**07 01 47.1**	**-2.7**
	baz=48					
DL2	**Dalian**	**76.03 50**	P	**P**	**06 52 08.5**	**+1.8**
DL2			S	**S**	**07 01 49.5**	**-0.4**
DL2			SS	**SS**	**07 06 39.5**	**-2.3**
DL2			pmax	pmax		
	comp=Z,230nm,0.9s					
DL2			pmax	pmax		
	comp=Z,5μm,7.0s					
DL2			LR	LR		
	comp=Z,83μm,17.9s					
DL2			LR	LR		
	comp=Z,93μm,18.1s					
DL2			LR	LR		
	comp=Z,94μm,18.0s					
CER	**Ceres**	**76.04 175**	*e*P	**P**	**06 52 06.2**	**-0.3**
CER			IAmb	IAmb	06 52 10.8	
	comp=Z,1μm,2.4s					
SOE	**Somerset East**	**76.04 169**	IAmb	IAmb	06 52 13.6	
	comp=Z,132nm,1.1s					
SOE	**Somerset East**	**76.04 169**	*e*P	**P**	**06 52 06.8**	**+0.2**
SOE			IAmb	IAmb	06 52 10.2	
	comp=Z,673nm,2.1s					
O22K	**Cooper Landing**	**76.09 351**	P	**P**	**06 52 06.8**	**+0.2**
	baz=13					
O22K			S	**S**	**07 01 51.5**	**+1.7**
	baz=13					
MDJ	**Mudanjiang**	**76.12 41**	IAmb	IAmb	06 52 16.5	
	comp=Z,502nm,2.0s					
MDJ	**Mudanjiang**	**76.12 41**	P	**P**	**06 52 06.8**	**-0.3**
MDJ			pP	pP	06 52 10.0	-0.6
MDJ			sP	sP	06 52 11.3	-0.6
MDJ			S	**S**	**07 01 49.0**	**-1.8**
MDJ			pmax	pmax		
	comp=Z,23nm,2.1s					
MDJ			pmax	pmax		
	comp=Z,6μm,11.5s					
MDJ			LR	LR		
	comp=Z,17μm,20.5s					
MDJ			LR	LR		
	comp=Z,18μm,21.1s					
MDJ			LR	LR		
	comp=Z,21μm,20.3s					
FCAR	**Ozark Folk Cen**	**76.20 306**	IAmb	IAmb	06 52 18.9	
	comp=Z,140nm,0.9s					
N19K	**Bonanza Creek**	**76.21 354**	IAmb	IAmb	06 52 20.9	
	comp=Z,102nm,0.9s					
N19K	**Bonanza Creek**	**76.21 354**	P	**P**	**06 52 08.0**	**+0.5**
	baz=9.4,SNR=21					
N19K			S	**S**	**07 01 52.7**	**+1.2**
	baz=9.4					
BRAL	**Brewton**	**76.25 300**	IAMs_20	IAMs_20	07 23 15.2	
	comp=Z,44μm,22.0s					
BRAL	**Brewton**	**76.25 300**	P	**P**	**06 52 08.1**	**+0.1**
	baz=48					
BRAL			S	**S**	**07 01 52.1**	**-0.5**
	baz=48					
BRAL	**Brewton**	**76.25 300**	P	**P**	**06 52 07.5**	**-0.5**
	baz=48					
BRAL			S	**S**	**07 01 51.0**	**-1.6**
	baz=48					
P23K	**Montague Islan**	**76.28 350**	P	**P**	**06 52 08.1**	**+0.4**
	baz=15					
P23K			S	**S**	**07 01 54.9**	**+2.9**
	baz=15					
SDBA	**SAO DESIDERIO**	**76.34 239**	*e*P	**P**	**06 52 07.9**	**-0.8**
S31K	**Pelican**	**76.36 344**	P	**P**	**06 52 09.4**	**+1.2**
	baz=23,SNR=46					
S31K			S	**S**	**07 01 60.0**	**+7.1**
	baz=23					
BOAV	**Boa Vista**	**76.39 261**	*e*P	**P**	**06 52 09.2**	**+0.2**
SEW	**Seward**	**76.42 351**	IAmb	IAmb	06 52 21.6	
	comp=Z,192nm,1.1s					
SEW	**Seward**	**76.42 351**	P	**P**	**06 52 07.7**	**-0.8**
	baz=13,SNR=10.0					
SEW			S	**S**	**07 01 54.8**	**+1.3**
	baz=13					
N18K	**Kilae Creek**	**76.45 354**	IAMs_20	IAMs_20	07 32 28.0	
	comp=Z,20μm,20.0s					
N18K	**Kilae Creek**	**76.45 354**	P	**P**	**06 52 09.9**	**+1.1**
	baz=8.3,SNR=35					
N18K			S	**S**	**07 01 57.2**	**+3.3**
	baz=8.3					
EGMT	**Eagleton**	**76.46 325**	P	**P**	**06 52 09.2**	**+0.1**
	baz=39,SNR=146					
EGMT			S	**S**	**07 01 58.5**	**+3.9**
	baz=39					
S32K	**Killisnoo**	**76.46 343**	P	**P**	**06 52 10.0**	**+1.2**
	baz=24,SNR=18					
S32K			S	**S**	**07 01 58.3**	**+4.3**
	baz=24					
GUA01	**Guaratinga, BA**	**76.51 232**	*e*P	**P**	**06 52 10.0**	**+0.5**
146A	**Union**	**76.54 302**	P	**P**	**06 52 10.1**	**+0.5**
	baz=48,SNR=14					
146A			S	**S**	**07 01 54.0**	**-1.7**
	baz=48					
KSU1	**Kansas State U**	**76.56 311**	P	**P**	**06 52 06.8**	**-2.9**
	baz=45,SNR=29					
KSU1			S	**S**	**07 01 58.3**	**+2.6**
	baz=45					
KSU1	**Kansas State U**	**76.56 311**	P	**P**	**06 52 08.3**	**-1.4**
	baz=45,SNR=29					
KSU1			S	**S**	**07 01 55.2**	**-0.6**
	baz=45					
T33K	**Petersburg**	**76.69 342**	P	**P**	**06 52 10.0**	**0.0**
	baz=25					
Q23K	**Middleton Isla**	**76.69 349**	P	**P**	**06 52 10.0**	**0.0**
	baz=15					
GRHM	**Grahamstown, E**	**76.71 169**	*e*P	**P**	**06 52 10.8**	**+0.4**
GRHM			IAmb	IAmb	06 52 14.0	
	comp=Z,1μm,2.6s					
SUJ	**Sinuiju**	**76.77 47**	P	**P**	**06 52 11.9**	**+1.0**
SUJ			pP	**sP**	**06 52 15.9**	**+0.3**
SUJ			S	**S**	**07 01 55.7**	**-2.3**
O20K	**Slope Mountain**	**76.78 353**	P	**P**	**06 52 09.7**	**-0.9**
	baz=11,SNR=7.8					
O20K			S	**S**	**07 01 57.2**	**-0.3**
	baz=11					
RSSD	**Black Hills**	**76.80 319**	P	**P**	**06 52 10.2**	**-1.1**
RSSD	**Black Hills**	**76.80 319**	P	**P**	**06 52 10.2**	**-1.1**
RSSD			pmax	pmax		
	comp=Z,47nm,0.9s					
RSSD			MLR	MLR		
	comp=Z,60μm,18.0s					
RSSD	**Black Hills**	**76.80 319**	P	**P**	**06 52 11.7**	**+0.4**
	baz=42,SNR=40					
RSSD			S	**S**	**07 01 51.6**	**-7.1**
	baz=42					
RSSD	**Black Hills**	**76.80 319**	P	**P**	**06 52 11.0**	**-0.3**
	baz=42					
RSSD			S	**S**	**07 02 01.0**	**+2.2**
	baz=42					
RSSD	**Black Hills**	**76.80 319**	P	**P**	**06 52 11.6**	**+0.3**
O19K	**Port Alsworth**	**76.81 354**	IAmb	IAmb	06 52 23.4	
	comp=Z,219nm,1.4s					
O19K	**Port Alsworth**	**76.81 354**	P	**P**	**06 52 09.9**	**-0.8**
	baz=9.5					
O19K			S	**S**	**07 01 58.8**	**+1.1**
	baz=9.5					
N16K	**Nishlik Lake**	**76.84 356**	P	**P**	**06 52 11.5**	**+0.6**
	baz=6.1,SNR=18					
N16K			S	**S**	**07 02 04.9**	**+6.8**
	baz=6.1					
TYV	**Tymovskoe**	**76.87 30**	*e*P	**P**	**06 52 12.2**	**+1.0**
TYV			*e*S	**S**	**07 02 02.5**	**+3.8**
TYV			pmax	pmax		
	comp=Z,6μm,4.9s					
TYV			pmax	pmax		
	comp=Z,108nm,1.7s					
TYV			smax	smax		
	comp=N,6μm,8.6s					
TYV			smax	smax		
	comp=E,12μm,8.6s					
WRAK	**Wrangell Islan**	**76.91 341**	P	**P**	**06 52 11.5**	**+0.2**
	baz=25,SNR=33					
WRAK			S	**S**	**07 02 05.4**	**+6.5**
	baz=25					
BRSE	**Bradley Lake S**	**76.92 352**	P	**P**	**06 52 11.5**	**+0.1**
	baz=12					
BRSE			S	**S**	**07 02 00.4**	**+1.3**
	baz=12					
SIT	**Sitka**	**77.00 343**	P	**P**	**06 52 11.8**	**0.0**
	baz=23,SNR=12					
SIT			S	**S**	**07 02 07.7**	**+7.9**
	baz=23					
HHAR	**Hobbs**	**77.00 308**	IAmb	IAmb	06 52 19.2	
	comp=Z,112nm,0.9s					
HOM	**Homer**	**77.10 352**	P	**P**	**06 52 13.0**	**+0.7**
	baz=11					
HOM			S	**S**	**07 02 04.1**	**+3.2**
	baz=11					
U38A	**Gravette**	**77.15 308**	IAmb	IAmb	06 52 22.2	
	comp=Z,178nm,0.9s					
U38A	**Gravette**	**77.15 308**	P	**P**	**06 52 12.8**	**-0.3**
	baz=46,SNR=65					
U38A			S	S	07 01 52.6	-10
	baz=46					
O18K	**Koktuh Hills**	**77.22 354**	P	**P**	**06 52 12.2**	**-0.9**
	baz=8.8					
O18K			S	**S**	**07 02 04.8**	**+2.5**
	baz=8.8					
P19K	**Oil Pt**	**77.25 353**	P	**P**	**06 52 13.4**	**+0.1**
	baz=10					
P19K			S	**S**	**07 02 04.1**	**+1.4**
	baz=10					
ROSN	**Rosenhof**	**77.28 170**	*e*P	**P**	**06 52 14.0**	**+0.6**
ROSN			IAmb	IAmb	06 52 18.3	
	comp=Z,118nm,0.8s					
ELIM	**Elim**	**77.30 174**	*e*P	**P**	**06 52 13.2**	**-0.4**
ELIM			IAmb	IAmb	06 52 17.8	
	comp=Z,81nm,0.9s					
KROM	**Kromhout**	**77.33 170**	*e*P	**P**	**06 52 13.5**	**-0.2**
KROM			IAmb	IAmb	06 52 17.4	
	comp=Z,1μm,2.2s					
BUFB	**Buffelsbos**	**77.35 170**	*e*P	**P**	**06 52 15.7**	**+1.8**
BUFB			IAmb	IAmb	06 52 18.2	
	comp=Z,76nm,0.9s					
WHN	**Wuhan**	**77.36 60**	⇓P	**P**	**06 52 15.0**	**+0.7**
WHN			sP	**sP**	**06 52 19.8**	**+0.7**
WHN			PP	**PP**	**06 55 09.3**	**+1.1**
WHN			S	**S**	**07 02 06.5**	**+1.8**
WHN			SS	**SS**	**07 07 06.0**	**+3.6**
WHN			pmax	pmax		
	comp=Z,350nm,1.0s					
WHN			pmax	pmax		
	comp=Z,11μm,4.4s					
U33K	**Whale Pass**	**77.37 341**	P	**P**	**06 52 15.4**	**+1.5**
	baz=25,SNR=16					
U33K			S	**S**	**07 02 11.2**	**+7.3**
	baz=25					
O17K	**Koliganek Bris**	**77.44 355**	P	**P**	**06 52 16.6**	**+2.4**
	baz=7.4,SNR=23					
O17K			S	**S**	**07 02 10.1**	**+5.6**
	baz=7.4					
ROCAM	**Rodrigues Isla**	**77.57 132**	P	**P**	**06 52 14.2**	**-1.1**
ROCAM			IAMs_20	IAMs_20	07 31 18.5	
	comp=Z,18μm,19.0s					
USA0B	**Ussuriysk Arra**	**77.58 40**	P	**P**	**06 52 14.6**	**-0.7**
USA0B	**Ussuriysk Arra**	**77.58 40**	P	**P**	**06 52 14.6**	**-0.7**
USA0B			pmax	pmax		
	comp=Z,370nm,1.4s					
USRK	**Ussuriysk Ar.**	**77.58 40**	P	**P**	**06 52 14.4**	**-0.9**
	comp=Z,36nm,0.8s,baz=298,slow=4.1,SNR=31					
USRK			PP	**PP**	**06 55 06.5**	**-3.1**
	comp=Z,11nm,0.9s,baz=335,slow=9.9,SNR=3.4					
USRK			LR	LR	07 29 13.0	
	comp=Z,52μm,20.4s,baz=313,slow=38					
	comp=Z,36nm,0.8s					
USRK	**Ussuriysk Ar.**	**77.58 40**	P	**P**	**06 52 14.2**	**-1.1**
X40A	**Basin Creek Fa**	**77.59 306**	S	**S**	**07 01 59.7**	**-7.3**
	baz=46					
X40A			S	**S**	**07 01 59.7**	**-7.3**
	baz=46					
346A	**Big Creek Wild**	**77.63 301**	IAmb	IAmb	06 52 24.2	
	comp=Z,232nm,0.9s					
346A	**Big Creek Wild**	**77.63 301**	P	**P**	**06 52 16.4**	**+0.6**
	baz=47,SNR=16					
346A			S	**S**	**07 02 04.1**	**-3.6**
	baz=47					
ITTB	**Itaituba**	**77.67 252**	*e*P	**P**	**06 52 16.9**	**+0.7**
O16K	**Kokwok River B**	**77.68 355**	P	**P**	**06 52 17.6**	**+2.1**
	baz=6.6,SNR=14					
O16K			S	**S**	**07 02 12.4**	**+5.2**
	baz=6.6					
P18K	**Big Mountain,**	**77.68 354**	IAmb	IAmb	06 52 22.7	
	comp=Z,229nm,1.6s					
P18K	**Big Mountain,**	**77.68 354**	P	**P**	**06 52 15.0**	**-0.7**
	baz=8.8					
P18K			S	**S**	**07 02 08.7**	**+1.4**
	baz=8.8					
NAN01	**Guarapari, ES**	**77.69 231**	*e*P	**P**	**06 52 18.4**	**+2.2**
V35K	**Ketchikan**	**77.72 340**	P	**P**	**06 52 17.1**	**+1.2**
	baz=26,SNR=14					
V35K			S	**S**	**07 02 16.0**	**+8.3**
	baz=26					
VBMS	**Vicksburg**	**77.73 303**	IAmb	IAmb	06 52 28.0	
	comp=Z,194nm,0.9s					
VBMS			IAMs_20	IAMs_20	07 23 05.2	
	comp=Z,47μm,22.0s					
VBMS	**Vicksburg**	**77.73 303**	P	**P**	**06 52 17.5**	**+1.2**
	baz=47,SNR=10.0					
VBMS			S	**S**	**07 02 01.2**	**-7.4**
	baz=47					
VBMS	**Vicksburg**	**77.73 303**	P	**P**	**06 52 17.0**	**+0.7**
	baz=47,SNR=10.0					
VBMS			S	**S**	**07 02 07.2**	**-1.4**
	baz=47					
143A	**Socs Landing,**	**77.94 303**	P	**P**	**06 52 16.5**	**-1.0**
	baz=47					
143A			S	**S**	**07 02 09.2**	**-1.7**
	baz=47					
CRAG	**Craig**	**77.96 341**	P	**P**	**06 52 18.4**	**+1.2**
	baz=25,SNR=8.7					
CRAG			S	**S**	**07 02 18.7**	**+8.4**
	baz=25					
P17K	**Kvichak River**	**77.97 355**	P	**P**	**06 52 16.6**	**-0.6**
	baz=7.8					
P17K			S	**S**	**07 02 14.6**	**+4.3**
	baz=7.8					
MIAR	**Mount Ida**	**77.99 306**	IAmb	IAmb	06 52 26.1	
	comp=Z,218nm,1.0s					
MIAR	**Mount Ida**	**77.99 306**	P	**P**	**06 52 16.5**	**-1.3**
	baz=46,SNR=38					
MIAR			S	**S**	**07 02 05.4**	**-6.0**
	baz=46					
MIAR	**Mount Ida**	**77.99 306**	P	**P**	**06 52 16.6**	**-1.1**
	baz=46,SNR=38					
MIAR			S	**S**	**07 02 12.0**	**+0.6**
	baz=46					
JANB	**Januaria**	**78.00 236**	*e*P	**P**	**06 52 18.5**	**+0.5**
Q19K	**Cape Douglas,**	**78.01 353**	P	**P**	**06 52 17.8**	**+0.4**
	baz=9.9					
CNSH	**ChangSha**	**78.03 63**	⇓P	**P**	**06 52 17.5**	**-0.6**
CNSH			S	**S**	**07 02 11.0**	**-1.0**
CNSH			pmax	pmax		
	comp=Z,6μm,6.3s					
CNSH			LR	LR		
	comp=Z,39μm,18.2s					
CNSH			LR	LR		
	comp=Z,44μm,20.3s					
CNSH			LR	LR		
	comp=Z,77μm,19.0s					
T35B	**Sooner Cattle**	**78.04 309**	P	**P**	**06 52 18.2**	**+0.1**
	baz=45,SNR=67					
T35B			S	**S**	**07 02 04.5**	**-7.5**
	baz=45					
UGL	**Uglegorsk**	**78.10 32**	*e*P	**P**	**06 52 19.7**	**+1.6**
UGL			*e*S	**S**	**07 02 16.3**	**+4.2**
UGL			*e*		07 10 32.0	
UGL			pmax	pmax		
	comp=N,2μm,3.5s					
UGL			pmax	pmax		
	comp=E,2μm,3.5s					
UGL			pmax	pmax		
	comp=Z,7μm,3.5s					
UGL			pmax	pmax		
	comp=Z,390nm,1.5s					
UGL			smax	smax		
	comp=N,13μm,8.0s					
UGL			smax	smax		
	comp=E,15μm,8.0s					
UGL			MLR	MLR		
	comp=E,47μm,15.0s					
UGL			MLR	MLR		
	comp=N,103μm,16.0s					
UGL			MLR	MLR		
	comp=Z,90μm,18.0s					
OGNE	**Ogallala**	**78.14 316**	IAMs_20	IAMs_20	07 26 57.2	
	comp=Z,29μm,20.0s					
OGNE	**Ogallala**	**78.14 316**	P	**P**	**06 52 16.1**	**-2.6**
	baz=43,SNR=11					
OGNE			S	**S**	**07 02 09.5**	**-3.6**
	baz=43					
OGNE	**Ogallala**	**78.14 316**	P	**P**	**06 52 18.8**	**+0.1**
	baz=43,SNR=11					
OGNE			S	**S**	**07 02 13.3**	**+0.2**
	baz=43					
R32A	**Long Quarter,**	**78.20 312**	IAmb	IAmb	06 52 27.0	
	comp=Z,254nm,1.1s					
R32A	**Long Quarter,**	**78.20 312**	P	**P**	**06 52 16.2**	**-2.8**
	baz=44,SNR=21					
R32A			S	S	07 02 02.4	-11
	baz=44					
Q20K	**Shuyak Island**	**78.20 352**	P	**P**	**06 52 20.0**	**+1.5**
	baz=11,SNR=8.0					
Q20K			S	**S**	**07 02 13.9**	**+1.0**
	baz=11					
PYAG	**Pyongyang**	**78.20 47**	P	**P**	**06 52 18.9**	**+0.1**
PYAG			sP	**sP**	**06 52 23.9**	**+0.2**
PYAG			S	**S**	**07 02 12.6**	**-1.0**
P16K	**Nushagak River**	**78.23 355**	P	**P**	**06 52 19.3**	**+0.7**
	baz=6.7,SNR=10.0					
MTDJ	**Mount Denham**	**78.30 284**	IAMs_20	IAMs_20	07 21 32.7	
	comp=Z,45μm,22.0s					
TUL1	**Leonard**	**78.34 308**	IAmb	IAmb	06 52 26.9	
	comp=Z,180nm,1.1s					
TUL1	**Leonard**	**78.34 308**	P	**P**	**06 52 17.6**	**-2.1**
	baz=45,SNR=18					
TUL1			S	**S**	**07 02 07.3**	**-7.8**
	baz=45					
TUL1	**Leonard**	**78.34 308**	P	**P**	**06 52 19.2**	**-0.5**
	baz=45,SNR=18					
TUL1			S	**S**	**07 02 12.5**	**-2.6**
	baz=45					
344A	**Westbrook Farm**	**78.38 302**	P	**P**	**06 52 21.0**	**+1.0**
	baz=47,SNR=14					
344A			S	**S**	**07 02 18.0**	**+2.3**
	baz=47					
MSHR	**Mys Shultsa**	**78.40 42**	*de*P	**P**	**06 52 20.2**	**+0.3**
MSHR			pmax	pmax		
	comp=Z,257nm,2.1s					
MSHR			MLR	MLR		
	comp=Z,139μm,17.0s					
Q18K	**Katmai Hardscr**	**78.40 354**	P	**P**	**06 52 19.0**	**-0.8**
	baz=8.9					
Q18K			S	**S**	**07 02 14.3**	**-1.0**
	baz=8.9					
CBKS	**Cedar Bluff**	**78.48 313**	IAmb	IAmb	06 52 30.2	
	comp=Z,152nm,0.8s					
CBKS	**Cedar Bluff**	**78.48 313**	P	**P**	**06 52 19.7**	**-0.8**
	baz=44,SNR=20					
CBKS	**Cedar Bluff**	**78.48 313**	P	**P**	**06 52 20.7**	**+0.2**
	baz=44,SNR=20					
CBKS			S	**S**	**07 02 15.2**	**-1.4**
	baz=44					
RLMT	**Red Lodge**	**78.49 322**	P	**P**	**06 52 21.6**	**+1.0**
	baz=39,SNR=68					
RLMT			S	**S**	**07 02 21.2**	**+4.3**
	baz=39					
Q16K	**King Salmon**	**78.50 355**	P	**P**	**06 52 20.0**	**0.0**
	baz=7.7					
Q16K			S	**S**	**07 02 17.5**	**+1.6**
	baz=7.7					
HHU	**Hamhung**	**78.51 46**	P	**P**	**06 52 21.4**	**+0.9**
HHU			sP	**sP**	**06 52 26.4**	**+1.0**
HHU			S	**S**	**07 02 15.4**	**-1.4**
OK051	**E0350 and S346**	**78.52 309**	IAMs_20	IAMs_20	07 26 47.6	
	comp=Z,37μm,21.0s					
OK044	**Pawnee Station**	**78.59 309**	IAMs_20	IAMs_20	07 26 49.5	
	comp=Z,31μm,22.0s					
OK045	**Pawnee Station**	**78.61 309**	IAMs_20	IAMs_20	07 26 51.1	
	comp=Z,38μm,21.0s					
OK046	**Pawnee Station**	**78.63 309**	IAMs_20	IAMs_20	07 26 50.7	
	comp=Z,37μm,22.0s					
OK048	**Pawnee Station**	**78.64 309**	IAMs_20	IAMs_20	07 26 50.9	
	comp=Z,39μm,22.0s					
OK050	**Pawnee Station**	**78.68 309**	IAMs_20	IAMs_20	07 26 52.9	
	comp=Z,38μm,21.0s					
OK034	**N. Norfolk Rd.**	**78.80 309**	IAmb	IAmb	06 52 31.5	
	comp=Z,256nm,0.9s					
OK034			IAMs_20	IAMs_20	07 24 05.1	
	comp=Z,38μm,22.0s					
KAN14	**Manchester OK**	**78.83 310**	IAmb	IAmb	06 52 30.7	
	comp=Z,247nm,1.1s					
OK049	**E0420 Rd and N**	**78.85 310**	IAmb	IAmb	06 52 32.1	
	comp=Z,212nm,1.0s					
OK049			IAMs_20	IAMs_20	07 26 59.5	
	comp=Z,41μm,22.0s					
Q17K	**Contact Creek**	**78.85 354**	P	**P**	**06 52 21.7**	**-0.5**
	baz=8.2,SNR=13					
Q17K			S	**S**	**07 02 20.8**	**+0.8**
	baz=8.2					
OK033	**Mehan**	**78.90 309**	IAMs_20	IAMs_20	07 30 57.8	
	comp=Z,28μm,18.0s					
OK031	**S. Brethren Rd**	**78.91 309**	IAMs_20	IAMs_20	07 26 39.1	
	comp=Z,32μm,21.0s					
HJU	**Haeju**	**78.91 48**	P	**P**	**06 52 23.9**	**+1.1**
HJU			pP	**sP**	**06 52 27.7**	**+0.1**
HJU			S	**S**	**07 02 23.2**	**+2.0**
SJMB	**Sao Joao De Ma**	**78.98 232**	*e*P	**P**	**06 52 23.9**	**+0.6**
RIB01	**Linhares ES**	**79.02 231**	*e*P	**P**	**06 52 24.0**	**+0.6**
X37A	**Clayton**	**79.02 307**	IAmb	IAmb	06 52 31.3	
	comp=Z,163nm,0.8s					
X37A	**Clayton**	**79.02 307**	P	**P**	**06 52 22.6**	**-0.8**
	baz=45,SNR=42					
X37A			S	**S**	**07 02 22.1**	**-0.4**
	baz=45					
KDAK	**Kodiak Island**	**79.04 352**	LR	LR	07 28 01.8	
	comp=Z,18μm,20.6s,baz=44,slow=36					
KDAK	**Kodiak Island**	**79.04 352**	P	**P**	**06 52 23.3**	**+0.2**
KDAK			IAmb	IAmb	06 52 33.2	
	comp=Z,201nm,0.8s					
KDAK	**Kodiak Island**	**79.04 352**	IAMs_20	IAMs_20	07 32 04.6	
	comp=Z,24μm,22.0s					
KDAK	**Kodiak Island**	**79.04 352**	*d i*P	**P**	**06 52 24.8**	**+1.7**
KDAK			pmax	pmax		
	comp=Z,362nm,0.9s					
KDAK	**Kodiak Island**	**79.04 352**	P	**P**	**06 52 22.8**	**-0.3**
	baz=11					
KDAK			S	**S**	**07 02 24.6**	**+2.8**
	baz=11					
KDAK	**Kodiak Island**	**79.04 352**	P	**P**	**06 52 25.6**	**+2.5**
TEY	**Ternei**	**79.06 37**	⇑*e*P	**P**	**06 52 22.8**	**-0.6**
TEY			*e*		07 02 21.5	
TEY			pmax	pmax		
	comp=Z,400nm,7.0s					
TEY			pmax	pmax		
	comp=N,200nm,3.9s					
TEY			MLR	MLR		
	comp=N,4μm,16.0s					
TEY			MLR	MLR		
	comp=E,3μm,16.0s					
TEY			MLR	MLR		
	comp=Z,5μm,16.0s					
OK032	**Salt Plains WL**	**79.08 310**	IAmb	IAmb	06 52 32.1	
	comp=Z,271nm,1.4s					
OK032			IAMs_20	IAMs_20	07 28 52.5	
	comp=Z,32μm,19.0s					
K22A	**Casper**	**79.11 319**	P	**P**	**06 52 23.3**	**-0.7**
	baz=40,SNR=58					
K22A			S	**S**	**07 02 24.4**	**+0.9**
	baz=40					
K22A	**Casper**	**79.11 319**	P	**P**	**06 52 23.8**	**-0.3**
	baz=40,SNR=58					
K22A			S	**S**	**07 02 24.0**	**+0.5**
	baz=40					
MSO	**Missoula**	**79.15 326**	IAmb	IAmb	06 52 30.9	
	comp=Z,390nm,1.6s					
MSO	**Missoula**	**79.15 326**	P	**P**	**06 52 24.4**	**+0.3**
	baz=37,SNR=82					
MSO			S	**S**	**07 02 24.1**	**+0.4**
	baz=37					
NJ2	**Nanjing**	**79.15 56**	⇓*i*P	**P**	**06 52 25.0**	**+0.8**
NJ2			pP	**sP**	**06 52 28.8**	**-0.2**
NJ2			sP	**PcP**	**06 52 31.0**	**-1.6**
NJ2			PP	**PP**	**06 55 21.0**	**-2.1**
NJ2			S	**S**	**07 02 25.8**	**+1.9**

NJ2			SS	**SS**	**07 07 33.0 +3.8**
NJ2			pmax	pmax	
	comp=Z,61nm,1.1s				
NJ2			pmax	pmax	
	comp=Z,7μm,4.5s				
NJ2			LR	LR	
	comp=Z,57μm,18.0s				
NJ2			LR	LR	
	comp=Z,94μm,15.9s				
BOZ	**Bozeman (W)**	**79.16 324**	IAmb	IAmb	06 52 33.8
	comp=Z,184nm,0.9s				
BOZ	**Bozeman (W)**	**79.16 324**	P	**P**	**06 52 24.5 +0.3**
	baz=38,SNR=191				
BOZ			S	**S**	**07 02 27.6 +3.7**
	baz=38				
545B	**Wilberts Farm,**	**79.19 301**	P	**P**	**06 52 27.4 +2.9**
	baz=47				
545B			S	**S**	**07 02 30.9 +6.5**
	baz=47				
NEW	**Newport**	**79.25 329**	LR	LR	07 29 00.5
	comp=Z,40μm,18.1s,baz=43,slow=37				
NEW	**Newport**	**79.25 329**	IAms_20	IAms_20	07 29 37.8
	comp=Z,32μm,22.0s				
NEW	**Newport**	**79.25 329**	P	**P**	**06 52 25.4 +0.9**
	baz=35,SNR=37				
NEW			S	**S**	**07 02 27.3 +2.8**
	baz=35				
NPGB	**Novo Progresso**	**79.31 250**	*e*P	**P**	**06 52 25.8 +0.5**
OK029	**Liberty Lake**	**79.37 309**	IAmb	IAmb	06 52 34.9
	comp=Z,231nm,1.1s				
OK029			IAms_20	IAms_20	07 31 30.3
	comp=Z,27μm,18.0s				
342B	**Flagon Creek P**	**79.42 303**	P	**P**	**06 52 24.9 -0.8**
	baz=46,SNR=35				
342B			S	**S**	**07 02 29.5 +2.7**
	baz=46				
OK035	**E0210 Rd and N**	**79.43 311**	IAms_20	IAms_20	07 27 51.7
	comp=Z,31μm,19.0s				
SDV	**Santo Domingo**	**79.44 272**	LR	LR	07 23 46.4
	comp=Z,19μm,21.3s,baz=46,slow=33				
SDV	**Santo Domingo**	**79.44 272**	P	**P**	**06 52 25.3 -0.9**
SDV	**Santo Domingo**	**79.44 272**	IAms_20	IAms_20	07 23 44.7
	comp=Z,19μm,20.0s				
SDV	**Santo Domingo**	**79.44 272**	*e*P	**P**	**06 52 25.5 -0.8**
YHH	**Holmes Hill**	**79.45 323**	IAmb	IAmb	06 52 34.9
	comp=Z,348nm,1.8s				
OK025	**Westminster Rd**	**79.46 309**	IAmb	IAmb	06 52 35.2
	comp=Z,163nm,0.9s				
OK025			IAms_20	IAms_20	07 31 13.6
	comp=Z,21μm,18.0s				
BRIGG	**Briggsdale**	**79.58 317**	IAmb	IAmb	06 52 36.0
	comp=Z,325nm,1.1s				
BRIGG			IAms_20	IAms_20	07 25 43.3
	comp=Z,43μm,22.0s				
BBB	**Bella Bella**	**79.59 337**	LR	LR	07 30 15.1
	comp=Z,23μm,19.2s,baz=30,slow=38				
YMR	**Madison River**	**79.60 323**	IAmb	IAmb	06 52 34.9
	comp=Z,278nm,1.2s				
PHWY	**Pilot Hill**	**79.61 318**	IAmb	IAmb	06 52 35.3
	comp=Z,166nm,1.1s				
OK038	**West end E0370**	**79.61 310**	IAmb	IAmb	06 52 33.7
	comp=Z,188nm,0.9s				
OK038			IAms_20	IAms_20	07 29 06.5
	comp=Z,31μm,19.0s				
H17A	**Grant Village**	**79.64 323**	P	**P**	**06 52 28.7 +1.7**
	baz=38,SNR=89				
H17A			S	**S**	**07 02 35.7 +6.4**
	baz=38				
OHAK	**Old Harbor**	**79.66 353**	P	**P**	**06 52 28.7 +2.2**
	baz=10				
OHAK			S	**S**	**07 02 32.1 +3.6**
	baz=10				
R16K	**Pilot Point**	**79.66 355**	P	**P**	**06 52 27.2 +0.7**
	baz=7.0				
CRJC	**Cerrejon, Guaj**	**79.68 275**	*e*P	**P**	**06 52 27.7 +0.3**
PEA0B	**Petropavlovsk-**	**79.69 21**	*d iP*	**P**	**06 52 27.4 +0.6**
PETK	**Petropavlovsk-**	**79.69 21**	P	**P**	**06 52 26.3 -0.5**
	comp=Z,66nm,1.0s,baz=229,slow=1.4,SNR=23				
PETK			S	**S**	**07 02 25.6 -3.4**
	comp=Z,1.8nm,0.9s,baz=39,slow=19,SNR=1.3				
PETK			LR	LR	07 32 57.7
	comp=Z,41μm,18.7s,baz=326,slow=40				
	comp=Z,66nm,1.0s				
Z38A	**Mt. Pleasant**	**79.72 306**	P	**P**	**06 52 27.3 0.0**
	baz=45,SNR=13				
Z38A			S	**S**	**07 02 32.1 +2.2**
	baz=45				
INCN	**Inchon**	**79.81 48**	P	**P**	**06 52 27.3 -0.5**
INCN			IAmb	IAmb	06 52 36.2
	comp=Z,336nm,1.1s				
INCN	**Inchon**	**79.81 48**	P	**P**	**06 52 27.3 -0.5**
INCN			pmax	pmax	
	comp=Z,336nm,1.1s				
INCN	**Inchon**	**79.81 48**	P	**P**	**06 52 29.1 +1.4**
	comp=Z,298nm,1.1s				
INCN	**Inchon**	**79.81 48**	P	**P**	**06 52 29.2 +1.4**
U32A	**Winter Ranch,**	**79.83 311**	IAmb	IAmb	06 52 36.6
	comp=Z,323nm,1.1s				
U32A	**Winter Ranch,**	**79.83 311**	P	**P**	**06 52 28.4 +0.6**
	baz=44,SNR=55				
U32A			S	**S**	**07 02 33.4 +2.4**
	baz=44				
H02S1	**DAWSON INLET T**	**79.86 340**	P	**P**	**06 52 27.3 -0.3**
	SNR=38				
KSCO	**Kaye Shedlock'**	**79.87 315**	IAmb	IAmb	06 52 37.3
	comp=Z,340nm,1.0s				
KSCO	**Kaye Shedlock'**	**79.87 315**	P	**P**	**06 52 27.3 -0.9**
	baz=42,SNR=41				
KSCO			S	**S**	**07 02 35.2 +3.6**
	baz=42				
KSCO	**Kaye Shedlock'**	**79.87 315**	P	**P**	**06 52 27.3 -0.9**
	baz=42,SNR=41				
KSCO			S	**S**	**07 02 35.1 +3.4**
	baz=42				
B08A	**Colville Reser**	**80.00 330**	IAmb	IAmb	06 52 35.7
	comp=Z,360nm,1.7s				
PET	**Petropavlovsk**	**80.01 20**	*e*P	**P**	**06 52 30.7 +2.2**
PET			*e*		06 55 28.4
PET			*e*S	**S**	**07 02 32.9 +0.6**
PET			pmax	pmax	
	comp=Z,202nm,1.5s				
PET			pmax	pmax	
	comp=Z,4μm,10.9s				
PET			pmax	pmax	
	comp=Z,3μm,9.5s				
PET			pmax	pmax	
	comp=Z,2μm,16.7s				
PET			smax	smax	
	comp=N,4μm,25.7s				
PET			smax	smax	
	comp=E,11μm,24.9s				
PET			MLR	MLR	
	comp=Z,66μm,19.0s				
PET			MLR	MLR	
	comp=Z,53μm,18.0s				
PET	**Petropavlovsk**	**80.01 20**	P	**P**	**06 52 32.9 +4.4**
	comp=Z,674nm,1.9s				
PET	**Petropavlovsk**	**80.01 20**	P	**P**	**06 52 32.9 +4.4**
YSS	**Yuzh-Sakhalins**	**80.10 32**	P	**P**	**06 52 28.9 -0.2**
YSS	**Yuzh-Sakhalins**	**80.10 32**	‖*e*P	**P**	**06 52 29.4 +0.3**
YSS			*e*		06 55 28.8
YSS			*e*S	**S**	**07 02 32.7 -0.7**
YSS			pmax	pmax	
	comp=Z,9μm,3.6s				
YSS			pmax	pmax	
	comp=N,2μm,4.1s				
YSS			pmax	pmax	
	comp=E,2μm,4.1s				
YSS			pmax	pmax	
	comp=Z,1μm,0.9s				
YSS			pmax	pmax	
	comp=Z,2μm,4.3s				
YSS			smax	smax	
	comp=E,9μm,8.0s				
YSS	**Yuzh-Sakhalins**	**80.10 32**	P	**P**	**06 52 29.6 +0.5**
	comp=E,1μm,1.0s				
YSS	**Yuzh-Sakhalins**	**80.10 32**	P	**P**	**06 52 29.6 +0.5**
SNDB	**Serra Nova Dou**	**80.13 244**	*e*P	**P**	**06 52 30.0 +0.3**
N23A	**Red Feather La**	**80.15 318**	IAmb	IAmb	06 52 40.6
	comp=Z,164nm,1.1s				
N23A	**Red Feather La**	**80.15 318**	P	**P**	**06 52 29.3 -0.6**
	baz=41,SNR=60				
N23A			S	**S**	**07 02 35.8 +1.0**
	baz=41				
MOOW	**Moose Ponds**	**80.22 322**	IAms_20	IAms_20	07 30 00.1
	comp=Z,41μm,19.0s				
ALF01	**Guarapari-ES**	**80.24 230**	*e*P	**P**	**06 52 31.7 +1.7**
SPIA	**Saint Paul Isl**	**80.32 2**	P	**P**	**06 52 32.5 +2.5**
	baz=358				
MACA	**Manacapuru-AM**	**80.33 257**	*e*P	**P**	**06 52 30.8 0.0**
441A	**DeRidder**	**80.39 303**	S	**S**	**07 02 42.9 +5.9**
	baz=46				
SII	**Sitkinak Islan**	**80.40 353**	P	**P**	**06 52 30.2 -0.4**
	baz=9.4				
SII			S	**S**	**07 02 39.5 +3.1**
	baz=9.4				
SII	**Sitkinak Islan**	**80.40 353**	P	P	06 52 39.6 +9.0
	comp=Z,226nm,1.3s				
FXWY	**Fox Creek**	**80.44 322**	IAms_20	IAms_20	07 30 44.6
	comp=Z,44μm,21.0s				
BW06	**Boulder Array**	**80.45 321**	IAmb	IAmb	06 52 39.9
	comp=Z,338nm,2.0s				
BW06	**Boulder Array**	**80.45 321**	P	**P**	**06 52 30.9 -0.5**
	baz=39,SNR=67				
BW06			S	**S**	**07 02 39.4 +1.6**
	baz=39				
PD31	**Pinedale Array**	**80.45 321**	IAmb	IAmb	06 52 39.9
	comp=Z,303nm,2.0s				
PDAR	**Pinedale Array**	**80.45 321**	P	**P**	**06 52 30.6 -0.8**
	comp=Z,15nm,0.5s,baz=51,slow=4.9,SNR=50				
PDAR			PP	**PP**	**06 55 32.3 -1.4**
	comp=Z,2.3nm,0.7s,baz=54,slow=7.9,SNR=2.1				
PDAR			PKKPbc	**PKKPbc**	**07 11 11.8 +0.5**
	comp=Z,1.5nm,1.0s,baz=168,slow=2.5,SNR=3.9				
PDAR			LR	LR	07 27 57.4
	comp=Z,65μm,19.3s,baz=52,slow=36				
	comp=Z,15nm,0.5s				
SNOW	**Snow King Moun**	**80.45 322**	IAms_20	IAms_20	07 29 36.1
	comp=Z,39μm,18.0s				
KSRS	**Korea Array**	**80.53 47**	P	**P**	**06 52 31.6 0.0**
	comp=Z,36nm,0.9s,baz=325,slow=4.4,SNR=59				
KSRS			S	**S**	**07 02 35.8 -2.5**
	comp=Z,0.3nm,0.4s,baz=131,slow=31,SNR=1.1				
KSRS			LR	LR	07 32 57.4
	comp=Z,60μm,18.0s,baz=315,slow=39				
	comp=Z,36nm,0.9s				
REDW	**Red Top Meadow**	**80.57 322**	IAmb	IAmb	06 52 40.8
	comp=Z,645nm,2.0s				
REDW			IAms_20	IAms_20	07 29 49.3
	comp=Z,39μm,20.0s				
NATX	**Nacogdoches**	**80.58 305**	IAms_20	IAms_20	07 27 23.6
	comp=Z,35μm,20.0s				
NATX	**Nacogdoches**	**80.58 305**	P	**P**	**06 52 31.0 -1.0**
	baz=45				
NATX			S	**S**	**07 02 41.9 +2.8**
	baz=45				
NATX	**Nacogdoches**	**80.58 305**	P	**P**	**06 52 31.1 -0.8**
	baz=45				
NATX			S	**S**	**07 02 36.4 -2.6**
	baz=45				
BDFB	**Brasilia**	**80.75 239**	P	**P**	**06 52 33.0 0.0**
	comp=Z,153nm,0.8s,baz=44,slow=6.7,SNR=61				
BDFB			LR	LR	07 28 32.0
	comp=Z,15μm,18.1s,baz=54,slow=36				
	comp=Z,153nm,0.8s				
BDFB	**Brasilia**	**80.75 239**	P	**P**	**06 52 32.4 -0.6**
BDFB			IAmb	IAmb	06 52 40.9
	comp=Z,197nm,0.9s				
BDFB	**Brasilia**	**80.75 239**	P	**P**	**06 52 32.4 -0.6**
BDFB			pmax	pmax	
	comp=Z,197nm,0.9s				
BDFB	**Brasilia**	**80.75 239**	*e*P	**P**	**06 52 33.0 0.0**
ISCO	**Idaho Springs**	**80.82 317**	S	**S**	**07 02 40.8 -1.1**
	baz=41				
ISCO	**Idaho Springs**	**80.82 317**	S	**S**	**07 02 44.2 +2.2**
	baz=41				
WMOK	**Wichita Mounta**	**80.88 309**	IAms_20	IAms_20	07 27 15.3
	comp=Z,22μm,20.0s				
WMOK	**Wichita Mounta**	**80.88 309**	IAmb	IAmb	06 52 42.2
	comp=Z,150nm,1.1s				
WMOK	**Wichita Mounta**	**80.88 309**	P	**P**	**06 52 31.8 -1.8**
	baz=44,SNR=61				
WMOK			S	**S**	**07 02 44.9 +2.7**
	baz=44				
WMOK	**Wichita Mounta**	**80.88 309**	P	**P**	**06 52 32.8 -0.8**
	baz=44,SNR=61				
WMOK			S	**S**	**07 02 44.0 +1.8**
	baz=44				
D08A	**Wollman Farm,**	**80.93 329**	IAmb	IAmb	06 52 42.8
	comp=Z,269nm,1.2s				
CHGN	**Chignik**	**80.98 355**	P	**P**	**06 52 33.3 -0.3**
CHGN	**Chignik**	**80.98 355**	P	**P**	**06 52 31.2 -2.4**
	baz=6.3				
Z35A	**Perchaven, San**	**81.01 307**	IAmb	IAmb	06 52 44.6
	comp=Z,130nm,0.8s				
Z35A	**Perchaven, San**	**81.01 307**	P	**P**	**06 52 33.2 -1.1**
	baz=44,SNR=30				
Z35A			S	**S**	**07 02 41.8 -1.7**
	baz=44				
TJN	**Taejon**	**81.02 48**	*de*P	**P**	**06 52 33.8 -0.4**
TJN	**Taejon**	**81.02 48**	P	**P**	**06 52 35.1 +0.9**
	comp=Z,1μm,1.4s				
E09A	**Wood Farm, Sta**	**81.09 328**	IAmb	IAmb	06 52 43.2
	comp=Z,265nm,0.9s				
237A	**Washetta, Mont**	**81.10 306**	P	**P**	**06 52 33.5 -1.2**
	baz=45				
237A			S	**S**	**07 02 46.7 +2.2**
	baz=45				
AHID	**Auburn Hatcher**	**81.16 322**	IAmb	IAmb	06 52 44.9
	comp=Z,172nm,1.1s				
Q24A	**Divide**	**81.21 316**	IAmb	IAmb	06 52 44.0
	comp=Z,130nm,1.1s				
Q24A	**Divide**	**81.21 316**	P	**P**	**06 52 35.2 -0.4**
	baz=41,SNR=54				
Q24A			S	**S**	**07 02 49.7 +3.6**
	baz=41				
SSE	**Sheshan**	**81.24 56**	P	**P**	**06 52 36.3 +0.8**
SSE			S	**S**	**07 02 44.5 -1.4**
SSE			pmax	pmax	
	comp=Z,94nm,0.9s				
SSE			pmax	pmax	
	comp=Z,3μm,4.7s				
SSE			LR	LR	
	comp=Z,8μm,18.1s				
CHIR	**Chirikof Islan**	**81.25 354**	P	**P**	**06 52 35.8 +0.7**
	baz=8.4				
SKR	**Severo-Kuril's**	**81.44 23**	*e*P	**P**	**06 52 34.8 -1.4**
SKR			*e*S	**S**	**07 02 39.6 -7.7**
SKR			pmax	pmax	
	comp=Z,2μm,6.7s				
SKR			smax	smax	
	comp=E,3μm,14.1s				
SKR			smax	smax	
	comp=N,2μm,9.2s				
SKR			MLR	MLR	
	comp=Z,15μm,22.0s				
UBPT	**Khong Chiam**	**81.48 77**	P	**P**	**06 52 36.2 -0.8**
UBPT			IAmb	IAmb	06 52 49.3
	comp=Z,269nm,1.9s				
UBPT	**Khong Chiam**	**81.48 77**	P	**P**	**06 52 36.1 -0.9**
	comp=Z,11μmcomp=Z,38nm,1.1s				
SRIT	**Nakonsritamara**	**81.66 86**	P	**P**	**06 52 37.9 0.0**
	comp=Z,120nm,2.4s				
HAWA	**Hanford**	**81.72 329**	IAms_20	IAms_20	07 27 31.3
	comp=Z,22μm,20.0s				
CAM01	**Campos-RJ**	**81.72 230**	*e*P	**P**	**06 52 38.6 +0.7**
GZH	**Guangzhou**	**81.74 66**	P	**P**	**06 52 39.0 +0.8**
GZH			S	**S**	**07 02 52.3 +1.0**
GZH			pmax	pmax	
	comp=Z,4μm,4.1s				
GZH			LR	LR	
	comp=Z,24μm,21.6s				
GZH			LR	LR	
	comp=Z,22μm,18.1s				
O20A	**White River Ci**	**81.86 319**	P	**P**	**06 52 38.5 -0.4**
	baz=39,SNR=108				
O20A			S	**S**	**07 02 53.8 +1.2**
	baz=39				
TAMC	**Tame, Arauca**	**81.92 271**	*e*P	**P**	**06 52 40.6 +1.2**
LHMI	**Lhok Sumawe**	**81.96 90**	IAms_20	IAms_20	07 34 08.4
	comp=Z,23μm,21.0s				
LHMI	**Lhok Sumawe**	**81.96 90**	P	**P**	**06 52 38.6 -0.9**
	comp=Z,14μmcomp=Z,6μmcomp=Z,113nm,1.1s				
PMNB	**Patos De Minas**	**81.97 236**	*e*P	**P**	**06 52 40.5 +1.1**
HLID	**Hailey**	**81.98 324**	IAmb	IAmb	06 52 48.3
	comp=Z,395nm,1.7s				
HLID	**Hailey**	**81.98 324**	P	**P**	**06 52 40.5 +1.1**
	baz=36,SNR=109				
HLID			S	**S**	**07 02 59.0 +5.4**
	baz=36				
PAMC	**Pamplona, Colo**	**81.99 273**	*e*P	**P**	**06 52 39.4 -0.8**
SDPT	**Sand Point**	**82.04 356**	P	**P**	**06 52 39.9 +0.7**
	baz=4.8				
QIZ	**Qiongzhong**	**82.08 72**	P	**P**	**06 52 38.8 -1.3**
QIZ			sP	**pP**	**06 52 43.8 +0.2**
QIZ			S	**S**	**07 02 54.3 -0.6**
QIZ			SS	**SS**	**07 08 11.8 -1.8**
QIZ			pmax	pmax	
	comp=Z,35nm,1.4s				
QIZ			pmax	pmax	
	comp=Z,6μm,6.4s				
QIZ			LR	LR	
	comp=Z,30μm,20.1s				
QIZ			LR	LR	
	comp=Z,62μm,21.1s				
WHTX	**Lake Whitney,**	**82.09 307**	P	**P**	**06 52 38.9 -1.0**
WHTX	**Lake Whitney,**	**82.09 307**	P	**P**	**06 52 38.3 -1.7**
	baz=44				
WHTX			S	**S**	**07 02 56.0 +1.3**
	baz=44				
WHTX	**Lake Whitney,**	**82.09 307**	P	**P**	**06 52 39.1 -0.9**
	baz=44				
WHTX			S	**S**	**07 02 54.6 -0.1**
	baz=44				
T25A	**Trinidad**	**82.20 314**	P	**P**	**06 52 40.0 -0.8**
	baz=41,SNR=56				
T25A			S	**S**	**07 02 58.4 +2.2**
	baz=41				
MLSI	**Meulaboh, Aceh**	**82.20 91**	P	**P**	**06 52 38.7 -2.1**
	comp=Z,578nmcomp=Z,201nm,0.8s				
LON	**Longmire**	**82.26 331**	IAmb	IAmb	06 52 52.4
	comp=Z,216nm,1.2s				
SDCO	**Great Sand Dun**	**82.31 315**	IAmb	IAmb	06 52 50.2
	comp=Z,455nm,2.0s				
SDCO			IAms_20	IAms_20	07 31 30.9
	comp=Z,32μm,19.0s				
SDCO	**Great Sand Dun**	**82.31 315**	P	**P**	**06 52 42.2 +0.8**
	baz=40,SNR=103				
SDCO			S	**S**	**07 03 03.5 +6.1**
	baz=40				
SDCO	**Great Sand Dun**	**82.31 315**	P	**P**	**06 52 40.1 -1.4**
	baz=40,SNR=103				
SDCO			S	**S**	**07 02 58.3 +0.8**
	baz=40				
DUB01	**Friburgo-RJ**	**82.33 230**	*e*P	**P**	**06 52 42.0 +0.8**
CLDB	**Colider**	**82.35 248**	*e*P	**P**	**06 52 41.8 +0.4**
ASAJ	**Asahikawa**	**82.36 34**	P	**P**	**06 52 40.6 -0.5**
AMTX	**Amarillo**	**82.41 311**	IAms_20	IAms_20	07 28 57.5
	comp=Z,42μm,20.0s				
AMTX	**Amarillo**	**82.41 311**	P	**P**	**06 52 42.2 +0.5**
	baz=42				
AMTX			S	**S**	**07 03 02.6 +4.5**
	baz=42				
AMTX	**Amarillo**	**82.41 311**	P	**P**	**06 52 41.7 -0.1**
	baz=42				
AMTX			S	**S**	**07 02 59.5 +1.4**
	baz=42				
JSH	**Shimam**	**82.47 37**	P	**P**	**06 52 42.7 +1.0**
CHNA	**Chernabura Isl**	**82.51 356**	P	**P**	**06 52 41.4 -0.3**
	baz=5.4				
CHNA			S	**S**	**07 02 58.8 +0.6**
	baz=5.4				
CNBA	**Chernabura Isl**	**82.52 356**	IAms_20	IAms_20	07 36 00.6
	comp=Z,18μm,21.0s				
HKT	**Hockley**	**82.57 304**	P	**P**	**06 52 41.7 -0.7**
HKT	**Hockley**	**82.57 304**	*d iP*	**P**	**06 52 42.0 -0.4**
HKT			pmax	pmax	
	comp=Z,92nm,1.4s				
HKT			MLR	MLR	
	comp=Z,51μm,19.0s				
HKT	**Hockley**	**82.57 304**	P	**P**	**06 52 40.0 -2.4**
	baz=44				
HKT			S	**S**	**07 03 04.1 +4.6**
	baz=44				
HKT	**Hockley**	**82.57 304**	P	**P**	**06 52 44.3 +1.8**
TCUT	**Toone Canyon**	**82.60 321**	IAmb	IAmb	06 52 51.7
	comp=Z,257nm,1.3s				
IPMB	**Ipameri, GO**	**82.64 237**	*e*P	**P**	**06 52 43.1 +0.2**
FALS	**False Pass**	**82.64 358**	P	**P**	**06 52 41.5 -0.8**
	baz=2.6				
MFID	**Camas Ranch**	**82.70 325**	IAms_20	IAms_20	07 28 18.5
	comp=Z,43μm,21.0s				
HKPS	**Hong Kong Po S**	**82.83 66**	IAms_20	IAms_20	07 32 37.1
	comp=Z,40μm,20.0s				
HKPS	**Hong Kong Po S**	**82.83 66**	P	P	06 52 51.7 +7.7
	comp=Z,233nm,1.9s				
SGCB	**S£o Gabriel d**	**82.84 263**	*e*P	**P**	**06 52 43.4 -0.7**
BARC	**Barichara**	**82.84 272**	*e*P	**P**	**06 52 42.8 -1.6**
BSCB	**Bom Sucesso**	**82.87 233**	*e*P	**P**	**06 52 44.9 +0.8**
ABTX	**Abilene, Hawle**	**82.91 308**	P	**P**	**06 52 43.2 -1.1**
	baz=43,SNR=13				
ABTX			S	**S**	**07 03 04.0 +0.8**
	baz=43				
ABTX	**Abilene, Hawle**	**82.91 308**	P	**P**	**06 52 43.9 -0.4**
	baz=43,SNR=13				
ABTX			S	**S**	**07 03 01.5 -1.6**
	baz=43				
JEW	**Eniwo**	**82.92 36**	P	**P**	**06 52 45.8 +1.7**
	comp=Z,698nm,1.5s				
JEW	**Eniwo**	**82.92 36**	P	**P**	**06 52 44.2 +0.1**
SPUT	**South Promonto**	**82.92 322**	IAmb	IAmb	06 53 02.5
	comp=Z,202nm,1.5s				
S22A	**4UR Ranch, Cre**	**83.00 316**	IAmb	IAmb	06 52 54.3
	comp=Z,104nm,0.9s				
S22A	**4UR Ranch, Cre**	**83.00 316**	P	**P**	**06 52 44.9 -0.1**
	baz=40,SNR=144				
S22A			S	**S**	**07 03 06.6 +2.1**
	baz=40				
JLU	**Jordanelle**	**83.02 321**	IAmb	IAmb	06 52 54.0
	comp=Z,133nm,1.0s				
435B	**Jarrell**	**83.03 306**	P	**P**	**06 52 42.0 -2.9**
	baz=44				
435B			S	**S**	**07 03 05.3 +0.9**
	baz=44				
435B	**Jarrell**	**83.03 306**	P	**P**	**06 52 44.8 -0.1**
	baz=44				
435B			S	**S**	**07 03 03.6 -0.8**
	baz=44				
CTU	**Camp Tracy**	**83.09 321**	IAmb	IAmb	06 52 53.5
	comp=Z,105nm,1.0s				
VAS01	**Vassouras-RJ**	**83.09 231**	*e*P	**P**	**06 52 46.9 +1.8**
ARAG	**Araguaiana, MT**	**83.22 241**	*e*P	**P**	**06 52 47.0 +1.2**
P18A	**Preston Nutter**	**83.22 319**	IAmb	IAmb	06 52 54.8
	comp=Z,144nm,1.1s				
LASI	**Langsa, Aceh**	**83.23 90**	P	**P**	**06 52 45.7 -0.4**
	comp=Z,19μmcomp=Z,1μm,0.5s				
RUSC	**La Rusia**	**83.24 272**	*e*P	**P**	**06 52 43.1 -3.7**
SKLT	**Songkhla**	**83.36 86**	P	**P**	**06 52 45.7 -1.1**
	comp=Z,5μmcomp=Z,147nm,1.8s				
SKLT	**Songkhla**	**83.36 86**	P	**P**	**06 52 47.2 +0.4**
	comp=Z,154nm,1.8s				
SHEM	**Shemya Is, Ala**	**83.41 11**	LR	LR	07 32 49.7
	comp=Z,9μm,18.9s,baz=340,slow=38				
HOOD	**Mount Hood Mea**	**83.42 330**	IAmb	IAmb	06 52 57.8
	comp=Z,199nm,1.1s				
KUR	**Kuril'sk**	**83.49 30**	*d iP*	**P**	**06 52 47.0 0.0**
KUR			*e*		06 52 53.3
KUR			*e*		06 56 01.8
KUR			S	**S**	**07 03 07.2 -1.3**
KUR			SS	**SS**	**07 08 33.0 +0.2**
KUR			*e*SSS	SSS	07 12 03.9
KUR			pmax	pmax	
	comp=Z,5μm,5.8s				
KUR			MLR	MLR	
	comp=Z,64μm,16.0s				
KUR			MLR	MLR	
	comp=N,60μm,17.0s				
JTU	**Tsushima**	**83.51 48**	P	P	06 52 55.7 +8.4
	comp=N,274nm,2.0s				
JTU	**Tsushima**	**83.51 48**	P	**P**	**06 52 45.8 -1.4**
PDRB	**Porto dos Gac**	**83.51 248**	*e*P	**P**	**06 52 48.2 +0.7**
MPU	**Maple Canyon**	**83.57 321**	IAmb	IAmb	06 52 53.7
	comp=Z,373nm,2.0s				
I07A	**Izee**	**83.64 328**	IAmb	IAmb	06 52 54.5
	comp=Z,248nm,1.4s				
PTGC	**Puerto Gaitan,**	**83.67 270**	*e*P	**P**	**06 52 48.1 -0.3**
MSTX	**Muleshoe**	**83.69 311**	IAmb	IAmb	06 52 56.1
	comp=Z,139nm,1.1s				
MSTX	**Muleshoe**	**83.69 311**	P	**P**	**06 52 49.8 +1.4**
	baz=42,SNR=29				
MSTX			S	**S**	**07 03 08.2 -2.9**
	baz=42				
MSTX	**Muleshoe**	**83.69 311**	P	**P**	**06 52 49.1 +0.7**
	baz=42,SNR=29				
MSTX			S	**S**	**07 03 07.9 -3.3**
	baz=42				
UNV	**Unalaska Valle**	**83.70 360**	P	**P**	**06 52 47.3 -0.6**
	baz=0.3				
UNV			S	**S**	**07 03 09.7 -0.5**
	baz=0.3				
UNV	**Unalaska Valle**	**83.70 360**	P	P	06 52 52.7 +4.8
KCSI	**Kotacane, Aceh**	**83.71 91**	P	**P**	**06 52 47.1 -1.5**

comp=Z,5µmcomp=Z,120nm,1.1s
YUK Yuzh-Kuril'sk 83.74 32 *d iP* **P 06 52 49.1 +0.8**
YUK *e* 06 56 02.4
YUK PPP PPP 06 57 56.3
YUK *i* S **S 07 03 11.5 +0.4**
YUK *e*SSS SSS 07 11 58.5
YUK pmax pmax
comp=Z,2µm,5.1s
YUK pmax pmax
comp=Z,1µm,1.3s
YUK pmax pmax
comp=N,661nm,1.4s
YUK pmax pmax
comp=E,346nm,1.0s
PTBC PUERTO BERRIO, 83.81 273 *eP* **P 06 52 49.1 0.0**
NLU North Lily Min 83.83 321 IAmb IAmb 06 52 57.4
comp=Z,252nm,1.4s
J08A Circle Bar Ran 83.84 327 IAmb IAmb 06 52 57.8
comp=Z,94nm,0.9s
MAN01 Angra dos Reis 83.85 231 *eP* **P 06 52 51.7 +2.6**
QZH Quanzhou 83.93 62 *iP* **P 06 52 50.5 +0.9**
QZH PP **PP 06 56 05.5 +2.8**
QZH SKS **S 07 03 10.0 -3.6**
QZH S **SKSac 07 03 15.3 +2.3**
QZH SS **SS 07 08 41.8 +1.2**
QZH pmax pmax
comp=Z,4µm,4.5s
QZH pmax pmax
comp=Z,130nm,1.9s
QZH LR LR
comp=Z,25µm,18.9s
QZH LR LR
comp=Z,43µm,20.4s
JOT Ohata 83.93 37 P **P 06 52 48.6 -0.7**
TMUT Trail Mountain 83.94 320 IAmb IAmb 06 52 58.3
comp=Z,86nm,0.9s
DUG Dugway, Tooele 83.98 321 P **P 06 52 49.1 -0.7**
baz=37,SNR=113
DUG S **S 07 03 13.3 -0.7**
baz=37
SPBC San Pablo de B 84.13 272 *eP* **P 06 52 50.6 -0.2**
H04A Detroit Lake 84.16 330 IAmb IAmb 06 52 59.5
comp=Z,163nm,1.2s
Q16A Castle Valley 84.22 320 IAmb IAmb 06 52 59.7
comp=Z,120nm,0.9s
MVCO Mesa Verde 84.25 317 IAmb IAmb 06 53 03.0
comp=Z,119nm,0.9s
MVCO Mesa Verde 84.25 317 P **P 06 52 51.1 -0.3**
baz=39,SNR=81
MVCO S **S 07 03 14.8 -2.2**
baz=39
TSI Tuntungan 84.31 91 P **P 06 52 50.8 -0.8**
comp=Z,10µmcomp=Z,9µmcomp=Z,165nm,1.1s
ERM Erimo 84.32 35 P **P 06 52 51.2 -0.1**
ERM Erimo 84.32 35 *ceP* **P 06 52 53.5 +2.2**
ERM pmax pmax
comp=Z,561nm,1.1s
ERM MLR MLR
comp=Z,95µm,17.0s
ERM Erimo 84.32 35 P **P 06 52 54.0 +2.7**
comp=Z,648nm,1.1s
ERM Erimo 84.32 35 P **P 06 52 54.1 +2.7**
JEM Erimo 84.32 35 P **P 06 52 54.0 +2.7**
comp=Z,257nm,1.2s
JEM Erimo 84.32 35 P **P 06 52 49.9 -1.4**
JTM Tenmabayashi 84.42 37 P **P 06 52 52.9 +1.1**
comp=Z,544nm,1.6s
JTM Tenmabayashi 84.42 37 P **P 06 52 48.1 -3.7**
TEIG Tepich 84.46 292 IAMs_20 IAMs_20 07 29 52.3
comp=Z,30µm,21.0s
TEIG Tepich 84.46 292 *eP* **P 06 52 52.2 -0.2**
TEIG Tepich 84.46 292 P P 06 52 57.4 +5.1
JFU Fukue jima 2 84.54 50 P **P 06 52 54.5 +1.9**
735A Kenedy 84.55 305 P **P 06 52 53.3 +0.6**
baz=44,SNR=12
735A S **S 07 03 16.4 -3.3**
baz=44
NIKH Nikolski High 84.56 1 P **P 06 52 52.4 +0.1**
baz=359
JCT Junction City 84.57 307 P **P 06 52 51.8 -1.0**
baz=43,SNR=34
JCT Junction City 84.57 307 P **P 06 52 52.9 +0.1**
baz=43,SNR=34
JCT S **S 07 03 15.6 -4.4**
baz=43
ELK Elko 84.62 323 LR LR 07 30 23.9
comp=Z,25µm,19.4s,baz=46,slow=36
ELK Elko 84.62 323 IAMs_20 IAMs_20 07 33 08.4
comp=Z,33µm,20.0s
KULM Kulim 84.64 88 P **P 06 52 52.3 -1.1**
KULM IAmb IAmb 06 52 58.3
comp=Z,115nm,1.2s
KULM IAMs_20 IAMs_20 07 34 39.6
comp=Z,21µm,21.0s
KULM Kulim 84.64 88 P **P 06 52 52.1 -1.2**
comp=Z,13µmcomp=Z,7µmcomp=Z,96nm,2.4s
COR Corvallis 84.65 330 IAMs_20 IAMs_20 07 31 35.9
comp=Z,29µm,21.0s
COR Corvallis 84.65 330 P P 06 52 58.2 +5.3
WVOR Wild Horse Val 84.67 326 IAmb IAmb 06 53 02.4
comp=Z,189nm,1.2s
HELC Santa Helena 84.83 274 *eP* **P 06 52 55.1 +0.4**
ROSC El Rosal 84.85 272 P **P 06 52 54.0 -0.9**
comp=Z,25nm,0.7s,baz=69,slow=3.7,SNR=16
ROSC LR LR 07 26 35.4
comp=Z,104µm,21.8s,baz=48,slow=33
comp=Z,25nm,0.7s
ROSC El Rosal 84.85 272 IAmb IAmb 06 53 04.4
comp=Z,270nm,1.7s
ROSC El Rosal 84.85 272 *eP* **P 06 52 55.1 +0.2**
ROSC El Rosal 84.85 272 P **P 06 52 54.0 -0.9**
ANMO Albuquerque 84.94 314 LR LR 07 29 22.5
comp=Z,95µm,21.2s,baz=44,slow=35
ANMO Albuquerque 84.94 314 P **P 06 52 54.3 -0.5**
ANMO IAmb IAmb 06 53 04.1
comp=Z,85nm,1.1s
ANMO Albuquerque 84.94 314 *ceP* **P 06 52 55.5 +0.6**
ANMO pmax pmax
comp=Z,222nm,2.5s
ANMO MLR MLR
comp=Z,91µm,21.0s
ANMO Albuquerque 84.94 314 P **P 06 52 55.2 +0.3**
baz=40,SNR=76
ANMO S **S 07 03 21.5 -2.4**
baz=40
ANMO Albuquerque 84.94 314 P **P 06 52 54.6 -0.2**
baz=40
ANMO S **S 07 03 20.4 -3.5**
baz=40
ANMO Albuquerque 84.94 314 P **P 06 52 55.7 +0.8**
PSI Prapat 85.04 91 P **P 06 52 54.7 -0.8**
comp=Z,51nm,0.9s,baz=278,slow=6.3,SNR=35
PSI S **S 07 03 17.7 -7.5**
comp=Z,1.4nm,0.3s,baz=183,slow=16,SNR=1.3
PSI LR LR 07 35 40.6
comp=Z,21µm,21.7s,baz=304,slow=39
comp=Z,51nm,0.9s
PSI Prapat 85.04 91 P **PcP 06 52 54.4 -4.4**
comp=Z,13µmcomp=Z,9µmcomp=Z,198nm,2.2s
PSI P **P 06 52 54.2 -1.3**
comp=Z,13µmcomp=Z,9µmcomp=Z,198nm,2.2s
PSI Prapat 85.04 91 P **P 06 52 54.7 -0.8**
comp=Z,198nm,2.2s
GSI Gunungsitoli 85.06 93 P **P 06 52 54.0 -1.4**
GSI IAmb IAmb 06 53 01.1
comp=Z,185nm,1.1s
GSI IAMs_20 IAMs_20 07 33 27.6
comp=Z,29µm,22.0s
GSI Gunungsitoli 85.06 93 P **P 06 52 54.6 -0.8**
comp=Z,14µmcomp=Z,9µmcomp=Z,183nm,1.5s
GSI Gunungsitoli 85.06 93 P **P 06 52 56.7 +1.3**
comp=Z,184nm,1.5s
RPSI Rantau Prapat 85.11 91 IAmb IAmb 06 53 00.5
comp=Z,171nm,1.2s
RPSI IAMs_20 IAMs_20 07 34 45.0
comp=Z,30µm,22.0s
JHS Saijyo 85.14 46 IAmb IAmb 06 53 04.6
comp=Z,120nm,1.3s
JHS Saijyo 85.14 46 P **P 06 52 58.9 +3.3**
comp=Z,72nm,1.3s
JHS Saijyo 85.14 46 P **P 06 52 56.5 +0.9**
BB19B Bebedouro 85.16 236 *eP* **P 06 52 57.5 +1.7**
PARB Paraibuna 85.17 232 *eP* **P 06 52 56.0 +0.3**
ITRB Iturama 85.26 238 *eP* **P 06 52 58.4 +2.1**
ADK Adak 85.28 6 IAMs_20 IAMs_20 07 33 19.8
comp=Z,16µm,21.0s
JSD Sado 85.34 40 P **P 06 52 57.6 +1.1**
comp=Z,300nm,1.5s
JSD Sado 85.34 40 P **P 06 52 56.7 +0.2**
GUY2C Guyana, Caldas 85.36 273 *eP* **P 06 52 58.2 +0.6**
JNU Nakatsue 85.37 48 P **P 06 52 58.7 +1.9**
comp=Z,374nm,1.4s
JNU Nakatsue 85.37 48 P **P 06 52 55.9 -1.0**
MTPU Mount Pierson 85.40 320 IAmb IAmb 06 53 06.7
comp=Z,121nm,0.9s
CBOC Ciudad Bolivar 85.41 274 *eP* **P 06 52 58.2 +0.7**
IPM Ipoh 85.46 88 P **P 06 52 56.0 -1.5**
IPM IAmb IAmb 06 53 02.0
comp=Z,93nm,1.1s
IPM Ipoh 85.46 88 P **P 06 52 56.0 -1.5**
IPM Ipoh 85.46 88 P **P 06 52 57.0 -0.5**
KVTX Kingsville 85.55 304 P **P 06 52 59.6 +1.9**
baz=43
KVTX S **S 07 03 30.6 +1.0**
baz=43
JYA Atsumi 85.58 39 P **P 06 52 56.7 -1.0**
RCLB Rio Claro- Sao 85.59 234 *eP* **P 06 52 59.6 +1.8**
TRSI Tarutung 85.59 91 P **P 06 52 57.8 -0.4**
comp=Z,11µmcomp=Z,288nm,0.6s
JOM Ohasama 85.59 38 P **P 06 52 56.8 -0.9**
VAO Valinhos 85.70 233 *eP* **P 06 52 59.9 +1.5**
JAD Aida 85.74 45 P **P 06 52 58.2 -0.4**
MOD Modoc Plateau 85.79 327 IAmb IAmb 06 53 08.4
comp=Z,186nm,1.1s
Y22D IRIS PASSCAL I 85.86 314 P **P 06 52 59.3 0.0**
baz=40
Y22D S **S 07 03 29.3 -3.5**
baz=40
Y22D IRIS PASSCAL I 85.86 314 P **P 06 52 60.0 +0.6**
baz=40
Y22F Passcal Instru 85.86 314 P **P 06 52 59.7 +0.4**
baz=40
PTAC Punta Ardita, 85.86 276 *eP* **P 06 52 58.9 -0.6**
ANIL Santa Ana 85.88 272 *eP* **P 06 53 00.9 +1.0**
DLV T Lat 85.89 78 P **P 06 53 01.9 +2.1**
comp=Z,128nm,1.2s
DBO Dodson Butte 85.89 330 IAmb IAmb 06 53 08.0
comp=Z,185nm,1.2s
833A Chaparral WMA, 85.90 305 P **P 06 52 59.0 -0.5**
baz=43,SNR=13
833A S **S 07 03 28.7 -4.3**
baz=43
833A Chaparral WMA, 85.90 305 P **P 06 52 58.9 -0.5**
baz=43,SNR=13
833A S **S 07 03 27.5 -5.6**
baz=43
SALV Santo Antonio 85.90 244 *eP* **P 06 52 59.2 -0.2**
Y22A Socorro 85.99 314 P **P 06 53 01.5 +1.4**
baz=40,SNR=37
Y22A S **S 07 03 28.9 -5.3**
baz=40
BCIP Isla Barro Col 85.99 279 P **P 06 52 58.9 -1.2**
BCIP IAmb IAmb 06 53 10.8
comp=Z,289nm,1.4s
BCIP IAMs_20 IAMs_20 07 30 17.7
comp=Z,17µm,22.0s
BCIP Isla Barro Col 85.99 279 *eP* **P 06 53 00.5 +0.4**
BCIP Isla Barro Col 85.99 279 P **P 06 52 58.9 -1.2**
BCIP pmax pmax
comp=Z,289nm,1.5s
BCIP MLR MLR
comp=Z,17µm,22.0s
PRAC Prado 86.02 271 *eP* **P 06 53 00.4 +0.1**
JWT Wachi 86.10 44 P **P 06 53 00.2 -0.2**
C2SB Chapadao do Su 86.13 240 *eP* **P 06 53 02.4 +1.9**
ORTC Ortega, Tolima 86.16 272 *eP* **P 06 53 01.0 0.0**
SZCU Shurtz Canyon 86.19 320 IAmb IAmb 06 53 10.3
comp=Z,273nm,1.8s
HUMO Hull Mountain 86.22 329 IAmb IAmb 06 53 09.0
comp=Z,100nm,0.9s
HUMO IAMs_20 IAMs_20 07 30 25.5
comp=Z,22µm,21.0s
PLMC San Jos del P 86.25 273 *eP* **P 06 53 03.2 +1.7**
JGN Niukaw 86.33 42 P **P 06 53 00.8 -0.8**
JSU Suzuyama 86.36 49 IAmb IAmb 06 53 09.3
comp=Z,282nm,1.4s
JSU Suzuyama 86.36 49 P **P 06 53 03.3 +1.6**
comp=Z,162nm,1.9s
JSU Suzuyama 86.36 49 P **P 06 53 02.1 +0.3**
PBSI Pulau Batu 86.49 93 P **P 06 53 02.4 -0.1**
comp=Z,8µmcomp=Z,295nm,1.0s
MAJO Matsushiro 86.51 41 P **P 06 53 01.7 -0.6**
MAJO Matsushiro 86.51 41 *c iP* **P 06 53 02.0 -0.4**
MAJO pmax pmax
comp=Z,299nm,1.3s
MAJO Matsushiro 86.51 41 P **P 06 53 02.2 -0.1**
comp=Z,205nm,1.6s
MAJO Matsushiro 86.51 41 P **P 06 53 02.3 -0.1**
MAT Matsushiro 86.51 41 P **P 06 53 01.6 -0.8**
W18A Petrified Fore 86.51 316 P **P 06 53 02.4 -0.2**
baz=38
W18A S **S 07 03 40.5 +1.3**
baz=38
MJAR Matsushiro Arr 86.51 41 P **P 06 53 01.7 -0.7**
comp=Z,36nm,0.9s,baz=321,slow=5.1,SNR=45
MJAR S **SKSac 07 03 24.0 -5.1**
comp=Z,0.5nm,0.5s,baz=144,slow=21,SNR=1.8
MJAR LR LR 07 35 54.5
comp=Z,117µm,18.0s,baz=327,slow=39
comp=Z,36nm,0.9s
JMN Monobe 86.52 46 P **P 06 53 04.9 +2.4**
comp=Z,179nm,1.1s
JMN Monobe 86.52 46 P **P 06 53 01.5 -1.0**
JMM Marumori 86.67 39 IAmb IAmb 06 53 10.2
comp=Z,189nm,1.1s
JMM Marumori 86.67 39 P **P 06 53 03.0 -0.1**
comp=Z,178nm,1.5s
JMM Marumori 86.67 39 P **P 06 53 01.6 -1.5**
R11A Troy Canyon, C 86.73 322 IAmb IAmb 06 53 11.9
comp=Z,223nm,1.9s
R11A Troy Canyon, C 86.73 322 P **P 06 53 03.1 -0.5**
baz=35,SNR=32
R11A S **S 07 03 44.6 +3.3**
baz=35
U15A North Rim 86.74 319 IAmb IAmb 06 53 12.5
comp=Z,290nm,1.8s
PNME Penonome 86.80 279 *eP* **P 06 53 04.6 +0.5**
JGF Kuroka 86.84 42 P **P 06 53 04.4 +0.4**
comp=Z,144nm,1.7s
JGF Kuroka 86.84 42 P **P 06 53 03.3 -0.8**
VILB Vilhena 86.84 249 *eP* **P 06 53 04.6 +0.4**
PET01 Itanhaem-SP 86.86 233 *eP* **P 06 53 05.2 +1.1**
INU Inuyama 86.87 43 IAmb IAmb 06 53 11.1
comp=Z,249nm,1.5s
INU Inuyama 86.87 43 P **P 06 53 06.0 +1.9**
MNSI Mandailing Nat 86.87 92 P **P 06 53 03.4 -1.0**
YBH Yreka Blue Hor 86.88 329 LR LR 07 31 43.7
comp=Z,23µm,19.1s,baz=28,slow=36
YBH Yreka Blue Hor 86.88 329 IAmb IAmb 06 53 12.3
comp=Z,117nm,1.4s
YBH IAMs_20 IAMs_20 07 31 31.9
comp=Z,24µm,20.0s
YOTC Yotoco, Valle 86.92 273 *eP* **P 06 53 04.4 -0.4**
WUAZ Wupatki 87.02 318 IAmb IAmb 06 53 14.3
comp=Z,235nm,1.7s
WUAZ Wupatki 87.02 318 P **P 06 53 03.8 -1.2**
baz=37,SNR=36
WUAZ S **S 07 03 49.1 +5.0**
baz=37
PCMB Pacaembu 87.24 237 *eP* **P 06 53 06.9 +1.0**
JRY Ryogami san 87.26 41 P **P 06 53 04.8 -1.3**
PAHR Pah Rah Range 87.26 325 IAmb IAmb 06 53 14.6
comp=Z,76nm,1.0s
JIE Ise 87.47 44 P **P 06 53 09.1 +2.1**
GARC Garzon, Huila 87.50 271 *eP* **P 06 53 05.2 -2.6**
121A Cookes Peak, D 87.50 313 P **P 06 53 05.3 -2.2**
baz=39,SNR=14
121A Cookes Peak, D 87.50 313 P **P 06 53 07.3 -0.2**
baz=39,SNR=14
121A S **S 07 03 50.6 +1.6**
baz=39
FRTB Fartura 87.50 235 *eP* **P 06 53 08.5 +1.3**
TX31 Lajitas Ar. Si 87.66 309 P **P 06 53 07.7 -0.5**
baz=41,SNR=70
TX32 Lajitas Array 87.66 309 IAmb IAmb 06 53 17.5
comp=Z,203nm,1.5s
TXAR Lajitas Array 87.66 309 P **P 06 53 08.6 +0.4**
comp=Z,18nm,0.8s,baz=70,slow=2.8,SNR=64
TXAR PKPPKP **P'P'df 07 19 04.4 -4.2**
comp=Z,1.2nm,1.0s,baz=199,slow=2.7,SNR=4.6
TXAR LR LR 07 31 49.7
comp=Z,27µm,20.9s,baz=47,slow=35
comp=Z,18nm,0.8s
TPH Tonopah 87.69 323 IAmb IAmb 06 53 15.8
comp=Z,88nm,1.0s
TBTG Tabatinga, AM 87.70 262 *eP* **P 06 53 08.6 +0.2**
TBTG Tabatinga, AM 87.70 262 *eP* **P 06 53 09.2 +0.8**
JYT Yasato 87.72 40 P **P 06 53 08.0 -0.2**
comp=Z,219nm,1.4s
JYT Yasato 87.72 40 P **P 06 53 07.8 -0.4**
YERR Yerington 87.81 325 IAmb IAmb 06 53 17.7
comp=Z,97nm,0.9s
PETF Flores 87.83 291 IAmb IAmb 06 53 15.2
comp=Z,86nm,1.2s
NVAR Mina Array Bea 87.87 324 P **P 06 53 08.7 -0.5**
comp=Z,11nm,0.8s,baz=50,slow=4.7,SNR=38
NVAR PP **PP 06 56 33.8 -0.5**
comp=Z,4.3nm,0.9s,baz=60,slow=5.3,SNR=3.4
NVAR PKKPbc **PKKPbc 07 10 55.3 +1.2**
comp=Z,4.2nm,0.8s,baz=199,slow=4.1,SNR=15
NVAR PKPPKP P'P'df 07 18 58.9 -10
comp=Z,0.2nm,0.5s,baz=204,slow=2.0,SNR=4.5
NVAR LR LR 07 32 37.2
comp=Z,35µm,19.5s,baz=40,slow=36
comp=Z,11nm,0.8s
PTLB Pontes e Lacer 87.88 247 *eP* **P 06 53 08.6 -0.5**
MPK Martis Peak 87.88 325 IAmb IAmb 06 53 14.3
comp=Z,105nm,1.0s
ACON Acoyapa 87.94 284 IAmb IAmb 06 53 19.5
comp=Z,134nm,1.2s
ACON Acoyapa 87.94 284 *eP* **P 06 53 09.3 -0.3**
SISI Saibi 87.94 94 P **P 06 53 07.9 -1.7**
comp=Z,8µmcomp=Z,248nm,1.6s
JOD2 Odawara 2 87.96 41 P **P 06 53 07.0 -2.4**
TGUH Tegucigalpa,Un 88.00 287 *eP* **P 06 53 10.5 +0.4**
JCC Jacoby Creek, 88.17 329 IAMs_20 IAMs_20 07 31 49.1
comp=Z,24µm,20.0s
TPNV Topopah Spring 88.18 322 IAMs_20 IAMs_20 07 33 05.7
comp=Z,27µm,20.0s
TPNV Topopah Spring 88.18 322 P **P 06 53 09.9 -0.8**
baz=35,SNR=6.8
TPNV S **S 07 03 58.8 +3.6**
baz=35
BKNI Bangkinang 88.26 91 IAMs_20 IAMs_20 07 36 55.5
comp=Z,18µm,20.0s
BKNI Bangkinang 88.26 91 P **P 06 53 09.9 -1.2**
comp=Z,9µmcomp=Z,5µmcomp=Z,122nm,0.9s
WAKR Walker 88.29 325 IAmb IAmb 06 53 20.3
comp=Z,65nm,1.0s
BRU2 Volcan 88.31 280 *eP* **P 06 53 11.5 0.0**
RIMA Rio Macho 88.50 282 IAmb IAmb 06 53 21.2
comp=Z,103nm,1.4s
HDC Heredia 88.52 282 IAMs_20 IAMs_20 07 30 35.5
comp=Z,21µm,20.0s
HDC Heredia 88.52 282 *eP* **P 06 53 13.4 +0.9**
V12A Nelson 88.53 320 IAmb IAmb 06 53 21.2
comp=Z,67nm,0.9s
JOW Kunigami 88.59 54 P **P 06 53 11.1 -1.4**
comp=Z,60nm,0.9s,baz=311,slow=3.5,SNR=7.3
JOW LR LR 07 37 20.9
comp=Z,64µm,18.1s,baz=330,slow=39
comp=Z,60nm,0.9s
JOW Kunigami 88.59 54 P **P 06 53 14.1 +1.6**
comp=Z,216nm,1.3s
JOW Kunigami 88.59 54 P **P 06 53 12.9 +0.4**
GRAC Grapevine Rang 88.65 322 IAmb IAmb 06 53 21.7
comp=Z,117nm,1.4s
GRAC Grapevine Rang 88.65 322 P **P 06 53 13.6 +0.9**
baz=34,SNR=25
GRAC S **S 07 04 02.0 +2.6**
baz=34
CNGN Cerro Negro 88.66 286 IAmb IAmb 06 53 20.8
comp=Z,101nm,1.2s
CNGN Cerro Negro 88.66 286 *eP* **P 06 53 11.5 -1.6**
TIJ01 Guaruva-PR 88.67 233 *eP* **P 06 53 14.1 +1.4**
MLAC Mammoth, Mammo 88.77 324 P **P 06 53 12.9 -0.6**
baz=33
CRIN San Cristobal 88.77 286 *eP* **P 06 53 12.9 -0.7**
FURC Furnace Creek, 88.86 322 P **P 06 53 12.3 -1.3**
baz=34,SNR=18
FURC S **S 07 04 03.0 +1.8**
baz=34
ETMB Extrema 88.87 256 *eP* **P 06 53 12.8 -1.1**
JTS Las Juntas de 88.92 283 LR LR 07 27 50.4
comp=Z,31µm,21.5s,baz=106,slow=32
JTS Las Juntas de 88.92 283 *eP* **P 06 53 11.7 -2.6**
JTS Las Juntas de 88.92 283 *deP* **P 06 53 11.6 -2.6**
JTS pmax pmax
comp=Z,57nm,3.3s
JTS Las Juntas de 88.92 283 P P 06 53 22.2 +7.9
TRCB Terra Rica 88.97 237 *eP* **P 06 53 16.0 +1.8**
TIN Tinemaha, Big 88.98 323 P **P 06 53 12.2 -2.2**
baz=33
CRUC La Cruz 88.98 271 *eP* **P 06 53 18.4 +3.5**
GWY Greenwater Val 89.00 322 IAmb IAmb 06 53 23.6
comp=Z,72nm,0.9s
SHOC Shoshone, Teco 89.05 321 P **P 06 53 14.5 -0.1**
baz=34
SHOC S **S 07 04 08.1 +4.9**
baz=34
NEE2 Needles Airpor 89.20 319 P **P 06 53 14.5 -0.8**
baz=36
NEE2 S **S 07 04 06.7 +2.2**
baz=36
AQDB Aquidauana 89.21 241 IAmb IAmb 06 53 26.5
comp=Z,77nm,1.0s
AQDB Aquidauana 89.21 241 *eP* **P 06 53 15.7 +0.4**
MTO3 Montecristo 89.22 289 IAmb IAmb 06 53 25.4
comp=Z,115nm,1.2s
TUC Tucson 89.25 315 P **P 06 53 15.3 -0.4**
TUC IAmb IAmb 06 53 24.6
comp=Z,75nm,1.0s
TUC Tucson 89.25 315 P **P 06 53 15.3 -0.4**
TUC pmax pmax
comp=Z,75nm,1.0s
TUC MLR MLR
comp=Z,92µm,21.0s
TUC Tucson 89.25 315 P **P 06 53 14.8 -0.8**
baz=38
TUC S **S 07 04 05.2 -0.1**
baz=38
TUC Tucson 89.25 315 P **P 06 53 16.2 +0.5**
TUQ Turquoise Moun 89.27 321 P **P 06 53 16.1 +0.3**
baz=35,SNR=6.1
TUQ S **S 07 04 06.6 +1.1**
baz=35
PDMCI Parker Dam,Lak 89.34 319 P **P 06 53 15.4 -0.5**
baz=36,SNR=30
PDMCI S **S 07 04 06.5 +0.6**
baz=36
MYKOM Kota Tinggi 89.34 88 IAMs_20 IAMs_20 07 40 10.2
comp=Z,21µm,19.0s
MYKOM Kota Tinggi 89.34 88 P **P 06 53 15.2 -1.0**
comp=Z,9µmcomp=Z,5µmcomp=Z,85nm,2.8s
SDSI Sungai Dareh 89.39 92 P **P 06 53 14.6 -1.8**
comp=Z,9µmcomp=Z,126nm,1.9s
CWC Cottonwood Cre 89.43 323 P **P 06 53 16.2 -0.3**
baz=34
CWC S **S 07 04 07.2 +0.3**
baz=34
MPMC Manual Prospec 89.48 322 P **P 06 53 15.5 -1.3**
baz=34,SNR=35
MPMC S **S 07 04 06.6 -1.0**
baz=34
GCUF Volcan Galeras 89.50 271 *eP* **P 06 53 18.3 +0.7**
SIV San Ignacio 89.57 248 LR LR 07 30 54.9
comp=Z,20µm,21.0s,baz=64,slow=34
BTDF Bukit Timah Da 89.58 89 P **P 06 53 16.0 -1.3**
comp=Z,6µmcomp=Z,3µmcomp=Z,71nm,1.5s
PPSI Pulau Pagai 89.59 94 P **P 06 53 17.4 +0.1**
comp=Z,11µmcomp=Z,8µmcomp=Z,313nm,1.7s
SNET Serv Nac Est T 89.63 288 IAMs_20 IAMs_20 07 26 54.5
comp=Z,37µm,22.0s
RGRI Rengat 89.67 91 P **P 06 53 16.9 -0.8**
GMRC Granite Mounta 89.68 320 P **P 06 53 18.3 +0.7**
baz=35,SNR=23
GMRC S **S 07 04 08.0 -1.3**
baz=35
GSC Goldstone, Bar 89.79 321 P **P 06 53 17.0 -1.2**
baz=34,SNR=21
GSC S **S 07 04 09.9 -0.4**
baz=34
IRM Iron Mountain 89.95 319 P **P 06 53 18.5 -0.3**
baz=35,SNR=68
IRM S **S 07 04 11.6 0.0**
baz=35
HEC Hector,Ludlow 89.96 321 P **P 06 53 20.6 +1.6**
baz=34
HEC S **S 07 04 11.6 -0.2**
baz=34

BLYC	Blythe	89.98	319	IAmb	IAmb	06 53 27.9	
	comp=Z,85nm,0.9s						
JHJ	Hachijo jima 2	90.02	42	LR	LR	07 38 07.1	
	comp=Z,66μm,18.5s,baz=346,slow=39						
PTGB	Pitanga	90.04	236	eP	P	06 53 20.9	+1.7
LRMC	Laurel Mtn Rad	90.04	322	P	P	06 53 19.4	0.0
	baz=34,SNR=8.8						
LRMC				S	S	07 04 14.3	+1.6
	baz=34						
VOG	Valley Oaks Go	90.10	323	P	P	06 53 20.2	+0.7
	baz=33						
BONI	La Bonita	90.16	271	eP	P	06 53 20.3	0.0
TULM	Tulcn-Chalpat	90.17	271	eP	P	06 53 16.3	-4.4
RRX	Edison Barstow	90.23	321	P	P	06 53 19.8	-0.3
	baz=34						
RRX				S	S	07 04 12.9	-1.3
	baz=34						
ISA	Isabella, Lake	90.25	322	P	P	06 53 19.8	-0.4
	baz=33,SNR=42						
ISA				S	S	07 04 12.5	-2.0
	baz=33						
VES	Vestal, Richgr	90.37	323	P	P	06 53 18.9	-1.8
	baz=33						
TPRI	Tanjung Pinang	90.43	88	P	P	06 53 20.8	-0.5
TPRI				pP	sP	06 53 25.7	-0.4
CCAC	Calif City Air	90.47	322	IAmb	IAmb	06 53 30.3	
	comp=Z,74nm,1.0s						
BELC	Belle Mtn. Jos	90.48	320	P	P	06 53 20.7	-0.7
	baz=35,SNR=32						
BELC				S	S	07 04 15.4	-1.3
	baz=35						
BC3	Big Chuckawall	90.50	319	P	P	06 53 20.1	-1.4
	baz=35,SNR=38						
BC3				S	S	07 04 13.7	-3.2
	baz=35						
214A	Organ Pipe Nat	90.57	316	IAmb	IAmb	06 53 27.2	
	comp=Z,200nm,2.0s						
214A	Organ Pipe Nat	90.57	316	P	P	06 53 20.7	-1.1
	baz=36,SNR=22						
214A				S	S	07 04 15.0	-2.4
	baz=36						
SAO	San Andreas Ge	90.61	325	IAms_20	IAms_20	07 33 00.9	
	comp=Z,33μm,21.0s						
EDW2	Edwards Air Fo	90.68	322	P	P	06 53 21.4	-0.9
	baz=34,SNR=21						
EDW2				S	S	07 04 14.5	-3.9
	baz=34						
GLA	Glamis	90.69	319	P	P	06 53 22.0	-0.3
	baz=35,SNR=6.9						
GLA				S	S	07 04 18.3	-0.3
	baz=35						
BBRC	Big Bear Solar	90.70	321	P	P	06 53 22.2	-0.3
	baz=34						
BBRC				S	S	07 04 14.2	-4.8
	baz=34						
ARVC	Arvin	90.86	322	P	P	06 53 23.2	+0.2
	baz=33						
ARVC				S	S	07 04 18.1	-1.8
	baz=33						
CUSE	Cuicocha Este	90.90	271	eP	P	06 53 25.1	+1.0
PFO	Pinyon Flats O	91.02	320	LR	LR	07 34 40.4	
	comp=Z,29μm,20.4s,baz=36,slow=36						
PFO	Pinyon Flats O	91.02	320	P	P	06 53 23.8	-0.2
PFO				IAmb	IAmb	06 53 32.9	
	comp=Z,77nm,0.9s						
PFO	Pinyon Flats O	91.02	320	IAms_20	IAms_20	07 34 27.0	
	comp=Z,32μm,21.0s						
PFO	Pinyon Flats O	91.02	320	c iP	P	06 53 24.1	+0.2
PFO				pmax	pmax		
	comp=Z,137nm,0.9s						
PFO				MLR	MLR		
	comp=Z,55μm,22.0s						
PFO	Pinyon Flats O	91.02	320	P	P	06 53 23.5	-0.5
	baz=34,SNR=38						
PFO				S	S	07 04 20.7	-1.0
	baz=34						
TPFO	Pinon Flats	91.02	320	P	P	06 53 22.7	-1.2
	baz=34,SNR=36						
TPFO				S	S	07 04 22.1	+0.4
	baz=34						
BFSC	Mount Baldy Ra	91.06	321	P	P	06 53 23.7	-0.5
	baz=34,SNR=11						
BFSC				S	S	07 04 20.4	-1.7
	baz=34						
CMIG	Matias Romero	91.11	295	LR	LR	07 32 04.0	
	comp=Z,22μm,20.9s,baz=27,slow=34						
TER01	Tubaro-SC	91.17	231	eP	P	06 53 24.1	-0.1
SMMC	Simmler	91.22	323	P	P	06 53 21.8	-2.9
	baz=32						
SMMC				S	S	07 04 21.1	-2.2
	baz=32						
OSI	Osito Audit: C	91.24	322	P	P	06 53 23.7	-1.2
	baz=33						
OSI				S	S	07 04 21.7	-1.8
	baz=33						
SWSC	Sam W. Stewart	91.25	319	P	P	06 53 24.8	0.0
	baz=35,SNR=15						
SWSC				S	S	07 04 22.7	-0.8
	baz=35						
DECC	Green Verdugo	91.36	322	P	P	06 53 25.5	+0.2
	baz=33						
DECC				S	S	07 04 22.7	-1.9
	baz=33						
MURC	Murrieta	91.37	320	P	P	06 53 25.6	+0.2
	baz=34,SNR=17						
MURC				S	S	07 04 25.1	+0.3
	baz=34						
DSRI	Dabo	91.41	89	P	P	06 53 25.1	-0.7
	comp=Z,3μmcomp=Z,36nm,1.0s						
MASI	Maura Aman, Be	91.48	93	P	P	06 53 25.4	-0.8
	comp=Z,3μmcomp=Z,3μmcomp=Z,78nm,1.7s						
PKM	Mcpherson Peak	91.49	323	P	P	06 53 25.4	-0.8
	baz=32,SNR=5.2						
PKM				S	S	07 04 22.8	-3.3
	baz=32						
JMBI	JAMBI	91.50	91	P	P	06 53 25.7	-0.5
MONP2	Monument Peak	91.59	320	P	P	06 53 27.6	+0.9
	baz=34,SNR=37						
MONP2				S	S	07 04 23.8	-3.3
	baz=34						
IKP	In-Ko-Pah, Jac	91.64	319	P	P	06 53 26.9	+0.1
	baz=35,SNR=23						
IKP				S	S	07 04 25.4	-1.8
	baz=35						
PIAT	Ana Tenorio	91.67	270	eP	P	06 53 28.2	+0.7
FMP	Fort Macarthur	91.79	321	P	P	06 53 27.3	0.0
	baz=33						
FMP				S	S	07 04 24.2	-4.1
	baz=33						
SBC	Santa Barbara	91.83	323	P	P	06 53 27.9	+0.5
	baz=32						
SBC				S	S	07 04 25.3	-3.4
	baz=32						
109C	Camp Elliot, M	91.92	320	IAms_20	IAms_20	07 34 57.8	
	comp=Z,33μm,20.0s						
109C	Camp Elliot, M	91.92	320	P	P	06 53 29.2	+1.2
	baz=34,SNR=7.9						
109C				S	S	07 04 25.3	-4.2
	baz=34						
UBSI	University, Be	91.92	93	P	P	06 53 26.8	-1.4
	comp=Z,7μmcomp=Z,159nm,1.5s						
HSIG		91.94	313	IAmb	IAmb	06 53 35.4	
	comp=Z,163nm,2.0s						
ITAB	Concordia	91.95	234	eP	P	06 53 29.8	+1.9
KSI	Kapahiang	92.08	93	P	P	06 53 28.3	-0.7
	comp=Z,7μmcomp=Z,163nm,2.0s						
CIS	Catalina Islan	92.11	321	P	P	06 53 30.3	+1.4
	baz=33						
CIS				S	S	07 04 26.6	-4.7
	baz=33						
CZSB	Cruzeiro do Su	92.13	262	eP	P	06 53 27.0	-2.1
SCZ2	Santa Cruz Isl	92.17	322	P	P	06 53 27.7	-1.4
	baz=33						
UNM	Universidad Na	92.32	299	IAms_20	IAms_20	07 38 25.1	
	comp=Z,16μm,20.0s						
SCI2	San Clemente I	92.52	321	P	P	06 53 29.4	-1.3
	baz=33						
SNCC	San Nicolas Is	92.74	322	P	P	06 53 30.4	-1.4
	baz=33						
CNLB	Canela	92.75	232	eP	P	06 53 32.8	+1.2
MNAI	Manna	92.82	93	IAms_20	IAms_20	07 38 04.5	
	comp=Z,17μm,21.0s						
MNAI	Manna	92.82	93	P	P	06 53 31.5	-0.9
	comp=Z,6μmcomp=Z,216nm,1.1s						
PMBI	Palembang	93.20	91	IAms_20	IAms_20	07 39 23.4	
	comp=Z,22μm,21.0s						
PMBI	Palembang	93.20	91	P	P	06 53 33.1	-1.0
BOSC	San Juan Bosco	93.30	269	IAmb	IAmb	06 53 45.0	
	comp=Z,113nm,1.5s						
COCO	West Island	93.65	103	IAms_20	IAms_20	07 38 27.8	
	comp=Z,22μm,20.0s						
PPBI	Pangkal Pinang	93.69	90	P	P	06 53 35.3	-1.0
LWLI	Liwa	94.08	93	P	P	06 53 37.1	-1.1
	comp=Z,7μmcomp=Z,125nm,1.0s						
CPUP	Villa Florida	94.46	238	P	P	06 53 39.9	+0.4
	comp=Z,5.3nm,0.9s,baz=42,slow=7.5,SNR=8.4						
CPUP				LR	LR	07 33 55.5	
	comp=Z,34μm,21.5s,baz=50,slow=34						
	comp=Z,5.3nm,0.9s						
CPUP	Villa Florida	94.46	238	P	P	06 53 39.0	-0.5
CPUP	Villa Florida	94.46	238	P	P	06 53 39.0	-0.5
CPUP				pmax	pmax		
	comp=Z,20nm,1.1s						
CPUP	Villa Florida	94.46	238	eP	P	06 53 39.8	+0.3
KLI	Kotabumi	94.56	92	P	P	06 53 38.6	-1.7
	comp=Z,6μmcomp=Z,52nm,0.4s						
KASI	Kota Agung	94.74	93	P	P	06 53 40.3	-0.8
	comp=Z,2μmcomp=Z,36nm,0.9s						
SBUM	Sibu	95.03	82	IAms_20	IAms_20	07 42 38.4	
	comp=Z,31μm,22.0s						
SBUM	Sibu	95.03	82	P	P	06 53 41.9	-0.6
	comp=Z,5μmcomp=Z,2μmcomp=Z,26nm,2.1s						
BLSI	Bandar Lampung	95.18	92	P	P	06 53 41.4	-1.8
TPI	Tanjungpandan	95.20	89	P	P	06 53 42.3	-1.0
	comp=Z,855nmcomp=Z,13nm,1.4s						
KKM	Kota Kinabalu	95.46	77	IAms_20	IAms_20	07 44 33.5	
	comp=Z,33μm,21.0s						
KKM	Kota Kinabalu	95.46	77	P	P	06 53 43.1	-1.5
	comp=Z,2μmcomp=Z,11nm,1.0s						
LPIG	La Paz	95.46	310	LR	LR	07 35 39.9	
	comp=Z,24μm,21.1s,baz=34,slow=35						
SLBS	Sierra La Lagu	95.58	309	IAms_20	IAms_20	07 38 39.4	
	comp=Z,18μm,19.0s						
ATAH	Atahualpa	95.89	266	LR	LR	07 35 54.7	
	comp=Z,30μm,19.9s,baz=26,slow=35						
JCJ	Chichijima	96.11	44	P	P	06 53 46.3	-1.0
	comp=Z,19nm,0.5s,baz=309,slow=3.6,SNR=4.1						
JCJ				LR	LR	07 41 01.6	
	comp=Z,38μm,19.9s,baz=344,slow=38						
	comp=Z,19nm,0.5s						
PLTB	Pedras Altas	96.15	232	eP	P	06 53 49.2	+2.1
ITQB	Itaqui	96.42	235	eP	P	06 53 48.6	+0.2
PB16	IPOC Station P	97.00	252	IAmb	IAmb	06 54 01.6	
	comp=Z,51nm,1.0s						
MYLDM	Lahad Datu	97.69	76	P	P	06 53 54.1	-0.5
	comp=Z,2μmcomp=Z,42nm,1.6s						
CNJI	Cibinong	97.86	93	P	P	06 53 53.6	-1.7
	comp=Z,394nmcomp=Z,14nm,1.4s						
LEM	Lembang	97.90	92	LR	LR	07 42 02.9	
	comp=Z,19μm,21.9s,baz=314,slow=38						
NNA	Nana	98.00	261	LR	LR	07 33 45.8	
	comp=Z,20μm,21.7s,baz=14,slow=33						
NNA	Nana	98.00	261	P	P	06 53 54.5	-1.5
NNA	Nana	98.00	261	IAms_20	IAms_20	07 36 17.8	
	comp=Z,28μm,22.0s						
NNA	Nana	98.00	261	⇓ eP	P	06 53 55.8	-0.2
NNA				pmax	pmax		
	comp=Z,77nm,1.6s						
NNA				MLR	MLR		
	comp=Z,47μm,21.0s						
NNA	Nana	98.00	261	P	Pdif	06 54 04.0	+8.0
PB01	IPOC Station P	98.81	250	IAmb	IAmb	06 54 07.3	
	comp=Z,34nm,1.2s						
PB02	IPOC Station P	99.28	250	P	Pdif	06 54 00.2	-1.4
PB02				IAmb	IAmb	06 54 25.1	
	comp=Z,54nm,1.2s						
LVC	Limon Verde	99.47	248	LR	LR	07 37 32.0	
	comp=Z,10μm,21.7s,baz=24,slow=34						
LVC	Limon Verde	99.47	248		Pdif	06 54 01.9	-0.9
LVC				IAmb	IAmb	06 54 12.5	
	comp=Z,49nm,1.4s						
LVC	Limon Verde	99.47	248	IAms_20	IAms_20	07 38 26.2	
	comp=Z,19μm,22.0s						
LVC	Limon Verde	99.47	248	P	Pdif	06 54 01.9	-0.9
LVC				pmax	pmax		
	comp=Z,49nm,1.4s						
LVC				MLR	MLR		
	comp=Z,19μm,22.0s						
LVC	Limon Verde	99.47	248	P	Pdif	06 54 05.1	+2.3
LVC	Limon Verde	99.47	248	eP	Pdif	06 54 02.8	+0.1
PB07	IPOC Station P	99.55	249	IAmb	IAmb	06 54 11.2	
	comp=Z,98nm,1.8s						
SMRI	Semarang	100.13	90	IAms_20	IAms_20	07 46 30.9	
	comp=Z,17μm,20.0s						
UGM	Wanagama	100.76	91	IAms_20	IAms_20	07 46 06.8	
	comp=Z,15μm,22.0s						
LPA	La Plata	100.92	232	c iPDIFF	Pdif	06 54 06.6	-1.8
LPA				PP	PP	06 58 11.8	-5.2
LPA				SKS		07 04 49.1	
LPA				SDIFF	Sdif	07 05 41.2	-5.3
LPA				SS	SS	07 12 40.9	-4.7
BBKI	Banjar Baru	100.95	85	P	Pdif	06 54 07.3	-1.9
BKB	Balikpapan	100.96	81	IAms_20	IAms_20	07 43 29.1	
	comp=Z,16μm,20.0s						
MPSI	Mapaga	102.04	78	P	Pdif	06 54 12.6	-1.4
	comp=Z,3μmcomp=Z,892nmcomp=Z,7.3nm,1.0s						
MRSI	Marisa	103.41	77	P	Pdif	06 54 19.0	-1.1
	comp=Z,1μmcomp=Z,10nm,0.8s						
JAGI	Jajag, Banyuwa	103.80	89	IAms_20	IAms_20	07 46 27.2	
	comp=Z,13μm,20.0s						
PAF	Port-aux-Franc	104.55	145	IAms_20	IAms_20	07 49 56.9	
	comp=Z,21μm,18.0s						
LCO	Las Campanas	104.91	244	IAms_20	IAms_20	07 43 21.3	
	comp=Z,22μm,20.0s						
LUWI	Luwuk	105.06	77	IAms_20	IAms_20	07 51 34.0	
	comp=Z,17μm,21.0s						
TRQA	Tornquist	105.45	232	IAms_20	IAms_20	07 39 32.0	
	comp=Z,20μm,21.0s						
KAPI	Kappang	105.59	82	PP	PP	06 58 51.9	-0.1
	comp=Z,5.1nm,0.6s,baz=296,slow=9.1,SNR=3.9						
KAPI	Kappang	105.59	82	IAms_20	IAms_20	07 52 32.5	
	comp=Z,17μm,22.0s						
GUMO	Guam	108.56	50	IAms_20	IAms_20	07 47 06.7	
	comp=Z,15μm,22.0s						
MIDW	Midway	108.65	10	IAms_20	IAms_20	07 52 21.5	
	comp=Z,13μm,22.0s						
MMRI	Maumere	109.84	83	IAms_20	IAms_20	07 51 07.3	
	comp=Z,23μm,22.0s						
SOEI	Soe	112.08	83	IAms_20	IAms_20	07 53 21.4	
	comp=Z,19μm,22.0s						
PLCA	Paso Flores	112.24	235	Pdiff	Pdif	06 54 58.7	-0.1
	comp=Z,0.8nm,0.9s,baz=259,slow=20,SNR=1.7						
PLCA				PKIKP	PKiKP	06 58 56.6	+1.8
	comp=Z,1.6nm,0.7s,baz=38,slow=2.2,SNR=6.1						
FAKI	Fak Fak	113.08	71	IAms_20	IAms_20	07 53 09.3	
	comp=Z,19μm,22.0s						
WAKE	Wake Island	113.56	27	IAms_20	IAms_20	07 46 57.6	
	comp=Z,14μm,21.0s						
VNA1	Neumayer--Stat	114.22	188	PKKPbc	PKKPbc	07 09 38.4	-0.7
VNA2	Neumayer--Watz	114.41	187	PKKPbc	PKKPbc	07 09 39.7	+1.3
VNA2	Neumayer--Watz	114.41	187	PKPdf	PKiKP	06 58 59.4	+1.5
VNA2	Neumayer--Watz	114.41	187	Pdiff	Pdif	06 55 14.5	+6.9
	baz=45,slow=5.0						
SNAA	Sanae	114.76	185	PKKPbc	PKKPbc	07 09 38.4	+1.0
SNAA	Sanae	114.76	185	PKPdf	PKiKP	06 58 60.0	+1.3
SNAA	Sanae	114.76	185	IAms_20	IAms_20	07 48 01.5	
	comp=Z,21μm,19.0s						
SNAA	Sanae	114.76	185	eP	PKiKP	06 58 59.1	+0.4
SNAA	Sanae	114.76	185	⇑ iPKIKP	PKPdf	06 58 58.5	-0.2
SNAA				pmax	pmax		
	comp=Z,14nm,1.7s						
SNAA				MLR	MLR		
	comp=Z,20μm,18.0s						
TROLL	Troll, Antarti	114.78	184	PKKPbc	PKKPbc	07 09 36.1	-1.3
TROLL	Troll, Antarti	114.78	184	PKPdf	PKiKP	06 59 00.5	+1.6
TROLL	Troll, Antarti	114.78	184	Pdiff	Pdif	06 55 19.3	+10
VNA3	Neumayer Olymp	114.93	188	PKKPbc	PKKPbc	07 09 37.3	+0.6
VNA3	Neumayer Olymp	114.93	188	PKPdf	PKiKP	06 59 00.2	+1.2
KIP	Kipapa	115.54	351	IAms_20	IAms_20	07 51 35.2	
	comp=Z,15μm,20.0s						
SAUI	Saumlaki	115.96	76	IAms_20	IAms_20	07 54 25.8	
	comp=Z,12μm,22.0s						
MBWA	Marble Bar	116.08	95	IAms_20	IAms_20	07 53 07.8	
	comp=Z,11μm,20.0s						
MAW	Mawson	116.33	161	PKP	PKiKP	06 59 03.0	+1.3
	comp=Z,6.8nm,1.0s,baz=324,slow=5.2,SNR=7.5						
MAW				PKKPbc	PKKPbc	07 09 31.3	-0.3
	comp=Z,1.5nm,0.8s,baz=131,slow=6.9,SNR=3.1						
MAW	Mawson	116.33	161	PKIKP	PKiKP	06 59 03.0	+1.3
POHA	Pohakuloa	116.85	348	IAms_20	IAms_20	07 49 24.7	
	comp=Z,13μm,19.0s						
MORW	Morawa	118.14	105	P	PKiKP	06 59 13.4	+7.0
GENI	Genyem	118.25	65	P	PKiKP	06 59 11.5	+4.4
MTN	Manton Dam	119.13	80	P	PKiKP	06 59 10.5	+1.8
KNRA	Kununurra	119.26	84	P	PKiKP	06 59 11.6	+2.7
BLDU	Ballidu	119.50	106	P	PKiKP	06 59 11.6	+2.5
KDU	Kakadu	119.99	79	P	PKPdf	06 59 10.2	-0.1
JOHN	Johnston Islan	120.68	3	IAms_20	IAms_20	07 52 39.2	
	comp=Z,15μm,22.0s						
KLBR	Kellerberrin	120.79	106	P	PKiKP	06 59 17.3	+5.7
NWAO	Narrogin (SRO)	121.17	108	IAms_20	IAms_20	07 53 05.0	
	comp=Z,12μm,21.0s						
WRKA	Warakurna	124.69	93	P	PKiKP	06 59 19.4	-0.1
WRA	Warramunga Arr	126.05	84	PKhKP	PKPpre	06 59 07.2	
	comp=Z,0.2nm,0.6s,baz=328,slow=1.7,SNR=1.0						
WRA				PKP	PKPdf	06 59 21.0	-0.9
	comp=Z,12nm,0.9s,baz=328,slow=2.0,SNR=22						
WRA				PP	PP	07 01 15.1	-0.7
	comp=Z,7.4nm,0.9s,baz=314,slow=5.3,SNR=5.1						
WRA				PKKPbc	PKKPab	07 08 55.8	+1.2
	comp=Z,0.6nm,1.0s,baz=118,slow=3.8,SNR=2.3						
WRA				PKKP	PKKPdf	07 09 39.2	+1.1
	comp=Z,1.0nm,0.8s,baz=124,slow=2.3,SNR=6.6						
WRAB	Tennant Creek	126.06	84	⇑ iPKIKP	PKPdf	06 59 20.1	-1.8
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s						
WRAB	Tennant Creek	126.06	84	P	PKPdf	06 59 21.5	-0.4
WRAB	Tennant Creek	126.06	84	P	PKPdf	06 59 21.6	-0.4
WB1	Warramunga Ar.	126.07	84	P	PKPdf	06 59 21.2	-0.7
PMG	Port Moresby	127.93	64	IAms_20	IAms_20	08 01 42.2	
	comp=Z,9μm,19.0s						
PMG	Port Moresby	127.93	64	⇑ iPKIKP	PKiKP	06 59 26.1	-0.1
PMG				pmax	pmax		
	comp=Z,39nm,1.0s						
PMG				MLR	MLR		
	comp=Z,18μm,24.0s						
PMG	Port Moresby	127.93	64	P	PKiKP	06 59 30.5	+4.3
PMG	Port Moresby	127.93	64	P	PKiKP	06 59 30.6	+4.3
ASAR	Alice Springs	128.01	88	PKhKP	PKPpre	06 59 15.7	
	comp=Z,1.0nm,0.7s,baz=332,slow=2.3,SNR=5.9						
ASAR				PKP	PKPdf	06 59 23.9	-1.6
	comp=Z,11nm,0.7s,baz=327,slow=1.5,SNR=23						
ASAR				PP	PP	07 01 29.4	+0.6
	comp=Z,7.8nm,1.0s,baz=313,slow=5.3,SNR=2.8						
ASAR				PKKPbc	PKKPdf	07 08 47.3	-47
	comp=Z,0.5nm,0.7s,baz=130,slow=4.3,SNR=2.4						
ASAR	Alice Springs	128.01	88	PKPdf	PKPdf	06 59 24.2	-1.3
ASAR	Alice Springs	128.01	88	PKIKP	PKPdf	06 59 24.2	-1.3
AS01	Alice Springs	128.04	88	P	PKPdf	06 59 25.8	+0.2
COEN	Coen	128.47	72	PKPdf	PKPdf	06 59 25.9	-0.7
COEN	Coen	128.47	72	P	PKiKP	06 59 27.5	+0.3
QIS	Mount Isa	130.28	81	P	PKPdf	06 59 30.3	+0.4
CASY	Casey	131.15	148	IAms_20	IAms_20	07 58 01.0	
	comp=Z,12μm,20.0s						
CASY	Casey	131.15	148	P	PKiKP	06 59 38.1	+7.1
OOD	Oodnadatta	131.70	91	P	PKiKP	06 59 38.0	+4.6
MULG	Mulgathing	131.85	95	P	PKiKP	06 59 35.5	+1.9
MTSU	Mount Surprise	132.10	75	P	PKiKP	06 59 36.2	+1.7
TARA	Tarawa	132.41	28	IAms_20	IAms_20	07 58 60.0	
	comp=Z,19μm,21.0s						
QSPA	South Pole Qui	132.69	180	P	PKPdf	06 59 31.9	-1.3
TV1H	Townsville Har	134.60	74	P	PKiKP	06 59 40.3	+0.8
CTA	Charters Tower	134.76	75	P	PKiKP	06 59 39.8	0.0
CTAO	Charters Tower	134.76	75	IAms_20	IAms_20	08 05 34.0	
	comp=Z,12μm,21.0s						
CTAO	Charters Tower	134.76	75	P	PKiKP	06 59 40.0	+0.2
CTAO	Charters Tower	134.76	75	P	PKiKP	06 59 40.0	+0.2
HNR	Honiara	135.88	51	IAms_20	IAms_20	08 03 22.1	
	comp=Z,14μm,22.0s						
HTT	Hallett	137.01	96	P	PKiKP	06 59 49.4	+5.3
QLP	Quilpie	137.29	84	P	PKPdf	06 59 39.5	-3.4
STKA	Stephens Creek	138.20	92	PKhKP	PKPpre	06 59 34.8	
	comp=Z,5.2nm,0.8s,baz=337,slow=4.2,SNR=5.5						
STKA	Stephens Creek	138.20	92	P	PKPdf	06 59 44.5	+0.1
TAOE	Nuku Hiva Isla	138.83	317	eLR	LR	07 44 38.3	
	comp=Z,32μm,22.8s						
RMQ	Roma	140.53	80	P	PKPdf	06 59 46.6	-2.3
CMSA	Cobar Meteorol	141.05	89	P	PKPdf	06 59 46.9	-2.7
EIDS	Eidsvold	141.54	77	P	PKPdf	06 59 51.6	+0.9
AULRC	Lightning Ridg	141.62	85	P	PKPdf	06 59 49.3	-1.4
BRAT	Ballarat	142.50	99	P	PKiKP	06 59 55.0	-0.1
VNDA	Vanda	142.94	169	PKhKP	PKPpre	06 59 44.9	
	comp=Z,5.3nm,1.1s,baz=246,slow=4.9,SNR=18						
VNDA				PKP	PKPdf	06 59 51.4	-0.2
	comp=Z,7.5nm,0.7s,baz=261,slow=3.9,SNR=21						
VNDA	Vanda	142.94	169		PKPpre	06 59 47.0	
SBA	Scott Base	143.29	171		PKPpre	06 59 47.3	
SBA	Scott Base	143.29	171	IAms_20	IAms_20	08 03 04.2	
	comp=Z,16μm,20.0s						
SBA	Scott Base	143.29	171	PKHKP	PKPpre	06 59 47.3	
SBA				MLR	MLR		
	comp=Z,16μm,20.0s						
SBA	Scott Base	143.29	171	P	PKPbc	06 59 49.9	+0.5
AUDCS	Dubbo College	143.55	88	P	PKiKP	06 59 59.2	+1.8
TOO	Toolangi	143.64	98		PKPbc	06 59 51.3	-0.3
TOO	Toolangi	143.64	98	PKIKP	PKPbc	06 59 51.3	-0.3
TOO	Toolangi	143.64	98	P	PKiKP	07 00 01.4	+3.9
FUNA	Funafuti	143.71	24	PKPdf	PKPbc	06 59 52.5	+0.2
FUNA	Funafuti	143.71	24	P	PKiKP	06 59 58.1	-0.1
FUNA	Funafuti	143.71	24	P	PKiKP	06 59 58.2	-0.1
AUWSH	Wavell State H	144.16	78	P	PKPdf	06 59 55.2	0.0
AUPHS	Peel High Scho	144.64	85	P	PKPdf	06 59 55.7	-0.3
ARMA	Armidale	144.82	83	P	PKPdf	06 59 56.4	-0.1
GC1S	Gold Coast 1 S	144.94	78	P	PKPdf	06 59 58.2	+1.6
CAN	Canberra	145.27	93	IAms_20	IAms_20	08 05 59.8	
	comp=Z,12μm,21.0s						
CAN	Canberra	145.27	93	P	PKPdf	06 59 57.4	+0.4
AUSMG	Snowy Mountain	145.45	95	P	PK

comp=Z,17nm,0.8s,baz=96,slow=7.7,SNR=5.8

*THE **30** 06:40:43.2, 40°.23N×19°.49E, h7km±2km, ML2.6/5, Error ellipse: s-maj=2.2km s-min=0.8km az=254.0*
*ATH **30** 06:40:43.1, 40°.20N×19°.43E, h13km±3km, ML3.0/4, Error ellipse: s-maj=5.1km s-min=1.8km az=267.0*
ISC 30 06:40:43.5±1.2, 40°.22N±0°.03×19°.55E±0°.06, h6km±11km, n17, σ0.63/27, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.25**	**350**	P	**Pg**	**06 40 47.4**	**-1.2**
VLO				S	**Sg**	**06 40 51.8**	**-0.2**
	5μm,0.7s						
VLO	**Vlora**	**0.25**	**350**	P	**Pg**	**06 40 49.9**	**+1.4**
	baz=110						
SRN	**Sarande**	**0.48**	**134**	P	**Pg**	**06 40 52.7**	**-0.1**
SRN				S	**Sb**	**06 41 01.2**	**-0.5**
	448nm,0.4s						
KEK	**Kerkira**	**0.54**	**159**	P	**Pg**	**06 40 54.2**	**+0.3**
KEK				S	**Sb**	**06 41 02.8**	**-0.5**
	598nm,0.3s						
KEK	**Kerkira**	**0.54**	**159**	P	**Pg**	**06 40 54.0**	**+0.1**
KEK				S	**Sg**	**06 41 01.3**	**+0.3**
KEK				AML	AML	06 41 07.9	
	comp=E,2632μm,0.3s						
KEK				AML	AML	06 41 08.9	
	comp=N,2233μm,0.2s						
LSK	**Leskovik**	**0.81**	**94**	P	**Pg**	**06 40 58.4**	**-0.6**
LSK				S	**Sb**	**06 41 11.9**	**+0.8**
	comp=N,680nm,0.6s						
IGT	**Igoumenitsa**	**0.91**	**139**	P	**Pg**	**06 41 00.8**	**-0.2**
IGT				S	**Sb**	**06 41 14.4**	**+0.4**
	comp=N,448nm,0.5s						
IGT	**Igoumenitsa**	**0.91**	**139**	P	**Pg**	**06 41 00.6**	**-0.4**
IGT				S	**Sb**	**06 41 14.5**	**+0.4**
IGT				AML	AML	06 41 17.4	
	comp=E,974μm,0.6s						
IGT				AML	AML	06 41 17.5	
	comp=N,1327μm,0.5s						
JAN	**Janina**	**1.15**	**119**	P	**Pb**	**06 41 05.1**	**-0.6**
JAN	**Janina**	**1.15**	**119**	P	**Pb**	**06 41 05.1**	**-0.6**
JAN				S	**Sg**	**06 41 21.5**	**+1.1**
JAN				AML	AML	06 41 25.0	
	comp=E,2512μm,0.3s						
JAN				AML	AML	06 41 25.4	
	comp=N,2453μm,0.5s						
NEST	**Nestorio**	**1.16**	**80**	P	**Pb**	**06 41 05.7**	**-0.4**
NEST	**Nestorio**	**1.16**	**80**	P	**Pb**	**06 41 05.7**	**-0.4**
NEST				S	**Sn**	**06 41 22.9**	**+0.4**
NEST				AML	AML	06 41 27.5	
	comp=N,1173μm,0.7s						
NEST				AML	AML	06 41 27.8	
	comp=E,1274μm,0.6s						
PENT	**Pentalofos**	**1.22**	**91**	P	**Pn**	**06 41 06.8**	**-0.3**
PENT	**Pentalofos**	**1.22**	**91**	P	**Pn**	**06 41 06.9**	**-0.3**
KPRO	**Kipourio**	**1.41**	**100**	P	**Pb**	**06 41 10.6**	**+0.2**
TSLK	**Tsoukalades, L**	**1.63**	**148**	P	**Pb**	**06 41 13.2**	**-0.8**
TSLK				S	**Sn**	**06 41 34.4**	**+0.4**
EVGI	**Lefkada island**	**1.81**	**151**	P	**Pn**	**06 41 15.6**	**+0.4**

ROM 30 06:43:46.3±0.1, 42°.900N±0°.006×13°.146E±0°.010, h7km±1km, ML3.5/2, 1C, Error ellipse: s-maj=0.7km s-min=0.5km az=322.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**69**	⇑P	Pg	06 43 47.5	-0.4
MC2				S	Sg	06 43 48.2	-0.8
T1245	**Castelsantange**	**0.05**	**144**	P	Pg	06 43 48.5	+0.5
T1245				S	Sg	06 43 49.6	+0.3
T1216	**Preci, Frazion**	**0.09**	**264**	P	Pg	06 43 50.0	+1.5
T1216				S	Sg	06 43 51.5	+1.6
T1216				AML	AML		
T1216				AML	AML		
T1256	**Bolognola (MC)**	**0.12**	**29**	P	Pg	06 43 49.5	+0.5
T1256				S	Sg	06 43 51.2	+0.4
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=E,62661μm,0.9s						
T1256				AML	AML		
	comp=N,62430μm,2.5s						
T1256				AML	AML		
	comp=N,51530μm,0.6s						
T1256				AML	AML		
	comp=E,61569μm,0.9s						
AM05	**Amandola Campo**	**0.17**	**63**	P	Pg	06 43 50.2	+0.4
AM05				S	Sg	06 43 52.6	+0.5
GUMA	**Gualdo di Mace**	**0.21**	**41**	P	Pg	06 43 51.8	+1.2
GUMA				S	Sg	06 43 55.0	+1.6
T1241	**Roccafluvione,**	**0.21**	**102**	P	Pg	06 43 50.9	+0.4
T1241				S	Sg	06 43 55.3	+1.9
T1215	**Vallo di Nera,**	**0.23**	**244**	P	Pg	06 43 51.4	+0.6
T1215				S	Sg	06 43 54.4	+0.6
T1215				AML	AML		
	comp=N,11283μm,0.3s						
T1215				AML	AML		
	comp=N,12687μm,0.5s						
T1215				AML	AML		
	comp=E,4924μm,0.8s						
T1217	**Poggiodomo (PG**	**0.24**	**220**	P	Pg	06 43 51.6	+0.5
T1201	**Domo (RI)**	**0.26**	**162**	P	Pg	06 43 52.0	+0.7
T1201				S	Sb	06 43 56.9	-1.0
LNSS	**Leonessa**	**0.31**	**195**	P	Pb	06 43 53.7	-0.5
LNSS				S	Sg	06 43 56.8	+0.4
SSM1	**San Severino M**	**0.33**	**4**	P	Pb	06 43 54.2	-0.3
SSM1				S	Sb	06 43 58.6	-1.4
ASSB	**Assisi San Ben**	**0.39**	**292**	P	Pb	06 43 55.4	-0.1
ASSB				S	Sb	06 44 00.8	-0.8
T1211	**Morro Reatino**	**0.42**	**210**	P	Pg	06 43 55.0	+0.5

ROM 30 06:44:30.7±0.1, 42°.855N±0°.004×13°.085E±0°.006, h8km, ML4.4/14, 3C, Error ellipse: s-maj=0.5km s-min=0.4km az=147.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**306**	P	Pg	06 44 32.8	+0.2
T1216				S	Sg	06 44 34.5	+0.5
T1245	**Castelsantange**	**0.08**	**89**	P	Pg	06 44 33.2	+0.3
T1245				S	Sg	06 44 35.1	+0.6
T1245				AML	AML		
T1245				AML	AML		
	comp=E,7775μm,0.7s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**53**	P	Pg	06 44 33.2	0.0
MC2				S	Sg	06 44 35.7	+0.7
T1215	**Vallo di Nera,**	**0.17**	**252**	⇑P	Pg	06 44 34.5	+0.2
T1215				S	Sg	06 44 37.3	+0.7
T1215				AML	AML		
	comp=N,32798μm,0.6s						
T1217	**Poggiodomo (PG**	**0.18**	**218**	P	Pg	06 44 34.7	+0.2
T1217				S	Sg	06 44 38.0	+0.9
T1217				AML	AML		
	comp=N,61637μm,0.6s						
T1256	**Bolognola (MC)**	**0.18**	**34**	⇑P	Pg	06 44 34.9	+0.3
T1256				S	Sg	06 44 38.2	+1.0
T1244	**Arquata del Tr**	**0.18**	**122**	P	Pg	06 44 35.5	+1.0
T1244				S	Sg	06 44 38.6	+1.4
AM05	**Amandola Campo**	**0.23**	**58**	⇑P	Pg	06 44 35.8	+0.4
AM05				S	Sg	06 44 39.7	+1.2
AM05				AML	AML		
	comp=N,57100μm,0.5s						
AM05				AML	AML		
	comp=N,10065μm,0.5s						
AM05				AML	AML		
	comp=N,57050μm,0.5s						
AM05				AML	AML		
	comp=N,10085μm,0.5s						
AM05				AML	AML		
AM05				AML	AML		
	comp=E,37300μm,1.1s						
T1204	**Amatrice, Fraz**	**0.25**	**136**	P	Pg	06 44 36.5	+0.8
LNSS	**Leonessa**	**0.25**	**188**	P	Pb	06 44 37.4	-0.1
LNSS				S	Sg	06 44 40.1	+0.9
T1241	**Roccafluvione,**	**0.25**	**90**	P	Pg	06 44 36.6	+0.9
T1241				S	Sb	06 44 41.1	-1.0
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
GUMA	**Gualdo di Mace**	**0.28**	**41**	P	Pg	06 44 36.8	+0.6
GUMA				S	Sb	06 44 41.8	-1.0
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.31**	**120**	P	Pg	06 44 37.1	+0.2
T1243				S	Sg	06 44 42.3	+1.3
PIO1	**Pioraco**	**0.33**	**347**	P	Pg	06 44 37.4	+0.2
MDAR	**Monte D'Aria**	**0.34**	**7**	P	Pg	06 44 37.6	+0.1
MDAR				S	Sg	06 44 43.0	+1.1
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
ASSB	**Assisi San Ben**	**0.36**	**301**	P	Pb	06 44 38.8	-0.6
ASSB				S	Sg	06 44 43.7	+1.0
SSM1	**San Severino M**	**0.38**	**10**	P	Pg	06 44 38.3	+0.2
SSM1				S	Sb	06 44 44.5	-1.2
GAG1	**Gagliole**	**0.38**	**358**	P	Pg	06 44 38.6	+0.4
GAG1				S	Sb	06 44 44.9	-1.0
GAG1				AML	AML		
GAG1				AML	AML		
MNTP	**Montappone**	**0.40**	**45**	P	Pg	06 44 39.2	+0.7
MNTP				S	Sb	06 44 46.5	+0.2
CESX	**Cesi**	**0.45**	**237**	P	Pg	06 44 39.3	0.0
OFFI	**Offida**	**0.45**	**80**	P	Pb	06 44 40.5	-0.3
ATCC	**AVT- Casa Cast**	**0.46**	**315**	P	Pg	06 44 40.0	+0.3
ATCC				AML	AML		
	comp=E,43020μm,0.5s						
EL6	**Elcito**	**0.47**	**1**	P	Pg	06 44 40.0	+0.1
EL6				S	Sb	06 44 47.4	-1.1
EL6				AML	AML		
	comp=E,94400μm,0.2s						
EL6				AML	AML		
TRE1	**Treia**	**0.49**	**20**	P	Pg	06 44 40.5	+0.4
TRE1				S	Sb	06 44 48.9	+0.1
TRE1				AML	AML		
	comp=E,89700μm,0.8s						
TRE1				AML	AML		
	comp=N,88300μm,0.5s						
FOSV	**Fossato di Vic**	**0.50**	**332**	P	Pg	06 44 40.9	+0.5
CING	**Cingoli**	**0.53**	**9**	P	Pg	06 44 40.7	-0.2
MURB	**Monte Urbino**	**0.58**	**315**	P	Pb	06 44 43.1	0.0
MMUR	**Monte Murano**	**0.59**	**354**	P	Pb	06 44 42.8	-0.5
MMUR				S	Sb	06 44 51.3	-0.5
MMUR				AML	AML		
	comp=E,75000μm,0.2s						
MMUR				AML	AML		
	comp=N,47950μm,0.3s						
TRTR	**Tortoreto Alta**	**0.61**	**94**	P	Pb	06 44 43.6	0.0
CIMA	**Civitanova Mar**	**0.62**	**43**	P	Pb	06 44 43.6	-0.1
ATFO	**Monte Foce - G**	**0.64**	**324**	P	Pg	06 44 43.2	+0.3
ATFO				AML	AML		
	comp=E,23506μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.64**	**303**	P	Pb	06 44 44.0	-0.1
PP3	**Marolino**	**0.65**	**36**	P	Pb	06 44 44.2	-0.1
ARVD	**Arcevia**	**0.65**	**351**	P	Pb	06 44 43.8	-0.5
ARVD				S	Sb	06 44 53.2	-0.3
ARVD				AML	AML		
	comp=E,20841μm,0.2s						
ATLO	**AVT- Montelove**	**0.68**	**313**	P	Pb	06 44 45.0	+0.3
TB02	**Pietralunga**	**0.71**	**316**	P	Pb	06 44 45.5	+0.2
MGAB	**Montegabbione**	**0.72**	**275**	P	Pb	06 44 45.5	+0.1
ATVA	**AVT- Monte Val**	**0.72**	**306**	P	Pb	06 44 45.9	+0.4
ATVO	**AVT- Monte Val**	**0.72**	**317**	P	Pg	06 44 45.0	+0.4
TB03	**Pietralunga**	**0.74**	**318**	P	Pb	06 44 45.4	-0.3
SRES	**S.Oreste - Sor**	**0.75**	**215**	P	Pg	06 44 45.4	+0.3
MPAG	**Monte Paganucc**	**0.81**	**343**	P	Pg	06 44 46.5	+0.2
MPAG				S	Sb	06 44 58.7	+0.5
SACS	**San Casciano d**	**0.86**	**270**	P	Pg	06 44 47.5	+0.2
FSSB	**Fossombrone**	**0.87**	**345**	P	Pb	06 44 48.3	+0.4
CAFI	**Castiglion Fio**	**0.95**	**300**	P	Pb	06 44 49.1	-0.2
SF04	**Casetta**	**1.05**	**269**	P	Pb	06 44 51.0	0.0

*ROM **30** 06:48:52.7±0.1, 42°.683N±0°.004×13°.200E±0°.005, h10km, ML3.9/10, Error ellipse: s-maj=0.5km s-min=0.4km az=196.0*
*LDG **30** 06:48:52.1±0.1, 42°.68N×13°.21E, h10km, Ml3.6/2, Error ellipse: s-maj=2.2km s-min=1.2km az=31.0*
ISC 30 06:48:52.6±0.8, 42°.70N±0°.02×13°.20E±0°.02, h15km±5km, n38, σ1.947/59, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.05**	**139**	P	**Pg**	**06 48 55.1**	**-0.4**
T1201				S	**Sg**	**06 48 57.1**	**-0.4**
T1204	**Amatrice, Fraz**	**0.09**	**104**	P	**Pg**	**06 48 55.5**	**-0.4**
T1204				S	**Sg**	**06 48 57.6**	**-0.4**
T1204				AML	AML		
T1204				AML	AML		
	comp=N,91800μm,1.4s						
T1204				AML	AML		
T1204				AML	AML		
	comp=N,91850μm,1.4s						
LNSS	**Leonessa**	**0.15**	**232**	P	**Pg**	**06 48 56.4**	**-0.3**
LNSS				S	**Sg**	**06 48 59.1**	**-0.2**
LNSS				AML	AML		
T1243	**Rocca Santa Ma**	**0.18**	**90**	P	**Pg**	**06 48 56.9**	**-0.2**
T1243				S	**Sg**	**06 49 00.1**	**+0.2**
RM33	**Pellescritta (**	**0.19**	**178**	P	**Pg**	**06 48 57.2**	**+0.1**
RM33				S	**Sg**	**06 49 00.5**	**+0.3**
RM33				AML	AML		
	comp=E,73650μm,1.1s						
RM33				AML	AML		
	comp=N,73200μm,0.3s						
RM33				AML	AML		
	comp=E,72550μm,1.1s						
RM33				AML	AML		
	comp=E,73700μm,1.1s						
RM33				AML	AML		
	comp=E,72600μm,1.1s						
RM33				AML	AML		
	comp=N,71400μm,0.3s						
T1217	**Poggiodomo (PG**	**0.20**	**274**	P	**Pg**	**06 48 57.6**	**+0.2**
T1217				S	**Sg**	**06 49 00.2**	**-0.3**
T1217				AML	AML		
	comp=E,70950μm,0.5s						
T1217				AML	AML		
	comp=N,63350μm,0.3s						
T1217				AML	AML		
	comp=E,73050μm,0.5s						
T1217				AML	AML		
	comp=N,64200μm,0.3s						
T1217				AML	AML		
	comp=N,63400μm,0.3s						
T1217				AML	AML		
	comp=E,71050μm,0.5s						
CAMP	**Campotosto**	**0.22**	**137**	P	**Pg**	**06 48 57.7**	**0.0**
CAMP				S	**Sg**	**06 49 01.3**	**+0.3**
CAMP				AML	AML		
	comp=E,40150μm,1.0s						
CAMP				AML	AML		
	comp=N,25650μm,0.5s						
T1241	**Roccafluvione,**	**0.23**	**46**	P	**Pb**	**06 48 58.6**	**+0.1**
T1241				S	**Sb**	**06 49 02.6**	**+0.1**
T1246	**Crognaleto (TE**	**0.24**	**118**	P	**Pg**	**06 48 58.1**	**+0.1**
T1246				S	**Sg**	**06 49 02.0**	**+0.4**
T1247	**Pizzolo (AQ)**	**0.27**	**165**	P	**Pg**	**06 48 58.7**	**+0.4**
T1247				S	**Sb**	**06 49 03.0**	**-0.5**
T1247				AML	AML		
	comp=N,41050μm,0.4s						
T1247				AML	AML		
	comp=E,44900μm,0.4s						
T1247				AML	AML		
	comp=N,41000μm,0.4s						
FEMA	**Monte Fema**	**0.29**	**337**	P	**Pb**	**06 48 59.8**	**+0.2**
FEMA				S	**Sb**	**06 49 04.4**	**+0.2**
TERO	**Teramo**	**0.30**	**104**	P	**Pg**	**06 48 59.0**	**0.0**
TERO				S	**Sb**	**06 49 03.9**	**-0.7**
TERO				AML	AML		
	comp=E,49350μm,0.6s						
TERO				AML	AML		
	comp=E,51850μm,0.6s						
TERO				AML	AML		
	comp=N,51250μm,0.6s						
TERO				AML	AML		
	comp=N,49400μm,0.6s						
T1211	**Morro Reatino**	**0.30**	**238**	P	**Pg**	**06 48 58.9**	**-0.2**
T1211				S	**Sg**	**06 49 03.6**	**+0.2**
GIGS	**Gran Sasso**	**0.37**	**132**	P	**Pg**	**06 49 00.1**	**0.0**
GIGS				S	**Sb**	**06 49 05.8**	**-0.6**
GIGS				AML	AML		
	comp=N,10810μm,0.5s						
GIGS				AML	AML		
	comp=E,8545μm,0.8s						
AQU	**L'Aquila**	**0.37**	**157**	P	**Pg**	**06 49 00.4**	**+0.3**
AQU				S	**Sb**	**06 49 06.1**	**-0.4**
AQU				AML	AML		
	comp=E,24050μm,0.7s						
AQU				AML	AML		
	comp=E,23000μm,0.7s						
AQU				AML	AML		
	comp=N,20900μm,0.7s						
AQU				AML	AML		
	comp=N,20000μm,0.7s						
GUMA	**Gualdo di Mace**	**0.38**	**15**	P	**Pg**	**06 49 00.4**	**+0.2**
CSP1	**Cessapalombo**	**0.40**	**0**	P	**Pb**	**06 49 01.1**	**-0.3**
CSP1				S	**Sb**	**06 49 07.5**	**+0.2**
OFFI	**Offida**	**0.43**	**56**	P	**Pb**	**06 49 02.1**	**+0.3**
FIAM	**Fiamignano**	**0.43**	**189**	P	**Pg**	**06 49 01.2**	**-0.1**
FIAM				S	**Sg**	**06 49 07.7**	**+0.5**
FIAM				AML	AML		
	comp=E,25150μm,0.8s						
FIAM				AML	AML		
	comp=N,23350μm,0.8s						
CESX	**Cesi**	**0.47**	**260**	P	**Pg**	**06 49 01.8**	**-0.1**
FAGN	**Fagnano**	**0.51**	**147**	P	**Pb**	**06 49 03.4**	**0.0**
VCEL	**Villa Celiera**	**0.56**	**123**	P	**Pb**	**06 49 04.0**	**-0.2**
VCEL				S	**Sb**	**06 49 13.1**	**+1.1**
T0110	**Collepietro**	**0.63**	**138**	P	**Pb**	**06 49 05.2**	**-0.2**
T0110				S	**Sb**	**06 49 14.8**	**+0.7**
T0110				AML	AML		
	comp=E,17900μm,0.5s						
T0110				AML	AML		
	comp=N,31350μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.64**	**320**	P	**Pb**	**06 49 06.2**	**+0.7**
SRES	**S.Oreste - Sor**	**0.69**	**228**	P	**Pg**	**06 49 06.2**	**+0.2**
MGAB	**Montegabbione**	**0.83**	**285**	P	**Pg**	**06 49 09.2**	**+0.5**
ATVA	**AVT- Monte Val**	**0.89**	**311**	P	**Pn**	**06 49 10.3**	**-0.3**
SACS	**San Casciano d**	**0.96**	**279**	P	**Pg**	**06 49 11.4**	**+0.2**
CAFI	**Castiglion Fio**	**1.11**	**305**	P	**Pg**	**06 49 14.2**	**+0.3**
PGF	**Pioggiola**	**3.11**	**269**	*e*P	**Pn**	**06 49 42.6**	**+1.5**
PGF				*e*Sn	**Sn**	**06 50 14.5**	**-3.5**
	comp=N,16nm,0.4s						
SBF	**Sospel**	**4.37**	**287**	*e*P	**Pn**	**06 50 00.5**	**+2.0**
LMR	**La Mourre**	**4.95**	**280**	*e*P	**Pn**	**06 50 08.7**	**+2.4**
MBDF	**Montbardon**	**5.08**	**296**	*e*P	**Pn**	**06 50 10.9**	**+2.5**
LPG	**La Plagne**	**5.42**	**303**	*e*P	**Pn**	**06 50 16.1**	**+3.0**
CABF	**La Chapelle**	**6.41**	**310**	*e*P	**Pn**	**06 50 29.4**	**+2.9**
VIVF	**Saint-Julien-l**	**6.54**	**292**	*e*P	**Pn**	**06 50 31.1**	**+2.8**
HINF	**Hinteralfeld**	**6.80**	**321**	*e*P	**Pn**	**06 50 34.6**	**+2.8**
HAU	**Haudompre**	**7.17**	**320**	*e*P	**Pn**	**06 50 39.7**	**+2.8**
HAU				*e*Sn	**Sn**	**06 51 51.7**	**-6.4**
	comp=N,63nm,1.0s						

ROM 30 06:54:46.8±0.1, 42°.796N±0°.006×13°.209E±0°.009, h11km±2km, ML2.8/4, Error ellipse: s-maj=0.7km s-min=0.3km az=329.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.14**	**167**	P	Pb	06 54 50.9	-0.6
T1201				S	Sg	06 54 53.3	+0.7
T1204	**Amatrice, Fraz**	**0.14**	**146**	P	Pg	06 54 50.9	+0.6
T1204				S	Sg	06 54 53.3	+0.6
T1204				AML	AML		
	comp=E,39900μm,0.4s						
T1204				AML	AML		
	comp=N,17850μm,1.2s						
T1204				AML	AML		
T1204				AML	AML		
T1216	**Preci, Frazion**	**0.17**	**304**	AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1243	**Rocca Santa Ma**	**0.20**	**119**	P	Pg	06 54 51.7	+0.5
T1243				S	Sg	06 54 55.3	+1.1
FEMA	**Monte Fema**	**0.20**	**325**	AML	AML		
	comp=N,62050μm,0.6s						
FEMA				AML	AML		
	comp=E,83800μm,0.5s						
FEMA				AML	AML		
	comp=E,83800μm,0.5s						
AM05	**Amandola Campo**	**0.21**	**30**	P	Pg	06 54 51.4	+0.1
AM05				S	Sg	06 54 54.4	0.0
T1217	**Poggiodomo (PG**	**0.22**	**248**	P	Pb	06 54 52.2	-0.6
T1217				S	Sg	06 54 55.5	+0.9
LNSS	**Leonessa**	**0.23**	**213**	P	Pg	06 54 52.1	+0.5
LNSS				S	Sg	06 54 55.5	+0.6
T1215	**Vallo di Nera,**	**0.25**	**272**	AML	AML		
	comp=N,14940μm,0.7s						
T1215				AML	AML		
	comp=E,7705μm,1.2s						
T1215				AML	AML		
	comp=N,14300μm,0.9s						
T1215				AML	AML		
	comp=E,12920μm,1.1s						
T1215				AML	AML		
	comp=N,14450μm,0.7s						
T1215				AML	AML		
	comp=E,13500μm,1.1s						
T1215				AML	AML		
	comp=E,4386μm,0.4s						
T1215				AML	AML		
	comp=E,4414μm,0.4s						
T1215				AML	AML		
	comp=N,2685μm,0.3s						
RM33	**Pellescritta (**	**0.29**	**179**	P	Pg	06 54 53.2	+0.6
RM33				S	Sg	06 54 57.3	+0.8
RM33				AML	AML		
	comp=E,9025μm,1.1s						
RM33				AML	AML		
	comp=N,9570μm,0.3s						
RM33				AML	AML		
	comp=E,9020μm,1.1s						
RM33				AML	AML		
	comp=N,9430μm,0.3s						
RM33				AML	AML		
	comp=E,96550μm,1.2s						
RM33				AML	AML		
	comp=N,81200μm,1.0s						
RM33				AML	AML		
	comp=E,95050μm,1.2s						
RM33				AML	AML		
	comp=N,81900μm,1.0s						
RM33				AML	AML		
	comp=E,2513μm,0.1s						
RM33				AML	AML		
	comp=E,2454μm,0.1s						
T1246	**Crognaleto (TE**	**0.30**	**135**	P	Pg	06 54 53.4	+0.5
T1246				S	Sg	06 54 58.0	+1.1
CAMP	**Campotosto**	**0.30**	**150**	P	Pg	06 54 53.2	+0.3
CAMP				S	Sg	06 54 57.8	+0.8
CAMP				AML	AML		
	comp=E,71200μm,0.2s						
CAMP				AML	AML		
	comp=N,41350μm,0.2s						
CAMP				AML	AML		
	comp=E,2723μm,0.3s						
TERO	**Teramo**	**0.34**	**121**	P	Pg	06 54 54.2	+0.6
TERO				S	Sb	06 54 59.4	-0.8
TERO				AML	AML		
	comp=E,36750μm,0.6s						
TERO				AML	AML		
	comp=N,60600μm,0.4s						
TERO				AML	AML		
	comp=E,40550μm,0.6s						
TERO				AML	AML		
	comp=N,65200μm,0.4s						
TERO				AML	AML		
	comp=N,1541μm,0.1s						
TERO				AML	AML		
	comp=N,1360μm,0.2s						
OFFI	**Offida**	**0.38**	**68**	P	Pb	06 54 55.4	-0.1
GIGS	**Gran Sasso**	**0.44**	**142**	P	Pg	06 54 55.5	+0.1
GIGS				S	Sg	06 55 01.7	+0.5

GIGS			AML	AML
	comp=E,1137μm,1.6s			
GIGS			AML	AML
	comp=N,782μm,1.6s			
GIGS			AML	AML
	comp=E,6315μm,1.3s			
GIGS			AML	AML
	comp=N,8305μm,0.5s			

*IDC **30** 06:55:40.0±2.1, 42°.83N×13°.15E, h0km, mb3.7/6, mbtmp3.7/10, ML3.4/4, Error ellipse: s-maj=37.7km s-min=25.6km az=47.0*
*LDG **30** 06:55:40.4±0.1, 42°.69N×13°.20E, h13km, Ml3.5/8, Error ellipse: s-maj=5.9km s-min=2.9km az=32.0*
*NEIC **30** 06:55:40.2±1.8, 42°.71N±0°.05×13°.22E±0°.06, h10km±2km, Error ellipse: s-maj=9.4km s-min=6.1km az=44.0*
*ROM **30** 06:55:41.1±0.1, 42°.712N±0°.003×13°.197E±0°.005, h11km, ML3.6/16, Error ellipse: s-maj=0.4km s-min=0.3km az=246.0*

ISC 30 06:55:40.7±0.7, 42°.69N±0°.02×13°.16E±0°.02, h17km±4km, n100, σ2°.12/130, mb3.9/5, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.07**	**113**	P	**Pg**	**06 55 44.0**	**-0.1**
T1201				S	**Sg**	**06 55 46.1**	**-0.3**
T1204	**Amatrice, Fraz**	**0.12**	**95**	P	**Pg**	**06 55 44.0**	**-0.6**
T1204				S	**Sb**	**06 55 46.3**	**-1.0**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
	comp=N,70628μm,0.4s						
LNSS	**Leonessa**	**0.12**	**226**	P	**Pb**	**06 55 45.2**	**+0.5**
LNSS				S	**Sb**	**06 55 48.3**	**+1.0**
T1244	**Arquata del Tr**	**0.12**	**56**	P	**Pg**	**06 55 43.7**	**-1.0**
T1244				S	**Sg**	**06 55 46.0**	**-1.2**
T1217	**Poggiodomo (PG**	**0.17**	**279**	P	**Pb**	**06 55 45.6**	**+0.1**
T1217				S	**Sb**	**06 55 48.9**	**+0.3**
T1217				AML	AML		
	comp=E,77450μm,0.6s						
T1217				AML	AML		
	comp=N,98700μm,0.3s						
T1217				AML	AML		
	comp=E,75800μm,0.6s						
T1217				AML	AML		
	comp=N,96100μm,1.4s						
T1217				AML	AML		
	comp=N,96000μm,1.4s						
T1217				AML	AML		
	comp=E,77400μm,0.6s						
T1217				AML	AML		
	comp=N,98600μm,0.3s						
T1217				AML	AML		
	comp=N,96000μm,1.4s						
T1217				AML	AML		
	comp=N,98750μm,0.3s						
T1217				AML	AML		
	comp=E,75850μm,0.6s						
T1217				AML	AML		
	comp=N,58898μm,0.5s						
T1217				AML	AML		
	comp=E,41255μm,0.3s						
T1245	**Castelsantange**	**0.17**	**8**	P	**Pb**	**06 55 45.6**	**0.0**
T1245				S	**Sg**	**06 55 47.4**	**-1.0**
RM33	**Pellescritta (**	**0.18**	**167**	P	**Pb**	**06 55 46.0**	**+0.2**
RM33				S	**Sb**	**06 55 49.6**	**+0.6**
RM33				AML	AML		
	comp=E,96750μm,1.2s						
RM33				AML	AML		
	comp=N,81200μm,1.0s						
RM33				AML	AML		
	comp=E,95150μm,1.2s						
RM33				AML	AML		
	comp=E,96800μm,1.2s						
RM33				AML	AML		
	comp=N,81250μm,1.0s						
RM33				AML	AML		
	comp=E,95000μm,1.2s						
RM33				AML	AML		
	comp=E,96550μm,1.2s						
RM33				AML	AML		
	comp=E,95050μm,1.2s						
RM33				AML	AML		
	comp=N,81900μm,1.0s						
RM33				AML	AML		
	comp=N,81200μm,1.0s						
RM33				AML	AML		
	comp=E,96900μm,1.2s						
RM33				AML	AML		
	comp=E,95500μm,1.2s						
RM33				AML	AML		
	comp=E,39459μm,0.1s						
RM33				AML	AML		
	comp=E,40101μm,0.2s						
RM33				AML	AML		
	comp=N,30429μm,1.8s						
RM33				AML	AML		
	comp=N,31449μm,1.8s						
T1243	**Rocca Santa Ma**	**0.21**	**87**	P	**Pg**	**06 55 45.3**	**-0.5**
T1243				S	**Sg**	**06 55 48.5**	**-0.8**
MC2	**Monte Cornacci**	**0.23**	**6**	P	**Pg**	**06 55 46.0**	**-0.2**
MC2				S	**Sg**	**06 55 49.5**	**-0.3**
T1216	**Preci, Frazion**	**0.23**	**334**	P	**Pg**	**06 55 46.0**	**0.0**
T1216				S	**Sg**	**06 55 49.9**	**+0.3**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=E,45098μm,0.3s						
CAMP	**Campotosto**	**0.24**	**129**		**Pg**	**06 55 44.2**	**-2.0**
CAMP				Sg	**Sg**	**06 55 50.1**	**+0.2**
CAMP	**Campotosto**	**0.24**	**129**	P	**Pg**	**06 55 46.5**	**+0.2**
CAMP				S	**Sg**	**06 55 50.2**	**+0.2**
CAMP				AML	AML		
	comp=E,81300μm,0.2s						
CAMP				AML	AML		
	comp=N,41350μm,0.2s						
CAMP				AML	AML		
	comp=E,17746μm,0.7s						
CAMP				AML	AML		
	comp=N,11143μm,2.2s						
T1215	**Vallo di Nera,**	**0.24**	**298**	P	**Pg**	**06 55 46.5**	**+0.2**
T1215				S	**Sb**	**06 55 51.1**	**+0.3**
T1215				AML	AML		
	comp=N,38600μm,0.2s						
T1215				AML	AML		
	comp=E,38600μm,1.6s						
T1215				AML	AML		
	comp=E,38150μm,1.6s						
T1215				AML	AML		
	comp=E,38650μm,1.6s						
T1215				AML	AML		
	comp=N,38850μm,0.2s						
T1215				AML	AML		
	comp=E,38100μm,1.6s						
T1215				AML	AML		
	comp=E,38700μm,1.6s						
T1215				AML	AML		
	comp=N,38900μm,0.2s						
T1215				AML	AML		
	comp=N,38550μm,0.2s						
T1215				AML	AML		
	comp=E,13404μm,1.1s						
T1215				AML	AML		
	comp=N,15237μm,1.8s						
T1215				AML	AML		
	comp=N,15882μm,1.8s						
T1215				AML	AML		
	comp=E,13987μm,3.2s						
T1241	**Roccafluvione,**	**0.26**	**50**	P	**Pg**	**06 55 46.4**	**-0.2**
T1241				S	**Sg**	**06 55 50.0**	**-0.6**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
	comp=E,44269μm,0.5s						
T1241				AML	AML		
	comp=N,30908μm,0.4s						
T1241				AML	AML		
	comp=E,47020μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.27**	**157**	P	**Pb**	**06 55 47.2**	**+0.1**
T1247				S	**Sb**	**06 55 52.8**	**+1.4**
T1247				AML	AML		
	comp=E,72900μm,0.1s						
T1247				AML	AML		
	comp=N,99200μm,0.2s						
T1247				AML	AML		
	comp=E,25159μm,1.2s						
T1246	**Crognaleto (TE**	**0.27**	**113**	P	**Pg**	**06 55 46.7**	**0.0**
T1246				S	**Sg**	**06 55 50.6**	**-0.1**
FEMA	**Monte Fema**	**0.29**	**344**	P	**Pb**	**06 55 47.6**	**+0.1**
FEMA				S	**Sg**	**06 55 51.3**	**-0.1**
FEMA				AML	AML		
	comp=N,93000μm,1.2s						
FEMA				AML	AML		
	comp=E,83600μm,0.9s						
FEMA				AML	AML		
	comp=N,93250μm,1.2s						
FEMA				AML	AML		
	comp=N,39323μm,0.7s						
FEMA				AML	AML		
	comp=E,46219μm,0.2s						
ARRO	**Arrone**	**0.31**	**250**	AML	AML		
	comp=N,17065μm,2.0s						
ARRO				AML	AML		
	comp=E,20450μm,0.5s						
ARRO				AML	AML		
	comp=N,24650μm,0.7s						
ARRO				AML	AML		
	comp=E,15455μm,1.1s						
AM05	**Amandola Campo**	**0.32**	**26**	P	**Pg**	**06 55 47.3**	**-0.3**
AM05				S	**Sg**	**06 55 51.9**	**-0.4**
AM05				AML	AML		
	comp=E,11700μm,0.8s						
AM05				AML	AML		
	comp=E,52100μm,0.5s						
AM05				AML	AML		
	comp=E,52150μm,0.5s						
AM05				AML	AML		
	comp=N,3400μm,0.8s						
AM05				AML	AML		
	comp=N,13800μm,1.0s						
AM05				AML	AML		
	comp=E,12000μm,0.4s						
AM05				AML	AML		
	comp=E,10373μm,3.6s						
AM05				AML	AML		
	comp=E,47527μm,3.6s						
AM05				AML	AML		
	comp=N,10374μm,2.0s						
TERO	**Teramo**	**0.34**	**101**	P	**Pg**	**06 55 47.5**	**-0.3**
TERO				S	**Sg**	**06 55 52.5**	**-0.2**
TERO				AML	AML		
	comp=E,40500μm,0.9s						
TERO				AML	AML		
	comp=N,60550μm,0.4s						
TERO				AML	AML		
	comp=E,40500μm,0.6s						
TERO				AML	AML		
	comp=N,65150μm,0.4s						
AQU	**L'Aquila**	**0.38**	**151**	Pg	**Pb**	**06 55 48.9**	**-0.1**
AQU	**L'Aquila**	**0.38**	**151**	P	**Pb**	**06 55 49.1**	**0.0**
AQU				S	**Sb**	**06 55 55.4**	**+0.7**
AQU				AML	AML		
	comp=E,18700μm,0.3s						
AQU				AML	AML		
	comp=N,17550μm,0.7s						
AQU				AML	AML		
	comp=E,18850μm,0.3s						
AQU				AML	AML		
	comp=E,18900μm,0.3s						
AQU				AML	AML		
	comp=N,16800μm,0.6s						
AQU				AML	AML		
	comp=N,6681μm,3.8s						
AQU				AML	AML		
	comp=E,8102μm,0.3s						
AQU				AML	AML		
	comp=E,7964μm,0.3s						
AQU				AML	AML		
	comp=N,7634μm,0.3s						
GIGS	**Gran Sasso**	**0.39**	**128**	P	**Pg**	**06 55 48.8**	**+0.1**
GIGS				S	**Sg**	**06 55 54.2**	**+0.1**
GIGS				AML	AML		
	comp=E,11100μm,0.4s						
GIGS				AML	AML		
	comp=N,8640μm,1.0s						
GUMA	**Gualdo di Mace**	**0.40**	**19**	P	**Pg**	**06 55 48.8**	**-0.1**
FIAM	**Fiamignano**	**0.42**	**184**	P	**Pb**	**06 55 50.0**	**+0.3**
FIAM				S	**Sb**	**06 55 56.8**	**+0.9**
FIAM				AML	AML		
	comp=E,19500μm,0.5s						
FIAM				AML	AML		
	comp=N,13150μm,0.4s						
FIAM				AML	AML		
	comp=N,8811μm,0.7s						
FIAM				AML	AML		
	comp=E,9538μm,0.7s						
OFFI	**Offida**	**0.46**	**57**	P	**Pb**	**06 55 50.3**	**-0.2**
SEF1	**Sefro**	**0.48**	**342**	P	**Pb**	**06 55 51.2**	**+0.3**
SEF1				S	**Sb**	**06 55 58.2**	**+0.5**
MDAR	**Monte D'Aria**	**0.51**	**359**	P	**Pb**	**06 55 51.7**	**+0.5**
FAGN	**Fagnano**	**0.53**	**143**	P	**Pb**	**06 55 51.9**	**+0.3**
FAGN				AML	AML		
	comp=E,36100μm,0.4s						
FAGN				AML	AML		
	comp=N,30450μm,0.5s						
FAGN				AML	AML		
	comp=E,11097μm,0.5s						
FAGN				AML	AML		
	comp=N,11965μm,0.4s						
TRTR	**Tortoreto Alta**	**0.57**	**77**	P	**Pb**	**06 55 52.6**	**+0.3**
TRTR				AML	AML		
	comp=N,58950μm,0.5s						
TRTR				AML	AML		
	comp=E,61150μm,0.9s						
VCEL	**Villa Celiera**	**0.58**	**120**	P	**Pb**	**06 55 52.6**	**0.0**
VCEL				AML	AML		
	comp=E,26900μm,0.4s						
VCEL				AML	AML		
	comp=N,29550μm,0.4s						
VCEL				AML	AML		
	comp=E,26950μm,0.4s						
T0110	**Collepietro**	**0.65**	**135**	P	**Pg**	**06 55 53.5**	**0.0**
T0110				AML	AML		
	comp=E,24350μm,0.6s						
T0110				AML	AML		
	comp=N,26000μm,0.4s						
T0110				AML	AML		
	comp=E,12286μm,0.6s						
T0110				AML	AML		
	comp=N,7653μm,0.5s						
MURB	**Monte Urbino**	**0.74**	**321**		**Pb**	**06 55 54.5**	**-0.7**
INTR	**Introdacqua**	**0.87**	**140**		**Pb**	**06 55 57.4**	**-0.1**
LATE	**Laterza**	**1.00**	**266**		**Pb**	**06 55 59.7**	**0.0**
MCIV	**Monte Civitell**	**1.09**	**275**	AML	AML		
	comp=N,2815μm,0.9s						
MCIV				AML	AML		
	comp=E,2200μm,0.5s						
MCIV				AML	AML		
	comp=N,2820μm,0.9s						
MCIV				AML	AML		
	comp=E,2200μm,0.5s						
MCIV				AML	AML		
	comp=E,1527μm,6.3s						
MCIV				AML	AML		
	comp=N,1615μm,4.5s						
OSSC	**Osservatorio P**	**1.63**	**302**	Pn	**Pb**	**06 56 10.0**	**-0.4**
CASP	**Castiglione de**	**1.69**	**274**		**Pb**	**06 56 10.9**	**-0.5**
SGRT	**San Giovanni R**	**2.13**	**115**	Pn	**Pn**	**06 56 15.5**	**-0.2**
VLC	**Villacollemand**	**2.50**	**307**	Pn	**Pn**	**06 56 21.6**	**+0.9**
TEOL	**Teolo**	**2.88**	**339**	Pn	**Pn**	**06 56 25.7**	**-0.1**
PGF	**Pioggiola**	**3.07**	**269**	*e*Pn	**Pn**	**06 56 27.5**	**-1.1**
PGF	**Pioggiola**	**3.07**	**269**	*e*P	**Pn**	**06 56 30.6**	**+2.0**
PGF				*e*Sn	**Sn**	**06 57 02.1**	**-2.9**
	comp=N,33nm,0.3s						
MSSA	**Maissana**	**3.11**	**303**	Pn	**Pn**	**06 56 29.5**	**+0.4**
SALO	**Salr**	**3.49**	**328**	Pn	**Pn**	**06 56 34.1**	**-0.2**
STAL	**STALIGIAL**	**3.59**	**355**	Pn	**Pn**	**06 56 36.4**	**+0.8**
ABTA	**Abfaltersbach**	**4.09**	**354**	*e*Pn	**Pn**	**06 56 45.4**	**+2.8**
	comp=N,32nm,0.5s						
SBF	**Sospel**	**4.34**	**288**	*e*Pn	**Pn**	**06 56 44.4**	**-1.6**
SBF	**Sospel**	**4.34**	**288**	*e*P	**Pn**	**06 56 48.4**	**+2.4**
SBF				*e*Sn	**Sn**	**06 57 33.0**	**-3.2**
	comp=N,34nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**4.44**	**333**	Pn	**Pn**	**06 56 47.0**	**-0.6**
TIP	**Timpagrande**	**4.44**	**141**	Pn	**Pn**	**06 56 46.1**	**-1.3**
WTTA	**Wattenberg**	**4.70**	**347**	*e*Pn	**Pn**	**06 56 55.1**	**+4.0**
	comp=N,12nm,0.4s						
DAVOX	**Davos/Dischmat**	**4.71**	**331**	Pn	**Pn**	**06 56 52.6**	**+1.4**
	comp=N,2.1nm,0.3s,baz=149,slow=22,SNR=2.6						
DAVOX				Sn	**Sn**	**06 57 49.0**	**+3.4**
	comp=N,4.0nm,0.3s,baz=14,slow=22,SNR=2.4						
	comp=N,12nm,0.6s						
WATA	**Walderalm**	**4.78**	**347**		**Pn**	**06 56 56.5**	**+4.3**
WATA	**Walderalm**	**4.78**	**347**	*e*Pn	**Pn**	**06 56 56.5**	**+4.3**
	comp=N,6.0nm,0.2s						
ARSA	**Arzberg**	**4.86**	**19**	*e*Pn	**Pn**	**06 56 56.8**	**+3.6**
	comp=N,4.8nm,0.3s						
LMR	**La Mourre**	**4.92**	**280**	*e*Pn	**Pn**	**06 56 51.0**	**-2.9**
LMR	**La Mourre**	**4.92**	**280**	*e*P	**Pn**	**06 56 55.6**	**+1.7**
LMR				*e*Sn	**Sn**	**06 57 46.1**	**-4.3**
	comp=N,11nm,0.6s						
MBDF	**Montbardon**	**5.06**	**296**	*e*Pn	**Pn**	**06 56 54.8**	**-1.1**
MBDF	**Montbardon**	**5.06**	**296**	*e*P	**Pn**	**06 56 59.4**	**+3.5**
CLTB	**Caltabellotta**	**5.10**	**179**	Pn	**Pn**	**06 56 55.9**	**-0.6**
DIVS	**Divibare**	**5.18**	**72**	Pn	**Pn**	**06 56 57.6**	**+0.1**
MOA	**Molln**	**5.22**	**8**	*e*Pn	Pn	06 57 02.9	+4.8
	comp=N,2.0nm,0.2s						
LPG	**La Plagne**	**5.40**	**304**	*e*Pn	**Pn**	**06 57 00.5**	**-0.3**
LPG	**La Plagne**	**5.40**	**304**	*e*P	**Pn**	**06 57 04.5**	**+3.7**
LPL	**La Plagne**	**5.42**	**304**	*e*Pn	**Pn**	**06 57 00.4**	**-0.6**
LPL	**La Plagne**	**5.42**	**304**	*e*P	**Pn**	**06 57 04.2**	**+3.2**
LPL				*e*Sn	**Sn**	**06 57 59.1**	**-4.0**
	comp=N,6.4nm,0.4s						
RONA	**Rosalia, Austr**	**5.48**	**23**		**Pn**	**06 57 04.5**	**+2.9**
RONA	**Rosalia, Austr**	**5.48**	**23**	*e*Pn	**Pn**	**06 57 04.5**	**+2.9**
	comp=N,4.9nm,0.3s						
SENIN	**Lac Senin/Sane**	**5.57**	**313**	Pn	**Pn**	**06 57 03.9**	**+0.9**
CONA	**Conrad Observa**	**5.58**	**19**	*e*Pn	**Pn**	**06 57 04.3**	**+1.3**
	comp=N,4.0nm,0.3s						
SMRF	**Simiane la Rot**	**5.68**	**286**	*e*Pn	**Pn**	**06 57 04.8**	**+0.4**
SMRF	**Simiane la Rot**	**5.68**	**286**	*e*P	**Pn**	**06 57 07.9**	**+3.5**
SMRF				*e*Sn	**Sn**	**06 58 04.8**	**-4.4**
	comp=N,8.3nm,0.5s						
ORIF	**Oris-en-Rattie**	**5.72**	**295**	*e*P	**Pn**	**06 57 07.6**	**+2.6**
KEK	**Kerkira**	**5.82**	**118**	Pn	**Pn**	**06 57 05.9**	**-0.4**
GERES	**GERESS Array B**	**6.17**	**3**	Pn	**Pn**	**06 57 10.7**	**-0.5**
	comp=N,0.4nm,0.3s,baz=181,slow=15,SNR=1.1						
GERES				Sn	**Sn**	**06 58 22.2**	**+0.8**
	comp=N,2.9nm,0.3s,baz=167,slow=25,SNR=4.5						
	comp=N,1.3nm,0.4s						
CABF	**La Chapelle**	**6.39**	**310**	*e*P	**Pn**	**06 57 17.0**	**+2.9**
VIVF	**Saint-Julien-l**	**6.51**	**292**	*e*P	**Pn**	**06 57 19.5**	**+3.7**
HINF	**Hinteralfeld**	**6.79**	**321**	*e*P	**Pn**	**06 57 22.0**	**+2.4**
HINF				*e*Sn	**Sn**	**06 58 30.9**	**-5.6**
	comp=N,86nm,1.3s						
LASF	**Ste Croix**	**6.92**	**285**	*e*P	**Pn**	**06 57 24.0**	**+2.6**
CDF	**Champ du Feu**	**7.06**	**326**	*e*P	**Pn**	**06 57 26.6**	**+3.3**
HAU	**Haudompre**	**7.16**	**320**	*e*P	**Pn**	**06 57 28.5**	**+3.8**
HAU				*e*Sn	**Sn**	**06 58 40.3**	**-5.3**
	comp=N,58nm,1.0s						
MAHO	**Mahon**	**7.25**	**250**	Pn	**Pn**	**06 57 26.3**	**+0.4**
VTS	**Vitosha**	**7.43**	**87**	Pn	**Pn**	**06 57 27.1**	**-1.4**
KEST	**Kesra**	**7.55**	**204**	Pn	**Pn**	**06 57 31.1**	**+1.1**
PAGF	**Fort de Pagny**	**7.84**	**321**	*e*P	**Pn**	**06 57 35.8**	**+1.8**
LOR	**Lormes**	**8.03**	**308**	*e*P	**Pn**	**06 57 40.6**	**+4.1**
	baz=117						
MTLF	**Montolieu**	**8.04**	**278**	*e*P	**Pn**	**06 57 40.2**	**+3.4**
CAF	**Calviac**	**8.33**	**289**	*e*P	**Pn**	**06 57 43.0**	**+2.3**
CLL	**Collm**	**8.62**	**359**	*e*Sn	**Sn**	**06 59 15.0**	**-6.5**
CLL				*ex*	x	06 59 39.0	
CLL				*ex*	x	06 59 54.0	
CLL				*e*Sg		07 00 21.0	
RDO	**Rodhopi**	**9.36**	**95**	Pn	**Pn**	**06 57 54.7**	**-0.1**
IDI	**Anoyia**	**11.74**	**125**	Pn	**Pn**	**06 58 31.2**	**+3.7**
	comp=N,0.5nm,0.3s,baz=2.5,slow=13,SNR=2.1						
IDI				Sn	**Sn**	**07 00 30.7**	**-7.4**
	comp=N,0.3nm,0.3s,baz=16,slow=14,SNR=1.7						
	comp=N,2.1nm,0.5s						
ESDC	**Sonseca Array**	**13.24**	**263**	Pn	**Pn**	**06 58 48.6**	**+0.6**
	comp=N,0.1nm,0.3s,baz=68,slow=10,SNR=2.0						
	comp=N,0.4nm,0.8s						
BR131	**Keskin Array S**	**15.69**	**94**	Pn	**Pn**	**06 59 20.9**	**-0.2**
BR131				IAmb	IAmb	06 59 32.9	
	comp=Z,8.0nm,1.5s						
FINES	**FINESS Array B**	**20.32**	**18**	P	**P**	**07 00 16.1**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=206,slow=9.3,SNR=1.2						
	comp=Z,1.9nm,0.8s						
ARU	**Arti**	**31.87**	**49**	P	**P**	**07 02 07.0**	**+2.3**
	comp=Z,2.1nm,0.4s,baz=270,slow=16,SNR=3.1						
	comp=Z,2.1nm,0.4s						
BVAR	**Borovoye Array**	**38.79**	**54**	P	**P**	**07 03 04.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=284,slow=5.8,SNR=1.5						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**47.00**	**50**	P	**P**	**07 04 11.5**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=294,slow=7.2,SNR=1.6						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**07 04 18.4**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=285,slow=7.4,SNR=5.0						
	comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**61.89**	**50**	P	**P**	**07 06 00.2**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=289,slow=9.1,SNR=1.8						
	comp=Z,0.3nm,0.6s						

ROM 30 06:55:54.2±0.1, 42°.751N±0°.004×13°.231E±0°.006, h11km, ML4.1/7, 1C, Error ellipse: s-maj=0.5km s-min=0.4km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.10**	**171**	P	Pg	06 55 57.5	+0.6
T1201				S	Sg	06 55 59.9	+1.0
T1204	**Amatrice, Fraz**	**0.10**	**140**	⇑P	Pg	06 55 57.4	+0.3
T1204				S	Sg	06 55 59.5	+0.4
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1245	**Castelsantange**	**0.11**	**343**	P	Pg	06 55 57.3	+0.1
T1245				S	Sg	06 55 59.4	0.0
MC2	**Monte Cornacci**	**0.16**	**350**	P	Pg	06 55 58.4	+0.3
MC2				S	Sg	06 56 01.4	+0.7
T1243	**Rocca Santa Ma**	**0.17**	**109**	P	Pg	06 55 58.2	+0.2
T1243				S	Sg	06 56 01.1	+0.4
T1241	**Roccafluvione,**	**0.18**	**54**	P	Pb	06 55 59.0	-0.7
T1241				S	Sg	06 56 02.0	+1.1
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
	comp=N,29507μm,0.4s						
T1241				AML	AML		
	comp=E,53875μm,0.7s						
T1241				AML	AML		
	comp=E,51602μm,0.7s						
T1241				AML	AML		
	comp=N,28543μm,0.3s						
LNSS	**Leonessa**	**0.20**	**224**	P	Pg	06 55 59.1	+0.5
LNSS				S	Sg	06 56 02.8	+1.2
LNSS				AML	AML		
T1217	**Poggiodomo (PG**	**0.22**	**260**	P	Pg	06 55 59.2	+0.2
T1217				S	Sg	06 56 02.9	+0.8
T1217				AML	AML		
	comp=E,77450μm,0.6s						
T1217				AML	AML		
	comp=N,98700μm,0.3s						
T1217				AML	AML		
	comp=E,75800μm,0.6s						
T1217				AML	AML		
	comp=N,96100μm,1.4s						
T1217				AML	AML		
	comp=E,77400μm,0.6s						
T1217				AML	AML		
	comp=N,98600μm,0.3s						
T1217				AML	AML		
	comp=E,75850μm,0.6s						
T1217				AML	AML		
	comp=N,96000μm,1.4s						
T1217				AML	AML		
	comp=N,98800μm,0.3s						
T1217				AML	AML		
	comp=N,95800μm,1.4s						
T1217				AML	AML		
	comp=E,61338μm,0.8s						
T1217				AML	AML		
	comp=E,62573μm,0.8s						
RM33	**Pellescritta (**	**0.24**	**183**	P	Pg	06 55 59.7	+0.5

RM33				S	Sg	06 56 04.0 +1.3
RM33				AML	AML	
	comp=E,96750μm,1.2s					
RM33				AML	AML	
	comp=N,81200μm,1.0s					
RM33				AML	AML	
	comp=E,95150μm,1.2s					
RM33				AML	AML	
	comp=N,81900μm,1.0s					
RM33				AML	AML	
	comp=E,96500μm,1.2s					
RM33				AML	AML	
	comp=E,95050μm,1.2s					
RM33				AML	AML	
	comp=N,81850μm,1.0s					
RM33				AML	AML	
	comp=E,95250μm,1.2s					
AM05	**Amandola Campo**	**0.24**	**22**	P	Pg	06 55 59.6 +0.3
AM05				S	Sg	06 56 03.6 +0.9
CAMP	**Campotosto**	**0.25**	**148**	P	Pg	06 55 59.8 +0.3
CAMP				S	Sg	06 56 04.0 +1.0
T1246	**Crognaleto (TE**	**0.26**	**131**	P	Pg	06 55 59.8 +0.3
T1246				S	Sg	06 56 04.1 +1.0
T1215	**Vallo di Nera,**	**0.27**	**281**	P	Pg	06 56 00.2 +0.4
TERO	**Teramo**	**0.30**	**115**	P	Pg	06 56 00.5 +0.1
TERO				S	Sg	06 56 05.4 +0.9
TERO				AML	AML	
	comp=E,47000μm,0.6s					
TERO				AML	AML	
	comp=N,60550μm,0.4s					
TERO				AML	AML	
	comp=E,49750μm,0.6s					
TERO				AML	AML	
	comp=N,65150μm,0.4s					
TERO				AML	AML	
	comp=N,60600μm,0.4s					
TERO				AML	AML	
	comp=E,30806μm,0.1s					
TERO				AML	AML	
	comp=E,27883μm,0.1s					
T1247	**Pizzolo (AQ)**	**0.31**	**171**	P	Pg	06 56 01.0 +0.5
T1247				S	Sb	06 56 06.2 -0.8
GUMA	**Gualdo di Mace**	**0.32**	**14**	P	Pb	06 56 02.2 +0.1
GUMA				S	Sb	06 56 06.6 -0.7
OFFI	**Offida**	**0.38**	**61**	P	Pb	06 56 02.8 -0.2
GIGS	**Gran Sasso**	**0.39**	**140**	P	Pg	06 56 02.2 +0.2
GIGS				S	Sg	06 56 07.9 +0.7
AQU	**L'Aquila**	**0.42**	**162**	P	Pb	06 56 03.4 -0.2
AQU				S	Sb	06 56 09.6 -0.4
FIAM	**Fiamignano**	**0.49**	**190**	P	Pg	06 56 03.8 0.0
FIAM				S	Sb	06 56 11.3 -0.8
TRTR	**Tortoreto Alta**	**0.51**	**83**	P	Pb	06 56 05.3 +0.2
TRTR				AML	AML	
	comp=E,61200μm,0.9s					
TRTR				AML	AML	
	comp=N,58950μm,0.5s					
TRTR				AML	AML	
	comp=E,61150μm,0.9s					

ROM 30 06:56:05.8±0.1, 42°.799N±0°.003×13°.108E±0°.005, h10km, ML4.2/7, Error ellipse: s-maj=0.4km s-min=0.3km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.11**	**324**	P	Pg	06 56 08.8	+0.2
T1216				S	Sg	06 56 11.1	+0.4
MC2	**Monte Cornacci**	**0.13**	**28**	P	Pg	06 56 09.7	+0.6
MC2				S	Sg	06 56 12.0	+0.6
T1217	**Poggiodomo (PG**	**0.16**	**236**	P	Pg	06 56 10.0	+0.6
T1217				S	Sg	06 56 12.8	+1.0
T1217				AML	AML		
	comp=E,77450μm,0.6s						
T1217				AML	AML		
	comp=N,98700μm,0.3s						
T1217				AML	AML		
	comp=E,75850μm,0.6s						
T1217				AML	AML		
	comp=N,96100μm,1.4s						
T1217				AML	AML		
	comp=N,98600μm,0.3s						
T1217				AML	AML		
	comp=N,96000μm,1.4s						
T1217				AML	AML		
	comp=E,77400μm,0.6s						
T1217				AML	AML		
	comp=N,75800μm,0.4s						
T1217				AML	AML		
	comp=N,88731μm,0.6s						
T1217				AML	AML		
	comp=E,75800μm,0.6s						
FEMA	**Monte Fema**	**0.17**	**345**	P	Pb	06 56 10.6	-0.5
FEMA				S	Sg	06 56 12.8	+0.6
T1215	**Vallo di Nera,**	**0.18**	**271**	P	Pg	06 56 10.1	+0.5
T1215				S	Sg	06 56 13.2	+0.9
T1201	**Domo (RI)**	**0.18**	**143**	P	Pg	06 56 10.4	+0.7
T1201				S	Sg	06 56 13.8	+1.5
T1204	**Amatrice, Fraz**	**0.20**	**129**	P	Pg	06 56 10.5	+0.4
T1204				S	Sg	06 56 13.9	+0.9
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
LNSS	**Leonessa**	**0.20**	**194**	P	Pb	06 56 10.9	-0.7
LNSS				S	Sg	06 56 14.5	+1.4
LNSS				AML	AML		
T1241	**Roccafluvione,**	**0.24**	**76**	P	Pb	06 56 11.9	-0.4
T1241				S	Sg	06 56 15.7	+1.5
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
AM05	**Amandola Campo**	**0.25**	**45**	P	Pg	06 56 11.4	+0.4
AM05				S	Sb	06 56 15.7	-1.2
RM33	**Pellescritta (**	**0.30**	**165**	P	Pb	06 56 12.6	-0.7
RM33				S	Sb	06 56 17.4	-0.9
RM33				AML	AML		
	comp=E,96800μm,1.2s						
RM33				AML	AML		
	comp=N,81200μm,1.0s						
RM33				AML	AML		
	comp=E,95150μm,1.2s						
RM33				AML	AML		
	comp=N,81900μm,1.0s						
RM33				AML	AML		
	comp=E,96500μm,1.2s						
RM33				AML	AML		
	comp=N,81200μm,1.0s						
RM33				AML	AML		
	comp=E,95050μm,1.2s						
RM33				AML	AML		
	comp=N,44617μm,0.4s						
RM33				AML	AML		
	comp=E,52854μm,0.1s						
RM33				AML	AML		
	comp=E,54003μm,0.1s						
RM33				AML	AML		
	comp=N,45589μm,0.3s						
GUMA	**Gualdo di Mace**	**0.31**	**32**	P	Pg	06 56 12.5	+0.5
CAMP	**Campotosto**	**0.34**	**140**	P	Pg	06 56 12.9	+0.2
CAMP				S	Sg	06 56 18.3	+1.0
T1246	**Crognaleto (TE**	**0.36**	**127**	P	Pg	06 56 13.0	+0.1
T1246				S	Sg	06 56 18.6	+0.9
SEF1	**Sefro**	**0.37**	**341**	P	Pg	06 56 13.3	+0.2
SEF1				S	Sb	06 56 19.2	-1.0
T1247	**Pizzolo (AQ)**	**0.38**	**158**	P	Pb	06 56 15.1	+0.4
T1247				S	Sb	06 56 20.0	-0.6
PIO1	**Pioraco**	**0.39**	**347**	P	Pg	06 56 13.7	+0.2
PIO1				S	Sb	06 56 19.9	-0.9
TERO	**Teramo**	**0.41**	**116**	P	Pg	06 56 14.0	+0.2
TERO				S	Sg	06 56 19.9	+0.8
TERO				AML	AML		
	comp=E,40500μm,0.9s						
TERO				AML	AML		
	comp=N,60550μm,0.4s						
TERO				AML	AML		
	comp=E,40500μm,0.6s						
TERO				AML	AML		
	comp=N,65150μm,0.4s						
TERO				AML	AML		
	comp=N,26210μm,0.8s						
SSM1	**San Severino M**	**0.43**	**7**	P	Pg	06 56 14.7	+0.4
SSM1				S	Sb	06 56 21.6	-0.4
OFFI	**Offida**	**0.45**	**72**	P	Pb	06 56 16.1	+0.3
GIGS	**Gran Sasso**	**0.49**	**136**	P	Pg	06 56 15.4	+0.1
GIGS				S	Sg	06 56 22.3	+0.5
FIAM	**Fiamignano**	**0.53**	**179**	P	Pg	06 56 16.2	+0.1
FIAM				S	Sb	06 56 24.5	-0.4
TRTR	**Tortoreto Alta**	**0.59**	**89**	AML	AML		
	comp=E,61150μm,0.9s						
TRTR				AML	AML		
	comp=E,61200μm,0.9s						
TRTR				AML	AML		
	comp=N,58950μm,0.5s						

ROM 30 06:56:38.1±0.1, 42°.844N±0°.004×13°.145E±0°.005, h10km, ML3.5/7, Error ellipse: s-maj=0.4km s-min=0.2km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**68**	P	Pg	06 56 40.1	-0.1
T1245				S	Sg	06 56 41.3	-0.3
MC2	**Monte Cornacci**	**0.08**	**26**	P	Pg	06 56 40.8	+0.2
MC2				S	Sg	06 56 42.4	0.0
T1216	**Preci, Frazion**	**0.10**	**297**	P	Pg	06 56 41.1	+0.3
T1216				S	Sg	06 56 43.2	+0.6
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=N,59086μm,0.2s						
T1216				AML	AML		
	comp=E,59661μm,0.5s						
FEMA	**Monte Fema**	**0.14**	**329**	P	Pg	06 56 41.7	+0.3
FEMA				S	Sg	06 56 44.2	+0.6
AM05	**Amandola Campo**	**0.20**	**49**	P	Pg	06 56 43.0	+0.7
AM05				S	Sg	06 56 46.2	+1.0
T1217	**Poggiodomo (PG**	**0.20**	**230**	P	Pg	06 56 43.8	+1.4
T1217				S	Sg	06 56 46.8	+1.4
T1215	**Vallo di Nera,**	**0.21**	**259**	P	Pg	06 56 43.2	+0.7
T1215				S	Sg	06 56 46.7	+1.3
T1215				AML	AML		
	comp=E,14200μm,0.5s						
T1215				AML	AML		
	comp=N,13800μm,0.5s						
T1215				AML	AML		
	comp=E,12020μm,1.2s						
T1215				AML	AML		
	comp=N,8161μm,0.4s						
T1215				AML	AML		
	comp=N,8586μm,0.8s						
T1215				AML	AML		
	comp=E,11590μm,0.5s						
T1204	**Amatrice, Fraz**	**0.21**	**143**	P	Pg	06 56 43.2	+0.7
T1204				S	Sg	06 56 47.0	+1.5
T1204				AML	AML		
	comp=E,38529μm,0.3s						
T1241	**Roccafluvione,**	**0.21**	**86**	P	Pg	06 56 43.4	+0.9
T1241				S	Sg	06 56 47.0	+1.6
LNSS	**Leonessa**	**0.25**	**198**	P	Pb	06 56 44.3	-0.6
GUMA	**Gualdo di Mace**	**0.26**	**32**	P	Pb	06 56 44.4	-0.6
GUMA				S	Sb	06 56 48.6	-0.9
T1243	**Rocca Santa Ma**	**0.27**	**123**	P	Pg	06 56 43.7	+0.2
T1243				S	Sg	06 56 48.3	+1.1
SEF1	**Sefro**	**0.34**	**334**	P	Pg	06 56 45.1	+0.3
SEF1				S	Sb	06 56 50.9	-0.9
SEF1				AML	AML		
	comp=E,13694μm,0.7s						
SEF1				AML	AML		
	comp=N,11094μm,0.2s						
MDAR	**Monte D'Aria**	**0.35**	**360**	P	Pb	06 56 45.9	-0.6
MDAR				S	Sb	06 56 51.3	-0.9
MDAR				AML	AML		
	comp=N,5671μm,0.6s						
CAMP	**Campotosto**	**0.36**	**148**	P	Pg	06 56 45.5	+0.2
CAMP				S	Sb	06 56 51.5	-1.1
T1246	**Crognaleto (TE**	**0.36**	**135**	P	Pg	06 56 45.6	+0.2
T1246				S	Sg	06 56 51.4	+1.1
MNTP	**Montappone**	**0.38**	**39**	P	Pb	06 56 46.7	-0.2
MNTP				S	Sb	06 56 53.4	+0.5
SSM1	**San Severino M**	**0.39**	**3**	P	Pg	06 56 46.3	+0.5
SSM1				S	Sb	06 56 52.4	-0.7
TERO	**Teramo**	**0.40**	**123**	P	Pg	06 56 46.2	+0.1
TERO				S	Sb	06 56 52.7	-1.0
TERO				AML	AML		
	comp=E,18707μm,0.3s						
TERO				AML	AML		
	comp=E,19750μm,0.3s						
OFFI	**Offida**	**0.41**	**77**	P	Pb	06 56 47.5	0.0
ASSB	**Assisi San Ben**	**0.41**	**299**	P	Pg	06 56 46.4	+0.3
ASSB				S	Sb	06 56 52.9	-0.9
ASSB				AML	AML		
	comp=E,15070μm,0.3s						
ASSB				AML	AML		
	comp=N,8581μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.50**	**313**	P	Pg	06 56 48.2	+0.3
FSSB	**Fossombrone**	**0.89**	**343**	S	Sn	06 57 10.0	+0.2

ROM 30 06:57:21.6±0.1, 42°.861N±0°.004×13°.092E±0°.005, h10km, ML3.8/4, Error ellipse: s-maj=0.4km s-min=0.3km az=154.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**299**	P	Pg	06 57 24.1	+0.4
T1216				S	Sg	06 57 25.7	+0.5
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.07**	**93**	P	Pg	06 57 23.8	-0.1
T1245				S	Sg	06 57 26.0	+0.4
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**54**	P	Pg	06 57 23.9	-0.3
MC2				S	Sg	06 57 26.6	+0.6
FEMA	**Monte Fema**	**0.11**	**343**	P	Pg	06 57 24.8	+0.5
FEMA				S	Sg	06 57 26.9	+0.6
FEMA				AML	AML		
	comp=N,50088μm,0.2s						
FEMA				AML	AML		
	comp=E,54211μm,0.4s						
T1215	**Vallo di Nera,**	**0.17**	**250**	P	Pg	06 57 25.8	+0.5
T1215				S	Sg	06 57 28.8	+0.9
T1215				AML	AML		
	comp=N,7786μm,0.2s						
T1215				AML	AML		
	comp=E,9651μm,0.5s						
T1215				AML	AML		
	comp=E,9023μm,0.5s						
T1217	**Poggiodomo (PG**	**0.19**	**219**	P	Pg	06 57 26.1	+0.5
T1217				S	Sg	06 57 29.4	+1.1
AM05	**Amandola Campo**	**0.22**	**59**	P	Pg	06 57 26.7	+0.5
AM05				S	Sg	06 57 30.4	+1.1
T1201	**Domo (RI)**	**0.23**	**150**	P	Pg	06 57 27.1	+0.7
T1201				S	Sg	06 57 31.4	+1.8
T1241	**Roccafluvione,**	**0.25**	**91**	P	Pg	06 57 27.6	+0.9
T1241				S	Sg	06 57 31.6	+1.5
LNSS	**Leonessa**	**0.26**	**188**	P	Pb	06 57 28.4	0.0
LNSS				S	Sg	06 57 31.6	+1.2
GUMA	**Gualdo di Mace**	**0.27**	**41**	P	Pg	06 57 27.8	+0.8
GUMA				S	Sb	06 57 32.9	-0.4
MDAR	**Monte D'Aria**	**0.33**	**6**	P	Pg	06 57 28.6	+0.4
MDAR				S	Sb	06 57 34.0	-1.2
GAG1	**Gagliole**	**0.38**	**357**	P	Pg	06 57 29.5	+0.5
GAG1				S	Sb	06 57 35.7	-0.7

*ROM **30** 06:58:03.0±0.1, 42°.908N±0°.004×13°.101E±0°.010, h7km, ML3.2/10, Error ellipse: s-maj=0.7km s-min=0.4km az=261.0*

*LDG **30** 06:58:02.2±0.2, 42°.93N×13°.08E, h10km, Ml3.1/5, Error ellipse: s-maj=7.3km s-min=3.6km az=39.0*

ISC 30 06:58:00.4±0.9, 42°.91N±0°.03×13°.06E±0°.03, h23km±5km, n29, σ1°.11/45, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**238**	P	**Pb**	**06 58 04.8**	**+0.2**
T1216				S	**Sb**	**06 58 06.2**	**-1.1**
T1216				AML	AML		
	comp=E,37040μm,0.3s						
T1216				AML	AML		
	comp=N,33175μm,0.8s						
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=N,30147μm,0.2s						
T1216				AML	AML		
	comp=E,37145μm,0.3s						
FEMA	**Monte Fema**	**0.05**	**354**	P	**Pb**	**06 58 05.0**	**+0.2**
FEMA				S	**Sb**	**06 58 06.5**	**-1.3**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,56000μm,1.0s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,65050μm,0.9s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,45868μm,0.2s						
T1245	**Castelsantange**	**0.11**	**118**	P	**Pb**	**06 58 05.2**	**0.0**
T1245				S	**Sb**	**06 58 06.4**	**-2.0**
T1245				AML	AML		
	comp=E,73900μm,1.1s						
T1245				AML	AML		
	comp=N,84500μm,0.8s						
T1245				AML	AML		
	comp=E,61350μm,0.5s						
T1245				AML	AML		
	comp=N,86900μm,0.8s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1215	**Vallo di Nera,**	**0.17**	**233**	AML	AML		
	comp=E,3952μm,0.3s						
T1215				AML	AML		
	comp=N,15350μm,1.5s						
T1215				AML	AML		
	comp=E,12850μm,1.3s						
T1215				AML	AML		
	comp=N,16600μm,1.5s						
T1215				AML	AML		
	comp=E,12250μm,1.3s						
T1217	**Poggiodomo (PG**	**0.22**	**205**	P	**Pn**	**06 58 09.2**	**+0.9**
T1217				S	**Sb**	**06 58 12.1**	**+1.9**
T1217				AML	AML		
	comp=E,10350μm,0.4s						
T1217				AML	AML		
	comp=N,13500μm,0.4s						
T1217				AML	AML		
	comp=E,12850μm,0.6s						
T1217				AML	AML		
	comp=N,17450μm,0.9s						
T1217				AML	AML		
	comp=N,17850μm,0.8s						
T1217				AML	AML		
	comp=E,12400μm,0.5s						
T1217				AML	AML		
	comp=N,7161μm,0.5s						
SEF1	**Sefro**	**0.25**	**341**	P	**Pn**	**06 58 09.3**	**+0.5**
SEF1				S	**Sn**	**06 58 13.2**	**-0.8**
GUMA	**Gualdo di Mace**	**0.26**	**53**	P	**Pn**	**06 58 08.1**	**-0.7**
GUMA				S	**Sb**	**06 58 12.2**	**+1.1**
PIO1	**Pioraco**	**0.28**	**349**	P	**Pn**	**06 58 09.5**	**+0.4**
PIO1				S	**Sn**	**06 58 13.7**	**-0.9**
T1201	**Domo (RI)**	**0.29**	**150**	P	**Pn**	**06 58 09.9**	**+0.6**
T1201				S	**Sb**	**06 58 12.6**	**+0.7**
T1204	**Amatrice, Fraz**	**0.30**	**140**	P	**Pn**	**06 58 10.0**	**+0.4**
T1204				S	**Sn**	**06 58 14.3**	**-1.0**
T1204				AML	AML		
	comp=E,26300μm,1.2s						
T1204				AML	AML		
	comp=N,16900μm,1.0s						
T1204				AML	AML		
	comp=E,26450μm,1.2s						
T1204				AML	AML		
	comp=N,16800μm,1.0s						
T1204				AML	AML		
	comp=N,9321μm,0.2s						
LNSS	**Leonessa**	**0.30**	**182**	P	**Pn**	**06 58 10.1**	**+0.6**
LNSS				S	**Sn**	**06 58 13.9**	**-1.5**
LNSS				AML	AML		
	comp=E,14100μm,0.2s						
LNSS				AML	AML		
	comp=N,28450μm,0.1s						
LNSS				AML	AML		
	comp=N,20050μm,0.3s						
LNSS				AML	AML		
	comp=E,5781μm,0.1s						
GAG1	**Gagliole**	**0.33**	**1**	P	**Pn**	**06 58 12.1**	**+2.2**
GAG1				S	**Sn**	**06 58 15.5**	**-0.4**
T1243	**Rocca Santa Ma**	**0.36**	**126**	P	**Pn**	**06 58 11.0**	**+0.8**
T1243				S	**Sn**	**06 58 16.4**	**-0.2**
RM33	**Pellescritta (**	**0.41**	**164**	P	**Pn**	**06 58 12.0**	**+0.9**
RM33				AML	AML		
	comp=E,8665μm,0.4s						
RM33				AML	AML		
	comp=N,8290μm,0.4s						
RM33				AML	AML		
	comp=E,8700μm,0.4s						
RM33				AML	AML		
	comp=N,8095μm,1.0s						
RM33				AML	AML		
	comp=E,9805μm,1.0s						
RM33				AML	AML		
	comp=N,8890μm,1.2s						
RM33				AML	AML		
	comp=E,9610μm,1.0s						
RM33				AML	AML		
	comp=N,8905μm,1.2s						
RM33				AML	AML		
	comp=E,5190μm,0.3s						
RM33				AML	AML		
	comp=E,5051μm,0.4s						
EL6	**Elcito**	**0.42**	**4**	P	**Pn**	**06 58 12.5**	**+1.4**
EL6				S	**Sn**	**06 58 18.2**	**-0.1**
CAMP	**Campotosto**	**0.45**	**145**	P	**Pn**	**06 58 12.3**	**+0.7**
CAMP				S	**Sn**	**06 58 18.6**	**-0.5**
CAMP				AML	AML		
	comp=E,5730μm,1.0s						
CAMP				AML	AML		
	comp=N,5135μm,1.0s						
CAMP				AML	AML		
	comp=N,2397μm,1.1s						
CAMP				AML	AML		
	comp=E,1456μm,0.8s						
TERO	**Teramo**	**0.49**	**125**	P	**Pn**	**06 58 13.3**	**+1.2**
TERO				S	**Sn**	**06 58 19.0**	**-1.0**
TERO				AML	AML		
	comp=N,8815μm,1.0s						
TERO				AML	AML		
	comp=E,6330μm,1.2s						
TERO				AML	AML		
	comp=E,4155μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.50**	**159**	P	**Pn**	**06 58 13.3**	**+1.1**
T1247				S	**Sn**	**06 58 20.2**	**+0.2**
T1247				AML	AML		
	comp=N,7810μm,1.0s						
T1247				AML	AML		
	comp=E,9810μm,1.4s						
T1247				AML	AML		
	comp=E,6530μm,0.4s						
GIGS	**Gran Sasso**	**0.59**	**140**	P	**Pn**	**06 58 14.6**	**+1.1**
PGF	**Pioggiola**	**3.01**	**265**	*e*Pn	**Pn**	**06 58 47.7**	**+0.9**
PGF	**Pioggiola**	**3.01**	**265**	*e*P	**Pb**	**06 58 51.3**	**-2.1**
PGF				*e*Sn	**Sn**	**06 59 22.1**	**-0.1**
	comp=E,6.8nm,0.3s						
SBF	**Sospel**	**4.21**	**285**	*e*Pn	**Pn**	**06 59 04.3**	**+1.1**
SBF	**Sospel**	**4.21**	**285**	*e*P	Pb	06 59 08.7	-5.1
SBF				*e*Sn	**Sn**	**06 59 52.0**	**+0.4**
	comp=E,20nm,0.7s						
LMR	**La Mourre**	**4.81**	**277**	*e*Pn	**Pn**	**06 59 11.9**	**+0.5**
LMR	**La Mourre**	**4.81**	**277**	*e*P	Pn	06 59 16.4	+5.0
LMR				*e*Sn	**Sn**	**07 00 06.7**	**+0.3**
	comp=E,6.3nm,0.6s						
SMRF	**Simiane la Rot**	**5.55**	**284**	*e*Pn	**Pn**	**06 59 23.0**	**+1.4**
SMRF	**Simiane la Rot**	**5.55**	**284**	*e*P	Pn	06 59 28.5	+6.9
SMRF				*e*Sn	**Sn**	**07 00 23.6**	**-1.1**
	comp=E,31nm,1.2s						
ORIF	**Oris-en-Rattie**	**5.56**	**294**	*e*Pn	**Pn**	**06 59 23.9**	**+2.1**
ORIF	**Oris-en-Rattie**	**5.56**	**294**	*e*P	Pn	06 59 28.0	+6.2
ORIF				*e*Sn	**Sn**	**07 00 23.3**	**-1.7**
	comp=E,11nm,0.6s						

ROM 30 06:59:45.4±0.1, 42°.824N±0°.005×13°.18E±0°.01, h13km±1km,

ML3.6/5,1C-1D,Error ellipse: s-maj=0.6km s-min=0.6km az=66.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**7**	P	Pg	06 59 48.2	+0.2
T1245				S	Sg	06 59 49.8	+0.1
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245	comp=E,76826μm,0.3s			AML	AML		
MC2	**Monte Cornacci**	**0.09**	**4**	P	Pg	06 59 49.1	+0.6
MC2				S	Sg	06 59 50.9	+0.2
T1216	**Preci, Frazion**	**0.14**	**299**	P	Pg	06 59 49.2	+0.2
T1216				S	Sg	06 59 51.6	+0.2
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216	comp=N,60101μm,0.2s			AML	AML		
T1216	comp=E,40931μm,0.7s			AML	AML		
FEMA	**Monte Fema**	**0.17**	**325**	⇓P	Pg	06 59 49.8	+0.3
FEMA				S	Sg	06 59 53.0	+0.7
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA	comp=N,16696μm,0.1s			AML	AML		
FEMA	comp=E,27259μm,0.3s			AML	AML		
T1204	**Amatrice, Fraz**	**0.18**	**146**	P	Pb	06 59 50.2	-0.5
T1204				S	Sb	06 59 54.1	-0.1
T1241	**Roccafluvione,**	**0.19**	**80**	⇑P	Pb	06 59 50.2	-0.6
T1241				S	Sg	06 59 53.2	+0.6
T1241				AML	AML		
T1241	comp=E,29300μm,0.7s			AML	AML		
T1241	comp=N,27500μm,0.7s			AML	AML		
T1241	comp=E,31500μm,0.7s			AML	AML		
T1241	comp=N,24850μm,0.7s			AML	AML		
T1241	comp=E,51350μm,0.2s			AML	AML		
T1241	comp=N,59000μm,0.2s			AML	AML		
T1241	comp=E,58050μm,0.2s			AML	AML		
T1241	comp=N,52450μm,0.2s			AML	AML		
T1241	comp=N,59000μm,0.3s			AML	AML		
T1241	comp=E,58000μm,0.2s			AML	AML		
T1241	comp=E,19142μm,0.2s			AML	AML		
T1241	comp=N,6593μm,0.2s			AML	AML		
T1241	comp=N,6977μm,0.2s			AML	AML		
T1241	comp=E,19444μm,0.2s			AML	AML		
AM05	**Amandola Campo**	**0.20**	**39**	P	Pg	06 59 50.0	+0.2
AM05				S	Sg	06 59 53.2	+0.3
AM05				AML	AML		
AM05	comp=E,13600μm,0.6s			AML	AML		
AM05	comp=N,15150μm,0.7s			AML	AML		
AM05	comp=E,43050μm,0.6s			AML	AML		
AM05	comp=E,14850μm,0.1s			AML	AML		
AM05	comp=N,15200μm,0.7s			AML	AML		
AM05	comp=E,72900μm,0.8s			AML	AML		
AM05	comp=N,6700μm,0.1s			AML	AML		
AM05	comp=N,16050μm,1.1s			AML	AML		
AM05	comp=N,6695μm,0.1s			AML	AML		
AM05	comp=N,1622μm,0.1s			AML	AML		
AM05	comp=E,24152μm,0.3s			AML	AML		
T1243	**Rocca Santa Ma**	**0.23**	**123**	P	Pg	06 59 50.4	-0.1
T1243				S	Sg	06 59 54.2	+0.3
GUMA	**Gualdo di Mace**	**0.26**	**25**	P	Pg	06 59 51.4	+0.4
GUMA				S	Sb	06 59 56.0	-0.6
RM33	**Pellescritta (**	**0.32**	**176**	P	Pb	06 59 53.0	0.0
RM33				S	Sb	06 59 57.7	-0.4
CAMP	**Campotosto**	**0.33**	**150**	P	Pg	06 59 52.3	0.0
CAMP				S	Sg	06 59 57.5	+0.7
TERO	**Teramo**	**0.37**	**123**	P	Pg	06 59 52.7	-0.1
TERO				S	Sg	06 59 58.6	+0.7
MNTP	**Montappone**	**0.38**	**34**	P	Pg	06 59 53.5	+0.5
MNTP				S	Sb	07 00 00.2	+0.4
FIAM	**Fiamignano**	**0.56**	**185**	AML	AML		
FIAM	comp=N,4895μm,0.6s			AML	AML		
FIAM	comp=E,5275μm,0.7s			AML	AML		
ARVD	**Arcevia**	**0.70**	**345**	AML	AML		
ARVD	comp=N,1810μm,1.4s			AML	AML		
ARVD	comp=E,2190μm,0.6s			AML	AML		
ARVD	comp=E,3885μm,0.7s			AML	AML		
ARVD	comp=N,3325μm,0.6s			AML	AML		
T0110	**Collepietro**	**0.74**	**143**	AML	AML		
T0110	comp=E,6120μm,0.5s			AML	AML		
T0110	comp=N,6780μm,0.5s			AML	AML		

NEIC ***30*** *07:00:39.0±1.8, 42°.63N±0°.05×13°.19E±0°.07, h10km±2km, mb4.0/4, ML4.1(ROM), ML4.1(VIE), Error ellipse: s-maj=11.4km s-min=3.9km az=223.0*

LDG ***30*** *07:00:39.4±0.2, 42°.79N×13°.14E, h10km, Ml3.7/21, Error ellipse: s-maj=6.2km s-min=5.1km az=24.0*

ROM ***30*** *07:00:40.2±0.1, 42°.876N±0°.003×13°.053E±0°.004, h10km, ML3.8/24, Error ellipse: s-maj=0.3km s-min=0.3km az=104.0*

IDC ***30*** *07:00:40.2±1.4, 42°.68N×13°.22E, h0km, mb3.7/6, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=35.2km s-min=25.8km az=118.0*

ISC 30 07:00:40.1±0.7, 42°.87N±0°.02×13°.05E±0°.02, h12km±3km, n127, σ2°.02/171, mb3.8/6, 4C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**316**	⇓P	**Pg**	**07 00 42.5**	**+0.1**
T1216				S	**Sg**	**07 00 43.9**	**-0.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.10**	**359**	P	**Pg**	**07 00 43.2**	**+0.1**
FEMA				S	**Sg**	**07 00 45.0**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1245	**Castelsantange**	**0.10**	**95**	P	**Pg**	**07 00 43.3**	**+0.2**
T1245				S	**Sg**	**07 00 45.3**	**-0.1**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.11**	**65**	P	**Pg**	**07 00 43.4**	**+0.1**
MC2				S	**Sg**	**07 00 45.7**	**0.0**
T1215	**Vallo di Nera,**	**0.15**	**245**	⇑P	**Pg**	**07 00 44.3**	**+0.7**
T1215				S	**Sg**	**07 00 47.1**	**+0.9**
T1215				AML	AML		
T1215	comp=E,49550μm,0.5s			AML	AML		
T1215	comp=N,32400μm,1.1s			AML	AML		
T1215	comp=E,47650μm,0.5s			AML	AML		
T1215	comp=E,49500μm,0.4s			AML	AML		
T1215	comp=N,32350μm,1.1s			AML	AML		
T1215	comp=N,33300μm,1.1s			AML	AML		
T1215	comp=E,47653μm,0.5s			AML	AML		
T1217	**Poggiodomo (PG**	**0.18**	**210**	⇑P	**Pb**	**07 00 44.9**	**-0.4**
T1217				S	**Sg**	**07 00 48.1**	**+1.1**
T1217				AML	AML		
T1217	comp=E,46450μm,0.7s			AML	AML		
T1217	comp=E,46350μm,0.7s			AML	AML		
T1217	comp=N,56750μm,0.8s			AML	AML		
T1217	comp=E,46400μm,0.7s			AML	AML		
T1217	comp=N,58350μm,0.2s			AML	AML		
T1217	comp=E,46500μm,0.7s			AML	AML		
T1217	comp=N,56850μm,0.8s			AML	AML		
T1217	comp=E,46300μm,0.7s			AML	AML		
T1217	comp=N,58400μm,0.2s			AML	AML		
T1217	comp=N,56700μm,0.8s			AML	AML		
T1217	comp=E,41192μm,0.2s			AML	AML		
T1256	**Bolognola (MC)**	**0.19**	**42**	P	**Pg**	**07 00 44.6**	**+0.2**
T1256				S	**Sg**	**07 00 47.8**	**+0.4**
T1244	**Arquata del Tr**	**0.21**	**121**	P	**Pb**	**07 00 45.3**	**-0.6**
T1244				S	**Sb**	**07 00 49.2**	**+1.3**
AM05	**Amandola Campo**	**0.25**	**63**	P	**Pg**	**07 00 45.6**	**+0.3**
AM05				S	**Sg**	**07 00 49.5**	**+0.7**
AM05				AML	AML		
AM05	comp=E,14850μm,0.1s			AML	AML		
AM05	comp=N,16050μm,1.1s			AML	AML		
AM05	comp=E,72900μm,0.8s			AML	AML		
AM05	comp=N,4905μm,0.1s			AML	AML		
AM05	comp=E,26150μm,0.5s			AML	AML		
AM05	comp=N,34950μm,0.5s			AML	AML		
AM05				AML	AML		
AM05	comp=N,7390μm,0.2s			AML	AML		
AM05	comp=N,4617μm,0.1s			AML	AML		
AM05	comp=N,11560μm,0.1s			AML	AML		
LNSS	**Leonessa**	**0.26**	**182**	P	**Pb**	**07 00 46.4**	**-0.3**
LNSS				S	**Sb**	**07 00 50.9**	**-0.4**
T1204	**Amatrice, Fraz**	**0.27**	**134**	P	**Pb**	**07 00 46.8**	**-0.2**
T1204				S	**Sb**	**07 00 51.1**	**-0.5**
T1204				AML	AML		
T1204	comp=E,67050μm,0.2s			AML	AML		
T1204	comp=N,88850μm,0.4s			AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204	comp=E,29058μm,0.4s			AML	AML		
T1241	**Roccafluvione,**	**0.28**	**92**	P	**Pb**	**07 00 46.8**	**-0.3**
T1241				S	**Sb**	**07 00 51.4**	**-0.3**
T1241				AML	AML		
T1241	comp=E,51350μm,0.2s			AML	AML		
T1241	comp=N,59000μm,0.3s			AML	AML		
T1241	comp=E,58050μm,0.2s			AML	AML		
T1241	comp=N,52450μm,0.2s			AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241	comp=N,52438μm,0.2s			AML	AML		
GUMA	**Gualdo di Mace**	**0.29**	**47**	⇑P	**Pb**	**07 00 46.5**	**-0.6**
GUMA				S	**Sb**	**07 00 51.4**	**-0.5**
GUMA				AML	AML		
GUMA	comp=E,92300μm,0.8s			AML	AML		
GUMA	comp=N,81800μm,0.3s			AML	AML		
GUMA				AML	AML		
GUMA	comp=N,99100μm,0.5s			AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA	comp=E,72833μm,0.6s			AML	AML		
SEF1	**Sefro**	**0.29**	**345**	P	**Pg**	**07 00 46.4**	**+0.4**
SEF1				S	**Sb**	**07 00 51.0**	**-1.0**
SEF1				AML	AML		
SEF1	comp=E,34500μm,0.3s			AML	AML		
SEF1	comp=N,31550μm,0.3s			AML	AML		
SEF1	comp=E,34500μm,0.3s			AML	AML		
SEF1	comp=N,31500μm,0.3s			AML	AML		
SEF1	comp=N,43400μm,1.0s			AML	AML		
SEF1	comp=E,49600μm,0.3s			AML	AML		
SEF1	comp=N,24778μm,0.2s			AML	AML		
PIO1	**Pioraco**	**0.32**	**351**	P	**Pg**	**07 00 46.7**	**+0.1**
PIO1				S	**Sb**	**07 00 51.8**	**-1.0**
PIO1				AML	AML		
PIO1	comp=E,14800μm,0.9s			AML	AML		
PIO1	comp=N,16800μm,1.2s			AML	AML		
PIO1	comp=N,16750μm,1.2s			AML	AML		
PIO1	comp=N,37650μm,0.7s			AML	AML		
PIO1	comp=E,28350μm,0.6s			AML	AML		
PIO1	comp=N,15217μm,0.6s			AML	AML		
MDAR	**Monte D'Aria**	**0.33**	**12**	P	**Pg**	**07 00 47.0**	**+0.1**
MDAR				S	**Sg**	**07 00 52.0**	**+0.6**
MDAR				AML	AML		
MDAR	comp=E,22350μm,0.6s			AML	AML		
MDAR	comp=N,46650μm,0.3s			AML	AML		
MDAR	comp=E,27600μm,0.4s			AML	AML		
MDAR	comp=N,46678μm,0.3s			AML	AML		
ASSB	**Assisi San Ben**	**0.34**	**302**	P	**Pg**	**07 00 47.3**	**+0.3**
ASSB				S	**Sb**	**07 00 52.6**	**-0.8**
ASSB				AML	AML		
ASSB	comp=E,27850μm,0.3s			AML	AML		
ASSB	comp=N,18200μm,0.8s			AML	AML		
ASSB	comp=E,27820μm,0.3s			AML	AML		
T1243	**Rocca Santa Ma**	**0.34**	**120**	P	**Pb**	**07 00 47.5**	**-0.6**
T1243				S	**Sb**	**07 00 52.7**	**-0.7**
ARRO	**Arrone**	**0.36**	**216**	P	**Pg**	**07 00 47.8**	**+0.6**
ARRO				S	**Sb**	**07 00 53.8**	**0.0**
ARRO				AML	AML		
ARRO	comp=N,11330μm,0.2s			AML	AML		
ARRO	comp=N,14050μm,0.6s			AML	AML		
ARRO	comp=E,18900μm,0.3s			AML	AML		
ARRO	comp=N,9799μm,0.3s			AML	AML		
GAG1	**Gagliole**	**0.37**	**2**	P	**Pg**	**07 00 47.8**	**+0.3**
GAG1				S	**Sb**	**07 00 53.8**	**-0.6**
GAG1				AML	AML		
GAG1	comp=E,43250μm,1.4s			AML	AML		
GAG1	comp=N,35450μm,0.2s			AML	AML		
GAG1	comp=E,43300μm,1.4s			AML	AML		
GAG1	comp=E,61800μm,0.7s			AML	AML		
GAG1	comp=N,53300μm,0.8s			AML	AML		
GAG1	comp=E,35770μm,0.3s			AML	AML		
SSM1	**San Severino M**	**0.37**	**14**	P	**Pg**	**07 00 47.6**	**+0.1**
SSM1				S	**Sb**	**07 00 53.6**	**-0.8**
RM33	**Pellescritta (**	**0.38**	**161**	P	**Pb**	**07 00 48.3**	**-0.5**
RM33				S	**Sb**	**07 00 54.6**	**+0.1**
RM33				AML	AML		
RM33	comp=E,9915μm,1.3s			AML	AML		
RM33	comp=N,9450μm,1.1s			AML	AML		
RM33	comp=E,10025μm,1.3s			AML	AML		
RM33	comp=N,9315μm,1.1s			AML	AML		
RM33	comp=E,54050μm,1.2s			AML	AML		
RM33	comp=N,35800μm,0.2s			AML	AML		
RM33	comp=E,53950μm,1.2s			AML	AML		
RM33	comp=N,35300μm,0.2s			AML	AML		
RM33	comp=N,7625μm,0.4s			AML	AML		
MNTP	**Montappone**	**0.41**	**48**	P	**Pb**	**07 00 49.0**	**-0.3**
MNTP				S	**Sb**	**07 00 56.2**	**+0.8**
MNTP				AML	AML		
MNTP	comp=E,51600μm,0.7s			AML	AML		
MNTP	comp=N,35550μm,1.1s			AML	AML		
MNTP	comp=N,21533μm,0.3s			AML	AML		
CESX	**Cesi**	**0.43**	**234**	Pg	**Pg**	**07 00 47.7**	**-0.9**
CESX	**Cesi**	**0.43**	**234**	P	**Pg**	**07 00 49.0**	**+0.3**
CESX				S	**Sb**	**07 00 56.1**	**+0.1**
CESX				AML	AML		
CESX	comp=E,18450μm,1.5s			AML	AML		
CESX	comp=N,21900μm,0.3s			AML	AML		
CESX	comp=E,19750μm,0.6s			AML	AML		
CESX	comp=N,21876μm,0.3s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.44**	**317**	P	**Pg**	**07 00 49.1**	**+0.3**
ATCC				AML	AML		
ATCC	comp=E,18100μm,0.6s			AML	AML		
ATCC	comp=N,14900μm,0.5s			AML	AML		
ATCC	comp=E,41100μm,0.9s			AML	AML		
ATCC	comp=N,27150μm,1.3s			AML	AML		
ATCC	comp=N,14944μm,0.5s			AML	AML		
OFFI	**Offida**	**0.47**	**81**	P	**Pb**	**07 00 50.4**	**+0.2**
OFFI				AML	AML		
OFFI	comp=E,22600μm,1.6s			AML	AML		
OFFI	comp=N,21900μm,0.4s			AML	AML		
OFFI	comp=E,81200μm,0.7s			AML	AML		
OFFI	comp=N,77300μm,0.7s			AML	AML		
OFFI	comp=N,19731μm,0.7s			AML	AML		
TERO	**Teramo**	**0.47**	**121**	P	**Pg**	**07 00 49.3**	**-0.1**
TERO				S	**Sb**	**07 00 56.8**	**-0.5**
TERO				AML	AML		
TERO	comp=E,11050μm,0.6s			AML	AML		
TERO	comp=N,8410μm,0.6s			AML	AML		
TERO	comp=E,11610μm,0.6s			AML	AML		
TERO	comp=N,9070μm,0.6s			AML	AML		
TERO	comp=N,65300μm,0.3s			AML	AML		
TERO	comp=E,41850μm,0.5s			AML	AML		
TERO	comp=E,40400μm,0.5s			AML	AML		
TERO	comp=N,68250μm,0.3s			AML	AML		
TERO	comp=E,7657μm,0.4s			AML	AML		
FOSV	**Fossato di Vic**	**0.48**	**334**	P	**Pb**	**07 00 50.0**	**-0.5**
FOSV				AML	AML		
FOSV	comp=E,14450μm,1.5s			AML	AML		
FOSV	comp=N,18150μm,0.5s			AML	AML		
TRE1	**Treia**	**0.48**	**23**	P	**Pb**	**07 00 50.2**	**-0.3**
TRE1				S	**Sb**	**07 00 58.1**	**+0.5**
TRE1				AML	AML		
TRE1	comp=E,37100μm,0.7s			AML	AML		
TRE1	comp=N,30650μm,1.0s			AML	AML		
TRE1	comp=N,14264μm,0.8s			AML	AML		
MURB	**Monte Urbino**	**0.55**	**316**	P	**Pb**	**07 00 51.4**	**-0.3**
MURB				AML	AML		
MURB	comp=E,23650μm,0.3s			AML	AML		
MURB	comp=N,19600μm,0.3s			AML	AML		
MURB	comp=E,24900μm,0.3s			AML	AML		
MURB	comp=N,18550μm,0.3s			AML	AML		
MURB	comp=E,24400μm,1.3s			AML	AML		
MURB	comp=N,34300μm,1.0s			AML	AML		
MURB	comp=N,35850μm,1.0s			AML	AML		
GIGS	**Gran Sasso**	**0.56**	**137**	P	**Pb**	**07 00 51.5**	**-0.4**
GIGS				AML	AML		
GIGS	comp=E,1700μm,1.3s			AML	AML		
GIGS	comp=N,3185μm,0.7s			AML	AML		
GIGS	comp=N,7550μm,1.1s			AML	AML		
GIGS	comp=E,7680μm,0.8s			AML	AML		
ATFO	**Monte Foce - G**	**0.61**	**325**	P	**Pb**	**07 00 52.5**	**-0.3**
ATFO				AML	AML		
ATFO	comp=E,5815μm,0.5s			AML	AML		
ATFO	comp=N,5895μm,0.7s			AML	AML		
ATFO	comp=N,9275μm,0.6s			AML	AML		
ATFO	comp=E,11950μm,1.0s			AML	AML		
ATFO	comp=N,5893μm,0.7s			AML	AML		
ARVD	**Arcevia**	**0.64**	**353**	P	**Pg**	**07 00 52.6**	**+0.1**
ARVD				S	**Sb**	**07 01 02.2**	**+0.2**
ARVD				AML	AML		
ARVD	comp=E,3885μm,0.7s			AML	AML		
ARVD	comp=N,3330μm,0.6s			AML	AML		
ARVD	comp=E,6400μm,0.6s			AML	AML		
ARVD	comp=N,6300μm,0.7s			AML	AML		
ARVD	comp=E,3620μm,0.1s			AML	AML		
TRTR	**Tortoreto Alta**	**0.64**	**95**	P	**Pb**	**07 00 53.6**	**+0.6**
TRTR				AML	AML		
TRTR	comp=E,22750μm,0.5s			AML	AML		

TRTR				AML	AML		
	comp=N,18100μm,0.4s						
TRTR				AML	AML		
	comp=E,89550μm,0.8s						
TRTR				AML	AML		
	comp=N,56800μm,1.0s						
AOI	**Ancona**	**0.79**	**30**	P	**Pb**	**07 00 55.6**	**-0.2**
AOI				AML	AML		
	comp=E,5720μm,0.4s						
AOI				AML	AML		
	comp=N,4225μm,1.5s						
AOI				AML	AML		
	comp=E,9100μm,1.5s						
AOI				AML	AML		
	comp=N,7775μm,0.5s						
T0110	**Collepietro**	**0.83**	**140**	P	**Pn**	**07 00 57.1**	**-0.6**
T0110				AML	AML		
	comp=E,7185μm,0.6s						
T0110				AML	AML		
	comp=N,8880μm,0.5s						
T0110				AML	AML		
	comp=E,26350μm,0.6s						
T0110				AML	AML		
	comp=N,23200μm,1.1s						
SACS	**San Casciano d**	**0.84**	**269**	P	**Pb**	**07 00 57.0**	**+0.4**
FSSB	**Fossombrone**	**0.85**	**346**	P	**Pb**	**07 00 56.7**	**0.0**
FSSB				AML	AML		
	comp=E,10570μm,0.4s						
FSSB				AML	AML		
	comp=N,9190μm,1.2s						
FSSB				AML	AML		
	comp=E,12400μm,1.0s						
FSSB				AML	AML		
	comp=N,14350μm,0.4s						
LATE	**Laterza**	**0.95**	**255**		**Pn**	**07 00 59.3**	**+0.1**
MCIV	**Monte Civitell**	**1.02**	**266**	P	**Pg**	**07 00 59.9**	**+0.2**
MCIV				AML	AML		
	comp=E,2335μm,0.5s						
MCIV				AML	AML		
	comp=N,1865μm,0.8s						
SF04	**Casetta**	**1.02**	**269**	⇑P	**Pn**	**07 01 01.0**	**+0.8**
OSSC	**Osservatorio P**	**1.48**	**297**	Pn	**Pg**	**07 01 08.6**	**+0.2**
CASP	**Castiglione de**	**1.61**	**268**	Pn	**Pn**	**07 01 08.7**	**+0.4**
PIGN	**Pignataro Magg**	**1.86**	**153**	P	**Pn**	**07 01 09.9**	**-1.9**
ZCCA	**Zocca**	**2.12**	**315**	Pn	**Pb**	**07 01 19.3**	**+1.0**
VLC	**Villacollemand**	**2.33**	**305**	Pn	**Pb**	**07 01 20.1**	**-1.9**
PRMA	**PARMA**	**2.74**	**315**	Pn	**Pb**	**07 01 27.3**	**-1.7**
MSSA	**Maissana**	**2.95**	**301**	Pn	**Pn**	**07 01 27.7**	**+1.0**
PGF	**Pioggiola**	**3.00**	**265**	*e*Pn	**Pn**	**07 01 25.8**	**-1.7**
PGF	**Pioggiola**	**3.00**	**265**	*e*P	**Pn**	**07 01 29.0**	**+1.5**
PGF				*e*Sn	**Sn**	**07 02 00.5**	**-3.0**
SALO	**Salr**	**3.30**	**327**	Pn	**Pn**	**07 01 34.2**	**+2.7**
CTI	**Castel Tesino**	**3.34**	**343**	Pn	**Pb**	**07 01 35.9**	**-3.3**
CUC	**Castrocucco**	**3.54**	**143**	Pn	**Pn**	**07 01 30.4**	**-4.5**
SBF	**Sospel**	**4.21**	**286**	*e*Pn	**Pn**	**07 01 43.0**	**-1.1**
SBF	**Sospel**	**4.21**	**286**	*e*P	**Pn**	**07 01 46.8**	**+2.7**
SBF				*e*Sn	**Sn**	**07 02 34.3**	**+1.0**
	comp=N,49nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**4.25**	**333**	Pn	**Pn**	**07 01 47.8**	**+3.1**
DAVOX	**Davos/Dischmat**	**4.52**	**331**	Pn	**Pn**	**07 01 52.8**	**+4.3**
	comp=N,3.6nm,0.3s,baz=169,slow=22,SNR=4.8						
	comp=N,28nm,0.5s						
SQTA	**Sankt Quirin**	**4.55**	**344**		**Pn**	**07 01 53.2**	**+4.4**
SQTA	**Sankt Quirin**	**4.55**	**344**	*e*Pn	**Pn**	**07 01 53.2**	**+4.4**
	comp=N,9.7nm,0.3s						
WATA	**Walderalm**	**4.59**	**347**		Pn	07 01 54.1	+4.8
WATA	**Walderalm**	**4.59**	**347**	*e*Pn	Pn	07 01 54.1	+4.8
	comp=N,15nm,0.5s						
LMR	**La Mourre**	**4.81**	**278**	*e*Pn	**Pn**	**07 01 50.5**	**-1.8**
LMR	**La Mourre**	**4.81**	**278**	*e*P	**Pn**	**07 01 53.4**	**+1.1**
LMR				*e*Sn	**Sn**	**07 02 47.6**	**-0.3**
	comp=N,21nm,0.5s						
MBDF	**Montbardon**	**4.91**	**294**	*e*Pn	**Pn**	**07 01 52.6**	**-1.2**
MBDF	**Montbardon**	**4.91**	**294**	*e*P	**Pn**	**07 01 55.7**	**+1.9**
MBDF				*e*Sn	**Sn**	**07 02 50.6**	**0.0**
	comp=N,58nm,0.7s						
MOA	**Molln**	**5.06**	**9**	*e*Pn	**Pn**	**07 01 57.1**	**+1.4**
	comp=N,2.7nm,0.1s						
LPG	**La Plagne**	**5.24**	**302**	*e*Pn	**Pn**	**07 01 57.3**	**-1.1**
LPG	**La Plagne**	**5.24**	**302**	*e*P	**Pn**	**07 02 02.2**	**+3.8**
LPG				*e*Sn	**Sn**	**07 02 58.5**	**-0.3**
	comp=N,39nm,0.8s						
LPL	**La Plagne**	**5.26**	**302**	*e*Pn	**Pn**	**07 01 57.9**	**-0.7**
LPL	**La Plagne**	**5.26**	**302**	*e*P	**Pn**	**07 02 02.7**	**+4.1**
LPL				*e*Sn	**Sn**	**07 02 58.4**	**-0.9**
	comp=N,39nm,0.8s						
SENIN	**Lac Senin/Sane**	**5.39**	**312**	Pn	**Pn**	**07 02 02.9**	**+2.5**
CONA	**Conrad Observa**	**5.43**	**20**	*e*Pn	**Pn**	**07 02 01.8**	**+0.8**
	comp=N,3.0nm,0.2s						
SMRF	**Simiane la Rot**	**5.56**	**284**	*e*Pn	**Pn**	**07 02 00.6**	**-2.0**
SMRF	**Simiane la Rot**	**5.56**	**284**	*e*P	**Pn**	**07 02 05.5**	**+2.9**
SMRF				*e*Sn	**Sn**	**07 03 05.0**	**-1.3**
ORIF	**Oris-en-Rattie**	**5.57**	**294**	*e*Pn	**Pn**	**07 02 01.7**	**-1.1**
ORIF	**Oris-en-Rattie**	**5.57**	**294**	*e*P	**Pn**	**07 02 07.0**	**+4.2**
ORIF				*e*Sn	**Sn**	**07 03 02.8**	**-4.0**
	comp=N,38nm,0.6s						
GERES	**GERESS Array B**	**6.00**	**4**	Pn	**Pn**	**07 02 09.1**	**+0.5**
CABF	**La Chapelle**	**6.21**	**309**	*e*Pn	**Pn**	**07 02 10.0**	**-1.6**
CABF				*e*Sn	Sn	07 03 13.1	-9.5
	comp=N,37nm,0.9s						
KHC	**Kasperske Hory**	**6.28**	**3**	Pn	**Pn**	**07 02 13.8**	**+1.3**
VIVF	**Saint-Julien-l**	**6.38**	**291**	*e*Pn	**Pn**	**07 02 12.6**	**-1.2**
VIVF	**Saint-Julien-l**	**6.38**	**291**	*e*P	**Pn**	**07 02 17.5**	**+3.7**
SSB	**Saint Sauveur**	**6.59**	**294**	Pn	**Pn**	**07 02 18.1**	**+1.4**
HINF	**Hinteralfeld**	**6.60**	**321**	*e*Pn	**Pn**	**07 02 15.1**	**-1.8**
HINF	**Hinteralfeld**	**6.60**	**321**	*e*P	**Pn**	**07 02 18.5**	**+1.6**
HINF				*e*Sn	**Sn**	**07 03 29.4**	**-2.6**
	comp=N,24nm,0.5s						
LASF	**Ste Croix**	**6.80**	**283**	*e*P	**Pn**	**07 02 22.8**	**+3.2**
CDF	**Champ du Feu**	**6.87**	**326**	*e*P	**Pn**	**07 02 22.2**	**+1.7**
CDF				*e*Sn	**Sn**	**07 03 34.7**	**-3.9**
	comp=N,53nm,0.8s						
HAU	**Haudompre**	**6.97**	**320**	*e*Pn	**Pn**	**07 02 20.9**	**-1.1**
HAU				*e*Sn	**Sn**	**07 03 38.4**	**-2.8**
	comp=N,29nm,0.7s						
SMF	**Signal de Mont**	**7.57**	**303**	*e*Pn	**Pn**	**07 02 28.0**	**-2.1**
SMF	**Signal de Mont**	**7.57**	**303**	*e*P	**Pn**	**07 02 33.9**	**+3.8**
SMF				*e*Sn	**Sn**	**07 03 55.2**	**-0.5**
	comp=N,11nm,0.5s						
PAGF	**Fort de Pagny**	**7.66**	**321**	*e*Pn	**Pn**	**07 02 29.8**	**-1.5**
PAGF	**Fort de Pagny**	**7.66**	**321**	*e*P	**Pn**	**07 02 35.0**	**+3.7**
PAGF				*e*Sn	**Sn**	**07 03 56.0**	**-1.9**
	comp=N,34nm,0.7s						
KEST	**Kesra**	**7.68**	**203**	Pn	**Pn**	**07 02 35.7**	**+3.9**
	comp=N,0.7nm,0.3s,baz=251,slow=1.3,SNR=5.0						
SFTF	**Sexfontaines**	**7.75**	**316**	*e*Pn	**Pn**	**07 02 31.0**	**-1.6**
	baz=120						
SFTF	**Sexfontaines**	**7.75**	**316**	*e*P	**Pn**	**07 02 36.1**	**+3.5**
	baz=136						
SFTF				*e*Sn	**Sn**	**07 03 57.9**	**-2.4**
	comp=N,15nm,0.5s						
LOR	**Lormes**	**7.85**	**307**	*e*Pn	**Pn**	**07 02 31.7**	**-2.4**
LOR	**Lormes**	**7.85**	**307**	*e*P	**Pn**	**07 02 37.2**	**+3.1**
	baz=117						
LOR				*e*Sn	**Sn**	**07 03 57.0**	**-5.8**
	comp=N,12nm,0.6s						
AVF	**Avril sur Loir**	**7.93**	**303**	*e*Pn	**Pn**	**07 02 33.3**	**-1.8**
AVF	**Avril sur Loir**	**7.93**	**303**	*e*P	**Pn**	**07 02 38.3**	**+3.2**
AVF				*e*Sn	**Sn**	**07 04 03.9**	**-0.8**
	comp=N,9.0nm,0.7s						
MEZF	**Maizieres J'vi**	**7.94**	**318**	*e*Pn	**Pn**	**07 02 34.0**	**-1.2**
MTLF	**Montolieu**	**7.94**	**277**	*e*Pn	**Pn**	**07 02 33.8**	**-1.5**
MTLF	**Montolieu**	**7.94**	**277**	*e*P	**Pn**	**07 02 38.0**	**+2.7**
SSF	**Saint Saulge**	**7.96**	**305**	*e*Pn	**Pn**	**07 02 34.3**	**-1.2**
SSF	**Saint Saulge**	**7.96**	**305**	*e*P	**Pn**	**07 02 39.3**	**+3.8**
SSF				*e*Sn	**Sn**	**07 04 06.4**	**+1.0**
	comp=N,10nm,0.7s						
SAVF	**Savonnieres en**	**7.98**	**319**	*e*Pn	**Pn**	**07 02 34.1**	**-1.7**
SAVF				*e*Sn	**Sn**	**07 04 03.8**	**-2.2**
	comp=N,9.2nm,0.4s						
BGF	**Bois d'Agland**	**8.15**	**300**	*e*P	**Pn**	**07 02 42.1**	**+4.0**
BGF				*e*Sn	**Sn**	**07 04 06.9**	**-3.2**
	comp=N,14nm,0.7s						
CLL	**Collm**	**8.45**	**360**	*e*Pn	**Pn**	**07 02 40.0**	**-2.1**
CLL				*e*Sn	**Sn**	**07 04 14.0**	**-3.3**
CLL	**Collm**	**8.45**	**360**	*e*(Pg)	**Pg**	**07 03 21.0**	**-0.6**
CLL	**Collm**	**8.45**	**360**	*e*Sg	**Sg**	**07 05 19.0**	**+8.1**
TCF	**Toulx Ste Croi**	**8.46**	**298**	*e*Sn	**Sn**	**07 04 15.1**	**-2.7**
	comp=N,5.7nm,0.7s						
OJC	**Ojcow**	**8.70**	**30**	Pn	**Pn**	**07 02 46.3**	**+0.7**
EPF	**Esparros**	**9.33**	**275**	*e*Pn	**Pn**	**07 02 51.7**	**-2.6**
EPF	**Esparros**	**9.33**	**275**	*e*P	**Pn**	**07 02 57.2**	**+2.9**
BR231	**Keskin MP Arra**	**15.12**	**95**	Pn	**Pn**	**07 04 09.2**	**-4.2**
MTE	**Manteigas**	**15.60**	**268**	Pn	**Pn**	**07 04 19.9**	**+0.3**
BR131	**Keskin Array S**	**15.79**	**95**	Pn	**Pn**	**07 04 20.1**	**-2.1**
BR131				IAmb	IAmb	07 04 31.0	
	comp=Z,2.2nm,0.9s						
EKA	**Eskdalemuir Ar**	**16.33**	**325**	Pn	**P**	**07 04 32.3**	**+0.5**
	baz=137,slow=14						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**20.18**	**18**	P	Pn	07 05 19.1	+3.1
	comp=Z,3.8nm,0.8s,baz=182,slow=7.2,SNR=7.4						
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.20**	**202**	P	**P**	**07 07 00.1**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=17,slow=9.2,SNR=3.9						
	comp=Z,0.7nm,0.7s						
ARU	**Arti**	**31.81**	**49**	P	**P**	**07 07 05.7**	**+1.6**
	comp=Z,2.0nm,0.4s,baz=256,slow=13,SNR=3.7						
	comp=Z,2.0nm,0.4s						
BVAR	**Borovoye Array**	**38.75**	**54**	P	**P**	**07 08 06.3**	**+2.3**
	comp=Z,0.4nm,0.8s,baz=260,slow=8.5,SNR=2.6						
	comp=Z,0.4nm,0.8s						
KBL	**Kabul**	**43.78**	**82**	P	**P**	**07 08 45.8**	**+0.1**
KBL				IAmb	IAmb	07 08 46.1	
	comp=Z,5.3nm,0.5s						
ZALV	**Zalesovo Beam**	**46.94**	**50**	P	**P**	**07 09 12.2**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=289,slow=14,SNR=1.8						
	comp=Z,0.4nm,0.5s						
MAKZ	**Makanchi**	**47.61**	**60**	P	**P**	**07 09 14.7**	**-1.0**
MK31	**Makanchi Array**	**47.81**	**60**	P	**P**	**07 09 16.0**	**-1.2**
MKAR	**Makanchi Array**	**47.81**	**60**	P	**P**	**07 09 18.9**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=310,slow=5.4,SNR=2.7						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**47.81**	**60**	P	**P**	**07 09 15.0**	**-2.2**

ROM 30 07:00:53.8±0.1, 42°.834N±0°.004×13°.073E±0°.007, h9km, ML3.5/7, Error ellipse: s-maj=0.6km s-min=0.4km az=113.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**325**	P	Pg	07 00 56.4	+0.4
T1216				S	Sg	07 00 58.0	+0.5
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.09**	**75**	P	Pg	07 00 56.3	0.0
T1245				S	Sg	07 00 58.5	+0.5
MC2	**Monte Cornacci**	**0.12**	**48**	P	Pg	07 00 57.0	+0.4
MC2				S	Sg	07 00 59.4	+0.7
FEMA	**Monte Fema**	**0.13**	**352**	P	Pg	07 00 57.3	+0.4
FEMA				S	Sg	07 00 59.6	+0.6
T1215	**Vallo di Nera,**	**0.15**	**258**	P	Pg	07 00 57.6	+0.5
T1215				S	Sg	07 01 00.5	+1.0
T1215				AML	AML		
	comp=E,49500μm,0.5s						
T1215				AML	AML		
	comp=N,32000μm,1.1s						
T1215				AML	AML		
	comp=N,33300μm,1.1s						
T1215				AML	AML		
	comp=N,32300μm,1.1s						
T1215				AML	AML		
	comp=E,47650μm,0.5s						
T1215				AML	AML		
	comp=E,49500μm,0.4s						
T1215				AML	AML		
	comp=N,10281μm,0.9s						
T1215				AML	AML		
	comp=N,6181μm,0.2s						
T1217	**Poggiodomo (PG**	**0.16**	**221**	P	Pg	07 00 57.8	+0.6
T1217				S	Sg	07 01 00.8	+1.1
T1217				AML	AML		
	comp=E,46400μm,0.7s						
T1217				AML	AML		
	comp=N,58400μm,0.2s						
T1217				AML	AML		
	comp=E,46300μm,0.7s						
T1217				AML	AML		
	comp=N,56850μm,0.8s						
T1217				AML	AML		
	comp=N,58400μm,0.2s						
T1217				AML	AML		
	comp=E,46400μm,0.7s						
T1217				AML	AML		
	comp=N,56800μm,0.8s						
T1217				AML	AML		
	comp=N,56700μm,0.8s						
T1217				AML	AML		
	comp=N,14741μm,1.3s						
T1256	**Bolognola (MC)**	**0.20**	**33**	P	Pg	07 00 58.5	+0.4
T1256				S	Sg	07 01 02.0	+1.0
T1201	**Domo (RI)**	**0.22**	**143**	P	Pg	07 00 59.0	+0.7
T1201				S	Sg	07 01 02.7	+1.4
T1204	**Amatrice, Fraz**	**0.24**	**131**	AML	AML		
T1204				AML	AML		
AM05	**Amandola Campo**	**0.25**	**55**	P	Pb	07 01 00.6	+0.1
AM05				S	Sg	07 01 03.2	+1.0
T1241	**Roccafluvione,**	**0.26**	**85**	P	Pg	07 00 59.8	+0.7
T1241				S	Sb	07 01 04.1	-1.3
GUMA	**Gualdo di Mace**	**0.30**	**40**	P	Pg	07 01 00.3	+0.5
GUMA				S	Sb	07 01 05.4	-1.0
SEF1	**Sefro**	**0.33**	**344**	P	Pg	07 01 00.3	+0.1
SEF1				S	Sb	07 01 06.0	-1.2
ARRO	**Arrone**	**0.34**	**222**	AML	AML		
	comp=N,11325μm,0.2s						
ARRO				AML	AML		
	comp=E,18900μm,0.3s						
ARRO				AML	AML		
	comp=N,14100μm,0.6s						
RM33	**Pellescritta (**	**0.34**	**162**	AML	AML		
	comp=E,10025μm,1.3s						
RM33				AML	AML		
	comp=E,9915μm,1.3s						
RM33				AML	AML		
	comp=N,9450μm,1.1s						
RM33				AML	AML		
	comp=N,9310μm,1.1s						
RM33				AML	AML		
	comp=E,54050μm,1.2s						
RM33				AML	AML		
	comp=N,35800μm,0.2s						
RM33				AML	AML		
	comp=E,53950μm,1.2s						
RM33				AML	AML		
	comp=N,35250μm,0.2s						
MDAR	**Monte D'Aria**	**0.36**	**8**	P	Pg	07 01 01.1	+0.1
MDAR				S	Sg	07 01 06.9	+1.2
ASSB	**Assisi San Ben**	**0.37**	**305**	AML	AML		
	comp=N,18200μm,0.8s						
ASSB				AML	AML		
	comp=E,27850μm,0.3s						
CAMP	**Campotosto**	**0.39**	**140**	P	Pg	07 01 01.7	+0.3
SSM1	**San Severino M**	**0.40**	**11**	P	Pg	07 01 01.9	+0.2
SSM1				S	Sb	07 01 08.3	-1.0
MNTP	**Montappone**	**0.42**	**44**	P	Pb	07 01 02.9	-0.5
MNTP				S	Sb	07 01 10.2	+0.4
CESX	**Cesi**	**0.43**	**239**	AML	AML		
	comp=N,21900μm,0.3s						
CESX				AML	AML		
	comp=E,18450μm,1.5s						
CESX				AML	AML		
	comp=E,19750μm,0.6s						
CESX				AML	AML		
	comp=N,21876μm,0.3s						
TERO	**Teramo**	**0.44**	**118**	AML	AML		
	comp=N,68250μm,0.3s						
TERO				AML	AML		
	comp=E,11055μm,0.6s						
TERO				AML	AML		
	comp=N,8395μm,0.6s						
TERO				AML	AML		
	comp=E,11610μm,0.6s						
TERO				AML	AML		
	comp=N,9070μm,0.6s						
TERO				AML	AML		
	comp=E,40400μm,0.5s						
TERO				AML	AML		
	comp=N,65350μm,0.3s						
TERO				AML	AML		
	comp=E,41850μm,0.5s						
TERO				AML	AML		
	comp=E,11625μm,0.6s						
TERO				AML	AML		
	comp=E,11032μm,0.6s						
OFFI	**Offida**	**0.46**	**77**	P	Pb	07 01 04.2	+0.2
ATCC	**AVT- Casa Cast**	**0.47**	**318**	AML	AML		
	comp=N,27200μm,1.3s						
ATCC				AML	AML		
	comp=E,18100μm,0.6s						
ATCC				AML	AML		
	comp=N,14950μm,0.5s						
ATCC				AML	AML		
	comp=E,41050μm,0.9s						
TRE1	**Treia**	**0.51**	**20**	P	Pb	07 01 04.7	-0.1
TRE1				S	Sb	07 01 12.8	+0.4
FOSV	**Fossato di Vic**	**0.51**	**334**	AML	AML		
	comp=N,18100μm,0.5s						
FOSV				AML	AML		
	comp=E,4750μm,0.7s						
FOSV				AML	AML		
	comp=N,7175μm,0.3s						
FOSV				AML	AML		
	comp=E,14450μm,1.5s						
GIGS	**Gran Sasso**	**0.53**	**136**	AML	AML		
	comp=E,1695μm,1.3s						
GIGS				AML	AML		
	comp=N,3185μm,0.7s						
GIGS				AML	AML		
	comp=E,7680μm,0.8s						
GIGS				AML	AML		
	comp=N,7550μm,1.1s						
MURB	**Monte Urbino**	**0.59**	**317**	AML	AML		
	comp=N,25850μm,0.4s						
MURB				AML	AML		
	comp=E,23650μm,0.3s						
MURB				AML	AML		
	comp=N,19600μm,0.3s						
MURB				AML	AML		
	comp=N,18550μm,0.3s						
MURB				AML	AML		
	comp=E,24400μm,1.3s						
MURB				AML	AML		
	comp=E,24900μm,0.3s						
MURB				AML	AML		
	comp=N,26400μm,0.4s						
MMUR	**Monte Murano**	**0.61**	**355**	AML	AML		
	comp=E,8030μm,1.0s						
MMUR				AML	AML		
	comp=N,4620μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.64**	**305**	AML	AML		
	comp=N,6315μm,0.8s						
ATTE				AML	AML		
	comp=E,4915μm,0.4s						
ATFO	**Monte Foce - G**	**0.65**	**326**	AML	AML		
	comp=E,6435μm,1.2s						
ATFO				AML	AML		
	comp=E,5810μm,0.5s						
ATFO				AML	AML		
	comp=N,5895μm,0.7s						
ARVD	**Arcevia**	**0.67**	**352**	AML	AML		
	comp=E,2790μm,0.7s						
ARVD				AML	AML		
	comp=N,2250μm,0.7s						
ARVD				AML	AML		
	comp=E,5325μm,1.1s						
ARVD				AML	AML		
	comp=N,4045μm,0.6s						
T0110	**Collepietro**	**0.80**	**139**	AML	AML		
	comp=N,8880μm,0.5s						
T0110				AML	AML		
	comp=E,6250μm,0.4s						
T0110				AML	AML		
	comp=E,26350μm,0.6s						
T0110				AML	AML		
	comp=N,23200μm,1.1s						
PIEI	**Pieia**	**0.80**	**331**	AML	AML		
	comp=E,2570μm,0.6s						
PIEI				AML	AML		
	comp=N,2240μm,0.2s						
PTQR	**Pietraquaria**	**0.85**	**163**	AML	AML		
	comp=N,2770μm,0.9s						
PTQR				AML	AML		
	comp=E,3030μm,1.5s						
PTQR				AML	AML		
	comp=E,2030μm,0.8s						
PTQR				AML	AML		
	comp=N,1747μm,0.5s						
MCIV	**Monte Civitell**	**1.03**	**267**	AML	AML		
	comp=N,1865μm,0.8s						
MCIV				AML	AML		
	comp=N,1865μm,0.8s						
MCIV				AML	AML		
	comp=E,2335μm,0.5s						
MCIV				AML	AML		
	comp=N,1167μm,0.8s						
FROS	**Frosini**	**1.46**	**286**	AML	AML		
	comp=E,1565μm,1.0s						
FROS				AML	AML		
	comp=N,1315μm,0.7s						
PIGN	**Pignataro Magg**	**1.83**	**153**	AML	AML		
	comp=N,600μm,0.7s						
PIGN				AML	AML		
	comp=E,872μm,0.7s						

PRU ***30*** *07:01:31.9±0.0, 42°.70N×13°.53E, h0km, M4.2*
ROM ***30*** *07:01:32.7±0.1, 42°.777N±0°.003×13°.223E±0°.006, h9km, ML4.0/12, Error ellipse: s-maj=0.5km s-min=0.1km az=72.0*
IDC ***30*** *07:01:33.0±0.8, 42°.70N×13°.19E, h0km, mb4.0/14, mbtmp4.0/21, ML3.8/7, Error ellipse: s-maj=15.9km s-min=15.1km az=141.0*
NEIC ***30*** *07:01:33.1±1.1, 42°.74N±0°.03×13°.17E±0°.07, h10km±1km, mb4.2/1, ML4.0(ROM), Error ellipse: s-maj=8.3km s-min=5.6km az=276.0*

ISC 30 07:01:33.9±0.8, 42°.78N±0°.02×13°.22E±0°.02, h7km±5km, n77, σ1§13/107, mb4.2/14, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**341**	P	**Pg**	**07 01 35.0**	**-1.0**
T1245				S	**Sg**	**07 01 36.8**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1201	**Domo (RI)**	**0.13**	**170**	P	**Pg**	**07 01 36.3**	**-0.3**
T1201				S	**Sg**	**07 01 39.2**	**+0.7**
T1204	**Amatrice, Fraz**	**0.13**	**147**	⇓P	**Pg**	**07 01 36.1**	**-0.5**
T1204				S	**Sg**	**07 01 38.9**	**+0.3**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
MC2	**Monte Cornacci**	**0.13**	**350**	P	**Pg**	**07 01 36.4**	**-0.4**
MC2				S	**Sg**	**07 01 38.6**	**-0.3**
T1241	**Roccafluvione,**	**0.17**	**64**	P	**Pg**	**07 01 37.3**	**-0.1**
T1241				S	**Sg**	**07 01 40.3**	**+0.5**
T1241				AML	AML		
T1241				AML	AML		
T1216	**Preci, Frazion**	**0.18**	**306**	P	**Pg**	**07 01 37.5**	**-0.2**
T1216				S	**Sg**	**07 01 40.2**	**0.0**
T1243	**Rocca Santa Ma**	**0.19**	**117**	P	**Pg**	**07 01 37.0**	**-0.6**
T1243				S	**Sg**	**07 01 40.3**	**0.0**
AM05	**Amandola Campo**	**0.22**	**26**	P	**Pg**	**07 01 37.5**	**-0.8**
AM05				S	**Sg**	**07 01 41.4**	**+0.2**
AM05				AML	AML		
	comp=E,26150μm,0.5s						
AM05				AML	AML		
	comp=N,7390μm,0.2s						
AM05				AML	AML		
	comp=N,34950μm,0.5s						
AM05				AML	AML		
LNSS	**Leonessa**	**0.22**	**217**	P	**Pg**	**07 01 37.8**	**-0.5**
LNSS				S	**Sg**	**07 01 41.7**	**+0.3**
LNSS				AML	AML		
	comp=E,55150μm,0.5s						
LNSS				AML	AML		
T1217	**Poggiodomo (PG**	**0.23**	**252**	P	**Pg**	**07 01 38.4**	**0.0**
T1217				S	**Sg**	**07 01 41.9**	**+0.4**
RM33	**Pellescritta (**	**0.27**	**181**	P	**Pg**	**07 01 38.6**	**-0.7**
RM33				S	**Sg**	**07 01 43.5**	**+0.6**
RM33				AML	AML		
	comp=E,54000μm,1.2s						
RM33				AML	AML		
	comp=N,35850μm,0.2s						
RM33				AML	AML		
	comp=E,53950μm,1.2s						
RM33				AML	AML		
	comp=N,35300μm,0.2s						

RM33				AML	AML		
	comp=E,54050µm,1.2s						
RM33				AML	AML		
	comp=N,35250µm,0.2s						
RM33				AML	AML		
	comp=E,54000µm,1.2s						
RM33				AML	AML		
	comp=N,35800µm,0.2s						
T1246	**Crognaleto (TE**	**0.28**	**135**	P	**Pg**	**07 01 38.6**	**-0.8**
T1246				S	**Sg**	**07 01 43.5**	**+0.3**
CAMP	**Campotosto**	**0.28**	**151**		**Pg**	**07 01 38.5**	**-0.9**
CAMP	**Campotosto**	**0.28**	**151**	P	**Pg**	**07 01 38.5**	**-0.9**
CAMP				S	**Sg**	**07 01 43.3**	**+0.1**
CAMP				AML	AML		
	comp=E,37700µm,0.8s						
CAMP				AML	AML		
	comp=N,42950µm,0.7s						
GUMA	**Gualdo di Mace**	**0.29**	**16**	P	**Pg**	**07 01 39.5**	**-0.2**
GUMA				S	**Sg**	**07 01 44.5**	**+0.9**
TERO	**Teramo**	**0.32**	**119**	P	**Pg**	**07 01 39.4**	**-0.8**
TERO				S	**Sg**	**07 01 44.7**	**+0.2**
T1247	**Pizzolo (AQ)**	**0.34**	**171**	P	**Pg**	**07 01 39.7**	**-0.9**
T1247				AML	AML		
	comp=E,46050µm,1.6s						
T1247				AML	AML		
	comp=N,52200µm,0.8s						
ARRO	**Arrone**	**0.39**	**239**	P	**Pg**	**07 01 40.8**	**-0.7**
ARRO				S	**Sg**	**07 01 47.2**	**+0.6**
MNTP	**Montappone**	**0.40**	**27**	P	**Pg**	**07 01 41.6**	**-0.1**
MNTP				S	**Sb**	**07 01 49.0**	**-0.7**
GIGS	**Gran Sasso**	**0.42**	**142**	P	**Pg**	**07 01 41.8**	**-0.2**
PIO1	**Pioraco**	**0.43**	**336**	P	**Pg**	**07 01 41.4**	**-0.9**
PIO1				S	**Sg**	**07 01 48.5**	**+0.4**
AQU	**L'Aquila**	**0.45**	**163**	Pg	**Pg**	**07 01 41.5**	**-1.1**
AQU	**L'Aquila**	**0.45**	**163**	P	**Pg**	**07 01 41.5**	**-1.1**
AQU				S	**Sg**	**07 01 49.1**	**+0.7**
AQU				AML	AML		
	comp=E,22650µm,1.6s						
AQU				AML	AML		
	comp=E,22650µm,1.6s						
AQU				AML	AML		
	comp=N,32850µm,0.8s						
AQU				AML	AML		
	comp=N,33350µm,0.8s						
GAG1	**Gagliole**	**0.47**	**346**	P	**Pg**	**07 01 41.6**	**-1.4**
GAG1				S	**Sg**	**07 01 49.9**	**+0.8**
FIAM	**Fiamignano**	**0.52**	**189**	P	**Pg**	**07 01 42.5**	**-1.4**
FIAM				S	**Sg**	**07 01 51.0**	**+0.3**
ATCC	**AVT- Casa Cast**	**0.59**	**314**	P	**Pg**	**07 01 44.0**	**-1.2**
ATCC				S	**Sg**	**07 01 53.5**	**+0.6**
ATCC				AML	AML		
	comp=N,27150µm,1.3s						
ATCC				AML	AML		
	comp=N,27200µm,1.3s						
ATCC				AML	AML		
	comp=E,44150µm,0.8s						
VCEL	**Villa Celiera**	**0.60**	**130**	P	**Pg**	**07 01 44.8**	**-0.7**
VCEL				S	**Sb**	**07 01 54.5**	**-1.0**
VCEL				AML	AML		
	comp=N,34600µm,1.0s						
VCEL				AML	AML		
	comp=E,23000µm,0.8s						
FOSV	**Fossato di Vic**	**0.61**	**327**	P	**Pg**	**07 01 44.5**	**-1.3**
FOSV				S	**Sg**	**07 01 54.0**	**+0.2**
FOSV				AML	AML		
	comp=N,18150µm,0.5s						
FOSV				AML	AML		
	comp=E,14450µm,1.5s						
MURB	**Monte Urbino**	**0.70**	**313**	Pg	**Pg**	**07 01 45.9**	**-1.5**
ARVD	**Arcevia**	**0.74**	**344**	P	**Pg**	**07 01 48.0**	**-0.2**
ARVD				S	**Sg**	**07 01 58.7**	**+0.7**
FRON	**Frontone**	**0.82**	**334**	P	**Pg**	**07 01 48.1**	**-1.6**
FRON				S	**Sg**	**07 02 01.0**	**+0.6**
FSSB	**Fossombrone**	**0.97**	**340**	P	**Pg**	**07 01 51.7**	**-0.8**
LATE	**Laterza**	**1.06**	**261**	Pg	**Pg**	**07 01 53.0**	**-1.2**
CAFI	**Castiglion Fio**	**1.07**	**301**	P	**Pg**	**07 01 53.4**	**-1.1**
CAFI				AML	AML		
	comp=E,5960µm,1.0s						
CAFI				AML	AML		
	comp=N,4875µm,0.7s						
CAFI				AML	AML		
	comp=N,4675µm,0.8s						
CAFI				AML	AML		
	comp=E,5925µm,0.9s						
OSSC	**Osservatorio P**	**1.63**	**298**	Pn	**Pn**	**07 02 02.7**	**-0.3**
CASP	**Castiglione de**	**1.73**	**271**	Pn	**Pn**	**07 02 03.4**	**-1.1**
PAOL	**Paolisi**	**2.02**	**150**		**Pn**	**07 02 08.0**	**-0.4**
FUORN	**Ofenpass-Fuorn**	**4.38**	**332**	Pn	**Pn**	**07 02 39.4**	**-1.7**
TUE	**Stuetta**	**4.61**	**324**		**Pn**	**07 02 42.8**	**-1.4**
DAVOX	**Davos/Dischmat**	**4.65**	**330**	Pn	**Pn**	**07 02 45.0**	**+0.2**
	comp=E,11nm,0.3s,baz=158,slow=21,SNR=6.6						
DAVOX				Sn	**Sn**	**07 03 42.8**	**+3.7**
	comp=E,3.4nm,0.3s,baz=207,slow=21,SNR=3.7						
	comp=E,46nm,0.5s						
SCTE	**Santa Cesarea**	**4.78**	**123**	Pn	**Pn**	**07 02 45.2**	**-1.1**
CEL	**Celeste**	**4.95**	**155**	Pn	**Pn**	**07 02 47.3**	**-1.5**
TIR	**Tirane**	**5.15**	**104**		**Pn**	**07 02 51.0**	**-0.4**
SENIN	**Lac Senin/Sane**	**5.54**	**312**	Pn	**Pn**	**07 02 55.7**	**-1.3**
KEK	**Kerkira**	**5.83**	**120**	Pn	**Pn**	**07 02 58.8**	**-2.0**
GERES	**GERESS Array B**	**6.07**	**3**	Pn	**Pn**	**07 03 06.8**	**+2.7**
	comp=E,1.6nm,0.3s,baz=183,slow=15,SNR=2.0						
GERES				Sn	**Sn**	**07 04 11.4**	**-2.5**
	comp=E,2.9nm,0.3s,baz=173,slow=24,SNR=2.2						
	comp=E,3.4nm,0.3s						
GERES	**GERESS Array B**	**6.07**	**3**	Pn	**Pn**	**07 03 03.2**	**-0.9**
CKRC	**Cesky Krumlov**	**6.09**	**7**	*e*SN	**Sn**	**07 04 11.7**	**-2.5**
KHC	**Kasperske Hory**	**6.36**	**2**	Pn	**Pn**	**07 03 07.0**	**-1.0**
KHC	**Kasperske Hory**	**6.36**	**2**	*e*PN	**Pn**	**07 03 06.8**	**-1.2**
KHC				*e*SN	**Sn**	**07 04 17.7**	**-3.1**
ECH	**Echery**	**6.90**	**324**	Pn	**Pn**	**07 03 14.1**	**-1.4**
VTS	**Vitosha**	**7.38**	**88**	Pn	**Pn**	**07 03 21.5**	**-0.7**
KEST	**Kesra**	**7.65**	**204**	Pn	**Pn**	**07 03 28.6**	**+2.7**
	comp=E,0.8nm,0.3s,baz=26,slow=2.1,SNR=4.0						
MLR	**Muntele Rosu**	**9.54**	**69**	Pn	**Pn**	**07 03 54.5**	**+2.8**
	comp=E,0.4nm,0.3s,baz=112,slow=18,SNR=2.7						
	comp=E,4.2nm,0.8s						
IDI	**Anoyia**	**11.75**	**126**	Pn	**Pn**	**07 04 21.2**	**-0.8**
	comp=E,0.5nm,0.3s,baz=303,slow=17,SNR=2.0						
IDI				Sn	**Sn**	**07 06 31.4**	**-2.1**
	comp=E,0.7nm,0.3s,baz=339,slow=20,SNR=4.2						
	comp=E,3.2nm,0.6s						
ESDC	**Sonseca Array**	**13.30**	**262**	Pn	**Pn**	**07 04 42.8**	**-0.3**
	comp=E,0.1nm,0.3s,baz=67,slow=14,SNR=2.8						
	comp=E,0.5nm,0.8s						
EKA	**Eskdalemuir Ar**	**16.47**	**325**	Pn	**Pn**	**07 05 26.4**	**+1.2**
	baz=137,slow=14						
	comp=E,1.0nm,0.5s						
HFS	**Hagfors**	**17.38**	**1**	P	**P**	**07 05 37.8**	**-0.2**
	comp=E,0.2nm,0.3s,baz=173,slow=18,SNR=4.2						
	comp=E,3.3nm,0.9s						
NOA	**NORSAR Array B**	**18.33**	**357**	P	**P**	**07 05 49.0**	**+0.5**
	comp=E,0.6nm,0.6s,baz=184,slow=10,SNR=2.3						
FINES	**FINESS Array B**	**20.22**	**18**	P	**P**	**07 06 09.7**	**+0.5**
	comp=E,3.5nm,0.7s,baz=205,slow=10,SNR=5.1						
	comp=E,3.5nm,0.7s						
KBZ	**Khabaz**	**21.59**	**77**	P	**P**	**07 06 25.4**	**+1.4**
	comp=E,4.2nm,0.8s,baz=290,slow=9.2,SNR=6.2						
	comp=E,4.2nm,0.8s						
BELG	**Belogornoye**	**24.90**	**55**	P	**P**	**07 06 58.9**	**+1.7**
	comp=E,9.3nm,0.8s,baz=259,slow=5.2,SNR=2.3						
	comp=E,9.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.17**	**202**	P	**P**	**07 07 53.3**	**-0.3**
	comp=E,2.6nm,0.8s,baz=16,slow=9.1,SNR=3.6						
	comp=E,2.6nm,0.8s						
ARU	**Arti**	**31.77**	**49**	P	**P**	**07 07 58.2**	**-0.3**
	baz=273,slow=12						
GEYT	**Alibeck**	**34.24**	**83**	P	**P**	**07 08 20.6**	**+0.2**
	comp=E,0.9nm,0.4s,baz=274,slow=3.9,SNR=2.5						
	comp=E,0.9nm,0.4s						
BRVK	**Borovoye**	**38.63**	**54**	P	**P**	**07 08 56.4**	**-1.2**
BRVK				IAmb	IAmb	07 09 00.3	
	comp=Z,4.6nm,0.9s						
BVAR	**Borovoye Array**	**38.70**	**54**	P	**P**	**07 08 59.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=261,slow=5.7,SNR=9.9						
	comp=Z,1.5nm,0.7s						
KK31	**Karatay Array**	**41.22**	**69**	P	**P**	**07 09 18.9**	**-0.4**
KKAR	**Karatay Array**	**41.22**	**69**	P	**P**	**07 09 18.9**	**-0.4**
KURBB	**Kurchatov Arra**	**44.14**	**56**	P	**P**	**07 09 43.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=312,slow=7.3,SNR=2.7						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**46.90**	**50**	P	**P**	**07 10 05.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=293,slow=7.7,SNR=2.4						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**47.74**	**60**	P	**P**	**07 10 10.9**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=282,slow=6.6,SNR=4.7						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**61.79**	**50**	P	**P**	**07 11 53.8**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=287,slow=7.6,SNR=8.3						
	comp=Z,2.5nm,0.9s						
INK	**Inuvik**	**66.46**	**347**	P	**P**	**07 12 23.4**	**-0.1**
	comp=Z,2.9nm,1.0s,baz=14,slow=4.2,SNR=4.4						
	comp=Z,2.9nm,1.0s						
BOSA	**Boshof**	**71.90**	**169**	P	**P**	**07 12 56.8**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=12,slow=9.3,SNR=1.7						
	comp=Z,1.6nm,0.6s						
PDAR	**Pinedale Array**	**80.54**	**321**	P	**P**	**07 13 47.0**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=64,slow=4.1,SNR=2.6						
	comp=Z,0.2nm,0.6s						
BDFB	**Brasilia**	**80.79**	**239**	P	**P**	**07 13 49.8**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=59,slow=4.0,SNR=4.0						
	comp=Z,2.8nm,0.8s						

STR ***30*** *07:03:21.3±5.9, 43°N±23°×1°3E±4°8, h15km, MLv3.9/13, Error ellipse: s-maj=0.1km s-min=0.0km az=113.7, preliminary*
ROM ***30*** *07:03:22.6±0.1, 42°.806N±0°.003×13°.121E±0°.004, h11km, ML3.9/58, Error ellipse: s-maj=0.3km s-min=0.1km az=258.0*
IDC ***30*** *07:03:23.0±1.4, 42°.89N×13°.39E, h0km, mb3.6/3, mbtmp3.7/7, ML3.7/4, Error ellipse: s-maj=36.5km s-min=18.4km az=97.0*
LDG ***30*** *07:03:22.7±0.1, 42°.78N×12°.97E, h9km, Ml3.5/5, Error ellipse: s-maj=5.6km s-min=3.2km az=51.0*
PRU ***30*** *07:03:23.5±0.0, 42°.74N×13°.61E, h10km*
ISC 30 07:03:22.8±0.7, 42°.80N±0°.01×13°.11E±0°.02, h14km±4km, n135, σ1s65/162, 2C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**47**	P	**Pg**	**07 03 25.3**	**-0.6**
T1245				S	**Sg**	**07 03 27.1**	**-1.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.11**	**324**	P	**Pg**	**07 03 25.9**	**-0.2**
T1216				S	**Sg**	**07 03 28.1**	**-0.3**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.13**	**29**	P	**Pg**	**07 03 26.2**	**-0.3**
MC2				S	**Sg**	**07 03 28.3**	**-0.8**
T1217	**Poggiodomo (PG**	**0.16**	**236**	P	**Pg**	**07 03 26.9**	**+0.1**
T1217				S	**Sg**	**07 03 29.9**	**+0.4**
T1217				AML	AML		
	comp=E,47500µm,0.6s						
T1217				AML	AML		
	comp=E,45550µm,0.6s						
T1217				AML	AML		
	comp=N,56500µm,0.4s						
T1217				AML	AML		
	comp=E,47550µm,0.6s						
T1217				AML	AML		
	comp=N,57950µm,0.5s						
T1217				AML	AML		
	comp=N,56450µm,0.4s						
T1217				AML	AML		
	comp=E,47500µm,0.6s						
T1217				AML	AML		
	comp=E,45550µm,0.6s						
FEMA	**Monte Fema**	**0.17**	**346**	P	**Pg**	**07 03 26.7**	**-0.3**
FEMA				S	**Sg**	**07 03 29.7**	**-0.1**
T1215	**Vallo di Nera,**	**0.17**	**271**	P	**Pg**	**07 03 27.2**	**+0.2**
T1215				S	**Sg**	**07 03 30.2**	**+0.4**
T1215				AML	AML		
	comp=E,28700µm,1.1s						
T1215				AML	AML		
	comp=E,32950µm,1.1s						
T1215				AML	AML		
	comp=N,48000µm,0.9s						
T1215				AML	AML		
	comp=N,48750µm,1.0s						
T1215				AML	AML		
	comp=E,32900µm,1.1s						
T1215				AML	AML		
	comp=E,32950µm,1.1s						
T1215				AML	AML		
	comp=N,47950µm,0.9s						
T1215				AML	AML		
	comp=N,48700µm,1.0s						
T1215				AML	AML		
	comp=E,28700µm,1.1s						
T1201	**Domo (RI)**	**0.18**	**143**	P	**Pb**	**07 03 27.2**	**-0.8**
T1201				S	**Sg**	**07 03 30.7**	**+0.7**
T1204	**Amatrice, Fraz**	**0.20**	**129**	P	**Pg**	**07 03 27.3**	**-0.1**
T1204				S	**Sg**	**07 03 30.7**	**+0.1**
T1204				AML	AML		
	comp=E,86950µm,1.5s						
T1204				AML	AML		
	comp=N,50900µm,0.3s						
LNSS	**Leonessa**	**0.20**	**194**	⇑P	**Pg**	**07 03 27.6**	**+0.1**
LNSS				S	**Sg**	**07 03 31.3**	**+0.7**
LNSS				AML	AML		
	comp=E,50600µm,0.2s						
LNSS				AML	AML		
T1256	**Bolognola (MC)**	**0.22**	**23**	P	**Pg**	**07 03 27.4**	**-0.5**
T1256				S	**Sg**	**07 03 31.1**	**-0.2**
T1241	**Roccafluvione,**	**0.24**	**77**	⇑P	**Pb**	**07 03 28.4**	**-0.7**
T1241				S	**Sg**	**07 03 32.1**	**+0.4**
T1241				AML	AML		
	comp=N,88800µm,0.3s						
T1241				AML	AML		
	comp=E,79600µm,0.4s						
T1241				AML	AML		
	comp=N,85550µm,0.3s						
T1241				AML	AML		
	comp=E,78700µm,0.4s						
T1241				AML	AML		
	comp=E,79600µm,0.4s						
T1241				AML	AML		
	comp=N,85600µm,0.3s						
T1241				AML	AML		
	comp=N,88750µm,0.3s						
AM05	**Amandola Campo**	**0.25**	**46**	P	**Pg**	**07 03 28.0**	**-0.3**
AM05				S	**Sg**	**07 03 31.9**	**-0.1**
AM05				AML	AML		
	comp=E,51200µm,0.2s						
AM05				AML	AML		
	comp=N,4340µm,0.4s						
AM05				AML	AML		
	comp=N,16450µm,0.3s						
AM05				AML	AML		
	comp=E,12700µm,0.7s						
T1243	**Rocca Santa Ma**	**0.27**	**112**	P	**Pg**	**07 03 28.3**	**-0.3**
RM33	**Pellescritta (**	**0.30**	**165**	P	**Pg**	**07 03 29.1**	**0.0**
RM33				S	**Sg**	**07 03 34.0**	**+0.6**
RM33				AML	AML		
	comp=E,46800µm,1.5s						
RM33				AML	AML		
	comp=N,52900µm,0.2s						
RM33				AML	AML		
	comp=N,52950µm,0.2s						
RM33				AML	AML		
	comp=N,53400µm,0.2s						
RM33				AML	AML		
	comp=E,45950µm,1.5s						
GUMA	**Gualdo di Mace**	**0.31**	**33**	P	**Pg**	**07 03 29.2**	**-0.1**
GUMA				S	**Sb**	**07 03 34.5**	**-0.7**
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,86550µm,0.4s						
GUMA				AML	AML		
	comp=N,91700µm,0.4s						
GUMA				AML	AML		
ARRO	**Arrone**	**0.34**	**229**	P	**Pg**	**07 03 29.8**	**+0.2**
ARRO				S	**Sb**	**07 03 36.4**	**+0.6**
ARRO				AML	AML		
	comp=E,15850µm,0.3s						
ARRO				AML	AML		
	comp=N,13000µm,0.6s						
ARRO				AML	AML		
	comp=N,12970µm,0.6s						
CAMP	**Campotosto**	**0.35**	**140**	⇓P	**Pg**	**07 03 29.6**	**-0.3**
CAMP				S	**Sg**	**07 03 34.8**	**+0.1**
CAMP				AML	AML		
	comp=E,26900µm,1.1s						
CAMP				AML	AML		
	comp=N,22700µm,0.3s						
T1246	**Crognaleto (TE**	**0.36**	**127**	P	**Pg**	**07 03 29.8**	**-0.4**
T1246				S	**Sg**	**07 03 35.3**	**+0.2**
SEF1	**Sefro**	**0.36**	**341**	P	**Pg**	**07 03 30.0**	**-0.3**
SEF1				S	**Sg**	**07 03 35.8**	**+0.5**
SEF1				AML	AML		
	comp=E,43200µm,0.4s						
SEF1				AML	AML		
	comp=N,35950µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.39**	**158**	P	**Pg**	**07 03 30.9**	**+0.3**
T1247				S	**Sb**	**07 03 36.8**	**-0.5**
T1247				AML	AML		
	comp=N,48600µm,0.2s						
T1247				AML	AML		
	comp=E,55550µm,0.3s						
T1247				AML	AML		
	comp=N,48650µm,0.2s						
PIO1	**Pioraco**	**0.39**	**347**	P	**Pg**	**07 03 30.3**	**-0.4**
PIO1				S	**Sb**	**07 03 36.6**	**-0.8**
PIO1				AML	AML		
	comp=N,38250µm,1.2s						
PIO1				AML	AML		
	comp=E,16900µm,1.2s						
MDAR	**Monte D'Aria**	**0.39**	**4**	P	**Pg**	**07 03 30.4**	**-0.4**
MDAR				S	**Sb**	**07 03 36.6**	**-1.0**
MDAR				AML	AML		
	comp=E,32800µm,0.5s						
MDAR				AML	AML		
	comp=N,36950µm,0.5s						
TERO	**Teramo**	**0.41**	**116**	P	**Pg**	**07 03 30.4**	**-0.6**
TERO				S	**Sg**	**07 03 36.5**	**-0.1**
TERO				AML	AML		
	comp=E,25050µm,0.3s						
TERO				AML	AML		
	comp=N,25650µm,1.6s						
TERO				AML	AML		
	comp=N,27650µm,1.6s						
TERO				AML	AML		
	comp=E,25100µm,0.3s						
TERO				AML	AML		
	comp=N,25700µm,1.6s						
TERO				AML	AML		
	comp=E,27600µm,0.8s						
ASSB	**Assisi San Ben**	**0.41**	**306**	P	**Pg**	**07 03 30.9**	**-0.2**
ASSB				S	**Sg**	**07 03 37.3**	**+0.7**
MNTP	**Montappone**	**0.43**	**38**	P	**Pb**	**07 03 31.6**	**-0.6**
MNTP				AML	AML		
	comp=E,36200µm,0.4s						
MNTP				AML	AML		
	comp=N,28000µm,0.3s						
SSM1	**San Severino M**	**0.43**	**7**	P	**Pg**	**07 03 31.0**	**-0.4**
SSM1				S	**Sb**	**07 03 37.9**	**-0.7**
CESX	**Cesi**	**0.43**	**244**	P	**Pg**	**07 03 31.3**	**-0.1**
CESX				S	**Sg**	**07 03 38.0**	**+0.7**
CESX				AML	AML		
	comp=N,15300µm,0.7s						
CESX				AML	AML		
	comp=E,11350µm,0.6s						
GAG1	**Gagliole**	**0.44**	**356**	P	**Pg**	**07 03 31.4**	**-0.2**
GAG1				S	**Sb**	**07 03 38.3**	**-0.6**
GAG1				AML	AML		
	comp=E,53950µm,0.6s						
GAG1				AML	AML		
	comp=N,65200µm,0.6s						
OFFI	**Offida**	**0.45**	**72**	P	**Pb**	**07 03 32.0**	**-0.5**
OFFI				AML	AML		
	comp=E,41300µm,0.4s						
OFFI				AML	AML		
	comp=N,88850µm,0.7s						
GIGS	**Gran Sasso**	**0.49**	**136**	P	**Pg**	**07 03 31.8**	**-0.7**
GIGS				S	**Sg**	**07 03 38.9**	**-0.2**
GIGS				AML	AML		
	comp=E,5130µm,0.3s						
GIGS				AML	AML		
	comp=N,4370µm,0.3s						
GIGS				AML	AML		
	comp=E,5135µm,0.3s						
AQU	**L'Aquila**	**0.50**	**154**	P	**Pg**	**07 03 32.4**	**-0.3**
AQU				S	**Sb**	**07 03 40.0**	**-0.5**
AQU				AML	AML		
	comp=E,16700µm,0.7s						
AQU				AML	AML		
	comp=N,12800µm,0.3s						
AQU				AML	AML		
	comp=E,16000µm,0.7s						
AQU				AML	AML		
	comp=E,16750µm,0.7s						
AQU				AML	AML		
	comp=N,13000µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.52**	**318**	P	**Pg**	**07 03 32.7**	**-0.3**
ATCC				AML	AML		
	comp=N,11950µm,0.3s						
ATCC				AML	AML		
	comp=E,14600µm,0.6s						
FIAM	**Fiamignano**	**0.53**	**179**	P	**Pg**	**07 03 32.9**	**-0.4**
FIAM				S	**Sb**	**07 03 41.1**	**-0.4**
FIAM				AML	AML		
	comp=N,14650µm,0.4s						
FIAM				AML	AML		
	comp=E,17100µm,0.4s						
TRE1	**Treia**	**0.53**	**16**	P	**Pb**	**07 03 33.4**	**-0.6**
TRE1				AML	AML		
	comp=E,36750µm,0.5s						
TRE1				AML	AML		
	comp=N,29500µm,0.5s						
FOSV	**Fossato di Vic**	**0.56**	**333**	P	**Pg**	**07 03 33.2**	**-0.5**
FOSV				AML	AML		
	comp=N,10350µm,1.5s						
FOSV				AML	AML		
	comp=E,7620µm,0.5s						
TRTR	**Tortoreto Alta**	**0.59**	**89**	AML	AML		
	comp=E,50450µm,1.1s						
TRTR				AML	AML		
	comp=N,49600µm,0.7s						
MURB	**Monte Urbino**	**0.63**	**317**	P	**Pg**	**07 03 35.0**	**-0.2**
MURB				AML	AML		
	comp=N,19300µm,0.3s						
MURB				AML	AML		
	comp=E,16500µm,1.1s						
MURB				AML	AML		
	comp=N,20550µm,0.3s						
MURB				AML	AML		
	comp=N,19250µm,0.3s						
MURB				AML	AML		
	comp=E,15150µm,0.3s						
FAGN	**Fagnano**	**0.64**	**146**	P	**Pg**	**07 03 34.9**	**-0.4**
FAGN				AML	AML		
	comp=E,25950µm,0.4s						
FAGN				AML	AML		
	comp=N,20300µm,0.3s						
VCEL	**Villa Celiera**	**0.68**	**127**	P	**Pg**	**07 03 35.5**	**-0.5**
VCEL				AML	AML		
	comp=N,17000µm,0.4s						
VCEL				AML	AML		
	comp=E,15450µm,0.3s						
VCEL				AML	AML		
	comp=N,16950µm,0.4s						
PP3	**Marolino**	**0.69**	**32**	P	**Pb**	**07 03 36.7**	**+0.2**
PP3				AML	AML		
	comp=E,15350µm,0.3s						
PP3				AML	AML		
	comp=N,14100µm,0.7s						
PP3				AML	AML		
	comp=N,13900µm,1.3s						
PP3				AML	AML		
	comp=E,15100µm,0.3s						
ATFO	**Monte Foce - G**	**0.69**	**325**	P	**Pg**	**07 03 36.1**	**-0.2**
ATFO				AML	AML		
	comp=N,5245µm,0.2s						
ATFO				AML	AML		
	comp=E,5280µm,0.8s						
ARVD	**Arcevia**	**0.71**	**350**	P	**Pg**	**07 03 36.0**	**-0.6**
ARVD				AML	AML		
	comp=E,6490µm,0.5s						
ARVD				AML	AML		
	comp=N,4865µm,0.7s						
SRES	**S.Oreste - Sor**	**0.71**	**218**	P	**Pg**	**07 03 36.8**	**0.0**
SRES				AML	AML		
	comp=E,3365µm,0.9s						
SRES				AML	AML		
	comp=N,3500µm,0.7s						
MGAB	**Montegabbione**	**0.74**	**279**	P	**Pg**	**07 03 37.0**	**-0.3**
T0110	**Collepietro**	**0.76**	**139**	P	**Pg**	**07 03 36.4**	**-1.2**
T0110				AML	AML		
	comp=N,13800µm,0.4s						
T0110				AML	AML		
	comp=E,17200µm,0.4s						

ATVO	**AVT- Monte Val**	**0.78 319**	AML	AML	
	comp=N,4670μm,0.5s				
ATVO			AML	AML	
	comp=E,3660μm,0.4s				
ATVO			AML	AML	
	comp=E,3665μm,0.4s				
MTCE	**Montecelio**	**0.82 199**	P	**Pg**	**07 03 37.9 -0.9**
ATPI	**Pietralunga -**	**0.83 322**	AML	AML	
	comp=E,4120μm,1.0s				
ATPI			AML	AML	
	comp=N,3690μm,0.5s				
ATPI			AML	AML	
	comp=E,4125μm,1.0s				
AOI	**Ancona**	**0.83 26**	P	**Pg**	**07 03 38.5 -0.5**
AOI			AML	AML	
	comp=E,5675μm,1.4s				
AOI			AML	AML	
	comp=N,5200μm,0.2s				
AOI			AML	AML	
	comp=E,5670μm,1.4s				
AOI			AML	AML	
	comp=N,5205μm,0.2s				
PIEI	**Pieia**	**0.85 331**	P	**Pg**	**07 03 38.7 -0.5**
PIEI			AML	AML	
	comp=N,2645μm,1.5s				
PIEI			AML	AML	
	comp=E,3795μm,0.3s				
PIEI			AML	AML	
	comp=N,2650μm,1.5s				
CERT	**Cerreto**	**0.86 186**	P	**Pn**	**07 03 40.4 -0.1**
CERT			AML	AML	
	comp=N,7190μm,0.4s				
CERT			AML	AML	
	comp=E,10485μm,0.4s				
MPAG	**Monte Paganucc**	**0.87 343**	P	**Pg**	**07 03 38.9 -0.8**
MPAG			AML	AML	
	comp=E,4290μm,0.5s				
MPAG			AML	AML	
	comp=N,4800μm,0.5s				
SACS	**San Casciano d**	**0.88 274**	P	**Pg**	**07 03 39.9 0.0**
SENI	**Senigallia**	**0.91 6**	P	**Pn**	**07 03 41.0 -0.2**
SENI			AML	AML	
	comp=E,22350μm,0.4s				
SENI			AML	AML	
	comp=N,22950μm,0.3s				
FSSB	**Fossombrone**	**0.92 345**	P	**Pg**	**07 03 39.8 -0.9**
FSSB			AML	AML	
	comp=E,11185μm,0.4s				
FSSB			AML	AML	
	comp=N,23750μm,0.4s				
CAFI	**Castiglion Fio**	**0.99 303**	AML	AML	
	comp=E,2035μm,0.5s				
CAFI			AML	AML	
	comp=N,2335μm,0.6s				
CAFI			AML	AML	
	comp=N,2460μm,0.6s				
CAFI			AML	AML	
	comp=E,2080μm,0.5s				
GUAR	**Guarcino**	**1.02 171**	P	**Pn**	**07 03 42.9 +0.1**
GUAR			AML	AML	
	comp=N,6070μm,0.9s				
GUAR			AML	AML	
	comp=E,5920μm,0.3s				
RMP	**Rome, Mte Porz**	**1.03 197**	P	**Pg**	**07 03 42.1 -0.6**
RMP			AML	AML	
	comp=E,5340μm,0.8s				
RMP			AML	AML	
	comp=N,8345μm,0.5s				
VIVA	**Pratoni del Vi**	**1.08 193**	P	**Pn**	**07 03 44.0 +0.4**
VIVA			AML	AML	
	comp=E,13450μm,0.5s				
VIVA			AML	AML	
	comp=N,13100μm,1.1s				
RDP	**Rocca di Papa**	**1.08 196**	P	**Pb**	**07 03 42.9 -0.5**
RDP			AML	AML	
	comp=N,15100μm,0.5s				
RDP			AML	AML	
	comp=E,13000μm,0.5s				
LPEL	**Lama dei Pelig**	**1.10 133**	P	**Pb**	**07 03 42.4 -1.2**
TOLF	**Tolfa**	**1.10 228**	P	**Pb**	**07 03 43.1 -0.6**
TOLF			AML	AML	
	comp=E,1910μm,1.0s				
TOLF			AML	AML	
	comp=N,2340μm,1.0s				
SF01	**Poggio Pratacc**	**1.14 271**	AML	AML	
	comp=N,1891μm,1.1s				
SF01			AML	AML	
	comp=E,3025μm,0.5s				
LAV9	**Lanuvio**	**1.16 195**	AML	AML	
	comp=N,7065μm,1.3s				
LAV9			AML	AML	
	comp=N,6965μm,1.3s				
LAV9			AML	AML	
	comp=E,10300μm,0.5s				
LAV9			AML	AML	
	comp=E,9540μm,0.5s				
POFI	**Posta Fibreno**	**1.17 157**	P	**Pg**	**07 03 45.3 -0.1**
POFI			AML	AML	
	comp=E,2535μm,1.4s				
POFI			AML	AML	
	comp=N,1770μm,1.6s				
GIUL	**Giuliano Di Ro**	**1.25 175**	P	**Pn**	**07 03 45.7 -0.1**
GIUL			AML	AML	
	comp=N,2580μm,0.8s				
GIUL			AML	AML	
	comp=E,1700μm,1.6s				
LATB	**Latina**	**1.31 185**	P	**Pn**	**07 03 46.5 -0.2**
LATB			AML	AML	
	comp=N,833μm,0.9s				
LATB			AML	AML	
	comp=E,954μm,0.7s				
SFI	**Santa Sofia**	**1.44 321**	P	**Pb**	**07 03 49.2 -0.2**
MIDA	**Miranda**	**1.44 143**	P	**Pn**	**07 03 48.0 -0.6**
FROS	**Frosini**	**1.49 287**	P	**Pn**	**07 03 49.5 +0.4**
TRIV	**Trivento**	**1.49 133**	P	**Pg**	**07 03 50.7 -0.7**
CSNT	**Castellina Chi**	**1.49 297**	P	**Pn**	**07 03 49.9 +0.7**
OSSC	**Osservatorio P**	**1.54 299**	P	**Pn**	**07 03 48.8 -1.1**
RUFI	**Rufina**	**1.56 312**	P	**Pn**	**07 03 51.0 +0.8**
TRIF	**Trifonti**	**1.65 282**	AML	AML	
	comp=E,418μm,0.5s				
TRIF			AML	AML	
	comp=N,540μm,0.6s				
MODR	**Mondragone**	**1.75 161**	P	**Pn**	**07 03 53.7 +1.0**
MODR			AML	AML	
	comp=E,1026μm,1.6s				
MODR			AML	AML	
	comp=N,922μm,0.9s				
MELA	**Melanico ??? S**	**1.86 125**	P	**Pb**	**07 03 55.6 -0.9**
TREM	**Isole Tremiti**	**1.90 110**	AML	AML	
	comp=N,2050μm,0.6s				
TREM			AML	AML	
	comp=E,1750μm,0.7s				
MTCR	**Monte La Croce**	**1.97 309**	P	**Pn**	**07 03 56.1 +0.3**
PAOL	**Paolisi**	**2.08 148**	AML	AML	
	comp=E,478μm,1.6s				
PAOL			AML	AML	
	comp=N,596μm,0.9s				
APRC	**Apricena**	**2.09 119**	P	**Pb**	**07 03 59.0 -1.4**
APRC			AML	AML	
	comp=E,971μm,0.4s				
APRC			AML	AML	
	comp=N,1144μm,1.6s				
VULT	**Monte Vulture**	**2.63 134**	P	**Pn**	**07 04 06.9 +2.0**
MORSI	**Morsiglia**	**2.76 274**	P	**Pn**	**07 04 06.2 -0.3**
SMPL	**Sampolo**	**2.92 257**	P	**Pn**	**07 04 09.8 +1.0**
PGF	**Pioggiola**	**3.04 267**	*e*Pn	**Pn**	**07 04 06.7 -3.9**
PGF	**Pioggiola**	**3.04 267**	*e*P	**Pn**	**07 04 10.7 +0.1**
PGF			*e*Sn	**Sn**	**07 04 42.8 -4.0**
	comp=N,20nm,0.4s				
PGF	**Pioggiola**	**3.04 267**	P	**Pn**	**07 04 09.1 -1.4**
AJAC	**Base Areonaval**	**3.33 256**	P	**Pn**	**07 04 15.9 +1.4**
CTI	**Castel Tesino**	**3.41 343**	P	**Pn**	**07 04 17.1 +1.4**
STAL	**STALIGIAL**	**3.47 355**	P	**Pn**	**07 04 17.4 +1.0**
LTRZ	**Laterza**	**3.54 127**	P	**Pn**	**07 04 18.7 +1.3**
MABI	**Malga Bissina**	**3.75 331**	P	**Pn**	**07 04 22.2 +1.8**
KOSI	**Kohlern**	**3.86 342**	P	**Pn**	**07 04 24.0 +2.0**
APPI	**Appiano**	**3.91 341**	P	**Pn**	**07 04 24.2 +1.6**
SBF	**Sospel**	**4.27 286**	*e*Pn	**Pn**	**07 04 23.1 -4.4**
SBF	**Sospel**	**4.27 286**	*e*P	**Pn**	**07 04 28.3 +0.8**
SBF			*e*Sn	**Sn**	**07 05 13.5 -3.7**
	comp=N,12nm,0.4s				
TURF	**col de Turini**	**4.33 288**	P	**Pn**	**07 04 29.5 +1.1**
DAVOX	**Davos/Dischmat**	**4.59 331**	Pn	**Pn**	**07 04 35.5 +3.4**
	comp=N,2.9nm,0.3s,baz=325,slow=23,SNR=1.4				
DAVOX			Sn	**Sn**	**07 05 31.6 +6.3**
	comp=N,2.9nm,0.3s,baz=302,slow=22,SNR=1.6				
	comp=N,27nm,0.5s				
LMR	**La Mourre**	**4.86 279**	*e*Pn	Pn	07 04 30.3 -5.2
LMR	**La Mourre**	**4.86 279**	*e*P	**Pn**	**07 04 36.2 +0.7**
LMR			*e*Sn	**Sn**	**07 05 25.4 -6.2**
SURF	**Saint Ours**	**4.87 292**	P	**Pn**	**07 04 36.5 +0.7**
JAUF	**Jausiers**	**4.89 292**	P	**Pn**	**07 04 37.4 +1.2**
MBDF	**Montbardon**	**4.98 295**	*e*P	**Pn**	**07 04 38.9 +1.7**
CREF	**Crivoux**	**5.02 293**	P	**Pn**	**07 04 39.9 +2.1**
LPG	**La Plagne**	**5.31 303**	*e*P	**Pn**	**07 04 43.6 +1.7**
LPL	**La Plagne**	**5.33 303**	*e*P	**Pn**	**07 04 43.7 +1.5**
RSL	**Roselend**	**5.48 304**	P	**Pn**	**07 04 46.8 +2.6**
SMRF	**Simiane la Rot**	**5.61 285**	*e*Pn	**Pn**	**07 04 43.0 -2.9**
SMRF	**Simiane la Rot**	**5.61 285**	*e*P	**Pn**	**07 04 47.3 +1.4**
ORIF	**Oris-en-Rattie**	**5.64 295**	*e*P	**Pn**	**07 04 47.8 +1.5**
GERES	**GERESS Array B**	**6.06 4**	Pn	**Pn**	**07 04 52.3 +0.2**
	comp=N,1.9nm,0.3s,baz=168,slow=13,SNR=6.4				
	comp=N,3.9nm,0.3s				
CKRC	**Cesky Krumlov**	**6.08 8**	*e*SN	**Sn**	**07 06 00.6 -1.0**
KIZ	**Kirchzarten**	**6.32 326**	P	**Pn**	**07 04 56.5 +0.9**
KIZ	**Kirchzarten**	**6.32 326**	S	**Sn**	**07 06 05.8 -1.7**
KHC	**Kasperske Hory**	**6.34 3**	*e*PN	**Pn**	**07 04 56.8 +0.9**
KHC			*e*SN	**Sn**	**07 06 07.2 -0.9**
VIVF	**Saint-Julien-l**	**6.44 291**	*e*P	**Pn**	**07 04 58.9 +1.7**
MOF	**Molkenrain**	**6.57 322**	P	**Pn**	**07 04 59.8 +0.7**
MOF			S	**Sn**	**07 06 13.6 -0.3**
HINF	**Hinteralfeld**	**6.68 321**	*e*Pn	**Pn**	**07 04 57.0 -3.5**
HINF	**Hinteralfeld**	**6.68 321**	*e*P	**Pn**	**07 05 01.7 +1.2**
HINF			*e*Sn	**Sn**	**07 06 09.6 -6.8**
	comp=N,27nm,0.5s				
ECH	**Echery**	**6.84 324**	P	**Pn**	**07 05 03.1 +0.4**
ECH			S	**Sn**	**07 06 19.3 -1.0**
LASF	**Ste Croix**	**6.85 284**	*e*Pn	**Pn**	**07 04 59.4 -3.5**
LASF	**Ste Croix**	**6.85 284**	*e*P	**Pn**	**07 05 04.3 +1.4**
WLS	**Welschbruch**	**6.91 326**	P	**Pn**	**07 05 04.8 +1.1**
CDF	**Champ du Feu**	**6.94 326**	*e*P	**Pn**	**07 05 05.4 +1.2**
HAU	**Haudompre**	**7.05 320**	*e*Pn	**Pn**	**07 05 02.8 -2.8**
HAU	**Haudompre**	**7.05 320**	*e*P	**Pn**	**07 05 07.5 +1.9**
HAU			*e*Sn	**Sn**	**07 06 18.4 -7.1**
	comp=N,46nm,0.5s				
KEST	**Kesra**	**7.64 204**	Pn	Pn	07 05 18.9 +5.2
	comp=N,0.5nm,0.3s,baz=21,slow=5.8,SNR=1.6				
	comp=N,2.9nm,0.5s				
MEZF	**Maizieres J'vi**	**8.02 318**	*e*P	**Pn**	**07 05 21.4 +2.6**
	baz=139				
SAVF	**Savonnieres en**	**8.06 319**	*e*P	**Pn**	**07 05 22.0 +2.6**
BCLA	**Clavier**	**9.32 328**	*d*P	**Pn**	**07 05 34.0 -2.7**
BMRD	**Maredsous**	**9.45 325**	*d*P	**Pn**	**07 05 37.1 -1.3**
EKA	**Eskdalemuir Ar**	**16.40 325**	Pn	**P**	**07 07 16.7 +1.4**
	baz=139,slow=14				
	comp=N,0.5nm,0.5s				
FINES	**FINESS Array B**	**20.23 18**	P	**P**	**07 07 56.4 -0.7**
	comp=N,1.4nm,0.6s,baz=198,slow=12,SNR=3.4				
	comp=N,1.4nm,0.6s				
TORD	**Torodi Ar. Bea**	**31.15 202**	P	**P**	**07 09 44.0 +2.7**
	comp=N,0.9nm,0.9s,baz=18,slow=7.6,SNR=3.0				
	comp=N,0.9nm,0.9s				
MKAR	**Makanchi Array**	**47.81 60**	P	**P**	**07 12 01.5 +1.8**
	comp=N,0.8nm,0.8s,baz=282,slow=6.1,SNR=2.3				
	comp=N,0.8nm,0.8s				

ROM ***30*** *07:04:59.4±0.0, 42°.826N±0°.003×13°.060E±0°.004, h10km, ML3.8/30, Error ellipse: s-maj=0.3km s-min=0.1km az=266.0*
IDC ***30*** *07:04:59.3±1.5, 42°.61N×13°.19E, h0km, mb3.8/5, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=33.1km s-min=28.0km az=112.0*
LDG ***30*** *07:04:59.1±0.1, 42°.81N×13°.07E, h10km, Ml3.6/9, Error ellipse: s-maj=4.5km s-min=2.6km az=39.0*
NEIC ***30*** *07:04:59.2±0.9, 42°.80N±0°.04×12°.99E±0°.04, h10km±2km, Error ellipse: s-maj=7.9km s-min=3.0km az=215.0*
ISC 30 07:04:59.6±0.7,**42°.83N**±0°.02×**13°.04E**±0°.02,**h13**km±4km,
n131,σ1§**50**/156,**mb3.8**/4,**7C-2D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**345**	⇓P	**Pg**	**07 05 02.0**	**-0.3**
T1216				S	**Sg**	**07 05 03.7**	**-0.6**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.11**	**74**	P	**Pg**	**07 05 02.5**	**-0.4**
T1245				S	**Sg**	**07 05 04.5**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1215	**Vallo di Nera,**	**0.13**	**260**	⇑P	**Pg**	**07 05 03.2**	**+0.2**
T1215				S	**Sg**	**07 05 05.7**	**+0.3**
T1215				AML	AML		
	comp=N,34950μm,0.4s						
T1215				AML	AML		
	comp=E,42100μm,0.5s						
T1215				AML	AML		
	comp=N,32250μm,1.2s						
T1215				AML	AML		
	comp=E,39050μm,0.5s						
T1215				AML	AML		
	comp=N,34950μm,0.5s						
T1215				AML	AML		
	comp=E,42200μm,0.5s						
T1215				AML	AML		
	comp=N,32300μm,1.2s						
T1215				AML	AML		
	comp=E,40850μm,1.5s						
T1215				AML	AML		
	comp=E,42150μm,0.5s						
T1215				AML	AML		
	comp=N,43850μm,1.6s						
T1215				AML	AML		
	comp=N,43300μm,0.8s						
T1215				AML	AML		
	comp=E,39044μm,0.5s						
FEMA	**Monte Fema**	**0.14**	**2**	P	**Pg**	**07 05 03.1**	**-0.1**
FEMA				S	**Sg**	**07 05 05.5**	**-0.2**
MC2	**Monte Cornacci**	**0.14**	**51**	P	**Pg**	**07 05 03.0**	**-0.3**
MC2				S	**Sg**	**07 05 05.2**	**-0.8**
T1217	**Poggiodomo (PG**	**0.14**	**216**	⇑P	**Pg**	**07 05 03.3**	**+0.2**
T1217				S	**Sg**	**07 05 06.0**	**+0.3**
T1217				AML	AML		
	comp=E,82700μm,0.5s						
T1217				AML	AML		
	comp=N,76250μm,0.2s						
T1217				AML	AML		
	comp=E,80700μm,0.7s						
T1217				AML	AML		
	comp=N,75600μm,0.2s						
T1217				AML	AML		
	comp=E,82650μm,0.5s						
T1217				AML	AML		
	comp=N,76300μm,0.2s						
T1217				AML	AML		
	comp=E,80650μm,0.8s						
T1217				AML	AML		
	comp=N,75650μm,0.2s						
T1217				AML	AML		
	comp=E,82700μm,0.5s						
T1217				AML	AML		
	comp=N,79550μm,1.4s						
T1217				AML	AML		
	comp=N,83750μm,1.4s						
T1217				AML	AML		
	comp=E,80550μm,0.8s						
T1217				AML	AML		
	comp=E,81165μm,0.8s						
T1244	**Arquata del Tr**	**0.20**	**110**	P	**Pg**	**07 05 04.1**	**0.0**
T1244				S	**Sg**	**07 05 07.6**	**+0.4**
LNSS	**Leonessa**	**0.22**	**180**	P	**Pg**	**07 05 04.7**	**+0.2**
LNSS				S	**Sg**	**07 05 08.4**	**+0.6**
T1256	**Bolognola (MC)**	**0.23**	**37**	P	**Pg**	**07 05 04.3**	**-0.2**
T1256				S	**Sg**	**07 05 08.1**	**+0.1**
T1201	**Domo (RI)**	**0.23**	**138**	P	**Pg**	**07 05 04.8**	**+0.3**
T1201				S	**Sb**	**07 05 08.9**	**-0.7**
T1204	**Amatrice, Fraz**	**0.25**	**126**	⇑P	**Pg**	**07 05 05.0**	**0.0**
T1204				S	**Sg**	**07 05 09.1**	**+0.5**
T1204				AML	AML		
	comp=E,92600μm,0.3s						
T1204				AML	AML		
	comp=N,55500μm,0.6s						
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
	comp=N,41842μm,0.3s						
AM05	**Amandola Campo**	**0.27**	**56**	P	**Pg**	**07 05 05.2**	**-0.1**
AM05				S	**Sg**	**07 05 09.6**	**+0.3**
AM05				AML	AML		
	comp=E,10505μm,0.4s						
AM05				AML	AML		
	comp=N,10815μm,0.3s						
AM05				AML	AML		
	comp=E,45650μm,0.4s						
AM05				AML	AML		
	comp=E,14900μm,0.9s						
AM05				AML	AML		
	comp=N,17600μm,1.6s						
AM05				AML	AML		
	comp=N,2710μm,0.5s						
AM05				AML	AML		
	comp=E,62400μm,0.9s						
AM05				AML	AML		
	comp=E,45631μm,0.4s						
AM05				AML	AML		
	comp=N,10224μm,0.6s						
T1241	**Roccafluvione,**	**0.29**	**84**	P	**Pg**	**07 05 05.9**	**+0.3**
T1241				S	**Sg**	**07 05 10.3**	**+0.7**
T1241				AML	AML		
	comp=E,73600μm,0.7s						
T1241				AML	AML		
	comp=N,53400μm,0.6s						
T1241				AML	AML		
	comp=E,73650μm,0.7s						
T1241				AML	AML		
	comp=N,53450μm,0.6s						
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
	comp=N,50106μm,0.2s						
ARRO	**Arrone**	**0.32**	**220**	⇑P	**Pg**	**07 05 06.4**	**+0.3**
ARRO				S	**Sb**	**07 05 11.5**	**-0.7**
ARRO				AML	AML		
	comp=E,25150μm,0.8s						
ARRO				AML	AML		
	comp=N,21450μm,0.2s						
ARRO				AML	AML		
	comp=N,22500μm,1.6s						
ARRO				AML	AML		
	comp=E,25100μm,0.8s						
ARRO				AML	AML		
	comp=E,21683μm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**42**	⇑P	**Pg**	**07 05 06.3**	**+0.1**
GUMA				S	**Sb**	**07 05 11.5**	**-0.8**
GUMA				AML	AML		
	comp=E,56850μm,0.4s						
GUMA				AML	AML		
	comp=N,93050μm,0.4s						
GUMA				AML	AML		
	comp=E,76900μm,0.4s						
GUMA				AML	AML		
	comp=N,97000μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,86914μm,0.4s						
GUMA				AML	AML		
	comp=E,77042μm,0.4s						
T1243	**Rocca Santa Ma**	**0.33**	**113**	P	**Pg**	**07 05 05.9**	**-0.4**
T1243				S	**Sg**	**07 05 10.8**	**+0.1**
SEF1	**Sefro**	**0.33**	**348**	P	**Pg**	**07 05 06.4**	**0.0**
SEF1				S	**Sg**	**07 05 11.6**	**+0.8**
SEF1				AML	AML		
	comp=E,19450μm,0.4s						
SEF1				AML	AML		
	comp=N,17800μm,0.6s						
SEF1				AML	AML		
	comp=E,28200μm,0.7s						
SEF1				AML	AML		
	comp=N,30350μm,0.4s						
RM33	**Pellescritta (**	**0.34**	**158**	P	**Pg**	**07 05 06.5**	**0.0**
RM33				S	**Sg**	**07 05 11.9**	**+0.7**
RM33				AML	AML		
	comp=E,33950μm,0.2s						
RM33				AML	AML		
	comp=N,34200μm,0.3s						
RM33				AML	AML		
	comp=E,34500μm,0.2s						
RM33				AML	AML		
	comp=N,33800μm,0.9s						
RM33				AML	AML		
	comp=N,34250μm,0.3s						
RM33				AML	AML		
	comp=E,34450μm,0.2s						
RM33				AML	AML		
	comp=E,58750μm,0.4s						
RM33				AML	AML		
	comp=N,69400μm,0.9s						
RM33				AML	AML		
	comp=N,68600μm,0.9s						
RM33				AML	AML		
	comp=E,60650μm,0.4s						
RM33				AML	AML		
	comp=N,22020μm,0.2s						
ASSB	**Assisi San Ben**	**0.36**	**308**	P	**Pg**	**07 05 06.9**	**0.0**
ASSB				AML	AML		
	comp=E,13900μm,0.9s						
ASSB				AML	AML		
	comp=N,11200μm,1.4s						
ASSB				AML	AML		
	comp=N,16550μm,0.7s						
ASSB				AML	AML		
	comp=E,17350μm,1.6s						
PIO1	**Pioraco**	**0.36**	**353**	P	**Pg**	**07 05 06.8**	**+0.1**
PIO1				S	**Sb**	**07 05 12.8**	**-0.5**
FIU1	**Fiuminata**	**0.37**	**347**	P	**Pg**	**07 05 07.5**	**+0.4**
FIU1				S	**Sb**	**07 05 13.2**	**-0.6**
MDAR	**Monte D'Aria**	**0.38**	**11**	P	**Pg**	**07 05 06.9**	**-0.3**
MDAR				S	**Sg**	**07 05 12.8**	**+0.5**
CAMP	**Campotosto**	**0.40**	**137**		**Pg**	**07 05 07.4**	**-0.2**
CAMP	**Campotosto**	**0.40**	**137**	P	**Pg**	**07 05 07.3**	**-0.2**
CAMP				AML	AML		
	comp=E,14000μm,0.5s						
CAMP				AML	AML		
	comp=N,15050μm,0.5s						
CESX	**Cesi**	**0.40**	**238**	Pg	**Pg**	**07 05 07.6**	**0.0**
CESX	**Cesi**	**0.40**	**238**	⇑P	**Pg**	**07 05 07.7**	**0.0**
CESX				AML	AML		
	comp=N,16500μm,0.5s						
CESX				AML	AML		
	comp=E,17500μm,0.5s						
CESX				AML	AML		
	comp=E,17512μm,0.5s						
T1246	**Crognaleto (TE**	**0.41**	**126**	P	**Pg**	**07 05 07.4**	**-0.4**
T1246				S	**Sg**	**07 05 13.6**	**+0.3**
GAG1	**Gagliole**	**0.41**	**2**	P	**Pg**	**07 05 07.9**	**+0.1**
GAG1				AML	AML		
	comp=E,20500μm,0.5s						
GAG1				AML	AML		
	comp=N,24050μm,0.4s						
GAG1				AML	AML		
	comp=E,36400μm,1.1s						
GAG1				AML	AML		
	comp=N,38800μm,0.5s						
GAG1				AML	AML		
	comp=E,18966μm,1.0s						
SSM1	**San Severino M**	**0.41**	**14**	P	**Pg**	**07 05 07.5**	**-0.3**
SSM1				S	**Sb**	**07 05 14.4**	**-0.6**
T1247	**Pizzolo (AQ)**	**0.43**	**154**	P	**Pg**	**07 05 08.0**	**-0.1**
T1247				AML	AML		
	comp=E,30200μm,0.4s						
T1247				AML	AML		
	comp=N,37900μm,0.4s						
T1247				AML	AML		
	comp=E,55000μm,0.5s						
T1247				AML	AML		
	comp=N,56450μm,0.8s						
MNTP	**Montappone**	**0.44**	**45**	P	**Pb**	**07 05 08.9**	**-0.4**
MNTP				AML	AML		
	comp=E,31650μm,0.4s						

MNTP			AML	AML		
	comp=N,23400μm,0.3s					
MNTP			AML	AML		
	comp=E,35200μm,1.3s					
MNTP			AML	AML		
	comp=N,34900μm,1.0s					
MNTP			AML	AML		
	comp=N,22274μm,0.4s					
TERO	**Teramo**	**0.46 116**	P	**Pg**	**07 05 08.1**	**-0.6**
TERO			S	**Sg**	**07 05 14.9**	**+0.1**
TERO			AML	AML		
	comp=E,19300μm,0.4s					
TERO			AML	AML		
	comp=N,21250μm,0.7s					
TERO			AML	AML		
	comp=E,20750μm,0.4s					
TERO			AML	AML		
	comp=N,23500μm,1.5s					
TERO			AML	AML		
	comp=E,41200μm,0.8s					
TERO			AML	AML		
	comp=N,46950μm,0.7s					
TERO			AML	AML		
	comp=N,48100μm,0.7s					
TERO			AML	AML		
	comp=E,42300μm,0.8s					
TERO			AML	AML		
	comp=E,15586μm,0.2s					
TERO			AML	AML		
	comp=N,20006μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.47 321**	P	**Pg**	**07 05 08.9**	**+0.1**
ATCC			AML	AML		
	comp=E,11695μm,0.3s					
ATCC			AML	AML		
	comp=N,12700μm,0.8s					
ATCC			AML	AML		
	comp=E,18100μm,1.6s					
ATCC			AML	AML		
	comp=N,16350μm,0.6s					
ATCC			AML	AML		
	comp=N,12695μm,0.8s					
OFFI	**Offida**	**0.48 77**	⇑P	**Pb**	**07 05 09.7**	**-0.3**
OFFI			AML	AML		
	comp=E,19200μm,0.4s					
OFFI			AML	AML		
	comp=N,26650μm,0.7s					
OFFI			AML	AML		
	comp=N,66150μm,0.5s					
OFFI			AML	AML		
	comp=E,72300μm,0.6s					
FOSV	**Fossato di Vic**	**0.51 336**	P	**Pg**	**07 05 09.8**	**+0.1**
FOSV			AML	AML		
	comp=E,4275μm,1.3s					
FOSV			AML	AML		
	comp=N,4360μm,0.5s					
FOSV			AML	AML		
	comp=N,11370μm,0.4s					
FOSV			AML	AML		
	comp=E,14300μm,0.7s					
AQU	**L'Aquila**	**0.54 150**		**Pg**	**07 05 09.8**	**-0.4**
AQU	**L'Aquila**	**0.54 150**	P	**Pg**	**07 05 10.1**	**-0.1**
AQU			AML	AML		
	comp=E,11350μm,1.1s					
AQU			AML	AML		
	comp=N,10900μm,0.6s					
AQU			AML	AML		
	comp=E,11100μm,1.1s					
AQU			AML	AML		
	comp=N,10750μm,0.6s					
AQU			AML	AML		
	comp=N,24300μm,0.8s					
AQU			AML	AML		
	comp=E,29750μm,1.5s					
AQU			AML	AML		
	comp=N,25900μm,1.2s					
AQU			AML	AML		
	comp=E,30550μm,1.5s					
AQU			AML	AML		
	comp=N,8644μm,0.3s					
GIGS	**Gran Sasso**	**0.54 134**	P	**Pg**	**07 05 09.8**	**-0.4**
GIGS			AML	AML		
	comp=E,4505μm,0.2s					
GIGS			AML	AML		
	comp=N,2950μm,1.3s					
GIGS			AML	AML		
	comp=E,7545μm,1.5s					
GIGS			AML	AML		
	comp=N,7740μm,1.6s					
FIAM	**Fiamignano**	**0.56 174**	P	**Pg**	**07 05 10.3**	**-0.3**
FIAM			S	**Sb**	**07 05 18.7**	**-0.5**
FIAM			AML	AML		
	comp=E,12400μm,0.9s					
FIAM			AML	AML		
	comp=N,11665μm,0.2s					
MURB	**Monte Urbino**	**0.58 319**		**Pg**	**07 05 10.1**	**-0.9**
TRTR	**Tortoreto Alta**	**0.64 91**	P	**Pb**	**07 05 12.6**	**0.0**
TRTR			AML	AML		
	comp=E,27100μm,1.1s					
TRTR			AML	AML		
	comp=N,27350μm,0.4s					
TRTR			AML	AML		
	comp=E,55300μm,1.5s					
TRTR			AML	AML		
	comp=N,27800μm,0.4s					
ATFO	**Monte Foce - G**	**0.64 328**	P	**Pb**	**07 05 13.1**	**+0.4**
ATFO			AML	AML		
	comp=E,4155μm,0.6s					
ATFO			AML	AML		
	comp=N,4615μm,0.5s					
ATFO			AML	AML		
	comp=E,5565μm,0.8s					
ATFO			AML	AML		
	comp=N,4950μm,1.5s					
ATFO			AML	AML		
	comp=E,4156μm,0.6s					
ATLO	**AVT- Montelove**	**0.68 317**	P	**Pg**	**07 05 12.8**	**0.0**
FAGN	**Fagnano**	**0.69 144**	P	**Pb**	**07 05 13.3**	**-0.2**
FAGN			AML	AML		
	comp=E,19600μm,0.4s					
FAGN			AML	AML		
	comp=N,11950μm,1.6s					
FAGN			AML	AML		
	comp=E,27000μm,0.4s					
FAGN			AML	AML		
	comp=N,33550μm,0.5s					
MGAB	**Montegabbione**	**0.69 278**	P	**Pg**	**07 05 13.1**	**+0.1**
MGAB			AML	AML		
	comp=E,8885μm,1.5s					
MGAB			AML	AML		
	comp=N,8770μm,0.9s					
MGAB			AML	AML		
	comp=E,10010μm,1.4s					
MGAB			AML	AML		
	comp=N,8630μm,1.5s					
MGAB			AML	AML		
	comp=E,8880μm,1.5s					
MGAB			AML	AML		
	comp=N,8765μm,0.9s					
MGAB			AML	AML		
	comp=E,10025μm,1.4s					
PP3	**Marolino**	**0.69 37**	P	**Pb**	**07 05 13.5**	**+0.1**
PP3			AML	AML		
	comp=E,16300μm,0.5s					
PP3			AML	AML		
	comp=N,15300μm,0.4s					
PP3			AML	AML		
	comp=E,16800μm,0.5s					
PP3			AML	AML		
	comp=N,15200μm,0.4s					
PP3			AML	AML		
	comp=E,46750μm,0.6s					
PP3			AML	AML		
	comp=E,47350μm,0.6s					
PP3			AML	AML		
	comp=N,24500μm,0.6s					
PP3			AML	AML		
	comp=N,27500μm,0.7s					
PP3			AML	AML		
	comp=N,15179μm,0.4s					
SRES	**S.Oreste - Sor**	**0.71 214**	P	**Pg**	**07 05 12.9**	**-0.4**
SRES			S	**Sb**	**07 05 24.0**	**+0.6**
SRES			AML	AML		
	comp=E,6870μm,1.4s					
SRES			AML	AML		
	comp=N,8900μm,0.4s					
SRES			AML	AML		
	comp=N,8322μm,0.7s					

TB01	**Gubbio**	**0.71 322**	P	**Pg**	**07 05 12.4**	**-1.1**
ATVA	**AVT- Monte Val**	**0.72 309**	P	**Pg**	**07 05 13.7**	**+0.2**
ATVO	**AVT- Monte Val**	**0.73 320**	P	**Pb**	**07 05 14.0**	**-0.1**
VCEL	**Villa Celiera**	**0.73 126**	P	**Pg**	**07 05 13.2**	**-0.6**
VCEL			AML	AML		
	comp=E,14000μm,1.5s					
VCEL			AML	AML		
	comp=N,12850μm,1.5s					
VCEL			AML	AML		
	comp=E,23850μm,0.8s					
VCEL			AML	AML		
	comp=N,37250μm,1.4s					
VCEL			AML	AML		
	comp=E,9852μm,0.3s					
ATPI	**Pietralunga -**	**0.78 323**	AML	AML		
	comp=N,2370μm,0.5s					
ATPI			AML	AML		
	comp=E,2690μm,1.1s					
ATPI			AML	AML		
	comp=E,3595μm,1.2s					
ATPI			AML	AML		
	comp=N,3995μm,0.6s					
T0110	**Collepietro**	**0.81 137**	P	**Pg**	**07 05 14.2**	**-1.1**
T0110			AML	AML		
	comp=E,15400μm,0.7s					
T0110			AML	AML		
	comp=N,14350μm,1.4s					
T0110			AML	AML		
	comp=E,21800μm,0.4s					
T0110			AML	AML		
	comp=N,25250μm,0.4s					
AOI	**Ancona**	**0.83 29**	P	**Pg**	**07 05 15.8**	**+0.1**
AOI			AML	AML		
	comp=E,4180μm,0.4s					
AOI			AML	AML		
	comp=N,3810μm,0.8s					
AOI			AML	AML		
	comp=E,4385μm,0.3s					
AOI			AML	AML		
	comp=N,4390μm,0.4s					
AOI			AML	AML		
	comp=E,3800μm,0.4s					
MTCE	**Montecelio**	**0.83 196**	P	**Pg**	**07 05 14.8**	**-0.8**
MTCE			AML	AML		
	comp=E,4275μm,0.9s					
MTCE			AML	AML		
	comp=N,4610μm,1.0s					
MTCE			AML	AML		
	comp=N,6855μm,1.6s					
MTCE			AML	AML		
	comp=E,9345μm,0.9s					
MTCE			AML	AML		
	comp=E,3576μm,0.5s					
SACS	**San Casciano d**	**0.83 272**	P	**Pg**	**07 05 15.5**	**-0.2**
SACS			AML	AML		
	comp=E,4290μm,0.8s					
SACS			AML	AML		
	comp=N,4370μm,1.2s					
SACS			AML	AML		
	comp=N,3416μm,1.6s					
CERT	**Cerreto**	**0.88 183**	P	**Pg**	**07 05 16.1**	**-0.4**
CERT			AML	AML		
	comp=E,13750μm,0.7s					
CERT			AML	AML		
	comp=N,5900μm,0.4s					
CERT			AML	AML		
	comp=N,5901μm,0.4s					
BADI	**Badiali**	**0.90 320**	AML	AML		
	comp=N,2541μm,0.5s					
CAFI	**Castiglion Fio**	**0.94 303**	P	**Pg**	**07 05 17.6**	**-0.1**
CAFI			AML	AML		
	comp=E,5040μm,0.9s					
CAFI			AML	AML		
	comp=E,5120μm,0.9s					
CAFI			AML	AML		
	comp=N,5280μm,1.0s					
CAFI			AML	AML		
	comp=N,5125μm,1.0s					
CAFI			AML	AML		
	comp=E,3861μm,0.5s					
CAFI			AML	AML		
	comp=N,3609μm,0.8s					
LATE	**Laterza**	**0.94 257**	Pg	**Pg**	**07 05 16.8**	**-0.9**
RCAV	**Rocca di Cave**	**0.98 184**	AML	AML		
	comp=N,6905μm,0.9s					
RCAV			AML	AML		
	comp=E,7115μm,0.4s					
RCAV			AML	AML		
	comp=E,11135μm,1.1s					
RCAV			AML	AML		
	comp=N,6900μm,0.9s					
RCAV			AML	AML		
	comp=N,6578μm,1.3s					
MCIV	**Monte Civitell**	**1.01 268**	AML	AML		
	comp=E,2090μm,0.8s					
MCIV			AML	AML		
	comp=N,1705μm,0.7s					
MCIV			AML	AML		
	comp=N,1181μm,0.7s					
SF04	**Casetta**	**1.02 271**	AML	AML		
	comp=E,2290μm,0.7s					
SF04			AML	AML		
	comp=N,2012μm,0.3s					
VVLD	**Villa Vallelon**	**1.05 156**	P	**Pb**	**07 05 19.2**	**-0.4**
TOLF	**Tolfa**	**1.08 226**	P	**Pb**	**07 05 19.2**	**-0.9**
TOLF			AML	AML		
	comp=E,3120μm,0.5s					
TOLF			AML	AML		
	comp=N,2530μm,1.4s					
TOLF			AML	AML		
	comp=E,2787μm,0.4s					
RDP	**Rocca di Papa**	**1.09 193**	P	**Pn**	**07 05 20.6**	**0.0**
RDP			AML	AML		
	comp=E,21350μm,0.5s					
RDP			AML	AML		
	comp=N,17600μm,0.5s					
LPEL	**Lama dei Pelig**	**1.15 132**	P	**Pb**	**07 05 20.6**	**-0.7**
LPEL			AML	AML		
	comp=N,3645μm,0.5s					
LPEL			AML	AML		
	comp=E,5795μm,0.5s					
LAV9	**Lanuvio**	**1.18 193**	P	**Pg**	**07 05 22.1**	**-0.1**
POFI	**Posta Fibreno**	**1.21 156**	P	**Pn**	**07 05 22.0**	**-0.3**
LRP	**Arpino**	**1.25 161**	P	**Pg**	**07 05 23.4**	**-0.1**
GIUL	**Giuliano Di Ro**	**1.28 173**	P	**Pn**	**07 05 23.1**	**0.0**
CSNT	**Castellina Chi**	**1.44 297**	P	**Pb**	**07 05 25.9**	**-0.3**
FROS	**Frosini**	**1.44 286**	P	**Pb**	**07 05 25.8**	**-0.4**
OSSC	**Osservatorio P**	**1.49 299**	Pn	**Pn**	**07 05 25.4**	**-0.7**
RUFI	**Rufina**	**1.51 313**	P	**Pn**	**07 05 26.6**	**+0.3**
TRIF	**Trifonti**	**1.60 281**	P	**Pn**	**07 05 27.7**	**+0.2**
TRIF			AML	AML		
	comp=E,1031μm,1.0s					
TRIF			AML	AML		
	comp=N,800μm,0.8s					
CASP	**Castiglione de**	**1.60 270**	Pn	**Pn**	**07 05 27.8**	**+0.2**
MTCR	**Monte La Croce**	**1.91 310**	P	**Pn**	**07 05 32.5**	**+0.5**
PAOL	**Paolisi**	**2.12 147**	Pn	**Pn**	**07 05 34.4**	**-0.4**
VLC	**Villacollemand**	**2.35 306**	Pn	**Pn**	**07 05 37.7**	**-0.1**
MORSI	**Morsiglia**	**2.71 274**	S	**Pn**	**07 05 44.0**	**+1.3**
SMPL	**Sampolo**	**2.88 257**	S	**Pn**	**07 05 46.0**	**+1.0**
PGF	**Pioggiola**	**2.99 266**	*e*Pn	**Pn**	**07 05 45.1**	**-1.7**
PGF	**Pioggiola**	**2.99 266**	*e*P	**Pn**	**07 05 47.9**	**+1.1**
PGF			*e*Sn	**Sn**	**07 06 18.9**	**-3.7**
	comp=N,12nm,0.3s					
PGF	**Pioggiola**	**2.99 266**	S	**Pn**	**07 05 47.9**	**+1.1**
AJAC	**Base Areonaval**	**3.29 256**	S	**Pn**	**07 05 52.5**	**+1.7**
CUC	**Castrocucco**	**3.52 143**	Pn	**Pn**	**07 05 52.9**	**-1.0**
SBF	**Sospel**	**4.22 286**	*e*Pn	**Pn**	**07 06 01.4**	**-2.2**
SBF	**Sospel**	**4.22 286**	*e*P	**Pn**	**07 06 06.4**	**+2.8**
SBF			*e*Sn	**Sn**	**07 06 56.7**	**+3.9**
	comp=N,90nm,0.6s					
TURF	**col de Turini**	**4.28 288**	S	**Pn**	**07 06 05.9**	**+1.4**
DAVOX	**Davos/Dischmat**	**4.55 331**	Pn	Pn	07 06 13.2	+4.9
	comp=N,4.2nm,0.3s,baz=160,slow=22,SNR=1.7					
	comp=N,21nm,0.5s					
LMR	**La Mourre**	**4.81 278**	*e*Pn	**Pn**	**07 06 09.0**	**-2.7**
LMR	**La Mourre**	**4.81 278**	*e*P	**Pn**	**07 06 12.2**	**+0.5**
SURF	**Saint Ours**	**4.81 292**	S	**Pn**	**07 06 13.4**	**+1.5**
JAUF	**Jausiers**	**4.84 291**	S	**Pn**	**07 06 15.3**	**+3.1**
MBDF	**Montbardon**	**4.92 295**	*e*Pn	**Pn**	**07 06 12.0**	**-1.4**
MBDF	**Montbardon**	**4.92 295**	*e*P	**Pn**	**07 06 15.9**	**+2.5**
MBDF			*e*Sn	**Sn**	**07 07 06.3**	**-3.9**
	comp=N,43nm,0.7s					
CREF	**Crivoux**	**4.96 293**	S	**Pn**	**07 06 17.9**	**+3.9**
LPG	**La Plagne**	**5.25 303**	*e*Pn	**Pn**	**07 06 16.4**	**-1.6**
LPG	**La Plagne**	**5.25 303**	*e*P	**Pn**	**07 06 20.3**	**+2.3**

LPG			*e*Sn	**Sn**	**07 07 18.0**	**-0.6**
	comp=N,47nm,0.7s					
LPL	**La Plagne**	**5.28 303**	*e*Pn	**Pn**	**07 06 17.8**	**-0.5**
LPL	**La Plagne**	**5.28 303**	*e*P	**Pn**	**07 06 21.2**	**+2.9**
LPL			*e*Sn	**Sn**	**07 07 14.4**	**-4.6**
	comp=N,41nm,0.7s					
TIR	**Tirane**	**5.29 104**	Pn	**Pn**	**07 06 18.5**	**+0.3**
SMRF	**Simiane la Rot**	**5.56 284**	*e*Pn	**Pn**	**07 06 20.2**	**-1.8**
SMRF	**Simiane la Rot**	**5.56 284**	*e*P	**Pn**	**07 06 24.8**	**+2.8**
SMRF			*e*Sn	**Sn**	**07 07 20.9**	**-4.9**
	comp=N,31nm,0.8s					
ORIF	**Oris-en-Rattie**	**5.58 294**	*e*Pn	**Pn**	**07 06 20.8**	**-1.6**
ORIF	**Oris-en-Rattie**	**5.58 294**	*e*P	**Pn**	**07 06 25.7**	**+3.3**
ORIF			*e*Sn	**Sn**	**07 07 23.1**	**-3.3**
	comp=N,66nm,0.8s					
CABF	**La Chapelle**	**6.24 310**	*e*P	**Pn**	**07 06 34.3**	**+3.0**
VIVF	**Saint-Julien-l**	**6.38 291**	*e*Pn	**Pn**	**07 06 32.8**	**-0.5**
VIVF	**Saint-Julien-l**	**6.38 291**	*e*P	**Pn**	**07 06 36.9**	**+3.6**
LASF	**Ste Croix**	**6.80 284**	*e*Pn	**Pn**	**07 06 37.3**	**-1.7**
LASF	**Ste Croix**	**6.80 284**	*e*P	**Pn**	**07 06 40.0**	**+1.0**
CDF	**Champ du Feu**	**6.89 326**	*e*Pn	**Pn**	**07 06 38.3**	**-2.1**
CDF	**Champ du Feu**	**6.89 326**	*e*P	**Pn**	**07 06 42.1**	**+1.7**
KEST	**Kesra**	**7.64 203**	Pn	**Pn**	**07 06 52.5**	**+1.8**
	comp=N,0.6nm,0.3s,baz=237,slow=4.1,SNR=2.0					
LOR	**Lormes**	**7.87 307**	*e*Pn	**Pn**	**07 06 50.5**	**-3.2**
	baz=110					
LOR	**Lormes**	**7.87 307**	*e*P	**Pn**	**07 06 57.1**	**+3.4**
MTLF	**Montolieu**	**7.94 277**	*e*Pn	**Pn**	**07 06 52.7**	**-2.0**
MTLF	**Montolieu**	**7.94 277**	*e*P	**Pn**	**07 06 58.2**	**+3.5**
AVF	**Avril sur Loir**	**7.95 303**	*e*P	**Pn**	**07 06 59.1**	**+4.4**
BMRD	**Maredsous**	**9.40 326**	*d*P	**Pn**	**07 07 13.4**	**-1.2**
BR131	**Keskin Array S**	**15.79 94**	IAmb	IAmb	07 09 23.6	
	comp=Z,16nm,1.4s					
BR131	**Keskin Array S**	**15.79 94**	Pn	**Pn**	**07 08 40.0**	**-1.6**
BRTR	**Keskin Array B**	**15.79 94**	Pn	**Pn**	**07 08 40.6**	**-1.1**
EKA	**Eskdalemuir Ar**	**16.36 326**	Pn	**P**	**07 08 52.2**	**+0.7**
	baz=135,slow=14					
	comp=Z,0.2nm,0.3s					
FINES	**FINESS Array B**	**20.22 18**	P	Pn	07 09 38.3	+2.4
	comp=Z,6.1nm,0.8s,baz=186,slow=10.0,SNR=8.4					
	comp=Z,6.1nm,0.8s					
KBZ	**Khabaz**	**21.71 77**	P	**P**	**07 09 52.4**	**+2.3**
	comp=Z,2.3nm,0.8s,baz=298,slow=3.6,SNR=3.6					
	comp=Z,2.3nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.16 202**	P	**P**	**07 11 18.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=21,slow=9.5,SNR=3.0					
	comp=Z,0.4nm,0.5s					
MKAR	**Makanchi Array**	**47.84 60**	P	**P**	**07 13 37.0**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=287,slow=5.9,SNR=3.7					
	comp=Z,1.1nm,0.8s					
MKAR	**Makanchi Array**	**47.84 60**	P	**P**	**07 13 36.0**	**-0.7**
SONM	**Songino Array**	**61.87 50**	P	**P**	**07 15 21.0**	**+2.5**
	comp=Z,1.0nm,0.9s,baz=297,slow=6.3,SNR=3.9					
	comp=Z,1.0nm,0.9s					

*PRU **30** 07:05:55.1±0.0, 42°.70N×14°.13E, h10^{km}, M4.3*
*ROM **30** 07:05:56.3±0.1, 42°.796N±0°.003×13°.161E±0°.005, h9^{km}, ML4.1/15, Error ellipse: s-maj=0.4km s-min=0.2km az=66.0*
*LDG **30** 07:05:56.1±0.3, 42°.80N×13°.23E, h10^{km}, Ml3.5/6, Error ellipse: s-maj=9.6km s-min=5.2km az=46.0*
*IDC **30** 07:05:56.8±0.8, 42°.75N×13°.07E, h0^{km}, mb3.9/11, mbtmp3.9/19, ML3.7/7, Error ellipse: s-maj=16.6km s-min=15.2km az=177.0*
*NEIC **30** 07:05:59.5±1.7, 42°.92N±0°.06×13°.11E±0°.06, h10^{km}±2^{km}, mb4.3/6, ML4.1(ROM), ML4.1(VIE), Error ellipse: s-maj=9.9km s-min=7.2km az=205.0*

ISC 30 07:05:57.5±0.8, **42°.79N**±0°.02×**13°.14E**±0°.02, **h6**^{km}±5^{km}, **n149**, σ1$**72**/180, **mb4.2**/13, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**27**	P	**Pg**	**07 05 58.3**	**-1.0**
T1245				S	**Sg**	**07 05 59.7**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1244	**Arquata del Tr**	**0.12**	**107**	P	**Pg**	**07 05 59.5**	**-0.5**
T1244				S	**Sg**	**07 06 01.8**	**+0.1**
MC2	**Monte Cornacci**	**0.12**	**16**	P	**Pg**	**07 05 59.5**	**-0.7**
MC2				S	**Sg**	**07 06 01.9**	**-0.1**
T1216	**Preci, Frazion**	**0.14**	**317**	P	**Pg**	**07 05 59.8**	**-0.5**
T1216				S	**Sg**	**07 06 02.5**	**+0.3**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1201	**Domo (RI)**	**0.16**	**150**	P	**Pg**	**07 06 00.4**	**-0.3**
T1201				S	**Sg**	**07 06 03.5**	**+0.7**
T1204	**Amatrice, Fraz**	**0.17**	**132**	P	**Pg**	**07 06 00.5**	**-0.5**
T1204				S	**Sg**	**07 06 03.6**	**+0.3**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1217	**Poggiodomo (PG**	**0.18**	**243**	P	**Pg**	**07 06 01.1**	**0.0**
T1217				S	**Sg**	**07 06 03.8**	**+0.5**
T1217				AML	AML		
	comp=E,57850μm,1.6s						
T1217				AML	AML		
	comp=N,79600μm,1.4s						
T1217				AML	AML		
	comp=E,54700μm,1.6s						
T1217				AML	AML		
	comp=N,84000μm,1.4s						
T1217				AML	AML		
	comp=E,61400μm,0.2s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,61350μm,0.2s						
T1217				AML	AML		
	comp=E,53132μm,1.3s						
T1217				AML	AML		
	comp=E,29936μm,1.2s						
T1215	**Vallo di Nera,**	**0.20**	**273**	P	**Pg**	**07 06 01.4**	**-0.1**
T1215				S	**Sg**	**07 06 04.9**	**+0.7**
T1215				AML	AML		
	comp=E,39550μm,1.5s						
T1215				AML	AML		
	comp=N,43750μm,1.6s						
T1215				AML	AML		
	comp=E,40850μm,1.5s						
T1215				AML	AML		
	comp=E,40900μm,1.5s						
T1215				AML	AML		
	comp=N,43300μm,0.8s						
LNSS	**Leonessa**	**0.20**	**202**	P	**Pg**	**07 06 02.2**	**+0.7**
LNSS				S	**Sg**	**07 06 04.9**	**+0.6**
T1241	**Roccafluvione,**	**0.22**	**73**	P	**Pg**	**07 06 01.8**	**-0.1**
T1241				S	**Sg**	**07 06 05.6**	**+0.8**
T1241				AML	AML		
T1241				AML	AML		
T1256	**Bolognola (MC)**	**0.22**	**16**	P	**Pg**	**07 06 01.4**	**-0.5**
T1256				S	**Sg**	**07 06 04.2**	**-0.7**
AM05	**Amandola Campo**	**0.24**	**40**	P	**Pg**	**07 06 01.6**	**-0.6**
AM05				S	**Sg**	**07 06 05.4**	**0.0**
AM05				AML	AML		
	comp=E,62400μm,0.9s						
AM05				AML	AML		
	comp=N,17600μm,1.6s						
AM05				AML	AML		
	comp=N,2505μm,0.2s						
AM05				AML	AML		
	comp=E,14900μm,0.9s						
T1243	**Rocca Santa Ma**	**0.24**	**113**	P	**Pg**	**07 06 02.1**	**-0.1**
T1243				S	**Sg**	**07 06 05.3**	**-0.2**
RM33	**Pellescritta (**	**0.29**	**170**	P	**Pg**	**07 06 02.4**	**-0.7**
RM33				S	**Sg**	**07 06 07.2**	**+0.3**
RM33				AML	AML		
	comp=E,58750μm,0.4s						
RM33				AML	AML		
	comp=N,69350μm,0.9s						
RM33				AML	AML		
	comp=N,68600μm,0.9s						
RM33				AML	AML		
	comp=E,58800μm,0.4s						
RM33				AML	AML		
	comp=N,69400μm,0.9s						
RM33				AML	AML		

comp=N,68550µm,0.9s
RM33 AML AML
comp=E,60650µm,0.4s
GUMA Gualdo di Mace 0.30 27 P **Pg** **07 06 03.0 -0.5**
GUMA S **Sg** **07 06 08.4 +0.9**
T1246 Crognaleto (TE 0.33 129 P **Pg** **07 06 04.0 0.0**
T1246 S **Sg** **07 06 08.2 -0.1**
ARRO Arrone 0.35 233 P **Pg** **07 06 05.0 +0.7**
T1247 Pizzolo (AQ) 0.37 162 P **Pg** **07 06 03.8 -0.8**
T1247 S **Sg** **07 06 09.9 +0.4**
TERO Teramo 0.38 116 P **Pg** **07 06 04.4 -0.5**
TERO S **Sg** **07 06 09.5 -0.3**
TERO AML AML
comp=E,42300µm,0.8s
TERO AML AML
comp=N,48100µm,0.7s
TERO AML AML
comp=N,46950µm,0.7s
TERO AML AML
comp=E,41200µm,0.8s
PIO1 Pioraco 0.40 343 P **Pg** **07 06 04.3 -1.0**
PIO1 S **Sg** **07 06 11.2 +0.6**
MNTP Montappone 0.42 35 P **Pg** **07 06 05.5 -0.1**
MNTP AML AML
comp=N,46700µm,1.6s
MNTP AML AML
comp=E,51850µm,1.6s
OFFI Offida 0.42 70 P **Pg** **07 06 05.1 -0.6**
ASSB Assisi San Ben 0.44 305 P **Pg** **07 06 05.2 -0.7**
ASSB S **Sg** **07 06 12.0 +0.3**
ASSB AML AML
comp=E,19950µm,1.3s
ASSB AML AML
comp=N,16550µm,0.7s
GAG1 Gagliole 0.45 353 P **Pg** **07 06 05.8 -0.4**
GAG1 S **Sg** **07 06 13.2 +1.1**
CESX Cesi 0.45 247 P **Pg** **07 06 06.0 -0.2**
GIGS Gran Sasso 0.46 137 P **Pg** **07 06 05.5 -0.9**
GIGS S **Sg** **07 06 12.2 -0.3**
GIGS AML AML
comp=N,9265µm,1.5s
GIGS AML AML
comp=E,8195µm,1.6s
AQU L'Aquila 0.48 156 P **Pg** **07 06 06.4 -0.3**
AQU AML AML
comp=E,50850µm,1.2s
AQU AML AML
comp=E,51050µm,1.2s
AQU AML AML
comp=N,25900µm,1.2s
AQU AML AML
comp=N,26800µm,1.6s
FIAM Fiamignano 0.52 182 P **Pg** **07 06 06.6 -1.0**
ATCC AVT- Casa Cast 0.54 317 P **Pg** **07 06 07.1 -0.8**
ATCC S **Sg** **07 06 16.0 +1.1**
ATCC AML AML
comp=E,36150µm,1.5s
ATCC AML AML
comp=N,27200µm,1.6s
FOSV Fossato di Vic 0.57 331 P **Pg** **07 06 07.6 -1.0**
FOSV S **Sg** **07 06 16.7 +0.6**
MURB Monte Urbino 0.65 316 Pg **Pg** **07 06 10.6 +0.5**
PP3 Marolino 0.68 30 AML AML
comp=N,24500µm,0.6s
PP3 AML AML
comp=E,46750µm,0.6s
PP3 AML AML
comp=E,47350µm,0.6s
PP3 AML AML
comp=N,27500µm,0.7s
PP3 AML AML
comp=E,46800µm,0.6s
ATTE AVT- Monte Tez 0.71 305 P **Pg** **07 06 10.8 -0.3**
MGAB Montegabbione 0.77 279 P **Pb** **07 06 13.0 -0.3**
ATVA AVT- Monte Val 0.80 308 P **Pg** **07 06 12.2 -0.6**
ATVO AVT- Monte Val 0.80 318 P **Pg** **07 06 12.4 -0.4**
ATBU Serra di Buran 0.81 328 P **Pg** **07 06 12.3 -0.7**
MTCE Montecelio 0.82 201 P **Pg** **07 06 11.8 -1.5**
CERT Cerreto 0.85 188 P **Pg** **07 06 13.0 -0.8**
SACS San Casciano d 0.91 274 P **Pg** **07 06 14.9 0.0**
ATMC Monte Cedrone 0.96 314 P **Pg** **07 06 14.4 -1.5**
INTR Introdacqua 0.96 144 **Pn** **07 06 20.1 +2.4**
LATE Laterza 1.00 260 Pg **Pb** **07 06 17.3 0.0**
LPEL Lama dei Pelig 1.07 134 AML AML
comp=N,5390µm,1.6s
LPEL AML AML
comp=E,6585µm,0.8s
TOLF Tolfa 1.12 230 P **Pg** **07 06 18.4 -0.5**
TOLF AML AML
comp=E,3925µm,1.6s
TOLF AML AML
comp=N,3010µm,1.2s
GIUL Giuliano Di Ro 1.24 176 P **Pg** **07 06 20.6 -0.5**
OSSC Osservatorio P 1.57 298 Pn **Pb** **07 06 26.9 0.0**
CASP Castiglione de 1.68 271 Pn **Pn** **07 06 27.1 -0.3**
ZCCA Zocca 2.22 315 Pn **Pn** **07 06 34.4 -0.5**
VLC Villacollemand 2.43 305 Pn **Pn** **07 06 37.6 -0.1**
PRMA PARMA 2.84 315 Pn **Pn** **07 06 43.9 +0.5**
MSSA Maissana 3.04 301 Pn **Pn** **07 06 46.1 -0.2**
PGF Pioggiola 3.07 267 *e*Pn **Pn** **07 06 43.2 -3.4**
PGF Pioggiola 3.07 267 *e*P **Pn** **07 06 47.3 +0.7**
PGF *e*Sn **Sn** **07 07 17.6 -6.1**
comp=N,70nm,0.8s
CTI Castel Tesino 3.43 342 Pn **Pn** **07 06 51.5 -0.1**
CUC Castrocucco 3.44 143 Pn **Pb** **07 06 55.6 -3.4**
STAL STALIGIAL 3.48 355 Pn **Pn** **07 06 51.0 -1.3**
CLUD Cludinico 3.67 357 Pn **Pn** **07 06 54.6 -0.2**
SBF Sospel 4.30 286 *e*Pn **Pn** **07 07 00.4 -3.2**
SBF Sospel 4.30 286 *e*P **Pn** **07 07 05.1 +1.5**
SBF *e*Sn **Sn** **07 07 49.1 -5.0**
comp=N,25nm,0.5s
FUORN Ofenpass-Fuorn 4.34 333 **Pn** **07 07 02.6 -1.7**
PDG Podgorica 4.53 93 Pn **Pn** **07 07 08.2 +1.6**
TIP Timpagrande 4.53 142 Pn **Pn** **07 07 10.8 +4.1**
TUE Stuetta 4.57 325 Pn **Pn** **07 07 06.3 -1.1**
DAVOX Davos/Dischmat 4.62 331 Pn **Pn** **07 07 09.7 +1.7**
comp=N,9.4nm,0.3s,baz=164,slow=20,SNR=9.2
DAVOX Sn **Sn** **07 08 05.2 +3.2**
comp=N,4.0nm,0.3s,baz=194,slow=20,SNR=4.1
comp=N,102nm,0.8s
SQTA Sankt Quirin 4.64 343 **Pn** **07 07 10.0 +1.8**
SQTA Sankt Quirin 4.64 343 *e*Pn **Pn** **07 07 10.0 +1.8**
WATA Walderalm 4.68 347 **Pn** **07 07 08.8 0.0**
WATA Walderalm 4.68 347 *e*Pn **Pn** **07 07 08.8 0.0**
comp=N,38nm,0.5s
ARSA Arzberg 4.77 20 *e*Pn **Pn** **07 07 07.6 -2.3**
comp=N,8.3nm,0.4s
LMR La Mourre 4.89 279 *e*Pn **Pn** **07 07 07.0 -4.6**
LMR La Mourre 4.89 279 *e*P **Pn** **07 07 11.1 -0.5**
LMR La Mourre 4.89 279 *e*Sn **Pn** **07 07 10.6 -1.0**
comp=N,41nm,0.7s
BIOA Bad Ischl, Aus 4.91 4 **Pn** **07 07 13.4 +1.5**
BIOA Bad Ischl, Aus 4.91 4 *e*Pn **Pn** **07 07 13.5 +1.5**
comp=N,25nm,0.4s
RETA Reutte 4.99 341 *e*Pn **Pn** **07 07 14.5 +1.5**
comp=N,11nm,0.4s
MBDF Montbardon 5.00 295 *e*Pn **Pn** **07 07 12.2 -1.1**
MBDF Montbardon 5.00 295 *e*P **Pn** **07 07 15.4 +2.1**
MBDF *e*Sn **Sn** **07 08 05.7 -5.9**
comp=N,36nm,0.7s
DAVA Damuels 5.05 334 *e*Pn **Pn** **07 07 14.2 +0.2**
comp=N,27nm,0.6s
MOA Molln 5.12 8 *e*Pn **Pn** **07 07 16.1 +1.3**
comp=N,21nm,0.5s
DIVS Divibare 5.15 73 Pn **Pn** **07 07 16.0 +0.7**
TIR Tirane 5.21 104 Pn **Pn** **07 07 16.5 +0.6**
CLTB Caltabellotta 5.21 179 Pn Pn 07 07 20.9 +4.8
VLO Vlora 5.29 114 Pn **Pn** **07 07 20.4 +3.2**
LPG La Plagne 5.34 303 *e*Pn **Pn** **07 07 16.0 -2.0**
LPG La Plagne 5.34 303 *e*P **Pn** **07 07 20.0 +2.0**
LPG *e*Sn **Sn** **07 08 15.1 -4.8**
comp=N,41nm,0.8s
LPL La Plagne 5.36 303 *e*Pn **Pn** **07 07 16.6 -1.6**
LPL La Plagne 5.36 303 *e*P **Pn** **07 07 19.9 +1.7**
LPL *e*Sn **Sn** **07 08 15.3 -5.0**
comp=N,31nm,0.7s
RONA Rosalia, Austr 5.39 23 **Pn** **07 07 19.8 +1.3**
RONA Rosalia, Austr 5.39 23 *e*Pn **Pn** **07 07 19.8 +1.3**
comp=N,8.6nm,0.4s
CONA Conrad Observa 5.48 20 *e*Pn **Pn** **07 07 20.4 +0.6**
comp=N,20nm,0.5s
SENIN Lac Senin/Sane 5.49 313 Pn **Pn** **07 07 21.5 +1.5**
SMRF Simiane la Rot 5.64 285 *e*Pn **Pn** **07 07 19.3 -2.7**
SMRF Simiane la Rot 5.64 285 *e*P **Pn** **07 07 23.6 +1.6**
SMRF *e*Sn **Sn** **07 08 20.1 -7.0**
comp=N,5.3nm,0.4s
ORIF Oris-en-Rattie 5.67 295 *e*P **Pn** **07 07 25.0 +2.7**
KEK Kerkira 5.88 119 Pn **Pn** **07 07 26.0 +0.7**
GEC2 GERESS Array S 6.07 3 Pn **Pn** **07 07 27.9 +0.1**
GERES GERESS Array B 6.07 3 Pn **Pn** **07 07 27.8 -0.1**
comp=N,0.9nm,0.3s,baz=180,slow=14,SNR=2.2
comp=N,3.2nm,0.3s
GERES GERESS Array B 6.07 3 Pn **Pn** **07 07 26.6 -1.2**
CABF La Chapelle 6.31 310 *e*P **Pn** **07 07 32.3 +1.1**
KHC Kasperske Hory 6.35 3 Pn **Pn** **07 07 31.2 -0.4**
KHC Kasperske Hory 6.35 3 *e*PN **Pn** **07 07 30.0 -1.6**
KHC *e*SN **Sn** **07 08 40.4 -4.0**
VIVF Saint-Julien-l 6.47 291 *e*Pn **Pn** **07 07 30.3 -3.0**
VIVF Saint-Julien-l 6.47 291 *e*P **Pn** **07 07 34.6 +1.3**
BFO Black Forest 6.49 330 Pn **Pn** **07 07 33.0 -0.5**
SSB Saint Sauveur 6.68 295 Pn **Pn** **07 07 37.2 +1.0**
HINF Hinteralfeld 6.70 321 *e*P **Pn** **07 07 36.5 0.0**
ECH Echery 6.86 324 **Pn** **07 07 38.5 -0.2**
CDF Champ du Feu 6.96 326 *e*P **Pn** **07 07 40.1 0.0**
HAU Haudompre 7.07 320 *e*P **Pn** **07 07 42.2 +0.6**
VTS Vitosha 7.44 88 Pn **Pn** **07 07 47.4 +0.7**
KEST Kesra 7.64 204 Pn **Pn** **07 07 52.0 +2.6**
comp=N,0.7nm,0.3s,baz=200,slow=3.9,SNR=5.0
KEST Kesra 7.64 204 **Pn** **07 07 52.0 +2.6**
SMF Signal de Mont 7.66 303 *e*P **Pn** **07 07 49.6 -0.1**
PAGF Fort de Pagny 7.76 321 *e*P **Pn** **07 07 51.1 +0.2**
SFTF Sexfontaines 7.85 316 *e*P **Pn** **07 07 53.2 +0.9**
baz=129
AVF Avril sur Loir 8.03 303 *e*P **Pn** **07 07 55.1 +0.5**
MEZF Maizieres J'vi 8.04 318 *e*P **Pn** **07 07 57.3 +2.5**
CAF Calviac 8.29 289 *e*P **Pn** **07 07 59.1 +0.9**
WLF Walferdange 8.41 327 Pn **Pn** **07 07 59.4 -0.5**
CLL Collm 8.52 359 *e*Pn **Pn** **07 08 05.0 +3.6**
CLL *e*Sn **Sn** **07 09 34.0 -3.8**
CLL *ex* x 07 10 01.0
CLL *e*Sg **Sg** **07 10 30.0 -0.8**
comp=Z,59nm,1.3s
RDO Rodhopi 9.38 96 Pn **Pn** **07 08 14.1 +1.0**
MLR Muntele Rosu 9.59 69 Pn **Pn** **07 08 19.6 +3.4**
comp=Z,0.4nm,0.3s,baz=139,slow=9.6,SNR=3.3
comp=Z,3.7nm,0.6s
BURAR Bucovina Array 9.79 56 Pn **Pn** **07 08 19.0 +0.1**
ESDC Sonseca Array 13.25 262 Pn **Pn** **07 09 03.5 -2.7**
comp=Z,0.1nm,0.3s,baz=71,slow=13,SNR=6.6
comp=Z,1.2nm,0.8s
ANTO Ankara 15.05 95 Pn **Pn** **07 09 33.0 +2.2**
BRTR Keskin Array B 15.71 94 Pn **Pn** **07 09 40.2 +0.7**
baz=287,slow=15,SNR=1.5
comp=Z,0.5nm,0.8s
EKA Eskdalemuir Ar 16.43 325 Pn **Pn** **07 09 48.1 -0.3**
baz=135,slow=14
comp=Z,0.9nm,0.5s
HFS Hagfors 17.37 1 P **P** **07 10 01.7 0.0**
comp=Z,1.8nm,0.8s,baz=168,slow=16,SNR=1.2
NOA NORSAR Array B 18.31 357 P **P** **07 10 12.2 0.0**
comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=11
comp=Z,6.9nm,0.8s
NC204 NORSAR Array S 18.57 356 P **P** **07 10 14.4 -0.6**
NC204 IAmb IAmb 07 10 23.7
comp=Z,31nm,1.4s
FIA0 FINESS Array S 20.23 18 P **P** **07 10 32.2 -0.8**
FINES FINESS Array B 20.23 18 P **P** **07 10 32.9 -0.1**
comp=Z,4.4nm,0.9s,baz=199,slow=9.5,SNR=5.6
comp=Z,4.4nm,0.9s
FINES FINESS Array B 20.23 18 P **P** **07 10 33.4 +0.4**
KIV Kislovodsk 21.46 77 P **P** **07 10 47.7 +1.1**
ASF Jabal al Asfar 21.56 112 P **P** **07 10 48.3 +0.6**
comp=Z,1.3nm,0.3s,baz=206,slow=5.7,SNR=1.5
comp=Z,1.3nm,0.3s
ONI Oni 22.23 80 P **P** **07 10 56.3 +1.4**
ONI IAmb IAmb 07 11 16.8
comp=Z,16nm,1.3s
GURO Guroymak-BITLI 22.26 91 P **P** **07 10 56.6 +1.3**
GURO IAmb IAmb 07 11 06.1
comp=Z,12nm,1.0s
BELG Belogornoye 24.94 55 P **P** **07 11 23.2 +1.9**
comp=Z,8.2nm,0.8s,baz=74,slow=17,SNR=4.3
comp=Z,8.2nm,0.8s
TORD Torodi Ar. Bea 31.16 202 P **P** **07 12 16.9 -0.3**
comp=Z,2.1nm,0.9s,baz=12,slow=8.8,SNR=7.1
comp=Z,2.1nm,0.9s
TORD Torodi Ar. Bea 31.16 202 P **P** **07 12 17.5 +0.3**
BRVK Borovoye 38.67 54 P **P** **07 13 22.0 +0.3**
BRVK IAmb IAmb 07 13 37.9
comp=Z,5.9nm,1.0s
ZALV Zalesovo Beam 46.94 50 P **P** **07 14 28.8 0.0**
comp=Z,1.0nm,0.5s,baz=280,slow=7.2,SNR=3.8
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 47.79 60 P **P** **07 14 35.2 -0.3**
comp=Z,1.5nm,0.7s,baz=287,slow=6.7,SNR=5.4
comp=Z,1.5nm,0.7s
SONM Songino Array 61.83 50 P **P** **07 16 18.0 +0.6**
comp=Z,1.9nm,1.0s,baz=291,slow=7.9,SNR=6.8
comp=Z,1.9nm,1.0s
ILAR Eielson Array 71.64 351 P **P** **07 17 20.2 +0.8**
comp=Z,0.4nm,0.8s,baz=0.4,slow=4.9,SNR=4.1
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 80.50 321 P **P** **07 18 10.7 0.0**
comp=Z,0.4nm,0.8s,baz=52,slow=5.8,SNR=2.7
comp=Z,0.4nm,0.8s
BDFB Brasilia 80.75 239 P **P** **07 18 11.8 -0.3**
comp=Z,2.6nm,0.9s,baz=113,slow=9.2,SNR=3.4
comp=Z,2.6nm,0.9s
TXAR Lajitas Array 87.71 309 P **P** **07 18 49.3 +1.9**
comp=Z,0.2nm,0.6s,baz=108,slow=2.9,SNR=2.1
comp=Z,0.2nm,0.6s

ROM 30 07:06:45.2±0.1, 42°.874N±0°.003×13°.057E±0°.005,
h10km, ML4.1/9, 1C, Error ellipse: s-maj=0.4km
s-min=0.3km az=271.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**301**	P	Pg	07 06 47.2	+0.1
T1216				S	Sg	07 06 48.6	+0.2
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.09**	**357**	P	Pg	07 06 48.1	+0.3
FEMA				S	Sg	07 06 49.9	+0.3
T1245	**Castelsantange**	**0.10**	**100**	P	Pg	07 06 48.0	+0.1
T1245				S	Sg	07 06 50.2	+0.3
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**69**	P	Pg	07 06 48.6	+0.6
MC2				S	Sg	07 06 50.5	+0.4
T1215	**Vallo di Nera,**	**0.16**	**242**	P	Pg	07 06 49.2	+0.5
T1215				S	Sg	07 06 52.0	+0.9
T1215				AML	AML		
	comp=E,27950µm,1.2s						
T1215				AML	AML		
	comp=N,24050µm,1.0s						
T1215				AML	AML		
	comp=E,27900µm,1.2s						
T1215				AML	AML		
	comp=N,24000µm,1.0s						
T1215				AML	AML		
	comp=N,24050µm,1.0s						
T1215				AML	AML		
	comp=E,27950µm,1.3s						
T1217	**Poggiodomo (PG**	**0.19**	**210**	⇑P	Pg	07 06 49.8	+0.6
T1217				S	Sg	07 06 53.0	+1.1
T1217				AML	AML		
	comp=E,61400µm,0.2s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,61400µm,0.2s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,61350µm,0.2s						
AM05	**Amandola Campo**	**0.24**	**65**	P	Pg	07 06 50.6	+0.5
AM05				S	Sg	07 06 54.7	+1.2
AM05				AML	AML		
	comp=E,7195µm,0.9s						
AM05				AML	AML		
	comp=N,9840µm,0.2s						
AM05				AML	AML		
	comp=E,38300µm,0.8s						
AM05				AML	AML		
	comp=N,1560µm,0.1s						
AM05				AML	AML		
	comp=E,7190µm,0.9s						
AM05				AML	AML		
	comp=E,38250µm,0.8s						
AM05				AML	AML		
	comp=N,1615µm,1.0s						
AM05				AML	AML		
	comp=N,9845µm,0.2s						
AM05				AML	AML		
	comp=N,1558µm,0.1s						
T1201	**Domo (RI)**	**0.26**	**147**	P	Pg	07 06 51.2	+0.7
T1201				S	Sb	07 06 55.9	-0.7
LNSS	**Leonessa**	**0.27**	**183**	P	Pg	07 06 51.2	+0.5
LNSS				S	Sg	07 06 55.6	+1.1
LNSS				AML	AML		
	comp=N,79496µm,0.4s						
T1204	**Amatrice, Fraz**	**0.28**	**136**	P	Pg	07 06 51.2	+0.4
T1204				S	Sb	07 06 55.9	-1.3
T1204				AML	AML		
T1204				AML	AML		
T1241	**Roccafluvione,**	**0.28**	**94**	P	Pb	07 06 51.7	-0.6
T1241				S	Sg	07 06 55.2	+0.7
GUMA	**Gualdo di Mace**	**0.28**	**47**	P	Pg	07 06 51.5	+0.7
GUMA				S	Sb	07 06 56.5	-0.7
GUMA				AML	AML		
	comp=E,74200µm,0.4s						
GUMA				AML	AML		
	comp=N,78950µm,0.5s						
GUMA				AML	AML		
	comp=N,86100µm,0.4s						
GUMA				AML	AML		
	comp=E,67000µm,0.6s						
PIO1	**Pioraco**	**0.31**	**350**	P	Pb	07 06 52.2	-0.6
PIO1				S	Sb	07 06 57.0	-1.0
MDAR	**Monte D'Aria**	**0.32**	**11**	P	Pg	07 06 51.9	+0.1
MDAR				S	Sg	07 06 57.2	+1.1
FIU1	**Fiuminata**	**0.33**	**344**	P	Pg	07 06 52.3	+0.5
FIU1				S	Sb	07 06 57.4	-1.1
ASSB	**Assisi San Ben**	**0.34**	**300**	P	Pg	07 06 52.2	+0.2
ASSB				S	Sg	07 06 57.5	+1.1
T1243	**Rocca Santa Ma**	**0.34**	**122**	P	Pg	07 06 52.2	+0.2
T1243				S	Sg	07 06 57.6	+1.1
GAG1	**Gagliole**	**0.36**	**1**	P	Pg	07 06 53.0	+0.5
GAG1				S	Sb	07 06 59.0	-0.6
ARRO	**Arrone**	**0.36**	**216**	P	Pb	07 06 53.4	-0.4
ARRO				S	Sb	07 06 58.8	-0.8
ARRO				AML	AML		
	comp=E,11788µm,0.2s						
SSM1	**San Severino M**	**0.36**	**14**	P	Pg	07 06 52.7	+0.2
SSM1				S	Sb	07 06 58.7	-0.9
RM33	**Pellescritta (**	**0.38**	**162**	P	Pg	07 06 53.2	+0.4
RM33				S	Sb	07 06 59.1	-1.0
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=E,10976µm,0.2s						
RM33				AML	AML		
MNTP	**Montappone**	**0.40**	**49**	P	Pb	07 06 54.0	-0.4
CAMP	**Campotosto**	**0.43**	**142**	P	Pg	07 06 54.1	+0.5
CAMP				S	Sg	07 07 00.2	+1.0
T1246	**Crognaleto (TE**	**0.43**	**132**	P	Pg	07 06 53.9	+0.2
T1246				S	Sg	07 07 00.4	+0.9
ATCC	**AVT- Casa Cast**	**0.44**	**316**	P	Pg	07 06 54.1	+0.4
CESX	**Cesi**	**0.44**	**233**	P	Pg	07 06 53.9	+0.1
CESX				AML	AML		
	comp=N,14200µm,0.3s						
OFFI	**Offida**	**0.47**	**82**	P	Pb	07 06 55.3	-0.2
T1247	**Pizzolo (AQ)**	**0.47**	**158**	P	Pg	07 06 54.5	+0.2
T1247				AML	AML		
T1247				AML	AML		
	comp=E,97800µm,0.8s						
TERO	**Teramo**	**0.47**	**122**	P	Pg	07 06 54.9	+0.4
TERO				S	Sg	07 07 01.7	+0.9
TRE1	**Treia**	**0.47**	**23**	P	Pg	07 06 55.0	+0.5
GIGS	**Gran Sasso**	**0.57**	**138**	P	Pg	07 06 56.7	+0.5
AQU	**L'Aquila**	**0.58**	**154**	P	Pg	07 06 56.9	+0.5
ATFO	**Monte Foce - G**	**0.61**	**324**	P	Pb	07 06 57.6	-0.4
FIAM	**Fiamignano**	**0.61**	**176**	P	Pb	07 06 57.6	-0.4
TRTR	**Tortoreto Alta**	**0.63**	**96**	P	Pb	07 06 58.6	+0.3
PP3	**Marolino**	**0.65**	**39**	P	Pb	07 06 58.5	-0.1
MGAB	**Montegabbione**	**0.69**	**273**	P	Pg	07 06 59.0	+0.4
SRES	**S.Oreste - Sor**	**0.75**	**213**	P	Pg	07 06 59.2	-0.6
T0110	**Collepietro**	**0.84**	**140**	P	Pb	07 07 02.1	+0.1
SACS	**San Casciano d**	**0.84**	**269**	P	Pb	07 07 02.5	+0.5
MTCE	**Montecelio**	**0.88**	**195**	P	Pg	07 07 01.4	-0.8
PTQR	**Pietraquaria**	**0.89**	**163**	P	Pn	07 07 03.6	-0.2
CAFI	**Castiglion Fio**	**0.92**	**300**	P	Pb	07 07 03.2	0.0
CERT	**Cerreto**	**0.93**	**183**	P	Pb	07 07 03.2	-0.1

ROM 30 07:07:10.2±0.1, 42°.792N±0°.004×13°.150E±0°.006,
h10km, ML3.2/8, 1D, Error ellipse: s-maj=0.5km
s-min=0.4km az=47.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**23**	P	Pg	07 07 13.0	+0.4
T1245				S	Sg	07 07 14.7	+0.3
T1245				AML	AML		
	comp=E,64962µm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**14**	P	Pg	07 07 13.2	-0.1
MC2				S	Sg	07 07 16.0	+0.4
T1216	**Preci, Frazion**	**0.14**	**316**	P	Pg	07 07 13.9	+0.5
T1216				S	Sg	07 07 16.1	+0.4
T1201	**Domo (RI)**	**0.15**	**151**	P	Pb	07 07 14.5	-0.7
T1201				S	Sg	07 07 17.3	+1.2
T1204	**Amatrice, Fraz**	**0.17**	**133**	P	Pg	07 07 14.4	+0.5
T1204				S	Sg	07 07 17.2	+0.6
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
	comp=N,7743µm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**244**	P	Pb	07 07 15.0	-0.6
T1217				S	Sg	07 07 18.0	+1.2
T1217				AML	AML		
	comp=E,64400µm,1.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,64950µm,0.8s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,8717µm,0.1s						
FEMA	**Monte Fema**	**0.18**	**337**	P	Pg	07 07 14.5	+0.3
FEMA				S	Sg	07 07 18.1	+1.1
FEMA				AML	AML		
	comp=E,11690µm,0.2s						
FEMA				AML	AML		
	comp=N,7403µm,0.1s						
LNSS	**Leonessa**	**0.21**	**203**	P	Pb	07 07 15.3	-0.8
LNSS				S	Sg	07 07 19.1	+1.6
LNSS				AML	AML		
	comp=N,22433µm,0.3s						
T1215	**Vallo di Nera,**	**0.21**	**273**	P	Pg	07 07 15.1	+0.5
T1215				S	Sg	07 07 17.9	+0.4
T1215				AML	AML		
	comp=E,35300µm,0.6s						
T1215				AML	AML		
	comp=N,45850µm,0.8s						
T1215				AML	AML		
	comp=E,39000µm,0.7s						
T1215				AML	AML		
	comp=N,45000µm,0.8s						
T1215				AML	AML		
	comp=E,7408µm,0.1s						
T1215				AML	AML		
	comp=N,8317µm,0.3s						
T1241	**Roccafluvione,**	**0.22**	**73**	P	Pb	07 07 15.7	-0.6
T1241				S	Sg	07 07 19.1	+1.3
T1243	**Rocca Santa Ma**	**0.24**	**113**	P	Pg	07 07 15.4	+0.3
T1243				S	Sg	07 07 19.2	+0.7
RM33	**Pellescritta (**	**0.29**	**170**	⇓P	Pb	07 07 16.9	-0.6
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=N,4731µm,0.4s						
GUMA	**Gualdo di Mace**	**0.30**	**27**	P	Pb	07 07 17.5	-0.2
CAMP	**Campotosto**	**0.32**	**143**	P	Pg	07 07 17.1	+0.5

CAMP			S	Sg	07 07 21.7	+0.8
T1246	**Crognaleto (TE**	**0.33 129**	P	Pg	07 07 16.9	+0.1
T1246			S	Sg	07 07 21.9	+0.7
ARRO	**Arrone**	**0.35 233**	P	Pb	07 07 18.2	-0.4
T1247	**Pizzolo (AQ)**	**0.37 163**	P	Pg	07 07 17.9	+0.4
T1247			S	Sb	07 07 24.1	-0.5
TERO	**Teramo**	**0.38 117**	P	Pg	07 07 17.7	+0.1
TERO			AML	AML		
	comp=E,41900μm,0.7s					
TERO			AML	AML		
	comp=N,74200μm,0.3s					
TERO			AML	AML		
	comp=E,47600μm,0.3s					
TERO			AML	AML		
	comp=N,83500μm,0.3s					
TERO			AML	AML		
	comp=N,5511μm,0.4s					
MNTP	**Montappone**	**0.42 34**	P	Pb	07 07 19.5	-0.1
OFFI	**Offida**	**0.42 70**	P	Pb	07 07 19.6	-0.1
FIAM	**Fiamignano**	**0.53 183**	P	Pb	07 07 21.6	+0.1

PRU ***30*** *07:07:51.2±0.0, 42°.57N×13°.74E, h0km, M4.5*
ROM ***30*** *07:07:53.7±0.0, 42°.715N±0°.002×13°.188E±0°.004, h10km, ML4.1/67, Error ellipse: s-maj=0.3km s-min=0.1km az=244.0*
LDG ***30*** *07:07:53.5±0.2, 42°.70N×13°.20E, h10km, Ml3.9/10, Error ellipse: s-maj=6.0km s-min=3.8km az=49.0*
IDC ***30*** *07:07:54.1±0.7, 42°.85N×13°.10E, h0km, mb4.0/13, mbtmp3.9/21, ML3.6/8, Error ellipse: s-maj=16.7km s-min=14.2km az=139.0*
NEIC ***30*** *07:07:55.0±1.6, 42°.69N±0°.06×13°.20E±0°.05, h10km±1km, mb4.5/12, ML4.2(ROM), ML4.2(VIE), Error ellipse: s-maj=10.4km s-min=6.7km az=174.0*
ISC 30 07:07:54.7±0.7, **42°.70N**±0°.01×**13°.18E**±0°.02, **h11**km±4km, **n231**, σ1°§**63**/261, **mb4.2**/17, **15C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.07 133**		⇓P	**Pg**	**07 07 56.7**	**-0.4**
T1201				S	**Sg**	**07 07 58.7**	**-0.1**
T1244	**Arquata del Tr**	**0.10 58**		⇑P	**Pg**	**07 07 56.5**	**-0.9**
T1244				S	**Sg**	**07 07 58.5**	**-1.0**
T1204	**Amatrice, Fraz**	**0.10 106**		⇓P	**Pg**	**07 07 56.9**	**-0.7**
T1204				S	**Sg**	**07 07 58.9**	**-0.7**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
LNSS	**Leonessa**	**0.15 226**		⇑P	**Pg**	**07 07 58.0**	**-0.1**
LNSS				S	**Sg**	**07 08 00.9**	**+0.3**
T1245	**Castelsantange**	**0.15 1**		P	**Pg**	**07 07 57.3**	**-1.0**
T1245				S	**Sg**	**07 07 60.0**	**-0.9**
T1217	**Poggiodomo (PG**	**0.19 273**		⇑P	**Pg**	**07 07 58.4**	**-0.3**
T1217				S	**Sg**	**07 08 01.8**	**+0.2**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1243	**Rocca Santa Ma**	**0.20 92**		⇑P	**Pg**	**07 07 58.1**	**-0.8**
T1243				S	**Sg**	**07 08 01.1**	**-0.7**
RM33	**Pellescritta (**	**0.20 173**		⇑P	**Pg**	**07 07 58.7**	**-0.2**
RM33				S	**Sg**	**07 08 02.2**	**+0.4**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
MC2	**Monte Cornacci**	**0.21 1**		P	**Pg**	**07 07 58.2**	**-1.0**
MC2				S	**Sg**	**07 08 02.1**	**-0.3**
T1216	**Preci, Frazion**	**0.22 327**		P	**Pg**	**07 07 58.6**	**-0.8**
T1216				S	**Sg**	**07 08 01.9**	**-0.7**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
CAMP	**Campotosto**	**0.24 135**			**Pg**	**07 07 59.0**	**-0.7**
CAMP				Sg	**Sg**	**07 08 02.8**	**-0.2**
CAMP	**Campotosto**	**0.24 135**		⇑P	**Pg**	**07 07 59.2**	**-0.5**
CAMP				S	**Sg**	**07 08 02.9**	**-0.1**
CAMP				AML	AML		
	comp=E,51000μm,0.8s						
CAMP				AML	AML		
	comp=N,73250μm,0.5s						
T1241	**Roccafluvione,**	**0.24 50**		P	**Pg**	**07 07 59.2**	**-0.5**
T1241				S	**Sg**	**07 08 02.9**	**-0.1**
T1241				AML	AML		
T1241				AML	AML		
	comp=N,78450μm,0.6s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,85450μm,0.6s						
T1241				AML	AML		
	comp=N,96700μm,0.8s						
T1241				AML	AML		
T1215	**Vallo di Nera,**	**0.25 293**		P	**Pg**	**07 07 59.4**	**-0.5**
T1215				S	**Sg**	**07 08 03.6**	**+0.2**
T1215				AML	AML		
	comp=N,68450μm,1.4s						
T1215				AML	AML		
	comp=E,60200μm,0.3s						
T1215				AML	AML		
	comp=N,68500μm,1.4s						
T1215				AML	AML		
	comp=N,68400μm,1.4s						
T1215				AML	AML		
	comp=N,68400μm,1.4s						
T1215				AML	AML		
	comp=E,60250μm,0.3s						
T1215				AML	AML		
	comp=E,61800μm,0.3s						
T1246	**Crognaleto (TE**	**0.26 118**		⇑P	**Pg**	**07 07 59.4**	**-0.6**
T1246				S	**Sg**	**07 08 03.5**	**-0.1**
T1247	**Pizzolo (AQ)**	**0.28 162**		⇑P	**Pg**	**07 08 00.1**	**-0.3**
T1247				S	**Sg**	**07 08 04.9**	**+0.8**
T1247				AML	AML		
T1247				AML	AML		
	comp=E,97800μm,0.8s						
FEMA	**Monte Fema**	**0.28 339**		P	**Pg**	**07 07 59.8**	**-0.6**
FEMA				S	**Sg**	**07 08 04.0**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,99000μm,0.6s						
AM05	**Amandola Campo**	**0.30 24**		⇑P	**Pg**	**07 07 59.8**	**-1.0**
AM05				S	**Sg**	**07 08 04.6**	**-0.3**
AM05				AML	AML		
	comp=N,33350μm,0.6s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9390μm,0.1s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9380μm,0.1s						
AM05				AML	AML		
	comp=E,38850μm,0.9s						
AM05				AML	AML		
	comp=N,25112μm,0.1s						
AM05				AML	AML		
	comp=E,64695μm,0.1s						
AM05				AML	AML		
	comp=E,21692μm,0.1s						
T1256	**Bolognola (MC)**	**0.30 6**		⇑P	**Pg**	**07 07 59.8**	**-1.2**
T1256				S	**Sg**	**07 08 04.3**	**-0.8**
TERO	**Teramo**	**0.32 104**		P	**Pg**	**07 08 00.3**	**-0.8**
TERO				S	**Sg**	**07 08 05.3**	**-0.2**
TERO				AML	AML		
	comp=E,47600μm,0.3s						
TERO				AML	AML		
	comp=N,74200μm,0.3s						
TERO				AML	AML		
	comp=N,83500μm,0.3s						
TERO				AML	AML		
	comp=E,43500μm,0.6s						
ARRO	**Arrone**	**0.33 248**		P	**Pg**	**07 08 00.9**	**-0.4**
ARRO				AML	AML		
	comp=E,31300μm,0.2s						
ARRO				AML	AML		
	comp=N,33100μm,0.8s						
ARRO				AML	AML		
	comp=E,17260μm,1.7s						
ARRO				AML	AML		
	comp=N,19280μm,0.8s						
GUMA	**Gualdo di Mace**	**0.38 17**		⇑P	**Pg**	**07 08 01.4**	**-0.8**
GUMA				S	**Sg**	**07 08 07.5**	**+0.2**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GIGS	**Gran Sasso**	**0.38 132**		P	**Pg**	**07 08 01.4**	**-0.9**
GIGS				S	**Sg**	**07 08 07.3**	**0.0**
GIGS				AML	AML		
	comp=E,13150μm,0.7s						
GIGS				AML	AML		
	comp=N,7290μm,0.7s						
AQU	**L'Aquila**	**0.39 155**			**Pg**	**07 08 01.8**	**-0.5**
AQU	**L'Aquila**	**0.39 155**		⇑P	**Pg**	**07 08 01.9**	**-0.5**
AQU				S	**Sg**	**07 08 08.2**	**+0.8**
AQU				AML	AML		
	comp=E,51700μm,0.6s						
AQU				AML	AML		
	comp=N,46450μm,0.3s						
AQU				AML	AML		
	comp=N,45800μm,0.3s						
AQU				AML	AML		
	comp=E,47950μm,0.6s						
OFFI	**Offida**	**0.44 58**		⇑P	**Pg**	**07 08 03.0**	**-0.3**
OFFI				S	**Sb**	**07 08 10.8**	**-0.2**
OFFI				AML	AML		
OFFI				AML	AML		
FIAM	**Fiamignano**	**0.44 186**		⇑P	**Pg**	**07 08 02.9**	**-0.5**
FIAM				S	**Sg**	**07 08 09.9**	**+0.7**
FIAM				AML	AML		
	comp=N,40450μm,0.6s						
FIAM				AML	AML		
	comp=E,26150μm,1.1s						
CESX	**Cesi**	**0.46 258**			**Pg**	**07 08 03.2**	**-0.4**
CESX	**Cesi**	**0.46 258**		P	**Pg**	**07 08 02.9**	**-0.7**
CESX				AML	AML		
	comp=N,21050μm,0.7s						
CESX				AML	AML		
	comp=E,25200μm,0.4s						
CESX				AML	AML		
	comp=N,22100μm,0.6s						
SEF1	**Sefro**	**0.48 339**		P	**Pg**	**07 08 03.0**	**-1.0**
SEF1				S	**Sg**	**07 08 10.5**	**+0.1**
SEF1				AML	AML		
	comp=E,77350μm,0.2s						
SEF1				AML	AML		
	comp=N,40850μm,1.0s						
SEF1				AML	AML		
	comp=E,77350μm,0.2s						
SEF1				AML	AML		
	comp=N,51850μm,0.2s						
MNTP	**Montappone**	**0.48 26**		P	**Pg**	**07 08 03.5**	**-0.7**
MNTP				S	**Sb**	**07 08 12.1**	**-0.2**
MNTP				AML	AML		
	comp=E,86150μm,0.6s						
MNTP				AML	AML		
	comp=N,54600μm,0.5s						
MNTP				AML	AML		
	comp=E,86200μm,0.6s						
MNTP				AML	AML		
	comp=N,56250μm,1.4s						
MDAR	**Monte D'Aria**	**0.49 356**		P	**Pg**	**07 08 03.1**	**-1.2**
MDAR				AML	AML		
	comp=N,43850μm,0.4s						
MDAR				AML	AML		
	comp=E,42850μm,1.2s						
PIO1	**Pioraco**	**0.50 343**		P	**Pg**	**07 08 03.3**	**-1.1**
PIO1				AML	AML		
	comp=E,21000μm,1.4s						
PIO1				AML	AML		
	comp=N,25850μm,0.6s						
PIO1				AML	AML		
	comp=E,24550μm,0.5s						
PIO1				AML	AML		
	comp=N,40700μm,0.7s						
PIO1				AML	AML		
	comp=E,24500μm,0.5s						
ASSB	**Assisi San Ben**	**0.51 311**		P	**Pg**	**07 08 04.8**	**+0.1**
ASSB				AML	AML		
	comp=E,69350μm,0.4s						
ASSB				AML	AML		
	comp=N,48250μm,0.5s						
FIU1	**Fiuminata**	**0.52 339**		P	**Pg**	**07 08 03.8**	**-1.1**
FIU1				AML	AML		
	comp=E,27300μm,0.3s						
FIU1				AML	AML		
	comp=N,25950μm,1.0s						
FIU1				AML	AML		
	comp=N,26000μm,1.0s						
FIU1				AML	AML		
	comp=E,27250μm,0.3s						
SSM1	**San Severino M**	**0.53 359**		P	**Pg**	**07 08 03.8**	**-1.2**
FAGN	**Fagnano**	**0.53 146**		P	**Pg**	**07 08 04.2**	**-0.9**
FAGN				AML	AML		
	comp=N,47000μm,1.5s						
FAGN				AML	AML		
	comp=E,93450μm,0.4s						
GAG1	**Gagliole**	**0.54 351**		P	**Pg**	**07 08 04.4**	**-0.9**
GAG1				S	**Sg**	**07 08 12.5**	**+0.1**
GAG1				AML	AML		
	comp=E,72300μm,0.4s						
GAG1				AML	AML		
	comp=N,57500μm,0.3s						
GAG1				AML	AML		
	comp=N,94350μm,1.1s						
GAG1				AML	AML		
	comp=E,78300μm,1.2s						
TRTR	**Tortoreto Alta**	**0.55 79**		⇑P	**Pg**	**07 08 05.5**	**+0.1**
TRTR				AML	AML		
	comp=N,96450μm,0.4s						
TRTR				AML	AML		
TRTR				AML	AML		
	comp=N,96500μm,0.4s						
VCEL	**Villa Celiera**	**0.57 122**		P	**Pg**	**07 08 05.5**	**-0.4**
VCEL				AML	AML		
	comp=E,26350μm,0.7s						
VCEL				AML	AML		
	comp=N,38250μm,0.9s						
VCEL				AML	AML		
	comp=E,30500μm,1.6s						
VCEL				AML	AML		
	comp=N,38350μm,1.6s						
VCEL				AML	AML		
	comp=N,38400μm,1.6s						
VCEL				AML	AML		
	comp=E,30450μm,1.6s						
TRE1	**Treia**	**0.61 9**		P	**Pg**	**07 08 06.0**	**-0.7**
TRE1				S	**Sb**	**07 08 16.1**	**-0.1**
TRE1				AML	AML		
	comp=E,67300μm,0.6s						
TRE1				AML	AML		
	comp=N,51900μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.62 321**		P	**Pg**	**07 08 05.8**	**-1.1**
ATCC				AML	AML		
	comp=E,33350μm,0.2s						
ATCC				AML	AML		
	comp=N,30600μm,1.3s						
ATCC				AML	AML		
	comp=E,43150μm,0.3s						
ATCC				AML	AML		
	comp=N,15457μm,0.9s						
ATCC				AML	AML		
	comp=E,13557μm,0.6s						
T0110	**Collepietro**	**0.65 137**		P	**Pg**	**07 08 06.3**	**-0.9**
T0110				S	**Sb**	**07 08 16.7**	**-0.5**
T0110				AML	AML		
	comp=E,31650μm,0.5s						
T0110				AML	AML		
	comp=N,33950μm,0.4s						
FOSV	**Fossato di Vic**	**0.67 332**		P	**Pg**	**07 08 06.4**	**-1.2**
FOSV				S	**Sg**	**07 08 16.4**	**-0.1**
CING	**Cingoli**	**0.67 1**		P	**Pg**	**07 08 06.8**	**-1.0**
SRES	**S.Oreste - Sor**	**0.68 227**		P	**Pg**	**07 08 07.2**	**-0.7**
SRES				AML	AML		
	comp=E,6515μm,0.4s						
SRES				AML	AML		
	comp=N,8475μm,0.5s						
SRES				AML	AML		
	comp=N,9240μm,0.5s						
SRES				AML	AML		
	comp=E,8070μm,0.3s						
CIMA	**Civitanova Mar**	**0.70 30**		P	**Pg**	**07 08 07.9**	**-0.4**
PTQR	**Pietraquaria**	**0.70 167**		P	**Pg**	**07 08 06.9**	**-1.3**
PTQR				AML	AML		
	comp=N,6300μm,1.6s						
PTQR				AML	AML		
	comp=E,8880μm,1.1s						
MURB	**Monte Urbino**	**0.74 319**			**Pn**	**07 08 10.4**	**-0.8**
MURB	**Monte Urbino**	**0.74 319**		P	**Pg**	**07 08 08.1**	**-0.9**
MURB				AML	AML		
	comp=E,31850μm,1.1s						
MURB				AML	AML		
	comp=N,41050μm,0.3s						
MURB				AML	AML		
	comp=E,38150μm,1.1s						
MURB				AML	AML		
	comp=N,41900μm,0.3s						
MURB				AML	AML		
	comp=N,62300μm,1.0s						
MURB				AML	AML		
	comp=N,67150μm,1.0s						
MURB				AML	AML		
	comp=E,60200μm,1.0s						
MURB				AML	AML		
	comp=E,65600μm,0.3s						
PP3	**Marolino**	**0.74 25**		P	**Pg**	**07 08 08.2**	**-0.8**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
MMUR	**Monte Murano**	**0.75 350**		P	**Pg**	**07 08 07.5**	**-1.8**
MTCE	**Montecelio**	**0.76 206**		P	**Pg**	**07 08 08.0**	**-1.3**
MTCE				AML	AML		
	comp=E,9115μm,1.1s						
MTCE				AML	AML		
	comp=E,9470μm,0.5s						
MTCE				AML	AML		
	comp=N,8925μm,1.4s						
CERT	**Cerreto**	**0.77 191**		P	**Pg**	**07 08 08.4**	**-1.1**
CERT				AML	AML		
	comp=E,21600μm,0.4s						
CERT				AML	AML		
	comp=N,13600μm,0.9s						
ATTE	**AVT- Monte Tez**	**0.79 309**		P	**Pg**	**07 08 09.6**	**-0.3**
ATTE				AML	AML		
	comp=E,5055μm,0.8s						
ATTE				AML	AML		
	comp=N,5590μm,0.7s						
ATTE				AML	AML		
	comp=E,8510μm,1.2s						
ATTE				AML	AML		
	comp=N,11200μm,0.6s						
ATTE				AML	AML		
	comp=E,5054μm,0.8s						
ATTE				AML	AML		
	comp=N,4916μm,0.8s						
ATFO	**Monte Foce - G**	**0.80 326**		P	**Pg**	**07 08 09.2**	**-1.0**
ATFO				AML	AML		
	comp=E,9480μm,0.2s						
ATFO				AML	AML		
	comp=N,7575μm,0.6s						
ATFO				AML	AML		
	comp=E,12700μm,1.5s						
ATFO				AML	AML		
	comp=N,10305μm,0.5s						
ATFO				AML	AML		
	comp=N,10310μm,0.5s						
ATFO				AML	AML		
	comp=E,7092μm,3.1s						
ATFO				AML	AML		
	comp=N,7578μm,0.6s						
ARVD	**Arcevia**	**0.81 347**		P	**Pg**	**07 08 09.1**	**-1.4**
ARVD				S	**Sg**	**07 08 21.4**	**+0.4**
ARVD				AML	AML		
	comp=E,7010μm,0.9s						
ARVD				AML	AML		
	comp=N,7130μm,0.7s						
ARVD				AML	AML		
	comp=E,7850μm,1.3s						
MGAB	**Montegabbione**	**0.82 285**		P	**Pg**	**07 08 10.0**	**-0.5**
MGAB				AML	AML		
	comp=E,28350μm,0.8s						
MGAB				AML	AML		
	comp=N,24050μm,1.2s						
MGAB				AML	AML		
	comp=N,27550μm,0.5s						
MGAB				AML	AML		
	comp=E,28300μm,0.8s						
MGAB				AML	AML		
	comp=E,27300μm,0.8s						
ATLO	**AVT- Montelove**	**0.83 317**		P	**Pg**	**07 08 09.7**	**-1.2**
TB01	**Gubbio**	**0.87 321**		P	**Pg**	**07 08 10.0**	**-1.5**
INTR	**Introdacqua**	**0.87 142**			**Pg**	**07 08 11.4**	**-0.1**
RCAV	**Rocca di Cave**	**0.87 192**		P	**Pg**	**07 08 10.5**	**-1.0**
RCAV				AML	AML		
	comp=N,13820μm,0.9s						
RCAV				AML	AML		
	comp=N,13800μm,0.9s						
RCAV				AML	AML		
	comp=E,16100μm,0.6s						
ATVA	**AVT- Monte Val**	**0.88 311**		P	**Pg**	**07 08 10.8**	**-0.8**
FRON	**Frontone**	**0.88 338**		P	**Pg**	**07 08 09.7**	**-2.0**
FRON				AML	AML		
	comp=E,8310μm,0.4s						
FRON				AML	AML		
	comp=N,10700μm,0.5s						
ATVO	**AVT- Monte Val**	**0.89 320**		P	**Pg**	**07 08 10.8**	**-1.0**
ATVO				AML	AML		
	comp=E,7160μm,0.7s						
ATVO				AML	AML		
	comp=N,8495μm,0.6s						
ATVO				AML	AML		
	comp=N,10370μm,1.4s						
ATVO				AML	AML		
	comp=E,11200μm,1.6s						
ATVO				AML	AML		
	comp=E,7160μm,0.7s						
ATVO				AML	AML		
	comp=N,8496μm,0.6s						
VVLD	**Villa Vallelon**	**0.89 158**		P	**Pg**	**07 08 11.1**	**-0.8**
VVLD				AML	AML		
	comp=E,8310μm,0.6s						
VVLD				AML	AML		
	comp=N,8145μm,1.1s						
AOI	**Ancona**	**0.90 20**		P	**Pg**	**07 08 10.8**	**-1.3**
AOI				AML	AML		
	comp=E,14500μm,0.5s						
AOI				AML	AML		
	comp=E,14550μm,0.5s						
AOI				AML	AML		
	comp=N,12600μm,1.1s						
GUAR	**Guarcino**	**0.91 174**		P	**Pg**	**07 08 11.7**	**-0.6**
GUAR				AML	AML		
	comp=N,17100μm,0.7s						
GUAR				AML	AML		
	comp=E,11700μm,0.8s						
ATMI	**Monte Miggiano**	**0.92 314**		AML	AML		
	comp=E,23659μm,0.5s						
ATMI				AML	AML		
	comp=E,26350μm,1.1s						
ATMI				AML	AML		
	comp=N,31300μm,0.4s						
ATMI				AML	AML		
	comp=N,16414μm,0.6s						
PIEI	**Pieia**	**0.96 331**		AML	AML		
	comp=N,6365μm,1.3s						
PIEI				AML	AML		
	comp=E,8670μm,1.5s						
RMP	**Rome, Mte Porz**	**0.96 202**		AML	AML		
	comp=N,14550μm,0.6s						
RMP				AML	AML		
	comp=E,11750μm,0.9s						
MPAG	**Monte Paganucc**	**0.98 342**		P	**Pg**	**07 08 12.0**	**-1.5**
MPAG				AML	AML		
	comp=E,8450μm,0.4s						
MPAG				AML	AML		
	comp=N,8710μm,1.3s						
LPEL	**Lama dei Pelig**	**0.99 131**		P	**Pg**	**07 08 12.1**	**-1.6**
LPEL				AML	AML		
	comp=N,8365μm,0.9s						
LPEL				AML	AML		
	comp=E,12350μm,1.0s						
SENI	**Senigallia**	**1.00 2**		AML	AML		
	comp=N,12350μm,0.8s						

SENI			AML	AML		
	comp=E,48950μm,0.4s					
SENI			AML	AML		
	comp=E,14295μm,0.5s					
SENI			AML	AML		
	comp=N,46800μm,0.4s					
RDP	**Rocca di Papa**	**1.01 200**	P	**Pg**	**07 08 13.4**	**-0.7**
RDP			AML	AML		
	comp=N,23150μm,0.5s					
RDP			AML	AML		
	comp=E,20850μm,0.5s					
LATE	**Laterza**	**1.02 265**	Pg	**Pg**	**07 08 14.0**	**-0.4**
SAMA	**S.Maria delle**	**1.02 206**	AML	AML		
	comp=E,5605μm,0.5s					
SAMA			AML	AML		
	comp=N,4540μm,1.6s					
SAMA			AML	AML		
	comp=N,4535μm,1.6s					
FSSB	**Fossombrone**	**1.03 343**	P	**Pg**	**07 08 12.9**	**-1.7**
FSSB			AML	AML		
	comp=N,29700μm,1.4s					
FSSB			AML	AML		
	comp=E,25650μm,0.4s					
BADI	**Badiali**	**1.06 320**	AML	AML		
	comp=E,306μm,0.9s					
BADI			AML	AML		
	comp=N,7090μm,1.2s					
POFI	**Posta Fibreno**	**1.06 158**	P	**Pg**	**07 08 14.3**	**-0.8**
TOLF	**Tolfa**	**1.08 234**	P	**Pb**	**07 08 14.1**	**-1.4**
TOLF			AML	AML		
	comp=E,3860μm,0.5s					
TOLF			AML	AML		
	comp=N,3775μm,1.0s					
CAFI	**Castiglion Fio**	**1.09 305**	P	**Pb**	**07 08 14.9**	**-0.7**
CAFI			AML	AML		
	comp=E,6075μm,1.0s					
CAFI			AML	AML		
	comp=N,6160μm,0.5s					
CAFI			AML	AML		
	comp=E,6140μm,1.1s					
CAFI			AML	AML		
	comp=N,6510μm,1.2s					
CAFI			AML	AML		
	comp=N,6165μm,0.5s					
CAFI			AML	AML		
	comp=E,6080μm,1.0s					
CAFI			AML	AML		
	comp=N,3388μm,0.7s					
CAFI			AML	AML		
	comp=E,3285μm,1.1s					
CAFI			AML	AML		
	comp=N,3210μm,0.7s					
LRP	**Arpino**	**1.10 164**	P	**Pb**	**07 08 15.6**	**-0.1**
LRP			AML	AML		
	comp=N,7210μm,1.0s					
LRP			AML	AML		
	comp=E,4685μm,1.5s					
PE3	**Peglio**	**1.11 333**	AML	AML		
	comp=E,44μm,1.2s					
PE3			AML	AML		
	comp=N,44μm,0.3s					
SF04	**Casetta**	**1.13 277**	AML	AML		
	comp=N,3611μm,0.6s					
SF04			AML	AML		
	comp=E,6575μm,0.5s					
GIUL	**Giuliano Di Ro**	**1.15 177**	P	**Pb**	**07 08 15.6**	**-1.0**
GIUL			AML	AML		
	comp=N,7050μm,0.7s					
GIUL			AML	AML		
	comp=E,5920μm,0.5s					
LATB	**Latina**	**1.22 188**	P	**Pn**	**07 08 15.5**	**-2.2**
LATB			AML	AML		
	comp=E,1945μm,1.1s					
LATB			AML	AML		
	comp=N,1165μm,1.1s					
CERA	**Filignano**	**1.27 150**	P	**Pn**	**07 08 17.9**	**-0.5**
CERA			AML	AML		
	comp=N,6945μm,0.9s					
CERA			AML	AML		
	comp=E,6590μm,0.9s					
CRE	**Caprese Michel**	**1.28 316**	AML	AML		
	comp=E,2985μm,1.0s					
CRE			AML	AML		
	comp=N,4595μm,1.3s					
FROS	**Frosini**	**1.57 289**	P	**Pn**	**07 08 21.7**	**-0.9**
FROS			AML	AML		
	comp=N,3350μm,1.1s					
FROS			AML	AML		
	comp=E,2890μm,1.2s					
CSNT	**Castellina Chi**	**1.58 300**	P	**Pn**	**07 08 22.3**	**-0.5**
OSSC	**Osservatorio P**	**1.64 301**	Pn	**Pb**	**07 08 24.2**	**-0.7**
CASP	**Castiglione de**	**1.71 274**	Pn	**Pn**	**07 08 24.0**	**-0.5**
CASP	**Castiglione de**	**1.71 274**	P	**Pn**	**07 08 23.6**	**-0.9**
CASP			AML	AML		
	comp=E,851μm,0.4s					
CASP			AML	AML		
	comp=N,710μm,1.4s					
TRIF	**Trifonti**	**1.73 285**	P	**Pn**	**07 08 24.3**	**-0.4**
MTCR	**Monte La Croce**	**2.07 310**	P	**Pn**	**07 08 28.3**	**-1.3**
CELB	**S.Piero in Cam**	**2.19 272**	P	**Pn**	**07 08 30.4**	**-0.7**
CELB			AML	AML		
	comp=N,266μm,1.3s					
CELB			AML	AML		
	comp=E,442μm,1.5s					
ZCCA	**Zocca**	**2.30 316**	Pn	**Pn**	**07 08 34.1**	**+1.5**
CARD	**Cardoso**	**2.37 305**	P	**Pn**	**07 08 32.8**	**-0.8**
CARD			AML	AML		
	comp=N,940μm,1.3s					
CARD			AML	AML		
	comp=E,1048μm,0.7s					
VLC	**Villacollemand**	**2.50 306**	Pn	**Pn**	**07 08 35.5**	**+0.1**
PLMA	**Palmaria, Port**	**2.78 300**	P	**Pn**	**07 08 38.9**	**-0.2**
MORSI	**Morsiglia**	**2.82 276**	P	**Pn**	**07 08 40.2**	**+0.4**
PRMA	**PARMA**	**2.93 316**	Pn	**Pn**	**07 08 43.7**	**+2.5**
PGF	**Pioggiola**	**3.09 269**	*e*Pn	**Pn**	**07 08 43.9**	**+0.3**
PGF	**Pioggiola**	**3.09 269**	*e*P	**Pb**	**07 08 48.2**	**-1.6**
PGF			*e*Sn	**Sn**	**07 09 17.0**	**-3.6**
	comp=E,47nm,0.3s					
PGF	**Pioggiola**	**3.09 269**	P	**Pn**	**07 08 44.4**	**+0.8**
MSSA	**Maissana**	**3.12 302**	Pn	**Pn**	**07 08 44.5**	**+0.6**
CGRP	**Cima Grappa**	**3.33 343**	P	**Pn**	**07 08 47.2**	**+0.3**
CGRP			AML	AML		
	comp=E,1860μm,1.1s					
CGRP			AML	AML		
	comp=E,1815μm,1.1s					
CGRP			AML	AML		
	comp=N,1630μm,0.9s					
CGRP			AML	AML		
	comp=N,1645μm,0.9s					
SALO	**Salr**	**3.49 328**	Pn	**Pn**	**07 08 50.1**	**+1.2**
SALO	**Salr**	**3.49 328**	P	**Pn**	**07 08 49.9**	**+1.0**
CTI	**Castel Tesino**	**3.52 342**	Pn	**Pn**	**07 08 49.9**	**+0.5**
CTI	**Castel Tesino**	**3.52 342**	P	**Pn**	**07 08 49.7**	**+0.2**
CTI			AML	AML		
	comp=N,910μm,0.5s					
CTI			AML	AML		
	comp=E,953μm,1.5s					
MPRI	**Monte Prat**	**3.54 358**	P	**Pn**	**07 08 49.4**	**-0.3**
MPRI			AML	AML		
	comp=E,1390μm,1.2s					
MPRI			AML	AML		
	comp=N,1525μm,1.2s					
STAL	**STALIGIAL**	**3.57 355**	Pn	**Pn**	**07 08 49.8**	**-0.3**
DGI	**Dorgali Grotta**	**3.59 230**	P	**Pn**	**07 08 50.5**	**+0.2**
LUSI	**Trento, Gardas**	**3.63 334**	P	**Pn**	**07 08 51.6**	**+0.7**
CIMO	**Cimolais**	**3.65 352**	P	**Pn**	**07 08 49.7**	**-1.4**
CIMO			AML	AML		
	comp=N,310μm,1.1s					
CIMO			AML	AML		
	comp=E,382μm,0.9s					
PRED	**Cave del Predi**	**3.75 4**	Pn	**Pn**	**07 08 52.5**	**0.0**
CLUD	**Cludinico**	**3.76 357**	Pn	**Pn**	**07 08 53.0**	**+0.3**
MABI	**Malga Bissina**	**3.86 331**	P	**Pn**	**07 08 55.0**	**+0.8**
KOSI	**Kohlern**	**3.97 342**	P	**Pn**	**07 08 56.6**	**+0.9**
APPI	**Appiano**	**4.03 340**	P	**Pn**	**07 08 57.1**	**+0.8**
APPI			AML	AML		
	comp=N,787μm,1.4s					
APPI			AML	AML		
	comp=E,596μm,0.8s					
ABTA	**Abfaltersbach**	**4.07 353**	*e*Pn	**Pn**	**07 08 57.4**	**+0.4**
	comp=E,92nm,0.5s					
SOKA	**Soboth**	**4.19 18**	*e*Pn	**Pn**	**07 09 01.6**	**+3.0**
	comp=E,5.5nm,0.2s					
SBF	**Sospel**	**4.35 287**	*e*Pn	**Pn**	**07 08 57.9**	**-3.0**
SBF	**Sospel**	**4.35 287**	*e*P	**Pn**	**07 09 04.4**	**+3.5**
SBF			*e*Sn	Sn	07 09 41.6	-10
	comp=E,63nm,0.4s					
FUORN	**Ofenpass-Fuorn**	**4.43 333**	Pn	**Pn**	**07 09 03.3**	**+1.1**
TUE	**Stuetta**	**4.66 325**	Pn	**Pn**	**07 09 06.4**	**+1.2**
CALF	**Calern**	**4.69 285**	P	**Pn**	**07 09 06.3**	**+0.7**
DAVOX	**Davos/Dischmat**	**4.71 331**	Pn	**Pn**	**07 09 07.7**	**+1.8**
	comp=E,5.4nm,0.3s,baz=150,slow=20,SNR=2.0					
DAVOX			Sn	**Sn**	**07 10 03.8**	**+3.3**
	comp=E,7.8nm,0.3s,baz=133,slow=21,SNR=1.9					
SQTA	**Sankt Quirin**	**4.73 343**		**Pn**	**07 09 08.2**	**+2.2**
SQTA	**Sankt Quirin**	**4.73 343**	*e*Pn	**Pn**	**07 09 08.3**	**+2.2**
	comp=E,13nm,0.2s					
WATA	**Walderalm**	**4.77 347**		**Pn**	**07 09 08.0**	**+1.4**
WATA	**Walderalm**	**4.77 347**	*e*Pn	**Pn**	**07 09 08.0**	**+1.4**
	comp=E,16nm,0.5s					
ARSA	**Arzberg**	**4.84 19**	*e*Pn	**Pn**	**07 09 09.6**	**+2.1**
	comp=E,13nm,0.4s					
LMR	**La Mourre**	**4.93 280**	*e*Pn	**Pn**	**07 09 06.3**	**-2.5**
LMR	**La Mourre**	**4.93 280**	*e*P	**Pn**	**07 09 10.9**	**+2.1**
LMR			*e*Sn	**Sn**	**07 09 58.2**	**-7.6**
	comp=E,26nm,0.5s					
SURF	**Saint Ours**	**4.96 293**	P	**Pn**	**07 09 14.0**	**+4.7**
BIOA	**Bad Ischl, Aus**	**5.00 4**		**Pn**	**07 09 09.8**	**+0.1**
BIOA	**Bad Ischl, Aus**	**5.00 4**	*e*Pn	**Pn**	**07 09 09.8**	**+0.1**
	comp=E,25nm,0.4s					
TRIGF	**Trigance**	**5.06 284**	P	**Pn**	**07 09 12.0**	**+1.4**
MBDF	**Montbardon**	**5.07 296**	*e*P	**Pn**	**07 09 13.5**	**+2.7**
CREF	**Crivoux**	**5.11 293**	P	**Pn**	**07 09 15.4**	**+4.1**
CLTB	**Caltabellotta**	**5.12 180**		**Pn**	**07 09 12.2**	**+0.8**
FLAF	**Flassans-sur-I**	**5.12 280**	P	**Pn**	**07 09 12.2**	**+0.9**
TIR	**Tirane**	**5.16 103**	Pn	**Pn**	**07 09 12.3**	**+0.5**
LPG	**La Plagne**	**5.41 303**	*e*P	**Pn**	**07 09 16.6**	**+1.0**
LPG			*e*Sn	Sn	07 10 04.9	-13
	comp=E,33nm,0.5s					
LPL	**La Plagne**	**5.43 303**	*e*P	**Pn**	**07 09 16.7**	**+0.9**
LPL			*e*Sn	Sn	07 10 02.5	-16
	comp=E,13nm,0.3s					
RONA	**Rosalia, Austr**	**5.46 23**		**Pn**	**07 09 15.7**	**-0.3**
RONA	**Rosalia, Austr**	**5.46 23**	*e*Pn	**Pn**	**07 09 15.7**	**-0.3**
	comp=E,29nm,0.7s					
ARTF	**Artigues**	**5.47 282**	P	**Pn**	**07 09 17.3**	**+1.1**
CONA	**Conrad Observa**	**5.55 19**	*e*Pn	**Pn**	**07 09 19.0**	**+1.6**
	comp=E,10nm,0.3s					
SENIN	**Lac Senin/Sane**	**5.57 313**	Pn	**Pn**	**07 09 19.6**	**+1.8**
SMRF	**Simiane la Rot**	**5.69 285**	*e*Pn	**Pn**	**07 09 17.1**	**-2.1**
SMRF	**Simiane la Rot**	**5.69 285**	*e*P	**Pn**	**07 09 21.7**	**+2.5**
SMRF			*e*Sn	Sn	07 10 14.3	-10
	comp=E,21nm,0.5s					
ORIF	**Oris-en-Rattie**	**5.73 295**	*e*Pn	**Pn**	**07 09 15.8**	**-4.0**
ORIF	**Oris-en-Rattie**	**5.73 295**	*e*P	**Pn**	**07 09 20.8**	**+1.0**
RUSF	**Rustrel**	**5.75 285**	P	**Pn**	**07 09 24.4**	**+4.4**
KEK	**Kerkira**	**5.81 119**	Pn	**Pn**	**07 09 21.5**	**+0.6**
GRN	**Grenoble**	**5.94 298**	P	Pn	07 09 28.1	+5.4
GEC2	**GERESS Array S**	**6.15 3**	Pn	**Pn**	**07 09 25.0**	**-0.6**
GERES	**GERESS Array B**	**6.15 3**	Pn	**Pn**	**07 09 25.0**	**-0.6**
	comp=E,2.0nm,0.3s,baz=184,slow=13,SNR=2.0					
GERES			Sn	**Sn**	**07 10 33.7**	**-2.3**
	comp=E,8.9nm,0.3s,baz=165,slow=24,SNR=8.5					
	comp=E,9.4nm,0.7s					
GERES	**GERESS Array B**	**6.15 3**	Pn	**Pn**	**07 09 24.2**	**-1.4**
CABF	**La Chapelle**	**6.39 310**	*e*P	**Pn**	**07 09 28.7**	**-0.2**
KHC	**Kasperske Hory**	**6.43 2**	*e*PN	**Pn**	**07 09 27.9**	**-1.5**
KHC			*e*SN	**Sn**	**07 10 40.7**	**-2.1**
VIVF	**Saint-Julien-l**	**6.53 292**	*e*Pn	**Pn**	**07 09 26.3**	**-4.4**
VIVF	**Saint-Julien-l**	**6.53 292**	*e*P	**Pn**	**07 09 31.7**	**+1.0**
BFO	**Black Forest**	**6.58 330**	Pn	**Pn**	**07 09 32.0**	**+0.7**
HINF	**Hinteralfeld**	**6.79 321**	*e*P	**Pn**	**07 09 33.8**	**-0.5**
HINF			*e*Sn	**Sn**	**07 10 47.3**	**-4.2**
	comp=E,112nm,0.8s					
LASF	**Ste Croix**	**6.93 285**	*e*Pn	**Pn**	**07 09 33.3**	**-2.9**
LASF	**Ste Croix**	**6.93 285**	*e*P	**Pn**	**07 09 37.5**	**+1.3**
ECH	**Echery**	**6.95 325**	Pn	**Pn**	**07 09 36.5**	**0.0**
WLS	**Welschbruch**	**7.02 326**	P	**Pb**	**07 10 01.3**	**+4.6**
CDF	**Champ du Feu**	**7.05 326**	*e*P	**Pn**	**07 09 37.6**	**-0.4**
CDF			*e*Sn	**Sn**	**07 10 52.8**	**-5.4**
	comp=E,52nm,0.4s					
HAU	**Haudompre**	**7.16 320**	*e*P	**Pn**	**07 09 39.1**	**-0.3**
HAU			*e*Sn	**Sn**	**07 10 53.8**	**-6.9**
	comp=E,142nm,0.6s					
MAHO	**Mahon**	**7.28 250**	Pn	**Pn**	**07 09 41.0**	**0.0**
KEST	**Kesra**	**7.57 204**	Pn	**Pn**	**07 09 48.5**	**+3.4**
	comp=E,1.5nm,0.3s,baz=313,slow=3.7,SNR=6.2					
	comp=E,8.4nm,0.5s					
SMF	**Signal de Mont**	**7.74 304**	*e*P	**Pn**	**07 09 47.3**	**+0.1**
SFTF	**Sexfontaines**	**7.94 317**	*e*P	**Pn**	**07 09 52.1**	**+2.1**
	baz=129					
LOR	**Lormes**	**8.03 308**	*e*P	**Pn**	**07 09 52.6**	**+1.3**
	baz=121					
MTLF	**Montolieu**	**8.06 278**	*e*P	**Pn**	**07 09 54.5**	**+2.8**
AVF	**Avril sur Loir**	**8.10 304**	*e*P	**Pn**	**07 09 50.9**	**-1.3**
MEZF	**Maizieres J'vi**	**8.13 318**	*e*P	**Pn**	**07 09 53.5**	**+0.9**
	baz=145					
SSF	**Saint Saulge**	**8.13 306**	*e*P	**Pn**	**07 09 55.1**	**+2.4**
SAVF	**Savonnieres en**	**8.17 319**	*e*P	**Pn**	**07 09 55.7**	**+2.5**
	baz=125					
BGF	**Bois d'Agland**	**8.32 301**	*e*P	**Pn**	**07 09 57.8**	**+2.6**
CAF	**Calviac**	**8.34 289**	*e*P	**Pn**	**07 09 56.8**	**+1.2**
TCF	**Toulx Ste Croi**	**8.62 298**	*e*P	**Pn**	**07 10 02.2**	**+2.8**
RJF	**Les Rejaudoux**	**8.80 291**	*e*P	**Pn**	**07 10 04.3**	**+2.4**
RDO	**Rodhopi**	**9.34 95**	Pn	**Pn**	**07 10 08.0**	**-1.2**
MLR	**Muntele Rosu**	**9.60 69**	Pn	Pn	07 10 18.6	+5.8
	comp=E,0.3nm,0.3s,baz=190,slow=7.3,SNR=5.9					
ETSF	**Etsaut**	**10.11 276**	*e*P	**Pn**	**07 10 22.7**	**+2.9**
IDI	**Anoyia**	**11.73 125**	Pn	**Pn**	**07 10 46.1**	**+4.1**
	comp=E,0.8nm,0.3s,baz=55,slow=7.1,SNR=1.5					
IDI			Sn	**Sn**	**07 12 46.1**	**-6.9**
	comp=E,0.5nm,0.3s,baz=240,slow=19,SNR=1.6					
	comp=E,2.3nm,0.4s					
ESDC	**Sonseca Array**	**13.27 263**	Pn	**Pn**	**07 11 02.7**	**-0.3**
	baz=68,slow=14,SNR=6.3					
	comp=E,1.0nm,0.7s					
AKASG	**Malin Array Be**	**13.59 48**	Pn	**Pn**	**07 11 08.1**	**+0.9**
	comp=E,0.3nm,0.3s,baz=240,slow=11,SNR=3.8					
	comp=E,0.1nm,0.3s					
ELL	**Elmali**	**14.17 109**	Pn	**Pn**	**07 11 13.6**	**-1.8**
BR231	**Keskin MP Arra**	**15.01 94**	Pn	**Pn**	**07 11 25.8**	**-1.0**
BRTR	**Keskin Array B**	**15.68 94**	Pn	**P**	**07 11 39.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=287,slow=10,SNR=2.9					
	comp=E,1.1nm,0.8s					
EKA	**Eskdalemuir Ar**	**16.52 326**	Pn	**Pn**	**07 11 45.9**	**-0.3**
	baz=132,slow=14					
	comp=E,0.5nm,0.4s					
HFS	**Hagfors**	**17.46 1**	P	**P**	**07 11 59.6**	**+0.4**
	comp=E,2.4nm,0.6s,baz=173,slow=13,SNR=5.9					
NC602	**NORSAR Array S**	**18.09 357**		**Pn**	**07 12 05.1**	**-0.7**
NC602			IAmb	IAmb	07 12 19.5	
	comp=Z,71nm,1.5s					
NB2	**NORSAR Subarra**	**18.40 357**	P	**Pn**	**07 12 09.9**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=178,slow=9.3					
NOA	**NORSAR Array B**	**18.40 357**	P	**P**	**07 12 09.6**	**0.0**
	baz=176,slow=11,SNR=5.2					
	comp=Z,2.1nm,0.5s					
FINES	**FINESS Array B**	**20.30 18**	P	**P**	**07 12 28.9**	**-1.4**
	comp=Z,3.2nm,0.7s,baz=196,slow=11,SNR=5.6					
	comp=Z,3.2nm,0.7s					
FINES	**FINESS Array B**	**20.30 18**	P	**P**	**07 12 29.5**	**-0.8**
FIA1	**FINESS Array S**	**20.30 18**		**P**	**07 12 28.1**	**-2.2**
KBZ	**Khabaz**	**21.63 77**	P	**P**	**07 12 46.5**	**+1.7**
	comp=Z,6.7nm,0.9s,baz=280,slow=9.1,SNR=6.1					
	comp=Z,6.7nm,0.9s					
BELG	**Belogornoye**	**24.97 55**	P	**P**	**07 13 18.4**	**+0.4**
	comp=Z,24nm,0.9s,baz=255,slow=2.4,SNR=7.4					
	comp=Z,24nm,0.9s					
ARCES	**ARCESS Array B**	**27.64 9**	P	**P**	**07 13 40.6**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=190,slow=6.2,SNR=5.5					
	comp=Z,0.9nm,0.6s					
TORD	**Torodi Ar. Bea**	**31.09 202**	P	**P**	**07 14 14.7**	**+1.6**
	comp=Z,2.5nm,0.8s,baz=16,slow=9.5,SNR=6.6					
	comp=Z,2.5nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.09 202**	P	**P**	**07 14 13.0**	**0.0**
ARU	**Arti**	**31.84 49**	P	**P**	**07 14 19.2**	**-0.1**
ABKAR	**Akbulak array**	**32.72 62**	P	**P**	**07 14 26.9**	**-0.2**
ABKAR			IAmb	IAmb	07 14 52.1	
	comp=Z,2.0nm,1.0s					
GEYT	**Alibeck**	**34.28 83**	P	**P**	**07 14 41.3**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=316,slow=6.0,SNR=2.5					
	comp=Z,0.9nm,0.4s					
BRVK	**Borovoye**	**38.70 54**	P	**P**	**07 15 19.2**	**+0.8**
BRVK			IAmb	IAmb	07 15 20.6	
	comp=Z,15nm,1.1s					
KK31	**Karatay Array**	**41.28 69**	P	**P**	**07 15 40.2**	**+0.3**
KKAR	**Karatay Array**	**41.28 69**	P	**P**	**07 15 40.3**	**+0.4**
ZALV	**Zalesovo Beam**	**46.97 50**	P	**P**	**07 16 25.2**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=289,slow=8.5,SNR=5.3					
	comp=Z,1.2nm,0.4s					
ZALV	**Zalesovo Beam**	**46.97 50**	P	**P**	**07 16 25.7**	**+0.3**
MK31	**Makanchi Array**	**47.81 60**	P	**P**	**07 16 32.6**	**+0.5**
MKAR	**Makanchi Array**	**47.81 60**	P	**P**	**07 16 32.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=286,slow=6.3,SNR=7.3					
	comp=Z,1.8nm,0.7s					
MKAR	**Makanchi Array**	**47.81 60**	P	**P**	**07 16 32.6**	**+0.5**
EUNU	**Eureka**	**49.90 347**	P	**P**	**07 16 48.7**	**+0.9**
EUNU			IAmb	IAmb	07 16 53.0	
	comp=Z,9.1nm,1.1s					
SONM	**Songino Array**	**61.87 50**	P	**P**	**07 18 14.9**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=291,slow=7.7,SNR=7.7					
	comp=Z,1.8nm,0.8s					
SONM	**Songino Array**	**61.87 50**	P	**P**	**07 18 14.5**	**+0.5**
YKA	**Yellowknife Ar**	**67.12 337**	P	**P**	**07 18 48.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=41,slow=5.9,SNR=2.3					
ILAR	**Eielson Array**	**71.73 351**	P	**P**	**07 19 17.6**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=342,slow=3.5,SNR=9.2					
	comp=Z,1.0nm,0.8s					
PDAR	**Pinedale Array**	**80.58 321**	P	**P**	**07 20 07.5**	**0.0**
	comp=Z,0.4nm,0.7s,baz=47,slow=5.4,SNR=2.7					
	comp=Z,0.4nm,0.7s					
BDFB	**Brasilia**	**80.73 239**	P	**P**	**07 20 09.5**	**+1.2**
	comp=Z,2.9nm,0.7s,baz=67,slow=5.1,SNR=4.7					
	comp=Z,2.9nm,0.7s					
BMO	**Blue Mountains**	**82.27 327**	P	**P**	**07 20 16.8**	**+0.6**
BMO			IAmb	IAmb	07 20 17.9	
	comp=Z,3.6nm,0.8s					
TXAR	**Lajitas Array**	**87.79 309**	P	**P**	**07 20 45.4**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=60,slow=7.4,SNR=2.3					
	comp=Z,0.3nm,0.7s					

LDG ***30*** *07:08:34.8±0.2,42°.71N×13°.21E,h10km,MI4.1/8,Error ellipse: s-maj=7.4km s-min=4.5km az=29.0*
ROM ***30*** *07:08:35.5±0.1,42°.713N±0°.004×13°.142E±0°.005, h10km,ML4.2/22,Error ellipse: s-maj=0.4km s-min=0.3km az=228.0*
NEIC ***30*** *07:08:35.1±1.9,42°.75N±0°.10×13°.2E±0°.1,h10km±2km, Error ellipse: s-maj=21.2km s-min=3.4km az=218.0*
PRU ***30*** *07:08:38.9±0.0,42°.82N×13°.60E,h0km*
IDC ***30*** *07:08:38.2±1.4,42°.87N×13°.37E,h0km,mb3.9/6, mbtmp3.9/11,ML4.1/4,Error ellipse: s-maj=25.4km s-min=21.3km az=78.0*
ISC 30 07:08:36.3±0.7,42°.71N±0°.02×13°.12E±0°.02,h10km±4km, n110,σ1°80/146,mb4.1/5,4C,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.11**	**120**	P	**Pg**	**07 08 38.6**	**-0.5**
T1201				S	**Sg**	**07 08 41.0**	**-0.2**
LNSS	**Leonessa**	**0.12**	**208**	P	**Pg**	**07 08 39.2**	**-0.2**
LNSS				S	**Sg**	**07 08 41.6**	**+0.1**
T1244	**Arquata del Tr**	**0.14**	**71**	⇑P	**Pg**	**07 08 39.0**	**-0.6**
T1244				S	**Sg**	**07 08 41.7**	**-0.2**
T1217	**Poggiodomo (PG**	**0.14**	**270**	⇑P	**Pg**	**07 08 39.1**	**-0.5**
T1217				S	**Sg**	**07 08 41.9**	**0.0**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1204	**Amatrice, Fraz**	**0.15**	**104**	P	**Pg**	**07 08 39.1**	**-0.7**
T1204				S	**Sg**	**07 08 41.9**	**-0.3**
T1204				AML	AML		
T1204				AML	AML		
	comp=N,98900μm,0.6s						
T1204				AML	AML		
	comp=N,99050μm,0.6s						
T1204				AML	AML		
T1245	**Castelsantange**	**0.15**	**19**	P	**Pg**	**07 08 39.6**	**-0.3**
T1245				S	**Sg**	**07 08 41.7**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.19**	**337**	P	**Pg**	**07 08 39.9**	**-0.6**
T1216				S	**Sg**	**07 08 43.0**	**-0.3**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1215	**Vallo di Nera,**	**0.21**	**296**	⇑P	**Pg**	**07 08 40.2**	**-0.5**
T1215				S	**Sg**	**07 08 43.8**	**+0.2**
T1215				AML	AML		
	comp=N,68400μm,1.4s						
T1215				AML	AML		
	comp=E,60200μm,0.3s						
T1215				AML	AML		
	comp=N,68450μm,1.4s						
T1215				AML	AML		
	comp=E,61800μm,0.3s						
T1215				AML	AML		
	comp=N,68450μm,1.4s						
T1215				AML	AML		
	comp=N,68500μm,1.4s						
T1215				AML	AML		
	comp=E,61800μm,0.3s						
T1215				AML	AML		
	comp=N,68400μm,1.4s						
T1215				AML	AML		
	comp=N,68400μm,1.4s						
T1215				AML	AML		
	comp=E,60250μm,0.3s						
MC2	**Monte Cornacci**	**0.21**	**14**	P	**Pg**	**07 08 40.7**	**-0.1**
MC2				S	**Sg**	**07 08 43.6**	**-0.3**
RM33	**Pellescritta (**	**0.21**	**161**	P	**Pg**	**07 08 40.5**	**-0.3**
RM33				S	**Sg**	**07 08 44.0**	**+0.1**
RM33				AML	AML		
	comp=E,75850μm,0.2s						
RM33				AML	AML		
	comp=N,87300μm,0.4s						
RM33				AML	AML		
	comp=N,89950μm,0.4s						
RM33				AML	AML		
	comp=E,75850μm,0.2s						
RM33				AML	AML		
	comp=N,87250μm,0.4s						
RM33				AML	AML		
	comp=E,74150μm,0.2s						
T1243	**Rocca Santa Ma**	**0.24**	**94**	P	**Pg**	**07 08 40.3**	**-1.0**
T1243				S	**Sg**	**07 08 44.8**	**0.0**
T1241	**Roccafluvione,**	**0.27**	**58**	P	**Pg**	**07 08 41.6**	**-0.3**
T1241				S	**Sg**	**07 08 46.1**	**+0.6**
T1241				AML	AML		
T1241				AML	AML		
	comp=N,96700μm,0.8s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,96700μm,0.8s

comp=N,55000µm,0.5s
GUMA Gualdo di Mace 0.38 24 P Pg 07 08 43.5 -0.4
GUMA S **Sg 07 08 49.4 +0.4**
CSP1 Cessapalombo 0.39 9 P **Pg 07 08 43.5 -0.5**
CSP1 S **Sg 07 08 48.8 -0.3**
CESX Cesi 0.41 256 Pg **Pg 07 08 43.0 -1.5**
CESX Cesi 0.41 256 P **Pg 07 08 44.7 +0.2**
AQU L'Aquila 0.41 150 Pg **Pg 07 08 44.0 -0.4**
AQU L'Aquila 0.41 150 P **Pg 07 08 43.5 -1.0**
AQU AML AML
comp=E,35161µm,1.2s
AQU AML AML
comp=E,33544µm,1.2s
GIGS Gran Sasso 0.42 128 P **Pg 07 08 43.2 -1.4**
GIGS S **Sg 07 08 49.6 -0.6**
GIGS AML AML
comp=E,10750µm,0.4s
GIGS AML AML
comp=N,6955µm,1.2s
FIAM Fiamignano 0.44 180 P **Pg 07 08 44.0 -1.0**
SEF1 Sefro 0.45 344 P **Pg 07 08 45.2 0.0**
OFFI Offida 0.47 62 P **Pg 07 08 45.3 -0.3**
OFFI AML AML
OFFI AML AML
comp=E,97200µm,0.4s
ASSB Assisi San Ben 0.47 314 P **Pg 07 08 45.9 +0.3**
ASSB S **Sg 07 08 52.3 +0.4**
PIO1 Pioraco 0.48 348 P **Pg 07 08 45.4 -0.3**
PIO1 AML AML
comp=E,24550µm,0.5s
PIO1 AML AML
comp=N,40700µm,0.7s
PIO1 AML AML
comp=E,24500µm,0.5s
MDAR Monte D'Aria 0.48 2 P **Pg 07 08 45.0 -0.7**
MDAR S **Sg 07 08 52.3 +0.1**
MNTP Montappone 0.50 31 P **Pg 07 08 46.0 -0.1**
MNTP S **Sb 07 08 54.1 -0.3**
MNTP AML AML
comp=E,64850µm,1.1s
MNTP AML AML
comp=E,64900µm,1.1s
MNTP AML AML
comp=N,56250µm,1.4s
SSM1 San Severino M 0.52 5 P **Pg 07 08 45.5 -0.9**
SSM1 S **Sg 07 08 53.6 +0.3**
GAG1 Gagliole 0.53 356 P **Pg 07 08 46.2 -0.5**
GAG1 S **Sg 07 08 54.1 +0.5**
FAGN Fagnano 0.56 142 P **Pg 07 08 46.9 -0.4**
ATCC AVT- Casa Cast 0.59 323 P **Pg 07 08 47.6 -0.2**
TRTR Tortoreto Alta 0.59 80 P **Pg 07 08 47.7 -0.1**
TRE1 Treia 0.61 13 P **Pg 07 08 48.2 -0.1**
TRE1 AML AML
comp=E,48050µm,0.4s
TRE1 AML AML
comp=E,48000µm,0.4s
TRE1 AML AML
comp=N,46950µm,0.6s
VCEL Villa Celiera 0.62 121 P **Pg 07 08 47.4 -0.9**
VCEL AML AML
comp=E,30500µm,1.6s
VCEL AML AML
comp=N,38350µm,1.6s
VCEL AML AML
comp=E,30450µm,1.6s
VCEL AML AML
comp=N,38400µm,1.6s
SRES S.Oreste - Sor 0.66 224 P **Pg 07 08 48.8 -0.2**
CING Cingoli 0.67 5 P **Pg 07 08 48.8 -0.4**
T0110 Collepietro 0.69 135 P **Pg 07 08 48.9 -0.8**
MURB Monte Urbino 0.70 322 **Pg 07 08 49.3 -0.6**
MURB Monte Urbino 0.70 322 P **Pg 07 08 48.5 -1.4**
MURB AML AML
comp=E,60200µm,1.0s
MURB AML AML
comp=E,65600µm,0.3s
MURB AML AML
comp=N,67150µm,1.0s
MURB AML AML
comp=N,62300µm,1.0s
MMUR Monte Murano 0.73 353 P **Pg 07 08 48.3 -2.2**
MMUR S **Sb 07 09 00.8 -0.6**
ATTE AVT- Monte Tez 0.74 311 P **Pg 07 08 50.2 -0.5**
PP3 Marolino 0.76 28 P **Pg 07 08 50.6 -0.3**
PP3 AML AML
comp=N,69900µm,1.5s
PP3 AML AML
comp=N,70700µm,1.5s
PP3 AML AML
comp=E,70250µm,0.4s
PP3 AML AML
comp=E,65150µm,0.4s
ATFO Monte Foce - G 0.77 329 P **Pg 07 08 50.1 -1.1**
ATFO AML AML
comp=N,10305µm,0.5s
ATFO AML AML
comp=E,12700µm,1.5s
ATFO AML AML
comp=N,10310µm,0.5s
MGAB Montegabbione 0.77 285 P **Pg 07 08 51.2 0.0**
MGAB AML AML
comp=E,28350µm,0.8s
MGAB AML AML
comp=N,27550µm,0.5s
MGAB AML AML
comp=E,28300µm,0.8s
MGAB AML AML
comp=E,27300µm,0.8s
MGAB AML AML
comp=N,24050µm,1.2s
ARVD Arcevia 0.80 351 P **Pg 07 08 50.1 -1.6**
ATVA AVT- Monte Val 0.83 313 P **Pg 07 08 52.2 -0.2**
FRON Frontone 0.86 340 P **Pg 07 08 52.0 -0.8**
RCAV Rocca di Cave 0.87 189 P **Pb 07 08 53.6 0.0**
RCAV AML AML
comp=N,9032µm,0.8s
AOI Ancona 0.91 23 P **Pg 07 08 52.9 -0.9**
PIEI Pieia 0.93 333 P **Pg 07 08 54.0 -0.2**
CAFI Castiglion Fio 1.05 306 P **Pg 07 08 56.2 -0.3**
CAFI AML AML
comp=E,6080µm,1.0s
CAFI AML AML
comp=E,6075µm,1.0s
CAFI AML AML
comp=N,6160µm,0.5s
CAFI AML AML
comp=N,6510µm,1.2s
CAFI AML AML
comp=E,6140µm,1.1s
CAFI AML AML
comp=N,6165µm,0.5s
ARCI Arcidosso 1.22 277 P **Pg 07 08 59.8 0.0**
LATB Latina 1.22 186 P **Pn 07 08 59.3 -0.1**
TRIF Trifonti 1.68 285 P **Pn 07 09 05.1 -0.7**
PGF Pioggiola 3.04 268 *e*P **Pn 07 09 25.7 +1.1**
PGF *e*Sn **Sn 07 09 58.1 -3.1**
comp=N,75nm,0.6s
STAL STALIGIAL 3.56 355 Pn **Pn 07 09 31.3 -0.4**
CLUD Cludinico 3.75 357 Pn **Pn 07 09 32.9 -1.3**
SBF Sospel 4.31 287 *e*P **Pn 07 09 42.7 +0.8**
FUORN Ofenpass-Fuorn 4.41 333 Pn **Pn 07 09 41.9 -1.6**
PDG Podgorica 4.54 91 Pn **Pn 07 09 42.6 -2.4**
TUE Stuetta 4.62 326 Pn **Pn 07 09 44.1 -2.3**
DAVOX Davos/Dischmat 4.68 332 Pn **Pn 07 09 51.7 +4.6**
comp=N,14nm,0.3s,baz=306,slow=8.5,SNR=6.7
DAVOX Sn **Sn 07 10 45.1 +3.6**
comp=N,15nm,0.3s,baz=316,slow=22,SNR=2.0
comp=N,38nm,0.4s
SCTE Santa Cesarea 4.81 121 Pn **Pn 07 09 45.6 -3.1**
LMR La Mourre 4.89 280 *e*P **Pn 07 09 48.7 -1.1**
LMR *e*Sn **Sn 07 10 42.1 -4.3**
comp=N,18nm,0.3s
MBDF Montbardon 5.02 296 *e*P **Pn 07 09 54.4 +2.6**
DIVS Divibare 5.19 72 Pn **Pn 07 09 51.1 -3.0**
TIR Tirane 5.21 103 Pn **Pn 07 09 51.5 -2.7**
VLO Vlora 5.28 113 Pn **Pn 07 09 53.3 -1.9**
LPL La Plagne 5.38 304 *e*P **Pn 07 09 59.0 +2.1**
SMRF Simiane la Rot 5.64 285 *e*P **Pn 07 10 01.1 +0.8**
ORIF Oris-en-Rattie 5.68 295 *e*P **Pn 07 10 02.8 +1.9**
GERES GERESS Array B 6.15 4 Pn **Pn 07 10 07.3 +0.1**
comp=N,1.8nm,0.3s,baz=190,slow=16,SNR=1.3
GERES Sn **Sn 07 11 18.3 +0.7**
comp=N,11nm,0.3s,baz=170,slow=24,SNR=6.9
comp=N,4.3nm,0.4s
CKRC Cesky Krumlov 6.17 7 *e*SN **Sn 07 11 16.1 -1.8**

CABF La Chapelle 6.35 310 *e*P **Pn 07 10 10.5 +0.5**
KHC Kasperske Hory 6.43 3 *e*SN **Sn 07 11 22.3 -2.1**
VIVF Saint-Julien-I 6.48 292 *e*P **Pn 07 10 13.0 +1.3**
HINF Hinteralfeld 6.75 321 *e*P **Pn 07 10 16.1 +0.6**
HINF *e*Sn **Sn 07 11 29.2 -3.2**
comp=N,91nm,0.7s
LASF Ste Croix 6.88 285 *e*P **Pn 07 10 16.3 -1.0**
ECH Echery 6.92 325 Pn **Pn 07 10 16.2 -1.5**
CDF Champ du Feu 7.02 326 *e*P **Pn 07 10 17.9 -1.3**
CDF *e*Sn **Sn 07 11 33.3 -5.8**
comp=N,52nm,0.4s
HAU Haudompre 7.12 320 *e*P **Pn 07 10 20.1 -0.4**
HAU *e*Sn **Sn 07 11 35.6 -5.9**
comp=N,142nm,0.6s
NKC Novy Kostel 7.54 357 *e*SN **Sn 07 11 49.5 -2.2**
SMF Signal de Mont 7.69 304 *e*P **Pn 07 10 27.8 -0.5**
SMF *e*Sn **Sn 07 11 50.1 -5.4**
comp=N,28nm,0.7s
SFTF Sexfontaines 7.90 317 *e*P **Pn 07 10 32.2 +1.0**
baz=131
LOR Lormes 7.99 308 *e*P **Pn 07 10 34.6 +2.2**
baz=122
LOR *e*Sn **Sn 07 11 56.6 -6.2**
comp=N,20nm,0.5s
MTLF Montolieu 8.01 278 *e*P **Pn 07 10 34.6 +1.8**
CAF Calviac 8.30 289 *e*P **Pn 07 10 37.9 +1.3**
CAF *e*Sn **Sn 07 12 03.4 -7.0**
comp=N,5.1nm,0.4s
TCF Toulx Ste Croi 8.58 298 *e*P **Pn 07 10 40.1 -0.4**
RJF Les Rejaudoux 8.76 291 *e*P **Pn 07 10 45.0 +2.1**
LFF La Frestale 9.22 288 *e*P **Pn 07 10 50.0 +0.7**
EPF Esparros 9.39 276 *e*P **Pn 07 10 55.3 +3.6**
ETSF Etsaut 10.06 276 *e*P **Pn 07 11 05.4 +4.6**
SJPF Ste Jean 10.53 277 *e*P **Pn 07 11 11.2 +3.9**
AKASG Malin Array Be 13.62 49 Pn **Pn 07 11 50.7 +1.4**
comp=N,0.5nm,0.3s,baz=238,slow=11,SNR=1.8
comp=N,0.2nm,0.4s
EKA Eskdalemuir Ar 16.48 326 Pn **P 07 12 31.2 +1.1**
baz=135,slow=14
comp=N,1.1nm,0.5s
NOA NORSAR Array B 18.39 357 P **P 07 12 52.0 +0.8**
comp=N,3.2nm,0.7s,baz=176,slow=12,SNR=1.8
FIA0 FINESS Array S 20.31 18 P **P 07 13 10.2 -1.9**
FINES FINESS Array B 20.31 18 P **P 07 13 12.5 +0.4**
comp=N,4.5nm,0.8s,baz=190,slow=9.7,SNR=2.0
comp=N,4.5nm,0.8s
KBZ Khabaz 21.68 77 P **P 07 13 28.0 +1.1**
comp=N,5.5nm,0.9s,baz=287,slow=8.3,SNR=4.3
comp=N,5.5nm,0.9s
TORD Torodi Ar. Bea 31.07 202 P P 07 14 60.0 +5.3
comp=N,0.9nm,0.7s,baz=20,slow=8.7,SNR=1.5
comp=N,0.9nm,0.7s
GEYT Alibeck 34.33 83 P **P 07 15 24.1 +1.1**
comp=N,1.7nm,0.5s,baz=272,slow=11,SNR=2.5
comp=N,1.7nm,0.5s
MKAR Makanchi Array 47.84 60 P **P 07 17 14.5 +0.5**
comp=N,1.8nm,0.7s,baz=287,slow=4.9,SNR=5.3
comp=N,1.8nm,0.7s
SONM Songino Array 61.90 50 P **P 07 18 58.6 +2.7**
comp=N,0.7nm,0.6s,baz=284,slow=5.8,SNR=2.4
comp=N,0.7nm,0.6s

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*LDG **30** 07:10:05.9±0.2, 42.°79N×13.°15E, h10km, Ml3.4/15, Error ellipse: s-maj=5.5km s-min=3.4km az=31.0*
*ROM **30** 07:10:06.4±0.1, 42.°803N±0.°003×13.°105E±0.°004, h10km, ML3.7/37, Error ellipse: s-maj=0.3km s-min=0.1km az=236.0*
*IDC **30** 07:10:06.6±1.6, 42.°71N×13.°17E, h0km, mb3.7/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=38.6km s-min=26.8km az=101.0*
ISC 30 07:10:06.2±0.7, 42.°80N±0.°02×13.°10E±0.°02, h17km±4km, n110, σ2§28/150, mb3.9/3, 2C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**47**	⇓P	**Pg**	**07 10 09.2**	**-0.5**
T1245				S	**Sg**	**07 10 11.1**	**-1.0**
T1216	**Preci, Frazion**	**0.11**	**326**	⇑P	**Pg**	**07 10 09.5**	**-0.3**
T1216				S	**Sg**	**07 10 11.7**	**-0.6**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.13**	**29**	P	**Pg**	**07 10 10.0**	**-0.3**
MC2				S	**Sg**	**07 10 12.5**	**-0.4**
T1244	**Arquata del Tr**	**0.15**	**106**	P	**Pb**	**07 10 10.4**	**-0.2**
T1244				S	**Sb**	**07 10 13.4**	**-0.1**
T1217	**Poggiodomo (PG**	**0.15**	**236**	P	**Pg**	**07 10 10.4**	**0.0**
T1217				S	**Sg**	**07 10 13.3**	**+0.1**
T1217				AML	AML		
comp=E,33100µm,0.4s							
T1217				AML	AML		
comp=E,32700µm,1.0s							
T1217				AML	AML		
comp=E,32750µm,1.0s							
T1217				AML	AML		
comp=N,48850µm,1.2s							
T1217				AML	AML		
comp=N,48800µm,1.2s							
T1217				AML	AML		
comp=N,48850µm,1.2s							
T1217				AML	AML		
comp=E,33100µm,0.4s							
T1217				AML	AML		
comp=E,32800µm,1.0s							
T1217				AML	AML		
comp=N,51300µm,0.5s							
FEMA	**Monte Fema**	**0.17**	**346**	P	**Pg**	**07 10 10.5**	**-0.2**
FEMA				S	**Sg**	**07 10 13.3**	**-0.4**
FEMA				AML	AML		
FEMA				AML	AML		
comp=N,76950µm,0.7s							
FEMA				AML	AML		
comp=N,76900µm,0.7s							
FEMA				AML	AML		
comp=N,76900µm,0.6s							
FEMA				AML	AML		
FEMA				AML	AML		
T1215	**Vallo di Nera,**	**0.17**	**271**	P	**Pg**	**07 10 10.7**	**0.0**
T1215				S	**Sg**	**07 10 13.7**	**+0.1**
T1215				AML	AML		
comp=N,27350µm,0.4s							
T1215				AML	AML		
comp=N,27700µm,0.4s							
T1215				AML	AML		
comp=E,22700µm,0.6s							
T1215				AML	AML		
comp=N,27400µm,0.4s							
T1215				AML	AML		
comp=N,27750µm,0.4s							
T1215				AML	AML		
comp=N,27400µm,0.4s							
T1215				AML	AML		
comp=E,23350µm,1.5s							
T1201	**Domo (RI)**	**0.18**	**143**	P	**Pb**	**07 10 11.2**	**0.0**
T1201				S	**Sb**	**07 10 14.6**	**+0.2**
T1204	**Amatrice, Fraz**	**0.20**	**128**	P	**Pb**	**07 10 11.2**	**-0.3**
T1204				S	**Sb**	**07 10 14.9**	**-0.2**
T1204				AML	AML		
comp=N,69100µm,0.2s							
T1204				AML	AML		
comp=E,82950µm,0.3s							
T1204				AML	AML		
comp=E,82900µm,0.3s							
T1204				AML	AML		
comp=N,69150µm,0.2s							
T1204				AML	AML		
comp=E,82700µm,0.3s							
LNSS	**Leonessa**	**0.20**	**193**	P	**Pg**	**07 10 11.3**	**+0.3**
LNSS				S	**Sg**	**07 10 14.9**	**+0.5**
T1256	**Bolognola (MC)**	**0.23**	**23**	P	**Pg**	**07 10 11.6**	**+0.1**
T1256				S	**Sg**	**07 10 15.3**	**+0.2**
T1241	**Roccafluvione,**	**0.25**	**77**	P	**Pb**	**07 10 12.4**	**+0.1**
T1241				S	**Sb**	**07 10 16.5**	**+0.1**
T1241				AML	AML		
comp=E,50150µm,0.6s							
T1241				AML	AML		
comp=N,50950µm,0.6s							
T1241				AML	AML		
comp=N,50950µm,0.6s							
T1241				AML	AML		
comp=N,51800µm,0.6s							
T1241				AML	AML		
comp=E,50450µm,0.6s							
T1241				AML	AML		
comp=N,51850µm,0.6s							
T1241				AML	AML		
comp=E,50150µm,0.6s							
T1241				AML	AML		
comp=N,50900µm,0.6s							
AM05	**Amandola Campo**	**0.26**	**46**	P	**Pg**	**07 10 12.0**	**+0.1**
AM05				S	**Sg**	**07 10 16.0**	**+0.3**
AM05				AML	AML		
comp=N,11755µm,0.7s							
AM05				AML	AML		
comp=E,50300µm,0.9s							
AM05				AML	AML		
comp=E,12850µm,0.9s							
AM05				AML	AML		
comp=N,11750µm,0.7s							
AM05				AML	AML		
comp=E,50350µm,0.9s							
AM05				AML	AML		
comp=N,11745µm,0.7s							
AM05				AML	AML		
comp=N,3170µm,0.4s							
AM05				AML	AML		
comp=E,12800µm,0.9s							
T1243	**Rocca Santa Ma**	**0.27**	**112**	P	**Pg**	**07 10 12.2**	**-0.1**
T1243				S	**Sb**	**07 10 16.8**	**-0.4**
RM33	**Pellescritta (**	**0.30**	**164**	P	**Pg**	**07 10 12.9**	**+0.2**
RM33				S	**Sb**	**07 10 18.0**	**0.0**
RM33				AML	AML		
comp=E,18400µm,0.3s							
RM33				AML	AML		
comp=E,18000µm,0.3s							
RM33				AML	AML		
comp=N,14550µm,0.3s							
RM33				AML	AML		
comp=N,14750µm,0.3s							
RM33				AML	AML		
comp=E,18050µm,0.3s							
RM33				AML	AML		
comp=N,14700µm,0.3s							
RM33				AML	AML		
comp=N,14500µm,0.3s							
CSP1 Cessapalombo 0.30 14 P **Pg 07 10 12.8 +0.1**							
CSP1 S **Sg 07 10 17.6 +0.4**							
GUMA Gualdo di Mace 0.31 33 P **Pg 07 10 13.2 +0.4**							
GUMA S **Sb 07 10 18.4 +0.1**							
ARRO Arrone 0.33 229 P **Pg 07 10 13.6 +0.4**							
ARRO AML AML							
comp=E,10590µm,0.2s							
ARRO AML AML							
comp=N,11450µm,0.2s							
CAMP Campotosto 0.35 139 ⇑P **Pg 07 10 13.6 +0.1**							
CAMP S **Sb 07 10 18.9 -0.3**							
CAMP AML AML							
comp=E,12800µm,0.8s							
CAMP AML AML							
comp=N,11760µm,0.7s							
T1246 Crognaleto (TE 0.36 127 P **Pg 07 10 13.7 0.0**							
T1246 S **Sb 07 10 19.4 -0.3**							
SEF1 Sefro 0.37 342 P **Pg 07 10 13.8 0.0**							
SEF1 S **Sg 07 10 19.6 +0.6**							
SEF1 AML AML							
comp=E,32950µm,0.3s							
SEF1 AML AML							
comp=E,32900µm,0.3s							
SEF1 AML AML							
comp=N,35450µm,0.2s							
SEF1 AML AML							
comp=E,32950µm,0.3s							
SEF1 AML AML							
comp=N,35500µm,0.2s							
T1247 Pizzolo (AQ) 0.39 158 P **Pb 07 10 14.4 -0.2**							
T1247 S **Sb 07 10 20.8 +0.5**							
MDAR Monte D'Aria 0.39 4 P **Pg 07 10 14.5 +0.2**							
MDAR S **Sg 07 10 20.4 +0.6**							
ASSB Assisi San Ben 0.41 307 P **Pg 07 10 14.5 0.0**							
ASSB S **Sg 07 10 20.7 +0.5**							
ASSB AML AML							
comp=E,17900µm,0.9s							
ASSB AML AML							
comp=N,14950µm,0.8s							
FIU1 Fiuminata 0.41 342 P **Pg 07 10 14.7 +0.1**							
FIU1 S **Sg 07 10 20.9 +0.7**							
FIU1 AML AML							
comp=E,17550µm,0.2s							
FIU1 AML AML							
comp=N,17500µm,1.2s							
FIU1 AML AML							
comp=E,17550µm,0.2s							
FIU1 AML AML							
comp=N,17550µm,1.2s							
TERO Teramo 0.41 115 P **Pg 07 10 14.4 -0.1**							
TERO S **Sb 07 10 21.0 0.0**							
TERO AML AML							
comp=E,14800µm,0.7s							
TERO AML AML							
comp=N,13250µm,0.3s							
TERO AML AML							
comp=N,14250µm,0.3s							
TERO AML AML							
comp=E,14850µm,0.7s							
TERO AML AML							
comp=E,15650µm,1.0s							
TERO AML AML							
comp=N,13200µm,0.3s							
CESX Cesi 0.43 244 P **Pg 07 10 15.0 +0.1**							
CESX S **Sg 07 10 21.7 +1.0**							
CESX AML AML							
comp=E,15650µm,0.4s							
CESX AML AML							
comp=N,10420µm,0.5s							
MNTP Montappone 0.43 38 P **Pb 07 10 15.9 +0.5**							
MNTP AML AML							
comp=N,24250µm,0.3s							
MNTP AML AML							
comp=E,27700µm,1.6s							
GAG1 Gagliole 0.44 357 P **Pb 07 10 16.1 +0.6**							
GAG1 S **Sb 07 10 22.3 +0.4**							
GAG1 AML AML							
comp=N,33700µm,0.6s							
GAG1 AML AML							
comp=E,29800µm,0.3s							
OFFI Offida 0.45 72 P **Pb 07 10 16.2 +0.5**							
OFFI AML AML							
comp=N,30100µm,0.6s							
OFFI AML AML							
comp=E,17100µm,0.3s							
GIGS Gran Sasso 0.49 135 P **Pg 07 10 15.6 -0.4**							
GIGS AML AML							
comp=E,2790µm,0.6s							
GIGS AML AML							
comp=N,2920µm,1.2s							
AQU L'Aquila 0.50 154 P **Pg 07 10 16.1 0.0**							
AQU AML AML							
comp=N,6525µm,1.0s							
AQU AML AML							
comp=N,6785µm,0.6s							
AQU AML AML							
comp=N,6530µm,1.0s							
AQU AML AML							
comp=E,6325µm,0.4s							
AQU AML AML							
comp=E,6135µm,0.4s							
ATCC AVT- Casa Cast 0.51 319 P **Pg 07 10 16.4 -0.1**							
ATCC S **Sg 07 10 24.4 +1.0**							
ATCC AML AML							
comp=N,12150µm,0.5s							
ATCC AML AML							
comp=E,15400µm,1.0s							
FIAM Fiamignano 0.53 179 P **Pb 07 10 17.3 +0.2**							
TRTR Tortoreto Alta 0.60 89 P **Pn 07 10 19.1 -0.8**							
TRTR AML AML							
comp=N,17850µm,0.4s							
TRTR AML AML							
comp=E,22950µm,0.5s							
TRTR AML AML							
comp=N,17800µm,0.4s							
MURB Monte Urbino 0.63 318 P **Pg 07 10 18.2 -0.4**							
MURB AML AML							
comp=E,29700µm,1.0s							
MURB AML AML							
comp=N,31800µm,0.3s							
MURB AML AML							
comp=E,34250µm,1.0s							
MURB AML AML							
comp=N,30450µm,1.0s							

FAGN	**Fagnano**	**0.64 146**	P	**Pb**	**07 10 19.1 +0.1**	
VCEL	**Villa Celiera**	**0.68 126**	P	**Pb**	**07 10 19.6 0.0**	
VCEL			AML	AML		
	comp=N,11465μm,0.6s					
VCEL			AML	AML		
	comp=E,12500μm,0.4s					
VCEL			AML	AML		
	comp=N,11500μm,0.6s					
ATTE	**AVT- Monte Tez**	**0.68 306**	P	**Pg**	**07 10 19.4 -0.1**	
ATTE			AML	AML		
	comp=E,7085μm,0.4s					
ATTE			AML	AML		
	comp=N,4735μm,0.4s					
PP3	**Marolino**	**0.69 32**	P	**Pn**	**07 10 20.7 -0.5**	
PP3			AML	AML		
	comp=N,11695μm,0.3s					
PP3			AML	AML		
	comp=E,19800μm,0.4s					
PP3			AML	AML		
	comp=N,11200μm,0.3s					
PP3			AML	AML		
	comp=N,11680μm,0.3s					
PP3			AML	AML		
	comp=N,11205μm,0.3s					
PP3			AML	AML		
	comp=E,19800μm,0.4s					
PP3			AML	AML		
	comp=E,19750μm,0.4s					
ATFO	**Monte Foce - G**	**0.69 326**	P	**Pg**	**07 10 19.5 -0.2**	
ATFO			AML	AML		
	comp=N,11300μm,0.3s					
ATFO			AML	AML		
	comp=E,5705μm,0.5s					
ARVD	**Arcevia**	**0.71 350**	P	**Pb**	**07 10 19.5 -0.6**	
ARVD			AML	AML		
	comp=E,3840μm,0.4s					
ARVD			AML	AML		
	comp=N,2765μm,0.5s					
SRES	**S.Oreste - Sor**	**0.71 218**	P	**Pb**	**07 10 20.5 +0.3**	
SRES			AML	AML		
	comp=E,2350μm,0.8s					
SRES			AML	AML		
	comp=N,2120μm,0.5s					
MGAB	**Montegabbione**	**0.74 279**	P	**Pb**	**07 10 21.0 +0.3**	
MGAB			AML	AML		
	comp=E,9905μm,1.2s					
MGAB			AML	AML		
	comp=N,11200μm,0.5s					
MGAB			AML	AML		
	comp=E,10750μm,1.2s					
MGAB			AML	AML		
	comp=N,11550μm,0.5s					
T0110	**Collepietro**	**0.76 139**	P	**Pg**	**07 10 20.7 -0.3**	
T0110			AML	AML		
	comp=E,7830μm,0.4s					
T0110			AML	AML		
	comp=N,7240μm,0.7s					
ATMI	**Monte Miggiano**	**0.81 311**	P	**Pb**	**07 10 22.5 +0.6**	
MTCE	**Montecelio**	**0.82 199**	P	**Pg**	**07 10 22.7 +0.6**	
ATPI	**Pietralunga -**	**0.83 322**	P	**Pb**	**07 10 21.7 -0.5**	
ATPI			AML	AML		
	comp=N,2975μm,0.4s					
ATPI			AML	AML		
	comp=E,3125μm,0.8s					
AOI	**Ancona**	**0.83 26**	P	**Pg**	**07 10 22.8 +0.4**	
AOI			AML	AML		
	comp=E,3835μm,1.0s					
AOI			AML	AML		
	comp=N,4050μm,0.4s					
PIEI	**Pieia**	**0.85 331**	AML	AML		
	comp=N,2505μm,0.9s					
PIEI			AML	AML		
	comp=E,3655μm,0.3s					
CERT	**Cerreto**	**0.85 186**	P	**Pn**	**07 10 24.2 +0.7**	
MPAG	**Monte Paganucc**	**0.87 343**	P	**Pb**	**07 10 23.3 +0.5**	
MPAG			AML	AML		
	comp=E,2760μm,0.5s					
MPAG			AML	AML		
	comp=N,4560μm,0.7s					
MPAG			AML	AML		
	comp=N,4555μm,0.7s					
MPAG			AML	AML		
	comp=E,2755μm,0.5s					
SACS	**San Casciano d**	**0.88 274**	P	**Pb**	**07 10 23.5 +0.4**	
SACS			AML	AML		
	comp=N,3475μm,0.6s					
SACS			AML	AML		
	comp=E,3585μm,1.3s					
SACS			AML	AML		
	comp=N,3495μm,0.6s					
SACS			AML	AML		
	comp=N,3470μm,0.6s					
SACS			AML	AML		
	comp=E,3435μm,1.3s					
APEC	**Apecchio**	**0.91 327**	P	**Pb**	**07 10 24.4 +0.9**	
FSSB	**Fossombrone**	**0.92 345**	P	**Pb**	**07 10 23.9 +0.1**	
FSSB			AML	AML		
	comp=N,12400μm,0.4s					
FSSB			AML	AML		
	comp=E,9775μm,0.3s					
LATE	**Laterza**	**0.98 259**	P	**Pb**	**07 10 25.5 +0.8**	
CAFI	**Castiglion Fio**	**0.99 303**	P	**Pb**	**07 10 25.4 +0.5**	
CAFI			AML	AML		
	comp=E,2680μm,0.6s					
CAFI			AML	AML		
	comp=E,2750μm,0.6s					
CAFI			AML	AML		
	comp=N,2645μm,1.4s					
CAFI			AML	AML		
	comp=N,2770μm,1.4s					
MCIV	**Monte Civitell**	**1.05 269**	P	**Pb**	**07 10 26.4 +0.4**	
MCIV			AML	AML		
	comp=N,1575μm,0.7s					
MCIV			AML	AML		
	comp=E,1770μm,0.3s					
FROS	**Frosini**	**1.49 287**	P	**Pn**	**07 10 33.5 +1.3**	
TRIF	**Trifonti**	**1.65 282**	P	**Pn**	**07 10 35.6 +1.2**	
CASP	**Castiglione de**	**1.65 270**	P	**Pn**	**07 10 35.2 +0.8**	
PGF	**Pioggiola**	**3.04 267**	*e*Pn	**Pn**	**07 10 52.5 -1.1**	
PGF	**Pioggiola**	**3.04 267**	*e*P	**Pn**	**07 10 55.5 +1.9**	
PGF			*e*Sn	**Sn**	**07 11 25.2 -4.4**	
	comp=E,14nm,0.3s					
SBF	**Sospel**	**4.27 286**	*e*Pn	**Pn**	**07 11 08.2 -2.3**	
SBF	**Sospel**	**4.27 286**	*e*P	**Pn**	**07 11 13.8 +3.3**	
SBF			*e*Sn	**Sn**	**07 11 56.1 -3.9**	
	comp=E,25nm,0.5s					
DAVOX	**Davos/Dischmat**	**4.59 331**	Pn	**Pn**	**07 11 19.0 +4.0**	
	comp=E,6.4nm,0.3s,baz=330,slow=20,SNR=1.1					
DAVOX			Sn	**Sb**	**07 12 16.1 -5.5**	
	comp=E,2.0nm,0.3s,baz=352,slow=20,SNR=2.0					
	comp=E,29nm,0.5s					
LMR	**La Mourre**	**4.86 279**	*e*Pn	**Pn**	**07 11 15.9 -2.6**	
LMR	**La Mourre**	**4.86 279**	*e*P	**Pn**	**07 11 19.9 +1.4**	
LMR			*e*Sn	**Sn**	**07 12 09.5 -4.9**	
	comp=E,5.0nm,0.5s					
MBDF	**Montbardon**	**4.97 295**	*e*Pn	**Pn**	**07 11 20.7 +0.5**	
MBDF	**Montbardon**	**4.97 295**	*e*P	**Pn**	**07 11 24.5 +4.3**	
MBDF			*e*Sn	**Sn**	**07 12 12.7 -4.7**	
	comp=E,35nm,1.0s					
LPG	**La Plagne**	**5.31 303**	*e*Pn	**Pn**	**07 11 25.4 +0.5**	
LPG	**La Plagne**	**5.31 303**	*e*P	**Pn**	**07 11 28.3 +3.4**	
LPG			*e*Sn	**Sn**	**07 12 20.9 -4.9**	
	comp=E,14nm,0.6s					
LPL	**La Plagne**	**5.33 303**	*e*Pn	**Pn**	**07 11 24.4 -0.8**	
LPL	**La Plagne**	**5.33 303**	*e*P	**Pn**	**07 11 28.5 +3.3**	
LPL			*e*Sn	**Sn**	**07 12 21.3 -4.9**	
	comp=E,12nm,0.5s					
SMRF	**Simiane la Rot**	**5.61 285**	*e*Pn	**Pn**	**07 11 29.4 +0.5**	
SMRF	**Simiane la Rot**	**5.61 285**	*e*P	**Pn**	**07 11 32.5 +3.6**	
SMRF			*e*Sn	**Sn**	**07 12 28.0 -5.0**	
	comp=E,3.9nm,0.6s					
ORIF	**Oris-en-Rattie**	**5.64 295**	*e*Pn	**Pn**	**07 11 30.0 +0.7**	
ORIF	**Oris-en-Rattie**	**5.64 295**	*e*P	**Pn**	**07 11 33.1 +3.8**	
GERES	**GERESS Array B**	**6.06 4**	Sn	**Sn**	**07 12 45.2 +1.1**	
	comp=E,2.6nm,0.3s,baz=172,slow=23,SNR=1.8					
CABF	**La Chapelle**	**6.29 310**	*e*Pn	**Pn**	**07 11 36.4 -1.8**	
CABF	**La Chapelle**	**6.29 310**	*e*P	**Pn**	**07 11 41.3 +3.1**	
VIVF	**Saint-Julien-l**	**6.43 292**	*e*Pn	**Pn**	**07 11 39.6 -0.6**	
VIVF	**Saint-Julien-l**	**6.43 292**	*e*P	**Pn**	**07 11 44.0 +3.8**	
VIVF			*e*Sn	**Sn**	**07 12 47.6 -5.7**	
	comp=E,5.3nm,0.5s					
HINF	**Hinteralfeld**	**6.68 321**	*e*Pn	**Pn**	**07 11 42.1 -1.4**	
HINF	**Hinteralfeld**	**6.68 321**	*e*P	**Pn**	**07 11 47.6 +4.1**	
LASF	**Ste Croix**	**6.85 284**	*e*Pn	**Pn**	**07 11 44.6 -1.3**	
LASF	**Ste Croix**	**6.85 284**	*e*P	**Pn**	**07 11 49.9 +4.0**	
CDF	**Champ du Feu**	**6.94 326**	*e*P	**Pn**	**07 11 50.8 +3.6**	
HAU	**Haudompre**	**7.05 320**	*e*Pn	**Pn**	**07 11 47.0 -1.6**	
HAU	**Haudompre**	**7.05 320**	*e*P	**Pn**	**07 11 52.9 +4.3**	
SMF	**Signal de Mont**	**7.63 303**	*e*Pn	**Pn**	**07 11 53.7 -2.9**	
SMF	**Signal de Mont**	**7.63 303**	*e*P	**Pn**	**07 12 00.1 +3.5**	
SMF			*e*Sn	**Sn**	**07 13 21.0 -1.7**	
	comp=E,3.6nm,0.3s					
PAGF	**Fort de Pagny**	**7.73 321**	*e*P	**Pn**	**07 12 00.2 +2.3**	
LOR	**Lormes**	**7.92 307**	*e*Pn	**Pn**	**07 11 58.6 -2.0**	
	baz=102					
LOR	**Lormes**	**7.92 307**	*e*P	**Pn**	**07 12 04.4 +3.8**	
	baz=109					
LOR			*e*Sn	**Sn**	**07 13 24.4 -5.5**	
	comp=E,4.7nm,0.3s					
MTLF	**Montolieu**	**7.99 278**	*e*P	**Pn**	**07 12 05.9 +4.4**	
MTLF			*e*Sn	**Sn**	**07 13 24.3 -7.2**	
	comp=E,12nm,1.0s					
AVF	**Avril sur Loir**	**8.00 303**	*e*Pn	**Pn**	**07 12 01.2 -0.4**	
AVF	**Avril sur Loir**	**8.00 303**	*e*P	**Pn**	**07 12 05.5 +3.9**	
MEZF	**Maizieres J'vi**	**8.02 318**	*e*Pn	**Pn**	**07 12 00.8 -1.0**	
MEZF	**Maizieres J'vi**	**8.02 318**	*e*P	**Pn**	**07 12 05.1 +3.3**	
SSF	**Saint Saulge**	**8.03 305**	*e*Pn	**Pn**	**07 12 00.8 -1.3**	
SSF	**Saint Saulge**	**8.03 305**	*e*P	**Pn**	**07 12 05.7 +3.6**	
SSF			*e*Sn	**Sn**	**07 13 26.3 -6.2**	
	comp=E,5.0nm,0.5s					
BGF	**Bois d'Agland**	**8.22 301**	*e*Pn	**Pn**	**07 12 04.2 -0.4**	
BGF	**Bois d'Agland**	**8.22 301**	*e*P	**Pn**	**07 12 09.0 +4.4**	
BGF			*e*Sn	**Sn**	**07 13 37.0 0.0**	
	comp=E,7.1nm,0.4s					
CAF	**Calviac**	**8.26 289**	*e*P	**Pn**	**07 12 08.6 +3.4**	
IDI	**Anoyia**	**11.83 125**	Sn	**Sn**	**07 15 01.3 -4.6**	
	comp=E,0.1nm,0.3s,baz=278,slow=4.6,SNR=2.9					
FINES	**FINESS Array B**	**20.23 18**	P	Pn	07 14 42.9 +0.8	
	comp=E,4.3nm,1.0s,baz=184,slow=11,SNR=2.1					
	comp=E,4.3nm,1.0s					
TORD	**Torodi Ar. Bea**	**31.15 202**	P	**P**	**07 16 26.5 +2.3**	
	comp=E,1.0nm,0.9s,baz=17,slow=8.5,SNR=3.5					
	comp=E,1.0nm,0.9s					
ZALV	**Zalesovo Beam**	**46.96 50**	P	**P**	**07 18 39.1 +3.2**	
	comp=E,0.4nm,0.4s,baz=299,slow=7.2,SNR=1.9					
	comp=E,0.4nm,0.4s					
MKAR	**Makanchi Array**	**47.81 60**	P	**P**	**07 18 45.8 +3.1**	
	comp=E,0.7nm,0.7s,baz=275,slow=7.1,SNR=2.2					
	comp=E,0.7nm,0.7s					

ROM 30 07:12:53.5±0.1, 42°.791N±0°.003×13°.098E±0°.005, h10km, ML3.0/3, 1C, Error ellipse: s-maj=0.3km s-min=0.3km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**45**	P	Pg	07 12 56.6	+0.3
T1245				S	Sg	07 12 58.6	+0.3
T1245				END			
T1216	**Preci, Frazion**	**0.12**	**330**	P	Pg	07 12 56.9	+0.4
T1216				S	Sg	07 12 59.0	+0.5
MC2	**Monte Cornacci**	**0.14**	**29**	P	Pg	07 12 57.6	+0.7
MC2				S	Sg	07 12 59.9	+0.6
T1217	**Poggiodomo (PG**	**0.15**	**237**	P	Pg	07 12 57.5	+0.5
T1217				S	Sg	07 13 00.5	+1.2
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=N,11286μm,0.2s						
T1217				AML	AML		
	comp=E,8056μm,0.1s						
T1215	**Vallo di Nera,**	**0.17**	**274**	P	Pg	07 12 57.7	+0.4
T1215				S	Sg	07 13 01.0	+1.1
T1215				AML	AML		
	comp=E,50300μm,0.8s						
T1215				AML	AML		
	comp=N,45250μm,0.9s						
T1215				AML	AML		
	comp=E,48800μm,0.8s						
T1215				AML	AML		
	comp=N,46800μm,1.5s						
FEMA	**Monte Fema**	**0.17**	**348**	P	Pg	07 12 58.1	+0.7
FEMA				S	Sg	07 13 01.0	+0.8
LNSS	**Leonessa**	**0.19**	**193**	⇑P	Pg	07 12 58.2	+0.5
LNSS				S	Sg	07 13 01.8	+1.2
T1241	**Roccafluvione,**	**0.25**	**75**	AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
RM33	**Pellescritta (**	**0.29**	**163**	P	Pg	07 12 59.9	+0.4
RM33				S	Sb	07 13 05.0	-0.9
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=E,4809μm,0.1s						
RM33				AML	AML		
	comp=E,4926μm,0.1s						
ARRO	**Arrone**	**0.32**	**229**	P	Pg	07 13 00.5	+0.4
ARRO				S	Sb	07 13 05.9	-0.8
ARRO				AML	AML		
	comp=E,66800μm,1.1s						
ARRO				AML	AML		
	comp=N,58600μm,0.9s						
CESX	**Cesi**	**0.42**	**245**	P	Pg	07 13 01.9	+0.1
CESX				S	Sb	07 13 08.8	-0.7
CESX				AML	AML		
	comp=N,43450μm,0.4s						
CESX				AML	AML		
	comp=E,52600μm,1.2s						
CESX				AML	AML		
	comp=N,2475μm,0.3s						
SRES	**S.Oreste - Sor**	**0.70**	**218**	AML	AML		
	comp=E,12055μm,0.7s						
SRES				AML	AML		
	comp=N,20450μm,0.4s						
MGAB	**Montegabbione**	**0.73**	**280**	AML	AML		
	comp=E,52150μm,0.6s						
MGAB				AML	AML		
	comp=N,40050μm,0.5s						
MGAB				AML	AML		
	comp=E,54750μm,0.6s						
MGAB				AML	AML		
	comp=N,38250μm,0.9s						
MTCE	**Montecelio**	**0.81**	**199**	AML	AML		
	comp=E,23500μm,0.4s						
MTCE				AML	AML		
	comp=N,15550μm,0.8s						
CERT	**Cerreto**	**0.85**	**186**	AML	AML		
	comp=N,18900μm,0.4s						
CERT				AML	AML		
	comp=E,30200μm,0.6s						
SACS	**San Casciano d**	**0.88**	**274**	AML	AML		
	comp=N,15300μm,0.7s						
SACS				AML	AML		
	comp=E,12695μm,1.6s						
SACS				AML	AML		
	comp=N,15150μm,1.0s						
SACS				AML	AML		
	comp=E,13200μm,0.7s						
LIK	**San Giovanni I**	**1.33**	**165**	AML	AML		
	comp=E,17400μm,0.4s						
LIK				AML	AML		
	comp=N,15100μm,1.5s						
PTRJ	**Pietraroja**	**1.78**	**143**	AML	AML		
	comp=N,6270μm,0.4s						
PTRJ				AML	AML		
	comp=E,5870μm,0.6s						
PTRJ				AML	AML		
	comp=E,6610μm,0.6s						
PTRJ				AML	AML		
	comp=N,7400μm,1.0s						

*MOS **30** 07:13:04.2±1.2, 42°.74N×13°.21E, h9km, mb4.5/17, Error ellipse: s-maj=6.2km s-min=3.7km az=77.5*
*IDC **30** 07:13:04.7±0.6, 42°.76N×13°.08E, h0km, mb4.1/17, mbtmp4.1/27, ML3.8/11, Error ellipse: s-maj=13.0km s-min=9.9km az=110.0*
*PRU **30** 07:13:05.1±0.0, 42°.61N×13°.16E, h10km, M4.5*
*ROM **30** 07:13:05.2±0.0, 42°.693N±0°.002×13°.226E±0°.002, h11km, ML4.2/143, Error ellipse: s-maj=0.2km s-min=0.1km az=74.0*
*NEIC **30** 07:13:06.3±1.1, 42°.73N±0°.04×13°.18E±0°.06, h10km±1km, mb4.3/13, ML4.5(ROM), ML4.5(VIE), Error ellipse: s-maj=8.4km s-min=7.1km az=49.0*
*BEO **30** 07:13:06.8±0.6, 42°.66N×13°.21E, h12km±2km, ML4.4/16*
*LDG **30** 07:13:07.3±0.1, 42°.68N×13°.06E, h11km, Ml3.8/29, Error ellipse: s-maj=5.4km s-min=2.9km az=36.0*
*PDG **30** 07:13:08.8±0.8, 42°.66N×13°.24E, h40km±11km, MD4.4/1, ML4.4/10, Error ellipse: s-maj=1.6km s-min=1.0km az=90.0*

ISC 30 07:13:05.9±0.6, 42°.69N±0°.01×13°.21E±0°.01, h12km±3km, n621, σ1°.92/702, mb4.3/35, 57C-31D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.04**	**138**	⇑P	Pg	07 13 07.8	-0.5
T1201				S	Sg	07 13 09.3	-0.6
T1204	**Amatrice, Fraz**	**0.08**	**99**	⇓P	Pg	07 13 07.9	-0.7
T1204				S	Sg	07 13 09.5	-1.1
T1244	**Arquata del Tr**	**0.09**	**42**	⇓P	Pg	07 13 08.0	-0.8
T1244				S	Sg	07 13 09.6	-1.2
LNSS	**Leonessa**	**0.15**	**237**	⇑P	Pb	07 13 09.7	-1.1
LNSS				S	Sg	07 13 12.7	+0.5
T1245	**Castelsantange**	**0.17**	**354**	P	Pg	07 13 09.3	-0.6
T1245				S	Sg	07 13 12.1	-0.6
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1243	**Rocca Santa Ma**	**0.17**	**87**	⇑P	Pg	07 13 09.2	-0.7
T1243				S	Sg	07 13 11.9	-0.8
RM33	**Pellescritta (**	**0.18**	**180**	⇓P	Pg	07 13 09.9	0.0
RM33				S	Sg	07 13 13.2	+0.4
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
CAMP	**Campotosto**	**0.21**	**136**	P	Pg	07 13 10.2	-0.3
CAMP				Sg	Sg	07 13 13.8	+0.1
CAMP	**Campotosto**	**0.21**	**136**	⇑P	Pg	07 13 10.2	-0.3
CAMP				S	Sg	07 13 13.5	-0.1
CAMP				AML	AML		
CAMP				AML	AML		
T1217	**Poggiodomo (PG**	**0.21**	**277**	⇑P	Pg	07 13 10.3	-0.2
T1217				S	Sg	07 13 13.7	+0.1
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
MC2	**Monte Cornacci**	**0.23**	**356**	P	Pb	07 13 11.5	-0.6
T1246	**Crognaleto (TE**	**0.23**	**117**	⇑P	Pg	07 13 10.4	-0.4
T1246				S	Sg	07 13 14.1	-0.1
T1241	**Roccafluvione,**	**0.23**	**43**	⇑P	Pb	07 13 10.7	-1.4
T1241				S	Sg	07 13 14.1	-0.1
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1216	**Preci, Frazion**	**0.25**	**325**	P	Pg	07 13 10.7	-0.5
T1216				S	Sg	07 13 14.6	-0.1
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1247	**Pizzolo (AQ)**	**0.25**	**166**	P	Pg	07 13 11.2	0.0
T1247				S	Sb	07 13 15.4	-1.5
T1247				AML	AML		
T1247				AML	AML		
T1215	**Vallo di Nera,**	**0.28**	**294**	⇑P	Pg	07 13 11.4	-0.3
T1215				S	Sg	07 13 15.9	+0.3
T1215				AML	AML		
	comp=E,50300μm,0.8s						
T1215				AML	AML		
	comp=N,45250μm,0.9s						
T1215				AML	AML		
	comp=E,48800μm,0.8s						
T1215				AML	AML		
	comp=E,48800μm,0.8s						
T1215				AML	AML		
	comp=N,46800μm,1.5s						
T1215				AML	AML		
	comp=N,46850μm,1.5s						
T1215				AML	AML		
	comp=E,50300μm,0.8s						
T1215				AML	AML		
	comp=E,48700μm,0.8s						
TERO	**Teramo**	**0.29**	**103**	⇑P	Pg	07 13 11.3	-0.7
TERO				S	Sg	07 13 15.7	-0.3
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
FEMA	**Monte Fema**	**0.30**	**336**	P	Pg	07 13 11.7	-0.5
FEMA				S	Sg	07 13 16.3	0.0
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,78950μm,0.8s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,78900μm,0.8s						
FEMA				AML	AML		
	comp=N,78950μm,0.9s						
AM05	**Amandola Campo**	**0.31**	**19**	⇑P	Pg	07 13 11.6	-0.6
AM05				S	Sg	07 13 16.3	-0.1
AM05				AML	AML		
	comp=E,99500μm,0.7s						
AM05				AML	AML		
	comp=E,23850μm,0.4s						
AM05				AML	AML		
	comp=E,99550μm,0.7s						
AM05				AML	AML		
	comp=N,28100μm,0.4s						
AM05				AML	AML		
	comp=N,6490μm,0.1s						
T1256	**Bolognola (MC)**	**0.32**	**2**	P	Pg	07 13 11.6	-0.9
T1256				S	Sg	07 13 16.3	-0.5
ARRO	**Arrone**	**0.35**	**252**	P	Pg	07 13 12.9	0.0
ARRO				S	Sb	07 13 18.5	-1.0
GIGS	**Gran Sasso**	**0.35**	**132**	⇑P	Pg	07 13 12.3	-0.7
GIGS				S	Sg	07 13 17.7	-0.1
GIGS				AML	AML		
	comp=E,38500μm,0.5s						
GIGS				AML	AML		
	comp=N,19900μm,0.2s						
AQU	**L'Aquila**	**0.36**	**157**		Pb	07 13 13.3	-1.0
AQU	**L'Aquila**	**0.36**	**157**	P	Pb	07 13 13.3	-1.0
AQU	**L'Aquila**	**0.36**	**157**	P	Pg	07 13 13.0	-0.2
AQU				S	Sb	07 13 18.5	-1.5
AQU				AML	AML		
	comp=E,93650μm,0.8s						
AQU				AML	AML		
	comp=N,81450μm,0.8s						
AQU				AML	AML		
	comp=E,84350μm,0.8s						
AQU				AML	AML		
	comp=N,83000μm,0.8s						
AQU				AML	AML		
	comp=N,81400μm,0.8s						
GUMA	**Gualdo di Mace**	**0.39**	**13**	P	Pg	07 13 13.2	-0.5
GUMA				S	Sb	07 13 19.5	-1.2
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
FIAM	**Fiamignano**	**0.42**	**190**	⇓P	Pg	07 13 14.1	-0.2
FIAM				S	Sb	07 13 20.8	-1.1
OFFI	**Offida**	**0.43**	**54**	⇑P	Pb	07 13 14.4	-1.1

OFFI				S	Sb	07 13 22.1	+0.3
OFFI				AML	AML		
OFFI				AML	AML		
CESX	**Cesi**	**0.47 261**			**Pg**	**07 13 15.2**	**-0.1**
CESX	**Cesi**	**0.47 261**		P	**Pg**	**07 13 14.9**	**-0.4**
CESX				AML	AML		
	comp=E,52600µm,1.2s						
CESX				AML	AML		
	comp=N,43450µm,0.4s						
MNTP	**Montappone**	**0.49**	**23**	P	**Pb**	**07 13 15.2**	**-1.2**
MNTP				AML	AML		
	comp=N,81750µm,1.0s						
MNTP				AML	AML		
MNTP				AML	AML		
	comp=N,81700µm,1.0s						
SEF1	**Sefro**	**0.50 337**		P	**Pg**	**07 13 15.0**	**-0.7**
SEF1				AML	AML		
	comp=N,49350µm,0.7s						
SEF1				AML	AML		
	comp=E,60550µm,0.2s						
SEF1				AML	AML		
	comp=N,49350µm,0.7s						
FAGN	**Fagnano**	**0.50 147**		P	**Pg**	**07 13 15.1**	**-0.7**
FAGN				AML	AML		
FAGN				AML	AML		
MDAR	**Monte D'Aria**	**0.51 354**		P	**Pg**	**07 13 15.3**	**-0.6**
MDAR				S	**Sb**	**07 13 23.1**	**-1.2**
PIO1	**Pioraco**	**0.52 341**		P	**Pg**	**07 13 15.5**	**-0.6**
PIO1				AML	AML		
	comp=E,20850µm,0.5s						
PIO1				AML	AML		
	comp=N,34300µm,0.7s						
PIO1				AML	AML		
	comp=E,20900µm,0.5s						
TRTR	**Tortoreto Alta**	**0.53**	**77**	⇑P	**Pb**	**07 13 16.7**	**-0.5**
TRTR				AML	AML		
TRTR				AML	AML		
ASSB	**Assisi San Ben**	**0.54 311**		P	**Pg**	**07 13 16.0**	**-0.5**
ASSB				AML	AML		
	comp=E,27600µm,0.5s						
ASSB				AML	AML		
	comp=N,29100µm,1.5s						
FIU1	**Fiuminata**	**0.54 338**		P	**Pg**	**07 13 15.9**	**-0.7**
FIU1				AML	AML		
	comp=E,20050µm,0.3s						
FIU1				AML	AML		
	comp=N,14600µm,0.4s						
SSM1	**San Severino M**	**0.54 357**		P	**Pg**	**07 13 15.8**	**-0.7**
VCEL	**Villa Celiera**	**0.55 122**		P	**Pg**	**07 13 16.0**	**-0.6**
VCEL				AML	AML		
VCEL				AML	AML		
	comp=N,91900µm,1.2s						
GAG1	**Gagliole**	**0.56 349**		P	**Pb**	**07 13 16.6**	**-1.1**
GAG1				AML	AML		
	comp=E,57800µm,0.7s						
GAG1				AML	AML		
	comp=N,72800µm,0.4s						
GAG1				AML	AML		
	comp=N,72750µm,0.4s						
GAG1				AML	AML		
	comp=E,57750µm,0.7s						
SNTG	**Esanatoglia**	**0.60 341**		P	**Pg**	**07 13 17.2**	**-0.5**
SNTG				S	**Sb**	**07 13 25.9**	**-1.0**
SNTG				AML	AML		
	comp=E,11710µm,1.0s						
SNTG				AML	AML		
	comp=N,13200µm,1.2s						
SNTG				AML	AML		
	comp=E,12140µm,1.0s						
SNTG				AML	AML		
	comp=E,12145µm,1.0s						
SNTG				AML	AML		
	comp=N,13250µm,1.1s						
SNTG				AML	AML		
	comp=N,13195µm,1.1s						
SNTG				AML	AML		
	comp=E,11750µm,1.0s						
T0110	**Collepietro**	**0.62 138**		P	**Pg**	**07 13 17.1**	**-0.9**
T0110				S	**Sb**	**07 13 27.0**	**-0.5**
T0110				AML	AML		
	comp=E,94100µm,0.4s						
T0110				AML	AML		
	comp=N,94700µm,0.4s						
TRE1	**Treia**	**0.63**	**7**	P	**Pb**	**07 13 18.0**	**-0.9**
TRE1				S	**Sb**	**07 13 28.1**	**+0.4**
TRE1				AML	AML		
	comp=E,83050µm,0.5s						
TRE1				AML	AML		
	comp=N,57500µm,1.0s						
TRE1				AML	AML		
	comp=E,83050µm,0.5s						
TRE1				AML	AML		
	comp=N,57450µm,1.0s						
ATCC	**AVT- Casa Cast**	**0.65 320**		P	**Pg**	**07 13 17.7**	**-0.9**
ATCC				AML	AML		
	comp=N,26400µm,0.5s						
ATCC				AML	AML		
	comp=E,33150µm,1.2s						
PTQR	**Pietraquaria**	**0.68 168**		P	**Pg**	**07 13 18.1**	**-1.0**
PTQR				AML	AML		
	comp=E,12350µm,1.2s						
PTQR				AML	AML		
	comp=N,12190µm,0.7s						
CING	**Cingoli**	**0.69 359**		P	**Pg**	**07 13 18.6**	**-0.7**
SRES	**S.Oreste - Sor**	**0.69 229**		P	**Pg**	**07 13 19.0**	**-0.3**
SRES				AML	AML		
	comp=E,12055µm,0.7s						
SRES				AML	AML		
	comp=N,20450µm,0.4s						
FOSV	**Fossato di Vic**	**0.69 331**		P	**Pg**	**07 13 18.3**	**-1.1**
FOSV				AML	AML		
	comp=N,16450µm,0.4s						
FOSV				AML	AML		
	comp=E,12600µm,1.6s						
FOSV				AML	AML		
	comp=N,16400µm,0.4s						
CIMA	**Civitanova Mar**	**0.70**	**28**	P	**Pb**	**07 13 19.7**	**-0.4**
PP3	**Marolino**	**0.75**	**23**	⇑P	**Pb**	**07 13 20.2**	**-0.7**
PP3				AML	AML		
	comp=E,75800µm,0.4s						
PP3				AML	AML		
	comp=N,92900µm,0.5s						
PP3				AML	AML		
	comp=E,84700µm,0.5s						
PP3				AML	AML		
	comp=N,88650µm,0.5s						
PP3				AML	AML		
	comp=E,84650µm,0.5s						
PP3				AML	AML		
	comp=N,88500µm,0.5s						
PP3				AML	AML		
	comp=N,92950µm,0.5s						
MTCE	**Montecelio**	**0.75 208**		P	**Pg**	**07 13 19.3**	**-1.2**
MTCE				AML	AML		
	comp=E,23500µm,0.4s						
MTCE				AML	AML		
	comp=N,15600µm,0.8s						
MTCE				AML	AML		
	comp=N,15550µm,0.8s						
CERT	**Cerreto**	**0.76 193**		P	**Pg**	**07 13 19.5**	**-1.1**
CERT				AML	AML		
	comp=E,30200µm,0.6s						
CERT				AML	AML		
	comp=N,18900µm,0.4s						
MURB	**Monte Urbino**	**0.77 319**			**Pb**	**07 13 20.7**	**-0.6**
MURB	**Monte Urbino**	**0.77 319**		P	**Pg**	**07 13 20.0**	**-0.8**
MURB				AML	AML		
	comp=E,46400µm,0.8s						
MURB				AML	AML		
	comp=N,43750µm,1.6s						
MURB				AML	AML		
	comp=E,47900µm,0.8s						
MURB				AML	AML		
	comp=N,44750µm,1.6s						
MURB				AML	AML		
	comp=E,46400µm,0.8s						
MURB				AML	AML		
	comp=N,43800µm,1.6s						
ATFO	**Monte Foce - G**	**0.83 325**		P	**Pg**	**07 13 21.1**	**-0.8**
ATFO				AML	AML		
	comp=E,15050µm,0.7s						
ATFO				AML	AML		
	comp=N,13200µm,0.5s						
MGAB	**Montegabbione**	**0.84 286**		P	**Pb**	**07 13 22.5**	**0.0**
MGAB				AML	AML		
	comp=E,52150µm,0.6s						
MGAB				AML	AML		
	comp=N,40050µm,0.5s						
MGAB				AML	AML		
	comp=N,38250µm,0.9s						
MGAB				AML	AML		
	comp=E,52200µm,0.6s						
MGAB				AML	AML		
	comp=E,54750µm,0.6s						
INTR	**Introdacqua**	**0.85 143**			**Pn**	**07 13 23.2**	**-0.5**
RCAV	**Rocca di Cave**	**0.86 193**		P	**Pb**	**07 13 22.5**	**-0.4**
RCAV				AML	AML		
	comp=N,27800µm,1.3s						
RCAV				AML	AML		
	comp=E,32000µm,1.4s						
RCAV				AML	AML		
	comp=N,27850µm,1.3s						
VVLD	**Villa Vallelon**	**0.87 160**		P	**Pg**	**07 13 21.9**	**-0.8**
VVLD				AML	AML		
	comp=N,16900µm,0.5s						
VVLD				AML	AML		
	comp=E,20800µm,0.5s						
GUAR	**Guarcino**	**0.90 175**		P	**Pb**	**07 13 23.4**	**0.0**
GUAR				AML	AML		
	comp=E,20500µm,0.4s						
GUAR				AML	AML		
	comp=N,32050µm,0.6s						
AOI	**Ancona**	**0.91**	**18**	P	**Pg**	**07 13 22.2**	**-1.2**
AOI				AML	AML		
	comp=N,13500µm,1.0s						
AOI				AML	AML		
	comp=E,14250µm,0.4s						
ATVO	**AVT- Monte Val**	**0.91 320**		P	**Pg**	**07 13 22.6**	**-0.9**
ATVO				AML	AML		
	comp=E,12800µm,1.5s						
ATVO				AML	AML		
	comp=N,10430µm,0.8s						
ATMI	**Monte Miggiano**	**0.95 313**		AML	AML		
	comp=E,43650µm,0.5s						
ATMI				AML	AML		
	comp=N,32750µm,0.6s						
PCRO	**Pietralacroce**	**0.95**	**14**	P	**Pn**	**07 13 24.1**	**-1.0**
RMP	**Rome, Mte Porz**	**0.95 204**		P	**Pb**	**07 13 24.1**	**-0.3**
RMP				AML	AML		
	comp=N,22500µm,0.6s						
RMP				AML	AML		
	comp=E,20150µm,1.1s						
CAFR	**Castel Frentan**	**0.96 118**		P	**Pg**	**07 13 23.2**	**-1.1**
CAFR				AML	AML		
	comp=E,14550µm,0.5s						
CAFR				AML	AML		
	comp=N,20800µm,1.5s						
LPEL	**Lama dei Pelig**	**0.96 131**		P	**Pg**	**07 13 22.6**	**-1.8**
LPEL				AML	AML		
	comp=E,18150µm,0.4s						
LPEL				AML	AML		
	comp=N,15650µm,0.8s						
ATPI	**Pietralunga -**	**0.97 322**		P	**Pb**	**07 13 24.0**	**-0.7**
ATPI				AML	AML		
	comp=E,19350µm,0.6s						
ATPI				AML	AML		
	comp=N,10000µm,0.8s						
SACS	**San Casciano d**	**0.97 280**		P	**Pn**	**07 13 24.8**	**-0.7**
SACS				AML	AML		
	comp=E,12695µm,1.6s						
SACS				AML	AML		
	comp=N,15150µm,1.0s						
SACS				AML	AML		
	comp=E,13200µm,0.7s						
SACS				AML	AML		
	comp=N,15300µm,0.7s						
SACS				AML	AML		
	comp=E,12705µm,1.6s						
PIEI	**Pieia**	**0.98 330**		P	**Pb**	**07 13 24.3**	**-0.7**
PIEI				AML	AML		
	comp=E,8125µm,1.5s						
PIEI				AML	AML		
	comp=N,7515µm,0.5s						
PIEI				AML	AML		
	comp=E,8120µm,1.5s						
VIVA	**Pratoni del Vi**	**0.99 200**		P	**Pn**	**07 13 25.2**	**-0.5**
VIVA				AML	AML		
	comp=E,48100µm,0.5s						
VIVA				AML	AML		
	comp=N,46700µm,0.8s						
RDP	**Rocca di Papa**	**1.00 202**		P	**Pb**	**07 13 24.7**	**-0.5**
RDP				AML	AML		
	comp=E,50550µm,0.6s						
RDP				AML	AML		
	comp=N,57750µm,1.6s						
ROM9	**Roma**	**1.00 211**		P	**Pg**	**07 13 24.5**	**-0.7**
MA9	**Marino**	**1.00 204**		P	**Pb**	**07 13 24.9**	**-0.4**
MA9				AML	AML		
	comp=E,35950µm,0.5s						
MA9				AML	AML		
	comp=N,28600µm,0.5s						
SAMA	**S.Maria delle**	**1.02 207**		P	**Pg**	**07 13 24.7**	**-0.8**
SENI	**Senigallia**	**1.02**	**1**	AML	AML		
	comp=N,13265µm,1.0s						
SENI				AML	AML		
	comp=E,14450µm,1.1s						
SENI				AML	AML		
	comp=E,42200µm,1.5s						
SENI				AML	AML		
	comp=N,51250µm,1.2s						
POFI	**Posta Fibreno**	**1.04 159**		P	**Pg**	**07 13 24.8**	**-1.1**
POFI				AML	AML		
	comp=N,9985µm,0.6s						
POFI				AML	AML		
	comp=E,13050µm,1.1s						
POFI				AML	AML		
	comp=N,9775µm,0.8s						
POFI				AML	AML		
	comp=E,12250µm,1.2s						
LATE	**Laterza**	**1.04 266**			**Pn**	**07 13 26.0**	**-0.4**
LATE	**Laterza**	**1.04 266**		P	**Pn**	**07 13 25.8**	**-0.7**
FSSB	**Fossombrone**	**1.05 343**		P	**Pg**	**07 13 24.9**	**-1.3**
FSSB				AML	AML		
	comp=N,31600µm,0.5s						
FSSB				AML	AML		
	comp=E,28900µm,0.4s						
LRP	**Arpino**	**1.08 165**		P	**Pn**	**07 13 26.4**	**-0.4**
LRP				AML	AML		
	comp=E,7305µm,0.8s						
LRP				AML	AML		
	comp=N,11450µm,0.4s						
LAV9	**Lanuvio**	**1.08 201**		P	**Pb**	**07 13 25.7**	**-0.8**
LAV9				AML	AML		
	comp=E,44750µm,0.5s						
LAV9				AML	AML		
	comp=E,41900µm,0.5s						
LAV9				AML	AML		
	comp=N,34650µm,0.4s						
LAV9				AML	AML		
	comp=N,33350µm,0.4s						
TOLF	**Tolfa**	**1.09 236**		P	**Pb**	**07 13 25.8**	**-1.0**
TOLF				AML	AML		
	comp=N,10160µm,0.6s						
TOLF				AML	AML		
	comp=E,10500µm,0.7s						
CAFI	**Castiglion Fio**	**1.12 305**		P	**Pb**	**07 13 26.6**	**-0.6**
CAFI				AML	AML		
	comp=E,8275µm,0.6s						
CAFI				AML	AML		
	comp=N,9270µm,0.6s						
CAFI				AML	AML		
	comp=E,8380µm,0.6s						
CAFI				AML	AML		
	comp=N,9665µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.13 178**		P	**Pb**	**07 13 26.6**	**-0.8**
GIUL				AML	AML		
	comp=E,9415µm,0.5s						
GIUL				AML	AML		
	comp=N,11250µm,0.5s						
MCIV	**Monte Civitell**	**1.14 275**		P	**Pb**	**07 13 27.0**	**-0.5**
MCIV				AML	AML		
	comp=E,4465µm,0.6s						
MCIV				AML	AML		
	comp=N,5505µm,0.8s						
SF04	**Casetta**	**1.15 278**		AML	AML		
	comp=N,6315µm,0.4s						
SF04				AML	AML		
	comp=E,6085µm,0.3s						
SSP9	**Sansepolcro**	**1.19 319**		P	**Pg**	**07 13 28.1**	**-0.7**
SSP9				AML	AML		
	comp=N,8625µm,1.5s						
SSP9				AML	AML		
	comp=E,7885µm,1.6s						
RNI2	**Rionero Sannit**	**1.21 144**		P	**Pb**	**07 13 27.5**	**-1.3**
RNI2				AML	AML		
	comp=N,11350µm,0.5s						
RNI2				AML	AML		
	comp=E,14650µm,0.7s						
LATB	**Latina**	**1.21 189**		P	**Pn**	**07 13 27.0**	**-1.6**
LATB				AML	AML		
	comp=N,2915µm,0.6s						
LATB				AML	AML		
	comp=E,3260µm,0.7s						
LIK	**San Giovanni I**	**1.21 168**		P	**Pg**	**07 13 28.8**	**-0.3**
LIK	**San Giovanni I**	**1.21 168**		AML	AML		
	comp=N,15100µm,1.5s						
LIK				AML	AML		
	comp=E,17400µm,0.4s						
LIK				AML	AML		
	comp=N,15050µm,1.5s						
LIK				AML	AML		
	comp=E,17400µm,0.4s						
SF01	**Poggio Pratacc**	**1.22 276**		AML	AML		
	comp=N,8890µm,1.0s						
SF01				AML	AML		
	comp=E,9875µm,0.7s						
CERA	**Filignano**	**1.24 151**		P	**Pn**	**07 13 27.7**	**-1.5**
ARCI	**Arcidosso**	**1.29 278**		P	**Pg**	**07 13 30.0**	**-0.8**
ARCI				AML	AML		
	comp=N,2190µm,0.7s						
ARCI				AML	AML		
	comp=E,2400µm,1.1s						
MIDA	**Miranda**	**1.30 143**		P	**Pn**	**07 13 28.1**	**-1.9**
CRE	**Caprese Michel**	**1.31 316**		P	**Pn**	**07 13 29.7**	**-0.5**
CRE				AML	AML		
	comp=N,4275µm,1.5s						
CRE				AML	AML		
	comp=E,5045µm,0.6s						
TRIV	**Trivento**	**1.35 132**		P	**Pb**	**07 13 30.4**	**-0.8**
TRIV				AML	AML		
	comp=N,8290µm,0.7s						
TRIV				AML	AML		
	comp=E,8605µm,0.8s						
VAGA	**Valle Agricola**	**1.48 149**		P	**Pn**	**07 13 32.3**	**-0.1**
BSSO	**Busso**	**1.54 138**		P	**Pn**	**07 13 32.9**	**-0.4**
BSSO				AML	AML		
	comp=E,1895µm,1.2s						
BSSO				AML	AML		
	comp=N,3900µm,1.6s						
BSSO				AML	AML		
	comp=E,4730µm,1.3s						
BSSO				AML	AML		
	comp=N,1635µm,1.6s						
MAON	**Monte Argentar**	**1.56 261**		P	**Pn**	**07 13 32.9**	**-0.6**
MAON				AML	AML		
	comp=N,1925µm,1.0s						
MAON				AML	AML		
	comp=E,2800µm,0.6s						
SFI	**Santa Sofia**	**1.57 321**		P	**Pg**	**07 13 35.0**	**-1.1**
FROS	**Frosini**	**1.60 290**		P	**Pb**	**07 13 34.2**	**-1.1**
FROS				AML	AML		
	comp=N,3465µm,1.2s						
FROS				AML	AML		
	comp=E,3535µm,0.7s						
CSNT	**Castellina Chi**	**1.61 300**		P	**Pn**	**07 13 34.1**	**-0.1**
CSNT				AML	AML		
	comp=N,1835µm,0.6s						
CSNT				AML	AML		
	comp=E,1690µm,1.5s						
MODR	**Mondragone**	**1.62 162**		P	**Pb**	**07 13 35.0**	**-0.7**
MODR				AML	AML		
	comp=E,2245µm,0.7s						
MODR				AML	AML		
	comp=N,3155µm,0.8s						
CIGN	**Sant'Elia a Pi**	**1.63 129**		P	**Pn**	**07 13 33.8**	**-0.6**
CIGN				AML	AML		
	comp=N,3485µm,0.9s						
CIGN				AML	AML		
	comp=E,3395µm,0.6s						
PIGN	**Pignataro Magg**	**1.65 154**		P	**Pb**	**07 13 35.7**	**-0.6**
PIGN				AML	AML		
	comp=N,3085µm,1.2s						
PIGN				AML	AML		
	comp=E,2800µm,1.1s						
PIGN				AML	AML		
	comp=E,2745µm,0.7s						
PIGN				AML	AML		
	comp=N,2700µm,1.1s						
OSSC	**Osservatorio P**	**1.67 301**		Pn	**Pn**	**07 13 34.3**	**-0.7**
OSSC	**Osservatorio P**	**1.67 301**		P	**Pn**	**07 13 33.7**	**-1.3**
OSSC				AML	AML		
	comp=N,2515µm,0.8s						
OSSC				AML	AML		
	comp=E,2550µm,0.8s						
OSSC				AML	AML		
	comp=E,2135µm,0.7s						
OSSC				AML	AML		
	comp=N,2135µm,0.7s						
RUFI	**Rufina**	**1.70 313**		P	**Pn**	**07 13 35.4**	**+0.1**
RUFI				AML	AML		
	comp=N,3010µm,1.2s						
RUFI				AML	AML		
	comp=E,3035µm,0.8s						
GATE	**Gambatesa**	**1.72 132**		P	**Pb**	**07 13 37.5**	**0.0**
GATE				AML	AML		
	comp=E,2165µm,0.9s						
GATE				AML	AML		
	comp=N,2415µm,0.7s						
GATE				AML	AML		
	comp=E,3255µm,1.6s						
GATE				AML	AML		
	comp=N,2485µm,0.7s						
MELA	**Melanico ??? S**	**1.73 124**		P	**Pb**	**07 13 36.8**	**-0.8**
MELA				AML	AML		
	comp=N,12500µm,0.5s						
MELA				AML	AML		
	comp=E,8625µm,0.7s						
MELA				AML	AML		
	comp=E,8345µm,0.7s						
MELA				AML	AML		
	comp=N,12950µm,0.5s						
CASP	**Castiglione de**	**1.73 274**		Pn	**Pn**	**07 13 35.8**	**-0.1**
CASP	**Castiglione de**	**1.73 274**		P	**Pn**	**07 13 35.6**	**-0.3**
TRIF	**Trifonti**	**1.75 285**		P	**Pn**	**07 13 36.5**	**+0.3**
TRIF				AML	AML		
	comp=E,1498µm,1.5s						
TRIF				AML	AML		
	comp=N,1410µm,1.0s						
TREM	**Isole Tremiti**	**1.79 108**		AML	AML		
	comp=E,7490µm,0.6s						
TREM				AML	AML		
	comp=N,7520µm,0.7s						
VITU	**Vitulano (BN)**	**1.84 144**		P	**Pb**	**07 13 39.2**	**-0.3**
VITU				AML	AML		
	comp=E,1370µm,0.5s						
VITU				AML	AML		
	comp=E,3575µm,0.6s						
VITU				AML	AML		
	comp=N,3775µm,0.7s						
VITU				AML	AML		
	comp=N,3680µm,0.7s						
PSB1	**Pescosannita**	**1.89 140**		P	**Pg**	**07 13 40.5**	**-1.6**
VENT	**Ventotene**	**1.90 175**		P	**Pb**	**07 13 39.2**	**-1.3**
VENT				AML	AML		
	comp=E,2720µm,1.0s						
VENT				AML	AML		
	comp=N,2180µm,1.6s						
PAOL	**Paolisi**	**1.94 148**			**Pb**	**07 13 40.3**	**-1.0**
MOCO	**Biccari - m.te**	**1.96 132**		P	**Pb**	**07 13 40.8**	**-0.8**
MOCO				AML	AML		
	comp=E,1915µm,0.5s						
MOCO				AML	AML		
	comp=N,1091µm,1.2s						
APRC	**Apricena**	**1.96 117**		P	**Pn**	**07 13 39.4**	**+0.3**
APRC				AML	AML		
	comp=E,6090µm,0.3s						
APRC				AML	AML		
	comp=N,5750µm,1.1s						
A318A	**Donoratico (LI**	**1.99 283**		P	**Pn**	**07 13 39.6**	**+0.2**
MPPT	**Montemurlo**	**2.00 310**		P	**Pn**	**07 13 39.6**	**-0.1**
MPPT				AML	AML		
	comp=N,1865µm,0.8s						
MPPT				AML	AML		
	comp=E,1980µm,1.0s						
VBKN	**Vesuvio Bunker**	**2.07 153**		AML	AML		
	comp=E,4025µm,0.4s						
VBKN				AML	AML		
	comp=N,4755µm,1.1s						
A319A	**Santa Luce (PI**	**2.08 293**		P	**Pn**	**07 13 41.2**	**+0.5**

SGRT	**San Giovanni R**	**2.10 116**	Pn	**Pn**	**07 13 41.5 +0.5**
SGRT	**San Giovanni R**	**2.10 116**	P	**Pn**	**07 13 41.5 +0.5**
SGRT			AML	AML	
	comp=E,5060μm,0.5s				
SGRT			AML	AML	
	comp=N,4245μm,0.9s				
CELB	**S.Piero in Cam**	**2.21 273**	P	**Pn**	**07 13 42.2 -0.3**
CELB			AML	AML	
	comp=N,470μm,0.7s				
CELB			AML	AML	
	comp=E,400μm,0.7s				
PII	**Pisa**	**2.22 299**	P	**Pn**	**07 13 43.5 +1.0**
PII			AML	AML	
	comp=E,1364μm,1.0s				
PII			AML	AML	
	comp=N,1170μm,0.7s				
SGTA	**Sant Agata di**	**2.23 133**	P	**Pb**	**07 13 44.4 -1.8**
SGTA			AML	AML	
	comp=N,2095μm,0.8s				
SGTA			AML	AML	
	comp=N,2055μm,0.8s				
SGTA			AML	AML	
	comp=E,3995μm,0.8s				
SGTA			AML	AML	
	comp=E,3955μm,0.8s				
CAFE	**Carife**	**2.24 137**	P	**Pb**	**07 13 45.2 -1.2**
CAFE			AML	AML	
	comp=N,1585μm,0.6s				
CAFE			AML	AML	
	comp=E,2180μm,0.7s				
CAFE			AML	AML	
	comp=E,2165μm,0.7s				
CAFE			AML	AML	
	comp=N,1615μm,0.6s				
SNAL	**S. Angelo Dei**	**2.31 139**	P	**Pb**	**07 13 45.9 -1.6**
SNAL			AML	AML	
	comp=N,2495μm,0.9s				
SNAL			AML	AML	
	comp=E,1945μm,1.2s				
ZCCA	**Zocca**	**2.33 316**		**Pn**	**07 13 43.9 -0.2**
MAIM	**Mastiano**	**2.33 303**	P	**Pn**	**07 13 44.2 +0.1**
MAIM			AML	AML	
	comp=E,921μm,0.8s				
MAIM			AML	AML	
	comp=N,1006μm,0.7s				
BDI	**Bagni Di Lucca**	**2.35 307**	P	**Pn**	**07 13 44.4 -0.1**
BDI			AML	AML	
	comp=E,1182μm,0.8s				
BDI			AML	AML	
	comp=N,1072μm,0.8s				
BDI			AML	AML	
	comp=E,436μm,0.6s				
BDI			AML	AML	
	comp=N,481μm,1.2s				
CARD	**Cardoso**	**2.40 305**	P	**Pn**	**07 13 44.5 -0.5**
CARD			AML	AML	
	comp=E,998μm,0.5s				
CARD			AML	AML	
	comp=N,1057μm,0.5s				
CAPA	**Cerignola FG**	**2.47 127**	P	**Pn**	**07 13 46.4 +0.4**
CAPA			AML	AML	
	comp=E,4050μm,1.0s				
CAPA			AML	AML	
	comp=N,5905μm,1.0s				
VULT	**Monte Vulture**	**2.49 133**	P	**Pb**	**07 13 48.2 -2.5**
VULT			AML	AML	
	comp=N,3370μm,0.4s				
VULT			AML	AML	
	comp=N,3490μm,0.4s				
VULT			AML	AML	
	comp=E,3045μm,0.5s				
VULT			AML	AML	
	comp=E,3155μm,0.5s				
VLC	**Villacollemand**	**2.53 306**		**Pn**	**07 13 46.7 -0.2**
VLC	**Villacollemand**	**2.53 306**	P	**Pn**	**07 13 46.5 -0.3**
VLC			AML	AML	
	comp=N,996μm,1.0s				
VLC			AML	AML	
	comp=E,590μm,1.2s				
VLC			AML	AML	
	comp=E,612μm,1.2s				
VLC			AML	AML	
	comp=N,1008μm,1.0s				
GROG	**Isola di Gorgo**	**2.54 288**	P	**Pn**	**07 13 47.3 +0.3**
MRLC	**Muro Lucano**	**2.57 138**	P	**Pb**	**07 13 49.3 -2.7**
PALZ	**Palazzo San Ge**	**2.69 129**	AML	AML	
	comp=E,3145μm,1.1s				
PALZ			AML	AML	
	comp=N,2665μm,1.1s				
SERM	**Sermide**	**2.71 330**	AML	AML	
	comp=N,1820μm,0.7s				
SERM			AML	AML	
	comp=N,1245μm,0.6s				
SERM			AML	AML	
	comp=E,1390μm,0.6s				
SERM			AML	AML	
	comp=E,2860μm,0.6s				
MRVN	**Minervino Murg**	**2.76 125**	P	**Pn**	**07 13 50.6 +0.7**
MRVN			AML	AML	
	comp=N,933μm,0.7s				
MRVN			AML	AML	
	comp=E,914μm,1.5s				
ACER	**Acerenza**	**2.79 132**	P	**Pn**	**07 13 51.4 +1.0**
ACER			AML	AML	
	comp=E,2305μm,0.9s				
ACER			AML	AML	
	comp=N,1755μm,0.8s				
ACER			AML	AML	
	comp=E,2175μm,0.9s				
ACER			AML	AML	
	comp=N,1655μm,0.8s				
RIY	**Rijeka**	**2.79 19**	*e*Pn	**Pn**	**07 13 50.4 0.0**
RIY			*e*Sn	**Sn**	**07 14 25.4 +1.4**
PZUN	**Potenza**	**2.82 136**	P	**Pb**	**07 13 52.8 -3.3**
PZUN			AML	AML	
	comp=E,810μm,1.1s				
PZUN			AML	AML	
	comp=N,771μm,1.4s				
PZUN			AML	AML	
	comp=E,768μm,0.7s				
PZUN			AML	AML	
	comp=N,852μm,1.5s				
TEOL	**Teolo**	**2.89 338**		**Pn**	**07 13 52.6 +0.7**
SKDS	**Skadanscina**	**2.92 11**	*i* Pn	**Pn**	**07 13 51.5 -0.6**
PRMA	**PARMA**	**2.95 316**		**Pn**	**07 13 53.6 +1.0**
PTRP	**Pietrapertosa**	**3.04 134**	P	**Pn**	**07 13 56.0 +2.1**
PTRP			AML	AML	
	comp=E,1190μm,1.1s				
PTRP			AML	AML	
	comp=N,1595μm,0.9s				
MCEL	**Monticello**	**3.06 140**	P	**Pn**	**07 13 56.4 +2.2**
MCEL			AML	AML	
	comp=E,546μm,1.4s				
MCEL			AML	AML	
	comp=N,470μm,0.5s				
AMUR	**Altamura**	**3.10 124**	P	**Pn**	**07 13 55.6 +0.9**
AMUR			AML	AML	
	comp=E,2100μm,0.4s				
AMUR			AML	AML	
	comp=N,1475μm,0.4s				
PGF	**Pioggiola**	**3.11 269**	*e*Pn	**Pn**	**07 13 52.8 -2.2**
PGF	**Pioggiola**	**3.11 269**	*e*P	**Pn**	**07 13 55.7 +0.7**
PGF			*e*Sn	**Sn**	**07 14 29.1 -3.0**
	comp=N,49nm,0.4s				
MSSA	**Maissana**	**3.14 302**	Pn	**Pn**	**07 13 55.5 +0.2**
MSSA	**Maissana**	**3.14 302**	P	**Pn**	**07 13 55.3 -0.1**
MSSA			AML	AML	
	comp=N,455μm,0.8s				
MSSA			AML	AML	
	comp=E,390μm,0.7s				
CEY	**Cerknica**	**3.17 16**	*e*Pn	**Pn**	**07 13 54.4 -1.3**
MIGL	**Miglionico**	**3.19 130**	P	**Pn**	**07 13 55.7 -0.2**
MIGL			AML	AML	
	comp=N,3210μm,1.3s				
MIGL			AML	AML	
	comp=E,2790μm,0.5s				
SRKY	**Kupres RS**	**3.19 63**	⇑*i*Pn	**Pn**	**07 13 57.7 +1.6**
SIRI	**Monte Sirino -**	**3.20 141**	P	**Pn**	**07 13 58.4 +2.3**
SIRI			AML	AML	
	comp=E,484μm,0.4s				
SIRI			AML	AML	
	comp=N,399μm,1.1s				
SIRI			AML	AML	
	comp=N,392μm,1.1s				
SIRI			AML	AML	
	comp=E,483μm,0.4s				
SCHR	**S. Chirico Rap**	**3.29 138**	P	**Pn**	**07 13 59.3 +2.0**
SCHR			AML	AML	
	comp=E,255μm,0.8s				
SCHR			AML	AML	
	comp=N,273μm,1.6s				
MGRS	**Mrkonjic Grad**	**3.30 57**	⇑*i*Pn	**Pn**	**07 13 58.8 +1.3**
SABO	**M.te Sabotino**	**3.30 5**	P	**Pn**	**07 13 57.2 -0.3**
SABO			AML	AML	
	comp=N,1565μm,0.5s				
SABO			AML	AML	
	comp=N,5800μm,0.6s				
SABO			AML	AML	
	comp=E,1535μm,1.6s				
SABO			AML	AML	
	comp=E,6690μm,0.7s				
STON	**Ston**	**3.31 85**	*e*Pn	**Pn**	**07 13 56.5 -1.0**
STON	**Ston**	**3.31 85**	*e*Pn	**Pn**	**07 13 56.7 -0.8**
STON			*e*Sn	**Sn**	**07 14 37.1 +0.4**
STON	**Ston**	**3.31 85**	AML	AML	
	comp=N,632μm,0.3s				
STON			AML	AML	
	comp=E,605μm,0.7s				
MATE	**Matera**	**3.31 127**	⇑S	**Sn**	**07 14 39.1 +2.2**
MATE	**Matera**	**3.31 127**	AML	AML	
	comp=N,976μm,0.5s				
MATE			AML	AML	
	comp=E,992μm,0.8s				
MATE	**Matera**	**3.31 127**	⇑P	**Pn**	**07 13 59.5 +2.0**
CUC	**Castrocucco**	**3.33 143**	Pn	**Pn**	**07 14 00.3 +2.4**
CUC	**Castrocucco**	**3.33 143**	P	**Pn**	**07 13 59.7 +1.9**
CUC			AML	AML	
	comp=E,339μm,1.0s				
CUC			AML	AML	
	comp=N,274μm,0.8s				
CUC			AML	AML	
	comp=N,334μm,0.8s				
CUC			AML	AML	
	comp=E,434μm,1.0s				
ROVR	**Rover Verones**	**3.34 333**	AML	AML	
	comp=N,510μm,0.6s				
ROVR			AML	AML	
	comp=E,914μm,0.7s				
ROVR			AML	AML	
	comp=N,1290μm,0.6s				
ROVR			AML	AML	
	comp=E,370μm,0.9s				
AJAC	**Base Areonaval**	**3.39 259**	AML	AML	
	comp=E,1132μm,0.3s				
AJAC			AML	AML	
	comp=N,372μm,0.4s				
VARN	**Col Varnada, M**	**3.40 347**	P	**Pn**	**07 13 58.7 -0.1**
VARN			AML	AML	
	comp=E,1955μm,0.6s				
VARN			AML	AML	
	comp=N,1600μm,0.6s				
VARN			AML	AML	
	comp=N,1625μm,0.6s				
VARN			AML	AML	
	comp=E,1975μm,0.6s				
LTRZ	**Laterza**	**3.41 126**	P	**Pn**	**07 13 59.8 +0.8**
LTRZ			AML	AML	
	comp=N,650μm,1.6s				
LTRZ			AML	AML	
	comp=E,1215μm,0.4s				
PRIJ	**Prijedor**	**3.41 47**	*e*Pn	**Pb**	**07 14 06.7 +0.4**
NOCI	**Noci**	**3.45 122**	P	**Pn**	**07 14 00.5 +1.0**
NOCI			AML	AML	
	comp=E,1028μm,0.5s				
NOCI			AML	AML	
	comp=N,1226μm,0.6s				
SALO	**Salr**	**3.51 327**	Pn	**Pn**	**07 14 01.4 +1.0**
BLY	**Banja Luka**	**3.54 53**	*e*Pn	**Pn**	**07 14 02.3 +1.6**
BLY	**Banja Luka**	**3.54 53**	*e*Pn	**Pn**	**07 14 02.0 +1.3**
BLY	**Banja Luka**	**3.54 53**	P	**Pn**	**07 14 02.0 +1.3**
BLY			AML	AML	
	comp=E,1095μm,0.7s				
BLY			AML	AML	
	comp=E,1084μm,0.7s				
BLY			AML	AML	
	comp=N,1024μm,0.8s				
BLY			AML	AML	
	comp=N,1079μm,0.8s				
A051A	**Mrakovica**	**3.54 48**	*e*Pn	**Pn**	**07 14 00.9 +0.1**
CTI	**Castel Tesino**	**3.54 342**		**Pn**	**07 14 01.4 +0.5**
CTI	**Castel Tesino**	**3.54 342**	P	**Pn**	**07 14 01.4 +0.5**
CTI	**Castel Tesino**	**3.54 342**	P	**Pn**	**07 14 01.3 +0.5**
MPRI	**Monte Prat**	**3.56 357**	P	**Pn**	**07 14 01.1 +0.1**
MPRI			AML	AML	
	comp=E,1290μm,0.8s				
MPRI			AML	AML	
	comp=E,979μm,0.8s				
MPRI			AML	AML	
	comp=N,1615μm,0.4s				
MPRI			AML	AML	
	comp=N,1230μm,0.4s				
CADS	**Cadrg**	**3.56 6**	*i* Pn	**Pn**	**07 14 00.6 -0.4**
STAL	**STALIGIAL**	**3.59 354**		**Pn**	**07 14 01.4 -0.1**
DGI	**Dorgali Grotta**	**3.60 230**	P	**Pn**	**07 14 02.0 +0.5**
LUSI	**Trento, Gardas**	**3.65 334**	P	**Pn**	**07 14 03.4 +1.0**
LUSI			AML	AML	
	comp=E,840μm,0.8s				
LUSI			AML	AML	
	comp=N,1060μm,0.6s				
CIMO	**Cimolais**	**3.66 352**	P	**Pn**	**07 14 02.1 -0.3**
CIMO			AML	AML	
	comp=E,334μm,0.7s				
CIMO			AML	AML	
	comp=N,318μm,1.1s				
CIMO			AML	AML	
	comp=N,321μm,1.1s				
CIMO			AML	AML	
	comp=E,330μm,0.7s				
SALB	**San Lorenzo Be**	**3.67 139**	P	**Pn**	**07 14 05.2 +2.6**
SALB			AML	AML	
	comp=N,198μm,1.0s				
SALB			AML	AML	
	comp=E,296μm,0.4s				
AGOR	**Agordo**	**3.69 347**	P	**Pn**	**07 14 03.1 +0.3**
AGOR			AML	AML	
	comp=N,464μm,0.5s				
AGOR			AML	AML	
	comp=E,514μm,0.8s				
AGOR			AML	AML	
	comp=N,596μm,0.4s				
AGOR			AML	AML	
	comp=E,650μm,0.8s				
PTCC	**Patocco-Chiusa**	**3.72 1**	P	**Pn**	**07 14 02.1 -1.1**
PTCC			AML	AML	
	comp=N,503μm,0.7s				
PTCC			AML	AML	
	comp=E,526μm,0.8s				
TAR1	**Taranto**	**3.74 124**	AML	AML	
	comp=N,834μm,1.6s				
TAR1			AML	AML	
	comp=E,728μm,0.5s				
GAGG	**Gaggia**	**3.76 335**	P	**Pn**	**07 14 05.1 +1.2**
GAGG			AML	AML	
	comp=E,731μm,0.7s				
GAGG			AML	AML	
	comp=N,1048μm,0.4s				
GAGG			AML	AML	
	comp=N,738μm,0.8s				
GAGG			AML	AML	
	comp=E,1050μm,0.4s				
PRED	**Cave del Predi**	**3.76 4**		**Pn**	**07 14 03.6 -0.2**
CLUD	**Cludinico**	**3.78 357**		**Pn**	**07 14 04.0 0.0**
CLUD	**Cludinico**	**3.78 357**	P	**Pn**	**07 14 03.5 -0.4**
CLUD			AML	AML	
	comp=E,864μm,1.3s				
CLUD			AML	AML	
	comp=E,832μm,1.3s				
CLUD			AML	AML	
	comp=N,762μm,0.9s				
CLUD			AML	AML	
	comp=N,758μm,0.9s				
TREB	**Trebinje**	**3.79 88**	*e*Pn	**Pn**	**07 14 04.3 +0.2**
TREB	**Trebinje**	**3.79 88**	*e*Pn	**Pn**	**07 14 04.6 +0.5**
TREB			*e*Sn	**Sn**	**07 14 47.8 -0.8**
ACOM	**Acomizza, Ital**	**3.87 3**	P	**Pn**	**07 14 05.5 +0.2**
ACOM			AML	AML	
	comp=N,1028μm,0.6s				
ACOM			AML	AML	
	comp=E,992μm,0.8s				
ACOM			AML	AML	
	comp=N,1098μm,0.6s				
ACOM			AML	AML	
	comp=E,1040μm,0.8s				
ZOU	**Zoufplan**	**3.87 358**	P	**Pn**	**07 14 05.3 -0.1**
ZOU			AML	AML	
	comp=E,818μm,0.8s				
ZOU			AML	AML	
	comp=E,794μm,0.7s				
ZOU			AML	AML	
	comp=N,712μm,1.4s				
ZOU			AML	AML	
	comp=N,712μm,1.4s				
MABI	**Malga Bissina**	**3.88 331**	P	**Pn**	**07 14 06.6 +1.0**
MABI			AML	AML	
	comp=N,383μm,0.4s				
MABI			AML	AML	
	comp=E,411μm,1.5s				
QLNO	**Quiliano**	**3.90 296**	P	**Pn**	**07 14 06.6 +0.9**
QLNO			AML	AML	
	comp=N,206μm,1.2s				
QLNO			AML	AML	
	comp=E,121μm,1.4s				
HCY	**Herceg Novi**	**3.91 92**	⇑*i*Pn	**Pn**	**07 14 06.5 +0.7**
HCY	**Herceg Novi**	**3.91 92**	⇑*i*Pn	**Pn**	**07 14 06.4 +0.7**
HCY			*i* Sn	**Sn**	**07 14 50.8 -0.8**
BRY	**Bratogost**	**3.92 85**	⇑*i*Pn	**Pn**	**07 14 06.8 +0.6**
BRY	**Bratogost**	**3.92 85**	⇑*i*Pn	**Pn**	**07 14 06.7 +0.6**
BRY			*i* Sn	**Sn**	**07 14 51.5 -0.7**
A052A	**Srbac**	**3.94 51**	*e*Pn	**Pn**	**07 14 06.0 -0.1**
OBKA	**Obir**	**3.94 14**	*e*Pn	**Pn**	**07 14 04.5 -1.8**
OBKA	**Obir**	**3.94 14**	*i* Pn	**Pn**	**07 14 07.3 +1.0**
	comp=E,19nm,0.4s				
MYKA	**Terra Mystica**	**3.95 4**	*e*Pn	**Pn**	**07 14 06.8 +0.3**
	comp=E,7.0nm,0.2s				
KOSI	**Kohlern**	**4.00 341**	P	**Pn**	**07 14 08.3 +1.2**
APPI	**Appiano**	**4.05 340**	P	**Pn**	**07 14 08.7 +0.9**
APPI			AML	AML	
	comp=N,1013μm,0.5s				
APPI			AML	AML	
	comp=E,714μm,0.4s				
ABTA	**Abfaltersbach**	**4.09 353**	*e*Pn	**Pn**	**07 14 09.1 +0.7**
	comp=E,213nm,0.6s,SNR=25				
DOB	**Doboj**	**4.09 58**	*e*Pn	**Pb**	**07 14 13.4 -4.4**
CAR1	**CAROLEI**	**4.11 146**	P	**Pn**	**07 14 10.6 +1.9**
CAR1			AML	AML	
	comp=E,198μm,0.7s				
CAR1			AML	AML	
	comp=N,182μm,0.9s				
SOKA	**Soboth**	**4.20 17**	*i* Pn	**Pn**	**07 14 10.2 +0.4**
	comp=N,10.0nm,0.3s				
UPM	**Unac-Piva**	**4.21 81**	*e*Pn	**Pn**	**07 14 11.7 +1.6**
CEME	**Cevo**	**4.21 90**	⇓*i*Pn	**Pn**	**07 14 10.9 +0.9**
CEME			*i* Sn	**Sn**	**07 14 57.1 -2.1**
BUM	**Brajici-Budva**	**4.22 93**	⇑*i*Pn	**Pn**	**07 14 11.1 +1.0**
BUM			*i* Sn	**Sn**	**07 14 58.6 -0.7**
NKME	**Niksic**	**4.23 87**	⇓*i*Pn	**Pn**	**07 14 11.3 +1.1**
NKME			*i* Sn	**Sn**	**07 14 58.5 -1.1**
RISI	**Rein**	**4.34 350**	P	**Pn**	**07 14 12.9 +1.1**
SBF	**Sospel**	**4.38 288**	*e*Pn	**Pn**	**07 14 09.4 -2.9**
SBF	**Sospel**	**4.38 288**	*e*P	**Pn**	**07 14 13.0 +0.7**
SBF			*e*Sn	**Sn**	**07 14 59.2 -4.1**
	comp=N,62nm,0.5s				
MUGIO	**Muggio**	**4.41 319**	P	**Pn**	**07 14 13.4 +0.7**
MUGIO			AML	AML	
	comp=E,281μm,0.5s				
MUGIO			AML	AML	
	comp=N,236μm,0.4s				
HAPS	**Han Pijesak,Bl**	**4.41 70**	*e*Pn	**Pn**	**07 14 13.8 +1.0**
TIP	**Timpagrande**	**4.42 141**	⇑P	**Pn**	**07 14 15.2 +2.4**
TIP	**Timpagrande**	**4.42 141**	Pn	**Pn**	**07 14 13.9 +1.1**
ROSI	**Rossskopf**	**4.43 344**	P	**Pn**	**07 14 14.5 +1.4**
DRME	**Dracevica, Mon**	**4.45 94**	⇑*i*Pn	**Pn**	**07 14 14.5 +1.3**
DRME	**Dracevica, Mon**	**4.45 94**	⇓*i*Pn	**Pn**	**07 14 14.2 +1.0**
DRME			*i* Sn	**Sn**	**07 15 04.0 -0.9**
FUORN	**Ofenpass-Fuorn**	**4.46 333**	Pn	**Pn**	**07 14 14.4 +0.9**
PDG	**Podgorica**	**4.47 91**	⇑S	**Sn**	**07 15 05.1 -0.3**
PDG	**Podgorica**	**4.47 91**	Pn	**Pn**	**07 14 13.9 +0.4**
PDG	**Podgorica**	**4.47 91**	*e*Pn	**Pn**	**07 14 14.6 +1.1**
PDG			*e*Sn	**Sn**	**07 15 03.7 -1.7**
PDG	**Podgorica**	**4.47 91**	P	**Pn**	**07 14 14.6 +1.1**
PDG			AML	AML	
	comp=N,846μm,0.4s				
PDG			AML	AML	
	comp=N,603μm,0.4s				
PDG			AML	AML	
	comp=E,809μm,0.7s				
PDG			AML	AML	
	comp=E,579μm,0.4s				
PDG	**Podgorica**	**4.47 91**	⇑P	**Pn**	**07 14 14.9 +1.4**
TTG	**Podgorica**	**4.47 91**	⇓*i*Pn	**Pn**	**07 14 14.3 +0.8**
TTG			*i* Sn	**Sn**	**07 15 04.2 -1.2**
VARE	**Varese**	**4.50 316**	P	**Pn**	**07 14 15.2 +1.2**
VARE			AML	AML	
	comp=N,423μm,0.6s				
VARE			AML	AML	
	comp=E,416μm,0.4s				
ULC	**Ulcinj**	**4.53 97**	⇓*i*Pn	**Pn**	**07 14 15.0 +0.7**
ULC			*i* Sn	**Sn**	**07 15 05.1 -1.8**
BEHE	**Becsehely**	**4.56 33**	P	**Pn**	**07 14 15.6 +0.9**
PLE	**Pljevlja**	**4.57 80**	⇓*i*Pn	**Pn**	**07 14 17.5 +2.5**
PLE			*i* Sn	**Sn**	**07 15 06.7 -1.5**
RUDO	**Rudo**	**4.60 76**	*e*Pn	**Pn**	**07 14 15.9 +0.6**
KOME	**Kolasin**	**4.64 86**	⇑*i*Pn	**Pn**	**07 14 17.0 +1.1**
KOME			*i* Sn	**Sn**	**07 15 08.1 -1.7**
BBLS	**Lazići**	**4.67 73**	*e*Pn	**Pn**	**07 14 17.5 +1.2**
BBLS	**Lazići**	**4.67 73**	*e*Pn	**Pn**	**07 14 17.7 +1.4**
FETA	**Feichten**	**4.68 339**	*e*Pn	**Pn**	**07 14 18.6 +2.1**
	comp=E,13nm,0.3s				
TUE	**Stuetta**	**4.68 325**	Pn	**Pn**	**07 14 16.4 -0.2**
WTTA	**Wattenberg**	**4.71 347**	*e*Pn	**Pn**	**07 14 19.0 +2.0**
	comp=E,21nm,0.2s				
WTTA	**Wattenberg**	**4.71 347**	*e*Pn	**Pn**	**07 14 19.0 +2.0**
DAVOX	**Davos/Dischmat**	**4.73 331**	Pn	**Pn**	**07 14 20.0 +2.7**
	comp=E,12nm,0.3s,baz=289,slow=8.2,SNR=14				
DAVOX			Sn	**Sn**	**07 15 15.5 +3.3**
	comp=E,10nm,0.3s,baz=105,slow=21,SNR=5.5				
SCTE	**Santa Cesarea**	**4.74 122**		**Pn**	**07 14 18.5 +1.3**
SCTE	**Santa Cesarea**	**4.74 122**	P	**Pn**	**07 14 18.2 +1.1**
SCTE			AML	AML	
	comp=E,876μm,1.0s				
SCTE			AML	AML	
	comp=N,686μm,1.0s				
SQTA	**Sankt Quirin**	**4.75 343**		**Pn**	**07 14 19.2 +1.7**
SQTA	**Sankt Quirin**	**4.75 343**	P	**Pn**	**07 14 19.2 +1.7**
SQTA	**Sankt Quirin**	**4.75 343**	*e*Pn	**Pn**	**07 14 19.2 +1.7**
	comp=N,36nm,0.4s,SNR=8.0				
WATA	**Walderalm**	**4.79 347**		**Pn**	**07 14 20.2 +2.2**
WATA	**Walderalm**	**4.79 347**	P	**Pn**	**07 14 20.2 +2.2**
WATA	**Walderalm**	**4.79 347**	*i* Pn	**Pn**	**07 14 20.2 +2.2**
	comp=N,82nm,0.6s,SNR=7.6				
ARSA	**Arzberg**	**4.85 19**	*i* Pn	**Pn**	**07 14 18.4 -0.3**
	comp=N,8.1nm,0.3s				
ARSA	**Arzberg**	**4.85 19**	*e*Pn	**Pn**	**07 14 18.6 -0.1**
ARSA			*e*Sn	**Sn**	**07 15 12.5 -2.2**
BLJ	**Bijeljina**	**4.86 62**	*e*Pn	**Pn**	**07 14 17.4 -1.4**
KOVH	**Kovagotottos**	**4.88 44**	P	**Pn**	**07 14 18.2 -0.9**
MOTA	**Moosalm**	**4.89 343**		**Pn**	**07 14 21.4 +2.0**
MOTA	**Moosalm**	**4.89 343**	P	**Pn**	**07 14 21.4 +2.0**
MOTA	**Moosalm**	**4.89 343**	*e*Pn	**Pn**	**07 14 21.4 +2.0**
	comp=N,23nm,0.4s,SNR=8.9				
IVA	**Berane**	**4.92 86**	⇓*i*Pn	**Pn**	**07 14 22.0 +2.2**
TEKS	**Tekeris**	**4.95 66**	*e*Pn	**Pn**	**07 14 18.7 -1.4**
TEKS	**Tekeris**	**4.95 66**	*e*Pn	**Pn**	**07 14 20.2 +0.1**
LMR	**La Mourre**	**4.96 280**	*e*Pn	**Pn**	**07 14 16.9 -3.3**
LMR	**La Mourre**	**4.96 280**	*e*P	**Pn**	**07 14 20.3 +0.1**
LMR			*e*Sn	**Sn**	**07 15 13.6 -3.9**
	comp=N,17nm,0.5s				
FUSIO	**Fusio**	**4.97 321**	P	**Pn**	**07 14 20.8 +0.3**
PVY	**Plav**	**4.98 89**	⇓*i*Pn	**Pn**	**07 14 23.0 +2.4**
PVY			*i* Sn	**Sn**	**07 15 16.2 -1.9**
ZUGS	**Zugspitze, Sch**	**4.99 342**	*e*Pn	**Pn**	**07 14 23.4 +2.6**
ZUGS			*e*Sn	**Sn**	**07 15 21.8 +3.3**
SJES	**Sjenica**	**4.99 81**	*e*Pn	**Pn**	**07 14 22.4 +1.6**
SJES			*e*Sn	**Sn**	**07 15 16.5 -2.0**
BIOA	**Bad Ischl, Aus**	**5.01 3**		**Pn**	**07 14 21.6 +0.6**
BIOA	**Bad Ischl, Aus**	**5.01 3**	*e*Pn	**Pn**	**07 14 21.6 +0.6**
	comp=N,20nm,0.3s				
PART	**Garmisch-Parte**	**5.03 344**	*e*Pn	**Pn**	**07 14 23.2 +2.0**
MBDF	**Montbardon**	**5.10 296**	*e*Pn	**Pn**	**07 14 20.6 -1.6**
MBDF	**Montbardon**	**5.10 296**	*e*P	**Pn**	**07 14 23.2 +1.0**
MBDF			*e*Sn	**Sn**	**07 15 15.9 -5.2**
	comp=N,19nm,0.4s				
RETA	**Reutte**	**5.10 341**	*e*Pn	**Pn**	**07 14 24.4 +2.1**
	comp=N,14nm,0.3s				
TIR	**Tirane**	**5.13 103**	⇑P	**Pn**	**07 14 23.9 +1.3**
TIR	**Tirane**	**5.13 103**	Pn	**Pn**	**07 14 23.9 +1.3**

TIR Tirane 5.13 103 P Pn 07 14 23.6 +1.0
TIR Tirane 5.13 103 *e*Pn Pn 07 14 23.6 +1.0
TIR *e*Sn Sn 07 15 20.7 -1.0
TIR Tirane 5.13 103 P Pn 07 14 23.9 +1.3
TIR Tirane 5.13 103 P Pn 07 14 23.5 +1.0
TIR AML AML
comp=N,974µm,0.4s
TIR AML AML
comp=E,890µm,1.6s
DIVS Divibare 5.14 72 Pn Pn 07 14 23.6 +0.9
DIVS Divibare 5.14 72 *e*Pn Pn 07 14 23.3 +0.5
DIVS Divibare 5.14 72 *e*P Pn 07 14 23.2 +0.5
OBER Oberstdorf 5.15 337 *e*Pn Pn 07 14 25.2 +2.2
DAVA Damuels 5.17 334 *e*Pn Pn 07 14 25.5 +2.3
comp=E,12nm,0.3s,SNR=6.0
DAVA Damuels 5.17 334 *e*Pn Pn 07 14 25.6 +2.3
DAVA *e*Sn Sn 07 15 22.2 -0.7
VLO Vlora 5.21 113 Pn 07 14 25.6 +2.0
VLO Vlora 5.21 113 P Pn 07 14 25.2 +1.6
VLO Vlora 5.21 113 P Pn 07 14 25.6 +2.0
MOA Molln 5.21 8 *e*Pn Pn 07 14 24.4 +0.7
MOA *e*Sn Sn 07 15 23.5 -0.3
MOA Molln 5.21 8 *e*Pn Pn 07 14 24.4 +0.7
comp=E,10nm,0.3s
MOA Molln 5.21 8 *e*Pn Pn 07 14 25.4 +1.7
MOA *e*Sn Sn 07 15 23.4 -0.5
MORH Mrgy, Hungar 5.25 46 P Pn 07 14 25.4 +1.2
VAE Valguarnera 5.28 170 Pn Pn 07 14 24.8 +0.1
comp=E,1.8nm,0.3s,baz=234,slow=8.2,SNR=14
comp=E,5.3nm,0.3s
FRGS Fruska Gora 5.37 60 ⇑P Pn 07 14 26.4 +0.6
FRGS Fruska Gora 5.37 60 *e*Pn Pn 07 14 25.5 -0.3
FRGS Fruska Gora 5.37 60 *e*Pn Pn 07 14 25.8 0.0
MPLH Magyarpolny 5.43 33 P Pn 07 14 27.1 +0.4
LPG La Plagne 5.44 303 *e*Pn Pn 07 14 25.7 -1.3
LPG La Plagne 5.44 303 *e*P Pn 07 14 29.1 +2.1
LPG *e*Sn Sn 07 15 24.5 -5.1
comp=E,34nm,0.5s
UBR Ueberruh 5.45 337 *e*Pn Pn 07 14 28.6 +1.6
UBR *e*Sn Sn 07 15 32.3 +2.6
TRUS Trudelj 5.46 71 *e*Pn Pn 07 14 27.8 +0.8
TRUS *e*Sn Sn 07 15 28.8 -0.9
LPL La Plagne 5.46 303 *e*Pn Pn 07 14 25.7 -1.5
LPL La Plagne 5.46 303 *e*P Pn 07 14 29.2 +2.0
LPL *e*Sn Sn 07 15 23.4 -6.7
comp=E,38nm,0.6s
PHP Peshkopia 5.46 98 P Pn 07 14 29.1 +1.9
RONA Rosalia, Austr 5.46 22 Pn 07 14 27.2 0.0
RONA Rosalia, Austr 5.46 22 *e*Pn Pn 07 14 27.2 0.0
comp=E,3.6nm,0.2s
SOP Sopron 5.53 24 P Pn 07 14 27.1 -0.9
CONA Conrad Observa 5.56 19 *e*Pn Pn 07 14 28.4 -0.2
comp=E,4.8nm,0.2s
SENIN Lac Senin/Sane 5.60 313 Pn Pn 07 14 28.3 -0.9
GRUS Gruza 5.61 75 *e*Pn Pn 07 14 30.0 +0.9
GRUS *e*Sn Sn 07 15 32.4 -1.0
SMRF Simiane la Rot 5.72 286 *e*Pn Pn 07 14 30.2 -0.5
SMRF Simiane la Rot 5.72 286 *e*P Pn 07 14 32.8 +2.1
SMRF *e*Sn Sn 07 15 30.8 -5.5
comp=E,15nm,0.6s
ORIF Oris-en-Rattie 5.76 295 *e*Pn Pn 07 14 30.8 -0.5
ORIF Oris-en-Rattie 5.76 295 *e*P Pn 07 14 34.0 +2.7
ORIF *e*Sn Sn 07 15 31.6 -5.7
comp=E,34nm,0.8s
KEK Kerkira 5.79 119 Pn Pn 07 14 31.7 +0.1
KEK Kerkira 5.79 119 P Pn 07 14 33.0 +1.4
SELS Selova 5.83 82 *e*Pn Pn 07 14 32.7 +0.6
SELS *e*Sn Sn 07 15 36.6 -2.3
SRN Sarande 5.83 116 P Pn 07 14 33.6 +1.4
OHR Ohrid 5.88 103 *i* Pn Pn 07 14 34.8 +1.9
KBN Korca 6.04 107 Pn Pn 07 14 36.0 +1.0
KBN Korca 6.04 107 P Pn 07 14 36.6 +1.5
KBN Korca 6.04 107 P Pn 07 14 36.1 +1.0
LSK Leskovik 6.10 112 P Pn 07 14 37.7 +1.7
SKO Skopje 6.14 94 *i* Pn Pn 07 14 37.9 +1.5
ZST Bratislava 6.15 25 *e*P Pn 07 14 36.5 0.0
ZST *e* 07 15 42.8
GEC2 GERESS Array S 6.17 3 Pn Pn 07 14 36.6 -0.3
GEC2 GERESS Array S 6.17 3 *e*Pn Pn 07 14 37.0 +0.2
GERES GERESS Array B 6.17 3 Pn Pn 07 14 36.6 -0.3
comp=E,2.6nm,0.3s,baz=174,slow=12,SNR=12
GERES Sn Sn 07 15 46.5 -0.8
comp=E,14nm,0.3s,baz=190,slow=27,SNR=10
comp=E,8.3nm,0.6s
GERES GERESS Array B 6.17 3 Pn 07 14 36.4 -0.5
CKRC Cesky Krumlov 6.18 7 *e*PN Pn 07 14 36.3 -0.7
CKRC *e*SN Sn 07 15 45.6 -2.0
IGT Igoumenitsa 6.23 118 P Pn 07 14 39.4 +1.7
SRO Srobarova 6.26 33 *e*P Pn 07 14 38.9 +0.8
BOVS Bovan 6.28 78 ⇑P Pn 07 14 38.6 +0.2
BOVS Bovan 6.28 78 *e*Pn Pn 07 14 38.6 +0.2
BOVS *e*Sn Sn 07 15 47.4 -2.7
NEST Nestorio 6.30 108 P Pn 07 14 41.2 +2.5
BARS Barje 6.33 86 *e*Pn Pn 07 14 39.8 +0.7
MODS Modra-Piesok 6.36 25 *e*P Pn 07 14 40.2 +0.7
MODS *e* 07 15 47.0
KUBS Kucevo 6.38 71 *e*Pn Pn 07 14 40.0 +0.2
CABF La Chapelle 6.42 310 *e*Pn Pn 07 14 37.2 -3.1
CABF La Chapelle 6.42 310 *e*P Pn 07 14 41.3 +1.0
KHC Kasperske Hory 6.45 2 Pn Pn 07 14 40.5 -0.2
KHC Kasperske Hory 6.45 2 *e*P Pn 07 14 40.2 -0.5
KHC *e* 07 15 51.3
KHC Kasperske Hory 6.45 2 *e*PN Pn 07 14 40.2 -0.5
KHC *e*SN Sn 07 15 51.3 -2.9
PENT Pentalofos 6.45 110 P Pn 07 14 42.9 +2.1
WET Wettzell 6.46 358 *e*Pn Pn 07 14 40.3 -0.5
MDVR Moldovita 6.50 68 ⇑P Pn 07 14 41.9 +0.4
JAN Janina 6.51 115 P Pn 07 14 42.5 +1.0
SMOL Smolenice 6.53 25 *e*P Pn 07 14 44.6 +2.8
VIVF Saint-Julien-l 6.55 292 *e*Pn Pn 07 14 40.8 -1.3
VIVF Saint-Julien-l 6.55 292 *e*P Pn 07 14 43.7 +1.6
BFO Black Forest 6.60 330 Pn Pn 07 14 43.6 +0.8
BFO Black Forest 6.60 330 P Pn 07 14 43.6 +0.8
BFO Black Forest 6.60 330 *e*Pn Pn 07 14 44.5 +1.8
BFO *e*Sn Sn 07 15 54.4 -3.6
ZAGS Zajecar 6.68 77 *e*Pn Pn 07 14 44.3 +0.5
ZAGS *e*Sn Sn 07 15 57.9 -2.0
KPRO Kipourio 6.71 111 P Pn 07 14 46.4 +2.0
BZS Buzias 6.71 61 ⇑P Pn 07 14 44.7 +0.4
KRUC Moravsky 6.75 18 *e*PN Pn 07 14 44.1 -0.7
KRUC *e*SN Sn 07 15 57.7 -3.9
HINF Hinteralfeld 6.81 321 *e*Pn Pn 07 14 42.0 -3.7
HINF Hinteralfeld 6.81 321 *e*P Pn 07 14 46.1 +0.4
HINF *e*Sn Sn 07 15 56.2 -7.0
comp=E,53nm,0.4s
TSLK Tsoukalades, L 6.84 122 P Pn 07 14 48.0 +2.0
KZN Kozani 6.85 107 P Pn 07 14 46.9 +0.6
LKD2 Lefkada island 6.86 122 P Pn 07 14 48.2 +1.8
DRAG Dragano-Lefkad 6.88 123 P Pn 07 14 47.9 +1.4
JAVC Velka Javorina 6.91 25 *e*PN Pn 07 14 46.6 -0.5
NYDR Nydri-Lefkada 6.93 122 P Pn 07 14 48.6 +1.3
ZAPS Zavoj 6.93 82 *e*Pn Pn 07 14 48.6 +1.2
ZAPS *e*Sn Sn 07 16 04.1 -2.1
LASF Ste Croix 6.96 285 *e*Pn Pn 07 14 45.6 -2.1
LASF Ste Croix 6.96 285 *e*P Pn 07 14 48.2 +0.5
EVGI Lefkada island 6.96 123 P Pn 07 14 49.1 +1.3
ECH Echery 6.98 324 Pn 07 14 46.5 -1.4
ECH Echery 6.98 324 P Pn 07 14 46.5 -1.4
BLKB Belogradchik 6.98 79 ⇑P Pn 07 14 48.6 +0.6
HERR Herculane 7.01 69 ⇑P Pn 07 14 49.4 +1.0
VYHS Vyhne 7.02 32 *e*P Pn 07 14 48.9 +0.4
SIRR Siria 7.02 56 ⇑P Pn 07 14 49.6 +1.1
VRAC Vranov 7.03 18 Pn Pn 07 14 48.6 +0.1
comp=E,1.6nm,0.3s,baz=212,slow=14,SNR=4.0
VRAC Sn Sn 07 16 07.7 -0.7
comp=E,1.6nm,0.3s,baz=285,slow=18,SNR=2.4
comp=E,5.1nm,0.3s
VRAC Vranov 7.03 18 *e*PN Pn 07 14 47.5 -1.1
DJES Djerdap 7.03 71 ⇓P Pn 07 14 49.5 +0.9
DMLN Damoulianata-K 7.04 127 P Pn 07 14 50.8 +2.0
KEF3 Kipouria, Keph 7.05 127 P Pn 07 14 51.4 +2.5
KEF4 Livadi, Kephal 7.05 126 P Pn 07 14 51.2 +2.2
GRG Griva 7.08 101 P Pn 07 14 49.7 +0.4
CDF Champ du Feu 7.08 326 *e*Pn Pn 07 14 46.0 -3.4
CDF Champ du Feu 7.08 326 *e*P Pn 07 14 50.0 +0.6
CDF *e*Sn Sn 07 16 02.6 -7.2
comp=E,80nm,0.6s
VAY Valandovo 7.10 98 *i* Pn Pn 07 14 50.6 +1.0
ROTZ Rotzenmuhle 7.12 355 *e*Pn Pn 07 14 50.0 +0.1
GRA1 Grafenberg Arr 7.14 350 Pn Pn 07 14 50.4 +0.2
GRF Grafenberg Arr 7.14 350 P Pn 07 14 50.4 +0.2

HAU Haudompre 7.19 320 *e*Pn Pn 07 14 47.6 -3.2
HAU Haudompre 7.19 320 *e*P Pn 07 14 51.8 +1.0
HAU *e*Sn Sn 07 16 05.6 -6.7
comp=E,77nm,0.4s
VLS Valsamata 7.21 126 P Pn 07 14 52.8 +1.7
PSDA Pessada-Kefalo 7.24 127 P Pn 07 14 53.1 +1.5
GOPC GO Pecny, Ondr 7.31 8 *e*P Pn 07 14 52.5 0.0
GOPC *e* 07 16 12.9
GOPC GO Pecny, Ondr 7.31 8 *e*PN Pn 07 14 52.5 0.0
GOPC *e*SN Sn 07 16 12.9 -2.5
THL Klokotos Trika 7.34 112 P Pn 07 14 54.2 +1.3
PRU Pruhonice 7.36 7 *e*P Pn 07 14 53.0 -0.1
PRU *e* 07 16 14.5
PRU Pruhonice 7.36 7 *e*PN Pn 07 14 53.0 -0.1
PRU *e*SN Sn 07 16 14.5 -2.1
KKB Krupnik 7.37 93 *e*P Pn 07 14 54.8 +1.5
KNT Kendrikon 7.38 99 P Pn 07 14 54.1 +0.6
VTS Vitosha 7.39 87 ⇑P Pn 07 14 54.6 +1.0
VTS Vitosha 7.39 87 Pn Pn 07 14 54.7 +1.0
VTS Vitosha 7.39 87 P Pn 07 14 54.7 +1.0
GZR Gura Zlata 7.40 65 ⇑P Pn 07 14 54.3 +0.5
EVR Evrytania 7.53 117 P Pn 07 14 57.8 +2.2
KEST Kesra 7.57 205 Pn Pn 07 15 01.2 +5.1
comp=E,3.0nm,0.3s,baz=304,slow=4.0,SNR=18
KEST Kesra 7.57 205 Pn Pn 07 14 56.7 +0.6
NKC Novy Kostel 7.57 356 *e*P Pn 07 14 55.7 -0.3
NKC *e* 07 16 18.6
NKC Novy Kostel 7.57 356 *e*PN Pn 07 14 55.7 -0.3
NKC *e*SN Sn 07 16 18.6 -3.1
DEV Deva 7.65 62 ⇑P Pn 07 14 57.0 -0.2
MAKR Makrakomi, Fth 7.69 116 P Pn 07 15 00.1 +2.3
HORT Hortiatis 7.69 102 P Pn 07 14 58.0 +0.2
MORC Moravsky Berou 7.70 21 ⇓P Pn 07 14 59.4 +1.5
MORC Moravsky Berou 7.70 21 Pn Pn 07 14 58.3 +0.5
MORC Moravsky Berou 7.70 21 P Pn 07 14 58.3 +0.5
MORC Moravsky Berou 7.70 21 *e*PN Pn 07 14 57.9 +0.1
KECS Kecovo 7.72 39 *e*P Pn 07 15 00.3 +2.2
MPEP Malo Peshtene 7.74 81 *e*P Pn 07 14 59.7 +1.3
SMF Signal de Mont 7.76 304 *e*Pn Pn 07 14 55.0 -3.7
SMF Signal de Mont 7.76 304 *e*P Pn 07 15 00.9 +2.2
SMF *e*Sn Sn 07 16 18.5 -8.0
comp=E,34nm,0.7s
KRLC Kraliky 7.79 17 *e*P Pn 07 14 58.6 -0.5
KRLC Kraliky 7.79 17 *e*PN Pn 07 14 58.6 -0.5
SOH Sokhos 7.81 100 P Pn 07 14 59.8 +0.4
RLS Riolos of Patr 7.81 124 P Pn 07 15 01.1 +1.7
PAGF Fort de Pagny 7.87 321 *e*Pn Pn 07 14 56.7 -3.5
PAGF Fort de Pagny 7.87 321 *e*P Pn 07 15 00.7 +0.5
baz=122
PAGF *e*Sn Sn 07 16 21.7 -7.4
comp=E,71nm,0.8s
SRS Serrai 7.90 98 P Pn 07 15 01.2 +0.6
DPC Dobruska-Polom 7.96 15 *e*P Pn 07 15 00.3 -1.1
DPC Dobruska-Polom 7.96 15 *e*PN Pn 07 15 00.3 -1.1
SFTF Sexfontaines 7.96 317 *e*Pn Pn 07 14 58.0 -3.5
SFTF Sexfontaines 7.96 317 *e*P Pn 07 15 02.7 +1.2
baz=129
SFTF *e*Sn Sn 07 16 23.5 -8.0
comp=E,28nm,0.5s
LAKA Lakka 8.02 121 P Pn 07 15 04.5 +2.2
NVR Nevrokopi 8.04 96 P Pn 07 15 03.7 +1.1
LOR Lormes 8.06 308 *e*Pn Pn 07 14 58.7 -4.0
baz=123
LOR Lormes 8.06 308 *e*P Pn 07 15 04.4 +1.6
baz=126
LOR *e*Sn Sn 07 16 26.2 -7.6
comp=E,12nm,0.3s
PGB Panagyurishte 8.08 87 *e*P Pn 07 15 04.4 +1.3
MTLF Montolieu 8.09 278 *e*Pn Pn 07 15 00.8 -2.3
MTLF Montolieu 8.09 278 *e*P Pn 07 15 05.4 +2.3
MTLF *e*Sn Sn 07 16 27.7 -6.8
comp=E,3.1nm,0.5s
ALIK Aliki, Aigiali 8.09 120 P Pn 07 15 05.9 +2.7
AVF Avril sur Loir 8.13 304 *e*Pn Pn 07 15 00.1 -3.6
AVF Avril sur Loir 8.13 304 *e*P Pn 07 15 04.9 +1.2
AVF *e*Sn Sn 07 16 28.4 -7.1
comp=E,2.9nm,0.4s
OSTC Ostas 8.14 14 *e*PN Pn 07 15 03.8 0.0
CHVC Chvalec 8.14 13 *e*PN Pn 07 15 03.0 -0.9
MEZF Maizieres J'vi 8.15 318 *e*Pn Pn 07 15 01.0 -3.1
MEZF Maizieres J'vi 8.15 318 *e*P Pn 07 15 05.5 +1.4
baz=125
MEZF *e*Sn Sn 07 16 27.7 -8.4
comp=E,18nm,0.5s
SSF Saint Saulge 8.16 306 *e*Pn Pn 07 15 00.9 -3.3
SSF Saint Saulge 8.16 306 *e*P Pn 07 15 05.7 +1.5
SSF *e*Sn Sn 07 16 29.1 -7.2
comp=E,17nm,0.5s
AXAR Agios Charalam 8.17 115 P Pn 07 15 07.5 +3.2
SAVF Savonnieres en 8.20 319 *e*Pn Pn 07 15 01.6 -3.0
SAVF Savonnieres en 8.20 319 *e*P Pn 07 15 05.9 +1.3
baz=140
SAVF *e*Sn Sn 07 16 29.4 -7.7
comp=E,19nm,0.4s
BRG Berggiesshubel 8.20 3 *e*P Pn 07 15 08.1 +3.4
BRG *e* 07 16 32.9
BRG pmax pmax
comp=Z,10.0nm,0.9s
TNS Taunus Mts 8.22 338 *e*Pn Pn 07 15 06.1 +1.1
BGF Bois d'Agland 8.35 301 *e*P Pn 07 15 08.0 +1.3
BGF *e*Sn Sn 07 16 32.9 -7.9
comp=Z,45nm,0.7s
PAIG Paliouri 8.35 106 P Pn 07 15 06.1 -0.6
CAF Calviac 8.37 289 *e*Pn Pn 07 15 05.1 -1.9
CAF Calviac 8.37 289 *e*P Pn 07 15 09.0 +2.0
CAF *e*Sn Sn 07 16 34.9 -6.6
comp=Z,3.0nm,0.5s
PLVB Pleven 8.39 81 ⇑P Pn 07 15 08.5 +1.3
OUR Ouranopolis 8.41 103 P Pn 07 15 07.5 -0.1
CJR Cluj-Napoca 8.42 58 ⇑P Pn 07 15 08.9 +1.2
WLF Walferdange 8.52 327 *d*P Pn 07 15 10.2 +1.2
WLF *d*PP PnPn 07 15 18.4 +1.8
WLF *d*S Sn 07 16 43.3 -1.9
WLF Walferdange 8.52 327 *e*Pn Pn 07 15 11.3 +2.2
KAVA Kavala 8.60 98 P Pn 07 15 11.6 +1.4
CLL Collm 8.62 359 Pn Pn 07 15 09.1 -1.4
CLL Collm 8.62 359 *e*P Pn 07 15 10.0 -0.5
CLL *e* 07 16 45.0
CLL Collm 8.62 359 *e*Pn Pn 07 15 10.0 -0.5
CLL *ex* x 07 15 16.0
CLL *e*Sn Sn 07 16 27.0 -21
CLL *ex* x 07 16 45.0
CLL *ex* x 07 17 14.0
CLL *ex* x 07 17 28.0
CLL *e*Sg Sg 07 17 51.0 +8.5
comp=Z,55nm,1.0s
TCF Toulx Ste Croi 8.65 298 *e*Pn Pn 07 15 08.4 -2.5
TCF Toulx Ste Croi 8.65 298 *e*P Pn 07 15 13.6 +2.7
TCF *e*Sn Sn 07 16 40.3 -8.0
comp=Z,9.4nm,0.7s
ARR Arges 8.65 68 ⇓P Pn 07 15 11.9 +0.9
ITM Ithomi 8.66 127 Pn Pn 07 15 12.7 +1.7
ITM Ithomi 8.66 127 P Pn 07 15 14.1 +2.1
STHS Stebnicka Huta 8.74 37 *e*P Pn 07 15 15.4 +3.3
HYF Humbligny 8.78 305 *e*P Pn 07 15 15.8 +3.1
LOUT Loutraki 8.81 119 P Pn 07 15 13.6 +0.6
RJF Les Rejaudoux 8.83 291 *e*Pn Pn 07 15 11.9 -1.4
RJF Les Rejaudoux 8.83 291 *e*P Pn 07 15 15.9 +2.6
RJF *e*Sn Sn 07 16 45.5 -7.2
comp=Z,2.3nm,0.4s
VILL Villia 8.93 117 P Pn 07 15 14.7 0.0
VOIR 8.95 68 ⇑P Pn 07 15 15.9 +0.8
KYMI Kymi, Euboea I 9.21 112 P Pn 07 15 18.6 +0.1
KRND KRANIDI 9.28 122 P Pn 07 15 21.0 +1.5
RCHB Rochefort 9.28 326 *d*P Pn 07 15 20.9 +1.5
RCHB *d*PP PbPb 07 15 49.6 +0.2
LFF La Frestale 9.30 288 *e*Pn Pn 07 15 18.1 -1.6
LFF La Frestale 9.30 288 *e*P Pn 07 15 21.9 +2.2
MEM Membach 9.34 330 *d*P Pn 07 15 21.1 +0.8
ATHU Athens Univers 9.35 117 P Pn 07 15 21.8 +1.4
DION Dionisos Attik 9.38 116 P Pn 07 15 20.3 -0.7
GIVF Givet 9.41 325 *e*Pn Pn 07 15 17.9 -3.3
GIVF Givet 9.41 325 *e*P Pn 07 15 22.6 +1.4
VLY Voula,Athens 9.42 117 P Pn 07 15 22.2 +0.8
EPF Esparros 9.46 276 *e*Sn Sn 07 17 00.8 -7.6
comp=Z,3.8nm,0.6s
BSTI Sart Tilman 9.48 329 *d*S Sn 07 17 08.6 -0.1
DOU Dourbes 9.50 324 *d*x x 07 15 40.8
MLR Muntele Rosu 9.58 69 ⇑P Pn 07 15 24.7 +0.9
MLR Muntele Rosu 9.58 69 Pn Pn 07 15 26.2 +2.5
comp=Z,1.1nm,0.3s,baz=116,slow=23,SNR=12
comp=Z,16nm,0.8s

MLR Muntele Rosu 9.58 69 Pn Pn 07 15 24.4 +0.6
BMRD Maredsous 9.58 326 *d*P Pn 07 15 25.7 +2.1
BAIF Baives 9.64 323 *e*Pn Pn 07 15 20.9 -3.5
BAIF Baives 9.64 323 *e*P Pn 07 15 25.7 +1.3
BAIF *e*Sn Sn 07 17 04.3 -8.3
comp=Z,21nm,0.8s
RAZG Razgrad 9.76 80 ⇓P Pn 07 15 27.0 +0.9
ETSF Etsaut 10.13 276 *e*Pn Pn 07 15 31.1 -0.1
ETSF Etsaut 10.13 276 *e*P Pn 07 15 34.9 +3.7
PLOR Plostina 10.14 67 ⇑P Pn 07 15 32.3 +1.0
VRI Vrincioaia 10.20 67 ⇑P Pn 07 15 32.5 +0.4
MFF Saint Martin d 10.29 297 *e*P Pn 07 15 36.1 +2.8
ROIA ROIAK 10.40 83 *e*P Pn 07 15 37.2 +2.3
PRD Provadia 10.42 82 *e*P Pn 07 15 33.7 -1.3
SJPF Ste Jean 10.61 277 *e*Pn Pn 07 15 36.8 -0.9
SJPF Ste Jean 10.61 277 *e*P Pn 07 15 40.6 +2.9
APE Apeiranthos 11.00 117⇑*e*P Pn 07 15 42.6 -0.5
TIRR Tirgusor 11.17 76 Pn Pn 07 15 47.1 +1.7
TIRR Tirgusor 11.17 76 P Pn 07 15 47.1 +1.7
SANT Santorini 11.36 120 Pn Pn 07 15 48.9 +0.9
IDI Anoyia 11.70 125 Pn Pn 07 15 53.0 +0.2
comp=Z,3.9nm,0.3s,baz=317,slow=12,SNR=16
IDI Sn Sn 07 17 57.4 -5.9
comp=Z,1.1nm,0.3s,baz=298,slow=23,SNR=3.4
comp=Z,6.7nm,0.4s
IDI Anoyia 11.70 125 Pn Pn 07 15 53.0 +0.2
ESBB Sonseca Array 13.28 263 Pn Pn 07 16 14.7 +0.3
ESDC Sonseca Array 13.29 263 Pn Pn 07 16 14.6 +0.3
comp=Z,0.1nm,0.3s,baz=68,slow=14,SNR=32
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 13.58 48 Pn Pn 07 16 19.4 +1.1
comp=Z,0.3nm,0.3s,baz=239,slow=13,SNR=1.6
comp=Z,0.4nm,0.5s
PAB San Pablo 13.61 263 Pn Pn 07 16 18.9 +0.1
PAB San Pablo 13.61 263 P Pn 07 16 18.9 +0.1
ELL Elmali 14.14 109 Pn Pn 07 16 27.2 +1.0
ELL Elmali 14.14 109 P Pn 07 16 27.2 +1.0
PBRG Braganca 14.81 273 *e*P P 07 16 43.1 +2.0
NACGM Naroch 15.11 31 *e*P P 07 16 41.8 -2.4
comp=Z,18nm,1.0s,baz=222
MVO Moncorvo 15.15 271 *e*P P 07 16 48.1 +3.3
BR131 Keskin Array S 15.65 94 P P 07 16 48.5 -2.1
BR131 Keskin Array S 15.65 94⇑*e*P Pn 07 16 45.9 -0.5
BRTR Keskin Array B 15.65 94 Pn P 07 16 49.2 -1.3
comp=Z,0.1nm,0.3s,baz=278,slow=10,SNR=6.8
comp=Z,1.6nm,0.7s
POLO Lamas de Olo 15.67 272 *e*P P 07 16 52.4 +1.8
MTE Manteigas 15.71 269 *e*P P 07 16 54.4 +3.3
comp=Z,19nm,1.3s
MTE Manteigas 15.71 269 Pn 07 16 47.5 +0.5
PVIS Viseu 15.89 270 *e*P P 07 16 51.2 -1.8
comp=Z,18nm,1.5s
PGAV Gavieira, Arco 15.90 275 *e*P P 07 16 55.6 +2.3
comp=Z,27nm,1.6s
PBAR Barrancos 16.06 260 *e*P P 07 16 57.5 +2.6
PCAS Casmilo, Conde 16.51 268 *e*P P 07 17 02.1 +2.2
EKA Eskdalemuir Ar 16.54 326 Pn Pn 07 16 55.5 -2.0
baz=141,slow=14
HFS Hagfors 17.47 1 P P 07 17 10.4 0.0
comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=5.8
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 18.42 357 P Pn 07 17 22.0 +1.1
comp=Z,4.9nm,0.8s,baz=174,slow=10
NOA NORSAR Array B 18.42 357 P Pn 07 17 22.0 +1.1
baz=176,slow=11,SNR=4.3
comp=Z,2.2nm,0.8s
NOA NORSAR Array B 18.42 357 P Pn 07 17 22.0 +1.1
VSR Storozhevoye 19.58 55 *e*P P 07 17 32.5 -1.1
VSR pmax pmax
comp=Z,9.0nm,0.5s
OBN Obninsk 19.64 43⇑*e*P P 07 17 33.6 -0.6
OBN pmax pmax
comp=Z,72nm,2.5s
VORR Voronezh 19.73 54 *e*P P 07 17 34.2 -1.1
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 19.86 51 *e*P P 07 17 35.6 -1.1
LPSR pmax pmax
comp=Z,10.0nm,0.8s
FINES FINESS Array B 20.31 18 P Pn 07 17 41.9 -1.6
comp=Z,6.3nm,0.7s,baz=202,slow=10,SNR=13
comp=Z,6.3nm,0.7s
MOS Moscow 20.47 42 *e*P P 07 17 41.9 -1.4
TAM Tamanrasset 20.85 200 P Pn 07 17 52.8 +2.6
TAM pmax pmax
comp=Z,10.0nm,2.2s
VRH Novokhopyorsk 21.14 56 *e*P P 07 17 51.4 +0.9
VRH pmax pmax
comp=Z,30nm,0.9s
KIV Kislovodsk 21.43 77 P P 07 17 53.8 -0.1
KIV Kislovodsk 21.43 77 *e*P P 07 17 54.3 +0.4
KIV pmax pmax
comp=Z,23nm,1.1s
SHA1 Shidzhatmaz 21.44 77⇓*e*P P 07 17 55.1 +1.0
ASF Jabal al Asfar 21.47 111 P P 07 17 57.7 +3.3
comp=Z,2.3nm,0.4s,baz=330,slow=2.4,SNR=3.1
comp=Z,2.3nm,0.4s
NEY Neytrino 21.55 78⇑*e*P P 07 17 57.0 +1.7
NEY pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 21.61 77 P P 07 17 57.9 +2.2
comp=Z,12nm,0.8s,baz=276,slow=9.1,SNR=16
comp=Z,12nm,0.8s
KBZ Khabaz 21.61 77⇑*e*P P 07 17 57.4 +1.7
KBZ pmax pmax
comp=Z,15nm,0.9s
MARD Mardin 21.74 95 P P 07 17 57.6 +0.4
MARD IAmb IAmb 07 18 04.2
comp=Z,16nm,1.1s
ONI Oni 22.19 80 P P 07 18 01.9 -0.1
ONI Oni 22.19 80 P P 07 18 01.9 -0.1
ONI pmax pmax
comp=Z,6.0nm,0.9s
GURO Guroymak-BITLI 22.21 91 P P 07 18 02.7 +0.3
GURO IAmb IAmb 07 18 18.1
comp=Z,20nm,1.3s
KLMR Klimovskoe 24.13 32 *e*P P 07 18 20.3 -1.1
KLMR pmax pmax
comp=Z,27nm,2.0s
KLMR Klimovskoe 24.13 32 *e*P P 07 18 20.3 -1.1
KLMR AMP 07 18 33.6
comp=Z,27nm,2.0s
BELG Belogornoye 24.96 55 P P 07 18 30.0 +1.0
comp=Z,51nm,1.0s,baz=241,slow=3.0,SNR=9.6
BELG Belogornoye 24.96 55⇓*e*P P 07 18 29.7 +0.7
BELG pmax pmax
comp=Z,9.0nm,1.0s
ARCES ARCESS Array B 27.66 9 P P 07 18 52.2 -1.0
comp=Z,2.1nm,0.9s,baz=184,slow=11,SNR=1.7
comp=Z,2.1nm,0.9s
TORD Torodi Ar. Bea 31.08 202 P P 07 19 25.4 +1.4
comp=Z,6.1nm,0.8s,baz=20,slow=8.5,SNR=21
comp=Z,6.1nm,0.8s
ARU Arti 31.83 49 P P 07 19 30.3 0.0
ARU Arti 31.83 49*d i*P P 07 19 30.6 +0.3
ARU 07 20 36.6
ARU S S 07 24 42.0 +1.7
ARU SS SnSn 07 26 23.8 -4.0
ARU pmax pmax
comp=Z,17nm,0.9s
ABKAR Akbulak array 32.70 62 P P 07 19 37.9 -0.1
SVE Sverdlovsk 33.01 48 *e*P P 07 19 41.7 +1.1
GEYT Alibeck 34.26 83 P P 07 19 53.0 +1.2
comp=Z,3.0nm,0.7s,baz=282,slow=9.0,SNR=4.7
comp=Z,3.0nm,0.7s
GEYT Alibeck 34.26 83 P P 07 19 52.5 +0.7
GEYT IAmb IAmb 07 19 59.1
comp=Z,3.0nm,0.7s
GEYT Alibeck 34.26 83 P P 07 19 52.5 +0.7
GEYT pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 38.69 54 P P 07 20 30.2 +0.8
BRVK Borovoye 38.69 54⇓*e*P P 07 20 30.9 +1.6
BRVK pmax pmax
comp=Z,14nm,1.0s
DBIC Dimbokro 39.27 209 P P 07 20 35.0 +0.5
comp=Z,2.6nm,0.7s,baz=7.4,slow=5.5,SNR=4.4
comp=Z,2.6nm,0.7s
DBIC Dimbokro 39.27 209 P P 07 20 35.0 +0.5
DBIC IAmb IAmb 07 20 42.7
comp=Z,12nm,1.4s
DBIC Dimbokro 39.27 209 P P 07 20 35.0 +0.5
DBIC pmax pmax
comp=Z,12nm,1.4s
TIC Toumodi 39.35 209⇑*i*P P 07 20 37.1 +1.9

comp=Z,2.1nm,0.2s
KIC Kosan Boka 39.51 209⇑ *i*P P 07 20 37.3 +0.7
comp=Z,2.3nm,0.4s
LIC Lamto 39.74 209⇑ *i*P P 07 20 39.2 +0.8
comp=Z,11nm,0.5s
KK31 Karatay Array 41.26 69 P **P 07 20 51.6 +0.7**
KK31 IAmb IAmb 07 21 02.1
comp=Z,3.9nm,0.8s
KK31 Karatay Array 41.26 69 P **P 07 20 51.6 +0.7**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.26 69 P **P 07 20 51.6 +0.7**
KKAR Karatay Array 41.26 69 P **P 07 20 51.6 +0.7**
AAK Ala-Archa 44.16 68⇑ *e*P P 07 21 15.6 +1.0
AAK pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 44.23 56 P **P 07 21 14.9 +0.2**
KURK IAmb IAmb 07 21 21.3
comp=Z,4.5nm,0.9s
KURK Kurchatov 44.23 56⇑ *e*P P 07 21 15.1 +0.3
KURK pmax pmax
comp=Z,23nm,2.5s
NRIK Noril'sk 45.40 29 P **P 07 21 23.1 -0.8**
comp=Z,0.6nm,0.3s,baz=43,slow=8.9,SNR=4.0
comp=Z,0.6nm,0.3s
ZALV Zalesovo Beam 46.97 50 P **P 07 21 36.9 +0.4**
comp=Z,1.5nm,0.4s,baz=288,slow=8.7,SNR=7.4
comp=Z,1.5nm,0.4s
MK31 Makanchi Array 47.80 60⇓ *e*P P 07 21 42.7 -0.3
MKAR Makanchi Array 47.80 60 P **P 07 21 44.0 +0.9**
comp=Z,3.0nm,0.7s,baz=282,slow=6.3,SNR=12
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 47.80 60 *i* P **P 07 21 44.0 +0.9**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
DGZ Jazzator, Alta 49.91 55⇑ *e*P P 07 22 00.6 +1.2
DGZ pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 52.49 62 *e*P **P 07 22 22.5 +3.8**
GOMU GeErMu 61.03 66 P **P 07 23 20.5 +0.6**
GOMU pP sP 07 23 24.3 -1.3
GOMU sP pP 07 23 27.3 +3.2
SONM Songino Array 61.86 50 P **P 07 23 26.6 +1.6**
comp=Z,2.6nm,0.8s,baz=290,slow=9.1,SNR=12
comp=Z,2.6nm,0.8s
ULN Ulaanbaatar 62.21 49⇑ *e*P P 07 23 25.8 -1.6
ULN pmax pmax
comp=Z,2.0nm,1.0s
HHC Hu-ho-hao-te 68.97 54 *e*P **P 07 24 11.5 +0.4**
PZH PanZhiHua 71.53 71 P **P 07 24 28.5 +1.5**
ILAR Eielson Array 71.75 351 P **P 07 24 27.3 -0.3**
comp=Z,0.8nm,1.0s,baz=3.8,slow=5.4,SNR=3.1
comp=Z,0.8nm,1.0s
BOSA Boshof 71.81 169 P **P 07 24 28.4 0.0**
comp=Z,2.3nm,0.8s,baz=243,slow=2.3,SNR=2.2
comp=Z,2.3nm,0.8s
CMAR Chiang Mai Arr 74.65 79 P **P 07 24 45.6 +0.2**
comp=Z,1.0nm,0.3s,baz=314,slow=7.1,SNR=4.2
comp=Z,1.0nm,0.3s
NJ2 Nanjing 79.17 56 *e*P **P 07 25 12.3 +1.6**
PDAR Pinedale Array 80.61 321 P **P 07 25 18.6 -0.1**
comp=Z,0.2nm,0.5s,baz=69,slow=4.9,SNR=2.5
comp=Z,0.2nm,0.5s
BDFB Brasilia 80.74 239 P **P 07 25 20.0 +0.6**
comp=Z,1.5nm,0.5s,baz=96,slow=5.7,SNR=4.2
comp=Z,1.5nm,0.5s
BDFB Brasilia 80.74 239 P **P 07 25 20.0 +0.6**
BMO Blue Mountains 82.29 327 P **P 07 25 27.7 +0.3**
BMO IAmb IAmb 07 25 29.3
comp=Z,3.1nm,0.9s
BMO Blue Mountains 82.29 327 P **P 07 25 27.7 +0.3**
BMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 85.10 314⇓ *e*P P 07 25 43.6 +1.6
ANMO pmax pmax
comp=Z,1.0nm,1.1s
TXAR Lajitas Array 87.81 309 P **P 07 25 56.7 +1.4**
comp=Z,0.6nm,1.1s,baz=76,slow=7.5,SNR=2.0
comp=Z,0.6nm,1.1s

*IDC **30** 07:13:05.7±4.3,4°.78S×143°.48E,h65km±43km,mb3.8/9,*
mbtmp4.2/12,ML4.1/2,Error ellipse: s-maj=31.5km
s-min=22.8km az=97.0
*NEIC **30** 07:13:10.1±1.4,4°.99S±0°.09×143°.4E±0°.1,h106km±14km,*
mb4.3/13,Error ellipse: s-maj=16.4km s-min=12.5km
az=118.0
ISC 30 07:13:09.1±0.5,**4°.97S**±0°.06×**143°.31E**±0°.07,**h101**km,**n46,**
σ1$44/48,mb4.2/11,3C,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**4.98**	**54**		**Pn**	**07 14 20.9**	**-0.8**
PMG	**Port Moresby**	**5.83**	**139**	P	**Pn**	**07 14 32.0**	**-1.1**
	21nm,0.3s,baz=324,slow=7.4,SNR=9.3						
PMG				S	**Sn**	**07 15 35.7**	**-3.0**
	38nm,0.3s,baz=100,slow=23,SNR=8.2						
PMG	**Port Moresby**	**5.83**	**139**	P	**Pn**	**07 14 32.6**	**-0.6**
PMG	**Port Moresby**	**5.83**	**139**	P	**Pn**	**07 14 32.7**	**-0.5**
RABL	**Rabaul**	**8.86**	**85**	Pn	**Pn**	**07 15 15.8**	**+1.4**
COEN	**Coen**	**8.93**	**181**	Pn	**Pn**	**07 15 16.1**	**+0.8**
COEN	**Coen**	**8.93**	**181**	P	**Pn**	**07 15 16.8**	**+1.4**
KDU	**Kakadu**	**13.17**	**234**	P	**Pn**	**07 16 10.2**	**-2.1**
MTN	**Manton Dam**	**14.35**	**236**		**Pn**	**07 16 27.9**	**+0.3**
TV1H	**Townsville Har**	**14.61**	**167**	P	**P**	**07 16 36.6**	**+2.1**
CTA	**Charters Tower**	**15.30**	**169**	P	**Pn**	**07 16 41.9**	**+2.2**
	0.2nm,0.3s,baz=12,slow=16,SNR=3.1						
	2.6nm,0.7s						
CTAO	**Charters Tower**	**15.30**	**169**	Pn	**Pn**	**07 16 39.3**	**-0.4**
QIS	**Mount Isa**	**15.91**	**193**	P	**P**	**07 16 50.3**	**+1.3**
WB0	**Warramunga Arr**	**17.08**	**210**	P	**Pn**	**07 17 02.5**	**+0.7**
WB0				IAmb	IAmb	07 17 19.4	
	comp=Z,13nm,0.7s						
HNR	**Honiara**	**17.09**	**106**		**Pn**	**07 17 00.3**	**-1.6**
WR0	**Warramunga Arr**	**17.17**	**209**	P	**P**	**07 17 03.3**	**+0.3**
WR0				IAmb	IAmb	07 17 08.3	
	comp=Z,17nm,0.7s						
WRAB	**Tennant Creek**	**17.24**	**210**	P	**P**	**07 17 04.4**	**+0.7**
WRAB				IAmb	IAmb	07 17 08.7	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**17.24**	**210**	P	**P**	**07 17 03.9**	**+0.1**
WB2	**Warramunga Arr**	**17.25**	**210**	P	**P**	**07 17 04.5**	**+0.7**
WB2				IAmb	IAmb	07 17 08.8	
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**17.26**	**210**	P	**P**	**07 17 04.0**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=29,slow=12,SNR=45						
WRA				S	**Sn**	**07 20 11.3**	**-4.7**
	comp=Z,1.5nm,0.6s,baz=26,slow=22,SNR=5.1						
WRA				Lg	Lg	07 22 10.5	
	baz=31,slow=26						
	comp=Z,9.2nm,0.7s						
WRA	**Warramunga Arr**	**17.26**	**210**	P	**P**	**07 17 03.3**	**-0.6**
KNRA	**Kununurra**	**17.82**	**232**	P	**P**	**07 17 10.6**	**+0.6**
SOEI	**Soe**	**19.47**	**255**	P	**P**	**07 17 28.3**	**-0.1**
AS01	**Alice Springs**	**20.66**	**205**	P	**P**	**07 17 42.6**	**+1.6**
AS31	**Alice Springs**	**20.68**	**205**	P	**P**	**07 17 41.9**	**+0.7**
ASAR	**Alice Springs**	**20.68**	**205**	P	**P**	**07 17 42.5**	**+1.3**
	comp=Z,2.3nm,0.6s,baz=31,slow=10,SNR=29						
	comp=Z,2.3nm,0.6s						
EIDS	**Eidsvold**	**21.61**	**161**	P	**P**	**07 17 50.8**	**-0.3**
EIDS				IAmb	IAmb	07 17 56.6	
	comp=Z,15nm,1.0s						
TOLI2	**Tolitoli**	**23.30**	**284**	P	**P**	**07 18 07.2**	**-1.2**
TOLI2				IAmb	IAmb	07 18 23.9	
	comp=Z,9.7nm,0.8s						
OOD	**Oodnadatta**	**23.83**	**197**	P	**P**	**07 18 14.6**	**+1.6**
WRKA	**Warakurna**	**24.62**	**214**	P	**P**	**07 18 21.4**	**+1.1**
LCRK	**Leigh Creek**	**25.79**	**190**	P	**P**	**07 18 34.4**	**+3.6**
STKA	**Stephens Creek**	**26.82**	**183**	P	**P**	**07 18 42.0**	**+2.0**
	comp=Z,2.6nm,0.8s,baz=13,slow=12,SNR=3.8						
	comp=Z,2.6nm,0.8s						
MBWA	**Marble Bar**	**27.97**	**233**	P	**P**	**07 18 50.4**	**-0.1**
MBWA				IAmb	IAmb	07 18 52.5	
	comp=Z,9.8nm,1.1s						
KSRS	**Korea Array**	**44.58**	**342**	P	**P**	**07 21 10.9**	**-0.2**
	comp=Z,1.9nm,1.0s,baz=156,slow=9.6,SNR=4.9						
	comp=Z,1.9nm,1.0s						
SONM	**Songino Array**	**61.77**	**333**	P	**P**	**07 23 17.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=153,slow=4.4,SNR=2.5						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**74.39**	**321**	P	**P**	**07 24 36.1**	**0.0**
	comp=Z,0.7nm,0.3s,baz=97,slow=8.5,SNR=17						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**76.21**	**329**	P	**P**	**07 24 44.9**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=123,slow=7.1,SNR=2.6						
	comp=Z,0.4nm,0.3s						
NRIK	**Noril'sk**	**83.19**	**343**	P	**P**	**07 25 23.9**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=124,slow=7.3,SNR=2.5						
	comp=Z,1.4nm,0.5s						
ILAR	**Eielson Array**	**86.00**	**24**	P	**P**	**07 25 36.7**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=259,slow=4.9,SNR=23						
	comp=Z,1.9nm,0.6s						
GEYT	**Alibeck**	**89.24**	**308**	P	**P**	**07 25 55.2**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=103,slow=20,SNR=2.4						
	comp=Z,0.8nm,0.4s						
EKA	**Eskdalemuir Ar**	**123.04**	**338**	PKP	**PKiKP**	**07 31 55.0**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=42,slow=3.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**141.28**	**285**	PKP	**PKiKP**	**07 32 32.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=78,slow=1.2,SNR=4.8						
KIC	**Kosan Boka**	**148.18**	**274⇑**	*i*PKIKP	**PKiKP**	**07 32 46.6**	**+0.4**
	comp=Z,2.2nm,0.3s						
DBIC	**Dimbokro**	**148.29**	**275**	PKPbc	**PKiKP**	**07 32 46.7**	**+0.4**
	comp=Z,4.3nm,1.1s,baz=53,slow=2.2,SNR=6.1						
TIC	**Toumodi**	**148.45**	**275⇑**	*i*PKIKP	**PKiKP**	**07 32 47.3**	**+0.6**
	comp=Z,3.4nm,0.2s						
LIC	**Lamto**	**148.47**	**274⇑**	*i*PKIKP	**PKiKP**	**07 32 46.8**	**+0.1**
	comp=Z,8.6nm,0.5s						

*PRU **30** 07:19:47.8±0.0,42°.06N×13°.50E,h11km*
*ROM **30** 07:19:54.6±0.1,42°.827N±0°.004×13°.092E±0°.005,*
h10km,ML3.5/25,Error ellipse: s-maj=0.4km s-min=0.4km
az=309.0
*VIE **30** 07:19:56.5±12.0,42°.75N×13°.49E,h10km,mb3.1/3,*
ml3.0/8,Error ellipse: s-maj=138.4km s-min=24.1km
az=175.0 126 km NE of Rome
ISC 30 07:19:54.7±0.8,**42°.82N**±0°.02×**13°.10E**±0°.02,**h13**km±5km,
n48,σ1$06/49,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**62**	P	**Pg**	**07 19 57.5**	**0.0**
T1245				S	**Sg**	**07 19 59.2**	**-0.3**
T1216	**Preci, Frazion**	**0.09**	**318**	P	**Pg**	**07 19 57.5**	**-0.1**
T1216				S	**Sg**	**07 19 59.3**	**-0.4**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.14**	**344**	P	**Pg**	**07 19 58.5**	**+0.1**
FEMA				S	**Sg**	**07 20 00.9**	**-0.1**
FEMA				AML	AML		
	comp=E,81050μm,0.6s						
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,81050μm,0.6s						
FEMA				AML	AML		
T1217	**Poggiodomo (PG**	**0.17**	**229**	P	**Pb**	**07 19 58.9**	**-0.9**
T1217				S	**Sg**	**07 20 02.0**	**+0.5**
T1217				AML	AML		
	comp=E,21650μm,0.4s						
T1217				AML	AML		
	comp=N,25850μm,0.9s						
T1217				AML	AML		
	comp=E,21200μm,0.4s						
T1217				AML	AML		
	comp=N,24450μm,0.9s						
T1217				AML	AML		
	comp=E,21250μm,0.4s						
T1217				AML	AML		
	comp=N,24500μm,0.9s						
T1217				AML	AML		
	comp=E,21600μm,0.3s						
T1217				AML	AML		
	comp=N,25850μm,0.9s						
T1217				AML	AML		
	comp=E,21250μm,0.3s						
T1215	**Vallo di Nera,**	**0.17**	**263**	P	**Pg**	**07 19 58.8**	**+0.1**
T1215				S	**Sg**	**07 20 01.8**	**+0.3**
T1215				AML	AML		
	comp=E,14450μm,0.4s						
T1215				AML	AML		
	comp=N,11280μm,1.0s						
T1215				AML	AML		
	comp=E,13450μm,1.1s						
T1215				AML	AML		
	comp=N,12000μm,1.0s						
T1215				AML	AML		
	comp=E,14500μm,0.4s						
T1215				AML	AML		
	comp=N,11260μm,1.0s						
T1215				AML	AML		
	comp=E,14500μm,0.4s						
T1215				AML	AML		
	comp=N,11300μm,1.0s						
T1215				AML	AML		
	comp=N,11950μm,1.0s						
T1215				AML	AML		
	comp=E,13400μm,1.1s						
T1201	**Domo (RI)**	**0.20**	**147**	P	**Pg**	**07 19 59.7**	**+0.6**
T1201				S	**Sg**	**07 20 03.7**	**+1.5**
T1256	**Bolognola (MC)**	**0.20**	**26**	AML	AML		
	comp=N,38500μm,1.1s						
T1256				AML	AML		
	comp=E,28700μm,0.3s						
T1256				AML	AML		
	comp=E,29100μm,0.3s						
T1256				AML	AML		
	comp=N,38450μm,1.1s						
T1256				AML	AML		
	comp=E,28750μm,0.3s						
T1256				AML	AML		
	comp=N,37550μm,1.1s						
T1256				AML	AML		
	comp=N,38500μm,1.1s						
T1204	**Amatrice, Fraz**	**0.22**	**133**	P	**Pb**	**07 19 59.9**	**-0.7**
T1204				S	**Sb**	**07 20 03.8**	**-0.8**
LNSS	**Leonessa**	**0.23**	**192**	P	**Pb**	**07 20 00.1**	**-0.7**
LNSS				S	**Sb**	**07 20 04.0**	**-0.8**
LNSS				AML	AML		
	comp=N,42300μm,0.7s						
LNSS				AML	AML		
	comp=E,21750μm,0.2s						
AM05	**Amandola Campo**	**0.24**	**50**	P	**Pg**	**07 19 60.0**	**+0.1**
AM05				AML	AML		
	comp=E,6800μm,1.4s						
AM05				AML	AML		
	comp=N,7705μm,1.4s						
AM05				AML	AML		
	comp=N,2340μm,0.1s						
AM05				AML	AML		
	comp=E,26800μm,1.4s						
AM05				AML	AML		
	comp=N,2335μm,0.1s						
AM05				AML	AML		
	comp=N,7710μm,1.4s						
T1241	**Roccafluvione,**	**0.24**	**82**	P	**Pg**	**07 20 00.6**	**+0.7**
T1241				S	**Sg**	**07 20 04.7**	**+1.2**
T1243	**Rocca Santa Ma**	**0.28**	**116**	P	**Pg**	**07 20 01.1**	**+0.4**
T1243				S	**Sb**	**07 20 05.5**	**-1.0**
GUMA	**Gualdo di Mace**	**0.29**	**35**	P	**Pg**	**07 20 01.1**	**+0.2**
GUMA				S	**Sb**	**07 20 04.6**	**-2.1**
GUMA				AML	AML		
	comp=N,37500μm,0.3s						
GUMA				AML	AML		
	comp=N,35950μm,0.5s						
GUMA				AML	AML		
	comp=E,30650μm,0.4s						
GUMA				AML	AML		
	comp=E,32200μm,0.6s						
RM33	**Pellescritta (**	**0.33**	**165**	P	**Pg**	**07 20 01.7**	**+0.3**
RM33				S	**Sg**	**07 20 07.1**	**+1.3**
SEF1	**Sefro**	**0.34**	**341**	P	**Pb**	**07 20 02.0**	**-0.7**
SEF1				S	**Sb**	**07 20 07.7**	**-0.5**
SEF1				AML	AML		
	comp=E,18600μm,0.3s						
SEF1				AML	AML		
	comp=N,16350μm,0.2s						
SEF1				AML	AML		
	comp=E,19400μm,0.9s						
SEF1				AML	AML		
	comp=N,17150μm,0.3s						
ARRO	**Arrone**	**0.35**	**226**	P	**Pg**	**07 20 01.9**	**+0.2**
ARRO				S	**Sb**	**07 20 07.4**	**-0.8**
ARRO				AML	AML		
	comp=E,8170μm,0.4s						
ARRO				AML	AML		
	comp=N,7925μm,0.2s						
ARRO				AML	AML		
	comp=N,7920μm,0.2s						
CAMP	**Campotosto**	**0.37**	**142**	P	**Pg**	**07 20 02.1**	**0.0**
CAMP				S	**Sg**	**07 20 07.9**	**+0.8**
T1246	**Crognaleto (TE**	**0.38**	**130**	P	**Pg**	**07 20 02.5**	**+0.2**
T1246				S	**Sg**	**07 20 08.3**	**+1.0**
T1247	**Pizzolo (AQ)**	**0.41**	**159**	P	**Pb**	**07 20 04.0**	**+0.1**
T1247				S	**Sb**	**07 20 10.0**	**0.0**
MNTP	**Montappone**	**0.41**	**41**	AML	AML		
	comp=E,14350μm,1.4s						
MNTP				AML	AML		
	comp=N,15050μm,0.3s						
MNTP				AML	AML		
	comp=N,15000μm,0.3s						
GAG1	**Gagliole**	**0.41**	**356**	P	**Pb**	**07 20 03.4**	**-0.6**
GAG1				AML	AML		
	comp=N,15300μm,0.3s						
GAG1				AML	AML		
	comp=E,13200μm,0.3s						
TERO	**Teramo**	**0.42**	**118**	P	**Pg**	**07 20 03.2**	**+0.1**
TERO				S	**Sb**	**07 20 09.7**	**-0.7**
CESX	**Cesi**	**0.44**	**241**	P	**Pg**	**07 20 03.0**	**-0.4**
CESX				AML	AML		
	comp=E,5235μm,0.6s						
CESX				AML	AML		
	comp=N,6040μm,0.5s						
OFFI	**Offida**	**0.44**	**75**	P	**Pn**	**07 20 04.7**	**-2.1**
ATCC	**AVT- Casa Cast**	**0.50**	**317**	P	**Pb**	**07 20 04.4**	**-1.0**
ATCC				AML	AML		
	comp=N,6555μm,1.4s						
ATCC				AML	AML		
	comp=E,7155μm,0.6s						
ATCC				AML	AML		
	comp=N,6560μm,1.4s						
GIGS	**Gran Sasso**	**0.51**	**137**	P	**Pb**	**07 20 04.4**	**-1.2**
FIAM	**Fiamignano**	**0.56**	**179**	P	**Pb**	**07 20 05.4**	**-1.0**
FIAM				S	**Sg**	**07 20 14.0**	**+1.0**
TRTR	**Tortoreto Alta**	**0.60**	**91**	P	**Pn**	**07 20 07.3**	**-1.6**
ARVD	**Arcevia**	**0.68**	**350**	AML	AML		
	comp=N,1395μm,0.7s						
ARVD				AML	AML		
	comp=E,1550μm,1.4s						
SRES	**S.Oreste - Sor**	**0.73**	**217**	AML	AML		
	comp=E,1855μm,0.5s						
SRES				AML	AML		
	comp=N,2735μm,0.4s						
MTCE	**Montecelio**	**0.84**	**199**	AML	AML		
	comp=N,1178μm,1.3s						
MTCE				AML	AML		
	comp=E,2485μm,0.8s						
MTCE				AML	AML		
	comp=N,1173μm,1.3s						
CERT	**Cerreto**	**0.88**	**186**	AML	AML		
	comp=N,1855μm,0.4s						
CERT				AML	AML		
	comp=E,4220μm,0.5s						
FSSB	**Fossombrone**	**0.90**	**345**	AML	AML		
	comp=E,3695μm,0.3s						
FSSB				AML	AML		
	comp=N,5475μm,0.4s						
INTR	**Introdacqua**	**1.01**	**144**	AML	AML		
	comp=E,1μm,0.5s						
INTR				AML	AML		
	comp=N,2μm,0.5s						
INTR				AML	AML		
	comp=N,3100μm,0.5s						
INTR				AML	AML		
	comp=E,1455μm,0.5s						
MCIV	**Monte Civitell**	**1.05**	**268**	AML	AML		
	comp=N,546μm,1.5s						
MCIV				AML	AML		
	comp=E,718μm,0.7s						
TOLF	**Tolfa**	**1.11**	**227**	AML	AML		
	comp=N,1109μm,0.5s						
TOLF				AML	AML		
	comp=E,1390μm,1.6s						
SF01	**Poggio Pratacc**	**1.13**	**270**	AML	AML		
	comp=E,978μm,0.5s						
SF01				AML	AML		
	comp=N,840μm,0.8s						
LAV9	**Lanuvio**	**1.18**	**195**	AML	AML		
	comp=E,3455μm,0.3s						
LAV9				AML	AML		
	comp=N,3930μm,0.6s						
LAV9				AML	AML		
	comp=E,3465μm,0.4s						
LAV9				AML	AML		
	comp=N,3775μm,0.6s						
CASP	**Castiglione de**	**1.65**	**270**	AML	AML		
	comp=E,92μm,0.8s						
CASP				AML	AML		
	comp=N,101μm,1.2s						
MYKA	**Terra Mystica**	**3.83**	**6**	*e*Pn	Pb	07 20 56.7	-5.4
	comp=N,5.0nm,0.3s						
ABTA	**Abfaltersbach**	**3.95**	**354**	*e*Pn	**Pn**	**07 20 57.9**	**+2.8**
	comp=N,9.1nm,0.5s						
WATA	**Walderalm**	**4.64**	**347**	*e*Pn	Pn	07 21 08.2	+3.5
	comp=N,3.5nm,0.3s						
ARSA	**Arzberg**	**4.75**	**20**	*e*Pn	**Pn**	**07 21 08.0**	**+2.0**
	comp=N,1.8nm,0.3s						
RETA	**Reutte**	**4.95**	**341**	*e*Pn	Pb	07 21 13.7	-7.6
	comp=N,3.4nm,0.3s						
DAVA	**Damuels**	**5.01**	**334**	*e*Pn	Pn	07 21 14.0	+4.2
	comp=N,2.6nm,0.3s						
MOA	**Molln**	**5.09**	**9**	*e*Pn	**Pn**	**07 21 12.7**	**+2.0**
	comp=N,2.8nm,0.4s						
CONA	**Conrad Observa**	**5.46**	**20**	*e*Pn	**Pn**	**07 21 17.7**	**+1.8**
	comp=N,0.7nm,0.3s						
KHC	**Kasperske Hory**	**6.32**	**3**	*e*PN	Pn	07 21 31.0	+3.4
KHC				*e*SN	Sn	07 22 47.0	+7.4

ROM 30 07:23:40.6±0.1,**42°.785N**±0°.004×**13°.135E**±0°.005,
h11km,**ML3.4/9,3C,Error ellipse: s-maj=0.4km**
s-min=0.4km az=64.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**28**	P	Pg	07 23 43.4	+0.1
T1245				S	Sg	07 23 45.1	-0.1
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.13**	**18**	P	Pg	07 23 44.2	+0.2
MC2				S	Sg	07 23 46.9	+0.5
T1201	**Domo (RI)**	**0.15**	**146**	⇑P	Pb	07 23 44.9	-0.7
T1201				S	Sg	07 23 47.9	+1.3
T1217	**Poggiodomo (PG**	**0.17**	**244**	⇑P	Pg	07 23 44.8	+0.4
T1217				S	Sg	07 23 48.0	+1.0
T1217				AML	AML		
	comp=E,27350μm,0.4s						
T1217				AML	AML		
	comp=N,34950μm,0.6s						
T1217				AML	AML		
	comp=E,27550μm,0.4s						
T1217				AML	AML		
	comp=N,33750μm,0.6s						
T1217				AML	AML		
	comp=E,46800μm,0.3s						
T1217				AML	AML		
	comp=N,41550μm,0.3s						
T1217				AML	AML		
	comp=E,45100μm,0.3s						
T1217				AML	AML		
	comp=N,41600μm,0.4s						
T1217				AML	AML		
	comp=E,27350μm,0.4s						
T1217				AML	AML		
	comp=N,34964μm,0.6s						
T1217				AML	AML		
	comp=N,33780μm,0.6s						
T1204	**Amatrice, Fraz**	**0.17**	**129**	⇑P	Pg	07 23 44.9	+0.4
T1204				S	Sg	07 23 48.1	+0.9
T1204				AML	AML		
	comp=E,62350μm,0.6s						
T1204				AML	AML		
	comp=N,41450μm,0.6s						
T1204				AML	AML		
T1204				AML	AML		
LNSS	**Leonessa**	**0.20**	**201**	P	Pg	07 23 45.3	+0.4
LNSS				S	Sg	07 23 48.9	+1.1
LNSS				AML	AML		

comp=E,55300µm,0.3s
LNSS AML AML
LNSS AML AML
T1215 Vallo di Nera, 0.20 275 P Pg 07 23 45.5 +0.6
T1215 S Sg 07 23 48.7 +0.9
T1215 AML AML
comp=E,20350µm,0.3s
T1215 AML AML
comp=N,18650µm,1.5s
T1215 AML AML
comp=E,19650µm,0.3s
T1215 AML AML
comp=N,18700µm,1.5s
T1215 AML AML
comp=E,10779µm,0.8s
T1215 AML AML
comp=N,8197µm,1.0s
T1215 AML AML
comp=N,7808µm,0.6s
T1215 AML AML
comp=E,10099µm,0.8s
T1243 Rocca Santa Ma 0.25 111 P Pg 07 23 45.9 +0.2
T1243 S Sg 07 23 49.8 +0.6
RM33 Pellescritta (0.28 168 P Pg 07 23 46.7 +0.3
RM33 S Sb 07 23 51.5 -1.1
RM33 AML AML
comp=E,26850µm,0.7s
RM33 AML AML
comp=N,24250µm,0.9s
RM33 AML AML
comp=E,58400µm,0.7s
RM33 AML AML
comp=N,74650µm,0.4s
GUMA Gualdo di Mace 0.31 28 P Pg 07 23 47.6 +0.6
GUMA S Sb 07 23 52.9 -0.6
CAMP Campotosto 0.32 141 P Pg 07 23 47.3 +0.2
CAMP S Sg 07 23 52.1 +0.7
CAMP AML AML
comp=E,61000µm,0.3s
CAMP AML AML
comp=N,50050µm,0.3s
CAMP AML AML
comp=E,4678µm,0.4s
CAMP AML AML
comp=N,5612µm,2.2s
T1246 Crognaleto (TE 0.33 127 P Pg 07 23 47.5 +0.2
T1246 S Sg 07 23 52.6 +0.9
ARRO Arrone 0.34 233 P Pg 07 23 47.8 +0.3
ARRO AML AML
comp=E,13130µm,1.1s
ARRO AML AML
comp=N,13600µm,1.4s
ARRO AML AML
comp=E,6992µm,0.3s
ARRO AML AML
comp=N,6662µm,0.7s
T1247 Pizzolo (AQ) 0.36 161 P Pb 07 23 49.0 -0.2
T1247 S Sb 07 23 54.1 -0.7
TERO Teramo 0.38 115 P Pg 07 23 48.7 +0.5
TERO S Sg 07 23 54.1 +0.8
TERO AML AML
comp=E,50450µm,0.3s
TERO AML AML
TERO AML AML
comp=E,57100µm,0.3s
TERO AML AML
OFFI Offida 0.43 69 P Pb 07 23 50.0 -0.2
OFFI AML AML
comp=E,49400µm,0.3s
OFFI AML AML
comp=N,46650µm,0.4s
GIGS Gran Sasso 0.46 136 P Pg 07 23 49.9 +0.2
GIGS S Sg 07 23 56.4 +0.5
GIGS AML AML
comp=E,21850µm,0.2s
GIGS AML AML
comp=N,7170µm,1.4s
FIAM Fiamignano 0.52 181 P Pb 07 23 51.3 -0.5
FIAM S Sb 07 23 58.6 -0.7
TRTR Tortoreto Alta 0.57 87 P Pb 07 23 53.0 +0.3
TRTR AML AML
comp=E,48300µm,0.4s
TRTR AML AML
comp=N,35150µm,0.4s
TRTR AML AML
comp=E,14996µm,2.5s
LPEL Lama dei Pelig 1.07 133 AML AML
comp=E,6630µm,0.9s
LPEL AML AML
comp=N,4060µm,0.2s
LPEL AML AML
comp=E,761µm,0.5s
RDP Rocca di Papa 1.07 197 AML AML
comp=N,6390µm,0.4s
RDP AML AML
comp=E,9605µm,0.5s
RDP AML AML
comp=N,12100µm,0.7s
RDP AML AML
comp=E,8314µm,0.5s

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*IDC **30** 07:24:36.2±1.5, 42°.71N×13°.58E, h0km, mb3.7/3, mbtmp3.6/7, ML3.7/4, Error ellipse: s-maj=31.6km s-min=15.9km az=96.0*
*ROM **30** 07:24:38.0±0.1, 42°.729N±0°.004×13°.217E±0°.006, h8km, ML3.8/33, Error ellipse: s-maj=0.5km s-min=0.3km az=50.0*
*PRU **30** 07:24:37.9±0.0, 42°.60N×13°.84E, h10km*
*LDG **30** 07:24:38.4±0.1, 42°.71N×13°.23E, h9km, Ml3.5/8, Error ellipse: s-maj=5.5km s-min=2.9km az=44.0*
*BEO **30** 07:24:42.7±0.7, 42°.75N×13°.45E, h14km±4km, ML3.8/14*
ISC 30 07:24:38.1±0.7, 42°.73N±0°.02×13°.25E±0°.02, h13km±4km, n136, σ2.9 11/179, 12C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1244	**Arquata del Tr**	**0.05**	**51**	P	**Pg**	**07 24 40.5**	**-0.2**
T1244				S	**Sg**	**07 24 42.3**	**-0.3**
T1201	**Domo (RI)**	**0.07**	**178**	⇓P	**Pg**	**07 24 40.8**	**-0.1**
T1201				S	**Sg**	**07 24 42.8**	**-0.1**
T1204	**Amatrice, Fraz**	**0.07**	**135**	P	**Pg**	**07 24 40.9**	**-0.1**
T1204				S	**Sg**	**07 24 42.9**	**-0.2**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1245	**Castelsantange**	**0.14**	**341**	P	**Pg**	**07 24 41.2**	**-0.6**
T1245				S	**Sg**	**07 24 43.4**	**-0.9**
T1243	**Rocca Santa Ma**	**0.15**	**101**	P	**Pg**	**07 24 41.7**	**-0.2**
T1243				S	**Sb**	**07 24 44.9**	**-1.1**
MC2	**Monte Cornacci**	**0.19**	**347**	P	**Pg**	**07 24 42.2**	**-0.4**
MC2				S	**Sg**	**07 24 45.7**	**0.0**
LNSS	**Leonessa**	**0.20**	**231**	P	**Pg**	**07 24 42.4**	**-0.2**
LNSS				S	**Sg**	**07 24 45.5**	**-0.2**
RM33	**Pellescritta (**	**0.22**	**186**	P	**Pg**	**07 24 43.1**	**+0.1**
RM33				S	**Sg**	**07 24 46.6**	**+0.4**
RM33				AML	AML		
comp=E,58400µm,0.7s							
RM33				AML	AML		
comp=N,74600µm,0.4s							
RM33				AML	AML		
comp=E,57900µm,0.7s							
RM33				AML	AML		
comp=N,72550µm,0.4s							
RM33				AML	AML		
comp=N,72500µm,0.4s							
RM33				AML	AML		
comp=N,74650µm,0.4s							
RM33				AML	AML		
comp=E,57950µm,0.7s							
CAMP	**Campotosto**	**0.23**	**148**	⇓P	**Pg**	**07 24 43.1**	**0.0**
CAMP				S	**Sb**	**07 24 47.1**	**-1.1**
T1246	**Crognaleto (TE**	**0.23**	**128**	⇑P	**Pg**	**07 24 43.4**	**+0.3**
T1246				S	**Sb**	**07 24 47.5**	**-0.9**
T1217	**Poggiodomo (PG**	**0.23**	**267**	P	**Pg**	**07 24 42.6**	**-0.6**
T1217				S	**Sg**	**07 24 46.1**	**-0.5**
T1217				AML	AML		
comp=N,41600µm,0.3s							
T1217				AML	AML		
comp=E,45100µm,0.3s							
T1217				AML	AML		
comp=E,46750µm,0.3s							
T1217				AML	AML		
comp=N,41600µm,0.4s							
T1217				AML	AML		
comp=N,41550µm,0.3s							
T1217				AML	AML		
comp=E,46800µm,0.3s							
T1216	**Preci, Frazion**	**0.23**	**314**	P	**Pg**	**07 24 43.0**	**-0.2**
T1216				S	**Sg**	**07 24 46.2**	**-0.5**
T1256	**Bolognola (MC)**	**0.28**	**357**	P	**Pg**	**07 24 44.2**	**+0.1**
T1256				S	**Sg**	**07 24 48.1**	**0.0**
TERO	**Teramo**	**0.28**	**111**	P	**Pg**	**07 24 44.1**	**+0.1**
TERO				S	**Sb**	**07 24 49.1**	**-0.6**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
comp=E,57100µm,0.3s							
TERO				AML	AML		
comp=E,50450µm,0.3s							
TERO				AML	AML		
T1247	**Pizzolo (AQ)**	**0.29**	**172**	⇓P	**Pg**	**07 24 44.1**	**0.0**
T1247				S	**Sg**	**07 24 49.0**	**+0.9**
T1215	**Vallo di Nera,**	**0.29**	**285**	P	**Pg**	**07 24 43.5**	**-0.7**
T1215				S	**Sg**	**07 24 47.9**	**-0.3**
GUMA	**Gualdo di Mace**	**0.34**	**11**	P	**Pg**	**07 24 45.2**	**+0.1**
GUMA				S	**Sg**	**07 24 51.2**	**+1.4**
GIGS	**Gran Sasso**	**0.36**	**139**	P	**Pg**	**07 24 45.3**	**-0.2**
GIGS				S	**Sb**	**07 24 51.2**	**-0.9**
OFFI	**Offida**	**0.38**	**57**	P	**Pb**	**07 24 46.8**	**0.0**
OFFI				AML	AML		
comp=E,49400µm,0.3s							
OFFI				AML	AML		
comp=N,46650µm,0.4s							
AQU	**L'Aquila**	**0.39**	**163**	P	**Pg**	**07 24 45.9**	**-0.1**
AQU				S	**Sb**	**07 24 52.2**	**-0.7**
AQU				AML	AML		
comp=E,17050µm,1.5s							
AQU				AML	AML		
comp=N,18000µm,0.3s							
AQU				AML	AML		
comp=N,18000µm,0.4s							
AQU				AML	AML		
comp=E,17300µm,1.5s							
FIAM	**Fiamignano**	**0.47**	**192**	P	**Pg**	**07 24 47.1**	**-0.3**
FIAM				S	**Sg**	**07 24 54.0**	**+0.3**
TRTR	**Tortoreto Alta**	**0.50**	**80**	P	**Pb**	**07 24 49.3**	**+0.5**
TRTR				AML	AML		
comp=N,35150µm,0.4s							
TRTR				AML	AML		
comp=E,48300µm,0.4s							
FAGN	**Fagnano**	**0.52**	**151**	P	**Pb**	**07 24 49.2**	**0.0**
FAGN				S	**Sb**	**07 24 57.7**	**+1.0**
FAGN				AML	AML		
comp=N,32350µm,0.3s							
FAGN				AML	AML		
comp=E,36050µm,0.3s							
VCEL	**Villa Celiera**	**0.55**	**127**	P	**Pb**	**07 24 49.4**	**-0.2**
VCEL				S	**Sn**	**07 24 58.7**	**-2.2**
VCEL				AML	AML		
comp=E,27300µm,0.4s							
VCEL				AML	AML		
comp=N,33850µm,1.0s							
CADA	**Capodarco di F**	**0.60**	**39**	P	**Pb**	**07 24 51.2**	**+0.8**
CADA				AML	AML		
comp=N,24750µm,0.4s							
CADA				AML	AML		
comp=E,30000µm,1.2s							
T0110	**Collepietro**	**0.64**	**142**	P	**Pg**	**07 24 50.2**	**-0.3**
T0110				S	**Sb**	**07 25 00.3**	**+0.3**
T0110				AML	AML		
comp=E,28400µm,0.5s							
T0110				AML	AML		
comp=N,28150µm,0.4s							
PP3	**Marolino**	**0.70**	**22**	P	**Pb**	**07 24 52.6**	**+0.4**
PP3				AML	AML		
comp=N,38850µm,0.5s							
PP3				AML	AML		
comp=E,29800µm,0.5s							
PP3				AML	AML		
comp=E,27650µm,0.4s							
PP3				AML	AML		
comp=N,38900µm,0.5s							
PP3				AML	AML		
comp=N,39000µm,0.5s							
PP3				AML	AML		
comp=E,29850µm,0.5s							
SRES	**S.Oreste - Sor**	**0.73**	**228**	P	**Pg**	**07 24 52.7**	**+0.4**
SRES				AML	AML		
comp=E,4135µm,1.6s							
SRES				AML	AML		
comp=N,3465µm,0.9s							
VVLD	**Villa Vallelon**	**0.90**	**162**	P	**Pn**	**07 24 56.5**	**0.0**
VVLD				AML	AML		
comp=N,2955µm,0.4s							
VVLD				AML	AML		
comp=E,3205µm,1.1s							
GUAR	**Guarcino**	**0.93**	**177**	P	**Pg**	**07 24 56.7**	**+0.6**
GUAR				AML	AML		
comp=N,5480µm,0.6s							
GUAR				AML	AML		
comp=E,3755µm,1.4s							
ATPI	**Pietralunga -**	**0.95**	**320**	AML	AML		
comp=E,3115µm,0.7s							
ATPI				AML	AML		
comp=N,3300µm,1.0s							
MPAG	**Monte Paganucc**	**0.97**	**339**	P	**Pb**	**07 24 56.7**	**-0.1**
LPEL	**Lama dei Pelig**	**0.97**	**134**	P	**Pb**	**07 24 55.9**	**-0.9**
LPEL				S	**Sn**	**07 25 11.0**	**-0.1**
LPEL				AML	AML		
comp=E,6630µm,0.9s							
LPEL				AML	AML		
comp=N,4060µm,0.2s							
LPEL				AML	AML		
comp=N,4065µm,0.2s							
RDP	**Rocca di Papa**	**1.04**	**202**	P	**Pb**	**07 24 58.5**	**+0.4**
RDP				AML	AML		
comp=N,12100µm,0.7s							
RDP				AML	AML		
comp=N,12050µm,0.7s							
RDP				AML	AML		
comp=E,9605µm,0.5s							
POFI	**Posta Fibreno**	**1.07**	**161**	P	**Pn**	**07 24 59.5**	**+0.7**
POFI				AML	AML		
comp=E,2855µm,0.4s							
POFI				AML	AML		
comp=N,1675µm,0.5s							
POFI				AML	AML		
comp=E,2627µm,0.5s							
LRP	**Arpino**	**1.11**	**167**	AML	AML		
comp=E,1220µm,0.6s							
LRP				AML	AML		
comp=N,2405µm,1.3s							
LRP				AML	AML		
comp=N,2400µm,1.3s							
CAFI	**Castiglion Fio**	**1.12**	**303**	AML	AML		
comp=E,2975µm,0.6s							
CAFI				AML	AML		
comp=E,2945µm,0.6s							
CAFI				AML	AML		
comp=N,2935µm,0.6s							
CAFI				AML	AML		
comp=N,2850µm,0.6s							
LAV9	**Lanuvio**	**1.12**	**201**	P	**Pg**	**07 25 00.3**	**+0.6**
LAV9				AML	AML		
comp=E,10315µm,0.4s							
LAV9				AML	AML		
comp=E,10110µm,0.4s							
LAV9				AML	AML		
comp=E,10290µm,0.4s							
LAV9				AML	AML		
comp=N,8425µm,0.5s							
LAV9				AML	AML		
comp=N,7505µm,0.5s							
TOLF	**Tolfa**	**1.14**	**235**	P	**Pn**	**07 24 59.6**	**-0.1**
TOLF				AML	AML		
comp=E,2380µm,0.5s							
TOLF				AML	AML		
comp=N,1990µm,1.0s							
MCIV	**Monte Civitell**	**1.16**	**273**	P	**Pn**	**07 25 00.0**	**0.0**
MCIV				AML	AML		
comp=E,1350µm,0.8s							
MCIV				AML	AML		
comp=N,1230µm,0.7s							
MCIV				AML	AML		
comp=E,1355µm,0.8s							
GIUL	**Giuliano Di Ro**	**1.17**	**180**	P	**Pg**	**07 25 00.8**	**+0.2**
GIUL				AML	AML		
comp=N,1885µm,1.0s							
GIUL				AML	AML		
comp=E,1500µm,0.6s							
SF04	**Casetta**	**1.17**	**276**	⇑P	**Pn**	**07 25 01.0**	**+0.7**
SF04				AML	AML		
comp=E,1725µm,0.5s							
SF04				AML	AML		
comp=N,1298µm,0.7s							
RNI2	**Rionero Sannit**	**1.22**	**146**	P	**Pg**	**07 25 02.2**	**+0.5**
SF01	**Poggio Pratacc**	**1.24**	**275**	⇓P	**Pn**	**07 25 01.6**	**+0.4**
LATB	**Latina**	**1.25**	**190**	P	**Pb**	**07 25 02.1**	**+0.5**
LATB				AML	AML		
comp=E,574µm,0.9s							
LATB				AML	AML		
comp=N,416µm,0.6s							
ARCI	**Arcidosso**	**1.31**	**276**	P	**Pn**	**07 25 02.8**	**+0.6**
ARCI				AML	AML		
comp=N,420µm,0.8s							
ARCI				AML	AML		
comp=E,630µm,0.6s							
BSSO	**Busso**	**1.55**	**139**	AML	AML		
comp=E,433µm,0.7s							
BSSO				AML	AML		
comp=N,438µm,1.5s							
MAON	**Monte Argentar**	**1.59**	**260**	P	**Pn**	**07 25 06.9**	**+1.0**
MAON				AML	AML		
comp=N,392µm,1.2s							
MAON				AML	AML		
comp=E,554µm,0.6s							
CASP	**Castiglione de**	**1.76**	**273**	P	**Pn**	**07 25 08.3**	**0.0**
CASP				AML	AML		
comp=N,194µm,1.2s							
CASP				AML	AML		
comp=E,179µm,1.5s							
VULT	**Monte Vulture**	**2.50**	**134**	S	**Sb**	**07 25 54.0**	**+0.3**
RAVA	**Ravarino**	**2.55**	**323**	S	**Sg**	**07 25 60.0**	**0.0**
RIY	**Rijeka**	**2.75**	**19**	*e*Pn	**Pb**	**07 25 25.0**	**-2.1**
RIY				*e*Sn	**Sn**	**07 25 57.2**	**+2.3**
AMUR	**Altamura**	**3.10**	**125**	⇓P	**Pn**	**07 25 29.6**	**+2.9**
PGF	**Pioggiola**	**3.14**	**268**	*e*P	**Pn**	**07 25 29.0**	**+1.6**
STON	**Ston**	**3.28**	**86**	*e*Pn	**Pn**	**07 25 32.0**	**+2.8**
STON				*e*Sn	**Sn**	**07 26 07.0**	**-1.0**
MATE	**Matera**	**3.32**	**128**	⇓P	**Pb**	**07 25 34.8**	**-2.0**
LTRZ	**Laterza**	**3.42**	**127**	P	**Pn**	**07 25 33.3**	**+2.3**
BLY	**Banja Luka**	**3.50**	**53**	*e*Pn	**Pn**	**07 25 35.9**	**+3.7**
BLY				*e*Sn	**Sn**	**07 26 15.8**	**+2.4**
CTI	**Castel Tesino**	**3.51**	**342**	⇑P	**Pn**	**07 25 33.7**	**+1.2**
CTI				AML	AML		
comp=N,304µm,0.6s							
CTI				AML	AML		
comp=E,340µm,1.0s							
TREB	**Trebinje**	**3.76**	**88**	*e*Pn	**Pn**	**07 25 39.3**	**+3.5**
TREB				*e*Sn	**Sn**	**07 26 20.4**	**+0.5**
CAPR	**Capriolo**	**3.76**	**322**	P	**Pg**	**07 25 48.7**	**-1.5**
MABI	**Malga Bissina**	**3.86**	**330**	⇑P	**Pn**	**07 25 39.3**	**+1.9**
MYKA	**Terra Mystica**	**3.91**	**4**	*e*Pn	**Pn**	**07 25 39.6**	**+1.6**
comp=E,1.3nm,0.1s							
KOSI	**Kohlern**	**3.97**	**341**	⇓P	**Pn**	**07 25 40.8**	**+2.0**
KOSI				AML	AML		
comp=E,355µm,1.1s							
KOSI				AML	AML		
comp=N,244µm,0.7s							
APPI	**Appiano**	**4.02**	**340**	⇓P	**Pn**	**07 25 41.1**	**+1.7**
ABTA	**Abfaltersbach**	**4.05**	**353**	*e*Pn	**Pn**	**07 25 41.3**	**+1.4**
comp=N,26nm,0.4s							
SOKA	**Soboth**	**4.15**	**17**	*e*Pn	**Pn**	**07 25 44.5**	**+3.2**
comp=N,3.0nm,0.3s							
SBF	**Sospel**	**4.39**	**287**	*e*P	**Pn**	**07 25 46.5**	**+2.0**
ROSI	**Rosskopf**	**4.40**	**343**	⇑P	**Pn**	**07 25 46.6**	**+1.8**
ROSI				AML	AML		
comp=N,328µm,1.6s							
ROSI				AML	AML		
comp=E,278µm,0.8s							
PDG	**Podgorica**	**4.45**	**92**	⇓P	**Pn**	**07 25 43.1**	**-2.1**
PDG	**Podgorica**	**4.45**	**92**	*e*Pn	**Pn**	**07 25 47.0**	**+1.8**
PDG				*e*Sn	**Sn**	**07 26 37.4**	**+0.6**
BBLS	**Lazići**	**4.64**	**74**	*e*Pn	**Pn**	**07 25 50.9**	**+3.0**
BBLS				*e*Sn	**Sn**	**07 26 39.5**	**-2.1**
FETA	**Feichten**	**4.65**	**338**	*e*Pn	**Pn**	**07 25 50.5**	**+2.3**
comp=E,8.1nm,0.4s							
WTTA	**Wattenberg**	**4.68**	**346**	*e*Pn	**Pn**	**07 25 51.3**	**+2.7**
comp=E,7.6nm,0.4s							
DAVOX	**Davos/Dischmat**	**4.71**	**331**	Pn	**Pn**	**07 25 52.3**	**+3.3**
comp=E,5.9nm,0.3s,baz=151,slow=16,SNR=10.0							
DAVOX				Sn	**Sn**	**07 26 49.5**	**+5.9**
comp=E,1.0nm,0.3s,baz=277,slow=18,SNR=2.6							
comp=E,24nm,0.5s							
SQTA	**Sankt Quirin**	**4.72**	**343**	*e*Pn	**Pn**	**07 25 51.4**	**+2.3**
comp=E,15nm,0.4s							
WATA	**Walderalm**	**4.76**	**346**	*e*Pn	**Pn**	**07 25 52.4**	**+2.8**
comp=E,6.2nm,0.3s							
ARSA	**Arzberg**	**4.80**	**19**	*e*Pn	**Pn**	**07 25 49.5**	**-0.6**
comp=E,5.7nm,0.6s							
MOTA	**Moosalm**	**4.86**	**343**	*e*Pn	**Pn**	**07 25 53.3**	**+2.3**
comp=E,7.3nm,0.3s							
SJES	**Sjenica**	**4.96**	**82**	*e*Pn	**Pn**	**07 25 55.3**	**+2.9**
SJES				*e*Sn	**Sn**	**07 26 47.5**	**-2.2**
BIOA	**Bad Ischl, Aus**	**4.97**	**3**	*e*Pn	**Pn**	**07 25 56.4**	**+3.9**
comp=E,7.2nm,0.3s							
LMR	**La Mourre**	**4.98**	**279**	*e*P	**Pn**	**07 25 52.3**	**-0.2**
LMR				*e*Sn	**Sn**	**07 26 45.1**	**-4.8**
comp=E,38nm,1.3s							
RETA	**Reutte**	**5.08**	**341**	*e*Pn	**Pn**	**07 25 56.1**	**+2.2**
comp=E,4.3nm,0.3s							
DIVS	**Divibare**	**5.10**	**72**	*e*Pn	**Pn**	**07 25 55.9**	**+1.6**
DIVS				*e*Sn	**Sn**	**07 26 50.9**	**-2.2**
MBDF	**Montbardon**	**5.10**	**295**	*e*P	**Pn**	**07 25 57.0**	**+2.6**
TIR	**Tirane**	**5.12**	**103**	⇑P	**Pn**	**07 25 54.5**	**0.0**
TIR	**Tirane**	**5.12**	**103**	*e*Pn	**Pn**	**07 25 56.6**	**+2.2**
DAVA	**Damuels**	**5.15**	**334**	*e*Pn	**Pn**	**07 25 57.7**	**+2.7**
comp=E,13nm,0.5s							
MOA	**Molln**	**5.17**	**8**	*e*Pn	**Pn**	**07 25 59.0**	**+3.8**
MOA				*e*Sn	**Sn**	**07 26 56.3**	**+1.5**
MOA	**Molln**	**5.17**	**8**	*e*Pn	**Pn**	**07 25 57.7**	**+2.5**
comp=E,0.9nm,0.3s							
FRGS	**Fruska Gora**	**5.33**	**61**	⇓P	**Pb**	**07 26 06.8**	**-4.2**
FRGS	**Fruska Gora**	**5.33**	**61**	*e*Pn	**Pn**	**07 25 58.5**	**+1.2**
FRGS				*e*Sn	**Sn**	**07 26 58.4**	**-0.1**
RONA	**Rosalia, Austr**	**5.42**	**22**	*e*Pn	**Pn**	**07 25 59.9**	**+1.3**
comp=E,2.0nm,0.3s							
LPG	**La Plagne**	**5.43**	**303**	*e*P	**Pn**	**07 26 02.0**	**+2.9**
LPG				*e*Sn	**Sn**	**07 26 56.5**	**-5.1**
comp=E,11nm,0.5s							
LPL	**La Plagne**	**5.46**	**303**	*e*P	**Pn**	**07 26 02.7**	**+3.4**
LPL				*e*Sn	**Sn**	**07 26 56.9**	**-5.1**
comp=E,11nm,0.5s							
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn	**Pn**	**07 26 02.3**	**+2.3**
comp=E,2.6nm,0.2s							
GRUS	**Gruza**	**5.57**	**75**	*e*Pn	**Pn**	**07 26 02.6**	**+1.9**
GRUS				*e*Sn	**Sn**	**07 27 03.5**	**-1.0**
SMRF	**Simiane la Rot**	**5.73**	**285**	*e*P	**Pn**	**07 26 05.4**	**+2.5**
ORIF	**Oris-en-Rattie**	**5.76**	**295**	*e*P	**Pn**	**07 26 06.4**	**+3.0**
SELS	**Selova**	**5.80**	**82**	*e*Pn	**Pn**	**07 26 05.4**	**+1.6**
SELS				*e*Sn	**Sn**	**07 27 07.8**	**-2.3**
GERES	**GERESS Array B**	**6.13**	**3**	Pn	**Pn**	**07 26 07.8**	**-0.5**
comp=E,1.1nm,0.3s,baz=174,slow=13,SNR=4.5							
GERES				Sn	**Sn**	**07 27 18.8**	**+0.5**
comp=E,2.4nm,0.3s,baz=166,slow=23,SNR=5.3							
comp=E,2.2nm,0.4s							
CKRC	**Cesky Krumlov**	**6.14**	**7**	*e*PN	**Pn**	**07 26 09.8**	**+1.3**
CKRC				*e*SN	**Sn**	**07 27 17.4**	**-1.1**
BOVS	**Bovan**	**6.25**	**79**	⇑P	**Pn**	**07 26 11.2**	**+1.2**
BOVS	**Bovan**	**6.25**	**79**	*e*Pn	**Pn**	**07 26 11.2**	**+1.2**
BOVS				*e*Sn	**Sn**	**07 27 18.2**	**-3.1**
BARS	**Barje**	**6.31**	**86**	*e*Pn	**Pn**	**07 26 13.0**	**+2.2**
KHC	**Kasperske Hory**	**6.41**	**2**	*e*PN	**Pn**	**07 26 13.7**	**+1.5**
KHC				*e*SN	**Sn**	**07 27 24.4**	**-0.8**
CABF	**La Chapelle**	**6.41**	**310**	*e*P	**Pn**	**07 26 15.2**	**+2.9**
VIVF	**Saint-Julien-l**	**6.56**	**292**	*e*P	**Pn**	**07 26 17.5**	**+3.2**
ZAGS	**Zajecar**	**6.65**	**78**	*e*Pn	**Pn**	**07 26 16.9**	**+1.4**
BZS	**Buzias**	**6.67**	**62**	⇑P	**Pn**	**07 26 17.7**	**+1.9**
HINF	**Hinteralfeld**	**6.80**	**321**	*e*P	**Pn**	**07 26 20.8**	**+3.2**
HINF				*e*Sn	**Sn**	**07 27 29.0**	**-5.8**
comp=E,17nm,0.5s							
ZAPS	**Zavoj**	**6.90**	**82**	*e*Pn	**Pn**	**07 26 20.3**	**+1.3**
ZAPS				*e*Sn	**Sn**	**07 27 34.6**	**-2.8**
BLKB	**Belogradchik**	**6.95**	**79**	⇑P	**Pn**	**07 26 18.7**	**-1.0**
LASF	**Ste Croix**	**6.97**	**284**	*e*P	**Pn**	**07 26 23.3**	**+3.4**
HERR	**Herculane**	**6.97**	**69**	⇓P	**Pn**	**07 26 21.4**	**+1.5**
CDF	**Champ du Feu**	**7.06**	**326**	*e*P	**Pn**	**07 26 22.0**	**+0.8**
HAU	**Haudompre**	**7.17**	**320**	*e*P	**Pn**	**07 26 26.3**	**+3.6**
HAU				*e*Sn	**Sn**	**07 27 37.6**	**-6.4**
comp=E,23nm,0.5s							

VTS	**Vitosha**	**7.36 87**	⇑P	**Pn**	**07 26 27.8**	**+2.4**
GZR	**Gura Zlata**	**7.36 66**	⇑P	**Pn**	**07 26 28.3**	**+3.0**
KEST	**Kesra**	**7.61 205**	Pn	Pn	07 26 34.0	+5.2
	comp=E,0.6nm,0.3s,baz=101,slow=22,SNR=2.0					
LOR	**Lormes**	**8.05 308**	*e*P	**Pn**	**07 26 38.0**	**+3.3**
	baz=122					
LOR			*e*Sn	**Sn**	**07 28 04.7**	**-0.9**
	comp=E,14nm,0.7s					
MTLF	**Montolieu**	**8.11 278**	*e*P	**Pn**	**07 26 39.5**	**+4.0**
SSF	**Saint Saulge**	**8.16 305**	*e*P	**Pn**	**07 26 39.9**	**+3.7**
CAF	**Calviac**	**8.38 289**	*e*P	**Pn**	**07 26 41.6**	**+2.4**
CLL	**Collm**	**8.59 359**	*e*Pn	**Pn**	**07 26 42.0**	**0.0**
CLL			*e*Sn	Sn	07 28 03.0	-16
CLL			*ex*	x	07 28 14.0	
CLL			*ex*	x	07 28 28.0	
CLL			*ex*	x	07 28 42.0	
CLL			*e*Sg	Sg	07 29 02.0	-11
	comp=Z,20nm,1.1s					
ARR	**Arges**	**8.62 68**	⇓P	**Pn**	**07 26 45.8**	**+3.3**
VOIR		**8.92 68**	⇑P	**Pn**	**07 26 46.7**	**+0.1**
MLR	**Muntele Rosu**	**9.54 69**	⇓P	**Pn**	**07 26 58.0**	**+2.7**
BURAR	**Bucovina Array**	**9.76 56**	⇓P	Pn	07 27 06.5	+8.3
ETSF	**Etsaut**	**10.15 276**	*e*P	**Pn**	**07 27 07.4**	**+3.9**
IDI	**Anoyia**	**11.71 126**	Pn	**Pn**	**07 27 25.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=54,slow=18,SNR=1.1					
IDI			Sn	**Sn**	**07 29 28.7**	**-6.7**
	comp=Z,0.1nm,0.3s,baz=309,slow=20,SNR=1.2					
ESDC	**Sonseca Array**	**13.31 263**	Pn	**Pn**	**07 27 47.7**	**+0.9**
	baz=78,slow=15,SNR=2.4					
	comp=Z,0.2nm,0.4s					
EKA	**Eskdalemuir Ar**	**16.52 325**	Pn	**P**	**07 28 32.4**	**+0.4**
	baz=132,slow=12					
	comp=Z,0.3nm,0.4s					
FINES	**FINESS Array B**	**20.26 18**	P	**P**	**07 29 12.9**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=189,slow=11,SNR=4.4					
	comp=Z,2.7nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.12 202**	P	**P**	**07 30 57.6**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=12,slow=6.8,SNR=6.3					
	comp=Z,1.2nm,0.8s					
MKAR	**Makanchi Array**	**47.76 60**	P	**P**	**07 33 13.1**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=297,slow=5.8,SNR=3.1					
	comp=Z,0.7nm,0.7s					

ROM 30 07:25:08.2±0.0, 42°.867N±0°.003×13°.092E±0°.004, h11km, ML3.3/6, Error ellipse: s-maj=0.3km s-min=0.3km az=311.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**294**	P	Pg	07 25 10.9	+0.4
T1216				S	Sg	07 25 12.4	+0.3
T1216				AML	AML		
	comp=E,76996μm,0.2s						
T1245	**Castelsantange**	**0.07**	**99**	P	Pg	07 25 11.0	+0.2
T1245				S	Sg	07 25 12.7	+0.1
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**58**	P	Pg	07 25 11.2	+0.3
MC2				S	Sg	07 25 13.2	+0.2
FEMA	**Monte Fema**	**0.10**	**342**	P	Pg	07 25 11.4	+0.4
FEMA				S	Sg	07 25 13.5	+0.4
FEMA				AML	AML		
	comp=N,39664μm,0.3s						
T1215	**Vallo di Nera,**	**0.18**	**248**	P	Pg	07 25 12.7	+0.5
T1215				S	Sg	07 25 16.2	+1.4
T1215				AML	AML		
	comp=N,4595μm,0.1s						
T1217	**Poggiodomo (PG**	**0.20**	**217**	P	Pg	07 25 13.0	+0.5
T1217				S	Sg	07 25 16.4	+1.1
T1217				AML	AML		
	comp=N,6707μm,0.2s						
AM05	**Amandola Campo**	**0.22**	**60**	P	Pg	07 25 13.4	+0.5
AM05				S	Sg	07 25 17.0	+0.9
AM05				AML	AML		
	comp=N,1580μm,0.1s						
AM05				AML	AML		
	comp=E,3591μm,0.1s						
T1201	**Domo (RI)**	**0.24**	**151**	P	Pb	07 25 14.0	-0.7
T1201				S	Sg	07 25 18.2	+1.6
GUMA	**Gualdo di Mace**	**0.27**	**42**	P	Pg	07 25 14.3	+0.6
GUMA				S	Sb	07 25 19.0	-0.6
SEF1	**Sefro**	**0.30**	**339**	P	Pg	07 25 14.7	+0.4
SEF1				S	Sb	07 25 19.6	-1.1
T1243	**Rocca Santa Ma**	**0.31**	**123**	P	Pg	07 25 14.8	+0.3
T1243				S	Sg	07 25 19.8	+1.0
MDAR	**Monte D'Aria**	**0.33**	**7**	P	Pg	07 25 15.1	+0.3
MDAR				S	Sg	07 25 20.4	+1.1
ARRO	**Arrone**	**0.38**	**220**	P	Pg	07 25 15.9	+0.2
ARRO				S	Sb	07 25 22.1	-0.6
MNTP	**Montappone**	**0.39**	**46**	P	Pb	07 25 16.8	-0.3
CAMP	**Campotosto**	**0.41**	**145**	P	Pg	07 25 16.8	+0.5
CAMP				S	Sg	07 25 22.7	+1.0

ROM 30 07:25:42.7±0.2, 42°.86N±0°.02×13°.03E±0°.02, h13km±2km, ML2.6/3, 1D, Error ellipse: s-maj=1.7km s-min=1.3km az=165.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**347**	⇓P	Pg	07 25 45.8	+0.6
T1216				S	Sg	07 25 47.2	+0.3
T1216				AML	AML		
T1216				AML	AML		
	comp=E,74550μm,0.3s						
FEMA	**Monte Fema**	**0.10**	**9**	P	Pb	07 25 46.4	-0.3
FEMA				S	Sg	07 25 48.2	0.0
FEMA				AML	AML		
	comp=E,20152μm,0.2s						
T1245	**Castelsantange**	**0.12**	**92**	P	Pg	07 25 46.2	+0.1
T1245				S	Sg	07 25 48.8	+0.3
T1245				AML	AML		
	comp=E,31496μm,0.2s						
T1245				AML	AML		
	comp=N,32486μm,0.2s						
T1215	**Vallo di Nera,**	**0.13**	**244**	P	Pg	07 25 46.0	-0.2
T1215				S	Sg	07 25 49.1	+0.4
T1215				AML	AML		
	comp=N,1972μm,0.2s						
T1215				AML	AML		
	comp=N,1902μm,0.1s						
T1215				AML	AML		
	comp=E,1922μm,0.1s						
T1215				AML	AML		
	comp=E,2883μm,0.2s						
AM05	**Amandola Campo**	**0.27**	**64**	P	Pb	07 25 48.9	-0.5
AM05				S	Sg	07 25 52.7	+0.6
GUMA	**Gualdo di Mace**	**0.30**	**48**	P	Pb	07 25 49.7	-0.3
GUMA				S	Sg	07 25 53.3	+0.1

*ROM **30** 07:28:39.8±0.1, 42°.785N±0°.004×13°.188E±0°.005, h9km, ML3.5/11, Error ellipse: s-maj=0.4km s-min=0.3km az=50.0*
*IDC **30** 07:28:40.4±1.6, 42°.75N×13°.34E, h0km, mb3.6/2, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=44.9km s-min=22.3km az=97.0*
*PRU **30** 07:28:41.8±0.0, 42°.80N×13°.71E, h0km*
ISC 30 07:28:40.7±0.8, 42°.78N±0°.02×13°.22E±0°.02, h7km±6km, n38, σ1°.18/61, 3C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**344**	P	**Pg**	**07 28 42.0**	**-0.8**
T1245				S	**Sg**	**07 28 43.5**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1201	**Domo (RI)**	**0.12**	**169**	P	**Pg**	**07 28 43.7**	**+0.2**
T1201				S	**Sg**	**07 28 46.8**	**+1.4**
T1204	**Amatrice, Fraz**	**0.13**	**145**	P	**Pg**	**07 28 43.8**	**+0.2**
T1204				S	**Sg**	**07 28 46.2**	**+0.7**
T1204				AML	AML		
	comp=E,37700μm,1.0s						
T1204				AML	AML		
	comp=N,29400μm,1.2s						
T1204				AML	AML		
	comp=N,29350μm,1.2s						
T1204				AML	AML		
	comp=E,37750μm,1.0s						
MC2	**Monte Cornacci**	**0.14**	**351**	P	**Pg**	**07 28 43.6**	**-0.2**
MC2				S	**Sg**	**07 28 46.1**	**+0.3**
T1241	**Roccafluvione,**	**0.17**	**64**	P	**Pg**	**07 28 45.3**	**+1.0**
T1241				S	**Sg**	**07 28 48.4**	**+1.6**
T1216	**Preci, Frazion**	**0.18**	**307**	P	**Pg**	**07 28 43.9**	**-0.6**
T1216				S	**Sg**	**07 28 46.0**	**-1.0**
T1216				AML	AML		
	comp=E,77450μm,0.5s						
T1216				AML	AML		
	comp=N,87250μm,0.4s						
T1216				AML	AML		
	comp=E,77500μm,0.5s						
T1216				AML	AML		
	comp=N,87250μm,0.4s						
T1216				AML	AML		
	comp=E,77550μm,0.5s						
T1216				AML	AML		
	comp=N,87200μm,0.4s						
T1243	**Rocca Santa Ma**	**0.19**	**116**	P	**Pg**	**07 28 44.7**	**+0.2**
T1243				S	**Sg**	**07 28 48.4**	**+1.2**
LNSS	**Leonessa**	**0.22**	**217**	P	**Pg**	**07 28 45.4**	**+0.3**
LNSS				S	**Sg**	**07 28 48.6**	**+0.5**
LNSS				AML	AML		
	comp=N,29500μm,0.6s						
LNSS				AML	AML		
	comp=E,17800μm,0.4s						
AM05	**Amandola Campo**	**0.22**	**26**	P	**Pg**	**07 28 45.0**	**-0.2**
AM05				S	**Sg**	**07 28 48.8**	**+0.7**
T1217	**Poggiodomo (PG**	**0.22**	**252**	P	**Pg**	**07 28 44.8**	**-0.4**
T1217				S	**Sg**	**07 28 48.2**	**0.0**
T1217				AML	AML		
	comp=N,22850μm,0.6s						
T1217				AML	AML		
	comp=N,21550μm,0.6s						
T1217				AML	AML		
	comp=E,19050μm,0.5s						
T1217				AML	AML		
	comp=N,22800μm,0.6s						
T1217				AML	AML		
	comp=E,18900μm,0.5s						
T1217				AML	AML		
	comp=N,21600μm,0.6s						
T1217				AML	AML		
	comp=N,22800μm,0.6s						
T1217				AML	AML		
	comp=N,21550μm,0.6s						
T1217				AML	AML		
	comp=E,18900μm,0.5s						
T1217				AML	AML		
	comp=E,19050μm,0.5s						
T1256	**Bolognola (MC)**	**0.23**	**1**	P	**Pg**	**07 28 44.7**	**-0.6**
T1256				S	**Sg**	**07 28 48.8**	**+0.4**
T1215	**Vallo di Nera,**	**0.26**	**275**	P	**Pg**	**07 28 45.4**	**-0.4**
T1215				S	**Sg**	**07 28 49.1**	**-0.2**
T1215				AML	AML		
	comp=N,14300μm,1.2s						
T1215				AML	AML		
	comp=N,13600μm,1.2s						
T1215				AML	AML		
	comp=N,14250μm,1.2s						
T1215				AML	AML		
	comp=E,13800μm,0.5s						
T1215				AML	AML		
	comp=N,13560μm,1.2s						
T1215				AML	AML		
	comp=E,13550μm,0.5s						
T1215				AML	AML		
	comp=E,13850μm,0.5s						
T1215				AML	AML		
	comp=N,13570μm,1.2s						
RM33	**Pellescritta (**	**0.27**	**181**	P	**Pg**	**07 28 46.2**	**+0.2**
RM33				S	**Sg**	**07 28 50.7**	**+1.0**
CAMP	**Campotosto**	**0.28**	**150**	P	**Pg**	**07 28 46.3**	**0.0**
CAMP				S	**Sb**	**07 28 51.1**	**-2.0**
T1246	**Crognaleto (TE**	**0.28**	**134**	P	**Pg**	**07 28 46.2**	**-0.1**
T1246				S	**Sg**	**07 28 51.3**	**+1.2**
TERO	**Teramo**	**0.32**	**119**	P	**Pb**	**07 28 47.0**	**-1.9**
TERO				S	**Sb**	**07 28 52.5**	**-1.8**
OFFI	**Offida**	**0.38**	**65**	P	**Pb**	**07 28 48.9**	**-0.8**
AQU	**L'Aquila**	**0.45**	**162**	P	**Pg**	**07 28 49.0**	**-0.4**
AQU				AML	AML		
	comp=E,7245μm,1.6s						
AQU				AML	AML		
	comp=N,7760μm,1.0s						
AQU				AML	AML		
	comp=N,7960μm,1.0s						
AQU				AML	AML		
	comp=E,7250μm,1.6s						
AQU				AML	AML		
	comp=E,6815μm,1.1s						
FIAM	**Fiamignano**	**0.52**	**188**	P	**Pg**	**07 28 50.7**	**0.0**
FIAM				S	**Sg**	**07 28 58.2**	**+0.7**
SNTG	**Esanatoglia**	**0.52**	**337**	P	**Pg**	**07 28 50.0**	**-0.7**
SNTG				S	**Sg**	**07 28 57.7**	**+0.2**
ATCC	**AVT- Casa Cast**	**0.59**	**314**	P	**Pg**	**07 28 51.1**	**-1.0**
ATCC				S	**Sg**	**07 29 00.1**	**+0.3**
FOSV	**Fossato di Vic**	**0.61**	**327**	P	**Pg**	**07 28 51.7**	**-0.9**
FOSV				S	**Sg**	**07 29 01.0**	**+0.3**
T0110	**Collepietro**	**0.69**	**143**	P	**Pg**	**07 28 53.5**	**-0.5**
T0110				AML	AML		
	comp=E,4515μm,0.5s						
T0110				AML	AML		
	comp=N,6020μm,0.8s						
T0110				AML	AML		
	comp=N,6015μm,0.8s						
ATFO	**Monte Foce - G**	**0.76**	**321**	P	**Pg**	**07 28 54.2**	**-1.1**
ATFO				AML	AML		
	comp=E,4075μm,1.1s						
ATFO				AML	AML		
	comp=N,2755μm,0.6s						
CAFI	**Castiglion Fio**	**1.07**	**301**	P	**Pg**	**07 29 00.2**	**-1.0**
MCIV	**Monte Civitell**	**1.14**	**270**	⇑P	**Pg**	**07 29 01.8**	**-0.7**
MCIV				AML	AML		
	comp=E,965μm,0.6s						
MCIV				AML	AML		
	comp=N,794μm,0.5s						
MCIV				AML	AML		
	comp=E,966μm,0.6s						
SF04	**Casetta**	**1.15**	**273**	S	**Sg**	**07 29 20.0**	**+2.3**
SF01	**Poggio Pratacc**	**1.22**	**272**	⇑P	**Pg**	**07 29 04.0**	**-0.1**
SF01				AML	AML		
	comp=E,1680μm,0.6s						
SF01				AML	AML		
	comp=N,1212μm,0.8s						
CSNT	**Castellina Chi**	**1.57**	**297**	⇑P	**Pn**	**07 29 08.1**	**-0.9**
CSNT				AML	AML		
	comp=E,425μm,0.6s						
CSNT				AML	AML		
	comp=N,330μm,0.7s						
CSNT				AML	AML		
	comp=E,424μm,0.6s						
MTCR	**Monte La Croce**	**2.04**	**308**	⇓P	**Pn**	**07 29 16.6**	**+0.9**
MRLC	**Muro Lucano**	**2.64**	**139**	⇓P	**Pn**	**07 29 21.2**	**-2.5**
SBPO	**S.Benedetto Po**	**2.81**	**325**	S	**Sb**	**07 30 08.0**	**+2.1**
SARZ	**Sarezzano**	**3.75**	**305**	⇓P	**Pn**	**07 29 42.1**	**+3.1**
DAVOX	**Davos/Dischmat**	**4.65**	**330**	Pn	**Pn**	**07 29 53.5**	**+2.0**
	comp=E,4.0nm,0.3s,baz=157,slow=16,SNR=6.3						
DAVOX				Sn	**Sn**	**07 30 48.6**	**+2.8**
	comp=E,1.4nm,0.3s,baz=266,slow=19,SNR=5.0						
	comp=E,16nm,0.5s						
GERES	**GERESS Array B**	**6.08**	**3**	Pn	**Pn**	**07 30 12.3**	**+1.3**
	comp=E,0.8nm,0.3s,baz=184,slow=17,SNR=4.2						
GERES				Sn	**Sn**	**07 31 20.7**	**-0.1**
	comp=E,1.6nm,0.3s,baz=183,slow=22,SNR=6.2						
	comp=E,1.6nm,0.4s						
KHC	**Kasperske Hory**	**6.36**	**2**	*e*PN	**Pn**	**07 30 15.6**	**+0.8**
KHC				*e*SN	**Sn**	**07 31 25.4**	**-2.3**
TORD	**Torodi Ar. Bea**	**31.16**	**202**	P	**P**	**07 35 01.2**	**+0.9**
	comp=E,0.4nm,0.4s,baz=21,slow=8.7,SNR=4.5						
	comp=E,0.4nm,0.4s						
MKAR	**Makanchi Array**	**47.75**	**60**	P	**P**	**07 37 18.2**	**-0.1**
	comp=E,1.0nm,0.9s,baz=294,slow=9.1,SNR=1.5						
	comp=E,1.0nm,0.9s						

ROM 30 07:29:39.5±0.1, 42°.804N±0°.004×13°.095E±0°.005, h11km, ML3.0/6, 2D, Error ellipse: s-maj=0.4km s-min=0.4km az=313.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**53**	P	Pg	07 29 42.2	+0.1
T1245				S	Sg	07 29 44.3	+0.2
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1217	**Poggiodomo (PG**	**0.15**	**233**	P	Pg	07 29 43.5	+0.5
T1217				S	Sg	07 29 46.5	+1.1
T1217				AML	AML		
	comp=E,8170μm,0.5s						
T1217				AML	AML		
	comp=N,10600μm,0.7s						
T1217				AML	AML		
	comp=E,52050μm,0.3s						
T1217				AML	AML		
	comp=N,78400μm,0.3s						
T1217				AML	AML		
	comp=E,53000μm,0.4s						
T1217				AML	AML		
	comp=N,77600μm,0.3s						
T1217				AML	AML		
	comp=E,2449μm,0.1s						
T1215	**Vallo di Nera,**	**0.17**	**269**	P	Pg	07 29 43.6	+0.4
T1215				S	Sg	07 29 46.8	+1.0
T1215				AML	AML		
	comp=E,6905μm,1.1s						
T1215				AML	AML		
	comp=N,5980μm,0.9s						
T1215				AML	AML		
	comp=E,26700μm,0.4s						
T1215				AML	AML		
	comp=N,32950μm,0.4s						
T1215				AML	AML		
	comp=E,27500μm,0.4s						
T1215				AML	AML		
	comp=N,33350μm,0.4s						
T1215				AML	AML		
	comp=N,3251μm,0.1s						
T1215				AML	AML		
	comp=N,3314μm,0.1s						
T1201	**Domo (RI)**	**0.19**	**142**	P	Pb	07 29 44.3	-0.7
T1201				S	Sg	07 29 47.9	+1.5
T1201				END			
LNSS	**Leonessa**	**0.20**	**191**	P	Pg	07 29 44.4	+0.5
LNSS				S	Sg	07 29 48.0	+1.1
LNSS				AML	AML		
	comp=E,47800μm,0.9s						
LNSS				AML	AML		
LNSS				AML	AML		
	comp=N,13081μm,0.2s						
T1204	**Amatrice, Fraz**	**0.21**	**128**	P	Pg	07 29 44.4	+0.5
T1204				S	Sg	07 29 48.3	+1.3
T1204				AML	AML		
	comp=E,20750μm,0.2s						
T1204				AML	AML		
	comp=N,16600μm,0.1s						
T1204				AML	AML		
	comp=E,63650μm,0.3s						
T1204				AML	AML		
	comp=N,38900μm,1.0s						
T1241	**Roccafluvione,**	**0.25**	**78**	⇓P	Pb	07 29 45.6	-0.5
T1241				S	Sb	07 29 49.6	-0.9
T1241				AML	AML		
	comp=E,44450μm,0.6s						
T1241				AML	AML		
	comp=N,32900μm,0.4s						
T1241				AML	AML		
	comp=E,43500μm,0.6s						
T1241				AML	AML		
	comp=N,32750μm,0.4s						
T1241				AML	AML		
	comp=N,27808μm,0.6s						
AM05	**Amandola Campo**	**0.26**	**48**	AML	AML		
	comp=E,41400μm,0.3s						
AM05				AML	AML		
	comp=E,5610μm,0.7s						
AM05				AML	AML		
	comp=N,7420μm,0.3s						
AM05				AML	AML		
	comp=E,29150μm,0.7s						
AM05				AML	AML		
	comp=N,1280μm,0.9s						
AM05				AML	AML		
	comp=E,11000μm,0.4s						
AM05				AML	AML		
	comp=N,13150μm,0.4s						
AM05				AML	AML		
	comp=N,3060μm,0.1s						
T1243	**Rocca Santa Ma**	**0.28**	**112**	P	Pg	07 29 45.6	+0.4
T1243				S	Sg	07 29 49.9	+0.8
RM33	**Pellescritta (**	**0.31**	**163**	P	Pg	07 29 46.2	+0.5
RM33				S	Sb	07 29 51.2	-1.0
RM33				AML	AML		
	comp=E,29900μm,0.3s						
RM33				AML	AML		
	comp=N,28150μm,0.7s						
RM33				AML	AML		
	comp=E,29950μm,0.3s						
RM33				AML	AML		
	comp=N,27850μm,0.7s						
RM33				AML	AML		
	comp=E,1813μm,0.2s						
GUMA	**Gualdo di Mace**	**0.31**	**34**	P	Pg	07 29 46.1	+0.4
GUMA				S	Sb	07 29 52.2	-0.1
GUMA				AML	AML		
	comp=E,58800μm,0.8s						
GUMA				AML	AML		
	comp=N,56400μm,0.6s						
GUMA				AML	AML		
	comp=E,41350μm,1.5s						
GUMA				AML	AML		
	comp=N,77050μm,0.5s						
GUMA				AML	AML		
	comp=N,16345μm,0.3s						
GUMA				AML	AML		
	comp=E,21581μm,0.3s						
ARRO	**Arrone**	**0.33**	**227**	P	Pg	07 29 46.7	+0.6
ARRO				S	Sb	07 29 52.2	-0.5
ARRO				AML	AML		
	comp=E,14300μm,0.8s						
ARRO				AML	AML		
	comp=N,20300μm,0.6s						
CAMP	**Campotosto**	**0.35**	**139**	P	Pg	07 29 46.7	+0.2
CAMP				AML	AML		
	comp=E,7390μm,0.3s						
CAMP				AML	AML		
	comp=N,7175μm,0.3s						
SEF1	**Sefro**	**0.36**	**343**	P	Pg	07 29 46.6	0.0
SEF1				AML	AML		
	comp=E,16900μm,1.5s						
SEF1				AML	AML		
	comp=N,12820μm,0.2s						
TERO	**Teramo**	**0.42**	**116**	P	Pg	07 29 47.7	0.0
TERO				S	Sb	07 29 54.3	-1.0
TERO				AML	AML		
	comp=E,14100μm,0.4s						
TERO				AML	AML		
	comp=N,24750μm,0.5s						
TERO				AML	AML		
	comp=E,15200μm,0.4s						
TERO				AML	AML		
	comp=N,25700μm,0.5s						
MNTP	**Montappone**	**0.43**	**39**	P	Pb	07 29 48.5	-0.6
MNTP				AML	AML		
	comp=E,17000μm,0.9s						
MNTP				AML	AML		
	comp=N,15200μm,1.5s						
OFFI	**Offida**	**0.45**	**73**	⇓P	Pb	07 29 49.5	0.0
OFFI				AML	AML		
	comp=E,17150μm,0.6s						
OFFI				AML	AML		
	comp=N,18200μm,0.6s						
GIGS	**Gran Sasso**	**0.50**	**135**	P	Pg	07 29 49.2	0.0
GIGS				S	Sg	07 29 56.6	+0.8
GIGS				AML	AML		
	comp=E,2390μm,0.5s						
GIGS				AML	AML		
	comp=N,1730μm,0.1s						

*ROM **30** 07:30:13.0±0.0, 42°.803N±0°.002×13°.081E±0°.004, h10km, ML3.6/27, Error ellipse: s-maj=0.2km s-min=0.2km az=284.0*
*LDG **30** 07:30:12.4±0.2, 42°.79N×13°.05E, h10km, Ml3.2/12, Error ellipse: s-maj=5.3km s-min=3.4km az=46.0*
*IDC **30** 07:30:12.1±1.6, 42°.83N×13°.12E, h0km, mb3.7/3, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=45.2km s-min=17.6km az=96.0*
ISC 30 07:30:13.1±0.7, 42°.80N±0°.02×12°.98E±0°.02, h16km±3km, n86, σ2°.30/114, 6C-7D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1215	**Vallo di Nera,**	**0.08**	**269**	P	**Pb**	**07 30 16.9**	**+0.5**
T1215				S	**Sb**	**07 30 19.8**	**+1.1**
T1215				AML	AML		
	comp=E,26650μm,0.4s						
T1215				AML	AML		
	comp=N,32950μm,0.4s						
T1215				AML	AML		
	comp=E,27500μm,0.4s						
T1215				AML	AML		
	comp=N,33350μm,0.4s						
T1215				AML	AML		
	comp=E,26700μm,0.4s						
T1215				AML	AML		
	comp=N,32900μm,0.4s						
T1215				AML	AML		
	comp=E,27550μm,0.4s						
T1215				AML	AML		
	comp=N,33300μm,0.4s						
T1215				AML	AML		
	comp=E,26700μm,0.4s						
T1215				AML	AML		
	comp=E,27500μm,0.4s						
T1215				AML	AML		
	comp=E,26650μm,0.4s						
T1215				AML	AML		
	comp=E,27550μm,0.4s						
T1215				AML	AML		
	comp=N,33350μm,0.4s						
T1215				AML	AML		
	comp=N,32950μm,0.4s						
T1216	**Preci, Frazion**	**0.09**	**20**	P	**Pg**	**07 30 16.0**	**-0.7**
T1216				S	**Sg**	**07 30 17.9**	**-1.0**
T1216				AML	AML		
	comp=E,95750μm,0.5s						
T1216				AML	AML		
	comp=E,95550μm,0.5s						
T1216				AML	AML		
	comp=N,83400μm,0.6s						
T1216				AML	AML		
	comp=N,95350μm,0.2s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,95500μm,0.2s						
T1217	**Poggiodomo (PG**	**0.10**	**200**	P	**Pg**	**07 30 16.8**	**+0.1**
T1217				S	**Sb**	**07 30 19.6**	**+0.6**
T1245	**Castelsantange**	**0.17**	**71**	P	**Pg**	**07 30 15.9**	**-1.7**
T1245				S	**Sg**	**07 30 17.9**	**-2.6**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.17**	**19**	P	**Pg**	**07 30 17.1**	**-0.6**
FEMA				S	**Sg**	**07 30 19.8**	**-0.8**
FEMA				AML	AML		
	comp=E,63100μm,0.2s						
FEMA				AML	AML		
	comp=E,63150μm,0.2s						
FEMA				AML	AML		
	comp=N,59400μm,0.6s						
FEMA				AML	AML		
	comp=N,59450μm,0.6s						
MC2	**Monte Cornacci**	**0.19**	**55**	P	**Pg**	**07 30 16.6**	**-1.4**
MC2				S	**Sg**	**07 30 19.2**	**-2.1**
LNSS	**Leonessa**	**0.20**	**167**	P	**Pg**	**07 30 17.7**	**-0.4**
LNSS				S	**Sg**	**07 30 21.3**	**-0.1**
LNSS				AML	AML		
	comp=E,47800μm,0.9s						
LNSS				AML	AML		
T1244	**Arquata del Tr**	**0.24**	**101**	P	**Pg**	**07 30 17.4**	**-1.3**
T1244				S	**Sg**	**07 30 20.5**	**-1.9**
T1201	**Domo (RI)**	**0.25**	**126**	P	**Pg**	**07 30 17.8**	**-0.9**
T1201				S	**Sg**	**07 30 21.6**	**-1.0**
ARRO	**Arrone**	**0.27**	**215**	P	**Pb**	**07 30 19.8**	**+0.1**
ARRO				S	**Sb**	**07 30 24.9**	**+0.9**
ARRO				AML	AML		
	comp=E,14350μm,0.8s						
ARRO				AML	AML		
	comp=N,20300μm,0.6s						
ARRO				AML	AML		
	comp=N,20350μm,0.6s						
ARRO				AML	AML		
	comp=E,14300μm,0.8s						
T1256	**Bolognola (MC)**	**0.27**	**42**	P	**Pg**	**07 30 18.2**	**-1.0**
T1256				S	**Sg**	**07 30 22.0**	**-1.4**
T1204	**Amatrice, Fraz**	**0.28**	**117**	P	**Pg**	**07 30 18.2**	**-1.2**
T1204				S	**Sg**	**07 30 21.7**	**-1.8**
T1204				AML	AML		
	comp=E,63600μm,0.3s						
T1204				AML	AML		
	comp=N,38900μm,1.0s						
T1204				AML	AML		
	comp=E,63650μm,0.3s						
T1204				AML	AML		
	comp=N,38950μm,1.0s						
T1204				AML	AML		
	comp=E,63700μm,0.3s						
AM05	**Amandola Campo**	**0.33**	**58**	P	**Pg**	**07 30 19.0**	**-1.1**
AM05				S	**Sg**	**07 30 23.0**	**-1.8**
AM05				AML	AML		
	comp=N,13150μm,0.4s						
AM05				AML	AML		
	comp=N,3060μm,0.1s						
AM05				AML	AML		
	comp=E,11000μm,0.4s						
AM05				AML	AML		
	comp=N,4090μm,0.1s						
AM05				AML	AML		
	comp=E,41400μm,0.3s						
CSP1	**Cessapalombo**	**0.33**	**30**	P	**Pg**	**07 30 19.5**	**-0.8**
CSP1				S	**Sg**	**07 30 24.2**	**-0.8**
CSP1				AML	AML		
	comp=N,31350μm,0.4s						
CSP1				AML	AML		
	comp=E,21650μm,0.4s						
T1241	**Roccafluvione,**	**0.34**	**81**	P	**Pg**	**07 30 19.5**	**-0.7**
T1241				S	**Sg**	**07 30 23.6**	**-1.5**
T1241				AML	AML		
	comp=E,44450μm,0.6s						
T1241				AML	AML		
	comp=N,32900μm,0.4s						
T1241				AML	AML		
	comp=E,43500μm,0.6s						
T1241				AML	AML		
	comp=N,32750μm,0.4s						
T1241				AML	AML		
	comp=N,32850μm,0.4s						
RM33	**Pellescritta (**	**0.34**	**149**	P	**Pg**	**07 30 19.7**	**-0.7**
RM33				S	**Sg**	**07 30 24.8**	**-0.4**
RM33				AML	AML		
	comp=E,29900μm,0.3s						
RM33				AML	AML		
	comp=N,28200μm,0.7s						
RM33				AML	AML		
	comp=N,27900μm,0.7s						
RM33				AML	AML		
	comp=N,27850μm,0.7s						
RM33				AML	AML		
	comp=E,29950μm,0.3s						
RM33				AML	AML		
	comp=N,28150μm,0.7s						
RM33				AML	AML		
	comp=E,29900μm,0.3s						
SEF1	**Sefro**	**0.34**	**357**	P	**Pb**	**07 30 20.6**	**-0.3**
SEF1				AML	AML		
	comp=N,12850μm,0.2s						
SEF1				AML	AML		
	comp=N,12820μm,0.2s						
SEF1				AML	AML		
	comp=E,16900μm,1.5s						
SEF1				AML	AML		
	comp=N,12835μm,0.2s						
CESX	**Cesi**	**0.35**	**237**	P	**Pb**	**07 30 21.3**	**+0.3**
CESX				S	**Sb**	**07 30 27.8**	**+1.6**
CESX				AML	AML		
	comp=N,17100μm,0.4s						
CESX				AML	AML		
	comp=E,27650μm,0.5s						
T1243	**Rocca Santa Ma**	**0.36**	**107**	P	**Pg**	**07 30 19.5**	**-1.2**
T1243				S	**Sg**	**07 30 23.7**	**-2.2**
CAMP	**Campotosto**	**0.42**	**130**	P	**Pg**	**07 30 20.4**	**-1.2**
CAMP				S	**Sg**	**07 30 26.0**	**-1.4**
GAG1	**Gagliole**	**0.44**	**9**	P	**Pb**	**07 30 22.1**	**-0.4**
GAG1				AML	AML		
	comp=E,14000μm,0.6s						
GAG1				AML	AML		
	comp=N,16400μm,0.6s						
SNTG	**Esanatoglia**	**0.45**	**357**	P	**Pb**	**07 30 22.7**	**-0.1**
SNTG				S	**Sb**	**07 30 29.4**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.46**	**327**	P	**Pb**	**07 30 23.4**	**+0.6**
ATCC				AML	AML		
	comp=E,5205μm,0.6s						
ATCC				AML	AML		
	comp=N,6320μm,1.0s						
MNTP	**Montappone**	**0.49**	**47**	P	**Pg**	**07 30 22.0**	**-1.0**
TERO	**Teramo**	**0.50**	**111**	P	**Pg**	**07 30 21.4**	**-1.7**
TERO				S	**Sg**	**07 30 27.9**	**-1.8**
TERO				AML	AML		
	comp=N,13000μm,1.3s						
TERO				AML	AML		
	comp=E,15200μm,0.4s						
TERO				AML	AML		
	comp=E,14100μm,0.4s						
TERO				AML	AML		
	comp=N,13015μm,1.3s						
TERO				AML	AML		
	comp=N,13750μm,1.3s						
TERO				AML	AML		
	comp=E,14105μm,0.4s						
OFFI	**Offida**	**0.54**	**76**	P	**Pb**	**07 30 23.1**	**-1.0**
OFFI				AML	AML		
	comp=N,18200μm,0.6s						
OFFI				AML	AML		
	comp=E,17150μm,0.6s						
FIAM	**Fiamignano**	**0.55**	**169**	P	**Pg**	**07 30 23.6**	**-0.4**
FIAM				S	**Sb**	**07 30 31.6**	**-0.4**
FIAM				AML	AML		
	comp=E,10730μm,0.4s						
FIAM				AML	AML		
	comp=N,9535μm,0.3s						
TRE1	**Treia**	**0.56**	**26**	P	**Pb**	**07 30 24.4**	**-0.2**
TRE1				AML	AML		
	comp=E,13700μm,0.4s						
TRE1				AML	AML		
	comp=N,8605μm,1.1s						
TRE1				AML	AML		
	comp=N,8785μm,1.4s						
TRE1				AML	AML		
	comp=N,8795μm,1.4s						
SRES	**S.Oreste - Sor**	**0.66**	**212**	P	**Pb**	**07 30 26.8**	**+0.5**
SRES				AML	AML		
	comp=N,5085μm,0.4s						
SRES				AML	AML		
	comp=E,4580μm,0.9s						
ARVD	**Arcevia**	**0.69**	**358**	AML	AML		
	comp=N,2005μm,0.5s						
ARVD				AML	AML		
	comp=E,1750μm,1.5s						
VCEL	**Villa Celiera**	**0.76**	**122**	P	**Pg**	**07 30 26.6**	**-1.3**
MTCE	**Montecelio**	**0.80**	**193**	P	**Pb**	**07 30 28.6**	**-0.1**
MTCE				AML	AML		
	comp=E,3795μm,1.5s						
MTCE				AML	AML		
	comp=N,2860μm,0.9s						
T0110	**Collepietro**	**0.83**	**134**	P	**Pb**	**07 30 27.8**	**-1.4**
CERT	**Cerreto**	**0.85**	**180**	P	**Pb**	**07 30 29.4**	**-0.2**
CERT				AML	AML		
	comp=E,6740μm,1.3s						
CERT				AML	AML		
	comp=N,3650μm,0.7s						
AOI	**Ancona**	**0.88**	**31**	P	**Pg**	**07 30 29.6**	**-0.6**
AOI				AML	AML		
	comp=E,2270μm,1.1s						
AOI				AML	AML		
	comp=E,2340μm,1.2s						
AOI				AML	AML		
	comp=N,2685μm,0.5s						
AOI				AML	AML		
	comp=E,1926μm,0.6s						
FSSB	**Fossombrone**	**0.90**	**351**	AML	AML		
	comp=N,5785μm,0.5s						
FSSB				AML	AML		
	comp=E,4985μm,0.4s						
CAFI	**Castiglion Fio**	**0.91**	**306**	P	**Pn**	**07 30 32.1**	**+0.8**
CAFI				AML	AML		
	comp=E,1304μm,0.7s						
CAFI				AML	AML		
	comp=N,1270μm,1.1s						
CAFI				AML	AML		
	comp=E,1300μm,0.7s						
TOLF	**Tolfa**	**1.03**	**225**	P	**Pn**	**07 30 33.2**	**+0.3**
TOLF				AML	AML		
	comp=E,2690μm,1.5s						
TOLF				AML	AML		
	comp=N,2175μm,0.5s						
RDP	**Rocca di Papa**	**1.06**	**191**	AML	AML		
	comp=N,10070μm,0.6s						
RDP				AML	AML		
	comp=E,11600μm,0.5s						
LAV9	**Lanuvio**	**1.14**	**190**	AML	AML		
	comp=E,7590μm,0.5s						
LAV9				AML	AML		
	comp=E,7750μm,0.5s						
LAV9				AML	AML		
	comp=N,6095μm,0.4s						
LAV9				AML	AML		
	comp=N,6155μm,0.3s						
MAON	**Monte Argentar**	**1.41**	**255**	⇓P	**Pb**	**07 30 39.5**	**+0.4**
MAON				AML	AML		
	comp=E,484μm,1.1s						
MAON				AML	AML		
	comp=N,363μm,1.0s						
CASP	**Castiglione de**	**1.55**	**270**	⇓P	**Pb**	**07 30 41.5**	**0.0**
CASP				AML	AML		
	comp=E,152μm,0.7s						
CASP				AML	AML		
	comp=N,186μm,0.6s						
TRIF	**Trifonti**	**1.55**	**282**	⇑P	**Pb**	**07 30 42.0**	**+0.5**
TRIF				AML	AML		
	comp=E,310μm,1.0s						
TRIF				AML	AML		
	comp=N,303μm,0.6s						
PIGN	**Pignataro Magg**	**1.84**	**150**	P	**Pn**	**07 30 41.9**	**-2.1**
PIGN				AML	AML		
	comp=N,321μm,1.1s						
PIGN				AML	AML		
	comp=E,334μm,1.5s						
HVAR	**Hvar**	**2.58**	**80**	⇑P	**Pn**	**07 30 55.2**	**+1.1**
MNTV	**Mantova**	**2.83**	**327**	S	**Sb**	**07 31 37.0**	**-0.5**
PGF	**Pioggiola**	**2.94**	**266**	*e*P	**Pn**	**07 31 01.5**	**+2.2**
PGF				*e*Sn	**Sn**	**07 31 32.4**	**-1.9**
	comp=E,6.0nm,0.3s						
PGF	**Pioggiola**	**2.94**	**266**	⇓P	**Pn**	**07 31 01.9**	**+2.6**
AMUR	**Altamura**	**3.31**	**124**	⇓P	**Pn**	**07 31 05.5**	**+1.3**
SALO	**Salr**	**3.32**	**329**	⇑P	**Pn**	**07 31 07.6**	**+3.2**
CTI	**Castel Tesino**	**3.38**	**344**	⇓P	**Pn**	**07 31 08.2**	**+2.9**
LTRZ	**Laterza**	**3.62**	**126**	⇑P	**Pn**	**07 31 10.5**	**+2.0**
MABI	**Malga Bissina**	**3.70**	**332**	⇑P	**Pn**	**07 31 12.7**	**+2.9**
SBF	**Sospel**	**4.18**	**287**	*e*Sn	**Sn**	**07 32 01.2**	**-3.5**
	comp=E,5.6nm,0.4s						
RISI	**Rein**	**4.19**	**352**	⇓P	**Pn**	**07 31 20.6**	**+4.0**
VSL	**Villasalto**	**4.28**	**221**	⇑P	**Pn**	**07 31 20.3**	**+2.8**
SPS2	**Spezzano della**	**4.33**	**143**	S	**Sn**	**07 32 12.0**	**+3.6**
DAVOX	**Davos/Dischmat**	**4.55**	**332**	Pn	**Pn**	**07 31 23.8**	**+2.4**
	comp=E,1.2nm,0.3s,baz=143,slow=19,SNR=1.5						
DAVOX				Sn	**Sn**	**07 32 19.9**	**+6.0**
	comp=E,1.3nm,0.3s,baz=346,slow=22,SNR=1.4						
	comp=E,8.1nm,0.4s						
GRI	**Girifalco**	**4.76**	**146**	S	**Sb**	**07 32 37.0**	**+3.9**
LMR	**La Mourre**	**4.77**	**279**	*e*P	**Pn**	**07 31 25.9**	**+1.7**
LMR				*e*Sn	**Sn**	**07 32 16.0**	**-3.1**
	comp=E,17nm,0.9s						
MBDF	**Montbardon**	**4.89**	**295**	*e*Pn	**Pn**	**07 31 24.6**	**-1.5**
MBDF	**Montbardon**	**4.89**	**295**	*e*P	**Pn**	**07 31 29.0**	**+2.9**
MBDF				*e*Sn	**Sn**	**07 32 19.2**	**-3.1**
	comp=E,14nm,0.7s						
RESU	**Resuttano**	**5.22**	**171**	⇓P	**Pg**	**07 31 48.5**	**-4.5**
LPG	**La Plagne**	**5.23**	**303**	*e*Pn	**Pn**	**07 31 29.3**	**-1.5**
LPG	**La Plagne**	**5.23**	**303**	*e*P	**Pn**	**07 31 33.9**	**+3.1**
LPG				*e*Sn	**Sn**	**07 32 27.0**	**-3.8**
	comp=E,8.9nm,0.7s						
LPL	**La Plagne**	**5.25**	**303**	*e*Pn	**Pn**	**07 31 29.5**	**-1.5**
LPL	**La Plagne**	**5.25**	**303**	*e*P	**Pn**	**07 31 33.5**	**+2.5**
SMRF	**Simiane la Rot**	**5.52**	**285**	*e*P	**Pn**	**07 31 39.1**	**+4.5**
GERES	**GERESS Array B**	**6.06**	**5**	Pn	**Pn**	**07 31 42.6**	**+0.5**
	comp=E,0.6nm,0.3s,baz=175,slow=13,SNR=3.6						
GERES				Sn	**Sn**	**07 32 52.2**	**+0.9**
	comp=E,1.4nm,0.3s,baz=165,slow=23,SNR=1.6						
	comp=E,4.1nm,0.7s						
CABF	**La Chapelle**	**6.21**	**310**	*e*P	**Pn**	**07 31 48.1**	**+3.9**
HINF	**Hinteralfeld**	**6.62**	**321**	*e*P	**Pn**	**07 31 52.1**	**+2.4**
HINF				*e*Sn	**Sn**	**07 32 59.4**	**-5.3**
	comp=E,19nm,0.6s						
LASF	**Ste Croix**	**6.76**	**284**	*e*Pn	**Pn**	**07 31 50.2**	**-1.4**
CDF	**Champ du Feu**	**6.89**	**327**	*e*Pn	**Pn**	**07 31 52.1**	**-1.3**
CDF				*e*Sn	**Sn**	**07 33 06.2**	**-5.2**
	comp=E,14nm,0.6s						
HAU	**Haudompre**	**6.99**	**320**	*e*P	**Pn**	**07 31 57.4**	**+2.7**
HAU				*e*Sn	**Sn**	**07 33 08.1**	**-5.7**
	comp=E,54nm,1.0s						
SMF	**Signal de Mont**	**7.55**	**304**	*e*Pn	**Pn**	**07 31 59.0**	**-3.5**
SMF				*e*Sn	**Sn**	**07 33 22.1**	**-5.7**
	comp=E,10.0nm,0.9s						
KEST	**Kesra**	**7.60**	**203**	Pn	Pn	07 32 10.4	+7.1
	comp=E,0.4nm,0.3s,baz=114,slow=8.5,SNR=2.0						
SFTF	**Sexfontaines**	**7.76**	**317**	*e*P	**Pn**	**07 32 07.6**	**+2.3**
LOR	**Lormes**	**7.85**	**308**	*e*P	**Pn**	**07 32 10.0**	**+3.4**
LOR				*e*Sn	**Sn**	**07 33 29.3**	**-5.7**
	comp=E,4.7nm,0.6s						
AVF	**Avril sur Loir**	**7.92**	**304**	*e*Pn	**Pn**	**07 32 07.5**	**0.0**
MEZF	**Maizieres J'vi**	**7.95**	**318**	*e*P	**Pn**	**07 32 10.3**	**+2.3**
SSF	**Saint Saulge**	**7.95**	**306**	*e*Pn	**Pn**	**07 32 06.6**	**-1.4**
SAVF	**Savonnieres en**	**8.00**	**319**	*e*P	**Pn**	**07 32 11.9**	**+3.4**
MFF	**Saint Martin d**	**10.08**	**297**	*e*Pn	**Pn**	**07 32 35.1**	**-2.1**
FINES	**FINESS Array B**	**20.25**	**18**	P	**P**	**07 34 47.4**	**0.0**
	comp=E,3.8nm,1.0s,baz=231,slow=8.8,SNR=1.6						
	comp=E,3.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P	**P**	**07 36 32.6**	**+1.7**
	comp=E,0.9nm,0.8s,baz=15,slow=9.6,SNR=4.0						
	comp=E,0.9nm,0.8s						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**07 38 51.7**	**+1.4**
	comp=E,0.8nm,0.8s,baz=299,slow=7.2,SNR=2.8						
	comp=E,0.8nm,0.8s						

ROM 30 07:31:08.2±0.0, 42°.801N±0°.002×13°.088E±0°.004, h10km, ML3.4/25, 17C-14D, Error ellipse: s-maj=0.3km s-min=0.2km az=278.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**53**	⇓P	Pg	07 31 11.3	+0.4
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,96900μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,97053μm,0.2s						
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.10**	**330**	P	Pg	07 31 11.5	+0.6
T1216				S	Sg	07 31 13.4	+0.5
T1216				AML	AML		
	comp=N,95400μm,0.2s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,95350μm,0.2s						
T1216				AML	AML		
	comp=N,95500μm,0.2s						
T1216				AML	AML		
MC2	**Monte Cornacci**	**0.13**	**34**	P	Pg	07 31 11.3	-0.1
MC2				S	Sg	07 31 14.5	+0.7
T1217	**Poggiodomo (PG**	**0.15**	**232**	P	Pg	07 31 12.0	+0.5
T1217				AML	AML		
	comp=E,10800μm,0.6s						
T1217				AML	AML		
	comp=E,10435μm,1.5s						
T1217				AML	AML		
	comp=E,10850μm,0.6s						
T1217				AML	AML		
	comp=N,14750μm,0.4s						
T1217				AML	AML		
	comp=E,10400μm,0.6s						
T1217				AML	AML		
	comp=N,14250μm,0.4s						
T1217				AML	AML		
	comp=N,14750μm,0.4s						
T1217				AML	AML		
	comp=N,14200μm,0.4s						
T1217				AML	AML		
	comp=E,10800μm,0.6s						
T1217				AML	AML		
	comp=E,10415μm,0.6s						
T1217				AML	AML		
	comp=N,13191μm,0.2s						
T1217				AML	AML		
	comp=E,9238μm,0.1s						
T1217				AML	AML		
	comp=N,13092μm,0.2s						
T1217				AML	AML		
	comp=E,9147μm,0.1s						
T1215	**Vallo di Nera,**	**0.16**	**270**	P	Pg	07 31 12.3	+0.5
T1215				S	Sg	07 31 15.2	+0.9
FEMA	**Monte Fema**	**0.16**	**350**	⇑P	Pg	07 31 12.6	+0.7
FEMA				S	Sg	07 31 15.1	+0.7
FEMA				AML	AML		
	comp=N,54700μm,0.3s						
FEMA				AML	AML		
	comp=E,56850μm,0.3s						
FEMA				AML	AML		
	comp=E,56859μm,0.3s						
FEMA				AML	AML		
	comp=N,42201μm,0.1s						
LNSS	**Leonessa**	**0.20**	**190**	P	Pg	07 31 13.2	+0.7
LNSS				S	Sg	07 31 16.6	+1.2
LNSS				AML	AML		
	comp=E,14600μm,0.2s						
LNSS				AML	AML		
	comp=N,32450μm,0.4s						
LNSS				AML	AML		
	comp=N,31854μm,0.1s						
LNSS				AML	AML		
	comp=E,14575μm,0.2s						
T1204	**Amatrice, Fraz**	**0.21**	**127**	⇓P	Pg	07 31 13.4	+0.8
T1204				AML	AML		
	comp=E,13150μm,0.2s						
T1204				AML	AML		
	comp=N,10250μm,0.9s						
T1204				AML	AML		
	comp=N,7199μm,0.1s						
T1204				AML	AML		
	comp=E,13158μm,0.2s						
T1241	**Roccafluvione,**	**0.26**	**78**	S	Sb	07 31 19.0	-0.5
AM05	**Amandola Campo**	**0.26**	**48**	⇑P	Pg	07 31 14.2	+0.6
AM05				S	Sg	07 31 18.1	+0.9
AM05				AML	AML		
	comp=E,6210μm,1.1s						
AM05				AML	AML		
	comp=E,26250μm,1.1s						
AM05				AML	AML		
	comp=N,4085μm,0.1s						
AM05				AML	AML		
	comp=E,6205μm,1.1s						
AM05				AML	AML		
	comp=N,7425μm,1.2s						
AM05				AML	AML		
	comp=E,26300μm,1.1s						
AM05				AML	AML		
	comp=E,22098μm,0.1s						
AM05				AML	AML		
	comp=N,4087μm,0.1s						
AM05				AML	AML		
	comp=E,5664μm,0.1s						
AM05				AML	AML		
	comp=N,6628μm,0.1s						
T1243	**Rocca Santa Ma**	**0.28**	**111**	P	Pg	07 31 14.5	+0.5
T1243				S	Sg	07 31 19.0	+1.1
RM33	**Pellescritta (**	**0.31**	**162**	P	Pg	07 31 14.9	+0.6
RM33				S	Sb	07 31 20.0	-0.9
RM33				AML	AML		
	comp=E,7460μm,1.5s						
RM33				AML	AML		
	comp=N,5310μm,0.4s						
RM33				AML	AML		
	comp=N,5375μm,0.4s						
RM33				AML	AML		
	comp=N,5315μm,0.4s						
RM33				AML	AML		
	comp=E,7290μm,1.5s						

RM33				AML	AML	
	comp=E,7455μm,1.5s					
RM33				AML	AML	
	comp=E,7285μm,1.5s					
RM33				AML	AML	
	comp=N,5315μm,0.4s					
RM33				AML	AML	
	comp=N,5380μm,0.4s					
RM33				AML	AML	
	comp=N,5285μm,0.2s					
RM33				AML	AML	
	comp=N,5377μm,0.4s					
RM33				AML	AML	
	comp=E,5289μm,0.3s					
RM33				AML	AML	
	comp=E,5085μm,0.3s					
GUMA	**Gualdo di Mace**	**0.32**	**35**	⇑P	Pb	07 31 15.3 -0.6
GUMA				S	Sb	07 31 20.4 -0.8
GUMA				AML	AML	
	comp=E,38150μm,0.5s					
GUMA				AML	AML	
	comp=N,45900μm,0.6s					
GUMA				AML	AML	
	comp=E,35500μm,0.5s					
GUMA				AML	AML	
	comp=N,53350μm,0.6s					
GUMA				AML	AML	
	comp=E,42150μm,0.6s					
GUMA				AML	AML	
	comp=E,38200μm,0.5s					
GUMA				AML	AML	
	comp=E,38157μm,0.5s					
GUMA				AML	AML	
	comp=N,43428μm,0.4s					
GUMA				AML	AML	
	comp=E,35517μm,0.5s					
GUMA				AML	AML	
	comp=N,47172μm,0.3s					
ARRO	**Arrone**	**0.33**	**227**	P	Pg	07 31 15.2 +0.6
ARRO				AML	AML	
	comp=E,6105μm,1.1s					
ARRO				AML	AML	
	comp=N,5300μm,0.3s					
ARRO				AML	AML	
	comp=E,6110μm,1.1s					
ARRO				AML	AML	
	comp=N,5302μm,0.3s					
ARRO				AML	AML	
	comp=E,5471μm,0.2s					
CAMP	**Campotosto**	**0.36**	**138**	⇑P	Pg	07 31 15.8 +0.5
CAMP				AML	AML	
	comp=N,2540μm,1.2s					
CAMP				AML	AML	
	comp=E,2715μm,0.9s					
CAMP				AML	AML	
	comp=N,2275μm,0.6s					
CAMP				AML	AML	
	comp=E,2219μm,0.7s					
SEF1	**Sefro**	**0.36**	**343**	⇑P	Pg	07 31 15.7 +0.4
SEF1				S	Sb	07 31 21.5 -0.9
SEF1				AML	AML	
	comp=E,12150μm,0.2s					
SEF1				AML	AML	
	comp=N,12400μm,0.2s					
SEF1				AML	AML	
	comp=N,12433μm,0.2s					
SEF1				AML	AML	
	comp=E,12180μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.39**	**157**	P	Pg	07 31 16.4 +0.5
T1247				AML	AML	
	comp=E,5280μm,0.3s					
T1247				AML	AML	
	comp=N,4530μm,0.3s					
T1247				AML	AML	
	comp=N,4532μm,0.3s					
T1247				AML	AML	
	comp=E,3972μm,0.3s					
ASSB	**Assisi San Ben**	**0.40**	**308**	⇑P	Pg	07 31 16.6 +0.6
FIU1	**Fiuminata**	**0.40**	**344**	⇑P	Pg	07 31 16.7 +0.6
FIU1				AML	AML	
	comp=E,5975μm,0.6s					
FIU1				AML	AML	
	comp=E,5980μm,0.6s					
FIU1				AML	AML	
	comp=N,6400μm,0.6s					
FIU1				AML	AML	
	comp=N,5680μm,0.2s					
FIU1				AML	AML	
	comp=E,4271μm,0.2s					
CESX	**Cesi**	**0.42**	**243**	⇑P	Pg	07 31 16.7 +0.3
CESX				AML	AML	
	comp=E,7305μm,0.4s					
CESX				AML	AML	
	comp=N,5455μm,0.2s					
CESX				AML	AML	
	comp=E,7306μm,0.4s					
CESX				AML	AML	
	comp=N,5454μm,0.2s					
TERO	**Teramo**	**0.42**	**115**	P	Pg	07 31 16.8 +0.3
TERO				AML	AML	
	comp=E,5470μm,0.5s					
TERO				AML	AML	
	comp=N,4740μm,0.4s					
TERO				AML	AML	
	comp=E,6260μm,0.4s					
TERO				AML	AML	
	comp=N,8470μm,0.4s					
TERO				AML	AML	
	comp=E,6435μm,0.4s					
TERO				AML	AML	
	comp=N,8845μm,0.4s					
TERO				AML	AML	
	comp=N,4580μm,0.4s					
TERO				AML	AML	
	comp=N,3483μm,0.2s					
TERO				AML	AML	
	comp=E,4459μm,0.1s					
TERO				AML	AML	
	comp=E,5366μm,0.1s					
SSM1	**San Severino M**	**0.43**	**9**	⇑P	Pg	07 31 17.1 +0.5
GAG1	**Gagliole**	**0.44**	**358**	P	Pg	07 31 17.2 +0.5
MNTP	**Montappone**	**0.44**	**40**	⇓P	Pb	07 31 17.8 -0.1
MNTP				AML	AML	
	comp=E,13150μm,0.4s					
MNTP				AML	AML	
	comp=N,13800μm,1.4s					
MNTP				AML	AML	
	comp=E,13200μm,0.4s					
MNTP				AML	AML	
	comp=N,13367μm,0.4s					
MNTP				AML	AML	
	comp=E,13160μm,0.4s					
OFFI	**Offida**	**0.46**	**73**	⇑P	Pb	07 31 18.6 +0.3
OFFI				AML	AML	
	comp=E,8655μm,0.5s					
OFFI				AML	AML	
	comp=N,9316μm,0.6s					
SNTG	**Esanatoglia**	**0.47**	**347**	⇑P	Pg	07 31 17.6 +0.3
SNTG				AML	AML	
	comp=N,4370μm,0.6s					
SNTG				AML	AML	
	comp=E,3645μm,0.9s					
SNTG				AML	AML	
	comp=E,3463μm,0.1s					
SNTG				AML	AML	
	comp=E,3439μm,0.1s					
SNTG				AML	AML	
	comp=N,4367μm,0.2s					
SNTG				AML	AML	
	comp=N,4016μm,0.1s					
GIGS	**Gran Sasso**	**0.50**	**135**	⇑P	Pg	07 31 18.1 +0.2
GIGS				AML	AML	
	comp=N,382μm,0.2s					
GIGS				AML	AML	
	comp=E,636μm,0.4s					
ATCC	**AVT- Casa Cast**	**0.51**	**320**	⇑P	Pg	07 31 18.3 +0.3
ATCC				AML	AML	
	comp=E,4260μm,0.9s					
ATCC				AML	AML	
	comp=N,3510μm,0.3s					
ATCC				AML	AML	
	comp=N,3507μm,0.3s					
ATCC				AML	AML	
	comp=E,3304μm,0.3s					
FIAM	**Fiamignano**	**0.53**	**178**	P	Pg	07 31 18.9 +0.3
FIAM				S	Sb	07 31 28.0 +0.6
FIAM				AML	AML	
	comp=N,1271μm,0.9s					
FIAM				AML	AML	
	comp=E,1593μm,0.4s					
TRE1	**Treia**	**0.54**	**18**	⇑P	Pb	07 31 19.5 -0.1
TRE1				AML	AML	
	comp=E,9965μm,0.5s					
TRE1				AML	AML	
	comp=N,8785μm,1.4s					
TRE1				AML	AML	
	comp=E,9980μm,0.5s					
TRE1				AML	AML	
	comp=N,8785μm,1.4s					
TRE1				AML	AML	
	comp=N,8795μm,1.4s					
TRE1				AML	AML	
	comp=N,7475μm,0.2s					
TRE1				AML	AML	
	comp=E,8593μm,0.4s					
FOSV	**Fossato di Vic**	**0.55**	**334**	⇓P	Pb	07 31 19.7 -0.2
FOSV				S	Sb	07 31 28.0 +0.2
FOSV				AML	AML	
	comp=E,1585μm,0.6s					
FOSV				AML	AML	
	comp=N,2355μm,0.5s					
FOSV				AML	AML	
	comp=N,2840μm,0.5s					
FOSV				AML	AML	
	comp=E,1990μm,0.5s					
FOSV				AML	AML	
	comp=E,1548μm,0.4s					
FOSV				AML	AML	
	comp=N,2356μm,0.5s					
MURB	**Monte Urbino**	**0.62**	**318**	⇓P	Pg	07 31 20.5 +0.3
MURB				AML	AML	
	comp=N,6450μm,0.3s					
MURB				AML	AML	
	comp=E,6610μm,0.3s					
MURB				AML	AML	
	comp=N,6950μm,0.3s					
MURB				AML	AML	
	comp=E,6615μm,0.3s					
MURB				AML	AML	
	comp=E,6310μm,0.3s					
MURB				AML	AML	
	comp=N,6455μm,0.3s					
MURB				AML	AML	
	comp=N,6455μm,0.3s					
MURB				AML	AML	
	comp=E,6615μm,0.3s					
MURB				AML	AML	
	comp=E,6309μm,0.3s					
MURB				AML	AML	
	comp=N,6950μm,0.3s					
MMUR	**Monte Murano**	**0.64**	**354**	S	Sb	07 31 32.0 +1.4
VCEL	**Villa Celiera**	**0.69**	**126**	⇓P	Pb	07 31 22.1 -0.2
VCEL				AML	AML	
	comp=N,2177μm,0.3s					
VCEL				AML	AML	
	comp=E,2465μm,0.5s					
PP3	**Marolino**	**0.69**	**33**	⇓P	Pb	07 31 22.8 +0.5
PP3				AML	AML	
	comp=N,7222μm,0.5s					
PP3				AML	AML	
	comp=N,7168μm,0.5s					
PP3				AML	AML	
	comp=E,5604μm,0.4s					
PP3				AML	AML	
	comp=E,5235μm,0.4s					
ARVD	**Arcevia**	**0.70**	**351**	⇑P	Pg	07 31 21.9 +0.1
ARVD				S	Sb	07 31 33.0 +0.7
ARVD				AML	AML	
	comp=N,1415μm,0.9s					
ARVD				AML	AML	
	comp=E,1655μm,1.4s					
ARVD				AML	AML	
	comp=N,1270μm,0.4s					
ARVD				AML	AML	
	comp=E,1388μm,0.2s					
SRES	**S.Oreste - Sor**	**0.71**	**217**	⇓P	Pb	07 31 22.5 -0.1
SRES				S	Sn	07 31 35.0 -0.2
SRES				AML	AML	
	comp=E,1174μm,0.3s					
SRES				AML	AML	
	comp=N,1139μm,0.4s					
MGAB	**Montegabbione**	**0.73**	**279**	⇓P	Pb	07 31 23.3 +0.4
MGAB				AML	AML	
	comp=N,4085μm,0.6s					
MGAB				AML	AML	
	comp=E,3440μm,1.1s					
MGAB				AML	AML	
	comp=E,3750μm,1.1s					
MGAB				AML	AML	
	comp=N,4210μm,0.6s					
MGAB				AML	AML	
	comp=N,4208μm,0.6s					
MGAB				AML	AML	
	comp=E,3458μm,0.8s					
MGAB				AML	AML	
	comp=E,2765μm,0.8s					
MGAB				AML	AML	
	comp=N,4083μm,0.6s					
FRON	**Frontone**	**0.76**	**340**	P	Pb	07 31 23.4 -0.2
FRON				AML	AML	
	comp=E,1274μm,0.4s					
FRON				AML	AML	
	comp=N,1570μm,0.3s					
T0110	**Collepietro**	**0.77**	**138**	⇓P	Pg	07 31 23.0 0.0
T0110				AML	AML	
	comp=N,1654μm,0.4s					
T0110				AML	AML	
	comp=E,1954μm,0.6s					
AOI	**Ancona**	**0.84**	**27**	⇓P	Pb	07 31 24.6 -0.2
AOI				S	Sn	07 31 39.0 +0.6
AOI				AML	AML	
	comp=N,2070μm,0.3s					
AOI				AML	AML	
	comp=E,2340μm,1.2s					
AOI				AML	AML	
	comp=N,2070μm,0.3s					
AOI				AML	AML	
	comp=E,2127μm,0.3s					
PIEI	**Pieia**	**0.84**	**331**	S	Sn	07 31 39.0 +0.5
MPAG	**Monte Paganucc**	**0.86**	**344**	S	Sn	07 31 40.0 +0.9
SACS	**San Casciano d**	**0.87**	**274**	⇑P	Pn	07 31 26.9 +0.5
FSSB	**Fossombrone**	**0.92**	**346**	⇓P	Pn	07 31 26.7 -0.4
FSSB				S	Sn	07 31 41.0 +0.6
FSSB				AML	AML	
	comp=N,4585μm,0.4s					
FSSB				AML	AML	
	comp=E,4685μm,0.4s					
FSSB				AML	AML	
	comp=N,4584μm,0.4s					
FSSB				AML	AML	
	comp=E,4685μm,0.4s					
SF04	**Casetta**	**1.05**	**272**	⇓P	Pn	07 31 29.6 +0.7
SF04				AML	AML	
	comp=E,907μm,0.3s					
SF04				AML	AML	
	comp=N,584μm,0.8s					
CRE	**Caprese Michel**	**1.17**	**315**	⇑P	Pn	07 31 31.7 +1.1
CRE				AML	AML	
	comp=E,383μm,0.7s					
CRE				AML	AML	
	comp=N,450μm,0.6s					
TRIF	**Trifonti**	**1.64**	**282**	⇓P	Pn	07 31 37.2 +0.2
TRIF				AML	AML	
	comp=E,197μm,0.7s					
TRIF				AML	AML	
	comp=N,183μm,0.8s					

NEIC ***30*** *07:33:58.4±2.3, 66°.06N±0°.07×85°.6W±0°.2, h16km±3km, Error ellipse: s-maj=12.0km s-min=10.2km az=117.0*
OTT ***30*** *07:33:59.9±0.1, 66°.09N×85°.69W, h18km, MN4.0/4, 55km southeast from Repulse Bay, Nu*
ISC 30 07:33:56.8±0.7, 66°.05N±0°.05×85°.59W±0°.06, h10km, n20, σ2°19/26, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILON	**Igloolik, Nuna**	**3.63**	**22**	Pn	**Pn**	**07 34 54.2**	**+1.3**
ILON				Sn	**Sn**	**07 35 35.2**	**-0.5**
ILON	**Igloolik, Nuna**	**3.63**	**22**	PN	**Pn**	**07 34 54.2**	**+1.3**
ILON				SN	**Sn**	**07 35 35.2**	**-0.5**
ILON				Trac		07 35 54.5	
	comp=Z,232nm,0.4s						
FRB	**Frobisher Bay**	**7.60**	**100**	Pn	**Pn**	**07 35 49.1**	**+1.7**
FRB	**Frobisher Bay**	**7.60**	**100**	PN	**Pn**	**07 35 49.1**	**+1.7**
FRB				SN	**Sn**	**07 37 10.7**	**-2.8**
FRB				LG	Lg	07 37 58.8	
FRB				Trac		07 38 19.6	
	comp=Z,214nm,1.1s						
CLRN	**Clyde River**	**7.70**	**47**	Pn	**Pn**	**07 35 49.6**	**+0.9**
CLRN	**Clyde River**	**7.70**	**47**	PN	**Pn**	**07 35 49.6**	**+0.9**
CLRN				SN	**Sn**	**07 37 12.1**	**-3.6**
CLRN				LG	Lg	07 37 59.9	
CLRN				Trac		07 38 02.4	
	comp=Z,103nm,0.4s						
FCC	**Fort Churchill**	**8.30**	**212**	Pn	**Pn**	**07 35 57.4**	**+0.3**
FCC	**Fort Churchill**	**8.30**	**212**	PN	**Pn**	**07 35 58.0**	**+1.0**
FCC				SN	**Sn**	**07 37 26.6**	**-4.1**
FCC				LG	Lg	07 38 18.6	
FCC				Trac		07 38 25.9	
	comp=Z,108nm,0.9s						
RES	**Resolute Bay**	**9.21**	**344**	Pn	**Pn**	**07 36 10.1**	**+0.8**
RES	**Resolute Bay**	**9.21**	**344**	PN	**Pn**	**07 36 10.1**	**+0.8**
RES				SN	**Sn**	**07 37 46.1**	**-6.7**
RES				LG	Lg	07 38 45.5	
RES				Trac		07 38 49.0	
	comp=Z,121nm,1.6s						
KUKN	**Kugluktuk, NWT**	**11.64**	**292**	PN	**Pn**	**07 36 44.0**	**+1.3**
KUKN				Trac		07 40 07.6	
	comp=Z,98nm,1.4s						
YKA	**Yellowknife Ar**	**13.03**	**268**	Pn	**Pn**	**07 37 02.9**	**+1.3**
EUNU	**Eureka**	**14.08**	**359**	Pn	**Pn**	**07 37 18.1**	**+2.1**
SCHQ	**Schefferville**	**14.48**	**132**	Pn	**Pn**	**07 37 20.8**	**-0.8**
C36M	**Paulatuk**	**14.79**	**300**	Pn	**Pn**	**07 37 25.5**	**-0.1**
HILA	**High Level**	**16.26**	**257**	Pn	**Pn**	**07 37 44.7**	**-0.2**
IVI	**Ivigtut**	**17.11**	**89**		**P**	**07 37 57.2**	**-0.2**
IVI				IAmb	IAmb	07 38 12.6	
	comp=Z,75nm,1.4s						
INK	**Inuvik**	**18.35**	**299**		**P**	**07 38 11.2**	**+0.2**
INK				IAmb	IAmb	07 38 20.2	
	comp=Z,12nm,1.4s						
AGMN	**Agassiz Nation**	**18.60**	**202**	P	**Pn**	**07 38 15.9**	**+1.7**
MDND	**Maddock**	**19.69**	**209**	P	**P**	**07 38 27.4**	**+1.5**
MDND				IAmb	IAmb	07 38 30.3	
	comp=Z,12nm,0.8s						

OTT 30 07:34:41.3±0.1, 66°.07N×85°.56W, h18km, MN3.8/3, 60km southeast from Repulse Bay, Nu, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILON	**Igloolik, Nuna**	**3.61**	**22**	PN	Pn	07 35 35.8	-0.4
ILON				SN	Sn	07 36 16.4	-1.8
ILON				LG	Lg	07 36 34.9	
ILON				Trac		07 36 39.1	
	comp=Z,145nm,0.4s						
FRB	**Frobisher Bay**	**7.59**	**100**	PN	Pn	07 36 29.9	-0.9
FRB				SN	Sn	07 37 50.8	-5.5
FRB				LG	Lg	07 38 40.9	
FRB				Trac		07 38 54.3	
	comp=Z,59nm,0.7s						
CLRN	**Clyde River**	**7.68**	**47**	PN	Pn	07 36 31.4	-0.6
CLRN				Trac		07 38 47.0	
	comp=Z,57nm,0.3s						
FCC	**Fort Churchill**	**8.32**	**212**	PN	Pn	07 36 39.2	-1.6
FCC				SN	Sn	07 38 08.3	-5.9
FCC				LG	Lg	07 39 02.4	
FCC				Trac		07 39 17.6	
	comp=Z,238nm,1.6s						
RES	**Resolute Bay**	**9.19**	**344**	PN	Pn	07 36 51.5	-1.1
RES				SN	Sn	07 38 28.6	-6.8
RES				Trac		07 39 45.7	
	comp=Z,553nm,3.5s						
KUKN	**Kugluktuk, NWT**	**11.65**	**292**	PN	Pn	07 37 25.2	-1.1
KUKN				Trac		07 40 52.8	
	comp=Z,954nm,5.2s						

MOS ***30*** *07:34:47.5±0.9, 42°.95N×13°.16E, h10km, mb4.3/10, Error ellipse: s-maj=7.4km s-min=4.2km az=85.5*
STR ***30*** *07:34:47.0, 42°.92N×13°.13E, h10km, MLv4.6/12, preliminary*
IDC ***30*** *07:34:48.0±1.0, 42°.98N×13°.12E, h0km, mb4.0/10, mbtmp3.8/18, ML3.7/7, Error ellipse: s-maj=16.6km s-min=14.1km az=58.0*
ROM ***30*** *07:34:47.9±0.0, 42°.927N±0°.002×13°.133E±0°.003, h10km, ML4.0/80, Error ellipse: s-maj=0.2km s-min=0.1km az=69.0*
PDG ***30*** *07:34:48.8±0.8, 42°.94N×13°.17E, h10km, ML4.3/13, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
LDG ***30*** *07:34:48.8±0.2, 42°.85N×13°.08E, h10km, Ml4.1/19, Error ellipse: s-maj=7.0km s-min=4.8km az=34.0*
NEIC ***30*** *07:34:48.5±2.0, 42°.86N±0°.05×13°.12E±0°.05, h10km±1km, mb4.1/6, ML4.0(ROM), ML4.0(VIE), Error ellipse: s-maj=9.1km s-min=6.8km az=185.0*
PRU ***30*** *07:34:49.0±0.0, 43°.08N×13°.12E, h0km, M4.1*
BEO ***30*** *07:34:49.9±0.7, 42°.93N×13°.17E, h9km±2km, ML4.1/9*
ISC 30 07:34:49.0±0.6, 42°.93N±0°.01×13°.13E±0°.01, h8km±4km, n451, σ1°86/542, mb4.1/17, 40C-29D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.05**	**108**	P	**Pg**	**07 34 50.0**	**-0.8**
MC2				S	**Sg**	**07 34 51.3**	**-0.9**
FEMA	**Monte Fema**	**0.07**	**300**	P	**Pg**	**07 34 50.7**	**-0.4**
FEMA				S	**Sg**	**07 34 52.6**	**+0.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1245	**Castelsantange**	**0.08**	**149**	P	**Pg**	**07 34 50.9**	**-0.4**
T1245				S	**Sg**	**07 34 52.5**	**-0.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.09**	**246**	P	**Pg**	**07 34 51.0**	**-0.3**
T1216				S	**Sg**	**07 34 52.9**	**+0.1**
T1216				AML	AML		
T1216				AML	AML		
T1256	**Bolognola (MC)**	**0.10**	**41**	P	**Pg**	**07 34 50.8**	**-0.8**
T1256				S	**Sg**	**07 34 52.5**	**-0.8**
FDMO	**Fiordimonte**	**0.11**	**344**	⇓P	**Pg**	**07 34 51.0**	**-0.6**
FDMO				S	**Sg**	**07 34 53.2**	**-0.2**
T1219	**Muccia, Frazio**	**0.16**	**325**	⇑P	**Pg**	**07 34 51.9**	**-0.4**
T1219				S	**Sg**	**07 34 54.9**	**+0.3**
AM05	**Amandola Campo**	**0.17**	**73**	⇑P	**Pg**	**07 34 52.0**	**-0.6**
AM05				S	**Sg**	**07 34 54.7**	**-0.2**
AM05				AML	AML		
	comp=E,41850μm,0.6s						
AM05				AML	AML		
	comp=N,45250μm,0.6s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9155μm,0.1s						
AM05				AML	AML		
	comp=E,41800μm,0.6s						
AM05				AML	AML		
	comp=N,9150μm,0.1s						
AM05				AML	AML		
	comp=N,9153μm,0.1s						
AM05				AML	AML		
AM05				AML	AML		
	comp=E,35424μm,0.2s						
AM05				AML	AML		
	comp=N,39127μm,0.3s						
T1220	**Camerino, Fraz**	**0.19**	**350**	⇓P	**Pg**	**07 34 52.3**	**-0.5**
T1220				S	**Sg**	**07 34 55.4**	**0.0**
T1212	**Cascia, Frazio**	**0.19**	**200**	P	**Pg**	**07 34 52.8**	**-0.1**
T1212				S	**Sg**	**07 34 56.1**	**+0.6**
GUMA	**Gualdo di Mace**	**0.20**	**48**	⇑P	**Pg**	**07 34 52.8**	**-0.4**
GUMA				S	**Sg**	**07 34 56.2**	**+0.3**
T1244	**Arquata del Tr**	**0.21**	**144**	P	**Pg**	**07 34 53.0**	**-0.2**

T1244			S	Sg	07 34 56.7	+0.6
T1215	**Vallo di Nera,**	**0.23 237**	P	Pg	07 34 53.4	-0.2
T1215			S	Sg	07 34 57.4	+0.7
T1215			AML	AML		
	comp=E,28850µm,0.5s					
T1215			AML	AML		
	comp=E,30550µm,0.5s					
T1215			AML	AML		
	comp=N,37500µm,0.5s					
T1215			AML	AML		
	comp=E,28900µm,0.5s					
T1215			AML	AML		
	comp=N,38350µm,0.5s					
T1215			AML	AML		
	comp=N,37550µm,0.5s					
T1215			AML	AML		
	comp=N,21775µm,0.3s					
T1215			AML	AML		
	comp=N,20643µm,0.3s					
T1215			AML	AML		
	comp=E,25637µm,0.5s					
T1215			AML	AML		
	comp=E,25529µm,0.5s					
T1241	**Roccafluvione,**	**0.23 108**	⇑P	Pg	07 34 53.5	-0.1
T1241			S	Sg	07 34 57.3	+0.5
T1241			AML	AML		
	comp=E,56800µm,0.4s					
T1241			AML	AML		
	comp=N,50150µm,0.4s					
T1241			AML	AML		
	comp=E,56800µm,0.3s					
T1241			AML	AML		
	comp=E,59750µm,0.3s					
T1241			AML	AML		
	comp=N,47350µm,0.9s					
T1241			AML	AML		
	comp=E,56750µm,0.3s					
T1241			AML	AML		
	comp=N,50100µm,0.5s					
T1241			AML	AML		
	comp=N,47400µm,0.9s					
T1241			AML	AML		
	comp=E,59800µm,0.3s					
T1241			AML	AML		
	comp=N,46054µm,0.5s					
T1241			AML	AML		
	comp=E,56773µm,0.3s					
T1241			AML	AML		
	comp=E,59786µm,0.3s					
T1241			AML	AML		
	comp=N,50150µm,0.5s					
SEF1	**Sefro**	**0.26 329**	P	Pg	07 34 53.6	-0.5
SEF1			S	Sb	07 34 58.3	-2.3
SEF1			AML	AML		
SEF1			AML	AML		
SEF1			AML	AML		
SEF1			AML	AML		
SEF1			AML	AML		
T1217	**Poggiodomo (PG**	**0.26 214**	P	Pb	07 34 54.3	-1.7
T1217			S	Sb	07 34 58.4	-2.3
MDAR	**Monte D'Aria**	**0.27 2**	P	Pg	07 34 53.8	-0.5
MDAR			S	Sg	07 34 58.0	+0.1
MDAR			AML	AML		
	comp=E,85500µm,1.0s					
MDAR			AML	AML		
	comp=N,91900µm,0.5s					
MDAR			AML	AML		
	comp=N,92050µm,0.5s					
MDAR			AML	AML		
	comp=N,91700µm,0.5s					
MDAR			AML	AML		
	comp=N,65739µm,0.3s					
MDAR			AML	AML		
	comp=E,79647µm,0.4s					
PIO1	**Pioraco**	**0.27 337**	P	Pg	07 34 53.9	-0.6
PIO1			S	Sb	07 34 58.5	-2.6
PIO1			AML	AML		
	comp=E,42500µm,0.6s					
PIO1			AML	AML		
	comp=E,42450µm,0.5s					
PIO1			AML	AML		
	comp=N,90700µm,0.5s					
PIO1			AML	AML		
	comp=N,90750µm,0.5s					
PIO1			AML	AML		
	comp=E,42453µm,0.6s					
T1201	**Domo (RI)**	**0.28 162**	P	Pb	07 34 54.6	-1.8
T1201			S	Sb	07 34 59.4	-2.0
T1204	**Amatrice, Fraz**	**0.29 151**	P	Pg	07 34 54.2	-0.5
T1204			S	Sb	07 34 58.9	-2.6
T1204			AML	AML		
	comp=E,47900µm,0.3s					
T1204			AML	AML		
	comp=N,27600µm,0.9s					
T1204			AML	AML		
	comp=N,27550µm,0.9s					
T1204			AML	AML		
	comp=N,24985µm,0.7s					
T1204			AML	AML		
	comp=E,47889µm,0.3s					
FIU1	**Fiuminata**	**0.30 331**	P	Pg	07 34 54.4	-0.5
FIU1			S	Sb	07 34 59.4	-2.4
FIU1			AML	AML		
	comp=E,32600µm,0.6s					
FIU1			AML	AML		
	comp=N,34450µm,1.1s					
FIU1			AML	AML		
	comp=E,32550µm,0.6s					
FIU1			AML	AML		
	comp=N,34500µm,1.1s					
FIU1			AML	AML		
	comp=E,26320µm,0.5s					
FIU1			AML	AML		
	comp=N,30250µm,0.3s					
SSM1	**San Severino M**	**0.30 6**	P	Pg	07 34 54.3	-0.7
SSM1			S	Sb	07 34 59.3	-2.6
GAG1	**Gagliole**	**0.31 351**	P	Pg	07 34 54.8	-0.4
GAG1			S	Sb	07 34 59.7	-2.5
MNTP	**Montappone**	**0.33 50**	⇑P	Pb	07 34 55.2	-1.9
MNTP			S	Sb	07 35 01.2	-1.3
MNTP			AML	AML		
MNTP			AML	AML		
	comp=N,93700µm,0.9s					
MNTP			AML	AML		
	comp=N,93650µm,0.9s					
MNTP			AML	AML		
MNTP			AML	AML		
	comp=E,99235µm,0.6s					
MNTP			AML	AML		
	comp=N,93134µm,0.3s					
T1243	**Rocca Santa Ma**	**0.33 135**	P	Pg	07 34 55.0	-0.5
T1243			S	Sg	07 34 59.9	0.0
LNSS	**Leonessa**	**0.33 192**	P	Pg	07 34 54.8	-0.8
LNSS			S	Sb	07 35 00.3	-2.4
SNTG	**Esanatoglia**	**0.36 337**	⇑P	Pg	07 34 55.2	-0.8
SNTG			S	Sb	07 35 01.2	-2.3
SNTG			AML	AML		
	comp=E,23800µm,1.2s					
SNTG			AML	AML		
	comp=N,30050µm,0.7s					
SNTG			AML	AML		
	comp=E,23800µm,1.2s					
SNTG			AML	AML		
	comp=E,21650µm,0.1s					
SNTG			AML	AML		
	comp=N,31850µm,0.7s					
SNTG			AML	AML		
	comp=N,30000µm,0.7s					
SNTG			AML	AML		
	comp=N,29100µm,0.4s					
SNTG			AML	AML		
	comp=E,21775µm,0.1s					
SNTG			AML	AML		
	comp=N,30937µm,0.4s					
SNTG			AML	AML		
	comp=E,21657µm,0.1s					
ASSB	**Assisi San Ben**	**0.36 289**	⇑P	Pg	07 34 55.6	-0.5
ASSB			S	Sb	07 35 01.5	-2.2
ASSB			AML	AML		
	comp=E,43400µm,0.5s					
ASSB			AML	AML		
	comp=N,48750µm,0.4s					
ASSB			AML	AML		
	comp=N,48766µm,0.4s					
ASSB			AML	AML		
	comp=E,43405µm,0.5s					

EL6	**Elcito**	**0.40 357**	P	Pg	07 34 56.3	-0.6
EL6			S	Sb	07 35 02.5	-2.3
EL6			AML	AML		
	comp=E,82250µm,0.4s					
EL6			AML	AML		
	comp=N,72950µm,0.5s					
EL6			AML	AML		
	comp=E,82248µm,0.4s					
TRE1	**Treia**	**0.41 19**	P	Pb	07 34 56.6	-1.9
TRE1			S	Sb	07 35 03.6	-1.3
TRE1			AML	AML		
TRE1			AML	AML		
TRE1			AML	AML		
TRE1			AML	AML		
	comp=N,90228µm,0.2s					
TRE1			AML	AML		
OFFI	**Offida**	**0.41 89**	⇑P	Pb	07 34 56.9	-1.5
OFFI			AML	AML		
	comp=E,46550µm,0.7s					
OFFI			AML	AML		
	comp=N,50050µm,0.6s					
OFFI			AML	AML		
	comp=N,50052µm,0.6s					
OFFI			AML	AML		
	comp=E,46547µm,0.7s					
RM33	**Pellescritta (**	**0.42 172**	P	Pg	07 34 56.6	-0.6
RM33			S	Sb	07 35 03.3	-2.1
T1246	**Crognaleto (TE**	**0.43 142**	P	Pb	07 34 57.2	-1.8
T1246			S	Sb	07 35 03.3	-2.4
ARRO	**Arrone**	**0.44 218**	P	Pg	07 34 56.8	-0.7
ARRO			AML	AML		
	comp=E,10325µm,1.1s					
ARRO			AML	AML		
	comp=N,10515µm,0.8s					
ARRO			AML	AML		
	comp=E,10275µm,1.1s					
ARRO			AML	AML		
	comp=N,10525µm,0.8s					
ARRO			AML	AML		
	comp=E,10305µm,1.1s					
ARRO			AML	AML		
	comp=N,10530µm,0.8s					
ARRO			AML	AML		
	comp=N,10510µm,0.8s					
ARRO			AML	AML		
	comp=E,9424µm,0.7s					
CAMP	**Campotosto**	**0.44 152**		Pg	07 34 56.8	-0.8
CAMP	**Campotosto**	**0.44 152**	P	Pg	07 34 56.6	-1.0
CAMP			S	Sb	07 35 03.5	-2.4
CAMP			AML	AML		
	comp=N,14400µm,0.5s					
CAMP			AML	AML		
	comp=E,9410µm,0.9s					
CAMP			AML	AML		
	comp=N,14371µm,0.5s					
CAMP			AML	AML		
	comp=E,8331µm,0.5s					
ATCC	**AVT- Casa Cast**	**0.44 306**	P	Pg	07 34 57.1	-0.5
ATCC			AML	AML		
	comp=E,44850µm,0.9s					
ATCC			AML	AML		
	comp=N,53050µm,0.5s					
ATCC			AML	AML		
	comp=N,53000µm,0.5s					
ATCC			AML	AML		
	comp=E,44582µm,0.3s					
FOSV	**Fossato di Vic**	**0.46 324**	P	Pg	07 34 57.2	-0.7
FOSV			S	Sb	07 35 04.8	-1.5
FOSV			AML	AML		
	comp=E,39350µm,1.5s					
FOSV			AML	AML		
	comp=E,39300µm,1.5s					
FOSV			AML	AML		
FOSV			AML	AML		
FOSV			AML	AML		
	comp=E,38134µm,0.3s					
TERO	**Teramo**	**0.46 131**	P	Pg	07 34 57.0	-1.0
TERO			S	Sg	07 35 03.9	-0.1
TERO			AML	AML		
	comp=N,38700µm,0.4s					
TERO			AML	AML		
	comp=N,40000µm,0.4s					
TERO			AML	AML		
	comp=E,22750µm,0.6s					
TERO			AML	AML		
	comp=E,23350µm,0.6s					
TERO			AML	AML		
	comp=N,38750µm,0.4s					
TERO			AML	AML		
	comp=N,40000µm,0.4s					
TERO			AML	AML		
	comp=E,22160µm,0.5s					
TERO			AML	AML		
	comp=N,38731µm,0.4s					
TERO			AML	AML		
	comp=E,22987µm,0.4s					
T1247	**Pizzolo (AQ)**	**0.50 166**	P	Pg	07 34 57.9	-0.8
T1247			S	Sb	07 35 05.7	-1.9
CESX	**Cesi**	**0.52 232**		Pg	07 34 58.0	-1.0
CESX	**Cesi**	**0.52 232**	P	Pg	07 34 58.2	-0.8
CESX			AML	AML		
	comp=N,15850µm,0.6s					
CESX			AML	AML		
	comp=E,15400µm,0.4s					
CESX			AML	AML		
	comp=N,15840µm,0.6s					
CESX			AML	AML		
	comp=E,15408µm,0.4s					
MMUR	**Monte Murano**	**0.52 349**	P	Pb	07 34 58.9	-1.6
MMUR			S	Sb	07 35 06.9	-1.4
MMUR			AML	AML		
	comp=E,44550µm,0.5s					
MMUR			AML	AML		
	comp=N,38300µm,0.3s					
MMUR			AML	AML		
	comp=N,38350µm,0.3s					
MMUR			AML	AML		
	comp=E,44600µm,0.4s					
MMUR			AML	AML		
	comp=N,38303µm,0.3s					
MMUR			AML	AML		
	comp=E,44568µm,0.5s					
CADA	**Capodarco di F**	**0.53 60**	P	Pb	07 34 59.8	-0.9
CADA			AML	AML		
	comp=E,57400µm,0.5s					
CADA			AML	AML		
	comp=N,54450µm,0.8s					
CADA			AML	AML		
	comp=N,54500µm,0.8s					
CADA			AML	AML		
	comp=N,54464µm,0.8s					
CADA			AML	AML		
	comp=E,57402µm,0.5s					
CIMA	**Civitanova Mar**	**0.55 46**	P	Pb	07 34 59.4	-1.4
MURB	**Monte Urbino**	**0.56 307**		Pg	07 34 59.0	-0.8
MURB	**Monte Urbino**	**0.56 307**	P	Pg	07 34 59.2	-0.6
MURB			AML	AML		
	comp=N,63050µm,1.0s					
MURB			AML	AML		
MURB			AML	AML		
	comp=N,60200µm,1.0s					
MURB			AML	AML		
MURB			AML	AML		
	comp=N,58433µm,0.3s					
MURB			AML	AML		
	comp=N,56273µm,0.3s					
MURB			AML	AML		
MURB			AML	AML		
PP3	**Marolino**	**0.57 38**	⇑P	Pb	07 34 59.9	-1.3
GIGS	**Gran Sasso**	**0.58 146**	P	Pg	07 34 59.3	-0.8
GIGS			AML	AML		
	comp=E,4675µm,0.9s					
GIGS			AML	AML		
	comp=N,3150µm,0.9s					
GIGS			AML	AML		
	comp=N,3155µm,0.9s					
GIGS			AML	AML		
	comp=N,3127µm,0.4s					
GIGS			AML	AML		
	comp=E,4639µm,0.7s					
ARVD	**Arcevia**	**0.59 346**	P	Pg	07 34 59.6	-0.8
ARVD			S	Sb	07 35 08.9	-1.2
ARVD			AML	AML		
	comp=N,9890µm,0.1s					
ARVD			AML	AML		
	comp=E,13600µm,0.6s					

ARVD			AML	AML		
	comp=E,11104µm,0.2s					
ARVD			AML	AML		
	comp=N,9889µm,0.1s					
TRTR	**Tortoreto Alta**	**0.59 101**	⇑P	Pb	07 35 00.5	-1.0
TRTR			AML	AML		
	comp=N,50000µm,0.8s					
TRTR			AML	AML		
	comp=E,42200µm,0.6s					
TRTR			AML	AML		
	comp=E,42199µm,0.6s					
TRTR			AML	AML		
	comp=N,49974µm,0.8s					
ATFO	**Monte Foce - G**	**0.60 317**	P	Pg	07 34 59.8	-0.8
ATFO			AML	AML		
	comp=N,12750µm,1.6s					
ATFO			AML	AML		
	comp=E,14350µm,1.3s					
ATFO			AML	AML		
	comp=E,14294µm,0.3s					
ATFO			AML	AML		
	comp=N,12739µm,0.3s					
AQU	**L'Aquila**	**0.61 161**		Pg	07 34 59.3	-1.4
AQU	**L'Aquila**	**0.61 161**	P	Pg	07 34 59.3	-1.4
AQU	**L'Aquila**	**0.61 161**	P	Pg	07 34 59.4	-1.3
ATTE	**AVT- Monte Tez**	**0.63 296**	P	Pg	07 35 00.2	-1.0
ATTE			AML	AML		
	comp=E,12050µm,0.9s					
ATTE			AML	AML		
	comp=N,11150µm,0.8s					
ATTE			AML	AML		
	comp=N,11186µm,0.8s					
ATTE			AML	AML		
	comp=E,12048µm,0.9s					
ATLO	**AVT- Montelove**	**0.66 306**	⇑P	Pg	07 35 00.7	-0.9
FIAM	**Fiamignano**	**0.66 181**	P	Pg	07 35 00.7	-1.0
FRON	**Frontone**	**0.66 333**	P	Pg	07 35 00.6	-1.2
FRON			AML	AML		
	comp=N,19050µm,0.6s					
FRON			AML	AML		
	comp=E,13050µm,0.2s					
FRON			AML	AML		
	comp=N,16312µm,0.3s					
FRON			AML	AML		
	comp=E,13030µm,0.2s					
TB01	**Gubbio**	**0.68 312**	P	Pg	07 35 01.2	-1.0
TB02	**Pietralunga**	**0.69 310**	P	Pg	07 35 01.3	-1.0
ATVO	**AVT- Monte Val**	**0.70 311**	⇑P	Pg	07 35 01.4	-1.0
ATVO			AML	AML		
	comp=N,11700µm,0.4s					
ATVO			AML	AML		
	comp=E,14350µm,0.3s					
ATVO			AML	AML		
	comp=N,11692µm,0.4s					
ATVO			AML	AML		
	comp=E,14356µm,0.3s					
AOI	**Ancona**	**0.71 29**	P	Pg	07 35 01.7	-1.0
AOI			S	Sb	07 35 13.1	-0.6
AOI			AML	AML		
	comp=E,18500µm,0.3s					
AOI			AML	AML		
	comp=N,19400µm,0.4s					
AOI			AML	AML		
	comp=N,19408µm,0.4s					
AOI			AML	AML		
	comp=E,18504µm,0.3s					
ATVA	**AVT- Monte Val**	**0.71 300**	P	Pg	07 35 01.6	-1.1
PCRO	**Pietralacroce**	**0.74 23**	P	Pb	07 35 03.1	-1.1
VCEL	**Villa Celiera**	**0.75 135**	P	Pg	07 35 02.3	-1.1
ATPI	**Pietralunga -**	**0.75 315**	P	Pg	07 35 02.1	-1.2
ATPI			S	Sb	07 35 14.0	-0.7
ATPI			AML	AML		
	comp=E,12750µm,0.4s					
ATPI			AML	AML		
	comp=N,11500µm,1.1s					
MGAB	**Montegabbione**	**0.75 269**	P	Pg	07 35 02.3	-1.1
MGAB			AML	AML		
	comp=E,18350µm,0.7s					
MGAB			AML	AML		
	comp=N,15800µm,0.6s					
MGAB			AML	AML		
	comp=N,15750µm,0.6s					
MGAB			AML	AML		
	comp=N,14250µm,0.6s					
MGAB			AML	AML		
	comp=E,21200µm,0.6s					
MGAB			AML	AML		
	comp=E,21195µm,0.6s					
MGAB			AML	AML		
	comp=E,18376µm,0.7s					
MGAB			AML	AML		
	comp=N,15762µm,0.6s					
PIEI	**Pieia**	**0.75 325**	P	Pg	07 35 02.2	-1.2
PIEI			S	Sb	07 35 13.8	-0.9
PIEI			AML	AML		
	comp=N,7120µm,0.6s					
PIEI			AML	AML		
	comp=E,8855µm,0.3s					
PIEI			AML	AML		
	comp=E,8875µm,0.3s					
PIEI			AML	AML		
	comp=N,7042µm,0.3s					
ATMI	**Monte Miggiano**	**0.75 303**	P	Pg	07 35 02.3	-1.2
ATMI			AML	AML		
	comp=E,20500µm,1.3s					
ATMI			AML	AML		
	comp=N,30550µm,0.8s					
ATMI			AML	AML		
	comp=N,30547µm,0.8s					
MPAG	**Monte Paganucc**	**0.75 339**	P	Pg	07 35 02.7	-0.8
MPAG			AML	AML		
	comp=E,9665µm,0.7s					
MPAG			AML	AML		
	comp=N,10455µm,0.4s					
MPAG			AML	AML		
	comp=E,9730µm,0.7s					
MPAG			AML	AML		
	comp=N,10795µm,0.4s					
MPAG			AML	AML		
	comp=E,9755µm,0.7s					
MPAG			AML	AML		
	comp=N,10825µm,0.4s					
MPAG			AML	AML		
	comp=N,10806µm,0.4s					
MPAG			AML	AML		
	comp=E,9611µm,0.4s					
MPAG			AML	AML		
	comp=E,9671µm,0.4s					
MPAG			AML	AML		
	comp=N,10459µm,0.4s					
SENI	**Senigallia**	**0.78 5**	P	Pb	07 35 03.9	-0.9
SENI			AML	AML		
	comp=E,61650µm,0.3s					
SENI			AML	AML		
	comp=N,42050µm,1.4s					
SENI			AML	AML		
	comp=E,10400µm,0.9s					
SENI			AML	AML		
	comp=N,9145µm,1.0s					
SENI			AML	AML		
	comp=E,61600µm,0.3s					
SENI			AML	AML		
	comp=N,42050µm,1.4s					
SENI			AML	AML		
	comp=N,9115µm,1.0s					
SENI			AML	AML		
	comp=E,10390µm,0.9s					
SENI			AML	AML		
	comp=E,8563µm,0.4s					
SENI			AML	AML		
	comp=N,37365µm,0.3s					
SENI			AML	AML		
	comp=N,8620µm,0.3s					
SENI			AML	AML		
	comp=E,61619µm,0.3s					
NARO	**Abbazia di Nar**	**0.79 330**	P	Pg	07 35 02.8	-1.5
NARO			AML	AML		
	comp=E,9065µm,0.7s					
NARO			AML	AML		
	comp=N,4435µm,1.1s					
NARO			AML	AML		
	comp=N,4364µm,0.2s					
NARO			AML	AML		
	comp=E,6379µm,0.4s					
FSSB	**Fossombrone**	**0.81 341**	P	Pg	07 35 03.3	-1.2
FSSB			AML	AML		
	comp=E,25950µm,0.6s					

FSSB			AML	AML		
	comp=N,51350μm,0.3s					
FSSB			AML	AML		
	comp=E,25949μm,0.6s					
FSSB			AML	AML		
	comp=N,51353μm,0.3s					
APEC	**Apecchio**	**0.82 321**	P	**Pb**	**07 35 04.5**	**-1.0**
APEC			AML	AML		
	comp=N,2290μm,0.6s					
APEC			AML	AML		
	comp=E,2080μm,0.9s					
APEC			AML	AML		
	comp=N,7052μm,0.7s					
APEC			AML	AML		
	comp=E,2080μm,0.9s					
APEC			AML	AML		
	comp=N,2290μm,0.6s					
SRES	**S.Oreste - Sor**	**0.83 214**	P	**Pb**	**07 35 04.8**	**-0.9**
SRES			AML	AML		
	comp=N,6260μm,0.5s					
SRES			AML	AML		
	comp=E,7080μm,1.0s					
SRES			AML	AML		
	comp=E,7075μm,1.0s					
SRES			AML	AML		
	comp=N,6260μm,0.5s					
T0110	**Collepietro**	**0.85 145**	P	**Pg**	**07 35 04.0**	**-1.3**
T0110			AML	AML		
	comp=N,11500μm,1.3s					
T0110			AML	AML		
	comp=E,11800μm,0.7s					
T0110			AML	AML		
	comp=N,11388μm,0.6s					
T0110			AML	AML		
	comp=E,11768μm,0.7s					
BADI	**Badiali**	**0.87 312**	AML	AML		
	comp=E,364μm,0.4s					
BADI			AML	AML		
	comp=N,6730μm,0.4s					
BADI			AML	AML		
	comp=N,6735μm,0.4s					
BADI			AML	AML		
	comp=E,363μm,0.4s					
PE3	**Peglio**	**0.90 329**	P	**Pg**	**07 35 05.0**	**-1.2**
PE3			AML	AML		
	comp=E,75μm,0.2s					
PE3			AML	AML		
	comp=N,84μm,0.2s					
SACS	**San Casciano d**	**0.90 265**	P	**Pb**	**07 35 05.9**	**-1.0**
SACS			AML	AML		
	comp=E,8665μm,0.9s					
SACS			AML	AML		
	comp=N,7070μm,0.8s					
SACS			AML	AML		
	comp=N,6685μm,0.8s					
SACS			AML	AML		
	comp=E,8640μm,0.9s					
SACS			AML	AML		
	comp=E,8090μm,0.9s					
SACS			AML	AML		
	comp=E,8090μm,0.9s					
SACS			AML	AML		
	comp=N,7070μm,0.8s					
SACS			AML	AML		
	comp=N,6683μm,0.8s					
SACS			AML	AML		
	comp=E,8665μm,0.9s					
CAFI	**Castiglion Fio**	**0.94 296**	P	**Pg**	**07 35 05.8**	**-1.3**
CAFI			AML	AML		
	comp=E,5750μm,0.9s					
CAFI			AML	AML		
	comp=N,7090μm,1.0s					
CAFI			AML	AML		
	comp=E,5800μm,0.9s					
CAFI			AML	AML		
	comp=N,7270μm,1.0s					
CAFI			AML	AML		
	comp=N,6886μm,0.9s					
CAFI			AML	AML		
	comp=N,6661μm,0.9s					
CAFI			AML	AML		
	comp=E,5804μm,0.9s					
CAFI			AML	AML		
	comp=E,5750μm,0.9s					
MTCE	**Montecelio**	**0.95 198**	P	**Pg**	**07 35 06.0**	**-1.2**
SSP9	**Sansepolcro**	**0.97 312**	P	**Pb**	**07 35 07.2**	**-0.9**
SSP9			AML	AML		
	comp=E,5520μm,0.7s					
SSP9			AML	AML		
	comp=N,5695μm,1.6s					
SSP9			AML	AML		
	comp=N,4523μm,1.4s					
SSP9			AML	AML		
	comp=E,5521μm,0.7s					
CERT	**Cerreto**	**0.98 186**	P	**Pg**	**07 35 06.2**	**-1.7**
LATE	**Laterza**	**1.03 253**		**Pg**	**07 35 07.7**	**-1.0**
CPGN	**Carpegna, Ital**	**1.05 326**	P	**Pn**	**07 35 08.7**	**-1.6**
INTR	**Introdacqua**	**1.08 148**		Pg	07 35 04.3	-5.4
MCIV	**Monte Civitell**	**1.08 263**	P	**Pn**	**07 35 09.2**	**-1.4**
MCIV			AML	AML		
	comp=E,2885μm,0.7s					
MCIV			AML	AML		
	comp=N,3080μm,0.7s					
MCIV			AML	AML		
	comp=N,3081μm,0.7s					
MCIV			AML	AML		
	comp=E,2886μm,0.7s					
SF04	**Casetta**	**1.08 266**	AML	AML		
	comp=E,3135μm,0.5s					
SF04			AML	AML		
	comp=N,2448μm,0.4s					
RCAV	**Rocca di Cave**	**1.09 187**	P	**Pg**	**07 35 08.1**	**-1.7**
CRE	**Caprese Michel**	**1.11 309**	AML	AML		
	comp=E,3790μm,0.4s					
CRE			AML	AML		
	comp=N,5215μm,0.5s					
VVLD	**Villa Vallelon**	**1.12 161**	P	**Pg**	**07 35 08.6**	**-1.9**
VVLD			AML	AML		
	comp=E,5280μm,0.9s					
VVLD			AML	AML		
	comp=N,3795μm,1.3s					
VVLD			AML	AML		
	comp=E,5281μm,0.9s					
VVLD			AML	AML		
	comp=N,3570μm,1.0s					
SF01	**Poggio Pratacc**	**1.16 265**	AML	AML		
	comp=E,3270μm,0.8s					
SF01			AML	AML		
	comp=N,4905μm,0.9s					
LPEL	**Lama dei Pelig**	**1.18 138**	AML	AML		
	comp=N,4810μm,0.6s					
LPEL			AML	AML		
	comp=E,6280μm,0.7s					
RDP	**Rocca di Papa**	**1.21 195**	P	**Pb**	**07 35 10.3**	**-1.9**
POFI	**Posta Fibreno**	**1.28 160**	P	**Pg**	**07 35 12.7**	**-0.9**
POFI			AML	AML		
	comp=E,2690μm,0.8s					
POFI			AML	AML		
	comp=N,2780μm,1.3s					
POFI			AML	AML		
	comp=E,2765μm,1.6s					
POFI			AML	AML		
	comp=N,2825μm,1.3s					
POFI			AML	AML		
	comp=E,2687μm,0.8s					
POFI			AML	AML		
	comp=N,2517μm,0.7s					
POFI			AML	AML		
	comp=E,2640μm,0.9s					
POFI			AML	AML		
	comp=E,2790μm,1.7s					
POFI			AML	AML		
	comp=N,2644μm,0.7s					
LRP	**Arpino**	**1.32 165**	P	**Pg**	**07 35 13.6**	**-0.7**
LRP			AML	AML		
	comp=E,1395μm,1.1s					
LRP			AML	AML		
	comp=N,3090μm,0.7s					
LRP			AML	AML		
	comp=E,1395μm,1.1s					
LRP			AML	AML		
	comp=N,3092μm,0.7s					
SFI	**Santa Sofia**	**1.35 317**	P	**Pg**	**07 35 13.9**	**-1.0**
SFI			AML	AML		
	comp=E,2535μm,1.5s					
SFI			AML	AML		
	comp=N,2345μm,1.5s					
SFI			AML	AML		
	comp=E,2540μm,1.5s					
SFI			AML	AML		
	comp=N,2470μm,1.5s					
SFI			AML	AML		
	comp=E,2220μm,0.7s					
SFI			AML	AML		
	comp=N,2336μm,1.1s					
SFI			AML	AML		
	comp=N,2409μm,1.1s					
SFI			AML	AML		
	comp=E,2230μm,0.7s					
GIUL	**Giuliano Di Ro**	**1.37 176**	P	**Pg**	**07 35 14.4**	**-0.8**
RNI2	**Rionero Sannit**	**1.44 148**	P	**Pg**	**07 35 16.4**	**-0.2**
FROS	**Frosini**	**1.48 282**	P	**Pb**	**07 35 15.1**	**-1.6**
FROS			AML	AML		
	comp=E,2310μm,1.2s					
FROS			AML	AML		
	comp=N,2130μm,1.1s					
FROS			AML	AML		
	comp=N,2026μm,0.7s					
FROS			AML	AML		
	comp=E,2286μm,1.0s					
CERA	**Filignano**	**1.48 153**	P	**Pg**	**07 35 16.5**	**-0.9**
RUFI	**Rufina**	**1.49 308**	P	**Pn**	**07 35 14.8**	**-1.3**
RUFI			AML	AML		
	comp=E,2711μm,0.5s					
RUFI			AML	AML		
	comp=N,3065μm,0.9s					
RUFI			AML	AML		
	comp=N,3065μm,0.9s					
RUFI			AML	AML		
	comp=E,2709μm,0.5s					
OSSC	**Osservatorio P**	**1.50 294**		**Pn**	**07 35 15.1**	**-1.2**
OSSC	**Osservatorio P**	**1.50 294**	P	**Pn**	**07 35 15.0**	**-1.2**
OSSC			AML	AML		
	comp=E,1975μm,1.0s					
OSSC			AML	AML		
	comp=N,1350μm,0.9s					
OSSC			AML	AML		
	comp=E,1340μm,0.9s					
OSSC			AML	AML		
	comp=N,1960μm,1.0s					
OSSC			AML	AML		
	comp=N,1349μm,0.9s					
OSSC			AML	AML		
	comp=E,1342μm,0.9s					
OSSC			AML	AML		
	comp=E,1980μm,1.0s					
OSSC			AML	AML		
	comp=N,1959μm,1.0s					
MIDA	**Miranda**	**1.53 147**	P	**Pg**	**07 35 17.1**	**-1.3**
LMD	**Lutirano**	**1.55 318**	P	**Pb**	**07 35 17.0**	**-0.9**
LMD			AML	AML		
	comp=E,2285μm,0.4s					
LMD			AML	AML		
	comp=N,2685μm,0.7s					
LMD			AML	AML		
	comp=E,2284μm,0.4s					
LMD			AML	AML		
	comp=N,2684μm,0.7s					
TRIV	**Trivento**	**1.57 137**	P	**Pg**	**07 35 17.6**	**-1.5**
TRIV			AML	AML		
	comp=E,3325μm,0.8s					
TRIV			AML	AML		
	comp=N,2655μm,0.9s					
TRIV			AML	AML		
	comp=N,2655μm,0.9s					
TRIV			AML	AML		
	comp=E,3326μm,0.8s					
TRIF	**Trifonti**	**1.65 277**	P	**Pn**	**07 35 17.3**	**-1.0**
TRIF			AML	AML		
	comp=E,1190μm,0.8s					
TRIF			AML	AML		
	comp=N,1110μm,0.6s					
TRIF			AML	AML		
	comp=N,1112μm,0.6s					
TRIF			AML	AML		
	comp=E,1192μm,0.8s					
CASP	**Castiglione de**	**1.67 266**		**Pn**	**07 35 17.4**	**-1.2**
CASP	**Castiglione de**	**1.67 266**	P	**Pn**	**07 35 17.3**	**-1.2**
CASP			AML	AML		
	comp=E,494μm,1.0s					
CASP			AML	AML		
	comp=N,419μm,1.1s					
CASP			AML	AML		
	comp=E,493μm,1.0s					
CASP			AML	AML		
	comp=N,419μm,1.1s					
BSSO	**Busso**	**1.76 141**	P	**Pg**	**07 35 21.4**	**-1.3**
MPPT	**Montemurlo**	**1.81 305**	P	**Pb**	**07 35 20.7**	**-1.7**
CIGN	**Sant'Elia a Pi**	**1.83 133**	P	**Pb**	**07 35 21.4**	**-1.3**
SACR	**S. Croce Del S**	**1.93 142**	P	**Pg**	**07 35 24.2**	**-1.7**
GATE	**Gambatesa**	**1.94 136**	P	**Pb**	**07 35 24.0**	**-0.5**
BRJN	**Brijuni**	**2.03 13**	P	**Pn**	**07 35 22.7**	**-0.8**
POPM	**Popiglio**	**2.06 304**	P	**Pn**	**07 35 23.9**	**0.0**
PSB1	**Pescosannita**	**2.11 143**	P	**Pb**	**07 35 26.4**	**-1.2**
ZCCA	**Zocca**	**2.12 313**		**Pb**	**07 35 25.5**	**-2.1**
ZCCA	**Zocca**	**2.12 313**	P	**Pb**	**07 35 27.4**	**-0.3**
BDI	**Bagni Di Lucca**	**2.17 302**	P	**Pn**	**07 35 24.8**	**-0.6**
MOCO	**Biccari - m.te**	**2.17 135**	P	**Pb**	**07 35 26.8**	**-1.7**
PAOL	**Paolisi**	**2.18 150**		**Pn**	**07 35 23.1**	**-2.4**
CARD	**Cardoso**	**2.22 301**	P	**Pn**	**07 35 25.9**	**-0.3**
SGRT	**San Giovanni R**	**2.26 120**		**Pn**	**07 35 26.4**	**-0.4**
SGRT	**San Giovanni R**	**2.26 120**	P	**Pn**	**07 35 26.6**	**-0.2**
SGRT			AML	AML		
	comp=E,2195μm,0.6s					
SGRT			AML	AML		
	comp=N,2055μm,1.3s					
SGRT			AML	AML		
	comp=N,1754μm,0.5s					
SGRT			AML	AML		
	comp=E,2193μm,0.6s					
GSCL	**Gusciola**	**2.33 308**	P	**Pb**	**07 35 28.8**	**-2.5**
VLC	**Villacollemand**	**2.34 303**		**Pn**	**07 35 28.0**	**+0.1**
VLC	**Villacollemand**	**2.34 303**	P	**Pn**	**07 35 27.5**	**-0.4**
SGTA	**Sant Agata di**	**2.44 136**	P	**Pb**	**07 35 30.7**	**-2.6**
EQUI	**Equi**	**2.49 301**	P	**Pn**	**07 35 29.1**	**-0.8**
EQUI			AML	AML		
	comp=E,434μm,0.7s					
EQUI			AML	AML		
	comp=N,479μm,0.5s					
EQUI			AML	AML		
	comp=N,479μm,0.5s					
EQUI			AML	AML		
	comp=E,435μm,0.7s					
RIY	**Rijeka**	**2.59 22**	*e*Pn	**Pn**	**07 35 30.3**	**-0.9**
RIY			*e*Sn	**Sn**	**07 36 03.4**	**+0.6**
TEOL	**Teolo**	**2.65 337**		**Pn**	**07 35 32.2**	**+0.2**
TEOL	**Teolo**	**2.65 337**	P	**Pn**	**07 35 31.6**	**-0.4**
TEOL			AML	AML		
	comp=E,2805μm,1.1s					
TEOL			AML	AML		
	comp=N,2450μm,0.7s					
TEOL			AML	AML		
	comp=E,2720μm,0.8s					
TEOL			AML	AML		
	comp=N,2450μm,0.7s					
SKDS	**Skadanscina**	**2.69 13**	*i* Pn	**Pn**	**07 35 31.4**	**-1.3**
SKDS			*i* Sn	**Sn**	**07 36 03.9**	**-1.6**
SKDS			IAML		07 36 06.2	
	comp=Z,226nm,0.3s					
GRAM	**Graiana**	**2.72 306**	P	**Pn**	**07 35 32.3**	**-0.8**
PRMA	**PARMA**	**2.74 313**		**Pn**	**07 35 33.9**	**+0.6**
CEY	**Cerknica**	**2.96 18**	*e*Pn	**Pn**	**07 35 35.5**	**-0.9**
SMPL	**Sampolo**	**2.96 255**	P	**Pn**	**07 35 36.6**	**+0.2**
MSSA	**Maissana**	**2.97 299**	Pn	**Pn**	**07 35 36.0**	**-0.5**
PGF	**Pioggiola**	**3.07 264**	*e*P	**Pn**	**07 35 38.0**	**+0.1**
PGF	**Pioggiola**	**3.07 264**	AML	AML		
	comp=N,71μm,1.4s					
PGF			AML	AML		
	comp=E,79μm,0.4s					
SABO	**M.te Sabotino**	**3.07 6**	P	**Pn**	**07 35 36.7**	**-1.2**
SABO			AML	AML		
	comp=E,5380μm,0.5s					
SABO			AML	AML		
	comp=N,5700μm,0.6s					
SABO			AML	AML		
	comp=E,1345μm,0.5s					
SABO			AML	AML		
	comp=N,1445μm,0.6s					
SABO			AML	AML		
	comp=E,1347μm,0.5s					
SABO			AML	AML		
	comp=N,5703μm,0.6s					
SABO			AML	AML		
	comp=E,5381μm,0.5s					
SABO			AML	AML		
	comp=N,1446μm,0.6s					
ROVR	**Rover Verones**	**3.10 332**	P	**Pn**	**07 35 38.3**	**0.0**
ROVR			AML	AML		
	comp=E,837μm,0.4s					
ROVR			AML	AML		
	comp=N,1014μm,1.1s					
ROVR			AML	AML		
	comp=E,274μm,0.4s					
ROVR			AML	AML		
	comp=N,400μm,1.1s					
ROVR			AML	AML		
	comp=N,905μm,0.4s					
ROVR			AML	AML		
	comp=E,275μm,0.4s					
ROVR			AML	AML		
	comp=N,359μm,0.3s					
ROVR			AML	AML		
	comp=E,837μm,0.4s					
CGRP	**Cima Grappa**	**3.10 343**	P	**Pn**	**07 35 38.0**	**-0.5**
CGRP			AML	AML		
	comp=E,1690μm,1.2s					
CGRP			AML	AML		
	comp=N,1805μm,0.5s					
CGRP			AML	AML		
	comp=E,1685μm,1.2s					
CGRP			AML	AML		
	comp=N,1805μm,0.5s					
CGRP			AML	AML		
	comp=E,1584μm,0.4s					
CGRP			AML	AML		
	comp=N,1802μm,0.5s					
CGRP			AML	AML		
	comp=E,1590μm,0.4s					
CGRP			AML	AML		
	comp=N,1804μm,0.5s					
SRKY	**Kupres RS**	**3.15 67**	*e*Pn	**Pn**	**07 35 39.9**	**+0.9**
MGRS	**Mrkonjic Grad**	**3.23 61**	*e*Pn	**Pn**	**07 35 40.6**	**+0.5**
LJU	**Ljubljana**	**3.27 17**	P	**Pn**	**07 35 40.1**	**-0.5**
LJU			AML	AML		
	comp=E,4570μm,1.5s					
LJU			AML	AML		
	comp=N,6845μm,1.3s					
LJU			AML	AML		
	comp=N,6258μm,0.4s					
LJU			AML	AML		
	comp=E,4410μm,0.5s					
SALO	**Salr**	**3.28 326**	Pn	**Pn**	**07 35 41.1**	**+0.5**
SALO	**Salr**	**3.28 326**	P	**Pn**	**07 35 41.2**	**+0.5**
SALO			AML	AML		
	comp=E,844μm,0.7s					
SALO			AML	AML		
	comp=N,1165μm,0.9s					
SALO			AML	AML		
	comp=N,978μm,0.6s					
SALO			AML	AML		
	comp=E,783μm,0.9s					
SALO			AML	AML		
	comp=E,756μm,0.7s					
SALO			AML	AML		
	comp=N,951μm,0.6s					
CTI	**Castel Tesino**	**3.30 342**		**Pn**	**07 35 41.7**	**+0.7**
CTI	**Castel Tesino**	**3.30 342**	P	**Pn**	**07 35 41.7**	**+0.7**
CTI	**Castel Tesino**	**3.30 342**	P	**Pn**	**07 35 41.0**	**-0.1**
CTI			AML	AML		
	comp=E,786μm,0.7s					
CTI			AML	AML		
	comp=N,1120μm,1.4s					
CTI			AML	AML		
	comp=E,715μm,0.2s					
CTI			AML	AML		
	comp=N,1005μm,0.3s					
PRIJ	**Prijedor**	**3.30 50**	*e*Pn	**Pb**	**07 35 43.4**	**-4.4**
MPRI	**Monte Prat**	**3.32 358**	P	**Pn**	**07 35 40.8**	**-0.4**
MPRI			AML	AML		
	comp=E,742μm,0.6s					
MPRI			AML	AML		
	comp=N,827μm,0.4s					
MPRI			AML	AML		
	comp=E,959μm,0.6s					
MPRI			AML	AML		
	comp=N,1085μm,0.4s					
MPRI			AML	AML		
	comp=N,827μm,0.4s					
MPRI			AML	AML		
	comp=E,742μm,0.6s					
MPRI			AML	AML		
	comp=N,1081μm,0.4s					
MPRI			AML	AML		
	comp=E,960μm,0.6s					
STAL	**STALIGIAL**	**3.35 355**		**Pn**	**07 35 41.1**	**-0.6**
STAL	**STALIGIAL**	**3.35 355**	P	**Pn**	**07 35 41.0**	**-0.6**
STAL			AML	AML		
	comp=E,920μm,0.7s					
STAL			AML	AML		
	comp=N,798μm,0.8s					
STAL			AML	AML		
	comp=E,1174μm,0.6s					
STAL			AML	AML		
	comp=N,822μm,0.8s					
STAL			AML	AML		
	comp=E,1172μm,0.6s					
STAL			AML	AML		
	comp=N,764μm,0.3s					
STAL			AML	AML		
	comp=N,704μm,0.4s					
STAL			AML	AML		
	comp=E,920μm,0.7s					
STON	**Ston**	**3.36 89**	*e*Pn	**Pn**	**07 35 40.3**	**-1.4**
STON	**Ston**	**3.36 89**	*e*Pn	**Pn**	**07 35 40.3**	**-1.4**
STON			*e*Sn	**Sn**	**07 36 21.1**	**-0.7**
STON	**Ston**	**3.36 89**	AML	AML		
	comp=N,273μm,0.6s					
STON			AML	AML		
	comp=E,257μm,0.6s					
LUSI	**Trento, Gardas**	**3.41 333**	P	**Pn**	**07 35 42.5**	**-0.1**
LUSI			AML	AML		
	comp=E,728μm,1.5s					
LUSI			AML	AML		
	comp=N,842μm,1.3s					
LUSI			AML	AML		
	comp=N,777μm,0.5s					
LUSI			AML	AML		
	comp=E,709μm,0.5s					
CIMO	**Cimolais**	**3.42 352**	P	**Pn**	**07 35 42.2**	**-0.4**
CIMO			AML	AML		
	comp=E,257μm,0.8s					
CIMO			AML	AML		
	comp=N,324μm,0.8s					
CIMO			AML	AML		
	comp=E,253μm,0.8s					
CIMO			AML	AML		
	comp=N,314μm,0.8s					
CIMO			AML	AML		
	comp=N,233μm,0.7s					
CIMO			AML	AML		
	comp=N,251μm,0.7s					
CIMO			AML	AML		
	comp=E,233μm,0.3s					
CIMO			AML	AML		
	comp=E,236μm,0.3s					
A051A	**Mrakovica**	**3.43 51**	*e*Pn	**Pn**	**07 35 42.4**	**-0.5**
BLY	**Banja Luka**	**3.45 57**	*e*Pn	**Pn**	**07 35 41.1**	**-2.0**
BLY	**Banja Luka**	**3.45 57**	*e*Pn	**Pn**	**07 35 45.0**	**+1.9**
BLY			*e*Sn	**Sn**	**07 36 24.6**	**+0.5**
PTCC	**Patocco-Chiusa**	**3.48 3**	P	**Pn**	**07 35 42.3**	**-1.2**
PTCC			AML	AML		
	comp=E,572μm,0.6s					
PTCC			AML	AML		
	comp=N,362μm,0.7s					
PTCC			AML	AML		
	comp=E,572μm,0.6s					
PTCC			AML	AML		
	comp=N,355μm,0.5s					
MATE	**Matera**	**3.51 129**	⇓P	**Pn**	**07 35 45.6**	**+1.8**
GAGG	**Gaggia**	**3.52 335**	P	**Pn**	**07 35 43.6**	**-0.5**
GAGG			AML	AML		
	comp=E,806μm,0.8s					
GAGG			AML	AML		
	comp=N,868μm,0.7s					
GAGG			AML	AML		
	comp=E,765μm,1.0s					
GAGG			AML	AML		
	comp=N,454μm,0.9s					
GAGG			AML	AML		
	comp=E,447μm,0.9s					

GAGG AML AML
comp=N,752µm,1.0s
PRED Cave del Predi 3.53 5 Pn 07 35 43.0 -1.2
CLUD Cludinico 3.53 357 Pn 07 35 43.7 -0.5
CLUD Cludinico 3.53 357 P **Pn 07 35 43.0 -1.2**
CLUD AML AML
comp=E,632µm,0.7s
CLUD AML AML
comp=N,536µm,0.8s
CLUD AML AML
comp=E,424µm,0.7s
CLUD AML AML
comp=N,415µm,0.9s
CLUD AML AML
comp=N,416µm,0.9s
CLUD AML AML
comp=E,395µm,0.7s
ZONE Zone 3.57 324 AML AML
comp=E,483µm,0.9s
ZONE AML AML
comp=N,542µm,0.4s
ACOM Acomizza, Ital 3.63 4 P **Pn 07 35 45.2 -0.5**
ACOM AML AML
comp=E,913µm,0.5s
ACOM AML AML
comp=N,910µm,0.7s
ACOM AML AML
comp=E,875µm,0.6s
ACOM AML AML
comp=N,864µm,0.7s
ACOM AML AML
comp=E,875µm,0.6s
ACOM AML AML
comp=N,913µm,0.7s
ACOM AML AML
comp=N,865µm,0.7s
ACOM AML AML
comp=E,915µm,0.5s
ZOU Zoufplan 3.63 358 P **Pn 07 35 45.0 -0.7**
ZOU AML AML
comp=E,554µm,0.6s
ZOU AML AML
comp=N,585µm,1.0s
ZOU AML AML
comp=E,559µm,0.6s
ZOU AML AML
comp=N,624µm,1.0s
ZOU AML AML
comp=N,399µm,0.9s
ZOU AML AML
comp=E,553µm,0.6s
ZOU AML AML
comp=N,411µm,0.9s
ZOU AML AML
comp=E,538µm,0.6s
MABI Malga Bissina 3.65 330 P **Pn 07 35 46.3 +0.4**
FVI Forni Avoltri 3.68 356 P **Pn 07 35 45.8 -0.4**
FVI AML AML
comp=E,472µm,0.8s
FVI AML AML
comp=N,504µm,0.6s
FVI AML AML
comp=E,473µm,0.8s
FVI AML AML
comp=N,505µm,0.6s
MYKA Terra Mystica 3.72 5 *e*Pn **Pn 07 35 46.5 -0.3**
comp=N,27nm,0.4s,SNR=6.9
OBKA Obir 3.72 15 *e*Pn **Pn 07 35 46.2 -0.7**
OBKA Obir 3.72 15 *e*Pn **Pn 07 35 46.5 -0.4**
comp=N,6.1nm,0.2s
OBKA Obir 3.72 15 *e*Pn **Pn 07 35 46.8 -0.1**
KOSI Kohlern 3.75 341 P **Pn 07 35 47.6 +0.3**
KOSI AML AML
comp=E,742µm,0.5s
KOSI AML AML
comp=N,591µm,0.7s
KOSI AML AML
comp=E,742µm,0.5s
KOSI AML AML
comp=N,568µm,0.7s
ABTA Abfaltersbach 3.84 354 *e*Pn **Pn 07 35 49.0 +0.4**
comp=N,155nm,0.5s,SNR=32
TREB Trebinje 3.84 91 *e*Pn **Pn 07 35 48.0 -0.5**
TREB Trebinje 3.84 91 *e*Pn **Pn 07 35 48.5 0.0**
TREB *e*Sn **Sn 07 36 32.7 -1.1**
BRY Bratogost 3.97 89 *e*Pn **Pn 07 35 49.7 -0.7**
BRY Bratogost 3.97 89 *e*Pn **Pn 07 35 50.5 +0.1**
BRY *i* Sn **Sn 07 36 37.9 +0.7**
HCY Herceg Novi 3.98 95 *e*Pn **Pn 07 35 48.5 -1.9**
HCY Herceg Novi 3.98 95 ⇑*i*Pn **Pn 07 35 50.6 +0.2**
HCY *i* Sn **Sn 07 36 38.3 +1.1**
SOKA Soboth 3.99 19 *e*Pn **Pn 07 35 49.8 -0.7**
comp=N,2.6nm,0.3s
RISI Rein 4.09 350 P **Pn 07 35 52.4 +0.4**
RISI AML AML
comp=E,1500µm,0.6s
RISI AML AML
comp=N,1785µm,0.5s
RISI AML AML
comp=E,1499µm,0.6s
RISI AML AML
comp=N,1785µm,0.5s
ROSI Rosskopf 4.18 344 P **Pn 07 35 53.8 +0.5**
MUGIO Muggio 4.19 317 P **Pn 07 35 53.2 -0.1**
MUGIO AML AML
comp=E,184µm,0.5s
MUGIO AML AML
comp=N,226µm,1.0s
FUORN Ofenpass-Fuorn 4.22 332 Pn **Pn 07 35 55.6 +1.7**
UPM Unac-Piva 4.24 84 *e*Pn **Pn 07 35 54.1 0.0**
UPM *i* Sn **Sn 07 36 44.4 +0.5**
SBF Sospel 4.25 285 *e*P **Pn 07 35 53.9 -0.3**
CEME Cevo 4.28 93 ⇑*i*Pn **Pn 07 35 54.8 +0.3**
CEME *i* Sn **Sn 07 36 45.4 +0.7**
NKME Niksic 4.28 90 ⇓*i*Pn **Pn 07 35 54.8 +0.2**
NKME *i* Sn **Sn 07 36 45.5 +0.8**
VARE Varese 4.29 315 P **Pn 07 35 55.3 +0.6**
VARE AML AML
comp=E,329µm,0.7s
VARE AML AML
comp=N,271µm,0.5s
VARE AML AML
comp=N,271µm,0.5s
VARE AML AML
comp=E,329µm,0.7s
BUM Brajici-Budva 4.30 96 ⇓*i*Pn **Pn 07 35 55.1 +0.3**
BUM *i* Sn **Sn 07 36 45.9 +0.8**
HAPS Han Pijesak,Bl 4.39 73 *e*Pn **Pn 07 35 55.9 -0.2**
BEHE Becsehely 4.39 35 P **Pn 07 35 54.3 -1.7**
FETA Feichten 4.43 338 *e*Pn **Pn 07 35 58.6 +1.8**
comp=E,20nm,0.6s,SNR=7.9
TUE Stuetta 4.45 324 Pn **Pn 07 35 57.8 +0.7**
WTTA Wattenberg 4.46 347 *e*Pn **Pn 07 35 58.6 +1.5**
comp=E,15nm,0.3s,SNR=5.6
WTTA Wattenberg 4.46 347 *e*Pn **Pn 07 35 58.6 +1.5**
WTTA Wattenberg 4.46 347 P **Pn 07 35 58.4 +1.3**
DAVOX Davos/Dischmat 4.49 330 Pn **Pn 07 35 59.6 +2.1**
comp=E,12nm,0.3s,baz=152,slow=18,SNR=15
DAVOX Sn **Sn 07 36 50.9 +0.8**
comp=E,9.3nm,0.3s,baz=281,slow=23,SNR=8.8
DAVOX Davos/Dischmat 4.49 330 P **Pn 07 35 59.2 +1.6**
SQTA Sankt Quirin 4.50 343 **Pn 07 35 58.3 +0.7**
SQTA Sankt Quirin 4.50 343 P **Pn 07 35 58.3 +0.7**
SQTA Sankt Quirin 4.50 343 *i* Pn **Pn 07 35 58.3 +0.7**
comp=E,55nm,0.4s,SNR=13
DRME Dracevica, Mon 4.53 97 *e*Pn **Pn 07 35 58.2 +0.3**
DRME Dracevica, Mon 4.53 97 ⇑*i*Pn **Pn 07 35 58.3 +0.3**
DRME *i* Sn **Sn 07 36 51.5 +0.7**
PDG Podgorica 4.54 94 ⇓P **Pn 07 35 57.3 -0.8**
PDG Podgorica 4.54 94 Pn **Pn 07 35 57.6 -0.4**
PDG Podgorica 4.54 94 *e*Pn **Pn 07 35 58.4 +0.4**
PDG *e*Sn **Sn 07 36 50.4 -0.6**
TTG Podgorica 4.54 94 *e*Pn **Pn 07 35 58.4 +0.4**
TTG *i* Sn **Sn 07 36 51.8 +0.8**
WATA Walderalm 4.54 347 **Pn 07 35 59.7 +1.5**
WATA Walderalm 4.54 347 P **Pn 07 35 59.7 +1.5**
WATA Walderalm 4.54 347 *e*Pn **Pn 07 35 59.7 +1.5**
comp=E,38nm,0.5s,SNR=16
PLE Pljevlja 4.60 83 ⇓*i*Pn **Pn 07 35 59.3 +0.4**
PLE *i* Sn **Sn 07 36 53.1 +0.5**
RUDO Rudo 4.61 79 *e*Pn **Pn 07 35 56.5 -2.5**
ULC Ulcinj 4.62 100 ⇑*i*Pn **Pn 07 35 59.7 +0.5**
ULC *i* Sn **Sn 07 36 53.8 +0.7**
ARSA Arzberg 4.64 21 *i* Pn **Pn 07 35 58.6 -0.8**
comp=E,3.4nm,0.3s
ARSA Arzberg 4.64 21 *e*Pn **Pn 07 35 58.8 -0.7**
MOTA Moosalm 4.64 343 **Pn 07 36 01.4 +1.8**
MOTA Moosalm 4.64 343 P **Pn 07 36 01.4 +1.8**
MOTA Moosalm 4.64 343 *e*Pn **Pn 07 36 01.3 +1.8**
comp=E,14nm,0.3s,SNR=12
TRAV Traversella 4.65 306 P **Pn 07 35 59.0 -0.7**
TRAV AML AML
comp=E,130µm,0.9s
TRAV AML AML
comp=N,134µm,0.4s
BBLS Lazići 4.67 76 *e*Pn **Pn 07 36 00.1 +0.3**
BBLS Lazići 4.67 76 *e*Pn **Pn 07 36 00.6 +0.8**
BBLS *e*Sn **Sn 07 36 52.6 -1.6**
KOME Kolasin 4.69 89 *e*Pn **Pn 07 36 00.5 +0.3**
KOME *i* Sn **Sn 07 36 55.4 +0.5**
KOVH Kovagotottos 4.75 47 P **Pn 07 35 59.0 -2.0**
KOVH S **Sn 07 36 51.4 -4.9**
BIOA Bad Ischl, Aus 4.78 4 **Pn 07 36 01.3 0.0**
BIOA Bad Ischl, Aus 4.78 4 *e*Pn **Pn 07 36 01.3 0.0**
comp=N,60nm,0.3s,SNR=21
PART Garmisch-Parte 4.79 343 *e*Pn **Pn 07 36 03.3 +1.9**
PART *e*Sn **Sn 07 36 59.7 +2.6**
RJOB Jochberg 4.82 357 *e*Sn **Sn 07 36 59.1 +1.2**
RETA Reutte 4.86 341 *e*Pn **Pn 07 36 03.6 +1.2**
comp=N,24nm,0.4s,SNR=10
LMR La Mourre 4.86 277 *e*P **Pn 07 36 01.6 -0.9**
DAVA Damuels 4.93 333 *e*Pn **Pn 07 36 04.9 +1.4**
comp=N,52nm,0.5s,SNR=11
DAVA Damuels 4.93 333 *e*Pn **Pn 07 36 05.0 +1.4**
MBDF Montbardon 4.94 294 *e*P **Pn 07 36 04.7 +1.0**
MBDF *e*Sn **Sn 07 36 55.7 -5.4**
comp=N,56nm,0.7s
IVA Berane 4.97 88 ⇑*i*Pn **Pn 07 36 04.3 +0.3**
IVA *i* Sn **Sn 07 37 02.2 +0.5**
MOA Molln 4.99 9 *e*Pn **Pn 07 36 04.2 0.0**
MOA *e*Sn **Sn 07 37 00.8 -1.2**
MOA Molln 4.99 9 *e*Pn **Pn 07 36 04.1 0.0**
comp=N,5.8nm,0.2s
MOA Molln 4.99 9 *e*Pn **Pn 07 36 04.0 -0.2**
MOA *e*Sn **Sn 07 37 01.4 -0.6**
EMBD Embd, Matterta 5.01 313 P Pn 07 36 08.7 +4.0
SJES Sjenica 5.02 84 *e*Pn **Pn 07 36 05.6 +0.9**
SJES *e*Sn **Sn 07 37 01.4 -1.6**
PVY Plav 5.04 91 *e*Pn **Pn 07 36 05.3 +0.3**
PVY *i* Sn **Sn 07 37 03.8 +0.4**
DIVS Divibare 5.12 74 Pn **Pn 07 36 05.4 -0.7**
DIVS Divibare 5.12 74 *e*Pn **Pn 07 36 06.0 -0.1**
DIVS Divibare 5.12 74 *e*Pn **Pn 07 36 06.2 +0.1**
MORH Mrgy, Hungar 5.13 48 ⇓P Pn 07 36 10.9 +4.8
TIR Tirane 5.25 105 ⇑P **Pn 07 36 07.9 +0.1**
TIR Tirane 5.25 105 Pn **Pn 07 36 06.8 -0.9**
TIR Tirane 5.25 105 *e*Pn **Pn 07 36 08.0 +0.2**
TIR *e*Sn **Sn 07 37 06.1 -2.4**
TIR Tirane 5.25 105 P **Pn 07 36 07.7 -0.1**
LPG La Plagne 5.26 301 *e*P **Pn 07 36 09.0 +0.9**
LPG *e*Sn **Sn 07 37 10.3 +1.2**
comp=N,61nm,0.7s
MPLH Magyarpolny 5.27 35 P Pn 07 36 12.9 +4.9
RONA Rosalia, Austr 5.27 24 **Pn 07 36 07.5 -0.6**
RONA Rosalia, Austr 5.27 24 *i* Pn **Pn 07 36 07.5 -0.6**
comp=N,11nm,0.4s
LPL La Plagne 5.28 302 *e*P **Pn 07 36 09.2 +0.8**
LPL *e*Sn **Sn 07 37 07.3 -2.2**
comp=N,40nm,0.5s
FRGS Fruska Gora 5.30 63 ⇑P **Pn 07 36 09.9 +1.4**
FRGS Fruska Gora 5.30 63 *e*Pn **Pn 07 36 06.7 -1.9**
FRGS Fruska Gora 5.30 63 *e*Pn **Pn 07 36 08.6 0.0**
SOP Sopron 5.33 26 P **Pn 07 36 10.4 +1.5**
CONA Conrad Observa 5.36 20 *e*Pn **Pn 07 36 09.0 -0.3**
comp=N,3.4nm,0.2s
VLO Vlora 5.36 115 **Pn 07 36 07.5 -1.7**
VLO Vlora 5.36 115 P **Pn 07 36 07.6 -1.7**
SENIN Lac Senin/Sane 5.39 312 Pn **Pn 07 36 11.1 +1.1**
FUR Furstenfeldbru 5.40 347 *e*Pn **Pn 07 36 12.3 +2.4**
TRUS Trudelj 5.44 74 *e*Pn **Pn 07 36 09.9 -0.5**
SMRF Simiane la Rot 5.60 283 *e*P **Pn 07 36 13.9 +1.3**
ORIF Oris-en-Rattie 5.60 293 *e*P **Pn 07 36 14.8 +2.1**
GRUS Gruza 5.61 78 *e*Pn **Pn 07 36 12.8 +0.1**
GRUS *e*Sn **Sn 07 37 13.7 -3.6**
SULZ Cheisacher 5.81 324 P **Pn 07 36 16.5 +1.1**
TORNY Torny/Romont 5.83 313 P **Pn 07 36 17.4 +1.5**
SLE Schleitheim 5.84 328 P **Pn 07 36 16.7 +0.8**
BALST Balsthal 5.85 321 P **Pn 07 36 16.6 +0.6**
SELS Selova 5.86 84 *e*Pn **Pn 07 36 15.8 -0.4**
SELS *e*Sn **Sn 07 37 21.0 -2.5**
GEC2 GERESS Array S 5.93 4 **Pn 07 36 16.3 -0.9**
GEC2 GERESS Array S 5.93 4 *e*Pn **Pn 07 36 16.3 -0.9**
GEC2 *e*Sn **Sn 07 37 21.8 -3.6**
GERES GERESS Array B 5.93 4 **Pn 07 36 16.3 -0.9**
comp=N,3.3nm,0.3s,baz=173,slow=13,SNR=18
GERES Sn **Sn 07 37 21.9 -3.6**
comp=N,14nm,0.3s,baz=174,slow=24,SNR=11
comp=N,4.7nm,0.3s
GERES GERESS Array B 5.93 4 **Pn 07 36 16.2 -1.1**
CKRC Cesky Krumlov 5.95 8 *e*PN **Pn 07 36 15.9 -1.5**
CKRC *e*SN **Sn 07 37 21.2 -4.6**
ZST Bratislava 5.96 27 *e*P **Pn 07 36 18.5 +1.0**
ZST *e* 07 37 20.2
OHR Ohrid 5.99 105 *i* Pn **Pn 07 36 19.4 +1.4**
GIMEL St. Georges / 6.08 309 P **Pn 07 36 21.5 +2.3**
BOURR Bourrignon 6.11 319 P **Pn 07 36 20.9 +1.3**
MODS Modra-Piesok 6.17 27 *e*P **Pn 07 36 19.4 -1.1**
MODS *e* 07 37 27.7
BRANT Les Verrieres 6.20 313 P **Pn 07 36 22.0 +1.2**
KHC Kasperske Hory 6.21 3 Pn **Pn 07 36 20.0 -1.0**
KHC Kasperske Hory 6.21 3 *e*P **Pn 07 36 19.7 -1.3**
KHC *e* 07 37 27.8
KHC Kasperske Hory 6.21 3 *e*PN **Pn 07 36 19.7 -1.3**
KHC *e*SN **Sn 07 37 27.8 -4.4**
CABF La Chapelle 6.22 309 *e*P **Pn 07 36 22.1 +0.9**
SKO Skopje 6.22 96 *i* Pn **Pn 07 36 21.6 +0.5**
WET Wettzell 6.22 358 *e*Pn **Pn 07 36 19.8 -1.4**
WET *e*Sn **Sn 07 37 28.9 -3.5**
KIZ Kirchzarten 6.22 326 P **Pn 07 36 21.5 +0.3**
BOVS Bovan 6.30 81 ⇑P **Pn 07 36 21.3 -0.9**
BOVS Bovan 6.30 81 *e*Pn **Pn 07 36 21.6 -0.6**
BOVS *e*Sn **Sn 07 37 29.3 -5.0**
CHMF Charmoille 6.30 316 P **Pn 07 36 22.9 +0.6**
BFO Black Forest 6.37 330 Pn **Pn 07 36 24.0 +0.9**
BFO Black Forest 6.37 330 P **Pn 07 36 24.0 +0.9**
BFO Black Forest 6.37 330 *e*Pn **Pn 07 36 24.0 +0.9**
KUBS Kucevo 6.37 74 *e*Pn **Pn 07 36 22.2 -1.0**
BARS Barje 6.38 88 *e*Pn **Pn 07 36 22.9 -0.4**
RIVEL MONT RIVEL 6.40 309 P **Pn 07 36 27.0 +3.4**
VIVF Saint-Julien-I 6.41 290 *e*P **Pn 07 36 26.4 +2.7**
MDVR Moldovita 6.47 70 ⇑P **Pn 07 36 24.2 -0.5**
MOF Molkenrain 6.49 321 P **Pn 07 36 25.6 +0.8**
BOUC Bouclans 6.50 314 P **Pn 07 36 25.7 +0.6**
KRUC Moravsky 6.54 19 *e*PN **Pn 07 36 23.4 -2.1**
KRUC *e*SN **Sn 07 37 35.5 -4.8**
HINF Hinteralfeld 6.59 320 *e*P **Pn 07 36 25.9 -0.3**
HINF *e*Sn **Sn 07 37 35.6 -6.0**
comp=N,74nm,0.5s
RONF Ronchamp 6.62 319 P **Pn 07 36 27.1 +0.6**
SSB Saint Sauveur 6.62 294 Pn **Pn 07 36 27.1 +0.5**
SSB Saint Sauveur 6.62 294 P **Pn 07 36 27.1 +0.5**
BZS Buzias 6.66 63 ⇑P **Pn 07 36 27.7 +0.6**
BZS Buzias 6.66 63 ⇑P **Pn 07 36 27.7 +0.6**
ZAGS Zajecar 6.69 79 *e*Pn **Pn 07 36 27.1 -0.5**
ECH Echery 6.75 324 **Pn 07 36 28.3 0.0**
ECH Echery 6.75 324 P **Pn 07 36 28.3 0.0**
WLS Welschbruch 6.82 326 P **Pn 07 36 29.9 +0.6**
VRAC Vranov 6.82 19 ⇑P Pb 07 36 40.0 -7.7
VRAC Vranov 6.82 19 Pn **Pn 07 36 29.5 +0.2**
comp=N,0.4nm,0.3s,baz=227,slow=15,SNR=2.1
VRAC Sn **Sn 07 37 41.8 -5.4**
comp=N,2.8nm,0.3s,baz=108,slow=21,SNR=6.1
comp=N,2.4nm,0.6s
VRAC Vranov 6.82 19 *e*PN **Pn 07 36 28.1 -1.2**
VRAC *e*SN **Sn 07 37 42.1 -5.0**
LASF Ste Croix 6.84 283 *e*P **Pn 07 36 32.3 +2.6**
CDF Champ du Feu 6.85 325 *e*P **Pn 07 36 29.5 -0.3**
CDF *e*Sn **Sn 07 37 43.6 -4.3**
comp=N,60nm,0.6s
VYHS Vyhne 6.85 34 *e*P **Pn 07 36 30.5 +0.8**
VYHS *e* 07 37 44.0
ROTZ Rotzenmuhle 6.87 355 *e*Sn **Sn 07 37 42.7 -5.7**
GRFO Grafenberg 6.89 350 Pn **Pn 07 36 29.9 -0.4**
GRFO Grafenberg 6.89 350 P **Pn 07 36 29.9 -0.4**
GRA1 Grafenberg Arr 6.89 350 Pn **Pn 07 36 30.1 -0.3**
GRF Grafenberg Arr 6.89 350 P **Pn 07 36 30.1 -0.3**
SIRR Siria 6.94 58 ⇑P **Pn 07 36 32.3 +1.3**
HAU Haudompre 6.96 319 *e*P **Pn 07 36 31.2 -0.1**
HAU *e*Sn **Sn 07 37 44.2 -6.5**
comp=N,129nm,0.6s
ZAPS Zavoj 6.96 84 *e*Pn **Pn 07 36 32.7 +1.3**
HERR Herculane 6.99 71 ⇑P **Pn 07 36 31.6 0.0**
BLKB Belogradchik 7.00 81 ⇑P **Pn 07 36 31.4 -0.5**
DJES Djerdap 7.01 72 ⇑P **Pn 07 36 32.1 +0.1**
GOPC GO Pecny, Ondr 7.08 9 *e*P **Pn 07 36 31.4 -1.5**
GOPC *e* 07 37 48.0
GOPC GO Pecny, Ondr 7.08 9 *e*PN **Pn 07 36 31.4 -1.5**
GOPC *e*SN **Sn 07 37 48.0 -5.6**
MANZ Manzenberg 7.10 355 *e*Pn **Pn 07 36 32.8 -0.4**
MANZ *e*Sn **Sn 07 37 48.2 -5.8**
PRU Pruhonice 7.13 7 *e*P **Pn 07 36 33.1 -0.5**
PRU *e* 07 37 49.3
PRU Pruhonice 7.13 7 *e*PN **Pn 07 36 33.1 -0.5**
PRU *e*SN **Sn 07 37 49.3 -5.4**
VAY Valandovo 7.20 100 *i* Pn **Pn 07 36 34.5 -0.1**
NKC Novy Kostel 7.32 357 *e*P **Pn 07 36 36.4 +0.2**
NKC *e* 07 37 54.9
NKC Novy Kostel 7.32 357 *e*PN **Pn 07 36 36.4 +0.2**
NKC *e*SN **Sn 07 37 54.9 -4.6**
GZR Gura Zlata 7.36 67 ⇑P **Pn 07 36 36.9 +0.1**
VTS Vitosha 7.44 89 ⇑P **Pn 07 36 38.1 +0.1**
VTS Vitosha 7.44 89 Pn **Pn 07 36 38.1 +0.1**
VTS Vitosha 7.44 89 P **Pn 07 36 38.2 +0.1**
MORC Moravsky Berou 7.50 22 *e*PN **Pn 07 36 37.9 -0.8**
MORC *e*SN **Sn 07 37 59.0 -4.9**
SMF Signal de Mont 7.58 303 *e*P **Pn 07 36 39.6 -0.2**
SMF *e*Sn **Sn 07 37 58.8 -7.1**
comp=N,29nm,0.6s
DEV Deva 7.60 64 ⇑P **Pn 07 36 40.3 +0.3**
DEV Deva 7.60 64 ⇑P **Pn 07 36 40.3 +0.3**
PAGF Fort de Pagny 7.65 320 *e*P **Pn 07 36 41.2 +0.5**
baz=151
PAGF *e*Sn **Sn 07 38 04.3 -3.2**
comp=N,63nm,0.7s
DPC Dobruska-Polom 7.74 15 *e*P **Pn 07 36 40.9 -1.1**
DPC Dobruska-Polom 7.74 15 *e*PN **Pn 07 36 40.9 -1.1**
SFTF Sexfontaines 7.75 316 *e*P **Pn 07 36 42.3 +0.2**
baz=128
SFTF *e*Sn **Sn 07 38 04.8 -5.2**
comp=N,53nm,0.8s
KEST Kesra 7.76 203 Pn Pn 07 36 47.5 +5.2
comp=N,0.5nm,0.3s,baz=94,slow=6.5,SNR=4.2
MOX Moxa 7.79 353 *e*Pn **Pn 07 36 39.6 -3.0**
MOX *e*Sn **Sn 07 38 03.9 -7.1**
DRGR 7.83 57 ⇑P **Pn 07 36 44.8 +1.6**
DRGR 7.83 57 ⇑P **Pn 07 36 44.8 +1.6**
LOR Lormes 7.86 307 *e*P **Pn 07 36 44.1 +0.4**
baz=118
LOR *e*Sn **Sn 07 38 08.2 -4.7**
comp=N,24nm,0.5s
LOR Lormes 7.86 307 P Pn 07 36 48.1 +4.4
OSTC Ostas 7.92 14 *e*PN **Pn 07 36 43.9 -0.5**
CHVC Chvalec 7.92 14 *e*PN **Pn 07 36 43.3 -1.2**
CHVC *e*SN **Sn 07 38 08.6 -5.6**
MEZF Maizieres J'vi 7.94 317 *e*P **Pn 07 36 45.7 +1.1**
baz=136
MEZF *e*Sn **Sn 07 38 07.0 -7.6**
comp=N,34nm,0.6s
AVF Avril sur Loir 7.95 302 *e*P **Pn 07 36 44.4 -0.4**
AVF *e*Sn **Sn 07 38 08.7 -6.1**
comp=N,24nm,0.9s
BRG Berggiesshubel 7.97 4 *e*P Pn 07 36 48.9 +3.8
BRG *e* 07 38 09.3
BRG pmax pmax
comp=Z,4.0nm,0.5s
SSF Saint Saulge 7.97 305 *e*P **Pn 07 36 45.5 +0.3**
SSF *e*Sn **Sn 07 38 07.6 -7.9**
comp=Z,20nm,0.6s
SAVF Savonnieres en 7.98 318 *e*P **Pn 07 36 46.5 +1.3**
baz=146
SAVF *e*Sn **Sn 07 38 09.3 -6.3**
comp=Z,32nm,0.7s
TNS Taunus Mts 7.98 338 *e*Pn **Pn 07 36 46.3 +1.0**
MTLF Montolieu 7.99 277 *e*P **Pn 07 36 47.2 +1.7**
BGF Bois d'Agland 8.17 300 *e*P **Pn 07 36 51.2 +3.3**
BGF *e*Sn **Sn 07 38 13.1 -7.3**
comp=Z,29nm,0.4s
CAF Calviac 8.23 288 *e*P **Pn 07 36 50.2 +1.4**
WLF Walferdange 8.29 327 Pn **Pn 07 36 48.5 -1.0**
WLF Walferdange 8.29 327 P **Pn 07 36 48.5 -1.0**
WLF Walferdange 8.29 327 *d*PP Pn 07 36 56.3 +6.8
WLF *d*S **Sn 07 38 24.0 +0.8**
CLL Collm 8.38 359 Pn **Pn 07 36 49.0 -1.8**
CLL Collm 8.38 359 *e*P **Pn 07 36 50.0 -0.8**
CLL *e* 07 38 21.0
CLL Collm 8.38 359 *e*Pn **Pn 07 36 50.0 -0.8**
CLL *e*Sn **Sn 07 38 21.0 -4.6**
CLL *ex* x 07 38 34.0
CLL *ex* x 07 38 48.0
CLL *e*Sg **Sg 07 39 20.0 +2.1**
comp=Z,33nm,1.1s
PLVB Pleven 8.41 83 ⇓P **Pn 07 36 51.3 +0.1**
TCF Toulx Ste Croi 8.48 297 *e*P **Pn 07 36 53.7 +1.5**
TCF *e*Sn **Sn 07 38 19.9 -8.2**
comp=Z,11nm,0.6s
ARR Arges 8.62 70 ⇑P **Pn 07 36 54.7 +0.6**
RJF Les Rejaudoux 8.69 290 *e*P **Pn 07 36 57.3 +2.3**
VOIR 8.93 70 ⇓P **Pn 07 36 58.6 +0.3**
VOIR 8.93 70 ⇓P **Pn 07 36 58.6 +0.3**
RCHB Rochefort 9.05 326 *d*P **Pn 07 37 00.6 +0.7**
RCHB *d*S **Sn 07 38 37.5 -4.3**
MEM Membach 9.10 330 *d*P **Pn 07 37 02.3 +1.7**
MEM *d*S **Sn 07 38 42.1 -1.1**
LFF La Frestale 9.17 287 *e*P **Pn 07 37 04.1 +2.6**
GIVF Givet 9.18 324 *e*P **Pn 07 37 02.4 +0.8**
BCLA Clavier 9.22 327 *d*P **Pn 07 37 04.3 +2.1**
BCLA *d*S **Sn 07 38 41.9 -4.2**
BMRD Maredsous 9.35 325 *d*P **Pn 07 37 04.1 +0.1**
BMRD *d*PP **PnPn 07 37 11.9 +0.3**
BMRD *d*S **Sn 07 38 48.1 -1.2**
EPF Esparros 9.38 275 *e*P **Pn 07 37 07.0 +2.5**
RDO Rodhopi 9.40 97 Pn **Pn 07 37 04.4 -0.3**
BAIF Baives 9.42 322 *e*P **Pn 07 37 07.7 +2.8**
BAIF *e*Sn **Sn 07 38 45.2 -5.7**
comp=Z,29nm,0.9s
MLR Muntele Rosu 9.55 70 ⇑P **Pn 07 37 06.9 -0.1**
MLR Muntele Rosu 9.55 70 Pn **Pn 07 37 08.4 +1.5**
comp=Z,0.6nm,0.3s,baz=124,slow=17,SNR=6.6
comp=Z,3.6nm,0.6s
MLR Muntele Rosu 9.55 70 Pn **Pn 07 37 06.1 -0.9**
BURAR Bucovina Array 9.72 57 ⇓P **Pn 07 37 12.0 +2.8**
BURAR Bucovina Array 9.72 57 ⇓P **Pn 07 37 12.0 +2.8**
NEHR Nehoiu 9.78 71 ⇓P **Pn 07 37 11.0 +1.0**
ETSF Etsaut 10.05 274 *e*P **Pn 07 37 17.1 +3.4**
MFF Saint Martin d 10.13 296 *e*P **Pn 07 37 15.2 +0.5**
IDI Anoyia 11.89 126 Pn **Pn 07 37 39.4 +0.5**
comp=Z,0.2nm,0.3s,baz=15,slow=10,SNR=3.0
IDI Sn **Sn 07 39 46.7 -5.1**
comp=Z,0.6nm,0.3s,baz=148,slow=9.6,SNR=3.1
comp=Z,2.8nm,0.7s
ESDC Sonseca Array 13.26 262 Pn **Pn 07 37 57.9 +0.3**
comp=Z,0.3nm,0.5s,baz=73,slow=15,SNR=1.4
AKBB Malin Array Si 13.47 49 ⇑*e*P Pn 07 38 15.3 -5.0
NACGM Naroch 14.94 32 *e*P **Pn 07 38 01.1 +0.8**
BRTR Keskin Array B 15.73 95 Pn **Pn 07 38 31.1 +0.1**
baz=260,slow=17,SNR=1.6
comp=Z,0.6nm,0.7s
EKA Eskdalemuir Ar 16.31 325 Pn **P 07 38 38.9 -2.3**
baz=137,slow=14
comp=Z,0.2nm,0.3s
NAO01 NORSAR Array S 18.00 356 **P 07 39 00.4 +0.6**
NB2 NORSAR Subarra 18.18 357 P **P 07 39 03.2 +1.3**
comp=Z,4.4nm,0.9s,baz=175,slow=11
NOA NORSAR Array B 18.18 357 P **P 07 39 01.7 -0.2**
baz=170,slow=13,SNR=4.9
comp=Z,0.9nm,0.5s
NC204 NORSAR Array S 18.43 356 P **Pn 07 39 05.0 +0.3**
NC204 IAmb IAmb 07 39 07.9
comp=Z,9.3nm,1.0s
OBN Obninsk 19.51 43 *e*P **Pn 07 39 17.4 -0.2**
OBN pmax pmax
comp=Z,6.0nm,1.2s
FINES FINESS Array B 20.10 18 P Pn 07 39 22.6 -2.1
comp=Z,4.4nm,0.8s,baz=204,slow=9.8,SNR=5.9
comp=Z,4.4nm,0.8s
FINES FINESS Array B 20.10 18 P Pn 07 39 23.3 -1.3
FINES FINESS Array B 20.10 18 P Pn 07 39 23.3 -1.3
FIA1 FINESS Array S 20.10 18 P Pn 07 39 23.2 -1.5
FIA1 IAmb IAmb 07 39 43.1

comp=Z,23nm,1.1s
KIV Kislovodsk 21.44 77 *e*P **P 07 39 38.0 +0.4**
KIV pmax pmax
comp=Z,13nm,1.1s
ASF Jabal al Asfar 21.62 112 P **P 07 39 39.4 -0.2**
comp=Z,1.5nm,0.5s,baz=291,slow=8.6,SNR=1.5
comp=Z,1.5nm,0.5s
KBZ Khabaz 21.62 78 P **P 07 39 40.4 +1.0**
comp=Z,5.5nm,0.8s,baz=302,slow=8.7,SNR=8.4
comp=Z,5.5nm,0.8s
KBZ Khabaz 21.62 78⇑ *e*P **P 07 39 40.3 +0.9**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KLMR Klimovskoe 23.96 32 *e*P **P 07 40 03.0 -0.4**
KLMR pmax pmax
comp=Z,23nm,1.6s
KLMR Klimovskoe 23.96 32 *e*P **P 07 40 03.1 -0.4**
KLMR AMP 07 40 11.2
comp=Z,23nm,1.6s
TORD Torodi Ar. Bea 31.28 202 P **P 07 41 09.2 -0.3**
comp=Z,0.8nm,0.6s,baz=18,slow=8.2,SNR=7.0
comp=Z,0.8nm,0.6s
ARU Arti 31.72 49 P **P 07 41 11.5 -1.5**
comp=Z,4.7nm,0.7s,baz=260,slow=9.8,SNR=7.9
comp=Z,4.7nm,0.7s
ARU Arti 31.72 49 P **P 07 41 12.1 -1.0**
ARU Arti 31.72 49 *d i*P **P 07 41 12.5 -0.5**
ARU 07 42 15.0
ARU S **S 07 46 23.5 +0.8**
ARU SS **SnSn 07 48 11.0 +2.1**
ARU pmax pmax
comp=Z,5.0nm,0.7s
GEYT Alibeck 34.29 83 P **P 07 41 37.5 +1.7**
comp=Z,2.2nm,0.6s,baz=311,slow=9.0,SNR=5.5
comp=Z,2.2nm,0.6s
BRVK Borovoye 38.60 54 P **P 07 42 10.7 -1.6**
BRVK IAmb IAmb 07 42 16.6
comp=Z,3.6nm,0.9s
BRVK Borovoye 38.60 54⇓ *e*P **P 07 42 12.7 +0.4**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
KK31 Karatay Array 41.23 69 P **P 07 42 35.6 +1.3**
KK31 IAmb IAmb 07 42 39.0
comp=Z,2.8nm,1.1s
KK31 Karatay Array 41.23 69 P **P 07 42 35.6 +1.3**
KK31 pmax pmax
comp=Z,3.0nm,1.1s
MKAR Makanchi Array 47.73 60 P **P 07 43 25.9 -0.3**
comp=Z,1.1nm,0.9s,baz=312,slow=6.1,SNR=4.3
comp=Z,1.1nm,0.9s
MKAR Makanchi Array 47.73 60 P **P 07 43 25.1 -1.2**
MKAR Makanchi Array 47.73 60 *i* P **P 07 43 28.5 +2.3**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
DGZ Jazzator, Alta 49.82 55⇓ *e*P **P 07 43 42.6 +0.2**
DGZ pmax pmax
comp=Z,2.0nm,1.3s
WMQ Urumqi 52.43 62 *e*P **P 07 44 04.8 +2.8**
TIXI Tiksi 57.14 20⇑ *e*P **P 07 44 36.6 +1.1**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 62.10 49⇓ *e*P **P 07 45 09.2 -1.2**
ULN pmax pmax
comp=Z,1.0nm,0.8s
BILL Bilibino 67.52 11 *i* P **P 07 45 46.6 +1.4**
BILL pmax pmax
comp=Z,14nm,1.1s
ZEA Zeya 68.43 36 *e*P P 07 45 45.4 -5.7
ILAR Eielson Array 71.50 351 P **P 07 46 10.8 +1.1**
comp=Z,0.5nm,0.7s,baz=33,slow=6.1,SNR=5.6
comp=Z,0.5nm,0.7s
PZH PanZhiHua 71.51 71 P **P 07 46 12.0 +1.4**
KMI Kunming 73.08 71⇑P **P 07 46 22.8 +2.6**
CMAR Chiang Mai Arr 74.66 79 P **P 07 46 29.7 +0.4**
comp=Z,2.4nm,0.3s,baz=297,slow=6.6,SNR=4.8
comp=Z,2.4nm,0.3s
NJ2 Nanjing 79.08 56 *e*P **P 07 46 52.8 -1.2**
TXAR Lajitas Array 87.62 309 P **P 07 47 38.3 +0.1**
comp=Z,1.0nm,1.2s,baz=131,slow=4.1,SNR=3.0
comp=Z,1.0nm,1.2s

*LDG **30** 07:37:19.7±0.3, 42°.88N×13°.15E, h2km, Ml3.7/2, Error ellipse: s-maj=7.0km s-min=5.2km az=56.0*
*ROM **30** 07:37:20.2±0.0, 42°.884N±0°.002×13°.103E±0°.004, h9km, ML3.7/30, Error ellipse: s-maj=0.3km s-min=0.2km az=87.0*
*IDC **30** 07:37:20.1±2.1, 42°.83N×13°.09E, h0km, mb3.5/2, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=78.5km s-min=23.5km az=100.0*
ISC 30 07:37:20.2±0.7, 42°.89N±0°.01×13°.14E±0°.02, h13km±3km, n92, σ1§48/130, 7C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**53**	P	**Pg**	**07 37 22.5**	**-0.5**
MC2				S	**Sg**	**07 37 24.3**	**-0.6**
T1245	**Castelsantange**	**0.04**	**130**	⇓P	**Pg**	**07 37 22.7**	**-0.3**
T1245				S	**Sg**	**07 37 24.1**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.09**	**274**	⇑P	**Pb**	**07 37 22.7**	**-0.5**
T1216				S	**Sb**	**07 37 24.2**	**-1.1**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.10**	**319**	P	**Pb**	**07 37 23.1**	**-1.0**
FEMA				S	**Sb**	**07 37 24.9**	**-1.8**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1214	**Arquata del Tr**	**0.14**	**158**	P	**Pg**	**07 37 24.3**	**+0.4**
T1214				S	**Sg**	**07 37 26.5**	**+0.2**
T1256	**Bolognola (MC)**	**0.14**	**27**	P	**Pg**	**07 37 23.9**	**+0.1**
T1256				S	**Sg**	**07 37 26.7**	**+0.3**
T1212	**Cascia, Frazio**	**0.15**	**208**	P	**Pg**	**07 37 24.0**	**0.0**
T1212				S	**Sg**	**07 37 26.6**	**-0.1**
FDMO	**Fiordimonte**	**0.16**	**345**	P	**Pb**	**07 37 24.0**	**-1.0**
FDMO				S	**Sb**	**07 37 26.7**	**-1.5**
T1213	**Norcia, Frazio**	**0.16**	**184**	P	**Pg**	**07 37 24.1**	**0.0**
T1213				S	**Sg**	**07 37 26.8**	**0.0**
T1244	**Arquata del Tr**	**0.17**	**138**	P	**Pg**	**07 37 25.4**	**+1.1**
T1244				S	**Sg**	**07 37 28.2**	**+1.1**
AM05	**Amandola Campo**	**0.18**	**59**	P	**Pg**	**07 37 25.0**	**+0.5**
AM05				S	**Sg**	**07 37 28.4**	**+1.1**
AM05				AML	AML		
AM05	comp=E,14000μm,0.5s			AML	AML		
AM05	comp=E,51050μm,0.9s			AML	AML		
AM05	comp=N,1685μm,0.3s			AML	AML		
AM05	comp=E,14050μm,0.5s			AML	AML		
AM05	comp=E,51000μm,0.9s			AML	AML		
AM05	comp=N,1680μm,0.3s			AML	AML		
AM05	comp=N,13400μm,1.4s			AML	AML		
T1219	**Muccia, Frazio**	**0.20**	**330**	P	**Pb**	**07 37 24.7**	**-1.1**
CSP1	**Cessapalombo**	**0.21**	**13**	P	**Pg**	**07 37 25.1**	**+0.1**
CSP1				S	**Sg**	**07 37 29.0**	**+0.7**
T1241	**Roccafluvione,**	**0.21**	**98**	⇑P	**Pg**	**07 37 26.1**	**+1.1**
T1241				S	**Sg**	**07 37 30.1**	**+1.9**
T1241	comp=N,31500μm,0.7s			AML	AML		
T1241	comp=E,66350μm,0.3s			AML	AML		
T1241	comp=E,65300μm,0.3s			AML	AML		
T1241	comp=N,31250μm,0.4s			AML	AML		
T1241	comp=N,31550μm,0.7s			AML	AML		
T1241	comp=E,66400μm,0.3s			AML	AML		
T1241	comp=N,31200μm,0.4s			AML	AML		
T1218	**Civita (PG)**	**0.22**	**185**	P	**Pg**	**07 37 26.2**	**+1.2**
T1218				S	**Sg**	**07 37 28.9**	**+0.5**
T1215	**Vallo di Nera,**	**0.22**	**248**	⇑P	**Pg**	**07 37 24.9**	**-0.1**
T1215				S	**Sb**	**07 37 28.1**	**-1.8**
T1215				AML	AML		
T1215	comp=E,22300μm,0.4s			AML	AML		
T1215	comp=E,21450μm,0.4s			AML	AML		
T1215	comp=N,21350μm,0.3s			AML	AML		
T1215	comp=N,21900μm,0.3s			AML	AML		
GUMA	**Gualdo di Mace**	**0.23**	**39**	P	**Pb**	**07 37 25.9**	**-0.3**
GUMA				S	**Sb**	**07 37 30.2**	**0.0**
GUMA				AML	AML		
GUMA	comp=E,84700μm,0.6s			AML	AML		
GUMA	comp=N,76700μm,0.5s			AML	AML		
GUMA				AML	AML		
GUMA	comp=E,63350μm,0.5s			AML	AML		
T1220	**Camerino, Fraz**	**0.23**	**350**	P	**Pg**	**07 37 25.4**	**+0.2**
T1220				S	**Sg**	**07 37 29.3**	**+0.8**
T1217	**Poggiodomo (PG**	**0.23**	**222**	P	**Pg**	**07 37 25.2**	**0.0**
T1217				S	**Sg**	**07 37 28.9**	**+0.2**
T1201	**Domo (RI)**	**0.24**	**160**	P	**Pb**	**07 37 26.9**	**+0.5**
T1201				S	**Sb**	**07 37 30.5**	**-0.1**
T1204	**Amatrice, Fraz**	**0.25**	**148**	P	**Pb**	**07 37 25.9**	**-0.6**
T1204				S	**Sb**	**07 37 30.2**	**-0.6**
T1204				AML	AML		
T1204	comp=N,26850μm,1.2s			AML	AML		
T1204	comp=E,38750μm,0.6s			AML	AML		
T1204	comp=N,26900μm,1.2s			AML	AML		
LNSS	**Leonessa**	**0.29**	**195**	P	**Pg**	**07 37 26.2**	**-0.1**
LNSS				AML	AML		
LNSS	comp=N,37850μm,0.7s			AML	AML		
LNSS	comp=E,16350μm,0.2s			AML	AML		
LNSS	comp=N,37800μm,0.7s			AML	AML		
T1243	**Rocca Santa Ma**	**0.29**	**130**	P	**Pb**	**07 37 26.9**	**-0.5**
T1243				S	**Sb**	**07 37 31.8**	**-0.4**
SEF1	**Sefro**	**0.30**	**332**	P	**Pg**	**07 37 26.8**	**+0.4**
SEF1				S	**Sg**	**07 37 31.2**	**+0.6**
MDAR	**Monte D'Aria**	**0.31**	**0**	P	**Pb**	**07 37 27.2**	**-0.4**
MDAR				S	**Sg**	**07 37 31.8**	**+0.8**
PIO1	**Pioraco**	**0.32**	**339**	P	**Pg**	**07 37 26.7**	**0.0**
PIO1				S	**Sg**	**07 37 31.9**	**+0.8**
FIU1	**Fiuminata**	**0.34**	**333**	P	**Pg**	**07 37 27.3**	**+0.1**
FIU1				S	**Sg**	**07 37 32.6**	**+0.7**
FIU1	comp=E,6555μm,0.8s			AML	AML		
FIU1	comp=N,5440μm,1.5s			AML	AML		
FIU1	comp=E,6560μm,0.8s			AML	AML		
FIU1	comp=N,5435μm,1.5s			AML	AML		
SSM1	**San Severino M**	**0.34**	**4**	P	**Pg**	**07 37 27.4**	**+0.2**
SSM1				S	**Sb**	**07 37 33.1**	**-0.4**
MNTP	**Montappone**	**0.35**	**44**	P	**Pb**	**07 37 28.0**	**-0.3**
MNTP				S	**Sn**	**07 37 35.2**	**-2.6**
MNTP				AML	AML		
MNTP	comp=E,18450μm,0.3s			AML	AML		
MNTP	comp=N,13750μm,0.5s			AML	AML		
GAG1	**Gagliole**	**0.36**	**351**	P	**Pg**	**07 37 27.8**	**+0.3**
GAG1				AML	AML		
GAG1	comp=E,22400μm,0.7s			AML	AML		
GAG1	comp=N,21600μm,0.6s			AML	AML		
RM33	**Pellescritta (**	**0.38**	**172**	P	**Pb**	**07 37 28.9**	**+0.1**
RM33				S	**Sb**	**07 37 34.4**	**-0.2**
RM33				AML	AML		
RM33	comp=N,10475μm,0.7s			AML	AML		
RM33	comp=N,10675μm,0.7s			AML	AML		
RM33	comp=N,10475μm,0.7s			AML	AML		
RM33	comp=E,13100μm,1.0s			AML	AML		
RM33	comp=N,10655μm,0.7s			AML	AML		
RM33	comp=E,13400μm,0.9s			AML	AML		
ASSB	**Assisi San Ben**	**0.39**	**294**	⇑P	**Pg**	**07 37 27.7**	**-0.3**
ASSB				S	**Sg**	**07 37 33.5**	**+0.3**
ASSB				AML	AML		
ASSB	comp=E,17400μm,0.2s			AML	AML		
ASSB	comp=N,13950μm,1.1s			AML	AML		
SNTG	**Esanatoglia**	**0.40**	**338**	P	**Pb**	**07 37 28.6**	**-0.6**
SNTG				S	**Sb**	**07 37 34.6**	**-0.6**
SNTG				AML	AML		
SNTG	comp=E,4760μm,0.8s			AML	AML		
SNTG	comp=N,4565μm,1.5s			AML	AML		
SNTG	comp=E,4595μm,0.8s			AML	AML		
SNTG	comp=N,4690μm,1.5s			AML	AML		
T1246	**Crognaleto (TE**	**0.40**	**139**	P	**Pb**	**07 37 29.1**	**0.0**
T1246				S	**Sb**	**07 37 34.7**	**-0.4**
CAMP	**Campotosto**	**0.40**	**150**	P	**Pb**	**07 37 28.6**	**-0.6**
OFFI	**Offida**	**0.40**	**83**	P	**Pn**	**07 37 29.6**	**-2.1**
OFFI				AML	AML		
OFFI	comp=E,15400μm,0.5s			AML	AML		
OFFI	comp=N,14650μm,0.5s			AML	AML		
T1211	**Morro Reatino**	**0.41**	**211**	P	**Pg**	**07 37 28.2**	**-0.3**
T1211				S	**Sb**	**07 37 35.1**	**-0.5**
ARRO	**Arrone**	**0.41**	**222**	AML	AML		
ARRO	comp=N,9475μm,0.2s			AML	AML		
ARRO	comp=E,8890μm,0.2s			AML	AML		
TERO	**Teramo**	**0.43**	**127**	P	**Pb**	**07 37 28.9**	**-0.8**
TERO				S	**Sb**	**07 37 35.9**	**-0.1**
TERO				AML	AML		
TERO	comp=E,16350μm,1.5s			AML	AML		
TERO	comp=E,17750μm,1.5s			AML	AML		
TERO	comp=N,18350μm,1.4s			AML	AML		
TERO	comp=E,16400μm,1.5s			AML	AML		
TERO	comp=N,17250μm,0.2s			AML	AML		
TRE1	**Treia**	**0.44**	**16**	P	**Pb**	**07 37 30.0**	**+0.1**
TRE1				S	**Sn**	**07 37 37.6**	**-2.5**
T1247	**Pizzolo (AQ)**	**0.46**	**165**	P	**Pb**	**07 37 30.1**	**0.0**
T1247				S	**Sb**	**07 37 37.2**	**+0.3**
T1247				AML	AML		
T1247	comp=E,12500μm,0.4s			AML	AML		
T1247	comp=N,12550μm,0.5s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.47**	**309**	P	**Pg**	**07 37 29.6**	**-0.1**
ATCC				S	**Sb**	**07 37 36.8**	**-0.5**
ATCC				AML	AML		
ATCC	comp=E,9345μm,0.6s			AML	AML		
ATCC	comp=E,9305μm,0.6s			AML	AML		
ATCC	comp=N,8595μm,0.6s			AML	AML		
ATCC	comp=N,8575μm,0.6s			AML	AML		
ATCC	comp=E,9315μm,0.6s			AML	AML		
CING	**Cingoli**	**0.49**	**5**	P	**Pb**	**07 37 30.6**	**-0.1**
CING				S	**Sb**	**07 37 38.1**	**+0.2**
FOSV	**Fossato di Vic**	**0.49**	**326**	⇑P	**Pg**	**07 37 29.9**	**-0.1**
FOSV				S	**Sb**	**07 37 37.5**	**-0.5**
CESX	**Cesi**	**0.50**	**237**	⇑P	**Pg**	**07 37 29.5**	**-0.5**
CESX				S	**Sb**	**07 37 37.0**	**-1.0**
CESX	comp=E,11900μm,0.4s			AML	AML		
CESX	comp=N,10695μm,0.7s			AML	AML		
GIGS	**Gran Sasso**	**0.54**	**144**	P	**Pb**	**07 37 31.0**	**-0.5**
GIGS				AML	AML		
GIGS	comp=E,3205μm,1.1s			AML	AML		
GIGS	comp=N,2545μm,0.8s			AML	AML		
CADA	**Capodarco di F**	**0.55**	**56**	P	**Pn**	**07 37 32.2**	**-1.5**
AQU	**L'Aquila**	**0.56**	**160**	P	**Pn**	**07 37 32.5**	**-1.5**
MMUR	**Monte Murano**	**0.57**	**349**	P	**Pb**	**07 37 32.1**	**+0.1**
MMUR				S	**Sb**	**07 37 40.5**	**+0.5**
CIMA	**Civitanova Mar**	**0.57**	**42**	P	**Pn**	**07 37 32.9**	**-1.2**
TRTR	**Tortoreto Alta**	**0.57**	**97**	P	**Pn**	**07 37 33.0**	**-1.0**
TRTR				AML	AML		
TRTR	comp=N,23150μm,0.5s			AML	AML		
TRTR	comp=E,17750μm,0.6s			AML	AML		
MURB	**Monte Urbino**	**0.59**	**310**	P	**Pg**	**07 37 31.5**	**-0.2**
MURB				S	**Sb**	**07 37 40.8**	**+0.1**
MURB				AML	AML		
MURB	comp=E,9770μm,0.2s			AML	AML		
MURB	comp=N,10590μm,0.9s			AML	AML		
MURB	comp=E,9775μm,0.2s			AML	AML		
MURB	comp=N,10685μm,0.9s			AML	AML		
MURB	comp=E,10850μm,0.2s			AML	AML		
MURB	comp=N,10605μm,0.8s			AML	AML		
PP3	**Marolino**	**0.60**	**35**	P	**Pn**	**07 37 33.2**	**-1.2**
PP3				AML	AML		
PP3	comp=E,7960μm,0.3s			AML	AML		
PP3	comp=N,14800μm,1.2s			AML	AML		
PP3	comp=E,7940μm,0.3s			AML	AML		
FIAM	**Fiamignano**	**0.62**	**182**	P	**Pb**	**07 37 32.7**	**-0.2**
FIAM				S	**Sb**	**07 37 41.5**	**0.0**
ARVD	**Arcevia**	**0.63**	**347**	P	**Pg**	**07 37 33.0**	**+0.4**
ARVD				S	**Sg**	**07 37 42.3**	**+1.4**
ATFO	**Monte Foce - G**	**0.64**	**319**	P	**Pb**	**07 37 32.4**	**-0.9**
ATFO				AML	AML		
ATFO	comp=N,2725μm,0.7s			AML	AML		
ATFO	comp=E,2685μm,0.4s			AML	AML		
ATTE	**AVT- Monte Tez**	**0.66**	**299**	P	**Pb**	**07 37 32.5**	**-1.1**
ATTE				AML	AML		
ATTE	comp=E,2785μm,0.4s			AML	AML		
ATTE	comp=N,2695μm,1.2s			AML	AML		
FRON	**Frontone**	**0.70**	**334**	P	**Pn**	**07 37 34.8**	**-1.0**
FRON				S	**Sg**	**07 37 44.3**	**+1.2**
VCEL	**Villa Celiera**	**0.71**	**133**	⇑P	**Pg**	**07 37 34.1**	**0.0**
VCEL				S	**Sn**	**07 37 45.6**	**-1.3**
VCEL				AML	AML		
VCEL	comp=E,8620μm,0.2s			AML	AML		
VCEL	comp=N,7615μm,0.2s			AML	AML		
VCEL	comp=E,8625μm,0.2s			AML	AML		
ATVO	**AVT- Monte Val**	**0.73**	**313**	P	**Pb**	**07 37 33.8**	**-1.0**
ATVO				AML	AML		
ATVO	comp=N,2120μm,0.7s			AML	AML		
ATVO	comp=E,2230μm,0.7s			AML	AML		
MGAB	**Montegabbione**	**0.76**	**272**	P	**Pg**	**07 37 35.4**	**+0.5**
ATPI	**Pietralunga -**	**0.78**	**317**	AML	AML		
ATPI	comp=E,2100μm,0.5s			AML	AML		
ATPI	comp=N,2065μm,0.6s			AML	AML		
SACS	**San Casciano d**	**0.91**	**268**	P	**Pg**	**07 37 37.7**	**-0.1**
LPEL	**Lama dei Pelig**	**1.14**	**137**	P	**Pg**	**07 37 41.9**	**-0.3**
TOLF	**Tolfa**	**1.18**	**226**	P	**Pg**	**07 37 42.3**	**-0.5**
CSNT	**Castellina Chi**	**1.48**	**294**	P	**Pb**	**07 37 47.3**	**-0.1**
CSNT				AML	AML		
CSNT	comp=E,374μm,0.9s			AML	AML		
CSNT	comp=N,402μm,0.6s			AML	AML		
TRIF	**Trifonti**	**1.66**	**279**	P	**Pn**	**07 37 49.1**	**+0.1**
TRIF				AML	AML		
TRIF	comp=N,290μm,0.7s			AML	AML		
TRIF	comp=E,298μm,0.7s			AML	AML		
CARD	**Cardoso**	**2.25**	**301**	AML	AML		
CARD	comp=E,210μm,1.1s			AML	AML		
CARD	comp=N,186μm,1.0s			AML	AML		
PGF	**Pioggiola**	**3.07**	**265**	*e*P	**Pn**	**07 38 10.2**	**+1.7**
SBF	**Sospel**	**4.27**	**285**	*e*P	**Pn**	**07 38 27.9**	**+2.9**
DAVOX	**Davos/Dischmat**	**4.53**	**330**	Pn	**Pn**	**07 38 32.4**	**+3.7**
	comp=N,1.8nm,0.3s,baz=162,slow=18,SNR=1.1						
	comp=N,16nm,0.7s						
LMR	**La Mourre**	**4.88**	**278**	*e*P	**Pn**	**07 38 33.9**	**+0.7**
MBDF	**Montbardon**	**4.96**	**294**	*e*P	**Pn**	**07 38 37.7**	**+3.2**
LPG	**La Plagne**	**5.28**	**302**	*e*P	**Pn**	**07 38 42.8**	**+3.7**
LPL	**La Plagne**	**5.30**	**302**	*e*P	**Pn**	**07 38 42.7**	**+3.4**
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*P	**Pn**	**07 38 46.4**	**+3.0**
ORIF	**Oris-en-Rattie**	**5.63**	**294**	*e*P	**Pn**	**07 38 47.3**	**+3.7**
GERES	**GERESS Array B**	**5.97**	**4**	Pn	**Pn**	**07 38 50.1**	**+1.7**
	comp=N,5.5nm,0.6s,baz=189,slow=16,SNR=1.2						
GERES				Sn	**Sn**	**07 39 56.5**	**-0.1**
	comp=N,0.9nm,0.3s,baz=167,slow=24,SNR=1.3						
VIVF	**Saint-Julien-l**	**6.43**	**291**	*e*P	**Pn**	**07 38 58.6**	**+4.0**
HINF	**Hinteralfeld**	**6.63**	**320**	*e*P	**Pn**	**07 39 00.5**	**+3.2**
HINF				*e*Sn	**Sn**	**07 40 07.8**	**-4.8**
	comp=N,12nm,0.3s						
CDF	**Champ du Feu**	**6.89**	**325**	*e*P	**Pn**	**07 39 02.4**	**+1.5**
HAU	**Haudompre**	**7.00**	**319**	*e*P	**Pn**	**07 39 06.3**	**+3.9**
HAU				*e*Sn	**Sn**	**07 40 16.9**	**-4.9**
	comp=N,31nm,0.9s						
PAGF	**Fort de Pagny**	**7.68**	**320**	*e*P	**Pn**	**07 39 15.5**	**+3.8**
	baz=120						
SFTF	**Sexfontaines**	**7.79**	**316**	*e*P	Pn	07 39 17.4	+4.3
	baz=123						
AVF	**Avril sur Loir**	**7.98**	**303**	*e*P	Pn	07 39 20.0	+4.3
SSF	**Saint Saulge**	**8.01**	**305**	*e*P	Pn	07 39 20.4	+4.3
MTLF	**Montolieu**	**8.01**	**277**	*e*P	Pn	07 39 20.9	+4.7
HYF	**Humbligny**	**8.62**	**304**	*e*P	**Pn**	**07 39 27.7**	**+3.1**
EPF	**Esparros**	**9.39**	**275**	*e*P	Pn	07 39 39.6	+4.4
ETSF	**Etsaut**	**10.06**	**275**	*e*P	Pn	07 39 49.0	+4.7
FINES	**FINESS Array B**	**20.14**	**18**	P	Pn	07 41 57.9	+2.3
	comp=N,1.9nm,0.7s,baz=206,slow=13,SNR=3.9						
	comp=N,1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**31.24**	**202**	P	**P**	**07 43 40.6**	**+1.1**
	comp=N,0.4nm,0.5s,baz=14,slow=10,SNR=2.7						
	comp=N,0.4nm,0.5s						

*IDC **30** 07:38:59.2±1.1, 42°.74N×13°.13E, h0km, mb3.9/7, mbtmp3.9/14, ML3.8/6, Error ellipse: s-maj=19.3km s-min=16.8km az=126.0*
*PRU **30** 07:38:59.9±0.0, 42°.64N×13°.36E, h10km*
*LDG **30** 07:38:59.7±0.3, 42°.53N×13°.05E, h10km, Ml4.0/17, Error ellipse: s-maj=8.3km s-min=5.8km az=34.0*
*ROM **30** 07:38:59.0±0.0, 42°.682N±0°.002×13°.157E±0°.002, h11km, ML4.0/33, Error ellipse: s-maj=0.3km s-min=0.2km az=236.0*
ISC 30 07:38:59.9±0.6, 42°.69N±0°.01×13°.14E±0°.02, h10km±3km, n221, σ1§85/276, mb4.0/6, 18C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.02**	**226**	P	**Pg**	**07 39 01.5**	**-0.4**
T1218				S	**Sg**	**07 39 03.0**	**-0.3**
T1213	**Norcia, Frazio**	**0.04**	**347**	⇓P	**Pg**	**07 39 01.4**	**-0.5**
T1213				S	**Sg**	**07 39 03.0**	**-0.5**
T1201	**Domo (RI)**	**0.09**	**109**	P	**Pg**	**07 39 02.0**	**-0.5**
T1201				S	**Sg**	**07 39 03.9**	**-0.4**
T1214	**Arquata del Tr**	**0.09**	**35**	P	**Pg**	**07 39 01.8**	**-0.7**
T1214				S	**Sg**	**07 39 03.8**	**-0.7**
T1212	**Cascia, Frazio**	**0.10**	**314**	P	**Pg**	**07 39 02.2**	**-0.3**
T1212				S	**Sg**	**07 39 04.3**	**-0.1**
LNSS	**Leonessa**	**0.11**	**221**	⇑P	**Pg**	**07 39 02.6**	**-0.1**
LNSS				S	**Sg**	**07 39 05.1**	**+0.3**
T1204	**Amatrice, Fraz**	**0.13**	**94**	⇑P	**Pg**	**07 39 02.5**	**-0.7**
T1204				S	**Sg**	**07 39 04.6**	**-0.8**
T1244	**Arquata del Tr**	**0.14**	**59**	⇑P	**Pg**	**07 39 02.6**	**-0.6**
T1244				S	**Sg**	**07 39 05.1**	**-0.3**
T1217	**Poggiodomo (PG**	**0.15**	**280**	⇑P	**Pg**	**07 39 03.1**	**-0.3**
T1217				S	**Sg**	**07 39 06.2**	**+0.3**
T1217				AML	AML		
T1217	comp=E,95550μm,0.8s			AML	AML		
T1217	comp=E,92400μm,0.9s			AML	AML		
T1217	comp=E,95150μm,0.8s			AML	AML		
T1217				AML	AML		
T1217	comp=E,92600μm,0.9s			AML	AML		
T1217				AML	AML		
T1217	comp=E,95250μm,0.8s			AML	AML		

T1217			AML	AML			
T1217			AML	AML			
comp=E,92250µm,0.9s							
T1245	**Castelsantange**	**0.17 12**	P	**Pg**	**07 39 03.4**	**-0.4**	
T1245			S	**Sg**	**07 39 06.2**	**-0.3**	
T1245			AML	AML			
T1245			AML	AML			
T1245			AML	AML			
T1245			AML	AML			
T1245			AML	AML			
T1245			AML	AML			
RM33	**Pellescritta (**	**0.19 162**	P	**Pg**	**07 39 03.5**	**-0.4**	
RM33			S	**Sg**	**07 39 06.8**	**+0.1**	
RM33			AML	AML			
comp=E,40950µm,1.0s							
RM33			AML	AML			
comp=N,26400µm,0.3s							
RM33			AML	AML			
comp=E,41950µm,1.0s							
RM33			AML	AML			
comp=E,41000µm,1.0s							
RM33			AML	AML			
comp=N,27500µm,0.3s							
RM33			AML	AML			
comp=N,26350µm,0.3s							
T1216	**Preci, Frazion**	**0.22 337**	P	**Pg**	**07 39 04.5**	**-0.1**	
T1216			S	**Sg**	**07 39 07.9**	**+0.2**	
T1243	**Rocca Santa Ma**	**0.23 87**	P	**Pg**	**07 39 03.8**	**-0.9**	
T1243			S	**Sg**	**07 39 07.4**	**-0.5**	
MC2	**Monte Cornacci**	**0.23 10**	P	**Pg**	**07 39 04.6**	**-0.1**	
MC2			S	**Sg**	**07 39 08.1**	**0.0**	
T1215	**Vallo di Nera,**	**0.23 300**	P	**Pg**	**07 39 04.4**	**-0.3**	
T1215			S	**Sg**	**07 39 08.3**	**+0.4**	
T1215			AML	AML			
comp=E,51100µm,0.8s							
T1215			AML	AML			
comp=E,50550µm,0.9s							
T1215			AML	AML			
comp=N,62300µm,0.3s							
T1215			AML	AML			
comp=N,63450µm,0.3s							
T1215			AML	AML			
comp=N,62300µm,0.3s							
T1215			AML	AML			
comp=N,63450µm,0.3s							
T1215			AML	AML			
comp=E,51100µm,0.9s							
T1215			AML	AML			
comp=N,62250µm,0.3s							
T1215			AML	AML			
comp=N,63400µm,0.3s							
CAMP	**Campotosto**	**0.25 127**	P	**Pg**	**07 39 04.3**	**-0.8**	
CAMP			S	**Sg**	**07 39 08.1**	**-0.4**	
T1211	**Morro Reatino**	**0.26 234**	P	**Pg**	**07 39 05.3**	**0.0**	
T1211			S	**Sg**	**07 39 09.8**	**+1.0**	
T1247	**Pizzolo (AQ)**	**0.27 154**	P	**Pg**	**07 39 05.2**	**-0.3**	
T1247			S	**Sg**	**07 39 09.6**	**+0.5**	
T1241	**Roccafluvione,**	**0.28 52**	P	**Pg**	**07 39 05.4**	**-0.2**	
T1241			S	**Sg**	**07 39 09.5**	**+0.2**	
T1246	**Crognaleto (TE**	**0.28 111**	P	**Pg**	**07 39 04.7**	**-0.9**	
T1246			S	**Sg**	**07 39 08.9**	**-0.6**	
FEMA	**Monte Fema**	**0.28 347**	P	**Pg**	**07 39 05.6**	**-0.1**	
FEMA			S	**Sg**	**07 39 09.8**	**+0.2**	
ARRO	**Arrone**	**0.29 249**	P	**Pg**	**07 39 05.5**	**-0.3**	
ARRO			AML	AML			
comp=E,16950µm,0.7s							
ARRO			AML	AML			
comp=N,20000µm,1.6s							
ARRO			AML	AML			
comp=E,16900µm,0.7s							
ARRO			AML	AML			
comp=N,20050µm,1.6s							
T1256	**Bolognola (MC)**	**0.33 11**	P	**Pg**	**07 39 06.0**	**-0.5**	
T1256			S	**Sg**	**07 39 10.8**	**-0.1**	
AM05	**Amandola Campo**	**0.33 28**	P	**Pg**	**07 39 05.8**	**-0.7**	
AM05			S	**Sg**	**07 39 11.2**	**+0.2**	
AM05			AML	AML			
comp=E,69300µm,0.3s							
AM05			AML	AML			
comp=E,16650µm,0.4s							
AM05			AML	AML			
comp=N,4765µm,1.1s							
AM05			AML	AML			
comp=N,21550µm,0.4s							
AM05			AML	AML			
comp=E,16700µm,0.4s							
TERO	**Teramo**	**0.35 100**	P	**Pg**	**07 39 05.7**	**-1.2**	
TERO			S	**Sg**	**07 39 10.8**	**-0.7**	
TERO			AML	AML			
comp=E,28400µm,0.7s							
TERO			AML	AML			
comp=N,25700µm,0.7s							
TERO			AML	AML			
comp=E,30050µm,0.7s							
TERO			AML	AML			
comp=N,26600µm,0.7s							
TERO			AML	AML			
comp=N,25750µm,0.7s							
FDMO	**Fiordimonte**	**0.35 354**	P	**Pg**	**07 39 06.7**	**-0.2**	
FDMO			S	**Sg**	**07 39 11.9**	**+0.2**	
T1219	**Muccia, Frazio**	**0.38 345**	P	**Pg**	**07 39 07.2**	**-0.3**	
T1219			S	**Sg**	**07 39 12.8**	**+0.2**	
AQU	**L'Aquila**	**0.39 149**	P	**Pg**	**07 39 07.1**	**-0.4**	
AQU			S	**Sb**	**07 39 13.3**	**-1.6**	
AQU			AML	AML			
comp=E,11170µm,1.1s							
AQU			AML	AML			
comp=N,9620µm,0.9s							
AQU			AML	AML			
comp=N,9410µm,0.9s							
AQU			AML	AML			
comp=E,11185µm,1.1s							
AQU			AML	AML			
comp=E,10715µm,1.1s							
GIGS	**Gran Sasso**	**0.40 126**	P	**Pg**	**07 39 06.7**	**-1.0**	
GIGS			S	**Sg**	**07 39 12.3**	**-0.7**	
GIGS			AML	AML			
comp=E,3475µm,1.3s							
GIGS			AML	AML			
comp=N,2970µm,1.3s							
GUMA	**Gualdo di Mace**	**0.40 21**	P	**Pg**	**07 39 07.4**	**-0.5**	
GUMA			S	**Sb**	**07 39 14.1**	**-1.3**	
FIAM	**Fiamignano**	**0.42 182**	P	**Pg**	**07 39 07.6**	**-0.6**	
FIAM			S	**Sg**	**07 39 13.9**	**+0.2**	
CESX	**Cesi**	**0.42 260**	P	**Pg**	**07 39 07.0**	**-1.1**	
T1220	**Camerino, Fraz**	**0.42 355**	P	**Pg**	**07 39 07.8**	**-0.4**	
T1220			S	**Sg**	**07 39 14.4**	**+0.5**	
OFFI	**Offida**	**0.47 58**	P	**Pg**	**07 39 09.0**	**-0.2**	
SEF1	**Sefro**	**0.48 343**	P	**Pg**	**07 39 08.8**	**-0.5**	
SEF1			S	**Sg**	**07 39 16.1**	**+0.4**	
SEF1			AML	AML			
comp=E,83600µm,0.2s							
SEF1			AML	AML			
comp=E,83600µm,0.3s							
SEF1			AML	AML			
comp=N,66800µm,0.2s							
SEF1			AML	AML			
comp=E,83550µm,0.3s							
PIO1	**Pioraco**	**0.51 347**	P	**Pg**	**07 39 09.1**	**-0.6**	
PIO1			S	**Sg**	**07 39 17.0**	**+0.6**	
MDAR	**Monte D'Aria**	**0.51 0**	P	**Pg**	**07 39 09.1**	**-0.7**	
MDAR			S	**Sg**	**07 39 16.8**	**+0.3**	
MNTP	**Montappone**	**0.51 28**	P	**Pg**	**07 39 10.1**	**+0.2**	
MNTP			S	**Sb**	**07 39 18.2**	**-0.3**	
MNTP			AML	AML			
comp=E,43150µm,0.4s							
MNTP			AML	AML			
comp=N,43350µm,1.1s							
MNTP			AML	AML			
comp=N,43350µm,1.1s							
FIU1	**Fiuminata**	**0.53 343**	P	**Pg**	**07 39 09.7**	**-0.4**	
FIU1			S	**Sg**	**07 39 17.5**	**+0.4**	
FIU1			AML	AML			
comp=E,27750µm,0.3s							
FIU1			AML	AML			
comp=E,27700µm,0.3s							
FIU1			AML	AML			
comp=N,22800µm,0.2s							
FIU1			AML	AML			
comp=E,27750µm,0.3s							
SSM1	**San Severino M**	**0.54 3**	P	**Pg**	**07 39 09.8**	**-0.7**	
SSM1			S	**Sg**	**07 39 17.8**	**+0.1**	
GAG1	**Gagliole**	**0.55 355**	P	**Pg**	**07 39 10.5**	**-0.2**	
GAG1			S	**Sg**	**07 39 18.7**	**+0.7**	
GAG1			AML	AML			
comp=E,50800µm,0.3s							
GAG1			AML	AML			
comp=N,66600µm,0.4s							
GAG1			AML	AML			
comp=E,50800µm,0.3s							
GAG1			AML	AML			
comp=N,66600µm,0.4s							
TRTR	**Tortoreto Alta**	**0.58 78**	P	**Pg**	**07 39 11.1**	**-0.2**	
SNTG	**Esanatoglia**	**0.59 346**	P	**Pg**	**07 39 11.2**	**-0.1**	
SNTG			S	**Sg**	**07 39 19.6**	**+0.5**	
VCEL	**Villa Celiera**	**0.60 119**	P	**Pg**	**07 39 10.9**	**-0.6**	
ATCC	**AVT- Casa Cast**	**0.62 324**	P	**Pg**	**07 39 11.3**	**-0.6**	
ATCC			S	**Sg**	**07 39 20.9**	**+0.8**	
TRE1	**Treia**	**0.64 12**	P	**Pg**	**07 39 12.1**	**-0.2**	
SRES	**S.Oreste - Sor**	**0.65 226**	P	**Pg**	**07 39 11.4**	**-1.1**	
FOSV	**Fossato di Vic**	**0.67 336**	P	**Pg**	**07 39 13.0**	**+0.2**	
CADA	**Capodarco di F**	**0.68 42**	P	**Pb**	**07 39 13.4**	**-0.5**	
CADA			AML	AML			
comp=E,51750µm,0.4s							
CADA			AML	AML			
comp=N,54550µm,1.2s							
CADA			AML	AML			
comp=E,51800µm,0.4s							
PTQR	**Pietraquaria**	**0.69 164**	P	**Pg**	**07 39 13.3**	**0.0**	
MTCE	**Montecelio**	**0.72 204**	P	**Pg**	**07 39 13.2**	**-0.8**	
MURB	**Monte Urbino**	**0.73 322**	P	**Pg**	**07 39 14.2**	**+0.2**	
CIMA	**Civitanova Mar**	**0.73 32**	P	**Pg**	**07 39 14.0**	**-0.1**	
CERT	**Cerreto**	**0.75 189**	P	**Pg**	**07 39 12.8**	**-1.5**	
PP3	**Marolino**	**0.77 26**	P	**Pg**	**07 39 14.4**	**-0.4**	
MGAB	**Montegabbione**	**0.79 287**	P	**Pg**	**07 39 15.0**	**-0.1**	
MGAB			AML	AML			
comp=E,28650µm,0.5s							
MGAB			AML	AML			
comp=N,19800µm,0.4s							
MGAB			AML	AML			
comp=E,29000µm,0.5s							
MGAB			AML	AML			
comp=N,20100µm,1.0s							
ATFO	**Monte Foce - G**	**0.80 329**	P	**Pg**	**07 39 13.8**	**-1.5**	
ARVD	**Arcevia**	**0.82 350**	P	**Pg**	**07 39 15.1**	**-0.7**	
ARVD			S	**Sb**	**07 39 27.1**	**-0.4**	
ATLO	**AVT- Montelove**	**0.83 320**	P	**Pg**	**07 39 14.9**	**-0.9**	
ATVA	**AVT- Monte Val**	**0.86 314**	P	**Pg**	**07 39 14.5**	**-2.0**	
TB01	**Gubbio**	**0.86 324**	P	**Pg**	**07 39 16.8**	**+0.2**	
ATVO	**AVT- Monte Val**	**0.88 323**	P	**Pg**	**07 39 15.4**	**-1.5**	
VVLD	**Villa Vallelon**	**0.89 156**	P	**Pg**	**07 39 16.4**	**-0.7**	
ATBU	**Serra di Buran**	**0.90 332**	P	**Pg**	**07 39 16.8**	**-0.4**	
GUAR	**Guarcino**	**0.90 172**	P	**Pg**	**07 39 16.9**	**-0.3**	
ATMI	**Monte Miggiano**	**0.91 316**	P	**Pg**	**07 39 16.5**	**-0.9**	
SACS	**San Casciano d**	**0.92 281**	P	**Pg**	**07 39 17.1**	**-0.6**	
AOI	**Ancona**	**0.93 21**	P	**Pg**	**07 39 16.6**	**-1.1**	
ATPI	**Pietralunga -**	**0.94 325**	P	**Pg**	**07 39 17.0**	**-0.9**	
ATPC	**Poggio Castell**	**0.94 328**	P	**Pg**	**07 39 15.9**	**-2.0**	
RDP	**Rocca di Papa**	**0.98 199**	P	**Pb**	**07 39 18.8**	**-0.2**	
MPAG	**Monte Paganucc**	**0.98 344**	P	**Pg**	**07 39 16.5**	**-2.3**	
LPEL	**Lama dei Pelig**	**1.00 129**	P	**Pb**	**07 39 19.0**	**-0.5**	
APEC	**Apecchio**	**1.02 329**	P	**Pg**	**07 39 17.8**	**-1.8**	
SENI	**Senigallia**	**1.02 4**	P	**Pg**	**07 39 19.2**	**-0.3**	
SENI			AML	AML			
comp=E,38850µm,0.3s							
SENI			AML	AML			
comp=N,43300µm,0.4s							
TOLF	**Tolfa**	**1.05 234**	P	**Pg**	**07 39 18.2**	**-1.8**	
BADI	**Badiali**	**1.05 322**	AML	AML			
comp=N,6440µm,0.8s							
BADI			AML	AML			
comp=E,302µm,1.0s							
POFI	**Posta Fibreno**	**1.06 156**	P	**Pg**	**07 39 19.5**	**-0.7**	
CAFI	**Castiglion Fio**	**1.07 307**	P	**Pg**	**07 39 19.9**	**-0.6**	
MCIV	**Monte Civitell**	**1.08 275**	AML	AML			
comp=E,3830µm,0.7s							
MCIV			AML	AML			
comp=N,3350µm,0.9s							
SF13	**Bagnolo**	**1.13 277**	P	**Pb**	**07 39 20.9**	**-0.6**	
GIUL	**Giuliano Di Ro**	**1.13 176**	P	**Pb**	**07 39 21.2**	**-0.4**	
SSP9	**Sansepolcro**	**1.15 321**	P	**Pg**	**07 39 22.4**	**+0.3**	
ARCI	**Arcidosso**	**1.23 278**	P	**Pn**	**07 39 22.6**	**-0.7**	
ARCI			AML	AML			
comp=N,1050µm,1.1s							
ARCI			AML	AML			
comp=E,1215µm,1.4s							
CERA	**Filignano**	**1.27 149**	P	**Pg**	**07 39 23.8**	**-0.5**	
CRE	**Caprese Michel**	**1.27 317**	P	**Pn**	**07 39 23.8**	**-0.1**	
CRE			AML	AML			
comp=E,2870µm,0.5s							
CRE			AML	AML			
comp=N,3480µm,1.4s							
MIDA	**Miranda**	**1.33 141**	P	**Pn**	**07 39 23.8**	**-0.8**	
TRIV	**Trivento**	**1.40 131**	AML	AML			
comp=N,2275µm,1.1s							
TRIV			AML	AML			
comp=E,2280µm,1.4s							
TRIV			AML	AML			
comp=N,2280µm,1.1s							
ASQU	**Asqua**	**1.48 319**	P	**Pb**	**07 39 27.6**	**0.0**	
MAON	**Monte Argentar**	**1.50 261**	P	**Pn**	**07 39 25.5**	**-1.4**	
MAON			AML	AML			
comp=E,989µm,1.2s							
MAON			AML	AML			
comp=N,888µm,0.8s							
SFI	**Santa Sofia**	**1.54 323**	P	**Pb**	**07 39 28.2**	**-0.3**	
FROS	**Frosini**	**1.55 290**	P	**Pn**	**07 39 26.4**	**-1.1**	
CSNT	**Castellina Chi**	**1.56 301**	P	**Pn**	**07 39 27.3**	**-0.5**	
CSNT			AML	AML			
comp=E,1410µm,0.8s							
CSNT			AML	AML			
comp=N,1094µm,1.2s							
BSSO	**Busso**	**1.57 136**	P	**Pg**	**07 39 29.2**	**-0.9**	
OSSC	**Osservatorio P**	**1.62 302**	P	**Pn**	**07 39 27.5**	**-1.0**	
RUFI	**Rufina**	**1.66 315**	P	**Pn**	**07 39 28.6**	**-0.4**	
RUFI			AML	AML			
comp=E,1787µm,0.5s							
RUFI			AML	AML			
comp=N,1460µm,0.9s							
RUFI			AML	AML			
comp=E,1791µm,0.5s							
RUFI			AML	AML			
comp=N,1462µm,0.9s							
TRIF	**Trifonti**	**1.70 285**	P	**Pn**	**07 39 29.0**	**-0.6**	
TRIF			AML	AML			
comp=E,1010µm,0.9s							
TRIF			AML	AML			
comp=N,1135µm,0.8s							
MELA	**Melanico ??? S**	**1.77 123**	P	**Pb**	**07 39 31.7**	**-0.7**	
MPPT	**Montemurlo**	**1.96 311**	AML	AML			
comp=E,1000µm,1.2s							
MPPT			AML	AML			
comp=N,776µm,1.1s							
FNVD	**Fontana Vidola**	**2.08 316**	P	**Pn**	**07 39 35.7**	**+0.7**	
SGRT	**San Giovanni R**	**2.15 115**	P	**Pn**	**07 39 36.5**	**+0.7**	
POPM	**Popiglio**	**2.20 309**	AML	AML			
comp=E,694µm,0.8s							
POPM			AML	AML			
comp=N,783µm,0.2s							
MAIM	**Mastiano**	**2.29 303**	P	**Pn**	**07 39 37.6**	**-0.1**	
MAIM			AML	AML			
comp=N,888µm,0.6s							
MAIM			AML	AML			
comp=E,452µm,0.9s							
CARD	**Cardoso**	**2.35 306**	P	**Pn**	**07 39 38.1**	**-0.5**	
CARD			AML	AML			
comp=N,722µm,1.1s							
CARD			AML	AML			
comp=E,550µm,0.7s							
EQUI	**Equi**	**2.63 305**	P	**Pn**	**07 39 42.0**	**-0.3**	
EQUI			AML	AML			
comp=E,244µm,0.6s							
EQUI			AML	AML			
comp=N,348µm,0.4s							
PLMA	**Palmaria, Port**	**2.76 301**	P	**Pn**	**07 39 44.1**	**0.0**	
PLMA			AML	AML			
comp=N,228µm,0.3s							
PLMA			AML	AML			
comp=E,188µm,1.3s							
CMPR	**Campora**	**2.87 145**	AML	AML			
comp=N,102µm,1.1s							
CMPR			AML	AML			
comp=E,102µm,1.0s							
TEOL	**Teolo**	**2.88 339**	P	**Pn**	**07 39 46.8**	**+1.0**	
SMPL	**Sampolo**	**2.92 260**	AML	AML			
comp=E,57µm,0.6s							
SMPL			AML	AML			
comp=N,109µm,0.8s							
ZOVE	**Zovencedo**	**3.01 337**	P	**Pn**	**07 39 48.2**	**+0.6**	
PGF	**Pioggiola**	**3.06 269**	*e*P	**Pn**	**07 39 48.9**	**+0.5**	
PGF	**Pioggiola**	**3.06 269**	AML	AML			
comp=N,72µm,1.3s							
PGF			AML	AML			
comp=E,78µm,1.2s							
ROVR	**Rover Verones**	**3.31 334**	P	**Pn**	**07 39 52.8**	**+0.9**	
ROVR			AML	AML			
comp=N,1008µm,0.5s							
ROVR			AML	AML			
comp=N,396µm,0.5s							
ROVR			AML	AML			
comp=E,187µm,0.8s							
ROVR			AML	AML			
comp=E,616µm,0.8s							
AJAC	**Base Areonaval**	**3.33 258**	AML	AML			
comp=E,224µm,0.4s							
AJAC			AML	AML			
comp=N,178µm,0.8s							
CGRP	**Cima Grappa**	**3.33 344**	P	**Pn**	**07 39 52.9**	**+0.6**	
CGRP			AML	AML			
comp=N,1320µm,0.4s							
CGRP			AML	AML			
comp=N,1335µm,0.4s							
CGRP			AML	AML			
comp=E,1265µm,0.4s							
CGRP			AML	AML			
comp=E,1310µm,0.4s							
CTI	**Castel Tesino**	**3.53 343**	P	**Pn**	**07 39 55.6**	**+0.8**	
CTI			AML	AML			
comp=N,906µm,1.6s							
CTI			AML	AML			
comp=E,760µm,0.2s							
MPRI	**Monte Prat**	**3.56 358**	P	**Pn**	**07 39 55.0**	**-0.2**	
MPRI			AML	AML			
comp=E,579µm,1.4s							
MPRI			AML	AML			
comp=E,774µm,0.6s							
MPRI			AML	AML			
comp=N,1033µm,0.5s							
MPRI			AML	AML			
comp=N,1355µm,0.5s							
STAL	**STALIGIAL**	**3.59 355**	P	**Pn**	**07 39 55.1**	**-0.5**	
LUSI	**Trento, Gardas**	**3.63 335**	P	**Pn**	**07 39 57.1**	**+0.8**	
LUSI			AML	AML			
comp=N,930µm,0.9s							
LUSI			AML	AML			
comp=E,646µm,0.9s							
ZONE	**Zone**	**3.77 326**	AML	AML			
comp=E,490µm,0.8s							
ZONE			AML	AML			
comp=N,626µm,0.5s							
MABI	**Malga Bissina**	**3.86 332**	P	**Pn**	**07 39 59.4**	**-0.1**	
ACOM	**Acomizza, Ital**	**3.87 4**	P	**Pn**	**07 39 59.9**	**+0.2**	
ACOM			AML	AML			
comp=E,764µm,0.8s							
ACOM			AML	AML			
comp=E,740µm,0.8s							
ACOM			AML	AML			
comp=N,719µm,0.7s							
ACOM			AML	AML			
comp=N,676µm,0.7s							
OBKA	**Obir**	**3.95 14**	*e*Pn	**Pn**	**07 40 02.4**	**+1.7**	
comp=N,34nm,0.5s							
MYKA	**Terra Mystica**	**3.96 5**	*e*Pn	**Pn**	**07 40 00.7**	**-0.1**	
comp=N,24nm,0.4s							
KOSI	**Kohlern**	**3.98 342**	P	**Pn**	**07 40 02.4**	**+1.3**	
KOSI			AML	AML			
comp=E,596µm,0.8s							
KOSI			AML	AML			
comp=N,600µm,0.5s							
ABTA	**Abfaltersbach**	**4.08 354**	*e*Pn	**Pn**	**07 40 03.1**	**+0.7**	
comp=N,68nm,0.5s							
SOKA	**Soboth**	**4.21 18**	*e*Pn	**Pn**	**07 40 07.0**	**+2.8**	
comp=N,6.7nm,0.3s							
SBF	**Sospel**	**4.33 288**	*e*P	**Pn**	**07 40 05.8**	**0.0**	
SBF			*e*Sn	**Sn**	**07 40 58.4**	**+2.1**	
comp=N,46nm,0.4s							
RISI	**Rein**	**4.33 350**	P	**Pn**	**07 40 06.7**	**+0.8**	
RISI			AML	AML			
comp=E,918µm,1.6s							
RISI			AML	AML			
comp=N,1540µm,0.4s							
ROSI	**Rosskopf**	**4.42 344**	P	**Pn**	**07 40 08.4**	**+1.3**	
ROSI			AML	AML			
comp=N,632µm,1.6s							
ROSI			AML	AML			
comp=E,770µm,0.4s							
PDG	**Podgorica**	**4.53 91**	⇑P	**Pn**	**07 40 07.9**	**-0.6**	
FETA	**Feichten**	**4.66 339**	*e*Pn	**Pn**	**07 40 12.7**	**+2.3**	
comp=E,26nm,0.8s							
WTTA	**Wattenberg**	**4.70 347**	*e*Pn	**Pn**	**07 40 12.7**	**+1.7**	
comp=E,5.8nm,0.2s							
WTTA	**Wattenberg**	**4.70 347**	*e*Sn	**Sn**	**07 41 06.3**	**+0.7**	
DAVOX	**Davos/Dischmat**	**4.71 332**	Pn	**Pn**	**07 40 12.6**	**+1.5**	
comp=E,4.8nm,0.3s,baz=158,slow=19,SNR=3.4							
DAVOX			Sn	**Sn**	**07 41 07.1**	**+1.3**	
comp=E,6.5nm,0.3s,baz=130,slow=20,SNR=7.8							
comp=E,14nm,0.3s							
SQTA	**Sankt Quirin**	**4.74 344**	*e*Pn	**Pn**	**07 40 13.8**	**+2.3**	
comp=E,33nm,0.4s							
WATA	**Walderalm**	**4.78 347**	*e*Pn	**Pn**	**07 40 13.3**	**+1.3**	
comp=E,14nm,0.3s							
ARSA	**Arzberg**	**4.87 20**	*e*Pn	**Pn**	**07 40 14.3**	**+1.1**	
comp=E,11nm,0.4s							
ARSA	**Arzberg**	**4.87 20**	*e*Pn	**Pn**	**07 40 14.2**	**+1.0**	
ARSA			*e*Sn	**Sn**	**07 41 06.4**	**-3.1**	
MOTA	**Moosalm**	**4.88 344**	*e*Pn	**Pn**	**07 40 15.9**	**+2.5**	
comp=E,14nm,0.5s							
LMR	**La Mourre**	**4.90 280**	*e*P	**Pn**	**07 40 13.8**	**+0.2**	
BIOA	**Bad Ischl, Aus**	**5.02 4**	*e*Pn	**Pn**	**07 40 16.2**	**+1.0**	
comp=E,13nm,0.3s							
PART	**Garmisch-Parte**	**5.02 344**	*e*Sn	**Sn**	**07 41 15.3**	**+1.9**	
MBDF	**Montbardon**	**5.05 296**	*e*P	**Pn**	**07 40 17.6**	**+1.9**	
RJOB	**Jochberg**	**5.06 357**	*e*Pn	**Pn**	**07 40 18.5**	**+2.7**	
RJOB			*e*Sn	**Sn**	**07 41 16.5**	**+2.2**	
RETA	**Reutte**	**5.09 342**	*e*Pn	**Pn**	**07 40 18.1**	**+1.9**	
comp=E,5.6nm,0.3s							
OBER	**Oberstdorf**	**5.13 338**	*e*Sn	**Sn**	**07 41 18.1**	**+2.0**	
DAVA	**Damuels**	**5.15 334**	*e*Pn	**Pn**	**07 40 19.0**	**+1.8**	
comp=E,26nm,0.6s							
DAVA	**Damuels**	**5.15 334**	*e*Pn	**Pn**	**07 40 19.2**	**+2.1**	
TIR	**Tirane**	**5.19 103**	⇑P	**Pn**	**07 40 17.4**	**-0.1**	
MOA	**Molln**	**5.22 8**	*e*Pn	**Pn**	**07 40 18.4**	**+0.3**	
comp=E,20nm,0.5s							
MOA	**Molln**	**5.22 8**	*e*Sn	**Sn**	**07 41 18.3**	**0.0**	
LPG	**La Plagne**	**5.39 304**	*e*P	**Pn**	**07 40 24.0**	**+3.4**	
LPL	**La Plagne**	**5.41 304**	*e*P	**Pn**	**07 40 23.7**	**+2.9**	
LPL			*e*Sn	**Sn**	**07 41 19.3**	**-3.9**	
comp=E,22nm,0.4s							
RONA	**Rosalia, Austr**	**5.49 23**	*e*Pn	**Pn**	**07 40 20.8**	**-0.9**	
comp=E,3.5nm,0.2s							
CONA	**Conrad Observa**	**5.58 19**	*e*Pn	**Pn**	**07 40 23.0**	**0.0**	
comp=E,22nm,0.6s							
SMRF	**Simiane la Rot**	**5.67 286**	*e*P	**Pn**	**07 40 25.0**	**+0.9**	
ORIF	**Oris-en-Rattie**	**5.71 295**	*e*P	**Pn**	**07 40 26.2**	**+1.4**	
GEC2	**GERESS Array S**	**6.17 3**	*e*Sn	**Sn**	**07 41 39.3**	**-2.5**	
GERES	**GERESS Array B**	**6.17 3**	Pn	**Pn**	**07 40 30.5**	**-0.6**	
comp=E,1.1nm,0.3s,baz=172,slow=13,SNR=5.9							
GERES			Sn	**Sn**	**07 41 40.4**	**-1.4**	
comp=E,9.4nm,0.3s,baz=170,slow=24,SNR=11							
comp=E,2.6nm,0.4s							
CKRC	**Cesky Krumlov**	**6.19 7**	*e*PN	**Pn**	**07 40 31.6**	**+0.3**	
CKRC			*e*SN	**Sn**	**07 41 39.3**	**-2.8**	
BOVS	**Bovan**	**6.34 78**	⇑P	**Pn**	**07 40 33.3**	**0.0**	
CABF	**La Chapelle**	**6.38 310**	*e*P	**Pn**	**07 40 33.8**	**-0.2**	
CABF			*e*Sn	**Sn**	**07 41 42.8**	**-4.0**	
comp=E,36nm,0.8s							
KHC	**Kasperske Hory**	**6.45 3**	*e*PN	**Pn**	**07 40 34.5**	**-0.4**	
KHC			*e*SN	**Sn**	**07 41 45.6**	**-3.0**	
WET	**Wettzell**	**6.46 358**	*e*Sn	**Sn**	**07 41 45.6**	**-3.2**	
VIVF	**Saint-Julien-l**	**6.50 292**	*e*P	**Pn**	**07 40 37.2**	**+1.6**	
MDVR	**Moldovita**	**6.55 68**	⇑P	**Pn**	**07 40 36.4**	**+0.1**	
BZS	**Buzias**	**6.76 61**	⇑P	**Pn**	**07 40 40.7**	**+1.5**	
KRUC	**Moravsky**	**6.77 18**	*e*PN	**Pn**	**07 40 38.4**	**-0.8**	
KRUC			*e*SN	**Sn**	**07 41 52.9**	**-3.4**	
HINF	**Hinteralfeld**	**6.78 321**	*e*P	**Pn**	**07 40 42.0**	**+2.6**	
HINF			*e*Sn	**Sn**	**07 41 52.6

HERR	**Herculane**	**7.06 69**	⇑P	**Pn**	**07 40 43.2**	**-0.1**
ROTZ	**Rotzenmuhle**	**7.11 355**	*e*Sn	**Sn**	**07 42 00.4**	**-4.4**
HAU	**Haudompre**	**7.15 320**	*e*P	**Pn**	**07 40 45.6**	**+1.1**
HAU			*e*Sn	**Sn**	**07 42 01.3**	**-4.5**
	comp=E,69nm,0.4s					
GOPC	**GO Pecny, Ondr**	**7.32 8**	*e*SN	**Sn**	**07 42 07.0**	**-2.9**
MANZ	**Manzenberg**	**7.34 355**	*e*Pn	**Pn**	**07 40 47.5**	**+0.4**
MANZ			*e*Sn	**Sn**	**07 42 04.4**	**-5.9**
PRU	**Pruhonice**	**7.37 7**	*e*SN	**Sn**	**07 42 07.8**	**-3.3**
VTS	**Vitosha**	**7.45 87**	⇑P	**Pn**	**07 40 49.7**	**+1.1**
GZR	**Gura Zlata**	**7.45 65**	⇑P	**Pn**	**07 40 48.7**	**0.0**
KEST	**Kesra**	**7.54 204**	Pn	**Pn**	**07 40 52.4**	**+2.5**
	comp=E,0.7nm,0.3s,baz=330,slow=9.7,SNR=4.1					
	comp=E,2.8nm,0.5s					
NKC	**Novy Kostel**	**7.56 357**	*e*SN	**Sn**	**07 42 13.0**	**-2.9**
DEV	**Deva**	**7.70 62**	⇑P	**Pn**	**07 40 53.6**	**+1.6**
SMF	**Signal de Mont**	**7.72 304**	*e*P	**Pn**	**07 40 54.6**	**+2.3**
SMF			*e*Sn	**Sn**	**07 42 14.4**	**-5.3**
	comp=E,18nm,0.4s					
PAGF	**Fort de Pagny**	**7.84 321**	*e*P	**Pn**	**07 40 55.9**	**+2.0**
	baz=136					
PAGF			*e*Sn	**Sn**	**07 42 17.8**	**-4.8**
	comp=E,36nm,0.7s					
SFTF	**Sexfontaines**	**7.93 317**	*e*P	**Pn**	**07 40 56.3**	**+1.2**
	baz=130					
SFTF			*e*Sn	**Sn**	**07 42 20.1**	**-4.7**
	comp=E,19nm,0.5s					
DRGR		**7.95 56**	⇑P	**Pn**	**07 40 56.8**	**+1.2**
LOR	**Lormes**	**8.01 308**	*e*P	**Pn**	**07 40 57.1**	**+0.8**
	baz=124					
LOR			*e*Sn	**Sn**	**07 42 21.3**	**-5.7**
	comp=E,14nm,0.4s					
MOX	**Moxa**	**8.03 353**	*e*Sn	**Sn**	**07 42 22.5**	**-4.8**
MTLF	**Montolieu**	**8.03 278**	*e*P	**Pn**	**07 40 58.6**	**+2.0**
AVF	**Avril sur Loir**	**8.08 304**	*e*P	**Pn**	**07 41 00.2**	**+2.9**
AVF			*e*Sn	**Sn**	**07 42 22.3**	**-6.3**
	comp=E,14nm,0.9s					
SSF	**Saint Saulge**	**8.12 306**	*e*P	**Pn**	**07 41 00.7**	**+2.9**
SSF			*e*Sn	**Sn**	**07 42 23.4**	**-6.1**
	comp=E,12nm,0.6s					
MEZF	**Maizieres J'vi**	**8.12 319**	*e*P	**Pn**	**07 40 58.6**	**+0.8**
MEZF			*e*Sn	**Sn**	**07 42 24.3**	**-5.2**
	comp=E,30nm,0.7s					
SAVF	**Savonnieres en**	**8.16 319**	*e*P	**Pn**	**07 40 57.6**	**-0.7**
	baz=153					
SAVF			*e*Sn	**Sn**	**07 42 25.2**	**-5.4**
	comp=E,21nm,0.7s					
BGF	**Bois d'Agland**	**8.30 301**	*e*P	**Pn**	**07 41 03.1**	**+2.9**
CAF	**Calviac**	**8.32 289**	*e*P	**Pn**	**07 41 02.9**	**+2.4**
TCF	**Toulx Ste Croi**	**8.60 298**	*e*P	**Pn**	**07 41 06.3**	**+1.9**
CLL	**Collm**	**8.63 359**	*e*Pn	**Pn**	**07 41 02.0**	**-2.7**
CLL			*ex*	x	07 41 08.0	
CLL			*e*Sn	Sn	07 42 30.0	-12
CLL			*ex*	x	07 42 38.0	
CLL			*ex*	x	07 43 04.0	
CLL			*e*Sg	**Sg**	**07 43 29.0**	**-7.5**
	comp=Z,21nm,0.9s					
ARR	**Arges**	**8.71 68**	⇑P	**Pn**	**07 41 07.5**	**+1.6**
RJF	**Les Rejaudoux**	**8.78 291**	*e*P	**Pn**	**07 41 08.5**	**+1.7**
VOIR		**9.01 68**	⇑P	**Pn**	**07 41 11.4**	**+1.4**
GIVF	**Givet**	**9.38 325**	*e*P	**Pn**	**07 41 19.0**	**+4.0**
GIVF			*e*Sn	**Sn**	**07 42 55.2**	**-5.2**
	comp=Z,17nm,0.7s					
BAIF	**Baives**	**9.61 323**	*e*P	Pn	07 41 23.3	+5.1
BAIF			*e*Sn	**Sn**	**07 42 59.9**	**-6.2**
	comp=Z,6.1nm,0.5s					
MLR	**Muntele Rosu**	**9.63 69**	⇑P	**Pn**	**07 41 20.0**	**+1.4**
MLR	**Muntele Rosu**	**9.63 69**	Pn	**Pn**	**07 41 20.0**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=118,slow=21,SNR=5.1					
	comp=Z,4.9nm,0.6s					
ETSF	**Etsaut**	**10.07 276**	*e*P	**Pn**	**07 41 26.6**	**+2.0**
PLOR	**Plostina**	**10.20 67**	⇑P	**Pn**	**07 41 26.7**	**+0.4**
ESDC	**Sonseca Array**	**13.23 263**	Pn	**Pn**	**07 42 07.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=67,slow=13,SNR=7.2					
	comp=Z,0.7nm,0.6s					
AKASG	**Malin Array Be**	**13.62 48**	Pn	**Pn**	**07 42 14.9**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=238,slow=11,SNR=3.9					
EKA	**Eskdalemuir Ar**	**16.51 326**	Pn	**Pn**	**07 42 52.5**	**+1.1**
	baz=141,slow=14					
	comp=Z,0.3nm,0.3s					
NB2	**NORSAR Subarra**	**18.42 357**	P	Pn	07 43 23.1	+8.0
	comp=Z,1.0nm,0.8s,baz=176,slow=10					
NOA	**NORSAR Array B**	**18.42 357**	P	**Pn**	**07 43 15.2**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=176,slow=11,SNR=3.4					
FINES	**FINESS Array B**	**20.33 18**	P	**P**	**07 43 35.9**	**0.0**
	comp=Z,5.1nm,0.8s,baz=200,slow=11,SNR=7.5					
	comp=Z,5.1nm,0.8s					
KBZ	**Khabaz**	**21.67 77**	P	**P**	**07 43 51.7**	**+1.2**
	comp=Z,4.0nm,0.8s,baz=271,slow=9.3,SNR=5.3					
	comp=Z,4.0nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.06 202**	P	**P**	**07 45 18.1**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=17,slow=8.4,SNR=4.7					
	comp=Z,1.4nm,0.9s					
ARU	**Arti**	**31.88 49**	P	**P**	**07 45 24.8**	**-0.1**
	comp=Z,3.2nm,0.4s,baz=293,slow=9.0,SNR=5.0					
	comp=Z,3.2nm,0.4s					
MKAR	**Makanchi Array**	**47.85 60**	P	**P**	**07 47 37.6**	**0.0**
	comp=Z,1.2nm,0.7s,baz=288,slow=7.0,SNR=5.1					
	comp=Z,1.2nm,0.7s					
SONM	**Songino Array**	**61.90 50**	P	**P**	**07 49 21.7**	**+2.2**
	comp=Z,1.1nm,0.7s,baz=284,slow=8.7,SNR=4.3					
	comp=Z,1.1nm,0.7s					
ILAR	**Eielson Array**	**71.74 351**	P	**P**	**07 50 23.0**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=340,slow=4.4,SNR=2.7					
	comp=Z,0.4nm,0.9s					

*LDG **30** 07:40:31.8±0.2, 42°.79N×13°.14E, h10km, Ml3.5/4, Error ellipse: s-maj=6.4km s-min=3.9km az=43.0*
*ROM **30** 07:40:32.6±0.0, 42°.778N±0°.002×13°.177E±0°.004, h8km, ML3.6/19, Error ellipse: s-maj=0.3km s-min=0.1km az=72.0*

ISC 30 07:40:32.2±0.8, 42°.78N±0°.02×13°.17E±0°.02, h14km±4km, n70, σ1°.39/105, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.04**	**125**	‖P	**Pg**	**07 40 33.9**	**-1.2**
T1214				S	**Sg**	**07 40 34.6**	**-2.4**
T1213	**Norcia, Frazio**	**0.06**	**208**	P	**Pg**	**07 40 34.8**	**-0.3**
T1213				S	**Sg**	**07 40 36.2**	**-0.8**
T1245	**Castelsantange**	**0.08**	**12**	P	**Pg**	**07 40 34.9**	**-0.5**
T1245				S	**Sg**	**07 40 36.4**	**-1.1**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1212	**Cascia, Frazio**	**0.09**	**252**	P	**Pg**	**07 40 35.5**	**0.0**
T1212				S	**Sg**	**07 40 37.5**	**0.0**
T1244	**Arquata del Tr**	**0.10**	**104**	P	**Pg**	**07 40 35.2**	**-0.3**
T1244				S	**Sg**	**07 40 37.1**	**-0.6**
T1218	**Civita (PG)**	**0.12**	**199**	P	**Pg**	**07 40 35.7**	**0.0**
T1218				S	**Sg**	**07 40 38.3**	**+0.2**
MC2	**Monte Cornacci**	**0.13**	**8**	P	**Pg**	**07 40 36.2**	**+0.1**
MC2				S	**Sg**	**07 40 38.9**	**+0.3**
T1201	**Domo (RI)**	**0.14**	**153**	P	**Pg**	**07 40 36.3**	**+0.3**
T1201				S	**Sg**	**07 40 39.0**	**+0.6**
T1204	**Amatrice, Fraz**	**0.15**	**134**	P	**Pg**	**07 40 36.4**	**+0.2**
T1204				S	**Sg**	**07 40 39.2**	**+0.2**
T1204				AML	AML		
	comp=E,34900μm,0.4s						
T1204				AML	AML		
	comp=N,27550μm,1.1s						
T1204				AML	AML		
	comp=E,37050μm,0.2s						
T1204				AML	AML		
	comp=N,28000μm,0.8s						
T1204				AML	AML		
	comp=E,37000μm,0.2s						
T1204				AML	AML		
	comp=N,27950μm,0.8s						
T1204				AML	AML		
	comp=E,22764μm,0.4s						
T1204				AML	AML		
	comp=N,27544μm,1.1s						
T1216	**Preci, Frazion**	**0.15**	**315**	P	**Pg**	**07 40 37.0**	**+0.9**
T1216				S	**Sg**	**07 40 39.8**	**+1.0**
T1217	**Poggiodomo (PG**	**0.19**	**248**	P	**Pg**	**07 40 37.1**	**+0.4**
T1217				S	**Sg**	**07 40 40.7**	**+1.1**
FEMA	**Monte Fema**	**0.20**	**335**	P	**Pg**	**07 40 38.0**	**+1.1**
FEMA				S	**Sg**	**07 40 40.9**	**+0.8**
LNSS	**Leonessa**	**0.20**	**208**	P	**Pg**	**07 40 37.6**	**+0.7**
LNSS				S	**Sg**	**07 40 40.8**	**+0.8**
T1241	**Roccafluvione,**	**0.21**	**69**	P	**Pg**	**07 40 38.1**	**+1.1**
T1241				S	**Sg**	**07 40 41.3**	**+1.1**
T1215	**Vallo di Nera,**	**0.22**	**275**	P	**Pg**	**07 40 37.9**	**+0.7**
T1215				S	**Sg**	**07 40 41.8**	**+1.3**
T1243	**Rocca Santa Ma**	**0.23**	**112**	P	**Pg**	**07 40 37.4**	**+0.1**
T1243				S	**Sg**	**07 40 42.0**	**+1.4**
T1256	**Bolognola (MC)**	**0.23**	**11**	P	**Pg**	**07 40 37.7**	**+0.3**
T1256				S	**Sg**	**07 40 41.8**	**+0.9**
AM05	**Amandola Campo**	**0.24**	**35**	P	**Pg**	**07 40 38.2**	**+0.7**
AM05				S	**Sg**	**07 40 42.0**	**+1.0**
AM05				AML	AML		
	comp=E,8615μm,0.2s						
AM05				AML	AML		
	comp=N,1510μm,0.1s						
AM05				AML	AML		
	comp=E,8610μm,0.2s						
AM05				AML	AML		
	comp=E,30850μm,1.1s						
AM05				AML	AML		
	comp=N,1855μm,0.1s						
AM05				AML	AML		
	comp=E,8600μm,0.2s						
AM05				AML	AML		
	comp=N,9220μm,1.0s						
AM05				AML	AML		
	comp=E,30900μm,1.1s						
FDMO	**Fiordimonte**	**0.26**	**347**	P	**Pb**	**07 40 39.0**	**+0.3**
FDMO				S	**Sb**	**07 40 43.0**	**-0.1**
RM33	**Pellescritta (**	**0.28**	**173**	P	**Pb**	**07 40 39.0**	**-0.1**
RM33				S	**Sb**	**07 40 43.3**	**-0.2**
RM33				AML	AML		
	comp=E,12540μm,0.3s						
RM33				AML	AML		
	comp=N,10520μm,0.4s						
RM33				AML	AML		
	comp=E,12515μm,0.3s						
RM33				AML	AML		
	comp=N,10485μm,0.4s						
T1219	**Muccia, Frazio**	**0.30**	**337**	P	**Pb**	**07 40 39.2**	**-0.2**
T1219				S	**Sb**	**07 40 44.2**	**-0.1**
CAMP	**Campotosto**	**0.30**	**144**	P	**Pg**	**07 40 38.9**	**+0.2**
CAMP				S	**Sg**	**07 40 43.8**	**+0.8**
CAMP				AML	AML		
	comp=N,6910μm,1.5s						
CAMP				AML	AML		
	comp=E,5560μm,0.5s						
GUMA	**Gualdo di Mace**	**0.31**	**24**	P	**Pb**	**07 40 39.4**	**-0.2**
GUMA				S	**Sb**	**07 40 44.8**	**+0.4**
GUMA				AML	AML		
	comp=N,51650μm,0.4s						
GUMA				AML	AML		
	comp=E,55500μm,0.5s						
GUMA				AML	AML		
	comp=N,50600μm,1.1s						
GUMA				AML	AML		
	comp=N,51600μm,0.4s						
GUMA				AML	AML		
	comp=E,43550μm,0.7s						
GUMA				AML	AML		
	comp=N,49481μm,2.8s						
GUMA				AML	AML		
	comp=E,36962μm,1.5s						
GUMA				AML	AML		
	comp=E,29202μm,2.8s						
GUMA				AML	AML		
	comp=N,39980μm,0.4s						
T1246	**Crognaleto (TE**	**0.31**	**129**	P	**Pg**	**07 40 39.0**	**+0.2**
T1246				S	**Sg**	**07 40 44.0**	**+0.8**
T1220	**Camerino, Fraz**	**0.33**	**350**	P	**Pb**	**07 40 39.8**	**-0.2**
T1220				S	**Sb**	**07 40 45.6**	**+0.4**
T1211	**Morro Reatino**	**0.34**	**223**	P	**Pb**	**07 40 40.4**	**+0.2**
T1211				S	**Sb**	**07 40 45.6**	**+0.2**
T1247	**Pizzolo (AQ)**	**0.35**	**164**	P	**Pb**	**07 40 40.6**	**+0.2**
T1247				S	**Sb**	**07 40 46.0**	**+0.2**
TERO	**Teramo**	**0.36**	**116**	P	**Pb**	**07 40 40.4**	**0.0**
TERO				S	**Sg**	**07 40 45.3**	**+0.8**
TERO				AML	AML		
	comp=N,10460μm,1.1s						
TERO				AML	AML		
	comp=E,12300μm,1.0s						
TERO				AML	AML		
	comp=N,10475μm,1.1s						
TERO				AML	AML		
	comp=E,12650μm,1.0s						
TERO				AML	AML		
	comp=N,10940μm,1.2s						
TERO				AML	AML		
	comp=N,10945μm,1.2s						
TERO				AML	AML		
	comp=N,10450μm,1.1s						
SEF1	**Sefro**	**0.40**	**336**	P	**Pb**	**07 40 42.2**	**+1.1**
SEF1				S	**Sb**	**07 40 47.5**	**+0.4**
OFFI	**Offida**	**0.41**	**68**	P	**Pb**	**07 40 41.7**	**+0.4**
OFFI				AML	AML		
	comp=E,21350μm,0.5s						
OFFI				AML	AML		
	comp=N,21050μm,0.7s						
MNTP	**Montappone**	**0.42**	**32**	P	**Pb**	**07 40 42.2**	**+0.7**
MNTP				AML	AML		
	comp=E,16100μm,1.0s						
MNTP				AML	AML		
	comp=N,16850μm,1.4s						
MNTP				AML	AML		
	comp=E,16150μm,1.1s						
MNTP				AML	AML		
	comp=N,16900μm,1.4s						
MNTP				AML	AML		
	comp=N,7568μm,2.0s						
FIU1	**Fiuminata**	**0.44**	**337**	P	**Pb**	**07 40 42.0**	**+0.1**
FIU1				S	**Sb**	**07 40 49.1**	**+0.8**
GIGS	**Gran Sasso**	**0.45**	**138**	P	**Pg**	**07 40 41.5**	**+0.3**
ASSB	**Assisi San Ben**	**0.46**	**305**	P	**Pb**	**07 40 42.2**	**+0.1**
ASSB				S	**Sb**	**07 40 49.2**	**+0.4**
ASSB				AML	AML		
	comp=N,13200μm,0.2s						
ASSB				AML	AML		
	comp=E,13300μm,0.2s						
ASSB				AML	AML		
	comp=N,8321μm,0.3s						
ASSB				AML	AML		
	comp=E,6919μm,1.2s						
SNTG	**Esanatoglia**	**0.50**	**341**	P	**Pb**	**07 40 43.8**	**+0.9**
SNTG				S	**Sb**	**07 40 50.8**	**+0.7**
FIAM	**Fiamignano**	**0.51**	**184**	P	**Pg**	**07 40 42.7**	**+0.3**
FIAM				S	**Sb**	**07 40 50.8**	**+0.3**
TRTR	**Tortoreto Alta**	**0.55**	**87**	P	**Pb**	**07 40 44.8**	**+1.1**
ATCC	**AVT- Casa Cast**	**0.56**	**316**	P	**Pb**	**07 40 44.2**	**+0.3**
ATCC				S	**Sb**	**07 40 52.7**	**+1.0**
ATCC				AML	AML		
	comp=N,8645μm,0.7s						
ATCC				AML	AML		
	comp=N,8640μm,0.7s						
ATCC				AML	AML		
	comp=E,10950μm,0.7s						
ATCC				AML	AML		
	comp=E,10429μm,0.8s						
ATCC				AML	AML		
	comp=N,7298μm,0.8s						
FOSV	**Fossato di Vic**	**0.59**	**330**	P	**Pb**	**07 40 44.6**	**+0.2**
FOSV				S	**Sb**	**07 40 53.5**	**+0.8**
FOSV				AML	AML		
	comp=E,6595μm,1.0s						
FOSV				AML	AML		
	comp=N,4980μm,0.4s						
FOSV				AML	AML		
	comp=E,4538μm,0.7s						
FOSV				AML	AML		
	comp=N,4335μm,0.2s						
CADA	**Capodarco di F**	**0.60**	**46**	P	**Pn**	**07 40 46.0**	**-0.4**
FAGN	**Fagnano**	**0.60**	**149**	P	**Pb**	**07 40 45.1**	**+0.5**
FAGN				AML	AML		
	comp=E,7815μm,0.4s						
FAGN				AML	AML		
	comp=E,7450μm,2.4s						
FAGN				AML	AML		
	comp=N,9205μm,0.5s						
VCEL	**Villa Celiera**	**0.63**	**128**	P	**Pg**	**07 40 44.9**	**+0.2**
VCEL				AML	AML		
	comp=E,4995μm,1.0s						
VCEL				AML	AML		
	comp=E,7905μm,0.4s						
VCEL				AML	AML		
	comp=N,7600μm,0.5s						
VCEL				AML	AML		
	comp=E,4053μm,1.1s						
T0110	**Collepietro**	**0.72**	**141**	P	**Pg**	**07 40 45.8**	**-0.4**
T0110				AML	AML		
	comp=E,4770μm,0.6s						
T0110				AML	AML		
	comp=N,4835μm,0.4s						
T0110				AML	AML		
	comp=E,5695μm,1.2s						
T0110				AML	AML		
	comp=N,4785μm,0.4s						
ATFO	**Monte Foce - G**	**0.73**	**324**	P	**Pb**	**07 40 47.0**	**+0.3**
ATFO				AML	AML		
	comp=E,4905μm,1.4s						
ATFO				AML	AML		
	comp=N,3675μm,0.4s						
ATFO				AML	AML		
	comp=E,4900μm,1.4s						
ATFO				AML	AML		
	comp=E,3167μm,0.5s						
ATFO				AML	AML		
	comp=N,2240μm,1.0s						
FRON	**Frontone**	**0.80**	**336**	P	**Pb**	**07 40 48.1**	**0.0**
ATVA	**AVT- Monte Val**	**0.81**	**308**	P	**Pn**	**07 40 49.5**	**+0.1**
AOI	**Ancona**	**0.83**	**22**	P	**Pg**	**07 40 48.2**	**-0.2**
AOI				AML	AML		
	comp=E,2225μm,0.8s						
AOI				AML	AML		
	comp=N,2495μm,0.2s						
AOI				AML	AML		
	comp=E,2220μm,0.8s						
AOI				AML	AML		
	comp=E,1942μm,1.2s						
ATPI	**Pietralunga -**	**0.87**	**320**	P	**Pb**	**07 40 49.5**	**+0.3**
ATPI				AML	AML		
	comp=N,2780μm,1.6s						
ATPI				AML	AML		
	comp=E,3010μm,0.6s						
ATPI				AML	AML		
	comp=N,2785μm,1.6s						
ATPI				AML	AML		
	comp=E,1881μm,0.9s						
PIEI	**Pieia**	**0.88**	**329**	P	**Pg**	**07 40 49.2**	**-0.2**
PIEI				AML	AML		
	comp=E,1710μm,1.3s						
PIEI				AML	AML		
	comp=N,1725μm,0.7s						
PIEI				AML	AML		
	comp=N,1730μm,0.7s						
FSSB	**Fossombrone**	**0.95**	**343**	P	**Pb**	**07 40 50.9**	**+0.3**
FSSB				AML	AML		
	comp=E,5890μm,0.5s						
FSSB				AML	AML		
	comp=N,13500μm,0.4s						
FSSB				AML	AML		
	comp=E,5885μm,0.5s						
FSSB				AML	AML		
	comp=E,4823μm,0.3s						
FSSB				AML	AML		
	comp=N,5311μm,3.4s						
LPEL	**Lama dei Pelig**	**1.05**	**134**	P	**Pg**	**07 40 52.4**	**-0.2**
LPEL				AML	AML		
	comp=E,1440μm,0.8s						
LPEL				AML	AML		
	comp=N,1660μm,0.6s						
LPEL				AML	AML		
	comp=N,1875μm,0.9s						
LPEL				AML	AML		
	comp=E,1815μm,0.4s						
MCIV	**Monte Civitell**	**1.10**	**270**	AML	AML		
	comp=E,1070μm,0.7s						
MCIV				AML	AML		
	comp=N,873μm,1.2s						
SF04	**Casetta**	**1.11**	**273**	AML	AML		
	comp=N,1455μm,0.4s						
SF04				AML	AML		
	comp=E,1850μm,0.3s						
GIUL	**Giuliano Di Ro**	**1.22**	**177**	AML	AML		
	comp=N,1090μm,0.6s						
GIUL				AML	AML		
	comp=E,604μm,0.6s						
PGF	**Pioggiola**	**3.08**	**267**	*e*P	**Pn**	**07 41 21.5**	**+0.9**
PGF				*e*Sn	**Sn**	**07 41 52.7**	**-4.6**
	comp=E,21nm,0.3s						
SBF	**Sospel**	**4.32**	**286**	*e*P	**Pn**	**07 41 38.0**	**+0.5**
LMR	**La Mourre**	**4.91**	**279**	*e*P	**Pn**	**07 41 47.6**	**+2.0**
HINF	**Hinteralfeld**	**6.72**	**321**	*e*P	**Pn**	**07 42 12.8**	**+2.3**
HINF				*e*Sn	**Sn**	**07 43 20.6**	**-6.2**
	comp=E,12nm,0.5s						
HAU	**Haudompre**	**7.09**	**320**	*e*P	**Pn**	**07 42 18.2**	**+2.6**
HAU				*e*Sn	**Sn**	**07 43 34.3**	**-1.6**
	comp=E,20nm,0.3s						
SMF	**Signal de Mont**	**7.68**	**303**	*e*P	**Pn**	**07 42 25.6**	**+1.9**
SFTF	**Sexfontaines**	**7.87**	**316**	*e*P	**Pn**	**07 42 28.8**	**+2.6**
	baz=137						
LOR	**Lormes**	**7.97**	**307**	*e*P	**Pn**	**07 42 30.7**	**+3.1**
AVF	**Avril sur Loir**	**8.05**	**303**	*e*P	**Pn**	**07 42 27.8**	**-0.8**
MEZF	**Maizieres J'vi**	**8.06**	**318**	*e*P	**Pn**	**07 42 31.1**	**+2.3**
SSF	**Saint Saulge**	**8.08**	**305**	*e*P	**Pn**	**07 42 28.3**	**-0.8**
SAVF	**Savonnieres en**	**8.10**	**319**	*e*P	**Pn**	**07 42 32.5**	**+3.1**
	baz=142						
CAF	**Calviac**	**8.30**	**289**	*e*P	**Pn**	**07 42 35.4**	**+3.2**
CLL	**Collm**	**8.53**	**359**	*e*Sg	**Sg**	**07 45 02.0**	**-3.8**
	comp=Z,36nm,1.7s						
TCF	**Toulx Ste Croi**	**8.57**	**298**	*e*P	**Pn**	**07 42 39.2**	**+3.3**
GIVF	**Givet**	**9.31**	**325**	*e*P	**Pn**	**07 42 48.9**	**+3.0**

IDC 30 07:44:16.2±1.7, 42°.84N×13°.15E, h0km, mb3.6/3, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=42.9km s-min=29.0km az=100.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVOX	**Davos/Dischmat**	**4.58**	**331**	Pn	Pn	07 45 26.9	+0.1
	5.5nm,0.3s,baz=167,slow=20,SNR=2.8						
	14nm,0.4s						
EKA	**Eskdalemuir Ar**	**16.39**	**325**	Pn	Pn	07 48 05.5	-1.9
	baz=132,slow=14						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**20.18**	**18**	P	Pn	07 48 53.8	-0.1
	4.2nm,0.9s,baz=234,slow=6.4,SNR=1.9						
	4.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.20**	**202**	P	P	07 50 37.4	+0.3
	0.3nm,0.5s,baz=11,slow=7.7,SNR=2.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**47.77**	**60**	P	P	07 52 54.0	-0.9
	0.6nm,0.7s,baz=297,slow=6.3,SNR=2.3						
	0.6nm,0.7s						

*IDC **30** 07:45:05.4±1.6, 42°.80N×13°.84E, h0km, mb3.9/4, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=37.5km s-min=23.1km az=96.0*

ISC 30 07:45:06.8±1.2, 42°.8N±0°.1×13°.8E±0°.2, h11km, n6, σ0°.87/5, mb4.0/3, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVOX	**Davos/Dischmat**	**4.82**	**326**	Pn	**Pn**	**07 46 19.3**	**-0.2**
	4.2nm,0.3s,baz=147,slow=19,SNR=2.6						
	30nm,0.7s						
GERES	**GERESS Array B**	**6.01**	**360**	Pn	**Pn**	**07 46 36.6**	**+0.8**
	1.1nm,0.3s,baz=179,slow=9.3,SNR=4.0						
	3.6nm,0.4s						
FINES	**FINESS Array B**	**20.05**	**17**	P	Pn	07 49 41.6	+0.3
	4.5nm,0.8s,baz=187,slow=8.2,SNR=5.4						
	4.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.37**	**203**	P	**P**	**07 51 28.0**	**+0.4**
	0.6nm,0.5s,baz=21,slow=9.0,SNR=2.8						
	0.6nm,0.5s						
ARU	**Arti**	**31.43**	**49**	P	**P**	**07 51 27.0**	**-0.8**
	2.7nm,0.5s,baz=252,slow=7.6,SNR=3.7						
	2.7nm,0.5s						
MKAR	**Makanchi Array**	**47.37**	**60**	P	**P**	**07 53 40.7**	**0.0**
	1.0nm,0.7s,baz=292,slow=6.4,SNR=3.6						
	1.0nm,0.7s						

*IDC **30** 07:59:16.0±2.0, 42°.76N×13°.51E, h0km, mb3.6/2, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=51.5km s-min=17.5km az=98.0*
*ROM **30** 07:59:17.1±0.0, 42°.787N±0°.001×13°.087E±0°.003, h10km, ML3.5/88, Error ellipse: s-maj=0.2km s-min=0.1km az=250.0*
*PRU **30** 07:59:17.7±0.0, 42°.78N×13°.56E, h0km*

*LDG **30** 07:59:17.3±0.2, 42°.68N×13°.13E, h10km, Ml3.5/13, Error ellipse: s-maj=6.2km s-min=4.4km az=41.0*
*BGR **30** 07:59:18.6±0.9, 42°.68N×13°.37E, h10km, ML3.7/7, Error ellipse: s-maj=13.3km s-min=12.2km az=75.0*
ISC 30 07:59:17.4±0.7, 42.79N±0.01×13.08E±0.02, h13km±4km, n203, σ1§61/250, 3C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.04**	**215**	⇑P	**Pg**	**07 59 19.6**	**-0.3**
T1212				S	**Sg**	**07 59 21.1**	**-0.6**
T1213	**Norcia, Frazio**	**0.07**	**151**	P	**Pg**	**07 59 19.8**	**-0.4**
T1213				S	**Sg**	**07 59 21.3**	**-0.8**
T1214	**Arquata del Tr**	**0.10**	**106**	⇓P	**Pg**	**07 59 20.2**	**-0.4**
T1214				S	**Sg**	**07 59 22.0**	**-0.8**
T1245	**Castelsantange**	**0.10**	**49**	P	**Pg**	**07 59 20.2**	**-0.4**
T1245				S	**Sg**	**07 59 22.3**	**-0.7**
T1216	**Preci, Frazion**	**0.11**	**337**	P	**Pg**	**07 59 20.6**	**-0.1**
T1216				S	**Sg**	**07 59 22.8**	**-0.1**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=E,86265μm,0.1s						
T1216				AML	AML		
T1218	**Civita (PG)**	**0.12**	**167**	⇑P	**Pg**	**07 59 20.6**	**-0.2**
T1218				S	**Sg**	**07 59 23.0**	**-0.2**
T1217	**Poggiodomo (PG**	**0.13**	**235**	P	**Pg**	**07 59 20.9**	**0.0**
T1217				S	**Sg**	**07 59 23.5**	**+0.1**
T1217				AML	AML		
	comp=N,53100μm,0.3s						
T1217				AML	AML		
	comp=E,24700μm,0.5s						
T1217				AML	AML		
	comp=N,52550μm,0.3s						
T1217				AML	AML		
	comp=N,53100μm,0.3s						
T1217				AML	AML		
	comp=E,24650μm,0.5s						
T1217				AML	AML		
	comp=N,52500μm,0.3s						
T1217				AML	AML		
	comp=E,24800μm,0.5s						
T1217				AML	AML		
	comp=E,20413μm,0.3s						
T1217				AML	AML		
	comp=N,53079μm,0.3s						
T1217				AML	AML		
	comp=E,20134μm,0.3s						
T1217				AML	AML		
	comp=N,52527μm,0.3s						
MC2	**Monte Cornacci**	**0.15**	**33**	P	**Pg**	**07 59 21.1**	**-0.2**
MC2				S	**Sg**	**07 59 23.9**	**-0.1**
T1215	**Vallo di Nera,**	**0.16**	**275**	P	**Pg**	**07 59 21.3**	**+0.1**
T1215				S	**Sg**	**07 59 24.3**	**+0.4**
T1215				AML	AML		
	comp=E,22050μm,0.4s						
T1215				AML	AML		
	comp=E,21350μm,0.9s						
T1215				AML	AML		
	comp=E,22050μm,0.5s						
T1215				AML	AML		
	comp=N,31700μm,0.5s						
T1215				AML	AML		
	comp=E,21350μm,0.9s						
T1215				AML	AML		
	comp=N,31200μm,1.0s						
T1215				AML	AML		
	comp=E,21630μm,0.3s						
T1215				AML	AML		
	comp=E,21246μm,0.2s						
T1215				AML	AML		
	comp=N,28581μm,0.2s						
T1215				AML	AML		
	comp=N,28373μm,0.2s						
T1244	**Arquata del Tr**	**0.16**	**101**	P	**Pg**	**07 59 21.4**	**0.0**
T1244				S	**Sg**	**07 59 24.3**	**+0.2**
FEMA	**Monte Fema**	**0.18**	**353**	P	**Pg**	**07 59 21.7**	**+0.1**
FEMA				S	**Sg**	**07 59 24.4**	**-0.1**
FEMA				AML	AML		
	comp=E,77100μm,0.3s						
FEMA				AML	AML		
	comp=N,52150μm,1.1s						
FEMA				AML	AML		
	comp=E,77050μm,0.3s						
FEMA				AML	AML		
	comp=N,72000μm,0.8s						
FEMA				AML	AML		
	comp=E,79450μm,0.6s						
FEMA				AML	AML		
	comp=N,38250μm,0.1s						
FEMA				AML	AML		
	comp=E,77083μm,0.3s						
T1201	**Domo (RI)**	**0.18**	**136**	P	**Pg**	**07 59 21.8**	**+0.2**
T1201				S	**Sb**	**07 59 25.3**	**-0.9**
LNSS	**Leonessa**	**0.19**	**189**	P	**Pg**	**07 59 21.8**	**0.0**
LNSS				S	**Sg**	**07 59 25.1**	**+0.4**
LNSS				AML	AML		
	comp=E,31100μm,0.2s						
LNSS				AML	AML		
	comp=N,92600μm,0.4s						
LNSS				AML	AML		
	comp=E,31133μm,0.2s						
T1204	**Amatrice, Fraz**	**0.21**	**122**	P	**Pg**	**07 59 22.1**	**0.0**
T1204				S	**Sg**	**07 59 25.7**	**+0.3**
T1256	**Bolognola (MC)**	**0.24**	**26**	P	**Pg**	**07 59 22.5**	**-0.2**
T1256				S	**Sg**	**07 59 26.6**	**+0.2**
FDMO	**Fiordimonte**	**0.25**	**1**	⇑P	**Pg**	**07 59 22.8**	**0.0**
FDMO				S	**Sg**	**07 59 26.7**	**+0.4**
T1219	**Muccia, Frazio**	**0.27**	**349**	P	**Pg**	**07 59 23.2**	**0.0**
T1219				S	**Sg**	**07 59 27.5**	**+0.5**
AM05	**Amandola Campo**	**0.28**	**47**	P	**Pg**	**07 59 23.2**	**-0.1**
AM05				S	**Sg**	**07 59 27.8**	**+0.6**
AM05				AML	AML		
	comp=E,8555μm,0.8s						
AM05				AML	AML		
	comp=N,8970μm,0.5s						
AM05				AML	AML		
	comp=E,43250μm,0.8s						
AM05				AML	AML		
	comp=E,8595μm,0.8s						
AM05				AML	AML		
	comp=N,8980μm,0.5s						
AM05				AML	AML		
	comp=N,2080μm,0.6s						
AM05				AML	AML		
	comp=E,8580μm,0.8s						
AM05				AML	AML		
	comp=N,8990μm,0.5s						
AM05				AML	AML		
	comp=N,2075μm,0.6s						
AM05				AML	AML		
	comp=E,32637μm,0.2s						
AM05				AML	AML		
	comp=E,7810μm,0.2s						
AM05				AML	AML		
	comp=N,7203μm,0.1s						
AM05				AML	AML		
	comp=N,1867μm,0.1s						
T1243	**Rocca Santa Ma**	**0.29**	**108**	P	**Pg**	**07 59 23.4**	**-0.1**
T1243				S	**Sg**	**07 59 27.9**	**+0.4**
RM33	**Pellescritta (**	**0.30**	**160**	P	**Pg**	**07 59 23.4**	**-0.2**
RM33				S	**Sg**	**07 59 28.5**	**+0.7**
T1211	**Morro Reatino**	**0.30**	**213**	P	**Pg**	**07 59 23.7**	**0.0**
T1211				S	**Sg**	**07 59 28.9**	**+0.9**
T1211				AML	AML		
	comp=E,17300μm,0.4s						
T1211				AML	AML		
	comp=N,45300μm,0.2s						
T1211				AML	AML		
	comp=E,17650μm,1.2s						
T1211				AML	AML		
	comp=N,45000μm,0.2s						
T1211				AML	AML		
	comp=E,17350μm,0.4s						
T1211				AML	AML		
	comp=N,45250μm,0.2s						
T1211				AML	AML		
	comp=E,17700μm,1.2s						
T1211				AML	AML		
	comp=N,45100μm,0.2s						
T1211				AML	AML		
	comp=E,17700μm,1.2s						
T1211				AML	AML		
	comp=N,45294μm,0.2s						
T1211				AML	AML		
	comp=E,17335μm,0.4s						
T1211				AML	AML		
	comp=N,45052μm,0.2s						
T1211				AML	AML		
	comp=E,17505μm,0.3s						
ARRO	**Arrone**	**0.31**	**228**	P	**Pg**	**07 59 23.9**	**+0.1**
ARRO				S	**Sb**	**07 59 29.6**	**-0.3**
ARRO				AML	AML		
	comp=E,12335μm,0.2s						
ARRO				AML	AML		
	comp=N,16600μm,0.7s						
ARRO				AML	AML		
	comp=E,12313μm,0.2s						
ARRO				AML	AML		
	comp=N,15998μm,0.2s						
T1220	**Camerino, Fraz**	**0.32**	**1**	P	**Pg**	**07 59 24.0**	**0.0**
T1220				S	**Sb**	**07 59 29.6**	**-0.6**
GUMA	**Gualdo di Mace**	**0.33**	**34**	P	**Pg**	**07 59 24.4**	**+0.2**
GUMA				S	**Sb**	**07 59 30.1**	**-0.4**
GUMA				AML	AML		
	comp=E,61200μm,0.6s						
GUMA				AML	AML		
	comp=E,66200μm,0.6s						
GUMA				AML	AML		
	comp=N,75100μm,0.4s						
GUMA				AML	AML		
	comp=N,54600μm,0.4s						
GUMA				AML	AML		
	comp=E,61250μm,0.6s						
GUMA				AML	AML		
	comp=N,54564μm,0.4s						
GUMA				AML	AML		
	comp=N,75070μm,0.4s						
GUMA				AML	AML		
	comp=E,61204μm,0.6s						
GUMA				AML	AML		
	comp=E,66196μm,0.6s						
CAMP	**Campotosto**	**0.35**	**136**	P	**Pg**	**07 59 24.3**	**-0.3**
CAMP				S	**Sg**	**07 59 29.9**	**+0.5**
T1246	**Crognaleto (TE**	**0.37**	**124**	P	**Pg**	**07 59 24.6**	**-0.3**
T1246				S	**Sg**	**07 59 30.1**	**+0.3**
SEF1	**Sefro**	**0.37**	**345**	P	**Pg**	**07 59 24.9**	**-0.1**
SEF1				S	**Sb**	**07 59 30.9**	**-0.7**
SEF1				AML	AML		
	comp=E,21100μm,0.4s						
SEF1				AML	AML		
	comp=N,16200μm,0.3s						
SEF1				AML	AML		
	comp=E,22150μm,1.5s						
SEF1				AML	AML		
	comp=E,22200μm,1.5s						
SEF1				AML	AML		
	comp=N,27750μm,1.3s						
SEF1				AML	AML		
	comp=N,16231μm,0.3s						
SEF1				AML	AML		
	comp=E,21063μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.38**	**155**	P	**Pg**	**07 59 25.1**	**0.0**
T1247				S	**Sb**	**07 59 31.1**	**-0.8**
T1247				AML	AML		
	comp=N,14400μm,1.3s						
T1247				AML	AML		
	comp=E,12800μm,0.7s						
T1247				AML	AML		
	comp=E,10961μm,0.4s						
T1247				AML	AML		
	comp=N,13281μm,0.3s						
PIO1	**Pioraco**	**0.40**	**350**	P	**Pg**	**07 59 25.3**	**-0.1**
PIO1				AML	AML		
	comp=N,12700μm,0.8s						
PIO1				AML	AML		
	comp=N,12750μm,0.8s						
PIO1				AML	AML		
	comp=E,8450μm,0.4s						
PIO1				AML	AML		
	comp=N,12410μm,0.7s						
PIO1				AML	AML		
	comp=E,8450μm,0.4s						
ASSB	**Assisi San Ben**	**0.40**	**310**	P	**Pg**	**07 59 25.4**	**-0.1**
ASSB				AML	AML		
	comp=E,11385μm,0.3s						
ASSB				AML	AML		
	comp=N,7320μm,0.5s						
ASSB				AML	AML		
	comp=E,11378μm,0.3s						
ASSB				AML	AML		
	comp=N,7027μm,0.4s						
MDAR	**Monte D'Aria**	**0.41**	**7**	P	**Pg**	**07 59 25.4**	**-0.2**
CESX	**Cesi**	**0.41**	**244**	P	**Pg**	**07 59 25.5**	**-0.1**
CESX				AML	AML		
	comp=E,13050μm,0.3s						
CESX				AML	AML		
	comp=N,8275μm,0.3s						
CESX				AML	AML		
	comp=E,13059μm,0.3s						
FIU1	**Fiuminata**	**0.41**	**345**	P	**Pg**	**07 59 25.8**	**0.0**
FIU1				S	**Sb**	**07 59 32.3**	**-0.6**
FIU1				AML	AML		
	comp=E,7860μm,1.5s						
FIU1				AML	AML		
	comp=N,6440μm,0.5s						
FIU1				AML	AML		
	comp=E,9360μm,0.2s						
FIU1				AML	AML		
	comp=N,6455μm,1.3s						
FIU1				AML	AML		
	comp=E,9395μm,0.2s						
FIU1				AML	AML		
	comp=E,6386μm,0.2s						
FIU1				AML	AML		
	comp=N,5910μm,0.2s						
TERO	**Teramo**	**0.42**	**113**	P	**Pg**	**07 59 25.3**	**-0.5**
TERO				AML	AML		
	comp=N,45350μm,0.4s						
TERO				AML	AML		
	comp=N,47050μm,0.4s						
TERO				AML	AML		
	comp=E,20350μm,0.3s						
TERO				AML	AML		
	comp=E,19250μm,0.3s						
TERO				AML	AML		
	comp=N,47088μm,0.4s						
TERO				AML	AML		
	comp=E,19223μm,0.3s						
TERO				AML	AML		
	comp=E,20335μm,0.3s						
TERO				AML	AML		
	comp=N,45333μm,0.4s						
SSM1	**San Severino M**	**0.45**	**9**	P	**Pg**	**07 59 26.1**	**-0.3**
SSM1				S	**Sb**	**07 59 33.2**	**-0.5**
GAG1	**Gagliole**	**0.45**	**359**	P	**Pg**	**07 59 26.3**	**-0.1**
GAG1				S	**Sb**	**07 59 33.7**	**-0.2**
GAG1				AML	AML		
	comp=E,27800μm,1.0s						
GAG1				AML	AML		
	comp=N,26150μm,0.4s						
GAG1				AML	AML		
	comp=E,27800μm,0.9s						
GAG1				AML	AML		
	comp=N,26150μm,0.4s						
GAG1				AML	AML		
	comp=N,26179μm,0.4s						
GAG1				AML	AML		
	comp=E,25869μm,0.3s						
MNTP	**Montappone**	**0.45**	**39**	P	**Pg**	**07 59 26.7**	**+0.3**
MNTP				AML	AML		
	comp=E,16150μm,0.8s						
MNTP				AML	AML		
	comp=N,20950μm,1.1s						
MNTP				AML	AML		
	comp=N,15774μm,0.3s						
MNTP				AML	AML		
	comp=E,15745μm,0.4s						
OFFI	**Offida**	**0.47**	**72**	P	**Pb**	**07 59 27.1**	**-0.5**
OFFI				AML	AML		
	comp=E,20200μm,0.6s						
OFFI				AML	AML		
	comp=N,24750μm,0.4s						
OFFI				AML	AML		
	comp=E,20203μm,0.6s						
OFFI				AML	AML		
	comp=N,24739μm,0.4s						
SNTG	**Esanatoglia**	**0.48**	**348**	P	**Pg**	**07 59 26.6**	**-0.3**
SNTG				S	**Sb**	**07 59 34.4**	**-0.3**
SNTG				AML	AML		
	comp=E,4325μm,0.8s						
SNTG				AML	AML		
	comp=E,4300μm,0.8s						
SNTG				AML	AML		
	comp=N,5170μm,1.2s						
SNTG				AML	AML		
	comp=E,4435μm,0.6s						
SNTG				AML	AML		
	comp=E,4520μm,0.6s						
SNTG				AML	AML		
	comp=N,5165μm,1.2s						
SNTG				AML	AML		
	comp=N,4815μm,1.2s						
SNTG				AML	AML		
	comp=E,4430μm,0.6s						
SNTG				AML	AML		
	comp=E,3924μm,0.2s						
SNTG				AML	AML		
	comp=N,4787μm,0.1s						
SNTG				AML	AML		
	comp=N,4271μm,0.1s						
SNTG				AML	AML		
	comp=E,4041μm,0.2s						
GIGS	**Gran Sasso**	**0.49**	**133**	P	**Pg**	**07 59 26.6**	**-0.6**
GIGS				AML	AML		
	comp=E,1920μm,0.2s						
GIGS				AML	AML		
	comp=N,1905μm,1.1s						
GIGS				AML	AML		
	comp=N,1691μm,0.2s						
GIGS				AML	AML		
	comp=E,1921μm,0.2s						
AQU	**L'Aquila**	**0.49**	**151**	P	**Pg**	**07 59 27.1**	**-0.1**
AQU				S	**Sb**	**07 59 35.4**	**+0.2**
AQU				AML	AML		
	comp=N,5975μm,0.9s						
AQU				AML	AML		
	comp=E,4505μm,0.4s						
AQU				AML	AML		
	comp=N,5485μm,0.9s						
AQU				AML	AML		
	comp=E,4545μm,0.5s						
AQU				AML	AML		
	comp=N,4553μm,0.8s						
AQU				AML	AML		
	comp=N,4694μm,0.8s						
AQU				AML	AML		
	comp=E,4543μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.51**	**321**	P	**Pg**	**07 59 27.3**	**-0.2**
ATCC				S	**Sb**	**07 59 35.7**	**+0.1**
ATCC				AML	AML		
	comp=E,9085μm,0.3s						
ATCC				AML	AML		
	comp=N,8165μm,0.6s						
ATCC				AML	AML		
	comp=N,8160μm,0.6s						
ATCC				AML	AML		
	comp=E,9110μm,0.3s						
ATCC				AML	AML		
	comp=N,8165μm,0.6s						
ATCC				AML	AML		
	comp=E,9088μm,0.3s						
FIAM	**Fiamignano**	**0.52**	**177**	P	**Pg**	**07 59 27.2**	**-0.4**
FIAM				AML	AML		
	comp=N,4335μm,0.4s						
FIAM				AML	AML		
	comp=N,5820μm,0.6s						
FIAM				AML	AML		
	comp=E,5120μm,0.9s						
FIAM				AML	AML		
	comp=E,4945μm,0.5s						
FIAM				AML	AML		
	comp=N,4333μm,0.4s						
EL6	**Elcito**	**0.54**	**2**	P	**Pg**	**07 59 27.6**	**-0.5**
EL6				AML	AML		
	comp=E,9560μm,0.4s						
EL6				AML	AML		
	comp=N,10720μm,0.4s						
EL6				AML	AML		
	comp=E,10155μm,0.3s						
EL6				AML	AML		
	comp=N,15350μm,0.3s						
EL6				AML	AML		
	comp=E,10150μm,0.3s						
EL6				AML	AML		
	comp=N,15400μm,0.3s						
EL6				AML	AML		
	comp=E,9548μm,0.4s						
EL6				AML	AML		
	comp=N,10730μm,0.4s						
TRE1	**Treia**	**0.55**	**18**	P	**Pg**	**07 59 28.3**	**+0.1**
TRE1				AML	AML		
	comp=E,20900μm,0.7s						
TRE1				AML	AML		
	comp=N,12300μm,0.6s						
TRE1				AML	AML		
	comp=N,12350μm,0.6s						
TRE1				AML	AML		
	comp=N,12313μm,0.6s						
TRE1				AML	AML		
	comp=E,20896μm,0.7s						
FOSV	**Fossato di Vic**	**0.56**	**335**	P	**Pg**	**07 59 27.8**	**-0.6**
FOSV				AML	AML		
	comp=E,3235μm,0.5s						
FOSV				AML	AML		
	comp=N,5015μm,0.3s						
FOSV				AML	AML		
	comp=E,3685μm,0.6s						
FOSV				AML	AML		
	comp=E,3680μm,0.6s						
FOSV				AML	AML		
	comp=N,5010μm,0.3s						
FOSV				AML	AML		
	comp=N,5012μm,0.3s						
FOSV				AML	AML		
	comp=E,2997μm,0.4s						
CING	**Cingoli**	**0.59**	**8**	P	**Pg**	**07 59 28.7**	**-0.4**
CING				S	**Sb**	**07 59 38.1**	**0.0**
TRTR	**Tortoreto Alta**	**0.61**	**88**	P	**Pb**	**07 59 29.8**	**-0.3**
TRTR				AML	AML		
	comp=E,21300μm,0.4s						
TRTR				AML	AML		
	comp=N,20950μm,0.4s						
TRTR				AML	AML		
	comp=N,20946μm,0.4s						
TRTR				AML	AML		
	comp=E,21292μm,0.4s						
MURB	**Monte Urbino**	**0.63**	**320**	P	**Pg**	**07 59 29.6**	**0.0**
MURB				AML	AML		
	comp=E,12850μm,0.2s						
MURB				AML	AML		
	comp=E,12800μm,0.2s						
MURB				AML	AML		
	comp=N,18050μm,0.4s						
MURB				AML	AML		
	comp=N,17750μm,0.4s						
MURB				AML	AML		
	comp=E,13000μm,0.2s						
MURB				AML	AML		
	comp=N,18050μm,0.4s						
MURB				AML	AML		
	comp=N,17720μm,0.4s						
MURB				AML	AML		
	comp=E,13006μm,0.2s						
MURB				AML	AML		
	comp=E,12809μm,0.2s						
FAGN	**Fagnano**	**0.64**	**144**	P	**Pg**	**07 59 29.8**	**-0.2**
CADA	**Capodarco di F**	**0.65**	**51**	P	**Pb**	**07 59 31.1**	**+0.6**
ATTE	**AVT- Monte Tez**	**0.67**	**308**	P	**Pg**	**07 59 30.9**	**+0.3**
CIMA	**Civitanova Mar**	**0.68**	**40**	P	**Pb**	**07 59 31.1**	**+0.1**
VCEL	**Villa Celiera**	**0.69**	**125**	P	**Pg**	**07 59 30.3**	**-0.5**
VCEL				AML	AML		
	comp=E,8815μm,1.0s						
VCEL				AML	AML		
	comp=N,8940μm,0.6s						
VCEL				AML	AML		
	comp=N,8942μm,0.6s						
VCEL				AML	AML		
	comp=E,7172μm,0.4s						
ATFO	**Monte Foce - G**	**0.69**	**327**	P	**Pg**	**07 59 30.8**	**-0.1**
ATFO				AML	AML		
	comp=E,2855μm,0.9s						
ATFO				AML	AML		
	comp=N,2955μm,0.4s						
ATFO				AML	AML		
	comp=E,2649μm,0.4s						
ATFO				AML	AML		
	comp=N,2957μm,0.4s						

SRES	**S.Oreste - Sor**	**0.69**	**218**	P	**Pg**	**07 59 30.2**	**-0.7**
SRES				AML	AML		
	comp=E,2900µm,1.4s						
SRES				AML	AML		
	comp=N,3130µm,1.4s						
SRES				AML	AML		
	comp=E,2850µm,0.3s						
SRES				AML	AML		
	comp=N,3107µm,0.4s						
ATSC	**Scheggia e Pas**	**0.70**	**336**	P	**Pg**	**07 59 30.9**	**-0.1**
PP3	**Marolino**	**0.71**	**33**	P	**Pb**	**07 59 31.6**	**0.0**
PP3				AML	AML		
	comp=E,8445µm,0.7s						
PP3				AML	AML		
	comp=N,8510µm,1.3s						
PP3				AML	AML		
	comp=E,8730µm,0.7s						
PP3				AML	AML		
	comp=N,8490µm,1.3s						
PP3				AML	AML		
	comp=N,8845µm,1.3s						
PP3				AML	AML		
	comp=E,8710µm,0.7s						
PP3				AML	AML		
	comp=E,7421µm,0.4s						
PP3				AML	AML		
	comp=N,8004µm,0.3s						
PP3				AML	AML		
	comp=N,8323µm,0.3s						
PP3				AML	AML		
	comp=E,7123µm,0.4s						
ARVD	**Arcevia**	**0.72**	**352**	P	**Pg**	**07 59 31.3**	**-0.1**
ARVD				AML	AML		
	comp=N,2010µm,0.4s						
ARVD				AML	AML		
	comp=E,2485µm,0.8s						
ARVD				AML	AML		
	comp=E,1974µm,0.2s						
ARVD				AML	AML		
	comp=N,1953µm,0.3s						
ATLO	**AVT- Montelove**	**0.72**	**317**	P	**Pg**	**07 59 31.0**	**-0.5**
MGAB	**Montegabbione**	**0.72**	**280**	P	**Pg**	**07 59 31.7**	**+0.2**
MGAB				AML	AML		
	comp=E,9235µm,1.5s						
MGAB				AML	AML		
	comp=N,10115µm,1.3s						
MGAB				AML	AML		
	comp=N,10185µm,1.3s						
MGAB				AML	AML		
	comp=E,10465µm,1.4s						
MGAB				AML	AML		
	comp=N,9292µm,0.5s						
MGAB				AML	AML		
	comp=E,9309µm,0.4s						
MGAB				AML	AML		
	comp=N,8454µm,0.6s						
MGAB				AML	AML		
	comp=E,7558µm,0.4s						
ATVA	**AVT- Monte Val**	**0.76**	**310**	P	**Pg**	**07 59 32.2**	**0.0**
T0110	**Collepietro**	**0.76**	**137**	P	**Pg**	**07 59 31.7**	**-0.5**
T0110				AML	AML		
	comp=E,6695µm,1.4s						
T0110				AML	AML		
	comp=N,6895µm,0.4s						
T0110				AML	AML		
	comp=N,6893µm,0.4s						
T0110				AML	AML		
	comp=E,6255µm,0.6s						
ATVO	**AVT- Monte Val**	**0.77**	**321**	P	**Pg**	**07 59 32.3**	**-0.1**
ATVO				AML	AML		
	comp=E,2110µm,0.5s						
ATVO				AML	AML		
	comp=N,2690µm,0.7s						
ATVO				AML	AML		
	comp=N,2692µm,0.7s						
ATVO				AML	AML		
	comp=E,2112µm,0.5s						
FRON	**Frontone**	**0.77**	**341**	P	**Pg**	**07 59 31.8**	**-0.6**
FRON				AML	AML		
	comp=E,2440µm,0.5s						
FRON				AML	AML		
	comp=N,3180µm,0.6s						
FRON				AML	AML		
	comp=E,2319µm,0.4s						
FRON				AML	AML		
	comp=N,3006µm,0.4s						
PTQR	**Pietraquaria**	**0.80**	**163**	P	**Pb**	**07 59 33.1**	**-0.2**
MTCE	**Montecelio**	**0.80**	**198**	P	**Pg**	**07 59 32.3**	**-0.7**
MTCE				AML	AML		
	comp=E,2590µm,0.4s						
MTCE				AML	AML		
	comp=N,2060µm,0.4s						
MTCE				AML	AML		
	comp=N,2059µm,0.4s						
MTCE				AML	AML		
	comp=E,2587µm,0.4s						
ATMI	**Monte Miggiano**	**0.81**	**313**	P	**Pb**	**07 59 33.6**	**+0.2**
ATMI				AML	AML		
	comp=N,7010µm,0.7s						
ATMI				AML	AML		
	comp=E,5620µm,1.1s						
ATMI				AML	AML		
	comp=N,6652µm,0.3s						
ATMI				AML	AML		
	comp=E,4520µm,0.3s						
ATPI	**Pietralunga -**	**0.83**	**323**	P	**Pg**	**07 59 32.8**	**-0.7**
ATPI				AML	AML		
	comp=E,2015µm,1.0s						
ATPI				AML	AML		
	comp=N,1940µm,0.8s						
ATPI				AML	AML		
	comp=N,1935µm,0.8s						
ATPI				AML	AML		
	comp=N,1938µm,0.8s						
ATPI				AML	AML		
	comp=E,2009µm,0.8s						
CERT	**Cerreto**	**0.84**	**185**	P	**Pg**	**07 59 33.4**	**-0.4**
CERT				AML	AML		
	comp=E,9195µm,0.5s						
CERT				AML	AML		
	comp=N,3565µm,1.1s						
CERT				AML	AML		
	comp=N,3118µm,0.5s						
CERT				AML	AML		
	comp=E,9194µm,0.5s						
PIEI	**Pieia**	**0.85**	**332**	P	**Pg**	**07 59 34.0**	**+0.1**
PIEI				AML	AML		
	comp=E,1905µm,1.2s						
PIEI				AML	AML		
	comp=N,1745µm,0.3s						
PIEI				AML	AML		
	comp=E,1837µm,0.4s						
AOI	**Ancona**	**0.85**	**26**	P	**Pg**	**07 59 33.3**	**-0.6**
AOI				AML	AML		
	comp=N,2400µm,0.9s						
AOI				AML	AML		
	comp=E,2845µm,0.4s						
AOI				AML	AML		
	comp=E,2841µm,0.3s						
AOI				AML	AML		
	comp=N,2117µm,0.3s						
SACS	**San Casciano d**	**0.86**	**274**	P	**Pg**	**07 59 33.9**	**-0.2**
SACS				AML	AML		
	comp=N,2865µm,0.7s						
SACS				AML	AML		
	comp=E,2610µm,0.6s						
SACS				AML	AML		
	comp=E,2611µm,0.6s						
SACS				AML	AML		
	comp=N,2938µm,0.6s						
SACS				AML	AML		
	comp=N,2865µm,0.7s						
MPAG	**Monte Paganucc**	**0.87**	**345**	P	**Pg**	**07 59 33.4**	**-1.0**
MPAG				AML	AML		
	comp=N,2620µm,1.1s						
MPAG				AML	AML		
	comp=E,2300µm,0.5s						
MPAG				AML	AML		
	comp=E,2301µm,0.5s						
MPAG				AML	AML		
	comp=E,2365µm,0.4s						
MPAG				AML	AML		
	comp=N,2818µm,0.5s						
MPAG				AML	AML		
	comp=N,2594µm,0.4s						
SENI	**Senigallia**	**0.92**	**7**	P	**Pb**	**07 59 35.3**	**0.0**
SENI				AML	AML		
	comp=E,11500µm,0.4s						
SENI				AML	AML		
	comp=N,10565µm,0.3s						
SENI				AML	AML		
	comp=E,2881µm,0.8s						
SENI				AML	AML		
	comp=E,11518µm,0.4s						
SENI				AML	AML		
	comp=N,10541µm,0.3s						
SENI				AML	AML		
	comp=N,2684µm,0.8s						
FSSB	**Fossombrone**	**0.93**	**346**	P	**Pg**	**07 59 34.8**	**-0.6**
FSSB				AML	AML		
	comp=N,9545µm,0.3s						
FSSB				AML	AML		
	comp=E,6305µm,0.4s						
FSSB				AML	AML		
	comp=E,6309µm,0.4s						
FSSB				AML	AML		
	comp=N,9565µm,0.3s						
RCAV	**Rocca di Cave**	**0.94**	**186**	AML	AML		
	comp=E,3585µm,0.5s						
RCAV				AML	AML		
	comp=N,3325µm,0.7s						
BADI	**Badiali**	**0.95**	**320**	AML	AML		
	comp=N,1415µm,1.1s						
BADI				AML	AML		
	comp=E,338µm,0.1s						
LATE	**Laterza**	**0.96**	**260**	P	**Pb**	**07 59 35.3**	**-0.6**
CAFI	**Castiglion Fio**	**0.98**	**304**	P	**Pb**	**07 59 36.3**	**0.0**
CAFI				AML	AML		
	comp=E,1850µm,0.5s						
CAFI				AML	AML		
	comp=N,1275µm,1.2s						
CAFI				AML	AML		
	comp=N,1140µm,0.4s						
CAFI				AML	AML		
	comp=E,1810µm,0.5s						
CAFI				AML	AML		
	comp=N,1123µm,0.4s						
CAFI				AML	AML		
	comp=E,1849µm,0.5s						
VVLD	**Villa Vallelon**	**1.00**	**156**	P	**Pn**	**07 59 37.6**	**+0.3**
GUAR	**Guarcino**	**1.01**	**170**	P	**Pn**	**07 59 38.1**	**+0.8**
GUAR				AML	AML		
	comp=N,3210µm,0.7s						
GUAR				AML	AML		
	comp=E,2846µm,0.7s						
GUAR				AML	AML		
	comp=E,2845µm,0.7s						
GUAR				AML	AML		
	comp=N,3215µm,0.7s						
RMP	**Rome, Mte Porz**	**1.01**	**196**	P	**Pn**	**07 59 37.3**	**-0.1**
RMP				AML	AML		
	comp=N,3460µm,1.2s						
RMP				AML	AML		
	comp=E,3255µm,1.3s						
RMP				AML	AML		
	comp=N,3151µm,0.4s						
RMP				AML	AML		
	comp=E,2803µm,0.4s						
MCIV	**Monte Civitell**	**1.03**	**270**	P	**Pb**	**07 59 37.0**	**-0.2**
MCIV				AML	AML		
	comp=E,1033µm,0.8s						
MCIV				AML	AML		
	comp=N,1170µm,0.6s						
MCIV				AML	AML		
	comp=N,1169µm,0.6s						
MCIV				AML	AML		
	comp=E,1032µm,0.8s						
TOLF	**Tolfa**	**1.08**	**228**	P	**Pb**	**07 59 37.2**	**-0.7**
TOLF				AML	AML		
	comp=E,1535µm,0.7s						
TOLF				AML	AML		
	comp=N,1715µm,0.3s						
TOLF				AML	AML		
	comp=E,1533µm,0.7s						
TOLF				AML	AML		
	comp=N,1716µm,0.3s						
CAFR	**Castel Frentan**	**1.09**	**120**	P	**Pg**	**07 59 40.2**	**+1.8**
LPEL	**Lama dei Pelig**	**1.10**	**132**	AML	AML		
	comp=E,2140µm,1.5s						
LPEL				AML	AML		
	comp=N,1895µm,0.7s						
POFI	**Posta Fibreno**	**1.17**	**156**	P	**Pg**	**07 59 40.4**	**+0.5**
POFI				AML	AML		
	comp=N,898µm,0.5s						
POFI				AML	AML		
	comp=E,1235µm,0.8s						
POFI				AML	AML		
	comp=N,900µm,0.5s						
POFI				AML	AML		
	comp=E,1236µm,0.8s						
POFI				AML	AML		
	comp=E,1184µm,0.8s						
POFI				AML	AML		
	comp=N,932µm,0.5s						
CRE	**Caprese Michel**	**1.17**	**316**	P	**Pg**	**07 59 40.5**	**+0.4**
CRE				AML	AML		
	comp=N,1150µm,0.7s						
CRE				AML	AML		
	comp=E,870µm,0.5s						
CRE				AML	AML		
	comp=E,870µm,0.5s						
CRE				AML	AML		
	comp=N,1151µm,0.7s						
ARCI	**Arcidosso**	**1.18**	**274**	P	**Pg**	**07 59 40.4**	**+0.2**
ARCI				AML	AML		
	comp=N,412µm,0.6s						
ARCI				AML	AML		
	comp=E,498µm,1.1s						
ARCI				AML	AML		
	comp=E,429µm,0.8s						
ARCI				AML	AML		
	comp=N,411µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.23**	**174**	P	**Pg**	**07 59 41.1**	**-0.1**
GIUL				AML	AML		
	comp=E,1200µm,0.5s						
GIUL				AML	AML		
	comp=N,1203µm,0.6s						
GIUL				AML	AML		
	comp=E,1195µm,0.5s						
GIUL				AML	AML		
	comp=N,1203µm,0.6s						
RNI2	**Rionero Sannit**	**1.35**	**143**	P	**Pg**	**07 59 44.5**	**+1.2**
CERA	**Filignano**	**1.38**	**149**	P	**Pg**	**07 59 44.0**	**+0.1**
FRES	**Fresagrandinar**	**1.43**	**124**	P	**Pg**	**07 59 44.8**	**-0.1**
SFI	**Santa Sofia**	**1.43**	**322**	P	**Pg**	**07 59 44.6**	**-0.4**
MIDA	**Miranda**	**1.44**	**142**	P	**Pn**	**07 59 43.3**	**0.0**
FROS	**Frosini**	**1.47**	**287**	P	**Pn**	**07 59 43.8**	**+0.2**
FROS				AML	AML		
	comp=N,525µm,1.6s						
FROS				AML	AML		
	comp=E,633µm,1.5s						
FROS				AML	AML		
	comp=N,525µm,0.7s						
FROS				AML	AML		
	comp=E,597µm,0.7s						
CSNT	**Castellina Chi**	**1.48**	**298**	P	**Pn**	**07 59 43.9**	**+0.2**
CSNT				AML	AML		
	comp=N,392µm,0.9s						
CSNT				AML	AML		
	comp=E,432µm,1.6s						
CSNT				AML	AML		
	comp=E,385µm,0.5s						
CSNT				AML	AML		
	comp=N,392µm,0.9s						
MAON	**Monte Argentar**	**1.48**	**257**	P	**Pn**	**07 59 44.2**	**+0.4**
MAON				AML	AML		
	comp=N,296µm,0.7s						
MAON				AML	AML		
	comp=E,367µm,1.0s						
MAON				AML	AML		
	comp=E,367µm,1.0s						
MAON				AML	AML		
	comp=N,295µm,0.7s						
TRIV	**Trivento**	**1.49**	**133**	P	**Pg**	**07 59 45.9**	**-0.3**
OSSC	**Osservatorio P**	**1.53**	**299**	P	**Pn**	**07 59 44.4**	**-0.1**
OSSC				AML	AML		
	comp=N,462µm,1.4s						
OSSC				AML	AML		
	comp=E,386µm,0.9s						
OSSC				AML	AML		
	comp=N,452µm,0.9s						
OSSC				AML	AML		
	comp=E,386µm,0.9s						
OSSC				AML	AML		
	comp=E,488µm,0.9s						
OSSC				AML	AML		
	comp=N,426µm,0.8s						
RUFI	**Rufina**	**1.56**	**313**	P	**Pb**	**07 59 45.7**	**-0.4**
CASP	**Castiglione de**	**1.63**	**271**	P	**Pn**	**07 59 45.7**	**-0.2**
CASP				AML	AML		
	comp=E,277µm,0.4s						
CASP				AML	AML		
	comp=N,180µm,0.6s						
CASP				AML	AML		
	comp=N,181µm,0.6s						
CASP				AML	AML		
	comp=E,277µm,0.4s						
TRIF	**Trifonti**	**1.63**	**282**	P	**Pn**	**07 59 46.1**	**+0.2**
TRIF				AML	AML		
	comp=E,403µm,0.7s						
TRIF				AML	AML		
	comp=N,366µm,0.8s						
TRIF				AML	AML		
	comp=N,365µm,0.8s						
TRIF				AML	AML		
	comp=E,338µm,0.4s						
BSSO	**Busso**	**1.68**	**137**	P	**Pg**	**07 59 49.2**	**-0.4**
BSSO				AML	AML		
	comp=E,254µm,1.0s						
BSSO				AML	AML		
	comp=N,206µm,0.7s						
BSSO				AML	AML		
	comp=E,593µm,1.0s						
BSSO				AML	AML		
	comp=E,254µm,1.0s						
BSSO				AML	AML		
	comp=N,505µm,0.8s						
BSSO				AML	AML		
	comp=N,206µm,0.7s						
MELA	**Melanico ??? S**	**1.86**	**125**	P	**Pb**	**07 59 50.9**	**-0.4**
MELA				AML	AML		
	comp=N,1495µm,0.8s						
MELA				AML	AML		
	comp=E,1885µm,0.5s						
MELA				AML	AML		
	comp=E,2618µm,0.6s						
MELA				AML	AML		
	comp=N,1494µm,0.8s						
MELA				AML	AML		
	comp=E,1885µm,0.5s						
MELA				AML	AML		
	comp=N,1483µm,0.8s						
TREM	**Isole Tremiti**	**1.92**	**109**	P	**Pb**	**07 59 51.6**	**-0.7**
TREM				AML	AML		
	comp=N,1875µm,0.8s						
TREM				AML	AML		
	comp=E,1185µm,0.7s						
TREM				AML	AML		
	comp=N,1871µm,0.8s						
TREM				AML	AML		
	comp=E,1185µm,0.7s						
APRC	**Apricena**	**2.10**	**119**	P	**Pb**	**07 59 53.9**	**-1.5**
APRC				AML	AML		
	comp=N,828µm,0.5s						
APRC				AML	AML		
	comp=E,544µm,0.6s						
APRC				AML	AML		
	comp=N,828µm,0.5s						
APRC				AML	AML		
	comp=E,544µm,0.6s						
APRC				AML	AML		
	comp=E,549µm,0.6s						
APRC				AML	AML		
	comp=N,922µm,1.0s						
CELB	**S.Piero in Cam**	**2.11**	**270**	P	**Pn**	**07 59 52.7**	**+0.1**
CELB				AML	AML		
	comp=E,113µm,0.5s						
CELB				AML	AML		
	comp=N,83µm,0.7s						
CELB				AML	AML		
	comp=N,83µm,0.7s						
CELB				AML	AML		
	comp=E,113µm,0.5s						
BRJN	**Brijuni**	**2.17**	**13**	P	**Pn**	**07 59 53.9**	**+0.6**
SGRT	**San Giovanni R**	**2.23**	**117**	P	**Pn**	**07 59 55.6**	**+1.4**
SGRT				AML	AML		
	comp=N,706µm,0.8s						
SGRT				AML	AML		
	comp=E,811µm,0.5s						
SGRT				AML	AML		
	comp=E,811µm,0.5s						
SGRT				AML	AML		
	comp=N,706µm,0.8s						
EQUI	**Equi**	**2.54**	**304**	P	**Pn**	**07 59 59.0**	**+0.7**
EQUI				AML	AML		
	comp=N,146µm,1.0s						
EQUI				AML	AML		
	comp=E,107µm,0.4s						
EQUI				AML	AML		
	comp=E,107µm,0.4s						
EQUI				AML	AML		
	comp=N,146µm,1.0s						
GRAM	**Graiana**	**2.77**	**309**	AML	AML		
	comp=E,278µm,0.8s						
GRAM				AML	AML		
	comp=N,284µm,0.6s						
PALZ	**Palazzo San Ge**	**2.83**	**130**	P	**Pn**	**08 00 04.3**	**+1.9**
PALZ				AML	AML		
	comp=E,544µm,1.6s						
PALZ				AML	AML		
	comp=N,482µm,1.2s						
PALZ				AML	AML		
	comp=E,493µm,0.7s						
PALZ				AML	AML		
	comp=N,482µm,1.2s						
SKDS	**Skadanscina**	**2.84**	**13**	*i* Pn	**Pn**	**08 00 02.7**	**+0.2**
SMPL	**Sampolo**	**2.89**	**257**	P	**Pn**	**08 00 04.0**	**+0.8**
SMPL				AML	AML		
	comp=E,21µm,0.8s						
SMPL				AML	AML		
	comp=N,28µm,1.6s						
MRVN	**Minervino Murg**	**2.90**	**126**	P	**Pn**	**08 00 04.7**	**+1.4**
MRVN				AML	AML		
	comp=N,177µm,0.7s						
MRVN				AML	AML		
	comp=E,132µm,1.3s						
MRVN				AML	AML		
	comp=N,177µm,0.7s						
MRVN				AML	AML		
	comp=E,120µm,0.7s						
PGF	**Pioggiola**	**3.02**	**267**	*e*P	**Pn**	**08 00 06.4**	**+1.4**
PGF	**Pioggiola**	**3.02**	**267**	AML	AML		
	comp=E,32µm,1.4s						
PGF				AML	AML		
	comp=N,37µm,0.6s						
SABO	**M.te Sabotino**	**3.21**	**6**	P	**Pn**	**08 00 08.2**	**+0.5**
SABO				AML	AML		
	comp=N,1655µm,0.9s						
SABO				AML	AML		
	comp=N,424µm,0.9s						
SABO				AML	AML		
	comp=E,338µm,0.7s						
SABO				AML	AML		
	comp=E,1380µm,0.7s						
SABO				AML	AML		
	comp=N,393µm,0.5s						
SABO				AML	AML		
	comp=E,1382µm,0.7s						
SABO				AML	AML		
	comp=N,1477µm,0.5s						
AMUR	**Altamura**	**3.23**	**124**	P	**Pn**	**08 00 09.3**	**+1.4**
AMUR				AML	AML		
	comp=E,173µm,0.6s						
SALO	**Salr**	**3.37**	**328**	P	**Pn**	**08 00 12.2**	**+2.4**
SALO				AML	AML		
	comp=E,276µm,0.4s						
SALO				AML	AML		
	comp=N,272µm,0.7s						
SALO				AML	AML		
	comp=E,287µm,0.4s						
SALO				AML	AML		
	comp=N,273µm,0.7s						
SALO				AML	AML		
	comp=N,299µm,0.6s						
SALO				AML	AML		
	comp=E,276µm,0.4s						
STON	**Ston**	**3.40**	**87**	AML	AML		
	comp=E,105µm,1.6s						
STON				AML	AML		
	comp=N,82µm,0.4s						
CTI	**Castel Tesino**	**3.42**	**343**	P	**Pn**	**08 00 12.5**	**+2.0**

CTI				AML	AML	
	comp=E,235μm,0.3s					
CTI				AML	AML	
	comp=N,329μm,1.5s					
CTI				AML	AML	
	comp=N,316μm,0.3s					
CTI				AML	AML	
	comp=E,235μm,0.3s					
LJU	**Ljubljana**	**3.42**	**17**	P	**Pn**	**08 00 11.2 +0.8**
LJU				AML	AML	
	comp=E,1004μm,0.7s					
LJU				AML	AML	
	comp=N,1160μm,0.6s					
LJU				AML	AML	
	comp=N,1161μm,0.6s					
LJU				AML	AML	
	comp=E,1002μm,0.7s					
MPRI	**Monte Prat**	**3.45**	**359**	P	**Pn**	**08 00 12.2 +1.3**
MPRI				AML	AML	
	comp=E,241μm,0.6s					
MPRI				AML	AML	
	comp=N,323μm,0.7s					
MPRI				AML	AML	
	comp=N,223μm,0.6s					
MPRI				AML	AML	
	comp=N,298μm,0.5s					
MPRI				AML	AML	
	comp=E,190μm,0.6s					
MPRI				AML	AML	
	comp=E,241μm,0.6s					
CADS	**Cadrg**	**3.47**	**8**	*i* Pn	**Pn**	**08 00 11.6 +0.4**
STAL	**STALIGIAL**	**3.48**	**356**	P	**Pn**	**08 00 12.6 +1.2**
STAL				AML	AML	
	comp=E,290μm,0.3s					
STAL				AML	AML	
	comp=N,255μm,0.3s					
STAL				AML	AML	
	comp=E,266μm,0.3s					
STAL				AML	AML	
	comp=N,255μm,0.3s					
STAL				AML	AML	
	comp=N,302μm,0.3s					
STAL				AML	AML	
	comp=E,290μm,0.3s					
CRAC	**Craco**	**3.49**	**133**	AML	AML	
	comp=E,328μm,1.0s					
CRAC				AML	AML	
	comp=N,366μm,1.5s					
LUSI	**Trento, Gardas**	**3.52**	**335**	P	**Pn**	**08 00 13.9 +2.0**
LUSI				AML	AML	
	comp=E,190μm,0.5s					
LUSI				AML	AML	
	comp=N,238μm,0.4s					
LUSI				AML	AML	
	comp=E,191μm,0.5s					
LUSI				AML	AML	
	comp=N,239μm,0.4s					
CIMO	**Cimolais**	**3.55**	**353**	P	**Pn**	**08 00 13.0 +0.8**
CIMO				AML	AML	
	comp=E,65μm,0.7s					
CIMO				AML	AML	
	comp=E,71μm,0.8s					
CIMO				AML	AML	
	comp=N,81μm,0.6s					
CIMO				AML	AML	
	comp=N,71μm,0.6s					
CIMO				AML	AML	
	comp=N,71μm,0.6s					
CIMO				AML	AML	
	comp=N,81μm,0.6s					
CIMO				AML	AML	
	comp=E,64μm,0.7s					
CIMO				AML	AML	
	comp=E,64μm,0.8s					
PTCC	**Patocco-Chiusa**	**3.62**	**3**	P	**Pn**	**08 00 13.6 +0.4**
PTCC				AML	AML	
	comp=E,123μm,0.6s					
PTCC				AML	AML	
	comp=N,119μm,0.8s					
PTCC				AML	AML	
	comp=N,85μm,0.3s					
PTCC				AML	AML	
	comp=E,94μm,0.7s					
GAGG	**Gaggia**	**3.63**	**336**	P	**Pn**	**08 00 15.2 +1.8**
GAGG				AML	AML	
	comp=N,144μm,0.9s					
GAGG				AML	AML	
	comp=E,192μm,0.8s					
GAGG				AML	AML	
	comp=E,156μm,0.8s					
GAGG				AML	AML	
	comp=N,191μm,0.9s					
GAGG				AML	AML	
	comp=N,138μm,0.8s					
GAGG				AML	AML	
	comp=E,191μm,0.8s					
MABI	**Malga Bissina**	**3.75**	**332**	P	**Pn**	**08 00 16.9 +1.7**
MABI				AML	AML	
	comp=N,77μm,0.3s					
ZOU	**Zoufplan**	**3.77**	**359**	P	**Pn**	**08 00 16.5 +1.1**
ZOU				AML	AML	
	comp=E,156μm,1.2s					
ZOU				AML	AML	
	comp=N,142μm,1.0s					
ZOU				AML	AML	
	comp=N,111μm,0.6s					
ZOU				AML	AML	
	comp=E,164μm,1.0s					
ZOU				AML	AML	
	comp=N,132μm,1.2s					
ZOU				AML	AML	
	comp=E,131μm,0.6s					
ACOM	**Acomizza, Ital**	**3.77**	**5**	P	**Pn**	**08 00 17.0 +1.5**
ACOM				AML	AML	
	comp=E,208μm,1.3s					
ACOM				AML	AML	
	comp=E,203μm,0.9s					
ACOM				AML	AML	
	comp=N,223μm,1.0s					
ACOM				AML	AML	
	comp=N,250μm,1.0s					
ACOM				AML	AML	
	comp=E,199μm,0.7s					
ACOM				AML	AML	
	comp=E,205μm,0.8s					
ACOM				AML	AML	
	comp=N,209μm,0.5s					
ACOM				AML	AML	
	comp=N,219μm,0.5s					
MYKA	**Terra Mystica**	**3.86**	**6**	*e*Pn	**Pn**	**08 00 18.3 +1.7**
	comp=N,11nm,0.3s					
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pn**	**08 00 17.1 +0.5**
	comp=N,2.7nm,0.2s					
KOSI	**Kohlern**	**3.87**	**342**	P	**Pn**	**08 00 19.1 +2.3**
KOSI				AML	AML	
	comp=E,242μm,0.9s					
KOSI				AML	AML	
	comp=N,138μm,1.6s					
KOSI				AML	AML	
	comp=E,181μm,0.7s					
KOSI				AML	AML	
	comp=N,123μm,0.6s					
ABTA	**Abfaltersbach**	**3.98**	**354**	*e*Pn	**Pn**	**08 00 20.3 +2.0**
	comp=N,36nm,0.5s,SNR=6.5					
SOKA	**Soboth**	**4.13**	**19**	*i* Pn	**Pn**	**08 00 21.2 +0.9**
	comp=N,4.5nm,0.5s					
RISI	**Rein**	**4.22**	**351**	P	**Pn**	**08 00 23.1 +1.4**
RISI				AML	AML	
	comp=N,344μm,0.4s					
RISI				AML	AML	
	comp=E,490μm,0.5s					
RISI				AML	AML	
	comp=N,345μm,0.4s					
RISI				AML	AML	
	comp=E,490μm,0.5s					
SBF	**Sospel**	**4.26**	**287**	*e*P	**Pn**	**08 00 23.2 +1.2**
SBF				*e*Sn	**Sn**	**08 01 11.4 -0.1**
	comp=E,30nm,0.7s					
ROSI	**Rosskopf**	**4.31**	**345**	P	**Pn**	**08 00 25.3 +2.5**
VSL	**Villasalto**	**4.32**	**222**	P	**Pn**	**08 00 24.4 +1.7**
FETA	**Feichten**	**4.55**	**339**	*e*Pn	**Pn**	**08 00 29.6 +3.5**
	comp=E,6.2nm,0.4s					
WTTA	**Wattenberg**	**4.59**	**348**	*e*Pn	**Pn**	**08 00 29.5 +2.8**
	comp=E,2.7nm,0.2s					
WTTA	**Wattenberg**	**4.59**	**348**	*e*Pn	**Pn**	**08 00 29.8 +3.1**
WTTA				*e*Sn	**Sn**	**08 01 21.6 +1.6**
DAVOX	**Davos/Dischmat**	**4.60**	**331**	Pn	**Pn**	**08 00 30.2 +3.4**
	comp=E,2.1nm,0.3s,baz=276,slow=5.9,SNR=8.2					
DAVOX				Sn	**Sn**	**08 01 23.9 +3.8**
	comp=E,3.5nm,0.3s,baz=358,slow=23,SNR=5.7					
	comp=E,6.6nm,0.3s					
DAVOX	**Davos/Dischmat**	**4.60**	**331**	P	**Pn**	**08 00 28.9 +2.1**
SQTA	**Sankt Quirin**	**4.63**	**344**	*e*Pn	**Pn**	**08 00 30.9 +3.7**
	comp=E,10nm,0.3s,SNR=4.8					
WATA	**Walderalm**	**4.67**	**347**	*e*Pn	**Pn**	**08 00 31.3 +3.5**
	comp=E,3.9nm,0.2s					
MOTA	**Moosalm**	**4.77**	**344**	*e*Pn	**Pn**	**08 00 32.2 +3.1**
	comp=E,5.9nm,0.3s					
ARSA	**Arzberg**	**4.79**	**20**	*e*Pn	**Pn**	**08 00 29.9 +0.7**
	comp=E,3.2nm,0.3s,SNR=4.6					
ARSA	**Arzberg**	**4.79**	**20**	*e*Pn	**Pn**	**08 00 29.9 +0.7**
ARSA				*e*Sn	**Sn**	**08 01 22.4 -2.2**
ARSA	**Arzberg**	**4.79**	**20**	P	**Pn**	**08 00 29.9 +0.7**
LMR	**La Mourre**	**4.84**	**279**	*e*P	**Pn**	**08 00 30.7 +0.7**
LMR				*e*Sn	**Sn**	**08 01 22.8 -3.1**
	comp=E,29nm,1.2s					
ZUGS	**Zugspitze, Sch**	**4.86**	**343**	*e*Pn	**Pn**	**08 00 34.5 +3.9**
BIOA	**Bad Ischl, Aus**	**4.92**	**4**	*e*Pn	**Pn**	**08 00 32.6 +1.6**
	comp=E,12nm,0.3s,SNR=10.0					
RJOB	**Jochberg**	**4.95**	**358**	*e*Pn	**Pn**	**08 00 34.3 +2.7**
RJOB				*e*Sn	**Sn**	**08 01 27.2 -1.6**
MBDF	**Montbardon**	**4.96**	**295**	*e*P	**Pn**	**08 00 34.4 +2.6**
RETA	**Reutte**	**4.98**	**342**	*e*Pn	**Pn**	**08 00 35.4 +3.5**
	comp=E,4.0nm,0.2s,SNR=9.0					
DAVA	**Damuels**	**5.04**	**334**	*e*Pn	**Pn**	**08 00 35.1 +2.3**
	comp=E,2.3nm,0.2s					
DAVA	**Damuels**	**5.04**	**334**	*e*Pn	**Pn**	**08 00 36.2 +3.4**
DAVA				*e*Sn	**Sn**	**08 01 30.8 -0.1**
MOA	**Molln**	**5.13**	**9**	*i* Pn	**Pn**	**08 00 35.3 +1.3**
	comp=E,1.8nm,0.2s,SNR=5.1					
MOA	**Molln**	**5.13**	**9**	*e*Pn	**Pn**	**08 00 35.4 +1.4**
LPG	**La Plagne**	**5.30**	**303**	*e*P	**Pn**	**08 00 40.8 +4.3**
LPG				*e*Sn	**Sn**	**08 01 35.2 -2.3**
	comp=E,18nm,0.8s					
LPL	**La Plagne**	**5.32**	**303**	*e*P	**Pn**	**08 00 41.2 +4.5**
UBR	**Ueberruh**	**5.32**	**338**	*e*Pn	**Pn**	**08 00 39.8 +3.2**
RONA	**Rosalia, Austr**	**5.41**	**24**	*e*Pn	**Pn**	**08 00 38.6 +0.8**
	comp=E,1.4nm,0.2s					
CONA	**Conrad Observa**	**5.50**	**20**	*e*Pn	**Pn**	**08 00 39.8 +0.7**
	comp=E,3.9nm,0.3s,SNR=6.9					
SMRF	**Simiane la Rot**	**5.60**	**285**	*e*P	**Pn**	**08 00 44.2 +3.8**
ORIF	**Oris-en-Rattie**	**5.62**	**295**	*e*P	**Pn**	**08 00 44.8 +4.0**
GEC2	**GERESS Array S**	**6.07**	**4**	*e*Pn	**Pn**	**08 00 47.7 +0.7**
GEC2				*e*Sn	**Sn**	**08 01 55.9 -0.5**
GERES	**GERESS Array B**	**6.07**	**4**	Pn	**Pn**	**08 00 47.5 +0.5**
	comp=E,0.8nm,0.3s,baz=178,slow=13,SNR=7.7					
GERES				Sn	**Sn**	**08 01 57.1 +0.7**
	comp=E,2.3nm,0.3s,baz=181,slow=23,SNR=6.2					
	comp=E,1.1nm,0.4s					
CKRC	**Cesky Krumlov**	**6.09**	**8**	*e*PN	**Pn**	**08 00 47.0 -0.2**
CKRC				*e*SN	**Sn**	**08 01 56.0 -0.7**
CABF	**La Chapelle**	**6.28**	**310**	*e*P	**Pn**	**08 00 52.8 +3.0**
KHC	**Kasperske Hory**	**6.35**	**3**	*e*PN	**Pn**	**08 00 50.8 0.0**
KHC				*e*SN	**Sn**	**08 02 02.2 -1.0**
WET	**Wettzell**	**6.36**	**359**	*e*Pn	**Pn**	**08 00 50.7 -0.2**
VIVF	**Saint-Julien-l**	**6.42**	**292**	*e*P	**Pn**	**08 00 55.0 +3.3**
BFO	**Black Forest**	**6.47**	**331**	*e*Pn	**Pn**	**08 00 54.3 +2.0**
BFO				*e*Sn	**Sn**	**08 02 06.6 +0.7**
HINF	**Hinteralfeld**	**6.67**	**321**	*e*P	**Pn**	**08 00 55.9 +0.7**
HINF				*e*Sn	**Sn**	**08 02 07.8 -3.3**
	comp=E,21nm,0.6s					
LASF	**Ste Croix**	**6.84**	**284**	*e*P	**Pn**	**08 01 00.0 +2.6**
CDF	**Champ du Feu**	**6.94**	**326**	*e*P	**Pn**	**08 01 00.0 +1.1**
CDF				*e*Sn	**Sn**	**08 02 14.7 -3.0**
	comp=E,11nm,0.3s					
GRF	**Grafenberg Arr**	**7.03**	**350**	*e*Sn	**Sn**	**08 02 18.4 -1.3**
HAU	**Haudompre**	**7.05**	**320**	*e*P	**Pn**	**08 01 01.6 +1.3**
HAU				*e*Sn	**Sn**	**08 02 17.1 -3.1**
	comp=E,33nm,0.7s					
MANZ	**Manzenberg**	**7.23**	**355**	*e*Sn	**Sn**	**08 02 22.2 -2.6**
SMF	**Signal de Mont**	**7.63**	**304**	*e*P	**Pn**	**08 01 11.1 +2.9**
SMF				*e*Sn	**Sn**	**08 02 30.0 -4.4**
	comp=E,12nm,0.7s					
PAGF	**Fort de Pagny**	**7.73**	**321**	*e*P	**Pn**	**08 01 13.7 +4.1**
SFTF	**Sexfontaines**	**7.82**	**317**	*e*P	**Pn**	**08 01 13.3 +2.4**
	baz=141					
SFTF				*e*Sn	**Sn**	**08 02 35.7 -3.6**
	comp=E,27nm,1.1s					
LOR	**Lormes**	**7.92**	**308**	*e*P	**Pn**	**08 01 13.1 +0.9**
	baz=119					
LOR				*e*Sn	**Sn**	**08 02 37.2 -4.4**
	comp=E,4.0nm,0.4s					
MOX	**Moxa**	**7.92**	**353**	*e*Sn	**Sn**	**08 02 38.6 -3.2**
MTLF	**Montolieu**	**7.97**	**278**	*e*P	**Pn**	**08 01 17.2 +4.2**
MEZF	**Maizieres J'vi**	**8.02**	**318**	*e*P	**Pn**	**08 01 18.0 +4.5**
MEZF				*e*Sn	**Sn**	**08 02 39.9 -4.0**
	comp=E,26nm,1.2s					
SAVF	**Savonnieres en**	**8.06**	**319**	*e*P	Pn	08 01 19.1 +5.0
	baz=132					
CAF	**Calviac**	**8.24**	**289**	*e*P	**Pn**	**08 01 19.1 +2.4**
CLL	**Collm**	**8.52**	**360**	*e*Pn	**Pn**	**08 01 19.0 -1.5**
CLL				*e*(Pg)	**Pg**	**08 01 58.0 -2.5**
CLL				*ex*	x	08 02 35.0
CLL				*e*Sn	Sn	08 02 39.0 -17
CLL				*ex*	x	08 02 57.0
CLL				*e*Sg	**Sg**	**08 03 47.0 -3.7**
	comp=Z,23nm,1.7s					
GIVF	**Givet**	**9.27**	**325**	*e*P	Pn	08 01 36.2 +5.5
BAIF	**Baives**	**9.50**	**323**	*e*P	Pn	08 01 39.2 +5.3
ETSF	**Etsaut**	**10.02**	**275**	*e*P	**Pn**	**08 01 45.6 +4.5**
EKA	**Eskdalemuir Ar**	**16.40**	**326**	Pn	**P**	**08 03 10.5 +0.6**
	baz=138,slow=14					
	comp=Z,0.4nm,0.5s					
FINES	**FINESS Array B**	**20.24**	**18**	P	**P**	**08 03 51.7 -0.4**
	comp=Z,2.4nm,0.9s,baz=187,slow=22,SNR=1.5					
	comp=Z,2.4nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.13**	**202**	P	**P**	**08 05 37.2 +1.4**
	comp=Z,0.9nm,0.9s,baz=8.9,slow=9.7,SNR=3.6					
	comp=Z,0.9nm,0.9s					

*LDG **30** 08:00:08.7±0.1, 42°.80N×13°.16E, h8km, Ml3.2/13, Error ellipse: s-maj=2.6km s-min=1.6km az=51.0*
*ROM **30** 08:00:09.5±0.0, 42°.797N±0°.002×13°.122E±0°.004, h10km, ML3.5/24, Error ellipse: s-maj=0.3km s-min=0.2km az=260.0*

ISC 30 08:00:08.9±0.8, **42°.80N**±0°.01×**13°.12E**±0°.02, **h19**km±1km, **n111**, σ2§**05**/157, **2C**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**40**	P	**Pg**	**08 00 11.8**	**-0.8**
T1245				S	**Sg**	**08 00 14.1**	**-1.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1214	**Arquata del Tr**	**0.07**	**123**	P	**Pg**	**08 00 12.2**	**-0.4**
T1214				S	**Sg**	**08 00 13.9**	**-1.3**
T1212	**Cascia, Frazio**	**0.08**	**230**	⇑P	**Pg**	**08 00 12.3**	**-0.3**
T1212				S	**Sg**	**08 00 14.0**	**-1.0**
T1213	**Norcia, Frazio**	**0.08**	**179**	⇑P	**Pg**	**08 00 12.2**	**-0.4**
T1213				S	**Sg**	**08 00 13.8**	**-1.3**
T1216	**Preci, Frazion**	**0.12**	**319**	P	**Pg**	**08 00 12.8**	**-0.1**
T1216				S	**Sg**	**08 00 15.2**	**-0.5**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=E,65150μm,0.2s						
T1216				AML	AML		
	comp=N,55476μm,0.2s						
MC2	**Monte Cornacci**	**0.12**	**24**	P	**Pg**	**08 00 12.6**	**-0.6**
MC2				S	**Sg**	**08 00 15.7**	**-0.4**
T1218	**Civita (PG)**	**0.13**	**183**	P	**Pg**	**08 00 13.1**	**-0.1**
T1218				S	**Sg**	**08 00 15.7**	**-0.3**
T1244	**Arquata del Tr**	**0.14**	**109**	P	**Pg**	**08 00 13.2**	**0.0**
T1244				S	**Sg**	**08 00 16.1**	**0.0**
T1217	**Poggiodomo (PG**	**0.17**	**238**	P	**Pg**	**08 00 13.7**	**+0.1**
T1217				S	**Sg**	**08 00 16.7**	**0.0**
T1217				AML	AML		
	comp=E,23650μm,0.2s						
T1217				AML	AML		
	comp=N,33500μm,0.6s						
T1217				AML	AML		
	comp=E,23200μm,0.2s						
T1217				AML	AML		
	comp=N,31950μm,0.5s						
T1217				AML	AML		
	comp=N,33500μm,0.5s						
T1217				AML	AML		
	comp=E,23250μm,0.2s						
T1217				AML	AML		
	comp=N,31950μm,0.6s						
T1217				AML	AML		
	comp=N,31950μm,0.5s						
T1217				AML	AML		
	comp=N,30128μm,0.3s						
T1217				AML	AML		
	comp=E,23662μm,0.2s						
T1217				AML	AML		
	comp=N,29856μm,0.3s						
T1217				AML	AML		
	comp=E,23221μm,0.2s						
FEMA	**Monte Fema**	**0.17**	**341**	P	**Pg**	**08 00 13.8**	**+0.2**
FEMA				S	**Sg**	**08 00 17.0**	**+0.1**
FEMA				AML	AML		
	comp=E,79400μm,0.6s						
FEMA				AML	AML		
	comp=E,79450μm,0.6s						
FEMA				AML	AML		
	comp=N,72000μm,0.8s						
FEMA				AML	AML		
	comp=E,79450μm,0.6s						
FEMA				AML	AML		
	comp=E,65943μm,0.2s						
FEMA				AML	AML		
	comp=N,52282μm,0.3s						
T1201	**Domo (RI)**	**0.17**	**147**	P	**Pg**	**08 00 14.0**	**+0.4**
T1201				S	**Sg**	**08 00 17.3**	**+0.5**
T1215	**Vallo di Nera,**	**0.19**	**270**	P	**Pg**	**08 00 14.1**	**+0.3**
T1215				S	**Sg**	**08 00 17.1**	**0.0**
T1215				AML	AML		
	comp=N,19250μm,0.2s						
T1215				AML	AML		
	comp=E,12950μm,0.8s						
T1215				AML	AML		
	comp=E,11800μm,0.9s						
T1215				AML	AML		
	comp=N,19300μm,0.2s						
T1215				AML	AML		
	comp=N,18950μm,0.2s						
T1215				AML	AML		
	comp=E,11850μm,0.9s						
T1215				AML	AML		
	comp=N,19250μm,0.2s						
T1215				AML	AML		
	comp=N,18900μm,0.2s						
T1215				AML	AML		
	comp=E,12950μm,0.8s						
T1215				AML	AML		
	comp=E,9284μm,0.1s						
T1215				AML	AML		
	comp=N,19262μm,0.2s						
T1215				AML	AML		
	comp=N,18930μm,0.2s						
T1215				AML	AML		
	comp=E,9405μm,0.1s						
T1204	**Amatrice, Fraz**	**0.19**	**131**	P	**Pg**	**08 00 14.1**	**+0.2**
T1204				S	**Sg**	**08 00 17.6**	**+0.3**
LNSS	**Leonessa**	**0.21**	**197**	P	**Pg**	**08 00 14.4**	**+0.3**
LNSS				S	**Sg**	**08 00 17.9**	**+0.2**
T1256	**Bolognola (MC)**	**0.22**	**20**	P	**Pg**	**08 00 14.7**	**+0.3**
T1256				S	**Sg**	**08 00 18.4**	**+0.4**
AM05	**Amandola Campo**	**0.24**	**44**	P	**Pg**	**08 00 15.2**	**+0.6**
AM05				S	**Sg**	**08 00 19.4**	**+0.9**
AM05				AML	AML		
	comp=E,27500μm,0.6s						
AM05				AML	AML		
	comp=E,6960μm,1.3s						
AM05				AML	AML		
	comp=N,7695μm,1.4s						
AM05				AML	AML		
	comp=N,7690μm,1.4s						
AM05				AML	AML		
	comp=N,1890μm,1.5s						
AM05				AML	AML		
	comp=E,6955μm,1.3s						
AM05				AML	AML		
	comp=E,27450μm,0.6s						
T1243	**Rocca Santa Ma**	**0.26**	**113**	P	**Pg**	**08 00 15.3**	**+0.4**
T1243				S	**Sg**	**08 00 19.4**	**+0.3**
T1219	**Muccia, Frazio**	**0.27**	**341**	P	**Pb**	**08 00 15.5**	**+0.5**
T1219				S	**Sb**	**08 00 19.9**	**+0.8**
RM33	**Pellescritta (**	**0.30**	**167**	P	**Pb**	**08 00 16.1**	**+0.5**
RM33				S	**Sb**	**08 00 20.8**	**+0.6**
RM33				AML	AML		
	comp=E,15650μm,0.9s						
RM33				AML	AML		
	comp=N,15050μm,0.4s						
RM33				AML	AML		
	comp=N,15100μm,0.4s						
RM33				AML	AML		
	comp=E,15250μm,0.9s						
RM33				AML	AML		
	comp=N,15250μm,0.4s						
RM33				AML	AML		
	comp=N,15200μm,0.4s						
RM33				AML	AML		
	comp=N,12261μm,0.3s						
RM33				AML	AML		
	comp=E,12268μm,0.3s						
RM33				AML	AML		
	comp=E,12550μm,0.3s						
RM33				AML	AML		
	comp=N,12672μm,0.3s						
GUMA	**Gualdo di Mace**	**0.30**	**31**	P	**Pb**	**08 00 16.5**	**+0.7**
GUMA				S	**Sb**	**08 00 22.1**	**+1.7**
GUMA				AML	AML		
	comp=E,55150μm,0.3s						
GUMA				AML	AML		
	comp=E,35600μm,0.9s						
GUMA				AML	AML		
	comp=N,47950μm,0.6s						
GUMA				AML	AML		
	comp=N,49900μm,0.3s						
GUMA				AML	AML		
	comp=E,33653μm,0.6s						
GUMA				AML	AML		
	comp=N,47944μm,0.6s						
T1220	**Camerino, Fraz**	**0.31**	**355**	P	**Pb**	**08 00 16.3**	**+0.4**
T1220				S	**Sb**	**08 00 21.4**	**+0.8**
T1211	**Morro Reatino**	**0.33**	**217**	P	**Pg**	**08 00 16.5**	**+0.4**
T1211				S	**Sb**	**08 00 21.6**	**+0.4**
T1211				AML	AML		
	comp=N,23200μm,1.2s						
T1211				AML	AML		
	comp=E,15810μm,0.2s						
T1211				AML	AML		
	comp=N,23350μm,1.2s						
T1211				AML	AML		
	comp=N,23200μm,1.2s						
T1211				AML	AML		
	comp=E,15800μm,0.2s						
T1211				AML	AML		
	comp=N,23350μm,1.2s						
T1211				AML	AML		
	comp=E,15400μm,0.2s						
T1211				AML	AML		
	comp=E,15816μm,0.2s						
T1211				AML	AML		
	comp=N,22048μm,0.3s						
T1211				AML	AML		
	comp=E,15372μm,0.2s						
T1211				AML	AML		
	comp=N,21964μm,0.3s						
CAMP	**Campotosto**	**0.34**	**141**	P	**Pg**	**08 00 16.4**	**+0.2**
ARRO	**Arrone**	**0.34**	**230**	P	**Pg**	**08 00 16.7**	**+0.5**
ARRO				S	**Sb**	**08 00 22.2**	**+0.6**
ARRO				AML	AML		
	comp=E,6920μm,0.2s						
ARRO				AML	AML		
	comp=N,9485μm,0.2s						
ARRO				AML	AML		
	comp=E,6915μm,0.2s						
ARRO				AML	AML		
	comp=N,9505μm,0.2s						
ARRO				AML	AML		
	comp=N,9490μm,0.2s						
ARRO				AML	AML		
	comp=E,6919μm,0.2s						
T1246	**Crognaleto (TE**	**0.35**	**128**	P	**Pb**	**08 00 16.6**	**0.0**
T1246				S	**Sb**	**08 00 22.1**	**+0.3**
SEF1	**Sefro**	**0.37**	**340**	P	**Pg**	**08 00 17.2**	**+0.5**
SEF1				S	**Sb**	**08 00 23.4**	**+0.9**
SEF1				AML	AML		
	comp=E,22200μm,1.4s						
SEF1				AML	AML		
	comp=N,27750μm,1.3s						

SEF1			AML	AML	
	comp=E,22150μm,1.5s				
SEF1			AML	AML	
	comp=N,27750μm,1.3s				
SEF1			AML	AML	
	comp=E,22200μm,1.5s				
SEF1			AML	AML	
	comp=E,21581μm,0.3s				
SEF1			AML	AML	
	comp=N,24986μm,0.2s				
T1247	**Pizzolo (AQ)**	**0.38 160**	P	**Pg**	**08 00 17.0 +0.1**
T1247			S	**Sb**	**08 00 23.3 +0.6**
PIO1	**Pioraco**	**0.39 345**	P	**Pg**	**08 00 17.6 +0.5**
MDAR	**Monte D'Aria**	**0.39 2**	P	**Pg**	**08 00 17.5 +0.4**
MDAR			S	**Sb**	**08 00 24.2 +1.1**
TERO	**Teramo**	**0.40 117**	P	**Pg**	**08 00 17.3 +0.2**
TERO			S	**Sb**	**08 00 23.6 +0.5**
FIU1	**Fiuminata**	**0.41 340**	P	**Pb**	**08 00 18.2 +0.5**
FIU1			AML	AML	
	comp=E,9355μm,0.2s				
FIU1			AML	AML	
	comp=N,6460μm,1.4s				
FIU1			AML	AML	
	comp=E,9360μm,0.2s				
FIU1			AML	AML	
	comp=N,6455μm,1.3s				
FIU1			AML	AML	
	comp=E,9395μm,0.2s				
FIU1			AML	AML	
	comp=N,6293μm,0.2s				
FIU1			AML	AML	
	comp=E,9378μm,0.2s				
ASSB	**Assisi San Ben**	**0.42 305**	P	**Pg**	**08 00 17.8 +0.3**
ASSB			S	**Sg**	**08 00 24.3 +0.9**
ASSB			AML	AML	
	comp=E,6920μm,0.4s				
ASSB			AML	AML	
	comp=N,6585μm,0.7s				
ASSB			AML	AML	
	comp=N,5315μm,0.2s				
ASSB			AML	AML	
	comp=E,6920μm,0.4s				
MNTP	**Montappone**	**0.42 37**	P	**Pb**	**08 00 18.8 +1.0**
MNTP			AML	AML	
	comp=E,15576μm,0.7s				
MNTP			AML	AML	
	comp=N,12390μm,0.7s				
SSM1	**San Severino M**	**0.43 5**	P	**Pb**	**08 00 18.3 +0.3**
OFFI	**Offida**	**0.43 72**	P	**Pb**	**08 00 19.0 +1.0**
GAG1	**Gagliole**	**0.44 355**	P	**Pb**	**08 00 18.5 +0.4**
CESX	**Cesi**	**0.44 245**	P	**Pg**	**08 00 18.3 +0.3**
CESX			S	**Sb**	**08 00 25.3 +0.8**
CESX			AML	AML	
	comp=E,4873μm,0.6s				
CESX			AML	AML	
	comp=N,5560μm,0.3s				
SNTG	**Esanatoglia**	**0.47 344**	P	**Pb**	**08 00 19.1 +0.5**
SNTG			AML	AML	
	comp=E,4520μm,0.6s				
SNTG			AML	AML	
	comp=E,4435μm,0.6s				
SNTG			AML	AML	
	comp=N,4395μm,1.1s				
SNTG			AML	AML	
	comp=E,4430μm,0.6s				
SNTG			AML	AML	
	comp=N,4180μm,1.1s				
SNTG			AML	AML	
	comp=E,4273μm,0.2s				
SNTG			AML	AML	
	comp=N,3597μm,0.2s				
SNTG			AML	AML	
	comp=N,3720μm,0.2s				
SNTG			AML	AML	
	comp=E,4147μm,0.2s				
GIGS	**Gran Sasso**	**0.48 137**	P	**Pg**	**08 00 18.8 +0.1**
AQU	**L'Aquila**	**0.49 155**	P	**Pb**	**08 00 19.4 +0.4**
ATCC	**AVT- Casa Cast**	**0.52 317**	P	**Pg**	**08 00 20.0 +0.6**
ATCC			AML	AML	
	comp=N,4516μm,0.3s				
ATCC			AML	AML	
	comp=E,5179μm,0.5s				
EL6	**Elcito**	**0.53 358**	P	**Pb**	**08 00 20.1 +0.5**
EL6			AML	AML	
	comp=E,10135μm,0.3s				
EL6			AML	AML	
	comp=N,15400μm,0.3s				
EL6			AML	AML	
	comp=E,10155μm,0.3s				
EL6			AML	AML	
	comp=N,15350μm,0.3s				
EL6			AML	AML	
	comp=E,10150μm,0.3s				
EL6			AML	AML	
	comp=N,15384μm,0.3s				
EL6			AML	AML	
	comp=E,10136μm,0.3s				
TRE1	**Treia**	**0.53 15**	P	**Pg**	**08 00 19.7 +0.1**
TRE1			AML	AML	
	comp=E,10345μm,1.3s				
TRE1			AML	AML	
	comp=N,12000μm,1.2s				
TRE1			AML	AML	
	comp=N,12050μm,1.2s				
TRE1			AML	AML	
	comp=E,10340μm,1.3s				
TRE1			AML	AML	
	comp=E,9074μm,0.5s				
TRE1			AML	AML	
	comp=N,9484μm,0.5s				
FIAM	**Fiamignano**	**0.53 181**	P	**Pb**	**08 00 20.1 +0.5**
FOSV	**Fossato di Vic**	**0.56 332**	P	**Pg**	**08 00 19.8 -0.4**
FOSV			S	**Sb**	**08 00 29.3 +1.6**
FOSV			AML	AML	
	comp=N,4020μm,1.4s				
FOSV			AML	AML	
	comp=E,3680μm,0.6s				
FOSV			AML	AML	
	comp=N,4015μm,1.4s				
FOSV			AML	AML	
	comp=E,3685μm,0.6s				
FOSV			AML	AML	
	comp=E,3682μm,0.6s				
FOSV			AML	AML	
	comp=N,3770μm,0.3s				
TRTR	**Tortoreto Alta**	**0.58 89**	P	**Pb**	**08 00 22.0 +1.7**
CADA	**Capodarco di F**	**0.61 50**	P	**Pn**	**08 00 23.0 +0.4**
FAGN	**Fagnano**	**0.63 147**	P	**Pb**	**08 00 21.9 +0.6**
MURB	**Monte Urbino**	**0.64 317**	P	**Pb**	**08 00 22.3 +0.9**
MURB			AML	AML	
	comp=N,8375μm,0.3s				
MURB			AML	AML	
	comp=E,7250μm,0.3s				
MURB			AML	AML	
	comp=N,8206μm,0.3s				
MURB			AML	AML	
	comp=E,7252μm,0.3s				
MURB			AML	AML	
	comp=N,8374μm,0.3s				
MURB			AML	AML	
	comp=E,6359μm,0.3s				
VCEL	**Villa Celiera**	**0.67 127**	P	**Pb**	**08 00 22.7 +0.8**
PP3	**Marolino**	**0.68 31**	P	**Pg**	**08 00 21.8 -0.5**
PP3			AML	AML	
	comp=E,5767μm,0.5s				
PP3			AML	AML	
	comp=E,5885μm,0.5s				
PP3			AML	AML	
	comp=N,5223μm,0.5s				
PP3			AML	AML	
	comp=N,5078μm,0.5s				
ATFO	**Monte Foce - G**	**0.70 325**	P	**Pg**	**08 00 23.1 +0.5**
SRES	**S.Oreste - Sor**	**0.72 219**	P	**Pb**	**08 00 23.8 +0.9**
SRES			S	**Sb**	**08 00 34.3 +1.9**
SRES			AML	AML	
	comp=N,1483μm,0.5s				
SRES			AML	AML	
	comp=E,1464μm,0.3s				
ATLO	**AVT- Montelove**	**0.73 315**	P	**Pg**	**08 00 23.0 -0.3**
T0110	**Collepietro**	**0.75 140**	P	**Pg**	**08 00 23.5 -0.2**
MGAB	**Montegabbione**	**0.75 279**	P	**Pn**	**08 00 25.4 +0.8**
MGAB			AML	AML	
	comp=N,3185μm,0.8s				
MGAB			AML	AML	
	comp=E,2665μm,0.5s				
MGAB			AML	AML	
	comp=E,2950μm,0.5s				
MGAB			AML	AML	
	comp=N,3595μm,0.8s				
MGAB			AML	AML	
	comp=N,3593μm,0.8s				
MGAB			AML	AML	
	comp=E,2951μm,0.5s				
MGAB			AML	AML	
	comp=E,2667μm,0.5s				
MGAB			AML	AML	
	comp=N,3183μm,0.8s				
ATVA	**AVT- Monte Val**	**0.78 308**	P	**Pb**	**08 00 24.9 +1.1**
ATVO	**AVT- Monte Val**	**0.78 318**	P	**Pg**	**08 00 24.6 +0.4**
PTQR	**Pietraquaria**	**0.81 165**	P	**Pb**	**08 00 25.2 +0.9**
ATMI	**Monte Miggiano**	**0.82 311**	P	**Pn**	**08 00 26.5 +1.0**
MTCE	**Montecelio**	**0.83 200**	P	**Pg**	**08 00 24.7 -0.3**
CERT	**Cerreto**	**0.86 187**	P	**Pg**	**08 00 25.3 -0.3**
SACS	**San Casciano d**	**0.90 274**	P	**Pb**	**08 00 27.2 +1.4**
CAFI	**Castiglion Fio**	**1.00 302**	P	**Pg**	**08 00 28.1 -0.3**
SF03	**Valle Cupa**	**1.06 271**	P	**Pb**	**08 00 29.8 +1.2**
MCIV	**Monte Civitell**	**1.07 269**	P	**Pn**	**08 00 30.5 +1.6**
MCIV			AML	AML	
	comp=E,626μm,0.4s				
MCIV			AML	AML	
	comp=N,530μm,0.5s				
LPEL	**Lama dei Pelig**	**1.09 133**	P	**Pg**	**08 00 29.6 -0.4**
PGF	**Pioggiola**	**3.05 267**	*e*P	**Pn**	**08 00 59.3 +3.1**
PGF			*e*Sn	**Sn**	**08 01 30.2 -2.1**
	comp=N,19nm,0.6s				
SBF	**Sospel**	**4.28 286**	*e*P	**Pn**	**08 01 16.5 +3.4**
SBF			*e*Sn	**Sn**	**08 02 00.0 -2.6**
	comp=N,14nm,0.5s				
LMR	**La Mourre**	**4.88 279**	*e*Pn	**Pn**	**08 01 20.1 -1.1**
LMR	**La Mourre**	**4.88 279**	*e*P	**Pn**	**08 01 24.4 +3.2**
LMR			*e*Sn	**Sn**	**08 02 14.3 -2.7**
	comp=N,12nm,1.0s				
MBDF	**Montbardon**	**4.99 295**	*e*Pn	**Pn**	**08 01 22.1 -0.7**
MBDF	**Montbardon**	**4.99 295**	*e*P	**Pn**	**08 01 26.2 +3.4**
MBDF			*e*Sn	**Sn**	**08 02 17.1 -2.9**
	comp=N,7.0nm,0.8s				
LPG	**La Plagne**	**5.32 303**	*e*Pn	**Pn**	**08 01 26.9 -0.6**
LPG	**La Plagne**	**5.32 303**	*e*P	**Pn**	**08 01 31.5 +4.0**
LPG			*e*Sn	**Sn**	**08 02 25.4 -3.0**
	comp=N,12nm,0.8s				
LPL	**La Plagne**	**5.34 303**	*e*Pn	**Pn**	**08 01 27.4 -0.3**
LPL	**La Plagne**	**5.34 303**	*e*P	**Pn**	**08 01 31.2 +3.5**
LPL			*e*Sn	**Sn**	**08 02 25.1 -3.7**
	comp=N,6.7nm,0.6s				
SMRF	**Simiane la Rot**	**5.62 285**	*e*Pn	**Pn**	**08 01 31.1 -0.4**
SMRF	**Simiane la Rot**	**5.62 285**	*e*P	**Pn**	**08 01 35.4 +3.9**
SMRF			*e*Sn	**Sn**	**08 02 32.3 -3.3**
ORIF	**Oris-en-Rattie**	**5.65 294**	*e*Pn	**Pn**	**08 01 30.5 -1.4**
ORIF	**Oris-en-Rattie**	**5.65 294**	*e*P	**Pn**	**08 01 35.4 +3.5**
CABF	**La Chapelle**	**6.30 310**	*e*Pn	**Pn**	**08 01 40.0 -0.8**
CABF	**La Chapelle**	**6.30 310**	*e*P	**Pn**	**08 01 44.5 +3.7**
VIVF	**Saint-Julien-l**	**6.45 291**	*e*Pn	**Pn**	**08 01 42.3 -0.5**
VIVF	**Saint-Julien-l**	**6.45 291**	*e*P	**Pn**	**08 01 45.6 +2.8**
HINF	**Hinteralfeld**	**6.69 321**	*e*Pn	**Pn**	**08 01 45.2 -0.8**
HINF	**Hinteralfeld**	**6.69 321**	*e*P	**Pn**	**08 01 50.3 +4.3**
HINF			*e*Sn	**Sn**	**08 02 57.5 -4.2**
	comp=N,10nm,0.5s				
LASF	**Ste Croix**	**6.87 284**	*e*Pn	**Pn**	**08 01 48.2 -0.3**
LASF	**Ste Croix**	**6.87 284**	*e*P	**Pn**	**08 01 52.2 +3.7**
CDF	**Champ du Feu**	**6.95 326**	*e*P	**Pn**	**08 01 53.3 +3.6**
CDF			*e*Sn	**Sn**	**08 03 03.9 -4.3**
	comp=N,3.9nm,0.4s				
HAU	**Haudompre**	**7.06 320**	*e*Pn	**Pn**	**08 01 50.5 -0.6**
HAU	**Haudompre**	**7.06 320**	*e*P	**Pn**	**08 01 55.7 +4.6**
HAU			*e*Sn	**Sn**	**08 03 06.5 -4.3**
	comp=N,19nm,0.6s				
SMF	**Signal de Mont**	**7.65 303**	*e*Pn	**Pn**	**08 01 58.3 -0.9**
SMF	**Signal de Mont**	**7.65 303**	*e*P	**Pn**	**08 02 03.2 +4.0**
SMF			*e*Sn	**Sn**	**08 03 20.3 -5.0**
	comp=N,2.9nm,0.5s				
SFTF	**Sexfontaines**	**7.84 316**	*e*Pn	**Pn**	**08 02 01.1 -0.7**
	baz=136				
SFTF	**Sexfontaines**	**7.84 316**	*e*P	**Pn**	**08 02 05.9 +4.1**
	baz=130				
LOR	**Lormes**	**7.94 307**	*e*Pn	**Pn**	**08 02 02.5 -0.7**
	baz=127				
LOR	**Lormes**	**7.94 307**	*e*P	**Pn**	**08 02 07.4 +4.2**
	baz=125				
LOR			*e*Sn	**Sn**	**08 03 27.3 -5.1**
	comp=N,1.9nm,0.3s				
AVF	**Avril sur Loir**	**8.01 303**	*e*Pn	**Pn**	**08 02 03.2 -1.0**
AVF	**Avril sur Loir**	**8.01 303**	*e*P	**Pn**	**08 02 08.6 +4.4**
MEZF	**Maizieres J'vi**	**8.03 318**	*e*Pn	**Pn**	**08 02 03.7 -0.7**
MEZF	**Maizieres J'vi**	**8.03 318**	*e*P	**Pn**	**08 02 08.6 +4.2**
	baz=142				
SSF	**Saint Saulge**	**8.04 305**	*e*P	**Pn**	**08 02 08.8 +4.2**
SSF			*e*Sn	**Sn**	**08 03 29.6 -5.4**
	comp=N,2.5nm,0.5s				
SAVF	**Savonnieres en**	**8.07 319**	*e*Pn	**Pn**	**08 02 04.7 -0.3**
SAVF	**Savonnieres en**	**8.07 319**	*e*P	**Pn**	**08 02 09.0 +4.0**
SAVF			*e*Sn	**Sn**	**08 03 30.4 -5.2**
	comp=N,3.1nm,0.4s				
CAF	**Calviac**	**8.27 289**	*e*Pn	**Pn**	**08 02 06.9 -0.9**
CAF	**Calviac**	**8.27 289**	*e*P	**Pn**	**08 02 12.4 +4.6**
TCF	**Toulx Ste Croi**	**8.54 298**	*e*Pn	**Pn**	**08 02 10.8 -0.7**
TCF	**Toulx Ste Croi**	**8.54 298**	*e*P	**Pn**	**08 02 15.4 +3.9**
RJF	**Les Rejaudoux**	**8.73 291**	*e*Pn	**Pn**	**08 02 12.8 -1.2**
RJF	**Les Rejaudoux**	**8.73 291**	*e*P	**Pn**	**08 02 18.1 +4.1**

*IDC **30** 08:02:39.0± 1.5, 42°.85N× 13°.29E, h0km, mb3.5/4, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=32.9km s-min=16.8km az=88.0*
*ROM **30** 08:02:40.1± 0.1, 42°.830N± 0°.004× 13°.081E± 0°.006, h10km, ML3.4/70, Error ellipse: s-maj=0.6km s-min=0.4km az=297.0*
*LDG **30** 08:02:40.9± 0.2, 42°.78N× 12°.99E, h10km, Ml3.1/14, Error ellipse: s-maj=7.0km s-min=4.2km az=47.0*
*PRU **30** 08:02:41.9± 0.0, 42°.83N× 13°.51E, h10km*
ISC 30 08:02:40.3± 0.7, **42°.83N**± 0°.01× **13°.00E**± 0°.02, **h14**km± 4km, **n169**, σ2^S**09**/201, **mb3.7**/3, **30C-38D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**11**	⇑P	**Pg**	**08 02 42.8**	**-0.3**
T1216				S	**Sg**	**08 02 44.6**	**-0.4**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1215	**Vallo di Nera,**	**0.10**	**254**	⇑P	**Pg**	**08 02 44.2**	**+0.7**
T1215				S	**Sb**	**08 02 47.0**	**+0.4**
T1215				AML	AML		
	comp=E,33850μm,1.2s						
T1215				AML	AML		
	comp=N,29050μm,0.5s						
T1215				AML	AML		
	comp=N,26400μm,0.5s						
T1215				AML	AML		
	comp=N,29000μm,0.5s						
T1215				AML	AML		
	comp=N,26350μm,0.5s						
T1215				AML	AML		
	comp=E,35650μm,1.2s						
T1215				AML	AML		
	comp=N,23183μm,0.1s						
T1215				AML	AML		
	comp=E,24017μm,0.1s						
T1215				AML	AML		
	comp=E,24974μm,0.1s						
T1215				AML	AML		
	comp=N,23950μm,0.1s						
T1217	**Poggiodomo (PG**	**0.13**	**204**	P	**Pg**	**08 02 44.3**	**+0.4**
T1217				S	**Sb**	**08 02 47.4**	**0.0**
T1217				AML	AML		
	comp=E,37250μm,0.1s						
T1217				AML	AML		
	comp=E,38000μm,0.1s						
T1217				AML	AML		
	comp=E,37200μm,0.1s						
T1217				AML	AML		
	comp=N,45500μm,0.3s						
T1217				AML	AML		
	comp=N,46750μm,0.3s						
T1217				AML	AML		
	comp=N,45450μm,0.3s						
T1217				AML	AML		
	comp=E,37950μm,0.1s						
T1217				AML	AML		
	comp=N,46761μm,0.3s						
T1217				AML	AML		
	comp=E,37967μm,0.1s						
T1217				AML	AML		
	comp=E,37223μm,0.1s						
T1217				AML	AML		
	comp=N,45482μm,0.3s						
FEMA	**Monte Fema**	**0.14**	**15**	P	**Pg**	**08 02 43.8**	**-0.2**
FEMA				S	**Sg**	**08 02 46.2**	**-0.3**
FEMA				AML	AML		
	comp=N,41150μm,0.5s						
FEMA				AML	AML		
	comp=E,82100μm,0.5s						
FEMA				AML	AML		
	comp=N,41150μm,0.5s						
FEMA				AML	AML		
	comp=E,80979μm,0.3s						
FEMA				AML	AML		
	comp=N,35978μm,0.3s						
LNSS	**Leonessa**	**0.23**	**173**	P	**Pg**	**08 02 45.8**	**+0.5**
LNSS				S	**Sg**	**08 02 49.3**	**+0.5**
LNSS				AML	AML		
	comp=E,26550μm,0.1s						
LNSS				AML	AML		
	comp=N,67100μm,0.4s						
LNSS				AML	AML		
	comp=E,26550μm,0.1s						
LNSS				AML	AML		
	comp=N,66910μm,0.1s						
AM05	**Amandola Campo**	**0.30**	**60**	P	**Pg**	**08 02 45.7**	**-0.8**
AM05				S	**Sg**	**08 02 49.7**	**-0.9**
AM05				AML	AML		
	comp=E,7105μm,0.7s						
AM05				AML	AML		
	comp=N,6625μm,1.6s						
AM05				AML	AML		
	comp=E,35950μm,1.3s						
AM05				AML	AML		
	comp=N,1965μm,0.1s						
AM05				AML	AML		
	comp=E,7110μm,0.7s						
AM05				AML	AML		
	comp=N,1970μm,0.1s						
AM05				AML	AML		
	comp=E,36000μm,1.3s						
AM05				AML	AML		
	comp=N,5838μm,0.2s						
AM05				AML	AML		
	comp=N,1968μm,0.1s						
AM05				AML	AML		
	comp=E,27528μm,0.1s						
AM05				AML	AML		
	comp=E,6385μm,0.2s						
ARRO	**Arrone**	**0.31**	**215**	P	**Pg**	**08 02 47.3**	**+0.7**
ARRO				S	**Sb**	**08 02 53.0**	**+0.6**
T1211	**Morro Reatino**	**0.32**	**200**	P	**Pb**	**08 02 47.9**	**+0.1**
T1211				S	**Sb**	**08 02 53.1**	**+0.3**
T1211				AML	AML		
	comp=E,19200μm,0.1s						
T1211				AML	AML		
	comp=N,23850μm,0.4s						
T1211				AML	AML		
	comp=N,23850μm,0.4s						
T1211				AML	AML		
	comp=N,23850μm,0.4s						
T1211				AML	AML		
	comp=E,18950μm,0.1s						
T1211				AML	AML		
	comp=E,18900μm,0.1s						
T1211				AML	AML		
	comp=N,23900μm,0.4s						
T1211				AML	AML		
	comp=N,23900μm,0.4s						
T1211				AML	AML		
	comp=E,19200μm,0.1s						
T1211				AML	AML		
	comp=N,21906μm,0.3s						
T1211				AML	AML		
	comp=E,19184μm,0.1s						
T1211				AML	AML		
	comp=N,21936μm,0.3s						
T1211				AML	AML		
	comp=E,18938μm,0.1s						
SEF1	**Sefro**	**0.32**	**353**	⇑P	**Pg**	**08 02 47.2**	**+0.3**
SEF1				AML	AML		
	comp=E,18650μm,0.3s						
SEF1				AML	AML		
	comp=N,13750μm,0.3s						
SEF1				AML	AML		
	comp=E,18650μm,0.3s						
SEF1				AML	AML		
	comp=N,13700μm,0.3s						
SEF1				AML	AML		
	comp=N,13732μm,0.3s						
SEF1				AML	AML		
	comp=E,18635μm,0.3s						
ASSB	**Assisi San Ben**	**0.33**	**310**	P	**Pg**	**08 02 47.7**	**+0.7**
ASSB				S	**Sb**	**08 02 53.6**	**+0.4**
GUMA	**Gualdo di Mace**	**0.34**	**46**	⇓P	**Pg**	**08 02 46.8**	**-0.4**
GUMA				S	**Sg**	**08 02 51.8**	**-0.1**
GUMA				AML	AML		
	comp=N,61500μm,0.4s						
GUMA				AML	AML		
	comp=E,42650μm,0.8s						
GUMA				AML	AML		
	comp=N,55750μm,1.2s						
GUMA				AML	AML		
	comp=E,59950μm,0.5s						
GUMA				AML	AML		
	comp=E,59961μm,0.5s						
GUMA				AML	AML		
	comp=N,61506μm,0.4s						
GUMA				AML	AML		
	comp=N,54367μm,0.5s						
GUMA				AML	AML		
	comp=E,42287μm,0.4s						
T1243	**Rocca Santa Ma**	**0.35**	**112**	⇓P	**Pg**	**08 02 46.6**	**-0.9**
T1243				S	**Sg**	**08 02 51.3**	**-1.1**
RM33	**Pellescritta (**	**0.36**	**154**	P	**Pg**	**08 02 47.2**	**-0.3**
RM33				S	**Sg**	**08 02 52.8**	**+0.3**
RM33				AML	AML		
	comp=E,9330μm,0.3s						
RM33				AML	AML		
	comp=N,10510μm,0.2s						
RM33				AML	AML		
	comp=E,9485μm,0.3s						
RM33				AML	AML		
	comp=N,10650μm,0.2s						
RM33				AML	AML		
	comp=E,9335μm,0.3s						
RM33				AML	AML		
	comp=N,10500μm,0.2s						
RM33				AML	AML		
	comp=E,9510μm,0.3s						
RM33				AML	AML		
	comp=E,10660μm,0.1s						
RM33				AML	AML		
	comp=N,10525μm,0.2s						
RM33				AML	AML		
	comp=N,10620μm,0.2s						
RM33				AML	AML		
	comp=E,10525μm,0.1s						
RM33				AML	AML		
	comp=N,10490μm,0.2s						
RM33				AML	AML		
	comp=N,10510μm,0.2s						
RM33				AML	AML		
	comp=N,10642μm,0.2s						
RM33				AML	AML		
	comp=E,9487μm,0.3s						
RM33				AML	AML		
	comp=E,9336μm,0.3s						
FIU1	**Fiuminata**	**0.36**	**352**	⇓P	**Pg**	**08 02 48.1**	**+0.4**
FIU1				AML	AML		
	comp=E,5895μm,0.3s						
FIU1				AML	AML		
	comp=N,4605μm,1.2s						
FIU1				AML	AML		
	comp=N,4610μm,1.2s						
FIU1				AML	AML		
	comp=E,5897μm,0.3s						
FIU1				AML	AML		
	comp=N,3400μm,0.2s						
CESX	**Cesi**	**0.38**	**235**	P	**Pg**	**08 02 48.5**	**+0.5**
CESX				AML	AML		

	comp=E,13950µm,0.5s						
CESX				AML	AML		
	comp=N,11700µm,0.4s						
CESX				AML	AML		
	comp=E,12947µm,0.4s						
CESX				AML	AML		
	comp=N,11721µm,0.4s						
GAG1	**Gagliole**	**0.41**	**7**	⇓P	**Pg**	**08 02 48.7**	**+0.2**
GAG1				AML	AML		
	comp=N,13100µm,0.4s						
GAG1				AML	AML		
	comp=E,15350µm,0.4s						
CAMP	**Campotosto**	**0.42**	**134**	P	**Pg**	**08 02 47.8**	**-0.9**
CAMP				S	**Sg**	**08 02 53.8**	**-0.7**
CAMP				AML	AML		
	comp=E,4905µm,0.4s						
CAMP				AML	AML		
	comp=N,6200µm,0.3s						
CAMP				AML	AML		
	comp=N,6375µm,0.5s						
CAMP				AML	AML		
	comp=E,5495µm,0.2s						
CAMP				AML	AML		
	comp=E,4903µm,0.4s						
CAMP				AML	AML		
	comp=N,6201µm,0.3s						
SNTG	**Esanatoglia**	**0.43**	**354**	S	**Sb**	**08 02 56.0**	**0.0**
ATCC	**AVT- Casa Cast**	**0.44**	**323**	⇓P	**Pg**	**08 02 48.3**	**-0.8**
ATCC				AML	AML		
	comp=N,7780µm,0.3s						
ATCC				AML	AML		
	comp=E,7815µm,0.4s						
ATCC				AML	AML		
	comp=E,7817µm,0.4s						
ATCC				AML	AML		
	comp=N,7779µm,0.3s						
MNTP	**Montappone**	**0.46**	**48**	P	**Pg**	**08 02 49.2**	**-0.2**
MNTP				S	**Sb**	**08 02 56.8**	**-0.1**
MNTP				AML	AML		
	comp=E,14550µm,0.4s						
MNTP				AML	AML		
	comp=N,16350µm,0.4s						
MNTP				AML	AML		
	comp=E,14550µm,0.4s						
MNTP				AML	AML		
	comp=E,14548µm,0.4s						
MNTP				AML	AML		
	comp=N,16314µm,0.4s						
TERO	**Teramo**	**0.49**	**115**	P	**Pg**	**08 02 48.8**	**-1.1**
TERO				AML	AML		
	comp=E,10100µm,0.5s						
TERO				AML	AML		
	comp=N,10040µm,0.7s						
TERO				AML	AML		
	comp=N,10470µm,0.7s						
TERO				AML	AML		
	comp=E,10130µm,0.5s						
TERO				AML	AML		
	comp=N,10050µm,0.7s						
TERO				AML	AML		
	comp=E,10850µm,0.5s						
TERO				AML	AML		
	comp=N,12050µm,0.1s						
TERO				AML	AML		
	comp=E,12750µm,0.1s						
TERO				AML	AML		
	comp=N,13850µm,0.1s						
TERO				AML	AML		
	comp=E,10820µm,0.1s						
TERO				AML	AML		
	comp=E,8091µm,0.2s						
TERO				AML	AML		
	comp=N,9991µm,0.3s						
TERO				AML	AML		
	comp=E,7504µm,0.2s						
TERO				AML	AML		
	comp=N,10438µm,0.3s						
FOSV	**Fossato di Vic**	**0.50**	**339**	⇓P	**Pg**	**08 02 48.3**	**-1.8**
FOSV				AML	AML		
	comp=E,2860µm,1.3s						
FOSV				AML	AML		
	comp=N,3595µm,0.3s						
FOSV				AML	AML		
	comp=N,3595µm,0.3s						
FOSV				AML	AML		
	comp=E,2420µm,0.4s						
MURB	**Monte Urbino**	**0.56**	**321**	⇓P	**Pg**	**08 02 51.9**	**+0.6**
MURB				AML	AML		
	comp=E,12150µm,0.5s						
MURB				AML	AML		
	comp=N,11100µm,0.3s						
MURB				AML	AML		
	comp=N,10295µm,0.3s						
MURB				AML	AML		
	comp=E,11095µm,0.5s						
MURB				AML	AML		
	comp=E,11116µm,0.5s						
MURB				AML	AML		
	comp=N,11095µm,0.3s						
MURB				AML	AML		
	comp=N,10295µm,0.3s						
MURB				AML	AML		
	comp=E,12148µm,0.5s						
AQU	**L'Aquila**	**0.56**	**148**	⇑P	**Pg**	**08 02 51.7**	**+0.4**
AQU				AML	AML		
	comp=N,3630µm,0.5s						
AQU				AML	AML		
	comp=E,3050µm,0.3s						
AQU				AML	AML		
	comp=N,3430µm,0.5s						
AQU				AML	AML		
	comp=E,2905µm,0.3s						
AQU				AML	AML		
	comp=E,3054µm,0.3s						
AQU				AML	AML		
	comp=N,3630µm,0.5s						
AQU				AML	AML		
	comp=N,3430µm,0.5s						
AQU				AML	AML		
	comp=E,2908µm,0.3s						
GIGS	**Gran Sasso**	**0.56**	**132**	⇓P	**Pg**	**08 02 51.2**	**-0.2**
GIGS				AML	AML		
	comp=E,1605µm,0.4s						
GIGS				AML	AML		
	comp=N,1376µm,0.5s						
GIGS				AML	AML		
	comp=E,1870µm,0.4s						
GIGS				AML	AML		
	comp=N,1605µm,0.1s						
GIGS				AML	AML		
	comp=E,1528µm,0.3s						
GIGS				AML	AML		
	comp=N,1149µm,0.1s						
FIAM	**Fiamignano**	**0.57**	**171**	⇑P	**Pg**	**08 02 51.4**	**-0.1**
FIAM				AML	AML		
	comp=E,3695µm,0.4s						
FIAM				AML	AML		
	comp=N,2260µm,0.4s						
FIAM				AML	AML		
	comp=E,3696µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.60**	**308**	⇓P	**Pn**	**08 02 55.2**	**+0.7**
ATTE				AML	AML		
	comp=N,2270µm,0.3s						
ATTE				AML	AML		
	comp=E,3675µm,0.3s						
ATTE				AML	AML		
	comp=N,2272µm,0.3s						
ATTE				AML	AML		
	comp=E,3672µm,0.3s						
ATFO	**Monte Foce - G**	**0.62**	**330**	⇓P	**Pg**	**08 02 51.4**	**-1.1**
ATFO				AML	AML		
	comp=E,3435µm,0.4s						
ATFO				AML	AML		
	comp=N,3445µm,1.0s						
ATFO				AML	AML		
	comp=N,2488µm,0.4s						
ATFO				AML	AML		
	comp=E,3437µm,0.4s						
MGAB	**Montegabbione**	**0.66**	**277**	⇓P	**Pb**	**08 02 54.2**	**+0.6**
MGAB				AML	AML		
	comp=N,8495µm,0.4s						
MGAB				AML	AML		
	comp=E,5295µm,1.3s						
MGAB				AML	AML		
	comp=N,8815µm,0.5s						
MGAB				AML	AML		
	comp=E,5915µm,0.7s						
MGAB				AML	AML		
	comp=N,8497µm,0.4s						
MGAB				AML	AML		
	comp=N,8807µm,0.5s						
MGAB				AML	AML		
	comp=E,5242µm,0.2s						
MGAB				AML	AML		
	comp=E,5880µm,0.3s						
ARVD	**Arcevia**	**0.67**	**356**	P	**Pg**	**08 02 53.5**	**+0.2**
ARVD				S	**Sn**	**08 03 05.0**	**-0.7**
ARVD				AML	AML		
	comp=E,1545µm,0.8s						
ARVD				AML	AML		
	comp=N,1685µm,0.7s						
ARVD				AML	AML		
	comp=N,1689µm,0.7s						
ARVD				AML	AML		
	comp=E,1332µm,0.4s						
TRTR	**Tortoreto Alta**	**0.67**	**92**	⇑P	**Pg**	**08 02 53.2**	**-0.2**
TRTR				AML	AML		
	comp=N,11650µm,0.4s						
TRTR				AML	AML		
	comp=E,23550µm,1.6s						
TRTR				AML	AML		
	comp=N,11625µm,0.4s						
TRTR				AML	AML		
	comp=E,23004µm,0.4s						
SRES	**S.Oreste - Sor**	**0.70**	**212**	⇓P	**Pg**	**08 02 54.2**	**+0.4**
SRES				AML	AML		
	comp=E,2880µm,0.4s						
SRES				AML	AML		
	comp=N,3985µm,0.5s						
SRES				AML	AML		
	comp=N,3983µm,0.5s						
ATVO	**AVT- Monte Val**	**0.70**	**322**	⇑P	**Pg**	**08 02 54.5**	**+0.5**
ATVO				AML	AML		
	comp=E,1975µm,0.8s						
ATVO				AML	AML		
	comp=N,2235µm,0.9s						
ATVO				AML	AML		
	comp=N,2232µm,0.9s						
ATVO				AML	AML		
	comp=E,1538µm,0.4s						
PP3	**Marolino**	**0.70**	**39**	⇓P	**Pg**	**08 02 54.4**	**+0.4**
PP3				AML	AML		
	comp=E,8260µm,0.7s						
PP3				AML	AML		
	comp=N,9490µm,0.4s						
PP3				AML	AML		
	comp=N,9455µm,0.4s						
PP3				AML	AML		
	comp=E,8530µm,0.6s						
PP3				AML	AML		
	comp=E,8533µm,0.6s						
PP3				AML	AML		
	comp=N,9478µm,0.4s						
PP3				AML	AML		
	comp=N,9467µm,0.4s						
PP3				AML	AML		
	comp=E,7996µm,0.6s						
FAGN	**Fagnano**	**0.71**	**143**	⇑P	**Pg**	**08 02 53.5**	**-0.6**
FAGN				AML	AML		
	comp=N,4480µm,0.3s						
FAGN				AML	AML		
	comp=E,5745µm,0.4s						
FAGN				AML	AML		
	comp=N,4475µm,0.3s						
FAGN				AML	AML		
	comp=N,4479µm,0.3s						
FAGN				AML	AML		
	comp=E,5744µm,0.4s						
ATMI	**Monte Miggiano**	**0.74**	**313**	⇑P	**Pn**	**08 02 57.5**	**+1.2**
ATMI				AML	AML		
	comp=N,8570µm,0.8s						
ATMI				AML	AML		
	comp=E,7090µm,0.5s						
ATMI				AML	AML		
	comp=N,7266µm,0.4s						
ATMI				AML	AML		
	comp=E,7089µm,0.5s						
VCEL	**Villa Celiera**	**0.76**	**125**	⇓P	**Pg**	**08 02 54.0**	**-1.0**
VCEL				AML	AML		
	comp=E,5855µm,0.4s						
VCEL				AML	AML		
	comp=N,5040µm,1.4s						
VCEL				AML	AML		
	comp=N,5045µm,1.4s						
VCEL				AML	AML		
	comp=E,5853µm,0.4s						
VCEL				AML	AML		
	comp=N,4806µm,0.3s						
ATPI	**Pietralunga -**	**0.76**	**325**	⇑P	**Pb**	**08 02 55.7**	**+0.3**
ATPI				AML	AML		
	comp=N,2275µm,0.4s						
ATPI				AML	AML		
	comp=E,2100µm,0.5s						
ATPI				AML	AML		
	comp=E,2102µm,0.5s						
ATPI				AML	AML		
	comp=N,2275µm,1.6s						
SACS	**San Casciano d**	**0.80**	**272**	P	**Pn**	**08 02 57.3**	**0.0**
SACS				AML	AML		
	comp=E,1939µm,0.4s						
SACS				AML	AML		
	comp=E,2007µm,0.4s						
MPAG	**Monte Paganucc**	**0.82**	**348**	P	**Pb**	**08 02 56.9**	**+0.6**
MPAG				AML	AML		
	comp=E,2280µm,0.4s						
MPAG				AML	AML		
	comp=N,2275µm,0.5s						
MTCE	**Montecelio**	**0.83**	**194**	⇓P	**Pg**	**08 02 56.4**	**+0.1**
MTCE				AML	AML		
	comp=N,1510µm,0.5s						
MTCE				AML	AML		
	comp=E,2465µm,0.8s						
MTCE				AML	AML		
	comp=N,1511µm,0.5s						
MTCE				AML	AML		
	comp=E,2469µm,0.8s						
AOI	**Ancona**	**0.84**	**31**	P	**Pg**	**08 02 56.8**	**+0.2**
AOI				AML	AML		
	comp=N,1775µm,1.3s						
AOI				AML	AML		
	comp=E,1765µm,1.1s						
AOI				AML	AML		
	comp=E,1730µm,0.5s						
AOI				AML	AML		
	comp=N,1631µm,0.5s						
PTQR	**Pietraquaria**	**0.86**	**160**	⇓P	**Pg**	**08 02 56.8**	**-0.2**
PTQR				AML	AML		
	comp=E,1190µm,0.9s						
PTQR				AML	AML		
	comp=N,1270µm,0.5s						
PTQR				AML	AML		
	comp=E,1038µm,0.3s						
FSSB	**Fossombrone**	**0.88**	**349**	⇓P	**Pg**	**08 02 57.9**	**+0.7**
FSSB				AML	AML		
	comp=N,4380µm,0.5s						
FSSB				AML	AML		
	comp=E,3805µm,1.3s						
FSSB				AML	AML		
	comp=E,3596µm,0.4s						
FSSB				AML	AML		
	comp=N,4381µm,0.5s						
CERT	**Cerreto**	**0.88**	**181**	⇑P	**Pb**	**08 02 57.0**	**-0.3**
CERT				AML	AML		
	comp=E,3510µm,0.6s						
CERT				AML	AML		
	comp=N,1950µm,1.1s						
CERT				AML	AML		
	comp=N,1885µm,0.3s						
CERT				AML	AML		
	comp=E,3510µm,0.6s						
LATE	**Laterza**	**0.91**	**257**	P	**Pn**	**08 02 59.3**	**+0.6**
PE3	**Peglio**	**0.94**	**337**	⇓P	**Pn**	**08 02 59.9**	**+0.8**
PE3				AML	AML		
	comp=E,10µm,0.4s						
PE3				AML	AML		
	comp=N,13µm,0.5s						
MCIV	**Monte Civitell**	**0.98**	**267**	⇓P	**Pn**	**08 03 00.6**	**+0.9**
MCIV				AML	AML		
	comp=E,1145µm,0.9s						
MCIV				AML	AML		
	comp=N,1085µm,0.5s						
MCIV				AML	AML		
	comp=N,1085µm,0.5s						
MCIV				AML	AML		
	comp=E,1145µm,0.9s						
MCIV				AML	AML		
	comp=E,1016µm,0.7s						
MCIV				AML	AML		
	comp=N,1084µm,0.5s						
RCAV	**Rocca di Cave**	**0.98**	**182**	⇓P	**Pn**	**08 03 00.3**	**+0.5**
RCAV				AML	AML		
	comp=N,2495µm,1.3s						
RCAV				AML	AML		
	comp=E,2455µm,1.6s						
RCAV				AML	AML		
	comp=E,2424µm,0.4s						
RCAV				AML	AML		
	comp=N,2388µm,0.4s						
SF04	**Casetta**	**0.99**	**271**	⇑P	**Pn**	**08 03 01.1**	**+1.3**
SF04				AML	AML		
	comp=E,1662µm,0.3s						
SF04				AML	AML		
	comp=N,1740µm,1.5s						
SF04				AML	AML		
	comp=E,1660µm,0.3s						
SF04				AML	AML		
	comp=N,1726µm,0.3s						
SF01	**Poggio Pratacc**	**1.06**	**269**	⇑P	**Pg**	**08 03 02.8**	**+2.1**
SF01				AML	AML		
	comp=E,1727µm,0.6s						
SF01				AML	AML		
	comp=N,1580µm,0.8s						
TOLF	**Tolfa**	**1.07**	**224**	⇓P	**Pg**	**08 03 01.9**	**+1.1**
TOLF				AML	AML		
	comp=N,1545µm,0.4s						
TOLF				AML	AML		
	comp=E,1715µm,1.5s						
TOLF				AML	AML		
	comp=E,1506µm,0.8s						
TOLF				AML	AML		
	comp=N,1545µm,0.4s						
VIVA	**Pratoni del Vi**	**1.09**	**189**	P	**Pg**	**08 03 01.8**	**+0.4**
VIVA				AML	AML		
	comp=N,4095µm,0.4s						
VIVA				AML	AML		
	comp=E,4360µm,1.4s						
VIVA				AML	AML		
	comp=N,4100µm,0.4s						
VIVA				AML	AML		
	comp=E,4067µm,0.4s						
CRE	**Caprese Michel**	**1.10**	**316**	⇓P	**Pg**	**08 03 03.4**	**+1.8**
CRE				AML	AML		
	comp=N,794µm,0.5s						
CRE				AML	AML		
	comp=E,600µm,0.4s						
CRE				AML	AML		
	comp=N,794µm,0.5s						
CRE				AML	AML		
	comp=E,600µm,0.4s						
ARCI	**Arcidosso**	**1.12**	**272**	⇓P	**Pg**	**08 03 03.4**	**+1.5**
ARCI				AML	AML		
	comp=E,318µm,1.6s						
ARCI				AML	AML		
	comp=N,339µm,0.7s						
ARCI				AML	AML		
	comp=E,290µm,0.6s						
ARCI				AML	AML		
	comp=N,339µm,0.7s						
LPEL	**Lama dei Pelig**	**1.17**	**131**	⇓P	**Pg**	**08 03 03.5**	**+0.6**
LPEL				S	**Sg**	**08 03 19.0**	**+0.8**
LPEL				AML	AML		
	comp=N,1095µm,1.3s						
LPEL				AML	AML		
	comp=E,1495µm,1.5s						
LPEL				AML	AML		
	comp=E,1345µm,0.3s						
LPEL				AML	AML		
	comp=N,1018µm,0.4s						
POFI	**Posta Fibreno**	**1.23**	**154**	⇑P	**Pg**	**08 03 05.9**	**+1.9**
POFI				AML	AML		
	comp=N,486µm,0.7s						
POFI				AML	AML		
	comp=E,825µm,0.6s						
POFI				AML	AML		
	comp=E,776µm,0.6s						
POFI				AML	AML		
	comp=N,458µm,0.6s						
POFI				AML	AML		
	comp=N,487µm,0.7s						
POFI				AML	AML		
	comp=E,825µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.28**	**172**	⇑P	**Pg**	**08 03 05.5**	**+0.5**
GIUL				AML	AML		
	comp=E,664µm,0.6s						
GIUL				AML	AML		
	comp=N,659µm,0.6s						
GIUL				AML	AML		
	comp=N,659µm,0.6s						
GIUL				AML	AML		
	comp=E,664µm,0.6s						
FROS	**Frosini**	**1.41**	**286**	⇓P	**Pb**	**08 03 07.0**	**+0.7**
FROS				AML	AML		
	comp=E,665µm,0.5s						
FROS				AML	AML		
	comp=N,394µm,0.7s						
FROS				AML	AML		
	comp=N,394µm,0.7s						
FROS				AML	AML		
	comp=E,665µm,0.5s						
MAON	**Monte Argentar**	**1.44**	**254**	⇑P	**Pb**	**08 03 07.0**	**+0.1**
MAON				AML	AML		
	comp=E,324µm,1.6s						
MAON				AML	AML		
	comp=N,202µm,1.2s						
MAON				AML	AML		
	comp=N,187µm,0.7s						
MAON				AML	AML		
	comp=E,312µm,0.7s						
RUFI	**Rufina**	**1.48**	**313**	⇑P	**Pg**	**08 03 08.7**	**-0.1**
RUFI				AML	AML		
	comp=E,427µm,0.5s						
RUFI				AML	AML		
	comp=N,352µm,0.5s						
LMD	**Lutirano**	**1.56**	**323**	⇓P	**Pg**	**08 03 12.3**	**+2.0**
TRIV	**Trivento**	**1.56**	**132**	⇓P	**Pb**	**08 03 10.1**	**+1.0**
TRIV				AML	AML		
	comp=E,82650µm,1.6s						
TRIV				AML	AML		
	comp=N,82700µm,1.6s						
TRIV				AML	AML		
	comp=N,652µm,1.1s						
TRIV				AML	AML		
	comp=E,712µm,0.7s						
TRIV				AML	AML		
	comp=N,652µm,1.1s						
TRIV				AML	AML		
	comp=E,712µm,0.7s						
TRIF	**Trifonti**	**1.57**	**281**	⇑P	**Pb**	**08 03 09.1**	**0.0**
TRIF				AML	AML		
	comp=E,338µm,0.7s						
TRIF				AML	AML		
	comp=N,260µm,0.6s						
TRIF				AML	AML		
	comp=N,260µm,0.6s						
TRIF				AML	AML		
	comp=E,339µm,0.7s						
CASP	**Castiglione de**	**1.57**	**269**	⇓P	**Pn**	**08 03 08.6**	**+0.8**
CASP				AML	AML		
	comp=N,112µm,0.5s						
CASP				AML	AML		
	comp=E,137µm,0.5s						
CASP				AML	AML		
	comp=E,137µm,0.5s						
CASP				AML	AML		
	comp=N,113µm,0.5s						
BRIS	**BRISIGHELLA**	**1.71**	**321**	⇓P	**Pg**	**08 03 14.6**	**+1.5**
BSSO	**Busso**	**1.75**	**137**	⇓P	**Pb**	**08 03 13.3**	**+1.1**
BSSO				AML	AML		
	comp=N,137µm,1.1s						
BSSO				AML	AML		
	comp=E,120µm,1.0s						
BSSO				AML	AML		
	comp=E,109µm,0.5s						
BSSO				AML	AML		
	comp=N,136µm,0.8s						
MODR	**Mondragone**	**1.81**	**159**	⇓P	**Pb**	**08 03 13.3**	**+0.2**
MODR				AML	AML		
	comp=N,224µm,0.6s						
MODR				AML	AML		
	comp=E,170µm,0.9s						
MODR				AML	AML		
	comp=N,223µm,0.6s						

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MODR                          AML   AML
     comp=E,169µm,0.9s
POPM Popiglio        2.04 307 P     Pn    08 03 13.8 -0.4
POPM                          AML   AML
     comp=N,182µm,0.5s
POPM                          AML   AML
     comp=E,174µm,0.8s
POPM                          AML   AML
     comp=N,182µm,0.5s
POPM                          AML   AML
     comp=E,129µm,0.5s
CELB S.Piero in Cam  2.06 269 P     Pn    08 03 15.5 +1.0
CELB                          AML   AML
     comp=E,65µm,0.5s
CELB                          AML   AML
     comp=N,57µm,0.5s
CELB                          AML   AML
     comp=E,65µm,0.5s
CELB                          AML   AML
     comp=N,57µm,0.5s
MAIM Mastiano        2.13 301 ⇑P    Pn    08 03 17.0 +1.6
MAIM                          AML   AML
     comp=E,118µm,0.5s
MAIM                          AML   AML
     comp=N,130µm,0.5s
MAIM                          AML   AML
     comp=E,119µm,0.5s
MAIM                          AML   AML
     comp=N,130µm,0.5s
PAOL Paolisi         2.14 146 S     Sb    08 03 47.0 +1.6
APRC Apricena        2.17 119 ⇓P    Pn    08 03 17.4 +1.4
APRC                          AML   AML
     comp=N,676µm,1.1s
APRC                          AML   AML
     comp=E,468µm,1.6s
APRC                          AML   AML
     comp=E,447µm,0.4s
APRC                          AML   AML
     comp=E,397µm,0.4s
APRC                          AML   AML
     comp=N,644µm,0.3s
MOCO Biccari - m.te  2.17 132 P     Pn    08 03 17.1 +1.0
MOCO                          AML   AML
     comp=E,190µm,0.8s
MOCO                          AML   AML
     comp=E,177µm,1.1s
MOCO                          AML   AML
     comp=N,110µm,1.2s
VLC  Villacollemand  2.32 306 P     Pb    08 03 20.6 -1.3
VLC                           AML   AML
     comp=N,107µm,1.1s
VLC                           AML   AML
     comp=E,91µm,1.0s
VLC                           AML   AML
     comp=E,91µm,1.0s
VLC                           AML   AML
     comp=N,116µm,1.1s
VLC                           AML   AML
     comp=N,107µm,1.1s
VLC                           AML   AML
     comp=E,104µm,1.1s
HVAR Hvar            2.55  81 ⇓P    Pn    08 03 22.3 +1.0
GRAM Graiana         2.70 309 ⇑P    Pb    08 03 27.0 -1.4
GRAM                          AML   AML
     comp=N,189µm,0.4s
GRAM                          AML   AML
     comp=E,172µm,0.4s
GRAM                          AML   AML
     comp=N,189µm,0.4s
GRAM                          AML   AML
     comp=E,172µm,0.4s
PGF  Pioggiola       2.96 266 ePn   Pn    08 03 26.6 -0.4
PGF  Pioggiola       2.96 266 eP    Pn    08 03 28.9 +1.9
PGF                           eSn   Sn    08 04 00.0 -2.4
     comp=E,10.0nm,0.4s
TREG Tregnago        3.00 334 S     Sn    08 04 03.0 -0.2
CMPR Campora         3.05 145 P     Pn    08 03 28.5 +0.4
CMPR                          AML   AML
     comp=E,38µm,0.9s
CRND Cornuda         3.08 348 S     Sb    08 04 12.0 -0.1
ROVR Rover Verones   3.14 334 ⇑P    Pn    08 03 32.2 +2.8
ROVR                          AML   AML
     comp=N,82µm,0.9s
ROVR                          AML   AML
     comp=E,56µm,0.6s
ROVR                          AML   AML
     comp=E,56µm,0.6s
ROVR                          AML   AML
     comp=N,70µm,0.5s
SABO M.te Sabotino   3.18   8 ⇓P    Pn    08 03 30.6 +0.7
SABO                          AML   AML
     comp=N,944µm,0.6s
SABO                          AML   AML
     comp=E,217µm,0.8s
SABO                          AML   AML
     comp=N,244µm,1.6s
SABO                          AML   AML
     comp=E,900µm,0.8s
SABO                          AML   AML
     comp=N,234µm,0.9s
SABO                          AML   AML
     comp=E,776µm,0.7s
SABO                          AML   AML
     comp=E,194µm,0.9s
SABO                          AML   AML
     comp=N,944µm,0.6s
LJU  Ljubljana       3.39  18 ⇑P    Pn    08 03 32.7 -0.1
LJU                           S     Sn    08 04 15.0 +2.1
LJU                           AML   AML
     comp=N,880µm,0.5s
LJU                           AML   AML
     comp=E,733µm,0.8s
LJU                           AML   AML
     comp=E,682µm,0.9s
LJU                           AML   AML
     comp=N,880µm,0.5s
STAL STALIGIAL       3.44 357 ⇓P    Pn    08 03 35.5 +2.1
STAL                          AML   AML
     comp=N,132µm,1.1s
STAL                          AML   AML
     comp=E,201µm,0.7s
STAL                          AML   AML
     comp=N,122µm,0.4s
STAL                          AML   AML
     comp=E,192µm,0.6s
STAL                          AML   AML
     comp=E,200µm,0.4s
STAL                          AML   AML
     comp=N,235µm,0.6s
LUSI Trento, Gardas  3.46 335 ⇑P    Pn    08 03 36.5 +2.7
LUSI                          AML   AML
     comp=E,111µm,0.4s
LUSI                          AML   AML
     comp=N,158µm,0.5s
LUSI                          AML   AML
     comp=N,155µm,0.4s
LUSI                          AML   AML
     comp=E,111µm,0.4s
MABI Malga Bissina   3.68 332 ⇑P    Pn    08 03 40.0 +3.0
MABI                          AML   AML
     comp=E,39µm,0.5s
ZOU  Zoufplan        3.73 360 ⇓P    Pn    08 03 38.9 +1.4
ZOU                           AML   AML
     comp=E,114µm,1.1s
ZOU                           AML   AML
     comp=N,95µm,0.8s
ZOU                           AML   AML
     comp=E,114µm,1.1s
ZOU                           AML   AML
     comp=E,122µm,0.8s
ZOU                           AML   AML
     comp=N,95µm,0.8s
CANO Canova, Maglio  3.73 293 S     Sn    08 04 26.0 +4.8
ACOM Acomizza, Ital  3.73   5 ⇓P    Pn    08 03 39.5 +1.9
ACOM                          AML   AML
     comp=E,165µm,0.5s
ACOM                          AML   AML
     comp=N,125µm,1.3s
ACOM                          AML   AML
     comp=E,165µm,0.5s
ACOM                          AML   AML
     comp=N,115µm,0.5s
ACOM                          AML   AML
     comp=N,117µm,0.5s
ACOM                          AML   AML
     comp=E,168µm,0.4s
KOSI Kohlern         3.81 343 ⇑P    Pn    08 03 40.1 +1.4
KOSI                          AML   AML
     comp=N,111µm,0.7s
KOSI                          AML   AML
     comp=E,144µm,0.9s
KOSI                          AML   AML
     comp=N,111µm,0.7s
KOSI                          AML   AML
     comp=E,114µm,0.7s
MYKA Terra Mystica   3.83   7 ePn   Pn    08 03 40.2 +1.3
     comp=E,13nm,0.5s
OBKA Obir            3.84  16 ePn   Pn    08 03 39.8 +0.8
     comp=E,2.3nm,0.2s
ROTM Rocchetta Tana  3.92 303 ⇑P    Pg    08 03 56.8 +1.5
ABTA Abfaltersbach   3.93 355 ePn   Pn    08 03 42.2 +2.0
     comp=E,21nm,0.5s
BRES Bressanone      3.97 347 ⇑P    Pn    08 03 44.4 +3.3
SOKA Soboth          4.11  20 ePn   Pn    08 03 43.5 +0.8
     comp=E,2.2nm,0.3s
RISI Rein            4.17 351 ⇓P    Pn    08 03 46.7 +3.1
RISI                          AML   AML
     comp=E,347µm,0.6s
RISI                          AML   AML
     comp=N,250µm,0.3s
RISI                          AML   AML
     comp=N,249µm,0.3s
RISI                          AML   AML
     comp=E,347µm,0.6s
SBF  Sospel          4.19 286 ePn   Pn    08 03 42.6 -1.2
SBF  Sospel          4.19 286 eP    Pn    08 03 45.7 +1.9
SBF                           eSn   Sn    08 04 29.4 -3.2
     comp=E,9.0nm,0.5s
VSL  Villasalto      4.31 221 ⇑P    Pn    08 03 48.0 +2.6
VSL                           AML   AML
     comp=N,35µm,0.5s
VSL                           AML   AML
     comp=E,33µm,0.5s
VSL                           AML   AML
     comp=E,33µm,0.5s
VSL                           AML   AML
     comp=N,35µm,0.5s
FETA Feichten        4.49 340 ePn   Pn    08 03 51.3 +3.3
     comp=N,11nm,0.8s
DAVOX Davos/Dischmat 4.53 332 Pn    Pn    08 03 52.2 +3.6
     comp=N,0.8nm,0.3s,baz=139,slow=11,SNR=2.3
DAVOX                         Sn    Sn    08 04 45.1 +3.9
     comp=N,1.6nm,0.3s,baz=302,slow=21,SNR=3.7
     comp=N,8.7nm,0.6s
WTTA Wattenberg      4.54 348 ePn   Pn    08 03 51.9 +3.2
     comp=N,2.8nm,0.2s
SQTA Sankt Quirin    4.57 344 ePn   Pn    08 03 51.5 +2.4
     comp=N,4.4nm,0.2s
WATA Walderalm       4.62 348 ePn   Pn    08 03 53.5 +3.8
     comp=N,3.3nm,0.2s
MOTA Moosalm         4.71 344 ePn   Pn    08 03 53.3 +2.3
     comp=N,1.3nm,0.2s
ARSA Arzberg         4.77  21 ePn   Pn    08 03 51.4 -0.3
     comp=N,3.1nm,0.3s
LMR  La Mourre       4.78 278 ePn   Pn    08 03 51.0 -0.9
LMR  La Mourre       4.78 278 eP    Pn    08 03 53.0 +1.1
LMR                           eSn   Sn    08 04 43.4 -3.7
     comp=N,4.9nm,0.5s
BIOA Bad Ischl, Aus  4.88   5 ePn   Pn    08 03 55.0 +1.7
     comp=N,19nm,0.3s
MBDF Montbardon      4.89 295 ePn   Pn    08 03 52.7 -0.9
MBDF Montbardon      4.89 295 eP    Pn    08 03 56.0 +2.4
RETA Reutte          4.92 342 ePn   Pn    08 03 57.1 +3.2
     comp=N,1.8nm,0.3s
DAVA Damuels         4.97 335 ePn   Pn    08 03 58.6 +3.9
     comp=N,9.2nm,0.7s
MOA  Molln           5.10  10 ePn   Pn    08 03 57.3 +1.0
     comp=N,3.1nm,0.4s
GMB  Gambarie        5.13 154 ⇑P    Pn    08 03 53.1 -3.7
LPG  La Plagne       5.23 303 ePn   Pn    08 03 57.0 -1.3
LPG  La Plagne       5.23 303 eP    Pn    08 04 01.3 +3.0
LPG                           eSn   Sn    08 04 54.3 -4.2
     comp=N,4.5nm,0.5s
LPL  La Plagne       5.25 303 ePn   Pn    08 03 57.7 -0.8
LPL  La Plagne       5.25 303 eP    Pn    08 04 01.6 +3.1
LPL                           eSn   Sn    08 04 54.6 -4.3
     comp=N,3.9nm,0.5s
CAGR Agira           5.33 167 ⇑P    Pn    08 03 58.2 -1.3
RONA Rosalia, Austr  5.39  24 ePn   Pn    08 03 59.7 -0.6
     comp=N,1.0nm,0.2s
CONA Conrad Observa  5.48  21 ePn   Pn    08 04 02.0 +0.4
     comp=N,2.7nm,0.5s
SMRF Simiane la Rot  5.53 284 ePn   Pn    08 04 01.1 -1.1
SMRF Simiane la Rot  5.53 284 eP    Pn    08 04 05.3 +3.1
SMRF                          eSn   Sn    08 05 02.1 -3.5
     comp=N,2.1nm,0.5s
ORIF Oris-en-Rattie  5.55 294 ePn   Pn    08 04 01.2 -1.4
ORIF Oris-en-Rattie  5.55 294 eP    Pn    08 04 05.9 +3.3
ORIF                          eSn   Sn    08 05 02.1 -4.2
     comp=N,4.2nm,0.5s
GERES GERESS Array B 6.04   4 Pn    Pn    08 04 09.3 +0.2
     comp=N,0.4nm,0.3s,baz=170,slow=13,SNR=5.5
GERES                         Sn    Sn    08 05 17.9 -0.2
     comp=N,2.2nm,0.3s,baz=182,slow=24,SNR=6.9
     comp=N,0.8nm,0.3s
CKRC Cesky Krumlov   6.06   8 eSN   Sn    08 05 16.8 -1.8
KHC  Kasperske Hory  6.31   3 ePN   Pn    08 04 15.1 +2.1
KHC                           eSN   Sn    08 05 24.1 -0.8
VIVF Saint-Julien-l  6.35 291 ePn   Pn    08 04 12.4 -1.1
VIVF Saint-Julien-l  6.35 291 eP    Pn    08 04 16.5 +3.0
VIVF                          eSn   Sn    08 05 20.8 -5.1
     comp=N,0.7nm,0.3s
HINF Hinteralfeld    6.61 321 ePn   Pn    08 04 15.2 -1.8
HINF Hinteralfeld    6.61 321 eP    Pn    08 04 20.1 +3.1
HINF                          eSn   Sn    08 05 26.8 -5.2
     comp=N,6.9nm,0.4s
LASF Ste Croix       6.77 284 ePn   Pn    08 04 17.8 -1.4
LASF Ste Croix       6.77 284 eP    Pn    08 04 22.6 +3.4
CDF  Champ du Feu    6.87 326 ePn   Pn    08 04 18.9 -1.8
CDF  Champ du Feu    6.87 326 eP    Pn    08 04 23.5 +2.8
CDF                           eSn   Sn    08 05 33.2 -5.5
     comp=N,7.2nm,0.4s
HAU  Haudompre       6.98 320 ePn   Pn    08 04 20.5 -1.5
HAU  Haudompre       6.98 320 eP    Pn    08 04 25.6 +3.6
HAU                           eSn   Sn    08 05 35.6 -5.6
     comp=N,14nm,0.4s
SMF  Signal de Mont  7.55 303 ePn   Pn    08 04 28.2 -1.8
SMF  Signal de Mont  7.55 303 eP    Pn    08 04 33.4 +3.4
SMF                           eSn   Sn    08 05 49.2 -6.2
     comp=N,3.1nm,0.4s
PAGF Fort de Pagny   7.66 321 ePn   Pn    08 04 29.6 -1.8
PAGF Fort de Pagny   7.66 321 eP    Pn    08 04 34.7 +3.3
SFTF Sexfontaines    7.75 317 ePn   Pn    08 04 31.0 -1.7
SFTF Sexfontaines    7.75 317 eP    Pn    08 04 36.4 +3.7
LOR  Lormes          7.85 308 ePn   Pn    08 04 32.2 -1.8
LOR  Lormes          7.85 308 eP    Pn    08 04 37.0 +3.0
     baz=123
LOR                           eSn   Sn    08 05 55.9 -6.7
     comp=N,3.7nm,0.4s
MTLF Montolieu       7.91 277 ePn   Pn    08 04 33.5 -1.4
MTLF Montolieu       7.91 277 eP    Pn    08 04 38.9 +4.0
AVF  Avril sur Loir  7.92 303 ePn   Pn    08 04 33.4 -1.5
AVF  Avril sur Loir  7.92 303 eP    Pn    08 04 36.6 +1.7
MEZF Maizieres J'vi  7.95 318 ePn   Pn    08 04 33.5 -1.8
MEZF Maizieres J'vi  7.95 318 eP    Pn    08 04 38.9 +3.6
SSF  Saint Saulge    7.95 305 ePn   Pn    08 04 33.9 -1.5
SSF  Saint Saulge    7.95 305 eP    Pn    08 04 39.2 +3.8
SAVF Savonnieres en  7.99 319 ePn   Pn    08 04 34.3 -1.6
SAVF Savonnieres en  7.99 319 eP    Pn    08 04 39.5 +3.6
CAF  Calviac         8.18 289 ePn   Pn    08 04 37.0 -1.5
CAF  Calviac         8.18 289 eP    Pn    08 04 42.2 +3.7
RJF  Les Rejaudoux   8.63 291 ePn   Pn    08 04 43.6 -1.1
RJF  Les Rejaudoux   8.63 291 eP    Pn    08 04 47.7 +3.0
EKA  Eskdalemuir Ar 16.34 326 Pn    P     08 06 31.4 -0.5
     baz=133,slow=13
     comp=N,0.2nm,0.4s
FINES FINESS Array B 20.22  18 P    P     08 07 15.1 +0.5
     comp=N,1.6nm,0.7s,baz=224,slow=12,SNR=3.6
     comp=N,1.6nm,0.7s
TORD Torodi Ar. Bea 31.15 202 P     P     08 08 59.9 +1.2
     comp=N,0.3nm,0.5s,baz=27,slow=7.9,SNR=2.4
     comp=N,0.3nm,0.5s
MKAR Makanchi Array 47.86  60 P     P     08 11 18.4 +0.8
     comp=N,0.8nm,0.7s,baz=297,slow=6.3,SNR=2.8
     comp=N,0.8nm,0.7s
SONM Songino Array  61.89  50 P     P     08 12 57.9 -1.3
     comp=N,0.3nm,0.5s,baz=318,slow=6.2,SNR=1.8
     comp=N,0.3nm,0.5s
```

*IDC **30** 08:10:49.8±1.9, 42°.93N×13°.15E, h0km, mb3.5/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=51.5km*

s-min=17.5km az=98.0
*PRU **30** 08:10:50.8±0.0, 42°.84N×13°.14E, h4km*
*ROM **30** 08:10:51.1±0.0, 42°.859N±0°.002×13°.051E±0°.003, h10km, ML3.5/62, Error ellipse: s-maj=0.2km s-min=0.0km az=254.0*
*LDG **30** 08:10:52.0±0.1, 42°.78N×12°.98E, h10km, Ml3.2/16, Error ellipse: s-maj=3.6km s-min=2.1km az=45.0*

ISC 30 08:10:50.7±0.3, 42°.849N±0°.010×13°.03E±0°.01, h19km, n209, σ1§55/225, 16C-5D, Central Italy

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Code Station Name      Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
T1216 Preci, Frazion  0.04 352  ⇓P    Pg          08 10 53.4 -0.7
T1216                           S     Sg          08 10 54.7 -1.7
T1212 Cascia, Frazio  0.10 172  ⇑P    Pg          08 10 54.4 -0.1
T1212                           S     Sg          08 10 56.5 -0.6
FEMA  Monte Fema      0.11   8  P     Pg          08 10 54.2 -0.6
FEMA                            S     Sg          08 10 56.4 -1.2
FEMA                            AML   AML
     comp=E,81650µm,0.2s
FEMA                            AML   AML
     comp=E,81700µm,0.2s
FEMA                            AML   AML
T1245 Castelsantange  0.12  86  P     Pg          08 10 54.2 -0.6
T1245                           S     Sg          08 10 56.3 -1.4
T1215 Vallo di Nera,  0.13 248  ⇑P    Pg          08 10 55.0 +0.2
T1215                           S     Sg          08 10 57.6 +0.1
MC2   Monte Cornacci  0.14  62  P     Pg          08 10 54.6 -0.5
MC2                             S     Sg          08 10 56.9 -1.2
T1213 Norcia, Frazio  0.14 150  P     Pg          08 10 54.8 -0.2
T1213                           S     Sg          08 10 57.4 -0.6
T1217 Poggiodomo (PG  0.15 207  ⇑P    Pg          08 10 55.5 +0.3
T1217                           S     Sg          08 10 58.6 +0.4
T1217                           AML   AML
     comp=N,95000µm,0.8s
T1217                           AML   AML
     comp=N,94300µm,0.8s
T1217                           AML   AML
     comp=N,94950µm,0.8s
T1217                           AML   AML
     comp=N,94650µm,0.8s
T1217                           AML   AML
     comp=E,47600µm,0.7s
T1217                           AML   AML
     comp=N,94650µm,0.8s
T1217                           AML   AML
     comp=E,47800µm,0.7s
T1217                           AML   AML
     comp=N,94250µm,0.8s
T1217                           AML   AML
     comp=N,94700µm,0.8s
T1217                           AML   AML
     comp=N,94500µm,0.8s
T1214 Arquata del Tr  0.16 124  P     Pg          08 10 55.1 -0.2
T1214                           S     Sg          08 10 57.6 -0.8
T1218 Civita (PG)     0.19 160  ⇑P    Pg          08 10 55.7 +0.1
T1218                           S     Sg          08 10 59.0  0.0
FDMO  Fiordimonte     0.19  13  P     Pg          08 10 55.5 -0.1
FDMO                            S     Sg          08 10 58.5 -0.5
T1219 Muccia, Frazio  0.21 356  P     Pg          08 10 55.8 -0.1
T1219                           S     Sg          08 10 59.0 -0.4
T1256 Bolognola (MC)  0.21  43  P     Pg          08 10 56.0 -0.1
T1256                           S     Sg          08 10 59.2 -0.5
T1244 Arquata del Tr  0.22 115  P     Pg          08 10 56.1 +0.1
T1244                           S     Sg          08 10 59.9 +0.2
LNSS  Leonessa        0.25 178  P     Pg          08 10 56.9 +0.4
LNSS                            S     Sg          08 11 01.1 +0.6
LNSS                            AML   AML
     comp=E,34550µm,0.4s
LNSS                            AML   AML
     comp=N,68550µm,0.4s
T1201 Domo (RI)       0.25 139  P     Pg          08 10 57.0 +0.4
T1201                           S     Sg          08 11 01.3 +0.7
T1220 Camerino, Fraz  0.27  10  P     Pg          08 10 56.5 -0.2
T1220                           S     Sb          08 11 01.4 +0.7
AM05  Amandola Campo  0.27  62  P     Pg          08 10 56.7 -0.1
AM05                            S     Sg          08 11 00.8 -0.2
AM05                            AML   AML
     comp=E,11450µm,1.2s
AM05                            AML   AML
     comp=N,10800µm,0.5s
AM05                            AML   AML
     comp=E,53050µm,1.2s
AM05                            AML   AML
     comp=N,1845µm,0.8s
AM05                            AML   AML
     comp=E,11460µm,1.2s
AM05                            AML   AML
     comp=N,1840µm,0.8s
AM05                            AML   AML
     comp=N,10840µm,0.5s
T1204 Amatrice, Fraz  0.27 129  P     Pg          08 10 57.0  0.0
T1204                           S     Sg          08 11 01.7 +0.5
T1204                           AML   AML
     comp=E,28650µm,0.2s
T1204                           AML   AML
     comp=E,28700µm,0.2s
T1204                           AML   AML
     comp=N,19150µm,0.8s
T1241 Roccafluvione,  0.30  88  P     Pg          08 10 57.7 +0.5
T1241                           S     Sg          08 11 02.2 +0.5
T1241                           AML   AML
     comp=E,71600µm,0.3s
T1241                           AML   AML
     comp=N,51450µm,0.9s
T1241                           AML   AML
     comp=N,46750µm,0.9s
T1241                           AML   AML
     comp=N,51400µm,0.9s
T1241                           AML   AML
     comp=E,76500µm,0.3s
T1241                           AML   AML
     comp=E,71650µm,0.3s
SEF1  Sefro           0.30 349  P     Pg          08 10 57.6 +0.3
SEF1                            S     Sg          08 11 02.7 +0.7
SEF1                            AML   AML
     comp=N,17650µm,1.2s
SEF1                            AML   AML
     comp=E,21700µm,0.8s
GUMA  Gualdo di Mace  0.31  47  ⇑P    Pg          08 10 57.7 +0.2
GUMA                            S     Sg          08 11 02.7 +0.6
GUMA                            AML   AML
     comp=E,74800µm,1.4s
GUMA                            AML   AML
     comp=N,76000µm,0.4s
GUMA                            AML   AML
     comp=N,82950µm,0.4s
GUMA                            AML   AML
     comp=E,69450µm,1.5s
ARRO  Arrone          0.33 216  ⇑P    Pg          08 10 58.5 +0.8
ARRO                            S     Sg          08 11 03.8 +1.2
ARRO                            AML   AML
     comp=E,16350µm,0.2s
ARRO                            AML   AML
     comp=N,14400µm,0.3s
PIO1  Pioraco         0.33 355  P     Pg          08 10 57.9 +0.1
PIO1                            S     Sb          08 11 03.6 +0.6
PIO1                            AML   AML
     comp=E,7835µm,0.6s
PIO1                            AML   AML
     comp=N,12550µm,0.5s
PIO1                            AML   AML
     comp=N,12500µm,0.5s
ASSB  Assisi San Ben  0.33 306  ⇑P    Pg          08 10 58.3 +0.4
ASSB                            S     Sg          08 11 03.6 +0.8
T1211 Morro Reatino   0.34 202  P     Pg          08 10 58.7 +0.7
T1211                           S     Sg          08 11 04.5 +1.5
T1211                           AML   AML
     comp=N,34900µm,1.4s
T1211                           AML   AML
     comp=N,34500µm,1.4s
T1211                           AML   AML
     comp=E,29750µm,0.5s
T1211                           AML   AML
     comp=N,34500µm,1.4s
T1211                           AML   AML
     comp=N,34850µm,1.4s
T1211                           AML   AML
     comp=E,30050µm,0.5s
T1243 Rocca Santa Ma  0.34 116  P     Pb          08 10 58.0 -0.3
T1243                           S     Sb          08 11 03.5  0.0
FIU1  Fiuminata       0.35 348  P     Pg          08 10 58.3 +0.2
FIU1                            S     Sg          08 11 03.8 +0.7
FIU1                            AML   AML
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comp=E,7015µm,0.4s
FIU1 AML AML
comp=N,7190µm,0.2s
FIU1 AML AML
comp=E,7020µm,0.4s
FIU1 AML AML
comp=N,7190µm,0.2s
MDAR Monte D'Aria 0.35 14 P **Pg 08 10 58.2 -0.1**
MDAR S **Sb 08 11 03.7 -0.1**
RM33 Pellescritta (0.37 158 P **Pg 08 10 58.7 +0.3**
RM33 S **Sb 08 11 04.7 +0.5**
RM33 AML AML
comp=E,13300µm,0.3s
RM33 AML AML
comp=N,13250µm,0.3s
RM33 AML AML
comp=N,13300µm,0.3s
RM33 AML AML
comp=E,13300µm,0.3s
GAG1 Gagliole 0.39 4 P **Pg 08 10 59.2 +0.3**
GAG1 S **Sg 08 11 04.8 +0.4**
SSM1 San Severino M 0.40 16 P **Pg 08 10 58.9 -0.1**
CESX Cesi 0.41 234 ⇑P **Pg 08 10 59.7 +0.6**
CESX S **Sg 08 11 06.4 +1.6**
CESX AML AML
comp=E,13250µm,0.7s
CESX AML AML
comp=N,19350µm,0.5s
SNTG Esanatoglia 0.41 351 P **Pg 08 10 59.5 +0.3**
SNTG S **Sg 08 11 05.7 +0.7**
SNTG AML AML
comp=E,4540µm,0.3s
SNTG AML AML
comp=N,4760µm,0.8s
SNTG AML AML
comp=N,4935µm,0.8s
SNTG AML AML
comp=E,4290µm,0.3s
CAMP Campotosto 0.42 138 P **Pb 08 10 59.4 -0.3**
CAMP S **Sb 08 11 05.9 +0.2**
CAMP AML AML
comp=N,4225µm,1.6s
CAMP AML AML
comp=E,4430µm,0.7s
MNTP Montappone 0.43 48 P **Pb 08 11 00.2 +0.4**
MNTP AML AML
comp=E,21700µm,0.3s
MNTP AML AML
comp=N,22200µm,0.5s
MNTP AML AML
comp=N,22150µm,0.5s
MNTP AML AML
comp=E,21650µm,0.3s
T1246 Crognaleto (TE 0.43 128 P **Pb 08 10 59.6 -0.2**
T1246 S **Sb 08 11 06.2 +0.1**
ATCC AVT- Casa Cast 0.44 320 ⇑P **Pg 08 11 00.2 +0.5**
ATCC S **Sg 08 11 07.3 +1.5**
ATCC AML AML
comp=E,7620µm,0.2s
ATCC AML AML
comp=N,8205µm,0.6s
ATCC AML AML
comp=N,7562µm,0.7s
T1247 Pizzolo (AQ) 0.45 154 P **Pb 08 11 00.3 +0.2**
T1247 S **Sb 08 11 07.7 +1.2**
T1247 AML AML
comp=E,12200µm,1.3s
T1247 AML AML
comp=N,12015µm,0.4s
TERO Teramo 0.48 118 P **Pb 08 11 00.6 0.0**
TERO S **Sb 08 11 07.3 0.0**
TERO AML AML
comp=E,10050µm,0.4s
TERO AML AML
comp=E,10040µm,0.4s
TERO AML AML
comp=N,13650µm,0.1s
TERO AML AML
comp=N,16150µm,0.1s
TERO AML AML
comp=E,10030µm,0.4s
TERO AML AML
comp=E,11365µm,0.5s
EL6 Elcito 0.48 6 P **Pg 08 11 00.5 -0.1**
EL6 AML AML
comp=E,7620µm,0.9s
EL6 AML AML
comp=N,12500µm,0.5s
EL6 AML AML
comp=N,12550µm,0.5s
EL6 AML AML
comp=E,7610µm,0.9s
FOSV Fossato di Vic 0.49 336 P **Pg 08 11 01.0 +0.4**
FOSV S **Sg 08 11 08.5 +1.3**
FOSV AML AML
comp=E,3030µm,0.6s
FOSV AML AML
comp=N,4350µm,0.3s
OFFI Offida 0.49 80 P **Pb 08 11 01.3 +0.6**
OFFI AML AML
comp=N,22400µm,0.7s
OFFI AML AML
comp=E,18600µm,0.6s
MURB Monte Urbino 0.55 319 P **Pg 08 11 02.4 +0.6**
MURB S **Sg 08 11 11.1 +1.8**
MURB AML AML
comp=E,11750µm,1.3s
MURB AML AML
comp=N,10925µm,0.2s
MURB AML AML
comp=E,11800µm,1.3s
MURB AML AML
comp=N,10905µm,0.2s
MURB AML AML
comp=E,12450µm,0.4s
MURB AML AML
comp=N,11115µm,0.2s
GIGS Gran Sasso 0.56 135 P **Pb 08 11 02.3 +0.4**
GIGS AML AML
comp=N,1345µm,0.1s
GIGS AML AML
comp=E,2155µm,0.3s
AQU L'Aquila 0.57 151 P **Pb 08 11 02.7 +0.7**
AQU AML AML
comp=N,3595µm,1.3s
AQU AML AML
comp=E,3545µm,0.7s
AQU AML AML
comp=N,3445µm,1.0s
AQU AML AML
comp=E,3890µm,0.7s
AQU AML AML
comp=N,3590µm,1.3s
AQU AML AML
comp=N,2168µm,0.4s
FIAM Fiamignano 0.58 173 P **Pg 08 11 02.7 +0.4**
FIAM S **Sb 08 11 11.5 +1.3**
FIAM AML AML
comp=E,5110µm,0.9s
FIAM AML AML
comp=N,6025µm,0.4s
ATTE AVT- Monte Tez 0.60 305 P **Pg 08 11 03.3 +0.6**
ATTE AML AML
comp=N,2400µm,0.6s
ATTE AML AML
comp=N,1853µm,0.9s
ATTE AML AML
comp=E,2560µm,0.8s
ATFO Monte Foce - G 0.62 327 P **Pg 08 11 02.5 -0.4**
ATFO AML AML
comp=E,2755µm,0.6s
ATFO AML AML
comp=N,3260µm,0.8s
ATFO AML AML
comp=E,2592µm,0.7s
CADA Capodarco di F 0.64 57 P **Pn 08 11 04.6 -0.1**
ATLO AVT- Montelove 0.65 316 P **Pg 08 11 03.2 -0.4**
ARVD Arcevia 0.65 355 P **Pg 08 11 03.5 -0.1**
ARVD AML AML
comp=N,2095µm,1.0s
ARVD AML AML
comp=E,2740µm,0.8s
TRTR Tortoreto Alta 0.65 93 P **Pn 08 11 04.5 -0.4**
TRTR AML AML
comp=E,20050µm,1.6s
TRTR AML AML
comp=N,15350µm,1.4s
CIMA Civitanova Mar 0.66 46 P **Pb 08 11 04.4 +0.9**
MGAB Montegabbione 0.68 276 P **Pg 08 11 04.8 +0.8**
MGAB AML AML
comp=E,7060µm,0.4s
MGAB AML AML
comp=N,7295µm,1.5s
MGAB AML AML
comp=E,7295µm,0.4s
MGAB AML AML
comp=N,7850µm,1.5s
PP3 Marolino 0.68 39 P **Pg 08 11 03.2 -0.9**
PP3 AML AML
comp=N,12850µm,0.8s
PP3 AML AML
comp=N,13100µm,0.8s
PP3 AML AML
comp=E,10650µm,0.6s
PP3 AML AML
comp=E,10800µm,0.6s
TB01 Gubbio 0.69 321 P **Pg 08 11 04.1 -0.1**
ATVA AVT- Monte Val 0.69 309 P **Pg 08 11 05.2 +0.9**
ATVO AVT- Monte Val 0.70 320 P **Pg 08 11 04.7 +0.3**
ATVO AML AML
comp=N,2520µm,0.4s
ATVO AML AML
comp=E,3025µm,0.4s
ATVO AML AML
comp=E,1938µm,0.4s
FAGN Fagnano 0.71 145 P **Pb 08 11 05.4 +0.9**
FAGN AML AML
comp=E,11000µm,0.5s
FAGN AML AML
comp=N,5720µm,0.5s
TB03 Pietralunga 0.71 321 P **Pg 08 11 04.8 0.0**
SRES S.Oreste - Sor 0.72 212 P **Pg 08 11 05.5 +0.7**
SRES AML AML
comp=E,4240µm,1.1s
SRES AML AML
comp=N,3880µm,0.4s
ATMI Monte Miggiano 0.74 311 P **Pg 08 11 06.5 +1.3**
VCEL Villa Celiera 0.75 127 P **Pb 08 11 05.5 +0.3**
VCEL AML AML
comp=N,6375µm,0.3s
VCEL AML AML
comp=N,6370µm,0.3s
VCEL AML AML
comp=E,7310µm,0.4s
ATPI Pietralunga - 0.76 323 P **Pg 08 11 05.9 +0.4**
ATPI AML AML
comp=E,2400µm,0.8s
ATPI AML AML
comp=N,2115µm,0.6s
MPAG Monte Paganucc 0.80 346 P **Pg 08 11 06.7 +0.3**
MPAG AML AML
comp=N,1660µm,1.2s
MPAG AML AML
comp=E,1970µm,0.5s
MPAG AML AML
comp=N,1655µm,1.2s
AOI Ancona 0.82 31 P **Pb 08 11 06.5 +0.2**
AOI AML AML
comp=E,4670µm,0.4s
AOI AML AML
comp=N,4265µm,0.4s
SACS San Casciano d 0.82 270 P **Pg 08 11 07.0 +0.2**
SACS AML AML
comp=N,3125µm,0.6s
SACS AML AML
comp=E,3010µm,0.6s
T0110 Collepietro 0.83 138 P **Pb 08 11 07.0 +0.4**
T0110 AML AML
comp=E,6330µm,0.5s
T0110 AML AML
comp=N,4915µm,0.6s
APEC Apecchio 0.84 328 P **Pg 08 11 07.9 +0.9**
MTCE Montecelio 0.85 194 P **Pg 08 11 07.2 0.0**
MTCE AML AML
comp=E,3275µm,1.3s
MTCE AML AML
comp=N,3600µm,0.6s
FSSB Fossombrone 0.86 348 P **Pg 08 11 07.3 -0.2**
FSSB AML AML
comp=N,6510µm,0.4s
FSSB AML AML
comp=E,5895µm,0.3s
SENI Senigallia 0.87 10 P **Pb 08 11 07.8 +0.6**
PTQR Pietraquaria 0.87 161 P **Pg 08 11 07.6 -0.1**
PTQR AML AML
comp=E,1840µm,0.9s
PTQR AML AML
comp=N,1765µm,0.3s
CERT Cerreto 0.90 182 P **Pg 08 11 08.3 +0.1**
CERT AML AML
comp=E,7280µm,0.4s
CERT AML AML
comp=N,4145µm,0.6s
CAFI Castiglion Fio 0.91 302 P **Pg 08 11 08.5 0.0**
CAFI AML AML
comp=E,1580µm,0.5s
CAFI AML AML
comp=N,1485µm,0.7s
CAFI AML AML
comp=E,1568µm,0.5s
LATE Laterza 0.93 256 P **Pg 08 11 08.5 -0.3**
MCIV Monte Civitell 1.00 266 P **Pg 08 11 10.2 +0.2**
MCIV AML AML
comp=E,1235µm,0.3s
MCIV AML AML
comp=N,1115µm,0.4s
MCIV AML AML
comp=E,1235µm,0.4s
RCAV Rocca di Cave 1.00 183 P **Pg 08 11 10.4 +0.2**
RCAV AML AML
comp=N,4110µm,0.8s
RCAV AML AML
comp=E,4885µm,0.4s
RMP Rome, Mte Porz 1.06 193 P **Pg 08 11 11.5 +0.2**
RMP AML AML
comp=E,4020µm,1.4s
RMP AML AML
comp=N,5285µm,0.6s
GUAR Guarcino 1.07 169 AML AML
comp=N,3360µm,0.5s
GUAR AML AML
comp=E,2880µm,0.8s
TOLF Tolfa 1.09 224 P **Pb 08 11 11.8 +0.8**
TOLF AML AML
comp=N,2295µm,1.0s
TOLF AML AML
comp=E,1610µm,0.5s
CRE Caprese Michel 1.10 315 AML AML
comp=N,874µm,1.2s
CRE AML AML
comp=E,716µm,1.3s
RDP Rocca di Papa 1.11 192 P **Pb 08 11 12.3 +0.9**
ARCI Arcidosso 1.14 271 P **Pn 08 11 13.4 +1.7**
LAV9 Lanuvio 1.20 192 P **Pn 08 11 14.1 +1.8**
LAV9 AML AML
comp=N,9375µm,0.4s
LAV9 AML AML
comp=E,6550µm,0.4s
LAV9 AML AML
comp=E,6770µm,0.4s
LAV9 AML AML
comp=N,9550µm,0.4s
POFI Posta Fibreno 1.24 156 P **Pg 08 11 14.4 -0.2**
POFI AML AML
comp=E,1018µm,1.2s
POFI AML AML
comp=N,1044µm,1.4s
LRP Arpino 1.27 161 P **Pg 08 11 15.4 +0.2**
LRP AML AML
comp=E,886µm,1.6s
LRP AML AML
comp=N,1450µm,0.4s
GIUL Giuliano Di Ro 1.30 172 P **Pb 08 11 15.7 +1.2**
GIUL AML AML
comp=E,1300µm,0.6s
GIUL AML AML
comp=N,1120µm,0.4s
ASQU Asqua 1.31 317 P **Pn 08 11 15.5 +1.5**
ASQU AML AML
comp=N,840µm,0.7s
ASQU AML AML
comp=E,527µm,0.4s
LATB Latina 1.35 182 P **Pn 08 11 16.2 +1.7**
LATB AML AML
comp=N,352µm,0.9s
LATB AML AML
comp=E,482µm,1.0s
FROS Frosini 1.42 285 P **Pn 08 11 17.1 +1.7**
FROS AML AML
comp=N,500µm,0.7s
FROS AML AML
comp=E,675µm,0.8s
MAON Monte Argentar 1.46 254 P **Pn 08 11 17.4 +1.4**
MAON AML AML
comp=E,370µm,1.6s
MAON AML AML
comp=N,318µm,1.0s
RUFI Rufina 1.48 312 P **Pn 08 11 18.3 +1.9**
LMD Lutirano 1.56 322 P **Pn 08 11 19.7 +2.3**
LMD AML AML
comp=E,560µm,0.9s
LMD AML AML
comp=N,606µm,0.9s
TRIV Trivento 1.56 133 P **Pg 08 11 20.1 -0.7**
TRIV AML AML
comp=E,692µm,0.8s
TRIV AML AML
comp=N,693µm,1.1s
TRIV AML AML
TRIV AML AML
TRIF Trifonti 1.58 280 P **Pn 08 11 19.7 +2.0**
TRIF AML AML
comp=E,332µm,0.8s
TRIF AML AML
comp=N,294µm,0.6s
CASP Castiglione de 1.59 269 AML AML
comp=E,128µm,1.4s
CASP AML AML
comp=N,144µm,1.6s
VAGA Valle Agricola 1.69 148 P **Pb 08 11 21.8 +0.6**
VAGA AML AML
comp=N,792µm,0.7s
VAGA AML AML
comp=E,464µm,0.7s
MODR Mondragone 1.82 159 P **Pb 08 11 23.6 +0.3**
MODR AML AML
comp=E,244µm,0.6s
MODR AML AML
comp=N,312µm,1.5s
PIGN Pignataro Magg 1.86 152 P **Pb 08 11 24.1 +0.1**
PIGN AML AML
comp=E,195µm,0.7s
PIGN AML AML
comp=N,251µm,1.2s
MTCR Monte La Croce 1.89 309 P **Pn 08 11 23.6 +1.6**
MELA Melanico ??? S 1.93 126 P **Pb 08 11 25.2 0.0**
MELA AML AML
comp=E,1177µm,0.4s
MELA AML AML
comp=E,1185µm,0.4s
MELA AML AML
comp=N,1575µm,1.2s
MELA AML AML
comp=N,1620µm,1.2s
VITU Vitulano (BN) 2.05 144 P **Pn 08 11 25.6 +1.5**
VITU AML AML
comp=E,440µm,0.6s
VITU AML AML
comp=N,412µm,0.5s
SGRT San Giovanni R 2.29 118 P **Pb 08 11 30.0 -1.4**
SGRT AML AML
comp=E,772µm,0.6s
SGRT AML AML
comp=N,732µm,0.5s
VLC Villacollemand 2.33 305 AML AML
comp=N,104µm,1.4s
VLC AML AML
comp=E,103µm,1.1s
VLC AML AML
comp=N,101µm,1.1s
VLC AML AML
comp=E,110µm,1.0s
EQUI Equi 2.47 303 P **Pn 08 11 32.1 +2.2**
EQUI AML AML
comp=E,75µm,0.5s
EQUI AML AML
comp=N,100µm,0.6s
KNDS Knezji Dol 2.85 20 *i* Pn **Pn 08 11 37.0 +1.7**
MSSA Maissana 2.94 301 P **Pn 08 11 38.6 +2.1**
MSSA AML AML
comp=E,63µm,1.2s
MSSA AML AML
comp=N,84µm,0.9s
PGF Pioggiola 2.98 266 *e*Pn **Pn 08 11 37.4 +0.3**
PGF Pioggiola 2.98 266 *e*P **Pn 08 11 39.6 +2.5**
PGF *e*Sn **Sn 08 12 10.9 -1.5**
comp=N,15nm,0.5s
ROVR Rover Verones 3.13 334 AML AML
comp=N,91µm,1.0s
ROVR AML AML
comp=E,71µm,0.9s
CGRP Cima Grappa 3.16 344 AML AML
comp=E,390µm,0.8s
CGRP AML AML
comp=N,308µm,0.5s
SABO M.te Sabotino 3.16 7 AML AML
comp=E,345µm,0.7s
SABO AML AML
comp=N,2160µm,0.8s
SABO AML AML
comp=N,593µm,0.8s
SABO AML AML
comp=E,1610µm,0.7s
CTI Castel Tesino 3.35 343 AML AML
comp=N,186µm,0.2s
CTI AML AML
comp=E,174µm,1.5s
LJU Ljubljana 3.37 18 AML AML
comp=E,834µm,0.8s
LJU AML AML
comp=N,1195µm,0.7s
MPRI Monte Prat 3.39 360 AML AML
comp=N,472µm,0.6s
MPRI AML AML
comp=E,241µm,1.6s
CADS Cadrg 3.42 8 *i* Pn **Pn 08 11 44.6 +1.6**
STAL STALIGIAL 3.42 356 AML AML
comp=E,244µm,0.7s
STAL AML AML
comp=N,170µm,0.5s
STON Ston 3.44 88 AML AML
comp=E,82µm,1.6s
STON AML AML
comp=N,94µm,0.9s
LUSI Trento, Gardas 3.45 335 AML AML
comp=N,220µm,0.7s
LUSI AML AML
comp=E,142µm,0.5s
MATE Matera 3.52 127 ⇑P **Pb 08 11 50.2 -2.1**
CUC Castrocucco 3.54 143 AML AML
comp=N,49µm,0.9s
CUC AML AML
comp=E,53µm,1.2s
ZONE Zone 3.58 325 AML AML
comp=N,135µm,0.6s
ZONE AML AML
comp=E,178µm,0.1s
MABI Malga Bissina 3.68 332 AML AML
comp=N,72µm,0.6s
MABI AML AML
comp=E,53µm,0.9s
ZOU Zoufplan 3.71 359 AML AML
comp=N,128µm,1.2s
ZOU AML AML
comp=E,131µm,1.0s
ACOM Acomizza, Ital 3.71 5 AML AML
comp=E,208µm,1.1s
ACOM AML AML
comp=E,190µm,0.6s
ACOM AML AML
comp=N,204µm,0.6s
ACOM AML AML
comp=N,180µm,0.6s
MYKA Terra Mystica 3.81 6 *e*Pn **Pn 08 11 50.5 +2.2**
comp=N,9.0nm,0.4s,SNR=5.9
OBKA Obir 3.82 16 *e*Pn **Pn 08 11 50.6 +2.1**
comp=N,3.3nm,0.3s
ABTA Abfaltersbach 3.92 355 *e*Pn **Pn 08 11 50.9 +1.0**
comp=N,6.3nm,0.2s,SNR=6.3

MGRO	**Montegrosso**	**3.98 289**	AML	AML		
	comp=N,32μm,1.5s					
MGRO			AML	AML		
	comp=E,29μm,0.9s					
SOKA	**Soboth**	**4.09 20**	*e*Pn	**Pn**	**08 11 53.0**	**+0.8**
	comp=E,2.6nm,0.4s					
MUGIO	**Muggio**	**4.20 318**	AML	AML		
	comp=E,40μm,0.5s					
MUGIO			AML	AML		
	comp=N,40μm,0.4s					
SBF	**Sospel**	**4.20 286**	*e*Pn	**Pn**	**08 11 54.2**	**+0.4**
SBF	**Sospel**	**4.20 286**	*e*P	**Pn**	**08 11 56.3**	**+2.5**
SBF			*e*Sn	**Sn**	**08 12 40.2**	**-2.2**
	comp=N,12nm,0.5s					
VSL	**Villasalto**	**4.34 221**	AML	AML		
	comp=E,46μm,0.3s					
VSL			AML	AML		
	comp=N,48μm,1.2s					
FETA	**Feichten**	**4.48 339**	*e*Pn	Pn	08 12 02.3	+4.6
	comp=N,3.5nm,0.4s					
WTTA	**Wattenberg**	**4.52 348**	*e*Pn	**Pn**	**08 12 01.1**	**+2.8**
	comp=N,2.9nm,0.3s					
DAVOX	**Davos/Dischmat**	**4.52 331**	Pn	**Pn**	**08 12 01.3**	**+3.0**
	comp=N,1.1nm,0.3s,baz=146,slow=7.3,SNR=3.1					
DAVOX			Sn	**Sn**	**08 12 55.3**	**+4.9**
	comp=N,1.8nm,0.3s,baz=120,slow=23,SNR=5.9					
	comp=N,4.1nm,0.4s					
SQTA	**Sankt Quirin**	**4.56 344**	*e*Pn	Pn	08 12 03.7	+5.0
	comp=N,4.4nm,0.2s					
WATA	**Walderalm**	**4.60 348**	*e*Pn	Pn	08 12 04.1	+4.8
	comp=N,3.6nm,0.2s,SNR=4.5					
PDG	**Podgorica**	**4.61 93**	⇓P	**Pn**	**08 12 00.9**	**+1.6**
MOTA	**Moosalm**	**4.70 344**	*e*Pn	Pn	08 12 05.5	+4.8
	comp=N,3.2nm,0.3s					
ARSA	**Arzberg**	**4.74 21**	*i* Pn	**Pn**	**08 12 02.7**	**+1.6**
	comp=N,5.9nm,0.3s,SNR=8.1					
LMR	**La Mourre**	**4.80 278**	*e*Pn	**Pn**	**08 12 02.7**	**+0.8**
LMR	**La Mourre**	**4.80 278**	*e*P	**Pn**	**08 12 05.8**	**+3.9**
LMR			*e*Sn	**Sn**	**08 12 54.1**	**-2.8**
	comp=N,5.2nm,0.6s					
BIOA	**Bad Ischl, Aus**	**4.86 5**	*e*Pn	**Pn**	**08 12 05.3**	**+2.5**
	comp=N,7.8nm,0.2s,SNR=8.5					
MBDF	**Montbardon**	**4.90 295**	*e*Pn	**Pn**	**08 12 04.2**	**+0.7**
MBDF	**Montbardon**	**4.90 295**	*e*P	**Pn**	**08 12 07.7**	**+4.2**
MBDF			*e*Sn	**Sn**	**08 12 57.9**	**-1.9**
	comp=N,7.7nm,0.7s					
RETA	**Reutte**	**4.91 342**	*e*Pn	**Pn**	**08 12 03.3**	**-0.1**
	comp=N,2.4nm,0.3s					
DAVA	**Damuels**	**4.97 334**	*e*Pn	**Pn**	**08 12 08.5**	**+4.2**
	comp=N,3.1nm,0.3s					
MOA	**Molln**	**5.08 9**	*e*Pn	**Pn**	**08 12 07.7**	**+2.0**
	comp=N,3.0nm,0.2s,SNR=11					
LPG	**La Plagne**	**5.23 303**	*e*Pn	**Pn**	**08 12 08.8**	**+0.7**
LPG	**La Plagne**	**5.23 303**	*e*P	Pn	08 12 12.8	+4.7
LPG			*e*Sn	**Sn**	**08 13 05.5**	**-2.6**
	comp=N,4.1nm,0.4s					
LPL	**La Plagne**	**5.25 303**	*e*Pn	**Pn**	**08 12 08.8**	**+0.4**
LPL	**La Plagne**	**5.25 303**	*e*P	Pn	08 12 13.3	+4.9
TIR	**Tirane**	**5.30 104**	⇓P	**Pn**	**08 12 11.1**	**+2.3**
RONA	**Rosalia, Austr**	**5.37 24**	*e*Pn	**Pn**	**08 12 11.5**	**+1.7**
	comp=N,4.7nm,0.5s,SNR=5.1					
FRGS	**Fruska Gora**	**5.41 62**	⇑P	Pn	08 12 17.5	+7.2
CONA	**Conrad Observa**	**5.46 20**	*i* Pn	**Pn**	**08 12 12.6**	**+1.6**
	comp=N,5.5nm,0.3s,SNR=14					
SMRF	**Simiane la Rot**	**5.54 284**	*e*Pn	**Pn**	**08 12 12.4**	**+0.2**
SMRF	**Simiane la Rot**	**5.54 284**	*e*P	**Pn**	**08 12 15.9**	**+3.7**
SMRF			*e*Sn	**Sn**	**08 13 11.6**	**-3.8**
ORIF	**Oris-en-Rattie**	**5.56 294**	*e*Pn	**Pn**	**08 12 13.1**	**+0.6**
ORIF	**Oris-en-Rattie**	**5.56 294**	*e*P	Pn	08 12 17.1	+4.6
ORIF			*e*Sn	**Sn**	**08 13 13.4**	**-2.6**
	comp=N,9.0nm,0.6s					
GERES	**GERESS Array B**	**6.02 4**	Pn	**Pn**	**08 12 18.7**	**0.0**
	comp=N,0.7nm,0.3s,baz=171,slow=13,SNR=12					
GERES			Sn	**Sn**	**08 13 26.9**	**-0.2**
	comp=N,2.2nm,0.3s,baz=188,slow=27,SNR=8.3					
	comp=N,1.5nm,0.5s					
CKRC	**Cesky Krumlov**	**6.04 8**	*e*PN	**Pn**	**08 12 19.7**	**+0.8**
CKRC			*e*SN	**Sn**	**08 13 27.5**	**0.0**
CABF	**La Chapelle**	**6.21 310**	*e*Pn	**Pn**	**08 12 22.2**	**+0.8**
CABF	**La Chapelle**	**6.21 310**	*e*P	Pn	08 12 26.5	+5.1
KHC	**Kasperske Hory**	**6.29 3**	*e*PN	**Pn**	**08 12 23.4**	**+0.9**
KHC			*e*SN	**Sn**	**08 13 32.7**	**-1.2**
VIVF	**Saint-Julien-l**	**6.37 291**	*e*Pn	**Pn**	**08 12 23.2**	**-0.2**
VIVF	**Saint-Julien-l**	**6.37 291**	*e*P	Pn	08 12 28.5	+5.1
VIVF			*e*Sn	**Sn**	**08 13 31.3**	**-4.3**
	comp=N,1.0nm,0.3s					
BOVS	**Bovan**	**6.39 80**	⇑P	**Pn**	**08 12 25.6**	**+1.9**
HINF	**Hinteralfeld**	**6.60 321**	*e*Pn	**Pn**	**08 12 27.3**	**+0.6**
HINF	**Hinteralfeld**	**6.60 321**	*e*P	Pn	08 12 31.6	+4.9
HINF			*e*Sn	**Sn**	**08 13 38.4**	**-3.0**
	comp=N,8.1nm,0.5s					
BZS	**Buzias**	**6.76 63**	⇓P	**Pn**	**08 12 32.6**	**+3.7**
LASF	**Ste Croix**	**6.79 284**	*e*Pn	**Pn**	**08 12 29.5**	**+0.3**
LASF	**Ste Croix**	**6.79 284**	*e*P	**Pn**	**08 12 32.8**	**+3.6**
CDF	**Champ du Feu**	**6.87 326**	*e*Pn	**Pn**	**08 12 31.7**	**+1.3**
CDF	**Champ du Feu**	**6.87 326**	*e*P	Pn	08 12 36.2	+5.8
CDF			*e*Sn	**Sn**	**08 13 44.7**	**-3.4**
	comp=N,9.2nm,0.5s					
HAU	**Haudompre**	**6.97 320**	*e*Pn	**Pn**	**08 12 32.8**	**+1.0**
HAU	**Haudompre**	**6.97 320**	*e*P	Pn	08 12 37.0	+5.2
HAU			*e*Sn	**Sn**	**08 13 48.2**	**-2.4**
	comp=N,17nm,0.5s					
HERR	**Herculane**	**7.08 70**	⇑P	Pn	08 12 38.0	+4.7
PRU	**Pruhonice**	**7.22 8**	*e*SN	**Sn**	**08 13 56.2**	**-0.3**
NKC	**Novy Kostel**	**7.40 357**	*e*SN	**Sn**	**08 14 00.5**	**-0.5**
GZR	**Gura Zlata**	**7.46 67**	⇑P	**Pn**	**08 12 42.2**	**+3.7**
VTS	**Vitosha**	**7.52 88**	⇑P	**Pn**	**08 12 41.0**	**+1.6**
SMF	**Signal de Mont**	**7.56 303**	*e*Pn	**Pn**	**08 12 40.0**	**+0.2**
SMF	**Signal de Mont**	**7.56 303**	*e*P	Pn	08 12 44.8	+5.0
SMF			*e*Sn	**Sn**	**08 14 01.5**	**-3.5**
	comp=N,5.7nm,0.5s					
PAGF	**Fort de Pagny**	**7.66 321**	*e*Sn	**Sn**	**08 14 03.9**	**-3.5**
	comp=N,9.1nm,0.6s					
SFTF	**Sexfontaines**	**7.75 316**	*e*Pn	**Pn**	**08 12 42.8**	**+0.3**
SFTF	**Sexfontaines**	**7.75 316**	*e*P	Pn	08 12 48.4	+5.9
	baz=131					
LOR	**Lormes**	**7.85 307**	*e*Pn	**Pn**	**08 12 44.0**	**+0.2**
LOR	**Lormes**	**7.85 307**	*e*P	Pn	08 12 49.5	+5.7
LOR			*e*Sn	**Sn**	**08 14 08.5**	**-3.6**
	comp=N,3.6nm,0.5s					
MTLF	**Montolieu**	**7.93 277**	*e*Pn	**Pn**	**08 12 44.8**	**-0.1**
MTLF	**Montolieu**	**7.93 277**	*e*P	Pn	08 12 49.9	+5.0
MEZF	**Maizieres J'vi**	**7.94 318**	*e*Pn	**Pn**	**08 12 45.6**	**+0.6**
MEZF	**Maizieres J'vi**	**7.94 318**	*e*P	Pn	08 12 50.6	+5.6
SSF	**Saint Saulge**	**7.96 305**	*e*Pn	**Pn**	**08 12 45.9**	**+0.7**
SSF	**Saint Saulge**	**7.96 305**	*e*P	Pn	08 12 50.7	+5.5
SSF			*e*Sn	**Sn**	**08 14 11.4**	**-3.3**
	comp=N,1.3nm,0.3s					
SAVF	**Savonnieres en**	**7.99 319**	*e*Pn	**Pn**	**08 12 46.3**	**+0.7**
SAVF	**Savonnieres en**	**7.99 319**	*e*P	Pn	08 12 51.1	+5.5
CAF	**Calviac**	**8.19 288**	*e*Pn	**Pn**	**08 12 48.4**	**0.0**
CAF	**Calviac**	**8.19 288**	*e*P	**Pn**	**08 12 52.1**	**+3.7**
TCF	**Toulx Ste Croi**	**8.45 298**	*e*Sn	**Sn**	**08 14 22.2**	**-4.7**
	comp=N,1.3nm,0.3s					
CLL	**Collm**	**8.46 360**	*e*Pn	**Pn**	**08 12 56.0**	**+3.9**
CLL			*e*Sn	**Sn**	**08 14 25.0**	**-2.1**
CLL			*ex*	x	08 14 50.0	
CLL			*ex*	x	08 15 09.0	
CLL			*e*Sg		08 15 19.0	
	comp=Z,6.0nm,0.8s					
CLL			*ex*	x	08 15 37.0	
ARR	**Arges**	**8.72 69**	⇓P	**Pn**	**08 12 59.7**	**+3.9**
VOIR		**9.02 69**	⇑P	Pn	08 13 04.8	+4.8
FINES	**FINESS Array B**	**20.20 18**	P	Pn	08 15 26.6	+0.6
	comp=Z,3.2nm,0.8s,baz=219,slow=11,SNR=3.5					
	comp=Z,3.2nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.18 202**	P	**P**	**08 17 11.3**	**+2.7**
	comp=Z,0.2nm,0.5s,baz=29,slow=10.0,SNR=1.7					
	comp=Z,0.2nm,0.5s					

*IDC **30** 08:12:30.3±2.7, 37°.88N×142°.60E, h0km, mb3.6/2, mbtmp3.5/3, ML2.3/1, Error ellipse: s-maj=51.1km s-min=37.7km az=41.0*
*JMA **30** 08:12:37.2±0.1, 37°.8N±0°.4×142°.0E±0°.8, h38km±1km, MV3.3/39, SE OFF MIYAGI PREF*
ISC 30 08:12:37.2±2.7, 37°.83N±0°.06×142°.0E±0°.1, h25km±14km, n24, σ0°90/28, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.63**	**320**	⇓*i*P	**Pb**	**08 12 50.0**	**+0.4**
JIKH				⇓S	**Sn**	**08 12 58.9**	**-1.0**
JIO	**Ouri**	**0.80**	**321**	⇓*i*P	**Pb**	**08 12 52.6**	**+0.1**
JIO				⇓S	**Sb**	**08 13 03.1**	**+0.2**
JMST	**Minamisoumatoc**	**0.88**	**263**	⇓*i*P	**Pb**	**08 12 53.2**	**-0.6**
JMST				⇓S	**Sb**	**08 13 04.5**	**-0.6**
JMM	**Marumori**	**0.94**	**272**	⇓*i*P	**Pn**	**08 12 54.4**	**-0.5**
JMM				⇓S	**Sb**	**08 13 06.5**	**-0.5**
JFK	**Kawauchi**	**1.00**	**243**	P	**Pn**	**08 12 54.6**	**-1.1**
JFK				S	**Sn**	**08 13 07.2**	**-1.8**
JKMT	**Kesennumamotoy**	**1.06**	**338**	⇓*i*P	**Pn**	**08 12 56.1**	**-0.4**
JKMT				⇓S	**Sn**	**08 13 09.1**	**-1.4**
JOU	**Okura**	**1.17**	**298**	*i* P	**Pn**	**08 12 58.3**	**+0.2**
JOU				S	**Sb**	**08 13 13.4**	**-0.2**
JMK	**Ichinoseki**	**1.27**	**332**	*i* P	**Pn**	**08 12 59.5**	**0.0**
JMK				*e*S	**Sn**	**08 13 15.5**	**-0.1**
JOTO	**OTAMA OYAMA**	**1.34**	**259**	P	**Pn**	**08 13 00.9**	**+0.5**
JOTO				S	**Sn**	**08 13 17.6**	**+0.2**
JYS	**Shiratake**	**1.56**	**285**	P	**Pn**	**08 13 04.3**	**+0.8**
JYS				*e*S	**Sb**	**08 13 24.6**	**-0.3**
JYK	**Kaneyama**	**1.68**	**311**	P	**Pn**	**08 13 05.6**	**+0.6**
JOM	**Ohasama**	**1.73**	**342**	P	**Pn**	**08 13 06.1**	**+0.3**
JFY	**Yanaizu**	**1.86**	**258**	*e*S	**Sn**	**08 13 30.9**	**+0.7**
JRG	**Rokugo**	**1.89**	**326**	P	**Pn**	**08 13 08.8**	**+0.9**
JYA	**Atsumi**	**1.94**	**294**	P	**Pn**	**08 13 09.7**	**+1.0**
MJAR	**Matsushiro Arr**	**3.28**	**248**	Pn	**Pn**	**08 13 29.6**	**+2.6**
	0.2nm,0.3s,baz=79,slow=17,SNR=14						
MJAR				Sn	**Sb**	**08 14 14.4**	**+0.2**
	0.1nm,0.3s,baz=92,slow=13,SNR=5.1						
	1.7nm,0.4s						
SONM	**Songino Array**	**27.73**	**303**	P	**P**	**08 18 23.8**	**+0.1**
	0.3nm,0.3s,baz=90,slow=7.3,SNR=2.1						
	0.3nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.18**	**123**	T	T	08 47 55.6	
	baz=315,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**28.19**	**123**	T	T	08 47 51.0	
	baz=315,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**28.20**	**123**	T	T	08 47 57.0	
	baz=315,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	08 48 48.4	
	baz=317,slow=75,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	08 48 56.5	
	baz=317,slow=75,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**28.94**	**125**	T	T	08 48 50.4	
	baz=317,slow=75,SNR=8.3						
WRA	**Warramunga Arr**	**57.91**	**188**	P	P	08 22 24.9	-2.4
	0.7nm,1.0s,baz=5.4,slow=7.3,SNR=6.6						
	0.7nm,1.0s						

*LDG **30** 08:13:04.3±0.1, 42°.90N×13°.23E, h10km, MI3.3/21, Error ellipse: s-maj=2.7km s-min=2.1km az=62.0*
*ROM **30** 08:13:04.7±0.0, 42°.893N±0°.002×13°.154E±0°.004, h8km, ML3.5/39, Error ellipse: s-maj=0.3km s-min=0.1km az=75.0*
*IDC **30** 08:13:06.0±1.6, 43°.02N×13°.37E, h0km, mb3.6/2, mbtmp3.7/5, ML3.2/3, Error ellipse: s-maj=41.5km s-min=17.7km az=92.0*
*PRU **30** 08:13:08.6±0.0, 43°.09N×13°.35E, h0km*
ISC 30 08:13:04.2±0.7, 42°.90N±0°.01×13°.17E±0°.02, h13km±4km, n154, σ2°29/204, 4C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.02**	**40**	⇑P	**Pg**	**08 13 06.2**	**-0.5**
MC2				S	**Sg**	**08 13 07.2**	**-1.4**
T1245	**Castelsantange**	**0.04**	**161**	P	**Pg**	**08 13 06.4**	**-0.4**
T1245				S	**Sg**	**08 13 08.0**	**-0.6**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.11**	**307**	P	**Pb**	**08 13 08.0**	**-0.3**
FEMA				S	**Sb**	**08 13 09.7**	**-1.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.11**	**268**	P	**Pb**	**08 13 07.7**	**-0.5**
T1216				S	**Sb**	**08 13 09.7**	**-1.1**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1256	**Bolognola (MC)**	**0.12**	**20**	⇑P	**Pg**	**08 13 07.8**	**+0.3**
T1256				S	**Sg**	**08 13 10.1**	**+0.2**
FDMO	**Fiordimonte**	**0.15**	**337**	P	**Pb**	**08 13 08.6**	**-0.4**
FDMO				S	**Sb**	**08 13 11.2**	**-0.9**
AM05	**Amandola Campo**	**0.16**	**58**	P	**Pg**	**08 13 08.8**	**+0.8**
AM05				S	**Sg**	**08 13 11.7**	**+1.1**
AM05				AML	AML		
	comp=E,8545μm,0.7s						
AM05				AML	AML		
	comp=E,35550μm,0.4s						
AM05				AML	AML		
	comp=N,1200μm,0.4s						
AM05				AML	AML		
	comp=E,8525μm,0.7s						
AM05				AML	AML		
	comp=N,6475μm,1.4s						
T1244	**Arquata del Tr**	**0.17**	**146**	P	**Pg**	**08 13 09.0**	**+0.8**
T1244				S	**Sg**	**08 13 12.3**	**+1.4**
T1212	**Cascia, Frazio**	**0.17**	**213**	P	**Pb**	**08 13 08.9**	**-0.3**
T1212				S	**Sb**	**08 13 11.8**	**-0.8**
T1241	**Roccafluvione,**	**0.20**	**101**	P	**Pg**	**08 13 09.7**	**+1.1**
T1241				S	**Sg**	**08 13 13.4**	**+1.8**
T1241				AML	AML		
T1241				AML	AML		
	comp=E,17950μm,0.6s						
T1241				AML	AML		
	comp=N,22700μm,0.7s						
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
	comp=N,23200μm,0.7s						
T1241				AML	AML		
T1241				AML	AML		
	comp=E,17900μm,0.6s						
T1241				AML	AML		
	comp=N,23250μm,0.7s						
T1219	**Muccia, Frazio**	**0.20**	**324**	P	**Pb**	**08 13 09.3**	**-0.5**
T1219				S	**Sb**	**08 13 12.8**	**-0.7**
GUMA	**Gualdo di Mace**	**0.21**	**36**	⇑P	**Pg**	**08 13 09.8**	**+1.1**
GUMA				S	**Sg**	**08 13 14.0**	**+2.1**
GUMA				AML	AML		
	comp=E,80300μm,1.6s						
GUMA				AML	AML		
	comp=N,91050μm,0.3s						
GUMA				AML	AML		
	comp=E,88150μm,1.6s						
GUMA				AML	AML		
	comp=N,90800μm,0.3s						
GUMA				AML	AML		
	comp=N,90900μm,0.3s						
GUMA				AML	AML		
T1220	**Camerino, Fraz**	**0.22**	**345**	P	**Pb**	**08 13 09.7**	**-0.4**
T1220				S	**Sb**	**08 13 13.8**	**-0.3**
T1215	**Vallo di Nera,**	**0.24**	**247**	P	**Pg**	**08 13 10.0**	**+0.7**
T1215				S	**Sb**	**08 13 13.9**	**-0.7**
T1215				AML	AML		
	comp=N,18200μm,0.6s						
T1215				AML	AML		
	comp=N,18900μm,1.5s						
T1215				AML	AML		
	comp=N,18150μm,0.6s						
T1215				AML	AML		
	comp=E,17850μm,0.6s						
T1215				AML	AML		
	comp=E,16850μm,0.7s						
T1215				AML	AML		
	comp=N,18950μm,1.5s						
T1204	**Amatrice, Fraz**	**0.24**	**154**	P	**Pg**	**08 13 10.6**	**+1.2**
T1204				S	**Sg**	**08 13 15.3**	**+2.3**
T1204				AML	AML		
	comp=E,18100μm,1.0s						
T1204				AML	AML		
	comp=N,13135μm,1.2s						
T1204				AML	AML		
	comp=N,13175μm,1.2s						
T1204				AML	AML		
	comp=N,13125μm,1.2s						
T1204				AML	AML		
	comp=E,18050μm,1.0s						
T1201	**Domo (RI)**	**0.24**	**166**	P	**Pb**	**08 13 10.3**	**-0.2**
T1201				S	**Sg**	**08 13 15.3**	**+2.3**
T1217	**Poggiodomo (PG**	**0.25**	**224**	P	**Pg**	**08 13 10.3**	**+0.7**
T1217				S	**Sb**	**08 13 14.4**	**-0.6**
T1217				AML	AML		
	comp=E,14950μm,0.8s						
T1217				AML	AML		
	comp=N,24550μm,0.3s						
T1217				AML	AML		
	comp=E,14500μm,0.8s						
T1217				AML	AML		
	comp=N,24000μm,0.3s						
T1217				AML	AML		
	comp=E,14900μm,0.8s						
T1217				AML	AML		
	comp=E,14450μm,0.8s						
T1217				AML	AML		
	comp=N,24000μm,0.3s						
T1217				AML	AML		
	comp=N,24550μm,0.3s						
T1217				AML	AML		
	comp=E,12489μm,0.8s						
T1217				AML	AML		
	comp=E,12400μm,0.8s						
T1243	**Rocca Santa Ma**	**0.28**	**134**	P	**Pb**	**08 13 11.3**	**+0.1**
T1243				S	**Sg**	**08 13 16.2**	**+2.0**
MDAR	**Monte D'Aria**	**0.30**	**356**	P	**Pg**	**08 13 11.0**	**+0.6**
MDAR				S	**Sg**	**08 13 16.1**	**+1.5**
SEF1	**Sefro**	**0.30**	**327**	P	**Pg**	**08 13 11.1**	**+0.8**
SEF1				S	**Sg**	**08 13 16.1**	**+1.5**
SEF1				AML	AML		
	comp=E,56450μm,0.2s						
SEF1				AML	AML		
	comp=N,39550μm,0.3s						
SEF1				AML	AML		
	comp=N,39550μm,0.3s						
SEF1				AML	AML		
	comp=E,56450μm,0.3s						
LNSS	**Leonessa**	**0.31**	**198**	P	**Pg**	**08 13 11.7**	**+1.1**
LNSS				S	**Sg**	**08 13 16.4**	**+1.6**
LNSS				AML	AML		
	comp=N,16200μm,0.3s						
LNSS				AML	AML		
	comp=E,7010μm,0.3s						
PIO1	**Pioraco**	**0.32**	**334**	P	**Pg**	**08 13 11.5**	**+0.9**
PIO1				S	**Sg**	**08 13 16.7**	**+1.7**
MNTP	**Montappone**	**0.33**	**42**	P	**Pb**	**08 13 12.3**	**+0.4**
MNTP				AML	AML		
	comp=E,21150μm,0.7s						
MNTP				AML	AML		
	comp=N,20500μm,0.8s						
MNTP				AML	AML		
	comp=N,20450μm,0.8s						
SSM1	**San Severino M**	**0.33**	**1**	P	**Pg**	**08 13 11.7**	**+0.7**
SSM1				S	**Sb**	**08 13 17.4**	**+0.2**
FIU1	**Fiuminata**	**0.34**	**329**	P	**Pg**	**08 13 12.0**	**+0.9**
FIU1				S	**Sg**	**08 13 17.6**	**+1.8**
FIU1				AML	AML		
	comp=E,8470μm,1.0s						
FIU1				AML	AML		
	comp=N,12150μm,1.1s						
FIU1				AML	AML		
	comp=E,8435μm,1.0s						
FIU1				AML	AML		
	comp=N,12100μm,1.1s						
GAG1	**Gagliole**	**0.35**	**348**	P	**Pg**	**08 13 12.3**	**+1.0**
GAG1				S	**Sb**	**08 13 18.1**	**+0.3**
OFFI	**Offida**	**0.38**	**84**	P	**Pn**	**08 13 13.9**	**-1.5**
OFFI				AML	AML		
	comp=E,10140μm,0.6s						
OFFI				AML	AML		
	comp=N,15600μm,0.5s						
RM33	**Pellescritta (**	**0.39**	**175**	P	**Pg**	**08 13 12.8**	**+0.9**
RM33				S	**Sb**	**08 13 19.1**	**+0.2**
RM33				AML	AML		
	comp=E,7695μm,1.3s						
RM33				AML	AML		
	comp=N,6585μm,0.2s						
RM33				AML	AML		
	comp=E,7785μm,1.3s						
RM33				AML	AML		
	comp=N,6445μm,0.2s						
RM33				AML	AML		
	comp=N,16600μm,0.1s						
RM33				AML	AML		
	comp=E,14300μm,0.3s						
RM33				AML	AML		
	comp=E,14000μm,0.3s						
RM33				AML	AML		
	comp=N,16300μm,0.5s						
RM33				AML	AML		
	comp=E,5538μm,1.7s						
RM33				AML	AML		
	comp=E,5403μm,1.7s						
RM33				AML	AML		
	comp=N,6087μm,1.0s						
RM33				AML	AML		
	comp=N,6131μm,1.7s						
T1246	**Crognaleto (TE**	**0.39**	**142**	P	**Pb**	**08 13 13.0**	**0.0**
T1246				S	**Sb**	**08 13 19.1**	**+0.1**
SNTG	**Esanatoglia**	**0.40**	**335**	P	**Pg**	**08 13 12.9**	**+0.7**
SNTG				S	**Sg**	**08 13 19.2**	**+1.6**
SNTG				AML	AML		
	comp=E,10500μm,0.2s						
SNTG				AML	AML		
	comp=N,12300μm,1.6s						
SNTG				AML	AML		
	comp=E,11150μm,0.2s						
SNTG				AML	AML		
	comp=N,11250μm,1.6s						
CAMP	**Campotosto**	**0.40**	**154**	P	**Pg**	**08 13 13.0**	**+0.8**
CAMP				S	**Sb**	**08 13 18.9**	**-0.3**
CAMP				AML	AML		
	comp=N,3315μm,1.5s						
CAMP				AML	AML		
	comp=N,2861μm,0.8s						
CAMP				AML	AML		
	comp=E,3940μm,1.5s						
ASSB	**Assisi San Ben**	**0.40**	**292**	P	**Pg**	**08 13 13.1**	**+0.8**
ASSB				S	**Sg**	**08 13 19.3**	**+1.6**
ASSB				AML	AML		
	comp=E,13350μm,1.4s						
ASSB				AML	AML		
	comp=N,16950μm,1.0s						
TERO	**Teramo**	**0.42**	**130**	P	**Pb**	**08 13 13.6**	**+0.1**
TERO				S	**Sb**	**08 13 20.1**	**+0.3**
TERO				AML	AML		
	comp=E,4405μm,0.8s						
TERO				AML	AML		
	comp=N,6160μm,0.5s						
TERO				AML	AML		
	comp=E,4620μm,0.8s						
TERO				AML	AML		
	comp=N,6320μm,0.5s						
TRE1	**Treia**	**0.43**	**14**	P	**Pb**	**08 13 14.6**	**+1.0**
TRE1				AML	AML		
	comp=E,19700μm,0.6s						
TRE1				AML	AML		
	comp=E,19700μm,0.6s						
TRE1				AML	AML		
	comp=N,23050μm,0.4s						
T1211	**Morro Reatino**	**0.43**	**213**	P	**Pg**	**08 13 13.8**	**+1.1**
T1211				S	**Sb**	**08 13 20.4**	**+0.4**
ARRO	**Arrone**	**0.43**	**224**	P	**Pg**	**08 13 13.6**	**+0.8**
ARRO				S	**Sg**	**08 13 20.3**	**+1.7**
ARRO				AML	AML		
	comp=E,6560μm,0.7s						
ARRO				AML	AML		
	comp=E,6565μm,0.7s						
ARRO				AML	AML		
	comp=N,4675μm,0.

FOSV Fossato di Vic 0.50 323 P **Pg** **08 13 14.8 +0.8**
FOSV S **Sb** **08 13 22.6 +0.6**
CESX Cesi 0.52 237 P **Pb** **08 13 14.8 -0.4**
CESX AML AML
comp=N,6895μm,0.3s
CESX AML AML
comp=E,8110μm,0.8s
CESX AML AML
comp=N,6230μm,2.0s
CADA Capodarco di F 0.53 55 P **Pn** **08 13 17.1 -0.3**
GIGS Gran Sasso 0.53 146 P **Pg** **08 13 15.2 +0.5**
CIMA Civitanova Mar 0.55 42 P **Pn** **08 13 17.0 -0.8**
TRTR Tortoreto Alta 0.55 99 P **Pn** **08 13 17.4 -0.3**
TRTR AML AML
comp=E,10790μm,0.8s
TRTR AML AML
comp=N,9305μm,0.5s
MMUR Monte Murano 0.56 347 P **Pb** **08 13 15.8 -0.1**
MMUR S **Sg** **08 13 25.2 +2.5**
PP3 Marolino 0.58 34 P **Pn** **08 13 17.1 -1.0**
PP3 AML AML
comp=E,12300μm,1.2s
PP3 AML AML
comp=N,11825μm,0.7s
PP3 AML AML
comp=E,11920μm,1.2s
PP3 AML AML
comp=N,11960μm,0.6s
PP3 AML AML
comp=E,12300μm,1.2s
PP3 AML AML
comp=E,11885μm,1.2s
PP3 AML AML
comp=N,11925μm,0.6s
PP3 AML AML
comp=N,11835μm,0.6s
MURB Monte Urbino 0.60 308 P **Pb** **08 13 16.6 +0.1**
MURB AML AML
comp=E,22350μm,0.3s
MURB AML AML
comp=N,15250μm,0.3s
MURB AML AML
comp=E,23500μm,0.3s
MURB AML AML
comp=N,13600μm,0.9s
MURB AML AML
comp=E,22300μm,0.3s
ARVD Arcevia 0.63 345 P **Pb** **08 13 16.9 0.0**
ARVD S **Sg** **08 13 26.8 +2.1**
ARVD AML AML
comp=N,4025μm,1.3s
ARVD AML AML
comp=E,6005μm,0.3s
FIAM Fiamignano 0.63 184 P **Pb** **08 13 17.0 0.0**
FIAM S **Sg** **08 13 26.5 +1.7**
ATSC Scheggia e Pas 0.64 326 P **Pb** **08 13 17.1 -0.1**
ATSC S **Sg** **08 13 27.2 +2.2**
ATFO Monte Foce - G 0.64 317 P **Pb** **08 13 17.5 +0.2**
ATFO AML AML
comp=E,4565μm,1.1s
ATFO AML AML
comp=N,4630μm,0.4s
ATTE AVT- Monte Tez 0.67 297 P **Pb** **08 13 18.1 +0.3**
ATTE AML AML
comp=N,2505μm,0.6s
ATTE AML AML
comp=E,2495μm,0.6s
ATLO AVT- Montelove 0.70 307 P **Pb** **08 13 18.3 +0.1**
FRON Frontone 0.70 333 P **Pb** **08 13 18.1 -0.2**
FRON AML AML
comp=E,5720μm,0.4s
FRON AML AML
comp=N,7830μm,0.4s
VCEL Villa Celiera 0.70 135 P **Pg** **08 13 18.8 +0.9**
TB01 Gubbio 0.72 312 P **Pb** **08 13 18.8 +0.1**
TB01 S **Sg** **08 13 30.0 +2.2**
AOI Ancona 0.73 26 P **Pg** **08 13 19.3 +1.0**
AOI AML AML
comp=N,2860μm,0.5s
AOI AML AML
comp=E,3030μm,1.5s
TB02 Pietralunga 0.73 311 P **Pb** **08 13 18.9 +0.1**
ATBU Serra di Buran 0.74 322 P **Pg** **08 13 19.5 +1.0**
ATVO AVT- Monte Val 0.74 311 P **Pb** **08 13 19.1 +0.1**
ATVO AML AML
comp=E,2925μm,1.4s
ATVO AML AML
comp=N,2730μm,0.5s
ATVA AVT- Monte Val 0.75 301 P **Pb** **08 13 19.3 +0.2**
MGAB Montegabbione 0.78 272 P **Pb** **08 13 20.2 +0.7**
MGAB AML AML
comp=E,4330μm,1.5s
MGAB AML AML
comp=N,10650μm,0.5s
MGAB AML AML
comp=E,5040μm,1.5s
MGAB AML AML
comp=N,10250μm,0.5s
ATPI Pietralunga - 0.79 315 P **Pb** **08 13 20.0 +0.2**
ATPI AML AML
comp=E,3220μm,0.7s
ATPI AML AML
comp=N,3135μm,0.6s
PIEI Pieia 0.79 324 P **Pb** **08 13 20.0 +0.2**
PIEI AML AML
comp=E,2490μm,0.5s
PIEI AML AML
comp=N,2175μm,1.4s
ATMI Monte Miggiano 0.79 304 P **Pb** **08 13 19.4 -0.4**
MPAG Monte Paganucc 0.79 338 P **Pb** **08 13 20.2 +0.3**
MPAG AML AML
comp=N,3555μm,0.6s
MPAG AML AML
comp=E,7465μm,0.3s
T0110 Collepietro 0.81 146 P **Pg** **08 13 20.3 +0.5**
SRES S.Oreste - Sor 0.82 217 P **Pg** **08 13 21.0 +1.0**
FSSB Fossombrone 0.85 340 ⇑P **Pb** **08 13 21.2 +0.4**
FSSB AML AML
comp=E,15750μm,0.4s
FSSB AML AML
comp=N,16400μm,0.4s
APEC Apecchio 0.86 321 P **Pg** **08 13 21.8 +1.0**
APEC AML AML
comp=N,828μm,0.6s
APEC AML AML
comp=E,714μm,0.7s
MTCE Montecelio 0.93 200 P **Pb** **08 13 22.4 +0.3**
SACS San Casciano d 0.93 268 P **Pn** **08 13 23.1 +0.1**
SACS AML AML
comp=E,3100μm,0.7s
SACS AML AML
comp=E,3105μm,0.7s
SACS AML AML
comp=N,2795μm,0.9s
PE3 Peglio 0.94 329 AML AML
comp=N,28μm,0.2s
PE3 AML AML
comp=E,24μm,0.4s
CERT Cerreto 0.95 188 P **Pb** **08 13 22.3 -0.3**
CAFI Castiglion Fio 0.98 297 P **Pb** **08 13 23.5 +0.5**
CAFI AML AML
comp=N,1585μm,1.6s
CAFI AML AML
comp=E,1810μm,1.6s
VVLD Villa Vallelon 1.08 162 P **Pb** **08 13 24.5 -0.2**
SF11 Podere del Sol 1.10 269 P **Pb** **08 13 25.7 +0.7**
MCIV Monte Civitell 1.10 264 P **Pn** **08 13 25.3 -0.1**
MCIV AML AML
comp=N,1157μm,0.7s
MCIV AML AML
comp=E,1200μm,0.4s
SF14 Selvena 1.15 264 P **Pb** **08 13 26.8 +0.8**
ARCI Arcidosso 1.25 269 P **Pb** **08 13 28.4 +0.8**
CSNT Castellina Chi 1.49 293 P **Pn** **08 13 31.3 +0.6**
MAON Monte Argentar 1.57 253 P **Pb** **08 13 33.2 +0.1**
MAON AML AML
comp=N,282μm,1.1s
MAON AML AML
comp=E,213μm,0.8s
LMD Lutirano 1.59 319 P **Pb** **08 13 33.1 -0.3**
CASP Castiglione de 1.70 267 P **Pn** **08 13 34.8 +1.3**
PGF Pioggiola 3.09 265 *e*Pn **Pn** **08 13 51.5 -1.3**
PGF Pioggiola 3.09 265 *e*P **Pn** **08 13 55.3 +2.5**
PGF *e*Sn **Sn** **08 14 25.2 -4.4**
comp=E,9.8nm,0.6s

MYKA Terra Mystica 3.75 5 *e*Pn **Pn** **08 14 04.3 +2.5**
comp=E,18nm,0.5s
ABTA Abfaltersbach 3.88 353 *e*Pn **Pn** **08 14 06.6 +3.0**
comp=E,80nm,0.8s
SOKA Soboth 4.01 19 *e*Pn **Pb** **08 14 10.1 -4.5**
comp=E,4.3nm,0.4s
SBF Sospel 4.29 285 *e*Pn **Pn** **08 14 08.9 -0.3**
SBF Sospel 4.29 285 *e*P **Pn** **08 14 12.4 +3.2**
SBF *e*Sn **Sn** **08 14 56.0 -3.1**
comp=E,14nm,0.6s
WTTA Wattenberg 4.50 347 *e*Pn Pn 08 14 15.7 +3.5
comp=E,8.7nm,0.5s
DAVOX Davos/Dischmat 4.54 330 Pn Pn 08 14 17.7 +5.0
comp=E,3.3nm,0.3s,baz=143,slow=5.1,SNR=4.1
DAVOX Sn **Sn** **08 15 10.1 +4.7**
comp=E,2.2nm,0.3s,baz=276,slow=23,SNR=1.8
comp=E,9.8nm,0.3s
SQTA Sankt Quirin 4.54 343 *e*Pn Pn 08 14 17.0 +4.3
comp=E,5.8nm,0.2s
WATA Walderalm 4.58 346 *e*Pn Pn 08 14 17.4 +4.1
comp=E,13nm,0.5s
BIOA Bad Ischl, Aus 4.81 4 *e*Pn Pn 08 14 19.7 +3.4
comp=E,24nm,0.3s
LMR La Mourre 4.90 277 *e*Pn **Pn** **08 14 16.8 -0.6**
LMR La Mourre 4.90 277 *e*P **Pn** **08 14 19.1 +1.7**
RETA Reutte 4.90 341 *e*Pn Pn 08 14 21.4 +3.9
comp=E,5.0nm,0.4s
DAVA Damuels 4.97 333 *e*Pn Pn 08 14 22.4 +3.8
comp=E,18nm,0.7s
MBDF Montbardon 4.98 294 *e*Pn **Pn** **08 14 18.0 -0.7**
MBDF Montbardon 4.98 294 *e*P **Pn** **08 14 22.2 +3.5**
MBDF *e*Sn **Sn** **08 15 12.3 -3.9**
comp=E,10nm,0.7s
MOA Molin 5.01 8 *i* Pn **Pn** **08 14 22.0 +2.9**
comp=E,8.9nm,0.6s
LPG La Plagne 5.30 302 *e*Pn **Pn** **08 14 22.6 -0.6**
LPG La Plagne 5.30 302 *e*P **Pn** **08 14 26.4 +3.2**
LPG *e*Sn **Sn** **08 15 19.8 -4.5**
comp=E,13nm,0.7s
LPL La Plagne 5.32 302 *e*Pn **Pn** **08 14 22.8 -0.7**
LPL La Plagne 5.32 302 *e*P **Pn** **08 14 26.9 +3.4**
LPL *e*Sn **Sn** **08 15 20.3 -4.4**
comp=E,9.0nm,0.5s
CONA Conrad Observa 5.38 20 *e*Pn **Pn** **08 14 25.8 +1.7**
comp=E,1.6nm,0.3s
SMRF Simiane la Rot 5.63 284 *e*Pn **Pn** **08 14 26.6 -1.0**
SMRF Simiane la Rot 5.63 284 *e*P **Pn** **08 14 31.0 +3.4**
SMRF *e*Sn **Sn** **08 15 28.4 -3.8**
comp=E,4.0nm,0.7s
ORIF Oris-en-Rattie 5.64 294 *e*Pn **Pn** **08 14 26.8 -1.0**
ORIF Oris-en-Rattie 5.64 294 *e*P **Pn** **08 14 31.3 +3.5**
GERES GERESS Array B 5.96 3 Pn **Pn** **08 14 35.1 +2.9**
comp=E,0.7nm,0.3s,baz=179,slow=12,SNR=4.3
GERES Sn **Sn** **08 15 38.2 -2.1**
comp=E,1.3nm,0.3s,baz=188,slow=20,SNR=3.1
comp=E,2.0nm,0.4s
CKRC Cesky Krumlov 5.98 7 *e*PN **Pn** **08 14 34.5 +2.2**
CKRC *e*SN **Sn** **08 15 39.1 -1.6**
KHC Kasperske Hory 6.24 2 *e*PN **Pn** **08 14 37.5 +1.5**
KHC *e*SN **Sn** **08 15 46.1 -1.1**
CABF La Chapelle 6.26 309 *e*Pn **Pn** **08 14 34.9 -1.4**
CABF La Chapelle 6.26 309 *e*P **Pn** **08 14 39.3 +3.0**
CABF *e*Sn **Sn** **08 15 43.0 -4.8**
comp=E,13nm,0.9s
VIVF Saint-Julien-l 6.45 291 *e*Pn **Pn** **08 14 38.1 -0.7**
VIVF Saint-Julien-l 6.45 291 *e*P **Pn** **08 14 42.5 +3.7**
VIVF *e*Sn **Sn** **08 15 47.0 -5.2**
comp=E,2.5nm,0.6s
HINF Hinteralfeld 6.63 320 *e*Pn **Pn** **08 14 39.8 -1.6**
HINF Hinteralfeld 6.63 320 *e*P **Pn** **08 14 44.1 +2.7**
HINF *e*Sn **Sn** **08 15 52.2 -4.6**
comp=E,19nm,0.5s
LASF Ste Croix 6.88 283 *e*Pn **Pn** **08 14 43.3 -1.4**
LASF Ste Croix 6.88 283 *e*P **Pn** **08 14 48.1 +3.4**
CDF Champ du Feu 6.89 325 *e*Pn **Pn** **08 14 43.9 -1.0**
CDF Champ du Feu 6.89 325 *e*P **Pn** **08 14 47.1 +2.2**
CDF *e*Sn **Sn** **08 15 58.2 -5.0**
comp=E,14nm,0.6s
HAU Haudompre 7.01 319 *e*Pn **Pn** **08 14 45.0 -1.5**
HAU Haudompre 7.01 319 *e*P **Pn** **08 14 48.9 +2.4**
HAU *e*Sn **Sn** **08 16 01.0 -5.0**
comp=E,42nm,0.6s
NKC Novy Kostel 7.36 356 *e*SN **Sn** **08 16 13.2 -1.4**
SMF Signal de Mont 7.62 303 *e*Pn **Pn** **08 14 52.4 -2.5**
SMF Signal de Mont 7.62 303 *e*P **Pn** **08 14 58.3 +3.4**
SMF *e*Sn **Sn** **08 16 14.9 -6.2**
comp=E,9.6nm,0.7s
SFTF Sexfontaines 7.79 316 *e*Pn **Pn** **08 14 56.1 -1.1**
SFTF Sexfontaines 7.79 316 *e*P **Pn** **08 15 00.4 +3.2**
SFTF *e*Sn **Sn** **08 16 19.1 -6.2**
comp=E,5.8nm,0.4s
LOR Lormes 7.91 307 *e*Pn **Pn** **08 14 57.7 -1.1**
LOR Lormes 7.91 307 *e*P Pn 08 15 03.0 +4.2
baz=123
LOR *e*Sn **Sn** **08 16 22.3 -5.8**
comp=E,5.7nm,0.4s
MEZF Maizieres J'vi 7.98 317 *e*Pn **Pn** **08 14 57.7 -2.1**
MEZF Maizieres J'vi 7.98 317 *e*P **Pn** **08 15 03.2 +3.4**
MEZF *e*Sn **Sn** **08 16 23.5 -6.3**
comp=E,5.5nm,0.5s
AVF Avril sur Loir 7.99 303 *e*Pn **Pn** **08 14 58.9 -1.0**
AVF Avril sur Loir 7.99 303 *e*P **Pn** **08 15 03.3 +3.4**
AVF *e*Sn **Sn** **08 16 24.1 -6.0**
comp=E,6.0nm,0.8s
SSF Saint Saulge 8.02 305 *e*Pn **Pn** **08 14 59.3 -1.0**
SSF Saint Saulge 8.02 305 *e*P Pn 08 15 04.5 +4.2
SSF *e*Sn **Sn** **08 16 24.7 -6.1**
comp=E,4.8nm,0.6s
SAVF Savonnieres en 8.02 318 *e*Pn **Pn** **08 14 59.3 -1.0**
SAVF Savonnieres en 8.02 318 *e*P Pn 08 15 04.2 +3.9
SAVF *e*Sn **Sn** **08 16 23.0 -7.8**
comp=E,4.2nm,0.4s
MTLF Montolieu 8.03 277 *e*Pn **Pn** **08 14 59.8 -0.6**
MTLF Montolieu 8.03 277 *e*P Pn 08 15 04.9 +4.5
MTLF *e*Sn **Sn** **08 16 24.7 -6.3**
CLL Collm 8.42 359 *ex* x 08 16 41.0
CLL *e*(Sg) Sb 08 17 08.0 -1.7
comp=Z,20nm,1.1s
TCF Toulx Ste Croi 8.53 297 *e*Pn **Pn** **08 15 06.3 -1.0**
TCF Toulx Ste Croi 8.53 297 *e*P **Pn** **08 15 11.3 +4.0**
TCF *e*Sn **Sn** **08 16 36.7 -6.6**
comp=Z,1.1nm,0.4s
EPF Esparros 9.41 275 *e*Pn **Pn** **08 15 18.2 -1.2**
EPF Esparros 9.41 275 *e*P **Pn** **08 15 23.3 +3.9**
FINES FINESS Array B 20.12 18 P Pn 08 17 39.9 +0.6
comp=Z,0.1nm,0.3s,baz=219,slow=12,SNR=2.7
comp=Z,4.2nm,0.9s
TORD Torodi Ar. Bea 31.26 202 P P 08 19 27.9 +4.3
comp=Z,0.4nm,0.5s,baz=26,slow=10,SNR=3.2
comp=Z,0.4nm,0.5s
SONM Songino Array 61.75 50 P **P** **08 23 25.0 +2.7**
comp=Z,1.0nm,1.0s,baz=286,slow=7.3,SNR=3.9
comp=Z,1.0nm,1.0s

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*IDC **30** 08:21:54.0±1.4, 42.°85N×13.°47E, h0^{km}, mb3.5/3, mbtmp3.5/6, ML3.3/3, Error ellipse: s-maj=41.0km s-min=18.3km az=100.0*
*ROM **30** 08:21:54.9±0.0, 42.°828N±0.°002×13.°113E±0.°004, h10^{km}, ML3.5/33, Error ellipse: s-maj=0.3km s-min=0.1km az=256.0*
*LDG **30** 08:21:54.5±0.1, 42.°80N×13.°16E, h10^{km}, Ml3.0/2, Error ellipse: s-maj=3.8km s-min=2.2km az=43.0*
ISC 30 08:21:55.0±0.7, 42.°83N±0.°01×13.°13E±0.°02, h15^{km}±4^{km}, n156, σ1^{s}.9^{s}50/168, 20C, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.05**	**55**	P	**Pg**	**08 21 57.6**	**-0.5**
T1245				S	**Sg**	**08 21 59.2**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1214	**Arquata del Tr**	**0.09**	**138**	P	**Pg**	**08 21 58.2**	**-0.2**
T1214				S	**Sg**	**08 22 00.2**	**-0.4**
T1212	**Cascia, Frazio**	**0.10**	**220**	P	**Pg**	**08 21 58.1**	**-0.3**
T1212				S	**Sg**	**08 22 00.2**	**-0.3**
MC2	**Monte Cornacci**	**0.10**	**28**	⇑P	**Pg**	**08 21 58.2**	**-0.3**
MC2				S	**Sg**	**08 22 00.1**	**-0.8**
T1213	**Norcia, Frazio**	**0.10**	**181**	P	**Pg**	**08 21 58.2**	**-0.2**
T1213				S	**Sg**	**08 22 00.3**	**-0.3**
T1216	**Preci, Frazion**	**0.10**	**309**	P	**Pg**	**08 21 57.7**	**-0.8**

T1216 S **Sg** **08 21 59.9 -0.8**
T1244 Arquata del Tr 0.14 119 ⇑P **Pg** **08 21 58.6 -0.3**
T1244 S **Sg** **08 22 02.0 +0.5**
FEMA Monte Fema 0.15 337 P **Pg** **08 21 58.3 -0.8**
FEMA S **Sg** **08 22 01.1 -0.6**
FEMA AML AML
comp=E,38450μm,0.5s
FEMA AML AML
comp=N,49700μm,0.5s
FEMA AML AML
comp=E,91300μm,1.6s
FEMA AML AML
FEMA AML AML
comp=E,38474μm,0.5s
FEMA AML AML
comp=N,49718μm,0.5s
T1218 Civita (PG) 0.15 184 P **Pg** **08 21 59.1 0.0**
T1218 S **Sg** **08 22 02.1 +0.3**
T1217 Poggiodomo (PG 0.18 232 P **Pg** **08 21 59.4 -0.1**
T1217 S **Sg** **08 22 03.0 +0.5**
T1217 AML AML
comp=N,23500μm,0.5s
T1217 AML AML
comp=E,18600μm,0.7s
T1217 AML AML
comp=N,23300μm,0.5s
T1217 AML AML
comp=E,18900μm,0.7s
T1217 AML AML
comp=N,23550μm,0.5s
T1217 AML AML
comp=E,18700μm,0.7s
T1217 AML AML
comp=N,23250μm,0.5s
T1217 AML AML
comp=E,43750μm,0.6s
T1217 AML AML
comp=N,51350μm,0.4s
T1217 AML AML
comp=E,40600μm,0.7s
T1217 AML AML
comp=N,53650μm,0.4s
T1217 AML AML
comp=E,18608μm,0.7s
T1217 AML AML
comp=E,18926μm,0.7s
T1217 AML AML
comp=N,20431μm,1.2s
T1217 AML AML
comp=N,23529μm,0.5s
T1201 Domo (RI) 0.19 152 P **Pg** **08 22 00.1 +0.5**
T1201 S **Sg** **08 22 04.0 +1.3**
T1215 Vallo di Nera, 0.19 263 P **Pg** **08 21 59.3 -0.3**
T1215 S **Sg** **08 22 02.4 -0.3**
T1215 AML AML
comp=E,8890μm,1.2s
T1215 AML AML
comp=N,10490μm,0.7s
T1215 AML AML
comp=E,8885μm,1.2s
T1215 AML AML
comp=N,10465μm,0.7s
T1215 AML AML
comp=E,27950μm,1.5s
T1215 AML AML
comp=N,24050μm,0.9s
T1215 AML AML
comp=E,8297μm,0.4s
T1215 AML AML
comp=N,9892μm,1.0s
T1256 Bolognola (MC) 0.20 22 P **Pg** **08 21 59.6 -0.2**
T1256 S **Sg** **08 22 02.9 0.0**
T1204 Amatrice, Fraz 0.20 137 P **Pg** **08 22 00.1 +0.2**
T1204 S **Sg** **08 22 03.5 +0.4**
T1204 AML AML
comp=E,43050μm,0.2s
T1204 AML AML
comp=N,23700μm,1.0s
T1204 AML AML
T1204 AML AML
comp=N,97550μm,0.5s
T1204 AML AML
comp=N,24080μm,4.1s
T1204 AML AML
comp=E,43087μm,0.2s
FDMO Fiordimonte 0.21 352 P **Pg** **08 21 59.5 -0.4**
FDMO S **Sg** **08 22 03.1 -0.2**
AM05 Amandola Campo 0.22 47 ⇑P **Pg** **08 22 00.1 0.0**
AM05 S **Sg** **08 22 03.7 +0.1**
AM05 AML AML
comp=E,6570μm,1.0s
AM05 AML AML
comp=N,7640μm,0.3s
AM05 AML AML
comp=E,31500μm,0.8s
AM05 AML AML
comp=E,6790μm,0.7s
AM05 AML AML
comp=N,1500μm,1.6s
AM05 AML AML
comp=E,6739μm,2.3s
AM05 AML AML
comp=N,7635μm,0.3s
AM05 AML AML
comp=E,31550μm,0.8s
T1241 Roccafluvione, 0.23 82 P **Pg** **08 22 00.7 +0.6**
T1241 S **Sg** **08 22 04.6 +1.1**
LNSS Leonessa 0.23 196 ⇑P **Pg** **08 22 00.3 +0.1**
LNSS S **Sg** **08 22 04.3 +0.5**
T1219 Muccia, Frazio 0.25 339 P **Pg** **08 22 00.2 -0.2**
T1219 S **Sg** **08 22 04.4 +0.2**
T1243 Rocca Santa Ma 0.27 118 ⇑P **Pb** **08 22 00.9 -0.7**
T1243 S **Sb** **08 22 05.3 -0.7**
GUMA Gualdo di Mace 0.28 33 P **Pb** **08 22 00.8 -1.0**
GUMA S **Sb** **08 22 05.9 -0.5**
GUMA AML AML
comp=E,49500μm,0.4s
GUMA AML AML
comp=N,48400μm,0.5s
GUMA AML AML
comp=E,53300μm,0.4s
GUMA AML AML
comp=N,42550μm,0.5s
GUMA AML AML
comp=E,67550μm,0.6s
GUMA AML AML
comp=N,87200μm,0.4s
GUMA AML AML
comp=E,86150μm,0.4s
GUMA AML AML
comp=N,76050μm,0.5s
GUMA AML AML
comp=E,49499μm,0.4s
GUMA AML AML
comp=N,34420μm,4.2s
GUMA AML AML
comp=E,53283μm,0.4s
GUMA AML AML
comp=N,48403μm,0.5s
RM33 Pellescritta (0.32 169 ⇑P **Pb** **08 22 01.9 -0.7**
RM33 S **Sb** **08 22 07.5 0.0**
RM33 AML AML
comp=E,12550μm,1.1s
RM33 AML AML
comp=N,12500μm,0.2s
RM33 AML AML
comp=E,12400μm,1.1s
RM33 AML AML
comp=N,12450μm,0.2s
RM33 AML AML
comp=E,78650μm,1.1s
RM33 AML AML
comp=N,77250μm,0.3s
RM33 AML AML
comp=E,76850μm,0.6s
RM33 AML AML
comp=N,77700μm,0.3s
RM33 AML AML
comp=E,76800μm,0.6s
RM33 AML AML
comp=N,77200μm,0.3s
SEF1 Sefro 0.35 338 P **Pb** **08 22 02.5 -0.5**
SEF1 AML AML
comp=E,9900μm,0.3s
SEF1 AML AML
comp=N,10245μm,0.3s

SEF1				AML	AML		
	comp=E,35400µm,0.3s						
SEF1				AML	AML		
	comp=N,48850µm,0.3s						
T1211	**Morro Reatino**	**0.35**	**215**	⇑P	**Pg**	**08 22 02.3**	**0.0**
T1211				S	**Sb**	**08 22 07.9**	**-0.5**
T1211				AML	AML		
	comp=E,12260µm,0.2s						
T1211				AML	AML		
	comp=N,35100µm,1.3s						
T1211				AML	AML		
	comp=E,29700µm,1.3s						
T1211				AML	AML		
	comp=N,57300µm,1.0s						
T1211				AML	AML		
	comp=E,12283µm,0.1s						
T1211				AML	AML		
	comp=N,35047µm,1.3s						
CAMP	**Campotosto**	**0.36**	**144**	⇑P	**Pb**	**08 22 02.4**	**-0.7**
CAMP				S	**Sb**	**08 22 08.2**	**-0.4**
CAMP				AML	AML		
	comp=E,7720µm,1.1s						
CAMP				AML	AML		
	comp=N,5645µm,1.2s						
CAMP				AML	AML		
	comp=E,38400µm,0.8s						
CAMP				AML	AML		
	comp=N,4982µm,0.3s						
CAMP				AML	AML		
	comp=E,7720µm,1.1s						
CAMP				AML	AML		
	comp=N,24800µm,0.7s						
T1246	**Crognaleto (TE**	**0.36**	**132**	⇑P	**Pb**	**08 22 02.5**	**-0.7**
T1246				S	**Sb**	**08 22 08.2**	**-0.5**
ARRO	**Arrone**	**0.36**	**228**	⇑P	**Pg**	**08 22 02.4**	**0.0**
ARRO				AML	AML		
	comp=E,4980µm,1.4s						
ARRO				AML	AML		
	comp=N,5355µm,0.2s						
ARRO				AML	AML		
	comp=N,5360µm,0.2s						
ARRO				AML	AML		
	comp=N,26900µm,0.8s						
ARRO				AML	AML		
	comp=E,23500µm,1.2s						
MDAR	**Monte D'Aria**	**0.37**	**2**	P	**Pg**	**08 22 02.0**	**-0.6**
FIU1	**Fiuminata**	**0.39**	**338**	P	**Pb**	**08 22 03.4**	**-0.3**
MNTP	**Montappone**	**0.40**	**39**	P	**Pb**	**08 22 03.6**	**-0.2**
MNTP				S	**Sb**	**08 22 10.8**	**+1.1**
MNTP				AML	AML		
	comp=E,16800µm,0.4s						
MNTP				AML	AML		
	comp=N,17100µm,0.4s						
MNTP				AML	AML		
	comp=E,23450µm,0.9s						
MNTP				AML	AML		
	comp=N,17900µm,0.5s						
MNTP				AML	AML		
	comp=E,17506µm,4.0s						
MNTP				AML	AML		
	comp=N,17279µm,3.2s						
T1247	**Pizzolo (AQ)**	**0.40**	**162**	⇑P	**Pb**	**08 22 03.3**	**-0.6**
T1247				S	**Sb**	**08 22 09.9**	**+0.1**
T1247				AML	AML		
	comp=E,12950µm,1.0s						
T1247				AML	AML		
	comp=N,11250µm,1.4s						
T1247				AML	AML		
T1247				AML	AML		
T1247				AML	AML		
	comp=E,64600µm,0.5s						
SSM1	**San Severino M**	**0.41**	**5**	P	**Pg**	**08 22 02.9**	**-0.3**
SSM1				S	**Sb**	**08 22 09.2**	**-0.6**
TERO	**Teramo**	**0.41**	**120**	⇑P	**Pb**	**08 22 03.1**	**-0.7**
TERO				S	**Sb**	**08 22 09.4**	**-0.5**
TERO				AML	AML		
	comp=E,14450µm,0.4s						
TERO				AML	AML		
	comp=N,13700µm,1.5s						
TERO				AML	AML		
	comp=E,15750µm,0.4s						
TERO				AML	AML		
	comp=N,15200µm,1.5s						
TERO				AML	AML		
	comp=E,25650µm,0.6s						
TERO				AML	AML		
	comp=N,35700µm,0.6s						
TERO				AML	AML		
	comp=E,26600µm,0.7s						
TERO				AML	AML		
	comp=N,36550µm,0.6s						
TERO				AML	AML		
	comp=E,11429µm,1.0s						
TERO				AML	AML		
	comp=N,15189µm,1.5s						
TERO				AML	AML		
	comp=E,16882µm,1.9s						
TERO				AML	AML		
	comp=N,11102µm,0.5s						
ASSB	**Assisi San Ben**	**0.41**	**302**	P	**Pg**	**08 22 02.7**	**-0.5**
GAG1	**Gagliole**	**0.41**	**354**	AML	AML		
	comp=E,13800µm,0.5s						
GAG1				AML	AML		
	comp=N,12250µm,0.4s						
GAG1				AML	AML		
	comp=E,43200µm,0.6s						
GAG1				AML	AML		
	comp=N,45250µm,0.4s						
GAG1				AML	AML		
	comp=E,43150µm,0.6s						
OFFI	**Offida**	**0.42**	**75**	⇑P	**Pb**	**08 22 04.4**	**+0.2**
OFFI				AML	AML		
	comp=E,12100µm,0.6s						
OFFI				AML	AML		
	comp=N,11250µm,0.4s						
OFFI				AML	AML		
	comp=E,26700µm,0.4s						
OFFI				AML	AML		
	comp=N,33550µm,0.4s						
OFFI				AML	AML		
	comp=N,12934µm,21.2s						
OFFI				AML	AML		
	comp=E,11825µm,0.4s						
SNTG	**Esanatoglia**	**0.45**	**342**	P	**Pg**	**08 22 03.9**	**-0.1**
SNTG				S	**Sb**	**08 22 11.0**	**-0.2**
SNTG				AML	AML		
	comp=E,2070µm,0.5s						
SNTG				AML	AML		
	comp=N,2580µm,0.5s						
SNTG				AML	AML		
	comp=E,1965µm,0.5s						
SNTG				AML	AML		
	comp=N,2575µm,0.5s						
SNTG				AML	AML		
	comp=E,9025µm,0.3s						
SNTG				AML	AML		
	comp=N,8660µm,0.3s						
SNTG				AML	AML		
	comp=E,9115µm,0.4s						
SNTG				AML	AML		
	comp=N,9205µm,0.3s						
SNTG				AML	AML		
	comp=N,9200µm,0.3s						
SNTG				AML	AML		
	comp=E,9000µm,0.3s						
CESX	**Cesi**	**0.46**	**242**	⇑P	**Pg**	**08 22 03.7**	**-0.4**
CESX				S	**Sg**	**08 22 11.1**	**+0.7**
CESX				AML	AML		
	comp=E,5970µm,1.2s						
CESX				AML	AML		
	comp=N,5150µm,0.3s						
CESX				AML	AML		
	comp=E,15150µm,0.5s						
CESX				AML	AML		
	comp=N,14800µm,0.5s						
CESX				AML	AML		
	comp=N,5154µm,0.3s						
CESX				AML	AML		
	comp=E,6524µm,3.7s						
GIGS	**Gran Sasso**	**0.50**	**139**	⇑P	**Pg**	**08 22 04.5**	**-0.4**
GIGS				S	**Sb**	**08 22 11.9**	**-0.6**
GIGS				AML	AML		
	comp=E,1870µm,0.4s						
GIGS				AML	AML		
	comp=N,2030µm,1.0s						
GIGS				AML	AML		
	comp=E,4865µm,0.4s						
GIGS				AML	AML		
	comp=N,6400µm,0.5s						
TRE1	**Treia**	**0.50**	**16**	P	**Pb**	**08 22 05.5**	**0.0**
TRE1				S	**Sb**	**08 22 13.3**	**+0.6**
ATCC	**AVT- Casa Cast**	**0.51**	**315**	P	**Pg**	**08 22 04.4**	**-0.7**
ATCC				AML	AML		
	comp=N,22900µm,0.3s						
ATCC				AML	AML		
	comp=E,18250µm,0.9s						
ATCC				AML	AML		
	comp=N,22850µm,0.3s						
AQU	**L'Aquila**	**0.51**	**157**	⇑P	**Pb**	**08 22 05.0**	**-0.7**
AQU				S	**Sb**	**08 22 13.3**	**+0.3**
AQU				AML	AML		
	comp=E,3160µm,1.3s						
AQU				AML	AML		
	comp=N,4645µm,0.6s						
AQU				AML	AML		
	comp=E,3115µm,1.3s						
AQU				AML	AML		
	comp=N,4625µm,0.6s						
AQU				AML	AML		
	comp=E,17700µm,1.4s						
AQU				AML	AML		
	comp=N,19600µm,0.5s						
AQU				AML	AML		
	comp=N,18800µm,0.5s						
AQU				AML	AML		
	comp=E,17800µm,1.4s						
AQU				AML	AML		
	comp=E,17650µm,1.4s						
AQU				AML	AML		
	comp=N,4643µm,0.6s						
AQU				AML	AML		
	comp=E,2982µm,0.6s						
CING	**Cingoli**	**0.55**	**5**	P	**Pg**	**08 22 05.5**	**-0.5**
FIAM	**Fiamignano**	**0.56**	**181**	⇑P	**Pg**	**08 22 05.7**	**-0.3**
FIAM				S	**Sb**	**08 22 14.4**	**+0.1**
FIAM				AML	AML		
	comp=E,6240µm,1.0s						
FIAM				AML	AML		
	comp=N,4500µm,0.4s						
TRTR	**Tortoreto Alta**	**0.58**	**91**	⇑P	**Pn**	**08 22 07.5**	**-1.2**
TRTR				AML	AML		
	comp=E,22400µm,0.5s						
TRTR				AML	AML		
	comp=N,14400µm,0.6s						
TRTR				AML	AML		
	comp=N,19350µm,0.4s						
TRTR				AML	AML		
	comp=E,27250µm,0.4s						
CADA	**Capodarco di F**	**0.59**	**51**	P	**Pn**	**08 22 07.9**	**-0.9**
MURB	**Monte Urbino**	**0.62**	**315**	P	**Pb**	**08 22 07.3**	**-0.3**
MURB				AML	AML		
	comp=E,5990µm,1.0s						
MURB				AML	AML		
	comp=N,6330µm,0.3s						
MURB				AML	AML		
	comp=E,6455µm,0.4s						
MURB				AML	AML		
	comp=N,6500µm,0.3s						
MURB				AML	AML		
	comp=N,27600µm,0.3s						
MURB				AML	AML		
	comp=E,29050µm,0.2s						
MURB				AML	AML		
	comp=N,30400µm,0.3s						
MURB				AML	AML		
	comp=E,28500µm,0.3s						
MURB				AML	AML		
	comp=N,27650µm,0.3s						
CIMA	**Civitanova Mar**	**0.62**	**39**	P	**Pn**	**08 22 08.4**	**-0.8**
MMUR	**Monte Murano**	**0.62**	**351**	P	**Pb**	**08 22 07.5**	**-0.1**
FAGN	**Fagnano**	**0.65**	**149**	P	**Pb**	**08 22 07.5**	**-0.6**
FAGN				AML	AML		
	comp=E,9005µm,0.5s						
FAGN				AML	AML		
	comp=N,5770µm,0.7s						
FAGN				AML	AML		
	comp=N,17450µm,0.3s						
FAGN				AML	AML		
	comp=E,25250µm,1.0s						
PP3	**Marolino**	**0.66**	**32**	P	**Pb**	**08 22 08.4**	**+0.3**
PP3				AML	AML		
	comp=E,27800µm,0.5s						
PP3				AML	AML		
	comp=N,22100µm,0.4s						
PP3				AML	AML		
	comp=E,30550µm,0.4s						
PP3				AML	AML		
	comp=N,19150µm,0.3s						
PP3				AML	AML		
	comp=E,7309µm,1.9s						
PP3				AML	AML		
	comp=N,9433µm,3.3s						
PP3				AML	AML		
	comp=N,9571µm,3.3s						
PP3				AML	AML		
	comp=E,7548µm,1.8s						
ATFO	**Monte Foce - G**	**0.68**	**323**	P	**Pg**	**08 22 07.8**	**-0.5**
ATFO				AML	AML		
	comp=E,1985µm,0.3s						
ATFO				AML	AML		
	comp=N,1660µm,0.5s						
ATFO				AML	AML		
	comp=E,4010µm,1.4s						
ATFO				AML	AML		
	comp=N,5795µm,0.5s						
ATFO				AML	AML		
	comp=E,1986µm,0.3s						
ATTE	**AVT- Monte Tez**	**0.68**	**304**	P	**Pg**	**08 22 06.9**	**-1.4**
VCEL	**Villa Celiera**	**0.68**	**129**	P	**Pb**	**08 22 08.2**	**-0.4**
VCEL				AML	AML		
	comp=E,6195µm,0.4s						
VCEL				AML	AML		
	comp=N,6550µm,1.5s						
VCEL				AML	AML		
	comp=E,20450µm,0.9s						
VCEL				AML	AML		
	comp=N,20250µm,0.5s						
VCEL				AML	AML		
	comp=N,20300µm,0.5s						
ARVD	**Arcevia**	**0.69**	**349**	P	**Pg**	**08 22 08.0**	**-0.5**
ARVD				AML	AML		
	comp=E,1410µm,0.9s						
ARVD				AML	AML		
	comp=N,962µm,0.5s						
ARVD				AML	AML		
	comp=E,3850µm,0.7s						
ARVD				AML	AML		
	comp=N,3575µm,1.4s						
ARVD				AML	AML		
	comp=E,3845µm,0.7s						
ARVD				AML	AML		
	comp=E,1238µm,0.6s						
ARVD				AML	AML		
	comp=N,916µm,0.9s						
ATLO	**AVT- Montelove**	**0.72**	**313**	P	**Pg**	**08 22 08.9**	**-0.2**
SRES	**S.Oreste - Sor**	**0.74**	**218**	⇑P	**Pg**	**08 22 08.9**	**-0.6**
SRES				AML	AML		
	comp=E,3110µm,0.7s						
SRES				AML	AML		
	comp=N,3640µm,0.5s						
FRON	**Frontone**	**0.75**	**337**	P	**Pb**	**08 22 09.5**	**-0.3**
MGAB	**Montegabbione**	**0.75**	**277**	P	**Pg**	**08 22 09.2**	**-0.5**
MGAB				AML	AML		
	comp=E,10715µm,0.5s						
MGAB				AML	AML		
	comp=N,9635µm,0.3s						
MGAB				AML	AML		
	comp=E,12985µm,0.4s						
MGAB				AML	AML		
	comp=N,8230µm,1.2s						
MGAB				AML	AML		
	comp=E,3777µm,3.0s						
MGAB				AML	AML		
	comp=E,3530µm,3.0s						
MGAB				AML	AML		
	comp=N,3991µm,10.2s						
MGAB				AML	AML		
	comp=N,3738µm,11.6s						
ATVA	**AVT- Monte Val**	**0.77**	**307**	P	**Pb**	**08 22 10.0**	**0.0**
ATVO	**AVT- Monte Val**	**0.77**	**317**	P	**Pg**	**08 22 09.5**	**-0.5**
T0110	**Collepietro**	**0.77**	**141**	P	**Pg**	**08 22 09.4**	**-0.5**
T0110				AML	AML		
	comp=E,6080µm,0.4s						
T0110				AML	AML		
	comp=N,8900µm,0.4s						
T0110				AML	AML		
	comp=E,23100µm,0.4s						
T0110				AML	AML		
	comp=N,15100µm,0.6s						
T0110				AML	AML		
	comp=E,6082µm,0.4s						
T0110				AML	AML		
	comp=N,8902µm,0.4s						
ATBU	**Serra di Buran**	**0.78**	**327**	P	**Pb**	**08 22 10.2**	**0.0**
TB03	**Pietralunga**	**0.78**	**318**	P	**Pg**	**08 22 09.4**	**-0.8**
AOI	**Ancona**	**0.80**	**25**	P	**Pb**	**08 22 10.3**	**-0.4**
ATMI	**Monte Miggiano**	**0.81**	**309**	P	**Pg**	**08 22 09.8**	**-0.9**
ATMI				AML	AML		
	comp=E,7105µm,0.7s						
ATMI				AML	AML		
	comp=N,6135µm,0.4s						
ATPC	**Poggio Castell**	**0.82**	**323**	P	**Pg**	**08 22 10.3**	**-0.7**
ATPI	**Pietralunga -**	**0.82**	**320**	P	**Pg**	**08 22 10.0**	**-1.0**
ATPI				AML	AML		
	comp=E,2265µm,1.2s						
ATPI				AML	AML		
	comp=N,3155µm,0.4s						
PTQR	**Pietraquaria**	**0.83**	**166**	P	**Pg**	**08 22 10.4**	**-0.7**
PIEI	**Pieia**	**0.83**	**329**	P	**Pg**	**08 22 10.9**	**-0.3**
PIEI				AML	AML		
	comp=E,978µm,0.9s						
PIEI				AML	AML		
	comp=N,612µm,1.1s						
PIEI				AML	AML		
	comp=N,2345µm,0.3s						
PIEI				AML	AML		
	comp=E,2520µm,0.2s						
MPAG	**Monte Paganucc**	**0.85**	**342**	AML	AML		
	comp=N,3430µm,0.3s						
MPAG				AML	AML		
	comp=E,5750µm,0.3s						
MTCE	**Montecelio**	**0.85**	**200**	P	**Pg**	**08 22 10.7**	**-0.8**
MTCE				AML	AML		
	comp=E,2045µm,0.6s						
MTCE				AML	AML		
	comp=N,1920µm,0.5s						
MTCE				AML	AML		
	comp=E,4485µm,0.3s						
MTCE				AML	AML		
	comp=N,2525µm,0.6s						
MTCE				AML	AML		
	comp=N,1919µm,0.5s						
MTCE				AML	AML		
	comp=E,2096µm,9.9s						
CERT	**Cerreto**	**0.88**	**187**	P	**Pg**	**08 22 11.3**	**-0.8**
CERT				AML	AML		
	comp=E,8160µm,0.4s						
CERT				AML	AML		
	comp=N,5485µm,0.4s						
CERT				AML	AML		
	comp=N,2590µm,1.7s						
CERT				AML	AML		
	comp=E,3970µm,0.4s						
SACS	**San Casciano d**	**0.90**	**272**	P	**Pg**	**08 22 11.7**	**-0.7**
SACS				AML	AML		
	comp=E,1770µm,0.6s						
SACS				AML	AML		
	comp=N,1695µm,0.6s						
SACS				AML	AML		
	comp=E,1820µm,0.6s						
SACS				AML	AML		
	comp=N,1645µm,0.7s						
SACS				AML	AML		
	comp=N,5235µm,1.1s						
SACS				AML	AML		
	comp=E,3020µm,0.7s						
APEC	**Apecchio**	**0.90**	**325**	AML	AML		
	comp=N,683µm,0.9s						
APEC				AML	AML		
	comp=E,422µm,0.8s						
FSSB	**Fossombrone**	**0.90**	**344**	P	**Pb**	**08 22 12.4**	**0.0**
PE3	**Peglio**	**0.98**	**332**	P	**Pg**	**08 22 13.6**	**-0.5**
RCAV	**Rocca di Cave**	**0.99**	**188**	AML	AML		
	comp=E,8090µm,1.5s						
RCAV				AML	AML		
	comp=N,4940µm,0.7s						
RCAV				AML	AML		
	comp=N,3416µm,0.8s						
RCAV				AML	AML		
	comp=E,4103µm,0.6s						
CAFI	**Castiglion Fio**	**0.99**	**301**	P	**Pg**	**08 22 13.2**	**-1.0**
LATE	**Laterza**	**1.00**	**258**	P	**Pg**	**08 22 13.7**	**-0.6**
VVLD	**Villa Vallelon**	**1.02**	**159**	P	**Pb**	**08 22 14.3**	**-0.1**
VVLD				AML	AML		
	comp=E,2000µm,0.6s						
VVLD				AML	AML		
	comp=N,1400µm,0.9s						
VVLD				AML	AML		
	comp=N,2135µm,0.5s						
VVLD				AML	AML		
	comp=N,1463µm,1.8s						
RMP	**Rome, Mte Porz**	**1.06**	**197**	P	**Pg**	**08 22 15.1**	**-0.5**
RMP				AML	AML		
	comp=E,3405µm,0.8s						
RMP				AML	AML		
	comp=N,6055µm,0.4s						
RMP				AML	AML		
	comp=N,4799µm,0.4s						
RMP				AML	AML		
	comp=E,3253µm,0.4s						
MCIV	**Monte Civitell**	**1.07**	**268**	AML	AML		
	comp=E,2430µm,0.3s						
MCIV				AML	AML		
	comp=N,1168µm,0.3s						
MCIV				AML	AML		
	comp=E,2430µm,0.4s						
CAFR	**Castel Frentan**	**1.08**	**123**	P	**Pn**	**08 22 16.3**	**+0.7**
LPEL	**Lama dei Pelig**	**1.10**	**135**	P	**Pg**	**08 22 15.2**	**-1.1**
LPEL				AML	AML		
	comp=E,5155µm,0.5s						
LPEL				AML	AML		
	comp=N,2735µm,0.8s						
LPEL				AML	AML		
	comp=E,2537µm,3.8s						
LPEL				AML	AML		
	comp=N,2135µm,5.3s						
RDP	**Rocca di Papa**	**1.11**	**196**	P	**Pb**	**08 22 15.6**	**-0.3**
SAMA	**S.Maria delle**	**1.12**	**201**	P	**Pb**	**08 22 15.7**	**-0.3**
TOLF	**Tolfa**	**1.13**	**228**	⇑P	**Pb**	**08 22 15.8**	**-0.4**
SF01	**Poggio Pratacc**	**1.15**	**270**	AML	AML		
	comp=E,1725µm,0.5s						
SF01				AML	AML		
	comp=N,1569µm,0.8s						
CRE	**Caprese Michel**	**1.17**	**313**	AML	AML		
	comp=E,868µm,0.5s						
CRE				AML	AML		
	comp=N,1067µm,0.3s						
POFI	**Posta Fibreno**	**1.19**	**158**	AML	AML		
	comp=E,1190µm,0.7s						
POFI				AML	AML		
	comp=N,1014µm,0.7s						
GIUL	**Giuliano Di Ro**	**1.27**	**176**	AML	AML		
	comp=E,1370µm,1.4s						
GIUL				AML	AML		
	comp=N,1760µm,0.9s						
GIUL				AML	AML		
	comp=E,705µm,8.2s						
GIUL				AML	AML		
	comp=N,1379µm,0.8s						
LATB	**Latina**	**1.34**	**185**	P	**Pn**	**08 22 19.0**	**-0.1**
LATB				AML	AML		
	comp=E,558µm,1.3s						
LATB				AML	AML		
	comp=N,460µm,0.7s						
LATB				AML	AML		
	comp=E,352µm,3.9s						
LATB				AML	AML		
	comp=N,309µm,2.6s						
CSNT	**Castellina Chi**	**1.49**	**296**	P	**Pn**	**08 22 22.0**	**+0.7**
CSNT				AML	AML		
	comp=E,470µm,1.6s						
CSNT				AML	AML		
	comp=N,372µm,0.6s						
TRIV	**Trivento**	**1.49**	**135**	AML	AML		
	comp=N,854µm,0.7s						
TRIV				AML	AML		
	comp=E,776µm,0.8s						
FROS	**Frosini**	**1.50**	**286**	P	**Pn**	**08 22 21.5**	**+0.2**
VAGA	**Valle Agricola**	**1.63**	**149**	AML	AML		
	comp=E,460µm,0.3s						
VAGA				AML	AML		

comp=N,775μm,0.4s
TRIF Trifonti 1.66 281 P **Pn 08 22 23.6 0.0**
TRIF AML AML
comp=E,817μm,0.6s
TRIF AML AML
comp=N,584μm,0.5s
TRIF AML AML
comp=E,828μm,0.9s
TRIF AML AML
comp=N,584μm,0.6s
MELA Melanico ??? S 1.86 126 AML AML
comp=N,1318μm,0.7s
MELA AML AML
comp=E,1370μm,0.7s
MELA AML AML
comp=E,1290μm,0.7s
MELA AML AML
comp=N,1455μm,0.7s
TREM Isole Tremiti 1.90 111 AML AML
comp=E,1280μm,0.7s
TREM AML AML
comp=N,1625μm,0.7s
SGRT San Giovanni R 2.22 118 AML AML
comp=N,546μm,0.5s
SGRT AML AML
comp=E,711μm,0.9s
BDI Bagni Di Lucca 2.22 305 AML AML
comp=E,402μm,0.5s
BDI AML AML
comp=E,156μm,0.5s
BDI AML AML
comp=N,244μm,0.5s
BDI AML AML
comp=N,93μm,1.1s
PGF Pioggiola 3.06 266 *e*P **Pn 08 22 44.3 +1.5**
PGF *e*Sn **Sn 08 23 16.4 -2.8**
comp=N,13nm,0.5s
PGF Pioggiola 3.06 266 AML AML
comp=N,36μm,0.6s
PGF AML AML
comp=N,36μm,0.6s
PGF AML AML
comp=E,47μm,1.5s
SABO M.te Sabotino 3.17 6 AML AML
comp=E,1505μm,1.5s
SABO AML AML
comp=N,474μm,0.6s
SABO AML AML
comp=E,340μm,1.5s
SABO AML AML
comp=N,1710μm,0.6s
MPRI Monte Prat 3.42 358 AML AML
comp=N,545μm,0.5s
MPRI AML AML
comp=E,331μm,0.7s
CIMO Cimolais 3.52 352 AML AML
comp=E,117μm,1.6s
CIMO AML AML
comp=E,116μm,1.6s
CIMO AML AML
comp=N,81μm,1.2s
CIMO AML AML
comp=N,80μm,1.2s
ZONE Zone 3.65 325 AML AML
comp=E,188μm,0.3s
ZONE AML AML
comp=N,300μm,0.2s
ACOM Acomizza, Ital 3.73 4 AML AML
comp=N,218μm,0.9s
ACOM AML AML
comp=E,368μm,0.3s
ACOM AML AML
comp=N,224μm,0.4s
ACOM AML AML
comp=E,376μm,0.3s
ZOU Zoufplan 3.73 358 AML AML
comp=N,176μm,1.0s
ZOU AML AML
comp=E,142μm,0.9s
ZOU AML AML
comp=E,140μm,1.0s
ZOU AML AML
comp=N,118μm,1.4s
OBKA Obir 3.82 15 *e*Pn **Pn 08 22 54.2 +0.8**
comp=N,2.7nm,0.3s
MYKA Terra Mystica 3.82 5 *e*Pn **Pn 08 22 54.9 +1.6**
comp=N,3.5nm,0.3s
KOSI Kohlern 3.85 342 AML AML
comp=E,200μm,1.0s
KOSI AML AML
comp=N,189μm,0.9s
ABTA Abfaltersbach 3.95 354 *e*Pn **Pn 08 22 57.3 +2.3**
comp=N,18nm,0.5s
SOKA Soboth 4.08 19 *e*Pn **Pn 08 22 57.5 +0.6**
SBF Sospel 4.28 286 *e*Pn **Pn 08 22 58.8 -0.8**
SBF *e*Sn **Sn 08 23 45.7 -3.6**
comp=N,11nm,0.6s
VSL Villasalto 4.37 222 AML AML
comp=E,104μm,0.3s
VSL AML AML
comp=N,55μm,0.6s
FETA Feichten 4.53 339 *e*Pn **Pn 08 23 05.8 +2.7**
comp=N,7.0nm,0.6s
WTTA Wattenberg 4.56 347 *e*Pn **Pn 08 23 07.1 +3.5**
comp=N,4.2nm,0.5s
DAVOX Davos/Dischmat 4.58 331 Pn **Pn 08 23 07.9 +4.0**
comp=N,1.2nm,0.3s,baz=149,slow=19,SNR=7.1
comp=N,13nm,0.7s
SQTA Sankt Quirin 4.60 343 *e*Pn **Pn 08 23 07.6 +3.6**
comp=N,8.7nm,0.4s
WATA Walderalm 4.64 347 *e*Pn **Pn 08 23 08.1 +3.5**
comp=N,9.7nm,0.5s
ARSA Arzberg 4.74 20 *e*Pn **Pn 08 23 06.3 +0.4**
comp=N,2.1nm,0.3s
MOTA Moosalm 4.74 343 *e*Pn **Pn 08 23 08.3 +2.3**
comp=N,6.3nm,0.7s
LMR La Mourre 4.88 278 *e*Pn **Pn 08 23 06.3 -1.4**
BIOA Bad Ischl, Aus 4.88 4 *e*Pn **Pn 08 23 09.5 +1.7**
comp=N,3.6nm,0.3s
RETA Reutte 4.95 341 *e*Pn **Pn 08 23 11.3 +2.5**
comp=N,3.0nm,0.3s
MBDF Montbardon 4.98 295 *e*P **Pn 08 23 12.3 +3.0**
DAVA Damuels 5.02 334 *e*Pn **Pn 08 23 13.6 +3.7**
comp=N,9.9nm,0.6s
MOA Molln 5.09 9 *e*Pn **Pn 08 23 12.4 +1.7**
comp=N,1.5nm,0.3s
LPG La Plagne 5.31 302 *e*P **Pn 08 23 17.1 +3.2**
LPL La Plagne 5.33 303 *e*P **Pn 08 23 17.0 +2.8**
RONA Rosalia, Austr 5.36 24 *e*Pn **Pn 08 23 15.2 +0.8**
comp=N,1.0nm,0.2s
CONA Conrad Observa 5.45 20 *e*Pn **Pn 08 23 16.2 +0.5**
comp=N,2.5nm,0.3s
SMRF Simiane la Rot 5.62 284 *e*Pn **Pn 08 23 16.6 -1.4**
SMRF Simiane la Rot 5.62 284 *e*P **Pn 08 23 20.5 +2.5**
ORIF Oris-en-Rattie 5.64 294 *e*Pn **Pn 08 23 16.7 -1.6**
ORIF Oris-en-Rattie 5.64 294 *e*P **Pn 08 23 21.7 +3.4**
GERES GERESS Array B 6.03 4 Pn **Pn 08 23 24.3 +0.6**
comp=N,0.7nm,0.3s,baz=177,slow=13,SNR=11
comp=N,0.7nm,0.3s
CABF La Chapelle 6.28 309 *e*P **Pn 08 23 30.6 +3.5**
VIVF Saint-Julien-l 6.44 291 *e*P **Pn 08 23 28.7 -0.6**
HINF Hinteralfeld 6.67 321 *e*P **Pn 08 23 35.5 +3.1**
LASF Ste Croix 6.86 284 *e*P **Pn 08 23 38.3 +3.3**
CDF Champ du Feu 6.93 326 *e*P **Pn 08 23 38.4 +2.4**
HAU Haudompre 7.04 320 *e*P **Pn 08 23 40.7 +3.2**
SMF Signal de Mont 7.63 303 *e*P **Pn 08 23 49.2 +3.6**
KEST Kesra 7.67 204 Pn **Pn 08 23 50.2 +4.0**
comp=N,0.2nm,0.3s,baz=14,slow=4.2,SNR=1.8
comp=N,2.0nm,0.6s
PAGF Fort de Pagny 7.72 320 *e*P **Pn 08 23 51.1 +4.3**
SFTF Sexfontaines 7.82 316 *e*Pn **Pn 08 23 46.7 -1.5**
LOR Lormes 7.92 307 *e*P Pn 08 23 55.8 +6.2
MEZF Maizieres J'vi 8.01 318 *e*P **Pn 08 23 54.3 +3.6**
SSF Saint Saulge 8.03 305 *e*P **Pn 08 23 55.5 +4.5**
EPF Esparros 9.39 276 *e*P **Pn 08 24 14.0 +4.3**
FINES FINESS Array B 20.20 18 P **P 08 26 27.9 -0.9**
comp=N,2.3nm,0.9s,baz=204,slow=10.0,SNR=1.7
comp=N,2.3nm,0.9s
TORD Torodi Ar. Bea 31.18 202 P **P 08 28 15.1 +1.6**
comp=N,0.3nm,0.8s,baz=1.3,slow=11,SNR=2.2
comp=N,0.3nm,0.8s
MKAR Makanchi Array 47.78 60 P **P 08 30 31.5 +0.1**
comp=N,0.6nm,0.8s,baz=298,slow=6.1,SNR=2.2
comp=N,0.6nm,0.8s

PDG ***30*** *08:22:52.8±0.6, 42°.72N×13°.14E, h11km, ML4.0/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
LDG ***30*** *08:22:52.8±0.2, 42°.68N×13°.06E, h10km, Ml3.4/19, Error ellipse: s-maj=5.5km s-min=3.6km az=45.0*
ROM ***30*** *08:22:52.1±0.0, 42°.729N±0°.002×13°.137E±0°.002, h10km, ML3.7/81, Error ellipse: s-maj=0.2km s-min=0.1km az=245.0*
PRU ***30*** *08:22:52.2±0.0, 42°.79N×12°.88E, h0km*
IDC ***30*** *08:22:53.1±1.2, 42°.88N×13°.11E, h0km, mb3.8/6, mbtmp3.7/12, ML3.8/6, MS4.7/1, Error ellipse: s-maj=23.6km s-min=14.2km az=96.0*
STR ***30*** *08:22:56.5±1.0, 43°N±4°×1°3E±°, h10km, MLv3.8/43, Error ellipse: s-maj=0.0km s-min=0.0km az=89.5, preliminary*
ISC 30 08:22:52.5±0.7,**42°.73N**±0°.01×**13°.11E**±0°.01,**h9**km±3km,
n307,σ2°**11**/360,**mb3.8**/5,**16C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.01**	**107**	P	**Pg**	**08 22 54.0**	**-0.3**
T1213				S	**Sg**	**08 22 54.8**	**-0.7**
T1212	**Cascia, Frazio**	**0.05**	**296**	P	**Pg**	**08 22 54.8**	**+0.3**
T1212				S	**Sg**	**08 22 56.2**	**+0.2**
T1218	**Civita (PG)**	**0.06**	**176**	⇑P	**Pg**	**08 22 54.7**	**+0.1**
T1218				S	**Sg**	**08 22 56.2**	**0.0**
T1214	**Arquata del Tr**	**0.08**	**67**	P	**Pg**	**08 22 54.5**	**-0.4**
T1214				S	**Sg**	**08 22 55.9**	**-0.8**
T1201	**Domo (RI)**	**0.13**	**124**	P	**Pg**	**08 22 55.7**	**+0.2**
T1201				S	**Sg**	**08 22 58.1**	**+0.5**
T1217	**Poggiodomo (PG**	**0.13**	**263**	⇑P	**Pg**	**08 22 56.2**	**+0.7**
T1217				S	**Sg**	**08 22 58.9**	**+1.1**
T1217				AML	AML		
	comp=E,43750μm,0.6s						
T1217				AML	AML		
	comp=N,51400μm,0.4s						
T1217				AML	AML		
	comp=N,53650μm,0.4s						
T1217				AML	AML		
	comp=E,43700μm,0.6s						
T1217				AML	AML		
	comp=N,51350μm,0.3s						
T1217				AML	AML		
	comp=N,53650μm,0.3s						
T1217				AML	AML		
	comp=N,51350μm,0.4s						
T1217				AML	AML		
	comp=E,40600μm,0.7s						
T1217				AML	AML		
	comp=E,40550μm,0.7s						
T1217				AML	AML		
	comp=E,43750μm,0.6s						
T1217				AML	AML		
	comp=N,53700μm,0.3s						
LNSS	**Leonessa**	**0.14**	**202**	P	**Pg**	**08 22 56.1**	**+0.5**
LNSS				S	**Sg**	**08 22 59.0**	**+1.2**
T1245	**Castelsantange**	**0.14**	**24**	P	**Pg**	**08 22 55.6**	**-0.1**
T1245				S	**Sg**	**08 22 58.0**	**-0.1**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1244	**Arquata del Tr**	**0.14**	**78**	⇑P	**Pg**	**08 22 55.8**	**+0.1**
T1244				S	**Sg**	**08 22 58.2**	**+0.2**
T1204	**Amatrice, Fraz**	**0.16**	**109**	⇑P	**Pg**	**08 22 56.2**	**+0.1**
T1204				S	**Sg**	**08 22 58.9**	**+0.3**
T1204				AML	AML		
	comp=N,97650μm,0.5s						
T1204				AML	AML		
	comp=N,97550μm,0.5s						
T1204				AML	AML		
T1204				AML	AML		
	comp=N,97450μm,0.5s						
T1216	**Preci, Frazion**	**0.17**	**338**	⇑P	**Pg**	**08 22 56.5**	**+0.3**
T1216				S	**Sg**	**08 22 59.5**	**+0.7**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1215	**Vallo di Nera,**	**0.19**	**293**	⇑P	**Pg**	**08 22 57.1**	**+0.6**
T1215				S	**Sg**	**08 23 00.5**	**+1.2**
T1215				AML	AML		
	comp=E,28000μm,1.5s						
T1215				AML	AML		
	comp=N,24000μm,0.9s						
T1215				AML	AML		
	comp=N,25250μm,1.6s						
T1215				AML	AML		
	comp=E,26200μm,0.2s						
T1215				AML	AML		
	comp=N,25250μm,1.6s						
T1215				AML	AML		
	comp=E,27950μm,1.5s						
T1215				AML	AML		
	comp=N,24050μm,0.9s						
MC2	**Monte Cornacci**	**0.19**	**18**	P	**Pg**	**08 22 56.7**	**+0.1**
MC2				S	**Sg**	**08 22 59.8**	**+0.3**
RM33	**Pellescritta (**	**0.23**	**160**	⇓P	**Pg**	**08 22 57.5**	**+0.2**
RM33				S	**Sg**	**08 23 01.3**	**+0.8**
RM33				AML	AML		
	comp=E,78700μm,1.1s						
RM33				AML	AML		
	comp=E,76850μm,0.6s						
RM33				AML	AML		
	comp=N,77700μm,0.3s						
RM33				AML	AML		
	comp=E,78650μm,1.1s						
RM33				AML	AML		
	comp=N,77250μm,0.3s						
RM33				AML	AML		
	comp=E,76800μm,0.6s						
RM33				AML	AML		
	comp=N,77200μm,0.3s						
FEMA	**Monte Fema**	**0.24**	**349**	P	**Pg**	**08 22 57.6**	**+0.2**
FEMA				S	**Sg**	**08 23 01.8**	**+1.1**
FEMA				AML	AML		
	comp=E,91200μm,1.6s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,91300μm,1.6s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,91300μm,1.6s						
FEMA				AML	AML		
	comp=E,91400μm,1.6s						
FEMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.25**	**97**	P	**Pg**	**08 22 57.4**	**-0.2**
T1243				S	**Sg**	**08 23 01.4**	**+0.3**
T1241	**Roccafluvione,**	**0.27**	**62**	P	**Pg**	**08 22 58.4**	**+0.5**
T1241				S	**Sg**	**08 23 02.5**	**+0.9**
T1241				AML	AML		
	comp=E,27200μm,0.6s						
T1241				AML	AML		
	comp=E,27800μm,1.1s						
T1241				AML	AML		
	comp=N,27200μm,0.9s						
T1241				AML	AML		
	comp=N,29600μm,0.9s						
T1241				AML	AML		
	comp=N,27150μm,0.9s						
T1241				AML	AML		
	comp=E,27850μm,1.1s						
T1241				AML	AML		
	comp=E,27250μm,0.6s						
T1211	**Morro Reatino**	**0.27**	**224**	P	**Pg**	**08 22 58.5**	**+0.6**
T1211				S	**Sg**	**08 23 03.5**	**+1.9**
T1211				AML	AML		
	comp=E,29100μm,0.5s						
T1211				AML	AML		
	comp=N,58200μm,1.0s						
T1211				AML	AML		
	comp=E,29800μm,1.3s						
T1211				AML	AML		
	comp=N,57450μm,1.0s						
T1211				AML	AML		
	comp=E,29150μm,0.5s						
T1211				AML	AML		
	comp=E,29700μm,1.3s						
T1211				AML	AML		
	comp=N,57300μm,1.0s						
T1211				AML	AML		
	comp=E,29750μm,1.3s						
T1211				AML	AML		
	comp=N,58150μm,1.0s						
T1211				AML	AML		
	comp=N,57400μm,1.0s						
CAMP	**Campotosto**	**0.29**	**131**	⇓P	**Pg**	**08 22 58.3**	**-0.1**
CAMP				S	**Sg**	**08 23 02.8**	**+0.5**
CAMP				AML	AML		
	comp=E,38400μm,0.8s						
CAMP				AML	AML		
	comp=N,24800μm,0.7s						
ARRO	**Arrone**	**0.29**	**240**	⇑P	**Pg**	**08 22 59.0**	**+0.7**
ARRO				S	**Sg**	**08 23 04.0**	**+1.7**
ARRO				AML	AML		
	comp=E,23500μm,1.2s						
ARRO				AML	AML		
	comp=N,26900μm,0.8s						
AM05	**Amandola Campo**	**0.31**	**36**	P	**Pg**	**08 22 58.6**	**0.0**
AM05				S	**Sb**	**08 23 03.3**	**-2.0**
AM05				AML	AML		
	comp=N,6025μm,0.5s						
AM05				AML	AML		
	comp=E,6790μm,0.7s						
AM05				AML	AML		
	comp=N,6030μm,0.5s						
AM05				AML	AML		
	comp=E,27850μm,1.0s						
AM05				AML	AML		
	comp=N,1385μm,0.2s						
T1246	**Crognaleto (TE**	**0.32**	**117**	⇓P	**Pg**	**08 22 58.6**	**-0.2**
T1246				S	**Sg**	**08 23 03.4**	**+0.3**
T1247	**Pizzolo (AQ)**	**0.32**	**154**	⇓P	**Pg**	**08 22 59.0**	**+0.1**
T1247				S	**Sg**	**08 23 04.1**	**+1.0**
T1247				AML	AML		
	comp=E,64600μm,0.5s						
T1247				AML	AML		
GUMA	**Gualdo di Mace**	**0.37**	**26**	⇑P	**Pg**	**08 22 60.0**	**+0.1**
GUMA				S	**Sb**	**08 23 06.2**	**-1.0**
GUMA				AML	AML		
	comp=E,67550μm,0.6s						
GUMA				AML	AML		
	comp=N,87400μm,0.4s						
GUMA				AML	AML		
	comp=N,76050μm,0.5s						
GUMA				AML	AML		
	comp=N,87200μm,0.4s						
GUMA				AML	AML		
	comp=E,67550μm,0.6s						
GUMA				AML	AML		
	comp=N,87250μm,0.4s						
GUMA				AML	AML		
	comp=E,86150μm,0.4s						
TERO	**Teramo**	**0.38**	**106**	⇓P	**Pg**	**08 22 59.6**	**-0.4**
TERO				S	**Sg**	**08 23 05.1**	**+0.1**
TERO				AML	AML		
	comp=E,26600μm,0.7s						
TERO				AML	AML		
	comp=N,36550μm,0.6s						
TERO				AML	AML		
	comp=E,25650μm,0.6s						
TERO				AML	AML		
	comp=N,35700μm,0.6s						
TERO				AML	AML		
	comp=E,25700μm,0.6s						
CESX	**Cesi**	**0.41**	**253**	⇑P	**Pg**	**08 23 00.9**	**+0.4**
CESX				S	**Sg**	**08 23 07.7**	**+1.8**
CESX				AML	AML		
	comp=E,15150μm,0.5s						
CESX				AML	AML		
	comp=N,14800μm,0.5s						
AQU	**L'Aquila**	**0.43**	**150**	P	**Pg**	**08 23 00.7**	**-0.3**
AQU				S	**Sg**	**08 23 07.5**	**+0.8**
AQU				AML	AML		
	comp=N,19550μm,0.5s						
AQU				AML	AML		
	comp=E,17700μm,1.4s						
AQU				AML	AML		
	comp=N,19600μm,0.5s						
AQU				AML	AML		
	comp=N,18800μm,0.5s						
AQU				AML	AML		
	comp=E,17650μm,1.4s						
AQU				AML	AML		
	comp=E,17800μm,1.4s						
SEF1	**Sefro**	**0.43**	**344**	P	**Pg**	**08 23 01.0**	**0.0**
SEF1				S	**Sb**	**08 23 07.9**	**-1.1**
SEF1				AML	AML		
	comp=E,35400μm,0.3s						
SEF1				AML	AML		
	comp=N,48850μm,0.3s						
SEF1				AML	AML		
	comp=N,48850μm,0.3s						
SEF1				AML	AML		
	comp=E,35400μm,0.3s						
GIGS	**Gran Sasso**	**0.44**	**129**	⇓P	**Pg**	**08 23 00.6**	**-0.5**
GIGS				S	**Sg**	**08 23 07.0**	**+0.1**
GIGS				AML	AML		
	comp=E,4865μm,0.4s						
GIGS				AML	AML		
	comp=N,6400μm,0.5s						
ASSB	**Assisi San Ben**	**0.46**	**314**	⇑P	**Pg**	**08 23 01.6**	**+0.2**
PIO1	**Pioraco**	**0.46**	**348**	P	**Pg**	**08 23 01.4**	**-0.1**
PIO1				S	**Sb**	**08 23 08.7**	**-0.9**
PIO1				AML	AML		
	comp=E,13150μm,0.4s						
PIO1				AML	AML		
	comp=E,13200μm,0.4s						
PIO1				AML	AML		
	comp=N,18700μm,0.6s						
FIAM	**Fiamignano**	**0.46**	**179**	⇓P	**Pg**	**08 23 01.5**	**+0.1**
FIAM				S	**Sg**	**08 23 08.7**	**+1.1**
MDAR	**Monte D'Aria**	**0.46**	**3**	P	**Pg**	**08 23 01.4**	**-0.2**
MDAR				S	**Sb**	**08 23 08.5**	**-1.4**
OFFI	**Offida**	**0.47**	**64**	P	**Pg**	**08 23 02.3**	**+0.6**
OFFI				AML	AML		
	comp=N,33550μm,0.4s						
OFFI				AML	AML		
	comp=E,26700μm,0.4s						
FIU1	**Fiuminata**	**0.48**	**344**	P	**Pg**	**08 23 01.7**	**-0.1**
FIU1				S	**Sb**	**08 23 09.5**	**-0.7**
FIU1				AML	AML		
	comp=E,11415μm,0.3s						
FIU1				AML	AML		
	comp=E,11395μm,0.3s						
FIU1				AML	AML		
	comp=N,13350μm,0.3s						
MNTP	**Montappone**	**0.49**	**33**	P	**Pg**	**08 23 02.2**	**+0.3**
MNTP				AML	AML		
	comp=E,23450μm,0.9s						
MNTP				AML	AML		
	comp=N,17900μm,0.5s						
MNTP				AML	AML		
	comp=E,23400μm,0.9s						
MNTP				AML	AML		
	comp=N,17850μm,0.5s						
SSM1	**San Severino M**	**0.50**	**6**	P	**Pg**	**08 23 02.1**	**-0.2**
SSM1				S	**Sb**	**08 23 10.2**	**-0.7**
GAG1	**Gagliole**	**0.51**	**357**	P	**Pg**	**08 23 02.5**	**+0.1**
GAG1				S	**Sb**	**08 23 10.4**	**-0.7**
GAG1				AML	AML		
	comp=E,43150μm,0.6s						
GAG1				AML	AML		
	comp=N,45250μm,0.4s						
GAG1				AML	AML		
	comp=E,43200μm,0.6s						
GAG1				AML	AML		
	comp=N,45250μm,0.4s						
GAG1				AML	AML		
	comp=E,43150μm,0.6s						
SNTG	**Esanatoglia**	**0.54**	**347**	AML	AML		
	comp=N,9200μm,0.3s						
SNTG				AML	AML		
	comp=N,8665μm,0.3s						
SNTG				AML	AML		
	comp=E,9115μm,0.4s						
SNTG				AML	AML		
	comp=E,9025μm,0.3s						
SNTG				AML	AML		
	comp=N,9205μm,0.3s						
SNTG				AML	AML		
	comp=E,9000μm,0.3s						
SNTG				AML	AML		
	comp=N,8660μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.57**	**323**	⇑P	**Pg**	**08 23 03.6**	**+0.1**
ATCC				S	**Sb**	**08 23 12.8**	**-0.1**
ATCC				AML	AML		
	comp=E,18250μm,0.9s						
ATCC				AML	AML		
	comp=N,22900μm,0.3s						
ATCC				AML	AML		
	comp=N,22850μm,0.3s						

FAGN	**Fagnano**	**0.58 143**	⇑P	**Pg**	**08 23 03.3**	**-0.5**
FAGN			AML	AML		
	comp=N,18100µm,0.4s					
FAGN			AML	AML		
	comp=E,25250µm,1.0s					
TRTR	**Tortoreto Alta**	**0.60 82**	AML	AML		
	comp=E,31200µm,0.4s					
TRTR			AML	AML		
	comp=N,31450µm,0.4s					
TRE1	**Treia**	**0.60 14**	P	**Pg**	**08 23 04.2**	**0.0**
FOSV	**Fossato di Vic**	**0.62 336**	⇑P	**Pg**	**08 23 04.3**	**-0.2**
FOSV			S	**Sb**	**08 23 13.9**	**-0.4**
FOSV			AML	AML		
	comp=E,7285µm,1.4s					
FOSV			AML	AML		
	comp=N,11150µm,0.8s					
FOSV			AML	AML		
	comp=E,7290µm,1.4s					
VCEL	**Villa Celiera**	**0.64 121**	P	**Pg**	**08 23 04.5**	**-0.3**
VCEL			AML	AML		
	comp=E,20450µm,0.9s					
VCEL			AML	AML		
	comp=N,20300µm,0.5s					
VCEL			AML	AML		
	comp=N,20250µm,0.5s					
CING	**Cingoli**	**0.65 6**	P	**Pg**	**08 23 04.6**	**-0.5**
SRES	**S.Oreste - Sor**	**0.66 222**	P	**Pg**	**08 23 05.7**	**+0.4**
SRES			AML	AML		
	comp=E,2765µm,0.4s					
SRES			AML	AML		
	comp=N,2810µm,1.1s					
MURB	**Monte Urbino**	**0.69 321**	AML	AML		
	comp=E,28500µm,0.3s					
MURB			AML	AML		
	comp=E,28500µm,0.2s					
MURB			AML	AML		
	comp=N,27600µm,0.3s					
MURB			AML	AML		
	comp=E,29050µm,0.2s					
MURB			AML	AML		
	comp=N,27600µm,0.3s					
MURB			AML	AML		
	comp=N,30400µm,0.3s					
MURB			AML	AML		
	comp=N,27650µm,0.3s					
T0110	**Collepietro**	**0.70 135**	P	**Pg**	**08 23 05.3**	**-0.8**
T0110			AML	AML		
	comp=N,15100µm,0.6s					
T0110			AML	AML		
	comp=E,23100µm,0.4s					
CIMA	**Civitanova Mar**	**0.71 35**	P	**Pb**	**08 23 06.9**	**-0.1**
MMUR	**Monte Murano**	**0.72 353**	P	**Pg**	**08 23 06.0**	**-0.3**
ATTE	**AVT- Monte Tez**	**0.73 310**	P	**Pg**	**08 23 06.9**	**+0.3**
ATTE			AML	AML		
	comp=E,3475µm,0.7s					
ATTE			AML	AML		
	comp=N,3945µm,0.3s					
PTQR	**Pietraquaria**	**0.74 163**	P	**Pg**	**08 23 06.0**	**-0.8**
PTQR			AML	AML		
	comp=E,1970µm,1.1s					
PTQR			AML	AML		
	comp=N,1770µm,0.8s					
PP3	**Marolino**	**0.74 29**	P	**Pb**	**08 23 07.5**	**-0.1**
PP3			AML	AML		
	comp=N,19150µm,0.3s					
PP3			AML	AML		
	comp=E,27800µm,0.5s					
PP3			AML	AML		
	comp=N,19100µm,0.3s					
PP3			AML	AML		
	comp=N,22100µm,0.4s					
PP3			AML	AML		
	comp=E,30550µm,0.4s					
PP3			AML	AML		
	comp=E,27850µm,0.5s					
ATFO	**Monte Foce - G**	**0.75 328**	P	**Pg**	**08 23 06.8**	**-0.1**
ATFO			AML	AML		
	comp=E,7060µm,0.6s					
ATFO			AML	AML		
	comp=N,6370µm,0.6s					
MGAB	**Montegabbione**	**0.76 284**	P	**Pg**	**08 23 07.9**	**+0.9**
MGAB			AML	AML		
	comp=E,11820µm,1.5s					
MGAB			AML	AML		
	comp=N,9165µm,1.1s					
MGAB			AML	AML		
	comp=E,10715µm,0.5s					
MGAB			AML	AML		
	comp=N,9635µm,0.3s					
MGAB			AML	AML		
	comp=E,12985µm,0.4s					
MGAB			AML	AML		
	comp=N,9170µm,1.1s					
MGAB			AML	AML		
	comp=N,9640µm,0.3s					
MGAB			AML	AML		
	comp=E,13020µm,1.5s					
MTCE	**Montecelio**	**0.76 201**	P	**Pg**	**08 23 06.8**	**-0.3**
MTCE			AML	AML		
	comp=E,4980µm,0.9s					
MTCE			AML	AML		
	comp=N,2525µm,0.6s					
ATSC	**Scheggia e Pas**	**0.76 336**	P	**Pg**	**08 23 06.7**	**-0.5**
ARVD	**Arcevia**	**0.78 351**	P	**Pg**	**08 23 07.0**	**-0.5**
ARVD			AML	AML		
	comp=E,3850µm,0.7s					
ARVD			AML	AML		
	comp=N,3575µm,1.4s					
ARVD			AML	AML		
	comp=E,3845µm,0.7s					
ATLO	**AVT- Montelove**	**0.78 319**	P	**Pg**	**08 23 07.2**	**-0.3**
CERT	**Cerreto**	**0.79 187**	P	**Pg**	**08 23 07.1**	**-0.5**
CERT			AML	AML		
	comp=N,5485µm,0.4s					
CERT			AML	AML		
	comp=E,8160µm,0.4s					
ATVA	**AVT- Monte Val**	**0.82 313**	P	**Pg**	**08 23 08.1**	**-0.1**
ATVO	**AVT- Monte Val**	**0.83 322**	P	**Pg**	**08 23 08.1**	**-0.5**
ATVO			AML	AML		
	comp=N,5865µm,0.6s					
ATVO			AML	AML		
	comp=E,4460µm,0.9s					
FRON	**Frontone**	**0.84 341**	P	**Pg**	**08 23 08.3**	**-0.3**
FRON			AML	AML		
	comp=E,3695µm,0.3s					
FRON			AML	AML		
	comp=N,6785µm,0.4s					
ATBU	**Serra di Buran**	**0.85 331**	P	**Pg**	**08 23 08.8**	**-0.1**
ATMI	**Monte Miggiano**	**0.86 315**	AML	AML		
	comp=E,8690µm,0.4s					
ATMI			AML	AML		
	comp=N,12000µm,0.7s					
ATPI	**Pietralunga -**	**0.89 325**	P	**Pg**	**08 23 09.3**	**-0.3**
ATPI			AML	AML		
	comp=E,5220µm,0.8s					
ATPI			AML	AML		
	comp=N,4060µm,0.8s					
ATPI			AML	AML		
	comp=E,5215µm,0.8s					
RCAV	**Rocca di Cave**	**0.89 188**	AML	AML		
	comp=N,4935µm,0.7s					
RCAV			AML	AML		
	comp=E,8100µm,1.5s					
RCAV			AML	AML		
	comp=N,4940µm,0.7s					
ATPC	**Poggio Castell**	**0.89 328**	P	**Pg**	**08 23 09.4**	**-0.3**
SACS	**San Casciano d**	**0.89 278**	P	**Pg**	**08 23 09.8**	**+0.2**
SACS			AML	AML		
	comp=E,3285µm,1.1s					
SACS			AML	AML		
	comp=N,5310µm,1.1s					
AOI	**Ancona**	**0.90 24**	P	**Pg**	**08 23 09.4**	**-0.3**
AOI			AML	AML		
	comp=E,3945µm,0.5s					
AOI			AML	AML		
	comp=N,5580µm,0.4s					
PIEI	**Pieia**	**0.91 333**	P	**Pg**	**08 23 10.0**	**0.0**
PIEI			AML	AML		
	comp=E,3200µm,0.8s					
PIEI			AML	AML		
	comp=N,2845µm,0.9s					
MPAG	**Monte Paganucc**	**0.94 344**	AML	AML		
	comp=N,4700µm,0.4s					
MPAG			AML	AML		
	comp=E,5750µm,0.3s					
VVLD	**Villa Vallelon**	**0.94 156**	P	**Pg**	**08 23 10.0**	**-0.5**
GUAR	**Guarcino**	**0.95 171**	AML	AML		
	comp=E,3650µm,0.4s					
GUAR			AML	AML		
	comp=N,4735µm,0.4s					
RMP	**Rome, Mte Porz**	**0.96 198**	AML	AML		
	comp=E,3945µm,0.7s					
RMP			AML	AML		
	comp=N,6235µm,1.4s					
SENI	**Senigallia**	**0.98 5**	AML	AML		
	comp=N,19500µm,0.4s					
SENI			AML	AML		
	comp=E,19798µm,0.6s					
ATMC	**Monte Cedrone**	**0.98 317**	P	**Pg**	**08 23 11.2**	**-0.1**
FSSB	**Fossombrone**	**0.99 346**	P	**Pg**	**08 23 11.1**	**-0.5**
FSSB			AML	AML		
	comp=E,11750µm,0.4s					
FSSB			AML	AML		
	comp=N,18250µm,0.4s					
BADI	**Badiali**	**1.00 321**	AML	AML		
	comp=E,177µm,0.5s					
BADI			AML	AML		
	comp=N,2185µm,1.2s					
RDP	**Rocca di Papa**	**1.01 197**	AML	AML		
	comp=E,9080µm,0.5s					
RDP			AML	AML		
	comp=N,9120µm,0.4s					
CAFI	**Castiglion Fio**	**1.03 306**	P	**Pg**	**08 23 12.5**	**+0.2**
CAFI			AML	AML		
	comp=N,2070µm,0.6s					
CAFI			AML	AML		
	comp=E,2705µm,0.6s					
LPEL	**Lama dei Pelig**	**1.05 130**	P	**Pg**	**08 23 11.0**	**-1.6**
LPEL			AML	AML		
	comp=E,5155µm,0.5s					
LPEL			AML	AML		
	comp=N,2890µm,1.5s					
MCIV	**Monte Civitell**	**1.06 273**	P	**Pg**	**08 23 13.2**	**+0.4**
MCIV			AML	AML		
	comp=E,2430µm,0.4s					
MCIV			AML	AML		
	comp=N,1169µm,0.3s					
MCIV			AML	AML		
	comp=E,2430µm,0.3s					
TOLF	**Tolfa**	**1.06 231**	P	**Pg**	**08 23 12.4**	**-0.3**
TOLF			AML	AML		
	comp=N,1990µm,0.5s					
TOLF			AML	AML		
	comp=E,2845µm,0.9s					
PE3	**Peglio**	**1.07 335**	P	**Pb**	**08 23 12.9**	**-0.1**
SF04	**Casetta**	**1.07 276**	AML	AML		
	comp=E,2705µm,1.1s					
SF04			AML	AML		
	comp=N,2710µm,1.3s					
POFI	**Posta Fibreno**	**1.10 156**	P	**Pg**	**08 23 13.3**	**-0.4**
LRP	**Arpino**	**1.14 162**	AML	AML		
	comp=N,2180µm,0.6s					
LRP			AML	AML		
	comp=E,1375µm,0.6s					
SF01	**Poggio Pratacc**	**1.14 275**	AML	AML		
	comp=N,2770µm,1.0s					
SF01			AML	AML		
	comp=E,2878µm,0.6s					
GIUL	**Giuliano Di Ro**	**1.18 175**	P	**Pg**	**08 23 15.2**	**+0.2**
GIUL			AML	AML		
	comp=N,1830µm,0.6s					
GIUL			AML	AML		
	comp=E,1850µm,0.7s					
ARCI	**Arcidosso**	**1.21 276**	P	**Pg**	**08 23 16.0**	**+0.3**
ARCI			AML	AML		
	comp=E,620µm,0.7s					
ARCI			AML	AML		
	comp=N,570µm,0.5s					
CRE	**Caprese Michel**	**1.23 317**	AML	AML		
	comp=N,2040µm,0.3s					
CRE			AML	AML		
	comp=E,1790µm,1.1s					
LATB	**Latina**	**1.24 185**	P	**Pn**	**08 23 14.9**	**-1.0**
LATB			AML	AML		
	comp=N,460µm,0.7s					
LATB			AML	AML		
	comp=E,808µm,0.9s					
LATB			AML	AML		
	comp=N,461µm,0.7s					
RNI2	**Rionero Sannit**	**1.28 143**	P	**Pn**	**08 23 17.4**	**+0.8**
CERA	**Filignano**	**1.32 149**	P	**Pn**	**08 23 16.7**	**-0.3**
MIDA	**Miranda**	**1.38 142**	P	**Pn**	**08 23 16.5**	**-1.4**
ASQU	**Asqua**	**1.44 318**	P	**Pn**	**08 23 19.2**	**+0.5**
TRIV	**Trivento**	**1.44 131**	P	**Pn**	**08 23 18.9**	**+0.2**
TRIV			AML	AML		
	comp=E,1705µm,0.7s					
TRIV			AML	AML		
	comp=N,1895µm,1.0s					
MAON	**Monte Argentar**	**1.49 259**	P	**Pn**	**08 23 19.6**	**+0.2**
MAON			AML	AML		
	comp=E,467µm,0.4s					
MAON			AML	AML		
	comp=N,303µm,1.1s					
FROS	**Frosini**	**1.51 289**	P	**Pn**	**08 23 19.9**	**+0.2**
FROS			AML	AML		
	comp=E,1064µm,0.6s					
FROS			AML	AML		
	comp=N,907µm,0.7s					
CSNT	**Castellina Chi**	**1.52 300**	P	**Pn**	**08 23 20.2**	**+0.3**
CSNT			AML	AML		
	comp=N,572µm,0.5s					
CSNT			AML	AML		
	comp=E,526µm,1.0s					
OSSC	**Osservatorio P**	**1.58 301**	P	**Pn**	**08 23 19.9**	**-0.7**
OSSC			AML	AML		
	comp=E,600µm,1.2s					
OSSC			AML	AML		
	comp=N,634µm,0.7s					
RUFI	**Rufina**	**1.61 314**	P	**Pn**	**08 23 20.8**	**-0.3**
CASP	**Castiglione de**	**1.65 273**	P	**Pn**	**08 23 21.6**	**0.0**
TRIF	**Trifonti**	**1.67 284**	P	**Pn**	**08 23 22.3**	**+0.4**
TRIF			AML	AML		
	comp=E,817µm,0.6s					
TRIF			AML	AML		
	comp=N,584µm,0.6s					
TRIF			AML	AML		
	comp=N,584µm,0.5s					
TRIF			AML	AML		
	comp=E,828µm,0.9s					
MELA	**Melanico ??? S**	**1.81 124**	AML	AML		
	comp=E,2185µm,0.7s					
MELA			AML	AML		
	comp=N,2330µm,0.5s					
MELA			AML	AML		
	comp=E,2285µm,0.7s					
MELA			AML	AML		
	comp=N,2365µm,0.5s					
MPPT	**Montemurlo**	**1.92 311**	AML	AML		
	comp=E,430µm,1.4s					
MPPT			AML	AML		
	comp=N,536µm,0.5s					
SGRT	**San Giovanni R**	**2.19 116**	P	**Pn**	**08 23 30.3**	**+1.3**
MAIM	**Mastiano**	**2.25 303**	P	**Pn**	**08 23 30.3**	**+0.6**
MAIM			AML	AML		
	comp=E,269µm,1.1s					
MAIM			AML	AML		
	comp=N,354µm,0.5s					
VLC	**Villacollemand**	**2.44 307**	P	**Pn**	**08 23 32.9**	**+0.4**
VLC			AML	AML		
	comp=E,187µm,1.0s					
VLC			AML	AML		
	comp=N,262µm,1.0s					
VLC			AML	AML		
	comp=E,196µm,1.0s					
VLC			AML	AML		
	comp=N,229µm,1.0s					
GSCL	**Gusciola**	**2.45 312**	P	**Pn**	**08 23 33.4**	**+0.9**
GSCL			AML	AML		
	comp=N,308µm,0.7s					
GSCL			AML	AML		
	comp=E,438µm,0.7s					
EQUI	**Equi**	**2.59 305**	P	**Pn**	**08 23 34.8**	**+0.3**
EQUI			AML	AML		
	comp=E,143µm,0.9s					
EQUI			AML	AML		
	comp=N,170µm,0.5s					
PLMA	**Palmaria, Port**	**2.72 300**	P	**Pn**	**08 23 36.9**	**+0.7**
PLMA			AML	AML		
	comp=N,116µm,1.0s					
PLMA			AML	AML		
	comp=E,123µm,0.6s					
MORSI	**Morsiglia**	**2.76 276**	Pg	**Pn**	**08 23 37.8**	**+0.9**
GRAM	**Graiana**	**2.83 310**	P	**Pn**	**08 23 38.7**	**+0.9**
GRAM			AML	AML		
	comp=E,454µm,0.8s					
GRAM			AML	AML		
	comp=N,420µm,1.0s					
SMPL	**Sampolo**	**2.90 259**	P	**Pn**	**08 23 39.7**	**+0.9**
SMPL	**Sampolo**	**2.90 259**	Pn	**Pn**	**08 23 39.8**	**+1.1**
PGF	**Pioggiola**	**3.04 268**	*e*Pn	**Pn**	**08 23 38.8**	**-1.9**
PGF	**Pioggiola**	**3.04 268**	*e*P	**Pn**	**08 23 41.7**	**+1.0**
PGF			*e*Sn	**Sn**	**08 24 13.5**	**-3.7**
	comp=N,18nm,0.3s					
PGF	**Pioggiola**	**3.04 268**	AML	AML		
	comp=N,36µm,0.6s					
PGF			AML	AML		
	comp=E,47µm,1.5s					
PGF			AML	AML		
	comp=N,36µm,0.6s					
PGF	**Pioggiola**	**3.04 268**	Pn	**Pn**	**08 23 41.9**	**+1.1**
MSSA	**Maissana**	**3.06 302**	P	**Pn**	**08 23 41.6**	**+0.6**
MSSA			AML	AML		
	comp=E,88µm,1.4s					
MSSA			AML	AML		
	comp=N,136µm,0.5s					
AMUR	**Altamura**	**3.18 124**	P	**Pn**	**08 23 42.6**	**-0.1**
AMUR			AML	AML		
	comp=E,240µm,0.5s					
AMUR			AML	AML		
	comp=N,264µm,0.5s					
ROVR	**Rover Verones**	**3.27 334**	P	**Pn**	**08 23 44.9**	**+1.0**
ROVR			AML	AML		
	comp=N,158µm,1.6s					
ROVR			AML	AML		
	comp=E,101µm,0.7s					
SABO	**M.te Sabotino**	**3.27 6**	P	**Pn**	**08 23 43.9**	**0.0**
SABO			AML	AML		
	comp=N,2540µm,0.6s					
SABO			AML	AML		
	comp=E,533µm,0.7s					
SABO			AML	AML		
	comp=E,2210µm,0.7s					
SABO			AML	AML		
	comp=N,680µm,0.6s					
CGRP	**Cima Grappa**	**3.29 344**	P	**Pn**	**08 23 45.4**	**+1.2**
CGRP			AML	AML		
	comp=N,558µm,0.5s					
CGRP			AML	AML		
	comp=E,698µm,0.4s					
AJAC	**Base Areonaval**	**3.32 258**	Pn	**Pn**	**08 23 46.1**	**+1.6**
SALO	**Salr**	**3.44 328**	P	**Pn**	**08 23 47.4**	**+1.3**
SALO			AML	AML		
	comp=N,469µm,0.3s					
SALO			AML	AML		
	comp=E,336µm,0.8s					
CTI	**Castel Tesino**	**3.48 343**	P	**Pn**	**08 23 48.3**	**+1.5**
CTI			AML	AML		
	comp=E,453µm,0.5s					
CTI			AML	AML		
	comp=N,380µm,1.2s					
LTRZ	**Laterza**	**3.50 126**	P	**Pn**	**08 23 48.3**	**+1.4**
MPRI	**Monte Prat**	**3.51 359**	P	**Pn**	**08 23 47.5**	**+0.2**
MPRI			AML	AML		
	comp=N,598µm,0.6s					
MPRI			AML	AML		
	comp=E,368µm,0.7s					
STAL	**STALIGIAL**	**3.54 356**	P	**Pn**	**08 23 48.2**	**+0.6**
STAL			AML	AML		
	comp=E,488µm,0.3s					
STAL			AML	AML		
	comp=N,333µm,1.3s					
LUSI	**Trento, Gardas**	**3.58 335**	P	**Pn**	**08 23 49.0**	**+0.8**
LUSI			AML	AML		
	comp=E,290µm,0.7s					
LUSI			AML	AML		
	comp=N,360µm,1.6s					
CIMO	**Cimolais**	**3.61 353**	P	**Pn**	**08 23 49.0**	**+0.4**
CIMO			AML	AML		
	comp=N,100µm,0.6s					
CIMO			AML	AML		
	comp=N,100µm,0.6s					
CIMO			AML	AML		
	comp=E,116µm,1.6s					
CIMO			AML	AML		
	comp=E,117µm,1.6s					
PTCC	**Patocco-Chiusa**	**3.68 3**	P	**Pn**	**08 23 49.4**	**-0.2**
PTCC			AML	AML		
	comp=E,149µm,0.4s					
PTCC			AML	AML		
	comp=N,125µm,1.4s					
GAGG	**Gaggia**	**3.69 336**	P	**Pn**	**08 23 50.9**	**+1.1**
GAGG			AML	AML		
	comp=E,273µm,0.8s					
GAGG			AML	AML		
	comp=N,248µm,0.9s					
ZONE	**Zone**	**3.72 326**	AML	AML		
	comp=N,300µm,0.2s					
ZONE			AML	AML		
	comp=E,194µm,0.6s					
MABI	**Malga Bissina**	**3.81 332**	P	**Pn**	**08 23 52.8**	**+1.4**
TAR1	**Taranto**	**3.83 124**	AML	AML		
	comp=N,186µm,1.5s					
TAR1			AML	AML		
	comp=E,186µm,0.9s					
ZOU	**Zoufplan**	**3.83 359**	P	**Pn**	**08 23 52.2**	**+0.5**
ZOU			AML	AML		
	comp=E,198µm,1.1s					
ZOU			AML	AML		
	comp=N,198µm,1.5s					
ACOM	**Acomizza, Ital**	**3.83 4**	P	**Pn**	**08 23 52.4**	**+0.7**
ACOM			AML	AML		
	comp=E,376µm,0.3s					
ACOM			AML	AML		
	comp=N,261µm,1.1s					
CANO	**Canova, Maglio**	**3.84 294**	AML	AML		
	comp=E,177µm,1.1s					
CANO			AML	AML		
	comp=N,144µm,0.3s					
OBKA	**Obir**	**3.92 15**	*e*Pn	**Pn**	**08 23 53.8**	**+1.0**
	comp=N,13nm,0.6s					
KOSI	**Kohlern**	**3.93 342**	P	**Pn**	**08 23 55.3**	**+2.2**
KOSI			AML	AML		
	comp=E,285µm,0.7s					
KOSI			AML	AML		
	comp=N,212µm,0.8s					
APPI	**Appiano**	**3.98 341**	P	**Pn**	**08 23 55.4**	**+1.6**
HCY	**Herceg Novi**	**3.99 92**	*e*Pn	**Pn**	**08 23 54.7**	**+1.0**
HCY			*i* Sn	**Sn**	**08 24 42.1**	**+1.6**
BRY	**Bratogost**	**4.00 86**	*e*Pn	**Pn**	**08 23 54.8**	**+0.8**
BRY			*i* Sn	**Sn**	**08 24 42.4**	**+1.4**
ABTA	**Abfaltersbach**	**4.04 354**	*e*P	**Pn**	**08 23 56.2**	**+1.7**
	comp=N,27nm,0.5s,SNR=4.4					
SOKA	**Soboth**	**4.18 18**	*e*Pn	**Pn**	**08 23 57.7**	**+1.3**
	comp=N,2.6nm,0.2s					
BRMO	**Bormio**	**4.22 333**	P	**Pn**	**08 23 59.5**	**+2.4**
BRMO			AML	AML		
	comp=E,67µm,0.6s					
BRMO			AML	AML		
	comp=N,60µm,0.7s					
SAOF	**Saorge**	**4.24 289**	Pn	**Pn**	**08 23 58.5**	**+1.3**
UPM	**Unac-Piva**	**4.28 82**	*e*Pn	**Pn**	**08 23 58.8**	**+0.9**
UPM			*i* Sn	**Sn**	**08 24 49.3**	**+1.3**
RISI	**Rein**	**4.28 351**	AML	AML		
	comp=N,745µm,0.4s					
RISI			AML	AML		
	comp=E,625µm,0.4s					
VSL	**Villasalto**	**4.29 222**	P	**Pn**	**08 23 59.8**	**+2.0**
CEME	**Cevo**	**4.29 90**	⇑*i*Pn	**Pn**	**08 23 58.8**	**+0.9**
CEME			*i* Sn	**Sn**	**08 24 49.5**	**+1.4**
SBF	**Sospel**	**4.29 287**	*e*Pn	**Pn**	**08 23 55.6**	**-2.4**
SBF	**Sospel**	**4.29 287**	*e*P	**Pn**	**08 23 58.9**	**+0.9**
SBF			*e*Sn	**Sn**	**08 24 43.1**	**-5.1**
	comp=E,43nm,0.4s					
BUM	**Brajici-Budva**	**4.30 94**	*e*Pn	**Pn**	**08 23 59.0**	**+1.0**
BUM			*i* Sn	**Sn**	**08 24 49.7**	**+1.4**
NKME	**Niksic**	**4.30 88**	*e*Pn	**Pn**	**08 23 59.1**	**+1.0**
NKME			*i* Sn	**Sn**	**08 24 49.9**	**+1.5**
MUGIO	**Muggio**	**4.33 319**	AML	AML		
	comp=N,101µm,0.6s					
MUGIO			AML	AML		
	comp=E,89µm,0.7s					
TURF	**col de Turini**	**4.35 289**	Pn	**Pn**	**08 23 59.8**	**+1.0**
VARE	**Varese**	**4.42 317**	AML	AML		
	comp=N,165µm,0.5s					
VARE			AML	AML		
	comp=E,140µm,0.8s					
SPIF	**crte de Spivo**	**4.48 289**	Pn	**Pn**	**08 24 03.0**	**+2.4**
MVIF	**Mont Vial**	**4.50 287**	Pn	**Pn**	**08 24 02.8**	**+1.9**
DRME	**Dracevica, Mon**	**4.53 95**	*e*Pn	**Pn**	**08 24 02.2**	**+1.1**
DRME			*i* Sn	**Sn**	**08 24 55.2**	**+1.4**

TTG	**Podgorica**	**4.55**	**92**	*e*Pn	**Pn**	**08 24 02.5**	**+1.1**
TTG				*i* Sn	**Sn**	**08 24 55.8**	**+1.5**
ULC	**Ulcinj**	**4.61**	**97**	⇑*i*Pn	**Pn**	**08 24 03.4**	**+1.1**
ULC				*i* Sn	**Sn**	**08 24 57.3**	**+1.4**
FETA	**Feichten**	**4.61**	**339**	*e*Pn	**Pn**	**08 24 04.9**	**+2.4**
	comp=E,16nm,0.7s,SNR=5.9						
CALF	**Calern**	**4.63**	**285**	Pn	**Pn**	**08 24 03.8**	**+1.1**
PLE	**Pljevlja**	**4.64**	**80**	*e*Pn	**Pn**	**08 24 03.8**	**+1.0**
PLE				*i* Sn	**Sn**	**08 24 58.1**	**+1.3**
ISO	**Isola**	**4.64**	**290**	Pn	**Pn**	**08 24 05.9**	**+3.1**
WTTA	**Wattenberg**	**4.65**	**348**	*e*Pn	**Pn**	**08 24 05.6**	**+2.6**
	comp=E,9.9nm,0.3s						
WTTA	**Wattenberg**	**4.65**	**348**	*e*Pn	**Pn**	**08 24 06.1**	**+3.1**
DAVOX	**Davos/Dischmat**	**4.66**	**332**	Pn	**Pn**	**08 24 04.8**	**+1.8**
	comp=E,11nm,0.3s,baz=154,slow=17,SNR=15						
DAVOX				Sn	**Sn**	**08 24 58.9**	**+1.6**
	comp=E,3.9nm,0.3s,baz=147,slow=18,SNR=2.1						
	comp=E,34nm,0.5s						
SQTA	**Sankt Quirin**	**4.69**	**344**	*e*Pn	**Pn**	**08 24 05.5**	**+2.0**
	comp=E,9.2nm,0.2s,SNR=5.1						
PZZ	**Stroppo**	**4.70**	**294**	P	**Pn**	**08 24 04.3**	**+0.7**
PZZ				AML	AML		
	comp=E,40µm,0.3s						
PZZ				AML	AML		
	comp=N,44µm,1.2s						
KOME	**Kolasin**	**4.72**	**86**	*e*Pn	**Pn**	**08 24 04.8**	**+1.0**
KOME				*i* Sn	**Sn**	**08 24 59.8**	**+1.2**
WATA	**Walderalm**	**4.73**	**347**	*e*Pn	**Pn**	**08 24 06.5**	**+2.4**
	comp=N,25nm,0.5s,SNR=5.2						
TRAV	**Traversella**	**4.76**	**308**	AML	AML		
	comp=E,46µm,0.9s						
TRAV				AML	AML		
	comp=N,42µm,0.4s						
ENAUX	**Enaux**	**4.81**	**289**	Pn	**Pn**	**08 24 07.8**	**+2.6**
MOTA	**Moosalm**	**4.83**	**344**	*i* Pn	**Pn**	**08 24 07.4**	**+2.0**
	comp=N,14nm,0.4s,SNR=6.1						
ARSA	**Arzberg**	**4.83**	**20**	*e*Pn	**Pn**	**08 24 06.2**	**+0.8**
	comp=N,2.3nm,0.2s						
ARSA	**Arzberg**	**4.83**	**20**	*e*Sn	**Sn**	**08 25 00.0**	**-1.4**
LMR	**La Mourre**	**4.88**	**279**	*e*Pn	**Pn**	**08 24 03.4**	**-2.5**
LMR	**La Mourre**	**4.88**	**279**	*e*P	**Pn**	**08 24 05.8**	**-0.1**
LMR				*e*Sn	**Sn**	**08 24 56.6**	**-5.8**
	comp=N,5.5nm,0.5s						
SURF	**Saint Ours**	**4.90**	**293**	Pn	**Pn**	**08 24 08.1**	**+1.8**
JAUF	**Jausiers**	**4.92**	**292**	Pn	**Pn**	**08 24 08.7**	**+2.0**
ZUGS	**Zugspitze, Sch**	**4.92**	**343**	*e*Pn	**Pn**	**08 24 09.7**	**+2.8**
PART	**Garmisch-Parte**	**4.97**	**344**	*e*Pn	**Pn**	**08 24 10.4**	**+3.1**
BIOA	**Bad Ischl, Aus**	**4.98**	**4**	*e*Pn	**Pn**	**08 24 08.8**	**+1.5**
	comp=N,9.3nm,0.3s,SNR=7.0						
IVA	**Berane**	**4.99**	**86**	⇑*i*Pn	**Pn**	**08 24 08.7**	**+1.1**
IVA				*i* Sn	**Sn**	**08 25 06.6**	**+1.1**
TRIGF	**Trigance**	**5.00**	**284**	Pn	**Pn**	**08 24 09.4**	**+1.7**
MBDF	**Montbardon**	**5.01**	**296**	*e*Pn	**Pn**	**08 24 05.3**	**-2.6**
MBDF	**Montbardon**	**5.01**	**296**	*e*P	**Pn**	**08 24 09.6**	**+1.7**
RJOB	**Jochberg**	**5.01**	**358**	*e*Sn	**Sn**	**08 25 09.0**	**+3.1**
RETA	**Reutte**	**5.04**	**342**	*e*Pn	**Pn**	**08 24 10.8**	**+2.6**
	comp=N,7.9nm,0.3s,SNR=6.5						
CREF	**Crivoux**	**5.05**	**293**	Pn	**Pn**	**08 24 10.7**	**+2.3**
PVY	**Plav**	**5.05**	**89**	⇓*i*Pn	**Pn**	**08 24 09.5**	**+1.0**
PVY				*i* Sn	**Sn**	**08 25 08.0**	**+1.0**
FLAF	**Flassans-sur-I**	**5.07**	**280**	Pn	**Pn**	**08 24 09.7**	**+1.2**
OGAG	**Argentiere**	**5.07**	**292**	Pn	**Pn**	**08 24 13.4**	**+4.7**
OBER	**Oberstdorf**	**5.08**	**338**	*e*Pn	**Pn**	**08 24 11.4**	**+2.6**
DAVA	**Damuels**	**5.10**	**334**	*e*Pn	**Pn**	**08 24 12.1**	**+3.0**
	comp=N,12nm,0.3s,SNR=9.5						
DAVA	**Damuels**	**5.10**	**334**	*e*Pn	**Pn**	**08 24 12.1**	**+3.0**
EMBD	**Embd, Matterta**	**5.14**	**315**	Pn	**Pn**	**08 24 11.4**	**+1.8**
EMBD	**Embd, Matterta**	**5.14**	**315**	Sn	**Sn**	**08 25 09.4**	**+0.3**
MOA	**Molln**	**5.19**	**9**	*e*Pn	**Pn**	**08 24 11.6**	**+1.5**
	comp=N,4.6nm,0.3s						
MOA	**Molln**	**5.19**	**9**	*e*Pn	**Pn**	**08 24 11.6**	**+1.5**
MOA				*e*Sn	**Sn**	**08 25 09.9**	**-0.2**
LPG	**La Plagne**	**5.35**	**303**	*e*Pn	**Pn**	**08 24 09.9**	**-2.8**
LPG	**La Plagne**	**5.35**	**303**	*e*P	**Pn**	**08 24 14.4**	**+1.7**
LPL	**La Plagne**	**5.37**	**303**	*e*Pn	**Pn**	**08 24 10.4**	**-2.5**
LPL	**La Plagne**	**5.37**	**303**	*e*P	**Pn**	**08 24 14.7**	**+1.8**
LPL				*e*Sn	**Sn**	**08 25 08.6**	**-6.3**
	comp=N,6.3nm,0.4s						
ARTF	**Artigues**	**5.41**	**282**	Pn	**Pn**	**08 24 14.7**	**+1.4**
RONA	**Rosalia, Austr**	**5.46**	**23**	*e*Pn	**Pn**	**08 24 14.7**	**+0.8**
	comp=N,4.2nm,0.3s						
RSL	**Roselend**	**5.52**	**305**	Pn	**Pn**	**08 24 16.8**	**+1.9**
CONA	**Conrad Observa**	**5.55**	**20**	*e*Pn	**Pn**	**08 24 15.9**	**+0.7**
	comp=N,3.7nm,0.3s						
SMRF	**Simiane la Rot**	**5.63**	**285**	*e*Pn	**Pn**	**08 24 14.3**	**-2.0**
SMRF	**Simiane la Rot**	**5.63**	**285**	*e*P	**Pn**	**08 24 18.5**	**+2.2**
SMRF				*e*Sn	**Sn**	**08 25 15.5**	**-5.6**
	comp=N,6.0nm,0.7s						
OGSI	**Sixt**	**5.64**	**308**	Pn	**Pn**	**08 24 18.4**	**+1.9**
ORIF	**Oris-en-Rattie**	**5.67**	**295**	*e*Pn	**Pn**	**08 24 14.6**	**-2.3**
ORIF	**Oris-en-Rattie**	**5.67**	**295**	*e*P	**Pn**	**08 24 19.1**	**+2.2**
ORIF				*e*Sn	**Sn**	**08 25 15.1**	**-7.0**
	comp=N,7.3nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.67**	**295**	Pn	**Pn**	**08 24 18.8**	**+1.9**
AIGLE	**Aigle**	**5.69**	**311**	Pn	**Pn**	**08 24 19.1**	**+1.9**
RUSF	**Rustrel**	**5.69**	**285**	Pn	**Pn**	**08 24 19.9**	**+2.8**
GRN	**Grenoble**	**5.88**	**298**	Pn	**Pn**	**08 24 23.1**	**+3.4**
SULZ	**Cheisacher**	**5.96**	**325**	Pn	**Pn**	**08 24 21.9**	**+1.1**
SULZ	**Cheisacher**	**5.96**	**325**	Sn	**Sn**	**08 25 28.3**	**-0.8**
TORNY	**Torny/Romont**	**5.96**	**315**	Pn	**Pn**	**08 24 22.4**	**+1.5**
TORNY	**Torny/Romont**	**5.96**	**315**	Sn	**Sn**	**08 25 28.9**	**-0.3**
BALST	**Balsthal**	**5.99**	**322**	Sn	**Sn**	**08 25 30.6**	**+0.6**
BALST	**Balsthal**	**5.99**	**322**	Pn	**Pn**	**08 24 21.1**	**-0.2**
SLE	**Schleitheim**	**6.00**	**329**	Pn	**Pn**	**08 24 22.0**	**+0.6**
GEC2	**GERESS Array S**	**6.13**	**4**	*e*Pn	**Pn**	**08 24 23.4**	**+0.2**
GEC2				*e*Sn	**Sn**	**08 25 32.5**	**-0.9**
GERES	**GERESS Array B**	**6.13**	**4**	Pn	**Pn**	**08 24 23.1**	**-0.1**
	comp=N,2.1nm,0.3s,baz=168,slow=13,SNR=16						
GERES				Sn	**Sn**	**08 25 30.2**	**-3.3**
	comp=N,1.4nm,0.3s,baz=191,slow=31,SNR=2.4						
	comp=N,2.1nm,0.3s						
CKRC	**Cesky Krumlov**	**6.15**	**7**	*e*PN	**Pn**	**08 24 23.0**	**-0.4**
CKRC				*e*SN	**Sn**	**08 25 32.1**	**-1.7**
GIMEL	**St. Georges /**	**6.19**	**310**	Pn	**Pn**	**08 24 25.3**	**+1.3**
BOURR	**Bourrignon**	**6.25**	**320**	Pn	**Pn**	**08 24 25.8**	**+1.0**
BRANT	**Les Verrieres**	**6.32**	**314**	Pn	**Pn**	**08 24 26.9**	**+1.1**
CABF	**La Chapelle**	**6.33**	**310**	*e*Pn	**Pn**	**08 24 23.1**	**-2.9**
CABF	**La Chapelle**	**6.33**	**310**	*e*P	**Pn**	**08 24 27.1**	**+1.1**
CABF				*e*Sn	**Sn**	**08 25 31.7**	**-6.8**
	comp=N,10.0nm,0.7s						
OG35	**Corcelles**	**6.34**	**304**	Pn	**Pn**	**08 24 26.7**	**+0.7**
OG35				Sn	**Sn**	**08 25 34.1**	**-4.4**
KIZ	**Kirchzarten**	**6.38**	**327**	Pn	**Pn**	**08 24 27.0**	**+0.5**
KIZ	**Kirchzarten**	**6.38**	**327**	Sn	**Sn**	**08 25 37.1**	**-2.3**
KHC	**Kasperske Hory**	**6.41**	**3**	*e*PN	**Pn**	**08 24 26.0**	**-1.0**
KHC				*e*SN	**Sn**	**08 25 38.4**	**-1.9**
WET	**Wettzell**	**6.42**	**359**	*e*Pn	**Pn**	**08 24 27.3**	**+0.2**
WET				*e*Sn	**Sn**	**08 25 38.7**	**-1.8**
CHMF	**Charmoille**	**6.43**	**317**	Pn	**Pn**	**08 24 27.9**	**+0.6**
VIVF	**Saint-Julien-I**	**6.46**	**292**	*e*Pn	**Pn**	**08 24 25.0**	**-2.8**
VIVF	**Saint-Julien-I**	**6.46**	**292**	*e*P	**Pn**	**08 24 29.6**	**+1.8**
VIVF				*e*Sn	**Sn**	**08 25 34.3**	**-7.3**
	comp=N,1.7nm,0.4s						
BFO	**Black Forest**	**6.53**	**331**	*e*Pn	**Pn**	**08 24 30.6**	**+2.0**
VOGT	**Vogtsburg - To**	**6.58**	**326**	Pn	**Pn**	**08 24 29.7**	**+0.4**
VOGT	**Vogtsburg - To**	**6.58**	**326**	Sn	**Sn**	**08 25 43.0**	**-1.4**
MOF	**Molkenrain**	**6.63**	**323**	Pn	**Pn**	**08 24 30.5**	**+0.4**
MOF				Sn	**Sn**	**08 25 44.3**	**-1.5**
BOUC	**Bouclans**	**6.63**	**315**	Sn	**Sn**	**08 25 41.8**	**-3.9**
SSB	**Saint Sauveur**	**6.68**	**295**	Pn	**Pn**	**08 24 32.2**	**+1.4**
HINF	**Hinteralfeld**	**6.73**	**321**	*e*Pn	**Pn**	**08 24 28.7**	**-2.7**
HINF	**Hinteralfeld**	**6.73**	**321**	*e*P	**Pn**	**08 24 32.0**	**+0.6**
HINF				*e*Sn	**Sn**	**08 25 40.9**	**-7.3**
	comp=N,16nm,0.4s						
KRUC	**Moravsky**	**6.74**	**19**	*e*PN	**Pn**	**08 24 30.1**	**-1.3**
KRUC				*e*SN	**Sn**	**08 25 46.4**	**-1.8**
RONF	**Ronchamp**	**6.75**	**320**	Pn	**Pn**	**08 24 31.6**	**-0.1**
RONF				Sn	**Sn**	**08 25 47.6**	**-1.1**
LASF	**Ste Croix**	**6.87**	**284**	*e*Pn	**Pn**	**08 24 30.3**	**-3.0**
LASF	**Ste Croix**	**6.87**	**284**	*e*P	**Pn**	**08 24 34.2**	**+0.9**
ECH	**Echery**	**6.90**	**325**	Pn	**Pn**	**08 24 33.5**	**-0.2**
ECH	**Echery**	**6.90**	**325**	Pn	**Pn**	**08 24 33.8**	**+0.1**
ECH				Sn	**Sn**	**08 25 51.1**	**-1.1**
CDF	**Champ du Feu**	**7.00**	**326**	*e*Pn	**Pn**	**08 24 32.5**	**-2.7**
CDF	**Champ du Feu**	**7.00**	**326**	*e*P	**Pn**	**08 24 35.3**	**+0.1**
CDF				*e*Sn	**Sn**	**08 25 47.9**	**-7.0**
	comp=N,15nm,0.5s						
VRAC	**Vranov**	**7.01**	**19**	Pn	**Pn**	**08 24 37.4**	**+2.2**
	comp=N,0.7nm,0.3s,baz=190,slow=14,SNR=2.3						
	comp=N,1.2nm,0.3s						
ROTZ	**Rotzenmuhle**	**7.07**	**355**	*e*Sn	**Sn**	**08 25 53.3**	**-3.0**
HAU	**Haudompre**	**7.11**	**320**	*e*Pn	**Pn**	**08 24 33.8**	**-2.7**
HAU	**Haudompre**	**7.11**	**320**	*e*P	**Pn**	**08 24 36.9**	**+0.4**
HAU				*e*Sn	**Sn**	**08 25 49.8**	**-7.5**
	comp=N,34nm,0.5s						
PLYF	**Puligny Montra**	**7.29**	**308**	Pn	**Pn**	**08 24 39.2**	**+0.1**
NKC	**Novy Kostel**	**7.52**	**357**	*e*SN	**Sn**	**08 26 04.8**	**-2.7**
KEST	**Kesra**	**7.57**	**204**	Pn	Pn	08 24 48.4	+5.4
	comp=N,0.6nm,0.3s,baz=225,slow=23,SNR=1.7						
	comp=N,2.2nm,0.5s						
SMF	**Signal de Mont**	**7.68**	**304**	*e*Pn	**Pn**	**08 24 41.4**	**-3.0**
SMF	**Signal de Mont**	**7.68**	**304**	*e*P	**Pn**	**08 24 44.7**	**+0.3**
SMF				*e*Sn	**Sn**	**08 26 03.8**	**-7.6**
	comp=N,7.6nm,0.4s						
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*Pn	**Pn**	**08 24 43.4**	**-2.5**
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*P	**Pn**	**08 24 47.4**	**+1.5**
PAGF				*e*Sn	**Sn**	**08 26 06.2**	**-7.9**
	comp=N,10nm,0.5s						
SFTF	**Sexfontaines**	**7.88**	**317**	*e*Pn	**Pn**	**08 24 44.3**	**-2.9**
SFTF	**Sexfontaines**	**7.88**	**317**	*e*P	**Pn**	**08 24 47.5**	**+0.3**
LOR	**Lormes**	**7.97**	**308**	*e*Pn	**Pn**	**08 24 45.8**	**-2.6**
LOR	**Lormes**	**7.97**	**308**	*e*P	**Pn**	**08 24 49.0**	**+0.6**
LOR				*e*Sn	**Sn**	**08 26 10.3**	**-8.3**
	comp=N,4.8nm,0.3s						
LOR	**Lormes**	**7.97**	**308**	Pn	**Pn**	**08 24 48.3**	**-0.1**
MOX	**Moxa**	**7.99**	**353**	*e*Sn	**Sn**	**08 26 15.6**	**-3.3**
MTLF	**Montolieu**	**8.00**	**278**	*e*Pn	**Pn**	**08 24 46.2**	**-2.6**
MTLF	**Montolieu**	**8.00**	**278**	*e*P	**Pn**	**08 24 52.5**	**+3.7**
AVF	**Avril sur Loir**	**8.04**	**304**	*e*Pn	**Pn**	**08 24 46.7**	**-2.6**
AVF	**Avril sur Loir**	**8.04**	**304**	*e*P	**Pn**	**08 24 50.1**	**+0.8**
AVF				*e*Sn	**Sn**	**08 26 12.3**	**-8.0**
MEZF	**Maizieres J'vi**	**8.07**	**318**	*e*Pn	**Pn**	**08 24 46.4**	**-3.4**
MEZF	**Maizieres J'vi**	**8.07**	**318**	*e*P	**Pn**	**08 24 51.1**	**+1.3**
SSF	**Saint Saulge**	**8.08**	**306**	*e*Pn	**Pn**	**08 24 46.6**	**-3.2**
SSF	**Saint Saulge**	**8.08**	**306**	*e*P	**Pn**	**08 24 49.7**	**-0.1**
SSF				*e*Sn	**Sn**	**08 26 13.0**	**-8.2**
	comp=N,5.7nm,0.7s						
SAVF	**Savonnieres en**	**8.12**	**319**	*e*Pn	**Pn**	**08 24 47.7**	**-2.7**
SAVF	**Savonnieres en**	**8.12**	**319**	*e*P	**Pn**	**08 24 52.1**	**+1.7**
SAVF				*e*Sn	**Sn**	**08 26 13.7**	**-8.4**
	comp=N,4.3nm,0.4s						
ABH	**Alteburg**	**8.12**	**334**	Pn	**Pn**	**08 24 52.0**	**+1.6**
CAF	**Calviac**	**8.28**	**289**	*e*Pn	**Pn**	**08 24 50.1**	**-2.6**
CAF	**Calviac**	**8.28**	**289**	*e*P	**Pn**	**08 24 54.9**	**+2.2**
CLL	**Collm**	**8.58**	**360**	*e*Pn	**Pn**	**08 24 57.0**	**+0.3**
CLL				*ex*	x	08 25 00.0	
CLL				*ex*	x	08 25 08.0	
CLL				*e*Sn	Sn	08 26 18.0	-16
CLL				*ex*	x	08 26 37.0	
CLL				*ex*	x	08 26 53.0	
CLL				*ex*	x	08 27 15.0	
CLL				*e*Sg	**Sg**	**08 27 29.0**	**+1.3**
	comp=Z,15nm,1.3s						
RJF	**Les Rejaudoux**	**8.74**	**291**	*e*Pn	**Pn**	**08 24 56.0**	**-3.0**
RJF	**Les Rejaudoux**	**8.74**	**291**	*e*P	**Pn**	**08 25 01.7**	**+2.7**
BAIF	**Baives**	**9.56**	**323**	*e*Sn	Sn	08 26 48.3	-9.4
	comp=Z,3.6nm,0.5s						
IDI	**Anoyia**	**11.79**	**125**	Pn	**Pn**	**08 25 38.8**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=268,slow=11,SNR=1.1						
ESDC	**Sonseca Array**	**13.21**	**262**	Pn	**Pn**	**08 26 02.4**	**+2.2**
	baz=62,slow=14,SNR=2.0						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**16.46**	**326**	Pn	**Pn**	**08 26 44.5**	**+1.1**
	baz=134,slow=14						
EKA				LR	LR	08 34 23.7	
	comp=Z,2µm,18.0s,baz=62,slow=42						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**20.29**	**18**	P	**P**	**08 27 28.1**	**0.0**
	comp=Z,2.8nm,0.8s,baz=195,slow=14,SNR=3.4						
	comp=Z,2.8nm,0.8s						
KBZ	**Khabaz**	**21.68**	**77**	P	**P**	**08 27 44.4**	**+1.1**
	comp=Z,2.7nm,0.9s,baz=266,slow=14,SNR=2.9						
	comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.09**	**202**	P	**P**	**08 29 12.5**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=25,slow=9.8,SNR=2.9						
	comp=Z,0.3nm,0.4s						
ARU	**Arti**	**31.86**	**49**	P	**P**	**08 29 19.1**	**+1.6**
	comp=Z,1.7nm,0.2s,baz=262,slow=4.0,SNR=4.6						
	comp=Z,1.7nm,0.2s						
MKAR	**Makanchi Array**	**47.84**	**60**	P	**P**	**08 31 32.3**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=282,slow=7.2,SNR=2.4						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**61.89**	**50**	P	**P**	**08 33 14.2**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=283,slow=7.1,SNR=3.4						
	comp=Z,0.5nm,0.7s						

ROM 30 08:24:35.2±0.0, 42°.776N±0°.003×13°.071E±0°.004,
h10km, ML3.5/19, 2C-1D, Error ellipse: s-maj=0.3km
s-min=0.2km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.03**	**218**	P	Pg	08 24 37.5	+0.2
T1212				S	Sg	08 24 38.7	+0.1
T1213	**Norcia, Frazio**	**0.07**	**142**	P	Pg	08 24 37.9	+0.4
T1213				S	Sg	08 24 39.3	+0.1
T1214	**Arquata del Tr**	**0.10**	**99**	P	Pg	08 24 38.5	+0.4
T1214				S	Sg	08 24 40.3	+0.3
T1218	**Civita (PG)**	**0.11**	**163**	P	Pg	08 24 38.6	+0.5
T1218				S	Sg	08 24 40.8	+0.6
T1245	**Castelsantange**	**0.12**	**47**	⇓P	Pg	08 24 38.5	+0.2
T1245				S	Sg	08 24 40.6	+0.2
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.12**	**342**	P	Pg	08 24 38.5	+0.4
T1216				S	Sg	08 24 40.7	+0.4
T1217	**Poggiodomo (PG**	**0.12**	**238**	⇑P	Pg	08 24 38.7	+0.5
T1217				S	Sg	08 24 41.1	+0.7
T1215	**Vallo di Nera,**	**0.15**	**280**	P	Pg	08 24 39.1	+0.5
T1215				S	Sg	08 24 41.7	+0.6
T1215				AML	AML		
	comp=E,10715µm,1.0s						
T1215				AML	AML		
	comp=E,10045µm,1.0s						
T1215				AML	AML		
	comp=E,10685µm,1.0s						
T1215				AML	AML		
	comp=E,10035µm,1.0s						
T1215				AML	AML		
	comp=E,10690µm,1.0s						
T1215				AML	AML		
	comp=N,8235µm,1.1s						
T1215				AML	AML		
	comp=N,9065µm,1.1s						
T1215				AML	AML		
	comp=N,9075µm,1.1s						
T1215				AML	AML		
	comp=N,8235µm,1.1s						
T1215				AML	AML		
	comp=E,10700µm,1.0s						
T1215				AML	AML		
	comp=E,10030µm,1.0s						
MC2	**Monte Cornacci**	**0.16**	**33**	P	Pg	08 24 39.5	+0.5
MC2				S	Sg	08 24 42.3	+0.7
T1244	**Arquata del Tr**	**0.17**	**96**	P	Pg	08 24 39.5	+0.5
T1244				S	Sg	08 24 42.7	+1.2
LNSS	**Leonessa**	**0.17**	**187**	P	Pg	08 24 39.8	+0.7
LNSS				S	Sg	08 24 42.7	+1.0
LNSS				AML	AML		
	comp=N,57000µm,0.2s						
LNSS				AML	AML		
	comp=E,35650µm,0.3s						
T1201	**Domo (RI)**	**0.18**	**132**	⇑P	Pb	08 24 40.0	-0.6
T1201				S	Sg	08 24 43.3	+1.5
T1204	**Amatrice, Fraz**	**0.21**	**119**	P	Pb	08 24 40.5	-0.7
T1204				S	Sg	08 24 43.8	+1.1
T1204				AML	AML		
	comp=E,48000µm,0.5s						
T1204				AML	AML		
	comp=N,24800µm,0.4s						
T1204				AML	AML		
	comp=N,24750µm,0.4s						
T1204				AML	AML		
	comp=E,47950µm,0.5s						
MMO1	**Montemonaco**	**0.23**	**57**	P	Pg	08 24 40.4	+0.5
MMO1				S	Sg	08 24 44.0	+0.8
T1256	**Bolognola (MC)**	**0.26**	**26**	P	Pg	08 24 41.2	+0.7
T1256				S	Sg	08 24 44.8	+0.7
FDMO	**Fiordimonte**	**0.26**	**3**	P	Pb	08 24 41.5	-0.5
FDMO				S	Sg	08 24 44.9	+0.8
T1241	**Roccafluvione,**	**0.28**	**73**	P	Pb	08 24 41.9	-0.4
T1241				S	Sb	08 24 46.3	-0.7
T1241				AML	AML		
	comp=N,16700µm,0.6s						
T1241				AML	AML		
	comp=N,16450µm,0.6s						
T1241				AML	AML		
	comp=E,35950µm,0.9s						
T1241				AML	AML		
	comp=E,35600µm,0.9s						
T1241				AML	AML		
	comp=N,16500µm,0.6s						
RM33	**Pellescritta (**	**0.29**	**158**	P	Pg	08 24 41.5	+0.5
RM33				S	Sb	08 24 46.1	-1.2
RM33				AML	AML		
	comp=E,20800µm,0.2s						
RM33				AML	AML		
	comp=N,20550µm,0.2s						
RM33				AML	AML		
	comp=N,20050µm,0.2s						
RM33				AML	AML		
	comp=N,20600µm,0.2s						
RM33				AML	AML		
	comp=E,20600µm,0.2s						
RM33				AML	AML		
	comp=E,20650µm,0.2s						
RM33				AML	AML		
	comp=N,20100µm,0.2s						
AM05	**Amandola Campo**	**0.29**	**46**	P	Pg	08 24 41.2	+0.1
AM05				S	Sb	08 24 46.2	-1.1
AM05				AML	AML		
	comp=E,3770µm,0.6s						
AM05				AML	AML		
	comp=N,3595µm,0.5s						
AM05				AML	AML		
	comp=N,798µm,0.4s						
AM05				AML	AML		
	comp=N,3590µm,0.5s						
AM05				AML	AML		
	comp=E,14150µm,0.9s						
AM05				AML	AML		
	comp=N,796µm,0.4s						
T1243	**Rocca Santa Ma**	**0.29**	**106**	P	Pg	08 24 41.4	+0.3
T1243				S	Sg	08 24 45.9	+0.9
T1211	**Morro Reatino**	**0.29**	**213**	P	Pg	08 24 41.8	+0.7
T1211				S	Sb	08 24 46.4	-1.0
ARRO	**Arrone**	**0.30**	**229**	P	Pg	08 24 41.8	+0.6
ARRO				S	Sg	08 24 45.8	+0.6
CSP1	**Cessapalombo**	**0.33**	**17**	P	Pb	08 24 42.8	-0.4
CSP1				S	Sg	08 24 47.3	+1.0
CAMP	**Campotosto**	**0.35**	**134**	P	Pg	08 24 42.6	+0.4
CAMP				S	Sg	08 24 47.8	+1.0
CAMP				AML	AML		
	comp=E,5350µm,0.8s						
CAMP				AML	AML		
	comp=N,4360µm,0.9s						
GUMA	**Gualdo di Mace**	**0.35**	**34**	P	Pg	08 24 42.4	+0.3
GUMA				S	Sb	08 24 48.5	-0.4
GUMA				AML	AML		
	comp=E,20600µm,0.6s						
GUMA				AML	AML		
	comp=N,27050µm,0.6s						
GUMA				AML	AML		
	comp=E,19900µm,0.5s						
GUMA				AML	AML		
	comp=N,19600µm,0.7s						
T1246	**Crognaleto (TE**	**0.37**	**122**	P	Pg	08 24 42.9	+0.4
T1246				S	Sg	08 24 48.4	+1.0
T1247	**Pizzolo (AQ)**	**0.37**	**153**	P	Pg	08 24 42.7	0.0
T1247				S	Sb	08 24 48.8	-1.0
T1247				AML	AML		
	comp=E,12450µm,0.3s						
T1247				AML	AML		
	comp=N,17550µm,0.2s						
SEF1	**Sefro**	**0.38**	**346**	P	Pg	08 24 42.8	0.0
SEF1				S	Sb	08 24 49.1	-0.8
CESX	**Cesi**	**0.40**	**246**	P	Pg	08 24 43.2	+0.1
CESX				S	Sg	08 24 49.2	+0.9
CESX				AML	AML		
	comp=E,5950µm,0.6s						
CESX				AML	AML		
	comp=N,4425µm,0.8s						
ASSB	**Assisi San Ben**	**0.40**	**311**	P	Pg	08 24 43.4	+0.2
ASSB				S	Sb	08 24 49.8	-0.9
MDAR	**Monte D'Aria**	**0.42**	**7**	P	Pg	08 24 43.0	-0.5
MDAR				S

T0110 S Sg 08 24 59.5 -0.2
SACS San Casciano d 0.86 275 P Pb 08 24 52.5 +0.4

*IDC **30** 08:26:45.5±2.5, 48.°88N×155.°61E, h0km, mb4.0/12, mbtmp4.0/13, ML3.1/1, Error ellipse: s-maj=61.8km s-min=21.7km az=172.0*
*NEIC **30** 08:26:55.5±1.3, 49.°16N±0.°10×156.°0E±0.°1, h66km±10km, mb4.4/11, Error ellipse: s-maj=19.6km s-min=4.8km az=135.0*
*KRSC **30** 08:26:56.4±2.4, 49.°26N×157.°32E, h39km±35km, ML4.8*
*MOS **30** 08:26:56.1±1.0, 49.°28N×156.°05E, h85km, mb4.1/6, Error ellipse: s-maj=14.1km s-min=4.1km az=77.6*
ISC 30 08:26:58.1±0.8, **49.°27N**±0.°09×**156.°32E**±0.°08, **h100**km, **n104**, σ1$**66**/138, **mb4.1**/19, **7C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.42**	**355**	*e*PN	**Pn**	**08 27 24.0**	**+0.6**
SKR				*e*S	**Sn**	**08 27 38.1**	**-4.5**
SKR				pmax	pmax		
	comp=Z,21nm,0.2s						
SKR				smax	smax		
	comp=N,877nm,0.2s						
SKR				smax	smax		
	comp=E,696nm,0.3s						
PAU	**Pauzhetka**	**2.23**	**8**	PN	**Pn**	**08 27 32.9**	**-0.7**
PAU				S	**Sn**	**08 27 59.1**	**-1.6**
PAU	**Pauzhetka**	**2.23**	**8**	P	**Pn**	**08 27 32.9**	**-0.7**
PAU				S	**Sn**	**08 27 59.1**	**-1.6**
KDTR	**Khodutka, Kamc**	**2.78**	**23**	PN	**Pn**	**08 27 39.4**	**-1.5**
KDTR				S	**Sn**	**08 28 10.7**	**-3.1**
KDTR	**Khodutka, Kamc**	**2.78**	**23**	P	**Pn**	**08 27 39.4**	**-1.5**
KDTR				S	**Sn**	**08 28 10.7**	**-3.1**
ASAK	**Asacha**	**3.28**	**17**	PN	**Pn**	**08 27 47.5**	**-0.1**
ASAK				S	**Sn**	**08 28 25.4**	**-0.4**
ASAK	**Asacha**	**3.28**	**17**	P	**Pn**	**08 27 47.5**	**-0.1**
ASAK				S	**Sn**	**08 28 25.4**	**-0.4**
MTVR	**Mutnovka**	**3.43**	**19**	PN	**Pn**	**08 27 49.2**	**-0.5**
MTVR				S	**Sn**	**08 28 27.3**	**-2.2**
MTVR	**Mutnovka**	**3.43**	**19**	P	**Pn**	**08 27 49.2**	**-0.5**
MTVR				S	**Sn**	**08 28 27.3**	**-2.2**
RUS	**Russkaya**	**3.46**	**23**	PN	**Pn**	**08 27 48.5**	**-1.5**
RUS				S	**Sn**	**08 28 26.7**	**-3.4**
RUS	**Russkaya**	**3.46**	**23**	P	**Pn**	**08 27 48.5**	**-1.5**
RUS				S	**Sn**	**08 28 26.7**	**-3.4**
GRL	**Gorelyy**	**3.47**	**18**	PN	**Pn**	**08 27 50.1**	**-0.2**
GRL				S	**Sn**	**08 28 29.1**	**-1.4**
GRL	**Gorelyy**	**3.47**	**18**	P	**Pn**	**08 27 50.1**	**-0.2**
GRL				S	**Sn**	**08 28 29.1**	**-1.4**
APC	**Apacha**	**3.70**	**8**	PN	**Pn**	**08 27 53.6**	**+0.4**
APC				S	**Sn**	**08 28 35.5**	**-0.3**
APC	**Apacha**	**3.70**	**8**	P	**Pn**	**08 27 53.6**	**+0.4**
APC				S	**Sn**	**08 28 35.5**	**-0.3**
KRMR	**Karymshinskiy**	**3.75**	**17**	PN	**Pn**	**08 27 54.2**	**+0.4**
KRMR				S	**Sn**	**08 28 36.9**	**0.0**
KRMR	**Karymshinskiy**	**3.75**	**17**	P	**Pn**	**08 27 54.2**	**+0.4**
KRMR				S	**Sn**	**08 28 36.9**	**0.0**
PEA0B	**Petropavlovsk-**	**3.94**	**12**		**Pn**	**08 27 56.3**	**-0.2**
PEA0B	**Petropavlovsk-**	**3.94**	**12**	*d* PN	**Pn**	**08 27 56.6**	**+0.1**
PETK	**Petropavlovsk-**	**3.94**	**12**	Pn	**Pn**	**08 27 55.9**	**-0.6**
	comp=E,5.3nm,0.3s,baz=179,slow=12,SNR=80						
PETK				Sn	**Sn**	**08 28 43.7**	**+2.0**
	comp=E,3.8nm,0.3s,baz=180,slow=26,SNR=5.3						
	comp=E,12nm,0.4s						
PETK	**Petropavlovsk-**	**3.94**	**12**		**Pn**	**08 27 55.6**	**-0.9**
PET	**Petropavlovsk**	**4.04**	**20**	Pn	**Pn**	**08 27 57.4**	**-0.3**
PET				Sn	**Sn**	**08 28 43.6**	**-0.4**
PET	**Petropavlovsk**	**4.04**	**20**	PN	**Pn**	**08 27 57.4**	**-0.3**
PET				S	**Sn**	**08 28 43.1**	**-0.9**
PET	**Petropavlovsk**	**4.04**	**20**	P	**Pn**	**08 27 57.4**	**-0.3**
PET				S	**Sn**	**08 28 43.1**	**-0.9**
DALK	**Dalny**	**4.07**	**21**	PN	**Pn**	**08 27 57.8**	**-0.3**
DALK				S	**Sn**	**08 28 42.8**	**-1.9**
DALK	**Dalny**	**4.07**	**21**	P	**Pn**	**08 27 57.8**	**-0.3**
DALK				S	**Sn**	**08 28 42.8**	**-1.9**
UGLR	**Uglovaya**	**4.25**	**21**	PN	**Pn**	**08 28 01.3**	**+0.6**
UGLR				S	**Sn**	**08 28 48.7**	**-0.5**
UGLR	**Uglovaya**	**4.25**	**21**	P	**Pn**	**08 28 01.3**	**+0.6**
UGLR				S	**Sn**	**08 28 48.7**	**-0.5**
AVH	**Avacha**	**4.28**	**20**	PN	**Pn**	**08 28 02.1**	**+1.0**
AVH				S	**Sn**	**08 28 50.6**	**+0.6**
AVH	**Avacha**	**4.28**	**20**	P	**Pn**	**08 28 02.1**	**+1.0**
AVH				S	**Sn**	**08 28 50.6**	**+0.6**
KOK	**Koryaka**	**4.29**	**19**	PN	**Pn**	**08 28 02.3**	**+1.1**
KOK				S	**Sn**	**08 28 51.2**	**+1.1**
KOK	**Koryaka**	**4.29**	**19**	P	**Pn**	**08 28 02.3**	**+1.1**
KOK				S	**Sn**	**08 28 51.2**	**+1.1**
SMAR	**Somma**	**4.29**	**20**	PN	**Pn**	**08 28 01.5**	**+0.1**
SMAR				S	**Sn**	**08 28 49.3**	**-1.2**
SMAR	**Somma**	**4.29**	**20**	P	**Pn**	**08 28 01.5**	**+0.1**
SMAR				S	**Sn**	**08 28 49.3**	**-1.2**
KRER	**Koryakskii**	**4.32**	**20**	PN	**Pn**	**08 28 01.8**	**0.0**
KRER				S	**Sn**	**08 28 49.9**	**-1.2**
KRER	**Koryakskii**	**4.32**	**20**	P	**Pn**	**08 28 01.8**	**0.0**
KRER				S	**Sn**	**08 28 49.9**	**-1.2**
SDLR	**Sedlovina**	**4.33**	**21**	PN	**Pn**	**08 28 01.2**	**-0.6**
SDLR				S	**Sn**	**08 28 48.3**	**-2.8**
SDLR	**Sedlovina**	**4.33**	**21**	P	**Pn**	**08 28 01.2**	**-0.6**
SDLR				S	**Sn**	**08 28 48.3**	**-2.8**
NLC	**Nalytchevo**	**4.35**	**25**	PN	**Pn**	**08 28 00.1**	**-1.8**
NLC				S	**Sn**	**08 28 47.0**	**-4.4**
NLC	**Nalytchevo**	**4.35**	**25**	P	**Pn**	**08 28 00.1**	**-1.8**
NLC				S	**Sn**	**08 28 47.0**	**-4.4**
KRX	**Arik**	**4.35**	**19**	PN	**Pn**	**08 28 03.0**	**+0.9**
KRX				S	**Sn**	**08 28 51.5**	**-0.2**
KRX	**Arik**	**4.35**	**19**	P	**Pn**	**08 28 03.0**	**+0.9**
KRX				S	**Sn**	**08 28 51.5**	**-0.2**
SPN	**Mys Shipunski**	**4.49**	**30**	PN	**Pn**	**08 28 02.9**	**-0.9**
SPN				S	**Sn**	**08 28 52.2**	**-2.6**
SPN	**Mys Shipunski**	**4.49**	**30**	P	**Pn**	**08 28 02.9**	**-0.9**
SPN				S	**Sn**	**08 28 52.2**	**-2.6**
GNL	**Ganaly**	**4.55**	**12**	PN	**Pn**	**08 28 05.6**	**+0.8**
GNL	**Ganaly**	**4.55**	**12**	P	**Pn**	**08 28 05.6**	**+0.8**
MKZ	**Mys Kozlova**	**6.26**	**30**	PN	**Pn**	**08 28 25.8**	**-2.1**
MKZ	**Mys Kozlova**	**6.26**	**30**	P	**Pn**	**08 28 25.8**	**-2.1**
MKZ				S	**Sn**	**08 29 33.3**	**-4.6**
TUMD	**Tumrok D**	**6.45**	**21**	S	**Sn**	**08 29 39.8**	**-2.7**
TUMR	**Tumrok**	**6.47**	**20**	PN	**Pn**	**08 28 32.8**	**+2.1**
TUMR	**Tumrok**	**6.47**	**20**	P	**Pn**	**08 28 32.8**	**+2.1**
KUR	**Kuril'sk**	**7.03**	**238⇑**	*e*PN	**Pn**	**08 28 36.7**	**-1.6**
KBTR	**Krutoberegovo**	**7.99**	**27**	PN	**Pn**	**08 28 50.0**	**-1.3**
KBTR	**Krutoberegovo**	**7.99**	**27**	P	**Pn**	**08 28 50.0**	**-1.3**
YUK	**Yuzh-Kuril'sk**	**8.89**	**238⇑**	*e*PN	**Pn**	**08 29 01.3**	**-2.3**
YSS	**Yuzh-Sakhalins**	**9.37**	**261**	*e*PN	Pn	08 29 11.8	+1.7
MA2	**Magadan**	**10.82**	**345⇑**	*e*PN	**Pn**	**08 29 26.4**	**-3.3**
MA2				pmax	pmax		
	comp=Z,37nm,2.2s						
SHEM	**Shemya Is, Ala**	**11.72**	**66**	Pn	**Pn**	**08 29 42.1**	**+0.2**
	comp=Z,16nm,0.3s,baz=194,slow=1.7,SNR=9.1						
SMY	**Shemya**	**11.72**	**66**	Pn	**Pn**	**08 29 42.4**	**+0.5**
SMY	**Shemya**	**11.72**	**66**	PN	**Pn**	**08 29 42.4**	**+0.5**
YAK	**Yakutsk**	**19.54**	**321**	P	**Pn**	**08 31 16.2**	**-3.5**
YAK				IAmb	IAmb	08 31 20.1	
	comp=Z,22nm,0.6s						
TIXI	**Tiksi**	**25.74**	**340**	P	**P**	**08 32 19.0**	**+0.2**
TIXI	**Tiksi**	**25.74**	**340⇑**	*e*P	**P**	**08 32 17.8**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**30.67**	**160**	T	T	09 06 04.0	
	baz=347,slow=76,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**30.68**	**160**	T	T	09 06 04.0	
	baz=347,slow=76,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**30.68**	**160**	T	T	09 06 02.9	
	baz=347,slow=76,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**31.81**	**161**	T	T	09 07 27.1	
	baz=347,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	**31.82**	**161**	T	T	09 07 28.7	
	baz=347,slow=76,SNR=160						
H11S2	**WAKE ISLAND Hy**	**31.83**	**161**	T	T	09 07 26.5	
	baz=347,slow=76,SNR=65						
TOLK	**Toolik Lake Re**	**32.46**	**34**	P	**P**	**08 33 21.5**	**+3.0**
ILAR	**Eielson Array**	**33.24**	**41**	P	**P**	**08 33 28.2**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=264,slow=7.2,SNR=1.8						
	comp=Z,0.2nm,0.5s						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**08 34 11.9**	**+3.0**
	comp=Z,1.7nm,0.8s,baz=16,slow=8.1,SNR=3.7						
	comp=Z,1.7nm,0.8s						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**08 34 12.3**	**+3.4**
INK				IAmb	IAmb	08 34 21.8	
	comp=Z,5.9nm,1.1s						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**08 34 12.3**	**+3.4**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ZALV	**Zalesovo Beam**	**42.92**	**305**	P	**P**	**08 34 44.4**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=60,slow=8.5,SNR=3.7						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**42.92**	**305**	P	**P**	**08 34 45.2**	**-1.3**
ZALV	**Zalesovo Beam**	**42.92**	**305**	*e*P	**P**	**08 34 46.0**	**-0.5**
DGZ	**Jazzator, Alta**	**43.29**	**298⇑**	*e*P	**P**	**08 34 50.8**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**47.71**	**297**	P	**P**	**08 35 24.1**	**-0.4**
MK31				IAmb	IAmb	08 35 41.4	
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**47.71**	**297**	P	**P**	**08 35 24.1**	**-0.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MKAR	**Makanchi Array**	**47.71**	**297**	P	**P**	**08 35 22.5**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=62,slow=7.2,SNR=4.5						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**47.71**	**297**	P	**P**	**08 35 24.1**	**-0.4**
MKAR	**Makanchi Array**	**47.71**	**297**	*e*P	**P**	**08 35 25.0**	**+0.5**
KURK	**Kurchatov**	**47.78**	**303**	P	**P**	**08 35 25.1**	**+0.3**
KURK				IAmb	IAmb	08 35 26.0	
	comp=Z,2.9nm,0.9s						
KURK	**Kurchatov**	**47.78**	**303**	P	**P**	**08 35 25.2**	**+0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BVAR	**Borovoye Array**	**50.93**	**309**	P	**P**	**08 35 46.3**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=44,slow=8.9,SNR=9.4						
	comp=Z,0.5nm,0.3s						
BRVK	**Borovoye**	**50.97**	**309**	P	**P**	**08 35 49.4**	**+0.3**
BRVK				IAmb	IAmb	08 35 50.0	
	comp=Z,3.7nm,1.2s						
BRVK	**Borovoye**	**50.97**	**309**	P	**P**	**08 35 49.4**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARU	**Arti**	**54.61**	**318**	P	**P**	**08 36 15.6**	**-0.2**
	comp=Z,3.2nm,0.3s,baz=55,slow=5.4,SNR=5.3						
	comp=Z,3.2nm,0.3s						
ARU	**Arti**	**54.61**	**318**	P	**P**	**08 36 15.8**	**0.0**
ARU				IAmb	IAmb	08 36 16.6	
	comp=Z,6.4nm,1.0s						
AAK	**Ala-Archa**	**54.64**	**296**	P	**P**	**08 36 15.8**	**-0.7**
AAK	**Ala-Archa**	**54.64**	**296**	P	**P**	**08 36 15.8**	**-0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KIRV	**Kirov**	**57.05**	**323⇑**	*e*P	**P**	**08 36 34.0**	**+0.8**
ABKAR	**Akbulak array**	**58.46**	**310**	P	**P**	**08 36 44.0**	**+0.8**
ABKAR				IAmb	IAmb	08 36 45.7	
	comp=Z,1.2nm,0.6s						
MDPB	**Devils Postpil**	**59.45**	**67**	P	**P**	**08 36 52.9**	**+2.3**
FINES	**FINESS Array B**	**62.66**	**336**	P	**P**	**08 37 12.0**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=43,slow=6.5,SNR=6.0						
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**62.66**	**336**	P	**P**	**08 37 12.8**	**+1.3**
FINES	**FINESS Array B**	**62.66**	**336**	P	**P**	**08 37 12.8**	**+1.3**
ULM	**Lac du Bonnet**	**63.21**	**43⇑**	*e*P	**P**	**08 37 13.8**	**-1.6**
HFS	**Hagfors**	**66.82**	**341**	P	**P**	**08 37 40.7**	**+2.1**
	comp=Z,3.0nm,0.9s,baz=53,slow=9.8,SNR=4.0						
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**70.62**	**327**	P	**P**	**08 38 01.6**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=32,slow=6.4,SNR=3.7						
	comp=Z,0.5nm,0.4s						
EKA	**Eskdalemuir Ar**	**74.36**	**348**	P	**P**	**08 38 25.8**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=19,slow=5.3,SNR=22						
	comp=Z,1.3nm,0.4s						
TXAR	**Lajitas Array**	**74.41**	**63**	P	P	08 38 29.7	+4.4
	comp=Z,0.3nm,0.7s,baz=299,slow=5.0,SNR=3.0						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**77.98**	**318**	P	**P**	**08 38 46.1**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=34,slow=4.6,SNR=4.4						
	comp=Z,2.1nm,0.9s						

*NOU **30** 08:31:02.4, 18.°24S×177.°67W, h614km, mb4.7/69, Fiji Islands Region*
*NEIC **30** 08:31:02.5±1.7, 18.°17S±0.°10×177.°8W±0.°1, h597km±5km, mb4.5/91, Error ellipse: s-maj=15.1km s-min=13.9km az=127.0*
*IDC **30** 08:31:04.1±0.9, 18.°15S×177.°85W, h621km±9km, mb3.9/26, mbtmp4.8/28, Error ellipse: s-maj=10.9km s-min=10.1km az=131.0*
ISC 30 08:31:01.4±0.3, **18.°23S**±0.°06×**177.°77W**±0.°06, **h590**km, **n342**, σ1$**15**/334, **mb4.5**/70, **22C-16D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.91**	**355**	P	**P**	**08 32 27.9**	**+2.2**
MSVF	**Nonsavu**	**4.00**	**276**	P	**P**	**08 32 30.3**	**+4.0**
	360nm,0.6s,baz=143,slow=4.8,SNR=178						
MSVF				S	**S**	**08 33 43.1**	**+7.6**
	103nm,1.2s,baz=132,slow=20,SNR=8.5						
MSVF	**Nonsavu**	**4.00**	**276**	P	**P**	**08 32 30.5**	**+4.2**
AFI	**Afiamalu**	**7.19**	**54**	P	**P**	**08 32 52.9**	**0.0**
	73nm,0.5s,baz=117,slow=0.2,SNR=27						
AFI				S	**S**	**08 34 24.8**	**+0.7**
	20nm,0.3s,baz=237,slow=19,SNR=2.4						
AFI	**Afiamalu**	**7.19**	**54**	P	**P**	**08 32 53.2**	**+0.3**
AFI	**Afiamalu**	**7.19**	**54**	P	**P**	**08 32 53.9**	**+1.0**
NIUE	**Niue**	**7.49**	**98**	P	**P**	**08 32 57.5**	**+1.9**
	baz=7.5,SNR=8.2						
NIUE				S	S	08 34 43.4	+14
	baz=7.5						
NIUE	**Niue**	**7.49**	**98**	P	**P**	**08 32 57.5**	**+1.9**
NIUE	**Niue**	**7.49**	**98**	P	**P**	**08 32 57.7**	**+2.1**
FUNA	**Funafuti**	**10.08**	**343**	P	**P**	**08 33 21.3**	**+0.3**
RTV	**Rentapao**	**13.14**	**270**	P	**P**	**08 33 53.9**	**+2.1**
DVP	**Devils Point**	**13.37**	**270**	P	**P**	**08 33 55.0**	**+0.9**
MARNC	**Mare, Loyalty**	**13.74**	**254**	P	**P**	**08 33 57.7**	**-0.2**
MARNC	**Mare, Loyalty**	**13.74**	**254**	P	**P**	**08 33 57.9**	**0.0**
LIFNC	**LIFOU**	**14.36**	**257**	P	**P**	**08 34 03.4**	**-0.5**
LIFNC	**LIFOU**	**14.36**	**257**	P	**P**	**08 34 04.4**	**+0.5**
DZM	**Mont Dzumac**	**15.30**	**253**	P	**P**	**08 34 13.8**	**+0.9**
	13nm,0.5s,baz=78,slow=23,SNR=22						
DZM	**Mont Dzumac**	**15.30**	**253**	P	**P**	**08 34 13.9**	**+1.1**
DZM				IAmb	IAmb	08 34 15.2	
	comp=Z,18nm,0.8s						
DZM	**Mont Dzumac**	**15.30**	**253**	P	**P**	**08 34 14.1**	**+1.2**
NOUC	**Port Laguerre**	**15.44**	**253**	P	**P**	**08 34 14.3**	**+0.3**
NFK	**Norfolk Island**	**16.93**	**228**	P	**P**	**08 34 28.8**	**+1.1**
	baz=17						
KOUNC	**Koumac, New Ca**	**17.08**	**259**	P	**P**	**08 34 31.3**	**+2.1**
OUZ	**Omahuta**	**18.58**	**203**	P	**P**	**08 34 43.0**	**+0.4**
KUZ	**Kuaotunu**	**19.32**	**196**	P	**P**	**08 34 51.1**	**+1.8**
KUZ	**Kuaotunu**	**19.32**	**196**	P	**P**	**08 34 49.8**	**+0.5**
WIAZ	**Waiheke Island**	**19.52**	**197**	P	**P**	**08 34 53.6**	**+2.4**
MBAZ	**Motutapu North**	**19.57**	**198**	P	**P**	**08 34 54.1**	**+2.5**
ETAZ	**East Tamaki Re**	**19.73**	**198**	P	**P**	**08 34 54.8**	**+1.8**
MKAZ	**Moumakai**	**19.80**	**197**	P	**P**	**08 34 55.8**	**+2.1**
WTAZ	**Waiatarua**	**19.81**	**198**	P	**P**	**08 34 56.0**	**+2.2**
URZ	**Urewera**	**20.45**	**192**	S	**S**	**08 38 04.5**	**-7.3**
	comp=Z,3.3nm,0.4s,baz=84,slow=18,SNR=2.0						
RAHZ	**Arahi**	**21.09**	**191**	P	P	08 34 48.6	-17
RITZ	**Rihia Road**	**21.41**	**194**	P	P	08 34 54.1	-14
BKZ	**Black Stump Fm**	**21.45**	**192**	P	**P**	**08 35 06.9**	**-1.6**
TWVZ	**Taurewa**	**21.59**	**194**	P	P	08 34 53.9	-16
SNZO	**South Karori**	**23.89**	**194**	P	**P**	**08 35 29.6**	**-0.5**
SNZO	**South Karori**	**23.89**	**194**	P	**P**	**08 35 29.6**	**-0.5**
QRZ	**Quartz Range**	**24.02**	**198**	P	**P**	**08 35 31.8**	**+0.5**
KHZ	**Kahutara**	**25.22**	**195**	P	**P**	**08 35 41.0**	**-0.8**
PPT	**Papeete**	**26.83**	**93**	P	**P**	**08 35 57.7**	**+1.3**
	comp=Z,10nm,0.5s,baz=27,slow=4.2,SNR=4.4						
	comp=Z,10nm,0.5s						
RPZ	**Rata Peaks**	**27.10**	**198**	P	**P**	**08 35 58.4**	**0.0**
	comp=Z,3.1nm,0.4s,baz=353,slow=22,SNR=2.0						
	comp=Z,3.1nm,0.4s						
RPZ	**Rata Peaks**	**27.10**	**198**	P	**P**	**08 35 58.5**	**+0.1**
JCZ	**Jackson Bay**	**28.14**	**201**	P	**P**	**08 36 07.5**	**0.0**
ODZ	**Otahua Downs**	**28.43**	**197**	P	**P**	**08 36 09.6**	**-0.4**
EIDS	**Eidsvold**	**29.73**	**251**	P	**P**	**08 36 21.7**	**+0.2**
	baz=30,SNR=11						
EIDS	**Eidsvold**	**29.73**	**251**	P	**P**	**08 36 21.7**	**+0.2**
EIDS				IAmb	IAmb	08 36 22.4	
	comp=Z,15nm,0.6s						
EIDS	**Eidsvold**	**29.73**	**251**	P	**P**	**08 36 21.7**	**+0.2**
WHZ	**Wether Hill Ro**	**30.02**	**200**	P	**P**	**08 36 25.4**	**+1.8**
WHZ				IAmb	IAmb	08 36 26.4	
	comp=Z,11nm,0.6s						
ARMA	**Armidale**	**30.31**	**241**	P	**P**	**08 36 27.8**	**+1.3**
	baz=30,SNR=16						
ARMA	**Armidale**	**30.31**	**241**	P	**P**	**08 36 27.7**	**+1.3**
ARMA				IAmb	IAmb	08 36 28.5	
	comp=Z,33nm,1.5s						
ARMA	**Armidale**	**30.31**	**241**	P	**P**	**08 36 27.8**	**+1.3**
RMQ	**Roma**	**31.95**	**249**	P	**P**	**08 36 41.5**	**+1.1**
	baz=32,SNR=16						
RMQ	**Roma**	**31.95**	**249**	P	**P**	**08 36 41.4**	**+1.0**
RABL	**Rabaul**	**32.54**	**292**	P	**P**	**08 36 46.9**	**+1.3**
TV1H	**Townsville Har**	**33.53**	**262**	P	**P**	**08 36 54.0**	**+0.2**
CNB	**Canberra Magne**	**33.71**	**233**	P	**P**	**08 36 56.5**	**+1.3**
	baz=34,SNR=56						
CNB	**Canberra Magne**	**33.71**	**233**	P	**P**	**08 36 56.6**	**+1.3**
CTA	**Charters Tower**	**33.99**	**261**	P	**P**	**08 36 58.0**	**+0.3**
	comp=Z,17nm,0.4s,baz=95,slow=10,SNR=66						
	comp=Z,17nm,0.4s						
CTA	**Charters Tower**	**33.99**	**261**	P	**P**	**08 36 57.9**	**+0.3**
CTAO	**Charters Tower**	**33.99**	**261**	P	**P**	**08 36 58.0**	**+0.3**
CTAO	**Charters Tower**	**33.99**	**261**	P	**P**	**08 36 58.0**	**+0.3**
CAN	**Canberra**	**33.99**	**233**	P	**P**	**08 36 58.7**	**+1.2**
CAN	**Canberra**	**33.99**	**233**	P	**P**	**08 36 58.6**	**+1.1**
MILA	**Mila**	**34.54**	**230**	P	**P**	**08 37 02.9**	**+0.8**
	baz=35,SNR=5.5						
MILA	**Mila**	**34.54**	**230**	P	**P**	**08 37 03.0**	**+0.9**
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**08 37 07.1**	**+0.1**
	comp=Z,47nm,0.9s,baz=71,slow=7.0,SNR=5.7						
	comp=Z,47nm,0.9s						
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**08 37 07.8**	**+0.8**
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**08 37 07.9**	**+0.9**
	comp=Z,61nm,1.1s						
CMSA	**Cobar Meteorol**	**35.52**	**241**	P	**P**	**08 37 11.0**	**+0.8**
	baz=36,SNR=9.5						
CMSA	**Cobar Meteorol**	**35.52**	**241**	P	**P**	**08 37 11.1**	**+0.8**
MTSU	**Mount Surprise**	**35.97**	**264**	P	**P**	**08 37 14.4**	**+0.3**
	baz=36,SNR=16						
MTSU	**Mount Surprise**	**35.97**	**264**	P	**P**	**08 37 14.5**	**+0.3**
QLP	**Quilpie**	**35.99**	**250**	P	**P**	**08 37 14.6**	**+0.5**
	baz=36,SNR=19						
QLP	**Quilpie**	**35.99**	**250**	P	**P**	**08 37 14.6**	**+0.5**
TOO	**Toolangi**	**37.44**	**231**	P	**P**	**08 37 26.9**	**+1.0**
	baz=38,SNR=19						
TOO	**Toolangi**	**37.44**	**231**	P	**P**	**08 37 26.8**	**+0.9**
TOO	**Toolangi**	**37.44**	**231**	P	**P**	**08 37 27.1**	**+1.2**
COEN	**Coen**	**37.71**	**271**	P	**P**	**08 37 29.3**	**+1.0**
	baz=38,SNR=167						
COEN	**Coen**	**37.71**	**271**	P	**P**	**08 37 29.4**	**+1.0**
COEN	**Coen**	**37.71**	**271**	P	**P**	**08 37 29.4**	**+1.0**
MANU	**Manus Island**	**37.78**	**291**	P	**P**	**08 37 28.1**	**-0.8**
BRAT	**Ballarat**	**38.60**	**232**	P	**P**	**08 37 36.9**	**+1.7**
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**08 37 39.6**	**+1.1**
	comp=Z,16nm,0.5s,baz=88,slow=9.3,SNR=49						
	comp=Z,16nm,0.5s						
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**08 37 39.6**	**+1.1**
	baz=39,SNR=45						
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**08 37 39.7**	**+1.1**
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**08 37 39.7**	**+1.1**
INKA	**Innaminka**	**39.19**	**248**	P	**P**	**08 37 41.5**	**+1.4**
QIS	**Mount Isa**	**40.19**	**260**	P	**P**	**08 37 47.9**	**-0.4**
	baz=40,SNR=9.2						
QIS	**Mount Isa**	**40.19**	**260**	P	**P**	**08 37 48.0**	**-0.2**
HTT	**Hallett**	**41.51**	**240**	P	**P**	**08 37 59.2**	**+0.7**
	baz=42,SNR=14						
HTT	**Hallett**	**41.51**	**240**	P	**P**	**08 37 59.3**	**+0.7**
LCRK	**Leigh Creek**	**41.66**	**245**	P	**P**	**08 38 00.2**	**+0.5**
OOD	**Oodnadatta**	**43.66**	**249**	P	**P**	**08 38 16.2**	**+0.9**
BBOO	**Buckleboo**	**43.78**	**241**	P	**P**	**08 38 16.6**	**+0.4**
	baz=44,SNR=26						
BBOO	**Buckleboo**	**43.78**	**241**	P	**P**	**08 38 16.6**	**+0.4**
**BBOO

MORW IAmb IAmb 08 40 23.6
comp=Z,25nm,1.4s
MORW Morawa 60.91 246 P **P** **08 40 17.5 -0.9**
PLAI Plampang 63.09 269 P **P** **08 40 32.1 -0.7**
TOLI2 Tolitoli 63.37 281 P **P** **08 40 34.5 -0.1**
TOLI2 IAmb IAmb 08 40 35.0
comp=Z,26nm,1.3s
TOLI2 Tolitoli 63.37 281 P **P** **08 40 33.9 -0.6**
GIRL Giralia 63.38 253 P **P** **08 40 35.4 +0.9**
baz=63,SNR=5.6
GIRL Giralia 63.38 253 P **P** **08 40 35.2 +0.7**
GIRL Giralia 63.38 253 P **P** **08 40 35.3 +0.9**
CASY Casey 66.10 205 P **P** **08 40 51.0 +0.3**
CASY IAmb IAmb 08 40 51.6
comp=Z,31nm,1.4s
JAGI Jajag, Banyuwa 66.64 268 P **P** **08 40 53.6 -1.5**
JAGI Jajag, Banyuwa 66.64 268 P **P** **08 40 53.5 -1.5**
JMM Marumori 68.04 326 P **P** **08 41 03.1 0.0**
JMM IAmb IAmb 08 41 19.8
comp=Z,26nm,1.3s
JGF Kuroka 68.36 322 P **P** **08 41 04.9 -0.2**
JGF IAmb IAmb 08 41 08.1
comp=Z,12nm,1.1s
JGF Kuroka 68.36 322 P **P** **08 41 05.1 0.0**
MJAR Matsushiro Arr 68.52 323 P **P** **08 41 05.0 -1.1**
comp=Z,5.5nm,0.5s,baz=159,slow=5.9,SNR=17
comp=Z,5.5nm,0.5s
MAJO Matsushiro 68.53 323 P **P** **08 41 04.9 -1.2**
MAJO Matsushiro 68.53 323 P **P** **08 41 05.3 -0.7**
MJB9 Matsu-Tunnel 68.53 323 P **P** **08 41 05.9 -0.1**
MJB9 IAmb IAmb 08 41 06.8
comp=Z,16nm,0.5s
KKM Kota Kinabalu 69.41 284 P **P** **08 41 11.1 -0.8**
KKM IAmb IAmb 08 41 12.1
comp=Z,13nm,0.7s
KKM Kota Kinabalu 69.41 284 P **P** **08 41 11.6 -0.3**
comp=Z,21nm,1.4s
ADK Adak 69.82 1 P **P** **08 41 12.7 -0.7**
JSU Suzuyama 70.08 314 P **P** **08 41 15.6 +0.1**
JSU IAmb IAmb 08 41 29.0
comp=Z,40nm,1.3s
UGM Wanagama 70.24 268 P **P** **08 41 16.3 -0.5**
UGM Wanagama 70.24 268 P **P** **08 41 16.5 -0.3**
JHS Saijyo 70.53 319 P **P** **08 41 18.5 +0.4**
JHS Saijyo 70.53 319 P **P** **08 41 18.3 +0.3**
QSPA South Pole Qui 71.83 180 P **P** **08 41 26.1 +0.9**
comp=Z,7.7nm,0.6s,baz=225,slow=1.0,SNR=71
comp=Z,7.7nm,0.6s
QSPA South Pole Qui 71.83 180 P **P** **08 41 25.7 +0.4**
QSPA IAmb IAmb 08 41 27.3
comp=Z,9.9nm,0.8s
SBUM Sibu 71.85 279 P **P** **08 41 25.9 -0.3**
SBUM IAmb IAmb 08 41 27.0
comp=Z,7.1nm,0.7s
BBJI Bungbulang 73.09 268 P **P** **08 41 32.6 -0.8**
LEM Lembang 73.31 268 P **P** **08 41 34.4 -0.4**
comp=Z,38nm,0.7s,baz=94,slow=2.1,SNR=5.3
comp=Z,38nm,0.7s
PETK Petropavlovsk- 74.14 345 P **P** **08 41 37.6 -0.7**
comp=Z,6.3nm,0.7s,baz=118,slow=7.8,SNR=14
comp=Z,6.3nm,0.7s
KSRS Korea Array 75.34 318 P **P** **08 41 45.3 -0.1**
comp=Z,1.5nm,0.6s,baz=134,slow=7.2,SNR=6.9
comp=Z,1.5nm,0.6s
KSAR Wonju Array Be 75.36 318 P **P** **08 41 45.4 -0.1**
USRK Ussuriysk Ar. 77.22 325 P **P** **08 41 55.9 +0.4**
comp=Z,1.3nm,0.4s,baz=176,slow=5.6,SNR=6.3
comp=Z,1.3nm,0.4s
ISA Isabella, Lake 77.60 46 P **P** **08 41 57.6 -0.3**
CMB Columbia Colle 77.66 43 P **P** **08 41 57.2 -0.9**
OHAK Old Harbor 77.90 13 P **P** **08 41 58.4 -0.5**
OHAK IAmb IAmb 08 42 01.9
comp=Z,42nm,1.4s
YBH Yreka Blue Hor 78.39 39 P **P** **08 42 03.0 +1.0**
NJ2 Nanjing 78.61 309 *e*P **P** **08 42 03.3 0.0**
YERR Yerington 78.94 43 P **P** **08 42 06.2 +1.1**
NVAR Mina Array Bea 79.24 44 P **P** **08 42 07.2 +0.5**
comp=Z,2.2nm,0.7s,baz=223,slow=8.7,SNR=13
comp=Z,2.2nm,0.7s
MOD Modoc Plateau 79.94 40 P **P** **08 42 10.9 +0.6**
K05A Summer Lake 80.07 39 P **P** **08 42 11.9 +0.9**
O19K Port Alsworth 80.43 12 IAmb IAmb 08 42 11.7
comp=Z,15nm,0.7s
CNPM China Point 80.45 13 P **P** **08 42 11.9 -0.4**
CNPM IAmb IAmb 08 42 30.4
comp=Z,21nm,1.1s
CN2 Changchun 80.64 322 *e*P **P** **08 42 14.0 +0.3**
CN2 *e*PP **PP** **08 45 31.3 +2.4**
SMAI San Martin Ant 80.64 159 P **P** **08 42 14.6 +1.3**
SMAI IAmb IAmb 08 42 16.1
comp=Z,17nm,1.0s
PINE Pine Mountain 80.67 38 P **P** **08 42 13.6 -0.5**
PINE IAmb IAmb 08 42 15.9
comp=Z,10nm,1.1s
BNX BinXian 80.70 325 ⇑P **P** **08 42 14.0 +0.1**
I07A Izee 81.68 38 P **P** **08 42 19.5 +0.3**
BELA Belgrano 2 81.77 173 P **P** **08 42 19.0 0.0**
BELA IAmb IAmb 08 42 20.0
comp=Z,8.9nm,0.9s
319A Douglas 82.13 53 IAmb IAmb 08 42 30.4
comp=Z,5.6nm,0.5s
SUA Susitna One 82.31 13 P **P** **08 42 21.4 -0.5**
SUA IAmb IAmb 08 42 27.5
comp=Z,18nm,1.2s
ELK Elko 82.48 43 P **P** **08 42 23.2 -0.2**
TTA Tatalina 82.68 10 P **P** **08 42 23.7 0.0**
TTA IAmb IAmb 08 42 25.1
comp=Z,13nm,1.2s
G08A Pilot Rock 82.69 38 P **P** **08 42 23.9 -0.3**
PMR Palmer 82.77 13 P **P** **08 42 23.3 -0.7**
IPM Ipoh 83.06 277 P **P** **08 42 26.4 -0.3**
comp=Z,25nm,0.8s
MAW Mawson 83.76 200 P **P** **08 42 29.4 +0.4**
comp=Z,2.3nm,0.7s,baz=166,slow=3.6,SNR=15
comp=Z,2.3nm,0.7s
MAW Mawson 83.76 200 P **P** **08 42 30.0 +1.0**
CAST Castle Rocks 83.82 11 IAmb IAmb 08 42 28.7
comp=Z,20nm,1.4s
N25K Chitina, Valde 83.85 15 P **P** **08 42 29.4 -0.1**
N25K IAmb IAmb 08 42 29.9
comp=Z,8.5nm,0.7s
BARN Barnard Glacie 84.16 17 IAmb IAmb 08 42 31.3
comp=Z,6.8nm,0.8s
HNS HongShan 84.18 312 ⇓P **P** **08 42 31.5 -0.1**
TRF Thorofare Moun 84.19 12 P **P** **08 42 30.2 -1.1**
TRF IAmb IAmb 08 42 30.8
comp=Z,12nm,0.9s
RND Reindeer 84.45 13 IAmb IAmb 08 42 33.0
comp=Z,11nm,1.1s
LYN LuoYang 84.50 309 ⇓*i*P **P** **08 42 33.8 +0.6**
PSI Prapat 84.51 275 P **P** **08 42 32.8 -1.2**
comp=Z,11nm,0.7s,baz=339,slow=1.8,SNR=8.9
comp=Z,11nm,0.7s
M26K Nabesna, AK 84.93 15 IAmb IAmb 08 42 35.4
comp=Z,12nm,1.1s
M27K Edge Creek, AK 85.18 16 IAmb IAmb 08 42 37.0
comp=Z,9.3nm,1.1s
WRH Wood River Hil 85.55 12 IAmb IAmb 08 42 38.0
comp=Z,14nm,1.1s
TXAR Lajitas Array 85.66 57 P **P** **08 42 40.5 +1.4**
comp=Z,3.3nm,0.7s,baz=218,slow=5.7,SNR=42
comp=Z,3.3nm,0.7s
GYA Guiyang 85.72 299 ⇓*i*P **P** **08 42 39.5 0.0**
CCB Clear Creek Bu 85.76 12 P **P** **08 42 37.5 -1.1**
CCB IAmb IAmb 08 42 38.9
comp=Z,22nm,1.4s
MDM Murphy Dome 85.95 12 IAmb IAmb 08 42 39.2
comp=Z,15nm,1.2s
ILAR Eielson Array 86.06 13 P **P** **08 42 38.5 -1.5**
comp=Z,2.0nm,0.4s,baz=217,slow=5.0,SNR=68
comp=Z,2.0nm,0.4s
XLT XiLinHaoTe 86.39 319 *e*P **P** **08 42 42.3 +0.1**
K27K Chicken 86.52 15 IAmb IAmb 08 42 45.5
comp=Z,7.4nm,1.4s
J26L Joseph Creek 86.56 14 IAmb IAmb 08 42 43.6
comp=Z,28nm,1.5s
REDW Red Top Meadow 86.62 42 IAmb IAmb 08 42 44.9
comp=Z,8.1nm,1.3s
M30M Minto, Yukon 86.75 18 IAmb IAmb 08 42 44.0
comp=Z,12nm,1.2s
XAN Xi'an 86.93 307 P **P** **08 42 45.8 +0.9**
YHL Hebgen Lake 87.13 41 IAmb IAmb 08 42 48.0
comp=Z,6.2nm,1.0s
PDAR Pinedale Array 87.17 43 P **P** **08 42 46.0 0.0**
comp=Z,1.0nm,0.6s,baz=197,slow=2.8,SNR=10.0
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 87.17 43 P **P** **08 42 46.3 +0.2**
DAWY Dawson 87.23 16 P **P** **08 42 45.6 0.0**
WAPA Wapiti River 88.28 29 IAmb IAmb 08 42 51.4
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 89.56 289 P **P** **08 42 58.0 +0.5**
comp=Z,3.3nm,0.8s,baz=109,slow=3.2,SNR=18
comp=Z,3.3nm,0.8s
PZH PanZhiHua 89.84 298 P **P** **08 42 58.3 -0.4**
TROLL Troll, Antarti 89.99 180 P **P** **08 42 58.4 -0.2**
SNAA Sanae 90.26 178 P **P** **08 42 59.3 -0.5**
SNAA Sanae 90.26 178 P **P** **08 43 00.1 +0.3**
SNAA IAmb IAmb 08 43 00.5
comp=Z,9.0nm,1.3s
VNA3 Neumayer Olymp 90.38 176 P **P** **08 42 59.8 -0.4**
PLCA Paso Flores 90.67 133 P **P** **08 43 03.0 +0.7**
comp=Z,2.0nm,0.9s,baz=237,slow=5.9,SNR=6.3
comp=Z,2.0nm,0.9s
VNA2 Neumayer--Watz 90.83 177 P **P** **08 43 02.5 +0.2**
baz=178,slow=5.0
VNA1 Neumayer--Stat 91.05 177 P **P** **08 43 04.3 +1.0**
LZH Lanzhou 91.56 307 *e*P **P** **08 43 04.0 -2.5**
LZH pP pP 08 45 08.5 -6.0
LZH sP sP 08 46 06.5 -6.7
SONM Songino Array 94.19 319 P **P** **08 43 17.8 -0.4**
comp=Z,0.5nm,0.4s,baz=96,slow=2.9,SNR=3.9
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 108.86 322 PKiKP **PKiKP** **08 48 21.9 -2.3**
comp=Z,0.8nm,0.5s,baz=239,slow=2.5,SNR=3.6
MKAR Makanchi Array 109.79 314 PKiKP **PKiKP** **08 48 24.6 -1.7**
comp=Z,0.8nm,0.5s,baz=147,slow=0.7,SNR=14
BVAR Boroyoe Array 117.47 321 PKP **PKPdf** **08 48 39.1 -1.6**
comp=Z,1.3nm,0.4s,baz=116,slow=2.3,SNR=16
AKTO Aktyubinsk 125.50 319 PKP **PKPdf** **08 48 55.0 -1.2**
comp=Z,0.7nm,0.6s,baz=313,slow=3.6,SNR=3.6
ARCES ARCESS Array B 126.73 350 PKP **PKPdf** **08 48 56.9 -1.2**
comp=Z,4.1nm,0.9s,baz=48,slow=1.3,SNR=17
GEYT Alibeck 127.72 304 PKP **PKPdf** **08 48 59.9 -1.0**
comp=Z,1.8nm,0.6s,baz=0.0,slow=2.9,SNR=3.7
FINES FINESS Array B 133.66 344 PKhKP PKPpre 08 49 04.7
comp=Z,4.3nm,0.8s,baz=75,slow=2.2,SNR=2.1
FINES PKP **PKPdf** **08 49 09.6 -1.7**
comp=Z,4.4nm,0.8s,baz=51,slow=0.9,SNR=5.5
NB2 NORSAR Subarra 136.76 354 PKPdf PKPpre 08 49 07.5
comp=Z,0.4nm,0.6s,baz=14,slow=1.8
NOA NORSAR Array B 136.76 354 PKhKP PKPpre 08 49 07.2
comp=Z,0.6nm,0.8s,baz=19,slow=5.1,SNR=4.2
NOA PKP **PKPdf** **08 49 16.0 -1.2**
comp=Z,0.4nm,0.5s,baz=14,slow=3.7,SNR=3.3
HFS Hagfors 137.34 352 PKhKP PKPpre 08 49 07.8
comp=Z,2.9nm,0.8s,baz=357,slow=3.0,SNR=8.2
AKASG Malin Array Be 141.12 333 PKhKP PKPpre 08 49 19.1
comp=Z,0.6nm,0.4s,baz=42,slow=4.4,SNR=8.5
AKASG PKP **PKPdf** **08 49 26.2 +0.8**
comp=Z,1.4nm,0.4s,baz=38,slow=3.0,SNR=9.7
EKA Eskdalemuir Ar 142.73 5 PKhKP PKPpre 08 49 24.1
comp=Z,1.3nm,0.5s,baz=320,slow=2.7,SNR=18
MILM Milestii Mici 144.00 329 ⇑P PKPbc 08 49 29.3 -0.7
OJC Ojcow 145.12 340 *e*PKP **PKPdf** **08 49 30.8 -1.6**
BURAR Bucovina Array 145.18 332 ⇑P **PKPbc** **08 49 33.9 +0.1**
TESR Tescani 145.34 330 ⇑P **PKPbc** **08 49 33.9 -0.3**
BR131 Keskin Array S 145.43 315 **PKPdf** **08 49 32.6 -0.9**
BRTR Keskin Array B 145.44 315 PKPbc **PKPdf** **08 49 34.0 +0.5**
comp=Z,5.5nm,0.5s,baz=108,slow=1.3,SNR=22
BRTR Keskin Array B 145.44 315 PKPdf **PKPdf** **08 49 31.9 -1.5**
BRTR PKPbc **PKPbc** **08 49 34.6 -0.2**
KSP Ksiaz 145.58 344 *e*PKP **PKPbc** **08 49 34.5 -0.2**
TPGR Topolog 145.60 326 ⇑P **PKPbc** **08 49 34.9 -0.1**
VRI Vrincioaia 145.76 329 ⇑P **PKPab** **08 49 36.9 -0.3**
ASF Jabal al Asfar 145.86 301 PKPbc **PKPbc** **08 49 35.4 -0.8**
comp=Z,6.1nm,0.8s,baz=81,slow=4.0,SNR=7.7
OSTC Ostas 145.86 344 *e*PKP **PKPbc** **08 49 35.4 -0.2**
CHVC Chvalec 145.88 344 *e*PKP **PKPbc** **08 49 35.2 -0.4**
TRPA Tarpa 145.89 336 ⇑P **PKPbc** **08 49 35.5 -0.2**
CLL Collm 145.90 348 **PKPbc** **08 49 35.4 -0.2**
CLL Collm 145.90 348 ⇓*i* PKPbc **PKPbc** **08 49 35.0 -0.6**
comp=Z,24nm,0.6s
CLL *i* PKPab **PKPab** **08 49 36.7 -0.9**
comp=Z,13nm,0.6s
UPC Upice 145.96 344 *e*PKP **PKPbc** **08 49 35.3 -0.5**
HARR Harsova 145.97 326 ⇑P **PKPbc** **08 49 36.0 0.0**
DPC Dobruska-Polom 146.02 344 *e*PKP **PKPbc** **08 49 36.0 0.0**
KRLC Kraliky 146.15 343 *e*PKP **PKPbc** **08 49 36.3 -0.1**
MORC Moravsky Berou 146.20 342 ⇑P **PKPbc** **08 49 36.6 0.0**
MORC Moravsky Berou 146.20 342 *e*PKP **PKPbc** **08 49 36.0 -0.5**
PVCC Panska Ves 146.30 346 *e*PKP **PKPbc** **08 49 36.5 -0.2**
MLR Muntele Rosu 146.41 329 ⇑P **PKPbc** **08 49 37.8 +0.5**
MLR Muntele Rosu 146.41 329 PKPbc **PKPbc** **08 49 36.2 -1.2**
comp=Z,4.8nm,0.4s,baz=108,slow=3.5,SNR=7.3
MAUC Maruska 146.48 341 *e*PKP **PKPbc** **08 49 37.4 +0.1**
CJR Cluj-Napoca 146.58 333 ⇑P **PKPbc** **08 49 36.8 -0.8**
PRU Pruhonice 146.81 345 *e*PKP **PKPbc** **08 49 37.7 -0.4**
MMAI Mount Meron Ar 146.82 303 PKPbc **PKPbc** **08 49 38.3 -0.5**
baz=57,slow=5.3
VOIR 146.88 330 ⇑P **PKPbc** **08 49 38.8 +0.2**
DRGR 146.89 334 ⇓P **PKPbc** **08 49 37.7 -0.8**
VRAC Vranov 146.90 343 ⇑P **PKPbc** **08 49 37.6 -0.8**
VRAC Vranov 146.90 343 *e*PKP **PKPbc** **08 49 37.9 -0.5**
JAVC Velka Javorina 146.98 341 *e*PKP **PKPbc** **08 49 39.3 +0.6**
NKC Novy Kostel 147.03 348 *e*PKP **PKPbc** **08 49 38.4 -0.3**
ARR Arges 147.13 330 ⇑P **PKPbc** **08 49 39.7 +0.5**
KRUC Moravsky 147.17 343 *e*PKP **PKPbc** **08 49 38.3 -0.8**
BORA Eskisehir 147.45 317 **PKPbc** **08 49 39.9 -0.4**
MEM Membach 147.55 356 *d*PKP **PKPbc** **08 49 39.4 -0.6**
BTNL Ternell 147.57 355 *d*PKP **PKPbc** **08 49 39.2 -0.9**
BSTI Sart Tilman 147.61 356 *d*PKP **PKPbc** **08 49 39.7 -0.5**
SIRR Siria 147.75 334 ⇑P **PKPbc** **08 49 40.6 -0.1**
SNF Seneffe 147.75 358 *d*PKP **PKPbc** **08 49 39.7 -0.8**
BCLA Clavier 147.79 356 *d*PKPdf **PKPdf** **08 49 36.1 -0.7**
BHOU Houvegnez 147.81 355 *d*PKP **PKPbc** **08 49 40.6 -0.1**
KHC Kasperske Hory 147.83 346 *e*PKP **PKPbc** **08 49 40.1 -0.8**
KHC *ex* x 08 49 45.2
BMRD Maredsous 147.94 357 *d*PKP **PKPbc** **08 49 40.0 -1.0**
CKRC Cesky Krumlov 147.95 345 *e*PKP **PKPbc** **08 49 40.7 -0.4**
GZR Gura Zlata 147.96 332 ⇑P **PKPbc** **08 49 40.7 -0.7**
RCHB Rochefort 148.06 356 *d*PKP **PKPbc** **08 49 40.9 -0.4**
GERES GERESS Array B 148.07 346 PKPbc **PKPbc** **08 49 41.0 -0.6**
comp=Z,4.3nm,0.6s,baz=29,slow=3.2,SNR=23
GERES GERESS Array B 148.07 346 **PKPbc** **08 49 41.3 -0.3**
EIL Elat 148.10 297 PKPbc **PKPbc** **08 49 41.4 -0.7**
comp=Z,10nm,1.0s,baz=259,slow=1.5,SNR=5.3
DOU Dourbes 148.15 357 *d*PKP **PKPbc** **08 49 40.9 -0.7**
BZS Buzias 148.29 334 ⇓P **PKPbc** **08 49 41.6 -0.5**
CONA Conrad Observa 148.35 342 *e*P **PKPbc** **08 49 42.0 -0.3**
comp=Z,5.4nm,0.7s,SNR=6.6
RONA Rosalia, Austr 148.43 342 *e*P **PKPbc** **08 49 42.2 -0.2**
comp=Z,6.2nm,0.8s
WLF Walferdange 148.48 355 *d*PKP **PKPbc** **08 49 42.4 0.0**
HERR Herculane 148.52 332 ⇑P **PKPbc** **08 49 42.2 -0.4**
MOA Molln 148.86 344 *e*P **PKPbc** **08 49 42.7 -0.8**
comp=Z,8.1nm,1.2s
MDVR Moldovita 148.91 333 ⇑P **PKPbc** **08 49 43.4 -0.3**
MORH Mrgy, Hungar 148.96 338 ⇑P **PKPbc** **08 49 42.4 -1.2**
ARSA Arzberg 149.06 342 *e*P **PKPbc** **08 49 42.8 -1.1**
comp=Z,7.6nm,1.4s
BIOA Bad Ischl, Aus 149.16 345 *e*P **PKPbc** **08 49 43.1 -1.0**
comp=Z,5.5nm,1.0s
BLKB Belogradchik 149.37 330 ⇑P **PKPbc** **08 49 44.4 -0.4**
FRGS Fruska Gora 149.40 335 ⇑P **PKPbc** **08 49 44.2 -0.6**
BFO Black Forest 149.57 352 **PKPbc** **08 49 44.9 -0.2**
SOKA Soboth 149.72 342 *e*P **PKPbc** **08 49 44.4 -1.2**
comp=Z,6.4nm,0.9s
BOVS Bovan 149.81 331 ⇑P **PKPbc** **08 49 44.7 -1.0**
VTS Vitosha 149.85 328 **PKPbc** **08 49 45.9 -0.3**
WATA Walderalm 149.97 347 *i* P **PKPbc** **08 49 45.3 -1.0**
comp=Z,4.7nm,0.6s
RETA Reutte 149.99 348 *e*P **PKPbc** **08 49 45.2 -1.0**
comp=Z,2.9nm,0.6s
WTTA Wattenberg 150.03 347 *e*P **PKPbc** **08 49 45.5 -0.9**
comp=Z,16nm,0.6s,SNR=5.3
MOTA Moosalm 150.06 348 *e*P **PKPbc** **08 49 45.4 -1.1**
comp=Z,9.7nm,1.0s
MYKA Terra Mystica 150.15 344 *e*P **PKPbc** **08 49 45.2 -1.4**
comp=Z,6.8nm,0.6s
SQTA Sankt Quirin 150.16 348 *e*P **PKPbc** **08 49 45.7 -0.9**
comp=Z,9.5nm,0.7s
DIVS Divibare 150.19 334 **PKPbc** **08 49 46.5 -0.3**
ABTA Abfaltersbach 150.32 346 *e*P **PKPbc** **08 49 45.6 -1.3**
comp=Z,16nm,0.6s
PRED Cave del Predi 150.34 344 **PKPbc** **08 49 46.6 -0.4**
DAVA Damuels 150.34 349 *e*P **PKPbc** **08 49 46.5 -0.6**
comp=Z,7.8nm,0.7s
FETA Feichten 150.44 348 *e*P **PKPbc** **08 49 46.6 -0.7**
comp=Z,6.5nm,0.8s
DAVOX Davos/Dischmat 150.83 349 PKPbc **PKPbc** **08 49 47.8 -0.5**
FUORN Ofenpass-Fuorn 150.92 349 **PKPbc** **08 49 48.6 0.0**
FUORN PKPab **PKPab** **08 49 58.3 -0.4**
ESDC Sonseca Array 157.97 13 PKPab **PKPab** **08 50 27.6 -1.2**
comp=Z,0.4nm,0.6s,baz=349,slow=3.9,SNR=5.9
MDT Midelt 164.23 22 PKP **PKPdf** **08 49 56.1 -2.5**
comp=Z,1.2nm,0.7s,baz=299,slow=8.1,SNR=2.9
TORD Torodi Ar. Bea 174.92 174 PKP **PKPdf** **08 50 03.4 -1.8**
comp=Z,1.2nm,1.1s,baz=232,slow=4.7,SNR=4.2
TORD PKPab **PKPab** **08 51 43.8 -0.3**
comp=Z,0.3nm,0.6s,baz=183,slow=3.8,SNR=1.6

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*IDC **30** 08:31:05.0±1.9, 42°.87N×13°.53E, h0km, mb3.5/2, mbtmp3.5/5, ML3.6/3, MS4.4/1, Error ellipse: s-maj=56.6km s-min=20.9km az=104.0*
*ROM **30** 08:31:06.7±0.0, 42°.885N±0°.002×13°.101E±0°.003, h10km, ML3.5/49, Error ellipse: s-maj=0.2km s-min=0.0km az=80.0*
*PRU **30** 08:31:07.2±0.0, 42°.83N×13°.87E, h10km*
*LDG **30** 08:31:07.8±0.1, 42°.76N×13°.09E, h10km, Ml3.4/20, Error ellipse: s-maj=3.2km s-min=2.3km az=32.0*
ISC 30 08:31:06.4±0.7, 42°.88N±0°.01×13°.09E±0°.01, h15km±4km, n191, σ1§54/228, 17C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**280**	⇑P	**Pg**	**08 31 09.4**	**+0.1**
T1216				S	**Sg**	**08 31 11.0**	**-0.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.08**	**109**	⇓P	**Pg**	**08 31 09.5**	**-0.1**
T1245				S	**Sg**	**08 31 11.1**	**-0.6**
MC2	**Monte Cornacci**	**0.08**	**67**	⇓P	**Pg**	**08 31 09.5**	**-0.2**
MC2				S	**Sg**	**08 31 11.3**	**-0.6**
FEMA	**Monte Fema**	**0.09**	**340**	P	**Pg**	**08 31 09.7**	**0.0**
FEMA				S	**Sg**	**08 31 11.5**	**-0.3**
T1212	**Cascia, Frazio**	**0.13**	**194**	P	**Pb**	**08 31 10.6**	**-0.1**
T1212				S	**Sb**	**08 31 13.3**	**-0.3**
FDMO	**Fiordimonte**	**0.15**	**359**	⇓P	**Pg**	**08 31 10.6**	**+0.2**
FDMO				S	**Sg**	**08 31 13.2**	**+0.2**
T1213	**Norcia, Frazio**	**0.16**	**170**	P	**Pg**	**08 31 10.6**	**+0.1**
T1213				S	**Sg**	**08 31 13.8**	**+0.6**
T1256	**Bolognola (MC)**	**0.16**	**39**	P	**Pg**	**08 31 10.7**	**+0.1**
T1256				S	**Sg**	**08 31 13.3**	**-0.1**
T1215	**Vallo di Nera,**	**0.18**	**244**	⇑P	**Pb**	**08 31 11.4**	**-0.1**
T1215				S	**Sb**	**08 31 14.7**	**-0.2**
T1215				AML	AML		
	comp=N,8935μm,0.8s						
T1215				AML	AML		
	comp=E,8480μm,0.3s						
T1215				AML	AML		
	comp=N,8590μm,0.8s						
T1215				AML	AML		
	comp=E,8280μm,0.3s						
T1215				AML	AML		
	comp=N,8905μm,0.8s						
T1215				AML	AML		
	comp=E,8510μm,0.3s						
T1215				AML	AML		
	comp=N,8460μm,0.8s						
T1215				AML	AML		
	comp=E,20000μm,1.3s						
T1215				AML	AML		
	comp=E,19100μm,1.1s						
T1215				AML	AML		
	comp=N,19700μm,1.0s						
T1215				AML	AML		
	comp=N,19300μm,1.0s						
T1215				AML	AML		
	comp=N,8913μm,0.8s						
T1215				AML	AML		
	comp=N,8543μm,0.8s						
T1215				AML	AML		
	comp=E,8281μm,0.3s						
T1215				AML	AML		
	comp=E,8469μm,0.3s						
T1219	**Muccia, Frazio**	**0.18**	**341**	P	**Pb**	**08 31 11.2**	**-0.5**
T1219				S	**Sb**	**08 31 14.3**	**-0.8**
T1244	**Arquata del Tr**	**0.20**	**129**	P	**Pb**	**08 31 11.6**	**-0.3**
T1244				S	**Sb**	**08 31 15.0**	**-0.4**
T1217	**Poggiodomo (PG**	**0.20**	**215**	⇑P	**Pb**	**08 31 11.8**	**-0.1**
T1217				S	**Sb**	**08 31 15.5**	**-0.2**
T1217				AML	AML		
	comp=E,8650μm,0.9s						
T1217				AML	AML		
	comp=N,18300μm,0.8s						
T1217				AML	AML		
	comp=E,8425μm,1.2s						
T1217				AML	AML		
	comp=N,18800μm,0.8s						
T1217				AML	AML		
	comp=E,8640μm,0.9s						
T1217				AML	AML		
	comp=N,18300μm,0.8s						
T1217				AML	AML		
	comp=E,8480μm,1.2s						
T1217				AML	AML		
	comp=N,18650μm,0.8s						
T1217				AML	AML		
	comp=E,29650μm,0.7s						
T1217				AML	AML		
	comp=N,36700μm,0.9s						
T1217				AML	AML		
	comp=E,29100μm,1.0s						
T1217				AML	AML		
	comp=N,36600μm,0.7s						
T1217				AML	AML		
	comp=E,8046μm,0.6s						
T1217				AML	AML		
	comp=E,8406μm,1.2s						
T1217				AML	AML		
	comp=N,18803μm,0.8s						
T1217				AML	AML		
	comp=N,18284μm,0.8s						
AM05	**Amandola Campo**	**0.22**	**64**	⇑P	**Pg**	**08 31 11.6**	**+0.2**
AM05				S	**Sg**	**08 31 15.0**	**+0.4**
AM05				AML	AML		
	comp=E,13900μm,0.9s						
AM05				AML	AML		
	comp=N,18400μm,0.8s						
AM05				AML	AML		
	comp=E,65350μm,0.6s						
AM05				AML	AML		
	comp=N,22950μm,0.7s						
AM05				AML	AML		
	comp=E,69950μm,0.4s						
AM05				AML	AML		
	comp=N,4875μm,0.8s						
AM05				AML	AML		
	comp=N,4870μm,0.8s						
AM05				AML	AML		
	comp=E,18200μm,0.8s						
AM05				AML	AML		
	comp=N,4532μm,0.1s						
AM05				AML	AML		
	comp=E,63571μm,0.0s						
AM05				AML	AML		
	comp=E,12902μm,0.3s						
AM05				AML	AML		
	comp=N,16011μm,0.5s						
CSP1	**Cessapalombo**	**0.23**	**22**	⇑P	**Pg**	**08 31 11.8**	**+0.2**
CSP1				S	**Sg**	**08 31 15.5**	**+0.4**
CSP1				AML	AML		
	comp=E,91650μm,0.3s						
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
	comp=E,91825μm,0.3s						
T1220	**Camerino, Fraz**	**0.23**	**360**	P	**Pg**	**08 31 11.8**	**+0.3**
T1220				S	**Sb**	**08 31 15.7**	**-0.6**
T1201	**Domo (RI)**	**0.25**	**152**	P	**Pb**	**08 31 12.6**	**-0.2**
T1241	**Roccafluvione,**	**0.25**	**96**	⇑P	**Pb**	**08 31 12.7**	**0.0**
T1241				S	**Sb**	**08 31 16.8**	**-0.2**
T1241				AML	AML		
	comp=N,28350μm,0.3s						
T1241				AML	AML		
	comp=E,71850μm,0.3s						
T1241				AML	AML		
	comp=N,24000μm,0.2s						
T1241				AML	AML		
	comp=E,69350μm,0.3s						
T1241				AML	AML		

comp=N,28300µm,0.3s
T1241 AML AML
comp=N,23550µm,0.2s
T1241 AML AML
comp=E,69400µm,0.3s
T1241 AML AML
comp=E,71900µm,0.3s
T1241 AML AML
comp=N,23600µm,0.2s
T1241 AML AML
comp=E,69379µm,0.3s
T1241 AML AML
comp=N,23631µm,0.2s
T1241 AML AML
comp=N,28332µm,0.3s
T1241 AML AML
comp=E,71872µm,0.3s
GUMA Gualdo di Mace 0.26 45 ⇑P Pb 08 31 12.5 -0.3
GUMA S **Sb 08 31 16.9 -0.2**
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
T1204 Amatrice, Fraz 0.27 141 P **Pg 08 31 12.4 +0.2**
T1204 S **Sb 08 31 16.9 -0.6**
T1204 AML AML
comp=E,11595µm,0.3s
T1204 AML AML
comp=N,9360µm,0.6s
LNSS Leonessa 0.28 187 P **Pb 08 31 13.5 +0.2**
LNSS S **Sb 08 31 17.7 -0.2**
LNSS AML AML
comp=E,4635µm,1.2s
LNSS AML AML
comp=N,10550µm,0.3s
LNSS AML AML
comp=N,21000µm,0.6s
LNSS AML AML
comp=E,9320µm,0.9s
LNSS AML AML
comp=E,4488µm,0.4s
LNSS AML AML
comp=N,10564µm,0.3s
SEF1 Sefro 0.28 339 P **Pb 08 31 12.9 -0.4**
SEF1 S **Sb 08 31 17.6 -0.3**
SEF1 AML AML
comp=E,41500µm,1.6s
SEF1 AML AML
comp=N,45300µm,0.2s
SEF1 AML AML
comp=E,41550µm,1.6s
SEF1 AML AML
comp=N,45250µm,0.2s
SEF1 AML AML
comp=N,45300µm,0.2s
SEF1 AML AML
comp=E,58300µm,0.3s
SEF1 AML AML
comp=E,37390µm,0.3s
SEF1 AML AML
comp=N,45280µm,0.2s
PIO1 Pioraco 0.31 345 P **Pb 08 31 13.2 -0.5**
PIO1 S **Sb 08 31 18.3 -0.3**
PIO1 AML AML
comp=E,12400µm,0.4s
PIO1 AML AML
comp=N,16600µm,0.7s
PIO1 AML AML
comp=E,12400µm,0.5s
PIO1 AML AML
comp=E,22850µm,1.6s
PIO1 AML AML
comp=N,48750µm,0.9s
PIO1 AML AML
comp=N,16596µm,0.7s
PIO1 AML AML
comp=E,12387µm,0.5s
MDAR Monte D'Aria 0.31 7 P **Pg 08 31 13.3 +0.3**
MDAR S **Sb 08 31 18.2 -0.7**
MDAR AML AML
comp=E,32600µm,0.3s
MDAR AML AML
comp=N,39250µm,0.4s
MDAR AML AML
comp=E,32615µm,0.3s
MDAR AML AML
comp=N,39256µm,0.4s
T1243 Rocca Santa Ma 0.32 125 P **Pg 08 31 13.4 +0.3**
FIU1 Fiuminata 0.33 339 P **Pb 08 31 13.8 -0.3**
FIU1 S **Sb 08 31 19.0 -0.2**
FIU1 AML AML
comp=N,18200µm,0.2s
FIU1 AML AML
comp=E,16000µm,1.1s
FIU1 AML AML
comp=N,18150µm,0.2s
FIU1 AML AML
comp=E,15915µm,0.3s
FIU1 AML AML
comp=N,18169µm,0.2s
ASSB Assisi San Ben 0.35 297 ⇑P Pb 08 31 14.2 -0.3
GAG1 Gagliole 0.36 357 P **Pb 08 31 14.3 -0.3**
GAG1 S **Sb 08 31 19.9 -0.2**
GAG1 AML AML
comp=E,36600µm,0.4s
GAG1 AML AML
comp=N,28500µm,0.9s
GAG1 AML AML
comp=N,54250µm,0.6s
GAG1 AML AML
comp=E,68200µm,0.5s
GAG1 AML AML
comp=E,36586µm,0.5s
GAG1 AML AML
comp=N,28284µm,0.3s
MNTP Montappone 0.38 47 P **Pb 08 31 14.9 0.0**
MNTP S **Sb 08 31 20.9 +0.3**
MNTP AML AML
comp=E,5750µm,0.9s
MNTP AML AML
comp=N,24900µm,0.3s
MNTP AML AML
comp=N,24894µm,0.3s
MNTP AML AML
comp=E,5369µm,0.3s
RM33 Pellescritta (0.38 166 AML AML
comp=N,10800µm,1.6s
RM33 AML AML
comp=E,4365µm,0.4s
RM33 AML AML
comp=N,3550µm,0.3s
RM33 AML AML
comp=E,4280µm,0.6s
RM33 AML AML
comp=N,3520µm,0.3s
RM33 AML AML
comp=E,9045µm,1.6s
RM33 AML AML
comp=E,8790µm,1.6s
RM33 AML AML
comp=N,10730µm,0.5s
ARRO Arrone 0.39 218 P **Pb 08 31 15.0 0.0**
ARRO S **Sb 08 31 21.2 +0.5**
ARRO AML AML
comp=E,3775µm,0.3s
ARRO AML AML
comp=N,3620µm,0.4s
ARRO AML AML
comp=N,7285µm,1.2s
ARRO AML AML
comp=E,11145µm,1.1s
ARRO AML AML
comp=E,3775µm,0.3s
ARRO AML AML
comp=N,3579µm,0.4s
SNTG Esanatoglia 0.39 344 AML AML
comp=E,11745µm,1.2s
SNTG AML AML
comp=E,8890µm,0.1s
SNTG AML AML
comp=N,6410µm,0.5s
SNTG AML AML
comp=E,9055µm,0.1s
SNTG AML AML
comp=N,6650µm,0.4s
SNTG AML AML
comp=E,12460µm,1.2s
SNTG AML AML
comp=N,13700µm,0.5s
SNTG AML AML
comp=N,12750µm,0.5s
T1211 Morro Reatino 0.39 206 P **Pb 08 31 15.0 -0.1**
T1211 S **Sb 08 31 21.5 +0.6**
CAMP Campotosto 0.42 146 ⇑P Pg 08 31 15.1 +0.2
CAMP S **Sb 08 31 21.5 -0.3**
CAMP AML AML
comp=E,2715µm,0.5s
CAMP AML AML
comp=N,3430µm,0.6s
CAMP AML AML
comp=E,6640µm,1.2s
CAMP AML AML
comp=N,6895µm,0.6s
CAMP AML AML
comp=N,3426µm,0.6s
CAMP AML AML
comp=E,2676µm,0.0s
T1246 Crognaleto (TE 0.42 135 P **Pg 08 31 15.1 +0.1**
T1246 S **Sb 08 31 21.4 -0.5**
OFFI Offida 0.44 83 ⇑P Pb 08 31 16.2 +0.3
OFFI AML AML
comp=E,13800µm,0.8s
OFFI AML AML
comp=N,19950µm,0.7s
OFFI AML AML
comp=N,31350µm,0.7s
OFFI AML AML
comp=E,20550µm,0.8s
ATCC AVT- Casa Cast 0.45 313 ⇑P Pb 08 31 15.9 -0.2
ATCC S **Sb 08 31 23.1 +0.5**
EL6 Elcito 0.45 1 P **Pg 08 31 15.7 +0.3**
EL6 S **Sb 08 31 22.8 +0.1**
EL6 AML AML
comp=E,18200µm,1.4s
EL6 AML AML
comp=N,28850µm,0.3s
EL6 AML AML
comp=E,16322µm,0.1s
EL6 AML AML
comp=N,28815µm,0.3s
TERO Teramo 0.46 124 P **Pg 08 31 15.6 0.0**
TERO S **Sb 08 31 22.8 -0.2**
TERO AML AML
comp=E,6565µm,0.7s
TERO AML AML
comp=N,6585µm,1.6s
TERO AML AML
comp=E,6740µm,0.7s
TERO AML AML
comp=N,6880µm,0.5s
TERO AML AML
comp=N,11600µm,0.6s
TERO AML AML
comp=N,11300µm,0.6s
TERO AML AML
comp=E,8680µm,0.6s
TERO AML AML
comp=E,8860µm,0.6s
TERO AML AML
comp=E,6563µm,0.7s
TERO AML AML
comp=N,6882µm,0.5s
TERO AML AML
comp=E,6744µm,0.7s
TERO AML AML
comp=N,6561µm,0.5s
TRE1 Treia 0.46 21 P **Pb 08 31 16.2 -0.1**
TRE1 S **Sb 08 31 23.6 +0.7**
TRE1 AML AML
comp=E,27800µm,1.3s
TRE1 AML AML
comp=N,24950µm,1.6s
TRE1 AML AML
comp=N,44400µm,1.6s
TRE1 AML AML
comp=E,43300µm,0.7s
TRE1 AML AML
comp=E,27557µm,0.5s
TRE1 AML AML
comp=N,22702µm,0.2s
CESX Cesi 0.46 234 ⇑P Pb 08 31 16.1 -0.2
CESX S **Sb 08 31 23.5 +0.5**
CESX AML AML
comp=E,7245µm,0.5s
CESX AML AML
comp=N,5930µm,0.5s
CESX AML AML
comp=N,10315µm,0.8s
CESX AML AML
comp=E,11950µm,1.1s
CESX AML AML
comp=N,5931µm,0.5s
CESX AML AML
comp=E,7243µm,0.5s
T1247 Pizzolo (AQ) 0.47 161 P **Pb 08 31 16.4 0.0**
T1247 S **Sb 08 31 23.3 +0.1**
FOSV Fossato di Vic 0.48 330 P **Pb 08 31 16.2 -0.4**
FOSV S **Sb 08 31 23.8 +0.3**
FOSV AML AML
comp=E,7925µm,0.2s
FOSV AML AML
comp=N,15000µm,0.3s
FOSV AML AML
comp=E,8695µm,0.9s
FOSV AML AML
comp=N,15050µm,0.3s
FOSV AML AML
comp=N,15005µm,0.3s
FOSV AML AML
comp=E,7923µm,0.2s
CING Cingoli 0.50 9 P **Pg 08 31 16.5 +0.2**
GIGS Gran Sasso 0.56 140 P **Pg 08 31 17.3 -0.1**
GIGS S **Sg 08 31 25.4 +0.5**
GIGS AML AML
comp=E,884µm,1.1s
GIGS AML AML
comp=N,938µm,0.7s
GIGS AML AML
comp=N,1740µm,0.8s
GIGS AML AML
comp=E,1990µm,0.6s
GIGS AML AML
comp=E,883µm,1.1s
GIGS AML AML
comp=N,937µm,0.7s
MURB Monte Urbino 0.56 313 P **Pb 08 31 17.9 -0.1**
MURB S **Sb 08 31 26.5 +0.6**
MURB AML AML
comp=E,15550µm,0.3s
MURB AML AML
comp=N,15600µm,0.9s
MURB AML AML
comp=N,15200µm,1.0s
MURB AML AML
comp=E,15500µm,0.3s
MURB AML AML
comp=N,15600µm,1.0s
MURB AML AML
comp=E,17250µm,0.3s
MURB AML AML
comp=E,17265µm,0.3s
MURB AML AML
comp=E,15521µm,0.3s
MURB AML AML
comp=N,15480µm,0.4s
MURB AML AML
comp=N,14974µm,0.2s
CADA Capodarco di F 0.58 57 P **Pn 08 31 19.4 -0.9**
CIMA Civitanova Mar 0.60 45 P **Pb 08 31 19.2 +0.5**
TRTR Tortoreto Alta 0.61 97 ⇑P Pb 08 31 19.6 +0.8
TRTR AML AML
comp=E,13650µm,0.9s
TRTR AML AML
comp=N,14200µm,1.0s
TRTR AML AML
comp=E,17300µm,0.4s
TRTR AML AML
comp=N,24150µm,0.5s
TRTR AML AML
comp=N,8739µm,0.3s
FIAM Fiamignano 0.61 178 P **Pg 08 31 18.4 0.0**
ATFO Monte Foce - G 0.62 322 P **Pb 08 31 18.8 -0.2**
ATFO S **Sb 08 31 28.4 +0.9**
ATFO AML AML
comp=E,4395µm,0.9s
ATFO AML AML
comp=N,3660µm,0.4s
ATFO AML AML
comp=E,6585µm,1.1s
ATFO AML AML
comp=N,5240µm,0.6s
ATFO AML AML
comp=N,3661µm,0.4s
ATFO AML AML
comp=E,4261µm,0.8s
ATTE AVT- Monte Tez 0.62 301 P **Pg 08 31 18.8 +0.1**
ATTE AML AML
comp=E,3050µm,0.4s
ATTE AML AML
comp=N,2970µm,1.5s
ATTE AML AML
comp=N,3135µm,1.3s
ATTE AML AML
comp=E,4105µm,1.4s
ATTE AML AML
comp=N,969µm,0.6s
ARVD Arcevia 0.63 350 P **Pg 08 31 18.7 0.0**
PP3 Marolino 0.63 37 ⇑P Pb 08 31 19.5 +0.4
PP3 AML AML
comp=N,28950µm,0.8s
PP3 AML AML
comp=N,28900µm,0.8s
PP3 AML AML
comp=N,30100µm,0.8s
PP3 AML AML
comp=E,24600µm,0.8s
PP3 AML AML
comp=E,24050µm,0.8s
PP3 AML AML
comp=N,25787µm,0.3s
PP3 AML AML
comp=E,21291µm,0.2s
ATLO AVT- Montelove 0.66 311 P **Pb 08 31 19.5 -0.2**
ATLO S **Sb 08 31 29.6 +0.8**
FRON Frontone 0.69 337 ⇑P Pg 08 31 19.8 -0.1
FRON S **Sb 08 31 30.5 +0.9**
FRON AML AML
comp=E,2875µm,0.4s
FRON AML AML
comp=N,5335µm,0.3s
FRON AML AML
comp=N,6680µm,0.5s
FRON AML AML
comp=E,7145µm,1.2s
FRON AML AML
comp=N,5333µm,0.3s
FRON AML AML
comp=E,2874µm,0.4s
TB01 Gubbio 0.69 316 P **Pg 08 31 20.0 0.0**
ATVO AVT- Monte Val 0.71 315 ⇑P Pb 08 31 20.3 -0.2
ATVO AML AML
comp=E,4030µm,0.9s
ATVO AML AML
comp=N,4135µm,0.7s
ATVO AML AML
comp=E,2725µm,0.3s
ATVA AVT- Monte Val 0.71 304 P **Pb 08 31 20.8 +0.2**
FAGN Fagnano 0.71 149 P **Pb 08 31 21.1 +0.5**
MGAB Montegabbione 0.72 273 P **Pb 08 31 20.9 +0.2**
MGAB AML AML
comp=E,6085µm,0.4s
MGAB AML AML
comp=N,7315µm,0.5s
MGAB AML AML
comp=E,5880µm,0.4s
MGAB AML AML
comp=N,7650µm,0.5s
MGAB AML AML
comp=N,3804µm,0.5s
TB03 Pietralunga 0.72 317 P **Pb 08 31 20.6 -0.2**
VCEL Villa Celiera 0.74 131 ⇑P Pg 08 31 20.7 -0.1
VCEL AML AML
comp=E,5130µm,1.2s
VCEL AML AML
comp=N,3965µm,1.3s
VCEL AML AML
comp=E,5155µm,0.6s
VCEL AML AML
comp=N,8080µm,1.1s
ATMI Monte Miggiano 0.75 307 P **Pn 08 31 23.0 +0.3**
ATMI AML AML
comp=N,10035µm,0.9s
ATMI AML AML
comp=E,10705µm,1.4s
ATMI AML AML
comp=E,8649µm,0.3s
ATPI Pietralunga - 0.76 319 P **Pb 08 31 21.3 -0.1**
ATPI AML AML
comp=E,2480µm,1.2s
ATPI AML AML
comp=N,3300µm,0.5s
ATPI AML AML
comp=N,3305µm,0.5s
ATPI AML AML
comp=E,2515µm,0.6s
ATPI AML AML
comp=E,1797µm,0.5s
AOI Ancona 0.77 29 P **Pg 08 31 21.4 0.0**
AOI AML AML
comp=E,4275µm,1.4s
AOI AML AML
comp=N,5220µm,1.6s
AOI AML AML
comp=E,4560µm,1.6s
AOI AML AML
comp=N,6370µm,0.4s
AOI AML AML
comp=E,4010µm,0.4s
PIEI Pieia 0.77 328 P **Pb 08 31 21.8 +0.2**
PIEI AML AML
comp=E,3630µm,0.3s
PIEI AML AML
comp=N,2330µm,0.4s
MPAG Monte Paganucc 0.79 342 P **Pg 08 31 21.7 -0.1**
MPAG AML AML
comp=E,3365µm,0.4s
MPAG AML AML
comp=N,2370µm,1.5s
MPAG AML AML
comp=E,5230µm,1.2s
MPAG AML AML
comp=N,3915µm,1.6s
MPAG AML AML
comp=E,3097µm,0.3s
NARO Abbazia di Nar 0.82 333 P **Pb 08 31 22.3 -0.1**
NARO AML AML
comp=E,3115µm,0.8s
NARO AML AML
comp=N,2275µm,1.3s
NARO AML AML
comp=N,890µm,0.2s
T0110 Collepietro 0.83 142 P **Pg 08 31 22.3 -0.2**
T0110 AML AML
comp=E,4280µm,0.5s
T0110 AML AML
comp=N,6050µm,0.5s
T0110 AML AML
comp=E,7445µm,0.9s
T0110 AML AML
comp=N,6835µm,1.6s
T0110 AML AML
comp=E,1938µm,0.5s
FSSB Fossombrone 0.84 344 P **Pn 08 31 23.3 -0.6**
FSSB AML AML
comp=E,8400µm,0.3s
FSSB AML AML
comp=N,9890µm,0.3s
FSSB AML AML
comp=N,12050µm,0.4s
FSSB AML AML
comp=E,11415µm,0.5s
ATMC Monte Cedrone 0.87 311 P **Pn 08 31 24.4 +0.2**
SACS San Casciano d 0.87 268 P **Pn 08 31 24.8 +0.6**
SACS AML AML
comp=E,3045µm,0.7s

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SACS                                AML   AML
      comp=N,3475µm,0.8s
SACS                                AML   AML
      comp=E,3205µm,0.8s
SACS                                AML   AML
      comp=N,3640µm,0.8s
SACS                                AML   AML
      comp=E,1094µm,0.9s
SACS                                AML   AML
      comp=E,1106µm,0.9s
MTCE  Montecelio          0.90 197  P     Pn    08 31 24.8 +0.3
PE3   Peglio              0.92 332  P     Pn    08 31 24.7 -0.3
CERT  Cerreto             0.94 185  P     Pn    08 31 26.7 +1.6
CAFI  Castiglion Fio      0.94 299  P     Pg    08 31 24.6 +0.1
CAFI                                AML   AML
      comp=E,1915µm,0.4s
CAFI                                AML   AML
      comp=N,1840µm,1.6s
CAFI                                AML   AML
      comp=E,2575µm,1.6s
CAFI                                AML   AML
      comp=E,2495µm,0.5s
CAFI                                AML   AML
      comp=N,2596µm,1.4s
CAFI                                AML   AML
      comp=N,2630µm,1.4s
CAFI                                AML   AML
      comp=N,1802µm,0.9s
MCIV  Monte Civitell      1.04 265  P     Pn    08 31 27.2 +0.6
MCIV                                AML   AML
      comp=E,998µm,1.0s
MCIV                                AML   AML
      comp=N,1073µm,0.9s
MCIV                                AML   AML
      comp=N,344µm,1.0s
MCIV                                AML   AML
      comp=E,552µm,0.7s
VVLD  Villa Vallelon      1.08 158  P     Pg    08 31 28.2 +0.8
CRE   Caprese Michel      1.11 312  AML   AML
      comp=N,1605µm,0.9s
CRE                                 AML   AML
      comp=E,1020µm,1.4s
TOLF  Tolfa               1.15 225  P     Pb    08 31 27.8 -0.2
LPEL  Lama dei Pelig      1.16 135  P     Pn    08 31 27.0 -1.2
POFI  Posta Fibreno       1.25 158  P     Pg    08 31 32.2 +1.7
ASQU  Asqua               1.32 314  P     Pg    08 31 31.9 +0.1
GIUL  Giuliano Di Ro      1.33 175  P     Pg    08 31 32.5 +0.6
SFI   Santa Sofia         1.37 319  P     Pg    08 31 33.0 +0.3
CSNT  Castellina Chi      1.44 295  P     Pb    08 31 33.2 +0.2
FROS  Frosini             1.46 284  P     Pb    08 31 33.2  0.0
FROS                                AML   AML
      comp=E,832µm,1.4s
FROS                                AML   AML
      comp=N,602µm,0.8s
FROS                                AML   AML
      comp=E,513µm,0.6s
FROS                                AML   AML
      comp=N,323µm,1.4s
RUFI  Rufina              1.50 310  P     Pg    08 31 34.8 -0.4
MIDA  Miranda             1.51 145  P     Pb    08 31 34.4 +0.2
MAON  Monte Argentar      1.51 253  P     Pb    08 31 33.9 -0.3
MAON                                AML   AML
      comp=E,415µm,1.6s
MAON                                AML   AML
      comp=N,264µm,1.4s
MAON                                AML   AML
      comp=E,117µm,0.6s
MAON                                AML   AML
      comp=N,91µm,1.0s
TRIV  Trivento            1.55 135  P     Pg    08 31 36.0 -0.3
TRIF  Trifonti            1.62 279  P     Pb    08 31 35.4 -0.7
TRIF                                AML   AML
      comp=N,400µm,1.6s
TRIF                                AML   AML
      comp=E,494µm,1.6s
TRIF                                AML   AML
      comp=N,157µm,0.7s
TRIF                                AML   AML
      comp=E,318µm,0.5s
VAGA  Valle Agricola      1.69 149  P     Pg    08 31 39.4 +0.5
BSSO  Busso               1.74 140  P     Pg    08 31 40.5 +0.6
CIGN  Sant'Elia a Pi      1.82 132  P     Pg    08 31 40.6 -0.8
POPM  Popiglio            2.06 305  P     Pn    08 31 41.3 +0.8
POPM                                AML   AML
      comp=E,115µm,1.2s
BRJN  Brijuni             2.08  13  P     Pn    08 31 41.6 +0.8
APRC  Apricena            2.14 121  P     Pb    08 31 43.6 -1.3
PAOL  Paolisi             2.15 149  AML   AML
      comp=N,236µm,1.4s
PAOL                                AML   AML
      comp=E,259µm,1.6s
SGRT  San Giovanni R      2.27 119  P     Pb    08 31 45.5 -1.7
SKDS  Skadanscina         2.75  14  i Pn  Pn    08 31 50.7 +0.6
PGF   Pioggiola           3.03 265  ePn   Pn    08 31 53.6 -0.4
PGF   Pioggiola           3.03 265  eP    Pn    08 31 55.9 +1.9
PGF                                 eSn   Sn    08 32 28.3 -1.8
      comp=E,14nm,0.6s
SABO  M.te Sabotino       3.12   7  P     Pn    08 31 56.1 +1.0
SABO                                AML   AML
      comp=N,483µm,0.7s
SABO                                AML   AML
      comp=N,1725µm,1.2s
SABO                                AML   AML
      comp=E,2180µm,0.6s
SABO                                AML   AML
      comp=E,516µm,0.6s
SABO                                AML   AML
      comp=E,624µm,0.7s
SABO                                AML   AML
      comp=N,133µm,0.6s
SABO                                AML   AML
      comp=E,161µm,0.7s
SABO                                AML   AML
      comp=N,576µm,1.0s
ROVR  Rover Verones       3.12 333  P     Pn    08 31 58.1 +2.9
SALO  Salr                3.30 327  P     Pn    08 32 00.8 +3.2
LJU   Ljubljana           3.33  18  P     Pn    08 31 59.5 +1.5
LJU                                 AML   AML
      comp=N,1960µm,0.6s
LJU                                 AML   AML
      comp=E,1945µm,0.6s
LJU                                 AML   AML
      comp=E,341µm,0.4s
LJU                                 AML   AML
      comp=N,431µm,0.3s
CTI   Castel Tesino       3.33 342  P     Pn    08 32 00.8 +2.7
MPRI  Monte Prat          3.36 359  P     Pn    08 31 60.0 +1.5
MPRI                                AML   AML
      comp=E,346µm,0.8s
MPRI                                AML   AML
      comp=N,480µm,0.6s
MPRI                                AML   AML
      comp=E,134µm,0.5s
MPRI                                AML   AML
      comp=E,163µm,0.5s
MPRI                                AML   AML
      comp=N,173µm,0.4s
CADS  Cadrg               3.38   8  i Pn  Pn    08 31 59.6 +0.9
STON  Ston                3.39  89  AML   AML
      comp=N,113µm,0.7s
STON                                AML   AML
      comp=E,99µm,0.6s
LUSI  Trento, Gardas      3.44 334  P     Pn    08 32 02.8 +3.2
CIMO  Cimolais            3.46 353  P     Pn    08 32 01.1 +1.3
CIMO                                AML   AML
      comp=N,95µm,0.6s
CIMO                                AML   AML
      comp=E,100µm,0.6s
CIMO                                AML   AML
      comp=E,107µm,0.6s
CIMO                                AML   AML
      comp=N,98µm,0.7s
CIMO                                AML   AML
      comp=E,43µm,0.7s
CIMO                                AML   AML
      comp=E,29µm,0.4s
CIMO                                AML   AML
      comp=N,28µm,0.5s
PTCC  Patocco-Chiusa      3.53   3  P     Pn    08 32 01.6 +0.8
PTCC                                AML   AML
      comp=N,136µm,0.6s
PTCC                                AML   AML
      comp=E,140µm,0.3s
PTCC                                AML   AML
      comp=N,72µm,0.4s
GAGG  Gaggia              3.55 335  P     Pn    08 32 04.2 +3.1
MABI  Malga Bissina       3.67 331  P     Pn    08 32 05.7 +2.8
ZOU   Zoufplan            3.68 359  AML   AML
      comp=E,174µm,0.8s
ZOU                                 AML   AML
      comp=N,160µm,0.7s
ACOM  Acomizza, Ital      3.68   5  P     Pn    08 32 05.0 +2.0
ACOM                                AML   AML
      comp=E,322µm,0.8s
ACOM                                AML   AML
      comp=N,238µm,0.4s
ACOM                                AML   AML
      comp=E,102µm,0.4s
ACOM                                AML   AML
      comp=N,100µm,0.3s
MYKA  Terra Mystica       3.77   6  ePn   Pn    08 32 05.7 +1.6
      comp=N,14nm,0.4s,SNR=10
OBKA  Obir                3.77  16  ePn   Pn    08 32 05.7 +1.5
      comp=N,1.7nm,0.2s
KOSI  Kohlern             3.78 342  P     Pn    08 32 07.3 +2.9
ABTA  Abfaltersbach       3.89 354  i Pn  Pn    08 32 08.3 +2.6
      comp=N,31nm,0.6s,SNR=15
SOKA  Soboth              4.04  19  ePn   Pn    08 32 09.2 +1.3
      comp=N,1.4nm,0.3s
RISI  Rein                4.13 350  P     Pn    08 32 12.3 +3.1
SBF   Sospel              4.24 285  ePn   Pn    08 32 11.4 +0.9
SBF   Sospel              4.24 285  eP    Pn    08 32 14.6 +4.1
SBF                                 eSn   Sn    08 32 58.3 -1.5
      comp=N,23nm,0.5s
FETA  Feichten            4.47 339  i Pn  Pn    08 32 16.4 +2.7
      comp=N,3.6nm,0.3s
WTTA  Wattenberg          4.50 347  i Pn  Pn    08 32 17.9 +3.7
      comp=N,2.1nm,0.3s
WTTA  Wattenberg          4.50 347  P     Pn    08 32 14.8 +0.5
DAVOX Davos/Dischmat      4.52 331  Pn    Pn    08 32 18.4 +3.9
      comp=N,2.4nm,0.3s,baz=151,slow=18,SNR=12
      comp=N,9.9nm,0.5s
DAVOX Davos/Dischmat      4.52 331  P     Pn    08 32 18.9 +4.4
SQTA  Sankt Quirin        4.54 344  i Pn  Pn    08 32 18.9 +4.2
      comp=N,7.0nm,0.2s,SNR=7.2
WATA  Walderalm           4.58 347  ePn   Pn    08 32 19.0 +3.7
      comp=N,14nm,0.4s,SNR=6.8
MOTA  Moosalm             4.68 343  ePn   Pn    08 32 20.9 +4.2
      comp=N,8.2nm,0.4s
ARSA  Arzberg             4.70  21  ePn   Pn    08 32 17.5 +0.7
      comp=N,1.3nm,0.3s
BIOA  Bad Ischl, Aus      4.83   4  ePn   Pn    08 32 20.7 +2.1
      comp=N,16nm,0.3s,SNR=12
LMR   La Mourre           4.84 278  ePn   Pn    08 32 19.0 +0.3
LMR   La Mourre           4.84 278  eP    Pn    08 32 23.4 +4.7
LMR                                 eSn   Sn    08 33 11.8 -2.7
      comp=N,6.0nm,0.4s
RETA  Reutte              4.89 341  ePn   Pn    08 32 22.6 +3.1
      comp=N,2.8nm,0.3s
MBDF  Montbardon          4.93 294  ePn   Pn    08 32 20.6 +0.5
MBDF  Montbardon          4.93 294  eP    Pn    08 32 25.0 +4.9
MBDF                                eSn   Sn    08 33 15.5 -1.5
      comp=N,13nm,0.6s
DAVA  Damuels             4.96 334  ePn   Pn    08 32 24.1 +3.6
      comp=N,7.6nm,0.6s,SNR=4.9
MOA   Molln               5.04   9  i Pn  Pn    08 32 23.0 +1.5
      comp=N,4.5nm,0.3s,SNR=11
LPG   La Plagne           5.25 302  ePn   Pn    08 32 25.8 +1.1
LPG   La Plagne           5.25 302  eP    Pn    08 32 29.8 +5.1
LPG                                 eSn   Sn    08 33 23.9 -1.3
      comp=N,17nm,0.5s
LPL   La Plagne           5.28 302  eSn   Sn    08 33 24.0 -1.6
      comp=N,6.0nm,0.3s
RONA  Rosalia, Austr      5.32  24  ePn   Pn    08 32 26.4 +1.0
      comp=N,1.2nm,0.2s
CONA  Conrad Observa      5.41  20  i Pn  Pn    08 32 27.8 +1.1
      comp=N,3.5nm,0.2s,SNR=11
SMRF  Simiane la Rot      5.58 284  ePn   Pn    08 32 29.3 +0.3
SMRF  Simiane la Rot      5.58 284  eP    Pn    08 32 33.8 +4.8
ORIF  Oris-en-Rattie      5.59 294  ePn   Pn    08 32 29.7 +0.5
ORIF  Oris-en-Rattie      5.59 294  eP    Pn    08 32 34.1 +4.9
ORIF                                eSn   Sn    08 33 30.0 -3.2
      comp=N,8.1nm,0.4s
GERES GERESS Array B      5.98   4  Pn    Pn    08 32 35.1 +0.6
      comp=N,0.9nm,0.3s,baz=175,slow=13,SNR=12
GERES                               Sn    Sn    08 33 38.8 -3.9
      comp=N,2.8nm,0.3s,baz=176,slow=18,SNR=6.3
      comp=N,1.3nm,0.3s
CKRC  Cesky Krumlov       6.00   8  eSN   Sn    08 33 42.1 -1.0
CABF  La Chapelle         6.22 309  ePn   Pn    08 32 39.1 +1.2
CABF  La Chapelle         6.22 309  eP    Pn    08 32 43.8 +5.9
KHC   Kasperske Hory      6.26   3  ePN   Pn    08 32 39.5 +1.2
KHC                                 eSN   Sn    08 33 48.7 -0.9
VIVF  Saint-Julien-I      6.40 291  ePn   Pn    08 32 40.5 +0.3
VIVF  Saint-Julien-I      6.40 291  eP    Pn    08 32 45.3 +5.1
VIVF                                eSn   Sn    08 33 50.0 -2.9
      comp=N,5.3nm,0.6s
KRUC  Moravsky            6.60  19  ePN   Pn    08 32 43.7 +0.8
HINF  Hinteralfeld        6.61 320  ePn   Pn    08 32 44.4 +1.4
HINF  Hinteralfeld        6.61 320  eP    Pn    08 32 49.0 +6.0
HINF                                eSn   Sn    08 33 56.3 -1.8
      comp=N,11nm,0.4s
LASF  Ste Croix           6.82 283  ePn   Pn    08 32 46.0  0.0
LASF  Ste Croix           6.82 283  eP    Pn    08 32 51.3 +5.3
LASF                                eSn   Sn    08 33 59.9 -3.5
      comp=N,6.0nm,0.7s
CDF   Champ du Feu        6.87 326  ePn   Pn    08 32 47.7 +1.0
CDF   Champ du Feu        6.87 326  eP    Pn    08 32 52.1 +5.4
CDF                                 eSn   Sn    08 34 02.2 -2.4
      comp=N,16nm,0.5s
VRAC  Vranov              6.87  20  Pn    Pn    08 32 46.3 -0.4
      comp=N,0.4nm,0.3s,baz=150,slow=13,SNR=1.8
      comp=N,1.1nm,0.3s
HAU   Haudompre           6.98 320  ePn   Pn    08 32 49.4 +1.3
HAU   Haudompre           6.98 320  eP    Pn    08 32 54.2 +6.1
HAU                                 eSn   Sn    08 34 05.3 -2.0
      comp=N,18nm,0.5s
SMF   Signal de Mont      7.58 303  ePn   Pn    08 32 57.2 +0.8
SMF   Signal de Mont      7.58 303  eP    Pn    08 33 01.0 +4.6
PAGF  Fort de Pagny       7.66 320  ePn   Pn    08 32 58.6 +1.1
PAGF  Fort de Pagny       7.66 320  eP    Pn    08 33 03.1 +5.6
PAGF                                eSn   Sn    08 34 21.3 -2.7
      comp=N,16nm,0.6s
SFTF  Sexfontaines        7.76 316  ePn   Pn    08 32 59.7 +0.8
SFTF  Sexfontaines        7.76 316  eP    Pn    08 33 05.3 +6.4
      baz=131
SFTF                                eSn   Sn    08 34 22.9 -3.6
      comp=N,8.0nm,0.5s
LOR   Lormes              7.87 307  ePn   Pn    08 33 00.8 +0.5
LOR   Lormes              7.87 307  eP    Pn    08 33 06.1 +5.8
      baz=125
LOR                                 eSn   Sn    08 34 24.9 -4.2
      comp=N,3.4nm,0.3s
AVF   Avril sur Loir      7.95 303  ePn   Pn    08 33 01.9 +0.5
AVF   Avril sur Loir      7.95 303  eP    Pn    08 33 07.4 +6.0
AVF                                 eSn   Sn    08 34 27.5 -3.5
MEZF  Maizieres J'vi      7.95 318  ePn   Pn    08 33 02.5 +1.1
MEZF  Maizieres J'vi      7.95 318  eP    Pn    08 33 07.1 +5.7
      baz=130
MEZF                                eSn   Sn    08 34 28.3 -2.8
      comp=N,6.5nm,0.7s
SSF   Saint Saulge        7.98 305  ePn   Pn    08 33 02.3 +0.5
SSF   Saint Saulge        7.98 305  eP    Pn    08 33 07.1 +5.3
SSF                                 eSn   Sn    08 34 27.6 -4.1
      comp=N,3.2nm,0.5s
SAVF  Savonnieres en      7.99 319  ePn   Pn    08 33 03.0 +1.0
SAVF  Savonnieres en      7.99 319  eP    Pn    08 33 08.3 +6.3
      baz=137
SAVF                                eSn   Sn    08 34 29.2 -2.9
      comp=N,3.4nm,0.4s
CLL   Collm               8.43 360  ePn   Pn    08 33 09.0 +1.0
CLL                                 ex    x     08 33 12.0
CLL                                 ePg   Pg    08 33 45.0 -2.7
CLL                                 eSn   Sn    08 34 27.0 -16
CLL                                 ex    x     08 34 38.0
CLL                                 ex    x     08 35 13.0
CLL                                 eSg   Sg    08 35 36.0 -0.7
      comp=Z,15nm,1.4s
TCF   Toulx Ste Croi      8.48 297  ePn   Pn    08 33 09.4 +0.7
TCF   Toulx Ste Croi      8.48 297  eP    Pn    08 33 14.2 +5.5
TCF                                 eSn   Sn    08 34 40.0 -4.1
FINES FINESS Array B     20.15  18  P     P     08 35 40.6 +0.8
      comp=Z,1.7nm,0.8s,baz=212,slow=4.9,SNR=1.2
      comp=Z,1.7nm,0.8s
JMIC  Jan Mayen          30.17 346  LR    LR    08 51 15.4
      comp=Z,641nm,19.3s,baz=66,slow=40
TORD  Torodi Ar. Bea     31.22 202  P     P     08 37 27.0 +1.6
      comp=Z,0.4nm,0.6s,baz=10,slow=8.5,SNR=3.1
      comp=Z,0.4nm,0.6s
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*NAO **30** 08:31:08.5±1.8, 72°.80N×4°.78E, ML3.4*
*IDC **30** 08:31:10.4±0.8, 72°.82N×5°.38E, h0km, mb3.8/9, mbtmp3.8/14, ML3.2/6, Error ellipse: s-maj=19.0km s-min=14.6km az=58.0*
*BER **30** 08:31:12.9±3.2, 72°.89N×5°.42E, h10km, ML2.4, ML3.4(NAO), Confirmed Earthquake*

ISC 30 08:31:12.1±0.7, 72.78N±0°.06×5.86E±0°.07, h11km, n57, σ2s 09/71, mb3.8/9, Norwegian Sea

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Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op    ISC         h m  s    ISC
BJO1  Bjornoya            4.10  59  eP    Pn          08 32 13.5 -0.9
BJO1                                i                 08 32 18.7
TRO   Tromso              5.27 120  eP    Pn          08 32 32.3 +1.8
TRO                                 eS    Sn          08 33 29.2 -1.8
TRO                                 IAML              08 33 31.3
      comp=Z,7.3nm,0.2s
LOF   Lofoten             5.33 147  eP    Pn          08 32 33.3 +1.9
LOF                                 eS    Sn          08 33 29.9 -2.7
LOF                                 IAML              08 33 36.1
      comp=Z,14nm,0.3s
JETT  Jettan, Norway      5.70 117  Pn    Pn          08 32 38.7 +2.1
JETT                                Sn    Sn          08 33 41.3 -0.7
JETT  Jettan, Norway      5.70 117  Pn    Pn          08 32 38.7 +2.1
JETT                                Sn    Sn          08 33 41.3 -0.7
BRBA  Barentsburg A       5.71  18  Pn    Pn          08 32 35.8 -0.7
BRBA  Barentsburg A       5.71  18  Pn    Pn          08 32 35.8 -0.7
BRBB  Barentsburg B       5.74  18  Pn    Pn          08 32 36.0 -0.9
BRBB  Barentsburg B       5.74  18  Pn    Pn          08 32 36.0 -0.9
STEI  Steigen             5.80 142  eP    Pn          08 32 39.9 +2.1
STEI                                eS    Sn          08 33 41.5 -2.7
STEI                                IAML              08 33 50.1
      comp=Z,9.7nm,0.5s
HAMF  Hammerfest          5.99 102  Pn    Pn          08 32 41.5 +1.0
HAMF                                Sn    Sn          08 33 46.3 -2.7
HAMF  Hammerfest          5.99 102  eP    Pn          08 32 41.0 +0.5
HAMF                                eS    Sn          08 33 45.3 -3.7
HAMF                                IAML              08 33 50.1
      comp=Z,6.2nm,0.4s
SPA0  Spitsbergen Ar
      baz=218,slow=18     6.03  21  Pn    Pn          08 32 38.7 -2.3
SPA0  Spitsbergen Ar      6.03  21  Pn    Pn          08 32 38.7 -2.3
      baz=218,slow=18
SPITS Spitsbergen Ar      6.03  21  Pn    Pn          08 32 37.7 -3.3
      baz=210,slow=17
      comp=Z,6.6nm,0.6s
KIF   Kilpisjarvi         6.18 120  Pn    Pn          08 32 44.9 +1.8
KIF                                 Sn    Sn          08 33 52.5 -1.1
KIF   Kilpisjarvi         6.18 120  eP    Pn          08 32 45.1 +2.0
KIF                                 eS    Sn          08 33 50.7 -2.9
FAUS  Fauske              6.29 145  eP    Pn          08 32 46.2 +1.6
FAUS                                eS    Sn          08 33 53.6 -2.8
FAUS                                IAML              08 33 59.7
      comp=Z,9.3nm,0.3s
KBS   Kingsbay            6.36  11  eP    Pn          08 32 43.1 -2.3
KONS  Konsvik             6.79 155  eP    Pn          08 32 53.0 +1.6
KONS                                eS    Sn          08 34 03.8 -4.8
KONS                                IAML              08 34 10.2
      comp=Z,7.4nm,0.3s
KTK1  Kautokeino          6.82 115  eP    Pn          08 32 54.2 +2.3
KTK1                                IAML              08 34 15.7
      comp=Z,2.6nm,0.5s
STOK  Stokkvaagen         6.93 155  eP    Pn          08 32 56.1 +2.7
STOK                                eS    Sn          08 34 07.5 -4.6
ARA0  ARCESS Array S      7.12 108  Pn    Pn          08 32 57.4 +1.4
      baz=319,slow=14
ARA0                                Sn    Sn          08 34 14.0 -2.8
      baz=302,slow=22
ARA0  ARCESS Array S      7.12 108  Pn    Pn          08 32 57.4 +1.4
      baz=319,slow=14
ARA0                                Sn    Sn          08 34 14.0 -2.8
      baz=302,slow=22
ARA0                                IAML              08 34 20.3
      comp=Z,2.7nm,0.5s
ARCES ARCESS Array B      7.12 108  Pn    Pn          08 32 57.4 +1.4
      comp=Z,0.2nm,0.3s,baz=324,slow=15,SNR=19
ARCES                               Sn    Sn          08 34 15.0 -1.8
      comp=Z,0.3nm,0.3s,baz=319,slow=19,SNR=2.0
      comp=Z,1.5nm,0.4s
MOR8  Moi Rana            7.28 151  eP    Pn          08 32 59.5 +1.4
MOR8                                eS    Sn          08 34 16.5 -4.1
MOR8                                IAML              08 34 22.0
      comp=Z,12nm,0.2s
HEF   Hetta               7.35 118  eP    Pn          08 33 00.8 +1.7
HEF                                 eS    Sn          08 34 15.9 -6.4
KEV   Kevo                7.42 104  eP    Pn          08 33 01.1 +0.9
DBG   Daneborg            7.53 294  Pn    Pn          08 32 54.5 -7.1
DBG   Daneborg            7.53 294  Pn    Pn          08 32 54.5 -7.1
DBG   Daneborg            7.53 294  i P   Pn          08 32 53.9 -7.6
DAG   Danmarks Havn       7.54 313  i P   Pn          08 32 54.0 -7.7
DAG                                 eS    Sn          08 34 01.4 -26
NOA   NORSAR Array B     11.97 167  Pn    Pn          08 34 03.2 +0.9
      baz=345,slow=13,SNR=4.0
NRA0  NORESS Array S     12.29 167  Pn    Pn          08 34 07.9 +1.2
      baz=13,slow=14
NRA0                                Sn    Sn          08 36 19.8 -3.7
      baz=1.4,slow=28
NRA0  NORESS Array S     12.29 167  Pn    Pn          08 34 07.9 +1.2
      baz=13,slow=14
NRA0                                Sn    Sn          08 36 19.8 -3.7
      baz=1.4,slow=28
HFS   Hagfors            13.06 162  Pn    Pn          08 34 18.0 +0.8
      comp=Z,0.3nm,0.3s,baz=343,slow=12,SNR=7.3
      comp=Z,3.9nm,0.7s
HFS   Hagfors            13.06 162  Pn    Pn          08 34 17.7 +0.6
      baz=344,slow=16
HFS   Hagfors            13.06 162  Pn    Pn          08 34 17.7 +0.6
      baz=344,slow=16
FIA0  FINESS Array S     13.71 136  Pn    Pn          08 34 27.2 +1.2
      baz=335,slow=12
FIA0  FINESS Array S     13.71 136  Pn    Pn          08 34 27.2 +1.2
      baz=335,slow=12
FINES FINESS Array B     13.71 136  Pn    Pn          08 34 27.4 +1.4
      comp=Z,0.4nm,0.3s,baz=340,slow=12,SNR=15
      comp=Z,5.0nm,0.7s
LSH   Leshukonskoye      16.09  99  P     Pn          08 34 59.9 +2.2
      comp=Z,39nm,1.4s
KLMR  Klimovskoe         17.49 115  eP    Pn          08 35 12.9 -2.6
      comp=Z,43nm,1.9s
EKA   Eskdalemuir Ar     17.91 197  P     Pn          08 35 20.8 +0.1
      baz=8.8,slow=11
      comp=Z,1.3nm,0.8s
PRGR  Permogore          18.55 106  P     P           08 35 26.8 -1.5
KIRV  Kirov              22.14 107  P     P           08 36 08.9 +1.7
      comp=Z,6.4nm,0.6s,baz=340,slow=5.3,SNR=4.3
      comp=Z,6.4nm,0.6s
AKASG Malin Array Be     24.41 142  P     P           08 36 31.6 +1.6
      comp=Z,3.0nm,0.8s,baz=344,slow=9.5,SNR=11
      comp=Z,3.0nm,0.8s
AKTO  Aktyubinsk         31.70 106  P     P           08 37 36.0 +0.7
      comp=Z,0.6nm,0.5s,baz=308,slow=9.9,SNR=2.7
      comp=Z,0.6nm,0.5s
BVAR  Borovoye Array     33.05  91  P     P           08 37 49.4 +2.3
      comp=Z,0.3nm,0.6s,baz=320,slow=8.3,SNR=2.4
      comp=Z,0.3nm,0.6s
ESDC  Sonseca Array      33.53 194  P     P           08 37 51.5 +0.1
      comp=Z,0.6nm,0.8s,baz=360,slow=8.0,SNR=4.3
      comp=Z,0.6nm,0.8s
ILAR  Eielson Array      41.50 343  P     P           08 38 58.7 +0.3
      comp=Z,0.8nm,0.9s,baz=2.8,slow=7.4,SNR=6.1
      comp=Z,0.8nm,0.9s
GEYT  Alibeck            43.24 114  P     P           08 39 14.9 +2.0
      comp=Z,1.3nm,0.5s,baz=330,slow=8.3,SNR=3.7
      comp=Z,1.3nm,0.5s
NDI   New Delhi          57.35  99  eP    P           08 41 00.0 +0.2
TORD  Torodi Ar. Bea     59.65 185  P     P           08 41 16.0 +0.1
      comp=Z,1.4nm,0.8s,baz=358,slow=7.0,SNR=5.3
      comp=Z,1.4nm,0.8s
TXAR  Lajitas Array      67.77 297  P     P           08 42 08.8 -0.7
      comp=Z,0.3nm,0.7s,baz=51,slow=4.7,SNR=4.9
      comp=Z,0.3nm,0.7s
ASAR  Alice Springs     123.32  60  PKP   PKPdf       08 50 06.5 -1.8
      comp=Z,0.2nm,0.6s,baz=347,slow=1.1,SNR=7.2
MAW   Mawson            145.04 146  PKPbc PKPdf       08 50 48.0 +0.8
      comp=Z,2.5nm,0.8s,baz=287,slow=5.0,SNR=5.4
```

*ROM **30** 08:32:00.8±0.1, 42°.900N±0°.003×13°.156E±0°.005, h6km, ML3.7/41, Error ellipse: s-maj=0.4km s-min=0.1km az=66.0*
*LDG **30** 08:32:00.5±0.1, 42°.91N×13°.22E, h10km, Ml3.4/18, Error ellipse: s-maj=2.3km s-min=1.6km az=50.0*
*IDC **30** 08:32:01.1±1.2, 42°.98N×12°.99E, h0km, mb3.9/8, mbtmp3.9/11, ML3.6/3, Error ellipse: s-maj=24.1km*

s-min=15.1km az=88.0
PRU ***30*** *08:32:11.6±0.0,43°.31N×12°.55E,h10km*
ISC 30 08:32:00.9±0.7,**42°.91N**±0°.01×**13°.14E**±0°.02,**h6**km±4km,
n127,σ2∞**76**/178,**mb4.0**/7,**1C**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**93**	⇑P	**Pg**	**08 32 01.8**	**-0.6**
MC2				S	**Sg**	**08 32 03.0**	**-0.6**
T1245	**Castelsantange**	**0.07**	**148**	P	**Pg**	**08 32 02.6**	**-0.2**
T1245				S	**Sg**	**08 32 03.9**	**-0.1**
FEMA	**Monte Fema**	**0.08**	**306**	P	**Pg**	**08 32 03.5**	**+0.5**
FEMA				S	**Sg**	**08 32 05.4**	**+1.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.09**	**255**	P	**Pg**	**08 32 02.9**	**-0.1**
T1216				S	**Sg**	**08 32 05.7**	**+1.3**
T1216				AML	AML		
T1216				AML	AML		
T1256	**Bolognola (MC)**	**0.11**	**35**	P	**Pg**	**08 32 03.6**	**+0.2**
T1256				S	**Sg**	**08 32 05.9**	**+0.8**
FDMO	**Fiordimonte**	**0.13**	**343**	P	**Pg**	**08 32 04.4**	**+0.8**
FDMO				S	**Sg**	**08 32 07.0**	**+1.6**
T1214	**Arquata del Tr**	**0.16**	**162**	P	**Pg**	**08 32 04.1**	**-0.2**
T1214				S	**Sg**	**08 32 07.3**	**+0.8**
AM05	**Amandola Campo**	**0.17**	**68**	P	**Pg**	**08 32 04.7**	**+0.4**
AM05				S	**Sg**	**08 32 07.6**	**+0.9**
AM05				AML	AML		
	comp=E,18150μm,0.8s						
AM05				AML	AML		
	comp=N,23000μm,0.7s						
AM05				AML	AML		
	comp=N,22950μm,0.7s						
AM05				AML	AML		
	comp=E,18200μm,0.8s						
AM05				AML	AML		
	comp=E,69950μm,0.4s						
AM05				AML	AML		
	comp=N,3280μm,0.1s						
T1219	**Muccia, Frazio**	**0.17**	**326**	P	**Pg**	**08 32 05.1**	**+0.7**
T1219				S	**Sg**	**08 32 08.9**	**+2.1**
T1244	**Arquata del Tr**	**0.20**	**143**	P	**Pg**	**08 32 05.1**	**+0.2**
T1244				S	**Sg**	**08 32 08.8**	**+1.3**
T1220	**Camerino, Fraz**	**0.20**	**349**	P	**Pg**	**08 32 05.7**	**+0.8**
T1220				S	**Sg**	**08 32 09.7**	**+2.1**
GUMA	**Gualdo di Mace**	**0.21**	**44**	P	**Pg**	**08 32 05.8**	**+0.7**
GUMA				S	**Sg**	**08 32 09.9**	**+2.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1215	**Vallo di Nera,**	**0.23**	**241**	P	**Pg**	**08 32 06.8**	**+1.3**
T1215				AML	AML		
	comp=E,19100μm,1.1s						
T1215				AML	AML		
	comp=N,19700μm,1.0s						
T1215				AML	AML		
	comp=E,20100μm,1.3s						
T1215				AML	AML		
	comp=N,19300μm,1.0s						
T1215				AML	AML		
	comp=N,19250μm,1.0s						
T1215				AML	AML		
	comp=N,19300μm,1.0s						
T1215				AML	AML		
	comp=E,19100μm,1.1s						
T1215				AML	AML		
	comp=E,20050μm,1.2s						
T1215				AML	AML		
	comp=N,19700μm,1.0s						
T1217	**Poggiodomo (PG**	**0.25**	**217**	P	**Pg**	**08 32 07.2**	**+1.2**
T1217				AML	AML		
	comp=E,29650μm,0.7s						
T1217				AML	AML		
	comp=N,36700μm,0.9s						
T1217				AML	AML		
	comp=E,29050μm,1.0s						
T1217				AML	AML		
	comp=N,36600μm,0.6s						
T1201	**Domo (RI)**	**0.27**	**162**	P	**Pg**	**08 32 06.5**	**+0.3**
SEF1	**Sefro**	**0.27**	**329**	P	**Pg**	**08 32 07.1**	**+0.9**
SEF1				S	**Sg**	**08 32 12.3**	**+2.4**
SEF1				AML	AML		
	comp=E,58250μm,0.4s						
SEF1				AML	AML		
	comp=N,33350μm,0.3s						
SEF1				AML	AML		
	comp=E,58300μm,0.3s						
SEF1				AML	AML		
	comp=N,33350μm,0.2s						
T1204	**Amatrice, Fraz**	**0.27**	**151**	P	**Pg**	**08 32 06.7**	**+0.4**
T1204				S	**Sg**	**08 32 11.4**	**+1.5**
T1204				AML	AML		
	comp=N,17400μm,1.3s						
T1204				AML	AML		
	comp=E,21850μm,0.3s						
MDAR	**Monte D'Aria**	**0.28**	**1**	P	**Pg**	**08 32 07.0**	**+0.6**
MDAR				S	**Sg**	**08 32 11.9**	**+1.8**
PIO1	**Pioraco**	**0.29**	**337**	P	**Pg**	**08 32 07.5**	**+1.0**
PIO1				S	**Sg**	**08 32 13.1**	**+2.7**
PIO1				AML	AML		
	comp=E,22850μm,1.6s						
PIO1				AML	AML		
	comp=E,22850μm,1.6s						
PIO1				AML	AML		
	comp=N,48750μm,0.8s						
PIO1				AML	AML		
	comp=N,48750μm,0.9s						
FIU1	**Fiuminata**	**0.31**	**331**	P	**Pb**	**08 32 07.8**	**-1.1**
FIU1				S	**Sb**	**08 32 13.2**	**-1.2**
FIU1				AML	AML		
	comp=N,16600μm,0.3s						
FIU1				AML	AML		
	comp=E,12840μm,1.4s						
SSM1	**San Severino M**	**0.32**	**5**	P	**Pb**	**08 32 07.9**	**-1.1**
SSM1				S	**Sb**	**08 32 13.2**	**-1.2**
T1243	**Rocca Santa Ma**	**0.32**	**134**	P	**Pg**	**08 32 07.4**	**+0.3**
T1243				S	**Sg**	**08 32 12.7**	**+1.4**
LNSS	**Leonessa**	**0.32**	**193**	P	**Pg**	**08 32 08.1**	**+0.9**
LNSS				S	**Sg**	**08 32 12.6**	**+1.1**
LNSS				AML	AML		
	comp=E,9320μm,0.9s						
LNSS				AML	AML		
	comp=N,21000μm,0.6s						
LNSS				AML	AML		
	comp=E,9325μm,0.9s						
GAG1	**Gagliole**	**0.33**	**351**	P	**Pb**	**08 32 08.3**	**-1.0**
GAG1				S	**Sb**	**08 32 14.1**	**-0.7**
GAG1				AML	AML		
	comp=E,68200μm,0.5s						
GAG1				AML	AML		
	comp=N,54250μm,0.6s						
GAG1				AML	AML		
	comp=N,54200μm,0.6s						
SNTG	**Esanatoglia**	**0.37**	**337**	AML	AML		
	comp=N,13700μm,0.5s						
SNTG				AML	AML		
	comp=N,12750μm,0.5s						
SNTG				AML	AML		
	comp=E,11750μm,1.2s						
SNTG				AML	AML		
	comp=E,12450μm,1.2s						
SNTG				AML	AML		
	comp=E,11745μm,1.2s						
ASSB	**Assisi San Ben**	**0.38**	**290**	P	**Pb**	**08 32 09.6**	**-0.5**
ASSB				S	**Sb**	**08 32 15.6**	**-0.6**
OFFI	**Offida**	**0.40**	**87**	P	**Pb**	**08 32 10.3**	**-0.2**
OFFI				AML	AML		
	comp=E,20550μm,0.8s						
OFFI				AML	AML		
	comp=N,31350μm,0.7s						
RM33	**Pellescritta (**	**0.41**	**172**	P	**Pg**	**08 32 09.3**	**+0.4**
RM33				AML	AML		
	comp=E,13650μm,1.3s						
RM33				AML	AML		
	comp=N,11250μm,1.1s						
RM33				AML	AML		
	comp=N,11400μm,1.1s						
RM33				AML	AML		
	comp=E,13750μm,1.3s						
RM33				AML	AML		
	comp=N,11450μm,1.1s						
RM33				AML	AML		
	comp=N,11300μm,1.1s						
RM33				AML	AML		
	comp=E,13600μm,1.3s						
RM33				AML	AML		
	comp=E,13700μm,1.3s						
EL6	**Elcito**	**0.42**	**356**	P	**Pb**	**08 32 09.6**	**-1.2**
EL6				S	**Sb**	**08 32 16.8**	**-0.6**
EL6				AML	AML		
	comp=E,19500μm,1.0s						
EL6				AML	AML		
	comp=N,25050μm,1.2s						
TRE1	**Treia**	**0.42**	**18**	P	**Pb**	**08 32 10.5**	**-0.3**
TRE1				S	**Sb**	**08 32 17.7**	**+0.4**
TRE1				AML	AML		
	comp=E,43300μm,0.7s						
TRE1				AML	AML		
	comp=N,44400μm,1.6s						
TRE1				AML	AML		
	comp=E,43300μm,0.7s						
TRE1				AML	AML		
	comp=E,43350μm,0.7s						
TRE1				AML	AML		
	comp=N,44400μm,1.6s						
T1246	**Crognaleto (TE**	**0.42**	**142**	P	**Pg**	**08 32 09.0**	**-0.1**
T1246				S	**Sg**	**08 32 15.8**	**+1.1**
CAMP	**Campotosto**	**0.43**	**152**	P	**Pg**	**08 32 09.0**	**-0.3**
CAMP				S	**Sg**	**08 32 16.0**	**+1.2**
CAMP				AML	AML		
	comp=N,6895μm,0.6s						
CAMP				AML	AML		
	comp=E,6640μm,1.2s						
ARRO	**Arrone**	**0.43**	**219**	P	**Pg**	**08 32 09.8**	**+0.5**
ARRO				AML	AML		
	comp=E,11165μm,1.1s						
ARRO				AML	AML		
	comp=N,7285μm,1.2s						
ARRO				AML	AML		
	comp=E,11145μm,1.1s						
ARRO				AML	AML		
	comp=N,7280μm,1.2s						
ARRO				AML	AML		
	comp=E,11180μm,1.1s						
T1211	**Morro Reatino**	**0.43**	**209**	P	**Pg**	**08 32 09.9**	**+0.6**
TERO	**Teramo**	**0.45**	**130**	P	**Pg**	**08 32 09.3**	**-0.3**
TERO				S	**Sg**	**08 32 16.6**	**+1.1**
TERO				AML	AML		
	comp=E,8685μm,0.6s						
TERO				AML	AML		
	comp=N,11250μm,0.6s						
TERO				AML	AML		
	comp=N,11300μm,0.6s						
TERO				AML	AML		
	comp=E,8860μm,0.6s						
TERO				AML	AML		
	comp=E,8680μm,0.6s						
TERO				AML	AML		
	comp=N,11600μm,0.6s						
TERO				AML	AML		
	comp=E,8670μm,0.6s						
TERO				AML	AML		
	comp=N,11265μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.46**	**307**	P	**Pb**	**08 32 10.6**	**-0.8**
ATCC				S	**Sb**	**08 32 18.7**	**+0.3**
ATCC				AML	AML		
	comp=N,17550μm,0.5s						
ATCC				AML	AML		
	comp=E,15650μm,1.1s						
ATCC				AML	AML		
	comp=N,17600μm,0.5s						
CING	**Cingoli**	**0.46**	**5**	P	**Pb**	**08 32 10.6**	**-1.0**
CING				S	**Sb**	**08 32 18.2**	**-0.5**
FOSV	**Fossato di Vic**	**0.47**	**324**	P	**Pb**	**08 32 10.7**	**-1.0**
FOSV				S	**Sb**	**08 32 19.0**	**+0.1**
FOSV				AML	AML		
	comp=E,8695μm,0.9s						
FOSV				AML	AML		
	comp=N,12950μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.49**	**166**	P	**Pg**	**08 32 10.6**	**+0.3**
T1247				S	**Sg**	**08 32 18.4**	**+1.7**
T1247				AML	AML		
	comp=E,17550μm,0.8s						
T1247				AML	AML		
	comp=N,11100μm,1.0s						
CESX	**Cesi**	**0.51**	**234**	P	**Pg**	**08 32 11.4**	**+0.6**
CESX				S	**Sg**	**08 32 19.6**	**+2.2**
CESX				AML	AML		
	comp=N,10315μm,0.8s						
CESX				AML	AML		
	comp=E,14050μm,1.4s						
CADA	**Capodarco di F**	**0.54**	**58**	P	**Pn**	**08 32 13.3**	**-1.8**
CIMA	**Civitanova Mar**	**0.55**	**45**	P	**Pn**	**08 32 13.3**	**-2.0**
GIGS	**Gran Sasso**	**0.56**	**145**	P	**Pg**	**08 32 11.9**	**+0.1**
GIGS				S	**Sg**	**08 32 20.0**	**+0.9**
GIGS				AML	AML		
	comp=N,1740μm,0.8s						
GIGS				AML	AML		
	comp=E,1990μm,0.6s						
GIGS				AML	AML		
	comp=N,1735μm,0.8s						
MURB	**Monte Urbino**	**0.57**	**308**	P	**Pb**	**08 32 12.5**	**-0.9**
MURB				AML	AML		
	comp=E,12105μm,1.0s						
MURB				AML	AML		
	comp=N,10675μm,1.4s						
MURB				AML	AML		
	comp=E,12125μm,1.0s						
MURB				AML	AML		
	comp=E,12065μm,1.0s						
MURB				AML	AML		
	comp=N,10750μm,1.4s						
PP3	**Marolino**	**0.58**	**36**	P	**Pb**	**08 32 13.4**	**0.0**
PP3				AML	AML		
	comp=E,20400μm,1.6s						
PP3				AML	AML		
	comp=N,26950μm,0.4s						
PP3				AML	AML		
	comp=E,20450μm,1.6s						
PP3				AML	AML		
	comp=N,26950μm,0.4s						
PP3				AML	AML		
	comp=N,27200μm,0.4s						
PP3				AML	AML		
	comp=E,20200μm,1.6s						
TRTR	**Tortoreto Alta**	**0.58**	**100**	P	**Pb**	**08 32 13.2**	**-0.3**
TRTR				AML	AML		
	comp=E,22500μm,0.7s						
TRTR				AML	AML		
	comp=N,24750μm,0.6s						
AQU	**L'Aquila**	**0.59**	**161**	P	**Pg**	**08 32 12.1**	**-0.3**
AQU				S	**Sg**	**08 32 22.1**	**+2.1**
AQU				AML	AML		
	comp=E,9755μm,1.5s						
AQU				AML	AML		
	comp=N,8600μm,1.3s						
AQU				AML	AML		
	comp=N,8080μm,1.3s						
AQU				AML	AML		
	comp=E,9645μm,1.5s						
ARVD	**Arcevia**	**0.60**	**346**	P	**Pb**	**08 32 13.0**	**-0.9**
ARVD				S	**Sn**	**08 32 23.2**	**-3.0**
ARVD				AML	AML		
	comp=N,4025μm,0.9s						
ARVD				AML	AML		
	comp=E,5525μm,0.4s						
ATFO	**Monte Foce - G**	**0.61**	**318**	AML	AML		
	comp=E,6585μm,1.1s						
ATFO				AML	AML		
	comp=N,10600μm,1.3s						
FIAM	**Fiamignano**	**0.65**	**181**	P	**Pg**	**08 32 13.3**	**-0.1**
FRON	**Frontone**	**0.67**	**334**	P	**Pb**	**08 32 14.4**	**-0.7**
FRON				S	**Sn**	**08 32 25.4**	**-2.6**
FRON				AML	AML		
	comp=N,6680μm,0.5s						
FRON				AML	AML		
	comp=E,7145μm,1.2s						
FRON				AML	AML		
	comp=N,6685μm,0.5s						
ATVO	**AVT- Monte Val**	**0.71**	**311**	P	**Pb**	**08 32 15.0**	**-0.8**
ATVO				AML	AML		
	comp=E,3880μm,1.6s						
ATVO				AML	AML		
	comp=N,3090μm,1.2s						
AOI	**Ancona**	**0.72**	**28**	P	**Pb**	**08 32 15.3**	**-0.6**
AOI				S	**Sn**	**08 32 26.8**	**-2.3**
AOI				AML	AML		
	comp=N,6370μm,0.4s						
AOI				AML	AML		
	comp=E,4560μm,1.6s						
FAGN	**Fagnano**	**0.73**	**153**	P	**Pg**	**08 32 15.4**	**+0.5**
FAGN				S	**Sg**	**08 32 25.9**	**+1.6**
VCEL	**Villa Celiera**	**0.73**	**135**	P	**Pg**	**08 32 14.6**	**-0.4**
VCEL				AML	AML		
	comp=E,7590μm,1.3s						
VCEL				AML	AML		
	comp=N,8075μm,1.1s						
VCEL				AML	AML		
	comp=N,8080μm,1.1s						
VCEL				AML	AML		
	comp=E,7585μm,1.3s						
MGAB	**Montegabbione**	**0.75**	**270**	P	**Pn**	**08 32 17.6**	**-0.5**
MGAB				AML	AML		
	comp=N,7690μm,1.3s						
MGAB				AML	AML		
	comp=E,4470μm,0.5s						
MGAB				AML	AML		
	comp=E,5675μm,1.1s						
MGAB				AML	AML		
	comp=N,7645μm,1.4s						
ATPI	**Pietralunga -**	**0.76**	**315**	P	**Pb**	**08 32 16.2**	**-0.4**
ATPI				AML	AML		
	comp=N,3625μm,1.2s						
ATPI				AML	AML		
	comp=E,4220μm,1.3s						
PIEI	**Pieia**	**0.76**	**325**	P	**Pb**	**08 32 16.2**	**-0.4**
PIEI				AML	AML		
	comp=E,2460μm,1.2s						
PIEI				AML	AML		
	comp=N,2725μm,1.2s						
MPAG	**Monte Paganucc**	**0.77**	**339**	AML	AML		
	comp=E,5230μm,1.2s						
MPAG				AML	AML		
	comp=N,3915μm,1.6s						
FSSB	**Fossombrone**	**0.82**	**341**	P	**Pn**	**08 32 17.5**	**-1.6**
FSSB				AML	AML		
	comp=E,11415μm,0.5s						
FSSB				AML	AML		
	comp=N,13100μm,0.5s						
T0110	**Collepietro**	**0.83**	**145**	P	**Pg**	**08 32 16.4**	**-0.6**
T0110				AML	AML		
	comp=E,7875μm,0.5s						
T0110				AML	AML		
	comp=N,6835μm,1.6s						
T0110				AML	AML		
	comp=N,6840μm,1.6s						
SACS	**San Casciano d**	**0.91**	**266**	P	**Pb**	**08 32 19.4**	**+0.3**
SACS				AML	AML		
	comp=N,3475μm,0.8s						
SACS				AML	AML		
	comp=N,3640μm,0.8s						
SACS				AML	AML		
	comp=E,3625μm,1.5s						
SACS				AML	AML		
	comp=E,3560μm,1.5s						
SACS				AML	AML		
	comp=N,3480μm,0.8s						
SACS				AML	AML		
	comp=N,3645μm,0.8s						
MTCE	**Montecelio**	**0.94**	**198**	AML	AML		
	comp=E,3005μm,1.6s						
MTCE				AML	AML		
	comp=N,1945μm,1.3s						
CAFI	**Castiglion Fio**	**0.95**	**296**	P	**Pb**	**08 32 19.9**	**0.0**
CAFI				AML	AML		
	comp=N,2630μm,1.4s						
CAFI				AML	AML		
	comp=E,2575μm,1.6s						
LATE	**Laterza**	**1.03**	**253**	P	**Pn**	**08 32 22.2**	**+0.3**
MCIV	**Monte Civitell**	**1.08**	**263**	P	**Pn**	**08 32 23.1**	**+0.4**
MCIV				AML	AML		
	comp=N,1073μm,0.9s						
MCIV				AML	AML		
	comp=E,1228μm,1.3s						
MCIV				AML	AML		
	comp=N,1072μm,0.9s						
SF04	**Casetta**	**1.09**	**266**	AML	AML		
	comp=N,1188μm,0.9s						
SF04				AML	AML		
	comp=E,1626μm,1.2s						
RMP	**Rome, Mte Porz**	**1.15**	**196**	AML	AML		
	comp=N,3565μm,1.0s						
RMP				AML	AML		
	comp=E,2480μm,1.3s						
TOLF	**Tolfa**	**1.20**	**225**	P	**Pn**	**08 32 24.4**	**+0.2**
TOLF				AML	AML		
	comp=E,1820μm,0.7s						
TOLF				AML	AML		
	comp=N,2160μm,1.0s						
FROS	**Frosini**	**1.48**	**282**	P	**Pg**	**08 32 30.1**	**+0.7**
PGF	**Pioggiola**	**3.07**	**265**	*e*Pn	**Pn**	**08 32 48.2**	**-1.9**
PGF	**Pioggiola**	**3.07**	**265**	*e*P	**Pn**	**08 32 52.2**	**+2.1**
PGF				*e*Sn	**Sn**	**08 33 23.4**	**-3.8**
	comp=N,24nm,0.7s						
SBF	**Sospel**	**4.26**	**285**	*e*Pn	**Pn**	**08 33 04.6**	**-1.8**
SBF	**Sospel**	**4.26**	**285**	*e*P	**Pn**	**08 33 07.3**	**+0.9**
SBF				*e*Sn	**Sn**	**08 33 52.4**	**-4.1**
	comp=N,16nm,0.5s						
DAVOX	**Davos/Dischmat**	**4.51**	**330**	Pn	**Pn**	**08 33 10.3**	**+0.4**
	comp=N,6.9nm,0.3s,baz=105,slow=21,SNR=9.3						
DAVOX				Sn	**Sn**	**08 34 04.2**	**+1.5**
	baz=289,slow=18						
	comp=N,35nm,0.5s						
LMR	**La Mourre**	**4.87**	**277**	*e*Pn	**Pn**	**08 33 12.8**	**-1.9**
LMR	**La Mourre**	**4.87**	**277**	*e*P	**Pn**	**08 33 15.9**	**+1.2**
MBDF	**Montbardon**	**4.95**	**294**	*e*Pn	**Pn**	**08 33 14.3**	**-1.7**
MBDF	**Montbardon**	**4.95**	**294**	*e*P	**Pn**	**08 33 18.4**	**+2.4**
MBDF				*e*Sn	**Sn**	**08 34 08.8**	**-4.8**
	comp=N,7.1nm,0.6s						
LPG	**La Plagne**	**5.27**	**302**	*e*Pn	**Pn**	**08 33 18.8**	**-1.6**
LPG	**La Plagne**	**5.27**	**302**	*e*P	**Pn**	**08 33 22.8**	**+2.4**
LPG				*e*Sn	**Sn**	**08 34 16.8**	**-4.8**
	comp=N,14nm,0.8s						
LPL	**La Plagne**	**5.29**	**302**	*e*Pn	**Pn**	**08 33 18.4**	**-2.3**
LPL	**La Plagne**	**5.29**	**302**	*e*P	**Pn**	**08 33 22.8**	**+2.1**
LPL				*e*Sn	**Sn**	**08 34 15.8**	**-6.2**
	comp=N,6.9nm,0.4s						
SMRF	**Simiane la Rot**	**5.61**	**283**	*e*Pn	**Pn**	**08 33 22.6**	**-2.3**
SMRF	**Simiane la Rot**	**5.61**	**283**	*e*P	**Pn**	**08 33 27.8**	**+2.9**
ORIF	**Oris-en-Rattie**	**5.61**	**293**	*e*Pn	**Pn**	**08 33 22.6**	**-2.4**
ORIF	**Oris-en-Rattie**	**5.61**	**293**	*e*P	**Pn**	**08 33 26.8**	**+1.8**
ORIF				*e*Sn	**Sn**	**08 34 23.6**	**-6.2**
	comp=N,13nm,0.8s						
GERES	**GERESS Array B**	**5.95**	**4**	Pn	**Pn**	**08 33 29.7**	**+0.2**
	comp=N,1.6nm,0.3s,baz=180,slow=13,SNR=6.8						
GERES				Sn	**Sn**	**08 34 37.2**	**-0.8**
	comp=N,2.3nm,0.3s,baz=177,slow=23,SNR=5.6						
	comp=N,2.3nm,0.3s						
CKRC	**Cesky Krumlov**	**5.96**	**7**	*e*SN	**Sn**	**08 34 37.5**	**-0.8**
KHC	**Kasperske Hory**	**6.22**	**3**	*e*PN	Pn	08 33 38.0	+4.7
KHC				*e*SN	**Sn**	**08 34 43.6**	**-1.2**
CABF	**La Chapelle**	**6.23**	**309**	*e*Pn	**Pn**	**08 33 31.4**	**-2.1**
CABF	**La Chapelle**	**6.23**	**309**	*e*P	**Pn**	**08 33 35.7**	**+2.2**
CABF				*e*Sn	**Sn**	**08 34 38.7**	**-6.4**
	comp=N,7.9nm,0.7s						
VIVF	**Saint-Julien-l**	**6.42**	**290**	*e*Pn	**Pn**	**08 33 33.3**	**-2.7**
VIVF	**Saint-Julien-l**	**6.42**	**290**	*e*P	**Pn**	**08 33 38.7**	**+2.7**
VIVF				*e*Sn	**Sn**	**08 34 42.4**	**-7.2**
	comp=N,4.2nm,0.7s						
HINF	**Hinteralfeld**	**6.60**	**320**	*e*Pn	**Pn**	**08 33 36.0**	**-2.6**
HINF	**Hinteralfeld**	**6.60**	**320**	*e*P	**Pn**	**08 33 40.5**	**+1.9**
HINF				*e*Sn	**Sn**	**08 34 47.4**	**-6.7**
	comp=N,59nm,0.8s						
LASF	**Ste Croix**	**6.85**	**283**	*e*Pn	**Pn**	**08 33 40.0**	**-1.9**
LASF	**Ste Croix**	**6.85**	**283**	*e*P	**Pn**	**08 33 44.4**	**+2.5**
LASF				*e*Sn	**Sn**	**08 34 53.8**	**-6.4**
	comp=N,13nm,1.0s						
CDF	**Champ du Feu**	**6.86**	**325**	*e*Pn	**Pn**	**08 33 39.9**	**-2.2**
CDF	**Champ du Feu**	**6.86**	**325**	*e*P	**Pn**	**08 33 44.6**	**+2.5**
CDF				*e*Sn	**Sn**	**08 34 53.1**	**-7.4**
	comp=N,17nm,0.6s						
HAU	**Haudompre**	**6.98**	**319**	*e*Pn	**Pn**	**08 33 41.4**	**-2.3**
HAU	**Haudompre**	**6.98**	**319**	*e*P	**Pn**	**08 33 46.3**	**+2.6**
HAU				*e*Sn	**Sn**	**08 34 56.6**	**-6.7**
	comp=N,34nm,0.6s						
PRU	**Pruhonice**	**7.14**	**7**	*e*SN	**Sn**	**08 35 05.7**	**-1.6**
PAGF	**Fort de Pagny**	**7.66**	**320**	*e*Pn	**Pn**	**08 33 50.5**	**-2.5**
PAGF	**Fort de Pagny**	**7.66**	**320**	*e*P	**Pn**	**08 33 55.4**	**+2.4**
PAGF				*e*Sn	**Sn**	**08 35 12.0**	**-8.1**
	comp=N,15nm,0.7s						
SFTF	**Sexfontaines**	**7.76**	**316**	*e*Pn	**Pn**	**08 33 51.9**	**-2.5**
SFTF	**Sexfontaines**	**7.76**	**316**	*e*P	**Pn**	**08 33 57.0**	**+2.6**
	baz=124						

SFTF				*e*Sn	**Sn**	**08 35 15.0**	**-7.6**
LOR	**Lormes**	**7.88**	**307**	*e*Pn	**Pn**	**08 33 53.5**	**-2.5**
LOR	**Lormes**	**7.88**	**307**	*e*P	**Pn**	**08 33 58.6**	**+2.6**
	baz=117						
LOR				*e*Sn	**Sn**	**08 35 17.9**	**-7.5**
	comp=N,7.7nm,0.5s						
MEZF	**Maizieres J'vi**	**7.95**	**317**	*e*Pn	**Pn**	**08 33 54.4**	**-2.6**
MEZF	**Maizieres J'vi**	**7.95**	**317**	*e*P	**Pn**	**08 33 59.8**	**+2.8**
MEZF				*e*Sn	**Sn**	**08 35 19.6**	**-7.6**
	comp=N,6.9nm,0.5s						
AVF	**Avril sur Loir**	**7.96**	**302**	*e*Sn	**Sn**	**08 35 20.1**	**-7.3**
SSF	**Saint Saulge**	**7.99**	**305**	*e*Sn	**Sn**	**08 35 21.0**	**-7.1**
	comp=N,7.9nm,0.7s						
SAVF	**Savonnieres en**	**7.99**	**318**	*e*Pn	**Pn**	**08 33 54.9**	**-2.6**
SAVF	**Savonnieres en**	**7.99**	**318**	*e*P	**Pn**	**08 33 59.6**	**+2.1**
SAVF				*e*Sn	**Sn**	**08 35 20.1**	**-8.1**
	comp=N,4.9nm,0.4s						
MTLF	**Montolieu**	**8.00**	**277**	*e*Pn	**Pn**	**08 33 55.3**	**-2.4**
MTLF	**Montolieu**	**8.00**	**277**	*e*P	**Pn**	**08 34 00.8**	**+3.1**
MTLF				*e*Sn	**Sn**	**08 35 21.2**	**-7.3**
BAIF	**Baives**	**9.43**	**322**	*e*Sn	**Sn**	**08 35 55.5**	**-8.0**
ESDC	**Sonseca Array**	**13.26**	**262**	Pn	**Pn**	**08 35 09.0**	**-0.7**
	baz=69,slow=16,SNR=1.3						
	comp=N,0.2nm,0.4s						
FINES	**FINESS Array B**	**20.11**	**18**	P	Pn	08 36 36.1	-0.9
	comp=N,2.7nm,0.8s,baz=206,slow=9.1,SNR=1.8						
	comp=N,2.7nm,0.8s						
KBZ	**Khabaz**	**21.62**	**78**	P	**P**	**08 36 54.4**	**+2.8**
	comp=N,6.1nm,0.9s,baz=312,slow=7.6,SNR=7.2						
	comp=N,6.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.27**	**202**	P	**P**	**08 38 22.9**	**+1.3**
	comp=N,0.7nm,0.6s,baz=24,slow=8.1,SNR=4.6						
	comp=N,0.7nm,0.6s						
ARU	**Arti**	**31.73**	**49**	P	**P**	**08 38 26.9**	**+1.6**
	comp=N,4.5nm,0.6s,baz=253,slow=7.2,SNR=5.0						
	comp=N,4.5nm,0.6s						
BVAR	**Borovoye Array**	**38.67**	**54**	P	**P**	**08 39 27.5**	**+2.4**
	comp=N,1.8nm,1.0s,baz=298,slow=6.4,SNR=3.5						
	comp=N,1.8nm,1.0s						
ZALV	**Zalesovo Beam**	**46.86**	**50**	P	**P**	**08 40 32.6**	**+1.0**
	comp=N,0.4nm,0.4s,baz=279,slow=9.6,SNR=1.3						
	comp=N,0.4nm,0.4s						
SONM	**Songino Array**	**61.76**	**50**	P	**P**	**08 42 21.5**	**+1.3**
	comp=N,0.7nm,0.7s,baz=285,slow=7.3,SNR=4.2						
	comp=N,0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**74.66**	**79**	P	**P**	**08 43 42.5**	**+1.0**
	comp=N,0.7nm,0.3s,baz=288,slow=6.8,SNR=4.6						
	comp=N,0.7nm,0.3s						

ROM 30 08:32:59.8±0.1, 42°.818N±0°.003×13°.167E±0°.005, h10km, ML3.2/9, 2C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**21**	⇑P	Pg	08 33 02.2	+0.2
T1245				S	Sg	08 33 03.5	-0.1
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**10**	P	Pg	08 33 02.9	+0.3
MC2				S	Sg	08 33 05.0	+0.4
FEMA	**Monte Fema**	**0.17**	**329**	P	Pg	08 33 04.0	+0.4
FEMA				S	Sg	08 33 07.0	+0.8
T1204	**Amatrice, Fraz**	**0.18**	**142**	P	Pg	08 33 04.5	+0.8
T1204				S	Sg	08 33 07.7	+1.2
T1204				AML	AML		
	comp=E,6365μm,0.9s						
T1204				AML	AML		
	comp=N,6490μm,1.1s						
T1204				AML	AML		
	comp=N,26950μm,0.4s						
T1204				AML	AML		
	comp=E,79050μm,0.8s						
T1204				AML	AML		
	comp=E,5653μm,0.1s						
T1204				AML	AML		
	comp=N,4348μm,0.1s						
T1217	**Poggiodomo (PG**	**0.20**	**239**	P	Pg	08 33 04.9	+0.8
T1217				S	Sg	08 33 08.3	+1.2
T1217				AML	AML		
	comp=N,4720μm,0.3s						
T1217				AML	AML		
	comp=E,3392μm,0.2s						
T1217				AML	AML		
	comp=E,3471μm,0.2s						
T1217				AML	AML		
	comp=N,4709μm,0.3s						
AM05	**Amandola Campo**	**0.21**	**40**	P	Pb	08 33 05.7	-0.1
AM05				S	Sg	08 33 08.2	+1.0
AM05				AML	AML		
	comp=E,1765μm,0.4s						
AM05				AML	AML		
	comp=N,644μm,0.1s						
AM05				AML	AML		
	comp=N,1970μm,0.1s						
AM05				AML	AML		
	comp=E,8300μm,0.1s						
AM05				AML	AML		
	comp=E,1770μm,0.4s						
AM05				AML	AML		
	comp=N,1971μm,0.1s						
AM05				AML	AML		
	comp=N,644μm,0.1s						
AM05				AML	AML		
	comp=E,8298μm,0.1s						
AM05				AML	AML		
	comp=E,1608μm,0.1s						
LNSS	**Leonessa**	**0.23**	**204**	P	Pg	08 33 05.1	+0.5
LNSS				S	Sg	08 33 09.6	+1.6
LNSS				AML	AML		
	comp=N,9830μm,0.3s						
LNSS				AML	AML		
	comp=E,4280μm,0.2s						
LNSS				AML	AML		
	comp=N,11175μm,0.1s						
LNSS				AML	AML		
	comp=E,4280μm,0.2s						
LNSS				AML	AML		
	comp=N,9834μm,0.3s						
T1243	**Rocca Santa Ma**	**0.24**	**120**	⇑P	Pg	08 33 05.4	+0.6
T1243				S	Sg	08 33 09.3	+1.1
GUMA	**Gualdo di Mace**	**0.27**	**27**	P	Pb	08 33 06.2	-0.6
GUMA				S	Sb	08 33 10.9	-0.7
GUMA				AML	AML		
	comp=N,6891μm,0.2s						
GUMA				AML	AML		
	comp=N,8555μm,0.5s						
GUMA				AML	AML		
	comp=E,8109μm,0.3s						
GUMA				AML	AML		
	comp=E,7466μm,0.3s						
RM33	**Pellescritta (**	**0.31**	**174**	P	Pg	08 33 06.5	+0.5
RM33				S	Sb	08 33 11.9	-0.7
RM33				AML	AML		
	comp=E,5890μm,1.0s						
RM33				AML	AML		
	comp=E,5745μm,1.0s						
RM33				AML	AML		
	comp=N,9290μm,0.3s						
RM33				AML	AML		
	comp=N,9570μm,0.3s						
RM33				AML	AML		
	comp=E,1714μm,0.2s						
RM33				AML	AML		
	comp=E,1770μm,0.2s						
RM33				AML	AML		
	comp=N,1413μm,0.2s						
RM33				AML	AML		
	comp=N,1442μm,0.2s						
SEF1	**Sefro**	**0.37**	**334**	P	Pg	08 33 07.4	+0.3
SEF1				S	Sb	08 33 13.2	-1.1
SEF1				AML	AML		
	comp=E,3265μm,0.3s						
SEF1				AML	AML		
	comp=N,2864μm,1.4s						
SEF1				AML	AML		
	comp=E,3264μm,0.3s						
SEF1				AML	AML		
	comp=N,2594μm,0.3s						
TERO	**Teramo**	**0.38**	**121**	P	Pg	08 33 07.5	+0.2
TERO				S	Sb	08 33 13.6	-0.9
TERO				AML	AML		
	comp=E,4880μm,0.5s						
TERO				AML	AML		
	comp=N,5765μm,0.6s						
TERO				AML	AML		
	comp=N,1971μm,0.1s						
TERO				AML	AML		
	comp=N,2218μm,0.1s						
TERO				AML	AML		
	comp=E,1740μm,0.1s						
TERO				AML	AML		
	comp=E,2027μm,0.1s						
ARRO	**Arrone**	**0.38**	**231**	⇓P	Pb	08 33 08.0	-0.6
ARRO				AML	AML		
	comp=N,1084μm,0.2s						
ARRO				AML	AML		
	comp=E,1135μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.39**	**166**	⇓P	Pg	08 33 08.1	+0.6
T1247				AML	AML		
	comp=N,18850μm,0.2s						
T1247				AML	AML		
	comp=E,10855μm,0.2s						
T1247				AML	AML		
	comp=E,2167μm,0.3s						
T1247				AML	AML		
	comp=N,1935μm,0.3s						
SSM1	**San Severino M**	**0.41**	**1**	⇓P	Pg	08 33 08.4	+0.5
GAG1	**Gagliole**	**0.43**	**350**	P	Pg	08 33 08.7	+0.5
GAG1				AML	AML		
	comp=N,3719μm,0.4s						
GAG1				AML	AML		
	comp=E,3181μm,0.4s						
SNTG	**Esanatoglia**	**0.47**	**339**	P	Pg	08 33 09.1	+0.1
SNTG				S	Sb	08 33 16.6	-0.6
SNTG				AML	AML		
	comp=E,1038μm,0.1s						
SNTG				AML	AML		
	comp=E,1058μm,0.1s						
SNTG				AML	AML		
	comp=N,915μm,0.3s						
GIGS	**Gran Sasso**	**0.47**	**141**	P	Pg	08 33 09.4	+0.4
GIGS				S	Sg	08 33 16.2	+0.9
GIGS				AML	AML		
	comp=E,3250μm,0.2s						
GIGS				AML	AML		
	comp=N,2165μm,0.1s						
GIGS				AML	AML		
	comp=N,289μm,0.1s						
GIGS				AML	AML		
	comp=E,339μm,0.2s						
EL6	**Elcito**	**0.51**	**355**	S	Sb	08 33 18.0	-0.5
PIEI	**Pieia**	**0.85**	**327**	S	Sn	08 33 30.0	-0.5

*STR **30** 08:34:16.0±0.6, 43°.N±5°.×1°.4E±°, h5km, MLv4.4/39, Error ellipse: s-maj=0.0km s-min=0.0km az=10.7, preliminary*
*LDG **30** 08:34:20.9±0.0, 42°.85N×13°.05E, h10km, Ml3.8/24, Error ellipse: s-maj=1.4km s-min=0.9km az=42.0*
*IDC **30** 08:34:21.8±1.0, 42°.99N×12°.94E, h0km, mb3.9/9, mbtmp3.8/17, ML3.8/7, Error ellipse: s-maj=18.8km s-min=12.8km az=90.0*
*ROM **30** 08:34:21.8±0.0, 42°.860N±0°.001×13°.054E±0°.003, h10km, ML3.8/65, Error ellipse: s-maj=0.2km s-min=0.0km az=80.0*
*PRU **30** 08:34:23.8±0.0, 42°.96N×13°.42E, h0km*

ISC 30 08:34:22.1±0.7, 42°.85N±0°.01×13°.00E±0°.02, h13km±4km, n290, σ2§45/309, mb4.0/8, 24C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**25**	⇓P	**Pg**	**08 34 24.3**	**-0.3**
T1216				S	**Sg**	**08 34 25.7**	**-0.6**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1215	**Vallo di Nera,**	**0.10**	**242**	⇑P	**Pg**	**08 34 25.8**	**+0.7**
T1215				S	**Sb**	**08 34 28.6**	**-0.1**
T1215				AML	AML		
	comp=N,47250μm,1.6s						
T1215				AML	AML		
	comp=N,47300μm,1.6s						
T1215				AML	AML		
	comp=E,47650μm,0.5s						
T1215				AML	AML		
	comp=E,47800μm,0.4s						
T1215				AML	AML		
	comp=N,47300μm,1.6s						
T1215				AML	AML		
	comp=E,47600μm,0.4s						
T1215				AML	AML		
	comp=N,47200μm,1.6s						
T1215				AML	AML		
	comp=E,47850μm,0.4s						
T1215				AML	AML		
	comp=N,47150μm,1.6s						
T1215				AML	AML		
	comp=N,39569μm,0.3s						
T1215				AML	AML		
	comp=E,47602μm,0.5s						
T1215				AML	AML		
	comp=N,37650μm,0.3s						
T1215				AML	AML		
	comp=E,47838μm,0.4s						
T1212	**Cascia, Frazio**	**0.11**	**160**	P	**Pg**	**08 34 25.3**	**+0.1**
T1212				S	**Sg**	**08 34 27.5**	**+0.1**
FEMA	**Monte Fema**	**0.12**	**20**	P	**Pg**	**08 34 25.0**	**-0.4**
FEMA				S	**Sg**	**08 34 27.0**	**-0.8**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1245	**Castelsantange**	**0.14**	**88**	⇓P	**Pg**	**08 34 25.0**	**-0.7**
T1245				S	**Sg**	**08 34 26.9**	**-1.4**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1217	**Poggiodomo (PG**	**0.15**	**198**	⇑P	**Pg**	**08 34 26.4**	**+0.6**
T1217				S	**Sb**	**08 34 29.5**	**-0.4**
T1217				AML	AML		
	comp=E,49750μm,0.7s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,49300μm,0.7s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,49800μm,0.7s						
T1217				AML	AML		
	comp=E,40124μm,0.2s						
T1217				AML	AML		
	comp=N,95671μm,0.3s						
T1217				AML	AML		
	comp=N,98457μm,0.3s						
T1217				AML	AML		
	comp=E,40876μm,0.2s						
MC2	**Monte Cornacci**	**0.16**	**67**	P	**Pg**	**08 34 25.2**	**-0.8**
MC2				S	**Sg**	**08 34 27.6**	**-1.2**
T1213	**Norcia, Frazio**	**0.16**	**143**	P	**Pg**	**08 34 25.7**	**-0.2**
T1213				S	**Sg**	**08 34 28.2**	**-0.4**
T1214	**Arquata del Tr**	**0.18**	**120**	P	**Pg**	**08 34 25.9**	**-0.5**
T1214				S	**Sg**	**08 34 28.5**	**-0.8**
FDMO	**Fiordimonte**	**0.20**	**20**	P	**Pg**	**08 34 26.2**	**-0.3**
FDMO				S	**Sg**	**08 34 29.3**	**-0.3**
T1218	**Civita (PG)**	**0.20**	**154**	⇑P	**Pg**	**08 34 26.6**	**0.0**
T1218				S	**Sg**	**08 34 30.0**	**+0.3**
T1219	**Muccia, Frazio**	**0.20**	**3**	P	**Pg**	**08 34 26.5**	**-0.2**
T1219				S	**Sg**	**08 34 29.9**	**+0.1**
T1256	**Bolognola (MC)**	**0.23**	**48**	P	**Pg**	**08 34 26.5**	**-0.6**
T1256				S	**Sg**	**08 34 29.7**	**-0.9**
MMO1	**Montemonaco**	**0.25**	**79**	P	**Pg**	**08 34 26.6**	**-0.8**
LNSS	**Leonessa**	**0.25**	**172**	⇑P	**Pg**	**08 34 27.7**	**+0.2**
LNSS				S	**Sb**	**08 34 32.1**	**-0.8**
LNSS				AML	AML		
	comp=N,81050μm,0.8s						
LNSS				AML	AML		
	comp=E,30650μm,0.2s						
LNSS				AML	AML		
	comp=E,30632μm,0.2s						
LNSS				AML	AML		
	comp=N,71358μm,0.2s						
T1220	**Camerino, Fraz**	**0.27**	**15**	P	**Pg**	**08 34 27.5**	**-0.2**
T1220				S	**Sg**	**08 34 31.4**	**-0.1**
T1201	**Domo (RI)**	**0.27**	**136**	⇑P	**Pg**	**08 34 27.8**	**0.0**
T1201				S	**Sg**	**08 34 32.3**	**+0.7**
AM05	**Amandola Campo**	**0.29**	**64**	⇑P	**Pg**	**08 34 27.5**	**-0.7**
AM05				S	**Sg**	**08 34 31.5**	**-0.7**
AM05				AML	AML		
	comp=N,28300μm,0.2s						
AM05				AML	AML		
	comp=N,7600μm,0.7s						
AM05				AML	AML		
	comp=E,20250μm,0.1s						
AM05				AML	AML		
AM05				AML	AML		
	comp=E,20233μm,0.1s						
AM05				AML	AML		
	comp=N,25377μm,0.1s						
AM05				AML	AML		
	comp=N,7180μm,0.1s						
AM05				AML	AML		
	comp=E,95278μm,0.1s						
T1204	**Amatrice, Fraz**	**0.29**	**126**	P	**Pg**	**08 34 28.0**	**-0.3**
T1204				S	**Sg**	**08 34 32.4**	**0.0**
T1204				AML	AML		
	comp=E,57966μm,0.3s						
T1204				AML	AML		
	comp=N,28018μm,0.3s						
SEF1	**Sefro**	**0.30**	**353**	P	**Pg**	**08 34 28.4**	**+0.2**
SEF1				S	**Sg**	**08 34 33.3**	**+0.9**
SEF1				AML	AML		
	comp=E,56750μm,0.3s						
SEF1				AML	AML		
	comp=N,49000μm,0.2s						
SEF1				AML	AML		
	comp=N,48950μm,0.2s						
SEF1				AML	AML		
	comp=E,56763μm,0.3s						
SEF1				AML	AML		
	comp=N,48965μm,0.2s						
ASSB	**Assisi San Ben**	**0.31**	**308**	⇑P	**Pg**	**08 34 29.1**	**+0.6**
ASSB				S	**Sb**	**08 34 34.4**	**-0.3**
ASSB				AML	AML		
	comp=E,33450μm,0.2s						
ASSB				AML	AML		
	comp=N,29650μm,0.7s						
ASSB				AML	AML		
	comp=E,33427μm,0.2s						
ASSB				AML	AML		
	comp=N,26001μm,0.2s						
ARRO	**Arrone**	**0.32**	**212**	⇑P	**Pg**	**08 34 29.4**	**+0.8**
ARRO				S	**Sb**	**08 34 34.7**	**-0.1**
ARRO				AML	AML		
	comp=E,24950μm,0.7s						
ARRO				AML	AML		
	comp=N,20700μm,0.2s						
ARRO				AML	AML		
	comp=E,25000μm,0.7s						
ARRO				AML	AML		
	comp=N,20702μm,0.2s						
ARRO				AML	AML		
	comp=E,19950μm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**50**	⇑P	**Pg**	**08 34 28.4**	**-0.4**
GUMA				S	**Sg**	**08 34 33.3**	**0.0**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
PIO1	**Pioraco**	**0.33**	**359**	P	**Pg**	**08 34 28.8**	**0.0**
PIO1				S	**Sg**	**08 34 33.9**	**+0.7**
T1211	**Morro Reatino**	**0.34**	**198**	⇑P	**Pg**	**08 34 29.4**	**+0.4**
T1211				S	**Sb**	**08 34 35.1**	**-0.2**
T1211				AML	AML		
	comp=E,30650μm,0.3s						
T1211				AML	AML		
	comp=E,29800μm,0.3s						
T1211				AML	AML		
	comp=E,30600μm,0.3s						
T1211				AML	AML		
	comp=N,48750μm,1.4s						
T1211				AML	AML		
	comp=N,49600μm,1.4s						
T1211				AML	AML		
	comp=N,48858μm,0.4s						
T1211				AML	AML		
	comp=N,48611μm,0.3s						
T1211				AML	AML		
	comp=E,26577μm,0.2s						
T1211				AML	AML		
	comp=E,26023μm,0.2s						
FIU1	**Fiuminata**	**0.34**	**352**	P	**Pg**	**08 34 29.1**	**+0.1**
FIU1				S	**Sg**	**08 34 34.6**	**+0.9**
FIU1				AML	AML		
	comp=E,21100μm,0.3s						
FIU1				AML	AML		
	comp=N,16900μm,0.8s						
FIU1				AML	AML		
	comp=E,21150μm,0.3s						
FIU1				AML	AML		
	comp=N,16950μm,0.8s						
FIU1				AML	AML		
	comp=E,21106μm,0.3s						
FIU1				AML	AML		
	comp=N,15207μm,0.2s						
MDAR	**Monte D'Aria**	**0.36**	**18**	⇑P	**Pg**	**08 34 29.0**	**-0.4**
MDAR				S	**Sg**	**08 34 34.4**	**+0.1**
MDAR				AML	AML		
	comp=E,29100μm,0.4s						
MDAR				AML	AML		
	comp=E,29100μm,0.4s						
MDAR				AML	AML		
	comp=N,48900μm,0.3s						
MDAR				AML	AML		
	comp=N,48900μm,0.4s						
MDAR				AML	AML		
	comp=N,48912μm,0.3s						
MDAR				AML	AML		
	comp=E,27026μm,0.2s						
T1243	**Rocca Santa Ma**	**0.37**	**115**	P	**Pg**	**08 34 28.7**	**-0.9**
T1243				S	**Sg**	**08 34 34.2**	**-0.3**
RM33	**Pellescritta (**	**0.38**	**155**	P	**Pg**	**08 34 29.5**	**-0.2**
RM33				S	**Sg**	**08 34 35.6**	**+0.7**
RM33				AML	AML		
	comp=N,21250μm,0.8s						
RM33				AML	AML		
	comp=E,15050μm,0.5s						
RM33				AML	AML		
	comp=N,21350μm,0.8s						
RM33				AML	AML		
	comp=E,15000μm,0.4s						
RM33				AML	AML		
	comp=E,15050μm,0.4s						
RM33				AML	AML		
	comp=E,14415μm,0.3s						
RM33				AML	AML		
	comp=N,19312μm,0.2s						
RM33				AML	AML		
	comp=N,19387μm,0.2s						
RM33				AML	AML		
	comp=E,14178μm,0.3s						
CESX	**Cesi**	**0.39**	**232**	⇑P	**Pg**	**08 34 30.6**	**+0.7**
CESX				S	**Sb**	**08 34 37.0**	**+0.2**
CESX				AML	AML		
	comp=E,22650μm,0.4s						
CESX				AML	AML		
	comp=N,34900μm,0.5s						
CESX				AML	AML		
	comp=N,34866μm,0.5s						
CESX				AML	AML		
	comp=E,22664μm,0.4s						

GAG1	**Gagliole**	**0.39**	**8**	AML	AML		
	comp=E,58300µm,0.5s						
GAG1				AML	AML		
	comp=E,58350µm,0.5s						
GAG1				AML	AML		
	comp=N,55800µm,0.5s						
GAG1				AML	AML		
	comp=N,55750µm,0.5s						
SSM1	**San Severino M**	**0.40**	**19**	P	**Pg**	**08 34 29.6**	**-0.5**
SSM1				S	**Sg**	**08 34 36.0**	**+0.5**
SNTG	**Esanatoglia**	**0.41**	**354**	P	**Pg**	**08 34 30.2**	**-0.1**
SNTG				AML	AML		
	comp=E,9865µm,0.4s						
SNTG				AML	AML		
	comp=N,11145µm,0.8s						
SNTG				AML	AML		
	comp=N,11755µm,0.8s						
SNTG				AML	AML		
	comp=E,9885µm,0.4s						
SNTG				AML	AML		
	comp=N,11115µm,0.8s						
SNTG				AML	AML		
	comp=E,10355µm,0.4s						
SNTG				AML	AML		
	comp=N,11805µm,0.8s						
SNTG				AML	AML		
	comp=E,9511µm,0.5s						
SNTG				AML	AML		
	comp=N,8229µm,0.3s						
SNTG				AML	AML		
	comp=E,9492µm,0.5s						
SNTG				AML	AML		
	comp=N,8407µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.42**	**322**	P	**Pg**	**08 34 31.0**	**+0.4**
ATCC				AML	AML		
	comp=N,19450µm,0.7s						
ATCC				AML	AML		
	comp=E,20550µm,0.7s						
ATCC				AML	AML		
	comp=N,19400µm,0.7s						
ATCC				AML	AML		
	comp=E,20600µm,0.7s						
ATCC				AML	AML		
	comp=E,19792µm,0.6s						
ATCC				AML	AML		
	comp=N,17691µm,0.5s						
CAMP	**Campotosto**	**0.44**	**136**	⇑P	**Pg**	**08 34 30.2**	**-0.7**
CAMP				S	**Sg**	**08 34 36.8**	**0.0**
CAMP				AML	AML		
	comp=N,8042µm,0.5s						
CAMP				AML	AML		
	comp=E,8580µm,0.6s						
T1246	**Crognaleto (TE**	**0.46**	**126**	P	**Pg**	**08 34 30.3**	**-0.9**
T1246				S	**Sg**	**08 34 36.9**	**-0.3**
T1247	**Pizzolo (AQ)**	**0.47**	**151**	P	**Pg**	**08 34 31.1**	**-0.2**
T1247				AML	AML		
	comp=E,18927µm,0.5s						
T1247				AML	AML		
	comp=N,18742µm,0.4s						
FOSV	**Fossato di Vic**	**0.47**	**339**	P	**Pg**	**08 34 31.7**	**+0.2**
FOSV				AML	AML		
	comp=E,12150µm,0.4s						
FOSV				AML	AML		
	comp=N,11550µm,0.4s						
FOSV				AML	AML		
	comp=N,11548µm,0.4s						
FOSV				AML	AML		
	comp=E,12152µm,0.4s						
EL6	**Elcito**	**0.48**	**9**	⇑P	**Pg**	**08 34 31.3**	**-0.4**
EL6				S	**Sb**	**08 34 38.9**	**-0.8**
EL6				AML	AML		
	comp=E,19900µm,0.7s						
EL6				AML	AML		
	comp=N,25100µm,1.5s						
EL6				AML	AML		
	comp=E,19850µm,0.7s						
EL6				AML	AML		
	comp=E,17842µm,0.2s						
EL6				AML	AML		
	comp=N,24506µm,0.2s						
TERO	**Teramo**	**0.50**	**117**	P	**Pg**	**08 34 31.0**	**-1.0**
TERO				S	**Sg**	**08 34 38.1**	**-0.7**
TERO				AML	AML		
	comp=N,21300µm,0.4s						
TERO				AML	AML		
	comp=E,21400µm,0.3s						
TERO				AML	AML		
	comp=E,22350µm,0.3s						
TERO				AML	AML		
	comp=E,21350µm,0.3s						
TERO				AML	AML		
	comp=N,20650µm,0.4s						
TERO				AML	AML		
	comp=N,20656µm,0.4s						
TERO				AML	AML		
	comp=N,21337µm,0.4s						
TERO				AML	AML		
	comp=E,21361µm,0.3s						
TERO				AML	AML		
	comp=E,22331µm,0.3s						
OFFI	**Offida**	**0.52**	**80**	P	**Pg**	**08 34 32.1**	**-0.2**
OFFI				AML	AML		
	comp=N,54450µm,0.7s						
OFFI				AML	AML		
	comp=E,44250µm,0.6s						
OFFI				AML	AML		
	comp=E,44281µm,0.6s						
OFFI				AML	AML		
	comp=N,54452µm,0.7s						
TRE1	**Treia**	**0.52**	**27**	P	**Pg**	**08 34 32.1**	**-0.1**
TRE1				AML	AML		
	comp=N,31400µm,0.4s						
TRE1				AML	AML		
	comp=E,38700µm,0.4s						
TRE1				AML	AML		
	comp=N,31380µm,0.3s						
TRE1				AML	AML		
	comp=E,38690µm,0.4s						
MURB	**Monte Urbino**	**0.54**	**320**	P	**Pg**	**08 34 33.1**	**+0.5**
MURB				AML	AML		
	comp=E,29100µm,0.3s						
MURB				AML	AML		
	comp=N,21500µm,0.3s						
MURB				AML	AML		
	comp=E,29300µm,0.4s						
MURB				AML	AML		
	comp=N,23450µm,0.3s						
MURB				AML	AML		
	comp=N,21512µm,0.3s						
MURB				AML	AML		
	comp=N,23468µm,0.3s						
MURB				AML	AML		
	comp=E,29116µm,0.3s						
MURB				AML	AML		
	comp=E,29293µm,0.4s						
AQU	**L'Aquila**	**0.58**	**149**	P	**Pg**	**08 34 33.2**	**-0.3**
AQU				AML	AML		
	comp=N,9565µm,0.9s						
AQU				AML	AML		
	comp=E,6840µm,1.1s						
AQU				AML	AML		
	comp=E,7005µm,1.1s						
AQU				AML	AML		
	comp=N,9540µm,0.9s						
AQU				AML	AML		
	comp=N,9395µm,1.0s						
AQU				AML	AML		
	comp=N,9525µm,0.9s						
AQU				AML	AML		
	comp=E,7000µm,1.1s						
AQU				AML	AML		
	comp=E,6933µm,0.7s						
AQU				AML	AML		
	comp=E,6669µm,0.7s						
AQU				AML	AML		
	comp=N,7530µm,0.6s						
AQU				AML	AML		
	comp=N,7660µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.58**	**307**	AML	AML		
	comp=E,7730µm,1.3s						
ATTE				AML	AML		
	comp=N,5675µm,1.2s						
GIGS	**Gran Sasso**	**0.58**	**133**	P	**Pg**	**08 34 32.6**	**-0.9**
GIGS				S	**Sg**	**08 34 40.9**	**-0.4**
GIGS				AML	AML		
	comp=N,2431µm,0.7s						
GIGS				AML	AML		
	comp=E,3025µm,0.3s						
FIAM	**Fiamignano**	**0.59**	**171**	P	**Pg**	**08 34 33.4**	**-0.2**
MMUR	**Monte Murano**	**0.59**	**0**	P	**Pg**	**08 34 33.7**	**0.0**
ATFO	**Monte Foce - G**	**0.60**	**329**	P	**Pg**	**08 34 33.9**	**0.0**
ATFO				AML	AML		
	comp=E,7195µm,0.6s						
ATFO				AML	AML		
	comp=N,7555µm,0.5s						
ATFO				AML	AML		
	comp=E,7197µm,0.6s						
ATFO				AML	AML		
	comp=N,7553µm,0.5s						
ATLO	**AVT- Montelove**	**0.63**	**317**	P	**Pg**	**08 34 34.6**	**+0.1**
ARVD	**Arcevia**	**0.65**	**357**	P	**Pg**	**08 34 34.2**	**-0.5**
ARVD				AML	AML		
	comp=N,5000µm,1.0s						
ARVD				AML	AML		
	comp=E,6335µm,1.0s						
ARVD				AML	AML		
	comp=E,5100µm,0.2s						
ARVD				AML	AML		
	comp=N,4258µm,0.4s						
MGAB	**Montegabbione**	**0.65**	**276**	P	**Pg**	**08 34 35.4**	**+0.6**
MGAB				AML	AML		
	comp=E,17750µm,0.5s						
MGAB				AML	AML		
	comp=N,26400µm,0.8s						
MGAB				AML	AML		
	comp=N,24950µm,0.8s						
MGAB				AML	AML		
	comp=E,17700µm,0.5s						
MGAB				AML	AML		
	comp=E,19000µm,0.6s						
MGAB				AML	AML		
	comp=E,19019µm,0.6s						
MGAB				AML	AML		
	comp=N,26413µm,0.8s						
MGAB				AML	AML		
	comp=E,17743µm,0.5s						
MGAB				AML	AML		
	comp=N,24913µm,0.8s						
CADA	**Capodarco di F**	**0.66**	**58**	P	**Pb**	**08 34 35.3**	**-0.2**
CIMA	**Civitanova Mar**	**0.67**	**47**	P	**Pg**	**08 34 35.1**	**0.0**
TRTR	**Tortoreto Alta**	**0.68**	**93**	P	**Pg**	**08 34 35.2**	**0.0**
TRTR				AML	AML		
	comp=N,34550µm,0.6s						
TRTR				AML	AML		
	comp=E,48600µm,1.6s						
TRTR				AML	AML		
	comp=N,34600µm,0.6s						
TRTR				AML	AML		
	comp=E,47437µm,0.4s						
TRTR				AML	AML		
	comp=N,34599µm,0.6s						
ATVO	**AVT- Monte Val**	**0.68**	**321**	P	**Pg**	**08 34 35.5**	**+0.1**
ATVO				AML	AML		
	comp=E,5385µm,0.5s						
ATVO				AML	AML		
	comp=N,6080µm,0.8s						
ATVO				AML	AML		
	comp=N,6078µm,0.8s						
ATVO				AML	AML		
	comp=E,5388µm,0.5s						
PP3	**Marolino**	**0.69**	**40**	P	**Pg**	**08 34 35.0**	**-0.5**
PP3				AML	AML		
	comp=N,26500µm,0.7s						
PP3				AML	AML		
	comp=N,26050µm,0.7s						
PP3				AML	AML		
	comp=E,29500µm,0.6s						
PP3				AML	AML		
	comp=E,29450µm,0.6s						
PP3				AML	AML		
	comp=N,26048µm,0.7s						
PP3				AML	AML		
	comp=E,28130µm,0.6s						
PP3				AML	AML		
	comp=E,29467µm,0.6s						
PP3				AML	AML		
	comp=E,28150µm,0.6s						
PP3				AML	AML		
	comp=N,26503µm,0.7s						
FRON	**Frontone**	**0.69**	**344**	P	**Pg**	**08 34 34.9**	**-0.7**
FRON				AML	AML		
	comp=E,4925µm,0.6s						
FRON				AML	AML		
	comp=N,6385µm,0.3s						
FRON				AML	AML		
	comp=N,6388µm,0.3s						
FRON				AML	AML		
	comp=E,4923µm,0.6s						
ATBU	**Serra di Buran**	**0.70**	**333**	P	**Pg**	**08 34 35.9**	**+0.1**
SRES	**S.Oreste - Sor**	**0.71**	**210**	P	**Pg**	**08 34 36.3**	**+0.4**
SRES				AML	AML		
	comp=E,9625µm,1.0s						
SRES				AML	AML		
	comp=N,7155µm,0.5s						
SRES				AML	AML		
	comp=E,9649µm,1.0s						
SRES				AML	AML		
	comp=N,7159µm,0.5s						
ATMI	**Monte Miggiano**	**0.72**	**312**	P	**Pn**	**08 34 37.7**	**-0.4**
ATMI				AML	AML		
	comp=E,23450µm,0.6s						
ATMI				AML	AML		
	comp=E,23464µm,0.6s						
ATMI				AML	AML		
	comp=N,19450µm,0.7s						
ATMI				AML	AML		
	comp=N,19422µm,0.7s						
ATPI	**Pietralunga -**	**0.74**	**324**	P	**Pg**	**08 34 36.6**	**+0.1**
ATPI				AML	AML		
	comp=N,3850µm,0.9s						
ATPI				AML	AML		
	comp=E,7805µm,0.6s						
ATPI				AML	AML		
	comp=E,7800µm,0.6s						
ATPI				AML	AML		
	comp=E,7802µm,0.6s						
ATPI				AML	AML		
	comp=N,3525µm,0.9s						
ATPC	**Poggio Castell**	**0.74**	**328**	P	**Pg**	**08 34 36.6**	**+0.1**
PIEI	**Pieia**	**0.76**	**334**	AML	AML		
	comp=N,4310µm,1.1s						
PIEI				AML	AML		
	comp=E,4135µm,0.4s						
VCEL	**Villa Celiera**	**0.77**	**126**	P	**Pg**	**08 34 36.2**	**-1.0**
VCEL				AML	AML		
	comp=E,18050µm,0.4s						
VCEL				AML	AML		
	comp=N,13100µm,1.2s						
VCEL				AML	AML		
	comp=N,13050µm,1.2s						
VCEL				AML	AML		
	comp=E,18000µm,0.4s						
VCEL				AML	AML		
	comp=E,18037µm,0.4s						
VCEL				AML	AML		
	comp=N,11370µm,0.6s						
MPAG	**Monte Paganucc**	**0.80**	**348**	P	**Pg**	**08 34 37.3**	**-0.3**
MPAG				AML	AML		
	comp=N,4525µm,0.4s						
MPAG				AML	AML		
	comp=E,4220µm,0.6s						
MPAG				AML	AML		
	comp=E,4256µm,0.7s						
MPAG				AML	AML		
	comp=E,4222µm,0.6s						
MPAG				AML	AML		
	comp=N,4525µm,0.4s						
MPAG				AML	AML		
	comp=N,4922µm,0.7s						
SACS	**San Casciano d**	**0.80**	**270**	P	**Pb**	**08 34 38.4**	**+0.5**
SACS				AML	AML		
	comp=E,7495µm,0.7s						
SACS				AML	AML		
	comp=N,8920µm,0.7s						
SACS				AML	AML		
	comp=N,8919µm,0.7s						
SACS				AML	AML		
	comp=E,7496µm,0.7s						
SACS				AML	AML		
	comp=E,7652µm,0.7s						
APEC	**Apecchio**	**0.82**	**329**	P	**Pb**	**08 34 38.5**	**+0.2**
APEC				AML	AML		
	comp=N,2890µm,0.8s						
APEC				AML	AML		
	comp=E,1007µm,0.6s						
APEC				AML	AML		
	comp=N,989µm,1.2s						
AOI	**Ancona**	**0.83**	**32**	P	**Pg**	**08 34 37.3**	**-0.9**
AOI				AML	AML		
	comp=E,11550µm,0.5s						
AOI				AML	AML		
	comp=N,7900µm,0.5s						
AOI				AML	AML		
	comp=N,7899µm,0.5s						
AOI				AML	AML		
	comp=E,11550µm,0.5s						
MTCE	**Montecelio**	**0.85**	**193**	P	**Pg**	**08 34 37.8**	**-0.8**
MTCE				AML	AML		
	comp=E,8955µm,0.6s						
MTCE				AML	AML		
	comp=N,7000µm,0.5s						
MTCE				AML	AML		
	comp=E,8950µm,0.6s						
MTCE				AML	AML		
	comp=N,7000µm,0.5s						
MTCE				AML	AML		
	comp=E,8952µm,0.6s						
T0110	**Collepietro**	**0.85**	**137**	P	**Pg**	**08 34 37.5**	**-1.1**
T0110				AML	AML		
	comp=N,12050µm,0.4s						
T0110				AML	AML		
	comp=E,15750µm,0.4s						
T0110				AML	AML		
	comp=E,15759µm,0.4s						
T0110				AML	AML		
	comp=N,12046µm,0.4s						
FSSB	**Fossombrone**	**0.85**	**349**	P	**Pg**	**08 34 38.3**	**-0.3**
FSSB				AML	AML		
	comp=E,12550µm,1.4s						
FSSB				AML	AML		
	comp=N,16250µm,0.4s						
FSSB				AML	AML		
	comp=E,12129µm,0.3s						
FSSB				AML	AML		
	comp=N,16254µm,0.4s						
SENI	**Senigallia**	**0.87**	**11**	P	**Pg**	**08 34 38.8**	**-0.2**
SENI				AML	AML		
	comp=E,9425µm,0.7s						
SENI				AML	AML		
	comp=N,5387µm,0.9s						
SENI				AML	AML		
	comp=N,5380µm,0.9s						
SENI				AML	AML		
	comp=E,9429µm,0.7s						
SENI				AML	AML		
	comp=N,5116µm,1.0s						
PTQR	**Pietraquaria**	**0.88**	**160**	P	**Pg**	**08 34 38.2**	**-1.0**
PTQR				AML	AML		
	comp=E,3100µm,0.6s						
PTQR				AML	AML		
	comp=N,3280µm,0.4s						
PTQR				AML	AML		
	comp=E,3100µm,0.6s						
CAFI	**Castiglion Fio**	**0.89**	**303**	AML	AML		
	comp=E,4265µm,0.7s						
CAFI				AML	AML		
	comp=N,3835µm,0.6s						
CAFI				AML	AML		
	comp=E,4280µm,0.7s						
CAFI				AML	AML		
	comp=N,4015µm,0.6s						
CERT	**Cerreto**	**0.90**	**181**	P	**Pg**	**08 34 39.1**	**-0.4**
CERT				AML	AML		
	comp=E,10700µm,0.4s						
CERT				AML	AML		
	comp=N,6345µm,0.6s						
CERT				AML	AML		
	comp=N,6344µm,0.6s						
CERT				AML	AML		
	comp=E,10698µm,0.4s						
SSP9	**Sansepolcro**	**0.96**	**319**	AML	AML		
	comp=N,4240µm,0.6s						
SSP9				AML	AML		
	comp=E,3415µm,1.5s						
MCIV	**Monte Civitell**	**0.97**	**266**	P	**Pg**	**08 34 41.5**	**+0.6**
MCIV				AML	AML		
	comp=E,3245µm,0.6s						
MCIV				AML	AML		
	comp=N,2520µm,0.8s						
MCIV				AML	AML		
	comp=N,2520µm,0.8s						
MCIV				AML	AML		
	comp=N,2519µm,0.8s						
SF04	**Casetta**	**0.98**	**270**	AML	AML		
	comp=E,4275µm,0.3s						
SF04				AML	AML		
	comp=N,3345µm,0.8s						
RMP	**Rome, Mte Porz**	**1.06**	**192**	AML	AML		
	comp=E,6540µm,1.0s						
RMP				AML	AML		
	comp=N,9560µm,0.7s						
TOLF	**Tolfa**	**1.08**	**223**	P	**Pb**	**08 34 42.4**	**-0.2**
CRE	**Caprese Michel**	**1.08**	**316**	P	**Pb**	**08 34 43.1**	**+0.3**
CRE				AML	AML		
	comp=E,1945µm,0.4s						
CRE				AML	AML		
	comp=N,2795µm,0.7s						
CRE				AML	AML		
	comp=E,1945µm,0.4s						
CRE				AML	AML		
	comp=N,2795µm,0.7s						
GUAR	**Guarcino**	**1.08**	**167**	P	**Pn**	**08 34 44.6**	**+1.6**
GUAR				AML	AML		
	comp=E,5185µm,0.6s						
GUAR				AML	AML		
	comp=N,5815µm,0.5s						
GUAR				AML	AML		
	comp=E,5185µm,0.6s						
GUAR				AML	AML		
	comp=N,5813µm,0.5s						
VVLD	**Villa Vallelon**	**1.08**	**154**	P	**Pn**	**08 34 44.3**	**+1.2**
LPEL	**Lama dei Pelig**	**1.19**	**132**	P	**Pn**	**08 34 43.2**	**-1.4**
LPEL				AML	AML		
	comp=E,5270µm,0.7s						
LPEL				AML	AML		
	comp=N,3515µm,1.3s						
LPEL				AML	AML		
	comp=N,3443µm,0.4s						
LPEL				AML	AML		
	comp=E,5271µm,0.7s						
POFI	**Posta Fibreno**	**1.25**	**155**	P	**Pg**	**08 34 46.9**	**+0.7**
POFI				AML	AML		
	comp=E,2495µm,0.6s						
POFI				AML	AML		
	comp=N,2035µm,0.6s						
POFI				AML	AML		
	comp=E,2607µm,0.6s						
POFI				AML	AML		
	comp=E,2497µm,0.6s						
POFI				AML	AML		
	comp=N,1951µm,0.9s						
POFI				AML	AML		
	comp=N,2032µm,0.6s						
LRP	**Arpino**	**1.28**	**160**	AML	AML		
	comp=N,2650µm,0.7s						
LRP				AML	AML		
	comp=E,1980µm,0.7s						
ASQU	**Asqua**	**1.29**	**317**	P	**Pg**	**08 34 47.1**	**+0.1**
GIUL	**Giuliano Di Ro**	**1.31**	**171**	P	**Pb**	**08 34 47.0**	**+0.4**
GIUL				AML	AML		
	comp=E,2760µm,0.8s						
GIUL				AML	AML		
	comp=N,2155µm,0.7s						
GIUL				AML	AML		
	comp=N,2155µm,0.7s						
GIUL				AML	AML		
	comp=E,2763µm,0.8s						
SFI	**Santa Sofia**	**1.34**	**322**	P	**Pg**	**08 34 49.0**	**+1.0**
LATB	**Latina**	**1.36**	**181**	AML	AML		
	comp=N,716µm,1.0s						
LATB				AML	AML		
	comp=E,1058µm,0.8s						
CSNT	**Castellina Chi**	**1.39**	**297**	P	**Pb**	**08 34 48.2**	**+0.2**
FROS	**Frosini**	**1.40**	**285**	P	**Pn**	**08 34 47.9**	**+0.6**
FROS				AML	AML		
	comp=E,1935µm,0.7s						
FROS				AML	AML		
	comp=N,1520µm,0.8s						
FROS				AML	AML		
	comp=N,1521µm,0.8s						
FROS				AML	AML		

comp=E,1932µm,0.7s
MAON Monte Argentar 1.44 254 AML AML
comp=E,832µm,0.7s
MAON AML AML
comp=N,688µm,0.9s
OSSC Osservatorio P 1.45 298 P **Pn 08 34 48.0 0.0**
OSSC AML AML
comp=E,994µm,0.6s
OSSC AML AML
comp=N,734µm,0.6s
OSSC AML AML
OSSC AML AML
comp=E,748µm,0.6s
OSSC AML AML
comp=N,931µm,0.6s
OSSC AML AML
comp=N,734µm,0.6s
OSSC AML AML
comp=N,932µm,0.6s
OSSC AML AML
comp=E,997µm,0.6s
OSSC AML AML
comp=E,748µm,0.6s
CERA Filignano 1.47 148 P **Pb 08 34 49.6 +0.3**
RUFI Rufina 1.47 313 P **Pn 08 34 49.0 +0.7**
RUFI AML AML
comp=E,1378µm,0.6s
RUFI AML AML
comp=N,1486µm,0.8s
FRES Fresagrandinar 1.52 125 P **Pb 08 34 49.9 -0.3**
MIDA Miranda 1.53 142 P **Pb 08 34 50.5 +0.1**
TRIF Trifonti 1.56 280 P **Pn 08 34 50.4 +0.8**
TRIF AML AML
comp=E,802µm,0.6s
TRIF AML AML
comp=N,956µm,0.9s
TRIF AML AML
comp=E,802µm,0.6s
TRIF AML AML
comp=N,959µm,0.9s
CASP Castiglione de 1.57 269 AML AML
comp=E,382µm,0.7s
CASP AML AML
comp=N,354µm,1.0s
TRIV Trivento 1.58 133 P **Pg 08 34 52.1 -0.4**
CRMI Carmignano 1.75 303 P **Pb 08 34 53.6 -0.6**
BSSO Busso 1.77 137 P **Pb 08 34 54.7 +0.3**
MPPT Montemurlo 1.77 309 P **Pn 08 34 53.7 +1.1**
MPPT AML AML
comp=N,932µm,0.9s
MPPT AML AML
comp=E,1010µm,0.8s
MTCR Monte La Croce 1.87 310 P **Pn 08 34 54.5 +0.5**
SACR S. Croce Del S 1.93 138 P **Pb 08 34 58.0 +0.8**
MELA Melanico ??? S 1.95 125 AML AML
comp=N,3290µm,0.6s
MELA AML AML
comp=E,3490µm,0.5s
MELA AML AML
comp=E,3660µm,0.5s
MELA AML AML
comp=N,3310µm,0.6s
POPM Popiglio 2.02 307 P **Pn 08 34 56.5 +0.5**
POPM AML AML
comp=E,490µm,1.3s
POPM AML AML
comp=N,446µm,0.9s
POPM AML AML
comp=N,395µm,1.0s
POPM AML AML
comp=E,414µm,0.7s
CELB S.Piero in Cam 2.05 268 AML AML
comp=E,220µm,0.5s
CELB AML AML
comp=N,170µm,0.7s
MAIM Mastiano 2.11 301 P **Pn 08 34 58.2 +1.1**
MAIM AML AML
comp=E,389µm,0.6s
MAIM AML AML
comp=N,402µm,0.6s
MAIM AML AML
comp=E,389µm,0.6s
MAIM AML AML
comp=N,402µm,0.6s
BDI Bagni Di Lucca 2.12 306 P **Pn 08 34 57.7 +0.2**
CARD Cardoso 2.17 304 P **Pn 08 34 57.9 -0.1**
CARD AML AML
comp=E,506µm,0.4s
CARD AML AML
comp=N,578µm,1.0s
CARD AML AML
comp=E,506µm,0.4s
CARD AML AML
comp=N,513µm,0.5s
APRC Apricena 2.18 119 AML AML
comp=N,2450µm,0.4s
APRC AML AML
comp=E,1550µm,1.1s
VLC Villacollemand 2.30 305 AML AML
comp=E,257µm,1.3s
VLC AML AML
comp=N,298µm,1.2s
VLC AML AML
comp=E,267µm,1.3s
VLC AML AML
comp=N,288µm,1.2s
SGRT San Giovanni R 2.31 117 AML AML
comp=E,1195µm,0.6s
SGRT AML AML
comp=N,1380µm,0.5s
PLMA Palmaria, Port 2.58 299 AML AML
comp=E,164µm,0.6s
PLMA AML AML
comp=N,176µm,0.6s
MORSI Morsiglia 2.67 273 Pn **Pn 08 35 06.0 +1.1**
TEOL Teolo 2.68 340 P **Pn 08 35 06.7 +1.6**
SKDS Skadanscina 2.79 15 *i* Pn **Pn 08 35 06.4 -0.2**
SKDS *i* Sn **Sn 08 35 40.4 +0.2**
SKDS IAML 08 35 41.1
comp=Z,123nm,0.3s
ZOVE Zovencedo 2.82 338 P **Pn 08 35 08.3 +1.4**
SMPL Sampolo 2.85 256 AML AML
comp=N,56µm,0.7s
SMPL AML AML
comp=E,51µm,0.5s
SMPL Sampolo 2.85 256 Pn **Pn 08 35 08.8 +1.5**
MSSA Maissana 2.92 301 AML AML
comp=E,166µm,1.4s
MSSA AML AML
comp=N,228µm,0.8s
PGF Pioggiola 2.96 265 *e*Pn **Pn 08 35 06.8 -2.2**
PGF Pioggiola 2.96 265 *e*P **Pn 08 35 10.5 +1.5**
PGF *e*Sn **Sn 08 35 40.2 -4.2**
comp=N,37nm,0.5s
PGF Pioggiola 2.96 265 AML AML
comp=E,88µm,1.4s
PGF AML AML
comp=N,61µm,0.4s
PGF Pioggiola 2.96 265 Pn **Pn 08 35 10.7 +1.7**
ROVR Rover Verones 3.12 334 P **Pn 08 35 12.6 +1.5**
ROVR AML AML
comp=E,164µm,0.8s
ROVR AML AML
comp=N,208µm,0.9s
ROVR AML AML
comp=E,165µm,0.8s
ROVR AML AML
comp=N,505µm,0.5s
ROVR AML AML
comp=N,181µm,0.5s
CGRP Cima Grappa 3.15 345 AML AML
comp=N,718µm,0.5s
CGRP AML AML
comp=E,962µm,0.7s
CGRP AML AML
comp=N,760µm,0.9s
CGRP AML AML
comp=E,1010µm,0.7s
SABO M.te Sabotino 3.16 8 AML AML
comp=E,860µm,0.6s
SABO AML AML
comp=E,3790µm,0.6s
SABO AML AML
comp=N,3390µm,0.8s
SABO AML AML
comp=N,889µm,0.6s
AJAC Base Areonaval 3.27 255 AML AML
comp=N,89µm,1.1s
AJAC AML AML
comp=E,168µm,0.6s
AJAC Base Areonaval 3.27 255 Pn **Pn 08 35 15.2 +2.1**
SALO Salr 3.29 328 AML AML
comp=N,880µm,0.8s
SALO AML AML
comp=E,465µm,1.0s
CTI Castel Tesino 3.34 344 AML AML
comp=E,594µm,0.8s
CTI AML AML
comp=N,650µm,0.3s
LJU Ljubljana 3.38 18 AML AML
comp=E,2565µm,0.7s
LJU AML AML
comp=N,4000µm,0.7s
MPRI Monte Prat 3.39 360 AML AML
comp=N,1205µm,0.6s
MPRI AML AML
comp=E,1195µm,0.6s
STAL STALIGIAL 3.41 357 AML AML
comp=E,920µm,0.3s
STAL AML AML
comp=E,759µm,0.4s
STAL AML AML
comp=N,716µm,0.3s
STAL AML AML
comp=N,692µm,1.6s
LUSI Trento, Gardas 3.44 335 AML AML
comp=E,412µm,0.6s
LUSI AML AML
comp=N,549µm,1.6s
CIMO Cimolais 3.48 354 AML AML
comp=E,169µm,0.6s
CIMO AML AML
comp=E,169µm,0.6s
CIMO AML AML
comp=N,226µm,1.1s
CIMO AML AML
comp=N,222µm,1.1s
AGOR Agordo 3.50 349 AML AML
comp=N,312µm,1.4s
AGOR AML AML
comp=E,343µm,1.4s
AGOR AML AML
comp=N,424µm,1.1s
AGOR AML AML
comp=E,240µm,0.6s
MATE Matera 3.54 127 ⇑P **Pb 08 35 20.7 -4.0**
PTCC Patocco-Chiusa 3.56 4 AML AML
comp=E,294µm,0.9s
PTCC AML AML
comp=N,500µm,0.7s
ZONE Zone 3.57 326 AML AML
comp=N,456µm,1.2s
ZONE AML AML
comp=E,338µm,0.7s
CLUD Cludinico 3.61 359 AML AML
comp=E,462µm,0.8s
CLUD AML AML
comp=N,512µm,0.8s
ZOU Zoufplan 3.71 360 AML AML
comp=E,485µm,0.7s
ZOU AML AML
comp=E,475µm,0.7s
ZOU AML AML
comp=N,510µm,0.8s
ZOU AML AML
comp=N,504µm,0.8s
ACOM Acomizza, Ital 3.71 6 AML AML
comp=N,898µm,0.8s
ACOM AML AML
comp=E,712µm,0.7s
ACOM AML AML
comp=E,690µm,0.7s
ACOM AML AML
comp=N,884µm,0.8s
FVI Forni Avoltri 3.75 358 AML AML
comp=N,772µm,0.7s
FVI AML AML
comp=E,451µm,0.6s
MYKA Terra Mystica 3.81 7 *e*Pn **Pn 08 35 21.4 +0.9**
comp=E,13nm,0.2s,SNR=7.3
OBKA Obir 3.82 16 *i* Pn **Pn 08 35 21.2 +0.4**
comp=E,4.7nm,0.2s
ABTA Abfaltersbach 3.91 355 *e*Pn **Pn 08 35 23.9 +1.9**
comp=E,9.9nm,0.2s
BRES Bressanone 3.95 347 AML AML
comp=E,548µm,0.8s
BRES AML AML
comp=N,604µm,0.7s
MGRO Montegrosso 3.96 289 AML AML
comp=N,78µm,1.3s
MGRO AML AML
comp=E,196µm,0.9s
SOKA Soboth 4.09 20 *e*Pn **Pn 08 35 24.9 +0.4**
comp=E,6.3nm,0.3s
SAOF Saorge 4.12 288 Pn **Pn 08 35 26.7 +1.8**
RISI Rein 4.15 351 AML AML
comp=E,1060µm,0.5s
RISI AML AML
comp=N,1205µm,0.5s
MUGIO Muggio 4.18 319 AML AML
comp=E,190µm,1.0s
MUGIO AML AML
comp=N,191µm,0.7s
SBF Sospel 4.18 286 *e*Pn **Pn 08 35 23.5 -2.2**
SBF Sospel 4.18 286 *e*P **Pn 08 35 27.0 +1.3**
SBF *e*Sn **Sn 08 36 09.8 -4.6**
comp=N,42nm,0.5s
TURF col de Turini 4.23 287 Pn **Pn 08 35 28.4 +1.9**
TURF Sn **Sb 08 36 27.0 -0.6**
VSL Villasalto 4.32 220 AML AML
comp=N,94µm,0.7s
VSL AML AML
comp=E,80µm,0.5s
SPIF crte de Spivo 4.36 288 Pn **Pn 08 35 32.9 +4.6**
SPIF Sn **Sb 08 36 29.1 -2.2**
MVIF Mont Vial 4.38 286 Pn **Pn 08 35 31.0 +2.4**
FETA Feichten 4.47 340 *e*Pn **Pn 08 35 33.7 +3.9**
comp=E,5.4nm,0.4s
DAVOX Davos/Dischmat 4.51 332 Pn **Pn 08 35 33.2 +2.8**
comp=E,4.7nm,0.3s,baz=156,slow=21,SNR=2.9
DAVOX Sn **Sn 08 36 23.8 +1.0**
comp=E,4.9nm,0.3s,baz=120,slow=22,SNR=3.8
WTTA Wattenberg 4.52 348 *e*Pn **Pn 08 35 33.6 +3.2**
comp=E,8.8nm,0.3s
CALF Calern 4.52 284 Pn **Pn 08 35 31.9 +1.4**
ISO Isola 4.52 289 Pn **Pn 08 35 32.9 +2.5**
SQTA Sankt Quirin 4.55 344 *e*Pn **Pn 08 35 33.6 +2.8**
comp=E,8.4nm,0.2s
WATA Walderalm 4.59 348 *e*Pn **Pn 08 35 34.3 +2.8**
comp=E,9.4nm,0.2s
MOTA Moosalm 4.69 344 *e*Pn **Pn 08 35 35.9 +3.1**
comp=E,15nm,0.4s
ENAUX Enaux 4.70 288 Pn **Pn 08 35 37.0 +4.2**
ARSA Arzberg 4.75 21 *e*Pn **Pn 08 35 33.5 +0.1**
comp=E,16nm,0.5s,SNR=5.7
SURF Saint Ours 4.77 292 Pn **Pn 08 35 36.0 +2.1**
LMR La Mourre 4.77 278 *e*Pn **Pn 08 35 31.3 -2.5**
LMR La Mourre 4.77 278 *e*P **Pn 08 35 34.4 +0.6**
LMR *e*Sn **Sn 08 36 23.6 -5.4**
comp=E,6.5nm,0.4s
JAUF Jausiers 4.80 291 Pn **Pn 08 35 36.6 +2.4**
BIOA Bad Ischl, Aus 4.86 5 *i* Pn **Pn 08 35 36.2 +1.2**
comp=E,18nm,0.3s,SNR=7.5
MBDF Montbardon 4.88 295 *e*Pn **Pn 08 35 32.9 -2.5**
MBDF Montbardon 4.88 295 *e*P **Pn 08 35 37.0 +1.6**
MBDF *e*Sn **Sn 08 36 26.6 -5.2**
comp=E,26nm,0.5s
TRIGF Trigance 4.89 283 Pn **Pn 08 35 37.8 +2.3**
RETA Reutte 4.90 342 *e*Pn **Pn 08 35 38.6 +3.1**
comp=E,5.7nm,0.3s
CREF Crivoux 4.92 292 Pn **Pn 08 35 38.4 +2.5**
OGAG Argentiere 4.95 291 Pn **Pn 08 35 40.5 +4.2**
DAVA Damuels 4.95 335 *e*Pn **Pn 08 35 39.8 +3.4**
comp=E,17nm,0.4s
FLAF Flassans-sur-I 4.96 278 Pn **Pn 08 35 37.7 +1.3**
EMBD Embd, Matterta 4.99 314 Pn **Pn 08 35 40.3 +3.5**
MOA Molln 5.08 10 *e*Pn **Pn 08 35 38.9 +0.9**
comp=E,4.4nm,0.1s
DIX Grande Dixence 5.14 311 Pn **Pn 08 35 42.5 +3.4**
LPG La Plagne 5.21 303 *e*Pn **Pn 08 35 37.3 -2.8**
LPG La Plagne 5.21 303 *e*P **Pn 08 35 41.9 +1.8**
LPG *e*Sn **Sn 08 36 34.6 -5.6**
comp=E,25nm,0.7s
LPL La Plagne 5.23 303 *e*Pn **Pn 08 35 38.1 -2.2**
LPL La Plagne 5.23 303 *e*P **Pn 08 35 42.0 +1.7**
LPL *e*Sn **Sn 08 36 34.5 -6.1**
comp=E,14nm,0.4s
ARTF Artigues 5.30 280 Pn **Pn 08 35 42.8 +1.7**
TIR Tirane 5.33 104 ⇓P **Pn 08 35 42.5 +1.1**
RONA Rosalia, Austr 5.38 25 *e*Pn **Pn 08 35 42.4 +0.3**
comp=E,5.3nm,0.2s
RSL Roselend 5.38 304 Pn **Pn 08 35 45.6 +3.3**
CONA Conrad Observa 5.46 21 *i* Pn **Pn 08 35 43.4 +0.1**
comp=E,26nm,0.5s,SNR=8.7
SMRF Simiane la Rot 5.52 284 *e*Pn **Pn 08 35 41.8 -2.3**
SMRF Simiane la Rot 5.52 284 *e*P **Pn 08 35 47.5 +3.4**
SMRF *e*Sn **Sn 08 36 41.4 -6.0**
ORIF Oris-en-Rattie 5.54 294 *e*Pn **Pn 08 35 42.0 -2.4**
ORIF Oris-en-Rattie 5.54 294 *e*P **Pn 08 35 47.8 +3.4**
ORIF *e*Sn **Sn 08 36 42.3 -5.7**
comp=E,21nm,0.8s
ORIF Oris-en-Rattie 5.54 294 Pn **Pn 08 35 47.8 +3.4**
AIGLE Aigle 5.55 311 Pn **Pn 08 35 47.4 +3.0**
RUSF Rustrel 5.58 284 Pn Pn 08 35 52.0 +7.1
SULZ Cheisacher 5.81 325 Pn **Pn 08 35 49.9 +1.9**
TORNY Torny/Romont 5.81 314 Pn **Pn 08 35 50.9 +2.8**
BALST Balsthal 5.84 322 Pn **Pn 08 35 50.9 +2.3**
SLE Schleitheim 5.85 329 Pn **Pn 08 35 50.1 +1.5**
GUT Gutenstein 5.89 334 Pn **Pn 08 35 52.0 +2.9**
OGSM Saint Maurice 5.92 300 P Pn 08 35 40.7 -8.9
GERES GERESS Array B 6.01 4 Pn **Pn 08 35 51.0 +0.1**
comp=E,1.9nm,0.3s,baz=178,slow=13,SNR=9.2
GERES Sn **Sn 08 36 58.1 -1.6**
comp=E,5.9nm,0.3s,baz=181,slow=29,SNR=9.8
comp=E,2.5nm,0.3s
CKRC Cesky Krumlov 6.04 8 *e*SN **Sn 08 36 58.1 -2.1**
GIMEL St. Georges / 6.05 310 Pn **Pn 08 35 54.0 +2.6**
BOURR Bourrignon 6.10 320 Pn **Pn 08 35 53.9 +1.8**
BRANT Les Verrieres 6.18 314 Pn **Pn 08 35 55.5 +2.4**
CABF La Chapelle 6.19 310 *e*Pn **Pn 08 35 50.7 -2.6**
CABF La Chapelle 6.19 310 *e*P **Pn 08 35 55.0 +1.7**
CABF *e*Sn **Sn 08 36 57.7 -6.3**
comp=E,12nm,0.5s
OG35 Corcelles 6.20 304 Pn **Pn 08 35 54.3 +0.9**
KIZ Kirchzarten 6.23 327 Pn **Pn 08 35 55.4 +1.6**
CHMF Charmoille 6.29 317 Pn **Pn 08 35 56.8 +2.2**
KHC Kasperske Hory 6.29 3 *e*PN **Pn 08 35 54.6 -0.1**
KHC *e*SN **Sn 08 37 03.6 -2.9**
VIVF Saint-Julien-I 6.34 291 *e*Pn **Pn 08 35 52.6 -2.7**
VIVF Saint-Julien-I 6.34 291 *e*P **Pn 08 35 58.0 +2.7**
VIVF *e*Sn **Sn 08 37 01.1 -6.6**
VOGT Vogtsburg - To 6.43 326 Pn **Pn 08 35 58.1 +1.6**
MOF Molkenrain 6.48 322 Pn **Pn 08 35 59.3 +1.9**
BOUC Bouclans 6.49 315 Pn **Pn 08 35 59.3 +2.0**
HINF Hinteralfeld 6.58 321 *e*Pn **Pn 08 35 56.0 -2.7**
HINF Hinteralfeld 6.58 321 *e*P **Pn 08 36 00.7 +2.0**
HINF *e*Sn **Sn 08 37 06.8 -6.8**
comp=E,27nm,0.5s
RONF Ronchamp 6.61 320 Pn **Pn 08 36 00.6 +1.7**
ECH Echery 6.75 325 Pn **Pn 08 36 02.0 +1.1**
LASF Ste Croix 6.76 284 *e*Pn **Pn 08 35 57.8 -3.3**
LASF Ste Croix 6.76 284 *e*P **Pn 08 36 02.4 +1.3**
LASF *e*Sn **Sn 08 37 11.1 -6.9**
comp=E,4.5nm,0.5s
BZS Buzias 6.78 63 ⇑P **Pn 08 36 01.0 -0.4**
WLS Welschbruch 6.82 327 Pn **Pn 08 36 03.8 +1.8**
CDF Champ du Feu 6.85 326 *e*Pn **Pn 08 35 59.4 -3.0**
CDF Champ du Feu 6.85 326 *e*P **Pn 08 36 04.3 +1.9**
CDF *e*Sn **Sn 08 37 13.7 -6.6**
comp=E,32nm,0.4s
VRAC Vranov 6.92 20 Pn **Pn 08 36 02.4 -1.0**
comp=E,0.6nm,0.3s,baz=133,slow=21,SNR=1.8
comp=E,5.2nm,0.8s
HAU Haudompre 6.96 320 *e*Pn **Pn 08 36 01.6 -2.2**
HAU Haudompre 6.96 320 *e*P **Pn 08 36 06.0 +2.2**
HAU *e*Sn **Sn 08 37 15.7 -7.1**
comp=E,50nm,0.6s
HERR Herculane 7.11 70 ⇓P **Pn 08 36 06.6 +0.8**
BLKB Belogradchik 7.11 80 ⇓P **Pn 08 36 07.0 +1.0**
GZR Gura Zlata 7.48 67 ⇑P **Pn 08 36 11.4 +0.4**
SMF Signal de Mont 7.54 303 *e*Pn **Pn 08 36 09.0 -2.7**
SMF Signal de Mont 7.54 303 *e*P **Pn 08 36 13.4 +1.7**
SMF *e*Sn **Sn 08 37 30.2 -6.9**
comp=E,8.4nm,0.5s
VTS Vitosha 7.54 88 ⇓P **Pn 08 36 12.9 +0.9**
PAGF Fort de Pagny 7.64 321 *e*Pn **Pn 08 36 10.5 -2.6**
PAGF Fort de Pagny 7.64 321 *e*P **Pn 08 36 15.4 +2.3**
PAGF *e*Sn **Sn 08 37 32.6 -7.0**
comp=E,34nm,0.7s
KEST Kesra 7.65 203 Pn **Pn 08 36 17.9 +4.5**
comp=E,0.6nm,0.3s,baz=300,slow=5.9,SNR=2.2
comp=E,2.3nm,0.5s
DEV Deva 7.72 63 ⇑P **Pn 08 36 12.6 -1.6**
SFTF Sexfontaines 7.74 317 *e*Pn **Pn 08 36 11.7 -2.7**
SFTF Sexfontaines 7.74 317 *e*P **Pn 08 36 15.6 +1.2**
SFTF *e*Sn **Sn 08 37 34.7 -7.2**
comp=E,30nm,0.4s
LOR Lormes 7.83 307 *e*Pn **Pn 08 36 13.0 -2.7**
LOR Lormes 7.83 307 *e*P **Pn 08 36 18.4 +2.7**
LOR *e*Sn **Sn 08 37 35.9 -8.3**
comp=E,9.9nm,0.3s
AVF Avril sur Loir 7.90 303 *e*Pn **Pn 08 36 14.1 -2.6**
AVF Avril sur Loir 7.90 303 *e*P **Pn 08 36 19.1 +2.4**
AVF *e*Sn **Sn 08 37 39.8 -6.2**
comp=E,5.0nm,0.3s
MTLF Montolieu 7.90 277 *e*Pn **Pn 08 36 13.7 -3.1**
MTLF Montolieu 7.90 277 *e*P **Pn 08 36 19.7 +2.9**
MEZF Maizieres J'vi 7.93 318 *e*Pn **Pn 08 36 13.3 -3.7**
MEZF Maizieres J'vi 7.93 318 *e*P **Pn 08 36 19.4 +2.4**
MEZF *e*Sn **Sn 08 37 39.7 -6.8**
comp=E,50nm,0.7s
SSF Saint Saulge 7.94 305 *e*Pn **Pn 08 36 14.1 -3.1**
SSF Saint Saulge 7.94 305 *e*P **Pn 08 36 19.8 +2.6**
SSF *e*Sn **Sn 08 37 38.9 -7.9**
comp=E,5.4nm,0.3s
SAVF Savonnieres en 7.97 319 *e*Pn **Pn 08 36 14.4 -3.2**
SAVF Savonnieres en 7.97 319 *e*P **Pn 08 36 19.8 +2.2**
SAVF *e*Sn **Sn 08 37 40.0 -7.6**
comp=E,29nm,0.4s
TCF Toulx Ste Croi 8.43 298 *e*Pn **Pn 08 36 21.2 -2.8**
TCF Toulx Ste Croi 8.43 298 *e*P **Pn 08 36 25.5 +1.5**
TCF *e*Sn **Sn 08 37 51.5 -7.5**
comp=E,14nm,0.7s
PLVB Pleven 8.52 82 ⇑P **Pn 08 36 26.4 +1.2**
ARR Arges 8.74 69 ⇑P **Pn 08 36 29.3 +1.0**
VOIR 9.04 69 ⇑P **Pn 08 36 35.1 +2.6**
GIVF Givet 9.18 325 *e*Sn **Sn 08 38 09.0 -8.4**
comp=E,55nm,0.8s
DOPR Dopca 9.40 66 ⇑P **Pn 08 36 37.5 +0.2**
BAIF Baives 9.41 323 *e*Sn Sn 08 38 14.3 -8.8
comp=E,8.6nm,0.4s
MLR Muntele Rosu 9.67 70 ⇓P **Pn 08 36 43.3 +2.1**
MLR Muntele Rosu 9.67 70 Pn **Pn 08 36 43.2 +2.1**
comp=E,0.3nm,0.3s,baz=278,slow=22,SNR=2.3
comp=E,2.2nm,0.5s
BURAR Bucovina Array 9.85 57 ⇑P **Pn 08 36 46.9 +3.5**
NEHR Nehoiu 9.90 70 ⇓P **Pn 08 36 45.2 +1.0**
BISRR Bisoca 10.21 70 ⇑P **Pn 08 36 49.0 +0.6**
ESDC Sonseca Array 13.15 262 Pn **Pn 08 37 30.1 +1.5**
comp=E,0.1nm,0.3s,baz=58,slow=12,SNR=2.9
comp=E,0.4nm,0.8s
BRTR Keskin Array B 15.83 94 Pn **P 08 38 08.6 0.0**
comp=E,0.1nm,0.3s,baz=302,slow=11,SNR=3.5
comp=E,1.1nm,0.8s
EKA Eskdalemuir Ar 16.32 326 Pn **Pn 08 38 12.0 +1.2**
baz=135,slow=14
comp=E,0.2nm,0.4s
NOA NORSAR Array B 18.25 357 P **P 08 38 35.4 +0.3**
comp=E,0.6nm,0.7s,baz=174,slow=11,SNR=2.4
FINES FINESS Array B 20.20 18 P **P 08 38 57.0 +0.6**
comp=E,3.2nm,0.8s,baz=192,slow=10,SNR=6.2
comp=E,3.2nm,0.8s
KBZ Khabaz 21.73 77 P **P 08 39 15.2 +2.2**
comp=E,4.1nm,0.9s,baz=292,slow=7.6,SNR=4.6
comp=E,4.1nm,0.9s
TORD Torodi Ar. Bea 31.17 202 P **P 08 40 41.9 +0.9**
comp=E,1.3nm,0.9s,baz=16,slow=8.8,SNR=5.4
comp=E,1.3nm,0.9s
ARU Arti 31.85 49 P **P 08 40 46.6 +0.1**
comp=E,4.0nm,0.6s,baz=253,slow=4.5,SNR=7.0
comp=E,4.0nm,0.6s
BVAR Borovoye Array 38.79 54 P **P 08 41 47.6 +1.3**
comp=E,0.9nm,0.7s,baz=234,slow=6.6,SNR=6.3
comp=E,0.9nm,0.7s
ZALV Zalesovo Beam 46.99 50 P **P 08 42 53.1 +0.5**
comp=E,0.6nm,0.5s,baz=290,slow=6.0,SNR=2.1
comp=E,0.6nm,0.5s
MKAR Makanchi Array 47.85 60 P **P 08 43 00.4 +0.8**
comp=E,0.9nm,0.7s,baz=278,slow=6.7,SNR=4.5
comp=E,0.9nm,0.7s

SONM Songino Array 61.88 50 P **P** **08 44 43.4 +2.2**
comp=E,1.1nm,0.8s,baz=302,slow=8.5,SNR=4.8
comp=E,1.1nm,0.8s
CMAR Chiang Mai Arr 74.78 79 P **P** **08 46 04.5 +2.2**
comp=E,0.8nm,0.3s,baz=309,slow=5.7,SNR=5.5
comp=E,0.8nm,0.3s

WEL 30 08:34:25.9±1.5, 37°S±9°×17°9E±°, h12km, M2.6/7, ML2.9/6, MLv2.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=136.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.54**	**233**	P		Pg	08 34 36.9	+0.3
MXZ				S		Sb	08 34 44.6	-0.6
WMGZ	**Waiomatatini S**	**0.68**	**210**	P		Pb	08 34 40.2	+0.5
WMGZ				S		Sb	08 34 50.3	+1.2
PKGZ	**Pakihiroa**	**0.90**	**223**	P		Pg	08 34 43.3	0.0
PKGZ				S		Sb	08 34 55.8	+0.4
PUZ	**Puketiti**	**0.96**	**209**	P		Pg	08 34 44.1	-0.3
PUZ				S		Sg	08 34 56.8	-0.2
PUZ	**Puketiti**	**0.96**	**209**	P		Pn	08 34 46.1	+0.9
HAZ	**Te Kaha**	**1.00**	**238**	P		Pb	08 34 44.6	-0.4
HAZ				S		Sn	08 34 59.0	-0.7
TWGZ	**Tauwhareparae**	**1.17**	**216**	P		Pb	08 34 47.2	-0.9
TWGZ				S		Sb	08 35 03.0	-0.2
TWGZ	**Tauwhareparae**	**1.17**	**216**	P		Pb	08 34 47.6	-0.5
RUGZ	**Raukumara Rang**	**1.18**	**232**	P		Pb	08 34 47.9	-0.5
RUGZ				S		Sn	08 35 04.5	0.0
RUGZ	**Raukumara Rang**	**1.18**	**232**	P		Pb	08 34 48.2	-0.2
CNGZ	**Carnagh Statio**	**1.35**	**202**	P		Pn	08 34 50.0	-0.6
CNGZ				S		Sb	08 35 08.3	0.0

*LDG **30** 08:35:58.1±0.1, 42°.82N×13°.14E, h10km, Ml4.4/17, Error ellipse: s-maj=2.7km s-min=1.7km az=51.0*
*ROM **30** 08:35:58.6±0.0, 42°.837N±0°.002×13°.079E±0°.003, h10km, ML4.3/35, Mw4.3, Error ellipse: s-maj=0.2km s-min=0.1km az=255.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.94; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$2.28; $M_{r\theta}$-0.31; $M_{\theta\phi}$-0.29; $M_{\phi r}$-2.48; Fault plane solution: $M_0$3.28884×10^{15} NP1:ϕ_s160.00000°, δ22.00000°, λ-113.00000°. NP2:ϕ_s5.00000°, δ70.00000°, λ-81.00000°.*
*IDC **30** 08:35:59.2±0.9, 42°.78N×12°.99E, h0km, mb4.1/19, mbtmp4.0/28, ML3.9/7 Error ellipse: s-maj=16.4km s-min=13.1km az=32.0*
*MOS **30** 08:36:00.3±1.1, 42°.99N×13°.20E, h9km, mb4.6/22, Error ellipse: s-maj=6.3km s-min=4.1km az=76.8*
*NEIC **30** 08:36:01.0±1.3, 42°.77N±0°.06×12°.96E±0°.06, h10km±1km, mb4.6/25, ML4.4(ROM), ML4.4(VIE), Error ellipse: s-maj=10.9km s-min=6.6km az=210.0*
*PRU **30** 08:36:01.8±0.0, 43°.11N×12°.97E, h0km, M4.6*
*STR **30** 08:36:04.0, 42°.88N×13°.22E, h30km, MLv4.6/9, preliminary*

ISC 30 08:35:59.7±0.8, 42°.84N±0°.01×13°.05E±0°.01, h4km±5km, n442, σ2°30/503, mb4.4/43, 33C-29D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**338**	⇑P		**Pg**	**08 36 01.2**	**+0.2**
T1216				S		**Sg**	**08 36 02.9**	**+0.9**
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1212	**Cascia, Frazio**	**0.08**	**182**	P		**Pg**	**08 36 01.6**	**+0.1**
T1212				S		**Sg**	**08 36 03.6**	**+1.0**
T1245	**Castelsantange**	**0.10**	**78**	⇓P		**Pg**	**08 36 01.5**	**-0.4**
T1245				S		**Sg**	**08 36 03.3**	**0.0**
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1213	**Norcia, Frazio**	**0.12**	**153**	P		**Pg**	**08 36 01.9**	**-0.3**
T1213				S		**Sg**	**08 36 04.1**	**+0.3**
FEMA	**Monte Fema**	**0.13**	**0**	P		**Pg**	**08 36 02.1**	**-0.2**
FEMA				S		**Sg**	**08 36 04.5**	**+0.5**
MC2	**Monte Cornacci**	**0.13**	**53**	⇓P		**Pg**	**08 36 02.0**	**-0.4**
MC2				S		**Sg**	**08 36 04.4**	**+0.3**
T1215	**Vallo di Nera,**	**0.14**	**256**	⇑P		**Pg**	**08 36 02.6**	**+0.2**
T1215				S		**Sg**	**08 36 05.5**	**+1.3**
T1215				AML		AML		
	comp=E,23868μm,0.4s							
T1215				AML		AML		
	comp=N,32703μm,0.3s							
T1215				AML		AML		
	comp=E,23260μm,0.3s							
T1215				AML		AML		
	comp=N,32324μm,0.3s							
T1214	**Arquata del Tr**	**0.14**	**123**	P		**Pg**	**08 36 02.1**	**-0.4**
T1214				S		**Sg**	**08 36 04.4**	**0.0**
T1217	**Poggiodomo (PG**	**0.15**	**215**	⇑P		**Pg**	**08 36 02.7**	**0.0**
T1217				S		**Sg**	**08 36 05.8**	**+1.1**
T1217				AML		AML		
	comp=E,39400μm,0.5s							
T1217				AML		AML		
	comp=E,38850μm,0.5s							
T1217				AML		AML		
	comp=N,55050μm,0.3s							
T1217				AML		AML		
	comp=E,39350μm,0.5s							
T1217				AML		AML		
	comp=N,55150μm,0.3s							
T1217				AML		AML		
	comp=E,38850μm,0.5s							
T1217				AML		AML		
	comp=N,55050μm,0.3s							
T1217				AML		AML		
	comp=E,39350μm,0.5s							
T1217				AML		AML		
	comp=N,55200μm,0.3s							
T1217				AML		AML		
	comp=E,36111μm,0.3s							
T1217				AML		AML		
	comp=E,35249μm,0.3s							
T1217				AML		AML		
	comp=N,55042μm,0.3s							
T1217				AML		AML		
	comp=N,55176μm,0.3s							
T1218	**Civita (PG)**	**0.17**	**164**	P		**Pg**	**08 36 03.0**	**0.0**
T1218				S		**Sg**	**08 36 05.8**	**+0.5**
T1244	**Arquata del Tr**	**0.20**	**113**	P		**Pg**	**08 36 03.1**	**-0.5**
T1244				S		**Sg**	**08 36 06.5**	**+0.3**
FDMO	**Fiordimonte**	**0.20**	**8**	P		**Pg**	**08 36 03.3**	**-0.4**
FDMO				S		**Sg**	**08 36 06.5**	**+0.1**
MMO1	**Montemonaco**	**0.21**	**72**	P		**Pg**	**08 36 03.1**	**-0.7**
MMO1				S		**Sg**	**08 36 06.4**	**-0.3**
T1256	**Bolognola (MC)**	**0.21**	**37**	P		**Pg**	**08 36 03.2**	**-0.7**
T1256				S		**Sg**	**08 36 06.8**	**0.0**
T1219	**Muccia, Frazio**	**0.22**	**352**	P		**Pg**	**08 36 03.7**	**-0.4**
T1219				S		**Sg**	**08 36 07.5**	**+0.5**
LNSS	**Leonessa**	**0.23**	**182**	P		**Pg**	**08 36 03.9**	**-0.3**
LNSS				S		**Sg**	**08 36 07.9**	**+0.7**
LNSS				AML		AML		
LNSS				AML		AML		
	comp=E,52350μm,0.4s							
LNSS				AML		AML		
	comp=N,69591μm,0.2s							
LNSS				AML		AML		
	comp=E,22449μm,0.2s							
T1201	**Domo (RI)**	**0.23**	**140**	P		**Pg**	**08 36 03.9**	**-0.3**
T1201				S		**Sg**	**08 36 08.0**	**+0.8**
T1204	**Amatrice, Fraz**	**0.25**	**129**	P		**Pg**	**08 36 04.1**	**-0.5**
T1204				S		**Sg**	**08 36 08.2**	**+0.3**
T1204				AML		AML		
	comp=E,94550μm,0.2s							
T1204				AML		AML		
	comp=N,55600μm,0.4s							
T1204				AML		AML		
T1204				AML		AML		
T1204				AML		AML		
	comp=N,55657μm,0.4s							
T1204				AML		AML		
	comp=E,75043μm,0.3s							
AM05	**Amandola Campo**	**0.27**	**57**	P		**Pg**	**08 36 04.1**	**-0.7**
AM05				S		**Sg**	**08 36 08.2**	**-0.1**
AM05				AML		AML		
	comp=N,97550μm,0.8s							
AM05				AML		AML		
AM05				AML		AML		
AM05				AML		AML		
	comp=E,70900μm,0.7s							
AM05				AML		AML		
AM05				AML		AML		
AM05				AML		AML		
	comp=N,97500μm,0.8s							
AM05				AML		AML		
	comp=N,97600μm,0.8s							
AM05				AML		AML		
AM05				AML		AML		
	comp=E,70950μm,0.7s							
AM05				AML		AML		
AM05				AML		AML		
	comp=E,41035μm,0.1s							
AM05				AML		AML		
	comp=N,79335μm,0.1s							
AM05				AML		AML		
T1220	**Camerino, Fraz**	**0.28**	**6**	P		**Pg**	**08 36 04.7**	**-0.4**
T1220				S		**Sg**	**08 36 09.0**	**+0.3**
GUMA	**Gualdo di Mace**	**0.31**	**43**	P		**Pg**	**08 36 05.2**	**-0.5**
GUMA				S		**Sg**	**08 36 10.2**	**+0.4**
GUMA				AML		AML		
GUMA				AML		AML		
GUMA				AML		AML		
GUMA				AML		AML		
GUMA				AML		AML		
SEF1	**Sefro**	**0.32**	**347**	P		**Pg**	**08 36 05.5**	**-0.4**
SEF1				S		**Sg**	**08 36 10.7**	**+0.6**
SEF1				AML		AML		
SEF1				AML		AML		
SEF1				AML		AML		
SEF1				AML		AML		
SEF1				AML		AML		
T1243	**Rocca Santa Ma**	**0.33**	**115**	P		**Pg**	**08 36 05.2**	**-0.8**
T1243				S		**Sg**	**08 36 10.4**	**+0.1**
ARRO	**Arrone**	**0.33**	**219**	P		**Pg**	**08 36 05.9**	**-0.2**
ARRO				AML		AML		
	comp=N,18600μm,0.7s							
ARRO				AML		AML		
	comp=E,16100μm,1.1s							
ARRO				AML		AML		
	comp=N,18650μm,0.7s							
ARRO				AML		AML		
	comp=E,13261μm,0.3s							
ARRO				AML		AML		
	comp=N,17639μm,0.3s							
T1211	**Morro Reatino**	**0.33**	**205**	P		**Pg**	**08 36 06.4**	**+0.3**
T1211				S		**Sg**	**08 36 11.7**	**+1.2**
T1211				AML		AML		
	comp=E,22100μm,0.3s							
T1211				AML		AML		
	comp=N,38250μm,0.9s							
T1211				AML		AML		
	comp=N,37000μm,0.9s							
T1211				AML		AML		
	comp=N,38250μm,0.9s							
T1211				AML		AML		
	comp=E,22650μm,0.3s							
T1211				AML		AML		
	comp=E,22150μm,0.3s							
T1211				AML		AML		
	comp=E,22689μm,0.3s							
T1211				AML		AML		
	comp=N,36369μm,0.4s							
T1211				AML		AML		
	comp=E,22120μm,0.3s							
T1211				AML		AML		
	comp=N,35521μm,0.4s							
PIO1	**Pioraco**	**0.35**	**352**	P		**Pg**	**08 36 05.9**	**-0.5**
PIO1				S		**Sg**	**08 36 11.4**	**+0.5**
PIO1				AML		AML		
PIO1				AML		AML		
PIO1				AML		AML		
PIO1				AML		AML		
PIO1				AML		AML		
	comp=E,99549μm,0.7s							
RM33	**Pellescritta (**	**0.35**	**159**	P		**Pg**	**08 36 05.9**	**-0.5**
RM33				S		**Sg**	**08 36 11.2**	**+0.2**
RM33				AML		AML		
	comp=E,24450μm,1.0s							
RM33				AML		AML		
	comp=E,23650μm,1.0s							
RM33				AML		AML		
	comp=E,24500μm,1.0s							
RM33				AML		AML		
	comp=N,21750μm,0.3s							
RM33				AML		AML		
	comp=N,21800μm,0.3s							
RM33				AML		AML		
	comp=E,23700μm,0.7s							
RM33				AML		AML		
	comp=N,17616μm,0.4s							
RM33				AML		AML		
	comp=N,17398μm,0.4s							
RM33				AML		AML		
	comp=E,16419μm,0.4s							
RM33				AML		AML		
	comp=E,16284μm,0.4s							
ASSB	**Assisi San Ben**	**0.35**	**306**	P		**Pg**	**08 36 06.1**	**-0.4**
ASSB				S		**Sg**	**08 36 11.8**	**+0.6**
ASSB				AML		AML		
	comp=E,86450μm,0.5s							
ASSB				AML		AML		
ASSB				AML		AML		
	comp=N,97584μm,0.6s							
ASSB				AML		AML		
	comp=E,86464μm,0.5s							
FIU1	**Fiuminata**	**0.36**	**346**	P		**Pg**	**08 36 06.3**	**-0.4**
FIU1				S		**Sg**	**08 36 11.9**	**+0.4**
FIU1				AML		AML		
FIU1				AML		AML		
FIU1				AML		AML		
FIU1				AML		AML		
FIU1				AML		AML		
MDAR	**Monte D'Aria**	**0.36**	**11**	P		**Pg**	**08 36 06.0**	**-0.8**
MDAR				S		**Sg**	**08 36 11.5**	**0.0**
MDAR				AML		AML		
MDAR				AML		AML		
MDAR				AML		AML		
MDAR				AML		AML		
MDAR				AML		AML		
CAMP	**Campotosto**	**0.40**	**138**			**Pn**	**08 36 11.4**	**-1.0**
CAMP	**Campotosto**	**0.40**	**138**	⇑P		**Pg**	**08 36 06.3**	**-1.1**
CAMP				S		**Sg**	**08 36 12.2**	**-0.4**
CAMP				AML		AML		
	comp=E,17700μm,0.7s							
CAMP				AML		AML		
	comp=N,17750μm,0.7s							
CAMP				AML		AML		
	comp=E,19250μm,0.3s							
CAMP				AML		AML		
	comp=N,17781μm,0.7s							
CAMP				AML		AML		
	comp=E,17704μm,0.7s							
GAG1	**Gagliole**	**0.40**	**2**	P		**Pg**	**08 36 07.0**	**-0.5**
GAG1				S		**Sg**	**08 36 13.3**	**+0.6**
GAG1				AML		AML		
GAG1				AML		AML		
GAG1				AML		AML		
GAG1				AML		AML		
GAG1				AML		AML		
SSM1	**San Severino M**	**0.41**	**13**	P		**Pg**	**08 36 06.7**	**-0.8**
SSM1				S		**Sg**	**08 36 12.9**	**+0.1**
CESX	**Cesi**	**0.41**	**237**	P		**Pg**	**08 36 07.4**	**-0.2**
T1246	**Crognaleto (TE**	**0.41**	**127**	P		**Pg**	**08 36 06.5**	**-1.1**
T1246				S		**Sg**	**08 36 12.7**	**-0.3**
SNTG	**Esanatoglia**	**0.43**	**349**	⇑P		**Pg**	**08 36 07.5**	**-0.4**
SNTG				S		**Sg**	**08 36 13.9**	**+0.4**
SNTG				AML		AML		
	comp=E,84100μm,0.7s							
SNTG				AML		AML		
	comp=N,82250μm,0.5s							
SNTG				AML		AML		
	comp=E,84450μm,0.7s							
SNTG				AML		AML		
	comp=E,82400μm,0.7s							
SNTG				AML		AML		
	comp=N,82700μm,0.5s							
SNTG				AML		AML		
	comp=N,82250μm,0.5s							
SNTG				AML		AML		
	comp=E,69391μm,0.2s							
SNTG				AML		AML		
	comp=N,82716μm,0.5s							
SNTG				AML		AML		
	comp=E,72968μm,0.4s							
T1247	**Pizzolo (AQ)**	**0.43**	**155**	P		**Pg**	**08 36 07.2**	**-0.8**
T1247				AML		AML		
	comp=E,26100μm,0.8s							
T1247				AML		AML		
	comp=N,26000μm,0.5s							
T1247				AML		AML		
	comp=N,25988μm,0.5s							
T1247				AML		AML		
	comp=E,24686μm,0.7s							
ATCC	**AVT- Casa Cast**	**0.46**	**320**	P		**Pg**	**08 36 08.2**	**-0.4**
ATCC				S		**Sg**	**08 36 15.6**	**+1.0**
TERO	**Teramo**	**0.46**	**117**	P		**Pg**	**08 36 07.4**	**-1.2**
TERO				S		**Sg**	**08 36 14.0**	**-0.5**
TERO				AML		AML		
	comp=E,25800μm,0.6s							
TERO				AML		AML		
	comp=N,28250μm,0.7s							
TERO				AML		AML		
	comp=E,27000μm,0.6s							
TERO				AML		AML		
	comp=N,29600μm,0.7s							
TERO				AML		AML		
	comp=N,72500μm,0.1s							
TERO				AML		AML		
	comp=N,80350μm,0.1s							
TERO				AML		AML		
	comp=E,38600μm,0.8s							
TERO				AML		AML		
	comp=E,42300μm,0.8s							
TERO				AML		AML		
	comp=E,23573μm,0.5s							
TERO				AML		AML		
	comp=N,26745μm,0.5s							
TERO				AML		AML		
	comp=E,22638μm,0.5s							
TERO				AML		AML		
	comp=N,26918μm,0.3s							
OFFI	**Offida**	**0.48**	**78**	P		**Pg**	**08 36 08.7**	**-0.2**
OFFI				AML		AML		
OFFI				AML		AML		
OFFI				AML		AML		
OFFI				AML		AML		
EL6	**Elcito**	**0.49**	**4**	P		**Pg**	**08 36 08.7**	**-0.6**
EL6				S		**Sg**	**08 36 16.1**	**+0.4**
EL6				AML		AML		
EL6				AML		AML		
EL6				AML		AML		
FOSV	**Fossato di Vic**	**0.51**	**335**	P		**Pg**	**08 36 09.1**	**-0.3**
FOSV				S		**Sg**	**08 36 16.5**	**+0.5**
FOSV				AML		AML		
	comp=N,78650μm,1.5s							
FOSV				AML		AML		
	comp=N,78600μm,1.5s							
FOSV				AML		AML		
	comp=E,77500μm,0.5s							
FOSV				AML		AML		
	comp=N,62143μm,0.5s							
FOSV				AML		AML		
	comp=E,77501μm,0.5s							
TRE1	**Treia**	**0.51**	**22**	P		**Pg**	**08 36 09.3**	**-0.3**
TRE1				AML		AML		
TRE1				AML		AML		
TRE1				AML		AML		
TRE1				AML		AML		
GIGS	**Gran Sasso**	**0.54**	**135**	P		**Pg**	**08 36 09.1**	**-1.1**
GIGS				S		**Sg**	**08 36 16.9**	**-0.3**
GIGS				AML		AML		
	comp=E,4095μm,0.8s							
GIGS				AML		AML		
	comp=N,4280μm,0.6s							
AQU	**L'Aquila**	**0.55**	**151**	P		**Pg**	**08 36 09.9**	**-0.2**
MURB	**Monte Urbino**	**0.57**	**318**	P		**Pg**	**08 36 10.6**	**-0.1**
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MURB				AML		AML		
MMUR	**Monte Murano**	**0.61**	**356**	P		**Pg**	**08 36 10.9**	**-0.5**
MMUR				AML		AML		
MMUR				AML		AML		
MMUR				AML		AML		
MMUR				AML		AML		
MMUR				AML		AML		
MMUR				AML		AML		
ATTE	**AVT- Monte Tez**	**0.63**	**306**	P		**Pg**	**08 36 11.1**	**-0.7**
CADA	**Capodarco di F**	**0.63**	**55**	P		**Pg**	**08 36 12.0**	**+0.2**
TRTR	**Tortoreto Alta**	**0.64**	**92**	P		**Pg**	**08 36 11.6**	**-0.3**
TRTR				AML		AML		
	comp=E,84100μm,0.8s							
TRTR				AML		AML		
	comp=N,59850μm,0.6s							
TRTR				AML		AML		
	comp=E,84096μm,0.8s							
TRTR				AML		AML		
	comp=N,59852μm,0.6s							
CIMA	**Civitanova Mar**	**0.66**	**44**	P		**Pg**	**08 36 12.2**	**-0.1**
ARVD	**Arcevia**	**0.67**	**353**	P		**Pg**	**08 36 12.3**	**-0.2**
ATLO	**AVT- Montelove**	**0.67**	**316**	P		**Pg**	**08 36 11.8**	**-0.8**
PP3	**Marolino**	**0.68**	**37**	P		**Pg**	**08 36 12.7**	**-0.1**
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
PP3				AML		AML		
FAGN	**Fagnano**	**0.69**	**145**	P		**Pg**	**08 36 13.2**	**+0.2**
MGAB	**Montegabbione**	**0.69**	**277**	P		**Pb**	**08 36 13.6**	**-0.8**
ATVA	**AVT- Monte Val**	**0.71**	**309**	P		**Pg**	**08 36 13.6**	**+0.2**
SRES	**S.Oreste - Sor**	**0.72**	**214**	P		**Pg**	**08 36 13.3**	**-0.1**
ATVO	**AVT- Monte Val**	**0.72**	**320**	P		**Pg**	**08 36 13.2**	**-0.3**
VCEL	**Villa Celiera**	**0.73**	**127**	P		**Pg**	**08 36 12.5**	**-1.2**
VCEL				AML		AML		
	comp=E,19400μm,0.5s							
VCEL				AML		AML		
	comp=E,19450μm,0.5s							
VCEL				AML		AML		
	comp=N,19450μm,0.7s							
VCEL				AML		AML		
	comp=E,19419μm,0.5s							
VCEL				AML		AML		
	comp=N,19452μm,0.7s							
ATBU	**Serra di Buran**	**0.74**	**330**	P		**Pg**	**08 36 13.8**	**-0.1**
ATMI	**Monte Miggiano**	**0.76**	**311**	P		**Pg**	**08 36 12.8**	**-1.5**
ATPI	**Pietralunga -**	**0.78**	**323**	P		**Pg**	**08 36 14.8**	**+0.3**
ATPC	**Poggio Castell**	**0.78**	**326**	P		**Pg**	**08 36 14.7**	**+0.1**
T0110	**Collepietro**	**0.81**	**138**	P		**Pg**	**08 36 13.8**	**-1.5**
AOI	**Ancona**	**0.82**	**29**	P		**Pg**	**08 36 14.7**	**-0.8**
SACS	**San Casciano d**	**0.84**	**271**	P		**Pg**	**08 36 14.8**	**-1.0**
PCRO	**Pietralacroce**	**0.85**	**24**	P		**Pg**	**08 36 14.9**	**-1.1**
ATMC	**Monte Cedrone**	**0.88**	**315**	P		**Pg**	**08 36 15.8**	**-0.7**
FSSB	**Fossombrone**	**0.88**	**347**	P		**Pg**	**08 36 15.6**	**-1.0**
FSSB				AML		AML		
FSSB				AML		AML		
FSSB				AML		AML		
FSSB				AML		AML		
BADI	**Badiali**	**0.90**	**319**	AML		AML		
	comp=E,3160μm,0.5s							
BADI				AML		AML		
	comp=N,27300μm,0.9s							
CAFI	**Castiglion Fio**	**0.93**	**302**	P		**Pg**	**08 36 17.0**	**-0.6**
LATE	**Laterza**	**0.94**	**257**			**Pg**	**08 36 17.7**	**-0.1**
PE3	**Peglio**	**0.95**	**335**	P		**Pg**	**08 36 17.1**	**-0.8**
PE3				AML		AML		
	comp=E,271μm,1.2s							
PE3				AML		AML		
	comp=N,258μm,0.3s							
MCIV	**Monte Civitell**	**1.01**	**267**	P		**Pg**	**08 36 18.4**	**-0.7**
MCIV				AML		AML		
	comp=N,5660μm,1.4s							

MCIV AML AML
comp=E,5915µm,0.9s
MCIV AML AML
comp=N,5659µm,1.4s
MCIV AML AML
comp=E,5919µm,0.9s
SF04 Casetta 1.02 271 P **Pg** **08 36 19.2 -0.1**
SF04 AML AML
comp=E,5200µm,1.1s
SF04 AML AML
comp=N,4720µm,0.8s
SF04 AML AML
comp=N,4157µm,0.8s
SF04 AML AML
comp=E,5199µm,1.1s
INTR Introdacqua 1.04 142 Pg **Pn** **08 36 20.9 -0.2**
INTR Introdacqua 1.04 142 P **Pg** **08 36 18.8 -0.8**
VVLD Villa Vallelon 1.05 156 P **Pg** **08 36 19.5 -0.4**
TOLF Tolfa 1.09 226 P **Pg** **08 36 18.6 -2.0**
TOLF AML AML
comp=E,4145µm,1.6s
TOLF AML AML
comp=N,4855µm,0.6s
TOLF AML AML
comp=E,3991µm,0.8s
TOLF AML AML
comp=N,4854µm,0.6s
LPEL Lama dei Pelig 1.15 133 P **Pg** **08 36 20.5 -1.2**
POFI Posta Fibreno 1.22 156 P **Pg** **08 36 22.2 -0.8**
GIUL Giuliano Di Ro 1.28 173 P **Pn** **08 36 23.0 -1.5**
ASQU Asqua 1.33 317 P **Pb** **08 36 25.1 -0.2**
LATB Latina 1.34 183 P **Pn** **08 36 24.2 -1.0**
SFI Santa Sofia 1.38 321 P **Pg** **08 36 26.2 +0.1**
RNI2 Rionero Sannit 1.40 144 P **Pn** **08 36 25.5 -0.6**
CERA Filignano 1.43 149 P **Pb** **08 36 26.7 -0.3**
CSNT Castellina Chi 1.44 297 P **Pn** **08 36 26.3 -0.2**
FROS Frosini 1.44 286 P **Pn** **08 36 25.7 -0.8**
OSSC Osservatorio P 1.49 298 Pn **Pb** **08 36 27.8 -0.2**
OSSC Sn **Sb** **08 36 46.9 -0.3**
OSSC Osservatorio P 1.49 298 P **Pn** **08 36 26.0 -1.2**
MIDA Miranda 1.49 143 P **Pn** **08 36 26.9 -0.4**
RUFI Rufina 1.51 312 P **Pn** **08 36 26.9 -0.6**
TRIF Trifonti 1.60 281 P **Pn** **08 36 27.6 -1.3**
TRIF AML AML
comp=N,2635µm,0.9s
TRIF AML AML
comp=E,2390µm,0.9s
TRIF AML AML
comp=N,2563µm,0.7s
TRIF AML AML
comp=E,2390µm,0.9s
CASP Castiglione de 1.61 269 Pn **Pn** **08 36 28.2 -0.7**
CASP Castiglione de 1.61 269 P **Pn** **08 36 27.3 -1.6**
CASP AML AML
comp=E,1320µm,1.6s
CASP AML AML
comp=N,1130µm,0.9s
CASP AML AML
comp=N,1130µm,0.9s
CASP AML AML
comp=E,1373µm,1.9s
CRMI Carmignano 1.79 303 P **Pn** **08 36 31.0 -0.5**
SACR S. Croce Del S 1.89 139 P **Pn** **08 36 31.6 -1.3**
VITU Vitulano (BN) 2.03 144 P **Pn** **08 36 34.5 -0.2**
PII Pisa 2.04 297 P **Pn** **08 36 35.3 +0.4**
POPM Popiglio 2.06 307 P **Pn** **08 36 34.4 -0.7**
PAOL Paolisi 2.13 147 Pn **Pn** **08 36 36.5 +0.4**
MOCO Biccari - m.te 2.15 132 P **Pn** **08 36 35.7 -0.7**
MAIM Mastiano 2.15 301 P **Pn** **08 36 36.5 +0.1**
CARD Cardoso 2.22 303 P **Pn** **08 36 36.0 -1.2**
SGRT San Giovanni R 2.27 117 Pn **Pb** **08 36 39.7 -1.6**
SGRT San Giovanni R 2.27 117 P **Pn** **08 36 37.4 -0.7**
VLC Villacollemand 2.35 305 **Pn** **08 36 39.0 -0.1**
VLC Villacollemand 2.35 305 P **Pn** **08 36 38.5 -0.5**
EQUI Equi 2.49 303 P **Pn** **08 36 41.3 +0.2**
TEOL Teolo 2.71 339 **Pb** **08 36 46.5 -2.2**
TEOL Teolo 2.71 339 P **Pn** **08 36 45.2 +1.1**
PRMA PARMA 2.76 315 **Pb** **08 36 47.9 -1.7**
SKDS Skadanscina 2.80 14 *i* Pn **Pn** **08 36 43.4 -1.9**
SKDS *i* Sn **Sn** **08 37 16.8 -2.7**
SKDS IAML 08 37 41.9
comp=Z,2µm,0.8s
ZOVE Zovencedo 2.85 337 P **Pn** **08 36 46.0 0.0**
MSSA Maissana 2.96 301 Pn **Pn** **08 36 50.0 +2.4**
MSSA Maissana 2.96 301 P **Pn** **08 36 47.8 +0.2**
PGF Pioggiola 3.00 266 *e*Pn **Pn** **08 36 44.9 -3.2**
PGF Pioggiola 3.00 266 *e*P **Pn** **08 36 47.3 -0.8**
PGF *e*Sn **Sn** **08 37 19.6 -5.0**
comp=Z,197nm,0.8s
ROVR Rover Verones 3.15 334 P **Pn** **08 36 49.8 -0.4**
BOB Bobbio (Coli) 3.24 308 P **Pn** **08 36 53.1 +1.6**
GORR Gorreto 3.25 304 P **Pn** **08 36 50.9 -0.6**
SALO Salr 3.32 328 Pn **Pn** **08 36 53.9 +1.4**
BAD Bernadia 3.40 2 P **Pn** **08 36 52.2 -1.4**
STAL STALIGIAL 3.43 356 P **Pn** **08 36 53.2 -0.8**
ZONE Zone 3.61 325 P **Pn** **08 36 56.7 +0.3**
PRED Cave del Predi 3.63 6 Pn **Pn** **08 36 58.5 +1.8**
PCP Piancastagn 3.69 299 P **Pn** **08 36 56.3 -1.2**
MABI Malga Bissina 3.70 331 P **Pn** **08 36 57.6 -0.1**
QLNO Quiliano 3.73 295 P **Pn** **08 36 56.6 -1.4**
FVI Forni Avoltri 3.77 357 P **Pn** **08 36 58.1 -0.6**
MYKA Terra Mystica 3.82 6 *e*Pn **Pn** **08 36 58.5 -0.8**
comp=Z,175nm,0.7s
OBKA Obir 3.83 16 *e*Pn **Pn** **08 36 56.7 -2.8**
comp=Z,76nm,0.5s
OBKA Obir 3.83 16 *e*Pn **Pb** **08 37 03.8 -4.0**
OBKA *e*Sn **Sg** **08 38 04.8 +2.2**
APPI Appiano 3.87 341 P **Pn** **08 37 00.3 +0.2**
ABTA Abfaltersbach 3.93 355 *e*Pn **Pn** **08 37 00.7 -0.2**
comp=Z,217nm,0.5s
BRMO Bormio 4.11 333 P **Pn** **08 37 04.0 +0.6**
SAOF Saorge 4.17 288 P **Pg** **08 37 16.6 -2.8**
RISI Rein 4.17 351 P **Pn** **08 37 05.1 +0.9**
BERNI Berninapass 4.18 330 P **Pn** **08 37 04.9 +0.4**
MOSI Grossmontoni 4.18 336 P **Pn** **08 37 04.8 +0.3**
SBF Sospel 4.22 286 *e*Pn **Pn** **08 37 01.7 -3.2**
SBF Sospel 4.22 286 *e*P **Pn** **08 37 04.7 -0.2**
SBF *e*Sn **Sn** **08 37 48.9 -5.7**
comp=Z,90nm,0.5s
FUORN Ofenpass-Fuorn 4.27 333 Pn **Pn** **08 37 06.4 +0.6**
FUORN Ofenpass-Fuorn 4.27 333 P **Pn** **08 37 06.2 +0.4**
TUE Stuetta 4.49 325 Pn **Pn** **08 37 09.5 +0.7**
TUE Stuetta 4.49 325 P **Pn** **08 37 09.8 +1.0**
FETA Feichten 4.50 339 *e*Pn **Pn** **08 37 09.0 +0.2**
comp=Z,100nm,0.9s
WTTA Wattenberg 4.54 348 *e*Pn **Pn** **08 37 09.9 +0.6**
comp=Z,56nm,0.5s
DAVOX Davos/Dischmat 4.54 331 Pn **Pn** **08 37 11.1 +1.6**
comp=Z,15nm,0.3s,baz=150,slow=17,SNR=12
DAVOX Sn **Sn** **08 38 03.1 +0.4**
comp=Z,28nm,0.3s,baz=110,slow=23,SNR=9.1
comp=Z,179nm,0.8s
DAVOX Davos/Dischmat 4.54 331 P **Pn** **08 37 10.6 +1.2**
SQTA Sankt Quirin 4.58 344 **Pn** **08 37 09.3 -0.4**
SQTA Sankt Quirin 4.58 344 P **Pn** **08 37 09.4 -0.4**
SQTA Sankt Quirin 4.58 344 *e*Pn **Pn** **08 37 09.3 -0.4**
comp=Z,24nm,0.2s
PDG Podgorica 4.60 93 Pn **Pn** **08 37 12.4 +2.4**
WATA Walderalm 4.62 347 **Pn** **08 37 11.9 +1.5**
WATA Walderalm 4.62 347 P **Pn** **08 37 11.9 +1.5**
WATA Walderalm 4.62 347 *e*Pn **Pn** **08 37 11.9 +1.5**
comp=Z,66nm,0.4s
MOTA Moosalm 4.71 344 **Pn** **08 37 12.9 +1.2**
MOTA Moosalm 4.71 344 P **Pn** **08 37 12.9 +1.2**
MOTA Moosalm 4.71 344 *e*Pn **Pn** **08 37 12.9 +1.2**
comp=Z,64nm,0.6s
ENAUX Enaux 4.74 288 Sg **Pn** **08 37 13.8 +1.8**
ARSA Arzberg 4.75 21 *e*Pn **Pn** **08 37 11.3 -0.8**
comp=Z,36nm,0.4s
SURF Saint Ours 4.81 292 Sg **Pn** **08 37 15.2 +2.1**
LMR La Mourre 4.82 278 *e*Pn **Pn** **08 37 09.3 -3.7**
LMR La Mourre 4.82 278 *e*P **Pn** **08 37 11.8 -1.2**
KOVH Kovagotottos 4.86 46 P **Pn** **08 37 11.9 -1.7**
KOVH S **Sn** **08 38 06.3 -4.0**
BIOA Bad Ischl, Aus 4.87 5 **Pn** **08 37 13.9 +0.1**
BIOA Bad Ischl, Aus 4.87 5 *e*Pn **Pn** **08 37 13.9 +0.1**
comp=Z,80nm,0.4s
RJOB Jochberg 4.91 358 *e*Pn **Pn** **08 37 15.6 +1.3**
MBDF Montbardon 4.92 295 *e*Pn **Pn** **08 37 11.7 -2.9**
MBDF Montbardon 4.92 295 *e*P **Pn** **08 37 15.4 +0.8**
MBDF *e*Sn **Sn** **08 38 05.8 -6.3**
comp=Z,74nm,0.6s
RETA Reutte 4.92 342 *e*Pn **Pn** **08 37 15.3 +0.7**
comp=Z,22nm,0.3s
TRIGF Trigance 4.93 283 Sg **Pn** **08 37 15.0 +0.3**
CREF Crivoux 4.96 292 P Pn 08 37 20.1 +4.9
CREF Crivoux 4.96 292 Sg **Pn** **08 37 18.4 +3.2**
OBER Oberstdorf 4.97 338 *e*Pn **Pn** **08 37 17.7 +2.5**
DAVA Damuels 4.99 334 *e*Pn **Pn** **08 37 16.0 +0.6**
comp=Z,72nm,0.6s
DAVA Damuels 4.99 334 *e*Pn **Pn** **08 37 17.1 +1.7**
DAVA *e*Sn **Sn** **08 38 16.2 +2.6**
OGAG Argentiere 4.99 291 P Pn 08 37 20.6 +5.1
OGAG Argentiere 4.99 291 Sg Pn 08 37 20.3 +4.8
FLAF Flassans-sur-I 5.00 279 Sg **Pn** **08 37 18.7 +3.1**
EMBD Embd, Matterta 5.03 314 P Pn 08 37 20.7 +4.6
EMBD Embd, Matterta 5.03 314 Sg **Pn** **08 37 19.5 +3.4**
MOA Molln 5.09 9 *e*Pn **Pn** **08 37 16.4 -0.3**
comp=Z,38nm,0.4s
MOA Molln 5.09 9 *e*Pn **Pn** **08 37 16.8 +0.1**
DIX Grande Dixence 5.18 311 Sg Pn 08 37 24.8 +6.6
MORH Mrgy, Hungar 5.24 48 P **Pn** **08 37 19.0 +0.3**
LPG La Plagne 5.25 303 *e*Pn **Pn** **08 37 16.0 -3.3**
LPG La Plagne 5.25 303 *e*P **Pn** **08 37 19.8 +0.5**
LPG *e*Sn **Sn** **08 38 13.9 -6.5**
comp=Z,76nm,0.6s
UBR Ueberruh 5.27 338 *e*Pn **Pn** **08 37 19.7 +0.4**
LPL La Plagne 5.27 303 *e*Pn **Pn** **08 37 16.1 -3.4**
LPL La Plagne 5.27 303 *e*P **Pn** **08 37 20.7 +1.2**
LPL *e*Sn **Sn** **08 38 13.1 -7.7**
comp=Z,29nm,0.2s
TIR Tirane 5.29 104 ⇑P **Pn** **08 37 18.6 -0.8**
TIR Tirane 5.29 104 Pn **Pn** **08 37 18.9 -0.5**
TIR Tirane 5.29 104 P **Pn** **08 37 18.9 -0.5**
RONA Rosalia, Austr 5.38 24 **Pn** **08 37 19.5 -1.2**
RONA Rosalia, Austr 5.38 24 *e*Pn **Pn** **08 37 19.5 -1.2**
comp=Z,21nm,0.4s
VLO Vlora 5.38 114 Pn **Pn** **08 37 21.0 +0.4**
VLO Vlora 5.38 114 P **Pn** **08 37 21.0 +0.4**
MPLH Magyarpolny 5.38 35 P **Pn** **08 37 20.3 -0.4**
RSL Roselend 5.42 304 P **Pn** **08 37 25.4 +4.0**
SOP Sopron 5.44 26 P **Pn** **08 37 19.1 -2.5**
CONA Conrad Observa 5.46 20 *e*Pn **Pn** **08 37 20.5 -1.4**
comp=Z,9.1nm,0.3s
FUR Furstenfeldbru 5.47 347 *e*Pn **Pn** **08 37 23.4 +1.4**
SMRF Simiane la Rot 5.56 284 *e*Pn **Pn** **08 37 20.2 -3.1**
SMRF Simiane la Rot 5.56 284 *e*P **Pn** **08 37 24.2 +0.9**
ORIF Oris-en-Rattie 5.58 294 *e*Pn **Pn** **08 37 20.6 -3.0**
ORIF Oris-en-Rattie 5.58 294 *e*P **Pn** **08 37 25.0 +1.4**
ORIF Oris-en-Rattie 5.58 294 P Pn 08 37 30.1 +6.5
GRN Grenoble 5.79 297 P **Pn** **08 37 30.2 +3.8**
TORNY Torny/Romont 5.85 314 P **Pn** **08 37 29.1 +1.8**
KEK Kerkira 5.96 119 Pn **Pn** **08 37 28.8 0.0**
GEC2 GERESS Array S 6.03 4 *e*Pn **Pn** **08 37 28.4 -1.3**
GERES GERESS Array B 6.03 4 *e*Pn **Pn** **08 37 31.4 +1.7**
comp=Z,7.6nm,0.3s,baz=188,slow=13,SNR=9.7
GERES Sn **Sn** **08 38 35.6 -3.6**
comp=Z,25nm,0.3s,baz=174,slow=24,SNR=12
comp=Z,14nm,0.3s
GERES GERESS Array B 6.03 4 **Pn** **08 37 31.5 +1.8**
CKRC Cesky Krumlov 6.05 8 *e*PN **Pn** **08 37 28.8 -1.1**
CKRC *e*SN **Sn** **08 38 34.9 -4.7**
ZST Bratislava 6.07 27 *e*P **Pn** **08 37 28.1 -2.1**
ZST *e* 08 38 34.5
BRANT Les Verrieres 6.22 314 P **Pn** **08 37 34.1 +1.8**
CABF La Chapelle 6.23 310 *e*Pn **Pn** **08 37 28.9 -3.6**
CABF La Chapelle 6.23 310 *e*P **Pn** **08 37 33.4 +0.9**
OG35 Corcelles 6.24 303 P **Pn** **08 37 36.4 +3.8**
MODS Modra-Piesok 6.28 27 *e*P **Pn** **08 37 31.1 -2.0**
MODS *e* 08 38 40.3
KHC Kasperske Hory 6.31 3 Pn **Pn** **08 37 34.8 +1.3**
KHC Kasperske Hory 6.31 3 *e*P **Pn** **08 37 32.2 -1.3**
KHC *e* 08 38 40.2
KHC Kasperske Hory 6.31 3 *e*PN **Pn** **08 37 32.2 -1.3**
KHC *e*SN **Sn** **08 38 40.2 -5.8**
WET Wettzell 6.31 359 *e*Sn **Sn** **08 38 39.3 -6.8**
VIVF Saint-Julien-l 6.38 291 *e*Pn **Pn** **08 37 31.5 -3.1**
VIVF Saint-Julien-l 6.38 291 *e*P **Pn** **08 37 35.8 +1.2**
BFO Black Forest 6.42 331 Pn **Pn** **08 37 36.2 +1.2**
BFO Black Forest 6.42 331 P **Pn** **08 37 36.2 +1.2**
SMOL Smolenice 6.45 27 *e*P **Pn** **08 37 36.1 +0.6**
SMOL *e* 08 38 46.9
STU Stuttgart 6.52 337 Pn **Pn** **08 37 38.9 +2.5**
STU Stuttgart 6.52 337 P **Pn** **08 37 38.9 +2.5**
BOUC Bouclans 6.53 315 P **Pn** **08 37 37.8 +1.3**
HINF Hinteralfeld 6.62 321 *e*Pn **Pn** **08 37 34.1 -3.7**
HINF Hinteralfeld 6.62 321 *e*P **Pn** **08 37 38.2 +0.4**
HINF *e*Sn **Sn** **08 38 45.7 -8.1**
comp=Z,619nm,0.9s
KRUC Moravsky 6.65 19 *e*PN **Pn** **08 37 36.3 -1.8**
KRUC *e*SN **Sn** **08 38 48.8 -5.5**
BZS Buzias 6.75 63 ⇑P **Pn** **08 37 39.5 -0.1**
BZS Buzias 6.75 63 ⇑P **Pn** **08 37 39.5 -0.1**
ECH Echery 6.79 324 Pn **Pn** **08 37 39.8 -0.3**
ECH Echery 6.79 324 P **Pn** **08 37 39.8 -0.3**
LASF Ste Croix 6.80 284 *e*Pn **Pn** **08 37 37.0 -3.3**
LASF Ste Croix 6.80 284 *e*P **Pn** **08 37 41.6 +1.3**
CDF Champ du Feu 6.89 326 *e*Pn **Pn** **08 37 38.0 -3.5**
CDF Champ du Feu 6.89 326 *e*P **Pn** **08 37 42.6 +1.1**
CDF *e*Sn **Sn** **08 38 52.1 -8.3**
comp=Z,161nm,0.8s
VRAC Vranov 6.93 20 Pn **Pn** **08 37 40.4 -1.6**
comp=Z,1.5nm,0.3s,baz=167,slow=14,SNR=2.5
VRAC Sn **Sn** **08 38 55.2 -6.0**
comp=Z,4.0nm,0.3s,baz=300,slow=21,SNR=4.7
VRAC Vranov 6.93 20 *e*PN **Pn** **08 37 40.3 -1.6**
VRAC *e*SN Sn 08 38 52.0 -9.2
VYHS Vyhne 6.96 34 *e*P **Pn** **08 37 43.5 +1.1**
VYHS *e* 08 38 55.2
GRF Grafenberg Arr 6.97 350 *e*Sn **Sn** **08 38 57.3 -5.0**
HAU Haudompre 7.00 320 *e*Pn **Pn** **08 37 39.1 -3.8**
HAU Haudompre 7.00 320 *e*P **Pn** **08 37 43.6 +0.7**
HAU *e*Sn **Sn** **08 38 54.8 -8.1**
comp=Z,456nm,0.6s
HERR Herculane 7.07 70 ⇑P **Pn** **08 37 44.4 +0.5**
GOPC GO Pecny, Ondr 7.18 9 *e*P **Pn** **08 37 44.7 -0.8**
GOPC *e* 08 39 00.8
GOPC GO Pecny, Ondr 7.18 9 *e*PN **Pn** **08 37 44.7 -0.8**
GOPC *e*SN **Sn** **08 39 00.8 -6.7**
MANZ Manzenberg 7.18 355 *e*Sn **Sn** **08 39 01.5 -6.0**
PRU Pruhonice 7.23 8 *e*P **Pn** **08 37 45.5 -0.6**
PRU *e* 08 39 02.4
PRU Pruhonice 7.23 8 *e*PN **Pn** **08 37 45.5 -0.6**
PRU *e*SN **Sn** **08 39 02.4 -6.2**
NKC Novy Kostel 7.41 357 *e*SN **Sn** **08 39 08.2 -4.9**
GZR Gura Zlata 7.45 67 ⇑P **Pn** **08 37 48.5 -0.7**
KKB Krupnik 7.50 94 *e*P **Pn** **08 37 49.4 -0.4**
VTS Vitosha 7.50 88 ⇑P **Pn** **08 37 50.1 +0.1**
VTS Vitosha 7.50 88 ⇑P **Pn** **08 37 50.1 +0.1**
SMF Signal de Mont 7.58 303 *e*Pn **Pn** **08 37 47.1 -3.8**
SMF Signal de Mont 7.58 303 *e*P **Pn** **08 37 52.4 +1.5**
PAGF Fort de Pagny 7.68 321 *e*Pn **Pn** **08 37 48.9 -3.4**
PAGF Fort de Pagny 7.68 321 *e*P **Pn** **08 37 53.8 +1.5**
PAGF *e*Sn **Sn** **08 39 11.2 -8.5**
comp=Z,129nm,0.7s
KRLC Kraliky 7.69 18 *e*P **Pn** **08 37 50.5 -1.9**
KRLC Kraliky 7.69 18 *e*PN **Pn** **08 37 50.5 -1.9**
DEV Deva 7.69 63 ⇑P **Pn** **08 37 52.4 -0.1**
DEV Deva 7.69 63 ⇑P **Pn** **08 37 52.4 -0.1**
SFTF Sexfontaines 7.77 316 *e*Pn **Pn** **08 37 50.1 -3.5**
SFTF Sexfontaines 7.77 316 *e*P **Pn** **08 37 54.0 +0.4**
SFTF *e*Sn **Sn** **08 39 13.7 -8.3**
comp=Z,224nm,0.9s
OKC Ostrava-Krasne 7.84 25 *e*SN **Sn** **08 39 16.3 -7.3**
MPEP Malo Peshtene 7.84 83 *e*P **Pn** **08 37 54.4 -0.1**
DPC Dobruska-Polom 7.85 16 *e*P **Pn** **08 37 54.1 -0.5**
DPC *e* 08 39 17.7
DPC Dobruska-Polom 7.85 16 *e*PN **Pn** **08 37 54.1 -0.5**
DPC *e*SN **Sn** **08 39 17.7 -6.2**
LOR Lormes 7.87 307 *e*Pn **Pn** **08 37 51.3 -3.6**
LOR Lormes 7.87 307 *e*P **Pn** **08 37 55.9 +1.0**
LOR *e*Sn **Sn** **08 39 15.8 -8.7**
comp=Z,65nm,0.5s
MOX Moxa 7.87 353 *e*Sn **Sn** **08 39 16.4 -8.1**
AVF Avril sur Loir 7.95 303 *e*Pn **Pn** **08 37 53.1 -2.8**
AVF Avril sur Loir 7.95 303 *e*P **Pn** **08 37 57.4 +1.5**
MTLF Montolieu 7.95 277 *e*Pn **Pn** **08 37 53.0 -3.0**
MTLF Montolieu 7.95 277 *e*P **Pn** **08 37 57.9 +1.9**
MEZF Maizieres J'vi 7.96 318 *e*Pn **Pn** **08 37 52.7 -3.5**
MEZF Maizieres J'vi 7.96 318 *e*P **Pn** **08 37 57.0 +0.8**
MEZF *e*Sn **Sn** **08 39 19.0 -7.7**
comp=Z,56nm,0.5s
SSF Saint Saulge 7.98 305 *e*Pn **Pn** **08 37 53.1 -3.3**
SSF Saint Saulge 7.98 305 *e*P **Pn** **08 37 56.5 +0.1**
SSF *e*Sn **Sn** **08 39 18.2 -8.8**
comp=Z,29nm,0.6s
SAVF Savonnieres en 8.01 319 *e*Pn **Pn** **08 37 53.0 -3.8**
SAVF Savonnieres en 8.01 319 *e*P **Pn** **08 37 57.5 +0.7**
OSTC Ostas 8.02 15 *e*PN **Pn** **08 37 56.5 -0.5**
CHVC Chvalec 8.03 14 *e*PN **Pn** **08 37 56.0 -1.0**
MMB Musomiste 8.03 95 *e*P **Pn** **08 37 58.6 +1.5**
TNS Taunus Mts 8.04 338 *e*Sn **Sn** **08 39 21.8 -6.8**
BRG Berggiesshubel 8.06 4 *e*P Pn 08 37 44.5 -13
BRG *e* 08 39 21.6
BRG pmax pmax
comp=Z,12nm,0.8s
BGF Bois d'Agland 8.16 301 *e*Pn **Pn** **08 37 55.3 -3.6**
BGF Bois d'Agland 8.16 301 *e*P **Pn** **08 38 00.8 +1.9**
BGF *e*Sn **Sn** **08 39 22.8 -8.8**
comp=Z,33nm,0.5s
CAF Calviac 8.21 288 *e*Pn **Pn** **08 37 56.0 -3.5**
CAF Calviac 8.21 288 *e*P **Pn** **08 38 00.8 +1.2**
WLF Walferdange 8.33 327 Pn **Pn** **08 38 02.2 +1.0**
WLF Walferdange 8.33 327 P **Pn** **08 38 02.2 +1.0**
WLF Walferdange 8.33 327 *d*P **Pn** **08 38 02.3 +1.0**
WLF *d*S **Sn** **08 39 34.9 -0.8**
WLF Walferdange 8.33 327 *e*Pn **Pn** **08 38 01.6 +0.4**
WLF *e*Sn **Sn** **08 39 35.6 -0.2**
CRVS Cervenica-Dubn 8.44 41 *e*P Pn 08 38 07.5 +4.8
TCF Toulx Ste Croi 8.47 298 *e*Pn **Pn** **08 37 59.5 -3.7**
TCF Toulx Ste Croi 8.47 298 *e*P **Pn** **08 38 04.2 +1.0**
CLL Collm 8.48 360 Pn **Pn** **08 38 03.0 -0.1**
CLL Collm 8.48 360 *e*P **Pn** **08 38 02.0 -1.2**
CLL pmax pmax
comp=Z,18nm,0.7s
CLL Collm 8.48 360 *e*Pn **Pn** **08 38 02.0 -1.2**
comp=Z,18nm,0.7s
CLL *ex* x 08 39 37.0
CLL *ex* x 08 40 06.0
CLL *ex* x 08 40 20.0
CLL *e*Sg **Sg** **08 40 35.0 +3.4**
comp=Z,162nm,1.3s
PLVB Pleven 8.48 82 ⇓P **Pn** **08 38 06.6 +3.3**
UZH Uzhgorod 8.68 45 *e*P **Pn** **08 38 06.0 0.0**
STHS Stebnicka Huta 8.70 38 *e*P **Pn** **08 38 10.7 +4.5**
ARR Arges 8.71 69 ⇑P **Pn** **08 38 08.1 +1.6**
RZN Rozhen 8.73 94 *e*P **Pn** **08 38 06.4 -0.5**
BHOU Houvegnez 8.94 330 *d*P **Pn** **08 38 11.3 +1.6**
VOIR 9.01 69 ⇓P **Pn** **08 38 11.7 +1.0**
VOIR 9.01 69 ⇓P **Pn** **08 38 11.7 +1.0**
BTNL Ternell 9.09 331 *d*P **Pn** **08 38 12.5 +0.9**
RCHB Rochefort 9.09 326 *d*P **Pn** **08 38 12.5 +0.9**
RCHB *d*S **Sn** **08 39 49.2 -5.1**
LFF La Frestale 9.13 288 *e*Pn **Pn** **08 38 08.6 -3.6**
LFF La Frestale 9.13 288 *e*P **Pn** **08 38 13.6 +1.4**
MEM Membach 9.15 331 *d*P **Pn** **08 38 13.8 +1.4**
MEM *d*S **Sn** **08 39 51.6 -4.2**
GIVF Givet 9.22 325 *e*Sn Sn 08 39 47.2 -10
comp=Z,43nm,0.7s
KDZ Kurdzhali 9.25 93 *e*P **Pn** **08 38 15.5 +1.6**
BCLA Clavier 9.27 328 *d*P **Pn** **08 38 15.2 +1.2**
BCLA *d*PP **PnPn** **08 38 25.5 +4.0**
BCLA *d*S **Sn** **08 39 54.3 -4.3**
DIM Dimitrovgrad 9.27 91 *e*P **Pn** **08 38 17.8 +3.8**
BSTI Sart Tilman 9.29 329 *d*P **Pn** **08 38 15.9 +1.5**
BSTI *d*S **Sn** **08 39 53.3 -6.0**
DOU Dourbes 9.31 324 *d*P **Pn** **08 38 16.7 +2.1**
DOU *d*S **Sn** **08 39 58.0 -1.8**
BGES Gesves 9.32 327 *d*P **Pn** **08 38 16.0 +1.2**
BGES *dx* x 08 38 25.2
DOPR Dopca 9.37 66 ⇑P **Pn** **08 38 16.6 +1.1**
BMRD Maredsous 9.39 326 *d*P **Pn** **08 38 16.9 +1.1**
BMRD *d*S **Sn** **08 40 00.1 -1.6**
BAIF Baives 9.45 323 *e*Sn Sn 08 39 53.0 -10
comp=Z,26nm,0.7s
MLR Muntele Rosu 9.64 70 ⇑P **Pn** **08 38 21.0 +1.7**
MLR Muntele Rosu 9.64 70 Pn **Pn** **08 38 21.4 +2.1**
comp=Z,0.3nm,0.3s,baz=217,slow=14,SNR=3.7
comp=Z,6.3nm,0.7s
MLR Muntele Rosu 9.64 70 Pn **Pn** **08 38 20.9 +1.6**
SNF Seneffe 9.75 325 *d*P **Pn** **08 38 22.1 +1.5**
BURAR Bucovina Array 9.82 57 Pn **Pn** **08 38 22.6 +0.8**
BURAR Bucovina Array 9.82 57 P **Pn** **08 38 22.6 +0.8**
MFF Saint Martin d 10.12 296 *e*Pn **Pn** **08 38 21.6 -4.1**
MFF Saint Martin d 10.12 296 *e*P **Pn** **08 38 27.4 +1.7**
LVV L'vov 10.31 44 *e*P **Pn** **08 38 27.1 -1.2**
ESDC Sonseca Array 13.19 262 Pn **Pn** **08 39 05.9 -1.8**
comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=3.1
comp=Z,0.5nm,0.9s
AKASG Malin Array Be 13.57 49 Pn **Pn** **08 39 12.0 -0.9**
comp=Z,0.2nm,0.3s,baz=242,slow=12,SNR=4.7
comp=Z,1.3nm,0.8s
AKBB Malin Array Si 13.57 49⇑*e*P **Pn** **08 39 15.5 +2.6**
ISP Isparta 14.23 105⇓*e*P **Pn** **08 39 23.3 +1.2**
ELL Elmali 14.31 110 **Pn** **08 39 23.6 +0.5**
ELL Elmali 14.31 110 P **Pn** **08 39 23.6 +0.5**
NACGM Naroch 15.05 32 *e*P **Pn** **08 39 29.8 -3.2**
comp=Z,17nm,1.1s,baz=223
ANTO Ankara 15.12 95 Pn **Pn** **08 39 34.8 +0.7**
ANTO Ankara 15.12 95 P **Pn** **08 39 34.8 +0.7**
ANTO pmax pmax
comp=Z,8.0nm,0.8s
BRTR Keskin Array B 15.79 94 Pn **P** **08 39 45.5 -1.4**
comp=Z,0.8nm,0.7s,baz=266,slow=11,SNR=2.4
EKA Eskdalemuir Ar 16.35 325 Pn **Pn** **08 39 50.0 0.0**
baz=135,slow=16
comp=Z,4.1nm,0.8s
EKA Eskdalemuir Ar 16.35 325 P **Pn** **08 39 50.0 0.0**
DSB Dublin 16.59 316 **Pn** **08 39 53.4 +0.4**
DSB IAmb IAmb 08 40 01.5
comp=Z,50nm,1.2s
KONO Kongsberg 16.97 354⇑*e*P **P** **08 40 00.0 +0.3**
KONO pmax pmax
comp=Z,9.0nm,0.9s
HFS Hagfors 17.33 1 P **P** **08 40 03.4 -0.3**
comp=Z,3.4nm,0.7s,baz=181,slow=13,SNR=2.8
NB2 NORSAR Subarra 18.27 357 P **P** **08 40 15.2 +1.1**
comp=Z,21nm,1.4s,baz=176,slow=11
NOA NORSAR Array B 18.27 357 P **P** **08 40 15.2 +1.1**
baz=174,slow=11,SNR=7.1
comp=Z,1.1nm,0.7s
NC405 NORSAR Array S 18.32 358 P **P** **08 40 15.6 +0.9**
NC204 NORSAR Array S 18.52 357 P **Pn** **08 40 18.7 +1.7**
NC204 IAmb IAmb 08 40 36.4
comp=Z,47nm,1.1s
VSR Storozhevoye 19.60 56 *e*P **P** **08 40 27.5 -1.2**
VSR pmax pmax
comp=Z,20nm,1.2s
OBN Obninsk 19.61 43 *e*P **P** **08 40 27.4 -1.4**
OBN pmax pmax
comp=Z,10.0nm,0.9s
VORR Voronezh 19.75 54 *e*P P 08 40 21.0 -9.3
VORR pmax pmax
comp=Z,70nm,0.4s
LPSR Galich'ya Gora 19.86 52 *e*P **P** **08 40 28.3 -3.3**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MMAI Mount Meron Ar 20.12 112 P Pn 08 40 35.3 -1.2
comp=Z,0.9nm,0.2s,baz=352,slow=9.3
comp=Z,0.9nm,0.2s
FINES FINESS Array B 20.21 18 P **P** **08 40 34.8 -0.5**
comp=Z,6.8nm,0.7s,baz=199,slow=10.0,SNR=7.9
comp=Z,6.8nm,0.7s
FINES FINESS Array B 20.21 18 P **P** **08 40 35.4 +0.2**
FINES FINESS Array B 20.21 18 P **P** **08 40 35.4 +0.2**
MOS Moscow 20.44 42 *e*P **P** **08 40 37.4 -0.5**
MOS *e* 08 40 55.0
MOS *e* 08 41 13.1
MOS pmax pmax
comp=Z,64nm,1.0s
VRH Novokhopyorsk 21.16 57 *e*P **P** **08 40 42.8 -2.8**
VRH pmax pmax
comp=Z,20nm,0.8s
VALR Valaam 21.41 24*ce*P **P** **08 40 49.2 +1.0**
VALR pmax pmax
comp=Z,54nm,1.0s
KIV Kislovodsk 21.52 77 P **P** **08 40 49.3 -0.4**
KIV IAmb IAmb 08 40 53.3
comp=Z,39nm,1.3s
KIV Kislovodsk 21.52 77 *e*P **P** **08 40 49.5 -0.2**
KIV pmax pmax
comp=Z,25nm,1.1s
KVAR Kislovodsk Arr 21.52 77 P **P** **08 40 51.2 +1.4**
comp=Z,4.7nm,0.8s,baz=253,slow=11,SNR=6.1
comp=Z,4.7nm,0.8s
SHA1 Shidzhatmaz 21.52 77⇓*e*P **P** **08 40 51.5 +1.6**
ASF Jabal al Asfar 21.64 112 P **P** **08 40 52.0 +0.9**
comp=Z,1.3nm,0.4s,baz=138,slow=5.9,SNR=3.6

comp=Z,1.3nm,0.4s
ASF Jabal al Asfar 21.64 112 P **P 08 40 52.0 +0.9**
NEY Neytrino 21.64 79⇑ *e*P **P 08 40 52.2 +1.0**
NEY pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 21.70 77 P **P 08 40 51.5 0.0**
comp=Z,7.5nm,0.9s,baz=270,slow=14,SNR=6.2
comp=Z,7.5nm,0.9s
KBZ Khabaz 21.70 77⇑ *e*P **P 08 40 51.3 -0.2**
KBZ pmax pmax
comp=Z,20nm,1.3s
MARD Mardin 21.87 95 P **P 08 40 54.3 +0.7**
GURO Guroymak-BITLI 22.34 91 P **P 08 40 59.1 +0.5**
GURO IAmb IAmb 08 41 09.2
comp=Z,18nm,1.2s
KLMR Klimovskoe 24.07 32 *e*P **P 08 41 10.5 -5.3**
KLMR pmax pmax
comp=Z,35nm,1.4s
KLMR Klimovskoe 24.07 32 *e*P **P 08 41 10.5 -5.3**
KLMR AMP 08 41 18.7
comp=Z,35nm,1.4s
BELG Belogornoye 24.98 55 P **P 08 41 23.0 -1.1**
comp=Z,14nm,0.4s,baz=87,slow=16,SNR=5.6
comp=Z,14nm,0.4s
BELG Belogornoye 24.98 55⇑ *e*P **P 08 41 24.5 +0.4**
BELG pmax pmax
comp=Z,5.0nm,1.1s
AKT Akhty 25.64 81 *e*P **P 08 41 34.8 +4.4**
AKT *e* 08 42 13.2
AKT pmax pmax
comp=Z,36nm,1.4s
KIRV Kirov 27.46 42 *c*e**P P 08 41 47.5 +1.0**
TORD Torodi Ar. Bea 31.17 202 P **P 08 42 17.9 -1.9**
comp=Z,1.2nm,0.8s,baz=15,slow=8.4,SNR=4.3
comp=Z,1.2nm,0.8s
ARU Arti 31.83 49 P **P 08 42 24.1 -1.2**
comp=Z,3.7nm,0.5s,baz=264,slow=7.0,SNR=14
comp=Z,3.7nm,0.5s
ARU Arti 31.83 49 P **P 08 42 24.2 -1.0**
ARU Arti 31.83 49 *c i*P **P 08 42 26.5 +1.2**
ARU 08 43 26.1
ARU S **S 08 47 40.2 +4.2**
ARU SS **SnSn 08 49 29.3 +6.4**
ARU pmax pmax
comp=Z,11nm,0.7s
ABKAR Akbulak array 32.74 62 P **P 08 42 32.3 -1.0**
SVE Sverdlovsk 33.01 48 *e*P **P 08 42 37.3 +1.7**
SVE pmax pmax
comp=Z,18nm,1.5s
RAYN Ar Rayn 33.01 115 P **P 08 42 35.6 -0.4**
RAYN Ar Rayn 33.01 115 P **P 08 42 35.6 -0.4**
RAYN pmax pmax
comp=Z,1.0nm,1.0s
GEYT Alibeck 34.36 83 P **P 08 42 49.8 +2.2**
comp=Z,1.3nm,0.5s,baz=260,slow=8.3,SNR=2.7
comp=Z,1.3nm,0.5s
GYA0 ALIBECK ARRAY 34.36 83 P **P 08 42 48.4 +0.7**
GYA0 pmax pmax
comp=Z,5.0nm,1.0s
GYA0B ALIBECK ARRAY 34.36 83 P **P 08 42 48.4 +0.8**
BRVK Borovoye 38.70 54 P **P 08 43 23.8 -0.7**
BRVK Borovoye 38.70 54⇓ *e*P **P 08 43 24.3 -0.2**
BRVK pmax pmax
comp=Z,14nm,1.7s
BVAR Borovoye Array 38.77 54 P **P 08 43 25.1 0.0**
comp=Z,1.6nm,0.8s,baz=269,slow=7.4,SNR=9.2
comp=Z,1.6nm,0.8s
GAR Garm 42.73 75 P **P 08 43 58.3 +0.2**
GAR IAmb IAmb 08 44 05.8
comp=Z,8.6nm,0.7s
AAK Ala-Archa 44.22 68⇑ *e*P **P 08 44 10.8 +0.7**
AAK pmax pmax
comp=Z,6.0nm,1.6s
KURK Kurchatov 44.25 56⇑ *e*P **P 08 44 09.1 -0.9**
KURK pmax pmax
comp=Z,5.0nm,1.3s
NRIK Noril'sk 45.33 29⇓ *e*P **P 08 44 19.5 +1.2**
NRIK pmax pmax
comp=Z,5.0nm,1.3s
KSH Kashi 46.50 72 P **P 08 44 32.0 +3.8**
ZALV Zalesovo Beam 46.97 50 P **P 08 44 32.2 +0.8**
comp=Z,1.3nm,0.6s,baz=290,slow=6.0,SNR=5.4
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 46.97 50 *i* P **P 08 44 33.0 +1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 47.83 60 P **P 08 44 39.1 +0.8**
comp=Z,2.3nm,0.7s,baz=300,slow=5.4,SNR=4.4
comp=Z,2.3nm,0.7s
DGZ Jazzator, Alta 49.92 55⇑ *e*P **P 08 44 53.5 -1.0**
DGZ pmax pmax
comp=Z,2.0nm,0.7s
WMQ Urumqi 52.53 62 *e*P **P 08 45 17.3 +3.3**
TIXI Tiksi 57.24 20⇑ *e*P **P 08 45 48.6 +1.0**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 61.86 50 P **P 08 46 21.3 +1.2**
comp=Z,2.2nm,0.8s,baz=305,slow=5.2,SNR=9.7
comp=Z,2.2nm,0.8s
ULN Ulaanbaatar 62.21 49⇑ *e*P **P 08 46 24.2 +1.8**
ULN pmax pmax
comp=Z,6.0nm,1.7s
HHC Hu-ho-hao-te 68.98 53 *e*P **P 08 47 06.8 +0.6**
FYU Fort Yukon 69.66 351 P **P 08 47 11.0 +1.2**
SEY Seymchan 69.69 19⇑ *e*P **P 08 47 10.9 +0.8**
SEY pmax pmax
comp=Z,9.0nm,1.2s
I29M Ogilvie Camp, 69.86 348 IAmb IAmb 08 47 16.0
comp=Z,7.7nm,0.8s
DAWY Dawson 71.24 348 P **P 08 47 19.7 +0.1**
DAWY IAmb IAmb 08 47 20.3
comp=Z,9.6nm,1.4s
J26L Joseph Creek 71.43 350 IAmb IAmb 08 47 26.3
comp=Z,7.8nm,0.9s
ILAR Eielson Array 71.58 351 P **P 08 47 21.8 +0.1**
comp=Z,1.4nm,0.8s,baz=359,slow=4.5,SNR=6.3
comp=Z,1.4nm,0.8s
PZH PanZhiHua 71.60 71 P **P 08 47 25.0 +2.5**
KMI Kunming 73.16 71⇑ P **P 08 47 33.3 +1.3**
DGAR Diego Garcia 73.47 117⇑ *e*P **P 08 47 34.9 +1.4**
CN2 Changchun 74.67 44 *e*P P 08 47 33.0 -7.3
CN2 *es*P pP 08 47 42.5 +0.7
CMAR Chiang Mai Arr 74.74 79 P **P 08 47 41.1 0.0**
comp=Z,1.9nm,0.3s,baz=305,slow=7.2,SNR=5.9
comp=Z,1.9nm,0.3s
BOZ Bozeman (W) 79.13 324 IAmb IAmb 08 48 12.3
comp=Z,5.6nm,1.1s
NJ2 Nanjing 79.19 56 *e*P **P 08 48 04.3 -1.6**
DLMT Dillon 79.73 324 IAmb IAmb 08 48 16.5
comp=Z,6.1nm,0.9s
PDAR Pinedale Array 80.42 321 P **P 08 48 12.6 -0.2**
comp=Z,0.8nm,0.9s,baz=58,slow=4.2,SNR=3.6
comp=Z,0.8nm,0.9s
KSAR Wonju Array Be 80.55 47 P **P 08 48 13.5 +0.3**
KSAR Wonju Array Be 80.55 47 P **P 08 48 13.5 +0.3**
KSRS Korea Array 80.56 47 P **P 08 48 15.3 +2.1**
comp=Z,1.4nm,0.9s,baz=347,slow=5.0,SNR=5.3
comp=Z,1.4nm,0.9s
BMO Blue Mountains 82.10 327 P **P 08 48 20.1 -1.3**
BMO IAmb IAmb 08 48 26.5
comp=Z,6.6nm,0.8s
BMO Blue Mountains 82.10 327 P **P 08 48 20.1 -1.3**
BMO pmax pmax
comp=Z,7.0nm,0.9s
SRU San Rafael Swe 83.73 319 P **P 08 48 29.4 -0.7**
SRU IAmb IAmb 08 48 40.4
comp=Z,3.1nm,0.8s
SRU San Rafael Swe 83.73 319 P **P 08 48 29.4 -0.7**
SRU pmax pmax
comp=Z,3.0nm,0.8s
MJAR Matsushiro Arr 86.53 41 P **P 08 48 45.4 +1.4**
comp=Z,1.2nm,0.8s,baz=342,slow=2.5,SNR=2.6
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 87.63 309 P **P 08 48 50.9 +1.3**
comp=Z,0.4nm,0.8s,baz=33,slow=3.5,SNR=2.0
comp=Z,0.4nm,0.8s

*LDG **30** 08:37:02.9±0.2, 42°.70N×13°.16E, h10km, MI3.9/6, Error ellipse: s-maj=9.6km s-min=3.6km az=29.0*
*ROM **30** 08:37:04.2±0.0, 42°.741N±0°.003×13°.261E±0°.004, h9km, ML3.8/8, Error ellipse: s-maj=0.3km s-min=0.2km az=235.0*
ISC 30 08:37:03.0±0.8, **42°.74N**±0°.02×**13°.26E**±0°.02, **h18**km±2km, **n70**, σ1§**69**/107, **4C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1244	**Arquata del Tr**	**0.04**	**55**	⇑P	**Pg**	**08 37 06.1**	**-0.2**
T1244				S	**Sg**	**08 37 07.1**	**-1.5**
T1214	**Arquata del Tr**	**0.04**	**302**	⇑P	**Pg**	**08 37 06.3**	**-0.1**
T1214				S	**Sg**	**08 37 07.5**	**-1.3**
T1204	**Amatrice, Fraz**	**0.07**	**145**	⇓P	**Pg**	**08 37 07.0**	**+0.4**
T1204				S	**Sg**	**08 37 08.8**	**-0.3**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1201	**Domo (RI)**	**0.08**	**184**	P	**Pg**	**08 37 07.2**	**+0.6**
T1201				S	**Sg**	**08 37 09.2**	**+0.2**
T1213	**Norcia, Frazio**	**0.10**	**263**	P	**Pg**	**08 37 07.3**	**+0.5**
T1213				S	**Sg**	**08 37 09.3**	**0.0**
T1218	**Civita (PG)**	**0.12**	**238**	⇑P	**Pg**	**08 37 07.9**	**+0.8**
T1218				S	**Sg**	**08 37 10.5**	**+0.7**
T1245	**Castelsantange**	**0.13**	**337**	P	**Pg**	**08 37 07.5**	**+0.3**
T1245				S	**Sg**	**08 37 10.0**	**0.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1243	**Rocca Santa Ma**	**0.15**	**106**	P	**Pb**	**08 37 07.9**	**+1.1**
T1243				S	**Sg**	**08 37 10.4**	**+0.2**
T1212	**Cascia, Frazio**	**0.16**	**275**	P	**Pg**	**08 37 08.3**	**+0.9**
T1212				S	**Sg**	**08 37 11.1**	**+0.7**
T1241	**Roccafluvione,**	**0.17**	**47**	⇑P	**Pb**	**08 37 08.8**	**+1.4**
T1241				S	**Sg**	**08 37 11.7**	**+1.0**
MC2	**Monte Cornacci**	**0.18**	**344**	P	**Pg**	**08 37 08.4**	**+0.5**
MC2				S	**Sg**	**08 37 11.9**	**+0.7**
LNSS	**Leonessa**	**0.21**	**230**	P	**Pb**	**08 37 09.4**	**+1.2**
LNSS				S	**Sg**	**08 37 13.3**	**+1.7**
LNSS				AML	AML		
	comp=E,52350μm,0.4s						
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,52349μm,0.4s						
LNSS				AML	AML		
CAMP	**Campotosto**	**0.23**	**151**	⇓P	**Pb**	**08 37 09.5**	**+0.9**
CAMP				S	**Sg**	**08 37 13.5**	**+1.3**
CAMP				AML	AML		
	comp=E,19250μm,0.3s						
CAMP				AML	AML		
	comp=N,14900μm,1.2s						
CAMP				AML	AML		
	comp=E,19239μm,0.3s						
CAMP				AML	AML		
	comp=N,14222μm,0.2s						
RM33	**Pellescritta (**	**0.23**	**188**	P	**Pb**	**08 37 10.3**	**+1.7**
RM33				S	**Sg**	**08 37 14.2**	**+2.1**
RM33				AML	AML		
	comp=N,19500μm,1.6s						
RM33				AML	AML		
	comp=E,24150μm,1.0s						
RM33				AML	AML		
	comp=N,19350μm,1.6s						
RM33				AML	AML		
	comp=E,24550μm,1.0s						
RM33				AML	AML		
	comp=N,19500μm,1.6s						
RM33				AML	AML		
	comp=E,24100μm,1.0s						
RM33				AML	AML		
	comp=E,23331μm,0.5s						
RM33				AML	AML		
	comp=N,18053μm,0.4s						
RM33				AML	AML		
	comp=N,18214μm,0.5s						
RM33				AML	AML		
	comp=E,23442μm,0.5s						
T1246	**Crognaleto (TE**	**0.23**	**131**	⇓P	**Pb**	**08 37 09.5**	**+0.9**
T1246				S	**Sg**	**08 37 13.5**	**+1.3**
T1216	**Preci, Frazion**	**0.23**	**311**	P	**Pg**	**08 37 09.7**	**+1.2**
T1216				S	**Sg**	**08 37 13.4**	**+1.1**
T1217	**Poggiodomo (PG**	**0.24**	**264**	P	**Pg**	**08 37 09.8**	**+1.1**
T1217				S	**Sg**	**08 37 14.1**	**+1.6**
T1217				AML	AML		
	comp=E,21250μm,0.6s						
T1217				AML	AML		
	comp=N,24800μm,0.5s						
T1217				AML	AML		
	comp=E,20350μm,0.6s						
T1217				AML	AML		
	comp=N,25200μm,0.5s						
AM05	**Amandola Campo**	**0.25**	**16**	P	**Pb**	**08 37 09.9**	**+0.9**
AM05				S	**Sb**	**08 37 14.0**	**+1.1**
T1256	**Bolognola (MC)**	**0.27**	**355**	P	**Pg**	**08 37 10.2**	**+1.0**
T1256				S	**Sg**	**08 37 14.7**	**+1.3**
TERO	**Teramo**	**0.28**	**114**	P	**Pb**	**08 37 10.3**	**+0.8**
TERO				S	**Sg**	**08 37 14.7**	**+1.3**
TERO				AML	AML		
	comp=E,38600μm,0.8s						
TERO				AML	AML		
	comp=E,42300μm,0.8s						
TERO				AML	AML		
	comp=N,80350μm,0.1s						
TERO				AML	AML		
	comp=N,72500μm,0.1s						
TERO				AML	AML		
	comp=N,80316μm,0.1s						
TERO				AML	AML		
	comp=E,32583μm,0.3s						
TERO				AML	AML		
	comp=E,30740μm,0.3s						
TERO				AML	AML		
	comp=N,72495μm,0.1s						
T1215	**Vallo di Nera,**	**0.29**	**283**	P	**Pg**	**08 37 10.8**	**+1.3**
T1215				S	**Sg**	**08 37 15.4**	**+1.5**
T1247	**Pizzolo (AQ)**	**0.30**	**174**	P	**Pb**	**08 37 10.8**	**+1.0**
T1247				S	**Sb**	**08 37 15.7**	**+1.3**
GUMA	**Gualdo di Mace**	**0.33**	**10**	P	**Pb**	**08 37 11.5**	**+1.1**
GUMA				S	**Sb**	**08 37 17.1**	**+1.7**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.36**	**354**	P	**Pg**	**08 37 11.5**	**+0.9**
CSP1				S	**Sb**	**08 37 17.5**	**+1.2**
T1211	**Morro Reatino**	**0.36**	**236**	P	**Pb**	**08 37 11.9**	**+1.0**
T1211				S	**Sb**	**08 37 17.6**	**+1.3**
GIGS	**Gran Sasso**	**0.37**	**141**	P	**Pb**	**08 37 11.9**	**+0.8**
GIGS				S	**Sb**	**08 37 17.5**	**+1.0**
GIGS				AML	AML		
	comp=N,3400μm,1.5s						
GIGS				AML	AML		
	comp=E,3600μm,0.9s						
OFFI	**Offida**	**0.37**	**58**	P	**Pb**	**08 37 12.8**	**+1.6**
ARRO	**Arrone**	**0.40**	**247**	P	**Pb**	**08 37 12.6**	**+1.1**
AQU	**L'Aquila**	**0.40**	**164**	P	**Pb**	**08 37 12.4**	**+0.9**
AQU				S	**Sb**	**08 37 18.9**	**+1.5**
MNTP	**Montappone**	**0.43**	**21**	P	**Pb**	**08 37 13.3**	**+1.2**
MNTP				AML	AML		
	comp=N,18249μm,0.4s						
MNTP				AML	AML		
	comp=E,35918μm,0.2s						
MDAR	**Monte D'Aria**	**0.46**	**349**	P	**Pg**	**08 37 13.3**	**+0.9**
MDAR				S	**Sb**	**08 37 20.9**	**+1.5**
SEF1	**Sefro**	**0.47**	**331**	P	**Pg**	**08 37 13.5**	**+1.0**
SEF1				S	**Sb**	**08 37 20.9**	**+1.5**
FIAM	**Fiamignano**	**0.48**	**193**	P	**Pb**	**08 37 14.2**	**+1.2**
FIAM				S	**Sb**	**08 37 21.4**	**+1.6**
PIO1	**Pioraco**	**0.48**	**336**	P	**Pg**	**08 37 13.8**	**+1.0**
TRTR	**Tortoreto Alta**	**0.49**	**81**	P	**Pn**	**08 37 15.2**	**+0.2**
SSM1	**San Severino M**	**0.49**	**353**	P	**Pg**	**08 37 14.0**	**+1.0**
SSM1				S	**Sb**	**08 37 22.0**	**+1.9**
FIU1	**Fiuminata**	**0.51**	**332**	P	**Pg**	**08 37 14.3**	**+1.0**
CESX	**Cesi**	**0.52**	**256**	P	**Pg**	**08 37 14.5**	**+1.1**
GAG1	**Gagliole**	**0.52**	**344**	P	**Pb**	**08 37 15.1**	**+1.4**
GAG1				S	**Sb**	**08 37 23.0**	**+2.1**
FAGN	**Fagnano**	**0.53**	**153**	P	**Pb**	**08 37 15.2**	**+1.4**
ASSB	**Assisi San Ben**	**0.54**	**305**	P	**Pg**	**08 37 14.6**	**+0.8**
ASSB				S	**Sg**	**08 37 22.9**	**+1.8**
VCEL	**Villa Celiera**	**0.55**	**128**	P	**Pb**	**08 37 15.4**	**+1.2**
VCEL				AML	AML		
	comp=E,13321μm,0.3s						
VCEL				AML	AML		
	comp=N,12331μm,0.3s						
SNTG	**Esanatoglia**	**0.57**	**336**	P	**Pg**	**08 37 15.1**	**+0.8**
TRE1	**Treia**	**0.57**	**4**	P	**Pb**	**08 37 16.1**	**+1.6**
CADA	**Capodarco di F**	**0.59**	**39**	P	**Pn**	**08 37 17.2**	**+0.8**
EL6	**Elcito**	**0.60**	**349**	P	**Pg**	**08 37 15.7**	**+0.6**
ATCC	**AVT- Casa Cast**	**0.64**	**315**	P	**Pg**	**08 37 16.7**	**+1.0**
T0110	**Collepietro**	**0.64**	**143**	P	**Pb**	**08 37 16.4**	**+0.7**
T0110				AML	AML		
	comp=N,10272μm,0.4s						
T0110				AML	AML		
	comp=E,10709μm,0.4s						
FOSV	**Fossato di Vic**	**0.67**	**327**	P	**Pg**	**08 37 16.9**	**+0.8**
FOSV				S	**Sb**	**08 37 27.2**	**+2.1**
PP3	**Marolino**	**0.69**	**22**	P	**Pn**	**08 37 19.0**	**+1.1**
SRES	**S.Oreste - Sor**	**0.75**	**228**	P	**Pb**	**08 37 19.3**	**+1.8**
MURB	**Monte Urbino**	**0.75**	**315**	P	**Pg**	**08 37 17.9**	**+0.2**
ARVD	**Arcevia**	**0.80**	**343**	P	**Pg**	**08 37 19.4**	**+0.9**
ATSC	**Scheggia e Pas**	**0.80**	**329**	P	**Pg**	**08 37 19.5**	**+0.7**
ATFO	**Monte Foce - G**	**0.81**	**322**	P	**Pg**	**08 37 19.5**	**+0.7**
AOI	**Ancona**	**0.85**	**17**	P	**Pn**	**08 37 21.1**	**+1.0**
MGAB	**Montegabbione**	**0.86**	**282**	P	**Pb**	**08 37 21.7**	**+2.2**
TB01	**Gubbio**	**0.88**	**317**	P	**Pg**	**08 37 21.0**	**+0.8**
LPEL	**Lama dei Pelig**	**0.97**	**135**	P	**Pn**	**08 37 22.5**	**+0.6**
SACS	**San Casciano d**	**1.00**	**277**	P	**Pn**	**08 37 24.0**	**+1.8**
FSSB	**Fossombrone**	**1.02**	**340**	P	**Pb**	**08 37 23.6**	**+1.5**
PGF	**Pioggiola**	**3.15**	**268**	*e*P	**Pn**	**08 37 54.5**	**+2.7**
PGF				*e*Sn	**Sn**	**08 38 24.3**	**-4.6**
	comp=E,131nm,1.1s						
SBF	**Sospel**	**4.40**	**287**	*e*Pn	**Pn**	**08 38 06.2**	**-2.7**
SBF				*e*Sn	**Sn**	**08 38 54.7**	**-5.0**
	comp=E,66nm,0.6s						
LMR	**La Mourre**	**4.98**	**279**	*e*Pn	**Pn**	**08 38 14.6**	**-2.3**
LMR				*e*Sn	Sn	08 39 07.4	-6.6
	comp=E,170nm,1.6s						
MBDF	**Montbardon**	**5.10**	**295**	*e*Pn	**Pn**	**08 38 17.4**	**-1.3**
MBDF				*e*Sn	**Sn**	**08 39 12.3**	**-4.9**
	comp=E,127nm,1.0s						
LPG	**La Plagne**	**5.44**	**303**	*e*Pn	**Pn**	**08 38 22.0**	**-1.4**
LPG				*e*Sn	**Sn**	**08 39 20.1**	**-5.5**
	comp=E,177nm,1.1s						
LPL	**La Plagne**	**5.46**	**303**	*e*Pn	**Pn**	**08 38 21.0**	**-2.6**
LPL				*e*Sn	**Sn**	**08 39 20.8**	**-5.2**
	comp=E,76nm,0.8s						
VIVF	**Saint-Julien-l**	**6.56**	**292**	*e*Pn	Pn	08 38 35.6	-3.0
LASF	**Ste Croix**	**6.98**	**284**	*e*Pn	**Pn**	**08 38 42.0**	**-2.3**
MFF	**Saint Martin d**	**10.30**	**297**	*e*Pn	Pn	08 39 23.0	-6.8

*IDC **30** 08:41:18.2±1.4, 42°.89N×13°.85E, h0km, mb3.6/3, mbtmp3.5/7, ML3.6/4, Error ellipse: s-maj=28.3km s-min=16.1km az=90.0*
*ROM **30** 08:41:19.8±0.0, 42°.895N±0°.002×13°.190E±0°.004, h8km, ML3.6/81, Error ellipse: s-maj=0.3km s-min=0.1km az=253.0*
*PRU **30** 08:41:20.5±0.0, 42°.88N×13°.57E, h0km*
*LDG **30** 08:41:21.8±0.1, 42°.75N×13°.16E, h10km, Ml3.5/16, Error ellipse: s-maj=4.2km s-min=2.5km az=46.0*
ISC 30 08:41:19.8±0.4, **42°.89N**±0°.01×**13°.19E**±0°.02, **h8**km±2km, **n198**, σ1§**66**/230, **mb3.7**/3, **1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.02**	**9**	P	**Pg**	**08 41 20.8**	**-0.9**
MC2				S	**Sg**	**08 41 21.8**	**-1.2**
T1245	**Castelsantange**	**0.03**	**177**	P	**Pg**	**08 41 21.4**	**-0.3**
T1245				S	**Sg**	**08 41 22.6**	**-0.3**
T1256	**Bolognola (MC)**	**0.12**	**14**	P	**Pg**	**08 41 22.6**	**-0.1**
T1256				S	**Sg**	**08 41 25.0**	**+0.3**
FEMA	**Monte Fema**	**0.12**	**306**	P	**Pg**	**08 41 23.1**	**+0.4**
FEMA				S	**Sg**	**08 41 25.6**	**+0.9**
T1216	**Preci, Frazion**	**0.12**	**270**	P	**Pg**	**08 41 23.1**	**+0.5**
T1216				S	**Sg**	**08 41 25.6**	**+1.0**
T1214	**Arquata del Tr**	**0.13**	**173**	P	**Pg**	**08 41 23.5**	**+0.6**
T1214				S	**Sg**	**08 41 26.4**	**+1.5**
AM05	**Amandola Campo**	**0.15**	**55**	⇑P	**Pg**	**08 41 23.3**	**+0.2**
AM05				S	**Sg**	**08 41 26.0**	**+0.7**
AM05				AML	AML		
	comp=N,15700μm,1.0s						
AM05				AML	AML		
	comp=E,74800μm,0.9s						
AM05				AML	AML		
	comp=N,15650μm,1.0s						
AM05				AML	AML		
	comp=N,4450μm,0.1s						
AM05				AML	AML		
	comp=E,18700μm,0.9s						
AM05				AML	AML		
	comp=E,74850μm,0.9s						
T1244	**Arquata del Tr**	**0.16**	**148**	P	**Pg**	**08 41 23.8**	**+0.6**
T1244				S	**Sg**	**08 41 27.2**	**+1.7**
FDMO	**Fiordimonte**	**0.16**	**334**	P	**Pg**	**08 41 23.6**	**+0.3**
FDMO				S	**Sg**	**08 41 26.6**	**+1.0**
T1213	**Norcia, Frazio**	**0.17**	**195**	P	**Pg**	**08 41 24.2**	**+0.7**
T1213				S	**Sg**	**08 41 26.9**	**+0.9**
T1212	**Cascia, Frazio**	**0.17**	**217**	P	**Pg**	**08 41 24.6**	**+1.1**
T1212				S	**Sg**	**08 41 27.6**	**+1.7**
T1241	**Roccafluvione,**	**0.18**	**101**	P	**Pg**	**08 41 24.5**	**+0.9**
T1241				S	**Sg**	**08 41 27.9**	**+1.6**
T1241				AML	AML		
	comp=E,63850μm,1.1s						
T1241				AML	AML		
	comp=N,69350μm,0.7s						
T1241				AML	AML		
	comp=E,63850μm,1.1s						
T1241				AML	AML		
	comp=N,71250μm,0.7s						
T1241				AML	AML		
	comp=N,69400μm,0.6s						
T1241				AML	AML		
	comp=E,65850μm,1.1s						
GUMA	**Gualdo di Mace**	**0.20**	**32**	P	**Pg**	**08 41 24.6**	**+0.6**
GUMA				S	**Sg**	**08 41 28.2**	**+1.3**
GUMA				AML	AML		
	comp=E,92100μm,0.3s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,92300μm,0.3s						
GUMA				AML	AML		
	comp=N,93500μm,0.7s						
GUMA				AML	AML		
	comp=N,91600μm,1.2s						
T1219	**Muccia, Frazio**	**0.21**	**322**	P	**Pg**	**08 41 24.6**	**+0.5**
T1219				S	**Sg**	**08 41 28.7**	**+1.6**
T1218	**Civita (PG)**	**0.23**	**193**	P	**Pg**	**08 41 25.2**	**+0.8**
T1218				S	**Sg**	**08 41 29.8**	**+2.2**
T1220	**Camerino, Fraz**	**0.23**	**342**	P	**Pg**	**08 41 24.8**	**+0.3**
T1220				S	**Sg**	**08 41 29.4**	**+1.7**
T1204	**Amatrice, Fraz**	**0.23**	**156**	P	**Pg**	**08 41 25.1**	**+0.5**
T1204				S	**Sg**	**08 41 29.6**	**+1.8**
T1204				AML	AML		
	comp=N,27550μm,1.1s						
T1204				AML	AML		
	comp=E,41500μm,0.5s						
T1204				AML	AML		
	comp=N,27500μm,1.1s						
T1201	**Domo (RI)**	**0.24**	**168**	P	**Pg**	**08 41 25.7**	**+1.1**
T1201				S	**Sg**	**08 41 30.2**	**+2.3**
T1215	**Vallo di Nera,**	**0.25**	**249**	P	**Pg**	**08 41 25.7**	**+0.8**
T1215				S	**Sg**	**08 41 29.8**	**+1.6**
T1217	**Poggiodomo (PG**	**0.26**	**226**	P	**Pg**	**08 41 25.8**	**+0.8**
T1217				S	**Sg**	**08 41 30.6**	**+2.1**
T1243	**Rocca Santa Ma**	**0.27**	**135**	P	**Pg**	**08 41 25.7**	**+0.4**
T1243				S	**Sg**	**08 41 30.4**	**+1.4**
MDAR	**Monte D'Aria**	**0.30**	**354**	P	**Pg**	**08 41 26.5**	**+0.6**
MDAR				S	**Sg**	**08 41 31.5**	**+1.5**
MDAR				AML	AML		
	comp=E,21800μm,0.4s						
MDAR				AML	AML		
	comp=N,15050μm,1.4s						
LNSS	**Leonessa**	**0.31**	**200**	P	**Pg**	**08 41 27.1**	**+1.2**
LNSS				S	**Sb**	**08 41 32.1**	**-0.7**
SEF1	**Sefro**	**0.31**	**326**	P	**Pg**	**08 41 26.4**	**+0.4**
SEF1				S	**Sg**	**08 41 32.0**	**+1.9**
SEF1				AML	AML		
	comp=E,28850μm,0.3s						
SEF1				AML	AML		
	comp=N,23550μm,1.2s						
SEF1				AML	AML		
	comp=N,23500μm,1.2s						
MNTP	**Montappone**	**0.32**	**40**	P	**Pg**	**08 41 27.4**	**+1.1**
PIO1	**Pioraco**	**0.32**	**333**	P	**Pg**	**08 41 26.7**	**+0.5**
PIO1				S	**Sg**	**08 41 32.3**	**+1.8**
PIO1				AML	AML		
	comp=E,11470μm,0.4s						
PIO1				AML	AML		
	comp=N,15000μm,1.5s						
PIO1				AML	AML		
	comp=N,15050μm,1.5s						

PIO1 AML AML
comp=E,11475µm,0.4s
SSM1 San Severino M 0.34 359 P Pg 08 41 27.0 +0.5
FIU1 Fiuminata 0.35 328 P Pg 08 41 27.5 +0.7
FIU1 S Sg 08 41 33.4 +2.0
FIU1 AML AML
comp=E,6985µm,1.5s
FIU1 AML AML
comp=N,8860µm,1.2s
FIU1 AML AML
comp=E,6980µm,1.5s
GAG1 Gagliole 0.36 346 P Pg 08 41 27.7 +0.8
GAG1 S Sg 08 41 33.5 +1.9
OFFI Offida 0.37 83 P Pg 08 41 28.1 +1.0
OFFI AML AML
comp=E,36600µm,1.1s
OFFI AML AML
comp=N,33700µm,0.5s
RM33 Pellescritta (0.38 177 P Pg 08 41 27.9 +0.5
RM33 S Sb 08 41 34.7 -0.2
RM33 AML AML
comp=N,11850µm,1.6s
RM33 AML AML
comp=E,13600µm,0.9s
RM33 AML AML
comp=N,12100µm,1.6s
RM33 AML AML
comp=N,11900µm,1.6s
RM33 AML AML
comp=E,13600µm,0.9s
RM33 AML AML
comp=E,13250µm,0.9s
T1246 Crognaleto (TE 0.38 144 P Pg 08 41 27.6 +0.3
T1246 S Sb 08 41 33.9 -1.0
CAMP Campotosto 0.39 155 P Pg 08 41 27.7 +0.2
CAMP S Sg 08 41 34.0 +1.3
CAMP AML AML
comp=E,8400µm,0.5s
CAMP AML AML
comp=N,10415µm,0.8s
SNTG Esanatoglia 0.41 334 P Pg 08 41 28.0 +0.2
SNTG S Sg 08 41 34.8 +1.6
SNTG AML AML
comp=E,6120µm,1.1s
SNTG AML AML
comp=N,6570µm,1.3s
SNTG AML AML
comp=E,5785µm,0.3s
SNTG AML AML
comp=E,5780µm,0.3s
SNTG AML AML
comp=N,7055µm,1.3s
TERO Teramo 0.41 131 P Pg 08 41 28.0 +0.2
TERO S Sg 08 41 34.5 +1.3
TERO AML AML
comp=E,23350µm,0.3s
TERO AML AML
comp=N,24000µm,0.4s
TERO AML AML
comp=E,23300µm,0.3s
TERO AML AML
comp=N,25000µm,0.3s
TERO AML AML
comp=E,24650µm,0.3s
ASSB Assisi San Ben 0.42 292 P Pg 08 41 28.5 +0.5
ASSB AML AML
comp=E,10250µm,0.7s
ASSB AML AML
comp=N,12360µm,1.5s
TRE1 Treia 0.43 12 P Pg 08 41 29.1 +0.8
TRE1 AML AML
comp=E,21000µm,0.5s
TRE1 AML AML
comp=N,17300µm,0.4s
TRE1 AML AML
comp=N,17250µm,0.4s
TRE1 AML AML
comp=E,21050µm,0.5s
T1211 Morro Reatino 0.43 214 P Pg 08 41 29.9 +1.7
ARRO Arrone 0.44 225 P Pg 08 41 29.9 +1.5
EL6 Elcito 0.44 352 P Pg 08 41 28.6 +0.1
EL6 S Sg 08 41 36.7 +2.4
EL6 AML AML
comp=N,14000µm,0.4s
EL6 AML AML
comp=E,13950µm,0.5s
EL6 AML AML
comp=E,13900µm,0.5s
T1247 Pizzolo (AQ) 0.46 169 P Pg 08 41 29.2 +0.5
T1247 S Sb 08 41 36.7 -0.4
T1247 AML AML
comp=E,16200µm,1.6s
T1247 AML AML
comp=N,13800µm,1.3s
CING Cingoli 0.48 1 P Pg 08 41 29.9 +0.6
ATCC AVT- Casa Cast 0.50 307 P Pg 08 41 29.9 +0.4
ATCC AML AML
comp=E,11500µm,1.0s
ATCC AML AML
comp=N,9130µm,0.9s
ATCC AML AML
comp=E,11450µm,1.0s
ATCC AML AML
comp=N,9110µm,0.9s
ATCC AML AML
comp=N,9125µm,0.9s
FOSV Fossato di Vic 0.51 323 P Pg 08 41 29.9 +0.1
FOSV S Sg 08 41 38.2 +1.8
FOSV AML AML
comp=E,8835µm,0.3s
FOSV AML AML
comp=N,10170µm,0.3s
FOSV AML AML
comp=E,8830µm,0.3s
FOSV AML AML
comp=N,10185µm,0.3s
CADA Capodarco di F 0.52 54 P Pg 08 41 32.0 +2.1
GIGS Gran Sasso 0.52 147 P Pg 08 41 30.3 +0.3
GIGS AML AML
comp=E,2610µm,1.6s
GIGS AML AML
comp=N,2165µm,0.9s
CESX Cesi 0.53 238 P Pg 08 41 30.6 +0.6
CESX AML AML
comp=E,8775µm,1.5s
CESX AML AML
comp=N,7740µm,0.5s
TRTR Tortoreto Alta 0.54 99 P Pg 08 41 31.7 +1.4
TRTR AML AML
comp=N,34150µm,0.4s
TRTR AML AML
comp=E,34650µm,1.0s
CIMA Civitanova Mar 0.55 40 P Pg 08 41 32.2 +1.8
AQU L'Aquila 0.56 163 P Pg 08 41 30.7 +0.1
AQU AML AML
comp=E,8990µm,1.6s
AQU AML AML
comp=N,8640µm,1.1s
AQU AML AML
comp=N,8350µm,1.1s
AQU AML AML
comp=E,9015µm,1.6s
AQU AML AML
comp=N,8645µm,1.1s
AQU AML AML
comp=E,8750µm,1.6s
MMUR Monte Murano 0.57 346 P Pg 08 41 31.3 +0.4
MMUR S Sg 08 41 40.9 +2.6
PP3 Marolino 0.58 32 P Pg 08 41 32.3 +1.3
PP3 AML AML
comp=E,17700µm,0.7s
PP3 AML AML
comp=N,11720µm,0.8s
PP3 AML AML
comp=N,11340µm,0.8s
PP3 AML AML
comp=E,18550µm,0.7s
PP3 AML AML
comp=N,11325µm,0.8s
PP3 AML AML
comp=N,11700µm,0.8s
MURB Monte Urbino 0.61 308 AML AML
comp=E,10750µm,0.3s
MURB AML AML
comp=E,10750µm,0.4s
MURB AML AML
comp=N,8110µm,0.3s
MURB AML AML
comp=N,8105µm,0.3s
MURB AML AML
comp=N,7915µm,0.3s
MURB AML AML
comp=E,12550µm,0.4s
FIAM Fiamignano 0.62 185 P Pg 08 41 31.9 0.0
FIAM AML AML
comp=E,4565µm,0.9s
FIAM AML AML
comp=N,4315µm,1.4s
ARVD Arcevia 0.63 344 P Pg 08 41 32.2 +0.2
ARVD AML AML
comp=N,2435µm,1.5s
ARVD AML AML
comp=E,4440µm,1.1s
ATFO Monte Foce - G 0.66 317 P Pg 08 41 32.6 +0.1
ATFO AML AML
comp=N,4435µm,1.3s
ATFO AML AML
comp=E,3825µm,0.9s
ATTE AVT- Monte Tez 0.68 297 P Pg 08 41 33.5 +0.5
ATTE AML AML
comp=E,2455µm,0.4s
ATTE AML AML
comp=N,2390µm,1.3s
FAGN Fagnano 0.69 155 P Pg 08 41 33.3 +0.2
FAGN AML AML
comp=N,8680µm,0.4s
FAGN AML AML
comp=E,8065µm,0.4s
VCEL Villa Celiera 0.69 136 P Pg 08 41 33.5 +0.3
VCEL AML AML
comp=E,8425µm,0.6s
VCEL AML AML
comp=N,10200µm,1.5s
VCEL AML AML
comp=N,10150µm,1.5s
FRON Frontone 0.71 332 P Pg 08 41 33.4 -0.2
FRON AML AML
comp=N,4260µm,0.6s
FRON AML AML
comp=E,3350µm,0.6s
AOI Ancona 0.73 25 P Pg 08 41 34.7 +0.8
AOI AML AML
comp=N,2820µm,1.5s
AOI AML AML
comp=E,2825µm,0.7s
ATVO AVT- Monte Val 0.75 311 P Pg 08 41 34.3 0.0
ATVO AML AML
comp=N,2360µm,1.4s
ATVO AML AML
comp=E,2620µm,1.3s
ATVO AML AML
comp=N,2355µm,1.4s
PCRO Pietralacroce 0.76 19 P Pg 08 41 35.9 +1.5
MGAB Montegabbione 0.79 272 P Pg 08 41 35.0 0.0
MGAB AML AML
comp=N,5620µm,0.4s
MGAB AML AML
comp=E,4435µm,0.8s
MGAB AML AML
comp=N,5240µm,0.4s
MGAB AML AML
comp=E,3830µm,1.1s
T0110 Collepietro 0.80 146 P Pg 08 41 34.7 -0.4
T0110 AML AML
comp=N,7510µm,0.5s
T0110 AML AML
comp=E,8065µm,0.7s
ATPI Pietralunga - 0.80 315 P Pg 08 41 35.3 0.0
ATPI AML AML
comp=E,3185µm,0.4s
ATPI AML AML
comp=N,2395µm,1.3s
ATPI AML AML
comp=E,3180µm,0.4s
ATPI AML AML
comp=N,2390µm,1.3s
MPAG Monte Paganucc 0.80 337 AML AML
comp=N,2500µm,1.3s
MPAG AML AML
comp=E,2070µm,0.9s
PIEI Pieia 0.80 324 P Pg 08 41 35.4 +0.1
PIEI AML AML
comp=N,1915µm,1.1s
PIEI AML AML
comp=E,2030µm,1.5s
ATMI Monte Miggiano 0.81 304 P Pg 08 41 36.3 +1.0
ATMI AML AML
comp=E,5300µm,0.9s
ATMI AML AML
comp=N,6315µm,0.4s
SENI Senigallia 0.81 2 P Pg 08 41 36.1 +0.6
SENI AML AML
comp=E,13355µm,0.3s
SENI AML AML
comp=N,11050µm,0.3s
SENI AML AML
comp=E,2975µm,1.1s
SENI AML AML
comp=N,2815µm,1.6s
SENI AML AML
comp=E,3174µm,1.6s
SENI AML AML
comp=N,2925µm,1.6s
FSSB Fossombrone 0.85 340 P Pg 08 41 36.2 0.0
FSSB AML AML
comp=N,12090µm,0.4s
FSSB AML AML
comp=E,6800µm,1.2s
PTQR Pietraquaria 0.88 170 P Pg 08 41 35.9 -0.9
PTQR AML AML
comp=E,2035µm,1.6s
PTQR AML AML
comp=N,1465µm,1.3s
MTCE Montecelio 0.93 201 P Pg 08 41 37.5 -0.2
MTCE AML AML
comp=N,1795µm,1.4s
MTCE AML AML
comp=E,2475µm,0.9s
SACS San Casciano d 0.94 268 P Pg 08 41 38.6 +0.7
SACS AML AML
comp=N,2235µm,1.6s
SACS AML AML
comp=E,2430µm,0.8s
PE3 Peglio 0.95 328 P Pg 08 41 38.6 +0.6
CERT Cerreto 0.95 189 P Pg 08 41 39.0 +0.9
CERT AML AML
comp=N,3660µm,0.6s
CERT AML AML
comp=E,4185µm,1.1s
CAFI Castiglion Fio 0.99 297 P Pg 08 41 38.4 -0.6
CAFI AML AML
comp=E,1540µm,1.6s
CAFI AML AML
comp=N,1220µm,0.4s
RCAV Rocca di Cave 1.06 190 P Pg 08 41 40.6 +0.5
RCAV AML AML
comp=N,3190µm,0.6s
RCAV AML AML
comp=E,3755µm,1.0s
GUAR Guarcino 1.10 175 P Pb 08 41 41.7 +0.7
GUAR AML AML
comp=N,4155µm,1.0s
GUAR AML AML
comp=E,2520µm,0.9s
MCIV Monte Civitell 1.12 265 P Pg 08 41 42.1 +0.8
MCIV AML AML
comp=N,1125µm,1.5s
MCIV AML AML
comp=E,1124µm,1.6s
LPEL Lama dei Pelig 1.12 138 P Pg 08 41 40.5 -0.9
LPEL AML AML
comp=N,1960µm,1.0s
LPEL AML AML
comp=E,2455µm,0.9s
SF04 Casetta 1.12 268 AML AML
comp=E,1162µm,0.6s
SF04 AML AML
comp=N,1380µm,1.5s
CRE Caprese Michel 1.16 309 P Pg 08 41 41.4 -0.7
CRE AML AML
comp=N,1009µm,1.2s
CRE AML AML
comp=E,814µm,1.6s
TOLF Tolfa 1.21 227 P Pg 08 41 42.8 -0.1
TOLF AML AML
comp=N,1905µm,1.1s
TOLF AML AML
comp=E,1080µm,1.3s
POFI Posta Fibreno 1.24 161 P Pg 08 41 43.0 -0.5
POFI AML AML
comp=E,1905µm,1.3s
POFI AML AML
comp=N,1445µm,1.1s
LRP Arpino 1.28 166 P Pb 08 41 44.8 +0.8
LRP AML AML
comp=E,863µm,1.0s
LRP AML AML
comp=N,1238µm,1.3s
ASQU Asqua 1.36 312 P Pn 08 41 46.1 +0.9
SFI Santa Sofia 1.41 317 P Pn 08 41 46.4 +0.7
CERA Filignano 1.43 154 P Pn 08 41 46.5 +0.4
CSNT Castellina Chi 1.50 293 P Pn 08 41 47.6 +0.6
TRIV Trivento 1.51 138 P Pn 08 41 48.1 +0.9
TRIV AML AML
comp=N,1630µm,1.0s
TRIV AML AML
comp=E,1960µm,1.0s
FROS Frosini 1.52 283 P Pn 08 41 47.8 +0.5
RUFI Rufina 1.55 308 P Pn 08 41 47.9 +0.3
OSSC Osservatorio P 1.55 295 P Pn 08 41 47.5 -0.2
LMD Lutirano 1.60 318 P Pn 08 41 50.4 +2.0
LMD AML AML
comp=N,512µm,1.2s
LMD AML AML
comp=E,562µm,1.3s
VAGA Valle Agricola 1.67 152 P Pb 08 41 51.8 +1.0
VAGA AML AML
comp=E,609µm,0.9s
VAGA AML AML
comp=N,870µm,0.9s
TRIF Trifonti 1.69 278 P Pn 08 41 49.4 -0.2
TRIF AML AML
comp=E,368µm,0.8s
TRIF AML AML
comp=N,317µm,0.8s
BSSO Busso 1.70 142 P Pb 08 41 51.8 +0.4
BSSO AML AML
comp=N,1165µm,1.3s
BSSO AML AML
comp=E,492µm,1.6s
BSSO AML AML
comp=E,1218µm,1.6s
BSSO AML AML
comp=N,472µm,1.6s
BRIS BRISIGHELLA 1.75 317 P Pn 08 41 52.6 +2.1
BRIS AML AML
comp=E,908µm,1.5s
BRIS AML AML
comp=N,890µm,1.6s
MELA Melanico ??? S 1.86 129 P Pn 08 41 53.9 +1.9
MELA AML AML
comp=E,1960µm,1.0s
MELA AML AML
comp=E,1870µm,1.0s
MELA AML AML
comp=N,2145µm,1.0s
MELA AML AML
comp=N,2255µm,1.0s
BRJN Brijuni 2.06 11 P Pn 08 41 55.6 +1.0
APRC Apricena 2.08 122 P Pn 08 41 56.4 +1.4
APRC AML AML
comp=N,1086µm,0.5s
APRC AML AML
comp=E,876µm,0.6s
MRB1 Monte Rocchett 2.21 142 AML AML
comp=E,884µm,0.7s
MRB1 AML AML
comp=N,866µm,1.1s
MRB1 AML AML
comp=N,852µm,1.0s
MRB1 AML AML
comp=E,908µm,0.7s
SGRT San Giovanni R 2.21 120 P Pn 08 41 57.9 +1.1
SGRT AML AML
comp=E,702µm,1.3s
SGRT AML AML
comp=N,967µm,1.1s
CARD Cardoso 2.27 301 P Pn 08 41 58.0 +0.4
CARD AML AML
comp=E,222µm,1.0s
CARD AML AML
comp=N,176µm,1.6s
KNDS Knezji Dol 2.77 18 *i* Pn **Pn 08 42 05.4 +0.8**
MRVN Minervino Murg 2.90 128 AML AML
comp=E,250µm,0.9s
MRVN AML AML
comp=N,210µm,0.7s
SABO M.te Sabotino 3.10 5 P Pn 08 42 09.6 +0.5
SABO AML AML
comp=E,2150µm,0.8s
SABO AML AML
comp=N,2435µm,0.9s
SABO AML AML
comp=N,630µm,0.9s
SABO AML AML
comp=E,465µm,0.9s
PGF Pioggiola 3.10 265 *e*Pn **Pn 08 42 09.4 +0.3**
PGF Pioggiola 3.10 265 *e*P **Pn 08 42 11.6 +2.5**
PGF *e*Sn **Sn 08 42 44.2 -2.2**
comp=E,13nm,0.5s
ROVR Rover Verones 3.15 332 P Pn 08 42 11.1 +1.4
ROVR AML AML
comp=E,105µm,1.0s
ROVR AML AML
comp=N,102µm,0.3s
CGRP Cima Grappa 3.15 342 P Pn 08 42 10.7 +0.8
CGRP AML AML
comp=N,377µm,0.6s
CGRP AML AML
comp=E,336µm,1.1s
LJU Ljubljana 3.30 16 AML AML
comp=N,2155µm,0.8s
LJU AML AML
comp=E,2430µm,1.4s
STON Ston 3.32 89 AML AML
comp=E,120µm,1.3s
STON AML AML
comp=N,111µm,1.6s
SALO Salr 3.33 326 P Pn 08 42 14.1 +1.9
SALO AML AML
comp=N,298µm,1.4s
SALO AML AML
comp=E,286µm,0.9s
CTI Castel Tesino 3.34 341 P Pn 08 42 14.1 +1.7
CTI AML AML
comp=N,242µm,0.3s
CTI AML AML
comp=E,244µm,1.3s
MPRI Monte Prat 3.35 358 P Pn 08 42 13.4 +0.9
MPRI AML AML
comp=E,270µm,1.0s
MPRI AML AML
comp=N,572µm,1.6s
ROBS Robic 3.36 4 *i* Pn **Pn 08 42 13.2 +0.7**
STAL STALIGIAL 3.39 354 P Pn 08 42 13.6 +0.7
STAL AML AML
comp=E,306µm,0.9s
STAL AML AML
comp=N,178µm,0.5s
CIMO Cimolais 3.46 351 P Pn 08 42 14.6 +0.6
CIMO AML AML
comp=E,94µm,1.4s
CIMO AML AML
comp=N,83µm,0.6s
CIMO AML AML
comp=N,83µm,0.6s
CIMO AML AML
comp=E,86µm,1.4s
LUSI Trento, Gardas 3.46 333 P Pn 08 42 15.7 +1.6
LUSI AML AML
comp=N,206µm,1.0s
LUSI AML AML
comp=E,170µm,0.9s
PTCC Patocco-Chiusa 3.52 2 P Pn 08 42 15.2 +0.5
PTCC AML AML
comp=E,118µm,0.6s
PTCC AML AML
comp=N,130µm,1.5s
GAGG Gaggia 3.57 334 P Pn 08 42 17.3 +1.8

GAGG				AML	AML		
	comp=N,251μm,1.4s						
GAGG				AML	AML		
	comp=E,274μm,1.3s						
NOCI	**Noci**	**3.58**	**125**	P	**Pn**	**08 42 17.0**	**+1.4**
NOCI				AML	AML		
	comp=E,170μm,1.0s						
NOCI				AML	AML		
	comp=N,258μm,1.2s						
ACOM	**Acomizza, Ital**	**3.67**	**4**	P	**Pn**	**08 42 18.1**	**+1.2**
ACOM				AML	AML		
	comp=N,236μm,1.0s						
ACOM				AML	AML		
	comp=E,347μm,1.3s						
ACOM				AML	AML		
	comp=N,210μm,0.7s						
ACOM				AML	AML		
	comp=E,313μm,1.3s						
ZOU	**Zoufplan**	**3.67**	**358**	P	**Pn**	**08 42 17.6**	**+0.6**
ZOU				AML	AML		
	comp=E,244μm,1.1s						
ZOU				AML	AML		
	comp=N,252μm,1.4s						
MABI	**Malga Bissina**	**3.70**	**330**	P	**Pn**	**08 42 19.3**	**+1.9**
FVI	**Forni Avoltri**	**3.72**	**356**	P	**Pn**	**08 42 18.4**	**+0.9**
FVI				AML	AML		
	comp=E,134μm,1.3s						
FVI				AML	AML		
	comp=N,142μm,1.1s						
OBKA	**Obir**	**3.75**	**15**	*e*Pn	**Pn**	**08 42 19.2**	**+1.3**
	comp=N,1.6nm,0.2s						
MYKA	**Terra Mystica**	**3.75**	**5**	*e*Pn	**Pn**	**08 42 19.7**	**+1.7**
	comp=N,2.9nm,0.2s						
KOSI	**Kohlern**	**3.80**	**341**	P	**Pn**	**08 42 20.6**	**+1.9**
KOSI				AML	AML		
	comp=N,246μm,0.6s						
KOSI				AML	AML		
	comp=E,198μm,1.4s						
ABTA	**Abfaltersbach**	**3.89**	**353**	*e*Pn	**Pn**	**08 42 21.7**	**+1.8**
	comp=E,32nm,0.3s,SNR=28						
SOKA	**Soboth**	**4.01**	**19**	*e*Pn	**Pn**	**08 42 22.8**	**+1.3**
	comp=E,1.6nm,0.4s						
RISI	**Rein**	**4.13**	**349**	P	**Pn**	**08 42 25.3**	**+1.9**
RISI				AML	AML		
	comp=E,636μm,0.5s						
RISI				AML	AML		
	comp=N,394μm,0.6s						
MOSI	**Grossmontoni**	**4.17**	**334**	P	**Pn**	**08 42 27.4**	**+3.5**
ROSI	**Rosskopf**	**4.23**	**343**	P	**Pn**	**08 42 26.5**	**+1.8**
ROSI				AML	AML		
	comp=N,246μm,1.6s						
ROSI				AML	AML		
	comp=E,276μm,1.3s						
SBF	**Sospel**	**4.30**	**285**	*e*Pn	**Pn**	**08 42 26.6**	**+1.0**
SBF	**Sospel**	**4.30**	**285**	*e*P	**Pn**	**08 42 29.1**	**+3.5**
SBF				*e*Sn	**Sn**	**08 43 14.1**	**-1.9**
	comp=E,37nm,0.9s						
VSL	**Villasalto**	**4.44**	**222**	P	**Pn**	**08 42 29.5**	**+2.0**
FETA	**Feichten**	**4.48**	**338**	*e*Pn	**Pn**	**08 42 30.8**	**+2.7**
	comp=E,16nm,0.8s,SNR=7.3						
WTTA	**Wattenberg**	**4.51**	**346**	*e*Pn	**Pn**	**08 42 31.3**	**+2.8**
	comp=E,6.4nm,0.2s,SNR=11						
WTTA	**Wattenberg**	**4.51**	**346**	P	**Pn**	**08 42 31.2**	**+2.8**
DAVOX	**Davos/Dischmat**	**4.54**	**330**	Pn	**Pn**	**08 42 32.3**	**+3.3**
	comp=E,4.6nm,0.3s,baz=162,slow=20,SNR=8.9						
DAVOX				Sn	**Sn**	**08 43 29.4**	**+7.4**
	comp=E,1.8nm,0.3s,baz=323,slow=22,SNR=2.1						
	comp=E,21nm,0.5s						
SQTA	**Sankt Quirin**	**4.55**	**343**	*e*Pn	**Pn**	**08 42 32.0**	**+2.9**
	comp=E,21nm,0.3s,SNR=6.6						
WATA	**Walderalm**	**4.59**	**346**	*e*Pn	**Pn**	**08 42 32.4**	**+2.8**
	comp=E,4.8nm,0.2s,SNR=13						
ARSA	**Arzberg**	**4.66**	**20**	*e*Pn	**Pn**	**08 42 30.9**	**+0.4**
	comp=E,2.6nm,0.4s						
MOTA	**Moosalm**	**4.69**	**342**	*e*Pn	**Pn**	**08 42 33.4**	**+2.4**
	comp=E,8.8nm,0.5s,SNR=5.2						
BIOA	**Bad Ischl, Aus**	**4.81**	**4**	*e*Pn	**Pn**	**08 42 33.8**	**+1.3**
	comp=E,8.6nm,0.3s,SNR=9.2						
RETA	**Reutte**	**4.91**	**340**	*e*Pn	**Pn**	**08 42 36.1**	**+2.2**
	comp=E,10nm,0.4s,SNR=5.8						
LMR	**La Mourre**	**4.91**	**277**	*e*Pn	**Pn**	**08 42 34.2**	**+0.4**
LMR	**La Mourre**	**4.91**	**277**	*e*P	**Pn**	**08 42 37.0**	**+3.2**
DAVA	**Damuels**	**4.98**	**333**	*e*Pn	**Pn**	**08 42 37.9**	**+2.9**
	comp=E,13nm,0.5s						
MBDF	**Montbardon**	**4.99**	**294**	*e*Pn	**Pn**	**08 42 35.9**	**+0.8**
MBDF	**Montbardon**	**4.99**	**294**	*e*P	**Pn**	**08 42 39.5**	**+4.4**
MBDF				*e*Sn	**Sn**	**08 43 38.6**	**+5.6**
	comp=E,15nm,0.8s						
MOA	**Molln**	**5.02**	**8**	*e*Pn	**Pn**	**08 42 37.0**	**+1.7**
	comp=E,1.6nm,0.1s						
RONA	**Rosalia, Austr**	**5.29**	**23**	*e*Pn	**Pn**	**08 42 39.9**	**+0.8**
	comp=E,1.1nm,0.3s						
LPG	**La Plagne**	**5.31**	**302**	*e*Pn	**Pn**	**08 42 40.7**	**+1.1**
LPG	**La Plagne**	**5.31**	**302**	*e*P	Pn	08 42 44.4	+4.8
LPG				*e*Sn	**Sn**	**08 43 39.0**	**-2.1**
	comp=E,14nm,0.7s						
LPL	**La Plagne**	**5.33**	**302**	*e*P	Pn	08 42 44.4	+4.6
CONA	**Conrad Observa**	**5.38**	**20**	*e*Pn	**Pn**	**08 42 40.7**	**+0.4**
	comp=E,1.9nm,0.2s						
SMRF	**Simiane la Rot**	**5.65**	**284**	*e*P	**Pn**	**08 42 47.1**	**+3.1**
ORIF	**Oris-en-Rattie**	**5.65**	**294**	*e*P	**Pn**	**08 42 47.8**	**+3.6**
ORIF				*e*Sn	**Sn**	**08 43 46.4**	**-2.9**
	comp=E,12nm,0.7s						
GERES	**GERESS Array B**	**5.97**	**3**	Pn	**Pn**	**08 42 48.8**	**+0.4**
	comp=E,0.7nm,0.3s,baz=180,slow=13,SNR=14						
GERES				Sn	**Sn**	**08 43 55.0**	**-1.9**
	comp=E,2.7nm,0.3s,baz=173,slow=23,SNR=2.8						
	comp=E,1.4nm,0.3s						
CKRC	**Cesky Krumlov**	**5.98**	**7**	*e*PN	**Pn**	**08 42 48.8**	**+0.2**
CKRC				*e*SN	**Sn**	**08 43 56.6**	**-0.6**
KHC	**Kasperske Hory**	**6.25**	**2**	*e*PN	**Pn**	**08 42 52.4**	**+0.2**
KHC				*e*SN	**Sn**	**08 44 02.1**	**-1.7**
CABF	**La Chapelle**	**6.28**	**309**	*e*Pn	**Pn**	**08 42 53.9**	**+1.2**
CABF	**La Chapelle**	**6.28**	**309**	*e*P	Pn	08 42 57.8	+5.1
VIVF	**Saint-Julien-l**	**6.46**	**291**	*e*P	**Pn**	**08 42 59.3**	**+4.1**
HINF	**Hinteralfeld**	**6.64**	**320**	*e*Pn	**Pn**	**08 42 58.4**	**+0.7**
HINF	**Hinteralfeld**	**6.64**	**320**	*e*P	Pn	08 43 03.3	+5.6
HINF				*e*Sn	**Sn**	**08 44 11.3**	**-2.3**
	comp=E,28nm,0.7s						
LASF	**Ste Croix**	**6.89**	**283**	*e*P	**Pn**	**08 43 05.4**	**+4.3**
CDF	**Champ du Feu**	**6.90**	**325**	*e*Pn	**Pn**	**08 43 02.1**	**+0.8**
CDF				*e*Sn	**Sn**	**08 44 17.0**	**-2.9**
	comp=E,16nm,0.4s						
HAU	**Haudompre**	**7.02**	**319**	*e*Pn	**Pn**	**08 43 03.6**	**+0.8**
HAU	**Haudompre**	**7.02**	**319**	*e*P	Pn	08 43 07.8	+5.0
HAU				*e*Sn	**Sn**	**08 44 20.1**	**-2.7**
	comp=E,17nm,0.4s						
NKC	**Novy Kostel**	**7.36**	**356**	*e*SN	**Sn**	**08 44 29.5**	**-1.7**
SMF	**Signal de Mont**	**7.63**	**303**	*e*Pn	**Pn**	**08 43 11.9**	**+0.6**
PAGF	**Fort de Pagny**	**7.70**	**320**	*e*Pn	**Pn**	**08 43 12.2**	**0.0**
PAGF	**Fort de Pagny**	**7.70**	**320**	*e*P	Pn	08 43 17.6	+5.4
PAGF				*e*Sn	**Sn**	**08 44 36.3**	**-3.2**
	comp=E,44nm,1.1s						
SFTF	**Sexfontaines**	**7.80**	**316**	*e*Pn	**Pn**	**08 43 13.9**	**+0.3**
SFTF	**Sexfontaines**	**7.80**	**316**	*e*P	Pn	08 43 18.4	+4.8
SFTF				*e*Sn	**Sn**	**08 44 38.4**	**-3.6**
	comp=E,22nm,0.9s						
LOR	**Lormes**	**7.92**	**307**	*e*Pn	**Pn**	**08 43 16.1**	**+0.9**
	baz=122						
LOR	**Lormes**	**7.92**	**307**	*e*P	Pn	08 43 20.2	+5.0
LOR				*e*Sn	**Sn**	**08 44 40.9**	**-4.0**
	comp=E,6.6nm,0.6s						
MEZF	**Maizieres J'vi**	**7.99**	**317**	*e*Pn	**Pn**	**08 43 19.0**	**+2.9**
MEZF	**Maizieres J'vi**	**7.99**	**317**	*e*P	Pn	08 43 21.5	+5.4
MEZF				*e*Sn	**Sn**	**08 44 43.2**	**-3.4**
	comp=E,8.9nm,0.5s						
AVF	**Avril sur Loir**	**8.00**	**303**	*e*Pn	**Pn**	**08 43 16.4**	**+0.1**
SSF	**Saint Saulge**	**8.03**	**305**	*e*Pn	**Pn**	**08 43 17.3**	**+0.6**
SSF	**Saint Saulge**	**8.03**	**305**	*e*P	Pn	08 43 21.4	+4.7
SAVF	**Savonnieres en**	**8.03**	**318**	*e*Sn	**Sn**	**08 44 44.3**	**-3.3**
	comp=E,6.6nm,0.5s						
MTLF	**Montolieu**	**8.04**	**277**	*e*P	Pn	08 43 21.8	+5.0
BGF	**Bois d'Agland**	**8.22**	**300**	*e*Pn	**Pn**	**08 43 19.2**	**-0.1**
CLL	**Collm**	**8.42**	**359**	*e*Pn	**Pn**	**08 43 22.0**	**0.0**
CLL				*e*Sn	Sn	08 44 44.0	-13
CLL				*e*Sg	**Sg**	**08 45 50.0**	**+0.1**
	comp=Z,20nm,1.3s						
TCF	**Toulx Ste Croi**	**8.54**	**297**	*e*Pn	**Pn**	**08 43 24.7**	**+1.0**
TCF	**Toulx Ste Croi**	**8.54**	**297**	*e*P	Pn	08 43 29.1	+5.4
ESDC	**Sonseca Array**	**13.29**	**262**	Pn	Pn	08 44 34.8	+6.0
	baz=66,slow=14,SNR=2.0						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**16.36**	**325**	Pn	**Pn**	**08 45 10.6**	**+0.9**
	baz=139,slow=15						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**31.26**	**202**	P	**P**	**08 47 41.0**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=18,slow=7.6,SNR=4.9						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**47.71**	**60**	P	P	08 49 52.9	-3.9
	comp=Z,0.7nm,0.9s,baz=288,slow=6.4,SNR=2.4						
	comp=Z,0.7nm,0.9s						
SONM	**Songino Array**	**61.74**	**50**	P	**P**	**08 51 35.8**	**-2.8**
	comp=Z,0.2nm,0.4s,baz=291,slow=6.0,SNR=1.6						
	comp=Z,0.2nm,0.4s						

*ISK **30** 08:44:18.9, 36°.95N×27°.94E, h8km, ML2.7/13*
*THE **30** 08:44:19.6, 36°.98N×27°.93E, h5km±5km, ML2.6/2, Error ellipse: s-maj=5.8km s-min=1.5km az=21.0*
*DDA **30** 08:44:19.4±0.0, 36°.96N×27°.97E, h5km±2km, ML2.5*

ISC 30 08:44:19.6±1.0, 36°.95N±0°.02×27°.92E±0°.02, h10km±8km, n34, σ0°.93/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.31**	**124**		PG	**Pg**	**08 44 25.4**	**-0.4**
TURN					SG	**Sg**	**08 44 30.0**	**+0.1**
TURN	**Turunc**	**0.31**	**124**		P	**Pg**	**08 44 25.3**	**-0.4**
TURN					S	**Sg**	**08 44 29.6**	**-0.3**
TURN				*i*	AML	AML	08 44 32.0	
	comp=N,650nm,0.4s							
TURN				*i*	AML	AML	08 44 32.0	
	comp=E,981nm,0.2s							
YER	**Yerkesik**	**0.34**	**57**		PG	**Pg**	**08 44 25.9**	**-0.5**
YER					SG	**Sg**	**08 44 30.9**	**0.0**
YER	**Yerkesik**	**0.34**	**57**		P	**Pg**	**08 44 26.1**	**-0.3**
YER					S	**Sg**	**08 44 30.8**	**-0.1**
BDRM	**Kayabasi**	**0.40**	**287**		P	**Pb**	**08 44 28.3**	**-0.5**
BDRM					S	**Sb**	**08 44 35.2**	**+0.2**
MULA	**Mugla, Merkez-**	**0.44**	**46**		P	**Pg**	**08 44 28.1**	**-0.1**
MULA					S	**Sg**	**08 44 33.6**	**-0.4**
BODT	**Bodrum**	**0.50**	**283**		PG	**Pg**	**08 44 29.4**	**+0.1**
BODT					SG	**Sb**	**08 44 38.1**	**+0.2**
BODT	**Bodrum**	**0.50**	**283**		P	**Pg**	**08 44 29.2**	**-0.1**
BODT					S	**Sg**	**08 44 37.0**	**+1.0**
DALY	**Dalyan (Mula)**	**0.60**	**103**		PG	**Pg**	**08 44 30.8**	**-0.4**
AYDN	**Tasoluk**	**0.71**	**357**		P	**Pg**	**08 44 33.3**	**+0.1**
AYDN					S	**Sg**	**08 44 42.8**	**+0.2**
AYDN				*i*	AML	AML	08 44 48.0	
	comp=E,218nm,0.4s							
AYDN				*i*	AML	AML	08 44 49.0	
	comp=N,220nm,0.3s							
DDIM	**Aydin, Didim**	**0.74**	**313**		P	**Pn**	**08 44 36.1**	**-0.1**
DDIM					S	**Sb**	**08 44 45.4**	**+0.5**
DDIM				*i*	AML	AML	08 44 50.0	
	comp=N,212nm,0.5s							
DDIM				*i*	AML	AML	08 44 50.0	
	comp=E,258nm,0.4s							
ARG	**Arkhangelos**	**0.75**	**167**		P	**Pg**	**08 44 34.2**	**+0.2**
ARG					S	**Sn**	**08 44 47.2**	**-0.5**
	402nm,0.6s							
GCAM	**G?zelcaml?**	**0.93**	**324**		PG	**Pg**	**08 44 37.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.93**	**324**		P	**Pn**	**08 44 38.7**	**0.0**
GCAM					S	**Sb**	**08 44 51.0**	**+0.9**
GCAM				*i*	AML	AML	08 44 55.0	
	comp=E,212nm,0.4s							
GCAM				*i*	AML	AML	08 44 56.0	
	comp=N,176nm,0.3s							
TAVA	**DENIZLI_Tavas**	**0.94**	**57**		P	**Pg**	**08 44 37.1**	**-0.7**
TAVA					S	**Sg**	**08 44 49.7**	**-0.3**
FETY	**Fethiye**	**0.98**	**108**		PG	**Pg**	**08 44 37.9**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**359**		PG	**Pg**	**08 44 38.5**	**-0.2**
SMG	**Samos**	**1.15**	**311**		P	**Pn**	**08 44 41.9**	**+0.1**
APMY	**Acipayam-Deniz**	**1.22**	**64**		PN	**Pb**	**08 44 42.3**	**-0.5**
GOLH	**Golhisar**	**1.34**	**77**		P	**Pg**	**08 44 45.7**	**+0.4**
GOLH					S	**Sg**	**08 45 07.2**	**+4.5**
DGB	**zmir**	**1.38**	**323**		P	**Pn**	**08 44 44.3**	**-0.6**
KARP	**Karpathos**	**1.53**	**204**		P	**Pn**	**08 44 46.9**	**-0.1**
KARP					S	**Sn**	**08 45 06.3**	**-0.7**
	158nm,0.9s							
AKAS	**Kas**	**1.53**	**117**		PN	**Pn**	**08 44 47.1**	**0.0**
AKAS	**Kas**	**1.53**	**117**		P	**Pb**	**08 44 48.3**	**+0.1**
AKAS					S	**Sg**	**08 45 10.3**	**+1.5**
AKAS				*i*	AML	AML	08 45 24.0	
	comp=N,73nm,0.8s							
BLCB	**Balcova**	**1.59**	**334**		PN	**Pn**	**08 44 48.1**	**+0.2**
ELL	**Elmali**	**1.61**	**97**		PN	**Pn**	**08 44 48.1**	**-0.1**
MANT	**Manisa**	**1.62**	**18**		P	**Pb**	**08 44 49.5**	**-0.1**
MANT					S	**Sn**	**08 45 09.4**	**-0.1**
URLA	**Izmir**	**1.76**	**324**		PN	**Pn**	**08 44 50.7**	**+0.5**
URLA	**Izmir**	**1.76**	**324**		P	**Pg**	**08 44 53.2**	**-0.1**
URLA					S	**Sg**	**08 45 16.2**	**+0.2**
URLA				*i*	AML	AML	08 45 23.0	
	comp=E,48nm,0.9s							
PASA	**Karahalli, USA**	**1.87**	**41**		P	**Pb**	**08 44 53.1**	**-0.8**
PASA					S	**Sn**	**08 45 14.3**	**-1.1**
KORT	**Korkueli**	**1.94**	**88**		PN	**Pn**	**08 44 52.9**	**+0.1**
KORT	**Korkueli**	**1.94**	**88**		P	**Pg**	**08 44 57.0**	**+0.1**
KORT					S	**Sg**	**08 45 25.3**	**+3.2**
USAK	**Uak-Merkez**	**1.96**	**26**		P	**Pn**	**08 44 53.8**	**+0.8**
USAK					S	**Sn**	**08 45 16.2**	**-1.5**
USAK				*i*	AML	AML	08 46 09.0	
	comp=N,50nm,2.5s							
AKUM	**Antalya-Kumluc**	**2.04**	**107**		P	**Pg**	**08 44 58.3**	**-0.5**
AKUM					S	**Sg**	**08 45 24.7**	**-0.6**

ROM 30 08:55:52.4±0.1, 42°.900N±0°.006×13°.102E±0°.009, h4km, ML3.3/18, 13C-6D, Error ellipse: s-maj=0.7km s-min=0.6km az=108.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.07**	**79**	⇑P		Pg	08 55 54.1	+0.1
T1245	**Castelsantange**	**0.08**	**124**		P	Pg	08 55 54.7	+0.6
T1245					S	Sg	08 55 56.2	+0.8
T1245					AML	AML		
T1245					AML	AML		
AM05	**Amandola Campo**	**0.20**	**67**		P	Pg	08 55 56.5	+0.2
AM05					S	Sg	08 55 59.5	+0.5
AM05					AML	AML		
	comp=E,5340μm,0.2s							
AM05					AML	AML		
	comp=N,4720μm,0.2s							
AM05					AML	AML		
	comp=E,24050μm,0.3s							
AM05					AML	AML		
	comp=N,946μm,0.1s							
AM05					AML	AML		
	comp=E,5335μm,0.2s							
AM05					AML	AML		
	comp=N,4715μm,0.2s							
AM05					AML	AML		
	comp=E,24000μm,0.3s							
AM05					AML	AML		
	comp=N,947μm,0.1s							
AM05					AML	AML		
	comp=E,6105μm,0.7s							
AM05					AML	AML		
	comp=E,27300μm,0.7s							
AM05					AML	AML		
	comp=N,1390μm,1.1s							
AM05					AML	AML		
	comp=N,6585μm,0.5s							
AM05					AML	AML		
	comp=E,24016μm,0.3s							
AM05					AML	AML		
	comp=E,5335μm,0.2s							
AM05					AML	AML		
	comp=N,4717μm,0.2s							
AM05					AML	AML		
	comp=N,945μm,0.1s							
T1217	**Poggiodomo (PG**	**0.23**	**214**	⇑P		Pg	08 55 58.1	+1.3
T1217					AML	AML		
	comp=E,5205μm,0.9s							
T1217					AML	AML		
	comp=N,6595μm,1.5s							
T1217					AML	AML		
	comp=E,5170μm,0.9s							
T1217					AML	AML		
	comp=N,6500μm,1.5s							
T1217					AML	AML		
	comp=E,5200μm,0.9s							
T1217					AML	AML		
	comp=N,7760μm,0.3s							
T1217					AML	AML		
	comp=N,7715μm,0.4s							
T1217					AML	AML		
	comp=E,11150μm,0.6s							
T1217					AML	AML		
	comp=N,11950μm,0.5s							
T1217					AML	AML		
	comp=N,11400μm,0.5s							
T1217					AML	AML		
	comp=E,11350μm,0.6s							
T1217					AML	AML		
	comp=E,11100μm,0.6s							
T1217					AML	AML		
	comp=N,5498μm,0.6s							
T1217					AML	AML		
	comp=E,4026μm,0.5s							
T1217					AML	AML		
	comp=E,4148μm,0.5s							
T1217					AML	AML		
	comp=N,5633μm,0.6s							
GUMA	**Gualdo di Mace**	**0.24**	**46**	⇑P		Pg	08 55 57.6	+0.6
GUMA					S	Sg	08 56 01.4	+1.3
GUMA					AML	AML		
	comp=E,24100μm,0.6s							
GUMA					AML	AML		
	comp=N,23550μm,0.5s							
GUMA					AML	AML		
	comp=E,26700μm,0.5s							
GUMA					AML	AML		
	comp=N,28100μm,0.3s							
GUMA					AML	AML		
	comp=E,39750μm,0.7s							
GUMA					AML	AML		
	comp=N,53000μm,0.6s							
GUMA					AML	AML		
	comp=E,38200μm,0.3s							
GUMA					AML	AML		
	comp=N,62350μm,0.5s							
GUMA					AML	AML		
	comp=N,23577μm,0.5s							
GUMA					AML	AML		
	comp=N,28121μm,0.3s							
GUMA					AML	AML		
	comp=E,24119μm,0.7s							
GUMA					AML	AML		
	comp=E,26680μm,0.5s							
T1241	**Roccafluvione,**	**0.25**	**100**	⇑P		Pg	08 55 58.0	+0.8
T1241					S	Sg	08 56 01.6	+1.2
T1241					AML	AML		
	comp=N,11350μm,0.6s							
T1241					AML	AML		
	comp=E,12740μm,1.5s							
T1241					AML	AML		
	comp=N,11600μm,0.6s							
T1241					AML	AML		
	comp=E,12900μm,1.5s							
T1241					AML	AML		
	comp=N,11350μm,0.6s							
T1241					AML	AML		
	comp=E,12720μm,1.5s							
T1241					AML	AML		
	comp=N,11550μm,0.6s							
T1241					AML	AML		
	comp=E,16900μm,0.6s							
T1241					AML	AML		
	comp=N,12085μm,0.4s							
T1241					AML	AML		
	comp=N,12055μm,0.4s							
T1241					AML	AML		
	comp=E,16850μm,0.6s							
T1241					AML	AML		
	comp=E,10101μm,0.3s							
T1241					AML	AML		
	comp=E,10598μm,0.3s							
T1241					AML	AML		
	comp=N,10530μm,0.3s							
T1241					AML	AML		
	comp=N,11049μm,0.3s							
SEF1	**Sefro**	**0.27**	**335**	⇑P		Pb	08 55 58.9	-0.9
SEF1					AML	AML		
	comp=E,7190μm,0.3s							
SEF1					AML	AML		
	comp=N,5923μm,0.3s							
SEF1					AML	AML		
	comp=N,5904μm,0.3s							
SEF1					AML	AML		
	comp=E,17750μm,0.6s							
SEF1					AML	AML		
	comp=N,20500μm,0.2s							
SEF1					AML	AML		
	comp=E,7189μm,0.3s							
SEF1					AML	AML		
	comp=N,5898μm,0.3s							
ASSB	**Assisi San Ben**	**0.35**	**294**	⇑P		Pb	08 56 00.7	-0.6
ASSB					AML	AML		
	comp=E,1910μm,0.4s							
ASSB					AML	AML		
	comp=N,2625μm,0.7s							
ASSB					AML	AML		
	comp=E,9975μm,0.9s							
ASSB					AML	AML		
	comp=N,10270μm,0.5s							
ASSB					AML	AML		
	comp=E,1742μm,0.2s							
ASSB					AML	AML		
	comp=N,2602μm,0.4s							
MNTP	**Montappone**	**0.36**	**48**	P		Pg	08 56 00.3	+0.9
MNTP					AML	AML		
	comp=E,9675μm,0.7s							
MNTP					AML	AML		
	comp=N,6300μm,0.9s							
MNTP					AML	AML		
	comp=E,16050μm,0.6s							
MNTP					AML	AML		
	comp=N,13900μm,0.2s							
MNTP					AML	AML		
	comp=N,5025μm,0.5s							
MNTP					AML	AML		
	comp=E,9674μm,0.7s							
SNTG	**Esanatoglia**	**0.37**	**342**	⇓P		Pb	08 56 01.1	-0.6
SNTG					AML	AML		
	comp=E,1335μm,0.5s							
SNTG					AML	AML		
	comp=E,1307μm,0.5s							
SNTG					AML	AML		
	comp=N,1510μm,1.0s							
SNTG					AML	AML		
	comp=E,1334μm,0.5s							
SNTG					AML	AML		
	comp=N,1390μm,1.0s							
SNTG					AML	AML		
	comp=N,1515μm,1.0s							
SNTG					AML	AML		
	comp=N,3170μm,1.4s							
SNTG					AML	AML		
	comp=E,3305μm,0.6s							
SNTG					AML	AML		
	comp=N,3595μm,0.1s							
SNTG					AML	AML		
	comp=E,3165μm,0.6s							
SNTG					AML	AML		
	comp=N,1291μm,0.1s							
SNTG					AML	AML		
	comp=N,1424μm,0.6s							
SNTG					AML	AML		
	comp=E,1246μm,0.4s							
SNTG					AML	AML		
	comp=E,1334μm,0.5s							
RM33	**Pellescritta (**	**0.40**	**168**		S	Sb	08 56 08.0	-0.5
OFFI	**Offida**	**0.43**	**85**	⇑P		Pb	08 56 01.9	-0.6
OFFI					S	Sb	08 56 09.5	+0.1
OFFI					AML	AML		
	comp=E,10950μm,0.6s							
OFFI					AML	AML		
	comp=N,10600μm,0.4s							
OFFI					AML	AML		
	comp=E,10984μm,0.6s							
OFFI					AML	AML		
	comp=N,10610μm,0.4s							
FOSV	**Fossato di Vic**	**0.47**	**328**	⇓P		Pb	08 56 02.4	-0.8
FOSV					AML	AML		
	comp=E,1545μm,1.5s							
FOSV					AML	AML		
	comp=N,2155μm,0.2s							
FOSV					AML	AML		
	comp=N,3185μm,0.4s							
FOSV					AML	AML		
	comp=E,2230μm,0.1s							
FOSV					AML	AML		

comp=E,2120μm,0.7s
CESX AML AML
comp=N,2320μm,0.7s
CESX AML AML
comp=E,3750μm,0.6s
CESX AML AML
comp=N,3520μm,0.3s
CESX AML AML
comp=N,2318μm,0.7s
CESX AML AML
comp=E,2121μm,0.7s
AQU L'Aquila 0.59 158 P Pg 08 56 04.4 +0.7
AQU S Sb 08 56 13.2 -0.8
TRTR Tortoreto Alta 0.60 98 ⇑P Pb 08 56 05.2 -0.2
TRTR S Sb 08 56 15.1 +0.8
TRTR AML AML
comp=E,7275μm,0.5s
TRTR AML AML
comp=N,7550μm,0.3s
TRTR AML AML
comp=E,7340μm,0.4s
TRTR AML AML
comp=N,7550μm,0.3s
TRTR AML AML
comp=E,7276μm,0.5s
ATFO Monte Foce - G 0.61 320 ⇓P Pb 08 56 04.9 -0.7
ATFO AML AML
comp=E,941μm,0.5s
ATFO AML AML
comp=N,807μm,0.5s
ATFO AML AML
comp=E,2475μm,0.4s
ATFO AML AML
comp=N,4150μm,0.3s
ATFO AML AML
comp=E,943μm,0.5s
ATFO AML AML
comp=N,807μm,0.5s
ARVD Arcevia 0.61 349 S Sb 08 56 15.0 +0.4
FIAM Fiamignano 0.63 179 P Pg 08 56 05.0 +0.5
FIAM S Sb 08 56 14.6 -0.6
ATVO AVT- Monte Val 0.70 314 ⇑P Pg 08 56 06.5 +0.6
ATVO AML AML
comp=E,554μm,1.1s
ATVO AML AML
comp=N,703μm,0.7s
ATVO AML AML
comp=E,1875μm,0.7s
ATVO AML AML
comp=N,1745μm,0.5s
ATVO AML AML
comp=N,703μm,0.7s
ATVO AML AML
comp=E,530μm,0.5s
VCEL Villa Celiera 0.74 133 ⇓P Pg 08 56 06.7 +0.1
VCEL S Sb 08 56 18.6 +0.1
VCEL AML AML
comp=E,1795μm,0.5s
VCEL AML AML
comp=N,1705μm,1.3s
VCEL AML AML
comp=E,2660μm,0.5s
VCEL AML AML
comp=N,1805μm,0.7s
VCEL AML AML
comp=E,1797μm,0.5s
VCEL AML AML
comp=N,1670μm,0.6s
MPAG Monte Paganucc 0.77 341 ⇑P Pb 08 56 08.0 -0.4
MPAG AML AML
comp=E,726μm,0.9s
MPAG AML AML
comp=N,666μm,0.7s
MPAG AML AML
comp=E,1185μm,0.7s
MPAG AML AML
comp=N,1250μm,0.3s
MPAG AML AML
comp=E,1552μm,1.0s
MPAG AML AML
comp=E,517μm,0.9s
MPAG AML AML
comp=N,1618μm,0.6s
MPAG AML AML
comp=N,666μm,0.7s
FSSB Fossombrone 0.83 343 ⇓P Pb 08 56 09.0 -0.3
FSSB AML AML
comp=E,1585μm,1.4s
FSSB AML AML
comp=N,2295μm,0.4s
FSSB AML AML
comp=E,3375μm,0.3s
FSSB AML AML
comp=N,4200μm,0.3s
FSSB AML AML
comp=E,1456μm,0.4s
FSSB AML AML
comp=N,2297μm,0.4s
T0110 Collepietro 0.84 143 ⇓P Pg 08 56 08.5 0.0
T0110 AML AML
comp=E,1665μm,1.5s
T0110 AML AML
comp=N,1675μm,0.7s
T0110 AML AML
comp=E,1675μm,0.7s
T0110 AML AML
comp=N,1830μm,1.2s
T0110 AML AML
comp=N,1562μm,0.6s
T0110 AML AML
comp=E,1611μm,0.5s
LPEL Lama dei Pelig 1.17 136 P Pg 08 56 14.7 0.0
LPEL S Sn 08 56 31.5 -0.4
CSNT Castellina Chi 1.44 294 P Pb 08 56 19.7 -0.1
CSNT AML AML
comp=E,96μm,0.6s
CSNT AML AML
comp=N,112μm,0.6s
CSNT AML AML
comp=E,169μm,0.7s
CSNT AML AML
comp=N,184μm,0.4s
CSNT AML AML
comp=N,113μm,0.6s
CSNT AML AML
comp=E,95μm,0.6s
PAOL Paolisi 2.16 149 P Pb 08 56 31.8 -0.3
PAOL S Sn 08 56 56.0 -0.5
GSCL Gusciola 2.33 309 S Sb 08 57 05.0 +0.9
CORF Corte 2.98 260 S Sg 08 57 29.0 +1.0
PGF Pioggiola 3.04 265 P Pg 08 56 48.9 -1.7
GORR Gorreto 3.25 303 S Sb 08 57 30.0 -0.4
ZAG Zagreb 3.58 34 ⇑P Pb 08 56 56.8 +0.5
ACOM Acomizza, Ital 3.66 4 ⇑P Pn 08 56 51.9 +2.0
KOSI Kohlern 3.77 342 S Sb 08 57 48.0 +2.4

*PRU **30** 08:56:44.3±0.0, 42°.72N×13°.60E, h0km*
ROM 30 08:56:44.7±0.1, 42°.776N±0°.004×13°.144E±0°.005, h9km, ML3.3/25, 11C-12D, Error ellipse: s-maj=0.4km s-min=0.4km az=229.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**22**	⇑P	Pg	08 56 47.5	+0.4
T1245				S	Sg	08 56 49.2	+0.3
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.14**	**14**	⇓P	Pg	08 56 48.5	+0.5
MC2				S	Sg	08 56 50.9	+0.7
T1204	**Amatrice, Fraz**	**0.16**	**128**	⇑P	Pg	08 56 48.9	+0.7
T1217	**Poggiodomo (PG**	**0.17**	**248**	⇑P	Pg	08 56 48.9	+0.6
T1217				S	Sg	08 56 52.0	+1.2
T1217				AML	AML		
	comp=E,11350μm,0.6s						
T1217				AML	AML		
	comp=N,11395μm,0.5s						
LNSS	**Leonessa**	**0.19**	**204**	P	Pg	08 56 49.4	+0.7
LNSS				S	Sg	08 56 52.8	+1.4
FEMA	**Monte Fema**	**0.20**	**340**	P	Pg	08 56 49.5	+0.7
FEMA				S	Sg	08 56 52.5	+0.9
FEMA				AML	AML		
	comp=E,42050μm,0.2s						
FEMA				AML	AML		
	comp=N,36200μm,0.7s						
FEMA				AML	AML		
	comp=E,42100μm,0.2s						
T1215	**Vallo di Nera,**	**0.20**	**277**	P	Pg	08 56 49.3	+0.4
T1215				AML	AML		
	comp=E,9175μm,0.4s						
T1215				AML	AML		
	comp=E,9110μm,0.5s						
T1215				AML	AML		
	comp=N,11200μm,1.1s						
T1215				AML	AML		
	comp=E,9175μm,0.4s						
T1215				AML	AML		
	comp=N,11150μm,1.1s						
T1215				AML	AML		
	comp=E,9110μm,0.4s						
T1215				AML	AML		
	comp=N,11255μm,1.1s						
T1215				AML	AML		
	comp=E,9180μm,0.4s						
T1215				AML	AML		
	comp=E,9125μm,0.5s						
T1215				AML	AML		
	comp=N,11170μm,1.1s						
T1215				AML	AML		
	comp=E,9180μm,1.6s						
T1215				AML	AML		
	comp=E,9125μm,1.5s						
T1241	**Roccafluvione,**	**0.23**	**69**	⇓P	Pg	08 56 50.4	+1.1
T1241				S	Sg	08 56 54.2	+1.8
T1241				AML	AML		
	comp=E,16900μm,0.6s						
T1241				AML	AML		
	comp=N,12085μm,0.4s						
T1241				AML	AML		
	comp=E,16900μm,0.6s						
T1241				AML	AML		
	comp=N,12060μm,0.4s						
T1241				AML	AML		
	comp=E,16850μm,0.6s						
T1241				AML	AML		
	comp=N,12065μm,0.4s						
T1241				AML	AML		
	comp=E,16900μm,0.6s						
T1241				AML	AML		
	comp=N,12080μm,0.4s						
T1241				AML	AML		
	comp=N,12075μm,0.4s						
T1241				AML	AML		
	comp=E,16850μm,1.4s						
T1241				AML	AML		
	comp=N,12075μm,1.6s						
T1243	**Rocca Santa Ma**	**0.24**	**109**	P	Pg	08 56 49.8	+0.2
T1243				S	Sg	08 56 54.0	+1.2
AM05	**Amandola Campo**	**0.25**	**37**	P	Pg	08 56 50.4	+0.6
AM05				AML	AML		
	comp=E,6105μm,0.7s						
AM05				AML	AML		
	comp=N,6585μm,0.5s						
AM05				AML	AML		
	comp=E,27300μm,0.7s						
AM05				AML	AML		
	comp=N,1385μm,1.1s						
AM05				AML	AML		
	comp=N,6590μm,0.5s						
CAMP	**Campotosto**	**0.31**	**141**	⇑P	Pg	08 56 51.2	+0.3
GUMA	**Gualdo di Mace**	**0.32**	**26**	⇓P	Pg	08 56 51.8	+0.7
GUMA				S	Sb	08 56 57.2	-0.8
GUMA				AML	AML		
	comp=E,39750μm,0.6s						
GUMA				AML	AML		
	comp=N,53000μm,0.6s						
GUMA				AML	AML		
	comp=N,62350μm,0.5s						
GUMA				AML	AML		
	comp=E,39750μm,0.7s						
GUMA				AML	AML		
	comp=N,53000μm,0.6s						
GUMA				AML	AML		
	comp=N,62350μm,1.5s						
GUMA				AML	AML		
	comp=N,53000μm,1.4s						
GUMA				AML	AML		
	comp=E,38200μm,0.3s						
T1211	**Morro Reatino**	**0.32**	**221**	S	Sb	08 56 58.0	-0.1
TERO	**Teramo**	**0.37**	**114**	P	Pg	08 56 52.2	+0.2
SEF1	**Sefro**	**0.40**	**339**	⇑P	Pg	08 56 52.8	+0.3
SEF1				S	Sb	08 56 59.0	-1.2
SEF1				AML	AML		
	comp=E,17750μm,0.7s						
SEF1				AML	AML		
	comp=E,17750μm,0.6s						
SEF1				AML	AML		
	comp=N,20500μm,0.2s						
OFFI	**Offida**	**0.43**	**68**	P	Pb	08 56 54.1	-0.4
OFFI				AML	AML		
	comp=N,9030μm,0.7s						
OFFI				AML	AML		
	comp=E,7400μm,1.6s						
MNTP	**Montappone**	**0.43**	**33**	⇓P	Pb	08 56 54.2	-0.3
ASSB	**Assisi San Ben**	**0.45**	**307**	⇓P	Pg	08 56 53.5	+0.1
ASSB				S	Sg	08 57 00.1	+0.9
ASSB				AML	AML		
	comp=E,9975μm,0.9s						
ASSB				AML	AML		
	comp=N,10270μm,0.5s						
ASSB				AML	AML		
	comp=E,9975μm,1.1s						
SSM1	**San Severino M**	**0.45**	**3**	P	Pg	08 56 53.9	+0.4
GAG1	**Gagliole**	**0.47**	**353**	⇑P	Pg	08 56 54.4	+0.6
GAG1				AML	AML		
	comp=E,13250μm,0.3s						
GAG1				AML	AML		
	comp=N,13050μm,1.3s						
SNTG	**Esanatoglia**	**0.50**	**343**	P	Pg	08 56 54.6	+0.2
SNTG				S	Sb	08 57 02.3	-0.9
SNTG				AML	AML		
	comp=E,3305μm,0.6s						
SNTG				AML	AML		
	comp=E,3165μm,0.6s						
SNTG				AML	AML		
	comp=N,3595μm,0.1s						
SNTG				AML	AML		
	comp=N,3170μm,1.4s						
SNTG				AML	AML		
	comp=E,3305μm,0.6s						
SNTG				AML	AML		
	comp=N,3170μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.55**	**318**	⇓P	Pg	08 56 55.5	+0.1
ATCC				S	Sb	08 57 04.2	-0.5
ATCC				AML	AML		
	comp=N,5730μm,0.4s						
ATCC				AML	AML		
	comp=E,6130μm,0.2s						
ATCC				AML	AML		
	comp=N,5725μm,0.4s						
TRTR	**Tortoreto Alta**	**0.57**	**87**	⇑P	Pb	08 56 56.9	+0.1
FOSV	**Fossato di Vic**	**0.59**	**332**	⇓P	Pg	08 56 56.1	0.0
FOSV				AML	AML		
	comp=E,2230μm,0.1s						
FOSV				AML	AML		
	comp=N,3185μm,0.4s						
FOSV				AML	AML		
	comp=N,3185μm,1.6s						
MURB	**Monte Urbino**	**0.67**	**317**	P	Pg	08 56 57.7	+0.1
MURB				S	Sb	08 57 08.3	+0.3
MURB				AML	AML		
	comp=E,10255μm,1.6s						
MURB				AML	AML		
	comp=N,13300μm,0.3s						
MURB				AML	AML		
	comp=N,13350μm,0.3s						
MURB				AML	AML		
	comp=N,13300μm,0.3s						
MURB				AML	AML		
	comp=E,10230μm,1.6s						
MURB				AML	AML		
	comp=N,13300μm,1.7s						
MURB				AML	AML		
	comp=E,11200μm,0.4s						
MURB				AML	AML		
	comp=N,13350μm,1.7s						
MURB				AML	AML		
	comp=E,10230μm,0.4s						
SRES S.Oreste - Sor 0.71 221 P Pg 08 56 58.7 +0.3
SRES AML AML
comp=E,712μm,0.7s
SRES AML AML
comp=N,688μm,1.6s
ATFO Monte Foce - G 0.72 325 P Pg 08 56 58.7 0.0
ATFO S Sb 08 57 10.1 +0.4
ATFO AML AML
comp=N,4150μm,0.3s
ATFO AML AML
comp=E,2475μm,0.4s
ARVD Arcevia 0.74 348 ⇑P Pg 08 56 59.0 +0.1
ARVD S Sb 08 57 10.3 +0.3
ARVD AML AML
comp=E,1905μm,0.5s
ARVD AML AML
comp=N,1235μm,0.8s
ATVO AVT- Monte Val 0.81 319 ⇓P Pb 08 57 00.8 -0.2
ATVO AML AML
comp=E,1875μm,0.7s
ATVO AML AML
comp=N,1745μm,0.5s
ATVO AML AML
comp=E,1875μm,1.3s
AOI Ancona 0.84 23 P Pb 08 57 01.4 -0.2
AOI AML AML
comp=N,1600μm,0.3s
AOI AML AML
comp=N,1605μm,0.3s
AOI AML AML
comp=E,1650μm,0.3s
PIEI Pieia 0.88 330 ⇓P Pg 08 57 01.6 0.0
PIEI AML AML
comp=N,1165μm,0.9s
PIEI AML AML
comp=E,1580μm,0.3s
PIEI AML AML
comp=N,1165μm,1.1s
MPAG Monte Paganucc 0.90 342 ⇓P Pg 08 57 02.2 +0.2
MPAG AML AML
comp=N,1435μm,0.7s
MPAG AML AML
comp=E,1315μm,0.4s
FSSB Fossombrone 0.95 344 ⇑P Pg 08 57 03.2 +0.1
FSSB AML AML
comp=E,5915μm,0.3s
FSSB AML AML
comp=N,4200μm,0.3s
CAFI Castiglion Fio 1.02 303 ⇓P Pb 08 57 04.6 -0.1
CAFI AML AML
comp=E,1530μm,0.6s
CAFI AML AML
comp=N,1595μm,0.6s
CAFI AML AML
comp=E,1530μm,1.4s
CAFI AML AML
comp=N,1595μm,1.4s
LPEL Lama dei Pelig 1.06 133 ⇑P Pg 08 57 04.5 -0.6
VIVA Pratoni del Vi 1.06 195 P Pg 08 57 05.0 0.0
MCIV Monte Civitell 1.08 271 ⇓P Pn 08 57 05.9 -0.2
MCIV AML AML
comp=E,822μm,0.3s
MCIV AML AML
comp=N,568μm,0.7s
SF04 Casetta 1.09 274 ⇑P Pn 08 57 06.4 +0.1
CASP Castiglione de 1.68 271 AML AML
comp=E,106μm,0.4s
CASP AML AML
comp=N,74μm,0.4s
ABTA Abfaltersbach 4.00 354 *e*Pn Pn 08 57 45.8 -0.5
comp=N,17nm,0.6s
FETA Feichten 4.58 339 *e*Pn Pn 08 57 58.1 +3.8
comp=N,4.4nm,0.4s
WTTA Wattenberg 4.61 347 *i* Pn Pn 08 57 57.3 +2.5
comp=N,2.4nm,0.3s
SQTA Sankt Quirin 4.65 344 *e*Pn Pn 08 57 57.8 +2.5
comp=N,3.4nm,0.3s
WATA Walderalm 4.69 347 *e*Pn Pn 08 57 58.0 +2.2
comp=N,3.3nm,0.3s
BIOA Bad Ischl, Aus 4.93 4 *e*Pn Pn 08 58 01.3 +2.3
comp=N,6.4nm,0.3s
RETA Reutte 5.00 341 *i* Pn Pn 08 57 59.5 -0.6
comp=N,1.2nm,0.2s
DAVA Damuels 5.07 334 *e*Pn Pn 08 58 04.1 +3.1
comp=N,6.6nm,0.5s
MOA Molln 5.13 8 *e*Pn Pn 08 58 01.2 -0.6
comp=N,3.7nm,0.5s
RONA Rosalia, Austr 5.40 23 *e*Pn Pn 08 58 07.9 +2.3
comp=N,1.6nm,0.4s
CONA Conrad Observa 5.50 19 *e*Pn Pn 08 58 07.4 +0.5
comp=N,1.0nm,0.3s
CKRC Cesky Krumlov 6.10 7 *e*PN Pn 08 58 15.3 +0.3
CKRC *e*SN Sn 08 59 23.8 -1.2
KHC Kasperske Hory 6.36 3 *e*PN Pn 08 58 19.1 +0.4
KHC *e*SN Sn 08 59 30.0 -1.5

*LDG **30** 08:57:55.8±0.2, 42°.67N×13°.21E, h10km, Ml3.5/21, Error ellipse: s-maj=6.8km s-min=4.5km az=44.0*
*ROM **30** 08:57:55.4±0.0, 42°.711N±0°.002×13°.219E±0°.002, h11km, ML3.5/50, Error ellipse: s-maj=0.2km s-min=0.2km az=249.0*
ISC 30 08:57:54.9±0.7, 42°.70N±0°.01×13°.19E±0°.02, h16km±3km, n135, σ1§50/178, 19C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.06**	**294**	⇓P	**Pg**	**08 57 58.2**	**+0.1**
T1213				S	**Sg**	**08 57 60.0**	**-0.2**
T1214	**Arquata del Tr**	**0.06**	**11**	⇓P	**Pg**	**08 57 57.9**	**-0.3**
T1214				S	**Sg**	**08 57 59.4**	**-0.9**
T1201	**Domo (RI)**	**0.06**	**137**	⇓*i*P	**Pg**	**08 57 58.3**	**+0.2**
T1201				S	**Sg**	**08 58 00.2**	**0.0**
T1218	**Civita (PG)**	**0.07**	**240**	⇑P	**Pg**	**08 57 58.5**	**+0.3**
T1218				S	**Sg**	**08 58 00.5**	**+0.2**
T1244	**Arquata del Tr**	**0.09**	**55**	⇑*i*P	**Pg**	**08 57 58.1**	**-0.3**
T1244				S	**Sg**	**08 58 00.0**	**-0.7**
T1204	**Amatrice, Fraz**	**0.10**	**107**	⇑P	**Pg**	**08 57 58.4**	**-0.1**
T1204				S	**Sg**	**08 58 00.2**	**-0.6**
T1204				AML	AML		
T1204				AML	AML		
T1212	**Cascia, Frazio**	**0.12**	**294**	⇑P	**Pg**	**08 57 59.0**	**+0.4**
T1212				S	**Sg**	**08 58 01.5**	**+0.3**
LNSS	**Leonessa**	**0.15**	**229**	⇑*i*P	**Pb**	**08 57 59.8**	**+0.4**
LNSS				S	**Sb**	**08 58 03.0**	**+0.6**
LNSS				AML	AML		
	comp=E,32950μm,0.3s						
LNSS				AML	AML		
	comp=N,93400μm,0.3s						
T1245	**Castelsantange**	**0.15**	**358**	P	**Pg**	**08 57 59.2**	**0.0**
T1245				S	**Sg**	**08 58 01.8**	**-0.2**
T1245				AML	AML		
	comp=E,89600μm,0.3s						
T1245				AML	AML		
	comp=E,95300μm,0.3s						
T1245				AML	AML		
	comp=E,95250μm,0.3s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=N,76217μm,0.4s						
T1245				AML	AML		
	comp=E,49045μm,0.3s						
T1245				AML	AML		
	comp=E,49774μm,0.3s						
T1245				AML	AML		
	comp=N,85230μm,1.2s						
T1243	**Rocca Santa Ma**	**0.19**	**92**	⇑P	**Pg**	**08 57 59.5**	**-0.1**
T1243				S	**Sg**	**08 58 02.3**	**-0.4**
RM33	**Pellescritta (**	**0.19**	**175**	⇑*i*P	**Pb**	**08 58 00.3**	**+0.1**
RM33				S	**Sb**	**08 58 04.0**	**+0.3**
RM33				AML	AML		
	comp=E,71200μm,0.3s						
RM33				AML	AML		
	comp=N,34950μm,0.2s						
RM33				AML	AML		
	comp=E,70350μm,0.3s						
RM33				AML	AML		
	comp=N,36550μm,0.2s						
RM33				AML	AML		
	comp=N,36500μm,0.2s						
RM33				AML	AML		
	comp=N,34950μm,0.2s						
RM33				AML	AML		
	comp=E,71150μm,0.3s						

T1217	**Poggiodomo (PG**	**0.19 273⇑**	*i*P	**Pb**	**08 58 00.3 +0.2**
T1217			S	**Sb**	**08 58 03.9 +0.3**
T1217			AML	AML	
	comp=E,19000μm,0.7s				
T1217			AML	AML	
	comp=N,29000μm,0.4s				
T1217			AML	AML	
	comp=E,18950μm,0.7s				
T1217			AML	AML	
	comp=E,18550μm,0.7s				
T1217			AML	AML	
	comp=N,28950μm,0.4s				
T1217			AML	AML	
	comp=N,29300μm,0.4s				
MC2	**Monte Cornacci**	**0.21 359**	*e*P	**Pg**	**08 57 60.0 -0.1**
MC2			S	**Sg**	**08 58 03.9 +0.5**
CAMP	**Campotosto**	**0.23 136⇑**	*i*P	**Pg**	**08 58 00.5 +0.3**
CAMP			S	**Sg**	**08 58 04.2 +0.4**
CAMP			AML	AML	
	comp=N,17800μm,0.2s				
CAMP			AML	AML	
	comp=E,23800μm,0.2s				
T1241	**Roccafluvione,**	**0.23 49⇑**	*i*P	**Pg**	**08 58 00.7 +0.4**
T1241			S	**Sg**	**08 58 04.1 +0.2**
T1241			AML	AML	
	comp=E,17900μm,0.5s				
T1241			AML	AML	
	comp=E,17850μm,0.5s				
T1241			AML	AML	
	comp=N,17000μm,0.6s				
T1246	**Crognaleto (TE**	**0.25 118⇑**	*i*P	**Pg**	**08 58 00.7 +0.1**
T1246			S	**Sg**	**08 58 04.5 +0.1**
T1215	**Vallo di Nera,**	**0.26 293**	*e*P	**Pg**	**08 58 01.3 +0.6**
T1215			S	**Sb**	**08 58 05.5 0.0**
T1215			AML	AML	
	comp=N,8640μm,1.3s				
T1215			AML	AML	
	comp=E,6895μm,0.7s				
T1215			AML	AML	
	comp=E,6815μm,1.0s				
T1215			AML	AML	
	comp=N,8875μm,1.3s				
T1215			AML	AML	
	comp=N,8645μm,1.3s				
T1215			AML	AML	
	comp=E,6905μm,0.7s				
T1215			AML	AML	
	comp=N,8865μm,1.3s				
T1215			AML	AML	
	comp=E,6815μm,1.0s				
T1215			AML	AML	
	comp=E,6900μm,0.7s				
T1215			AML	AML	
	comp=N,8820μm,1.3s				
T1247	**Pizzolo (AQ)**	**0.27 163**	P	**Pb**	**08 58 01.5 0.0**
T1247			S	**Sb**	**08 58 06.2 +0.3**
T1247			AML	AML	
	comp=E,25450μm,0.2s				
T1247			AML	AML	
	comp=N,29650μm,0.6s				
FEMA	**Monte Fema**	**0.28 338**	*e*P	**Pg**	**08 58 01.4 +0.3**
FEMA			S	**Sg**	**08 58 05.8 +0.5**
FEMA			AML	AML	
	comp=E,18950μm,0.6s				
FEMA			AML	AML	
	comp=N,15300μm,0.7s				
FEMA			AML	AML	
	comp=E,19950μm,1.5s				
FEMA			AML	AML	
	comp=N,15250μm,0.7s				
FEMA			AML	AML	
	comp=E,19900μm,1.5s				
FEMA			AML	AML	
	comp=E,16347μm,0.4s				
AM05	**Amandola Campo**	**0.30 23⇑**	*i*P	**Pg**	**08 58 01.5 +0.2**
AM05			S	**Sg**	**08 58 05.9 +0.2**
AM05			AML	AML	
	comp=E,8000μm,0.4s				
AM05			AML	AML	
	comp=E,26000μm,1.3s				
AM05			AML	AML	
	comp=E,7995μm,0.4s				
AM05			AML	AML	
	comp=N,2150μm,1.5s				
AM05			AML	AML	
	comp=E,26050μm,1.3s				
AM05			AML	AML	
	comp=N,6215μm,0.2s				
T1211	**Morro Reatino**	**0.30 236**	P	**Pb**	**08 58 02.1 +0.1**
T1211			S	**Sb**	**08 58 07.6 +0.8**
T1211			AML	AML	
	comp=E,14350μm,0.2s				
T1211			AML	AML	
	comp=E,14700μm,0.1s				
T1211			AML	AML	
	comp=E,14350μm,0.1s				
T1211			AML	AML	
	comp=N,19950μm,0.5s				
T1211			AML	AML	
	comp=N,19900μm,0.5s				
T1211			AML	AML	
	comp=E,14700μm,0.1s				
T1211			AML	AML	
	comp=N,19950μm,0.5s				
T1211			AML	AML	
	comp=N,19900μm,0.5s				
T1256	**Bolognola (MC)**	**0.30 4**	*e*P	**Pg**	**08 58 01.6 +0.1**
T1256			S	**Sg**	**08 58 06.4 +0.4**
TERO	**Teramo**	**0.31 105**	P	**Pg**	**08 58 01.5 0.0**
TERO			S	**Sg**	**08 58 06.1 0.0**
TERO			AML	AML	
	comp=E,20450μm,0.7s				
TERO			AML	AML	
	comp=E,18950μm,0.7s				
TERO			AML	AML	
	comp=N,29200μm,0.5s				
TERO			AML	AML	
	comp=N,30400μm,0.5s				
TERO			AML	AML	
	comp=E,19000μm,0.7s				
ARRO	**Arrone**	**0.34 249**	*e*P	**Pb**	**08 58 02.9 +0.3**
ARRO			AML	AML	
	comp=E,6400μm,0.8s				
ARRO			AML	AML	
	comp=N,5160μm,0.9s				
FDMO	**Fiordimonte**	**0.34 347**	P	**Pg**	**08 58 02.3 +0.2**
FDMO			S	**Sg**	**08 58 07.5 +0.6**
GUMA	**Gualdo di Mace**	**0.37 16⇑**	*i*P	**Pg**	**08 58 03.1 +0.5**
GUMA			S	**Sb**	**08 58 09.0 +0.2**
GUMA			AML	AML	
	comp=E,38950μm,0.3s				
GUMA			AML	AML	
	comp=N,34850μm,0.2s				
GUMA			AML	AML	
	comp=E,55450μm,0.3s				
GUMA			AML	AML	
	comp=N,27800μm,0.4s				
GUMA			AML	AML	
	comp=E,38950μm,0.3s				
GUMA			AML	AML	
	comp=N,34900μm,0.2s				
GIGS	**Gran Sasso**	**0.38 132**	*e*P	**Pg**	**08 58 02.6 0.0**
GIGS			S	**Sg**	**08 58 08.2 +0.3**
GIGS			AML	AML	
	comp=N,3020μm,1.4s				
GIGS			AML	AML	
	comp=E,6525μm,0.2s				
GIGS			AML	AML	
	comp=E,6520μm,0.2s				
T1219	**Muccia, Frazio**	**0.38 339**	P	**Pg**	**08 58 03.0 +0.3**
T1219			S	**Sb**	**08 58 08.8 -0.1**
AQU	**L'Aquila**	**0.38 156**	*e*P	**Pb**	**08 58 03.5 +0.1**
AQU			S	**Sb**	**08 58 08.9 -0.1**
AQU			AML	AML	
	comp=N,7665μm,0.2s				
AQU			AML	AML	
	comp=N,7350μm,0.2s				
AQU			AML	AML	
	comp=E,6450μm,0.5s				
AQU			AML	AML	
	comp=N,7670μm,0.2s				
AQU			AML	AML	
	comp=E,6415μm,1.1s				
CSP1	**Cessapalombo**	**0.39 1**	*e*P	**Pg**	**08 58 03.0 +0.1**
CSP1			S	**Sg**	**08 58 08.8 +0.5**
T1220	**Camerino, Fraz**	**0.41 349**	P	**Pg**	**08 58 03.6 +0.2**
T1220			S	**Sb**	**08 58 10.0 0.0**
OFFI	**Offida**	**0.43 57⇑**	*i*P	**Pb**	**08 58 04.4 +0.3**
OFFI			AML	AML	
	comp=N,14450μm,0.7s				
OFFI			AML	AML	
	comp=E,15900μm,0.4s				
FIAM	**Fiamignano**	**0.44 187⇑**	*i*P	**Pb**	**08 58 04.4 +0.1**
FIAM			S	**Sb**	**08 58 11.4 +0.8**
CESX	**Cesi**	**0.46 259**	*e*P	**Pb**	**08 58 04.8 +0.1**
CESX			AML	AML	
	comp=N,3780μm,0.3s				
CESX			AML	AML	
	comp=E,4820μm,0.4s				
MNTP	**Montappone**	**0.48 25**	P	**Pb**	**08 58 05.0 0.0**
MNTP			S	**Sb**	**08 58 12.7 +0.9**
SEF1	**Sefro**	**0.48 338**	*e*P	**Pb**	**08 58 05.1 +0.1**
SEF1			S	**Sb**	**08 58 12.0 +0.2**
MDAR	**Monte D'Aria**	**0.49 356**	*e*P	**Pg**	**08 58 04.8 +0.1**
MDAR			S	**Sg**	**08 58 11.9 +0.5**
ASSB	**Assisi San Ben**	**0.52 311**	P	**Pb**	**08 58 06.4 +0.7**
FIU1	**Fiuminata**	**0.52 338**	P	**Pg**	**08 58 05.8 +0.5**
FAGN	**Fagnano**	**0.52 146**	*e*P	**Pb**	**08 58 06.4 +0.7**
FAGN			AML	AML	
	comp=N,11580μm,0.4s				
FAGN			AML	AML	
	comp=E,13500μm,0.3s				
SSM1	**San Severino M**	**0.53 359**	P	**Pg**	**08 58 05.4 0.0**
TRTR	**Tortoreto Alta**	**0.54 79⇑**	*i*P	**Pb**	**08 58 06.7 +0.7**
TRTR			AML	AML	
	comp=N,19100μm,0.4s				
TRTR			AML	AML	
	comp=E,17350μm,0.6s				
GAG1	**Gagliole**	**0.54 350**	P	**Pg**	**08 58 06.1 +0.4**
GAG1			S	**Sb**	**08 58 14.4 +0.7**
VCEL	**Villa Celiera**	**0.57 123⇓**	*i*P	**Pb**	**08 58 06.7 +0.2**
VCEL			AML	AML	
	comp=N,12550μm,0.8s				
VCEL			AML	AML	
	comp=E,14200μm,0.3s				
SNTG	**Esanatoglia**	**0.58 341**	P	**Pb**	**08 58 07.3 +0.5**
SNTG			S	**Sb**	**08 58 15.8 +1.0**
TRE1	**Treia**	**0.61 8**	P	**Pb**	**08 58 07.5 +0.2**
EL6	**Elcito**	**0.63 354**	P	**Pb**	**08 58 08.1 +0.4**
CADA	**Capodarco di F**	**0.64 40**	*e*P	**Pn**	**08 58 08.8 -0.6**
T0110	**Collepietro**	**0.64 138**	*e*P	**Pg**	**08 58 07.6 0.0**
T0110			AML	AML	
	comp=E,9395μm,0.3s				
T0110			AML	AML	
	comp=N,8735μm,0.4s				
FOSV	**Fossato di Vic**	**0.67 332**	*e*P	**Pg**	**08 58 08.4 +0.3**
FOSV			AML	AML	
	comp=E,2545μm,0.2s				
FOSV			AML	AML	
	comp=N,2430μm,0.7s				
FOSV			AML	AML	
	comp=E,2023μm,0.5s				
SRES	**S.Oreste - Sor**	**0.69 228**	*e*P	**Pb**	**08 58 09.0 +0.5**
SRES			AML	AML	
	comp=E,2165μm,0.7s				
SRES			AML	AML	
	comp=N,2010μm,0.4s				
CIMA	**Civitanova Mar**	**0.70 30**	P	**Pn**	**08 58 09.6 -0.5**
PTQR	**Pietraquaria**	**0.70 167**	*e*P	**Pb**	**08 58 09.0 +0.3**
PP3	**Marolino**	**0.74 24**	P	**Pg**	**08 58 10.1 +0.7**
PP3			AML	AML	
	comp=E,14350μm,0.7s				
PP3			AML	AML	
	comp=E,14150μm,0.6s				
PP3			AML	AML	
	comp=N,9955μm,0.4s				
PP3			AML	AML	
	comp=E,14350μm,0.7s				
PP3			AML	AML	
	comp=E,14100μm,0.6s				
PP3			AML	AML	
	comp=N,9950μm,0.4s				
PP3			AML	AML	
	comp=N,9205μm,0.4s				
MURB	**Monte Urbino**	**0.74 319**	*e*P	**Pg**	**08 58 10.1 +0.6**
MURB			AML	AML	
	comp=N,6160μm,0.3s				
MURB			AML	AML	
	comp=N,6625μm,0.3s				
MURB			AML	AML	
	comp=E,6920μm,0.3s				
MURB			AML	AML	
	comp=N,6165μm,0.3s				
MURB			AML	AML	
	comp=E,7745μm,0.3s				
MURB			AML	AML	
	comp=N,6630μm,0.3s				
MTCE	**Montecelio**	**0.76 206⇑**	*i*P	**Pb**	**08 58 09.6 -0.1**
MTCE			AML	AML	
	comp=N,1530μm,1.6s				
MTCE			AML	AML	
	comp=E,4535μm,0.5s				
CERT	**Cerreto**	**0.77 192**	*e*P	**Pb**	**08 58 10.0 0.0**
CERT			AML	AML	
	comp=E,9525μm,0.5s				
CERT			AML	AML	
	comp=N,4470μm,1.5s				
ATFO	**Monte Foce - G**	**0.81 326**	*e*P	**Pb**	**08 58 10.9 +0.3**
ATFO			AML	AML	
	comp=E,1600μm,0.6s				
ATFO			AML	AML	
	comp=N,1390μm,1.0s				
ARVD	**Arcevia**	**0.82 347**	*e*P	**Pb**	**08 58 10.8 0.0**
ARVD			AML	AML	
	comp=E,1195μm,1.0s				
ARVD			AML	AML	
	comp=N,978μm,0.6s				
ARVD			AML	AML	
	comp=N,977μm,0.6s				
ARVD			AML	AML	
	comp=N,966μm,0.7s				
MGAB	**Montegabbione**	**0.82 285**	*e*P	**Pn**	**08 58 11.9 0.0**
MGAB			AML	AML	
	comp=E,3165μm,0.5s				
MGAB			AML	AML	
	comp=E,2825μm,0.5s				
MGAB			AML	AML	
	comp=N,3930μm,1.0s				
MGAB			AML	AML	
	comp=N,3620μm,1.0s				
RCAV	**Rocca di Cave**	**0.88 192**	*e*P	**Pn**	**08 58 12.9 +0.3**
RCAV			AML	AML	
	comp=E,5555μm,0.4s				
RCAV			AML	AML	
	comp=N,6155μm,0.8s				
ATVA	**AVT- Monte Val**	**0.88 311**	P	**Pn**	**08 58 13.7 +1.0**
FRON	**Frontone**	**0.88 337**	*e*P	**Pg**	**08 58 12.3 +0.2**
FRON			AML	AML	
	comp=E,1175μm,1.2s				
FRON			AML	AML	
	comp=N,1870μm,1.5s				
FRON			AML	AML	
	comp=E,1034μm,0.4s				
FRON			AML	AML	
	comp=N,1395μm,0.7s				
VVLD	**Villa Vallelon**	**0.89 159**	P	**Pn**	**08 58 12.9 +0.1**
ATVO	**AVT- Monte Val**	**0.89 320**	*e*P	**Pb**	**08 58 12.4 +0.3**
ATVO			AML	AML	
	comp=N,1040μm,1.6s				
ATVO			AML	AML	
	comp=E,1155μm,1.1s				
AOI	**Ancona**	**0.90 19**	*e*P	**Pb**	**08 58 12.2 +0.1**
AOI			AML	AML	
	comp=E,1515μm,1.1s				
AOI			AML	AML	
	comp=N,1680μm,0.9s				
ATMI	**Monte Miggiano**	**0.93 313**	P	**Pn**	**08 58 14.7 +1.4**
PCRO	**Pietralacroce**	**0.94 15**	P	**Pn**	**08 58 14.0 +0.5**
SACS	**San Casciano d**	**0.96 279**	*e*P	**Pn**	**08 58 14.0 +0.3**
SACS			AML	AML	
	comp=E,1610μm,0.6s				
SACS			AML	AML	
	comp=N,1490μm,1.2s				
PIEI	**Pieia**	**0.96 330**	*e*P	**Pn**	**08 58 14.0 +0.2**
PIEI			AML	AML	
	comp=E,1033μm,1.3s				
PIEI			AML	AML	
	comp=N,899μm,1.2s				
RMP	**Rome, Mte Porz**	**0.96 202**	P	**Pn**	**08 58 14.1 +0.3**
RMP			AML	AML	
	comp=E,3430μm,0.5s				
RMP			AML	AML	
	comp=N,4425μm,0.7s				
MPAG	**Monte Paganucc**	**0.98 341**	P	**Pn**	**08 58 14.8 +0.8**
MPAG			AML	AML	
	comp=E,1290μm,0.9s				
MPAG			AML	AML	
	comp=N,1034μm,1.5s				
MPAG			AML	AML	
	comp=N,1032μm,1.5s				
LPEL	**Lama dei Pelig**	**0.98 131**	*e*P	**Pb**	**08 58 13.3 -0.3**
LPEL			AML	AML	
	comp=E,2615μm,0.4s				
LPEL			AML	AML	
	comp=N,1885μm,1.4s				
SENI	**Senigallia**	**1.00 2**	P	**Pg**	**08 58 15.3 +1.0**
VIVA	**Pratoni del Vi**	**1.00 198**	AML	AML	
	comp=E,6690μm,0.4s				
VIVA			AML	AML	
	comp=N,7640μm,0.4s				
LATE	**Laterza**	**1.03 265**	P	**Pg**	**08 58 15.2 +0.4**
FSSB	**Fossombrone**	**1.03 343**	*e*P	**Pn**	**08 58 15.0 +0.2**
FSSB			AML	AML	
	comp=N,4860μm,0.4s				
FSSB			AML	AML	
	comp=E,2945μm,0.3s				
FSSB			AML	AML	
	comp=N,4098μm,0.3s				
ATMC	**Monte Cedrone**	**1.04 316**	P	**Pg**	**08 58 15.6 +0.5**
POFI	**Posta Fibreno**	**1.06 158**	P	**Pb**	**08 58 15.1 +0.2**
TOLF	**Tolfa**	**1.09 235**	P	**Pn**	**08 58 15.8 +0.2**
TOLF			AML	AML	
	comp=E,881μm,0.6s				
TOLF			AML	AML	
	comp=N,1146μm,1.1s				
CAFI	**Castiglion Fio**	**1.10 305**	P	**Pg**	**08 58 16.5 +0.4**
CAFI			AML	AML	
	comp=E,698μm,0.8s				
CAFI			AML	AML	
	comp=N,792μm,0.5s				
MCIV	**Monte Civitell**	**1.12 274**	P	**Pg**	**08 58 17.2 +0.7**
MCIV			AML	AML	
	comp=E,608μm,0.8s				
MCIV			AML	AML	
	comp=N,548μm,0.7s				
GIUL	**Giuliano Di Ro**	**1.15 178**	P	**Pg**	**08 58 17.5 +0.4**
GIUL			AML	AML	
	comp=N,1750μm,0.5s				
GIUL			AML	AML	
	comp=E,876μm,1.6s				
RNI2	**Rionero Sannit**	**1.23 144**	P	**Pg**	**08 58 19.7 +1.1**
CERA	**Filignano**	**1.26 151**	P	**Pg**	**08 58 19.9 +0.6**
CERA			AML	AML	
	comp=E,2010μm,0.7s				
CERA			AML	AML	
	comp=N,1255μm,0.4s				
ARCI	**Arcidosso**	**1.27 277**	P	**Pg**	**08 58 19.8 +0.3**
CRE	**Caprese Michel**	**1.29 316**	P	**Pg**	**08 58 20.1 +0.3**
MIDA	**Miranda**	**1.32 143**	P	**Pb**	**08 58 19.6 +0.2**
TRIV	**Trivento**	**1.38 132**	P	**Pg**	**08 58 21.7 +0.3**
TRIV			AML	AML	
	comp=N,1160μm,1.6s				
TRIV			AML	AML	
	comp=E,1295μm,1.1s				
VAGA	**Valle Agricola**	**1.50 149**	P	**Pg**	**08 58 24.7 +0.8**
MAON	**Monte Argentar**	**1.55 260⇑**	*i*P	**Pb**	**08 58 23.2 0.0**
MAON			AML	AML	
	comp=E,249μm,1.0s				
MAON			AML	AML	
	comp=N,274μm,1.2s				
SFI	**Santa Sofia**	**1.55 321**	P	**Pg**	**08 58 24.9 +0.1**
BSSO	**Busso**	**1.56 138**	P	**Pg**	**08 58 25.7 +0.9**
OSSC	**Osservatorio P**	**1.65 301**	P	**Pn**	**08 58 24.2 +1.0**
RUFI	**Rufina**	**1.67 313**	P	**Pb**	**08 58 24.8 -0.6**
CASP	**Castiglione de**	**1.72 274**	*e*P	**Pb**	**08 58 25.4 -0.7**
CASP			AML	AML	
	comp=E,90μm,1.2s				
CASP			AML	AML	
	comp=N,117μm,1.2s				
TRIF	**Trifonti**	**1.73 285**	*e*P	**Pb**	**08 58 26.1 -0.2**
TRIF			AML	AML	
	comp=E,187μm,0.6s				
TRIF			AML	AML	
	comp=N,198μm,0.8s				
APRC	**Apricena**	**1.98 118⇑**	*e*P	**Pb**	**08 58 30.8 +0.1**
APRC			AML	AML	
	comp=E,601μm,0.4s				
APRC			AML	AML	
	comp=N,917μm,0.6s				
MTCR	**Monte La Croce**	**2.08 310**	*e*P	**Pn**	**08 58 30.6 +1.3**
CELB	**S.Piero in Cam**	**2.20 272**	*e*P	**Pn**	**08 58 32.1 +1.3**
CELB			AML	AML	
	comp=E,52μm,0.6s				
CELB			AML	AML	
	comp=N,59μm,0.7s				
MAIM	**Mastiano**	**2.31 302**	*e*P	**Pn**	**08 58 34.2 +1.8**
PLMA	**Palmaria, Port**	**2.78 300**	P	**Pn**	**08 58 40.7 +1.9**
SMPL	**Sampolo**	**2.96 259**	*e*P	**Pn**	**08 58 43.9 +2.7**
SMPL			AML	AML	
	comp=E,18μm,1.5s				
SMPL			AML	AML	
	comp=N,24μm,1.1s				
PGF	**Pioggiola**	**3.10 269**	*e*P	**Pn**	**08 58 45.8 +2.6**
PGF			*e*Sn	**Sn**	**08 59 17.6 -2.4**
	comp=N,19nm,0.3s				
PGF	**Pioggiola**	**3.10 269**	AML	AML	
	comp=E,33μm,1.4s				
PGF			AML	AML	
	comp=N,25μm,1.2s				
PGF			AML	AML	
	comp=N,19μm,0.7s				
CTI	**Castel Tesino**	**3.52 342**	*e*P	**Pn**	**08 58 51.1 +2.1**
CTI			AML	AML	
	comp=E,143μm,0.6s				
CTI			AML	AML	
	comp=N,146μm,0.2s				
CIMO	**Cimolais**	**3.65 352**	*e*P	**Pn**	**08 58 52.4 +1.7**
MABI	**Malga Bissina**	**3.86 331**	*e*P	**Pn**	**08 58 56.3 +2.5**
KOSI	**Kohlern**	**3.98 342**	*e*P	**Pn**	**08 58 58.3 +3.0**
BOSI	**Bolzano**	**4.02 341**	P	**Pn**	**08 58 56.2 +0.5**
BOSI			AML	AML	
	comp=E,348μm,1.1s				
BOSI			AML	AML	
	comp=N,415μm,0.9s				
VSL	**Villasalto**	**4.31 223**	*e*P	**Pn**	**08 59 02.3 +2.5**
RISI	**Rein**	**4.32 350**	*e*P	**Pn**	**08 59 03.0 +2.9**
SBF	**Sospel**	**4.36 287**	*e*P	**Pn**	**08 59 03.3 +2.8**
SBF			*e*Sn	**Sn**	**08 59 48.4 -2.6**
	comp=N,15nm,0.5s				
LMR	**La Mourre**	**4.94 280**	*e*Pn	**Pn**	**08 59 08.4 0.0**
LMR			*e*Sn	**Sn**	**09 00 02.8 -2.4**
	comp=N,30nm,1.3s				
MBDF	**Montbardon**	**5.08 296**	*e*Pn	**Pn**	**08 59 11.3 +0.9**
MBDF			*e*Sn	**Sn**	**09 00 06.7 -2.1**
	comp=N,12nm,0.6s				
LPG	**La Plagne**	**5.42 303**	*e*Pn	**Pn**	**08 59 15.0 -0.2**
LPG			*e*Sn	**Sn**	**09 00 14.5 -2.8**
	comp=N,9.6nm,0.7s				
LPL	**La Plagne**	**5.44 303**	*e*Sn	**Sn**	**09 00 14.9 -2.8**
	comp=N,12nm,0.8s				
SMRF	**Simiane la Rot**	**5.70 285**	*e*P	**Pn**	**08 59 23.2 +4.3**
SMRF			*e*Sn	**Sn**	**09 00 20.8 -3.2**
	comp=N,5.1nm,0.6s				
ORIF	**Oris-en-Rattie**	**5.74 295**	*e*Pn	**Pn**	**08 59 19.0 -0.5**
ORIF			*e*Sn	**Sn**	**09 00 22.0 -3.0**
	comp=N,17nm,1.1s				
CABF	**La Chapelle**	**6.40 310**	*e*P	**Pn**	**08 59 31.9 +3.4**
CABF			*e*Sn	**Sn**	**09 00 38.0 -3.3**
	comp=N,32nm,1.2s				
VIVF	**Saint-Julien-l**	**6.53 292**	*e*Pn	**Pn**	**08 59 30.0 -0.3**
HINF	**Hinteralfeld**	**6.79 321**	*e*P	**Pn**	**08 59 37.8 +3.9**
HINF			*e*Sn	**Sn**	**09 00 47.1 -3.8**
	comp=N,6.6nm,0.5s				
LASF	**Ste Croix**	**6.94 285**	*e*Pn	**Pn**	**08 59 35.0 -0.9**
LASF			*e*Sn	**Sn**	**09 00 50.8 -3.7**
	comp=N,64nm,2.0s				
CDF	**Champ du Feu**	**7.06 326**	*e*Pn	**Pn**	**08 59 38.3 +0.7**
CDF			*e*Sn	**Sn**	**09 00 50.5 -7.0**
	comp=N,14nm,0.5s				
HAU	**Haudompre**	**7.17 320**	*e*Pn	**Pn**	**08 59 38.5 -0.5**
HAU			*e*Sn	**Sn**	**09 00 56.3 -3.7**
	comp=N,12nm,0.5s				
SMF	**Signal de Mont**	**7.74 304**	*e*P	Pn	08 59 51.8 +4.9
PAGF	**Fort de Pagny**	**7.85 321**	*e*Sn	**Sn**	**09 01 12.7 -4.1**
	comp=N,25nm,1.1s				
SFTF	**Sexfontaines**	**7.94 317**	*e*P	Pn	08 59 55.0 +5.3
	baz=137				

SFTF			*e*Sn	**Sn**	**09 01 14.9**	**-4.2**
	comp=N,13nm,0.9s					
LOR	**Lormes**	**8.04 308**	*e*P	Pn	08 59 56.5	+5.6
	baz=126					
MTLF	**Montolieu**	**8.07 278**	*e*Pn	**Pn**	**08 59 50.6**	**-0.8**
MTLF			*e*Sn	**Sn**	**09 01 16.6**	**-5.7**
	comp=N,16nm,1.2s					
MEZF	**Maizieres J'vi**	**8.13 318**	*e*Pn	**Pn**	**08 59 51.8**	**-0.4**
	baz=136					
SSF	**Saint Saulge**	**8.14 306**	*e*P	Pn	08 59 57.7	+5.3
SAVF	**Savonnieres en**	**8.18 319**	*e*P	Pn	08 59 57.4	+4.6
	baz=138					
SAVF			*e*Sn	**Sn**	**09 01 20.2**	**-4.6**
	comp=N,4.3nm,0.5s					
BGF	**Bois d'Agland**	**8.32 301**	*e*P	Pn	09 00 00.4	+5.5
RJF	**Les Rejaudoux**	**8.81 291**	*e*Pn	**Pn**	**09 00 00.5**	**-1.0**

PRU ***30*** *09:02:26.6±0.0, 42°.69N×14°.16E, h10km*
ROM ***30*** *09:02:29.7±0.1, 42°.936N±0°.003×13°.205E±0°.005, h6km, ML3.5/23, Error ellipse: s-maj=0.4km s-min=0.1km az=65.0*
IDC ***30*** *09:02:30.4±1.5, 43°.07N×13°.29E, h0km, mb3.6/3, mbtmp3.6/7, ML3.2/4, Error ellipse: s-maj=33.1km s-min=16.9km az=88.0*

ISC 30 09:02:30.1±0.8, 42°.94N±0°.01×13°.22E±0°.02, h4km±5km, n75, σ1§05/111, mb3.7/3, 1C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**216**	P	**Pg**	**09 02 31.0**	**-0.2**
MC2				S	**Sg**	**09 02 31.9**	**-0.2**
T1256	**Bolognola (MC)**	**0.06**	**4**	P	**Pg**	**09 02 31.5**	**-0.1**
T1256				S	**Sg**	**09 02 32.9**	**+0.2**
T1245	**Castelsantange**	**0.09**	**195**	P	**Pg**	**09 02 32.2**	**+0.2**
T1245				S	**Sg**	**09 02 33.9**	**+0.7**
T1245				AML	AML		
T1245				AML	AML		
AM05	**Amandola Campo**	**0.10**	**70⇑**	*i*P	**Pg**	**09 02 32.5**	**+0.3**
AM05				S	**Sg**	**09 02 34.7**	**+1.1**
AM05				AML	AML		
	comp=E,11795μm,1.2s						
AM05				AML	AML		
	comp=N,10520μm,1.6s						
AM05				AML	AML		
	comp=N,1610μm,0.1s						
AM05				AML	AML		
	comp=E,11815μm,1.2s						
AM05				AML	AML		
	comp=N,10505μm,1.6s						
AM05				AML	AML		
	comp=N,1615μm,0.1s						
AM05				AML	AML		
	comp=E,11820μm,1.2s						
AM05				AML	AML		
	comp=N,10540μm,1.6s						
AM05				AML	AML		
	comp=E,52100μm,1.2s						
AM05				AML	AML		
	comp=N,10535μm,1.6s						
AM05				AML	AML		
	comp=E,11785μm,1.2s						
AM05				AML	AML		
	comp=N,2745μm,1.1s						
AM05				AML	AML		
	comp=N,1613μm,0.1s						
FEMA	**Monte Fema**	**0.13**	**279**	P	**Pg**	**09 02 32.8**	**+0.1**
FEMA				S	**Sg**	**09 02 35.2**	**+0.8**
FEMA				AML	AML		
	comp=E,54550μm,1.4s						
FEMA				AML	AML		
	comp=N,53150μm,0.5s						
FEMA				AML	AML		
	comp=E,54550μm,1.4s						
FEMA				AML	AML		
	comp=N,53200μm,0.5s						
FEMA				AML	AML		
	comp=E,77550μm,0.9s						
FEMA				AML	AML		
	comp=N,68500μm,1.3s						
FEMA				AML	AML		
	comp=N,53179μm,0.5s						
FEMA				AML	AML		
	comp=E,52681μm,0.3s						
FDMO	**Fiordimonte**	**0.14**	**314**	P	**Pg**	**09 02 32.9**	**0.0**
FDMO				S	**Sg**	**09 02 35.5**	**+0.8**
GUMA	**Gualdo di Mace**	**0.15**	**35**	*e*P	**Pg**	**09 02 33.6**	**+0.6**
GUMA				S	**Sg**	**09 02 36.7**	**+1.7**
GUMA				AML	AML		
	comp=E,76000μm,1.1s						
GUMA				AML	AML		
	comp=N,64900μm,1.3s						
GUMA				AML	AML		
	comp=E,81000μm,1.0s						
GUMA				AML	AML		
	comp=N,73000μm,1.2s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,79150μm,0.6s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,73007μm,1.2s						
GUMA				AML	AML		
	comp=N,64927μm,1.3s						
GUMA				AML	AML		
	comp=E,76004μm,1.1s						
GUMA				AML	AML		
	comp=E,80999μm,1.0s						
T1216	**Preci, Frazion**	**0.16**	**251**	P	**Pg**	**09 02 33.3**	**+0.1**
T1216				S	**Sg**	**09 02 36.4**	**+1.1**
T1241	**Roccafluvione,**	**0.18**	**119**	P	**Pg**	**09 02 34.5**	**+0.9**
T1241				S	**Sg**	**09 02 37.6**	**+1.7**
T1219	**Muccia, Frazio**	**0.19**	**306**	P	**Pg**	**09 02 34.0**	**+0.2**
T1219				S	**Sg**	**09 02 37.5**	**+1.1**
T1220	**Camerino, Fraz**	**0.19**	**330**	P	**Pg**	**09 02 34.0**	**+0.1**
T1220				S	**Sg**	**09 02 37.8**	**+1.3**
T1244	**Arquata del Tr**	**0.19**	**163**	P	**Pg**	**09 02 34.2**	**+0.3**
T1244				S	**Sg**	**09 02 38.3**	**+1.9**
MDAR	**Monte D'Aria**	**0.26**	**347**	P	**Pg**	**09 02 35.2**	**+0.1**
MDAR				S	**Sg**	**09 02 39.9**	**+1.4**
MNTP	**Montappone**	**0.27**	**43**	P	**Pg**	**09 02 36.3**	**+1.0**
T1204	**Amatrice, Fraz**	**0.28**	**165**	AML	AML		
	comp=E,18200μm,0.9s						
T1204				AML	AML		
	comp=N,9660μm,0.9s						
SEF1	**Sefro**	**0.29**	**316**	P	**Pg**	**09 02 35.9**	**+0.3**
SEF1				S	**Sg**	**09 02 41.0**	**+1.6**
SEF1				AML	AML		
	comp=N,27800μm,0.3s						
SEF1				AML	AML		
	comp=E,37550μm,1.4s						
SEF1				AML	AML		
	comp=N,27750μm,0.3s						
SEF1				AML	AML		
	comp=N,27800μm,0.3s						
SEF1				AML	AML		
	comp=E,37600μm,1.4s						
SSM1	**San Severino M**	**0.29**	**354**	P	**Pg**	**09 02 35.8**	**+0.1**
SSM1				S	**Sg**	**09 02 41.2**	**+1.7**
PIO1	**Pioraco**	**0.29**	**324**	P	**Pg**	**09 02 35.8**	**0.0**
PIO1				S	**Sg**	**09 02 41.1**	**+1.5**
T1215	**Vallo di Nera,**	**0.29**	**242**	P	**Pg**	**09 02 35.8**	**0.0**
T1215				S	**Sg**	**09 02 41.0**	**+1.3**
T1243	**Rocca Santa Ma**	**0.30**	**145**	P	**Pg**	**09 02 36.2**	**+0.3**
T1243				S	**Sg**	**09 02 41.1**	**+1.3**
GAG1	**Gagliole**	**0.32**	**339**	P	**Pg**	**09 02 36.5**	**+0.2**
GAG1				S	**Sg**	**09 02 42.0**	**+1.6**
GAG1				AML	AML		
	comp=E,23350μm,0.4s						
GAG1				AML	AML		
	comp=N,20300μm,0.5s						
GAG1				AML	AML		
	comp=E,23350μm,0.3s						
GAG1				AML	AML		
	comp=N,20250μm,0.5s						
GAG1				AML	AML		
	comp=E,32050μm,0.6s						
GAG1				AML	AML		
	comp=N,37950μm,0.4s						
GAG1				AML	AML		
	comp=E,32100μm,0.6s						
GAG1				AML	AML		
	comp=N,37900μm,0.4s						
GAG1				AML	AML		
	comp=E,23358μm,0.3s						
GAG1				AML	AML		
	comp=N,20276μm,0.5s						
FIU1	**Fiuminata**	**0.32**	**319**	P	**Pg**	**09 02 36.5**	**+0.1**
FIU1				S	**Sg**	**09 02 42.1**	**+1.4**
OFFI	**Offida**	**0.34**	**91**	P	**Pb**	**09 02 38.1**	**-0.8**
OFFI				AML	AML		
	comp=N,14450μm,0.6s						
OFFI				AML	AML		
	comp=E,13500μm,0.9s						
LNSS	**Leonessa**	**0.36**	**201**	P	**Pg**	**09 02 38.0**	**+0.9**
LNSS				S	**Sb**	**09 02 43.6**	**-1.7**
SNTG	**Esanatoglia**	**0.37**	**327**	P	**Pg**	**09 02 37.1**	**-0.2**
SNTG				S	**Sg**	**09 02 43.8**	**+1.6**
SNTG				AML	AML		
	comp=E,7750μm,0.3s						
SNTG				AML	AML		
	comp=N,5800μm,1.1s						
SNTG				AML	AML		
	comp=N,6225μm,0.5s						
SNTG				AML	AML		
	comp=E,7750μm,0.3s						
SNTG				AML	AML		
	comp=N,5800μm,1.2s						
SNTG				AML	AML		
	comp=E,7755μm,0.3s						
SNTG				AML	AML		
	comp=N,7600μm,1.2s						
SNTG				AML	AML		
	comp=N,7905μm,1.2s						
SNTG				AML	AML		
	comp=N,7595μm,1.2s						
SNTG				AML	AML		
	comp=N,7900μm,1.2s						
SNTG				AML	AML		
	comp=E,7425μm,0.3s						
SNTG				AML	AML		
	comp=N,5579μm,0.6s						
SNTG				AML	AML		
	comp=N,6226μm,0.5s						
TRE1	**Treia**	**0.38**	**10**	P	**Pb**	**09 02 38.7**	**-0.7**
TRE1				S	**Sb**	**09 02 45.3**	**-0.3**
T1246	**Crognaleto (TE**	**0.41**	**151**	P	**Pg**	**09 02 38.5**	**+0.5**
T1246				S	**Sb**	**09 02 44.8**	**-1.9**
ASSB	**Assisi San Ben**	**0.42**	**284**	*e*P	**Pg**	**09 02 38.0**	**-0.2**
ASSB				S	**Sg**	**09 02 45.1**	**+1.3**
TERO	**Teramo**	**0.43**	**138**	AML	AML		
	comp=E,7120μm,1.0s						
TERO				AML	AML		
	comp=E,6925μm,1.0s						
TERO				AML	AML		
	comp=N,5550μm,0.6s						
TERO				AML	AML		
	comp=N,5670μm,0.6s						
CAMP	**Campotosto**	**0.43**	**161**	*e*P	**Pg**	**09 02 38.5**	**+0.1**
CAMP				S	**Sg**	**09 02 45.3**	**+1.3**
CAMP				AML	AML		
	comp=E,5075μm,1.1s						
CAMP				AML	AML		
	comp=N,3995μm,0.6s						
RM33	**Pellescritta (**	**0.43**	**181**	*e*P	**Pg**	**09 02 38.6**	**+0.2**
RM33				S	**Sg**	**09 02 45.2**	**+1.1**
FOSV	**Fossato di Vic**	**0.49**	**317⇓**	*e*P	**Pg**	**09 02 39.3**	**-0.2**
FOSV				S	**Sb**	**09 02 47.5**	**-1.3**
FOSV				AML	AML		
	comp=E,5810μm,0.3s						
FOSV				AML	AML		
	comp=N,12800μm,1.6s						
FOSV				AML	AML		
	comp=E,6200μm,0.5s						
FOSV				AML	AML		
	comp=E,5810μm,0.3s						
FOSV				AML	AML		
	comp=N,11357μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.49**	**300**	*e*P	**Pg**	**09 02 39.6**	**+0.1**
ATCC				S	**Sb**	**09 02 47.7**	**-1.2**
ATCC				AML	AML		
	comp=E,9940μm,1.1s						
ATCC				AML	AML		
	comp=N,8025μm,0.5s						
ATCC				AML	AML		
	comp=E,9975μm,1.1s						
ATCC				AML	AML		
	comp=E,9970μm,1.1s						
ATCC				AML	AML		
	comp=N,8020μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.50**	**173**	P	**Pg**	**09 02 39.9**	**+0.1**
T1247				S	**Sb**	**09 02 47.8**	**-1.5**
PP3	**Marolino**	**0.52**	**33**	*e*P	**Pb**	**09 02 41.3**	**-0.5**
PP3				AML	AML		
	comp=E,7170μm,1.5s						
PP3				AML	AML		
	comp=N,5325μm,1.5s						
PP3				AML	AML		
	comp=E,7565μm,1.5s						
PP3				AML	AML		
	comp=N,5405μm,1.1s						
PP3				AML	AML		
	comp=N,9495μm,0.4s						
PP3				AML	AML		
	comp=N,9105μm,1.2s						
PP3				AML	AML		
	comp=E,9930μm,0.8s						
PP3				AML	AML		
	comp=E,9775μm,0.8s						
TRTR	**Tortoreto Alta**	**0.53**	**104**	*e*P	**Pb**	**09 02 41.6**	**-0.3**
TRTR				AML	AML		
	comp=N,10245μm,0.6s						
TRTR				AML	AML		
	comp=E,13550μm,1.2s						
ARVD	**Arcevia**	**0.59**	**340**	P	**Pg**	**09 02 41.4**	**-0.1**
ARVD				S	**Sb**	**09 02 51.5**	**-0.3**
ARVD				AML	AML		
	comp=E,2800μm,0.2s						
ARVD				AML	AML		
	comp=N,1755μm,1.0s						
ARVD				AML	AML		
	comp=E,5890μm,0.3s						
ARVD				AML	AML		
	comp=N,2590μm,0.3s						
ARVD				AML	AML		
	comp=N,1562μm,0.1s						
ARVD				AML	AML		
	comp=E,2803μm,0.2s						
MURB	**Monte Urbino**	**0.60**	**302**	*e*P	**Pg**	**09 02 41.5**	**-0.1**
MURB				S	**Sb**	**09 02 51.5**	**-0.6**
MURB				AML	AML		
	comp=E,8385μm,0.3s						
MURB				AML	AML		
	comp=N,9680μm,0.2s						
MURB				AML	AML		
	comp=E,9990μm,1.5s						
MURB				AML	AML		
	comp=E,8965μm,0.3s						
MURB				AML	AML		
	comp=E,10265μm,0.2s						
MURB				AML	AML		
	comp=E,8970μm,0.3s						
MURB				AML	AML		
	comp=N,10315μm,0.3s						
MURB				AML	AML		
	comp=E,9622μm,0.4s						
MURB				AML	AML		
	comp=E,8384μm,0.3s						
MURB				AML	AML		
	comp=N,9675μm,0.2s						
ATFO	**Monte Foce - G**	**0.64**	**312**	*e*P	**Pg**	**09 02 42.2**	**-0.1**
ATFO				S	**Sb**	**09 02 52.1**	**-1.1**
ATFO				AML	AML		
	comp=N,2495μm,1.5s						
ATFO				AML	AML		
	comp=E,2960μm,0.5s						
FRON	**Frontone**	**0.68**	**328**	*e*P	**Pg**	**09 02 42.7**	**-0.5**
FRON				S	**Sb**	**09 02 54.0**	**-0.4**
FRON				AML	AML		
	comp=E,3775μm,0.6s						
FRON				AML	AML		
	comp=N,5615μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.68**	**292**	P	**Pb**	**09 02 44.5**	**-0.2**
ATLO	**AVT- Montelove**	**0.70**	**302**	P	**Pg**	**09 02 43.1**	**-0.5**
ATVO	**AVT- Monte Val**	**0.74**	**307**	*e*P	**Pg**	**09 02 43.8**	**-0.5**
ATVO				S	**Sb**	**09 02 55.6**	**-0.6**
ATVO				AML	AML		
	comp=E,1550μm,1.6s						
ATVO				AML	AML		
	comp=N,1945μm,0.7s						
ATVO				AML	AML		
	comp=E,1545μm,1.6s						
PIEI	**Pieia**	**0.78**	**320**	*e*P	**Pg**	**09 02 44.8**	**-0.2**
PIEI				S	**Sb**	**09 02 57.0**	**-0.2**
PIEI				AML	AML		
	comp=E,2310μm,0.3s						
PIEI				AML	AML		
	comp=N,1720μm,0.3s						
ATPI	**Pietralunga -**	**0.79**	**311**	*e*P	**Pg**	**09 02 44.9**	**-0.3**
ATPI				S	**Sb**	**09 02 57.1**	**-0.3**
ATPI				AML	AML		
	comp=E,2025μm,0.5s						
ATPI				AML	AML		
	comp=N,1775μm,0.7s						
ATPI				AML	AML		
	comp=E,2020μm,0.5s						
ATMI	**Monte Miggiano**	**0.80**	**300**	P	**Pb**	**09 02 46.1**	**-0.5**
MGAB	**Montegabbione**	**0.81**	**268**	P	**Pb**	**09 02 46.8**	**-0.1**
FSSB	**Fossombrone**	**0.82**	**337**	*e*P	**Pg**	**09 02 45.8**	**0.0**
FSSB				AML	AML		
	comp=E,5405μm,1.3s						
FSSB				AML	AML		
	comp=N,8215μm,0.5s						
T0110	**Collepietro**	**0.83**	**150**	P	**Pg**	**09 02 45.9**	**-0.1**
T0110				AML	AML		
	comp=E,2425μm,1.1s						
T0110				AML	AML		
	comp=N,2820μm,1.0s						
SACS	**San Casciano d**	**0.97**	**265**	P	**Pg**	**09 02 49.0**	**+0.3**
MTCE	**Montecelio**	**0.98**	**201**	P	**Pg**	**09 02 49.1**	**+0.2**
MTCE				AML	AML		
	comp=N,1176μm,0.6s						
MTCE				AML	AML		
	comp=E,1460μm,1.6s						
CAFI	**Castiglion Fio**	**1.00**	**293**	P	**Pg**	**09 02 49.3**	**+0.1**
CAFI				AML	AML		
	comp=N,872μm,1.1s						
CAFI				AML	AML		
	comp=E,1050μm,1.4s						
CAFI				AML	AML		
	comp=N,797μm,1.5s						
MCIV	**Monte Civitell**	**1.15**	**262**	AML	AML		
	comp=E,516μm,1.0s						
MCIV				AML	AML		
	comp=N,556μm,1.6s						
MCIV				AML	AML		
	comp=N,555μm,1.6s						
VIVA	**Pratoni del Vi**	**1.24**	**196**	AML	AML		
	comp=E,2050μm,0.8s						
VIVA				AML	AML		
	comp=E,2055μm,0.8s						
VIVA				AML	AML		
	comp=N,2100μm,0.6s						
ABTA	**Abfaltersbach**	**3.84**	**353**	*e*Pn	**Pn**	**09 03 30.7**	**+0.7**
	comp=N,14nm,0.4s,SNR=15						
FETA	**Feichten**	**4.45**	**337**	*i* Pn	**Pn**	**09 03 39.9**	**+1.5**
	comp=N,8.0nm,0.4s,SNR=8.7						
WTTA	**Wattenberg**	**4.46**	**346**	*e*Pn	**Pn**	**09 03 40.6**	**+1.8**
	comp=N,4.4nm,0.3s,SNR=7.3						
SQTA	**Sankt Quirin**	**4.51**	**342**	*i* Pn	**Pn**	**09 03 40.5**	**+1.2**
	comp=N,17nm,0.4s,SNR=12						
DAVOX	**Davos/Dischmat**	**4.51**	**329**	Pn	**Pn**	**09 03 41.2**	**+1.8**
	comp=N,2.6nm,0.3s,baz=139,slow=9.6,SNR=10						
DAVOX				Sn	**Sn**	**09 04 35.0**	**+2.6**
	comp=N,1.1nm,0.3s,baz=125,slow=23,SNR=8.1						
	comp=N,10nm,0.4s						
WATA	**Walderalm**	**4.54**	**346**	*e*Pn	**Pn**	**09 03 41.2**	**+1.4**
	comp=N,4.6nm,0.3s,SNR=4.5						
ARSA	**Arzberg**	**4.61**	**20**	*e*Pn	**Pn**	**09 03 40.3**	**-0.2**
	comp=N,1.2nm,0.3s						
MOTA	**Moosalm**	**4.65**	**342**	*e*Pn	**Pn**	**09 03 42.9**	**+1.6**
	comp=N,7.1nm,0.4s,SNR=8.7						
BIOA	**Bad Ischl, Aus**	**4.76**	**3**	*e*Pn	**Pn**	**09 03 42.4**	**-0.2**
	comp=N,7.8nm,0.3s,SNR=7.8						
RETA	**Reutte**	**4.87**	**340**	*e*Pn	**Pn**	**09 03 45.6**	**+1.4**
	comp=N,6.2nm,0.3s,SNR=14						
DAVA	**Damuels**	**4.95**	**333**	*e*Pn	**Pn**	**09 03 46.7**	**+1.4**
	comp=N,6.3nm,0.4s,SNR=9.5						
MOA	**Molln**	**4.96**	**8**	*e*Pn	**Pn**	**09 03 44.3**	**-1.1**
	comp=N,1.0nm,0.3s						
RONA	**Rosalia, Austr**	**5.23**	**23**	*e*Pn	**Pn**	**09 03 48.8**	**-0.3**
	comp=N,0.5nm,0.2s						
CONA	**Conrad Observa**	**5.32**	**20**	*e*Pn	**Pn**	**09 03 49.5**	**-0.9**
	comp=N,0.6nm,0.2s						
GERES	**GERESS Array B**	**5.91**	**3**	Pn	**Pn**	**09 03 57.3**	**-1.3**
	comp=N,0.4nm,0.3s,baz=184,slow=14,SNR=5.6						
GERES				Sn	**Sn**	**09 05 03.2**	**-3.6**
	comp=N,1.2nm,0.3s,baz=182,slow=23,SNR=6.1						
	comp=N,0.7nm,0.3s						
KHC	**Kasperske Hory**	**6.20**	**2**	*e*PN	**Pn**	**09 04 00.7**	**-1.7**
KHC				*e*SN	**Sn**	**09 05 11.7**	**-2.0**
EKA	**Eskdalemuir Ar**	**16.34**	**325**	Pn	**P**	**09 06 21.8**	**-1.4**
	baz=137,slow=12						
	comp=N,0.5nm,0.6s						
FINES	**FINESS Array B**	**20.07**	**18**	P	**P**	**09 07 02.6**	**-1.5**
	comp=N,0.1nm,0.3s,baz=207,slow=14,SNR=2.6						
	comp=N,7.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**31.32**	**202**	P	**P**	**09 08 52.2**	**+0.7**
	comp=N,0.5nm,0.8s,baz=15,slow=7.3,SNR=2.2						
	comp=N,0.5nm,0.8s						
MKAR	**Makanchi Array**	**47.67**	**60**	P	**P**	**09 11 08.2**	**+0.7**
	comp=N,1.3nm,0.9s,baz=291,slow=8.5,SNR=2.2						
	comp=N,1.3nm,0.9s						
SONM	**Songino Array**	**61.69**	**50**	P	**P**	**09 12 50.4**	**+1.1**
	comp=N,0.3nm,0.6s,baz=309,slow=9.1,SNR=2.0						
	comp=N,0.3nm,0.6s						

ROM 30 09:03:29.9±0.1, 42°.826N±0°.004×13°.102E±0°.006, h12km, ML3.4/22, 1C, Error ellipse: s-maj=0.5km s-min=0.1km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**65**	P	Pg	09 03 33.2	+0.7
T1245				S	Sg	09 03 35.2	+0.8
T1212	**Cascia, Frazio**	**0.09**	**209**	P	Pg	09 03 32.8	+0.2
T1212				S	Sg	09 03 34.3	-0.2
T1216	**Preci, Frazion**	**0.09**	**317**	P	Pg	09 03 32.9	+0.3
T1216				S	Sg	09 03 35.6	+1.0
T1213	**Norcia, Frazio**	**0.10**	**170**	P	Pg	09 03 33.0	+0.3
T1213				S	Sg	09 03 34.9	+0.1
T1214	**Arquata del Tr**	**0.10**	**130**	P	Pg	09 03 33.4	+0.5
T1214				S	Sg	09 03 35.4	+0.4
FEMA	**Monte Fema**	**0.14**	**344**	P	Pg	09 03 33.7	+0.3
FEMA				S	Sg	09 03 36.4	+0.5
T1218	**Civita (PG)**	**0.16**	**176**	P	Pg	09 03 34.0	+0.5
T1218				S	Sg	09 03 36.5	+0.3
T1244	**Arquata del Tr**	**0.16**	**116**	P	Pb	09 03 34.6	-0.3
T1244				S	Sg	09 03 37.7	+1.5
T1217	**Poggiodomo (PG**	**0.17**	**228**	P	Pg	09 03 34.0	+0.3
T1217				S	Sg	09 03 36.6	+0.2
T1217				AML	AML		
	comp=E,7490μm,0.6s						
T1217				AML	AML		
	comp=N,15150μm,0.3s						
T1217				AML	AML		
	comp=E,7485μm,0.6s						
T1217				AML	AML		
	comp=N,14550μm,0.3s						
T1217				AML	AML		
	comp=E,8130μm,0.5s						
T1217				AML	AML		
	comp=N,15200μm,0.4s						
T1217				AML	AML		
	comp=N,14550μm,0.3s						
T1217				AML	AML		
	comp=N,15200μm,0.3s						
T1217				AML	AML		
	comp=N,14500μm,0.3s						
T1217				AML	AML		
	comp=E,8150μm,0.5s						
T1217				AML	AML		
	comp=E,7491μm,0.6s						
T1217				AML	AML		
	comp=E,7466μm,0.6s						
T1215	**Vallo di Nera,**	**0.17**	**262⇑**	*i*P	Pg	09 03 34.3	+0.5
T1215				S	Sg	09 03 37.0	+0.5
T1201	**Domo (RI)**	**0.20**	**147**	P	Pb	09 03 35.1	-0.5
T1201				S	Sg	09 03 38.6	+1.4
T1204	**Amatrice, Fraz**	**0.22**	**133**	*e*P	Pb	09 03 35.3	-0.7
T1204				S	Sg	09 03 39.0	+1.2
T1204				AML	AML		
	comp=E,15150μm,0.2s						
T1204				AML	AML		
	comp=N,9520μm,0.5s						
T1204				AML	AML		

	comp=E,15350μm,0.8s					
T1204				AML	AML	
	comp=N,10435μm,1.0s					
LNSS	**Leonessa**	**0.23**	**191**	*e*P	Pg	09 03 35.1 +0.3
LNSS				S	Sg	09 03 38.4 +0.4
LNSS				AML	AML	
	comp=E,11430μm,0.2s					
LNSS				AML	AML	
	comp=N,24450μm,0.4s					
AM05	**Amandola Campo**	**0.24**	**51**	AML	AML	
	comp=E,51950μm,1.2s					
AM05				AML	AML	
	comp=N,9600μm,0.7s					
AM05				AML	AML	
	comp=N,2745μm,1.1s					
AM05				AML	AML	
	comp=N,9620μm,0.7s					
AM05				AML	AML	
	comp=E,11400μm,1.2s					
T1219	**Muccia, Frazio**	**0.24**	**343**	P	Pg	09 03 35.4 +0.5
T1219				S	Sg	09 03 38.9 +0.5
T1220	**Camerino, Fraz**	**0.28**	**358**	P	Pg	09 03 35.5 -0.2
T1220				S	Sg	09 03 39.2 -0.4
T1243	**Rocca Santa Ma**	**0.29**	**117**	*e*P	Pb	09 03 36.5 -0.5
T1243				S	Sb	09 03 40.8 -1.1
GUMA	**Gualdo di Mace**	**0.29**	**36**	AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
	comp=N,82500μm,0.5s					
GUMA				AML	AML	
GUMA				AML	AML	
RM33	**Pellescritta (**	**0.33**	**165**	*e*P	Pg	09 03 36.6 +0.1
RM33				S	Sg	09 03 41.6 +0.6
RM33				AML	AML	
	comp=N,11600μm,1.0s					
RM33				AML	AML	
	comp=N,11600μm,1.0s					
RM33				AML	AML	
	comp=N,11550μm,1.0s					
RM33				AML	AML	
	comp=E,8290μm,0.9s					
RM33				AML	AML	
	comp=N,11550μm,1.0s					
RM33				AML	AML	
	comp=E,7985μm,0.5s					
SEF1	**Sefro**	**0.34**	**341**	P	Pg	09 03 37.1 +0.4
SEF1				S	Sg	09 03 42.1 +0.8
T1211	**Morro Reatino**	**0.34**	**212**	P	Pg	09 03 37.0 +0.1
T1211				S	Sg	09 03 41.9 +0.4
T1211				AML	AML	
	comp=E,5990μm,0.2s					
T1211				AML	AML	
	comp=N,9795μm,0.2s					
T1211				AML	AML	
	comp=E,6075μm,0.1s					
T1211				AML	AML	
	comp=N,9785μm,0.2s					
T1211				AML	AML	
	comp=N,9835μm,0.2s					
T1211				AML	AML	
	comp=E,5985μm,0.2s					
ARRO	**Arrone**	**0.35**	**225**	P	Pg	09 03 37.1 +0.2
ARRO				S	Sg	09 03 42.2 +0.7
ARRO				AML	AML	
	comp=E,3660μm,1.6s					
ARRO				AML	AML	
	comp=N,4240μm,0.6s					
ARRO				AML	AML	
	comp=E,3865μm,1.3s					
ARRO				AML	AML	
	comp=E,3870μm,1.3s					
PIO1	**Pioraco**	**0.36**	**346**	P	Pg	09 03 36.9 -0.3
PIO1				S	Sg	09 03 42.6 +0.6
MDAR	**Monte D'Aria**	**0.37**	**5**	P	Pg	09 03 36.7 -0.5
MDAR				S	Sg	09 03 41.4 -0.8
CAMP	**Campotosto**	**0.37**	**142**	P	Pg	09 03 37.4 +0.1
CAMP				S	Sg	09 03 43.1 +0.9
CAMP				AML	AML	
	comp=E,4080μm,0.8s					
CAMP				AML	AML	
	comp=N,4065μm,0.5s					
T1246	**Crognaleto (TE**	**0.38**	**130**	P	Pg	09 03 37.7 +0.3
T1246				S	Sb	09 03 43.5 -1.0
FIU1	**Fiuminata**	**0.38**	**341**	P	Pg	09 03 37.6 +0.1
FIU1				S	Sg	09 03 43.4 +0.7
ASSB	**Assisi San Ben**	**0.39**	**304**	*e*P	Pg	09 03 37.6 0.0
ASSB				S	Sb	09 03 44.8 0.0
ASSB				AML	AML	
	comp=N,7600μm,1.6s					
ASSB				AML	AML	
	comp=E,5975μm,1.0s					
SSM1	**San Severino M**	**0.41**	**8**	P	Pg	09 03 37.4 -0.6
SSM1				S	Sg	09 03 42.8 -0.5
T1247	**Pizzolo (AQ)**	**0.41**	**159**	*e*P	Pg	09 03 38.2 +0.2
T1247				S	Sg	09 03 44.2 +0.7
T1247				AML	AML	
	comp=E,7320μm,0.7s					
T1247				AML	AML	
	comp=N,6975μm,0.2s					
T1247				AML	AML	
	comp=E,7325μm,0.7s					
GAG1	**Gagliole**	**0.41**	**357**	P	Pg	09 03 37.7 -0.3
GAG1				S	Sg	09 03 43.6 0.0
GAG1				AML	AML	
	comp=E,32100μm,0.6s					
GAG1				AML	AML	
	comp=N,37950μm,0.4s					
GAG1				AML	AML	
	comp=E,32050μm,0.6s					
GAG1				AML	AML	
	comp=N,37950μm,0.4s					
GAG1				AML	AML	
	comp=N,37900μm,0.4s					
MNTP	**Montappone**	**0.41**	**41**	*e*P	Pg	09 03 37.7 -0.4
MNTP				S	Sg	09 03 43.4 -0.1
MNTP				AML	AML	
	comp=E,44950μm,1.4s					
MNTP				AML	AML	
	comp=N,23150μm,1.0s					
MNTP				AML	AML	
	comp=N,23100μm,1.0s					
TERO	**Teramo**	**0.42**	**119**	*e*P	Pg	09 03 38.5 +0.3
TERO				AML	AML	
	comp=N,7820μm,0.1s					
TERO				AML	AML	
	comp=E,5890μm,0.4s					
TERO				AML	AML	
	comp=N,7815μm,0.1s					
TERO				AML	AML	
	comp=E,6345μm,0.4s					
TERO				AML	AML	
	comp=E,5895μm,0.4s					
TERO				AML	AML	
	comp=N,8755μm,0.1s					
CESX	**Cesi**	**0.44**	**241**	P	Pg	09 03 39.0 +0.4
CESX				S	Sg	09 03 45.1 +0.7
CESX				AML	AML	
	comp=E,4055μm,0.5s					
CESX				AML	AML	
	comp=N,3680μm,0.3s					
OFFI	**Offida**	**0.44**	**76**	P	Pb	09 03 39.5 -0.2
OFFI				AML	AML	
	comp=E,13200μm,0.7s					
OFFI				AML	AML	
	comp=N,16050μm,0.8s					
SNTG	**Esanatoglia**	**0.44**	**345**	P	Pg	09 03 38.6 -0.1
SNTG				S	Sg	09 03 45.1 +0.5
SNTG				AML	AML	
	comp=N,7600μm,1.1s					
SNTG				AML	AML	
	comp=E,4660μm,1.2s					
SNTG				AML	AML	
	comp=E,4790μm,1.2s					
SNTG				AML	AML	
	comp=N,7600μm,1.2s					
SNTG				AML	AML	
	comp=N,7905μm,1.2s					
SNTG				AML	AML	
	comp=N,7900μm,1.2s					
SNTG				AML	AML	
	comp=E,4665μm,1.2s					
SNTG				AML	AML	
	comp=N,7595μm,1.2s					
ATCC	**AVT- Casa Cast**	**0.49**	**317**	*e*P	Pb	09 03 40.2 -0.3
ATCC				AML	AML	
	comp=N,6780μm,0.6s					
ATCC				AML	AML	
	comp=E,7050μm,0.7s					
ATCC				AML	AML	
	comp=N,6785μm,0.6s					
TRE1	**Treia**	**0.51**	**18**	P	Pg	09 03 39.7 -0.1
TRE1				S	Sg	09 03 46.5 -0.1
GIGS	**Gran Sasso**	**0.51**	**137**	*e*P	Pg	09 03 40.0 +0.1
GIGS				S	Sb	09 03 47.5 -0.8
GIGS				AML	AML	
	comp=E,1170μm,0.7s					
GIGS				AML	AML	
	comp=N,954μm,1.5s					
GIGS				AML	AML	
	comp=N,955μm,1.5s					
AQU	**L'Aquila**	**0.52**	**155**	AML	AML	
	comp=N,3675μm,1.1s					
AQU				AML	AML	
	comp=E,2870μm,1.1s					
AQU				AML	AML	
	comp=N,3765μm,1.1s					
AQU				AML	AML	
	comp=E,2815μm,1.1s					
FOSV	**Fossato di Vic**	**0.53**	**332**	*e*P	Pg	09 03 40.6 +0.4
FOSV				S	Sb	09 03 48.4 -0.4
FOSV				AML	AML	
	comp=E,6200μm,0.5s					
FOSV				AML	AML	
	comp=N,6535μm,0.3s					
FIAM	**Fiamignano**	**0.56**	**179**	*e*P	Pg	09 03 40.6 -0.1
FIAM				AML	AML	
	comp=E,2475μm,1.6s					
FIAM				AML	AML	
	comp=N,2795μm,1.1s					
TRTR	**Tortoreto Alta**	**0.60**	**91**	*e*P	Pb	09 03 43.0 +0.8
TRTR				AML	AML	
	comp=N,12800μm,0.7s					
TRTR				AML	AML	
	comp=E,9820μm,1.6s					
MURB	**Monte Urbino**	**0.61**	**316**	*e*P	Pb	09 03 42.5 0.0
MURB				AML	AML	
	comp=E,8975μm,0.3s					
MURB				AML	AML	
	comp=N,6455μm,0.3s					
MURB				AML	AML	
	comp=E,8965μm,0.3s					
MURB				AML	AML	
	comp=N,7025μm,0.3s					
MURB				AML	AML	
	comp=N,6450μm,0.3s					
MURB				AML	AML	
	comp=E,10265μm,0.2s					
MURB				AML	AML	
	comp=E,8970μm,0.3s					
ATFO	**Monte Foce - G**	**0.67**	**324**	*e*P	Pb	09 03 43.5 0.0
ATFO				AML	AML	
	comp=N,4000μm,0.9s					
ATFO				AML	AML	
	comp=E,4010μm,1.0s					
ARVD	**Arcevia**	**0.68**	**350**	P	Pg	09 03 43.0 -0.1
ARVD				S	Sb	09 03 52.8 -0.4
ARVD				AML	AML	
	comp=E,5890μm,0.3s					
ARVD				AML	AML	
	comp=N,2590μm,0.3s					
VCEL	**Villa Celiera**	**0.69**	**128**	*e*P	Pb	09 03 44.0 0.0
VCEL				AML	AML	
	comp=E,2820μm,1.1s					
VCEL				AML	AML	
	comp=N,3510μm,0.5s					
MGAB	**Montegabbione**	**0.73**	**277**	P	Pb	09 03 44.8 +0.2
SRES	**S.Oreste - Sor**	**0.73**	**217**	*e*P	Pg	09 03 44.0 -0.1
SRES				AML	AML	
	comp=E,1354μm,0.6s					
SRES				AML	AML	
	comp=N,1665μm,1.2s					
FRON	**Frontone**	**0.74**	**338**	*e*P	Pg	09 03 44.0 -0.3
FRON				S	Sb	09 03 55.0 0.0
FRON				AML	AML	
	comp=E,3315μm,0.4s					
FRON				AML	AML	
	comp=N,4225μm,0.4s					
ATVO	**AVT- Monte Val**	**0.75**	**318**	P	Pb	09 03 44.9 -0.1
ATVO				AML	AML	
	comp=N,1715μm,0.8s					
ATVO				AML	AML	
	comp=E,1775μm,0.9s					
T0110	**Collepietro**	**0.78**	**140**	*e*P	Pg	09 03 44.7 -0.3
T0110				AML	AML	
	comp=N,2575μm,0.6s					
T0110				AML	AML	
	comp=E,4070μm,0.5s					
PIEI	**Pieia**	**0.82**	**330**	*e*P	Pg	09 03 45.9 +0.1
PIEI				AML	AML	
	comp=E,1550μm,1.6s					
PIEI				AML	AML	
	comp=N,1740μm,0.9s					
MPAG	**Monte Paganucc**	**0.84**	**343**	*e*P	Pg	09 03 46.1 -0.1
MPAG				AML	AML	
	comp=E,2255μm,0.8s					
MPAG				AML	AML	
	comp=N,2600μm,0.7s					
SACS	**San Casciano d**	**0.88**	**272**	P	Pb	09 03 47.2 +0.1
APEC	**Apecchio**	**0.89**	**326**	*e*P	Pb	09 03 47.4 +0.2
CAFI	**Castiglion Fio**	**0.97**	**302**	*e*P	Pn	09 03 49.2 -0.2
CAFI				AML	AML	
	comp=N,788μm,1.3s					
CAFI				AML	AML	
	comp=E,946μm,1.6s					
PE3	**Peglio**	**0.97**	**333**	*e*P	Pn	09 03 49.1 -0.4
CPGN	**Carpegna, Ital**	**1.13**	**330**	P	Pn	09 03 52.0 +0.3
CPGN				AML	AML	
	comp=N,2235μm,0.7s					
CPGN				AML	AML	
	comp=E,3255μm,1.0s					
SFI	**Santa Sofia**	**1.41**	**320**	P	Pg	09 03 56.8 -0.2

*NOU **30** 09:03:36.0,41.°09S×177.°18E,h0km,MLv3.6/7,Off E. Coast of N. Island, N.Z.*
*WEL **30** 09:03:42.4±0.7,41.°S±3.°×17.°7E±.°,h25km±4km,M3.1/22, ML3.4/24,MLv3.1/22,Error ellipse: s-maj=0.0km s-min=0.0km az=111.2*

ISC 30 09:03:38.7±2.1,40.°98S±0.°05×176.°95E±0.°07,h15km±12km, n62,σ0°93/69,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPWZ	**Castlepoint**	**0.57**	**276**	P	**Pn**	**09 03 52.6**	**+0.3**
CPWZ				S	**Sb**	**09 04 00.4**	**+2.0**
BFZ	**Birch Farm**	**0.61**	**298**	P	**Pb**	**09 03 51.6**	**+0.5**
BFZ	**Birch Farm**	**0.61**	**298**	P	**Pb**	**09 03 51.5**	**+0.4**
ANWZ	**Angora Road**	**0.63**	**325**	P	**Pb**	**09 03 52.0**	**+0.7**
ANWZ				S	**Sg**	**09 03 59.6**	**+0.3**
PRHZ	**Porangahau**	**0.75**	**341**	P	**Pb**	**09 03 54.7**	**+1.3**
PRHZ				S	**Sb**	**09 04 04.3**	**+0.8**
TMWZ	**Te Maipa**	**0.81**	**260**	P	**Pn**	**09 03 56.3**	**+0.6**
TIWZ	**Tintock**	**0.83**	**283**	P	**Pb**	**09 03 55.7**	**+0.8**
PRWZ	**Pori Road**	**0.85**	**299**	P	**Pb**	**09 03 55.8**	**+0.5**
DVHZ	**Dannevirke**	**0.90**	**318**	P	**Pg**	**09 03 56.1**	**-0.1**
DVHZ				S	**Sg**	**09 04 06.7**	**-1.2**
PXZ	**Pawanui**	**0.94**	**356**	P	**Pn**	**09 03 58.1**	**+0.7**
WPHZ	**Waipukurau**	**0.99**	**337**	P	**Pb**	**09 03 58.1**	**+0.5**
WPHZ				S	**Sg**	**09 04 10.7**	**0.0**
TRWZ	**Traveller**	**1.04**	**246**	P	**Pn**	**09 03 59.8**	**+1.0**
POWZ	**Post Office Ro**	**1.07**	**303**	P	**Pb**	**09 03 58.9**	**-0.1**
MRZ	**Mangatainoka R**	**1.09**	**286**	P	**Pb**	**09 03 58.9**	**-0.3**
HOWZ	**Holdsworth Sta**	**1.09**	**274**	P	**Pb**	**09 03 59.3**	**0.0**
MTW	**Mount Morrison**	**1.11**	**260**	P	**Pb**	**09 04 00.1**	**+0.4**
KAHZ	**Kahuranaki**	**1.18**	**357**	P	**Pn**	**09 04 01.5**	**+0.7**
TSZ	**Takapari Road**	**1.19**	**320**	P	**Pn**	**09 04 00.4**	**-0.4**
TSZ				S	**Sb**	**09 04 13.8**	**-2.3**
PNHZ	**Pukenui**	**1.21**	**331**	P	**Pn**	**09 04 01.0**	**-0.1**
PNHZ				S	**Sb**	**09 04 14.8**	**-1.9**
PAWZ	**Paruwai Farm**	**1.22**	**250**	P	**Pn**	**09 04 01.8**	**+0.6**
MSWZ	**Moikau Station**	**1.36**	**250**	P	**Pn**	**09 04 03.5**	**+0.4**
OGWZ	**Otaki Gorge**	**1.36**	**276**	P	**Pn**	**09 04 03.1**	**0.0**
PLWZ	**Palliser**	**1.41**	**245**	P	**Pn**	**09 04 04.3**	**+0.4**
CAW	**Cannon Point**	**1.43**	**264**	P	**Pn**	**09 04 04.3**	**+0.2**
MCHZ	**McNeill Hill**	**1.54**	**353**	P	**Pn**	**09 04 06.8**	**+1.1**
KIW	**Kapiti Island**	**1.55**	**274**	P	**Pn**	**09 04 06.1**	**+0.3**
KWHZ	**Kaweka Forest**	**1.60**	**345**	P	**Pn**	**09 04 07.1**	**+0.5**
WEL	**Wellington**	**1.68**	**259**	P	**Pn**	**09 04 07.5**	**-0.1**
SNZO	**South Karori**	**1.73**	**258**	P	**Pn**	**09 04 09.8**	**+1.6**
MOVZ	**Moawhango**	**1.81**	**329**	P	**Pn**	**09 04 10.5**	**+1.0**
BKZ	**Black Stump Fm**	**1.84**	**349**	P	**Pn**	**09 04 10.4**	**+0.6**
BKZ	**Black Stump Fm**	**1.84**	**349**	P	**Pn**	**09 04 10.4**	**+0.6**
NMHZ	**Naumai**	**1.88**	**357**	P	**Pn**	**09 04 11.8**	**+1.4**
WAZ	**Wanganui**	**1.93**	**308**	P	**Pn**	**09 04 12.5**	**+1.5**
MTVZ	**Mangateitei**	**1.95**	**324**	P	**Pb**	**09 04 13.5**	**-0.5**
TUVZ	**Tukino**	**1.97**	**329**	P	**Pn**	**09 04 13.3**	**+1.5**
TCW	**Tory Channel**	**2.04**	**262**	P	**Pn**	**09 04 12.6**	**+0.1**
SNVZ	**South Ngauruho**	**2.05**	**330**	P	**Pn**	**09 04 14.4**	**+1.5**
OTVZ	**Oturere**	**2.06**	**331**	P	**Pn**	**09 04 14.1**	**+1.2**
PKVZ	**Pokaka**	**2.08**	**323**	P	**Pn**	**09 04 14.9**	**+1.7**
NNVZ	**North Ngauruho**	**2.11**	**330**	P	**Pb**	**09 04 15.9**	**-0.8**
MTHZ	**Maungataniwha**	**2.12**	**358**	P	**Pn**	**09 04 14.8**	**+1.1**
TWVZ	**Taurewa**	**2.23**	**328**	P	**Pn**	**09 04 16.6**	**+1.4**
DUWZ	**D'Urville Isla**	**2.30**	**273**	P	**Pn**	**09 04 17.1**	**+0.9**
BSWZ	**Blackbirch Sta**	**2.43**	**251**	P	**Pn**	**09 04 18.3**	**+0.4**
MUGZ	**Murupara**	**2.50**	**357**	P	**Pn**	**09 04 18.9**	**0.0**
MUGZ				S	**Sn**	**09 04 47.8**	**-1.3**
MWZ	**Matawai**	**2.67**	**10**	P	**Pn**	**09 04 21.4**	**+0.1**
URZ	**Urewera**	**2.71**	**3**	P	**Pn**	**09 04 22.2**	**+0.4**
URZ	**Urewera**	**2.71**	**3**	P	**Pn**	**09 04 22.4**	**+0.6**
TARZ	**Mount Tarawera**	**2.76**	**353**	P	**Pn**	**09 04 23.4**	**+0.9**
KHZ	**Kahutara**	**2.93**	**239**	P	**Pn**	**09 04 24.8**	**0.0**
KHZ	**Kahutara**	**2.93**	**239**	P	**Pn**	**09 04 24.8**	**0.0**
HIZ	**Hauiti**	**2.94**	**326**	P	**Pn**	**09 04 26.8**	**+1.9**
TKNZ	**Takaka Hill**	**3.02**	**268**	P	**Pn**	**09 04 26.9**	**+0.9**
THZ	**Tophouse**	**3.14**	**254**	P	**Pn**	**09 04 28.2**	**+0.4**
MRNZ	**Matariki Terra**	**3.19**	**261**	P	**Pn**	**09 04 29.3**	**+0.9**
QRZ	**Quartz Range**	**3.35**	**271**	P	**Pn**	**09 04 31.7**	**+1.1**
GVZ	**Greta Valley S**	**3.53**	**234**	P	**Pn**	**09 04 33.5**	**+0.4**
LTZ	**Lake Taylor**	**3.93**	**241**	P	**Pn**	**09 04 38.6**	**0.0**
MQZ	**McQueen's Vall**	**4.19**	**228**	P	**Pn**	**09 04 42.4**	**+0.3**
CTZ	**Chatham Island**	**5.51**	**122**	P	Pn	09 05 06.3	+6.1
TMZ	**Timaru**	**5.55**	**230**	P	**Pn**	**09 05 00.9**	**+0.1**

*LDG **30** 09:04:44.8±0.1,42.°67N×13.°23E,h10km,Ml3.6/22,Error ellipse: s-maj=3.1km s-min=1.8km az=40.0*
*ROM **30** 09:04:45.3±0.1,42.°693N±0.°003×13.°218E±0.°004, h10km,ML3.5/18,Error ellipse: s-maj=0.3km s-min=0.3km az=231.0*

ISC 30 09:04:44.3±0.8,42.°70N±0.°01×13.°22E±0.°02,h18km±1km, n89,σ2°09/139,10C-1D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.04**	**150⇓**	*e*P	**Pg**	**09 04 48.0**	**+0.3**
T1201				S	**Sg**	**09 04 49.9**	**-0.2**
T1214	**Arquata del Tr**	**0.06**	**352**	P	**Pg**	**09 04 47.7**	**-0.3**
T1214				S	**Sg**	**09 04 49.5**	**-0.9**
T1204	**Amatrice, Fraz**	**0.07**	**106⇑**	P	**Pg**	**09 04 48.2**	**+0.2**
T1204				S	**Sg**	**09 04 50.1**	**-0.4**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1213	**Norcia, Frazio**	**0.08**	**293**	P	**Pg**	**09 04 47.9**	**-0.1**
T1213				S	**Sg**	**09 04 49.7**	**-0.7**
T1218	**Civita (PG)**	**0.08**	**252**	P	**Pg**	**09 04 48.1**	**+0.1**
T1218				S	**Sg**	**09 04 50.0**	**-0.5**
T1244	**Arquata del Tr**	**0.08**	**43**	*e*P	**Pg**	**09 04 48.1**	**+0.1**
T1244				S	**Sg**	**09 04 50.1**	**-0.5**
T1212	**Cascia, Frazio**	**0.14**	**293**	P	**Pg**	**09 04 48.8**	**+0.2**
T1212				S	**Sg**	**09 04 51.3**	**-0.2**
LNSS	**Leonessa**	**0.16**	**235⇑**	*i*P	**Pg**	**09 04 49.4**	**+0.5**
LNSS				S	**Sg**	**09 04 52.4**	**+0.5**
LNSS				AML	AML		
	comp=N,58150μm,1.0s						
LNSS				AML	AML		
	comp=E,17800μm,0.6s						
LNSS				AML	AML		
	comp=N,53173μm,0.4s						
T1245	**Castelsantange**	**0.16**	**351**	P	**Pb**	**09 04 49.8**	**+1.8**
T1245				S	**Sg**	**09 04 52.1**	**0.0**
T1243	**Rocca Santa Ma**	**0.17**	**90⇑**	*i*P	**Pg**	**09 04 49.4**	**+0.4**
T1243				S	**Sg**	**09 04 52.2**	**+0.1**
RM33	**Pellescritta (**	**0.19**	**181⇑**	*i*P	**Pb**	**09 04 50.0**	**+1.3**
RM33				S	**Sg**	**09 04 53.4**	**+0.9**
RM33				AML	AML		
	comp=E,62950μm,1.5s						
RM33				AML	AML		
	comp=N,54100μm,0.2s						
RM33				AML	AML		
	comp=E,63000μm,1.5s						
RM33				AML	AML		
	comp=N,54050μm,0.2s						
RM33				AML	AML		
	comp=N,56600μm,0.2s						
RM33				AML	AML		
	comp=E,64500μm,0.2s						
RM33				AML	AML		
	comp=N,54079μm,0.2s						
RM33				AML	AML		
	comp=E,64499μm,0.2s						
CAMP	**Campotosto**	**0.21**	**139⇑**	*i*P	**Pb**	**09 04 50.3**	**+1.0**
CAMP				S	**Sg**	**09 04 54.0**	**+0.8**
CAMP				AML	AML		
	comp=N,8790μm,1.1s						
CAMP				AML	AML		
	comp=E,16500μm,0.2s						
CAMP				AML	AML		
	comp=E,16522μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**274⇑**	*e*P	**Pg**	**09 04 50.0**	**+0.4**
T1217				S	**Sg**	**09 04 53.6**	**+0.4**
T1217				AML	AML		
	comp=E,12300μm,0.4s						
T1217				AML	AML		
	comp=N,30650μm,0.3s						
T1217				AML	AML		
	comp=E,12300μm,0.4s						
T1217				AML	AML		
	comp=N,31000μm,0.3s						
T1217				AML	AML		
	comp=E,12050μm,0.6s						
T1217				AML	AML		
	comp=N,30650μm,0.3s						
T1217				AML	AML		
	comp=N,30950μm,0.3s						
T1217				AML	AML		
	comp=E,12075μm,0.6s						
MC2	**Monte Cornacci**	**0.22**	**354**	P	**Pg**	**09 04 50.6**	**+0.9**
MC2				S	**Sg**	**09 04 54.0**	**+0.5**
T1241	**Roccafluvione,**	**0.22**	**44**	*e*P	**Pg**	**09 04 50.6**	**+0.9**
T1241				S	**Sg**	**09 04 54.3**	**+0.9**
T1241				AML	AML		
	comp=E,33350μm,0.5s						
T1241				AML	AML		
	comp=N,21200μm,0.5s						
T1241				AML	AML		
	comp=E,31600μm,0.5s						
T1241				AML	AML		
	comp=N,21800μm,0.9s						
T1241				AML	AML		
	comp=N,21150μm,0.5s						
T1241				AML	AML		
	comp=E,31607μm,0.5s						
T1246	**Crognaleto (TE**	**0.23**	**119⇑**	*i*P	**Pb**	**09 04 50.5**	**+0.8**
T1246				S	**Sg**	**09 04 54.4**	**+0.8**
T1216	**Preci, Frazion**	**0.24**	**323**	P	**Pb**	**09 04 51.2**	**+1.2**
T1216				S	**Sg**	**09 04 54.3**	**+0.4**
T1247	**Pizzolo (AQ)**	**0.26**	**167⇑**	*i*P	**Pb**	**09 04 51.2**	**+0.9**
T1247				S	**Sg**	**09 04 55.8**	**+1.5**
T1247				AML	AML		
	comp=N,36550μm,0.4s						
T1247				AML	AML		
	comp=E,30650μm,1.4s						
T1247				AML	AML		
	comp=E,26155μm,0.1s						
T1215	**Vallo di Nera,**	**0.28**	**292**	P	**Pb**	**09 04 51.9**	**+1.1**
T1215				S	**Sg**	**09 04 55.7**	**+0.8**
T1215				AML	AML		
	comp=E,9275μm,1.0s						
T1215				AML	AML		
	comp=N,8625μm,0.9s						
T1215				AML	AML		
	comp=E,9365μm,1.0s						
T1215				AML	AML		
	comp=N,8530μm,0.9s						
T1215				AML	AML		
	comp=E,9245μm,1.0s						
T1215				AML	AML		
	comp=E,9385μm,1.0s						
T1215				AML	AML		
	comp=N,8510μm,0.9s						

T1215				AML	AML	
	comp=E,9360μm,1.0s					
T1215				AML	AML	
	comp=E,9265μm,1.0s					
T1215				AML	AML	
	comp=N,8635μm,0.9s					
TERO	**Teramo**	**0.29**	**104**	⇑*i*P	**Pg**	**09 04 51.4 +0.6**
TERO				S	**Sb**	**09 04 56.0 +0.6**
TERO				AML	AML	
	comp=N,19500μm,0.8s					
TERO				AML	AML	
	comp=N,19550μm,0.8s					
TERO				AML	AML	
	comp=N,21650μm,0.8s					
TERO				AML	AML	
	comp=E,21500μm,0.1s					
TERO				AML	AML	
	comp=E,23950μm,0.1s					
TERO				AML	AML	
	comp=N,20644μm,1.9s					
FEMA	**Monte Fema**	**0.29**	**335**	P	**Pg**	**09 04 51.6 +0.7**
FEMA				S	**Sg**	**09 04 56.0 +0.6**
FEMA				AML	AML	
	comp=E,25500μm,0.5s					
FEMA				AML	AML	
	comp=N,23750μm,1.1s					
AM05	**Amandola Campo**	**0.30**	**19**	*e*P	**Pg**	**09 04 51.8 +0.9**
AM05				S	**Sg**	**09 04 56.3 +0.9**
AM05				AML	AML	
	comp=E,5170μm,0.6s					
AM05				AML	AML	
	comp=N,7285μm,0.6s					
AM05				AML	AML	
	comp=E,24300μm,0.7s					
AM05				AML	AML	
	comp=N,1715μm,0.1s					
T1211	**Morro Reatino**	**0.32**	**239**	*e*P	**Pg**	**09 04 51.9 +0.7**
T1211				S	**Sb**	**09 04 56.8 +0.7**
T1211				AML	AML	
	comp=N,16200μm,0.4s					
T1211				AML	AML	
	comp=E,9550μm,0.3s					
T1211				AML	AML	
	comp=N,16250μm,0.4s					
T1211				AML	AML	
	comp=E,9540μm,0.3s					
T1211				AML	AML	
	comp=N,16050μm,0.4s					
T1211				AML	AML	
	comp=E,9495μm,0.3s					
T1211				AML	AML	
	comp=E,9495μm,0.3s					
FDMO	**Fiordimonte**	**0.35**	**344**	P	**Pg**	**09 04 52.8 +0.9**
FDMO				S	**Sg**	**09 04 57.8 +0.8**
GIGS	**Gran Sasso**	**0.35**	**134**	⇑*e*P	**Pg**	**09 04 52.5 +0.6**
GIGS				S	**Sb**	**09 04 58.0 +0.5**
GIGS				AML	AML	
	comp=N,2850μm,0.1s					
GIGS				AML	AML	
	comp=E,5675μm,1.6s					
GIGS				AML	AML	
	comp=N,2852μm,0.1s					
ARRO	**Arrone**	**0.36**	**251**	*e*P	**Pg**	**09 04 52.7 +0.8**
ARRO				S	**Sg**	**09 04 57.9 +1.0**
ARRO				AML	AML	
	comp=N,5095μm,1.0s					
ARRO				AML	AML	
	comp=E,5765μm,1.2s					
ARRO				AML	AML	
	comp=E,5521μm,0.2s					
AQU	**L'Aquila**	**0.37**	**159**	*e*P	**Pb**	**09 04 53.0 +0.6**
AQU				S	**Sb**	**09 04 58.5 +0.7**
AQU				AML	AML	
	comp=E,6440μm,1.0s					
AQU				AML	AML	
	comp=N,5980μm,1.1s					
AQU				AML	AML	
	comp=N,5585μm,1.1s					
AQU				AML	AML	
	comp=E,6635μm,1.0s					
AQU				AML	AML	
	comp=E,6435μm,1.0s					
AQU				AML	AML	
	comp=E,6632μm,1.0s					
AQU				AML	AML	
	comp=N,5523μm,0.3s					
AQU				AML	AML	
	comp=E,5377μm,0.6s					
GUMA	**Gualdo di Mace**	**0.38**	**13**	P	**Pb**	**09 04 53.5 +0.9**
GUMA				S	**Sb**	**09 04 59.5 +1.4**
OFFI	**Offida**	**0.42**	**55**	*e*P	**Pb**	**09 04 54.5 +1.3**
OFFI				AML	AML	
	comp=E,19400μm,0.6s					
OFFI				AML	AML	
	comp=N,16800μm,0.5s					
OFFI				AML	AML	
	comp=E,19416μm,0.6s					
FIAM	**Fiamignano**	**0.43**	**190**	*e*P	**Pb**	**09 04 54.1 +0.5**
FIAM				S	**Sb**	**09 05 00.5 +0.8**
FIAM				AML	AML	
	comp=E,14600μm,0.5s					
FIAM				AML	AML	
	comp=N,6610μm,0.8s					
MNTP	**Montappone**	**0.48**	**22**	P	**Pb**	**09 04 55.6 +1.4**
CESX	**Cesi**	**0.48**	**260**	*e*P	**Pg**	**09 04 54.6 +0.5**
CESX				S	**Sb**	**09 05 02.5 +1.5**
CESX				AML	AML	
	comp=E,6985μm,0.4s					
CESX				AML	AML	
	comp=N,7930μm,0.4s					
SEF1	**Sefro**	**0.49**	**336**	P	**Pg**	**09 04 55.3 +1.0**
SEF1				S	**Sg**	**09 05 02.4 +1.4**
FAGN	**Fagnano**	**0.51**	**148**	*e*P	**Pb**	**09 04 55.6 +0.9**
FAGN				S	**Sb**	**09 05 03.7 +2.0**
FAGN				AML	AML	
	comp=E,10090μm,1.3s					
FAGN				AML	AML	
	comp=N,16050μm,0.3s					
FAGN				AML	AML	
	comp=E,10066μm,0.2s					
TRTR	**Tortoreto Alta**	**0.52**	**77**	*e*P	**Pb**	**09 04 56.7 +1.8**
ASSB	**Assisi San Ben**	**0.54**	**310**	P	**Pb**	**09 04 56.3 +1.1**
VCEL	**Villa Celiera**	**0.55**	**123**	*e*P	**Pb**	**09 04 56.5 +1.2**
VCEL				AML	AML	
	comp=E,10800μm,0.5s					
VCEL				AML	AML	
	comp=E,10750μm,0.5s					
VCEL				AML	AML	
	comp=N,15350μm,0.8s					
SNTG	**Esanatoglia**	**0.60**	**340**	P	**Pb**	**09 04 57.7 +1.6**
SNTG				S	**Sg**	**09 05 05.5 +1.3**
T0110	**Collepietro**	**0.62**	**138**	*e*P	**Pg**	**09 04 57.4 +0.6**
T0110				AML	AML	
	comp=N,5600μm,0.5s					
T0110				AML	AML	
	comp=E,6435μm,0.4s					
T0110				AML	AML	
	comp=E,6116μm,0.7s					
CADA	**Capodarco di F**	**0.64**	**38**	P	**Pb**	**09 04 59.0 +2.2**
PTQR	**Pietraquaria**	**0.69**	**169**	*e*P	**Pg**	**09 04 58.5 +0.6**
PTQR				AML	AML	
	comp=N,1152μm,1.2s					
PTQR				AML	AML	
	comp=E,1385μm,1.1s					
FOSV	**Fossato di Vic**	**0.69**	**331**	*e*P	**Pb**	**09 04 59.5 +1.7**
FOSV				AML	AML	
	comp=E,2175μm,0.6s					
FOSV				AML	AML	
	comp=E,2180μm,0.6s					
FOSV				AML	AML	
	comp=N,2730μm,0.3s					
SRES	**S.Oreste - Sor**	**0.70**	**229**	*e*P	**Pb**	**09 04 58.9 +1.0**
SRES				S	**Sb**	**09 05 09.7 +2.6**
SRES				AML	AML	
	comp=N,2000μm,0.7s					
SRES				AML	AML	
	comp=E,1985μm,0.7s					
PP3	**Marolino**	**0.74**	**23**	*e*P	**Pb**	**09 05 00.3 +1.7**
PP3				AML	AML	
	comp=E,20300μm,0.5s					
PP3				AML	AML	
	comp=N,22700μm,0.5s					
PP3				AML	AML	
	comp=E,22100μm,0.5s					
PP3				AML	AML	
	comp=N,22300μm,0.4s					
PP3				AML	AML	
	comp=N,22650μm,0.5s					
PP3				AML	AML	
	comp=E,20350μm,0.5s					
PP3				AML	AML	
	comp=E,22101μm,0.5s					
MTCE	**Montecelio**	**0.76**	**208**	*e*P	**Pg**	**09 04 59.4 +0.2**
MTCE				AML	AML	
	comp=N,1675μm,0.6s					
MTCE				AML	AML	
	comp=E,2980μm,1.3s					
MURB	**Monte Urbino**	**0.76**	**318**	P	**Pb**	**09 05 00.6 +1.5**
CERT	**Cerreto**	**0.77**	**193**	*e*P	**Pg**	**09 04 59.7 +0.4**
CERT				AML	AML	
	comp=E,4880μm,0.5s					
CERT				AML	AML	
	comp=N,3080μm,1.2s					
CERT				AML	AML	
	comp=E,4881μm,0.5s					
ATTE	**AVT- Monte Tez**	**0.81**	**309**	P	**Pb**	**09 05 01.7 +1.8**
ATFO	**Monte Foce - G**	**0.82**	**325**	*e*P	**Pb**	**09 05 01.8 +1.7**
ARVD	**Arcevia**	**0.83**	**346**	*e*P	**Pg**	**09 05 01.2 +0.7**
MGAB	**Montegabbione**	**0.84**	**285**	*e*P	**Pg**	**09 05 01.6 +0.8**
MGAB				AML	AML	
	comp=E,7130μm,1.2s					
MGAB				AML	AML	
	comp=N,4735μm,1.3s					
MGAB				AML	AML	
	comp=N,4600μm,0.6s					
MGAB				AML	AML	
	comp=E,7715μm,1.2s					
AOI	**Ancona**	**0.90**	**18**	*e*P	**Pg**	**09 05 02.5 +0.7**
AOI				AML	AML	
	comp=N,2455μm,0.4s					
AOI				AML	AML	
	comp=E,2240μm,0.3s					
AOI				AML	AML	
	comp=N,2455μm,0.4s					
AOI				AML	AML	
	comp=E,2238μm,0.3s					
LPEL	**Lama dei Pelig**	**0.96**	**132**	*e*P	**Pg**	**09 05 02.8 -0.3**
LPEL				AML	AML	
	comp=N,1675μm,1.3s					
LPEL				AML	AML	
	comp=E,2135μm,0.3s					
LPEL				AML	AML	
	comp=N,1585μm,0.2s					
RMP	**Rome, Mte Porz**	**0.96**	**204**	*e*P	**Pb**	**09 05 03.9 +1.5**
RMP				AML	AML	
	comp=N,3635μm,0.8s					
RMP				AML	AML	
	comp=E,2690μm,1.5s					
CAFI	**Castiglion Fio**	**1.12**	**305**	*e*P	**Pg**	**09 05 06.8 +0.8**
CAFI				AML	AML	
	comp=N,1325μm,0.7s					
CAFI				AML	AML	
	comp=E,1160μm,0.5s					
MCIV	**Monte Civitell**	**1.14**	**275**	*e*P	**Pn**	**09 05 07.1 +1.7**
MCIV				AML	AML	
	comp=E,1098μm,0.6s					
MCIV				AML	AML	
	comp=N,990μm,0.6s					
LATB	**Latina**	**1.22**	**189**	*e*P	**Pg**	**09 05 08.2 +0.4**
ARCI	**Arcidosso**	**1.29**	**278**	*e*P	**Pb**	**09 05 09.7 +1.6**
ARCI				AML	AML	
	comp=E,350μm,1.0s					
ARCI				AML	AML	
	comp=N,434μm,1.1s					
TRIF	**Trifonti**	**1.75**	**285**	*e*P	**Pb**	**09 05 16.5 +0.6**
TRIF				AML	AML	
	comp=E,350μm,0.9s					
TRIF				AML	AML	
	comp=N,340μm,1.6s					
PGF	**Pioggiola**	**3.12**	**269**	*e*P	**Pn**	**09 05 36.3 +3.7**
PGF				*e*Sn	**Sn**	**09 06 07.4 -2.0**
	comp=N,12nm,0.5s					
SBF	**Sospel**	**4.38**	**287**	*e*P	**Pn**	**09 05 53.5 +3.5**
SBF				*e*Sn	**Sn**	**09 06 38.1 -2.4**
	comp=N,30nm,0.6s					
LMR	**La Mourre**	**4.96**	**280**	*e*P	**Pn**	**09 06 00.1 +2.3**
LMR				*e*Sn	**Sn**	**09 06 51.8 -2.9**
	comp=N,30nm,1.3s					
MBDF	**Montbardon**	**5.10**	**296**	*e*Pn	**Pn**	**09 05 59.1 -0.7**
MBDF				*e*Sn	**Sn**	**09 06 55.2 -3.1**
	comp=N,21nm,0.9s					
LPG	**La Plagne**	**5.44**	**303**	*e*Pn	**Pn**	**09 06 04.5 -0.1**
LPG				*e*Sn	**Sn**	**09 07 03.4 -3.4**
	comp=N,24nm,1.0s					
LPL	**La Plagne**	**5.46**	**303**	*e*Sn	**Sn**	**09 07 03.5 -3.7**
	comp=N,14nm,0.7s					
SMRF	**Simiane la Rot**	**5.72**	**286**	*e*P	**Pn**	**09 06 11.4 +3.1**
SMRF				*e*Sn	**Sn**	**09 07 10.1 -3.4**
	comp=N,38nm,1.5s					
ORIF	**Oris-en-Rattie**	**5.76**	**295**	*e*P	Pn	09 06 14.2 +5.3
ORIF				*e*Sn	**Sn**	**09 07 10.4 -4.1**
	comp=N,17nm,0.9s					
CABF	**La Chapelle**	**6.42**	**310**	*e*Pn	**Pn**	**09 06 17.0 -0.9**
CABF				*e*Sn	**Sn**	**09 07 26.5 -4.2**
	comp=N,21nm,0.9s					
VIVF	**Saint-Julien-l**	**6.55**	**292**	*e*Pn	**Pn**	**09 06 18.4 -1.3**
VIVF				*e*Sn	**Sn**	**09 07 29.5 -4.5**
	comp=N,26nm,1.5s					
HINF	**Hinteralfeld**	**6.81**	**321**	*e*Pn	**Pn**	**09 06 23.2 -0.1**
HINF				*e*Sn	**Sn**	**09 07 36.1 -4.2**
	comp=N,17nm,0.5s					
LASF	**Ste Croix**	**6.96**	**285**	*e*Pn	**Pn**	**09 06 25.5 +0.2**
CDF	**Champ du Feu**	**7.08**	**326**	*e*Pn	**Pn**	**09 06 26.7 -0.2**
CDF				*e*Sn	**Sn**	**09 07 42.8 -4.1**
	comp=N,21nm,0.7s					
HAU	**Haudompre**	**7.18**	**320**	*e*P	**Pn**	**09 06 32.4 +4.0**
HAU				*e*Sn	**Sn**	**09 07 45.0 -4.4**
	comp=N,21nm,0.5s					
SMF	**Signal de Mont**	**7.76**	**304**	*e*Pn	**Pn**	**09 06 35.9 -0.4**
SMF				*e*Sn	**Sn**	**09 07 58.5 -5.2**
	comp=N,9.7nm,0.8s					
PAGF	**Fort de Pagny**	**7.87**	**321**	*e*Sn	**Sn**	**09 08 01.6 -4.6**
	comp=N,74nm,1.4s					
SFTF	**Sexfontaines**	**7.96**	**317**	*e*Pn	**Pn**	**09 06 38.7 -0.3**
	baz=138					
LOR	**Lormes**	**8.06**	**308**	*e*Pn	**Pn**	**09 06 40.0 -0.3**
	baz=127					
LOR				*e*Sn	**Sn**	**09 08 06.6 -4.3**
	comp=N,16nm,1.1s					
AVF	**Avril sur Loir**	**8.13**	**304**	*e*Pn	**Pn**	**09 06 40.2 -1.1**
MEZF	**Maizieres J'vi**	**8.15**	**318**	*e*Pn	**Pn**	**09 06 40.8 -0.8**
	baz=139					
MEZF				*e*Sn	**Sn**	**09 08 07.3 -5.9**
	comp=N,66nm,1.6s					
SSF	**Saint Saulge**	**8.16**	**306**	*e*P	**Pn**	**09 06 46.3 +4.5**
SSF				*e*Sn	**Sn**	**09 08 08.3 -5.2**
	comp=N,19nm,1.3s					
SAVF	**Savonnieres en**	**8.20**	**319**	*e*Sn	**Sn**	**09 08 09.0 -5.2**
	comp=N,18nm,1.1s					
CAF	**Calviac**	**8.37**	**289**	*e*P	**Pn**	**09 06 48.9 +4.2**
HYF	**Humbligny**	**8.78**	**305**	*e*Pn	**Pn**	**09 06 49.7 -0.6**
RJF	**Les Rejaudoux**	**8.83**	**291**	*e*P	**Pn**	**09 06 55.3 +4.3**
LFF	**La Frestale**	**9.30**	**288**	*e*Pn	**Pn**	**09 06 55.7 -1.6**
GIVF	**Givet**	**9.40**	**325**	*e*Pn	**Pn**	**09 06 58.6 -0.2**
BAIF	**Baives**	**9.64**	**323**	*e*Pn	**Pn**	**09 07 00.9 -1.1**
BAIF				*e*Sn	**Sn**	**09 08 43.6 -6.1**
	comp=N,41nm,1.6s					
ETSF	**Etsaut**	**10.13**	**276**	*e*Pn	**Pn**	**09 07 07.7 -1.2**
MFF	**Saint Martin d**	**10.29**	**297**	*e*Pn	**Pn**	**09 07 10.0 -1.0**

ROM 30 09:09:39.0±0.1, 42°.816N±0°.007×13°.22E±0°.02, h12km±1km, ML3.2/30, 12C-12D, Error ellipse: s-maj=1.3km s-min=0.1km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**327**	P	Pg	09 09 41.9	+0.5
T1245				S	Sg	09 09 43.2	0.0
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**346**	P	Pg	09 09 41.6	-0.4
T1204	**Amatrice, Fraz**	**0.16**	**154**	P	Pb	09 09 43.7	-0.3
T1204				S	Sg	09 09 45.8	+0.4
T1204				AML	AML		
	comp=E,7315μm,0.2s						
T1204				AML	AML		
	comp=N,7725μm,1.1s						
T1204				AML	AML		
	comp=E,7320μm,1.1s						
T1204				AML	AML		
	comp=N,7705μm,1.1s						
T1204				AML	AML		
	comp=N,11650μm,1.1s						
T1204				AML	AML		
	comp=E,22500μm,0.5s						
T1204				AML	AML		
	comp=N,7318μm,0.2s						
T1204				AML	AML		
	comp=E,7322μm,0.2s						
T1241	**Roccafluvione,**	**0.16**	**75**	P	Pb	09 09 45.1	+1.2
T1241				S	Sg	09 09 48.3	+3.0
T1241				AML	AML		
	comp=E,10475μm,1.2s						
T1241				AML	AML		
	comp=N,12400μm,0.6s						
T1241				AML	AML		
	comp=E,18550μm,0.2s						
T1241				AML	AML		
	comp=N,8691μm,0.3s						
T1241				AML	AML		
	comp=E,9902μm,0.6s						
AM05	**Amandola Campo**	**0.19**	**30**	⇑P	Pb	09 09 43.9	-0.5
AM05				S	Sg	09 09 46.4	+0.4
AM05				AML	AML		
	comp=E,2785μm,0.6s						
AM05				AML	AML		
	comp=N,5825μm,0.2s						
AM05				AML	AML		
	comp=E,10900μm,0.5s						
AM05				AML	AML		
	comp=E,2790μm,0.6s						
AM05				AML	AML		
	comp=N,5820μm,0.2s						
AM05				AML	AML		
	comp=E,10880μm,0.5s						
AM05				AML	AML		
	comp=N,1220μm,0.1s						
AM05				AML	AML		
	comp=E,4455μm,0.4s						
AM05				AML	AML		
	comp=E,21200μm,0.8s						
AM05				AML	AML		
	comp=N,1380μm,1.1s						
AM05				AML	AML		
	comp=N,5840μm,0.3s						
AM05				AML	AML		
	comp=N,5822μm,0.2s						
AM05				AML	AML		
	comp=E,2653μm,0.2s						
AM05				AML	AML		
	comp=N,1222μm,0.1s						
AM05				AML	AML		
	comp=E,8422μm,0.1s						
T1243	**Rocca Santa Ma**	**0.20**	**126**	⇑P	Pb	09 09 44.7	0.0
T1243				S	Sg	09 09 47.5	+1.0
T1217	**Poggiodomo (PG**	**0.24**	**244**	P	Pb	09 09 45.8	+0.5
T1217				S	Sg	09 09 50.0	+2.5
T1217				AML	AML		
	comp=E,5540μm,0.8s						
T1217				AML	AML		
	comp=N,8690μm,0.8s						
T1217				AML	AML		
	comp=E,5545μm,0.8s						
T1217				AML	AML		
	comp=N,8465μm,0.7s						
T1217				AML	AML		
	comp=E,11720μm,0.2s						
T1217				AML	AML		
	comp=N,13600μm,1.5s						
T1217				AML	AML		
	comp=N,14050μm,0.3s						
T1217				AML	AML		
	comp=E,12205μm,0.2s						
T1217				AML	AML		
	comp=N,8194μm,0.3s						
T1217				AML	AML		
	comp=N,8360μm,0.3s						
T1217				AML	AML		
	comp=E,5464μm,0.2s						
T1217				AML	AML		
	comp=E,5424μm,0.2s						
LNSS	**Leonessa**	**0.25**	**212**	⇑P	Pb	09 09 45.3	-0.3
LNSS				S	Sg	09 09 48.6	+0.8
LNSS				AML	AML		
	comp=E,4845μm,0.3s						
LNSS				AML	AML		
	comp=N,10335μm,0.1s						
LNSS				AML	AML		
	comp=N,62850μm,0.2s						
LNSS				AML	AML		
	comp=E,24700μm,0.2s						
LNSS				AML	AML		
	comp=E,4844μm,0.3s						
LNSS				AML	AML		
	comp=N,10338μm,0.1s						
GUMA	**Gualdo di Mace**	**0.26**	**18**	P	Pb	09 09 45.2	-0.5
GUMA				S	Sg	09 09 48.9	+0.8
GUMA				AML	AML		
	comp=E,13950μm,0.3s						
GUMA				AML	AML		
	comp=N,14000μm,0.6s						
GUMA				AML	AML		
	comp=E,19750μm,0.3s						
GUMA				AML	AML		
	comp=N,14000μm,0.4s						
GUMA				AML	AML		
	comp=N,19950μm,0.6s						
GUMA				AML	AML		
	comp=N,27700μm,0.7s						
GUMA				AML	AML		
	comp=E,25550μm,0.2s						
GUMA				AML	AML		
	comp=E,23000μm,0.3s						
GUMA				AML	AML		
	comp=E,13946μm,0.3s						
GUMA				AML	AML		
	comp=N,13966μm,0.4s						
GUMA				AML	AML		
	comp=E,19708μm,0.3s						
GUMA				AML	AML		
	comp=N,12556μm,0.4s						
T1215	**Vallo di Nera,**	**0.26**	**267**	⇑P	Pb	09 09 46.7	+1.0
T1215				AML	AML		
	comp=E,4665μm,0.6s						
T1215				AML	AML		
	comp=N,4145μm,0.1s						
T1215				AML	AML		
	comp=E,4850μm,0.6s						
T1215				AML	AML		
	comp=N,4295μm,0.3s						
T1215				AML	AML		
	comp=E,7380μm,0.6s						
T1215				AML	AML		
	comp=N,11120μm,0.9s						
T1215				AML	AML		
	comp=E,8080μm,0.6s						
T1215				AML	AML		
	comp=N,11330μm,0.9s						
T1215				AML	AML		
	comp=N,2695μm,0.3s						
T1215				AML	AML		
	comp=N,2565μm,0.3s						
T1215				AML	AML		
	comp=E,4319μm,0.3s						
T1215				AML	AML		
	comp=E,4163μm,0.3s						
RM33	**Pellescritta (**	**0.31**	**181**	P	Pg	09 09 45.8	+0.5
RM33				S	Sg	09 09 49.6	+0.2
RM33				AML	AML		
	comp=N,4565μm,0.2s						
RM33				AML	AML		
	comp=E,8435μm,0.2s						
RM33				AML	AML		
	comp=N,4570μm,0.2s						
RM33				AML	AML		
	comp=N,4930μm,0.9s						
RM33				AML	AML		
	comp=E,8625μm,0.2s						
RM33				AML	AML		
	comp=N,8585μm,0.4s						
RM33				AML	AML		
	comp=N,8410μm,0.4s						
RM33				AML	AML		
	comp=N,4845μm,0.2s						
RM33				AML	AML		
	comp=N,4568μm,0.2s						
RM33				AML	AML		

	comp=E,8434µm,0.2s					
RM33				AML	AML	
	comp=E,8624µm,0.2s					
CAMP	**Campotosto**	**0.31**	**154**	⇓P	Pg	09 09 45.9 +0.5
CAMP				S	Sg	09 09 49.8 +0.2
CAMP				AML	AML	
	comp=E,2765µm,0.2s					
CAMP				AML	AML	
	comp=N,2255µm,0.7s					
CAMP				AML	AML	
	comp=E,2763µm,0.2s					
CAMP				AML	AML	
	comp=N,2060µm,0.3s					
TERO	**Teramo**	**0.34**	**124**	P	Pb	09 09 46.9 -0.2
TERO				AML	AML	
	comp=E,5240µm,0.3s					
TERO				AML	AML	
	comp=N,9560µm,0.4s					
TERO				AML	AML	
	comp=E,5515µm,0.3s					
TERO				AML	AML	
	comp=N,9555µm,0.4s					
TERO				AML	AML	
	comp=N,10020µm,0.4s					
TERO				AML	AML	
	comp=E,5518µm,0.3s					
TERO				AML	AML	
	comp=N,10016µm,0.4s					
TERO				AML	AML	
	comp=N,9558µm,0.4s					
TERO				AML	AML	
	comp=E,5239µm,0.3s					
OFFI	**Offida**	**0.36**	**71**	⇑P	Pn	09 09 48.8 -1.3
OFFI				AML	AML	
	comp=E,4295µm,0.4s					
OFFI				AML	AML	
	comp=N,6390µm,0.5s					
OFFI				AML	AML	
	comp=E,5910µm,0.8s					
OFFI				AML	AML	
	comp=N,7805µm,0.5s					
OFFI				AML	AML	
	comp=N,6391µm,0.5s					
OFFI				AML	AML	
	comp=E,4294µm,0.4s					
MNTP	**Montappone**	**0.37**	**29**	⇑P	Pb	09 09 48.0 +0.5
T1247	**Pizzolo (AQ)**	**0.38**	**172**	⇓P	Pg	09 09 47.0 +0.4
T1247				AML	AML	
	comp=N,4080µm,0.3s					
T1247				AML	AML	
	comp=E,5920µm,0.4s					
T1247				AML	AML	
	comp=N,4085µm,0.3s					
T1247				AML	AML	
	comp=E,5925µm,0.4s					
T1247				AML	AML	
	comp=N,6135µm,0.4s					
T1247				AML	AML	
	comp=N,3997µm,0.2s					
T1247				AML	AML	
	comp=E,4713µm,0.2s					
T1211	**Morro Reatino**	**0.39**	**224**	⇓P	Pb	09 09 47.8 -0.2
T1211				S	Sb	09 09 54.0 0.0
T1211				AML	AML	
	comp=E,2925µm,0.1s					
T1211				AML	AML	
	comp=N,4655µm,0.2s					
T1211				AML	AML	
	comp=E,2963µm,0.1s					
T1211				AML	AML	
	comp=N,4695µm,0.2s					
T1211				AML	AML	
	comp=E,8075µm,0.3s					
T1211				AML	AML	
	comp=N,20500µm,0.3s					
T1211				AML	AML	
	comp=N,20700µm,0.3s					
T1211				AML	AML	
	comp=E,7690µm,0.3s					
T1211				AML	AML	
	comp=E,2962µm,0.1s					
T1211				AML	AML	
	comp=E,2927µm,0.1s					
T1211				AML	AML	
	comp=N,4653µm,0.2s					
T1211				AML	AML	
	comp=N,4693µm,0.2s					
ARRO	**Arrone**	**0.41**	**235**	P	Pb	09 09 48.4 +0.1
ARRO				AML	AML	
	comp=E,1935µm,0.2s					
ARRO				AML	AML	
	comp=N,2415µm,0.4s					
ARRO				AML	AML	
	comp=N,4570µm,0.6s					
ARRO				AML	AML	
	comp=E,3550µm,0.2s					
ARRO				AML	AML	
	comp=E,1934µm,0.2s					
ARRO				AML	AML	
	comp=N,2052µm,0.2s					
GAG1	**Gagliole**	**0.44**	**345**	P	Pg	09 09 48.1 +0.5
GAG1				AML	AML	
	comp=E,9715µm,1.3s					
GAG1				AML	AML	
	comp=N,9100µm,0.3s					
GAG1				AML	AML	
	comp=E,4852µm,0.4s					
GAG1				AML	AML	
	comp=N,3890µm,0.4s					
GIGS	**Gran Sasso**	**0.45**	**145**	⇓P	Pg	09 09 47.8 +0.1
GIGS				AML	AML	
	comp=E,470µm,0.9s					
GIGS				AML	AML	
	comp=N,364µm,1.4s					
GIGS				AML	AML	
	comp=E,709µm,0.2s					
GIGS				AML	AML	
	comp=N,554µm,0.8s					
GIGS				AML	AML	
	comp=E,432µm,0.2s					
GIGS				AML	AML	
	comp=N,325µm,0.4s					
SNTG	**Esanatoglia**	**0.49**	**335**	P	Pg	09 09 49.0 +0.5
SNTG				AML	AML	
	comp=E,1250µm,0.3s					
SNTG				AML	AML	
	comp=N,1220µm,0.4s					
SNTG				AML	AML	
	comp=E,1255µm,0.3s					
SNTG				AML	AML	
	comp=N,1268µm,0.4s					
SNTG				AML	AML	
	comp=E,2010µm,0.5s					
SNTG				AML	AML	
	comp=N,1890µm,0.6s					
SNTG				AML	AML	
	comp=E,1970µm,0.5s					
SNTG				AML	AML	
	comp=N,1765µm,0.6s					
SNTG				AML	AML	
	comp=E,1209µm,0.4s					
SNTG				AML	AML	
	comp=N,1121µm,0.3s					
SNTG				AML	AML	
	comp=E,1252µm,0.4s					
SNTG				AML	AML	
	comp=N,1045µm,0.3s					
TRTR	**Tortoreto Alta**	**0.51**	**91**	⇓P	Pn	09 09 52.0 -0.1
TRTR				AML	AML	
	comp=E,6540µm,0.2s					
TRTR				AML	AML	
	comp=N,7165µm,0.3s					
TRTR				AML	AML	
	comp=E,6541µm,0.2s					
TRTR				AML	AML	
	comp=N,7170µm,0.3s					
CESX	**Cesi**	**0.52**	**247**	⇑P	Pn	09 09 52.5 +0.3
CESX				AML	AML	
	comp=E,3970µm,0.4s					
CESX				AML	AML	
	comp=N,2935µm,0.3s					
CESX				AML	AML	
	comp=E,1373µm,0.5s					
CESX				AML	AML	
	comp=N,1548µm,0.5s					
EL6	**Elcito**	**0.52**	**350**	⇓P	Pb	09 09 49.9 -0.3
EL6				AML	AML	
	comp=E,2005µm,0.4s					
EL6				AML	AML	
	comp=N,2590µm,0.4s					
EL6				AML	AML	
	comp=E,4515µm,1.3s					
EL6				AML	AML	
	comp=N,5295µm,0.2s					
EL6				AML	AML	
	comp=N,2590µm,0.4s					
EL6				AML	AML	
	comp=E,1982µm,0.4s					
FIAM	**Fiamignano**	**0.55**	**188**	⇑P	Pg	09 09 49.9 +0.1
FIAM				AML	AML	
	comp=N,913µm,0.4s					
ATCC	**AVT- Casa Cast**	**0.56**	**311**	⇓P	Pb	09 09 50.7 -0.2
ATCC				S	Sb	09 09 59.0 0.0
FOSV	**Fossato di Vic**	**0.59**	**325**	P	Pg	09 09 50.8 +0.4
FOSV				AML	AML	
	comp=N,2800µm,0.3s					
FOSV				AML	AML	
	comp=E,1165µm,0.3s					
FOSV				AML	AML	
	comp=E,1100µm,0.5s					
FOSV				AML	AML	
	comp=N,2800µm,0.3s					
VCEL	**Villa Celiera**	**0.62**	**133**	⇑P	Pb	09 09 52.1 +0.2
VCEL				S	Sb	09 10 02.0 +1.4
VCEL				AML	AML	
	comp=E,3005µm,1.6s					
VCEL				AML	AML	
	comp=N,2310µm,0.6s					
VCEL				AML	AML	
	comp=N,1573µm,0.4s					
VCEL				AML	AML	
	comp=E,1329µm,0.3s					
PP3	**Marolino**	**0.63**	**27**	⇓P	Pn	09 09 53.0 -0.8
PP3				AML	AML	
	comp=E,2425µm,1.5s					
PP3				AML	AML	
	comp=N,2200µm,1.0s					
PP3				AML	AML	
	comp=E,2480µm,1.5s					
PP3				AML	AML	
	comp=N,2330µm,0.5s					
PP3				AML	AML	
	comp=E,2485µm,1.5s					
PP3				AML	AML	
	comp=N,2335µm,0.5s					
PP3				AML	AML	
	comp=E,2283µm,0.5s					
PP3				AML	AML	
	comp=N,2147µm,0.5s					
PP3				AML	AML	
	comp=N,2331µm,0.5s					
PP3				AML	AML	
	comp=E,2303µm,0.5s					
MMUR	**Monte Murano**	**0.65**	**345**	S	Sb	09 10 02.0 +0.6
MURB	**Monte Urbino**	**0.68**	**311**	⇓P	Pb	09 09 52.8 -0.1
MURB				S	Sn	09 10 04.0 -1.2
MURB				AML	AML	
	comp=E,1985µm,0.6s					
MURB				AML	AML	
	comp=N,2190µm,0.2s					
MURB				AML	AML	
	comp=E,5005µm,0.3s					
MURB				AML	AML	
	comp=N,4135µm,0.2s					
MURB				AML	AML	
	comp=E,4525µm,0.2s					
MURB				AML	AML	
	comp=N,4420µm,1.5s					
MURB				AML	AML	
	comp=N,1762µm,0.4s					
MURB				AML	AML	
	comp=N,1793µm,0.2s					
MURB				AML	AML	
	comp=E,1872µm,0.6s					
MURB				AML	AML	
	comp=E,1983µm,0.6s					
ARVD	**Arcevia**	**0.71**	**343**	⇑P	Pg	09 09 53.0 +0.2
ARVD				S	Sb	09 10 04.0 +0.8
ARVD				AML	AML	
	comp=E,514µm,0.3s					
ARVD				AML	AML	
	comp=N,440µm,0.4s					
ARVD				AML	AML	
	comp=N,916µm,1.1s					
ARVD				AML	AML	
	comp=E,907µm,0.3s					
ARVD				AML	AML	
	comp=E,420µm,0.2s					
ARVD				AML	AML	
	comp=N,441µm,0.4s					
T0110	**Collepietro**	**0.72**	**145**	⇑P	Pg	09 09 53.2 +0.3
T0110				AML	AML	
	comp=N,1274µm,0.3s					
T0110				AML	AML	
	comp=E,1374µm,0.4s					
ATFO	**Monte Foce - G**	**0.73**	**319**	⇓P	Pg	09 09 53.4 +0.3
ATFO				AML	AML	
	comp=E,692µm,1.5s					
ATFO				AML	AML	
	comp=N,639µm,1.3s					
ATFO				AML	AML	
	comp=E,852µm,0.3s					
ATFO				AML	AML	
	comp=N,971µm,0.4s					
ATFO				AML	AML	
	comp=N,638µm,0.4s					
ATFO				AML	AML	
	comp=E,605µm,0.6s					
SRES	**S.Oreste - Sor**	**0.78**	**223**	S	Sn	09 10 07.0 -0.6
MGAB	**Montegabbione**	**0.82**	**277**	P	Pn	09 09 59.1 +2.6
PIEI	**Pieia**	**0.88**	**325**	S	Sn	09 10 10.0 0.0
MPAG	**Monte Paganucc**	**0.88**	**338**	⇓P	Pb	09 09 56.4 +0.1
MPAG				AML	AML	
	comp=E,467µm,0.4s					
MPAG				AML	AML	
	comp=N,516µm,0.9s					
MPAG				AML	AML	
	comp=E,685µm,0.8s					
MPAG				AML	AML	
	comp=N,1311µm,1.0s					
MPAG				AML	AML	
	comp=N,465µm,0.7s					
MPAG				AML	AML	
	comp=E,1237µm,0.4s					
MPAG				AML	AML	
	comp=E,467µm,0.4s					
FSSB	**Fossombrone**	**0.94**	**340**	S	Sn	09 10 12.0 +0.6
CRE	**Caprese Michel**	**1.23**	**311**	⇓P	Pg	09 10 04.9 +2.3
CRE				AML	AML	
	comp=N,269µm,0.3s					
CRE				AML	AML	
	comp=E,216µm,0.4s					
CRE				AML	AML	
	comp=E,181µm,0.5s					
CRE				AML	AML	
	comp=N,201µm,0.4s					
BRSN	**Barisano**	**1.69**	**331**	S	Sg	09 10 35.0 +1.7
TRIF	**Trifonti**	**1.73**	**281**	⇑P	Pg	09 10 11.7 -0.5
TRIF				AML	AML	
	comp=E,84µm,1.0s					
TRIF				AML	AML	
	comp=N,95µm,0.5s					
TRIF				AML	AML	
	comp=N,66µm,0.5s					
TRIF				AML	AML	
	comp=E,76µm,0.8s					
PAOL	**Paolisi**	**2.05**	**150**	P	Pn	09 10 14.2 +0.9

PRU ***30*** *09:10:41.8*±*0.0,42.°90N*×*13.°70E,h0km*
ROM 30 09:10:38.8±0.1**,42.°782N**±0.°003×**13.°064E**±0.°007,
h10km,ML3.2/42**,19C-20D,Error ellipse: s-maj=0.6km**
s-min=0.3km az=283.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
T1245	**Castelsantange**	**0.12**	**51**	P	Pg	09	10	42.3	+0.5
T1245				S	Sg	09	10	44.4	+0.5
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1245				AML	AML				
T1217	**Poggiodomo (PG**	**0.12**	**235**	⇑P	Pg	09	10	42.4	+0.6
T1217				AML	AML				
	comp=E,12200µm,0.2s								
T1217				AML	AML				
	comp=N,14000µm,0.3s								
T1217				AML	AML				
	comp=E,11710µm,0.2s								
T1217				AML	AML				
	comp=E,12200µm,0.2s								
T1217				AML	AML				
	comp=E,11700µm,0.2s								
T1217				AML	AML				
	comp=E,12205µm,0.2s								
T1217				AML	AML				
	comp=N,13600µm,0.3s								
T1217				AML	AML				
	comp=N,14050µm,0.3s								
T1217				AML	AML				
	comp=E,11720µm,0.2s								
T1217				AML	AML				
	comp=N,13603µm,0.3s								
T1217				AML	AML				
	comp=E,11718µm,0.2s								
T1217				AML	AML				
	comp=N,14016µm,0.3s								
T1217				AML	AML				
	comp=E,12217µm,0.2s								
T1215	**Vallo di Nera,**	**0.14**	**278**	⇑P	Pg	09	10	42.8	+0.7
T1215				AML	AML				
	comp=N,11170µm,0.9s								
T1215				AML	AML				
	comp=E,8080µm,0.6s								
T1215				AML	AML				
	comp=N,11345µm,0.9s								
T1215				AML	AML				
	comp=E,7380µm,0.6s								
T1215				AML	AML				
	comp=N,11165µm,0.9s								
T1215				AML	AML				
	comp=E,8085µm,0.6s								
T1215				AML	AML				
	comp=N,11295µm,0.9s								
T1215				AML	AML				
	comp=N,11120µm,0.9s								
T1215				AML	AML				
	comp=N,11330µm,0.9s								
T1215				AML	AML				
	comp=E,7380µm,0.6s								
T1215				AML	AML				
	comp=N,9821µm,0.2s								
T1215				AML	AML				
	comp=E,5610µm,0.1s								
T1215				AML	AML				
	comp=E,6055µm,0.1s								
T1215				AML	AML				
	comp=N,9697µm,0.2s								
LNSS	**Leonessa**	**0.18**	**186**	P	Pg	09	10	43.3	+0.6
LNSS				S	Sg	09	10	46.4	+1.0
LNSS				AML	AML				
	comp=E,24700µm,0.2s								
LNSS				AML	AML				
	comp=N,62850µm,0.2s								
LNSS				AML	AML				
	comp=E,24709µm,0.2s								
LNSS				AML	AML				
	comp=N,62836µm,0.2s								
FEMA	**Monte Fema**	**0.18**	**357**	P	Pg	09	10	43.4	+0.6
FEMA				S	Sg	09	10	46.5	+1.0
FEMA				AML	AML				
	comp=E,42650µm,1.0s								
FEMA				AML	AML				
	comp=N,32600µm,0.3s								
FEMA				AML	AML				
	comp=E,38766µm,0.3s								
FEMA				AML	AML				
	comp=N,32604µm,0.3s								
T1204	**Amatrice, Fraz**	**0.21**	**119**	P	Pg	09	10	44.1	+0.8
T1204				S	Sg	09	10	47.8	+1.4
T1204				AML	AML				
	comp=E,22450µm,0.5s								
T1204				AML	AML				
	comp=N,11650µm,1.1s								
T1204				AML	AML				
	comp=N,14720µm,0.3s								
T1204				AML	AML				
	comp=E,27600µm,1.0s								
T1204				AML	AML				
	comp=N,14700µm,0.3s								
T1204				AML	AML				
	comp=N,14730µm,0.3s								
T1204				AML	AML				
	comp=N,10826µm,0.2s								
T1204				AML	AML				
	comp=E,21551µm,0.2s								
T1241	**Roccafluvione,**	**0.28**	**74**	P	Pb	09	10	45.4	-0.5
T1241				S	Sb	09	10	50.1	-0.7
T1241				AML	AML				
	comp=N,11430µm,0.2s								
T1241				AML	AML				
	comp=N,11415µm,0.2s								
T1241				AML	AML				
	comp=E,18550µm,0.2s								
T1241				AML	AML				
	comp=E,18535µm,0.2s								
T1241				AML	AML				
	comp=N,11420µm,0.2s								
AM05	**Amandola Campo**	**0.29**	**47**	P	Pg	09	10	45.1	+0.5
AM05				S	Sb	09	10	49.8	-1.2
AM05				AML	AML				
	comp=E,4455µm,0.4s								
AM05				AML	AML				
	comp=N,5840µm,0.3s								
AM05				AML	AML				
	comp=E,21200µm,0.8s								
AM05				AML	AML				
	comp=N,1380µm,1.1s								
T1211	**Morro Reatino**	**0.29**	**212**	⇑P	Pg	09	10	44.5	-0.3
T1211				AML	AML				
	comp=E,8085µm,0.3s								
T1211				AML	AML				
	comp=N,20450µm,0.3s								
T1211				AML	AML				
	comp=E,7690µm,0.3s								
T1211				AML	AML				
	comp=E,8075µm,0.3s								
T1211				AML	AML				
	comp=N,20700µm,0.3s								
T1211				AML	AML				
	comp=N,20699µm,0.3s								
T1211				AML	AML				
	comp=E,7851µm,0.2s								
T1211				AML	AML				
	comp=E,7320µm,0.2s								
T1211				AML	AML				
	comp=N,20486µm,0.3s								
RM33	**Pellescritta (**	**0.29**	**158**	P	Pg	09	10	45.2	+0.5
RM33				S	Sg	09	10	49.9	+1.2
RM33				AML	AML				
	comp=N,8605µm,0.4s								
RM33				AML	AML				
	comp=E,6315µm,0.3s								
RM33				AML	AML				
	comp=N,8440µm,0.4s								
RM33				AML	AML				
	comp=N,8600µm,0.4s								
RM33				AML	AML				
	comp=E,6860µm,0.3s								
RM33				AML	AML				
	comp=E,6320µm,0.3s								
RM33				AML	AML				
	comp=N,8410µm,0.4s								
RM33				AML	AML				
	comp=E,5843µm,0.2s								
RM33				AML	AML				
	comp=N,8023µm,0.2s								
RM33				AML	AML				
	comp=E,6104µm,0.2s								
RM33				AML	AML				
	comp=N,8024µm,0.3s								
T1243	**Rocca Santa Ma**	**0.30**	**107**	P	Pg	09	10	45.1	+0.3
T1243				S	Sg	09	10	49.8	+1.0
ARRO	**Arrone**	**0.30**	**227**	⇑P	Pg	09	10	45.4	+0.6
ARRO				AML	AML				
	comp=N,4565µm,0.6s								
ARRO				AML	AML				

	comp=E,3550μm,0.2s					
ARRO				AML	AML	
	comp=N,4570μm,0.6s					
ARRO				AML	AML	
	comp=N,4436μm,0.2s					
ARRO				AML	AML	
	comp=E,3552μm,0.2s					
GUMA	**Gualdo di Mace**	**0.34**	**35**	⇑P	Pb	09 10 46.5 -0.6
GUMA				AML	AML	
	comp=E,25550μm,0.2s					
GUMA				AML	AML	
	comp=N,19950μm,0.6s					
GUMA				AML	AML	
	comp=N,27700μm,0.7s					
GUMA				AML	AML	
	comp=E,23000μm,0.3s					
GUMA				AML	AML	
	comp=N,17175μm,0.2s					
GUMA				AML	AML	
	comp=N,21400μm,0.5s					
GUMA				AML	AML	
	comp=E,22971μm,0.3s					
GUMA				AML	AML	
	comp=E,25538μm,0.2s					
CAMP	**Campotosto**	**0.35**	**134**	P	Pg	09 10 46.4 +0.5
CAMP				S	Sb	09 10 52.1 -0.9
CAMP				AML	AML	
	comp=E,2285μm,0.8s					
CAMP				AML	AML	
	comp=N,2165μm,1.1s					
CAMP				AML	AML	
	comp=N,2055μm,0.6s					
CAMP				AML	AML	
	comp=E,1827μm,0.6s					
SEF1	**Sefro**	**0.38**	**347**	⇓P	Pg	09 10 46.9 +0.7
SEF1				AML	AML	
	comp=E,10050μm,0.2s					
SEF1				AML	AML	
	comp=N,9020μm,0.7s					
SEF1				AML	AML	
	comp=E,10045μm,0.2s					
SEF1				AML	AML	
	comp=N,9015μm,0.7s					
SEF1				AML	AML	
	comp=N,7977μm,0.2s					
SEF1				AML	AML	
	comp=E,10060μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.38**	**153**	P	Pg	09 10 46.8 +0.5
T1247				S	Sb	09 10 52.8 -0.9
T1247				AML	AML	
	comp=E,5055μm,1.3s					
T1247				AML	AML	
	comp=N,6135μm,0.4s					
T1247				AML	AML	
	comp=E,4948μm,0.4s					
T1247				AML	AML	
	comp=N,6135μm,0.4s					
CESX	**Cesi**	**0.40**	**244**	⇑P	Pg	09 10 47.0 +0.4
CESX				AML	AML	
	comp=N,2935μm,0.3s					
CESX				AML	AML	
	comp=E,3970μm,0.4s					
CESX				AML	AML	
	comp=N,2933μm,0.3s					
CESX				AML	AML	
	comp=E,3971μm,0.4s					
MDAR	**Monte D'Aria**	**0.41**	**8**	⇑P	Pg	09 10 47.6 +0.7
MDAR				AML	AML	
	comp=N,4000μm,0.3s					
MDAR				AML	AML	
	comp=E,3831μm,0.2s					
TERO	**Teramo**	**0.43**	**112**	⇓P	Pg	09 10 47.5 +0.2
TERO				AML	AML	
	comp=E,3855μm,1.0s					
TERO				AML	AML	
	comp=N,4415μm,0.4s					
TERO				AML	AML	
	comp=E,3455μm,0.2s					
TERO				AML	AML	
	comp=N,3216μm,0.3s					
TERO				AML	AML	
	comp=E,3675μm,0.2s					
TERO				AML	AML	
	comp=N,3121μm,0.3s					
GAG1	**Gagliole**	**0.46**	**0**	⇑P	Pb	09 10 48.7 -0.2
GAG1				AML	AML	
	comp=E,9710μm,1.3s					
GAG1				AML	AML	
	comp=N,9110μm,0.3s					
GAG1				AML	AML	
	comp=N,9085μm,0.3s					
GAG1				AML	AML	
	comp=E,9715μm,1.3s					
GAG1				AML	AML	
	comp=E,7327μm,0.2s					
GAG1				AML	AML	
	comp=N,9105μm,0.3s					
MNTP	**Montappone**	**0.46**	**40**	⇓P	Pb	09 10 48.9 -0.2
MNTP				AML	AML	
	comp=E,9680μm,0.2s					
MNTP				AML	AML	
	comp=E,9685μm,0.2s					
MNTP				AML	AML	
	comp=N,7715μm,0.4s					
MNTP				AML	AML	
	comp=N,7711μm,0.4s					
MNTP				AML	AML	
	comp=E,9680μm,0.2s					
OFFI	**Offida**	**0.48**	**71**	⇑P	Pb	09 10 49.4 0.0
OFFI				AML	AML	
	comp=E,6900μm,0.6s					
OFFI				AML	AML	
	comp=E,5910μm,0.8s					
OFFI				AML	AML	
	comp=N,10550μm,0.8s					
OFFI				AML	AML	
	comp=N,9481μm,0.2s					
OFFI				AML	AML	
	comp=E,6493μm,0.4s					
SNTG	**Esanatoglia**	**0.48**	**349**	⇑P	Pg	09 10 48.7 +0.5
SNTG				AML	AML	
	comp=N,1770μm,0.6s					
SNTG				AML	AML	
	comp=N,1765μm,0.6s					
SNTG				AML	AML	
	comp=E,2010μm,0.5s					
SNTG				AML	AML	
	comp=N,1890μm,0.6s					
SNTG				AML	AML	
	comp=E,1970μm,0.5s					
SNTG				AML	AML	
	comp=E,1421μm,0.2s					
SNTG				AML	AML	
	comp=N,1631μm,0.4s					
SNTG				AML	AML	
	comp=N,1594μm,0.1s					
SNTG				AML	AML	
	comp=E,1396μm,0.1s					
AQU	**L'Aquila**	**0.49**	**150**	P	Pg	09 10 48.8 +0.3
AQU				S	Sb	09 10 56.7 -0.2
AQU				AML	AML	
	comp=E,1795μm,0.5s					
AQU				AML	AML	
	comp=N,1515μm,0.3s					
AQU				AML	AML	
	comp=E,1840μm,0.5s					
AQU				AML	AML	
	comp=N,1610μm,0.3s					
AQU				AML	AML	
	comp=E,1796μm,0.5s					
AQU				AML	AML	
	comp=N,1514μm,0.3s					
AQU				AML	AML	
	comp=E,1840μm,0.5s					
AQU				AML	AML	
	comp=N,1609μm,0.3s					
GIGS	**Gran Sasso**	**0.50**	**131**	⇓P	Pg	09 10 48.9 +0.4
GIGS				AML	AML	
	comp=E,709μm,0.2s					
GIGS				AML	AML	
	comp=N,554μm,0.8s					
GIGS				AML	AML	
	comp=N,488μm,0.2s					
GIGS				AML	AML	
	comp=E,709μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.51**	**322**	⇓P	Pg	09 10 49.2 +0.5
ATCC				AML	AML	
	comp=N,3415μm,0.2s					
ATCC				AML	AML	
	comp=E,3105μm,1.3s					
ATCC				AML	AML	
	comp=E,2882μm,0.3s					
ATCC				AML	AML	
	comp=N,3417μm,0.2s					
FIAM	**Fiamignano**	**0.52**	**176**	⇑P	Pg	09 10 49.2 +0.4
FIAM				S	Sb	09 10 57.3 -0.3
FIAM				AML	AML	
	comp=E,2140μm,1.0s					
FIAM				AML	AML	
	comp=N,2010μm,0.7s					
FIAM				AML	AML	
	comp=E,1767μm,0.2s					
FIAM				AML	AML	
	comp=N,2009μm,0.7s					
EL6	**Elcito**	**0.55**	**3**	⇓P	Pg	09 10 49.8 +0.3
EL6				AML	AML	
	comp=E,4505μm,1.3s					
EL6				AML	AML	
	comp=N,5300μm,0.2s					
FOSV	**Fossato di Vic**	**0.56**	**337**	⇓P	Pg	09 10 50.1 +0.4
FOSV				AML	AML	
	comp=E,962μm,0.4s					
FOSV				AML	AML	
	comp=N,1616μm,0.3s					
MURB	**Monte Urbino**	**0.62**	**321**	⇓P	Pg	09 10 51.3 +0.4
MURB				S	Sb	09 11 02.0 +1.3
MURB				AML	AML	
	comp=N,4135μm,0.2s					
MURB				AML	AML	
	comp=E,5005μm,0.3s					
MURB				AML	AML	
	comp=E,4525μm,0.2s					
MURB				AML	AML	
	comp=N,4420μm,1.5s					
MURB				AML	AML	
	comp=N,4357μm,0.3s					
MURB				AML	AML	
	comp=N,4135μm,0.2s					
MURB				AML	AML	
	comp=E,5004μm,0.3s					
MURB				AML	AML	
	comp=E,4525μm,0.2s					
TRTR	**Tortoreto Alta**	**0.63**	**87**	⇓P	Pb	09 10 52.3 +0.5
TRTR				AML	AML	
	comp=E,6865μm,0.6s					
TRTR				AML	AML	
	comp=N,7435μm,0.8s					
TRTR				AML	AML	
	comp=N,6872μm,0.3s					
TRTR				AML	AML	
	comp=E,6728μm,0.6s					
ATTE	**AVT- Monte Tez**	**0.67**	**309**	⇑P	Pn	09 10 54.8 +0.4
SRES	**S.Oreste - Sor**	**0.68**	**217**	⇑P	Pb	09 10 52.5 -0.3
SRES				S	Sn	09 11 04.0 -1.2
SRES				AML	AML	
	comp=N,1275μm,0.4s					
SRES				AML	AML	
	comp=E,1095μm,1.4s					
SRES				AML	AML	
	comp=E,946μm,0.3s					
SRES				AML	AML	
	comp=N,1275μm,0.4s					
ATFO	**Monte Foce - G**	**0.69**	**328**	⇓P	Pb	09 10 52.8 -0.1
ATFO				AML	AML	
	comp=N,1050μm,0.9s					
ATFO				AML	AML	
	comp=E,1079μm,1.4s					
ATFO				AML	AML	
	comp=N,1050μm,0.9s					
ATFO				AML	AML	
	comp=E,1027μm,0.5s					
ATFO				AML	AML	
	comp=N,973μm,0.4s					
VCEL	**Villa Celiera**	**0.69**	**124**	⇓P	Pb	09 10 52.7 -0.3
VCEL				AML	AML	
	comp=E,3000μm,1.6s					
VCEL				AML	AML	
	comp=N,2310μm,0.6s					
VCEL				AML	AML	
	comp=E,3005μm,1.6s					
VCEL				AML	AML	
	comp=N,2143μm,0.3s					
VCEL				AML	AML	
	comp=E,2527μm,0.3s					
MGAB	**Montegabbione**	**0.71**	**281**	⇓P	Pn	09 10 54.3 -0.6
MGAB				AML	AML	
	comp=N,1655μm,0.5s					
MGAB				AML	AML	
	comp=E,1295μm,1.5s					
MGAB				AML	AML	
	comp=N,1840μm,0.5s					
MGAB				AML	AML	
	comp=E,1240μm,1.0s					
MGAB				AML	AML	
	comp=N,1650μm,0.5s					
MGAB				AML	AML	
	comp=E,1204μm,0.4s					
MGAB				AML	AML	
	comp=N,1652μm,0.5s					
MGAB				AML	AML	
	comp=N,1839μm,0.5s					
MGAB				AML	AML	
	comp=E,1274μm,0.5s					
PP3	**Marolino**	**0.72**	**34**	⇓P	Pb	09 10 53.7 +0.3
PP3				AML	AML	
	comp=E,5345μm,0.3s					
PP3				AML	AML	
	comp=N,4545μm,0.3s					
PP3				AML	AML	
	comp=N,4450μm,0.3s					
PP3				AML	AML	
	comp=E,5350μm,0.3s					
PP3				AML	AML	
	comp=E,5535μm,0.3s					
PP3				AML	AML	
	comp=N,4545μm,0.3s					
PP3				AML	AML	
	comp=N,4455μm,0.3s					
PP3				AML	AML	
	comp=E,5348μm,0.3s					
PP3				AML	AML	
	comp=N,4453μm,0.3s					
PP3				AML	AML	
	comp=N,4545μm,0.3s					
PP3				AML	AML	
	comp=E,5535μm,0.3s					
ARVD	**Arcevia**	**0.72**	**353**	S	Sn	09 11 05.0 -1.3
T0110	**Collepietro**	**0.77**	**136**	⇓P	Pg	09 10 53.5 -0.1
T0110				AML	AML	
	comp=N,1810μm,0.4s					
T0110				AML	AML	
	comp=E,1820μm,0.7s					
T0110				AML	AML	
	comp=E,1809μm,0.4s					
T0110				AML	AML	
	comp=N,1811μm,0.4s					
CERT	**Cerreto**	**0.83**	**184**	⇓P	Pn	09 10 56.0 -0.6
CERT				AML	AML	
	comp=E,2355μm,0.5s					
CERT				AML	AML	
	comp=N,1265μm,1.2s					
CERT				AML	AML	
	comp=N,1241μm,0.4s					
CERT				AML	AML	
	comp=E,2355μm,0.5s					
AOI	**Ancona**	**0.86**	**27**	⇑P	Pb	09 10 56.0 +0.1
AOI				S	Sn	09 11 11.0 +1.3
AOI				AML	AML	
	comp=E,1555μm,0.4s					
AOI				AML	AML	
	comp=N,1290μm,0.4s					
AOI				AML	AML	
	comp=E,1556μm,0.4s					
AOI				AML	AML	
	comp=N,1293μm,0.4s					
MPAG	**Monte Paganucc**	**0.88**	**345**	⇑P	Pn	09 10 56.7 -0.5
MPAG				AML	AML	
	comp=E,685μm,0.8s					
MPAG				AML	AML	
	comp=N,508μm,0.2s					
CAFI	**Castiglion Fio**	**0.97**	**305**	⇓P	Pb	09 10 58.1 +0.4
CAFI				S	Sn	09 11 13.0 +0.5
CAFI				AML	AML	
	comp=N,408μm,1.0s					
CAFI				AML	AML	
	comp=E,496μm,0.6s					
CAFI				AML	AML	
	comp=E,421μm,0.3s					
CAFI				AML	AML	
	comp=N,366μm,0.5s					
CAFI				AML	AML	
	comp=N,344μm,0.5s					
CAFI				AML	AML	
	comp=E,402μm,0.3s					
VVLD	**Villa Vallelon**	**1.00**	**155**	P	Pn	09 10 59.2 +0.3
VVLD				AML	AML	
	comp=E,570μm,0.4s					
VVLD				AML	AML	
	comp=N,486μm,0.6s					
VVLD				AML	AML	
	comp=E,570μm,0.4s					
VVLD				AML	AML	
	comp=N,486μm,0.6s					
GUAR	**Guarcino**	**1.00**	**169**	⇑P	Pn	09 11 00.7 +1.7
MCIV	**Monte Civitell**	**1.02**	**270**	⇓P	Pn	09 10 59.8 +0.6
MCIV				AML	AML	
	comp=E,410μm,0.5s					
MCIV				AML	AML	
	comp=N,275μm,1.5s					
MCIV				AML	AML	
	comp=E,409μm,0.5s					
MCIV				AML	AML	
	comp=N,250μm,0.3s					
TOLF	**Tolfa**	**1.06**	**228**	⇓P	Pg	09 10 59.0 -0.3
TOLF				AML	AML	
	comp=E,505μm,1.0s					
TOLF				AML	AML	
	comp=N,548μm,1.0s					
TOLF				AML	AML	
	comp=N,544μm,0.4s					
TOLF				AML	AML	
	comp=E,452μm,0.6s					
LPEL	**Lama dei Pelig**	**1.11**	**131**	⇓P	Pb	09 10 60.0 -0.1
LPEL				AML	AML	
	comp=E,692μm,1.2s					
LPEL				AML	AML	
	comp=N,598μm,0.7s					
LPEL				AML	AML	
	comp=E,600μm,0.4s					
LPEL				AML	AML	
	comp=N,598μm,0.7s					
ARCI	**Arcidosso**	**1.17**	**274**	⇓P	Pn	09 11 02.6 +1.3
ARCI				AML	AML	
	comp=E,410μm,0.3s					
ARCI				AML	AML	
	comp=N,446μm,0.6s					
ARCI				AML	AML	
	comp=E,96μm,0.6s					
ARCI				AML	AML	
	comp=N,145μm,0.4s					
CASP	**Castiglione de**	**1.62**	**271**	⇑P	Pn	09 11 07.6 +0.2
CASP				AML	AML	
	comp=E,50μm,1.3s					
CASP				AML	AML	
	comp=N,59μm,1.2s					
CASP				AML	AML	
	comp=E,49μm,0.4s					
CASP				AML	AML	
	comp=N,59μm,1.2s					
PTRJ	**Pietraroja**	**1.79**	**142**	P	Pg	09 11 13.2 +0.1
SGRT	**San Giovanni R**	**2.24**	**116**	⇑P	Pb	09 11 18.0 -1.4
PGF	**Pioggiola**	**3.01**	**267**	⇑P	Pn	09 11 27.9 +1.3
SABO	**M.te Sabotino**	**3.22**	**7**	P	Pb	09 11 37.0 +0.9
CKRC	**Cesky Krumlov**	**6.10**	**8**	*e*SN	Sn	09 13 17.3 -1.6
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN	Pn	09 12 13.4 +0.8
KHC				*e*SN	Sn	09 13 23.1 -2.2

*NNC **30** 09:23:09.2±7.8, 37°.38N×71°.20E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=62.4km s-min=45.7km az=172.0*
*IDC **30** 09:23:10.9±5.0, 35°.68N×70°.46E, h170km±46km, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=38.8km s-min=28.8km az=25.0*

ISC 30 09:23:09.7±1.9, 37°.0N±0°.1×70°.6E±0°.1, h64km, n10, σ2°.9 14/11, mb3.9/4, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.10**	**359**	P	**Pn**	**09 24 35.1**	**-2.1**
	1.4nm,0.3s,baz=171,slow=12,SNR=42						
KK31				⇑S	**Sn**	**09 25 45.2**	**-0.4**
	1.0nm,0.2s,baz=173,slow=22,SNR=5.1						
TKM2	**Tokmak 2**	**7.04**	**31**	⇑P	**Pn**	**09 24 48.9**	**-1.4**
	3.5nm,1.1s						
TKM2				⇑S	Sn	09 25 59.6	-9.5
	1.4nm,0.7s						
GEYT	**Alibeck**	**9.98**	**279**	P	**Pn**	**09 25 31.2**	**+0.9**
	0.8nm,0.4s,baz=113,slow=11,SNR=2.1						
GEYT				S	Sn	09 27 29.1	+8.4
	1.3nm,0.3s,baz=110,slow=28,SNR=3.3						
AB31	**Akbulak array**	**14.50**	**331**	⇑P	**Pn**	**09 26 30.4**	**-1.0**
	0.5nm,0.5s,baz=164,slow=11,SNR=15						
AB31				⇓S	**Sn**	**09 29 12.4**	**+1.8**
	0.9nm,0.7s,baz=152,slow=23,SNR=3.7						
AKTO	**Aktyubinsk**	**16.20**	**330**	⇓P	**P**	**09 26 56.4**	**+1.3**
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.60**	**26**	P	**Pn**	**09 27 38.5**	**+4.2**
	0.6nm,0.3s,baz=225,slow=11,SNR=2.9						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**36.90**	**326**	P	**P**	**09 30 10.8**	**-1.0**
	6.0nm,1.1s,baz=122,slow=7.2,SNR=7.8						
	6.0nm,1.1s						
HFS	**Hagfors**	**42.49**	**322**	P	**P**	**09 30 56.6**	**-1.7**
	3.7nm,0.9s,baz=93,slow=10,SNR=9.1						
	3.7nm,0.9s						
NOA	**NORSAR Array B**	**43.80**	**323**	P	**P**	**09 31 07.4**	**-1.5**
	0.4nm,0.4s,baz=109,slow=8.0,SNR=2.0						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**82.51**	**122**	P	P	09 35 12.4	-13
	0.9nm,1.2s,baz=322,slow=5.3,SNR=1.9						
	0.9nm,1.2s						

*ROM **30** 09:23:52.6±0.1, 42°.846N±0°.004×13°.082E±0°.005, h3km, ML3.3/13, Error ellipse: s-maj=0.5km s-min=0.2km az=219.0*
*PRU **30** 09:23:53.9±0.0, 42°.80N×13°.68E, h10km*
*IDC **30** 09:23:54.3±1.9, 43°.06N×13°.55E, h0km, mbtmp3.6/5, ML3.0/5, Error ellipse: s-maj=48.9km s-min=17.0km az=93.0*

ISC 30 09:23:53.7±0.8, 42°.87N±0°.02×13°.13E±0°.02, h11km±5km, n68, σ1°.20/98, 8C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**101**	P	**Pg**	**09 23 54.7**	**-1.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.11**	**329**	P	**Pg**	**09 23 55.8**	**-0.9**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,83350μm,0.6s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,68508μm,0.1s						
AM05	**Amandola Campo**	**0.20**	**56**	P	**Pg**	**09 23 58.0**	**0.0**
AM05				S	**Sg**	**09 24 01.6**	**+0.7**
AM05				AML	AML		
	comp=E,30250μm,1.6s						
AM05				AML	AML		
	comp=N,2095μm,0.1s						
AM05				AML	AML		
	comp=E,6930μm,1.1s						
AM05				AML	AML		
	comp=N,6330μm,1.6s						
AM05				AML	AML		
	comp=E,6935μm,1.1s						
AM05				AML	AML		
	comp=N,2100μm,0.1s						
AM05				AML	AML		
	comp=N,2099μm,0.1s						

AM05 AML AML
comp=E,29501μm,0.1s
AM05 AML AML
comp=E,6387μm,0.1s
AM05 AML AML
comp=N,5874μm,0.1s
T1241 Roccafluvione, 0.22 92 ⇓P **Pb 09 23 59.1 -0.8**
T1241 S **Sg 09 24 02.9 +1.3**
T1241 AML AML
comp=E,30200μm,0.7s
T1241 AML AML
comp=N,65600μm,0.3s
T1241 AML AML
comp=E,30200μm,0.6s
T1241 AML AML
comp=N,65600μm,0.3s
T1241 AML AML
comp=N,65550μm,0.3s
T1241 AML AML
comp=E,22535μm,0.2s
T1241 AML AML
comp=N,64007μm,0.2s
T1204 Amatrice, Fraz 0.23 144 ⇑P **Pg 09 23 57.8 -0.9**
T1204 AML AML
comp=E,10365μm,0.9s
T1204 AML AML
comp=N,6145μm,1.5s
T1204 AML AML
comp=N,6165μm,1.5s
T1204 AML AML
comp=E,10315μm,0.9s
T1204 AML AML
comp=N,4528μm,0.2s
T1204 AML AML
comp=E,8419μm,0.3s
GUMA Gualdo di Mace 0.25 37 ⇓P **Pg 09 23 59.3 +0.5**
GUMA S **Sg 09 24 03.6 +1.3**
GUMA AML AML
comp=E,69900μm,0.4s
GUMA AML AML
comp=N,81400μm,0.5s
GUMA AML AML
GUMA AML AML
comp=N,58950μm,0.5s
GUMA AML AML
comp=N,81450μm,0.5s
GUMA AML AML
comp=E,69900μm,0.3s
GUMA AML AML
comp=E,85804μm,0.3s
GUMA AML AML
comp=N,81409μm,0.5s
GUMA AML AML
comp=N,58966μm,0.5s
LNSS Leonessa 0.27 194 P **Pg 09 23 57.4 -1.9**
LNSS AML AML
comp=E,4945μm,1.1s
LNSS AML AML
comp=N,12800μm,0.9s
LNSS AML AML
comp=N,29700μm,0.2s
LNSS AML AML
comp=E,14400μm,0.2s
LNSS AML AML
comp=E,4915μm,0.4s
LNSS AML AML
comp=N,8781μm,0.5s
T1243 Rocca Santa Ma 0.29 126 P **Pg 09 23 59.6 0.0**
T1243 S **Sb 09 24 04.4 -1.5**
SEF1 Sefro 0.31 335 S **Sg 09 23 60.0 -4.2**
MDAR Monte D'Aria 0.33 2 P **Pg 09 24 00.2 -0.1**
MDAR S **Sg 09 24 05.6 +0.9**
PIO1 Pioraco 0.33 341 P **Pg 09 24 00.2 -0.2**
FIU1 Fiuminata 0.35 336 P **Pg 09 24 00.7 -0.1**
FIU1 S **Sg 09 24 06.5 +0.9**
RM33 Pellescritta (0.36 170 P **Pg 09 24 00.1 -0.8**
RM33 AML AML
comp=E,3450μm,0.2s
RM33 AML AML
comp=N,3580μm,0.5s
RM33 AML AML
comp=E,3500μm,0.9s
RM33 AML AML
comp=E,4195μm,0.7s
RM33 AML AML
comp=N,3580μm,0.5s
RM33 AML AML
comp=N,3640μm,0.5s
RM33 AML AML
comp=E,4210μm,0.7s
RM33 AML AML
comp=N,3368μm,0.3s
RM33 AML AML
comp=E,3414μm,0.3s
RM33 AML AML
comp=E,3450μm,0.2s
RM33 AML AML
comp=N,3232μm,0.2s
SSM1 San Severino M 0.36 6 P **Pg 09 24 01.1 +0.1**
SSM1 S **Sg 09 24 06.9 +1.0**
GAG1 Gagliole 0.38 353 ⇑P **Pg 09 23 57.3 -3.9**
GAG1 AML AML
comp=E,29700μm,1.3s
GAG1 AML AML
comp=N,27000μm,0.4s
ASSB Assisi San Ben 0.39 297 P **Pg 09 24 01.4 0.0**
ASSB S **Sg 09 24 07.5 +0.9**
CAMP Campotosto 0.39 148 P **Pg 09 24 00.9 -0.5**
CAMP AML AML
comp=E,2615μm,0.2s
CAMP AML AML
comp=N,2150μm,0.7s
CAMP AML AML
comp=N,2108μm,0.4s
CAMP AML AML
comp=E,2620μm,0.2s
T1211 Morro Reatino 0.39 211 P **Pg 09 24 01.1 -0.3**
T1211 AML AML
comp=E,3635μm,0.6s
T1211 AML AML
comp=N,5805μm,0.3s
T1211 AML AML
comp=E,3470μm,1.6s
T1211 AML AML
comp=N,5885μm,0.3s
T1211 AML AML
comp=E,3640μm,0.6s
T1211 AML AML
comp=N,6615μm,0.8s
T1211 AML AML
comp=E,2663μm,0.2s
T1211 AML AML
comp=N,5248μm,0.2s
T1211 AML AML
comp=N,5262μm,0.3s
T1211 AML AML
comp=E,2692μm,0.3s
SNTG Esanatoglia 0.41 341 P **Pg 09 24 01.8 -0.1**
SNTG S **Sg 09 24 08.5 +1.2**
OFFI Offida 0.41 80 ⇑P **Pb 09 24 02.8 -0.3**
OFFI S **Sb 09 24 10.6 +1.2**
OFFI AML AML
comp=N,9355μm,1.2s
OFFI AML AML
comp=E,8955μm,0.6s
OFFI AML AML
comp=E,8954μm,0.6s
OFFI AML AML
comp=N,8202μm,0.4s
TERO Teramo 0.43 125 P **Pg 09 24 01.8 -0.3**
TERO AML AML
comp=N,6965μm,0.1s
TERO AML AML
comp=E,5705μm,0.3s
TERO AML AML
comp=N,6370μm,0.1s
TERO AML AML
comp=E,6090μm,0.3s
TERO AML AML
comp=N,6365μm,0.1s
TERO AML AML
comp=N,6965μm,0.1s
TERO AML AML
comp=E,6089μm,0.3s
TERO AML AML
comp=E,5708μm,0.3s
TERO AML AML
comp=N,6368μm,0.1s
T1247 Pizzolo (AQ) 0.44 164 ⇑P **Pg 09 24 02.2 -0.2**
T1247 AML AML
comp=E,2627μm,0.3s
T1247 AML AML
comp=N,4122μm,0.4s
EL6 Elcito 0.46 358 P **Pg 09 24 02.7 -0.2**
EL6 S **Sb 09 24 10.3 -0.7**
TRE1 Treia 0.47 17 P **Pb 09 24 03.5 -0.5**
TRE1 S **Sb 09 24 11.2 +0.3**
CESX Cesi 0.48 238 S **Sb 09 24 12.0 +0.7**
ATCC AVT- Casa Cast 0.48 312 P **Pg 09 24 03.4 +0.2**
ATCC S **Sb 09 24 11.0 -0.4**
FOSV Fossato di Vic 0.51 328 P **Pg 09 24 03.3 -0.3**
FOSV S **Sg 09 24 11.6 +1.2**
GIGS Gran Sasso 0.53 142 ⇑P **Pg 09 24 03.8 -0.2**
GIGS AML AML
comp=N,576μm,0.4s
GIGS AML AML
comp=E,679μm,0.3s
GIGS AML AML
comp=E,679μm,0.3s
GIGS AML AML
comp=N,512μm,0.3s
TRTR Tortoreto Alta 0.58 95 ⇓P **Pb 09 24 06.0 +0.1**
TRTR S **Sn 09 24 16.3 -1.2**
TRTR AML AML
comp=N,8522μm,0.7s
TRTR AML AML
comp=E,7520μm,0.6s
MMUR Monte Murano 0.58 351 P **Pg 09 24 05.0 -0.1**
MMUR S **Sb 09 24 14.5 +0.1**
MURB Monte Urbino 0.59 312 P **Pg 09 24 05.2 -0.1**
MURB S **Sg 09 24 13.9 +0.8**
PP3 Marolino 0.62 34 P **Pb 09 24 06.7 +0.1**
PP3 S **Sn 09 24 17.1 -1.4**
ATFO Monte Foce - G 0.65 321 P **Pg 09 24 06.2 0.0**
ATFO S **Sb 09 24 16.6 +0.4**
ARVD Arcevia 0.65 348 P **Pg 09 24 05.9 -0.4**
ARVD S **Sb 09 24 16.3 +0.1**
ATTE AVT- Monte Tez 0.66 301 P **Pg 09 24 05.7 -0.8**
VCEL Villa Celiera 0.70 132 ⇑P **Pg 09 24 07.2 -0.1**
VCEL S **Sb 09 24 17.6 -0.3**
VCEL AML AML
comp=E,2405μm,0.4s
VCEL AML AML
comp=N,2800μm,0.7s
FRON Frontone 0.72 336 P **Pg 09 24 06.8 -0.8**
FRON S **Sb 09 24 18.0 -0.1**
ATVO AVT- Monte Val 0.74 315 P **Pg 09 24 07.7 -0.3**
ATVO S **Sg 09 24 18.3 +0.6**
AOI Ancona 0.77 27 P **Pg 09 24 08.7 +0.1**
AOI S **Sb 09 24 20.4 +0.8**
PIEI Pieia 0.80 327 P **Pg 09 24 08.8 -0.3**
PIEI S **Sb 09 24 20.8 +0.2**
T0110 Collepietro 0.80 143 ⇑P **Pg 09 24 08.4 -0.7**
T0110 AML AML
comp=N,1662μm,0.6s
T0110 AML AML
comp=E,1627μm,0.4s
MPAG Monte Paganucc 0.81 341 P **Pg 09 24 09.1 -0.3**
MPAG S **Sb 09 24 21.9 +1.0**
LPEL Lama dei Pelig 1.13 136 P **Pb 09 24 14.3 -1.0**
GIUL Giuliano Di Ro 1.31 176 ⇑P **Pg 09 24 19.9 +1.1**
SKDS Skadanscina 2.75 13 *i* Pn **Pn 09 24 35.9 -2.0**
SKDS *i* Sn **Sn 09 25 11.4 +0.1**
SKDS IAML 09 25 12.2
comp=Z,72nm,0.3s
MYKA Terra Mystica 3.78 5 *e*Pn **Pn 09 24 52.5 +0.4**
comp=Z,2.6nm,0.2s
OBKA Obir 3.78 15 *e*Pn **Pn 09 24 52.4 +0.4**
comp=Z,1.2nm,0.1s
ABTA Abfaltersbach 3.91 354 *e*Pn **Pn 09 24 54.7 +0.9**
comp=Z,5.0nm,0.3s
FETA Feichten 4.49 339 *e*Pn **Pn 09 25 02.9 +1.0**
comp=Z,2.3nm,0.3s
WTTA Wattenberg 4.52 347 *e*Pn **Pn 09 25 03.8 +1.5**
comp=Z,1.9nm,0.3s
DAVOX Davos/Dischmat 4.55 331 Pn **Pn 09 25 04.9 +2.2**
comp=Z,1.7nm,0.3s,baz=145,slow=12,SNR=2.9
DAVOX Sn **Sn 09 25 57.7 +2.1**
comp=Z,0.9nm,0.3s,baz=143,slow=20,SNR=1.7
comp=Z,3.8nm,0.3s
SQTA Sankt Quirin 4.56 343 *e*Pn **Pn 09 25 03.5 +0.7**
comp=Z,2.9nm,0.2s
WATA Walderalm 4.60 347 *e*Pn **Pn 09 25 04.2 +0.7**
comp=Z,2.1nm,0.2s
MOTA Moosalm 4.70 343 *e*Pn **Pn 09 25 05.7 +1.0**
comp=Z,1.9nm,0.3s
BIOA Bad Ischl, Aus 4.84 4 *e*Pn **Pn 09 25 07.5 +1.0**
comp=Z,2.4nm,0.2s
RETA Reutte 4.92 341 *e*Pn **Pn 09 25 08.4 +0.8**
comp=Z,1.1nm,0.2s
DAVA Damuels 4.98 334 *e*Pn **Pn 09 25 08.6 0.0**
comp=Z,2.0nm,0.2s
MOA Molln 5.05 9 *e*Pn **Pn 09 25 10.4 +1.0**
comp=Z,1.6nm,0.2s
RONA Rosalia, Austr 5.33 24 *e*Pn **Pn 09 25 13.4 +0.2**
comp=Z,0.5nm,0.2s
CONA Conrad Observa 5.42 20 *e*Pn **Pn 09 25 14.5 0.0**
comp=Z,0.6nm,0.2s
VAE Valguarnera 5.47 169 Pn **Pn 09 25 19.6 +4.4**
comp=Z,2.6nm,0.3s,baz=0.0,slow=6.1,SNR=2.0
VAE Sn **Sn 09 26 18.1 0.0**
comp=Z,1.6nm,0.3s,baz=186,slow=13,SNR=1.2
comp=Z,11nm,0.5s
GERES GERESS Array B 5.99 4 Pn **Pn 09 25 22.2 -0.2**
comp=Z,0.4nm,0.3s,baz=174,slow=13,SNR=6.2
GERES Sn **Sn 09 26 28.2 -3.0**
comp=Z,1.7nm,0.3s,baz=176,slow=20,SNR=5.0
comp=Z,1.0nm,0.3s
CKRC Cesky Krumlov 6.01 7 *e*PN **Pn 09 25 22.1 -0.5**
CKRC *e*SN **Sn 09 26 28.4 -3.1**
KHC Kasperske Hory 6.28 3 *e*PN **Pn 09 25 26.6 +0.3**
KHC *e*SN **Sn 09 26 36.3 -1.7**
NKC Novy Kostel 7.38 357 *e*SN **Sn 09 27 04.4 -0.9**
KEST Kesra 7.70 204 Pn Pn 09 25 51.4 +5.5
comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=1.5
comp=Z,1.4nm,0.5s
CLL Collm 8.45 359 *e*Sn Sn 09 27 22.0 -9.3
CLL *ex* x 09 28 02.0
CLL *e*Sg Sb 09 28 10.0 +10
CLL *ex* x 09 28 38.0
comp=Z,9.0nm,1.1s
FINES FINESS Array B 20.16 18 P **P 09 28 26.0 -1.8**
comp=Z,0.1nm,0.3s,baz=172,slow=10,SNR=1.6
comp=Z,2.3nm,0.9s

*IDC **30** 09:27:06.6±1.0, 35°.34N×16°.08E, h0km, mb3.9/12, mbtmp3.9/24, ML3.9/12, Error ellipse: s-maj=17.5km s-min=15.2km az=170.0*
*PDG **30** 09:27:07.6±0.1, 35°.63N×16°.16E, h9km±3km, ML4.9/12, Error ellipse: s-maj=3.0km s-min=2.4km az=90.0*
*THE **30** 09:27:11.9, 35°.85N×16°.12E, h10km±26km, ML4.8/8, Error ellipse: s-maj=35.3km s-min=1.4km az=230.0*
*BEO **30** 09:27:12.7±0.6, 35°.84N×16°.20E, h2km±2km, ML4.7/13*
ISC 30 09:27:11.3±1.6, 35°.77N±0°.06×16°.18E±0°.04, h16km±9km, n205, σ2°16/243, mb3.8/12, 34C-10D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPAC	**Pachino**	**1.26**	**317**	⇑*e*P	**Pg**	**09 27 36.4**	**+0.7**
HPAC				S	**Sn**	**09 27 58.9**	**+7.9**
HPAC				AML	AML		
comp=E,3630μm,0.2s							
HPAC				AML	AML		
comp=N,24200μm,0.6s							
HMDC	**Modica**	**1.63**	**317**	⇑*e*P	**Pb**	**09 27 40.7**	**-0.4**
HMDC				S	**Sg**	**09 28 05.3**	**+1.3**
SSY	**Sortino**	**1.64**	**327**	⇑*e*P	**Pg**	**09 27 41.5**	**-1.4**
SSY				S	**Sg**	**09 28 07.6**	**+3.3**
SSY				AML	AML		
comp=E,8410μm,0.4s							
SSY				AML	AML		
comp=N,21250μm,0.4s							
AGST	**Augusta-Monte**	**1.67**	**333**	⇑*i*P	**Pg**	**09 27 42.3**	**-1.1**
AGST				S	**Sg**	**09 28 08.4**	**+3.3**
HAGA	**Augusta**	**1.72**	**332**	*e*P	**Pb**	**09 27 42.3**	**-0.3**
HAGA				S	**Sg**	**09 28 09.2**	**+2.5**
HAGA				AML	AML		
comp=E,11100μm,0.4s							
HAGA				AML	AML		
comp=N,14750μm,1.3s							
HVZN	**Vizzini**	**1.83**	**320**	P	**Pb**	**09 27 43.8**	**-0.7**
HVZN				S	**Sg**	**09 28 12.2**	**+1.8**
EPOZ	**Pozzillo**	**1.95**	**333**	*e*P	**Pg**	**09 27 47.9**	**-0.8**
ESML	**S. M. di Licod**	**2.12**	**331**	P	**Pb**	**09 27 48.7**	**-0.6**
ESLN	**Serra La Nave**	**2.15**	**334**	P	**Pb**	**09 27 49.4**	**-0.6**
VAE	**Valguarnera**	**2.22**	**321**	Pn	**Pb**	**09 27 50.9**	**-0.2**
comp=N,44nm,0.3s,baz=344,slow=6.6,SNR=22							
VAE				Sn	**Sg**	**09 28 22.2**	**-0.4**
comp=N,124nm,0.3s,baz=112,slow=19,SNR=7.6							
comp=N,92nm,0.3s							
CLTA	**Licata**	**2.26**	**308**	*e*P	**Pn**	**09 27 49.1**	**+1.0**
EMSG	**Monte Spagnolo**	**2.27**	**335**	*e*P	**Pb**	**09 27 51.6**	**-0.4**
CAGR	**Agira**	**2.29**	**324**	*e*P	**Pb**	**09 27 51.4**	**-0.9**
SOI	**Samo**	**2.30**	**358**	P	**Pb**	**09 27 52.2**	**-0.2**
SOI				S	**Sg**	**09 28 25.0**	**-0.2**
EPZF	**Pizzo Felice**	**2.31**	**333**	*e*P	**Pb**	**09 27 52.1**	**-0.5**
GALF	**Gagliano Caste**	**2.33**	**327**	*e*P	**Pb**	**09 27 52.1**	**-0.9**
MNO	**Monte Soro**	**2.46**	**332**	P	**Pb**	**09 27 54.4**	**-1.0**
CEL	**Celeste**	**2.49**	**355**	*e*P	**Pb**	**09 27 55.1**	**-0.7**
FAVR	**Favara**	**2.51**	**307**	*e*P	**Pn**	**09 27 53.1**	**+1.6**
MSRU	**Castanea**	**2.54**	**348**	P	**Pb**	**09 27 55.1**	**-1.5**
MSRU				S	**Sg**	**09 28 30.2**	**-2.9**
MSRU				AML	AML		
comp=N,2525μm,0.4s							
MSRU				AML	AML		
comp=E,3930μm,1.5s							
MILZ	**Milazzo**	**2.61**	**343**	*e*P	**Pb**	**09 27 55.8**	**-1.9**
PLAC	**Placanica**	**2.68**	**4**	*e*P	**Pb**	**09 27 57.9**	**-1.1**
CSLB	**Castelbuono**	**2.75**	**322**	*e*P	**Pb**	**09 27 57.6**	**-2.5**
VPL	**Vulcano Piano**	**2.77**	**340**	*e*P	**Pb**	**09 27 58.4**	**-2.1**
GIB	**Gibilmanna**	**2.81**	**323**	*e*P	**Pb**	**09 27 58.6**	**-2.5**
JOPP	**Joppolo**	**2.84**	**355**	P	**Pb**	**09 27 59.9**	**-1.8**
LLI	**Lipari**	**2.84**	**340**	*e*P	**Pb**	**09 27 59.6**	**-2.1**
IFIL	**Filicudi I Eol**	**3.07**	**336**	*e*P	**Pn**	**09 28 01.5**	**+2.3**
IST3	**Stromboli F**	**3.11**	**346**	*e*P	**Pn**	**09 28 02.7**	**+2.8**
IACL	**Alicudi**	**3.12**	**333**	*e*P	**Pn**	**09 28 02.4**	**+2.5**
MPG	**Monte Pellegri**	**3.28**	**317**	*e*P	**Pn**	**09 28 04.6**	**+2.4**
SERS	**Sersale**	**3.28**	**7**	*e*P	**Pb**	**09 28 05.9**	**-3.4**
TIP	**Timpagrande**	**3.43**	**8**	⇑S	**Sb**	**09 28 53.8**	**+0.5**
CAR1	**CAROLEI**	**3.48**	**0**	*e*P	**Pn**	**09 28 08.4**	**+3.6**
CAR1				S	**Sb**	**09 28 53.5**	**-1.0**
CAR1				AML	AML		
comp=E,2105μm,0.5s							
CAR1				AML	AML		
comp=N,1930μm,0.4s							
CAR1				AML	AML		
comp=E,2360μm,0.5s							
CAR1				AML	AML		
comp=N,1820μm,0.3s							
CELI	**Celico**	**3.63**	**4**	*e*P	**Pb**	**09 28 11.4**	**-3.9**
CET2	**Cetraro**	**3.75**	**357**	*e*P	**Pn**	**09 28 11.8**	**+3.1**
CET2				S	**Sb**	**09 28 58.8**	**-3.8**
CET2				AML	AML		
comp=N,2065μm,0.4s							
CET2				AML	AML		
comp=E,2830μm,0.3s							
USI	**Ustica**	**3.78**	**322**	*e*P	**Pn**	**09 28 10.5**	**+1.5**
TDS	**Terranova Siba**	**3.88**	**2**	*e*P	**Pn**	**09 28 14.0**	**+3.6**
SALB	**San Lorenzo Be**	**4.10**	**2**	*e*P	**Pn**	**09 28 17.6**	**+4.2**
MMN	**Mormanno**	**4.11**	**358**	*e*P	**Pn**	**09 28 16.8**	**+3.3**
KEF3	**Kipouria, Keph**	**4.13**	**53**	P	**Pn**	**09 28 14.9**	**+1.2**
KEF3				S	**Sn**	**09 29 04.5**	**+2.8**
comp=E,4μm,0.4s							
DMLN	**Damoulianata-K**	**4.16**	**53**	P	**Pn**	**09 28 15.1**	**+0.8**
DMLN				S	**Sn**	**09 29 05.4**	**+2.8**
comp=E,2μm,0.4s							
KEF4	**Livadi, Kephal**	**4.21**	**53**	P	**Pn**	**09 28 15.7**	**+0.9**
CUC	**Castrocucco**	**4.22**	**356**	*e*P	**Pn**	**09 28 18.0**	**+2.9**
PSDA	**Pessada-Kefalo**	**4.23**	**55**	P	**Pn**	**09 28 15.9**	**+0.7**
PSDA				S	**Sn**	**09 29 06.4**	**+2.1**
comp=E,2μm,0.4s							
VLS	**Valsamata**	**4.27**	**55**	P	**Pn**	**09 28 16.4**	**+0.7**
VLS				S	**Sn**	**09 29 07.7**	**+2.4**
comp=E,2μm,0.6s							
MGR	**Morigerati**	**4.39**	**354**	*e*P	**Pn**	**09 28 20.5**	**+3.2**
SIRI	**Monte Sirino -**	**4.41**	**357**	*e*P	**Pn**	**09 28 20.4**	**+2.7**
MTSN	**Montesano sull**	**4.50**	**356**	*e*P	**Pn**	**09 28 21.9**	**+2.9**
MCEL	**Monticello**	**4.55**	**356**	*e*P	**Pn**	**09 28 22.5**	**+2.8**
DRAG	**Dragano-Lefkad**	**4.56**	**49**	P	**Pn**	**09 28 21.1**	**+1.5**
DRAG				S	**Sn**	**09 29 14.6**	**+2.3**
EVGI	**Lefkada island**	**4.57**	**50**	P	**Pn**	**09 28 21.1**	**+1.3**
EVGI				S	**Sn**	**09 29 15.3**	**+2.7**
comp=E,3μm,0.6s							
CMPR	**Campora**	**4.59**	**352**	*e*P	**Pn**	**09 28 23.2**	**+3.0**
CRAC	**Craco**	**4.59**	**2**	*e*P	**Pn**	**09 28 24.4**	**+4.3**
NYDR	**Nydri-Lefkada**	**4.65**	**50**	P	**Pn**	**09 28 22.9**	**+2.0**
NYDR				S	**Sn**	**09 29 16.8**	**+2.3**
comp=E,1μm,0.6s							
SCTE	**Santa Cesarea**	**4.66**	**22**	*e*P	**Pn**	**09 28 22.4**	**+1.4**
TSLK	**Tsoukalades, L**	**4.69**	**48**	P	**Pn**	**09 28 23.3**	**+1.8**
TSLK				S	**Sn**	**09 29 18.9**	**+3.3**
comp=E,1μm,0.3s							
RLS	**Riolos of Patr**	**4.81**	**60**	P	**Pn**	**09 28 25.5**	**+2.4**
RLS				S	**Sn**	**09 29 21.7**	**+3.1**
comp=E,418nm,0.4s							
MIGL	**Miglionico**	**4.83**	**2**	*e*P	**Pn**	**09 28 26.3**	**+2.9**
LTRZ	**Laterza**	**4.85**	**6**	*e*P	**Pn**	**09 28 25.7**	**+2.0**
KEK	**Kerkira**	**4.87**	**35**	P	**Pn**	**09 28 25.1**	**+1.2**
MATE	**Matera**	**4.89**	**5**	⇑P	**Pn**	**09 28 24.5**	**+0.4**
IGT	**Igoumenitsa**	**5.00**	**40**	P	**Pn**	**09 28 27.2**	**+1.5**
SRN	**Sarande**	**5.10**	**35**	P	**Pn**	**09 28 27.9**	**+0.9**
LAKA	**Lakka**	**5.25**	**60**	P	**Pn**	**09 28 31.3**	**+2.0**
JAN	**Janina**	**5.36**	**42**	P	**Pn**	**09 28 31.9**	**+1.2**
EVR	**Evrytania**	**5.47**	**53**	P	**Pn**	**09 28 34.9**	**+2.5**
KEST	**Kesra**	**5.56**	**272**	Pn	**Pn**	**09 28 30.6**	**-2.9**
comp=E,0.7nm,0.3s,baz=88,slow=5.8,SNR=14							
KEST				Sn	**Sn**	**09 29 32.1**	**-4.9**
comp=E,6.5nm,0.3s,baz=316,slow=20,SNR=8.1							
comp=E,6.1nm,0.5s							
TATN	**Tataouine**	**5.66**	**237**	P	Pn	09 28 25.1	-10
TIR	**Tirane**	**6.27**	**26**	⇑P	**Pn**	**09 28 44.6**	**+1.4**
TIR	**Tirane**	**6.27**	**26**	*e*Pn	**Pn**	**09 28 45.2**	**+2.0**
TIR				*e*Sn	**Sn**	**09 29 53.3**	**-1.2**
OHR	**Ohrid**	**6.45**	**33**	*i* Pn	**Pn**	**09 28 48.1**	**+2.5**
ULC	**Ulcinj**	**6.63**	**20**	⇑*i*Pn	**Pn**	**09 28 48.8**	**+0.7**
ULC				*i* Sn	**Sn**	**09 30 04.8**	**+1.5**
DRME	**Dracevica, Mon**	**6.82**	**19**	*e*Pn	**Pn**	**09 28 51.1**	**+0.4**
DRME	**Dracevica, Mon**	**6.82**	**19**	⇑*i*Pn	**Pn**	**09 28 51.5**	**+0.8**
DRME				*i* Sn	**Sn**	**09 30 09.5**	**+1.5**
BUM	**Brajici-Budva**	**6.85**	**17**	⇑*i*Pn	**Pn**	**09 28 51.9**	**+0.7**
BUM				*i* Sn	**Sn**	**09 30 10.2**	**+1.3**
HCY	**Herceg Novi**	**6.90**	**14**	*e*Pn	**Pn**	**09 28 52.1**	**+0.2**
HCY	**Herceg Novi**	**6.90**	**14**	⇓*i*Pn	**Pn**	**09 28 52.7**	**+0.8**
HCY				*i* Sn	**Sn**	**09 30 11.6**	**+1.5**
PDG	**Podgorica**	**7.07**	**19**	⇑P	**Pn**	**09 28 54.8**	**+0.7**
PDG	**Podgorica**	**7.07**	**19**	*e*Pn	**Pn**	**09 28 55.1**	**+1.0**
PDG				*e*Sn	**Sn**	**09 30 14.2**	**+0.2**
TTG	**Podgorica**	**7.07**	**19**	⇑*i*Pn	**Pn**	**09 28 55.0**	**+1.0**
TTG				*i* Sn	**Sn**	**09 30 15.4**	**+1.4**
CEME	**Cevo**	**7.09**	**17**	*e*Pn	**Pn**	**09 28 55.3**	**+0.8**
CEME				*i* Sn	**Sn**	**09 30 16.1**	**+1.3**
IDI	**Anoyia**	**7.12**	**91**	⇑P	**Pn**	**09 28 53.0**	**-2.0**
IDI	**Anoyia**	**7.12**	**91**	Pn	**Pn**	**09 28 53.2**	**-1.7**
comp=E,8.9nm,0.3s,baz=249,slow=11,SNR=56							
IDI				Sn	**Sn**	**09 30 11.8**	**-3.8**
comp=E,18nm,0.3s,baz=295,slow=19,SNR=14							
comp=E,17nm,0.3s							
TREB	**Trebinje**	**7.14**	**13**	*e*Pn	**Pn**	**09 28 55.4**	**+0.3**
TREB	**Trebinje**	**7.14**	**13**	*e*Pn	**Pn**	**09 28 55.4**	**+0.3**
TREB				*e*Sn	**Sn**	**09 30 13.8**	**-2.0**
STON	**Ston**	**7.19**	**9**	*e*Pn	**Pn**	**09 28 54.5**	**-1.2**
STON	**Ston**	**7.19**	**9**	*e*Pn	**Pn**	**09 28 55.4**	**-0.3**
STON				*e*Sn	**Sn**	**09 30 15.8**	**-1.2**
NKME	**Niksic**	**7.31**	**16**	⇓*i*Pn	**Pn**	**09 28 58.4**	**+0.9**
NKME				*i* Sn	**Sn**	**09 30 21.4**	**+1.3**
BRY	**Bratogost**	**7.35**	**14**	*e*Pn	**Pn**	**09 28 58.7**	**+0.6**
BRY	**Bratogost**	**7.35**	**14**	⇓*i*Pn	**Pn**	**09 28 59.0**	**+0.9**
BRY				*i* Sn	**Sn**	**09 30 22.4**	**+1.1**
PVY	**Plav**	**7.42**	**22**	*e*Pn	**Pn**	**09 28 59.8**	**+0.8**
PVY				*i* Sn	**Sn**	**09 30 24.0**	**+1.1**
SKO	**Skopje**	**7.43**	**32**	*i* Pn	**Pn**	**09 29 00.2**	**+1.2**
VAY	**Valandovo**	**7.47**	**40**	*i* Pn	**Pn**	**09 29 00.7**	**+1.1**
KOME	**Kolasin**	**7.53**	**19**	*e*Pn	**Pn**	**09 29 01.3**	**+0.8**
KOME				*i* Sn	**Sn**	**09 30 26.6**	**+1.1**
IVA	**Berane**	**7.65**	**21**	⇓*i*Pn	**Pn**	**09 29 03.1**	**+0.9**
IVA				*i* Sn	**Sn**	**09 30 29.6**	**+1.0**
UPM	**Unac-Piva**	**7.71**	**15**	*e*Pn	**Pn**	**09 29 04.9**	**+1.7**
UPM	**Unac-Piva**	**7.71**	**15**	*e*Pn	**Pn**	**09 29 04.0**	**+0.8**
UPM				*i* Sn	**Sn**	**09 30 31.2**	**+0.9**
PLE	**Pljevlja**	**7.94**	**17**	*e*Pn	**Pn**	**09 29 07.2**	**+0.9**
PLE				*i* Sn	**Sn**	**09 30 36.8**	**+1.0**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
SJES	Sjenica	8.03	20	*e*Pn	Pn	09 29 09.7	+2.2
SJES				*e*Sn	Sn	09 30 35.7	-2.3
KKB	Krupnik	8.13	39	*e*P	Pn	09 29 09.7	+1.0
RUDO	Rudo	8.21	16	*e*Pn	Pn	09 29 11.7	+1.9
BARS	Barje	8.28	30	*e*Pn	Pn	09 29 11.7	+0.9
MMB	Musomiste	8.28	43	*e*P	Pn	09 29 12.0	+1.2
SRKY	Kupres RS	8.32	5	*e*Pn	Pn	09 29 12.4	+1.0
SELS	Selova	8.36	26	*e*Pn	Pn	09 29 12.8	+0.9
SELS				*e*Sn	Sn	09 30 43.2	-2.7
BBLS	Lazići	8.46	16	*e*Pn	Pn	09 29 14.3	+1.1
BBLS	Lazići	8.46	16	*e*Pn	Pn	09 29 14.3	+1.1
BBLS				*e*Sn	Sn	09 30 45.5	-2.8
HAPS	Han Pijesak,Bl	8.57	14	*e*Pn	Pn	09 29 15.9	+1.0
MGRS	Mrkonjic Grad	8.66	4	*e*Pn	Pn	09 29 18.7	+2.7
VTS	Vitosha	8.76	37	⇑P	Pn	09 29 18.3	+0.8
VTS	Vitosha	8.76	37	*e*P	Pn	09 29 18.9	+1.5
DIVS	Divibare	8.81	18	*e*Pn	Pn	09 29 18.8	+0.6
DIVS	Divibare	8.81	18	*e*Pn	Pn	09 29 19.1	+0.9
DIVS				*e*Sn	Sn	09 30 54.2	-3.0
GRUS	Gruza	8.82	22	*e*Pn	Pn	09 29 19.2	+1.0
GRUS				*e*Sn	Sn	09 30 54.3	-3.0
BOVS	Bovan	8.93	27	⇑P	Pn	09 29 20.5	+0.8
BOVS	Bovan	8.93	27	*e*Pn	Pn	09 29 19.5	-0.2
BOVS				*e*Sn	Sn	09 30 57.2	-2.7
ZAPS	Zavoj	9.00	32	*e*Pn	Pn	09 29 22.6	+2.0
ZAPS				*e*Sn	Sn	09 30 58.8	-2.8
BLY	Banja Luka	9.00	5	*e*Pn	Pn	09 29 22.3	+1.7
BLY	Banja Luka	9.00	5	*e*Pn	Pn	09 29 22.9	+2.3
BLY				*e*Sn	Sn	09 30 59.0	-2.6
TRUS	Trudelj	9.04	20	*e*Pn	Pn	09 29 22.5	+1.3
TRUS				*e*Sn	Sn	09 30 58.8	-3.8
TEKS	Tekeris	9.13	15	*e*Pn	Pn	09 29 22.7	+0.2
TEKS	Tekeris	9.13	15	*e*Pn	Pn	09 29 22.2	-0.3
A051A	Mrakovica	9.25	3	*e*Pn	Pn	09 29 26.0	+1.9
ZAGS	Zajecar	9.28	28	*e*Pn	Pn	09 29 25.5	+1.0
ZAGS				*e*Sn	Sn	09 31 04.7	-3.8
KDZ	Kurdzhali	9.30	48	*e*P	Pn	09 29 24.6	-0.2
A052A	Srbac	9.38	6	*e*Pn	Pn	09 29 26.7	+1.0
MPEP	Malo Peshtene	9.56	35	*e*P	Pn	09 29 30.4	+2.1
KUBS	Kucevo	9.60	24	*e*Pn	Pn	09 29 28.6	-0.2
KUBS				*e*Sn	Sn	09 31 12.0	-4.4
FRGS	Fruska Gora	9.77	15	⇓P	Pn	09 29 31.6	+0.4
FRGS	Fruska Gora	9.77	15	*e*Pn	Pn	09 29 31.4	+0.2
FRGS	Fruska Gora	9.77	15	*e*Pn	Pn	09 29 31.5	+0.2
FRGS				*e*Sn	Sn	09 31 17.4	-3.2
MDVR	Moldovita	9.94	23	⇑P	Pn	09 29 34.5	+0.9
PLVB	Pleven	10.01	38	⇓P	Pn	09 29 35.4	+1.0
CEY	Cerknica	10.04	353	*e*Pn	Pn	09 29 38.5	+3.5
HERR	Herculane	10.27	26	⇑P	Pn	09 29 39.4	+1.4
KOVH	Kovagotottos	10.41	7	P	Pn	09 29 40.9	+1.0
MORH	Mrgy, Hungar	10.60	9	⇑P	Pn	09 29 43.3	+0.9
BZS	Buzias	10.66	21	⇑P	Pn	09 29 44.3	+1.0
OBKA	Obir	10.80	354	*e*Pn	Pn	09 29 45.4	+0.1
OBKA	Obir	10.80	354	*e*Pn	Pn	09 29 49.0	+3.7
	comp=E,1.8nm,0.3s						
GZR	Gura Zlata	10.84	26	⇑P	Pn	09 29 47.9	+2.1
LOT	Lotru	11.25	28	⇑P	Pn	09 29 53.8	+2.3
SIRR	Siria	11.27	20	⇑P	Pn	09 29 53.3	+1.6
ARSA	Arzberg	11.48	358	*e*Pn	Pn	09 29 57.2	+2.6
	comp=E,3.2nm,0.3s						
ARR	Arges	11.53	31	⇓P	Pn	09 29 57.2	+1.8
VOIR		11.77	32	⇑P	Pn	09 30 00.5	+2.0
RONA	Rosalia, Austr	11.92	0	*e*Pn	Pn	09 30 03.0	+2.4
	comp=E,2.5nm,0.3s						
FETA	Feichten	11.96	342	*e*Pn	Pn	09 30 05.5	+4.3
	comp=E,4.4nm,0.8s						
DAVOX	Davos/Dischmat	11.97	339	Pn	Pn	09 30 03.9	+2.5
	comp=E,0.1nm,0.3s,baz=154,slow=18,SNR=1.4						
DAVOX				Sn	Sn	09 32 21.8	+7.1
	comp=E,0.8nm,0.3s,baz=156,slow=19,SNR=2.8						
	comp=E,1.1nm,0.5s						
DRGR		12.05	22	⇓P	Pn	09 30 04.2	+1.8
WATA	Walderalm	12.05	345	*e*Pn	Pn	09 30 06.8	+4.2
	comp=E,1.1nm,0.3s						
MARR	Marisel-Cluj	12.07	23	⇑P	Pn	09 30 04.0	+1.2
CONA	Conrad Observa	12.15	359	*e*Pn	Pn	09 30 06.1	+2.3
	comp=E,1.5nm,0.3s						
MOA	Molln	12.15	354	*e*Pn	Pn	09 30 06.8	+3.1
	comp=E,5.0nm,0.6s						
MOTA	Moosalm	12.17	343	*e*Pn	Pn	09 30 08.5	+4.4
	comp=E,6.8nm,0.9s						
ICOR	Ion Corvin	12.20	43	⇑P	Pn	09 30 05.0	+0.6
MLR	Muntele Rosu	12.21	34	⇓P	Pn	09 30 06.9	+2.3
MLR	Muntele Rosu	12.21	34	Pn	Pn	09 30 06.8	+2.2
	comp=E,1.1nm,0.3s,baz=101,slow=16,SNR=8.1						
MLR				Sn	Sn	09 32 26.5	+6.0
	comp=E,0.2nm,0.3s,baz=253,slow=19,SNR=0.9						
	comp=E,4.4nm,0.5s						
CJR	Cluj-Napoca	12.27	25	⇑P	Pn	09 30 07.0	+1.7
DOPR	Dopca	12.33	32	⇑P	Pn	09 30 07.4	+1.2
RETA	Reutte	12.38	343	*e*Pn	Pn	09 30 10.4	+3.4
	comp=E,1.9nm,0.6s						
TLBR	Topalu	12.61	42	⇑P	Pn	09 30 11.3	+1.4
HARR	Harsova	12.64	42	⇑P	Pn	09 30 12.2	+1.8
TIRR	Tirgusor	12.75	43	⇑P	Pn	09 30 13.0	+1.0
TIRR	Tirgusor	12.75	43	⇑P	Pn	09 30 13.0	+1.0
PLOR	Plostina	12.80	35	⇑P	Pn	09 30 14.2	+1.5
VRI	Vrincioaia	12.85	35	⇑P	Pn	09 30 14.9	+1.6
BMR	Baia Mare	13.08	22	⇑P	Pn	09 30 17.6	+1.2
GERES	GERESS Array B	13.19	353	Pn	Pn	09 30 20.0	+2.0
	comp=E,0.2nm,0.3s,baz=163,slow=13,SNR=4.8						
	comp=E,0.7nm,0.4s						
KHC	Kasperske Hory	13.49	353	*e*P	Pn	09 30 24.9	+2.9
KHC				AMS	AMS	09 48 20.0	
	comp=E,3μm,24.0s						
TREC	Trest	13.52	358	AMS	AMS	09 50 30.0	
	comp=E,2μm,23.6s						
VRAC	Vranov	13.53	1	Pn	Pn	09 30 25.8	+3.2
	comp=E,0.2nm,0.3s,baz=191,slow=5.2,SNR=1.8						
	comp=E,1.8nm,0.7s						
BURAR	Bucovina Array	13.61	27	⇓P	Pn	09 30 25.2	+1.4
MAUC	Maruska	13.64	5	*e*P	Pn	09 30 27.0	+2.9
MAUC				AMS	AMS	09 53 40.0	
	comp=E,3μm,29.3s						
OKC	Ostrava-Krasne	14.13	5	AMS	AMS	09 49 30.0	
	comp=E,1μm,23.2s						
GOPC	GO Pecny, Ondr	14.17	356	AMS	AMS	09 48 00.0	
	comp=E,2μm,22.6s						
KRLC	Kraliky	14.30	2	AMS	AMS	09 49 40.0	
	comp=E,1μm,19.7s						
BRTR	Keskin Array B	14.37	69	Pn	Pn	09 30 36.2	+2.0
	comp=E,0.2nm,0.3s,baz=250,slow=14,SNR=2.4						
	comp=E,0.7nm,0.5s						
DPC	Dobruska-Polom	14.57	0	AMS	AMS	09 50 20.0	
	comp=E,1μm,24.8s						
NKC	Novy Kostel	14.71	351	AMS	AMS	09 53 00.0	
	comp=E,1μm,18.8s						
UPC	Upice	14.73	360	AMS	AMS	09 47 40.0	
	comp=E,2μm,21.6s						
OSTC	Ostas	14.78	0	AMS	AMS	09 48 00.0	
	comp=E,2μm,20.7s						
PVCC	Panska Ves	14.79	356	AMS	AMS	09 49 50.0	
	comp=E,2μm,23.0s						
CHVC	Chvalec	14.81	360	AMS	AMS	09 49 50.0	
	comp=E,2μm,25.1s						
MMAI	Mount Meron Ar	16.11	94	Pn	Pn	09 30 50.8	-6.4
	comp=E,2.6nm,0.3s,baz=272,slow=13,SNR=5.4						
MMAI				Sn	Sn	09 33 45.8	-10
	comp=E,4.2nm,0.3s,baz=206,slow=15,SNR=4.5						
ESDC	Sonseca Array	16.40	290	Pn	Pn	09 31 00.3	-0.6
	comp=E,0.1nm,0.3s,baz=97,slow=13,SNR=13						
	comp=E,1.1nm,0.7s						
EIL	Elat	16.92	106	Sn	Sn	09 34 03.0	-12
	comp=E,0.9nm,0.3s,baz=311,slow=19,SNR=1.8						
MDT	Midelt	17.43	266	P	Pn	09 31 11.0	-2.9
	comp=E,0.1nm,0.3s,baz=65,slow=6.9,SNR=2.2						
	comp=E,0.3nm,0.3s						
ASF	Jabal al Asfar	17.55	96	P	Pn	09 31 12.2	-3.2
	comp=E,0.7nm,0.3s,baz=287,slow=7.1,SNR=6.8						
	comp=E,2.9nm,0.5s						
AKASG	Malin Array Be	17.65	28	P	P	09 31 19.1	+1.8
	comp=E,1.2nm,0.3s,baz=217,slow=10,SNR=14						
	comp=E,3.8nm,0.7s						
NACGM	Naroch	20.49	18	*e*P	Pn	09 31 54.2	+3.7
	comp=Z,13nm,0.8s,baz=206						
KBZ	Khabaz	21.96	61	P	P	09 32 05.9	+1.6
	comp=Z,2.2nm,0.9s,baz=264,slow=9.2,SNR=2.2						
	comp=Z,2.2nm,0.9s						
EKA	Eskdalemuir Ar	23.64	332	P	P	09 32 20.9	-0.8
	comp=Z,0.7nm,0.8s,baz=140,slow=11,SNR=2.3						
	comp=Z,0.7nm,0.8s						
HFS	Hagfors	24.43	357	P	P	09 32 30.7	+1.7
	comp=Z,2.0nm,0.6s,baz=155,slow=11,SNR=6.4						
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	25.48	354	P	P	09 32 40.5	+1.9
	comp=Z,0.9nm,0.7s,baz=162,slow=8.7,SNR=1.6						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	26.04	214	P	P	09 32 36.9	-7.1
	comp=Z,0.9nm,0.6s,baz=33,slow=9.9,SNR=6.7						
	comp=Z,0.9nm,0.6s						
FINES	FINESS Array B	26.45	11	P	P	09 32 48.9	+1.6
	comp=Z,8.4nm,1.1s,baz=186,slow=8.2,SNR=2.6						
	comp=Z,8.4nm,1.1s						
BELG	Belogornoye	27.74	43	P	P	09 33 01.7	+2.7
	comp=Z,5.3nm,0.5s,baz=233,slow=5.1,SNR=2.6						
	comp=Z,5.3nm,0.5s						
ARCES	ARCESS Array B	34.21	6	P	P	09 33 56.6	+0.8
	comp=Z,2.6nm,0.9s,baz=189,slow=9.9,SNR=7.9						
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	49.52	56	P	P	09 36 01.3	0.0
	comp=Z,0.5nm,0.5s,baz=281,slow=6.5,SNR=5.3						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	49.87	46	P	P	09 36 04.3	+0.6
	comp=Z,1.6nm,0.6s,baz=279,slow=7.4,SNR=6.1						
	comp=Z,1.6nm,0.6s						
SONM	Songino Array	64.66	48	P	P	09 37 48.0	-0.5
	comp=Z,0.2nm,0.3s,baz=308,slow=7.1,SNR=2.1						
	comp=Z,0.2nm,0.3s						
ILAR	Eielson Array	78.91	353	P	P	09 39 14.0	+0.5
	comp=Z,0.3nm,0.8s,baz=18,slow=3.2,SNR=2.5						
	comp=Z,0.3nm,0.8s						
WRA	Warramunga Arr	123.94	91	PKP	PKPdf	09 46 07.8	-1.4
	comp=Z,0.1nm,0.8s,baz=312,slow=2.1,SNR=0.7						

RSNC 30 09:28:47.2±1.2, 6°.81N×73°.16W, h148km±5km, ML3.1, Mw3.6, 2C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
BARC	Barichara	0.22	187	⇓*i*P	Pn	09 29 07.3	-0.3
BARC				*e*S	Sn	09 29 22.9	-0.2
BARC				*i*		09 29 23.3	
	comp=Z,374nm,0.3s						
BRRC	Barranca, Sant	0.63	298	⇑*i*P	Pn	09 29 09.0	-0.1
BRRC				*e*S	Sn	09 29 24.8	-0.8
BRRC				*i*		09 29 29.4	
	comp=Z,204nm,0.3s						
PAMC	Pamplona, Colo	0.69	41	*e*P	Pn	09 29 09.4	-0.7
PAMC				*e*S	Sn	09 29 27.2	-0.2
PAMC				*i*		09 29 30.1	
	comp=Z,115nm,0.4s						
RUSC	La Rusia	0.91	176	⇓*i*P	Pn	09 29 11.2	-0.5
RUSC				*e*S	Sn	09 29 30.0	-0.2
RUSC				*i*		09 29 30.9	
	comp=Z,113nm,0.2s						
PTBC	PUERTO BERRIO,	1.32	258	*e*P	Pn	09 29 13.6	-1.2
PTBC				*e*S	Sn	09 29 35.0	-0.9
PTBC				*i*		09 29 37.0	
	comp=Z,135nm,0.2s						
TAMC	Tame, Arauca	1.41	105	⇓*i*P	Pn	09 29 15.7	0.0
TAMC				*i*		09 29 36.5	
	comp=Z,77nm,0.3s						
TAMC				*e*S	Sn	09 29 37.3	-0.1
SPBC	San Pablo de B	1.47	218	*e*P	Pn	09 29 16.0	-0.4
SPBC				*e*S	Sn	09 29 38.2	-0.5
SPBC				*i*		09 29 40.7	
	comp=Z,173nm,0.1s						
NORC	Norcasia	2.11	234	*e*P	Pn	09 29 23.2	-0.3
NORC				*e*S	Sn	09 29 51.2	-0.3
NORC				*i*		09 29 56.2	
	comp=Z,79nm,0.2s						
CHIC	Chingaza	2.24	195	*e*P	Pn	09 29 25.4	-0.1
CHIC				*e*S	Sn	09 29 54.9	0.0
CHIC				*i*		09 29 59.9	
	comp=Z,68nm,0.4s						
ROSC	El Rosal	2.27	211	*e*P	Pn	09 29 25.9	0.0
ROSC				*e*S	Sn	09 29 56.7	+1.1
ROSC				*i*		09 30 01.9	
	comp=Z,203nm,0.4s						
HELC	Santa Helena	2.44	256	*e*P	Pn	09 29 27.9	0.0
HELC				*e*S	Sn	09 29 59.9	+0.9
HELC				*i*		09 30 07.6	
	comp=Z,66nm,0.3s						
GUY2C	Guyana, Caldas	2.70	235	*e*P	Pn	09 29 31.3	+0.1
GUY2C				*e*S	Sn	09 30 08.4	+3.3
GUY2C				*i*		09 30 13.5	
	comp=Z,69nm,0.3s						
PTGC	Puerto Gaitan,	2.79	159	⇓*i*P	Pn	09 29 30.4	-1.5
PTGC				*e*S	Sn	09 30 03.6	-2.6
PTGC				*i*		09 30 06.5	
	comp=Z,42nm,0.3s						
CBOC	Ciudad Bolivar	2.99	252	*e*P	Pn	09 29 34.8	+0.2
CBOC				*e*S	Sn	09 30 10.2	-0.9
CBOC				*i*		09 30 24.9	
	comp=Z,17nm,0.2s						
DBBC	Dabeiba	3.04	274	*e*S	Sn	09 30 10.6	-1.5
PRAC	Prado	3.52	209	*e*P	Pn	09 29 40.8	-0.5
PRAC				*e*S	Sn	09 30 22.3	-1.0
PRAC				AMP		09 30 27.4	
	comp=Z,761nm,0.2s						
PLMC	San Jos del P	3.64	239	*e*P	Pn	09 29 42.7	-0.1
PLMC				*e*S	Sn	09 30 26.9	+1.0
PLMC				*i*		09 30 32.6	
	comp=Z,17nm,0.3s						
SJCC	San Jacinto, C	3.66	327	⇑*e*P	Pn	09 29 41.5	-1.6
SJCC				*e*S	Sn	09 30 22.4	-4.0
SJCC				*i*		09 30 26.5	
	comp=Z,18nm,0.3s						
CRJC	Cerrejon, Guaj	4.19	4	*e*P	Pn	09 29 47.7	-2.4
CRJC				*e*S	Sn	09 30 33.4	-5.6
CRJC				*i*		09 30 38.3	
	comp=Z,24nm,0.4s						

*IDC **30** 09:32:16.3±1.0, 23°.93S×69°.51E, h0km, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=35.1km s-min=23.1km az=48.0*

ISC 30 09:32:17.9±1.0, 24°.0S±0°.2×69°.5E±0°.2, h10km, n16, σ0°.45/10, mb3.9/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
H08S1	Diego Carcia H	16.45	10	T	T	09 53 01.1	
	baz=190,slow=76,SNR=110						
H08S2	Diego Garcia H	16.46	10	T	T	09 53 03.2	
	baz=190,slow=76,SNR=118						
H08S3	Diego Garcia H	16.47	10	T	T	09 53 01.5	
	baz=190,slow=76,SNR=156						
H01W2	Cape Leeuwin H	40.07	116	T	T	10 22 28.3	
	baz=272,slow=75,SNR=9.1						
H01W3	Cape Leeuwin H	40.07	116	T	T	10 22 32.4	
	baz=272,slow=75,SNR=7.8						
H01W1	Cape Leeuwin H	40.08	116	T	T	10 22 20.8	
	baz=272,slow=75,SNR=9.0						
CMAR	Chiang Mai Arr	50.99	37	P	P	09 41 20.1	0.0
	0.9nm,0.3s,baz=230,slow=8.2,SNR=1.7						
	0.9nm,0.3s						
ASAR	Alice Springs	58.41	104	P	P	09 42 14.6	+0.4
	0.5nm,0.8s,baz=251,slow=6.3,SNR=9.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	59.79	100	P	P	09 42 24.0	+0.2
	0.7nm,0.9s,baz=250,slow=10,SNR=5.4						
	0.7nm,0.9s						
VNDA	Vanda	67.30	166	P	P	09 43 12.1	-0.3
	0.8nm,1.0s,baz=254,slow=4.6,SNR=4.0						
	0.8nm,1.0s						
MKAR	Makanchi Array	71.35	9	P	P	09 43 37.3	-0.5
	1.1nm,0.8s,baz=193,slow=5.0,SNR=4.7						
	1.1nm,0.8s						
BRTR	Keskin Array B	71.66	332	P	P	09 43 40.5	+0.5
	1.2nm,0.9s,baz=198,slow=3.5,SNR=4.4						
	1.2nm,0.9s						
TORD	Torodi Ar. Bea	75.81	291	P	P	09 44 04.7	-0.1
	1.1nm,1.0s,baz=132,slow=8.6,SNR=3.5						
	1.1nm,1.0s						
ZALV	Zalesovo Beam	78.69	9	P	P	09 44 19.3	-0.7
	0.9nm,0.6s,baz=190,slow=4.0,SNR=6.0						
	0.9nm,0.6s						
SONM	Songino Array	78.76	24	P	P	09 44 20.6	-0.1
	0.4nm,0.7s,baz=200,slow=2.1,SNR=1.9						
	0.4nm,0.7s						
AKASG	Malin Array Be	82.40	335	P	P	09 44 40.3	+0.3
	0.2nm,0.3s,baz=144,slow=4.4,SNR=4.9						
	0.2nm,0.3s						

*IDC **30** 09:41:02.9±1.7, 43°.02N×13°.33E, h0km, mb3.5/2, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=49.2km s-min=17.2km az=94.0*
*ROM **30** 09:41:05.0±0.2, 42°.916N±0°.005×13°.316E±0°.010, h26km±1km, ML3.3/86, Error ellipse: s-maj=0.7km s-min=0.5km az=281.0*
*PRU **30** 09:41:05.5±0.0, 43°.05N×13°.61E, h0km*

ISC 30 09:41:05.7±0.8, 42°.90N±0°.02×13°.32E±0°.02, h18km±2km, n121, σ1°.00/140, 40C-44D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
MMO1	Montemonaco	0.01	129	P	Pg	09 41 09.5	+0.5
MMO1				S	Sg	09 41 12.6	+1.4
AM05	Amandola Campo	0.08	19	P	Pg	09 41 09.9	+0.6
AM05				S	Sg	09 41 13.2	+1.5
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9455μm,0.1s						
AM05				AML	AML		
	comp=N,9440μm,0.1s						
AM05				AML	AML		
	comp=N,39950μm,0.3s						
AM05				AML	AML		
	comp=N,9430μm,0.1s						
AM05				AML	AML		
	comp=E,35550μm,0.2s						
T1241	Roccafluvione,	0.10	120	P	Pg	09 41 10.4	+1.0
T1241				S	Sg	09 41 14.0	+2.1
T1241				AML	AML		
T1241				AML	AML		
	comp=N,69450μm,0.2s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,69450μm,0.3s						
T1245	Castelsantange	0.11	244	⇓P	Pg	09 41 10.1	+0.4
T1245				S	Sg	09 41 13.8	+1.4
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
GUMA	Gualdo di Mace	0.16	4	⇑P	Pg	09 41 10.7	+0.5
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,63050μm,0.4s						
GUMA				AML	AML		
	comp=N,89750μm,0.4s						
GUMA				AML	AML		
	comp=E,86900μm,1.3s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,63100μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,63050μm,1.6s						
FEMA	Monte Fema	0.21	286	P	Pb	09 41 11.0	+0.4
FEMA				S	Sg	09 41 15.4	+1.0
FEMA				AML	AML		
	comp=N,23250μm,0.2s						
FEMA				AML	AML		
	comp=E,35850μm,1.5s						
FEMA				AML	AML		
	comp=N,23250μm,0.3s						
FEMA				AML	AML		
	comp=E,35900μm,1.5s						
FEMA				AML	AML		
	comp=E,35900μm,0.5s						
T1204	Amatrice, Fraz	0.23	180	⇓P	Pb	09 41 11.5	+0.4
T1204				S	Sg	09 41 16.1	+1.2
T1204				AML	AML		
	comp=E,26350μm,0.2s						
T1204				AML	AML		
	comp=N,14000μm,0.5s						
T1204				AML	AML		
	comp=E,26400μm,0.2s						
T1243	Rocca Santa Ma	0.23	155	P	Pg	09 41 11.4	+0.3
T1243				S	Sg	09 41 16.2	+1.4
OFFI	Offida	0.27	83	⇓P	Pb	09 41 12.8	+1.0
OFFI				AML	AML		
	comp=N,20150μm,0.5s						
OFFI				AML	AML		
	comp=E,13500μm,0.5s						
OFFI				AML	AML		
	comp=N,20150μm,1.5s						
SSM1	San Severino M	0.34	342	P	Pg	09 41 13.0	+0.1
T1217	Poggiodomo (PG	0.34	236	P	Pg	09 41 12.1	-1.0
T1217				AML	AML		
	comp=E,13100μm,0.4s						
T1217				AML	AML		
	comp=N,18500μm,0.5s						
T1217				AML	AML		
	comp=E,13050μm,0.4s						
T1217				AML	AML		
	comp=N,18850μm,0.5s						
T1217				AML	AML		
	comp=N,18500μm,0.5s						
T1217				AML	AML		
	comp=E,13050μm,0.4s						
T1217				AML	AML		
	comp=E,13030μm,0.4s						
T1217				AML	AML		
	comp=N,18850μm,0.5s						
TERO	Teramo	0.35	143	⇑P	Pg	09 41 13.2	+0.1
TERO				AML	AML		
	comp=N,5490μm,0.5s						
TERO				AML	AML		
	comp=E,5785μm,1.2s						
TERO				AML	AML		
	comp=E,6450μm,1.2s						
TERO				AML	AML		
	comp=N,4945μm,0.5s						
TERO				AML	AML		
	comp=E,6450μm,0.8s						
TERO				AML	AML		
	comp=E,5785μm,0.8s						
LNSS	Leonessa	0.36	214	⇓P	Pg	09 41 12.7	-0.7
LNSS				S	Sb	09 41 19.8	+0.7
LNSS				AML	AML		
	comp=E,14400μm,0.5s						
LNSS				AML	AML		
	comp=N,28300μm,0.4s						
SEF1	Sefro	0.36	312	⇑P	Pg	09 41 13.8	+0.4
SEF1				AML	AML		
	comp=E,9960μm,0.2s						
SEF1				AML	AML		
	comp=E,9950μm,0.2s						
SEF1				AML	AML		
	comp=N,7085μm,0.2s						
PIO1	Pioraco	0.37	318	⇓P	Pg	09 41 13.9	+0.4
PIO1				AML	AML		
	comp=N,6120μm,0.5s						
PIO1				AML	AML		
	comp=E,4840μm,1.5s						
PIO1				AML	AML		
	comp=N,6120μm,0.5s						
CAMP	Campotosto	0.37	170	⇓P	Pg	09 41 13.4	-0.2
CAMP				S	Sb	09 41 19.7	+0.3
CAMP				AML	AML		
	comp=N,4610μm,1.1s						
CAMP				AML	AML		
	comp=E,3630μm

comp=E,12500µm,0.5s
TRTR AML AML
comp=N,7980µm,0.8s
TRTR AML AML
comp=N,7980µm,1.2s
T1247 Pizzolo (AQ) 0.46 182 ⇓P **Pg 09 41 14.9 -0.2**
T1247 S **Sb 09 41 23.0 +1.2**
T1247 AML AML
comp=E,8995µm,0.2s
T1247 AML AML
comp=N,19650µm,0.4s
GIGS Gran Sasso 0.49 158 ⇓P **Pg 09 41 15.1 -0.5**
GIGS AML AML
comp=E,1735µm,0.4s
GIGS AML AML
comp=N,1445µm,0.6s
GIGS AML AML
comp=N,1450µm,0.6s
ASSB Assisi San Ben 0.50 286 ⇓P **Pg 09 41 15.5 -0.3**
ASSB AML AML
comp=N,7960µm,0.2s
ASSB AML AML
comp=E,6415µm,0.2s
T1211 Morro Reatino 0.50 223 ⇓P **Pg 09 41 16.2 +0.3**
T1211 AML AML
comp=E,8015µm,1.1s
T1211 AML AML
comp=N,27150µm,0.3s
T1211 AML AML
comp=N,27150µm,0.3s
T1211 AML AML
comp=N,27200µm,0.3s
T1211 AML AML
comp=N,27200µm,0.3s
T1211 AML AML
comp=E,8075µm,1.1s
T1211 AML AML
comp=E,8075µm,0.9s
T1211 AML AML
comp=E,8015µm,0.9s
PP3 Marolino 0.52 24 ⇑P **Pb 09 41 16.4 +0.2**
PP3 AML AML
comp=E,5455µm,1.1s
PP3 AML AML
comp=E,5455µm,1.1s
PP3 AML AML
comp=E,5915µm,1.1s
PP3 AML AML
comp=N,6555µm,1.1s
PP3 AML AML
comp=N,6690µm,1.1s
PP3 AML AML
comp=N,6555µm,0.9s
PP3 AML AML
comp=E,5915µm,0.9s
PP3 AML AML
comp=E,5455µm,0.9s
PP3 AML AML
comp=N,6690µm,0.9s
ARRO Arrone 0.52 232 ⇑P **Pg 09 41 16.2 0.0**
ARRO S **Sb 09 41 25.0 +1.6**
AQU L'Aquila 0.55 174 ⇓P **Pb 09 41 16.2 -0.5**
AQU AML AML
comp=E,2655µm,0.4s
AQU AML AML
comp=N,2980µm,0.5s
AQU AML AML
comp=E,2735µm,0.4s
AQU AML AML
comp=N,3005µm,0.5s
AQU AML AML
comp=N,2980µm,1.5s
AQU AML AML
comp=N,3005µm,1.5s
FOSV Fossato di Vic 0.56 314 ⇑P **Pb 09 41 16.4 -0.6**
FOSV AML AML
comp=E,3510µm,0.3s
FOSV AML AML
comp=N,6800µm,0.2s
FOSV AML AML
comp=N,6795µm,0.2s
FOSV AML AML
comp=E,3505µm,0.3s
ATCC AVT- Casa Cast 0.57 300 S **Sg 09 41 26.0 +1.2**
CESX Cesi 0.62 242 ⇓P **Pb 09 41 17.7 -0.1**
CESX AML AML
comp=N,6300µm,0.9s
CESX AML AML
comp=E,7840µm,0.8s
CESX AML AML
comp=N,6300µm,1.1s
CESX AML AML
comp=E,7840µm,1.2s
VCEL Villa Celiera 0.64 143 ⇑P **Pg 09 41 18.6 +0.2**
VCEL S **Sn 09 41 29.0 -0.6**
VCEL AML AML
comp=E,3610µm,0.7s
VCEL AML AML
comp=E,3615µm,0.7s
VCEL AML AML
comp=N,3120µm,0.4s
FIAM Fiamignano 0.65 193 ⇓P **Pb 09 41 17.3 -1.1**
FIAM AML AML
comp=N,4770µm,0.6s
FIAM AML AML
comp=E,3705µm,0.6s
ARVD Arcevia 0.66 335 ⇑P **Pb 09 41 18.1 -0.4**
ARVD S **Sg 09 41 29.0 +1.6**
ARVD AML AML
comp=E,1550µm,0.5s
ARVD AML AML
comp=N,1365µm,0.4s
ARVD AML AML
comp=E,1550µm,1.5s
AOI Ancona 0.68 18 ⇓P **Pg 09 41 19.5 +0.5**
AOI S **Sn 09 41 31.0 +0.5**
AOI AML AML
comp=N,8010µm,0.4s
AOI AML AML
comp=N,8015µm,0.4s
AOI AML AML
comp=E,5290µm,0.4s
MURB Monte Urbino 0.68 302 ⇓P **Pb 09 41 18.6 -0.5**
MURB AML AML
comp=E,10900µm,0.3s
MURB AML AML
comp=N,9685µm,0.3s
MURB AML AML
comp=E,12150µm,1.1s
MURB AML AML
comp=N,9705µm,0.4s
MURB AML AML
comp=E,10850µm,0.3s
MURB AML AML
comp=N,9690µm,0.3s
MURB AML AML
comp=E,12150µm,0.9s
MURB AML AML
comp=E,10850µm,1.7s
ATFO Monte Foce - G 0.72 310 ⇑P **Pb 09 41 19.0 -0.6**
ATFO AML AML
comp=E,1870µm,1.0s
ATFO AML AML
comp=N,1925µm,0.7s
ATFO AML AML
comp=E,1870µm,1.0s
FRON Frontone 0.75 325 P **Pb 09 41 19.8 -0.4**
FRON AML AML
comp=E,1930µm,0.6s
FRON AML AML
comp=N,2545µm,0.8s
FRON AML AML
comp=N,2545µm,1.2s
FRON AML AML
comp=E,1930µm,1.4s
T0110 Collepietro 0.76 153 ⇓P **Pb 09 41 19.6 -0.8**
T0110 AML AML
comp=E,3200µm,0.5s
T0110 AML AML
comp=N,2645µm,0.4s
ATTE AVT- Monte Tez 0.77 293 ⇓P **Pb 09 41 21.2 +0.7**
ATTE AML AML
comp=E,1665µm,1.3s
ATTE AML AML
comp=N,1825µm,0.7s
ATTE AML AML
comp=E,1665µm,0.7s

SENI Senigallia 0.80 356 ⇑P **Pn 09 41 22.6 +0.6**
ATVO AVT- Monte Val 0.82 306 ⇑P **Pb 09 41 20.8 -0.6**
ATVO AML AML
comp=N,1540µm,0.3s
ATVO AML AML
comp=E,1695µm,0.4s
MPAG Monte Paganucc 0.83 331 ⇓P **Pb 09 41 21.2 -0.4**
MPAG AML AML
comp=E,2070µm,0.4s
MPAG AML AML
comp=N,1875µm,0.5s
PIEI Pieia 0.85 318 ⇑P **Pb 09 41 21.2 -0.7**
PIEI S **Sb 09 41 34.0 +0.9**
PIEI AML AML
comp=E,2040µm,1.2s
PIEI AML AML
comp=N,2080µm,0.2s
PIEI AML AML
comp=E,2040µm,0.8s
ATPI Pietralunga - 0.86 309 ⇑P **Pn 09 41 23.6 +0.7**
ATPI AML AML
comp=E,2715µm,0.5s
ATPI AML AML
comp=N,1645µm,0.4s
ATMI Monte Miggiano 0.88 300 ⇑P **Pn 09 41 24.2 +1.0**
ATMI AML AML
comp=E,2930µm,1.1s
ATMI AML AML
comp=N,2595µm,1.3s
ATMI AML AML
comp=E,2930µm,0.9s
ATMI AML AML
comp=N,2595µm,0.7s
FSSB Fossombrone 0.88 334 P **Pb 09 41 22.7 +0.3**
FSSB AML AML
comp=N,5540µm,0.4s
FSSB AML AML
comp=N,5535µm,0.4s
FSSB AML AML
comp=N,5535µm,1.6s
FSSB AML AML
comp=E,5570µm,0.4s
PTQR Pietraquaria 0.88 176 ⇑P **Pb 09 41 21.8 -0.7**
PTQR AML AML
comp=E,570µm,0.6s
PTQR AML AML
comp=N,763µm,0.7s
PTQR AML AML
comp=E,570µm,1.4s
MGAB Montegabbione 0.89 271 ⇓P **Pb 09 41 22.6 +0.1**
MGAB AML AML
comp=N,3350µm,0.4s
MGAB AML AML
comp=E,2275µm,0.3s
MGAB AML AML
comp=N,3190µm,0.4s
MGAB AML AML
comp=E,2010µm,0.3s
SRES S.Oreste - Sor 0.90 222 P **Pg 09 41 23.6 +0.5**
SRES AML AML
comp=E,1204µm,1.4s
SRES AML AML
comp=E,1204µm,0.6s
SRES AML AML
comp=N,1410µm,0.5s
MTCE Montecelio 0.98 206 ⇓P **Pb 09 41 24.5 +0.4**
MTCE AML AML
comp=E,1830µm,0.5s
MTCE AML AML
comp=N,932µm,0.5s
CERT Cerreto 0.99 195 ⇓P **Pn 09 41 25.0 +0.4**
CERT AML AML
comp=N,2045µm,0.5s
CERT AML AML
comp=E,2465µm,0.4s
CERT AML AML
comp=E,2465µm,1.6s
CERT AML AML
comp=N,2045µm,1.5s
BADI Badiali 0.99 308 ⇑P **Pb 09 41 24.5 +0.2**
SACS San Casciano d 1.04 267 ⇑P **Pb 09 41 24.8 -0.3**
SACS AML AML
comp=N,1090µm,0.8s
SACS AML AML
comp=N,1090µm,1.2s
SACS AML AML
comp=E,1170µm,0.7s
LPEL Lama dei Pelig 1.07 143 P **Pb 09 41 24.2 -1.4**
LPEL AML AML
comp=N,723µm,0.7s
LPEL AML AML
comp=N,723µm,1.3s
LPEL AML AML
comp=E,918µm,0.7s
CAFI Castiglion Fio 1.08 294 ⇓P **Pn 09 41 26.7 +0.9**
CAFI AML AML
comp=E,750µm,0.5s
CAFI AML AML
comp=N,798µm,0.9s
CAFI AML AML
comp=E,750µm,1.5s
SSP9 Sansepolcro 1.10 308 ⇓P **Pg 09 41 29.2 +2.3**
SSP9 AML AML
comp=N,810µm,1.6s
SSP9 AML AML
comp=E,814µm,0.9s
SSP9 AML AML
comp=E,814µm,1.1s
SSP9 AML AML
comp=N,810µm,0.4s
GUAR Guarcino 1.11 180 ⇓P **Pg 09 41 27.4 +0.2**
GUAR AML AML
comp=E,1082µm,0.5s
GUAR AML AML
comp=N,1125µm,0.5s
LATE Laterza 1.15 256 ⇑P **Pg 09 41 28.8 +0.8**
CPGN Carpegna, Ital 1.16 321 ⇓P **Pg 09 41 29.0 +0.9**
MCIV Monte Civitell 1.21 265 ⇓P **Pn 09 41 27.3 -0.4**
MCIV AML AML
comp=E,516µm,0.6s
MCIV AML AML
comp=E,516µm,1.4s
MCIV AML AML
comp=N,374µm,0.2s
POFI Posta Fibreno 1.22 166 ⇓P **Pg 09 41 29.7 +0.4**
POFI AML AML
comp=N,594µm,0.6s
POFI AML AML
comp=E,578µm,0.8s
CRE Caprese Michel 1.23 306 ⇑P **Pn 09 41 28.4 +0.4**
CRE AML AML
comp=E,758µm,1.4s
CRE AML AML
comp=N,738µm,0.2s
CRE AML AML
comp=E,758µm,0.6s
CRE AML AML
comp=N,738µm,1.8s
SF01 Poggio Pratacc 1.29 267 ⇑P **Pg 09 41 31.0 +0.3**
ARCI Arcidosso 1.36 268 ⇑P **Pg 09 41 32.3 +0.4**
ARCI AML AML
comp=E,183µm,1.2s
ARCI AML AML
comp=N,147µm,1.0s
ASQU Asqua 1.43 309 ⇓P **Pg 09 41 34.1 +0.9**
ASQU AML AML
comp=N,752µm,0.8s
ASQU AML AML
comp=E,468µm,0.5s
ASQU AML AML
comp=N,752µm,1.2s
SFI Santa Sofia 1.47 314 ⇓P **Pg 09 41 34.0 +0.1**
SFI AML AML
comp=E,460µm,1.2s
SFI AML AML
comp=N,452µm,1.2s
SFI AML AML
comp=E,460µm,0.8s
RUFI Rufina 1.62 306 ⇑P **Pb 09 41 35.2 +0.3**
RUFI S **Sg 09 41 59.0 +1.1**
RUFI AML AML
comp=E,410µm,0.7s
RUFI AML AML
comp=E,410µm,1.3s
RUFI AML AML
comp=N,674µm,0.7s
OSSC Osservatorio P 1.64 293 ⇓P **Pn 09 41 32.9 -0.7**

OSSC AML AML
comp=E,230µm,0.5s
OSSC AML AML
comp=E,230µm,1.5s
OSSC AML AML
comp=N,256µm,0.8s
LMD Lutirano 1.66 316 ⇓P **Pg 09 41 37.7 +0.1**
LMD AML AML
comp=E,460µm,1.3s
LMD AML AML
comp=N,577µm,0.7s
LMD AML AML
comp=E,460µm,0.7s
LMD AML AML
comp=N,577µm,1.3s
TRIF Trifonti 1.79 278 ⇑P **Pn 09 41 35.0 -0.5**
TRIF AML AML
comp=E,376µm,0.3s
TRIF AML AML
comp=N,294µm,1.2s
TRIF AML AML
comp=E,376µm,1.7s
TRIF AML AML
comp=N,294µm,0.8s
CASP Castiglione de 1.81 267 ⇑P **Pn 09 41 34.9 -1.0**
CASP AML AML
comp=E,70µm,0.6s
CASP AML AML
comp=N,71µm,0.7s
CASP AML AML
comp=E,70µm,1.4s
IMOL Imola, Italy 1.85 322 ⇑P **Pn 09 41 34.7 -1.7**
PAOL Paolisi 2.09 153 P **Pg 09 41 46.7 +0.9**
PII Pisa 2.20 293 ⇓P **Pn 09 41 42.7 +1.5**
PII AML AML
comp=N,206µm,0.4s
PII AML AML
comp=E,210µm,0.4s
VBKN Vesuvio Bunker 2.23 158 ⇑P **Pb 09 41 44.4 -1.0**
VBKN AML AML
comp=N,1650µm,0.6s
VBKN AML AML
comp=E,1525µm,0.3s
MAIM Mastiano 2.29 297 P **Pn 09 41 43.9 +1.4**
MAIM AML AML
comp=N,157µm,0.4s
MAIM AML AML
comp=E,185µm,0.6s
NDIM Novi di Modena 2.64 319 S **Sg 09 42 30.0 -0.6**
GRAM Graiana 2.84 305 ⇑P **Pb 09 41 53.7 -2.1**
GRAM AML AML
comp=E,302µm,1.1s
GRAM AML AML
comp=N,303µm,0.9s
GRAM AML AML
comp=N,303µm,1.1s
GRAM AML AML
comp=E,302µm,0.9s
SABO M.te Sabotino 3.08 4 ⇓P **Pn 09 41 52.6 -0.8**
SABO AML AML
comp=N,1205µm,0.7s
SABO AML AML
comp=E,300µm,0.7s
SABO AML AML
comp=N,296µm,0.6s
SABO AML AML
comp=E,1188µm,0.7s
SABO AML AML
comp=E,300µm,1.3s
CGRP Cima Grappa 3.17 340 ⇓P **Pn 09 41 54.6 -0.1**
CGRP AML AML
comp=N,214µm,0.4s
CGRP AML AML
comp=E,218µm,0.5s
ROVR Rover Verones 3.18 330 ⇑P **Pn 09 41 55.3 +0.5**
ROVR AML AML
comp=N,85µm,0.4s
ROVR AML AML
comp=E,55µm,0.5s
PGF Pioggiola 3.20 265 P **Pn 09 41 55.1 0.0**
MPRI Monte Prat 3.35 356 ⇓P **Pn 09 41 56.7 -0.4**
MPRI AML AML
comp=E,198µm,1.0s
MPRI AML AML
comp=N,248µm,0.6s
CTI Castel Tesino 3.36 340 ⇑P **Pn 09 41 57.5 +0.2**
CTI AML AML
comp=E,144µm,1.3s
CTI AML AML
comp=N,162µm,0.7s
SALO Salr 3.38 324 P **Pn 09 41 57.9 +0.4**
SALO AML AML
comp=E,140µm,1.2s
SALO AML AML
comp=N,168µm,1.2s
CIMO Cimolais 3.46 350 ⇑P **Pn 09 41 58.0 -0.7**
CIMO AML AML
comp=E,42µm,1.0s
CIMO AML AML
comp=N,54µm,1.3s
CIMO AML AML
comp=N,54µm,0.7s
CIMO AML AML
comp=E,42µm,1.0s
LUSI Trento, Gardas 3.50 332 ⇓P **Pn 09 41 59.4 +0.2**
LUSI AML AML
comp=E,120µm,0.7s
LUSI AML AML
comp=N,148µm,1.1s
PTCC Patocco-Chiusa 3.50 0 ⇓P **Pn 09 41 58.4 -0.8**
PTCC AML AML
comp=N,94µm,0.9s
PTCC AML AML
comp=E,103µm,0.8s
PTCC AML AML
comp=E,103µm,1.2s
PTCC AML AML
comp=N,94µm,1.1s
CLUD Cludinico 3.57 355 ⇓P **Pn 09 41 59.3 -0.8**
CLUD AML AML
comp=E,103µm,0.7s
CLUD AML AML
comp=N,72µm,0.6s
GAGG Gaggia 3.60 333 ⇓P **Pn 09 42 00.8 +0.2**
GAGG AML AML
comp=E,113µm,0.8s
GAGG AML AML
comp=N,128µm,1.0s
GAGG AML AML
comp=E,113µm,1.2s
GAGG AML AML
comp=N,128µm,1.0s
ACOM Acomizza, Ital 3.65 2 ⇑P **Pn 09 42 01.6 +0.3**
ACOM AML AML
comp=E,160µm,1.3s
ACOM AML AML
comp=N,212µm,0.9s
ACOM AML AML
comp=N,212µm,1.1s
ACOM AML AML
comp=E,160µm,0.7s
ZOU Zoufplan 3.66 356 ⇓P **Pn 09 42 00.9 -0.6**
ZOU AML AML
comp=E,120µm,1.6s
ZOU AML AML
comp=E,120µm,0.4s
ZOU AML AML
comp=N,102µm,0.6s
ZONE Zone 3.67 322 ⇓P **Pn 09 42 01.8 +0.4**
ZONE AML AML
comp=E,108µm,0.3s
ZONE AML AML
comp=N,122µm,0.2s
FVI Forni Avoltri 3.71 354 ⇓P **Pn 09 42 01.9 -0.2**
FVI AML AML
comp=E,71µm,0.7s
FVI AML AML
comp=E,71µm,1.3s
FVI AML AML
comp=N,107µm,0.8s
MABI Malga Bissina 3.73 328 ⇑P **Pn 09 42 03.0 +0.5**
MABI AML AML
comp=E,49µm,0.9s
MABI AML AML
comp=N,61µm,0.5s
MABI AML AML
comp=E,49µm,0.9s

EUCT	**Pavia**	**3.79 309**	S	**Sn**	**09 42 47.0**	**-0.2**
KOSI	**Kohlern**	**3.82 339**	⇑P	**Pn**	**09 42 04.3**	**+0.7**
KOSI			AML	AML		
	comp=E,116μm,1.4s					
KOSI			AML	AML		
	comp=E,116μm,0.6s					
KOSI			AML	AML		
	comp=N,111μm,1.1s					
APPI	**Appiano**	**3.87 338**	⇑P	**Pn**	**09 42 04.6**	**+0.3**
APPI			AML	AML		
	comp=E,114μm,0.4s					
APPI			AML	AML		
	comp=N,120μm,1.2s					
APPI			AML	AML		
	comp=N,120μm,0.8s					
ABTA	**Abfaltersbach**	**3.89 352**	*e*Pn	**Pn**	**09 42 04.1**	**-0.3**
	comp=N,7.0nm,0.3s,SNR=8.3					
RISI	**Rein**	**4.14 348**	⇓P	**Pn**	**09 42 08.6**	**+0.5**
RISI			AML	AML		
	comp=N,177μm,0.4s					
RISI			AML	AML		
	comp=E,210μm,0.5s					
ROSI	**Rosskopf**	**4.25 342**	⇑P	**Pn**	**09 42 10.2**	**+0.7**
ROSI			AML	AML		
	comp=N,216μm,0.9s					
ROSI			AML	AML		
	comp=E,97μm,0.6s					
MUGIO	**Muggio**	**4.30 316**	P	**Pn**	**09 42 10.1**	**0.0**
MUGIO			AML	AML		
	comp=E,42μm,0.2s					
MUGIO			AML	AML		
	comp=N,47μm,0.9s					
MUGIO			AML	AML		
	comp=N,47μm,1.1s					
MONC	**Moncucco Torin**	**4.45 301**	⇑P	**Pb**	**09 42 21.1**	**-2.2**
FETA	**Feichten**	**4.51 337**	*e*Pn	**Pn**	**09 42 13.6**	**+0.5**
	comp=N,5.8nm,0.3s,SNR=9.7					
WTTA	**Wattenberg**	**4.52 345**	*e*Pn	**Pn**	**09 42 14.3**	**+1.0**
	comp=N,3.6nm,0.3s					
SQTA	**Sankt Quirin**	**4.57 342**	*e*Pn	**Pn**	**09 42 14.6**	**+0.7**
	comp=N,11nm,0.3s,SNR=5.5					
DAVOX	**Davos/Dischmat**	**4.58 329**	⇓P	**Pn**	**09 42 15.9**	**+1.8**
DAVOX			AML	AML		
	comp=N,49μm,0.9s					
DAVOX			AML	AML		
	comp=E,38μm,0.8s					
WATA	**Walderalm**	**4.60 345**	*e*Pn	**Pn**	**09 42 15.5**	**+1.1**
	comp=E,2.2nm,0.2s					
MOTA	**Moosalm**	**4.71 341**	*e*Pn	**Pn**	**09 42 17.3**	**+1.4**
	comp=E,3.8nm,0.3s,SNR=5.3					
BIOA	**Bad Ischl, Aus**	**4.79 3**	*e*Pn	**Pn**	**09 42 16.7**	**-0.2**
	comp=E,6.0nm,0.2s,SNR=6.4					
FUSIO	**Fusio**	**4.86 319**	⇑P	**Pn**	**09 42 18.6**	**+0.7**
FUSIO			AML	AML		
	comp=E,49μm,1.1s					
FUSIO			AML	AML		
	comp=N,39μm,1.6s					
RETA	**Reutte**	**4.93 339**	*e*Pn	**Pn**	**09 42 19.9**	**+1.1**
	comp=N,4.8nm,0.4s,SNR=5.5					
MOA	**Molln**	**4.99 7**	*e*Pn	**Pn**	**09 42 19.7**	**+0.1**
	comp=N,1.8nm,0.3s					
DAVA	**Damuels**	**5.01 332**	*e*Pn	**Pn**	**09 42 20.9**	**+0.9**
	comp=N,4.9nm,0.3s,SNR=7.5					
GERES	**GERESS Array B**	**5.95 2**	Pn	**Pn**	**09 42 30.8**	**-2.0**
	comp=N,1.0nm,0.3s,baz=173,slow=13,SNR=12					
GERES			Sn	**Sn**	**09 43 37.9**	**-2.6**
	comp=N,1.8nm,0.3s,baz=178,slow=26,SNR=7.3					
	comp=N,1.2nm,0.3s					
CKRC	**Cesky Krumlov**	**5.96 6**	*e*SN	**Sn**	**09 43 36.3**	**-4.3**
KHC	**Kasperske Hory**	**6.23 2**	*e*PN	**Pn**	**09 42 35.1**	**-1.5**
KHC			*e*SN	**Sn**	**09 43 43.7**	**-3.7**
CLL	**Collm**	**8.41 359**	*e*Pn	**Pn**	**09 43 06.0**	**-0.5**
CLL			*ex*	x	09 44 41.0	
FINES	**FINESS Array B**	**20.08 18**	P	**P**	**09 45 37.1**	**-0.6**
	comp=N,0.1nm,0.3s,baz=192,slow=13,SNR=1.7					
	comp=N,4.3nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.31 202**	P	**P**	**09 47 25.6**	**+0.9**
	comp=N,0.3nm,0.6s,baz=32,slow=8.5,SNR=2.2					
	comp=N,0.3nm,0.6s					
MKAR	**Makanchi Array**	**47.62 60**	P	**P**	**09 49 39.9**	**-0.4**
	comp=N,0.5nm,0.6s,baz=297,slow=9.5,SNR=2.6					
	comp=N,0.5nm,0.6s					

*IDC **30** 09:45:34.1±1.7, 42°.76N×13°.78E, h0km, mb3.3/1, mbtmp3.3/5, ML2.9/3, Error ellipse: s-maj=44.8km s-min=15.2km az=100.0*
*ROM **30** 09:45:34.9±0.1, 42°.718N±0°.003×13°.182E±0°.004, h8km, ML3.2/49, Error ellipse: s-maj=0.3km s-min=0.1km az=34.0*
*PRU **30** 09:45:34.6±0.0, 42°.55N×13°.82E, h10km*
ISC 30 09:45:34.5±0.8, 42°.67N±0°.02×13°.22E±0°.02, h14km±5km, n68, σ1s34/73, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.07**	**82**	P	**Pg**	**09 45 38.2**	**+0.6**
T1204				S	**Sg**	**09 45 40.4**	**+0.8**
T1204				AML	AML		
	comp=N,25450μm,0.7s						
T1204				AML	AML		
	comp=E,43850μm,0.6s						
T1204				AML	AML		
	comp=N,25500μm,0.7s						
T1204				AML	AML		
	comp=E,43900μm,0.6s						
LNSS	**Leonessa**	**0.15**	**245**	P	**Pb**	**09 45 39.1**	**0.0**
LNSS				S	**Sb**	**09 45 42.2**	**0.0**
LNSS				AML	AML		
	comp=E,22400μm,0.5s						
LNSS				AML	AML		
	comp=N,47950μm,0.2s						
RM33	**Pellescritta (**	**0.16**	**182**	P	**Pb**	**09 45 40.0**	**+0.7**
RM33				S	**Sb**	**09 45 43.7**	**+1.3**
RM33				AML	AML		
	comp=E,15800μm,0.3s						
RM33				AML	AML		
	comp=N,18350μm,1.5s						
RM33				AML	AML		
	comp=N,18550μm,1.5s						
RM33				AML	AML		
	comp=E,15800μm,0.3s						
RM33				AML	AML		
	comp=E,15850μm,0.3s						
RM33				AML	AML		
	comp=N,17900μm,0.9s						
RM33				AML	AML		
	comp=N,18150μm,0.9s						
RM33				AML	AML		
	comp=E,14800μm,0.3s						
T1243	**Rocca Santa Ma**	**0.17**	**80**	P	**Pb**	**09 45 39.5**	**0.0**
T1243				S	**Sb**	**09 45 42.7**	**-0.1**
CAMP	**Campotosto**	**0.19**	**133**	P	**Pb**	**09 45 40.7**	**+0.9**
CAMP				S	**Sb**	**09 45 44.6**	**+1.2**
CAMP				AML	AML		
	comp=E,9195μm,0.6s						
CAMP				AML	AML		
	comp=N,9135μm,0.4s						
CAMP				AML	AML		
	comp=N,9135μm,1.6s						
T1245	**Castelsantange**	**0.19**	**353**	P	**Pg**	**09 45 38.2**	**-0.9**
T1245				S	**Sg**	**09 45 40.2**	**-1.9**
T1245				AML	AML		
	comp=E,28850μm,0.8s						
T1245				AML	AML		
	comp=E,31300μm,0.8s						
T1245				AML	AML		
	comp=N,40550μm,0.6s						
T1245				AML	AML		
	comp=N,42400μm,0.6s						
T1217	**Poggiodomo (PG**	**0.22**	**282**	P	**Pb**	**09 45 39.4**	**-0.9**
T1217				S	**Sg**	**09 45 42.7**	**-0.1**
T1217				AML	AML		
	comp=E,11730μm,0.2s						
T1217				AML	AML		
	comp=N,15350μm,0.5s						
T1217				AML	AML		
	comp=E,11505μm,0.2s						
T1217				AML	AML		
	comp=E,11760μm,0.2s						
T1217				AML	AML		
	comp=N,15300μm,0.5s						
T1217				AML	AML		
	comp=E,11515μm,0.2s						
T1217				AML	AML		
	comp=E,11770μm,0.2s						
T1217				AML	AML		
	comp=N,15000μm,0.5s						
T1217				AML	AML		
	comp=E,11485μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.23**	**166**	P	**Pb**	**09 45 41.3**	**+0.8**
T1247				AML	AML		
	comp=N,14950μm,0.6s						
T1247				AML	AML		
	comp=E,9220μm,1.6s						
T1247				AML	AML		
	comp=E,9220μm,0.4s						
T1241	**Roccafluvione,**	**0.24**	**39**	P	**Pb**	**09 45 40.5**	**-0.2**
T1241				S	**Sb**	**09 45 44.3**	**-0.6**
T1241				AML	AML		
	comp=E,15450μm,0.6s						
T1241				AML	AML		
	comp=E,15750μm,0.6s						
T1241				AML	AML		
	comp=N,20550μm,0.6s						
T1241				AML	AML		
	comp=N,20850μm,0.6s						
T1241				AML	AML		
	comp=E,15800μm,0.6s						
T1241				AML	AML		
	comp=N,20600μm,0.6s						
T1241				AML	AML		
	comp=E,15500μm,0.6s						
T1241				AML	AML		
	comp=N,20850μm,0.6s						
MMO1	**Montemonaco**	**0.25**	**18**	P	**Pb**	**09 45 39.6**	**-1.1**
MMO1				S	**Sg**	**09 45 43.2**	**-0.3**
TERO	**Teramo**	**0.28**	**99**	P	**Pb**	**09 45 41.7**	**+0.3**
TERO				S	**Sb**	**09 45 46.9**	**+0.8**
TERO				AML	AML		
	comp=N,14150μm,0.5s						
TERO				AML	AML		
	comp=E,7735μm,0.5s						
TERO				AML	AML		
	comp=E,7200μm,0.5s						
TERO				AML	AML		
	comp=N,14550μm,0.5s						
T1215	**Vallo di Nera,**	**0.29**	**298**	P	**Pg**	**09 45 40.4**	**-0.3**
T1215				S	**Sg**	**09 45 44.5**	**-0.4**
T1215				AML	AML		
	comp=E,7610μm,0.2s						
T1215				AML	AML		
	comp=N,6880μm,0.9s						
T1215				AML	AML		
	comp=E,7605μm,0.2s						
T1215				AML	AML		
	comp=N,6885μm,0.9s						
T1215				AML	AML		
	comp=E,7605μm,0.2s						
T1215				AML	AML		
	comp=N,6890μm,0.9s						
T1215				AML	AML		
	comp=N,6805μm,0.9s						
T1215				AML	AML		
	comp=N,6890μm,1.1s						
T1215				AML	AML		
	comp=E,7615μm,0.2s						
T1215				AML	AML		
	comp=N,6805μm,1.1s						
T1211	**Morro Reatino**	**0.30**	**244**	P	**Pb**	**09 45 41.6**	**-0.1**
T1211				S	**Sb**	**09 45 46.8**	**+0.2**
T1211				AML	AML		
	comp=E,10590μm,0.5s						
T1211				AML	AML		
	comp=N,18350μm,0.5s						
T1211				AML	AML		
	comp=E,10890μm,1.3s						
T1211				AML	AML		
	comp=N,18150μm,0.5s						
T1211				AML	AML		
	comp=E,10880μm,1.3s						
T1211				AML	AML		
	comp=N,18350μm,0.5s						
T1211				AML	AML		
	comp=N,18150μm,0.5s						
T1211				AML	AML		
	comp=E,10595μm,0.5s						
T1211				AML	AML		
	comp=E,10880μm,0.7s						
AM05	**Amandola Campo**	**0.33**	**17**	P	**Pb**	**09 45 41.3**	**-0.8**
AM05				AML	AML		
	comp=E,4035μm,0.4s						
AM05				AML	AML		
	comp=N,726μm,1.5s						
AM05				AML	AML		
	comp=E,15750μm,0.4s						
AM05				AML	AML		
	comp=N,726μm,1.5s						
AM05				AML	AML		
	comp=N,2425μm,0.4s						
AM05				AML	AML		
	comp=N,726μm,0.5s						
AM05				AML	AML		
	comp=N,2425μm,1.6s						
GIGS	**Gran Sasso**	**0.34**	**130**	P	**Pn**	**09 45 43.0**	**-2.0**
GIGS				S	**Sn**	**09 45 49.0**	**-2.7**
GIGS				AML	AML		
	comp=E,1565μm,0.7s						
GIGS				AML	AML		
	comp=N,1870μm,0.5s						
AQU	**L'Aquila**	**0.34**	**157**	P	**Pn**	**09 45 43.7**	**-1.3**
AQU				AML	AML		
	comp=E,4155μm,1.1s						
AQU				AML	AML		
	comp=N,3645μm,1.1s						
AQU				AML	AML		
	comp=E,4260μm,1.1s						
AQU				AML	AML		
	comp=N,3400μm,1.1s						
AQU				AML	AML		
	comp=N,3645μm,0.9s						
AQU				AML	AML		
	comp=E,4260μm,0.9s						
AQU				AML	AML		
	comp=E,4155μm,0.9s						
AQU				AML	AML		
	comp=N,3400μm,0.9s						
ARRO	**Arrone**	**0.35**	**256**	P	**Pb**	**09 45 42.2**	**-0.3**
ARRO				AML	AML		
	comp=E,7490μm,0.8s						
ARRO				AML	AML		
	comp=N,7500μm,0.7s						
ARRO				AML	AML		
	comp=N,7495μm,0.7s						
ARRO				AML	AML		
	comp=E,7495μm,0.8s						
FIAM	**Fiamignano**	**0.41**	**191**	P	**Pn**	**09 45 44.2**	**-1.8**
FIAM				S	**Sn**	**09 45 51.2**	**-2.2**
FIAM				AML	AML		
	comp=E,2855μm,0.4s						
FIAM				AML	AML		
	comp=N,3475μm,1.0s						
FIAM				AML	AML		
	comp=N,3475μm,1.0s						
GUMA	**Gualdo di Mace**	**0.41**	**12**	P	**Pb**	**09 45 42.8**	**-0.7**
GUMA				S	**Sb**	**09 45 49.1**	**-0.5**
GUMA				AML	AML		
	comp=E,33450μm,0.6s						
GUMA				AML	AML		
	comp=E,33500μm,0.6s						
GUMA				AML	AML		
	comp=E,49800μm,0.5s						
GUMA				AML	AML		
	comp=N,39200μm,0.5s						
GUMA				AML	AML		
	comp=N,42750μm,0.5s						
GUMA				AML	AML		
	comp=N,39200μm,1.5s						
OFFI	**Offida**	**0.43**	**52**	P	**Pn**	**09 45 44.5**	**-1.9**
OFFI				AML	AML		
	comp=E,11235μm,0.6s						
OFFI				AML	AML		
	comp=N,11200μm,0.6s						
OFFI				AML	AML		
	comp=E,11235μm,1.4s						
OFFI				AML	AML		
	comp=N,11200μm,1.4s						
CESX	**Cesi**	**0.48**	**263**	P	**Pb**	**09 45 44.1**	**-0.6**
CESX				S	**Sb**	**09 45 51.2**	**-0.3**
CESX				AML	AML		
	comp=N,4630μm,0.5s						
CESX				AML	AML		
	comp=E,5245μm,0.4s						
CESX				AML	AML		
	comp=N,4630μm,1.5s						
FAGN	**Fagnano**	**0.48**	**146**	P	**Pn**	**09 45 45.9**	**-1.1**
FAGN				S	**Sn**	**09 45 55.0**	**-0.2**
FAGN				AML	AML		
	comp=E,6505μm,0.5s						
FAGN				AML	AML		
	comp=N,6360μm,0.4s						
MNTP	**Montappone**	**0.51**	**21**	P	**Pb**	**09 45 44.9**	**-0.3**
MNTP				AML	AML		
	comp=N,9850μm,0.6s						
MNTP				AML	AML		
	comp=N,9855μm,0.6s						
MNTP				AML	AML		
	comp=N,9855μm,1.4s						
MNTP				AML	AML		
	comp=E,7890μm,1.6s						
TRTR	**Tortoreto Alta**	**0.53**	**74**	P	**Pn**	**09 45 46.9**	**-0.7**
TRTR				AML	AML		
	comp=N,13600μm,0.5s						
TRTR				AML	AML		
	comp=E,9640μm,0.4s						
VCEL	**Villa Celiera**	**0.53**	**120**	P	**Pn**	**09 45 47.0**	**-0.7**
VCEL				AML	AML		
	comp=N,6645μm,0.9s						
VCEL				AML	AML		
	comp=N,6650μm,0.9s						
VCEL				AML	AML		
	comp=E,4810μm,0.4s						
ASSB	**Assisi San Ben**	**0.56**	**312**	P	**Pg**	**09 45 45.0**	**-0.6**
ASSB				AML	AML		
	comp=N,3155μm,0.2s						
ASSB				AML	AML		
	comp=E,3450μm,1.0s						
T0110	**Collepietro**	**0.60**	**137**	P	**Pn**	**09 45 48.2**	**-0.5**
T0110				S	**Sn**	**09 45 58.1**	**-0.2**
T0110				AML	AML		
	comp=E,4660μm,0.5s						
T0110				AML	AML		
	comp=N,4595μm,0.5s						
SNTG	**Esanatoglia**	**0.62**	**341**	P	**Pb**	**09 45 46.5**	**-0.7**
SNTG				AML	AML		
	comp=E,975μm,0.6s						
SNTG				AML	AML		
	comp=N,1128μm,0.3s						
SNTG				AML	AML		
	comp=E,954μm,0.4s						
SNTG				AML	AML		
	comp=N,1220μm,0.3s						
SNTG				AML	AML		
	comp=E,976μm,0.6s						
SNTG				AML	AML		
	comp=E,953μm,0.4s						
SNTG				AML	AML		
	comp=N,1131μm,0.3s						
SNTG				AML	AML		
	comp=E,976μm,1.4s						
EL6	**Elcito**	**0.67**	**352**	P	**Pb**	**09 45 47.1**	**-0.8**
EL6				AML	AML		
	comp=N,2290μm,1.1s						
EL6				AML	AML		
	comp=N,2295μm,1.1s						
EL6				AML	AML		
	comp=E,2320μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.67**	**321**	P	**Pg**	**09 45 47.0**	**-0.7**
ATCC				S	**Sg**	**09 45 56.6**	**+0.1**
ATCC				AML	AML		
	comp=N,2340μm,0.6s						
ATCC				AML	AML		
	comp=E,2875μm,0.7s						
ATCC				AML	AML		
	comp=N,2340μm,1.4s						
ATCC				AML	AML		
	comp=E,2875μm,1.3s						
SRES	**S.Oreste - Sor**	**0.68**	**231**	P	**Pn**	**09 45 49.3**	**-0.4**
SRES				AML	AML		
	comp=N,1255μm,0.3s						
SRES				AML	AML		
	comp=E,1082μm,0.4s						
SRES				AML	AML		
	comp=N,1260μm,0.3s						
FOSV	**Fossato di Vic**	**0.71**	**332**	P	**Pb**	**09 45 48.1**	**-0.6**
FOSV				AML	AML		
	comp=N,1420μm,0.8s						
FOSV				AML	AML		
	comp=E,1515μm,0.6s						
FOSV				AML	AML		
	comp=N,1420μm,1.2s						
CERT	**Cerreto**	**0.74**	**194**	AML	AML		
	comp=N,1182μm,0.5s						
CERT				AML	AML		
	comp=E,1740μm,0.4s						
CERT				AML	AML		
	comp=E,1740μm,1.6s						
MURB	**Monte Urbino**	**0.79**	**320**	P	**Pb**	**09 45 49.3**	**-0.7**
MURB				AML	AML		
	comp=N,4510μm,0.4s						
MURB				AML	AML		
	comp=N,4365μm,0.4s						
MURB				AML	AML		
	comp=E,4685μm,0.4s						
MURB				AML	AML		
	comp=N,4370μm,0.4s						
MURB				AML	AML		
	comp=E,4020μm,0.4s						
ATFO	**Monte Foce - G**	**0.85**	**326**	P	**Pb**	**09 45 50.1**	**-0.9**
ATFO				AML	AML		
	comp=E,950μm,0.6s						
ATFO				AML	AML		
	comp=N,882μm,1.0s						
ATFO				AML	AML		
	comp=E,950μm,1.4s						
MGAB	**Montegabbione**	**0.85**	**287**	AML	AML		
	comp=N,1915μm,0.4s						
MGAB				AML	AML		
	comp=E,3060μm,1.2s						
MGAB				AML	AML		
	comp=N,2170μm,0.6s						
MGAB				AML	AML		
	comp=E,3395μm,0.8s						
MGAB				AML	AML		
	comp=N,2170μm,1.4s						
MGAB				AML	AML		
	comp=E,3060μm,0.8s						
ARVD	**Arcevia**	**0.86**	**346**	P	**Pg**	**09 45 50.7**	**-0.4**
ARVD				AML	AML		
	comp=N,716μm,1.6s						
ARVD				AML	AML		
	comp=E,794μm,0.7s						
ARVD				AML	AML		
	comp=N,716μm,0.4s						
ATVO	**AVT- Monte Val**	**0.93**	**320**	P	**Pb**	**09 45 51.7**	**-0.7**
ATVO				AML	AML		
	comp=E,856μm,1.4s						
ATVO				AML	AML		
	comp=N,730μm,0.9s						
SACS	**San Casciano d**	**0.98**	**281**	⇓P	**Pg**	**09 45 53.4**	**-0.2**
PIEI	**Pieia**	**1.00**	**330**	P	**Pg**	**09 45 53.5**	**-0.5**
PIEI				AML	AML		
	comp=E,672μm,0.4s						
PIEI				AML	AML		
	comp=N,500μm,0.5s						
PIEI				AML	AML		
	comp=E,672μm,1.6s						
PIEI				AML	AML		
	comp=N,500μm,1.5s						
POFI	**Posta Fibreno**	**1.01**	**159**	AML	AML		
	comp=N,624μm,1.0s						
POFI				AML	AML		
	comp=E,803μm,0.7s						
POFI				AML	AML		
	comp=N,624μm,1.0s						
MPAG	**Monte Paganucc**	**1.02**	**341**	P	**Pg**	**09 45 53.6**	**-0.6**
MPAG				AML	AML		
	comp=N,711μm,1.3s						
MPAG				AML	AML		
	comp=E,696μm,0.5s						
MPAG				AML	AML		
	comp=N,711μm,0.7s						
FSSB	**Fossombrone**	**1.08**	**343**	P	**Pn**	**09 45 54.4**	**-0.8**
FSSB				AML	AML		
	comp=N,2580μm,0.5s						
FSSB				AML	AML		
	comp=E,1960μm,0.4s						
TOLF	**Tolfa**	**1.09**	**237**	AML	AML		
	comp=N,538μm,0.4s						
TOLF				AML	AML		

	comp=E,664μm,0.7s					
GIUL	**Giuliano Di Ro**	**1.11 179**	AML	AML		
	comp=E,424μm,1.5s					
GIUL			AML	AML		
	comp=E,424μm,0.5s					
GIUL			AML	AML		
	comp=N,627μm,0.7s					
CAFI	**Castiglion Fio**	**1.14 306**	AML	AML		
	comp=E,534μm,0.6s					
CAFI			AML	AML		
	comp=N,684μm,0.6s					
CAFI			AML	AML		
	comp=E,534μm,1.4s					
MCIV	**Monte Civitell**	**1.15 276**	AML	AML		
	comp=N,498μm,1.2s					
MCIV			AML	AML		
	comp=N,498μm,0.8s					
MCIV			AML	AML		
	comp=E,464μm,0.7s					
PE3	**Peglio**	**1.16 333**	AML	AML		
	comp=N,27μm,0.1s					
PE3			AML	AML		
	comp=E,20μm,0.1s					
LATB	**Latina**	**1.19 189**	AML	AML		
	comp=E,212μm,0.8s					
LATB			AML	AML		
	comp=N,144μm,1.3s					
CRE	**Caprese Michel**	**1.33 316**	AML	AML		
	comp=E,374μm,0.8s					
CRE			AML	AML		
	comp=N,365μm,0.8s					
CRE			AML	AML		
	comp=N,365μm,1.2s					
PGF	**Pioggiola**	**3.12 269**	AML	AML		
	comp=N,18μm,1.4s					
PGF			AML	AML		
	comp=E,21μm,1.3s					
PGF			AML	AML		
	comp=N,18μm,0.6s					
CTI	**Castel Tesino**	**3.56 342**	AML	AML		
	comp=E,71μm,1.2s					
CTI			AML	AML		
	comp=E,71μm,0.8s					
CTI			AML	AML		
	comp=N,81μm,0.3s					
STAL	**STALIGIAL**	**3.61 354**	AML	AML		
	comp=N,90μm,0.7s					
STAL			AML	AML		
	comp=E,107μm,1.0s					
STAL			AML	AML		
	comp=E,107μm,1.0s					
OBKA	**Obir**	**3.96 13**	*e*Pn	Pb	09 46 39.0	-5.0
	comp=E,4.1nm,0.5s					
ABTA	**Abfaltersbach**	**4.11 353**	*e*Pn	**Pn**	**09 46 39.0**	**+2.1**
	comp=E,16nm,0.5s					
WTTA	**Wattenberg**	**4.73 347**	*e*Pn	Pn	09 46 49.4	+3.9
	comp=E,6.6nm,0.6s					
DAVOX	**Davos/Dischmat**	**4.75 331**	Pn	**Pn**	**09 46 49.1**	**+3.2**
	comp=E,0.9nm,0.3s,baz=143,slow=10,SNR=3.2					
DAVOX			Sn	**Sn**	**09 47 45.9**	**+5.1**
	comp=E,0.2nm,0.3s,baz=180,slow=19,SNR=0.8					
	comp=E,9.9nm,0.7s					
SQTA	**Sankt Quirin**	**4.77 343**	*i* Pn	**Pn**	**09 46 49.7**	**+3.7**
	comp=E,4.6nm,0.3s					
WATA	**Walderalm**	**4.81 347**	*e*Pn	**Pn**	**09 46 48.1**	**+1.5**
	comp=E,1.4nm,0.2s					
BIOA	**Bad Ischl, Aus**	**5.03 3**	*e*Pn	**Pn**	**09 46 50.3**	**+0.8**
	comp=E,2.9nm,0.3s					
MOA	**Molln**	**5.24 8**	*e*Pn	**Pn**	**09 46 54.1**	**+1.8**
	comp=E,0.5nm,0.2s					
RONA	**Rosalia, Austr**	**5.48 22**	*e*Pn	**Pn**	**09 46 58.5**	**+2.8**
	comp=E,2.7nm,0.5s					
CONA	**Conrad Observa**	**5.58 19**	*e*Pn	**Pn**	**09 46 59.6**	**+2.5**
	comp=E,3.0nm,0.4s					
GERES	**GERESS Array B**	**6.19 3**	Pn	**Pn**	**09 47 05.1**	**-0.3**
	comp=E,0.1nm,0.3s,baz=183,slow=19,SNR=2.1					
GERES			Sn	**Sn**	**09 48 15.8**	**-0.2**
	comp=E,0.8nm,0.3s,baz=174,slow=23,SNR=5.9					
	comp=E,0.7nm,0.6s					
KHC	**Kasperske Hory**	**6.47 2**	*e*PN	**Pn**	**09 47 10.1**	**+0.8**
KHC			*e*SN	**Sn**	**09 48 22.9**	**0.0**
VRAC	**Vranov**	**7.04 18**	Pn	**Pn**	**09 47 17.0**	**-0.1**
	comp=E,1.5nm,0.4s,baz=197,slow=11					
KEST	**Kesra**	**7.55 205**	Pn	Pn	09 47 30.8	+6.6
	comp=E,0.2nm,0.3s,baz=27,slow=4.5,SNR=2.2					
	comp=E,1.2nm,0.4s					
TORD	**Torodi Ar. Bea**	**31.06 202**	P	P	09 51 55.4	+3.3
	comp=E,0.2nm,0.6s,baz=21,slow=8.5,SNR=2.1					
	comp=E,0.2nm,0.6s					

*IDC **30** 09:51:03.6±1.2, 43.°01N×12.°97E, h0km, mb3.6/5, mbtmp3.6/12, MLJ3.6/7, Error ellipse: s-maj=21.8km s-min=13.4km az=87.0*
*LDG **30** 09:51:03.6±0.2, 42.°83N×13.°16E, h10km, Ml3.4/7, Error ellipse: s-maj=4.6km s-min=3.5km az=37.0*
*PRU **30** 09:51:04.7±0.0, 42.°75N×13.°75E, h10km*
ISC 30 09:51:04.7±0.6, **42.°84N**±0.°01×**13.°13E**±0.°02, **h13**km±3km, **n159**, σ1§**57**/201, **mb3.8**/4, **16C-9D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**65**	⇓P	**Pg**	**09 51 06.2**	**-1.1**
T1245				S	**Sg**	**09 51 07.4**	**-1.8**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1214	**Arquata del Tr**	**0.10**	**143**	P	**Pg**	**09 51 07.3**	**-0.5**
T1214				S	**Sg**	**09 51 09.2**	**-0.8**
T1216	**Preci, Frazion**	**0.10**	**304**	P	**Pg**	**09 51 06.7**	**-1.0**
T1216				S	**Sg**	**09 51 08.7**	**-1.1**
T1212	**Cascia, Frazio**	**0.11**	**216**	P	**Pg**	**09 51 07.5**	**-0.3**
T1212				S	**Sg**	**09 51 09.6**	**-0.4**
T1213	**Norcia, Frazio**	**0.11**	**181**	P	**Pg**	**09 51 07.5**	**-0.3**
T1213				S	**Sg**	**09 51 09.5**	**-0.6**
FEMA	**Monte Fema**	**0.14**	**335**	P	**Pg**	**09 51 07.4**	**-0.9**
FEMA				S	**Sg**	**09 51 09.6**	**-1.3**
FEMA				AML	AML		
	comp=E,76450μm,0.4s						
FEMA				AML	AML		
	comp=N,62050μm,1.6s						
FEMA				AML	AML		
	comp=N,62000μm,1.6s						
FEMA				AML	AML		
	comp=E,76450μm,0.4s						
FEMA				AML	AML		
	comp=E,76500μm,0.4s						
T1244	**Arquata del Tr**	**0.15**	**123**	P	**Pg**	**09 51 08.3**	**-0.1**
T1244				S	**Sb**	**09 51 11.2**	**-1.3**
T1218	**Civita (PG)**	**0.17**	**184**	P	**Pg**	**09 51 08.5**	**-0.2**
T1218				S	**Sg**	**09 51 11.7**	**+0.2**
T1256	**Bolognola (MC)**	**0.18**	**23**	P	**Pg**	**09 51 08.2**	**-0.8**
T1256				S	**Sg**	**09 51 11.3**	**-0.7**
T1217	**Poggiodomo (PG**	**0.19**	**230**	P	**Pg**	**09 51 08.8**	**-0.2**
T1217				S	**Sg**	**09 51 12.2**	**+0.2**
T1217				AML	AML		
	comp=N,48100μm,0.4s						
T1217				AML	AML		
	comp=E,33100μm,1.6s						
T1217				AML	AML		
	comp=N,47450μm,0.4s						
T1217				AML	AML		
	comp=E,34450μm,1.6s						
T1217				AML	AML		
	comp=E,33000μm,0.4s						
T1217				AML	AML		
	comp=N,47500μm,0.4s						
T1217				AML	AML		
	comp=N,48150μm,0.4s						
T1215	**Vallo di Nera,**	**0.20**	**260**	⇑P	**Pg**	**09 51 08.6**	**-0.4**
T1215				S	**Sg**	**09 51 12.1**	**0.0**
T1215				AML	AML		
	comp=N,21400μm,1.4s						
T1215				AML	AML		
	comp=E,24850μm,0.5s						
T1215				AML	AML		
	comp=N,20750μm,1.4s						
T1215				AML	AML		
	comp=N,21400μm,1.4s						
T1215				AML	AML		
	comp=E,23950μm,0.5s						
T1215				AML	AML		
	comp=N,20800μm,1.4s						
T1215				AML	AML		
	comp=E,24800μm,0.5s						
T1201	**Domo (RI)**	**0.20**	**154**	P	**Pg**	**09 51 09.4**	**+0.3**
T1201				S	**Sb**	**09 51 13.4**	**-0.6**
FDMO	**Fiordimonte**	**0.20**	**351**	P	**Pg**	**09 51 08.6**	**-0.6**
FDMO				S	**Sg**	**09 51 11.9**	**-0.4**
T1204	**Amatrice, Fraz**	**0.21**	**139**	P	**Pg**	**09 51 09.3**	**-0.1**
T1204				S	**Sb**	**09 51 13.2**	**-1.2**
T1204				AML	AML		
	comp=N,32200μm,0.3s						
T1204				AML	AML		
	comp=E,52700μm,1.1s						
T1204				AML	AML		
	comp=N,32150μm,0.3s						
T1204				AML	AML		
	comp=E,52750μm,1.1s						
AM05	**Amandola Campo**	**0.22**	**49**	⇑P	**Pg**	**09 51 09.0**	**-0.4**
AM05				S	**Sg**	**09 51 12.5**	**-0.1**
AM05				AML	AML		
	comp=E,14750μm,1.1s						
AM05				AML	AML		
	comp=E,14700μm,1.1s						
AM05				AML	AML		
	comp=E,65950μm,0.8s						
AM05				AML	AML		
	comp=N,4625μm,0.7s						
AM05				AML	AML		
	comp=N,20950μm,0.3s						
AM05				AML	AML		
	comp=N,21000μm,0.3s						
T1241	**Roccafluvione,**	**0.22**	**85**	P	**Pb**	**09 51 09.7**	**-0.9**
T1241				AML	AML		
	comp=N,39300μm,0.4s						
T1241				AML	AML		
	comp=E,85050μm,0.3s						
T1241				AML	AML		
	comp=N,39250μm,0.4s						
T1241				AML	AML		
	comp=E,87500μm,0.3s						
T1241				AML	AML		
	comp=E,87550μm,0.3s						
T1241				AML	AML		
	comp=N,42450μm,0.7s						
T1241				AML	AML		
	comp=E,85050μm,0.3s						
T1241				AML	AML		
	comp=N,39300μm,0.4s						
T1219	**Muccia, Frazio**	**0.24**	**338**	P	**Pg**	**09 51 09.8**	**0.0**
T1219				S	**Sg**	**09 51 13.2**	**-0.1**
LNSS	**Leonessa**	**0.24**	**196**	P	**Pg**	**09 51 09.9**	**0.0**
LNSS				S	**Sg**	**09 51 14.0**	**+0.6**
LNSS				AML	AML		
	comp=N,40750μm,1.1s						
LNSS				AML	AML		
	comp=E,16350μm,0.2s						
CSP1	**Cessapalombo**	**0.26**	**12**	P	**Pg**	**09 51 09.7**	**-0.6**
CSP1				S	**Sg**	**09 51 13.9**	**-0.1**
GUMA	**Gualdo di Mace**	**0.27**	**34**	⇑P	**Pg**	**09 51 10.2**	**-0.2**
GUMA				S	**Sg**	**09 51 14.9**	**+0.7**
GUMA				AML	AML		
	comp=E,97550μm,1.6s						
GUMA				AML	AML		
	comp=N,98350μm,1.6s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,97650μm,1.6s						
GUMA				AML	AML		
	comp=N,97900μm,1.6s						
GUMA				AML	AML		
	comp=E,97500μm,1.6s						
T1243	**Rocca Santa Ma**	**0.27**	**121**	P	**Pg**	**09 51 10.1**	**-0.4**
T1243				S	**Sb**	**09 51 14.7**	**-1.4**
T1220	**Camerino, Fraz**	**0.28**	**354**	P	**Pg**	**09 51 10.9**	**+0.5**
T1220				S	**Sg**	**09 51 14.9**	**+0.6**
RM33	**Pellescritta (**	**0.33**	**169**	P	**Pg**	**09 51 11.8**	**+0.3**
RM33				S	**Sb**	**09 51 17.1**	**-0.8**
RM33				AML	AML		
	comp=E,11100μm,0.8s						
RM33				AML	AML		
	comp=N,12500μm,0.3s						
RM33				AML	AML		
	comp=N,12500μm,0.2s						
RM33				AML	AML		
	comp=E,11150μm,0.8s						
RM33				AML	AML		
	comp=E,11000μm,0.8s						
RM33				AML	AML		
	comp=N,12500μm,0.2s						
SEF1	**Sefro**	**0.34**	**337**	P	**Pg**	**09 51 11.7**	**+0.2**
SEF1				AML	AML		
	comp=E,16900μm,0.5s						
SEF1				AML	AML		
	comp=N,16550μm,0.2s						
SEF1				AML	AML		
	comp=E,16850μm,0.5s						
MDAR	**Monte D'Aria**	**0.36**	**2**	P	**Pg**	**09 51 11.3**	**-0.6**
MDAR				S	**Sg**	**09 51 17.0**	**+0.2**
MDAR				AML	AML		
	comp=E,9780μm,1.2s						
MDAR				AML	AML		
	comp=N,10745μm,1.1s						
MDAR				AML	AML		
	comp=N,10715μm,1.1s						
MDAR				AML	AML		
	comp=E,9775μm,1.2s						
PIO1	**Pioraco**	**0.36**	**343**	P	**Pg**	**09 51 11.6**	**-0.3**
PIO1				S	**Sg**	**09 51 17.4**	**+0.6**
CAMP	**Campotosto**	**0.36**	**146**	P	**Pg**	**09 51 11.8**	**-0.3**
CAMP				S	**Sb**	**09 51 17.7**	**-1.1**
CAMP				AML	AML		
	comp=N,6260μm,0.5s						
CAMP				AML	AML		
	comp=E,11750μm,0.9s						
T1211	**Morro Reatino**	**0.36**	**214**	P	**Pg**	**09 51 12.2**	**+0.2**
T1211				S	**Sg**	**09 51 18.0**	**+1.0**
T1211				AML	AML		
	comp=E,12650μm,0.1s						
T1211				AML	AML		
	comp=N,17750μm,0.3s						
T1211				AML	AML		
	comp=N,17400μm,0.9s						
T1211				AML	AML		
	comp=N,17800μm,0.3s						
T1211				AML	AML		
	comp=N,17450μm,0.9s						
T1211				AML	AML		
	comp=E,12650μm,0.1s						
T1211				AML	AML		
	comp=E,13050μm,0.1s						
T1246	**Crognaleto (TE**	**0.37**	**133**	P	**Pg**	**09 51 11.8**	**-0.4**
T1246				S	**Sb**	**09 51 17.8**	**-1.1**
ARRO	**Arrone**	**0.37**	**226**	P	**Pg**	**09 51 11.9**	**-0.3**
ARRO				S	**Sg**	**09 51 17.9**	**+0.8**
ARRO				AML	AML		
	comp=E,8040μm,1.1s						
ARRO				AML	AML		
	comp=N,7350μm,0.4s						
ARRO				AML	AML		
	comp=N,7345μm,0.4s						
ARRO				AML	AML		
	comp=E,8015μm,1.1s						
FIU1	**Fiuminata**	**0.38**	**338**	P	**Pg**	**09 51 12.2**	**-0.2**
FIU1				AML	AML		
	comp=E,5870μm,0.5s						
FIU1				AML	AML		
	comp=N,5000μm,0.3s						
FIU1				AML	AML		
	comp=N,4995μm,0.3s						
MNTP	**Montappone**	**0.39**	**40**	⇑P	**Pg**	**09 51 12.7**	**+0.2**
MNTP				AML	AML		
	comp=N,22200μm,0.2s						
MNTP				AML	AML		
	comp=E,23500μm,1.1s						
MNTP				AML	AML		
	comp=N,22200μm,0.2s						
MNTP				AML	AML		
	comp=E,23550μm,1.1s						
SSM1	**San Severino M**	**0.39**	**5**	P	**Pg**	**09 51 12.0**	**-0.5**
SSM1				S	**Sg**	**09 51 18.4**	**+0.6**
ASSB	**Assisi San Ben**	**0.40**	**301**	P	**Pg**	**09 51 12.4**	**-0.4**
ASSB				AML	AML		
	comp=N,8920μm,0.9s						
ASSB				AML	AML		
	comp=E,14700μm,0.3s						
GAG1	**Gagliole**	**0.40**	**354**	P	**Pg**	**09 51 12.5**	**-0.3**
GAG1				AML	AML		
	comp=E,20150μm,0.7s						
GAG1				AML	AML		
	comp=N,30200μm,0.4s						
GAG1				AML	AML		
	comp=E,20100μm,0.7s						
TERO	**Teramo**	**0.41**	**121**	P	**Pg**	**09 51 12.4**	**-0.5**
TERO				S	**Sb**	**09 51 18.8**	**-1.2**
TERO				AML	AML		
	comp=E,34600μm,0.4s						
TERO				AML	AML		
	comp=E,36700μm,0.3s						
TERO				AML	AML		
	comp=E,36750μm,0.3s						
TERO				AML	AML		
	comp=N,44700μm,0.4s						
TERO				AML	AML		
	comp=N,47200μm,0.4s						
TERO				AML	AML		
	comp=E,34650μm,0.4s						
TERO				AML	AML		
	comp=N,47250μm,0.4s						
TERO				AML	AML		
	comp=N,44650μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.41**	**162**	P	**Pb**	**09 51 13.6**	**-0.3**
T1247				AML	AML		
	comp=E,12240μm,0.4s						
T1247				AML	AML		
	comp=N,12200μm,0.4s						
OFFI	**Offida**	**0.42**	**76**	⇑P	**Pg**	**09 51 12.7**	**-0.4**
OFFI				AML	AML		
	comp=E,22100μm,0.8s						
OFFI				AML	AML		
	comp=N,17450μm,0.5s						
SNTG	**Esanatoglia**	**0.44**	**342**	⇓P	**Pg**	**09 51 12.9**	**-0.5**
SNTG				AML	AML		
	comp=E,3730μm,0.5s						
SNTG				AML	AML		
	comp=N,4325μm,0.3s						
SNTG				AML	AML		
	comp=N,4480μm,0.3s						
SNTG				AML	AML		
	comp=E,3730μm,0.5s						
SNTG				AML	AML		
	comp=E,3645μm,0.5s						
SNTG				AML	AML		
	comp=N,4325μm,0.3s						
SNTG				AML	AML		
	comp=N,4475μm,0.3s						
SNTG				AML	AML		
	comp=N,4330μm,0.3s						
CESX	**Cesi**	**0.46**	**241**	P	**Pg**	**09 51 13.3**	**-0.5**
CESX				AML	AML		
	comp=E,7735μm,0.5s						
CESX				AML	AML		
	comp=N,8580μm,0.4s						
EL6	**Elcito**	**0.49**	**358**	P	**Pg**	**09 51 14.9**	**+0.5**
TRE1	**Treia**	**0.49**	**16**	⇑P	**Pg**	**09 51 14.6**	**+0.2**
TRE1				AML	AML		
	comp=E,16050μm,0.5s						
TRE1				AML	AML		
	comp=N,13500μm,0.3s						
TRE1				AML	AML		
	comp=N,13450μm,0.4s						
TRE1				AML	AML		
	comp=E,16050μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.50**	**314**	⇑P	**Pg**	**09 51 13.9**	**-0.6**
ATCC				AML	AML		
	comp=E,9760μm,0.3s						
ATCC				AML	AML		
	comp=N,8950μm,0.5s						
ATCC				AML	AML		
	comp=N,8935μm,0.5s						
ATCC				AML	AML		
	comp=E,9755μm,0.3s						
ATCC				AML	AML		
	comp=E,9750μm,0.3s						
ATCC				AML	AML		
	comp=N,8920μm,0.5s						
GIGS	**Gran Sasso**	**0.51**	**140**	P	**Pg**	**09 51 14.2**	**-0.4**
GIGS				S	**Sb**	**09 51 21.7**	**-1.1**
GIGS				AML	AML		
	comp=N,1995μm,0.4s						
GIGS				AML	AML		
	comp=E,2740μm,0.3s						
AQU	**L'Aquila**	**0.52**	**157**	P	**Pg**	**09 51 14.9**	**-0.1**
FOSV	**Fossato di Vic**	**0.53**	**330**	⇑P	**Pg**	**09 51 14.6**	**-0.6**
FOSV				AML	AML		
	comp=E,4360μm,0.4s						
FOSV				AML	AML		
	comp=N,4615μm,1.2s						
FOSV				AML	AML		
	comp=N,4620μm,1.2s						
FIAM	**Fiamignano**	**0.57**	**181**	P	**Pn**	**09 51 17.6**	**-1.0**
TRTR	**Tortoreto Alta**	**0.58**	**93**	P	**Pg**	**09 51 15.2**	**-0.7**
TRTR				AML	AML		
	comp=E,26700μm,0.4s						
TRTR				AML	AML		
	comp=N,16400μm,1.2s						
CADA	**Capodarco di F**	**0.58**	**52**	P	**Pb**	**09 51 17.0**	**+0.2**
MMUR	**Monte Murano**	**0.61**	**351**	P	**Pg**	**09 51 15.7**	**-0.9**
CIMA	**Civitanova Mar**	**0.61**	**40**	P	**Pg**	**09 51 16.3**	**-0.4**
MURB	**Monte Urbino**	**0.61**	**314**	⇑P	**Pg**	**09 51 16.2**	**-0.5**
MURB				AML	AML		
	comp=E,15850μm,0.3s						
MURB				AML	AML		
	comp=N,10350μm,0.9s						
MURB				AML	AML		
	comp=N,10150μm,1.0s						
MURB				AML	AML		
	comp=E,15800μm,0.3s						
MURB				AML	AML		
	comp=N,10365μm,0.9s						
MURB				AML	AML		
	comp=E,16800μm,0.3s						
MURB				AML	AML		
	comp=E,15850μm,0.3s						
MURB				AML	AML		
	comp=N,10400μm,0.9s						
PP3	**Marolino**	**0.65**	**33**	⇑P	**Pb**	**09 51 18.0**	**+0.2**
PP3				AML	AML		
	comp=N,10985μm,1.0s						
PP3				AML	AML		
	comp=E,11300μm,0.3s						
PP3				AML	AML		
	comp=N,11530μm,0.3s						
PP3				AML	AML		
	comp=N,11560μm,0.3s						
PP3				AML	AML		
	comp=E,11100μm,0.3s						
PP3				AML	AML		
	comp=E,11350μm,0.3s						
PP3				AML	AML		
	comp=N,10980μm,1.0s						
FAGN	**Fagnano**	**0.66**	**149**	P	**Pb**	**09 51 18.2**	**0.0**
ATFO	**Monte Foce - G**	**0.67**	**323**	⇑P	**Pg**	**09 51 17.2**	**-0.6**
ATFO				AML	AML		
	comp=N,2545μm,0.5s						
ATFO				AML	AML		
	comp=E,3155μm,0.6s						
ATSC	**Scheggia e Pas**	**0.67**	**331**	P	**Pg**	**09 51 16.5**	**-1.2**
ATTE	**AVT- Monte Tez**	**0.67**	**303**	P	**Pg**	**09 51 18.0**	**+0.2**
ARVD	**Arcevia**	**0.68**	**348**	⇑P	**Pg**	**09 51 17.3**	**-0.5**
ARVD				AML	AML		
	comp=N,1705μm,0.5s						
ARVD				AML	AML		
	comp=E,2405μm,0.4s						
VCEL	**Villa Celiera**	**0.69**	**130**	P	**Pg**	**09 51 17.5**	**-0.6**
VCEL				AML	AML		
	comp=N,9830μm,0.4s						
VCEL				AML	AML		
	comp=E,7235μm,1.3s						
VCEL				AML	AML		
	comp=N,9795μm,0.4s						
ATLO	**AVT- Montelove**	**0.71**	**312**	P	**Pg**	**09 51 19.0**	**+0.4**
FRON	**Frontone**	**0.74**	**337**	⇓P	**Pg**	**09 51 18.2**	**-0.9**
FRON				AML	AML		
	comp=E,1975μm,0.4s						
FRON				AML	AML		
	comp=N,3335μm,0.4s						
FRON				AML	AML		
	comp=E,1980μm,0.4s						
TB01	**Gubbio**	**0.74**	**317**	P	**Pg**	**09 51 18.1**	**-1.0**
MGAB	**Montegabbione**	**0.75**	**276**	⇓P	**Pg**	**09 51 19.2**	**0.0**
MGAB				AML	AML		
	comp=N,5695μm,1.1s						

MGAB				AML	AML		
	comp=N,5420μm,0.9s						
MGAB				AML	AML		
	comp=E,5455μm,1.6s						
MGAB				AML	AML		
	comp=E,6010μm,1.6s						
MGAB				AML	AML		
	comp=E,5460μm,1.6s						
MGAB				AML	AML		
	comp=N,5700μm,1.1s						
SRES	**S.Oreste - Sor**	**0.75**	**218**	⇑P	**Pg**	**09 51 19.1**	**-0.2**
SRES				AML	AML		
	comp=E,3015μm,0.9s						
SRES				AML	AML		
	comp=N,2950μm,0.5s						
ATVA	**AVT- Monte Val**	**0.76**	**306**	P	**Pg**	**09 51 19.7**	**+0.2**
ATVO	**AVT- Monte Val**	**0.76**	**316**	P	**Pg**	**09 51 18.1**	**-1.3**
ATBU	**Serra di Buran**	**0.77**	**327**	P	**Pg**	**09 51 18.9**	**-0.6**
TB03	**Pietralunga**	**0.77**	**317**	P	**Pg**	**09 51 18.8**	**-0.9**
T0110	**Collepietro**	**0.78**	**142**	P	**Pg**	**09 51 19.2**	**-0.5**
T0110				AML	AML		
	comp=E,5890μm,0.5s						
T0110				AML	AML		
	comp=N,6605μm,0.4s						
AOI	**Ancona**	**0.79**	**26**	⇓P	**Pg**	**09 51 19.6**	**-0.4**
AOI				AML	AML		
	comp=N,3065μm,1.4s						
AOI				AML	AML		
	comp=E,3410μm,0.4s						
ATPC	**Poggio Castell**	**0.81**	**323**	P	**Pg**	**09 51 20.0**	**-0.4**
ATPI	**Pietralunga -**	**0.81**	**319**	P	**Pb**	**09 51 21.2**	**+0.5**
PIEI	**Pieia**	**0.82**	**328**	P	**Pg**	**09 51 19.6**	**-1.0**
PCRO	**Pietralacroce**	**0.82**	**21**	P	**Pg**	**09 51 19.5**	**-1.1**
MPAG	**Monte Paganucc**	**0.84**	**341**	P	**Pg**	**09 51 21.0**	**+0.1**
PTQR	**Pietraquaria**	**0.84**	**166**	P	**Pg**	**09 51 20.8**	**-0.1**
MTCE	**Montecelio**	**0.86**	**200**	P	**Pg**	**09 51 20.8**	**-0.5**
SENI	**Senigallia**	**0.87**	**5**	P	**Pn**	**09 51 22.4**	**-0.3**
FSSB	**Fossombrone**	**0.89**	**343**	⇓P	**Pg**	**09 51 21.9**	**-0.1**
FSSB				AML	AML		
	comp=E,4605μm,0.4s						
FSSB				AML	AML		
	comp=N,8225μm,0.3s						
CERT	**Cerreto**	**0.89**	**187**	P	**Pg**	**09 51 20.4**	**-1.6**
SACS	**San Casciano d**	**0.90**	**271**	P	**Pg**	**09 51 21.8**	**-0.2**
ATMC	**Monte Cedrone**	**0.92**	**312**	P	**Pg**	**09 51 22.6**	**+0.2**
PE3	**Peglio**	**0.97**	**332**	P	**Pg**	**09 51 24.0**	**+0.5**
CAFI	**Castiglion Fio**	**0.98**	**300**	⇑P	**Pb**	**09 51 23.6**	**0.0**
CAFI				AML	AML		
	comp=E,1640μm,1.4s						
CAFI				AML	AML		
	comp=N,1760μm,0.6s						
CAFI				AML	AML		
	comp=E,1635μm,1.4s						
RCAV	**Rocca di Cave**	**1.00**	**188**	P	**Pg**	**09 51 24.2**	**+0.3**
LATE	**Laterza**	**1.00**	**258**	⇑P	**Pb**	**09 51 24.1**	**+0.1**
INTR	**Introdacqua**	**1.00**	**145**	AML	AML		
	comp=N,4645μm,0.4s						
INTR				AML	AML		
	comp=E,2145μm,0.6s						
VVLD	**Villa Vallelon**	**1.03**	**159**	P	**Pb**	**09 51 24.0**	**-0.5**
GUAR	**Guarcino**	**1.05**	**173**	P	**Pn**	**09 51 25.0**	**-0.1**
SF11	**Podere del Sol**	**1.07**	**272**	P	**Pb**	**09 51 25.0**	**-0.1**
MCIV	**Monte Civitell**	**1.07**	**267**	P	**Pb**	**09 51 24.3**	**-0.9**
CAFR	**Castel Frentan**	**1.09**	**124**	P	**Pb**	**09 51 24.6**	**-0.8**
LPEL	**Lama dei Peligˇ**	**1.11**	**135**	⇓P	**Pb**	**09 51 25.1**	**-0.7**
LPEL				AML	AML		
	comp=N,2195μm,0.5s						
LPEL				AML	AML		
	comp=E,1975μm,0.5s						
SF13	**Bagnolo**	**1.11**	**270**	P	**Pb**	**09 51 25.5**	**-0.3**
SF14	**Selvena**	**1.12**	**266**	P	**Pb**	**09 51 25.7**	**-0.2**
RDP	**Rocca di Papa**	**1.12**	**196**	P	**Pb**	**09 51 25.4**	**-0.6**
MA9	**Marino**	**1.12**	**198**	P	**Pb**	**09 51 25.5**	**-0.4**
SAMA	**S.Maria delle**	**1.13**	**201**	P	**Pb**	**09 51 25.4**	**-0.6**
CPGN	**Carpegna, Ital**	**1.13**	**329**	P	**Pn**	**09 51 26.8**	**+0.4**
TOLF	**Tolfa**	**1.14**	**228**	⇓P	**Pb**	**09 51 25.3**	**-1.0**
TOLF				AML	AML		
	comp=E,1710μm,0.7s						
TOLF				AML	AML		
	comp=N,1550μm,0.4s						
CRE	**Caprese Michel**	**1.16**	**313**	P	**Pn**	**09 51 27.0**	**+0.2**
CRE				AML	AML		
	comp=E,804μm,0.5s						
CRE				AML	AML		
	comp=N,1054μm,1.3s						
LAV9	**Lanuvio**	**1.20**	**196**	P	**Pg**	**09 51 28.6**	**+0.8**
ARCI	**Arcidosso**	**1.22**	**271**	P	**Pn**	**09 51 26.7**	**-0.8**
GIUL	**Giuliano Di Ro**	**1.28**	**176**	P	**Pg**	**09 51 29.1**	**-0.2**
LATB	**Latina**	**1.35**	**185**	P	**Pn**	**09 51 29.0**	**-0.2**
CERA	**Filignano**	**1.40**	**152**	P	**Pg**	**09 51 31.9**	**+0.2**
SFI	**Santa Sofia**	**1.42**	**319**	P	**Pb**	**09 51 32.0**	**+1.0**
MIDA	**Miranda**	**1.46**	**145**	P	**Pn**	**09 51 30.2**	**-0.6**
RUFI	**Rufina**	**1.55**	**311**	P	**Pb**	**09 51 33.7**	**+0.5**
TRIF	**Trifonti**	**1.66**	**280**	⇓P	**Pn**	**09 51 33.9**	**+0.3**
TRIF				AML	AML		
	comp=N,220μm,0.8s						
TRIF				AML	AML		
	comp=E,278μm,0.8s						
TRIF				AML	AML		
	comp=N,220μm,0.7s						
CASP	**Castiglione de**	**1.67**	**269**	⇑P	**Pn**	**09 51 33.9**	**+0.2**
CASP				AML	AML		
	comp=E,127μm,0.7s						
CASP				AML	AML		
	comp=N,128μm,1.6s						
CASP				AML	AML		
	comp=E,128μm,0.7s						
SACR	**S. Croce Del S**	**1.86**	**140**	P	**Pb**	**09 51 38.3**	**-0.2**
POPM	**Popiglio**	**2.11**	**306**	AML	AML		
	comp=E,192μm,1.3s						
POPM				AML	AML		
	comp=N,208μm,1.1s						
PGF	**Pioggiola**	**3.06**	**266**	*e*P	**Pn**	**09 51 53.6**	**+0.8**
OBKA	**Obir**	**3.81**	**15**	*e*Pn	**Pn**	**09 52 03.4**	**+0.2**
	comp=N,1.6nm,0.2s						
MYKA	**Terra Mystica**	**3.81**	**5**	*i* Pn	**Pn**	**09 52 04.3**	**+1.2**
	comp=N,3.5nm,0.2s						
ABTA	**Abfaltersbach**	**3.94**	**354**	*e*Pn	**Pn**	**09 52 06.3**	**+1.4**
	comp=N,37nm,0.6s,SNR=10						
SBF	**Sospel**	**4.28**	**286**	*e*P	**Pn**	**09 52 10.6**	**+1.0**
SBF				*e*Sn	**Sn**	**09 52 55.8**	**-3.6**
	comp=N,20nm,0.6s						
FETA	**Feichten**	**4.52**	**339**	*e*Pn	**Pn**	**09 52 14.0**	**+1.0**
	comp=N,3.4nm,0.3s						
WTTA	**Wattenberg**	**4.55**	**347**	*e*Pn	**Pn**	**09 52 16.2**	**+2.7**
	comp=N,7.4nm,0.5s						
DAVOX	**Davos/Dischmat**	**4.57**	**331**	Pn	**Pn**	**09 52 12.6**	**-1.1**
	comp=N,0.5nm,0.3s,baz=151,slow=18,SNR=1.8						
DAVOX				Sn	**Sn**	**09 53 03.8**	**-3.0**
	comp=N,2.4nm,0.3s,baz=293,slow=22,SNR=2.5						
	comp=N,4.9nm,0.4s						
WATA	**Walderalm**	**4.63**	**347**	*e*Pn	**Pn**	**09 52 18.0**	**+3.5**
	comp=N,3.9nm,0.2s						
ARSA	**Arzberg**	**4.73**	**20**	*e*Pn	**Pn**	**09 52 16.1**	**+0.4**
	comp=N,1.2nm,0.3s						
MOTA	**Moosalm**	**4.73**	**343**	*e*Pn	**Pn**	**09 52 19.1**	**+3.3**
	comp=N,3.0nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.87**	**4**	Pn	**Pn**	**09 52 18.6**	**+1.0**
	comp=N,12nm,0.3s,SNR=5.1						
LMR	**La Mourre**	**4.87**	**278**	*e*P	**Pn**	**09 52 18.3**	**+0.6**
RETA	**Reutte**	**4.94**	**341**	*e*Pn	**Pn**	**09 52 21.8**	**+3.1**
	comp=N,3.9nm,0.4s						
MBDF	**Montbardon**	**4.98**	**294**	*e*Pn	**Pn**	**09 52 17.4**	**-1.8**
MBDF				*e*Sn	**Sn**	**09 53 12.4**	**-4.3**
	comp=N,8.0nm,0.6s						
DAVA	**Damuels**	**5.01**	**334**	*e*Pn	**Pn**	**09 52 22.8**	**+3.1**
	comp=N,8.8nm,0.4s						
MOA	**Molln**	**5.08**	**9**	*i* Pn	**Pn**	**09 52 21.5**	**+1.0**
	comp=N,1.4nm,0.1s						
LPG	**La Plagne**	**5.30**	**302**	*e*P	**Pn**	**09 52 26.4**	**+2.6**
LPG				*e*Sn	**Sn**	**09 53 19.7**	**-5.2**
	comp=N,8.9nm,0.7s						
LPL	**La Plagne**	**5.32**	**302**	*e*P	**Pn**	**09 52 25.6**	**+1.5**
RONA	**Rosalia, Austr**	**5.35**	**24**	*e*Pn	**Pn**	**09 52 24.1**	**-0.2**
	comp=N,5.7nm,0.4s						
CONA	**Conrad Observa**	**5.44**	**20**	*e*Pn	**Pn**	**09 52 26.2**	**+0.6**
	comp=N,1.8nm,0.2s,SNR=6.7						
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*P	**Pn**	**09 52 30.6**	**+2.6**
ORIF	**Oris-en-Rattie**	**5.64**	**294**	*e*P	**Pn**	**09 52 32.4**	**+4.1**
GERES	**GERESS Array B**	**6.02**	**4**	Pn	**Pn**	**09 52 32.5**	**-1.1**
	comp=N,1.6nm,0.3s,baz=174,slow=13,SNR=11						
GERES				Sn	**Sn**	**09 53 39.1**	**-3.3**
	comp=N,2.9nm,0.3s,baz=176,slow=21,SNR=7.6						
	comp=N,1.6nm,0.3s						
CKRC	**Cesky Krumlov**	**6.04**	**7**	*e*PN	**Pn**	**09 52 33.2**	**-0.5**
CKRC				*e*SN	**Sn**	**09 53 41.0**	**-1.7**
CABF	**La Chapelle**	**6.28**	**309**	*e*P	**Pn**	**09 52 39.3**	**+2.3**
KHC	**Kasperske Hory**	**6.30**	**3**	*e*PN	**Pn**	**09 52 37.5**	**+0.2**
KHC				*e*SN	**Sn**	**09 53 48.1**	**-1.1**
HINF	**Hinteralfeld**	**6.66**	**321**	*e*P	**Pn**	**09 52 44.4**	**+2.2**
HINF				*e*Sn	**Sn**	**09 53 52.2**	**-5.8**
	comp=N,10nm,0.4s						
LASF	**Ste Croix**	**6.86**	**284**	*e*P	**Pn**	**09 52 48.1**	**+3.1**
VRAC	**Vranov**	**6.91**	**19**	Pn	**Pn**	**09 52 44.5**	**-1.1**
	comp=N,0.5nm,0.3s,baz=210,slow=16,SNR=1.9						
VRAC				Sn	Sn	09 53 49.7	-14
	baz=110,slow=22						
	comp=N,1.3nm,0.4s						
CDF	**Champ du Feu**	**6.92**	**326**	*e*P	**Pn**	**09 52 46.7**	**+0.8**
CDF				*e*Sn	**Sn**	**09 53 58.2**	**-6.3**
	comp=N,9.1nm,0.4s						
HAU	**Haudompre**	**7.03**	**320**	*e*P	**Pn**	**09 52 48.6**	**+1.3**
HAU				*e*Sn	**Sn**	**09 54 01.1**	**-6.0**
	comp=N,21nm,0.4s						
KEST	**Kesra**	**7.68**	**204**	Pn	**Pn**	**09 52 59.3**	**+3.1**
	comp=N,0.3nm,0.3s,baz=350,slow=6.1,SNR=2.6						
KEST				Sn	**Sn**	**09 54 21.3**	**-1.8**
	comp=N,0.2nm,0.3s,baz=72,slow=20,SNR=1.3						
	comp=N,3.2nm,0.9s						
PAGF	**Fort de Pagny**	**7.71**	**320**	*e*P	**Pn**	**09 52 57.8**	**+1.1**
LOR	**Lormes**	**7.92**	**307**	*e*P	**Pn**	**09 53 01.2**	**+1.7**
LOR				*e*Sn	**Sn**	**09 54 22.9**	**-6.0**
	comp=N,4.4nm,0.4s						
MEZF	**Maizieres J'vi**	**8.00**	**318**	*e*P	**Pn**	**09 53 04.3**	**+3.7**
SAVF	**Savonnieres en**	**8.04**	**319**	*e*P	**Pn**	**09 53 04.4**	**+3.2**
CLL	**Collm**	**8.47**	**359**	*e*(Pn)	**Pn**	**09 53 09.0**	**+1.9**
CLL				*e*Sn	Sn	09 54 30.0	-13
CLL				*e*(Sg)	**Sg**	**09 55 38.0**	**+1.6**
	comp=Z,12nm,1.3s						
MLR	**Muntele Rosu**	**9.59**	**70**	Pn	**Pn**	**09 53 25.0**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=158,slow=22,SNR=1.8						
	comp=Z,0.9nm,0.5s						
IDI	**Anoyia**	**11.84**	**126**	Pn	**Pn**	**09 53 56.1**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=300,slow=17,SNR=1.9						
	comp=Z,2.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**16.38**	**325**	Pn	**Pn**	**09 54 52.6**	**-1.6**
	baz=138,slow=13						
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**20.19**	**18**	P	**P**	**09 55 36.4**	**-2.4**
	comp=Z,3.3nm,0.9s,baz=193,slow=5.7,SNR=2.2						
	comp=Z,3.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.19**	**202**	P	**P**	**09 57 24.5**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=14,slow=9.5,SNR=4.0						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**38.72**	**54**	P	**P**	**09 58 28.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=287,slow=5.4,SNR=2.6						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**47.78**	**60**	P	**P**	**09 59 43.3**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=308,slow=7.1,SNR=4.0						
	comp=Z,1.2nm,0.9s						
SONM	**Songino Array**	**61.81**	**50**	P	**P**	**10 01 25.2**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=308,slow=7.1,SNR=4.0						
	comp=Z,0.6nm,0.6s						

*MOS **30** 09:59:24.0±0.0, 42°.04N×46°.04E, h16km, MPVA3.9*
*NORS **30** 09:59:24.0±0.0, 42°.08N×46°.08E, h19km, MPVA3.8*
*DRS **30** 09:59:25.9±0.0, 42°.04N×45°.94E, h18km*
ISC 30 09:59:24.1±1.0, **42°.02N**±0°.02×**46°.00E**±0°.01, **h14**km±8km,
n87, σ1**907**/163, **2C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.26**	**135**	P	**Pb**	**09 59 30.7**	**+0.1**
LGD				S	**Sb**	**09 59 35.2**	**+0.3**
LGD	**Lagodekhi**	**0.26**	**135**	PG	**Pb**	**09 59 30.6**	**+0.1**
LGD				S	**Sb**	**09 59 35.2**	**+0.3**
BTLR	**Botlikh**	**0.66**	**15**	*i* Pg	**Pg**	**09 59 36.8**	**-0.3**
BTLR				*e*Sg	**Sb**	**09 59 45.8**	**-0.8**
BTLR	**Botlikh**	**0.66**	**15**	⇓*i*PG	**Pg**	**09 59 36.8**	**-0.3**
BTLR				*e*S	**Sb**	**09 59 46.8**	**+0.2**
BTLR				pmax	pmax		
	comp=Z,82nm,0.4s						
BTLR				smax	smax		
	comp=N,330nm,0.5s						
XNZR	**Khunzakh**	**0.74**	**45**	*e*Pg	**Pg**	**09 59 38.7**	**+0.1**
XNZR				*e*Sg	**Sb**	**09 59 48.5**	**-0.3**
GNBR	**Gunib**	**0.81**	**63**	*i* Pg	**Pg**	**09 59 39.8**	**0.0**
GNBR				*e*Sg	**Sg**	**09 59 50.8**	**+0.3**
GNBR	**Gunib**	**0.81**	**63**	*e*PG	**Pg**	**09 59 39.7**	**0.0**
GNBR				*e*S	**Sn**	**09 59 51.5**	**-1.4**
GNBR				pmax	pmax		
	comp=Z,105nm,0.3s						
GNBR				smax	smax		
	comp=E,497nm,0.4s						
KMKR	**Kumukh**	**0.83**	**82**	*i* Pg	**Pg**	**09 59 40.2**	**0.0**
KMKR				*e*Sg	**Sg**	**09 59 51.3**	**+0.2**
KMKR	**Kumukh**	**0.83**	**82**	*e*PG	**Pg**	**09 59 40.2**	**0.0**
KMKR				*e*S	**Sn**	**09 59 52.3**	**-1.3**
KMKR				pmax	pmax		
	comp=Z,87nm,0.2s						
KMKR				smax	smax		
	comp=E,547nm,0.2s						
SHTL	**Shatili**	**0.89**	**316**	P	**Pb**	**09 59 40.2**	**-1.2**
SHTL				S	**Sb**	**09 59 51.5**	**-1.6**
SHTL	**Shatili**	**0.89**	**316**	PG	**Pb**	**09 59 40.1**	**-1.2**
SHTL				S	**Sb**	**09 59 51.5**	**-1.6**
UNCR	**Uncukul**	**0.91**	**40**	*e*Pg	**Pg**	**09 59 41.2**	**-0.5**
UNCR				*e*Sg	**Sg**	**09 59 53.5**	**-0.2**
UNCR	**Uncukul**	**0.91**	**40**	*e*PG	**Pg**	**09 59 41.2**	**-0.5**
UNCR				*e*S	**Sn**	**09 59 54.2**	**-1.2**
UNCR				pmax	pmax		
	comp=Z,14nm,0.1s						
UNCR				smax	smax		
	comp=N,946nm,0.5s						
SEAG	**Tbilisi Sea**	**0.93**	**254**	P	**Pn**	**09 59 42.7**	**+0.1**
SEAG				S	**Sn**	**09 59 56.4**	**+0.6**
SEAG	**Tbilisi Sea**	**0.93**	**254**	PG	**Pn**	**09 59 42.7**	**+0.1**
SEAG				S	**Sn**	**09 59 56.3**	**+0.6**
DVE	**Vedeno**	**0.94**	**6**	*e*Pg	**Pb**	**09 59 41.8**	**-0.4**
DVE				*e*Sg	**Sn**	**09 59 54.9**	**-1.2**
DVE	**Vedeno**	**0.94**	**6**	*e*PG	**Pb**	**09 59 41.8**	**-0.4**
DVE				*e*S	**Sn**	**09 59 54.9**	**-1.2**
ARKR	**Arakani**	**0.94**	**52**	*e*Pg	**Pg**	**09 59 42.0**	**-0.3**
ARKR				*e*Sg	**Sg**	**09 59 54.4**	**-0.2**
ARKR	**Arakani**	**0.94**	**52**	*e*PG	**Pg**	**09 59 42.0**	**-0.3**
ARKR				*e*S	**Sn**	**09 59 55.1**	**-1.1**
ARKR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARKR				smax	smax		
	comp=E,218nm,0.4s						
BTNK	**Botanikuri**	**0.96**	**250**	P	Pb	09 59 35.2	-7.2
BTNK				S	**Sb**	**09 59 49.8**	**-5.1**
BTNK	**Botanikuri**	**0.96**	**250**	PG	Pb	09 59 35.2	-7.2
KRNR	**Karanay**	**1.05**	**40**	*e*Pg	**Pb**	**09 59 43.5**	**-0.6**
KRNR				*e*Sg	**Sb**	**09 59 57.1**	**-0.7**
KRNR	**Karanay**	**1.05**	**40**	*e*PG	**Pn**	**09 59 43.7**	**-0.7**
KRNR				*e*S	**Sn**	**09 59 57.9**	**-1.0**
KRNR				pmax	pmax		
	comp=Z,26nm,0.5s						
KRNR				smax	smax		
	comp=E,109nm,0.3s						
DLMR	**Dylym**	**1.15**	**24**	*e*Pg	**Pb**	**09 59 45.3**	**-0.4**
DLMR				*e*Sg	**Sg**	**10 00 00.9**	**-0.3**
DLMR	**Dylym**	**1.15**	**24**	*e*PG	**Pb**	**09 59 45.3**	**-0.4**
DLMR				*e*S	**Sg**	**10 00 01.9**	**+0.7**
DLMR				pmax	pmax		
	comp=Z,78nm,0.3s						
DLMR				smax	smax		
	comp=N,390nm,0.4s						
BUJR	**Buynaksk**	**1.15**	**45**	*e*Pg	**Pg**	**09 59 46.2**	**-0.1**
BUJR				*e*Sg	**Sg**	**10 00 01.7**	**+0.4**
BUJR	**Buynaksk**	**1.15**	**45**	*e*PG	**Pg**	**09 59 46.2**	**-0.1**
BUJR				*e*S	**Sg**	**10 00 01.7**	**+0.4**
DBC	**Dubki**	**1.17**	**31**	*e*Pg	**Pg**	**09 59 46.0**	**-0.7**
DBC				*e*Sg	**Sg**	**10 00 01.8**	**-0.3**
DBC	**Dubki**	**1.17**	**31**	*e*PG	**Pg**	**09 59 46.1**	**-0.7**
DBC				*e*S	**Sg**	**10 00 03.4**	**+1.4**
DBC				smax	smax		
	comp=N,93nm,0.4s						
GROC	**Groznyy**	**1.19**	**353**	*e*Pg	**Pg**	**09 59 47.4**	**+0.3**
GROC				*e*Sg	**Sg**	**10 00 04.3**	**+1.8**
GROC	**Groznyy**	**1.19**	**353**	*e*PG	**Pg**	**09 59 47.5**	**+0.5**
GROC				*e*S	**Sg**	**10 00 04.8**	**+2.3**
GUDG	**Gudauri**	**1.21**	**292**	P	**Pb**	**09 59 47.0**	**+0.1**
GUDG				S	**Sg**	**10 00 03.2**	**-0.1**
GUDG	**Gudauri**	**1.21**	**292**	PG	**Pb**	**09 59 47.0**	**+0.1**
GUDG				S	**Sg**	**10 00 03.2**	**-0.1**
KMGR	**Komgaron**	**1.33**	**322**	*e*Pg	**Pg**	**09 59 50.5**	**+0.8**
KMGR				*e*Sg	**Sg**	**10 00 09.3**	**+2.3**
KMGR	**Komgaron**	**1.33**	**322**	*e*PG	**Pg**	**09 59 50.5**	**+0.8**
KMGR				*e*S	**Sg**	**10 00 09.3**	**+2.3**
KZRT	**Kazreti**	**1.35**	**243**	P	**Pn**	**09 59 48.3**	**-0.3**
KZRT				S	**Sb**	**10 00 06.9**	**+0.5**
KZRT	**Kazreti**	**1.35**	**243**	PG	**Pn**	**09 59 48.2**	**-0.3**
KZRT				S	**Sb**	**10 00 06.8**	**+0.5**
AKT	**Akhty**	**1.41**	**112**	*e*Pg	**Pb**	**09 59 50.1**	**-0.1**
AKT				*e*Sg	**Sg**	**10 00 09.4**	**0.0**
AKT	**Akhty**	**1.41**	**112**	*e*PG	**Pb**	**09 59 50.0**	**-0.1**
AKT				*e*S	**Sg**	**10 00 10.8**	**+1.4**
AKT				pmax	pmax		
	comp=Z,29nm,0.5s						
AKT				smax	smax		
	comp=E,146nm,0.4s						
VLKR	**Vladikavkaz**	**1.41**	**317**	*e*Pg	**Pb**	**09 59 49.9**	**-0.3**
VLKR				*e*Sg	**Sg**	**10 00 08.8**	**-0.9**
VLKR	**Vladikavkaz**	**1.41**	**317**	*e*PG	**Pb**	**09 59 49.9**	**-0.3**
VLKR				*e*S	**Sg**	**10 00 08.8**	**-0.9**
MAK	**Makhachkala**	**1.46**	**49**	*e*Pg	**Pb**	**09 59 50.5**	**-0.4**
MAK				*e*Sg	**Sg**	**10 00 10.3**	**-0.8**
MAK	**Makhachkala**	**1.46**	**49**	*e*PG	**Pb**	**09 59 50.5**	**-0.4**
MAK				*e*S	**Sg**	**10 00 12.1**	**+1.0**
MAK				pmax	pmax		
	comp=Z,155nm,0.2s						
MAK				smax	smax		
	comp=E,214nm,0.7s						
LACR	**Lac**	**1.49**	**303**	*e*Pg	**Pg**	**09 59 52.4**	**-0.4**
LACR				*e*Sg	**Sg**	**10 00 11.9**	**-0.3**
LACR	**Lac**	**1.49**	**303**	*e*PG	**Pg**	**09 59 52.6**	**-0.2**
LACR				*e*S	**Sg**	**10 00 11.9**	**-0.3**
LACR				pmax	pmax		
	comp=Z,16nm,0.2s						
DMNI	**Dmanisi**	**1.52**	**244**	P	**Pn**	**09 59 51.0**	**+0.1**
DMNI				S	**Sb**	**10 00 11.8**	**+0.6**
DMNI	**Dmanisi**	**1.52**	**244**	PG	**Pn**	**09 59 50.9**	**+0.1**
DMNI				S	**Sb**	**10 00 11.8**	**+0.6**
KSMR	**Kasumkent**	**1.65**	**104**	*e*Pg	**Pb**	**09 59 53.9**	**-0.4**
KSMR				*e*Sg	**Sg**	**10 00 16.2**	**-0.9**
KSMR	**Kasumkent**	**1.65**	**104**	*e*PN	**Pb**	**09 59 53.8**	**-0.4**
KSMR				*e*S	**Sg**	**10 00 17.5**	**+0.4**
KSMR				pmax	pmax		
	comp=Z,3.0nm,0.1s						
KSMR				pmax	pmax		
	comp=E,9.0nm,0.0s						
KSMR				smax	smax		
	comp=N,156nm,0.3s						
BRNG	**Burnasheti**	**1.67**	**257**	P	**Pb**	**09 59 53.8**	**-0.8**
BRNG				S	**Sg**	**10 00 17.5**	**-0.4**
BRNG	**Burnasheti**	**1.67**	**257**	PN	**Pb**	**09 59 53.8**	**-0.8**
BRNG				S	**Sg**	**10 00 17.4**	**-0.4**
ARNR	**Ardon**	**1.71**	**313**	*e*Pg	**Pb**	**09 59 55.3**	**0.0**
ARNR				*e*Sg	**Sg**	**10 00 20.1**	**+0.8**
ARNR	**Ardon**	**1.71**	**313**	*e*PN	**Pb**	**09 59 55.3**	**0.0**
ARNR				*e*S	**Sg**	**10 00 20.1**	**+0.8**
ZEI	**Tsey**	**1.73**	**297**	*e*Pg	**Pb**	**09 59 55.8**	**+0.1**
ZEI				*e*Sg	**Sb**	**10 00 18.5**	**+1.1**
ZEI	**Tsey**	**1.73**	**297**	*e*PN	**Pb**	**09 59 55.8**	**+0.1**
ZEI				*e*S	**Sb**	**10 00 18.5**	**+1.1**
DRN	**Derbent**	**1.74**	**89**	*e*Pg	**Pb**	**09 59 55.3**	**-0.5**
DRN				*e*Sg	**Sg**	**10 00 18.6**	**-1.4**
DRN	**Derbent**	**1.74**	**89**	*e*PN	**Pb**	**09 59 55.2**	**-0.5**
DRN				*e*S	**Sg**	**10 00 20.1**	**+0.1**
DRN				pmax	pmax		
	comp=Z,54nm,1.0s						
DRN				smax	smax		
	comp=N,138nm,0.6s						
ALIG	**Mtskhetisjvari**	**1.75**	**274**	P	**Pb**	**09 59 55.1**	**-0.9**
ALIG				S	**Sb**	**10 00 18.1**	**+0.4**
ALIG	**Mtskhetisjvari**	**1.75**	**274**	PN	**Pb**	**09 59 55.0**	**-0.9**
KORR	**Kora**	**1.78**	**307**	*e*Pg	**Pb**	**09 59 55.5**	**-0.9**
KORR				*e*Sg	**Sg**	**10 00 20.6**	**-0.7**
KORR	**Kora**	**1.78**	**307**	*e*PN	**Pb**	**09 59 55.5**	**-0.9**
KORR				*e*S	**Sg**	**10 00 20.6**	**-0.7**
STDR	**Stavd-Durt**	**1.96**	**314**	*e*Pg	**Pb**	**09 59 58.4**	**-1.1**
STDR				*e*Sg	**Sg**	**10 00 26.1**	**-1.0**
STDR	**Stavd-Durt**	**1.96**	**314**	*e*PN	**Pb**	**09 59 58.4**	**-1.1**
STDR				*e*S	**Sg**	**10 00 26.1**	**-1.0**
ONI	**Oni**	**1.97**	**288**	P	**Pb**	**09 59 59.4**	**-0.3**
ONI				S	**Sb**	**10 00 25.1**	**+0.9**
ONI	**Oni**	**1.97**	**288**	PN	**Pb**	**09 59 59.4**	**-0.3**
AKH	**Akhalkalaki**	**1.97**	**253**	P	**Pb**	**09 59 58.7**	**-1.1**
AK

CSNT				AML	AML	
	comp=N,106μm,1.3s					
CSNT				AML	AML	
	comp=E,101μm,1.1s					
CSNT				AML	AML	
	comp=N,106μm,0.7s					
MPPT	**Montemurlo**	**0.35**	**8**	P	Pb	10 04 16.0 -0.8
MPPT				S	Sb	10 04 21.5 -1.0
MPPT				AML	AML	
	comp=E,86μm,1.4s					
MPPT				AML	AML	
	comp=N,87μm,0.8s					
MPPT				AML	AML	
	comp=E,86μm,1.4s					
MPPT				AML	AML	
	comp=N,87μm,0.8s					
MPPT				AML	AML	
	comp=E,86μm,0.6s					
PII	**Pisa**	**0.38**	**288**	P	Pg	10 04 16.2 +0.7
PII				S	Sg	10 04 21.1 +0.6
PII	**Pisa**	**0.38**	**288**	⇓P	Pg	10 04 16.2 +0.7
PII				S	Sg	10 04 21.1 +0.5
PII				AML	AML	
	comp=N,209μm,1.4s					
PII				AML	AML	
	comp=E,168μm,0.2s					
PII				AML	AML	
	comp=N,209μm,0.6s					
MTCR	**Monte La Croce**	**0.42**	**358**	P	Pb	10 04 17.4 -0.5
MTCR				S	Sb	10 04 23.3 -1.2
MTCR	**Monte La Croce**	**0.42**	**358**	P	Pb	10 04 17.4 -0.6
MTCR				S	Sb	10 04 23.5 -1.0
RUFI	**Rufina**	**0.42**	**57**	P	Pb	10 04 17.4 -0.6
RUFI				S	Sb	10 04 23.3 -1.2
RUFI	**Rufina**	**0.42**	**57**	P	Pb	10 04 17.4 -0.6
RUFI				S	Sb	10 04 23.4 -1.1
POPM	**Popiglio**	**0.48**	**337**	P	Pb	10 04 18.4 -0.4
POPM				S	Sb	10 04 25.3 -0.7
MAIM	**Mastiano**	**0.49**	**309**	P	Pg	10 04 18.3 +0.6
MAIM				S	Sg	10 04 24.7 +0.6
MAIM	**Mastiano**	**0.49**	**309**	⇓P	Pg	10 04 18.3 +0.6
MAIM				S	Sg	10 04 24.9 +0.8
MAIM				AML	AML	
	comp=E,30μm,1.5s					
MAIM				AML	AML	
	comp=E,30μm,0.5s					
MAIM				AML	AML	
	comp=N,34μm,1.2s					
TRIF	**Trifonti**	**0.50**	**190**	P	Pg	10 04 18.4 +0.5
TRIF				AML	AML	
	comp=E,120μm,1.1s					
TRIF				AML	AML	
	comp=N,102μm,1.1s					
TRIF				AML	AML	
	comp=E,120μm,0.9s					
BDI	**Bagni Di Lucca**	**0.55**	**326**	P	Pb	10 04 19.6 -0.5
BDI				AML	AML	
	comp=N,18μm,0.3s					
BDI				AML	AML	
	comp=E,24μm,0.3s					
CARD	**Cardoso**	**0.57**	**317**	P	Pg	10 04 19.8 +0.5
CARD				S	Sg	10 04 27.4 +0.7
CARD	**Cardoso**	**0.57**	**317**	P	Pg	10 04 19.7 +0.4
CARD				AML	AML	
	comp=E,54μm,1.4s					
CARD				AML	AML	
	comp=N,41μm,1.2s					
CARD				AML	AML	
	comp=E,54μm,0.6s					
ASQU	**Asqua**	**0.59**	**71**	P	Pb	10 04 20.5 -0.3
ASQU				S	Sb	10 04 28.9 -0.5
ASQU	**Asqua**	**0.59**	**71**	P	Pb	10 04 20.5 -0.3
LMD	**Lutirano**	**0.68**	**47**	P	Pb	10 04 22.3 -0.1
LMD				S	Sb	10 04 32.6 +0.6
LMD	**Lutirano**	**0.68**	**47**	P	Pb	10 04 22.4 0.0
VLC	**Villacollemand**	**0.72**	**321**	P	Pb	10 04 22.5 -0.4
VLC				S	Sb	10 04 32.7 -0.3
VLC	**Villacollemand**	**0.72**	**321**	P	Pb	10 04 22.5 -0.4
SARO	**Sassorosso**	**0.73**	**322**	P	Pb	10 04 22.8 -0.4
CASP	**Castiglione de**	**0.82**	**188**	P	Pb	10 04 25.2 +0.4
CASP				AML	AML	
	comp=E,32μm,0.3s					
CASP				AML	AML	
	comp=E,32μm,1.7s					
CASP				AML	AML	
	comp=N,26μm,0.8s					
EQUI	**Equi**	**0.84**	**312**	P	Pg	10 04 24.6 +0.3
EQUI				S	Sg	10 04 35.4 +0.2
EQUI	**Equi**	**0.84**	**312**	P	Pg	10 04 24.6 +0.2
GROG	**Isola di Gorgo**	**0.84**	**258**	P	Pb	10 04 25.0 0.0
GROG				S	Sb	10 04 35.8 -0.6
PLMA	**Palmaria, Port**	**0.95**	**298**	P	Pb	10 04 26.9 0.0
PLMA				S	Sb	10 04 40.1 +0.4
ATCC	**AVT- Casa Cast**	**1.25**	**109**	⇓P	Pn	10 04 30.5 -1.6
ATCC				AML	AML	
	comp=N,976μm,0.4s					
ATCC				AML	AML	
	comp=E,1185μm,0.3s					
ATCC				AML	AML	
	comp=N,976μm,1.6s					
MSSA	**Maissana**	**1.29**	**304**	P	Pn	10 04 32.5 -0.1
EL6	**Elcito**	**1.54**	**100**	⇑P	Pg	10 04 37.7 0.0
T1245	**Castelsantange**	**1.75**	**115**	⇓P	Pb	10 04 39.9 -0.8
T1245				AML	AML	
	comp=E,22050μm,0.2s					
T1245				AML	AML	
	comp=N,35350μm,0.4s					
T1245				AML	AML	
	comp=N,36900μm,0.3s					
T1245				AML	AML	
	comp=E,22350μm,0.2s					
INTR	**Introdacqua**	**2.66**	**126**	⇑P	Pb	10 04 56.9 +0.9
VARE	**Varese**	**2.77**	**325**	S	Sb	10 05 33.0 +0.9

ROM 30 10:04:41.3±0.1, 42°.888N±0°.006×13°.148E±0°.007, h11km, ML2.8/20, 8C-7D, Error ellipse: s-maj=0.8km s-min=0.3km az=142.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**137**	P	Pg	10 04 43.7	+0.1
T1245				S	Sg	10 04 46.0	+0.8
T1245				AML	AML		
	comp=E,22050μm,0.2s						
T1245				AML	AML		
	comp=N,36850μm,0.3s						
T1245				AML	AML		
	comp=E,22350μm,0.2s						
T1245				AML	AML		
	comp=N,36900μm,0.3s						
T1245				AML	AML		
	comp=N,35350μm,0.4s						
T1245				AML	AML		
	comp=E,22000μm,0.2s						
T1245				AML	AML		
	comp=E,20432μm,0.2s						
T1245				AML	AML		
	comp=N,31027μm,0.1s						
T1245				AML	AML		
	comp=E,20887μm,0.2s						
T1245				AML	AML		
	comp=N,29025μm,0.1s						
MMO1	**Montemonaco**	**0.13**	**85**	P	Pg	10 04 44.7	+0.2
MMO1				S	Sg	10 04 47.5	+0.6
AM05	**Amandola Campo**	**0.17**	**59**	P	Pg	10 04 45.7	+0.5
AM05				S	Sg	10 04 49.0	+1.2
AM05				AML	AML		
	comp=E,1320μm,0.4s						
AM05				AML	AML		
	comp=N,1056μm,0.4s						
AM05				AML	AML		
	comp=E,5260μm,0.5s						
AM05				AML	AML		
	comp=N,402μm,0.1s						
AM05				AML	AML		
	comp=E,1316μm,0.4s						
AM05				AML	AML		
	comp=N,1058μm,0.4s						
AM05				AML	AML		
	comp=N,922μm,0.1s						
AM05				AML	AML		
	comp=N,401μm,0.1s						
AM05				AML	AML		
	comp=E,3662μm,0.1s						
AM05				AML	AML		
	comp=E,1204μm,0.1s						
T1241	**Roccafluvione,**	**0.21**	**99**	⇑P	Pb	10 04 46.6	-0.6
T1241				S	Sg	10 04 49.5	+0.6
T1241				AML	AML		
	comp=E,4685μm,0.3s						
T1241				AML	AML		
	comp=N,2545μm,0.7s						
GUMA	**Gualdo di Mace**	**0.22**	**38**	P	Pb	10 04 46.8	-0.6
GUMA				S	Sg	10 04 50.9	+1.7
GUMA				AML	AML		
	comp=E,7145μm,0.6s						
GUMA				AML	AML		
	comp=E,7570μm,0.3s						
GUMA				AML	AML		
	comp=N,8065μm,0.5s						
GUMA				AML	AML		
	comp=N,6400μm,0.4s						
GUMA				AML	AML		
	comp=E,7570μm,0.3s						
GUMA				AML	AML		
	comp=N,5135μm,0.3s						
GUMA				AML	AML		
	comp=N,5451μm,0.4s						
GUMA				AML	AML		
	comp=E,6916μm,0.4s						
T1215	**Vallo di Nera,**	**0.22**	**247**	P	Pg	10 04 45.9	-0.1
T1215				S	Sg	10 04 50.4	+1.2
T1215				AML	AML		
	comp=E,2310μm,1.0s						
T1215				AML	AML		
	comp=N,2620μm,0.1s						
T1215				AML	AML		
	comp=N,2615μm,0.1s						
T1215				AML	AML		
	comp=E,2310μm,1.0s						
T1215				AML	AML		
	comp=N,1391μm,0.2s						
T1215				AML	AML		
	comp=E,1242μm,0.1s						
T1215				AML	AML		
	comp=E,1251μm,0.1s						
T1215				AML	AML		
	comp=N,1380μm,0.2s						
T1217	**Poggiodomo (PG**	**0.24**	**222**	P	Pb	10 04 47.0	-0.7
T1217				S	Sg	10 04 50.9	+1.3
T1217				AML	AML		
	comp=E,3545μm,0.7s						
T1217				AML	AML		
	comp=N,4555μm,0.2s						
T1217				AML	AML		
	comp=E,3425μm,0.7s						
T1217				AML	AML		
	comp=N,4420μm,0.2s						
T1217				AML	AML		
	comp=E,4320μm,1.2s						
T1217				AML	AML		
	comp=N,5895μm,0.3s						
T1217				AML	AML		
	comp=E,4335μm,1.2s						
T1217				AML	AML		
	comp=N,6060μm,0.7s						
T1217				AML	AML		
	comp=E,4330μm,1.2s						
T1217				AML	AML		
	comp=N,6065μm,0.7s						
T1217				AML	AML		
	comp=N,5900μm,0.3s						
T1217				AML	AML		
	comp=E,4305μm,1.2s						
T1217				AML	AML		
	comp=E,4335μm,1.2s						
T1217				AML	AML		
	comp=E,3241μm,0.2s						
T1217				AML	AML		
	comp=E,3379μm,0.2s						
T1217				AML	AML		
	comp=N,4421μm,0.2s						
T1217				AML	AML		
	comp=N,4554μm,0.2s						
T1204	**Amatrice, Fraz**	**0.25**	**150**	P	Pg	10 04 46.8	+0.4
T1204				S	Sg	10 04 51.0	+1.1
T1204				AML	AML		
	comp=E,8685μm,0.2s						
T1204				AML	AML		
	comp=N,7420μm,0.2s						
T1204				AML	AML		
	comp=E,12455μm,1.1s						
T1204				AML	AML		
	comp=N,9355μm,1.0s						
T1243	**Rocca Santa Ma**	**0.29**	**131**	P	Pg	10 04 47.5	+0.2
LNSS	**Leonessa**	**0.30**	**196**	⇑P	Pg	10 04 47.7	+0.3
LNSS				S	Sb	10 04 52.7	-0.9
LNSS				AML	AML		
	comp=E,2260μm,1.5s						
LNSS				AML	AML		
	comp=N,5060μm,0.2s						
LNSS				AML	AML		
	comp=N,6980μm,0.1s						
LNSS				AML	AML		
	comp=N,6985μm,0.1s						
LNSS				AML	AML		
	comp=E,2255μm,1.5s						
LNSS				AML	AML		
	comp=N,3554μm,0.1s						
LNSS				AML	AML		
	comp=E,1745μm,0.2s						
MNTP	**Montappone**	**0.34**	**43**	⇓P	Pb	10 04 49.6	+0.2
MNTP				AML	AML		
	comp=E,1795μm,0.3s						
MNTP				AML	AML		
	comp=N,1740μm,0.3s						
MNTP				AML	AML		
	comp=E,1795μm,0.3s						
MNTP				AML	AML		
	comp=N,1745μm,0.3s						
MNTP				AML	AML		
	comp=E,1741μm,0.2s						
MNTP				AML	AML		
	comp=N,1144μm,0.3s						
GAG1	**Gagliole**	**0.35**	**350**	⇓P	Pb	10 04 49.5	-0.2
GAG1				AML	AML		
	comp=E,1724μm,0.4s						
GAG1				AML	AML		
	comp=N,1757μm,0.3s						
RM33	**Pellescritta (**	**0.38**	**173**	P	Pg	10 04 49.0	+0.1
RM33				AML	AML		
	comp=E,2395μm,0.2s						
RM33				AML	AML		
	comp=N,1625μm,0.3s						
RM33				AML	AML		
	comp=E,2330μm,0.2s						
RM33				AML	AML		
	comp=N,1665μm,0.3s						
RM33				AML	AML		
	comp=E,2335μm,0.2s						
RM33				AML	AML		
	comp=N,1670μm,0.3s						
RM33				AML	AML		
	comp=E,3850μm,0.1s						
RM33				AML	AML		
	comp=N,3455μm,0.3s						
RM33				AML	AML		
	comp=N,3540μm,0.3s						
RM33				AML	AML		
	comp=E,3665μm,0.2s						
RM33				AML	AML		
	comp=N,1520μm,0.2s						
RM33				AML	AML		
	comp=N,1574μm,0.2s						
SNTG	**Esanatoglia**	**0.40**	**338**	⇓P	Pb	10 04 49.8	-0.6
SNTG				AML	AML		
	comp=E,664μm,0.5s						
SNTG				AML	AML		
	comp=N,666μm,0.8s						
SNTG				AML	AML		
	comp=E,620μm,0.5s						
SNTG				AML	AML		
	comp=E,620μm,0.5s						
SNTG				AML	AML		
	comp=N,638μm,0.6s						
CAMP	**Campotosto**	**0.40**	**151**	⇑P	Pg	10 04 49.1	-0.1
CAMP				AML	AML		
	comp=E,2140μm,0.3s						
CAMP				AML	AML		
	comp=E,2135μm,0.3s						
CAMP				AML	AML		
	comp=N,780μm,0.8s						
CAMP				AML	AML		
	comp=E,2138μm,0.3s						
T1211	**Morro Reatino**	**0.41**	**211**	⇑P	Pg	10 04 50.0	+0.5
T1211				S	Sb	10 04 56.3	-0.8
T1211				AML	AML		
	comp=E,2240μm,0.1s						
T1211				AML	AML		
	comp=N,3200μm,0.2s						
T1211				AML	AML		
	comp=N,3202μm,0.2s						
T1211				AML	AML		
	comp=N,3199μm,0.3s						
T1211				AML	AML		
	comp=E,2298μm,0.1s						
T1211				AML	AML		
	comp=E,2242μm,0.1s						
ARRO	**Arrone**	**0.42**	**223**	⇑P	Pg	10 04 50.1	+0.6
ARRO				AML	AML		
	comp=E,2015μm,0.2s						
ARRO				AML	AML		
	comp=N,1360μm,0.2s						
TERO	**Teramo**	**0.43**	**128**	⇑P	Pg	10 04 48.0	-1.7
TERO				AML	AML		
	comp=E,1282μm,1.5s						
TERO				AML	AML		
	comp=N,2030μm,0.4s						
TERO				AML	AML		
	comp=N,2195μm,0.4s						
TERO				AML	AML		
	comp=E,1425μm,1.5s						
TERO				AML	AML		
	comp=E,1138μm,0.2s						
TERO				AML	AML		
	comp=N,1624μm,0.3s						
TERO				AML	AML		
	comp=E,1229μm,0.1s						
TERO				AML	AML		
	comp=N,1542μm,0.3s						
EL6	**Elcito**	**0.44**	**356**	⇓P	Pb	10 04 50.7	-0.5
EL6				AML	AML		
	comp=N,611μm,0.2s						
EL6				AML	AML		
	comp=E,902μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.46**	**166**	P	Pg	10 04 50.1	-0.2
T1247				S	Sb	10 04 57.7	-0.6
T1247				AML	AML		
	comp=E,1415μm,0.6s						
T1247				AML	AML		
	comp=N,1940μm,0.1s						
T1247				AML	AML		
	comp=E,1575μm,0.5s						
T1247				AML	AML		
	comp=N,2175μm,0.2s						
T1247				AML	AML		
	comp=E,1217μm,0.1s						
T1247				AML	AML		
	comp=N,1941μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.48**	**309**	P	Pb	10 04 51.9	+0.2
ATCC				AML	AML		
	comp=E,1180μm,0.3s						
ATCC				AML	AML		
	comp=N,975μm,0.4s						
ATCC				AML	AML		
	comp=E,1185μm,0.3s						
ATCC				AML	AML		
	comp=N,976μm,0.4s						
ATCC				AML	AML		
	comp=E,1183μm,0.3s						
ATCC				AML	AML		
	comp=N,758μm,0.3s						
CESX	**Cesi**	**0.50**	**237**	P	Pg	10 04 51.3	+0.2
CESX				S	Sb	10 04 60.0	+0.5
CESX				AML	AML		
	comp=E,1680μm,0.5s						
CESX				AML	AML		
	comp=N,1720μm,0.4s						
CESX				AML	AML		
	comp=N,1629μm,0.4s						
CESX				AML	AML		
	comp=E,1682μm,0.5s						
GIGS	**Gran Sasso**	**0.54**	**145**	P	Pg	10 04 49.8	-2.0
GIGS				AML	AML		
	comp=E,428μm,0.5s						
GIGS				AML	AML		
	comp=E,428μm,0.5s						
GIGS				AML	AML		
	comp=N,318μm,0.6s						
GIGS				AML	AML		
	comp=E,276μm,0.4s						
GIGS				AML	AML		
	comp=N,192μm,0.1s						
FIAM	**Fiamignano**	**0.62**	**182**	S	Sb	10 05 03.0	0.0
ATFO	**Monte Foce - G**	**0.64**	**319**	⇓P	Pb	10 04 54.2	-0.3
ATFO				AML	AML		
	comp=E,340μm,0.6s						
ATFO				AML	AML		
	comp=N,274μm,0.4s						
ATFO				AML	AML		
	comp=E,267μm,0.6s						
ATFO				AML	AML		
	comp=N,252μm,0.3s						
FAGN	**Fagnano**	**0.70**	**152**	S	Sb	10 05 06.0	+0.8
VCEL	**Villa Celiera**	**0.71**	**134**	P	Pg	10 04 54.7	-0.3
VCEL				S	Sb	10 05 05.7	+0.2
ATVO	**AVT- Monte Val**	**0.73**	**313**	S	Sn	10 05 08.0	-0.9
ATMI	**Monte Miggiano**	**0.78**	**305**	S	Sn	10 05 09.0	-1.1
T0110	**Collepietro**	**0.81**	**145**	⇓P	Pg	10 04 56.7	-0.3
T0110				S	Sb	10 05 08.0	-0.4
T0110				AML	AML		
	comp=E,778μm,0.4s						
T0110				AML	AML		
	comp=N,764μm,0.4s						
T0110				AML	AML		
	comp=E,777μm,0.4s						
T0110				AML	AML		
	comp=E,777μm,0.4s						
T0110				AML	AML		
	comp=N,763μm,0.4s						
SACS	**San Casciano d**	**0.91**	**268**	⇑P	Pn	10 05 00.5	+0.4
SACS				AML	AML		
	comp=E,140μm,1.4s						
SACS				AML	AML		
	comp=N,156μm,0.6s						
SACS				AML	AML		
	comp=E,144μm,0.6s						
SACS				AML	AML		
	comp=N,116μm,0.7s						
CAFI	**Castiglion Fio**	**0.97**	**297**	S	Sn	10 05 16.0	+1.3
TOLF	**Tolfa**	**1.18**	**226**	⇓P	Pg	10 05 04.7	+0.7
TOLF				AML	AML		
	comp=E,121μm,0.6s						
TOLF				AML	AML		
	comp=N,133μm,0.4s						
TOLF				AML	AML		
	comp=N,133μm,0.4s						
TOLF				AML	AML		
	comp=E,121μm,0.6s						
LAV9	**Lanuvio**	**1.25**	**196**	P	Pn	10 05 02.4	-2.3
LAV9				AML	AML		
	comp=E,634μm,0.6s						
LAV9				AML	AML		
	comp=N,537μm,1.2s						
LIK	**San Giovanni I**	**1.42**	**167**	⇑P	Pg	10 05 08.5	0.0
PAOL	**Paolisi**	**2.14**	**150**	S	Sn	10 05 42.0	-1.5
FERS	**Ferrara-Casagl**	**2.33**	**331**	P	Pg	10 05 27.4	+1.6

*IDC **30** 10:07:10.1±0.8, 32°.78N×95°.08E, h0km, mb3.6/9, mbtmp3.7/13, ML3.9/4, Error ellipse: s-maj=39.7km s-min=15.8km az=58.0*

ISC 30 10:07:15.0±0.8, 32°.79N±0°.09×95°.0E±0°.1, h35km, n20, σ0°70/20, mb3.8/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**9.19**	**239**	*e*P	**Pn**	**10 09 25.0**	**-0.4**
GUN	**Gumba**	**9.27**	**241**	*e*P	**Pn**	**10 09 26.5**	**0.0**
RAMN	**Ramite**	**9.34**	**234**	*e*P	**Pn**	**10 09 27.0**	**-0.4**
PKI	**Pulchoki** 6.5nm,0.4s	**9.81**	**240**	*e*P	**Pn**	**10 09 33.5**	**-0.3**
PKIN	**Phulchoki** 15nm,0.6s	**9.81**	**241**	*e*P	**Pn**	**10 09 33.4**	**-0.5**
DMN	**Daman**	**10.01**	**242**	*e*P	**Pn**	**10 09 36.2**	**-0.3**
DANN	**Dangsing** 10nm,0.5s	**10.66**	**248**	*e*P	**Pn**	**10 09 45.4**	**-0.1**

CMAR	Chiang Mai Arr	14.70	165	Pn	Pn	10 10 40.3	-0.1
	0.8nm,0.3s,baz=338,slow=12,SNR=3.0						
	2.6nm,0.3s						
MKAR	Makanchi Array	17.04	329	P	Pn	10 11 09.8	-0.6
	0.1nm,0.3s,baz=153,slow=13,SNR=1.9						
	0.3nm,0.5s						
SONM	Songino Array	17.32	26	P	Pn	10 11 13.0	-1.1
	0.2nm,0.3s,baz=212,slow=14,SNR=9.1						
	1.1nm,0.5s						
AAK	Ala-Archa	18.94	307	P	Pn	10 11 34.1	+0.1
	0.3nm,0.3s,baz=110,slow=12,SNR=1.6						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	21.57	331	P	P	10 12 02.0	+0.6
	2.3nm,0.6s,baz=138,slow=11,SNR=23						
	2.3nm,0.6s						
ZALV	Zalesovo Beam	22.37	344	P	P	10 12 10.0	+0.2
	0.6nm,0.4s,baz=125,slow=7.6,SNR=2.2						
	0.6nm,0.4s						
BVAR	Borovoye Array	26.87	326	P	P	10 12 54.3	+2.1
	0.2nm,0.6s,baz=125,slow=7.2,SNR=1.9						
	0.2nm,0.6s						
ARCES	ARCESS Array B	52.54	335	P	P	10 16 24.8	+0.4
	1.1nm,0.8s,baz=83,slow=8.4,SNR=1.0						
	1.1nm,0.8s						
NOA	NORSAR Array B	59.00	326	P	P	10 17 10.9	0.0
	0.7nm,0.7s,baz=78,slow=7.0,SNR=2.3						
	0.7nm,0.7s						
WRA	Warramunga Arr	64.51	139	P	P	10 17 48.6	+0.2
	0.6nm,0.8s,baz=306,slow=12,SNR=16						
	0.6nm,0.8s						
ASAR	Alice Springs	67.29	141	P	P	10 18 07.0	+0.7
	0.5nm,0.5s,baz=324,slow=6.5,SNR=11						
	0.5nm,0.5s						
ILAR	Eielson Array	71.52	23	P	P	10 18 32.0	+0.2
	0.6nm,0.8s,baz=293,slow=6.5,SNR=5.0						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	85.75	283	P	P	10 19 50.3	-0.7
	0.5nm,0.9s,baz=46,slow=6.2,SNR=2.4						
	0.5nm,0.9s						

ROM 30 10:14:49.7±0.1, 42°.704N±0°.002×13°.182E±0°.002, h11km, ML3.4/24, 14C-11D, Error ellipse: s-maj=0.9km s-min=0.2km az=307.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	Leonessa	0.14	226	P	Pg	10 14 53.7	+0.5
LNSS				S	Sg	10 14 56.5	+0.9
LNSS	comp=E,18100μm,0.3s			AML	AML		
LNSS	comp=N,53600μm,0.3s			AML	AML		
LNSS	comp=E,34300μm,0.3s			AML	AML		
LNSS	comp=N,91400μm,0.3s			AML	AML		
LNSS	comp=N,49590μm,0.2s			AML	AML		
LNSS	comp=E,18135μm,0.3s			AML	AML		
T1217	Poggiodomo (PG	0.18	273	⇑P	Pg	10 14 54.4	+0.6
T1217				S	Sg	10 14 57.5	+0.9
T1217	comp=E,4935μm,0.6s			AML	AML		
T1217	comp=N,10430μm,0.4s			AML	AML		
T1217	comp=E,5110μm,0.6s			AML	AML		
T1217	comp=N,10375μm,0.4s			AML	AML		
T1217	comp=E,4930μm,0.6s			AML	AML		
T1217	comp=N,10410μm,0.4s			AML	AML		
T1217	comp=E,5090μm,0.6s			AML	AML		
T1217	comp=N,10450μm,0.4s			AML	AML		
T1217	comp=E,15250μm,0.8s			AML	AML		
T1217	comp=N,25150μm,0.3s			AML	AML		
T1217	comp=E,15300μm,0.8s			AML	AML		
T1217	comp=N,24700μm,0.4s			AML	AML		
T1217	comp=N,25100μm,0.3s			AML	AML		
T1217	comp=N,24650μm,0.4s			AML	AML		
T1217	comp=E,15250μm,0.8s			AML	AML		
T1217	comp=E,15350μm,0.8s			AML	AML		
T1217	comp=E,3610μm,0.1s			AML	AML		
T1217	comp=E,3713μm,0.1s			AML	AML		
T1217	comp=N,7969μm,0.2s			AML	AML		
T1217	comp=N,7714μm,0.2s			AML	AML		
RM33	Pellescritta (	0.20	173	⇑P	Pg	10 14 54.5	+0.6
RM33				S	Sg	10 14 57.9	+1.0
RM33	comp=E,13700μm,0.7s			AML	AML		
RM33	comp=N,12200μm,0.9s			AML	AML		
T1243	Rocca Santa Ma	0.20	92	P	Pg	10 14 54.6	+0.6
MMO1	Montemonaco	0.22	28	⇑P	Pb	10 14 55.2	-0.6
CAMP	Campotosto	0.24	135	⇑P	Pg	10 14 55.2	+0.5
CAMP	comp=E,1635μm,0.8s			AML	AML		
CAMP	comp=N,1225μm,0.4s			AML	AML		
CAMP	comp=E,10500μm,0.8s			AML	AML		
CAMP	comp=N,6515μm,0.2s			AML	AML		
CAMP	comp=E,1338μm,0.3s			AML	AML		
CAMP	comp=N,1227μm,0.4s			AML	AML		
T1241	Roccafluvione,	0.24	50	⇓P	Pb	10 14 55.9	-0.1
T1241	comp=E,7025μm,1.2s			AML	AML		
T1241	comp=N,3060μm,1.5s			AML	AML		
T1241	comp=E,7020μm,0.3s			AML	AML		
T1241	comp=N,3170μm,0.5s			AML	AML		
T1241	comp=E,99250μm,0.2s			AML	AML		
T1241	comp=N,36550μm,0.3s			AML	AML		
T1241	comp=E,96000μm,0.2s			AML	AML		
T1241	comp=N,45650μm,0.3s			AML	AML		
T1241	comp=E,99100μm,0.2s			AML	AML		
T1241	comp=E,98900μm,0.2s			AML	AML		
T1241	comp=E,96050μm,0.2s			AML	AML		
T1241	comp=E,7018μm,0.3s			AML	AML		
T1241	comp=N,2950μm,0.4s			AML	AML		
T1241	comp=N,3126μm,0.4s			AML	AML		
T1241	comp=E,6872μm,0.3s			AML	AML		
T1215	Vallo di Nera,	0.25	293	⇑P	Pb	10 14 56.5	+0.2
T1215	comp=E,2415μm,0.4s			AML	AML		
T1215	comp=E,2410μm,0.4s			AML	AML		
T1215	comp=N,2110μm,0.8s			AML	AML		
T1215	comp=E,14550μm,0.4s			AML	AML		
T1215	comp=E,13975μm,0.4s			AML	AML		
T1215	comp=N,13815μm,0.2s			AML	AML		
T1215	comp=E,13960μm,0.4s			AML	AML		
T1215	comp=N,12900μm,0.2s			AML	AML		
T1215	comp=E,1548μm,0.1s			AML	AML		
T1215	comp=N,1419μm,0.1s			AML	AML		
T1215	comp=E,1500μm,0.1s			AML	AML		
T1215	comp=N,1465μm,0.1s			AML	AML		
T1247	Pizzolo (AQ)	0.28	162	⇑P	Pg	10 14 55.9	+0.5
T1247				S	Sb	10 15 00.4	-1.0
T1247	comp=E,6340μm,0.3s			AML	AML		
T1247	comp=N,5500μm,0.7s			AML	AML		
T1247	comp=E,9280μm,0.4s			AML	AML		
T1247	comp=E,9275μm,0.4s			AML	AML		
T1247	comp=N,9425μm,0.5s			AML	AML		
T1247	comp=E,6342μm,0.3s			AML	AML		
T1247	comp=N,4396μm,0.4s			AML	AML		
T1211	Morro Reatino	0.30	235	⇑P	Pg	10 14 55.6	-0.2
T1211				S	Sg	10 15 00.7	+1.0
T1211	comp=E,4590μm,1.0s			AML	AML		
T1211	comp=N,5255μm,0.6s			AML	AML		
T1211	comp=E,4525μm,0.1s			AML	AML		
T1211	comp=N,5265μm,0.6s			AML	AML		
T1211	comp=N,5255μm,0.6s			AML	AML		
T1211	comp=N,5290μm,0.6s			AML	AML		
T1211	comp=E,8050μm,1.5s			AML	AML		
T1211	comp=E,8310μm,1.5s			AML	AML		
T1211	comp=N,16700μm,1.2s			AML	AML		
T1211	comp=N,17000μm,1.2s			AML	AML		
T1211	comp=E,4521μm,0.1s			AML	AML		
T1211	comp=N,5081μm,0.3s			AML	AML		
T1211	comp=E,4498μm,0.1s			AML	AML		
T1211	comp=N,5178μm,0.3s			AML	AML		
TERO	Teramo	0.32	104	P	Pg	10 14 56.5	+0.3
TERO				S	Sg	10 15 01.2	+0.7
TERO	comp=E,3975μm,0.3s			AML	AML		
TERO	comp=N,3930μm,0.6s			AML	AML		
TERO	comp=N,4355μm,0.6s			AML	AML		
TERO	comp=E,3980μm,0.3s			AML	AML		
TERO	comp=N,10540μm,0.1s			AML	AML		
TERO	comp=E,4390μm,0.3s			AML	AML		
TERO	comp=N,11485μm,0.1s			AML	AML		
TERO	comp=E,9860μm,0.3s			AML	AML		
TERO	comp=N,11060μm,0.2s			AML	AML		
TERO	comp=E,10520μm,0.3s			AML	AML		
TERO	comp=N,11885μm,0.2s			AML	AML		
TERO	comp=N,11055μm,0.2s			AML	AML		
TERO	comp=E,9885μm,0.3s			AML	AML		
TERO	comp=N,4032μm,0.2s			AML	AML		
TERO	comp=E,3586μm,0.2s			AML	AML		
TERO	comp=E,3983μm,0.1s			AML	AML		
TERO	comp=N,3672μm,0.2s			AML	AML		
ARRO	Arrone	0.33	248	P	Pg	10 14 56.8	+0.4
ARRO	comp=E,2030μm,0.2s			AML	AML		
ARRO	comp=N,1835μm,0.7s			AML	AML		
ARRO	comp=E,7665μm,0.6s			AML	AML		
ARRO	comp=N,5830μm,0.9s			AML	AML		
ARRO	comp=N,1700μm,0.2s			AML	AML		
ARRO	comp=E,1839μm,0.1s			AML	AML		
GIGS	Gran Sasso	0.38	131	⇓P	Pg	10 14 57.6	+0.3
GIGS				S	Sg	10 15 03.3	+0.9
GIGS	comp=E,554μm,0.8s			AML	AML		
GIGS	comp=N,440μm,0.1s			AML	AML		
GIGS	comp=E,1735μm,0.3s			AML	AML		
GIGS	comp=N,1275μm,0.2s			AML	AML		
GIGS	comp=N,439μm,0.1s			AML	AML		
GIGS	comp=E,457μm,0.2s			AML	AML		
AQU	L'Aquila	0.39	155	P	Pg	10 14 57.7	+0.4
AQU	comp=E,1305μm,0.3s			AML	AML		
AQU	comp=N,1295μm,0.6s			AML	AML		
AQU	comp=E,1325μm,0.3s			AML	AML		
AQU	comp=N,1300μm,0.7s			AML	AML		
AQU	comp=E,3170μm,0.9s			AML	AML		
AQU	comp=E,3365μm,0.9s			AML	AML		
AQU	comp=N,3395μm,0.9s			AML	AML		
AQU	comp=N,3700μm,0.9s			AML	AML		
AQU	comp=E,3165μm,0.9s			AML	AML		
AQU	comp=N,1024μm,0.2s			AML	AML		
AQU	comp=E,1307μm,0.3s			AML	AML		
AQU	comp=E,1324μm,0.3s			AML	AML		
AQU	comp=N,1087μm,0.2s			AML	AML		
OFFI	Offida	0.44	58	⇑P	Pb	10 14 59.7	+0.2
OFFI	comp=E,3255μm,1.2s			AML	AML		
OFFI	comp=N,5575μm,0.5s			AML	AML		
OFFI	comp=N,12550μm,0.3s			AML	AML		
OFFI	comp=E,10600μm,0.7s			AML	AML		
OFFI	comp=E,2953μm,0.5s			AML	AML		
OFFI	comp=N,5576μm,0.5s			AML	AML		
FIAM	Fiamignano	0.44	186	⇑P	Pg	10 14 58.5	+0.1
FIAM				S	Sb	10 15 05.2	-0.9
FIAM	comp=E,2202μm,0.2s			AML	AML		
CESX	Cesi	0.45	258	P	Pg	10 14 58.2	-0.4
CESX	comp=E,1215μm,0.3s			AML	AML		
CESX	comp=N,1845μm,0.3s			AML	AML		
CESX	comp=E,5180μm,0.6s			AML	AML		
CESX	comp=N,4965μm,0.4s			AML	AML		
CESX	comp=E,1097μm,0.3s			AML	AML		
CESX	comp=N,1845μm,0.3s			AML	AML		
MNTP	Montappone	0.48	26	⇓P	Pb	10 14 59.8	-0.4
MNTP	comp=E,2420μm,1.1s			AML	AML		
MNTP	comp=N,1960μm,0.6s			AML	AML		
MNTP	comp=E,11050μm,0.2s			AML	AML		
MNTP	comp=N,10550μm,0.2s			AML	AML		
MNTP	comp=E,11030μm,0.2s			AML	AML		
MNTP	comp=N,10600μm,0.2s			AML	AML		
MNTP	comp=N,1785μm,0.2s			AML	AML		
MNTP	comp=E,2143μm,0.3s			AML	AML		
FAGN	Fagnano	0.53	146	⇓P	Pb	10 15 01.0	0.0
FAGN	comp=E,1835μm,1.2s			AML	AML		
FAGN	comp=N,1125μm,0.3s			AML	AML		
FAGN	comp=E,6445μm,0.5s			AML	AML		
FAGN	comp=N,7180μm,0.4s			AML	AML		
FAGN	comp=N,7185μm,0.4s			AML	AML		
FAGN	comp=E,1822μm,0.3s			AML	AML		
FAGN	comp=N,1122μm,0.3s			AML	AML		
TRTR	Tortoreto Alta	0.55	79	P	Pb	10 15 01.0	-0.3
TRTR	comp=E,2955μm,0.4s			AML	AML		
TRTR	comp=N,3195μm,0.4s			AML	AML		
TRTR	comp=E,7170μm,0.7s			AML	AML		
TRTR	comp=N,7630μm,0.4s			AML	AML		
TRTR	comp=E,7165μm,0.7s			AML	AML		
TRTR	comp=E,2956μm,0.4s			AML	AML		
TRTR	comp=N,3196μm,0.4s			AML	AML		
VCEL	Villa Celiera	0.58	122	⇓P	Pg	10 15 01.4	+0.4
VCEL	comp=E,1715μm,0.3s			AML	AML		
VCEL	comp=N,1105μm,0.7s			AML	AML		
VCEL	comp=E,4905μm,1.2s			AML	AML		
VCEL	comp=E,4910μm,1.2s			AML	AML		
VCEL	comp=N,5650μm,0.9s			AML	AML		
VCEL	comp=N,1015μm,0.4s			AML	AML		
VCEL	comp=E,1712μm,0.3s			AML	AML		
T0110	Collepietro	0.65	137	⇑P	Pg	10 15 02.3	0.0
T0110	comp=E,919μm,0.4s			AML	AML		
T0110	comp=N,844μm,0.3s			AML	AML		
T0110	comp=E,7425μm,0.4s			AML	AML		
T0110	comp=N,4655μm,1.2s			AML	AML		
T0110	comp=N,844μm,0.3s			AML	AML		
T0110	comp=E,919μm,0.4s			AML	AML		
SRES	S.Oreste - Sor	0.68	227	⇑P	Pb	10 15 03.3	-0.3
SRES	comp=E,636μm,0.2s			AML	AML		
SRES	comp=N,448μm,0.4s			AML	AML		
SRES	comp=N,838μm,1.6s			AML	AML		
SRES	comp=E,770μm,1.3s			AML	AML		
SRES	comp=N,448μm,0.4s			AML	AML		
SRES	comp=E,636μm,0.2s			AML	AML		
PP3	Marolino	0.74	25	⇓P	Pn	10 15 05.4	-0.7
PP3	comp=E,2365μm,0.4s			AML	AML		
PP3	comp=N,1395μm,0.8s			AML	AML		
PP3	comp=N,3580μm,1.6s			AML	AML		
PP3	comp=N,3545μm,0.5s			AML	AML		
PP3	comp=E,4370μm,0.5s			AML	AML		
PP3	comp=E,4595μm,0.5s			AML	AML		
PP3	comp=N,1502μm,0.8s			AML	AML		
PP3	comp=N,1391μm,0.8s			AML	AML		
PP3	comp=E,2201μm,0.4s			AML	AML		
PP3	comp=E,2368μm,0.4s			AML	AML		
MTCE	Montecelio	0.76	206	⇑P	Pg	10 15 03.6	-0.7
MTCE	comp=E,668μm,0.5s			AML	AML		
MTCE	comp=N,372μm,0.8s			AML	AML		
MTCE	comp=N,664μm,0.6s			AML	AML		
MTCE	comp=E,802μm,0.6s			AML	AML		
MTCE	comp=E,668μm,0.5s			AML	AML		
MTCE	comp=N,349μm,0.4s			AML	AML		
CERT	Cerreto	0.77	191	⇓P	Pg	10 15 03.9	-0.6
CERT	comp=E,970μm,0.5s			AML	AML		
CERT	comp=N,898μm,0.5s			AML	AML		
CERT	comp=N,1034μm,0.5s			AML	AML		
CERT	comp=E,2105μm,0.4s			AML	AML		
CERT	comp=E,969μm,0.5s			AML	AML		
CERT	comp=N,898μm,0.5s			AML	AML		
ATFO	Monte Foce - G	0.80	326	⇑P	Pb	10 15 05.6	0.0
ATFO	comp=E,510μm,0.5s			AML	AML		
ATFO	comp=N,346μm,0.9s			AML	AML		
ATFO	comp=E,1275μm,0.9s			AML	AML		
ATFO	comp=N,1540μm,0.3s			AML	AML		
ATFO	comp=E,285μm,0.5s			AML	AML		
ATFO	comp=N,303μm,0.6s			AML	AML		
ARVD	Arcevia	0.81	348	⇓P	Pb	10 15 06.0	+0.1
ARVD	comp=E,332μm,1.2s			AML	AML		
ARVD	comp=N,432μm,0.6s			AML	AML		
ARVD	comp=N,994μm,0.7s			AML	AML		
ARVD	comp=E,852μm,1.2s			AML	AML		
ARVD	comp=N,433μm,0.6s			AML	AML		

ARVD				AML	AML	
	comp=E,252μm,0.4s					
LPEL	**Lama dei Pelig**	**0.99 131**	⇓P	Pg		10 15 08.4 -0.4
LPEL				AML	AML	
	comp=E,334μm,1.1s					
LPEL				AML	AML	
	comp=N,268μm,0.7s					
LPEL				AML	AML	
	comp=E,1120μm,1.0s					
LPEL				AML	AML	
	comp=N,967μm,0.5s					
LPEL				AML	AML	
	comp=E,1125μm,1.0s					
LPEL				AML	AML	
	comp=N,245μm,0.4s					
LPEL				AML	AML	
	comp=E,300μm,0.3s					
POFI	**Posta Fibreno**	**1.06 158**	⇑P	Pn		10 15 12.4 +1.9
TOLF	**Tolfa**	**1.08 234**	P	Pn		10 15 10.7 -0.1
TOLF				AML	AML	
	comp=E,573μm,0.6s					
TOLF				AML	AML	
	comp=N,438μm,0.9s					
TOLF				AML	AML	
	comp=N,439μm,0.9s					
TOLF				AML	AML	
	comp=E,572μm,0.6s					
TOLF				AML	AML	
	comp=N,158μm,0.3s					
TOLF				AML	AML	
	comp=E,174μm,0.5s					
MCIV	**Monte Civitell**	**1.11 274**	⇓P	Pb		10 15 08.5 -2.4
SF01	**Poggio Pratacc**	**1.20 276**	S	Sn		10 15 30.0 +1.3
VBKN	**Vesuvio Bunker**	**2.09 153**	⇓P	Pn		10 15 24.9 +0.1

*PRU **30** 10:15:43.2±0.0, 42°.76N×13°.76E, h19km*
ROM 30 10:15:37.9±0.1, 42°.741N±0°.004×13°.254E±0°.006, h10km, ML3.3/30, 18C-17D, Error ellipse: s-maj=0.5km s-min=0.3km az=314.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.12**	**337**	⇓P		Pg	10 15 43.4	+2.4
T1245					AML	AML		
	comp=E,51455μm,0.4s							
T1245					AML	AML		
	comp=N,86055μm,0.4s							
T1245					AML	AML		
	comp=E,44136μm,0.4s							
T1245					AML	AML		
	comp=N,89715μm,0.4s							
T1243	**Rocca Santa Ma**	**0.15**	**107**	⇑P		Pg	10 15 41.8	+0.5
T1243				S		Sg	10 15 44.4	+0.7
T1241	**Roccafluvione,**	**0.17**	**49**	P		Pg	10 15 42.7	+1.0
T1241				S		Sg	10 15 45.7	+1.4
T1241					AML	AML		
	comp=E,99200μm,0.2s							
T1241					AML	AML		
	comp=N,36600μm,0.3s							
T1241					AML	AML		
	comp=E,99250μm,0.2s							
T1241					AML	AML		
	comp=E,96000μm,0.2s							
T1241					AML	AML		
	comp=N,45650μm,0.3s							
T1241					AML	AML		
	comp=E,99100μm,0.2s							
T1241					AML	AML		
	comp=N,36550μm,0.3s							
T1241					AML	AML		
	comp=E,96050μm,0.2s							
T1241					AML	AML		
	comp=E,98900μm,0.2s							
T1241					AML	AML		
	comp=N,45660μm,0.3s							
T1241					AML	AML		
	comp=E,99100μm,0.2s							
T1241					AML	AML		
	comp=N,36572μm,0.2s							
T1241					AML	AML		
	comp=E,96043μm,0.2s							
RM33	**Pellescritta (**	**0.23**	**187**	P		Pg	10 15 43.3	+0.5
RM33				S		Sg	10 15 47.7	+1.7
RM33					AML	AML		
	comp=N,8750μm,0.8s							
RM33					AML	AML		
	comp=E,9995μm,0.6s							
RM33					AML	AML		
	comp=N,7942μm,0.4s							
RM33					AML	AML		
	comp=E,9436μm,0.5s							
T1217	**Poggiodomo (PG**	**0.24**	**263**	P		Pg	10 15 43.5	+0.7
T1217				S		Sg	10 15 47.7	+1.5
T1217					AML	AML		
	comp=N,25150μm,0.3s							
T1217					AML	AML		
	comp=N,24650μm,0.4s							
T1217					AML	AML		
	comp=E,15250μm,0.8s							
T1217					AML	AML		
	comp=E,15300μm,0.8s							
T1217					AML	AML		
	comp=N,24700μm,0.4s							
T1217					AML	AML		
	comp=E,15250μm,0.8s							
T1217					AML	AML		
	comp=N,25100μm,0.3s							
T1217					AML	AML		
	comp=E,15350μm,0.8s							
T1217					AML	AML		
	comp=N,24605μm,0.3s							
T1217					AML	AML		
	comp=E,11510μm,0.3s							
T1217					AML	AML		
	comp=E,11145μm,0.3s							
T1217					AML	AML		
	comp=N,25132μm,0.3s							
AM05	**Amandola Campo**	**0.25**	**17**	P		Pg	10 15 43.7	+0.7
AM05				S		Sg	10 15 48.0	+1.6
AM05					AML	AML		
	comp=N,6415μm,0.3s							
AM05					AML	AML		
	comp=E,5000μm,1.0s							
AM05					AML	AML		
	comp=E,23950μm,0.2s							
AM05					AML	AML		
	comp=N,2005μm,0.3s							
AM05					AML	AML		
	comp=N,6410μm,0.3s							
AM05					AML	AML		
	comp=E,4603μm,0.2s							
AM05					AML	AML		
	comp=E,23421μm,0.1s							
AM05					AML	AML		
	comp=N,6147μm,0.1s							
AM05					AML	AML		
	comp=N,1834μm,0.1s							
TERO	**Teramo**	**0.28**	**115**	⇑P		Pg	10 15 44.1	+0.4
TERO				S		Sg	10 15 48.7	+1.2
TERO					AML	AML		
	comp=E,9860μm,0.3s							
TERO					AML	AML		
	comp=N,11060μm,0.2s							
TERO					AML	AML		
	comp=E,10520μm,0.3s							
TERO					AML	AML		
	comp=E,9885μm,0.3s							
TERO					AML	AML		
	comp=N,11055μm,0.2s							
TERO					AML	AML		
	comp=N,11885μm,0.2s							
TERO					AML	AML		
	comp=E,9871μm,0.3s							
TERO					AML	AML		
	comp=N,11038μm,0.2s							
TERO					AML	AML		
	comp=N,11868μm,0.2s							
TERO					AML	AML		
	comp=E,10540μm,0.3s							
T1247	**Pizzolo (AQ)**	**0.30**	**174**	P		Pg	10 15 44.7	+0.7
T1247				S		Sb	10 15 49.7	-0.9
T1247					AML	AML		
	comp=E,9280μm,0.4s							
T1247					AML	AML		
	comp=N,9425μm,0.5s							
T1247					AML	AML		
	comp=E,9275μm,0.4s							
T1247					AML	AML		
	comp=N,7081μm,0.3s							
T1247					AML	AML		
	comp=E,9275μm,0.4s							
GUMA	**Gualdo di Mace**	**0.33**	**11**	⇓P		Pb	10 15 45.5	-0.5
GUMA					AML	AML		
	comp=E,72000μm,0.3s							
GUMA					AML	AML		
	comp=N,53750μm,0.7s							
GUMA					AML	AML		
	comp=E,33450μm,0.2s							
GUMA					AML	AML		
	comp=N,68150μm,0.3s							
GUMA					AML	AML		
	comp=E,71999μm,0.3s							
GUMA					AML	AML		
	comp=E,33438μm,0.3s							
GUMA					AML	AML		
	comp=N,68154μm,0.3s							
GUMA					AML	AML		
	comp=N,46661μm,0.3s							
T1211	**Morro Reatino**	**0.36**	**235**	S		Sb	10 15 52.0	-0.3
ARRO	**Arrone**	**0.40**	**246**	S		Sb	10 15 53.0	-0.2
AQU	**L'Aquila**	**0.40**	**164**	P		Pg	10 15 46.3	+0.4
AQU				S		Sb	10 15 52.7	-0.7
AQU					AML	AML		
	comp=E,3170μm,0.9s							
AQU					AML	AML		
	comp=E,3365μm,0.9s							
AQU					AML	AML		
	comp=N,3395μm,0.9s							
AQU					AML	AML		
	comp=E,3165μm,0.9s							
AQU					AML	AML		
	comp=N,3700μm,0.9s							
AQU					AML	AML		
	comp=E,3090μm,1.0s							
AQU					AML	AML		
	comp=N,2705μm,0.4s							
AQU					AML	AML		
	comp=E,2990μm,0.3s							
AQU					AML	AML		
	comp=N,2816μm,0.4s							
MNTP	**Montappone**	**0.43**	**22**	⇓P		Pb	10 15 47.5	-0.1
MNTP					AML	AML		
	comp=E,11000μm,0.2s							
MNTP					AML	AML		
	comp=N,10550μm,0.2s							
MNTP					AML	AML		
	comp=E,10990μm,0.2s							
MNTP					AML	AML		
	comp=E,11050μm,0.2s							
MNTP					AML	AML		
	comp=N,10600μm,0.2s							
MNTP					AML	AML		
	comp=E,11030μm,0.2s							
MNTP					AML	AML		
	comp=E,11010μm,0.2s							
MNTP					AML	AML		
	comp=N,10572μm,0.2s							
SEF1	**Sefro**	**0.46**	**331**	S		Sb	10 15 55.0	-0.2
FIAM	**Fiamignano**	**0.48**	**192**	⇓P		Pg	10 15 47.7	+0.3
FIAM				S		Sb	10 15 55.1	-0.7
FIAM					AML	AML		
	comp=E,3960μm,0.4s							
FIAM					AML	AML		
	comp=N,2585μm,0.9s							
FIAM					AML	AML		
	comp=E,3962μm,0.4s							
FIAM					AML	AML		
	comp=N,2587μm,0.9s							
TRTR	**Tortoreto Alta**	**0.49**	**82**	⇑P		Pb	10 15 49.1	+0.5
TRTR					AML	AML		
	comp=E,7170μm,0.7s							
TRTR					AML	AML		
	comp=E,7165μm,0.7s							
TRTR					AML	AML		
	comp=N,7630μm,0.4s							
TRTR					AML	AML		
	comp=E,7166μm,0.7s							
TRTR					AML	AML		
	comp=N,7631μm,0.4s							
ASSB	**Assisi San Ben**	**0.53**	**305**	⇓P		Pg	10 15 48.8	+0.5
ASSB					AML	AML		
	comp=N,4865μm,0.2s							
ASSB					AML	AML		
	comp=E,5190μm,0.3s							
ASSB					AML	AML		
	comp=N,4865μm,0.2s							
ASSB					AML	AML		
	comp=E,5192μm,0.3s							
FAGN	**Fagnano**	**0.53**	**153**	P		Pg	10 15 48.8	+0.5
FAGN				S		Sb	10 15 57.6	+0.4
FAGN					AML	AML		
	comp=N,7185μm,0.4s							
FAGN					AML	AML		
	comp=N,7180μm,0.4s							
FAGN					AML	AML		
	comp=E,6445μm,0.5s							
FAGN					AML	AML		
	comp=E,6442μm,0.5s							
FAGN					AML	AML		
	comp=N,7182μm,0.4s							
VCEL	**Villa Celiera**	**0.56**	**128**	⇑P		Pg	10 15 49.3	+0.6
VCEL					AML	AML		
	comp=E,4905μm,1.2s							
VCEL					AML	AML		
	comp=E,4910μm,1.2s							
VCEL					AML	AML		
	comp=N,5650μm,0.9s							
VCEL					AML	AML		
	comp=N,5499μm,0.4s							
VCEL					AML	AML		
	comp=E,4810μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.63**	**315**	⇓P		Pg	10 15 50.5	+0.2
ATCC				S		Sb	10 16 01.0	+0.9
ATCC					AML	AML		
	comp=E,3685μm,0.8s							
ATCC					AML	AML		
	comp=N,3585μm,0.3s							
ATCC					AML	AML		
	comp=E,3690μm,0.8s							
ATCC					AML	AML		
	comp=E,3460μm,0.4s							
ATCC					AML	AML		
	comp=N,3586μm,0.3s							
ARVD	**Arcevia**	**0.79**	**343**	S		Sn	10 16 06.0	-1.1
ATFO	**Monte Foce - G**	**0.80**	**322**	⇓P		Pg	10 15 53.6	+0.3
ATFO					AML	AML		
	comp=N,1540μm,0.3s							
ATFO					AML	AML		
	comp=E,1275μm,0.9s							
ATFO					AML	AML		
	comp=E,1118μm,0.4s							
ATFO					AML	AML		
	comp=N,1537μm,0.3s							
ATTE	**AVT- Monte Tez**	**0.80**	**305**	⇑P		Pn	10 15 56.0	+0.6
ATTE				S		Sn	10 16 07.0	-0.5
ATTE					AML	AML		
	comp=E,1240μm,0.4s							
ATTE					AML	AML		
	comp=N,1205μm,0.3s							
ATTE					AML	AML		
	comp=E,1243μm,0.4s							
ATTE					AML	AML		
	comp=N,1208μm,0.3s							
AOI	**Ancona**	**0.85**	**17**	⇑P		Pb	10 15 54.8	-0.1
AOI					AML	AML		
	comp=N,1650μm,1.2s							
AOI					AML	AML		
	comp=E,1385μm,0.4s							
AOI					AML	AML		
	comp=N,1644μm,0.3s							
AOI					AML	AML		
	comp=E,1388μm,0.4s							
MGAB	**Montegabbione**	**0.86**	**282**	⇑P		Pb	10 15 55.3	+0.4
MGAB					AML	AML		
	comp=N,3700μm,0.4s							
MGAB					AML	AML		
	comp=N,3080μm,0.4s							
MGAB					AML	AML		
	comp=E,2985μm,1.1s							
MGAB					AML	AML		
	comp=E,3060μm,0.5s							
MGAB					AML	AML		
	comp=E,3057μm,0.5s							
MGAB					AML	AML		
	comp=N,3702μm,0.4s							
MGAB					AML	AML		
	comp=E,2784μm,0.3s							
MGAB					AML	AML		
	comp=N,3080μm,0.4s							
LPEL	**Lama dei Pelig**	**0.98**	**135**	⇑P		Pg	10 15 56.6	-0.1
LPEL					AML	AML		
	comp=N,967μm,0.5s							
LPEL					AML	AML		
	comp=E,1120μm,1.0s							
LPEL					AML	AML		
	comp=E,1125μm,1.0s							
LPEL					AML	AML		
	comp=E,1071μm,0.3s							
LPEL					AML	AML		
	comp=N,965μm,0.5s							
SACS	**San Casciano d**	**0.99**	**277**	⇓P		Pg	10 15 57.2	+0.1
SACS					AML	AML		
	comp=E,1180μm,0.8s							
SACS					AML	AML		
	comp=N,1285μm,0.4s							
SACS					AML	AML		
	comp=N,1282μm,0.4s							
SACS					AML	AML		
	comp=E,1181μm,0.8s							
SACS					AML	AML		
	comp=E,1178μm,0.8s							
SACS					AML	AML		
	comp=N,1315μm,0.4s							
FSSB	**Fossombrone**	**1.01**	**340**	⇓P		Pg	10 15 57.3	-0.1
FSSB				S		Sn	10 16 14.0	+1.4
FSSB					AML	AML		
	comp=E,2590μm,0.4s							
FSSB					AML	AML		
	comp=N,2985μm,0.3s							
FSSB					AML	AML		
	comp=E,2585μm,0.4s							
FSSB					AML	AML		
	comp=N,2986μm,0.3s							
FSSB					AML	AML		
	comp=E,2588μm,0.4s							
BADI	**Badiali**	**1.07**	**316**	⇑P		Pb	10 15 58.5	0.0
BADI					AML	AML		
	comp=N,566μm,0.7s							
LATE	**Laterza**	**1.08**	**264**	⇑P		Pn	10 15 59.2	0.0
POFI	**Posta Fibreno**	**1.08**	**161**		AML	AML		
	comp=N,430μm,1.2s							
POFI					AML	AML		
	comp=E,824μm,0.7s							
CAFI	**Castiglion Fio**	**1.11**	**302**	P		Pn	10 15 59.6	-0.1
CAFI					AML	AML		
	comp=E,736μm,0.4s							
CAFI					AML	AML		
	comp=N,658μm,1.2s							
CAFI					AML	AML		
	comp=E,736μm,0.4s							
CAFI					AML	AML		
	comp=N,658μm,1.2s							
CAFI					AML	AML		
	comp=N,517μm,0.4s							
CAFI					AML	AML		
	comp=E,736μm,0.4s							
CAFI					AML	AML		
	comp=E,726μm,0.4s							
CAFI					AML	AML		
	comp=N,483μm,0.4s							
TOLF	**Tolfa**	**1.15**	**234**	P		Pb	10 15 59.9	0.0
TOLF					AML	AML		
	comp=E,572μm,0.6s							
TOLF					AML	AML		
	comp=N,439μm,0.9s							
TOLF					AML	AML		
	comp=E,573μm,0.6s							
TOLF					AML	AML		
	comp=N,438μm,0.9s							
TOLF					AML	AML		
	comp=E,573μm,0.6s							
TOLF					AML	AML		
	comp=N,439μm,0.9s							
GIUL	**Giuliano Di Ro**	**1.18**	**180**	⇑P		Pg	10 16 02.3	+1.6
GIUL					AML	AML		
	comp=N,482μm,0.9s							
GIUL					AML	AML		
	comp=E,487μm,0.8s							
LATB	**Latina**	**1.27**	**190**	⇑P		Pg	10 16 02.9	+0.6
LATB					AML	AML		
	comp=N,140μm,0.9s							
LATB					AML	AML		
	comp=E,186μm,1.0s							
LATB					AML	AML		
	comp=N,140μm,0.9s							
LATB					AML	AML		
	comp=E,187μm,1.0s							
CRE	**Caprese Michel**	**1.30**	**313**	⇓P		Pg	10 16 02.8	0.0
CRE					AML	AML		
	comp=N,335μm,0.2s							
CRE					AML	AML		
	comp=E,436μm,0.5s							
CRE					AML	AML		
	comp=E,436μm,0.5s							
CRE					AML	AML		
	comp=N,335μm,0.2s							
ARCI	**Arcidosso**	**1.31**	**275**	P		Pg	10 16 03.4	+0.3
ARCI					AML	AML		
	comp=N,167μm,0.5s							
CSNT	**Castellina Chi**	**1.61**	**298**	P		Pn	10 16 06.8	+0.2
CSNT					AML	AML		
	comp=E,161μm,0.5s							
CSNT					AML	AML		
	comp=N,144μm,0.5s							
CSNT					AML	AML		
	comp=E,161μm,0.5s							
CSNT					AML	AML		
	comp=N,144μm,0.5s							
CASP	**Castiglione de**	**1.76**	**272**	⇓P		Pn	10 16 08.6	+0.1
CASP					AML	AML		
	comp=N,69μm,0.6s							
CASP					AML	AML		
	comp=E,79μm,1.6s							
CASP					AML	AML		
	comp=N,69μm,0.6s							
CASP					AML	AML		
	comp=E,63μm,0.7s							
APRC	**Apricena**	**1.96**	**119**	⇓P		Pg	10 16 14.8	-0.8
MTCR	**Monte La Croce**	**2.09**	**309**	⇑P		Pn	10 16 13.8	+0.7
MAIM	**Mastiano**	**2.33**	**301**	⇓P		Pn	10 16 17.7	+1.3
MAIM					AML	AML		
	comp=E,82μm,0.9s							
MAIM					AML	AML		
	comp=N,75μm,0.4s							
MAIM					AML	AML		
	comp=E,82μm,0.9s							
MAIM					AML	AML		
	comp=N,75μm,0.4s							
HVAR	**Hvar**	**2.39**	**78**	⇑P		Pn	10 16 18.1	+1.0
TEOL	**Teolo**	**2.86**	**337**	S		Sg	10 17 09.0	-0.7
MNTV	**Mantova**	**2.99**	**324**	P		Pn	10 16 27.1	+1.6
AMUR	**Altamura**	**3.10**	**125**	⇓P		Pn	10 16 28.9	+1.9
PGF	**Pioggiola**	**3.15**	**268**	P		Pn	10 16 29.4	+1.7
ORI	**Oriolo Calabro**	**3.60**	**137**	⇑P		Pn	10 16 35.4	+1.7
ORI					AML	AML		
	comp=E,304μm,0.2s							
ORI					AML	AML		
	comp=N,188μm,0.2s							
DGI	**Dorgali Grotta**	**3.65**	**230**	P		Pg	10 16 45.8	-2.1
MABI	**Malga Bissina**	**3.85**	**330**	⇓P		Pn	10 16 40.0	+2.5
EUCT	**Pavia**	**3.86**	**311**	⇓P		Pg	10 16 52.7	+0.9
OBKA	**Obir**	**3.88**	**13**	*e*Pn		Pn	10 16 38.3	+0.5
	comp=N,1.5nm,0.2s							
KOSI	**Kohlern**	**3.96**	**341**	⇑P		Pn	10 16 41.1	+2.3
ABTA	**Abfaltersbach**	**4.04**	**353**	*e*Pn		Pn	10 16 41.9	+2.0
	comp=N,6.3nm,0.3s							
SOKA	**Soboth**	**4.13**	**17**	*e*Pn		Pn	10 16 42.6	+1.4
	comp=N,2.2nm,0.3s							
BORM	**Bormio**	**4.26**	**332**	P		Pn	10 16 44.2	+1.3
RISI	**Rein**	**4.29**	**349**	⇑P		Pn	10 16 46.9	+3.5
VSL	**Villasalto**	**4.37**	**223**	⇑P		Pn	10 16 46.4	+2.0
ROSI	**Rosskopf**	**4.39**	**343**	⇓P		Pn	10 16 48.0	+3.2
FETA	**Feichten**	**4.64**	**338**	*e*Pn		Pn	10 16 52.1	+3.8
	comp=N,0.9nm,0.3s							
WTTA	**Wattenberg**	**4.67**	**346**	*e*Pn		Pn	10 16 52.1	+3.5
	comp=N,1.2nm,0.2s							
SQTA	**Sankt Quirin**	**4.71**	**343**	*e*Pn		Pn	10 16 53.3	+4.1
	comp=N,2.7nm,0.1s							
WATA	**Walderalm**	**4.75**	**346**	*e*Pn		Pn	10 16 53.3	+3.6
	comp=N,2.3nm,0.2s							

ARSA	**Arzberg**	**4.79**	**19**	*e*Pn	Pn	10 16 51.5 +1.4
	comp=N,0.7nm,0.2s					
MOTA	**Moosalm**	**4.85**	**342**	*e*Pn	Pn	10 16 54.5 +3.4
	comp=N,1.1nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.96**	**3**	*e*Pn	Pn	10 16 55.2 +2.7
	comp=N,2.5nm,0.3s					
RETA	**Reutte**	**5.06**	**340**	*e*Pn	Pn	10 16 57.9 +3.9
	comp=N,1.2nm,0.2s					
DAVA	**Damuels**	**5.14**	**333**	*e*Pn	Pn	10 16 59.1 +4.0
	comp=N,1.9nm,0.2s					
MOA	**Molln**	**5.16**	**8**	*e*Pn	Pn	10 16 56.9 +1.7
	comp=N,0.9nm,0.3s					
ESLN	**Serra La Nave**	**5.21**	**165**	P	Pb	10 17 09.7 +0.4
CONA	**Conrad Observa**	**5.50**	**19**	*e*Pn	Pn	10 17 00.6 +0.6
	comp=N,1.0nm,0.2s					
KHC	**Kasperske Hory**	**6.39**	**2**	*e*PN	Pn	10 17 16.2 +4.0
KHC				*e*SN	Sn	10 18 24.2 -1.1

PRU ***30*** *10:19:25.4±0.0, 42°.75N×13°.27E, h0km*
IDC ***30*** *10:19:26.3±0.9, 42°.88N×13°.13E, h0km, mb3.9/6, mbtmp3.8/17, ML3.5/11, Error ellipse: s-maj=17.0km s-min=11.1km az=100.0*
STR ***30*** *10:19:26.0, 42°.82N×13°.14E, h11km, MLv3.9/12, preliminary*
ROM ***30*** *10:19:26.2±0.0, 42°.811N±0°.001×13°.142E±0°.003, h11km, ML4.1/53, Mw3.7, Error ellipse: s-maj=0.2km s-min=0.1km az=250.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-1.57; Mθθ0.25; Mφφ1.32; Mrθ-2.56; Mθφ-0.68; Mφr2.70; Fault plane solution: M₀4.05081×10¹⁴ NP1:φs349.00000°, δ13.00000°, λ-60.00000°. NP2:φs138.00000°, δ79.00000°, λ-97.00000°.*
LDG ***30*** *10:19:27.7±0.1, 42°.68N×13°.12E, h10km, Ml3.7/22 Error ellipse: s-maj=3.8km s-min=2.2km az=48.0*
BEO ***30*** *10:19:28.8±0.7, 42°.91N×13°.19E, h14km±2km, ML3.9/13*
ISC 30 10:19:26.9±0.6, 42°.82N±0°.01×13°.13E±0°.01, h11km±4km, n328, σ1°50/411, mb4.1/5, 31C-26D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**46**	⇑P	**Pg**	**10 19 28.7**	**-0.7**
T1245				S	**Sg**	**10 19 30.3**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1214	**Arquata del Tr**	**0.08**	**136**	⇓P	**Pg**	**10 19 29.0**	**-0.6**
T1214				S	**Sg**	**10 19 30.7**	**-0.8**
T1212	**Cascia, Frazio**	**0.09**	**225**	⇓P	**Pg**	**10 19 29.4**	**-0.3**
T1212				S	**Sg**	**10 19 31.4**	**-0.3**
T1213	**Norcia, Frazio**	**0.09**	**184**	⇓P	**Pg**	**10 19 29.2**	**-0.5**
T1213				S	**Sg**	**10 19 30.9**	**-0.7**
T1216	**Preci, Frazion**	**0.11**	**311**	P	**Pg**	**10 19 29.6**	**-0.2**
T1216				S	**Sg**	**10 19 31.8**	**-0.2**
T1244	**Arquata del Tr**	**0.14**	**117**	⇓P	**Pg**	**10 19 29.9**	**-0.3**
T1244				S	**Sg**	**10 19 32.6**	**0.0**
T1218	**Civita (PG)**	**0.15**	**185**	⇓P	**Pg**	**10 19 30.2**	**-0.3**
T1218				S	**Sg**	**10 19 32.8**	**-0.1**
FEMA	**Monte Fema**	**0.16**	**337**	⇑P	**Pg**	**10 19 30.5**	**-0.1**
FEMA				S	**Sg**	**10 19 33.3**	**0.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1201	**Domo (RI)**	**0.18**	**152**	⇓P	**Pg**	**10 19 30.9**	**-0.1**
T1201				S	**Sg**	**10 19 34.2**	**+0.5**
T1217	**Poggiodomo (PG**	**0.18**	**235**	⇑P	**Pg**	**10 19 30.9**	**-0.1**
T1217				S	**Sg**	**10 19 34.1**	**+0.3**
T1217				AML	AML		
	comp=E,98650μm,0.5s						
T1217				AML	AML		
	comp=E,98400μm,0.5s						
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
	comp=E,95750μm,0.3s						
T1204	**Amatrice, Fraz**	**0.20**	**136**	⇓P	**Pg**	**10 19 30.9**	**-0.3**
T1204				S	**Sg**	**10 19 34.3**	**+0.1**
T1204				AML	AML		
T1204				AML	AML		
	comp=N,79700μm,0.6s						
T1204				AML	AML		
T1215	**Vallo di Nera,**	**0.20**	**265**	⇑P	**Pg**	**10 19 31.0**	**-0.2**
T1215				S	**Sg**	**10 19 34.4**	**+0.3**
T1215				AML	AML		
	comp=N,67550μm,0.2s						
T1215				AML	AML		
	comp=E,69300μm,0.2s						
T1215				AML	AML		
	comp=E,64200μm,0.2s						
T1215				AML	AML		
	comp=N,67550μm,0.2s						
T1215				AML	AML		
	comp=N,63050μm,0.2s						
T1215				AML	AML		
	comp=E,69250μm,0.2s						
T1215				AML	AML		
	comp=N,63050μm,0.2s						
T1256	**Bolognola (MC)**	**0.20**	**20**	⇑P	**Pg**	**10 19 31.0**	**-0.3**
T1256				S	**Sg**	**10 19 34.6**	**+0.2**
FDMO	**Fiordimonte**	**0.22**	**351**	P	**Pg**	**10 19 31.4**	**-0.2**
FDMO				S	**Sg**	**10 19 35.0**	**+0.2**
T1241	**Roccafluvione,**	**0.22**	**80**	P	**Pg**	**10 19 31.0**	**-0.6**
T1241				S	**Sg**	**10 19 35.3**	**+0.4**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
LNSS	**Leonessa**	**0.23**	**198**	⇑P	**Pg**	**10 19 31.6**	**-0.2**
LNSS				S	**Sg**	**10 19 35.4**	**+0.4**
AM05	**Amandola Campo**	**0.23**	**45**	P	**Pg**	**10 19 31.5**	**-0.3**
AM05				S	**Sg**	**10 19 35.1**	**+0.2**
AM05				AML	AML		
	comp=E,13200μm,1.0s						
AM05				AML	AML		
	comp=E,63950μm,0.7s						
AM05				AML	AML		
	comp=N,3545μm,0.6s						
AM05				AML	AML		
	comp=N,17250μm,1.0s						
T1219	**Muccia, Frazio**	**0.26**	**339**	P	**Pg**	**10 19 32.0**	**-0.3**
T1219				S	**Sb**	**10 19 36.4**	**-1.7**
T1243	**Rocca Santa Ma**	**0.26**	**117**	⇓P	**Pg**	**10 19 31.8**	**-0.6**
T1243				S	**Sg**	**10 19 35.9**	**-0.1**
CSP1	**Cessapalombo**	**0.28**	**11**	⇓P	**Pg**	**10 19 32.4**	**-0.3**
CSP1				S	**Sg**	**10 19 36.9**	**+0.3**
CSP1				AML	AML		
	comp=E,57750μm,1.0s						
CSP1				AML	AML		
	comp=N,78950μm,0.5s						
GUMA	**Gualdo di Mace**	**0.29**	**31**	P	**Pb**	**10 19 32.8**	**-1.3**
GUMA				S	**Sb**	**10 19 37.5**	**-1.4**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
RM33	**Pellescritta (**	**0.31**	**169**	⇑P	**Pg**	**10 19 32.8**	**-0.5**
RM33				S	**Sg**	**10 19 38.0**	**+0.4**
CAMP	**Campotosto**	**0.35**	**144**	⇑P	**Pg**	**10 19 33.4**	**-0.6**
CAMP				S	**Sg**	**10 19 38.5**	**-0.1**
CAMP				AML	AML		
	comp=E,35200μm,0.2s						
CAMP				AML	AML		
	comp=N,32000μm,0.5s						
T1211	**Morro Reatino**	**0.35**	**216**	⇑P	**Pg**	**10 19 33.7**	**-0.3**
T1211				S	**Sb**	**10 19 39.4**	**-1.4**
T1211				AML	AML		
	comp=E,64700μm,0.3s						
T1211				AML	AML		
	comp=E,67250μm,0.3s						
T1211				AML	AML		
T1211				AML	AML		
	comp=E,64700μm,0.3s						
T1211				AML	AML		
T1211				AML	AML		
	comp=E,67250μm,0.3s						
T1211				AML	AML		
T1246	**Crognaleto (TE**	**0.35**	**131**	P	**Pg**	**10 19 33.4**	**-0.6**
T1246				S	**Sg**	**10 19 38.8**	**0.0**
SEF1	**Sefro**	**0.36**	**338**	P	**Pg**	**10 19 33.8**	**-0.3**
SEF1				S	**Sb**	**10 19 39.5**	**-1.4**
SEF1				AML	AML		
	comp=N,54050μm,0.3s						
SEF1				AML	AML		
	comp=E,69550μm,0.3s						
ARRO	**Arrone**	**0.36**	**229**	⇑P	**Pg**	**10 19 33.9**	**-0.2**
ARRO				S	**Sb**	**10 19 39.5**	**-1.5**
ARRO				AML	AML		
	comp=E,38200μm,1.0s						
ARRO				AML	AML		
	comp=N,36350μm,1.4s						
MDAR	**Monte D'Aria**	**0.38**	**1**	⇑P	**Pg**	**10 19 34.1**	**-0.3**
MDAR				S	**Sb**	**10 19 40.2**	**-1.3**
MDAR				AML	AML		
	comp=N,30650μm,1.5s						
MDAR				AML	AML		
	comp=N,30650μm,1.5s						
MDAR				AML	AML		
	comp=E,26600μm,1.2s						
PIO1	**Pioraco**	**0.38**	**343**	P	**Pg**	**10 19 34.0**	**-0.4**
PIO1				S	**Sb**	**10 19 40.4**	**-1.1**
PIO1				AML	AML		
	comp=E,17950μm,0.4s						
PIO1				AML	AML		
	comp=N,32200μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.40**	**162**	⇑P	**Pg**	**10 19 34.3**	**-0.5**
T1247				S	**Sb**	**10 19 40.5**	**-1.5**
T1247				AML	AML		
	comp=E,58950μm,0.8s						
T1247				AML	AML		
	comp=N,54600μm,0.3s						
TERO	**Teramo**	**0.40**	**119**	P	**Pg**	**10 19 34.1**	**-0.7**
TERO				S	**Sg**	**10 19 40.3**	**+0.2**
TERO				AML	AML		
	comp=E,20300μm,0.4s						
TERO				AML	AML		
	comp=N,33450μm,0.3s						
TERO				AML	AML		
	comp=E,21900μm,1.0s						
TERO				AML	AML		
	comp=E,20250μm,0.4s						
TERO				AML	AML		
	comp=N,32100μm,0.3s						
FIU1	**Fiuminata**	**0.40**	**338**	P	**Pg**	**10 19 34.5**	**-0.4**
FIU1				S	**Sb**	**10 19 41.2**	**-1.0**
FIU1				AML	AML		
	comp=E,23400μm,0.4s						
FIU1				AML	AML		
	comp=N,23000μm,0.3s						
MNTP	**Montappone**	**0.40**	**38**	P	**Pb**	**10 19 35.1**	**-1.0**
MNTP				AML	AML		
	comp=E,53200μm,0.4s						
MNTP				AML	AML		
	comp=N,31650μm,0.7s						
MNTP				AML	AML		
	comp=E,53200μm,0.4s						
MNTP				AML	AML		
	comp=N,31650μm,0.6s						
SSM1	**San Severino M**	**0.41**	**4**	P	**Pg**	**10 19 34.7**	**-0.4**
SSM1				S	**Sb**	**10 19 41.2**	**-1.3**
ASSB	**Assisi San Ben**	**0.41**	**303**	⇑P	**Pg**	**10 19 34.9**	**-0.3**
ASSB				S	**Sb**	**10 19 41.6**	**-1.0**
ASSB				AML	AML		
	comp=N,31300μm,0.3s						
ASSB				AML	AML		
	comp=E,25000μm,0.6s						
OFFI	**Offida**	**0.42**	**74**	P	**Pb**	**10 19 35.6**	**-0.8**
GAG1	**Gagliole**	**0.42**	**353**	P	**Pg**	**10 19 35.1**	**-0.2**
GAG1				S	**Sb**	**10 19 42.0**	**-0.9**
GAG1				AML	AML		
	comp=E,77500μm,0.5s						
GAG1				AML	AML		
	comp=N,65400μm,0.7s						
CESX	**Cesi**	**0.46**	**243**	⇑P	**Pg**	**10 19 35.5**	**-0.5**
CESX				S	**Sb**	**10 19 42.6**	**-1.2**
CESX				AML	AML		
	comp=E,34900μm,1.4s						
CESX				AML	AML		
	comp=N,31250μm,0.4s						
SNTG	**Esanatoglia**	**0.46**	**342**	⇓P	**Pg**	**10 19 35.5**	**-0.5**
SNTG				S	**Sb**	**10 19 42.8**	**-1.1**
SNTG				AML	AML		
	comp=E,10750μm,0.3s						
SNTG				AML	AML		
	comp=E,11150μm,0.3s						
SNTG				AML	AML		
	comp=N,11835μm,0.8s						
SNTG				AML	AML		
	comp=N,11460μm,0.8s						
GIGS	**Gran Sasso**	**0.49**	**139**	⇑P	**Pg**	**10 19 35.5**	**-1.0**
GIGS				S	**Sg**	**10 19 42.7**	**-0.2**
GIGS				AML	AML		
	comp=N,5015μm,0.9s						
GIGS				AML	AML		
	comp=N,5010μm,0.9s						
GIGS				AML	AML		
	comp=E,5790μm,0.4s						
AQU	**L'Aquila**	**0.50**	**157**	⇑P	**Pg**	**10 19 36.0**	**-0.8**
AQU				S	**Sb**	**10 19 43.7**	**-1.5**
AQU				AML	AML		
	comp=E,20700μm,1.5s						
AQU				AML	AML		
	comp=N,25050μm,0.3s						
AQU				AML	AML		
	comp=N,23900μm,0.3s						
AQU				AML	AML		
	comp=E,20650μm,1.5s						
AQU				AML	AML		
	comp=E,20850μm,1.5s						
AQU				AML	AML		
	comp=N,25100μm,0.3s						
TRE1	**Treia**	**0.51**	**15**	⇑P	**Pb**	**10 19 37.0**	**-0.9**
TRE1				AML	AML		
	comp=E,48400μm,0.5s						
TRE1				AML	AML		
	comp=N,36850μm,0.6s						
TRE1				AML	AML		
	comp=E,48450μm,0.5s						
EL6	**Elcito**	**0.51**	**357**	⇓P	**Pg**	**10 19 36.5**	**-0.4**
EL6				S	**Sb**	**10 19 44.6**	**-0.9**
EL6				AML	AML		
	comp=N,25300μm,0.4s						
EL6				AML	AML		
	comp=N,25350μm,0.4s						
EL6				AML	AML		
	comp=E,19850μm,0.5s						
FIAM	**Fiamignano**	**0.55**	**181**	⇑P	**Pg**	**10 19 36.9**	**-0.8**
FIAM				S	**Sg**	**10 19 45.0**	**+0.1**
FIAM				AML	AML		
	comp=E,25200μm,0.7s						
FIAM				AML	AML		
	comp=N,25150μm,0.8s						
FOSV	**Fossato di Vic**	**0.55**	**330**	⇓P	**Pg**	**10 19 37.1**	**-0.5**
FOSV				S	**Sb**	**10 19 45.8**	**-0.7**
FOSV				AML	AML		
	comp=E,14250μm,1.0s						
FOSV				AML	AML		
	comp=N,10830μm,0.5s						
TRTR	**Tortoreto Alta**	**0.57**	**91**	P	**Pb**	**10 19 38.6**	**-0.3**
TRTR				AML	AML		
	comp=N,40550μm,0.7s						
TRTR				AML	AML		
	comp=E,50200μm,0.6s						
CIMA	**Civitanova Mar**	**0.63**	**39**	P	**Pb**	**10 19 39.4**	**-0.4**
MURB	**Monte Urbino**	**0.63**	**315**	P	**Pg**	**10 19 38.8**	**-0.5**
MURB				AML	AML		
	comp=E,50800μm,0.3s						
MURB				AML	AML		
	comp=N,27950μm,0.3s						
MURB				AML	AML		
	comp=E,55600μm,0.3s						
MURB				AML	AML		
	comp=N,31050μm,1.1s						
MURB				AML	AML		
	comp=N,28000μm,0.3s						
MURB				AML	AML		
	comp=E,50850μm,0.3s						
MMUR	**Monte Murano**	**0.63**	**351**	P	**Pg**	**10 19 38.7**	**-0.5**
MMUR				AML	AML		
	comp=E,20500μm,0.3s						
MMUR				AML	AML		
	comp=N,17650μm,0.6s						
MMUR				AML	AML		
	comp=E,20550μm,0.3s						
FAGN	**Fagnano**	**0.64**	**149**	⇓P	**Pg**	**10 19 38.5**	**-1.0**
FAGN				AML	AML		
	comp=E,35100μm,0.3s						
FAGN				AML	AML		
	comp=N,25050μm,0.6s						
PP3	**Marolino**	**0.66**	**32**	P	**Pb**	**10 19 40.0**	**-0.5**
PP3				AML	AML		
	comp=N,66700μm,1.3s						
PP3				AML	AML		
	comp=N,63100μm,1.3s						
PP3				AML	AML		
	comp=E,40900μm,0.5s						
PP3				AML	AML		
	comp=E,34200μm,0.6s						
VCEL	**Villa Celiera**	**0.67**	**129**	P	**Pg**	**10 19 39.2**	**-0.8**
VCEL				AML	AML		
	comp=E,17650μm,0.7s						
VCEL				AML	AML		
	comp=N,17600μm,0.4s						
ATFO	**Monte Foce - G**	**0.69**	**323**	⇓P	**Pg**	**10 19 39.5**	**-0.7**
ATFO				AML	AML		
	comp=E,7875μm,0.6s						
ATFO				AML	AML		
	comp=N,6815μm,0.6s						
ATTE	**AVT- Monte Tez**	**0.69**	**304**	P	**Pg**	**10 19 39.8**	**-0.5**
ATTE				AML	AML		
	comp=E,7810μm,0.4s						
ATTE				AML	AML		
	comp=N,8180μm,0.7s						
ATTE				AML	AML		
	comp=E,7805μm,0.4s						
ATSC	**Scheggia e Pas**	**0.69**	**332**	P	**Pg**	**10 19 39.5**	**-0.8**
ARVD	**Arcevia**	**0.69**	**348**	⇓P	**Pg**	**10 19 39.7**	**-0.7**
ARVD				AML	AML		
	comp=E,5540μm,0.3s						
ARVD				AML	AML		
	comp=N,5005μm,0.4s						
ATLO	**AVT- Montelove**	**0.73**	**313**	P	**Pg**	**10 19 40.3**	**-0.7**
SRES	**S.Oreste - Sor**	**0.74**	**219**	P	**Pg**	**10 19 40.3**	**-1.0**
SRES				AML	AML		
	comp=E,8890μm,0.3s						
SRES				AML	AML		
	comp=N,6975μm,0.3s						
MGAB	**Montegabbione**	**0.76**	**278**	P	**Pg**	**10 19 41.0**	**-0.5**
MGAB				AML	AML		
	comp=N,23562μm,0.5s						
T0110	**Collepietro**	**0.76**	**141**	P	**Pg**	**10 19 40.1**	**-1.5**
T0110				AML	AML		
	comp=N,15800μm,0.5s						
T0110				AML	AML		
	comp=E,20100μm,0.4s						
FRON	**Frontone**	**0.76**	**337**	⇓P	**Pg**	**10 19 40.7**	**-1.0**
FRON				AML	AML		
	comp=E,6840μm,0.5s						
FRON				AML	AML		
	comp=N,10035μm,0.3s						
TB01	**Gubbio**	**0.76**	**318**	P	**Pg**	**10 19 40.8**	**-0.8**
ATVA	**AVT- Monte Val**	**0.77**	**307**	P	**Pg**	**10 19 41.5**	**-0.4**
ATVO	**AVT- Monte Val**	**0.78**	**317**	⇓P	**Pg**	**10 19 41.1**	**-0.8**
ATVO				AML	AML		
	comp=E,6240μm,0.4s						
ATVO				AML	AML		
	comp=N,6195μm,0.4s						
ATVO				AML	AML		
	comp=E,6235μm,0.4s						
ATBU	**Serra di Buran**	**0.79**	**327**	P	**Pg**	**10 19 41.3**	**-0.8**
TB03	**Pietralunga**	**0.79**	**318**	P	**Pg**	**10 19 41.3**	**-0.8**
AOI	**Ancona**	**0.81**	**25**	P	**Pg**	**10 19 41.9**	**-0.7**
AOI				AML	AML		
	comp=E,5905μm,0.6s						
AOI				AML	AML		
	comp=N,5510μm,0.5s						
AOI				AML	AML		
	comp=E,3638μm,0.4s						
ATMI	**Monte Miggiano**	**0.82**	**309**	P	**Pg**	**10 19 42.3**	**-0.5**
ATMI				AML	AML		
	comp=N,26800μm,0.4s						
ATMI				AML	AML		
	comp=E,22200μm,1.1s						
ATMI				AML	AML		
	comp=E,18672μm,0.4s						
PTQR	**Pietraquaria**	**0.82**	**166**	P	**Pg**	**10 19 41.3**	**-1.5**
PTQR				AML	AML		
	comp=E,3320μm,0.4s						
PTQR				AML	AML		
	comp=N,3725μm,1.3s						
ATPC	**Poggio Castell**	**0.83**	**323**	P	**Pg**	**10 19 41.9**	**-1.0**
ATPI	**Pietralunga -**	**0.83**	**320**	P	**Pg**	**10 19 42.0**	**-1.0**
ATPI				AML	AML		
	comp=E,6430μm,0.5s						
ATPI				AML	AML		
	comp=N,4885μm,0.5s						
PIEI	**Pieia**	**0.84**	**329**	P	**Pg**	**10 19 42.3**	**-0.9**
PIEI				AML	AML		
	comp=E,5980μm,0.3s						
PIEI				AML	AML		
	comp=N,3540μm,1.4s						
MTCE	**Montecelio**	**0.85**	**200**	⇑P	**Pg**	**10 19 41.7**	**-1.5**
MTCE				AML	AML		
	comp=E,6635μm,0.6s						
MTCE				AML	AML		
	comp=N,5910μm,0.7s						
MTCE				AML	AML		
	comp=E,4134μm,0.7s						
MPAG	**Monte Paganucc**	**0.86**	**341**	⇓P	**Pg**	**10 19 42.6**	**-0.9**
MPAG				AML	AML		
	comp=E,6535μm,0.9s						
MPAG				AML	AML		
	comp=N,6395μm,0.4s						
MPAG				AML	AML		
	comp=E,6540μm,0.9s						
MPAG				AML	AML		
	comp=N,6400μm,0.4s						
MPAG				AML	AML		
	comp=E,5533μm,0.3s						
CERT	**Cerreto**	**0.88**	**187**	P	**Pg**	**10 19 42.3**	**-1.5**
SENI	**Senigallia**	**0.89**	**5**	P	**Pg**	**10 19 43.3**	**-0.8**
SENI				AML	AML		
	comp=E,7300μm,0.9s						
SENI				AML	AML		
	comp=N,5640μm,0.8s						
SACS	**San Casciano d**	**0.90**	**272**	P	**Pb**	**10 19 43.9**	**-0.7**
SACS				AML	AML		
	comp=E,5320μm,0.5s						
SACS				AML	AML		
	comp=N,7810μm,0.8s						
SACS				AML	AML		
	comp=E,5325μm,0.5s						
SACS				AML	AML		
	comp=N,6041μm,0.7s						
APEC	**Apecchio**	**0.91**	**325**	P	**Pg**	**10 19 43.5**	**-0.9**
FSSB	**Fossombrone**	**0.91**	**344**	P	**Pg**	**10 19 43.5**	**-1.0**
FSSB				AML	AML		
	comp=E,17450μm,0.4s						
FSSB				AML	AML		
	comp=N,29350μm,0.4s						
ATMC	**Monte Cedrone**	**0.93**	**313**	P	**Pb**	**10 19 44.4**	**-0.7**
RCAV	**Rocca di Cave**	**0.98**	**188**	P	**Pg**	**10 19 44.4**	**-1.4**
RCAV				AML	AML		
	comp=E,13610μm,0.4s						
RCAV				AML	AML		
	comp=N,9395μm,0.4s						
PE3	**Peglio**	**0.99**	**332**	P	**Pg**	**10 19 45.2**	**-0.9**
PE3				AML	AML		
	comp=E,40μm,0.4s						
PE3				AML	AML		
	comp=N,43μm,0.4s						
CAFI	**Castiglion Fio**	**1.00**	**301**	P	**Pg**	**10 19 45.2**	**-1.0**
CAFI				AML	AML		
	comp=E,5700μm,0.5s						
CAFI				AML	AML		
	comp=N,4535μm,0.6s						
CAFI				AML	AML		
	comp=E,5705μm,0.5s						
CAFI				AML	AML		
	comp=N,4540μm,0.6s						
CAFI				AML	AML		
	comp=E,5775μm,0.5s						
CAFI				AML	AML		
	comp=N,4715μm,0.7s						
CAFI				AML	AML		
	comp=N,4538μm,0.6s						
LATE	**Laterza**	**1.00**	**259**	P	**Pg**	**10 19 45.5**	**-0.7**
VVLD	**Villa Vallelon**	**1.01**	**159**	P	**Pg**	**10 19 45.1**	**-1.4**
VVLD				AML	AML		
	comp=E,4455μm,0.4s						

VVLD			AML	AML			
	comp=N,4505µm,0.7s						
GUAR	**Guarcino**	**1.03 173**	P	**Pg**	**10 19 45.2**	**-1.6**	
GUAR			AML	AML			
	comp=E,5760µm,0.5s						
GUAR			AML	AML			
	comp=N,8295µm,0.3s						
SSP9	**Sansepolcro**	**1.05 316**	P	**Pn**	**10 19 46.9**	**-0.7**	
SSP9			AML	AML			
	comp=E,2336µm,1.3s						
SSP9			AML	AML			
	comp=N,3460µm,0.5s						
RMP	**Rome, Mte Porz**	**1.06 198**	P	**Pg**	**10 19 45.6**	**-1.6**	
RMP			AML	AML			
	comp=E,7880µm,0.6s						
RMP			AML	AML			
	comp=N,11815µm,0.8s						
MCIV	**Monte Civitell**	**1.07 268**	P	**Pb**	**10 19 46.7**	**-0.8**	
MCIV			AML	AML			
	comp=E,3175µm,1.0s						
MCIV			AML	AML			
	comp=N,2595µm,0.6s						
MCIV			AML	AML			
	comp=E,1847µm,0.3s						
CAFR	**Castel Frentan**	**1.07 123**	P	**Pb**	**10 19 46.3**	**-1.2**	
CAFR			AML	AML			
	comp=E,4305µm,0.4s						
CAFR			AML	AML			
	comp=N,4525µm,0.6s						
SF04	**Casetta**	**1.08 271**	P	**Pn**	**10 19 47.5**	**-0.6**	
SF04			AML	AML			
	comp=E,5080µm,1.2s						
SF04			AML	AML			
	comp=N,2915µm,0.3s						
LPEL	**Lama dei Pelig**	**1.09 134**	P	**Pb**	**10 19 46.1**	**-1.8**	
LPEL			AML	AML			
	comp=E,5620µm,0.8s						
LPEL			AML	AML			
	comp=N,5615µm,0.8s						
VIVA	**Pratoni del Vi**	**1.10 194**	P	**Pb**	**10 19 45.7**	**-2.3**	
VIVA			AML	AML			
	comp=E,15550µm,0.5s						
VIVA			AML	AML			
	comp=N,21950µm,0.4s						
RDP	**Rocca di Papa**	**1.10 196**	P	**Pb**	**10 19 46.9**	**-1.2**	
RDP			AML	AML			
	comp=E,16750µm,0.5s						
RDP			AML	AML			
	comp=N,22750µm,1.4s						
MA9	**Marino**	**1.10 199**	P	**Pb**	**10 19 46.9**	**-1.1**	
MA9			AML	AML			
	comp=E,14750µm,0.5s						
MA9			AML	AML			
	comp=N,9330µm,0.5s						
TOLF	**Tolfa**	**1.13 228**	⇑P	**Pb**	**10 19 47.3**	**-1.1**	
TOLF			AML	AML			
	comp=E,4195µm,0.5s						
TOLF			AML	AML			
	comp=N,5465µm,0.9s						
TOLF			AML	AML			
	comp=N,3666µm,0.4s						
SF01	**Poggio Pratacc**	**1.16 270**	P	**Pb**	**10 19 48.3**	**-0.6**	
SF01			AML	AML			
	comp=E,3730µm,0.4s						
SF01			AML	AML			
	comp=N,3495µm,0.7s						
CRE	**Caprese Michel**	**1.18 313**	P	**Pb**	**10 19 48.6**	**-0.8**	
CRE			AML	AML			
	comp=E,2040µm,0.8s						
CRE			AML	AML			
	comp=N,2285µm,0.5s						
POFI	**Posta Fibreno**	**1.18 158**	P	**Pb**	**10 19 47.8**	**-1.6**	
LAV9	**Lanuvio**	**1.18 196**	P	**Pb**	**10 19 48.2**	**-1.2**	
LAV9			AML	AML			
	comp=E,13750µm,0.6s						
LAV9			AML	AML			
	comp=N,15250µm,0.4s						
LAV9			AML	AML			
	comp=E,14200µm,0.6s						
LAV9			AML	AML			
	comp=N,15400µm,0.4s						
LRP	**Arpino**	**1.22 164**	AML	AML			
	comp=E,2490µm,0.6s						
LRP			AML	AML			
	comp=N,3705µm,0.5s						
ARCI	**Arcidosso**	**1.22 272**	P	**Pg**	**10 19 49.9**	**-0.5**	
ARCI			AML	AML			
	comp=E,914µm,0.7s						
ARCI			AML	AML			
	comp=N,794µm,0.8s						
GIUL	**Giuliano Di Ro**	**1.26 176**	P	**Pn**	**10 19 49.2**	**-1.3**	
GIUL			AML	AML			
	comp=E,3260µm,0.8s						
GIUL			AML	AML			
	comp=N,3480µm,0.6s						
LATB	**Latina**	**1.33 186**	P	**Pn**	**10 19 49.3**	**-2.1**	
LATB			AML	AML			
	comp=E,1340µm,0.7s						
LATB			AML	AML			
	comp=N,780µm,1.1s						
LATB			AML	AML			
	comp=N,678µm,1.0s						
CERA	**Filignano**	**1.39 151**	P	**Pn**	**10 19 51.2**	**-1.0**	
CERA			AML	AML			
	comp=E,3210µm,0.7s						
CERA			AML	AML			
	comp=N,2925µm,0.8s						
CERA			AML	AML			
	comp=N,1863µm,0.4s						
ASQU	**Asqua**	**1.39 315**	P	**Pb**	**10 19 52.0**	**-0.8**	
ASQU			AML	AML			
	comp=E,2210µm,0.8s						
ASQU			AML	AML			
	comp=N,2215µm,0.8s						
TRIV	**Trivento**	**1.49 135**	P	**Pg**	**10 19 54.8**	**-0.7**	
TRIV			AML	AML			
	comp=E,2575µm,1.1s						
TRIV			AML	AML			
	comp=N,2965µm,0.6s						
CSNT	**Castellina Chi**	**1.50 297**	P	**Pb**	**10 19 53.8**	**-1.0**	
CSNT			AML	AML			
	comp=E,850µm,0.4s						
CSNT			AML	AML			
	comp=N,921µm,0.6s						
CSNT			AML	AML			
	comp=N,860µm,0.4s						
MAON	**Monte Argentar**	**1.53 256**	⇑P	**Pn**	**10 19 53.6**	**-0.5**	
MAON			AML	AML			
	comp=E,821µm,1.1s						
MAON			AML	AML			
	comp=N,558µm,1.1s						
OSSC	**Osservatorio P**	**1.55 298**	P	**Pn**	**10 19 54.0**	**-0.4**	
OSSC			AML	AML			
	comp=E,1050µm,1.3s						
OSSC			AML	AML			
	comp=N,800µm,1.6s						
OSSC			AML	AML			
	comp=E,806µm,1.6s						
OSSC			AML	AML			
	comp=N,989µm,1.3s						
RUFI	**Rufina**	**1.56 311**	P	**Pn**	**10 19 54.6**	**-0.1**	
VAGA	**Valle Agricola**	**1.62 149**	P	**Pb**	**10 19 56.0**	**-0.9**	
VAGA			AML	AML			
	comp=E,918µm,0.7s						
VAGA			AML	AML			
	comp=N,1515µm,1.1s						
LMD	**Lutirano**	**1.63 321**	P	**Pn**	**10 19 54.9**	**-0.7**	
TRIF	**Trifonti**	**1.66 281**	P	**Pn**	**10 19 55.8**	**-0.2**	
TRIF			AML	AML			
	comp=E,820µm,1.6s						
TRIF			AML	AML			
	comp=N,766µm,0.6s						
TRIF			AML	AML			
	comp=E,784µm,0.4s						
CASP	**Castiglione de**	**1.67 270**	P	**Pn**	**10 19 55.6**	**-0.5**	
CASP			AML	AML			
	comp=E,436µm,0.7s						
CASP			AML	AML			
	comp=N,366µm,1.3s						
BSSO	**Busso**	**1.67 139**	P	**Pb**	**10 19 57.0**	**-0.7**	
CIGN	**Sant'Elia a Pi**	**1.76 131**	P	**Pn**	**10 19 57.3**	**0.0**	
MODR	**Mondragone**	**1.76 161**	P	**Pn**	**10 19 57.3**	**0.0**	
MELA	**Melanico ??? S**	**1.85 126**	P	**Pb**	**10 19 59.6**	**-1.1**	
MELA			AML	AML			
	comp=E,2925µm,0.4s						
MELA			AML	AML			
	comp=N,3370µm,1.2s						
MELA			AML	AML			
	comp=E,3105µm,0.4s						
MELA			AML	AML			
	comp=N,3375µm,1.2s						
MELA			AML	AML			
	comp=E,1955µm,0.7s						
MTCR	**Monte La Croce**	**1.97 309**	P	**Pn**	**10 19 60.0**	**-0.4**	
PSB1	**Pescosannita**	**2.02 141**	P	**Pb**	**10 20 03.2**	**-0.5**	
APRC	**Apricena**	**2.08 120**	P	**Pn**	**10 20 01.3**	**-0.5**	
APRC			AML	AML			
	comp=E,1380µm,0.6s						
APRC			AML	AML			
	comp=N,2035µm,0.7s						
MOCO	**Biccari - m.te**	**2.09 133**	P	**Pb**	**10 20 04.0**	**-0.9**	
BRJN	**Brijuni**	**2.13 12**	P	**Pn**	**10 20 02.3**	**-0.2**	
CELB	**S.Piero in Cam**	**2.15 269**	P	**Pn**	**10 20 02.2**	**-0.6**	
CELB			AML	AML			
	comp=E,198µm,0.5s						
CELB			AML	AML			
	comp=N,158µm,0.5s						
EQUI	**Equi**	**2.55 303**	P	**Pn**	**10 20 08.2**	**-0.1**	
RIY	**Rijeka**	**2.69 21**	*e*Pn	**Pn**	**10 20 10.1**	**0.0**	
RIY			*e*Sn	**Sn**	**10 20 42.8**	**+0.2**	
PLMA	**Palmaria, Port**	**2.69 298**	P	**Pn**	**10 20 10.1**	**0.0**	
PLMA			AML	AML			
	comp=E,198µm,0.6s						
PLMA			AML	AML			
	comp=N,228µm,1.3s						
PLMA			AML	AML			
	comp=N,164µm,1.0s						
MORSI	**Morsiglia**	**2.77 274**	P	**Pn**	**10 20 11.7**	**+0.5**	
SKDS	**Skadanscina**	**2.80 13**	⇓*i*Pn	**Pn**	**10 20 11.2**	**-0.4**	
CDRU	**Civita di Ruta**	**2.84 144**	P	**Pn**	**10 20 12.8**	**+0.5**	
MRVN	**Minervino Murg**	**2.88 127**	P	**Pn**	**10 20 13.1**	**+0.3**	
MRVN			AML	AML			
	comp=E,380µm,0.4s						
MRVN			AML	AML			
	comp=N,251µm,1.0s						
SMPL	**Sampolo**	**2.94 257**	P	**Pn**	**10 20 13.3**	**-0.2**	
SMPL			AML	AML			
	comp=E,50µm,0.8s						
SMPL			AML	AML			
	comp=N,43µm,1.6s						
MSSA	**Maissana**	**3.02 301**	P	**Pn**	**10 20 14.7**	**-0.1**	
MSSA			AML	AML			
	comp=E,214µm,0.5s						
MSSA			AML	AML			
	comp=N,204µm,1.0s						
PGF	**Pioggiola**	**3.06 266**	*e*Pn	**Pn**	**10 20 15.2**	**-0.1**	
PGF			*e*Sn	**Sn**	**10 20 49.2**	**-2.7**	
	comp=N,34nm,0.5s						
PGF	**Pioggiola**	**3.06 266**	AML	AML			
	comp=E,59µm,0.5s						
PGF			AML	AML			
	comp=N,67µm,0.3s						
PGF	**Pioggiola**	**3.06 266**	P	**Pn**	**10 20 16.2**	**+0.9**	
CEY	**Cerknica**	**3.06 17**	*e*Pn	**Pn**	**10 20 15.1**	**-0.2**	
SABO	**M.te Sabotino**	**3.18 6**	P	**Pn**	**10 20 16.7**	**-0.2**	
SABO			AML	AML			
	comp=E,3695µm,0.7s						
SABO			AML	AML			
	comp=N,4210µm,0.5s						
SABO			AML	AML			
	comp=E,810µm,0.7s						
SABO			AML	AML			
	comp=N,1122µm,0.5s						
ROVR	**Rover Verones**	**3.19 333**	P	**Pn**	**10 20 17.0**	**-0.2**	
ROVR			AML	AML			
	comp=E,186µm,0.9s						
ROVR			AML	AML			
	comp=N,230µm,1.6s						
CGRP	**Cima Grappa**	**3.21 343**	P	**Pn**	**10 20 17.9**	**+0.6**	
CGRP			AML	AML			
	comp=E,766µm,0.8s						
CGRP			AML	AML			
	comp=N,828µm,0.6s						
CGRP			AML	AML			
	comp=E,786µm,0.5s						
CGRP			AML	AML			
	comp=N,855µm,0.6s						
CGRP			AML	AML			
	comp=E,460µm,0.4s						
AMUR	**Altamura**	**3.22 125**	P	**Pn**	**10 20 16.8**	**-0.7**	
AMUR			AML	AML			
	comp=E,442µm,0.4s						
AMUR			AML	AML			
	comp=N,440µm,0.3s						
AMUR			AML	AML			
	comp=N,236µm,0.5s						
MGR	**Morigerati**	**3.24 145**	P	**Pn**	**10 20 19.7**	**+2.1**	
MGR			AML	AML			
	comp=E,100µm,0.7s						
MGR			AML	AML			
	comp=N,97µm,1.3s						
VARN	**Col Varnada, M**	**3.26 347**	P	**Pn**	**10 20 18.0**	**0.0**	
VARN			AML	AML			
	comp=E,878µm,0.6s						
VARN			AML	AML			
	comp=N,700µm,0.6s						
VARN			AML	AML			
	comp=E,866µm,0.6s						
VARN			AML	AML			
	comp=N,686µm,0.6s						
MGRS	**Mrkonjic Grad**	**3.28 60**	*e*Pn	**Pn**	**10 20 20.0**	**+1.7**	
AJAC	**Base Areonaval**	**3.36 256**	P	**Pn**	**10 20 21.5**	**+2.2**	
STON	**Ston**	**3.36 88**	*e*Pn	**Pn**	**10 20 17.9**	**-1.4**	
STON	**Ston**	**3.36 88**	*e*Pn	**Pn**	**10 20 18.6**	**-0.7**	
STON			*e*Sn	**Sn**	**10 20 58.0**	**-1.1**	
SALO	**Salr**	**3.37 327**	P	**Pn**	**10 20 21.1**	**+1.6**	
SALO			AML	AML			
	comp=E,666µm,0.6s						
SALO			AML	AML			
	comp=N,575µm,1.1s						
LJU	**Ljubljana**	**3.38 17**	⇓*i*Pn	**Pn**	**10 20 20.2**	**+0.6**	
LJU	**Ljubljana**	**3.38 17**	P	**Pn**	**10 20 20.1**	**+0.5**	
LJU			AML	AML			
	comp=E,3160µm,1.4s						
LJU			AML	AML			
	comp=N,3760µm,0.5s						
LJU			AML	AML			
	comp=E,2144µm,0.6s						
CTI	**Castel Tesino**	**3.40 342**	P	**Pn**	**10 20 20.6**	**+0.7**	
CTI			AML	AML			
	comp=E,580µm,0.7s						
CTI			AML	AML			
	comp=N,447µm,0.7s						
MPRI	**Monte Prat**	**3.42 358**	P	**Pn**	**10 20 20.4**	**+0.1**	
MPRI			AML	AML			
	comp=E,714µm,0.7s						
MPRI			AML	AML			
	comp=N,980µm,0.7s						
CADS	**Cadrg**	**3.44 7**	⇓*i*Pn	**Pn**	**10 20 20.1**	**-0.3**	
MATE	**Matera**	**3.44 128**	⇑P	**Pn**	**10 20 22.1**	**+1.7**	
STAL	**STALIGIAL**	**3.46 355**	P	**Pn**	**10 20 20.8**	**+0.1**	
STAL			AML	AML			
	comp=E,692µm,0.6s						
STAL			AML	AML			
	comp=N,402µm,0.6s						
A051A	**Mrakovica**	**3.50 50**	*e*Pn	**Pn**	**10 20 21.6**	**+0.3**	
BLY	**Banja Luka**	**3.51 55**	*e*Pn	**Pb**	**10 20 24.7**	**-4.3**	
BLY	**Banja Luka**	**3.51 55**	*e*Pn	**Pn**	**10 20 21.5**	**+0.1**	
BLY			*e*Sn	**Sn**	**10 21 02.8**	**-0.1**	
LUSI	**Trento, Gardas**	**3.51 334**	P	**Pn**	**10 20 21.6**	**+0.1**	
LUSI			AML	AML			
	comp=E,364µm,0.8s						
LUSI			AML	AML			
	comp=N,494µm,0.3s						
CIMO	**Cimolais**	**3.53 352**	P	**Pn**	**10 20 21.5**	**-0.1**	
CIMO			AML	AML			
	comp=E,188µm,0.6s						
CIMO			AML	AML			
	comp=N,140µm,0.7s						
CIMO			AML	AML			
	comp=E,184µm,0.6s						
CIMO			AML	AML			
	comp=N,134µm,0.7s						
LTRZ	**Laterza**	**3.54 127**	P	**Pn**	**10 20 23.1**	**+1.4**	
PTCC	**Patocco-Chiusa**	**3.59 2**	P	**Pn**	**10 20 22.2**	**-0.3**	
PTCC			AML	AML			
	comp=E,274µm,0.6s						
PTCC			AML	AML			
	comp=N,264µm,1.0s						
GAGG	**Gaggia**	**3.62 335**	P	**Pn**	**10 20 24.4**	**+1.4**	
GAGG			AML	AML			
	comp=E,475µm,0.9s						
GAGG			AML	AML			
	comp=N,468µm,0.7s						
CLUD	**Cludinico**	**3.64 357**	P	**Pn**	**10 20 23.2**	**0.0**	
CLUD			AML	AML			
	comp=E,365µm,0.9s						
CLUD			AML	AML			
	comp=N,357µm,0.8s						
CLUD			AML	AML			
	comp=E,356µm,0.9s						
CLUD			AML	AML			
	comp=N,364µm,0.8s						
ZONE	**Zone**	**3.66 325**	P	**Pn**	**10 20 24.4**	**+0.9**	
ZONE			AML	AML			
	comp=E,271µm,1.0s						
ZONE			AML	AML			
	comp=N,398µm,0.6s						
ACOM	**Acomizza, Ital**	**3.74 4**	P	**Pn**	**10 20 24.9**	**+0.2**	
ACOM			AML	AML			
	comp=E,646µm,0.9s						
ACOM			AML	AML			
	comp=N,730µm,0.8s						
ACOM			AML	AML			
	comp=E,646µm,0.7s						
ACOM			AML	AML			
	comp=N,704µm,0.8s						
ZOU	**Zoufplan**	**3.74 358**	P	**Pn**	**10 20 24.8**	**+0.1**	
ZOU			AML	AML			
	comp=E,459µm,1.0s						
ZOU			AML	AML			
	comp=N,462µm,1.5s						
ZOU			AML	AML			
	comp=E,455µm,1.0s						
ZOU			AML	AML			
	comp=N,433µm,1.5s						
MABI	**Malga Bissina**	**3.74 331**	P	**Pn**	**10 20 26.0**	**+1.3**	
FVI	**Forni Avoltri**	**3.79 356**	P	**Pn**	**10 20 25.5**	**+0.2**	
FVI			AML	AML			
	comp=E,330µm,0.7s						
FVI			AML	AML			
	comp=N,348µm,0.9s						
SALB	**San Lorenzo Be**	**3.81 139**	AML	AML			
	comp=N,118µm,0.5s						
SALB			AML	AML			
	comp=E,106µm,0.9s						
OBKA	**Obir**	**3.83 15**	*e*Pn	**Pn**	**10 20 26.1**	**+0.3**	
OBKA	**Obir**	**3.83 15**	*e*Pn	**Pn**	**10 20 25.6**	**-0.2**	
	comp=E,2.9nm,0.2s						
OBKA	**Obir**	**3.83 15**	*e*Pn	**Pn**	**10 20 26.4**	**+0.6**	
MYKA	**Terra Mystica**	**3.83 5**	*i* Pn	**Pn**	**10 20 26.5**	**+0.7**	
	comp=E,12nm,0.2s,SNR=14						
TREB	**Trebinje**	**3.84 90**	*e*Pn	**Pn**	**10 20 26.0**	**+0.1**	
TREB	**Trebinje**	**3.84 90**	*e*Pn	**Pn**	**10 20 26.7**	**+0.8**	
TREB			*e*Sn	**Sn**	**10 21 09.9**	**-1.2**	
KOSI	**Kohlern**	**3.85 342**	P	**Pn**	**10 20 27.6**	**+1.3**	
KOSI			AML	AML			
	comp=E,570µm,1.0s						
KOSI			AML	AML			
	comp=N,374µm,1.1s						
APPI	**Appiano**	**3.91 340**	P	**Pn**	**10 20 27.7**	**+0.8**	
APPI			AML	AML			
	comp=E,336µm,0.5s						
APPI			AML	AML			
	comp=N,270µm,1.2s						
ABTA	**Abfaltersbach**	**3.95 354**	*i* Pn	**Pn**	**10 20 28.6**	**+1.0**	
	comp=N,110nm,0.4s,SNR=30						
HCY	**Herceg Novi**	**3.97 94**	*e*Pn	**Pn**	**10 20 28.5**	**+0.8**	
BRY	**Bratogost**	**3.98 87**	*e*Pn	**Pn**	**10 20 28.5**	**+0.6**	
SOKA	**Soboth**	**4.09 19**	*e*Pn	**Pn**	**10 20 29.3**	**-0.1**	
	comp=N,4.2nm,0.3s						
SOKA			*e*Sn	**Sn**	**10 21 20.7**	**+3.4**	
	comp=N,11nm,0.4s						
RISI	**Rein**	**4.20 350**	P	**Pn**	**10 20 31.4**	**+0.4**	
RISI			AML	AML			
	comp=E,639µm,0.6s						
RISI			AML	AML			
	comp=N,730µm,0.6s						
SAOF	**Saorge**	**4.23 288**	P	**Pn**	**10 20 32.9**	**+1.6**	
UPM	**Unac-Piva**	**4.25 83**	*e*Pn	**Pn**	**10 20 35.1**	**+3.4**	
SBF	**Sospel**	**4.29 286**	*e*Pn	**Pn**	**10 20 32.3**	**+0.2**	
SBF			*e*Sn	**Sn**	**10 21 19.5**	**-2.6**	
	comp=N,44nm,0.4s						
ROSI	**Rosskopf**	**4.29 344**	P	**Pn**	**10 20 32.8**	**+0.5**	
ROSI			AML	AML			
	comp=E,440µm,0.7s						
ROSI			AML	AML			
	comp=N,489µm,0.8s						
VSL	**Villasalto**	**4.36 222**	P	**Pn**	**10 20 33.6**	**+0.5**	
VSL			AML	AML			
	comp=E,94µm,0.3s						
VSL			AML	AML			
	comp=N,138µm,0.7s						
HAPS	**Han Pijesak,Bl**	**4.42 71**	*e*Pn	**Pn**	**10 20 35.8**	**+1.8**	
BEHE	**Becsehely**	**4.48 34**	P	**Pn**	**10 20 37.0**	**+2.3**	
DRME	**Dracevica, Mon**	**4.52 96**	*e*Pn	**Pn**	**10 20 36.5**	**+1.3**	
PDG	**Podgorica**	**4.53 93**	⇑P	**Pn**	**10 20 36.8**	**+1.4**	
PDG	**Podgorica**	**4.53 93**	*e*Pn	**Pn**	**10 20 37.4**	**+2.0**	
PDG			*e*Sn	**Sn**	**10 21 27.9**	**-0.2**	
FETA	**Feichten**	**4.54 339**	*e*Pn	**Pn**	**10 20 37.8**	**+2.2**	
	comp=N,15nm,0.5s,SNR=8.2						
TIP	**Timpagrande**	**4.55 142**	⇑P	**Pn**	**10 20 36.9**	**+1.1**	
WTTA	**Wattenberg**	**4.57 347**	*e*Pn	**Pn**	**10 20 38.3**	**+2.2**	
	comp=N,12nm,0.3s,SNR=9.1						
WTTA	**Wattenberg**	**4.57 347**	*e*Pn	**Pn**	**10 20 38.6**	**+2.5**	
DAVOX	**Davos/Dischmat**	**4.59 331**	Pn	**Pn**	**10 20 38.3**	**+1.9**	
	comp=N,6.2nm,0.3s,baz=162,slow=20,SNR=27						
DAVOX			Sn	**Sn**	**10 21 30.1**	**+0.4**	
	comp=N,6.2nm,0.3s,baz=158,slow=19,SNR=4.2						
	comp=N,22nm,0.3s						
DAVOX	**Davos/Dischmat**	**4.59 331**	P	**Pn**	**10 20 38.8**	**+2.4**	
SQTA	**Sankt Quirin**	**4.61 343**	*i* Pn	**Pn**	**10 20 38.7**	**+2.1**	
	comp=N,20nm,0.3s,SNR=14						
RUDO	**Rudo**	**4.63 78**	*e*Pn	**Pn**	**10 20 37.2**	**+0.5**	
CALF	**Calern**	**4.63 284**	P	**Pn**	**10 20 37.6**	**+0.7**	
WATA	**Walderalm**	**4.65 347**	*i* Pn	**Pn**	**10 20 39.6**	**+2.4**	
	comp=N,18nm,0.4s,SNR=13						
BBLS	**Lazići**	**4.69 75**	*e*Pn	**Pn**	**10 20 39.5**	**+1.8**	
BBLS	**Lazići**	**4.69 75**	*e*Pn	**Pn**	**10 20 39.4**	**+1.8**	
BBLS			*e*Sn	**Sn**	**10 21 29.7**	**-2.4**	
TRAV	**Traversella**	**4.72 307**	AML	AML			
	comp=E,71µm,0.8s						
TRAV			AML	AML			
	comp=N,60µm,1.0s						
ARSA	**Arzberg**	**4.75 20**	*e*Pn	**Pn**	**10 20 38.3**	**-0.1**	
	comp=N,8.3nm,0.3s,SNR=7.4						
ARSA			*e*Sn	**Sn**	**10 21 31.8**	**-1.6**	
	comp=N,14nm,0.4s						
ARSA	**Arzberg**	**4.75 20**	*e*Pn	**Pn**	**10 20 38.4**	**0.0**	
ARSA			*e*Sn	**Sn**	**10 21 31.3**	**-2.1**	
ARSA	**Arzberg**	**4.75 20**	P	**Pn**	**10 20 38.4**	**-0.1**	
MOTA	**Moosalm**	**4.75 343**	*i* Pn	**Pn**	**10 20 40.5**	**+1.9**	
	comp=N,14nm,0.4s,SNR=11						
KOVH	**Kovagotottos**	**4.83 46**	P	**Pn**	**10 20 38.7**	**-0.8**	
FUSIO	**Fusio**	**4.84 320**	P	**Pn**	**10 20 39.9**	**+0.2**	
SURF	**Saint Ours**	**4.88 292**	P	**Pn**	**10 20 42.3**	**+1.9**	
LMR	**La Mourre**	**4.88 278**	*e*Pn	**Pn**	**10 20 40.1**	**-0.1**	
LMR			*e*Sn	**Sn**	**10 21 33.1**	**-3.5**	
	comp=N,9.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.89 4**	*e*Pn	**Pn**	**10 20 40.9**	**+0.6**	
	comp=N,24nm,0.3s,SNR=24						
JAUF	**Jausiers**	**4.91 291**	P	**Pn**	**10 20 43.2**	**+2.5**	
RJOB	**Jochberg**	**4.93 357**	*e*Pn	**Pn**	**10 20 42.2**	**+1.3**	
RJOB			*e*Sn	**Sn**	**10 21 42.2**	**+4.4**	
RETA	**Reutte**	**4.96 341**	*e*Pn	**Pn**	**10 20 43.6**	**+2.2**	
	comp=N,5.7nm,0.3s,SNR=11						
MBDF	**Montbardon**	**4.99 295**	*e*Pn	**Pn**	**10 20 41.8**	**0.0**	
MBDF	**Montbardon**	**4.99 295**	*e*P	**Pn**	**10 20 45.6**	**+3.8**	
MBDF			*e*Sn	**Sn**	**10 21 36.6**	**-2.9**	
	comp=N,25nm,0.7s						
TRIGF	**Trigance**	**5.00 283**	P	**Pn**	**10 20 43.4**	**+1.5**	
DAVA	**Damuels**	**5.03 334**	*i* Pn	**Pn**	**10 20 45.4**	**+3.0**	
	comp=N,34nm,0.6s,SNR=17						
DAVA	**Damuels**	**5.03 334**	*e*Pn	**Pn**	**10 20 45.6**	**+3.2**	
CREF	**Crivoux**	**5.03 292**	P	Pn	10 20 47.5	+5.1	
SJES	**Sjenica**	**5.03 83**	*e*Pn	**Pn**	**10 20 42.4**	**0.0**	
SJES			*e*Sn	**Sn**	**10 21 38.6**	**-2.0**	
MOA	**Molln**	**5.09 9**	*e*Pn	**Pn**	**10 20 43.7**	**+0.6**	
MOA			*e*Sn	**Sn**	**10 21 38.2**	**-3.8**	
MOA	**Molln**	**5.09 9**	*i* Pn	**Pn**	**10 20 43.8**	**+0.6**	
	comp=N,11nm,0.4s						
MOA	**Molln**	**5.09 9**	*e*Pn	**Pn**	**10 20 43.9**	**+0.7**	
MOA			*e*Sn	**Sn**	**10 21 42.1**	**+0.2**	
DIVS	**Divibare**	**5.15 73**	*e*Pn	**Pn**	**10 20 43.0**	**-1.0**	
DIVS	**Divibare**	**5.15 73**	*e*Pn	**Pn**	**10 20 43.8**	**-0.2**	
MORH	**Mrgy, Hungar**	**5.20 47**	⇓P	**Pn**	**10 20 46.0**	**+1.4**	
MORH	**Mrgy, Hungar**	**5.20 47**	P	**Pn**	**10 20 46.4**	**+1.8**	
TIR	**Tirane**	**5.22 104**	⇑P	**Pn**	**10 20 46.0**	**+1.2**	

TIR	**Tirane**	**5.22 104**	*e*Pn	**Pn**	**10 20 45.8 +0.9**
TIR			*e*Sn	**Sn**	**10 21 44.0 -1.0**
BNALP	**Bannalp**	**5.26 322**	P	**Pn**	**10 20 48.0 +2.5**
UBR	**Ueberruh**	**5.31 337**	*e*Pn	**Pn**	**10 20 48.3 +2.1**
LPG	**La Plagne**	**5.32 302**	*e*Pn	**Pn**	**10 20 47.1 +0.6**
LPG	**La Plagne**	**5.32 302**	*e*P	**Pn**	**10 20 50.1 +3.6**
LPG			*e*Sn	**Sn**	**10 21 44.9 -2.9**
	comp=N,37nm,0.8s				
LPL	**La Plagne**	**5.34 303**	*e*Pn	**Pn**	**10 20 47.4 +0.7**
LPL	**La Plagne**	**5.34 303**	*e*P	**Pn**	**10 20 50.3 +3.6**
LPL			*e*Sn	**Sn**	**10 21 45.4 -2.8**
	comp=N,33nm,0.8s				
FRGS	**Fruska Gora**	**5.36 62**	⇑P	**Pn**	**10 20 49.3 +2.5**
FRGS	**Fruska Gora**	**5.36 62**	*e*Pn	**Pn**	**10 20 47.7 +1.0**
FRGS	**Fruska Gora**	**5.36 62**	*e*Pn	**Pn**	**10 20 45.8 -0.9**
MPLH	**Magyarpolny**	**5.36 34**	P	**Pn**	**10 20 46.9 +0.2**
RONA	**Rosalia, Austr**	**5.37 23**	*e*Pn	**Pn**	**10 20 47.0 0.0**
	comp=N,7.8nm,0.5s				
ARTF	**Artigues**	**5.41 281**	P	**Pn**	**10 20 49.2 +1.7**
SOP	**Sopron**	**5.43 25**	P	**Pn**	**10 20 48.2 +0.5**
CONA	**Conrad Observa**	**5.46 20**	*i* Pn	**Pn**	**10 20 48.3 +0.1**
	comp=N,16nm,0.5s,SNR=12				
CONA			*e*Sn	**Sn**	**10 21 49.7 -1.3**
	comp=N,23nm,0.7s				
RSL	**Roselend**	**5.49 304**	P	Pn	10 20 54.1 +5.4
SMRF	**Simiane la Rot**	**5.63 284**	*e*Pn	**Pn**	**10 20 50.3 -0.2**
SMRF			*e*Sn	**Sn**	**10 21 51.3 -3.8**
	comp=N,19nm,0.9s				
ORIF	**Oris-en-Rattie**	**5.65 294**	*e*P	**Pn**	**10 20 54.3 +3.5**
ORIF			*e*Sn	**Sn**	**10 21 52.0 -3.7**
	comp=N,23nm,0.6s				
ORIF	**Oris-en-Rattie**	**5.65 294**	P	Pn	10 20 55.8 +5.0
RUSF	**Rustrel**	**5.69 284**	P	**Pn**	**10 20 53.8 +2.5**
GRN	**Grenoble**	**5.85 297**	P	Pn	10 20 58.0 +4.4
SELS	**Selova**	**5.87 83**	*e*Pn	**Pn**	**10 20 54.1 +0.3**
SELS			*e*Sn	**Sn**	**10 21 58.1 -2.9**
OHR	**Ohrid**	**5.96 104**	*i* Pn	**Pn**	**10 20 57.0 +1.9**
OGSM	**Saint Maurice**	**6.03 300**	P	Pn	10 21 01.3 +5.3
GEC2	**GERESS Array S**	**6.04 4**	*e*Pn	**Pn**	**10 20 56.0 -0.3**
GEC2			*e*Sn	**Sn**	**10 22 04.9 -0.5**
GERES	**GERESS Array B**	**6.04 4**	Pn	**Pn**	**10 20 56.0 -0.3**
	comp=N,1.8nm,0.3s,baz=170,slow=12,SNR=28				
GERES			Sn	**Sn**	**10 22 05.7 +0.3**
	comp=N,5.2nm,0.3s,baz=172,slow=24,SNR=8.2				
	comp=N,3.7nm,0.5s				
CKRC	**Cesky Krumlov**	**6.06 7**	*e*PN	**Pn**	**10 20 55.5 -0.9**
CKRC			*e*SN	**Sn**	**10 22 05.4 -0.3**
CABF	**La Chapelle**	**6.29 309**	*e*Pn	**Pn**	**10 21 00.4 +0.7**
CABF	**La Chapelle**	**6.29 309**	*e*P	Pn	10 21 05.6 +5.9
CABF			*e*Sn	**Sn**	**10 22 07.8 -3.7**
	comp=N,28nm,0.8s				
BOVS	**Bovan**	**6.32 80**	⇑P	**Pn**	**10 21 00.3 +0.4**
BOVS	**Bovan**	**6.32 80**	*e*Pn	**Pn**	**10 20 59.5 -0.4**
BOVS			*e*Sn	**Sn**	**10 22 09.2 -2.8**
KHC	**Kasperske Hory**	**6.32 3**	*e*Pn	**Pn**	**10 20 59.5 -0.5**
KHC			*e*SN	**Sn**	**10 22 10.6 -1.6**
WET	**Wettzell**	**6.33 358**	*e*Pn	**Pn**	**10 20 59.5 -0.6**
WET			*e*Sn	**Sn**	**10 22 09.9 -2.5**
BARS	**Barje**	**6.38 87**	*e*Pn	**Pn**	**10 21 02.0 +1.1**
BARS			*e*Sn	**Sn**	**10 22 11.4 -2.3**
VIVF	**Saint-Julien-l**	**6.45 291**	*e*Pn	**Pn**	**10 21 01.0 -0.8**
VIVF	**Saint-Julien-l**	**6.45 291**	*e*P	**Pn**	**10 21 05.9 +4.1**
BFO	**Black Forest**	**6.46 330**	*e*Pn	**Pn**	**10 21 03.1 +1.2**
BFO			*e*Sn	**Sn**	**10 22 14.0 -1.7**
KRUC	**Moravsky**	**6.65 19**	*e*PN	**Pn**	**10 21 04.0 -0.4**
KRUC			*e*SN	**Sn**	**10 22 20.6 +0.5**
HINF	**Hinteralfeld**	**6.68 321**	*e*Pn	**Pn**	**10 21 04.8 -0.1**
HINF			*e*Sn	**Sn**	**10 22 17.8 -3.1**
	comp=N,32nm,0.4s				
ZAGS	**Zajecar**	**6.71 78**	*e*Pn	**Pn**	**10 21 06.4 +1.1**
JAVC	**Velka Javorina**	**6.82 26**	*e*PN	**Pn**	**10 21 06.4 -0.5**
LASF	**Ste Croix**	**6.87 284**	*e*Pn	**Pn**	**10 21 07.0 -0.5**
LASF	**Ste Croix**	**6.87 284**	*e*P	**Pn**	**10 21 10.1 +2.6**
VRAC	**Vranov**	**6.92 19**	Pn	**Pn**	**10 21 08.6 +0.4**
	comp=N,0.4nm,0.3s,baz=205,slow=14,SNR=2.6				
VRAC			Sn	**Sn**	**10 22 25.1 -1.8**
	comp=N,0.8nm,0.3s,baz=282,slow=18,SNR=3.5				
	comp=N,2.4nm,0.4s				
VRAC	**Vranov**	**6.92 19**	*e*PN	**Pn**	**10 21 07.0 -1.3**
CDF	**Champ du Feu**	**6.94 326**	*e*Pn	**Pn**	**10 21 08.6 +0.1**
CDF			*e*Sn	**Sn**	**10 22 24.2 -3.3**
	comp=N,35nm,0.5s				
ZAPS	**Zavoj**	**6.97 83**	*e*Pn	**Pn**	**10 21 10.1 +1.1**
ZAPS			*e*Sn	**Sn**	**10 22 25.0 -3.3**
PSZ	**Piszkesteto**	**6.98 41**	⇓P	**Pn**	**10 21 12.4 +3.4**
ROTZ	**Rotzenmuhle**	**6.98 355**	*e*Pn	**Pn**	**10 21 08.0 -1.1**
BLKB	**Belogradchik**	**7.02 80**	⇑P	**Pn**	**10 21 10.7 +1.1**
HAU	**Haudompre**	**7.05 320**	*e*Pn	**Pn**	**10 21 10.0 0.0**
HAU			*e*Sn	**Sn**	**10 22 26.7 -3.4**
	comp=N,80nm,0.7s				
GOPC	**GO Pecny, Ondr**	**7.19 9**	*e*PN	**Pn**	**10 21 10.6 -1.3**
GOPC			*e*SN	**Sn**	**10 22 32.1 -1.4**
MANZ	**Manzenberg**	**7.21 355**	*e*Pn	**Pn**	**10 21 12.3 +0.2**
PRU	**Pruhonice**	**7.24 7**	*e*PN	**Pn**	**10 21 12.3 -0.3**
PRU			*e*SN	**Sn**	**10 22 32.2 -2.5**
GZR	**Gura Zlata**	**7.40 66**	⇓P	**Pn**	**10 21 16.8 +1.9**
NKC	**Novy Kostel**	**7.43 357**	*e*PN	**Pn**	**10 21 14.4 -0.9**
NKC			*e*SN	**Sn**	**10 22 37.3 -2.2**
VTS	**Vitosha**	**7.44 88**	⇑P	**Pn**	**10 21 16.9 +1.3**
MORC	**Moravsky Berou**	**7.60 22**	⇑P	**Pn**	**10 21 19.2 +1.6**
SMF	**Signal de Mont**	**7.64 303**	*e*Pn	**Pn**	**10 21 17.4 -0.7**
SMF			*e*Sn	**Sn**	**10 22 40.4 -4.3**
	comp=N,17nm,0.6s				
KEST	**Kesra**	**7.66 204**	Pn	**Pn**	**10 21 20.3 +1.8**
	comp=N,1.0nm,0.3s,baz=54,slow=19,SNR=7.2				
KEST			Sn	**Sn**	**10 22 48.3 +3.1**
	comp=N,0.1nm,0.3s,baz=24,slow=20,SNR=1.0				
	comp=N,4.2nm,0.5s				
PAGF	**Fort de Pagny**	**7.73 320**	*e*Pn	**Pn**	**10 21 19.0 -0.3**
	baz=137				
PAGF			*e*Sn	**Sn**	**10 22 43.1 -3.7**
	comp=N,26nm,0.6s				
SFTF	**Sexfontaines**	**7.83 316**	*e*Pn	**Pn**	**10 21 20.1 -0.6**
	baz=138				
SFTF			*e*Sn	**Sn**	**10 22 45.5 -3.8**
	comp=N,20nm,0.7s				
DPC	**Dobruska-Polom**	**7.85 15**	*e*PN	**Pn**	**10 21 20.5 -0.5**
DRGR		**7.88 56**	⇓P	**Pn**	**10 21 23.3 +1.8**
MOX	**Moxa**	**7.90 353**	*e*Pn	**Pn**	**10 21 21.7 0.0**
LOR	**Lormes**	**7.93 307**	*e*Pn	**Pn**	**10 21 22.7 +0.6**
	baz=124				
LOR			*e*Sn	**Sn**	**10 22 47.1 -4.7**
	comp=N,12nm,0.5s				
AVF	**Avril sur Loir**	**8.01 303**	*e*Pn	**Pn**	**10 21 22.2 -0.9**
AVF			*e*Sn	**Sn**	**10 22 48.7 -4.9**
	comp=N,32nm,1.4s				
MTLF	**Montolieu**	**8.01 277**	*e*P	**Pn**	**10 21 27.0 +3.8**
MEZF	**Maizieres J'vi**	**8.02 318**	*e*Pn	**Pn**	**10 21 23.3 0.0**
	baz=137				
OSTC	**Ostas**	**8.03 14**	*e*PN	**Pn**	**10 21 23.4 0.0**
CHVC	**Chvalec**	**8.03 13**	*e*PN	**Pn**	**10 21 21.9 -1.5**
SSF	**Saint Saulge**	**8.04 305**	*e*Pn	**Pn**	**10 21 23.5 -0.1**
SSF			*e*Sn	**Sn**	**10 22 49.3 -5.1**
	comp=N,7.8nm,0.5s				
SAVF	**Savonnieres en**	**8.06 319**	*e*Pn	**Pn**	**10 21 23.6 -0.2**
	baz=139				
SAVF			*e*Sn	**Sn**	**10 22 50.7 -4.2**
	comp=N,12nm,0.6s				
BGF	**Bois d'Agland**	**8.23 301**	*e*Pn	**Pn**	**10 21 24.6 -1.5**
CAF	**Calviac**	**8.27 289**	*e*Pn	**Pn**	**10 21 25.6 -1.2**
CLL	**Collm**	**8.49 359**	*e*Pn	**Pn**	**10 21 29.0 -0.8**
CLL			*e*Sn	Sn	10 22 55.0 -11
CLL			*e*x	x	10 23 04.0
CLL			*e*x	x	10 23 30.0
CLL			*e*Sg	**Sg**	**10 23 56.0 -3.3**
	comp=Z,20nm,0.9s				
RJF	**Les Rejaudoux**	**8.73 291**	*e*P	Pn	10 21 37.3 +4.3
VOIR		**8.96 69**	⇓P	**Pn**	**10 21 39.0 +2.7**
GIVF	**Givet**	**9.27 325**	*e*Pn	**Pn**	**10 21 40.0 -0.4**
BAIF	**Baives**	**9.50 323**	*e*Pn	**Pn**	**10 21 43.5 -0.1**
MLR	**Muntele Rosu**	**9.59 69**	⇑P	**Pn**	**10 21 47.7 +2.8**
MLR	**Muntele Rosu**	**9.59 69**	Pn	**Pn**	**10 21 46.8 +1.8**
	comp=Z,0.1nm,0.3s,baz=220,slow=7.2,SNR=4.0				
	comp=Z,3.1nm,0.7s				
IDI	**Anoyia**	**11.83 126**	Pn	**Pn**	**10 22 17.6 +2.1**
	comp=Z,0.2nm,0.3s,baz=315,slow=14,SNR=2.2				
	comp=Z,3.5nm,0.9s				
ESDC	**Sonseca Array**	**13.24 262**	Pn	**Pn**	**10 22 34.4 -0.5**
	comp=Z,0.1nm,0.3s,baz=69,slow=12,SNR=6.1				
	comp=Z,0.4nm,0.6s				
AKASG	**Malin Array Be**	**13.54 49**	Pn	**Pn**	**10 22 39.6 +0.9**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=1.2				
	comp=Z,0.5nm,0.7s				
EKA	**Eskdalemuir Ar**	**16.40 325**	Pn	**P**	**10 23 18.9 -0.8**
	baz=138,slow=14				
	comp=Z,0.3nm,0.4s				
HFS	**Hagfors**	**17.34 1**	P	**P**	**10 23 30.3 +0.2**
	comp=Z,0.2nm,0.3s,baz=154,slow=17,SNR=1.8				
	comp=Z,3.0nm,0.9s				
NOA	**NORSAR Array B**	**18.29 357**	P	**P**	**10 23 40.9 +0.4**
	baz=176,slow=11,SNR=1.8				
	comp=Z,0.6nm,0.8s				
FINES	**FINESS Array B**	**20.20 18**	P	**P**	**10 24 01.0 -0.4**
	comp=Z,2.2nm,0.6s,baz=199,slow=13,SNR=9.1				
	comp=Z,2.2nm,0.6s				
TORD	**Torodi Ar. Bea**	**31.18 202**	P	**P**	**10 25 46.3 +0.4**
	comp=Z,1.0nm,0.8s,baz=14,slow=9.1,SNR=6.6				
	comp=Z,1.0nm,0.8s				
MKAR	**Makanchi Array**	**47.78 60**	P	**P**	**10 28 04.1 +0.1**
	comp=Z,1.4nm,0.8s,baz=286,slow=8.2,SNR=4.8				
	comp=Z,1.4nm,0.8s				
SONM	**Songino Array**	**61.82 50**	P	**P**	**10 29 47.4 +1.6**
	comp=Z,1.7nm,0.8s,baz=292,slow=7.1,SNR=8.4				
	comp=Z,1.7nm,0.8s				
INK	**Inuvik**	**66.41 347**	P	**P**	**10 30 15.8 +0.3**
	comp=Z,3.8nm,1.0s,baz=16,slow=7.4,SNR=2.9				
	comp=Z,3.8nm,1.0s				
ILAR	**Eielson Array**	**71.61 351**	P	**P**	**10 30 50.0 +2.2**
	comp=Z,0.4nm,0.8s,baz=0.7,slow=7.2,SNR=4.9				
	comp=Z,0.4nm,0.8s				

ROM 30 10:20:51.8±0.0, 43°.062N±0°.003×13°.065E±0°.004, h8km, ML3.4/28, 10C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=266.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.10**	**187**	⇑P	Pg	10 20 54.9	+0.6
FEMA				S	Sg	10 20 56.8	+0.8
FEMA				AML	AML		
	comp=E,57800μm,0.7s						
FEMA				AML	AML		
	comp=N,31400μm,0.5s						
FEMA				AML	AML		
	comp=N,28791μm,0.4s						
FEMA				AML	AML		
	comp=E,52064μm,0.4s						
SEF1	**Sefro**	**0.12**	**315**	P	Pg	10 20 55.2	+0.6
SEF1				S	Sg	10 20 57.3	+0.9
SEF1				AML	AML		
	comp=E,65450μm,1.0s						
SEF1				AML	AML		
	comp=E,65500μm,1.0s						
SEF1				AML	AML		
	comp=E,65450μm,1.0s						
SEF1				AML	AML		
	comp=N,64300μm,0.4s						
SEF1				AML	AML		
	comp=N,64302μm,0.4s						
SEF1				AML	AML		
	comp=E,63160μm,0.2s						
PIO1	**Pioraco**	**0.13**	**333**	P	Pg	10 20 55.2	+0.5
PIO1				S	Sg	10 20 57.4	+0.7
PIO1				AML	AML		
	comp=E,14000μm,1.5s						
PIO1				AML	AML		
	comp=N,19500μm,0.4s						
PIO1				AML	AML		
	comp=E,14000μm,1.5s						
PIO1				AML	AML		
	comp=N,19450μm,0.4s						
PIO1				AML	AML		
	comp=E,12563μm,0.3s						
PIO1				AML	AML		
	comp=N,19474μm,0.4s						
MDAR	**Monte D'Aria**	**0.14**	**23**	P	Pg	10 20 55.3	+0.4
MDAR				S	Sg	10 20 57.7	+0.6
MDAR				AML	AML		
	comp=E,34200μm,0.3s						
MDAR				AML	AML		
	comp=N,27100μm,1.0s						
FIU1	**Fiuminata**	**0.16**	**322**	P	Pg	10 20 55.8	+0.6
FIU1				S	Sg	10 20 58.6	+1.1
FIU1				AML	AML		
	comp=N,16250μm,0.2s						
FIU1				AML	AML		
	comp=E,11200μm,0.6s						
FIU1				AML	AML		
	comp=N,16250μm,0.2s						
FIU1				AML	AML		
	comp=E,10348μm,0.1s						
FIU1				AML	AML		
	comp=N,16249μm,0.2s						
SSM1	**San Severino M**	**0.19**	**26**	P	Pg	10 20 56.1	+0.5
SSM1				S	Sg	10 20 59.5	+1.3
GUMA	**Gualdo di Mace**	**0.20**	**90**	⇑P	Pg	10 20 56.7	+0.8
GUMA				S	Sg	10 21 00.3	+1.7
GUMA				AML	AML		
	comp=E,78850μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,60250μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=E,78850μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,60225μm,0.4s						
GUMA				AML	AML		
	comp=E,78830μm,0.4s						
SNTG	**Esanatoglia**	**0.21**	**335**	⇑P	Pg	10 20 56.8	+0.6
SNTG				S	Sg	10 21 00.5	+1.3
SNTG				AML	AML		
	comp=E,6580μm,0.6s						
SNTG				AML	AML		
	comp=N,8785μm,0.5s						
SNTG				AML	AML		
	comp=E,6500μm,0.6s						
SNTG				AML	AML		
	comp=E,6575μm,0.6s						
SNTG				AML	AML		
	comp=N,9950μm,0.5s						
SNTG				AML	AML		
	comp=N,8748μm,0.1s						
SNTG				AML	AML		
	comp=E,4799μm,0.1s						
SNTG				AML	AML		
	comp=N,8215μm,0.1s						
SNTG				AML	AML		
	comp=E,4815μm,0.1s						
T1245	**Castelsantange**	**0.22**	**156**	P	Pg	10 20 57.0	+0.6
T1245				S	Sg	10 21 01.2	+1.8
T1245				AML	AML		
	comp=E,68900μm,0.2s						
T1245				AML	AML		
	comp=E,68950μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,76250μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,18661μm,0.3s						
T1245				AML	AML		
	comp=N,19971μm,0.5s						
T1245				AML	AML		
	comp=E,18495μm,0.3s						
T1245				AML	AML		
	comp=N,20151μm,0.5s						
AM05	**Amandola Campo**	**0.23**	**112**	P	Pg	10 20 57.0	+0.6
AM05				S	Sg	10 21 00.7	+1.2
AM05				AML	AML		
	comp=E,4495μm,0.4s						
AM05				AML	AML		
	comp=E,17650μm,0.3s						
AM05				AML	AML		
	comp=N,5755μm,0.9s						
AM05				AML	AML		
	comp=N,1275μm,0.9s						
AM05				AML	AML		
	comp=N,1219μm,0.1s						
AM05				AML	AML		
	comp=N,4195μm,0.1s						
AM05				AML	AML		
	comp=E,16312μm,0.1s						
AM05				AML	AML		
	comp=E,3940μm,0.1s						
EL6	**Elcito**	**0.27**	**6**	P	Pg	10 20 57.7	+0.5
EL6				S	Sb	10 21 02.3	-1.5
EL6				AML	AML		
	comp=E,19250μm,0.4s						
EL6				AML	AML		
	comp=N,17600μm,0.3s						
EL6				AML	AML		
	comp=E,18559μm,0.3s						
EL6				AML	AML		
	comp=N,14162μm,0.3s						
T1215	**Vallo di Nera,**	**0.30**	**209**	P	Pg	10 20 58.5	+0.8
T1215				S	Sb	10 21 03.4	-1.1
T1215				AML	AML		
	comp=N,3905μm,0.5s						
T1215				AML	AML		
	comp=E,3750μm,0.3s						
T1215				AML	AML		
	comp=N,3870μm,0.5s						
T1215				AML	AML		
	comp=E,3845μm,0.3s						
T1215				AML	AML		
	comp=E,3750μm,0.3s						
T1215				AML	AML		
	comp=N,3865μm,0.5s						
T1215				AML	AML		
	comp=N,3880μm,0.5s						
T1215				AML	AML		
	comp=N,3878μm,0.5s						
T1215				AML	AML		
	comp=E,3843μm,0.3s						
T1215				AML	AML		
	comp=N,3901μm,0.5s						
T1215				AML	AML		
	comp=E,3749μm,0.3s						
ASSB	**Assisi San Ben**	**0.30**	**266**	⇑P	Pg	10 20 58.5	+0.8
ASSB				S	Sb	10 21 03.5	-1.0
ASSB				AML	AML		
	comp=N,20950μm,0.2s						
ASSB				AML	AML		
	comp=E,8770μm,0.4s						
ASSB				AML	AML		
	comp=N,20961μm,0.2s						
ASSB				AML	AML		
	comp=E,8769μm,0.4s						
MNTP	**Montappone**	**0.30**	**76**	P	Pb	10 20 58.9	-0.7
MNTP				S	Sb	10 21 04.5	-0.2
MNTP				AML	AML		
	comp=N,15850μm,0.4s						
MNTP				AML	AML		
	comp=E,14500μm,1.1s						
MNTP				AML	AML		
	comp=N,15900μm,0.4s						
MNTP				AML	AML		
	comp=E,14550μm,1.1s						
MNTP				AML	AML		
	comp=E,12853μm,0.3s						
MNTP				AML	AML		
	comp=N,15867μm,0.4s						
TRE1	**Treia**	**0.31**	**36**	P	Pb	10 20 58.8	-0.8
TRE1				S	Sb	10 21 04.5	-0.4
TRE1				AML	AML		
	comp=N,14100μm,0.4s						
TRE1				AML	AML		
	comp=E,14850μm,0.4s						
TRE1				AML	AML		
	comp=N,14116μm,0.4s						
TRE1				AML	AML		
	comp=E,14857μm,0.4s						
FOSV	**Fossato di Vic**	**0.32**	**316**	P	Pg	10 20 58.9	+0.7
FOSV				S	Sb	10 21 04.3	-1.0
FOSV				AML	AML		
	comp=N,10600μm,0.2s						
FOSV				AML	AML		
	comp=E,8530μm,0.2s						
FOSV				AML	AML		
	comp=N,10582μm,0.2s						
FOSV				AML	AML		
	comp=E,8533μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.34**	**292**	P	Pg	10 20 59.0	+0.5
ATCC				S	Sb	10 21 05.2	-0.4
ATCC				AML	AML		
	comp=N,28500μm,0.2s						
ATCC				AML	AML		
	comp=E,25300μm,1.4s						
ATCC				AML	AML		
	comp=N,28475μm,0.2s						
ATCC				AML	AML		
	comp=E,23123μm,0.1s						
T1241	**Roccafluvione,**	**0.34**	**127**	P	Pb	10 20 59.5	-0.6
T1241				S	Sb	10 21 04.9	-0.8
T1241				AML	AML		
	comp=E,13400μm,0.2s						
T1241				AML	AML		
	comp=E,13950μm,0.2s						
T1241				AML	AML		
	comp=N,7100μm,0.1s						
T1241				AML	AML		
	comp=N,8020μm,0.1s						
T1241				AML	AML		
	comp=N,7095μm,0.1s						
T1241				AML	AML		
	comp=E,5885μm,0.4s						
T1241				AML	AML		
	comp=N,5636μm,0.5s						
T1241				AML	AML		
	comp=N,5705μm,0.5s						
T1241				AML	AML		
	comp=E,5765μm,0.4s						
T1217	**Poggiodomo (PG**	**0.36**	**196**	P	Pg	10 20 59.6	+0.7
T1217				S	Sb	10 21 05.6	-0.8
MMUR	**Monte Murano**	**0.38**	**353**	⇑P	Pg	10 21 00.1	+0.8
MMUR				AML	AML		
	comp=E,14950μm,1.3s						
MMUR				AML	AML		
	comp=N,11050μm,0.4s						
MMUR				AML	AML		
	comp=E,14950μm,1.3s						
MMUR				AML	AML		
	comp=N,11000μm,0.4s						
MMUR				AML	AML		
	comp=E,12755μm,0.2s						
MMUR				AML	AML		
	comp=N,10215μm,0.2s						
MURB	**Monte Urbino**	**0.44**	**297**	P	Pb	10 21 01.3	-0.6
MURB				S	Sb	10 21 09.0	+0.2
MURB				AML	AML		
	comp=E,10980μm,0.2s						
MURB				AML	AML		
	comp=N,9845μm,0.9s						
MURB				AML	AML		
	comp=E,10830μm,0.9s						
MURB				AML	AML		
	comp=E,10950μm,0.2s						
MURB				AML	AML		
	comp=N,9855μm,0.9s						
MURB				AML	AML		
	comp=N,11065μm,0.2s						
MURB				AML	AML		
	comp=E,10954μm,0.2s						
MURB				AML	AML		
	comp=E,10772μm,0.2s						
MURB				AML	AML		
	comp=N,11087μm,0.2s						
MURB				AML	AML		
	comp=N,9625μm,0.2s						
ARVD	**Arcevia**	**0.45**	**348**	⇓P	Pg	10 21 01.0	+0.5
ARVD				AML	AML		
	comp=E,4525μm,0.1s						
ARVD				AML	AML		
	comp=N,3670μm,0.4s						
ARVD				AML	AML		
	comp=N,3278μm,0.2s						
ARVD				AML	AML		
	comp=E,4527μm,0.1s						
T1243	**Rocca Santa Ma**	**0.46**	**142**	P	Pg	10 21 01.0	+0.2
T1243				S	Sb	10 21 08.4	-0.9
ATFO	**Monte Foce - G**	**0.47**	**310**	⇓P	Pg	10 21 01.7	+0.7
ATFO				AML	AML		
	comp=E,2725μm,0.7s						
ATFO				AML	AML		
	comp=N,2480μm,0.3s						
ATFO				AML	AML		
	comp=N,2483μm,0.3s						
ATFO				AML	AML		
	comp=E,2550μm,0.7s						
PP3	**Marolino**	**0.51**	**51**	⇑P	Pb	10 21 02.9	-0.1
PP3				AML	AML		
	comp=N,9913μm,0.3s						
PP3				AML	AML		

comp=E,9285μm,0.5s
PP3 AML AML
comp=E,7413μm,0.5s
PP3 AML AML
comp=N,10418μm,0.3s
FRON Frontone 0.52 332 ⇑P Pg 10 21 02.3 +0.4
FRON AML AML
comp=N,4345μm,0.4s
FRON AML AML
comp=E,2735μm,1.3s
FRON AML AML
comp=N,4349μm,0.4s
FRON AML AML
comp=E,2610μm,0.2s
ARRO Arrone 0.53 205 P Pb 10 21 02.8 -0.5
ARRO S Sb 10 21 11.0 -0.2
ARRO AML AML
comp=E,1875μm,0.6s
ARRO AML AML
comp=N,1500μm,0.7s
ARRO AML AML
comp=N,1505μm,0.7s
ARRO AML AML
comp=N,1349μm,0.4s
ARRO AML AML
comp=E,1395μm,0.3s
RM33 Pellescritta (0.56 169 P Pb 10 21 03.6 -0.4
RM33 S Sb 10 21 11.9 -0.3
CESX Cesi 0.58 218 P Pg 10 21 02.8 -0.2
CESX S Sb 10 21 12.2 -0.3
CESX AML AML
comp=E,3995μm,0.3s
CESX AML AML
comp=N,3465μm,1.3s
CESX AML AML
comp=N,3017μm,0.4s
CESX AML AML
comp=E,3993μm,0.3s
ATVO AVT- Monte Val 0.58 304 ⇓P Pg 10 21 03.5 +0.5
ATVO S Sb 10 21 13.0 +0.4
ATVO AML AML
comp=E,1795μm,1.4s
ATVO AML AML
comp=N,2010μm,0.6s
ATVO AML AML
comp=N,2007μm,0.6s
ATVO AML AML
comp=E,1667μm,0.2s
TERO Teramo 0.59 138 P Pg 10 21 03.2 0.0
TERO S Sb 10 21 12.7 -0.3
TERO AML AML
comp=E,3360μm,0.3s
TERO AML AML
comp=N,4725μm,0.3s
TERO AML AML
comp=E,3105μm,0.3s
TERO AML AML
comp=N,4540μm,0.3s
TERO AML AML
comp=E,2157μm,0.3s
TERO AML AML
comp=N,1973μm,0.4s
TERO AML AML
comp=E,2044μm,0.3s
TERO AML AML
comp=N,1912μm,0.4s
MPAG Monte Paganucc 0.61 339 ⇓P Pb 10 21 04.4 -0.4
MPAG S Sb 10 21 15.0 +1.4
PIEI Pieia 0.61 321 ⇑P Pg 10 21 04.2 +0.5
PIEI S Sb 10 21 15.0 +1.4
PIEI AML AML
comp=E,2290μm,0.7s
PIEI AML AML
comp=N,2460μm,0.5s
PIEI AML AML
comp=N,2017μm,0.3s
PIEI AML AML
comp=E,2004μm,0.1s
ATPI Pietralunga - 0.62 309 S Sb 10 21 15.0 +1.1
AOI Ancona 0.63 39 ⇓P Pb 10 21 05.3 +0.2
AOI AML AML
comp=N,1660μm,0.3s
AOI AML AML
comp=E,2020μm,0.2s
AOI AML AML
comp=E,2020μm,0.2s
AOI AML AML
comp=N,1660μm,0.3s
SENI Senigallia 0.66 11 ⇓P Pg 10 21 04.8 +0.4
FSSB Fossombrone 0.66 342 ⇑P Pg 10 21 05.1 +0.5
FSSB S Sn 10 21 17.0 -1.2
FSSB AML AML
comp=E,7770μm,0.3s
FSSB AML AML
comp=N,9810μm,1.6s
FSSB AML AML
comp=E,7770μm,0.3s
FSSB AML AML
comp=N,8848μm,0.2s
APEC Apecchio 0.68 317 S Sn 10 21 18.0 -0.7
GIGS Gran Sasso 0.71 149 P Pg 10 21 05.4 -0.2
GIGS S Sb 10 21 17.0 +0.4
GIGS AML AML
comp=N,367μm,0.5s
GIGS AML AML
comp=E,433μm,0.6s
BADI Badiali 0.75 307 ⇑P Pb 10 21 06.8 -0.3
BADI S Sn 10 21 19.0 -1.3
BADI AML AML
comp=N,782μm,0.3s
CPGN Carpegna, Ital 0.92 324 ⇓P Pn 10 21 10.8 -0.4

*IDC **30** 10:20:59.5±1.1,36°.22N×97°.12W,h0km,mb3.6/1, mbtmp3.5/5,ML2.8/3,Error ellipse: s-maj=14.1km s-min=13.1km az=149.0*
*TUL **30** 10:21:02.2±0.8,36°.31N±0°.01×97°.04W±0°.02,h7km±1km, ML3.8,mb_Lg3.8/114(NEIC),Mwr3.4/16(SLM),Error ellipse: s-maj=1.9km s-min=1.7km az=49.0*
*ANF **30** 10:21:02.6±0.7,36°.32N×97°.02W,h10km±6km,ML4.8/13, Error ellipse: s-maj=3.0km s-min=2.9km az=79.0*
*NEIC **30** 10:21:02.4±0.4,36°.31N±0°.01×97°.063W±0°.009,h7km±5km, Error ellipse: s-maj=1.8km s-min=0.9km az=168.0*
*NEIC **30** 10:21:02.2,36°.31N×97°.06W,h7km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.03; $M_{\theta\theta}$1.59; $M_{\phi\phi}$-1.57; $M_{r\theta}$-0.04; $M_{\phi\theta}$-0.59; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.70000×10^{14} NP1:ϕ_s325.00000°, δ85.00000°,λ-5.00000°. NP2:ϕ_s55.00000°,δ85.00000°, λ-175.00000°. Principal axes: T 1.6979, Plg0.0000°, Azm190.0000°; N 0.0017, Plg83.0000°, Azm100.0000°; P -1.6995, Plg7.0000°, Azm280.0000°;*
ISC 30 10:21:02.5±0.8,36°.32N±0°.02×97°.04W±0°.02,h10km±5km, n172,σ1§03/170,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK050	**Pawnee Station**	**0.09**	**33**		**Pg**	**10 21 04.9**	**-0.2**
OK050				Sg	**Sg**	**10 21 06.5**	**-0.4**
OK048	**Pawnee Station**	**0.13**	**39**	Pg	**Pg**	**10 21 05.4**	**-0.2**
OK048				Sg	**Sg**	**10 21 07.6**	**-0.2**
OK046	**Pawnee Station**	**0.14**	**53**		**Pg**	**10 21 05.6**	**-0.1**
OK046				Sg	**Sg**	**10 21 07.8**	**-0.2**
OK045	**Pawnee Station**	**0.16**	**36**		**Pg**	**10 21 06.1**	**-0.1**
OK045				Sg	**Sg**	**10 21 08.5**	**-0.1**
OK044	**Pawnee Station**	**0.21**	**74**	Pg	**Pg**	**10 21 06.8**	**-0.1**
OK049	**E0420 Rd and N**	**0.23**	**294**	Pg	**Pg**	**10 21 07.1**	**-0.2**
OK051	**E0350 and S346**	**0.25**	**42**	Pg	**Pg**	**10 21 07.7**	**0.0**
OK033	**Mehan**	**0.28**	**162**	Pg	**Pg**	**10 21 08.1**	**-0.2**
OK031	**S. Brethren Rd**	**0.40**	**155**	Pg	**Pg**	**10 21 10.2**	**-0.2**
OK034	**N. Norfolk Rd.**	**0.41**	**139**	Pg	**Pg**	**10 21 10.4**	**-0.2**
OK029	**Liberty Lake**	**0.62**	**213**	Pg	**Pg**	**10 21 14.1**	**-0.4**
OK005	**Luther M Schoo**	**0.67**	**190**		**Pg**	**10 21 15.0**	**-0.5**
T35A	**Sooner Cattle**	**0.74**	**35**	Pg	**Pg**	**10 21 16.5**	**-0.3**
T35B	**Sooner Cattle**	**0.74**	**35**	P	**Pg**	**10 21 16.5**	**-0.3**
T35B	baz=215			S	**Sg**	**10 21 26.2**	**-0.2**
OK025	**Westminster Rd**	**0.77**	**198**	Pg	**Pg**	**10 21 16.9**	**-0.5**
OK009	**Oakdale Elemen**	**0.80**	**203**		**Pg**	**10 21 17.4**	**-0.5**
OK011	**Prague**	**0.88**	**161**	Pg	**Pg**	**10 21 18.7**	**-0.8**
OKCSW	**OKLAHOMA CITY**	**0.96**	**200**		**Pg**	**10 21 20.2**	**-0.9**
OK032	**Salt Plains WL**	**1.06**	**298**		**Pg**	**10 21 22.1**	**-0.8**
TUL1	**Leonard**	**1.09**	**111**	Pg	**Pg**	**10 21 22.4**	**-1.0**
TUL1	**Leonard**	**1.09**	**111**	P	**Pg**	**10 21 22.5**	**-1.0**
TUL1	baz=292			S	**Sg**	**10 21 36.8**	**-0.9**
TUL1	**Leonard**	**1.09**	**111**	P	**Pg**	**10 21 22.5**	**-1.0**
TUL1	baz=292,SNR=613			S	**Sg**	**10 21 37.3**	**-0.4**
FNO	**Franklin**	**1.09**	**195**		**Pg**	**10 21 22.3**	**-1.3**
OK038	**West end E0370**	**1.38**	**277**		**Pn**	**10 21 26.6**	**-1.2**
OK035	**E0210 Rd and N**	**1.40**	**287**		**Pn**	**10 21 28.0**	**-0.1**
U32A	**Winter Ranch,**	**1.58**	**273**		**Pn**	**10 21 31.0**	**+0.4**
U32A	**Winter Ranch,**	**1.58**	**273**	P	**Pn**	**10 21 31.1**	**+0.4**
U32A	baz=92,SNR=289			S	**Sb**	**10 21 52.6**	**+0.6**
X34A	**Smith Ranch, M**	**1.83**	**201**		**Pn**	**10 21 35.1**	**+1.0**
X34A	comp=Z,483nm,0.9s			IAmb_Lg		10 22 02.1	
WMOK	**Wichita Mounta**	**2.12**	**222**		**Pn**	**10 21 38.6**	**+0.6**
WMOK	**Wichita Mounta**	**2.12**	**222**	P	**Pn**	**10 21 38.7**	**+0.6**
WMOK	baz=41,SNR=496			S	**Sb**	**10 22 06.3**	**-1.1**
WMOK	**Wichita Mounta**	**2.12**	**222**	P	**Pn**	**10 21 38.8**	**+0.8**
WMOK	baz=41,SNR=232			S	**Sn**	**10 22 06.0**	**+1.6**
U38A	**Gravette**	**2.15**	**86**		**Pn**	**10 21 39.2**	**+0.7**
U38A	**Gravette**	**2.15**	**86**	P	**Pn**	**10 21 40.1**	**+1.6**
X37A	**Clayton**	**2.20**	**141**	Pn	**Pn**	**10 21 39.4**	**+0.3**
X37A	comp=Z,593nm,0.8s			IAmb_Lg		10 22 16.6	
X37A	**Clayton**	**2.20**	**141**	P	**Pn**	**10 21 39.8**	**+0.7**
R32A	**Long Quarter,**	**2.49**	**328**	Pn	**Pn**	**10 21 44.0**	**+0.8**
R32A	**Long Quarter,**	**2.49**	**328**	P	**Pn**	**10 21 43.8**	**+0.7**
R32A	baz=147,SNR=18			S	**Sn**	**10 22 14.8**	**+1.3**
HHAR	**Hobbs**	**2.51**	**90**		**Pn**	**10 21 44.3**	**+0.9**
KSU1	**Kansas State U**	**2.80**	**7**		**Pn**	**10 21 48.5**	**+1.1**
KSU1	comp=Z,189nm,0.9s			IAmb_Lg		10 22 34.3	
KSU1	**Kansas State U**	**2.80**	**7**	P	**Pn**	**10 21 48.2**	**+0.8**
KSU1	baz=187,SNR=116			Sb	**Sb**	**10 22 28.9**	**+1.8**
Z35A	**Perchaven, San**	**2.98**	**183**		**Pn**	**10 21 50.4**	**+0.5**
Z35A	**Perchaven, San**	**2.98**	**183**	P	**Pn**	**10 21 50.2**	**+0.3**
Z35A	baz=3.3,SNR=77			S	**Sn**	**10 22 28.1**	**+2.4**
S39A	**Bolivar**	**3.28**	**64**		**Pn**	**10 21 55.8**	**+1.8**
S39A	comp=Z,330nm,0.8s			IAmb_Lg		10 22 54.5	
CBKS	**Cedar Bluff**	**3.29**	**320**		**Pn**	**10 21 54.2**	**+0.1**
CBKS	**Cedar Bluff**	**3.29**	**320**	P	**Pn**	**10 21 54.8**	**+0.7**
CBKS	baz=139,SNR=7.4			S	**Sg**	**10 22 44.9**	**-3.2**
CBKS	**Cedar Bluff**	**3.29**	**320**	P	**Pn**	**10 21 54.5**	**+0.4**
CBKS	baz=139,SNR=15			Sb	**Sb**	**10 22 44.6**	**+3.6**
MIAR	**Mount Ida**	**3.34**	**121**	Pn	**Pn**	**10 21 55.5**	**+0.7**
MIAR	comp=Z,200nm,1.0s			IAmb_Lg		10 22 49.9	
MIAR	**Mount Ida**	**3.34**	**121**	P	**Pn**	**10 21 55.5**	**+0.7**
MIAR	**Mount Ida**	**3.34**	**121**	P	**Pn**	**10 21 56.0**	**+1.2**
MIAR	baz=303,SNR=26			S	**Sn**	**10 22 35.8**	**+1.4**
Z38A	**Mt. Pleasant**	**3.49**	**150**	Pn	**Pn**	**10 21 57.6**	**+0.8**
MGMO	**Mountain Grove**	**3.93**	**76**		**Pn**	**10 22 03.6**	**+0.7**
MGMO	comp=Z,297nm,0.7s			IAmb_Lg		10 23 12.0	
WHAR	**Wooly Hollow**	**4.00**	**103**	Pn	**Pn**	**10 22 04.6**	**+0.7**
WHAR	comp=Z,260nm,0.9s			IAmb_Lg		10 23 15.2	
FCAR	**Ozark Folk Cen**	**4.01**	**95**		**Pn**	**10 22 04.9**	**+0.9**
AMTX	**Amarillo**	**4.04**	**251**	Pn	**Pn**	**10 22 05.3**	**+0.8**
AMTX	comp=Z,223nm,0.8s			IAmb_Lg		10 23 13.0	
AMTX	**Amarillo**	**4.04**	**251**	P	**Pn**	**10 22 05.2**	**+0.8**
AMTX	baz=68			Sb	**Sb**	**10 23 05.2**	**+2.5**
UALR	**University of**	**4.13**	**110**	Pn	**Pn**	**10 22 06.4**	**+0.7**
UALR	comp=Z,213nm,0.9s			IAmb_Lg		10 23 21.2	
WLAR	**White Oak Lake**	**4.16**	**128**	Pn	**Pn**	**10 22 07.0**	**+0.9**
WLAR	comp=Z,194nm,1.2s			IAmb_Lg		10 23 11.8	
ABTX	**Abilene, Hawle**	**4.26**	**211**	Pn	**Pn**	**10 22 08.2**	**+0.7**
ABTX	comp=Z,124nm,0.8s			IAmb_Lg		10 23 18.8	
ABTX	**Abilene, Hawle**	**4.26**	**211**	P	**Pn**	**10 22 08.4**	**+0.9**
ABTX	baz=29			Sb	**Sb**	**10 23 12.3**	**+3.1**
R40A	**Maddies Statio**	**4.29**	**61**		**Pn**	**10 22 08.6**	**+0.7**
R40A	**Maddies Statio**	**4.29**	**61**	P	**Pn**	**10 22 08.4**	**+0.6**
R40A	baz=244,SNR=43			S	**Sn**	**10 22 58.0**	**+0.1**
P38A	**Dawn**	**4.31**	**39**	IAmb_Lg		10 23 19.9	
WHTX	**Lake Whitney,**	**4.33**	**185**	Pn	**Pn**	**10 22 08.6**	**+0.2**
WHTX	**Lake Whitney,**	**4.33**	**185**	P	**Pn**	**10 22 08.5**	**+0.1**
WHTX	**Lake Whitney,**	**4.33**	**185**	P	**Pn**	**10 22 08.2**	**-0.2**
WHTX	baz=4.4,SNR=6.2			S	**Sn**	**10 22 59.6**	**+0.8**
237A	**Washetta, Mont**	**4.42**	**166**		**Pn**	**10 22 09.8**	**+0.1**
237A	comp=Z,124nm,1.0s			IAmb_Lg		10 23 34.1	
237A	**Washetta, Mont**	**4.42**	**166**	P	**Pn**	**10 22 09.7**	**+0.1**
237A	baz=347,SNR=30			S	**Sn**	**10 23 01.7**	**+0.5**
N33A	**J Bar K, Exete**	**4.43**	**356**		**Pn**	**10 22 09.5**	**-0.3**
N33A	comp=Z,201nm,0.8s			IAmb_Lg		10 23 35.0	
N35A	**Tabor**	**4.67**	**13**	Pn	**Pn**	**10 22 13.4**	**+0.4**
N35A	comp=Z,238nm,0.8s			IAmb_Lg		10 23 40.1	
N35A	**Tabor**	**4.67**	**13**	P	**Pn**	**10 22 13.5**	**+0.4**
LCAR	**Lake Charles**	**4.77**	**91**		**Pn**	**10 22 15.2**	**+0.7**
CCAR	**Cane Creek**	**4.94**	**117**	IAmb_Lg		10 23 53.1	
CCM	**Cathedral Cave**	**4.95**	**68**	Pn	**Pn**	**10 22 17.6**	**+0.7**
CCM	**Cathedral Cave**	**4.95**	**68**	P	**Pn**	**10 22 17.3**	**+0.4**
CCM	**Cathedral Cave**	**4.95**	**68**	P	**Pn**	**10 22 16.9**	**0.0**
NATX	**Nacogdoches**	**4.96**	**156**		**Pn**	**10 22 17.1**	**+0.1**
NATX	comp=Z,123nm,0.8s			IAmb_Lg		10 23 49.7	
NATX	**Nacogdoches**	**4.96**	**156**	S	**Sn**	**10 23 13.2**	**-1.1**
BGNE	**Belgrade**	**5.16**	**351**		**Pn**	**10 22 21.2**	**+1.3**
BGNE	**Belgrade**	**5.16**	**351**	P	**Pn**	**10 22 20.0**	**+0.2**
BGNE	**Belgrade**	**5.16**	**351**	P	**Pn**	**10 22 20.0**	**+0.2**
BGNE	baz=170,SNR=5.2			S	**Sn**	**10 23 18.5**	**-0.9**
KSCO	**Kaye Shedlock'**	**5.18**	**303**	Pn	**Pn**	**10 22 20.6**	**+0.3**
KSCO	comp=Z,169nm,1.0s			IAmb_Lg		10 23 57.5	
KSCO	**Kaye Shedlock'**	**5.18**	**303**	P	**Pn**	**10 22 20.4**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.18**	**303**	P	**Pn**	**10 22 20.4**	**+0.1**
MSTX	**Muleshoe**	**5.24**	**245**	Pn	**Pn**	**10 22 22.2**	**+1.1**
MSTX	comp=Z,87nm,0.8s			IAmb_Lg		10 23 59.8	
MSTX	**Muleshoe**	**5.24**	**245**	P	**Pn**	**10 22 21.5**	**+0.4**
MSTX	baz=62			Sb	**Sb**	**10 23 42.6**	**+5.2**
PBMO	**Poplar Bluff**	**5.34**	**83**	IAmb_Lg		10 24 00.7	
N38A	**Joes South For**	**5.38**	**33**		**Pn**	**10 22 23.8**	**+1.0**
435B	**Jarrell**	**5.54**	**185**		**Pn**	**10 22 24.6**	**-0.4**
435B	**Jarrell**	**5.54**	**185**	P	**Pn**	**10 22 24.5**	**-0.5**
FVM	**French Village**	**5.54**	**71**	IAmb_Lg		10 23 57.3	
L34A	**Svendsen Farm,**	**5.67**	**5**	IAmb_Lg		10 24 13.6	
143A	**Socs Landing,**	**5.89**	**126**	IAmb_Lg		10 24 15.9	
SLM	**Saint Louis**	**5.89**	**65**	IAmb_Lg		10 24 09.7	
MET	**Memphis--Engin**	**5.91**	**100**	IAmb_Lg		10 24 13.9	
PVMO	**Portageville**	**5.93**	**87**	IAmb_Lg		10 24 15.9	
T25A	**Trinidad**	**5.97**	**280**	Pn	**Pn**	**10 22 31.4**	**+0.2**
T25A	comp=Z,89nm,0.7s			IAmb_Lg		10 24 17.8	
T25A	**Trinidad**	**5.97**	**280**	P	**Pn**	**10 22 31.1**	**-0.1**
OGNE	**Ogallala**	**6.05**	**321**		**Pn**	**10 22 33.4**	**+1.2**
OGNE	comp=Z,194nm,0.8s			IAmb_Lg		10 24 18.4	
OGNE	**Ogallala**	**6.05**	**321**	P	**Pn**	**10 22 32.5**	**+0.4**
OGNE	baz=138			S	**Sn**	**10 23 39.8**	**-1.7**
LNXT	**Lenox**	**6.11**	**90**	IAmb_Lg		10 24 24.9	
JCT	**Junction City**	**6.26**	**202**		**Pn**	**10 22 33.8**	**-1.2**
JCT	comp=Z,119nm,0.8s			IAmb_Lg		10 24 34.0	
JCT	**Junction City**	**6.26**	**202**	P	**Pn**	**10 22 34.2**	**-0.8**
JCT	**Junction City**	**6.26**	**202**	P	**Pn**	**10 22 34.4**	**-0.6**
SCIA	**State Center**	**6.33**	**27**		**Pn**	**10 22 35.3**	**-0.5**
SCIA	comp=Z,154nm,0.8s			IAmb_Lg		10 24 31.5	
SCIA	**State Center**	**6.33**	**27**	S	**Sn**	**10 23 48.1**	**0.0**
SCIA	**State Center**	**6.33**	**27**	S	**Sn**	**10 23 47.7**	**-0.4**
S44A	**Carbondale**	**6.38**	**75**		**Pn**	**10 22 37.1**	**+0.5**
HKT	**Hockley**	**6.43**	**171**	P	**Pn**	**10 22 37.0**	**-0.2**
K31A	**O'Neill**	**6.44**	**349**		**Pn**	**10 22 37.3**	**-0.1**
OXF	**Oxford**	**6.49**	**104**		**Pn**	**10 22 37.0**	**-1.0**
OXF	comp=Z,162nm,1.2s			IAmb_Lg		10 24 29.9	
OXF	**Oxford**	**6.49**	**104**	P	**Pn**	**10 22 37.9**	**-0.1**
W45A	**Hickory Valley**	**6.50**	**98**		**Pn**	**10 22 39.8**	**+1.6**
W45A	comp=Z,129nm,0.7s			IAmb_Lg		10 24 28.8	
N41A	**Harden Midland**	**6.54**	**46**		**Pn**	**10 22 40.3**	**+1.5**
Y45A	**Yeager Farm, C**	**6.62**	**109**	IAmb_Lg		10 24 46.1	
P43A	**Skaggs, Pawnee**	**6.80**	**59**		**Pn**	**10 22 42.8**	**+0.4**
P43A	**Skaggs, Pawnee**	**6.80**	**59**	P	**Pn**	**10 22 42.6**	**+0.1**
Q44A	**Meyer Farm, Va**	**6.88**	**66**		**Pn**	**10 22 45.1**	**+1.8**
SDCO	**Great Sand Dun**	**6.91**	**284**		**Pn**	**10 22 45.1**	**+0.9**
SDCO	**Great Sand Dun**	**6.91**	**284**	P	**Pn**	**10 22 45.0**	**+0.8**
SDCO	**Great Sand Dun**	**6.91**	**284**	P	**Pn**	**10 22 44.8**	**+0.6**
Q24A	**Divide**	**6.95**	**295**		**Pn**	**10 22 44.8**	**+0.1**
Q24A	comp=Z,107nm,1.2s			IAmb_Lg		10 24 58.7	
Q24A	**Divide**	**6.95**	**295**	P	**Pn**	**10 22 45.1**	**+0.3**
BRIGG	**Briggsdale**	**7.12**	**309**	IAmb_Lg		10 24 59.8	
K38A	**Parkersburg**	**7.13**	**26**	IAmb_Lg		10 25 04.9	
L40A	**Anamosa**	**7.30**	**36**		**Pn**	**10 22 50.5**	**+1.2**
L40A	comp=Z,102nm,0.8s			IAmb_Lg		10 24 54.5	
HDIL	**Hopedale**	**7.41**	**53**		**Pn**	**10 22 51.2**	**+0.6**
HDIL	**Hopedale**	**7.41**	**53**	P	**Pn**	**10 22 50.5**	**-0.2**
HDIL	**Hopedale**	**7.41**	**53**	P	**Pn**	**10 22 50.7**	**0.0**
ECSD	**EROS Data Cent**	**7.42**	**2**	Pn	**Pn**	**10 22 51.7**	**+0.9**
ECSD	**EROS Data Cent**	**7.42**	**2**	P	**Pn**	**10 22 51.5**	**+0.7**
ECSD	**EROS Data Cent**	**7.42**	**2**	P	**Pn**	**10 22 50.7**	**-0.1**
PLAL	**Pickwick Lake**	**7.42**	**98**		**Pn**	**10 22 50.5**	**-0.4**
WVT	**Waverly**	**7.45**	**89**	P	**Pn**	**10 22 51.1**	**-0.2**
735A	**Kenedy**	**7.47**	**185**	IAmb_Lg		10 25 12.6	
735A	**Kenedy**	**7.47**	**185**	P	**Pn**	**10 22 52.6**	**+1.1**
USIN	**University of**	**7.67**	**75**	IAmb_Lg		10 25 05.1	
O44A	**Mansfield**	**7.76**	**58**	IAmb_Lg		10 25 23.2	
ANMO	**Albuquerque**	**7.79**	**263**	Lg	Lg	10 25 05.1	
ANMO	**Albuquerque**	**7.79**	**263**	P	**Pn**	**10 22 56.2**	**+0.1**
I37A	**Lemond, Waseca**	**8.18**	**19**	IAmb_Lg		10 25 25.6	
833A	**Chaparral WMA,**	**8.21**	**195**	P	**Pn**	**10 23 02.1**	**+0.3**
PHWY	**Pilot Hill**	**8.24**	**310**		**Pn**	**10 23 02.2**	**-0.1**
PHWY	comp=Z,49nm,0.8s			IAmb_Lg		10 25 31.5	
SUSD	**Miller**	**8.25**	**350**	IAmb_Lg		10 25 43.4	
N23A	**Red Feather La**	**8.33**	**306**		**Pn**	**10 23 04.6**	**+1.0**
N23A	**Red Feather La**	**8.33**	**306**	P	**Pn**	**10 23 03.8**	**+0.2**
Y22D	**IRIS PASSCAL I**	**8.39**	**257**	IAmb_Lg		10 25 40.3	
JFWS	**Jewell Farm**	**8.42**	**36**	Pn	**Pn**	**10 23 06.1**	**+1.5**
JFWS	comp=Z,92nm,0.7s			IAmb_Lg		10 25 33.3	
JFWS	**Jewell Farm**	**8.42**	**36**	P	**Pn**	**10 23 05.9**	**+1.3**
JFWS	**Jewell Farm**	**8.42**	**36**	P	**Pn**	**10 23 04.2**	**-0.4**
WCI	**Wyandotte Cave**	**8.78**	**74**	P	**Pn**	**10 23 10.6**	**+1.1**
SFIN	**Lafayette**	**8.80**	**60**	IAmb_Lg		10 25 39.0	
SFIN	**Lafayette**	**8.80**	**60**	P	**Pn**	**10 23 10.7**	**+0.9**
LRAL	**Lakeview Retre**	**8.90**	**109**	P	**Pn**	**10 23 11.6**	**+0.5**
TX31	**Lajitas Ar. Si**	**8.91**	**221**		**Pn**	**10 23 12.7**	**+1.2**
TXAR	**Lajitas Array**	**8.91**	**221**	Pn	Pn	10 23 06.8	-4.7
TXAR	comp=Z,0.1nm,0.3s,baz=42,slow=12,SNR=3.5			Lg	Lg	10 25 31.8	
	comp=Z,0.9nm,0.3s,baz=36,slow=29,SNR=2.6						
	comp=Z,0.1nm,0.4s						
I40A	**Norwalk**	**9.02**	**31**		**Pn**	**10 23 11.3**	**-1.6**
I40A	comp=Z,70nm,1.0s			IAmb_Lg		10 25 46.6	
K43A	**Burlington**	**9.27**	**44**	IAmb_Lg		10 26 09.5	
RSSD	**Black Hills**	**9.45**	**328**	Pn	**Pn**	**10 23 19.7**	**+0.8**
RSSD	comp=Z,100nm,0.8s			IAmb_Lg		10 26 14.4	
RSSD	**Black Hills**	**9.45**	**328**	P	**Pn**	**10 23 19.5**	**+0.6**
RSSD	**Black Hills**	**9.45**	**328**	P	**Pn**	**10 23 18.8**	**-0.1**
SPMN	**Marine on St.**	**9.46**	**19**	P	**Pn**	**10 23 18.6**	**-0.2**
F33A	**5 Mile Ranch,**	**9.53**	**3**		**Pn**	**10 23 20.0**	**+0.2**
K22A	**Casper**	**9.68**	**314**	IAmb_Lg		10 26 33.6	
K22A	**Casper**	**9.68**	**314**	P	**Pn**	**10 23 22.1**	**+0.2**
K22A	**Casper**	**9.68**	**314**	P	**Pn**	**10 23 21.5**	**-0.5**
I42A	**Draeger Farm,**	**9.79**	**37**	IAmb_Lg		10 26 16.9	
G40A	**Rib Lake**	**10.33**	**28**		**Pn**	**10 23 30.9**	**+0.1**
TKL	**Tuckaleechee C**	**10.77**	**90**	Pn	**Pn**	**10 23 35.0**	**-1.8**

comp=Z,0.2nm,0.3s,baz=98,slow=12,SNR=1.9
TKL Lg Lg 10 26 34.2
comp=Z,1.9nm,0.3s,baz=2.3,slow=23,SNR=5.7
comp=Z,1.4nm,0.5s
PDAR Pinedale Array 11.61 308 Pn **Pn 10 23 46.2 -2.2**
comp=Z,0.4nm,0.3s,baz=122,slow=15,SNR=6.9
PDAR Lg Lg 10 27 02.1
comp=Z,0.9nm,0.3s,baz=113,slow=33,SNR=3.9
AGMN Agassiz Nation 12.01 4 P **Pn 10 23 51.5 -2.1**
baz=185
ULM Lac du Bonnet 13.95 3 Pn Pn 10 24 14.3 -5.9
comp=Z,0.2nm,0.3s,baz=179,slow=12,SNR=1.5
ULM Sn Sn 10 26 44.8 -10
comp=Z,0.5nm,0.3s,baz=53,slow=18,SNR=1.5
ULM Lg Lg 10 28 15.2
comp=Z,0.5nm,0.3s,baz=114,slow=21,SNR=3.3
comp=Z,2.8nm,0.6s
ILAR Eielson Array 40.89 330 P **P 10 28 44.9 +0.4**
comp=Z,0.8nm,0.7s,baz=110,slow=6.8,SNR=7.9
comp=Z,0.8nm,0.7s

ROM 30 10:21:35.3±0.1, 42°.802N±0°.004×13°.186E±0°.005, h9km, ML3.1/10, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.1km az=43.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**2**	P	Pg	10 21 37.7	+0.2
T1245				S	Sg	10 21 39.0	0.0
T1245				AML	AML		
T1245				AML	AML		
	comp=E,68900μm,0.2s						
T1245				AML	AML		
	comp=E,76250μm,0.2s						
T1245				AML	AML		
	comp=E,68900μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,76234μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,68908μm,0.2s						
T1204	**Amatrice, Fraz**	**0.16**	**143**	P	Pg	10 21 39.7	+0.8
T1204				S	Sg	10 21 42.7	+1.4
T1204				AML	AML		
	comp=E,12450μm,0.4s						
T1204				AML	AML		
	comp=N,7300μm,1.0s						
T1204				AML	AML		
	comp=N,7295μm,1.0s						
T1204				AML	AML		
	comp=E,12500μm,0.4s						
T1204				AML	AML		
	comp=N,7365μm,1.0s						
T1204				AML	AML		
	comp=N,7320μm,1.0s						
T1204				AML	AML		
	comp=E,12472μm,0.4s						
T1204				AML	AML		
	comp=N,5968μm,0.3s						
FEMA	**Monte Fema**	**0.19**	**328**	P	Pg	10 21 39.8	+0.5
FEMA				S	Sg	10 21 43.0	+0.9
FEMA				AML	AML		
	comp=E,17100μm,0.3s						
FEMA				AML	AML		
	comp=N,12300μm,0.6s						
FEMA				AML	AML		
	comp=N,12310μm,0.6s						
FEMA				AML	AML		
	comp=E,17101μm,0.3s						
FEMA				AML	AML		
	comp=N,9691μm,0.2s						
T1241	**Roccafluvione,**	**0.19**	**73**	P	Pg	10 21 40.3	+1.0
T1241				S	Sg	10 21 43.4	+1.4
T1241				AML	AML		
	comp=E,14000μm,0.2s						
T1241				AML	AML		
	comp=N,8020μm,0.1s						
T1241				AML	AML		
	comp=E,13950μm,0.2s						
T1241				AML	AML		
	comp=N,7100μm,0.1s						
T1241				AML	AML		
	comp=E,13400μm,0.2s						
T1241				AML	AML		
	comp=N,7995μm,0.1s						
T1241				AML	AML		
	comp=N,7095μm,0.1s						
T1241				AML	AML		
	comp=N,8018μm,0.1s						
T1241				AML	AML		
	comp=N,7097μm,0.1s						
T1241				AML	AML		
	comp=E,13986μm,0.2s						
T1241				AML	AML		
	comp=E,13403μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**244**	⇑P	Pg	10 21 41.7	+2.1
T1217				AML	AML		
	comp=E,2555μm,0.3s						
T1217				AML	AML		
	comp=N,3422μm,0.5s						
T1217				AML	AML		
	comp=N,3343μm,0.3s						
T1217				AML	AML		
	comp=N,2697μm,0.1s						
T1217				AML	AML		
	comp=E,2534μm,0.3s						
T1217				AML	AML		
	comp=E,2602μm,0.3s						
AM05	**Amandola Campo**	**0.21**	**35**	P	Pg	10 21 40.2	+0.4
AM05				S	Sg	10 21 43.8	+1.1
AM05				AML	AML		
	comp=E,3200μm,0.9s						
AM05				AML	AML		
	comp=N,2990μm,0.1s						
AM05				AML	AML		
	comp=N,1135μm,0.1s						
AM05				AML	AML		
	comp=E,11600μm,1.1s						
AM05				AML	AML		
	comp=E,3205μm,0.9s						
AM05				AML	AML		
	comp=E,3005μm,0.1s						
AM05				AML	AML		
	comp=N,2990μm,0.1s						
AM05				AML	AML		
	comp=N,1133μm,0.1s						
AM05				AML	AML		
	comp=E,11157μm,0.1s						
T1243	**Rocca Santa Ma**	**0.22**	**119**	P	Pg	10 21 40.5	+0.7
T1243				S	Sg	10 21 44.0	+1.1
T1215	**Vallo di Nera,**	**0.23**	**270**	P	Pg	10 21 40.9	+0.8
T1215				S	Sg	10 21 44.9	+1.6
T1215				AML	AML		
	comp=E,3100μm,0.2s						
T1215				AML	AML		
	comp=N,2495μm,0.3s						
T1215				AML	AML		
	comp=E,3195μm,0.2s						
T1215				AML	AML		
	comp=N,2375μm,0.3s						
T1215				AML	AML		
	comp=E,3102μm,0.2s						
T1215				AML	AML		
	comp=E,3196μm,0.2s						
T1215				AML	AML		
	comp=N,2057μm,0.1s						
T1215				AML	AML		
	comp=N,1986μm,0.1s						
GUMA	**Gualdo di Mace**	**0.28**	**23**	P	Pg	10 21 41.7	+0.7
GUMA				AML	AML		
	comp=E,15850μm,0.1s						
GUMA				AML	AML		
	comp=N,14700μm,0.3s						
GUMA				AML	AML		
	comp=E,15800μm,0.1s						
GUMA				AML	AML		
	comp=E,15050μm,0.1s						
GUMA				AML	AML		
	comp=N,17250μm,0.3s						
GUMA				AML	AML		
	comp=N,14750μm,0.3s						
GUMA				AML	AML		
	comp=E,15042μm,0.1s						
GUMA				AML	AML		
	comp=E,15816μm,0.1s						
GUMA				AML	AML		
	comp=N,14702μm,0.3s						
GUMA				AML	AML		
	comp=N,17233μm,0.3s						
RM33	**Pellescritta (**	**0.29**	**176**	P	Pg	10 21 41.9	+0.6
RM33				AML	AML		
	comp=N,1393μm,0.2s						
RM33				AML	AML		
	comp=E,1598μm,0.5s						
RM33				AML	AML		
	comp=E,1466μm,0.4s						
RM33				AML	AML		
	comp=N,1426μm,0.2s						
CAMP	**Campotosto**	**0.31**	**148**	P	Pg	10 21 42.0	+0.4
CAMP				AML	AML		
	comp=N,1234μm,0.3s						
CAMP				AML	AML		
	comp=E,1717μm,0.2s						
TERO	**Teramo**	**0.36**	**120**	P	Pg	10 21 42.8	+0.4
TERO				S	Sb	10 21 48.4	-1.2
TERO				AML	AML		
	comp=E,3360μm,0.3s						
TERO				AML	AML		
	comp=N,4725μm,0.3s						
TERO				AML	AML		
	comp=E,2923μm,0.3s						
TERO				AML	AML		
	comp=E,2747μm,0.3s						
TERO				AML	AML		
	comp=N,4540μm,0.3s						
TERO				AML	AML		
	comp=N,4721μm,0.3s						
T1211	**Morro Reatino**	**0.36**	**222**	S	Sb	10 21 50.0	+0.2
SEF1	**Sefro**	**0.39**	**333**	P	Pg	10 21 43.2	+0.3
SEF1				AML	AML		
	comp=E,3544μm,0.2s						
SEF1				AML	AML		
	comp=N,3578μm,0.2s						
OFFI	**Offida**	**0.39**	**70**	P	Pb	10 21 44.4	0.0
OFFI				AML	AML		
	comp=N,3692μm,0.5s						
MNTP	**Montappone**	**0.39**	**32**	P	Pb	10 21 44.1	-0.4
MNTP				AML	AML		
	comp=N,3980μm,0.2s						
MNTP				AML	AML		
	comp=E,3668μm,0.2s						
GAG1	**Gagliole**	**0.44**	**349**	P	Pg	10 21 44.3	+0.3
GAG1				AML	AML		
	comp=N,4330μm,0.3s						
GAG1				AML	AML		
	comp=E,4431μm,0.2s						
GIGS	**Gran Sasso**	**0.45**	**141**	P	Pg	10 21 44.5	+0.3
GIGS				AML	AML		
	comp=E,497μm,0.3s						
GIGS				AML	AML		
	comp=N,354μm,0.3s						
SNTG	**Esanatoglia**	**0.49**	**338**	P	Pg	10 21 45.0	+0.2
SNTG				AML	AML		
	comp=N,988μm,0.2s						
SNTG				AML	AML		
	comp=E,755μm,0.1s						
SNTG				AML	AML		
	comp=N,1048μm,0.2s						
SNTG				AML	AML		
	comp=E,801μm,0.1s						
EL6	**Elcito**	**0.53**	**353**	P	Pg	10 21 45.8	+0.1
EL6				S	Sb	10 21 54.2	-0.4
EL6				AML	AML		
	comp=E,2002μm,0.2s						
EL6				AML	AML		
	comp=N,2841μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.55**	**314**	P	Pg	10 21 46.5	+0.4
ATCC				AML	AML		
	comp=E,1684μm,0.3s						
ATCC				AML	AML		
	comp=N,1609μm,0.7s						
FOSV	**Fossato di Vic**	**0.58**	**328**	P	Pg	10 21 46.9	+0.2
FOSV				S	Sb	10 21 56.0	-0.1
FOSV				AML	AML		
	comp=N,1795μm,0.3s						
FOSV				AML	AML		
	comp=E,1395μm,0.2s						
FOSV				AML	AML		
	comp=E,1392μm,0.2s						
FOSV				AML	AML		
	comp=N,1797μm,0.3s						
VCEL	**Villa Celiera**	**0.63**	**130**	S	Sb	10 21 59.0	+1.4
MURB	**Monte Urbino**	**0.67**	**314**	S	Sb	10 21 60.0	+1.4
ARVD	**Arcevia**	**0.72**	**346**	P	Pb	10 21 49.6	-0.4
ARVD				S	Sb	10 22 00.2	+0.2
ATFO	**Monte Foce - G**	**0.72**	**322**	P	Pg	10 21 49.4	+0.1
ATFO				AML	AML		
	comp=E,522μm,0.3s						
ATFO				AML	AML		
	comp=N,540μm,0.5s						
SRES	**S.Oreste - Sor**	**0.75**	**222**	S	Sn	10 22 04.0	+0.3
MGAB	**Montegabbione**	**0.80**	**278**	⇓P	Pn	10 21 53.5	+0.7
MGAB				AML	AML		
	comp=N,509μm,0.3s						
MGAB				AML	AML		
	comp=E,523μm,0.4s						
MGAB				AML	AML		
	comp=E,470μm,0.4s						
MGAB				AML	AML		
	comp=N,556μm,0.4s						
PIEI	**Pieia**	**0.87**	**327**	S	Sn	10 22 06.0	-0.7
FSSB	**Fossombrone**	**0.94**	**342**	S	Sn	10 22 09.0	+0.7
PTRJ	**Pietraroja**	**1.75**	**145**	S	Sg	10 22 32.0	+0.4

ROM 30 10:21:46.4±0.1, 42°.865N±0°.010×11°.466E±0°.007, h5km, ML1.9/4, Error ellipse: s-maj=1.2km s-min=0.4km az=26.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCI	**Arcidosso**	**0.01**	**151**	P	Pg	10 21 47.2	-0.2
ARCI				S	Sg	10 21 47.7	-0.5
ARCI				AML	AML		
	comp=E,9225μm,0.3s						
ARCI				AML	AML		
	comp=N,8452μm,0.2s						
SF01	**Poggio Pratacc**	**0.09**	**126**	P	Pg	10 21 48.6	+0.3
SF01				S	Sg	10 21 50.5	+0.8
SF01				AML	AML		
	comp=N,930μm,0.6s						
SF01				AML	AML		
	comp=E,945μm,0.2s						
SF04	**Casetta**	**0.15**	**101**	P	Pg	10 21 49.8	+0.5
SF04				S	Sg	10 21 52.0	+0.7
SF04				AML	AML		
	comp=E,1308μm,0.5s						
SF04				AML	AML		
	comp=N,1286μm,0.2s						
SF04				AML	AML		
	comp=N,1284μm,0.2s						
SF04				AML	AML		
	comp=E,1166μm,0.3s						
MCIV	**Monte Civitell**	**0.18**	**119**	P	Pg	10 21 50.5	+0.5
MCIV				S	Sg	10 21 53.7	+1.4
MCIV				AML	AML		
	comp=E,602μm,0.2s						
MCIV				AML	AML		
	comp=N,660μm,0.7s						
MCIV				AML	AML		
	comp=E,603μm,0.2s						
MCIV				AML	AML		
	comp=N,629μm,0.2s						
FROS	**Frosini**	**0.41**	**327**	P	Pb	10 21 55.6	-0.6
CASP	**Castiglione de**	**0.45**	**261**	P	Pb	10 21 56.2	-0.5
TRIF	**Trifonti**	**0.48**	**301**	P	Pb	10 21 57.1	-0.3

*ROM **30** 10:24:33.9±0.0, 42°.942N±0°.001×13°.192E±0°.003, h8km, ML3.7/42, Error ellipse: s-maj=0.2km s-min=0.1km az=61.0*
*PRU **30** 10:24:33.5±0.0, 42°.82N×13°.76E, h10km*
*IDC **30** 10:24:33.9±1.2, 42°.99N×13°.50E, h0km, mb3.6/2, mbtmp3.7/9, ML3.4/7, Error ellipse: s-maj=31.2km s-min=13.1km az=95.0*
*LDG **30** 10:24:34.8±0.2, 42°.77N×13°.23E, h10km, Ml3.7/23, Error ellipse: s-maj=3.7km s-min=3.5km az=158.0*
*STR **30** 10:24:38.2±1.3, 43°N±5°.5°×1°.3E±°, h10km, MLv3.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=103.9, preliminary*

ISC 30 10:24:34.2±0.4, 42°.95N±0°.01×13°.19E±0°.01, h11km±2km, n220, σ1§49/259, 5C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.06**	**28**	⇑P	**Pg**	**10 24 35.9**	**-0.8**
T1256				S	**Sg**	**10 24 37.4**	**-1.2**
T1245	**Castelsantange**	**0.10**	**180**	⇑P	**Pg**	**10 24 36.4**	**-0.7**
T1245				S	**Sg**	**10 24 38.1**	**-1.0**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.10**	**276**	P	**Pg**	**10 24 37.0**	**-0.1**
FEMA				S	**Sg**	**10 24 39.1**	**-0.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FDMO	**Fiordimonte**	**0.11**	**319**	P	**Pg**	**10 24 37.0**	**-0.1**
FDMO				S	**Sg**	**10 24 39.2**	**-0.1**
AM05	**Amandola Campo**	**0.12**	**78**	⇑P	**Pg**	**10 24 36.9**	**-0.4**
AM05				S	**Sg**	**10 24 39.1**	**-0.5**
AM05				AML	AML		
AM05				AML	AML		
	comp=N,3045μm,0.2s						
AM05				AML	AML		
	comp=N,19050μm,0.9s						
AM05				AML	AML		
	comp=N,19000μm,0.9s						
AM05				AML	AML		
	comp=N,3040μm,0.2s						
AM05				AML	AML		
	comp=E,26150μm,1.1s						
T1216	**Preci, Frazion**	**0.14**	**244**	P	**Pg**	**10 24 37.4**	**-0.1**
T1216				S	**Sg**	**10 24 40.2**	**+0.3**
GUMA	**Gualdo di Mace**	**0.15**	**44**	⇑P	**Pg**	**10 24 37.9**	**+0.1**
GUMA				S	**Sg**	**10 24 40.8**	**+0.5**
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,97700μm,0.3s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,98100μm,0.3s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,97850μm,0.3s						
GUMA				AML	AML		
GUMA				AML	AML		
T1219	**Muccia, Frazio**	**0.17**	**308**	P	**Pg**	**10 24 38.2**	**+0.2**
T1219				S	**Sg**	**10 24 41.4**	**+0.8**
T1220	**Camerino, Fraz**	**0.17**	**336**	P	**Pg**	**10 24 38.2**	**+0.1**
T1220				S	**Sg**	**10 24 41.7**	**+0.9**
T1241	**Roccafluvione,**	**0.20**	**118**	⇑P	**Pg**	**10 24 38.7**	**+0.1**
T1241				S	**Sg**	**10 24 41.9**	**+0.3**
T1241				AML	AML		
	comp=E,69700μm,0.5s						
T1241				AML	AML		
	comp=E,69650μm,0.5s						
T1241				AML	AML		
	comp=E,69100μm,0.5s						
T1241				AML	AML		
	comp=N,52800μm,0.7s						
T1241				AML	AML		
	comp=N,49750μm,0.6s						
T1244	**Arquata del Tr**	**0.21**	**157**	P	**Pg**	**10 24 38.8**	**+0.1**
T1244				S	**Sg**	**10 24 42.4**	**+0.6**
T1212	**Cascia, Frazio**	**0.23**	**208**	P	**Pg**	**10 24 38.9**	**-0.1**
T1212				S	**Sg**	**10 24 42.9**	**+0.7**
MDAR	**Monte D'Aria**	**0.24**	**352**	P	**Pg**	**10 24 39.4**	**+0.1**
MDAR				S	**Sg**	**10 24 43.9**	**+1.1**
SEF1	**Sefro**	**0.26**	**318**	P	**Pg**	**10 24 39.9**	**+0.3**
SEF1				S	**Sb**	**10 24 44.8**	**-0.6**
SEF1				AML	AML		
	comp=E,64550μm,0.3s						
SEF1				AML	AML		
	comp=N,38800μm,1.1s						
SEF1				AML	AML		
	comp=E,64550μm,0.3s						
SEF1				AML	AML		
	comp=N,38750μm,1.1s						
PIO1	**Pioraco**	**0.27**	**327**	P	**Pg**	**10 24 40.0**	**+0.3**
PIO1				S	**Sb**	**10 24 45.1**	**-0.6**
PIO1				AML	AML		
	comp=E,14850μm,0.4s						
PIO1				AML	AML		
	comp=N,18600μm,0.9s						
PIO1				AML	AML		
	comp=E,14850μm,0.4s						
PIO1				AML	AML		
	comp=N,18550μm,0.9s						
PIO1				AML	AML		
	comp=N,16050μm,0.2s						
SSM1	**San Severino M**	**0.28**	**358**	P	**Pb**	**10 24 40.7**	**-0.5**
MNTP	**Montappone**	**0.28**	**48**	P	**Pb**	**10 24 40.5**	**-0.6**
MNTP				AML	AML		
	comp=E,45900μm,1.0s						
MNTP				AML	AML		
	comp=N,41150μm,1.1s						
MNTP				AML	AML		
	comp=N,41200μm,1.1s						
T1215	**Vallo di Nera,**	**0.28**	**238**	P	**Pg**	**10 24 40.1**	**+0.2**
T1215				S	**Sg**	**10 24 44.4**	**+0.7**
T1215				AML	AML		
	comp=E,13400μm,1.6s						
T1215				AML	AML		
	comp=E,13450μm,1.5s						
T1215				AML	AML		
	comp=N,16100μm,1.0s						
T1215				AML	AML		
	comp=E,13350μm,1.6s						
T1215				AML	AML		
	comp=N,15900μm,1.1s						
T1215				AML	AML		
	comp=E,13420μm,1.6s						
T1215				AML	AML		
	comp=N,16100μm,1.1s						
T1215				AML	AML		
	comp=N,16150μm,1.1s						
T1215				AML	AML		
	comp=E,13400μm,1.6s						
T1204	**Amatrice, Fraz**	**0.29**	**161**	P	**Pg**	**10 24 40.6**	**+0.5**
T1204				S	**Sg**	**10 24 44.9**	**+0.7**
T1204				AML	AML		
	comp=N,19900μm,0.6s						
T1204				AML	AML		
	comp=E,25150μm,1.3s						
T1204				AML	AML		
	comp=N,19950μm,0.6s						
T1204				AML	AML		
	comp=E,25100μm,1.3s						
GAG1	**Gagliole**	**0.30**	**343**	P	**Pg**	**10 24 40.8**	**+0.5**
GAG1				S	**Sb**	**10 24 46.0**	**-0.5**
GAG1				AML	AML		
	comp=E,32650μm,0.4s						
GAG1				AML	AML		
	comp=E,32600μm,0.4s						
GAG1				AML	AML		
	comp=N,39800μm,0.4s						
FIU1	**Fiuminata**	**0.30**	**322**	P	**Pg**	**10 24 40.6**	**+0.2**
FIU1				AML	AML		
	comp=E,9235μm,0.4s						
FIU1				AML	AML		
	comp=N,13750μm,1.3s						
FIU1				AML	AML		
	comp=E,9265μm,0.4s						
FIU1				AML	AML		
	comp=E,9270μm,0.4s						
FIU1				AML	AML		
	comp=E,9255μm,0.4s						
T1217	**Poggiodomo (PG**	**0.30**	**218**	P	**Pg**	**10 24 41.0**	**+0.6**
T1217				AML	AML		
	comp=E,18200μm,0.7s						
T1217				AML	AML		
	comp=N,24300μm,0.5s						
T1217				AML	AML		
	comp=E,18350μm,0.7s						
T1217				AML	AML		
	comp=N,24000μm,0.5s						
T1217				AML	AML		
	comp=E,18400μm,0.7s						
T1217				AML	AML		
	comp=N,23950μm,0.5s						

T1217 AML AML
comp=E,18350µm,0.7s
T1217 AML AML
comp=N,24300µm,0.5s
T1217 AML AML
comp=N,24000µm,0.5s
T1243 Rocca Santa Ma 0.32 143 P Pg 10 24 41.0 +0.3
T1243 S Sg 10 24 45.7 +0.7
SNTG Esanatoglia 0.35 329 P Pg 10 24 41.5 +0.2
SNTG AML AML
comp=E,8790µm,0.4s
SNTG AML AML
comp=N,8400µm,1.5s
SNTG AML AML
comp=E,8820µm,0.4s
SNTG AML AML
comp=N,8565µm,1.5s
SNTG AML AML
comp=E,8895µm,0.4s
SNTG AML AML
comp=N,8395µm,1.5s
LNSS Leonessa 0.36 197 P Pb 10 24 42.2 -0.5
LNSS S Sb 10 24 47.7 -0.7
LNSS AML AML
comp=E,17950µm,0.3s
LNSS AML AML
comp=N,48450µm,1.4s
OFFI Offida 0.37 92 P Pg 10 24 41.7 +0.2
OFFI AML AML
comp=E,28250µm,0.6s
OFFI AML AML
comp=N,33050µm,0.6s
TRE1 Treia 0.37 14 P Pb 10 24 42.6 -0.2
TRE1 AML AML
comp=E,21700µm,1.5s
TRE1 AML AML
comp=N,17950µm,1.3s
TRE1 AML AML
comp=N,17950µm,1.3s
TRE1 AML AML
comp=E,21750µm,1.5s
ASSB Assisi San Ben 0.40 283 P Pg 10 24 42.3 +0.2
ASSB S Sg 10 24 48.6 +1.2
ASSB AML AML
comp=E,14450µm,1.2s
ASSB AML AML
comp=N,13450µm,1.3s
T1246 Crognaleto (TE 0.43 148 P Pb 10 24 43.5 -0.4
T1246 S Sb 10 24 49.2 -1.2
RM33 Pellescritta (0.44 177 P Pg 10 24 43.2 +0.3
RM33 S Sb 10 24 49.6 -1.1
RM33 AML AML
comp=E,12700µm,1.0s
RM33 AML AML
comp=E,12850µm,1.0s
RM33 AML AML
comp=E,12650µm,1.0s
RM33 AML AML
comp=N,11850µm,0.3s
RM33 AML AML
comp=E,12900µm,1.0s
RM33 AML AML
comp=N,11550µm,0.3s
CAMP Campotosto 0.45 158 P Pg 10 24 42.8 -0.2
CAMP S Sg 10 24 49.5 +0.6
CAMP AML AML
comp=E,11450µm,0.6s
CAMP AML AML
comp=N,6805µm,1.5s
TERO Teramo 0.45 137 P Pb 10 24 43.5 -0.6
TERO S Sb 10 24 49.7 -1.1
TERO AML AML
comp=E,17000µm,0.6s
TERO AML AML
comp=N,12055µm,0.5s
TERO AML AML
comp=E,17600µm,0.6s
TERO AML AML
comp=N,12085µm,0.5s
TERO AML AML
comp=N,12500µm,0.5s
TERO AML AML
comp=N,12050µm,0.5s
TERO AML AML
comp=E,17050µm,0.6s
FOSV Fossato di Vic 0.46 318 P Pg 10 24 43.5 +0.2
FOSV S Sb 10 24 51.0 -0.2
FOSV AML AML
comp=E,8010µm,0.7s
FOSV AML AML
comp=N,15650µm,0.3s
ATCC AVT- Casa Cast 0.46 300 P Pg 10 24 43.6 +0.3
ATCC AML AML
comp=E,14750µm,1.1s
ATCC AML AML
comp=N,14850µm,0.6s
ATCC AML AML
comp=E,14800µm,1.1s
ATCC AML AML
comp=N,14900µm,0.6s
ARRO Arrone 0.48 220 P Pg 10 24 44.0 +0.3
ARRO AML AML
comp=E,9705µm,0.9s
ARRO AML AML
comp=N,6360µm,0.6s
ARRO AML AML
comp=E,9700µm,0.9s
ARRO AML AML
comp=N,6355µm,0.6s
ARRO AML AML
comp=E,9710µm,0.9s
ARRO AML AML
comp=E,6377µm,0.8s
T1211 Morro Reatino 0.48 210 P Pg 10 24 44.0 +0.3
T1211 S Sb 10 24 51.3 -0.6
T1211 AML AML
comp=E,7775µm,1.5s
T1211 AML AML
comp=E,7760µm,1.5s
T1211 AML AML
comp=N,16705µm,1.3s
T1211 AML AML
comp=E,7790µm,1.5s
T1211 AML AML
comp=N,16450µm,1.2s
T1211 AML AML
comp=N,16550µm,1.2s
T1211 AML AML
comp=E,7775µm,1.5s
T1211 AML AML
comp=N,16500µm,1.3s
T1211 AML AML
comp=E,7780µm,1.5s
CADA Capodarco di F 0.49 60 P Pb 10 24 44.7 0.0
CIMA Civitanova Mar 0.50 45 P Pg 10 24 43.8 -0.2
MMUR Monte Murano 0.51 344 P Pg 10 24 44.6 +0.4
MMUR S Sb 10 24 53.4 +0.8
T1247 Pizzolo (AQ) 0.52 171 P Pg 10 24 44.0 -0.3
T1247 AML AML
comp=E,13400µm,0.6s
T1247 AML AML
comp=N,12550µm,0.4s
PP3 Marolino 0.53 36 P Pg 10 24 44.8 +0.3
PP3 AML AML
comp=E,17600µm,1.1s
PP3 AML AML
comp=E,17300µm,1.1s
PP3 AML AML
comp=N,13900µm,0.4s
PP3 AML AML
comp=N,13850µm,0.4s
PP3 AML AML
comp=E,17650µm,1.1s
PP3 AML AML
comp=E,13467µm,1.7s
PP3 AML AML
comp=E,13910µm,1.1s
TRTR Tortoreto Alta 0.55 105 P Pb 10 24 45.5 -0.3
TRTR AML AML
comp=N,27500µm,0.8s
TRTR AML AML
comp=E,31300µm,0.7s
CESX Cesi 0.56 233 P Pg 10 24 44.9 -0.3
CESX AML AML
comp=E,10440µm,1.4s
CESX AML AML
comp=N,9190µm,1.6s

ARVD Arcevia 0.57 342 P Pg 10 24 45.5 +0.1
ARVD S Sb 10 24 55.4 +0.9
ARVD AML AML
comp=E,6685µm,0.4s
ARVD AML AML
comp=N,3095µm,0.8s
ARVD AML AML
comp=E,6690µm,0.4s
GIGS Gran Sasso 0.57 151 P Pg 10 24 45.3 -0.1
GIGS AML AML
comp=N,2310µm,0.7s
GIGS AML AML
comp=N,2305µm,0.7s
GIGS AML AML
comp=E,3430µm,0.7s
MURB Monte Urbino 0.58 303 P Pg 10 24 45.7 +0.3
MURB AML AML
comp=E,17950µm,1.2s
MURB AML AML
comp=N,18850µm,0.2s
MURB AML AML
comp=N,18000µm,0.2s
MURB AML AML
comp=E,17950µm,1.2s
MURB AML AML
comp=N,18850µm,0.2s
MURB AML AML
comp=E,20500µm,0.3s
ATSC Scheggia e Pas 0.60 322 P Pg 10 24 45.8 0.0
ATFO Monte Foce - G 0.61 313 P Pg 10 24 46.2 0.0
ATFO AML AML
comp=E,6565µm,0.5s
ATFO AML AML
comp=N,4425µm,0.4s
AQU L'Aquila 0.62 165 P Pb 10 24 46.6 -0.4
ATTE AVT- Monte Tez 0.66 292 P Pg 10 24 47.3 +0.4
ATTE AML AML
comp=E,4445µm,1.0s
ATTE AML AML
comp=N,4430µm,0.9s
FRON Frontone 0.66 329 P Pg 10 24 46.8 -0.2
FRON AML AML
comp=E,4205µm,1.5s
FRON AML AML
comp=N,6845µm,1.4s
FRON AML AML
comp=N,6840µm,1.4s
FRON AML AML
comp=E,4210µm,1.5s
AOI Ancona 0.67 27 P Pg 10 24 46.9 -0.3
AOI AML AML
comp=E,3440µm,0.8s
AOI AML AML
comp=N,4005µm,0.2s
ATLO AVT- Montelove 0.68 303 P Pg 10 24 47.3 0.0
TB01 Gubbio 0.70 308 P Pg 10 24 47.6 -0.1
ATBU Serra di Buran 0.70 318 P Pg 10 24 48.0 +0.2
PCRO Pietralacroce 0.70 21 P Pg 10 24 47.9 +0.1
TB03 Pietralunga 0.72 309 P Pg 10 24 48.1 -0.1
ATVA AVT- Monte Val 0.74 297 P Pg 10 24 48.7 +0.3
MPAG Monte Paganucc 0.75 335 P Pg 10 24 48.8 +0.2
MPAG AML AML
comp=N,3810µm,1.1s
MPAG AML AML
comp=E,3120µm,0.9s
MPAG AML AML
comp=N,3805µm,1.1s
ATPC Poggio Castell 0.75 315 P Pg 10 24 48.8 +0.1
PIEI Pieia 0.75 321 P Pg 10 24 48.6 -0.2
PIEI AML AML
comp=N,2815µm,0.3s
PIEI AML AML
comp=E,3455µm,0.3s
SENI Senigallia 0.75 3 P Pg 10 24 49.0 +0.3
ATPI Pietralunga - 0.76 311 P Pg 10 24 48.8 -0.1
ATPI AML AML
comp=E,3425µm,1.2s
ATPI AML AML
comp=N,3845µm,1.5s
ATMI Monte Miggiano 0.77 300 P Pn 10 24 50.8 -0.2
ATMI AML AML
comp=E,4630µm,0.4s
ATMI AML AML
comp=N,6315µm,0.5s
MGAB Montegabbione 0.79 268 P Pg 10 24 48.9 -0.5
MGAB AML AML
comp=E,5225µm,1.0s
MGAB AML AML
comp=N,10450µm,1.1s
MGAB AML AML
comp=E,4765µm,1.0s
MGAB AML AML
comp=E,5230µm,1.0s
MGAB AML AML
comp=N,10610µm,0.5s
FSSB Fossombrone 0.80 338 P Pg 10 24 49.8 +0.2
FSSB AML AML
comp=N,18850µm,0.4s
FSSB AML AML
comp=E,9720µm,0.4s
T0110 Collepietro 0.85 149 P Pg 10 24 50.3 -0.2
T0110 AML AML
comp=N,5485µm,0.6s
T0110 AML AML
comp=E,5680µm,1.2s
SRES S.Oreste - Sor 0.87 215 P Pg 10 24 50.8 -0.2
ATMC Monte Cedrone 0.88 305 P Pg 10 24 50.9 -0.3
PE3 Peglio 0.90 326 P Pg 10 24 51.4 -0.1
PE3 AML AML
comp=E,20µm,1.2s
PE3 AML AML
comp=N,23µm,0.2s
SACS San Casciano d 0.94 264 P Pg 10 24 51.7 -0.7
SACS AML AML
comp=E,3185µm,1.4s
SACS AML AML
comp=N,3575µm,1.1s
SACS AML AML
comp=E,3095µm,0.8s
SACS AML AML
comp=N,3705µm,1.1s
CAFI Castiglion Fio 0.97 293 P Pg 10 24 52.7 -0.1
CAFI AML AML
comp=E,2715µm,1.6s
CAFI AML AML
comp=N,1535µm,1.4s
MTCE Montecelio 0.98 200 P Pg 10 24 52.1 -1.0
CERT Cerreto 1.01 189 P Pg 10 24 52.8 -0.9
CPGN Carpegna, Ital 1.06 324 P Pg 10 24 53.8 -0.7
LATE Laterza 1.07 252 P Pg 10 24 54.0 -0.8
RCAV Rocca di Cave 1.12 189 P Pb 10 24 54.9 -0.6
CRE Caprese Michel 1.12 307 P Pb 10 24 55.6 -0.1
CRE AML AML
comp=E,1295µm,0.6s
CRE AML AML
comp=N,1325µm,0.6s
MCIV Monte Civitell 1.12 262 P Pb 10 24 55.7 +0.1
MCIV AML AML
comp=E,1385µm,0.7s
MCIV AML AML
comp=N,1890µm,0.8s
VVLD Villa Vallelon 1.13 163 P Pg 10 24 55.7 -0.2
GUAR Guarcino 1.16 175 P Pb 10 24 55.7 -0.5
SF13 Bagnolo 1.16 264 P Pb 10 24 55.4 -0.9
SF14 Selvena 1.17 261 P Pb 10 24 56.4 0.0
TOLF Tolfa 1.25 225 P Pn 10 24 57.1 -0.4
TOLF AML AML
comp=N,1825µm,0.6s
TOLF AML AML
comp=E,2410µm,0.6s
POFI Posta Fibreno 1.29 162 P Pn 10 24 57.5 -0.7
LRP Arpino 1.34 167 P Pn 10 24 58.5 -0.2
SFI Santa Sofia 1.36 315 P Pn 10 24 59.2 +0.1
GIUL Giuliano Di Ro 1.39 178 P Pn 10 24 59.7 +0.2
LATB Latina 1.47 187 P Pn 10 25 00.9 +0.4
LATB AML AML
comp=E,532µm,1.0s
LATB AML AML
comp=N,570µm,0.9s
CSNT Castellina Chi 1.48 291 P Pn 10 25 01.5 +0.7
CERA Filignano 1.49 155 P Pn 10 25 00.9 0.0
MIDA Miranda 1.53 148 P Pb 10 25 02.6 +0.1
LMD Lutirano 1.56 317 P Pb 10 25 02.8 -0.2
TRIV Trivento 1.56 139 P Pn 10 25 02.1 +0.3
TRIF Trifonti 1.68 276 AML AML

comp=N,418µm,0.6s
TRIF AML AML
comp=E,352µm,0.7s
TRIF AML AML
comp=N,418µm,0.6s
CASP Castiglione de 1.71 265 P Pn 10 25 04.3 +0.4
CASP AML AML
comp=E,231µm,1.6s
CASP AML AML
comp=N,162µm,1.6s
BSSO Busso 1.75 143 P Pb 10 25 05.6 -0.7
PSB1 Pescosannita 2.11 144 P Pn 10 25 10.6 +1.2
SMPL Sampolo 3.01 255 P Pn 10 25 23.4 +1.7
SMPL S Sb 10 26 01.6 -2.8
SABO M.te Sabotino 3.04 5 P Pn 10 25 23.3 +1.1
SABO AML AML
comp=N,1965µm,0.7s
SABO AML AML
comp=N,514µm,0.7s
SABO AML AML
comp=E,2035µm,0.8s
SABO AML AML
comp=E,448µm,1.6s
CGRP Cima Grappa 3.09 342 P Pn 10 25 23.6 +0.6
CGRP AML AML
comp=N,454µm,0.9s
CGRP AML AML
comp=N,438µm,0.6s
CGRP AML AML
comp=E,489µm,1.3s
CGRP AML AML
comp=E,506µm,0.9s
ROVR Rover Verones 3.09 331 P Pn 10 25 24.1 +1.1
ROVR AML AML
comp=E,120µm,1.1s
ROVR AML AML
comp=N,126µm,0.8s
PGF Pioggiola 3.11 264 *e*Pn **Pn 10 25 23.4 +0.2**
PGF Pioggiola 3.11 264 *e*P **Pn 10 25 25.8 +2.6**
PGF *e*Sn **Sn 10 25 59.0 -1.4**
comp=N,24nm,0.7s
PGF Pioggiola 3.11 264 AML AML
comp=N,38µm,1.1s
PGF AML AML
comp=E,38µm,1.4s
PGF Pioggiola 3.11 264 P Pn 10 25 25.1 +1.9
PGF Pioggiola 3.11 264 S Sb 10 26 04.5 -3.0
LJU Ljubljana 3.24 17 P Pn 10 25 26.2 +1.3
LJU AML AML
comp=E,2080µm,0.9s
LJU AML AML
comp=N,2245µm,0.7s
MPRI Monte Prat 3.29 358 P Pn 10 25 26.8 +1.1
MPRI AML AML
comp=N,464µm,1.3s
MPRI AML AML
comp=E,324µm,0.7s
STAL STALIGIAL 3.33 354 P Pn 10 25 27.1 +1.0
STAL AML AML
comp=N,218µm,1.4s
STAL AML AML
comp=E,356µm,1.2s
LUSI Trento, Gardas 3.41 333 P Pn 10 25 28.0 +0.7
LUSI AML AML
comp=N,236µm,0.9s
LUSI AML AML
comp=E,222µm,1.0s
GAGG Gaggia 3.51 334 P Pn 10 25 29.2 +0.4
GAGG AML AML
comp=E,416µm,0.9s
GAGG AML AML
comp=N,282µm,1.3s
ACOM Acomizza, Ital 3.60 4 P Pn 10 25 30.8 +0.7
ACOM AML AML
comp=E,400µm,1.0s
ACOM AML AML
comp=N,290µm,0.7s
ACOM AML AML
comp=E,376µm,1.0s
ACOM AML AML
comp=N,252µm,0.7s
ZOU Zoufplan 3.61 358 P Pn 10 25 31.2 +1.0
ZOU AML AML
comp=E,327µm,1.4s
ZOU AML AML
comp=N,272µm,1.1s
ZOU AML AML
comp=E,312µm,1.4s
ZOU AML AML
comp=N,268µm,1.2s
OBKA Obir 3.69 15 *e*Pn **Pn 10 25 32.7 +1.6**
comp=N,3.3nm,0.3s
MYKA Terra Mystica 3.69 5 *e*Pn **Pn 10 25 32.4 +1.3**
comp=N,3.5nm,0.2s
KOSI Kohlern 3.74 340 P Pn 10 25 33.0 +1.1
KOSI AML AML
comp=E,312µm,0.8s
KOSI AML AML
comp=N,280µm,1.4s
APPI Appiano 3.79 339 P Pn 10 25 33.7 +1.1
APPI AML AML
comp=N,147µm,1.1s
APPI AML AML
comp=E,147µm,1.3s
ABTA Abfaltersbach 3.83 353 *e*Pn **Pn 10 25 34.8 +1.8**
comp=E,19nm,0.5s,SNR=10
SALB San Lorenzo Be 3.88 141 P Pn 10 25 35.9 +2.0
BRMO Bormio 4.05 331 P Pn 10 25 37.0 +0.8
RISI Rein 4.07 349 P Pn 10 25 37.5 +1.0
ROSI Rosskopf 4.17 343 P Pn 10 25 39.1 +1.2
ROSI AML AML
comp=N,390µm,0.7s
ROSI AML AML
comp=E,336µm,1.0s
SBF Sospel 4.29 284 *e*P **Pn 10 25 42.2 +2.8**
SBF *e*Sn **Sn 10 26 28.4 -1.0**
comp=E,23nm,0.5s
FETA Feichten 4.43 338 *e*Pn **Pn 10 25 43.6 +2.2**
comp=E,15nm,0.4s,SNR=16
WTTA Wattenberg 4.45 346 *e*Pn **Pn 10 25 44.2 +2.5**
comp=E,8.5nm,0.3s,SNR=6.0
WTTA Wattenberg 4.45 346 P Pn 10 25 43.0 +1.3
DAVOX Davos/Dischmat 4.49 330 Pn **Pn 10 25 45.0 +2.8**
comp=E,4.9nm,0.3s,baz=148,slow=12,SNR=13
DAVOX Sn **Sn 10 26 40.4 +5.8**
comp=E,1.9nm,0.3s,baz=139,slow=19,SNR=4.0
comp=E,30nm,0.7s
DAVOX Davos/Dischmat 4.49 330 P Pn 10 25 45.2 +3.0
SQTA Sankt Quirin 4.49 343 *e*Pn **Pn 10 25 44.6 +2.3**
comp=E,25nm,0.5s,SNR=8.9
WATA Walderalm 4.53 346 *e*Pn **Pn 10 25 45.7 +3.0**
comp=E,3.5nm,0.2s,SNR=6.6
ARSA Arzberg 4.61 20 *e*Pn **Pn 10 25 44.1 +0.4**
comp=E,1.1nm,0.2s
MOTA Moosalm 4.63 342 *e*Pn **Pn 10 25 46.6 +2.4**
comp=E,15nm,0.6s,SNR=9.2
CALF Calern 4.64 282 P Pn 10 25 46.1 +1.9
BIOA Bad Ischl, Aus 4.75 4 *e*Pn **Pn 10 25 47.2 +1.5**
comp=E,10nm,0.3s,SNR=8.1
FUSIO Fusio 4.76 319 P Pn 10 25 47.7 +1.7
RETA Reutte 4.85 340 *i* Pn **Pn 10 25 49.8 +2.7**
comp=E,15nm,0.3s,SNR=16
SURF Saint Ours 4.87 290 P Pn 10 25 49.3 +1.9
JAUF Jausiers 4.90 290 P Pn 10 25 50.7 +2.9
JAUF S **Sn 10 26 45.4 +0.9**
LMR La Mourre 4.90 277 *e*Pn **Pn 10 25 47.6 -0.1**
LMR La Mourre 4.90 277 *e*P **Pn 10 25 50.6 +2.9**
DAVA Damuels 4.93 333 *i* Pn **Pn 10 25 51.0 +2.8**
comp=E,14nm,0.5s,SNR=12
MOA Molln 4.96 8 *e*Pn **Pn 10 25 50.4 +1.9**
comp=E,3.0nm,0.3s
MBDF Montbardon 4.97 293 *e*Pn **Pn 10 25 49.3 +0.5**
MBDF Montbardon 4.97 293 *e*P **Pn 10 25 51.4 +2.6**
MBDF *e*Sn **Sn 10 26 45.2 -1.1**
comp=E,25nm,0.7s
CREF Crivoux 5.02 291 P Pn 10 25 54.7 +5.2
EMBD Embd, Matterta 5.03 312 P Pn 10 25 52.3 +2.7
BNALP Bannalp 5.17 321 P Pn 10 25 54.2 +2.5
DIX Grande Dixence 5.18 309 P Pn 10 25 54.8 +2.9
RONA Rosalia, Austr 5.23 24 *e*Pn **Pn 10 25 52.7 +0.4**
comp=E,1.0nm,0.2s
LPG La Plagne 5.28 301 *e*Pn **Pn 10 25 53.8 +0.6**
LPG La Plagne 5.28 301 *e*P **Pn 10 25 56.9 +3.7**
LPG *e*Sn **Sn 10 26 52.4 -1.7**
comp=E,16nm,0.7s
LPL La Plagne 5.30 301 *e*Pn **Pn 10 25 53.5 +0.1**

LPL	La Plagne	5.30	301	eP	Pn	10 25 57.1	+3.7
LPL				eSn	Sn	10 26 52.8	-1.7
comp=E,11nm,0.2s							
CONA	Conrad Observa	5.32	20	ePn	Pn	10 25 54.6	+1.0
comp=E,1.6nm,0.2s,SNR=4.4							
VAE	Valguarnera	5.55	170	Pn	Pn	10 25 56.6	-0.1
comp=E,1.5nm,0.3s,baz=347,slow=14,SNR=1.4							
comp=E,9.1nm,0.5s							
OGSI	Sixt	5.55	306	P	Pn	10 25 59.7	+2.9
AIGLE	Aigle	5.59	309	P	Pn	10 25 55.6	-1.7
ORIF	Oris-en-Rattie	5.63	293	ePn	Pn	10 25 57.4	-0.4
ORIF	Oris-en-Rattie	5.63	293	eP	Pn	10 26 02.4	+4.6
ORIF				eSn	Sn	10 27 00.6	-1.9
comp=E,30nm,1.1s							
ORIF	Oris-en-Rattie	5.63	293	P	Pn	10 26 02.6	+4.8
SMRF	Simiane la Rot	5.63	283	ePn	Pn	10 25 58.1	+0.3
SMRF	Simiane la Rot	5.63	283	eP	Pn	10 26 01.6	+3.8
SMRF				eSn	Sn	10 26 59.6	-2.9
comp=E,39nm,1.4s							
BALST	Balsthal	5.86	320	S	Sn	10 27 08.6	+0.6
BALST	Balsthal	5.86	320	P	Pn	10 26 01.3	+0.4
GERES	GERESS Array B	5.91	3	Pn	Pn	10 26 02.2	+0.7
comp=E,0.8nm,0.3s,baz=171,slow=12,SNR=6.0							
GERES				Sn	Sn	10 27 09.6	+0.3
comp=E,2.1nm,0.3s,baz=183,slow=27,SNR=7.0							
comp=E,1.5nm,0.3s							
CKRC	Cesky Krumlov	5.92	7	eSN	Sn	10 27 08.0	-1.5
BOURR	Bourrignon	6.12	319	P	Pn	10 26 06.7	+2.2
BOURR	Bourrignon	6.12	319	S	Sn	10 27 15.7	+1.2
KHC	Kasperske Hory	6.19	2	ePN	Pn	10 26 06.0	+0.6
KHC				eSN	Sn	10 27 14.8	-1.3
CABF	La Chapelle	6.24	308	ePn	Pn	10 26 07.1	+1.0
CABF	La Chapelle	6.24	308	eP	Pn	10 26 10.9	+4.8
CABF				eSn	Sn	10 27 15.3	-2.1
comp=E,54nm,1.3s							
VIVF	Saint-Julien-l	6.44	290	eP	Pn	10 26 13.2	+4.3
MOF	Molkenrain	6.49	321	P	Pn	10 26 10.8	+1.1
MOF				S	Sn	10 27 24.1	+0.5
HINF	Hinteralfeld	6.60	320	ePn	Pn	10 26 11.6	+0.5
HINF	Hinteralfeld	6.60	320	eP	Pn	10 26 15.9	+4.8
HINF				eSn	Sn	10 27 24.4	-1.8
comp=E,74nm,1.0s							
ECH	Echery	6.75	323	P	Pn	10 26 14.4	+1.3
ECH				S	Sn	10 27 29.4	-0.5
VRAC	Vranov	6.78	19	Pn	Pn	10 26 14.0	+0.4
comp=E,0.4nm,0.3s,baz=202,slow=16,SNR=1.7							
comp=E,1.3nm,0.3s							
CDF	Champ du Feu	6.85	325	ePn	Pn	10 26 15.3	+0.7
CDF	Champ du Feu	6.85	325	eP	Pn	10 26 20.0	+5.4
CDF				eSn	Sn	10 27 30.6	-1.9
comp=E,31nm,1.0s							
LASF	Ste Croix	6.88	283	ePn	Pn	10 26 14.3	-0.6
LASF	Ste Croix	6.88	283	eP	Pn	10 26 18.9	+4.0
LASF				eSn	Sn	10 27 28.2	-4.9
comp=E,61nm,2.0s							
HAU	Haudompre	6.97	319	ePn	Pn	10 26 16.2	0.0
HAU	Haudompre	6.97	319	eP	Pn	10 26 21.2	+5.0
HAU				eSn	Sn	10 27 33.3	-2.1
comp=E,71nm,1.0s							
NKC	Novy Kostel	7.30	356	eSN	Sn	10 27 43.8	+0.3
SMF	Signal de Mont	7.60	302	ePn	Pn	10 26 24.9	+0.1
SMF	Signal de Mont	7.60	302	eP	Pn	10 26 29.6	+4.8
SMF				eSn	Sn	10 27 47.7	-3.2
comp=E,18nm,0.9s							
PAGF	Fort de Pagny	7.66	320	ePn	Pn	10 26 26.4	+0.9
baz=140							
PAGF	Fort de Pagny	7.66	320	eP	Pn	10 26 31.1	+5.6
PAGF				eSn	Sn	10 27 49.8	-2.4
comp=E,107nm,1.4s							
SFTF	Sexfontaines	7.76	315	ePn	Pn	10 26 27.0	0.0
baz=138							
SFTF	Sexfontaines	7.76	315	eP	Pn	10 26 32.0	+5.0
SFTF				eSn	Sn	10 27 52.0	-2.8
comp=E,40nm,1.2s							
KEST	Kesra	7.80	204	Pn	Pn	10 26 31.6	+4.0
comp=E,0.8nm,0.3s,baz=56,slow=17,SNR=3.5							
comp=E,0.9nm,0.4s							
LOR	Lormes	7.88	306	ePn	Pn	10 26 28.7	0.0
baz=123							
LOR	Lormes	7.88	306	eP	Pn	10 26 33.6	+4.9
MEZF	Maizieres J'vi	7.95	317	ePn	Pn	10 26 30.6	+1.1
baz=140							
MEZF	Maizieres J'vi	7.95	317	eP	Pn	10 26 34.4	+4.9
MEZF				eSn	Sn	10 27 56.6	-2.7
comp=E,20nm,0.8s							
AVF	Avril sur Loir	7.97	302	ePn	Pn	10 26 30.2	+0.4
AVF	Avril sur Loir	7.97	302	eP	Pn	10 26 34.9	+5.1
AVF				eSn	Sn	10 27 56.4	-3.5
comp=E,19nm,1.2s							
SAVF	Savonnieres en	7.99	318	ePn	Pn	10 26 30.8	+0.8
baz=136							
SAVF				eSn	Sn	10 27 57.7	-2.6
comp=E,9.0nm,0.7s							
SSF	Saint Saulge	8.00	304	ePn	Pn	10 26 29.7	-0.5
SSF	Saint Saulge	8.00	304	eP	Pn	10 26 35.1	+4.9
SSF				eSn	Sn	10 27 57.4	-3.1
comp=E,13nm,1.0s							
MTLF	Montolieu	8.03	277	ePn	Pn	10 26 30.8	+0.1
MTLF				eSn	Sn	10 27 57.1	-4.4
comp=E,47nm,1.7s							
BGF	Bois d'Agland	8.19	300	ePn	Pn	10 26 32.5	-0.4
BGF	Bois d'Agland	8.19	300	eP	Pn	10 26 37.8	+4.9
CAF	Calviac	8.27	288	ePn	Pn	10 26 33.5	-0.4
CAF	Calviac	8.27	288	eP	Pn	10 26 38.5	+4.6
CAF				eSn	Sn	10 28 02.5	-4.8
comp=E,46nm,1.8s							
CLL	Collm	8.36	359	ePn	Pn	10 26 35.0	-0.2
CLL				ex	x	10 26 51.0	
CLL				eSn	Sn	10 27 53.0	-16
CLL				ex	x	10 28 12.0	
CLL				ex	x	10 28 40.0	
CLL				ex	x	10 28 55.0	
CLL				eSg	Sg	10 29 00.0	-2.3
comp=Z,16nm,1.1s							
TCF	Toulx Ste Croi	8.51	297	ePn	Pn	10 26 38.7	+1.4
HYF	Humbligny	8.62	304	ePn	Pn	10 26 38.7	0.0
RJF	Les Rejaudoux	8.72	290	ePn	Pn	10 26 39.2	-0.9
RJF	Les Rejaudoux	8.72	290	eP	Pn	10 26 44.8	+4.7
GIVF	Givet	9.18	324	ePn	Pn	10 26 47.3	+0.9
LFF	La Frestale	9.20	287	ePn	Pn	10 26 46.1	-0.6
BAIF	Baives	9.42	322	ePn	Pn	10 26 51.4	+1.7
MFF	Saint Martin d	10.16	296	ePn	Pn	10 26 59.8	0.0
LDF	La Druitiere	10.87	306	ePn	Pn	10 27 09.6	+0.1
EKA	Eskdalemuir Ar	16.31	325	Pn	P	10 28 26.7	+0.8
baz=125,slow=10							
comp=Z,1.5nm,0.7s							
FINES	FINESS Array B	20.06	18	P	P	10 29 05.6	-1.5
comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=2.0							
comp=Z,5.7nm,1.0s							
TORD	Torodi Ar. Bea	31.32	202	P	P	10 30 56.5	+2.1
comp=Z,0.7nm,0.7s,baz=19,slow=10,SNR=4.5							
comp=Z,0.7nm,0.7s							
MKAR	Makanchi Array	47.68	60	P	P	10 33 11.8	+1.3
comp=Z,0.4nm,0.5s,baz=298,slow=7.4,SNR=2.1							
comp=Z,0.4nm,0.5s							

IDC ***30*** *10:26:23.5±1.4, 42°.87N×13°.29E, h0km, mb3.7/3, mbtmp3.7/7, ML3.3/4, MS3.8/1, Error ellipse: s-maj=35.2km s-min=15.0km az=98.0*

LDG ***30*** *10:26:24.8±0.1, 42°.82N×13°.07E, h10km, Ml3.5/22, Error ellipse: s-maj=4.1km s-min=2.4km az=51.0*

ROM ***30*** *10:26:24.9±0.0, 42°.838N±0°.001×13°.075E±0°.003, h10km, ML3.6/64, Error ellipse: s-maj=0.2km s-min=0.0km az=260.0*

PRU ***30*** *10:26:26.9±0.0, 42°.81N×13°.60E, h9km*

ISC 30 10:26:24.5±0.7, 42°.83N±0°.01×13°.02E±0°.02, h15km±4km, n186, σ1§70/244, 15C-7D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.06	358	P	Pg	10 26 27.5	0.0
T1216				S	Sg	10 26 29.0	-0.4
T1212	Cascia, Frazio	0.08	167	⇑P	Pg	10 26 27.9	+0.3
T1212				S	Sg	10 26 29.9	+0.3
T1215	Vallo di Nera,	0.12	258	⇑P	Pb	10 26 28.9	+0.4
T1215				S	Sb	10 26 31.7	+0.6
T1215				AML	AML		
comp=E,44750μm,0.4s							
T1215				AML	AML		
comp=E,44350μm,0.4s							
T1215				AML	AML		
comp=N,41550μm,0.4s							
T1215				AML	AML		
comp=N,44500μm,0.4s							
T1245	Castelsantange	0.13	76	⇓P	Pg	10 26 27.8	-0.4
T1245				S	Sg	10 26 29.7	-1.0
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1213	Norcia, Frazio	0.13	143	P	Pg	10 26 28.4	+0.2
T1213				S	Sg	10 26 30.5	-0.1
T1217	Poggiodomo (PG	0.13	210	⇑P	Pb	10 26 29.1	+0.3
T1217				S	Sb	10 26 32.1	+0.5
T1217				AML	AML		
comp=E,73250μm,1.2s							
T1217				AML	AML		
comp=E,72100μm,1.2s							
T1217				AML	AML		
T1217				AML	AML		
comp=E,72100μm,1.2s							
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
comp=E,73250μm,1.2s							
FEMA	Monte Fema	0.14	9	P	Pg	10 26 28.4	0.0
FEMA				S	Sg	10 26 30.6	-0.3
FEMA				AML	AML		
comp=E,71300μm,0.5s							
FEMA				AML	AML		
comp=N,79100μm,0.4s							
FEMA				AML	AML		
comp=E,71300μm,0.5s							
FEMA				AML	AML		
comp=N,79150μm,0.4s							
FEMA				AML	AML		
comp=E,71350μm,0.5s							
T1214	Arquata del Tr	0.15	116	P	Pg	10 26 28.5	0.0
T1214				S	Sg	10 26 30.8	-0.4
T1218	Civita (PG)	0.17	156	P	Pb	10 26 29.3	-0.2
T1218				S	Sb	10 26 32.3	-0.5
FDMO	Fiordimonte	0.21	13	P	Pg	10 26 29.6	+0.2
FDMO				S	Sg	10 26 32.8	+0.1
T1244	Arquata del Tr	0.21	109	P	Pg	10 26 29.5	+0.1
T1244				S	Sg	10 26 33.0	+0.2
LNSS	Leonessa	0.22	177	P	Pb	10 26 30.5	+0.2
LNSS				S	Sb	10 26 34.6	+0.3
LNSS				AML	AML		
comp=E,39750μm,0.2s							
LNSS				AML	AML		
T1219	Muccia, Frazio	0.23	357	P	Pg	10 26 30.1	+0.5
T1219				S	Sg	10 26 33.6	+0.5
T1256	Bolognola (MC)	0.23	40	P	Pg	10 26 29.7	-0.1
T1256				S	Sg	10 26 33.1	-0.3
MMO1	Montemonaco	0.24	72	⇑P	Pg	10 26 29.6	-0.2
MMO1				S	Sg	10 26 32.9	-0.5
T1201	Domo (RI)	0.24	135	P	Pg	10 26 29.8	0.0
T1204	Amatrice, Fraz	0.26	125	P	Pg	10 26 30.4	+0.1
T1204				S	Sg	10 26 34.6	+0.4
T1204				AML	AML		
comp=E,42250μm,1.0s							
T1204				AML	AML		
comp=N,32100μm,1.2s							
AM05	Amandola Campo	0.29	58	P	Pg	10 26 30.6	0.0
AM05				S	Sg	10 26 34.6	-0.1
AM05				AML	AML		
comp=E,9355μm,0.6s							
AM05				AML	AML		
comp=N,11545μm,0.5s							
AM05				AML	AML		
comp=E,38200μm,0.9s							
AM05				AML	AML		
comp=N,2525μm,0.6s							
AM05				AML	AML		
comp=E,38250μm,0.9s							
AM05				AML	AML		
comp=E,9390μm,0.6s							
AM05				AML	AML		
comp=N,11525μm,0.5s							
CSP1	Cessapalombo	0.30	27	⇑P	Pg	10 26 30.9	0.0
CSP1				S	Sg	10 26 35.3	+0.2
T1241	Roccafluvione,	0.30	84	P	Pg	10 26 31.2	+0.3
T1241				S	Sg	10 26 35.7	+0.5
T1241				AML	AML		
comp=N,37100μm,0.7s							
T1241				AML	AML		
comp=E,64000μm,0.9s							
T1241				AML	AML		
comp=N,37050μm,0.7s							
T1241				AML	AML		
comp=E,63950μm,0.9s							
ARRO	Arrone	0.31	217	⇑P	Pb	10 26 32.2	+0.4
ARRO				S	Sb	10 26 37.6	+0.9
ARRO				AML	AML		
comp=E,18150μm,0.9s							
ARRO				AML	AML		
comp=N,18250μm,0.2s							
ARRO				AML	AML		
comp=E,18200μm,0.9s							
ARRO				AML	AML		
comp=N,18300μm,0.2s							
T1211	Morro Reatino	0.32	203	P	Pb	10 26 32.8	+0.8
T1211				S	Sb	10 26 37.8	+0.8
T1211				AML	AML		
comp=N,50700μm,0.2s							
T1211				AML	AML		
comp=E,30150μm,0.1s							
T1211				AML	AML		
comp=N,50750μm,0.2s							
T1211				AML	AML		
comp=E,29300μm,0.1s							
T1211				AML	AML		
comp=N,51000μm,0.3s							
SEF1	Sefro	0.32	350	P	Pb	10 26 32.0	-0.1
SEF1				S	Sb	10 26 37.0	-0.1
SEF1				AML	AML		
comp=E,13950μm,0.4s							
SEF1				AML	AML		
comp=E,13900μm,0.4s							
SEF1				AML	AML		
comp=N,12450μm,0.3s							
GUMA	Gualdo di Mace	0.33	44	⇑P	Pg	10 26 31.6	+0.3
GUMA				S	Sg	10 26 36.6	+0.6
GUMA				AML	AML		
comp=N,77950μm,0.7s							
GUMA				AML	AML		
comp=N,79550μm,0.6s							
GUMA				AML	AML		
comp=E,91000μm,0.5s							
GUMA				AML	AML		
comp=E,67000μm,0.7s							
T1243	Rocca Santa Ma	0.34	112	P	Pg	10 26 31.4	-0.1
T1243				S	Sg	10 26 36.4	+0.1
ASSB	Assisi San Ben	0.34	309	⇑P	Pb	10 26 32.5	+0.1
ASSB				S	Sb	10 26 38.1	+0.4
RM33	Pellescritta (	0.35	156	⇑P	Pb	10 26 32.3	-0.2
RM33				S	Sb	10 26 37.9	+0.1
RM33				AML	AML		
comp=N,15850μm,1.3s							
RM33				AML	AML		
comp=E,25200μm,0.6s							
RM33				AML	AML		
comp=E,25150μm,0.6s							
RM33				AML	AML		
comp=E,25100μm,0.6s							
RM33				AML	AML		
comp=N,15850μm,1.4s							
RM33				AML	AML		
comp=N,15650μm,1.4s							
PIO1	Pioraco	0.35	355	P	Pb	10 26 32.4	-0.2
FIU1	Fiuminata	0.37	350	P	Pb	10 26 32.6	-0.2
MDAR	Monte D'Aria	0.38	14	P	Pg	10 26 32.5	+0.3
MDAR				S	Sg	10 26 38.0	+0.6
MDAR				AML	AML		
comp=E,6925μm,0.7s							
MDAR				AML	AML		
comp=N,9375μm,0.5s							
MDAR				AML	AML		
comp=E,6905μm,0.7s							
MDAR				AML	AML		
comp=N,9390μm,0.5s							
CESX	Cesi	0.39	236	⇑P	Pb	10 26 33.5	+0.3
CESX				S	Sb	10 26 40.2	+1.2
CESX				AML	AML		
comp=E,21450μm,0.7s							
CESX				AML	AML		
comp=N,15000μm,0.5s							
CAMP	Campotosto	0.41	135	⇑P	Pg	10 26 32.9	+0.1
CAMP				S	Sb	10 26 39.1	-0.5
CAMP				AML	AML		
comp=E,7590μm,1.1s							
CAMP				AML	AML		
comp=N,6190μm,0.5s							
GAG1	Gagliole	0.41	5	P	Pb	10 26 33.5	-0.1
GAG1				S	Sb	10 26 39.9	+0.2
GAG1				AML	AML		
comp=E,19500μm,0.6s							
GAG1				AML	AML		
comp=N,19900μm,0.5s							
SSM1	San Severino M	0.42	16	P	Pg	10 26 33.5	+0.6
T1246	Crognaleto (TE	0.42	125	⇑P	Pg	10 26 33.0	-0.1
T1246				S	Sg	10 26 39.1	+0.2
SNTG	Esanatoglia	0.43	352	⇑P	Pg	10 26 33.7	+0.5
SNTG				S	Sb	10 26 40.6	+0.4
SNTG				AML	AML		
comp=E,3965μm,0.6s							
SNTG				AML	AML		
comp=N,3565μm,1.0s							
SNTG				AML	AML		
comp=N,3755μm,1.0s							
SNTG				AML	AML		
comp=E,3970μm,0.6s							
SNTG				AML	AML		
comp=E,3705μm,0.7s							
T1247	Pizzolo (AQ)	0.44	152	⇓P	Pb	10 26 33.8	-0.2
T1247				S	Sb	10 26 40.8	+0.4
T1247				AML	AML		
comp=E,15250μm,0.4s							
T1247				AML	AML		
comp=N,13950μm,0.7s							
MNTP	Montappone	0.45	46	P	Pg	10 26 34.0	+0.5
MNTP				AML	AML		
comp=E,18350μm,0.6s							
MNTP				AML	AML		
comp=N,18850μm,0.8s							
MNTP				AML	AML		
comp=N,18900μm,0.8s							
MNTP				AML	AML		
comp=E,18350μm,0.6s							
ATCC	AVT- Casa Cast	0.46	322	P	Pb	10 26 34.2	-0.1
TERO	Teramo	0.47	115	P	Pg	10 26 33.7	-0.2
TERO				S	Sg	10 26 40.5	+0.2
TERO				AML	AML		
comp=N,12250μm,0.7s							
TERO				AML	AML		
comp=N,12900μm,0.7s							
TERO				AML	AML		
comp=E,11100μm,0.5s							
TERO				AML	AML		
comp=E,11750μm,0.4s							
TERO				AML	AML		
comp=N,12225μm,0.7s							
OFFI	Offida	0.50	77	P	Pb	10 26 34.9	-0.2
OFFI				AML	AML		
comp=N,27100μm,0.6s							
OFFI				AML	AML		
comp=E,26300μm,0.6s							
FOSV	Fossato di Vic	0.51	338	P	Pb	10 26 35.2	0.0
FOSV				S	Sb	10 26 43.2	+0.9
FOSV				AML	AML		
comp=N,3845μm,1.5s							
FOSV				AML	AML		
comp=E,3810μm,1.2s							
EL6	Elcito	0.51	7	P	Pg	10 26 34.8	+0.2
EL6				S	Sb	10 26 42.7	+0.3
EL6				AML	AML		
comp=E,8465μm,0.6s							
EL6				AML	AML		
comp=N,9865μm,0.8s							
TRE1	Treia	0.53	24	P	Pb	10 26 35.5	-0.1
AQU	L'Aquila	0.55	149	P	Pb	10 26 36.2	+0.3
AQU				S	Sb	10 26 44.1	+0.5
AQU				AML	AML		
comp=N,4650μm,1.0s							
AQU				AML	AML		
comp=N,4655μm,1.0s							
AQU				AML	AML		
comp=E,4815μm,0.8s							
AQU				AML	AML		
comp=E,4690μm,0.8s							
AQU				AML	AML		
comp=N,4895μm,1.0s							
GIGS	Gran Sasso	0.55	133	P	Pg	10 26 35.2	-0.2
GIGS				S	Sg	10 26 43.0	+0.2
GIGS				AML	AML		
comp=N,2015μm,1.4s							
GIGS				AML	AML		
comp=N,2020μm,1.4s							
GIGS				AML	AML		
comp=E,2040μm,0.6s							
FIAM	Fiamignano	0.56	173	⇓P	Pb	10 26 36.2	0.0
FIAM				S	Sb	10 26 44.9	+0.9
FIAM				AML	AML		
comp=E,6475μm,0.7s							
FIAM				AML	AML		
comp=N,6805μm,0.8s							
MURB	Monte Urbino	0.57	320	P	Pb	10 26 36.6	+0.4
MURB				AML	AML		
comp=E,7560μm,0.8s							
MURB				AML	AML		
comp=N,7770μm,1.0s							
MURB				AML	AML		
comp=E,8245μm,0.8s							
MURB				AML	AML		
comp=N,8775μm,1.0s							
MURB				AML	AML		
comp=E,7560μm,0.8s							
ATTE	AVT- Monte Tez	0.61	307	P	Pb	10 26 37.2	+0.2
ATTE				AML	AML		
comp=E,2410μm,0.8s							
ATTE				AML	AML		
comp=N,1930μm,0.6s							
MMUR	Monte Murano	0.61	358	P	Pg	10 26 36.8	+0.2
MMUR				S	Sb	10 26 45.9	+0.4
ATFO	Monte Foce - G	0.63	329	⇑P	Pb	10 26 37.7	+0.4
ATFO				AML	AML		
comp=E,3295μm,0.7s							
ATFO				AML	AML		
comp=N,2605μm,1.0s							
ATSC	Scheggia e Pas	0.65	338	P	Pb	10 26 37.8	+0.2
CADA	Capodarco di F	0.66	56	P	Pb	10 26 38.4	+0.7
TRTR	Tortoreto Alta	0.66	91	P	Pb	10 26 38.1	+0.4
TRTR				AML	AML		
comp=E,24300μm,0.8s							
TRTR				AML	AML		
comp=N,22700μm,0.5s							
ATLO	AVT- Montelove	0.66	318	P	Pb	10 26 38.0	+0.2
ARVD	Arcevia	0.67	355	P	Pg	10 26 37.8	+0.1
CIMA	Civitanova Mar	0.67	45	P	Pg	10 26 38.0	+0.3
MGAB	Montegabbione	0.67	278	P	Pn	10 26 38.9	-0.7
MGAB				AML	AML		
comp=E,5765μm,0.7s							
MGAB				AML	AML		
comp=N,7640μm,0.5s							
MGAB				AML	AML		
comp=E,6320μm,0.7s							
MGAB				AML	AML		
comp=N,8165μm,0.5s							
FAGN	Fagnano	0.70	143	⇓P	Pb	10 26 38.7	+0.2
FAGN				S	Sb	10 26 47.6	-0.3
FAGN				AML	AML		
comp=E,12300μm,0.5s							
FAGN				AML	AML		
comp=N,7275μm,0.5s							
PP3	Marolino	0.70	38	P	Pg	10 26 38.4	+0.3
PP3				AML	AML		
comp=E,10950μm,0.6s							
PP3				AML	AML		
comp=N,13250μm,0.7s							
PP3				AML	AML		
comp=E,11000μm,0.6s							
PP3				AML	AML		
comp=E,11750μm,0.6s							
PP3				AML	AML		
comp=N,12750μm,0.8s							
PP3				AML	AML		
comp=N,13200μm,0.7s							
SRES	S.Oreste - Sor	0.70	213	⇓P	Pn	10 26 39.2	-0.7
SRES				AML	AML		
comp=N,7060μm,0.4s							
SRES				AML	AML		
comp=E,4870μm,0.5s							
TB01	Gubbio	0.70	322	P	Pg	10 26 38.5	+0.3
ATVA	AVT- Monte Val	0.70	310	P	Pb	10 26 38.9	+0.4

ATVO	**AVT- Monte Val**	**0.71 321**	⇓P	**Pb**	**10 26 38.9 +0.2**	
ATVO			AML	AML		
	comp=E,1925μm,0.6s					
ATVO			AML	AML		
	comp=N,2350μm,1.2s					
FRON	**Frontone**	**0.72 343**	P	**Pb**	**10 26 39.1 +0.3**	
FRON			AML	AML		
	comp=E,2185μm,0.9s					
FRON			AML	AML		
	comp=N,2455μm,0.6s					
TB03	**Pietralunga**	**0.73 322**	P	**Pb**	**10 26 39.0 +0.1**	
ATBU	**Serra di Buran**	**0.73 332**	P	**Pb**	**10 26 39.5 +0.4**	
VCEL	**Villa Celiera**	**0.74 125**	⇓P	**Pg**	**10 26 39.0 0.0**	
VCEL			AML	AML		
	comp=N,8065μm,0.5s					
VCEL			AML	AML		
	comp=E,7275μm,1.4s					
ATMI	**Monte Miggiano**	**0.75 313**	P	**Pn**	**10 26 40.1 -0.5**	
ATMI			AML	AML		
	comp=E,5545μm,1.0s					
ATMI			AML	AML		
	comp=N,6940μm,0.7s					
ATPI	**Pietralunga -**	**0.77 324**	P	**Pb**	**10 26 40.0 +0.3**	
ATPI			AML	AML		
	comp=E,2470μm,0.6s					
ATPI			AML	AML		
	comp=N,1855μm,0.9s					
ATPC	**Poggio Castell**	**0.77 328**	P	**Pb**	**10 26 40.1 +0.4**	
PIEI	**Pieia**	**0.79 333**	P	**Pg**	**10 26 40.6 +0.6**	
PIEI			AML	AML		
	comp=N,1235μm,0.8s					
PIEI			AML	AML		
	comp=E,1155μm,0.7s					
SACS	**San Casciano d**	**0.82 272**	P	**Pn**	**10 26 41.4 -0.2**	
SACS			AML	AML		
	comp=E,3115μm,1.6s					
SACS			AML	AML		
	comp=N,2410μm,0.9s					
SACS			AML	AML		
	comp=E,3000μm,1.6s					
SACS			AML	AML		
	comp=N,2310μm,0.9s					
T0110	**Collepietro**	**0.82 137**	P	**Pb**	**10 26 39.9 -0.6**	
T0110			AML	AML		
	comp=N,6845μm,1.3s					
T0110			AML	AML		
	comp=E,7650μm,0.5s					
MPAG	**Monte Paganucc**	**0.82 347**	P	**Pg**	**10 26 40.9 +0.4**	
MPAG			AML	AML		
	comp=N,2145μm,0.6s					
MPAG			AML	AML		
	comp=E,1670μm,0.5s					
MTCE	**Montecelio**	**0.83 195**	P	**Pg**	**10 26 41.0 +0.4**	
MTCE			AML	AML		
	comp=E,4080μm,1.2s					
MTCE			AML	AML		
	comp=N,3570μm,0.9s					
AOI	**Ancona**	**0.84 30**	P	**Pb**	**10 26 40.8 0.0**	
AOI			AML	AML		
	comp=N,2085μm,0.6s					
AOI			AML	AML		
	comp=E,2240μm,1.1s					
PTQR	**Pietraquaria**	**0.85 161**	P	**Pb**	**10 26 40.5 -0.5**	
APEC	**Apecchio**	**0.85 329**	P	**Pg**	**10 26 41.5 +0.5**	
ATMC	**Monte Cedrone**	**0.87 316**	P	**Pb**	**10 26 41.2 -0.1**	
CERT	**Cerreto**	**0.88 182**	P	**Pg**	**10 26 41.7 +0.2**	
CERT			AML	AML		
	comp=N,3540μm,0.5s					
CERT			AML	AML		
	comp=E,6335μm,0.5s					
FSSB	**Fossombrone**	**0.88 348**	P	**Pg**	**10 26 42.0 +0.3**	
FSSB			AML	AML		
	comp=E,4480μm,0.4s					
FSSB			AML	AML		
	comp=N,6280μm,0.4s					
SENI	**Senigallia**	**0.89 10**	P	**Pb**	**10 26 41.6 -0.1**	
CAFI	**Castiglion Fio**	**0.92 303**	P	**Pn**	**10 26 42.8 -0.2**	
CAFI			AML	AML		
	comp=E,1340μm,0.5s					
CAFI			AML	AML		
	comp=N,1810μm,0.7s					
LATE	**Laterza**	**0.92 257**	P	**Pn**	**10 26 43.3 +0.3**	
PE3	**Peglio**	**0.95 336**	P	**Pb**	**10 26 42.6 -0.1**	
PE3			AML	AML		
	comp=N,49μm,0.4s					
PE3			AML	AML		
	comp=E,33μm,0.1s					
RCAV	**Rocca di Cave**	**0.98 183**	P	**Pg**	**10 26 43.5 +0.1**	
RCAV			AML	AML		
	comp=N,4895μm,1.5s					
RCAV			AML	AML		
	comp=E,4305μm,0.4s					
SF11	**Podere del Sol**	**0.99 273**	P	**Pn**	**10 26 44.1 +0.1**	
MCIV	**Monte Civitell**	**0.99 268**	P	**Pn**	**10 26 44.3 +0.4**	
MCIV			AML	AML		
	comp=E,1450μm,0.8s					
MCIV			AML	AML		
	comp=N,1165μm,0.8s					
SF13	**Bagnolo**	**1.03 270**	P	**Pg**	**10 26 44.9 +0.5**	
SF14	**Selvena**	**1.04 267**	P	**Pg**	**10 26 45.1 +0.5**	
RMP	**Rome, Mte Porz**	**1.04 193**	P	**Pg**	**10 26 45.1 +0.4**	
RMP			AML	AML		
	comp=N,7280μm,0.6s					
RMP			AML	AML		
	comp=E,4815μm,0.4s					
GUAR	**Guarcino**	**1.05 168**	P	**Pn**	**10 26 44.7 -0.1**	
GUAR			AML	AML		
	comp=N,3525μm,1.1s					
GUAR			AML	AML		
	comp=E,3790μm,0.7s					
VVLD	**Villa Vallelon**	**1.05 155**	P	**Pn**	**10 26 44.7 -0.2**	
SF01	**Poggio Pratacc**	**1.07 270**	AML	AML		
	comp=N,2130μm,0.8s					
SF01			AML	AML		
	comp=E,2425μm,0.7s					
TOLF	**Tolfa**	**1.07 225**	P	**Pg**	**10 26 45.7 +0.4**	
TOLF			AML	AML		
	comp=E,2585μm,0.6s					
TOLF			AML	AML		
	comp=N,2595μm,0.4s					
RDP	**Rocca di Papa**	**1.09 192**	P	**Pg**	**10 26 45.7 +0.1**	
SAMA	**S.Maria delle**	**1.09 197**	P	**Pn**	**10 26 45.3 0.0**	
CPGN	**Carpegna, Ital**	**1.10 333**	P	**Pg**	**10 26 47.0 +1.2**	
CRE	**Caprese Michel**	**1.11 316**	P	**Pn**	**10 26 45.8 +0.1**	
CRE			AML	AML		
	comp=E,787μm,0.5s					
CRE			AML	AML		
	comp=N,861μm,0.6s					
CAFR	**Castel Frentan**	**1.15 121**	P	**Pn**	**10 26 46.0 -0.1**	
LPEL	**Lama dei Pelig**	**1.16 132**	P	**Pn**	**10 26 45.7 -0.6**	
POFI	**Posta Fibreno**	**1.22 155**	P	**Pg**	**10 26 49.1 +1.0**	
GIUL	**Giuliano Di Ro**	**1.28 172**	P	**Pb**	**10 26 48.1 -0.3**	
GIUL			AML	AML		
	comp=N,1535μm,0.8s					
GIUL			AML	AML		
	comp=E,1465μm,0.5s					
LATB	**Latina**	**1.33 182**	P	**Pb**	**10 26 49.3 +0.1**	
CSNT	**Castellina Chi**	**1.42 298**	P	**Pg**	**10 26 51.7 -0.2**	
CSNT			AML	AML		
	comp=E,409μm,0.8s					
CSNT			AML	AML		
	comp=N,394μm,0.9s					
FROS	**Frosini**	**1.42 286**	P	**Pg**	**10 26 51.6 -0.2**	
CERA	**Filignano**	**1.43 149**	P	**Pb**	**10 26 51.5 +0.5**	
MAON	**Monte Argentar**	**1.45 255**	P	**Pb**	**10 26 51.6 +0.4**	
FRES	**Fresagrandinar**	**1.49 124**	P	**Pb**	**10 26 51.5 -0.3**	
MIDA	**Miranda**	**1.50 142**	P	**Pn**	**10 26 51.4 +0.4**	
TRIV	**Trivento**	**1.55 133**	P	**Pg**	**10 26 54.4 +0.1**	
TRIV			AML	AML		
	comp=N,1160μm,1.3s					
TRIV			AML	AML		
	comp=E,1158μm,0.9s					
TRIF	**Trifonti**	**1.58 281**	⇑P	**Pb**	**10 26 53.9 +0.4**	
TRIF			AML	AML		
	comp=N,401μm,0.6s					
TRIF			AML	AML		
	comp=E,323μm,0.7s					
CASP	**Castiglione de**	**1.59 269**	P	**Pb**	**10 26 53.5 0.0**	
CASP			AML	AML		
	comp=E,202μm,0.6s					
CASP			AML	AML		
	comp=N,194μm,1.1s					
VAGA	**Valle Agricola**	**1.67 147**	P	**Pb**	**10 26 55.1 +0.1**	
BSSO	**Busso**	**1.73 137**	P	**Pg**	**10 26 57.4 -0.4**	
TREM	**Isole Tremiti**	**1.97 110**	P	**Pn**	**10 26 57.8 +0.4**	
TREM			AML	AML		
	comp=E,1740μm,1.2s					
TREM			AML	AML		
	comp=N,2175μm,0.7s					
SMPL	**Sampolo**	**2.86 256**	P	**Pn**	**10 27 11.3 +1.6**	
PGF	**Pioggiola**	**2.98 266**	*e*Pn	**Pn**	**10 27 10.4 -0.9**	
PGF	**Pioggiola**	**2.98 266**	*e*P	**Pn**	**10 27 13.9 +2.6**	
PGF			*e*Sn	**Sn**	**10 27 45.6 -1.3**	
	comp=N,41nm,0.9s					
PGF	**Pioggiola**	**2.98 266**	AML	AML		
	comp=N,37μm,1.0s					
PGF			AML	AML		
	comp=E,40μm,1.2s					
CTI	**Castel Tesino**	**3.37 344**	P	**Pn**	**10 27 17.8 +1.1**	
NOCI	**Noci**	**3.64 123**	P	**Pn**	**10 27 21.9 +1.5**	
MABI	**Malga Bissina**	**3.69 332**	P	**Pn**	**10 27 23.5 +2.3**	
SBF	**Sospel**	**4.20 286**	*e*Pn	**Pn**	**10 27 29.0 +0.9**	
SBF			*e*Sn	**Sn**	**10 28 14.5 -2.5**	
	comp=E,23nm,0.7s					
VSL	**Villasalto**	**4.32 221**	P	**Pn**	**10 27 31.4 +1.7**	
VSL			AML	AML		
	comp=E,60μm,0.8s					
VSL			AML	AML		
	comp=N,50μm,0.6s					
DAVOX	**Davos/Dischmat**	**4.54 332**	Pn	**Pn**	**10 27 35.4 +2.5**	
	comp=N,3.3nm,0.3s,baz=162,slow=20,SNR=2.0					
DAVOX			Sn	**Sn**	**10 28 27.4 +1.9**	
	comp=N,1.4nm,0.3s,baz=140,slow=20,SNR=1.4					
	comp=N,17nm,0.9s					
LMR	**La Mourre**	**4.80 278**	*e*Pn	**Pn**	**10 27 35.5 -0.7**	
LMR	**La Mourre**	**4.80 278**	*e*P	**Pn**	**10 27 38.5 +2.3**	
LMR			*e*Sn	**Sn**	**10 28 29.1 -2.4**	
	comp=N,30nm,1.3s					
MBDF	**Montbardon**	**4.91 295**	*e*Pn	**Pn**	**10 27 37.4 -0.5**	
MBDF	**Montbardon**	**4.91 295**	*e*P	**Pn**	**10 27 40.8 +2.9**	
MBDF			*e*Sn	**Sn**	**10 28 31.7 -2.8**	
	comp=N,17nm,0.8s					
LPG	**La Plagne**	**5.24 303**	*e*Pn	**Pn**	**10 27 42.7 +0.1**	
LPG	**La Plagne**	**5.24 303**	*e*P	**Pn**	**10 27 45.8 +3.2**	
LPG			*e*Sn	**Sn**	**10 28 40.3 -2.6**	
	comp=N,28nm,1.0s					
LPL	**La Plagne**	**5.26 303**	*e*Pn	**Pn**	**10 27 41.9 -0.9**	
LPL	**La Plagne**	**5.26 303**	*e*P	**Pn**	**10 27 45.7 +2.9**	
LPL			*e*Sn	**Sn**	**10 28 39.8 -3.5**	
	comp=N,16nm,0.7s					
SMRF	**Simiane la Rot**	**5.55 284**	*e*Pn	**Pn**	**10 27 44.0 -2.5**	
SMRF	**Simiane la Rot**	**5.55 284**	*e*P	**Pn**	**10 27 50.2 +3.7**	
SMRF			*e*Sn	**Sn**	**10 28 45.7 -4.3**	
	comp=N,27nm,1.3s					
ORIF	**Oris-en-Rattie**	**5.57 294**	*e*Pn	**Pn**	**10 27 51.1 +4.2**	
ORIF			*e*Sn	**Sn**	**10 28 48.5 -2.2**	
	comp=N,13nm,0.7s					
GERES	**GERESS Array B**	**6.04 4**	Pn	**Pn**	**10 27 54.0 +0.6**	
	comp=N,0.4nm,0.3s,baz=171,slow=13,SNR=3.8					
GERES			Sn	**Sn**	**10 29 01.7 -0.5**	
	comp=N,0.9nm,0.3s,baz=178,slow=26,SNR=2.1					
	comp=N,4.7nm,0.7s					
CKRC	**Cesky Krumlov**	**6.06 8**	*e*SN	**Sn**	**10 29 02.4 -0.3**	
CABF	**La Chapelle**	**6.22 310**	*e*Pn	**Pn**	**10 27 54.5 -1.4**	
KHC	**Kasperske Hory**	**6.32 3**	*e*PN	**Pn**	**10 27 58.6 +1.5**	
KHC			*e*SN	**Sn**	**10 29 09.6 +0.6**	
VIVF	**Saint-Julien-l**	**6.37 291**	*e*Pn	**Pn**	**10 27 55.9 -1.9**	
VIVF	**Saint-Julien-l**	**6.37 291**	*e*P	**Pn**	**10 28 01.5 +3.7**	
VIVF			*e*Sn	**Sn**	**10 29 06.3 -4.0**	
	comp=N,16nm,1.3s					
HINF	**Hinteralfeld**	**6.62 321**	*e*Pn	**Pn**	**10 28 00.0 -1.2**	
HINF	**Hinteralfeld**	**6.62 321**	*e*P	**Pn**	**10 28 04.5 +3.3**	
HINF			*e*Sn	**Sn**	**10 29 12.2 -4.2**	
	comp=N,17nm,0.6s					
LASF	**Ste Croix**	**6.79 284**	*e*Pn	**Pn**	**10 28 02.7 -0.9**	
LASF	**Ste Croix**	**6.79 284**	*e*P	**Pn**	**10 28 07.1 +3.5**	
CDF	**Champ du Feu**	**6.88 326**	*e*Pn	**Pn**	**10 28 04.9 -0.1**	
CDF	**Champ du Feu**	**6.88 326**	*e*P	**Pn**	**10 28 08.6 +3.6**	
CDF			*e*Sn	**Sn**	**10 29 19.0 -4.1**	
	comp=N,10nm,0.4s					
VRAC	**Vranov**	**6.94 20**	Pn	**Pn**	**10 28 05.8 +0.2**	
	comp=N,0.3nm,0.3s,baz=204,slow=12,SNR=2.1					
	comp=N,2.5nm,0.6s					
HAU	**Haudompre**	**6.99 320**	*e*Pn	**Pn**	**10 28 05.9 -0.4**	
HAU	**Haudompre**	**6.99 320**	*e*P	**Pn**	**10 28 10.2 +3.9**	
HAU			*e*Sn	**Sn**	**10 29 22.0 -3.5**	
	comp=N,28nm,0.7s					
SMF	**Signal de Mont**	**7.57 303**	*e*Pn	**Pn**	**10 28 13.8 -0.5**	
SMF	**Signal de Mont**	**7.57 303**	*e*P	**Pn**	**10 28 18.2 +3.9**	
SMF			*e*Sn	**Sn**	**10 29 35.4 -4.4**	
	comp=N,64nm,1.8s					
KEST	**Kesra**	**7.64 203**	Pn	**Pn**	**10 28 18.4 +3.0**	
	comp=N,0.1nm,0.3s,baz=23,slow=16,SNR=1.7					
	comp=N,1.5nm,0.5s					
PAGF	**Fort de Pagny**	**7.67 321**	*e*Pn	**Pn**	**10 28 16.1 +0.4**	
	baz=138					
PAGF			*e*Sn	**Sn**	**10 29 38.0 -4.3**	
	comp=N,99nm,1.6s					
SFTF	**Sexfontaines**	**7.77 317**	*e*Pn	**Pn**	**10 28 17.3 +0.3**	
	baz=132					
SFTF			*e*Sn	**Sn**	**10 29 40.0 -4.6**	
	comp=N,12nm,0.8s					
LOR	**Lormes**	**7.86 308**	*e*Sn	**Sn**	**10 29 41.9 -5.1**	
	comp=N,5.7nm,0.6s					
MTLF	**Montolieu**	**7.93 277**	*e*Pn	**Pn**	**10 28 17.5 -1.7**	
MTLF	**Montolieu**	**7.93 277**	*e*P	**Pn**	**10 28 23.4 +4.2**	
AVF	**Avril sur Loir**	**7.93 303**	*e*Pn	**Pn**	**10 28 19.1 -0.2**	
AVF			*e*Sn	**Sn**	**10 29 43.8 -4.9**	
	comp=N,31nm,1.5s					
MEZF	**Maizieres J'vi**	**7.96 318**	*e*Sn	**Sn**	**10 29 44.2 -5.1**	
	comp=N,13nm,0.7s					
SSF	**Saint Saulge**	**7.97 305**	*e*Pn	**Pn**	**10 28 18.3 -1.4**	
SSF	**Saint Saulge**	**7.97 305**	*e*P	**Pn**	**10 28 23.8 +4.1**	
SSF			*e*Sn	**Sn**	**10 29 45.1 -4.4**	
	comp=N,15nm,1.1s					
SAVF	**Savonnieres en**	**8.00 319**	*e*Pn	**Pn**	**10 28 19.1 -1.1**	
SAVF			*e*Sn	**Sn**	**10 29 45.4 -4.9**	
	comp=N,30nm,1.3s					
BGF	**Bois d'Agland**	**8.15 301**	*e*Pn	**Pn**	**10 28 21.8 -0.5**	
BGF	**Bois d'Agland**	**8.15 301**	*e*P	**Pn**	**10 28 25.8 +3.5**	
CAF	**Calviac**	**8.19 289**	*e*Pn	**Pn**	**10 28 21.4 -1.4**	
CAF	**Calviac**	**8.19 289**	*e*P	**Pn**	**10 28 26.5 +3.7**	
TCF	**Toulx Ste Croi**	**8.46 298**	*e*Pn	**Pn**	**10 28 25.0 -1.5**	
TCF	**Toulx Ste Croi**	**8.46 298**	*e*P	**Pn**	**10 28 30.5 +4.0**	
RJF	**Les Rejaudoux**	**8.65 291**	*e*Pn	**Pn**	**10 28 28.1 -1.0**	
GIVF	**Givet**	**9.21 325**	*e*Pn	**Pn**	**10 28 36.0 -0.8**	
GIVF	**Givet**	**9.21 325**	*e*P	**Pn**	**10 28 40.9 +4.1**	
EPF	**Esparros**	**9.31 276**	*e*Pn	**Pn**	**10 28 36.4 -1.8**	
BAIF	**Baives**	**9.45 323**	*e*Pn	**Pn**	**10 28 38.7 -1.3**	
BAIF	**Baives**	**9.45 323**	*e*P	**Pn**	**10 28 44.0 +4.0**	
ETSF	**Etsaut**	**9.97 275**	*e*Pn	**Pn**	**10 28 45.4 -1.9**	
ETSF	**Etsaut**	**9.97 275**	*e*P	**Pn**	**10 28 51.4 +4.1**	
LDF	**La Druitiere**	**10.84 307**	*e*Pn	**Pn**	**10 28 56.0 -3.1**	
FLN	**La Foliniere**	**11.13 307**	*e*Pn	Pn	10 28 57.8 -5.3	
FINES	**FINESS Array B**	**20.22 18**	P	**P**	**10 30 58.8 +0.1**	
	comp=N,4.6nm,0.9s,baz=205,slow=6.2,SNR=2.7					
	comp=N,4.6nm,0.9s					
BORG	**Borgarnes**	**29.26 330**	LR	LR	10 44 07.7	
	comp=N,167nm,19.1s,baz=182,slow=36					
TORD	**Torodi Ar. Bea**	**31.16 202**	P	**P**	**10 32 44.2 +1.4**	
	comp=N,0.7nm,0.8s,baz=3.9,slow=9.0,SNR=3.6					
	comp=N,0.7nm,0.8s					
MKAR	**Makanchi Array**	**47.85 60**	P	**P**	**10 35 02.0 +0.5**	
	comp=N,0.7nm,0.6s,baz=283,slow=7.0,SNR=3.4					
	comp=N,0.7nm,0.6s					

*PRU **30** 10:29:25.7±0.0, 43.°01N×13.°44E, h0km*
ROM 30 10:29:22.4±0.1, 42.°855N±0.°004×13.°210E±0.°005,
h8km, ML3.2/39, 24C-9D, Error ellipse: s-maj=0.4km
s-min=0.3km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
T1245	**Castelsantange**	**0.02**	**275**	P	P	Pg	10 29 23.8	-0.4
T1245				S	S	Sg	10 29 24.4	-0.9
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
MMO1	**Montemonaco**	**0.10**	**63**	⇑P	P	Pg	10 29 24.9	+0.1
MMO1				S	S	Sg	10 29 26.7	+0.1
FEMA	**Monte Fema**	**0.16**	**312**	P	P	Pg	10 29 26.6	+0.8
FEMA				S	S	Sg	10 29 29.1	+0.9
AM05	**Amandola Campo**	**0.16**	**41**	P	P	Pg	10 29 26.2	+0.4
AM05				S	S	Sg	10 29 29.0	+0.9
AM05				AML	AML			
	comp=E,5525μm,0.1s							
AM05				AML	AML			
	comp=N,10545μm,0.2s							
AM05				AML	AML			
	comp=E,23400μm,0.1s							
AM05				AML	AML			
	comp=N,2260μm,0.1s							
AM05				AML	AML			
	comp=E,5520μm,0.1s							
AM05				AML	AML			
	comp=N,10515μm,0.2s							
AM05				AML	AML			
	comp=E,26200μm,0.2s							
AM05				AML	AML			
	comp=N,10520μm,0.2s							
AM05				AML	AML			
	comp=E,7175μm,0.8s							
AM05				AML	AML			
	comp=N,2365μm,0.1s							
AM05				AML	AML			
	comp=N,10527μm,0.2s							
AM05				AML	AML			
	comp=N,2259μm,0.1s							
AM05				AML	AML			
	comp=E,23411μm,0.1s							
AM05				AML	AML			
	comp=E,5521μm,0.1s							
T1241	**Roccafluvione,**	**0.16**	**90**	P	Pg		10 29 27.1	+1.2
T1241				S	Sg		10 29 29.6	+1.4
T1241				AML	AML			
	comp=N,29750μm,0.5s							
T1241				AML	AML			
	comp=E,40500μm,0.3s							
T1241				AML	AML			
	comp=N,29738μm,0.5s							
T1241				AML	AML			
	comp=E,40504μm,0.3s							
T1204	**Amatrice, Fraz**	**0.20**	**156**	P	Pg		10 29 27.3	+0.8
T1204				S	Sg		10 29 31.1	+1.9
T1204				AML	AML			
	comp=E,13250μm,0.3s							
T1204				AML	AML			
	comp=N,9920μm,1.3s							
T1204				AML	AML			
	comp=N,9960μm,1.3s							
T1204				AML	AML			
	comp=E,16750μm,1.3s							
T1204				AML	AML			
	comp=N,9900μm,1.3s							
T1204				AML	AML			
	comp=N,8772μm,0.6s							
T1204				AML	AML			
	comp=E,13260μm,0.3s							
GUMA	**Gualdo di Mace**	**0.23**	**24**	⇑P	Pg		10 29 27.9	+0.8
GUMA				S	Sg		10 29 31.8	+1.7
GUMA				AML	AML			
	comp=E,74550μm,0.3s							
GUMA				AML	AML			
	comp=N,67250μm,1.6s							
GUMA				AML	AML			
	comp=N,59850μm,1.6s							
GUMA				AML	AML			
	comp=E,42050μm,0.6s							
GUMA				AML	AML			
	comp=N,58947μm,0.5s							
GUMA				AML	AML			
	comp=E,74553μm,0.3s							
GUMA				AML	AML			
	comp=E,41405μm,0.2s							
GUMA				AML	AML			
	comp=N,66144μm,0.4s							
T1243	**Rocca Santa Ma**	**0.24**	**132**	P	Pg		10 29 27.8	+0.6
T1243				S	Sg		10 29 32.0	+1.5
T1217	**Poggiodomo (PG**	**0.25**	**235**	P	Pb		10 29 28.4	-0.9
T1217				S	Sb		10 29 32.5	-1.2
T1215	**Vallo di Nera,**	**0.26**	**258**	P	Pg		10 29 28.4	+0.9
T1215				S	Sb		10 29 32.9	-1.0
T1215				AML	AML			
	comp=E,9105μm,0.5s							
T1215				AML	AML			
	comp=N,9510μm,1.5s							
T1215				AML	AML			
	comp=N,9605μm,1.5s							
T1215				AML	AML			
	comp=E,9125μm,0.5s							
T1215				AML	AML			
	comp=N,9535μm,1.5s							
T1215				AML	AML			
	comp=E,9710μm,0.5s							
T1215				AML	AML			
	comp=N,9575μm,1.5s							
T1215				AML	AML			
	comp=E,9085μm,0.5s							
T1215				AML	AML			
	comp=N,9525μm,1.5s							
T1215				AML	AML			
	comp=E,9740μm,0.5s							
T1215				AML	AML			
	comp=N,9565μm,1.5s							
T1215				AML	AML			
	comp=E,9100μm,0.5s							
T1215				AML	AML			
	comp=N,9590μm,1.5s							
T1215				AML	AML			
	comp=E,9730μm,0.5s							
T1215				AML	AML			
	comp=E,9100μm,0.5s							
T1215				AML	AML			
	comp=N,9149μm,0.4s							
T1215				AML	AML			
	comp=E,9729μm,0.5s							
T1215				AML	AML			
	comp=N,8524μm,0.4s							
LNSS	**Leonessa**	**0.28**	**206**	P	Pb		10 29 29.1	-0.7
LNSS				S	Sb		10 29 33.7	-1.0
LNSS				AML	AML			
	comp=E,8340μm,0.4s							
LNSS				AML	AML			
	comp=E,8345μm,0.4s							
LNSS				AML	AML			
	comp=N,17000μm,0.2s							
LNSS				AML	AML			
	comp=N,17009μm,0.2s							
LNSS				AML	AML			
	comp=E,8344μm,0.4s							
MNTP	**Montappone**	**0.34**	**34**	⇑P	Pg		10 29 29.7	+0.6
MNTP				S	Sb		10 29 36.5	+0.2
RM33	**Pellescritta (**	**0.35**	**179**	P	Pg		10 29 29.8	+0.6
RM33				S	Sg		10 29 35.0	+1.2
RM33				AML	AML			
	comp=E,6270μm,1.3s							
RM33				AML	AML			
	comp=E,6295μm,1.3s							
RM33				AML	AML			
	comp=N,5540μm,1.3s							
RM33				AML	AML			
	comp=N,5690μm,1.3s							
RM33				AML	AML			
	comp=E,6290μm,1.3s							
RM33				AML	AML			
	comp=N,5545μm,1.3s							
RM33				AML	AML			
	comp=E,6275μm,1.3s							
RM33				AML	AML			
	comp=N,5690μm,1.3s							
RM33				AML	AML			
	comp=E,5574μm,0.5s							
RM33				AML	AML			
	comp=N,4810μm,0.6s							
RM33				AML	AML			
	comp=N,4873μm,0.6s							
RM33				AML	AML			
	comp=E,5603μm,0.5s							
SEF1	**Sefro**	**0.35**	**327**	P	Pg		10 29 29.8	+0.5
SEF1				S	Sb		10 29 35.7	-0.9
SEF1				AML	AML			
	comp=E,15550μm,0.2s							
SEF1				AML	AML			
	comp=N,10450μm,0.2s							
SEF1				AML	AML			
	comp=N,10645μm,0.3s							
SEF1				AML	AML			
	comp=E,17600μm,0.2s							
SEF1				AML	AML			
	comp=E,13320μm,0.3s							
SEF1				AML	AML			
	comp=N,9670μm,0.2s							
CAMP	**Campotosto**	**0.35**	**155**	P	Pg		10 29 29.8	+0.4
CAMP				S	Sb		10 29 35.6	-1.1
CAMP				AML	AML			

	comp=E,4155μm,1.1s					
CAMP			AML	AML		
	comp=N,3100μm,0.8s					
CAMP			AML	AML		
	comp=E,4910μm,0.2s					
CAMP			AML	AML		
	comp=N,2819μm,0.5s					
CAMP			AML	AML		
	comp=E,4157μm,1.1s					
OFFI	**Offida**	**0.36 77**	P	Pb	10 29 30.9	-0.1
OFFI			AML	AML		
	comp=N,14000μm,0.6s					
OFFI			AML	AML		
	comp=E,10800μm,0.5s					
OFFI			AML	AML		
	comp=E,10763μm,0.5s					
OFFI			AML	AML		
	comp=N,14022μm,0.6s					
TERO	**Teramo**	**0.37 129**	P	Pg	10 29 30.1	+0.4
TERO			S	Sb	10 29 36.0	-1.2
TERO			AML	AML		
	comp=E,5815μm,0.7s					
TERO			AML	AML		
	comp=E,5625μm,1.2s					
TERO			AML	AML		
	comp=N,8025μm,0.9s					
TERO			AML	AML		
	comp=N,7795μm,0.8s					
TERO			AML	AML		
	comp=N,7117μm,0.4s					
TERO			AML	AML		
	comp=N,6912μm,0.4s					
TERO			AML	AML		
	comp=E,5617μm,0.7s					
TERO			AML	AML		
	comp=E,5062μm,0.6s					
T1247	**Pizzolo (AQ)**	**0.42 171**	P	Pb	10 29 31.4	-0.7
T1247			S	Sb	10 29 38.1	-0.5
ARRO	**Arrone**	**0.43 230**	P	Pb	10 29 31.5	-0.7
ARRO			S	Sb	10 29 38.5	-0.2
ARRO			AML	AML		
	comp=N,3495μm,0.9s					
ARRO			AML	AML		
	comp=E,3790μm,1.4s					
ARRO			AML	AML		
	comp=N,3575μm,0.2s					
ARRO			AML	AML		
	comp=N,2278μm,0.2s					
ARRO			AML	AML		
	comp=E,2501μm,0.3s					
ASSB	**Assisi San Ben**	**0.45 295**	P	Pg	10 29 31.4	+0.4
ASSB			S	Sb	10 29 39.0	-0.4
ASSB			AML	AML		
	comp=N,6430μm,0.2s					
ASSB			AML	AML		
	comp=E,8520μm,0.2s					
ASSB			AML	AML		
	comp=N,4335μm,0.7s					
ASSB			AML	AML		
	comp=E,3714μm,0.4s					
SNTG	**Esanatoglia**	**0.45 334**	⇑P	Pg	10 29 31.4	+0.3
SNTG			AML	AML		
	comp=E,2160μm,0.7s					
SNTG			AML	AML		
	comp=N,3115μm,1.6s					
SNTG			AML	AML		
	comp=E,2145μm,0.7s					
SNTG			AML	AML		
	comp=E,2580μm,0.5s					
SNTG			AML	AML		
	comp=N,3110μm,1.6s					
SNTG			AML	AML		
	comp=E,2575μm,0.5s					
SNTG			AML	AML		
	comp=N,3215μm,1.6s					
SNTG			AML	AML		
	comp=E,1631μm,0.1s					
SNTG			AML	AML		
	comp=N,2417μm,0.3s					
SNTG			AML	AML		
	comp=N,2250μm,0.3s					
SNTG			AML	AML		
	comp=E,1706μm,0.5s					
GIGS	**Gran Sasso**	**0.48 147**	P	Pg	10 29 32.1	+0.3
GIGS			S	Sb	10 29 40.0	-0.4
GIGS			AML	AML		
	comp=E,974μm,1.6s					
GIGS			AML	AML		
	comp=N,724μm,1.6s					
GIGS			AML	AML		
	comp=E,1096μm,0.3s					
GIGS			AML	AML		
	comp=N,868μm,0.6s					
GIGS			AML	AML		
	comp=N,677μm,0.4s					
GIGS			AML	AML		
	comp=E,944μm,0.6s					
TRTR	**Tortoreto Alta**	**0.52 95**	⇑P	Pb	10 29 34.3	+0.6
TRTR			AML	AML		
	comp=E,10385μm,0.7s					
TRTR			AML	AML		
	comp=N,11465μm,1.2s					
TRTR			AML	AML		
	comp=E,10391μm,0.7s					
TRTR			AML	AML		
	comp=N,10113μm,0.6s					
AQU	**L'Aquila**	**0.52 164**	⇑P	Pg	10 29 33.0	+0.5
AQU			S	Sb	10 29 41.0	-0.5
AQU			AML	AML		
	comp=E,3645μm,1.4s					
AQU			AML	AML		
	comp=E,3700μm,1.2s					
AQU			AML	AML		
	comp=N,3490μm,1.2s					
AQU			AML	AML		
	comp=N,3445μm,1.2s					
AQU			AML	AML		
	comp=N,2734μm,0.7s					
AQU			AML	AML		
	comp=E,3646μm,1.4s					
AQU			AML	AML		
	comp=N,2774μm,0.7s					
AQU			AML	AML		
	comp=E,3370μm,1.3s					
ATCC	**AVT- Casa Cast**	**0.53 308**	⇑P	Pg	10 29 33.2	+0.5
ATCC			AML	AML		
	comp=N,5875μm,0.6s					
ATCC			AML	AML		
	comp=E,6650μm,0.9s					
ATCC			AML	AML		
	comp=N,5870μm,0.6s					
ATCC			AML	AML		
	comp=N,5871μm,0.6s					
ATCC			AML	AML		
	comp=E,6649μm,0.9s					
FOSV	**Fossato di Vic**	**0.55 323**	⇑P	Pg	10 29 33.4	+0.3
FOSV			S	Sb	10 29 43.0	+0.7
FOSV			AML	AML		
	comp=N,4160μm,0.5s					
FOSV			AML	AML		
	comp=E,2810μm,0.4s					
FOSV			AML	AML		
	comp=N,4160μm,0.5s					
FOSV			AML	AML		
	comp=E,2807μm,0.4s					
PP3	**Marolino**	**0.60 29**	⇓P	Pb	10 29 35.5	+0.4
PP3			S	Sb	10 29 45.0	+1.3
PP3			AML	AML		
	comp=E,7510μm,0.5s					
PP3			AML	AML		
	comp=N,11045μm,0.9s					
PP3			AML	AML		
	comp=E,7065μm,0.5s					
PP3			AML	AML		
	comp=N,10955μm,0.9s					
PP3			AML	AML		
	comp=N,10935μm,0.9s					
PP3			AML	AML		
	comp=E,7060μm,0.5s					
PP3			AML	AML		
	comp=N,11075μm,0.9s					
PP3			AML	AML		
	comp=N,10350μm,0.4s					
PP3			AML	AML		
	comp=E,7063μm,0.5s					
PP3			AML	AML		
	comp=N,10272μm,0.4s					
PP3			AML	AML		
	comp=E,7509μm,0.5s					
MURB	**Monte Urbino**	**0.65 309**	P	Pb	10 29 35.5	-0.5
MURB			AML	AML		
	comp=E,3985μm,0.9s					
MURB			AML	AML		
	comp=N,5805μm,0.9s					
MURB			AML	AML		
	comp=E,4615μm,0.9s					
MURB			AML	AML		
	comp=N,5755μm,0.9s					
MURB			AML	AML		
	comp=E,9470μm,1.0s					
MURB			AML	AML		
	comp=E,10600μm,1.1s					
MURB			AML	AML		
	comp=N,10265μm,0.4s					
MURB			AML	AML		
	comp=N,10335μm,0.4s					
MURB			AML	AML		
	comp=E,4363μm,0.3s					
MURB			AML	AML		
	comp=N,4790μm,0.4s					
MURB			AML	AML		
	comp=N,4513μm,0.4s					
MURB			AML	AML		
	comp=E,3837μm,0.3s					
ATFO	**Monte Foce - G**	**0.69 318**	P	Pg	10 29 35.9	+0.2
ATFO			AML	AML		
	comp=E,2160μm,0.6s					
ATFO			AML	AML		
	comp=N,2210μm,1.2s					
ATFO			AML	AML		
	comp=N,3360μm,0.4s					
ATFO			AML	AML		
	comp=E,2160μm,0.6s					
ATFO			AML	AML		
	comp=N,2213μm,1.2s					
ATTE	**AVT- Monte Tez**	**0.71 299**	⇑P	Pb	10 29 37.7	+0.5
ATTE			AML	AML		
	comp=E,1038μm,0.8s					
ATTE			AML	AML		
	comp=N,1105μm,0.9s					
ATTE			AML	AML		
	comp=E,1076μm,1.2s					
ATTE			AML	AML		
	comp=N,1165μm,0.8s					
ATTE			AML	AML		
	comp=N,979μm,1.3s					
ATTE			AML	AML		
	comp=E,1036μm,0.6s					
FRON	**Frontone**	**0.75 332**	⇑P	Pg	10 29 37.0	+0.1
FRON			S	Sn	10 29 50.0	-0.9
FRON			AML	AML		
	comp=N,2205μm,0.7s					
FRON			AML	AML		
	comp=E,2080μm,1.2s					
FRON			AML	AML		
	comp=E,1613μm,0.5s					
FRON			AML	AML		
	comp=N,1842μm,0.4s					
T0110	**Collepietro**	**0.76 146**	P	Pg	10 29 36.9	-0.1
T0110			S	Sb	10 29 48.6	+0.3
T0110			AML	AML		
	comp=N,3630μm,0.4s					
T0110			AML	AML		
	comp=E,2445μm,0.8s					
T0110			AML	AML		
	comp=N,3631μm,0.4s					
T0110			AML	AML		
	comp=E,2073μm,0.8s					
ATVO	**AVT- Monte Val**	**0.79 312**	⇑P	Pg	10 29 37.6	0.0
ATVO			AML	AML		
	comp=E,1094μm,0.4s					
ATVO			AML	AML		
	comp=N,1096μm,1.5s					
ATVO			AML	AML		
	comp=N,1405μm,0.4s					
ATVO			AML	AML		
	comp=E,1360μm,0.4s					
ATVO			AML	AML		
	comp=E,1095μm,0.4s					
ATVO			AML	AML		
	comp=N,977μm,0.4s					
FSSB	**Fossombrone**	**0.89 339**	P	Pb	10 29 40.4	+0.2
FSSB			AML	AML		
	comp=E,3510μm,0.3s					
FSSB			AML	AML		
	comp=N,4195μm,0.3s					
FSSB			AML	AML		
	comp=N,5250μm,0.3s					
FSSB			AML	AML		
	comp=N,4196μm,0.3s					
FSSB			AML	AML		
	comp=E,3510μm,0.3s					
CERT	**Cerreto**	**0.92 191**	⇓P	Pn	10 29 41.8	+0.2
CERT			AML	AML		
	comp=E,2125μm,0.6s					
CERT			AML	AML		
	comp=E,2126μm,0.6s					
CERT			AML	AML		
	comp=N,1380μm,0.7s					
SACS	**San Casciano d**	**0.96 270**	⇑P	Pb	10 29 41.3	0.0
SACS			AML	AML		
	comp=E,1575μm,1.3s					
SACS			AML	AML		
	comp=N,1390μm,0.9s					
SACS			AML	AML		
	comp=E,1572μm,1.3s					
SACS			AML	AML		
	comp=N,1371μm,0.9s					
SACS			AML	AML		
	comp=E,1555μm,1.3s					
SACS			AML	AML		
	comp=N,1386μm,0.9s					
PE3	**Peglio**	**0.99 328**	P	Pg	10 29 41.5	+0.1
PE3			AML	AML		
	comp=E,10μm,0.9s					
PE3			AML	AML		
	comp=N,10μm,1.0s					
CAFI	**Castiglion Fio**	**1.03 298**	⇓P	Pb	10 29 42.5	+0.1
CAFI			AML	AML		
	comp=E,980μm,1.6s					
CAFI			AML	AML		
	comp=N,910μm,0.5s					
CAFI			AML	AML		
	comp=E,811μm,0.5s					
CAFI			AML	AML		
	comp=N,676μm,0.8s					
CAFI			AML	AML		
	comp=N,664μm,0.8s					
CAFI			AML	AML		
	comp=E,811μm,0.5s					
MCIV	**Monte Civitell**	**1.13 267**	⇓P	Pn	10 29 44.8	+0.2
MCIV			AML	AML		
	comp=E,530μm,0.7s					
MCIV			AML	AML		
	comp=N,438μm,0.8s					
MCIV			AML	AML		
	comp=N,438μm,0.8s					
MCIV			AML	AML		
	comp=E,529μm,0.7s					
TOLF	**Tolfa**	**1.19 229**	⇓P	Pn	10 29 45.7	+0.3
TOLF			AML	AML		
	comp=N,510μm,0.5s					
TOLF			AML	AML		
	comp=E,528μm,0.5s					
TOLF			AML	AML		
	comp=E,528μm,0.5s					
TOLF			AML	AML		
	comp=N,510μm,0.5s					
CRE	**Caprese Michel**	**1.20 310**	⇓P	Pn	10 29 47.0	+1.5
CRE			AML	AML		
	comp=E,538μm,1.5s					
CRE			AML	AML		
	comp=N,492μm,0.4s					
CRE			AML	AML		
	comp=E,452μm,0.7s					
CRE			AML	AML		
	comp=N,492μm,0.4s					
POFI	**Posta Fibreno**	**1.20 162**	⇑P	Pn	10 29 47.7	+2.2
POFI			AML	AML		
	comp=N,525μm,0.7s					
POFI			AML	AML		
	comp=E,548μm,1.5s					
POFI			AML	AML		
	comp=E,529μm,0.7s					
POFI			AML	AML		
	comp=N,525μm,0.7s					
POFI			AML	AML		
	comp=N,525μm,0.7s					
POFI			AML	AML		
	comp=E,492μm,1.0s					
SF01	**Poggio Pratacc**	**1.21 269**	P	Pn	10 29 46.4	+0.7
SF01			AML	AML		
	comp=N,669μm,0.9s					
SF01			AML	AML		
	comp=E,633μm,0.8s					
SF01			AML	AML		
	comp=E,635μm,0.8s					
SF01			AML	AML		
	comp=N,669μm,0.9s					
ARCI	**Arcidosso**	**1.27 270**	⇑P	Pg	10 29 48.0	+1.2
ARCI			AML	AML		
	comp=N,196μm,1.6s					
GIUL	**Giuliano Di Ro**	**1.30 179**	⇑P	Pg	10 29 48.6	+1.4
GIUL			AML	AML		
	comp=E,474μm,1.3s					
GIUL			AML	AML		
	comp=N,492μm,1.4s					
GIUL			AML	AML		
	comp=N,380μm,0.7s					
GIUL			AML	AML		
	comp=E,474μm,1.3s					
FRES	**Fresagrandinar**	**1.39 129**	⇑P	Pg	10 29 50.2	+1.0
RUFI	**Rufina**	**1.58 309**	⇑P	Pg	10 29 52.6	-0.2
RUFI			AML	AML		
	comp=E,327μm,1.5s					
RUFI			AML	AML		
	comp=N,276μm,0.5s					
RUFI			AML	AML		
	comp=E,260μm,1.3s					
RUFI			AML	AML		
	comp=N,276μm,0.5s					
MTCR	**Monte La Croce**	**1.99 307**	⇑P	Pb	10 29 57.8	-1.2
MTCR			AML	AML		
	comp=E,197μm,1.6s					
MTCR			AML	AML		
	comp=N,232μm,1.0s					
MTCR			AML	AML		
	comp=E,188μm,0.9s					
GRAM	**Graiana**	**2.81 307**	P	Pg	10 30 14.6	-1.6
CMPR	**Campora**	**2.98 148**	S	Sn	10 30 49.0	+3.0
PGF	**Pioggiola**	**3.12 266**	P	Pn	10 30 14.3	+2.3
PGF			AML	AML		
	comp=N,16μm,1.6s					
PGF			AML	AML		
	comp=E,26μm,1.6s					
PGF			AML	AML		
	comp=E,18μm,1.0s					
SABO	**M.te Sabotino**	**3.14 5**	⇑P	Pn	10 30 12.8	+0.7
SABO			AML	AML		
	comp=N,1125μm,0.8s					
SABO			AML	AML		
	comp=E,252μm,1.6s					
SABO			AML	AML		
	comp=N,288μm,0.9s					
SABO			AML	AML		
	comp=E,1004μm,1.3s					
SABO			AML	AML		
	comp=N,288μm,0.9s					
SABO			AML	AML		
	comp=E,183μm,0.8s					
SABO			AML	AML		
	comp=E,867μm,0.8s					
SABO			AML	AML		
	comp=N,1126μm,0.8s					
CTI	**Castel Tesino**	**3.38 341**	S	Sn	10 30 58.0	+2.1
MPRI	**Monte Prat**	**3.39 357**	⇓P	Pn	10 30 17.0	+1.4
MPRI			AML	AML		
	comp=E,190μm,0.8s					
MPRI			AML	AML		
	comp=N,270μm,0.9s					
MPRI			AML	AML		
	comp=E,162μm,0.8s					
MPRI			AML	AML		
	comp=N,190μm,0.6s					
MPRI			AML	AML		
	comp=E,191μm,0.8s					
STAL	**STALIGIAL**	**3.42 354**	⇑P	Pn	10 30 16.9	+0.9
STAL			AML	AML		
	comp=E,138μm,0.9s					
STAL			AML	AML		
	comp=N,143μm,1.0s					
CUC	**Castrocucco**	**3.47 145**	⇓P	Pg	10 30 28.6	-0.1
CIMO	**Cimolais**	**3.50 351**	⇑P	Pn	10 30 17.8	+0.7
CIMO			AML	AML		
	comp=N,49μm,0.6s					
CIMO			AML	AML		
	comp=N,42μm,0.8s					
CIMO			AML	AML		
	comp=E,40μm,0.7s					
CIMO			AML	AML		
	comp=E,39μm,0.7s					
LUSI	**Trento, Gardas**	**3.50 333**	⇑P	Pn	10 30 19.3	+2.1
LUSI			AML	AML		
	comp=E,98μm,0.9s					
LUSI			AML	AML		
	comp=N,124μm,1.0s					
LUSI			AML	AML		
	comp=N,98μm,0.3s					
LUSI			AML	AML		
	comp=E,83μm,1.0s					
PTCC	**Patocco-Chiusa**	**3.55 2**	⇓P	Pn	10 30 18.5	+0.7
PTCC			AML	AML		
	comp=N,70μm,0.7s					
PTCC			AML	AML		
	comp=E,59μm,0.8s					
SARZ	**Sarezzano**	**3.70 304**	S	Sn	10 31 07.0	+3.3
KOSI	**Kohlern**	**3.84 341**	⇑P	Pn	10 30 23.9	+2.1
APPI	**Appiano**	**3.89 339**	⇑P	Pn	10 30 24.5	+2.0
ABTA	**Abfaltersbach**	**3.92 353**	*e*Pn	Pn	10 30 24.7	+1.7
	comp=E,10nm,0.3s					
WTTA	**Wattenberg**	**4.55 346**	*e*Pn	Pn	10 30 34.0	+2.4
	comp=E,2.5nm,0.2s					
SQTA	**Sankt Quirin**	**4.59 343**	*e*Pn	Pn	10 30 35.2	+3.1
	comp=E,8.7nm,0.4s					
CONA	**Conrad Observa**	**5.41 19**	*e*Pn	Pn	10 30 44.7	+1.4
	comp=E,0.7nm,0.2s					
CKRC	**Cesky Krumlov**	**6.01 7**	*e*SN	Sn	10 31 58.8	-1.9
KHC	**Kasperske Hory**	**6.28 2**	*e*PN	Pn	10 30 56.0	+0.7
KHC			*e*SN	Sn	10 32 04.8	-2.5

ROM 30 10:30:09.1±0.1,42°.844N±0'.002×13°.095E±0'.004,
h10km,ML3.3/21,26C-18D,Error ellipse: s-maj=0.3km
s-min=0.0km az=64.0,Central Italy

Code	Station Name	Δ°	A°Z°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**79**	P	Pg	10 30 12.0	+0.5
T1245				S	Sg	10 30 13.8	+0.5
T1245				AML	AML		
	comp=E,99250μm,0.2s						
T1245				AML	AML		
	comp=E,93031μm,0.1s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,99181μm,0.1s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,94650μm,0.4s						
FEMA	**Monte Fema**	**0.12**	**344**	⇓P	Pg	10 30 12.6	+0.4
FEMA				S	Sg	10 30 14.9	+0.5
FEMA				AML	AML		
	comp=E,80900μm,1.2s						
FEMA				AML	AML		
	comp=N,47650μm,0.6s						
FEMA				AML	AML		
	comp=N,47650μm,0.6s						
FEMA				AML	AML		
	comp=E,80850μm,1.2s						
FEMA				AML	AML		
	comp=E,80590μm,0.2s						
FEMA				AML	AML		
	comp=N,47190μm,0.1s						
T1215	**Vallo di Nera,**	**0.17**	**256**	P	Pg	10 30 13.4	+0.5
T1215				S	Sg	10 30 16.3	+0.9
T1215				AML	AML		
	comp=N,6885μm,0.9s						
T1215				AML	AML		
	comp=E,5100μm,0.6s						
T1215				AML	AML		

	comp=N,7315μm,1.1s					
T1215				AML	AML	
	comp=E,5090μm,0.6s					
T1215				AML	AML	
	comp=N,7335μm,1.1s					
T1215				AML	AML	
	comp=E,5280μm,0.6s					
T1215				AML	AML	
	comp=E,3022μm,0.2s					
T1215				AML	AML	
	comp=N,7335μm,0.9s					
T1215				AML	AML	
	comp=N,5369μm,0.2s					
T1215				AML	AML	
	comp=N,5511μm,0.2s					
T1215				AML	AML	
	comp=E,2995μm,0.2s					
T1217	**Poggiodomo (PG**	**0.18**	**222**	⇑P	Pg	10 30 13.6 +0.6
T1217				S	Sg	10 30 16.8 +1.1
T1217				AML	AML	
	comp=N,10700μm,0.4s					
T1217				AML	AML	
	comp=E,6110μm,1.4s					
T1217				AML	AML	
	comp=N,10580μm,0.4s					
T1217				AML	AML	
	comp=N,10660μm,0.4s					
T1217				AML	AML	
	comp=N,10615μm,0.4s					
T1217				AML	AML	
	comp=E,6325μm,1.4s					
T1217				AML	AML	
	comp=E,4840μm,0.3s					
T1217				AML	AML	
	comp=E,6115μm,1.4s					
T1217				AML	AML	
	comp=N,10615μm,1.6s					
T1217				AML	AML	
	comp=N,10660μm,1.6s					
T1217				AML	AML	
	comp=N,10607μm,0.4s					
T1217				AML	AML	
	comp=N,10675μm,0.4s					
T1217				AML	AML	
	comp=E,4938μm,0.3s					
MMO1	**Montemonaco**	**0.18**	**72**	⇑P	Pg	10 30 13.6 +0.5
MMO1				S	Sg	10 30 16.6 +0.9
AM05	**Amandola Campo**	**0.23**	**55**	⇓P	Pg	10 30 14.5 +0.6
AM05				S	Sg	10 30 18.2 +1.1
AM05				AML	AML	
	comp=E,7175μm,0.8s					
AM05				AML	AML	
	comp=N,6360μm,1.4s					
AM05				AML	AML	
	comp=N,2360μm,0.1s					
AM05				AML	AML	
	comp=E,26200μm,0.2s					
AM05				AML	AML	
	comp=N,6360μm,0.6s					
AM05				AML	AML	
	comp=E,6332μm,0.1s					
AM05				AML	AML	
	comp=N,6092μm,0.1s					
AM05				AML	AML	
	comp=E,22151μm,0.1s					
AM05				AML	AML	
	comp=N,2362μm,0.1s					
T1204	**Amatrice, Fraz**	**0.23**	**136**	⇑P	Pg	10 30 14.7 +0.7
T1204				S	Sg	10 30 18.8 +1.5
T1204				AML	AML	
	comp=E,16800μm,1.3s					
T1204				AML	AML	
	comp=N,7625μm,1.1s					
T1204				AML	AML	
	comp=E,16750μm,1.3s					
T1204				AML	AML	
	comp=N,7595μm,1.1s					
T1204				AML	AML	
	comp=N,7570μm,1.1s					
T1204				AML	AML	
	comp=E,16750μm,0.7s					
T1204				AML	AML	
	comp=N,5821μm,0.1s					
T1204				AML	AML	
	comp=E,14826μm,0.2s					
T1204				AML	AML	
	comp=N,7570μm,0.9s					
LNSS	**Leonessa**	**0.24**	**189**	⇑P	Pg	10 30 14.8 +0.7
T1241	**Roccafluvione,**	**0.25**	**87**	⇑P	Pb	10 30 15.2 -0.4
T1241				S	Sg	10 30 19.4 +1.8
T1241				AML	AML	
	comp=E,13500μm,0.8s					
T1241				AML	AML	
	comp=E,13550μm,0.8s					
T1241				AML	AML	
	comp=N,8465μm,0.3s					
T1241				AML	AML	
	comp=E,12708μm,0.2s					
T1241				AML	AML	
	comp=N,7789μm,0.2s					
T1241				AML	AML	
	comp=E,13500μm,1.2s					
T1241				AML	AML	
	comp=N,8465μm,0.3s					
T1241				AML	AML	
	comp=E,12391μm,0.2s					
GUMA	**Gualdo di Mace**	**0.28**	**39**	⇓P	Pg	10 30 15.5 +0.7
GUMA				S	Sb	10 30 20.2 -0.9
GUMA				AML	AML	
	comp=N,21850μm,0.7s					
GUMA				AML	AML	
	comp=E,28600μm,0.3s					
GUMA				AML	AML	
	comp=N,22850μm,0.2s					
GUMA				AML	AML	
	comp=E,20250μm,0.2s					
GUMA				AML	AML	
	comp=N,21900μm,0.7s					
GUMA				AML	AML	
	comp=N,22851μm,0.2s					
GUMA				AML	AML	
	comp=E,28567μm,0.3s					
GUMA				AML	AML	
	comp=E,20230μm,0.2s					
GUMA				AML	AML	
	comp=N,21900μm,1.3s					
GUMA				AML	AML	
	comp=E,20250μm,1.8s					
GUMA				AML	AML	
	comp=N,21094μm,0.2s					
T1243	**Rocca Santa Ma**	**0.30**	**119**	⇓P	Pg	10 30 15.6 +0.4
T1243				S	Sb	10 30 20.5 -1.1
SEF1	**Sefro**	**0.32**	**340**	⇑P	Pg	10 30 15.8 +0.3
SEF1				S	Sg	10 30 21.0 +1.1
SEF1				AML	AML	
	comp=N,10640μm,0.3s					
SEF1				AML	AML	
	comp=E,17600μm,0.2s					
SEF1				AML	AML	
	comp=N,10595μm,0.3s					
SEF1				AML	AML	
	comp=E,17600μm,0.2s					
SEF1				AML	AML	
	comp=N,10645μm,0.3s					
SEF1				AML	AML	
	comp=E,17596μm,0.2s					
SEF1				AML	AML	
	comp=N,10474μm,0.2s					
PIO1	**Pioraco**	**0.34**	**346**	⇓P	Pg	10 30 16.2 +0.3
PIO1				S	Sg	10 30 21.7 +1.1
PIO1				AML	AML	
	comp=N,5380μm,0.5s					
PIO1				AML	AML	
	comp=E,3043μm,0.3s					
RM33	**Pellescritta (**	**0.35**	**165**	⇑P	Pg	10 30 16.5 +0.4
RM33				S	Sg	10 30 21.6 +1.0
RM33				AML	AML	
	comp=E,3441μm,0.3s					
RM33				AML	AML	
	comp=N,3635μm,0.3s					
RM33				AML	AML	
	comp=N,3643μm,0.3s					
RM33				AML	AML	
	comp=E,3190μm,0.3s					
MDAR	**Monte D'Aria**	**0.35**	**6**	⇓P	Pg	10 30 16.4 +0.3
MDAR				S	Sg	10 30 21.8 +1.0
MDAR				AML	AML	
	comp=E,3804μm,0.2s					
MDAR				AML	AML	
	comp=N,4175μm,0.3s					
T1211	**Morro Reatino**	**0.36**	**210**	⇑P	Pb	10 30 17.1 -0.4
T1211				S	Sb	10 30 22.7 -0.6
T1211				AML	AML	
	comp=N,5475μm,0.3s					
T1211				AML	AML	
	comp=E,4155μm,1.5s					
T1211				AML	AML	
	comp=E,4155μm,0.5s					
T1211				AML	AML	
	comp=E,3996μm,0.3s					
T1211				AML	AML	
	comp=E,3923μm,0.3s					
T1211				AML	AML	
	comp=N,5475μm,0.3s					
T1211				AML	AML	
	comp=N,5457μm,0.3s					
ARRO	**Arrone**	**0.36**	**223**	⇓P	Pg	10 30 16.8 +0.6
ARRO				S	Sb	10 30 22.3 -0.9
ARRO				AML	AML	
	comp=E,2640μm,0.3s					
ARRO				AML	AML	
	comp=N,3575μm,0.2s					
ARRO				AML	AML	
	comp=E,2645μm,0.3s					
ARRO				AML	AML	
	comp=E,2642μm,0.3s					
ARRO				AML	AML	
	comp=N,3576μm,0.2s					
FIU1	**Fiuminata**	**0.36**	**341**	⇑P	Pg	10 30 16.7 +0.4
FIU1				S	Sg	10 30 22.3 +1.1
FIU1				AML	AML	
	comp=E,7270μm,0.2s					
FIU1				AML	AML	
	comp=N,7580μm,1.1s					
FIU1				AML	AML	
	comp=E,7275μm,0.2s					
FIU1				AML	AML	
	comp=N,7580μm,1.1s					
FIU1				AML	AML	
	comp=N,7580μm,0.9s					
FIU1				AML	AML	
	comp=E,7272μm,0.2s					
ASSB	**Assisi San Ben**	**0.38**	**302**	⇑P	Pg	10 30 16.7 +0.1
ASSB				S	Sg	10 30 22.5 +0.9
ASSB				AML	AML	
	comp=E,8520μm,0.2s					
ASSB				AML	AML	
	comp=N,6430μm,0.2s					
ASSB				AML	AML	
	comp=N,6430μm,0.2s					
ASSB				AML	AML	
	comp=E,8518μm,0.2s					
CAMP	**Campotosto**	**0.39**	**143**	⇑P	Pg	10 30 17.1 +0.3
CAMP				S	Sb	10 30 23.1 -1.0
CAMP				AML	AML	
	comp=E,4909μm,0.2s					
CAMP				AML	AML	
	comp=N,2174μm,0.2s					
SSM1	**San Severino M**	**0.39**	**9**	P	Pg	10 30 16.8 0.0
GAG1	**Gagliole**	**0.40**	**357**	⇓P	Pg	10 30 17.3 +0.4
GAG1				S	Sb	10 30 23.5 -0.9
GAG1				AML	AML	
	comp=E,10260μm,0.3s					
GAG1				AML	AML	
	comp=N,8605μm,0.6s					
GAG1				AML	AML	
	comp=N,8610μm,0.6s					
GAG1				AML	AML	
	comp=N,8245μm,0.4s					
GAG1				AML	AML	
	comp=E,10282μm,0.3s					
GAG1				AML	AML	
	comp=E,10295μm,0.3s					
MNTP	**Montappone**	**0.40**	**43**	⇑P	Pb	10 30 18.1 -0.2
MNTP				AML	AML	
	comp=E,7017μm,0.2s					
MNTP				AML	AML	
	comp=N,8032μm,0.3s					
SNTG	**Esanatoglia**	**0.43**	**345**	P	Pg	10 30 17.5 0.0
SNTG				S	Sg	10 30 23.9 +0.8
SNTG				AML	AML	
	comp=E,2575μm,0.5s					
SNTG				AML	AML	
	comp=N,2780μm,0.1s					
SNTG				AML	AML	
	comp=N,2785μm,0.1s					
SNTG				AML	AML	
	comp=E,2580μm,0.5s					
SNTG				AML	AML	
	comp=E,2088μm,0.1s					
SNTG				AML	AML	
	comp=E,2575μm,0.5s					
SNTG				AML	AML	
	comp=N,3035μm,0.1s					
SNTG				AML	AML	
	comp=N,3035μm,0.1s					
SNTG				AML	AML	
	comp=E,2053μm,0.1s					
SNTG				AML	AML	
	comp=N,2782μm,0.1s					
T1247	**Pizzolo (AQ)**	**0.43**	**159**	⇑P	Pg	10 30 18.0 +0.5
T1247				AML	AML	
	comp=N,4508μm,0.1s					
T1247				AML	AML	
	comp=E,3692μm,0.3s					
TERO	**Teramo**	**0.43**	**120**	P	Pg	10 30 17.8 +0.2
TERO				S	Sg	10 30 24.4 +1.0
TERO				AML	AML	
	comp=E,5180μm,0.3s					
TERO				AML	AML	
	comp=E,5785μm,0.3s					
TERO				AML	AML	
	comp=N,5810μm,1.1s					
TERO				AML	AML	
	comp=N,5280μm,1.1s					
TERO				AML	AML	
	comp=E,5185μm,0.3s					
TERO				AML	AML	
	comp=E,4197μm,0.1s					
TERO				AML	AML	
	comp=N,4534μm,0.1s					
TERO				AML	AML	
	comp=N,5102μm,0.1s					
TERO				AML	AML	
	comp=E,4793μm,0.1s					
TERO				AML	AML	
	comp=N,5810μm,0.9s					
TERO				AML	AML	
	comp=N,5280μm,0.9s					
OFFI	**Offida**	**0.44**	**78**	⇓P	Pb	10 30 19.1 +0.1
OFFI				AML	AML	
	comp=N,6689μm,0.4s					
OFFI				AML	AML	
	comp=E,6866μm,0.4s					
CESX	**Cesi**	**0.45**	**239**	⇓P	Pg	10 30 18.1 +0.3
CESX				S	Sb	10 30 25.0 -0.7
CESX				AML	AML	
	comp=N,3790μm,0.6s					
CESX				AML	AML	
	comp=E,3570μm,0.7s					
CESX				AML	AML	
	comp=N,3791μm,0.6s					
CESX				AML	AML	
	comp=E,3571μm,0.7s					
ATCC	**AVT- Casa Cast**	**0.48**	**316**	⇓P	Pg	10 30 18.7 +0.2
ATCC				S	Sb	10 30 26.0 -0.7
ATCC				AML	AML	
	comp=E,6280μm,0.2s					
ATCC				AML	AML	
	comp=E,6275μm,0.2s					
ATCC				AML	AML	
	comp=N,4194μm,0.3s					
ATCC				AML	AML	
	comp=E,6278μm,0.2s					
ATCC				AML	AML	
	comp=N,4195μm,0.3s					
TRE1	**Treia**	**0.49**	**19**	⇑P	Pb	10 30 19.7 -0.2
TRE1				AML	AML	
	comp=E,3800μm,0.3s					
TRE1				AML	AML	
	comp=N,3676μm,0.4s					
FOSV	**Fossato di Vic**	**0.51**	**332**	⇑P	Pg	10 30 19.2 +0.1
FOSV				S	Sb	10 30 27.0 -0.7
FOSV				AML	AML	
	comp=N,2415μm,0.4s					
FOSV				AML	AML	
	comp=E,1804μm,0.3s					
GIGS	**Gran Sasso**	**0.53**	**138**	⇓P	Pg	10 30 19.2 -0.1
GIGS				S	Sg	10 30 27.1 +0.8
GIGS				AML	AML	
	comp=E,1096μm,0.3s					
GIGS				AML	AML	
	comp=N,868μm,0.6s					
GIGS				AML	AML	
	comp=N,868μm,0.6s					
GIGS				AML	AML	
	comp=E,1096μm,0.3s					
GIGS				AML	AML	
	comp=N,789μm,0.1s					
GIGS				AML	AML	
	comp=E,960μm,0.2s					
AQU	**L'Aquila**	**0.54**	**155**	S	Sb	10 30 29.0 +0.5
FIAM	**Fiamignano**	**0.58**	**178**	⇑P	Pg	10 30 20.4 +0.1
FIAM				S	Sg	10 30 28.6 +0.7
FIAM				AML	AML	
	comp=E,1089μm,0.5s					
MURB	**Monte Urbino**	**0.59**	**315**	⇑P	Pg	10 30 20.9 +0.3
MURB				S	Sb	10 30 30.3 +0.3
MURB				AML	AML	
	comp=E,9470μm,1.1s					
MURB				AML	AML	
	comp=N,10360μm,0.4s					
MURB				AML	AML	
	comp=N,10265μm,0.4s					
MURB				AML	AML	
	comp=N,10335μm,0.4s					
MURB				AML	AML	
	comp=E,10600μm,1.1s					
MURB				AML	AML	
	comp=E,9470μm,0.9s					
MURB				AML	AML	
	comp=E,10600μm,0.9s					
MURB				AML	AML	
	comp=E,9523μm,0.4s					
MURB				AML	AML	
	comp=N,10273μm,0.4s					
MURB				AML	AML	
	comp=E,8446μm,0.3s					
MURB				AML	AML	
	comp=N,10353μm,0.4s					
MURB				AML	AML	
	comp=N,10335μm,1.6s					
MMUR	**Monte Murano**	**0.60**	**353**	P	Pg	10 30 21.0 +0.1
MMUR				AML	AML	
	comp=N,2862μm,0.1s					
MMUR				AML	AML	
	comp=E,3664μm,0.3s					
TRTR	**Tortoreto Alta**	**0.60**	**93**	⇑P	Pb	10 30 22.0 +0.3
TRTR				AML	AML	
	comp=E,4912μm,0.4s					
ATFO	**Monte Foce - G**	**0.65**	**324**	⇑P	Pg	10 30 20.9 -0.8
ATFO				S	Sb	10 30 31.7 +0.1
ATFO				AML	AML	
	comp=N,3362μm,0.4s					
ATFO				AML	AML	
	comp=E,1980μm,0.4s					
ATTE	**AVT- Monte Tez**	**0.65**	**303**	⇑P	Pg	10 30 22.0 +0.3
ATTE				AML	AML	
	comp=E,1038μm,0.4s					
ATTE				AML	AML	
	comp=N,1015μm,0.4s					
PP3	**Marolino**	**0.65**	**35**	P	Pb	10 30 22.8 +0.2
PP3				AML	AML	
	comp=N,5977μm,0.4s					
PP3				AML	AML	
	comp=N,5714μm,0.4s					
PP3				AML	AML	
	comp=E,4148μm,0.7s					
VCEL	**Villa Celiera**	**0.71**	**129**	P	Pg	10 30 22.9 +0.1
VCEL				AML	AML	
	comp=N,2651μm,0.3s					
VCEL				AML	AML	
	comp=E,3142μm,0.3s					
FRON	**Frontone**	**0.73**	**338**	⇓P	Pg	10 30 22.9 -0.2
FRON				S	Sb	10 30 33.5 -0.3
FRON				AML	AML	
	comp=N,1811μm,0.3s					
FRON				AML	AML	
	comp=E,1158μm,0.3s					
MGAB	**Montegabbione**	**0.73**	**276**	⇑P	Pg	10 30 23.2 0.0
MGAB				AML	AML	
	comp=N,1700μm,0.4s					
MGAB				AML	AML	
	comp=E,1498μm,0.5s					
MGAB				AML	AML	
	comp=E,1525μm,0.4s					
MGAB				AML	AML	
	comp=N,1749μm,0.5s					
ATVO	**AVT- Monte Val**	**0.74**	**317**	⇑P	Pg	10 30 23.4 +0.1
ATVO				S	Sb	10 30 34.1 -0.1
ATVO				AML	AML	
	comp=N,1409μm,0.4s					
ATVO				AML	AML	
	comp=E,1360μm,0.4s					
ATMI	**Monte Miggiano**	**0.78**	**309**	S	Sn	10 30 37.0 -0.9
ATPI	**Pietralunga -**	**0.79**	**320**	S	Sn	10 30 37.0 -1.2
AOI	**Ancona**	**0.80**	**28**	P	Pb	10 30 24.9 -0.2
AOI				AML	AML	
	comp=N,919μm,0.5s					
AOI				AML	AML	
	comp=E,946μm,0.4s					
T0110	**Collepietro**	**0.80**	**140**	⇑P	Pg	10 30 24.4 -0.1
T0110				AML	AML	
	comp=E,1660μm,0.6s					
T0110				AML	AML	
	comp=N,2547μm,0.3s					
PIEI	**Pieia**	**0.80**	**330**	⇑P	Pg	10 30 24.5 -0.2
PIEI				AML	AML	
	comp=E,1250μm,0.3s					
PIEI				AML	AML	
	comp=N,1160μm,1.6s					
PIEI				AML	AML	
	comp=N,1149μm,0.2s					
PIEI				AML	AML	
	comp=E,1251μm,0.3s					
MPAG	**Monte Paganucc**	**0.82**	**343**	S	Sn	10 30 38.0 -1.1
SACS	**San Casciano d**	**0.87**	**271**	⇑P	Pn	10 30 27.3 -0.1
FSSB	**Fossombrone**	**0.88**	**345**	⇓P	Pg	10 30 25.9 -0.1
FSSB				AML	AML	
	comp=E,2712μm,0.3s					
FSSB				AML	AML	
	comp=N,5248μm,0.3s					
CERT	**Cerreto**	**0.90**	**185**	⇑P	Pb	10 30 26.9 +0.1
CERT				AML	AML	
	comp=N,511μm,0.4s					
CERT				AML	AML	
	comp=E,781μm,0.4s					
CAFI	**Castiglion Fio**	**0.96**	**301**	⇓P	Pb	10 30 27.9 +0.1
CAFI				AML	AML	
	comp=E,844μm,0.4s					
CAFI				AML	AML	
	comp=N,910μm,0.5s					
CAFI				AML	AML	
	comp=E,830μm,0.4s					
CAFI				AML	AML	
	comp=N,868μm,0.5s					
CAFI				AML	AML	
	comp=E,845μm,0.4s					
CAFI				AML	AML	
	comp=N,907μm,0.5s					
LATE	**Laterza**	**0.98**	**257**	⇓P	Pb	10 30 28.4 +0.3
MCIV	**Monte Civitell**	**1.05**	**267**	⇓P	Pn	10 30 29.7 -0.1
MCIV				AML	AML	
	comp=E,300μm,0.5s					
SF04	**Casetta**	**1.05**	**270**	⇓P	Pn	10 30 30.4 +0.4
SACR	**S. Croce Del S**	**1.88**	**140**	P	Pb	10 30 43.0 -0.5
PAOL	**Paolisi**	**2.12**	**148**	S	Sn	10 31 10.0 -1.0

*ROM **30** 10:32:11.2±0.3, 42°.90N±0°.02×13°.11E±0°.01, h9km, ML3.3/61, Error ellipse: s-maj=1.8km s-min=0.9km az=333.0*
*PRU **30** 10:32:11.2±0.0, 42°.68N×13°.75E, h10km*
*IDC **30** 10:32:12.1±1.4, 42°.94N×13°.44E, h0km, mb3.6/2, mbtmp3.4/7, ML3.5/4, MS4.3/1, Error ellipse: s-maj=33.5km s-min=14.6km az=97.0*
ISC 30 10:32:12.5±0.7, **42°.85N**±0°.01×**13°.22E**±0°.02, **h12**km±4km, **n116**, σ1§**58**/136, **33C-28D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**295**	P	**Pg**	**10 32 14.0**	**-0.9**
T1245				S	**Sg**	**10 32 15.1**	**-1.5**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.10**	**57**	⇑P	**Pg**	**10 32 14.9**	**-0.6**
MMO1				S	**Sg**	**10 32 17.1**	**-0.4**
T1241	**Roccafluvione,**	**0.16**	**86**	P	**Pg**	**10 32 17.3**	**+1.1**
T1241				S	**Sg**	**10 32 20.5**	**+1.7**
AM05	**Amandola Campo**	**0.17**	**37**	⇓P	**Pg**	**10 32 15.9**	**-0.4**
AM05				S	**Sg**	**10 32 18.8**	**-0.3**
AM05				AML	AML		
	comp=N,6500μm,0.2s						
AM05				AML	AML		
	comp=E,7275μm,0.8s						
AM05				AML	AML		
	comp=N,1635μm,0.1s						
AM05				AML	AML		
	comp=E,23400μm,0.6s						
T1204	**Amatrice, Fraz**	**0.18**	**157**	P	**Pg**	**10 32 17.9**	**+1.2**
T1204				S	**Sg**	**10 32 22.4**	**+2.7**
T1204				AML	AML		
	comp=E,20150μm,0.3s						
T1204				AML	AML		
	comp=N,13150μm,1.6s						
T1204				AML	AML		
	comp=N,13200μm,1.6s						
T1243	**Rocca Santa Ma**	**0.23**	**131**	P	**Pg**	**10 32 18.4**	**+1.0**
T1243				S	**Sg**	**10 32 23.3**	**+2.6**
GUMA	**Gualdo di Mace**	**0.23**	**22**	⇓P	**Pg**	**10 32 17.0**	**-0.5**
GUMA				AML	AML		
	comp=E,31200μm,0.7s						
GUMA				AML	AML		
	comp=N,26600μm,0.8s						
GUMA				AML	AML		
	comp=N,30450μm,0.4s						
GUMA				AML	AML		
	comp=E,31250μm,0.8s						
CSP1	**Cessapalombo**	**0.24**	**358**	S	**Sg**	**10 32 21.0**	**-0.3**
T1217	**Poggiodomo (PG**	**0.25**	**238**	P	**Pg**	**10 32 16.7**	**-1.1**
T1217				S	**Sg**	**10 32 19.1**	**-2.2**
T1217				AML	AML		
	comp=E,11950μm,0.8s						
T1217				AML	AML		
	comp=N,14650μm,0.6s						
T1217				AML	AML		
	comp=N,14800μm,0.6s						
T1217				AML	AML		
	comp=E,11900μm,0.8s						
T1217				AML	AML		
	comp=N,14750μm,0.6s						
T1217				AML	AML		
	comp=E,11700μm,0.8s						
T1217				AML	AML		
	comp=E,11900μm,1.2s						
T1217				AML	AML		
	comp=E,11700μm,1.2s						
T1215	**Vallo di Nera,**	**0.26**	**260**	⇑P	**Pg**	**10 32 17.4**	**-0.6**
T1215				AML	AML		
	comp=N,12950μm,0.2s						
T1215				AML	AML		
	comp=E,15450μm,0.4s						
T1215				AML	AML		
	comp=E,15600μm,0.4s						
T1215				AML	AML		
	comp=N,13550μm,0.2s						
T1215				AML	AML		
	comp=E,15550μm,0.4s						
T1215				AML	AML		
	comp=E,15500μm,0.4s						
T1215				AML	AML		
	comp=N,13000μm,0.2s						
LNSS	**Leonessa**	**0.28**	**208**	P	**Pg**	**10 32 17.7**	**-0.6**
LNSS				S	**Sg**	**10 32 20.4**	**-1.7**
LNSS				AML	AML		
	comp=E,12750μm,0.2s						
LNSS				AML	AML		
	comp=N,26500μm,1.0s						
LNSS				AML	AML		
	comp=N,26500μm,1.0s						
RM33	**Pellescritta (**	**0.34**	**180**	P	**Pb**	**10 32 20.1**	**-0.5**
RM33				S	**Sb**	**10 32 24.4**	**-1.5**
RM33				AML	AML		
	comp=N,5170μm,0.5s						
RM33				AML	AML		
	comp=N,5145μm,0.6s						
RM33				AML	AML		
	comp=E,6975μm,1.5s						
RM33				AML	AML		
	comp=E,7035μm,1.5s						
RM33				AML	AML		
	comp=E,7035μm,0.5s						
RM33				AML	AML		
	comp=E,6975μm,0.5s						
RM33				AML	AML		
	comp=N,5145μm,0.5s						
MNTP	**Montappone**	**0.34**	**32**	⇑P	**Pb**	**10 32 19.5**	**-1.2**
MNTP				AML	AML		
	comp=N,11685μm,1.2s						
MNTP				AML	AML		
	comp=E,11600μm,0.5s						
MNTP				AML	AML		
	comp=N,11685μm,0.8s						
OFFI	**Offida**	**0.36**	**75**	⇑P	**Pn**	**10 32 20.6**	**-2.9**
OFFI				AML	AML		
	comp=N,12000μm,0.5s						
OFFI				AML	AML		
	comp=E,9620μm,1.1s						
TERO	**Teramo**	**0.36**	**128**	P	**Pn**	**10 32 20.8**	**-2.9**
TERO				S	**Sb**	**10 32 27.4**	**+0.8**
TERO				AML	AML		
	comp=N,12385μm,0.4s						
TERO				AML	AML		
	comp=E,8920μm,0.5s						
TERO				AML	AML		
	comp=N,12850μm,0.4s						
TERO				AML	AML		
	comp=N,12365μm,0.4s						
TERO				AML	AML		
	comp=E,8525μm,0.5s						
TERO				AML	AML		
	comp=N,12850μm,1.6s						
TERO				AML	AML		
	comp=N,12365μm,1.6s						
PIO1	**Pioraco**	**0.37**	**333**	⇑P	**Pg**	**10 32 19.5**	**-0.5**
PIO1				AML	AML		
	comp=N,7860μm,0.5s						
PIO1				AML	AML		
	comp=E,9435μm,1.0s						
FIU1	**Fiuminata**	**0.40**	**329**	⇑P	**Pg**	**10 32 20.2**	**-0.3**
FIU1				AML	AML		
	comp=E,5410μm,1.1s						
FIU1				AML	AML		
	comp=N,5985μm,1.2s						
FIU1				AML	AML		
	comp=N,5985μm,0.8s						
FIU1				AML	AML		
	comp=E,5410μm,0.9s						
T1211	**Morro Reatino**	**0.41**	**221**	⇑P	**Pg**	**10 32 19.6**	**-1.1**
T1211				AML	AML		
	comp=E,6230μm,0.3s						
T1211				AML	AML		
	comp=N,11060μm,0.9s						
T1211				AML	AML		
	comp=E,6480μm,0.3s						
T1211				AML	AML		
	comp=N,10990μm,0.9s						
T1211				AML	AML		
	comp=N,10975μm,0.9s						
T1211				AML	AML		
	comp=N,10975μm,1.0s						
T1211				AML	AML		
	comp=N,11045μm,0.9s						
T1211				AML	AML		
	comp=N,11045μm,1.1s						
T1211				AML	AML		
	comp=E,6485μm,0.3s						
T1211				AML	AML		
	comp=N,10975μm,1.0s						
ARRO	**Arrone**	**0.43**	**231**	⇑P	**Pg**	**10 32 19.8**	**-1.2**
ARRO				AML	AML		
	comp=N,5965μm,0.3s						
ARRO				AML	AML		
	comp=E,4000μm,0.8s						
ARRO				AML	AML		
	comp=E,4000μm,1.2s						
ASSB	**Assisi San Ben**	**0.46**	**296**	⇑P	**Pg**	**10 32 21.2**	**-0.3**
SNTG	**Esanatoglia**	**0.46**	**334**	⇑P	**Pg**	**10 32 20.8**	**-0.7**
SNTG				AML	AML		
	comp=E,3355μm,1.2s						
SNTG				AML	AML		
	comp=E,3290μm,1.0s						
SNTG				AML	AML		
	comp=N,4030μm,1.5s						
SNTG				AML	AML		
	comp=N,4285μm,1.5s						
SNTG				AML	AML		
	comp=E,3290μm,1.0s						
SNTG				AML	AML		
	comp=N,4285μm,0.5s						
SNTG				AML	AML		
	comp=N,4030μm,0.5s						
SNTG				AML	AML		
	comp=E,3355μm,0.8s						
GIGS	**Gran Sasso**	**0.47**	**147**	P	**Pn**	**10 32 23.1**	**-2.1**
GIGS				S	**Sb**	**10 32 30.5**	**+0.6**
GIGS				AML	AML		
	comp=N,1190μm,0.7s						
GIGS				AML	AML		
	comp=E,1530μm,0.9s						
TRTR	**Tortoreto Alta**	**0.51**	**94**	⇑P	**Pn**	**10 32 24.4**	**-1.3**
TRTR				AML	AML		
	comp=N,13500μm,0.7s						
TRTR				AML	AML		
	comp=E,17150μm,0.8s						
TRTR				AML	AML		
	comp=N,13500μm,1.3s						
CESX	**Cesi**	**0.53**	**244**	⇑P	**Pg**	**10 32 21.1**	**-1.7**
CESX				AML	AML		
	comp=N,5035μm,0.7s						
CESX				AML	AML		
	comp=E,5165μm,1.4s						
CESX				AML	AML		
	comp=N,5035μm,1.3s						
CESX				AML	AML		
	comp=E,5165μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.54**	**309**	⇓P	**Pg**	**10 32 22.6**	**-0.6**
ATCC				S	**Sb**	**10 32 32.0**	**+0.2**
ATCC				AML	AML		
	comp=E,5270μm,0.9s						
ATCC				AML	AML		
	comp=N,5805μm,1.0s						
ATCC				AML	AML		
	comp=N,5805μm,1.0s						
FOSV	**Fossato di Vic**	**0.56**	**323**	⇓P	**Pg**	**10 32 22.7**	**-0.8**
FOSV				AML	AML		
	comp=E,5365μm,0.2s						
FOSV				AML	AML		
	comp=N,4655μm,1.4s						
FIAM	**Fiamignano**	**0.58**	**187**	⇓P	**Pg**	**10 32 21.0**	**-2.9**
FIAM				S	**Sb**	**10 32 32.0**	**-1.0**
PP3	**Marolino**	**0.60**	**28**	⇓P	**Pn**	**10 32 25.4**	**-1.6**
PP3				AML	AML		
	comp=N,6040μm,0.7s						
PP3				AML	AML		
	comp=E,5770μm,1.6s						
PP3				AML	AML		
	comp=E,5670μm,1.6s						
PP3				AML	AML		
	comp=N,6045μm,0.7s						
PP3				AML	AML		
	comp=E,5770μm,0.4s						
PP3				AML	AML		
	comp=E,5670μm,0.4s						
MMUR	**Monte Murano**	**0.62**	**345**	S	**Sb**	**10 32 34.0**	**0.0**
FAGN	**Fagnano**	**0.64**	**155**	⇓P	**Pn**	**10 32 26.5**	**-1.0**
FAGN				AML	AML		
	comp=N,5135μm,1.6s						
FAGN				AML	AML		
	comp=N,5135μm,0.4s						
FAGN				AML	AML		
	comp=E,5650μm,0.6s						
VCEL	**Villa Celiera**	**0.65**	**134**	⇑P	**Pn**	**10 32 26.2**	**-1.4**
VCEL				AML	AML		
	comp=E,4550μm,0.4s						
VCEL				AML	AML		
	comp=N,5855μm,0.9s						
VCEL				AML	AML		
	comp=N,5855μm,1.1s						
MURB	**Monte Urbino**	**0.66**	**310**	⇑P	**Pg**	**10 32 24.7**	**-0.7**
MURB				S	**Sb**	**10 32 36.0**	**+0.9**
MURB				AML	AML		
	comp=N,5510μm,0.4s						
MURB				AML	AML		
	comp=E,6620μm,0.8s						
MURB				AML	AML		
	comp=N,5740μm,0.4s						
MURB				AML	AML		
	comp=E,6170μm,0.8s						
ARVD	**Arcevia**	**0.68**	**343**	⇑P	**Pg**	**10 32 24.9**	**-0.9**
ARVD				S	**Sb**	**10 32 36.0**	**+0.2**
ARVD				AML	AML		
	comp=E,2000μm,0.6s						
ARVD				AML	AML		
	comp=N,1395μm,1.4s						
ARVD				AML	AML		
	comp=N,1395μm,0.6s						
ATFO	**Monte Foce - G**	**0.70**	**318**	⇓P	**Pg**	**10 32 25.3**	**-0.9**
ATFO				AML	AML		
	comp=E,2455μm,0.5s						
ATFO				AML	AML		
	comp=N,1770μm,1.3s						
ATTE	**AVT- Monte Tez**	**0.72**	**299**	⇓P	**Pb**	**10 32 27.0**	**-0.2**
ATTE				AML	AML		
	comp=N,1440μm,1.0s						
ATTE				AML	AML		
	comp=E,1745μm,1.2s						
ATTE				AML	AML		
	comp=E,1745μm,0.8s						
T0110	**Collepietro**	**0.75**	**146**	⇑P	**Pn**	**10 32 27.6**	**-1.4**
T0110				AML	AML		
	comp=E,4860μm,0.5s						
T0110				AML	AML		
	comp=N,4830μm,0.5s						
FRON	**Frontone**	**0.76**	**332**	⇓P	**Pg**	**10 32 26.1**	**-1.2**
FRON				AML	AML		
	comp=E,1360μm,0.7s						
FRON				AML	AML		
	comp=N,1925μm,0.9s						
FRON				AML	AML		
	comp=N,1925μm,1.1s						
ATVO	**AVT- Monte Val**	**0.80**	**312**	⇑P	**Pg**	**10 32 26.8**	**-1.2**
ATVO				S	**Sb**	**10 32 40.0**	**+0.8**
ATVO				AML	AML		
	comp=E,1775μm,1.5s						
ATVO				AML	AML		
	comp=N,1345μm,1.0s						
ATVO				AML	AML		
	comp=N,1345μm,1.0s						
ATVO				AML	AML		
	comp=E,1775μm,0.5s						
SRES	**S.Oreste - Sor**	**0.80**	**221**	⇓P	**Pg**	**10 32 26.7**	**-1.3**
SRES				AML	AML		
	comp=E,1240μm,0.6s						
SRES				AML	AML		
	comp=N,1450μm,0.5s						
MGAB	**Montegabbione**	**0.81**	**275**	⇓P	**Pg**	**10 32 27.9**	**-0.4**
MGAB				AML	AML		
	comp=E,2535μm,0.4s						
MGAB				AML	AML		
	comp=N,2730μm,0.6s						
MGAB				AML	AML		
	comp=E,2720μm,0.4s						
MGAB				AML	AML		
	comp=N,2850μm,0.6s						
MGAB				AML	AML		
	comp=E,2540μm,0.4s						
MGAB				AML	AML		
	comp=N,2725μm,0.6s						
MGAB				AML	AML		
	comp=N,2725μm,1.4s						
MGAB				AML	AML		
	comp=N,2850μm,1.4s						
ATMI	**Monte Miggiano**	**0.85**	**305**	⇓P	**Pn**	**10 32 30.8**	**+0.5**
ATMI				AML	AML		
	comp=E,3130μm,1.2s						
ATMI				AML	AML		
	comp=N,3825μm,1.0s						
ATPI	**Pietralunga -**	**0.85**	**316**	⇑P	**Pg**	**10 32 28.0**	**-0.9**
ATPI				AML	AML		
	comp=N,1173μm,1.4s						
ATPI				AML	AML		
	comp=E,1470μm,0.5s						
ATPI				AML	AML		
	comp=N,1172μm,1.4s						
ATPI				AML	AML		
	comp=E,1470μm,1.5s						
ATPI				AML	AML		
	comp=N,1172μm,0.6s						
MPAG	**Monte Paganucc**	**0.85**	**337**	⇑P	**Pg**	**10 32 28.1**	**-0.9**
MPAG				S	**Sn**	**10 32 42.0**	**-0.9**
MPAG				AML	AML		
	comp=E,1830μm,0.7s						
MPAG				AML	AML		
	comp=N,1825μm,0.6s						
MPAG				AML	AML		
	comp=E,1835μm,0.7s						
MPAG				AML	AML		
	comp=E,1835μm,1.3s						
PIEI	**Pieia**	**0.85**	**324**	⇓P	**Pg**	**10 32 27.9**	**-1.1**
PIEI				AML	AML		
	comp=N,1022μm,0.5s						
PIEI				AML	AML		
	comp=E,980μm,1.0s						
PIEI				AML	AML		
	comp=E,980μm,1.0s						
PIEI				AML	AML		
	comp=N,1022μm,1.5s						
SENI	**Senigallia**	**0.86**	**1**	P	**Pn**	**10 32 29.8**	**-0.6**
SENI				AML	AML		
	comp=E,1970μm,1.0s						
SENI				AML	AML		
	comp=N,1268μm,0.5s						
MTCE	**Montecelio**	**0.90**	**203**	P	**Pg**	**10 32 28.3**	**-1.5**
MTCE				AML	AML		
	comp=E,1740μm,0.5s						
MTCE				AML	AML		
	comp=N,892μm,0.6s						
MTCE				AML	AML		
	comp=N,892μm,1.4s						
MTCE				AML	AML		
	comp=E,1740μm,1.5s						
FSSB	**Fossombrone**	**0.90**	**339**	⇓P	**Pg**	**10 32 29.0**	**-1.0**
FSSB				S	**Sn**	**10 32 44.0**	**-0.2**
FSSB				AML	AML		
	comp=N,4005μm,0.3s						
FSSB				AML	AML		
	comp=E,3435μm,1.3s						
CERT	**Cerreto**	**0.91**	**191**	⇑P	**Pb**	**10 32 29.5**	**-0.8**
CERT				AML	AML		
	comp=N,1239μm,0.5s						
CERT				AML	AML		
	comp=E,3560μm,0.5s						
SACS	**San Casciano d**	**0.96**	**271**	⇓P	**Pg**	**10 32 30.1**	**-1.0**
SACS				AML	AML		
	comp=N,1056μm,0.8s						
SACS				AML	AML		
	comp=E,1282μm,1.3s						
BADI	**Badiali**	**0.97**	**313**	⇑P	**Pg**	**10 32 30.3**	**-1.0**
INTR	**Introdacqua**	**0.98**	**148**	⇑P	**Pg**	**10 32 27.9**	**-3.4**
VVLD	**Villa Vallelon**	**1.02**	**163**	⇑P	**Pg**	**10 32 28.9**	**-3.3**
CAFI	**Castiglion Fio**	**1.04**	**298**	⇑P	**Pg**	**10 32 31.8**	**-0.7**
CAFI				AML	AML		
	comp=E,782μm,1.5s						
CAFI				AML	AML		
	comp=N,898μm,1.6s						
CAFI				AML	AML		
	comp=E,781μm,1.5s						
CAFI				AML	AML		
	comp=N,898μm,0.4s						
CAFI				AML	AML		
	comp=E,781μm,0.5s						
LPEL	**Lama dei Pelig**	**1.07**	**138**	P	**Pn**	**10 32 34.0**	**+0.5**
LPEL				AML	AML		
	comp=N,1150μm,1.0s						
LPEL				AML	AML		
	comp=N,1150μm,1.0s						
LPEL				AML	AML		
	comp=E,1645μm,0.7s						
MCIV	**Monte Civitell**	**1.14**	**267**	⇓P	**Pn**	**10 32 34.4**	**0.0**
MCIV				AML	AML		
	comp=N,507μm,1.5s						
MCIV				AML	AML		
	comp=E,710μm,0.8s						
MCIV				AML	AML		
	comp=N,507μm,0.5s						
MCIV				AML	AML		
	comp=E,710μm,1.2s						
SF04	**Casetta**	**1.15**	**270**	P	**Pn**	**10 32 33.9**	**-0.5**
SF04				AML	AML		
	comp=N,742μm,0.8s						
SF04				AML	AML		
	comp=E,695μm,0.4s						
SF04				AML	AML		
	comp=N,742μm,1.2s						
CPGN	**Carpegna, Ital**	**1.16**	**326**	P	**Pg**	**10 32 34.4**	**-0.4**
CPGN				AML	AML		
	comp=E,1546μm,0.9s						
CPGN				AML	AML		
	comp=N,1825μm,1.1s						
POFI	**Posta Fibreno**	**1.19**	**162**	⇓P	**Pn**	**10 32 38.1**	**+3.0**
POFI				AML	AML		
	comp=E,925μm,0.7s						
POFI				AML	AML		
	comp=N,802μm,1.2s						
POFI				AML	AML		
	comp=E,925μm,1.3s						
CRE	**Caprese Michel**	**1.21**	**310**	⇑P	**Pg**	**10 32 36.3**	**+0.5**
CRE				AML	AML		
	comp=E,444μm,0.6s						
CRE				AML	AML		
	comp=N,550μm,1.0s						
CRE				AML	AML		
	comp=E,444μm,1.4s						
GIUL	**Giuliano Di Ro**	**1.29**	**179**	⇑P	**Pg**	**10 32 38.7**	**+1.4**
GIUL				AML	AML		
	comp=N,718μm,0.6s						
GIUL				AML	AML		
	comp=E,796μm,1.6s						
GIUL				AML	AML		
	comp=E,796μm,0.4s						
GIUL				AML	AML		
	comp=N,718μm,1.4s						
SFI	**Santa Sofia**	**1.46**	**317**	⇓P	**Pg**	**10 32 41.0**	**+0.5**
SFI				AML	AML		
	comp=E,476μm,0.9s						
SFI				AML	AML		
	comp=N,448μm,1.3s						
SFI				AML	AML		
	comp=N,418μm,1.2s						
SFI				AML	AML		
	comp=E,414μm,0.9s						
SFI				AML	AML		
	comp=E,476μm,1.1s						
SFI				AML	AML		
	comp=N,448μm,0.7s						
SFI				AML	AML		
	comp=N,418μm,0.8s						
SFI				AML	AML		
	comp=E,414μm,1.1s						
TRIV	**Trivento**	**1.46**	**137**	⇓P	**Pg**	**10 32 40.5**	**-0.2**
TRIV				AML	AML		
	comp=E,1033μm,1.0s						
TRIV				AML	AML		
	comp=N,776μm,1.5s						
TRIV				AML	AML		
	comp=E,1033μm,1.0s						
RUFI	**Rufina**	**1.59**	**309**	⇑P	**Pb**	**10 32 42.3**	**+0.4**
MAON	**Monte Argentar**	**1.59**	**256**	P	**Pn**	**10 32 39.8**	**-0.8**
MAON				AML	AML		
	comp=E,154μm,0.6s						
MAON				AML	AML		
	comp=N,172μm,1.1s						
MAON				AML	AML		
	comp=N,172μm,0.9s						
TRIF	**Trifonti**	**1.72**	**280**	⇑P	**Pn**	**10 32 42.5**	**+0.2**
TRIF				AML	AML		
	comp=N,138μm,0.5s						
TRIF				AML	AML		
	comp=E,185μm,0.8s						
TRIF				AML	AML		
	comp=E,185μm,1.2s						
CASP	**Castiglione de**	**1.73**	**269**	⇑P	**Pn**	**10 32 42.0**	**-0.5**
CASP				AML	AML		
	comp=E,93μm,0.8s						
CASP				AML	AML		
	comp=E,93μm,1.2s						

CASP				AML	AML	
	comp=N,99μm,1.6s					
PIGN	**Pignataro Magg**	**1.79**	**156**	P	**Pn**	**10 32 41.7 -1.6**
PIGN				AML	AML	
	comp=E,226μm,1.0s					
PIGN				AML	AML	
	comp=N,286μm,1.1s					
PIGN				AML	AML	
	comp=E,226μm,1.0s					
VBKN	**Vesuvio Bunker**	**2.21**	**155**	S	**Sg**	**10 33 26.0 +2.5**
MAIM	**Mastiano**	**2.26**	**299**	P	**Pn**	**10 32 50.8 +1.1**
MAIM				AML	AML	
	comp=E,130μm,0.7s					
MAIM				AML	AML	
	comp=N,144μm,0.8s					
GSCL	**Gusciola**	**2.43**	**309**	P	**Pb**	**10 32 55.5 -0.8**
CAVE	**Cavezzo**	**2.58**	**322**	S	**Sn**	**10 33 25.0 -0.3**
CMPR	**Campora**	**2.97**	**148**	S	**Sn**	**10 33 32.0 -3.2**
PGF	**Pioggiola**	**3.12**	**266**	⇓P	**Pn**	**10 33 02.2 +0.5**
PGF				AML	AML	
	comp=E,26μm,1.3s					
PGF				AML	AML	
	comp=N,22μm,1.0s					
PGF				AML	AML	
	comp=N,22μm,1.0s					
STON	**Ston**	**3.30**	**88**	⇓P	Pb	10 33 05.1 -5.8
SALO	**Salr**	**3.38**	**326**	⇓P	**Pn**	**10 33 07.6 +2.4**
SALO				AML	AML	
	comp=E,138μm,1.0s					
SALO				AML	AML	
	comp=N,181μm,0.7s					
STAL	**STALIGIAL**	**3.43**	**354**	P	**Pn**	**10 33 06.4 +0.5**
STAL				AML	AML	
	comp=N,2720μm,0.8s					
STAL				AML	AML	
	comp=N,119μm,0.7s					
STAL				AML	AML	
	comp=E,2709μm,0.7s					
STAL				AML	AML	
	comp=E,143μm,1.6s					
STAL				AML	AML	
	comp=E,2709μm,1.3s					
STAL				AML	AML	
	comp=N,2720μm,1.2s					
ORZI	**Orzinuovi**	**3.48**	**318**	P	**Pb**	**10 33 10.0 -4.1**
LUSI	**Trento, Gardas**	**3.51**	**333**	⇓P	**Pn**	**10 33 10.0 +3.0**
PTCC	**Patocco-Chiusa**	**3.56**	**2**	⇑P	**Pn**	**10 33 08.2 +0.5**
PTCC				AML	AML	
	comp=N,71μm,0.6s					
PTCC				AML	AML	
	comp=E,73μm,1.0s					
PTCC				AML	AML	
	comp=N,71μm,1.4s					
PTCC				AML	AML	
	comp=E,73μm,1.0s					
ZONE	**Zone**	**3.67**	**324**	S	**Sb**	**10 34 01.0 -0.8**
ACOM	**Acomizza, Ital**	**3.71**	**3**	⇓P	**Pn**	**10 33 11.5 +1.7**
ACOM				AML	AML	
	comp=N,200μm,0.8s					
ACOM				AML	AML	
	comp=N,174μm,0.8s					
ACOM				AML	AML	
	comp=E,141μm,1.1s					
ACOM				AML	AML	
	comp=E,152μm,1.2s					
ACOM				AML	AML	
	comp=N,174μm,1.2s					
ACOM				AML	AML	
	comp=N,200μm,1.2s					
ZOU	**Zoufplan**	**3.71**	**357**	S	**Sn**	**10 33 52.0 -1.7**
ZOU				S	**Sb**	**10 34 01.0 -2.2**
MABI	**Malga Bissina**	**3.75**	**330**	⇑P	**Pn**	**10 33 13.0 +2.7**
OBKA	**Obir**	**3.78**	**14**	*e*Pn	**Pn**	**10 33 11.7 +1.0**
	comp=N,4.4nm,0.5s					
MYKA	**Terra Mystica**	**3.79**	**4**	*e*Pn	**Pn**	**10 33 10.4 -0.5**
	comp=N,0.5nm,0.3s					
KOSI	**Kohlern**	**3.85**	**341**	⇑P	**Pn**	**10 33 13.4 +1.7**
KOSI				AML	AML	
	comp=E,105μm,1.6s					
KOSI				AML	AML	
	comp=N,140μm,0.8s					
KOSI				AML	AML	
	comp=E,105μm,0.4s					
ABTA	**Abfaltersbach**	**3.93**	**353**	*e*Pn	**Pn**	**10 33 14.3 +1.5**
	comp=E,7.1nm,0.3s,SNR=5.7					
RISI	**Rein**	**4.18**	**349**	⇓P	**Pn**	**10 33 17.1 +0.8**
ROSI	**Rosskopf**	**4.28**	**343**	⇓P	**Pn**	**10 33 19.7 +2.0**
ROSI				AML	AML	
	comp=N,178μm,0.8s					
ROSI				AML	AML	
	comp=N,178μm,1.2s					
ROSI				AML	AML	
	comp=E,143μm,0.9s					
MUGIO	**Muggio**	**4.29**	**317**	⇑P	**Pn**	**10 33 18.9 +1.2**
VSL	**Villasalto**	**4.43**	**222**	⇓P	**Pn**	**10 33 18.5 -1.0**
FETA	**Feichten**	**4.53**	**338**	*e*Pn	**Pn**	**10 33 23.5 +2.4**
	comp=E,4.9nm,0.5s					
WTTA	**Wattenberg**	**4.56**	**346**	*e*Pn	**Pn**	**10 33 23.0 +1.6**
	comp=E,3.1nm,0.2s,SNR=5.2					
LLI	**Lipari**	**4.59**	**163**	S	**Sb**	**10 34 31.0 +2.8**
DAVOX	**Davos/Dischmat**	**4.59**	**330**	Pn	**Pn**	**10 33 24.1 +2.1**
	comp=E,1.9nm,0.3s,baz=152,slow=20,SNR=3.7					
DAVOX				Sn	**Sn**	**10 34 19.0 +3.6**
	comp=E,0.6nm,0.3s,baz=143,slow=20,SNR=1.9					
	comp=E,4.6nm,0.3s					
SQTA	**Sankt Quirin**	**4.60**	**343**	*e*Pn	**Pn**	**10 33 24.2 +2.2**
	comp=E,4.5nm,0.3s,SNR=5.5					
WATA	**Walderalm**	**4.64**	**346**	*e*Pn	**Pn**	**10 33 25.3 +2.8**
	comp=E,3.9nm,0.3s					
ARSA	**Arzberg**	**4.70**	**20**	*e*Pn	**Pn**	**10 33 24.9 +1.6**
	comp=E,0.8nm,0.2s					
MOTA	**Moosalm**	**4.74**	**342**	*e*Pn	**Pn**	**10 33 25.8 +1.9**
	comp=E,12nm,0.7s					
BIOA	**Bad Ischl, Aus**	**4.85**	**3**	*i* Pn	**Pn**	**10 33 26.9 +1.5**
	comp=E,6.0nm,0.3s					
CORL	**Corleone**	**4.95**	**179**	S	**Sb**	**10 34 39.0 +0.4**
RETA	**Reutte**	**4.95**	**340**	*e*Pn	**Pn**	**10 33 28.5 +1.6**
	comp=E,5.7nm,0.5s					
DAVA	**Damuels**	**5.03**	**333**	*e*Pn	**Pn**	**10 33 30.2 +2.2**
	comp=E,6.7nm,0.5s					
MOA	**Molln**	**5.06**	**8**	*e*Pn	**Pn**	**10 33 29.6 +1.4**
	comp=E,0.7nm,0.2s					
ESML	**S. M. di Licod**	**5.38**	**166**	P	**Pn**	**10 33 31.4 -1.2**
CONA	**Conrad Observa**	**5.41**	**19**	*e*Pn	**Pn**	**10 33 34.2 +1.0**
	comp=E,0.6nm,0.2s					
HLNI	**Lentini**	**5.64**	**166**	S	**Sb**	**10 35 02.0 +3.7**
GERES	**GERESS Array B**	**6.01**	**3**	Pn	**Pn**	**10 33 41.5 +0.2**
	comp=E,0.9nm,0.4s,baz=175,slow=13,SNR=5.5					
GERES				Sn	**Sn**	**10 34 49.2 -0.8**
	comp=E,1.0nm,0.3s,baz=182,slow=24,SNR=6.0					
CKRC	**Cesky Krumlov**	**6.02**	**7**	*e*SN	**Sn**	**10 34 48.8 -1.5**
KHC	**Kasperske Hory**	**6.29**	**2**	*e*PN	**Pn**	**10 33 45.8 +0.7**
KHC				*e*SN	**Sn**	**10 34 56.6 -0.3**
VRAC	**Vranov**	**6.88**	**19**	Pn	**Pn**	**10 33 52.4 -0.7**
	comp=E,0.3nm,0.3s,baz=197,slow=14,SNR=1.7					
	comp=E,0.9nm,0.3s					
KEST	**Kesra**	**7.71**	**204**	Pn	**Pn**	**10 34 08.3 +3.6**
	comp=E,0.1nm,0.3s,baz=18,slow=16,SNR=1.7					
	comp=E,3.1nm,0.9s					
EKA	**Eskdalemuir Ar**	**16.41**	**325**	Pn	**P**	**10 36 03.6 -1.7**
	baz=136,slow=14					
	comp=E,0.4nm,0.5s					
TORD	**Torodi Ar. Bea**	**31.23**	**202**	P	**P**	**10 38 33.9 +2.0**
	comp=E,0.5nm,0.7s,baz=15,slow=7.4,SNR=3.8					
	comp=E,0.5nm,0.7s					
KURBB	**Kurchatov Arra**	**44.11**	**56**	LR	LR	11 01 44.9
	comp=E,325nm,18.4s,baz=30,slow=40					
SONM	**Songino Array**	**61.76**	**50**	P	**P**	**10 42 32.0 +1.1**
	comp=E,0.7nm,0.9s,baz=323,slow=6.2,SNR=4.1					
	comp=E,0.7nm,0.9s					

PRU ***30*** *10:36:41.2±0.0, 40°.23N×14°.48E, h10km*
VIE 30 10:37:16.3±6.5, 42°.82N×13°.51E, h10km, mb3.0/4, ml2.7/10, Error ellipse: s-maj=71.8km s-min=12.9km az=175.0 132 km NE of Rome, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**3.99**	**350**	*e*Pn	Pn	10 38 17.4	-0.2
	5.1nm,0.4s,SNR=8.2						
WTTA	**Wattenberg**	**4.64**	**344**	*e*Pn	Pn	10 38 27.2	+0.6
	1.5nm,0.3s						
FETA	**Feichten**	**4.64**	**336**	*e*Pn	Pn	10 38 26.5	-0.2
	1.3nm,0.3s						
SQTA	**Sankt Quirin**	**4.70**	**340**	*e*Pn	Pn	10 38 27.1	-0.3
	3.6nm,0.4s,SNR=5.3						
MOTA	**Moosalm**	**4.84**	**340**	*e*Pn	Pn	10 38 29.3	0.0
	1.0nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.88**	**1**	*e*Pn	Pn	10 38 29.9	+0.2
	2.7nm,0.3s						
RETA	**Reutte**	**5.06**	**338**	*e*Pn	Pn	10 38 32.4	+0.1
	2.0nm,0.3s,SNR=5.4						
DAVA	**Damuels**	**5.16**	**331**	*e*Pn	Pn	10 38 33.9	+0.2
	0.9nm,0.2s						
CONA	**Conrad Observa**	**5.37**	**17**	*e*Pn	Pn	10 38 36.6	0.0
	0.3nm,0.2s						
KHC	**Kasperske Hory**	**6.32**	**0**	*e*PN	Pn	10 38 48.2	-1.3
KHC				*e*SN	Sb	10 40 25.0	+3.1

ROM 30 10:37:38.7±0.1, 42°.717N±0°.003×13°.223E±0°.005, h10km, ML3.1/17, 14C-8D, Error ellipse: s-maj=0.4km s-min=0.3km az=298.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.08**	**120**	P	Pg	10 37 41.7	+0.5
T1204				S	Sg	10 37 43.6	+0.5
T1204				AML	AML		
	comp=N,19850μm,1.0s						
T1204				AML	AML		
	comp=E,35600μm,0.8s						
T1204				AML	AML		
	comp=E,35550μm,0.8s						
T1204				AML	AML		
	comp=E,26016μm,0.1s						
T1204				AML	AML		
	comp=N,18376μm,0.2s						
T1243	**Rocca Santa Ma**	**0.17**	**97**	⇑P	Pg	10 37 42.9	+0.5
T1243				S	Sg	10 37 45.9	+0.8
LNSS	**Leonessa**	**0.18**	**230**	⇑P	Pg	10 37 43.1	+0.5
LNSS				S	Sg	10 37 46.2	+1.0
LNSS				AML	AML		
	comp=E,14250μm,1.3s						
LNSS				AML	AML		
	comp=N,32500μm,0.6s						
LNSS				AML	AML		
	comp=N,28365μm,0.2s						
LNSS				AML	AML		
	comp=E,13902μm,0.2s						
T1241	**Roccafluvione,**	**0.21**	**48**	P	Pb	10 37 43.9	-0.7
T1241				S	Sg	10 37 47.5	+1.4
T1241				AML	AML		
	comp=E,8679μm,0.3s						
T1241				AML	AML		
	comp=N,5159μm,0.3s						
T1241				AML	AML		
	comp=E,8584μm,0.3s						
T1241				AML	AML		
	comp=N,5543μm,0.3s						
RM33	**Pellescritta (**	**0.21**	**182**	P	Pg	10 37 43.6	+0.5
RM33				S	Sg	10 37 47.5	+1.4
RM33				AML	AML		
	comp=N,8095μm,0.9s						
RM33				AML	AML		
	comp=E,7730μm,1.1s						
RM33				AML	AML		
	comp=E,7770μm,1.1s						
RM33				AML	AML		
	comp=N,8090μm,0.9s						
RM33				AML	AML		
	comp=E,7735μm,1.1s						
RM33				AML	AML		
	comp=N,7925μm,0.9s						
RM33				AML	AML		
	comp=N,8095μm,0.9s						
RM33				AML	AML		
	comp=N,7920μm,0.9s						
RM33				AML	AML		
	comp=E,7770μm,1.1s						
RM33				AML	AML		
	comp=E,6324μm,0.3s						
RM33				AML	AML		
	comp=N,6350μm,0.1s						
RM33				AML	AML		
	comp=N,6195μm,0.1s						
RM33				AML	AML		
	comp=E,6161μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**269**	⇑P	Pg	10 37 43.5	+0.3
T1217				AML	AML		
	comp=N,16550μm,0.5s						
T1217				AML	AML		
	comp=E,7595μm,0.3s						
T1217				AML	AML		
	comp=N,16250μm,0.4s						
T1217				AML	AML		
	comp=E,7590μm,0.4s						
T1217				AML	AML		
	comp=N,16200μm,0.4s						
T1217				AML	AML		
	comp=N,16250μm,0.3s						
T1217				AML	AML		
	comp=N,16600μm,0.4s						
T1217				AML	AML		
	comp=E,7640μm,0.3s						
T1217				AML	AML		
	comp=E,7595μm,0.4s						
T1217				AML	AML		
	comp=N,15409μm,0.3s						
T1217				AML	AML		
	comp=E,7352μm,0.1s						
T1217				AML	AML		
	comp=N,15783μm,0.3s						
T1217				AML	AML		
	comp=E,7482μm,0.1s						
CAMP	**Campotosto**	**0.23**	**143**	⇑P	Pg	10 37 44.0	+0.6
CAMP				S	Sg	10 37 47.9	+1.2
CAMP				AML	AML		
	comp=E,3220μm,0.3s						
CAMP				AML	AML		
	comp=N,4095μm,0.3s						
CAMP				AML	AML		
	comp=N,4091μm,0.3s						
CAMP				AML	AML		
	comp=E,3221μm,0.3s						
T1215	**Vallo di Nera,**	**0.27**	**288**	⇓P	Pg	10 37 44.5	+0.2
T1215				AML	AML		
	comp=E,5890μm,0.3s						
T1215				AML	AML		
	comp=N,7360μm,0.2s						
T1215				AML	AML		
	comp=E,6070μm,0.3s						
T1215				AML	AML		
	comp=N,7235μm,0.2s						
T1215				AML	AML		
	comp=E,5895μm,0.3s						
T1215				AML	AML		
	comp=N,7360μm,0.2s						
T1215				AML	AML		
	comp=E,6075μm,0.3s						
T1215				AML	AML		
	comp=N,7235μm,0.2s						
T1215				AML	AML		
	comp=E,3871μm,0.2s						
T1215				AML	AML		
	comp=E,3969μm,0.2s						
T1215				AML	AML		
	comp=N,5788μm,0.2s						
T1215				AML	AML		
	comp=N,5852μm,0.2s						
FEMA	**Monte Fema**	**0.28**	**333**	S	Sg	10 37 47.0	-1.2
AM05	**Amandola Campo**	**0.28**	**20**	P	Pg	10 37 44.7	+0.3
AM05				S	Sb	10 37 49.7	-0.8
AM05				AML	AML		
	comp=E,2690μm,0.7s						
AM05				AML	AML		
	comp=N,3235μm,0.1s						
AM05				AML	AML		
	comp=E,2523μm,0.1s						
AM05				AML	AML		
	comp=E,8690μm,0.1s						
AM05				AML	AML		
	comp=N,3235μm,0.1s						
AM05				AML	AML		
	comp=N,840μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.28**	**169**	P	Pg	10 37 45.0	+0.6
T1247				S	Sb	10 37 49.8	-0.8
T1247				AML	AML		
	comp=E,7180μm,0.3s						
T1247				AML	AML		
	comp=N,7230μm,1.0s						
T1247				AML	AML		
	comp=E,7185μm,0.3s						
T1247				AML	AML		
	comp=N,6378μm,0.1s						
T1247				AML	AML		
	comp=E,5397μm,0.1s						
TERO	**Teramo**	**0.30**	**108**	⇓P	Pg	10 37 45.0	+0.4
TERO				S	Sb	10 37 49.9	-1.1
TERO				AML	AML		
	comp=N,10055μm,0.4s						
TERO				AML	AML		
	comp=E,6030μm,0.3s						
TERO				AML	AML		
	comp=E,5635μm,0.3s						
TERO				AML	AML		
	comp=N,10070μm,0.4s						
TERO				AML	AML		
	comp=E,5630μm,0.3s						
TERO				AML	AML		
	comp=N,11055μm,0.4s						
TERO				AML	AML		
	comp=N,10085μm,0.4s						
TERO				AML	AML		
	comp=E,4703μm,0.2s						
TERO				AML	AML		
	comp=N,6444μm,0.2s						
TERO				AML	AML		
	comp=N,7607μm,0.1s						
TERO				AML	AML		
	comp=E,4497μm,0.2s						
T1211	**Morro Reatino**	**0.33**	**236**	⇓P	Pg	10 37 45.6	+0.3
T1211				AML	AML		
	comp=E,6110μm,0.5s						
T1211				AML	AML		
	comp=N,8585μm,1.2s						
T1211				AML	AML		
	comp=E,6110μm,0.5s						
T1211				AML	AML		
	comp=N,8635μm,0.1s						
T1211				AML	AML		
	comp=E,6115μm,0.5s						
T1211				AML	AML		
	comp=E,6110μm,0.5s						
T1211				AML	AML		
	comp=N,8565μm,1.2s						
T1211				AML	AML		
	comp=N,8650μm,0.1s						
T1211				AML	AML		
	comp=E,5140μm,0.1s						
T1211				AML	AML		
	comp=N,8633μm,0.1s						
T1211				AML	AML		
	comp=E,5053μm,0.1s						
T1211				AML	AML		
	comp=N,8587μm,0.1s						
GUMA	**Gualdo di Mace**	**0.35**	**13**	⇑P	Pg	10 37 46.4	+0.6
GUMA				AML	AML		
	comp=N,21968μm,0.4s						
GUMA				AML	AML		
	comp=E,13923μm,0.4s						
GUMA				AML	AML		
	comp=E,23495μm,0.4s						
GUMA				AML	AML		
	comp=N,16408μm,0.4s						
ARRO	**Arrone**	**0.36**	**248**	⇑P	Pg	10 37 46.1	+0.2
ARRO				AML	AML		
	comp=E,3735μm,0.6s						
ARRO				AML	AML		
	comp=N,2800μm,1.5s						
ARRO				AML	AML		
	comp=E,3740μm,0.6s						
ARRO				AML	AML		
	comp=N,2805μm,1.5s						
ARRO				AML	AML		
	comp=E,3435μm,0.2s						
ARRO				AML	AML		
	comp=N,2720μm,0.2s						
GIGS	**Gran Sasso**	**0.37**	**136**	P	Pg	10 37 46.2	+0.2
GIGS				S	Sg	10 37 52.0	+1.0
GIGS				AML	AML		
	comp=E,1590μm,0.2s						
GIGS				AML	AML		
	comp=N,622μm,0.3s						
GIGS				AML	AML		
	comp=N,622μm,0.3s						
GIGS				AML	AML		
	comp=E,1595μm,0.2s						
GIGS				AML	AML		
	comp=N,560μm,0.3s						
GIGS				AML	AML		
	comp=E,1592μm,0.2s						
AQU	**L'Aquila**	**0.39**	**160**	P	Pg	10 37 46.9	+0.6
AQU				S	Sb	10 37 53.1	-0.5
AQU				AML	AML		
	comp=E,2095μm,1.1s						
AQU				AML	AML		
	comp=N,1900μm,0.4s						
AQU				AML	AML		
	comp=N,1915μm,0.4s						
AQU				AML	AML		
	comp=E,2035μm,1.1s						
AQU				AML	AML		
	comp=E,2090μm,1.1s						
AQU				AML	AML		
	comp=E,1860μm,0.6s						
AQU				AML	AML		
	comp=N,1916μm,0.4s						
AQU				AML	AML		
	comp=N,1899μm,0.4s						
AQU				AML	AML		
	comp=E,1938μm,0.6s						
OFFI	**Offida**	**0.40**	**57**	⇑P	Pb	10 37 47.8	-0.1
OFFI				AML	AML		
	comp=E,6100μm,0.7s						
OFFI				AML	AML		
	comp=N,5180μm,0.4s						
OFFI				AML	AML		
	comp=N,5177μm,0.4s						
OFFI				AML	AML		
	comp=E,6088μm,0.4s						
FIAM	**Fiamignano**	**0.46**	**190**	⇑P	Pg	10 37 47.8	+0.2
FIAM				AML	AML		
	comp=N,1795μm,0.3s						
FIAM				AML	AML		
	comp=E,2440μm,0.9s						
FIAM				AML	AML		
	comp=N,1798μm,0.3s						
FIAM				AML	AML		
	comp=E,2360μm,0.2s						
MNTP	**Montappone**	**0.46**	**23**	⇑P	Pb	10 37 48.5	-0.3
MNTP				AML	AML		
	comp=E,5214μm,0.2s						
MNTP				AML	AML		
	comp=N,4897μm,0.1s						
SEF1	**Sefro**	**0.47**	**335**	⇑P	Pg	10 37 48.5	+0.5
SEF1				AML	AML		
	comp=E,5581μm,0.2s						
SEF1				AML	AML		
	comp=N,5785μm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**80**	⇑P	Pb	10 37 50.2	+0.4
TRTR				AML	AML		
	comp=E,5465μm,0.4s						
TRTR				AML	AML		
	comp=N,7490μm,0.3s						
TRTR				AML	AML		
	comp=E,5469μm,0.4s						
TRTR				AML	AML		
	comp=N,7495μm,0.3s						
ASSB	**Assisi San Ben**	**0.53**	**308**	⇑P	Pb	10 37 49.7	-0.4
ASSB				AML	AML		
	comp=E,2279μm,0.2s						
VCEL	**Villa Celiera**	**0.56**	**125**	⇓P	Pb	10 37 50.3	-0.3
VCEL				AML	AML		
	comp=N,2430μm,1.5s						
VCEL				AML	AML		
	comp=E,2925μm,1.6s						
VCEL				AML	AML		
	comp=N,2425μm,1.5s						
VCEL				AML	AML		
	comp=E,2918μm,0.4s						
VCEL				AML	AML		
	comp=N,2116μm,0.3s						
SNTG	**Esanatoglia**	**0.58**	**339**	P	Pg	10 37 50.1	+0.2
SNTG				S	Sb	10 37 60.0	+0.9
SNTG				AML	AML		
	comp=E,1122μm,0.1s						
SNTG				AML	AML		
	comp=N,1145μm,0.1s						
SNTG				AML	AML		

	comp=E,1052μm,0.1s					
SNTG				AML	AML	
	comp=N,1272μm,0.1s					
EL6	**Elcito**	**0.62 352**	⇑P		Pg	10 37 51.0 +0.3
EL6			S		Sn	10 38 02.0 -1.6
EL6				AML	AML	
	comp=E,1975μm,0.3s					
EL6				AML	AML	
	comp=N,1796μm,0.2s					
T0110	**Collepietro**	**0.64 140**	S		Sb	10 38 02.0 +1.1
FOSV	**Fossato di Vic**	**0.67 330**	⇓P		Pg	10 37 51.6 -0.1
FOSV			S		Sb	10 38 02.0 +0.2
FOSV				AML	AML	
	comp=E,1049μm,0.2s					
FOSV				AML	AML	
	comp=N,831μm,0.2s					
SRES	**S.Oreste - Sor**	**0.71 228**	⇑P		Pb	10 37 53.0 -0.2
SRES			S		Sn	10 38 05.0 -0.8
SRES				AML	AML	
	comp=N,632μm,0.4s					
SRES				AML	AML	
	comp=E,764μm,0.4s					
SRES				AML	AML	
	comp=E,764μm,0.4s					
SRES				AML	AML	
	comp=N,632μm,0.4s					
PP3	**Marolino**	**0.72 23**	⇓P		Pb	10 37 53.6 +0.3
PP3				AML	AML	
	comp=E,4538μm,0.5s					
PP3				AML	AML	
	comp=N,2413μm,0.2s					
PP3				AML	AML	
	comp=N,2833μm,0.3s					
PP3				AML	AML	
	comp=E,4425μm,0.5s					
ARVD	**Arcevia**	**0.81 345**	S		Sn	10 38 07.0 -1.1
MGAB	**Montegabbione**	**0.84 284**	⇓P		Pn	10 37 57.1 +0.6
PIEI	**Pieia**	**0.96 329**	S		Sn	10 38 12.0 0.0
SACS	**San Casciano d**	**0.98 278**	⇓P		Pn	10 37 58.9 +0.5
SACS				AML	AML	
	comp=N,494μm,0.5s					
SACS				AML	AML	
	comp=E,361μm,0.8s					
SACS				AML	AML	
	comp=N,483μm,0.5s					
SACS				AML	AML	
	comp=E,399μm,0.7s					
LPEL	**Lama dei Pelig**	**0.98 133**	S		Sn	10 38 12.0 -0.3
FSSB	**Fossombrone**	**1.03 342**	S		Sn	10 38 15.0 +1.4
CAFI	**Castiglion Fio**	**1.11 304**	S		Sn	10 38 17.0 +1.5

*IDC **30** 10:49:39.9±1.2, 44°.16N×12°.47E, h0km, mb3.6/3, mbtmp3.5/10, ML3.4/6, Error ellipse: s-maj=30.7km s-min=12.7km az=108.0*
*STR **30** 10:49:41.6±2.5, 44°.8N×13°.2E±2°.1, h10km, MLv3.8/43, Error ellipse: s-maj=0.0km s-min=0.0km az=109.8, preliminary*
*PRU **30** 10:49:43.9±0.0, 44°.32N×12°.38E, h0km*
*ROM **30** 10:49:43.3±0.1, 44°.142N±0°.004×12°.268E±0°.006, h21km, ML3.6/90, Error ellipse: s-maj=0.5km s-min=0.2km az=80.0*
*GEN **30** 10:49:43.3, 44°.15N×12°.17E, h16km±2km, Ml0.0*
ISC 30 10:49:43.1±0.7, 44°.15N±0°.02×12°.32E±0°.02, h25km±4km, n246, σ1§73/267, mb3.4/3, 4C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
A309A	**Martorano (FC)**	**0.05**	**289**	⇑P	**Pb**	**10 49 46.3**	**-1.2**
A309A				S	**Sb**	**10 49 49.1**	**-1.3**
BLLA	**Bellaria**	**0.11**	**95**	⇑P	**Pb**	**10 49 48.0**	**+0.1**
BLLA				S	**Sb**	**10 49 52.4**	**+1.4**
BRSN	**Barisano**	**0.21**	**308**	⇑P	**Pb**	**10 49 48.6**	**-0.4**
BRSN				S	**Sb**	**10 49 53.7**	**+0.8**
BRSN				AML	AML		
	comp=E,59500μm,0.3s						
BRSN				AML	AML		
	comp=N,92600μm,0.2s						
BRSN				AML	AML		
	comp=N,93550μm,0.2s						
BRSN				AML	AML		
	comp=N,92200μm,0.2s						
BRSN				AML	AML		
	comp=E,61050μm,0.3s						
BRSN				AML	AML		
	comp=N,93800μm,0.2s						
RSM	**Repubblica di**	**0.24**	**156**	⇑P	**Pb**	**10 49 49.6**	**+0.3**
RSM				AML	AML		
	comp=E,11050μm,1.2s						
RSM				AML	AML		
	comp=N,9370μm,0.7s						
FAEN	**Faenza**	**0.34**	**294**	P	**Pb**	**10 49 51.0**	**+0.3**
FAEN				S	**Sn**	**10 49 57.6**	**-1.0**
SFI	**Santa Sofia**	**0.42**	**234**	⇓P	**Pb**	**10 49 51.0**	**-1.0**
SFI				S	**Sb**	**10 49 57.4**	**-0.7**
SFI				AML	AML		
	comp=N,8805μm,0.8s						
SFI				AML	AML		
	comp=N,8865μm,0.8s						
SFI				AML	AML		
	comp=N,8815μm,0.8s						
SFI				AML	AML		
	comp=N,8830μm,0.8s						
SFI				AML	AML		
	comp=E,7265μm,0.6s						
SFI				AML	AML		
	comp=N,8850μm,0.8s						
SFI				AML	AML		
	comp=E,7490μm,0.6s						
LMD	**Lutirano**	**0.44**	**260**	P	**Pb**	**10 49 51.3**	**-1.1**
LMD				S	**Sb**	**10 49 58.0**	**-0.8**
LMD	**Lutirano**	**0.44**	**260**	⇓P	**Pb**	**10 49 51.3**	**-1.1**
LMD				S	**Sb**	**10 49 57.7**	**-1.0**
LMD				AML	AML		
	comp=N,10770μm,0.5s						
LMD				AML	AML		
	comp=E,15605μm,0.3s						
IMOL	**Imola, Italy**	**0.46**	**297**	P	**Pb**	**10 49 53.1**	**+0.4**
IMOL	**Imola, Italy**	**0.46**	**297**	P	**Pb**	**10 49 53.0**	**+0.4**
IMOL				AML	AML		
	comp=E,15500μm,0.7s						
IMOL				AML	AML		
	comp=N,16400μm,0.8s						
IMOL				AML	AML		
	comp=E,15550μm,0.7s						
IMOL				AML	AML		
	comp=N,16450μm,0.8s						
PE3	**Peglio**	**0.47**	**164**	P	**Pb**	**10 49 53.0**	**+0.1**
PE3				AML	AML		
	comp=N,102μm,0.1s						
PE3				AML	AML		
	comp=E,71μm,0.1s						
PE3				AML	AML		
	comp=N,102μm,0.1s						
A308A	**Longastrino (F**	**0.48**	**333**	P	**Pn**	**10 49 54.3**	**-0.1**
ASQU	**Asqua**	**0.52**	**227**	P	**Pb**	**10 49 52.7**	**-1.0**
ASQU				S	**Sb**	**10 50 00.8**	**-0.2**
ASQU	**Asqua**	**0.52**	**227**	⇓P	**Pb**	**10 49 52.7**	**-1.0**
ASQU				S	**Sb**	**10 50 00.6**	**-0.3**
ASQU				AML	AML		
	comp=E,8965μm,0.8s						
ASQU				AML	AML		
	comp=N,11200μm,0.4s						
FSSB	**Fossombrone**	**0.57**	**144**	P	**Pb**	**10 49 54.7**	**+0.2**
FSSB				AML	AML		
	comp=N,7820μm,0.3s						
FSSB				AML	AML		
	comp=E,6510μm,0.3s						
BRIS	**BRISIGHELLA**	**0.58**	**270**	⇓P	**Pb**	**10 49 51.1**	**-3.5**
BRIS				S	**Sb**	**10 49 57.3**	**-5.1**
BRIS				AML	AML		
	comp=N,24100μm,0.4s						
BRIS				AML	AML		
	comp=N,22650μm,0.4s						
BRIS				AML	AML		
	comp=N,24100μm,0.4s						
BRIS				AML	AML		
	comp=E,18400μm,0.5s						
BRIS				AML	AML		
	comp=E,20150μm,0.4s						
CRE	**Caprese Michel**	**0.59**	**206**	P	**Pb**	**10 49 54.1**	**-0.9**
CRE				AML	AML		
	comp=E,5680μm,0.5s						
CRE				AML	AML		
	comp=N,5820μm,0.5s						
SSP9	**Sansepolcro**	**0.59**	**193**	P	**Pb**	**10 49 54.2**	**-0.7**
SSP9				S	**Sn**	**10 50 05.0**	**+0.2**
SSP9				AML	AML		
	comp=E,3790μm,0.8s						
SSP9				AML	AML		
	comp=N,4415μm,0.5s						
SSP9				AML	AML		
	comp=N,4405μm,0.5s						
SSP9				AML	AML		
	comp=E,3780μm,0.8s						
APEC	**Apecchio**	**0.60**	**173**	P	**Pb**	**10 49 54.7**	**-0.3**
APEC				AML	AML		
	comp=E,1505μm,0.3s						
APEC				AML	AML		
	comp=N,1225μm,1.2s						
PIEI	**Pieia**	**0.64**	**165**	P	**Pb**	**10 49 55.5**	**-0.2**
PIEI				S	**Sn**	**10 50 05.0**	**-0.9**
PIEI				AML	AML		
	comp=E,4870μm,1.6s						
PIEI				AML	AML		
	comp=N,3505μm,0.7s						
PIEI				AML	AML		
	comp=E,5105μm,1.5s						
MTRZ	**Monterenzio**	**0.65**	**290**	P	**Pn**	**10 49 56.5**	**-0.3**
MTRZ	**Monterenzio**	**0.65**	**290**	P	**Pb**	**10 49 56.4**	**+0.5**
MTRZ				AML	AML		
	comp=E,9110μm,1.2s						
MTRZ				AML	AML		
	comp=N,6280μm,1.1s						
MTRZ				AML	AML		
	comp=N,6190μm,1.1s						
MTRZ				AML	AML		
	comp=E,8810μm,1.2s						
RUFI	**Rufina**	**0.66**	**242**	P	**Pb**	**10 49 55.0**	**-1.0**
RUFI				S	**Sb**	**10 50 04.7**	**0.0**
RUFI	**Rufina**	**0.66**	**242**	⇓P	**Pb**	**10 49 55.0**	**-1.0**
RUFI				S	**Sb**	**10 50 04.4**	**-0.4**
RUFI				AML	AML		
	comp=E,3930μm,0.5s						
RUFI				AML	AML		
	comp=N,4130μm,0.8s						
SEI	**Scarperia**	**0.70**	**262**	P	**Pb**	**10 49 55.5**	**-1.1**
SEI	**Scarperia**	**0.70**	**262**	P	**Pb**	**10 49 55.5**	**-1.1**
FRON	**Frontone**	**0.70**	**155**	P	**Pn**	**10 49 57.2**	**-0.3**
FRON				AML	AML		
	comp=E,2855μm,0.6s						
FRON				AML	AML		
	comp=N,3010μm,0.3s						
FRON				AML	AML		
	comp=E,6775μm,1.5s						
FRON				AML	AML		
	comp=N,7895μm,0.5s						
ATPI	**Pietralunga -**	**0.70**	**175**	P	**Pb**	**10 49 56.8**	**0.0**
ATPI				AML	AML		
	comp=E,3330μm,0.7s						
ATPI				AML	AML		
	comp=N,3990μm,0.5s						
ATPI				AML	AML		
	comp=N,6195μm,1.4s						
ATPI				AML	AML		
	comp=E,3790μm,0.9s						
FIU	**Minerbio Fiu**	**0.77**	**310**	P	**Pn**	**10 50 00.8**	**+2.5**
FIU				AML	AML		
	comp=N,20250μm,0.4s						
FIU				AML	AML		
	comp=N,20200μm,0.4s						
FIU				AML	AML		
	comp=E,15000μm,0.7s						
ATVO	**AVT- Monte Val**	**0.77**	**175**	P	**Pn**	**10 49 58.2**	**-0.3**
ARVD	**Arcevia**	**0.80**	**145**	P	**Pn**	**10 49 59.2**	**+0.4**
ARVD				AML	AML		
	comp=N,3010μm,0.4s						
ARVD				AML	AML		
	comp=E,2150μm,1.1s						
ARVD				AML	AML		
	comp=E,6735μm,0.9s						
ARVD				AML	AML		
	comp=N,5965μm,0.1s						
ATFO	**Monte Foce - G**	**0.81**	**167**	P	**Pb**	**10 49 58.6**	**+0.1**
ATFO				AML	AML		
	comp=N,3005μm,0.5s						
ATFO				AML	AML		
	comp=E,4775μm,0.6s						
ATFO				AML	AML		
	comp=E,12100μm,0.4s						
ATFO				AML	AML		
	comp=N,11800μm,0.4s						
A307A	**Bentivoglio (B**	**0.81**	**309**	P	**Pn**	**10 50 01.2**	**+2.3**
A305A	**Porto Tolle (R**	**0.81**	**6**	P	**Pn**	**10 50 01.2**	**+2.3**
ATMI	**Monte Miggiano**	**0.82**	**182**	AML	AML		
	comp=E,21700μm,0.7s						
ATMI				AML	AML		
	comp=N,19300μm,0.3s						
FNVD	**Fontana Vidola**	**0.86**	**271**	P	**Pb**	**10 49 58.8**	**-0.6**
FNVD				AML	AML		
	comp=N,4300μm,0.6s						
FNVD				AML	AML		
	comp=E,3420μm,0.5s						
CAFI	**Castiglion Fio**	**0.86**	**197**	P	**Pb**	**10 49 59.0**	**-0.4**
CAFI				AML	AML		
	comp=E,2655μm,0.7s						
CAFI				AML	AML		
	comp=N,3440μm,0.5s						
CAFI				AML	AML		
	comp=E,2675μm,0.7s						
CAFI				AML	AML		
	comp=N,3545μm,0.5s						
CAFI				AML	AML		
	comp=N,4030μm,0.8s						
CAFI				AML	AML		
	comp=E,8455μm,0.6s						
CAFI				AML	AML		
	comp=N,4135μm,0.8s						
CAFI				AML	AML		
	comp=E,8670μm,0.5s						
MPPT	**Montemurlo**	**0.90**	**258**	P	**Pb**	**10 49 59.8**	**-0.4**
MPPT				AML	AML		
	comp=N,1805μm,0.7s						
MPPT				AML	AML		
	comp=N,1810μm,0.7s						
MPPT				AML	AML		
	comp=E,2010μm,0.5s						
FOSV	**Fossato di Vic**	**0.92**	**159**	P	**Pn**	**10 50 00.7**	**+0.2**
FOSV				AML	AML		
	comp=N,11250μm,1.1s						
FOSV				AML	AML		
	comp=E,9955μm,0.8s						
ATTE	**AVT- Monte Tez**	**0.95**	**178**	P	**Pb**	**10 50 01.4**	**+0.4**
ATTE				AML	AML		
	comp=N,9500μm,0.4s						
ATTE				AML	AML		
	comp=E,10120μm,0.5s						
MTCR	**Monte La Croce**	**0.96**	**263**	P	**Pn**	**10 50 00.7**	**-0.4**
MTCR	**Monte La Croce**	**0.96**	**263**	P	**Pn**	**10 50 00.5**	**-0.6**
ZCCA	**Zocca**	**0.98**	**282**	AML	AML		
	comp=N,1209μm,0.6s						
ZCCA				AML	AML		
	comp=E,1340μm,1.2s						
ZCCA				AML	AML		
	comp=N,1208μm,0.6s						
ZCCA				AML	AML		
	comp=E,1335μm,1.2s						
ZCCA				AML	AML		
	comp=N,1365μm,1.4s						
ZCCA				AML	AML		
	comp=E,1345μm,1.2s						
ATCC	**AVT- Casa Cast**	**1.00**	**166**	P	**Pb**	**10 50 02.0**	**+0.3**
ATCC				AML	AML		
	comp=N,26200μm,0.5s						
ATCC				AML	AML		
	comp=E,31150μm,1.0s						
OSSC	**Osservatorio P**	**1.00**	**231**	P	**Pn**	**10 50 00.4**	**-1.1**
OSSC	**Osservatorio P**	**1.00**	**231**	P	**Pn**	**10 50 00.4**	**-1.1**
OSSC				AML	AML		
	comp=N,3135μm,0.6s						
OSSC				AML	AML		
	comp=N,3130μm,0.6s						
OSSC				AML	AML		
	comp=E,3080μm,0.5s						
OSSC				AML	AML		
	comp=N,3495μm,0.9s						
OSSC				AML	AML		
	comp=E,3500μm,0.9s						
CSNT	**Castellina Chi**	**1.01**	**228**	P	**Pn**	**10 50 01.8**	**+0.1**
CSNT	**Castellina Chi**	**1.01**	**228**	P	**Pn**	**10 50 01.6**	**0.0**
CSNT				AML	AML		
	comp=N,2520μm,0.5s						
CSNT				AML	AML		
	comp=E,3370μm,0.5s						
SNTG	**Esanatoglia**	**1.01**	**153**	P	**Pb**	**10 50 02.3**	**+0.4**
SNTG				AML	AML		
	comp=N,13650μm,0.7s						
SNTG				AML	AML		
	comp=E,10905μm,0.4s						
SNTG				AML	AML		
	comp=E,10905μm,0.4s						
SNTG				AML	AML		
	comp=N,13000μm,0.7s						
CRMI	**Carmignano**	**1.04**	**250**	P	**Pn**	**10 50 02.1**	**0.0**
CRMI	**Carmignano**	**1.04**	**250**	P	**Pn**	**10 50 01.7**	**-0.4**
RAVA	**Ravarino**	**1.05**	**306**	P	**Pb**	**10 50 05.5**	**+3.0**
RAVA				S	**Sn**	**10 50 22.0**	**+6.0**
AOI	**Ancona**	**1.11**	**122**	P	**Pb**	**10 50 05.7**	**+2.0**
AOI				AML	AML		
	comp=N,6480μm,0.3s						
AOI				AML	AML		
	comp=E,8070μm,0.3s						
SERM	**Sermide**	**1.12**	**320**	P	**Pb**	**10 50 06.0**	**+2.2**
SERM	**Sermide**	**1.12**	**320**	P	**Pb**	**10 50 05.2**	**+1.3**
SERM				AML	AML		
	comp=E,2470μm,0.4s						
SERM				AML	AML		
	comp=N,4420μm,0.5s						
SERM				AML	AML		
	comp=N,2460μm,0.3s						
SERM				AML	AML		
	comp=E,4405μm,0.7s						
POPM	**Popiglio**	**1.13**	**265**	P	**Pb**	**10 50 04.6**	**+0.6**
POPM	**Popiglio**	**1.13**	**265**	P	**Pb**	**10 50 03.8**	**-0.2**
POPM				AML	AML		
	comp=E,1330μm,0.8s						
POPM				AML	AML		
	comp=N,1220μm,1.6s						
PP3	**Marolino**	**1.22**	**129**	AML	AML		
	comp=N,22350μm,0.4s						
PP3				AML	AML		
	comp=N,21950μm,0.5s						
PP3				AML	AML		
	comp=E,30050μm,0.7s						
PP3				AML	AML		
	comp=E,29050μm,0.7s						
BDI	**Bagni Di Lucca**	**1.24**	**266**	P	**Pb**	**10 50 06.2**	**+0.3**
BDI				AML	AML		
	comp=E,1430μm,1.0s						
BDI				AML	AML		
	comp=E,530μm,1.0s						
BDI				AML	AML		
	comp=N,1325μm,1.5s						
BDI				AML	AML		
	comp=N,568μm,1.2s						
MGAB	**Montegabbione**	**1.25**	**187**	P	**Pb**	**10 50 07.1**	**+1.1**
MGAB				AML	AML		
	comp=E,26650μm,1.2s						
MGAB				AML	AML		
	comp=N,27650μm,0.6s						
FROS	**Frosini**	**1.26**	**222**	P	**Pb**	**10 50 06.6**	**+0.3**
FROS	**Frosini**	**1.26**	**222**	P	**Pb**	**10 50 06.2**	**0.0**
FROS				AML	AML		
	comp=N,1930μm,0.8s						
FROS				AML	AML		
	comp=E,1500μm,0.9s						
BRJN	**Brijuni**	**1.27**	**53**	P	**Pb**	**10 50 06.4**	**0.0**
TEOL	**Teolo**	**1.29**	**339**	P	**Pb**	**10 50 06.5**	**-0.2**
TEOL				AML	AML		
	comp=E,8335μm,0.5s						
TEOL				AML	AML		
	comp=N,6265μm,0.5s						
CARD	**Cardoso**	**1.33**	**265**	P	**Pb**	**10 50 07.5**	**+0.2**
CARD	**Cardoso**	**1.33**	**265**	P	**Pn**	**10 50 06.6**	**+0.6**
CARD				AML	AML		
	comp=E,977μm,1.3s						
CARD				AML	AML		
	comp=N,1028μm,0.5s						
MAIM	**Mastiano**	**1.34**	**260**	P	**Pb**	**10 50 07.7**	**+0.2**
MAIM	**Mastiano**	**1.34**	**260**	P	**Pb**	**10 50 07.1**	**-0.4**
MAIM				AML	AML		
	comp=E,1135μm,0.6s						
MAIM				AML	AML		
	comp=N,1008μm,0.5s						
SACS	**San Casciano d**	**1.34**	**193**	P	**Pb**	**10 50 07.8**	**+0.2**
SACS				AML	AML		
	comp=E,6920μm,1.6s						
SACS				AML	AML		
	comp=N,7290μm,1.5s						
SACS				AML	AML		
	comp=E,7260μm,1.6s						
SACS				AML	AML		
	comp=N,7035μm,0.5s						
PII	**Pisa**	**1.36**	**252**	P	**Pb**	**10 50 07.7**	**-0.2**
PII	**Pisa**	**1.36**	**252**	P	**Pb**	**10 50 07.4**	**-0.5**
PII				AML	AML		
	comp=E,2670μm,0.4s						
PII				AML	AML		
	comp=N,3115μm,1.1s						
SARO	**Sassorosso**	**1.38**	**272**	P	**Pb**	**10 50 08.7**	**+0.4**
VLC	**Villacollemand**	**1.39**	**271**	P	**Pb**	**10 50 08.9**	**+0.5**
VLC	**Villacollemand**	**1.39**	**271**	P	**Pb**	**10 50 08.7**	**+0.3**
VLC				AML	AML		
	comp=N,628μm,1.2s						
VLC				AML	AML		
	comp=E,620μm,0.6s						
VLC				AML	AML		
	comp=E,634μm,0.6s						
VLC				AML	AML		
	comp=N,606μm,1.2s						
SF04	**Casetta**	**1.40**	**200**	AML	AML		
	comp=E,6085μm,0.5s						
SF04				AML	AML		
	comp=N,3385μm,0.7s						
OPPE	**Oppeano**	**1.41**	**325**	P	**Pb**	**10 50 08.7**	**-0.1**
OPPE	**Oppeano**	**1.41**	**325**	P	**Pb**	**10 50 08.4**	**-0.3**
OPPE				AML	AML		
	comp=E,4550μm,1.1s						
OPPE				AML	AML		
	comp=N,3835μm,0.6s						
A319A	**Santa Luce (PI**	**1.43**	**242**	P	**Pb**	**10 50 08.5**	**-0.5**
ZOVE	**Zovencedo**	**1.43**	**336**	P	**Pn**	**10 50 08.2**	**+0.7**
ARCI	**Arcidosso**	**1.44**	**205**	P	**Pb**	**10 50 08.5**	**-0.8**
ARCI				AML	AML		
	comp=N,1425μm,0.8s						
ARCI				AML	AML		
	comp=E,1087μm,1.0s						
SF01	**Poggio Pratacc**	**1.45**	**202**	AML	AML		
	comp=E,6400μm,0.6s						
SF01				AML	AML		
	comp=N,4585μm,0.4s						
MCIV	**Monte Civitell**	**1.45**	**199**	P	**Pb**	**10 50 09.9**	**+0.4**
MCIV				AML	AML		
	comp=N,3005μm,0.5s						
MCIV				AML	AML		
	comp=E,2885μm,0.4s						
TRIF	**Trifonti**	**1.46**	**225**	P	**Pb**	**10 50 08.9**	**-0.7**
TRIF				AML	AML		
	comp=N,803μm,0.6s						
TRIF				AML	AML		
	comp=E,856μm,0.4s						
A301A	**Isiata (VE)**	**1.48**	**8**	P	**Pb**	**10 50 09.6**	**-0.4**
A302A	**Resana (TV)**	**1.50**	**351**	P	**Pb**	**10 50 10.3**	**0.0**
EQUI	**Equi**	**1.56**	**271**	P	**Pb**	**10 50 11.1**	**-0.1**
EQUI	**Equi**	**1.56**	**271**	P	**Pb**	**10 50 11.1**	**-0.1**
EQUI				AML	AML		
	comp=N,607μm,0.4s						
EQUI				AML	AML		
	comp=E,422μm,0.9s						
PRMA	**PARMA**	**1.56**	**294**	P	**Pb**	**10 50 12.4**	**+1.1**
A318A	**Donoratico (LI**	**1.63**	**231**	P	**Pn**	**10 50 10.7**	**+0.5**
GRAM	**Graiana**	**1.65**	**283**	P	**Pb**	**10 50 14.0**	**+1.1**
GRAM				AML	AML		
	comp=E,1395μm,0.8s						
GRAM				AML	AML		
	comp=N,1152μm,0.4s						
ASOL	**Asolo**	**1.67**	**350**	P	**Pb**	**10 50 12.5**	**-0.7**
CRND	**Cornuda**	**1.69**	**354**	P	**Pb**	**10 50 12.4**	**-1.1**
CASP	**Castiglione de**	**1.72**	**218**	P	**Pn**	**10 50 12.3**	**+0.8**
CASP				AML	AML		
	comp=E,759μm,0.7s						
CASP				AML	AML		
	comp=N,714μm,0.4s						
ROVR	**Rover Verones**	**1.73**	**330**	P	**Pn**	**10 50 12.7**	**+0.9**
ROVR				AML	AML		
	comp=N,1365μm,0.3s						
ROVR				AML	AML		

comp=E,754μm,0.4s
CGRP Cima Grappa 1.77 348 P Pn 10 50 12.9 +0.7
CGRP AML AML
comp=E,2295μm,1.2s
CGRP AML AML
comp=N,2440μm,0.5s
CGRP AML AML
comp=N,2440μm,0.5s
CGRP AML AML
comp=E,2385μm,1.2s
PLMA Palmaria, Port 1.78 268 P Pb 10 50 13.7 -1.3
PLMA AML AML
comp=E,434μm,0.6s
PLMA AML AML
comp=N,414μm,1.0s
SKDS Skadanscina 1.84 40 ⇓*i*Pn **Pn 10 50 13.6 +0.4**
SKDS *i* Sn **Sb 10 50 37.5 -1.4**
SKDS *i* 10 50 46.3
SKDS IAML 10 50 52.5
comp=Z,529nm,0.4s
VARN Col Varnada, M 1.85 355 P Pn 10 50 14.0 +0.7
VARN AML AML
comp=E,2955μm,0.8s
VARN AML AML
comp=N,2145μm,1.2s
VARN AML AML
comp=E,2940μm,0.8s
VARN AML AML
comp=N,2160μm,1.2s
CAE Caneva 1.86 3 P Pn 10 50 14.2 +0.8
FRE8 Fregona 1.86 1 P Pn 10 50 14.3 +0.9
GROG Isola di Gorgo 1.90 248 P Pn 10 50 14.8 +0.9
GROG AML AML
comp=E,490μm,0.6s
GROG AML AML
comp=N,550μm,0.6s
MAON Monte Argentar 1.93 207 P Pb 10 50 16.3 -1.3
MAON AML AML
comp=N,778μm,0.6s
MAON AML AML
comp=E,972μm,1.0s
SALO Salr 1.94 320 P Pn 10 50 15.7 +1.2
CTI Castel Tesino 1.95 346 P Pn 10 50 15.8 +1.0
CTI AML AML
comp=E,1670μm,0.5s
CTI AML AML
comp=N,1755μm,1.2s
MSSA Maissana 2.02 276 P Pb 10 50 18.0 -1.2
MSSA AML AML
comp=E,412μm,0.9s
MSSA AML AML
comp=N,552μm,0.6s
SABO M.te Sabotino 2.04 26 P Pn 10 50 16.9 +1.0
SABO AML AML
comp=N,2325μm,0.4s
SABO AML AML
comp=E,6060μm,0.5s
SABO AML AML
comp=E,1605μm,0.5s
SABO AML AML
comp=N,9515μm,0.4s
LUSI Trento, Gardas 2.05 332 P Pn 10 50 17.3 +1.2
LUSI AML AML
comp=N,1660μm,0.6s
LUSI AML AML
comp=E,1290μm,1.5s
STAL STALIGIAL 2.13 7 P Pn 10 50 18.0 +0.9
STAL AML AML
comp=E,1655μm,0.8s
STAL AML AML
comp=N,1545μm,0.3s
STAL AML AML
comp=E,1970μm,0.3s
STAL AML AML
comp=N,1740μm,1.3s
AGOR Agordo 2.14 355 P Pn 10 50 18.3 +1.1
MPRI Monte Prat 2.14 13 P Pn 10 50 18.8 +1.5
MPRI AML AML
comp=E,2340μm,0.4s
MPRI AML AML
comp=N,3245μm,0.4s
GAGG Gaggia 2.16 334 P Pn 10 50 18.8 +1.2
GAGG AML AML
comp=E,2130μm,0.9s
GAGG AML AML
comp=N,2155μm,0.9s
GAGG AML AML
comp=E,1625μm,0.8s
GAGG AML AML
comp=N,1535μm,0.8s
CIMO Cimolais 2.16 2 P Pn 10 50 18.1 +0.6
CIMO AML AML
comp=E,342μm,0.4s
CIMO AML AML
comp=E,332μm,0.4s
CIMO AML AML
comp=N,401μm,1.3s
CIMO AML AML
comp=N,408μm,1.3s
GORR Gorreto 2.21 283 AML AML
comp=E,556μm,0.7s
GORR AML AML
comp=N,531μm,0.7s
DRE Drenchia 2.23 24 P Pn 10 50 19.4 +0.9
MABI Malga Bissina 2.29 327 P Pn 10 50 20.7 +1.2
MABI AML AML
comp=E,251μm,0.5s
MABI AML AML
comp=N,266μm,0.8s
CLUD Cludinico 2.34 10 P Pn 10 50 21.1 +1.1
CLUD AML AML
comp=E,596μm,0.8s
CLUD AML AML
comp=N,612μm,0.6s
CLUD AML AML
comp=E,575μm,0.8s
CLUD AML AML
comp=N,630μm,0.7s
PTCC Patocco-Chiusa 2.37 18 P Pn 10 50 21.4 +0.9
PTCC AML AML
comp=N,545μm,0.4s
PTCC AML AML
comp=E,596μm,0.7s
KOSI Kohlern 2.40 344 P Pn 10 50 22.5 +1.5
KOSI AML AML
comp=N,878μm,0.5s
KOSI AML AML
comp=E,998μm,0.7s
ZOU Zoufplan 2.45 11 P Pn 10 50 23.1 +1.4
ZOU AML AML
comp=E,971μm,1.0s
ZOU AML AML
comp=N,583μm,0.8s
ZOU AML AML
comp=E,970μm,1.0s
ZOU AML AML
comp=N,608μm,0.8s
APPI Appiano 2.45 342 P Pn 10 50 23.2 +1.6
APPI AML AML
comp=N,1006μm,0.3s
APPI AML AML
comp=E,999μm,0.6s
PRED Cave del Predi 2.45 21 P Pn 10 50 22.6 +0.9
LJU Ljubljana 2.46 39 P Pn 10 50 23.0 +1.5
LJU AML AML
comp=N,6490μm,0.6s
LJU AML AML
comp=E,4935μm,0.7s
MORSI Morsiglia 2.46 242 P Pn 10 50 22.5 +1.0
MORSI S **Sn 10 50 52.9 +2.1**
FVI Forni Avoltri 2.47 7 P Pn 10 50 23.6 +1.8
FVI AML AML
comp=E,763μm,0.4s
FVI AML AML
comp=N,887μm,0.6s
ACOM Acomizza, Ital 2.54 19 P Pn 10 50 23.8 +0.9
ABTA Abfaltersbach 2.60 3 *e*Pn **Pn 10 50 25.5 +1.9**
comp=N,26nm,0.5s,SNR=7.9
MYKA Terra Mystica 2.65 20 *e*Pn **Pn 10 50 26.1 +1.8**
comp=N,7.2nm,0.3s
MOSI Grossmontoni 2.76 334 P Pn 10 50 28.8 +2.8
MOSI AML AML
comp=E,1365μm,0.5s
MOSI AML AML
comp=N,1615μm,1.1s
OBKA Obir 2.83 33 *e*Pn **Pn 10 50 28.6 +1.7**
comp=N,8.3nm,0.3s,SNR=9.6

ROSI Rosskopf 2.85 347 P Pn 10 50 29.2 +2.0
ROSI AML AML
comp=N,987μm,0.2s
ROSI AML AML
comp=E,756μm,0.8s
PGF Pioggiola 2.90 238 AML AML
comp=N,162μm,0.4s
PGF AML AML
comp=E,173μm,0.6s
PGF Pioggiola 2.90 238 P Pn 10 50 29.0 +1.2
PGF Pioggiola 2.90 238 S Sn 10 51 04.1 +2.2
MUGIO Muggio 2.92 308 P Pn 10 50 29.0 +1.0
MUGIO AML AML
comp=N,230μm,1.0s
MUGIO AML AML
comp=E,222μm,0.4s
CANO Canova, Maglio 2.93 272 P Pn 10 50 29.8 +1.6
CORF Corte 2.96 232 P Pn 10 50 30.9 +2.4
CORF S **Sn 10 51 06.7 +3.4**
SMPL Sampolo 3.02 228 P Pn 10 50 32.1 +2.6
SMPL AML AML
comp=N,66μm,1.4s
SMPL AML AML
comp=E,83μm,0.7s
SMPL Sampolo 3.02 228 P Pn 10 50 32.4 +3.0
SMPL S **Sb 10 51 09.7 -3.1**
VARE Varese 3.04 306 AML AML
comp=E,302μm,0.4s
VARE AML AML
comp=N,524μm,0.2s
FETA Feichten 3.08 339 *e*Pn **Pn 10 50 33.1 +2.8**
comp=N,4.8nm,0.2s,SNR=12
DAVOX Davos/Dischmat 3.14 328 Pn **Pn 10 50 33.3 +2.2**
comp=N,6.5nm,0.3s,baz=159,slow=21,SNR=20
comp=N,12nm,0.3s
DAVOX Davos/Dischmat 3.14 328 P Pn 10 50 34.1 +3.0
DAVOX AML AML
comp=E,146μm,1.0s
DAVOX AML AML
comp=N,181μm,0.4s
WTTA Wattenberg 3.15 352 *i* Pn **Pn 10 50 33.9 +2.7**
comp=N,7.7nm,0.2s
WTTA Wattenberg 3.15 352 P Pn 10 50 33.7 +2.4
WTTA AML AML
comp=N,508μm,0.8s
WTTA AML AML
comp=E,588μm,1.3s
SQTA Sankt Quirin 3.16 346 *e*Pn **Pn 10 50 33.7 +2.3**
comp=E,14nm,0.1s,SNR=11
SOKA Soboth 3.17 36 *e*Pn **Pb 10 50 36.0 -2.8**
comp=E,3.5nm,0.2s
WATA Walderalm 3.23 351 *i* Pn **Pn 10 50 35.3 +3.0**
comp=E,28nm,0.2s,SNR=12
MOTA Moosalm 3.30 346 *i* Pn **Pn 10 50 36.0 +2.6**
comp=E,3.8nm,0.2s,SNR=11
SAOF Saorge 3.43 269 P Pn 10 50 37.4 +2.3
SAOF S **Sn 10 51 16.6 +1.6**
RETA Reutte 3.51 343 *e*Pn **Pn 10 50 38.9 +2.8**
comp=E,8.5nm,0.2s,SNR=10
TRAV Traversella 3.52 294 P Pn 10 50 36.8 +0.5
TRAV AML AML
comp=E,169μm,1.2s
TRAV AML AML
comp=N,158μm,0.4s
TURF col de Turini 3.55 269 P Pn 10 50 39.4 +2.6
PLONS Plons/SG 3.55 326 AML AML
comp=E,95μm,0.5s
PLONS AML AML
comp=N,126μm,1.0s
DAVA Damuels 3.57 332 *e*Pn **Pn 10 50 40.2 +3.2**
comp=N,11nm,0.2s,SNR=9.9
ESCA l'Escarene 3.58 267 P Pn 10 50 38.7 +1.6
MMK Mattmark 3.62 303 P Pn 10 50 38.6 +0.9
MMK AML AML
comp=N,144μm,0.5s
MMK AML AML
comp=E,122μm,0.7s
BIOA Bad Ischl, Aus 3.66 14 *e*Pn **Pn 10 50 40.7 +2.6**
comp=E,20nm,0.4s,SNR=14
SPIF crte de Spivo 3.66 270 P Pn 10 50 41.0 +2.8
VBKN Vesuvio Bunker 3.67 154 AML AML
comp=N,2140μm,0.1s
VBKN AML AML
comp=E,3765μm,0.1s
CIRO Champorcher 3.67 295 P Pn 10 50 39.0 +0.5
CIRO AML AML
comp=E,85μm,0.7s
CIRO AML AML
comp=N,96μm,1.2s
BHB Bricherasio 3.68 283 P Pn 10 50 39.3 +0.9
BHB AML AML
comp=E,69μm,1.3s
BHB AML AML
comp=N,76μm,0.9s
MVIF Mont Vial 3.73 268 P Pn 10 50 43.1 +3.9
EMBD Embd, Matterta 3.78 305 P Pn 10 50 41.5 +1.7
ISO Isola 3.79 272 P Pn 10 50 42.2 +2.3
ARSA Arzberg 3.83 35 *i* Pn **Pn 10 50 41.6 +1.2**
comp=N,9.6nm,0.5s
ARSA Arzberg 3.83 35 P Pn 10 50 41.7 +1.2
ARSA AML AML
comp=N,64μm,1.3s
ARSA AML AML
comp=E,75μm,1.4s
BNALP Bannalp 3.85 316 P Pn 10 50 43.8 +2.8
BNALP AML AML
comp=E,123μm,0.6s
BNALP AML AML
comp=N,124μm,1.5s
BEHE Becsehely 3.91 52 P Pn 10 50 39.9 -1.6
LSD Lago del Serru 3.91 291 P Pn 10 50 41.9 +0.1
LSD AML AML
comp=N,56μm,1.0s
LSD AML AML
comp=E,63μm,0.3s
CALF Calern 3.92 266 P Pn 10 50 43.8 +2.1
MOA Molln 3.94 20 *i* Pn **Pn 10 50 44.2 +2.2**
comp=E,4.1nm,0.2s
SURF Saint Ours 3.96 277 P Pn 10 50 45.0 +2.6
DIX Grande Dixence 3.97 301 P Pn 10 50 44.4 +1.8
JAUF Jausiers 4.00 276 P Pn 10 50 45.6 +2.6
REMY Saint-Rhmy-en 4.03 297 P Pn 10 50 44.4 +1.0
REMY AML AML
comp=E,162μm,1.3s
REMY AML AML
comp=N,262μm,0.7s
CREF Crivoux 4.10 278 P Pn 10 50 47.1 +2.8
ZUR Degenried 4.14 322 P Pn 10 50 47.9 +3.2
TRIGF Trigance 4.29 267 P Pn 10 50 49.6 +2.8
RSL Roselend 4.32 293 P Pn 10 50 50.3 +2.9
OGDI Digne 4.33 272 P Pb 10 50 54.0 -4.5
AIGLE Aigle 4.37 302 P Pn 10 50 51.2 +3.2
OGSI Sixt 4.38 298 P Pn 10 50 51.3 +3.3
FLAF Flassans-sur-I 4.46 262 P Pn 10 50 51.5 +2.4
SULZ Cheisacher 4.47 320 P Pn 10 50 51.4 +2.1
SULZ Cheisacher 4.47 320 S Sn 10 51 35.4 -5.1
SLE Schleitheim 4.49 325 P Pn 10 50 51.4 +1.9
RONA Rosalia, Austr 4.50 37 *e*Pn **Pn 10 50 50.8 +1.0**
comp=N,4.0nm,0.3s
GUT Gutenstein 4.51 332 P Pn 10 50 51.2 +1.4
CONA Conrad Observa 4.51 32 *e*Pn **Pn 10 50 50.9 +1.0**
comp=N,4.4nm,0.6s
KOVH Kovagotottos 4.53 63 P Pn 10 50 50.6 +0.6
KOVH S **Sn 10 51 42.0 +0.1**
BALST Balsthal 4.54 316 S Sn 10 51 41.0 -1.2
BALST Balsthal 4.54 316 P Pn 10 50 51.8 +1.5
GDM Grand'Maison 4.54 286 P Pn 10 50 54.9 +4.4
TORNY Torny/Romont 4.59 307 P Pn 10 50 53.4 +2.5
TORNY Torny/Romont 4.59 307 S Sn 10 51 42.0 -1.4
ORIF Oris-en-Rattie 4.66 282 P Pn 10 50 55.1 +3.1
ASEAF Site Antares, 4.68 255 P Pn 10 50 53.4 +1.6
FELD Feldberg im Sc 4.78 323 P Pn 10 50 55.7 +2.1
GERES GERESS Array B 4.79 11 Pn **Pn 10 50 52.9 -0.8**
comp=N,2.6nm,0.3s,baz=189,slow=13,SNR=22
GERES Sn **Sn 10 51 48.2 -0.3**
comp=N,6.7nm,0.3s,baz=192,slow=25,SNR=5.0
GERES Lg Lg 10 52 08.7
comp=N,3.6nm,0.3s,baz=195,slow=28,SNR=4.4
comp=N,3.2nm,0.3s
GRN Grenoble 4.81 285 P Pn 10 50 57.0 +3.0
BOURR Bourrignon 4.81 314 P Pn 10 50 56.2 +2.2
BSTF la Bastide-des 4.82 269 P Pn 10 50 57.1 +3.0
CKRC Cesky Krumlov 4.87 16 *e*SN **Sn 10 51 49.8 -0.4**
KIZ Kirchzarten 4.88 323 P Pn 10 50 56.5 +1.6
GIMEL St. Georges / 4.88 301 P Pn 10 50 57.6 +2.6

OGSM Saint Maurice 4.92 290 P Pn 10 50 57.6 +2.1
MORH Mrgy, Hungar 4.93 63 P Pn 10 50 55.7 +0.2
RUSF Rustrel 4.93 270 P Pn 10 50 59.7 +4.1
BRANT Les Verrieres 4.96 306 P Pn 10 50 57.9 +1.8
BRANT Les Verrieres 4.96 306 S Sn 10 51 50.6 -2.1
CHMF Charmoille 5.03 310 P Pn 10 50 58.4 +1.4
KHC Kasperske Hory 5.05 9 *e*PN **Pn 10 50 58.1 +0.8**
KHC *e*SN **Sn 10 51 53.8 -1.1**
VOGT Vogtsburg - To 5.08 322 P Pn 10 50 59.6 +1.8
OG35 Corcelles 5.13 294 P Pn 10 51 00.8 +2.3
MOF Molkenrain 5.17 318 P Pn 10 51 00.1 +1.1
RIVEL MONT RIVEL 5.20 302 P Pn 10 51 01.7 +2.4
BOUC Bouclans 5.25 308 P Pn 10 51 01.7 +1.7
CSKK Cskako 5.25 50 P Pb 10 51 11.7 -2.5
RONF Ronchamp 5.32 314 P Pn 10 51 02.3 +1.4
ECH Echery 5.42 320 P Pn 10 51 03.9 +1.6
ECH Echery 5.42 320 P Pn 10 51 03.7 +1.5
WLS Welschbruch 5.47 323 P Pn 10 51 05.2 +2.1
WLS S **Sn 10 52 04.2 -1.1**
SSB Saint Sauveur 5.65 284 P Pn 10 51 06.6 +1.1
SSB S **Sn 10 52 06.8 -2.8**
KRUC Moravsky 5.66 28 *e*PN **Pn 10 51 05.9 +0.4**
KRUC *e*SN **Sn 10 52 08.1 -1.6**
CIEL Dossenheim-sur 5.79 326 P Pn 10 51 09.4 +2.0
CIEL S **Sn 10 52 12.0 -1.1**
VRAC Vranov 5.94 28 Pn **Pn 10 51 09.4 +0.1**
comp=N,0.6nm,0.3s,baz=225,slow=13,SNR=1.2
VRAC Sn **Sn 10 52 16.4 -0.1**
comp=N,1.2nm,0.3s,baz=164,slow=18,SNR=2.0
comp=N,1.9nm,0.4s
VRAC Vranov 5.94 28 *e*PN **Sn 10 52 16.6 +0.1**
GOPC GO Pecny, Ondr 6.01 15 *e*PN **Pn 10 51 11.1 +0.8**
GOPC *e*SN **Sn 10 52 15.9 -2.4**
PLYF Puligny Montra 6.01 300 P Pn 10 51 11.4 +1.1
PRU Pruhonice 6.03 14 *e*PN **Pn 10 51 11.2 +0.5**
PRU *e*SN **Sn 10 52 16.5 -2.4**
NKC Novy Kostel 6.08 1 *e*PN **Pn 10 51 12.8 +1.4**
NKC *e*SN **Sn 10 52 18.7 -1.5**
ABH Alteburg 6.59 332 P Pn 10 51 20.7 +2.3
LOR Lormes 6.69 301 P Pn 10 51 21.1 +1.4
DPC Dobruska-Polom 6.77 22 *e*PN **Pn 10 51 20.5 -0.4**
CHVC Chvalec 6.92 20 *e*PN **Pn 10 51 23.3 +0.4**
OSTC Ostas 6.93 21 *e*PN **Pn 10 51 22.8 -0.3**
CLL Collm 7.17 3 *e*Pn **Pn 10 51 27.0 +0.7**
CLL *ex* x 10 51 41.0
CLL *e*Sn Sn 10 52 36.0 -11
CLL *ex* x 10 53 14.0
CLL *ex* x 10 53 18.0
CLL *ex* x 10 53 24.0
CLL *e*Sg Sb 10 53 33.0 +21
comp=Z,16nm,0.9s
FILF Fillols 7.29 261 P Pn 10 51 31.4 +3.4
MTLF Montolieu 7.36 267 P Pn 10 51 31.4 +2.5
EKA Eskdalemuir Ar 14.97 324 Pn **Pn 10 53 13.7 +0.8**
baz=138,slow=15
comp=Z,0.1nm,0.3s
HFS Hagfors 16.03 3 Pn **Pn 10 53 25.6 -1.0**
comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=1.5
comp=Z,2.7nm,1.0s
NOA NORSAR Array B 16.93 358 Pn **Pn 10 53 35.6 -2.5**
comp=Z,0.5nm,0.8s,baz=174,slow=12,SNR=1.0
FINES FINESS Array B 19.14 20 P Pn 10 54 04.7 -0.4
comp=Z,0.1nm,0.3s,baz=207,slow=15,SNR=1.8
comp=Z,2.4nm,0.9s
TORD Torodi Ar. Bea 32.21 200 P P 10 56 09.3 0.0
comp=Z,1.8nm,0.6s,baz=11,slow=8.7,SNR=10
comp=Z,1.8nm,0.6s
MKAR Makanchi Array 47.65 61 P P 10 58 18.0 +0.9
comp=Z,0.2nm,0.6s,baz=287,slow=9.9,SNR=1.2
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 86.39 308 P P 11 02 24.6 +1.1
comp=Z,0.2nm,0.8s,baz=55,slow=6.9,SNR=1.8
comp=Z,0.2nm,0.8s

ROM ***30*** *10:50:37.4±0.0, 42°.784N±0°.001×13°.085E±0°.003, h11km, ML3.9/50, Error ellipse: s-maj=0.2km s-min=0.1km az=242.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.75; $M_{\theta\theta}$=0.39; $M_{\phi\phi}$=2.14; $M_{r\theta}$=0.85; $M_{\theta\phi}$=0.24; $M_{\phi r}$=4.05; Fault plane solution: M_0=4.58672×10^{14} NP1:ϕ_s=205.00000°, δ=15.00000°, λ=-55.00000°. NP2: ϕ_s=349.00000°, δ=78.00000°, λ=-99.00000°.*
IDC ***30*** *10:50:37.2±1.2, 42°.78N×13°.02E, h10km, MI3.8/24, Error ellipse: s-maj=21.5km s-min=20.9km az=29.0*
LDG ***30*** *10:50:38.6±0.2, 42°.78N×13°.02E, h10km, MI3.8/24, Error ellipse: s-maj=5.6km s-min=3.5km az=44.0*
ISC 30 10:50:38.1±0.6,**42°.78N**±0°.01×**13°.05E**±0°.02,**h11**km±3km, **n196**,σ**2**s**05**/254,**mb4.1**/8,**15C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.03**	**185**	⇑P	**Pg**	**10 50 39.9**	**-0.4**
T1212				S	**Sg**	**10 50 41.2**	**-0.6**
T1213	**Norcia, Frazio**	**0.08**	**135**	⇓P	**Pg**	**10 50 40.0**	**-0.7**
T1213				S	**Sg**	**10 50 41.5**	**-1.1**
T1216	**Preci, Frazion**	**0.11**	**349**	⇑P	**Pg**	**10 50 40.8**	**-0.3**
T1216				S	**Sg**	**10 50 42.8**	**-0.4**
T1217	**Poggiodomo (PG**	**0.11**	**231**	⇑P	**Pg**	**10 50 41.2**	**+0.1**
T1217				S	**Sg**	**10 50 43.7**	**+0.4**
T1217				AML	AML		
	comp=E,37750μm,0.3s						
T1217				AML	AML		
	comp=N,82700μm,0.4s						
T1217				AML	AML		
	comp=N,84750μm,0.4s						
T1217				AML	AML		
	comp=N,82700μm,0.4s						
T1217				AML	AML		
	comp=E,37750μm,0.4s						
T1217				AML	AML		
	comp=E,38150μm,0.4s						
T1217				AML	AML		
	comp=E,38150μm,0.3s						
T1214	**Arquata del Tr**	**0.12**	**101**	⇓P	**Pg**	**10 50 40.5**	**-0.8**
T1214				S	**Sg**	**10 50 42.3**	**-1.3**
T1218	**Civita (PG)**	**0.12**	**156**	P	**Pg**	**10 50 40.9**	**-0.4**
T1218				S	**Sg**	**10 50 43.2**	**-0.3**
T1245	**Castelsantange**	**0.13**	**54**	⇓P	**Pg**	**10 50 40.6**	**-0.8**
T1245				S	**Sg**	**10 50 42.5**	**-1.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1215	**Vallo di Nera,**	**0.13**	**279**	⇑P	**Pg**	**10 50 41.5**	**+0.1**
T1215				S	**Sg**	**10 50 44.3**	**+0.6**
T1215				AML	AML		
	comp=E,36900μm,1.4s						
T1215				AML	AML		
	comp=E,36950μm,1.3s						
T1215				AML	AML		
	comp=N,34050μm,1.1s						
T1215				AML	AML		
	comp=E,39000μm,0.5s						
T1215				AML	AML		
	comp=N,34300μm,1.1s						
T1215				AML	AML		
	comp=N,34000μm,1.1s						
T1215				AML	AML		
	comp=N,34300μm,1.1s						
T1215				AML	AML		
	comp=E,36950μm,1.4s						
T1215				AML	AML		
	comp=E,39000μm,0.5s						
LNSS	**Leonessa**	**0.18**	**182**	⇑P	**Pg**	**10 50 42.1**	**0.0**
LNSS				S	**Sg**	**10 50 45.3**	**+0.4**
LNSS				AML	AML		
	comp=N,61500μm,1.1s						
LNSS				AML	AML		
	comp=E,23350μm,0.4s						
FEMA	**Monte Fema**	**0.18**	**0**	P	**Pg**	**10 50 41.4**	**-0.8**
FEMA				S	**Sg**	**10 50 44.7**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1244	**Arquata del Tr**	**0.18**	**98**	P	**Pg**	**10 50 41.6**	**-0.6**
T1244				S	**Sg**	**10 50 44.7**	**-0.4**
T1201	**Domo (RI)**	**0.19**	**130**	P	**Pg**	**10 50 42.1**	**-0.3**
T1201				S	**Sg**	**10 50 45.5**	**+0.2**
T1204	**Amatrice, Fraz**	**0.22**	**118**	⇑P	**Pg**	**10 50 42.4**	**-0.5**

T1204				S	Sg	10 50 45.9	-0.3
T1204				AML	AML		
	comp=E,66800µm,0.4s						
T1204				AML	AML		
	comp=N,53800µm,0.4s						
T1204				AML	AML		
	comp=E,66750µm,0.4s						
T1204				AML	AML		
	comp=N,53850µm,0.4s						
MMO1	**Montemonaco**	**0.24**	**60**	P	**Pg**	**10 50 42.2**	**-0.9**
MMO1				S	**Sg**	**10 50 45.7**	**-0.8**
FDMO	**Fiordimonte**	**0.26**	**6**	P	**Pg**	**10 50 43.0**	**-0.5**
FDMO				S	**Sg**	**10 50 46.9**	**-0.1**
T1256	**Bolognola (MC)**	**0.26**	**30**	P	**Pg**	**10 50 42.8**	**-0.8**
T1256				S	**Sg**	**10 50 46.8**	**-0.4**
T1219	**Muccia, Frazio**	**0.28**	**354**	P	**Pg**	**10 50 43.4**	**-0.4**
T1219				S	**Sg**	**10 50 47.8**	**+0.1**
T1211	**Morro Reatino**	**0.29**	**210**	P	**Pg**	**10 50 44.1**	**+0.1**
T1211				S	**Sg**	**10 50 48.6**	**+0.7**
T1211				AML	AML		
	comp=E,17550µm,0.8s						
T1211				AML	AML		
	comp=N,36100µm,0.3s						
T1211				AML	AML		
	comp=E,17300µm,0.8s						
T1211				AML	AML		
	comp=N,35850µm,0.3s						
T1211				AML	AML		
	comp=N,36050µm,0.2s						
T1211				AML	AML		
	comp=E,17250µm,0.8s						
T1211				AML	AML		
	comp=N,35800µm,0.2s						
T1211				AML	AML		
	comp=E,17500µm,0.8s						
ARRO	**Arrone**	**0.29**	**226**	P	**Pg**	**10 50 44.2**	**+0.1**
ARRO				S	**Sb**	**10 50 49.0**	**-1.1**
ARRO				AML	AML		
	comp=E,15750µm,0.7s						
ARRO				AML	AML		
	comp=N,12360µm,0.7s						
ARRO				AML	AML		
	comp=N,12385µm,0.7s						
ARRO				AML	AML		
	comp=E,15800µm,0.7s						
ARRO				AML	AML		
	comp=N,12350µm,0.7s						
T1241	**Roccafluvione,**	**0.29**	**75**	⇑P	**Pg**	**10 50 43.7**	**-0.4**
T1241				S	**Sg**	**10 50 47.9**	**-0.2**
T1241				AML	AML		
	comp=E,94350µm,0.3s						
T1241				AML	AML		
	comp=E,94200µm,0.3s						
T1241				AML	AML		
	comp=N,72100µm,0.5s						
T1241				AML	AML		
	comp=E,94500µm,0.3s						
AM05	**Amandola Campo**	**0.30**	**49**	⇑P	**Pg**	**10 50 43.5**	**-0.7**
AM05				S	**Sg**	**10 50 47.8**	**-0.4**
AM05				AML	AML		
	comp=N,16100µm,0.5s						
AM05				AML	AML		
	comp=E,71450µm,0.5s						
AM05				AML	AML		
	comp=N,3320µm,0.8s						
AM05				AML	AML		
	comp=E,18850µm,0.6s						
AM05				AML	AML		
	comp=N,3430µm,0.3s						
RM33	**Pellescritta (**	**0.30**	**156**	P	**Pg**	**10 50 43.8**	**-0.4**
RM33				S	**Sg**	**10 50 48.4**	**+0.1**
RM33				AML	AML		
	comp=E,19550µm,0.2s						
RM33				AML	AML		
	comp=E,18950µm,0.2s						
RM33				AML	AML		
	comp=N,15800µm,0.9s						
RM33				AML	AML		
	comp=N,15850µm,0.9s						
RM33				AML	AML		
	comp=E,19550µm,0.2s						
RM33				AML	AML		
	comp=N,15900µm,0.9s						
T1243	**Rocca Santa Ma**	**0.31**	**106**	⇑P	**Pg**	**10 50 43.4**	**-1.0**
T1243				S	**Sg**	**10 50 48.0**	**-0.6**
T1220	**Camerino, Fraz**	**0.33**	**5**	P	**Pg**	**10 50 44.7**	**-0.1**
T1220				S	**Sg**	**10 50 49.7**	**+0.5**
GUMA	**Gualdo di Mace**	**0.35**	**37**	P	**Pg**	**10 50 44.7**	**-0.5**
GUMA				S	**Sg**	**10 50 50.2**	**+0.3**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CAMP	**Campotosto**	**0.36**	**133**	⇑P	**Pg**	**10 50 44.6**	**-0.8**
CAMP				S	**Sg**	**10 50 49.9**	**-0.3**
SEF1	**Sefro**	**0.37**	**349**	P	**Pg**	**10 50 45.2**	**-0.3**
SEF1				S	**Sg**	**10 50 50.9**	**+0.4**
SEF1				AML	AML		
	comp=E,72600µm,0.2s						
SEF1				AML	AML		
	comp=N,66350µm,0.3s						
SEF1				AML	AML		
	comp=N,66400µm,0.3s						
SEF1				AML	AML		
	comp=E,72600µm,0.2s						
T1246	**Crognaleto (TE**	**0.38**	**121**	⇑P	**Pg**	**10 50 44.9**	**-0.9**
T1246				S	**Sg**	**10 50 50.3**	**-0.6**
CESX	**Cesi**	**0.39**	**244**	⇑P	**Pg**	**10 50 45.6**	**-0.2**
CESX				S	**Sb**	**10 50 52.2**	**-0.7**
CESX				AML	AML		
	comp=E,35850µm,0.6s						
CESX				AML	AML		
	comp=N,18400µm,0.6s						
ASSB	**Assisi San Ben**	**0.39**	**312**	P	**Pg**	**10 50 45.6**	**-0.2**
T1247	**Pizzolo (AQ)**	**0.39**	**151**	⇑P	**Pg**	**10 50 45.3**	**-0.5**
T1247				S	**Sg**	**10 50 51.3**	**+0.3**
PIO1	**Pioraco**	**0.40**	**353**	P	**Pg**	**10 50 45.8**	**-0.3**
PIO1				S	**Sg**	**10 50 51.9**	**+0.5**
PIO1				AML	AML		
	comp=N,26250µm,0.5s						
PIO1				AML	AML		
	comp=E,24800µm,0.4s						
FIU1	**Fiuminata**	**0.42**	**348**	P	**Pg**	**10 50 45.9**	**-0.4**
FIU1				S	**Sg**	**10 50 52.4**	**+0.5**
FIU1				AML	AML		
	comp=E,26950µm,1.3s						
FIU1				AML	AML		
	comp=N,27000µm,1.2s						
FIU1				AML	AML		
	comp=N,26950µm,1.2s						
FIU1				AML	AML		
	comp=E,26900µm,1.3s						
MDAR	**Monte D'Aria**	**0.42**	**10**	P	**Pg**	**10 50 45.9**	**-0.5**
MDAR				S	**Sg**	**10 50 52.1**	**+0.1**
MDAR				AML	AML		
	comp=E,21450µm,0.4s						
MDAR				AML	AML		
	comp=N,24200µm,0.5s						
MDAR				AML	AML		
	comp=E,21500µm,0.4s						
TERO	**Teramo**	**0.44**	**111**	P	**Pg**	**10 50 45.6**	**-1.2**
TERO				S	**Sg**	**10 50 51.9**	**-0.7**
GAG1	**Gagliole**	**0.46**	**2**	P	**Pg**	**10 50 46.8**	**-0.3**
GAG1				S	**Sb**	**10 50 53.9**	**-1.1**
GAG1				AML	AML		
	comp=E,48050µm,0.6s						
GAG1				AML	AML		
	comp=N,55200µm,0.6s						
SSM1	**San Severino M**	**0.46**	**12**	P	**Pg**	**10 50 46.5**	**-0.6**
SSM1				S	**Sg**	**10 50 53.4**	**+0.2**
MNTP	**Montappone**	**0.47**	**41**	P	**Pg**	**10 50 47.1**	**-0.3**
MNTP				AML	AML		
	comp=N,42350µm,0.4s						
MNTP				AML	AML		
	comp=E,33950µm,1.2s						
MNTP				AML	AML		
	comp=N,42300µm,0.4s						
SNTG	**Esanatoglia**	**0.48**	**351**	P	**Pg**	**10 50 46.9**	**-0.6**
SNTG				S	**Sb**	**10 50 54.4**	**-1.3**
SNTG				AML	AML		
	comp=E,10910µm,0.4s						
SNTG				AML	AML		
	comp=N,13000µm,0.7s						
SNTG				AML	AML		
	comp=N,13650µm,0.7s						
SNTG				AML	AML		
	comp=N,13000µm,0.7s						
SNTG				AML	AML		
	comp=E,10905µm,0.4s						
SNTG				AML	AML		
	comp=E,10905µm,0.4s						
OFFI	**Offida**	**0.49**	**72**	P	**Pg**	**10 50 47.4**	**-0.4**
OFFI				AML	AML		
	comp=E,28300µm,0.5s						
OFFI				AML	AML		
	comp=N,38450µm,0.6s						
AQU	**L'Aquila**	**0.50**	**148**	P	**Pg**	**10 50 47.1**	**-0.8**
ATCC	**AVT- Casa Cast**	**0.50**	**324**	P	**Pg**	**10 50 47.6**	**-0.3**
ATCC				S	**Sb**	**10 50 55.6**	**-0.7**
ATCC				AML	AML		
	comp=E,31150µm,1.0s						
ATCC				AML	AML		
	comp=N,26200µm,0.5s						
GIGS	**Gran Sasso**	**0.51**	**131**	P	**Pg**	**10 50 46.8**	**-1.3**
GIGS				S	**Sg**	**10 50 54.1**	**-0.7**
FIAM	**Fiamignano**	**0.52**	**174**	P	**Pg**	**10 50 47.8**	**-0.4**
FIAM				S	**Sg**	**10 50 55.4**	**+0.4**
EL6	**Elcito**	**0.55**	**4**	P	**Pg**	**10 50 48.2**	**-0.7**
EL6				S	**Sb**	**10 50 56.6**	**-1.1**
EL6				AML	AML		
	comp=E,24600µm,0.2s						
EL6				AML	AML		
	comp=N,25000µm,0.4s						
FOSV	**Fossato di Vic**	**0.55**	**338**	P	**Pg**	**10 50 48.4**	**-0.6**
FOSV				AML	AML		
	comp=E,10000µm,0.8s						
FOSV				AML	AML		
	comp=N,11250µm,1.1s						
FOSV				AML	AML		
	comp=E,9955µm,0.8s						
TRE1	**Treia**	**0.56**	**20**	P	**Pg**	**10 50 48.7**	**-0.4**
TRE1				S	**Sg**	**10 50 56.7**	**+0.1**
CING	**Cingoli**	**0.60**	**10**	P	**Pg**	**10 50 48.9**	**-1.0**
MURB	**Monte Urbino**	**0.62**	**322**	P	**Pg**	**10 50 49.7**	**-0.4**
MURB				S	**Sb**	**10 50 58.7**	**-0.9**
MURB				AML	AML		
	comp=E,53950µm,0.2s						
MURB				AML	AML		
	comp=N,57250µm,0.3s						
MURB				AML	AML		
	comp=E,59750µm,0.2s						
MURB				AML	AML		
	comp=N,57300µm,0.3s						
MURB				AML	AML		
	comp=N,59800µm,0.3s						
TRTR	**Tortoreto Alta**	**0.64**	**87**	P	**Pg**	**10 50 50.4**	**-0.1**
TRTR				AML	AML		
	comp=E,43250µm,0.6s						
TRTR				AML	AML		
	comp=N,22000µm,0.8s						
FAGN	**Fagnano**	**0.65**	**142**	P	**Pg**	**10 50 49.6**	**-1.1**
ATTE	**AVT- Monte Tez**	**0.66**	**309**	P	**Pg**	**10 50 50.5**	**-0.4**
ATTE				AML	AML		
	comp=N,9500µm,0.4s						
ATTE				AML	AML		
	comp=E,10120µm,0.5s						
MMUR	**Monte Murano**	**0.66**	**357**	P	**Pg**	**10 50 50.5**	**-0.4**
MMUR				AML	AML		
	comp=E,18100µm,0.9s						
MMUR				AML	AML		
	comp=N,12900µm,1.0s						
MMUR				AML	AML		
	comp=E,18100µm,0.9s						
MMUR				AML	AML		
	comp=N,12950µm,1.0s						
CADA	**Capodarco di F**	**0.67**	**52**	P	**Pb**	**10 50 51.3**	**-0.4**
SRES	**S.Oreste - Sor**	**0.67**	**216**	P	**Pg**	**10 50 51.1**	**-0.1**
SRES				AML	AML		
	comp=E,3825µm,1.1s						
SRES				AML	AML		
	comp=N,3625µm,1.1s						
ATFO	**Monte Foce - G**	**0.68**	**329**	P	**Pg**	**10 50 50.9**	**-0.4**
ATFO				AML	AML		
	comp=E,12100µm,0.4s						
ATFO				AML	AML		
	comp=N,11800µm,0.4s						
ATSC	**Scheggia e Pas**	**0.69**	**338**	P	**Pg**	**10 50 50.7**	**-0.9**
MGAB	**Montegabbione**	**0.70**	**281**	P	**Pb**	**10 50 51.8**	**-0.6**
MGAB				AML	AML		
	comp=E,26600µm,1.2s						
MGAB				AML	AML		
	comp=N,27650µm,0.6s						
MGAB				AML	AML		
	comp=E,26650µm,1.2s						
VCEL	**Villa Celiera**	**0.70**	**123**	P	**Pg**	**10 50 50.3**	**-1.4**
ATLO	**AVT- Montelove**	**0.71**	**319**	P	**Pg**	**10 50 51.3**	**-0.6**
ARVD	**Arcevia**	**0.72**	**354**	P	**Pg**	**10 50 51.3**	**-0.7**
ARVD				AML	AML		
	comp=E,6735µm,0.9s						
ARVD				AML	AML		
	comp=N,5965µm,0.1s						
PP3	**Marolino**	**0.72**	**34**	P	**Pg**	**10 50 51.3**	**-0.8**
PP3				AML	AML		
	comp=E,29100µm,0.7s						
PP3				AML	AML		
	comp=N,22000µm,0.4s						
PP3				AML	AML		
	comp=N,22300µm,0.4s						
PP3				AML	AML		
	comp=N,21950µm,0.5s						
PP3				AML	AML		
	comp=E,29050µm,0.7s						
PP3				AML	AML		
	comp=N,22350µm,0.4s						
PP3				AML	AML		
	comp=E,30050µm,0.7s						
ATVA	**AVT- Monte Val**	**0.75**	**312**	P	**Pg**	**10 50 51.9**	**-0.7**
ATVO	**AVT- Monte Val**	**0.76**	**322**	P	**Pg**	**10 50 52.2**	**-0.7**
ATVO				AML	AML		
	comp=E,7050µm,1.5s						
ATVO				AML	AML		
	comp=N,7845µm,0.6s						
FRON	**Frontone**	**0.77**	**342**	P	**Pg**	**10 50 52.1**	**-0.9**
FRON				AML	AML		
	comp=E,6775µm,1.5s						
FRON				AML	AML		
	comp=N,13050µm,0.5s						
T0110	**Collepietro**	**0.78**	**136**	P	**Pg**	**10 50 51.5**	**-1.6**
TB03	**Pietralunga**	**0.78**	**323**	P	**Pg**	**10 50 52.2**	**-0.9**
ATBU	**Serra di Buran**	**0.78**	**332**	P	**Pg**	**10 50 52.1**	**-1.2**
MTCE	**Montecelio**	**0.79**	**197**	P	**Pg**	**10 50 52.2**	**-1.2**
ATMI	**Monte Miggiano**	**0.80**	**314**	P	**Pb**	**10 50 53.4**	**-0.5**
PTQR	**Pietraquaria**	**0.80**	**161**	P	**Pg**	**10 50 52.3**	**-1.3**
ATPI	**Pietralunga -**	**0.82**	**325**	P	**Pg**	**10 50 53.0**	**-0.9**
ATPI				AML	AML		
	comp=E,6615µm,0.6s						
ATPI				AML	AML		
	comp=N,6195µm,1.4s						
ATPI				AML	AML		
	comp=E,6620µm,0.6s						
ATPC	**Poggio Castell**	**0.82**	**328**	P	**Pg**	**10 50 52.9**	**-1.2**
CERT	**Cerreto**	**0.83**	**183**	P	**Pg**	**10 50 53.6**	**-0.6**
SACS	**San Casciano d**	**0.84**	**275**	P	**Pg**	**10 50 54.1**	**-0.3**
SACS				AML	AML		
	comp=N,7290µm,1.5s						
SACS				AML	AML		
	comp=E,7260µm,1.6s						
SACS				AML	AML		
	comp=E,6920µm,1.6s						
SACS				AML	AML		
	comp=N,7035µm,0.5s						
PIEI	**Pieia**	**0.84**	**334**	P	**Pg**	**10 50 53.5**	**-0.9**
PIEI				AML	AML		
	comp=E,5555µm,0.8s						
PIEI				AML	AML		
	comp=N,4255µm,0.4s						
AOI	**Ancona**	**0.87**	**28**	P	**Pg**	**10 50 54.0**	**-0.8**
MPAG	**Monte Paganucc**	**0.87**	**346**	P	**Pg**	**10 50 54.2**	**-0.8**
MPAG				AML	AML		
	comp=N,9280µm,0.6s						
MPAG				AML	AML		
	comp=E,5260µm,0.4s						
MPAG				AML	AML		
	comp=N,9285µm,0.6s						
PCRO	**Pietralacroce**	**0.90**	**23**	P	**Pg**	**10 50 55.1**	**-0.4**
APEC	**Apecchio**	**0.90**	**330**	P	**Pg**	**10 50 54.8**	**-0.8**
APEC				AML	AML		
	comp=E,1405µm,0.5s						
APEC				AML	AML		
	comp=N,1680µm,0.4s						
APEC				AML	AML		
	comp=N,1675µm,0.4s						
APEC				AML	AML		
	comp=E,1400µm,0.5s						
FSSB	**Fossombrone**	**0.93**	**348**	P	**Pg**	**10 50 55.2**	**-0.8**
FSSB				AML	AML		
	comp=E,16600µm,1.1s						
FSSB				AML	AML		
	comp=N,21150µm,0.4s						
LATE	**Laterza**	**0.93**	**260**	P	**Pg**	**10 50 55.6**	**-0.5**
SENI	**Senigallia**	**0.93**	**8**	P	**Pg**	**10 50 54.4**	**-1.7**
RCAV	**Rocca di Cave**	**0.94**	**185**	P	**Pg**	**10 50 55.4**	**-0.8**
CAFI	**Castiglion Fio**	**0.96**	**305**	P	**Pg**	**10 50 55.6**	**-1.1**
CAFI				AML	AML		
	comp=N,4025µm,0.8s						
CAFI				AML	AML		
	comp=E,8670µm,0.5s						
CAFI				AML	AML		
	comp=N,4030µm,0.8s						
CAFI				AML	AML		
	comp=N,4135µm,0.8s						
CAFI				AML	AML		
	comp=E,8455µm,0.6s						
PE3	**Peglio**	**1.00**	**336**	P	**Pb**	**10 50 56.2**	**-1.3**
PE3				AML	AML		
	comp=N,52µm,0.1s						
PE3				AML	AML		
	comp=E,38µm,0.1s						
RMP	**Rome, Mte Porz**	**1.00**	**195**	P	**Pb**	**10 50 56.6**	**-0.9**
VVLD	**Villa Velleion**	**1.00**	**155**	P	**Pb**	**10 50 56.0**	**-1.6**
MCIV	**Monte Civitell**	**1.01**	**270**	AML	AML		
	comp=N,2220µm,0.6s						
MCIV				AML	AML		
	comp=E,2670µm,0.7s						
SF11	**Podere del Sol**	**1.01**	**275**	P	**Pb**	**10 50 57.0**	**-0.6**
SF04	**Casetta**	**1.02**	**274**	P	**Pb**	**10 50 57.3**	**-0.6**
SF04				AML	AML		
	comp=E,6085µm,0.5s						
SF04				AML	AML		
	comp=N,3385µm,0.7s						
RDP	**Rocca di Papa**	**1.05**	**194**	P	**Pb**	**10 50 57.1**	**-1.2**
SF13	**Bagnolo**	**1.05**	**272**	P	**Pb**	**10 50 57.3**	**-1.0**
SAMA	**S.Maria delle**	**1.06**	**199**	P	**Pb**	**10 50 56.9**	**-1.4**
SAMA				AML	AML		
	comp=E,1640µm,1.5s						
SAMA				AML	AML		
	comp=N,1175µm,0.7s						
SF14	**Selvena**	**1.06**	**269**	P	**Pb**	**10 50 57.8**	**-0.5**
TOLF	**Tolfa**	**1.06**	**228**	P	**Pb**	**10 50 57.7**	**-0.7**
TOLF				AML	AML		
	comp=N,2415µm,0.8s						
TOLF				AML	AML		
	comp=E,3560µm,0.7s						
SF01	**Poggio Pratacc**	**1.09**	**272**	P	**Pb**	**10 50 58.7**	**-0.4**
SF01				AML	AML		
	comp=E,6400µm,0.6s						
SF01				AML	AML		
	comp=N,4585µm,0.4s						
LPEL	**Lama dei Pelig**	**1.12**	**131**	P	**Pb**	**10 50 57.4**	**-2.0**
LAV9	**Lanuvio**	**1.13**	**193**	P	**Pb**	**10 50 58.7**	**-1.0**
ARCI	**Arcidosso**	**1.16**	**274**	P	**Pb**	**10 50 59.7**	**-0.5**
CRE	**Caprese Michel**	**1.16**	**317**	P	**Pb**	**10 50 59.5**	**-0.7**
CRE				AML	AML		
	comp=E,2090µm,1.6s						
CRE				AML	AML		
	comp=N,3420µm,1.1s						
POFI	**Posta Fibreno**	**1.17**	**155**	P	**Pg**	**10 51 00.9**	**+0.3**
GIUL	**Giuliano Di Ro**	**1.23**	**173**	P	**Pn**	**10 51 00.2**	**-1.1**
LATB	**Latina**	**1.29**	**183**	P	**Pn**	**10 51 00.9**	**-1.1**
RNI2	**Rionero Sannit**	**1.35**	**142**	P	**Pb**	**10 51 03.2**	**-0.3**
ASQU	**Asqua**	**1.37**	**318**	P	**Pg**	**10 51 04.6**	**+0.2**
CERA	**Filignano**	**1.39**	**148**	P	**Pn**	**10 51 02.1**	**-1.3**
SFI	**Santa Sofia**	**1.42**	**322**	P	**Pg**	**10 51 04.8**	**-0.7**
FRES	**Fresagrandinar**	**1.45**	**123**	P	**Pb**	**10 51 04.8**	**-0.3**
MIDA	**Miranda**	**1.45**	**141**	P	**Pn**	**10 51 03.1**	**-1.2**
FROS	**Frosini**	**1.45**	**288**	P	**Pb**	**10 51 04.7**	**-0.4**
MAON	**Monte Argentar**	**1.46**	**257**	P	**Pn**	**10 51 04.2**	**-0.1**
CSNT	**Castellina Chi**	**1.46**	**299**	P	**Pb**	**10 51 04.6**	**-0.7**
TRIV	**Trivento**	**1.51**	**132**	P	**Pn**	**10 51 05.0**	**0.0**
OSSC	**Osservatorio P**	**1.51**	**300**	P	**Pn**	**10 51 04.8**	**-0.4**
OSSC				AML	AML		
	comp=E,1058µm,0.9s						
OSSC				AML	AML		
	comp=N,1055µm,0.6s						
RUFI	**Rufina**	**1.54**	**314**	P	**Pn**	**10 51 05.5**	**-0.1**
CASP	**Castiglione de**	**1.61**	**271**	P	**Pn**	**10 51 06.4**	**0.0**
TRIF	**Trifonti**	**1.61**	**283**	P	**Pn**	**10 51 06.6**	**+0.1**
TRIF				AML	AML		
	comp=N,856µm,0.7s						
TRIF				AML	AML		
	comp=E,888µm,0.6s						
VAGA	**Valle Agricola**	**1.63**	**147**	P	**Pn**	**10 51 05.8**	**-0.9**
BSSO	**Busso**	**1.69**	**137**	P	**Pn**	**10 51 06.5**	**-1.0**
CIGN	**Sant'Elia a Pi**	**1.78**	**129**	P	**Pn**	**10 51 08.1**	**-0.6**
CRMI	**Carmignano**	**1.82**	**304**	P	**Pb**	**10 51 11.6**	**+0.1**
SACR	**S. Croce Del S**	**1.85**	**138**	P	**Pn**	**10 51 09.2**	**-0.7**
MTCR	**Monte La Croce**	**1.94**	**310**	P	**Pn**	**10 51 11.8**	**+0.7**
VITU	**Vitulano (BN)**	**1.98**	**143**	P	**Pb**	**10 51 13.9**	**-0.3**
PSB1	**Pescosannita**	**2.04**	**139**	P	**Pb**	**10 51 14.0**	**-1.1**
CELB	**S.Piero in Cam**	**2.09**	**270**	P	**Pn**	**10 51 12.9**	**-0.2**
MOCO	**Biccari - m.te**	**2.11**	**131**	P	**Pn**	**10 51 13.0**	**-0.4**
PALZ	**Palazzo San Ge**	**2.85**	**129**	P	**Pn**	**10 51 23.3**	**-0.1**
PALZ				AML	AML		
	comp=N,904µm,1.1s						
PALZ				AML	AML		
	comp=E,1018µm,0.9s						
MRVN	**Minervino Murg**	**2.91**	**125**	P	**Pn**	**10 51 23.9**	**-0.4**
MRVN				AML	AML		
	comp=N,194µm,0.7s						
MRVN				AML	AML		
	comp=E,182µm,0.8s						
PGF	**Pioggiola**	**3.00**	**267**	*e*Pn	**Pn**	**10 51 24.8**	**-0.8**
PGF	**Pioggiola**	**3.00**	**267**	*e*P	**Pn**	**10 51 27.2**	**+1.6**
PGF				*e*Sn	**Sn**	**10 51 59.0**	**-2.5**
	comp=E,52nm,0.7s						
LTRZ	**Laterza**	**3.56**	**126**	P	**Pn**	**10 51 33.0**	**-0.4**
NOCI	**Noci**	**3.60**	**122**	P	**Pn**	**10 51 33.4**	**-0.4**
SBF	**Sospel**	**4.24**	**287**	*e*P	**Pn**	**10 51 44.0**	**+1.4**
SBF				*e*Sn	**Sn**	**10 52 28.2**	**-3.8**
	comp=E,68nm,0.5s						
VSL	**Villasalto**	**4.30**	**221**	P	**Pn**	**10 51 44.6**	**+1.2**
DAVOX	**Davos/Dischmat**	**4.59**	**332**	Pn	**Pn**	**10 51 49.7**	**+2.2**
	comp=E,6.9nm,0.3s,baz=158,slow=20,SNR=1.3						
DAVOX				Sn	**Sn**	**10 52 44.0**	**+3.1**
	comp=E,5.0nm,0.3s,baz=277,slow=23,SNR=2.0						
	comp=E,35nm,0.4s						
PDG	**Podgorica**	**4.59**	**92**	⇓P	**Pn**	**10 51 47.8**	**+0.4**
LMR	**La Mourre**	**4.82**	**279**	*e*P	**Pn**	**10 51 52.9**	**+2.3**
LMR				*e*Sn	**Sn**	**10 52 41.9**	**-4.5**
	comp=E,22nm,0.8s						
MBDF	**Montbardon**	**4.95**	**295**	*e*Sn	**Sn**	**10 52 45.7**	**-3.9**
	comp=E,37nm,0.7s						
TIR	**Tirane**	**5.27**	**103**	⇓P	**Pn**	**10 51 57.8**	**+1.0**
LPG	**La Plagne**	**5.28**	**303**	*e*P	**Pn**	**10 51 59.8**	**+2.6**
LPG				*e*Sn	**Sn**	**10 52 53.3**	**-4.8**
	comp=E,39nm,0.7s						
LPL	**La Plagne**	**5.30**	**303**	*e*P	**Pn**	**10 51 59.7**	**+2.3**
LPL				*e*Sn	**Sn**	**10 52 54.3**	**-4.3**
	comp=E,44nm,0.9s						
SMRF	**Simiane la Rot**	**5.58**	**285**	*e*Pn	**Pn**	**10 51 59.0**	**-2.0**
SMRF	**Simiane la Rot**	**5.58**	**285**	*e*P	**Pn**	**10 52 03.6**	**+2.6**
ORIF	**Oris-en-Rattie**	**5.61**	**295**	*e*Pn	**Pn**	**10 51 59.6**	**-1.8**
ORIF				*e*Sn	**Sn**	**10 53 01.3**	**-4.5**
	comp=E,44nm,0.7s						
GERES	**GERESS Array B**	**6.08**	**4**	Sn	**Sn**	**10 53 16.8**	**-0.7**
	comp=E,5.1nm,0.3s,baz=158,slow=24,SNR=2.1						
VIVF	**Saint-Julien-l**	**6.40**	**292**	*e*P	**Pn**	**10 52 15.3**	**+3.0**
HINF	**Hinteralfeld**	**6.66**	**321**	*e*P	**Pn**	**10 52 18.3**	**+2.4**
HINF				*e*Sn	**Sn**	**10 53 26.3**	**-5.5**
	comp=E,45nm,0.4s						
KRUC	**Moravsky**	**6.70**	**19**	*e*PN	**Pn**	**10 52 14.1**	**-2.3**
KRUC				*e*SN	**Sn**	**10 53 30.1**	**-2.5**
LASF	**Ste Croix**	**6.82**	**284**	*e*Pn	**Pn**	**10 52 16.4**	**-1.6**
LASF				*e*Sn	**Sn**	**10 53 29.9**	**-5.6**
	comp=E,65nm,1.7s						
CDF	**Champ du Feu**	**6.93**	**326**	*e*Pn	**Pn**	**10 52 18.4**	**-1.2**
CDF	**Champ du Feu**	**6.93**	**326**	*e*P	**Pn**	**10 52 22.2**	**+2.6**
HAU	**Haudompre**	**7.04**	**320**	*e*Sn	**Sn**	**10 53 35.1**	**-5.8**
	comp=E,44nm,0.4s						
BLKB	**Belogradchik**	**7.08**	**80**	⇓P	**Pn**	**10 52 19.1**	**-2.6**
VTS	**Vitosha**	**7.51**	**88**	⇓P	**Pn**	**10 52 28.6**	**+1.1**
SMF	**Signal de Mont**	**7.61**	**304**	*e*Pn	**Pn**	**10 52 26.6**	**-2.3**
SMF	**Signal de Mont**	**7.61**	**304**	*e*P	**Pn**	**10 52 32.0**	**+3.1**
SMF				*e*Sn	**Sn**	**10 53 49.0**	**-6.0**

```
     comp=E,17nm,0.7s
PAGF Fort de Pagny      7.72 321 ePn      Pn      10 52 28.7 -1.7
     baz=139
PAGF                             eSn      Sn      10 53 51.8 -5.9
     comp=E,88nm,1.1s
SFTF Sexfontaines       7.81 317 ePn      Pn      10 52 28.9 -2.7
     baz=137
SFTF                             eSn      Sn      10 53 53.7 -6.3
     comp=E,18nm,0.4s
LOR  Lormes             7.90 308 ePn      Pn      10 52 31.0 -1.9
     baz=129
LOR  Lormes             7.90 308 eP       Pn      10 52 35.9 +3.0
LOR                              eSn      Sn      10 53 55.3 -7.0
     comp=E,22nm,0.6s
MTLF Montolieu          7.95 278 ePn      Pn      10 52 32.3 -1.3
AVF  Avril sur Loir     7.97 303 ePn      Pn      10 52 32.1 -1.7
AVF  Avril sur Loir     7.97 303 eP       Pn      10 52 37.0 +3.2
AVF                              eSn      Sn      10 53 57.4 -6.6
     comp=E,9.6nm,0.8s
MEZF Maizieres J'vi     8.00 318 ePn      Pn      10 52 31.7 -2.5
     baz=140
MEZF Maizieres J'vi     8.00 318 eP       Pn      10 52 37.4 +3.2
MEZF                             eSn      Sn      10 53 58.6 -6.1
     comp=E,20nm,0.7s
SSF  Saint Saulge       8.01 306 ePn      Pn      10 52 32.6 -1.7
SSF  Saint Saulge       8.01 306 eP       Pn      10 52 37.3 +3.0
SSF                              eSn      Sn      10 53 58.0 -6.8
     comp=E,5.7nm,0.4s
SAVF Savonnieres en     8.05 319 eSn      Sn      10 53 59.3 -6.4
     comp=E,9.7nm,0.5s
BGF  Bois d'Agland      8.19 301 eP       Pn      10 52 39.9 +3.1
BGF                              eSn      Sn      10 54 02.4 -6.9
     comp=E,6.3nm,0.4s
CAF  Calviac            8.22 289 ePn      Pn      10 52 35.5 -1.8
CAF  Calviac            8.22 289 eP       Pn      10 52 40.1 +2.8
TCF  Toulx Ste Croi     8.50 298 eP       Pn      10 52 45.6 +4.5
TCF                              eSn      Sn      10 54 10.4 -6.5
     comp=E,6.1nm,0.7s
CLL  Collm              8.53 360 e(Sg)    Sg      10 55 09.0 -2.6
     comp=Z,23nm,1.2s
HYF  Humbligny          8.63 305 eP       Pn      10 52 48.6 +5.8
HYF                              eSn      Sn      10 54 13.3 -6.7
     comp=Z,64nm,0.2s
RJF  Les Rejaudoux      8.68 291 ePn      Pn      10 52 42.0 -1.6
ARR  Arges              8.73  69 ⇑P       Pn      10 52 47.1 +2.8
VOIR                    9.03  69 ⇓P       Pn      10 52 50.6 +2.2
LFF  La Frestale        9.15 288 eP       Pn      10 52 53.2 +3.2
GIVF Givet              9.26 325 eP       Pn      10 52 55.1 +3.6
MLR  Muntele Rosu       9.66  69 ⇑P       Pn      10 52 59.6 +2.5
MLR  Muntele Rosu       9.66  69 Pn       Pn      10 53 01.8 +4.8
     comp=Z,0.2nm,0.3s,baz=257,slow=14,SNR=5.8
     comp=Z,3.8nm,0.7s
ETSF Etsaut            10.00 275 eP       Pn      10 53 05.4 +3.7
EKA  Eskdalemuir Ar    16.39 326 Pn       Pn      10 54 28.8 +0.9
     baz=134,slow=14
     comp=Z,0.3nm,0.4s
HFS  Hagfors           17.38   1 Pn       P       10 54 41.4 -0.3
     comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=1.7
     comp=Z,2.1nm,0.8s
NOA  NORSAR Array B    18.32 357 P        P       10 54 53.9 +1.9
     baz=182,slow=11,SNR=2.4
     comp=Z,0.6nm,0.8s
FINES FINESS Array B   20.26  18 P        Pn      10 55 13.9 -1.2
     comp=Z,3.2nm,0.8s,baz=200,slow=12,SNR=2.3
FINES                            LR       LR      11 02 36.6
     comp=Z,120nm,18.9s,baz=34,slow=35
     comp=Z,3.2nm,0.8s
KBZ  Khabaz            21.71  77 P        P       10 55 30.1 +1.2
     comp=Z,6.6nm,1.0s,baz=291,slow=8.7,SNR=5.4
     comp=Z,6.6nm,1.0s
TORD Torodi Ar. Bea    31.12 202 P        P       10 56 57.5 +0.8
     comp=Z,1.9nm,0.9s,baz=17,slow=9.0,SNR=6.0
     comp=Z,1.9nm,0.9s
ARU  Arti              31.86  49 P        P       10 57 03.3 +0.5
     comp=Z,3.3nm,0.5s,baz=276,slow=7.3,SNR=8.6
     comp=Z,3.3nm,0.5s
BVAR Borovoye Array    38.80  54 P        P       10 58 04.3 +1.7
     comp=Z,0.7nm,0.5s,baz=276,slow=7.1,SNR=7.2
     comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam     47.00  50 P        P       10 59 10.3 +1.4
     comp=Z,0.9nm,0.5s,baz=282,slow=7.4,SNR=3.7
     comp=Z,0.9nm,0.5s
MKAR Makanchi Array    47.86  60 P        P       10 59 16.4 +0.7
     comp=Z,2.3nm,0.8s,baz=293,slow=6.3,SNR=7.4
     comp=Z,2.3nm,0.8s
SONM Songino Array     61.89  50 P        P       11 00 58.3 +0.8
     comp=Z,1.5nm,0.8s,baz=291,slow=8.5,SNR=8.5
     comp=Z,1.5nm,0.8s
CMAR Chiang Mai Arr    74.75  79 P        P       11 02 19.8 +1.5
     comp=Z,0.7nm,0.3s,baz=305,slow=7.5,SNR=4.7
     comp=Z,0.7nm,0.3s
```

ROM 30 10:54:06.8±0.1, 42°.804N±0°.004×13°.082E±0°.006,
h10km, ML2.6/14, 6C-4D, Error ellipse: s-maj=0.5km
s-min=0.3km az=127.0, Central Italy

```
Code Station Name      Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
T1217 Poggiodomo (PG   0.14 230  P     Pg          10 54 10.9 +0.7
T1217                            S     Sg          10 54 13.8 +1.3
T1217                            AML   AML
      comp=E,2494µm,0.3s
T1217                            AML   AML
      comp=N,3345µm,1.2s
T1217                            AML   AML
      comp=E,2489µm,0.3s
T1217                            AML   AML
      comp=N,3324µm,0.1s
T1217                            AML   AML
      comp=E,2588µm,0.3s
T1217                            AML   AML
      comp=N,3246µm,0.3s
T1215 Vallo di Nera,   0.16 269  P     Pg          10 54 10.0 -0.4
T1215                            AML   AML
      comp=N,3405µm,0.4s
T1215                            AML   AML
      comp=E,3120µm,0.9s
T1215                            AML   AML
      comp=N,3280µm,0.4s
T1215                            AML   AML
      comp=E,2860µm,0.9s
T1215                            AML   AML
      comp=N,3400µm,0.4s
T1215                            AML   AML
      comp=E,2865µm,0.9s
T1215                            AML   AML
      comp=E,3125µm,0.9s
T1215                            AML   AML
      comp=N,3285µm,0.4s
T1215                            AML   AML
      comp=E,2750µm,0.1s
T1215                            AML   AML
      comp=N,3128µm,0.1s
T1215                            AML   AML
      comp=N,2985µm,0.1s
T1215                            AML   AML
      comp=E,3019µm,0.1s
FEMA Monte Fema        0.16 352  P     Pg          10 54 10.9 +0.5
FEMA                             S     Sg          10 54 13.7 +0.7
FEMA                             AML   AML
      comp=E,11250µm,1.1s
FEMA                             AML   AML
      comp=N,7475µm,1.6s
FEMA                             AML   AML
      comp=E,11225µm,1.1s
FEMA                             AML   AML
      comp=N,6153µm,0.2s
FEMA                             AML   AML
      comp=E,10634µm,0.2s
LNSS Leonessa          0.20 189  ⇓P    Pg          10 54 11.9 +0.8
LNSS                             S     Sg          10 54 15.4 +1.3
LNSS                             AML   AML
      comp=N,4395µm,1.5s
LNSS                             AML   AML
      comp=E,2355µm,0.2s
LNSS                             AML   AML
      comp=E,2358µm,0.2s
LNSS                             AML   AML
      comp=N,3391µm,0.2s
T1204 Amatrice, Fraz   0.21 126  P     Pg          10 54 11.7 +0.3
T1204                            S     Sg          10 54 15.9 +1.4
T1204                            AML   AML
      comp=E,4460µm,0.9s
T1204                            AML   AML
      comp=N,3255µm,0.5s
T1204                            AML   AML
      comp=N,3254µm,0.5s
T1204                            AML   AML
      comp=N,3250µm,0.5s
T1204                            AML   AML
      comp=E,4455µm,0.9s
T1204                            AML   AML
      comp=N,2566µm,0.3s
T1204                            AML   AML
      comp=E,4096µm,0.2s
T1241 Roccafluvione,   0.26  78  P     Pb          10 54 13.2 -0.5
T1241                            S     Sb          10 54 17.3 -0.9
T1241                            AML   AML
      comp=E,3710µm,0.6s
T1241                            AML   AML
      comp=N,2115µm,0.9s
T1241                            AML   AML
      comp=E,2847µm,0.2s
T1241                            AML   AML
      comp=N,1479µm,0.3s
AM05 Amandola Campo    0.26  49  P     Pb          10 54 13.5 -0.2
AM05                             S     Sg          10 54 16.7 +0.8
AM05                             AML   AML
      comp=E,1430µm,0.9s
AM05                             AML   AML
      comp=N,1485µm,1.2s
AM05                             AML   AML
      comp=E,5755µm,0.7s
AM05                             AML   AML
      comp=E,1435µm,0.9s
AM05                             AML   AML
      comp=N,1480µm,1.2s
AM05                             AML   AML
      comp=E,5750µm,0.7s
AM05                             AML   AML
      comp=N,453µm,0.1s
AM05                             AML   AML
      comp=N,454µm,0.1s
AM05                             AML   AML
      comp=N,1461µm,0.2s
AM05                             AML   AML
      comp=E,5068µm,0.1s
AM05                             AML   AML
      comp=N,453µm,0.1s
AM05                             AML   AML
      comp=E,1315µm,0.1s
T1243 Rocca Santa Ma   0.29 112  P     Pg          10 54 12.8 +0.1
T1243                            S     Sg          10 54 17.5 +0.8
RM33 Pellescritta (    0.31 162  P     Pg          10 54 13.6 +0.5
RM33                             S     Sg          10 54 18.3 +1.1
RM33                             AML   AML
      comp=E,1380µm,0.9s
RM33                             AML   AML
      comp=N,1020µm,0.2s
RM33                             AML   AML
      comp=E,1145µm,0.2s
RM33                             AML   AML
      comp=N,741µm,0.2s
T1211 Morro Reatino    0.32 212  P     Pg          10 54 13.2  0.0
T1211                            S     Sb          10 54 19.0 -0.9
GUMA Gualdo di Mace    0.32  36  P     Pb          10 54 13.9 -0.7
GUMA                             S     Sb          10 54 19.2 -0.7
ARRO Arrone            0.32 226  ⇓P    Pb          10 54 14.2 -0.5
ARRO                             S     Sb          10 54 19.2 -0.7
ARRO                             AML   AML
      comp=N,1136µm,0.2s
CAMP Campotosto        0.36 138  P     Pg          10 54 14.6 +0.6
ASSB Assisi San Ben    0.39 308  P     Pg          10 54 15.0 +0.4
ASSB                             S     Sb          10 54 21.0 -1.0
ASSB                             AML   AML
      comp=E,1875µm,0.8s
ASSB                             AML   AML
      comp=N,1605µm,0.8s
ASSB                             AML   AML
      comp=N,1571µm,0.1s
ASSB                             AML   AML
      comp=E,1847µm,0.1s
CESX Cesi              0.42 243  P     Pg          10 54 15.3 +0.3
CESX                             S     Sb          10 54 22.1 -0.6
CESX                             AML   AML
      comp=E,1275µm,1.6s
CESX                             AML   AML
      comp=N,1069µm,0.2s
CESX                             AML   AML
      comp=N,1067µm,0.2s
CESX                             AML   AML
      comp=E,1172µm,0.5s
TERO Teramo            0.42 115  P     Pb          10 54 16.8 +0.3
TERO                             S     Sg          10 54 21.6 +0.9
TERO                             AML   AML
      comp=E,1395µm,0.3s
TERO                             AML   AML
      comp=N,1035µm,0.6s
TERO                             AML   AML
      comp=E,1394µm,0.3s
TERO                             AML   AML
      comp=N,812µm,0.2s
TERO                             AML   AML
      comp=E,1324µm,0.3s
TERO                             AML   AML
      comp=N,892µm,0.2s
OFFI Offida            0.46  73  P     Pb          10 54 17.2 +0.1
OFFI                             S     Sb          10 54 24.1 +0.1
OFFI                             AML   AML
      comp=N,1260µm,0.4s
OFFI                             AML   AML
      comp=E,1453µm,0.3s
SNTG Esanatoglia       0.46 347  P     Pg          10 54 16.2 +0.4
SNTG                             AML   AML
      comp=E,435µm,1.4s
SNTG                             AML   AML
      comp=N,505µm,0.7s
SNTG                             AML   AML
      comp=E,411µm,0.2s
SNTG                             AML   AML
      comp=N,466µm,0.2s
SNTG                             AML   AML
      comp=N,448µm,0.2s
SNTG                             AML   AML
      comp=E,433µm,0.1s
ATCC AVT- Casa Cast    0.50 320  P     Pg          10 54 16.9 +0.3
ATCC                             S     Sb          10 54 24.8 -0.3
ATCC                             AML   AML
      comp=E,1045µm,0.5s
ATCC                             AML   AML
      comp=N,965µm,0.6s
ATCC                             AML   AML
      comp=N,964µm,0.6s
ATCC                             AML   AML
      comp=E,1040µm,0.5s
ATCC                             AML   AML
      comp=E,895µm,0.1s
ATCC                             AML   AML
      comp=N,840µm,0.4s
GIGS Gran Sasso        0.50 134  P     Pg          10 54 16.9 +0.3
GIGS                             S     Sg          10 54 24.0 +0.7
GIGS                             AML   AML
      comp=N,147µm,0.7s
GIGS                             AML   AML
      comp=N,148µm,0.7s
GIGS                             AML   AML
      comp=E,182µm,0.4s
GIGS                             AML   AML
      comp=E,143µm,0.2s
GIGS                             AML   AML
      comp=N,138µm,0.4s
EL6  Elcito            0.53   2  ⇑P    Pg          10 54 17.4 +0.3
EL6                              AML   AML
      comp=E,961µm,0.2s
EL6                              AML   AML
      comp=N,813µm,0.2s
FOSV Fossato di Vic    0.54 335  P     Pg          10 54 16.8 -0.6
FOSV                             S     Sg          10 54 23.9 -0.7
FOSV                             AML   AML
      comp=E,346µm,0.4s
FOSV                             AML   AML
      comp=N,464µm,0.3s
FOSV                             AML   AML
      comp=E,278µm,0.2s
FOSV                             AML   AML
      comp=N,464µm,0.3s
MURB Monte Urbino      0.61 319  ⇑P    Pg          10 54 17.4 -1.4
MURB                             AML   AML
      comp=E,2325µm,0.2s
MURB                             AML   AML
      comp=N,2015µm,1.1s
MURB                             AML   AML
      comp=N,1850µm,1.1s
MURB                             AML   AML
      comp=N,2015µm,1.1s
MURB                             AML   AML
      comp=E,2590µm,0.2s
MURB                             AML   AML
      comp=N,1701µm,0.4s
MURB                             AML   AML
      comp=E,2590µm,0.2s
MURB                             AML   AML
      comp=N,1589µm,0.3s
MURB                             AML   AML
      comp=E,2324µm,0.2s
ATFO Monte Foce - G    0.68 327  ⇑P    Pb          10 54 20.5 -0.2
ATFO                             S     Sb          10 54 30.8 +0.6
ATFO                             AML   AML
      comp=N,384µm,0.4s
ATFO                             AML   AML
      comp=E,328µm,0.3s
MGAB Montegabbione     0.72 279  ⇑P    Pb          10 54 21.7 +0.2
MGAB                             AML   AML
      comp=E,548µm,1.1s
MGAB                             AML   AML
      comp=N,620µm,0.7s
MGAB                             AML   AML
      comp=E,408µm,0.3s
MGAB                             AML   AML
      comp=E,450µm,0.3s
MGAB                             AML   AML
      comp=N,615µm,0.7s
MGAB                             AML   AML
      comp=N,620µm,0.7s
ATVO AVT- Monte Val    0.76 320  ⇑P    Pg          10 54 21.6 +0.1
ATVO                             AML   AML
      comp=E,180µm,0.2s
ATVO                             AML   AML
      comp=N,239µm,0.3s
PIEI Pieia             0.83 332  S     Sn          10 54 37.0  0.0
SACS San Casciano d    0.86 273  ⇑P    Pb          10 54 24.0 +0.1
SACS                             AML   AML
      comp=E,206µm,0.7s
SACS                             AML   AML
      comp=E,220µm,0.7s
SACS                             AML   AML
      comp=N,179µm,0.7s
CAFI Castiglion Fio    0.97 303  ⇓P    Pb          10 54 26.1 +0.3
CAFI                             S     Sn          10 54 41.0 +0.6
CAFI                             AML   AML
      comp=N,131µm,0.5s
CAFI                             AML   AML
      comp=E,176µm,0.6s
CAFI                             AML   AML
      comp=E,165µm,0.6s
CAFI                             AML   AML
      comp=N,136µm,0.4s
LIK  San Giovanni I    1.35 165  S     Sg          10 54 52.0 +1.9
LMD  Lutirano          1.62 322  S     Sg          10 55 02.0 +3.1
BRSN Barisano          1.65 334  S     Sg          10 54 60.0 +0.1
BRIS BRISIGHELLA       1.77 320  S     Sb          10 55 02.0 +0.5
PTRJ Pietraroja        1.80 143  S     Sg          10 55 05.0 +0.4
IMOL Imola, Italy      1.83 328  S     Sb          10 55 04.0 +0.6
GRAM Graiana           2.76 309  ⇓P    Pg          10 55 00.3 +0.6
CMPR Campora           2.99 145  S     Sb          10 55 38.0 +1.2
```

ROM 30 10:54:41.8±0.1, 42°.724N±0°.005×13°.164E±0°.005,
h10km, ML2.3/6, Error ellipse: s-maj=0.5km
s-min=0.3km az=169.0, Central Italy

```
Code Station Name      Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m s     ISC
T1204 Amatrice, Fraz   0.12 113  P     Pg          10 54 45.5 +0.6
T1204                            S     Sg          10 54 47.9 +0.9
T1204                            AML   AML
      comp=E,3010µm,0.9s
T1204                            AML   AML
      comp=N,2638µm,0.1s
T1204                            AML   AML
      comp=E,7570µm,0.3s
T1204                            AML   AML
      comp=N,4280µm,0.6s
T1204                            AML   AML
      comp=E,3020µm,0.9s
T1204                            AML   AML
      comp=N,2637µm,0.1s
T1204                            AML   AML
      comp=E,2525µm,0.3s
LNSS Leonessa          0.15 217  P     Pg          10 54 46.0 +0.7
LNSS                             S     Sg          10 54 48.9 +1.2
LNSS                             AML   AML
      comp=E,8040µm,0.3s
LNSS                             AML   AML
      comp=N,11700µm,0.3s
LNSS                             AML   AML
      comp=N,4392µm,1.5s
LNSS                             AML   AML
      comp=E,2216µm,1.7s
LNSS                             AML   AML
      comp=E,2175µm,0.2s
LNSS                             AML   AML
      comp=N,4010µm,0.1s
T1217 Poggiodomo (PG   0.17 266  P     Pg          10 54 46.2 +0.6
T1217                            S     Sg          10 54 49.0 +0.8
T1217                            AML   AML
      comp=E,1470µm,0.8s
T1217                            AML   AML
      comp=N,1555µm,1.4s
T1217                            AML   AML
      comp=E,2730µm,0.2s
T1217                            AML   AML
      comp=N,3075µm,0.2s
T1217                            AML   AML
      comp=E,1406µm,0.1s
T1217                            AML   AML
      comp=N,919µm,0.1s
T1217                            AML   AML
      comp=E,1411µm,0.1s
T1217                            AML   AML
      comp=N,886µm,0.1s
T1243 Rocca Santa Ma   0.21  97  P     Pg          10 54 46.7 +0.4
T1243                            S     Sg          10 54 50.1 +0.8
RM33 Pellescritta (    0.22 170  P     Pg          10 54 47.0 +0.6
RM33                             S     Sg          10 54 50.8 +1.3
RM33                             AML   AML
      comp=E,2750µm,0.8s
RM33                             AML   AML
      comp=N,1955µm,1.5s
RM33                             AML   AML
      comp=N,1023µm,0.2s
RM33                             AML   AML
      comp=E,1379µm,0.9s
RM33                             AML   AML
      comp=E,1182µm,0.2s
T1215 Vallo di Nera,   0.23 290  P     Pg          10 54 47.1 +0.5
T1215                            AML   AML
      comp=E,1255µm,0.5s
T1215                            AML   AML
      comp=N,1144µm,0.1s
T1215                            AML   AML
      comp=E,2110µm,1.6s
T1215                            AML   AML
      comp=N,2135µm,0.8s
T1215                            AML   AML
      comp=E,2095µm,1.6s
T1215                            AML   AML
      comp=N,1990µm,0.8s
T1215                            AML   AML
      comp=E,1192µm,0.1s
T1215                            AML   AML
      comp=N,1136µm,0.1s
T1215                            AML   AML
      comp=N,1142µm,0.1s
T1215                            AML   AML
      comp=E,1143µm,0.1s
T1241 Roccafluvione,   0.24  56  P     Pg          10 54 47.8 +1.1
T1241                            AML   AML
      comp=E,1965µm,0.3s
T1241                            AML   AML
      comp=N,952µm,0.5s
T1241                            AML   AML
      comp=N,5750µm,0.2s
T1241                            AML   AML
      comp=E,11200µm,0.2s
T1241                            AML   AML
      comp=E,1322µm,0.2s
T1241                            AML   AML
      comp=N,789µm,0.2s
FEMA Monte Fema        0.25 341  P     Pg          10 54 47.6 +0.5
FEMA                             AML   AML
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	comp=E,5225μm,0.2s					
FEMA				AML	AML	
	comp=N,2990μm,0.1s					
FEMA				AML	AML	
	comp=E,5695μm,0.5s					
FEMA				AML	AML	
	comp=N,7405μm,0.4s					
FEMA				AML	AML	
	comp=N,2731μm,0.1s					
FEMA				AML	AML	
	comp=E,5228μm,0.2s					
FEMA				AML	AML	
	comp=N,2992μm,0.1s					
AM05	**Amandola Campo**	**0.29**	**29**	P	Pg	10 54 48.2 +0.5
AM05				AML	AML	
	comp=E,1800μm,0.1s					
AM05				AML	AML	
	comp=N,1675μm,1.1s					
AM05				AML	AML	
	comp=E,7195μm,0.1s					
AM05				AML	AML	
	comp=N,466μm,0.6s					
AM05				AML	AML	
	comp=N,149μm,0.1s					
AM05				AML	AML	
	comp=E,350μm,0.1s					
AM05				AML	AML	
	comp=E,1534μm,0.1s					
AM05				AML	AML	
	comp=N,402μm,0.1s					
T1211	**Morro Reatino**	**0.30**	**230**	P	Pg	10 54 48.5 +0.7
T1211				S	Sb	10 54 53.1 -1.2
T1211				AML	AML	
	comp=E,2860μm,1.2s					
T1211				AML	AML	
	comp=E,2680μm,1.2s					
T1211				AML	AML	
	comp=N,4940μm,0.3s					
T1211				AML	AML	
	comp=N,5005μm,0.3s					
T1211				AML	AML	
	comp=E,605μm,0.1s					
T1211				AML	AML	
	comp=N,1332μm,0.3s					
T1211				AML	AML	
	comp=E,603μm,0.1s					
T1211				AML	AML	
	comp=N,1365μm,0.3s					
T1247	**Pizzolo (AQ)**	**0.30**	**161**	P	Pg	10 54 48.4 +0.5
T1247				AML	AML	
	comp=E,1485μm,1.5s					
T1247				AML	AML	
	comp=N,1930μm,0.8s					
T1247				AML	AML	
	comp=N,735μm,0.2s					
T1247				AML	AML	
	comp=E,789μm,0.3s					
ARRO	**Arrone**	**0.33**	**244**	P	Pb	10 54 49.2 -0.5
ARRO				AML	AML	
	comp=E,1030μm,0.7s					
ARRO				AML	AML	
	comp=N,1400μm,0.3s					
ARRO				AML	AML	
	comp=E,432μm,1.9s					
ARRO				AML	AML	
	comp=N,331μm,0.9s					
ARRO				AML	AML	
	comp=E,412μm,0.2s					
ARRO				AML	AML	
	comp=N,347μm,0.2s					
TERO	**Teramo**	**0.34**	**107**	P	Pg	10 54 49.0 +0.4
TERO				AML	AML	
	comp=E,3370μm,0.1s					
TERO				AML	AML	
	comp=N,2665μm,0.4s					
TERO				AML	AML	
	comp=N,3030μm,0.4s					
TERO				AML	AML	
	comp=E,3885μm,0.1s					
TERO				AML	AML	
	comp=E,452μm,0.2s					
TERO				AML	AML	
	comp=E,525μm,0.2s					
TERO				AML	AML	
	comp=N,548μm,0.1s					
TERO				AML	AML	
	comp=N,620μm,0.1s					
GUMA	**Gualdo di Mace**	**0.36**	**20**	P	Pg	10 54 49.6 +0.6
GUMA				AML	AML	
	comp=E,7015μm,0.7s					
GUMA				AML	AML	
	comp=N,10385μm,0.6s					
GUMA				AML	AML	
	comp=N,9615μm,0.3s					
GUMA				AML	AML	
	comp=E,7140μm,0.3s					
GUMA				AML	AML	
	comp=E,2201μm,0.2s					
GUMA				AML	AML	
	comp=N,1635μm,0.2s					
GUMA				AML	AML	
	comp=N,1515μm,0.2s					
GUMA				AML	AML	
	comp=E,1790μm,0.3s					
GIGS	**Gran Sasso**	**0.41**	**132**	P	Pg	10 54 50.2 +0.4
GIGS				AML	AML	
	comp=E,264μm,0.6s					
GIGS				AML	AML	
	comp=N,285μm,1.3s					
GIGS				AML	AML	
	comp=N,131μm,0.4s					
GIGS				AML	AML	
	comp=N,113μm,0.2s					
GIGS				AML	AML	
	comp=E,114μm,0.2s					
OFFI	**Offida**	**0.44**	**61**	P	Pb	10 54 51.7 0.0
OFFI				AML	AML	
	comp=N,826μm,0.5s					
OFFI				AML	AML	
	comp=E,826μm,0.3s					
CESX	**Cesi**	**0.45**	**255**	S	Sb	10 54 59.0 +0.5
FIAM	**Fiamignano**	**0.46**	**184**	S	Sb	10 54 59.0 +0.1
ASSB	**Assisi San Ben**	**0.49**	**311**	P	Pg	10 54 51.7 +0.3
ASSB				AML	AML	
	comp=E,893μm,0.2s					
ASSB				AML	AML	
	comp=N,887μm,0.2s					
ASSB				AML	AML	
	comp=E,396μm,0.4s					
ASSB				AML	AML	
	comp=N,526μm,0.2s					
ASSB				AML	AML	
	comp=E,418μm,0.2s					

TEH ***30*** *10:58:33.5, 32.°69N×47.°70E, h6km, ML3.1*
ISN ***30*** *10:58:36.1±1.7, 32.°80N×47.°64E, h27km±15km, ML2.9*
ISC 30 10:58:34.2±0.9, 32.°69N±0.°03×47.°71E±0.°03, h10km, n32, σ2°19/36, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.36**	**269**	*e*Pg	**Pb**	**10 58 41.6**	**-1.1**
IKFM	**Kafar-mosalman**	**0.84**	**8**	*e*Pg	**Pb**	**10 58 50.4**	**-0.5**
IKFM				*e*Sg	**Sn**	**10 59 03.8**	**-0.7**
IKFM				*e*		10 59 05.5	
	comp=Z,9μm,0.4s						
IKMR	**Kamar-syah**	**1.00**	**34**	*e*Pg	**Pb**	**10 58 53.2**	**-0.3**
IDOB	**Doab**	**1.16**	**19**	*e*Pg	**Pn**	**10 58 56.5**	**-0.2**
IKOM	**Komasi**	**1.49**	**354**	*e*		10 59 04.7	
	comp=Z,3μm,0.4s						
IKOM				*e*Pg	**Pg**	**10 59 03.3**	**+0.5**
IKOM				*e*Sg	**Sg**	**10 59 24.6**	**+2.4**
IBDR	**Badra**	**1.56**	**286**	*e*Pg	**Pb**	**10 59 02.0**	**-1.1**
	baz=102						
IBDR				*e*Sg	**Sg**	**10 59 23.0**	**-1.3**
IBDR				AML	AML	10 59 28.4	
	comp=N,205nm,0.4s						
IBDR				AML	AML	10 59 28.8	
	comp=E,166nm,0.7s						
RAFI	**Al-Rafai**	**1.66**	**235**	*e*Pn	**Pg**	**10 59 05.0**	**-1.1**
RAFI				*e*Sn	**Sg**	**10 59 28.0**	**+0.3**
AMIS	**Naft Sefid**	**1.68**	**127**	*e*		10 59 43.9	
	comp=Z,3μm,0.6s						
AMIS				*e*Pg	**Pg**	**10 59 06.5**	**+0.1**
HSAM	**Samen**	**1.69**	**26**	*e*		10 59 08.2	
	comp=Z,2μm,0.3s						
HSAM				*e*Pn	**Pg**	**10 59 06.8**	**+0.2**
KER	**Kermanshah**	**1.76**	**344**	*e*Pn	**Pg**	**10 59 06.9**	**-1.0**
IBZA	**Bozab**	**1.78**	**4**	*e*		10 59 11.5	
	comp=Z,2μm,0.8s						
IBZA				*e*Pn	**Pg**	**10 59 07.0**	**-1.3**
IGHG	**Ghaleghazi**	**1.89**	**330**	*e*		10 59 39.2	
	comp=N,4μm,0.4s						
IGHG				*e*Pn	**Pg**	**10 59 09.8**	**-0.7**
KHMZ	**Khomeyn**	**2.15**	**60**	*e*Pn	**Pg**	**10 59 14.1**	**-1.4**
IDHR	**Dehrash**	**2.29**	**331**	*e*Pn	**Pb**	**10 59 14.7**	**-1.0**
IDHR				*e*		10 59 18.7	
	comp=Z,1μm,0.3s						
SNGE	**Sanandaj**	**2.42**	**353**	*e*Pn	**Pb**	**10 59 16.8**	**-1.1**
ASAO	**Ashtian**	**2.67**	**46**	*e*Pn	**Pb**	**10 59 21.0**	**-1.3**
IPIR	**Pirpir**	**2.68**	**89**	*e*Pn	**Pb**	**10 59 21.2**	**-1.2**
IPIR				*e*		11 00 06.4	
	comp=Z,780nm,0.4s						
IBRJ	**Brojen**	**3.10**	**104**	*e*Pn	**Pn**	**10 59 25.6**	**+2.1**
IBRJ				*e*		11 00 29.3	
	comp=Z,280nm,0.7s						
QAMS	**Qamsar**	**3.26**	**70**	*e*Pn	**Pb**	**10 59 28.9**	**-3.4**
QAMS				*e*		11 00 21.2	
	comp=Z,524nm,0.4s						
IRAZ	**Razeghan**	**3.27**	**34**	*e*Pn	**Pb**	**10 59 29.0**	**-3.5**
IRAZ				*e*		11 00 36.9	
	comp=Z,554nm,0.7s						
IKLH	**Kolahrood**	**3.31**	**78**	*e*Pn	**Pb**	**10 59 29.5**	**-3.6**
IKLH				*e*		11 00 29.5	
	comp=Z,362nm,0.5s						
QABG	**Abgarm-Qazvin**	**3.39**	**27**	*e*Pn	**Pn**	**10 59 29.4**	**+2.1**
QABG				*e*		10 59 39.6	
	comp=Z,237nm,0.5s						
GHVR	**GHOM**	**3.48**	**58**	*e*Pn	**Pb**	**10 59 32.1**	**-3.9**
IQOM	**Qom**	**3.53**	**52**	*e*Pn	**Pn**	**10 59 32.2**	**+2.9**
IQOM				*e*		10 59 44.8	
	comp=Z,550nm,0.5s						
KLNJ	**Kolanjah**	**3.70**	**116**	*e*Pn	**Pn**	**10 59 34.2**	**+2.4**
KLNJ				*e*		11 00 49.8	
	comp=Z,341nm,0.5s						
IZEF	**Zefreh**	**3.89**	**86**	*e*Pn	**Pn**	**10 59 37.5**	**+3.2**
IZEF				*e*		10 59 51.2	
	comp=Z,154nm,0.5s						
KRSH	**Karshahi**	**3.92**	**70**	*e*Pn	**Pn**	**10 59 37.6**	**+3.1**
IRAM	**Ramesheh**	**4.05**	**101**	*e*Pn	**Pn**	**10 59 39.6**	**+3.1**
IVRN	**Varamin**	**4.06**	**54**	*e*Pn	**Pn**	**10 59 39.5**	**+3.1**
IVRN				*e*		10 59 59.2	
	comp=Z,187nm,0.5s						
ISFB	**Sefidab**	**4.13**	**65**	*e*Pn	**Pn**	**10 59 40.1**	**+2.7**
NASN	**Na'in**	**4.29**	**87**	*e*Pn	**Pn**	**10 59 42.4**	**+2.5**
IDMV	**Damavand**	**4.60**	**50**	*e*Pn	**Pn**	**10 59 46.8**	**+2.8**

LDG ***30*** *11:00:49.9±0.2, 42.°76N×13.°12E, h10km, Ml3.6/17, Error ellipse: s-maj=5.5km s-min=4.3km az=47.0*
ROM ***30*** *11:00:49.2±0.0, 42.°815N±0.°001×13.°090E±0.°003, h10km, ML3.5/59, Error ellipse: s-maj=0.2km s-min=0.1km az=252.0*
IDC ***30*** *11:00:49.0±1.4, 42.°86N×13.°25E, h0km, mb3.7/4, mbtmp3.6/9, ML3.6/5, Error ellipse: s-maj=22.8km s-min=15.3km az=82.0*
PRU ***30*** *11:00:50.0±0.0, 42.°83N×13.°35E, h0km*
STR ***30*** *11:00:52.4±1.4, 43.°N±6.°×1.°3E±1.°1, h10km, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=100.5, preliminary*
ISC 30 11:00:49.5±0.7, 42.°81N±0.°01×13.°08E±0.°02, h11km±4km, n230, σ1°82/281, mb3.9/3, 5C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.07**	**201**	⇑P	**Pg**	**11 00 51.9**	**-0.1**
T1212				S	**Sg**	**11 00 53.6**	**-0.2**
T1216	**Preci, Frazion**	**0.09**	**331**	P	**Pg**	**11 00 52.1**	**-0.1**
T1216				S	**Sg**	**11 00 53.8**	**-0.3**
T1245	**Castelsantange**	**0.09**	**62**	P	**Pg**	**11 00 52.0**	**-0.4**
T1245				S	**Sg**	**11 00 53.7**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1213	**Norcia, Frazio**	**0.10**	**158**	P	**Pg**	**11 00 52.5**	**+0.2**
T1213				S	**Sg**	**11 00 54.0**	**-0.4**
T1214	**Arquata del Tr**	**0.11**	**119**	P	**Pg**	**11 00 52.4**	**-0.2**
T1214				S	**Sg**	**11 00 54.2**	**-0.5**
T1218	**Civita (PG)**	**0.15**	**169**	P	**Pg**	**11 00 53.0**	**0.0**
T1218				S	**Sg**	**11 00 55.8**	**+0.3**
T1217	**Poggiodomo (PG**	**0.15**	**227**	P	**Pg**	**11 00 53.3**	**+0.2**
T1217				S	**Sg**	**11 00 56.3**	**+0.8**
T1217				AML	AML		
	comp=E,33550μm,0.7s						
T1217				AML	AML		
	comp=N,76650μm,0.3s						
T1217				AML	AML		
	comp=E,32750μm,0.7s						
T1217				AML	AML		
	comp=N,74700μm,0.3s						
T1217				AML	AML		
	comp=E,33600μm,0.7s						
T1217				AML	AML		
	comp=N,74650μm,0.3s						
T1217				AML	AML		
	comp=N,76600μm,0.3s						
FEMA	**Monte Fema**	**0.15**	**352**	P	**Pg**	**11 00 53.1**	**0.0**
FEMA				S	**Sg**	**11 00 55.7**	**0.0**
FEMA				AML	AML		
	comp=E,79050μm,0.5s						
FEMA				AML	AML		
	comp=N,87050μm,0.3s						
T1215	**Vallo di Nera,**	**0.15**	**266**	⇑P	**Pg**	**11 00 53.3**	**+0.2**
T1215				S	**Sg**	**11 00 56.3**	**+0.6**
T1215				AML	AML		
	comp=E,45250μm,0.2s						
T1215				AML	AML		
	comp=N,38300μm,0.9s						
T1215				AML	AML		
	comp=N,36650μm,0.9s						
T1215				AML	AML		
	comp=E,44650μm,0.2s						
T1215				AML	AML		
	comp=E,45300μm,0.2s						
T1215				AML	AML		
	comp=N,36700μm,0.9s						
T1244	**Arquata del Tr**	**0.17**	**109**	P	**Pg**	**11 00 53.5**	**0.0**
T1244				S	**Sg**	**11 00 56.6**	**+0.5**
MMO1	**Montemonaco**	**0.20**	**65**	P	**Pg**	**11 00 53.7**	**-0.3**
T1201	**Domo (RI)**	**0.20**	**141**	P	**Pg**	**11 00 54.2**	**+0.2**
T1201				S	**Sg**	**11 00 57.9**	**+1.0**
LNSS	**Leonessa**	**0.21**	**187**	P	**Pg**	**11 00 54.4**	**+0.3**
LNSS				S	**Sg**	**11 00 58.0**	**+0.7**
LNSS				AML	AML		
	comp=N,57900μm,0.2s						
LNSS				AML	AML		
	comp=E,28700μm,0.3s						
T1256	**Bolognola (MC)**	**0.22**	**30**	P	**Pg**	**11 00 54.2**	**-0.1**
T1256				S	**Sg**	**11 00 57.9**	**+0.3**
FDMO	**Fiordimonte**	**0.22**	**2**	P	**Pg**	**11 00 54.2**	**0.0**
FDMO				S	**Sg**	**11 00 58.0**	**+0.5**
T1204	**Amatrice, Fraz**	**0.22**	**128**	⇓P	**Pg**	**11 00 54.4**	**+0.1**
T1204				S	**Sg**	**11 00 58.3**	**+0.7**
T1204				AML	AML		
	comp=N,27100μm,0.3s						
T1204				AML	AML		
	comp=E,42850μm,0.7s						
T1204				AML	AML		
	comp=N,27150μm,0.3s						
T1219	**Muccia, Frazio**	**0.25**	**348**	P	**Pg**	**11 00 54.8**	**+0.1**
T1219				S	**Sg**	**11 00 58.7**	**+0.5**
AM05	**Amandola Campo**	**0.26**	**51**	P	**Pg**	**11 00 54.9**	**0.0**
AM05				S	**Sg**	**11 00 59.1**	**+0.5**
AM05				AML	AML		
	comp=N,7215μm,0.5s						
AM05				AML	AML		
	comp=E,25100μm,0.6s						
AM05				AML	AML		
	comp=E,25150μm,0.6s						
AM05				AML	AML		
	comp=N,1515μm,0.6s						
AM05				AML	AML		
	comp=N,1510μm,0.6s						
AM05				AML	AML		
	comp=N,7220μm,0.5s						
AM05				AML	AML		
	comp=E,5755μm,0.8s						
T1241	**Roccafluvione,**	**0.26**	**81**	P	**Pg**	**11 00 55.4**	**+0.4**
T1241				S	**Sg**	**11 00 59.6**	**+0.9**
T1241				AML	AML		
	comp=N,25250μm,0.6s						
T1241				AML	AML		
	comp=E,36450μm,0.7s						
T1241				AML	AML		
	comp=N,25300μm,0.7s						
T1241				AML	AML		
	comp=N,14340μm,0.4s						
T1241				AML	AML		
	comp=E,35900μm,0.7s						
T1241				AML	AML		
	comp=N,17267μm,0.4s						
CSP1	**Cessapalombo**	**0.29**	**19**	P	**Pg**	**11 00 55.5**	**0.0**
CSP1				S	**Sg**	**11 01 00.4**	**+0.8**
CSP1				AML	AML		
	comp=E,49900μm,0.3s						
CSP1				AML	AML		
	comp=N,61950μm,0.5s						
T1243	**Rocca Santa Ma**	**0.30**	**113**	P	**Pg**	**11 00 55.5**	**-0.2**
T1243				S	**Sg**	**11 01 00.1**	**+0.5**
GUMA	**Gualdo di Mace**	**0.31**	**37**	⇑P	**Pg**	**11 00 56.1**	**+0.2**
GUMA				S	**Sb**	**11 01 01.3**	**-1.0**
GUMA				AML	AML		
	comp=E,57350μm,0.4s						
GUMA				AML	AML		
	comp=E,60600μm,0.5s						
GUMA				AML	AML		
	comp=N,78350μm,0.5s						
GUMA				AML	AML		
	comp=N,65250μm,0.4s						
RM33	**Pellescritta (**	**0.32**	**162**	P	**Pg**	**11 00 56.2**	**+0.2**
RM33				S	**Sg**	**11 01 01.1**	**+0.7**
RM33				AML	AML		
	comp=E,12700μm,1.6s						
RM33				AML	AML		
	comp=E,12800μm,1.6s						
RM33				AML	AML		
	comp=N,13300μm,1.2s						
RM33				AML	AML		
	comp=N,13400μm,1.2s						
RM33				AML	AML		
	comp=E,12650μm,1.6s						
T1211	**Morro Reatino**	**0.33**	**210**	P	**Pg**	**11 00 56.4**	**+0.3**
T1211				S	**Sg**	**11 01 01.5**	**+1.0**
T1211				AML	AML		
	comp=E,14600μm,1.0s						
T1211				AML	AML		
	comp=E,14800μm,1.0s						
T1211				AML	AML		
	comp=N,45850μm,0.3s						
T1211				AML	AML		
	comp=N,45400μm,0.3s						
T1211				AML	AML		
	comp=E,14850μm,1.0s						
T1211				AML	AML		
	comp=E,14550μm,1.0s						
T1211				AML	AML		
	comp=N,45800μm,0.3s						
ARRO	**Arrone**	**0.33**	**225**	P	**Pg**	**11 00 56.4**	**+0.3**
ARRO				S	**Sg**	**11 01 01.9**	**+1.4**
ARRO				AML	AML		
	comp=N,12850μm,0.6s						
ARRO				AML	AML		
	comp=E,13950μm,0.2s						
ARRO				AML	AML		
	comp=E,10497μm,0.2s						
ARRO				AML	AML		
	comp=N,9555μm,0.7s						
SEF1	**Sefro**	**0.35**	**344**	P	**Pg**	**11 00 56.6**	**+0.1**
SEF1				S	**Sg**	**11 01 02.0**	**+0.8**
SEF1				AML	AML		
	comp=E,27400μm,0.3s						
SEF1				AML	AML		
	comp=N,33950μm,0.2s						
SEF1				AML	AML		
	comp=E,27350μm,0.3s						
SEF1				AML	AML		
	comp=E,24886μm,0.2s						
SEF1				AML	AML		
	comp=N,34000μm,0.2s						
CAMP	**Campotosto**	**0.37**	**139**	P	**Pg**	**11 00 56.8**	**-0.1**
CAMP				S	**Sg**	**11 01 02.3**	**+0.4**
CAMP				AML	AML		
	comp=E,7385μm,0.8s						
CAMP				AML	AML		
	comp=N,4285μm,0.6s						
CAMP				AML	AML		
	comp=N,4280μm,0.6s						
CAMP				AML	AML		
	comp=N,4084μm,2.2s						
PIO1	**Pioraco**	**0.37**	**349**	P	**Pg**	**11 00 56.8**	**-0.2**
PIO1				S	**Sg**	**11 01 02.8**	**+0.9**
MDAR	**Monte D'Aria**	**0.38**	**7**	P	**Pg**	**11 00 57.1**	**0.0**
MDAR				S	**Sg**	**11 01 02.9**	**+0.6**
MDAR				AML	AML		
	comp=N,12800μm,0.3s						
MDAR				AML	AML		
	comp=N,12800μm,0.3s						
MDAR				AML	AML		
	comp=E,15900μm,0.4s						
ASSB	**Assisi San Ben**	**0.38**	**307**	⇑P	**Pg**	**11 00 57.3**	**+0.1**
ASSB				S	**Sg**	**11 01 03.2**	**+0.9**
ASSB				AML	AML		
	comp=N,15150μm,0.9s						
ASSB				AML	AML		
	comp=E,12100μm,1.0s						
T1246	**Crognaleto (TE**	**0.38**	**127**	P	**Pg**	**11 00 56.8**	**-0.4**
T1246				S	**Sg**	**11 01 02.7**	**+0.4**
FIU1	**Fiuminata**	**0.39**	**344**	P	**Pg**	**11 00 57.2**	**0.0**
FIU1				S	**Sg**	**11 01 03.2**	**+0.7**
FIU1				AML	AML		
	comp=E,10060μm,1.1s						
FIU1				AML	AML		
	comp=N,10045μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.41**	**156**	P	**Pg**	**11 00 57.7**	**+0.1**
T1247				S	**Sg**	**11 01 03.6**	**+0.7**
T1247				AML	AML		
	comp=N,9350μm,0.6s						
T1247				AML	AML		
	comp=E,9880μm,0.6s						
CESX	**Cesi**	**0.42**	**241**	P	**Pg**	**11 00 57.9**	**+0.1**
CESX				S	**Sg**	**11 01 04.6**	**+1.2**
CESX				AML	AML		
	comp=E,11860μm,0.7s						
CESX				AML	AML		
	comp=N,11745μm,0.7s						
SSM1	**San Severino M**	**0.42**	**10**	P	**Pg**	**11 00 57.8**	**-0.1**
SSM1				S	**Sb**	**11 01 04.5**	**-0.8**
GAG1	**Gagliole**	**0.42**	**359**	P	**Pg**	**11 00 58.1**	**+0.2**
GAG1				S	**Sb**	**11 01 04.7**	**-0.7**
GAG1				AML	AML		
	comp=E,21550μm,0.5s						
GAG1				AML	AML		
	comp=N,30600μm,0.5s						
GAG1				AML	AML		
	comp=N,30650μm,0.5s						
GAG1				AML	AML		
	comp=E,22003μm,2.1s						
GAG1				AML	AML		
	comp=N,25043μm,0.3s						
TERO	**Teramo**	**0.43**	**116**	P	**Pg**	**11 00 57.7**	**-0.4**
TERO				S	**Sg**	**11 01 04.1**	**+0.3**
TERO				AML	AML		
	comp=E,6365μm,0.9s						
TERO				AML	AML		
	comp=N,8455μm,0.6s						
TERO				AML	AML		
	comp=E,6190μm,0.9s						
TERO				AML	AML		
	comp=N,7820μm,0.6s						
TERO				AML	AML		
	comp=N,7815μm,0.6s						
TERO				AML	AML		
	comp=E,6195μm,0.9s						
TERO				AML	AML		
	comp=E,5108μm,0.6s						
TERO				AML	AML		
	comp=E,3836μm,0.8s						
MNTP	**Montappone**	**0.43**	**42**	P	**Pg**	**11 00 58.5**	**+0.4**
MNTP				AML	AML		
	comp=E,16150μm,0.7s						
MNTP				AML	AML		
	comp=N,18250μm,0.5s						
SNTG	**Esanatoglia**	**0.45**	**347**	P	**Pg**	**11 00 58.4**	**0.0**
SNTG				S	**Sg**	**11 01 05.3**	**+0.9**
SNTG				AML	AML		
	comp=E,4800μm,0.9s						

SNTG				AML	AML	
	comp=N,5495µm,1.4s					
SNTG				AML	AML	
	comp=N,5960µm,0.2s					
SNTG				AML	AML	
	comp=E,4660µm,0.9s					
SNTG				AML	AML	
	comp=N,5495µm,1.3s					
SNTG				AML	AML	
	comp=E,4800µm,0.9s					
OFFI	**Offida**	**0.46 75**	P	**Pb**	**11 00 59.2 -0.5**	
OFFI			AML	AML		
	comp=E,12950µm,0.7s					
OFFI			AML	AML		
	comp=N,16950µm,0.7s					
ATCC	**AVT- Casa Cast**	**0.49 319**	P	**Pg**	**11 00 59.3 +0.1**	
ATCC			S	**Sg**	**11 01 06.9 +1.2**	
ATCC			AML	AML		
	comp=E,8955µm,1.6s					
ATCC			AML	AML		
	comp=E,8965µm,1.6s					
ATCC			AML	AML		
	comp=N,8400µm,0.8s					
GIGS	**Gran Sasso**	**0.51 135**	P	**Pg**	**11 00 59.0 -0.5**	
GIGS			S	**Sg**	**11 01 06.5 +0.1**	
GIGS			AML	AML		
	comp=N,1171µm,0.8s					
GIGS			AML	AML		
	comp=E,1655µm,0.6s					
AQU	**L'Aquila**	**0.52 152**	P	**Pg**	**11 00 59.6 0.0**	
TRE1	**Treia**	**0.53 19**	P	**Pg**	**11 01 00.1 +0.2**	
TRE1			AML	AML		
	comp=E,20650µm,0.4s					
TRE1			AML	AML		
	comp=N,12800µm,0.2s					
FOSV	**Fossato di Vic**	**0.53 334**	P	**Pg**	**11 01 00.0 +0.1**	
FOSV			AML	AML		
	comp=E,3315µm,1.1s					
FOSV			AML	AML		
	comp=N,3745µm,1.5s					
FOSV			AML	AML		
	comp=E,2961µm,1.6s					
FIAM	**Fiamignano**	**0.55 177**	P	**Pg**	**11 01 00.1 -0.1**	
FIAM			S	**Sg**	**11 01 07.9 +0.5**	
FIAM			AML	AML		
	comp=E,5395µm,0.9s					
FIAM			AML	AML		
	comp=N,5050µm,1.3s					
FIAM			AML	AML		
	comp=E,3724µm,0.3s					
MURB	**Monte Urbino**	**0.60 318**	P	**Pg**	**11 01 01.3 -0.1**	
MURB			AML	AML		
	comp=N,9295µm,0.3s					
MURB			AML	AML		
	comp=E,11065µm,0.7s					
TRTR	**Tortoreto Alta**	**0.61 90**	P	**Pb**	**11 01 02.2 -0.1**	
TRTR			AML	AML		
	comp=E,12550µm,1.0s					
TRTR			AML	AML		
	comp=N,10600µm,0.9s					
CADA	**Capodarco di F**	**0.63 53**	P	**Pb**	**11 01 02.9 +0.4**	
MMUR	**Monte Murano**	**0.63 355**	P	**Pg**	**11 01 01.1 -0.7**	
ATTE	**AVT- Monte Tez**	**0.66 306**	P	**Pg**	**11 01 02.3 +0.1**	
CIMA	**Civitanova Mar**	**0.66 41**	P	**Pb**	**11 01 02.9 0.0**	
FAGN	**Fagnano**	**0.66 145**	AML	AML		
	comp=E,6605µm,0.6s					
FAGN			AML	AML		
	comp=N,4765µm,1.5s					
ATFO	**Monte Foce - G**	**0.67 326**	P	**Pg**	**11 01 02.3 -0.2**	
ATFO			AML	AML		
	comp=E,3095µm,0.7s					
ATFO			AML	AML		
	comp=N,2630µm,0.9s					
ATSC	**Scheggia e Pas**	**0.67 335**	P	**Pg**	**11 01 02.1 -0.6**	
PP3	**Marolino**	**0.69 34**	P	**Pb**	**11 01 03.3 -0.2**	
PP3			AML	AML		
	comp=E,8245µm,0.8s					
PP3			AML	AML		
	comp=N,10405µm,1.4s					
PP3			AML	AML		
	comp=E,7890µm,0.5s					
PP3			AML	AML		
	comp=N,10920µm,1.4s					
PP3			AML	AML		
	comp=N,10415µm,1.4s					
PP3			AML	AML		
	comp=N,10935µm,1.4s					
PP3			AML	AML		
	comp=E,7507µm,0.8s					
PP3			AML	AML		
	comp=N,9069µm,0.9s					
PP3			AML	AML		
	comp=N,9486µm,0.9s					
ARVD	**Arcevia**	**0.69 352**	P	**Pg**	**11 01 02.4 -0.5**	
ARVD			AML	AML		
	comp=N,2625µm,0.7s					
ARVD			AML	AML		
	comp=E,2475µm,0.7s					
ARVD			AML	AML		
	comp=N,1522µm,1.2s					
ATLO	**AVT- Montelove**	**0.70 316**	P	**Pg**	**11 01 02.5 -0.7**	
VCEL	**Villa Celiera**	**0.70 126**	⇑P	**Pg**	**11 01 03.0 -0.2**	
VCEL			AML	AML		
	comp=E,5530µm,0.5s					
VCEL			AML	AML		
	comp=N,4605µm,1.2s					
VCEL			AML	AML		
	comp=E,5535µm,0.5s					
SRES	**S.Oreste - Sor**	**0.71 216**	P	**Pg**	**11 01 02.9 -0.5**	
SRES			AML	AML		
	comp=E,3515µm,0.6s					
SRES			AML	AML		
	comp=N,3765µm,0.4s					
MGAB	**Montegabbione**	**0.72 278**	P	**Pg**	**11 01 02.8 -0.6**	
MGAB			AML	AML		
	comp=N,10260µm,0.5s					
MGAB			AML	AML		
	comp=N,9525µm,0.6s					
MGAB			AML	AML		
	comp=E,6195µm,0.5s					
MGAB			AML	AML		
	comp=N,10290µm,0.5s					
MGAB			AML	AML		
	comp=E,7570µm,1.1s					
TB01	**Gubbio**	**0.74 321**	P	**Pg**	**11 01 03.7 -0.1**	
ATVA	**AVT- Monte Val**	**0.74 309**	P	**Pg**	**11 01 04.0 +0.1**	
FRON	**Frontone**	**0.75 340**	P	**Pg**	**11 01 03.9 -0.1**	
FRON			AML	AML		
	comp=E,2605µm,0.4s					
FRON			AML	AML		
	comp=N,3365µm,0.4s					
FRON			AML	AML		
	comp=N,2472µm,0.3s					
FRON			AML	AML		
	comp=E,1576µm,0.7s					
ATVO	**AVT- Monte Val**	**0.75 319**	P	**Pg**	**11 01 04.0 -0.1**	
ATVO			AML	AML		
	comp=E,2040µm,0.6s					
ATVO			AML	AML		
	comp=N,2030µm,0.4s					
TB03	**Pietralunga**	**0.76 320**	P	**Pg**	**11 01 04.2 -0.1**	
ATBU	**Serra di Buran**	**0.77 330**	P	**Pg**	**11 01 04.3 0.0**	
T0110	**Collepietro**	**0.78 138**	P	**Pg**	**11 01 04.2 -0.5**	
T0110			AML	AML		
	comp=E,4590µm,0.9s					
T0110			AML	AML		
	comp=N,4920µm,0.5s					
ATPC	**Poggio Castell**	**0.81 326**	P	**Pg**	**11 01 05.1 0.0**	
PIEI	**Pieia**	**0.82 331**	P	**Pg**	**11 01 05.0 -0.4**	
PIEI			AML	AML		
	comp=E,2140µm,0.3s					
PIEI			AML	AML		
	comp=N,1595µm,1.6s					
PIEI			AML	AML		
	comp=N,1486µm,2.2s					
PTQR	**Pietraquaria**	**0.83 163**	AML	AML		
	comp=N,1320µm,0.8s					
PTQR			AML	AML		
	comp=E,2105µm,0.4s					
MTCE	**Montecelio**	**0.83 198**	P	**Pg**	**11 01 05.1 -0.4**	
MTCE			AML	AML		
	comp=E,3410µm,1.2s					
MTCE			AML	AML		
	comp=N,2190µm,0.4s					
AOI	**Ancona**	**0.83 27**	P	**Pg**	**11 01 05.1 -0.5**	
AOI			AML	AML		
	comp=N,2635µm,0.4s					
AOI			AML	AML		
	comp=E,2995µm,1.4s					
AOI			AML	AML		
	comp=E,2834µm,0.4s					
MPAG	**Monte Paganucc**	**0.85 344**	P	**Pg**	**11 01 05.6 -0.3**	
PCRO	**Pietralacroce**	**0.86 23**	P	**Pb**	**11 01 06.6 +0.1**	
SACS	**San Casciano d**	**0.86 273**	P	**Pg**	**11 01 05.7 -0.4**	
SACS			AML	AML		
	comp=E,2580µm,1.1s					
SACS			AML	AML		
	comp=E,2585µm,1.1s					
SACS			AML	AML		
	comp=N,4115µm,1.1s					
SACS			AML	AML		
	comp=E,2490µm,1.1s					
SACS			AML	AML		
	comp=N,4190µm,1.1s					
CERT	**Cerreto**	**0.87 185**	P	**Pg**	**11 01 05.8 -0.4**	
CERT			AML	AML		
	comp=E,5515µm,0.5s					
CERT			AML	AML		
	comp=N,2905µm,0.4s					
SENI	**Senigallia**	**0.90 7**	P	**Pg**	**11 01 06.0 -0.8**	
SENI			AML	AML		
	comp=N,2910µm,1.0s					
SENI			AML	AML		
	comp=N,2870µm,1.0s					
SENI			AML	AML		
	comp=E,3285µm,0.8s					
ATMC	**Monte Cedrone**	**0.91 315**	P	**Pg**	**11 01 06.5 -0.5**	
FSSB	**Fossombrone**	**0.91 346**	P	**Pg**	**11 01 06.4 -0.6**	
FSSB			AML	AML		
	comp=N,9205µm,0.4s					
FSSB			AML	AML		
	comp=E,7985µm,0.4s					
FSSB			AML	AML		
	comp=E,3578µm,0.3s					
LATE	**Laterza**	**0.96 258**	P	**Pg**	**11 01 07.2 -0.8**	
CAFI	**Castiglion Fio**	**0.96 303**	P	**Pg**	**11 01 07.7 -0.5**	
CAFI			AML	AML		
	comp=N,1460µm,1.1s					
CAFI			AML	AML		
	comp=E,1790µm,0.6s					
CAFI			AML	AML		
	comp=N,1338µm,0.7s					
RCAV	**Rocca di Cave**	**0.97 186**	P	**Pg**	**11 01 08.4 +0.2**	
RCAV			AML	AML		
	comp=E,4150µm,0.5s					
RCAV			AML	AML		
	comp=N,3420µm,1.1s					
VVLD	**Villa Vallelon**	**1.02 157**	P	**Pg**	**11 01 08.2 -1.1**	
SF11	**Podere del Sol**	**1.03 274**	P	**Pg**	**11 01 09.5 +0.1**	
MCIV	**Monte Civitell**	**1.03 269**	P	**Pg**	**11 01 09.4 0.0**	
MCIV			AML	AML		
	comp=N,1240µm,0.4s					
MCIV			AML	AML		
	comp=E,846µm,0.3s					
GUAR	**Guarcino**	**1.03 170**	P	**Pg**	**11 01 08.4 -1.0**	
SF04	**Casetta**	**1.04 272**	P	**Pg**	**11 01 09.8 +0.2**	
SF13	**Bagnolo**	**1.07 271**	P	**Pg**	**11 01 09.7 -0.5**	
SF14	**Selvena**	**1.08 267**	P	**Pb**	**11 01 09.5 -0.7**	
VIVA	**Pratoni del Vi**	**1.09 192**	AML	AML		
	comp=N,6850µm,0.4s					
VIVA			AML	AML		
	comp=E,4785µm,0.4s					
MA9	**Marino**	**1.09 197**	P	**Pb**	**11 01 10.4 +0.1**	
RDP	**Rocca di Papa**	**1.09 194**	P	**Pb**	**11 01 09.3 -1.1**	
SAMA	**S.Maria delle**	**1.09 199**	P	**Pb**	**11 01 09.7 -0.8**	
TOLF	**Tolfa**	**1.09 227**	P	**Pb**	**11 01 09.3 -1.1**	
TOLF			AML	AML		
	comp=N,1880µm,0.3s					
TOLF			AML	AML		
	comp=E,2795µm,0.4s					
SF01	**Poggio Pratacc**	**1.11 270**	P	**Pb**	**11 01 10.9 +0.1**	
LPEL	**Lama dei Pelig**	**1.12 133**	P	**Pb**	**11 01 09.4 -1.5**	
LPEL			AML	AML		
	comp=N,1675µm,0.6s					
LPEL			AML	AML		
	comp=E,2025µm,1.0s					
ARCI	**Arcidosso**	**1.18 272**	P	**Pb**	**11 01 12.6 +0.7**	
ARCI			AML	AML		
	comp=E,446µm,0.8s					
ARCI			AML	AML		
	comp=N,382µm,0.4s					
POFI	**Posta Fibreno**	**1.19 157**	P	**Pb**	**11 01 12.2 0.0**	
POFI			AML	AML		
	comp=E,1245µm,0.6s					
POFI			AML	AML		
	comp=N,792µm,0.7s					
LRP	**Arpino**	**1.23 162**	P	**Pg**	**11 01 14.2 +1.1**	
LRP			AML	AML		
	comp=E,702µm,1.4s					
LRP			AML	AML		
	comp=N,1021µm,0.6s					
LATB	**Latina**	**1.32 184**	P	**Pn**	**11 01 12.9 -0.9**	
LATB			AML	AML		
	comp=E,522µm,0.9s					
LATB			AML	AML		
	comp=N,456µm,1.3s					
ASQU	**Asqua**	**1.36 317**	P	**Pn**	**11 01 14.2 -0.3**	
FRES	**Fresagrandinar**	**1.45 125**	P	**Pn**	**11 01 15.2 -0.5**	
MIDA	**Miranda**	**1.46 143**	P	**Pn**	**11 01 14.9 -1.0**	
MAON	**Monte Argentar**	**1.49 256**	P	**Pn**	**11 01 16.2 0.0**	
MAON			AML	AML		
	comp=E,388µm,1.1s					
MAON			AML	AML		
	comp=N,344µm,0.9s					
TRIV	**Trivento**	**1.51 133**	P	**Pn**	**11 01 15.8 -0.8**	
RUFI	**Rufina**	**1.54 312**	P	**Pn**	**11 01 17.6 +0.7**	
TRIF	**Trifonti**	**1.62 281**	P	**Pn**	**11 01 18.3 +0.2**	
TRIF			AML	AML		
	comp=N,290µm,0.7s					
TRIF			AML	AML		
	comp=E,379µm,0.7s					
CASP	**Castiglione de**	**1.63 270**	P	**Pn**	**11 01 18.3 +0.2**	
CASP			AML	AML		
	comp=N,146µm,0.8s					
CASP			AML	AML		
	comp=E,150µm,0.8s					
MAIM	**Mastiano**	**2.18 301**	P	**Pn**	**11 01 26.3 +0.6**	
MORSI	**Morsiglia**	**2.73 274**	P	**Pn**	**11 01 34.3 +1.0**	
GRAM	**Graiana**	**2.75 309**	P	**Pn**	**11 01 34.5 +0.9**	
GRAM			AML	AML		
	comp=E,240µm,1.1s					
GRAM			AML	AML		
	comp=N,211µm,0.4s					
SMPL	**Sampolo**	**2.90 257**	P	**Pn**	**11 01 35.6 0.0**	
CORF	**Corte**	**2.94 261**	P	**Pn**	**11 01 38.1 +1.9**	
PGF	**Pioggiola**	**3.02 266**	*e*Pn	**Pn**	**11 01 36.4 -0.9**	
PGF	**Pioggiola**	**3.02 266**	*e*P	**Pn**	**11 01 38.3 +1.0**	
PGF	**Pioggiola**	**3.02 266**	AML	AML		
	comp=N,20µm,1.4s					
PGF			AML	AML		
	comp=E,34µm,0.9s					
PGF	**Pioggiola**	**3.02 266**	P	**Pn**	**11 01 38.4 +1.0**	
SABO	**M.te Sabotino**	**3.19 7**	P	**Pn**	**11 01 40.0 +0.4**	
SABO			AML	AML		
	comp=N,386µm,0.8s					
SABO			AML	AML		
	comp=N,1420µm,0.9s					
SABO			AML	AML		
	comp=E,1255µm,0.5s					
SABO			AML	AML		
	comp=E,294µm,0.7s					
CGRP	**Cima Grappa**	**3.20 344**	P	**Pn**	**11 01 40.0 +0.1**	
AJAC	**Base Areonaval**	**3.32 256**	P	**Pn**	**11 01 43.0 +1.7**	
LJU	**Ljubljana**	**3.39 17**	P	**Pn**	**11 01 42.8 +0.4**	
LJU			AML	AML		
	comp=N,1172µm,0.5s					
LJU			AML	AML		
	comp=E,992µm,1.0s					
MPRI	**Monte Prat**	**3.43 359**	P	**Pn**	**11 01 43.1 +0.2**	
MPRI			AML	AML		
	comp=E,270µm,1.2s					
MPRI			AML	AML		
	comp=N,412µm,0.8s					
LUSI	**Trento, Gardas**	**3.50 335**	P	**Pn**	**11 01 44.4 +0.5**	
LUSI			AML	AML		
	comp=N,240µm,1.2s					
LUSI			AML	AML		
	comp=E,126µm,0.9s					
CIMO	**Cimolais**	**3.52 353**	P	**Pn**	**11 01 44.4 +0.1**	
PTCC	**Patocco-Chiusa**	**3.60 3**	P	**Pn**	**11 01 45.5 +0.3**	
PTCC			AML	AML		
	comp=N,94µm,0.4s					
PTCC			AML	AML		
	comp=E,124µm,0.4s					
GAGG	**Gaggia**	**3.60 336**	P	**Pn**	**11 01 46.7 +1.3**	
GAGG			AML	AML		
	comp=E,207µm,1.1s					
GAGG			AML	AML		
	comp=N,148µm,0.7s					
MABI	**Malga Bissina**	**3.72 331**	P	**Pn**	**11 01 48.0 +0.9**	
ACOM	**Acomizza, Ital**	**3.75 5**	P	**Pn**	**11 01 47.5 +0.2**	
ACOM			AML	AML		
	comp=E,197µm,1.1s					
ACOM			AML	AML		
	comp=N,185µm,0.8s					
ACOM			AML	AML		
	comp=N,207µm,0.6s					
ACOM			AML	AML		
	comp=E,257µm,1.3s					
MYKA	**Terra Mystica**	**3.84 6**	*e*Pn	**Pn**	**11 01 49.4 +0.9**	
	comp=E,3.3nm,0.2s					
OBKA	**Obir**	**3.84 15**	*e*Pn	**Pn**	**11 01 49.6 +1.0**	
	comp=E,2.6nm,0.3s					
KOSI	**Kohlern**	**3.84 342**	P	**Pn**	**11 01 48.8 0.0**	
KOSI			AML	AML		
	comp=N,160µm,0.7s					
KOSI			AML	AML		
	comp=E,240µm,1.1s					
ABTA	**Abfaltersbach**	**3.95 354**	*e*Pn	**Pn**	**11 01 51.8 +1.6**	
	comp=E,10.0nm,0.3s,SNR=7.7					
SOKA	**Soboth**	**4.11 19**	*e*Pn	**Pn**	**11 01 53.0 +0.8**	
	comp=E,2.5nm,0.4s					
SAOF	**Saorge**	**4.19 288**	P	**Pn**	**11 01 55.7 +2.4**	
SBF	**Sospel**	**4.25 286**	*e*Pn	**Pn**	**11 01 53.3 -0.9**	
SBF	**Sospel**	**4.25 286**	*e*P	**Pn**	**11 01 55.4 +1.2**	
VSL	**Villasalto**	**4.33 221**	P	**Pn**	**11 01 57.0 +1.7**	
VSL			AML	AML		
	comp=E,76µm,0.7s					
VSL			AML	AML		
	comp=N,43µm,0.6s					
FETA	**Feichten**	**4.53 339**	*e*Pn	**Pn**	**11 02 01.2 +3.1**	
	comp=N,3.9nm,0.4s					
WTTA	**Wattenberg**	**4.56 348**	*e*Pn	**Pn**	**11 02 01.7 +3.0**	
	comp=N,1.1nm,0.2s					
WTTA	**Wattenberg**	**4.56 348**	P	**Pn**	**11 02 01.0 +2.3**	
DAVOX	**Davos/Dischmat**	**4.57 331**	Pn	**Pn**	**11 02 01.9 +3.1**	
	comp=N,2.9nm,0.3s,baz=154,slow=18,SNR=13					
DAVOX			Sn	**Sn**	**11 02 54.6 +2.7**	
	comp=N,2.5nm,0.3s,baz=325,slow=21,SNR=5.4					
	comp=N,10.0nm,0.6s					
CALF	**Calern**	**4.59 284**	P	**Pn**	**11 01 59.8 +0.8**	
ISO	**Isola**	**4.59 289**	P	**Pn**	**11 02 02.7 +3.8**	
SQTA	**Sankt Quirin**	**4.60 344**	*e*Pn	**Pn**	**11 02 02.5 +3.4**	
	comp=N,2.9nm,0.2s,SNR=5.5					
WATA	**Walderalm**	**4.64 347**	*e*Pn	**Pn**	**11 02 02.4 +2.7**	
	comp=N,4.0nm,0.4s					
MOTA	**Moosalm**	**4.74 344**	*e*Pn	**Pn**	**11 02 04.1 +3.1**	
	comp=N,1.2nm,0.2s					
ARSA	**Arzberg**	**4.76 20**	*e*Pn	**Pn**	**11 02 01.9 +0.6**	
	comp=N,3.4nm,0.5s,SNR=4.6					
LMR	**La Mourre**	**4.84 278**	*e*Pn	**Pn**	**11 02 01.3 -0.9**	
LMR	**La Mourre**	**4.84 278**	*e*P	**Pn**	**11 02 04.8 +2.6**	
SURF	**Saint Ours**	**4.84 292**	P	**Pn**	**11 02 04.2 +1.7**	
JAUF	**Jausiers**	**4.87 292**	P	**Pn**	**11 02 06.6 +3.8**	
BIOA	**Bad Ischl, Aus**	**4.89 4**	*e*Pn	**Pn**	**11 02 04.4 +1.4**	
	comp=N,13nm,0.3s,SNR=14					
MBDF	**Montbardon**	**4.95 295**	*e*P	**Pn**	**11 02 06.9 +3.0**	
RETA	**Reutte**	**4.95 341**	*e*Pn	**Pn**	**11 02 06.6 +2.8**	
	comp=N,2.0nm,0.3s,SNR=4.2					
TRIGF	**Trigance**	**4.96 283**	P	**Pn**	**11 02 06.0 +2.0**	
CREF	**Crivoux**	**4.99 293**	P	**Pn**	**11 02 09.0 +4.5**	
DAVA	**Damuels**	**5.01 334**	*e*Pn	**Pn**	**11 02 07.8 +3.1**	
	comp=N,3.8nm,0.4s					
FLAF	**Flassans-sur-I**	**5.03 279**	P	**Pn**	**11 02 05.7 +0.9**	
ASEAF	**Site Antares,**	**5.09 272**	P	Pn	11 02 11.1 +5.8	
MOA	**Molln**	**5.11 9**	*e*Pn	**Pn**	**11 02 06.8 +0.9**	
	comp=N,1.4nm,0.1s,SNR=6.9					
DIX	**Grande Dixence**	**5.21 311**	P	**Pn**	**11 02 10.6 +3.1**	
DIX	**Grande Dixence**	**5.21 311**	S	**Sn**	**11 03 11.0 +3.3**	
LPG	**La Plagne**	**5.28 303**	*e*P	**Pn**	**11 02 11.5 +2.9**	
LPL	**La Plagne**	**5.30 303**	*e*Pn	**Pn**	**11 02 08.1 -0.7**	
LPL	**La Plagne**	**5.30 303**	*e*P	**Pn**	**11 02 12.2 +3.4**	
RONA	**Rosalia, Austr**	**5.39 24**	*e*Pn	**Pn**	**11 02 10.4 +0.6**	
	comp=N,1.9nm,0.2s					
RSL	**Roselend**	**5.45 304**	P	**Pn**	**11 02 13.8 +3.0**	
CONA	**Conrad Observa**	**5.48 20**	*e*Pn	**Pn**	**11 02 11.8 +0.7**	
	comp=N,3.9nm,0.3s,SNR=9.9					
SMRF	**Simiane la Rot**	**5.59 285**	*e*Pn	**Pn**	**11 02 11.6 -1.0**	
SMRF	**Simiane la Rot**	**5.59 285**	*e*P	**Pn**	**11 02 15.6 +3.0**	
ORIF	**Oris-en-Rattie**	**5.61 294**	*e*P	**Pn**	**11 02 17.0 +4.1**	
ORIF	**Oris-en-Rattie**	**5.61 294**	P	**Pn**	**11 02 16.9 +3.9**	
AIGLE	**Aigle**	**5.62 311**	P	**Pn**	**11 02 15.5 +2.5**	
AIGLE	**Aigle**	**5.62 311**	S	**Sn**	**11 03 20.1 +2.6**	
SULZ	**Cheisacher**	**5.88 325**	S	**Sn**	**11 03 24.3 +0.4**	
SULZ	**Cheisacher**	**5.88 325**	P	**Pn**	**11 02 17.3 +0.8**	
SLE	**Schleitheim**	**5.91 328**	P	**Pn**	**11 02 18.5 +1.5**	
SLE	**Schleitheim**	**5.91 328**	S	**Sn**	**11 03 24.1 -0.6**	
GERES	**GERESS Array B**	**6.05 4**	Pn	**Pn**	**11 02 19.4 +0.4**	
	comp=N,0.9nm,0.3s,baz=187,slow=15,SNR=15					
GERES			Sn	**Sn**	**11 03 27.1 -1.0**	
	comp=N,2.2nm,0.3s,baz=182,slow=24,SNR=7.7					
	comp=N,1.1nm,0.3s					
CKRC	**Cesky Krumlov**	**6.07 8**	*e*PN	**Pn**	**11 02 18.9 -0.2**	
CKRC			*e*SN	**Sn**	**11 03 27.7 -0.8**	
CABF	**La Chapelle**	**6.26 310**	*e*Pn	**Pn**	**11 02 21.2 -0.7**	
CABF	**La Chapelle**	**6.26 310**	*e*P	**Pn**	**11 02 25.6 +3.8**	
CABF			*e*Sn	**Sn**	**11 03 30.0 -3.4**	
	comp=N,12nm,0.8s					
KIZ	**Kirchzarten**	**6.29 327**	S	**Sn**	**11 03 32.8 -1.4**	
KIZ	**Kirchzarten**	**6.29 327**	P	**Pn**	**11 02 23.0 +0.7**	
KHC	**Kasperske Hory**	**6.33 3**	*e*PN	**Pn**	**11 02 23.2 +0.5**	
KHC			*e*SN	**Sn**	**11 03 33.6 -1.3**	
VIVF	**Saint-Julien-I**	**6.41 291**	*e*Pn	**Pn**	**11 02 22.7 -1.2**	
VIVF	**Saint-Julien-I**	**6.41 291**	*e*P	**Pn**	**11 02 27.8 +3.9**	
HINF	**Hinteralfeld**	**6.65 321**	*e*Pn	**Pn**	**11 02 26.2 -1.0**	
HINF	**Hinteralfeld**	**6.65 321**	*e*P	**Pn**	**11 02 30.8 +3.6**	
HINF			*e*Sn	**Sn**	**11 03 39.1 -3.9**	
	comp=N,22nm,0.7s					
LASF	**Ste Croix**	**6.83 284**	*e*Pn	**Pn**	**11 02 28.1 -1.5**	
LASF	**Ste Croix**	**6.83 284**	*e*P	**Pn**	**11 02 33.1 +3.5**	
CDF	**Champ du Feu**	**6.92 326**	*e*Pn	**Pn**	**11 02 30.1 -0.8**	
CDF	**Champ du Feu**	**6.92 326**	*e*P	**Pn**	**11 02 33.5 +2.6**	
CDF			*e*Sn	**Sn**	**11 03 45.7 -3.9**	
	comp=N,8.3nm,0.4s					
VRAC	**Vranov**	**6.94 19**	Pn	**Pn**	**11 02 31.6 +0.6**	
	comp=N,0.3nm,0.3s,baz=198,slow=21,SNR=1.6					
	comp=N,1.0nm,0.4s					
HAU	**Haudompre**	**7.03 320**	*e*Pn	**Pn**	**11 02 31.4 -0.9**	
HAU	**Haudompre**	**7.03 320**	*e*P	**Pn**	**11 02 35.9 +3.6**	
HAU			*e*Sn	**Sn**	**11 03 47.9 -4.2**	
	comp=N,25nm,0.4s					
NKC	**Novy Kostel**	**7.43 357**	*e*SN	**Sn**	**11 04 00.0 -2.1**	
SMF	**Signal de Mont**	**7.61 303**	*e*Pn	**Pn**	**11 02 39.6 -0.7**	
SMF	**Signal de Mont**	**7.61 303**	*e*P	**Pn**	**11 02 44.0 +3.7**	
SMF			*e*Sn	**Sn**	**11 04 01.8 -4.7**	
	comp=N,27nm,1.1s					
PAGF	**Fort de Pagny**	**7.71 321**	*e*Pn	**Pn**	**11 02 40.9 -0.7**	
	baz=140					
PAGF	**Fort de Pagny**	**7.71 321**	*e*P	**Pn**	**11 02 45.8 +4.2**	
PAGF			*e*Sn	**Sn**	**11 04 04.0 -4.9**	
	comp=N,71nm,1.6s					
SFTF	**Sexfontaines**	**7.80 316**	*e*Pn	**Pn**	**11 02 42.1 -0.8**	
	baz=138					
SFTF	**Sexfontaines**	**7.80 316**	*e*P	**Pn**	**11 02 47.2 +4.3**	
SFTF			*e*Sn	**Sn**	**11 04 06.8 -4.4**	
	comp=N,17nm,0.9s					
LOR	**Lormes**	**7.90 307**	*e*P	**Pn**	**11 02 48.2 +3.9**	
	baz=128					
LOR			*e*Sn	**Sn**	**11 04 07.8 -5.8**	
	comp=N,8.3nm,0.7s					
MTLF	**Montolieu**	**7.97 277**	*e*P	**Pn**	**11 02 48.9 +3.7**	
AVF	**Avril sur Loir**	**7.98 303**	*e*P	**Pn**	**11 02 50.0 +4.7**	
AVF			*e*Sn	**Sn**	**11 04 10.5 -4.9**	
	comp=N,13nm,1.2s					
MEZF	**Maizieres J'vi**	**7.99 318**	*e*Pn	**Pn**	**11 02 44.8 -0.7**	
	baz=140					
MEZF			*e*Sn	**Sn**	**11 04 10.7 -5.2**	
	comp=N,34nm,1.4s					
SSF	**Saint Saulge**	**8.01 305**	*e*Pn	**Pn**	**11 02 44.4 -1.3**	
SSF			*e*Sn	**Sn**	**11 04 11.5 -4.7**	
	comp=N,28nm,1.6s					
SAVF	**Savonnieres en**	**8.04 319**	*e*Pn	**Pn**	**11 02 45.3 -0.8**	
SAVF			*e*Sn	**Sn**	**11 04 12.2 -4.7**	
	comp=N,65nm,1.8s					
BGF	**Bois d'Agland**	**8.19 301**	*e*Pn	**Pn**	**11 02 47.9 -0.4**	
BGF			*e*Sn	**Sn**	**11 04 15.8 -5.0**	
	comp=N,5.1nm,0.4s					

CAF	**Calviac**	**8.23 289**	*e*Pn	**Pn**	**11 02 47.9**	**-1.0**
TCF	**Toulx Ste Croi**	**8.50 298**	*e*Pn	**Pn**	**11 02 50.9**	**-1.6**
TCF			*e*Sn	**Sn**	**11 04 23.2**	**-5.2**
comp=N,22nm,1.5s						
HYF	**Humbligny**	**8.63 305**	*e*P	Pn	11 02 59.7	+5.5
RJF	**Les Rejaudoux**	**8.69 291**	*e*P	**Pn**	**11 02 58.6**	**+3.5**
EPF	**Esparros**	**9.35 276**	*e*Pn	**Pn**	**11 03 03.1**	**-1.1**
BAIF	**Baives**	**9.48 323**	*e*Pn	**Pn**	**11 03 04.9**	**-1.0**
MLR	**Muntele Rosu**	**9.63 69**	Pn	**Pn**	**11 03 08.4**	**+0.3**
comp=N,0.1nm,0.3s,baz=119,slow=3.8,SNR=1.9						
comp=N,1.7nm,0.6s						
ETSF	**Etsaut**	**10.02 275**	*e*P	**Pn**	**11 03 17.8**	**+4.5**
SJPF	**Ste Jean**	**10.49 276**	*e*P	**Pn**	**11 03 23.7**	**+3.9**
FLN	**La Foliniere**	**11.17 307**	*e*Pn	**Pn**	**11 03 27.6**	**-1.5**
GRR	**Gorron**	**11.24 305**	*e*Pn	**Pn**	**11 03 27.1**	**-2.8**
SGMF	**Saint Gilles**	**12.23 302**	*e*Pn	**Pn**	**11 03 42.7**	**-0.8**
QUIF	**Quistinic**	**12.51 300**	*e*Pn	**Pn**	**11 03 45.7**	**-1.5**
ROSF	**Rostrenen**	**12.71 301**	*e*Pn	**Pn**	**11 03 48.6**	**-1.5**
EKA	**Eskdalemuir Ar**	**16.38 325**	Pn	**P**	**11 04 42.5**	**+0.5**
baz=136,slow=14						
comp=N,0.7nm,0.8s						
FINES	**FINESS Array B**	**20.22 18**	P	Pn	11 05 25.5	-0.6
comp=N,4.8nm,1.0s,baz=192,slow=13,SNR=2.9						
comp=N,4.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.16 202**	P	**P**	**11 07 09.4**	**+1.1**
comp=N,0.8nm,0.8s,baz=26,slow=8.7,SNR=4.2						
comp=N,0.8nm,0.8s						
MKAR	**Makanchi Array**	**47.82 60**	P	**P**	**11 09 27.2**	**+0.3**
comp=N,0.9nm,0.8s,baz=302,slow=8.3,SNR=3.4						
comp=N,0.9nm,0.8s						
SONM	**Songino Array**	**61.85 50**	P	**P**	**11 11 09.7**	**+1.1**
comp=N,0.5nm,0.4s,baz=289,slow=9.0,SNR=3.2						
comp=N,0.5nm,0.4s						

ROM ***30*** *11:05:54.4±0.0, 42°.932N±0°.001×13°.189E±0°.003, h8km, ML3.6/75, Error ellipse: s-maj=0.2km s-min=0.0km az=73.0*

LDG ***30*** *11:05:55.2±0.2, 42°.76N×13°.15E, h10km, Ml3.6/20, Error ellipse: s-maj=4.8km s-min=3.4km az=31.0*

PRU ***30*** *11:05:56.1±0.0, 42°.99N×13°.63E, h0km*

IDC ***30*** *11:05:57.0±1.0, 43°.16N×13°.40E, h0km, mb3.7/9, mbtmp3.7/15, ML3.4/6, MS4.0/1, Error ellipse: s-maj=18.1km s-min=14.1km az=81.0*

STR ***30*** *11:05:58.5±3.1, 43°.9N×1°.3E±2°.6, h10km, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=90.8, preliminary*

ISC 30 11:05:55.4±0.7, **42°.93N**±0°.01×**13°.15E**±0°.01, **h7**km±4km, **n249**, σ1s**75**/310, **mb3.8**/9, **5C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**159**	P	**Pg**	**11 05 56.7**	**-0.8**
T1245				S	**Sg**	**11 05 58.5**	**-0.4**
FEMA	**Monte Fema**	**0.08**	**295**	P	**Pg**	**11 05 57.6**	**0.0**
FEMA				S	**Sg**	**11 05 59.8**	**+0.6**
FEMA				AML	AML		
comp=N,83350μm,0.4s							
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
comp=N,83300μm,0.4s							
FEMA				AML	AML		
comp=N,83750μm,0.4s							
T1256	**Bolognola (MC)**	**0.10**	**35**	P	**Pg**	**11 05 56.6**	**-1.2**
T1256				S	**Sg**	**11 05 58.2**	**-1.3**
T1216	**Preci, Frazion**	**0.10**	**249**	P	**Pg**	**11 05 58.3**	**+0.5**
T1216				S	**Sg**	**11 06 00.7**	**+1.2**
FDMO	**Fiordimonte**	**0.12**	**337**	P	**Pg**	**11 05 57.5**	**-0.6**
FDMO				S	**Sg**	**11 05 59.9**	**0.0**
AM05	**Amandola Campo**	**0.16**	**71**	⇑P	**Pg**	**11 05 57.6**	**-1.1**
AM05				S	**Sg**	**11 06 00.2**	**-0.7**
AM05				AML	AML		
comp=E,20700μm,1.5s							
AM05				AML	AML		
comp=E,83000μm,1.4s							
AM05				AML	AML		
comp=N,18300μm,1.5s							
AM05				AML	AML		
comp=E,83050μm,1.4s							
AM05				AML	AML		
comp=N,18250μm,1.5s							
AM05				AML	AML		
comp=N,3410μm,0.6s							
T1219	**Muccia, Frazio**	**0.17**	**321**	⇓P	**Pg**	**11 05 58.7**	**-0.2**
T1219				S	**Sg**	**11 06 02.2**	**+1.0**
CSP1	**Cessapalombo**	**0.17**	**14**	P	**Pg**	**11 05 58.3**	**-0.6**
CSP1				S	**Sg**	**11 06 00.9**	**-0.5**
T1220	**Camerino, Fraz**	**0.19**	**346**	P	**Pg**	**11 05 58.9**	**-0.4**
T1220				S	**Sg**	**11 06 02.6**	**+0.7**
GUMA	**Gualdo di Mace**	**0.19**	**45**	P	**Pg**	**11 05 58.7**	**-0.6**
GUMA				S	**Sg**	**11 06 01.8**	**-0.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1212	**Cascia, Frazio**	**0.19**	**204**	P	**Pg**	**11 05 59.4**	**+0.1**
T1212				S	**Sg**	**11 06 03.3**	**+1.3**
T1244	**Arquata del Tr**	**0.20**	**148**	P	**Pg**	**11 05 58.8**	**-0.6**
T1244				S	**Sg**	**11 06 02.5**	**+0.3**
T1241	**Roccafluvione,**	**0.22**	**109**	P	**Pg**	**11 05 59.3**	**-0.5**
T1241				S	**Sg**	**11 06 02.6**	**-0.1**
T1215	**Vallo di Nera,**	**0.24**	**239**	P	**Pg**	**11 06 00.4**	**+0.2**
T1215				S	**Sg**	**11 06 05.2**	**+1.7**
T1218	**Civita (PG)**	**0.26**	**186**	P	**Pg**	**11 06 00.9**	**+0.3**
T1218				S	**Sg**	**11 06 05.4**	**+1.4**
MDAR	**Monte D'Aria**	**0.27**	**359**	P	**Pg**	**11 06 00.1**	**-0.6**
MDAR				S	**Sg**	**11 06 04.7**	**+0.4**
SEF1	**Sefro**	**0.27**	**326**	⇑P	**Pg**	**11 06 00.8**	**+0.1**
SEF1				S	**Sg**	**11 06 05.6**	**+1.4**
SEF1				AML	AML		
comp=N,35950μm,0.3s							
SEF1				AML	AML		
comp=E,37100μm,0.2s							
SEF1				AML	AML		
comp=N,36000μm,0.3s							
SEF1				AML	AML		
comp=N,35950μm,0.3s							
SEF1				AML	AML		
comp=E,37100μm,0.2s							
T1217	**Poggiodomo (PG**	**0.27**	**217**	P	**Pg**	**11 06 00.8**	**+0.1**
PIO1	**Pioraco**	**0.28**	**334**	P	**Pg**	**11 06 00.6**	**-0.3**
PIO1				S	**Sg**	**11 06 05.8**	**+1.2**
PIO1				AML	AML		
comp=N,22050μm,0.8s							
PIO1				AML	AML		
comp=E,19250μm,0.6s							
PIO1				AML	AML		
comp=N,22000μm,0.8s							
T1204	**Amatrice, Fraz**	**0.28**	**154**	P	**Pg**	**11 06 00.6**	**-0.4**
T1204				S	**Sg**	**11 06 05.3**	**+0.6**
T1201	**Domo (RI)**	**0.28**	**165**	P	**Pg**	**11 06 00.9**	**-0.1**
SSM1	**San Severino M**	**0.30**	**4**	P	**Pg**	**11 06 01.0**	**-0.4**
SSM1				S	**Sg**	**11 06 06.0**	**+0.6**
FIU1	**Fiuminata**	**0.31**	**328**	P	**Pg**	**11 06 01.3**	**-0.2**
FIU1				S	**Sg**	**11 06 06.6**	**+1.1**
FIU1				AML	AML		
comp=E,11490μm,0.8s							
FIU1				AML	AML		
comp=E,11450μm,0.8s							
FIU1				AML	AML		
comp=N,12400μm,1.2s							
MNTP	**Montappone**	**0.31**	**48**	P	**Pg**	**11 06 01.3**	**-0.3**
MNTP				AML	AML		
comp=N,42650μm,1.3s							
MNTP				AML	AML		
comp=N,42700μm,1.3s							
MNTP				AML	AML		
comp=E,59150μm,1.6s							
GAG1	**Gagliole**	**0.32**	**349**	P	**Pg**	**11 06 01.4**	**-0.2**
GAG1				S	**Sg**	**11 06 06.8**	**+1.0**
GAG1				AML	AML		
comp=E,40650μm,0.6s							
GAG1				AML	AML		
comp=E,40700μm,0.6s							
GAG1				AML	AML		
comp=N,53050μm,0.9s							
T1243	**Rocca Santa Ma**	**0.32**	**136**	P	**Pg**	**11 06 00.8**	**-0.8**
T1243				S	**Sg**	**11 06 06.1**	**+0.2**
LNSS	**Leonessa**	**0.33**	**194**	P	**Pg**	**11 06 02.1**	**+0.2**
LNSS				S	**Sg**	**11 06 07.7**	**+1.2**
SNTG	**Esanatoglia**	**0.36**	**335**	P	**Pg**	**11 06 02.2**	**-0.3**
SNTG				S	**Sg**	**11 06 08.5**	**+1.2**
SNTG				AML	AML		
comp=E,7435μm,1.4s							
SNTG				AML	AML		
comp=N,8950μm,1.6s							
SNTG				AML	AML		
comp=N,9385μm,1.5s							
SNTG				AML	AML		
comp=E,7170μm,1.4s							
SNTG				AML	AML		
comp=E,7435μm,1.4s							
SNTG				AML	AML		
comp=E,7175μm,1.4s							
SNTG				AML	AML		
comp=N,8955μm,1.5s							
ASSB	**Assisi San Ben**	**0.38**	**288**	P	**Pg**	**11 06 03.1**	**+0.3**
ASSB				S	**Sg**	**11 06 09.0**	**+1.2**
ASSB				AML	AML		
comp=E,9950μm,1.2s							
ASSB				AML	AML		
comp=N,9095μm,1.0s							
OFFI	**Offida**	**0.39**	**89**	P	**Pg**	**11 06 02.7**	**-0.3**
OFFI				AML	AML		
comp=N,29050μm,0.8s							
OFFI				AML	AML		
comp=E,21600μm,0.5s							
TRE1	**Treia**	**0.40**	**17**	P	**Pg**	**11 06 03.2**	**0.0**
TRE1				S	**Sg**	**11 06 09.6**	**+1.0**
TRE1				AML	AML		
comp=N,34850μm,0.5s							
TRE1				AML	AML		
comp=N,34900μm,0.5s							
TRE1				AML	AML		
comp=E,34200μm,0.9s							
EL6	**Elcito**	**0.40**	**355**	P	**Pg**	**11 06 02.9**	**-0.4**
EL6				S	**Sg**	**11 06 09.3**	**+0.7**
EL6				AML	AML		
comp=N,21500μm,0.8s							
EL6				AML	AML		
comp=E,18450μm,0.7s							
RM33	**Pellescritta (**	**0.42**	**174**	P	**Pg**	**11 06 03.4**	**-0.2**
RM33				S	**Sg**	**11 06 09.7**	**+0.6**
RM33				AML	AML		
comp=E,9100μm,1.0s							
RM33				AML	AML		
comp=E,9195μm,1.0s							
RM33				AML	AML		
comp=N,6025μm,0.7s							
RM33				AML	AML		
comp=E,9115μm,1.0s							
RM33				AML	AML		
comp=N,6190μm,0.7s							
RM33				AML	AML		
comp=E,9210μm,1.0s							
RM33				AML	AML		
comp=N,6020μm,0.7s							
T1246	**Crognaleto (TE**	**0.43**	**144**	P	**Pg**	**11 06 02.9**	**-0.8**
T1246				S	**Sg**	**11 06 09.5**	**+0.2**
CAMP	**Campotosto**	**0.43**	**154**	P	**Pg**	**11 06 03.2**	**-0.7**
CAMP				S	**Sg**	**11 06 09.9**	**+0.3**
CAMP				AML	AML		
comp=N,6385μm,0.4s							
CAMP				AML	AML		
comp=E,4530μm,0.9s							
ARRO	**Arrone**	**0.45**	**219**	P	**Pg**	**11 06 04.7**	**+0.6**
T1211	**Morro Reatino**	**0.45**	**209**	P	**Pg**	**11 06 04.5**	**+0.3**
TERO	**Teramo**	**0.45**	**132**	P	**Pg**	**11 06 03.4**	**-0.7**
TERO				S	**Sg**	**11 06 10.1**	**0.0**
TERO				AML	AML		
comp=E,10150μm,0.7s							
TERO				AML	AML		
comp=E,10465μm,0.7s							
TERO				AML	AML		
comp=N,7495μm,0.6s							
TERO				AML	AML		
comp=N,7730μm,0.6s							
TERO				AML	AML		
comp=E,10140μm,0.7s							
ATCC	**AVT- Casa Cast**	**0.46**	**305**	P	**Pg**	**11 06 04.0**	**-0.2**
ATCC				AML	AML		
comp=E,11700μm,0.8s							
ATCC				AML	AML		
comp=N,10100μm,0.8s							
ATCC				AML	AML		
comp=N,10090μm,0.8s							
ATCC				AML	AML		
comp=E,11750μm,0.8s							
FOSV	**Fossato di Vic**	**0.47**	**322**	P	**Pg**	**11 06 04.1**	**-0.4**
FOSV				S	**Sb**	**11 06 12.1**	**-1.0**
FOSV				AML	AML		
comp=E,10945μm,0.7s							
FOSV				AML	AML		
comp=N,12500μm,0.3s							
FOSV				AML	AML		
comp=N,12450μm,0.3s							
FOSV				AML	AML		
comp=E,10940μm,0.7s							
T1247	**Pizzolo (AQ)**	**0.50**	**167**	P	**Pg**	**11 06 05.0**	**0.0**
T1247				AML	AML		
comp=E,9545μm,0.9s							
T1247				AML	AML		
comp=N,10450μm,1.1s							
CADA	**Capodarco di F**	**0.52**	**59**	P	**Pb**	**11 06 06.2**	**-0.7**
MMUR	**Monte Murano**	**0.53**	**348**	P	**Pg**	**11 06 05.3**	**-0.3**
MMUR				S	**Sg**	**11 06 13.5**	**+0.9**
MMUR				AML	AML		
comp=E,19950μm,0.3s							
MMUR				AML	AML		
comp=N,11700μm,0.4s							
MMUR				AML	AML		
comp=E,19950μm,0.3s							
MMUR				AML	AML		
comp=N,11650μm,0.4s							
CESX	**Cesi**	**0.53**	**233**	P	**Pg**	**11 06 05.2**	**-0.4**
CESX				S	**Sg**	**11 06 13.8**	**+1.3**
CESX				AML	AML		
comp=E,7335μm,0.4s							
CESX				AML	AML		
comp=N,7380μm,0.8s							
CIMA	**Civitanova Mar**	**0.54**	**45**	P	**Pg**	**11 06 06.3**	**+0.5**
PP3	**Marolino**	**0.56**	**37**	P	**Pg**	**11 06 05.8**	**-0.4**
PP3				AML	AML		
comp=E,22150μm,1.3s							
PP3				AML	AML		
comp=E,22650μm,1.3s							
PP3				AML	AML		
comp=N,23350μm,0.5s							
PP3				AML	AML		
comp=N,23400μm,0.5s							
PP3				AML	AML		
comp=E,22700μm,1.3s							
PP3				AML	AML		
comp=N,23700μm,0.5s							
GIGS	**Gran Sasso**	**0.57**	**147**	P	**Pg**	**11 06 05.4**	**-0.9**
GIGS				AML	AML		
comp=N,1154μm,0.6s							
GIGS				AML	AML		
comp=E,1650μm,0.6s							
MURB	**Monte Urbino**	**0.57**	**306**	P	**Pg**	**11 06 06.2**	**-0.2**
MURB				S	**Sb**	**11 06 14.9**	**-1.1**
MURB				AML	AML		
comp=E,10300μm,0.3s							
MURB				AML	AML		
comp=E,10315μm,0.3s							
MURB				AML	AML		
comp=E,11300μm,0.4s							
MURB				AML	AML		
comp=N,11900μm,0.3s							
MURB				AML	AML		
comp=N,12400μm,0.3s							
TRTR	**Tortoreto Alta**	**0.57**	**102**	P	**Pg**	**11 06 05.8**	**-0.6**
TRTR				AML	AML		
comp=E,20400μm,0.4s							
TRTR				AML	AML		
comp=N,22450μm,0.4s							
ARVD	**Arcevia**	**0.59**	**345**	P	**Pg**	**11 06 06.2**	**-0.7**
ARVD				S	**Sb**	**11 06 15.5**	**-1.2**
ARVD				AML	AML		
comp=E,7415μm,0.2s							
ARVD				AML	AML		
comp=N,4455μm,0.2s							
AQU	**L'Aquila**	**0.60**	**162**	P	**Pg**	**11 06 06.3**	**-0.7**
ATSC	**Scheggia e Pas**	**0.60**	**326**	P	**Pg**	**11 06 06.5**	**-0.5**
ATFO	**Monte Foce - G**	**0.61**	**316**	P	**Pg**	**11 06 06.5**	**-0.7**
ATFO				S	**Sg**	**11 06 16.0**	**+0.8**
ATFO				AML	AML		
comp=E,5670μm,0.7s							
ATFO				AML	AML		
comp=N,5470μm,0.8s							
ATTE	**AVT- Monte Tez**	**0.64**	**295**	P	**Pg**	**11 06 07.7**	**-0.2**
ATTE				AML	AML		
comp=N,2575μm,0.9s							
ATTE				AML	AML		
comp=E,2860μm,1.0s							
FIAM	**Fiamignano**	**0.66**	**182**	⇓P	**Pg**	**11 06 07.3**	**-0.8**
FIAM				S	**Sg**	**11 06 17.4**	**+0.7**
FIAM				AML	AML		
comp=N,2865μm,0.9s							
FIAM				AML	AML		
comp=E,3575μm,0.8s							
FRON	**Frontone**	**0.67**	**332**	P	**Pg**	**11 06 07.4**	**-0.8**
FRON				S	**Sg**	**11 06 17.5**	**+0.5**
FRON				AML	AML		
comp=E,4595μm,0.8s							
FRON				AML	AML		
comp=N,5010μm,0.6s							
FRON				AML	AML		
comp=N,5005μm,0.6s							
ATLO	**AVT- Montelove**	**0.67**	**306**	P	**Pg**	**11 06 07.8**	**-0.5**
TB01	**Gubbio**	**0.69**	**311**	P	**Pg**	**11 06 08.3**	**-0.5**
ATBU	**Serra di Buran**	**0.70**	**321**	P	**Pg**	**11 06 08.1**	**-0.9**
AOI	**Ancona**	**0.70**	**28**	P	**Pg**	**11 06 08.2**	**-0.8**
AOI				AML	AML		
comp=E,3950μm,1.2s							
AOI				AML	AML		
comp=N,4370μm,0.3s							
ATVO	**AVT- Monte Val**	**0.71**	**310**	P	**Pg**	**11 06 08.5**	**-0.6**
ATVO				AML	AML		
comp=E,3385μm,0.9s							
ATVO				AML	AML		
comp=N,2725μm,0.5s							
TB03	**Pietralunga**	**0.72**	**311**	P	**Pg**	**11 06 09.0**	**-0.3**
ATVA	**AVT- Monte Val**	**0.72**	**299**	P	**Pg**	**11 06 08.9**	**-0.5**
FAGN	**Fagnano**	**0.73**	**154**	P	**Pg**	**11 06 07.8**	**-1.7**
PCRO	**Pietralacroce**	**0.73**	**22**	P	**Pg**	**11 06 09.7**	**+0.2**
VCEL	**Villa Celiera**	**0.74**	**136**	P	**Pg**	**11 06 07.9**	**-1.7**
ATPC	**Poggio Castell**	**0.75**	**318**	P	**Pg**	**11 06 09.1**	**-0.7**
ATPI	**Pietralunga -**	**0.76**	**314**	P	**Pg**	**11 06 09.4**	**-0.6**
ATPI				AML	AML		
comp=N,3350μm,0.9s							
ATPI				AML	AML		
comp=E,3760μm,0.7s							
ATPI				AML	AML		
comp=N,3345μm,0.9s							
PIEI	**Pieia**	**0.76**	**324**	⇑P	**Pg**	**11 06 09.6**	**-0.4**
PIEI				AML	AML		
comp=E,2860μm,0.3s							
PIEI				AML	AML		
comp=N,2420μm,1.5s							
MPAG	**Monte Paganucc**	**0.76**	**338**	P	**Pg**	**11 06 09.0**	**-1.0**
MPAG				AML	AML		
comp=E,3545μm,0.7s							
MPAG				AML	AML		
comp=N,3135μm,0.8s							
MPAG				AML	AML		
comp=E,3540μm,0.7s							
MPAG				AML	AML		
comp=N,3140μm,0.8s							
MGAB	**Montegabbione**	**0.76**	**269**	P	**Pg**	**11 06 09.6**	**-0.4**
ATMI	**Monte Miggiano**	**0.76**	**302**	P	**Pg**	**11 06 09.2**	**-0.9**
ATMI				AML	AML		
comp=N,7290μm,0.8s							
ATMI				AML	AML		
comp=E,5930μm,0.8s							
SENI	**Senigallia**	**0.78**	**4**	P	**Pg**	**11 06 09.4**	**-1.0**
SENI				AML	AML		
comp=E,5965μm,0.8s							
SENI				AML	AML		
comp=N,3927μm,1.5s							
FSSB	**Fossombrone**	**0.81**	**341**	P	**Pg**	**11 06 10.4**	**-0.7**
FSSB				AML	AML		
comp=E,7070μm,0.4s							
FSSB				AML	AML		
comp=N,12150μm,0.4s							
APEC	**Apecchio**	**0.83**	**320**	P	**Pg**	**11 06 11.0**	**-0.3**
APEC				AML	AML		
comp=E,734μm,1.6s							
APEC				AML	AML		
comp=E,734μm,1.6s							
APEC				AML	AML		
comp=N,1035μm,1.2s							
T0110	**Collepietro**	**0.84**	**146**	P	**Pg**	**11 06 10.0**	**-1.5**
T0110				AML	AML		
comp=E,4000μm,0.6s							
T0110				AML	AML		
comp=N,3665μm,0.9s							
ATMC	**Monte Cedrone**	**0.87**	**307**	P	**Pg**	**11 06 11.6**	**-0.6**
PE3	**Peglio**	**0.91**	**328**	P	**Pg**	**11 06 11.7**	**-1.1**
PE3				AML	AML		
comp=N,16μm,0.2s							
PE3				AML	AML		
comp=E,17μm,0.9s							
SACS	**San Casciano d**	**0.92**	**266**	P	**Pg**	**11 06 12.5**	**-0.5**
SACS				AML	AML		
comp=N,1610μm,1.0s							
SACS				AML	AML		
comp=E,1690μm,1.2s							
SACS				AML	AML		
comp=N,1720μm,1.0s							
SACS				AML	AML		
comp=E,1780μm,1.1s							
PTQR	**Pietraquaria**	**0.92**	**168**	P	**Pg**	**11 06 11.9**	**-1.2**
MTCE	**Montecelio**	**0.95**	**199**	P	**Pg**	**11 06 13.2**	**-0.5**
MTCE				AML	AML		
comp=E,1615μm,0.6s							
MTCE				AML	AML		
comp=N,1310μm,1.1s							
CAFI	**Castiglion Fio**	**0.96**	**295**	P	**Pg**	**11 06 12.8**	**-1.0**
CAFI				AML	AML		
comp=E,1385μm,1.1s							
CAFI				AML	AML		
comp=N,1510μm,1.0s							
CERT	**Cerreto**	**0.99**	**187**	P	**Pg**	**11 06 14.1**	**-0.2**
CERT				AML	AML		
comp=N,1665μm,0.6s							
CERT				AML	AML		
comp=E,2590μm,1.3s							
SSP9	**Sansepolcro**	**0.99**	**311**	P	**Pg**	**11 06 13.2**	**-1.2**
SSP9				AML	AML		
comp=E,2840μm,1.6s							
SSP9				AML	AML		
comp=N,2980μm,1.5s							
LATE	**Laterza**	**1.04**	**253**	P	**Pg**	**11 06 14.9**	**-0.5**
CPGN	**Carpegna, Ital**	**1.06**	**326**	P	**Pg**	**11 06 14.4**	**-1.4**
CPGN				AML	AML		
comp=E,4730μm,0.6s							
CPGN				AML	AML		
comp=N,3155μm,1.0s							
CPGN				AML	AML		
comp=N,6510μm,0.8s							
CPGN				AML	AML		
comp=E,5910μm,0.8s							
SF11	**Podere del Sol**	**1.08**	**267**	P	**Pg**	**11 06 14.7**	**-1.5**
RCAV	**Rocca di Cave**	**1.09**	**188**	P	**Pg**	**11 06 14.7**	**-1.6**
RCAV				AML	AML		
comp=N,2065μm,1.1s							
RCAV				AML	AML		
comp=E,2615μm,1.4s							
SF04	**Casetta**	**1.10**	**266**	P	**Pg**	**11 06 16.4**	**-0.1**
SF04				AML	AML		
comp=E,1411μm,1.2s							
SF04				AML	AML		
comp=N,816μm,0.4s							
VVLD	**Villa Vallelon**	**1.11**	**162**	AML	AML		
comp=N,1470μm,0.9s							
VVLD				AML	AML		
comp=E,1175μm,0.7s							
CRE	**Caprese Michel**	**1.12**	**309**	P	**Pg**	**11 06 15.6**	**-1.3**
CRE				AML	AML		
comp=E,1088μm,0.5s							
CRE				AML	AML		
comp=N,1595μm,1.3s							
RSM	**Repubblica di**	**1.12**	**333**	P	**Pg**	**11 06 15.7**	**-1.3**
CAFR	**Castel Frentan**	**1.13**	**128**	P	**Pg**	**11 06 15.3**	**-1.7**
SF13	**Bagnolo**	**1.13**	**265**	P	**Pg**	**11 06 16.1**	**-1.0**
GUAR	**Guarcino**	**1.14**	**174**	P	**Pg**	**11 06 15.8**	**-1.4**
SF14	**Selvena**	**1.14**	**262**	P	**Pg**	**11 06 16.2**	**-1.1**
RDP	**Rocca di Papa**	**1.21**	**196**	P	**Pb**	**11 06 17.5**	**-1.2**
TOLF	**Tolfa**	**1.21**	**225**	P	**Pb**	**11 06 17.5**	**-1.1**
POFI	**Posta Fibreno**	**1.28**	**161**	P	**Pn**	**11 06 19.1**	**-0.6**
ASQU	**Asqua**	**1.32**	**312**	P	**Pn**	**11 06 18.8**	**-1.5**
SFI	**Santa Sofia**	**1.36**	**316**	P	**Pn**	**11 06 19.8**	**-1.1**
GIUL	**Giuliano Di Ro**	**1.37**	**177**	P	**Pn**	**11 06 19.5**	**-1.5**

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GIUL                                  AML   AML
     comp=E,730µm,0.7s
GIUL                                  AML   AML
     comp=N,729µm,0.9s
LATB Latina          1.44 186 P     Pn    11 06 20.8 -1.0
LATB                                  AML   AML
     comp=N,304µm,1.0s
LATB                                  AML   AML
     comp=E,451µm,0.8s
CSNT Castellina Chi  1.47 292 P     Pn    11 06 21.1 -1.1
CERA Filignano       1.48 154 P     Pb    11 06 23.0 -0.2
CERA                                  AML   AML
     comp=E,996µm,0.7s
CERA                                  AML   AML
     comp=N,1275µm,0.6s
FROS Frosini         1.49 282 P     Pn    11 06 21.8 -0.8
RUFI Rufina          1.50 308 P     Pn    11 06 22.0 -0.8
OSSC Osservatorio P  1.52 294 P     Pn    11 06 22.1 -0.9
MIDA Miranda         1.52 147 P     Pn    11 06 22.1 -1.0
TRIV Trivento        1.56 138 P     Pn    11 06 22.6 -0.9
TRIV                                  AML   AML
     comp=N,1120µm,0.9s
TRIV                                  AML   AML
     comp=E,1955µm,0.7s
LMD Lutirano         1.56 318 P     Pn    11 06 23.2 -0.3
LMD                                   AML   AML
     comp=E,852µm,1.5s
LMD                                   AML   AML
     comp=N,769µm,1.6s
MAON Monte Argentar  1.57 252 P     Pn    11 06 23.0 -0.7
TRIF Trifonti        1.66 277 P     Pn    11 06 24.6 -0.3
CASP Castiglione de  1.69 266 P     Pn    11 06 24.7 -0.6
BRIS BRISIGHELLA     1.71 316 P     Pn    11 06 24.7 -0.8
VAGA Valle Agricola  1.71 152 AML   AML
     comp=E,408µm,0.8s
VAGA                                  AML   AML
     comp=N,537µm,1.4s
CIGN Sant'Elia a Pi  1.82 134 P     Pn    11 06 26.8 -0.3
MPPT Montemurlo      1.82 305 P     Pn    11 06 27.1 -0.1
MODR Mondragone      1.86 163 P     Pn    11 06 27.2 -0.4
MTCR Monte La Croce  1.91 306 P     Pn    11 06 27.9 -0.6
SACR S. Croce Del S  1.92 142 P     Pn    11 06 27.9 -0.6
BRJN Brijuni         2.02  12 P     Pn    11 06 29.7 -0.2
APRC Apricena        2.12 123 P     Pn    11 06 30.9 -0.4
APRC                                  AML   AML
     comp=N,637µm,1.3s
APRC                                  AML   AML
     comp=E,492µm,0.8s
MOCO Biccari - m.te  2.16 136 P     Pn    11 06 31.8  0.0
MORSI Morsiglia      2.78 272 P     Pn    11 06 40.9 +0.6
PALZ Palazzo San Ge  2.88 132 P     Pn    11 06 41.2 -0.6
PALZ                                  AML   AML
     comp=N,648µm,1.2s
PALZ                                  AML   AML
     comp=E,564µm,1.2s
SMPL Sampolo         2.98 255 P     Pn    11 06 43.8 +0.8
SABO M.te Sabotino   3.07   6 P     Pn    11 06 44.1 -0.3
SABO                                  AML   AML
     comp=E,765µm,0.9s
SABO                                  AML   AML
     comp=N,1046µm,0.7s
SABO                                  AML   AML
     comp=N,3945µm,0.7s
SABO                                  AML   AML
     comp=E,3260µm,0.9s
PGF  Pioggiola       3.08 264 ePn   Pn    11 06 41.3 -3.2
PGF  Pioggiola       3.08 264 eP    Pn    11 06 44.8 +0.3
PGF                           eSn   Sn    11 07 16.8 -4.9
     comp=E,23nm,0.8s
ROVR Rover Verones   3.10 332 P     Pn    11 06 44.1 -0.7
ROVR                                  AML   AML
     comp=E,132µm,0.8s
ROVR                                  AML   AML
     comp=N,116µm,1.0s
CGRP Cima Grappa     3.11 342 P     Pn    11 06 44.8 -0.2
CGRP                                  AML   AML
     comp=N,586µm,0.6s
CGRP                                  AML   AML
     comp=E,624µm,0.7s
CGRP                                  AML   AML
     comp=N,576µm,0.6s
CGRP                                  AML   AML
     comp=E,668µm,1.1s
LJU  Ljubljana       3.27  17 P     Pn    11 06 46.6 -0.5
LJU                                   AML   AML
     comp=E,3265µm,1.0s
LJU                                   AML   AML
     comp=N,3190µm,0.7s
SALO Salr            3.29 326 P     Pn    11 06 46.6 -0.6
SALO                                  AML   AML
     comp=N,470µm,1.0s
CTI  Castel Tesino   3.30 342 P     Pn    11 06 47.4 -0.2
CTI                                   AML   AML
     comp=N,343µm,0.6s
CTI                                   AML   AML
     comp=E,357µm,0.9s
MPRI Monte Prat      3.32 358 P     Pn    11 06 47.4 -0.4
MPRI                                  AML   AML
     comp=E,443µm,0.9s
MPRI                                  AML   AML
     comp=N,781µm,0.8s
STON Ston            3.34  89 AML   AML
     comp=E,91µm,1.5s
STON                                  AML   AML
     comp=N,92µm,0.7s
STAL STALIGIAL       3.35 355 P     Pn    11 06 48.0 -0.2
STAL                                  AML   AML
     comp=E,468µm,0.9s
STAL                                  AML   AML
     comp=N,386µm,0.8s
LUSI Trento, Gardas  3.42 333 P     Pn    11 06 48.3 -0.8
LUSI                                  AML   AML
     comp=E,275µm,1.2s
LUSI                                  AML   AML
     comp=N,314µm,0.7s
CIMO Cimolais        3.42 352 P     Pn    11 06 48.9 -0.2
CIMO                                  AML   AML
     comp=N,144µm,1.2s
CIMO                                  AML   AML
     comp=N,136µm,1.2s
CIMO                                  AML   AML
     comp=E,176µm,0.8s
CIMO                                  AML   AML
     comp=E,168µm,0.8s
PTCC Patocco-Chiusa  3.48   2 P     Pn    11 06 49.5 -0.5
PTCC                                  AML   AML
     comp=E,264µm,0.9s
PTCC                                  AML   AML
     comp=N,207µm,1.2s
MATE Matera          3.50 129 ⇑P    Pn    11 06 51.1 +0.9
GAGG Gaggia          3.52 334 P     Pn    11 06 49.9 -0.8
GAGG                                  AML   AML
     comp=E,434µm,0.9s
GAGG                                  AML   AML
     comp=N,383µm,1.2s
ZOU  Zoufplan        3.63 358 P     Pn    11 06 51.5 -0.7
ZOU                                   AML   AML
     comp=E,409µm,1.1s
ZOU                                   AML   AML
     comp=E,384µm,1.1s
ZOU                                   AML   AML
     comp=N,426µm,1.3s
ZOU                                   AML   AML
     comp=N,448µm,1.4s
MABI Malga Bissina   3.65 330 P     Pn    11 06 53.5 +1.0
MABI                                  AML   AML
     comp=N,78µm,0.7s
MABI                                  AML   AML
     comp=E,76µm,1.6s
OBKA Obir            3.72  15 ePn   Pn    11 06 53.8 +0.5
     comp=E,1.7nm,0.3s
MYKA Terra Mystica   3.72   5 ePn   Pn    11 06 52.1 -1.2
     comp=E,5.5nm,0.4s
KOSI Kohlern         3.75 341 P     Pn    11 06 53.4 -0.5
KOSI                                  AML   AML
     comp=E,381µm,1.0s
KOSI                                  AML   AML
     comp=N,318µm,1.1s
APPI Appiano         3.81 340 P     Pn    11 06 53.6 -0.8
APPI                                  AML   AML
     comp=E,218µm,1.4s
APPI                                  AML   AML
     comp=N,200µm,0.8s
ABTA Abfaltersbach   3.85 353 ePn   Pn    11 06 55.5 +0.4
     comp=N,22nm,0.4s,SNR=17
SOKA Soboth          3.98  19 ePn   Pn    11 06 56.4 -0.5
     comp=N,1.4nm,0.3s
RISI Rein            4.09 350 P     Pn    11 06 57.5 -1.1
RISI                                  AML   AML
     comp=E,408µm,0.5s
RISI                                  AML   AML
     comp=N,382µm,0.5s
ROSI Rosskopf        4.19 343 P     Pn    11 06 58.8 -1.0
ROSI                                  AML   AML
     comp=E,443µm,0.9s
ROSI                                  AML   AML
     comp=N,550µm,1.0s
MUGIO Muggio         4.20 317 P     Pn    11 07 00.1 +0.2
MUGIO                                 AML   AML
     comp=N,60µm,0.9s
MUGIO                                 AML   AML
     comp=E,60µm,1.4s
SAOF Saorge          4.21 286 P     Pn    11 07 00.8 +0.9
SBF  Sospel          4.27 285 ePn   Pn    11 06 58.8 -2.0
SBF  Sospel          4.27 285 eP    Pn    11 07 01.9 +1.1
SBF                           eSn   Sn    11 07 47.5 -3.4
     comp=E,23nm,0.5s
TURF col de Turini   4.32 286 P     Pn    11 07 03.0 +1.3
FETA Feichten        4.44 338 ePn   Pn    11 07 04.4 +1.1
     comp=E,6.2nm,0.3s,SNR=11
WTTA Wattenberg      4.47 347 ePn   Pn    11 07 04.8 +1.1
     comp=E,7.0nm,0.3s,SNR=12
WTTA Wattenberg      4.47 347 ePn   Pn    11 07 04.5 +0.8
WTTA Wattenberg      4.47 347 P     Pn    11 07 02.5 -1.1
DAVOX Davos/Dischmat 4.50 330 Pn    Pn    11 07 06.5 +2.4
     comp=E,5.4nm,0.3s,baz=310,slow=5.7,SNR=17
DAVOX                         Sn    Sn    11 07 58.8 +2.0
     comp=E,2.6nm,0.3s,baz=153,slow=22,SNR=3.5
     comp=E,14nm,0.3s
DAVOX Davos/Dischmat 4.50 330 P     Pn    11 07 05.2 +1.1
DAVOX                                 AML   AML
     comp=E,95µm,1.1s
DAVOX                                 AML   AML
     comp=N,89µm,1.0s
SQTA Sankt Quirin    4.51 343 ePn   Pn    11 07 05.5 +1.3
     comp=N,23nm,0.3s,SNR=13
PDG  Podgorica       4.53  94 ⇓P    Pn    11 07 05.5 +1.2
WATA Walderalm       4.55 346 ePn   Pn    11 07 06.4 +1.7
     comp=N,22nm,0.6s,SNR=13
CALF Calern          4.62 282 P     Pn    11 07 05.4 -0.3
ARSA Arzberg         4.64  20 ePn   Pn    11 07 05.2 -0.7
     comp=N,1.0nm,0.2s
MOTA Moosalm         4.65 343 i Pn  Pn    11 07 07.6 +1.5
     comp=N,18nm,0.6s,SNR=19
ZUGS Zugspitze, Sch  4.74 342 ePn   Pn    11 07 09.4 +1.8
BIOA Bad Ischl, Aus  4.78   4 ePn   Pn    11 07 08.2 +0.4
     comp=N,9.6nm,0.3s,SNR=11
RJOB Jochberg        4.82 357 ePn   Pn    11 07 09.6 +1.2
RJOB                          eSn   Sn    11 08 06.7 +2.3
SURF Saint Ours      4.85 291 P     Pn    11 07 09.0  0.0
RETA Reutte          4.86 341 ePn   Pn    11 07 10.4 +1.5
     comp=N,7.9nm,0.4s,SNR=15
LMR  La Mourre       4.88 277 ePn   Pn    11 07 06.1 -3.0
LMR  La Mourre       4.88 277 eP    Pn    11 07 09.7 +0.6
LMR                           eSn   Sn    11 08 00.7 -5.1
     comp=N,22nm,1.1s
JAUF Jausiers        4.88 290 P     Pn    11 07 09.6 +0.3
OBER Oberstdorf      4.91 337 ePn   Pn    11 07 11.4 +1.7
OBER                          eSn   Sn    11 08 08.7 +1.9
DAVA Damuels         4.94 333 ePn   Pn    11 07 11.7 +1.7
     comp=N,19nm,0.5s,SNR=13
DAVA Damuels         4.94 333 ePn   Pn    11 07 11.9 +1.8
MBDF Montbardon      4.95 293 eP    Pn    11 07 11.9 +1.6
MBDF                          eSn   Sn    11 08 03.4 -4.5
     comp=N,30nm,1.0s
MOA  Molln           4.99   9 ePn   Pn    11 07 11.2 +0.6
     comp=N,1.7nm,0.2s,SNR=9.6
MOA  Molln           4.99   9 ePn   Pn    11 07 11.3 +0.7
TRIGF Trigance       4.99 282 P     Pn    11 07 11.8 +1.1
EMBD Embd, Matterta  5.03 313 P     Pn    11 07 13.0 +1.8
MORH Mrgy, Hungar    5.12  48 ⇓P    Pg    11 07 38.1 +4.7
UBR  Ueberruh        5.21 337 ePn   Pn    11 07 14.8 +0.9
UBR                           eSn   Sn    11 08 13.5 -0.7
RONA Rosalia, Austr  5.26  24 ePn   Pn    11 07 14.7 +0.2
     comp=N,0.9nm,0.2s
LPG  La Plagne       5.27 301 eP    Pn    11 07 16.8 +2.0
LPG                           eSn   Sn    11 08 12.8 -3.0
     comp=N,53nm,1.2s
LPL  La Plagne       5.29 301 eP    Pn    11 07 17.0 +2.0
LPL                           eSn   Sn    11 08 11.9 -4.4
     comp=N,28nm,0.9s
FRGS Fruska Gora     5.29  63 ⇑P    Pg    11 07 37.1 +0.4
CONA Conrad Observa  5.35  20 ePn   Pn    11 07 15.2 -0.5
     comp=N,0.9nm,0.2s,SNR=5.1
SMRF Simiane la Rot  5.61 283 eP    Pn    11 07 20.6 +1.3
ORIF Oris-en-Rattie  5.62 293 eP    Pn    11 07 21.8 +2.4
ORIF                          eSn   Sn    11 08 19.4 -4.7
     comp=N,60nm,1.3s
GEC2 GERESS Array S  5.93   4 eSn   Sn    11 08 28.4 -3.5
GERES GERESS Array B 5.93   4 Pn    Pn    11 07 22.9 -0.8
     comp=N,0.7nm,0.3s,baz=172,slow=13,SNR=14
GERES                         Sn    Sn    11 08 28.6 -3.3
     comp=N,2.0nm,0.3s,baz=188,slow=27,SNR=6.6
     comp=N,1.4nm,0.4s
CKRC Cesky Krumlov   5.95   7 ePN   Pn    11 07 23.1 -0.8
CKRC                          eSN   Sn    11 08 29.0 -3.2
BRANT Les Verrieres  6.21 313 P     Pn    11 07 28.5 +1.0
KHC  Kasperske Hory  6.21   3 ePN   Pn    11 07 26.5 -1.0
KHC                           eSN   Sn    11 08 35.3 -3.4
CABF La Chapelle     6.23 309 ePn   Pn    11 07 27.5 -0.3
CABF                          eSn   Sn    11 08 35.0 -4.3
     comp=N,44nm,1.1s
CHMF Charmoille      6.31 315 P     Pn    11 07 29.0 +0.1
CHMF                          S     Sn    11 08 41.7 +0.5
BFO  Black Forest    6.37 330 ePn   Pn    11 07 31.6 +1.9
VIVF Saint-Julien-l  6.42 290 ePn   Pn    11 07 27.9 -2.5
VIVF Saint-Julien-l  6.42 290 eP    Pn    11 07 32.5 +2.1
HINF Hinteralfeld    6.60 320 ePn   Pn    11 07 32.4 -0.4
HINF                          eSn   Sn    11 08 44.4 -3.9
     comp=N,80nm,1.0s
CDF  Champ du Feu    6.86 325 ePn   Pn    11 07 35.7 -0.7
LASF Ste Croix       6.86 283 ePn   Pn    11 07 34.1 -2.2
LASF Ste Croix       6.86 283 eP    Pn    11 07 38.4 +2.1
ROTZ Rotzenmuhle     6.87 355 eSn   Sn    11 08 49.6 -5.3
HERR Herculane       6.97  71 ⇓P    Pn    11 07 41.6 +3.7
HAU  Haudompre       6.97 319 ePn   Pn    11 07 36.9 -1.0
HAU                           eSn   Sn    11 08 53.1 -4.4
     comp=N,37nm,0.5s
MANZ Manzenberg      7.10 355 eSn   Sn    11 08 53.3 -7.2
VTS  Vitosha         7.43  89 ⇓P    Pn    11 07 44.8 +0.5
SMF  Signal de Mont  7.59 302 ePn   Pn    11 07 44.8 -1.6
SMF  Signal de Mont  7.59 302 eP    Pn    11 07 49.4 +3.0
SMF                           eSn   Sn    11 09 06.9 -5.8
     comp=N,17nm,0.9s
PAGF Fort de Pagny   7.66 320 ePn   Pn    11 07 46.7 -0.6
     baz=141
SFTF Sexfontaines    7.76 316 ePn   Pn    11 07 47.3 -1.4
     baz=133
KEST Kesra           7.77 204 Pn    Pn    11 07 53.8 +4.9
     comp=N,0.7nm,0.3s,baz=355,slow=19,SNR=2.8
     comp=N,3.1nm,0.5s
MOX  Moxa            7.79 353 ePn   Pn    11 07 48.3 -0.8
MOX                           eSn   Sn    11 09 12.6 -4.9
LOR  Lormes          7.88 307 ePn   Pn    11 07 48.5 -1.8
     baz=128
LOR                           eSn   Sn    11 09 14.6 -5.0
     comp=N,13nm,0.8s
MEZF Maizieres J'vi  7.95 317 ePn   Pn    11 07 50.0 -1.2
     baz=137
MEZF                          eSn   Sn    11 09 16.3 -5.0
     comp=N,11nm,0.5s
AVF  Avril sur Loir  7.96 302 ePn   Pn    11 07 49.6 -1.8
AVF                           eSn   Sn    11 09 15.8 -5.8
     comp=N,25nm,1.4s
SAVF Savonnieres en  7.99 318 ePn   Pn    11 07 50.7 -1.1
     baz=137
SAVF                          eSn   Sn    11 09 17.7 -4.6
     comp=N,19nm,0.9s
SSF  Saint Saulge    7.99 304 ePn   Pn    11 07 50.6 -1.2
SSF                           eSn   Sn    11 09 16.6 -5.7
     comp=N,12nm,0.9s
MTLF Montolieu       8.01 277 eP    Pn    11 07 54.8 +2.7
BGF  Bois d'Agland   8.18 300 ePn   Pn    11 07 54.2 -0.3
BGF                           eSn   Sn    11 09 20.8 -6.4
     comp=N,29nm,1.1s
CAF  Calviac         8.25 288 eP    Pn    11 07 57.7 +2.3
CLL  Collm           8.38 359 ePn   Pn    11 07 56.0 -1.2
CLL                           ex    x     11 08 04.0
CLL                           eSn   Sn    11 09 19.0  -13
CLL                           ex    x     11 09 29.0
CLL                           ex    x     11 09 53.0
CLL                           ex    x     11 10 16.0
CLL                           eSg   Sg    11 10 21.0 -3.3
     comp=Z,21nm,1.1s
TCF  Toulx Ste Croi  8.50 297 eP    Pn    11 08 02.2 +3.4
GIVF Givet           9.19 324 ePn   Pn    11 08 07.1 -1.1
EPF  Esparros        9.39 275 eP    Pn    11 08 13.6 +2.5
BAIF Baives          9.42 322 ePn   Pn    11 08 10.5 -1.0
MLR  Muntele Rosu    9.54  70 Pn    Pn    11 08 13.1 -0.1
     comp=Z,0.1nm,0.3s,baz=302,slow=22,SNR=2.5
     comp=Z,2.1nm,0.9s
ETSF Etsaut         10.06 275 eP    Pn    11 08 23.5 +3.2
LDF  La Druitiere   10.86 306 eP    Pn    11 08 33.9 +2.7
NACGM Naroch        14.93  32 eP    Pn    11 09 25.6 -1.1
     comp=Z,14nm,0.9s,baz=223
EKA  Eskdalemuir Ar 16.32 325 Pn    Pn    11 09 46.2 +1.4
     baz=141,slow=14
     comp=Z,0.5nm,0.5s
FINES FINESS Array B 20.09  18 P     P     11 10 29.1 -0.2
     comp=Z,0.1nm,0.3s,baz=224,slow=7.8,SNR=1.6
     comp=Z,2.2nm,0.8s
KBZ  Khabaz         21.61  78 P     P     11 10 46.3 +0.6
     comp=Z,3.8nm,0.8s,baz=281,slow=8.9,SNR=4.6
     comp=Z,3.8nm,0.8s
JMIC Jan Mayen      30.13 346 LR    LR    11 24 33.7
     comp=Z,249nm,19.6s,baz=149,slow=37
AKTO Aktyubinsk     31.28  60 P     P     11 12 16.4 +0.6
     comp=Z,0.4nm,0.5s,baz=276,slow=9.2,SNR=1.7
     comp=Z,0.4nm,0.5s
TORD Torodi Ar. Bea 31.28 202 P     P     11 12 22.1 +6.1
     comp=Z,0.3nm,0.6s,baz=8.8,slow=9.4,SNR=2.3
     comp=Z,0.3nm,0.6s
ARU  Arti           31.71  49 P     P     11 12 19.4  0.0
     comp=Z,1.7nm,0.2s,baz=298,slow=5.4,SNR=7.1
     comp=Z,1.7nm,0.2s
ZALV Zalesovo Beam  46.85  50 P     P     11 14 26.1 +0.4
     comp=Z,0.4nm,0.4s,baz=268,slow=6.9,SNR=2.5
     comp=Z,0.4nm,0.4s
MKAR Makanchi Array 47.72  60 P     P     11 14 33.6 +1.0
     comp=Z,1.4nm,0.8s,baz=297,slow=5.3,SNR=6.3
     comp=Z,1.4nm,0.8s
SONM Songino Array  61.74  50 P     P     11 16 15.5 +1.1
     comp=Z,0.5nm,0.7s,baz=287,slow=9.9,SNR=2.5
     comp=Z,0.5nm,0.7s
ILAR Eielson Array  71.50 351 P     P     11 17 18.1 +1.9
     comp=Z,0.2nm,0.7s,baz=358,slow=5.9,SNR=4.6
     comp=Z,0.2nm,0.7s
TXAR Lajitas Array  87.63 309 P     P     11 18 46.5 +1.8
     comp=Z,0.1nm,0.4s,baz=39,slow=5.1,SNR=4.1
     comp=Z,0.1nm,0.4s
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*IDC **30** 11:14:20.6±1.6, 42°.78N×13°.20E, h0km, mb3.6/3, mbtmp3.5/5, ML3.6/2, Error ellipse: s-maj=44.1km s-min=17.6km az=96.0*
*LDG **30** 11:14:20.3±0.1, 42°.79N×13°.25E, h10km, Ml3.4/21, Error ellipse: s-maj=2.8km s-min=1.5km az=48.0*
*ROM **30** 11:14:20.9±0.0, 42°.806N±0°.002×13°.192E±0°.003, h10km, ML3.7/45, Error ellipse: s-maj=0.2km s-min=0.1km az=70.0*
*PRU **30** 11:14:23.6±0.0, 42°.86N×13°.15E, h0km*

ISC 30 11:14:20.9±0.7, 42°.80N±0°.01×13°.17E±0°.02, h14km±3km, n191, σ2s07/213, 8C-15D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**142**	P	**Pg**	**11 14 23.4**	**-0.4**
T1214				S	**Sg**	**11 14 24.9**	**-0.8**
T1245	**Castelsantange**	**0.06**	**15**	⇓P	**Pg**	**11 14 23.2**	**-0.6**
T1245				S	**Sg**	**11 14 24.6**	**-1.3**
T1245				AML	AML		
T1213	**Norcia, Frazio**	**0.08**	**202**	P	**Pg**	**11 14 24.0**	**+0.1**
T1213				S	**Sg**	**11 14 25.9**	**0.0**
T1212	**Cascia, Frazio**	**0.10**	**242**	P	**Pg**	**11 14 24.5**	**+0.3**
T1212				S	**Sg**	**11 14 26.8**	**+0.4**
T1244	**Arquata del Tr**	**0.11**	**114**	P	**Pg**	**11 14 24.0**	**-0.3**
T1244				S	**Sg**	**11 14 26.0**	**-0.4**
T1218	**Civita (PG)**	**0.14**	**196**	⇑P	**Pg**	**11 14 24.9**	**+0.3**
T1218				S	**Sg**	**11 14 27.9**	**+0.7**
T1216	**Preci, Frazion**	**0.14**	**310**	P	**Pg**	**11 14 24.8**	**+0.1**
T1216				S	**Sg**	**11 14 27.3**	**+0.1**
MMO1	**Montemonaco**	**0.15**	**50**	⇑P	**Pg**	**11 14 25.1**	**+0.2**
MMO1				S	**Sg**	**11 14 26.8**	**-0.8**
T1201	**Domo (RI)**	**0.15**	**156**	⇓P	**Pg**	**11 14 25.2**	**+0.4**
T1201				S	**Sg**	**11 14 28.2**	**+0.6**
T1204	**Amatrice, Fraz**	**0.17**	**138**	⇓P	**Pg**	**11 14 25.1**	**0.0**
T1204				S	**Sg**	**11 14 28.2**	**+0.3**
T1204				AML	AML		
	comp=E,74500µm,0.5s						
T1204				AML	AML		
	comp=N,53050µm,0.7s						
FEMA	**Monte Fema**	**0.18**	**332**	P	**Pg**	**11 14 25.4**	**0.0**
FEMA				S	**Sg**	**11 14 28.6**	**+0.2**
FEMA				AML	AML		
	comp=N,63300µm,0.6s						
FEMA				AML	AML		
	comp=E,87200µm,0.5s						
T1217	**Poggiodomo (PG**	**0.19**	**243**	⇑P	**Pg**	**11 14 26.0**	**+0.5**
T1217				S	**Sg**	**11 14 29.8**	**+1.2**
T1217				AML	AML		
	comp=E,30800µm,0.5s						
T1217				AML	AML		
	comp=E,29400µm,0.5s						
T1217				AML	AML		
	comp=N,29900µm,1.5s						
T1217				AML	AML		
	comp=N,29500µm,1.5s						
T1217				AML	AML		
	comp=E,29450µm,0.5s						
T1217				AML	AML		
	comp=N,29950µm,1.5s						
T1217				AML	AML		
	comp=N,29850µm,1.5s						
T1241	**Roccafluvione,**	**0.20**	**74**	P	**Pg**	**11 14 25.7**	**+0.1**
T1241				S	**Sg**	**11 14 28.8**	**+0.1**
T1241				AML	AML		
	comp=E,91350µm,0.9s						
T1241				AML	AML		
	comp=E,89050µm,0.9s						
T1241				AML	AML		
	comp=N,80300µm,0.3s						
T1241				AML	AML		
	comp=E,88750µm,0.9s						
T1241				AML	AML		
	comp=E,91050µm,0.9s						
T1241				AML	AML		
	comp=N,80250µm,0.3s						
T1241				AML	AML		
	comp=E,89000µm,0.9s						
T1241				AML	AML		
	comp=N,80750µm,0.3s						
T1241				AML	AML		
	comp=E,91100µm,0.9s						
T1241				AML	AML		
	comp=N,80800µm,0.3s						
T1256	**Bolognola (MC)**	**0.21**	**12**	P	**Pg**	**11 14 25.5**	**-0.3**
T1256				S	**Sg**	**11 14 28.9**	**-0.2**
LNSS	**Leonessa**	**0.22**	**205**	⇑P	**Pg**	**11 14 26.5**	**+0.6**
LNSS				S	**Sg**	**11 14 30.4**	**+1.2**
LNSS				AML	AML		
	comp=E,71550µm,0.3s						
LNSS				AML	AML		
T1215	**Vallo di Nera,**	**0.22**	**271**	⇑P	**Pg**	**11 14 26.4**	**+0.5**
T1215				S	**Sg**	**11 14 30.2**	**+1.0**
T1215				AML	AML		
	comp=E,27100µm,1.2s						
T1215				AML	AML		
	comp=N,35850µm,0.3s						
T1215				AML	AML		
	comp=E,29550µm,1.2s						
T1215				AML	AML		
	comp=N,34150µm,0.3s						
T1215				AML	AML		
	comp=N,34153µm,0.3s						
T1215				AML	AML		
	comp=E,25971µm,1.1s						
AM05	**Amandola Campo**	**0.22**	**38**	⇑P	**Pg**	**11 14 25.8**	**-0.1**
AM05				S	**Sg**	**11 14 29.4**	**+0.1**
AM05				AML	AML		
	comp=E,12450µm,1.4s						
AM05				AML	AML		
	comp=N,9775µm,1.3s						
AM05				AML	AML		
	comp=N,3405µm,0.8s						
AM05				AML	AML		
	comp=N,9755µm,1.3s						

AM05				AML	AML		
	comp=N,3400µm,0.8s						
AM05				AML	AML		
	comp=E,50700µm,1.4s						
AM05				AML	AML		
	comp=E,37934µm,0.2s						
AM05				AML	AML		
	comp=E,10912µm,0.2s						
T1243	**Rocca Santa Ma**	**0.23**	**116**	⇓P	**Pg**	**11 14 25.8**	**-0.2**
T1243				S	**Sg**	**11 14 29.5**	**-0.1**
FDMO	**Fiordimonte**	**0.24**	**346**	⇓P	**Pg**	**11 14 26.2**	**-0.1**
GUMA	**Gualdo di Mace**	**0.29**	**25**	P	**Pg**	**11 14 27.2**	**+0.1**
GUMA				S	**Sb**	**11 14 32.0**	**-0.7**
GUMA				AML	AML		
	comp=N,42650µm,0.6s						
GUMA				AML	AML		
	comp=E,61450µm,1.2s						
GUMA				AML	AML		
	comp=N,42700µm,0.6s						
GUMA				AML	AML		
	comp=E,53250µm,1.2s						
GUMA				AML	AML		
	comp=E,44720µm,0.2s						
GUMA				AML	AML		
	comp=N,40892µm,0.4s						
GUMA				AML	AML		
	comp=N,44900µm,0.5s						
GUMA				AML	AML		
	comp=E,43401µm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**5**	AML	AML		
	comp=E,28400µm,0.8s						
CSP1				AML	AML		
	comp=N,26650µm,0.9s						
RM33	**Pellescritta (**	**0.29**	**173**	P	**Pg**	**11 14 27.5**	**+0.4**
RM33				S	**Sg**	**11 14 32.1**	**+0.9**
RM33				AML	AML		
	comp=N,15350µm,0.9s						
RM33				AML	AML		
	comp=N,15300µm,0.9s						
RM33				AML	AML		
	comp=E,22650µm,1.0s						
CAMP	**Campotosto**	**0.32**	**146**	⇓P	**Pg**	**11 14 27.5**	**0.0**
CAMP				S	**Sg**	**11 14 32.5**	**+0.5**
CAMP				AML	AML		
	comp=E,22350µm,0.3s						
CAMP				AML	AML		
	comp=N,11200µm,0.6s						
T1246	**Crognaleto (TE**	**0.32**	**132**	⇓P	**Pg**	**11 14 27.6**	**-0.1**
T1246				S	**Sb**	**11 14 32.6**	**-1.0**
T1211	**Morro Reatino**	**0.35**	**221**	P	**Pg**	**11 14 28.6**	**+0.5**
T1211				S	**Sb**	**11 14 34.6**	**+0.1**
T1211				AML	AML		
	comp=E,22150µm,0.3s						
T1211				AML	AML		
	comp=E,22200µm,0.3s						
T1211				AML	AML		
	comp=N,45600µm,1.6s						
T1211				AML	AML		
	comp=N,45650µm,1.6s						
T1211				AML	AML		
	comp=E,21100µm,0.3s						
TERO	**Teramo**	**0.37**	**119**	⇓P	**Pg**	**11 14 28.1**	**-0.3**
TERO				S	**Sg**	**11 14 33.5**	**0.0**
TERO				AML	AML		
	comp=N,21950µm,0.3s						
TERO				AML	AML		
	comp=N,21900µm,0.3s						
TERO				AML	AML		
	comp=N,23500µm,0.2s						
TERO				AML	AML		
	comp=E,16600µm,0.4s						
TERO				AML	AML		
	comp=E,17700µm,0.3s						
ARRO	**Arrone**	**0.37**	**233**	P	**Pg**	**11 14 29.0**	**+0.6**
ARRO				S	**Sb**	**11 14 34.9**	**0.0**
T1247	**Pizzolo (AQ)**	**0.37**	**165**	⇓P	**Pg**	**11 14 28.7**	**+0.2**
T1247				S	**Sb**	**11 14 34.4**	**-0.6**
T1247				AML	AML		
	comp=E,15600µm,0.7s						
T1247				AML	AML		
	comp=N,16550µm,1.1s						
SEF1	**Sefro**	**0.38**	**335**	P	**Pg**	**11 14 28.8**	**+0.1**
SEF1				S	**Sb**	**11 14 35.1**	**-0.2**
SEF1				AML	AML		
	comp=E,18200µm,0.2s						
SEF1				AML	AML		
	comp=N,14850µm,1.1s						
MDAR	**Monte D'Aria**	**0.39**	**357**	P	**Pg**	**11 14 28.8**	**-0.1**
MDAR				S	**Sb**	**11 14 35.1**	**-0.6**
MDAR				AML	AML		
	comp=E,6805µm,1.5s						
MDAR				AML	AML		
	comp=N,9065µm,0.5s						
MDAR				AML	AML		
	comp=N,9045µm,0.5s						
MDAR				AML	AML		
	comp=N,8629µm,0.6s						
PIO1	**Pioraco**	**0.40**	**341**	P	**Pg**	**11 14 29.1**	**+0.1**
PIO1				S	**Sb**	**11 14 35.9**	**0.0**
PIO1				AML	AML		
	comp=E,7705µm,0.8s						
PIO1				AML	AML		
	comp=N,13900µm,0.6s						
MNTP	**Montappone**	**0.40**	**33**	P	**Pb**	**11 14 29.7**	**-0.2**
MNTP				AML	AML		
	comp=N,22550µm,1.0s						
MNTP				AML	AML		
	comp=E,24950µm,1.5s						
MNTP				AML	AML		
	comp=N,22600µm,1.0s						
MNTP				AML	AML		
	comp=N,13409µm,1.1s						
MNTP				AML	AML		
	comp=E,20539µm,2.6s						
OFFI	**Offida**	**0.41**	**70**	⇑P	**Pb**	**11 14 29.7**	**-0.2**
OFFI				AML	AML		
	comp=N,23300µm,0.4s						
OFFI				AML	AML		
	comp=E,16800µm,1.5s						
FIU1	**Fiuminata**	**0.42**	**336**	P	**Pg**	**11 14 29.5**	**0.0**
FIU1				AML	AML		
	comp=E,6670µm,0.6s						
FIU1				AML	AML		
	comp=N,6055µm,1.1s						
FIU1				AML	AML		
	comp=N,6050µm,1.1s						
FIU1				AML	AML		
	comp=E,6665µm,0.6s						
SSM1	**San Severino M**	**0.43**	**1**	P	**Pg**	**11 14 29.5**	**0.0**
SSM1				S	**Sb**	**11 14 36.1**	**-0.5**
GAG1	**Gagliole**	**0.44**	**351**	P	**Pg**	**11 14 29.9**	**+0.1**
GAG1				S	**Sb**	**11 14 36.9**	**-0.2**
GAG1				AML	AML		
	comp=E,20150µm,0.5s						
GAG1				AML	AML		
	comp=N,22950µm,0.5s						
ASSB	**Assisi San Ben**	**0.45**	**303**	⇓P	**Pg**	**11 14 30.1**	**+0.3**
ASSB				S	**Sg**	**11 14 37.0**	**+1.1**
ASSB				AML	AML		
	comp=E,11850µm,0.4s						
ASSB				AML	AML		
	comp=N,12950µm,1.0s						
GIGS	**Gran Sasso**	**0.46**	**140**	⇓P	**Pg**	**11 14 29.6**	**-0.5**
GIGS				S	**Sg**	**11 14 36.6**	**+0.3**
GIGS				AML	AML		
	comp=E,3880µm,0.5s						
GIGS				AML	AML		
	comp=N,2935µm,0.4s						
GIGS				AML	AML		
	comp=N,2930µm,0.4s						
CESX	**Cesi**	**0.47**	**247**	⇑P	**Pg**	**11 14 30.7**	**+0.4**
CESX				S	**Sb**	**11 14 38.5**	**+0.6**
CESX				AML	AML		
	comp=N,6365µm,1.2s						
CESX				AML	AML		
	comp=E,10895µm,0.6s						
CESX				AML	AML		
	comp=N,6273µm,0.7s						
AQU	**L'Aquila**	**0.48**	**159**	P	**Pg**	**11 14 30.3**	**-0.1**
AQU				S	**Sb**	**11 14 37.6**	**-0.5**
AQU				AML	AML		
	comp=E,5955µm,1.3s						
AQU				AML	AML		
	comp=N,8545µm,0.6s						
AQU				AML	AML		
	comp=E,5920µm,1.3s						
AQU				AML	AML		
	comp=N,8535µm,0.6s						
AQU				AML	AML		
	comp=N,8735µm,0.7s						
SNTG	**Esanatoglia**	**0.48**	**340**	P	**Pg**	**11 14 30.4**	**-0.1**
SNTG				S	**Sb**	**11 14 38.1**	**-0.2**
SNTG				AML	AML		
	comp=N,4155µm,0.6s						
SNTG				AML	AML		
	comp=E,4070µm,0.5s						
SNTG				AML	AML		
	comp=E,4205µm,0.5s						
SNTG				AML	AML		
	comp=N,4130µm,0.6s						
TRE1	**Treia**	**0.52**	**12**	AML	AML		
	comp=N,15300µm,0.5s						
TRE1				AML	AML		
	comp=N,15300µm,0.4s						
TRE1				AML	AML		
	comp=E,17900µm,0.6s						
EL6	**Elcito**	**0.53**	**355**	P	**Pg**	**11 14 31.2**	**-0.2**
EL6				AML	AML		
	comp=N,10885µm,0.3s						
EL6				AML	AML		
	comp=E,9385µm,0.4s						
EL6				AML	AML		
	comp=N,10850µm,0.3s						
EL6				AML	AML		
	comp=E,9380µm,0.4s						
EL6				AML	AML		
	comp=E,7844µm,0.6s						
EL6				AML	AML		
	comp=N,8217µm,0.5s						
FIAM	**Fiamignano**	**0.53**	**184**	P	**Pg**	**11 14 31.7**	**+0.2**
FIAM				S	**Sb**	**11 14 39.8**	**+0.1**
FIAM				AML	AML		
	comp=N,5460µm,0.5s						
FIAM				AML	AML		
	comp=E,7665µm,0.8s						
ATCC	**AVT- Casa Cast**	**0.55**	**315**	⇓P	**Pg**	**11 14 31.9**	**+0.2**
ATCC				AML	AML		
	comp=N,10800µm,1.0s						
ATCC				AML	AML		
	comp=E,11000µm,1.3s						
TRTR	**Tortoreto Alta**	**0.55**	**89**	P	**Pb**	**11 14 32.4**	**0.0**
TRTR				AML	AML		
	comp=E,26500µm,1.0s						
TRTR				AML	AML		
	comp=N,20100µm,0.7s						
FOSV	**Fossato di Vic**	**0.58**	**329**	⇓P	**Pg**	**11 14 32.3**	**0.0**
FOSV				S	**Sb**	**11 14 41.0**	**+0.1**
FOSV				AML	AML		
	comp=N,4405µm,0.3s						
FOSV				AML	AML		
	comp=E,6295µm,0.4s						
FAGN	**Fagnano**	**0.62**	**150**	P	**Pb**	**11 14 33.2**	**-0.3**
FAGN				S	**Sb**	**11 14 41.7**	**-0.3**
FAGN				AML	AML		
	comp=E,13500µm,0.3s						
FAGN				AML	AML		
	comp=N,9995µm,0.5s						
FAGN				AML	AML		
	comp=N,8853µm,0.7s						
VCEL	**Villa Celiera**	**0.64**	**129**	⇓P	**Pg**	**11 14 33.3**	**-0.2**
VCEL				S	**Sb**	**11 14 42.6**	**-0.2**
MMUR	**Monte Murano**	**0.65**	**349**	P	**Pg**	**11 14 33.7**	**-0.1**
MMUR				AML	AML		
	comp=E,6080µm,0.3s						
MMUR				AML	AML		
	comp=E,6080µm,0.3s						
MMUR				AML	AML		
	comp=N,5225µm,0.3s						
MURB	**Monte Urbino**	**0.66**	**315**	P	**Pg**	**11 14 33.9**	**0.0**
MURB				AML	AML		
	comp=N,13950µm,1.0s						
MURB				AML	AML		
	comp=E,14900µm,0.9s						
MURB				AML	AML		
	comp=N,13800µm,1.0s						
MURB				AML	AML		
	comp=E,14400µm,0.8s						
MURB				AML	AML		
	comp=E,14350µm,0.8s						
PP3	**Marolino**	**0.66**	**29**	P	**Pb**	**11 14 34.4**	**+0.1**
PP3				AML	AML		
	comp=E,13585µm,0.3s						
PP3				AML	AML		
	comp=E,13750µm,0.3s						
PP3				AML	AML		
	comp=E,13575µm,0.3s						
PP3				AML	AML		
	comp=N,12655µm,0.8s						
PP3				AML	AML		
	comp=N,12750µm,0.8s						
PP3				AML	AML		
	comp=N,12680µm,0.8s						
ATFO	**Monte Foce - G**	**0.71**	**323**	P	**Pg**	**11 14 34.8**	**-0.1**
ATFO				AML	AML		
	comp=N,4040µm,0.6s						
ATFO				AML	AML		
	comp=E,3615µm,0.7s						
ARVD	**Arcevia**	**0.72**	**347**	P	**Pg**	**11 14 34.5**	**-0.4**
ARVD				S	**Sb**	**11 14 45.8**	**+0.9**
ARVD				AML	AML		
	comp=E,1930µm,0.9s						
ARVD				AML	AML		
	comp=N,1760µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.72**	**304**	P	**Pg**	**11 14 35.1**	**+0.2**
ATTE				AML	AML		
	comp=E,2785µm,0.5s						
ATTE				AML	AML		
	comp=N,2770µm,0.7s						
T0110	**Collepietro**	**0.73**	**141**	⇓P	**Pg**	**11 14 34.5**	**-0.6**
T0110				S	**Sb**	**11 14 45.4**	**0.0**
T0110				AML	AML		
	comp=N,5710µm,1.3s						
T0110				AML	AML		
	comp=E,8285µm,0.6s						
T0110				AML	AML		
	comp=N,5357µm,0.4s						
SRES	**S.Oreste - Sor**	**0.74**	**221**	P	**Pg**	**11 14 35.8**	**+0.4**
ATLO	**AVT- Montelove**	**0.76**	**313**	P	**Pg**	**11 14 35.6**	**-0.1**
MGAB	**Montegabbione**	**0.78**	**279**	P	**Pg**	**11 14 36.2**	**0.0**
MGAB				AML	AML		
	comp=E,6030µm,0.9s						
MGAB				AML	AML		
	comp=N,7480µm,0.6s						
MGAB				AML	AML		
	comp=N,7095µm,1.0s						
MGAB				AML	AML		
	comp=E,6035µm,0.9s						
MGAB				AML	AML		
	comp=E,6840µm,0.4s						
FRON	**Frontone**	**0.79**	**336**	AML	AML		
	comp=E,2395µm,0.7s						
FRON				AML	AML		
	comp=N,3130µm,0.5s						
PTQR	**Pietraquaria**	**0.80**	**167**	P	**Pg**	**11 14 35.9**	**-0.5**
ATVA	**AVT- Monte Val**	**0.80**	**307**	P	**Pg**	**11 14 36.5**	**-0.1**
ATVO	**AVT- Monte Val**	**0.81**	**317**	P	**Pg**	**11 14 36.3**	**-0.3**
ATVO				AML	AML		
	comp=E,2740µm,0.8s						
ATVO				AML	AML		
	comp=N,3145µm,1.0s						
AOI	**Ancona**	**0.81**	**23**	P	**Pb**	**11 14 36.7**	**-0.2**
AOI				AML	AML		
	comp=E,1910µm,0.3s						
AOI				AML	AML		
	comp=N,2445µm,0.4s						
MTCE	**Montecelio**	**0.84**	**202**	P	**Pg**	**11 14 37.1**	**-0.1**
MTCE				AML	AML		
	comp=E,3395µm,0.5s						
MTCE				AML	AML		
	comp=N,1510µm,0.5s						
ATMI	**Monte Miggiano**	**0.85**	**309**	P	**Pb**	**11 14 37.9**	**+0.4**
ATPC	**Poggio Castell**	**0.86**	**323**	P	**Pg**	**11 14 37.3**	**-0.2**
ATPI	**Pietralunga -**	**0.86**	**320**	P	**Pg**	**11 14 37.4**	**-0.2**
ATPI				AML	AML		
	comp=E,2710µm,1.0s						
ATPI				AML	AML		
	comp=N,2410µm,0.7s						
ATPI				AML	AML		
	comp=N,2405µm,0.7s						
CERT	**Cerreto**	**0.86**	**189**	AML	AML		
	comp=N,4010µm,0.5s						
CERT				AML	AML		
	comp=E,4520µm,1.4s						
PIEI	**Pieia**	**0.87**	**328**	P	**Pg**	**11 14 37.4**	**-0.4**
PIEI				AML	AML		
	comp=N,1645µm,0.7s						
PIEI				AML	AML		
	comp=E,1865µm,0.7s						
MPAG	**Monte Paganucc**	**0.88**	**340**	P	**Pg**	**11 14 37.1**	**-1.0**
MPAG				AML	AML		
	comp=E,2385µm,0.6s						
MPAG				AML	AML		
	comp=N,1855µm,0.7s						
MPAG				AML	AML		
	comp=E,1746µm,2.4s						
MPAG				AML	AML		
	comp=N,1868µm,6.3s						
SACS	**San Casciano d**	**0.93**	**273**	P	**Pg**	**11 14 39.2**	**+0.3**
SACS				AML	AML		
	comp=E,3360µm,0.9s						
SACS				AML	AML		
	comp=N,3205µm,0.9s						
FSSB	**Fossombrone**	**0.94**	**342**	P	**Pg**	**11 14 38.7**	**-0.4**
FSSB				AML	AML		
	comp=N,8255µm,0.4s						
FSSB				AML	AML		
	comp=E,5155µm,0.7s						
RCAV	**Rocca di Cave**	**0.97**	**190**	AML	AML		
	comp=N,4320µm,1.0s						
RCAV				AML	AML		
	comp=E,3650µm,0.9s						
GUAR	**Guarcino**	**1.01**	**174**	AML	AML		
	comp=N,2790µm,0.7s						
GUAR				AML	AML		
	comp=E,2445µm,1.0s						
PE3	**Peglio**	**1.02**	**332**	P	**Pg**	**11 14 40.6**	**-0.1**
CAFI	**Castiglion Fio**	**1.03**	**301**	AML	AML		
	comp=N,2675µm,0.9s						
CAFI				AML	AML		
	comp=E,1515µm,0.5s						
CAFR	**Castel Frentan**	**1.04**	**123**	AML	AML		
	comp=E,1335µm,0.5s						
CAFR				AML	AML		
	comp=N,1530µm,0.6s						
LPEL	**Lama dei Pelig**	**1.06**	**135**	P	**Pg**	**11 14 40.4**	**-1.1**
LPEL				AML	AML		
	comp=E,2830µm,0.8s						
LPEL				AML	AML		
	comp=N,1610µm,0.8s						
MCIV	**Monte Civitell**	**1.10**	**269**	P	**Pb**	**11 14 41.4**	**-0.3**
MCIV				AML	AML		
	comp=E,978µm,0.8s						
MCIV				AML	AML		
	comp=N,1340µm,0.9s						
SF11	**Podere del Sol**	**1.10**	**274**	P	**Pb**	**11 14 41.0**	**-0.7**
TOLF	**Tolfa**	**1.13**	**230**	P	**Pb**	**11 14 42.2**	**-0.1**
SF13	**Bagnolo**	**1.14**	**271**	P	**Pb**	**11 14 42.8**	**+0.4**
SF14	**Selvena**	**1.14**	**268**	P	**Pb**	**11 14 42.8**	**+0.3**
POFI	**Posta Fibreno**	**1.16**	**159**	AML	AML		
	comp=E,1370µm,1.6s						
POFI				AML	AML		
	comp=N,1125µm,0.5s						
SF01	**Poggio Pratacc**	**1.18**	**271**	AML	AML		
	comp=N,1630µm,0.5s						
SF01				AML	AML		
	comp=E,2121µm,0.5s						
LRP	**Arpino**	**1.19**	**165**	AML	AML		
	comp=N,1186µm,1.2s						
LRP				AML	AML		
	comp=E,840µm,0.6s						
CRE	**Caprese Michel**	**1.21**	**313**	AML	AML		
	comp=E,920µm,1.6s						
CRE				AML	AML		
	comp=N,1150µm,0.5s						
GIUL	**Giuliano Di Ro**	**1.24**	**177**	AML	AML		
	comp=E,965µm,0.6s						
GIUL				AML	AML		
	comp=N,1565µm,0.6s						
ARCI	**Arcidosso**	**1.25**	**273**	P	**Pn**	**11 14 44.2**	**+0.2**
ARCI				AML	AML		
	comp=E,440µm,0.6s						
ARCI				AML	AML		
	comp=N,418µm,1.1s						
LATB	**Latina**	**1.31**	**187**	P	**Pn**	**11 14 44.6**	**-0.2**
RNI2	**Rionero Sannit**	**1.32**	**146**	AML	AML		
	comp=E,1480µm,0.7s						
RNI2				AML	AML		
	comp=N,1590µm,1.0s						
RNI2				AML	AML		
	comp=E,1520µm,0.7s						
RNI2				AML	AML		
	comp=N,1630µm,1.0s						
CERA	**Filignano**	**1.36**	**152**	P	**Pn**	**11 14 45.5**	**0.0**
MIDA	**Miranda**	**1.41**	**145**	P	**Pn**	**11 14 45.9**	**-0.4**
TRIV	**Trivento**	**1.46**	**135**	AML	AML		
	comp=N,1098µm,0.8s						
TRIV				AML	AML		
	comp=E,1500µm,0.9s						
CSNT	**Castellina Chi**	**1.53**	**297**	P	**Pb**	**11 14 49.2**	**+0.2**
MAON	**Monte Argentar**	**1.55**	**257**	AML	AML		
	comp=E,381µm,0.8s						
MAON				AML	AML		
	comp=N,178µm,0.8s						
RUFI	**Rufina**	**1.59**	**311**	P	**Pb**	**11 14 50.2**	**0.0**
VAGA	**Valle Agricola**	**1.59**	**150**	P	**Pb**	**11 14 50.1**	**-0.1**
BSSO	**Busso**	**1.64**	**139**	P	**Pn**	**11 14 50.3**	**+0.9**
BSSO				AML	AML		
	comp=E,227µm,1.1s						
BSSO				AML	AML		
	comp=N,302µm,1.3s						
TRIF	**Trifonti**	**1.69**	**281**	P	**Pn**	**11 14 51.2**	**+1.1**
CASP	**Castiglione de**	**1.69**	**270**	AML	AML		
	comp=N,167µm,0.7s						
CASP				AML	AML		
	comp=E,148µm,1.1s						
MELA	**Melanico ??? S**	**1.82**	**126**	AML	AML		
	comp=N,1230µm,0.5s						
MELA				AML	AML		
	comp=E,1075µm,0.8s						
MELA				AML	AML		
	comp=N,1180µm,0.5s						
MELA				AML	AML		
	comp=E,1125µm,0.6s						
MPPT	**Montemurlo**	**1.91**	**308**	AML	AML		
	comp=E,516µm,0.8s						
MPPT				AML	AML		
	comp=N,396µm,1.1s						
MTCR	**Monte La Croce**	**2.00**	**309**	P	**Pn**	**11 14 54.8**	**+0.3**
FNVD	**Fontana Vidola**	**2.02**	**313**	P	**Pn**	**11 14 56.4**	**+1.8**
APRC	**Apricena**	**2.05**	**120**	AML	AML		
	comp=E,528µm,0.6s						
APRC				AML	AML		
	comp=N,812µm,0.4s						
PAOL	**Paolisi**	**2.05**	**149**	AML	AML		
	comp=E,240µm,0.5s						
PAOL				AML	AML		
	comp=N,200µm,1.3s						
CARD	**Cardoso**	**2.31**	**303**	AML	AML		
	comp=E,176µm,0.4s						
CARD				AML	AML		
	comp=N,244µm,1.5s						
SGTA	**Sant Agata di**	**2.33**	**135**	AML	AML		
	comp=E,391µm,0.7s						
SGTA				AML	AML		
	comp=N,276µm,1.2s						
EQUI	**Equi**	**2.58**	**303**	AML	AML		
	comp=N,112µm,1.0s						
EQUI				AML	AML		
	comp=E,119µm,1.2s						
MRVN	**Minervino Murg**	**2.85**	**127**	AML	AML		
	comp=N,98µm,0.5s						
MRVN				AML	AML		
	comp=E,122µm,1.6s						
MSSA	**Maissana**	**3.06**	**301**	AML	AML		
	comp=N,104µm,1.3s						
MSSA				AML	AML		
	comp=E,83µm,0.7s						
PGF	**Pioggiola**	**3.08**	**267**	*e*Pn	**Pn**	**11 15 08.7**	**-0.6**
PGF	**Pioggiola**	**3.08**	**267**	*e*P	**Pn**	**11 15 11.4**	**+2.1**
PGF				*e*Sn	**Sn**	**11 15 44.0**	**-2.0**
	comp=E,17nm,0.6s						
AMUR	**Altamura**	**3.19**	**125**	AML	AML		
	comp=E,150µm,0.7s						
AMUR				AML	AML		
	comp=N,142µm,1.1s						
SABO	**M.te Sabotino**	**3.19**	**5**	AML	AML		
	comp=E,1370µm,0.9s						
SABO				AML	AML		
	comp=N,1710µm,0.7s						
SABO				AML	AML		

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     comp=E,314µm,0.9s
SABO                          AML   AML
     comp=N,460µm,0.8s
CGRP Cima Grappa      3.23 343 AML   AML
     comp=E,430µm,1.4s
CGRP                          AML   AML
     comp=N,373µm,0.9s
CGRP                          AML   AML
     comp=E,376µm,1.2s
CGRP                          AML   AML
     comp=N,322µm,0.9s
SIRI Monte Sirino -   3.31 141 AML   AML
     comp=N,90µm,1.6s
SIRI                          AML   AML
     comp=E,84µm,0.8s
STON Ston             3.33  87 AML   AML
     comp=N,87µm,0.8s
STON                          AML   AML
     comp=E,68µm,0.9s
LJU  Ljubljana        3.39  16 AML   AML
     comp=E,1285µm,0.9s
LJU                           AML   AML
     comp=N,1285µm,0.7s
CTI  Castel Tesino    3.42 342 AML   AML
     comp=N,170µm,0.6s
CTI                           AML   AML
     comp=E,249µm,0.7s
MPRI Monte Prat       3.44 358 AML   AML
     comp=E,356µm,0.7s
MPRI                          AML   AML
     comp=N,349µm,0.8s
LUSI Trento, Gardas   3.54 334 AML   AML
     comp=N,191µm,0.6s
LUSI                          AML   AML
     comp=E,196µm,1.0s
PTCC Patocco-Chiusa   3.61   2 AML   AML
     comp=N,101µm,1.1s
PTCC                          AML   AML
     comp=E,101µm,0.8s
ACOM Acomizza, Ital   3.76   4 AML   AML
     comp=E,191µm,1.5s
ACOM                          AML   AML
     comp=N,208µm,0.8s
MABI Malga Bissina    3.77 331 AML   AML
     comp=E,58µm,0.9s
MABI                          AML   AML
     comp=N,56µm,1.1s
OBKA Obir             3.84  14 ePn   Pn    11 15 21.2 +1.6
     comp=N,3.8nm,0.3s
MYKA Terra Mystica    3.84   5 ePn   Pn    11 15 21.8 +2.1
     comp=N,9.6nm,0.4s,SNR=4.3
KOSI Kohlern          3.88 341 AML   AML
     comp=E,228µm,1.3s
KOSI                          AML   AML
     comp=N,182µm,0.6s
ABTA Abfaltersbach    3.98 353 ePn   Pn    11 15 23.5 +2.0
     comp=N,18nm,0.4s,SNR=8.6
SOKA Soboth           4.10  18 i Pn  Pn    11 15 27.8 +4.6
     comp=N,1.9nm,0.3s
SBF  Sospel           4.31 286 ePn   Pn    11 15 25.5 -0.7
SBF  Sospel           4.31 286 eP    Pn    11 15 28.4 +2.2
SBF                            eSn   Sn    11 16 13.5 -2.8
     comp=N,20nm,0.5s
VSL  Villasalto       4.37 222 AML   AML
     comp=E,31µm,0.4s
VSL                           AML   AML
     comp=N,42µm,0.7s
FETA Feichten         4.56 339 ePn   Pn    11 15 34.0 +4.4
     comp=N,5.9nm,0.5s,SNR=6.0
WTTA Wattenberg       4.59 347 ePn   Pn    11 15 33.1 +3.0
     comp=N,4.2nm,0.3s,SNR=4.6
SQTA Sankt Quirin     4.63 343 ePn   Pn    11 15 34.3 +3.7
     comp=N,8.2nm,0.3s,SNR=4.1
WATA Walderalm        4.67 347 ePn   Pn    11 15 32.9 +1.7
     comp=N,3.4nm,0.2s
ARSA Arzberg          4.75  20 ePn   Pn    11 15 33.6 +1.5
     comp=N,1.9nm,0.5s
MOTA Moosalm          4.77 343 ePn   Pn    11 15 36.5 +4.0
     comp=N,12nm,0.6s
BIOA Bad Ischl, Aus   4.90   4 ePn   Pn    11 15 36.4 +2.2
     comp=N,10nm,0.5s,SNR=7.8
LMR  La Mourre        4.91 279 eP    Pn    11 15 35.6 +1.4
LMR                            eSn   Sn    11 16 27.2 -3.6
     comp=N,19nm,1.1s
RETA Reutte           4.99 341 ePn   Pn    11 15 37.8 +2.4
     comp=N,2.7nm,0.3s
MBDF Montbardon       5.02 295 ePn   Pn    11 15 34.6 -1.3
MBDF Montbardon       5.02 295 eP    Pn    11 15 38.7 +2.8
MBDF                           eSn   Sn    11 16 30.1 -3.6
     comp=N,20nm,0.8s
DAVA Damuels          5.05 334 ePn   Pn    11 15 38.8 +2.4
     comp=N,7.2nm,0.5s
MOA  Molln            5.11   8 ePn   Pn    11 15 39.1 +2.1
     comp=N,3.0nm,0.3s
LPG  La Plagne        5.35 302 ePn   Pn    11 15 38.9 -1.6
LPG  La Plagne        5.35 302 eP    Pn    11 15 43.0 +2.5
LPG                            eSn   Sn    11 16 38.1 -3.9
     comp=N,19nm,0.8s
LPL  La Plagne        5.37 303 eP    Pn    11 15 44.6 +3.8
LPL                            eSn   Sn    11 16 38.6 -3.8
     comp=N,12nm,0.6s
RONA Rosalia, Austr   5.38  23 ePn   Pn    11 15 41.9 +1.2
     comp=N,0.5nm,0.2s
CONA Conrad Observa   5.47  19 ePn   Pn    11 15 43.9 +1.9
     comp=N,1.3nm,0.2s
SMRF Simiane la Rot   5.66 285 ePn   Pn    11 15 42.8 -1.8
SMRF Simiane la Rot   5.66 285 eP    Pn    11 15 47.6 +3.0
SMRF                           eSn   Sn    11 16 45.4 -3.9
     comp=N,19nm,1.2s
ORIF Oris-en-Rattie   5.68 294 ePn   Pn    11 15 42.6 -2.3
ORIF Oris-en-Rattie   5.68 294 eP    Pn    11 15 47.9 +3.0
ORIF                           eSn   Sn    11 16 46.1 -3.8
     comp=N,9.4nm,0.7s
GERES GERESS Array B  6.06   3 Pn    Pn    11 15 52.6 +2.5
     comp=N,0.6nm,0.3s,baz=175,slow=13,SNR=8.8
GERES                          Sn    Sn    11 17 00.6 +1.3
     comp=N,1.2nm,0.3s,baz=190,slow=26,SNR=3.1
     comp=N,1.0nm,0.4s
CKRC Cesky Krumlov    6.07   7 eSN   Sn    11 17 00.7 +1.1
CABF La Chapelle      6.32 309 ePn   Pn    11 15 51.7 -2.0
CABF La Chapelle      6.32 309 eP    Pn    11 15 56.9 +3.2
CABF                           eSn   Sn    11 17 01.2 -4.6
     comp=N,12nm,0.7s
KHC  Kasperske Hory   6.34   2 ePN   Pn    11 15 55.9 +2.0
KHC                            eSN   Sn    11 17 06.3 +0.2
VIVF Saint-Julien-l   6.48 291 eP    Pn    11 15 59.3 +3.4
HINF Hinteralfeld     6.71 321 eP    Pn    11 16 02.6 +3.6
HINF                           eSn   Sn    11 17 10.5 -4.6
     comp=N,12nm,0.5s
LASF Ste Croix        6.90 284 eP    Pn    11 16 04.5 +2.9
CDF  Champ du Feu     6.97 326 eP    Pn    11 16 06.0 +3.4
CDF                            eSn   Sn    11 17 16.6 -5.0
     comp=N,13nm,0.6s
HAU  Haudompre        7.08 320 eP    Pn    11 16 07.5 +3.4
HAU                            eSn   Sn    11 17 19.4 -4.9
     comp=N,17nm,0.5s
SMF  Signal de Mont   7.67 303 eP    Pn    11 16 15.9 +3.7
SMF                            eSn   Sn    11 17 33.5 -5.4
     comp=N,15nm,1.0s
PAGF Fort de Pagny    7.76 320 ePn   Pn    11 16 11.9 -1.5
PAGF Fort de Pagny    7.76 320 eP    Pn    11 16 17.0 +3.6
SFTF Sexfontaines     7.86 316 eP    Pn    11 16 17.8 +3.0
SFTF                           eSn   Sn    11 17 37.9 -5.6
     comp=N,33nm,1.2s
LOR  Lormes           7.96 307 ePn   Pn    11 16 13.9 -2.3
LOR  Lormes           7.96 307 eP    Pn    11 16 19.8 +3.6
LOR                            eSn   Sn    11 17 40.2 -5.8
     comp=N,23nm,1.2s
MTLF Montolieu        8.04 278 eP    Pn    11 16 22.2 +5.0
AVF  Avril sur Loir   8.04 303 ePn   Pn    11 16 15.0 -2.2
AVF  Avril sur Loir   8.04 303 eP    Pn    11 16 20.9 +3.7
AVF                            eSn   Sn    11 17 42.2 -5.6
     comp=N,2.1nm,0.5s
SSF  Saint Saulge     8.07 305 eP    Pn    11 16 22.2 +4.6
SSF                            eSn   Sn    11 17 42.8 -5.8
     comp=N,4.1nm,0.6s
SAVF Savonnieres en   8.09 319 ePn   Pn    11 16 15.3 -2.6
SAVF Savonnieres en   8.09 319 eP    Pn    11 16 21.4 +3.5
BGF  Bois d'Agland    8.26 301 ePn   Pn    11 16 18.7 -1.5
BGF  Bois d'Agland    8.26 301 eP    Pn    11 16 24.5 +4.3
BGF                            eSn   Sn    11 17 47.5 -5.8
     comp=N,9.5nm,0.8s
CAF  Calviac          8.30 289 eP    Pn    11 16 23.7 +2.9
CLL  Collm            8.51 359 ePn   Pn    11 16 27.0 +3.3
CLL                            ePg   Pg    11 17 06.0 +2.2
CLL                            eSn   Sn    11 17 51.0 -8.5
CLL                            ex    x     11 18 04.0
CLL                            ex    x     11 18 31.0
CLL                            eSg   Sg    11 18 56.0 +2.1
     comp=Z,11nm,1.1s
GIVF Givet            9.30 325 ePn   Pn    11 16 32.2 -2.2
GIVF Givet            9.30 325 eP    Pn    11 16 38.4 +4.0
BAIF Baives           9.53 323 ePn   Pn    11 16 35.4 -2.3
BAIF Baives           9.53 323 eP    Pn    11 16 41.1 +3.4
EKA  Eskdalemuir Ar  16.43 325 Pn    Pn    11 18 12.0 +1.2
     baz=139,slow=14
     comp=Z,0.1nm,0.3s
FINES FINESS Array B 20.21  18 P     Pn    11 18 58.6 +1.6
     comp=Z,4.3nm,0.9s,baz=203,slow=9.1,SNR=2.6
     comp=Z,4.3nm,0.9s
TORD Torodi Ar. Bea  31.17 202 P     P     11 20 41.7 +2.2
     comp=Z,0.6nm,0.8s,baz=5.4,slow=8.0,SNR=3.2
     comp=Z,0.6nm,0.8s
MKAR Makanchi Array  47.77  60 P     P     11 22 57.4 -0.2
     comp=Z,0.7nm,0.8s,baz=274,slow=6.5,SNR=1.3
     comp=Z,0.7nm,0.8s
```

IDC 30 11:15:51.6±3.9, 17°.24S×175°.56W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=271.7km s-min=33.8km az=152.0, Tonga Islands

```
Code Station Name      Δ°   AZ°  Phase ID      Time      Res
                                Op    ISC     h m s     ISC
WRA  Warramunga Arr  47.43 259  P     P     11 24 28.1 -0.3
     0.2nm,0.8s,baz=95,slow=8.0,SNR=6.0
     0.2nm,0.8s
ASAR Alice Springs   47.59 253  P     P     11 24 29.6 +0.1
     0.6nm,0.6s,baz=88,slow=8.1,SNR=13
     0.6nm,0.6s
NVAR Mina Array Bea  77.08  43  P     P     11 27 47.1  0.0
     0.3nm,0.5s,baz=232,slow=4.4,SNR=2.4
     0.3nm,0.5s
```

*IDC **30** 11:20:21.5±1.3, 42°.90N×13°.44E, h0km, mb3.6/3, mbtmp3.6/7, ML3.3/4, MS3.3/1, Error ellipse: s-maj=24.1km s-min=14.7km az=92.0*
*ROM **30** 11:20:21.4±0.0, 42°.807N±0°.002×13°.185E±0°.003, h10km, ML3.7/21, Error ellipse: s-maj=0.2km s-min=0.0km az=79.0*
*LDG **30** 11:20:24.0±0.1, 42°.72N×13°.10E, h10km, Ml3.8/9, Error ellipse: s-maj=3.8km s-min=3.2km az=50.0*

ISC 30 11:20:21.4±0.7, 42°.80N±0°.01×13°.16E±0°.02, h13km±4km, n208, σ1§38/234, 20C-15D, Central Italy

```
Code Station Name      Δ°   AZ°  Phase ID      Time      Res
                                Op    ISC     h m s     ISC
T1214 Arquata del Tr  0.05 141  P     Pg    11 20 23.9 -0.3
T1214                           S     Sg    11 20 25.4 -0.7
T1245 Castelsantange  0.06  18 ⇓P    Pg    11 20 23.7 -0.5
T1245                           S     Sg    11 20 25.0 -1.2
T1245                           AML   AML
T1245                           AML   AML
T1245                           AML   AML
T1245                           AML   AML
T1213 Norcia, Frazio  0.08 200 ⇑P    Pg    11 20 24.5 +0.2
T1213                           S     Sg    11 20 26.3  0.0
T1212 Cascia, Frazio  0.10 241 ⇑P    Pb    11 20 24.9 -0.3
T1212                           S     Sg    11 20 27.2 +0.5
T1244 Arquata del Tr  0.11 114 ⇑P    Pg    11 20 24.5 -0.1
T1244                           S     Sg    11 20 26.8 -0.1
T1218 Civita (PG)     0.14 195 ⇑P    Pg    11 20 25.4 +0.4
T1218                           S     Sb    11 20 28.4 -0.5
T1216 Preci, Frazion  0.14 310  P     Pg    11 20 25.1 +0.1
T1216                           S     Sg    11 20 27.8 +0.3
T1201 Domo (RI)       0.16 156 ⇓P    Pg    11 20 25.7 +0.5
T1201                           S     Sb    11 20 29.1 -0.3
T1204 Amatrice, Fraz  0.17 138 ⇓P    Pg    11 20 25.6 +0.1
T1204                           S     Sg    11 20 28.5 +0.2
T1204                           AML   AML
     comp=E,37550µm,0.5s
T1204                           AML   AML
     comp=N,36950µm,0.5s
T1204                           AML   AML
     comp=E,99150µm,0.3s
T1204                           AML   AML
     comp=E,99350µm,0.3s
T1204                           AML   AML
     comp=N,38000µm,0.3s
T1204                           AML   AML
     comp=N,36955µm,0.5s
T1204                           AML   AML
     comp=E,38386µm,8.2s
FEMA Monte Fema       0.18 333  P     Pg    11 20 25.8  0.0
FEMA                            S     Sg    11 20 28.9 +0.2
FEMA                            AML   AML
     comp=E,99150µm,0.5s
FEMA                            AML   AML
FEMA                            AML   AML
FEMA                            AML   AML
FEMA                            AML   AML
FEMA                            AML   AML
FEMA                            AML   AML
     comp=E,96312µm,0.4s
T1217 Poggiodomo (PG  0.19 243 ⇑P    Pb    11 20 26.4 -0.4
T1217                           S     Sb    11 20 30.2 -0.3
T1217                           AML   AML
     comp=N,30800µm,0.3s
T1217                           AML   AML
     comp=E,27550µm,0.6s
T1217                           AML   AML
     comp=N,30100µm,0.3s
T1217                           AML   AML
     comp=E,28200µm,0.6s
T1217                           AML   AML
     comp=N,30800µm,0.3s
T1217                           AML   AML
     comp=E,27600µm,0.6s
T1217                           AML   AML
     comp=N,30050µm,0.3s
T1217                           AML   AML
     comp=E,38050µm,1.2s
T1217                           AML   AML
     comp=N,51850µm,0.5s
T1217                           AML   AML
     comp=E,39250µm,1.2s
T1217                           AML   AML
     comp=N,52100µm,0.5s
T1217                           AML   AML
     comp=N,51800µm,0.5s
T1217                           AML   AML
     comp=N,52150µm,0.5s
T1217                           AML   AML
     comp=E,39450µm,1.2s
T1217                           AML   AML
     comp=E,27785µm,1.9s
T1217                           AML   AML
     comp=E,28835µm,1.9s
T1217                           AML   AML
     comp=N,30796µm,0.3s
T1217                           AML   AML
     comp=N,30095µm,0.3s
T1241 Roccafluvione,  0.20  74  P     Pg    11 20 26.2 +0.2
T1241                           S     Sg    11 20 29.4 +0.3
T1241                           AML   AML
     comp=N,55300µm,0.4s
T1241                           AML   AML
     comp=N,55250µm,0.4s
T1241                           AML   AML
     comp=E,72150µm,0.2s
T1241                           AML   AML
     comp=E,72153µm,0.2s
T1241                           AML   AML
     comp=N,62878µm,5.2s
T1256 Bolognola (MC)  0.21  13  P     Pg    11 20 26.0 -0.2
T1256                           S     Sg    11 20 29.3 -0.2
LNSS Leonessa         0.22 205 ⇑P    Pb    11 20 26.9 -0.4
LNSS                            S     Sb    11 20 30.9 -0.3
T1215 Vallo di Nera,  0.22 271 ⇑P    Pb    11 20 26.8 -0.4
T1215                           S     Sb    11 20 30.7 -0.4
T1215                           AML   AML
     comp=E,21900µm,1.1s
T1215                           AML   AML
     comp=N,37250µm,0.2s
T1215                           AML   AML
     comp=E,24400µm,0.2s
T1215                           AML   AML
     comp=N,36050µm,0.2s
T1215                           AML   AML
     comp=E,21950µm,1.1s
T1215                           AML   AML
     comp=N,36050µm,0.2s
T1215                           AML   AML
     comp=E,24000µm,0.5s
T1215                           AML   AML
     comp=N,37250µm,0.2s
T1215                           AML   AML
     comp=E,24350µm,0.2s
T1215                           AML   AML
     comp=E,23950µm,0.5s
T1215                           AML   AML
     comp=N,36045µm,0.2s
T1215                           AML   AML
     comp=E,21914µm,1.1s
T1215                           AML   AML
     comp=E,24352µm,0.2s
T1215                           AML   AML
     comp=N,37256µm,0.2s
AM05 Amandola Campo   0.23  38 ⇑P    Pg    11 20 26.2 -0.1
AM05                            S     Sg    11 20 30.1 +0.4
AM05                            AML   AML
     comp=E,16000µm,0.9s
AM05                            AML   AML
     comp=N,16650µm,0.1s
AM05                            AML   AML
     comp=E,58800µm,0.5s
AM05                            AML   AML
     comp=N,6295µm,0.1s
AM05                            AML   AML
     comp=E,49650µm,0.2s
AM05                            AML   AML
     comp=N,22150µm,0.1s
AM05                            AML   AML
AM05                            AML   AML
     comp=N,7270µm,0.4s
AM05                            AML   AML
     comp=E,49700µm,0.2s
AM05                            AML   AML
     comp=N,36500µm,0.2s
AM05                            AML   AML
     comp=N,9365µm,0.1s
AM05                            AML   AML
     comp=E,16016µm,0.9s
AM05                            AML   AML
     comp=E,58802µm,0.5s
AM05                            AML   AML
     comp=N,6295µm,0.1s
AM05                            AML   AML
     comp=N,16663µm,0.1s
T1243 Rocca Santa Ma  0.23 116  P     Pg    11 20 26.4 -0.1
T1243                           S     Sg    11 20 29.9 -0.1
FDMO Fiordimonte      0.24 347  P     Pg    11 20 26.7 +0.1
GUMA Gualdo di Mace   0.29  26  P     Pg    11 20 27.6 +0.1
GUMA                            S     Sb    11 20 32.5 -0.8
GUMA                            AML   AML
GUMA                            AML   AML
GUMA                            AML   AML
GUMA                            AML   AML
GUMA                            AML   AML
CSP1 Cessapalombo     0.29   6  P     Pg    11 20 27.6  0.0
CSP1                            S     Sg    11 20 32.2 +0.5
RM33 Pellescritta (   0.29 173  P     Pg    11 20 28.0 +0.4
RM33                            S     Sb    11 20 32.7 -0.7
RM33                            AML   AML
     comp=E,15350µm,0.7s
RM33                            AML   AML
     comp=N,12200µm,0.3s
RM33                            AML   AML
     comp=E,15050µm,0.6s
RM33                            AML   AML
     comp=N,12000µm,0.3s
RM33                            AML   AML
     comp=E,18600µm,1.0s
RM33                            AML   AML
     comp=N,14550µm,0.4s
RM33                            AML   AML
     comp=E,18500µm,1.0s
RM33                            AML   AML
     comp=N,14650µm,0.4s
RM33                            AML   AML
     comp=N,12010µm,0.3s
RM33                            AML   AML
     comp=N,12164µm,0.3s
RM33                            AML   AML
     comp=E,16770µm,2.8s
RM33                            AML   AML
     comp=E,16875µm,2.8s
CAMP Campotosto       0.32 145 ⇓P    Pg    11 20 28.0  0.0
CAMP                            S     Sg    11 20 33.0 +0.5
CAMP                            AML   AML
     comp=E,14950µm,0.2s
CAMP                            AML   AML
     comp=N,13650µm,0.6s
CAMP                            AML   AML
     comp=E,24750µm,0.3s
CAMP                            AML   AML
     comp=N,15750µm,0.6s
CAMP                            AML   AML
     comp=N,13645µm,0.6s
CAMP                            AML   AML
     comp=E,14924µm,0.2s
T1246 Crognaleto (TE  0.33 132  P     Pg    11 20 28.1  0.0
T1246                           S     Sg    11 20 33.1 +0.5
T1211 Morro Reatino   0.35 221 ⇑P    Pb    11 20 29.1 -0.4
T1211                           S     Sb    11 20 35.2 +0.2
T1211                           AML   AML
     comp=E,24300µm,0.6s
T1211                           AML   AML
     comp=N,37650µm,0.3s
T1211                           AML   AML
     comp=E,24250µm,0.6s
T1211                           AML   AML
     comp=N,37800µm,0.3s
T1211                           AML   AML
     comp=N,37600µm,0.3s
T1211                           AML   AML
     comp=E,24200µm,0.6s
T1211                           AML   AML
     comp=N,37802µm,0.3s
T1211                           AML   AML
     comp=N,37667µm,0.3s
T1211                           AML   AML
     comp=E,24201µm,0.6s
T1211                           AML   AML
     comp=E,24265µm,0.6s
ARRO Arrone           0.37 233 ⇑P    Pb    11 20 29.4 -0.3
ARRO                            S     Sb    11 20 35.6 +0.2
ARRO                            AML   AML
     comp=E,11230µm,0.4s
ARRO                            AML   AML
     comp=N,10365µm,1.4s
ARRO                            AML   AML
     comp=E,15000µm,0.4s
ARRO                            AML   AML
     comp=N,11800µm,0.7s
ARRO                            AML   AML
     comp=N,11778µm,2.0s
ARRO                            AML   AML
     comp=E,11215µm,0.4s
TERO Teramo           0.37 118  P     Pg    11 20 28.7 -0.2
TERO                            S     Sg    11 20 34.3 +0.4
TERO                            AML   AML
     comp=E,15500µm,0.5s
TERO                            AML   AML
     comp=N,21150µm,0.5s
TERO                            AML   AML
     comp=E,16700µm,0.5s
TERO                            AML   AML
     comp=E,17750µm,0.3s
TERO                            AML   AML
     comp=N,21900µm,0.5s
TERO                            AML   AML
     comp=N,21100µm,0.5s
TERO                            AML   AML
     comp=E,17950µm,1.9s
TERO                            AML   AML
     comp=E,16863µm,2.0s
TERO                            AML   AML
     comp=E,16750µm,0.3s
T1247 Pizzolo (AQ)    0.37 164 ⇓P    Pg    11 20 29.2 +0.3
T1247                           S     Sb    11 20 35.2 -0.4
T1247                           AML   AML
     comp=E,12650µm,0.5s
T1247                           AML   AML
     comp=N,11400µm,1.1s
T1247                           AML   AML
     comp=E,20850µm,1.4s
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T1247				AML	AML		
	comp=N,15500µm,0.2s						
T1247				AML	AML		
	comp=E,13912µm,3.1s						
T1247				AML	AML		
	comp=N,11398µm,1.1s						
SEF1	**Sefro**	**0.38**	**335**	P	**Pg**	**11 20 29.2**	**+0.1**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
MDAR	**Monte D'Aria**	**0.39**	**358**	P	**Pg**	**11 20 29.3**	**0.0**
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
PIO1	**Pioraco**	**0.40**	**341**	P	**Pg**	**11 20 29.6**	**+0.1**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
MNTP	**Montappone**	**0.41**	**34**	P	**Pb**	**11 20 30.0**	**-0.4**
MNTP				S	**Sb**	**11 20 37.2**	**+0.7**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
OFFI	**Offida**	**0.41**	**70**	⇑P	**Pb**	**11 20 30.1**	**-0.4**
OFFI				AML	AML		
	comp=E,37950µm,0.5s						
OFFI				AML	AML		
	comp=N,39550µm,0.6s						
OFFI				AML	AML		
	comp=E,47800µm,1.4s						
OFFI				AML	AML		
	comp=N,91750µm,0.6s						
FIU1	**Fiuminata**	**0.42**	**336**	P	**Pg**	**11 20 30.2**	**+0.3**
FIU1				S	**Sb**	**11 20 36.8**	**-0.3**
FIU1				AML	AML		
FIU1				AML	AML		
SSM1	**San Severino M**	**0.43**	**1**	P	**Pg**	**11 20 30.0**	**0.0**
SSM1				S	**Sb**	**11 20 36.7**	**-0.5**
ASSB	**Assisi San Ben**	**0.44**	**303**	P	**Pg**	**11 20 30.5**	**+0.2**
GAG1	**Gagliole**	**0.44**	**351**	P	**Pg**	**11 20 30.4**	**+0.2**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GIGS	**Gran Sasso**	**0.46**	**139**	P	**Pg**	**11 20 30.2**	**-0.3**
GIGS				S	**Sg**	**11 20 37.1**	**+0.4**
GIGS				AML	AML		
	comp=E,2190µm,0.6s						
GIGS				AML	AML		
	comp=N,2600µm,0.6s						
GIGS				AML	AML		
	comp=N,3890µm,1.4s						
GIGS				AML	AML		
	comp=E,4965µm,0.6s						
GIGS				AML	AML		
	comp=N,2600µm,0.6s						
GIGS				AML	AML		
	comp=E,2190µm,0.6s						
CESX	**Cesi**	**0.47**	**246**	⇑P	**Pg**	**11 20 31.1**	**+0.4**
CESX				S	**Sb**	**11 20 38.5**	**+0.1**
CESX				AML	AML		
	comp=E,10850µm,0.5s						
CESX				AML	AML		
	comp=N,7925µm,1.1s						
CESX				AML	AML		
	comp=E,24550µm,1.2s						
CESX				AML	AML		
	comp=N,18850µm,0.4s						
CESX				AML	AML		
	comp=N,7921µm,1.1s						
CESX				AML	AML		
	comp=E,10825µm,0.5s						
AQU	**L'Aquila**	**0.48**	**158**	⇓P	**Pg**	**11 20 30.9**	**0.0**
AQU				AML	AML		
	comp=E,6300µm,0.8s						
AQU				AML	AML		
	comp=N,5560µm,0.7s						
AQU				AML	AML		
	comp=E,5760µm,0.8s						
AQU				AML	AML		
	comp=N,5470µm,0.6s						
AQU				AML	AML		
	comp=E,12150µm,1.5s						
AQU				AML	AML		
	comp=N,8945µm,1.6s						
AQU				AML	AML		
	comp=E,11200µm,1.5s						
AQU				AML	AML		
	comp=N,9185µm,1.6s						
AQU				AML	AML		
	comp=E,6298µm,0.8s						
AQU				AML	AML		
	comp=N,6371µm,5.0s						
AQU				AML	AML		
	comp=N,6300µm,5.0s						
AQU				AML	AML		
	comp=E,5764µm,0.8s						
SNTG	**Esanatoglia**	**0.48**	**340**	⇑P	**Pg**	**11 20 31.0**	**0.0**
SNTG				AML	AML		
	comp=E,88750µm,0.6s						
SNTG				AML	AML		
	comp=N,75900µm,0.5s						
SNTG				AML	AML		
	comp=E,87250µm,0.6s						
SNTG				AML	AML		
	comp=N,83950µm,0.5s						
SNTG				AML	AML		
	comp=N,75900µm,0.5s						
SNTG				AML	AML		
	comp=E,88750µm,0.6s						
TRE1	**Treia**	**0.52**	**12**	P	**Pb**	**11 20 32.2**	**-0.2**
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
EL6	**Elcito**	**0.53**	**355**	P	**Pg**	**11 20 31.9**	**0.0**
FIAM	**Fiamignano**	**0.53**	**184**	P	**Pg**	**11 20 32.0**	**+0.1**
FIAM				S	**Sb**	**11 20 40.0**	**-0.3**
FIAM				AML	AML		
	comp=E,6530µm,0.5s						
FIAM				AML	AML		
	comp=N,4360µm,0.6s						
FIAM				AML	AML		
	comp=E,7280µm,0.6s						
FIAM				AML	AML		
	comp=N,5455µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.54**	**315**	P	**Pg**	**11 20 32.3**	**+0.2**
ATCC				AML	AML		
ATCC				AML	AML		
TRTR	**Tortoreto Alta**	**0.55**	**89**	P	**Pb**	**11 20 33.3**	**+0.4**
FOSV	**Fossato di Vic**	**0.58**	**329**	P	**Pg**	**11 20 32.7**	**0.0**
FOSV				S	**Sb**	**11 20 41.8**	**+0.3**
FOSV				AML	AML		
FOSV				AML	AML		
FOSV				AML	AML		
CADA	**Capodarco di F**	**0.59**	**48**	P	**Pb**	**11 20 34.2**	**+0.6**
FAGN	**Fagnano**	**0.62**	**150**	P	**Pg**	**11 20 33.7**	**+0.2**
FAGN				AML	AML		
	comp=E,10130µm,0.4s						
FAGN				AML	AML		
	comp=N,6750µm,0.6s						
FAGN				AML	AML		
	comp=E,21150µm,0.4s						
FAGN				AML	AML		
	comp=N,14150µm,0.4s						
CIMA	**Civitanova Mar**	**0.63**	**36**	P	**Pb**	**11 20 34.3**	**+0.1**
VCEL	**Villa Celiera**	**0.64**	**129**	⇓P	**Pg**	**11 20 33.9**	**-0.1**
VCEL				S	**Sb**	**11 20 43.7**	**+0.2**
VCEL				AML	AML		
	comp=E,10470µm,0.6s						
VCEL				AML	AML		
	comp=E,16800µm,0.5s						
VCEL				AML	AML		
	comp=N,10400µm,1.0s						
VCEL				AML	AML		
	comp=N,10450µm,1.0s						
VCEL				AML	AML		
	comp=E,10475µm,0.6s						
MMUR	**Monte Murano**	**0.65**	**349**	P	**Pg**	**11 20 34.4**	**+0.3**
MMUR				AML	AML		
MMUR				AML	AML		
MMUR				AML	AML		
MURB	**Monte Urbino**	**0.66**	**315**	P	**Pg**	**11 20 34.5**	**+0.2**
MURB				AML	AML		
MURB				AML	AML		
	comp=N,81650µm,0.8s						
MURB				AML	AML		
	comp=N,81650µm,0.8s						
MURB				AML	AML		
MURB				AML	AML		
	comp=N,95500µm,0.3s						
MURB				AML	AML		
PP3	**Marolino**	**0.66**	**29**	⇑P	**Pb**	**11 20 34.9**	**+0.1**
PP3				AML	AML		
	comp=N,53250µm,0.4s						
PP3				AML	AML		
	comp=E,68550µm,0.4s						
PP3				AML	AML		
	comp=N,55750µm,0.4s						
PP3				AML	AML		
	comp=E,70100µm,0.4s						
PP3				AML	AML		
	comp=E,68600µm,0.4s						
PP3				AML	AML		
	comp=N,53232µm,0.4s						
PP3				AML	AML		
	comp=N,55752µm,0.4s						
PP3				AML	AML		
	comp=N,76750µm,0.3s						
PP3				AML	AML		
	comp=N,74100µm,0.3s						
ATFO	**Monte Foce - G**	**0.71**	**323**	P	**Pg**	**11 20 35.4**	**+0.1**
ATFO				S	**Sb**	**11 20 46.5**	**+1.0**
ATFO				AML	AML		
	comp=E,34250µm,0.6s						
ATFO				AML	AML		
	comp=N,25550µm,1.2s						
ATFO				AML	AML		
	comp=E,35150µm,0.6s						
ATFO				AML	AML		
	comp=N,40800µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.71**	**304**	AML	AML		
	comp=E,6565µm,0.9s						
ATTE				AML	AML		
	comp=N,7485µm,0.9s						
ATTE				AML	AML		
	comp=E,18000µm,0.4s						
ATTE				AML	AML		
	comp=N,11950µm,0.9s						
ARVD	**Arcevia**	**0.72**	**347**	P	**Pg**	**11 20 35.1**	**-0.2**
T0110	**Collepietro**	**0.73**	**141**	P	**Pg**	**11 20 35.0**	**-0.6**
T0110				AML	AML		
	comp=E,7935µm,1.1s						
T0110				AML	AML		
	comp=N,5690µm,0.4s						
T0110				AML	AML		
	comp=E,10865µm,0.6s						
T0110				AML	AML		
	comp=N,11800µm,0.3s						
SRES	**S.Oreste - Sor**	**0.74**	**221**	P	**Pb**	**11 20 36.2**	**0.0**
SRES				AML	AML		
	comp=E,2260µm,1.0s						
SRES				AML	AML		
	comp=N,2255µm,1.5s						
SRES				AML	AML		
	comp=E,9570µm,0.7s						
SRES				AML	AML		
	comp=N,6680µm,0.7s						
SRES				AML	AML		
	comp=N,7400µm,1.3s						
MGAB	**Montegabbione**	**0.78**	**279**	P	**Pb**	**11 20 37.2**	**+0.3**
MGAB				AML	AML		
	comp=E,6765µm,0.6s						
MGAB				AML	AML		
	comp=N,9310µm,0.7s						
MGAB				AML	AML		
	comp=E,7805µm,0.6s						
MGAB				AML	AML		
	comp=N,8595µm,0.7s						
MGAB				AML	AML		
	comp=E,17150µm,0.4s						
MGAB				AML	AML		
	comp=N,12850µm,0.4s						
MGAB				AML	AML		
	comp=E,18150µm,0.4s						
MGAB				AML	AML		
	comp=N,11500µm,1.2s						
MGAB				AML	AML		
	comp=E,17200µm,0.4s						
MGAB				AML	AML		
	comp=N,12900µm,0.4s						
FRON	**Frontone**	**0.79**	**336**	⇓P	**Pg**	**11 20 36.4**	**-0.3**
FRON				AML	AML		
	comp=E,38800µm,0.2s						
FRON				AML	AML		
	comp=N,40350µm,0.2s						
FRON				AML	AML		
	comp=N,40400µm,0.2s						
FRON				AML	AML		
	comp=E,38750µm,0.2s						
PTQR	**Pietraquaria**	**0.80**	**167**	P	**Pg**	**11 20 36.6**	**-0.3**
PTQR				AML	AML		
	comp=E,1495µm,0.7s						
PTQR				AML	AML		
	comp=N,1350µm,0.6s						
PTQR				AML	AML		
	comp=N,2265µm,1.3s						
PTQR				AML	AML		
	comp=E,2665µm,1.3s						
ATVO	**AVT- Monte Val**	**0.80**	**317**	P	**Pg**	**11 20 36.7**	**-0.3**
ATVO				AML	AML		
	comp=E,22450µm,0.3s						
ATVO				AML	AML		
	comp=N,25000µm,0.5s						
AOI	**Ancona**	**0.81**	**23**	⇓P	**Pg**	**11 20 37.1**	**-0.1**
AOI				AML	AML		
	comp=N,13200µm,0.3s						
AOI				AML	AML		
	comp=E,19600µm,0.3s						
AOI				AML	AML		
	comp=N,18450µm,0.3s						
MTCE	**Montecelio**	**0.84**	**202**	P	**Pg**	**11 20 37.3**	**-0.3**
MTCE				AML	AML		
	comp=E,3065µm,0.5s						
MTCE				AML	AML		
	comp=N,1700µm,1.1s						
MTCE				AML	AML		
	comp=E,7680µm,0.6s						
MTCE				AML	AML		
	comp=N,4030µm,1.6s						
ATMI	**Monte Miggiano**	**0.85**	**309**	P	**Pn**	**11 20 39.4**	**+0.4**
ATMI				AML	AML		
	comp=E,24950µm,0.6s						
ATMI				AML	AML		
	comp=N,25600µm,1.3s						
ATMI				AML	AML		
	comp=E,10642µm,0.8s						
ATMI				AML	AML		
	comp=N,11198µm,4.6s						
ATPI	**Pietralunga -**	**0.86**	**320**	P	**Pg**	**11 20 37.8**	**-0.2**
CERT	**Cerreto**	**0.86**	**189**	P	**Pg**	**11 20 37.8**	**-0.2**
CERT				AML	AML		
	comp=N,4185µm,0.6s						
CERT				AML	AML		
	comp=E,7640µm,0.6s						
PIEI	**Pieia**	**0.87**	**328**	P	**Pg**	**11 20 38.0**	**-0.2**
PIEI				AML	AML		
	comp=N,21950µm,0.5s						
PIEI				AML	AML		
	comp=N,22000µm,0.5s						
PIEI				AML	AML		
	comp=E,29100µm,0.2s						
MPAG	**Monte Paganucc**	**0.88**	**341**	P	**Pg**	**11 20 38.3**	**-0.2**
MPAG				AML	AML		
	comp=E,25050µm,1.4s						
MPAG				AML	AML		
	comp=N,23500µm,0.3s						
MPAG				AML	AML		
	comp=N,24000µm,0.3s						
MPAG				AML	AML		
	comp=N,23550µm,0.3s						
MPAG				AML	AML		
	comp=N,24050µm,0.3s						
MPAG				AML	AML		
	comp=E,25900µm,1.4s						
SENI	**Senigallia**	**0.91**	**3**	P	**Pn**	**11 20 39.4**	**-0.4**
SENI				AML	AML		
	comp=E,29500µm,0.6s						
SENI				AML	AML		
	comp=E,29450µm,0.6s						
SENI				AML	AML		
	comp=N,17850µm,1.1s						
SACS	**San Casciano d**	**0.92**	**273**	P	**Pb**	**11 20 39.6**	**+0.3**
SACS				AML	AML		
	comp=E,14240µm,1.6s						
SACS				AML	AML		
	comp=E,6595µm,1.3s						
SACS				AML	AML		
	comp=N,9065µm,1.3s						
SACS				AML	AML		
	comp=N,8475µm,1.3s						
FSSB	**Fossombrone**	**0.94**	**343**	P	**Pb**	**11 20 39.3**	**-0.2**
FSSB				AML	AML		
	comp=E,59800µm,0.2s						
FSSB				AML	AML		
	comp=N,83350µm,0.3s						
RCAV	**Rocca di Cave**	**0.97**	**190**	P	**Pn**	**11 20 41.2**	**+0.5**
RCAV				AML	AML		
	comp=N,5440µm,1.4s						
RCAV				AML	AML		
	comp=N,5450µm,1.4s						
RCAV				AML	AML		
	comp=E,3620µm,1.2s						
LATE	**Laterza**	**1.02**	**260**	⇓P	**Pn**	**11 20 41.6**	**+0.2**
PE3	**Peglio**	**1.02**	**332**	P	**Pg**	**11 20 41.1**	**0.0**
PE3				AML	AML		
	comp=E,178µm,1.0s						
PE3				AML	AML		
	comp=E,178µm,1.0s						
PE3				AML	AML		
	comp=N,232µm,1.0s						
CAFI	**Castiglion Fio**	**1.02**	**301**	P	**Pg**	**11 20 41.2**	**+0.1**
CAFI				AML	AML		
	comp=E,10800µm,0.5s						
CAFI				AML	AML		
	comp=N,9710µm,0.5s						
CAFI				AML	AML		
	comp=E,10860µm,0.5s						
CAFI				AML	AML		
	comp=N,10405µm,0.5s						
CAFI				AML	AML		
	comp=E,2744µm,0.5s						
CAFI				AML	AML		
	comp=E,2781µm,0.4s						
CAFI				AML	AML		
	comp=N,3209µm,0.9s						
CAFI				AML	AML		
	comp=N,3114µm,0.8s						
CAFR	**Castel Frentan**	**1.05**	**123**	P	**Pb**	**11 20 40.8**	**-0.5**
CAFR				AML	AML		
	comp=N,3055µm,1.1s						
CAFR				AML	AML		
	comp=E,2405µm,0.8s						
LPEL	**Lama dei Pelig**	**1.07**	**135**	P	**Pb**	**11 20 41.0**	**-0.7**
LPEL				AML	AML		
	comp=E,3155µm,1.4s						
LPEL				AML	AML		
	comp=N,4015µm,1.2s						
VIVA	**Pratoni del Vi**	**1.09**	**196**	P	**Pg**	**11 20 42.4**	**0.0**
VIVA				AML	AML		
	comp=E,5725µm,0.8s						
VIVA				AML	AML		
	comp=N,8540µm,0.5s						
MCIV	**Monte Civitell**	**1.09**	**269**	P	**Pg**	**11 20 42.7**	**+0.2**
MCIV				AML	AML		
	comp=E,3000µm,0.6s						
MCIV				AML	AML		
	comp=N,2325µm,1.6s						
SF04	**Casetta**	**1.11**	**272**	AML	AML		
	comp=E,2430µm,0.5s						
SF04				AML	AML		
	comp=N,2596µm,0.8s						
POFI	**Posta Fibreno**	**1.16**	**159**	P	**Pg**	**11 20 43.6**	**-0.1**
POFI				AML	AML		
	comp=E,1995µm,0.7s						
POFI				AML	AML		
	comp=N,1117µm,1.6s						
CPGN	**Carpegna, Ital**	**1.18**	**329**	P	**Pg**	**11 20 44.2**	**+0.2**
SF01	**Poggio Pratacc**	**1.18**	**271**	AML	AML		
	comp=E,3020µm,0.8s						
SF01				AML	AML		
	comp=E,3025µm,0.8s						
SF01				AML	AML		
	comp=N,3840µm,0.7s						
SF01				AML	AML		
	comp=N,3855µm,0.7s						
CRE	**Caprese Michel**	**1.21**	**313**	P	**Pg**	**11 20 45.0**	**+0.3**
CRE				AML	AML		
	comp=E,7430µm,0.5s						
CRE				AML	AML		
	comp=N,9185µm,0.6s						
ARCI	**Arcidosso**	**1.24**	**273**	P	**Pg**	**11 20 45.7**	**+0.3**
ARCI				AML	AML		
	comp=N,1450µm,0.9s						
ARCI				AML	AML		
	comp=E,1282µm,0.9s						
GIUL	**Giuliano Di Ro**	**1.24**	**177**	P	**Pg**	**11 20 45.8**	**+0.4**
GIUL				AML	AML		
	comp=E,1215µm,1.3s						
GIUL				AML	AML		
	comp=N,1775µm,0.7s						
LATB	**Latina**	**1.31**	**187**	P	**Pn**	**11 20 45.2**	**-0.1**
LATB				AML	AML		
	comp=N,752µm,1.3s						
LATB				AML	AML		
	comp=E,784µm,0.6s						
ASQU	**Asqua**	**1.41**	**315**	P	**Pg**	**11 20 49.0**	**+0.4**
ASQU				AML	AML		
	comp=E,4635µm,1.0s						
ASQU				AML	AML		
	comp=N,4380µm,0.7s						
CSNT	**Castellina Chi**	**1.53**	**297**	⇓P	**Pb**	**11 20 49.7**	**+0.2**
CSNT				AML	AML		
	comp=N,1640µm,0.8s						
CSNT				AML	AML		
	comp=E,2055µm,0.6s						
MAON	**Monte Argentar**	**1.55**	**257**	⇑P	**Pb**	**11 20 49.3**	**-0.6**
MAON				AML	AML		
	comp=E,1315µm,1.2s						
MAON				AML	AML		
	comp=N,920µm,1.1s						
OSSC	**Osservatorio P**	**1.58**	**298**	⇓P	**Pn**	**11 20 49.5**	**+0.4**
OSSC				AML	AML		
	comp=E,2885µm,1.1s						
OSSC				AML	AML		
	comp=E,2755µm,0.9s						
OSSC				AML	AML		
	comp=N,2765µm,1.1s						
OSSC				AML	AML		
	comp=N,2735µm,0.8s						
RUFI	**Rufina**	**1.59**	**311**	P	**Pb**	**11 20 51.3**	**+0.6**
RUFI				AML	AML		
	comp=N,4145µm,0.8s						
RUFI				AML	AML		
	comp=E,3155µm,0.5s						
LMD	**Lutirano**	**1.66**	**321**	AML	AML		
	comp=E,3790µm,1.4s						
LMD				AML	AML		
	comp=N,3185µm,0.6s						
CASP	**Castiglione de**	**1.69**	**270**	⇑P	**Pn**	**11 20 51.2**	**+0.6**
CASP				AML	AML		
	comp=E,464µm,1.0s						
CASP				AML	AML		
	comp=N,574µm,1.3s						
MPPT	**Montemurlo**	**1.90**	**308**	P	**Pb**	**11 20 55.5**	**-0.6**
MPPT				AML	AML		
	comp=E,2245µm,0.6s						
MPPT				AML	AML		
	comp=N,1555µm,1.4s						
MTCR	**Monte La Croce**	**2.00**	**309**	P	**Pb**	**11 20 56.8**	**-0.9**
MTCR				AML	AML		
	comp=E,1684µm,1.1s						
MTCR				AML	AML		
	comp=N,2346µm,0.7s						
BRJN	**Brijuni**	**2.15**	**11**	P	**Pn**	**11 20 58.1**	**+1.2**
SGRT	**San Giovanni R**	**2.18**	**118**	P	**Pb**	**11 20 59.2**	**-1.6**
SGRT				AML	AML		
	comp=N,966µm,0.5s						
SGRT				AML	AML		
	comp=E,1280µm,0.9s						
MAIM	**Mastiano**	**2.24**	**301**	⇓P	**Pn**	**11 20 59.5**	**+1.3**
MAIM				AML	AML		
	comp=N,1214µm,0.5s						
MAIM				AML	AML		
	comp=E,829µm,0.5s						

VLC	**Villacollemand**	**2.44 305**	P	**Pn**	**11 21 02.1 +1.2**
VLC			AML	AML	
	comp=E,645μm,1.1s				
VLC			AML	AML	
	comp=E,635μm,1.1s				
VLC			AML	AML	
	comp=N,558μm,1.3s				
VLC			AML	AML	
	comp=N,550μm,1.3s				
EQUI	**Equi**	**2.58 303**	P	**Pn**	**11 21 05.0 +2.1**
EQUI			AML	AML	
	comp=E,532μm,0.9s				
EQUI			AML	AML	
	comp=N,594μm,0.7s				
SKDS	**Skadanscina**	**2.81 12**	*i* Pn	**Pn**	**11 21 06.7 +0.7**
SMPL	**Sampolo**	**2.96 257**	P	**Pn**	**11 21 10.0 +2.0**
SMPL			AML	AML	
	comp=N,56μm,0.5s				
SMPL			AML	AML	
	comp=E,50μm,0.6s				
MSSA	**Maissana**	**3.05 301**	P	**Pn**	**11 21 11.7 +2.3**
PGF	**Pioggiola**	**3.08 267**	*e*Pn	**Pn**	**11 21 11.5 +1.7**
PGF	**Pioggiola**	**3.08 267**	*e*P	**Pb**	**11 21 13.3 -2.8**
PGF			*e*Sn	**Sn**	**11 21 45.5 -1.0**
	comp=E,35nm,0.4s				
PGF	**Pioggiola**	**3.08 267**	AML	AML	
	comp=N,85μm,0.8s				
PGF			AML	AML	
	comp=E,85μm,0.5s				
AMUR	**Altamura**	**3.19 125**	P	**Pn**	**11 21 13.0 +1.7**
AMUR			AML	AML	
	comp=N,285μm,0.4s				
AMUR			AML	AML	
	comp=E,324μm,0.7s				
SABO	**M.te Sabotino**	**3.19 5**	P	**Pn**	**11 21 12.1 +0.8**
SABO			AML	AML	
	comp=E,8355μm,1.6s				
SABO			AML	AML	
	comp=N,10400μm,0.8s				
SABO			AML	AML	
	comp=E,2015μm,1.5s				
SABO			AML	AML	
	comp=N,2840μm,0.8s				
ROVR	**Rover Verones**	**3.22 333**	P	**Pn**	**11 21 13.9 +2.2**
CGRP	**Cima Grappa**	**3.23 343**	P	**Pn**	**11 21 13.5 +1.6**
CGRP			AML	AML	
	comp=E,1680μm,1.4s				
CGRP			AML	AML	
	comp=N,1620μm,0.6s				
CGRP			AML	AML	
	comp=N,1615μm,0.6s				
CGRP			AML	AML	
	comp=E,1715μm,1.4s				
LJU	**Ljubljana**	**3.39 16**	AML	AML	
	comp=N,14700μm,0.6s				
LJU			AML	AML	
	comp=E,5525μm,0.7s				
SALO	**Salr**	**3.40 327**	P	**Pn**	**11 21 17.0 +2.9**
MATE	**Matera**	**3.41 128**	⇑P	**Pn**	**11 21 16.5 +2.3**
CTI	**Castel Tesino**	**3.42 342**	P	**Pn**	**11 21 16.6 +2.1**
CTI			AML	AML	
	comp=N,1225μm,0.3s				
CTI			AML	AML	
	comp=E,990μm,0.5s				
CADS	**Cadrg**	**3.45 7**	*i* Pn	**Pn**	**11 21 15.4 +0.5**
STAL	**STALIGIAL**	**3.48 355**	P	**Pn**	**11 21 16.3 +1.1**
STAL			AML	AML	
	comp=E,1170μm,1.2s				
STAL			AML	AML	
	comp=N,1210μm,1.3s				
STAL			AML	AML	
	comp=N,1096μm,0.8s				
STAL			AML	AML	
	comp=E,1346μm,0.5s				
LTRZ	**Laterza**	**3.51 128**	P	**Pn**	**11 21 17.5 +1.9**
LUSI	**Trento, Gardas**	**3.54 334**	P	**Pn**	**11 21 18.6 +2.6**
LUSI			AML	AML	
	comp=E,768μm,0.6s				
LUSI			AML	AML	
	comp=N,916μm,0.6s				
NOCI	**Noci**	**3.54 123**	P	**Pn**	**11 21 17.9 +1.8**
NOCI			AML	AML	
	comp=E,238μm,0.8s				
NOCI			AML	AML	
	comp=N,286μm,0.6s				
CIMO	**Cimolais**	**3.55 352**	P	**Pn**	**11 21 17.3 +1.2**
CIMO			AML	AML	
	comp=N,412μm,0.7s				
CIMO			AML	AML	
	comp=E,354μm,0.7s				
CIMO			AML	AML	
	comp=E,360μm,0.7s				
CIMO			AML	AML	
	comp=N,410μm,0.7s				
PTCC	**Patocco-Chiusa**	**3.61 2**	P	**Pn**	**11 21 17.6 +0.6**
PTCC			AML	AML	
	comp=E,610μm,0.5s				
PTCC			AML	AML	
	comp=N,668μm,0.5s				
GAGG	**Gaggia**	**3.64 335**	P	**Pn**	**11 21 19.9 +2.3**
DGI	**Dorgali Grotta**	**3.64 228**	⇑P	**Pn**	**11 21 19.0 +1.5**
ACOM	**Acomizza, Ital**	**3.76 4**	P	**Pn**	**11 21 20.8 +1.6**
ACOM			AML	AML	
	comp=E,1270μm,1.4s				
ACOM			AML	AML	
	comp=E,1240μm,1.4s				
ACOM			AML	AML	
	comp=N,1068μm,0.5s				
ACOM			AML	AML	
	comp=N,1092μm,1.5s				
ZOU	**Zoufplan**	**3.76 358**	P	**Pn**	**11 21 20.4 +1.2**
ZOU			AML	AML	
	comp=N,505μm,0.9s				
ZOU			AML	AML	
	comp=N,526μm,1.2s				
ZOU			AML	AML	
	comp=E,625μm,1.4s				
ZOU			AML	AML	
	comp=E,617μm,1.4s				
MABI	**Malga Bissina**	**3.77 331**	P	**Pn**	**11 21 21.7 +2.4**
FVI	**Forni Avoltri**	**3.81 356**	P	**Pn**	**11 21 21.4 +1.6**
FVI			AML	AML	
	comp=N,591μm,0.4s				
FVI			AML	AML	
	comp=E,503μm,0.5s				
OBKA	**Obir**	**3.84 14**	*e*Pn	**Pn**	**11 21 21.2 +1.0**
	comp=E,2.9nm,0.2s				
MYKA	**Terra Mystica**	**3.84 5**	*e*Pn	**Pn**	**11 21 21.4 +1.1**
	comp=E,10nm,0.4s				
KOSI	**Kohlern**	**3.88 341**	P	**Pn**	**11 21 23.2 +2.4**
KOSI			AML	AML	
	comp=N,782μm,1.5s				
KOSI			AML	AML	
	comp=E,944μm,0.8s				
APPI	**Appiano**	**3.93 340**	P	**Pn**	**11 21 23.9 +2.5**
APPI			AML	AML	
	comp=N,564μm,1.3s				
APPI			AML	AML	
	comp=E,719μm,0.4s				
ABTA	**Abfaltersbach**	**3.97 354**	*e*Pn	**Pn**	**11 21 23.8 +1.8**
	comp=E,27nm,0.4s,SNR=15				
SOKA	**Soboth**	**4.10 18**	*e*Pn	**Pn**	**11 21 24.6 +0.8**
	comp=E,2.1nm,0.3s				
BRMO	**Bormio**	**4.18 333**	P	**Pn**	**11 21 28.0 +3.0**
RISI	**Rein**	**4.22 350**	P	**Pn**	**11 21 27.7 +2.2**
MUGIO	**Muggio**	**4.30 318**	P	**Pn**	**11 21 28.6 +2.1**
ROSI	**Rosskopf**	**4.31 344**	P	**Pn**	**11 21 29.4 +2.6**
SBF	**Sospel**	**4.31 286**	*e*Pn	**Pn**	**11 21 27.7 +1.0**
SBF	**Sospel**	**4.31 286**	*e*P	**Pn**	**11 21 31.2 +4.5**
VSL	**Villasalto**	**4.37 222**	P	**Pn**	**11 21 29.3 +1.9**
VSL			AML	AML	
	comp=E,130μm,0.6s				
VSL			AML	AML	
	comp=N,70μm,1.1s				
PDG	**Podgorica**	**4.51 93**	⇑P	**Pn**	**11 21 31.4 +2.1**
FETA	**Feichten**	**4.56 339**	*e*Pn	**Pn**	**11 21 33.3 +3.1**
	comp=N,4.9nm,0.3s,SNR=5.3				
WTTA	**Wattenberg**	**4.59 347**	*e*Pn	**Pn**	**11 21 33.6 +3.0**
	comp=N,3.2nm,0.2s,SNR=5.6				
DAVOX	**Davos/Dischmat**	**4.62 331**	Pn	**Pn**	**11 21 34.1 +3.1**
	comp=N,3.5nm,0.3s,baz=153,slow=18,SNR=14				
	comp=N,9.1nm,0.3s				
SQTA	**Sankt Quirin**	**4.63 343**	*e*Pn	**Pn**	**11 21 34.0 +2.9**
	comp=N,2.4nm,0.1s,SNR=8.6				
WATA	**Walderalm**	**4.67 347**	*i* Pn	**Pn**	**11 21 35.2 +3.5**
	comp=N,2.7nm,0.2s,SNR=8.9				
TRAV	**Traversella**	**4.75 307**	P	**Pn**	**11 21 34.3 +1.6**
ARSA	**Arzberg**	**4.75 20**	*e*Pn	**Pn**	**11 21 33.8 +1.1**
	comp=N,3.7nm,0.3s				
MOTA	**Moosalm**	**4.77 343**	*e*Pn	**Pn**	**11 21 36.1 +3.0**
	comp=N,1.8nm,0.2s				
BIOA	**Bad Ischl, Aus**	**4.90 4**	*e*Pn	**Pn**	**11 21 36.1 +1.3**
	comp=N,9.7nm,0.3s				
LMR	**La Mourre**	**4.90 279**	*e*Pn	**Pn**	**11 21 35.5 +0.7**
LMR	**La Mourre**	**4.90 279**	*e*P	**Pn**	**11 21 39.1 +4.3**
LMR			*e*Sn	**Sn**	**11 22 28.4 -2.9**
	comp=N,20nm,0.4s				
RETA	**Reutte**	**4.99 341**	*e*Pn	**Pn**	**11 21 38.2 +2.3**
	comp=N,1.5nm,0.2s				
MBDF	**Montbardon**	**5.01 295**	*e*Pn	**Pn**	**11 21 37.5 +1.1**
MBDF			*e*Sn	**Sn**	**11 22 32.2 -2.1**
	comp=N,56nm,0.6s				
DAVA	**Damuels**	**5.05 334**	*e*Pn	**Pn**	**11 21 39.7 +2.8**
	comp=N,7.0nm,0.4s				
MOA	**Molln**	**5.11 8**	*e*Pn	**Pn**	**11 21 39.1 +1.5**
	comp=N,1.4nm,0.1s				
TIR	**Tirane**	**5.20 104**	⇓P	**Pn**	**11 21 34.9 -3.9**
MORH	**Mrgy, Hungar**	**5.20 47**	⇓P	Pg	11 22 10.7 +10
LPG	**La Plagne**	**5.34 302**	*e*Pn	**Pn**	**11 21 42.3 +1.2**
LPG	**La Plagne**	**5.34 302**	*e*P	Pn	11 21 46.4 +5.3
LPG			*e*Sn	**Sn**	**11 22 40.6 -2.0**
LPL	**La Plagne**	**5.36 303**	*e*Pn	**Pn**	**11 21 42.7 +1.4**
LPL	**La Plagne**	**5.36 303**	*e*P	Pn	11 21 46.4 +5.1
LPL			*e*Sn	**Sn**	**11 22 41.3 -1.7**
	comp=N,24nm,0.3s				
RONA	**Rosalia, Austr**	**5.38 23**	*i* Pn	**Pn**	**11 21 42.6 +1.3**
	comp=N,0.4nm,0.1s				
CONA	**Conrad Observa**	**5.47 19**	*e*Pn	**Pn**	**11 21 44.1 +1.5**
	comp=N,1.5nm,0.2s				
SMRF	**Simiane la Rot**	**5.65 285**	*e*Pn	**Pn**	**11 21 46.0 +0.9**
SMRF			*e*Sn	**Sn**	**11 22 47.5 -2.4**
	comp=N,16nm,0.4s				
ORIF	**Oris-en-Rattie**	**5.68 294**	*e*P	Pn	11 21 50.4 +4.9
GERES	**GERESS Array B**	**6.06 3**	Pn	**Pn**	**11 21 51.4 +0.7**
	comp=N,0.6nm,0.3s,baz=184,slow=13,SNR=15				
GERES			Sn	**Sn**	**11 22 58.0 -1.9**
	comp=N,4.0nm,0.3s,baz=180,slow=20,SNR=7.8				
	comp=N,1.2nm,0.4s				
CABF	**La Chapelle**	**6.32 310**	*e*Pn	**Pn**	**11 21 55.4 +1.1**
CABF	**La Chapelle**	**6.32 310**	*e*P	Pn	11 21 59.8 +5.5
VIVF	**Saint-Julien-l**	**6.48 291**	*e*Pn	**Pn**	**11 21 56.9 +0.5**
KRUC	**Moravsky**	**6.66 19**	*e*PN	**Pn**	**11 22 01.3 +2.5**
HINF	**Hinteralfeld**	**6.70 321**	*e*Pn	**Pn**	**11 22 01.0 +1.5**
HINF	**Hinteralfeld**	**6.70 321**	*e*P	Pn	11 22 04.6 +5.1
HINF			*e*Sn	**Sn**	**11 23 13.7 -2.0**
	comp=N,25nm,0.5s				
LASF	**Ste Croix**	**6.89 284**	*e*Pn	**Pn**	**11 22 03.0 +0.9**
LASF	**Ste Croix**	**6.89 284**	*e*P	Pn	11 22 07.8 +5.7
CDF	**Champ du Feu**	**6.96 326**	*e*Pn	**Pn**	**11 22 03.7 +0.6**
CDF	**Champ du Feu**	**6.96 326**	*e*P	Pn	11 22 09.5 +6.4
HAU	**Haudompre**	**7.08 320**	*e*Pn	**Pn**	**11 22 05.4 +0.8**
HAU	**Haudompre**	**7.08 320**	*e*P	Pn	11 22 10.6 +6.0
HAU			*e*Sn	**Sn**	**11 23 22.9 -2.0**
	comp=N,50nm,0.5s				
VTS	**Vitosha**	**7.42 88**	⇑P	**Pn**	**11 22 12.0 +2.5**
KEST	**Kesra**	**7.65 204**	Pn	**Pn**	**11 22 15.7 +3.1**
	comp=N,0.2nm,0.3s,baz=50,slow=7.9,SNR=2.2				
	comp=N,2.0nm,0.5s				
SMF	**Signal de Mont**	**7.67 303**	*e*Pn	**Pn**	**11 22 13.3 +0.6**
SFTF	**Sexfontaines**	**7.86 316**	*e*Pn	**Pn**	**11 22 16.5 +1.2**
LOR	**Lormes**	**7.96 307**	*e*Pn	**Pn**	**11 22 17.7 +1.0**
LOR			*e*Sn	**Sn**	**11 23 43.2 -3.4**
	comp=N,10nm,0.5s				
MTLF	**Montolieu**	**8.03 278**	*e*Pn	**Pn**	**11 22 18.5 +0.8**
AVF	**Avril sur Loir**	**8.04 303**	*e*Pn	**Pn**	**11 22 18.8 +1.1**
MEZF	**Maizieres J'vi**	**8.05 318**	*e*Pn	**Pn**	**11 22 19.1 +1.2**
SSF	**Saint Saulge**	**8.07 305**	*e*Pn	**Pn**	**11 22 19.6 +1.4**
BGF	**Bois d'Agland**	**8.26 301**	*e*Pn	**Pn**	**11 22 21.4 +0.6**
BGF	**Bois d'Agland**	**8.26 301**	*e*P	Pn	11 22 26.9 +6.1
CAF	**Calviac**	**8.30 289**	*e*Pn	**Pn**	**11 22 21.9 +0.5**
CLL	**Collm**	**8.51 359**	*e*Pn	**Pn**	**11 22 28.0 +3.8**
CLL			*e*Sg	**Sg**	**11 24 51.0 -3.3**
GIVF	**Givet**	**9.29 325**	*e*Pn	**Pn**	**11 22 35.8 +0.8**
GIVF	**Givet**	**9.29 325**	*e*P	Pn	11 22 40.6 +5.6
BAIF	**Baives**	**9.53 323**	*e*P	Pn	11 22 44.7 +6.5
MLR	**Muntele Rosu**	**9.57 69**	Pn	**Pn**	**11 22 38.2 -0.8**
	comp=N,0.1nm,0.3s,baz=288,slow=19,SNR=1.1				
	comp=N,0.9nm,0.5s				
LDF	**La Druitiere**	**10.94 307**	*e*Pn	**Pn**	**11 22 57.4 -0.2**
FLN	**La Foliniere**	**11.23 307**	*e*Pn	**Pn**	**11 23 01.0 -0.5**
GRR	**Gorron**	**11.30 304**	*e*Pn	**Pn**	**11 23 03.0 +0.6**
SGMF	**Saint Gilles**	**12.29 302**	*e*Pn	**Pn**	**11 23 17.0 +1.0**
QUIF	**Quistinic**	**12.57 300**	*e*Pn	**Pn**	**11 23 19.3 -0.4**
ROSF	**Rostrenen**	**12.77 301**	*e*Pn	**Pn**	**11 23 23.0 +0.5**
FINES	**FINESS Array B**	**20.21 18**	P	Pn	11 24 57.0 -0.6
	comp=N,1.9nm,0.7s,baz=203,slow=9.0,SNR=1.7				
	comp=N,1.9nm,0.7s				
BELG	**Belogornoye**	**24.93 55**	LR	LR	11 36 24.4
	comp=N,68nm,18.1s,baz=97,slow=39				
TORD	**Torodi Ar. Bea**	**31.17 202**	P	**P**	**11 26 43.2 +3.1**
	comp=N,0.4nm,0.5s,baz=357,slow=7.5,SNR=3.6				
	comp=N,0.4nm,0.5s				
MKAR	**Makanchi Array**	**47.77 60**	P	**P**	**11 28 59.6 +1.5**
	comp=N,0.5nm,0.6s,baz=282,slow=7.2,SNR=1.9				
	comp=N,0.5nm,0.6s				

*IDC **30** 11:20:44.4±1.2, 3°.39S×129°.21E, h0km, mb4.0/5, mbtmp3.9/7, ML3.7/2, MS4.8/1, Error ellipse: s-maj=41.4km s-min=22.8km az=83.0*
*DJA **30** 11:20:46.0±0.4, 3°.5S±4°×12°.9E±°, h10km, M3.9/9, MLv3.9/9*
ISC 30 11:20:49.0±0.8, **3°.35**S±0°.06×**129°.37**E±0°.05, **h35**km, **n17,** σ1§**30**/16, **mb3.9/4, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.44**	**270**	P	**Pn**	**11 20 55.8**	**-3.0**
KRAI	**Karang Ratu**	**0.98**	**272**	P	**Pn**	**11 21 05.8**	**-0.4**
AAI	**Ambon**	**1.22**	**254**	P	**Pn**	**11 21 09.3**	**-0.3**
BNDI	**Bandanaira**	**1.28**	**156**	P	**Pn**	**11 21 10.0**	**-0.4**
FAKI	**Fak Fak**	**2.90**	**82**	P	**Pn**	**11 21 31.9**	**-0.8**
SIJI	**Sorong**	**3.11**	**38**	Pn	**Pn**	**11 21 34.7**	**-0.8**
	16nm,0.3s,baz=224,slow=13,SNR=88						
SIJI				Sn	**Sn**	**11 22 09.5**	**-1.9**
	7.5nm,0.3s,baz=268,slow=11,SNR=13						
	67nm,0.4s						
SIJI	**Sorong**	**3.11**	**38**	P	**Pn**	**11 21 34.7**	**-0.8**
LBMI	**Labuha**	**3.28**	**325**	P	**Pn**	**11 21 37.3**	**-0.6**
SANI	**Sanana**	**3.62**	**291**	P	**Pn**	**11 21 42.4**	**-0.1**
KAPI	**Kappang**	**9.74**	**260**	LR	LR	11 27 22.3	
	comp=Z,134nm,19.0s,baz=94,slow=42						
WRA	**Warramunga Arr**	**17.19**	**164**	P	**Pn**	**11 24 44.6**	**-1.9**
	0.2nm,0.3s,baz=337,slow=13,SNR=16						
	1.1nm,0.9s						
ASAR	**Alice Springs**	**20.67**	**168**	P	**P**	**11 25 26.6**	**+0.7**
	7.6nm,0.9s,baz=352,slow=11,SNR=46						
	7.6nm,0.9s						
HNR	**Honiara**	**30.96**	**103**	LR	LR	11 41 28.9	
	comp=Z,2μm,18.3s,baz=246,slow=40						
MJAR	**Matsushiro Arr**	**40.53**	**11**	P	**P**	**11 28 25.7**	**+0.8**
	1.8nm,0.9s,baz=183,slow=9.4,SNR=5.3						
	1.8nm,0.9s						
SONM	**Songino Array**	**54.80**	**341**	P	**P**	**11 30 16.3**	**+0.7**
	1.2nm,1.1s,baz=142,slow=7.3,SNR=2.0						
	1.2nm,1.1s						
KURBB	**Kurchatov Arra**	**69.09**	**328**	P	**P**	**11 31 52.2**	**+0.8**
	1.2nm,0.6s,baz=128,slow=5.6,SNR=11						
	1.2nm,0.6s						
AKTO	**Aktyubinsk**	**80.82**	**322**	P	**P**	**11 33 00.0**	**+0.9**
	1.1nm,0.7s,baz=93,slow=4.9,SNR=6.4						
	1.1nm,0.7s						

*STR **30** 11:21:06.0±1.4, 43°N±10°×1°4E±°, h11km, MLv4.2/17, Error ellipse: s-maj=0.0km s-min=0.0km az=152.0, preliminary*
*LDG **30** 11:21:08.6±0.1, 43°.02N×13°.14E, h10km, Ml4.0/28, Error ellipse: s-maj=3.4km s-min=2.3km az=48.0*
*ROM **30** 11:21:08.7±0.0, 43°.062N±0°.002×13°.066E±0°.003, h8km, ML4.2/58, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.1km az=64.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.95; $M_{\theta\theta}$0.43; $M_{\phi\phi}$0.52; $M_{r\theta}$-0.06; $M_{r\phi}$-0.53; $M_{\theta\phi}$0.40; Fault plane solution: $M_0$1.06077×10^{15} NP1:ϕ_s305.00000°, δ37.00000°, λ-111.00000°. NP2:ϕ_s150.00000°, δ56.00000°, λ-75.00000°.*
*MED_RC **30** 11:21:09.0±0.7, 43°.06N×13°.08E, h29km±1km, MW4.5/5, Moment Tensor Solution. Mantle waves: s5,c5; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88±.19; $M_{\theta\theta}$0.51±.12; $M_{\phi\phi}$0.37±.09; $M_{r\theta}$0.07±.07; $M_{r\phi}$-0.33±.04; $M_{\theta\phi}$0.14±.05; Best double couple: $M_0$0.84000×10^{16} NP1:ϕ_s138.00000°, δ47.00000°, λ-78.00000°. NP2: ϕ_s301.00000°, δ44.00000°, λ-102.00000°. Principal axes: T 0.7700, Plg1.0000°, Azm219.0000°; N 0.1300, Plg9.0000°, Azm309.0000°; P -0.9000, Plg81.0000°, Azm122.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*IDC **30** 11:21:09.3±0.8, 43°.17N×13°.43E, h0km, mb3.9/7, mbtmp3.9/18, ML3.7/11, MS3.4/7 Error ellipse: s-maj=17.3km s-min=11.1km az=95.0*
*PDG **30** 11:21:09.6±0.7, 43°.07N×13°.13E, h7km±1km, ML4.1/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*PRU **30** 11:21:10.8±0.0, 43°.19N×13°.08E, h0km, M4.6*
*NEIC **30** 11:21:11.3±1.6, 43°.12N±0°.04×13°.12E±0°.05, h10km±1km, mb4.6/12, ML4.1(VIE), Error ellipse: s-maj=8.9km s-min=2.9km az=226.0*
ISC 30 11:21:09.3±0.7, **43°.07N**±0°.01×**13°.04E**±0°.01, **h7**km±3km, **n362,** σ2§**14**/456, **mb4.2**/12, **28C-18D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**242**	⇑P	**Pg**	**11 21 10.8**	**+0.1**
T1219				S	**Sg**	**11 21 12.0**	**+0.3**
FDMO	**Fiordimonte**	**0.05**	**133**	⇑P	**Pg**	**11 21 10.4**	**-0.5**
FDMO				S	**Sg**	**11 21 11.3**	**-0.7**
T1220	**Camerino, Fraz**	**0.05**	**40**	⇑P	**Pg**	**11 21 10.5**	**-0.5**
T1220				S	**Sg**	**11 21 11.6**	**-0.6**
SEF1	**Sefro**	**0.10**	**319**	⇑P	**Pg**	**11 21 12.1**	**+0.4**
SEF1				S	**Sg**	**11 21 14.2**	**+0.9**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
FEMA	**Monte Fema**	**0.11**	**176**	⇑P	**Pg**	**11 21 11.8**	**0.0**
FEMA				S	**Sg**	**11 21 14.2**	**+0.7**
PIO1	**Pioraco**	**0.12**	**339**	P	**Pg**	**11 21 12.0**	**+0.1**
PIO1				S	**Sg**	**11 21 14.3**	**+0.6**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
CSP1	**Cessapalombo**	**0.12**	**79**	⇑P	**Pg**	**11 21 11.5**	**-0.5**
CSP1				S	**Sg**	**11 21 13.3**	**-0.6**
CSP1				AML	AML		
CSP1				AML	AML		
FIU1	**Fiuminata**	**0.14**	**326**	⇓P	**Pg**	**11 21 12.7**	**+0.3**
FIU1				S	**Sg**	**11 21 15.4**	**+1.0**
FIU1				AML	AML		
FIU1				AML	AML		
MDAR	**Monte D'Aria**	**0.14**	**31**	⇑P	**Pg**	**11 21 12.1**	**-0.3**
MDAR				S	**Sg**	**11 21 14.4**	**-0.1**
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
T1256	**Bolognola (MC)**	**0.15**	**115**	⇑P	**Pg**	**11 21 12.1**	**-0.4**
T1256				S	**Sg**	**11 21 14.3**	**-0.4**
GAG1	**Gagliole**	**0.17**	**7**	⇑P	**Pg**	**11 21 12.9**	**+0.1**
GAG1				S	**Sg**	**11 21 16.0**	**+0.8**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
T1216	**Preci, Frazion**	**0.18**	**185**	⇑P	**Pg**	**11 21 13.0**	**+0.1**
T1216				S	**Sg**	**11 21 16.4**	**+1.0**
SSM1	**San Severino M**	**0.19**	**32**	⇑P	**Pg**	**11 21 12.9**	**-0.2**
SSM1				S	**Sg**	**11 21 16.0**	**+0.3**
SNTG	**Esanatoglia**	**0.20**	**339**	P	**Pg**	**11 21 13.5**	**+0.2**
SNTG				S	**Sg**	**11 21 17.1**	**+1.0**
SNTG				AML	AML		
	comp=N,83950μm,0.5s						
SNTG				AML	AML		
	comp=E,87250μm,0.6s						
GUMA	**Gualdo di Mace**	**0.22**	**92**	⇑P	**Pg**	**11 21 13.5**	**-0.1**
GUMA				S	**Sg**	**11 21 17.1**	**+0.5**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1245	**Castelsantange**	**0.24**	**153**	P	**Pg**	**11 21 13.9**	**-0.2**
T1245				S	**Sg**	**11 21 17.9**	**+0.6**
AM05	**Amandola Campo**	**0.25**	**112**	⇑P	**Pg**	**11 21 13.9**	**-0.3**
AM05				S	**Sg**	**11 21 17.7**	**+0.2**
AM05				AML	AML		
	comp=E,49650μm,0.2s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9365μm,0.1s						
AM05				AML	AML		
	comp=N,36500μm,0.2s						
AM05				AML	AML		
	comp=E,49700μm,0.2s						
EL6	**Elcito**	**0.26**	**10**	⇑P	**Pg**	**11 21 14.5**	**-0.1**
EL6				S	**Sg**	**11 21 18.9**	**+0.8**
EL6				AML	AML		
EL6				AML	AML		
ASSB	**Assisi San Ben**	**0.28**	**265**	⇑P	**Pg**	**11 21 15.3**	**+0.5**
ASSB				S	**Sb**	**11 21 20.5**	**-1.2**
ASSB				AML	AML		
	comp=N,87200μm,0.3s						
ASSB				AML	AML		
	comp=E,71550μm,1.2s						
T1215	**Vallo di Nera,**	**0.29**	**205**	⇑P	**Pg**	**11 21 15.3**	**+0.2**
T1215				S	**Sg**	**11 21 20.5**	**+1.5**
T1215				AML	AML		
	comp=E,24000μm,0.5s						
T1215				AML	AML		
	comp=E,24000μm,0.8s						
T1215				AML	AML		
	comp=N,25000μm,1.3s						
T1215				AML	AML		
	comp=N,23850μm,1.4s						
T1215				AML	AML		
	comp=E,24050μm,0.7s						
T1215				AML	AML		
	comp=N,25000μm,1.4s						
T1215				AML	AML		
	comp=E,23950μm,0.5s						
T1215				AML	AML		
	comp=E,24000μm,0.5s						
T1215				AML	AML		
	comp=N,24950μm,1.3s						
T1215				AML	AML		
	comp=E,24000μm,0.7s						
FOSV	**Fossato di Vic**	**0.30**	**318**	⇑P	**Pg**	**11 21 15.6**	**+0.3**
FOSV				S	**Sb**	**11 21 21.0**	**-1.4**
FOSV				AML	AML		
FOSV				AML	AML		
FOSV				AML	AML		
TRE1	**Treia**	**0.31**	**39**	⇑P	**Pg**	**11 21 15.6**	**+0.1**
TRE1				S	**Sb**	**11 21 21.3**	**-1.3**
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
ATCC	**AVT- Casa Cast**	**0.32**	**292**	⇑P	**Pg**	**11 21 16.1**	**+0.6**
ATCC				S	**Sb**	**11 21 21.9**	**-0.8**
ATCC				AML	AML		
ATCC				AML	AML		
T1212	**Cascia, Frazio**	**0.32**	**179**	⇑P	**Pg**	**11 21 15.5**	**0.0**
T1212				S	**Sg**	**11 21 20.9**	**+1.2**
MNTP	**Montappone**	**0.32**	**78**	P	**Pg**	**11 21 15.7**	**+0.1**
MNTP				S	**Sb**	**11 21 21.5**	**-1.3**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
CING	**Cingoli**	**0.33**	**20**	P	**Pg**	**11 21 15.5**	**-0.2**
T1214	**Arquata del Tr**	**0.33**	**158**	P	**Pg**	**11 21 15.7**	**-0.2**

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        comp=N,39200µm,0.6s
T1241                           AML   AML
        comp=E,42350µm,1.4s
T1244   Arquata del Tr    0.36 149  P     Pg    11 21 16.2 -0.2
T1244                             S     Sg    11 21 22.3 +1.1
T1217   Poggiodomo (PG    0.37 193  P     Pg    11 21 16.5 +0.1
T1217                             S     Sg    11 21 22.6 +1.3
T1217                           AML   AML
        comp=N,51800µm,0.4s
T1217                           AML   AML
        comp=E,39400µm,1.2s
T1217                           AML   AML
        comp=E,38050µm,1.2s
T1217                           AML   AML
        comp=N,51850µm,0.4s
T1217                           AML   AML
        comp=E,39450µm,1.2s
T1217                           AML   AML
        comp=E,39250µm,1.2s
T1217                           AML   AML
        comp=N,52100µm,0.5s
T1217                           AML   AML
        comp=N,51800µm,0.5s
T1217                           AML   AML
        comp=N,52150µm,0.5s
T1217                           AML   AML
        comp=E,39500µm,1.2s
T1217                           AML   AML
        comp=N,51850µm,0.5s
MMUR    Monte Murano      0.37 355  P     Pg    11 21 16.5 -0.2
MMUR                              S     Sg    11 21 22.9 +1.3
MMUR                            AML   AML
MMUR                            AML   AML
MMUR                            AML   AML
T1218   Civita (PG)       0.40 172  P     Pg    11 21 16.9 -0.2
T1218                             S     Sg    11 21 23.4 +1.0
MURB    Monte Urbino      0.42 297        Pb    11 21 18.5 -0.7
MURB    Monte Urbino      0.42 297  P     Pg    11 21 17.9 +0.4
MURB                              S     Sb    11 21 25.7 -0.1
MURB                            AML   AML
MURB                            AML   AML
        comp=N,81650µm,0.8s
MURB                            AML   AML
MURB                            AML   AML
        comp=N,95500µm,0.3s
MURB                            AML   AML
        comp=N,81650µm,0.8s
MURB                            AML   AML
ARVD    Arcevia           0.43 350 ⇑P     Pg    11 21 17.6 -0.1
ARVD                              S     Sb    11 21 25.1 -1.0
ARVD                            AML   AML
        comp=E,43600µm,0.3s
ARVD                            AML   AML
        comp=N,32900µm,0.2s
T1201   Domo (RI)         0.44 159  P     Pg    11 21 17.8 -0.1
T1201                             S     Sb    11 21 25.1 -1.1
T1204   Amatrice, Fraz    0.44 153 ⇓P     Pg    11 21 17.6 -0.3
T1204                             S     Sg    11 21 24.5 +0.8
T1204                           AML   AML
        comp=E,99250µm,0.3s
T1204                           AML   AML
        comp=E,99350µm,0.3s
T1204                           AML   AML
        comp=N,38000µm,0.3s
T1204                           AML   AML
        comp=E,99150µm,0.3s
ATFO    Monte Foce - G    0.45 311  P     Pg    11 21 18.4 +0.3
ATFO                              S     Sb    11 21 26.4 -0.3
ATFO                            AML   AML
        comp=E,35150µm,0.6s
ATFO                            AML   AML
        comp=N,40800µm,0.7s
LNSS    Leonessa          0.47 180  P     Pg    11 21 18.2 -0.2
LNSS                              S     Sg    11 21 25.4 +1.0
LNSS                            AML   AML
        comp=E,20900µm,1.0s
LNSS                            AML   AML
        comp=N,45200µm,1.1s
T1243   Rocca Santa Ma    0.48 141 ⇓P     Pg    11 21 17.9 -0.7
T1243                             S     Sg    11 21 25.2 +0.4
OFFI    Offida            0.49 106  P     Pg    11 21 19.2 +0.4
OFFI                            AML   AML
        comp=N,91750µm,0.6s
OFFI                            AML   AML
        comp=E,47800µm,1.4s
FRON    Frontone          0.50 333 ⇑P     Pg    11 21 19.0 -0.1
FRON                              S     Sb    11 21 27.3 -0.8
FRON                            AML   AML
        comp=E,38800µm,0.2s
FRON                            AML   AML
        comp=N,40350µm,0.2s
FRON                            AML   AML
        comp=N,40400µm,0.2s
FRON                            AML   AML
        comp=E,38750µm,0.2s
CIMA    Civitanova Mar    0.52  63  P     Pg    11 21 19.7 +0.4
PP3     Marolino          0.52  53  P     Pg    11 21 19.6 +0.3
PP3                             AML   AML
        comp=N,74050µm,0.3s
PP3                             AML   AML
        comp=N,76800µm,0.3s
PP3                             AML   AML
        comp=E,63850µm,0.8s
PP3                             AML   AML
        comp=N,76750µm,0.3s
PP3                             AML   AML
        comp=N,74100µm,0.3s
PP3                             AML   AML
        comp=E,61850µm,0.8s
ATTE    AVT- Monte Tez    0.52 285  P     Pg    11 21 19.6 +0.3
ATTE                            AML   AML
        comp=N,11950µm,0.9s
ATTE                            AML   AML
        comp=E,18000µm,0.4s
ATLO    AVT- Montelove    0.53 298  P     Pg    11 21 19.5 +0.1
ARRO    Arrone            0.53 203  P     Pg    11 21 19.4 -0.2
ARRO                            AML   AML
        comp=E,15050µm,0.4s
ARRO                            AML   AML
        comp=N,11750µm,0.7s
ARRO                            AML   AML
        comp=E,15000µm,0.4s
ARRO                            AML   AML
        comp=N,11800µm,0.7s
CADA    Capodarco di F    0.54  76  P     Pb    11 21 20.8 -0.4
CADA                            AML   AML
        comp=E,80650µm,1.4s
CADA                            AML   AML
        comp=N,77400µm,0.4s
T1211   Morro Reatino     0.55 194  P     Pg    11 21 19.9 -0.1
T1211                             S     Sb    11 21 28.9 -0.6
T1211                           AML   AML
        comp=E,18150µm,1.4s
T1211                           AML   AML
        comp=N,35650µm,0.4s
T1211                           AML   AML
        comp=E,19000µm,1.4s
T1211                           AML   AML
        comp=N,35400µm,0.4s
T1211                           AML   AML
        comp=E,18150µm,1.4s
T1211                           AML   AML
        comp=N,35600µm,0.4s
T1211                           AML   AML
        comp=E,19000µm,1.4s
T1211                           AML   AML
        comp=N,35350µm,0.4s
ATVO    AVT- Monte Val    0.56 304  P     Pg    11 21 20.4 +0.3
ATVO                            AML   AML
        comp=N,25000µm,0.5s
ATVO                            AML   AML
        comp=E,22450µm,0.3s
CESX    Cesi              0.57 217        Pg    11 21 20.1 -0.2
CESX    Cesi              0.57 217 ⇑P     Pg    11 21 20.1 -0.2
CESX                              S     Sb    11 21 29.3 -0.6
CESX                            AML   AML
        comp=E,24550µm,1.2s
CESX                            AML   AML
        comp=N,18850µm,0.4s
RM33    Pellescritta (    0.57 167 ⇓P     Pg    11 21 20.1 -0.3
RM33                              S     Sg    11 21 28.8 +0.9
RM33                            AML   AML
        comp=N,15500µm,0.8s
RM33                            AML   AML
        comp=E,18600µm,1.0s
RM33                            AML   AML
        comp=N,15550µm,0.8s
RM33                            AML   AML
        comp=N,15550µm,0.4s
RM33                            AML   AML
        comp=E,18500µm,1.0s
RM33                            AML   AML
        comp=N,14561µm,0.4s
RM33                            AML   AML
        comp=N,14632µm,0.4s
T1246   Crognaleto (TE    0.59 145  P     Pg    11 21 19.8 -0.8
T1246                             S     Sg    11 21 28.8 +0.4
ATVA    AVT- Monte Val    0.59 291  P     Pb    11 21 21.4 -0.6
PIEI    Pieia             0.59 322 ⇓P     Pg    11 21 20.7 -0.1
PIEI                            AML   AML
        comp=N,21950µm,0.5s
PIEI                            AML   AML
        comp=E,29100µm,0.2s
PIEI                            AML   AML
        comp=N,22000µm,0.5s
MPAG    Monte Paganucc    0.60 340  P     Pg    11 21 20.8  0.0
MPAG                              S     Sb    11 21 31.0 +0.2
MPAG                            AML   AML
        comp=E,25050µm,1.4s
MPAG                            AML   AML
        comp=N,23500µm,0.3s
MPAG                            AML   AML
        comp=E,25900µm,1.4s
MPAG                            AML   AML
        comp=N,24000µm,0.3s
CAMP    Campotosto        0.60 153        Pg    11 21 20.1 -0.8
CAMP    Campotosto        0.60 153 ⇓P     Pg    11 21 20.0 -0.8
CAMP                              S     Sg    11 21 29.0 +0.3
CAMP                            AML   AML
        comp=N,15750µm,0.6s
CAMP                            AML   AML
        comp=E,24750µm,0.3s
ATPI    Pietralunga -     0.60 310  P     Pg    11 21 21.3 +0.4
ATPI                              S     Sb    11 21 31.1 +0.1
ATPI                            AML   AML
        comp=E,17100µm,0.7s
ATPI                            AML   AML
        comp=E,17050µm,0.7s
ATPI                            AML   AML
        comp=N,24000µm,0.3s
TERO    Teramo            0.61 137  P     Pg    11 21 20.2 -0.8
TERO                              S     Sg    11 21 29.6 +0.6
TERO                            AML   AML
        comp=E,16750µm,0.3s
TERO                            AML   AML
        comp=N,14350µm,1.2s
TERO                            AML   AML
        comp=N,14900µm,1.2s
TERO                            AML   AML
        comp=E,17750µm,0.3s
ATMI    Monte Miggiano    0.62 295  P     Pb    11 21 22.5 -0.1
ATMI                            AML   AML
        comp=N,25600µm,1.3s
ATMI                            AML   AML
        comp=E,24950µm,0.6s
AOI     Ancona            0.63  40 ⇑P     Pg    11 21 21.1 -0.4
AOI                             AML   AML
        comp=N,18450µm,0.3s
AOI                             AML   AML
        comp=E,19600µm,0.3s
PCRO    Pietralacroce     0.65  33  P     Pg    11 21 21.8  0.0
SENI    Senigallia        0.65  12  P     Pb    11 21 22.5 -0.5
SENI                            AML   AML
        comp=E,29450µm,0.6s
SENI                            AML   AML
        comp=N,17850µm,1.1s
SENI                            AML   AML
        comp=E,29500µm,0.6s
FSSB    Fossombrone       0.65 343  P     Pg    11 21 21.9  0.0
FSSB                              S     Sb    11 21 32.8 +0.4
FSSB                            AML   AML
        comp=N,83350µm,0.3s
FSSB                            AML   AML
        comp=E,59800µm,0.2s
T1247   Pizzolo (AQ)      0.66 163  P     Pg    11 21 21.3 -0.6
T1247                           AML   AML
        comp=E,20850µm,1.4s
T1247                           AML   AML
        comp=N,17200µm,0.8s
TRTR    Tortoreto Alta    0.69 112  P     Pb    11 21 23.7  0.0
MGAB    Montegabbione     0.70 257  P     Pg    11 21 23.0 +0.2
MGAB                            AML   AML
        comp=N,12850µm,0.4s
MGAB                            AML   AML
        comp=E,18150µm,0.4s
MGAB                            AML   AML
        comp=E,17200µm,0.4s
MGAB                            AML   AML
        comp=N,12900µm,0.4s
MGAB                            AML   AML
        comp=E,17150µm,0.4s
MGAB                            AML   AML
        comp=N,11500µm,1.2s
GIGS    Gran Sasso        0.73 148  P     Pg    11 21 22.5 -0.9
GIGS                              S     Sg    11 21 33.0 +0.1
GIGS                            AML   AML
        comp=E,4965µm,0.6s
GIGS                            AML   AML
        comp=N,3890µm,1.4s
PE3     Peglio            0.74 328  P     Pb    11 21 24.1 -0.4
PE3                             AML   AML
        comp=N,233µm,1.0s
PE3                             AML   AML
        comp=N,232µm,1.0s
PE3                             AML   AML
        comp=E,178µm,1.0s
PE3                             AML   AML
        comp=E,178µm,1.0s
AQU     L'Aquila          0.76 159        Pg    11 21 24.3 +0.3
AQU     L'Aquila          0.76 159  P     Pg    11 21 23.4 -0.6
FIAM    Fiamignano        0.80 176  P     Pg    11 21 23.8 -1.0
CAFI    Castiglion Fio    0.83 289  P     Pg    11 21 25.4 +0.2
CAFI                            AML   AML
        comp=E,10855µm,0.5s
CAFI                            AML   AML
        comp=N,9725µm,0.5s
CAFI                            AML   AML
        comp=E,10800µm,0.5s
CAFI                            AML   AML
        comp=N,9710µm,0.5s
CAFI                            AML   AML
        comp=E,10860µm,0.5s
CAFI                            AML   AML
        comp=N,10405µm,0.5s
CAFI                            AML   AML
        comp=E,10825µm,0.5s
CAFI                            AML   AML
        comp=N,9700µm,0.5s
SACS    San Casciano d    0.86 256  P     Pb    11 21 26.3 -0.3
SACS                            AML   AML
        comp=E,6595µm,1.3s
SACS                            AML   AML
        comp=N,9065µm,1.3s
VCEL    Villa Celiera     0.90 139  P     Pg    11 21 24.8 -1.7
VCEL                            AML   AML
        comp=E,16850µm,0.5s
VCEL                            AML   AML
        comp=N,13050µm,0.7s
VCEL                            AML   AML
        comp=E,16800µm,0.5s
FAGN    Fagnano           0.90 153  P     Pg    11 21 26.0 -0.6
SRES    S.Oreste - Sor    0.92 205  P     Pg    11 21 26.3 -0.7
SRES                            AML   AML
        comp=N,7400µm,1.3s
SRES                            AML   AML
        comp=E,9570µm,0.7s
SRES                            AML   AML
        comp=N,6680µm,0.7s
CRE     Caprese Michel    0.97 305  P     Pn    11 21 29.5 +0.1
CRE                             AML   AML
        comp=N,9185µm,0.6s
CRE                             AML   AML
        comp=E,7430µm,0.5s
T0110   Collepietro       1.00 147  P     Pg    11 21 27.2 -1.3
T0110                           AML   AML
        comp=E,14500µm,0.6s
T0110                           AML   AML
        comp=N,11800µm,0.3s
LATE    Laterza           1.02 244  Pn    Pb    11 21 29.5 +0.3
LATE    Laterza           1.02 244  P     Pb    11 21 29.3 +0.1
MCIV    Monte Civitell    1.04 254  P     Pb    11 21 29.7  0.0
MCIV                            AML   AML
        comp=E,3000µm,0.6s
MCIV                            AML   AML
        comp=N,2325µm,1.6s
MTCE    Montecelio        1.07 192  P     Pg    11 21 28.8 -1.1
PTQR    Pietraquaria      1.08 166  P     Pn    11 21 31.5 +0.6
SF01    Poggio Pratacc    1.11 257  AML   AML
        comp=E,3025µm,0.8s
SF01                            AML   AML
        comp=E,3020µm,0.8s
SF01                            AML   AML
        comp=N,3855µm,0.7s
SF01                            AML   AML
        comp=N,3840µm,0.7s
CERT    Cerreto           1.12 182  P     Pg    11 21 30.0 -0.8
ASQU    Asqua             1.17 309  P     Pn    11 21 33.3 +1.1
ARCI    Arcidosso         1.17 260  P     Pn    11 21 32.5 +0.3
ARCI                            AML   AML
        comp=E,1480µm,0.9s
ARCI                            AML   AML
        comp=N,1450µm,0.9s
SFI     Santa Sofia       1.21 314  P     Pn    11 21 34.1 +1.5
RCAV    Rocca di Cave     1.22 183 ⇑P     Pn    11 21 33.5 +0.6
RCAV                            AML   AML
        comp=E,5835µm,0.6s
RCAV                            AML   AML
        comp=N,5450µm,1.4s
RCAV                            AML   AML
        comp=N,5440µm,1.4s
VVLD    Villa Vallelon    1.27 160  P     Pn    11 21 33.1 -0.5
LPEL    Lama dei Pelig    1.32 140  P     Pn    11 21 33.3 -1.0
CSNT    Castellina Chi    1.34 288  P     Pg    11 21 35.2 +0.2
RUFI    Rufina            1.35 305  P     Pg    11 21 35.5 +0.1
FROS    Frosini           1.39 276  P     Pn    11 21 35.2 +0.1
POFI    Posta Fibreno     1.44 160  P     Pg    11 21 37.7 +0.8
GIUL    Giuliano Di Ro    1.52 174  P     Pb    11 21 37.8  0.0
TRIF    Trifonti          1.57 272  P     Pn    11 21 37.5 -0.1
TRIF                            AML   AML
        comp=N,1610µm,1.0s
TRIF                            AML   AML
        comp=E,1560µm,0.6s
RNI2    Rionero Sannit    1.59 149  P     Pg    11 21 40.3 +0.4
CASP    Castiglione de    1.62 261  P     Pn    11 21 37.1 -1.2
CASP                            AML   AML
        comp=E,608µm,1.5s
CASP                            AML   AML
        comp=N,574µm,1.3s
CERA    Filignano         1.64 153  P     Pb    11 21 40.1 +0.2
CRMI    Carmignano        1.67 296  P     Pg    11 21 41.2 -0.2
MPPT    Montemurlo        1.67 303  P     Pb    11 21 40.6 +0.1
MIDA    Miranda           1.69 147  P     Pn    11 21 38.9 -0.3
MTCR    Monte La Croce    1.77 304  P     Pb    11 21 41.4 -0.7
VAGA    Valle Agricola    1.88 151  P     Pn    11 21 42.5 +0.6
BDI     Bagni Di Lucca    2.04 300  P     Pn    11 21 44.4 +0.3
MAIM    Mastiano          2.04 295  P     Pb    11 21 45.9 -0.7
SACR    S. Croce Del S    2.08 143  P     Pb    11 21 46.9 -0.5
CARD    Cardoso           2.09 298  P     Pn    11 21 45.3 +0.5
VLC     Villacollemand    2.21 300  P     Pn    11 21 48.0 +1.5
APRC    Apricena          2.27 124  P     Pn    11 21 48.2 +0.9
SGRT    San Giovanni R    2.39 122  P     Pn    11 21 49.4 +0.4
SKDS    Skadanscina       2.57  15  i Pn  Pn    11 21 40.5  -11
SKDS                            IAML  11 22 41.5
        comp=Z,451nm,0.4s
MORSI   Morsiglia         2.70 269  P     Pn    11 21 53.6 +0.5
MORSI                             S     Sg    11 22 36.7 +0.7
MSSA    Maissana          2.84 297  Pn    Pb    11 21 59.2 -1.2
SABO    M.te Sabotino     2.94   8  P     Pn    11 21 56.3 -0.1
SMPL    Sampolo           2.94 252  P     Pn    11 21 58.2 +1.7
MRLC    Muro Lucano       2.95 141  P     Pn    11 21 57.8 +1.3
PGF     Pioggiola         3.02 261  ePn   Pn    11 21 55.7 -1.9
PGF     Pioggiola         3.02 261  eP    Pn    11 21 58.8 +1.2
PGF                               eSn   Sn    11 22 31.4 -2.7
        comp=Z,72nm,0.8s
PGF     Pioggiola         3.02 261  P     Pn    11 21 57.6  0.0
CDRU    Civita di Ruta    3.08 146  P     Pn    11 22 00.8 +2.3
SALO    Salr              3.12 326  Pn    Pn    11 22 00.5 +1.5
CTI     Castel Tesino     3.14 342  Pn    Pn    11 21 57.3 -2.0
LJU     Ljubljana         3.16  19  P     Pn    11 21 59.7 +0.2
LJU                             AML   AML
        comp=N,14700µm,0.6s
LJU                             AML   AML
        comp=E,6550µm,0.8s
MPRI    Monte Prat        3.17 359  P     Pn    11 21 59.9 +0.2
MPRI                            AML   AML
        comp=E,2050µm,0.8s
MPRI                            AML   AML
        comp=N,1895µm,1.5s
STAL    STALIGIAL         3.20 356  Pn    Pn    11 21 59.2 -0.8
PTCC    Patocco-Chiusa    3.34   4  P     Pn    11 22 02.2 +0.1
FUSE    Fusea             3.34 360  P     Pn    11 22 01.4 -0.6
GAGG    Gaggia            3.36 334  P     Pn    11 22 03.9 +1.5
CLUD    Cludinico         3.39 358  Pn    Pn    11 22 03.0 +0.4
CLUD    Cludinico         3.39 358  P     Pn    11 22 04.0 +1.4
PRED    Cave del Predi    3.39   6  Pn    Pn    11 22 03.7 +0.9
ZOU     Zoufplan          3.49 359  P     Pn    11 22 03.2 -0.9
MABI    Malga Bissina     3.49 330  P     Pn    11 22 04.8 +0.7
ACOM    Acomizza, Ital    3.50   5  P     Pn    11 22 05.6 +1.3
FVI     Forni Avoltri     3.53 357  P     Pn    11 22 05.6 +1.0
MYKA    Terra Mystica     3.59   7  ePn   Pn    11 22 06.0 +0.6
        comp=N,16nm,0.2s
KOSI    Kohlern           3.59 341  P     Pn    11 22 06.8 +1.2
OBKA    Obir              3.60  17  ePn   Pn    11 22 05.7 +0.1
        comp=N,12nm,0.2s
APPI    Appiano           3.65 340  P     Pn    11 22 07.0 +0.8
ABTA    Abfaltersbach     3.70 354  ePn   Pn    11 22 07.9 +0.9
        comp=N,176nm,0.5s,SNR=7.0
DGI     Dorgali Grotta    3.76 224  P     Pn    11 22 07.8  0.0
BRMO    Bormio            3.90 332  P     Pn    11 22 12.0 +2.3
MOSI    Grossmontoni      3.96 334  P     Pn    11 22 13.3 +2.6
BERNI   Berninapass       3.98 328  P     Pn    11 22 12.2 +1.2
BRY     Bratogost         4.04  91  ePn   Pn    11 22 12.0 +0.4
BRY                               i Sn  Sn    11 22 59.5 +0.3
FUORN   Ofenpass-Fuorn    4.06 332  Pn    Pn    11 22 15.0 +2.9
FUORN   Ofenpass-Fuorn    4.06 332  P     Pn    11 22 14.2 +2.1
HCY     Herceg Novi       4.06  97  ePn   Pn    11 22 12.3 +0.4
HCY                               i Sn  Sn    11 23 00.1 +0.4
SAOF    Saorge            4.09 285  P     Pn    11 22 16.1 +3.8
SBF     Sospel            4.16 283  ePn   Pn    11 22 11.7 -1.5
SBF     Sospel            4.16 283  eP    Pn    11 22 14.9 +1.7
SBF     Sospel            4.16 283  eSn   Sn    11 22 58.6 -3.5
        comp=N,83nm,0.4s
TURF    col de Turini     4.21 284  P     Pn    11 22 15.8 +1.8
FETA    Feichten          4.28 338  ePn   Pn    11 22 16.6 +1.7
        comp=N,87nm,0.6s,SNR=12
UPM     Unac-Piva         4.29  86  ePn   Pn    11 22 15.6 +0.4
UPM                               i Sn  Sn    11 23 05.7 +0.1
TUE     Stuetta           4.30 324  Pn    Pn    11 22 17.1 +1.8
WTTA    Wattenberg        4.31 347  ePn   Pn    11 22 17.5 +2.0
        comp=N,14nm,0.2s
WTTA    Wattenberg        4.31 347  ePn   Pn    11 22 17.8 +2.4
BEHE    Becsehely         4.32  37  P     Pn    11 22 16.8 +1.5
SPIF    crte de Spivo     4.33 285  P     Pn    11 22 18.1 +2.4
DAVOX   Davos/Dischmat    4.34 330  Pn    Pn    11 22 18.6 +2.8
        comp=N,25nm,0.3s,baz=149,slow=15,SNR=16
DAVOX                             Sn    Sn    11 23 08.7 +2.0
        comp=N,5.2nm,0.3s,baz=261,slow=20,SNR=3.2
        comp=N,161nm,0.7s
DAVOX   Davos/Dischmat    4.34 330  P     Pn    11 22 18.3 +2.5
SQTA    Sankt Quirin      4.35 343        Pn    11 22 18.7 +2.8
SQTA    Sankt Quirin      4.35 343  ePn   Pn    11 22 18.7 +2.8
        comp=N,71nm,0.4s
NKME    Niksic            4.35  92  ePn   Pn    11 22 16.4 +0.5
NKME                              i Sn  Sn    11 23 07.1 +0.2
CEME    Cevo              4.36  95  ePn   Pn    11 22 16.4 +0.5
CEME                              i Sn  Sn    11 23 07.2 +0.2
MVIF    Mont Vial         4.36 283  P     Pn    11 22 19.3 +3.2
BUM     Brajici-Budva     4.38  98 ⇑i Pn   Pn    11 22 16.7 +0.4
BUM                               i Sn  Sn    11 23 07.8 +0.2
WATA    Walderalm         4.39 347        Pn    11 22 18.8 +2.3
WATA    Walderalm         4.39 347  ePn   Pn    11 22 18.8 +2.3
        comp=N,20nm,0.2s,SNR=7.6
ISO     Isola             4.49 286  P     Pn    11 22 21.4 +3.6
MOTA    Moosalm           4.49 343        Pn    11 22 20.3 +2.4
MOTA    Moosalm           4.49 343  ePn   Pn    11 22 20.3 +2.4
        comp=N,41nm,0.5s
CALF    Calern            4.51 281  P     Pn    11 22 19.4 +1.2
CALF                              S     Sb    11 23 19.5 -3.9
VSL     Villasalto        4.51 219  P     Pn    11 22 19.2 +1.2
ARSA    Arzberg           4.54  22  ePn   Pn    11 22 18.0 -0.3
        comp=N,7.1nm,0.3s
ARSA    Arzberg           4.54  22  ePn   Pn    11 22 18.1 -0.3
ARSA                              eSn   Sn    11 23 06.9 -4.4
DRME    Dracevica, Mon    4.62  99 ⇓i Pn   Pn    11 22 20.1 +0.6
DRME                              i Sn  Sn    11 23 13.6 +0.2
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PDG Podgorica 4.62 96 Pn **Pn 11 22 21.0 +1.5**
TTG Podgorica 4.62 96 *e*Pn **Pn 11 22 20.1 +0.6**
TTG *i* Sn **Sn 11 23 13.6 +0.2**
PART Garmisch-Parte 4.63 344 *e*Sn **Sn 11 23 16.3 +2.6**
BIOA Bad Ischl, Aus 4.64 5 Pn **Pn 11 22 20.9 +1.1**
BIOA Bad Ischl, Aus 4.64 5 *e*Pn **Pn 11 22 20.9 +1.1**
comp=N,50nm,0.4s,SNR=7.5
PLE Pljevlja 4.65 85 *e*Pn **Pn 11 22 20.5 +0.5**
PLE *i* Sn **Sn 11 23 14.3 0.0**
RJOB Jochberg 4.67 358 *e*Pn **Pn 11 22 22.1 +1.8**
RETA Reutte 4.70 341 *e*Pn **Pn 11 22 22.3 +1.5**
comp=N,17nm,0.5s,SNR=7.1
KOVH Kovagotottos 4.71 48 P **Pn 11 22 21.1 +0.3**
ULC Ulcinj 4.72 101 *e*Pn **Pn 11 22 21.5 +0.6**
ULC *i* Sn **Sn 11 23 15.9 +0.1**
SURF Saint Ours 4.73 290 P **Pn 11 22 23.9 +2.7**
OBER Oberstdorf 4.75 337 *e*Pn **Pn 11 22 25.0 +3.6**
JAUF Jausiers 4.76 289 P **Pn 11 22 22.5 +1.0**
KOME Kolasin 4.76 90 ⇑*i*Pn **Pn 11 22 22.0 +0.5**
KOME *i* Sn **Sn 11 23 16.8 -0.1**
DAVA Damuels 4.77 333 *e*Pn **Pn 11 22 23.2 +1.4**
comp=N,44nm,0.5s,SNR=9.5
DAVA Damuels 4.77 333 *e*Pn **Pn 11 22 26.2 +4.4**
LMR La Mourre 4.78 275 *e*Pn **Pn 11 22 20.2 -1.5**
LMR La Mourre 4.78 275 *e*P **Pn 11 22 23.4 +1.7**
MBDF Montbardon 4.82 292 *e*P **Pn 11 22 24.3 +1.8**
MBDF *e*Sn **Sn 11 23 14.3 -4.4**
comp=N,60nm,0.7s
MOA Molln 4.86 10 *e*Pn **Pn 11 22 23.6 +0.8**
comp=N,22nm,0.4s,SNR=7.7
MOA Molln 4.86 10 *e*Pn **Pn 11 22 24.4 +1.6**
MOA *e*Sn **Sn 11 23 19.1 -0.2**
EMBD Embd, Matterta 4.87 312 P Pb 11 22 29.3 -5.7
EMBD Embd, Matterta 4.87 312 P **Pn 11 22 24.1 +1.1**
CREF Crivoux 4.88 290 S **Pn 11 22 27.2 +4.0**
CREF S **Sb 11 23 31.1 -2.9**
TRIGF Trigance 4.88 280 P **Pn 11 22 25.1 +1.9**
IVA Berane 5.03 90 *e*Pn **Pn 11 22 25.8 +0.5**
IVA *i* Sn **Sn 11 23 23.6 -0.1**
UBR Ueberruh 5.05 337 *e*Pn **Pn 11 22 28.8 +3.2**
MORH Mrgy, Hungar 5.09 50 P **Pn 11 22 28.0 +2.1**
PVY Plav 5.11 93 *e*Pn **Pn 11 22 26.9 +0.5**
PVY *i* Sn **Sn 11 23 25.4 -0.3**
LPG La Plagne 5.13 300 *e*Pn **Pn 11 22 25.0 -1.7**
LPG La Plagne 5.13 300 *e*P **Pn 11 22 28.8 +2.1**
LPG *e*Sn **Sn 11 23 21.3 -5.0**
comp=N,59nm,0.6s
LPL La Plagne 5.15 301 *e*Pn **Pn 11 22 25.1 -1.9**
LPL La Plagne 5.15 301 *e*P **Pn 11 22 29.1 +2.1**
LPL *e*Sn **Sn 11 23 21.9 -4.8**
comp=N,48nm,0.6s
RONA Rosalia, Austr 5.17 25 **Pn 11 22 27.1 0.0**
RONA Rosalia, Austr 5.17 25 *e*Pn **Pn 11 22 27.1 0.0**
comp=N,6.5nm,0.3s
MPLH Magyarpolny 5.19 36 P **Pn 11 22 28.2 +0.8**
SOP Sopron 5.24 27 P **Pn 11 22 28.6 +0.6**
FUR Furstenfeldbru 5.25 347 *e*Pn **Pn 11 22 30.8 +2.7**
CONA Conrad Observa 5.25 21 *e*Pn **Pn 11 22 28.2 -0.1**
comp=N,6.0nm,0.2s
SENIN Lac Senin/Sane 5.25 311 Pn **Pn 11 22 31.1 +2.7**
TIR Tirane 5.35 106 Pn **Pn 11 22 29.8 +0.2**
OGSI Sixt 5.40 306 P **Pn 11 22 34.1 +3.8**
VLO Vlora 5.48 116 **Pn 11 22 32.6 +1.2**
CLTB Caltabellotta 5.49 179 Pn Pn 11 22 37.0 +5.5
ORIF Oris-en-Rattie 5.49 292 *e*Pn **Pn 11 22 29.6 -1.9**
ORIF Oris-en-Rattie 5.49 292 *e*P **Pn 11 22 33.8 +2.3**
ORIF *e*Sn **Sn 11 23 30.0 -4.9**
comp=N,68nm,0.7s
SMRF Simiane la Rot 5.50 282 *e*Pn **Pn 11 22 29.1 -2.6**
SMRF Simiane la Rot 5.50 282 *e*P **Pn 11 22 33.6 +1.9**
RUSF Rustrel 5.56 282 S **Pn 11 22 34.4 +1.9**
SULZ Cheisacher 5.65 324 P Pn 11 22 41.0 +7.2
SLE Schleitheim 5.68 327 S **Pn 11 22 35.3 +1.1**
BALST Balsthal 5.70 320 P **Pn 11 22 36.4 +2.0**
BALST Balsthal 5.70 320 S **Sn 11 23 38.7 -1.3**
BALST Balsthal 5.70 320 P **Pn 11 22 34.8 +0.4**
GEC2 GERESS Array S 5.80 4 **Pn 11 22 36.9 +1.2**
GERES GERESS Array B 5.80 4 Pn **Pn 11 22 35.6 -0.1**
comp=N,4.1nm,0.3s,baz=168,slow=13,SNR=19
GERES Sn **Sn 11 23 40.4 -2.1**
comp=N,11nm,0.3s,baz=177,slow=25,SNR=11
GERES LR LR 11 25 33.2
comp=N,226nm,18.4s,baz=168,slow=46
comp=N,4.8nm,0.3s
GERES GERESS Array B 5.80 4 **Pn 11 22 35.4 -0.4**
CKRC Cesky Krumlov 5.82 8 *e*PN **Pn 11 22 35.9 -0.1**
CKRC *e*SN **Sn 11 23 40.0 -3.0**
NORI Noerdlinger Ri 5.90 344 *e*Pn **Pn 11 22 37.5 +0.5**
GIMEL St. Georges / 5.94 308 P **Pn 11 22 41.6 +3.9**
BRANT Les Verrieres 6.05 312 S **Pn 11 22 41.1 +1.8**
BRANT Les Verrieres 6.05 312 S **Sn 11 23 53.2 +4.4**
KHC Kasperske Hory 6.08 3 Pn **Pn 11 22 40.2 +0.7**
KHC Kasperske Hory 6.08 3 *e*PN **Pn 11 22 39.1 -0.4**
KHC *e*SN **Sn 11 23 46.5 -2.8**
WET Wettzell 6.08 359 *e*Pn **Pn 11 22 39.0 -0.6**
CABF La Chapelle 6.08 308 *e*P **Pn 11 22 42.1 +2.4**
CABF *e*Sn **Sn 11 23 44.1 -5.4**
comp=N,92nm,1.1s
KEK Kerkira 6.09 121 Pn **Pn 11 22 40.8 +1.1**
BFO Black Forest 6.21 330 Pn **Pn 11 22 43.3 +1.9**
KBN Korca 6.28 110 Pn **Pn 11 22 42.9 +0.5**
VIVF Saint-Julien-l 6.30 289 *e*P **Pn 11 22 45.2 +2.6**
VIVF *e*Sn **Sn 11 23 49.4 -5.4**
comp=N,20nm,0.9s
MOF Molkenrain 6.33 321 P **Pn 11 22 44.5 +1.3**
BOUC Bouclans 6.36 313 P **Pn 11 22 45.6 +2.2**
KRUC Moravsky 6.43 20 *e*PN **Pn 11 22 44.0 -0.4**
HINF Hinteralfeld 6.44 320 *e*Pn **Pn 11 22 43.8 -0.7**
HINF *e*Sn **Sn 11 23 52.6 -5.7**
comp=N,122nm,0.6s
SSB Saint Sauveur 6.50 293 **Pn 11 22 47.9 +2.5**
ECH Echery 6.59 323 **Pn 11 22 47.4 +0.7**
ECH Echery 6.59 323 P **Pn 11 22 48.8 +2.1**
ECH Echery 6.59 323 P **Pn 11 22 47.6 +1.0**
CDF Champ du Feu 6.69 325 *e*Pn **Pn 11 22 47.4 -0.7**
CDF *e*Sn **Sn 11 23 58.9 -5.7**
comp=N,72nm,0.6s
VRAC Vranov 6.71 20 ⇓P **Pn 11 22 49.8 +1.6**
VRAC Vranov 6.71 20 Pn **Pn 11 22 45.9 -2.3**
comp=N,0.7nm,0.3s,baz=228,slow=11,SNR=2.3
VRAC Sn **Sn 11 24 00.0 -4.8**
comp=N,1.3nm,0.3s,baz=289,slow=23,SNR=2.2
VRAC LR LR 11 25 50.0
comp=N,214nm,21.2s,baz=165,slow=43
comp=N,1.9nm,0.3s
VRAC Vranov 6.71 20 *e*PN **Pn 11 22 47.4 -0.8**
ROTZ Rotzenmuhle 6.72 355 *e*Pn **Pn 11 22 48.3 -0.1**
ROTZ *e*Sn **Sn 11 23 59.5 -5.7**
GRFO Grafenberg 6.74 350 **Pn 11 22 49.0 +0.3**
GRA1 Grafenberg Arr 6.74 350 **Pn 11 22 50.1 +1.4**
LASF Ste Croix 6.75 282 *e*Pn **Pn 11 22 46.9 -1.9**
LASF *e*Sn **Sn 11 24 00.4 -5.4**
comp=N,15nm,0.9s
HAU Haudompre 6.81 319 *e*Pn **Pn 11 22 48.2 -1.5**
HAU *e*Sn **Sn 11 24 01.8 -5.7**
comp=N,124nm,0.6s
MANZ Manzenberg 6.95 355 *e*Sn **Sn 11 24 03.8 -7.0**
GOPC GO Pecny, Ondr 6.95 9 *e*PN **Pn 11 22 50.7 -0.9**
GOPC *e*SN **Sn 11 24 06.4 -4.5**
PRU Pruhonice 7.00 8 *e*PN **Pn 11 22 52.0 -0.2**
PRU *e*SN **Sn 11 24 07.9 -4.0**
PLYF Puligny Montra 7.05 306 P **Pn 11 22 55.2 +2.4**
MAUC Maruska 7.12 26 *e*PN **Pn 11 22 54.1 +0.3**
NKC Novy Kostel 7.18 357 *e*SN **Sn 11 24 12.5 -3.9**
MORC Moravsky Berou 7.39 23 ⇑P **Pn 11 22 57.6 -0.1**
MORC Moravsky Berou 7.39 23 **Pn 11 22 57.3 -0.3**
SMF Signal de Mont 7.45 302 *e*Pn **Pn 11 22 55.8 -2.6**
SMF Signal de Mont 7.45 302 *e*P **Pn 11 23 00.7 +2.3**
SMF *e*Sn **Sn 11 24 16.8 -6.3**
comp=N,39nm,0.8s
PAGF Fort de Pagny 7.50 320 *e*P **Pn 11 23 01.7 +2.7**
baz=142
PAGF *e*Sn **Sn 11 24 17.6 -6.6**
comp=N,56nm,0.6s
VTS Vitosha 7.51 90 **Pn 11 23 00.3 +1.0**
SFTF Sexfontaines 7.60 315 *e*Pn **Pn 11 22 58.8 -1.7**
baz=133
SFTF *e*Sn **Sn 11 24 20.3 -6.5**
comp=N,54nm,0.8s
DPC Dobruska-Polom 7.62 16 *e*PN **Pn 11 23 01.2 +0.4**
MOX Moxa 7.64 353 *e*Sn **Sn 11 24 22.2 -5.6**
LOR Lormes 7.73 306 *e*Pn **Pn 11 23 01.1 -1.1**
baz=127
LOR *e*Sn **Sn 11 24 23.4 -6.5**
comp=N,20nm,0.4s
LOR Lormes 7.73 306 P **Pn 11 23 04.1 +1.9**
MEZF Maizieres J'vi 7.79 317 *e*Pn **Pn 11 23 01.1 -1.9**
baz=136
MEZF *e*Sn **Sn 11 24 24.9 -6.5**
comp=N,53nm,0.9s
CHVC Chvalec 7.80 14 *e*PN **Pn 11 23 02.2 -1.0**
OSTC Ostas 7.80 15 *e*PN **Pn 11 23 03.2 0.0**
AVF Avril sur Loir 7.82 302 *e*Pn **Pn 11 23 01.7 -1.7**
AVF *e*Sn **Sn 11 24 26.4 -5.7**
comp=N,30nm,0.9s
TNS Taunus Mts 7.82 338 *e*Pn **Pn 11 23 05.2 +1.7**
SAVF Savonnieres en 7.83 318 *e*P **Pn 11 23 06.2 +2.7**
baz=140
SAVF *e*Sn **Sn 11 24 25.7 -6.6**
comp=N,37nm,0.7s
SSF Saint Saulge 7.84 304 *e*P **Pn 11 23 06.2 +2.5**
SSF *e*Sn **Sn 11 24 26.2 -6.5**
comp=N,19nm,0.6s
KEST Kesra 7.86 203 Pn Pn 11 23 09.2 +5.0
comp=N,0.8nm,0.3s,baz=256,slow=4.2,SNR=5.0
KEST LR LR 11 26 09.5
comp=N,279nm,21.8s,baz=37,slow=37
comp=N,6.2nm,0.6s
KEST Kesra 7.86 203 Pn Pn 11 23 09.7 +5.6
MTLF Montolieu 7.91 276 *e*Pn **Pn 11 23 07.2 +2.5**
MTLF *e*Sn **Sn 11 24 28.1 -6.4**
comp=N,16nm,1.1s
BGF Bois d'Agland 8.04 299 *e*Pn **Pn 11 23 04.5 -2.0**
BGF *e*Sn **Sn 11 24 31.2 -6.5**
comp=N,23nm,0.6s
CAF Calviac 8.13 287 *e*P **Pn 11 23 10.2 +2.5**
WLF Walferdange 8.13 327 Pn **Pn 11 23 11.8 +4.0**
WLF Walferdange 8.13 327 *d*P **Pn 11 23 09.3 +1.6**
CLL Collm 8.24 360 Pn **Pn 11 23 09.8 +0.6**
CLL Collm 8.24 360 *e*Pn **Pn 11 23 10.0 +0.8**
CLL *e*x x 11 23 19.0
CLL *e*x x 11 23 26.0
CLL *e*Sn **Sn 11 24 36.0 -6.5**
CLL *e*x x 11 24 47.0
CLL *e*x x 11 24 56.0
CLL *e*x x 11 25 10.0
CLL *e*Sg **Sg 11 25 33.0 -0.7**
comp=Z,61nm,1.2s
CLL LmH 11 26 00.0
comp=N,100nm,22.0s
CLL LmH 11 26 00.0
comp=E,300nm,20.3s
CLL Lm MLR 11 27 00.0
comp=Z,100nm,21.5s
TCF Toulx Ste Croi 8.36 296 *e*Pn **Pn 11 23 08.2 -2.7**
TCF Toulx Ste Croi 8.36 296 *e*P **Pn 11 23 14.3 +3.4**
TCF *e*Sn **Sn 11 24 38.4 -7.1**
comp=Z,15nm,0.8s
HYF Humbligny 8.46 303 *e*Pn **Pn 11 23 09.4 -2.9**
RJF Les Rejaudoux 8.58 289 *e*Pn **Pn 11 23 11.3 -2.6**
RCHB Rochefort 8.89 326 *d*P **Pn 11 23 20.7 +2.5**
RCHB *d*S **Sn 11 24 56.8 -1.7**
MEM Membach 8.95 330 *dx* x 11 23 22.9
GIVF Givet 9.02 324 *e*P **Pn 11 23 22.7 +2.8**
GIVF *e*Sn **Sn 11 24 54.0 -7.7**
comp=Z,20nm,0.7s
LFF La Frestale 9.06 286 *e*Pn **Pn 11 23 17.4 -3.1**
BCLA Clavier 9.07 327 *d*P **Pn 11 23 23.9 +3.4**
BCLA *d*S **Sn 11 24 58.3 -4.4**
DOU Dourbes 9.12 323 *d*P **Pn 11 23 23.3 +2.1**
DOU *d*S **Sn 11 25 01.9 -2.2**
BMRD Maredsous 9.20 325 *dx* x 11 23 40.0
BAIF Baives 9.26 322 *e*P **Pn 11 23 27.1 +3.9**
BAIF *e*Sn **Sn 11 24 59.0 -8.6**
comp=Z,15nm,0.7s
EPF Esparros 9.30 274 *e*Pn **Pn 11 23 22.1 -1.7**
RDO Rodhopi 9.49 97 Pn **Pn 11 23 27.1 +0.8**
SNF Seneffe 9.56 324 *d*P **Pn 11 23 29.1 +1.8**
MLR Muntele Rosu 9.57 71 Pn **Pn 11 23 24.2 -3.3**
comp=Z,0.2nm,0.3s,baz=164,slow=20,SNR=1.8
MLR LR LR 11 28 22.5
comp=Z,329nm,19.4s,baz=247,slow=47
comp=Z,2.3nm,0.7s
ETSF Etsaut 9.97 274 *e*P **Pn 11 23 36.8 +3.8**
MFF Saint Martin d 10.01 295 *e*Pn **Pn 11 23 31.6 -1.9**
SJPF Ste Jean 10.44 275 *e*P **Pn 11 23 43.1 +3.8**
LDF La Druitiere 10.71 306 *e*P **Pn 11 23 46.1 +3.0**
FLN La Foliniere 11.00 306 *e*P **Pn 11 23 49.8 +2.8**
GRR Gorron 11.07 304 *e*Pn **Pn 11 23 45.1 -2.9**
IDI Anoyia 12.03 126 Pn **Pn 11 24 01.8 +0.6**
comp=Z,0.2nm,0.3s,baz=130,slow=22,SNR=1.4
IDI Sn Sn 11 26 05.1 -11
comp=Z,0.2nm,0.3s,baz=351,slow=8.5,SNR=1.6
comp=Z,2.0nm,0.7s
QUIF Quistinic 12.36 299 *e*Pn **Pn 11 24 03.2 -2.3**
ESDC Sonseca Array 13.21 261 Pn **Pn 11 24 20.5 +3.1**
comp=Z,0.1nm,0.3s,baz=66,slow=13,SNR=2.5
ESDC LR LR 11 29 40.7
comp=Z,103nm,18.8s,baz=94,slow=38
comp=Z,0.8nm,1.0s
EKA Eskdalemuir Ar 16.16 325 Pn **Pn 11 24 57.8 +1.1**
baz=138,slow=14
comp=Z,0.6nm,0.4s
HFS Hagfors 17.09 1 Pn **Pn 11 25 08.1 -0.5**
comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=1.9
comp=Z,3.5nm,0.9s
NB2 NORSAR Subarra 18.03 357 P **P 11 25 20.5 -0.2**
comp=Z,6.3nm,1.1s,baz=175,slow=11
NOA NORSAR Array B 18.03 357 P **P 11 25 21.0 +0.3**
baz=176,slow=11,SNR=3.8
comp=Z,0.9nm,0.8s
NB201 NORSAR Array S 18.04 357 **P 11 25 20.9 +0.1**
NB201 IAmb IAmb 11 25 54.1
comp=Z,41nm,1.2s
FINES FINESS Array B 19.99 18 P **P 11 25 42.6 +0.6**
comp=Z,0.3nm,0.3s,baz=206,slow=7.8,SNR=9.3
comp=Z,5.7nm,0.8s
FINES FINESS Array B 19.99 18 P **Pn 11 25 43.0 -0.7**
FIA1 FINESS Array S 19.99 18 P **Pn 11 25 43.0 -0.7**
TORD Torodi Ar. Bea 31.39 202 P **P 11 27 31.7 +0.8**
comp=Z,1.6nm,0.8s,baz=16,slow=8.5,SNR=8.3
comp=Z,1.6nm,0.8s
TORD Torodi Ar. Bea 31.39 202 P **P 11 27 31.9 +1.1**
ARU Arti 31.68 49 P **P 11 27 32.8 -0.3**
ARU IAmb IAmb 11 27 41.4
comp=Z,5.1nm,0.7s
ANGG Ammassalik, Gr 35.73 327 P **P 11 28 10.2 +2.0**
KKAR Karatay Array 41.25 69 P **P 11 28 55.0 +0.1**
ZALV Zalesovo Beam 46.82 50 P **P 11 29 38.1 -1.3**
comp=Z,0.5nm,0.4s,baz=299,slow=9.1,SNR=2.1
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 47.72 60 P **P 11 29 46.2 -0.4**
comp=Z,2.4nm,0.9s,baz=292,slow=6.4,SNR=4.4
comp=Z,2.4nm,0.9s
MKAR Makanchi Array 47.72 60 P **P 11 29 47.1 +0.6**
SONM Songino Array 61.71 50 P **P 11 31 28.6 +0.4**
comp=Z,1.4nm,0.9s,baz=298,slow=8.0,SNR=6.1
comp=Z,1.4nm,0.9s
INK Inuvik 66.15 347 P **P 11 31 57.1 +0.3**
INK IAmb IAmb 11 32 20.0
comp=Z,7.8nm,1.3s
BMAR Burnt Mountain 68.53 351 P **P 11 32 13.4 +1.4**
H23K Yukon River 70.60 352 P **P 11 32 26.2 +1.4**
H23K IAmb IAmb 11 32 52.9
comp=Z,11nm,1.5s
IMAR Indian Mountai 70.80 354 P **P 11 32 27.2 +1.3**
DAWY Dawson 71.01 348 P **P 11 32 28.2 +0.9**
DAWY IAmb IAmb 11 32 46.9
comp=Z,5.8nm,1.3s
H21K Melozitna Rive 71.05 354 P **P 11 32 30.5 +2.9**
J26L Joseph Creek 71.20 350 P **P 11 32 29.9 +1.3**
J26L IAmb IAmb 11 32 31.7
comp=Z,2.3nm,0.7s
ILAR Eielson Array 71.35 351 P **P 11 32 30.4 +1.1**
comp=Z,0.9nm,0.8s,baz=3.9,slow=5.6,SNR=11
comp=Z,0.9nm,0.8s
ILAR Eielson Array 71.35 351 P **P 11 32 31.0 +1.7**
BCAR Beaver Creek A 72.32 348 P **P 11 32 36.3 +1.1**
J20K Nowinta River 72.62 354 P **P 11 32 38.1 +1.2**
PPLA Purkeypile 73.72 353 P **P 11 32 44.4 +0.8**
CMAR Chiang Mai Arr 74.70 79 P **P 11 32 49.8 -0.1**
comp=Z,0.6nm,0.3s,baz=301,slow=6.5,SNR=5.8
comp=Z,0.6nm,0.3s
KSRS Korea Array 80.41 47 LR LR 12 12 37.1
comp=Z,22nm,19.3s,baz=155,slow=38
TXAR Lajitas Array 87.47 309 P **P 11 33 59.6 +1.7**
comp=Z,0.8nm,1.0s,baz=104,slow=5.3,SNR=5.4
comp=Z,0.8nm,1.0s
PFO Pinyon Flats O 90.81 320 LR LR 12 16 55.5
comp=Z,50nm,18.1s,baz=214,slow=37

PRU ***30*** *11:26:49.8±0.0, 42°.89N×11°.50E, h0km*
ROM ***30*** *11:26:52.8±0.1, 42°.849N±0°.006×13°.121E±0°.005, h10km, ML3.3/74, Error ellipse: s-maj=0.6km s-min=0.2km az=344.0*
IDC ***30*** *11:26:53.3±1.5, 42°.96N×13°.22E, h0km, mb3.4/3, mbtmp3.3/5, ML3.1/2, Error ellipse: s-maj=39.0km s-min=17.2km az=95.0*

ISC 30 11:26:53.8±0.8, 42°.85N±0°.02×13°.12E±0°.02, h11km±5km, n127, σ1°.17/151, mb3.5/3, 44C-32D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1215	**Vallo di Nera,**	**0.19**	**256**	P	**Pg**	**11 26 57.5**	**-0.5**
T1215				S	**Sg**	**11 27 00.8**	**-0.1**
T1215				AML	AML		
	comp=N,13450μm,0.5s						
T1215				AML	AML		
	comp=E,13000μm,0.5s						
T1215				AML	AML		
	comp=N,13000μm,0.7s						
T1215				AML	AML		
	comp=N,13400μm,0.5s						
T1215				AML	AML		
	comp=N,13050μm,0.7s						
T1215				AML	AML		
	comp=E,12500μm,0.5s						
T1215				AML	AML		
	comp=E,13050μm,0.5s						
T1215				AML	AML		
	comp=E,11317μm,0.2s						
T1215				AML	AML		
	comp=N,7996μm,0.1s						
T1215				AML	AML		
	comp=E,11924μm,0.2s						
T1215				AML	AML		
	comp=N,8297μm,0.1s						
T1217	**Poggiodomo (PG**	**0.20**	**226**	P	**Pg**	**11 26 57.6**	**-0.4**
T1217				S	**Sg**	**11 27 01.2**	**+0.2**
T1217				AML	AML		
	comp=E,11500μm,0.4s						
T1217				AML	AML		
	comp=E,10950μm,0.3s						
T1217				AML	AML		
	comp=N,16200μm,0.3s						
T1217				AML	AML		
	comp=E,11550μm,0.4s						
T1217				AML	AML		
	comp=N,16400μm,0.3s						
T1217				AML	AML		
	comp=E,10980μm,0.3s						
T1217				AML	AML		
	comp=N,16200μm,0.3s						
T1217				AML	AML		
	comp=N,16400μm,0.3s						
T1217				AML	AML		
	comp=N,16150μm,0.3s						
T1217				AML	AML		
	comp=E,10985μm,0.4s						
T1217				AML	AML		
	comp=E,9837μm,0.2s						
T1217				AML	AML		
	comp=E,9835μm,0.2s						
T1217				AML	AML		
	comp=N,10348μm,0.3s						
T1217				AML	AML		
	comp=N,9972μm,0.2s						
AM05	**Amandola Campo**	**0.21**	**53**	P	**Pg**	**11 26 58.0**	**-0.3**
AM05				S	**Sg**	**11 27 01.8**	**+0.4**
AM05				AML	AML		
	comp=N,7355μm,1.1s						
AM05				AML	AML		
	comp=E,31050μm,0.1s						
AM05				AML	AML		
	comp=N,2945μm,0.1s						
AM05				AML	AML		
	comp=E,7295μm,0.7s						
AM05				AML	AML		
	comp=N,7350μm,1.1s						
AM05				AML	AML		
	comp=E,31100μm,0.1s						
AM05				AML	AML		
	comp=E,7103μm,0.1s						
AM05				AML	AML		
	comp=N,7030μm,0.1s						
AM05				AML	AML		
	comp=E,31071μm,0.1s						
AM05				AML	AML		
	comp=N,2945μm,0.1s						
T1204	**Amatrice, Fraz**	**0.23**	**140**	P	**Pg**	**11 26 58.2**	**-0.4**
T1204				S	**Sg**	**11 27 02.1**	**+0.2**
T1204				AML	AML		
	comp=E,23550μm,0.5s						
T1204				AML	AML		
	comp=N,11795μm,1.1s						
T1204				AML	AML		
	comp=N,11750μm,1.1s						
T1204				AML	AML		
	comp=N,11775μm,1.1s						
T1204				AML	AML		
	comp=N,9020μm,0.1s						
T1204				AML	AML		
	comp=E,21444μm,0.1s						
T1241	**Roccafluvione,**	**0.23**	**88**	P	**Pg**	**11 26 58.6**	**+0.1**
T1241				S	**Sg**	**11 27 02.8**	**+0.9**
T1241				AML	AML		
	comp=E,18250μm,0.7s						
T1241				AML	AML		
	comp=N,15750μm,0.4s						
T1241				AML	AML		
	comp=E,18300μm,0.7s						
T1241				AML	AML		
	comp=N,15800μm,0.4s						
T1241				AML	AML		
	comp=E,14618μm,0.2s						
T1241				AML	AML		
	comp=N,15394μm,0.1s						
LNSS	**Leonessa**	**0.25**	**194**	⇑P	**Pg**	**11 26 58.6**	**-0.5**
LNSS				S	**Sg**	**11 27 03.1**	**+0.5**
LNSS				AML	AML		
	comp=E,22700μm,0.2s						
LNSS				AML	AML		
	comp=N,64450μm,0.5s						
LNSS				AML	AML		
	comp=N,55517μm,0.1s						
LNSS				AML	AML		
	comp=E,22706μm,0.1s						
GUMA	**Gualdo di Mace**	**0.26**	**36**	⇑P	**Pg**	**11 26 59.1**	**-0.1**
GUMA				AML	AML		
	comp=E,34550μm,0.5s						
GUMA				AML	AML		
	comp=N,42100μm,0.6s						
GUMA				AML	AML		
	comp=E,40400μm,0.5s						
GUMA				AML	AML		
	comp=N,38950μm,0.5s						
GUMA				AML	AML		
	comp=E,21975μm,0.4s						
GUMA				AML	AML		
	comp=E,33637μm,0.6s						
GUMA				AML	AML		
	comp=N,30534μm,0.5s						
GUMA				AML	AML		
	comp=N,40459μm,0.4s						
T1243	**Rocca Santa Ma**	**0.28**	**122**	P	**Pg**	**11 26 59.0**	**-0.6**
T1243				S	**Sg**	**11 27 04.0**	**+0.4**
SEF1	**Sefro**	**0.32**	**337**	⇓P	**Pb**	**11 26 59.7**	**-1.9**
SEF1				AML	AML		
	comp=E,14050μm,0.2s						
SEF1				AML	AML		
	comp=N,11850μm,0.2s						
SEF1				AML	AML		
	comp=N,11800μm,0.2s						
SEF1				AML	AML		
	comp=E,14054μm,0.2s						
SEF1				AML	AML		
	comp=N,11815μm,0.2s						
MDAR	**Monte D'Aria**	**0.34**	**2**	⇑P	**Pb**	**11 27 00.1**	**-1.8**
MDAR				AML	AML		
	comp=E,9580μm,0.5s						
MDAR				AML	AML		
	comp=N,6545μm,0.4s						
MDAR				AML	AML		

	comp=E,9570µm,0.5s					
MDAR				AML	AML	
	comp=N,6545µm,0.4s					
MDAR				AML	AML	
	comp=E,9545µm,0.5s					
MDAR				AML	AML	
	comp=E,6705µm,0.2s					
MDAR				AML	AML	
	comp=N,5296µm,0.3s					
PIO1	**Pioraco**	**0.34**	**343**	⇓P	**Pb**	**11 27 00.2 -1.7**
PIO1				AML	AML	
	comp=N,7355µm,0.7s					
PIO1				AML	AML	
	comp=N,7360µm,0.7s					
PIO1				AML	AML	
	comp=E,3830µm,1.0s					
PIO1				AML	AML	
	comp=N,4214µm,0.3s					
PIO1				AML	AML	
	comp=E,3244µm,0.3s					
RM33	**Pellescritta (**	**0.35**	**169**	P	**Pg**	**11 26 60.0 -0.8**
RM33				S	**Sg**	**11 27 06.2 +0.8**
RM33				AML	AML	
	comp=E,9235µm,1.1s					
RM33				AML	AML	
	comp=N,7680µm,1.3s					
RM33				AML	AML	
	comp=N,7415µm,1.3s					
RM33				AML	AML	
	comp=E,9270µm,1.1s					
RM33				AML	AML	
	comp=E,7996µm,0.1s					
RM33				AML	AML	
	comp=E,8137µm,0.1s					
RM33				AML	AML	
	comp=N,5871µm,0.1s					
RM33				AML	AML	
	comp=N,5581µm,0.1s					
FIU1	**Fiuminata**	**0.37**	**338**	⇓P	**Pb**	**11 27 00.5 -1.8**
FIU1				AML	AML	
	comp=E,5410µm,1.4s					
FIU1				AML	AML	
	comp=N,6130µm,0.3s					
FIU1				AML	AML	
	comp=E,5238µm,0.3s					
FIU1				AML	AML	
	comp=N,6129µm,0.3s					
T1211	**Morro Reatino**	**0.37**	**212**	P	**Pg**	**11 27 00.5 -0.7**
T1211				S	**Sg**	**11 27 06.9 +0.7**
T1211				AML	AML	
	comp=E,8440µm,0.3s					
T1211				AML	AML	
	comp=E,8835µm,0.3s					
T1211				AML	AML	
	comp=N,18200µm,0.3s					
T1211				AML	AML	
	comp=N,18450µm,0.3s					
T1211				AML	AML	
	comp=N,18200µm,0.3s					
T1211				AML	AML	
	comp=E,8850µm,0.3s					
T1211				AML	AML	
	comp=E,8854µm,0.3s					
T1211				AML	AML	
	comp=N,18175µm,0.3s					
T1211				AML	AML	
	comp=N,18422µm,0.3s					
T1211				AML	AML	
	comp=E,8440µm,0.3s					
ARRO	**Arrone**	**0.38**	**224**	⇑P	**Pg**	**11 27 00.5 -0.7**
CAMP	**Campotosto**	**0.38**	**146**	⇑P	**Pg**	**11 27 00.6 -0.8**
CAMP				S	**Sg**	**11 27 06.4 0.0**
CAMP				AML	AML	
	comp=E,2870µm,0.2s					
CAMP				AML	AML	
	comp=N,2885µm,0.6s					
CAMP				AML	AML	
	comp=E,2869µm,0.2s					
CAMP				AML	AML	
	comp=N,2882µm,0.6s					
SSM1	**San Severino M**	**0.38**	**6**	P	**Pb**	**11 27 00.9 -1.6**
MNTP	**Montappone**	**0.38**	**41**	⇓P	**Pb**	**11 27 01.5 -1.1**
MNTP				AML	AML	
	comp=E,12350µm,1.0s					
MNTP				AML	AML	
	comp=N,11550µm,0.3s					
MNTP				AML	AML	
	comp=E,12300µm,1.0s					
MNTP				AML	AML	
	comp=N,11550µm,0.3s					
MNTP				AML	AML	
	comp=N,11566µm,0.3s					
MNTP				AML	AML	
	comp=E,11545µm,0.5s					
ASSB	**Assisi San Ben**	**0.39**	**300**	⇑P	**Pg**	**11 27 00.8 -0.8**
GAG1	**Gagliole**	**0.39**	**354**	⇓P	**Pb**	**11 27 01.1 -1.6**
GAG1				AML	AML	
	comp=E,14000µm,0.3s					
GAG1				AML	AML	
	comp=E,14050µm,0.3s					
GAG1				AML	AML	
	comp=N,14500µm,0.5s					
GAG1				AML	AML	
	comp=N,11452µm,0.4s					
GAG1				AML	AML	
	comp=E,14038µm,0.3s					
TERO	**Teramo**	**0.42**	**122**	P	**Pg**	**11 27 01.4 -0.7**
TERO				AML	AML	
	comp=E,4920µm,1.6s					
TERO				AML	AML	
	comp=E,4610µm,0.9s					
TERO				AML	AML	
	comp=N,5995µm,0.3s					
TERO				AML	AML	
	comp=N,6615µm,0.3s					
TERO				AML	AML	
	comp=N,5625µm,0.1s					
TERO				AML	AML	
	comp=E,3769µm,0.1s					
TERO				AML	AML	
	comp=E,4288µm,0.2s					
TERO				AML	AML	
	comp=N,4637µm,0.1s					
OFFI	**Offida**	**0.42**	**78**	⇑P	**Pb**	**11 27 02.5 -0.7**
OFFI				AML	AML	
	comp=E,8480µm,0.9s					
OFFI				AML	AML	
	comp=N,10365µm,0.7s					
OFFI				AML	AML	
	comp=E,8309µm,0.5s					
OFFI				AML	AML	
	comp=N,8088µm,0.4s					
SNTG	**Esanatoglia**	**0.43**	**342**	⇑P	**Pg**	**11 27 01.4 -0.8**
SNTG				AML	AML	
	comp=E,3820µm,0.8s					
SNTG				AML	AML	
	comp=N,3515µm,0.8s					
SNTG				AML	AML	
	comp=N,3765µm,0.8s					
SNTG				AML	AML	
	comp=N,3520µm,0.8s					
SNTG				AML	AML	
	comp=E,3815µm,0.8s					
SNTG				AML	AML	
	comp=E,3650µm,0.8s					
SNTG				AML	AML	
	comp=E,3251µm,0.1s					
SNTG				AML	AML	
	comp=N,2653µm,0.2s					
SNTG				AML	AML	
	comp=E,3257µm,0.1s					
SNTG				AML	AML	
	comp=N,2790µm,0.2s					
T1247	**Pizzolo (AQ)**	**0.43**	**162**	⇑P	**Pg**	**11 27 01.4 -0.8**
T1247				S	**Sg**	**11 27 08.8 +0.9**
T1247				AML	AML	
	comp=E,7675µm,0.4s					
T1247				AML	AML	
	comp=N,7955µm,0.4s					
T1247				AML	AML	
	comp=E,7670µm,0.4s					
T1247				AML	AML	
	comp=E,7673µm,0.4s					
T1247				AML	AML	
	comp=N,7958µm,0.4s					
CESX	**Cesi**	**0.47**	**239**	⇑P	**Pg**	**11 27 02.0 -0.9**
CESX				AML	AML	
	comp=E,5465µm,0.5s					
CESX				AML	AML	
	comp=N,5620µm,0.3s					
CESX				AML	AML	
	comp=N,5621µm,0.3s					
CESX				AML	AML	
	comp=E,5465µm,0.5s					
EL6	**Elcito**	**0.48**	**358**	⇑P	**Pb**	**11 27 02.4 -1.9**
EL6				AML	AML	
	comp=E,7695µm,0.2s					
EL6				AML	AML	
	comp=N,7810µm,0.2s					
EL6				AML	AML	
	comp=E,7705µm,0.2s					
EL6				AML	AML	
	comp=E,7695µm,0.2s					
EL6				AML	AML	
	comp=N,7810µm,0.2s					
TRE1	**Treia**	**0.48**	**17**	⇓P	**Pb**	**11 27 03.4 -0.8**
TRE1				AML	AML	
	comp=E,9765µm,0.5s					
TRE1				AML	AML	
	comp=N,7035µm,0.4s					
TRE1				AML	AML	
	comp=N,7035µm,0.4s					
TRE1				AML	AML	
	comp=E,9730µm,0.5s					
TRE1				AML	AML	
	comp=E,9747µm,0.5s					
TRE1				AML	AML	
	comp=N,7033µm,0.4s					
ATCC	**AVT- Casa Cast**	**0.49**	**314**	⇑P	**Pg**	**11 27 02.5 -0.8**
ATCC				AML	AML	
	comp=E,5225µm,0.6s					
ATCC				AML	AML	
	comp=N,4640µm,0.6s					
ATCC				AML	AML	
	comp=E,5230µm,0.6s					
ATCC				AML	AML	
	comp=E,4432µm,0.2s					
ATCC				AML	AML	
	comp=N,3385µm,0.2s					
FOSV	**Fossato di Vic**	**0.52**	**329**	⇑P	**Pg**	**11 27 03.0 -0.9**
FOSV				AML	AML	
	comp=E,2285µm,0.3s					
FOSV				AML	AML	
	comp=N,2440µm,0.6s					
FOSV				AML	AML	
	comp=N,2435µm,0.6s					
FOSV				AML	AML	
	comp=N,2439µm,0.6s					
FOSV				AML	AML	
	comp=E,2285µm,0.3s					
GIGS	**Gran Sasso**	**0.52**	**140**	P	**Pg**	**11 27 02.6 -1.3**
GIGS				S	**Sg**	**11 27 10.6 -0.1**
GIGS				AML	AML	
	comp=E,793µm,1.3s					
GIGS				AML	AML	
	comp=N,794µm,1.4s					
GIGS				AML	AML	
	comp=N,794µm,1.4s					
GIGS				AML	AML	
	comp=E,627µm,0.1s					
GIGS				AML	AML	
	comp=N,751µm,0.1s					
AQU	**L'Aquila**	**0.54**	**157**	⇑P	**Pg**	**11 27 03.3 -1.0**
AQU				S	**Sg**	**11 27 12.1 +0.7**
AQU				AML	AML	
	comp=E,2505µm,1.1s					
AQU				AML	AML	
	comp=N,2300µm,1.1s					
AQU				AML	AML	
	comp=N,2175µm,1.5s					
AQU				AML	AML	
	comp=N,2305µm,1.1s					
AQU				AML	AML	
	comp=E,2445µm,1.1s					
AQU				AML	AML	
	comp=E,2486µm,0.7s					
AQU				AML	AML	
	comp=E,2417µm,0.6s					
AQU				AML	AML	
	comp=N,2166µm,0.4s					
AQU				AML	AML	
	comp=N,2216µm,0.4s					
FIAM	**Fiamignano**	**0.58**	**180**	⇑P	**Pg**	**11 27 04.0 -1.1**
FIAM				S	**Sg**	**11 27 14.0 +1.2**
FIAM				AML	AML	
	comp=E,3580µm,0.5s					
FIAM				AML	AML	
	comp=N,2565µm,0.4s					
FIAM				AML	AML	
	comp=E,3581µm,0.5s					
FIAM				AML	AML	
	comp=N,2564µm,0.4s					
TRTR	**Tortoreto Alta**	**0.58**	**94**	⇑P	**Pb**	**11 27 05.6 -0.3**
TRTR				AML	AML	
	comp=E,7580µm,0.6s					
TRTR				AML	AML	
	comp=N,8320µm,0.5s					
TRTR				AML	AML	
	comp=E,7581µm,0.6s					
TRTR				AML	AML	
	comp=N,8319µm,0.5s					
MURB	**Monte Urbino**	**0.60**	**314**	⇓P	**Pg**	**11 27 04.7 -0.8**
MURB				S	**Sb**	**11 27 15.0 +0.1**
MURB				AML	AML	
	comp=E,5430µm,0.3s					
MURB				AML	AML	
	comp=N,6190µm,0.4s					
MURB				AML	AML	
	comp=N,5890µm,0.4s					
MURB				AML	AML	
	comp=E,6070µm,0.3s					
MURB				AML	AML	
	comp=E,5430µm,0.3s					
MURB				AML	AML	
	comp=N,5893µm,0.4s					
MURB				AML	AML	
	comp=E,6069µm,0.3s					
MURB				AML	AML	
	comp=E,5430µm,0.3s					
MURB				AML	AML	
	comp=N,6190µm,0.4s					
PP3	**Marolino**	**0.64**	**34**	⇓P	**Pb**	**11 27 06.3 -0.5**
PP3				AML	AML	
	comp=E,6525µm,0.7s					
PP3				AML	AML	
	comp=N,9500µm,0.4s					
PP3				AML	AML	
	comp=E,6320µm,0.7s					
PP3				AML	AML	
	comp=N,9565µm,0.4s					
PP3				AML	AML	
	comp=E,6520µm,0.7s					
PP3				AML	AML	
	comp=N,9575µm,0.4s					
PP3				AML	AML	
	comp=N,9567µm,0.4s					
PP3				AML	AML	
	comp=N,9509µm,0.4s					
PP3				AML	AML	
	comp=E,5976µm,0.3s					
PP3				AML	AML	
	comp=E,5989µm,0.4s					
ATFO	**Monte Foce - G**	**0.66**	**322**	⇓P	**Pg**	**11 27 05.6 -0.9**
ATFO				AML	AML	
	comp=N,1400µm,1.5s					
ATFO				AML	AML	
	comp=E,1910µm,1.0s					
ATFO				AML	AML	
	comp=E,1853µm,0.6s					
ATFO				AML	AML	
	comp=N,1224µm,0.3s					
ARVD	**Arcevia**	**0.66**	**349**	⇑P	**Pg**	**11 27 05.5 -1.1**
ARVD				S	**Sb**	**11 27 17.0 +0.5**
ARVD				AML	AML	
	comp=N,1270µm,0.5s					
ARVD				AML	AML	
	comp=E,1320µm,0.5s					
ARVD				AML	AML	
	comp=N,1160µm,0.5s					
ARVD				AML	AML	
	comp=E,1280µm,0.6s					
ATTE	**AVT- Monte Tez**	**0.66**	**302**	⇓P	**Pg**	**11 27 05.9 -0.8**
ATTE				AML	AML	
	comp=E,1105µm,0.7s					
ATTE				AML	AML	
	comp=N,1110µm,0.4s					
ATTE				AML	AML	
	comp=N,1111µm,0.4s					
ATTE				AML	AML	
	comp=E,963µm,0.3s					
FAGN	**Fagnano**	**0.68**	**150**	⇓P	**Pg**	**11 27 06.2 -0.6**
FAGN				AML	AML	
	comp=N,4255µm,0.5s					
FAGN				AML	AML	
	comp=E,5420µm,0.5s					
FAGN				AML	AML	
	comp=E,5421µm,0.5s					
FAGN				AML	AML	
	comp=N,4258µm,0.5s					
VCEL	**Villa Celiera**	**0.70**	**130**	⇑P	**Pg**	**11 27 06.4 -0.9**
VCEL				S	**Sg**	**11 27 17.0 +0.5**
VCEL				AML	AML	
	comp=E,3595µm,0.8s					
VCEL				AML	AML	
	comp=N,2730µm,1.5s					
VCEL				AML	AML	
	comp=E,3600µm,0.8s					
VCEL				AML	AML	
	comp=N,2725µm,1.5s					
VCEL				AML	AML	
	comp=N,2486µm,0.2s					
VCEL				AML	AML	
	comp=E,3225µm,0.4s					
FRON	**Frontone**	**0.73**	**337**	⇓P	**Pg**	**11 27 06.7 -1.2**
FRON				AML	AML	
	comp=E,1205µm,0.4s					
FRON				AML	AML	
	comp=N,1820µm,0.6s					
FRON				AML	AML	
	comp=E,1210µm,0.4s					
FRON				AML	AML	
	comp=N,1763µm,0.3s					
FRON				AML	AML	
	comp=E,1167µm,0.2s					
MGAB	**Montegabbione**	**0.74**	**275**	⇓P	**Pg**	**11 27 07.3 -0.8**
MGAB				S	**Sb**	**11 27 19.0 +0.1**
MGAB				AML	AML	
	comp=E,2300µm,0.8s					
MGAB				AML	AML	
	comp=N,3705µm,0.6s					
MGAB				AML	AML	
	comp=N,3630µm,0.6s					
MGAB				AML	AML	
	comp=E,2295µm,0.8s					
MGAB				AML	AML	
	comp=E,2120µm,1.6s					
MGAB				AML	AML	
	comp=E,2037µm,0.4s					
MGAB				AML	AML	
	comp=N,3706µm,0.6s					
MGAB				AML	AML	
	comp=E,2298µm,0.8s					
MGAB				AML	AML	
	comp=N,3632µm,0.6s					
ATVO	**AVT- Monte Val**	**0.75**	**316**	⇑P	**Pg**	**11 27 07.0 -1.2**
ATVO				AML	AML	
	comp=E,949µm,0.7s					
ATVO				AML	AML	
	comp=N,784µm,1.5s					
ATVO				AML	AML	
	comp=E,932µm,0.3s					
ATVO				AML	AML	
	comp=N,772µm,0.4s					
SRES	**S.Oreste - Sor**	**0.76**	**217**	⇑P	**Pg**	**11 27 07.2 -1.3**
SRES				AML	AML	
	comp=E,1530µm,0.7s					
SRES				AML	AML	
	comp=N,2015µm,0.6s					
SRES				AML	AML	
	comp=N,2015µm,0.6s					
SRES				AML	AML	
	comp=E,1409µm,0.8s					
AOI	**Ancona**	**0.78**	**26**	⇓P	**Pb**	**11 27 08.3 -1.1**
AOI				AML	AML	
	comp=N,1755µm,0.4s					
AOI				AML	AML	
	comp=E,1665µm,0.7s					
AOI				AML	AML	
	comp=N,1752µm,0.4s					
AOI				AML	AML	
	comp=E,1651µm,0.3s					
T0110	**Collepietro**	**0.79**	**142**	⇓P	**Pg**	**11 27 07.6 -1.4**
T0110				AML	AML	
	comp=N,2895µm,0.5s					
T0110				AML	AML	
	comp=E,3445µm,0.5s					
T0110				AML	AML	
	comp=E,3445µm,0.5s					
T0110				AML	AML	
	comp=N,2895µm,0.5s					
ATMI	**Monte Miggiano**	**0.79**	**308**	⇑P	**Pb**	**11 27 09.2 -0.4**
ATMI				AML	AML	
	comp=N,2645µm,1.4s					
ATMI				AML	AML	
	comp=E,2230µm,1.6s					
ATMI				AML	AML	
	comp=N,2573µm,0.4s					
ATMI				AML	AML	
	comp=E,2206µm,0.6s					
ATPI	**Pietralunga -**	**0.80**	**319**	⇓P	**Pg**	**11 27 08.1 -1.1**
ATPI				AML	AML	
	comp=E,990µm,0.6s					
ATPI				AML	AML	
	comp=E,988µm,0.6s					
ATPI				AML	AML	
	comp=N,796µm,0.3s					
ATPI				AML	AML	
	comp=E,990µm,0.6s					
ATPI				AML	AML	
	comp=N,796µm,0.3s					
ATPI				AML	AML	
	comp=N,796µm,0.3s					
ATPI				AML	AML	
	comp=E,988µm,0.6s					
PIEI	**Pieia**	**0.81**	**328**	⇑P	**Pg**	**11 27 08.3 -1.1**
PIEI				S	**Sb**	**11 27 21.0 +0.2**
PIEI				AML	AML	
	comp=E,1215µm,0.3s					
PIEI				AML	AML	
	comp=N,710µm,0.3s					
PIEI				AML	AML	
	comp=E,995µm,0.2s					
PIEI				AML	AML	
	comp=N,711µm,0.3s					
MPAG	**Monte Paganucc**	**0.82**	**341**	⇑P	**Pg**	**11 27 08.4 -1.3**
MPAG				S	**Sn**	**11 27 23.0 -0.5**
MPAG				AML	AML	
	comp=E,1260µm,0.6s					
MPAG				AML	AML	
	comp=N,1219µm,1.3s					
MPAG				AML	AML	
	comp=E,1265µm,0.6s					
MPAG				AML	AML	
	comp=N,1215µm,1.3s					
MPAG				AML	AML	
	comp=N,1212µm,0.4s					
MPAG				AML	AML	
	comp=E,1624µm,0.7s					
MPAG				AML	AML	
	comp=E,1263µm,0.6s					
MPAG				AML	AML	
	comp=N,1315µm,0.4s					
SENI	**Senigallia**	**0.86**	**5**	⇓P	**Pb**	**11 27 10.3 -0.3**
SENI				AML	AML	
	comp=E,2083µm,0.7s					
SENI				AML	AML	
	comp=N,1528µm,0.9s					
MTCE	**Montecelio**	**0.87**	**199**	⇓P	**Pg**	**11 27 09.0 -1.6**
MTCE				AML	AML	
	comp=N,1550µm,0.7s					
MTCE				AML	AML	
	comp=E,1590µm,1.1s					
MTCE				AML	AML	
	comp=E,1592µm,1.1s					
MTCE				AML	AML	
	comp=N,1552µm,0.7s					
FSSB	**Fossombrone**	**0.88**	**343**	⇑P	**Pg**	**11 27 09.5 -1.2**
FSSB				AML	AML	
	comp=E,2575µm,0.4s					
FSSB				AML	AML	
	comp=N,4325µm,0.3s					

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FSSB                                AML   AML
      comp=E,2573µm,0.4s
FSSB                                AML   AML
      comp=N,4328µm,0.3s
SACS  San Casciano d      0.89 270 ⇑P    Pg    11 27 10.4 -0.5
SACS                                AML   AML
      comp=E,880µm,1.3s
SACS                                AML   AML
      comp=N,1198µm,0.7s
SACS                                AML   AML
      comp=N,1201µm,0.7s
SACS                                AML   AML
      comp=N,1199µm,0.7s
SACS                                AML   AML
      comp=E,868µm,0.6s
SACS                                AML   AML
      comp=E,822µm,0.6s
CERT  Cerreto             0.91 187 ⇓P    Pg    11 27 09.4 -1.8
CERT                                AML   AML
      comp=E,2050µm,0.5s
CERT                                AML   AML
      comp=N,1230µm,0.5s
CERT                                AML   AML
      comp=E,2048µm,0.5s
CERT                                AML   AML
      comp=N,1231µm,0.5s
BADI  Badiali             0.92 316 ⇓P    Pb    11 27 10.5 -1.2
BADI                                AML   AML
      comp=N,1016µm,0.8s
PE3   Peglio              0.96 332 ⇓P    Pb    11 27 11.5 -0.9
PE3                                 AML   AML
      comp=E,28µm,0.2s
PE3                                 AML   AML
      comp=N,46µm,0.2s
CAFI  Castiglion Fio      0.97 300 ⇑P    Pb    11 27 11.6 -1.0
CAFI                                AML   AML
      comp=N,631µm,0.7s
CAFI                                AML   AML
      comp=E,704µm,0.6s
CAFI                                AML   AML
      comp=N,631µm,0.7s
CAFI                                AML   AML
      comp=E,679µm,0.6s
CAFI                                AML   AML
      comp=E,704µm,0.6s
CAFI                                AML   AML
      comp=N,585µm,0.7s
SSP9  Sansepolcro         1.02 315 ⇓P    Pb    11 27 12.9 -0.6
SSP9                                AML   AML
      comp=N,822µm,0.7s
SSP9                                AML   AML
      comp=E,527µm,0.9s
GUAR  Guarcino            1.06 172 ⇓P    Pn    11 27 15.5 +0.9
MCIV  Monte Civitell      1.07 267 P     Pg    11 27 13.1 -1.2
MCIV                                AML   AML
      comp=E,422µm,0.7s
MCIV                                AML   AML
      comp=N,411µm,1.2s
MCIV                                AML   AML
      comp=E,422µm,0.7s
MCIV                                AML   AML
      comp=N,358µm,0.6s
RMP   Rome, Mte Porz      1.08 197 ⇑P    Pg    11 27 13.7 -0.9
RMP                                 AML   AML
      comp=E,1565µm,0.7s
RMP                                 AML   AML
      comp=N,2430µm,0.8s
RMP                                 AML   AML
      comp=N,2432µm,0.8s
RMP                                 AML   AML
      comp=E,1498µm,0.5s
CPGN  Carpegna, Ital      1.12 329 P     Pb    11 27 14.7 -0.5
CPGN                                AML   AML
      comp=N,1065µm,0.7s
CPGN                                AML   AML
      comp=E,1146µm,0.6s
RDP   Rocca di Papa       1.13 196 ⇑P    Pb    11 27 15.6 +0.3
RDP                                 AML   AML
      comp=E,2725µm,1.6s
RDP                                 AML   AML
      comp=N,3980µm,1.6s
RDP                                 AML   AML
      comp=N,3688µm,0.5s
RDP                                 AML   AML
      comp=E,2653µm,0.5s
TOLF  Tolfa               1.14 227 ⇑P    Pg    11 27 13.0 -2.7
TOLF                                AML   AML
      comp=E,1265µm,0.5s
TOLF                                AML   AML
      comp=N,1245µm,0.5s
TOLF                                AML   AML
      comp=E,1263µm,0.5s
TOLF                                AML   AML
      comp=N,1245µm,0.5s
SF01  Poggio Pratacc      1.15 269 P     Pb    11 27 15.5 -0.1
SF01                                AML   AML
      comp=E,618µm,0.5s
SF01                                AML   AML
      comp=N,504µm,1.0s
SF01                                AML   AML
      comp=E,618µm,0.5s
SF01                                AML   AML
      comp=N,479µm,0.7s
CRE   Caprese Michel      1.15 312 ⇓P    Pn    11 27 15.7 -0.2
CRE                                 AML   AML
      comp=E,559µm,0.5s
CRE                                 AML   AML
      comp=N,496µm,1.3s
CRE                                 AML   AML
      comp=N,405µm,0.5s
CRE                                 AML   AML
      comp=E,559µm,0.5s
POFI  Posta Fibreno       1.21 159 ⇑P    Pb    11 27 17.4 +0.7
POFI                                AML   AML
      comp=E,516µm,0.6s
POFI                                AML   AML
      comp=N,486µm,0.7s
POFI                                AML   AML
      comp=E,487µm,0.6s
POFI                                AML   AML
      comp=N,481µm,0.8s
POFI                                AML   AML
      comp=N,486µm,0.7s
POFI                                AML   AML
      comp=E,516µm,0.6s
GIUL  Giuliano Di Ro      1.29 176 ⇑P    Pg    11 27 17.2 -1.4
GIUL                                AML   AML
      comp=E,656µm,0.7s
GIUL                                AML   AML
      comp=N,662µm,0.8s
GIUL                                AML   AML
      comp=N,661µm,0.8s
GIUL                                AML   AML
      comp=E,656µm,0.7s
TRIV  Trivento            1.51 135 ⇓P    Pg    11 27 22.6 -0.3
RUFI  Rufina              1.54 311 ⇑P    Pb    11 27 21.6 -0.6
RUFI                                AML   AML
      comp=E,228µm,0.6s
RUFI                                AML   AML
      comp=N,238µm,0.6s
LMD   Lutirano            1.60 320 ⇑P    Pg    11 27 26.0 +1.5
CASP  Castiglione de      1.66 269 ⇓P    Pn    11 27 21.7 -1.1
CASP                                AML   AML
      comp=E,68µm,1.1s
CASP                                AML   AML
      comp=N,62µm,0.8s
CASP                                AML   AML
      comp=E,57µm,0.8s
CASP                                AML   AML
      comp=N,62µm,0.8s
PTRJ  Pietraroja          1.82 144 P     Pn    11 27 21.8 -3.2
PTRJ                                AML   AML
      comp=E,2015µm,1.5s
PTRJ                                AML   AML
      comp=N,4400µm,0.8s
PTRJ                                AML   AML
      comp=E,2240µm,1.2s
PTRJ                                AML   AML
      comp=N,3685µm,0.8s
POPM  Popiglio            2.10 306 P     Pn    11 27 26.9 -1.9
POPM                                AML   AML
      comp=E,88µm,1.3s
POPM                                AML   AML
      comp=N,94µm,0.9s
POPM                                AML   AML
      comp=N,89µm,0.2s
POPM                                AML   AML
      comp=E,86µm,0.7s
BRJN  Brijuni             2.10  12 ⇑P    Pn    11 27 28.8 -0.1
MAIM  Mastiano            2.19 300 ⇓P    Pn    11 27 30.5 +0.4
MAIM                                AML   AML
      comp=E,101µm,0.5s
MAIM                                AML   AML
      comp=N,95µm,0.7s
MAIM                                AML   AML
      comp=E,101µm,0.5s
MAIM                                AML   AML
      comp=N,95µm,0.7s
VBKN  Vesuvio Bunker      2.24 154 S     Sn    11 27 58.0 -0.5
NDIM  Novi di Modena      2.59 322 ⇑P    Pn    11 27 34.8 -0.8
SABO  M.te Sabotino       3.15   6 ⇑P    Pn    11 27 42.0 -1.3
SABO                                AML   AML
      comp=N,220µm,0.8s
SABO                                AML   AML
      comp=E,192µm,0.6s
SABO                                AML   AML
      comp=E,172µm,0.5s
SABO                                AML   AML
      comp=N,725µm,0.6s
SABO                                AML   AML
      comp=E,733µm,0.6s
SABO                                AML   AML
      comp=N,207µm,0.7s
ROVR  Rover Verones       3.16 333 ⇑P    Pn    11 27 45.0 +1.5
CGRP  Cima Grappa         3.17 343 ⇑P    Pn    11 27 44.2 +0.5
CGRP                                AML   AML
      comp=E,186µm,0.7s
CGRP                                AML   AML
      comp=N,179µm,0.5s
CGRP                                AML   AML
      comp=E,186µm,0.7s
CGRP                                AML   AML
      comp=N,207µm,1.1s
CGRP                                AML   AML
      comp=N,179µm,0.5s
CGRP                                AML   AML
      comp=E,244µm,0.6s
LJU   Ljubljana           3.35  17 ⇑P    Pn    11 27 46.1 +0.1
LJU                                 AML   AML
      comp=E,636µm,1.0s
LJU                                 AML   AML
      comp=N,810µm,0.6s
LJU                                 AML   AML
      comp=E,571µm,0.5s
LJU                                 AML   AML
      comp=N,810µm,0.6s
CTI   Castel Tesino       3.37 342 ⇓P    Pn    11 27 47.0 +0.6
CTI                                 AML   AML
      comp=E,102µm,0.2s
CTI                                 AML   AML
      comp=N,97µm,0.5s
CTI                                 AML   AML
      comp=N,97µm,0.5s
CTI                                 AML   AML
      comp=E,102µm,0.2s
STAL  STALIGIAL           3.42 355 P     Pn    11 27 47.3 +0.2
STAL                                AML   AML
      comp=E,166µm,0.9s
STAL                                AML   AML
      comp=N,115µm,0.3s
STAL                                AML   AML
      comp=N,218µm,0.6s
STAL                                AML   AML
      comp=E,148µm,0.4s
STAL                                AML   AML
      comp=E,163µm,0.6s
STAL                                AML   AML
      comp=N,115µm,0.3s
LUSI  Trento, Gardas      3.48 334 ⇓P    Pn    11 27 48.4 +0.5
LUSI                                AML   AML
      comp=E,93µm,0.7s
LUSI                                AML   AML
      comp=N,136µm,0.6s
LUSI                                AML   AML
      comp=N,106µm,0.2s
LUSI                                AML   AML
      comp=E,71µm,0.8s
CIMO  Cimolais            3.49 352 ⇓P    Pn    11 27 47.8 -0.2
CIMO                                AML   AML
      comp=E,39µm,0.6s
CIMO                                AML   AML
      comp=N,38µm,1.6s
CIMO                                AML   AML
      comp=N,29µm,0.6s
CIMO                                AML   AML
      comp=N,27µm,0.4s
CIMO                                AML   AML
      comp=E,33µm,0.5s
CIMO                                AML   AML
      comp=E,36µm,0.7s
PTCC  Patocco-Chiusa      3.56   3 ⇓P    Pn    11 27 48.5 -0.4
PTCC                                AML   AML
      comp=N,64µm,0.6s
PTCC                                AML   AML
      comp=E,77µm,0.8s
PTCC                                AML   AML
      comp=E,50µm,0.5s
PTCC                                AML   AML
      comp=N,49µm,0.6s
DGI   Dorgali Grotta      3.65 227 S     Sn    11 28 32.0 -1.2
ZOU   Zoufplan            3.71 358 S     Sb    11 28 43.0 -1.4
ACOM  Acomizza, Ital      3.71   4 ⇑P    Pn    11 27 51.7 +0.6
ACOM                                AML   AML
      comp=N,113µm,1.5s
ACOM                                AML   AML
      comp=E,109µm,0.7s
ACOM                                AML   AML
      comp=N,93µm,0.7s
ACOM                                AML   AML
      comp=E,120µm,0.7s
ACOM                                AML   AML
      comp=N,88µm,0.9s
ACOM                                AML   AML
      comp=E,98µm,0.5s
ACOM                                AML   AML
      comp=N,112µm,0.9s
ACOM                                AML   AML
      comp=E,88µm,0.6s
MABI  Malga Bissina       3.71 331 ⇑P    Pn    11 27 52.4 +1.3
EUCT  Pavia               3.71 311 S     Sn    11 28 35.0 +0.3
FVI   Forni Avoltri       3.75 356 P     Pn    11 27 52.0 +0.4
FVI                                 AML   AML
      comp=N,69µm,0.5s
FVI                                 AML   AML
      comp=E,62µm,0.7s
FVI                                 AML   AML
      comp=N,69µm,0.5s
FVI                                 AML   AML
      comp=E,42µm,0.4s
QLNO  Quiliano            3.77 295 S     Sn    11 28 39.0 +2.9
MYKA  Terra Mystica       3.80   5 i Pn  Pn    11 27 53.1 +0.8
      comp=E,2.0nm,0.2s
OBKA  Obir                3.80  15 ePn   Pn    11 27 52.4 +0.2
      comp=E,0.3nm,0.1s
KOSI  Kohlern             3.82 342 ⇑P    Pn    11 27 53.6 +1.0
BOSI  Bolzano             3.87 341 S     Sn    11 28 42.0 +3.6
APPI  Appiano             3.87 340 P     Pn    11 27 53.9 +0.7
ABTA  Abfaltersbach       3.92 354 i Pn  Pn    11 27 54.5 +0.6
      comp=E,6.1nm,0.3s
TDS   Terranova Siba      4.00 142 S     Sb    11 28 51.0 -1.7
MGRO  Montegrosso         4.05 289 S     Sb    11 28 51.0 -3.1
RISI  Rein                4.17 350 P     Pn    11 27 55.7 -1.6
MUGIO Muggio              4.24 318 P     Pn    11 27 59.0 +0.7
VSL   Villasalto          4.38 221 ⇑P    Pn    11 28 00.7 +0.5
WTTA  Wattenberg          4.54 347 i Pn  Pn    11 28 05.0 +2.5
      comp=E,0.7nm,0.2s
DAVOX Davos/Dischmat      4.56 331 Pn    Pn    11 28 05.0 +2.2
      comp=E,1.6nm,0.3s,baz=149,slow=18,SNR=6.4
DAVOX                               Sn    Sn    11 28 56.6 +0.8
      comp=E,0.9nm,0.3s,baz=171,slow=21,SNR=1.9
      comp=E,4.2nm,0.5s
SQTA  Sankt Quirin        4.58 343 i Pn  Pn    11 28 04.6 +1.7
      comp=E,2.6nm,0.2s
WATA  Walderalm           4.62 347 ePn   Pn    11 28 05.4 +1.9
      comp=E,1.7nm,0.2s
MOTA  Moosalm             4.72 343 i Pn  Pn    11 28 06.5 +1.6
      comp=E,0.6nm,0.1s
ARSA  Arzberg             4.72  20 ePn   Pn    11 28 04.4 -0.4
      comp=E,0.7nm,0.2s
BIOA  Bad Ischl, Aus      4.86   4 i Pn  Pn    11 28 07.2 +0.5
      comp=E,3.1nm,0.3s
RETA  Reutte              4.93 341 ePn   Pn    11 28 09.5 +1.7
      comp=E,0.7nm,0.2s
CORL  Corleone            4.95 178 P     Pn    11 28 08.4 +0.3
MOA   Molln               5.07   9 i Pn  Pn    11 28 10.1 +0.5
      comp=E,0.9nm,0.1s
BNI   Bardonecchia        5.15 298 ⇑P    Pg    11 28 30.7 -1.6
MCT   Mte Cammarata       5.23 176 P     Pb    11 28 24.1 -1.1
RONA  Rosalia, Austr      5.34  24 ePn   Pn    11 28 13.4  0.0
      comp=E,0.5nm,0.2s
CONA  Conrad Observa      5.43  20 ePn   Pn    11 28 14.3 -0.4
      comp=E,1.0nm,0.2s
GERES GERESS Array B      6.01   4 Pn    Pn    11 28 21.9 -0.7
      comp=E,0.2nm,0.3s,baz=176,slow=13,SNR=5.8
GERES                               Sn    Sn    11 29 29.4 -2.0
      comp=E,0.8nm,0.3s,baz=183,slow=25,SNR=1.8
      comp=E,0.5nm,0.3s
CKRC  Cesky Krumlov       6.03   7 ePN   Pn    11 28 21.5 -1.3
CKRC                                eSN   Sn    11 29 31.4 -0.4
KHC   Kasperske Hory      6.29   3 ePN   Pn    11 28 25.4 -1.0
KHC                                 eSN   Sn    11 29 36.1 -2.1
HPAC  Pachino             6.33 165 ⇓P    Pn    11 28 27.2 +0.2
TORD  Torodi Ar. Bea     31.20 202 P     P     11 33 14.4 +1.4
      comp=E,0.3nm,0.6s,baz=23,slow=7.8,SNR=2.1
      comp=E,0.3nm,0.6s
SONM  Songino Array      61.81  50 P     P     11 37 14.1 +1.5
      comp=E,0.3nm,0.6s,baz=292,slow=7.6,SNR=1.5
      comp=E,0.3nm,0.6s
TXAR  Lajitas Array      87.66 309 P     P     11 39 44.1 +1.6
      comp=E,0.2nm,0.8s,baz=60,slow=4.3,SNR=2.4
      comp=E,0.2nm,0.8s
```

ROM 30 11:39:05.6±0.1, 42°.847N±0°.003×13°.163E±0°.005, h11km, ML3.4/27, 8C-6D, Error ellipse: s-maj=0.4km s-min=0.1km az=250.0, Central Italy

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op    ISC         h m s     ISC
T1245 Castelsantange      0.02  63   P     Pg          11 39 08.0 +0.1
T1245                                S     Sg          11 39 09.3 -0.1
FEMA  Monte Fema          0.14 324 ⇓P     Pg          11 39 09.5 +0.4
FEMA                                 S     Sg          11 39 12.0 +0.4
FEMA                                 AML   AML
      comp=N,13600µm,0.1s
FEMA                                 AML   AML
      comp=E,18100µm,0.2s
FEMA                                 AML   AML
      comp=N,13610µm,0.1s
FEMA                                 AML   AML
      comp=N,82350µm,0.4s
FEMA                                 AML   AML
FEMA                                 AML   AML
      comp=N,13610µm,0.1s
FEMA                                 AML   AML
      comp=E,18100µm,0.2s
AM05  Amandola Campo      0.19  47   P     Pg          11 39 10.1 +0.3
AM05                                 S     Sg          11 39 13.1 +0.5
AM05                                 AML   AML
      comp=E,940µm,0.7s
AM05                                 AML   AML
      comp=N,955µm,0.3s
AM05                                 AML   AML
      comp=E,3800µm,0.8s
AM05                                 AML   AML
      comp=N,322µm,0.1s
AM05                                 AML   AML
      comp=E,938µm,0.7s
AM05                                 AML   AML
      comp=N,954µm,0.3s
AM05                                 AML   AML
      comp=E,3795µm,0.8s
AM05                                 AML   AML
      comp=N,322µm,0.1s
AM05                                 AML   AML
      comp=E,42150µm,0.6s
AM05                                 AML   AML
      comp=N,2200µm,0.9s
AM05                                 AML   AML
      comp=E,9625µm,0.6s
AM05                                 AML   AML
      comp=N,8940µm,0.2s
AM05                                 AML   AML
      comp=N,2200µm,1.1s
AM05                                 AML   AML
      comp=E,3297µm,0.1s
AM05                                 AML   AML
      comp=E,852µm,0.1s
AM05                                 AML   AML
      comp=N,903µm,0.1s
AM05                                 AML   AML
      comp=N,322µm,0.1s
T1241 Roccafluvione,      0.20  87 ⇑P     Pb          11 39 10.7 -0.6
T1241                                S     Sg          11 39 14.1 +1.2
T1241                                AML   AML
      comp=N,9360µm,0.2s
T1241                                AML   AML
      comp=E,5205µm,1.1s
T1241                                AML   AML
      comp=N,9380µm,0.2s
T1241                                AML   AML
      comp=E,16350µm,0.4s
T1241                                AML   AML
      comp=N,11600µm,0.9s
T1241                                AML   AML
      comp=N,11650µm,0.9s
T1241                                AML   AML
      comp=E,16400µm,0.4s
T1241                                AML   AML
      comp=E,4755µm,0.2s
T1241                                AML   AML
      comp=N,9355µm,0.2s
T1201 Domo (RI)           0.20 161   P     Pb          11 39 10.8 -0.5
T1201                                S     Sg          11 39 15.0 +2.1
T1204 Amatrice, Fraz      0.20 146 ⇓P     Pg          11 39 10.7 +0.6
T1204                                S     Sg          11 39 14.5 +1.3
T1204                                AML   AML
      comp=E,9560µm,0.3s
T1204                                AML   AML
      comp=N,6165µm,0.2s
T1204                                AML   AML
      comp=N,8835µm,1.0s
T1204                                AML   AML
      comp=E,15200µm,1.1s
T1204                                AML   AML
      comp=N,6165µm,0.2s
T1204                                AML   AML
      comp=E,9543µm,0.3s
T1217 Poggiodomo (PG      0.22 232   P     Pg          11 39 10.9 +0.6
T1217                                S     Sg          11 39 14.1 +0.6
T1217                                AML   AML
      comp=E,2495µm,1.2s
T1217                                AML   AML
      comp=N,3845µm,0.5s
T1217                                AML   AML
      comp=E,11435µm,0.7s
T1217                                AML   AML
      comp=N,15950µm,0.2s
T1217                                AML   AML
      comp=E,11145µm,0.7s
T1217                                AML   AML
      comp=N,15800µm,0.2s
T1217                                AML   AML
      comp=N,15850µm,0.2s
T1217                                AML   AML
      comp=E,11165µm,0.7s
T1217                                AML   AML
      comp=E,11445µm,0.7s
T1217                                AML   AML
      comp=N,3383µm,0.2s
T1217                                AML   AML
      comp=E,1811µm,0.1s
T1217                                AML   AML
      comp=N,3424µm,0.2s
T1217                                AML   AML
      comp=E,1763µm,0.1s
T1215 Vallo di Nera,      0.22 258 ⇑P     Pg          11 39 10.9 +0.6
T1215                                S     Sg          11 39 14.6 +1.1
T1215                                AML   AML
      comp=E,1835µm,0.2s
T1215                                AML   AML
      comp=N,1625µm,0.6s
T1215                                AML   AML
      comp=E,1890µm,0.2s
T1215                                AML   AML
      comp=N,1675µm,1.4s
T1215                                AML   AML
      comp=E,1840µm,0.2s
T1215                                AML   AML
      comp=N,1630µm,0.6s
T1215                                AML   AML
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	comp=E,19900μm,0.5s					
T1215			AML	AML		
	comp=N,15150μm,0.5s					
T1215			AML	AML		
	comp=E,20150μm,0.5s					
T1215			AML	AML		
	comp=N,15000μm,0.5s					
T1215			AML	AML		
	comp=N,15200μm,0.5s					
T1215			AML	AML		
	comp=E,19950μm,0.5s					
T1215			AML	AML		
	comp=N,14950μm,0.5s					
T1215			AML	AML		
	comp=E,1598μm,0.1s					
T1215			AML	AML		
	comp=E,1550μm,0.1s					
T1215			AML	AML		
	comp=N,1520μm,0.1s					
T1215			AML	AML		
	comp=N,1490μm,0.1s					
GUMA	**Gualdo di Mace**	**0.25 30**	P	Pg	11 39 11.5	+0.6
GUMA			S	Sg	11 39 15.3	+1.0
GUMA			AML	AML		
	comp=E,7600μm,0.3s					
GUMA			AML	AML		
	comp=N,6545μm,0.5s					
GUMA			AML	AML		
	comp=E,8860μm,0.3s					
GUMA			AML	AML		
	comp=N,5370μm,0.5s					
GUMA			AML	AML		
	comp=E,63550μm,0.5s					
GUMA			AML	AML		
	comp=N,86000μm,0.5s					
GUMA			AML	AML		
	comp=E,71400μm,0.3s					
GUMA			AML	AML		
	comp=N,95200μm,0.3s					
GUMA			AML	AML		
	comp=N,86000μm,0.5s					
GUMA			AML	AML		
	comp=E,7597μm,0.3s					
GUMA			AML	AML		
	comp=N,6544μm,0.5s					
GUMA			AML	AML		
	comp=N,5253μm,0.3s					
GUMA			AML	AML		
	comp=E,8856μm,0.3s					
T1243	**Rocca Santa Ma**	**0.26 125**	P	Pg	11 39 11.5	+0.5
T1243			S	Sg	11 39 15.5	+0.9
LNSS	**Leonessa**	**0.26 200**	P	Pb	11 39 11.7	-0.7
LNSS			S	Sb	11 39 16.2	-0.7
LNSS			AML	AML		
	comp=E,4480μm,0.2s					
LNSS			AML	AML		
	comp=N,15800μm,0.1s					
LNSS			AML	AML		
	comp=E,5820μm,0.3s					
LNSS			AML	AML		
	comp=E,4481μm,0.2s					
LNSS			AML	AML		
	comp=N,15803μm,0.1s					
SEF1	**Sefro**	**0.34 332**	P	Pg	11 39 12.6	+0.1
SEF1			S	Sb	11 39 18.1	-1.0
RM33	**Pellescritta (**	**0.34 174**	P	Pg	11 39 12.8	+0.4
RM33			S	Sg	11 39 16.9	-0.1
RM33			AML	AML		
	comp=E,6920μm,1.0s					
RM33			AML	AML		
	comp=E,6755μm,1.0s					
RM33			AML	AML		
	comp=N,6495μm,1.5s					
RM33			AML	AML		
	comp=N,6325μm,0.4s					
RM33			AML	AML		
	comp=E,6760μm,1.0s					
RM33			AML	AML		
	comp=E,1308μm,0.2s					
RM33			AML	AML		
	comp=E,1323μm,0.2s					
RM33			AML	AML		
	comp=N,1308μm,0.1s					
RM33			AML	AML		
	comp=N,1304μm,0.1s					
MDAR	**Monte D'Aria**	**0.35 358**	P	Pg	11 39 12.7	+0.1
MDAR			S	Sb	11 39 18.4	-1.0
MDAR			AML	AML		
	comp=N,54900μm,0.6s					
MDAR			AML	AML		
	comp=N,54950μm,0.6s					
MDAR			AML	AML		
	comp=E,35550μm,0.4s					
MDAR			AML	AML		
	comp=N,875μm,0.2s					
MDAR			AML	AML		
	comp=E,894μm,0.2s					
PIO1	**Pioraco**	**0.36 338**	P	Pg	11 39 12.8	+0.1
PIO1			S	Sb	11 39 18.8	-0.8
CAMP	**Campotosto**	**0.36 150**	⇓P	Pg	11 39 13.1	+0.2
CAMP			S	Sg	11 39 18.6	+0.9
CAMP			AML	AML		
	comp=N,2830μm,0.2s					
CAMP			AML	AML		
	comp=E,4620μm,0.2s					
CAMP			AML	AML		
	comp=E,2217μm,0.2s					
CAMP			AML	AML		
	comp=N,880μm,0.3s					
FIU1	**Fiuminata**	**0.38 334**	P	Pg	11 39 13.4	+0.2
FIU1			S	Sb	11 39 19.5	-0.8
T1211	**Morro Reatino**	**0.39 216**	P	Pb	11 39 13.9	-0.6
T1211			S	Sg	11 39 18.6	+0.2
T1211			AML	AML		
	comp=E,2595μm,0.4s					
T1211			AML	AML		
	comp=N,2202μm,0.1s					
T1211			AML	AML		
	comp=N,9030μm,0.8s					
T1211			AML	AML		
	comp=N,9130μm,0.8s					
T1211			AML	AML		
	comp=E,4920μm,1.1s					
T1211			AML	AML		
	comp=N,9110μm,0.8s					
T1211			AML	AML		
	comp=N,9070μm,0.8s					
T1211			AML	AML		
	comp=E,4900μm,1.1s					
T1211			AML	AML		
	comp=N,2188μm,0.3s					
T1211			AML	AML		
	comp=E,2516μm,0.1s					
T1211			AML	AML		
	comp=N,2202μm,0.1s					
T1211			AML	AML		
	comp=E,2497μm,0.1s					
TERO	**Teramo**	**0.40 124**	P	Pg	11 39 13.7	+0.3
TERO			S	Sb	11 39 19.7	-1.0
TERO			AML	AML		
	comp=E,2285μm,0.5s					
TERO			AML	AML		
	comp=N,2800μm,0.3s					
TERO			AML	AML		
	comp=E,2410μm,0.5s					
TERO			AML	AML		
	comp=N,3005μm,0.3s					
TERO			AML	AML		
	comp=E,3910μm,0.4s					
TERO			AML	AML		
	comp=E,4200μm,0.4s					
TERO			AML	AML		
	comp=N,4750μm,0.4s					
TERO			AML	AML		
	comp=N,4500μm,0.4s					
TERO			AML	AML		
	comp=E,1991μm,0.2s					
TERO			AML	AML		
	comp=N,2620μm,0.1s					
TERO			AML	AML		
	comp=E,2159μm,0.2s					
TERO			AML	AML		
	comp=N,2436μm,0.1s					
ARRO	**Arrone**	**0.40 228**	P	Pg	11 39 13.8	+0.3
ARRO			S	Sg	11 39 19.2	+0.4
ARRO			AML	AML		
	comp=E,1975μm,0.2s					
ARRO			AML	AML		
	comp=N,1300μm,0.2s					
ARRO			AML	AML		
	comp=E,5995μm,0.7s					
ARRO			AML	AML		
	comp=E,6000μm,0.7s					
ARRO			AML	AML		
	comp=N,4100μm,1.0s					
ARRO			AML	AML		
	comp=N,1298μm,0.2s					
ARRO			AML	AML		
	comp=E,1975μm,0.2s					
GAG1	**Gagliole**	**0.40 350**	⇑P	Pg	11 39 13.8	+0.3
GAG1			AML	AML		
	comp=E,2277μm,0.5s					
GAG1			AML	AML		
	comp=N,1818μm,0.4s					
ASSB	**Assisi San Ben**	**0.42 298**	P	Pg	11 39 14.1	+0.2
ASSB			S	Sb	11 39 20.5	-0.9
ASSB			AML	AML		
	comp=E,2265μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.42 166**	P	Pg	11 39 14.2	+0.3
T1247			S	Sb	11 39 20.6	-0.8
T1247			AML	AML		
	comp=N,8275μm,0.4s					
T1247			AML	AML		
	comp=E,5515μm,0.2s					
T1247			AML	AML		
	comp=N,8280μm,0.4s					
T1247			AML	AML		
	comp=N,1736μm,0.1s					
T1247			AML	AML		
	comp=E,1239μm,0.2s					
SNTG	**Esanatoglia**	**0.44 338**	⇓P	Pg	11 39 14.3	0.0
SNTG			AML	AML		
	comp=E,627μm,0.9s					
SNTG			AML	AML		
	comp=N,649μm,0.9s					
SNTG			AML	AML		
	comp=E,557μm,0.2s					
SNTG			AML	AML		
	comp=N,684μm,1.5s					
SNTG			AML	AML		
	comp=N,12800μm,0.5s					
SNTG			AML	AML		
	comp=E,10300μm,0.2s					
SNTG			AML	AML		
	comp=E,11150μm,0.2s					
SNTG			AML	AML		
	comp=N,13350μm,0.5s					
SNTG			AML	AML		
	comp=E,587μm,0.1s					
SNTG			AML	AML		
	comp=N,601μm,0.3s					
SNTG			AML	AML		
	comp=N,610μm,0.4s					
SNTG			AML	AML		
	comp=E,557μm,0.2s					
EL6	**Elcito**	**0.48 355**	⇓P	Pg	11 39 15.2	0.0
EL6			S	Sb	11 39 24.0	+0.6
EL6			AML	AML		
	comp=E,72600μm,1.4s					
EL6			AML	AML		
	comp=N,89150μm,0.2s					
EL6			AML	AML		
	comp=N,960μm,0.4s					
EL6			AML	AML		
	comp=E,759μm,0.2s					
CESX	**Cesi**	**0.49 241**	P	Pg	11 39 15.5	+0.3
CESX			S	Sb	11 39 22.7	-0.7
CESX			AML	AML		
	comp=E,750μm,0.6s					
CESX			AML	AML		
	comp=N,926μm,1.6s					
CESX			AML	AML		
	comp=E,6865μm,0.6s					
CESX			AML	AML		
	comp=N,8945μm,0.3s					
CESX			AML	AML		
	comp=E,750μm,0.6s					
CESX			AML	AML		
	comp=N,905μm,0.4s					
GIGS	**Gran Sasso**	**0.50 143**	P	Pg	11 39 15.1	-0.2
GIGS			S	Sg	11 39 21.7	-0.2
GIGS			AML	AML		
	comp=N,662μm,0.3s					
GIGS			AML	AML		
	comp=E,1106μm,1.1s					
GIGS			AML	AML		
	comp=E,358μm,0.2s					
GIGS			AML	AML		
	comp=N,268μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.51 312**	P	Pg	11 39 15.9	+0.3
ATCC			S	Sb	11 39 23.6	-0.4
ATCC			AML	AML		
	comp=E,1010μm,1.2s					
ATCC			AML	AML		
	comp=N,1218μm,0.7s					
ATCC			AML	AML		
	comp=E,15200μm,0.1s					
ATCC			AML	AML		
	comp=N,15550μm,0.9s					
ATCC			AML	AML		
	comp=N,15600μm,0.9s					
ATCC			AML	AML		
	comp=E,15250μm,0.1s					
ATCC			AML	AML		
	comp=E,998μm,0.1s					
ATCC			AML	AML		
	comp=N,1027μm,0.6s					
AQU	**L'Aquila**	**0.52 160**	P	Pg	11 39 15.9	0.0
AQU			AML	AML		
	comp=N,2745μm,1.1s					
AQU			AML	AML		
	comp=N,2525μm,1.1s					
AQU			AML	AML		
	comp=E,3360μm,1.6s					
AQU			AML	AML		
	comp=E,3345μm,1.6s					
AQU			AML	AML		
	comp=N,308μm,0.3s					
AQU			AML	AML		
	comp=N,305μm,0.3s					
AQU			AML	AML		
	comp=E,407μm,0.4s					
AQU			AML	AML		
	comp=E,436μm,0.4s					
FOSV	**Fossato di Vic**	**0.54 327**	⇑P	Pg	11 39 16.2	+0.1
FOSV			S	Sb	11 39 25.0	+0.2
FOSV			AML	AML		
	comp=E,640μm,0.3s					
FOSV			AML	AML		
	comp=N,1560μm,0.3s					
FOSV			AML	AML		
	comp=E,26200μm,0.3s					
FOSV			AML	AML		
	comp=N,20800μm,0.3s					
FOSV			AML	AML		
	comp=E,26150μm,0.3s					
FOSV			AML	AML		
	comp=E,640μm,0.3s					
FOSV			AML	AML		
	comp=N,1564μm,0.3s					
PP3	**Marolino**	**0.62 32**	⇑P	Pb	11 39 19.0	+0.5
PP3			AML	AML		
	comp=E,4190μm,0.3s					
PP3			AML	AML		
	comp=N,1510μm,0.5s					
PP3			AML	AML		
	comp=E,4310μm,0.4s					
PP3			AML	AML		
	comp=N,1405μm,0.5s					
PP3			AML	AML		
	comp=E,10085μm,0.5s					
PP3			AML	AML		
	comp=E,9575μm,1.1s					
PP3			AML	AML		
	comp=N,11070μm,0.6s					
PP3			AML	AML		
	comp=N,11000μm,0.6s					
PP3			AML	AML		
	comp=E,10055μm,0.5s					
PP3			AML	AML		
	comp=E,9610μm,1.1s					
PP3			AML	AML		
	comp=N,11100μm,0.6s					
PP3			AML	AML		
	comp=E,4312μm,0.4s					
PP3			AML	AML		
	comp=N,1403μm,0.5s					
PP3			AML	AML		
	comp=E,4190μm,0.3s					
PP3			AML	AML		
	comp=N,1511μm,0.5s					
ARVD	**Arcevia**	**0.67 346**	S	Sb	11 39 30.0	+1.3
VCEL	**Villa Celiera**	**0.68 132**	P	Pg	11 39 18.7	0.0
VCEL			S	Sb	11 39 29.2	+0.4
VCEL			AML	AML		
	comp=E,964μm,0.5s					
VCEL			AML	AML		
	comp=N,1115μm,0.4s					
VCEL			AML	AML		
	comp=E,1635μm,0.5s					
VCEL			AML	AML		
	comp=N,3560μm,1.1s					
VCEL			AML	AML		
	comp=N,3555μm,1.1s					
VCEL			AML	AML		
	comp=E,785μm,0.2s					
VCEL			AML	AML		
	comp=N,987μm,0.2s					
ATFO	**Monte Foce - G**	**0.68 320**	⇑P	Pg	11 39 18.8	0.0
ATFO			S	Sb	11 39 30.0	+1.1
ATFO			AML	AML		
	comp=E,429μm,0.5s					
ATFO			AML	AML		
	comp=N,390μm,1.2s					
ATFO			AML	AML		
	comp=N,4720μm,0.3s					
ATFO			AML	AML		
	comp=E,4745μm,0.8s					
ATFO			AML	AML		
	comp=E,429μm,0.5s					
ATFO			AML	AML		
	comp=N,384μm,0.5s					
T0110	**Collepietro**	**0.77 144**	⇑P	Pg	11 39 20.4	-0.1
T0110			AML	AML		
	comp=N,1495μm,0.6s					
T0110			AML	AML		
	comp=E,2720μm,0.4s					
T0110			AML	AML		
	comp=N,603μm,0.5s					
T0110			AML	AML		
	comp=E,606μm,0.3s					
PIEI	**Pieia**	**0.83 327**	S	Sn	11 39 35.0	-0.5
SACS	**San Casciano d**	**0.92 271**	P	Pn	11 39 25.0	+0.5
TOLF	**Tolfa**	**1.16 228**	S	Sn	11 39 44.0	+0.3
CSNT	**Castellina Chi**	**1.50 295**	⇓P	Pn	11 39 31.4	-1.2
CSNT			AML	AML		
	comp=N,328μm,0.6s					
CSNT			AML	AML		
	comp=E,288μm,0.6s					
FROS	**Frosini**	**1.52 285**	⇑P	Pg	11 39 36.5	+1.8
PTRJ	**Pietraroja**	**1.80 145**	S	Sb	11 40 01.0	-0.1

*ROM **30** 11:40:01.0±0.0, 42°.895N±0°.001×13°.145E±0°.003, h8km, ML3.5/67, Error ellipse: s-maj=0.2km s-min=0.0km az=77.0*
*IDC **30** 11:40:02.1±1.3, 43°.05N×13°.29E, h0km, mb3.6/6, mbtmp3.6/11, ML3.5/5, MS3.4/1, Error ellipse: s-maj=24.9km s-min=13.8km az=91.0*
*LDG **30** 11:40:02.2±0.1, 42°.78N×13°.15E, h10km, Ml3.5/25, Error ellipse: s-maj=4.3km s-min=3.3km az=48.0*
*PRU **30** 11:40:03.9±0.0, 43°.06N×13°.24E, h0km*

ISC 30 11:40:01.7±0.7, 42°.90N±0°.01×13°.13E±0°.01, h9km±4km, n235, σ1§80/315, mb3.7/6, 12C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**136**	⇓*i*P	**Pg**	**11 40 03.0**	**-0.8**
T1245				S	**Sg**	**11 40 04.3**	**-1.1**
T1216	**Preci, Frazion**	**0.08**	**261**	P	**Pg**	**11 40 03.8**	**-0.1**
T1216				S	**Sg**	**11 40 05.8**	**+0.3**
FEMA	**Monte Fema**	**0.08**	**316**	P	**Pg**	**11 40 03.9**	**-0.1**
FEMA				S	**Sg**	**11 40 05.7**	**0.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,82350μm,0.4s						
T1256	**Bolognola (MC)**	**0.13**	**35**	⇑P	**Pg**	**11 40 04.2**	**-0.5**
T1256				S	**Sg**	**11 40 06.6**	**-0.2**
FDMO	**Fiordimonte**	**0.14**	**348**	P	**Pg**	**11 40 04.6**	**-0.1**
FDMO				S	**Sg**	**11 40 07.3**	**+0.4**
T1214	**Arquata del Tr**	**0.16**	**157**	P	**Pg**	**11 40 04.7**	**-0.5**
T1214				S	**Sg**	**11 40 07.4**	**-0.1**
T1212	**Cascia, Frazio**	**0.16**	**202**	⇑P	**Pg**	**11 40 05.2**	**0.0**
T1212				S	**Sg**	**11 40 08.1**	**+0.5**
T1219	**Muccia, Frazio**	**0.17**	**330**	P	**Pg**	**11 40 05.5**	**+0.1**
T1219				S	**Sg**	**11 40 08.7**	**+0.7**
T1213	**Norcia, Frazio**	**0.18**	**180**	P	**Pg**	**11 40 05.4**	**0.0**
T1213				S	**Sg**	**11 40 08.1**	**0.0**
AM05	**Amandola Campo**	**0.18**	**66**	⇑*i*P	**Pg**	**11 40 05.2**	**-0.3**
AM05				S	**Sg**	**11 40 08.1**	**0.0**
AM05				AML	AML		
	comp=E,9630μm,0.6s						
AM05				AML	AML		
	comp=E,9620μm,0.6s						
AM05				AML	AML		
	comp=N,8945μm,0.2s						
AM05				AML	AML		
	comp=E,42150μm,0.6s						
AM05				AML	AML		
	comp=N,2200μm,0.9s						
AM05				AML	AML		
	comp=E,9655μm,0.6s						
T1244	**Arquata del Tr**	**0.19**	**139**	P	**Pg**	**11 40 05.4**	**-0.4**
T1244				S	**Sg**	**11 40 08.9**	**+0.4**
T1220	**Camerino, Fraz**	**0.21**	**352**	P	**Pg**	**11 40 06.0**	**0.0**
T1220				S	**Sg**	**11 40 09.8**	**+0.9**
T1215	**Vallo di Nera,**	**0.21**	**242**	⇑*i*P	**Pg**	**11 40 06.2**	**+0.1**
T1215				S	**Sg**	**11 40 10.1**	**+1.0**
T1215				AML	AML		
	comp=N,15200μm,0.5s						
T1215				AML	AML		
	comp=E,19900μm,0.5s						
T1215				AML	AML		
	comp=N,15150μm,0.5s						
T1215				AML	AML		
	comp=N,15000μm,0.5s						
T1215				AML	AML		
	comp=N,15200μm,0.5s						
T1215				AML	AML		
	comp=E,19950μm,0.5s						
T1215				AML	AML		
	comp=E,20150μm,0.5s						
T1215				AML	AML		
	comp=N,14950μm,0.5s						
GUMA	**Gualdo di Mace**	**0.22**	**44**	⇑P	**Pg**	**11 40 06.2**	**0.0**
GUMA				S	**Sg**	**11 40 10.2**	**+0.9**
GUMA				AML	AML		
	comp=E,63550μm,0.5s						
GUMA				AML	AML		
	comp=N,86000μm,0.5s						
GUMA				AML	AML		
	comp=N,86000μm,0.5s						
GUMA				AML	AML		
	comp=E,71400μm,0.3s						
GUMA				AML	AML		
	comp=N,95200μm,0.3s						
T1241	**Roccafluvione,**	**0.23**	**102**	P	**Pg**	**11 40 06.2**	**-0.2**
T1241				S	**Sg**	**11 40 09.9**	**+0.4**
T1241				AML	AML		
	comp=E,16350μm,0.4s						
T1241				AML	AML		
	comp=N,11600μm,0.9s						
T1241				AML	AML		
	comp=N,11650μm,0.9s						
T1241				AML	AML		
	comp=E,16400μm,0.4s						
T1218	**Civita (PG)**	**0.23**	**182**	P	**Pg**	**11 40 06.2**	**-0.3**
T1218				S	**Sg**	**11 40 10.2**	**+0.5**
T1217	**Poggiodomo (PG**	**0.24**	**217**	⇑*i*P	**Pg**	**11 40 06.6**	**0.0**
T1217				S	**Sg**	**11 40 10.8**	**+1.0**
T1217				AML	AML		
	comp=E,11405μm,0.7s						
T1217				AML	AML		
	comp=N,16000μm,0.2s						
T1217				AML	AML		
	comp=E,11130μm,0.7s						
T1217				AML	AML		

comp=E,11430μm,0.7s
T1217 AML AML
comp=E,11135μm,0.7s
T1217 AML AML
comp=N,15800μm,0.2s
T1217 AML AML
comp=E,11435μm,0.7s
T1217 AML AML
comp=E,11145μm,0.7s
T1217 AML AML
comp=N,15850μm,0.2s
T1217 AML AML
comp=E,11165μm,0.7s
T1217 AML AML
comp=N,15950μm,0.2s
T1217 AML AML
comp=E,11445μm,0.7s
T1201 Domo (RI) 0.26 160 P **Pg 11 40 06.9 -0.1**
T1201 S **Sg 11 40 11.6 +1.0**
T1204 Amatrice, Fraz 0.27 148 ⇑P **Pg 11 40 07.1 0.0**
T1204 S **Sg 11 40 11.3 +0.6**
T1204 AML AML
comp=N,17850μm,0.1s
T1204 AML AML
comp=E,26150μm,0.3s
T1204 AML AML
comp=E,26100μm,0.3s
T1204 AML AML
comp=N,17900μm,0.1s
SEF1 Sefro 0.28 332 P **Pg 11 40 07.5 +0.2**
SEF1 S **Sg 11 40 12.1 +1.1**
SEF1 AML AML
comp=E,68600μm,0.2s
SEF1 AML AML
comp=N,54350μm,0.4s
MDAR Monte D'Aria 0.29 2 P **Pg 11 40 07.2 -0.3**
MDAR S **Sg 11 40 12.1 +0.7**
MDAR AML AML
comp=N,54900μm,0.6s
MDAR AML AML
comp=N,54950μm,0.6s
MDAR AML AML
comp=E,35550μm,0.4s
PIO1 Pioraco 0.29 339 P **Pg 11 40 07.7 +0.1**
PIO1 S **Sg 11 40 12.6 +1.1**
PIO1 AML AML
comp=E,25800μm,1.0s
PIO1 AML AML
comp=N,34950μm,0.4s
LNSS Leonessa 0.31 192 P **Pg 11 40 07.5 -0.3**
LNSS S **Sg 11 40 12.9 +1.0**
LNSS AML AML
comp=E,5825μm,0.3s
LNSS AML AML
comp=N,15150μm,0.4s
LNSS AML AML
comp=E,5820μm,0.3s
T1243 Rocca Santa Ma 0.32 131 P **Pg 11 40 07.9 -0.1**
T1243 S **Sg 11 40 12.4 +0.2**
FIU1 Fiuminata 0.32 333 P **Pg 11 40 08.2 +0.1**
FIU1 S **Sb 11 40 13.5 -1.5**
FIU1 AML AML
comp=N,16750μm,1.0s
FIU1 AML AML
comp=E,18500μm,0.4s
SSM1 San Severino M 0.33 7 P **Pg 11 40 08.1 -0.1**
SSM1 S **Sb 11 40 13.7 -1.5**
GAG1 Gagliole 0.34 353 P **Pg 11 40 08.4 0.0**
GAG1 S **Sb 11 40 14.0 -1.5**
MNTP Montappone 0.34 47 P **Pg 11 40 08.7 +0.2**
MNTP S **Sb 11 40 15.2 -0.5**
MNTP AML AML
comp=E,21350μm,1.2s
MNTP AML AML
comp=N,14400μm,1.1s
SNTG Esanatoglia 0.38 339 ⇓*i*P **Pg 11 40 09.1 -0.1**
SNTG S **Sb 11 40 15.4 -1.3**
SNTG AML AML
comp=E,10300μm,0.2s
SNTG AML AML
comp=N,12750μm,0.5s
SNTG AML AML
comp=N,13350μm,0.5s
SNTG AML AML
comp=E,10300μm,0.2s
SNTG AML AML
comp=N,12750μm,0.5s
SNTG AML AML
comp=E,11150μm,0.2s
RM33 Pellescritta (0.40 171 ⇑*e*P **Pg 11 40 09.0 -0.6**
RM33 S **Sg 11 40 15.2 +0.4**
RM33 AML AML
comp=E,6920μm,1.0s
RM33 AML AML
comp=E,6760μm,1.0s
RM33 AML AML
comp=N,6320μm,0.4s
RM33 AML AML
comp=E,6755μm,1.0s
RM33 AML AML
comp=N,6325μm,0.4s
RM33 AML AML
comp=E,6920μm,1.0s
RM33 AML AML
comp=N,6495μm,1.5s
OFFI Offida 0.41 85 P **Pg 11 40 10.1 +0.3**
OFFI S **Sb 11 40 18.0 +0.4**
OFFI AML AML
comp=E,11250μm,0.8s
OFFI AML AML
comp=N,12025μm,0.9s
ARRO Arrone 0.42 219 P **Pg 11 40 09.7 -0.2**
ARRO S **Sb 11 40 17.0 -0.8**
ARRO AML AML
comp=E,5995μm,0.7s
ARRO AML AML
comp=N,4100μm,1.0s
ARRO AML AML
comp=E,6000μm,0.7s
T1246 Crognaleto (TE 0.42 140 P **Pg 11 40 09.3 -0.6**
T1246 S **Sg 11 40 15.6 +0.1**
T1211 Morro Reatino 0.42 208 P **Pg 11 40 09.8 -0.1**
T1211 S **Sg 11 40 16.7 +1.2**
T1211 AML AML
comp=E,4900μm,1.1s
T1211 AML AML
comp=N,9065μm,0.8s
T1211 AML AML
comp=E,4955μm,1.1s
T1211 AML AML
comp=N,9090μm,0.8s
T1211 AML AML
comp=E,4900μm,1.1s
T1211 AML AML
comp=N,9030μm,0.8s
T1211 AML AML
comp=N,9130μm,0.8s
T1211 AML AML
comp=N,9070μm,0.8s
T1211 AML AML
comp=N,9110μm,0.8s
T1211 AML AML
comp=E,4955μm,1.1s
CAMP Campotosto 0.42 150 P **Pg 11 40 09.2 -0.8**
CAMP S **Sg 11 40 15.7 +0.1**
CAMP AML AML
comp=E,4620μm,0.2s
CAMP AML AML
comp=N,3675μm,0.5s
EL6 Elcito 0.43 358 P **Pg 11 40 09.9 -0.2**
EL6 S **Sb 11 40 16.9 -1.2**
EL6 AML AML
comp=E,72500μm,1.4s
EL6 AML AML
comp=N,88950μm,0.2s
TRE1 Treia 0.43 18 P **Pg 11 40 10.4 +0.2**
TRE1 S **Sb 11 40 18.1 -0.1**
TERO Teramo 0.45 128 P **Pg 11 40 09.8 -0.7**
TERO S **Sg 11 40 16.6 +0.2**
TERO AML AML
comp=E,4200μm,0.4s
TERO AML AML
comp=N,4900μm,0.5s
TERO AML AML
comp=E,3910μm,0.4s
TERO AML AML
comp=N,4665μm,0.5s
ATCC AVT- Casa Cast 0.45 308 P **Pg 11 40 10.7 +0.1**
ATCC S **Sb 11 40 18.4 -0.5**
ATCC AML AML
comp=E,15200μm,0.1s
ATCC AML AML
comp=N,15550μm,0.9s
ATCC AML AML
comp=N,15600μm,0.9s
ATCC AML AML
comp=E,15250μm,0.1s
FOSV Fossato di Vic 0.47 326 P **Pg 11 40 10.9 0.0**
FOSV S **Sb 11 40 18.7 -0.7**
FOSV AML AML
comp=E,26200μm,0.3s
FOSV AML AML
comp=N,20800μm,0.3s
FOSV AML AML
comp=E,26150μm,0.3s
CING Cingoli 0.47 6 P **Pg 11 40 10.8 -0.1**
CING S **Sb 11 40 18.5 -1.0**
T1247 Pizzolo (AQ) 0.48 165 P **Pg 11 40 10.3 -0.7**
T1247 S **Sg 11 40 17.7 +0.4**
T1247 AML AML
comp=N,8275μm,0.4s
T1247 AML AML
comp=N,8280μm,0.4s
T1247 AML AML
comp=E,5515μm,0.2s
CESX Cesi 0.50 234 ⇑*i*P **Pg 11 40 11.1 -0.3**
CESX S **Sb 11 40 19.3 -0.8**
CESX AML AML
comp=E,6865μm,0.6s
CESX AML AML
comp=N,8945μm,0.3s
MMUR Monte Murano 0.55 350 P **Pg 11 40 12.1 -0.3**
CADA Capodarco di F 0.55 58 P **Pb 11 40 13.2 -0.3**
GIGS Gran Sasso 0.56 144 P **Pg 11 40 11.8 -0.7**
GIGS S **Sg 11 40 20.0 +0.1**
GIGS AML AML
comp=N,662μm,0.3s
GIGS AML AML
comp=E,1106μm,1.1s
CIMA Civitanova Mar 0.57 45 P **Pg 11 40 12.9 +0.2**
MURB Monte Urbino 0.57 309 P **Pg 11 40 12.7 -0.1**
MURB S **Sb 11 40 22.6 +0.4**
MURB AML AML
comp=E,21950μm,0.3s
MURB AML AML
comp=E,23550μm,0.3s
MURB AML AML
comp=N,15450μm,0.3s
MURB AML AML
comp=N,15300μm,0.3s
AQU L'Aquila 0.59 160 P **Pg 11 40 12.2 -0.8**
AQU S **Sg 11 40 21.6 +0.9**
TRTR Tortoreto Alta 0.59 99 P **Pg 11 40 13.5 +0.4**
TRTR AML AML
comp=E,9205μm,1.3s
TRTR AML AML
comp=N,9450μm,1.1s
PP3 Marolino 0.59 37 P **Pb 11 40 13.5 -0.8**
PP3 AML AML
comp=E,10085μm,0.5s
PP3 AML AML
comp=N,10970μm,0.6s
PP3 AML AML
comp=E,9575μm,1.1s
PP3 AML AML
comp=N,11070μm,0.6s
PP3 AML AML
comp=E,10055μm,0.5s
PP3 AML AML
comp=N,11100μm,0.6s
PP3 AML AML
comp=E,9610μm,1.1s
ARVD Arcevia 0.61 347 P **Pg 11 40 12.2 -1.4**
ARVD S **Sb 11 40 23.0 -0.3**
ARVD AML AML
comp=N,6175μm,0.5s
ARVD AML AML
comp=E,8255μm,0.1s
ATSC Scheggia e Pas 0.61 328 P **Pg 11 40 13.5 -0.1**
ATSC S **Sb 11 40 23.0 -0.5**
ATFO Monte Foce - G 0.62 319 P **Pg 11 40 13.6 -0.1**
ATFO S **Sb 11 40 23.5 -0.1**
ATFO AML AML
comp=E,4745μm,0.8s
ATFO AML AML
comp=N,4720μm,0.3s
FIAM Fiamignano 0.64 181 P **Pg 11 40 13.1 -0.9**
FIAM S **Sg 11 40 22.5 +0.2**
FIAM AML AML
comp=E,2095μm,0.9s
FIAM AML AML
comp=N,1860μm,1.2s
ATTE AVT- Monte Tez 0.64 298 P **Pb 11 40 15.2 0.0**
ATTE AML AML
comp=E,2875μm,0.5s
ATTE AML AML
comp=N,2380μm,1.1s
ATLO AVT- Montelove 0.67 308 P **Pg 11 40 14.4 -0.3**
ATLO S **Sb 11 40 25.2 +0.2**
FRON Frontone 0.68 335 P **Pg 11 40 14.3 -0.5**
FRON S **Sb 11 40 25.1 -0.3**
FRON AML AML
comp=N,8105μm,0.5s
FRON AML AML
comp=E,6095μm,0.5s
TB02 Pietralunga 0.70 312 P **Pg 11 40 15.2 -0.1**
TB02 S **Sb 11 40 26.1 +0.1**
ATBU Serra di Buran 0.71 324 P **Pg 11 40 15.4 -0.1**
ATVO AVT- Monte Val 0.71 312 ⇓*e*P **Pg 11 40 15.0 -0.5**
ATVO S **Sb 11 40 26.4 +0.1**
ATVO AML AML
comp=N,3345μm,0.2s
ATVO AML AML
comp=E,3395μm,0.5s
ATVA AVT- Monte Val 0.72 302 P **Pg 11 40 14.7 -0.9**
FAGN Fagnano 0.72 152 P **Pg 11 40 14.9 -0.7**
FAGN AML AML
comp=N,3210μm,0.3s
FAGN AML AML
comp=E,3695μm,0.5s
TB03 Pietralunga 0.72 314 P **Pg 11 40 15.4 -0.3**
TB03 S **Sb 11 40 26.8 +0.2**
VCEL Villa Celiera 0.73 134 P **Pg 11 40 15.1 -0.8**
VCEL AML AML
comp=N,3560μm,1.1s
VCEL AML AML
comp=E,2905μm,0.8s
VCEL AML AML
comp=N,3555μm,1.1s
AOI Ancona 0.73 28 ⇑P **Pg 11 40 15.5 -0.4**
AOI AML AML
comp=E,2840μm,0.5s
AOI AML AML
comp=N,4090μm,0.3s
MGAB Montegabbione 0.74 271 P **Pg 11 40 14.9 -1.1**
MGAB AML AML
comp=E,5210μm,1.3s
MGAB AML AML
comp=E,5560μm,0.4s
MGAB AML AML
comp=N,16150μm,0.4s
MGAB AML AML
comp=N,15800μm,0.4s
ATPC Poggio Castell 0.76 320 P **Pg 11 40 16.1 -0.3**
ATPI Pietralunga - 0.76 316 P **Pg 11 40 16.1 -0.3**
ATPI S **Sb 11 40 28.0 +0.3**
ATMI Monte Miggiano 0.76 305 P **Pb 11 40 16.8 -0.4**
PCRO Pietralacroce 0.76 23 P **Pg 11 40 16.5 0.0**
PIEI Pieia 0.77 326 P **Pg 11 40 16.5 0.0**
PIEI S **Sb 11 40 28.2 +0.3**
PIEI AML AML
comp=N,2925μm,0.4s
PIEI AML AML
comp=E,4010μm,0.7s
MPAG Monte Paganucc 0.77 340 P **Pg 11 40 16.3 -0.3**
MPAG S **Sb 11 40 28.6 +0.4**
MPAG AML AML
comp=N,4080μm,0.4s
MPAG AML AML
comp=E,8670μm,0.3s
SRES S.Oreste - Sor 0.81 215 P **Pg 11 40 16.8 -0.5**
SRES AML AML
comp=N,1995μm,0.8s
SRES AML AML
comp=E,2455μm,0.8s
FSSB Fossombrone 0.83 342 P **Pg 11 40 17.3 -0.4**
FSSB AML AML
comp=N,15200μm,0.5s
FSSB AML AML
comp=E,16150μm,0.4s
T0110 Collepietro 0.83 144 P **Pg 11 40 16.8 -0.9**
T0110 AML AML
comp=E,2720μm,0.4s
T0110 AML AML
comp=N,2740μm,0.6s
APEC Apecchio 0.83 322 P **Pg 11 40 17.9 +0.2**
ATMC Monte Cedrone 0.87 309 P **Pg 11 40 18.4 -0.1**
SACS San Casciano d 0.90 267 P **Pg 11 40 18.7 -0.3**
SACS AML AML
comp=E,2885μm,0.4s
SACS AML AML
comp=N,3035μm,1.1s
PTQR Pietraquaria 0.90 167 P **Pg 11 40 17.9 -1.2**
PE3 Peglio 0.92 330 P **Pg 11 40 19.3 -0.1**
PE3 AML AML
comp=E,38μm,0.4s
PE3 AML AML
comp=N,50μm,0.9s
MTCE Montecelio 0.93 198 P **Pg 11 40 19.2 -0.3**
MTCE AML AML
comp=E,1740μm,0.7s
MTCE AML AML
comp=N,1114μm,1.6s
CAFI Castiglion Fio 0.95 297 P **Pg 11 40 19.7 -0.3**
CAFI AML AML
comp=E,1660μm,1.4s
CAFI AML AML
comp=N,1545μm,0.7s
CERT Cerreto 0.96 186 P **Pg 11 40 17.8 -2.3**
SSP9 Sansepolcro 0.99 313 P **Pb 11 40 20.9 -0.1**
LATE Laterza 1.02 254 P **Pg 11 40 20.7 -0.5**
RCAV Rocca di Cave 1.06 187 ⇑*i*P **Pb 11 40 22.7 +0.3**
RCAV AML AML
comp=E,2280μm,0.8s
RCAV AML AML
comp=N,1875μm,0.9s
SF11 Podere del Sol 1.06 269 P **Pb 11 40 22.5 +0.2**
MCIV Monte Civitell 1.07 264 P **Pg 11 40 22.5 +0.2**
MCIV AML AML
comp=N,1325μm,1.0s
MCIV AML AML
comp=E,1120μm,0.9s
VVLD Villa Vallelon 1.09 160 P **Pn 11 40 23.9 +0.6**
SF13 Bagnolo 1.11 266 P **Pg 11 40 22.9 -0.2**
GUAR Guarcino 1.12 173 AML AML
comp=N,1185μm,0.6s
GUAR AML AML
comp=E,1485μm,0.9s
CRE Caprese Michel 1.12 310 P **Pg 11 40 22.9 -0.3**
CRE AML AML
comp=E,1010μm,1.5s
CRE AML AML
comp=N,1385μm,0.7s
SF14 Selvena 1.12 263 P **Pg 11 40 22.1 -1.2**
RMP Rome, Mte Porz 1.14 196 P **Pn 11 40 24.2 +0.3**
RSM Repubblica di 1.14 335 P **Pn 11 40 24.6 +0.6**
LPEL Lama dei Pelig 1.16 137 P **Pb 11 40 22.5 -1.5**
TOLF Tolfa 1.18 225 P **Pb 11 40 23.2 -1.2**
TOLF AML AML
comp=E,1012μm,0.7s
TOLF AML AML
comp=N,1240μm,0.5s
SAMA S.Maria delle 1.19 200 AML AML
comp=N,788μm,1.0s
SAMA AML AML
comp=E,906μm,1.5s
ARCI Arcidosso 1.22 268 P **Pb 11 40 24.3 -0.7**
POFI Posta Fibreno 1.26 160 P **Pg 11 40 25.9 0.0**
POFI AML AML
comp=E,658μm,0.9s
POFI AML AML
comp=N,538μm,1.0s
ASQU Asqua 1.32 313 P **Pg 11 40 27.4 +0.3**
GIUL Giuliano Di Ro 1.35 176 P **Pb 11 40 27.3 +0.1**
GIUL AML AML
comp=E,552μm,0.9s
GIUL AML AML
comp=N,522μm,0.7s
SFI Santa Sofia 1.37 317 P **Pg 11 40 28.7 +0.7**
SFI AML AML
comp=N,783μm,1.1s
SFI AML AML
comp=E,750μm,0.6s
LATB Latina 1.41 185 P **Pb 11 40 28.2 -0.1**
LATB AML AML
comp=E,198μm,1.6s
LATB AML AML
comp=N,192μm,1.6s
CSNT Castellina Chi 1.46 294 P **Pn 11 40 28.5 +0.2**
CERA Filignano 1.46 153 P **Pg 11 40 30.1 +0.3**
FRES Fresagrandinar 1.47 129 ⇑P **Pg 11 40 30.6 +0.6**
FROS Frosini 1.48 283 P **Pn 11 40 28.3 -0.2**
RUFI Rufina 1.50 309 P **Pb 11 40 29.6 -0.2**
OSSC Osservatorio P 1.51 295 P **Pn 11 40 28.1 -0.8**
MIDA Miranda 1.51 146 P **Pg 11 40 30.6 -0.1**
MAON Monte Argentar 1.55 253 P **Pn 11 40 29.0 -0.5**
LMD Lutirano 1.56 319 P **Pg 11 40 31.8 0.0**
LMD AML AML
comp=E,545μm,0.7s
LMD AML AML
comp=N,718μm,1.2s
TRIF Trifonti 1.65 278 P **Pn 11 40 30.6 -0.3**
CASP Castiglione de 1.67 267 P **Pn 11 40 30.5 -0.7**
CASP AML AML
comp=E,190μm,0.8s
CASP AML AML
comp=N,134μm,1.1s
VAGA Valle Agricola 1.70 151 P **Pg 11 40 34.0 -0.3**
MPPT Montemurlo 1.82 306 AML AML
comp=N,353μm,0.7s
MPPT AML AML
comp=E,464μm,0.7s
MODR Mondragone 1.84 162 P **Pb 11 40 34.7 -0.9**
A318A Donoratico (LI 1.89 277 P **Pn 11 40 34.3 +0.2**
MTCR Monte La Croce 1.91 307 P **Pn 11 40 35.2 +0.6**
FNVD Fontana Vidola 1.93 312 P **Pn 11 40 35.8 +0.9**
POPM Popiglio 2.07 304 P **Pn 11 40 36.8 +0.1**
MAIM Mastiano 2.17 299 P **Pn 11 40 38.4 +0.3**
MAIM AML AML
comp=E,204μm,0.6s
MAIM AML AML
comp=N,244μm,0.7s
BDI Bagni Di Lucca 2.17 303 P **Pn 11 40 37.9 -0.4**
CARD Cardoso 2.23 301 P **Pn 11 40 39.0 +0.1**
GROG Isola di Gorgo 2.42 284 P **Pn 11 40 42.0 +0.5**
PGF Pioggiola 3.06 265 *e*Pn **Pn 11 40 50.1 -0.3**
PGF Pioggiola 3.06 265 *e*P **Pn 11 40 51.4 +1.0**
PGF *e*Sn **Sn 11 41 25.5 -1.7**
comp=N,29nm,0.9s
SABO M.te Sabotino 3.10 6 P **Pn 11 40 51.1 +0.3**
SABO AML AML
comp=N,1980μm,0.7s
SABO AML AML
comp=E,468μm,0.7s
SABO AML AML
comp=E,1885μm,0.7s
SABO AML AML
comp=N,520μm,0.7s
CGRP Cima Grappa 3.12 343 P **Pn 11 40 52.4 +1.0**
CGRP AML AML
comp=E,424μm,0.3s
CGRP AML AML
comp=N,412μm,0.8s
SALO Salr 3.29 326 P **Pn 11 40 55.1 +1.5**
SALO AML AML
comp=E,206μm,1.2s
SALO AML AML
comp=N,328μm,0.9s
LJU Ljubljana 3.30 17 AML AML
comp=E,2265μm,0.5s
LJU AML AML
comp=N,3135μm,0.7s
CTI Castel Tesino 3.32 342 P **Pn 11 40 54.8 +0.9**
CTI AML AML
comp=N,388μm,0.3s
CTI AML AML

comp=E,283μm,1.1s
MPRI Monte Prat 3.34 358 P Pn 11 40 54.5 +0.3
MPRI AML AML
comp=E,314μm,0.5s
MPRI AML AML
comp=N,598μm,0.4s
LUSI Trento, Gardas 3.43 334 P Pn 11 40 57.0 +1.6
LUSI AML AML
comp=E,194μm,0.7s
LUSI AML AML
comp=N,245μm,1.6s
CIMO Cimolais 3.44 352 P Pn 11 40 55.8 +0.2
CIMO AML AML
comp=N,92μm,0.6s
CIMO AML AML
comp=N,94μm,0.6s
CIMO AML AML
comp=E,87μm,0.5s
CIMO AML AML
comp=E,87μm,0.5s
PTCC Patocco-Chiusa 3.50 3 P Pn 11 40 56.3 -0.2
PTCC AML AML
comp=E,168μm,0.5s
PTCC AML AML
comp=N,212μm,0.4s
GAGG Gaggia 3.54 335 P Pn 11 40 58.5 +1.4
GAGG AML AML
comp=E,252μm,1.2s
GAGG AML AML
comp=N,239μm,0.8s
ACOM Acomizza, Ital 3.66 4 P Pn 11 40 59.8 +1.1
ACOM AML AML
comp=N,273μm,0.6s
ACOM AML AML
comp=E,303μm,0.4s
ACOM AML AML
comp=N,268μm,0.6s
ACOM AML AML
comp=E,316μm,1.5s
MABI Malga Bissina 3.66 330 AML AML
comp=N,92μm,0.4s
MABI AML AML
comp=E,68μm,1.0s
MYKA Terra Mystica 3.74 5 ePn Pn 11 41 00.6 +0.8
comp=E,9.5nm,0.5s,SNR=6.2
OBKA Obir 3.75 15 ePn Pn 11 41 00.8 +1.0
comp=E,2.5nm,0.2s
KOSI Kohlern 3.77 341 P Pn 11 41 01.8 +1.5
KOSI AML AML
comp=E,268μm,0.6s
KOSI AML AML
comp=N,258μm,0.8s
ABTA Abfaltersbach 3.87 354 i Pn Pn 11 41 02.4 +0.9
comp=N,26nm,0.4s,SNR=22
SOKA Soboth 4.01 19 ePn Pn 11 41 06.5 +3.0
comp=N,0.9nm,0.2s
RISI Rein 4.11 350 AML AML
comp=N,534μm,0.5s
RISI AML AML
comp=E,728μm,0.6s
MUGIO Muggio 4.20 317 AML AML
comp=N,58μm,1.4s
MUGIO AML AML
comp=E,64μm,0.4s
ROSI Rosskopf 4.20 344 P Pn 11 41 07.6 +1.4
ROSI AML AML
comp=N,234μm,0.5s
ROSI AML AML
comp=E,195μm,1.2s
SBF Sospel 4.26 285 ePn Pn 11 41 06.6 -0.2
SBF Sospel 4.26 285 eP Pn 11 41 09.9 +3.1
SBF eSn **Sn 11 41 55.0 -1.7**
comp=E,16nm,0.4s
FETA Feichten 4.46 338 i Pn Pn 11 41 11.4 +1.8
comp=E,12nm,0.8s,SNR=7.0
WTTA Wattenberg 4.49 347 ePn Pn 11 41 11.9 +1.8
comp=E,14nm,0.6s,SNR=8.2
DAVOX Davos/Dischmat 4.51 330 Pn Pn 11 41 12.6 +2.2
comp=E,2.9nm,0.3s,baz=145,slow=13,SNR=16
DAVOX Sn **Sn 11 42 06.0 +2.9**
comp=E,2.3nm,0.3s,baz=268,slow=22,SNR=3.8
comp=E,10nm,0.5s
DAVOX Davos/Dischmat 4.51 330 P Pn 11 41 13.3 +2.8
SQTA Sankt Quirin 4.53 343 ePn Pn 11 41 12.3 +1.7
comp=E,19nm,0.4s
WATA Walderalm 4.57 347 ePn Pn 11 41 13.5 +2.4
comp=E,16nm,0.5s,SNR=10
ARSA Arzberg 4.67 21 ePn Pn 11 41 13.3 +0.9
comp=E,2.5nm,0.4s
MOTA Moosalm 4.67 343 ePn Pn 11 41 14.7 +2.1
comp=E,18nm,0.7s,SNR=12
BIOA Bad Ischl, Aus 4.80 4 ePn Pn 11 41 15.1 +0.8
comp=E,11nm,0.4s,SNR=14
LMR La Mourre 4.86 277 ePn Pn 11 41 14.0 -1.1
LMR La Mourre 4.86 277 eP Pn 11 41 17.2 +2.1
LMR eSn **Sn 11 42 08.7 -2.8**
comp=E,15nm,1.0s
RETA Reutte 4.88 341 ePn Pn 11 41 17.5 +2.2
comp=E,5.0nm,0.4s
MBDF Montbardon 4.95 294 ePn Pn 11 41 15.6 -0.8
MBDF Montbardon 4.95 294 eP Pn 11 41 19.0 +2.6
MBDF eSn **Sn 11 42 11.3 -2.5**
comp=E,14nm,0.7s
DAVA Damuels 4.95 333 ePn Pn 11 41 18.5 +2.1
comp=E,7.5nm,0.6s
MOA Molln 5.01 9 ePn Pn 11 41 17.9 +0.7
comp=E,1.2nm,0.1s
LPG La Plagne 5.26 302 ePn Pn 11 41 20.2 -0.7
LPG La Plagne 5.26 302 eP Pn 11 41 23.5 +2.6
LPG eSn **Sn 11 42 19.1 -2.7**
comp=E,24nm,0.9s
LPL La Plagne 5.29 302 ePn Pn 11 41 21.1 0.0
LPL eSn **Sn 11 42 19.3 -3.0**
comp=E,7.6nm,0.4s
CONA Conrad Observa 5.38 20 ePn Pn 11 41 22.0 -0.3
comp=E,1.0nm,0.2s
SMRF Simiane la Rot 5.60 284 ePn Pn 11 41 24.7 -0.6
SMRF Simiane la Rot 5.60 284 eP Pn 11 41 28.1 +2.8
SMRF eSn **Sn 11 42 26.9 -2.9**
comp=E,9.4nm,0.9s
ORIF Oris-en-Rattie 5.61 294 ePn Pn 11 41 24.6 -0.8
ORIF Oris-en-Rattie 5.61 294 eP Pn 11 41 28.1 +2.7
ORIF eSn **Sn 11 42 26.8 -3.2**
comp=E,13nm,0.6s
GERES GERESS Array B 5.96 4 Pn Pn 11 41 29.9 -0.3
comp=E,1.2nm,0.3s,baz=184,slow=13,SNR=18
GERES Sn **Sn 11 42 36.5 -2.1**
comp=E,6.0nm,0.3s,baz=176,slow=23,SNR=18
comp=E,1.8nm,0.3s
CKRC Cesky Krumlov 5.97 8 ePN Pn 11 41 30.2 -0.2
CKRC eSN **Sn 11 42 35.7 -3.2**
CABF La Chapelle 6.23 309 ePn Pn 11 41 33.8 -0.2
CABF La Chapelle 6.23 309 eP Pn 11 41 37.4 +3.4
CABF eSn **Sn 11 42 41.8 -3.6**
comp=E,32nm,1.1s
KHC Kasperske Hory 6.24 3 ePN Pn 11 41 33.2 -0.8
KHC eSN **Sn 11 42 42.5 -2.9**
VIVF Saint-Julien-l 6.41 291 ePn Pn 11 41 35.4 -1.0
VIVF Saint-Julien-l 6.41 291 eP Pn 11 41 39.7 +3.3
VIVF eSn **Sn 11 42 46.0 -3.8**
comp=E,19nm,1.4s
KRUC Moravsky 6.57 19 ePN Pn 11 41 33.2 -5.3
KRUC eSN **Sn 11 42 50.1 -3.3**
HINF Hinteralfeld 6.61 320 ePn Pn 11 41 39.0 -0.1
HINF Hinteralfeld 6.61 320 eP Pn 11 41 42.4 +3.3
HINF eSn **Sn 11 42 51.1 -3.4**
comp=E,26nm,0.5s
LASF Ste Croix 6.84 283 eP Pn 11 41 46.8 +4.5
LASF eSn **Sn 11 42 55.9 -4.4**
comp=E,26nm,1.4s
VRAC Vranov 6.84 19 Pn Pn 11 41 41.3 -1.0
comp=E,0.4nm,0.3s,baz=194,slow=17,SNR=2.3
VRAC Sn **Sn 11 42 56.6 -3.7**
comp=E,0.8nm,0.3s,baz=295,slow=23,SNR=4.9
comp=E,1.6nm,0.5s
VRAC Vranov 6.84 19 eSN Sn 11 42 56.5 -3.7
CDF Champ du Feu 6.87 325 ePn Pn 11 41 42.2 -0.4
CDF Champ du Feu 6.87 325 eP Pn 11 41 46.0 +3.4
CDF eSn **Sn 11 42 57.1 -3.8**
comp=E,6.3nm,0.3s
HAU Haudompre 6.98 319 ePn Pn 11 41 43.5 -0.7
HAU Haudompre 6.98 319 eP Pn 11 41 48.0 +3.8
HAU eSn **Sn 11 42 59.8 -3.9**
comp=E,49nm,0.7s
PRU Pruhonice 7.15 7 ePN Pn 11 41 46.7 +0.2
PRU eSN **Sn 11 43 03.0 -4.9**
NKC Novy Kostel 7.35 357 eSN Sn 11 43 08.8 -3.9
SMF Signal de Mont 7.59 303 ePn Pn 11 41 51.4 -1.1
SMF Signal de Mont 7.59 303 eP Pn 11 41 54.1 +1.6
SMF eSn **Sn 11 43 13.9 -4.8**
comp=E,9.1nm,0.6s
PAGF Fort de Pagny 7.66 320 ePn Pn 11 41 53.1 -0.4
PAGF Fort de Pagny 7.66 320 eP Pn 11 41 56.8 +3.3
PAGF eSn **Sn 11 43 15.6 -4.8**
comp=E,22nm,0.8s
SFTF Sexfontaines 7.76 316 ePn Pn 11 41 53.6 -1.3
SFTF Sexfontaines 7.76 316 eP Pn 11 41 58.7 +3.8
SFTF eSn **Sn 11 43 18.2 -4.7**
comp=E,12nm,0.7s
LOR Lormes 7.88 307 ePn Pn 11 41 54.9 -1.6
LOR Lormes 7.88 307 eP Pn 11 42 00.2 +3.7
LOR eSn **Sn 11 43 21.3 -4.4**
comp=E,4.5nm,0.3s
MEZF Maizieres J'vi 7.95 318 ePn Pn 11 41 57.1 -0.4
MEZF eSn **Sn 11 43 22.9 -4.6**
comp=E,19nm,0.9s
AVF Avril sur Loir 7.96 303 ePn Pn 11 41 57.0 -0.5
AVF Avril sur Loir 7.96 303 eP Pn 11 42 01.2 +3.7
AVF eSn **Sn 11 43 23.2 -4.5**
comp=E,8.4nm,1.0s
SSF Saint Saulge 7.99 305 ePn Pn 11 41 56.4 -1.5
SSF Saint Saulge 7.99 305 eP Pn 11 42 01.3 +3.4
SSF eSn **Sn 11 43 23.7 -4.7**
comp=E,23nm,1.4s
MTLF Montolieu 7.99 277 eP Pn 11 42 02.2 +4.1
SAVF Savonnieres en 7.99 318 ePn Pn 11 41 56.9 -1.1
SAVF Savonnieres en 7.99 318 eP Pn 11 42 01.4 +3.4
SAVF eSn **Sn 11 43 24.1 -4.4**
comp=E,5.0nm,0.4s
BGF Bois d'Agland 8.18 300 ePn Pn 11 41 59.3 -1.3
BGF Bois d'Agland 8.18 300 eP Pn 11 42 04.4 +3.8
CAF Calviac 8.24 288 ePn Pn 11 42 02.3 +0.8
CAF Calviac 8.24 288 eP Pn 11 42 05.5 +4.0
CLL Collm 8.41 359 i Pn Pn 11 42 05.9 +2.2
CLL eSn **Sn 11 43 30.0 -8.7**
CLL eSg **Sg 11 44 25.0 -6.4**
comp=Z,10.0nm,1.1s
TCF Toulx Ste Croi 8.49 297 ePn Pn 11 42 04.3 -0.6
TCF Toulx Ste Croi 8.49 297 eP Pn 11 42 08.2 +3.3
HYF Humbligny 8.61 304 ePn Pn 11 42 06.0 -0.5
RJF Les Rejaudoux 8.69 290 ePn Pn 11 42 06.5 -1.2
GIVF Givet 9.19 324 ePn Pn 11 42 14.1 -0.4
EPF Esparros 9.38 275 ePn Pn 11 42 15.5 -1.6
EPF Esparros 9.38 275 eP Pn 11 42 21.0 +3.9
BAIF Baives 9.43 322 ePn Pn 11 42 16.4 -1.3
BAIF Baives 9.43 322 eP Pn 11 42 21.2 +3.5
FLN La Foliniere 11.15 306 ePn Pn 11 42 40.7 -0.6
ROSF Rostrenen 12.69 301 ePn Pn 11 43 00.7 -1.7
EKA Eskdalemuir Ar 16.33 325 Pn Pn 11 43 51.9 +0.8
baz=138,slow=14
comp=Z,0.6nm,0.7s
FINES FINESS Array B 20.12 18 P P 11 44 36.3 +0.6
comp=Z,0.1nm,0.3s,baz=202,slow=10,SNR=1.3
comp=Z,1.9nm,0.9s
KBZ Khabaz 21.63 78 P P 11 44 53.8 +1.7
comp=Z,5.6nm,1.1s,baz=282,slow=4.5,SNR=4.5
comp=Z,5.6nm,1.1s
TORD Torodi Ar. Bea 31.25 202 P P 11 46 23.2 +1.4
comp=Z,0.6nm,0.9s,baz=20,slow=6.8,SNR=3.5
comp=Z,0.6nm,0.9s
ARU Arti 31.74 49 P P 11 46 26.5 +0.7
comp=Z,0.9nm,0.3s,baz=231,slow=13,SNR=3.2
comp=Z,0.9nm,0.3s
MKAR Makanchi Array 47.75 60 P P 11 48 38.6 -0.3
comp=Z,0.5nm,0.8s,baz=297,slow=6.3,SNR=1.9
comp=Z,0.5nm,0.8s
TIXI Tiksi 57.16 20 LR LR 12 15 56.3
comp=Z,38nm,21.4s,baz=359,slow=38
SONM Songino Array 61.77 50 P P 11 50 21.9 +1.2
comp=Z,0.2nm,0.3s,baz=311,slow=7.5,SNR=2.2
comp=Z,0.2nm,0.3s
ILAR Eielson Array 71.52 351 P P 11 51 25.0 +2.5
comp=Z,0.3nm,0.8s,baz=12,slow=8.8,SNR=2.3
comp=Z,0.3nm,0.8s

ROM 30 11:44:04.7±0.1, 42°.896N±0°.004×13°.106E±0°.004,
h10km, ML3.0/20, 3C-10D, Error ellipse: s-maj=0.5km
s-min=0.2km az=178.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**328**	P	Pg	11 44 07.6	+0.4
FEMA				S	Sg	11 44 09.4	+0.5
FEMA				AML	AML		
	comp=E,57200μm,0.2s						
FEMA				AML	AML		
	comp=N,23250μm,0.1s						
FEMA				AML	AML		
	comp=N,23250μm,0.1s						
FEMA				AML	AML		
	comp=E,57200μm,0.2s						
FEMA				AML	AML		
	comp=E,57205μm,0.2s						
FEMA				AML	AML		
	comp=N,23242μm,0.1s						
MMO1	**Montemonaco**	**0.16**	**89**	P	Pg	11 44 08.8	+0.5
MMO1				S	Sg	11 44 11.6	+0.8
T1215	**Vallo di Nera,**	**0.20**	**242**	P	Pg	11 44 09.6	+0.7
T1215				S	Sg	11 44 12.8	+1.1
AM05	**Amandola Campo**	**0.20**	**66**	P	Pg	11 44 09.5	+0.6
AM05				S	Sg	11 44 12.8	+1.1
AM05				AML	AML		
	comp=E,3535μm,0.6s						
AM05				AML	AML		
	comp=N,3365μm,0.7s						
AM05				AML	AML		
	comp=N,974μm,0.1s						
AM05				AML	AML		
	comp=E,3530μm,0.6s						
AM05				AML	AML		
	comp=N,973μm,0.1s						
AM05				AML	AML		
	comp=E,13600μm,1.5s						
AM05				AML	AML		
	comp=N,974μm,0.1s						
AM05				AML	AML		
	comp=E,13550μm,1.5s						
AM05				AML	AML		
	comp=N,974μm,0.1s						
AM05				AML	AML		
	comp=E,11838μm,0.1s						
AM05				AML	AML		
	comp=E,3279μm,0.1s						
AM05				AML	AML		
	comp=N,2710μm,0.1s						
AM05				AML	AML		
	comp=N,974μm,0.1s						
T1217	**Poggiodomo (PG**	**0.23**	**215**	P	Pg	11 44 07.0	-2.3
T1217				AML	AML		
	comp=E,1510μm,0.3s						
T1217				AML	AML		
	comp=N,1587μm,0.6s						
T1217				AML	AML		
	comp=E,4660μm,0.4s						
T1217				AML	AML		
	comp=E,4530μm,0.4s						
T1217				AML	AML		
	comp=N,5255μm,0.3s						
T1217				AML	AML		
	comp=N,5265μm,0.3s						
T1217				AML	AML		
	comp=N,5235μm,0.3s						
T1217				AML	AML		
	comp=E,4665μm,0.4s						
T1217				AML	AML		
	comp=E,4555μm,0.4s						
T1217				AML	AML		
	comp=E,1443μm,0.2s						
T1217				AML	AML		
	comp=N,1461μm,0.2s						
T1217				AML	AML		
	comp=E,1461μm,0.2s						
T1217				AML	AML		
	comp=N,1457μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**45**	P	Pg	11 44 10.3	+0.8
GUMA				S	Sg	11 44 14.6	+1.8
GUMA				AML	AML		
	comp=E,11400μm,0.9s						
GUMA				AML	AML		
	comp=N,17500μm,0.5s						
GUMA				AML	AML		
	comp=E,12195μm,0.5s						
GUMA				AML	AML		
	comp=N,15600μm,0.5s						
GUMA				AML	AML		
	comp=N,18200μm,1.6s						
GUMA				AML	AML		
	comp=N,23550μm,0.5s						
GUMA				AML	AML		
	comp=E,26900μm,0.5s						
GUMA				AML	AML		
	comp=E,19150μm,0.5s						
GUMA				AML	AML		
	comp=N,16354μm,0.4s						
GUMA				AML	AML		
	comp=N,15588μm,0.5s						
GUMA				AML	AML		
	comp=E,10823μm,0.4s						
GUMA				AML	AML		
	comp=E,12210μm,0.5s						
T1241	**Roccafluvione,**	**0.24**	**99**	P	Pg	11 44 10.6	+0.9
T1241				S	Sg	11 44 14.7	+1.7
T1241				AML	AML		
	comp=E,8645μm,0.2s						
T1241				AML	AML		
	comp=N,2930μm,0.4s						
T1241				AML	AML		
	comp=N,2810μm,0.4s						
T1241				AML	AML		
	comp=E,8670μm,0.2s						
T1241				AML	AML		
	comp=N,11000μm,0.6s						
T1241				AML	AML		
	comp=E,8775μm,0.2s						
T1241				AML	AML		
	comp=E,8660μm,0.2s						
T1241				AML	AML		
	comp=E,8780μm,0.2s						
T1241				AML	AML		
	comp=N,10950μm,0.6s						
T1241				AML	AML		
	comp=N,11050μm,0.6s						
T1241				AML	AML		
	comp=E,8659μm,0.2s						
T1241				AML	AML		
	comp=E,8794μm,0.2s						
T1241				AML	AML		
	comp=N,2813μm,0.4s						
T1241				AML	AML		
	comp=N,2929μm,0.4s						
T1204	**Amatrice, Fraz**	**0.27**	**145**	P	Pb	11 44 11.3	-0.4
T1204				AML	AML		
	comp=E,19300μm,1.1s						
T1204				AML	AML		
	comp=N,10635μm,0.9s						
T1204				AML	AML		
	comp=E,19250μm,1.1s						
T1204				AML	AML		
	comp=N,10600μm,0.9s						
T1204				AML	AML		
	comp=N,10585μm,0.9s						
T1204				AML	AML		
	comp=N,1364μm,0.2s						
T1204				AML	AML		
	comp=E,2833μm,0.3s						
SEF1	**Sefro**	**0.28**	**335**	P	Pg	11 44 10.8	+0.5
SEF1				S	Sb	11 44 15.3	-1.3
SEF1				AML	AML		
	comp=E,5270μm,1.6s						
SEF1				AML	AML		
	comp=N,4760μm,1.3s						
SEF1				AML	AML		
	comp=E,5265μm,1.6s						
SEF1				AML	AML		
	comp=N,4755μm,1.3s						
SEF1				AML	AML		
	comp=N,4065μm,0.3s						
SEF1				AML	AML		
	comp=E,4644μm,0.2s						
LNSS	**Leonessa**	**0.30**	**189**	S	Sb	11 44 17.0	-0.2
MDAR	**Monte D'Aria**	**0.30**	**5**	⇓P	Pb	11 44 11.8	-0.5
MDAR				AML	AML		
	comp=E,1895μm,1.2s						
MDAR				AML	AML		
	comp=N,1745μm,0.2s						
MDAR				AML	AML		
	comp=N,2825μm,0.9s						
MDAR				AML	AML		
	comp=E,1900μm,0.3s						
MDAR				AML	AML		
	comp=E,1513μm,0.2s						
MDAR				AML	AML		
	comp=N,1746μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**128**	⇓P	Pg	11 44 11.8	+0.7
SSM1	**San Severino M**	**0.34**	**9**	P	Pb	11 44 12.4	-0.4
ASSB	**Assisi San Ben**	**0.36**	**294**	⇓P	Pg	11 44 12.2	+0.4
ASSB				AML	AML		
	comp=E,2245μm,0.3s						
ASSB				AML	AML		
	comp=N,2340μm,0.3s						
ASSB				AML	AML		
	comp=E,2244μm,0.3s						
ASSB				AML	AML		
	comp=N,2204μm,0.2s						
SNTG	**Esanatoglia**	**0.38**	**341**	⇓P	Pg	11 44 12.9	+0.7
SNTG				AML	AML		
	comp=E,1121μm,1.2s						
SNTG				AML	AML		
	comp=N,870μm,1.4s						
SNTG				AML	AML		
	comp=E,1065μm,0.4s						
SNTG				AML	AML		
	comp=N,975μm,1.4s						
SNTG				AML	AML		
	comp=E,1120μm,1.2s						
SNTG				AML	AML		
	comp=N,1070μm,0.6s						
SNTG				AML	AML		
	comp=N,1100μm,0.4s						
SNTG				AML	AML		
	comp=E,1122μm,1.2s						
SNTG				AML	AML		
	comp=N,803μm,0.1s						
SNTG				AML	AML		
	comp=E,1041μm,0.1s						
SNTG				AML	AML		
	comp=N,966μm,0.1s						
SNTG				AML	AML		
	comp=E,1044μm,0.1s						
ARRO	**Arrone**	**0.40**	**218**	P	Pb	11 44 14.8	+0.9
T1211	**Morro Reatino**	**0.41**	**207**	S	Sb	11 44 21.0	+0.6
CAMP	**Campotosto**	**0.42**	**148**	P	Pg	11 44 13.3	+0.2
CAMP				AML	AML		
	comp=E,1830μm,1.1s						
CAMP				AML	AML		
	comp=N,1765μm,0.4s						
CAMP				AML	AML		
	comp=N,1780μm,0.7s						
CAMP				AML	AML		
	comp=E,2245μm,0.8s						
CAMP				AML	AML		
	comp=N,314μm,0.4s						
CAMP				AML	AML		
	comp=E,373μm,0.2s						
EL6	**Elcito**	**0.43**	**360**	S	Sb	11 44 21.0	-0.2
ATCC	**AVT- Casa Cast**	**0.45**	**310**	⇓P	Pg	11 44 13.9	+0.5
ATCC				AML	AML		
	comp=E,1265μm,0.4s						
ATCC				AML	AML		
	comp=N,1205μm,0.5s						
ATCC				AML	AML		
	comp=N,1300μm,0.4s						
ATCC				AML	AML		
	comp=E,1268μm,0.4s						
ATCC				AML	AML		
	comp=N,1181μm,0.3s						
TERO	**Teramo**	**0.46**	**127**	P	Pg	11 44 13.9	+0.3
TERO				AML	AML		
	comp=E,3740μm,0.4s						
TERO				AML	AML		
	comp=N,3940μm,0.4s						
TERO				AML	AML		
	comp=E,3960μm,0.4s						
TERO				AML	AML		
	comp=E,3745μm,0.4s						
TERO				AML	AML		
	comp=N,4465μm,0.4s						
TERO				AML	AML		
	comp=N,671μm,0.2s						

TERO			AML	AML	
	comp=N,737μm,0.2s				
TERO			AML	AML	
	comp=E,513μm,0.2s				
TERO			AML	AML	
	comp=E,464μm,0.2s				
FOSV	**Fossato di Vic**	**0.47 328**	⇓P	Pg	11 44 14.2 +0.3
FOSV			AML	AML	
	comp=E,1330μm,0.3s				
FOSV			AML	AML	
	comp=N,2630μm,0.3s				
FOSV			AML	AML	
	comp=E,1329μm,0.3s				
FOSV			AML	AML	
	comp=N,2629μm,0.3s				
CESX	**Cesi**	**0.48 234**	S	Sb	11 44 22.0 -0.4
MMUR	**Monte Murano**	**0.55 352**	S	Sb	11 44 25.0 +0.5
GIGS	**Gran Sasso**	**0.56 142**	⇑P	Pg	11 44 15.7 0.0
GIGS			AML	AML	
	comp=E,395μm,1.5s				
GIGS			AML	AML	
	comp=N,382μm,0.6s				
GIGS			AML	AML	
	comp=E,396μm,1.5s				
GIGS			AML	AML	
	comp=N,86μm,0.4s				
GIGS			AML	AML	
	comp=E,103μm,0.4s				
TRTR	**Tortoreto Alta**	**0.60 98**	⇓P	Pb	11 44 17.7 +0.4
TRTR			AML	AML	
	comp=E,1425μm,1.3s				
TRTR			AML	AML	
	comp=N,1590μm,1.3s				
TRTR			AML	AML	
	comp=E,3675μm,1.3s				
TRTR			AML	AML	
	comp=N,3285μm,0.5s				
TRTR			AML	AML	
	comp=E,1204μm,0.5s				
TRTR			AML	AML	
	comp=N,950μm,0.9s				
PP3	**Marolino**	**0.61 37**	P	Pb	11 44 17.9 +0.5
PP3			AML	AML	
	comp=E,1960μm,0.3s				
PP3			AML	AML	
	comp=N,2000μm,0.8s				
PP3			AML	AML	
	comp=E,1935μm,0.3s				
PP3			AML	AML	
	comp=N,2225μm,0.3s				
PP3			AML	AML	
	comp=E,3685μm,0.5s				
PP3			AML	AML	
	comp=N,3080μm,0.4s				
PP3			AML	AML	
	comp=N,2920μm,0.4s				
PP3			AML	AML	
	comp=E,3620μm,0.5s				
PP3			AML	AML	
	comp=E,1958μm,0.3s				
PP3			AML	AML	
	comp=E,1931μm,0.3s				
PP3			AML	AML	
	comp=N,1996μm,0.2s				
PP3			AML	AML	
	comp=N,2222μm,0.3s				
ATFO	**Monte Foce - G**	**0.61 320**	⇑P	Pg	11 44 16.8 +0.2
ATFO			AML	AML	
	comp=E,472μm,0.6s				
ATFO			AML	AML	
	comp=N,383μm,0.6s				
ATFO			AML	AML	
	comp=E,724μm,0.4s				
ATFO			AML	AML	
	comp=N,676μm,0.6s				
ATFO			AML	AML	
	comp=N,303μm,0.4s				
ATFO			AML	AML	
	comp=E,392μm,0.5s				
ARVD	**Arcevia**	**0.61 349**	S	Sb	11 44 27.0 +0.7
ATVO	**AVT- Monte Val**	**0.70 314**	⇓P	Pg	11 44 18.1 -0.2
ATVO			AML	AML	
	comp=E,414μm,0.4s				
ATVO			AML	AML	
	comp=N,488μm,0.5s				
ATVO			AML	AML	
	comp=N,488μm,0.5s				
ATVO			AML	AML	
	comp=E,414μm,0.4s				
MGAB	**Montegabbione**	**0.73 272**	⇓P	Pn	11 44 21.6 +0.4
AOI	**Ancona**	**0.75 29**	S	Sn	11 44 33.0 +0.2
PIEI	**Pieia**	**0.76 327**	S	Sn	11 44 32.0 -1.2
FSSB	**Fossombrone**	**0.83 343**	S	Sn	11 44 35.0 +0.1
BADI	**Badiali**	**0.88 315**	⇑P	Pg	11 44 21.8 +0.1
SACS	**San Casciano d**	**0.88 267**	⇓P	Pn	11 44 22.9 -0.3
SACS			AML	AML	
	comp=E,210μm,1.1s				
SACS			AML	AML	
	comp=N,206μm,0.8s				
SACS			AML	AML	
	comp=E,224μm,1.0s				
SACS			AML	AML	
	comp=N,448μm,0.5s				
SACS			AML	AML	
	comp=E,212μm,1.0s				
SACS			AML	AML	
	comp=N,211μm,0.6s				
SACS			AML	AML	
	comp=N,207μm,0.8s				
SACS			AML	AML	
	comp=E,210μm,1.1s				

ROM 30 11:44:47.4±0.1, 42°.753N±0°.004×13°.207E±0°.007, h9km, ML3.0/27, 12C-19D, Error ellipse: s-maj=0.4km s-min=0.4km az=103.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.11**	**133**	⇓P	Pg	11 44 50.9	+0.8
T1204				S	Sg	11 44 53.3	+1.2
T1204				AML	AML		
	comp=E,19300μm,1.1s						
T1204				AML	AML		
	comp=N,10600μm,0.9s						
T1204				AML	AML		
	comp=E,19250μm,1.1s						
T1204				AML	AML		
	comp=N,10585μm,0.9s						
T1204				AML	AML		
	comp=E,15096μm,0.4s						
T1204				AML	AML		
	comp=N,9017μm,0.3s						
MMO1	**Montemonaco**	**0.17**	**31**	⇑P	Pg	11 44 51.3	+0.2
MMO1				S	Sg	11 44 54.2	+0.6
T1243	**Rocca Santa Ma**	**0.19**	**107**	P	Pg	11 44 52.1	+0.8
T1243				S	Sg	11 44 55.1	+1.1
LNSS	**Leonessa**	**0.19**	**219**	⇓P	Pg	11 44 52.6	+1.2
LNSS				S	Sg	11 44 55.8	+1.7
LNSS				AML	AML		
	comp=E,9650μm,0.4s						
LNSS				AML	AML		
	comp=N,17650μm,0.1s						
LNSS				AML	AML		
	comp=N,17656μm,0.1s						
LNSS				AML	AML		
	comp=E,9629μm,0.4s						
T1241	**Roccafluvione,**	**0.20**	**58**	P	Pg	11 44 51.4	0.0
T1241				S	Sg	11 44 55.7	+1.5
T1241				AML	AML		
	comp=E,7820μm,1.2s						
T1241				AML	AML		
	comp=E,7770μm,0.5s						
T1241				AML	AML		
	comp=N,11050μm,0.6s						
T1241				AML	AML		
	comp=N,10950μm,0.6s						
T1241				AML	AML		
	comp=E,7393μm,0.5s						
T1241				AML	AML		
	comp=N,10958μm,0.6s						
T1241				AML	AML		
	comp=E,7772μm,0.5s						
T1241				AML	AML		
	comp=N,11067μm,0.6s						
T1217	**Poggiodomo (PG**	**0.21**	**259**	P	Pg	11 44 52.7	+1.0
T1217				S	Sg	11 44 55.7	+1.2
T1217				AML	AML		
	comp=E,4660μm,0.4s						
T1217				AML	AML		
	comp=N,5235μm,0.3s						
T1217				AML	AML		
	comp=N,5270μm,0.3s						
T1217				AML	AML		
	comp=E,4550μm,0.4s						
T1217				AML	AML		
	comp=N,5255μm,0.3s						
T1217				AML	AML		
	comp=E,4665μm,0.4s						
T1217				AML	AML		
	comp=N,5265μm,0.3s						
T1217				AML	AML		
	comp=N,5235μm,0.3s						
T1217				AML	AML		
	comp=E,4555μm,0.4s						
T1217				AML	AML		
	comp=E,3595μm,0.2s						
T1217				AML	AML		
	comp=N,5267μm,0.3s						
T1217				AML	AML		
	comp=N,5234μm,0.3s						
T1217				AML	AML		
	comp=E,3450μm,0.2s						
CAMP	**Campotosto**	**0.26**	**145**	P	Pg	11 44 53.3	+0.6
CAMP				S	Sb	11 44 57.8	-1.2
CAMP				AML	AML		
	comp=E,2245μm,0.8s						
CAMP				AML	AML		
	comp=N,1780μm,0.7s						
CAMP				AML	AML		
	comp=E,2248μm,0.8s						
CAMP				AML	AML		
	comp=N,1779μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.32**	**168**	P	Pg	11 44 53.9	+0.2
T1247				S	Sb	11 44 59.8	-0.8
T1247				AML	AML		
	comp=N,5640μm,0.6s						
T1247				AML	AML		
	comp=N,4473μm,0.3s						
T1247				AML	AML		
	comp=E,5255μm,1.2s						
T1247				AML	AML		
	comp=E,5117μm,0.4s						
TERO	**Teramo**	**0.32**	**114**	P	Pg	11 44 54.3	+0.5
TERO				S	Sb	11 44 59.5	-1.2
TERO				AML	AML		
	comp=E,3745μm,0.4s						
TERO				AML	AML		
	comp=N,4465μm,0.4s						
TERO				AML	AML		
	comp=N,3940μm,0.4s						
TERO				AML	AML		
	comp=E,3960μm,0.4s						
TERO				AML	AML		
	comp=E,3960μm,0.4s						
TERO				AML	AML		
	comp=N,3702μm,0.1s						
TERO				AML	AML		
	comp=E,3743μm,0.4s						
TERO				AML	AML		
	comp=N,4315μm,0.1s						
GUMA	**Gualdo di Mace**	**0.32**	**17**	P	Pg	11 44 53.9	+0.1
GUMA				S	Sb	11 45 00.3	-0.5
GUMA				AML	AML		
	comp=E,26850μm,0.5s						
GUMA				AML	AML		
	comp=N,18200μm,1.6s						
GUMA				AML	AML		
	comp=E,19150μm,0.5s						
GUMA				AML	AML		
	comp=E,26900μm,0.5s						
GUMA				AML	AML		
	comp=N,18200μm,1.6s						
GUMA				AML	AML		
	comp=N,23550μm,0.5s						
GUMA				AML	AML		
	comp=N,15298μm,0.3s						
GUMA				AML	AML		
	comp=E,26872μm,0.5s						
GUMA				AML	AML		
	comp=E,19123μm,0.5s						
GUMA				AML	AML		
	comp=N,23508μm,0.5s						
T1211	**Morro Reatino**	**0.34**	**230**	P	Pg	11 44 54.8	+0.7
T1211				S	Sb	11 45 00.2	-1.0
OFFI	**Offida**	**0.40**	**62**	⇑P	Pb	11 44 56.4	-0.2
OFFI				S	Sb	11 45 04.0	+1.2
OFFI				AML	AML		
	comp=N,5360μm,0.6s						
OFFI				AML	AML		
	comp=E,4140μm,0.8s						
OFFI				AML	AML		
	comp=E,4141μm,0.8s						
OFFI				AML	AML		
	comp=N,5356μm,0.6s						
GIGS	**Gran Sasso**	**0.40**	**138**	P	Pg	11 44 55.4	+0.1
GIGS				S	Sb	11 45 02.0	-1.0
GIGS				AML	AML		
	comp=N,382μm,0.6s						
GIGS				AML	AML		
	comp=E,396μm,1.5s						
GIGS				AML	AML		
	comp=E,384μm,0.2s						
GIGS				AML	AML		
	comp=N,382μm,1.4s						
GIGS				AML	AML		
	comp=E,396μm,0.5s						
GIGS				AML	AML		
	comp=N,358μm,0.3s						
MNTP	**Montappone**	**0.43**	**27**	AML	AML		
	comp=N,3255μm,1.3s						
MNTP				AML	AML		
	comp=E,4520μm,0.7s						
MNTP				AML	AML		
	comp=E,4520μm,1.3s						
CESX	**Cesi**	**0.48**	**253**	S	Sb	11 45 06.0	+0.7
FIAM	**Fiamignano**	**0.49**	**188**	⇑P	Pg	11 44 56.8	-0.1
FIAM				S	Sb	11 45 04.9	-0.6
FIAM				AML	AML		
	comp=E,1167μm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**84**	⇓P	Pb	11 44 59.3	+0.5
TRTR				AML	AML		
	comp=N,3285μm,0.5s						
TRTR				AML	AML		
	comp=E,3675μm,1.3s						
TRTR				AML	AML		
	comp=E,3430μm,0.5s						
TRTR				AML	AML		
	comp=N,3283μm,0.5s						
SNTG	**Esanatoglia**	**0.54**	**339**	P	Pg	11 44 55.0	-2.9
SNTG				S	Sb	11 45 06.2	-0.8
EL6	**Elcito**	**0.58**	**352**	P	Pn	11 45 03.8	+1.9
EL6				S	Sb	11 45 09.0	+0.8
VCEL	**Villa Celiera**	**0.59**	**127**	⇓P	Pb	11 44 59.5	-0.5
VCEL				S	Sb	11 45 09.2	+0.8
VCEL				AML	AML		
	comp=E,1415μm,0.5s						
VCEL				AML	AML		
	comp=N,1845μm,0.6s						
VCEL				AML	AML		
	comp=E,1417μm,0.5s						
VCEL				AML	AML		
	comp=N,1841μm,0.6s						
T0110	**Collepietro**	**0.68**	**141**	⇑P	Pg	11 45 00.6	+0.2
T0110				AML	AML		
	comp=E,1750μm,0.5s						
T0110				AML	AML		
	comp=N,1445μm,1.2s						
T0110				AML	AML		
	comp=N,1440μm,1.2s						
T0110				AML	AML		
	comp=N,1259μm,0.3s						
T0110				AML	AML		
	comp=E,1749μm,0.5s						
PP3	**Marolino**	**0.69**	**25**	⇓P	Pb	11 45 01.6	+0.1
PP3				AML	AML		
	comp=E,3685μm,0.5s						
PP3				AML	AML		
	comp=N,2920μm,0.4s						
PP3				AML	AML		
	comp=N,3080μm,0.4s						
PP3				AML	AML		
	comp=E,3620μm,0.5s						
PP3				AML	AML		
	comp=N,3077μm,0.4s						
PP3				AML	AML		
	comp=E,3682μm,0.5s						
PP3				AML	AML		
	comp=N,2916μm,0.4s						
PP3				AML	AML		
	comp=E,3623μm,0.5s						
MURB	**Monte Urbino**	**0.71**	**316**	⇓P	Pb	11 45 02.0	0.0
MURB				S	Sn	11 45 14.0	-0.9
MURB				AML	AML		
	comp=E,2360μm,0.3s						
MURB				AML	AML		
	comp=N,2265μm,0.4s						
MURB				AML	AML		
	comp=E,2270μm,0.3s						
MURB				AML	AML		
	comp=N,2263μm,0.4s						
MURB				AML	AML		
	comp=N,2252μm,0.3s						
MURB				AML	AML		
	comp=E,2036μm,0.3s						
PTQR	**Pietraquaria**	**0.74**	**169**	P	Pg	11 45 00.6	-1.1
PTQR				AML	AML		
	comp=E,307μm,0.7s						
PTQR				AML	AML		
	comp=N,290μm,0.6s						
PTQR				AML	AML		
	comp=N,291μm,0.6s						
PTQR				AML	AML		
	comp=E,242μm,0.3s						
ARVD	**Arcevia**	**0.77**	**345**	⇓P	Pg	11 45 02.1	-0.1
ARVD				S	Sb	11 45 14.0	+0.5
ARVD				AML	AML		
	comp=E,532μm,0.2s						
ARVD				AML	AML		
	comp=N,434μm,0.9s						
ARVD				AML	AML		
	comp=N,373μm,0.5s						
ARVD				AML	AML		
	comp=E,525μm,0.5s						
ATFO	**Monte Foce - G**	**0.77**	**323**	⇓P	Pb	11 45 02.8	-0.2
ATFO				AML	AML		
	comp=N,676μm,0.6s						
ATFO				AML	AML		
	comp=E,724μm,0.4s						
ATFO				AML	AML		
	comp=E,724μm,0.4s						
ATFO				AML	AML		
	comp=N,677μm,0.6s						
AOI	**Ancona**	**0.85**	**20**	⇑P	Pb	11 45 04.1	-0.2
AOI				AML	AML		
	comp=N,696μm,0.4s						
AOI				AML	AML		
	comp=E,756μm,0.5s						
AOI				AML	AML		
	comp=N,696μm,0.4s						
AOI				AML	AML		
	comp=E,756μm,0.5s						
ATPI	**Pietralunga -**	**0.91**	**320**	⇓P	Pb	11 45 05.4	-0.1
ATPI				AML	AML		
	comp=E,354μm,0.6s						
ATPI				AML	AML		
	comp=N,434μm,0.5s						
ATPI				AML	AML		
	comp=E,354μm,0.6s						
ATPI				AML	AML		
	comp=N,434μm,0.5s						
SACS	**San Casciano d**	**0.96**	**276**	⇓P	Pn	11 45 07.5	+0.5
SACS				AML	AML		
	comp=N,448μm,0.5s						
SACS				AML	AML		
	comp=N,441μm,0.5s						
SACS				AML	AML		
	comp=E,249μm,0.8s						
FSSB	**Fossombrone**	**0.99**	**342**	⇑P	Pg	11 45 06.5	+0.1
FSSB				AML	AML		
	comp=E,1270μm,0.4s						
FSSB				AML	AML		
	comp=N,2300μm,0.4s						
FSSB				AML	AML		
	comp=N,2298μm,0.4s						
FSSB				AML	AML		
	comp=E,1272μm,0.4s						
LPEL	**Lama dei Pelig**	**1.01**	**134**	⇓P	Pg	11 45 06.8	0.0
LPEL				AML	AML		
	comp=N,289μm,0.7s						
LPEL				AML	AML		
	comp=E,381μm,0.4s						
BADI	**Badiali**	**1.03**	**317**	⇑P	Pb	11 45 07.7	+0.3
POFI	**Posta Fibreno**	**1.10**	**160**	⇓P	Pn	11 45 11.8	+2.8
POFI				AML	AML		
	comp=E,223μm,1.1s						
POFI				AML	AML		
	comp=N,182μm,1.6s						
POFI				AML	AML		
	comp=N,162μm,0.8s						
POFI				AML	AML		
	comp=E,212μm,0.8s						
POFI				AML	AML		
	comp=E,219μm,0.8s						
TOLF	**Tolfa**	**1.13**	**233**	⇑P	Pn	11 45 09.8	+0.5
TOLF				S	Sn	11 45 26.0	+1.0
TOLF				AML	AML		
	comp=E,314μm,0.6s						
TOLF				AML	AML		
	comp=N,272μm,0.5s						
TOLF				AML	AML		
	comp=E,313μm,0.6s						
TOLF				AML	AML		
	comp=N,273μm,0.5s						
LRP	**Arpino**	**1.14**	**166**	⇑P	Pn	11 45 11.9	+2.4
LRP				AML	AML		
	comp=E,164μm,0.7s						
LRP				AML	AML		
	comp=N,236μm,0.7s						
LRP				AML	AML		
	comp=N,237μm,0.7s						
LRP				AML	AML		
	comp=N,237μm,0.7s						
LRP				AML	AML		
	comp=E,158μm,0.5s						
CPGN	**Carpegna, Ital**	**1.23**	**329**	P	Pg	11 45 11.8	+0.8
MAON	**Monte Argentar**	**1.57**	**259**	P	Pb	11 45 16.4	-0.1
MAON				AML	AML		
	comp=N,43μm,0.7s						
MAON				AML	AML		
	comp=E,63μm,0.8s						
MAON				AML	AML		
	comp=N,46μm,1.0s						
MAON				AML	AML		
	comp=E,62μm,0.7s						
MAON				AML	AML		
	comp=N,43μm,0.7s						
RUFI	**Rufina**	**1.65**	**312**	⇓P	Pb	11 45 18.2	+0.3
CASP	**Castiglione de**	**1.72**	**272**	⇓P	Pn	11 45 17.7	+0.2
NDIM	**Novi di Modena**	**2.71**	**323**	⇑P	Pg	11 45 40.2	+0.9
STON	**Ston**	**3.31**	**86**	⇓P	Pn	11 45 40.3	+1.1
GORR	**Gorreto**	**3.39**	**304**	S	Sb	11 46 30.0	+1.0
ORI	**Oriolo Calabro**	**3.63**	**137**	S	Sb	11 46 36.0	+0.2
SALB	**San Lorenzo Be**	**3.72**	**139**	⇓P	Pn	11 45 43.8	-1.3
EUCT	**Pavia**	**3.83**	**311**	P	Pb	11 45 51.9	-3.1
PCP	**Piancastagn**	**3.83**	**299**	⇓P	Pb	11 45 53.3	-1.8
KOSI	**Kohlern**	**3.93**	**341**	⇓P	Pn	11 45 50.2	+2.1
KOSI				AML	AML		
	comp=E,49μm,1.1s						
KOSI				AML	AML		
	comp=N,37μm,1.5s						
ABTA	**Abfaltersbach**	**4.03**	**353**	*e*Pn	Pn	11 45 50.5	+1.3
	comp=N,3.1nm,0.4s						
RISI	**Rein**	**4.27**	**350**	⇑P	Pn	11 45 56.0	+3.3
MUGIO	**Muggio**	**4.36**	**318**	⇑P	Pn	11 45 55.7	+2.0
ROSI	**Rossskopf**	**4.37**	**344**	⇓P	Pn	11 45 56.5	+2.4
PDG	**Podgorica**	**4.48**	**92**	P	Pb	11 46 08.8	+2.7
FETA	**Feichten**	**4.62**	**338**	*e*Pn	Pn	11 46 00.6	+3.1
	comp=N,1.0nm,0.5s						
WTTA	**Wattenberg**	**4.65**	**347**	*e*Pn	Pn	11 46 00.7	+2.8
	comp=N,0.7nm,0.2s						
WATA	**Walderalm**	**4.73**	**346**	*i* Pn	Pn	11 46 02.2	+3.3
	comp=N,0.7nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.95**	**3**	*e*Pn	Pn	11 46 03.0	+1.1
	comp=N,2.7nm,0.4s						
GMB	**Gambarie**	**5.00**	**156**	P	Pn	11 46 03.2	+0.6
RETA	**Reutte**	**5.04**	**341**	*e*Pn	Pn	11 46 06.7	+3.5
	comp=N,1.1nm,0.3s						
DAVA	**Damuels**	**5.11**	**334**	*e*Pn	Pn	11 46 06.4	+2.2
	comp=N,0.4nm,0.1s						
MOA	**Molln**	**5.15**	**8**	*e*Pn	Pn	11 46 05.6	+1.0

comp=N,0.8nm,0.3s
CONA Conrad Observa 5.50 19 *e*Pn Pn 11 46 10.2 +0.6
comp=N,1.1nm,0.4s

ROM 30 11:45:33.3±0.1, 42°.912N±0°.004×13°.221E±0°.010, h8km, ML2.7/7, 1D, Error ellipse: s-maj=0.8km s-min=0.3km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMO1	**Montemonaco**	**0.08**	**99**	P	Pg	11 45 35.5	0.0
MMO1				S	Sg	11 45 36.9	0.0
AM05	**Amandola Campo**	**0.12**	**56**	P	Pg	11 45 36.4	+0.5
AM05				S	Sg	11 45 38.4	+0.5
AM05				AML	AML		
	comp=E,4205μm,0.7s						
AM05				AML	AML		
	comp=N,5005μm,0.2s						
AM05				AML	AML		
	comp=E,16200μm,0.7s						
AM05				AML	AML		
	comp=N,1128μm,0.1s						
AM05				AML	AML		
	comp=N,1126μm,0.1s						
AM05				AML	AML		
	comp=E,16250μm,0.7s						
AM05				AML	AML		
	comp=E,4210μm,0.7s						
AM05				AML	AML		
	comp=N,1128μm,0.1s						
AM05				AML	AML		
	comp=E,12853μm,0.2s						
AM05				AML	AML		
	comp=E,3554μm,0.2s						
AM05				AML	AML		
	comp=N,5004μm,0.2s						
T1241	**Roccafluvione,**	**0.16**	**110**	P	Pg	11 45 37.7	+0.9
T1241				S	Sg	11 45 40.8	+1.6
T1241				AML	AML		
	comp=E,5150μm,0.8s						
T1241				AML	AML		
	comp=N,3495μm,0.4s						
T1241				AML	AML		
	comp=E,5065μm,0.5s						
T1241				AML	AML		
	comp=N,3640μm,0.4s						
T1241				AML	AML		
	comp=E,5145μm,0.8s						
T1241				AML	AML		
	comp=E,5042μm,0.5s						
T1241				AML	AML		
	comp=E,5069μm,0.5s						
T1241				AML	AML		
	comp=N,3639μm,0.4s						
T1241				AML	AML		
	comp=N,3494μm,0.4s						
GUMA	**Gualdo di Mace**	**0.17**	**29**	P	Pg	11 45 37.6	+0.7
GUMA				S	Sg	11 45 40.8	+1.4
GUMA				AML	AML		
	comp=E,15200μm,0.8s						
GUMA				AML	AML		
	comp=N,10095μm,0.5s						
GUMA				AML	AML		
	comp=N,13500μm,0.6s						
GUMA				AML	AML		
	comp=E,10775μm,0.7s						
GUMA				AML	AML		
	comp=E,10569μm,0.4s						
GUMA				AML	AML		
	comp=N,10109μm,0.5s						
GUMA				AML	AML		
	comp=N,13493μm,0.6s						
GUMA				AML	AML		
	comp=E,15202μm,0.8s						
T1204	**Amatrice, Fraz**	**0.25**	**163**	P	Pg	11 45 39.0	+0.8
T1204				S	Sg	11 45 43.6	+2.0
T1204				AML	AML		
	comp=E,3350μm,0.4s						
T1204				AML	AML		
	comp=N,1864μm,0.8s						
T1204				AML	AML		
	comp=N,3070μm,0.7s						
T1204				AML	AML		
	comp=E,3960μm,0.3s						
T1204				AML	AML		
	comp=N,1850μm,0.3s						
T1204				AML	AML		
	comp=E,3345μm,0.4s						
T1243	**Rocca Santa Ma**	**0.27**	**142**	P	Pg	11 45 39.3	+0.6
MNTP	**Montappone**	**0.29**	**39**	P	Pb	11 45 40.0	-0.7
MNTP				AML	AML		
	comp=E,3506μm,0.7s						
MNTP				AML	AML		
	comp=N,2992μm,0.3s						
SEF1	**Sefro**	**0.31**	**320**	P	Pb	11 45 40.4	-0.7
LNSS	**Leonessa**	**0.34**	**203**	S	Sb	11 45 47.0	-0.2
SNTG	**Esanatoglia**	**0.40**	**329**	P	Pg	11 45 41.6	+0.5
SNTG				S	Sb	11 45 48.0	-1.0
SNTG				AML	AML		
	comp=E,806μm,0.2s						
SNTG				AML	AML		
	comp=E,816μm,0.2s						
SNTG				AML	AML		
	comp=N,1085μm,0.3s						
SNTG				AML	AML		
	comp=N,1007μm,0.3s						
SNTG				AML	AML		
	comp=N,1005μm,0.3s						
SNTG				AML	AML		
	comp=N,1088μm,0.3s						
SNTG				AML	AML		
	comp=E,816μm,0.2s						
SNTG				AML	AML		
	comp=E,807μm,0.2s						
CAMP	**Campotosto**	**0.40**	**160**	P	Pg	11 45 41.4	+0.3
CAMP				S	Sb	11 45 48.2	-0.9
CAMP				AML	AML		
	comp=N,1178μm,0.3s						
CAMP				AML	AML		
	comp=E,1128μm,0.3s						
CAMP				AML	AML		
	comp=E,1131μm,0.3s						
CAMP				AML	AML		
	comp=N,1179μm,0.3s						
RM33	**Pellescritta (**	**0.40**	**181**	P	Pb	11 45 42.2	-0.6
EL6	**Elcito**	**0.43**	**348**	S	Sb	11 45 51.0	+1.2
ASSB	**Assisi San Ben**	**0.43**	**288**	P	Pg	11 45 42.2	+0.5
T1247	**Pizzolo (AQ)**	**0.47**	**173**	P	Pb	11 45 43.3	-0.7
ATCC	**AVT- Casa Cast**	**0.51**	**303**	P	Pb	11 45 43.8	-0.7
ATCC				S	Sb	11 45 51.9	-0.1
ATCC				AML	AML		
	comp=E,1083μm,0.5s						
ATCC				AML	AML		
	comp=N,967μm,0.4s						
FOSV	**Fossato di Vic**	**0.51**	**319**	P	Pg	11 45 43.8	+0.6
FOSV				S	Sb	11 45 51.8	-0.3
FOSV				AML	AML		
	comp=E,1100μm,0.3s						
FOSV				AML	AML		
	comp=N,1385μm,0.2s						
FOSV				AML	AML		
	comp=E,1104μm,0.3s						
FOSV				AML	AML		
	comp=E,956μm,0.3s						
FOSV				AML	AML		
	comp=N,1115μm,0.3s						
GIGS	**Gran Sasso**	**0.53**	**151**	P	Pg	11 45 43.9	+0.4
GIGS				S	Sb	11 45 52.6	-0.1
GIGS				AML	AML		
	comp=E,223μm,0.4s						
GIGS				AML	AML		
	comp=N,143μm,0.2s						
ARVD	**Arcevia**	**0.62**	**341**	⇓P	Pg	11 45 45.8	+0.5
ARVD				S	Sb	11 45 56.0	+0.7
ARVD				AML	AML		
	comp=N,346μm,0.4s						
ARVD				AML	AML		
	comp=E,533μm,0.2s						
FIAM	**Fiamignano**	**0.65**	**187**	S	Sb	11 45 56.0	-0.2
PIEI	**Pieia**	**0.80**	**321**	S	Sn	11 46 02.0	-1.1
SAMA	**S.Maria delle**	**1.22**	**203**	S	Sn	11 46 15.0	+1.6
LAV9	**Lanuvio**	**1.29**	**198**	P	Pn	11 45 54.6	-3.0

PRU ***30*** *11:48:44.4±0.0, 42°.83N×13°.81E, h10km*

ROM 30 11:48:42.8±0.1, 42°.865N±0°.003×13°.077E±0°.004, h9km, ML2.8/36, 17C-19D, Error ellipse: s-maj=0.3km s-min=0.2km az=321.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.10**	**348**	⇓P	Pg	11 48 45.8	+0.4
FEMA				S	Sg	11 48 47.8	+0.4
FEMA				AML	AML		
	comp=N,43900μm,0.4s						
FEMA				AML	AML		
	comp=E,45850μm,1.1s						
FEMA				AML	AML		
	comp=N,43900μm,0.4s						
FEMA				AML	AML		
	comp=E,37823μm,0.1s						
FEMA				AML	AML		
	comp=N,32000μm,0.1s						
T1215	**Vallo di Nera,**	**0.17**	**248**	⇑P	Pg	11 48 47.0	+0.6
T1215				S	Sg	11 48 49.8	+0.9
T1215				AML	AML		
	comp=E,4575μm,0.7s						
T1215				AML	AML		
	comp=N,3985μm,0.4s						
T1215				AML	AML		
	comp=E,4620μm,0.7s						
T1215				AML	AML		
	comp=N,3970μm,0.4s						
T1215				AML	AML		
	comp=N,3990μm,0.4s						
T1215				AML	AML		
	comp=E,4625μm,0.7s						
T1215				AML	AML		
	comp=N,3975μm,0.4s						
T1215				AML	AML		
	comp=E,4625μm,0.7s						
T1215				AML	AML		
	comp=N,3980μm,0.5s						
T1215				AML	AML		
	comp=E,4575μm,0.7s						
T1215				AML	AML		
	comp=N,2930μm,0.2s						
T1215				AML	AML		
	comp=E,2697μm,0.2s						
T1215				AML	AML		
	comp=N,3005μm,0.2s						
T1215				AML	AML		
	comp=E,2515μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**215**	⇑P	Pg	11 48 47.5	+0.7
T1217				S	Sg	11 48 50.7	+1.2
T1217				AML	AML		
	comp=E,4110μm,1.0s						
T1217				AML	AML		
	comp=N,4615μm,0.5s						
T1217				AML	AML		
	comp=E,4225μm,0.7s						
T1217				AML	AML		
	comp=N,4310μm,0.5s						
T1217				AML	AML		
	comp=E,4110μm,1.0s						
T1217				AML	AML		
	comp=N,4315μm,0.5s						
T1217				AML	AML		
	comp=N,4615μm,0.4s						
T1217				AML	AML		
	comp=E,4230μm,0.7s						
T1217				AML	AML		
	comp=E,3793μm,0.3s						
T1217				AML	AML		
	comp=N,4224μm,0.2s						
T1217				AML	AML		
	comp=N,4325μm,0.2s						
T1217				AML	AML		
	comp=E,3837μm,0.2s						
AM05	**Amandola Campo**	**0.23**	**61**	P	Pg	11 48 48.2	+0.6
AM05				S	Sg	11 48 52.0	+1.2
AM05				AML	AML		
	comp=N,3325μm,0.2s						
AM05				AML	AML		
	comp=N,964μm,0.1s						
AM05				AML	AML		
	comp=N,3330μm,0.2s						
AM05				AML	AML		
	comp=E,14950μm,0.8s						
AM05				AML	AML		
	comp=N,964μm,0.1s						
AM05				AML	AML		
	comp=N,966μm,0.1s						
AM05				AML	AML		
	comp=E,2865μm,0.8s						
AM05				AML	AML		
	comp=N,3298μm,0.1s						
AM05				AML	AML		
	comp=E,12067μm,0.1s						
AM05				AML	AML		
	comp=N,965μm,0.1s						
AM05				AML	AML		
	comp=E,2648μm,0.1s						
CSP1	**Cessapalombo**	**0.25**	**22**	⇑P	Pg	11 48 48.3	+0.4
CSP1				AML	AML		
	comp=N,9915μm,1.5s						
CSP1				AML	AML		
	comp=E,10690μm,0.3s						
CSP1				AML	AML		
	comp=N,9647μm,0.2s						
CSP1				AML	AML		
	comp=E,8526μm,0.4s						
T1204	**Amatrice, Fraz**	**0.26**	**137**	P	Pg	11 48 48.8	+0.7
T1204				S	Sb	11 48 53.3	-1.0
T1204				AML	AML		
	comp=E,4360μm,0.2s						
T1204				AML	AML		
	comp=N,3280μm,0.7s						
T1204				AML	AML		
	comp=E,4370μm,0.2s						
T1204				AML	AML		
	comp=N,3275μm,0.7s						
T1204				AML	AML		
	comp=E,4367μm,0.2s						
T1204				AML	AML		
	comp=N,2910μm,0.2s						
T1241	**Roccafluvione,**	**0.26**	**92**	⇓P	Pb	11 48 49.2	-0.5
T1241				S	Sb	11 48 53.6	-0.7
T1241				AML	AML		
	comp=E,9980μm,0.3s						
T1241				AML	AML		
	comp=N,9610μm,0.3s						
T1241				AML	AML		
	comp=E,10750μm,0.3s						
T1241				AML	AML		
	comp=E,9975μm,0.3s						
T1241				AML	AML		
	comp=N,9575μm,0.3s						
T1241				AML	AML		
	comp=N,9035μm,0.3s						
T1241				AML	AML		
	comp=N,9040μm,0.3s						
T1241				AML	AML		
	comp=E,9960μm,0.3s						
T1241				AML	AML		
	comp=E,10800μm,0.3s						
T1241				AML	AML		
	comp=N,9580μm,0.3s						
T1241				AML	AML		
	comp=N,9602μm,0.3s						
T1241				AML	AML		
	comp=E,9968μm,0.3s						
T1241				AML	AML		
	comp=N,9039μm,0.3s						
T1241				AML	AML		
	comp=E,10786μm,0.3s						
LNSS	**Leonessa**	**0.26**	**186**	P	Pb	11 48 49.4	-0.4
LNSS				S	Sb	11 48 53.1	-1.3
GUMA	**Gualdo di Mace**	**0.27**	**44**	⇑P	Pg	11 48 49.1	+0.8
GUMA				S	Sb	11 48 54.0	-0.7
GUMA				AML	AML		
	comp=E,14250μm,0.4s						
GUMA				AML	AML		
	comp=N,16500μm,0.5s						
GUMA				AML	AML		
	comp=E,11250μm,1.4s						
GUMA				AML	AML		
	comp=N,15150μm,0.7s						
GUMA				AML	AML		
	comp=N,51370μm,1.6s						
GUMA				AML	AML		
	comp=E,13784μm,0.3s						
GUMA				AML	AML		
	comp=N,16512μm,0.5s						
GUMA				AML	AML		
	comp=E,10822μm,0.3s						
GUMA				AML	AML		
	comp=N,14539μm,0.5s						
SEF1	**Sefro**	**0.30**	**341**	P	Pb	11 48 50.3	-0.1
SEF1				AML	AML		
	comp=E,7625μm,1.3s						
SEF1				AML	AML		
	comp=E,7620μm,1.3s						
SEF1				AML	AML		
	comp=N,6955μm,0.2s						
SEF1				AML	AML		
	comp=E,7620μm,1.3s						
SEF1				AML	AML		
	comp=N,6960μm,0.2s						
SEF1				AML	AML		
	comp=E,6941μm,0.2s						
SEF1				AML	AML		
	comp=N,6956μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**121**	P	Pg	11 48 49.7	+0.5
T1243				S	Sb	11 48 55.1	-1.0
MDAR	**Monte D'Aria**	**0.33**	**8**	P	Pb	11 48 50.3	-0.7
MDAR				AML	AML		
	comp=E,4100μm,1.4s						
MDAR				AML	AML		
	comp=E,4100μm,1.4s						
MDAR				AML	AML		
	comp=N,6020μm,0.5s						
MDAR				AML	AML		
	comp=N,6015μm,0.5s						
MDAR				AML	AML		
	comp=N,5260μm,0.1s						
MDAR				AML	AML		
	comp=E,3732μm,0.2s						
ARRO	**Arrone**	**0.37**	**219**	⇑P	Pg	11 48 48.9	-1.1
RM33	**Pellescritta (**	**0.37**	**164**	P	Pg	11 48 50.7	+0.6
RM33				S	Sb	11 48 56.8	-0.7
RM33				AML	AML		
	comp=E,1550μm,0.1s						
RM33				AML	AML		
	comp=N,1640μm,0.6s						
RM33				AML	AML		
	comp=E,1580μm,0.1s						
RM33				AML	AML		
	comp=N,1575μm,0.6s						
RM33				AML	AML		
	comp=E,1555μm,0.1s						
RM33				AML	AML		
	comp=N,1635μm,0.6s						
RM33				AML	AML		
	comp=N,1378μm,0.1s						
RM33				AML	AML		
	comp=N,1410μm,0.1s						
RM33				AML	AML		
	comp=E,1554μm,0.1s						
T1211	**Morro Reatino**	**0.37**	**206**	P	Pg	11 48 50.7	+0.5
T1211				S	Sb	11 48 56.9	-0.6
T1211				AML	AML		
	comp=E,2060μm,1.1s						
T1211				AML	AML		
	comp=N,3265μm,0.2s						
T1211				AML	AML		
	comp=N,3260μm,0.2s						
T1211				AML	AML		
	comp=E,2055μm,1.1s						
T1211				AML	AML		
	comp=N,3260μm,0.2s						
T1211				AML	AML		
	comp=E,1614μm,0.1s						
T1211				AML	AML		
	comp=E,1585μm,0.1s						
T1211				AML	AML		
	comp=N,3262μm,0.2s						
GAG1	**Gagliole**	**0.37**	**359**	⇓P	Pg	11 48 50.9	+0.6
GAG1				AML	AML		
	comp=N,5490μm,0.5s						
GAG1				AML	AML		
	comp=N,5495μm,0.5s						
GAG1				AML	AML		
	comp=E,6305μm,0.3s						
GAG1				AML	AML		
	comp=N,4902μm,0.2s						
GAG1				AML	AML		
	comp=E,6302μm,0.3s						
MNTP	**Montappone**	**0.40**	**46**	⇑P	Pb	11 48 51.8	-0.2
MNTP				AML	AML		
	comp=E,4245μm,0.3s						
MNTP				AML	AML		
	comp=N,5220μm,0.3s						
MNTP				AML	AML		
	comp=E,4250μm,0.3s						
MNTP				AML	AML		
	comp=N,5222μm,0.3s						
MNTP				AML	AML		
	comp=E,4249μm,0.3s						
SNTG	**Esanatoglia**	**0.40**	**346**	⇓P	Pg	11 48 51.0	+0.2
SNTG				AML	AML		
	comp=N,1180μm,0.7s						
SNTG				AML	AML		
	comp=N,1185μm,0.7s						
SNTG				AML	AML		
	comp=N,1270μm,1.6s						
SNTG				AML	AML		
	comp=E,1220μm,0.1s						
SNTG				AML	AML		
	comp=E,1250μm,0.7s						
SNTG				AML	AML		
	comp=E,1220μm,0.1s						
SNTG				AML	AML		
	comp=E,1233μm,0.1s						
SNTG				AML	AML		
	comp=N,1177μm,0.1s						
SNTG				AML	AML		
	comp=N,908μm,0.1s						
CAMP	**Campotosto**	**0.41**	**143**	P	Pg	11 48 51.3	+0.4
CAMP				S	Sb	11 48 57.8	-0.9
CAMP				AML	AML		
	comp=N,636μm,0.5s						
CAMP				AML	AML		
	comp=N,700μm,0.3s						
CAMP				AML	AML		
	comp=E,788μm,0.2s						
CAMP				AML	AML		
	comp=N,637μm,0.5s						
CAMP				AML	AML		
	comp=E,788μm,0.2s						
CESX	**Cesi**	**0.45**	**235**	⇑P	Pg	11 48 51.7	+0.1
CESX				AML	AML		
	comp=N,1265μm,0.3s						
CESX				AML	AML		
	comp=E,992μm,0.5s						
CESX				AML	AML		
	comp=N,1267μm,0.3s						
CESX				AML	AML		
	comp=E,993μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.45**	**315**	⇑P	Pg	11 48 51.9	+0.2
ATCC				AML	AML		
	comp=E,2240μm,0.8s						
ATCC				AML	AML		
	comp=N,2645μm,0.3s						
ATCC				AML	AML		
	comp=N,2650μm,0.3s						
ATCC				AML	AML		
	comp=E,2245μm,0.8s						
ATCC				AML	AML		
	comp=E,2110μm,0.3s						
ATCC				AML	AML		
	comp=N,2646μm,0.3s						
OFFI	**Offida**	**0.45**	**81**	⇓P	Pb	11 48 53.0	+0.1
OFFI				AML	AML		
	comp=E,2090μm,1.5s						
OFFI				AML	AML		
	comp=N,3010μm,0.6s						
OFFI				AML	AML		
	comp=N,3011μm,0.6s						
OFFI				AML	AML		
	comp=E,2055μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.45**	**159**	⇑P	Pb	11 48 53.4	+0.4
T1247				AML	AML		
	comp=N,1321μm,0.2s						
T1247				AML	AML		
	comp=E,1070μm,0.1s						
TERO	**Teramo**	**0.46**	**122**	⇓P	Pg	11 48 52.0	+0.3
TERO				AML	AML		
	comp=N,1805μm,0.1s						
TERO				AML	AML		

	comp=N,2035μm,0.1s					
TERO				AML	AML	
	comp=E,1940μm,1.5s					
TERO				AML	AML	
	comp=N,2660μm,0.5s					
TERO				AML	AML	
	comp=N,2545μm,0.5s					
TERO				AML	AML	
	comp=E,1805μm,1.5s					
TERO				AML	AML	
	comp=E,1504μm,0.3s					
TERO				AML	AML	
	comp=E,1623μm,0.3s					
TERO				AML	AML	
	comp=N,2035μm,0.1s					
TERO				AML	AML	
	comp=N,1803μm,0.1s					
EL6	**Elcito**	**0.47**	**2**	⇑P	Pg	11 48 52.1 +0.2
FOSV	**Fossato di Vic**	**0.49**	**332**	⇓P	Pg	11 48 52.5 +0.1
FOSV				AML	AML	
	comp=E,927μm,0.4s					
FOSV				AML	AML	
	comp=N,1006μm,1.5s					
FOSV				AML	AML	
	comp=E,988μm,0.8s					
FOSV				AML	AML	
	comp=N,1006μm,1.5s					
FOSV				AML	AML	
	comp=N,985μm,0.3s					
FOSV				AML	AML	
	comp=E,927μm,0.4s					
GIGS	**Gran Sasso**	**0.55**	**139**	⇓P	Pg	11 48 53.7 +0.2
GIGS				AML	AML	
	comp=E,273μm,1.2s					
GIGS				AML	AML	
	comp=N,184μm,1.2s					
GIGS				AML	AML	
	comp=E,274μm,1.2s					
GIGS				AML	AML	
	comp=N,183μm,1.2s					
GIGS				AML	AML	
	comp=E,237μm,0.2s					
GIGS				AML	AML	
	comp=N,160μm,0.1s					
MURB	**Monte Urbino**	**0.57**	**315**	S	Sb	11 49 04.0 +0.8
FIAM	**Fiamignano**	**0.60**	**177**	⇑P	Pb	11 48 55.8 +0.3
FIAM				S	Sb	11 49 04.0 0.0
FIAM				AML	AML	
	comp=E,537μm,0.6s					
TRTR	**Tortoreto Alta**	**0.62**	**95**	⇓P	Pb	11 48 56.2 +0.4
TRTR				AML	AML	
	comp=E,2188μm,0.6s					
TRTR				AML	AML	
	comp=N,2470μm,0.6s					
ATFO	**Monte Foce - G**	**0.62**	**324**	⇑P	Pb	11 48 55.5 -0.5
ATFO				AML	AML	
	comp=N,676μm,0.4s					
ATFO				AML	AML	
	comp=E,696μm,1.5s					
ATFO				AML	AML	
	comp=N,677μm,0.4s					
ATFO				AML	AML	
	comp=E,571μm,0.3s					
ARVD	**Arcevia**	**0.64**	**351**	⇑P	Pb	11 48 55.8 -0.4
ARVD				S	Sb	11 49 06.0 +0.7
ARVD				AML	AML	
	comp=E,700μm,0.9s					
ARVD				AML	AML	
	comp=N,536μm,0.7s					
ARVD				AML	AML	
	comp=E,620μm,0.2s					
ARVD				AML	AML	
	comp=N,451μm,0.2s					
PP3	**Marolino**	**0.64**	**37**	⇓P	Pb	11 48 56.4 +0.2
PP3				AML	AML	
	comp=E,2310μm,1.3s					
PP3				AML	AML	
	comp=N,2550μm,0.8s					
PP3				AML	AML	
	comp=N,2530μm,0.8s					
PP3				AML	AML	
	comp=E,2310μm,1.3s					
PP3				AML	AML	
	comp=E,2455μm,1.3s					
PP3				AML	AML	
	comp=E,2152μm,0.4s					
PP3				AML	AML	
	comp=N,2416μm,0.3s					
PP3				AML	AML	
	comp=N,2508μm,0.3s					
PP3				AML	AML	
	comp=E,2071μm,0.4s					
FRON	**Frontone**	**0.70**	**339**	⇓P	Pb	11 48 57.5 +0.3
FRON				AML	AML	
	comp=N,725μm,1.4s					
FRON				AML	AML	
	comp=E,466μm,0.4s					
FRON				AML	AML	
	comp=N,669μm,0.3s					
FRON				AML	AML	
	comp=E,467μm,0.4s					
MGAB	**Montegabbione**	**0.71**	**274**	⇑P	Pg	11 48 56.9 +0.4
MGAB				AML	AML	
	comp=E,1145μm,0.4s					
MGAB				AML	AML	
	comp=N,1505μm,0.5s					
MGAB				AML	AML	
	comp=E,1030μm,0.9s					
MGAB				AML	AML	
	comp=N,1565μm,0.5s					
MGAB				AML	AML	
	comp=N,1503μm,0.5s					
MGAB				AML	AML	
	comp=E,952μm,0.5s					
MGAB				AML	AML	
	comp=N,1567μm,0.5s					
MGAB				AML	AML	
	comp=E,1146μm,0.4s					
ATVO	**AVT- Monte Val**	**0.71**	**317**	⇑P	Pb	11 48 57.1 -0.4
ATVO				AML	AML	
	comp=E,610μm,0.4s					
ATVO				AML	AML	
	comp=N,556μm,0.7s					
ATVO				AML	AML	
	comp=N,556μm,0.7s					
ATVO				AML	AML	
	comp=N,506μm,0.5s					
ATVO				AML	AML	
	comp=E,610μm,0.4s					
SRES	**S.Oreste - Sor**	**0.75**	**214**	S	Sn	11 49 11.0 -0.2
PIEI	**Pieia**	**0.78**	**330**	⇑P	Pb	11 48 58.3 -0.3
PIEI				S	Sn	11 49 11.0 -0.9
PIEI				AML	AML	
	comp=E,382μm,1.5s					
PIEI				AML	AML	
	comp=N,316μm,0.5s					
PIEI				AML	AML	
	comp=E,368μm,0.3s					
PIEI				AML	AML	
	comp=N,273μm,0.4s					
MPAG	**Monte Paganucc**	**0.80**	**343**	⇓P	Pb	11 48 58.9 0.0
MPAG				S	Sn	11 49 12.0 -0.4
MPAG				AML	AML	
	comp=E,444μm,0.7s					
MPAG				AML	AML	
	comp=N,414μm,0.6s					
MPAG				AML	AML	
	comp=E,443μm,0.7s					
MPAG				AML	AML	
	comp=N,971μm,0.8s					
MPAG				AML	AML	
	comp=N,367μm,0.4s					
MPAG				AML	AML	
	comp=E,826μm,0.5s					
MPAG				AML	AML	
	comp=E,412μm,0.5s					
T0110	**Collepietro**	**0.82**	**141**	⇓P	Pg	11 48 58.6 0.0
T0110				AML	AML	
	comp=N,1190μm,0.5s					
T0110				AML	AML	
	comp=E,806μm,0.7s					
T0110				AML	AML	
	comp=N,1190μm,0.5s					
T0110				AML	AML	
	comp=E,806μm,0.7s					
SENI	**Senigallia**	**0.85**	**8**	P	Pg	11 48 59.2 +0.1
SENI				AML	AML	
	comp=N,450μm,1.3s					
SENI				AML	AML	
	comp=E,544μm,1.0s					
SENI				AML	AML	
	comp=E,1954μm,0.4s					
SENI				AML	AML	
	comp=E,533μm,0.5s					
SENI				AML	AML	
	comp=N,2221μm,0.3s					
FSSB	**Fossombrone**	**0.85**	**345**	⇓P	Pg	11 48 59.5 +0.2
FSSB				S	Sn	11 49 14.0 +0.3
FSSB				AML	AML	
	comp=E,1390μm,0.3s					
FSSB				AML	AML	
	comp=N,1705μm,1.2s					
FSSB				AML	AML	
	comp=N,1582μm,0.3s					
FSSB				AML	AML	
	comp=E,1389μm,0.3s					
SACS	**San Casciano d**	**0.86**	**269**	⇓P	Pb	11 48 59.7 -0.2
SACS				AML	AML	
	comp=E,408μm,0.8s					
SACS				AML	AML	
	comp=N,506μm,1.1s					
SACS				AML	AML	
	comp=N,505μm,1.1s					
SACS				AML	AML	
	comp=N,505μm,1.1s					
SACS				AML	AML	
	comp=E,381μm,0.8s					
SACS				AML	AML	
	comp=E,408μm,0.8s					
SACS				AML	AML	
	comp=N,539μm,1.1s					
PE3	**Peglio**	**0.93**	**333**	⇓P	Pg	11 49 00.3 -0.5
CAFI	**Castiglion Fio**	**0.94**	**300**	⇓P	Pg	11 49 00.9 +0.1
CAFI				S	Sn	11 49 16.0 +0.3
CAFI				AML	AML	
	comp=E,516μm,0.6s					
CAFI				AML	AML	
	comp=N,501μm,0.8s					
CAFI				AML	AML	
	comp=N,500μm,0.8s					
CAFI				AML	AML	
	comp=E,488μm,0.6s					
CAFI				AML	AML	
	comp=E,515μm,0.6s					
CAFI				AML	AML	
	comp=N,501μm,0.8s					
SF04	**Casetta**	**1.04**	**269**	⇑P	Pn	11 49 03.7 +0.1
SF04				AML	AML	
	comp=E,285μm,1.6s					
SF04				AML	AML	
	comp=N,260μm,1.2s					
SF04				AML	AML	
	comp=N,252μm,0.6s					
TOLF	**Tolfa**	**1.13**	**225**	⇓P	Pb	11 49 02.9 -1.6
OVO	**Vesuviano**	**2.26**	**154**	⇓P	Pn	11 49 17.9 -2.5
OBKA	**Obir**	**3.79**	**16**	*e*Pn	Pn	11 49 40.7 -0.7
	comp=N,1.5nm,0.5s					
ABTA	**Abfaltersbach**	**3.90**	**354**	*e*Pn	Pn	11 49 44.3 +1.3
	comp=N,4.1nm,0.5s					
MOA	**Molin**	**5.05**	**9**	*e*Pn	Pn	11 49 59.3 +0.6
	comp=N,0.2nm,0.1s					
CONA	**Conrad Observa**	**5.43**	**20**	*e*Pn	Pn	11 50 04.2 +0.2
	comp=N,0.8nm,0.2s					
KHC	**Kasperske Hory**	**6.28**	**3**	*e*SN	Sn	11 51 26.1 -1.3

BEO ***30*** *11:58:15.5±0.6, 42°.77N×12°.76E, h0km, ML4.3/10*
PRU ***30*** *11:58:17.5±0.0, 42°.84N×13°.23E, h0km, M4.5*
IDC ***30*** *11:58:17.2±0.8, 42°.90N×13°.23E, h0km, mb3.9/10, mbtmp3.8/21, ML3.4/11, MS3.3/6, Error ellipse: s-maj=14.6km s-min=10.3km az=87.0*
ROM ***30*** *11:58:17.5±0.0, 42°.845N±0°.001×13°.057E±0°.003, h10km, ML4.0/108, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.0km az=254.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.17; $M_{\theta\theta}$0.02; $M_{\phi\phi}$0.15; $M_{r\theta}$0.52; $M_{\theta\phi}$-0.04; $M_{\phi r}$-1.25; Fault plane solution: $M_0$1.36509×10^{15} NP1:ϕ_s171.00000°, δ3.00000°, λ-77.00000°. NP2:ϕ_s338.00000°, δ87.00000°, λ-91.00000°.*
PDG ***30*** *11:58:17.9±0.7, 42°.84N×13°.06E, h13km, ML4.3/13 Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
NEIC ***30*** *11:58:18.6±2.2, 42°.82N±0°.06×13°.01E±0°.07, h6km±5km, mb4.5/11, ML4.0(VIE), Error ellipse: s-maj=8.9km s-min=6.3km az=211.0*
LDG ***30*** *11:58:18.7±0.1, 42°.76N×13°.02E, h10km, Ml3.7/22, Error ellipse: s-maj=5.5km s-min=3.2km az=44.0*
STR ***30*** *11:58:20.7±1.3, 43°.N±8°×1°.3E±°, h10km, MLv3.7/17, Error ellipse: s-maj=0.0km s-min=0.0km az=118.0, preliminary*

ISC 30 11:58:18.2±0.6, **42°.85N**±0°.01×**13°.04E**±0°.01, **h11**km±4km, **n489**, σ1§**57**/592, **mb4.2**/14, **41C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**345**	P	**Pg**	**11 58 19.9**	**-0.4**
T1216				S	**Sg**	**11 58 21.4**	**-0.5**
T1212	**Cascia, Frazio**	**0.10**	**176**	⇑P	**Pg**	**11 58 20.7**	**-0.2**
T1212				S	**Sg**	**11 58 22.7**	**-0.1**
FEMA	**Monte Fema**	**0.12**	**5**	P	**Pg**	**11 58 20.8**	**-0.4**
FEMA				S	**Sg**	**11 58 23.2**	**-0.2**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1215	**Vallo di Nera,**	**0.13**	**250**	⇑*i*P	**Pg**	**11 58 21.4**	**0.0**
T1215				S	**Sg**	**11 58 24.1**	**+0.5**
T1215				AML	AML		
	comp=E,91750μm,1.1s						
T1215				AML	AML		
	comp=E,96050μm,1.0s						
T1215				AML	AML		
	comp=N,83450μm,0.4s						
T1215				AML	AML		
	comp=E,91650μm,1.1s						
T1215				AML	AML		
	comp=N,86400μm,0.4s						
T1215				AML	AML		
	comp=E,96000μm,1.1s						
T1215				AML	AML		
	comp=N,83500μm,0.4s						
T1215				AML	AML		
	comp=E,91850μm,1.1s						
T1215				AML	AML		
	comp=N,86350μm,0.4s						
T1215				AML	AML		
	comp=E,95700μm,1.1s						
T1215				AML	AML		
	comp=E,91600μm,1.1s						
T1213	**Norcia, Frazio**	**0.14**	**151**	P	**Pg**	**11 58 21.3**	**-0.2**
T1213				S	**Sg**	**11 58 23.5**	**-0.3**
T1214	**Arquata del Tr**	**0.15**	**124**	⇓P	**Pg**	**11 58 21.3**	**-0.5**
T1214				S	**Sg**	**11 58 23.9**	**-0.4**
T1217	**Poggiodomo (PG**	**0.15**	**210**	⇑*i*P	**Pg**	**11 58 21.7**	**0.0**
T1217				S	**Sg**	**11 58 24.7**	**+0.5**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1218	**Civita (PG)**	**0.18**	**162**	⇑P	**Pg**	**11 58 22.0**	**-0.3**
T1218				S	**Sg**	**11 58 25.2**	**+0.2**
FDMO	**Fiordimonte**	**0.19**	**11**	P	**Pg**	**11 58 22.0**	**-0.4**
FDMO				S	**Sg**	**11 58 25.2**	**-0.1**
T1219	**Muccia, Frazio**	**0.21**	**354**	P	**Pg**	**11 58 22.4**	**-0.3**
T1219				S	**Sg**	**11 58 25.9**	**+0.2**
T1244	**Arquata del Tr**	**0.21**	**115**	P	**Pg**	**11 58 22.4**	**-0.3**
T1244				S	**Sg**	**11 58 26.0**	**+0.2**
T1256	**Bolognola (MC)**	**0.21**	**41**	P	**Pg**	**11 58 22.3**	**-0.4**
T1256				S	**Sg**	**11 58 25.7**	**-0.2**
MMO1	**Montemonaco**	**0.22**	**76**	P	**Pg**	**11 58 22.0**	**-0.9**
MMO1				S	**Sg**	**11 58 25.6**	**-0.4**
LNSS	**Leonessa**	**0.24**	**179**	P	**Pg**	**11 58 23.1**	**-0.2**
LNSS				S	**Sg**	**11 58 27.0**	**+0.3**
T1201	**Domo (RI)**	**0.25**	**140**	P	**Pg**	**11 58 23.2**	**-0.1**
T1201				S	**Sg**	**11 58 27.6**	**+0.9**
AM05	**Amandola Campo**	**0.27**	**60**	P	**Pg**	**11 58 23.2**	**-0.4**
AM05				S	**Sg**	**11 58 27.4**	**+0.1**
AM05				AML	AML		
	comp=N,21400μm,0.6s						
AM05				AML	AML		
	comp=E,82150μm,1.0s						
AM05				AML	AML		
	comp=N,21450μm,0.6s						
AM05				AML	AML		
	comp=E,82200μm,1.0s						
AM05				AML	AML		
	comp=N,7075μm,0.1s						
AM05				AML	AML		
	comp=E,16350μm,0.5s						
T1220	**Camerino, Fraz**	**0.27**	**8**	⇑P	**Pg**	**11 58 23.3**	**-0.4**
T1220				S	**Sg**	**11 58 28.0**	**+0.6**
T1204	**Amatrice, Fraz**	**0.27**	**129**	⇑*e*P	**Pg**	**11 58 23.4**	**-0.3**
T1204				S	**Sg**	**11 58 27.6**	**+0.2**
T1204				AML	AML		
T1204				AML	AML		
T1241	**Roccafluvione,**	**0.29**	**88**	⇓P	**Pg**	**11 58 24.0**	**-0.1**
T1241				S	**Sg**	**11 58 28.5**	**+0.4**
T1241				AML	AML		
T1241				AML	AML		
	comp=N,86200μm,0.8s						
T1241				AML	AML		
	comp=N,87900μm,0.9s						
T1241				AML	AML		
	comp=N,87950μm,0.9s						
T1241				AML	AML		
SEF1	**Sefro**	**0.31**	**348**	P	**Pg**	**11 58 24.1**	**-0.3**
SEF1				S	**Sg**	**11 58 29.2**	**+0.6**
SEF1				AML	AML		
	comp=E,48300μm,1.6s						
SEF1				AML	AML		
	comp=N,29700μm,0.5s						
GUMA	**Gualdo di Mace**	**0.31**	**45**	⇑*i*P	**Pg**	**11 58 24.2**	**-0.2**
GUMA				S	**Sg**	**11 58 29.1**	**+0.5**
GUMA				AML	AML		
	comp=N,80200μm,0.8s						
GUMA				AML	AML		
	comp=E,74350μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,80200μm,0.8s						
ARRO	**Arrone**	**0.33**	**217**	⇑*e*P	**Pg**	**11 58 24.8**	**-0.1**
ARRO				S	**Sg**	**11 58 30.2**	**+0.9**
ARRO				AML	AML		
	comp=N,56250μm,1.4s						
ARRO				AML	AML		
	comp=N,56300μm,1.4s						
ARRO				AML	AML		
	comp=E,67950μm,0.5s						
PIO1	**Pioraco**	**0.33**	**353**	P	**Pg**	**11 58 24.6**	**-0.3**
PIO1				S	**Sb**	**11 58 30.3**	**-1.4**
PIO1				AML	AML		
	comp=N,26200μm,0.6s						
PIO1				AML	AML		
	comp=E,20050μm,0.8s						
ASSB	**Assisi San Ben**	**0.34**	**305**	⇑*e*P	**Pg**	**11 58 24.7**	**-0.3**
ASSB				S	**Sg**	**11 58 30.1**	**+0.5**
T1243	**Rocca Santa Ma**	**0.34**	**116**	P	**Pg**	**11 58 24.3**	**-0.7**
T1243				S	**Sg**	**11 58 29.4**	**-0.1**
T1211	**Morro Reatino**	**0.34**	**203**	P	**Pg**	**11 58 24.8**	**-0.2**
T1211				S	**Sg**	**11 58 30.5**	**+0.9**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
FIU1	**Fiuminata**	**0.35**	**347**	P	**Pg**	**11 58 24.8**	**-0.4**
FIU1				S	**Sg**	**11 58 30.6**	**+0.7**
FIU1				AML	AML		
	comp=N,17500μm,1.2s						
FIU1				AML	AML		
	comp=E,17000μm,0.3s						
MDAR	**Monte D'Aria**	**0.35**	**13**	P	**Pg**	**11 58 24.8**	**-0.6**
MDAR				S	**Sg**	**11 58 30.5**	**+0.4**
MDAR				AML	AML		
	comp=E,15500μm,1.0s						
MDAR				AML	AML		
	comp=N,18700μm,0.6s						
RM33	**Pellescritta (**	**0.36**	**159**	P	**Pg**	**11 58 24.9**	**-0.5**
RM33				S	**Sg**	**11 58 30.6**	**+0.4**
RM33				AML	AML		
	comp=N,83050μm,0.6s						
RM33				AML	AML		
RM33				AML	AML		
	comp=N,82600μm,0.6s						
RM33				AML	AML		
	comp=N,82150μm,0.2s						
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=N,82650μm,0.6s						
GAG1	**Gagliole**	**0.39**	**3**	P	**Pg**	**11 58 25.7**	**-0.3**
GAG1				S	**Sb**	**11 58 32.3**	**-1.0**
GAG1				AML	AML		
	comp=N,42500μm,0.5s						
GAG1				AML	AML		
	comp=E,38700μm,0.4s						
SSM1	**San Severino M**	**0.40**	**15**	P	**Pg**	**11 58 25.4**	**-0.6**
SSM1				S	**Sg**	**11 58 32.0**	**+0.7**
CESX	**Cesi**	**0.41**	**235**		**Pg**	**11 58 26.3**	**0.0**
CESX	**Cesi**	**0.41**	**235**	⇑*e*P	**Pg**	**11 58 26.0**	**-0.3**
CESX				S	**Sg**	**11 58 32.5**	**+0.8**
CESX				AML	AML		
	comp=E,57550μm,0.6s						
CESX				AML	AML		
	comp=N,49000μm,0.6s						
CAMP	**Campotosto**	**0.41**	**138**		**Pg**	**11 58 25.8**	**-0.7**
CAMP	**Campotosto**	**0.41**	**138**	⇑*e*P	**Pg**	**11 58 25.7**	**-0.7**
CAMP				S	**Sg**	**11 58 31.9**	**0.0**
CAMP				AML	AML		
	comp=N,48500μm,0.7s						
CAMP				AML	AML		
	comp=E,46900μm,0.7s						
SNTG	**Esanatoglia**	**0.41**	**350**	P	**Pg**	**11 58 26.0**	**-0.4**
SNTG				S	**Sb**	**11 58 32.6**	**-1.4**
SNTG				AML	AML		
	comp=E,8655μm,0.6s						
SNTG				AML	AML		
	comp=N,8070μm,0.3s						
SNTG				AML	AML		
	comp=N,8060μm,1.5s						
SNTG				AML	AML		
	comp=E,8670μm,0.6s						
T1246	**Crognaleto (TE**	**0.43**	**128**	⇑*e*P	**Pg**	**11 58 25.9**	**-0.7**
T1246				S	**Sg**	**11 58 32.1**	**-0.2**
MNTP	**Montappone**	**0.43**	**47**	⇑P	**Pg**	**11 58 26.7**	**0.0**
MNTP				S	**Sb**	**11 58 34.1**	**-0.3**
MNTP				AML	AML		
	comp=E,39450μm,1.4s						
MNTP				AML	AML		
	comp=N,43550μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.45**	**320**	⇑*e*P	**Pg**	**11 58 26.6**	**-0.3**
ATCC				S	**Sb**	**11 58 34.5**	**-0.4**
ATCC				AML	AML		
	comp=N,14950μm,0.7s						
ATCC				AML	AML		
	comp=E,23050μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.45**	**154**	P	**Pg**	**11 58 26.4**	**-0.6**
T1247				S	**Sg**	**11 58 33.4**	**+0.5**
T1247				AML	AML		
	comp=N,81850μm,0.3s						
T1247				AML	AML		
	comp=E,86700μm,0.4s						
TERO	**Teramo**	**0.47**	**118**	⇑*e*P	**Pg**	**11 58 26.5**	**-0.9**
TERO				S	**Sg**	**11 58 33.5**	**-0.3**
TERO				AML	AML		
	comp=N,53150μm,0.6s						
TERO				AML	AML		
	comp=N,54650μm,0.6s						
TERO				AML	AML		
	comp=N,53100μm,0.6s						
TERO				AML	AML		
	comp=E,68250μm,0.8s						
TERO				AML	AML		
	comp=E,65600μm,0.9s						
EL6	**Elcito**	**0.48**	**6**	P	**Pg**	**11 58 27.1**	**-0.6**
EL6				S	**Sb**	**11 58 35.5**	**-0.6**
EL6				AML	AML		
	comp=N,17000μm,0.9s						

EL6				AML	AML	
	comp=E,17000µm,1.1s					
OFFI	**Offida**	**0.49 79**	⇑P		**Pg**	**11 58 27.8 +0.1**
OFFI			S		**Sb**	**11 58 36.1 +0.1**
OFFI			AML		AML	
	comp=E,78300µm,0.7s					
OFFI			AML		AML	
	comp=N,67450µm,0.6s					
FOSV	**Fossato di Vic**	**0.49 336**	P		**Pg**	**11 58 27.4 -0.4**
FOSV			AML		AML	
	comp=N,9545µm,0.5s					
FOSV			AML		AML	
	comp=E,6030µm,0.7s					
TRE1	**Treia**	**0.51 23**	P		**Pg**	**11 58 28.0 -0.1**
TRE1			AML		AML	
	comp=E,23050µm,0.9s					
TRE1			AML		AML	
	comp=N,19550µm,0.7s					
GIGS	**Gran Sasso**	**0.56 135**	P		**Pg**	**11 58 27.9 -1.2**
GIGS			S		**Sg**	**11 58 35.9 -0.5**
GIGS			AML		AML	
	comp=N,9975µm,0.3s					
GIGS			AML		AML	
	comp=E,15800µm,0.3s					
MURB	**Monte Urbino**	**0.56 318**			**Pg**	**11 58 29.1 0.0**
MURB	**Monte Urbino**	**0.56 318**	P		**Pg**	**11 58 28.8 -0.3**
MURB			AML		AML	
	comp=E,29250µm,1.1s					
MURB			AML		AML	
	comp=N,24200µm,0.3s					
MURB			AML		AML	
	comp=N,25550µm,0.3s					
MURB			AML		AML	
	comp=E,31850µm,1.1s					
AQU	**L'Aquila**	**0.56 151**			**Pg**	**11 58 28.7 -0.4**
AQU	**L'Aquila**	**0.56 151**	P		**Pg**	**11 58 28.3 -0.8**
AQU			S		**Sg**	**11 58 37.2 +0.7**
AQU			AML		AML	
	comp=E,34350µm,0.5s					
AQU			AML		AML	
	comp=N,23350µm,0.8s					
AQU			AML		AML	
	comp=N,22900µm,0.8s					
AQU			AML		AML	
	comp=E,33500µm,0.5s					
FIAM	**Fiamignano**	**0.58 174**	P		**Pg**	**11 58 28.8 -0.7**
FIAM			S		**Sg**	**11 58 37.9 +0.7**
FIAM			AML		AML	
	comp=E,35400µm,0.6s					
FIAM			AML		AML	
	comp=N,27750µm,0.2s					
MMUR	**Monte Murano**	**0.60 357**	P		**Pg**	**11 58 29.3 -0.5**
MMUR			S		**Sb**	**11 58 38.9 -0.3**
MMUR			AML		AML	
	comp=N,11400µm,0.6s					
MMUR			AML		AML	
	comp=E,12950µm,1.4s					
ATTE	**AVT- Monte Tez**	**0.61 305**	P		**Pg**	**11 58 29.8 -0.3**
ATTE			AML		AML	
	comp=N,4790µm,1.5s					
ATTE			AML		AML	
	comp=E,4955µm,1.2s					
ATFO	**Monte Foce - G**	**0.62 327**	P		**Pg**	**11 58 29.9 -0.4**
ATFO			AML		AML	
	comp=E,6845µm,0.6s					
ATFO			AML		AML	
	comp=N,6120µm,0.6s					
ATSC	**Scheggia e Pas**	**0.63 336**	P		**Pg**	**11 58 29.9 -0.6**
TRTR	**Tortoreto Alta**	**0.65 93**	P		**Pg**	**11 58 30.9 +0.1**
TRTR			AML		AML	
	comp=N,59900µm,1.2s					
TRTR			AML		AML	
ARVD	**Arcevia**	**0.66 354**	P		**Pg**	**11 58 30.2 -0.7**
ARVD			S		**Sb**	**11 58 40.7 -0.2**
ARVD			AML		AML	
	comp=E,3905µm,1.5s					
ARVD			AML		AML	
	comp=N,3790µm,1.1s					
ATLO	**AVT- Montelove**	**0.66 316**	P		**Pg**	**11 58 30.3 -0.7**
PP3	**Marolino**	**0.68 38**	P		**Pg**	**11 58 31.6 +0.2**
PP3			AML		AML	
	comp=E,19950µm,1.5s					
PP3			AML		AML	
	comp=E,20550µm,1.6s					
PP3			AML		AML	
	comp=N,18100µm,0.5s					
PP3			AML		AML	
	comp=N,18350µm,0.5s					
MGAB	**Montegabbione**	**0.68 276**	P		**Pb**	**11 58 31.9 -0.3**
MGAB			AML		AML	
	comp=E,15150µm,0.6s					
MGAB			AML		AML	
	comp=N,19550µm,0.6s					
MGAB			AML		AML	
	comp=N,21500µm,0.6s					
MGAB			AML		AML	
	comp=E,15400µm,0.6s					
TB01	**Gubbio**	**0.69 321**	P		**Pg**	**11 58 31.1 -0.5**
TB02	**Pietralunga**	**0.70 319**	P		**Pg**	**11 58 31.4 -0.3**
ATVA	**AVT- Monte Val**	**0.70 308**	P		**Pg**	**11 58 31.8 0.0**
ATVO	**AVT- Monte Val**	**0.71 320**	P		**Pg**	**11 58 31.3 -0.6**
ATVO			AML		AML	
	comp=N,4385µm,0.5s					
ATVO			AML		AML	
	comp=E,5660µm,1.2s					
FAGN	**Fagnano**	**0.71 145**	P		**Pg**	**11 58 30.8 -1.1**
FAGN			AML		AML	
	comp=N,65900µm,0.3s					
FAGN			AML		AML	
	comp=E,60800µm,0.5s					
FRON	**Frontone**	**0.71 341**	P		**Pg**	**11 58 31.2 -0.7**
FRON			S		**Sb**	**11 58 42.7 +0.3**
FRON			AML		AML	
	comp=E,4970µm,0.9s					
FRON			AML		AML	
	comp=N,5690µm,0.5s					
TB03	**Pietralunga**	**0.72 321**	P		**Pg**	**11 58 31.6 -0.5**
SRES	**S.Oreste - Sor**	**0.72 213**	P		**Pg**	**11 58 31.7 -0.5**
SRES			S		**Sb**	**11 58 43.1 +0.3**
SRES			AML		AML	
	comp=E,21750µm,1.4s					
SRES			AML		AML	
	comp=N,23850µm,0.5s					
ATBU	**Serra di Buran**	**0.72 331**	P		**Pg**	**11 58 32.0 -0.2**
ATMI	**Monte Miggiano**	**0.74 311**	P		**Pb**	**11 58 33.4 +0.1**
ATMI			AML		AML	
	comp=E,13250µm,0.6s					
ATMI			AML		AML	
	comp=N,13600µm,0.7s					
VCEL	**Villa Celiera**	**0.75 127**	P		**Pg**	**11 58 31.6 -1.0**
VCEL			S		**Sg**	**11 58 43.4 +1.0**
VCEL			AML		AML	
	comp=E,47450µm,0.3s					
VCEL			AML		AML	
	comp=N,42700µm,1.3s					
VCEL			AML		AML	
	comp=E,47500µm,0.3s					
ATPI	**Pietralunga -**	**0.76 323**	P		**Pg**	**11 58 32.6 -0.3**
ATPI			AML		AML	
	comp=E,4625µm,0.9s					
ATPI			AML		AML	
	comp=N,4000µm,1.1s					
ATPC	**Poggio Castell**	**0.76 326**	P		**Pg**	**11 58 32.6 -0.3**
PIEI	**Pieia**	**0.78 332**	P		**Pg**	**11 58 33.0 -0.3**
PIEI			AML		AML	
	comp=N,3020µm,1.1s					
PIEI			AML		AML	
	comp=E,3575µm,1.4s					
MPAG	**Monte Paganucc**	**0.81 346**	P		**Pg**	**11 58 33.2 -0.6**
MPAG			AML		AML	
	comp=E,5040µm,0.5s					
MPAG			AML		AML	
	comp=N,4785µm,0.6s					
MPAG			AML		AML	
	comp=N,4365µm,0.6s					
MPAG			AML		AML	
	comp=E,5105µm,0.5s					
AOI	**Ancona**	**0.82 30**	P		**Pg**	**11 58 33.3 -0.7**
AOI			AML		AML	
	comp=N,4595µm,1.4s					
AOI			AML		AML	
	comp=E,5250µm,0.6s					
SACS	**San Casciano d**	**0.83 271**	P		**Pg**	**11 58 33.9 -0.3**
SACS			AML		AML	
	comp=N,8010µm,1.4s					
SACS			AML		AML	
	comp=E,9230µm,1.6s					
SACS			AML		AML	
	comp=E,9450µm,1.6s					
SACS			AML		AML	
	comp=N,8060µm,1.4s					
T0110	**Collepietro**	**0.83 138**	P		**Pg**	**11 58 32.9 -1.3**
T0110			AML		AML	
	comp=E,45750µm,0.3s					
T0110			AML		AML	
	comp=N,43550µm,0.4s					
APEC	**Apecchio**	**0.84 328**	P		**Pg**	**11 58 33.2 -1.3**
APEC			AML		AML	
	comp=E,976µm,1.3s					
APEC			AML		AML	
	comp=N,1330µm,0.7s					
MTCE	**Montecelio**	**0.85 195**	P		**Pg**	**11 58 33.5 -1.1**
MTCE			AML		AML	
	comp=E,24700µm,1.1s					
MTCE			AML		AML	
	comp=N,25150µm,0.6s					
FSSB	**Fossombrone**	**0.87 348**	P		**Pg**	**11 58 34.3 -0.7**
FSSB			AML		AML	
	comp=E,10255µm,0.5s					
FSSB			AML		AML	
	comp=N,8215µm,1.0s					
PTQR	**Pietraquaria**	**0.87 162**	P		**Pg**	**11 58 33.9 -1.0**
PTQR			AML		AML	
	comp=N,13450µm,0.4s					
PTQR			AML		AML	
	comp=E,14100µm,0.4s					
SENI	**Senigallia**	**0.87 9**	P		**Pb**	**11 58 35.2 -0.2**
SENI			AML		AML	
	comp=E,6505µm,1.5s					
SENI			AML		AML	
	comp=N,6390µm,1.0s					
BADI	**Badiali**	**0.88 319**	AML		AML	
	comp=E,162µm,1.6s					
BADI			AML		AML	
	comp=N,3275µm,0.9s					
CERT	**Cerreto**	**0.90 183**	P		**Pg**	**11 58 34.5 -1.0**
CERT			AML		AML	
	comp=N,22500µm,0.4s					
CERT			AML		AML	
	comp=E,31100µm,0.6s					
CAFI	**Castiglion Fio**	**0.92 302**	P		**Pg**	**11 58 35.5 -0.4**
CAFI			AML		AML	
	comp=E,3960µm,1.4s					
CAFI			AML		AML	
	comp=N,3775µm,0.5s					
CAFI			AML		AML	
	comp=E,4065µm,1.4s					
CAFI			AML		AML	
	comp=N,3875µm,0.5s					
PE3	**Peglio**	**0.94 335**	P		**Pg**	**11 58 36.1 -0.2**
PE3			AML		AML	
	comp=N,29µm,1.3s					
PE3			AML		AML	
	comp=E,25µm,1.3s					
LATE	**Laterza**	**0.94 256**			**Pn**	**11 58 37.3 -0.1**
LATE	**Laterza**	**0.94 256**	P		**Pg**	**11 58 36.1 -0.1**
SSP9	**Sansepolcro**	**0.98 318**	P		**Pb**	**11 58 37.4 +0.1**
SF11	**Podere del Sol**	**1.00 272**	P		**Pb**	**11 58 37.5 -0.1**
RCAV	**Rocca di Cave**	**1.00 184**	P		**Pg**	**11 58 36.1 -1.3**
MCIV	**Monte Civitell**	**1.00 267**	P		**Pg**	**11 58 37.1 -0.4**
MCIV			AML		AML	
	comp=E,3475µm,0.8s					
MCIV			AML		AML	
	comp=N,3290µm,1.0s					
SF04	**Casetta**	**1.01 270**	AML		AML	
	comp=E,4760µm,1.2s					
SF04			AML		AML	
	comp=N,4140µm,1.1s					
SF13	**Bagnolo**	**1.04 269**	P		**Pg**	**11 58 38.1 -0.1**
SF14	**Selvena**	**1.05 266**	‖iP		**Pb**	**11 58 38.3 -0.1**
INTR	**Introdacqua**	**1.05 142**	P		**Pb**	**11 58 37.6 -0.9**
RMP	**Rome, Mte Porz**	**1.06 194**	P		**Pb**	**11 58 37.3 -1.3**
RMP			AML		AML	
	comp=N,44650µm,0.6s					
RMP			AML		AML	
	comp=E,37550µm,1.5s					
VVLD	**Villa Vallelon**	**1.07 156**	P		**Pb**	**11 58 37.8 -0.9**
VVLD			AML		AML	
	comp=E,14550µm,0.5s					
VVLD			AML		AML	
	comp=N,12650µm,0.6s					
GUAR	**Guarcino**	**1.07 169**	P		**Pn**	**11 58 39.3 +0.1**
GUAR			AML		AML	
	comp=N,24050µm,0.4s					
GUAR			AML		AML	
	comp=E,16750µm,0.7s					
SF01	**Poggio Pratacc**	**1.08 269**	AML		AML	
	comp=E,5815µm,1.1s					
SF01			AML		AML	
	comp=N,5440µm,0.9s					
CPGN	**Carpegna, Ital**	**1.09 332**	P		**Pn**	**11 58 39.4 -0.2**
CPGN			AML		AML	
	comp=E,6780µm,1.3s					
CPGN			AML		AML	
	comp=N,6070µm,1.4s					
CPGN			AML		AML	
	comp=N,4900µm,0.9s					
CPGN			AML		AML	
	comp=E,6285µm,0.9s					
TOLF	**Tolfa**	**1.09 225**	P		**Pb**	**11 58 38.3 -0.8**
TOLF			AML		AML	
	comp=N,12700µm,0.7s					
TOLF			AML		AML	
	comp=E,10875µm,0.6s					
CRE	**Caprese Michel**	**1.11 315**	P		**Pb**	**11 58 39.1 -0.4**
CRE			AML		AML	
	comp=N,2185µm,1.2s					
CRE			AML		AML	
	comp=E,1770µm,0.6s					
MA9	**Marino**	**1.11 195**	P		**Pb**	**11 58 38.3 -1.1**
RDP	**Rocca di Papa**	**1.11 192**	P		**Pb**	**11 58 38.0 -1.5**
RDP			AML		AML	
	comp=N,59550µm,0.7s					
RDP			AML		AML	
	comp=E,87900µm,0.5s					
SAMA	**S.Maria delle**	**1.11 197**	P		**Pb**	**11 58 38.2 -1.3**
ARCI	**Arcidosso**	**1.15 271**	P		**Pn**	**11 58 40.2 -0.1**
CAFR	**Castel Frentan**	**1.15 122**	P		**Pg**	**11 58 40.6 +0.4**
CAFR			AML		AML	
	comp=E,7855µm,0.6s					
CAFR			AML		AML	
	comp=N,8785µm,0.6s					
RSM	**Repubblica di**	**1.17 339**	P		**Pg**	**11 58 40.9 +0.2**
LPEL	**Lama dei Pelig**	**1.17 133**	P		**Pb**	**11 58 38.4 -2.0**
LPEL			AML		AML	
	comp=E,10375µm,0.6s					
LPEL			AML		AML	
	comp=N,12850µm,0.9s					
POFI	**Posta Fibreno**	**1.23 156**	P		**Pn**	**11 58 41.7 +0.2**
POFI			AML		AML	
	comp=N,5470µm,0.9s					
POFI			AML		AML	
	comp=E,5490µm,0.6s					
POFI			AML		AML	
	comp=E,5335µm,0.6s					
POFI			AML		AML	
	comp=N,5535µm,0.9s					
LRP	**Arpino**	**1.27 161**	P		**Pb**	**11 58 42.6 +0.5**
LRP			AML		AML	
	comp=N,9410µm,0.5s					
LRP			AML		AML	
	comp=E,5145µm,0.9s					
GIUL	**Giuliano Di Ro**	**1.30 173**	P		**Pn**	**11 58 42.1 -0.3**
GIUL			AML		AML	
	comp=E,8865µm,0.5s					
GIUL			AML		AML	
	comp=N,8615µm,0.6s					
ASQU	**Asqua**	**1.31 317**	P		**Pn**	**11 58 41.9 -0.7**
ASQU			AML		AML	
	comp=N,2025µm,1.1s					
ASQU			AML		AML	
	comp=E,1830µm,0.8s					
LATB	**Latina**	**1.35 182**	P		**Pn**	**11 58 41.8 -1.2**
LATB			AML		AML	
	comp=N,2735µm,0.7s					
LATB			AML		AML	
	comp=E,4180µm,0.6s					
SFI	**Santa Sofia**	**1.37 321**	P		**Pn**	**11 58 43.2 -0.1**
LIK	**San Giovanni I**	**1.40 164**	P		**Pg**	**11 58 45.0 +0.1**
LIK			AML		AML	
	comp=N,11550µm,0.5s					
LIK			AML		AML	
	comp=E,11585µm,0.4s					
RNI2	**Rionero Sannit**	**1.41 144**	P		**Pg**	**11 58 45.3 0.0**
CSNT	**Castellina Chi**	**1.42 297**	⇑*e*P		**Pn**	**11 58 43.8 -0.3**
FROS	**Frosini**	**1.43 285**	P		**Pn**	**11 58 43.4 -0.7**
CERA	**Filignano**	**1.45 149**	P		**Pn**	**11 58 44.6 +0.2**
CERA			AML		AML	
	comp=E,8560µm,1.3s					
CERA			AML		AML	
	comp=N,7505µm,0.9s					
CERA			AML		AML	
	comp=N,7350µm,0.9s					
CERA			AML		AML	
	comp=E,8680µm,1.3s					
MAON	**Monte Argentar**	**1.47 254**	P		**Pn**	**11 58 43.9 -0.8**
MAON			AML		AML	
	comp=E,2175µm,0.8s					
MAON			AML		AML	
	comp=N,1300µm,0.8s					
OSSC	**Osservatorio P**	**1.47 298**	Pn		**Pn**	**11 58 43.7 -1.1**
OSSC	**Osservatorio P**	**1.47 298**	P		**Pn**	**11 58 43.8 -0.9**
OSSC			AML		AML	
	comp=E,1255µm,0.8s					
OSSC			AML		AML	
	comp=N,1135µm,0.8s					
OSSC			AML		AML	
	comp=E,1191µm,1.4s					
OSSC			AML		AML	
	comp=N,1266µm,1.4s					
FRES	**Fresagrandinar**	**1.49 125**	P		**Pb**	**11 58 45.9 -0.1**
RUFI	**Rufina**	**1.49 312**	P		**Pb**	**11 58 45.3 -0.6**
MIDA	**Miranda**	**1.50 143**	P		**Pn**	**11 58 44.6 -0.7**
TRIV	**Trivento**	**1.56 133**	P		**Pb**	**11 58 47.2 +0.1**
TRIV			AML		AML	
	comp=E,5895µm,1.4s					
TRIV			AML		AML	
	comp=N,6005µm,1.0s					
LMD	**Lutirano**	**1.56 322**	P		**Pb**	**11 58 47.0 -0.2**
LMD			AML		AML	
	comp=N,1356µm,0.9s					
LMD			AML		AML	
	comp=E,1325µm,1.6s					
TRIF	**Trifonti**	**1.59 280**	P		**Pn**	**11 58 45.6 -0.8**
TRIF			AML		AML	
	comp=N,825µm,0.6s					
TRIF			AML		AML	
	comp=E,1060µm,0.7s					
CASP	**Castiglione de**	**1.60 269**	Pn		**Pn**	**11 58 44.8 -1.7**
CASP	**Castiglione de**	**1.60 269**	P		**Pn**	**11 58 45.5 -1.0**
CASP			AML		AML	
	comp=N,596µm,0.9s					
CASP			AML		AML	
	comp=E,560µm,1.6s					
VAGA	**Valle Agricola**	**1.69 148**	P		**Pb**	**11 58 48.9 -0.4**
BRIS	**BRISIGHELLA**	**1.71 320**	P		**Pg**	**11 58 50.4 -0.7**
BSSO	**Busso**	**1.74 138**	P		**Pn**	**11 58 48.6 +0.1**
BSSO			AML		AML	
	comp=E,3235µm,0.7s					
BSSO			AML		AML	
	comp=N,3765µm,0.8s					
CRMI	**Carmignano**	**1.78 303**	P		**Pn**	**11 58 49.2 +0.2**
MPPT	**Montemurlo**	**1.80 309**	P		**Pn**	**11 58 48.7 -0.6**
MPPT			AML		AML	
	comp=N,1425µm,1.6s					
MPPT			AML		AML	
	comp=E,1076µm,1.6s					
MODR	**Mondragone**	**1.81 159**	P		**Pn**	**11 58 49.5 +0.1**
MODR			AML		AML	
	comp=E,2165µm,1.6s					
MODR			AML		AML	
	comp=N,1910µm,0.8s					
A318A	**Donoratico (LI**	**1.83 279**	P		**Pn**	**11 58 49.4 -0.2**
CIGN	**Sant'Elia a Pi**	**1.83 130**	P		**Pb**	**11 58 51.9 +0.2**
CIGN			AML		AML	
	comp=E,1685µm,1.6s					
CIGN			AML		AML	
	comp=N,2035µm,1.1s					
PIGN	**Pignataro Magg**	**1.85 152**	P		**Pn**	**11 58 51.0 +1.0**
PIGN			AML		AML	
	comp=E,1375µm,1.1s					
PIGN			AML		AML	
	comp=N,2460µm,1.2s					
PIGN			AML		AML	
	comp=E,1435µm,0.6s					
PIGN			AML		AML	
	comp=N,2545µm,1.2s					
MTCR	**Monte La Croce**	**1.90 309**	P		**Pn**	**11 58 50.3 -0.4**
A319A	**Santa Luce (PI**	**1.91 290**	P		**Pn**	**11 58 51.1 +0.5**
MTRZ	**Monterenzio**	**1.91 324**	P		**Pb**	**11 58 52.3 -0.8**
SACR	**S. Croce Del S**	**1.91 139**	P		**Pb**	**11 58 52.5 -0.6**
FNVD	**Fontana Vidola**	**1.92 314**	P		**Pb**	**11 58 53.2 -0.1**
MELA	**Melanico ??? S**	**1.93 126**	P		**Pn**	**11 58 52.1 +1.2**
MELA			AML		AML	
	comp=E,6620µm,0.6s					
MELA			AML		AML	
	comp=N,6625µm,0.7s					
MELA			AML		AML	
	comp=E,6840µm,0.6s					
MELA			AML		AML	
	comp=N,6805µm,0.7s					
GATE	**Gambatesa**	**1.93 133**	P		**Pb**	**11 58 53.6 +0.2**
TREM	**Isole Tremiti**	**1.97 111**	P		**Pn**	**11 58 52.4 +0.9**
VITU	**Vitulano (BN)**	**2.04 144**	P		**Pb**	**11 58 54.3 -1.1**
POPM	**Popiglio**	**2.05 307**	P		**Pn**	**11 58 52.0 -0.6**
VENT	**Ventotene**	**2.07 172**	P		**Pn**	**11 58 54.3 +1.4**
PSB1	**Pescosannita**	**2.09 140**	P		**Pb**	**11 58 55.7 -0.5**
ZCCA	**Zocca**	**2.12 316**			**Pb**	**11 58 56.7 -0.1**
ZCCA	**Zocca**	**2.12 316**	P		**Pn**	**11 58 53.3 -0.4**
MAIM	**Mastiano**	**2.14 301**	P		**Pn**	**11 58 54.1 +0.3**
MAIM			AML		AML	
	comp=N,428µm,0.5s					
MAIM			AML		AML	
	comp=E,434µm,0.6s					
PAOL	**Paolisi**	**2.14 147**			**Pn**	**11 58 54.4 +0.4**
APRC	**Apricena**	**2.15 119**	P		**Pn**	**11 58 54.4 +0.2**
APRC			AML		AML	
	comp=N,3740µm,0.7s					
APRC			AML		AML	
	comp=E,2395µm,0.7s					
CARD	**Cardoso**	**2.20 303**	P		**Pn**	**11 58 54.4 -0.3**
MRB1	**Monte Rocchett**	**2.25 139**	P		**Pb**	**11 58 58.0 -0.8**
SGRT	**San Giovanni R**	**2.29 118**	Pn		**Pn**	**11 58 56.6 +0.6**
SGRT	**San Giovanni R**	**2.29 118**	P		**Pn**	**11 58 56.5 +0.5**
SGRT			AML		AML	
	comp=N,2940µm,0.8s					
SGRT			AML		AML	
	comp=E,3900µm,0.7s					
GSCL	**Gusciola**	**2.33 311**	P		**Pn**	**11 58 56.7 +0.2**
VLC	**Villacollemand**	**2.33 305**			**Pn**	**11 58 56.8 +0.2**
VLC	**Villacollemand**	**2.33 305**	P		**Pn**	**11 58 56.0 -0.6**
VLC			AML		AML	
	comp=E,498µm,1.3s					
VLC			AML		AML	
	comp=N,601µm,1.2s					
VLC			AML		AML	
	comp=E,472µm,1.3s					
VLC			AML		AML	
	comp=N,606µm,1.3s					
GROG	**Isola di Gorgo**	**2.37 285**	P		**Pn**	**11 58 57.3 +0.2**
SGTA	**Sant Agata di**	**2.44 134**	P		**Pn**	**11 58 57.9 -0.1**
CAFE	**Carife**	**2.45 137**	P		**Pb**	**11 59 00.5 -1.8**
EQUI	**Equi**	**2.48 303**	P		**Pn**	**11 58 58.0 -0.5**
EQUI			AML		AML	
	comp=E,245µm,1.6s					
EQUI			AML		AML	
	comp=N,352µm,0.9s					
SNAL	**S. Angelo Dei**	**2.51 139**	⇑P		**Pn**	**11 59 00.5 +1.4**
LIO3	**Lioni**	**2.52 140**	P		**Pb**	**11 59 01.6 -2.0**
MCRV	**Calabrutti - M**	**2.61 142**	P		**Pn**	**11 59 01.0 +0.6**
PLMA	**Palmaria, Port**	**2.61 299**	P		**Pn**	**11 59 00.7 +0.3**
CAPA	**Cerignola FG**	**2.67 128**	P		**Pn**	**11 59 03.1 +1.9**
CAPA			AML		AML	
	comp=E,4040µm,1.0s					
CAPA			AML		AML	
	comp=N,3290µm,1.3s					
RIY	**Rijeka**	**2.69 22**	*e*Pn		**Pn**	**11 59 01.5 +0.1**
RIY			*e*Sn		**Sn**	**11 59 35.1 +1.1**
VULT	**Monte Vulture**	**2.70 134**	P		**Pn**	**11 59 03.1 +1.4**
TEOL	**Teolo**	**2.70 339**			**Pn**	**11 59 03.8 +2.2**
TEOL	**Teolo**	**2.70 339**	P		**Pn**	**11 59 02.5 +0.9**
MORSI	**Morsiglia**	**2.70 274**	P		**Pn**	**11 59 01.9 +0.4**
MORSI			S		**Sn**	**11 59 34.0 -0.3**
GRAM	**Graiana**	**2.71 308**	P		**Pn**	**11 59 03.4 +1.5**
RDM3	**Ruvo Del Monte**	**2.71 136**	P		**Pn**	**11 59 03.9 +2.1**
PRMA	**PARMA**	**2.75 315**			**Pn**	**11 59 03.6 +1.3**
MRLC	**Muro Lucano**	**2.78 138**	P		**Pb**	**11 59 05.7 -2.3**

SKDS Skadanscina 2.79 14 *e*Pn **Pn 11 59 02.2 -0.7**
ZOVE Zovencedo 2.83 337 P **Pn 11 59 04.3 +0.9**
SMPL Sampolo 2.88 256 P **Pn 11 59 04.5 +0.5**
SMPL AML AML
comp=E,65µm,1.4s
SMPL AML AML
comp=N,80µm,1.3s
SMPL Sampolo 2.88 256 P **Pn 11 59 04.5 +0.5**
SMPL S **Sn 11 59 40.2 +1.5**
PALZ Palazzo San Ge 2.89 130 P **Pn 11 59 05.1 +0.8**
CDRU Civita di Ruta 2.90 143 P **Pn 11 59 05.1 +0.6**
CDRU AML AML
comp=E,254µm,0.8s
CDRU AML AML
comp=N,251µm,0.9s
MSSA Maissana 2.95 301 Pn **Pn 11 59 05.6 +0.5**
MSSA Maissana 2.95 301 P **Pn 11 59 05.3 +0.2**
MSSA AML AML
comp=E,194µm,1.3s
MSSA AML AML
comp=N,238µm,0.9s
MRVN Minervino Murg 2.96 126 P **Pn 11 59 05.5 +0.3**
MRVN AML AML
comp=E,732µm,0.6s
MRVN AML AML
comp=N,798µm,1.0s
PGF Pioggiola 2.99 266 *e*Pn **Pn 11 59 05.2 -0.5**
PGF Pioggiola 2.99 266 *e*P **Pn 11 59 07.1 +1.4**
PGF *e*Sn **Sn 11 59 39.0 -2.6**
comp=N,95nm,0.8s
PGF Pioggiola 2.99 266 AML AML
comp=N,84µm,1.6s
PGF AML AML
comp=E,90µm,0.8s
PGF Pioggiola 2.99 266 P **Pn 11 59 05.9 +0.2**
ACER Acerenza 2.99 132 P **Pn 11 59 07.9 +2.2**
ACER AML AML
comp=E,1265µm,0.8s
ACER AML AML
comp=N,1325µm,0.6s
ACER AML AML
comp=E,1225µm,0.8s
ACER AML AML
comp=N,1335µm,0.6s
ROVR Rover Verones 3.13 334 P **Pn 11 59 08.4 +0.7**
SABO M.te Sabotino 3.16 7 P **Pn 11 59 07.6 -0.3**
SABO AML AML
comp=N,3930µm,1.0s
SABO AML AML
comp=E,3785µm,0.7s
SABO AML AML
comp=N,1034µm,1.0s
SABO AML AML
comp=E,894µm,0.7s
CGRP Cima Grappa 3.16 344 P **Pn 11 59 09.1 +1.0**
CAE Caneva 3.19 352 P **Pn 11 59 08.5 +0.1**
VARN Col Varnada, M 3.22 348 P **Pn 11 59 08.8 +0.1**
BOB Bobbio (Coli) 3.23 308 P **Pn 11 59 11.2 +2.3**
GORR Gorreto 3.23 304 P **Pn 11 59 11.7 +2.7**
PTRP Pietrapertosa 3.25 135 P **Pn 11 59 11.1 +1.9**
MCEL Monticello 3.26 140 P **Pn 11 59 12.5 +3.1**
MTSN Montesano sull 3.29 141 ⇑P **Pn 11 59 11.5 +1.8**
AMUR Altamura 3.29 125 P **Pn 11 59 10.3 +0.5**
SALO Salr 3.31 328 Pn **Pn 11 59 11.7 +1.7**
SALO Salr 3.31 328 P **Pn 11 59 11.2 +1.2**
SALO AML AML
comp=N,710µm,1.6s
SALO AML AML
comp=E,790µm,1.3s
SALO AML AML
comp=N,662µm,1.1s
SALO AML AML
comp=E,870µm,1.3s
CTI Castel Tesino 3.35 343 **Pn 11 59 12.5 +1.9**
CTI Castel Tesino 3.35 343 P **Pn 11 59 11.3 +0.7**
CTI AML AML
comp=N,420µm,1.0s
CTI AML AML
comp=E,462µm,0.8s
DRE Drenchia 3.35 7 ⇑*i*P **Pn 11 59 10.1 -0.5**
LJU Ljubljana 3.37 18 AML AML
comp=N,2875µm,0.7s
LJU AML AML
comp=E,2455µm,1.0s
MIGL Miglionico 3.39 130 P **Pn 11 59 12.8 +1.6**
MPRI Monte Prat 3.40 359 P **Pn 11 59 11.8 +0.6**
MPRI AML AML
comp=N,786µm,0.8s
MPRI AML AML
comp=E,592µm,1.6s
CADS Cadrg 3.42 8 *i* Pn **Pn 11 59 11.0 -0.5**
STAL STALIGIAL 3.42 356 **Pn 11 59 12.6 +1.1**
STAL STALIGIAL 3.42 356 P **Pn 11 59 11.9 +0.4**
STAL AML AML
comp=E,710µm,0.8s
STAL AML AML
comp=N,394µm,1.2s
STON Ston 3.43 88 *e*Pn **Pn 11 59 11.7 +0.1**
STON *e*Sn **Sn 11 59 55.7 +3.5**
LUSI Trento, Gardas 3.46 335 P **Pn 11 59 12.7 +0.7**
LUSI AML AML
comp=N,359µm,0.7s
LUSI AML AML
comp=E,338µm,0.7s
CIMO Cimolais 3.49 353 AML AML
comp=E,145µm,0.8s
CIMO AML AML
comp=E,156µm,0.8s
CIMO AML AML
comp=N,244µm,1.3s
CIMO AML AML
comp=N,231µm,1.3s
AGOR Agordo 3.51 349 P **Pn 11 59 13.4 +0.6**
MATE Matera 3.52 127 ⇑P **Pn 11 59 14.4 +1.6**
CUC Castrocucco 3.54 143 Pn **Pn 11 59 14.7 +1.6**
BLY Banja Luka 3.56 56 *e*Pn **Pn 11 59 15.9 +2.6**
BLY *e*Sn **Sn 11 59 59.5 +4.1**
GAGG Gaggia 3.56 336 P **Pn 11 59 14.9 +1.3**
PTCC Patocco-Chiusa 3.57 4 P **Pn 11 59 13.0 -0.5**
PTCC AML AML
comp=N,198µm,1.5s
PTCC AML AML
comp=E,199µm,0.6s
FUSE Fusea 3.57 360 P **Pn 11 59 13.8 +0.2**
ZONE Zone 3.59 325 AML AML
comp=E,223µm,0.7s
ZONE AML AML
comp=N,246µm,0.4s
DGI Dorgali Grotta 3.60 227 P **Pn 11 59 14.3 +0.2**
LTRZ Laterza 3.61 127 P **Pn 11 59 15.3 +1.1**
CLUD Cludinico 3.61 358 **Pn 11 59 15.1 +0.9**
CLUD Cludinico 3.61 358 P **Pn 11 59 13.9 -0.3**
CLUD AML AML
comp=N,383µm,1.1s
CLUD AML AML
comp=E,466µm,1.1s
PRED Cave del Predi 3.62 6 **Pn 11 59 14.8 +0.5**
PRED Cave del Predi 3.62 6 P **Pn 11 59 15.1 +0.9**
NOCI Noci 3.65 123 P **Pn 11 59 15.1 +0.5**
PCP Piancastagn 3.67 299 P **Pn 11 59 14.5 -0.5**
PCP AML AML
comp=N,92µm,1.3s
PCP AML AML
comp=E,67µm,0.9s
MABI Malga Bissina 3.68 331 P **Pn 11 59 16.3 +1.0**
ZOU Zoufplan 3.71 359 P **Pn 11 59 16.0 +0.3**
ZOU AML AML
comp=E,419µm,1.2s
ZOU AML AML
comp=N,424µm,1.6s
ZOU AML AML
comp=N,464µm,1.1s
ZOU AML AML
comp=E,416µm,1.2s
ACOM Acomizza, Ital 3.72 5 P **Pn 11 59 16.2 +0.5**
ACOM AML AML
comp=E,611µm,1.2s
ACOM AML AML
comp=N,472µm,0.8s
ACOM AML AML
comp=E,591µm,1.3s
ACOM AML AML
comp=N,492µm,1.1s
FVI Forni Avoltri 3.75 357 P **Pn 11 59 17.3 +1.1**
FVI AML AML
comp=N,238µm,0.6s
FVI AML AML
comp=E,255µm,1.6s
KOSI Kohlern 3.81 342 P **Pn 11 59 18.6 +1.6**
KOSI AML AML
comp=N,389µm,0.8s
KOSI AML AML
comp=E,410µm,1.0s
MYKA Terra Mystica 3.81 6 *e*Pn **Pn 11 59 16.9 0.0**
comp=E,5.2nm,0.2s,SNR=9.6
OBKA Obir 3.82 16 *e*Pn **Pn 11 59 16.7 -0.3**
comp=E,2.9nm,0.2s
OBKA Obir 3.82 16 *e*Pn **Pn 11 59 18.4 +1.4**
APPI Appiano 3.85 341 P **Pn 11 59 19.2 +1.6**
APPI AML AML
comp=E,219µm,0.7s
APPI AML AML
comp=N,218µm,1.3s
TREB Trebinje 3.91 90 *e*Pn **Pn 11 59 19.4 +1.1**
TREB *e*Sn **Sn 12 00 08.1 +3.9**
ABTA Abfaltersbach 3.92 355 *e*Pn **Pn 11 59 19.4 +0.9**
comp=N,38nm,0.5s,SNR=24
BRY Bratogost 4.04 87 ⇑*i*Pn **Pn 11 59 20.6 +0.4**
BRY *i* Sn **Sn 12 00 08.8 +1.1**
HCY Herceg Novi 4.05 94 ⇓*i*Pn **Pn 11 59 20.6 +0.5**
HCY *i* Sn **Sn 12 00 08.8 +1.3**
SAOF Saorge 4.15 288 P **Pn 11 59 22.2 +0.6**
RISI Rein 4.16 351 P **Pn 11 59 23.4 +1.6**
RISI AML AML
comp=N,576µm,0.5s
RISI AML AML
comp=E,562µm,0.5s
MUGIO Muggio 4.20 318 AML AML
comp=N,95µm,0.4s
MUGIO AML AML
comp=E,90µm,1.3s
SBF Sospel 4.21 286 *e*Pn **Pn 11 59 21.2 -1.2**
SBF Sospel 4.21 286 *e*P **Pn 11 59 24.3 +1.9**
SBF *e*Sn **Sn 12 00 08.1 -3.5**
comp=E,43nm,0.5s
ROSI Rosskopf 4.24 345 P **Pn 11 59 24.5 +1.5**
FUORN Ofenpass-Fuorn 4.26 333 Pn **Pn 11 59 25.8 +2.5**
UPM Unac-Piva 4.32 83 *e*Pn **Pn 11 59 24.4 +0.4**
UPM *i* Sn **Sn 12 00 15.4 +0.9**
VSL Villasalto 4.34 221 P **Pn 11 59 24.9 +0.7**
VSL AML AML
comp=E,234µm,0.7s
VSL AML AML
comp=N,164µm,0.9s
CEME Cevo 4.35 92 ⇑*i*Pn **Pn 11 59 24.7 +0.4**
CEME *i* Sn **Sn 12 00 16.0 +1.0**
NKME Niksic 4.36 89 ⇓*i*Pn **Pn 11 59 24.9 +0.5**
NKME *i* Sn **Sn 12 00 16.3 +1.1**
BUM Brajici-Budva 4.36 95 ⇑*i*Pn **Pn 11 59 24.9 +0.4**
BUM *i* Sn **Sn 12 00 16.4 +1.1**
SPIF crte de Spivo 4.39 288 P **Pn 11 59 27.8 +2.9**
TUE Stuetta 4.48 325 Pn **Pn 11 59 29.4 +3.1**
FETA Feichten 4.48 339 *e*Pn **Pn 11 59 28.9 +2.6**
comp=N,6.4nm,0.4s,SNR=12
BEHE Becsehely 4.50 35 P **Pn 11 59 30.0 +3.7**
WTTA Wattenberg 4.53 348 *e*Pn **Pn 11 59 28.8 +1.9**
comp=N,18nm,0.5s
WTTA Wattenberg 4.53 348 *e*Pn **Pn 11 59 29.2 +2.3**
DAVOX Davos/Dischmat 4.53 331 Pn **Pn 11 59 29.1 +2.2**
comp=N,3.3nm,0.3s,baz=150,slow=19,SNR=15
DAVOX Sn **Sn 12 00 22.1 +2.5**
comp=N,3.1nm,0.3s,baz=120,slow=18,SNR=4.5
comp=N,11nm,0.3s
CALF Calern 4.55 284 P **Pn 11 59 27.0 -0.2**
SQTA Sankt Quirin 4.56 344 **Pn 11 59 29.6 +2.3**
SQTA Sankt Quirin 4.56 344 *e*Pn **Pn 11 59 29.6 +2.3**
comp=N,17nm,0.3s,SNR=10
DRME Dracevica, Mon 4.59 96 ⇓*i*Pn **Pn 11 59 28.2 +0.6**
DRME *i* Sn **Sn 12 00 22.0 +1.0**
PDG Podgorica 4.61 93 ⇑P **Pn 11 59 28.6 +0.9**
PDG Podgorica 4.61 93 Pn **Pn 11 59 28.5 +0.8**
PDG Podgorica 4.61 93 *e*Pn **Pn 11 59 28.7 +0.9**
PDG *e*Sn **Sn 12 00 23.9 +2.6**
TTG Podgorica 4.61 93 ⇓*i*Pn **Pn 11 59 28.3 +0.5**
TTG *i* Sn **Sn 12 00 22.4 +1.1**
WATA Walderalm 4.61 348 **Pn 11 59 30.5 +2.5**
WATA Walderalm 4.61 348 *i* Pn **Pn 11 59 30.5 +2.5**
comp=N,6.8nm,0.2s,SNR=11
TIP Timpagrande 4.62 141 ⇑P **Pn 11 59 30.8 +2.7**
TIP Timpagrande 4.62 141 Pn **Pn 11 59 30.9 +2.8**
PLE Pljevlja 4.68 82 *e*Pn **Pn 11 59 29.5 +0.6**
PLE *i* Sn **Sn 12 00 24.1 +0.9**
ULC Ulcinj 4.68 99 *e*Pn **Pn 11 59 29.4 +0.5**
ULC *i* Sn **Sn 12 00 24.2 +1.0**
MOTA Moosalm 4.70 344 **Pn 11 59 31.6 +2.4**
MOTA Moosalm 4.70 344 *e*Pn **Pn 11 59 31.6 +2.4**
comp=N,14nm,0.7s,SNR=9.7
ARSA Arzberg 4.74 21 *i* Pn **Pn 11 59 29.2 -0.5**
comp=N,5.6nm,0.5s,SNR=5.5
ARSA Arzberg 4.74 21 *e*Pn **Pn 11 59 29.3 -0.5**
ARSA *e*Sn **Sn 12 00 24.4 -0.3**
BBLS Lazići 4.75 75 *e*Pn **Pn 11 59 31.5 +1.6**
BBLS *e*Sn **Sn 12 00 28.4 +3.3**
KOME Kolasin 4.76 88 ⇓*i*Pn **Pn 11 59 30.6 +0.5**
KOME *i* Sn **Sn 12 00 26.2 +0.9**
ZUGS Zugspitze, Sch 4.80 343 *e*Pn Pb 11 59 36.8 -5.6
SURF Saint Ours 4.80 292 P **Pn 11 59 31.0 +0.3**
LMR La Mourre 4.80 278 *e*Pn **Pn 11 59 29.7 -0.8**
LMR La Mourre 4.80 278 *e*P **Pn 11 59 33.1 +2.6**
LMR *e*Sn **Sn 12 00 22.3 -3.9**
comp=N,21nm,0.9s
JAUF Jausiers 4.83 291 P **Pn 11 59 31.9 +0.9**
PART Garmisch-Parte 4.84 344 *e*Pn **Pn 11 59 34.0 +2.9**
KOVH Kovagotottos 4.86 46 P **Pn 11 59 31.1 -0.2**
KOVH S **Sn 12 00 25.9 -1.7**
BIOA Bad Ischl, Aus 4.86 5 **Pn 11 59 31.5 +0.1**
BIOA Bad Ischl, Aus 4.86 5 *i* Pn **Pn 11 59 31.5 +0.1**
comp=N,17nm,0.3s,SNR=23
RJOB Jochberg 4.89 358 *e*Pn **Pn 11 59 33.2 +1.3**
MBDF Montbardon 4.91 295 *e*Pn **Pn 11 59 31.4 -0.7**
MBDF Montbardon 4.91 295 *e*P **Pn 11 59 35.1 +3.0**
MBDF *e*Sn **Sn 12 00 25.5 -3.5**
comp=N,38nm,0.9s
RETA Reutte 4.91 342 *e*Pn **Pn 11 59 34.1 +2.0**
comp=N,2.4nm,0.3s
TRIGF Trigance 4.92 283 P **Pn 11 59 33.5 +1.3**
SCTE Santa Cesarea 4.93 122 Pn **Pn 11 59 31.8 -0.5**
CREF Crivoux 4.95 292 P **Pn 11 59 33.7 +1.0**
CREF S **Sn 12 00 29.6 -0.4**
OBER Oberstdorf 4.96 338 *e*Pn **Pn 11 59 35.9 +3.2**
DAVA Damuels 4.97 334 *e*Pn **Pn 11 59 35.7 +2.7**
comp=N,7.3nm,0.6s,SNR=9.1
DAVA Damuels 4.97 334 *e*Pn **Pn 11 59 36.4 +3.4**
FLAF Flassans-sur-I 4.99 278 P **Pn 11 59 33.2 +0.1**
IVA Berane 5.04 87 *e*Pn **Pn 11 59 34.5 +0.6**
IVA *i* Sn **Sn 12 00 32.9 +0.8**
MOA Molln 5.08 9 *e*Pn **Pn 11 59 34.6 +0.3**
MOA *e*Sn **Sn 12 00 33.5 +0.6**
MOA Molln 5.08 9 *e*Pn **Pn 11 59 34.4 +0.1**
comp=N,1.9nm,0.1s
MOA Molln 5.08 9 *e*Pn **Pn 11 59 34.7 +0.3**
MOA *e*Sn **Sn 12 00 33.5 +0.6**
SJES Sjenica 5.10 83 *e*Pn **Pn 11 59 36.4 +1.7**
SJES *e*Sn **Sn 12 00 35.9 +2.2**
PVY Plav 5.11 90 *e*Pn **Pn 11 59 35.4 +0.6**
PVY *i* Sn **Sn 12 00 34.6 +0.8**
DIX Grande Dixence 5.16 311 P **Pn 11 59 38.6 +2.9**
DIVS Divibare 5.21 74 Pn **Pn 11 59 37.3 +1.1**
DIVS Divibare 5.21 74 *e*Pn **Pn 11 59 36.2 0.0**
MORH Mrgy, Hungar 5.24 48 P **Pn 11 59 40.0 +3.6**
LPG La Plagne 5.24 303 *e*P **Pn 11 59 39.7 +2.9**
LPG *e*Sn **Sn 12 00 33.8 -3.5**
comp=N,42nm,0.9s
IVAS Ivanjica 5.25 80 *e*Pn **Pn 11 59 37.0 +0.3**
UBR Ueberruh 5.26 338 *e*Pn **Pn 11 59 39.5 +2.7**
LPL La Plagne 5.26 303 *e*P **Pn 11 59 40.1 +3.1**
LPL *e*Sn **Sn 12 00 34.1 -3.6**
comp=N,30nm,0.8s
TIR Tirane 5.30 104 ⇑P **Pn 11 59 37.9 +0.7**
TIR Tirane 5.30 104 Pn **Pn 11 59 38.1 +0.7**
TIR Tirane 5.30 104 P **Pn 11 59 38.0 +0.7**
TIR Tirane 5.30 104 *e*Pn **Pn 11 59 37.8 +0.5**
TIR *e*Sn **Sn 12 00 39.2 +0.9**
RONA Rosalia, Austr 5.37 24 **Pn 11 59 38.2 -0.2**
RONA Rosalia, Austr 5.37 24 *e*Pn **Pn 11 59 38.2 -0.2**
comp=N,6.8nm,0.5s,SNR=6.1
MPLH Magyarpolny 5.37 35 P **Pn 11 59 41.9 +3.5**
VLO Vlora 5.39 114 **Pn 11 59 40.1 +1.6**
SENIN Lac Senin/Sane 5.40 313 **Pn 11 59 41.0 +2.1**
FRGS Fruska Gora 5.41 62 ⇑P **Pn 11 59 39.2 +0.4**
FRGS Fruska Gora 5.41 62 *e*Pn **Pn 11 59 39.0 +0.2**
FRGS *e*Sn **Sn 12 00 43.4 +2.4**
CONA Conrad Observa 5.46 20 *e*Pn **Pn 11 59 39.2 -0.4**
comp=N,9.5nm,0.4s,SNR=9.0
VAE Valguarnera 5.46 168 Pn **Pn 11 59 41.1 +1.5**
comp=N,0.7nm,0.3s,baz=337,slow=13,SNR=1.5
comp=N,6.8nm,0.6s
SMRF Simiane la Rot 5.55 284 *e*P **Pn 11 59 42.8 +2.0**
SMRF *e*Sn **Sn 12 00 40.3 -4.3**
comp=N,30nm,1.1s
ORIF Oris-en-Rattie 5.57 294 *e*P **Pn 11 59 44.3 +3.2**
ORIF *e*Sn **Sn 12 00 41.3 -3.9**
comp=N,27nm,0.9s
RUSF Rustrel 5.61 284 P **Pn 11 59 43.7 +2.0**
PHP Peshkopia 5.62 99 P **Pn 11 59 43.1 +1.4**
GRUS Gruza 5.69 77 *e*Pn **Pn 11 59 44.3 +1.6**
GRN Grenoble 5.78 297 P **Pn 11 59 46.2 +2.2**
SELS Selova 5.94 84 *e*Pn **Pn 11 59 46.3 +0.2**
SELS *e*Sn **Sn 12 00 54.2 +0.1**
OGSM Saint Maurice 5.95 300 P **Pn 11 59 47.3 +1.0**
KEK Kerkira 5.98 119 Pn **Pn 11 59 47.9 +1.2**
KEK Kerkira 5.98 119 P **Pn 11 59 47.6 +0.9**
GEC2 GERESS Array S 6.02 4 **Pn 11 59 47.7 +0.4**
GEC2 GERESS Array S 6.02 4 *e*Pn **Pn 11 59 47.3 0.0**
GEC2 *e*Sn **Sn 12 00 56.1 -0.1**
GERES GERESS Array B 6.02 4 Pn **Pn 11 59 46.7 -0.5**
comp=N,1.1nm,0.3s,baz=177,slow=13,SNR=15
GERES Sn **Sn 12 00 55.3 -0.9**
comp=N,3.6nm,0.3s,baz=179,slow=24,SNR=8.1
GERES LR LR 12 01 55.2
comp=N,33nm,18.6s,baz=192,slow=37
comp=N,2.0nm,0.4s
GERES GERESS Array B 6.02 4 **Pn 11 59 46.9 -0.4**
SRN Sarande 6.02 117 P **Pn 11 59 48.5 +1.3**
CKRC Cesky Krumlov 6.04 8 *e*PN **Pn 11 59 46.9 -0.6**
CKRC *e*SN **Sn 12 00 55.1 -1.6**
BRANT Les Verrieres 6.20 314 P **Pn 11 59 51.3 +1.6**
BRANT S **Sn 12 01 01.2 +0.5**
KBN Korca 6.21 108 **Pn 11 59 51.7 +1.8**
KBN Korca 6.21 108 P **Pn 11 59 51.4 +1.5**
CABF La Chapelle 6.22 310 *e*Pn **Pn 11 59 48.7 -1.3**
CABF *e*Sn **Sn 12 00 57.2 -3.9**
comp=N,93nm,1.4s
LSK Leskovik 6.29 113 P **Pn 11 59 52.6 +1.7**
KHC Kasperske Hory 6.30 3 Pn **Pn 11 59 50.8 -0.2**
KHC Kasperske Hory 6.30 3 *e*PN **Pn 11 59 50.3 -0.8**
KHC *e*SN **Sn 12 01 01.0 -2.0**
WET Wettzell 6.30 359 *e*Pn **Pn 11 59 50.5 -0.6**
WET *e*Sn **Sn 12 01 01.1 -2.0**
VIVF Saint-Julien-l 6.37 291 *e*Pn **Pn 11 59 50.9 -1.2**
VIVF Saint-Julien-l 6.37 291 *e*P **Pn 11 59 55.0 +2.9**
BOVS Bovan 6.38 80 ⇑P **Pn 11 59 51.9 -0.3**
BOVS Bovan 6.38 80 *e*Pn **Pn 11 59 52.0 -0.2**
BFO Black Forest 6.40 331 Pn **Pn 11 59 55.2 +2.8**
BFO Black Forest 6.40 331 *e*Pn **Pn 11 59 54.6 +2.1**
IGT Igoumenitsa 6.42 119 P **Pn 11 59 54.1 +1.3**
BARS Barje 6.46 87 *e*Pn **Pn 11 59 53.2 0.0**
NEST Nestorio 6.48 109 P **Pn 11 59 55.3 +1.7**
FNA Florina 6.56 105 P **Pn 11 59 55.5 +0.8**
HINF Hinteralfeld 6.61 321 *e*Pn **Pn 11 59 54.5 -0.8**
HINF Hinteralfeld 6.61 321 *e*P **Pn 11 59 58.6 +3.3**
HINF *e*Sn **Sn 12 01 06.3 -4.4**
comp=N,23nm,0.5s
PENT Pentalofos 6.63 111 P **Pn 11 59 58.5 +2.8**
KRUC Moravsky 6.64 19 *e*PN **Pn 11 59 54.5 -1.2**
KRUC *e*SN **Sn 12 01 08.6 -2.8**
JAN Janina 6.70 116 P **Pn 11 59 57.1 +0.6**
BZS Buzias 6.76 63 ⇑P **Pn 11 59 57.4 0.0**
ECH Echery 6.77 324 **Pn 11 59 57.1 -0.5**
ZAGS Zajecar 6.78 79 *e*Pn **Pn 11 59 57.4 -0.2**
LASF Ste Croix 6.79 284 *e*Pn **Pn 11 59 56.7 -1.1**
LASF Ste Croix 6.79 284 *e*P **Pn 12 00 00.8 +3.0**
CDF Champ du Feu 6.88 326 *e*Pn **Pn 11 59 58.2 -0.8**
CDF Champ du Feu 6.88 326 *e*P **Pn 12 00 02.6 +3.6**
CDF *e*Sn **Sn 12 01 13.5 -3.8**
comp=N,54nm,1.1s
VRAC Vranov 6.92 20 Pn **Pn 11 59 59.4 -0.1**
comp=N,0.3nm,0.3s,baz=206,slow=16,SNR=2.1
VRAC Sn **Sn 12 01 15.4 -2.9**
comp=N,0.6nm,0.3s,baz=222,slow=22,SNR=1.9
VRAC LR LR 12 03 21.9
comp=N,260nm,19.9s,baz=191,slow=45
comp=N,1.4nm,0.3s
VRAC Vranov 6.92 20 *e*PN **Pn 11 59 57.6 -2.0**
VRAC *e*SN **Sn 12 01 15.6 -2.7**
ROTZ Rotzenmuhle 6.95 356 *e*Pn **Pn 12 00 00.6 +0.7**
ROTZ *e*Sn **Sn 12 01 16.3 -2.6**
HAU Haudompre 6.98 320 *e*Pn **Pn 11 59 59.3 -1.1**
HAU Haudompre 6.98 320 *e*P **Pn 12 00 03.6 +3.2**
HAU *e*Sn **Sn 12 01 15.4 -4.4**
comp=N,73nm,0.9s
TSLK Tsoukalades, L 7.04 122 P **Pn 12 00 02.8 +1.6**
ZAPS Zavoj 7.04 83 *e*Pn **Pn 12 00 02.3 +1.0**
ZAPS *e*Sn **Sn 12 01 20.6 -0.8**
SIRR Siria 7.04 58 ⇑P **Pn 12 00 01.2 -0.1**
LKD2 Lefkada island 7.06 122 P **Pn 12 00 02.9 +1.4**
DRAG Dragano-Lefkad 7.07 123 P **Pn 12 00 03.8 +2.1**
NYDR Nydri-Lefkada 7.13 123 P **Pn 12 00 03.8 +1.4**
EVGI Lefkada island 7.16 124 P **Pn 12 00 04.2 +1.3**
GOPC GO Pecny, Ondr 7.17 9 *e*SN **Sn 12 01 21.2 -3.3**
PRU Pruhonice 7.22 8 *e*PN **Pn 12 00 02.8 -0.9**
PRU *e*SN **Sn 12 01 23.3 -2.3**
DMLN Damoulianata-K 7.24 127 P **Pn 12 00 05.5 +1.5**
NKC Novy Kostel 7.40 357 *e*SN **Sn 12 01 27.1 -3.0**
GZR Gura Zlata 7.46 67 ⇑P **Pn 12 00 07.3 +0.3**
KKB Krupnik 7.51 94 *e*P **Pn 12 00 08.5 +0.9**
VTS Vitosha 7.51 88 ⇑P **Pn 12 00 08.5 +0.7**
VTS Vitosha 7.51 88 Pn **Pn 12 00 08.6 +0.7**
VTS Vitosha 7.51 88 *e*P **Pn 12 00 08.3 +0.4**
THL Klokotos Trika 7.52 113 P **Pn 12 00 08.9 +1.1**
SMF Signal de Mont 7.57 303 *e*P **Pn 12 00 12.5 +4.1**
SMF *e*Sn **Sn 12 01 28.8 -5.4**
comp=N,45nm,1.2s
MORC Moravsky Berou 7.60 23 ⇑P **Pn 12 00 10.3 +1.4**
KEST Kesra 7.66 203 Pn **Pn 12 00 12.7 +2.9**
comp=N,1.0nm,0.3s,baz=350,slow=7.9,SNR=12
KEST Sn **Sn 12 01 37.8 +1.2**
baz=131,slow=18
KEST LR LR 12 03 16.0
comp=N,351nm,19.6s,baz=322,slow=38
comp=N,11nm,0.7s
KEST Kesra 7.66 203 Pn **Pn 12 00 13.7 +3.9**
PAGF Fort de Pagny 7.66 321 *e*Pn **Pn 12 00 09.8 0.0**
baz=141
PAGF *e*Sn **Sn 12 01 32.1 -4.5**
comp=N,34nm,0.8s
DEV Deva 7.70 63 ⇑P **Pn 12 00 10.9 +0.7**
EVR Evrytania 7.72 118 P **Pn 12 00 12.6 +2.0**
SFTF Sexfontaines 7.76 316 *e*Pn **Pn 12 00 10.3 -0.8**
baz=139
SFTF *e*Sn **Sn 12 01 33.8 -5.1**
comp=N,14nm,0.7s
MPEP Malo Peshtene 7.85 83 *e*P **Pn 12 00 14.3 +1.9**
LOR Lormes 7.86 307 *e*Pn **Pn 12 00 11.6 -0.8**
baz=124
LOR Lormes 7.86 307 *e*P **Pn 12 00 16.4 +4.0**
LOR *e*Sn **Sn 12 01 36.0 -5.4**
comp=N,9.0nm,0.6s
MOX Moxa 7.86 353 *e*Sn **Sn 12 01 36.6 -4.8**
MAKR Makrakomi, Fth 7.88 116 P **Pn 12 00 14.9 +2.1**
DRGR 7.93 57 ⇑P **Pn 12 00 14.8 +1.4**
AVF Avril sur Loir 7.93 303 *e*Pn **Pn 12 00 12.3 -1.1**
MTLF Montolieu 7.93 277 *e*P **Pn 12 00 16.7 +3.2**
MEZF Maizieres J'vi 7.95 318 *e*Pn **Pn 12 00 13.0 -0.7**
baz=137
MEZF *e*Sn **Sn 12 01 38.7 -4.9**
comp=N,27nm,0.8s
SSF Saint Saulge 7.96 305 *e*Pn **Pn 12 00 12.5 -1.4**
SAVF Savonnieres en 7.99 319 *e*Pn **Pn 12 00 13.1 -1.1**
baz=140
SAVF Savonnieres en 7.99 319 *e*P **Pn 12 00 18.5 +4.3**
SAVF *e*Sn **Sn 12 01 39.7 -4.9**
comp=N,14nm,0.7s
RLS Riolos of Patr 8.01 124 P **Pn 12 00 16.9 +2.4**
TNS Taunus Mts 8.03 338 *e*Pn **Pn 12 00 16.7 +1.9**
MMB Musomiste 8.04 95 *e*P **Pn 12 00 15.4 +0.5**
SRS Serrai 8.05 99 P **Pn 12 00 15.7 +0.6**
BGF Bois d'Agland 8.15 301 *e*Pn **Pn 12 00 14.4 -2.1**
BGF Bois d'Agland 8.15 301 *e*P **Pn 12 00 19.9 +3.4**
NVR Nevrokopi 8.19 97 P **Pn 12 00 17.3 +0.3**
CAF Calviac 8.19 288 *e*Pn **Pn 12 00 15.2 -1.9**

CLL	**Collm**	**8.47**	**360**	*e*(Pn)	Pn	12 00 15.0	-5.7
CLL				*ex*	x	12 00 24.0	
CLL				*e*Sn	Sn	12 01 37.0	-19
CLL				*ex*	x	12 02 07.0	
CLL				*ex*	x	12 02 15.0	
CLL				*ex*	x	12 02 24.0	
CLL				*ex*	x	12 02 39.0	
CLL				*e*Sg	**Sg**	**12 02 47.0**	**-2.7**
	comp=Z,37nm,1.3s						
PLVB	**Pleven**	**8.49**	**82**	⇑P	**Pn**	**12 00 20.8**	**-0.4**
RJF	**Les Rejaudoux**	**8.65**	**290**	*e*P	**Pn**	**12 00 27.1**	**+3.8**
ARR	**Arges**	**8.72**	**69**	⇑P	**Pn**	**12 00 24.6**	**+0.3**
RZN	**Rozhen**	**8.74**	**94**	*e*P	**Pn**	**12 00 25.5**	**+0.8**
VOIR		**9.02**	**69**	⇑P	**Pn**	**12 00 28.8**	**+0.4**
LFF	**La Frestale**	**9.12**	**287**	*e*Pn	**Pn**	**12 00 28.1**	**-1.7**
GIVF	**Givet**	**9.20**	**325**	*e*Pn	**Pn**	**12 00 29.4**	**-1.4**
EPF	**Esparros**	**9.32**	**275**	*e*P	**Pn**	**12 00 36.4**	**+3.9**
BAIF	**Baives**	**9.44**	**323**	*e*Pn	**Pn**	**12 00 32.7**	**-1.3**
BAIF				*e*Sn	**Sn**	**12 02 13.9**	**-6.2**
	comp=Z,16nm,1.0s						
RDO	**Rodhopi**	**9.46**	**96**	Pn	**Pn**	**12 00 35.9**	**+1.4**
MLR	**Muntele Rosu**	**9.65**	**70**	⇑P	**Pn**	**12 00 37.4**	**+0.3**
MLR	**Muntele Rosu**	**9.65**	**70**	Pn	**Pn**	**12 00 36.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=208,slow=4.7,SNR=6.7						
MLR				LR	LR	12 05 16.8	
	comp=Z,345nm,18.6s,baz=258,slow=44						
	comp=Z,2.4nm,0.7s						
MLR	**Muntele Rosu**	**9.65**	**70**	Pn	**Pn**	**12 00 38.1**	**+1.1**
RAZG	**Razgrad**	**9.87**	**81**	⇑P	**Pn**	**12 00 40.8**	**+0.8**
ETSF	**Etsaut**	**9.98**	**275**	*e*P	**Pn**	**12 00 45.7**	**+4.1**
MFF	**Saint Martin d**	**10.10**	**296**	*e*Pn	**Pn**	**12 00 42.1**	**-1.1**
SJPF	**Ste Jean**	**10.46**	**276**	*e*Pn	**Pn**	**12 00 47.7**	**-0.4**
LDF	**La Druitiere**	**10.84**	**307**	*e*Pn	**Pn**	**12 00 51.3**	**-2.0**
FLN	**La Foliniere**	**11.13**	**307**	*e*Pn	**Pn**	**12 00 56.0**	**-1.2**
IDI	**Anoyia**	**11.90**	**125**	Pn	**Pn**	**12 01 07.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=305,slow=17,SNR=1.8						
IDI				Sn	**Sn**	**12 03 16.9**	**-3.8**
	comp=Z,0.8nm,0.3s,baz=222,slow=20,SNR=4.5						
	comp=Z,3.9nm,0.7s						
IDI	**Anoyia**	**11.90**	**125**	Pn	**Pn**	**12 01 08.5**	**+0.6**
SGMF	**Saint Gilles**	**12.19**	**302**	*e*Pn	**Pn**	**12 01 09.8**	**-1.9**
QUIF	**Quistinic**	**12.46**	**300**	*e*Pn	**Pn**	**12 01 12.8**	**-2.6**
ESDC	**Sonseca Array**	**13.18**	**262**	Pn	**Pn**	**12 01 25.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=70,slow=13,SNR=6.5						
ESDC				LR	LR	12 06 22.0	
	comp=Z,182nm,19.6s,baz=62,slow=36						
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**15.79**	**94**	Pn	**Pn**	**12 02 00.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=305,slow=10,SNR=1.7						
BRTR				LR	LR	12 09 16.6	
	comp=Z,275nm,18.0s,baz=258,slow=42						
	comp=Z,0.3nm,0.4s						
EKA	**Eskdalemuir Ar**	**16.34**	**325**	Pn	**P**	**12 02 09.8**	**-0.5**
	baz=138,slow=14						
	comp=Z,0.1nm,0.3s						
NOA	**NORSAR Array B**	**18.25**	**357**	P	**P**	**12 02 32.6**	**+1.1**
	baz=175,slow=11,SNR=1.0						
	comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**20.20**	**18**	P	**P**	**12 02 52.8**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=198,slow=10.0,SNR=6.1						
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**20.20**	**18**	P	Pn	12 02 54.5	-0.2
KBZ	**Khabaz**	**21.71**	**77**	P	**P**	**12 03 09.2**	**0.0**
	comp=Z,6.3nm,0.9s,baz=314,slow=7.8,SNR=7.5						
	comp=Z,6.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.18**	**202**	P	**P**	**12 04 37.5**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=19,slow=8.9,SNR=8.1						
	comp=Z,1.6nm,0.8s						
ARU	**Arti**	**31.83**	**49**	P	**P**	**12 04 42.3**	**-0.4**
ARU				IAmb	IAmb	12 04 43.5	
	comp=Z,16nm,1.4s						
ABKAR	**Akbulak array**	**32.75**	**62**	P	**P**	**12 04 50.1**	**-0.7**
GEYT	**Alibeck**	**34.37**	**83**	P	**P**	**12 05 03.5**	**-1.8**
	comp=Z,1.5nm,0.7s,baz=301,slow=6.3,SNR=3.8						
	comp=Z,1.5nm,0.7s						
GEYT	**Alibeck**	**34.37**	**83**	P	**P**	**12 05 05.1**	**-0.1**
GEYT				IAmb	IAmb	12 05 07.3	
	comp=Z,3.8nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**34.37**	**83**	P	**P**	**12 05 04.5**	**-0.7**
GYA0B				IAmb	IAmb	12 05 07.2	
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**38.70**	**54**	P	**P**	**12 05 43.4**	**+1.4**
KK31	**Karatay Array**	**41.33**	**69**	P	**P**	**12 06 05.3**	**+1.4**
KKAR	**Karatay Array**	**41.33**	**69**	P	**P**	**12 06 05.1**	**+1.2**
GAR	**Garm**	**42.74**	**75**	P	**P**	**12 06 16.2**	**+0.6**
GAR				IAmb	IAmb	12 06 19.2	
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**44.23**	**68**	P	**P**	**12 06 28.7**	**+1.1**
AAK				IAmb	IAmb	12 06 30.9	
	comp=Z,6.1nm,1.4s						
KSH	**Kashi**	**46.51**	**72**	P	**P**	**12 06 47.5**	**+1.8**
ZALV	**Zalesovo Beam**	**46.97**	**50**	P	**P**	**12 06 49.4**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=297,slow=6.3,SNR=2.3						
	comp=Z,0.7nm,0.5s						
NIL	**Nilore**	**47.28**	**80**	P	**P**	**12 06 52.5**	**+0.8**
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**12 06 55.2**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=307,slow=8.8,SNR=7.3						
	comp=Z,2.8nm,0.9s						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**12 06 56.2**	**+0.5**
BATG	**Bathurst New B**	**53.77**	**304**	P	**P**	**12 07 41.4**	**+0.9**
SONM	**Songino Array**	**61.86**	**50**	P	**P**	**12 08 37.6**	**+0.1**
	comp=Z,3.3nm,1.1s,baz=283,slow=7.8,SNR=14						
	comp=Z,3.3nm,1.1s						
SONM	**Songino Array**	**61.86**	**50**	P	**P**	**12 08 38.6**	**+1.1**
SONM				IAmb	IAmb	12 08 40.2	
	comp=Z,5.5nm,1.2s						
SJG	**San Juan**	**70.09**	**276**	P	**P**	**12 09 31.0**	**+0.4**
SJG				IAmb	IAmb	12 09 40.4	
	comp=Z,6.2nm,1.1s						
IMAR	**Indian Mountai**	**71.02**	**354**	P	**P**	**12 09 38.2**	**+2.6**
ILAR	**Eielson Array**	**71.57**	**351**	P	**P**	**12 09 40.3**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=19,slow=5.7,SNR=5.2						
	comp=Z,0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**74.75**	**79**	P	**P**	**12 09 58.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=307,slow=7.6,SNR=9.1						
	comp=Z,1.2nm,0.7s						
TXAR	**Lajitas Array**	**87.61**	**309**	P	**P**	**12 11 07.4**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=142,slow=4.5,SNR=2.3						
	comp=Z,0.3nm,0.9s						

ROM 30 12:02:26.4±0.1, 42°.782N±0°.004×13°.138E±0°.005, h10km, ML3.3/6, 2C-3D, Error ellipse: s-maj=0.5km s-min=0.1km az=330.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.17**	**245**	P	Pg	12 02 30.8	+0.7
T1217				S	Sg	12 02 33.7	+1.0
T1217				AML	AML		
	comp=E,5600μm,0.4s						
T1217				AML	AML		
	comp=N,4720μm,0.4s						
T1217				AML	AML		
	comp=E,5455μm,0.4s						
T1217				AML	AML		
	comp=N,4610μm,0.4s						
T1217				AML	AML		
	comp=E,5605μm,0.4s						
T1217				AML	AML		
	comp=N,6190μm,0.5s						
T1217				AML	AML		
	comp=E,24600μm,1.6s						
T1217				AML	AML		
	comp=E,24750μm,0.2s						
T1217				AML	AML		
	comp=N,48000μm,0.2s						
T1217				AML	AML		
	comp=N,48950μm,0.2s						
T1217				AML	AML		
	comp=E,4532μm,0.1s						
T1217				AML	AML		
	comp=N,3321μm,0.3s						
T1217				AML	AML		
	comp=E,4387μm,0.1s						
T1217				AML	AML		
	comp=N,3471μm,0.3s						
T1204	**Amatrice, Fraz**	**0.17**	**129**	P	Pg	12 02 30.9	+0.8
T1204				S	Sg	12 02 33.2	+0.4
T1204				AML	AML		
	comp=E,16950μm,0.1s						
T1204				AML	AML		
	comp=N,12450μm,0.8s						
T1204				AML	AML		
	comp=E,8693μm,0.1s						
T1204				AML	AML		
	comp=N,3616μm,0.2s						
MMO1	**Montemonaco**	**0.18**	**50**	P	Pg	12 02 30.8	+0.4
MMO1				S	Sg	12 02 33.9	+0.9
LNSS	**Leonessa**	**0.19**	**202**	P	Pg	12 02 31.2	+0.7
LNSS				S	Sg	12 02 34.6	+1.3
LNSS				AML	AML		
	comp=E,4310μm,0.3s						
LNSS				AML	AML		
	comp=N,16300μm,0.3s						
LNSS				AML	AML		
	comp=E,11800μm,0.2s						
LNSS				AML	AML		
	comp=N,20350μm,0.2s						
LNSS				AML	AML		
	comp=E,4314μm,0.3s						
LNSS				AML	AML		
	comp=N,16314μm,0.3s						
LNSS				AML	AML		
	comp=N,13565μm,0.1s						
T1215	**Vallo di Nera,**	**0.20**	**276**	P	Pg	12 02 31.2	+0.6
T1215				AML	AML		
	comp=E,5150μm,0.4s						
T1215				AML	AML		
	comp=N,4470μm,0.4s						
T1215				AML	AML		
	comp=E,5420μm,0.4s						
T1215				AML	AML		
	comp=N,4195μm,0.9s						
T1215				AML	AML		
	comp=E,22450μm,0.4s						
T1215				AML	AML		
	comp=N,15200μm,0.2s						
T1215				AML	AML		
	comp=E,23400μm,0.4s						
T1215				AML	AML		
	comp=N,14200μm,0.2s						
T1215				AML	AML		
	comp=N,15250μm,0.2s						
T1215				AML	AML		
	comp=N,14250μm,0.2s						
T1215				AML	AML		
	comp=E,23450μm,0.4s						
T1215				AML	AML		
	comp=E,22400μm,0.4s						
T1215				AML	AML		
	comp=N,2620μm,0.1s						
T1215				AML	AML		
	comp=E,1997μm,0.1s						
T1215				AML	AML		
	comp=E,1935μm,0.1s						
T1215				AML	AML		
	comp=N,2562μm,0.1s						
T1241	**Roccafluvione,**	**0.23**	**71**	P	Pg	12 02 32.1	+1.0
T1241				S	Sg	12 02 35.9	+1.6
T1241				AML	AML		
	comp=E,5700μm,0.1s						
T1241				AML	AML		
	comp=N,2405μm,0.3s						
T1241				AML	AML		
	comp=N,2340μm,0.3s						
T1241				AML	AML		
	comp=E,5695μm,0.1s						
T1241				AML	AML		
	comp=N,3940μm,0.9s						
T1241				AML	AML		
	comp=E,5900μm,0.1s						
T1241				AML	AML		
	comp=N,3730μm,0.9s						
T1241				AML	AML		
	comp=N,15650μm,0.4s						
T1241				AML	AML		
	comp=E,38350μm,0.3s						
T1241				AML	AML		
	comp=N,15850μm,0.4s						
T1241				AML	AML		
	comp=N,15800μm,0.4s						
T1241				AML	AML		
	comp=N,15700μm,0.4s						
T1241				AML	AML		
	comp=E,38300μm,0.3s						
T1241				AML	AML		
	comp=E,37200μm,0.3s						
T1241				AML	AML		
	comp=E,5901μm,0.1s						
T1241				AML	AML		
	comp=N,1523μm,0.1s						
T1241				AML	AML		
	comp=N,1611μm,0.1s						
T1241				AML	AML		
	comp=E,5699μm,0.1s						
T1243	**Rocca Santa Ma**	**0.24**	**110**	P	Pg	12 02 31.9	+0.5
T1243				S	Sg	12 02 36.0	+1.1
AM05	**Amandola Campo**	**0.25**	**39**	P	Pg	12 02 32.1	+0.6
AM05				AML	AML		
	comp=N,451μm,0.1s						
AM05				AML	AML		
	comp=E,1690μm,0.5s						
AM05				AML	AML		
	comp=N,1405μm,0.1s						
AM05				AML	AML		
	comp=E,6585μm,0.6s						
AM05				AML	AML		
	comp=N,575μm,0.1s						
AM05				AML	AML		
	comp=E,4705μm,0.2s						
AM05				AML	AML		
	comp=N,6310μm,0.4s						
AM05				AML	AML		
	comp=E,22450μm,0.6s						
AM05				AML	AML		
	comp=N,912μm,0.1s						
AM05				AML	AML		
	comp=E,22400μm,0.6s						
AM05				AML	AML		
	comp=E,931μm,0.1s						
AM05				AML	AML		
	comp=N,844μm,0.2s						
AM05				AML	AML		
	comp=E,3197μm,0.1s						
AM05				AML	AML		
	comp=N,255μm,0.1s						
CAMP	**Campotosto**	**0.32**	**141**	P	Pg	12 02 33.5	+0.7
CAMP				AML	AML		
	comp=E,6105μm,0.2s						
CAMP				AML	AML		
	comp=N,4015μm,0.2s						
CAMP				AML	AML		
	comp=E,915μm,0.2s						
CAMP				AML	AML		
	comp=N,857μm,0.2s						
ARRO	**Arrone**	**0.34**	**234**	P	Pg	12 02 33.7	+0.5
ARRO				AML	AML		
	comp=E,1010μm,0.3s						
ARRO				AML	AML		
	comp=N,1410μm,0.2s						
ARRO				AML	AML		
	comp=E,4165μm,0.2s						
ARRO				AML	AML		
	comp=N,3080μm,0.2s						
ARRO				AML	AML		
	comp=N,6240μm,1.5s						
ARRO				AML	AML		
	comp=E,5810μm,0.2s						
ARRO				AML	AML		
	comp=E,1012μm,0.3s						
ARRO				AML	AML		
	comp=N,1408μm,0.2s						
TERO	**Teramo**	**0.38**	**115**	P	Pg	12 02 34.3	+0.4
TERO				AML	AML		
	comp=E,3445μm,0.3s						
TERO				AML	AML		
	comp=N,5230μm,0.4s						
TERO				AML	AML		
	comp=E,3930μm,0.3s						
TERO				AML	AML		
	comp=N,5575μm,0.3s						
TERO				AML	AML		
	comp=N,5475μm,1.3s						
TERO				AML	AML		
	comp=E,5980μm,1.3s						
TERO				AML	AML		
	comp=N,5760μm,1.3s						
TERO				AML	AML		
	comp=E,6485μm,1.3s						
TERO				AML	AML		
	comp=N,1332μm,0.1s						
TERO				AML	AML		
	comp=E,1111μm,0.1s						
TERO				AML	AML		
	comp=E,1328μm,0.1s						
TERO				AML	AML		
	comp=N,1227μm,0.2s						
MNTP	**Montappone**	**0.43**	**34**	⇓P	Pb	12 02 36.1	0.0
OFFI	**Offida**	**0.43**	**69**	P	Pb	12 02 36.1	0.0
OFFI				AML	AML		
	comp=E,2675μm,0.7s						
OFFI				AML	AML		
	comp=N,4385μm,0.7s						
OFFI				AML	AML		
	comp=E,8585μm,0.7s						
OFFI				AML	AML		
	comp=N,8770μm,0.5s						
OFFI				AML	AML		
	comp=E,1543μm,0.3s						
OFFI				AML	AML		
	comp=N,1857μm,0.5s						
ASSB	**Assisi San Ben**	**0.44**	**307**	⇓P	Pg	12 02 34.4	-0.6
ASSB				AML	AML		
	comp=N,5685μm,1.5s						
ASSB				AML	AML		
	comp=E,11465μm,0.2s						
ASSB				AML	AML		
	comp=N,10350μm,0.2s						
ASSB				AML	AML		
	comp=N,983μm,0.2s						
ASSB				AML	AML		
	comp=E,776μm,0.2s						
CESX	**Cesi**	**0.45**	**248**	P	Pg	12 02 35.3	+0.2
CESX				AML	AML		
	comp=E,670μm,1.2s						
CESX				AML	AML		
	comp=N,731μm,0.4s						
CESX				AML	AML		
	comp=E,2815μm,0.6s						
CESX				AML	AML		
	comp=N,2525μm,0.7s						
CESX				AML	AML		
	comp=N,6730μm,0.5s						
CESX				AML	AML		
	comp=E,6870μm,0.7s						
CESX				AML	AML		
	comp=N,731μm,0.4s						
CESX				AML	AML		
	comp=E,560μm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**136**	P	Pg	12 02 35.9	+0.5
GIGS				AML	AML		
	comp=N,716μm,0.6s						
GIGS				AML	AML		
	comp=E,1280μm,0.5s						
GIGS				AML	AML		
	comp=E,261μm,0.2s						
GIGS				AML	AML		
	comp=N,212μm,0.1s						
FIAM	**Fiamignano**	**0.51**	**182**	P	Pg	12 02 36.6	+0.2
FIAM				S	Sb	12 02 44.3	-0.8
FIAM				AML	AML		
	comp=E,462μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.54**	**318**	P	Pg	12 02 37.2	+0.2
ATCC				AML	AML		
	comp=E,3375μm,0.2s						
ATCC				AML	AML		
	comp=N,2450μm,1.1s						
ATCC				AML	AML		
	comp=N,4830μm,0.3s						
ATCC				AML	AML		
	comp=E,4050μm,0.7s						
ATCC				AML	AML		
	comp=E,695μm,0.3s						
ATCC				AML	AML		
	comp=N,519μm,0.2s						
EL6	**Elcito**	**0.55**	**357**	P	Pg	12 02 37.2	+0.1
EL6				AML	AML		
	comp=E,1725μm,0.9s						
EL6				AML	AML		
	comp=N,1672μm,0.2s						
EL6				AML	AML		
	comp=E,3965μm,0.9s						
EL6				AML	AML		
	comp=N,4700μm,0.3s						
EL6				AML	AML		
	comp=E,3970μm,0.9s						
EL6				AML	AML		
	comp=N,4695μm,0.3s						
EL6				AML	AML		
	comp=N,962μm,0.2s						
EL6				AML	AML		
	comp=E,698μm,0.2s						
TRTR	**Tortoreto Alta**	**0.57**	**87**	AML	AML		
	comp=E,2050μm,0.9s						
TRTR				AML	AML		
	comp=N,2135μm,0.5s						
TRTR				AML	AML		
	comp=E,8485μm,0.5s						
TRTR				AML	AML		
	comp=N,7930μm,0.4s						
VCEL	**Villa Celiera**	**0.65**	**126**	P	Pb	12 02 39.5	-0.4
VCEL				AML	AML		
	comp=E,1970μm,0.5s						
VCEL				AML	AML		
	comp=N,1950μm,0.3s						
VCEL				AML	AML		
	comp=E,2780μm,0.7s						
VCEL				AML	AML		
	comp=N,2410μm,0.7s						
VCEL				AML	AML		
	comp=E,794μm,0.4s						
VCEL				AML	AML		
	comp=N,660μm,0.3s						
PP3	**Marolino**	**0.69**	**30**	⇑P	Pb	12 02 41.1	+0.6
PP3				AML	AML		
	comp=E,2275μm,0.5s						
PP3				AML	AML		
	comp=N,2385μm,0.4s						
PP3				AML	AML		
	comp=E,2260μm,0.5s						
PP3				AML	AML		
	comp=N,2440μm,0.4s						
PP3				AML	AML		
	comp=E,4380μm,0.3s						
PP3				AML	AML		
	comp=N,6185μm,0.7s						
PP3				AML	AML		
	comp=N,6405μm,0.7s						
PP3				AML	AML		
	comp=E,4090μm,0.3s						
PP3				AML	AML		
	comp=N,6400μm,0.7s						
PP3				AML	AML		
	comp=E,2169μm,0.4s						
PP3				AML	AML		
	comp=N,2441μm,0.4s						
PP3				AML	AML		
	comp=E,2206μm,0.4s						
PP3				AML	AML		
	comp=N,2385μm,0.4s						
SRES	**S.Oreste - Sor**	**0.71**	**221**	S	Sn	12 02 53.0	-0.6
ARVD	**Arcevia**	**0.73**	**349**	S	Sn	12 02 53.0	-1.1
MGAB	**Montegabbione**	**0.77**	**280**	⇑P	Pn	12 02 44.0	+0.8
MPAG	**Monte Paganucc**	**0.89**	**342**	S	Sn	12 02 59.0	+0.9
MCIV	**Monte Civitell**	**1.08**	**270**	⇓P	Pn	12 02 48.1	+0.5
MCIV				AML	AML		
	comp=E,252μm,1.3s						
MCIV				AML	AML		
	comp=N,204μm,1.6s						
MCIV				AML	AML		
	comp=N,372μm,1.1s						
MCIV				AML	AML		
	comp=E,391μm,0.3s						
MCIV				AML	AML		
	comp=N,97μm,0.2s						
MCIV				AML	AML		
	comp=E,105μm,0.2s						

*ROM **30** 12:03:17.4±0.0, 42°.855N±0°.002×13°.068E±0°.004, h10km, ML3.4/25, Error ellipse: s-maj=0.3km s-min=0.1km az=264.0*
*PRU **30** 12:03:18.0±0.0, 42°.86N×13°.48E, h0km*
*LDG **30** 12:03:18.5±0.1, 42°.73N×13°.10E, h10km, Ml3.0/10, Error ellipse: s-maj=4.1km s-min=2.9km az=21.0*

ISC 30 12:03:17.8±0.6, 42°.85N±0°.01×13°.06E±0°.02, h14km±4km, n87, σ1°.44/122, 6C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**322**	⇑P	**Pg**	**12 03 19.9**	**-0.7**

T1216			S	Sg	12 03 21.2	-1.2
T1212	**Cascia, Frazio**	**0.10 187**	⇑P	**Pg**	**12 03 20.8**	**-0.3**
T1212			S	**Sg**	**12 03 22.9**	**-0.3**
FEMA	**Monte Fema**	**0.11 356**	P	**Pg**	**12 03 20.7**	**-0.6**
FEMA			S	**Sg**	**12 03 22.7**	**-0.9**
FEMA			AML	AML		
	comp=E,39900μm,1.3s					
FEMA			AML	AML		
	comp=N,40150μm,0.6s					
FEMA			AML	AML		
	comp=E,39950μm,1.3s					
T1213	**Norcia, Frazio**	**0.14 159**	P	**Pg**	**12 03 21.1**	**-0.3**
T1213			S	**Sg**	**12 03 23.5**	**-0.4**
T1214	**Arquata del Tr**	**0.14 130**	⇓P	**Pg**	**12 03 21.2**	**-0.4**
T1214			S	**Sg**	**12 03 23.7**	**-0.5**
T1215	**Vallo di Nera,**	**0.15 251**	⇑P	**Pg**	**12 03 21.6**	**-0.1**
T1215			S	**Sg**	**12 03 24.2**	**-0.1**
T1215			AML	AML		
	comp=N,15200μm,0.2s					
T1215			AML	AML		
	comp=E,23400μm,0.4s					
T1215			AML	AML		
	comp=N,14250μm,0.2s					
T1215			AML	AML		
	comp=E,22450μm,0.4s					
T1215			AML	AML		
	comp=N,15200μm,0.2s					
T1215			AML	AML		
	comp=N,14200μm,0.2s					
T1215			AML	AML		
	comp=N,15250μm,0.2s					
T1215			AML	AML		
	comp=E,22400μm,0.4s					
T1215			AML	AML		
	comp=E,23450μm,0.4s					
T1217	**Poggiodomo (PG**	**0.17 215**	⇑P	**Pg**	**12 03 21.9**	**-0.1**
T1217			S	**Sg**	**12 03 25.0**	**+0.3**
T1217			AML	AML		
	comp=N,48950μm,0.2s					
T1217			AML	AML		
	comp=E,24700μm,0.2s					
T1217			AML	AML		
	comp=N,48000μm,0.2s					
T1217			AML	AML		
	comp=E,24600μm,1.6s					
T1217			AML	AML		
	comp=E,24650μm,1.6s					
T1217			AML	AML		
	comp=E,24700μm,0.2s					
T1217			AML	AML		
	comp=N,48000μm,0.2s					
T1217			AML	AML		
	comp=N,48950μm,0.2s					
T1218	**Civita (PG)**	**0.18 168**	⇑P	**Pg**	**12 03 22.1**	**-0.1**
T1218			S	**Sg**	**12 03 25.3**	**+0.1**
FDMO	**Fiordimonte**	**0.19 6**	P	**Pg**	**12 03 21.9**	**-0.3**
FDMO			S	**Sg**	**12 03 24.9**	**-0.3**
T1256	**Bolognola (MC)**	**0.20 38**	P	**Pg**	**12 03 22.0**	**-0.4**
T1256			S	**Sg**	**12 03 25.5**	**-0.1**
T1244	**Arquata del Tr**	**0.20 118**	P	**Pg**	**12 03 22.3**	**-0.1**
T1244			S	**Sg**	**12 03 25.9**	**+0.4**
MMO1	**Montemonaco**	**0.20 76**	P	**Pg**	**12 03 22.1**	**-0.3**
MMO1			S	**Sg**	**12 03 25.4**	**-0.2**
T1219	**Muccia, Frazio**	**0.21 349**	P	**Pg**	**12 03 22.4**	**-0.1**
T1219			S	**Sg**	**12 03 25.7**	**-0.1**
T1201	**Domo (RI)**	**0.24 144**	P	**Pg**	**12 03 23.2**	**+0.2**
T1201			S	**Sg**	**12 03 27.7**	**+1.1**
LNSS	**Leonessa**	**0.25 184**	P	**Pg**	**12 03 23.3**	**0.0**
LNSS			S	**Sb**	**12 03 27.4**	**-0.9**
LNSS			AML	AML		
	comp=E,11800μm,0.2s					
LNSS			AML	AML		
	comp=N,20350μm,0.2s					
AM05	**Amandola Campo**	**0.25 59**	P	**Pg**	**12 03 23.0**	**-0.1**
AM05			S	**Sg**	**12 03 26.9**	**+0.1**
AM05			AML	AML		
	comp=E,4705μm,0.2s					
AM05			AML	AML		
	comp=N,912μm,0.1s					
AM05			AML	AML		
	comp=N,912μm,0.1s					
AM05			AML	AML		
	comp=E,22450μm,0.6s					
AM05			AML	AML		
	comp=N,6310μm,0.4s					
AM05			AML	AML		
	comp=E,22400μm,0.6s					
T1204	**Amatrice, Fraz**	**0.26 133**	P	**Pg**	**12 03 23.3**	**-0.1**
T1204			S	**Sg**	**12 03 27.5**	**+0.3**
T1204			AML	AML		
	comp=N,12450μm,0.8s					
T1204			AML	AML		
	comp=E,16950μm,0.1s					
T1204			AML	AML		
	comp=E,16900μm,0.1s					
T1220	**Camerino, Fraz**	**0.26 4**	P	**Pg**	**12 03 23.2**	**-0.2**
T1220			S	**Sb**	**12 03 27.6**	**-1.0**
T1241	**Roccafluvione,**	**0.27 89**	P	**Pb**	**12 03 23.8**	**-0.7**
T1241			S	**Sb**	**12 03 28.2**	**-0.8**
T1241			AML	AML		
	comp=E,37150μm,0.3s					
T1241			AML	AML		
	comp=N,15800μm,0.4s					
T1241			AML	AML		
	comp=E,37200μm,0.3s					
T1241			AML	AML		
	comp=N,15850μm,0.4s					
T1241			AML	AML		
	comp=N,15650μm,0.4s					
T1241			AML	AML		
	comp=E,38350μm,0.3s					
T1241			AML	AML		
	comp=N,15700μm,0.4s					
T1241			AML	AML		
	comp=E,38300μm,0.3s					
T1241			AML	AML		
	comp=E,37200μm,0.3s					
GUMA	**Gualdo di Mace**	**0.29 43**	⇑P	**Pb**	**12 03 24.0**	**-0.8**
GUMA			S	**Sb**	**12 03 29.0**	**-0.6**
GUMA			AML	AML		
	comp=E,33050μm,0.8s					
GUMA			AML	AML		
	comp=N,35250μm,0.4s					
GUMA			AML	AML		
	comp=N,35200μm,0.4s					
GUMA			AML	AML		
	comp=E,34250μm,0.4s					
GUMA			AML	AML		
	comp=N,35700μm,1.0s					
GUMA			AML	AML		
	comp=N,35200μm,0.4s					
SEF1	**Sefro**	**0.31 344**	P	**Pg**	**12 03 24.2**	**0.0**
SEF1			S	**Sg**	**12 03 28.9**	**+0.3**
SEF1			AML	AML		
	comp=N,7165μm,1.0s					
T1243	**Rocca Santa Ma**	**0.32 118**	P	**Pg**	**12 03 24.3**	**-0.2**
T1243			S	**Sg**	**12 03 29.1**	**0.0**
MDAR	**Monte D'Aria**	**0.35 10**	P	**Pg**	**12 03 24.6**	**-0.3**
MDAR			S	**Sg**	**12 03 30.0**	**+0.2**
MDAR			AML	AML		
	comp=N,6079μm,0.6s					
MDAR			AML	AML		
	comp=E,4071μm,0.2s					
ARRO	**Arrone**	**0.35 219**	P	**Pg**	**12 03 25.1**	**+0.2**
ARRO			S	**Sb**	**12 03 30.7**	**-0.4**
ARRO			AML	AML		
	comp=N,5546μm,0.2s					
FIU1	**Fiuminata**	**0.35 344**	P	**Pb**	**12 03 25.1**	**-0.7**
FIU1			S	**Sb**	**12 03 30.4**	**-0.8**
ASSB	**Assisi San Ben**	**0.35 303**	P	**Pg**	**12 03 24.9**	**-0.1**
ASSB			S	**Sg**	**12 03 30.2**	**+0.3**
ASSB			AML	AML		
	comp=N,10354μm,0.2s					
ASSB			AML	AML		
	comp=E,7826μm,0.6s					
T1211	**Morro Reatino**	**0.35 206**	P	**Pb**	**12 03 25.3**	**-0.6**
T1211			S	**Sb**	**12 03 30.8**	**-0.5**
T1211			AML	AML		
	comp=N,17550μm,0.3s					
T1211			AML	AML		
	comp=E,11795μm,0.2s					
T1211			AML	AML		
	comp=N,17550μm,0.3s					
T1211			AML	AML		
	comp=N,17600μm,0.3s					
T1211			AML	AML		
	comp=E,11750μm,0.2s					
T1211			AML	AML		
	comp=N,17600μm,0.3s					
T1211			AML	AML		
	comp=E,11400μm,0.2s					
RM33	**Pellescritta (**	**0.36 162**	P	**Pg**	**12 03 25.1**	**0.0**
RM33			S	**Sb**	**12 03 30.8**	**-0.7**
RM33			AML	AML		
	comp=E,3315μm,0.2s					
RM33			AML	AML		
	comp=N,4324μm,0.7s					
RM33			AML	AML		
	comp=N,3846μm,0.1s					
CAMP	**Campotosto**	**0.41 141**	P	**Pg**	**12 03 25.7**	**-0.3**
CAMP			S	**Sg**	**12 03 31.8**	**+0.3**
CAMP			AML	AML		
	comp=N,1850μm,1.5s					
CAMP			AML	AML		
	comp=E,1755μm,2.2s					
MNTP	**Montappone**	**0.41 46**	P	**Pb**	**12 03 26.6**	**-0.3**
SNTG	**Esanatoglia**	**0.41 348**	P	**Pg**	**12 03 26.2**	**+0.1**
SNTG			S	**Sb**	**12 03 32.4**	**-0.7**
SNTG			AML	AML		
	comp=E,2033μm,0.5s					
SNTG			AML	AML		
	comp=E,2103μm,0.5s					
T1246	**Crognaleto (TE**	**0.42 130**	P	**Pg**	**12 03 25.8**	**-0.4**
T1246			S	**Sg**	**12 03 32.2**	**+0.4**
CESX	**Cesi**	**0.43 236**	P	**Pg**	**12 03 26.2**	**-0.2**
CESX			S	**Sg**	**12 03 32.6**	**+0.4**
CESX			AML	AML		
	comp=E,6870μm,0.7s					
CESX			AML	AML		
	comp=N,6730μm,0.5s					
T1247	**Pizzolo (AQ)**	**0.45 157**	P	**Pb**	**12 03 26.9**	**-0.5**
T1247			S	**Sb**	**12 03 34.0**	**+0.1**
T1247			AML	AML		
	comp=N,3337μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.46 317**	P	**Pg**	**12 03 26.8**	**-0.1**
ATCC			S	**Sb**	**12 03 33.9**	**-0.3**
ATCC			AML	AML		
	comp=N,4827μm,0.3s					
ATCC			AML	AML		
	comp=E,3258μm,0.3s					
TERO	**Teramo**	**0.46 119**	P	**Pg**	**12 03 26.6**	**-0.4**
TERO			S	**Sg**	**12 03 33.4**	**+0.2**
TERO			AML	AML		
	comp=E,5505μm,0.1s					
OFFI	**Offida**	**0.47 79**	P	**Pb**	**12 03 27.5**	**-0.3**
OFFI			AML	AML		
	comp=E,8585μm,0.7s					
OFFI			AML	AML		
	comp=N,8770μm,0.5s					
EL6	**Elcito**	**0.48 4**	P	**Pg**	**12 03 27.1**	**-0.3**
EL6			AML	AML		
	comp=E,3970μm,0.9s					
EL6			AML	AML		
	comp=E,3965μm,0.9s					
EL6			AML	AML		
	comp=N,4700μm,0.3s					
EL6			AML	AML		
	comp=N,4695μm,0.3s					
GIGS	**Gran Sasso**	**0.55 137**	P	**Pg**	**12 03 28.0**	**-0.6**
GIGS			S	**Sg**	**12 03 35.9**	**0.0**
FIAM	**Fiamignano**	**0.58 176**	P	**Pb**	**12 03 29.5**	**-0.3**
CADA	**Capodarco di F**	**0.62 56**	P	**Pb**	**12 03 30.8**	**+0.5**
TRTR	**Tortoreto Alta**	**0.63 94**	P	**Pb**	**12 03 30.8**	**+0.3**
TRTR			AML	AML		
	comp=E,8485μm,0.5s					
TRTR			AML	AML		
	comp=N,7930μm,0.4s					
TRTR			AML	AML		
	comp=N,4719μm,0.3s					
PP3	**Marolino**	**0.66 37**	P	**Pb**	**12 03 31.0**	**-0.1**
PP3			AML	AML		
	comp=E,4380μm,0.3s					
PP3			AML	AML		
	comp=N,6190μm,0.7s					
PP3			AML	AML		
	comp=E,4085μm,0.3s					
PP3			AML	AML		
	comp=E,4090μm,0.3s					
PP3			AML	AML		
	comp=N,6405μm,0.7s					
PP3			AML	AML		
	comp=N,6400μm,0.7s					
MGAB	**Montegabbione**	**0.70 275**	P	**Pb**	**12 03 32.1**	**+0.3**
AOI	**Ancona**	**0.80 29**	P	**Pg**	**12 03 33.1**	**-0.3**
AOI			AML	AML		
	comp=E,1255μm,0.4s					
AOI			AML	AML		
	comp=N,1285μm,1.5s					
MTCE	**Montecelio**	**0.86 196**	P	**Pg**	**12 03 33.1**	**-1.3**
MTCE			AML	AML		
	comp=N,926μm,1.3s					
MTCE			AML	AML		
	comp=E,1180μm,0.7s					
CASP	**Castiglione de**	**1.62 269**	AML	AML		
	comp=E,49μm,0.8s					
CASP			AML	AML		
	comp=N,63μm,1.0s					
MAIM	**Mastiano**	**2.15 300**	AML	AML		
	comp=E,56μm,0.6s					
MAIM			AML	AML		
	comp=N,56μm,1.5s					
PGF	**Pioggiola**	**3.01 266**	*e*Pn	**Pn**	**12 04 04.9**	**-0.2**
PGF	**Pioggiola**	**3.01 266**	*e*P	**Pn**	**12 04 06.9**	**+1.8**
PGF			*e*Sn	**Sn**	**12 04 39.9**	**-1.1**
	comp=N,5.8nm,0.6s					
SABO	**M.te Sabotino**	**3.15 7**	AML	AML		
	comp=E,536μm,1.6s					
SABO			AML	AML		
	comp=N,636μm,0.5s					
SABO			AML	AML		
	comp=E,120μm,1.4s					
SABO			AML	AML		
	comp=N,162μm,0.5s					
LJU	**Ljubljana**	**3.36 18**	AML	AML		
	comp=N,420μm,1.4s					
LJU			AML	AML		
	comp=E,429μm,0.5s					
ZAG	**Zagreb**	**3.64 34**	AML	AML		
	comp=N,418μm,0.1s					
ZAG			AML	AML		
	comp=E,490μm,0.1s					
ZOU	**Zoufplan**	**3.71 359**	AML	AML		
	comp=E,49μm,1.4s					
ZOU			AML	AML		
	comp=N,52μm,1.3s					
ABTA	**Abfaltersbach**	**3.92 354**	*e*Pn	**Pn**	**12 04 19.7**	**+2.2**
	comp=N,9.6nm,0.4s					
SBF	**Sospel**	**4.22 286**	*e*Pn	**Pn**	**12 04 21.9**	**+0.1**
SBF	**Sospel**	**4.22 286**	*e*P	**Pn**	**12 04 25.0**	**+3.2**
SBF			*e*Sn	**Sn**	**12 05 09.7**	**-1.2**
	comp=N,8.3nm,0.5s					
FETA	**Feichten**	**4.49 339**	*e*Pn	**Pn**	**12 04 29.2**	**+3.8**
	comp=N,1.0nm,0.3s					
WTTA	**Wattenberg**	**4.53 348**	*e*Pn	**Pn**	**12 04 30.3**	**+4.3**
	comp=N,1.9nm,0.2s					
SQTA	**Sankt Quirin**	**4.56 344**	*e*Pn	**Pn**	**12 04 30.4**	**+4.0**
	comp=N,3.2nm,0.2s					
LMR	**La Mourre**	**4.82 278**	*e*Pn	**Pn**	**12 04 30.7**	**+0.8**
LMR	**La Mourre**	**4.82 278**	*e*P	**Pn**	**12 04 33.7**	**+3.8**
LMR			*e*Sn	**Sn**	**12 05 23.6**	**-1.9**
	comp=N,10nm,1.1s					
BIOA	**Bad Ischl, Aus**	**4.86 5**	*e*Pn	**Pn**	**12 04 32.1**	**+1.7**
	comp=N,8.1nm,0.4s					
RETA	**Reutte**	**4.91 341**	*e*Pn	**Pn**	**12 04 34.9**	**+3.7**
	comp=N,2.6nm,0.3s					
MBDF	**Montbardon**	**4.92 295**	*e*Pn	**Pn**	**12 04 31.7**	**+0.2**
MBDF	**Montbardon**	**4.92 295**	*e*P	**Pn**	**12 04 35.7**	**+4.2**
MBDF			*e*Sn	**Sn**	**12 05 26.5**	**-1.8**
	comp=N,9.5nm,1.0s					
MOA	**Molln**	**5.07 9**	*e*Pn	**Pn**	**12 04 34.9**	**+1.6**
	comp=N,1.1nm,0.2s					
LPG	**La Plagne**	**5.25 302**	*e*P	**Pn**	**12 04 40.4**	**+4.3**
LPG			*e*Sn	**Sn**	**12 05 34.7**	**-1.8**
	comp=N,5.2nm,0.7s					
LPL	**La Plagne**	**5.27 303**	*e*Pn	**Pn**	**12 04 36.9**	**+0.6**
LPL	**La Plagne**	**5.27 303**	*e*P	**Pn**	**12 04 40.8**	**+4.5**
LPL			*e*Sn	**Sn**	**12 05 35.1**	**-1.9**
	comp=N,5.6nm,0.7s					
RONA	**Rosalia, Austr**	**5.36 24**	*e*Pn	**Pn**	**12 04 38.1**	**+0.8**
	comp=N,0.6nm,0.2s					
CONA	**Conrad Observa**	**5.45 20**	*e*Pn	**Pn**	**12 04 39.3**	**+0.7**
	comp=N,2.0nm,0.3s					
SMRF	**Simiane la Rot**	**5.57 284**	*e*Pn	**Pn**	**12 04 40.7**	**+0.5**
SMRF	**Simiane la Rot**	**5.57 284**	*e*P	**Pn**	**12 04 43.8**	**+3.6**
SMRF			*e*Sn	**Sn**	**12 05 41.8**	**-2.2**
	comp=N,23nm,1.4s					
ORIF	**Oris-en-Rattie**	**5.59 294**	*e*P	**Pn**	**12 04 45.2**	**+4.7**
ORIF			*e*Sn	**Sn**	**12 05 42.0**	**-2.5**
	comp=N,15nm,1.3s					
CKRC	**Cesky Krumlov**	**6.03 8**	*e*SN	**Sn**	**12 05 54.4**	**-1.0**
CABF	**La Chapelle**	**6.23 310**	*e*Pn	**Pn**	**12 04 49.9**	**+0.6**
CABF	**La Chapelle**	**6.23 310**	*e*P	Pn	12 04 54.1	+4.8
KHC	**Kasperske Hory**	**6.29 3**	*e*PN	**Pn**	**12 04 50.5**	**+0.4**
KHC			*e*SN	**Sn**	**12 06 00.6**	**-1.2**
VIVF	**Saint-Julien-l**	**6.39 291**	*e*Pn	**Pn**	**12 04 52.0**	**+0.6**
HINF	**Hinteralfeld**	**6.62 321**	*e*Pn	**Pn**	**12 04 54.3**	**-0.3**
HINF	**Hinteralfeld**	**6.62 321**	*e*P	Pn	12 04 59.5	+4.9
CDF	**Champ du Feu**	**6.88 326**	*e*Pn	**Pn**	**12 04 58.6**	**+0.3**
CDF	**Champ du Feu**	**6.88 326**	*e*P	Pn	12 05 03.6	+5.3
HAU	**Haudompre**	**6.99 320**	*e*Pn	**Pn**	**12 04 59.8**	**+0.1**
SFTF	**Sexfontaines**	**7.77 316**	*e*P	Pn	12 05 15.8	+5.5
LOR	**Lormes**	**7.87 307**	*e*Pn	**Pn**	**12 05 11.2**	**-0.5**
	baz=129					

ROM 30 12:04:13.8±0.1, 42°.851N±0'.004×13'.066E±0'.005, h10km, ML2.8/16, 10C-10D, Error ellipse: s-maj=0.3km s-min=0.2km az=312.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.11**	**354**	⇑P	Pg	12 04 17.1	+0.4
FEMA				S	Sg	12 04 19.1	+0.3
FEMA				AML	AML		
	comp=E,13950μm,1.1s						
FEMA				AML	AML		
	comp=N,12800μm,0.6s						
FEMA				AML	AML		
	comp=N,12850μm,0.6s						
FEMA				AML	AML		
	comp=E,13950μm,1.1s						
FEMA				AML	AML		
	comp=E,12121μm,0.3s						
FEMA				AML	AML		
	comp=N,11127μm,0.2s						
T1215	**Vallo di Nera,**	**0.15**	**252**	⇑P	Pg	12 04 17.8	+0.6
T1215				S	Sg	12 04 20.6	+1.0
T1215				AML	AML		
	comp=E,2560μm,0.4s						
T1215				AML	AML		
	comp=E,2610μm,0.4s						
T1215				AML	AML		
	comp=E,2555μm,0.4s						
T1215				AML	AML		
	comp=N,2830μm,1.5s						
T1215				AML	AML		
	comp=E,2605μm,0.4s						
T1215				AML	AML		
	comp=N,2750μm,1.3s						
T1215				AML	AML		
	comp=E,2560μm,0.4s						
T1215				AML	AML		
	comp=N,2835μm,1.5s						
T1215				AML	AML		
	comp=N,2750μm,1.3s						
T1215				AML	AML		
	comp=E,2603μm,0.4s						
T1215				AML	AML		
	comp=N,2529μm,0.1s						
T1215				AML	AML		
	comp=E,1914μm,0.1s						
T1215				AML	AML		
	comp=N,2506μm,0.1s						
T1215				AML	AML		
	comp=E,2039μm,0.1s						
T1217	**Poggiodomo (PG**	**0.17**	**216**	⇑P	Pg	12 04 18.2	+0.7
T1217				S	Sg	12 04 21.3	+1.2
T1217				AML	AML		
	comp=E,4175μm,0.3s						
T1217				AML	AML		
	comp=E,4115μm,0.3s						
T1217				AML	AML		
	comp=N,5310μm,0.8s						
T1217				AML	AML		
	comp=E,4110μm,0.3s						
T1217				AML	AML		
	comp=N,5190μm,0.8s						
T1217				AML	AML		
	comp=N,5305μm,0.8s						
T1217				AML	AML		
	comp=N,5185μm,0.8s						
T1217				AML	AML		
	comp=E,4180μm,0.3s						
T1217				AML	AML		
	comp=N,4725μm,0.2s						
T1217				AML	AML		
	comp=E,2882μm,0.2s						
T1217				AML	AML		
	comp=E,2729μm,0.2s						
T1217				AML	AML		
	comp=N,4686μm,0.2s						
MMO1	**Montemonaco**	**0.20**	**76**	⇑P	Pg	12 04 18.5	+0.5
MMO1				S	Sg	12 04 21.8	+1.0
AM05	**Amandola Campo**	**0.25**	**59**	⇑P	Pg	12 04 19.4	+0.6
AM05				S	Sg	12 04 23.2	+1.0
AM05				AML	AML		
	comp=E,2585μm,0.1s						
AM05				AML	AML		
	comp=E,9875μm,0.2s						
AM05				AML	AML		
	comp=N,2395μm,0.7s						
AM05				AML	AML		
	comp=E,9890μm,0.2s						
AM05				AML	AML		
	comp=E,2580μm,0.1s						
AM05				AML	AML		
	comp=E,9885μm,0.2s						
AM05				AML	AML		
	comp=N,902μm,0.1s						
AM05				AML	AML		
	comp=N,902μm,0.1s						
AM05				AML	AML		
	comp=E,2583μm,0.1s						
AM05				AML	AML		
	comp=N,2326μm,0.1s						
AM05				AML	AML		
	comp=E,8939μm,0.1s						
LNSS	**Leonessa**	**0.25**	**184**	⇓P	Pg	12 04 19.5	+0.7
LNSS				S	Sg	12 04 23.6	+1.3
LNSS				AML	AML		
	comp=N,6815μm,0.3s						
LNSS				AML	AML		
	comp=E,3445μm,0.4s						
LNSS				AML	AML		
	comp=N,6810μm,0.3s						
LNSS				AML	AML		
	comp=E,3338μm,0.2s						
LNSS				AML	AML		
	comp=N,5838μm,0.2s						
T1204	**Amatrice, Fraz**	**0.25**	**133**	⇓P	Pg	12 04 19.0	0.0
T1204				AML	AML		
	comp=N,2620μm,1.0s						
T1204				AML	AML		
	comp=N,2625μm,1.0s						
T1204				AML	AML		
	comp=E,5345μm,1.0s						
T1204				AML	AML		
	comp=E,4405μm,0.2s						
T1204				AML	AML		
	comp=N,2245μm,0.2s						
T1241	**Roccafluvione,**	**0.27**	**89**	⇑P	Pb	12 04 20.2	-0.6
T1241				S	Sb	12 04 24.6	-0.8
T1241				AML	AML		
	comp=E,6345μm,0.4s						
T1241				AML	AML		
	comp=N,5530μm,0.3s						
T1241				AML	AML		
	comp=E,6925μm,0.4s						
T1241				AML	AML		
	comp=N,5355μm,0.3s						
T1241				AML	AML		
	comp=E,6345μm,0.3s						
T1241				AML	AML		
	comp=N,5525μm,0.3s						
T1241				AML	AML		
	comp=N,5271μm,0.2s						
T1241				AML	AML		
	comp=E,4888μm,0.2s						

GUMA	**Gualdo di Mace**	**0.29**	**43**	⇑P	Pg	12 04 20.4	+0.7
GUMA				S	Sb	12 04 25.5	-0.5
GUMA				AML	AML		
	comp=N,8305μm,0.3s						
GUMA				AML	AML		
	comp=E,6825μm,1.5s						
GUMA				AML	AML		
	comp=E,9620μm,0.3s						
GUMA				AML	AML		
	comp=N,8635μm,0.6s						
GUMA				AML	AML		
	comp=N,8310μm,0.3s						
GUMA				AML	AML		
	comp=N,8306μm,0.3s						
GUMA				AML	AML		
	comp=N,7518μm,0.2s						
GUMA				AML	AML		
	comp=E,6734μm,0.4s						
GUMA				AML	AML		
	comp=E,9618μm,0.3s						
SEF1	**Sefro**	**0.31**	**344**	⇓P	Pb	12 04 20.8	-0.7
SEF1				AML	AML		
	comp=E,2672μm,0.3s						
SEF1				AML	AML		
	comp=N,2235μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**119**	⇓P	Pg	12 04 20.6	+0.4
T1243				S	Sb	12 04 25.8	-1.1
ARRO	**Arrone**	**0.35**	**219**	⇑P	Pg	12 04 21.2	+0.5
ARRO				S	Sb	12 04 26.9	-0.8
ARRO				AML	AML		
	comp=E,1270μm,0.3s						
ARRO				AML	AML		
	comp=E,1265μm,0.3s						
ARRO				AML	AML		
	comp=N,1655μm,0.2s						
ARRO				AML	AML		
	comp=E,1267μm,0.3s						
ARRO				AML	AML		
	comp=N,1656μm,0.2s						
T1211	**Morro Reatino**	**0.35**	**206**	⇓P	Pg	12 04 21.5	+0.6
T1211				S	Sb	12 04 26.9	-1.0
T1211				AML	AML		
	comp=E,3250μm,0.1s						
T1211				AML	AML		
	comp=N,3535μm,1.2s						
T1211				AML	AML		
	comp=E,3255μm,0.2s						
T1211				AML	AML		
	comp=N,3520μm,0.2s						
T1211				AML	AML		
	comp=E,3255μm,0.1s						
T1211				AML	AML		
	comp=N,3520μm,0.2s						
T1211				AML	AML		
	comp=E,3244μm,0.1s						
T1211				AML	AML		
	comp=N,3521μm,0.2s						
T1211				AML	AML		
	comp=N,3521μm,0.2s						
T1211				AML	AML		
	comp=E,3256μm,0.1s						
ASSB	**Assisi San Ben**	**0.35**	**303**	P	Pg	12 04 21.1	+0.3
ASSB				S	Sg	12 04 26.5	+0.9
ASSB				AML	AML		
	comp=E,1400μm,0.2s						
ASSB				AML	AML		
	comp=N,1285μm,0.2s						
ASSB				AML	AML		
	comp=N,1284μm,0.2s						
ASSB				AML	AML		
	comp=E,1400μm,0.2s						
RM33	**Pellescritta (**	**0.36**	**162**	P	Pg	12 04 21.4	+0.5
RM33				S	Sb	12 04 27.2	-0.9
RM33				AML	AML		
	comp=N,1425μm,0.4s						
RM33				AML	AML		
	comp=N,1430μm,0.4s						
RM33				AML	AML		
	comp=E,1515μm,0.5s						
RM33				AML	AML		
	comp=N,1425μm,0.4s						
RM33				AML	AML		
	comp=E,1545μm,0.5s						
RM33				AML	AML		
	comp=E,1515μm,0.5s						
RM33				AML	AML		
	comp=N,1351μm,0.1s						
RM33				AML	AML		
	comp=E,1416μm,0.1s						
RM33				AML	AML		
	comp=E,1390μm,0.1s						
RM33				AML	AML		
	comp=N,1314μm,0.1s						
CAMP	**Campotosto**	**0.40**	**141**	P	Pg	12 04 22.3	+0.5
CAMP				S	Sg	12 04 27.8	+0.7
CAMP				AML	AML		
	comp=N,430μm,0.3s						
CAMP				AML	AML		
	comp=E,379μm,0.3s						
MNTP	**Montappone**	**0.41**	**46**	⇓P	Pb	12 04 22.9	-0.3
MNTP				AML	AML		
	comp=E,2354μm,0.3s						
MNTP				AML	AML		
	comp=N,1877μm,0.3s						
SNTG	**Esanatoglia**	**0.41**	**347**	P	Pg	12 04 22.3	+0.4
SNTG				AML	AML		
	comp=E,498μm,0.2s						
SNTG				AML	AML		
	comp=N,604μm,0.6s						
SNTG				AML	AML		
	comp=N,509μm,0.2s						
SNTG				AML	AML		
	comp=N,527μm,0.2s						
SNTG				AML	AML		
	comp=E,498μm,0.2s						
SNTG				AML	AML		
	comp=E,501μm,0.1s						
CESX	**Cesi**	**0.43**	**236**	⇑P	Pg	12 04 22.5	+0.3
CESX				S	Sb	12 04 29.4	-0.7
CESX				AML	AML		
	comp=E,1465μm,0.6s						
CESX				AML	AML		
	comp=N,1630μm,0.5s						
CESX				AML	AML		
	comp=E,1315μm,0.4s						
CESX				AML	AML		
	comp=N,1629μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.44**	**157**	⇓P	Pb	12 04 23.9	+0.1
T1247				AML	AML		
	comp=E,1154μm,0.2s						
T1247				AML	AML		
	comp=N,1529μm,0.1s						
TERO	**Teramo**	**0.46**	**120**	⇓P	Pg	12 04 22.8	+0.1
TERO				S	Sb	12 04 30.0	-0.8
TERO				AML	AML		
	comp=E,1645μm,0.7s						
TERO				AML	AML		
	comp=N,1575μm,0.6s						
TERO				AML	AML		
	comp=N,1231μm,0.1s						
TERO				AML	AML		
	comp=N,1420μm,0.1s						
TERO				AML	AML		
	comp=E,1383μm,0.1s						
TERO				AML	AML		
	comp=E,1560μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.46**	**317**	P	Pg	12 04 23.2	+0.5
ATCC				AML	AML		
	comp=N,909μm,0.3s						
ATCC				AML	AML		
	comp=E,1025μm,0.5s						
OFFI	**Offida**	**0.46**	**79**	⇓P	Pb	12 04 24.1	+0.1
OFFI				AML	AML		
	comp=E,2610μm,0.3s						
OFFI				AML	AML		
	comp=N,2280μm,0.6s						
EL6	**Elcito**	**0.48**	**3**	⇓P	Pg	12 04 23.4	+0.2
EL6				S	Sb	12 04 31.0	-0.6
EL6				AML	AML		
	comp=E,1465μm,1.3s						
EL6				AML	AML		
	comp=N,1945μm,0.3s						
EL6				AML	AML		
	comp=N,1938μm,0.3s						
EL6				AML	AML		
	comp=E,1460μm,1.3s						
EL6				AML	AML		
	comp=N,1940μm,0.3s						
EL6				AML	AML		
	comp=E,1225μm,0.4s						
GIGS	**Gran Sasso**	**0.55**	**137**	P	Pg	12 04 24.4	0.0
GIGS				AML	AML		
	comp=N,158μm,0.2s						
GIGS				AML	AML		
	comp=E,163μm,0.2s						
FIAM	**Fiamignano**	**0.58**	**176**	⇑P	Pb	12 04 26.0	-0.1
FIAM				S	Sb	12 04 34.2	-0.3
FIAM				AML	AML		
	comp=N,502μm,0.2s						

*BEO **30** 12:06:59.2±0.6, 42°.81N×12°.84E, h3km±3km, ML4.7/14*
*PRU **30** 12:07:00.3±0.0, 42°.86N×12°.92E, h0km, M4.7*
*MOS **30** 12:07:00.8±1.1, 42°.96N×13°.04E, h12km, mb5.0/30, MS4.1/20, Error ellipse: s-maj=4.9km s-min=2.9km az=74.0*
*STR **30** 12:07:00.0, 42°.84N×13°.08E, h10km, MLv4.4/10, preliminary*
*PDG **30** 12:07:00.9±0.7, 42°.86N×13°.10E, h10km, MD4.6/2, ML4.6/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*ROM **30** 12:07:00.2±0.0, 42°.842N±0°.001×13°.076E±0°.001, h10km, ML4.6/65, Mw4.5, Error ellipse: s-maj=0.1km s-min=0.0km az=75.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.43; $M_{\theta\theta}$0.38; $M_{\phi\phi}$3.04; $M_{r\theta}$2.62; $M_{\theta\phi}$-2.04; $M_{\phi r}$-3.66; Fault plane solution: $M_0$5.88495×10^{15} NP1:ϕ_s160.00000°, δ20.00000°, λ-77.00000°. NP2:ϕ_s326.00000°, δ70.00000°, λ-95.00000°.*
*IDC **30** 12:07:00.5±0.5, 42°.93N×12°.97E, h0km, mb4.4/29, mbtmp4.3/44, ML3.8/14, MS3.9/66 Error ellipse: s-maj=10.0km s-min=8.5km az=101.0*
*MED_RC **30** 12:07:00.0±0.4, 42°.71N×13°.15E, h16km, MW4.7/13, Moment Tensor Solution. Mantle waves: s13,c17; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.85±.07; $M_{\theta\theta}$0.03±.07; $M_{\phi\phi}$0.81±.04; $M_{r\theta}$0.26±.16; $M_{\theta\phi}$-0.48±.04; $M_{\phi r}$-0.86±.10; Best double couple: $M_0$1.30000×10^{16} NP1:ϕ_s341.00000°, δ67.00000°, λ-84.00000°. NP2:ϕ_s146.00000°, δ24.00000°, λ-105.00000°. Principal axes: T 1.3900, Plg22.0000°, Azm67.0000°; N -0.1800, Plg6.0000°, Azm159.0000°; P -1.2100, Plg67.0000°, Azm263.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **30** 12:07:02.1±2.2, 42°.84N±0°.04×13°.00E±0°.06, h10km±1km, mb4.7/61, ML4.6(VIE) Error ellipse: s-maj=8.9km s-min=6.3km az=227.0*
*LDG **30** 12:07:02.4±0.1, 42°.74N×13°.00E, h10km, Ml4.3/38, Error ellipse: s-maj=4.1km s-min=2.3km az=43.0*
*TIR **30** 12:07:03.0, 42°.65N×13°.20E, h12km±2km, Ml5.0*
ISC 30 12:07:01.7±0.6, **42°.83N**±0°.01×**13°.04E**±0°.01, **h9**km±3km, **n912**, σ1**9**75/1020, **mb4.6**/70, **MS3.9**/60, **71C-35D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**348**	⇓P	**Pg**	**12 07 02.8**	**-1.1**
T1216				S	**Sg**	**12 07 04.3**	**-1.1**
T1212	**Cascia, Frazio**	**0.08**	**176**	⇑P	**Pg**	**12 07 03.2**	**-0.8**
T1212				S	**Sg**	**12 07 05.1**	**-0.5**
T1213	**Norcia, Frazio**	**0.12**	**148**	⇑P	**Pg**	**12 07 03.5**	**-1.1**
T1213				S	**Sg**	**12 07 05.8**	**-0.8**
T1215	**Vallo di Nera,**	**0.13**	**258**	⇑P	**Pg**	**12 07 04.3**	**-0.4**
T1215				S	**Sg**	**12 07 07.4**	**+0.7**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
FEMA	**Monte Fema**	**0.13**	**4**	P	**Pg**	**12 07 03.7**	**-1.2**
FEMA				S	**Sg**	**12 07 06.0**	**-1.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1217	**Poggiodomo (PG**	**0.14**	**214**	⇑P	**Pg**	**12 07 04.4**	**-0.5**
T1217				S	**Sg**	**12 07 07.8**	**+0.7**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1214	**Arquata del Tr**	**0.14**	**119**	P	**Pg**	**12 07 03.7**	**-1.3**
T1218	**Civita (PG)**	**0.17**	**160**	P	**Pg**	**12 07 04.4**	**-1.0**
T1244	**Arquata del Tr**	**0.20**	**110**	⇑P	**Pg**	**12 07 04.8**	**-1.2**
T1244				S	**Sg**	**12 07 08.3**	**-0.6**
FDMO	**Fiordimonte**	**0.21**	**10**	⇓P	**Pg**	**12 07 05.0**	**-1.1**
FDMO				S	**Sg**	**12 07 08.2**	**-0.8**
MMO1	**Montemonaco**	**0.22**	**72**	⇑P	**Pg**	**12 07 04.8**	**-1.6**
MMO1				S	**Sg**	**12 07 08.1**	**-1.4**
T1256	**Bolognola (MC)**	**0.23**	**38**	⇑P	**Pg**	**12 07 04.9**	**-1.5**
T1256				S	**Sg**	**12 07 08.5**	**-1.1**
LNSS	**Leonessa**	**0.23**	**179**	⇓P	**Pg**	**12 07 05.7**	**-0.7**
LNSS				S	**Sg**	**12 07 10.3**	**+0.8**
T1219	**Muccia, Frazio**	**0.23**	**354**	P	**Pg**	**12 07 05.4**	**-1.1**
T1219				S	**Sg**	**12 07 09.0**	**-0.6**
T1201	**Domo (RI)**	**0.23**	**137**	P	**Pg**	**12 07 05.6**	**-0.9**
T1201				S	**Sg**	**12 07 09.8**	**+0.1**
T1204	**Amatrice, Fraz**	**0.26**	**127**	P	**Pg**	**12 07 05.8**	**-1.2**
T1204				S	**Sg**	**12 07 10.2**	**-0.3**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
AM05	**Amandola Campo**	**0.28**	**57**	⇑P	**Pg**	**12 07 05.8**	**-1.5**
AM05				S	**Sg**	**12 07 10.4**	**-0.6**
AM05				AML	AML		
	comp=N,65000μm,0.4s						
AM05				AML	AML		
	comp=N,42650μm,0.6s						
AM05				AML	AML		
	comp=E,68250μm,1.6s						
AM05				AML	AML		
	comp=N,64950μm,0.4s						
AM05				AML	AML		
T1220	**Camerino, Fraz**	**0.28**	**8**	P	**Pg**	**12 07 06.1**	**-1.3**
T1220				S	**Sg**	**12 07 11.0**	**-0.3**
CSP1	**Cessapalombo**	**0.29**	**25**	⇑P	**Pg**	**12 07 06.2**	**-1.5**
CSP1				S	**Sg**	**12 07 10.8**	**-0.8**
T1241	**Roccafluvione,**	**0.29**	**85**	P	**Pg**	**12 07 06.4**	**-1.1**
T1241				S	**Sg**	**12 07 10.8**	**-0.7**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
ARRO	**Arrone**	**0.32**	**219**	⇑P	**Pg**	**12 07 07.5**	**-0.6**
ARRO				S	**Sb**	**12 07 13.6**	**-1.2**
ARRO				AML	AML		
ARRO				AML	AML		
ARRO				AML	AML		
GUMA	**Gualdo di Mace**	**0.32**	**43**	⇑P	**Pg**	**12 07 06.9**	**-1.3**
GUMA				S	**Sg**	**12 07 11.8**	**-0.6**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SEF1	**Sefro**	**0.32**	**348**	P	**Pg**	**12 07 07.1**	**-1.2**
SEF1				S	**Sg**	**12 07 12.0**	**-0.6**
SEF1				AML	AML		
SEF1				AML	AML		
T1211	**Morro Reatino**	**0.33**	**204**	P	**Pg**	**12 07 07.5**	**-0.7**
T1211				S	**Sg**	**12 07 13.2**	**+0.7**
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
T1243	**Rocca Santa Ma**	**0.33**	**113**	P	**Pg**	**12 07 06.7**	**-1.6**
T1243				S	**Sg**	**12 07 11.9**	**-0.9**
RM33	**Pellescritta (**	**0.35**	**158**	⇑P	**Pg**	**12 07 07.4**	**-1.2**
RM33				S	**Sg**	**12 07 13.6**	**+0.4**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
ASSB	**Assisi San Ben**	**0.35**	**308**	⇑P	**Pg**	**12 07 07.8**	**-0.9**
ASSB				S	**Sg**	**12 07 13.7**	**+0.3**
PIO1	**Pioraco**	**0.35**	**354**	P	**Pg**	**12 07 07.5**	**-1.3**
PIO1				S	**Sg**	**12 07 13.3**	**-0.1**
PIO1				AML	AML		
	comp=E,98000μm,0.4s						
PIO1				AML	AML		
FIU1	**Fiuminata**	**0.37**	**348**	P	**Pg**	**12 07 08.0**	**-1.0**
FIU1				S	**Sg**	**12 07 13.8**	**-0.1**
FIU1				AML	AML		
FIU1				AML	AML		
MDAR	**Monte D'Aria**	**0.37**	**12**	P	**Pg**	**12 07 07.6**	**-1.5**
MDAR				S	**Sg**	**12 07 13.8**	**-0.3**
MDAR				AML	AML		
MDAR				AML	AML		
CAMP	**Campotosto**	**0.40**	**137**		**Pg**	**12 07 08.5**	**-1.2**
CAMP				Sg	**Sg**	**12 07 14.7**	**-0.3**
CAMP	**Campotosto**	**0.40**	**137**	P	**Pg**	**12 07 08.2**	**-1.5**
CAMP				S	**Sg**	**12 07 14.3**	**-0.6**
CAMP				AML	AML		
	comp=E,95300μm,1.0s						
CAMP				AML	AML		
	comp=N,62950μm,0.6s						
CESX	**Cesi**	**0.40**	**237**		**Pg**	**12 07 08.8**	**-0.8**
CESX				Sg	**Sg**	**12 07 15.4**	**+0.4**
CESX	**Cesi**	**0.40**	**237**	⇑P	**Pg**	**12 07 08.8**	**-0.8**
CESX				S	**Sb**	**12 07 16.0**	**-1.2**
CESX				AML	AML		
CESX				AML	AML		
	comp=N,64300μm,0.5s						
GAG1	**Gagliole**	**0.41**	**3**	P	**Pg**	**12 07 08.6**	**-1.2**
SSM1	**San Severino M**	**0.41**	**14**	P	**Pg**	**12 07 08.3**	**-1.5**
T1246	**Crognaleto (TE**	**0.42**	**126**	P	**Pg**	**12 07 08.3**	**-1.6**
T1246				S	**Sg**	**12 07 14.7**	**-0.7**
SNTG	**Esanatoglia**	**0.43**	**351**	P	**Pg**	**12 07 08.9**	**-1.3**
SNTG				S	**Sg**	**12 07 15.5**	**-0.4**
SNTG				AML	AML		
	comp=E,62000μm,0.6s						
SNTG				AML	AML		
	comp=N,52450μm,1.6s						
SNTG				AML	AML		
	comp=N,52550μm,0.5s						
SNTG				AML	AML		
	comp=E,59500μm,0.6s						
SNTG				AML	AML		
	comp=N,52450μm,1.6s						
SNTG				AML	AML		
	comp=E,62050μm,0.6s						
T1247	**Pizzolo (AQ)**	**0.43**	**153**	P	**Pg**	**12 07 08.9**	**-1.3**
T1247				S	**Sg**	**12 07 16.3**	**+0.4**
T1247				AML	AML		
T1247				AML	AML		
MNTP	**Montappone**	**0.44**	**46**	⇑P	**Pg**	**12 07 09.3**	**-1.1**
ATCC	**AVT- Casa Cast**	**0.46**	**321**	⇑P	**Pg**	**12 07 09.8**	**-1.0**
ATCC				S	**Sg**	**12 07 17.3**	**+0.5**
ATCC				AML	AML		
ATCC				AML	AML		
TERO	**Teramo**	**0.47**	**116**	P	**Pg**	**12 07 09.2**	**-1.6**
TERO				S	**Sg**	**12 07 16.4**	**-0.6**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
OFFI	**Offida**	**0.49**	**77**	⇑P	**Pg**	**12 07 10.3**	**-1.0**
OFFI				AML	AML		
OFFI				AML	AML		
EL6	**Elcito**	**0.50**	**5**	P	**Pg**	**12 07 10.0**	**-1.5**
FOSV	**Fossato di Vic**	**0.51**	**337**	P	**Pg**	**12 07 10.4**	**-1.2**
FOSV				S	**Sg**	**12 07 18.1**	**-0.2**
FOSV				AML	AML		
	comp=E,48550μm,0.9s						
FOSV				AML	AML		
	comp=N,67500μm,0.6s						
TRE1	**Treia**	**0.52**	**23**	P	**Pg**	**12 07 10.6**	**-1.3**
TRE1				AML	AML		
TRE1				AML	AML		
GIGS	**Gran Sasso**	**0.55**	**134**	P	**Pg**	**12 07 10.5**	**-1.8**
GIGS				S	**Sg**	**12 07 19.0**	**-0.5**
GIGS				AML	AML		
	comp=E,21250μm,0.5s						
GIGS				AML	AML		
	comp=N,15400μm,0.5s						
AQU	**L'Aquila**	**0.55**	**150**		**Pg**	**12 07 11.5**	**-0.8**
AQU	**L'Aquila**	**0.55**	**150**	P	**Pg**	**12 07 11.5**	**-0.8**
AQU	**L'Aquila**	**0.55**	**150**	P	**Pg**	**12 07 11.2**	**-1.1**
AQU				AML	AML		
	comp=N,53600μm,1.0s						
AQU				AML	AML		
	comp=E,59650μm,1.0s						
AQU				AML	AML		
	comp=N,52550μm,1.0s						
AQU				AML	AML		
	comp=E,59900μm,1.0s						
FIAM	**Fiamignano**	**0.56**	**174**	P	**Pg**	**12 07 11.6**	**-1.1**
FIAM				S	**Sg**	**12 07 20.5**	**+0.4**
FIAM				AML	AML		
	comp=E,63550μm,0.4s						
FIAM				AML	AML		
	comp=N,75300μm,0.4s						
MURB	**Monte Urbino**	**0.57**	**319**		**Pg**	**12 07 12.1**	**-0.8**
MURB	**Monte Urbino**	**0.57**	**319**	P	**Pg**	**12 07 11.8**	**-1.1**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MMUR	**Monte Murano**	**0.61**	**357**	P	**Pg**	**12 07 12.1**	**-1.5**
MMUR				S	**Sg**	**12 07 21.4**	**-0.3**
MMUR				AML	AML		
	comp=N,69450μm,0.6s						
MMUR				AML	AML		
ATTE	**AVT- Monte Tez**	**0.62**	**307**	P	**Pg**	**12 07 12.9**	**-0.9**
ATTE				AML	AML		
	comp=E,34050μm,0.8s						
ATTE				AML	AML		
	comp=N,30100μm,0.5s						
ATFO	**Monte Foce - G**	**0.64**	**328**	P	**Pg**	**12 07 12.7**	**-1.3**
ATFO				AML	AML		
	comp=E,41300μm,0.7s						
ATFO				AML	AML		
	comp=N,41550μm,0.8s						
CADA	**Capodarco di F**	**0.64**	**55**	P	**Pg**	**12 07 13.7**	**-0.5**
CADA				AML	AML		
CADA				AML	AML		
TRTR	**Tortoreto Alta**	**0.65**	**92**	P	**Pg**	**12 07 12.7**	**-1.5**
TRTR				AML	AML		
TRTR				AML	AML		
ATSC	**Scheggia e Pas**	**0.65**	**337**	P	**Pg**	**12 07 12.9**	**-1.3**
CIMA	**Civitanova Mar**	**0.67**	**44**	P	**Pg**	**12 07 13.5**	**-1.1**
ATLO	**AVT- Montelove**	**0.67**	**317**	P	**Pg**	**12 07 13.4**	**-1.3**
ATLO				S	**Sg**	**12 07 23.3**	**-0.2**
ARVD	**Arcevia**	**0.67**	**354**	P	**Pg**	**12 07 13.1**	**-1.7**
ARVD				AML	AML		
	comp=E,34900μm,0.9s						
ARVD				AML	AML		
	comp=N,31850μm,0.5s						
MGAB	**Montegabbione**	**0.69**	**277**	P	**Pg**	**12 07 14.1**	**-0.9**
MGAB				S	**Sg**	**12 07 23.9**	**0.0**
MGAB				AML	AML		
	comp=E,84300μm,1.0s						
MGAB				AML	AML		
	comp=E,78400μm,1.0s						
MGAB				AML	AML		
MGAB				AML	AML		

PP3	**Marolino**	**0.69**	**37**	P	**Pg**	**12 07 14.0**	**-1.1**
PP3				AML	AML		
	comp=E,83050µm,0.8s						
PP3				AML	AML		
	comp=E,80500µm,0.8s						
PP3				AML	AML		
PP3				AML	AML		
FAGN	**Fagnano**	**0.69**	**144**	P	**Pg**	**12 07 13.5**	**-1.6**
FAGN				AML	AML		
	comp=N,81850µm,0.6s						
FAGN				AML	AML		
TB01	**Gubbio**	**0.71**	**322**	P	**Pg**	**12 07 14.0**	**-1.4**
SRES	**S.Oreste - Sor**	**0.71**	**214**	P	**Pg**	**12 07 14.5**	**-0.9**
SRES				AML	AML		
	comp=E,61800µm,1.2s						
SRES				AML	AML		
	comp=N,64900µm,0.4s						
TB02	**Pietralunga**	**0.71**	**320**	P	**Pg**	**12 07 14.1**	**-1.4**
ATVA	**AVT- Monte Val**	**0.71**	**309**	P	**Pg**	**12 07 14.6**	**-0.9**
ATVO	**AVT- Monte Val**	**0.72**	**320**	P	**Pg**	**12 07 14.2**	**-1.4**
ATVO				S	**Sg**	**12 07 24.9**	**-0.1**
ATVO				AML	AML		
	comp=E,27700µm,0.6s						
ATVO				AML	AML		
	comp=N,32100µm,1.6s						
FRON	**Frontone**	**0.72**	**342**	P	**Pg**	**12 07 14.3**	**-1.4**
TB03	**Pietralunga**	**0.73**	**321**	P	**Pg**	**12 07 14.4**	**-1.5**
VCEL	**Villa Celiera**	**0.73**	**126**	P	**Pg**	**12 07 14.3**	**-1.6**
VCEL				AML	AML		
	comp=N,85150µm,0.6s						
VCEL				AML	AML		
	comp=E,63100µm,0.5s						
ATBU	**Serra di Buran**	**0.74**	**331**	P	**Pg**	**12 07 14.7**	**-1.3**
ATMI	**Monte Miggiano**	**0.76**	**312**	P	**Pg**	**12 07 15.9**	**-0.5**
ATMI				AML	AML		
	comp=E,73900µm,0.7s						
ATMI				AML	AML		
	comp=N,84050µm,0.8s						
ATPI	**Pietralunga -**	**0.78**	**323**	P	**Pg**	**12 07 15.5**	**-1.2**
ATPI				AML	AML		
	comp=N,22700µm,1.0s						
ATPI				AML	AML		
	comp=E,34200µm,0.6s						
ATPC	**Poggio Castell**	**0.78**	**327**	P	**Pg**	**12 07 15.5**	**-1.2**
PIEI	**Pieia**	**0.80**	**333**	P	**Pg**	**12 07 15.8**	**-1.3**
PIEI				AML	AML		
	comp=N,19000µm,0.8s						
PIEI				AML	AML		
	comp=E,19850µm,0.3s						
T0110	**Collepietro**	**0.81**	**137**	P	**Pg**	**12 07 15.5**	**-1.9**
T0110				AML	AML		
	comp=E,97700µm,0.8s						
T0110				AML	AML		
	comp=N,65850µm,0.7s						
MPAG	**Monte Paganucc**	**0.82**	**346**	P	**Pg**	**12 07 15.8**	**-1.9**
SACS	**San Casciano d**	**0.83**	**272**	P	**Pg**	**12 07 17.1**	**-0.7**
SACS				AML	AML		
	comp=E,37450µm,1.6s						
SACS				AML	AML		
	comp=E,37000µm,0.8s						
SACS				AML	AML		
	comp=N,38550µm,0.7s						
SACS				AML	AML		
	comp=N,38750µm,0.7s						
AOI	**Ancona**	**0.83**	**30**	P	**Pg**	**12 07 15.8**	**-1.9**
AOI				AML	AML		
	comp=N,26150µm,0.5s						
AOI				AML	AML		
	comp=E,22500µm,1.4s						
MTCE	**Montecelio**	**0.83**	**195**	P	**Pg**	**12 07 16.3**	**-1.5**
MTCE				AML	AML		
	comp=N,39200µm,1.2s						
MTCE				AML	AML		
	comp=E,52300µm,0.9s						
PTQR	**Pietraquaria**	**0.85**	**161**	P	**Pg**	**12 07 16.4**	**-1.7**
PTQR				AML	AML		
	comp=E,27350µm,1.0s						
PTQR				AML	AML		
	comp=N,23750µm,0.5s						
APEC	**Apecchio**	**0.86**	**328**	P	**Pg**	**12 07 17.4**	**-0.8**
APEC				AML	AML		
	comp=E,5230µm,0.8s						
APEC				AML	AML		
	comp=N,5190µm,0.5s						
PCRO	**Pietralacroce**	**0.86**	**25**	P	**Pg**	**12 07 17.2**	**-1.1**
ATMC	**Monte Cedrone**	**0.87**	**315**	P	**Pg**	**12 07 17.4**	**-1.2**
CERT	**Cerreto**	**0.88**	**183**	P	**Pg**	**12 07 17.2**	**-1.5**
CERT				AML	AML		
	comp=N,39400µm,0.4s						
CERT				AML	AML		
	comp=E,59500µm,0.5s						
FSSB	**Fossombrone**	**0.88**	**348**	P	**Pg**	**12 07 16.8**	**-1.9**
FSSB				AML	AML		
	comp=E,75950µm,0.4s						
FSSB				AML	AML		
	comp=N,74700µm,0.4s						
SENI	**Senigallia**	**0.89**	**9**	P	**Pg**	**12 07 17.4**	**-1.4**
SENI				AML	AML		
SENI				AML	AML		
	comp=E,49800µm,0.8s						
SENI				AML	AML		
	comp=N,37850µm,1.0s						
SENI				AML	AML		
CAFI	**Castiglion Fio**	**0.93**	**303**	P	**Pg**	**12 07 18.4**	**-1.2**
CAFI				AML	AML		
	comp=E,15600µm,0.6s						
CAFI				AML	AML		
	comp=N,25350µm,0.8s						
CAFI				AML	AML		
	comp=N,26400µm,0.8s						
CAFI				AML	AML		
	comp=E,15400µm,0.6s						
LATE	**Laterza**	**0.93**	**257**		**Pg**	**12 07 18.9**	**-0.8**
LATE	**Laterza**	**0.93**	**257**	P	**Pg**	**12 07 18.7**	**-1.0**
PE3	**Peglio**	**0.95**	**336**	P	**Pg**	**12 07 18.8**	**-1.2**
PE3				AML	AML		
	comp=N,155µm,1.1s						
PE3				AML	AML		
	comp=E,172µm,0.3s						
RCAV	**Rocca di Cave**	**0.98**	**184**	P	**Pg**	**12 07 18.4**	**-2.2**
RCAV				AML	AML		
	comp=N,54800µm,1.3s						
RCAV				AML	AML		
	comp=E,49250µm,1.4s						
SSP9	**Sansepolcro**	**1.00**	**319**	P	**Pg**	**12 07 19.7**	**-1.2**
SSP9				AML	AML		
	comp=E,15600µm,1.6s						
SSP9				AML	AML		
	comp=N,23550µm,0.6s						
SF11	**Podere del Sol**	**1.00**	**273**	P	**Pg**	**12 07 20.3**	**-0.7**
MCIV	**Monte Civitell**	**1.00**	**268**	P	**Pg**	**12 07 20.1**	**-0.9**
MCIV				AML	AML		
	comp=E,17500µm,0.7s						
MCIV				AML	AML		
	comp=N,12350µm,0.8s						
SF04	**Casetta**	**1.01**	**271**	AML	AML		
	comp=E,17050µm,0.5s						
SF04				AML	AML		
	comp=N,19800µm,1.6s						
SF13	**Bagnolo**	**1.04**	**270**	P	**Pg**	**12 07 20.7**	**-1.1**
RMP	**Rome, Mte Porz**	**1.05**	**194**	P	**Pg**	**12 07 20.3**	**-1.6**
RMP				AML	AML		
	comp=N,65650µm,1.6s						
RMP				AML	AML		
	comp=E,46900µm,0.6s						
SF14	**Selvena**	**1.05**	**266**	P	**Pg**	**12 07 20.9**	**-1.1**
VVLD	**Villa Vallelon**	**1.05**	**155**	P	**Pg**	**12 07 20.1**	**-1.8**
VVLD				AML	AML		
	comp=E,25300µm,0.5s						
VVLD				AML	AML		
	comp=N,27050µm,0.5s						
GUAR	**Guarcino**	**1.05**	**169**	P	**Pg**	**12 07 19.8**	**-2.1**
GUAR				AML	AML		
	comp=E,40500µm,0.7s						
GUAR				AML	AML		
	comp=N,36600µm,1.6s						
TOLF	**Tolfa**	**1.08**	**225**	P	**Pg**	**12 07 20.9**	**-1.6**
TOLF				AML	AML		
	comp=N,22900µm,1.0s						
TOLF				AML	AML		
	comp=E,28250µm,1.2s						
SF01	**Poggio Pratacc**	**1.08**	**270**	AML	AML		
	comp=N,25350µm,0.8s						
SF01				AML	AML		
	comp=E,30300µm,0.7s						
MA9	**Marino**	**1.09**	**195**	P	**Pg**	**12 07 21.5**	**-1.2**

RDP	**Rocca di Papa**	**1.10**	**193**	P	**Pg**	**12 07 21.1**	**-1.7**
RDP				AML	AML		
RDP				AML	AML		
	comp=N,98050µm,0.6s						
VIVA	**Pratoni del Vi**	**1.10**	**191**	P	**Pg**	**12 07 21.6**	**-1.2**
SAMA	**S.Maria delle**	**1.10**	**198**	P	**Pg**	**12 07 21.2**	**-1.6**
CRE	**Caprese Michel**	**1.12**	**315**	P	**Pg**	**12 07 21.8**	**-1.5**
CRE				AML	AML		
	comp=E,9510µm,0.6s						
CRE				AML	AML		
	comp=N,9870µm,0.8s						
CAFR	**Castel Frentan**	**1.14**	**121**	P	**Pb**	**12 07 21.8**	**-1.8**
CAFR				AML	AML		
	comp=N,23050µm,0.6s						
CAFR				AML	AML		
	comp=E,22850µm,0.7s						
ARCI	**Arcidosso**	**1.15**	**272**	P	**Pb**	**12 07 22.7**	**-1.1**
ARCI				AML	AML		
	comp=E,6445µm,1.0s						
ARCI				AML	AML		
	comp=N,5770µm,1.5s						
LPEL	**Lama dei Pelig**	**1.15**	**132**	P	**Pb**	**12 07 21.6**	**-2.3**
LPEL				AML	AML		
	comp=E,35000µm,1.0s						
LPEL				AML	AML		
	comp=N,26450µm,0.6s						
LAV9	**Lanuvio**	**1.18**	**192**	P	**Pb**	**12 07 22.6**	**-1.6**
LAV9				AML	AML		
	comp=N,54000µm,1.1s						
LAV9				AML	AML		
	comp=N,57900µm,1.1s						
LAV9				AML	AML		
	comp=E,61900µm,1.0s						
LAV9				AML	AML		
	comp=E,64900µm,1.0s						
POFI	**Posta Fibreno**	**1.22**	**156**	P	**Pn**	**12 07 23.8**	**-1.2**
POFI				AML	AML		
	comp=N,13550µm,0.7s						
POFI				AML	AML		
	comp=E,15500µm,1.0s						
POFI				AML	AML		
	comp=N,14300µm,0.7s						
POFI				AML	AML		
	comp=E,15300µm,1.0s						
LRP	**Arpino**	**1.25**	**161**	P	**Pn**	**12 07 23.5**	**-1.9**
LRP				AML	AML		
	comp=E,11700µm,1.6s						
LRP				AML	AML		
	comp=N,15450µm,0.4s						
GIUL	**Giuliano Di Ro**	**1.28**	**173**	P	**Pn**	**12 07 24.1**	**-1.7**
GIUL				AML	AML		
	comp=E,15650µm,0.6s						
GIUL				AML	AML		
	comp=N,18800µm,0.7s						
ASQU	**Asqua**	**1.33**	**317**	P	**Pn**	**12 07 24.6**	**-1.9**
ASQU				AML	AML		
	comp=E,7775µm,1.0s						
ASQU				AML	AML		
	comp=N,11250µm,0.6s						
LATB	**Latina**	**1.33**	**182**	P	**Pn**	**12 07 24.7**	**-1.8**
LATB				AML	AML		
	comp=N,6090µm,1.1s						
LATB				AML	AML		
	comp=E,6135µm,1.1s						
BLLA	**Bellaria**	**1.38**	**343**	P	**Pn**	**12 07 26.0**	**-1.1**
LIK	**San Giovanni I**	**1.38**	**164**	P	**Pn**	**12 07 26.5**	**-0.6**
LIK				AML	AML		
	comp=E,28450µm,0.5s						
LIK				AML	AML		
	comp=N,28650µm,1.0s						
SFI	**Santa Sofia**	**1.38**	**321**	P	**Pn**	**12 07 26.1**	**-1.2**
SFI				AML	AML		
	comp=E,6275µm,1.0s						
SFI				AML	AML		
	comp=E,6420µm,1.1s						
SFI				AML	AML		
	comp=N,8150µm,1.0s						
SFI				AML	AML		
	comp=N,8065µm,1.0s						
RNI2	**Rionero Sannit**	**1.40**	**143**	P	**Pn**	**12 07 26.3**	**-1.2**
RNI2				AML	AML		
	comp=E,19100µm,0.7s						
RNI2				AML	AML		
	comp=N,21800µm,0.8s						
RNI2				AML	AML		
	comp=E,19550µm,0.7s						
RNI2				AML	AML		
	comp=N,22450µm,0.8s						
CERA	**Filignano**	**1.43**	**149**	P	**Pn**	**12 07 27.4**	**-0.5**
CERA				AML	AML		
	comp=E,23850µm,0.8s						
CERA				AML	AML		
	comp=N,18500µm,0.6s						
CERA				AML	AML		
	comp=E,23750µm,0.9s						
CERA				AML	AML		
	comp=N,19100µm,0.6s						
CSNT	**Castellina Chi**	**1.43**	**297**	P	**Pn**	**12 07 26.7**	**-1.2**
CSNT				AML	AML		
	comp=E,4555µm,0.7s						
CSNT				AML	AML		
	comp=N,5175µm,0.8s						
FROS	**Frosini**	**1.43**	**286**	P	**Pn**	**12 07 26.8**	**-1.1**
FROS				AML	AML		
	comp=E,9235µm,0.6s						
FROS				AML	AML		
	comp=N,7675µm,0.7s						
A309A	**Martorano (FC)**	**1.46**	**337**	P	**Pn**	**12 07 27.1**	**-1.1**
MAON	**Monte Argentar**	**1.46**	**255**	P	**Pn**	**12 07 27.0**	**-1.3**
OSSC	**Osservatorio P**	**1.48**	**299**	Pn	**Pn**	**12 07 27.3**	**-1.3**
OSSC	**Osservatorio P**	**1.48**	**299**	P	**Pn**	**12 07 27.4**	**-1.2**
RUFI	**Rufina**	**1.50**	**313**	P	**Pn**	**12 07 27.7**	**-1.1**
RUFI				AML	AML		
	comp=E,7245µm,0.7s						
RUFI				AML	AML		
	comp=N,7245µm,0.6s						
TRIV	**Trivento**	**1.54**	**133**	P	**Pn**	**12 07 28.4**	**-1.0**
TRIV				AML	AML		
	comp=E,13800µm,0.9s						
TRIV				AML	AML		
	comp=N,13450µm,0.8s						
LMD	**Lutirano**	**1.58**	**323**	P	**Pn**	**12 07 29.6**	**-0.3**
TRIF	**Trifonti**	**1.59**	**281**	P	**Pn**	**12 07 28.9**	**-1.2**
TRIF				AML	AML		
	comp=E,4325µm,0.7s						
TRIF				AML	AML		
	comp=N,4430µm,0.7s						
CASP	**Castiglione de**	**1.60**	**269**	Pn	**Pn**	**12 07 28.7**	**-1.5**
CASP	**Castiglione de**	**1.60**	**269**	P	**Pn**	**12 07 29.1**	**-1.0**
CASP				AML	AML		
	comp=E,2115µm,0.8s						
CASP				AML	AML		
	comp=N,2230µm,1.0s						
BRSN	**Barisano**	**1.61**	**335**	P	**Pn**	**12 07 29.1**	**-1.2**
BRIS	**BRISIGHELLA**	**1.73**	**320**	P	**Pn**	**12 07 30.5**	**-1.4**
BRIS				AML	AML		
	comp=E,9940µm,0.8s						
BRIS				AML	AML		
	comp=N,10385µm,1.0s						
BRIS				AML	AML		
	comp=E,9955µm,0.8s						
BRIS				AML	AML		
	comp=N,10330µm,0.9s						
BSSO	**Busso**	**1.73**	**137**	P	**Pn**	**12 07 31.5**	**-0.5**
BSSO				AML	AML		
	comp=E,8140µm,1.0s						
BSSO				AML	AML		
	comp=N,9505µm,1.6s						
SEI	**Scarperia**	**1.73**	**316**	P	**Pn**	**12 07 31.2**	**-0.9**
CRMI	**Carmignano**	**1.79**	**303**	P	**Pn**	**12 07 31.8**	**-1.0**
MODR	**Mondragone**	**1.79**	**159**	P	**Pn**	**12 07 32.5**	**-0.3**
MODR				AML	AML		
	comp=E,5785µm,1.0s						
MODR				AML	AML		
	comp=N,4320µm,0.8s						
MPPT	**Montemurlo**	**1.81**	**309**	P	**Pn**	**12 07 32.0**	**-1.2**
CIGN	**Sant'Elia a Pi**	**1.82**	**130**	AML	AML		
	comp=E,6385µm,0.9s						
CIGN				AML	AML		
	comp=N,7335µm,0.7s						
A318A	**Donoratico (LI**	**1.83**	**280**	P	**Pn**	**12 07 32.5**	**-0.8**
PIGN	**Pignataro Magg**	**1.84**	**152**	P	**Pn**	**12 07 33.1**	**-0.3**
PIGN				AML	AML		
	comp=E,3830µm,1.3s						
PIGN				AML	AML		
	comp=N,4575µm,1.1s						

PIGN				AML	AML		
	comp=E,3740µm,1.2s						
PIGN				AML	AML		
	comp=N,5080µm,1.1s						
MTCR	**Monte La Croce**	**1.91**	**310**	P	**Pn**	**12 07 33.1**	**-1.4**
MTCR				AML	AML		
	comp=E,3770µm,0.9s						
MTCR				AML	AML		
	comp=N,7255µm,0.9s						
A319A	**Santa Luce (PI**	**1.91**	**291**	P	**Pn**	**12 07 33.6**	**-0.8**
MELA	**Melanico ??? S**	**1.92**	**125**	P	**Pn**	**12 07 34.2**	**-0.3**
MELA				AML	AML		
	comp=E,19750µm,0.7s						
MELA				AML	AML		
	comp=N,20300µm,0.6s						
MELA				AML	AML		
	comp=E,20450µm,0.7s						
MELA				AML	AML		
	comp=N,20900µm,0.6s						
FNVD	**Fontana Vidola**	**1.93**	**315**	P	**Pn**	**12 07 33.2**	**-1.6**
TREM	**Isole Tremiti**	**1.96**	**110**	P	**Pn**	**12 07 34.4**	**-0.7**
TREM				AML	AML		
	comp=E,17350µm,0.7s						
TREM				AML	AML		
	comp=N,22700µm,0.7s						
PII	**Pisa**	**2.04**	**297**	P	**Pn**	**12 07 35.5**	**-0.7**
PII				AML	AML		
	comp=E,2105µm,1.0s						
PII				AML	AML		
	comp=N,2900µm,0.6s						
POPM	**Popiglio**	**2.06**	**307**	P	**Pn**	**12 07 35.2**	**-1.3**
POPM				AML	AML		
	comp=E,2450µm,0.9s						
POPM				AML	AML		
	comp=N,2555µm,0.7s						
PSB1	**Pescosannita**	**2.08**	**140**	AML	AML		
	comp=N,5570µm,1.1s						
PSB1				AML	AML		
	comp=E,5995µm,1.0s						
PSB1				AML	AML		
	comp=E,6290µm,1.0s						
PSB1				AML	AML		
	comp=N,5620µm,1.0s						
CELB	**S.Piero in Cam**	**2.08**	**269**	P	**Pn**	**12 07 35.4**	**-1.4**
CELB				AML	AML		
	comp=E,1350µm,0.6s						
CELB				AML	AML		
	comp=N,1040µm,1.6s						
PAOL	**Paolisi**	**2.13**	**147**		**Pn**	**12 07 37.8**	**+0.3**
PAOL	**Paolisi**	**2.13**	**147**	P	**Pn**	**12 07 37.4**	**-0.1**
PAOL				AML	AML		
	comp=E,2845µm,1.6s						
PAOL				AML	AML		
	comp=N,2910µm,1.0s						
PAOL				AML	AML		
	comp=E,3000µm,1.6s						
PAOL				AML	AML		
	comp=N,3100µm,1.0s						
ZCCA	**Zocca**	**2.13**	**316**		**Pn**	**12 07 37.3**	**-0.2**
APRC	**Apricena**	**2.15**	**119**	P	**Pn**	**12 07 37.4**	**-0.4**
APRC				AML	AML		
	comp=E,7165µm,1.2s						
APRC				AML	AML		
	comp=N,8915µm,0.6s						
MOCO	**Biccari - m.te**	**2.15**	**132**	AML	AML		
	comp=N,2560µm,1.1s						
MOCO				AML	AML		
	comp=E,4675µm,0.9s						
MOCO				AML	AML		
	comp=E,4775µm,0.9s						
MOCO				AML	AML		
	comp=N,2790µm,1.2s						
MAIM	**Mastiano**	**2.15**	**301**	P	**Pn**	**12 07 36.2**	**-1.5**
MAIM				AML	AML		
	comp=E,2130µm,0.6s						
MAIM				AML	AML		
	comp=N,2215µm,0.5s						
BDI	**Bagni Di Lucca**	**2.16**	**306**	P	**Pn**	**12 07 36.8**	**-1.2**
BDI				AML	AML		
	comp=E,2370µm,0.7s						
BDI				AML	AML		
	comp=N,2330µm,1.2s						
BDI				AML	AML		
	comp=E,954µm,1.2s						
BDI				AML	AML		
	comp=N,878µm,1.2s						
CARD	**Cardoso**	**2.21**	**304**	P	**Pn**	**12 07 37.3**	**-1.3**
SGRT	**San Giovanni R**	**2.28**	**117**	Pn	**Pn**	**12 07 39.7**	**+0.1**
SGRT	**San Giovanni R**	**2.28**	**117**	P	**Pn**	**12 07 39.2**	**-0.4**
SGRT	baz=114			S	**Sn**	**12 08 07.2**	**-0.6**
SGRT	baz=114			AMP			
	comp=N,28nm,0.8s,baz=114						
SGRT	**San Giovanni R**	**2.28**	**117**	P	**Pn**	**12 07 39.0**	**-0.5**
SGRT				AML	AML		
	comp=E,6955µm,1.4s						
SGRT				AML	AML		
	comp=N,8815µm,0.9s						
GSCL	**Gusciola**	**2.34**	**311**	P	**Pn**	**12 07 40.0**	**-0.4**
GSCL				AML	AML		
	comp=E,3715µm,1.6s						
GSCL				AML	AML		
	comp=N,2950µm,0.6s						
VLC	**Villacollemand**	**2.34**	**305**		**Pn**	**12 07 38.7**	**-1.6**
VLC	**Villacollemand**	**2.34**	**305**	P	**Pn**	**12 07 38.8**	**-1.6**
VLC				AML	AML		
	comp=E,1550µm,1.6s						
VLC				AML	AML		
	comp=N,1460µm,1.2s						
VLC				AML	AML		
	comp=E,1500µm,1.6s						
VLC				AML	AML		
	comp=N,1420µm,1.2s						
GROG	**Isola di Gorgo**	**2.38**	**286**	P	**Pn**	**12 07 39.9**	**-0.9**
SGTA	**Sant Agata di**	**2.42**	**134**	AML	AML		
	comp=N,4140µm,0.8s						
SGTA				AML	AML		
	comp=E,5220µm,0.8s						
SGTA				AML	AML		
	comp=N,4125µm,0.8s						
SGTA				AML	AML		
	comp=E,5325µm,0.8s						
CAFE	**Carife**	**2.44**	**137**	P	**Pn**	**12 07 41.3**	**-0.5**
CAFE				AML	AML		
	comp=E,4580µm,1.6s						
CAFE				AML	AML		
	comp=N,3790µm,1.2s						
CAFE				AML	AML		
	comp=E,4690µm,1.6s						
CAFE				AML	AML		
	comp=N,3775µm,1.1s						
EQUI	**Equi**	**2.49**	**303**	P	**Pn**	**12 07 41.3**	**-1.1**
EQUI				AML	AML		
	comp=E,1150µm,1.0s						
EQUI				AML	AML		
	comp=N,1445µm,0.5s						
PLMA	**Palmaria, Port**	**2.62**	**299**	P	**Pn**	**12 07 43.6**	**-0.6**
PLMA				AML	AML		
	comp=E,863µm,0.8s						
PLMA				AML	AML		
	comp=N,790µm,0.5s						
CAPA	**Cerignola FG**	**2.66**	**128**	P	**Pn**	**12 07 44.8**	**0.0**
CAPA				AML	AML		
	comp=E,9285µm,0.9s						
CAPA				AML	AML		
	comp=N,12450µm,1.1s						
VULT	**Monte Vulture**	**2.69**	**133**	AML	AML		
	comp=E,4005µm,1.2s						
VULT				AML	AML		
	comp=E,3940µm,1.2s						
VULT				AML	AML		
	comp=N,5410µm,0.7s						
VULT				AML	AML		
	comp=N,5610µm,0.7s						
MORSI	**Morsiglia**	**2.70**	**274**	P	**Pn**	**12 07 45.3**	**0.0**
RIY	**Rijeka**	**2.70**	**22**	*e*Pn	**Pn**	**12 07 44.2**	**-1.1**
RIY				*e*Sn	**Sn**	**12 08 18.4**	**+0.2**
TEOL	**Teolo**	**2.71**	**339**		**Pn**	**12 07 45.7**	**+0.2**
GRAM	**Graiana**	**2.72**	**309**	P	**Pn**	**12 07 45.4**	**-0.3**
GRAM				AML	AML		
	comp=E,2015µm,1.2s						
GRAM				AML	AML		
	comp=N,2810µm,1.0s						
PRMA	**PARMA**	**2.76**	**315**		**Pn**	**12 07 44.3**	**-1.8**
SKDS	**Skadanscina**	**2.81**	**14** ⇑	*i*Pn	**Pn**	**12 07 45.1**	**-1.7**
SKDS				*i* Sn	**Sn**	**12 08 20.0**	**-0.8**

SKDS			IAML			12 08 44.7
	comp=Z,1μm,0.7s					
OPPE	**Oppeano**	**2.82 332**	P	**Pn**		**12 07 47.2 +0.3**
OPPE			AML	AML		
	comp=E,4865μm,0.9s					
OPPE			AML	AML		
	comp=N,4890μm,0.8s					
SMPL	**Sampolo**	**2.87 256**	AML	AML		
	comp=E,269μm,0.7s					
SMPL			AML	AML		
	comp=N,300μm,0.9s					
PALZ	**Palazzo San Ge**	**2.88 130**	P	**Pn**		**12 07 47.8 -0.1**
CDRU	**Civita di Ruta**	**2.89 143**	AML	AML		
	comp=E,1050μm,1.3s					
CDRU			AML	AML		
	comp=N,728μm,1.5s					
MRVN	**Minervino Murg**	**2.94 126**	P	**Pn**		**12 07 48.3 -0.4**
MRVN			AML	AML		
	comp=E,2000μm,0.9s					
MRVN			AML	AML		
	comp=N,1515μm,0.8s					
MSSA	**Maissana**	**2.96 301**	Pn	**Pn**		**12 07 48.5 -0.4**
MSSA	**Maissana**	**2.96 301**	P	**Pn**		**12 07 47.7 -1.2**
MSSA			AML	AML		
	comp=E,828μm,0.7s					
MSSA			AML	AML		
	comp=N,1105μm,1.1s					
PGF	**Pioggiola**	**2.99 266**	*e*Pn	**Pn**		**12 07 49.3 -0.1**
PGF	**Pioggiola**	**2.99 266**	*e*P	**Pn**		**12 07 50.5 +1.1**
PGF			*e*Sn	**Sn**		**12 08 21.9 -3.5**
	comp=N,337nm,0.8s					
PGF	**Pioggiola**	**2.99 266**	AML	AML		
	comp=N,308μm,0.7s					
PGF			AML	AML		
	comp=E,410μm,1.4s					
PGF	**Pioggiola**	**2.99 266**	P	**Pn**		**12 07 49.4 0.0**
CMPR	**Campora**	**3.03 145**	AML	AML		
	comp=E,1076μm,1.0s					
CMPR			AML	AML		
	comp=N,600μm,1.2s					
CEY	**Cerknica**	**3.08 18**	*e*Pn	**Pn**		**12 07 48.9 -1.6**
ROVR	**Rover Verones**	**3.15 334**	P	**Pn**		**12 07 51.2 -0.5**
ROVR			AML	AML		
	comp=E,1970μm,0.9s					
ROVR			AML	AML		
	comp=N,2735μm,0.7s					
ROVR			AML	AML		
	comp=E,786μm,0.9s					
ROVR			AML	AML		
	comp=N,1045μm,0.7s					
SABO	**M.te Sabotino**	**3.18 7**	P	**Pn**		**12 07 50.5 -1.4**
SABO			AML	AML		
	comp=E,14250μm,0.6s					
SABO			AML	AML		
	comp=N,18900μm,0.6s					
SABO			AML	AML		
	comp=E,3245μm,0.7s					
SABO			AML	AML		
	comp=N,4750μm,0.8s					
CGRP	**Cima Grappa**	**3.18 344**	P	**Pn**		**12 07 51.6 -0.4**
CGRP			AML	AML		
	comp=E,4195μm,0.7s					
CGRP			AML	AML		
	comp=N,3640μm,0.5s					
CGRP			AML	AML		
	comp=E,4265μm,0.7s					
CGRP			AML	AML		
	comp=N,3700μm,0.7s					
VARN	**Col Varnada, M**	**3.23 348**	P	**Pn**		**12 07 51.8 -0.9**
VARN			AML	AML		
	comp=E,4665μm,1.0s					
VARN			AML	AML		
	comp=N,3720μm,1.0s					
VARN			AML	AML		
	comp=E,4660μm,1.0s					
VARN			AML	AML		
	comp=N,3675μm,1.0s					
GORR	**Gorreto**	**3.24 304**	P	**Pn**		**12 07 53.1 +0.3**
SRKY	**Kupres RS**	**3.25 66**	*e*Pn	**Pn**		**12 07 53.0 0.0**
MTSN	**Montesano sull**	**3.27 141**	P	**Pn**		**12 07 52.8 -0.5**
MTSN			AML	AML		
	comp=E,1322μm,1.0s					
MTSN			AML	AML		
	comp=N,1120μm,0.9s					
AMUR	**Altamura**	**3.28 125**	P	**Pn**		**12 07 53.0 -0.3**
AMUR			AML	AML		
	comp=E,2025μm,0.5s					
AMUR			AML	AML		
	comp=N,1740μm,0.6s					
AJAC	**Base Areonaval**	**3.29 256**	AML	AML		
	comp=N,492μm,0.7s					
AJAC			AML	AML		
	comp=E,507μm,0.9s					
SALO	**Salr**	**3.32 328**	Pn	**Pn**		**12 07 54.5 +0.7**
SALO	**Salr**	**3.32 328**	P	**Pn**		**12 07 54.1 +0.2**
SALO			AML	AML		
	comp=E,2490μm,1.0s					
SALO			AML	AML		
	comp=N,3205μm,0.5s					
SALO			AML	AML		
	comp=E,2660μm,1.0s					
SALO			AML	AML		
	comp=N,3150μm,0.5s					
MGRS	**Mrkonjic Grad**	**3.34 60**	*e*Pn	**Pn**		**12 07 54.3 +0.2**
CTI	**Castel Tesino**	**3.37 343**		**Pn**		**12 07 55.3 +0.7**
CTI	**Castel Tesino**	**3.37 343**	P	**Pn**		**12 07 55.3 +0.7**
CTI	**Castel Tesino**	**3.37 343**	P	**Pn**		**12 07 54.3 -0.3**
CTI			AML	AML		
	comp=E,2000μm,0.7s					
CTI			AML	AML		
	comp=N,2135μm,0.3s					
LJU	**Ljubljana**	**3.39 18**	⇑*i*Pn	**Pn**		**12 07 54.0 -0.8**
LJU	**Ljubljana**	**3.39 18**	AML	AML		
	comp=E,11290μm,0.8s					
LJU			AML	AML		
	comp=N,16150μm,0.5s					
RNCA	**Ronca, Sant'Ol**	**3.39 300**	P	**Pn**		**12 07 54.6 -0.2**
RNCA			AML	AML		
	comp=E,238μm,1.3s					
RNCA			AML	AML		
	comp=N,276μm,1.1s					
SIRI	**Monte Sirino -**	**3.39 140**	P	**Pn**		**12 07 55.1 +0.2**
SIRI			AML	AML		
	comp=E,778μm,1.3s					
SIRI			AML	AML		
	comp=N,956μm,0.7s					
MPRI	**Monte Prat**	**3.41 359**	P	**Pn**		**12 07 54.2 -0.9**
MPRI			AML	AML		
	comp=E,2425μm,0.6s					
MPRI			AML	AML		
	comp=N,2865μm,0.7s					
MPRI			AML	AML		
	comp=E,3165μm,0.6s					
MPRI			AML	AML		
	comp=N,3725μm,0.8s					
PRIJ	**Prijedor**	**3.42 50**	*e*Pn	**Pn**		**12 07 55.8 +0.7**
STON	**Ston**	**3.43 88**	*e*Pn	**Pn**		**12 07 53.0 -2.3**
STON	**Ston**	**3.43 88**	*e*Pn	**Pn**		**12 07 54.1 -1.2**
STON			*e*Sn	**Sn**		**12 08 37.2 +1.2**
STON	**Ston**	**3.43 88**	AML	AML		
	comp=E,918μm,0.7s					
STON			AML	AML		
	comp=N,1102μm,1.4s					
CADS	**Cadrg**	**3.44 8**	⇑*i*Pn	**Pn**		**12 07 54.0 -1.5**
STAL	**STALIGIAL**	**3.44 356**		**Pn**		**12 07 54.4 -1.1**
STAL	**STALIGIAL**	**3.44 356**	P	**Pn**		**12 07 54.1 -1.4**
STAL			AML	AML		
	comp=E,2865μm,0.8s					
STAL			AML	AML		
	comp=N,1960μm,0.3s					
STAL			AML	AML		
	comp=E,3625μm,0.8s					
STAL			AML	AML		
	comp=N,1960μm,1.3s					
LUSI	**Trento, Gardas**	**3.47 335**	P	**Pn**		**12 07 55.5 -0.4**
LUSI			AML	AML		
	comp=E,1605μm,0.6s					
LUSI			AML	AML		
	comp=N,2280μm,0.9s					
MATE	**Matera**	**3.50 127**	⇓P	**Pn**		**12 07 56.6 +0.3**
MATE	**Matera**	**3.50 127**	P	**Pn**		**12 07 55.9 -0.4**
MATE			AML	AML		
	comp=E,2345μm,0.9s					
MATE			AML	AML		
	comp=N,2075μm,0.9s					
CIMO	**Cimolais**	**3.51 353**	P	**Pn**		**12 07 55.1 -1.3**
CIMO			AML	AML		
	comp=E,980μm,0.9s					
CIMO			AML	AML		
	comp=N,859μm,0.7s					
CIMO			AML	AML		
	comp=E,955μm,0.9s					
CIMO			AML	AML		
	comp=N,842μm,0.7s					
CUC	**Castrocucco**	**3.52 143**		**Pn**		**12 07 58.8 +2.1**
CUC	**Castrocucco**	**3.52 143**	P	**Pn**		**12 07 57.7 +1.1**
CUC			AML	AML		
	comp=E,742μm,1.0s					
CUC			AML	AML		
	comp=N,722μm,1.2s					
CUC			AML	AML		
	comp=E,926μm,0.9s					
CUC			AML	AML		
	comp=N,872μm,1.2s					
AGOR	**Agordo**	**3.52 349**	P	**Pn**		**12 07 56.1 -0.6**
AGOR			AML	AML		
	comp=E,1010μm,0.9s					
AGOR			AML	AML		
	comp=N,1310μm,1.1s					
AGOR			AML	AML		
	comp=E,863μm,0.6s					
AGOR			AML	AML		
	comp=N,1065μm,1.1s					
A051A	**Mrakovica**	**3.55 51**	*e*Pn	**Pn**		**12 07 57.0 0.0**
BLY	**Banja Luka**	**3.56 56**	*e*Pn	**Pn**		**12 07 57.1 -0.1**
BLY	**Banja Luka**	**3.56 56**	*e*Pn	**Pn**		**12 07 57.8 +0.6**
BLY			*e*Sn	**Sn**		**12 08 40.8 +1.4**
BLY	**Banja Luka**	**3.56 56**	AML	AML		
	comp=E,2490μm,0.9s					
BLY			AML	AML		
	comp=E,2475μm,0.9s					
BLY			AML	AML		
	comp=N,2345μm,1.0s					
BLY			AML	AML		
	comp=N,2350μm,1.0s					
GAGG	**Gaggia**	**3.58 336**	P	**Pn**		**12 07 57.3 -0.2**
GAGG			AML	AML		
	comp=E,1695μm,0.9s					
GAGG			AML	AML		
	comp=N,3170μm,1.0s					
GAGG			AML	AML		
	comp=E,3235μm,1.0s					
GAGG			AML	AML		
	comp=N,1720μm,0.9s					
PTCC	**Patocco-Chiusa**	**3.58 4**	P	**Pn**		**12 07 56.0 -1.5**
PTCC			AML	AML		
	comp=E,1048μm,0.4s					
PTCC			AML	AML		
	comp=N,1132μm,1.0s					
LTRZ	**Laterza**	**3.60 127**	P	**Pn**		**12 07 57.5 -0.2**
ZONE	**Zone**	**3.61 325**	P	**Pn**		**12 07 57.7 -0.1**
ZONE			AML	AML		
	comp=E,1118μm,0.9s					
ZONE			AML	AML		
	comp=N,1130μm,0.6s					
CLUD	**Cludinico**	**3.63 358**		**Pn**		**12 07 57.3 -0.8**
CLUD	**Cludinico**	**3.63 358**	P	**Pn**		**12 07 56.6 -1.5**
CLUD			AML	AML		
	comp=E,1960μm,1.1s					
CLUD			AML	AML		
	comp=N,1755μm,0.8s					
CLUD			AML	AML		
	comp=E,1960μm,1.1s					
CLUD			AML	AML		
	comp=N,1745μm,0.8s					
PRED	**Cave del Predi**	**3.63 6**		**Pn**		**12 07 57.6 -0.6**
NOCI	**Noci**	**3.63 123**	P	**Pn**		**12 07 58.0 -0.2**
	baz=121					
NOCI			S	**Sn**		**12 08 39.2 -2.0**
	baz=121					
NOCI	**Noci**	**3.63 123**	P	**Pn**		**12 07 57.2 -0.9**
NOCI			AML	AML		
	comp=E,2065μm,1.1s					
NOCI			AML	AML		
	comp=N,2520μm,0.9s					
PCP	**Piancastagn**	**3.68 299**	P	**Pn**		**12 07 57.4 -1.4**
PCP			AML	AML		
	comp=E,298μm,0.7s					
PCP			AML	AML		
	comp=N,266μm,0.6s					
MABI	**Malga Bissina**	**3.70 332**	P	**Pn**		**12 07 59.3 +0.1**
MABI			AML	AML		
	comp=E,772μm,1.6s					
MABI			AML	AML		
	comp=N,974μm,0.5s					
QLNO	**Quiliano**	**3.72 295**	P	**Pn**		**12 07 58.3 -1.0**
ZOU	**Zoufplan**	**3.73 359**	P	**Pn**		**12 07 58.2 -1.4**
ZOU			AML	AML		
	comp=E,2170μm,1.0s					
ZOU			AML	AML		
	comp=N,1540μm,1.3s					
ZOU			AML	AML		
	comp=E,2125μm,1.0s					
ZOU			AML	AML		
	comp=N,1525μm,1.3s					
ACOM	**Acomizza, Ital**	**3.73 5**	P	**Pn**		**12 07 58.6 -1.0**
ACOM			AML	AML		
	comp=E,2315μm,1.0s					
ACOM			AML	AML		
	comp=N,2355μm,0.8s					
ACOM			AML	AML		
	comp=E,2225μm,1.0s					
ACOM			AML	AML		
	comp=N,2230μm,0.8s					
CANO	**Canova, Maglio**	**3.75 293**	AML	AML		
	comp=N,510μm,0.6s					
CANO			AML	AML		
	comp=E,1350μm,1.0s					
FVI	**Forni Avoltri**	**3.77 357**	AML	AML		
	comp=N,2050μm,0.6s					
FVI			AML	AML		
	comp=E,1305μm,0.7s					
KOSI	**Kohlern**	**3.82 343**	P	**Pn**		**12 08 01.0 +0.1**
KOSI			AML	AML		
	comp=E,2425μm,0.8s					
KOSI			AML	AML		
	comp=N,1775μm,0.9s					
MYKA	**Terra Mystica**	**3.83 6**	*i* Pn	**Pn**		**12 08 00.3 -0.6**
	comp=N,197nm,0.5s,SNR=98					
MYKA			*e*Sn	**Sn**		**12 08 45.6 -0.3**
	comp=N,150nm,0.4s					
OBKA	**Obir**	**3.83 16**	*e*Pn	**Pn**		**12 07 59.6 -1.4**
OBKA	**Obir**	**3.83 16**	*i* Pn	**Pn**		**12 08 00.2 -0.8**
	comp=N,16nm,0.2s,SNR=13					
OBKA			*e*Sn	**Sg**		**12 09 07.3 +2.5**
	comp=N,932nm,0.7s					
OBKA	**Obir**	**3.83 16**	*e*Pn	**Pn**		**12 07 59.9 -1.0**
APPI	**Appiano**	**3.87 341**	P	**Pn**		**12 08 01.7 +0.2**
APPI			AML	AML		
	comp=E,1175μm,0.9s					
APPI			AML	AML		
	comp=N,1500μm,0.6s					
TREB	**Trebinje**	**3.91 90**	*e*Pn	**Pn**		**12 08 01.5 -0.5**
TREB	**Trebinje**	**3.91 90**	*e*Pn	**Pn**		**12 08 01.4 -0.5**
TREB			*e*Sn	**Sn**		**12 08 49.6 +1.6**
TAR1	**Taranto**	**3.93 124**	AML	AML		
	comp=E,1615μm,0.6s					
TAR1			AML	AML		
	comp=N,2105μm,0.9s					
ABTA	**Abfaltersbach**	**3.94 355**	*i* Pn	**Pn**		**12 08 02.4 +0.1**
	comp=N,207nm,0.5s,SNR=92					
ABTA			*e*Sn	**Sn**		**12 08 50.1 +1.4**
	comp=N,504nm,0.6s					
A052A	**Srbac**	**3.95 53**	*e*Pn	**Pn**		**12 08 01.2 -1.3**
MGRO	**Montegrosso**	**4.00 289**	AML	AML		
	comp=E,284μm,0.9s					
MGRO			AML	AML		
	comp=N,244μm,0.9s					
HCY	**Herceg Novi**	**4.04 94**	*e*Pn	**Pn**		**12 08 02.9 -0.9**
HCY	**Herceg Novi**	**4.04 94**	⇑*i*Pn	**Pn**		**12 08 03.6 -0.2**
HCY			*i* Sn	**Sn**		**12 08 50.6 -0.6**
BRY	**Bratogost**	**4.04 87**	*e*Pn	**Pn**		**12 08 03.9 0.0**
BRY	**Bratogost**	**4.04 87**	*e*Pn	**Pn**		**12 08 03.6 -0.3**
BRY			*i* Sn	**Sn**		**12 08 50.4 -1.1**
SOKA	**Soboth**	**4.10 20**	*i* Pn	**Pn**		**12 08 04.0 -0.7**
	comp=N,91nm,0.7s,SNR=26					
SOKA			*e*Sn	**Sn**		**12 08 52.7 0.0**
	comp=N,51nm,0.4s					
BRMO	**Bormio**	**4.11 333**	P	**Pn**		**12 08 05.9 +1.1**
BRMO			AML	AML		
	comp=E,595μm,0.6s					
BRMO			AML	AML		
	comp=N,502μm,0.7s					
DOB	**Doboj**	**4.13 61**	*e*Pn	**Pn**		**12 08 04.4 -0.5**
SAOF	**Saorge**	**4.16 288**	P	**Pn**		**12 08 06.9 +1.5**
RISI	**Rein**	**4.17 351**	P	**Pn**		**12 08 05.4 -0.3**
BERNI	**Berninapass**	**4.18 330**	P	**Pn**		**12 08 06.4 +0.5**
BERNI			AML	AML		
	comp=E,688μm,0.6s					
BERNI			AML	AML		
	comp=N,626μm,0.8s					
MOSI	**Grossmontoni**	**4.18 336**	AML	AML		
	comp=N,3650μm,0.8s					
MOSI			AML	AML		
	comp=E,2400μm,0.9s					
SBF	**Sospel**	**4.21 286**	*e*Pn	**Pn**		**12 08 04.5 -1.7**
SBF	**Sospel**	**4.21 286**	*e*P	**Pn**		**12 08 07.5 +1.3**
SBF			*e*Sn	**Sn**		**12 08 51.8 -3.7**
	comp=E,193nm,0.5s					
MUGIO	**Muggio**	**4.21 319**	P	**Pn**		**12 08 05.1 -1.1**
MUGIO			AML	AML		
	comp=E,506μm,0.4s					
MUGIO			AML	AML		
	comp=N,527μm,1.5s					
ROSI	**Rosskopf**	**4.26 345**	P	**Pn**		**12 08 06.7 -0.2**
ROSI			AML	AML		
	comp=E,2835μm,1.0s					
ROSI			AML	AML		
	comp=N,2450μm,0.8s					
TURF	**col de Turini**	**4.27 287**	P	**Pn**		**12 08 08.4 +1.4**
FUORN	**Ofenpass-Fuorn**	**4.28 333**		**Pn**		**12 08 08.7 +1.6**
KOGS	**Kog**	**4.28 31**	AML	AML		
	comp=N,8300μm,1.3s					
KOGS			AML	AML		
	comp=E,8825μm,0.9s					
UPM	**Unac-Piva**	**4.32 83**	*e*Pn	**Pn**		**12 08 08.6 +0.9**
UPM	**Unac-Piva**	**4.32 83**	*e*Pn	**Pn**		**12 08 07.4 -0.3**
UPM			*i* Sn	**Sn**		**12 08 57.1 -1.2**
VSL	**Villasalto**	**4.33 221**	P	**Pn**		**12 08 07.8 +0.1**
VSL			AML	AML		
	comp=E,432μm,0.8s					
VSL			AML	AML		
	comp=N,426μm,0.5s					
CEME	**Cevo**	**4.34 92**	⇓*i*Pn	**Pn**		**12 08 07.8 -0.2**
CEME			*i* Sn	**Sn**		**12 08 57.8 -0.9**
NKME	**Niksic**	**4.35 89**	⇑*i*Pn	**Pn**		**12 08 08.0 -0.1**
NKME			*i* Sn	**Sn**		**12 08 58.0 -0.9**
BUM	**Brajici-Budva**	**4.36 95**	*e*Pn	**Pn**		**12 08 08.1 0.0**
BUM			*i* Sn	**Sn**		**12 08 58.3 -0.8**
IFIL	**Filicudi I Eol**	**4.42 164**	AML	AML		
	comp=N,354μm,0.9s					
IFIL			AML	AML		
	comp=E,784μm,0.6s					
HAPS	**Han Pijesak,Bl**	**4.49 72**	*e*Pn	**Pn**		**12 08 09.9 0.0**
TUE	**Stuetta**	**4.49 325**	Pn	**Pn**		**12 08 09.9 -0.3**
FETA	**Feichten**	**4.50 339**	*i* Pn	**Pn**		**12 08 11.3 +1.1**
	comp=E,38nm,0.5s,SNR=40					
FETA			*e*Sn	**Sn**		**12 09 04.6 +1.8**
	comp=E,111nm,0.6s					
BEHE	**Becsehely**	**4.51 35**	P	**Pn**		**12 08 10.6 +0.4**
WTTA	**Wattenberg**	**4.54 348**	*i* Pn	**Pn**		**12 08 11.9 +1.0**
	comp=E,22nm,0.2s,SNR=45					
WTTA	**Wattenberg**	**4.54 348**	*e*Pn	**Pn**		**12 08 11.8 +1.0**
WTTA	**Wattenberg**	**4.54 348**	AML	AML		
	comp=N,1190μm,0.9s					
WTTA			AML	AML		
	comp=E,1700μm,0.9s					
DAVOX	**Davos/Dischmat**	**4.54 331**	Pn	**Pn**		**12 08 11.3 +0.5**
	comp=E,13nm,0.3s,baz=138,slow=10,SNR=61					
DAVOX			Sn	**Sn**		**12 09 02.8 -1.0**
	comp=E,22nm,0.3s,baz=256,slow=14,SNR=4.8					
	comp=E,61nm,0.5s					
DAVOX	**Davos/Dischmat**	**4.54 331**	P	**Pn**		**12 08 12.4 +1.5**
DAVOX			AML	AML		
	comp=E,630μm,1.4s					
DAVOX			AML	AML		
	comp=N,622μm,0.6s					
CALF	**Calern**	**4.56 284**	P	**Pn**		**12 08 11.5 +0.5**
ISO	**Isola**	**4.56 289**	P	**Pn**		**12 08 14.8 +3.8**
SQTA	**Sankt Quirin**	**4.58 344**		**Pn**		**12 08 12.5 +1.3**
SQTA				**Sn**		**12 09 05.5 +0.9**
SQTA	**Sankt Quirin**	**4.58 344**	P	**Pn**		**12 08 12.5 +1.3**
SQTA						12 09 05.5
SQTA	**Sankt Quirin**	**4.58 344**	*i* Pn	**Pn**		**12 08 12.5 +1.3**
	comp=N,22nm,0.2s,SNR=36					
SQTA			*e*Sn	**Sn**		**12 09 05.5 +0.9**
	comp=N,242nm,0.4s					
DRME	**Dracevica, Mon**	**4.59 96**	⇑*i*Pn	**Pn**		**12 08 11.0 -0.3**
DRME	**Dracevica, Mon**	**4.59 96**	*e*Pn	**Pn**		**12 08 11.3 0.0**
DRME			*i* Sn	**Sn**		**12 09 03.9 -0.8**
PDG	**Podgorica**	**4.61 93**	⇓P	**Pn**		**12 08 12.0 +0.5**
PDG	**Podgorica**	**4.61 93**	Pn	**Pn**		**12 08 11.4 -0.1**
PDG	**Podgorica**	**4.61 93**	*e*Pn	**Pn**		**12 08 11.6 +0.1**
PDG			*e*Sn	**Sn**		**12 09 06.1 +1.1**
TTG	**Podgorica**	**4.61 93**	⇓*i*Pn	**Pn**		**12 08 11.5 +0.1**
TTG			*i* Sn	**Sn**		**12 09 04.3 -0.7**
TIP	**Timpagrande**	**4.61 141**	Pn	**Pn**		**12 08 11.7 +0.1**
WATA	**Walderalm**	**4.62 348**		**Pn**		**12 08 13.0 +1.1**
WATA				**Sn**		**12 09 09.2 +3.5**
WATA	**Walderalm**	**4.62 348**	*i* Pn	**Pn**		**12 08 13.0 +1.1**
	comp=N,16nm,0.2s,SNR=42					
WATA			*e*Sn	**Sn**		**12 09 09.2 +3.5**
	comp=N,157nm,0.4s					
ULC	**Ulcinj**	**4.68 99**	⇑*i*Pn	**Pn**		**12 08 12.5 0.0**
ULC			*i* Sn	**Sn**		**12 09 06.1 -0.8**
PLE	**Pljevlja**	**4.68 82**	*e*Pn	**Pn**		**12 08 12.4 -0.2**
PLE			*i* Sn	**Sn**		**12 09 05.9 -1.2**
RUDO	**Rudo**	**4.70 78**	*e*Pn	**Pn**		**12 08 12.9 +0.2**
MOTA	**Moosalm**	**4.72 344**		**Pn**		**12 08 15.0 +1.8**
MOTA				**Sn**		**12 09 12.9 +4.8**
MOTA	**Moosalm**	**4.72 344**	P	**Pn**		**12 08 15.0 +1.8**
MOTA						12 09 12.9
MOTA	**Moosalm**	**4.72 344**	*i* Pn	**Pn**		**12 08 15.0 +1.8**
	comp=N,3.9nm,0.3s,SNR=46					
MOTA			*e*Sn	**Sn**		**12 09 12.9 +4.8**
	comp=N,210nm,0.6s					
BBLS	**Lazići**	**4.76 75**	*e*Pn	**Pn**		**12 08 12.8 -0.9**
BBLS	**Lazići**	**4.76 75**	*e*Pn	**Pn**		**12 08 13.9 +0.2**
ARSA	**Arzberg**	**4.76 21**	*i* Pn	**Pn**		**12 08 12.4 -1.2**
	comp=N,70nm,0.4s,SNR=46					
ARSA			*e*Sn	**Sn**		**12 09 07.0 -1.8**
	comp=N,84nm,0.6s					
ARSA	**Arzberg**	**4.76 21**	*e*Pn	**Pn**		**12 08 12.3 -1.4**
KOME	**Kolasin**	**4.76 88**	*e*Pn	**Pn**		**12 08 13.7 0.0**
KOME			*i* Sn	**Sn**		**12 09 08.0 -1.1**
FUSIO	**Fusio**	**4.78 321**	P	**Pn**		**12 08 13.6 -0.5**
LMR	**La Mourre**	**4.81 278**	*e*Pn	**Pn**		**12 08 12.4 -1.9**
LMR	**La Mourre**	**4.81 278**	*e*P	**Pn**		**12 08 15.8 +1.5**
LMR			*e*Sn	**Sn**		**12 09 06.0 -4.0**
	comp=N,66nm,0.7s					
SURF	**Saint Ours**	**4.81 292**	P	**Pn**		**12 08 15.3 +0.9**
ZUGS	**Zugspitze, Sch**	**4.81 343**	*e*Pn	**Pn**		**12 08 16.7 +2.1**
MMK	**Mattmark**	**4.85 313**	P	**Pn**		**12 08 14.5 -0.6**
PART	**Garmisch-Parte**	**4.86 344**	*e*Pn	**Pn**		**12 08 16.9 +1.9**
KOVH	**Kovagotottos**	**4.87 46**	P	**Pn**		**12 08 13.4 -1.8**
KOVH			S	**Sn**		**12 09 09.6 -2.1**
BIOA	**Bad Ischl, Aus**	**4.88 5**		**Pn**		**12 08 15.2 -0.1**
BIOA				**Sn**		**12 09 14.9 +3.1**
BIOA	**Bad Ischl, Aus**	**4.88 5**	*i* Pn	**Pn**		**12 08 15.2 -0.1**
	comp=N,170nm,0.3s,SNR=112					
BIOA			*e*Sn	**Sn**		**12 09 14.9 +3.1**
	comp=N,316nm,0.8s					
RJOB	**Jochberg**	**4.91 358**	*e*Pn	**Pn**		**12 08 15.8 +0.1**
RJOB			*e*Sn	**Sn**		**12 09 15.0 +2.3**
BLJ	**Bijeljina**	**4.91 64**	*e*Pn	**Pn**		**12 08 13.2 -2.5**
MBDF	**Montbardon**	**4.92 295**	*e*Pn	**Pn**		**12 08 15.2 -0.7**
MBDF	**Montbardon**	**4.92 295**	*e*P	**Pn**		**12 08 17.7 +1.8**
MBDF			*e*Sn	**Sn**		**12 09 09.1 -3.9**
	comp=N,153nm,0.8s					
SCTE	**Santa Cesarea**	**4.92 122**	Pn	**Pn**		**12 08 16.1 +0.3**
SCTE	**Santa Cesarea**	**4.92 122**	P	**Pn**		**12 08 16.2 +0.3**
	baz=121					
SCTE			S	**Sn**		**12 09 10.3 -2.5**
	baz=121					
SCTE			AMP			
	comp=N,1.7nm,1.0s,baz=121					
SCTE	**Santa Cesarea**	**4.92 122**	P	**Pn**		**12 08 15.6 -0.2**
TRIGF	**Trigance**	**4.93 283**	P	**Pn**		**12 08 16.6 +0.7**
RETA	**Reutte**	**4.93 342**	*i* Pn	**Pn**		**12 08 17.4 +1.4**
	comp=N,32nm,0.4s,SNR=30					
RETA			*e*Sn	**Sn**		**12 09 15.6 +2.5**
	comp=N,138nm,0.5s					
CREF	**Crivoux**	**4.96 292**	P	**Pn**		**12 08 19.0 +2.5**
DAVA	**Damuels**	**4.99 334**	*i* Pn	**Pn**		**12 08 18.7 +1.9**
	comp=N,16nm,0.3s,SNR=54					
DAVA			*e*Sn	**Sn**		**12 09 18.2 +3.5**

comp=N,159nm,0.7s
DAVA Damuels 4.99 334 *e*Pn Pn 12 08 18.6 +1.7
DAVA *e*Sn **Sn** 12 09 18.2 +3.5
TEKS Tekeris 5.01 68 *e*Pn **Pn 12 08 15.9 -1.2**
TEKS Tekeris 5.01 68 *e*Pn **Pn 12 08 16.9 -0.2**
IVA Berane 5.04 87 *e*Pn **Pn 12 08 17.5 0.0**
IVA *i* Sn **Sn** 12 09 14.8 -1.1
CEL Celeste 5.06 154 Pn 12 08 18.0 +0.3
MOA Molln 5.09 9 *e*Pn **Pn 12 08 17.7 -0.5**
MOA *e*Sn **Sn** 12 09 14.3 -2.8
MOA Molln 5.09 9 *i* Pn **Pn 12 08 17.9 -0.3**
comp=N,112nm,0.4s,SNR=134
MOA *e*Sn **Sn 12 09 16.6 -0.5**
comp=N,82nm,0.4s
MOA Molln 5.09 9 *e*Pn **Pn 12 08 17.7 -0.5**
MOA *e*Sn **Sn** 12 09 16.8 -0.4
SJES Sjenica 5.10 83 *e*Pn **Pn 12 08 18.5 +0.1**
SJES *e*Sn **Sn** 12 09 17.9 +0.4
PVY Plav 5.11 90 *e*Pn **Pn 12 08 18.4 -0.1**
PVY *i* Sn **Sn** 12 09 16.4 -1.2
REMY Saint-Rhmy-en 5.18 308 P **Pn 12 08 18.8 -0.9**
BNALP Bannalp 5.20 323 P **Pn 12 08 20.6 +0.7**
BCI Bajram Curri 5.21 93 P **Pn 12 08 20.4 +0.6**
baz=90
BCI S **Sn 12 09 19.2 -0.8**
baz=90
BCI AMP
comp=E,4.0nm,0.7s,baz=90
BLAF les Blancs 5.22 285 P **Pn 12 08 22.9 +3.0**
DIVS Divibare 5.22 74 Pn **Pn 12 08 19.7 -0.3**
DIVS Divibare 5.22 74 *e*Pn **Pn 12 08 19.2 -0.8**
DIVS Divibare 5.22 74 *e*Pn **Pn 12 08 19.9 -0.1**
CLTB Caltabellotta 5.25 178 Pn **Pn 12 08 20.6 +0.2**
MORH Mrgy, Hungar 5.25 48 P **Pn 12 08 19.8 -0.5**
LPG La Plagne 5.25 303 *e*P **Pn 12 08 23.1 +2.5**
LPG *e*Sn **Sn 12 09 16.9 -4.5**
comp=E,216nm,0.8s
IVAS Ivanjica 5.25 79 *e*Pn **Pn 12 08 19.8 -0.7**
IVAS *e*Sn **Sn 12 09 21.2 0.0**
LPL La Plagne 5.27 303 *e*P **Pn 12 08 23.5 +2.7**
LPL *e*Sn **Sn 12 09 16.9 -4.9**
comp=E,151nm,0.8s
LPL La Plagne 5.27 303 P **Pn 12 08 20.1 -0.7**
UBR Ueberruh 5.27 338 *e*Pn **Pn 12 08 21.6 +0.9**
UBR *e*Sn **Sn 12 09 24.3 +2.7**
TIR Tirane 5.29 104 ⇑P **Pn 12 08 21.8 +0.9**
TIR Tirane 5.29 104 Pn 12 08 20.9 0.0
TIR Tirane 5.29 104 P **Pn 12 08 21.4 +0.5**
TIR Tirane 5.29 104 *e*Pn **Pn 12 08 21.2 +0.3**
TIR *e*Sn **Sn 12 09 20.6 -1.4**
TIR Tirane 5.29 104 P **Pn 12 08 20.9 0.0**
TIR Tirane 5.29 104 P **Pn 12 08 20.4 -0.5**
baz=102
TIR S **Sn 12 09 20.4 -1.5**
baz=102
TIR AMP
comp=E,2.0nm,0.9s,baz=102
TIR Tirane 5.29 104 P **Pn 12 08 20.5 -0.5**
VLO Vlora 5.38 114 Pn 12 08 22.7 +0.6
VLO Vlora 5.38 114 P **Pn 12 08 22.7 +0.6**
RONA Rosalia, Austr 5.39 24 Pn 12 08 21.2 -1.1
RONA **Sn 12 09 23.8 -0.6**
RONA Rosalia, Austr 5.39 24 *i* Pn **Pn 12 08 21.2 -1.1**
comp=E,70nm,0.6s,SNR=44
RONA *e*Sn **Sn 12 09 23.8 -0.6**
comp=E,34nm,0.4s
MPLH Magyarpolny 5.39 35 P **Pn 12 08 20.4 -1.8**
SENIN Lac Senin/Sane 5.41 313 Pn 12 08 24.4 +1.7
FRGS Fruska Gora 5.41 62 ⇑P **Pn 12 08 22.6 0.0**
FRGS Fruska Gora 5.41 62 *e*Pn **Pn 12 08 20.7 -1.9**
FRGS Fruska Gora 5.41 62 *e*Pn **Pn 12 08 20.9 -1.7**
VAE Valguarnera 5.45 168 Pn **Pn 12 08 26.3 +3.2**
comp=E,19nm,0.8s,baz=320,slow=7.9,SNR=4.2
SOP Sopron 5.45 26 P **Pn 12 08 22.2 -0.9**
CONA Conrad Observa 5.47 20 *i* Pn **Pn 12 08 22.2 -1.3**
comp=E,36nm,0.3s,SNR=52
CONA *e*Sn **Sn 12 09 25.0 -1.6**
comp=E,160nm,0.5s
FUR Furstenfeldbru 5.48 348 *e*Pn **Pn 12 08 25.4 +1.9**
EGYH Egyhazaskeszo 5.50 32 P **Pn 12 08 23.5 -0.3**
TRUS Trudelj 5.54 73 *e*Pn **Pn 12 08 23.8 -0.5**
TRUS *e*Sn **Sn 12 09 28.0 0.0**
SMRF Simiane la Rot 5.56 284 *e*P **Pn 12 08 26.3 +1.7**
SMRF *e*Sn **Sn 12 09 23.1 -5.5**
comp=E,73nm,0.9s
ORIF Oris-en-Rattie 5.58 294 *e*P **Pn 12 08 27.3 +2.4**
ORIF *e*Sn **Sn 12 09 25.0 -4.2**
comp=E,153nm,0.8s
PHP Peshkopia 5.61 99 P **Pn 12 08 25.9 +0.5**
PHP Peshkopia 5.61 99 P **Pn 12 08 25.8 +0.4**
baz=97
PHP S **Sn 12 09 28.5 -1.5**
baz=97
PHP AMP
comp=N,3.0nm,1.0s,baz=97
RUSF Rustrel 5.62 284 P **Pn 12 08 28.0 +2.6**
GRUS Gruza 5.70 77 *e*Pn **Pn 12 08 26.8 +0.3**
SELS Selova 5.94 83 *e*Pn **Pn 12 08 28.9 -0.9**
SELS *e*Sn **Sn 12 09 38.1 +0.2**
KEK Kerkira 5.97 119 Pn 12 08 30.7 +0.5
KEK Kerkira 5.97 119 P **Pn 12 08 29.8 -0.4**
SRN Sarande 6.01 117 P **Pn 12 08 31.6 +0.8**
SRN Sarande 6.01 117 P **Pn 12 08 30.9 +0.1**
baz=116
SRN AMP
comp=N,0.9nm,0.7s,baz=116
GEC2 GERESS Array S 6.04 4 Pn 12 08 29.6 -1.6
GEC2 GERESS Array S 6.04 4 *e*Pn **Pn 12 08 29.6 -1.6**
GEC2 *e*Sn **Sn 12 09 38.2 -2.2**
GERES GERESS Array B 6.04 4 Pn **Pn 12 08 29.6 -1.6**
comp=N,5.1nm,0.3s,baz=194,slow=28,SNR=58
GERES Sn **Sn 12 09 37.8 -2.6**
comp=N,20nm,0.3s,baz=186,slow=24,SNR=6.1
GERES LR LR 12 11 37.3
comp=N,1µm,18.7s,baz=194,slow=47
comp=N,30nm,0.7s
OHR Ohrid 6.04 104 *i* Pn **Pn 12 08 32.3 +1.1**
CKRC Cesky Krumlov 6.06 8 *e*PN **Pn 12 08 29.5 -1.9**
CKRC *e*SN **Sn 12 09 38.2 -2.6**
ZST Bratislava 6.08 27 *e*P **Pn 12 08 30.7 -1.0**
ZST *e* 12 09 39.2
KBN Korca 6.20 108 Pn 12 08 34.4 +0.9
KBN Korca 6.20 108 P **Pn 12 08 34.1 +0.6**
KBN Korca 6.20 108 P **Pn 12 08 34.4 +0.9**
KBN Korca 6.20 108 P **Pn 12 08 34.5 +0.9**
baz=107
KBN AMP
comp=N,2.6nm,0.7s,baz=107
SRO Srobarova 6.22 35 *e*P **Pn 12 08 35.2 +1.6**
CABF La Chapelle 6.23 310 *e*Pn **Pn 12 08 32.9 -1.0**
CABF La Chapelle 6.23 310 *e*P **Pn 12 08 36.4 +2.5**
CABF *e*Sn **Sn 12 09 40.5 -4.7**
comp=N,126nm,0.8s
LSK Leskovik 6.28 113 P **Pn 12 08 35.6 +1.1**
LSK Leskovik 6.28 113 P **Pn 12 08 35.8 +1.3**
baz=111
SKO Skopje 6.28 95 *i* Pn **Pn 12 08 35.4 +0.9**
MODS Modra-Piesok 6.29 27 *e*P **Pn 12 08 33.2 -1.4**
MODS *e* 12 09 48.2
KHC Kasperske Hory 6.31 3 Pn 12 08 33.3 -1.7
KHC Kasperske Hory 6.31 3 *e*P **Pn 12 08 33.2 -1.8**
KHC *e* 12 09 43.7
KHC MLR MLR
comp=Z,2µm,9.6s
KHC Kasperske Hory 6.31 3 *e*PN **Pn 12 08 33.2 -1.8**
KHC *e*Sn **Sn 12 09 43.7 -3.5**
KHC AMS AMS 12 11 10.0
comp=Z,2µm,9.6s
WET Wettzell 6.32 359 *e*Pn **Pn 12 08 33.5 -1.5**
WET *e*Sn **Sn 12 09 44.2 -3.1**
VIVF Saint-Julien-l 6.38 291 *e*Pn **Pn 12 08 35.2 -0.7**
VIVF *e*Sn **Sn 12 09 44.0 -4.8**
comp=Z,35nm,0.8s
VIVF Saint-Julien-l 6.38 291 P **Pn 12 08 36.6 +0.7**
BOVS Bovan 6.38 80 ⇓P **Pn 12 08 35.5 -0.4**
BOVS Bovan 6.38 80 *e*Pn **Pn 12 08 34.0 -1.9**
IGT Igoumenitsa 6.41 118 P **Pn 12 08 36.4 +0.1**
IGT Igoumenitsa 6.41 118 P **Pn 12 08 36.6 +0.3**
baz=117
BFO Black Forest 6.42 331 Pn 12 08 33.8 -2.6
BFO Black Forest 6.42 331 P **Pn 12 08 33.8 -2.6**
BFO Black Forest 6.42 331 *e*Pn **Pn 12 08 36.2 -0.1**
BARS Barje 6.46 87 *e*Pn **Pn 12 08 36.2 -0.7**

SMOL Smolenice 6.46 27 *e*P **Pn 12 08 36.2 -0.8**
SMOL *e* 12 09 52.3
KUBS Kucevo 6.47 73 *e*Pn **Pn 12 08 36.0 -1.0**
NEST Nestorio 6.47 109 P **Pn 12 08 38.5 +1.3**
STU Stuttgart 6.52 337 Pn 12 08 37.3 -0.5
STU Stuttgart 6.52 337 P **Pn 12 08 37.3 -0.5**
FNA Florina 6.56 105 P **Pn 12 08 38.7 +0.3**
MDVR Moldovita 6.57 70 ⇑P **Pn 12 08 38.6 0.0**
SSB Saint Sauveur 6.59 295 Pn **Pn 12 08 39.3 +0.5**
SSB Saint Sauveur 6.59 295 P **Pn 12 08 39.3 +0.5**
HINF Hinteralfeld 6.62 321 *e*Pn **Pn 12 08 38.8 -0.4**
HINF Hinteralfeld 6.62 321 *e*P **Pn 12 08 41.9 +2.7**
HINF *e*Sn **Sn 12 09 50.3 -4.5**
comp=Z,201nm,0.6s
PENT Pentalofos 6.62 111 P **Pn 12 08 40.3 +1.0**
KRUC Moravsky 6.66 19 *e*PN **Pn 12 08 37.7 -2.0**
KRUC *e*SN **Sn 12 09 52.7 -2.9**
JAN Janina 6.69 116 P **Pn 12 08 40.3 +0.2**
TREC Trest 6.69 14 *e*P **Pn 12 08 38.4 -1.7**
TREC MLR MLR
comp=Z,3µm,10.8s
TREC Trest 6.69 14 *e*PN **Pn 12 08 38.4 -1.7**
TREC AMS AMS 12 11 10.0
comp=Z,3µm,10.8s
BZS Buzias 6.76 63 ⇑P **Pn 12 08 40.9 -0.2**
ZAGS Zajecar 6.78 79 *e*Pn **Pn 12 08 41.1 -0.2**
ZAGS *e*Sn **Sn 12 09 56.6 -2.0**
ECH Echery 6.79 325 Pn 12 08 40.5 -0.9
ECH Echery 6.79 325 P **Pn 12 08 40.5 -0.9**
LASF Ste Croix 6.80 284 *e*Pn **Pn 12 08 40.8 -0.8**
LASF Ste Croix 6.80 284 *e*P **Pn 12 08 44.3 +2.7**
LASF *e*Sn **Sn 12 09 53.5 -5.6**
comp=Z,36nm,1.1s
JAVC Velka Javorina 6.84 27 *e*PN **Pn 12 08 41.2 -1.0**
KPRO Kipourio 6.89 112 P **Pn 12 08 44.7 +1.8**
CDF Champ du Feu 6.89 326 *e*Pn **Pn 12 08 42.1 -0.8**
CDF Champ du Feu 6.89 326 *e*P **Pn 12 08 46.2 +3.3**
CDF *e*Sn **Sn 12 09 56.7 -4.7**
comp=Z,183nm,0.5s
VRAC Vranov 6.94 20 ⇑P **Pn 12 08 43.9 +0.5**
VRAC Vranov 6.94 20 Pn **Pn 12 08 42.7 -0.8**
comp=Z,1.5nm,0.3s,baz=202,slow=14,SNR=21
VRAC Sn **Sn 12 09 57.8 -4.6**
comp=Z,2.1nm,0.3s,baz=95,slow=20,SNR=1.4
VRAC LR LR 12 12 04.3
comp=Z,1µm,18.5s,baz=210,slow=44
comp=Z,15nm,0.6s
VRAC Vranov 6.94 20 *e*PN **Pn 12 08 42.2 -1.3**
VRAC *e*SN **Sn 12 09 59.3 -3.1**
ROTZ Rotzenmuhle 6.96 356 *e*Pn **Pn 12 08 42.5 -1.4**
ROTZ *e*Sn **Sn 12 09 58.6 -4.5**
VYHS Vyhne 6.97 34 *e*P **Pn 12 08 43.9 -0.1**
VYHS *e* 12 10 05.9
GRFO Grafenberg 6.98 350 Pn 12 08 44.4 +0.4
GRFO Grafenberg 6.98 350 P **Pn 12 08 44.4 +0.4**
GRA1 Grafenberg Arr 6.98 350 Pn 12 08 44.0 -0.1
GRF Grafenberg Arr 6.98 350 P **Pn 12 08 44.0 -0.1**
HAU Haudompre 6.99 320 *e*Pn **Pn 12 08 43.1 -1.2**
HAU Haudompre 6.99 320 *e*P **Pn 12 08 46.1 +1.8**
HAU *e*Sn **Sn 12 09 59.2 -4.7**
comp=Z,391nm,0.8s
PSZ Piszkesteto 7.01 41 Pn 12 08 45.2 +0.6
PSZ Piszkesteto 7.01 41 P **Pn 12 08 45.2 +0.6**
PSZ Piszkesteto 7.01 41 P **Pn 12 08 45.4 +0.8**
KZN Kozani 7.02 108 P **Pn 12 08 45.1 +0.4**
TSLK Tsoukalades, L 7.03 122 P **Pn 12 08 45.8 +1.1**
ZAPS Zavoj 7.04 83 *e*Pn **Pn 12 08 45.4 +0.4**
ZAPS *e*Sn **Sn 12 10 01.7 -3.5**
LKD2 Lefkada island 7.05 122 P **Pn 12 08 45.4 +0.3**
SIRR Siria 7.05 58 ⇓P **Pn 12 08 46.1 +1.0**
DRAG Dragano-Lefkad 7.06 123 P **Pn 12 08 45.9 +0.7**
HERR Herculane 7.08 70 ⇑P **Pn 12 08 46.1 +0.6**
BLKB Belogradchik 7.08 80 ⇑P **Pn 12 08 45.8 +0.2**
DJES Djerdap 7.11 72 ⇑P **Pn 12 08 46.8 +0.9**
NYDR Nydri-Lefkada 7.12 123 P **Pn 12 08 46.2 +0.2**
EVGI Lefkada island 7.15 123 P **Pn 12 08 46.9 +0.5**
MANZ Manzenberg 7.19 355 *e*Pn **Pn 12 08 46.8 -0.1**
GOPC GO Pecny, Ondr 7.19 9 *e*P **Pn 12 08 44.9 -2.1**
GOPC *e* 12 10 04.6
GOPC MLR MLR
comp=Z,2µm,13.2s
GOPC GO Pecny, Ondr 7.19 9 *e*PN **Pn 12 08 44.9 -2.1**
GOPC *e*SN **Sn 12 10 04.6 -4.1**
GOPC AMS AMS 12 11 40.0
comp=Z,2µm,13.2s
MAHO Mahon 7.22 249 Pn 12 08 46.7 -0.6
DMLN Damoulianata-K 7.23 127 P **Pn 12 08 48.8 +1.3**
KEF3 Kipouria, Keph 7.24 127 P **Pn 12 08 48.9 +1.3**
PRU Pruhonice 7.24 8 *e*P **Pn 12 08 45.1 -2.5**
PRU *e* 12 10 05.9
PRU MLR MLR
comp=Z,2µm,14.0s
PRU Pruhonice 7.24 8 *e*PN **Pn 12 08 45.1 -2.5**
PRU *e*SN **Sn 12 10 05.9 -3.9**
PRU AMS AMS 12 11 40.0
comp=Z,2µm,14.0s
KEF4 Livadi, Kephal 7.24 127 P **Pn 12 08 48.9 +1.2**
VAY Valandovo 7.25 99 *i* Pn **Pn 12 08 48.0 +0.2**
MAUC Maruska 7.33 25 *e*PN **Pn 12 08 48.7 -0.3**
MAUC AMS AMS 12 12 20.0
comp=Z,3µm,12.8s
NKC Novy Kostel 7.42 357 *e*P **Pn 12 08 48.8 -1.3**
NKC *e* 12 10 09.4
NKC MLR MLR
comp=Z,2µm,9.8s
NKC Novy Kostel 7.42 357 *e*PN **Pn 12 08 48.8 -1.3**
NKC *e*SN **Sn 12 10 09.4 -4.9**
NKC AMS AMS 12 12 20.0
comp=Z,2µm,9.8s
PSDA Pessada-Kefalo 7.43 127 P **Pn 12 08 50.9 +0.6**
GZR Gura Zlata 7.46 67 ⇑P **Pn 12 08 51.0 +0.2**
KKB Krupnik 7.50 94 *e*P **Pn 12 08 51.7 +0.4**
THL Klokotos Trika 7.51 113 P **Pn 12 08 51.7 +0.3**
VTS Vitosha 7.51 88 ⇑P **Pn 12 08 51.7 +0.1**
VTS Vitosha 7.51 88 Pn **Pn 12 08 51.4 -0.2**
VTS Vitosha 7.51 88 P **Pn 12 08 51.4 -0.2**
VTS Vitosha 7.51 88 *e*P **Pn 12 08 51.3 -0.2**
SMF Signal de Mont 7.58 303 *e*Pn **Pn 12 08 51.4 -0.9**
SMF Signal de Mont 7.58 303 *e*P **Pn 12 08 55.6 +3.3**
SMF *e*Sn **Sn 12 10 12.7 -5.5**
comp=Z,56nm,0.5s
MORC Moravsky Berou 7.62 23 ⇑P **Pn 12 08 52.7 -0.2**
MORC Moravsky Berou 7.62 23 Pn **Pn 12 08 52.1 -0.7**
MORC Moravsky Berou 7.62 23 P **Pn 12 08 52.1 -0.7**
MORC Moravsky Berou 7.62 23 *e*PN **Pn 12 08 51.8 -1.0**
MORC *e*SN **Sn 12 10 15.8 -3.4**
KEST Kesra 7.64 203 Pn **Pn 12 08 55.9 +2.6**
comp=Z,4.0nm,0.3s,baz=317,slow=4.5,SNR=20
KEST Sn **Sn 12 10 21.6 +1.6**
comp=Z,0.4nm,0.3s,baz=85,slow=8.9,SNR=1.1
KEST LR LR 12 12 00.1
comp=Z,1µm,20.4s,baz=346,slow=39
comp=Z,16nm,0.5s
KEST Kesra 7.64 203 Pn 12 08 57.0 +3.7
PAGF Fort de Pagny 7.68 321 *e*Pn **Pn 12 08 53.3 -0.4**
PAGF *e*Sn **Sn 12 10 15.8 -4.9**
comp=Z,199nm,0.8s
KECS Kecovo 7.69 40 *e*P **Pn 12 08 56.7 +2.9**
KRLC Kraliky 7.69 18 *e*P **Pn 12 08 53.0 -0.9**
KRLC MLR MLR
comp=Z,2µm,10.9s
KRLC Kraliky 7.69 18 *e*PN **Pn 12 08 53.0 -0.9**
KRLC AMS AMS 12 12 00.0
comp=Z,2µm,10.9s
DEV Deva 7.70 63 ⇑P **Pn 12 08 54.0 0.0**
EVR Evrytania 7.71 118 P **Pn 12 08 55.6 +1.4**
PVCC Panska Ves 7.77 7 *e*P **Pn 12 08 53.1 -1.8**
PVCC MLR MLR
comp=Z,2µm,8.2s
PVCC Panska Ves 7.77 7 *e*PN **Pn 12 08 53.1 -1.8**
PVCC AMS AMS 12 12 00.0
comp=Z,2µm,8.2s
SFTF Sexfontaines 7.77 317 *e*Pn **Pn 12 08 54.3 -0.7**
baz=139
SFTF Sexfontaines 7.77 317 *e*P **Pn 12 08 57.7 +2.7**
SFTF *e*Sn **Sn 12 10 18.0 -5.0**
comp=Z,178nm,1.1s
OKC Ostrava-Krasne 7.85 25 *e*P **Pn 12 08 54.4 -1.6**
OKC MLR MLR
comp=Z,2µm,13.6s
OKC Ostrava-Krasne 7.85 25 *e*PN **Pn 12 08 54.4 -1.6**
OKC AMS AMS 12 12 30.0
comp=Z,2µm,13.6s

HORT Hortiatis 7.85 103 P **Pn 12 08 55.2 -0.9**
MPEP Malo Peshtene 7.85 83 *e*P **Pn 12 08 56.8 +0.7**
DPC Dobruska-Polom 7.86 16 *e*P **Pn 12 08 54.2 -1.9**
DPC MLR MLR
comp=Z,2µm,12.7s
DPC Dobruska-Polom 7.86 16 *e*PN **Pn 12 08 54.2 -1.9**
DPC AMS AMS 12 12 00.0
comp=Z,2µm,12.7s
LOR Lormes 7.87 307 *e*Pn **Pn 12 08 55.3 -1.0**
baz=121
LOR Lormes 7.87 307 *e*P **Pn 12 08 59.2 +2.9**
LOR *e*Sn **Sn 12 10 20.4 -5.0**
comp=Z,59nm,0.5s
MAKR Makrakomi, Fth 7.87 116 P **Pn 12 08 58.0 +1.7**
MOX Moxa 7.88 353 P **Pn 12 08 56.2 -0.2**
MOX Moxa 7.88 353 *e*Pn **Pn 12 08 54.3 -2.1**
MOX *e*Sn **Sn 12 10 19.8 -5.8**
ABAH Abaujker 7.94 44 P **Pn 12 09 00.6 +3.4**
DRGR 7.94 57 ⇑P **Pn 12 08 57.5 +0.2**
DRGR 7.94 57 P **Pn 12 08 58.2 +0.9**
MTLF Montolieu 7.94 277 *e*Pn **Pn 12 08 55.5 -1.7**
MTLF Montolieu 7.94 277 *e*P **Pn 12 09 00.3 +3.1**
MTLF *e*Sn **Sn 12 10 20.4 -6.7**
comp=Z,23nm,0.9s
AVF Avril sur Loir 7.94 303 *e*Pn **Pn 12 08 55.6 -1.7**
AVF Avril sur Loir 7.94 303 *e*P **Pn 12 09 00.7 +3.4**
AVF *e*Sn **Sn 12 10 21.4 -5.8**
comp=Z,38nm,0.8s
UPC Upice 7.95 14 *e*P **Pn 12 08 55.7 -1.7**
UPC MLR MLR
comp=Z,3µm,10.4s
UPC Upice 7.95 14 *e*PN **Pn 12 08 55.7 -1.7**
UPC AMS AMS 12 12 00.0
comp=Z,3µm,10.4s
MEZF Maizieres J'vi 7.96 318 *e*Pn **Pn 12 08 56.8 -0.8**
baz=140
MEZF *e*Sn **Sn 12 10 22.4 -5.3**
comp=Z,80nm,0.6s
SSF Saint Saulge 7.97 305 *e*Pn **Pn 12 08 56.3 -1.4**
SSF Saint Saulge 7.97 305 *e*P **Pn 12 09 00.9 +3.2**
SSF *e*Sn **Sn 12 10 22.1 -5.9**
comp=Z,47nm,0.7s
RLS Riolos of Patr 8.00 124 P **Pn 12 09 00.0 +1.9**
SAVF Savonnieres en 8.01 319 *e*Pn **Pn 12 08 57.5 -0.6**
SAVF Savonnieres en 8.01 319 *e*P **Pn 12 09 01.5 +3.4**
SAVF *e*Sn **Sn 12 10 23.0 -5.7**
comp=Z,61nm,0.7s
OSTC Ostas 8.03 15 *e*PN **Pn 12 08 56.9 -1.6**
OSTC AMS AMS 12 12 00.0
comp=Z,2µm,11.6s
CHVC Chvalec 8.03 14 *e*PN **Pn 12 08 56.3 -2.2**
CHVC AMS AMS 12 12 10.0
comp=Z,2µm,11.3s
MMB Musomiste 8.03 95 *e*P **Pn 12 08 58.7 +0.1**
TNS Taunus Mts 8.04 338 *e*Pn **Pn 12 08 59.6 +0.9**
TNS *e*Sn **Sn 12 10 27.2 -2.6**
SRS Serrai 8.05 99 P **Pn 12 08 58.9 +0.1**
BRG Berggiesshubel 8.07 4 *e*P **Pn 12 08 57.3 -1.7**
BRG *e* 12 10 23.9
BRG pmax pmax
comp=Z,9.0nm,0.6s
BRG MLR MLR
comp=E,879nm,8.4s
BRG MLR MLR
comp=Z,2µm,12.0s
BRG MLR MLR
comp=N,1µm,12.0s
BGF Bois d'Agland 8.16 301 *e*Pn **Pn 12 08 58.7 -1.6**
BGF Bois d'Agland 8.16 301 *e*P **Pn 12 09 03.3 +3.0**
BGF *e*Sn **Sn 12 10 26.7 -5.9**
comp=N,53nm,0.7s
NVR Nevrokopi 8.19 97 P **Pn 12 09 00.3 -0.4**
TRIZ Trizonia 8.19 120 P **Pn 12 09 03.3 +2.6**
CAF Calviac 8.20 289 *e*Pn **Pn 12 09 01.1 +0.2**
CAF Calviac 8.20 289 *e*P **Pn 12 09 04.0 +3.1**
CAF Calviac 8.20 289 P **Pn 12 09 01.8 +0.9**
LAKA Lakka 8.21 121 P **Pn 12 09 01.9 +0.9**
ALIK Aliki, Aigiali 8.28 120 P **Pn 12 09 04.3 +2.4**
KSP Ksiaz 8.32 14 *e*P Pn 12 09 07.1 +4.6
WLF Walferdange 8.33 327 Pn **Pn 12 09 03.1 +0.5**
WLF Walferdange 8.33 327 P **Pn 12 09 03.1 +0.5**
WLF Walferdange 8.33 327 *e*Pn **Pn 12 09 06.2 +3.6**
AXAR Agios Charalam 8.35 116 P **Pn 12 09 05.0 +2.1**
CRVS Cervenica-Dubn 8.45 41 *e*P **Pn 12 09 06.2 +2.0**
CJR Cluj-Napoca 8.46 59 ⇑P **Pn 12 09 05.1 +0.7**
TCF Toulx Ste Croi 8.47 298 *e*Pn **Pn 12 09 03.7 -0.8**
TCF Toulx Ste Croi 8.47 298 *e*P **Pn 12 09 07.8 +3.3**
TCF *e*Sn **Sn 12 10 34.0 -6.2**
comp=N,16nm,0.5s
CLL Collm 8.48 360 Pn **Pn 12 09 04.0 -0.7**
CLL Collm 8.48 360 *e*P **Pn 12 09 03.0 -1.7**
CLL pmax pmax
comp=Z,26nm,0.6s
CLL Collm 8.48 360 *e*Pn **Pn 12 09 03.0 -1.7**
comp=Z,26nm,0.6s
CLL *e*x x 12 09 12.0
CLL *e*x x 12 09 18.0
CLL *e*Sn Sn 12 10 26.0 -14
CLL *e*x x 12 10 35.0
CLL *e*x x 12 11 18.0
CLL *e*Sg **Sg 12 11 30.0 -3.8**
comp=Z,137nm,1.2s
CLL Lmax 12 12 00.0
PLVB Pleven 8.49 82 ⇑P **Pn 12 09 05.1 +0.2**
TRPA Tarpa 8.52 48 P **Pn 12 09 07.2 +2.0**
HYF Humbligny 8.59 305 *e*Pn **Pn 12 09 05.9 -0.3**
HYF Humbligny 8.59 305 *e*P **Pn 12 09 09.7 +3.5**
HYF *e*Sn **Sn 12 10 36.7 -6.5**
comp=Z,183nm,0.6s
PLD Plovdiv 8.65 91 *e*P **Pn 12 09 07.5 +0.4**
RJF Les Rejaudoux 8.66 291 *e*Pn **Pn 12 09 07.7 +0.6**
RJF *e*Sn **Sn 12 10 37.8 -7.0**
comp=Z,16nm,0.9s
UZH Uzhgorod 8.69 45 *e*P **Pn 12 09 07.1 -0.4**
UZH *e*S **Sn 12 10 43.9 -1.6**
UZH MLR MLR
comp=N,350nm,9.0s
UZH MLR MLR
comp=E,300nm,9.0s
UZH MLR MLR
comp=Z,250nm,9.0s
STHS Stebnicka Huta 8.71 38 *e*P **Pn 12 09 07.8 0.0**
ARR Arges 8.72 69 ⇑P **Pn 12 09 08.8 +0.8**
OJC Ojcow 8.73 30 *e*P **Pn 12 09 08.2 +0.1**
OJC Ojcow 8.73 30 Pn **Pn 12 09 08.6 +0.5**
OJC Ojcow 8.73 30 P **Pn 12 09 08.6 +0.5**
RZN Rozhen 8.74 94 *e*P **Pn 12 09 08.9 +0.5**
ITM Ithomi 8.85 127 Pn **Pn 12 09 10.6 +0.9**
ITM Ithomi 8.85 127 P **Pn 12 09 11.5 +1.7**
KOLS Kolonicke sedl 8.87 43 *e*P Pn 12 09 15.1 +5.1
TGMR Targu Mures 8.98 62 ⇑P **Pn 12 09 12.4 +1.0**
LOUT Loutraki 8.99 119 P **Pn 12 09 13.2 +1.5**
VOIR 9.02 69 ⇑P **Pn 12 09 13.2 +1.0**
ARCR ARCALIA 9.08 58 ⇑P **Pn 12 09 12.8 -0.1**
RCHB Rochefort 9.09 326 *d*P **Pn 12 09 13.9 +0.9**
RCHB *d*PP **PbPb 12 09 37.9 -4.3**
RCHB *d*S **Sn 12 10 51.9 -3.4**
BTNL Ternell 9.09 331 *d*P **Pn 12 09 15.6 +2.5**
LFF La Frestale 9.13 288 *e*Pn **Pn 12 09 13.6 +0.1**
LFF *e*Sn **Sn 12 10 48.8 -7.5**
comp=Z,21nm,0.8s
MEM Membach 9.15 331 *d*P **Pn 12 09 14.0 +0.1**
MEM *d*S **Sn 12 10 56.0 -0.9**
GIVF Givet 9.22 325 *e*Pn **Pn 12 09 13.3 -1.4**
GIVF *e*Sn **Sn 12 10 52.5 -6.0**
comp=Z,107nm,1.0s
KDZ Kurdzhali 9.26 93 *e*P **Pn 12 09 14.7 -0.7**
BSTI Sart Tilman 9.30 329 *d*P **Pn 12 09 19.1 +3.3**
BSTI *d*S **Sn 12 10 56.4 -4.0**
DOU Dourbes 9.31 324 *d*P **Pn 12 09 16.7 +0.7**
DOU *d*x x 12 09 29.5
DOU *d*S **Sn 12 10 58.5 -2.3**
EPF Esparros 9.32 276 *e*P **Pn 12 09 19.4 +3.2**
EPF *e*Sn **Sn 12 10 53.3 -7.8**
comp=Z,11nm,1.0s
BGES Gesves 9.32 327 *d*x x 12 09 23.6
BGES *d*S **Sn 12 10 55.1 -6.1**
DOPR Dopca 9.38 66 ⇑P **Pn 12 09 17.5 +0.4**
BMRD Maredsous 9.39 326 *d*P **Pn 12 09 19.2 +2.1**
BMRD *d*S **Sn 12 11 00.2 -2.6**
BAIF Baives 9.45 323 *e*Pn **Pn 12 09 18.0 +0.1**
BAIF *e*Sn **Sn 12 10 57.4 -6.8**
comp=Z,40nm,0.8s

RDO Rodhopi 9.46 96 Pn **Pn 12 09 18.1 0.0**
RDO Rodhopi 9.46 96 P **Pn 12 09 17.6 -0.5**
DION Dionisos Attik 9.56 116 P **Pn 12 09 18.7 -0.8**
VLY Voula,Athens 9.60 118 P **Pn 12 09 20.3 +0.3**
MLR Muntele Rosu 9.65 70 ⇓P **Pn 12 09 21.6 +0.7**
MLR Muntele Rosu 9.65 70 Pn **Pn 12 09 20.7 -0.2**
comp=Z,0.8nm,0.3s,baz=240,slow=6.3,SNR=16
comp=Z,13nm,0.8s
MLR Muntele Rosu 9.65 70 Pn 12 09 21.8 +1.0
MLR Muntele Rosu 9.65 70 P **Pn 12 09 21.8 +1.0**
SNF Seneffe 9.75 325 *d*P **Pn 12 09 25.0 +2.9**
VLI Veliai 9.76 125 P **Pn 12 09 24.5 +2.3**
BURAR Bucovina Array 9.83 57 ⇑P **Pn 12 09 24.4 +1.1**
BURAR Bucovina Array 9.83 57 Pn 12 09 24.3 +1.1
BURAR Bucovina Array 9.83 57 P **Pn 12 09 24.4 +1.1**
BUR08 Bucovina Ar. S 9.84 57 Pn 12 09 25.1 +1.7
RAZG Razgrad 9.87 81 ⇑P **Pn 12 09 24.2 +0.5**
NEHR Nehoiu 9.88 70 ⇑P **Pn 12 09 25.3 +1.4**
ETSF Etsaut 9.99 275 *e*P **Pn 12 09 28.8 +3.4**
ETSF *e*Sn **Sn 12 11 09.5 -8.0**
comp=Z,18nm,1.2s
KTHR Kythira 10.11 127 P **Pn 12 09 29.3 +2.3**
MFF Saint Martin d 10.11 296 *e*Pn **Pn 12 09 27.2 +0.2**
MFF *e*Sn **Sn 12 11 13.0 -7.5**
comp=Z,34nm,1.3s
KTHA Kythira Island 10.14 127 P **Pn 12 09 29.6 +2.1**
EDRB Edirne 10.20 91 P **Pn 12 09 27.5 -0.7**
PLOR Plostina 10.21 68 ⇑P **Pn 12 09 29.7 +1.3**
VRI Vrincioaia 10.27 68 ⇑P **Pn 12 09 29.0 -0.2**
LVV L'vov 10.32 44 *e*P **Pn 12 09 32.9 +3.0**
LVV *e*S **Sn 12 11 30.0 +4.4**
LVV pmax pmax
comp=Z,200nm,1.8s
LVV MLR MLR
comp=Z,3μm,9.2s
TESR Tescani 10.37 65 ⇑P **Pn 12 09 30.9 +0.3**
SJPF Ste Jean 10.46 276 *e*P **Pn 12 09 35.1 +3.3**
PRK Paraskevi 10.62 105 P **Pn 12 09 34.4 +0.4**
ICOR Ion Corvin 10.81 78 ⇑P **Pn 12 09 37.0 +0.4**
LDF La Druitiere 10.85 307 *e*P **Pn 12 09 40.6 +3.5**
HARR Harsova 10.94 75 ⇑P **Pn 12 09 38.5 +0.2**
TLBR Topalu 11.01 76 ⇓P **Pn 12 09 39.5 +0.2**
FLN La Foliniere 11.14 307 *e*P Pn 12 09 45.7 +4.6
FLN *e*Sn **Sn 12 11 37.8 -7.9**
comp=Z,39nm,1.1s
APE Apeiranthos 11.18 117⇑*e*P **Pn 12 09 41.8 +0.1**
GRR Gorron 11.20 305 *e*P **Pn 12 09 45.9 +4.0**
TPGR Topolog 11.29 74 ⇑P **Pn 12 09 43.2 -0.1**
IDI Anoyia 11.89 125 ⇑P **Pn 12 09 51.0 -0.5**
IDI Anoyia 11.89 125 Pn **Pn 12 09 51.3 -0.1**
comp=Z,0.7nm,0.3s,baz=1.8,slow=22,SNR=3.4
IDI Sn Sn 12 11 53.5 -11
comp=Z,0.4nm,0.3s,baz=238,slow=8.6,SNR=3.3
IDI LR LR 12 15 07.1
comp=Z,128nm,19.0s,baz=319,slow=41
comp=Z,4.5nm,0.5s
IDI Anoyia 11.89 125 Pn 12 09 51.8 +0.3
MILM Milestii Mici 11.91 65 *e*P **Pn 12 09 51.0 -0.6**
comp=Z,140nm,1.9s
MILM *e*S **Sn 12 12 03.0 -1.6**
MILM LRM MLR 12 15 18.0
comp=Z,900nm,11.0s
MILM Milestii Mici 11.91 65 *e*P **Pn 12 09 51.0 -0.6**
MILM *e*S **Sn 12 12 03.0 -1.6**
MILM pmax pmax
comp=Z,140nm,1.9s
MILM MLR MLR
comp=Z,3μm,12.5s
MILM MLR MLR
comp=N,900nm,11.0s
MILM MLR MLR
comp=E,2μm,12.5s
KIS Kishinev 11.94 64 *e*P **Pn 12 09 51.0 -1.0**
KIS *e*L L 12 14 59.0
KIS LRM MLR 12 15 25.0
comp=E,1μm,9.0s
KIS Kishinev 11.94 64 *e*P **Pn 12 09 51.0 -1.0**
KIS MLR MLR
comp=Z,1μm,11.6s
SGMF Saint Gilles 12.20 302 *e*Pn **Pn 12 09 54.9 -0.6**
QUIF Quistinic 12.47 300 *e*Pn **Pn 12 09 58.1 -1.2**
ESBB Sonseca Array 13.17 262 Pn Pn 12 10 09.5 +0.6
ESDC Sonseca Array 13.18 262 Pn Pn 12 10 06.7 -2.3
comp=Z,0.1nm,0.3s,baz=70,slow=14,SNR=18
ESDC LR LR 12 15 14.9
comp=Z,814nm,18.4s,baz=70,slow=38
comp=Z,4.7nm,1.1s
ESDC Sonseca Array 13.18 262 Pn 12 10 08.6 -0.4
PAB San Pablo 13.50 262 Pn 12 10 12.8 -0.6
PAB San Pablo 13.50 262 P **Pn 12 10 12.8 -0.6**
AKASG Malin Array Be 13.59 49 Pn **Pn 12 10 13.9 -0.6**
comp=Z,0.3nm,0.3s,baz=242,slow=13,SNR=4.8
AKASG LR LR 12 15 54.7
comp=Z,369nm,19.1s,baz=244,slow=39
comp=Z,3.1nm,0.8s
AKBB Malin Array Si 13.59 49 Pn 12 10 13.6 -0.8
AKBB Malin Array Si 13.59 49 P **Pn 12 10 13.6 -0.8**
MDUB Mudurnu 13.78 94 Pn 12 10 17.8 +0.5
ELL Elmali 14.31 109 P **Pn 12 10 27.4 +2.9**
ELL Elmali 14.31 109 P **Pn 12 10 27.5 +2.9**
PBRG Braganca 14.67 273 *e*P **P 12 10 37.5 +1.8**
comp=Z,21nm,1.5s
MVO Moncorvo 15.01 270 *e*P **P 12 10 37.5 -2.0**
comp=Z,38nm,1.8s
MVO A A 12 16 53.4
comp=Z,517nm,18.0s
NACGM Naroch 15.06 32 *e*P **Pn 12 10 33.9 -0.5**
comp=Z,44nm,1.1s,baz=222
MNK Minsk 15.21 35 *i*P **P 12 10 39.2 -2.3**
MNK *i*S **Sn 12 13 28.3 +3.3**
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=N,23nm,0.8s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK MLR MLR
comp=Z,654nm,16.0s
MNK MLR MLR
comp=N,224nm,16.0s
MNK MLR MLR
comp=E,64nm,16.0s
MNK Minsk 15.21 35 *i*P **P 12 10 39.3 -2.3**
comp=E,1.0nm,0.8s
MNK *i*P **P 12 10 39.3 -2.3**
comp=N,23nm,0.8s
MNK *i*P **P 12 10 39.3 -2.3**
comp=Z,15nm,0.8s,baz=226
MNK *i*PP **sP 12 10 47.4 +1.6**
MNK *i*S **Sn 12 13 28.4 +3.3**
MNK *i*SS **S 12 13 42.3 +0.3**
MNK *i*LQ LQ 12 15 06.8
MNK *i*LR LR 12 16 16.1
MNK *i*LRM MLR 12 17 12.4
comp=Z,654nm,15.8s
MNK *i*LRM MLR 12 17 18.1
comp=N,224nm,15.8s
MNK *i*LRM MLR 12 17 19.9
comp=E,64nm,15.8s
POLO Lamas de Olo 15.53 272 *e*P **P 12 10 43.9 -1.4**
comp=E,13nm,1.8s
MTE Manteigas 15.58 268 *e*P **P 12 10 47.0 +1.1**
comp=E,32nm,1.2s
MTE A A 12 17 25.5
comp=E,824nm,18.0s
MTE Manteigas 15.58 268 P **P 12 10 44.0 -1.9**
PCAB Cabril 15.63 273 *e*P **P 12 10 47.4 +1.0**
PCBR Castelo Branco 15.69 266 *e*P **Pn 12 10 44.1 +1.2**
comp=E,19nm,1.1s
PVIS Viseu 15.76 269 *e*P **P 12 10 49.3 +1.5**
comp=E,26nm,1.2s
PMRV Marv??o 15.76 264 *e*P **P 12 10 48.9 +1.1**
comp=E,20nm,1.4s
PMRV A A 12 17 27.7
comp=E,705nm,16.0s
PGAV Gavieira, Arco 15.77 274 A A 12 17 37.3
comp=E,632nm,18.0s
BR131 Keskin Array S 15.79 94 P **P 12 10 47.6 -0.7**
BR131 Keskin Array S 15.79 94 P **P 12 10 47.6 -0.7**
BR131 pmax pmax
comp=Z,23nm,1.2s
BRTR Keskin Array B 15.79 94 Pn **Pn 12 10 44.5 +0.1**
comp=Z,0.1nm,0.3s,baz=284,slow=11,SNR=7.3
BRTR LR LR 12 17 50.5
comp=Z,327nm,19.7s,baz=306,slow=41
comp=Z,3.2nm,0.9s
BRTR Keskin Array B 15.79 94 P **P 12 10 48.4 +0.1**
BRTR Keskin Array B 15.79 94 P **P 12 10 48.4 +0.1**
PBAR Barrancos 15.96 260 *e*P **P 12 10 51.1 +1.2**
comp=Z,25nm,1.6s
PESTR Estremoz 16.10 263 *e*P **P 12 10 52.1 +0.6**
comp=Z,43nm,2.0s
PESTR Estremoz 16.10 263 P **P 12 10 51.7 +0.2**
COI Coimbra 16.27 268 P **P 12 10 54.1 +0.7**
COI IAmb IAmb 12 10 59.8
comp=Z,38nm,0.8s
COI Coimbra 16.27 268 P **P 12 10 54.1 +0.7**
COI pmax pmax
comp=Z,38nm,0.9s
EKA Eskdalemuir Ar 16.35 326 Pn **Pn 12 10 50.4 -0.9**
baz=138,slow=14
comp=Z,0.5nm,0.4s
PCAS Casmilo, Conde 16.38 268 *e*P **P 12 10 56.2 +1.5**
comp=Z,52nm,1.7s
PMTG Montargil 16.49 264 *e*P **P 12 10 57.4 +1.5**
comp=Z,54nm,2.0s
EVO Evora 16.53 262 *e*P **P 12 10 58.5 +2.2**
comp=Z,27nm,2.0s
PVAQ Vaqueiros 16.76 258 A A 12 18 12.4
comp=Z,268nm,18.0s
PSBE So Bento 16.76 266 *e*P **P 12 10 59.0 +0.1**
comp=Z,63nm,1.7s
KONO Kongsberg 16.98 354⇑*e*P **P 12 11 01.1 0.0**
KONO pmax pmax
comp=Z,31nm,1.5s
MDT Midelt 17.12 240 P **P 12 11 02.7 -0.4**
comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=6.4
MDT LR LR 12 16 37.5
comp=Z,144nm,19.4s,baz=52,slow=34
comp=Z,2.2nm,0.8s
HFS Hagfors 17.33 1 P **Pn 12 11 02.8 -0.8**
comp=Z,0.2nm,0.3s,baz=167,slow=9.1,SNR=8.7
HFS LR LR 12 18 56.4
comp=Z,403nm,18.1s,baz=190,slow=42
comp=Z,6.3nm,0.8s
TOKA Tokat 17.71 90 P **P 12 11 12.9 +3.6**
VSU Vasula 17.84 24⇑*e*P **Pn 12 11 08.8 -1.1**
VSU pmax pmax
comp=Z,135nm,0.8s
NC602 NORSAR Array S 17.96 358 P **P 12 11 14.1 +2.2**
NC602 IAmb IAmb 12 11 17.5
comp=Z,60nm,1.2s
NAO01 NORSAR Array S 18.09 357 P **P 12 11 13.9 +0.5**
NAO01 IAmb IAmb 12 11 25.4
comp=Z,82nm,1.2s
NB2 NORSAR Subarra 18.27 357 P **Pn 12 11 13.5 -1.8**
comp=Z,16nm,1.1s,baz=175,slow=11
NOA NORSAR Array B 18.27 357 P **Pn 12 11 14.4 -0.9**
baz=174,slow=12,SNR=8.7
NOA LR LR 12 19 34.0
comp=Z,329nm,19.7s,baz=175,slow=42
comp=Z,1.9nm,0.8s
NB201 NORSAR Array S 18.28 357 P **Pn 12 11 15.1 -0.3**
NC405 NORSAR Array S 18.33 358 P **Pn 12 11 15.0 -0.9**
NC405 IAmb IAmb 12 11 37.8
comp=Z,66nm,1.5s
NC303 NORSAR Array S 18.45 357 P **P 12 11 16.1 -1.2**
NC204 NORSAR Array S 18.53 357 P **Pn 12 11 18.2 -0.2**
GAZ Gaziantep 19.33 99 P **P 12 11 26.9 -0.4**
VSR Storozhevoye 19.61 56 *e*P **P 12 11 29.1 -1.0**
VSR pmax pmax
comp=Z,20nm,1.4s
OBN Obninsk 19.62 43 P **P 12 11 28.8 -1.4**
comp=Z,0.9nm,0.3s,baz=90,slow=6.3,SNR=7.1
comp=Z,7.3nm,0.7s
OBN Obninsk 19.62 43 P **P 12 11 28.2 -2.1**
OBN IAmb IAmb 12 11 31.1
comp=Z,38nm,0.9s
OBN Obninsk 19.62 43*de*P **P 12 11 29.0 -1.2**
OBN pmax pmax
comp=Z,116nm,2.5s
OBN MLR MLR
comp=Z,384nm,12.0s
VORR Voronezh 19.76 54 *e*P **P 12 11 30.1 -1.6**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 19.88 52 *e*P **P 12 11 31.1 -1.9**
LPSR pmax pmax
comp=Z,20nm,1.0s
FINES FINESS Array B 20.21 18 P **P 12 11 35.8 -0.8**
comp=Z,14nm,0.7s,baz=203,slow=8.3,SNR=28
FINES LR LR 12 19 51.0
comp=Z,337nm,19.0s,baz=208,slow=38
comp=Z,14nm,0.7s
FINES FINESS Array B 20.21 18 P **P 12 11 36.4 -0.2**
FINES FINESS Array B 20.21 18 P **P 12 11 36.4 -0.2**
FIA1 FINESS Array S 20.22 18 P **P 12 11 36.6 0.0**
FIA1 IAmb IAmb 12 11 53.8
comp=Z,48nm,1.3s
MOS Moscow 20.45 42 *e*P **P 12 11 37.6 -1.7**
MOS pmax pmax
comp=Z,76nm,1.1s
MOS MLR MLR
comp=Z,1μm,11.0s
TAM Tamanrasset 20.94 200 P Pn 12 11 48.2 +0.7
TAM pmax pmax
comp=Z,12nm,1.0s
VRH Novokhopyorsk 21.17 57 *e*P **P 12 11 46.0 -1.0**
VRH pmax pmax
comp=Z,70nm,1.3s
VALR Valaam 21.42 24*de*P **P 12 11 48.8 -0.8**
VALR pmax pmax
comp=Z,37nm,0.9s
KIV Kislovodsk 21.53 77 P **P 12 11 51.5 +0.4**
KIV Kislovodsk 21.53 77 *e*P **P 12 11 51.5 +0.4**
KIV pmax pmax
comp=Z,70nm,1.0s
KIV MLR MLR
comp=Z,114nm,14.0s
KVAR Kislovodsk Arr 21.53 77 P **P 12 11 51.9 +0.8**
comp=Z,13nm,0.9s,baz=250,slow=15,SNR=3.7
comp=Z,13nm,0.9s
SHA1 Shidzhatmaz 21.54 77*d i*P **P 12 11 52.3 +1.0**
ASF Jabal al Asfar 21.64 112 P **P 12 11 53.8 +1.4**
comp=Z,8.6nm,0.8s,baz=298,slow=2.8,SNR=11
ASF LR LR 12 21 57.2
comp=Z,206nm,18.3s,baz=292,slow=41
comp=Z,8.6nm,0.8s
NEY Neytrino 21.65 79⇑*e*P **P 12 11 53.8 +1.3**
NEY pmax pmax
comp=Z,6.0nm,1.0s
GOF Gofitskoye 21.66 74⇑*e*P **P 12 11 53.7 +1.3**
KBZ Khabaz 21.71 77 P **P 12 11 54.1 +1.2**
comp=Z,29nm,0.9s,baz=308,slow=8.2,SNR=29
KBZ LR LR 12 23 03.0
comp=Z,194nm,18.9s,baz=296,slow=44
comp=Z,29nm,0.9s
KBZ Khabaz 21.71 77*c i*P **P 12 11 53.9 +1.0**
KBZ pmax pmax
comp=Z,48nm,1.1s
MARD Mardin 21.88 95 P **P 12 11 56.6 +1.7**
MARD IAmb IAmb 12 11 60.0
comp=Z,40nm,1.3s
EIL Elat 21.94 120 P **P 12 11 57.6 +2.1**
comp=Z,3.7nm,0.6s,baz=358,slow=12,SNR=2.4
comp=Z,3.7nm,0.6s
ONI Oni 22.30 80 P **P 12 12 01.0 +1.7**
ONI IAmb IAmb 12 12 05.5
comp=Z,32nm,0.9s
ONI Oni 22.30 80 P **P 12 12 01.0 +1.7**
ONI pmax pmax
comp=Z,32nm,0.9s
GURO Guroymak-BITLI 22.34 91 P **P 12 12 00.4 +0.5**
GURO IAmb IAmb 12 12 10.4
comp=Z,52nm,1.5s
ZEI Tsey 22.59 80 *e*P **P 12 12 03.6 +1.0**
ZEI pmax pmax
comp=Z,42nm,1.8s
KLMR Klimovskoe 24.08 32 *e*P **P 12 12 15.2 -1.9**
KLMR S **S 12 16 34.8 +0.5**
KLMR pmax pmax
comp=Z,57nm,1.3s
KLMR MLR MLR
comp=Z,654nm,15.0s
KLMR Klimovskoe 24.08 32 *e*P **P 12 12 15.2 -1.9**
KLMR *e*P **P 12 12 15.2 -1.9**
KLMR *e*P **P 12 12 15.2 -1.9**
KLMR AMP 12 12 20.2
comp=Z,57nm,1.3s
KLMR S **S 12 16 34.9 +0.6**
KLMR S **S 12 16 34.9 +0.6**
KLMR LQ LQ 12 20 27.4
KLMR LQ LQ 12 20 27.4
KLMR LR LR 12 21 27.5
KLMR AMP 12 22 53.5
comp=Z,654nm,15.0s
BELG Belogornoye 24.99 55 P **P 12 12 25.3 -0.1**
comp=Z,62nm,0.9s,baz=14,slow=4.2,SNR=16
comp=Z,62nm,0.9s
BELG Belogornoye 24.99 55*c i*P **P 12 12 26.3 +0.9**
BELG pmax pmax
comp=Z,12nm,0.9s
AKT Akhty 25.65 81 *e*P **P 12 12 32.1 +0.4**
AKT *e* 12 13 08.4
AKT pmax pmax
comp=Z,56nm,1.3s
PRGR Permogore 26.98 35 *e*P **P 12 12 45.1 +1.7**
PRGR pmax pmax
comp=Z,14nm,0.6s
KIRV Kirov 27.47 42 P **P 12 12 46.4 -1.4**
comp=Z,6.5nm,0.5s,baz=263,slow=9.8,SNR=4.1
KIRV LR LR 12 24 23.0
comp=Z,228nm,19.9s,baz=247,slow=38
comp=Z,6.5nm,0.5s
KIRV Kirov 27.47 42⇑*e*P **P 12 12 47.3 -0.5**
ARCES ARCESS Array B 27.54 9 P **P 12 12 47.3 -1.1**
comp=Z,1.9nm,0.8s,baz=207,slow=4.0,SNR=4.4
ARCES LR LR 12 24 28.6
comp=Z,274nm,18.4s,baz=206,slow=38
comp=Z,1.9nm,0.8s
LVZ Lovozero 27.65 17⇑*e*P **P 12 12 50.0 +0.6**
LVZ pmax pmax
comp=Z,12nm,1.2s
JMIC Jan Mayen 30.21 346 LR LR 12 26 53.3
comp=Z,104nm,19.8s,baz=80,slow=40
TORD Torodi Ar. Bea 31.16 202 P **P 12 13 20.6 -0.3**
comp=Z,7.1nm,0.9s,baz=16,slow=8.5,SNR=40
TORD LR LR 12 27 08.9
comp=Z,478nm,18.1s,baz=344,slow=39
comp=Z,7.1nm,0.9s
TORD Torodi Ar. Bea 31.16 202 P **P 12 13 20.4 -0.5**
AKTO Aktyubinsk 31.40 60 LR LR 12 27 15.4
comp=Z,67nm,18.2s,baz=186,slow=39
ARU Arti 31.84 49 LR LR 12 26 53.0
comp=Z,229nm,19.9s,baz=256,slow=38
ARU Arti 31.84 49 P **P 12 13 26.0 -0.6**
ARU Arti 31.84 49*c i*P **P 12 13 26.1 -0.5**
ARU S **S 12 18 38.1 +1.2**
ARU SS **SnSn 12 20 23.8 -0.4**
ARU pmax pmax
comp=Z,28nm,0.7s
ARU MLR MLR
comp=Z,419nm,14.0s
ABKAR Akbulak array 32.75 62 P **P 12 13 34.4 -0.3**
ABKAR Akbulak array 32.75 62 P **P 12 13 34.5 -0.3**
ABKAR IAmb IAmb 12 13 35.3
comp=Z,4.6nm,0.9s
SVE Sverdlovsk 33.02 48⇑*e*P **P 12 13 37.3 +0.4**
SVE pmax pmax
comp=Z,26nm,0.9s
SVE MLR MLR
comp=Z,555nm,13.0s
GEYT Alibeck 34.37 83 P **P 12 13 50.1 +1.1**
comp=Z,6.2nm,0.7s,baz=289,slow=9.2,SNR=11
GEYT LR LR 12 32 26.2
comp=Z,132nm,19.2s,baz=320,slow=44
comp=Z,6.2nm,0.7s
GEYT Alibeck 34.37 83 P **P 12 13 49.5 +0.6**
GYA0B ALIBECK ARRAY 34.37 83 P **P 12 13 49.1 +0.1**
GYA0B IAmb IAmb 12 14 07.3
comp=Z,15nm,1.0s
SPITS Spitsbergen Ar 35.49 1 LR LR 12 28 31.9
comp=Z,87nm,19.4s,baz=158,slow=36
BBTS Babate 37.85 231 LR LR 12 29 43.7
comp=Z,182nm,18.5s,baz=46,slow=36
BRVK Borovoye 38.71 54 P **P 12 14 26.7 +0.9**
BRVK IAmb IAmb 12 14 27.5
comp=Z,20nm,0.8s
BRVK Borovoye 38.71 54 P **P 12 14 26.7 +0.9**
BRVK pmax pmax
comp=Z,20nm,0.8s
BVAR Borovoye Array 38.78 54 LR LR 12 31 38.8
comp=Z,175nm,19.7s,baz=279,slow=38
DBIC Dimbokro 39.33 209 P **P 12 14 31.8 +0.6**
comp=Z,5.2nm,1.0s,baz=337,slow=8.1,SNR=3.6
DBIC LR LR 12 31 47.9
comp=Z,305nm,18.8s,baz=5.0,slow=38
comp=Z,5.2nm,1.0s
BRZS Berezniki 40.77 59 *e*P **P 12 14 41.9 -1.0**
BRZS Berezniki 40.77 59 *e*P **P 12 14 41.1 -1.8**
baz=59
SFJD Kangerlussuaq 41.31 328 P **P 12 14 46.2 -0.9**
comp=Z,5.1nm,0.7s,baz=51,slow=6.5,SNR=1.7
comp=Z,5.1nm,0.7s
KK31 Karatay Array 41.33 69 P **P 12 14 48.7 +1.0**
KK31 IAmb IAmb 12 14 50.7
comp=Z,25nm,1.3s
KK31 Karatay Array 41.33 69 P **P 12 14 48.7 +1.0**
KK31 pmax pmax
comp=Z,25nm,1.3s
KKAR Karatay Array 41.33 69 P **P 12 14 48.6 +0.9**
KKAR Karatay Array 41.33 69 P **P 12 14 48.6 +0.9**
IUG Iuzhnay 41.34 71 *e*P **P 12 14 47.3 -0.5**
IUG Iuzhnay 41.34 71 *e*P **P 12 14 47.3 -0.5**
baz=71
CHGR Chuyangaron 42.06 76 P **P 12 14 54.6 +0.8**
CHGR IAmb IAmb 12 14 55.5
comp=Z,22nm,0.9s
CHGR Chuyangaron 42.06 76 P **P 12 14 54.6 +0.8**
CHGR pmax pmax
comp=Z,22nm,0.9s
WSAR Wadi Sarin 42.33 103 LR LR 12 37 08.3
comp=Z,61nm,18.9s,baz=331,slow=43
BTK Batken 42.67 73 P **P 12 14 59.9 +1.1**
BTK Batken 42.67 73 P **P 12 14 59.9 +1.1**
BTK pmax pmax
comp=Z,8.0nm,1.0s
GAR Garm 42.74 75 P **P 12 15 00.6 +1.3**
BTLS Baital 43.07 65 *e*P **P 12 15 00.8 -1.0**
BTLS Baital 43.07 65 *e*P **P 12 15 00.8 -1.0**
baz=65
SGDS Sogindy 44.02 67 *e*P **P 12 15 08.9 -0.6**
SGDS Sogindy 44.02 67 *e*P **P 12 15 09.0 -0.6**
baz=67
AAK Ala-Archa 44.23 68 LR LR 12 38 36.1
comp=Z,272nm,18.2s,baz=311,slow=43
AAK Ala-Archa 44.23 68 P **P 12 15 12.4 +1.0**
AAK IAmb IAmb 12 15 15.8
comp=Z,14nm,1.3s
AAK Ala-Archa 44.23 68*c i*P **P 12 15 12.5 +1.1**
AAK pmax pmax
comp=Z,26nm,2.5s
KURK Kurchatov 44.26 56 P **P 12 15 10.8 -0.4**
KURK IAmb IAmb 12 15 12.1
comp=Z,8.4nm,0.8s
KURK Kurchatov 44.26 56*ce*P **P 12 15 11.0 -0.3**
KURK pmax pmax
comp=Z,22nm,2.5s
KUU Kurty 45.01 66 *e*P **P 12 15 16.9 -0.5**
KUU Kurty 45.01 66 *e*P **P 12 15 16.9 -0.5**
baz=66
NRIK Noril'sk 45.34 29 P **P 12 15 20.6 +1.0**
comp=Z,4.7nm,0.8s,baz=284,slow=6.7,SNR=6.4
NRIK LR LR 12 37 11.6
comp=Z,205nm,18.0s,baz=286,slow=40
comp=Z,4.7nm,0.8s
NRIK Noril'sk 45.34 29 P **P 12 15 21.0 +1.4**
NRIK IAmb IAmb 12 15 25.6
comp=Z,9.7nm,1.2s
NRIK Noril'sk 45.34 29*ce*P **P 12 15 21.3 +1.7**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
TNSS Tian-Shan 45.75 67 *e*P **P 12 15 23.5 -0.2**
TNSS Tian-Shan 45.75 67 *e*P **P 12 15 23.5 -0.2**
baz=67
MDOK Medeo 45.77 67 *e*P **P 12 15 22.8 -0.8**
MDOK Medeo 45.77 67 *e*P **P 12 15 22.8 -0.8**
baz=67
MBAR Mbarara 46.08 155*ce*P P 12 15 32.0 +5.8
MBAR pmax pmax
comp=Z,6.0nm,1.7s
KSH Kashi 46.51 72 P **P 12 15 30.5 +1.0**
KPKS Kokpek 46.75 66 *e*P **P 12 15 30.6 -0.6**
KPKS Kokpek 46.75 66 *e*P **P 12 15 30.6 -0.6**
baz=66
ZAA0 Zalesovo Array 46.98 50 P **P 12 15 33.1 +0.4**
ZAA0 IAmb IAmb 12 15 33.7

comp=Z,5.6nm,0.9s
ZALV Zalesovo Beam 46.98 50 P **P 12 15 32.9 +0.2**
comp=Z,2.8nm,0.5s,baz=282,slow=7.7,SNR=17
ZALV LR LR 12 37 56.0
comp=Z,166nm,19.2s,baz=260,slow=40
comp=Z,2.8nm,0.5s
ZALV Zalesovo Beam 46.98 50 P **P 12 15 32.5 -0.2**
UZB Uzynbulak 47.10 66 *e*P **P 12 15 33.0 -1.0**
UZB Uzynbulak 47.10 66 *e*P **P 12 15 33.0 -1.0**
baz=66
NIL Nilore 47.28 80 P **P 12 15 36.3 +0.9**
NIL Nilore 47.28 80 P **P 12 15 36.3 +0.9**
NIL pmax pmax
comp=Z,17nm,0.9s
MK31 Makanchi Array 47.84 60 P **P 12 15 39.5 -0.1**
MK31 IAmb IAmb 12 15 44.0
comp=Z,6.2nm,0.8s
MK31 Makanchi Array 47.84 60 P **P 12 15 39.5 -0.1**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 47.84 60 P **P 12 15 40.0 +0.5**
comp=Z,5.5nm,0.6s,baz=286,slow=5.9,SNR=28
MKAR LR LR 12 39 47.1
comp=Z,203nm,18.3s,baz=303,slow=41
comp=Z,5.5nm,0.6s
MKAR Makanchi Array 47.84 60 P **P 12 15 39.1 -0.5**
ZSN Zaisan 49.22 58 *e*P **P 12 15 49.9 -0.3**
ZSN Zaisan 49.22 58 *e*P **P 12 15 50.0 -0.3**
baz=58
EUNU Eureka 49.76 347 P **P 12 15 54.4 +0.5**
EUNU IAmb IAmb 12 16 08.8
comp=Z,7.4nm,1.1s
DGZ Jazzator, Alta 49.94 55*d i*P **P 12 15 56.9 +1.1**
DGZ pmax pmax
comp=Z,8.0nm,0.9s
SCHQ Schefferville 51.15 313 P **P 12 16 03.0 -1.7**
comp=Z,4.2nm,0.8s,baz=86,slow=8.7,SNR=1.9
comp=Z,4.2nm,0.8s
WMQ Urumqi 52.54 62 *e*P **P 12 16 16.5 +1.2**
RES Resolute Bay 53.65 342 LR LR 12 40 24.3
comp=Z,71nm,18.1s,baz=24,slow=37
TIXI Tiksi 57.25 20 LR LR 12 45 26.1
comp=Z,175nm,18.1s,baz=181,slow=40
TIXI Tiksi 57.25 20⇓*e*P **P 12 16 51.9 +3.0**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
DANN Dangsing 57.72 80 *e*P **P 12 16 53.1 -0.1**
comp=Z,22nm,0.8s
KOLN Koldanda 57.94 80 *e*P **P 12 16 54.2 -0.4**
comp=Z,11nm,2.2s
GKN Gorkha 58.55 80 *e*P **P 12 16 58.5 -0.4**
DMN Daman 59.12 80 *e*P **P 12 17 02.2 -0.7**
comp=Z,34nm,0.9s
PKIN Phulchoki 59.35 80 *e*P **P 12 17 04.0 -0.5**
comp=Z,42nm,1.2s
PKI Pulchoki 59.36 80 *e*P **P 12 17 03.9 -0.8**
comp=Z,15nm,0.9s
GUN Gumba 59.51 79 *e*P **P 12 17 05.3 -0.4**
comp=Z,30nm,0.8s
JIRN Jiri 59.87 79 *e*P **P 12 17 07.7 -0.6**
comp=Z,26nm,0.8s
RAMN Ramite 60.58 79 *e*P **P 12 17 11.9 -1.1**
comp=Z,26nm,0.7s
TSUM Tsumeb 61.86 175 LR LR 12 45 44.5
comp=Z,84nm,18.4s,baz=294,slow=38
SONM Songino Array 61.87 50 P **P 12 17 22.3 +1.1**
comp=Z,9.4nm,0.9s,baz=293,slow=8.5,SNR=40
SONM LR LR 12 46 15.0
comp=Z,162nm,18.6s,baz=330,slow=38
comp=Z,9.4nm,0.9s
SONM Songino Array 61.87 50 P **P 12 17 22.1 +0.8**
SONM Songino Array 61.87 50 P **P 12 17 22.1 +0.8**
SONM pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 62.22 49 P **P 12 17 24.7 +1.0**
ULN Ulaanbaatar 62.22 49 P **P 12 17 24.7 +1.0**
ULN pmax pmax
comp=Z,13nm,1.4s
GTA Gaotai 62.59 61 ⇓P **P 12 17 27.3 +1.0**
GTA pP sP 12 17 31.5 +0.7
GTA sP pP 12 17 34.3 +4.8
SADO Sadowa 62.90 307 LR LR 12 43 31.9
comp=Z,99nm,18.6s,baz=20,slow=35
YAK Yakutsk 63.78 28 P **P 12 17 34.1 +0.5**
RCBR Riachuelo 65.64 235 LR LR 12 45 14.0
comp=Z,64nm,18.0s,baz=154,slow=35
INK Inuvik 66.39 347 P **P 12 17 49.1 -1.3**
comp=Z,4.6nm,1.0s,baz=343,slow=6.0,SNR=14
INK LR LR 12 49 12.3
comp=Z,25nm,18.3s,baz=274,slow=38
comp=Z,4.6nm,1.0s
BRDH Bariadhala 66.80 80 LR LR 12 56 06.7
comp=Z,96nm,18.1s,baz=204,slow=44
YKA Yellowknife Ar 66.96 336 P **P 12 17 53.6 -0.6**
comp=Z,3.5nm,0.8s,baz=36,slow=5.1,SNR=4.2
YKA LR LR 12 47 35.9
comp=Z,76nm,19.5s,baz=302,slow=36
comp=Z,3.5nm,0.8s
LZH Lanzhou 67.12 62 *e*P **P 12 17 56.5 +0.7**
LZH pP sP 12 18 00.0 -0.4
LZH sP pP 12 18 02.5 +3.3
LBTB Lobatse 68.49 168 LR LR 12 49 31.1
comp=Z,45nm,20.0s,baz=344,slow=37
ULM Lac du Bonnet 68.51 319 LR LR 12 47 32.3
comp=Z,100nm,18.1s,baz=101,slow=36
PALK Pallekele 68.74 100 LR LR 12 51 45.3
comp=Z,38nm,18.6s,baz=97,slow=39
MDP Montagnes des 68.80 257 LR LR 12 44 02.3
comp=Z,38nm,19.0s,baz=108,slow=32
HHC Hu-ho-hao-te 68.99 53 *e*P **P 12 18 06.8 -0.6**
FYU Fort Yukon 69.67 351 P **P 12 18 12.4 +1.4**
SEY Seymchan 69.69 19⇓*e*P **P 12 18 13.9 +2.6**
SEY pmax pmax
comp=Z,15nm,1.7s
I29M Ogilvie Camp, 69.86 348 P **P 12 18 12.6 +0.3**
I29M IAmb IAmb 12 18 17.0
comp=Z,4.3nm,0.8s
SJG San Juan 70.09 277 LR LR 12 43 28.7
comp=Z,40nm,21.6s,baz=80,slow=31
TKL Tuckaleechee C 71.21 301 LR LR 12 49 29.3
comp=Z,40nm,18.3s,baz=66,slow=36
DAWY Dawson 71.24 348 P **P 12 18 21.4 +0.6**
DAWY IAmb IAmb 12 18 29.0
comp=Z,13nm,1.5s
H21K Melozitna Rive 71.29 354 P **P 12 18 22.6 +1.5**
J26L Joseph Creek 71.44 350 P **P 12 18 23.0 +0.9**
J26L IAmb IAmb 12 18 29.6
comp=Z,6.6nm,1.1s
ILAR Eielson Array 71.59 351 P **P 12 18 23.7 +0.9**
comp=Z,1.4nm,0.8s,baz=7.6,slow=5.0,SNR=15
comp=Z,1.4nm,0.8s
PZH PanZhiHua 71.61 71 P **P 12 18 24.3 +0.6**
BOSA Boshof 71.97 169 P **P 12 18 24.9 -0.6**
comp=Z,3.0nm,0.8s,baz=0.2,slow=7.4,SNR=5.0
BOSA LR LR 12 53 48.0
comp=Z,72nm,18.1s,baz=9.0,slow=39
comp=Z,3.0nm,0.8s
BOSA Boshof 71.97 169 P **P 12 18 25.0 -0.6**
MA2 Magadan 72.18 21 LR LR 12 55 01.5
comp=Z,158nm,18.1s,baz=314,slow=40
T47A Sharon Grove 72.42 304 P **P 12 18 26.8 -1.5**
T47A IAmb IAmb 12 18 27.6
comp=Z,7.6nm,0.8s
KMI Kunming 73.17 71 ⇓P **P 12 18 35.5 +2.3**
DHY Denali Highway 73.29 351 P **P 12 18 33.9 +0.7**
P33M Teslin, Yukon 73.57 343 P **P 12 18 35.3 +0.5**
P33M IAmb IAmb 12 18 40.7
comp=Z,4.7nm,0.8s
KLR Kul'dur 73.75 37 LR LR 12 54 46.2
comp=Z,210nm,19.1s,baz=320,slow=39
WAPA Wapiti River 74.28 334 P **P 12 18 39.4 +0.4**
CM31 Chiang Mai Arr 74.75 79 P **P 12 18 43.0 +0.8**
CM31 IAmb IAmb 12 18 45.2
comp=Z,9.2nm,0.9s
CMAR Chiang Mai Arr 74.75 79 P **P 12 18 44.1 +1.9**
comp=Z,3.9nm,0.8s,baz=303,slow=7.3,SNR=30
CMAR LR LR 12 59 13.8
comp=Z,35nm,18.0s,baz=170,slow=42
comp=Z,3.9nm,0.8s
CMAR Chiang Mai Arr 74.75 79 P **P 12 18 43.9 +1.7**
Y45A Yeager Farm, C 75.97 303 P **P 12 18 48.0 -1.1**
EGMT Eagleton 76.43 325 P **P 12 18 52.0 +0.5**
WHN Wuhan 77.41 60 ⇑P P 12 19 08.5 +11
USRK Ussuriysk Ar. 77.62 40 P **P 12 18 58.7 +0.5**
comp=Z,3.8nm,0.8s,baz=284,slow=5.0,SNR=8.4
comp=Z,3.8nm,0.8s
KDAK Kodiak Island 79.03 352 P **P 12 19 06.2 +0.5**
comp=Z,4.2nm,0.8s,baz=355,slow=12,SNR=1.3
comp=Z,4.2nm,0.8s
SDV Santo Domingo 79.39 272 LR LR 12 46 42.5
comp=Z,62nm,21.2s,baz=80,slow=30
PETK Petropavlovsk- 79.71 21 LR LR 12 59 21.9
comp=Z,115nm,18.1s,baz=332,slow=39
DLMT Dillon 79.73 324 P **P 12 19 11.1 +1.1**
DLMT IAmb IAmb 12 19 15.8
comp=Z,6.2nm,0.8s
C09A Chrisman Ranch 80.05 329 P **P 12 19 11.7 +0.3**
C09A IAmb IAmb 12 19 12.9
comp=Z,5.9nm,0.9s
YSS Yuzh-Sakhalins 80.13 32⇑*e*P **P 12 19 15.6 +3.7**
YSS pmax pmax
comp=Z,109nm,2.5s
PDAR Pinedale Array 80.42 321 P **P 12 19 13.2 -0.7**
comp=Z,0.4nm,0.6s,baz=36,slow=6.2,SNR=4.3
comp=Z,0.4nm,0.6s
KSAR Wonju Array Be 80.56 47 P **P 12 19 16.0 +1.6**
KSAR Wonju Array Be 80.56 47 P **P 12 19 16.0 +1.6**
KSRS Korea Array 80.57 47 P **P 12 19 16.2 +1.8**
comp=Z,3.4nm,0.9s,baz=335,slow=4.6,SNR=8.1
comp=Z,3.4nm,0.9s
BDFB Brasilia 80.70 239 P **P 12 19 15.1 -0.3**
comp=Z,3.1nm,0.8s,baz=24,slow=7.0,SNR=4.1
comp=Z,3.1nm,0.8s
E09A Wood Farm, Sta 81.06 328 P **P 12 19 17.3 +0.4**
BMO Blue Mountains 82.10 327 P **P 12 19 22.0 -0.6**
BMO IAmb IAmb 12 19 27.6
comp=Z,7.5nm,0.9s
BMO Blue Mountains 82.10 327 P **P 12 19 22.0 -0.6**
BMO pmax pmax
comp=Z,8.0nm,0.9s
RDMU Red Mountain 82.13 320 P **P 12 19 22.9 -0.1**
RDMU IAmb IAmb 12 19 43.2
comp=Z,6.1nm,1.2s
HWUT Hardware Ranch 82.25 321 P **P 12 19 24.3 +0.7**
SDCO Great Sand Dun 82.28 315 P **P 12 19 23.6 -0.3**
MFID Camas Ranch 82.67 325 P **P 12 19 26.3 +0.7**
PV13 Radium Mtn., P 83.65 318 P **P 12 19 31.0 +0.1**
SRU San Rafael Swe 83.73 319 P **P 12 19 30.3 -1.0**
SRU IAmb IAmb 12 19 44.6
comp=Z,3.7nm,0.8s
SRU San Rafael Swe 83.73 319 P **P 12 19 30.3 -1.0**
SRU pmax pmax
comp=Z,4.0nm,0.8s
ELK Elko 84.60 323 LR LR 12 57 11.3
comp=Z,50nm,18.5s,baz=44,slow=36
ROSC El Rosal 84.80 272 LR LR 12 52 58.3
comp=Z,140nm,21.8s,baz=84,slow=32
ANMO Albuquerque 84.91 314 LR LR 12 56 37.0
comp=Z,105nm,18.9s,baz=46,slow=35
MJAR Matsushiro Arr 86.54 41 P **P 12 19 44.8 -0.4**
comp=Z,1.1nm,0.8s,baz=307,slow=2.6,SNR=2.3
MJAR LR LR 13 02 29.7
comp=Z,106nm,19.5s,baz=322,slow=38
comp=Z,1.1nm,0.8s
YBH Yreka Blue Hor 86.86 328 LR LR 12 58 19.7
comp=Z,50nm,18.7s,baz=14,slow=36
TXAR Lajitas Array 87.62 309 P **P 12 19 50.5 -0.1**
comp=Z,0.3nm,0.7s,baz=57,slow=7.9,SNR=3.4
TXAR LR LR 12 59 16.7
comp=Z,39nm,18.5s,baz=38,slow=36
comp=Z,0.3nm,0.7s
JOW Kunigami 88.63 54 LR LR 13 03 35.3
comp=Z,94nm,19.6s,baz=164,slow=38
SIV San Ignacio 89.53 248 LR LR 12 57 50.1
comp=Z,26nm,19.7s,baz=81,slow=34
PFO Pinyon Flats O 90.99 320 LR LR 13 03 06.3
comp=Z,69nm,18.9s,baz=20,slow=37
CPUP Villa Florida 94.42 238 LR LR 13 03 34.9
comp=Z,48nm,18.2s,baz=38,slow=36
LPAZ La Paz 94.61 252 LR LR 13 00 09.8
comp=Z,31nm,19.6s,baz=70,slow=34
ATAH Atahualpa 95.84 266 LR LR 13 02 17.8
comp=Z,61nm,19.2s,baz=17,slow=35
JCJ Chichijima 96.15 44 LR LR 13 08 18.0
comp=Z,39nm,19.0s,baz=104,slow=38
NNA Nana 97.95 261 LR LR 12 58 59.0
comp=Z,26nm,20.6s,baz=12,slow=32
LEM Lembang 97.95 92 LR LR 13 08 38.1
comp=Z,27nm,20.0s,baz=222,slow=38
LVC Limon Verde 99.42 248 LR LR 13 02 59.0
comp=Z,16nm,19.0s,baz=25,slow=34
WRA Warramunga Arr 126.10 84 PKP **PKPdf 12 26 04.3 -0.3**
comp=Z,0.4nm,0.8s,baz=289,slow=2.6,SNR=2.2
ASAR Alice Springs 128.06 88 PKP **PKPdf 12 26 07.2 -1.1**
comp=Z,0.6nm,0.9s,baz=318,slow=1.5,SNR=4.7

PRU ***30*** *12:14:52.0±0.0, 42.75N×13.52E, h10km*
ROM 30 12:14:50.8±0.1, 42.841N±0.004×13.087E±0.007,
h10km, ML2.9/38, 25C-11D, Error ellipse: s-maj=0.6km
s-min=0.3km az=309.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.12**	**347**	P		Pg	12 14 54.4	+0.5
FEMA				S		Sg	12 14 56.7	+0.6
FEMA				AML		AML		
	comp=E,11900μm,0.4s							
FEMA				AML		AML		
	comp=N,15650μm,1.2s							
FEMA				AML		AML		
	comp=E,11850μm,0.4s							
FEMA				AML		AML		
	comp=N,41500μm,0.7s							
FEMA				AML		AML		
	comp=E,62250μm,0.3s							
FEMA				AML		AML		
	comp=E,11110μm,0.1s							
FEMA				AML		AML		
	comp=N,9759μm,0.1s							
T1217	**Poggiodomo (PG**	**0.17**	**222**	P		Pg	12 14 55.3	+0.7
T1217				S		Sg	12 14 58.4	+1.2
MMO1	**Montemonaco**	**0.19**	**72**	⇑P		Pg	12 14 55.4	+0.6
MMO1				S		Sg	12 14 58.6	+1.0
T1204	**Amatrice, Fraz**	**0.24**	**134**	⇑P		Pg	12 14 56.5	+0.7
T1204				AML		AML		
	comp=E,10595μm,1.3s							
T1204				AML		AML		
	comp=N,3275μm,0.2s							
T1204				AML		AML		
	comp=E,11460μm,0.2s							
T1204				AML		AML		
	comp=N,6995μm,0.1s							
T1204				AML		AML		
	comp=E,11450μm,0.2s							
T1204				AML		AML		
	comp=N,7075μm,0.2s							
T1204				AML		AML		
	comp=E,11440μm,0.2s							
T1204				AML		AML		
	comp=E,5495μm,0.2s							
AM05	**Amandola Campo**	**0.24**	**55**	⇑P		Pg	12 14 56.5	+0.7
AM05				S		Sg	12 15 00.4	+1.3
AM05				AML		AML		
	comp=E,1965μm,0.1s							
AM05				AML		AML		
	comp=N,2375μm,0.5s							
AM05				AML		AML		
	comp=E,8565μm,1.1s							
AM05				AML		AML		
	comp=N,912μm,0.1s							
AM05				AML		AML		
	comp=E,4270μm,0.6s							
AM05				AML		AML		
	comp=N,1002μm,0.4s							
AM05				AML		AML		
	comp=E,14200μm,0.6s							
AM05				AML		AML		
	comp=N,3010μm,0.7s							
AM05				AML		AML		
	comp=N,2200μm,0.1s							
AM05				AML		AML		
	comp=N,912μm,0.1s							
AM05				AML		AML		
	comp=E,8187μm,0.1s							
AM05				AML		AML		
	comp=E,1965μm,0.1s							
LNSS	**Leonessa**	**0.24**	**188**	P		Pg	12 14 55.9	0.0
LNSS				S		Sg	12 15 00.7	+1.5
LNSS				AML		AML		
	comp=E,6650μm,0.4s							
LNSS				AML		AML		
	comp=N,14400μm,0.5s							
LNSS				AML		AML		
	comp=E,8010μm,0.4s							
LNSS				AML		AML		
	comp=N,31300μm,0.3s							
LNSS				AML		AML		
	comp=E,2478μm,0.3s							
T1241	**Roccafluvione,**	**0.25**	**86**	⇓P		Pb	12 14 57.1	-0.4
T1241				S		Sb	12 15 01.3	-0.7
T1241				AML		AML		
	comp=E,7595μm,0.3s							
T1241				AML		AML		
	comp=E,7960μm,0.3s							
T1241				AML		AML		
	comp=N,6345μm,0.2s							
T1241				AML		AML		
	comp=N,6160μm,0.7s							
T1241				AML		AML		
	comp=E,7600μm,0.3s							
T1241				AML		AML		
	comp=E,7598μm,0.3s							
T1241				AML		AML		
	comp=E,7963μm,0.3s							
CSP1	**Cessapalombo**	**0.27**	**19**	⇑P		Pg	12 14 56.8	+0.5
CSP1				AML		AML		
	comp=E,7145μm,0.3s							
CSP1				AML		AML		
	comp=N,7345μm,0.3s							
CSP1				AML		AML		
	comp=N,7347μm,0.3s							
CSP1				AML		AML		
	comp=E,4803μm,0.2s							
GUMA	**Gualdo di Mace**	**0.29**	**39**	⇑P		Pb	12 14 57.5	-0.6
GUMA				AML		AML		
	comp=E,10700μm,0.4s							
GUMA				AML		AML		
	comp=N,10950μm,0.4s							
GUMA				AML		AML		
	comp=E,10550μm,0.6s							
GUMA				AML		AML		
	comp=N,10200μm,0.3s							
GUMA				AML		AML		
	comp=E,11150μm,0.3s							
GUMA				AML		AML		
	comp=N,14050μm,0.5s							
GUMA				AML		AML		
	comp=E,12100μm,1.2s							
GUMA				AML		AML		
	comp=N,12550μm,0.6s							
GUMA				AML		AML		
	comp=N,10057μm,0.5s							
T1243	**Rocca Santa Ma**	**0.30**	**118**	P		Pg	12 14 57.4	+0.4
T1243				S		Sb	12 15 02.5	-1.0
RM33	**Pellescritta (**	**0.34**	**164**	P		Pg	12 14 58.4	+0.6
RM33				S		Sb	12 15 04.0	-0.7
RM33				AML		AML		
	comp=E,3365μm,0.5s							
RM33				AML		AML		
	comp=N,3245μm,1.1s							
RM33				AML		AML		
	comp=E,3280μm,0.5s							
RM33				AML		AML		
	comp=N,3260μm,1.1s							
RM33				AML		AML		
	comp=E,4040μm,1.0s							
RM33				AML		AML		
	comp=N,4150μm,0.3s							
RM33				AML		AML		
	comp=E,3895μm,1.0s							
RM33				AML		AML		
	comp=N,4245μm,0.3s							
RM33				AML		AML		
	comp=E,2905μm,0.1s							
RM33				AML		AML		
	comp=N,2581μm,0.2s							
RM33				AML		AML		
	comp=N,2677μm,0.2s							
RM33				AML		AML		
	comp=E,2939μm,0.1s							
T1211	**Morro Reatino**	**0.35**	**209**	⇓P		Pg	12 14 58.5	+0.6
T1211				S		Sb	12 15 05.0	+0.1
T1211				AML		AML		
	comp=E,4385μm,1.5s							
T1211				AML		AML		
	comp=N,6845μm,0.2s							
T1211				AML		AML		
	comp=E,4365μm,1.4s							
T1211				AML		AML		
	comp=N,6815μm,0.2s							
T1211				AML		AML		
	comp=N,6845μm,0.2s							
T1211				AML		AML		
	comp=N,6820μm,0.2s							
T1211				AML		AML		
	comp=E,4375μm,1.4s							
T1211				AML		AML		
	comp=E,4380μm,1.5s							
T1211				AML		AML		
	comp=E,4040μm,0.1s							
T1211				AML		AML		
	comp=N,6846μm,0.2s							
T1211				AML		AML		
	comp=E,3915μm,0.1s							
T1211				AML		AML		
	comp=N,6816μm,0.2s							
ARRO	**Arrone**	**0.35**	**222**	⇑P		Pg	12 14 58.4	+0.6
ARRO				AML		AML		
	comp=N,2685μm,0.3s							
ARRO				AML		AML		
	comp=E,3220μm,1.5s							
ARRO				AML		AML		
	comp=E,3215μm,1.5s							
ARRO				AML		AML		
	comp=N,2680μm,0.3s							
ARRO				AML		AML		
	comp=E,3159μm,0.2s							
ARRO				AML		AML		
	comp=N,2655μm,0.2s							
ASSB	**Assisi San Ben**	**0.37**	**303**	⇑P		Pg	12 14 58.6	+0.3
ASSB				AML		AML		
	comp=E,2125μm,0.3s							
ASSB				AML		AML		
	comp=N,2295μm,0.3s							
ASSB				AML		AML		
	comp=E,2935μm,0.3s							
ASSB				AML		AML		
	comp=N,3285μm,0.3s							
ASSB				AML		AML		
	comp=E,2125μm,0.3s							
ASSB				AML		AML		
	comp=N,2291μm,0.3s							
CAMP	**Campotosto**	**0.39**	**142**	⇓P		Pg	12 14 58.9	+0.4
CAMP				S		Sb	12 15 04.9	-1.0
CAMP				AML		AML		
	comp=N,1060μm,0.5s							
CAMP				AML		AML		
	comp=N,1060μm,0.5s							
CAMP				AML		AML		
	comp=E,2830μm,0.2s							
CAMP				AML		AML		
	comp=N,546μm,0.4s							
CAMP				AML		AML		
	comp=E,649μm,0.2s							
GAG1	**Gagliole**	**0.40**	**358**	⇓P		Pb	12 14 59.5	-0.5
GAG1				AML		AML		
	comp=N,3786μm,0.5s							
GAG1				AML		AML		
	comp=E,2573μm,0.2s							
MNTP	**Montappone**	**0.41**	**43**	⇓P		Pb	12 14 60.0	-0.2
MNTP				AML		AML		
	comp=E,3615μm,0.3s							
MNTP				AML		AML		
	comp=N,4130μm,1.4s							
MNTP				AML		AML		
	comp=E,4740μm,1.1s							
MNTP				AML		AML		
	comp=N,7265μm,0.3s							
MNTP				AML		AML		
	comp=N,3539μm,0.4s							
MNTP				AML		AML		
	comp=E,3612μm,0.3s							
SNTG	**Esanatoglia**	**0.43**	**346**	⇑P		Pg	12 14 59.8	+0.5
SNTG				AML		AML		
	comp=E,667μm,0.1s							
SNTG				AML		AML		
	comp=N,721μm,1.0s							
SNTG				AML		AML		
	comp=E,678μm,0.1s							
SNTG				AML		AML		
	comp=N,756μm,0.3s							

SNTG				AML	AML	
	comp=N,1043μm,1.3s					
SNTG				AML	AML	
	comp=N,1150μm,0.8s					
SNTG				AML	AML	
	comp=E,1410μm,0.6s					
SNTG				AML	AML	
	comp=E,1450μm,0.6s					
SNTG				AML	AML	
	comp=E,508μm,0.2s					
SNTG				AML	AML	
	comp=N,651μm,0.1s					
SNTG				AML	AML	
	comp=N,756μm,0.3s					
SNTG				AML	AML	
	comp=E,498μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.43**	**159**	⇑P	Pb	12 15 01.0 +0.4
T1247				AML	AML	
	comp=E,2940μm,0.6s					
T1247				AML	AML	
	comp=N,2900μm,0.4s					
T1247				AML	AML	
	comp=E,2138μm,0.2s					
T1247				AML	AML	
	comp=N,2901μm,0.4s					
CESX	**Cesi**	**0.44**	**238**	P	Pg	12 14 59.8 +0.3
CESX				AML	AML	
	comp=N,1820μm,0.3s					
CESX				AML	AML	
	comp=E,2135μm,0.4s					
CESX				AML	AML	
	comp=N,1821μm,0.3s					
CESX				AML	AML	
	comp=E,2133μm,0.4s					
TERO	**Teramo**	**0.44**	**120**	P	Pg	12 14 59.8 +0.3
TERO				AML	AML	
	comp=E,1825μm,1.0s					
TERO				AML	AML	
	comp=E,1820μm,1.0s					
TERO				AML	AML	
	comp=N,2135μm,1.0s					
TERO				AML	AML	
	comp=N,2475μm,1.0s					
TERO				AML	AML	
	comp=N,2130μm,1.0s					
TERO				AML	AML	
	comp=E,2090μm,0.5s					
TERO				AML	AML	
	comp=N,2357μm,0.1s					
TERO				AML	AML	
	comp=E,1936μm,0.1s					
TERO				AML	AML	
	comp=E,1798μm,0.2s					
TERO				AML	AML	
	comp=N,2007μm,0.1s					
OFFI	**Offida**	**0.45**	**78**	⇑P	Pb	12 15 00.9 0.0
OFFI				AML	AML	
	comp=E,2870μm,0.6s					
OFFI				AML	AML	
	comp=N,2770μm,0.4s					
OFFI				AML	AML	
	comp=E,2872μm,0.6s					
OFFI				AML	AML	
	comp=N,2772μm,0.4s					
ATCC	**AVT- Casa Cast**	**0.47**	**317**	⇑P	Pg	12 15 00.6 +0.5
ATCC				AML	AML	
	comp=E,1324μm,0.7s					
ATCC				AML	AML	
	comp=N,1375μm,1.0s					
ATCC				AML	AML	
	comp=E,1865μm,0.9s					
ATCC				AML	AML	
	comp=N,1480μm,1.1s					
ATCC				AML	AML	
	comp=N,1227μm,0.3s					
ATCC				AML	AML	
	comp=E,1313μm,0.3s					
EL6	**Elcito**	**0.49**	**1**	⇑P	Pg	12 15 00.7 +0.3
EL6				S	Sb	12 15 09.0 +0.1
EL6				AML	AML	
	comp=N,1903μm,0.3s					
EL6				AML	AML	
	comp=E,1509μm,0.4s					
FOSV	**Fossato di Vic**	**0.51**	**332**	S	Sb	12 15 11.0 +1.5
GIGS	**Gran Sasso**	**0.53**	**138**	⇑P	Pg	12 15 01.2 0.0
GIGS				S	Sb	12 15 10.0 0.0
GIGS				AML	AML	
	comp=N,377μm,0.2s					
GIGS				AML	AML	
	comp=E,846μm,0.2s					
GIGS				AML	AML	
	comp=E,846μm,0.2s					
GIGS				AML	AML	
	comp=N,238μm,0.3s					
GIGS				AML	AML	
	comp=E,316μm,0.1s					
FIAM	**Fiamignano**	**0.57**	**178**	S	Sb	12 15 11.0 -0.3
MURB	**Monte Urbino**	**0.59**	**316**	⇑P	Pg	12 15 02.8 +0.4
MURB				AML	AML	
	comp=E,2110μm,0.4s					
MURB				AML	AML	
	comp=N,1955μm,0.3s					
MURB				AML	AML	
	comp=N,1910μm,0.3s					
MURB				AML	AML	
	comp=E,2110μm,0.4s					
MURB				AML	AML	
	comp=N,2570μm,0.2s					
MURB				AML	AML	
	comp=E,2320μm,0.4s					
MURB				AML	AML	
	comp=N,2865μm,0.2s					
MURB				AML	AML	
	comp=E,2111μm,0.4s					
MURB				AML	AML	
	comp=E,2321μm,0.4s					
MURB				AML	AML	
	comp=N,1909μm,0.3s					
MURB				AML	AML	
	comp=N,1953μm,0.3s					
TRTR	**Tortoreto Alta**	**0.61**	**93**	⇑P	Pb	12 15 04.0 +0.5
TRTR				AML	AML	
	comp=E,2810μm,0.3s					
TRTR				AML	AML	
	comp=N,2490μm,0.4s					
TRTR				AML	AML	
	comp=E,2807μm,0.3s					
TRTR				AML	AML	
	comp=N,2492μm,0.4s					
ATTE	**AVT- Monte Tez**	**0.65**	**304**	⇑P	Pn	12 15 06.5 +0.3
ATTE				AML	AML	
	comp=N,344μm,1.0s					
ATTE				AML	AML	
	comp=E,390μm,0.4s					
ATTE				AML	AML	
	comp=N,252μm,0.4s					
ATTE				AML	AML	
	comp=E,355μm,0.3s					
ATFO	**Monte Foce - G**	**0.65**	**324**	⇑P	Pb	12 15 04.4 +0.1
ATFO				AML	AML	
	comp=E,407μm,1.0s					
ATFO				AML	AML	
	comp=N,574μm,0.3s					
ATFO				AML	AML	
	comp=E,696μm,0.5s					
ATFO				AML	AML	
	comp=N,469μm,0.3s					
ATFO				AML	AML	
	comp=E,390μm,0.5s					
PP3	**Marolino**	**0.66**	**35**	⇑P	Pb	12 15 04.7 +0.3
PP3				S	Sb	12 15 14.0 +0.3
PP3				AML	AML	
	comp=E,1525μm,0.7s					
PP3				AML	AML	
	comp=N,1940μm,0.7s					
PP3				AML	AML	
	comp=E,1395μm,0.7s					
PP3				AML	AML	
	comp=N,1920μm,0.7s					
PP3				AML	AML	
	comp=N,2065μm,0.9s					
PP3				AML	AML	
	comp=E,2060μm,0.5s					
PP3				AML	AML	
	comp=N,2265μm,0.9s					
PP3				AML	AML	
	comp=E,1975μm,0.5s					
PP3				AML	AML	
	comp=E,1272μm,0.3s					
PP3				AML	AML	
	comp=N,1694μm,0.3s					
PP3				AML	AML	
	comp=E,1397μm,0.3s					
PP3				AML	AML	
	comp=N,1724μm,0.3s					
ARVD	**Arcevia**	**0.67**	**351**	⇑P	Pg	12 15 03.9 +0.2
ARVD				S	Sb	12 15 15.0 +1.1
ARVD				AML	AML	
	comp=E,429μm,0.7s					
ARVD				AML	AML	
	comp=N,421μm,0.8s					
ARVD				AML	AML	
	comp=E,712μm,0.1s					
ARVD				AML	AML	
	comp=N,464μm,0.2s					
ARVD				AML	AML	
	comp=E,317μm,0.3s					
ARVD				AML	AML	
	comp=N,274μm,0.2s					
FAGN	**Fagnano**	**0.68**	**147**	⇑P	Pb	12 15 05.6 +0.8
FAGN				AML	AML	
	comp=E,1760μm,0.3s					
FAGN				AML	AML	
	comp=N,1525μm,0.6s					
FAGN				AML	AML	
	comp=E,1560μm,0.5s					
FAGN				AML	AML	
	comp=N,888μm,0.4s					
VCEL	**Villa Celiera**	**0.71**	**128**	⇓P	Pg	12 15 04.8 +0.2
VCEL				S	Sg	12 15 14.0 0.0
VCEL				AML	AML	
	comp=E,1058μm,0.3s					
VCEL				AML	AML	
	comp=N,1028μm,0.9s					
VCEL				AML	AML	
	comp=E,1058μm,0.3s					
VCEL				AML	AML	
	comp=N,1030μm,0.9s					
VCEL				AML	AML	
	comp=E,1055μm,0.3s					
VCEL				AML	AML	
	comp=N,1032μm,0.9s					
VCEL				AML	AML	
	comp=N,896μm,0.5s					
VCEL				AML	AML	
	comp=E,1059μm,0.3s					
T0110	**Collepietro**	**0.80**	**140**	⇓P	Pg	12 15 06.5 +0.3
T0110				AML	AML	
	comp=N,1165μm,0.5s					
T0110				AML	AML	
	comp=E,1295μm,0.3s					
T0110				AML	AML	
	comp=E,1003μm,0.5s					
T0110				AML	AML	
	comp=N,1000μm,0.4s					
AOI	**Ancona**	**0.80**	**28**	⇑P	Pb	12 15 06.9 0.0
AOI				AML	AML	
	comp=E,451μm,0.5s					
AOI				AML	AML	
	comp=N,397μm,0.8s					
AOI				AML	AML	
	comp=N,428μm,0.8s					
AOI				AML	AML	
	comp=E,505μm,0.2s					
AOI				AML	AML	
	comp=E,451μm,0.5s					
AOI				AML	AML	
	comp=N,382μm,0.4s					
PIEI	**Pieia**	**0.80**	**330**	S	Sn	12 15 20.0 -0.3
MPAG	**Monte Paganucc**	**0.82**	**343**	⇓P	Pb	12 15 07.2 -0.1
MPAG				AML	AML	
	comp=E,348μm,0.3s					
MPAG				AML	AML	
	comp=N,318μm,0.5s					
MPAG				AML	AML	
	comp=E,646μm,0.2s					
MPAG				AML	AML	
	comp=N,502μm,1.6s					
MPAG				AML	AML	
	comp=N,1094μm,1.0s					
MPAG				AML	AML	
	comp=E,1158μm,0.9s					
MPAG				AML	AML	
	comp=E,314μm,0.5s					
MPAG				AML	AML	
	comp=E,765μm,0.6s					
MPAG				AML	AML	
	comp=N,317μm,0.5s					
MPAG				AML	AML	
	comp=N,785μm,0.6s					
SACS	**San Casciano d**	**0.87**	**271**	⇑P	Pn	12 15 09.0 -0.2
SACS				AML	AML	
	comp=E,353μm,0.5s					
SACS				AML	AML	
	comp=E,336μm,0.5s					
SACS				AML	AML	
	comp=N,392μm,0.8s					
SACS				AML	AML	
	comp=N,382μm,0.8s					
SACS				AML	AML	
	comp=N,360μm,0.8s					
SACS				AML	AML	
	comp=E,353μm,0.5s					
SACS				AML	AML	
	comp=N,380μm,0.8s					
SACS				AML	AML	
	comp=E,336μm,0.5s					
FSSB	**Fossombrone**	**0.88**	**345**	⇓P	Pb	12 15 08.7 +0.4
FSSB				AML	AML	
	comp=E,1100μm,0.4s					
FSSB				AML	AML	
	comp=N,1034μm,0.3s					
FSSB				AML	AML	
	comp=N,1245μm,0.2s					
FSSB				AML	AML	
	comp=E,1095μm,0.4s					
FSSB				AML	AML	
	comp=E,1100μm,0.4s					
FSSB				AML	AML	
	comp=N,1035μm,0.3s					
CERT	**Cerreto**	**0.90**	**185**	P	Pn	12 15 09.1 -0.4
CERT				AML	AML	
	comp=N,658μm,0.3s					
CERT				AML	AML	
	comp=E,848μm,0.5s					
CERT				AML	AML	
	comp=N,658μm,0.3s					
CERT				AML	AML	
	comp=E,848μm,0.5s					
CAFI	**Castiglion Fio**	**0.95**	**301**	⇑P	Pb	12 15 09.6 +0.1
CAFI				AML	AML	
	comp=N,316μm,0.7s					
CAFI				AML	AML	
	comp=E,296μm,0.6s					
CAFI				AML	AML	
	comp=E,296μm,0.6s					
CAFI				AML	AML	
	comp=N,328μm,0.7s					
CAFI				AML	AML	
	comp=N,316μm,0.7s					
CAFI				AML	AML	
	comp=E,308μm,0.6s					
INTR	**Introdacqua**	**1.03**	**144**	⇓P	Pg	12 15 08.0 -2.6
INTR				AML	AML	
	comp=E,332μm,1.6s					
INTR				AML	AML	
	comp=N,544μm,0.9s					
INTR				AML	AML	
	comp=N,517μm,0.6s					
INTR				AML	AML	
	comp=E,311nm,0.8s					
INTR				AML	AML	
	comp=N,370nm,0.6s					
INTR				AML	AML	
	comp=E,309μm,0.6s					
SAMA	**S.Maria delle**	**1.12**	**199**	S	Sn	12 15 31.0 +3.0
ARCI	**Arcidosso**	**1.19**	**271**	P	Pg	12 15 14.0 +0.4
ARCI				AML	AML	
	comp=E,65μm,1.4s					
ARCI				AML	AML	
	comp=N,54μm,1.6s					
ARCI				AML	AML	
	comp=N,53μm,0.6s					
ARCI				AML	AML	
	comp=E,57μm,0.8s					
POFI	**Posta Fibreno**	**1.22**	**157**	⇓P	Pg	12 15 16.4 +2.2
POFI				AML	AML	
	comp=E,167μm,0.7s					
POFI				AML	AML	
	comp=E,172μm,0.6s					
POFI				AML	AML	
	comp=N,129μm,0.8s					
CSNT	**Castellina Chi**	**1.46**	**296**	P	Pg	12 15 19.2 +0.4
CSNT				AML	AML	
	comp=E,56μm,0.8s					
CSNT				AML	AML	
	comp=N,64μm,0.5s					
CSNT				AML	AML	
	comp=E,56μm,0.8s					
CSNT				AML	AML	
	comp=N,64μm,0.5s					
CELB	**S.Piero in Cam**	**2.12**	**268**	S	Sg	12 15 59.0 +0.1
PAOL	**Paolisi**	**2.12**	**148**	⇑P	Pn	12 15 26.7 +0.3
NDIM	**Novi di Modena**	**2.59**	**323**	⇑P	Pn	12 15 31.8 -0.9
ABTA	**Abfaltersbach**	**3.93**	**354**	*e*Pn	Pn	12 15 53.9 +2.6
	comp=N,2.1nm,0.3s					
BIOA	**Bad Ischl, Aus**	**4.87**	**4**	*e*Pn	Pn	12 16 02.0 -2.1
	comp=N,1.0nm,0.2s					
CONA	**Conrad Observa**	**5.45**	**20**	*e*Pn	Pn	12 16 13.5 +1.4
	comp=N,0.7nm,0.3s					
KHC	**Kasperske Hory**	**6.30**	**3**	*e*SN	Sn	12 17 35.2 -0.6

ROM 30 12:15:48.3±0.1, 42°.896N±0°.003×13°.102E±0°.004,
h10km, ML3.0/14, 6C-5D, Error ellipse: s-maj=0.3km
s-min=0.2km az=222.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**122**	P	Pg	12 15 51.2	+0.5
T1245				S	Sg	12 15 52.9	+0.4
FEMA	**Monte Fema**	**0.08**	**330**	P	Pg	12 15 51.2	+0.5
FEMA				S	Sg	12 15 53.1	+0.6
FEMA				AML	AML		
	comp=E,62250μm,0.3s						
FEMA				AML	AML		
	comp=N,41450μm,0.7s						
FEMA				AML	AML		
	comp=E,62250μm,0.2s						
FEMA				AML	AML		
	comp=N,41450μm,0.7s						
FEMA				AML	AML		
	comp=E,57565μm,0.2s						
FEMA				AML	AML		
	comp=N,40180μm,0.1s						
MMO1	**Montemonaco**	**0.17**	**89**	P	Pg	12 15 52.4	+0.5
MMO1				S	Sg	12 15 55.1	+0.7
T1215	**Vallo di Nera,**	**0.20**	**241**	P	Pg	12 15 53.2	+0.8
T1215				S	Sg	12 15 56.2	+1.0
T1215				AML	AML		
	comp=E,3105μm,0.5s						
T1215				AML	AML		
	comp=E,3120μm,0.5s						
T1215				AML	AML		
	comp=N,3465μm,1.3s						
T1215				AML	AML		
	comp=E,3115μm,0.5s						
T1215				AML	AML		
	comp=N,3470μm,1.3s						
T1215				AML	AML		
	comp=E,3110μm,0.5s						
T1215				AML	AML		
	comp=N,3370μm,1.2s						
T1215				AML	AML		
	comp=E,1644μm,0.2s						
T1215				AML	AML		
	comp=N,2099μm,0.2s						
T1215				AML	AML		
	comp=E,1763μm,0.2s						
T1215				AML	AML		
	comp=N,2148μm,0.2s						
AM05	**Amandola Campo**	**0.20**	**66**	P	Pg	12 15 53.1	+0.6
AM05				S	Sg	12 15 56.3	+0.9
AM05				AML	AML		
	comp=E,14200μm,0.6s						
AM05				AML	AML		
	comp=N,1002μm,0.4s						
AM05				AML	AML		
	comp=N,3015μm,0.7s						
AM05				AML	AML		
	comp=N,1004μm,0.4s						
AM05				AML	AML		
	comp=E,4270μm,0.6s						
AM05				AML	AML		
	comp=E,13175μm,0.1s						
AM05				AML	AML		
	comp=E,3901μm,0.1s						
AM05				AML	AML		
	comp=N,2603μm,0.1s						
AM05				AML	AML		
	comp=N,1003μm,0.1s						
CSP1	**Cessapalombo**	**0.21**	**21**	⇑P	Pg	12 15 53.3	+0.5
CSP1				S	Sg	12 15 56.7	+1.0
CSP1				AML	AML		
	comp=E,7145μm,0.3s						
CSP1				AML	AML		
	comp=N,6760μm,0.4s						
CSP1				AML	AML		
	comp=N,6266μm,0.3s						
CSP1				AML	AML		
	comp=E,6399μm,0.1s						
T1217	**Poggiodomo (PG**	**0.22**	**214**	P	Pg	12 15 53.6	+0.7
T1217				S	Sg	12 15 57.6	+1.5
T1217				AML	AML		
	comp=E,7155μm,0.3s						
T1217				AML	AML		
	comp=N,9325μm,0.7s						
T1217				AML	AML		
	comp=E,7050μm,0.3s						
T1217				AML	AML		
	comp=N,9010μm,0.7s						
T1217				AML	AML		
	comp=E,7160μm,0.3s						
T1217				AML	AML		
	comp=N,9350μm,0.7s						
T1217				AML	AML		
	comp=N,9045μm,0.7s						
T1217				AML	AML		
	comp=E,7045μm,0.3s						
T1217				AML	AML		
	comp=N,8454μm,0.3s						
T1217				AML	AML		
	comp=N,8576μm,0.3s						
T1217				AML	AML		
	comp=E,5148μm,0.2s						
T1217				AML	AML		
	comp=E,4985μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**46**	⇑P	Pg	12 15 54.0	+0.8
GUMA				S	Sg	12 15 58.1	+1.6
GUMA				AML	AML		
	comp=E,11150μm,0.3s						
GUMA				AML	AML		
	comp=E,12100μm,1.2s						
GUMA				AML	AML		
	comp=N,14050μm,0.5s						
GUMA				AML	AML		
	comp=N,12550μm,0.6s						
GUMA				AML	AML		
	comp=E,11143μm,0.3s						
GUMA				AML	AML		
	comp=E,11603μm,0.3s						
GUMA				AML	AML		
	comp=N,14062μm,0.5s						
GUMA				AML	AML		
	comp=N,12052μm,0.4s						
T1241	**Roccafluvione,**	**0.24**	**99**	P	Pg	12 15 54.3	+1.0
T1241				S	Sg	12 15 58.3	+1.6
T1241				AML	AML		
	comp=N,5189μm,0.2s						
T1241				AML	AML		
	comp=E,6984μm,0.2s						
T1241				AML	AML		
	comp=E,6812μm,0.2s						
T1241				AML	AML		
	comp=N,5034μm,0.2s						
T1204	**Amatrice, Fraz**	**0.27**	**144**	P	Pb	12 15 54.6	-0.7
T1204				S	Sb	12 15 58.9	-1.2
T1204				AML	AML		
	comp=N,7075μm,0.2s						
T1204				AML	AML		
	comp=E,9135μm,0.3s						
T1204				AML	AML		

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     comp=N,7079µm,0.2s
T1204                    AML   AML
     comp=E,9137µm,0.3s
SEF1 Sefro       0.28 336 P     Pg    12 15 54.3 +0.5
SEF1                     S     Sg    12 15 58.7 +1.1
SEF1                     AML   AML
     comp=N,6576µm,0.2s
SEF1                     AML   AML
     comp=E,5549µm,0.2s
LNSS Leonessa    0.30 189 P     Pn    12 16 04.3 +5.5
LNSS                     S     Sb    12 16 06.0 +5.3
MDAR Monte D'Aria 0.30  6 ⇑P    Pg    12 15 55.0 +0.7
MDAR                     S     Sg    12 15 59.2 +0.9
MDAR                     AML   AML
     comp=E,1533µm,0.2s
MDAR                     AML   AML
     comp=N,2095µm,0.3s
FIU1 Fiuminata   0.32 337 P     Pg    12 15 55.2 +0.6
FIU1                     S     Sb    12 16 00.2 -1.1
FIU1                     AML   AML
     comp=N,3277µm,0.2s
FIU1                     AML   AML
     comp=E,2766µm,0.2s
T1243 Rocca Santa Ma 0.32 128 P     Pg    12 15 55.1 +0.3
T1243                    S     Sg    12 16 00.3 +1.2
SSM1 San Severino M 0.34  9 P     Pg    12 15 55.5 +0.5
SSM1                     S     Sb    12 16 01.0 -0.9
GAG1 Gagliole    0.34 356 P     Pg    12 15 55.8 +0.7
GAG1                     S     Sb    12 16 01.0 -1.0
GAG1                     AML   AML
     comp=E,4107µm,0.4s
GAG1                     AML   AML
     comp=N,2866µm,0.2s
ASSB Assisi San Ben 0.36 294 P     Pg    12 15 55.8 +0.4
ASSB                     S     Sb    12 16 01.4 -1.1
ASSB                     AML   AML
     comp=N,3285µm,0.3s
ASSB                     AML   AML
     comp=E,2935µm,0.3s
ASSB                     AML   AML
     comp=N,3030µm,0.2s
ASSB                     AML   AML
     comp=E,2934µm,0.3s
MNTP Montappone  0.36  48 P     Pb    12 15 56.3 -0.5
MNTP                     S     Sb    12 16 02.9 +0.3
MNTP                     AML   AML
     comp=E,4740µm,1.1s
MNTP                     AML   AML
     comp=N,7265µm,0.3s
MNTP                     AML   AML
     comp=N,7265µm,0.3s
MNTP                     AML   AML
     comp=E,4408µm,0.3s
SNTG Esanatoglia 0.38 342 P     Pg    12 15 56.4 +0.6
SNTG                     S     Sb    12 16 02.1 -1.0
SNTG                     AML   AML
     comp=N,1040µm,1.3s
SNTG                     AML   AML
     comp=E,1450µm,0.6s
SNTG                     AML   AML
     comp=N,1043µm,1.3s
SNTG                     AML   AML
     comp=N,1150µm,0.8s
SNTG                     AML   AML
     comp=E,1410µm,0.6s
SNTG                     AML   AML
     comp=N,1036µm,0.1s
SNTG                     AML   AML
     comp=E,1299µm,0.1s
SNTG                     AML   AML
     comp=N,988µm,0.2s
SNTG                     AML   AML
     comp=E,1224µm,0.1s
ARRO Arrone      0.40 218 S     Sb    12 16 06.0 +2.3
T1211 Morro Reatino 0.41 207 P     Pn    12 16 04.5 +4.2
T1211                    S     Sb    12 16 09.8 +5.9
CAMP Campotosto  0.43 148 ⇓P    Pg    12 15 57.0 +0.4
CAMP                     S     Sb    12 16 03.5 -1.0
CAMP                     AML   AML
     comp=E,1082µm,0.7s
CAMP                     AML   AML
     comp=N,1443µm,0.5s
OFFI Offida      0.43  85 ⇑P    Pb    12 15 57.9 -0.1
OFFI                     S     Sb    12 16 06.2 +1.7
OFFI                     AML   AML
     comp=E,2950µm,0.6s
OFFI                     AML   AML
     comp=N,3287µm,0.3s
EL6  Elcito      0.43   0 ⇓P    Pb    12 15 57.6 -0.5
EL6                      AML   AML
     comp=E,2008µm,0.2s
EL6                      AML   AML
     comp=N,3219µm,0.2s
ATCC AVT- Casa Cast 0.45 311 ⇑P    Pg    12 15 57.5 +0.5
ATCC                     S     Sb    12 16 04.5 -0.4
ATCC                     AML   AML
     comp=E,1865µm,0.9s
ATCC                     AML   AML
     comp=N,1480µm,1.1s
ATCC                     AML   AML
     comp=N,1456µm,0.4s
ATCC                     AML   AML
     comp=E,1604µm,0.2s
TERO Teramo      0.46 126 ⇓P    Pg    12 15 57.5 +0.2
TERO                     S     Sb    12 16 04.5 -0.9
TERO                     AML   AML
     comp=N,2370µm,0.3s
TERO                     AML   AML
     comp=E,1925µm,0.5s
TERO                     AML   AML
     comp=E,1821µm,0.3s
TERO                     AML   AML
     comp=N,2274µm,0.3s
TERO                     AML   AML
     comp=E,1835µm,0.4s
TERO                     AML   AML
     comp=N,2371µm,0.3s
FOSV Fossato di Vic 0.47 328 P     Pg    12 15 57.7 +0.2
FOSV                     S     Sb    12 16 05.3 -0.5
FOSV                     AML   AML
     comp=E,1630µm,0.1s
FOSV                     AML   AML
     comp=N,2975µm,0.3s
FOSV                     AML   AML
     comp=E,1628µm,0.1s
FOSV                     AML   AML
     comp=N,2978µm,0.3s
T1247 Pizzolo (AQ) 0.48 162 S     Sb    12 16 08.0 +2.1
CESX Cesi        0.48 234 S     Sb    12 16 06.0 +0.1
MMUR Monte Murano 0.55 352 S     Sb    12 16 09.0 +0.9
GIGS Gran Sasso  0.56 142 P     Pg    12 15 59.4 +0.2
GIGS                     S     Sb    12 16 08.0 -0.4
GIGS                     AML   AML
     comp=N,230µm,0.4s
GIGS                     AML   AML
     comp=E,251µm,0.2s
TRTR Tortoreto Alta 0.60  98 ⇑P    Pb    12 16 01.3 +0.4
TRTR                     AML   AML
     comp=E,3395µm,0.5s
TRTR                     AML   AML
     comp=N,3282µm,0.4s
PP3  Marolino    0.61  38 ⇓P    Pb    12 16 01.4 +0.4
PP3                      AML   AML
     comp=N,3950µm,0.4s
PP3                      AML   AML
     comp=N,4140µm,0.4s
PP3                      AML   AML
     comp=E,4180µm,0.4s
PP3                      AML   AML
     comp=E,3925µm,0.4s
PP3                      AML   AML
     comp=N,4141µm,0.4s
PP3                      AML   AML
     comp=E,4181µm,0.4s
PP3                      AML   AML
     comp=E,3927µm,0.4s
PP3                      AML   AML
     comp=N,3952µm,0.4s
ATFO Monte Foce - G 0.61 321 ⇓P    Pg    12 16 00.5 +0.3
ATFO                     AML   AML
     comp=E,556µm,0.1s
ATFO                     AML   AML
     comp=N,505µm,0.4s
ARVD Arcevia     0.61 349 S     Sb    12 16 10.0 +0.2
FIAM Fiamignano  0.63 179 S     Sg    12 16 08.0 -0.7
PIEI Pieia       0.76 327 S     Sn    12 16 16.0 -0.8
MPAG Monte Paganucc 0.77 341 S     Sn    12 16 17.0 -0.1
FSSB Fossombrone 0.83 344 S     Sn    12 16 18.0 -0.4
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ROM ***30*** *12:26:17.8±0.1, 42°.931N±0°.004×13°.197E±0°.006, h8km, ML3.6/27, Error ellipse: s-maj=0.5km s-min=0.2km az=228.0*
PRU ***30*** *12:26:18.3±0.0, 42°.97N×13°.41E, h0km*
PDG ***30*** *12:26:18.3±0.7, 42°.97N×13°.21E, h5km±1km, ML3.9/11, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
IDC ***30*** *12:26:18.9±0.9, 43°.10N×13°.45E, h0km, mb3.6/7, mbtmp3.6/15, ML3.5/8, MS3.0/7, Error ellipse: s-maj=21.4km s-min=12.6km az=92.0*
LDG ***30*** *12:26:19.6±0.1, 42°.84N×13°.14E, h10km, Ml3.8/22, Error ellipse: s-maj=4.5km s-min=2.5km az=44.0*

ISC 30 12:26:18.5±0.7, 42°.95N±0°.01×13°.17E±0°.01, h9km±4km, n274, σ1s78/366, mb3.7/7, 12C-22D, Central Italy

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                  Op    ISC         h m  s    ISC
FEMA Monte Fema  0.09 281         P     Pg          12 26 20.9 -0.1
FEMA                              S     Sg          12 26 23.2 +0.5
FEMA                              AML   AML
     comp=E,5605µm,0.2s
FEMA                              AML   AML
     comp=N,5130µm,0.1s
FEMA                              AML   AML
FEMA                              AML   AML
FEMA Monte Fema  0.09 281         P     Pg          12 26 20.6 -0.4
FEMA                              S     Sg          12 26 23.0 +0.3
T1245 Castelsantange 0.09 171     P     Pg          12 26 20.2 -0.8
T1245                             S     Sg          12 26 22.0 -0.7
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
     comp=N,9144µm,0.1s
T1245 Castelsantange 0.09 171     P     Pg          12 26 20.2 -0.8
T1245                             S     Sg          12 26 21.8 -1.0
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
T1245                             AML   AML
FDMO Fiordimonte 0.11 327         ⇓P    Pg          12 26 20.8 -0.4
FDMO                              S     Sg          12 26 23.2 +0.2
T1216 Preci, Frazion 0.12 243     P     Pg          12 26 21.0 -0.4
T1216                             S     Sg          12 26 23.9 +0.5
AM05 Amandola Campo 0.14  77      P     Pg          12 26 20.9 -0.7
AM05                              S     Sg          12 26 23.2 -0.6
AM05                              AML   AML
     comp=N,25650µm,0.4s
AM05                              AML   AML
AM05                              AML   AML
     comp=N,5865µm,0.6s
AM05                              AML   AML
     comp=E,32200µm,0.8s
AM05                              AML   AML
     comp=N,5870µm,0.6s
AM05                              AML   AML
     comp=N,25600µm,0.4s
T1219 Muccia, Frazio 0.16 313     ⇓P    Pg          12 26 21.9 -0.1
T1219                             S     Sg          12 26 25.4 +1.0
GUMA Gualdo di Mace 0.17  46      P     Pg          12 26 21.8 -0.3
GUMA                              S     Sg          12 26 25.0 +0.5
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA Gualdo di Mace 0.17  46      ⇑P    Pg          12 26 21.9 -0.3
GUMA                              S     Sg          12 26 25.1 +0.5
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
GUMA                              AML   AML
T1220 Camerino, Fraz 0.17 340     P     Pg          12 26 22.0 -0.2
T1220                             S     Sg          12 26 25.6 +0.8
T1214 Arquata del Tr 0.19 171     P     Pg          12 26 22.2 -0.3
T1214                             S     Sg          12 26 25.6 +0.4
T1244 Arquata del Tr 0.21 153     P     Pg          12 26 22.4 -0.4
T1244                             S     Sg          12 26 26.3 +0.5
T1241 Roccafluvione, 0.21 115     P     Pg          12 26 22.4 -0.5
T1241                             S     Sg          12 26 25.9 +0.1
T1241                             AML   AML
     comp=E,1870µm,0.2s
T1241                             AML   AML
     comp=N,1560µm,0.3s
T1241                             AML   AML
     comp=N,41400µm,1.3s
T1241                             AML   AML
     comp=E,47600µm,0.7s
T1241                             AML   AML
     comp=E,50700µm,0.7s
T1241                             AML   AML
     comp=N,44600µm,0.7s
T1241                             AML   AML
     comp=N,41450µm,1.3s
T1241                             AML   AML
     comp=N,44550µm,0.7s
T1241 Roccafluvione, 0.21 115     P     Pg          12 26 22.6 -0.2
T1241                             S     Sg          12 26 26.0 +0.2
T1241                             AML   AML
     comp=E,50700µm,0.7s
T1241                             AML   AML
     comp=N,41400µm,1.2s
T1241                             AML   AML
     comp=E,47600µm,0.7s
T1241                             AML   AML
     comp=E,50700µm,0.7s
T1241                             AML   AML
     comp=N,41400µm,1.3s
T1241                             AML   AML
     comp=N,44550µm,0.7s
T1241                             AML   AML
     comp=N,44600µm,0.7s
T1212 Cascia, Frazio 0.21 205     P     Pg          12 26 22.8 -0.2
T1212                             S     Sg          12 26 26.7 +0.8
T1213 Norcia, Frazio 0.22 188     P     Pg          12 26 23.2 +0.1
T1213                             S     Sg          12 26 26.9 +0.7
MDAR Monte D'Aria 0.25 356        P     Pg          12 26 23.3 -0.2
MDAR                              S     Sg          12 26 28.1 +1.1
MDAR                              AML   AML
     comp=E,24100µm,0.7s
MDAR                              AML   AML
     comp=N,29800µm,0.6s
MDAR                              AML   AML
     comp=E,24050µm,0.7s
SEF1 Sefro       0.26 321         P     Pg          12 26 23.8 +0.1
SEF1                              S     Sb          12 26 28.8 -1.2
SEF1                              AML   AML
     comp=E,45100µm,0.3s
SEF1                              AML   AML
     comp=N,42400µm,0.8s
T1215 Vallo di Nera, 0.26 237     P     Pg          12 26 23.9 +0.1
T1215                             S     Sg          12 26 28.7 +1.3
T1215                             AML   AML
     comp=E,2275µm,0.5s
T1215                             AML   AML
     comp=N,2495µm,0.4s
T1215                             AML   AML
     comp=E,2200µm,0.5s
T1215                             AML   AML
     comp=N,2635µm,0.1s
T1215                             AML   AML
     comp=E,8675µm,1.2s
T1215                             AML   AML
     comp=N,17900µm,1.1s
T1215                             AML   AML
     comp=E,9245µm,1.2s
T1215                             AML   AML
     comp=N,19400µm,1.1s
T1215                             AML   AML
     comp=E,9130µm,1.2s
T1215                             AML   AML
     comp=E,17900µm,1.1s
T1215                             AML   AML
     comp=N,19450µm,1.1s
T1215                             AML   AML
     comp=E,9300µm,1.2s
T1215                             AML   AML
     comp=N,19450µm,1.1s
T1215                             AML   AML
     comp=N,17850µm,1.1s
T1215                             AML   AML
     comp=E,9135µm,1.2s
T1215                             AML   AML
     comp=E,1476µm,0.2s
T1215 Vallo di Nera, 0.26 237     P     Pg          12 26 24.0 +0.1
T1215                             S     Sg          12 26 28.7 +1.3
T1215                             AML   AML
     comp=E,9150µm,1.2s
T1215                             AML   AML
     comp=E,9245µm,1.2s
T1215                             AML   AML
     comp=N,19400µm,1.1s
T1215                             AML   AML
     comp=E,9130µm,1.2s
T1215                             AML   AML
     comp=N,17900µm,1.1s
T1215                             AML   AML
     comp=N,19450µm,1.1s
T1215                             AML   AML
     comp=E,9285µm,1.2s
T1215                             AML   AML
     comp=N,17850µm,1.1s
T1215                             AML   AML
     comp=E,9135µm,1.2s
PIO1 Pioraco     0.27 330         P     Pg          12 26 23.8 -0.1
PIO1                              S     Sb          12 26 29.3 -1.0
PIO1                              AML   AML
     comp=E,27500µm,0.7s
PIO1                              AML   AML
     comp=N,25600µm,1.0s
PIO1                              AML   AML
     comp=E,27500µm,0.7s
PIO1                              AML   AML
     comp=N,25650µm,1.0s
PIO1                              AML   AML
     comp=N,25600µm,1.0s
SSM1 San Severino M 0.28  1       P     Pg          12 26 24.0 -0.2
SSM1                              S     Sb          12 26 29.3 -1.4
T1204 Amatrice, Fraz 0.29 158     P     Pg          12 26 24.0 -0.4
T1204                             S     Sg          12 26 28.2  0.0
T1204                             AML   AML
     comp=E,5090µm,0.3s
T1204                             AML   AML
     comp=N,2315µm,0.5s
T1204                             AML   AML
     comp=E,24900µm,1.0s
T1204                             AML   AML
     comp=N,11880µm,1.3s
T1204                             AML   AML
     comp=N,11665µm,1.3s
T1204                             AML   AML
     comp=N,11685µm,1.3s
T1204                             AML   AML
     comp=E,24850µm,1.0s
T1204                             AML   AML
     comp=E,2849µm,0.2s
T1204 Amatrice, Fraz 0.29 158     P     Pg          12 26 24.1 -0.4
T1204                             S     Sg          12 26 28.7 +0.4
T1204                             AML   AML
     comp=E,24900µm,1.0s
T1204                             AML   AML
     comp=N,11880µm,1.3s
T1204                             AML   AML
     comp=N,11665µm,1.3s
T1204                             AML   AML
     comp=N,11685µm,1.3s
T1204                             AML   AML
     comp=E,24850µm,1.0s
MNTP Montappone  0.29  49         P     Pg          12 26 24.7 +0.3
MNTP                              S     Sb          12 26 29.6 -1.3
MNTP                              AML   AML
     comp=E,71250µm,1.0s
MNTP                              AML   AML
     comp=N,57955µm,0.8s
T1217 Poggiodomo (PG 0.29 217     P     Pg          12 26 24.3 -0.1
T1217                             S     Sg          12 26 29.4 +1.1
T1217                             AML   AML
     comp=E,2595µm,0.3s
T1217                             AML   AML
     comp=N,2560µm,0.8s
T1217                             AML   AML
     comp=E,2529µm,0.3s
T1217                             AML   AML
     comp=N,2515µm,0.7s
T1217                             AML   AML
     comp=E,8385µm,0.5s
T1217                             AML   AML
     comp=N,12650µm,1.0s
T1217                             AML   AML
     comp=E,8395µm,0.5s
T1217                             AML   AML
     comp=N,12650µm,1.0s
T1217                             AML   AML
     comp=E,9800µm,0.8s
T1217                             AML   AML
     comp=N,13100µm,0.5s
T1217                             AML   AML
     comp=E,9445µm,0.9s
T1217                             AML   AML
     comp=N,13200µm,0.5s
T1217                             AML   AML
     comp=N,13100µm,0.5s
T1217                             AML   AML
     comp=E,9470µm,0.9s
T1217                             AML   AML
     comp=N,13150µm,0.5s
T1217                             AML   AML
     comp=N,2181µm,0.2s
T1217 Poggiodomo (PG 0.29 217     P     Pg          12 26 24.3 -0.1
T1217                             S     Sg          12 26 29.5 +1.2
T1217                             AML   AML
     comp=E,9770µm,0.8s
T1217                             AML   AML
     comp=E,9460µm,0.9s
T1217                             AML   AML
     comp=N,13150µm,0.5s
T1217                             AML   AML
     comp=E,9815µm,0.8s
T1217                             AML   AML
     comp=N,13100µm,0.5s
T1217                             AML   AML
     comp=E,9450µm,0.9s
T1217                             AML   AML
     comp=E,9795µm,0.8s
T1217                             AML   AML
     comp=E,9445µm,0.9s
T1217                             AML   AML
     comp=N,13200µm,0.5s
T1217                             AML   AML
     comp=E,9470µm,0.9s
T1217                             AML   AML
     comp=E,9785µm,0.8s
T1217                             AML   AML
     comp=N,13150µm,0.5s
T1217                             AML   AML
     comp=N,13100µm,0.5s
T1201 Domo (RI)  0.29 168         P     Pg          12 26 24.2 -0.2
T1201                             S     Sb          12 26 30.0 -1.1
FIU1 Fiuminata   0.30 325         P     Pg          12 26 24.3 -0.2
FIU1                              S     Sb          12 26 29.9 -1.2
FIU1                              AML   AML
     comp=E,10350µm,0.8s
FIU1                              AML   AML
     comp=E,10360µm,0.8s
FIU1                              AML   AML
     comp=N,14300µm,1.2s
FIU1                              AML   AML
     comp=N,14250µm,1.2s
FIU1                              AML   AML
     comp=E,10390µm,0.8s
GAG1 Gagliole    0.30 346         P     Pg          12 26 24.9 +0.3
GAG1                              S     Sb          12 26 30.2 -1.0
GAG1                              AML   AML
     comp=E,41900µm,0.5s
GAG1                              AML   AML
     comp=N,44600µm,0.4s
GAG1                              AML   AML
     comp=E,41950µm,0.5s
GAG1                              AML   AML
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comp=N,44600µm,0.4s
T1243 Rocca Santa Ma 0.32 140 P **Pg 12 26 24.2 -0.7**
T1243 S **Sg 12 26 29.7 +0.4**
T1243 Rocca Santa Ma 0.32 140 P **Pg 12 26 24.2 -0.7**
T1243 S **Sg 12 26 29.4 +0.2**
SNTG Esanatoglia 0.35 332 P **Pg 12 26 25.2 -0.3**
SNTG S **Sb 12 26 31.9 -0.8**
SNTG AML AML
comp=N,10210µm,1.5s
SNTG AML AML
comp=E,8360µm,0.5s
SNTG AML AML
comp=E,8865µm,1.3s
SNTG AML AML
comp=N,10205µm,1.5s
SNTG AML AML
comp=N,10225µm,1.5s
SNTG Esanatoglia 0.35 332 P **Pg 12 26 25.2 -0.3**
SNTG S **Sb 12 26 31.9 -0.8**
SNTG AML AML
comp=E,8360µm,0.5s
SNTG AML AML
comp=N,10210µm,1.5s
SNTG AML AML
comp=E,8865µm,1.3s
SNTG AML AML
comp=N,10225µm,1.5s
SNTG AML AML
comp=N,10205µm,1.5s
LNSS Leonessa 0.35 195 P **Pg 12 26 25.6 +0.1**
LNSS S **Sg 12 26 31.4 +1.1**
LNSS AML AML
comp=E,5275µm,1.3s
LNSS AML AML
comp=E,6680µm,0.6s
LNSS AML AML
comp=N,18750µm,0.4s
LNSS AML AML
comp=E,6685µm,0.6s
LNSS AML AML
comp=N,18800µm,0.4s
LNSS AML AML
comp=E,1053µm,0.1s
LNSS Leonessa 0.35 195 P **Pg 12 26 25.8 +0.1**
LNSS S **Sg 12 26 31.7 +1.4**
LNSS AML AML
comp=E,6680µm,0.6s
LNSS AML AML
comp=N,18750µm,0.4s
LNSS AML AML
comp=E,6685µm,0.6s
LNSS AML AML
comp=N,18800µm,0.4s
OFFI Offida 0.38 91 P **Pg 12 26 26.2 +0.2**
OFFI S **Sb 12 26 33.6 +0.2**
OFFI AML AML
comp=E,25950µm,1.1s
OFFI AML AML
comp=N,38650µm,0.6s
OFFI AML AML
comp=E,28350µm,1.1s
OFFI AML AML
comp=N,45250µm,0.7s
OFFI Offida 0.38 91 ⇑P **Pg 12 26 26.2 +0.2**
OFFI AML AML
comp=E,28350µm,1.1s
OFFI AML AML
comp=N,45250µm,0.7s
TRE1 Treia 0.38 16 P **Pg 12 26 26.4 +0.4**
TRE1 S **Sb 12 26 33.1 -0.4**
TRE1 AML AML
comp=N,36400µm,1.5s
TRE1 AML AML
comp=E,41200µm,0.9s
TRE1 AML AML
comp=N,36350µm,1.5s
ASSB Assisi San Ben 0.39 285 P **Pg 12 26 25.8 -0.3**
ASSB S **Sb 12 26 33.4 -0.3**
ASSB AML AML
comp=N,17900µm,0.4s
ASSB AML AML
comp=E,17700µm,0.4s
ASSB Assisi San Ben 0.39 285 P **Pg 12 26 26.0 -0.2**
ASSB S **Sb 12 26 33.0 -0.7**
ASSB AML AML
comp=E,17700µm,0.4s
ASSB AML AML
comp=N,17900µm,0.4s
EL6 Elcito 0.39 353 P **Pg 12 26 26.0 -0.2**
EL6 S **Sb 12 26 32.8 -1.0**
EL6 AML AML
comp=E,20500µm,0.8s
EL6 AML AML
comp=N,20550µm,0.5s
EL6 AML AML
comp=E,20600µm,0.8s
EL6 AML AML
comp=N,20600µm,0.5s
EL6 AML AML
comp=E,20650µm,0.8s
EL6 Elcito 0.39 353 P **Pg 12 26 25.7 -0.4**
EL6 S **Sb 12 26 33.1 -0.7**
EL6 AML AML
comp=E,20500µm,0.8s
EL6 AML AML
comp=N,20550µm,0.5s
EL6 AML AML
comp=E,20600µm,0.8s
EL6 AML AML
comp=N,20600µm,0.5s
EL6 AML AML
comp=E,20650µm,0.8s
CING Cingoli 0.43 3 P **Pg 12 26 26.7 -0.2**
T1246 Crognaleto (TE 0.43 146 ⇑P **Pg 12 26 26.2 -0.8**
T1246 S **Sg 12 26 33.2 +0.5**
RM33 Pellescritta (0.44 176 P **Pg 12 26 26.5 -0.5**
RM33 S **Sg 12 26 33.1 +0.2**
RM33 AML AML
comp=E,1440µm,0.4s
RM33 AML AML
comp=N,838µm,0.1s
RM33 AML AML
comp=E,1455µm,0.4s
RM33 AML AML
comp=N,836µm,0.1s
RM33 AML AML
comp=E,7835µm,0.3s
RM33 AML AML
comp=N,4790µm,0.9s
RM33 AML AML
comp=E,7795µm,0.3s
RM33 AML AML
comp=N,4705µm,0.9s
RM33 AML AML
comp=N,8540µm,1.4s
RM33 AML AML
comp=E,9495µm,1.6s
RM33 AML AML
comp=E,9435µm,1.6s
RM33 AML AML
comp=N,8625µm,1.1s
RM33 AML AML
comp=E,1440µm,0.3s
RM33 Pellescritta (0.44 176 P **Pg 12 26 26.6 -0.5**
RM33 S **Sg 12 26 33.5 +0.7**
CAMP Campotosto 0.45 157 P **Pg 12 26 26.3 -1.0**
CAMP S **Sg 12 26 33.4 +0.3**
CAMP AML AML
comp=N,5690µm,1.0s
CAMP AML AML
comp=E,8125µm,0.9s
CAMP AML AML
comp=N,6455µm,1.2s
CAMP Campotosto 0.45 157 P **Pg 12 26 26.4 -0.8**
CAMP S **Sg 12 26 33.7 +0.5**
CAMP AML AML
comp=N,6455µm,1.2s
CAMP AML AML
comp=E,8125µm,0.9s
ATCC AVT- Casa Cast 0.46 302 P **Pg 12 26 27.2 -0.2**
ATCC S **Sb 12 26 35.8 +0.1**
ATCC AML AML
comp=N,16150µm,0.9s
ATCC AML AML
comp=N,16550µm,0.8s
ATCC AML AML
comp=E,16900µm,1.3s
ATCC AVT- Casa Cast 0.46 302 P **Pg 12 26 27.4 0.0**
ATCC S **Sg 12 26 34.2 +0.8**
ATCC AML AML
comp=N,16500µm,0.8s
ATCC AML AML
comp=N,16550µm,0.8s
ATCC AML AML
comp=E,16900µm,1.3s
TERO Teramo 0.46 135 P **Pg 12 26 26.4 -1.0**
TERO S **Sg 12 26 33.5 +0.1**
TERO AML AML
comp=E,11045µm,0.7s
TERO AML AML
comp=N,11650µm,0.5s
TERO AML AML
comp=E,11040µm,0.7s
TERO AML AML
comp=N,11700µm,0.5s
TERO AML AML
comp=E,11505µm,0.7s
TERO AML AML
comp=N,12000µm,0.5s
TERO AML AML
comp=E,11035µm,0.7s
TERO Teramo 0.46 135 P **Pg 12 26 26.5 -1.0**
TERO S **Sg 12 26 33.8 +0.4**
TERO AML AML
comp=E,11045µm,0.7s
TERO AML AML
comp=N,11650µm,0.5s
TERO AML AML
comp=E,11040µm,0.7s
TERO AML AML
comp=N,11700µm,0.5s
TERO AML AML
comp=E,11035µm,0.7s
TERO AML AML
comp=N,12000µm,0.5s
TERO AML AML
comp=E,11505µm,0.7s
FOSV Fossato di Vic 0.46 320 P **Pg 12 26 27.2 -0.3**
FOSV S **Sb 12 26 35.5 -0.3**
FOSV AML AML
comp=E,8550µm,1.0s
FOSV AML AML
comp=N,19200µm,0.3s
FOSV AML AML
comp=E,8545µm,1.0s
FOSV AML AML
comp=N,19150µm,0.3s
FOSV Fossato di Vic 0.46 320 P **Pg 12 26 27.3 -0.3**
FOSV S **Sb 12 26 35.2 -0.6**
FOSV AML AML
comp=E,8550µm,1.0s
FOSV AML AML
comp=N,19200µm,0.3s
FOSV AML AML
comp=E,8545µm,1.0s
FOSV AML AML
comp=N,19150µm,0.3s
ARRO Arrone 0.47 219 P **Pg 12 26 27.6 -0.1**
ARRO S **Sb 12 26 39.3 +3.2**
ARRO AML AML
comp=E,1070µm,1.2s
ARRO AML AML
comp=N,805µm,0.2s
ARRO AML AML
comp=E,1920µm,0.6s
ARRO AML AML
comp=N,1660µm,1.2s
ARRO AML AML
comp=E,7755µm,1.2s
ARRO AML AML
comp=N,5170µm,1.1s
ARRO AML AML
comp=E,787µm,0.3s
ARRO Arrone 0.47 219 P **Pg 12 26 27.7 0.0**
ARRO AML AML
comp=N,5175µm,1.1s
ARRO AML AML
comp=E,7755µm,1.2s
ARRO AML AML
comp=N,5170µm,1.1s
T1211 Morro Reatino 0.47 209 P **Pg 12 26 28.3 +0.6**
T1211 S **Sb 12 26 35.5 -0.7**
T1211 Morro Reatino 0.47 209 P **Pg 12 26 28.1 +0.3**
T1211 S **Sg 12 26 35.1 +1.2**
CADA Capodarco di F 0.50 60 P **Pb 12 26 29.2 -0.3**
MMUR Monte Murano 0.51 346 P **Pg 12 26 28.4 0.0**
MMUR S **Sb 12 26 37.0 -0.3**
MMUR AML AML
comp=E,17900µm,0.3s
MMUR AML AML
comp=N,11670µm,0.9s
MMUR AML AML
comp=N,11700µm,0.9s
MMUR AML AML
comp=E,17950µm,0.3s
T1247 Pizzolo (AQ) 0.51 169 P **Pg 12 26 27.6 -0.8**
T1247 S **Sb 12 26 36.8 -0.5**
T1247 AML AML
comp=E,5100µm,1.2s
T1247 AML AML
comp=N,7960µm,1.1s
T1247 AML AML
comp=E,10350µm,1.6s
T1247 AML AML
comp=N,9105µm,1.1s
T1247 Pizzolo (AQ) 0.51 169 P **Pg 12 26 28.6 +0.1**
T1247 S **Sg 12 26 35.9 +0.7**
T1247 AML AML
comp=N,9105µm,1.1s
T1247 AML AML
comp=E,10350µm,1.6s
CIMA Civitanova Mar 0.51 45 P **Pb 12 26 29.3 -0.5**
PP3 Marolino 0.54 37 P **Pg 12 26 29.4 +0.4**
PP3 AML AML
comp=E,28850µm,0.9s
PP3 AML AML
comp=N,36550µm,0.4s
PP3 AML AML
comp=E,28650µm,1.3s
PP3 AML AML
comp=N,37600µm,0.5s
PP3 AML AML
comp=E,28800µm,0.9s
PP3 AML AML
comp=N,37550µm,0.5s
PP3 AML AML
comp=E,28600µm,1.3s
PP3 AML AML
comp=N,36500µm,0.4s
CESX Cesi 0.55 232 P **Pg 12 26 29.0 -0.2**
CESX S **Sg 12 26 37.6 +1.2**
CESX AML AML
comp=N,7370µm,1.3s
CESX AML AML
comp=E,6875µm,0.5s
TRTR Tortoreto Alta 0.56 104 P **Pg 12 26 29.6 +0.2**
TRTR S **Sn 12 26 40.4 -1.8**
TRTR AML AML
comp=E,30050µm,0.5s
TRTR AML AML
comp=N,29650µm,0.5s
TRTR AML AML
comp=E,33950µm,0.7s
TRTR AML AML
comp=N,30850µm,0.6s
TRTR Tortoreto Alta 0.56 104 P **Pg 12 26 29.8 +0.4**
TRTR AML AML
comp=E,33950µm,0.7s
TRTR AML AML
comp=N,30850µm,0.6s
MURB Monte Urbino 0.57 304 P **Pg 12 26 29.4 -0.1**
MURB S **Sb 12 26 39.5 +0.6**
MURB Monte Urbino 0.57 304 P **Pg 12 26 29.4 -0.1**
MURB AML AML
comp=E,18250µm,1.1s
MURB AML AML
comp=N,17550µm,0.9s
MURB AML AML
comp=N,18000µm,0.9s
MURB AML AML
comp=N,17500µm,0.9s
MURB AML AML
comp=E,18300µm,1.0s
MURB AML AML
comp=E,18850µm,1.1s
ARVD Arcevia 0.58 343 P **Pg 12 26 29.2 -0.5**
GIGS Gran Sasso 0.58 149 P **Pg 12 26 28.6 -1.1**
GIGS S **Sg 12 26 37.8 +0.5**
GIGS AML AML
comp=N,1340µm,0.4s
GIGS AML AML
comp=N,1810µm,1.4s
GIGS AML AML
comp=E,2385µm,0.6s
GIGS Gran Sasso 0.58 149 P **Pg 12 26 29.1 -0.7**
GIGS S **Sg 12 26 38.0 +0.7**
GIGS AML AML
comp=E,2385µm,0.6s
GIGS AML AML
comp=N,1810µm,1.4s
ATFO Monte Foce - G 0.61 314 ⇓P **Pg 12 26 30.0 -0.3**
AQU L'Aquila 0.62 164 P **Pg 12 26 29.7 -0.8**
AQU S **Sg 12 26 38.7 +0.2**
AQU AML AML
comp=N,6810µm,1.6s
AQU AML AML
comp=E,7845µm,1.6s
AQU AML AML
comp=N,6490µm,1.6s
AQU AML AML
comp=E,7940µm,1.6s
ATTE AVT- Monte Tez 0.65 293 P **Pg 12 26 31.0 -0.1**
ATTE AML AML
comp=N,4350µm,0.8s
ATTE AML AML
comp=E,4880µm,1.3s
FRON Frontone 0.66 331 ⇓P **Pg 12 26 30.7 -0.5**
ATLO AVT- Montelove 0.67 304 P **Pg 12 26 31.0 -0.5**
FIAM Fiamignano 0.68 183 AML AML
comp=N,1240µm,1.2s
FIAM AML AML
comp=E,782µm,0.8s
FIAM AML AML
comp=N,3605µm,0.6s
FIAM AML AML
comp=E,5110µm,1.1s
FIAM Fiamignano 0.68 183 P **Pg 12 26 31.1 -0.5**
FIAM AML AML
comp=E,5110µm,1.1s
FIAM AML AML
comp=N,3605µm,0.6s
AOI Ancona 0.68 28 P **Pg 12 26 31.6 -0.1**
AOI AML AML
comp=N,7850µm,0.4s
AOI AML AML
comp=E,8175µm,0.3s
AOI AML AML
comp=N,7855µm,0.4s
ATVO AVT- Monte Val 0.71 308 P **Pg 12 26 31.7 -0.4**
TB03 Pietralunga 0.72 310 P **Pg 12 26 32.1 -0.2**
VCEL Villa Celiera 0.74 138 P **Pg 12 26 31.8 -1.0**
VCEL S **Sb 12 26 43.2 -0.7**
VCEL Villa Celiera 0.74 138 P **Pg 12 26 32.0 -0.8**
VCEL AML AML
comp=E,5920µm,1.4s
VCEL AML AML
comp=N,7585µm,1.3s
FAGN Fagnano 0.74 156 P **Pg 12 26 32.0 -0.9**
ATPC Poggio Castell 0.75 316 P **Pg 12 26 32.7 -0.2**
MPAG Monte Paganucc 0.75 337 P **Pg 12 26 32.3 -0.6**
PIEI Pieia 0.75 322 P **Pg 12 26 32.4 -0.6**
ATPI Pietralunga - 0.75 312 P **Pg 12 26 32.6 -0.5**
ATPI AML AML
comp=E,4385µm,0.9s
ATPI AML AML
comp=N,4290µm,1.6s
SENI Senigallia 0.76 4 P **Pg 12 26 33.2 0.0**
MGAB Montegabbione 0.78 268 P **Pg 12 26 32.6 -0.9**
NARO Abbazia di Nar 0.79 327 P **Pg 12 26 33.1 -0.6**
NARO AML AML
comp=E,4665µm,1.0s
NARO AML AML
comp=N,3030µm,1.3s
FSSB Fossombrone 0.80 339 P **Pg 12 26 33.5 -0.5**
T0110 Collepietro 0.85 148 P **Pg 12 26 33.4 -1.5**
T0110 AML AML
comp=E,6740µm,0.5s
T0110 AML AML
comp=N,5495µm,0.8s
SRES S.Oreste - Sor 0.86 215 P **Pg 12 26 34.5 -0.6**
SACS San Casciano d 0.93 264 P **Pg 12 26 36.0 -0.4**
SACS AML AML
comp=N,2875µm,0.9s
SACS AML AML
comp=E,3295µm,1.3s
SACS AML AML
comp=N,2755µm,0.9s
SACS AML AML
comp=E,3185µm,1.3s
PTQR Pietraquaria 0.94 169 P **Pg 12 26 36.3 -0.3**
CAFI Castiglion Fio 0.96 294 P **Pg 12 26 36.3 -0.7**
CAFI AML AML
comp=N,1985µm,0.9s
CAFI AML AML
comp=E,3145µm,1.0s
SSP9 Sansepolcro 0.98 310 P **Pg 12 26 36.9 -0.6**
SSP9 AML AML
comp=E,4435µm,1.6s
SSP9 AML AML
comp=N,5850µm,1.6s
CERT Cerreto 1.01 188 P **Pg 12 26 37.5 -0.3**
CPGN Carpegna, Ital 1.05 324 P **Pg 12 26 37.9 -0.9**
SF11 Podere del Sol 1.10 266 P **Pg 12 26 38.6 -1.0**
MCIV Monte Civitell 1.11 262 P **Pg 12 26 39.1 -0.7**
MCIV AML AML
comp=N,1780µm,1.3s
MCIV AML AML
comp=E,1810µm,0.7s
RSM Repubblica di 1.11 332 P **Pg 12 26 39.3 -0.7**
CRE Caprese Michel 1.12 308 P **Pg 12 26 39.1 -0.8**
CRE AML AML
comp=E,1330µm,1.3s
CRE AML AML
comp=N,1615µm,0.6s
VVLD Villa Vallelon 1.12 162 P **Pg 12 26 39.1 -1.0**
SF13 Bagnolo 1.15 264 P **Pb 12 26 39.8 -0.7**
GUAR Guarcino 1.16 175 P **Pb 12 26 40.1 -0.6**
LPEL Lama dei Pelig 1.17 140 P **Pb 12 26 40.1 -0.9**
LPEL AML AML
comp=E,3345µm,0.8s
LPEL AML AML
comp=N,2310µm,1.0s
TOLF Tolfa 1.23 225 P **Pn 12 26 41.0 -1.0**
ARCI Arcidosso 1.25 266 AML AML
comp=E,555µm,1.0s
ARCI AML AML
comp=N,532µm,1.0s
POFI Posta Fibreno 1.29 162 P **Pn 12 26 41.7 -1.1**
ASQU Asqua 1.32 311 P **Pn 12 26 43.0 -0.1**
ASQU AML AML
comp=E,1480µm,1.3s
ASQU AML AML
comp=N,1300µm,1.0s
SFI Santa Sofia 1.36 315 P **Pn 12 26 42.7 -1.0**
SFI AML AML
comp=E,1250µm,0.9s
SFI AML AML
comp=N,1490µm,1.0s
SFI AML AML
comp=N,1535µm,1.0s
SFI AML AML
comp=E,1265µm,1.2s
GIUL Giuliano Di Ro 1.39 177 P **Pg 12 26 45.1 -0.1**
RNI2 Rionero Sannit 1.44 149 P **Pn 12 26 44.7 -0.2**
LATB Latina 1.46 186 P **Pn 12 26 44.8 -0.3**
LIK San Giovanni I 1.47 169 AML AML
comp=N,3100µm,1.4s
LIK AML AML
comp=E,2180µm,1.5s
CSNT Castellina Chi 1.47 292 P **Pn 12 26 44.6 -0.7**
CERA Filignano 1.49 155 P **Pn 12 26 44.6 -0.9**
CERA AML AML
comp=N,2120µm,0.8s
CERA AML AML
comp=N,2135µm,0.8s
CERA AML AML
comp=E,1715µm,0.8s
CERA AML AML

comp=E,1695μm,0.8s
RUFI Rufina 1.50 307 P **Pn 12 26 45.8 +0.2**
OSSC Osservatorio P 1.52 293 P **Pn 12 26 45.1 -0.8**
MIDA Miranda 1.53 148 P **Pn 12 26 46.1 0.0**
TRIV Trivento 1.56 139 AML AML
comp=N,2090μm,1.0s
TRIV AML AML
comp=E,2780μm,1.2s
MAON Monte Argentar 1.59 252 P **Pn 12 26 46.2 -0.7**
CASP Castiglione de 1.70 266 P **Pn 12 26 48.4 0.0**
CASP AML AML
comp=N,240μm,1.2s
CASP AML AML
comp=E,266μm,1.5s
BRIS BRISIGHELLA 1.70 316 P **Pb 12 26 49.7 -0.4**
BRIS AML AML
comp=E,1630μm,0.9s
BRIS AML AML
comp=N,1820μm,0.8s
BSSO Busso 1.75 142 P **Pn 12 26 48.0 -1.2**
BSSO AML AML
comp=N,336μm,1.0s
BSSO AML AML
comp=E,366μm,1.2s
MTRZ Monterenzio 1.89 320 P **Pn 12 26 51.9 +0.9**
MELA Melanico ??? S 1.91 130 P **Pn 12 26 52.0 +0.8**
MELA AML AML
comp=E,2090μm,1.0s
MELA AML AML
comp=N,1855μm,1.6s
MELA AML AML
comp=E,2045μm,1.0s
MELA AML AML
comp=N,1820μm,1.6s
MTCR Monte La Croce 1.91 305 P **Pn 12 26 51.4 0.0**
FNVD Fontana Vidola 1.92 310 P **Pb 12 26 53.6 -0.2**
VITU Vitulano (BN) 2.07 148 P **Pn 12 26 54.2 +0.7**
APRC Apricena 2.12 123 P **Pn 12 26 53.7 -0.5**
APRC AML AML
comp=E,794μm,0.5s
APRC AML AML
comp=N,1000μm,0.6s
MAIM Mastiano 2.18 297 P **Pn 12 26 54.1 -0.8**
MAIM AML AML
comp=E,370μm,0.7s
MAIM AML AML
comp=N,386μm,1.5s
SKDS Skadanscina 2.67 13 *i* Pn **Pn 12 27 01.5 -0.3**
SKDS *e*Sn **Sn 12 27 34.1 -0.1**
SKDS IAML 12 27 54.8
comp=Z,347nm,0.8s
VULT Monte Vulture 2.70 137 AML AML
comp=E,437μm,0.8s
VULT AML AML
comp=N,752μm,1.0s
MSSA Maissana 2.98 299 P **Pn 12 27 06.7 +0.6**
MSSA AML AML
comp=E,152μm,1.6s
MSSA AML AML
comp=N,172μm,1.6s
SMPL Sampolo 2.99 255 AML AML
comp=N,33μm,1.6s
SMPL AML AML
comp=E,26μm,1.4s
SABO M.te Sabotino 3.05 6 P **Pn 12 27 07.0 0.0**
SABO AML AML
comp=N,5850μm,0.6s
SABO AML AML
comp=E,879μm,0.6s
SABO AML AML
comp=N,1485μm,0.6s
SABO AML AML
comp=E,3655μm,0.6s
ROVR Rover Verones 3.09 332 P **Pn 12 27 08.4 +0.8**
ROVR AML AML
comp=E,136μm,1.1s
ROVR AML AML
comp=N,179μm,1.5s
CGRP Cima Grappa 3.09 342 P **Pn 12 27 07.9 +0.2**
CGRP AML AML
comp=N,676μm,0.7s
CGRP AML AML
comp=N,697μm,0.6s
CGRP AML AML
comp=E,813μm,1.4s
CGRP AML AML
comp=E,798μm,1.3s
PGF Pioggiola 3.10 264 *e*P **Pn 12 27 09.4 +1.7**
PGF *e*Sn **Sn 12 27 41.1 -3.8**
comp=E,30nm,0.7s
PGF Pioggiola 3.10 264 AML AML
comp=N,50μm,1.4s
PGF AML AML
comp=E,41μm,1.0s
AMUR Altamura 3.27 127 P **Pn 12 27 08.8 -1.2**
SALO Salr 3.28 326 P **Pn 12 27 11.6 +1.5**
SALO AML AML
comp=N,530μm,1.0s
SALO AML AML
comp=E,446μm,0.9s
SALO AML AML
comp=E,456μm,1.0s
SALO AML AML
comp=N,530μm,0.9s
CTI Castel Tesino 3.29 341 AML AML
comp=N,476μm,0.7s
CTI AML AML
comp=E,456μm,1.6s
STAL STALIGIAL 3.33 355 P **Pn 12 27 10.9 0.0**
STAL AML AML
comp=N,344μm,1.5s
STAL AML AML
comp=E,635μm,1.0s
STON Ston 3.33 90 AML AML
comp=N,119μm,1.0s
STON AML AML
comp=E,116μm,1.0s
LUSI Trento, Gardas 3.41 333 P **Pn 12 27 13.1 +1.2**
LUSI AML AML
comp=N,354μm,1.0s
LUSI AML AML
comp=E,340μm,0.8s
PTCC Patocco-Chiusa 3.46 2 P **Pn 12 27 12.4 -0.3**
PTCC AML AML
comp=N,220μm,0.6s
PTCC AML AML
comp=E,306μm,1.2s
MATE Matera 3.50 130 ⇓P **Pn 12 27 14.5 +1.4**
GAGG Gaggia 3.51 334 P **Pn 12 27 14.8 +1.3**
GAGG AML AML
comp=E,557μm,1.0s
GAGG AML AML
comp=N,456μm,0.9s
ACOM Acomizza, Ital 3.61 4 P **Pn 12 27 15.2 +0.4**
ACOM AML AML
comp=E,518μm,1.3s
ACOM AML AML
comp=N,426μm,0.7s
ACOM AML AML
comp=N,483μm,0.7s
ACOM AML AML
comp=E,527μm,1.3s
ZOU Zoufplan 3.61 358 P **Pn 12 27 15.0 +0.1**
ZOU AML AML
comp=E,492μm,1.0s
ZOU AML AML
comp=N,406μm,1.5s
ZOU AML AML
comp=E,470μm,1.0s
ZOU AML AML
comp=N,406μm,1.6s
MABI Malga Bissina 3.64 329 P **Pn 12 27 16.4 +1.1**
FVI Forni Avoltri 3.66 356 P **Pn 12 27 15.7 +0.3**
FVI AML AML
comp=N,303μm,0.6s
FVI AML AML
comp=E,232μm,0.9s
OBKA Obir 3.70 15 *e*Pn **Pn 12 27 17.3 +1.4**
OBKA comp=E,2.3nm,0.3s *e*Sg **Sg 12 28 19.2 +2.0**
comp=E,60nm,0.6s
MYKA Terra Mystica 3.70 5 *e*Pn **Pn 12 27 17.3 +1.3**
MYKA comp=E,4.0nm,0.2s *e*Sn **Sn 12 28 01.3 +1.6**
comp=E,32nm,0.5s
KOSI Kohlern 3.74 341 P **Pn 12 27 17.9 +1.3**
KOSI AML AML
comp=N,495μm,1.5s
KOSI AML AML
comp=E,428μm,1.1s
APPI Appiano 3.79 339 P **Pn 12 27 18.1 +0.9**
APPI AML AML
comp=N,247μm,0.8s
APPI AML AML
comp=E,246μm,1.2s
ABTA Abfaltersbach 3.83 353 *i* Pn **Pn 12 27 18.9 +1.2**
comp=E,28nm,0.4s,SNR=29
ABTA *e*Sn **Sn 12 28 02.5 -0.5**
comp=E,85nm,0.6s
BRY Bratogost 3.94 89 ⇓*i*Pn **Pn 12 27 20.4 +1.0**
BRY *i* Sn **Sn 12 28 07.8 +2.0**
HCY Herceg Novi 3.96 95 ⇑*i*Pn **Pn 12 27 20.7 +1.3**
HCY *i* Sn **Sn 12 28 08.1 +2.2**
RISI Rein 4.08 349 P **Pn 12 27 22.4 +1.2**
RISI AML AML
comp=N,650μm,0.4s
RISI AML AML
comp=E,601μm,0.6s
BERNI Berninapass 4.13 328 P **Pn 12 27 23.5 +1.5**
BERNI AML AML
comp=E,102μm,1.0s
BERNI AML AML
comp=N,115μm,0.9s
ROSI Rosskopf 4.17 343 P **Pn 12 27 23.8 +1.3**
ROSI AML AML
comp=E,449μm,1.3s
ROSI AML AML
comp=N,677μm,1.0s
MUGIO Muggio 4.19 317 P **Pn 12 27 23.4 +0.7**
UPM Unac-Piva 4.21 85 *e*Pn **Pn 12 27 24.1 +1.0**
UPM *i* Sn **Sn 12 28 14.1 +1.6**
CEME Cevo 4.25 93 ⇓*i*Pn **Pn 12 27 24.8 +1.3**
CEME *i* Sn **Sn 12 28 15.3 +2.0**
NKME Niksic 4.26 90 *e*Pn **Pn 12 27 24.8 +1.2**
NKME *i* Sn **Sn 12 28 15.2 +1.8**
BUM Brajici-Budva 4.27 97 ⇓*i*Pn **Pn 12 27 25.0 +1.2**
BUM *i* Sn **Sn 12 28 15.8 +2.0**
SBF Sospel 4.28 284 *e*Pn **Pn 12 27 23.1 -0.8**
SBF Sospel 4.28 284 *e*P **Pn 12 27 26.6 +2.7**
SBF *e*Sn **Sn 12 28 10.7 -3.2**
comp=N,38nm,0.6s
VARE Varese 4.30 314 P **Pn 12 27 25.4 +1.2**
VARE AML AML
comp=N,134μm,0.7s
VARE AML AML
comp=E,139μm,0.9s
FETA Feichten 4.43 338 *i* Pn **Pn 12 27 27.7 +1.7**
comp=E,22nm,0.7s,SNR=23
WTTA Wattenberg 4.45 346 *i* Pn **Pn 12 27 28.3 +2.0**
comp=E,11nm,0.3s,SNR=12
WTTA Wattenberg 4.45 346 AML AML
comp=E,244μm,0.8s
WTTA AML AML
comp=N,236μm,0.9s
DAVOX Davos/Dischmat 4.49 330 Pn **Pn 12 27 29.5 +2.6**
comp=N,4.2nm,0.3s,baz=163,slow=19,SNR=46
DAVOX Sn **Sn 12 28 23.3 +3.9**
comp=N,2.3nm,0.3s,baz=131,slow=20,SNR=4.6
comp=N,24nm,0.4s
DAVOX Davos/Dischmat 4.49 330 P **Pn 12 27 29.5 +2.6**
DAVOX AML AML
comp=N,166μm,0.7s
DAVOX AML AML
comp=E,159μm,1.2s
SQTA Sankt Quirin 4.49 343 *i* Pn **Pn 12 27 29.1 +2.2**
comp=E,40nm,0.5s,SNR=23
DRME Dracevica, Mon 4.51 98 ⇑*i*Pn **Pn 12 27 28.2 +1.2**
DRME *i* Sn **Sn 12 28 21.4 +1.9**
PDG Podgorica 4.52 94 ⇓P **Pn 12 27 28.4 +1.3**
TTG Podgorica 4.52 94 *e*Pn **Pn 12 27 28.4 +1.3**
TTG *i* Sn **Sn 12 28 21.6 +1.9**
WATA Walderalm 4.53 346 *i* Pn **Pn 12 27 29.6 +2.2**
comp=E,11nm,0.3s,SNR=19
PLE Pljevlja 4.57 83 ⇑*i*Pn **Pn 12 27 29.1 +1.2**
PLE *i* Sn **Sn 12 28 22.8 +1.6**
ULC Ulcinj 4.60 100 ⇑*i*Pn **Pn 12 27 29.6 +1.3**
ULC *i* Sn **Sn 12 28 23.0 +1.1**
ARSA Arzberg 4.62 20 *e*Pn **Pn 12 27 28.5 0.0**
comp=E,3.7nm,0.4s
MOTA Moosalm 4.63 342 *i* Pn **Pn 12 27 31.2 +2.3**
comp=E,37nm,0.8s,SNR=23
KOME Kolasin 4.66 89 ⇓*i*Pn **Pn 12 27 30.4 +1.2**
KOME *i* Sn **Sn 12 28 25.2 +1.7**
KOVH Kovagotottos 4.72 47 P **Pn 12 27 30.0 +0.1**
BIOA Bad Ischl, Aus 4.76 4 *i* Pn **Pn 12 27 31.4 +1.0**
comp=E,14nm,0.3s,SNR=12
BIOA *e*Sn **Sn 12 28 25.2 -0.5**
comp=E,29nm,0.6s
RETA Reutte 4.85 340 *i* Pn **Pn 12 27 33.8 +2.1**
comp=E,15nm,0.4s,SNR=18
LMR La Mourre 4.89 277 *e*Pn **Pn 12 27 31.4 -0.8**
LMR La Mourre 4.89 277 *e*P **Pn 12 27 35.2 +3.0**
DAVA Damuels 4.92 333 *i* Pn **Pn 12 27 35.2 +2.3**
comp=E,30nm,0.7s,SNR=22
IVA Berane 4.94 89 ⇓*i*Pn **Pn 12 27 34.3 +1.3**
IVA *i* Sn **Sn 12 28 31.9 +1.6**
MBDF Montbardon 4.96 293 *e*P **Pn 12 27 36.5 +3.2**
MBDF *e*Sn **Sn 12 28 27.3 -3.5**
comp=E,21nm,0.6s
MOA Molln 4.96 9 *e*Pn **Pn 12 27 34.4 +1.1**
comp=E,1.7nm,0.2s
MORH Mrgy, Hungar 5.10 48 P **Pg 12 27 53.3 -2.8**
BNALP Bannalp 5.17 321 P **Pn 12 27 38.8 +2.5**
TIR Tirane 5.23 106 ⇓P **Pn 12 27 37.9 +1.1**
RONA Rosalia, Austr 5.24 24 *e*Pn **Pn 12 27 37.9 +0.8**
comp=E,1.7nm,0.3s
LPG La Plagne 5.27 301 *e*P **Pn 12 27 40.7 +3.0**
LPG *e*Sn **Sn 12 28 35.5 -3.2**
comp=E,28nm,0.7s
LPL La Plagne 5.29 301 *e*P **Pn 12 27 41.0 +3.1**
LPL *e*Sn **Sn 12 28 35.4 -3.7**
comp=E,54nm,1.0s
CONA Conrad Observa 5.33 20 *e*Pn **Pn 12 27 38.6 +0.3**
comp=E,1.9nm,0.2s
ORIF Oris-en-Rattie 5.62 293 *e*P **Pn 12 27 45.8 +3.5**
ORIF *e*Sn **Sn 12 28 43.4 -3.7**
comp=E,90nm,1.5s
SMRF Simiane la Rot 5.62 283 *e*P **Pn 12 27 44.7 +2.4**
GERES GERESS Array B 5.91 3 Pn **Pn 12 27 46.3 0.0**
comp=E,0.8nm,0.3s,baz=178,slow=13,SNR=20
GERES Sn **Sn 12 28 51.5 -2.7**
comp=E,2.7nm,0.3s,baz=189,slow=24,SNR=8.4
GERES LR LR 12 29 48.3
comp=E,121nm,19.0s,baz=132,slow=36
comp=E,1.1nm,0.3s
CKRC Cesky Krumlov 5.93 7 *e*PN **Pn 12 27 46.1 -0.4**
CKRC *e*SN **Sn 12 28 51.8 -2.7**
KHC Kasperske Hory 6.19 2 *e*PN **Pn 12 27 49.8 -0.3**
KHC *e*SN **Sn 12 28 58.7 -2.4**
CABF La Chapelle 6.23 308 *e*Pn **Pn 12 27 50.9 +0.2**
CABF La Chapelle 6.23 308 *e*P **Pn 12 27 55.0 +4.3**
CABF *e*Sn **Sn 12 28 58.3 -3.8**
comp=E,71nm,1.3s
VIVF Saint-Julien-I 6.43 290 *e*Pn **Pn 12 27 52.9 -0.5**
KRUC Moravsky 6.52 19 *e*PN Pn 12 27 47.5 -7.0
KRUC *e*SN **Sn 12 29 04.6 -4.4**
HINF Hinteralfeld 6.59 320 *e*Pn **Pn 12 27 54.8 -0.9**
HINF Hinteralfeld 6.59 320 *e*P **Pn 12 28 00.0 +4.3**
HINF *e*Sn **Sn 12 29 06.5 -4.4**
comp=E,64nm,0.8s
BZS Buzias 6.62 63 ⇑P Pn 12 28 01.0 +4.9
VRAC Vranov 6.79 19 Pn **Pn 12 27 56.1 -2.3**
comp=E,0.5nm,0.3s,baz=222,slow=9.8,SNR=1.9
VRAC LR LR 12 31 20.6
comp=E,102nm,19.2s,baz=190,slow=46
comp=E,1.4nm,0.4s
CDF Champ du Feu 6.85 325 *e*Pn **Pn 12 27 59.0 -0.2**
CDF Champ du Feu 6.85 325 *e*P **Pn 12 28 03.2 +4.0**
LASF Ste Croix 6.86 283 *e*Pn **Pn 12 27 58.7 -0.7**
HAU Haudompre 6.97 319 *e*Pn **Pn 12 28 00.0 -0.8**
HAU Haudompre 6.97 319 *e*P **Pn 12 28 05.5 +4.7**
HAU *e*Sn **Sn 12 29 16.3 -3.8**
comp=E,49nm,0.6s
BLKB Belogradchik 6.97 81 ⇑P **Pn 12 28 03.3 +2.4**
NKC Novy Kostel 7.31 356 *e*SN **Sn 12 29 26.0 -2.4**
VTS Vitosha 7.41 89 ⇓P **Pn 12 28 08.7 +1.7**
SMF Signal de Mont 7.59 302 *e*Pn **Pn 12 28 08.3 -1.1**
SMF *e*Sn **Sn 12 29 30.2 -5.3**
comp=E,14nm,0.7s
PAGF Fort de Pagny 7.65 320 *e*Pn **Pn 12 28 09.8 -0.3**
baz=136
PAGF *e*Sn **Sn 12 29 32.2 -4.7**
comp=E,64nm,1.2s
SFTF Sexfontaines 7.76 315 *e*Pn **Pn 12 28 11.5 -0.1**
baz=138
SFTF *e*Sn **Sn 12 29 34.8 -4.7**
comp=E,105nm,1.5s
KEST Kesra 7.79 204 Pn **Pn 12 28 16.7 +4.6**
comp=E,0.2nm,0.3s,baz=26,slow=9.4,SNR=1.8
comp=E,2.3nm,0.7s
DRGR 7.79 57 ⇑P Pn 12 28 16.9 +4.8
LOR Lormes 7.88 306 *e*Pn **Pn 12 28 11.8 -1.4**
baz=127
LOR Lormes 7.88 306 *e*P **Pn 12 28 16.8 +3.6**
LOR *e*Sn **Sn 12 29 37.1 -5.3**
comp=E,14nm,0.7s
MEZF Maizieres J'vi 7.94 317 *e*Pn **Pn 12 28 13.5 -0.6**
baz=134
MEZF *e*Sn **Sn 12 29 39.8 -4.2**
comp=E,28nm,0.9s
AVF Avril sur Loir 7.96 302 *e*Pn **Pn 12 28 12.7 -1.6**
AVF Avril sur Loir 7.96 302 *e*P **Pn 12 28 18.7 +4.4**
AVF *e*Sn **Sn 12 29 38.8 -5.7**
comp=E,18nm,1.1s
SAVF Savonnieres en 7.98 318 *e*Pn **Pn 12 28 13.5 -1.1**
baz=139
SAVF *e*Sn **Sn 12 29 40.4 -4.6**
comp=E,29nm,1.0s
SSF Saint Saulge 7.99 304 *e*Pn **Pn 12 28 13.9 -0.8**
SSF Saint Saulge 7.99 304 *e*P **Pn 12 28 18.8 +4.1**
SSF *e*Sn **Sn 12 29 39.3 -5.9**
comp=E,37nm,1.4s
MARR Marisel-Cluj 8.00 59 ⇑P Pn 12 28 20.4 +5.5
MTLF Montolieu 8.02 277 *e*Pn **Pn 12 28 14.2 -1.0**
MTLF *e*Sn **Sn 12 29 39.6 -6.4**
comp=E,28nm,1.5s
BGF Bois d'Agland 8.19 300 *e*Pn **Pn 12 28 16.9 -0.5**
BGF *e*Sn **Sn 12 29 43.9 -6.1**
comp=E,10nm,0.6s
CAF Calviac 8.26 288 *e*Pn **Pn 12 28 17.2 -1.2**
WLF Walferdange 8.29 327 *d*P **Pn 12 28 20.9 +2.1**
CLL Collm 8.37 359 *e*Pn **Pn 12 28 19.0 -0.9**
CLL *e*Sn Sn 12 29 37.0 -17
CLL *ex* x 12 29 47.0
CLL *ex* x 12 29 56.0
CLL *ex* x 12 30 13.0
CLL *ex* x 12 30 23.0
CLL *e*Sg **Sg 12 30 44.0 -2.8**
comp=Z,30nm,1.2s
VOIR 8.89 70 ⇓P **Pn 12 28 31.6 +4.4**
RCHB Rochefort 9.05 326 *d*P **Pn 12 28 30.7 +1.5**
RCHB *d*S **Sn 12 30 09.2 -1.9**
MEM Membach 9.10 330 *d*PP Pn 12 28 37.6 +7.7
GIVF Givet 9.18 324 *e*Pn **Pn 12 28 31.2 +0.2**
BCLA Clavier 9.22 327 *d*P **Pn 12 28 34.2 +2.6**
DOU Dourbes 9.27 323 *dx* x 12 28 42.7
BGES Gesves 9.28 326 *d*P **Pn 12 28 35.0 +2.5**
EPF Esparros 9.40 275 *e*P **Pn 12 28 37.9 +3.7**
BAIF Baives 9.42 322 *e*Pn **Pn 12 28 33.6 -0.7**
MLR Muntele Rosu 9.52 70 ⇑P **Pn 12 28 40.2 +4.3**
MLR Muntele Rosu 9.52 70 LR LR 12 33 31.2
comp=Z,174nm,19.1s,baz=246,slow=47
SNF Seneffe 9.71 324 *d*P **Pn 12 28 40.2 +1.9**
ETSF Etsaut 10.07 274 *e*P **Pn 12 28 47.6 +4.2**
IDI Anoyia 11.88 126 Pn **Pn 12 29 08.3 +0.2**
comp=Z,0.2nm,0.3s,baz=287,slow=17,SNR=1.2
IDI Sn **Sn 12 31 12.9 -7.9**
comp=Z,0.2nm,0.3s,baz=205,slow=11,SNR=2.8
comp=Z,0.8nm,0.4s
ESDC Sonseca Array 13.29 262 Pn **P 12 29 34.0 -3.2**
baz=68,slow=11,SNR=1.8
ESDC LR LR 12 34 41.7
comp=Z,30nm,18.1s,baz=76,slow=37
comp=Z,0.2nm,0.7s
EKA Eskdalemuir Ar 16.31 325 Pn **P 12 30 10.1 -0.5**
baz=127,slow=14
comp=Z,2.5nm,0.9s
NOA NORSAR Array B 18.16 357 LR LR 12 38 17.4
comp=Z,20nm,21.8s,baz=305,slow=40
FINES FINESS Array B 20.07 18 P **P 12 30 51.5 -0.4**
comp=Z,0.1nm,0.3s,baz=235,slow=9.7,SNR=4.0
FINES LR LR 12 40 01.2
comp=Z,54nm,20.7s,baz=223,slow=41
comp=Z,5.8nm,1.1s
BELG Belogornoye 24.84 56 LR LR 12 42 01.9
comp=Z,64nm,18.4s,baz=169,slow=38
TORD Torodi Ar. Bea 31.30 202 P **P 12 32 41.4 +2.4**
comp=Z,0.6nm,0.9s,baz=9.9,slow=8.2,SNR=3.9
comp=Z,0.6nm,0.9s
MKAR Makanchi Array 47.70 60 P **P 12 34 55.4 +0.1**
comp=Z,0.8nm,0.7s,baz=270,slow=8.1,SNR=4.8
comp=Z,0.8nm,0.7s
SONM Songino Array 61.72 50 P **P 12 36 38.9 +1.8**
comp=Z,0.6nm,0.8s,baz=303,slow=9.6,SNR=2.5
comp=Z,0.6nm,0.8s
ILAR Eielson Array 71.49 351 P **P 12 37 40.0 +1.0**
comp=Z,0.5nm,0.8s,baz=5.6,slow=5.4,SNR=5.4
comp=Z,0.5nm,0.8s
CMAR Chiang Mai Arr 74.63 79 P **P 12 37 59.3 +0.9**
comp=Z,0.4nm,0.4s,baz=308,slow=8.8,SNR=5.7
comp=Z,0.4nm,0.4s
PDAR Pinedale Array 80.39 321 P **P 12 38 31.3 +0.8**
comp=Z,0.2nm,0.3s,baz=28,slow=8.3,SNR=4.2
comp=Z,0.2nm,0.3s
TXAR Lajitas Array 87.62 309 P **P 12 39 09.6 +2.1**
comp=Z,0.4nm,0.9s,baz=15,slow=3.8,SNR=1.9
comp=Z,0.4nm,0.9s

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*ROM **30** 12:32:19.6±0.1, 42°.847N±0°.004×13°.144E±0°.004, h10km, ML3.4/120, Error ellipse: s-maj=0.3km s-min=0.3km az=102.0*
*IDC **30** 12:32:19.1±1.2, 42°.87N×13°.68E, h0km, mb3.6/5, mbtmp3.7/9, ML3.5/4, Error ellipse: s-maj=30.3km s-min=14.8km az=86.0*
*LDG **30** 12:32:20.3±0.3, 42°.80N×13°.23E, h10km, Ml3.5/14, Error ellipse: s-maj=10.2km s-min=6.1km az=58.0*
*PRU **30** 12:32:21.2±0.0, 42°.93N×13°.44E, h0km*
*STR **30** 12:32:24.5±2.1, 43°N±8°×1°3E±1°8, h10km, MLv3.6/10, Error ellipse: s-maj=0.0km s-min=0.0km az=89.0, preliminary*

ISC 30 12:32:20.2±0.7, **42°.85N**±0°.01×**13°.14E**±0°.02, **h10**km±5km, **n274**, σ1§**58**/293, **mb3.7**/4, **66C-65D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**75**	P		**Pg**	**12 32 21.6**	**-0.8**
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
FEMA	**Monte Fema**	**0.13**	**331**	P		**Pg**	**12 32 23.3**	**-0.2**
FEMA				S		**Sg**	**12 32 25.7**	**0.0**
FEMA				AML		AML		
	comp=E,96750μm,1.5s							
FEMA				AML		AML		
	comp=N,81550μm,0.6s							
FEMA				AML		AML		
	comp=E,96700μm,1.5s							
FEMA				AML		AML		
	comp=N,81550μm,0.6s							
FEMA				AML		AML		
	comp=E,96600μm,1.5s							
FEMA				AML		AML		
	comp=E,87129μm,0.3s							
FEMA				AML		AML		
	comp=N,65803μm,0.5s							
FEMA				AML		AML		
	comp=N,81550μm,1.4s							
MMO1	**Montemonaco**	**0.15**	**69**	⇑P		**Pg**	**12 32 23.3**	**-0.3**
MMO1				S		**Sg**	**12 32 25.8**	**-0.3**
T1215	**Vallo di Nera,**	**0.20**	**257**	S		**Sg**	**12 32 29.0**	**+1.6**
T1217	**Poggiodomo (PG**	**0.20**	**228**	P		**Pg**	**12 32 24.7**	**+0.2**
T1217				S		**Sg**	**12 32 28.3**	**+0.8**
T1217				AML		AML		
	comp=N,45250μm,0.3s							
T1217				AML		AML		
	comp=E,30500μm,0.6s							
T1217				AML		AML		
	comp=N,43900μm,0.3s							
T1217				AML		AML		
	comp=N,45300μm,0.3s							
T1217				AML		AML		
	comp=N,43900μm,0.3s							
T1217				AML		AML		
	comp=E,30750μm,0.6s							
T1217				AML		AML		

	comp=N,45250µm,0.3s					
T1217				AML	AML	
	comp=E,24563µm,0.4s					
T1217				AML	AML	
	comp=N,45263µm,0.3s					
T1217				AML	AML	
	comp=E,24105µm,0.4s					
T1217				AML	AML	
	comp=N,43886µm,0.3s					
AM05	**Amandola Campo**	**0.21**	**50**	P	**Pg**	**12 32 24.5 -0.1**
AM05				S	**Sg**	**12 32 28.0 +0.4**
AM05				AML	AML	
	comp=E,21850µm,0.2s					
AM05				AML	AML	
	comp=N,33850µm,0.2s					
AM05				AML	AML	
	comp=N,8165µm,0.1s					
AM05				AML	AML	
	comp=N,8166µm,0.1s					
AM05				AML	AML	
AM05				AML	AML	
	comp=E,21843µm,0.2s					
AM05				AML	AML	
	comp=N,33841µm,0.2s					
AM05				AML	AML	
	comp=E,21800µm,0.2s					
AM05				AML	AML	
AM05				AML	AML	
	comp=N,33800µm,0.2s					
T1204	**Amatrice, Fraz**	**0.22**	**142**	⇑P	**Pg**	**12 32 24.8 0.0**
T1204				S	**Sg**	**12 32 28.9 +1.0**
T1204				AML	AML	
	comp=E,26100µm,1.1s					
T1204				AML	AML	
	comp=N,20100µm,0.7s					
T1204				AML	AML	
	comp=E,61100µm,0.2s					
T1204				AML	AML	
	comp=N,23450µm,1.0s					
T1204				AML	AML	
	comp=E,61150µm,0.2s					
T1204				AML	AML	
	comp=E,23577µm,0.3s					
T1204				AML	AML	
	comp=N,23450µm,1.0s					
T1204				AML	AML	
	comp=N,14833µm,0.2s					
T1241	**Roccafluvione,**	**0.22**	**87**	⇑P	**Pg**	**12 32 25.1 +0.3**
T1241				S	**Sg**	**12 32 28.7 +0.8**
T1241				AML	AML	
	comp=N,44100µm,0.6s					
T1241				AML	AML	
	comp=N,44050µm,0.6s					
T1241				AML	AML	
	comp=N,41243µm,0.6s					
T1241				AML	AML	
T1241				AML	AML	
T1241				AML	AML	
T1241				AML	AML	
	comp=N,38340µm,0.6s					
LNSS	**Leonessa**	**0.25**	**196**	P	**Pg**	**12 32 25.4 -0.1**
LNSS				S	**Sg**	**12 32 29.8 +0.9**
LNSS				AML	AML	
	comp=N,37200µm,0.2s					
LNSS				AML	AML	
	comp=E,17000µm,1.0s					
LNSS				AML	AML	
	comp=E,16806µm,0.2s					
LNSS				AML	AML	
	comp=E,17000µm,1.0s					
LNSS				AML	AML	
	comp=N,37199µm,0.2s					
GUMA	**Gualdo di Mace**	**0.26**	**34**	⇑P	**Pg**	**12 32 25.8 +0.2**
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
GUMA				AML	AML	
T1243	**Rocca Santa Ma**	**0.27**	**123**	⇑P	**Pg**	**12 32 25.5 -0.3**
T1243				S	**Sg**	**12 32 30.1 +0.6**
SEF1	**Sefro**	**0.33**	**335**	P	**Pg**	**12 32 26.9 0.0**
SEF1				AML	AML	
	comp=N,23000µm,0.7s					
SEF1				AML	AML	
	comp=N,23000µm,0.7s					
SEF1				AML	AML	
	comp=E,22250µm,0.9s					
SEF1				AML	AML	
	comp=E,21885µm,0.2s					
SEF1				AML	AML	
	comp=N,22890µm,0.2s					
RM33	**Pellescritta (**	**0.34**	**170**	P	**Pg**	**12 32 26.9 -0.2**
RM33				S	**Sg**	**12 32 32.7 +1.1**
RM33				AML	AML	
	comp=E,25400µm,0.3s					
RM33				AML	AML	
	comp=E,24700µm,0.3s					
RM33				AML	AML	
	comp=N,15000µm,0.4s					
RM33				AML	AML	
	comp=E,25450µm,0.3s					
RM33				AML	AML	
	comp=N,14300µm,0.4s					
RM33				AML	AML	
	comp=N,7685µm,0.4s					
RM33				AML	AML	
	comp=N,14950µm,0.4s					
RM33				AML	AML	
	comp=N,7713µm,0.4s					
RM33				AML	AML	
	comp=E,8290µm,0.3s					
RM33				AML	AML	
	comp=E,8178µm,0.3s					
MDAR	**Monte D'Aria**	**0.35**	**1**	⇑P	**Pg**	**12 32 27.2 +0.1**
MDAR				AML	AML	
	comp=E,9600µm,1.4s					
MDAR				AML	AML	
	comp=N,10965µm,0.5s					
MDAR				AML	AML	
	comp=N,10995µm,0.4s					
MDAR				AML	AML	
	comp=N,9691µm,0.4s					
MDAR				AML	AML	
	comp=E,9615µm,1.4s					
MDAR				AML	AML	
	comp=E,8099µm,0.4s					
PIO1	**Pioraco**	**0.35**	**341**	⇑P	**Pg**	**12 32 27.3 0.0**
PIO1				AML	AML	
	comp=E,11350µm,0.5s					
PIO1				AML	AML	
	comp=N,12850µm,0.5s					
PIO1				AML	AML	
	comp=E,11400µm,0.5s					
PIO1				AML	AML	
	comp=N,12900µm,0.5s					
PIO1				AML	AML	
	comp=N,12900µm,1.5s					
PIO1				AML	AML	
	comp=N,12865µm,0.5s					
CAMP	**Campotosto**	**0.37**	**147**	⇑P	**Pg**	**12 32 27.2 -0.4**
CAMP				S	**Sg**	**12 32 33.2 +0.7**
CAMP				AML	AML	
	comp=E,8640µm,0.2s					
CAMP				AML	AML	
	comp=N,5400µm,0.3s					
CAMP				AML	AML	
	comp=E,5860µm,0.7s					
CAMP				AML	AML	
	comp=N,4902µm,0.5s					
FIU1	**Fiuminata**	**0.37**	**336**	⇓P	**Pg**	**12 32 27.8 +0.2**
FIU1				AML	AML	
	comp=N,7650µm,0.6s					
FIU1				AML	AML	
	comp=N,7650µm,0.6s					
FIU1				AML	AML	
	comp=N,7650µm,1.4s					
FIU1				AML	AML	
	comp=N,7086µm,0.3s					
FIU1				AML	AML	
	comp=E,9137µm,0.3s					
FIU1				AML	AML	
	comp=E,9840µm,1.2s					
T1211	**Morro Reatino**	**0.38**	**214**	⇑P	**Pg**	**12 32 27.8 +0.1**
T1211				S	**Sb**	**12 32 35.0 0.0**
T1211				AML	AML	
	comp=E,9495µm,0.2s					
T1211				AML	AML	
	comp=E,9545µm,0.6s					
T1211				AML	AML	
	comp=N,24150µm,0.3s					
T1211				AML	AML	
	comp=N,24050µm,0.3s					
T1211				AML	AML	
	comp=E,9508µm,0.2s					
T1211				AML	AML	
	comp=N,24121µm,0.3s					
T1211				AML	AML	
	comp=N,24081µm,0.3s					
T1211				AML	AML	
	comp=E,9520µm,0.2s					
T1211				AML	AML	
	comp=E,9515µm,0.6s					
T1211				AML	AML	
	comp=E,9526µm,0.2s					
MNTP	**Montappone**	**0.38**	**40**	⇑P	**Pg**	**12 32 28.2 +0.4**
MNTP				AML	AML	
	comp=E,24700µm,0.6s					
MNTP				AML	AML	
	comp=N,28450µm,0.2s					
MNTP				AML	AML	
	comp=N,28500µm,0.2s					
MNTP				AML	AML	
	comp=E,24700µm,0.6s					
MNTP				AML	AML	
	comp=E,24696µm,0.6s					
MNTP				AML	AML	
	comp=N,28487µm,0.2s					
ARRO	**Arrone**	**0.38**	**226**	⇓P	**Pg**	**12 32 27.8 0.0**
ARRO				AML	AML	
	comp=E,9330µm,0.2s					
ARRO				AML	AML	
	comp=N,11650µm,0.5s					
ARRO				AML	AML	
	comp=E,9300µm,0.2s					
ARRO				AML	AML	
	comp=E,9305µm,0.2s					
ARRO				AML	AML	
	comp=E,9324µm,0.2s					
ARRO				AML	AML	
	comp=N,9933µm,0.4s					
ARRO				AML	AML	
	comp=E,9305µm,1.8s					
SSM1	**San Severino M**	**0.38**	**4**	⇑P	**Pg**	**12 32 28.0 +0.2**
GAG1	**Gagliole**	**0.40**	**353**	⇓P	**Pg**	**12 32 28.2 +0.1**
GAG1				AML	AML	
	comp=N,30850µm,0.4s					
GAG1				AML	AML	
	comp=N,30858µm,0.5s					
GAG1				AML	AML	
	comp=N,30850µm,1.6s					
GAG1				AML	AML	
	comp=E,24850µm,0.3s					
GAG1				AML	AML	
	comp=E,23714µm,0.2s					
ASSB	**Assisi San Ben**	**0.40**	**299**	⇓P	**Pg**	**12 32 28.1 -0.1**
ASSB				AML	AML	
	comp=N,17500µm,1.0s					
ASSB				AML	AML	
	comp=E,16250µm,0.2s					
ASSB				AML	AML	
	comp=E,16230µm,0.2s					
ASSB				AML	AML	
	comp=N,15548µm,0.2s					
TERO	**Teramo**	**0.41**	**123**	⇑P	**Pg**	**12 32 27.8 -0.5**
TERO				AML	AML	
	comp=E,13800µm,0.5s					
TERO				AML	AML	
	comp=N,23800µm,0.3s					
TERO				AML	AML	
	comp=E,15200µm,0.5s					
TERO				AML	AML	
	comp=N,19744µm,0.1s					
TERO				AML	AML	
	comp=E,12243µm,0.1s					
TERO				AML	AML	
	comp=N,17976µm,0.1s					
TERO				AML	AML	
	comp=N,22550µm,0.3s					
TERO				AML	AML	
	comp=E,10723µm,0.1s					
OFFI	**Offida**	**0.41**	**77**	⇑P	**Pg**	**12 32 28.9 +0.6**
OFFI				AML	AML	
	comp=E,20600µm,1.4s					
OFFI				AML	AML	
	comp=N,24850µm,0.7s					
OFFI				AML	AML	
	comp=N,19989µm,0.6s					
OFFI				AML	AML	
	comp=E,20600µm,0.6s					
OFFI				AML	AML	
	comp=E,20523µm,0.3s					
T1247	**Pizzolo (AQ)**	**0.42**	**164**	⇑P	**Pg**	**12 32 28.4 -0.2**
T1247				S	**Sb**	**12 32 35.4 -0.9**
T1247				AML	AML	
	comp=N,14225µm,0.2s					
T1247				AML	AML	
	comp=E,14700µm,1.2s					
T1247				AML	AML	
	comp=N,9584µm,0.2s					
T1247				AML	AML	
	comp=E,14700µm,0.8s					
T1247				AML	AML	
	comp=N,14220µm,0.2s					
T1247				AML	AML	
	comp=E,7937µm,0.5s					
SNTG	**Esanatoglia**	**0.43**	**341**	⇓P	**Pg**	**12 32 28.7 -0.1**
SNTG				S	**Sb**	**12 32 37.0 +0.4**
SNTG				AML	AML	
	comp=E,5040µm,0.9s					
SNTG				AML	AML	
	comp=N,7045µm,1.1s					
SNTG				AML	AML	
	comp=E,4950µm,0.9s					
SNTG				AML	AML	
	comp=N,7040µm,1.1s					
SNTG				AML	AML	
	comp=E,5035µm,0.8s					
SNTG				AML	AML	
	comp=N,7460µm,1.1s					
SNTG				AML	AML	
	comp=N,7460µm,0.9s					
SNTG				AML	AML	
	comp=N,7040µm,0.9s					
SNTG				AML	AML	
	comp=N,7139µm,0.2s					
SNTG				AML	AML	
	comp=E,4492µm,0.1s					
SNTG				AML	AML	
	comp=N,6845µm,0.2s					
SNTG				AML	AML	
	comp=E,4559µm,0.1s					
CESX	**Cesi**	**0.47**	**240**	⇓P	**Pg**	**12 32 29.3 -0.2**
CESX				AML	AML	
	comp=E,9990µm,0.3s					
CESX				AML	AML	
	comp=N,10850µm,0.4s					
CESX				AML	AML	
	comp=E,10010µm,0.3s					
TRE1	**Treia**	**0.48**	**15**	⇓P	**Pb**	**12 32 30.4 -0.4**
TRE1				AML	AML	
	comp=E,17350µm,0.6s					
TRE1				AML	AML	
	comp=N,17000µm,0.3s					
TRE1				AML	AML	
	comp=N,16950µm,0.3s					
TRE1				AML	AML	
	comp=E,15201µm,0.3s					
TRE1				AML	AML	
	comp=E,17350µm,1.4s					
TRE1				AML	AML	
	comp=N,16978µm,0.3s					
TRE1				AML	AML	
	comp=N,16950µm,1.7s					
ATCC	**AVT- Casa Cast**	**0.50**	**313**	⇑P	**Pg**	**12 32 29.8 -0.2**
ATCC				AML	AML	
	comp=N,12506µm,0.6s					
ATCC				AML	AML	
	comp=E,12567µm,0.3s					
ATCC				AML	AML	
	comp=E,13250µm,0.8s					
ATCC				AML	AML	
	comp=N,14800µm,1.1s					
GIGS	**Gran Sasso**	**0.51**	**141**	⇓P	**Pg**	**12 32 29.4 -0.7**
GIGS				AML	AML	
	comp=N,1770µm,0.6s					
GIGS				AML	AML	
	comp=E,2325µm,1.4s					
GIGS				AML	AML	
	comp=E,2325µm,0.6s					
GIGS				AML	AML	
	comp=N,1462µm,0.2s					
GIGS				AML	AML	
	comp=E,2043µm,0.5s					
GIGS				AML	AML	
	comp=N,1770µm,1.4s					
FOSV	**Fossato di Vic**	**0.53**	**329**	⇓P	**Pg**	**12 32 30.3 -0.2**
FOSV				S	**Sb**	**12 32 39.0 -0.3**
FOSV				AML	AML	
	comp=E,11475µm,0.3s					
FOSV				AML	AML	
	comp=N,12350µm,0.3s					
FOSV				AML	AML	
	comp=E,11440µm,0.3s					
FOSV				AML	AML	
	comp=E,11440µm,1.7s					
FOSV				AML	AML	
	comp=E,11452µm,0.3s					
FOSV				AML	AML	
	comp=N,12360µm,0.3s					
AQU	**L'Aquila**	**0.53**	**158**	⇑P	**Pg**	**12 32 30.2 -0.4**
AQU				AML	AML	
	comp=E,4120µm,1.0s					
AQU				AML	AML	
	comp=N,4350µm,0.4s					
AQU				AML	AML	
	comp=N,4235µm,0.4s					
AQU				AML	AML	
	comp=N,4239µm,0.4s					
AQU				AML	AML	
	comp=N,4353µm,0.4s					
AQU				AML	AML	
	comp=E,3880µm,0.6s					
AQU				AML	AML	
	comp=E,4125µm,1.0s					
AQU				AML	AML	
	comp=E,3820µm,1.0s					
AQU				AML	AML	
	comp=N,4355µm,0.4s					
AQU				AML	AML	
	comp=E,3816µm,0.6s					
TRTR	**Tortoreto Alta**	**0.57**	**94**	⇓P	**Pb**	**12 32 31.9 -0.5**
TRTR				AML	AML	
	comp=E,15900µm,0.5s					
TRTR				AML	AML	
	comp=N,14500µm,0.5s					
TRTR				AML	AML	
	comp=N,14480µm,0.5s					
TRTR				AML	AML	
	comp=E,15889µm,0.5s					
FIAM	**Fiamignano**	**0.58**	**181**	⇓P	**Pg**	**12 32 30.9 -0.6**
FIAM				S	**Sb**	**12 32 41.0 +0.2**
FIAM				AML	AML	
	comp=N,2775µm,0.4s					
FIAM				AML	AML	
	comp=E,4985µm,0.6s					
FIAM				AML	AML	
	comp=N,2770µm,0.4s					
FIAM				AML	AML	
	comp=N,2774µm,0.4s					
FIAM				AML	AML	
	comp=E,4292µm,0.7s					
MMUR	**Monte Murano**	**0.60**	**350**	⇓P	**Pg**	**12 32 32.1 +0.1**
MMUR				S	**Sb**	**12 32 42.0 +0.4**
MMUR				AML	AML	
	comp=E,10600µm,0.2s					
MMUR				AML	AML	
	comp=N,7860µm,0.3s					
MMUR				AML	AML	
	comp=E,10650µm,0.3s					
MMUR				AML	AML	
	comp=N,7860µm,0.3s					
MMUR				AML	AML	
	comp=E,10625µm,0.2s					
MURB	**Monte Urbino**	**0.61**	**313**	⇑P	**Pg**	**12 32 32.0 -0.1**
MURB				AML	AML	
	comp=N,16050µm,0.3s					
MURB				AML	AML	
	comp=E,17948µm,0.3s					
MURB				AML	AML	
	comp=E,16158µm,0.3s					
MURB				AML	AML	
	comp=N,16041µm,0.3s					
MURB				AML	AML	
	comp=N,17300µm,0.3s					
MURB				AML	AML	
	comp=E,16150µm,0.3s					
MURB				AML	AML	
	comp=E,17950µm,0.3s					
MURB				AML	AML	
	comp=N,17313µm,0.3s					
PP3	**Marolino**	**0.63**	**33**	⇓P	**Pb**	**12 32 33.0 -0.4**
PP3				AML	AML	
	comp=N,13900µm,1.5s					
PP3				AML	AML	
	comp=E,18000µm,0.3s					
PP3				AML	AML	
	comp=E,17600µm,0.3s					
PP3				AML	AML	
	comp=N,15300µm,0.5s					
PP3				AML	AML	
	comp=E,18014µm,0.3s					
PP3				AML	AML	
	comp=E,17610µm,0.3s					
PP3				AML	AML	
	comp=N,13917µm,0.5s					
PP3				AML	AML	
	comp=N,15300µm,0.5s					
ATFO	**Monte Foce - G**	**0.67**	**322**	⇓P	**Pg**	**12 32 32.6 -0.6**
ATFO				AML	AML	
	comp=E,3280µm,0.7s					
ATFO				AML	AML	
	comp=N,3355µm,0.9s					
ATFO				AML	AML	
	comp=E,3173µm,0.7s					
ATFO				AML	AML	
	comp=N,2965µm,0.5s					
ATFO				AML	AML	
	comp=E,3280µm,1.3s					
ARVD	**Arcevia**	**0.67**	**348**	⇑P	**Pg**	**12 32 32.9 -0.3**
ARVD				S	**Sb**	**12 32 44.0 +0.7**
ARVD				AML	AML	
	comp=E,3040µm,0.6s					
ARVD				AML	AML	
	comp=E,2642µm,0.2s					
ARVD				AML	AML	
	comp=N,2197µm,0.1s					
ARVD				AML	AML	
	comp=N,2195µm,0.1s					
FAGN	**Fagnano**	**0.67**	**150**	⇑P	**Pg**	**12 32 33.2 0.0**
FAGN				AML	AML	
	comp=N,6145µm,0.5s					
FAGN				AML	AML	
	comp=E,6415µm,0.4s					
FAGN				AML	AML	
	comp=E,6418µm,0.4s					
FAGN				AML	AML	
	comp=N,6143µm,0.5s					
ATTE	**AVT- Monte Tez**	**0.67**	**302**	⇓P	**Pg**	**12 32 33.1 -0.2**
ATTE				AML	AML	
	comp=N,3570µm,0.7s					
ATTE				AML	AML	
	comp=E,2700µm,0.4s					
ATTE				AML	AML	
	comp=E,2700µm,1.6s					
ATTE				AML	AML	
	comp=N,3567µm,0.7s					
ATTE				AML	AML	
	comp=E,2700µm,0.4s					
VCEL	**Villa Celiera**	**0.69**	**131**	⇑P	**Pg**	**12 32 33.1 -0.5**
VCEL				AML	AML	
	comp=E,8590µm,0.3s					
VCEL				AML	AML	
	comp=N,6755µm,1.2s					
VCEL				AML	AML	
	comp=E,8580µm,0.3s					

VCEL				AML	AML	
	comp=N,6612μm,0.3s					
VCEL				AML	AML	
	comp=E,8580μm,1.7s					
VCEL				AML	AML	
	comp=E,8599μm,0.3s					
FRON	**Frontone**	**0.73**	**336**	⇑P	**Pg**	**12 32 33.9 -0.5**
FRON				AML	AML	
	comp=N,3595μm,0.9s					
FRON				AML	AML	
	comp=E,2470μm,0.2s					
FRON				AML	AML	
	comp=E,2655μm,0.6s					
FRON				AML	AML	
	comp=N,3595μm,1.1s					
FRON				AML	AML	
	comp=N,3351μm,0.3s					
MGAB	**Montegabbione**	**0.76**	**275**	⇓P	**Pg**	**12 32 34.8 -0.1**
MGAB				AML	AML	
	comp=N,6605μm,0.6s					
MGAB				AML	AML	
	comp=E,6275μm,0.5s					
MGAB				AML	AML	
	comp=N,6525μm,0.7s					
MGAB				AML	AML	
	comp=N,6600μm,0.6s					
MGAB				AML	AML	
	comp=E,5225μm,0.5s					
MGAB				AML	AML	
	comp=N,6049μm,0.4s					
MGAB				AML	AML	
	comp=E,5223μm,0.5s					
MGAB				AML	AML	
	comp=N,5576μm,0.4s					
MGAB				AML	AML	
	comp=E,6271μm,0.5s					
MGAB				AML	AML	
	comp=N,6525μm,1.3s					
ATVO	**AVT- Monte Val**	**0.76**	**315**	⇓P	**Pg**	**12 32 34.3 -0.5**
ATVO				AML	AML	
	comp=N,3045μm,0.5s					
ATVO				AML	AML	
	comp=N,3050μm,0.5s					
ATVO				AML	AML	
	comp=E,3490μm,0.8s					
ATVO				AML	AML	
	comp=N,3047μm,0.5s					
ATVO				AML	AML	
	comp=E,3346μm,0.5s					
SRES	**S.Oreste - Sor**	**0.77**	**217**	⇑P	**Pg**	**12 32 34.8 -0.2**
SRES				S	**Sn**	**12 32 48.0 -0.7**
SRES				AML	AML	
	comp=E,1735μm,0.3s					
SRES				AML	AML	
	comp=E,1739μm,0.3s					
SRES				AML	AML	
	comp=N,2200μm,0.4s					
SRES				AML	AML	
	comp=N,2200μm,0.4s					
AOI	**Ancona**	**0.78**	**26**	⇓P	**Pg**	**12 32 35.2 -0.1**
AOI				S	**Sn**	**12 32 49.0 -0.2**
AOI				AML	AML	
	comp=N,5215μm,0.3s					
AOI				AML	AML	
	comp=N,5220μm,0.3s					
AOI				AML	AML	
	comp=E,5507μm,0.4s					
AOI				AML	AML	
	comp=N,5218μm,0.3s					
AOI				AML	AML	
	comp=E,5505μm,0.4s					
AOI				AML	AML	
	comp=N,5220μm,1.7s					
T0110	**Collepietro**	**0.78**	**142**	⇓P	**Pg**	**12 32 34.4 -0.9**
T0110				AML	AML	
	comp=E,7265μm,0.8s					
T0110				AML	AML	
	comp=N,6120μm,0.4s					
T0110				AML	AML	
	comp=E,6622μm,0.5s					
T0110				AML	AML	
	comp=N,6121μm,0.4s					
ATMI	**Monte Miggiano**	**0.80**	**308**	⇓P	**Pb**	**12 32 36.1 -0.2**
ATMI				AML	AML	
	comp=E,8425μm,0.7s					
ATMI				AML	AML	
	comp=N,9414μm,0.5s					
ATMI				AML	AML	
	comp=E,8394μm,0.3s					
ATMI				AML	AML	
	comp=E,8425μm,1.3s					
ATMI				AML	AML	
	comp=N,9390μm,0.5s					
ATPI	**Pietralunga -**	**0.81**	**319**	⇓P	**Pg**	**12 32 35.3 -0.5**
ATPI				AML	AML	
	comp=E,3000μm,0.4s					
ATPI				AML	AML	
	comp=N,2460μm,1.1s					
ATPI				AML	AML	
	comp=E,3000μm,1.6s					
ATPI				AML	AML	
	comp=N,2460μm,0.9s					
ATPI				AML	AML	
	comp=N,2298μm,0.5s					
ATPI				AML	AML	
	comp=E,3000μm,0.4s					
PIEI	**Pieia**	**0.82**	**328**	⇑P	**Pg**	**12 32 35.5 -0.5**
PIEI				AML	AML	
	comp=E,2340μm,0.3s					
PIEI				AML	AML	
	comp=N,1980μm,0.4s					
PIEI				AML	AML	
	comp=N,1982μm,0.4s					
PIEI				AML	AML	
	comp=N,1980μm,1.6s					
PIEI				AML	AML	
	comp=E,2339μm,0.3s					
MPAG	**Monte Paganucc**	**0.83**	**341**	⇑P	**Pg**	**12 32 35.8 -0.5**
MPAG				S	**Sn**	**12 32 50.0 -0.4**
MPAG				AML	AML	
	comp=E,2355μm,0.4s					
MPAG				AML	AML	
	comp=N,2455μm,0.8s					
MPAG				AML	AML	
	comp=E,2350μm,0.4s					
MPAG				AML	AML	
	comp=N,2450μm,0.8s					
MPAG				AML	AML	
	comp=N,2339μm,0.4s					
MPAG				AML	AML	
	comp=E,2355μm,0.3s					
MPAG				AML	AML	
	comp=E,2354μm,0.4s					
MPAG				AML	AML	
	comp=N,2520μm,0.3s					
PTQR	**Pietraquaria**	**0.85**	**167**	⇓P	**Pg**	**12 32 36.4 -0.1**
PTQR				AML	AML	
	comp=N,1355μm,0.4s					
PTQR				AML	AML	
	comp=E,1113μm,0.4s					
PTQR				AML	AML	
	comp=E,1390μm,1.0s					
PTQR				AML	AML	
	comp=N,1355μm,1.6s					
PTQR				AML	AML	
	comp=N,1354μm,0.4s					
SENI	**Senigallia**	**0.86**	**5**	⇓P	**Pb**	**12 32 37.6 +0.3**
SENI				AML	AML	
	comp=E,13700μm,0.4s					
SENI				AML	AML	
	comp=N,16700μm,0.4s					
SENI				AML	AML	
	comp=E,13650μm,0.4s					
SENI				AML	AML	
	comp=N,16750μm,0.4s					
SENI				AML	AML	
	comp=E,13650μm,1.6s					
SENI				AML	AML	
	comp=E,3410μm,0.5s					
SENI				AML	AML	
	comp=N,16717μm,0.4s					
SENI				AML	AML	
	comp=N,2551μm,0.4s					
MTCE	**Montecelio**	**0.87**	**200**	⇓P	**Pn**	**12 32 38.5 -0.1**
MTCE				AML	AML	
	comp=E,2570μm,0.5s					
MTCE				AML	AML	
	comp=N,1485μm,0.6s					
MTCE				AML	AML	
	comp=E,2574μm,0.5s					
MTCE				AML	AML	
	comp=N,1488μm,0.6s					
APEC	**Apecchio**	**0.88**	**324**	S	**Sn**	**12 32 52.0 +0.3**
FSSB	**Fossombrone**	**0.89**	**343**	⇓P	**Pg**	**12 32 37.0 -0.3**
FSSB				S	**Sn**	**12 32 52.0 +0.3**
FSSB				AML	AML	
	comp=E,6865μm,0.3s					
FSSB				AML	AML	
	comp=N,11500μm,0.3s					
FSSB				AML	AML	
	comp=E,6864μm,0.3s					
FSSB				AML	AML	
	comp=N,11489μm,0.3s					
SACS	**San Casciano d**	**0.90**	**271**	⇓P	**Pg**	**12 32 37.6 -0.1**
SACS				AML	AML	
	comp=E,2380μm,0.4s					
SACS				AML	AML	
	comp=N,2145μm,0.8s					
SACS				AML	AML	
	comp=N,2270μm,0.8s					
SACS				AML	AML	
	comp=N,2007μm,0.9s					
SACS				AML	AML	
	comp=N,1926μm,0.8s					
SACS				AML	AML	
	comp=E,2265μm,0.4s					
SACS				AML	AML	
	comp=N,2270μm,1.2s					
SACS				AML	AML	
	comp=N,2145μm,1.2s					
CERT	**Cerreto**	**0.90**	**187**	⇓P	**Pb**	**12 32 38.2 +0.1**
CERT				AML	AML	
	comp=E,3375μm,0.6s					
CERT				AML	AML	
	comp=E,3374μm,0.6s					
CERT				AML	AML	
	comp=N,2380μm,1.4s					
CERT				AML	AML	
	comp=N,2319μm,0.4s					
BADI	**Badiali**	**0.93**	**316**	⇓P	**Pg**	**12 32 37.8 -0.4**
BADI				AML	AML	
	comp=N,1383μm,0.4s					
PE3	**Peglio**	**0.97**	**331**	⇑P	**Pg**	**12 32 38.7 -0.2**
PE3				AML	AML	
	comp=N,21μm,0.7s					
PE3				AML	AML	
	comp=E,21μm,0.7s					
PE3				AML	AML	
	comp=N,21μm,0.7s					
CAFI	**Castiglion Fio**	**0.98**	**300**	⇑P	**Pg**	**12 32 38.8 -0.4**
CAFI				AML	AML	
	comp=E,2055μm,0.6s					
CAFI				AML	AML	
	comp=E,2055μm,0.6s					
CAFI				AML	AML	
	comp=E,2055μm,0.6s					
CAFI				AML	AML	
	comp=N,2196μm,0.9s					
CAFI				AML	AML	
	comp=N,2155μm,1.2s					
CAFI				AML	AML	
	comp=E,2055μm,1.4s					
CAFI				AML	AML	
	comp=E,2055μm,1.4s					
CAFI				AML	AML	
	comp=N,2225μm,1.2s					
CAFI				AML	AML	
	comp=N,2091μm,0.9s					
CAFI				AML	AML	
	comp=E,2056μm,0.6s					
LATE	**Laterza**	**1.01**	**257**	⇓P	**Pb**	**12 32 40.0 +0.1**
GUAR	**Guarcino**	**1.06**	**173**	⇑P	**Pn**	**12 32 42.7 +1.5**
MCIV	**Monte Civitell**	**1.08**	**267**	⇓P	**Pb**	**12 32 41.1 +0.1**
MCIV				AML	AML	
	comp=E,1028μm,0.8s					
MCIV				AML	AML	
	comp=N,884μm,1.0s					
MCIV				AML	AML	
	comp=E,1001μm,0.5s					
MCIV				AML	AML	
	comp=N,837μm,0.9s					
MCIV				AML	AML	
	comp=N,884μm,1.0s					
MCIV				AML	AML	
	comp=E,1028μm,1.2s					
RMP	**Rome, Mte Porz**	**1.08**	**197**	⇓P	**Pg**	**12 32 37.7 -3.4**
SF04	**Casetta**	**1.09**	**270**	⇓P	**Pn**	**12 32 41.6 +0.1**
SF04				AML	AML	
	comp=N,1341μm,1.5s					
SF04				AML	AML	
	comp=E,1245μm,0.3s					
SF04				AML	AML	
	comp=E,1246μm,0.3s					
SF04				AML	AML	
	comp=N,1323μm,0.3s					
LPEL	**Lama dei Pelig**	**1.11**	**136**	⇑P	**Pg**	**12 32 38.9 -2.7**
CPGN	**Carpegna, Ital**	**1.12**	**328**	⇓P	**Pb**	**12 32 42.1 +0.2**
TOLF	**Tolfa**	**1.15**	**227**	⇓P	**Pb**	**12 32 41.6 -0.6**
TOLF				AML	AML	
	comp=N,1430μm,0.9s					
TOLF				AML	AML	
	comp=E,1345μm,0.9s					
TOLF				AML	AML	
	comp=E,1345μm,1.1s					
TOLF				AML	AML	
	comp=E,1319μm,0.5s					
TOLF				AML	AML	
	comp=N,1428μm,0.9s					
SF01	**Poggio Pratacc**	**1.16**	**269**	⇑P	**Pg**	**12 32 42.6 +0.1**
SF01				AML	AML	
	comp=E,1481μm,0.7s					
SF01				AML	AML	
	comp=N,1170μm,0.7s					
SF01				AML	AML	
	comp=E,1483μm,0.7s					
SF01				AML	AML	
	comp=N,1169μm,0.7s					
CRE	**Caprese Michel**	**1.16**	**312**	⇓P	**Pb**	**12 32 42.5 0.0**
CRE				AML	AML	
	comp=N,1270μm,1.2s					
CRE				AML	AML	
	comp=E,896μm,0.6s					
CRE				AML	AML	
	comp=N,1212μm,0.3s					
CRE				AML	AML	
	comp=E,897μm,0.6s					
CRE				AML	AML	
	comp=N,1270μm,0.8s					
POFI	**Posta Fibreno**	**1.21**	**159**	⇑P	**Pg**	**12 32 45.8 +2.4**
POFI				AML	AML	
	comp=N,603μm,0.7s					
POFI				AML	AML	
	comp=N,604μm,0.7s					
POFI				AML	AML	
	comp=E,787μm,0.6s					
POFI				AML	AML	
	comp=N,640μm,0.7s					
POFI				AML	AML	
	comp=N,603μm,0.7s					
POFI				AML	AML	
	comp=E,772μm,0.6s					
POFI				AML	AML	
	comp=E,787μm,0.6s					
ARCI	**Arcidosso**	**1.22**	**271**	⇑P	**Pg**	**12 32 44.3 +0.6**
ARCI				AML	AML	
	comp=E,425μm,0.5s					
LRP	**Arpino**	**1.24**	**164**	P	**Pg**	**12 32 44.4 +0.3**
LRP				AML	AML	
	comp=N,882μm,0.8s					
LRP				AML	AML	
	comp=E,662μm,0.6s					
LRP				AML	AML	
	comp=E,662μm,1.4s					
LRP				AML	AML	
	comp=N,837μm,0.6s					
LRP				AML	AML	
	comp=E,661μm,0.6s					
GIUL	**Giuliano Di Ro**	**1.29**	**176**	P	**Pb**	**12 32 44.8 +0.2**
GIUL				AML	AML	
	comp=N,744μm,0.8s					
GIUL				AML	AML	
	comp=E,692μm,0.6s					
GIUL				AML	AML	
	comp=E,692μm,1.4s					
GIUL				AML	AML	
	comp=N,744μm,0.8s					
GIUL				AML	AML	
	comp=E,692μm,0.6s					
GIUL				AML	AML	
	comp=N,744μm,1.2s					
LATB	**Latina**	**1.36**	**186**	P	**Pn**	**12 32 44.4 -0.8**
LATB				AML	AML	
	comp=E,324μm,0.6s					
LATB				AML	AML	
	comp=N,242μm,1.1s					
LATB				AML	AML	
	comp=E,323μm,0.6s					
LATB				AML	AML	
	comp=N,242μm,0.9s					
LATB				AML	AML	
	comp=E,324μm,1.4s					
LATB				AML	AML	
	comp=N,243μm,1.1s					
ASQU	**Asqua**	**1.37**	**314**	⇑P	**Pg**	**12 32 46.3 -0.2**
ASQU				AML	AML	
	comp=N,752μm,1.0s					
ASQU				AML	AML	
	comp=E,625μm,0.5s					
ASQU				AML	AML	
	comp=N,751μm,1.0s					
ASQU				AML	AML	
	comp=N,752μm,1.0s					
ASQU				AML	AML	
	comp=E,625μm,0.5s					
SFI	**Santa Sofia**	**1.42**	**319**	⇓P	**Pg**	**12 32 48.4 +1.0**
SFI				AML	AML	
	comp=N,548μm,1.4s					
SFI				AML	AML	
	comp=E,692μm,0.6s					
SFI				AML	AML	
	comp=N,534μm,0.8s					
SFI				AML	AML	
	comp=E,692μm,0.6s					
SFI				AML	AML	
	comp=N,585μm,0.9s					
SFI				AML	AML	
	comp=N,548μm,0.6s					
SFI				AML	AML	
	comp=E,692μm,1.4s					
SFI				AML	AML	
	comp=E,685μm,0.6s					
FRES	**Fresagrandinar**	**1.43**	**127**	⇑P	**Pg**	**12 32 47.6 -0.1**
FROS	**Frosini**	**1.50**	**285**	⇑P	**Pn**	**12 32 47.4 +0.2**
FROS				AML	AML	
	comp=E,670μm,1.2s					
FROS				AML	AML	
	comp=N,456μm,0.5s					
FROS				AML	AML	
	comp=E,669μm,1.2s					
FROS				AML	AML	
	comp=N,456μm,1.5s					
FROS				AML	AML	
	comp=N,456μm,0.5s					
TRIV	**Trivento**	**1.50**	**135**	⇓P	**Pg**	**12 32 49.3 +0.2**
TRIV				AML	AML	
	comp=E,1190μm,0.8s					
TRIV				AML	AML	
	comp=N,866μm,0.8s					
TRIV				AML	AML	
	comp=N,866μm,0.8s					
TRIV				AML	AML	
	comp=E,1189μm,0.8s					
TRIV				AML	AML	
	comp=N,866μm,1.2s					
MAON	**Monte Argentar**	**1.54**	**255**	⇓P	**Pn**	**12 32 47.5 -0.3**
MAON				AML	AML	
	comp=E,248μm,1.4s					
MAON				AML	AML	
	comp=N,236μm,0.9s					
MAON				AML	AML	
	comp=N,236μm,0.9s					
MAON				AML	AML	
	comp=E,248μm,0.6s					
MAON				AML	AML	
	comp=N,236μm,1.1s					
MAON				AML	AML	
	comp=E,239μm,0.6s					
OSSC	**Osservatorio P**	**1.54**	**297**	P	**Pn**	**12 32 47.1 -0.7**
OSSC				AML	AML	
	comp=N,450μm,0.8s					
OSSC				AML	AML	
	comp=E,388μm,0.6s					
OSSC				AML	AML	
	comp=E,388μm,0.6s					
OSSC				AML	AML	
	comp=N,450μm,1.2s					
OSSC				AML	AML	
	comp=N,451μm,0.8s					
OSSC				AML	AML	
	comp=E,443μm,0.6s					
OSSC				AML	AML	
	comp=N,426μm,0.6s					
RUFI	**Rufina**	**1.55**	**310**	⇑P	**Pb**	**12 32 48.9 0.0**
RUFI				AML	AML	
	comp=E,633μm,0.6s					
RUFI				AML	AML	
	comp=N,742μm,0.6s					
CASP	**Castiglione de**	**1.67**	**269**	⇑P	**Pn**	**12 32 49.5 -0.1**
CASP				AML	AML	
	comp=E,122μm,1.1s					
CASP				AML	AML	
	comp=N,107μm,1.3s					
CASP				AML	AML	
	comp=E,122μm,0.9s					
CASP				AML	AML	
	comp=N,103μm,0.5s					
CASP				AML	AML	
	comp=E,111μm,0.5s					
CASP				AML	AML	
	comp=N,107μm,0.7s					
BSSO	**Busso**	**1.69**	**140**	⇓P	**Pg**	**12 32 52.5 -0.1**
BSSO				AML	AML	
	comp=N,194μm,0.6s					
BSSO				AML	AML	
	comp=N,488μm,0.6s					
BSSO				AML	AML	
	comp=N,194μm,0.6s					
BSSO				AML	AML	
	comp=E,592μm,1.1s					
BSSO				AML	AML	
	comp=E,234μm,1.1s					
BSSO				AML	AML	
	comp=E,234μm,1.1s					
MODR	**Mondragone**	**1.79**	**162**	⇓P	**Pb**	**12 32 52.6 -0.5**
MODR				AML	AML	
	comp=E,192μm,0.9s					
MODR				AML	AML	
	comp=N,212μm,1.0s					
MODR				AML	AML	
	comp=N,213μm,1.0s					
MODR				AML	AML	
	comp=E,193μm,0.9s					
MODR				AML	AML	
	comp=E,192μm,1.1s					
MPPT	**Montemurlo**	**1.86**	**307**	⇓P	**Pn**	**12 32 52.9 +0.7**
MPPT				AML	AML	
	comp=N,388μm,0.6s					
MPPT				AML	AML	
	comp=N,388μm,0.6s					
MPPT				AML	AML	
	comp=E,281μm,0.9s					
MPPT				AML	AML	
	comp=E,281μm,0.9s					
MELA	**Melanico ??? S**	**1.87**	**127**	⇑P	**Pb**	**12 32 53.6 -0.8**
MELA				AML	AML	
	comp=N,1430μm,0.6s					
MELA				AML	AML	
	comp=E,1159μm,0.5s					
MELA				AML	AML	
	comp=E,1130μm,0.5s					
MELA				AML	AML	
	comp=E,1161μm,0.5s					
MELA				AML	AML	
	comp=N,1430μm,0.6s					
MELA				AML	AML	
	comp=N,1293μm,0.5s					
MELA				AML	AML	
	comp=E,1128μm,0.6s					
MELA				AML	AML	
	comp=N,1295μm,0.5s					
TREM	**Isole Tremiti**	**1.90**	**112**	⇓P	**Pb**	**12 32 54.2 -0.8**
TREM				AML	AML	
	comp=N,1435μm,0.7s					

TREM				AML	AML	
	comp=E,1220μm,0.6s					
TREM				AML	AML	
	comp=E,1220μm,0.6s					
TREM				AML	AML	
	comp=N,1436μm,0.7s					
APRC	**Apricena**	**2.09**	**121**	⇓P	**Pn**	**12 32 56.5 +1.1**
APRC				AML	AML	
	comp=E,543μm,1.5s					
APRC				AML	AML	
	comp=E,562μm,0.5s					
APRC				AML	AML	
	comp=E,501μm,0.7s					
APRC				AML	AML	
	comp=N,926μm,0.4s					
APRC				AML	AML	
	comp=N,926μm,0.4s					
BRJN	**Brijuni**	**2.11**	**12**	⇑P	**Pn**	**12 32 55.8 +0.3**
POPM	**Popiglio**	**2.11**	**305**	⇑P	**Pn**	**12 32 55.5 0.0**
POPM				AML	AML	
	comp=N,206μm,1.2s					
POPM				AML	AML	
	comp=N,184μm,0.6s					
POPM				AML	AML	
	comp=N,206μm,0.8s					
POPM				AML	AML	
	comp=E,198μm,0.9s					
POPM				AML	AML	
	comp=E,187μm,0.5s					
CELB	**S.Piero in Cam**	**2.16**	**268**	⇑P	**Pn**	**12 32 56.2 0.0**
CELB				AML	AML	
	comp=N,68μm,1.6s					
CELB				AML	AML	
	comp=E,93μm,0.5s					
CELB				AML	AML	
	comp=N,59μm,0.6s					
CELB				AML	AML	
	comp=E,93μm,0.5s					
CELB				AML	AML	
	comp=N,68μm,0.4s					
MAIM	**Mastiano**	**2.20**	**300**	⇑P	**Pn**	**12 32 57.2 +0.3**
MAIM				AML	AML	
	comp=E,170μm,0.5s					
MAIM				AML	AML	
	comp=N,186μm,0.6s					
MAIM				AML	AML	
	comp=E,170μm,0.5s					
MAIM				AML	AML	
	comp=N,186μm,0.6s					
MAIM				AML	AML	
	comp=E,170μm,1.5s					
MAIM				AML	AML	
	comp=N,186μm,1.4s					
SGRT	**San Giovanni R**	**2.22**	**119**	P	**Pn**	**12 32 58.3 +1.1**
SGRT				AML	AML	
	comp=E,702μm,0.7s					
SGRT				AML	AML	
	comp=N,520μm,1.6s					
SGRT				AML	AML	
	comp=E,702μm,1.3s					
SGRT				AML	AML	
	comp=E,702μm,0.7s					
SGRT				AML	AML	
	comp=N,519μm,0.3s					
SGTA	**Sant Agata di**	**2.38**	**135**	⇓P	**Pn**	**12 33 01.4 +1.9**
SGTA				AML	AML	
	comp=N,238μm,0.5s					
SGTA				AML	AML	
	comp=E,466μm,0.6s					
SGTA				AML	AML	
	comp=N,238μm,1.5s					
SGTA				AML	AML	
	comp=N,280μm,0.8s					
SGTA				AML	AML	
	comp=E,465μm,0.6s					
SGTA				AML	AML	
	comp=E,494μm,0.6s					
SGTA				AML	AML	
	comp=N,238μm,0.5s					
VLC	**Villacollemand**	**2.39**	**304**	⇑P	**Pn**	**12 32 59.3 -0.2**
VLC				AML	AML	
	comp=N,128μm,0.8s					
VLC				AML	AML	
	comp=E,92μm,1.0s					
VLC				AML	AML	
	comp=N,126μm,0.8s					
VLC				AML	AML	
	comp=E,103μm,1.4s					
VLC				AML	AML	
	comp=E,103μm,0.6s					
VLC				AML	AML	
	comp=E,102μm,0.5s					
VLC				AML	AML	
	comp=E,92μm,1.0s					
VLC				AML	AML	
	comp=N,128μm,0.8s					
VLC				AML	AML	
	comp=N,126μm,0.8s					
HVAR	**Hvar**	**2.45**	**81**	⇓P	**Pn**	**12 33 00.9 +0.6**
SNAL	**S. Angelo Dei**	**2.47**	**140**	⇓P	**Pb**	**12 33 02.8 -1.9**
SNAL				AML	AML	
	comp=N,296μm,1.1s					
SNAL				AML	AML	
	comp=E,302μm,1.6s					
SNAL				AML	AML	
	comp=E,302μm,0.4s					
SNAL				AML	AML	
	comp=E,278μm,0.7s					
SNAL				AML	AML	
	comp=N,298μm,1.1s					
SNAL				AML	AML	
	comp=N,295μm,1.1s					
SNAL				AML	AML	
	comp=E,277μm,1.0s					
EQUI	**Equi**	**2.54**	**302**	⇓P	**Pn**	**12 33 01.9 +0.4**
EQUI				AML	AML	
	comp=N,119μm,1.1s					
EQUI				AML	AML	
	comp=E,78μm,0.5s					
EQUI				AML	AML	
	comp=E,78μm,0.5s					
EQUI				AML	AML	
	comp=N,106μm,0.9s					
EQUI				AML	AML	
	comp=N,119μm,0.9s					
CAPA	**Cerignola FG**	**2.61**	**129**	⇓P	**Pn**	**12 33 04.0 +1.5**
CAPA				AML	AML	
	comp=E,471μm,0.7s					
CAPA				AML	AML	
	comp=N,411μm,0.9s					
CAPA				AML	AML	
	comp=N,411μm,0.9s					
CAPA				AML	AML	
	comp=E,471μm,0.7s					
SKDS	**Skadanscina**	**2.77**	**13**	*i* Pn	**Pn**	**12 33 04.5 -0.3**
SKDS				IAML		12 33 41.1
	comp=Z,58nm,0.2s					
PALZ	**Palazzo San Ge**	**2.84**	**131**	P	**Pn**	**12 33 06.7 +1.0**
PALZ				AML	AML	
	comp=E,479μm,0.8s					
PALZ				AML	AML	
	comp=N,508μm,0.8s					
PALZ				AML	AML	
	comp=E,479μm,1.2s					
PALZ				AML	AML	
	comp=N,508μm,1.2s					
PALZ				AML	AML	
	comp=E,479μm,0.8s					
PALZ				AML	AML	
	comp=N,443μm,1.3s					
MNTV	**Mantova**	**2.86**	**324**	⇓P	**Pb**	**12 33 12.4 +1.1**
MRVN	**Minervino Murg**	**2.90**	**127**	P	**Pn**	**12 33 07.4 +0.9**
MRVN				AML	AML	
	comp=E,130μm,1.2s					
MRVN				AML	AML	
	comp=N,110μm,0.6s					
MRVN				AML	AML	
	comp=E,116μm,0.4s					
MRVN				AML	AML	
	comp=N,110μm,0.6s					
MRVN				AML	AML	
	comp=N,110μm,1.4s					
MRVN				AML	AML	
	comp=E,130μm,0.8s					
SMPL	**Sampolo**	**2.95**	**257**	⇑P	**Pn**	**12 33 08.1 +1.0**
SMPL				AML	AML	
	comp=N,16μm,1.6s					
SMPL				AML	AML	
	comp=E,19μm,0.7s					
SMPL				AML	AML	
	comp=E,19μm,0.7s					
SMPL				AML	AML	
	comp=N,15μm,0.8s					
SMPL				AML	AML	
	comp=N,16μm,0.4s					
CMPR	**Campora**	**3.00**	**147**	P	**Pn**	**12 33 09.6 +1.7**
CMPR				AML	AML	
	comp=E,60μm,0.6s					
CMPR				AML	AML	
	comp=N,48μm,1.5s					
CMPR				AML	AML	
	comp=N,38μm,0.5s					
CMPR				AML	AML	
	comp=E,60μm,0.6s					
MSSA	**Maissana**	**3.01**	**300**	⇑P	**Pn**	**12 33 08.4 +0.3**
MSSA				AML	AML	
	comp=N,102μm,0.6s					
MSSA				AML	AML	
	comp=E,71μm,0.5s					
MSSA				AML	AML	
	comp=N,101μm,0.6s					
MSSA				AML	AML	
	comp=E,71μm,0.5s					
CEY	**Cerknica**	**3.04**	**17**	*e*Pn	**Pn**	**12 33 05.8 -2.6**
BOJS	**Bojanci**	**3.06**	**29**	*i* Pn	**Pn**	**12 33 10.2 +1.6**
PGF	**Pioggiola**	**3.06**	**266**	*e*Pn	**Pn**	**12 33 09.1 +0.3**
PGF				*e*Sn	Sn	12 33 33.2 -12
	comp=E,33nm,0.8s					
PGF	**Pioggiola**	**3.06**	**266**	⇓P	**Pn**	**12 33 09.4 +0.6**
PGF				AML	AML	
	comp=N,26μm,1.3s					
PGF				AML	AML	
	comp=E,30μm,1.1s					
PGF				AML	AML	
	comp=E,25μm,0.7s					
PGF				AML	AML	
	comp=N,22μm,0.4s					
SABO	**M.te Sabotino**	**3.15**	**6**	⇓P	**Pn**	**12 33 10.2 +0.2**
SABO				AML	AML	
	comp=E,1180μm,0.8s					
SABO				AML	AML	
	comp=N,507μm,0.5s					
SABO				AML	AML	
	comp=N,1930μm,0.5s					
SABO				AML	AML	
	comp=E,289μm,1.2s					
SABO				AML	AML	
	comp=E,281μm,0.8s					
SABO				AML	AML	
	comp=E,1184μm,0.8s					
SABO				AML	AML	
	comp=E,1180μm,1.2s					
SABO				AML	AML	
	comp=N,507μm,0.5s					
SABO				AML	AML	
	comp=N,1928μm,0.5s					
ROVR	**Rover Verones**	**3.17**	**333**	⇓P	**Pn**	**12 33 11.8 +1.6**
ROVR				AML	AML	
	comp=N,124μm,0.4s					
ROVR				AML	AML	
	comp=E,66μm,0.7s					
ROVR				AML	AML	
	comp=E,66μm,0.7s					
ROVR				AML	AML	
	comp=N,124μm,0.4s					
SRKY	**Kupres RS**	**3.18**	**66**	*e*Pn	**Pn**	**12 33 12.0 +1.6**
AMUR	**Altamura**	**3.23**	**126**	⇓P	**Pn**	**12 33 12.2 +1.1**
AMUR				AML	AML	
	comp=E,197μm,0.5s					
AMUR				AML	AML	
	comp=N,178μm,0.6s					
AMUR				AML	AML	
	comp=E,197μm,1.5s					
AMUR				AML	AML	
	comp=E,197μm,0.5s					
AMUR				AML	AML	
	comp=N,178μm,0.6s					
MGR	**Morigerati**	**3.26**	**145**	P	**Pg**	**12 33 21.8 -0.8**
MGR				S	**Sb**	**12 33 59.0 +1.1**
MGRS	**Mrkonjic Grad**	**3.27**	**60**	*e*Pn	**Pn**	**12 33 13.2 +1.7**
SALO	**Salr**	**3.35**	**327**	⇓P	**Pn**	**12 33 14.6 +1.9**
SALO				AML	AML	
	comp=N,246μm,0.6s					
SALO				AML	AML	
	comp=E,218μm,0.9s					
SALO				AML	AML	
	comp=N,246μm,0.6s					
SALO				AML	AML	
	comp=E,218μm,0.9s					
SALO				AML	AML	
	comp=E,243μm,0.9s					
SALO				AML	AML	
	comp=N,242μm,0.6s					
SALO				AML	AML	
	comp=E,218μm,1.1s					
LJU	**Ljubljana**	**3.35**	**17**	P	**Pn**	**12 33 13.5 +0.8**
LJU				S	**Sn**	**12 33 55.0 +2.6**
LJU				AML	AML	
	comp=E,1295μm,0.5s					
LJU				AML	AML	
	comp=N,1770μm,1.1s					
LJU				AML	AML	
	comp=N,1590μm,0.4s					
LJU				AML	AML	
	comp=E,1298μm,0.5s					
STON	**Ston**	**3.35**	**88**	*e*Pn	**Pn**	**12 33 12.1 -0.6**
STON	**Ston**	**3.35**	**88**	⇑P	**Pn**	**12 33 12.5 -0.2**
STON				AML	AML	
	comp=N,75μm,0.6s					
STON				AML	AML	
	comp=E,92μm,0.4s					
STON				AML	AML	
	comp=N,64μm,0.6s					
STON				AML	AML	
	comp=E,92μm,0.4s					
CTI	**Castel Tesino**	**3.37**	**342**	⇓P	**Pn**	**12 33 14.9 +1.8**
CTI				AML	AML	
	comp=E,272μm,1.3s					
CTI				AML	AML	
	comp=N,310μm,0.2s					
CTI				AML	AML	
	comp=E,224μm,0.6s					
CTI				AML	AML	
	comp=N,310μm,0.2s					
CTI				AML	AML	
	comp=N,310μm,1.8s					
CTI				AML	AML	
	comp=E,272μm,0.7s					
MPRI	**Monte Prat**	**3.40**	**358**	⇓P	**Pn**	**12 33 14.2 +0.8**
MPRI				AML	AML	
	comp=N,391μm,0.4s					
MPRI				AML	AML	
	comp=N,301μm,0.4s					
MPRI				AML	AML	
	comp=E,293μm,0.5s					
MPRI				AML	AML	
	comp=E,222μm,0.5s					
MPRI				AML	AML	
	comp=E,293μm,0.5s					
MPRI				AML	AML	
	comp=N,392μm,0.4s					
STAL	**STALIGIAL**	**3.43**	**355**	⇑P	**Pn**	**12 33 14.2 +0.4**
STAL				AML	AML	
	comp=E,318μm,0.5s					
STAL				AML	AML	
	comp=N,234μm,0.3s					
STAL				AML	AML	
	comp=E,278μm,0.4s					
STAL				AML	AML	
	comp=E,299μm,0.4s					
STAL				AML	AML	
	comp=N,249μm,0.3s					
STAL				AML	AML	
	comp=N,234μm,0.3s					
MATE	**Matera**	**3.46**	**128**	⇑P	**Pn**	**12 33 15.8 +1.7**
A051A	**Mrakovica**	**3.48**	**50**	*e*Pn	**Pn**	**12 33 14.9 +0.4**
LUSI	**Trento, Gardas**	**3.49**	**334**	⇓P	**Pn**	**12 33 15.6 +1.0**
LUSI				AML	AML	
	comp=E,156μm,0.8s					
LUSI				AML	AML	
	comp=N,248μm,0.5s					
LUSI				AML	AML	
	comp=E,146μm,0.8s					
LUSI				AML	AML	
	comp=N,248μm,0.5s					
BLY	**Banja Luka**	**3.49**	**56**	*e*Pn	**Pn**	**12 33 16.0 +1.4**
BLY	**Banja Luka**	**3.49**	**56**	⇑P	**Pn**	**12 33 17.1 +2.6**
BLY				AML	AML	
	comp=N,131μm,0.7s					
BLY				AML	AML	
	comp=E,239μm,0.8s					
BLY				AML	AML	
	comp=N,147μm,0.7s					
BLY				AML	AML	
	comp=E,254μm,0.8s					
BLY				AML	AML	
	comp=E,239μm,0.8s					
BLY				AML	AML	
	comp=N,131μm,0.7s					
CIMO	**Cimolais**	**3.50**	**352**	P	**Pn**	**12 33 15.1 +0.4**
CIMO				AML	AML	
	comp=E,84μm,0.6s					
CIMO				AML	AML	
	comp=N,76μm,0.5s					
CIMO				AML	AML	
	comp=N,84μm,0.5s					
CIMO				AML	AML	
	comp=E,76μm,0.6s					
CIMO				AML	AML	
	comp=N,74μm,0.5s					
CIMO				AML	AML	
	comp=N,83μm,0.5s					
CIMO				AML	AML	
	comp=E,67μm,0.8s					
CIMO				AML	AML	
	comp=E,67μm,0.5s					
LTRZ	**Laterza**	**3.55**	**128**	⇓P	**Pn**	**12 33 16.8 +1.4**
LTRZ				AML	AML	
	comp=N,1267μm,1.6s					
LTRZ				AML	AML	
	comp=E,109μm,0.8s					
LTRZ				AML	AML	
	comp=E,108μm,0.8s					
PTCC	**Patocco-Chiusa**	**3.56**	**2**	⇑P	**Pn**	**12 33 15.9 +0.3**
PTCC				AML	AML	
	comp=N,100μm,0.4s					
PTCC				AML	AML	
	comp=E,109μm,0.9s					
PTCC				AML	AML	
	comp=N,100μm,0.4s					
PTCC				AML	AML	
	comp=E,96μm,0.4s					
NOCI	**Noci**	**3.58**	**124**	⇑P	**Pn**	**12 33 17.1 +1.2**
NOCI				AML	AML	
	comp=E,164μm,1.6s					
NOCI				AML	AML	
	comp=N,170μm,1.2s					
NOCI				AML	AML	
	comp=E,164μm,0.4s					
NOCI				AML	AML	
	comp=E,134μm,0.7s					
GAGG	**Gaggia**	**3.59**	**335**	⇓P	**Pn**	**12 33 18.1 +1.9**
GAGG				AML	AML	
	comp=N,171μm,0.9s					
GAGG				AML	AML	
	comp=E,228μm,1.1s					
GAGG				AML	AML	
	comp=E,153μm,1.0s					
GAGG				AML	AML	
	comp=E,172μm,0.8s					
GAGG				AML	AML	
	comp=N,142μm,0.6s					
GAGG				AML	AML	
	comp=N,163μm,0.8s					
GAGG				AML	AML	
	comp=N,171μm,1.1s					
CLUD	**Cludinico**	**3.62**	**357**	⇑P	**Pn**	**12 33 16.6 +0.3**
CLUD				AML	AML	
	comp=E,148μm,1.0s					
CLUD				AML	AML	
	comp=N,122μm,0.7s					
CLUD				AML	AML	
	comp=E,148μm,1.0s					
CLUD				AML	AML	
	comp=N,122μm,1.3s					
CLUD				AML	AML	
	comp=E,145μm,0.7s					
CLUD				AML	AML	
	comp=N,122μm,1.4s					
CLUD				AML	AML	
	comp=E,130μm,0.6s					
CLUD				AML	AML	
	comp=N,110μm,0.6s					
ZONE	**Zone**	**3.63**	**324**	⇑P	**Pn**	**12 33 15.3 -1.3**
ZONE				AML	AML	
	comp=N,142μm,0.3s					
ZONE				AML	AML	
	comp=E,152μm,0.2s					
ZONE				AML	AML	
	comp=E,152μm,0.2s					
ZONE				AML	AML	
	comp=N,142μm,0.3s					
ZONE				AML	AML	
	comp=E,192μm,1.0s					
ACOM	**Acomizza, Ital**	**3.71**	**4**	⇑P	**Pn**	**12 33 18.2 +0.4**
ACOM				AML	AML	
	comp=E,288μm,0.3s					
ACOM				AML	AML	
	comp=N,204μm,0.3s					
ACOM				AML	AML	
	comp=N,204μm,0.3s					
ACOM				AML	AML	
	comp=N,204μm,0.3s					
ACOM				AML	AML	
	comp=E,299μm,0.3s					
ACOM				AML	AML	
	comp=E,288μm,0.3s					
ZOU	**Zoufplan**	**3.71**	**358**	⇓P	**Pn**	**12 33 18.4 +0.6**
ZOU				AML	AML	
	comp=N,158μm,0.9s					
ZOU				AML	AML	
	comp=E,144μm,1.1s					
ZOU				AML	AML	
	comp=E,161μm,1.0s					
ZOU				AML	AML	
	comp=N,136μm,0.7s					
ZOU				AML	AML	
	comp=E,145μm,1.1s					
ZOU				AML	AML	
	comp=N,126μm,0.6s					
ZOU				AML	AML	
	comp=E,137μm,0.8s					
ZOU				AML	AML	
	comp=N,112μm,1.1s					
ZOU				AML	AML	
	comp=E,161μm,1.0s					
MABI	**Malga Bissina**	**3.72**	**331**	⇑P	**Pn**	**12 33 19.8 +1.9**
MABI				AML	AML	
	comp=N,60μm,0.4s					
FVI	**Forni Avoltri**	**3.76**	**356**	⇑P	**Pn**	**12 33 19.4 +1.1**
FVI				AML	AML	
	comp=E,99μm,0.4s					
FVI				AML	AML	
	comp=N,146μm,0.5s					
FVI				AML	AML	
	comp=E,99μm,0.4s					
FVI				AML	AML	
	comp=N,146μm,0.5s					
FVI				AML	AML	
	comp=E,99μm,1.6s					
OBKA	**Obir**	**3.80**	**15**	*e*Pn	**Pn**	**12 33 18.8 -0.1**
OBKA	**Obir**	**3.80**	**15**	*e*Pn	**Pn**	**12 33 19.5 +0.6**
	comp=E,5.0nm,0.2s					
MYKA	**Terra Mystica**	**3.80**	**5**	*e*Pn	**Pn**	**12 33 20.1 +1.2**
	comp=E,4.3nm,0.2s					
MYKA				*e*Sn	**Sn**	**12 34 05.2 +1.5**
	comp=E,12nm,0.4s					
KOSI	**Kohlern**	**3.83**	**341**	⇑P	**Pn**	**12 33 21.1 +1.7**
KOSI				AML	AML	
	comp=N,174μm,0.7s					
KOSI				AML	AML	
	comp=E,196μm,0.7s					
KOSI				AML	AML	
	comp=N,142μm,0.4s					
KOSI				AML	AML	
	comp=E,164μm,0.5s					
TREB	**Trebinje**	**3.84**	**90**	*e*Pn	**Pn**	**12 33 20.1 +0.7**
TAR1	**Taranto**	**3.88**	**125**	⇑P	**Pn**	**12 33 21.6 +1.8**
TAR1				AML	AML	
	comp=E,138μm,1.5s					
TAR1				AML	AML	
	comp=N,154μm,0.8s					

TAR1				AML	AML	
	comp=N,127μm,0.6s					
TAR1				AML	AML	
	comp=E,98μm,0.7s					
APPI	**Appiano**	**3.88**	**340**	⇑P	**Pn**	**12 33 21.8 +1.8**
APPI				AML	AML	
	comp=N,173μm,1.4s					
APPI				AML	AML	
	comp=N,173μm,0.6s					
APPI				AML	AML	
	comp=E,142μm,0.6s					
APPI				AML	AML	
	comp=E,124μm,0.4s					
APPI				AML	AML	
	comp=N,164μm,0.4s					
ABTA	**Abfaltersbach**	**3.93**	**354**	*i* Pn	**Pn**	**12 33 22.0 +1.4**
	comp=N,13nm,0.3s,SNR=21					
ABTA				*e*Sn	**Sn**	**12 34 08.5 +1.7**
	comp=N,30nm,0.4s					
BRY	**Bratogost**	**3.97**	**87**	*e*Pn	**Pn**	**12 33 21.5 +0.2**
HCY	**Herceg Novi**	**3.97**	**94**	*e*Pn	**Pn**	**12 33 21.3 +0.1**
BRES	**Bressanone**	**3.98**	**346**	P	**Pn**	**12 33 23.9 +2.3**
SOKA	**Soboth**	**4.06**	**19**	*e*Sn	**Sn**	**12 34 11.3 +1.2**
	comp=N,17nm,0.8s					
RISI	**Rein**	**4.17**	**350**	⇓P	**Pn**	**12 33 26.1 +2.1**
RISI				AML	AML	
	comp=N,462μm,1.5s					
RISI				AML	AML	
	comp=E,444μm,0.5s					
RISI				AML	AML	
	comp=E,444μm,0.5s					
RISI				AML	AML	
	comp=N,447μm,0.4s					
SAOF	**Saorge**	**4.22**	**288**	P	**Pn**	**12 33 25.4 +0.7**
UPM	**Unac-Piva**	**4.24**	**83**	*e*Pn	**Pn**	**12 33 23.6 -1.5**
ROSI	**Rosskopf**	**4.26**	**344**	⇓P	**Pn**	**12 33 27.2 +1.9**
ROSI				AML	AML	
	comp=N,274μm,0.3s					
ROSI				AML	AML	
	comp=E,196μm,0.4s					
ROSI				AML	AML	
	comp=E,196μm,1.6s					
ROSI				AML	AML	
	comp=N,274μm,1.7s					
ROSI				AML	AML	
	comp=N,274μm,0.3s					
ROSI				AML	AML	
	comp=E,196μm,0.4s					
CAR1	**CAROLEI**	**4.28**	**146**	S	**Sn**	**12 34 21.0 +5.6**
SBF	**Sospel**	**4.28**	**286**	*e*Pn	**Pn**	**12 33 24.5 -1.0**
SBF	**Sospel**	**4.28**	**286**	*e*P	**Pn**	**12 33 27.3 +1.8**
VSL	**Villasalto**	**4.39**	**222**	⇑P	**Pn**	**12 33 28.1 +1.2**
VSL				AML	AML	
	comp=N,29μm,0.8s					
VSL				AML	AML	
	comp=E,35μm,1.0s					
VSL				AML	AML	
	comp=N,29μm,1.2s					
VSL				AML	AML	
	comp=E,30μm,0.3s					
HAPS	**Han Pijesak,BI**	**4.41**	**72**	*e*Pn	**Pn**	**12 33 28.3 +1.0**
FETA	**Feichten**	**4.51**	**339**	*i* Pn	**Pn**	**12 33 32.2 +3.5**
	comp=E,3.2nm,0.5s,SNR=9.1					
FETA				*e*Sn	**Sn**	**12 34 24.0 +2.7**
	comp=E,8.3nm,0.5s					
DRME	**Dracevica, Mon**	**4.52**	**96**	*e*Pn	**Pn**	**12 33 30.0 +1.3**
PDG	**Podgorica**	**4.53**	**93**	⇑P	**Pn**	**12 33 29.0 +0.1**
WTTA	**Wattenberg**	**4.54**	**347**	*i* Pn	**Pn**	**12 33 32.0 +2.8**
	comp=E,2.5nm,0.2s,SNR=6.1					
WTTA	**Wattenberg**	**4.54**	**347**	⇓P	**Pn**	**12 33 32.0 +2.8**
DAVOX	**Davos/Dischmat**	**4.56**	**331**	Pn	**Pn**	**12 33 32.8 +3.3**
	comp=E,4.0nm,0.3s,baz=156,slow=16,SNR=22					
DAVOX				Sn	**Sn**	**12 34 22.6 -0.1**
	comp=E,1.2nm,0.3s,baz=155,slow=20,SNR=1.3					
	comp=E,10nm,0.3s					
DAVOX	**Davos/Dischmat**	**4.56**	**331**	P	**Pn**	**12 33 31.8 +2.3**
SQTA	**Sankt Quirin**	**4.58**	**343**	*i* Pn	**Pn**	**12 33 32.0 +2.3**
	comp=E,3.2nm,0.2s,SNR=8.0					
SQTA				*e*Sn	**Sn**	**12 34 25.5 +2.5**
	comp=E,19nm,0.4s					
RUDO	**Rudo**	**4.62**	**78**	*e*Pn	**Pn**	**12 33 31.1 +1.0**
WATA	**Walderalm**	**4.62**	**347**	*i* Pn	**Pn**	**12 33 33.2 +2.9**
	comp=E,4.3nm,0.2s,SNR=5.5					
CALF	**Calern**	**4.63**	**283**	P	**Pn**	**12 33 30.5 +0.2**
BBLS	**Lazići**	**4.68**	**75**	*e*Pn	**Pn**	**12 33 33.0 +2.0**
ARSA	**Arzberg**	**4.72**	**20**	*e*Pn	**Pn**	**12 33 31.4 -0.1**
	comp=E,2.0nm,0.3s					
ARSA	**Arzberg**	**4.72**	**20**	⇑P	**Pn**	**12 33 31.4 -0.1**
MOTA	**Moosalm**	**4.72**	**343**	*i* Pn	**Pn**	**12 33 33.8 +2.2**
	comp=E,4.5nm,0.3s,SNR=7.2					
SOLUN	**Solunto**	**4.76**	**176**	S	**Sn**	**12 34 31.0 +3.8**
BIOA	**Bad Ischl, Aus**	**4.86**	**4**	*i* Pn	**Pn**	**12 33 34.2 +0.8**
	comp=E,16nm,0.3s,SNR=15					
LMR	**La Mourre**	**4.88**	**278**	*e*Pn	**Pn**	**12 33 31.6 -2.0**
LMR	**La Mourre**	**4.88**	**278**	*e*P	**Pn**	**12 33 35.8 +2.2**
LMR	**La Mourre**	**4.88**	**278**	*e*Sn	Sn	12 34 13.9 -16
	comp=E,17nm,1.0s					
JAUF	**Jausiers**	**4.90**	**291**	P	**Pn**	**12 33 34.8 +0.7**
RETA	**Reutte**	**4.94**	**341**	*e*Pn	**Pn**	**12 33 37.1 +2.6**
	comp=E,5.7nm,0.3s					
CORL	**Corleone**	**4.95**	**178**	S	**Sn**	**12 34 35.0 +3.0**
MBDF	**Montbardon**	**4.98**	**294**	*e*Pn	**Pn**	**12 33 35.4 +0.3**
MBDF	**Montbardon**	**4.98**	**294**	*e*P	**Pn**	**12 33 37.4 +2.3**
TRIGF	**Trigance**	**4.99**	**283**	P	**Pn**	**12 33 36.6 +1.2**
DAVA	**Damuels**	**5.00**	**334**	*e*Pn	**Pn**	**12 33 38.5 +3.0**
	comp=E,13nm,0.5s					
MOA	**Molln**	**5.07**	**9**	*e*Pn	**Pn**	**12 33 37.1 +0.9**
	comp=E,2.9nm,0.2s					
DIVS	**Divibare**	**5.14**	**74**	*e*Pn	**Pn**	**12 33 37.4 0.0**
DIVS	**Divibare**	**5.14**	**74**	P	**Pn**	**12 33 39.5 +2.2**
LPG	**La Plagne**	**5.30**	**302**	*e*Pn	**Pn**	**12 33 40.9 +1.2**
LPG	**La Plagne**	**5.30**	**302**	*e*Sn	Sn	12 34 29.0 -12
	comp=E,12nm,0.6s					
LPL	**La Plagne**	**5.32**	**302**	*e*Pn	**Pn**	**12 33 41.3 +1.3**
LPL	**La Plagne**	**5.32**	**302**	*e*P	**Pn**	**12 33 43.5 +3.5**
LPL	**La Plagne**	**5.32**	**302**	*e*Sn	Sn	12 34 27.0 -14
	comp=E,11nm,0.5s					
FRGS	**Fruska Gora**	**5.34**	**62**	⇑P	**Pn**	**12 33 38.7 -1.3**
FRGS	**Fruska Gora**	**5.34**	**62**	*e*Pn	**Pn**	**12 33 38.3 -1.7**
RONA	**Rosalia, Austr**	**5.34**	**24**	*e*Pn	**Pn**	**12 33 40.7 +0.6**
	comp=E,1.3nm,0.1s					
CONA	**Conrad Observa**	**5.43**	**20**	*e*Pn	**Pn**	**12 33 41.8 +0.5**
	comp=E,1.8nm,0.3s					
ZUR	**Degenried**	**5.55**	**326**	P	Pb	12 33 52.3 -5.0
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*Pn	**Pn**	**12 33 42.7 -1.2**
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*P	**Pn**	**12 33 46.6 +2.7**
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*Sn	Sn	12 34 31.7 -17
	comp=E,19nm,1.2s					
ORIF	**Oris-en-Rattie**	**5.64**	**294**	*e*Pn	**Pn**	**12 33 45.8 +1.6**
ORIF	**Oris-en-Rattie**	**5.64**	**294**	*e*P	**Pn**	**12 33 47.4 +3.2**
ORIF	**Oris-en-Rattie**	**5.64**	**294**	*e*Sn	Sn	12 34 33.7 -15
	comp=E,16nm,0.9s					
SLE	**Schleitheim**	**5.91**	**328**	P	**Pn**	**12 33 48.5 +0.7**
SLE	**Schleitheim**	**5.91**	**328**	S	**Sn**	**12 34 53.8 -1.8**
BALST	**Balsthal**	**5.91**	**321**	P	**Pn**	**12 33 48.2 +0.3**
BALST	**Balsthal**	**5.91**	**321**	S	**Sn**	**12 34 56.3 +0.5**
KEK	**Kerkira**	**5.91**	**120**	⇓P	**Pn**	**12 33 49.5 +1.6**
GERES	**GERESS Array B**	**6.01**	**4**	Pn	**Pn**	**12 33 49.3 0.0**
	comp=E,0.9nm,0.3s,baz=177,slow=13,SNR=29					
GERES				Sn	**Sn**	**12 34 57.0 -1.2**
	comp=E,3.7nm,0.3s,baz=166,slow=23,SNR=10					
	comp=E,1.5nm,0.4s					
CKRC	**Cesky Krumlov**	**6.03**	**7**	*e*PN	**Pn**	**12 33 48.5 -1.0**
CKRC				*e*SN	**Sn**	**12 34 55.7 -2.8**
BOURR	**Bourrignon**	**6.17**	**319**	P	**Pn**	**12 33 51.6 +0.1**
BOURR	**Bourrignon**	**6.17**	**319**	S	**Sn**	**12 35 01.5 -0.6**
CABF	**La Chapelle**	**6.27**	**309**	*e*Pn	**Pn**	**12 33 54.0 +1.1**
CABF	**La Chapelle**	**6.27**	**309**	*e*P	**Pn**	**12 33 57.4 +4.5**
KIZ	**Kirchzarten**	**6.29**	**326**	P	**Pn**	**12 33 53.8 +0.7**
KIZ	**Kirchzarten**	**6.29**	**326**	S	**Sn**	**12 35 03.2 -1.8**
KHC	**Kasperske Hory**	**6.29**	**3**	*e*PN	**Pn**	**12 33 52.8 -0.3**
KHC				*e*SN	**Sn**	**12 35 02.4 -2.6**
BOVS	**Bovan**	**6.31**	**80**	⇑P	**Pn**	**12 33 52.8 -0.5**
VIVF	**Saint-Julien-I**	**6.44**	**291**	*e*Pn	**Pn**	**12 33 54.4 -0.7**
MDVR	**Moldovita**	**6.50**	**70**	⇑P	**Pn**	**12 33 54.8 -1.1**
MOF	**Molkenrain**	**6.55**	**322**	P	**Pn**	**12 33 57.6 +0.9**
MOF				S	**Sn**	**12 35 07.2 -4.3**
HINF	**Hinteralfeld**	**6.66**	**320**	*e*Pn	**Pn**	**12 33 58.9 +0.8**
HINF	**Hinteralfeld**	**6.66**	**320**	*e*P	Pn	12 34 05.1 +7.0
HINF	**Hinteralfeld**	**6.66**	**320**	*e*Sn	Sn	12 35 03.1 -11
	comp=E,19nm,0.6s					
BZS	**Buzias**	**6.69**	**63**	⇑P	**Pn**	**12 33 57.6 -0.9**
LASF	**Ste Croix**	**6.86**	**283**	*e*Pn	**Pn**	**12 34 00.3 -0.6**
CDF	**Champ du Feu**	**6.92**	**326**	*e*Pn	**Pn**	**12 34 01.4 -0.3**
CDF	**Champ du Feu**	**6.92**	**326**	*e*Sn	Sn	12 35 09.9 -11
	comp=E,11nm,0.4s					
HAU	**Haudompre**	**7.03**	**320**	*e*Pn	**Pn**	**12 34 03.3 +0.1**
HAU	**Haudompre**	**7.03**	**320**	*e*P	Pn	12 34 09.6 +6.4
HAU	**Haudompre**	**7.03**	**320**	*e*Sn	Sn	12 35 11.9 -11
	comp=E,29nm,0.5s					
NKC	**Novy Kostel**	**7.40**	**357**	*e*SN	**Sn**	**12 35 28.9 -3.4**
VTS	**Vitosha**	**7.44**	**88**	⇑P	**Pn**	**12 34 08.4 -0.5**
SMF	**Signal de Mont**	**7.63**	**303**	*e*Pn	**Pn**	**12 34 11.3 -0.1**
PAGF	**Fort de Pagny**	**7.71**	**320**	*e*Pn	**Pn**	**12 34 13.1 +0.6**
	baz=144					
PAGF	**Fort de Pagny**	**7.71**	**320**	*e*Sn	**Sn**	**12 35 31.4 -8.5**
	comp=E,30nm,1.1s					
SFTF	**Sexfontaines**	**7.81**	**316**	*e*Pn	**Pn**	**12 34 14.8 +0.9**
	baz=137					
SFTF	**Sexfontaines**	**7.81**	**316**	*e*P	Pn	12 34 20.3 +6.4
LOR	**Lormes**	**7.92**	**307**	*e*Pn	**Pn**	**12 34 16.3 +0.9**
	baz=128					
LOR	**Lormes**	**7.92**	**307**	*e*Sn	**Sn**	**12 35 36.9 -8.0**
	comp=E,7.7nm,0.5s					
AVF	**Avril sur Loir**	**7.99**	**303**	*e*Pn	**Pn**	**12 34 17.3 +0.9**
MEZF	**Maizieres J'vi**	**8.00**	**318**	*e*Pn	**Pn**	**12 34 17.4 +0.9**
	baz=141					
MTLF	**Montolieu**	**8.01**	**277**	*e*P	**Pn**	**12 34 19.9 +3.3**
SSF	**Saint Saulge**	**8.02**	**305**	*e*Pn	**Pn**	**12 34 17.7 +0.9**
SAVF	**Savonnieres en**	**8.04**	**319**	*e*Pn	**Pn**	**12 34 18.1 +1.1**
	baz=144					
BGF	**Bois d'Agland**	**8.21**	**300**	*e*Pn	**Pn**	**12 34 19.3 -0.1**
CAF	**Calviac**	**8.26**	**288**	*e*Pn	**Pn**	**12 34 20.2 +0.1**
CAF	**Calviac**	**8.26**	**288**	*e*Sn	Sn	12 35 32.1 -21
	comp=E,1.6nm,0.2s					
CLL	**Collm**	**8.47**	**359**	*e*Pn	**Pn**	**12 34 23.0 +0.2**
CLL				*e*(Pg)	**Pg**	**12 35 04.0 +1.8**
CLL				*ex*	x	12 35 57.0
CLL				*ex*	x	12 36 15.0
CLL				*ex*	x	12 36 30.0
CLL				*e*Sg	**Sg**	**12 36 51.0 -0.7**
	comp=Z,11nm,1.3s					
CLL	**Collm**	**8.47**	**359**	*e*Sn	Sn	12 35 39.0 -19
TCF	**Toulx Ste Croi**	**8.53**	**298**	*e*Pn	**Pn**	**12 34 23.7 0.0**
RJF	**Les Rejaudoux**	**8.72**	**290**	*e*Pn	**Pn**	**12 34 25.7 -0.7**
GIVF	**Givet**	**9.24**	**325**	*e*Pn	**Pn**	**12 34 35.1 +1.6**
EPF	**Esparros**	**9.39**	**275**	*e*P	**Pn**	**12 34 38.5 +2.9**
BAIF	**Baives**	**9.48**	**323**	*e*Pn	**Pn**	**12 34 38.3 +1.5**
BUR01	**Bucovina Ar. S**	**9.76**	**57**	⇓P	**Pn**	**12 34 39.3 -1.4**
ETSF	**Etsaut**	**10.06**	**275**	*e*P	**Pn**	**12 34 48.2 +3.4**
MFF	**Saint Martin d**	**10.17**	**296**	*e*P	Pn	12 34 51.6 +5.4
SJPF	**Ste Jean**	**10.53**	**276**	*e*P	**Pn**	**12 34 55.9 +4.7**
IDI	**Anoyia**	**11.84**	**126**	Pn	**Pn**	**12 35 04.9 -4.3**
	baz=299,slow=19,SNR=1.6					
IDI				Sn	Sn	12 37 10.9 -10
	comp=Z,0.2nm,0.3s,baz=238,slow=20,SNR=1.6					
	comp=Z,2.5nm,0.8s					
EKA	**Eskdalemuir Ar**	**16.38**	**325**	Pn	**P**	**12 36 12.6 -0.3**
	baz=135,slow=14					
	comp=Z,0.4nm,0.5s					
FINES	**FINESS Array B**	**20.18**	**18**	P	**P**	**12 36 53.0 -1.6**
	comp=Z,5.4nm,1.2s,baz=211,slow=7.8,SNR=1.2					
	comp=Z,5.4nm,1.2s					
TORD	**Torodi Ar. Bea**	**31.20**	**202**	P	**P**	**12 38 40.5 +0.8**
	comp=Z,0.4nm,0.5s,baz=9.7,slow=8.2,SNR=3.9					
	comp=Z,0.4nm,0.5s					
MKAR	**Makanchi Array**	**47.77**	**60**	P	**P**	**12 40 54.9 -2.5**
	comp=Z,1.0nm,0.9s,baz=277,slow=6.6,SNR=2.5					
	comp=Z,1.0nm,0.9s					
SONM	**Songino Array**	**61.80**	**50**	P	**P**	**12 42 38.0 -1.2**
	comp=Z,0.6nm,0.9s,baz=275,slow=7.1,SNR=2.0					
	comp=Z,0.6nm,0.9s					
TXAR	**Lajitas Array**	**87.67**	**309**	P	**P**	**12 45 12.1 +2.9**
	comp=Z,0.4nm,1.0s,baz=38,slow=4.6,SNR=2.4					
	comp=Z,0.4nm,1.0s					

ROM 30 12:32:57.4±0.0, 42°.712N±0°.003×13°.239E±0°.004, h11km, ML3.3/8, 6C-7D, Error ellipse: s-maj=0.3km s-min=0.3km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.05**	**335**	⇓P	Pg	12 32 59.9	+0.1
T1214				S	Sg	12 33 01.5	-0.1
T1201	**Domo (RI)**	**0.06**	**171**	⇓P	Pg	12 33 00.2	+0.5
T1201				S	Sg	12 33 02.0	+0.6
T1244	**Arquata del Tr**	**0.06**	**44**	⇑P	Pg	12 33 00.0	+0.3
T1244				S	Sg	12 33 01.7	+0.1
T1204	**Amatrice, Fraz**	**0.07**	**122**	⇓P	Pg	12 33 00.2	+0.3
T1204				S	Sg	12 33 01.8	0.0
T1204				AML	AML		
	comp=E,61100μm,0.2s						
T1204				AML	AML		
	comp=N,23400μm,1.0s						
T1204				AML	AML		
	comp=N,23336μm,0.3s						
T1204				AML	AML		
	comp=E,61152μm,0.2s						
T1213	**Norcia, Frazio**	**0.08**	**279**	P	Pg	12 33 00.3	+0.3
T1213				S	Sg	12 33 02.3	+0.4
T1218	**Civita (PG)**	**0.10**	**245**	⇑P	Pg	12 33 00.6	+0.4
T1218				S	Sg	12 33 02.9	+0.6
T1212	**Cascia, Frazio**	**0.15**	**286**	P	Pg	12 33 01.3	+0.4
T1212				S	Sg	12 33 04.0	+0.7
T1245	**Castelsantange**	**0.15**	**345**	P	Pg	12 33 01.2	+0.3
T1245				S	Sg	12 33 03.8	+0.3
T1245				AML	AML		
	comp=E,49300μm,0.4s						
T1245				AML	AML		
	comp=N,75000μm,0.8s						
T1245				AML	AML		
	comp=E,44550μm,0.4s						
T1245				AML	AML		
	comp=N,72550μm,0.8s						
T1245				AML	AML		
	comp=N,32352μm,1.2s						
T1245				AML	AML		
	comp=N,32128μm,1.2s						
T1245				AML	AML		
	comp=E,25731μm,0.7s						
T1245				AML	AML		
	comp=E,25002μm,0.7s						
T1243	**Rocca Santa Ma**	**0.15**	**96**	⇓P	Pg	12 33 01.2	+0.3
T1243				S	Sg	12 33 03.8	+0.3
LNSS	**Leonessa**	**0.18**	**233**	⇑P	Pg	12 33 02.0	+0.5
LNSS				S	Sg	12 33 05.3	+1.1
MMO1	**Montemonaco**	**0.20**	**19**	P	Pg	12 33 02.0	+0.3
MMO1				S	Sg	12 33 05.2	+0.6
T1241	**Roccafluvione,**	**0.20**	**44**	⇑P	Pg	12 33 02.4	+0.7
T1241				S	Sg	12 33 05.6	+0.9
T1241				AML	AML		
	comp=E,4540μm,0.9s						
T1241				AML	AML		
	comp=N,3488μm,2.1s						
RM33	**Pellescritta (**	**0.20**	**185**	⇓P	Pg	12 33 02.4	+0.6
RM33				S	Sg	12 33 05.9	+1.1
CAMP	**Campotosto**	**0.22**	**144**	⇓P	Pg	12 33 02.4	+0.4
CAMP				S	Sg	12 33 06.0	+0.8
T1217	**Poggiodomo (PG**	**0.23**	**270**	⇑P	Pg	12 33 02.5	+0.4
T1217				S	Sg	12 33 06.3	+0.9
T1246	**Crognaleto (TE**	**0.23**	**124**	⇓P	Pg	12 33 02.5	+0.3
T1246				S	Sg	12 33 06.2	+0.8
T1216	**Preci, Frazion**	**0.24**	**318**	P	Pg	12 33 02.6	+0.2
T1216				S	Sg	12 33 06.9	+1.1
T1247	**Pizzolo (AQ)**	**0.27**	**171**	P	Pg	12 33 03.5	+0.5
T1247				S	Sb	12 33 08.1	-0.9
AM05	**Amandola Campo**	**0.28**	**18**	⇑P	Pg	12 33 03.5	+0.4
AM05				S	Sg	12 33 07.8	+0.9
AM05				AML	AML		
	comp=E,4700μm,0.6s						
AM05				AML	AML		
	comp=E,17250μm,0.5s						
AM05				AML	AML		
	comp=N,928μm,0.1s						
AM05				AML	AML		
	comp=N,4245μm,0.6s						
AM05				AML	AML		
	comp=E,3059μm,0.5s						
AM05				AML	AML		
	comp=N,670μm,0.4s						
AM05				AML	AML		
	comp=N,3182μm,0.8s						
AM05				AML	AML		
	comp=E,10884μm,0.9s						
TERO	**Teramo**	**0.28**	**108**	P	Pg	12 33 03.4	+0.2
TERO				S	Sg	12 33 07.9	+0.8
TERO				AML	AML		
	comp=N,11081μm,1.2s						
TERO				AML	AML		
	comp=E,5836μm,0.2s						
TERO				AML	AML		
	comp=N,11672μm,0.3s						
FEMA	**Monte Fema**	**0.29**	**331**	P	Pg	12 33 03.5	+0.2
FEMA				S	Sg	12 33 08.0	+0.8
FEMA				AML	AML		
	comp=E,35900μm,1.0s						
FEMA				AML	AML		
	comp=N,31300μm,0.4s						
FEMA				AML	AML		
	comp=E,5518μm,0.5s						
FEMA				AML	AML		
	comp=N,4336μm,1.7s						
T1215	**Vallo di Nera,**	**0.29**	**288**	P	Pg	12 33 03.6	+0.4
T1215				S	Sb	12 33 08.3	-1.1
T1211	**Morro Reatino**	**0.34**	**238**	P	Pg	12 33 04.6	+0.4
T1211				S	Sb	12 33 10.0	-0.8
GIGS	**Gran Sasso**	**0.36**	**137**	P	Pg	12 33 04.5	-0.1
GIGS				S	Sg	12 33 10.0	+0.6
GIGS				AML	AML		
	comp=N,578μm,1.2s						
GUMA	**Gualdo di Mace**	**0.36**	**11**	P	Pg	12 33 05.1	+0.6
GUMA				S	Sb	12 33 11.0	-0.4
GUMA				AML	AML		
	comp=E,38600μm,1.6s						
GUMA				AML	AML		
	comp=N,40700μm,0.3s						
GUMA				AML	AML		
	comp=E,29929μm,0.3s						
GUMA				AML	AML		
	comp=N,25356μm,0.7s						
GUMA				AML	AML		
	comp=N,28444μm,1.5s						
ARRO	**Arrone**	**0.37**	**249**	P	Pg	12 33 05.2	+0.4
ARRO				S	Sb	12 33 10.9	-0.9
OFFI	**Offida**	**0.40**	**56**	P	Pb	12 33 06.3	-0.1
FIAM	**Fiamignano**	**0.45**	**191**	P	Pg	12 33 06.5	+0.2
FIAM				S	Sb	12 33 13.4	-0.8
MNTP	**Montappone**	**0.46**	**22**	P	Pb	12 33 07.0	-0.5
SEF1	**Sefro**	**0.48**	**334**	P	Pg	12 33 06.8	0.0
SEF1				S	Sb	12 33 14.4	-0.7
MDAR	**Monte D'Aria**	**0.49**	**352**	P	Pg	12 33 06.9	0.0
MDAR				S	Sb	12 33 14.5	-0.7
TRTR	**Tortoreto Alta**	**0.51**	**79**	P	Pb	12 33 08.5	+0.2
SSM1	**San Severino M**	**0.52**	**355**	P	Pg	12 33 07.6	+0.1
SSM1				S	Sb	12 33 15.5	-0.5
FIU1	**Fiuminata**	**0.53**	**335**	P	Pg	12 33 07.6	-0.1
VCEL	**Villa Celiera**	**0.55**	**125**	P	Pb	12 33 08.6	-0.4
CADA	**Capodarco di F**	**0.62**	**38**	P	Pb	12 33 10.8	+0.7
CIMA	**Civitanova Mar**	**0.67**	**28**	P	Pb	12 33 11.8	+0.6

ROM 30 12:40:12.0±0.1, 42°.913N±0°.004×13°.195E±0°.006, h8km, ML3.2/34, 8C-19D, Error ellipse: s-maj=0.5km s-min=0.4km az=128.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**185**	P	Pg	12 40 14.1	+0.1
T1245				S	Sg	12 40 15.6	+0.2
MMO1	**Montemonaco**	**0.10**	**98**	P	Pg	12 40 14.5	0.0
MMO1				S	Sg	12 40 16.2	0.0
FEMA	**Monte Fema**	**0.12**	**295**	P	Pg	12 40 15.2	+0.4
FEMA				S	Sg	12 40 17.7	+1.0
FEMA				AML	AML		
	comp=E,46650μm,0.3s						
FEMA				AML	AML		
	comp=E,46600μm,0.3s						
FEMA				AML	AML		
	comp=N,36800μm,0.3s						
FEMA				AML	AML		
	comp=N,36784μm,0.3s						
FEMA				AML	AML		
	comp=E,46634μm,0.3s						
AM05	**Amandola Campo**	**0.13**	**61**	P	Pg	12 40 15.3	+0.3
AM05				S	Sg	12 40 17.6	+0.6
AM05				AML	AML		
	comp=E,7720μm,1.6s						
AM05				AML	AML		
	comp=E,32450μm,1.4s						
AM05				AML	AML		
	comp=N,7515μm,1.1s						
AM05				AML	AML		
	comp=N,1195μm,0.1s						
AM05				AML	AML		
	comp=N,7520μm,1.1s						
AM05				AML	AML		
	comp=E,19481μm,0.1s						
AM05				AML	AML		
	comp=E,4073μm,0.1s						
AM05				AML	AML		
	comp=N,5116μm,0.2s						
AM05				AML	AML		
	comp=N,1195μm,0.1s						
GUMA	**Gualdo di Mace**	**0.18**	**34**	⇑P	Pg	12 40 16.5	+0.7
GUMA				S	Sg	12 40 19.9	+1.5
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,78450μm,0.3s						
GUMA				AML	AML		
	comp=N,84050μm,0.3s						
GUMA				AML	AML		
	comp=E,72650μm,0.4s						
GUMA				AML	AML		
	comp=N,78466μm,0.3s						
GUMA				AML	AML		
	comp=E,72655μm,0.4s						
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,84044μm,0.3s						
T1241	**Roccafluvione,**	**0.18**	**108**	P	Pg	12 40 16.7	+0.9
T1241				S	Sg	12 40 20.0	+1.6
T1241				AML	AML		
	comp=E,13850μm,0.6s						
T1241				AML	AML		
	comp=E,13900μm,0.6s						
T1241				AML	AML		
	comp=N,11450μm,0.6s						
T1241				AML	AML		
	comp=N,11450μm,0.6s						
T1241				AML	AML		
	comp=E,13866μm,0.6s						
T1204	**Amatrice, Fraz**	**0.25**	**159**	P	Pg	12 40 17.9	+0.8
T1215	**Vallo di Nera,**	**0.26**	**245**	AML	AML		
	comp=E,3880μm,0.4s						
T1215				AML	AML		
	comp=N,5410μm,1.1s						
T1215				AML	AML		
	comp=E,3970μm,0.4s						
T1215				AML	AML		
	comp=N,5435μm,1.1s					

LNSS				AML	AML	
	comp=E,7120μm,0.2s					
LNSS				AML	AML	
	comp=E,3680μm,0.3s					
LNSS				AML	AML	
	comp=N,7103μm,0.2s					
GAG1	**Gagliole**	**0.34 344**	⇑P	Pg	12 40 19.5 +0.8	
GAG1			AML	AML		
	comp=E,13100μm,0.4s					
GAG1			AML	AML		
	comp=E,13100μm,0.4s					
GAG1			AML	AML		
	comp=N,12700μm,0.9s					
GAG1			AML	AML		
	comp=N,12367μm,0.3s					
GAG1			AML	AML		
	comp=E,13103μm,0.4s					
OFFI	**Offida**	**0.36 86**	P	Pb	12 40 20.3 -0.4	
OFFI			AML	AML		
	comp=N,10460μm,0.7s					
OFFI			AML	AML		
	comp=E,8215μm,0.5s					
OFFI			AML	AML		
	comp=E,8212μm,0.5s					
OFFI			AML	AML		
	comp=N,10475μm,0.7s					
SNTG	**Esanatoglia**	**0.39 332**	⇓P	Pg	12 40 20.0 +0.3	
SNTG			AML	AML		
	comp=E,3145μm,0.3s					
SNTG			AML	AML		
	comp=N,3275μm,0.2s					
SNTG			AML	AML		
	comp=N,3345μm,0.3s					
SNTG			AML	AML		
	comp=E,3095μm,0.3s					
SNTG			AML	AML		
	comp=E,3094μm,0.3s					
SNTG			AML	AML		
	comp=E,3144μm,0.3s					
SNTG			AML	AML		
	comp=N,3274μm,0.2s					
SNTG			AML	AML		
	comp=N,3346μm,0.3s					
RM33	**Pellescritta (**	**0.40 178**	P	Pg	12 40 20.1 +0.2	
RM33			S	Sb	12 40 27.6 -0.3	
ASSB	**Assisi San Ben**	**0.41 288**	P	Pg	12 40 20.6 +0.5	
ASSB			AML	AML		
	comp=N,3945μm,1.6s					
ASSB			AML	AML		
	comp=E,4305μm,0.5s					
ASSB			AML	AML		
	comp=E,4302μm,0.5s					
ASSB			AML	AML		
	comp=N,2549μm,0.6s					
TERO	**Teramo**	**0.42 134**	P	Pg	12 40 20.5 +0.3	
TERO			AML	AML		
	comp=E,3685μm,0.4s					
TERO			AML	AML		
	comp=E,3810μm,0.4s					
TERO			AML	AML		
	comp=N,4370μm,0.5s					
TERO			AML	AML		
	comp=E,3690μm,0.4s					
TERO			AML	AML		
	comp=N,4140μm,0.5s					
TERO			AML	AML		
	comp=N,4049μm,0.3s					
TERO			AML	AML		
	comp=E,3687μm,0.4s					
TERO			AML	AML		
	comp=E,3809μm,0.4s					
TERO			AML	AML		
	comp=N,4277μm,0.3s					
EL6	**Elcito**	**0.42 351**	⇓P	Pg	12 40 18.9 -1.4	
EL6			S	Sb	12 40 29.0 +0.6	
T1247	**Pizzolo (AQ)**	**0.48 171**	⇓P	Pg	12 40 21.7 +0.4	
T1247			AML	AML		
	comp=E,3270μm,1.2s					
T1247			AML	AML		
	comp=N,4385μm,0.8s					
T1247			AML	AML		
	comp=N,2780μm,0.7s					
T1247			AML	AML		
	comp=E,3176μm,0.6s					
ATCC	**AVT- Casa Cast**	**0.49 304**	⇓P	Pg	12 40 22.0 +0.5	
ATCC			AML	AML		
	comp=E,3780μm,0.9s					
ATCC			AML	AML		
	comp=E,3775μm,0.9s					
ATCC			AML	AML		
	comp=N,4575μm,0.3s					
ATCC			AML	AML		
	comp=N,4574μm,0.3s					
ATCC			AML	AML		
	comp=E,3647μm,0.7s					
FOSV	**Fossato di Vic**	**0.50 320**	⇓P	Pg	12 40 22.0 +0.3	
FOSV			S	Sb	12 40 31.0 +0.5	
FOSV			AML	AML		
	comp=N,4375μm,1.2s					
FOSV			AML	AML		
	comp=E,2740μm,0.4s					
FOSV			AML	AML		
	comp=N,4276μm,0.5s					
FOSV			AML	AML		
	comp=E,2738μm,0.4s					
GIGS	**Gran Sasso**	**0.54 149**	P	Pg	12 40 22.7 +0.3	
GIGS			S	Sb	12 40 32.0 +0.3	
GIGS			AML	AML		
	comp=N,448μm,0.3s					
GIGS			AML	AML		
	comp=E,1002μm,0.6s					
GIGS			AML	AML		
	comp=E,814μm,0.2s					
GIGS			AML	AML		
	comp=N,431μm,0.1s					
TRTR	**Tortoreto Alta**	**0.54 101**	⇓P	Pb	12 40 24.1 +0.4	
TRTR			S	Sn	12 40 35.0 -0.2	
TRTR			AML	AML		
	comp=E,7250μm,0.4s					
TRTR			AML	AML		
	comp=N,9925μm,0.4s					
TRTR			AML	AML		
	comp=E,7253μm,0.4s					
TRTR			AML	AML		
	comp=N,9947μm,0.4s					
CESX	**Cesi**	**0.55 236**	P	Pg	12 40 23.0 +0.5	
CESX			S	Sb	12 40 31.6 -0.2	
CESX			AML	AML		
	comp=N,2195μm,0.6s					
CESX			AML	AML		
	comp=E,2365μm,1.0s					
CESX			AML	AML		
	comp=N,2196μm,0.6s					
CESX			AML	AML		
	comp=E,2366μm,1.0s					
MMUR	**Monte Murano**	**0.55 345**	S	Sb	12 40 33.0 +1.0	
PP3	**Marolino**	**0.56 33**	⇓P	Pb	12 40 24.3 +0.3	
PP3			AML	AML		
	comp=E,11000μm,0.8s					
PP3			AML	AML		
	comp=N,12200μm,0.3s					
PP3			AML	AML		
	comp=E,10485μm,0.8s					
PP3			AML	AML		
	comp=N,12600μm,0.3s					
PP3			AML	AML		
	comp=N,12150μm,0.3s					
PP3			AML	AML		
	comp=E,10480μm,0.8s					
PP3			AML	AML		
	comp=N,12650μm,0.3s					
PP3			AML	AML		
	comp=E,11000μm,0.8s					
PP3			AML	AML		
	comp=N,12614μm,0.3s					
PP3			AML	AML		
	comp=N,12184μm,0.3s					
PP3			AML	AML		
	comp=E,9750μm,0.3s					
PP3			AML	AML		
	comp=E,10226μm,0.3s					
MURB	**Monte Urbino**	**0.60 306**	⇓P	Pg	12 40 24.1 +0.4	
MURB			AML	AML		
	comp=E,3665μm,1.2s					
MURB			AML	AML		
	comp=N,3455μm,0.5s					
MURB			AML	AML		
	comp=N,3515μm,0.2s					
MURB			AML	AML		
	comp=E,3670μm,1.2s					
MURB			AML	AML		
	comp=E,3885μm,1.2s					
MURB			AML	AML		
	comp=N,3450μm,0.5s					
MURB			AML	AML		
	comp=N,3453μm,0.5s					
MURB			AML	AML		
	comp=E,3250μm,0.4s					
MURB			AML	AML		
	comp=N,3514μm,0.2s					
MURB			AML	AML		
	comp=E,3361μm,0.4s					
ARVD	**Arcevia**	**0.61 343**	⇑P	Pg	12 40 24.1 +0.2	
ARVD			S	Sb	12 40 35.0 +1.1	
ARVD			AML	AML		
	comp=E,2555μm,0.2s					
ARVD			AML	AML		
	comp=N,1370μm,0.2s					
ARVD			AML	AML		
	comp=N,1371μm,0.2s					
ARVD			AML	AML		
	comp=E,2554μm,0.2s					
ATFO	**Monte Foce - G**	**0.64 315**	⇓P	Pg	12 40 24.7 +0.2	
ATFO			AML	AML		
	comp=E,1440μm,1.2s					
ATFO			AML	AML		
	comp=N,1780μm,0.4s					
ATFO			AML	AML		
	comp=E,1213μm,0.7s					
ATFO			AML	AML		
	comp=N,1782μm,0.4s					
FIAM	**Fiamignano**	**0.65 185**	⇑P	Pg	12 40 24.5 0.0	
FIAM			S	Sb	12 40 35.0 +0.2	
FIAM			AML	AML		
	comp=E,1118μm,1.6s					
FIAM			AML	AML		
	comp=N,1095μm,0.9s					
FIAM			AML	AML		
	comp=N,1095μm,0.9s					
FIAM			AML	AML		
	comp=E,1115μm,0.9s					
ATTE	**AVT- Monte Tez**	**0.68 295**	⇓P	Pn	12 40 28.1 0.0	
FRON	**Frontone**	**0.70 331**	⇓P	Pg	12 40 25.4 -0.1	
FRON			AML	AML		
	comp=N,2030μm,0.4s					
FRON			AML	AML		
	comp=E,1640μm,0.2s					
FRON			AML	AML		
	comp=E,1641μm,0.2s					
FRON			AML	AML		
	comp=N,2030μm,0.4s					
AOI	**Ancona**	**0.70 25**	P	Pb	12 40 26.4 -0.1	
AOI			S	Sn	12 40 39.0 -0.4	
AOI			AML	AML		
	comp=E,1945μm,0.8s					
AOI			AML	AML		
	comp=N,2120μm,0.9s					
AOI			AML	AML		
	comp=N,1811μm,0.3s					
AOI			AML	AML		
	comp=E,1793μm,0.4s					
VCEL	**Villa Celiera**	**0.70 137**	P	Pg	12 40 25.8 +0.2	
VCEL			S	Sn	12 40 39.0 -0.5	
VCEL			AML	AML		
	comp=E,1795μm,0.6s					
VCEL			AML	AML		
	comp=N,1930μm,0.6s					
VCEL			AML	AML		
	comp=E,1790μm,0.6s					
VCEL			AML	AML		
	comp=N,1930μm,0.6s					
VCEL			AML	AML		
	comp=E,1791μm,0.6s					
ATVO	**AVT- Monte Val**	**0.74 309**	⇓P	Pg	12 40 26.4 0.0	
ATVO			AML	AML		
	comp=E,912μm,0.8s					
ATVO			AML	AML		
	comp=E,912μm,0.8s					
ATVO			AML	AML		
	comp=N,1140μm,1.6s					
ATVO			AML	AML		
	comp=N,884μm,0.7s					
ATVO			AML	AML		
	comp=E,912μm,0.8s					
MPAG	**Monte Paganucc**	**0.78 336**	⇓P	Pg	12 40 27.3 +0.2	
MPAG			S	Sn	12 40 41.0 -0.5	
MPAG			AML	AML		
	comp=E,1200μm,0.6s					
MPAG			AML	AML		
	comp=N,1060μm,0.5s					
PIEI	**Pieia**	**0.79 322**	⇓P	Pg	12 40 26.8 -0.4	
PIEI			S	Sn	12 40 41.0 -0.5	
PIEI			AML	AML		
	comp=N,739μm,0.4s					
PIEI			AML	AML		
	comp=N,738μm,0.4s					
PIEI			AML	AML		
	comp=E,877μm,0.8s					
PIEI			AML	AML		
	comp=E,792μm,0.2s					
PIEI			AML	AML		
	comp=N,739μm,0.4s					
ATPI	**Pietralunga -**	**0.79 313**	⇓P	Pg	12 40 27.3 0.0	
ATPI			S	Sn	12 40 41.0 -0.6	
ATPI			AML	AML		
	comp=N,922μm,1.2s					
ATPI			AML	AML		
	comp=E,878μm,1.3s					
ATPI			AML	AML		
	comp=N,926μm,1.2s					
ATPI			AML	AML		
	comp=N,778μm,1.0s					
ATPI			AML	AML		
	comp=E,739μm,0.5s					
MGAB	**Montegabbione**	**0.80 270**	⇑P	Pn	12 40 30.1 +0.5	
T0110	**Collepietro**	**0.81 148**	⇓P	Pg	12 40 27.8 +0.2	
T0110			AML	AML		
	comp=N,1710μm,0.5s					
T0110			AML	AML		
	comp=N,1715μm,0.5s					
T0110			AML	AML		
	comp=E,2360μm,0.5s					
T0110			AML	AML		
	comp=N,1713μm,0.5s					
T0110			AML	AML		
	comp=E,2359μm,0.5s					
FSSB	**Fossombrone**	**0.84 339**	⇑P	Pg	12 40 28.5 +0.3	
FSSB			S	Sn	12 40 43.0 +0.3	
FSSB			AML	AML		
	comp=E,2535μm,0.4s					
FSSB			AML	AML		
	comp=N,4035μm,1.2s					
FSSB			AML	AML		
	comp=E,2535μm,0.4s					
FSSB			AML	AML		
	comp=N,4023μm,0.4s					
BADI	**Badiali**	**0.92 311**	P	Pg	12 40 29.5 -0.1	
BADI			S	Sn	12 40 45.0 +0.4	
BADI			AML	AML		
	comp=N,685μm,1.2s					
CERT	**Cerreto**	**0.98 189**	⇓P	Pn	12 40 31.7 -0.3	
CERT			AML	AML		
	comp=E,1120μm,0.7s					
CERT			AML	AML		
	comp=N,518μm,0.9s					
CERT			AML	AML		
	comp=E,1121μm,0.7s					
CERT			AML	AML		
	comp=N,518μm,0.9s					
CAFI	**Castiglion Fio**	**0.99 295**	⇑P	Pb	12 40 31.4 -0.1	
CAFI			AML	AML		
	comp=E,620μm,0.9s					
CAFI			AML	AML		
	comp=N,716μm,1.2s					
CAFI			AML	AML		
	comp=E,620μm,0.9s					
CAFI			AML	AML		
	comp=N,615μm,0.8s					
CAFI			AML	AML		
	comp=E,613μm,0.7s					
CAFI			AML	AML		
	comp=N,611μm,0.8s					
TOLF	**Tolfa**	**1.23 227**	P	Pg	12 40 35.7 +0.2	
TOLF			AML	AML		
	comp=E,388μm,0.6s					
TOLF			AML	AML		
	comp=N,412μm,0.7s					
TOLF			AML	AML		
	comp=N,411μm,0.7s					
TOLF			AML	AML		
	comp=E,388μm,0.6s					
PAOL	**Paolisi**	**2.14 151**	⇓P	Pn	12 40 48.5 +0.4	
ABTA	**Abfaltersbach**	**3.87 353**	*e*Pn	Pn	12 41 13.4 +1.6	
	comp=E,14nm,0.5s					
FETA	**Feichten**	**4.46 338**	*e*Pn	Pn	12 41 23.7 +3.5	
	comp=E,3.4nm,0.3s					
SQTA	**Sankt Quirin**	**4.53 343**	*e*Pn	Pn	12 41 23.8 +2.8	
	comp=E,12nm,0.4s					
MOTA	**Moosalm**	**4.67 342**	*e*Pn	Pn	12 41 25.5 +2.5	
	comp=E,9.2nm,0.6s					

ROM 30 12:41:08.2±0.1, 42°.815N±0°.004×13°.137E±0°.004, h10km, ML2.7/6, 6C-7D, Error ellipse: s-maj=0.3km s-min=0.3km az=318.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**42**	⇑P	Pg	12 41 10.7	+0.4
T1245				S	Sg	12 41 12.1	+0.2
T1245				AML	AML		
	comp=E,44750μm,0.2s						
T1245				AML	AML		
	comp=N,34200μm,1.0s						
T1245				AML	AML		
	comp=E,43300μm,0.2s						
T1245				AML	AML		
	comp=N,32150μm,1.0s						
T1245				AML	AML		
	comp=N,33780μm,0.2s						
T1245				AML	AML		
	comp=E,44752μm,0.2s						
FEMA	**Monte Fema**	**0.16**	**336**	P	Pg	12 41 12.4	+0.6
FEMA				S	Sg	12 41 15.1	+0.8
FEMA				AML	AML		
	comp=N,4801μm,0.1s						
FEMA				AML	AML		
	comp=E,6200μm,0.1s						
MMO1	**Montemonaco**	**0.16**	**59**	⇑P	Pg	12 41 12.1	+0.4
MMO1				S	Sg	12 41 15.0	+0.8
T1217	**Poggiodomo (PG**	**0.18**	**236**	⇓P	Pg	12 41 12.5	+0.4
T1217				S	Sg	12 41 15.8	+1.0
T1217				AML	AML		
	comp=N,3675μm,0.2s						
T1217				AML	AML		
	comp=E,1981μm,0.1s						
T1217				AML	AML		
	comp=N,3643μm,0.2s						
T1217				AML	AML		
	comp=E,1978μm,0.1s						
T1204	**Amatrice, Fraz**	**0.19**	**136**	⇓P	Pg	12 41 12.9	+0.7
T1204				AML	AML		
	comp=E,2447μm,0.1s						
T1204				AML	AML		
	comp=N,1175μm,0.1s						
T1215	**Vallo di Nera,**	**0.20**	**266**	P	Pg	12 41 13.0	+0.7
T1215				S	Sg	12 41 16.4	+1.2
T1215				AML	AML		
	comp=E,2590μm,0.4s						
T1215				AML	AML		
	comp=N,1720μm,1.2s						
T1215				AML	AML		
	comp=E,2570μm,0.4s						
T1215				AML	AML		
	comp=N,1670μm,1.2s						
T1215				AML	AML		
	comp=N,1665μm,1.2s						
T1215				AML	AML		
	comp=E,2585μm,0.4s						
T1215				AML	AML		
	comp=N,1693μm,0.2s						
T1215				AML	AML		
	comp=N,1558μm,0.2s						
T1215				AML	AML		
	comp=E,2193μm,0.2s						
T1215				AML	AML		
	comp=E,2094μm,0.2s						
T1241	**Roccafluvione,**	**0.22**	**79**	⇓P	Pg	12 41 13.8	+1.1
T1241				S	Sg	12 41 17.3	+1.5
T1241				AML	AML		
	comp=E,4815μm,0.2s						
T1241				AML	AML		
	comp=N,3015μm,1.4s						
T1241				AML	AML		
	comp=E,5095μm,0.2s						
T1241				AML	AML		
	comp=N,2985μm,1.4s						
T1241				AML	AML		
	comp=N,2625μm,0.2s						
T1241				AML	AML		
	comp=E,5095μm,0.2s						
T1241				AML	AML		
	comp=N,2459μm,0.2s						
T1241				AML	AML		
	comp=E,4814μm,0.2s						
LNSS	**Leonessa**	**0.22**	**199**	P	Pg	12 41 13.5	+0.7
LNSS				S	Sg	12 41 17.5	+1.5
LNSS				AML	AML		
	comp=N,18000μm,0.2s						
LNSS				AML	AML		
	comp=E,7120μm,0.2s						
LNSS				AML	AML		
	comp=E,7119μm,0.2s						
LNSS				AML	AML		
	comp=N,18022μm,0.2s						
AM05	**Amandola Campo**	**0.23**	**44**	P	Pg	12 41 13.5	+0.7
AM05				S	Sg	12 41 17.1	+1.1
AM05				AML	AML		
	comp=E,1235μm,0.1s						
AM05				AML	AML		
	comp=N,1160μm,0.6s						
AM05				AML	AML		
	comp=N,440μm,0.1s						
AM05				AML	AML		
	comp=E,4770μm,0.1s						
AM05				AML	AML		
	comp=N,1113μm,0.1s						
AM05				AML	AML		
	comp=E,4769μm,0.1s						
AM05				AML	AML		
	comp=N,441μm,0.1s						
AM05				AML	AML		
	comp=E,1236μm,0.1s						
T1243	**Rocca Santa Ma**	**0.26**	**117**	⇑P	Pg	12 41 14.0	+0.6
T1243				S	Sg	12 41 18.3	+1.3
GUMA	**Gualdo di Mace**	**0.29**	**30**	P	Pb	12 41 15.3	-0.2
GUMA				S	Sb	12 41 19.6	-0.8
GUMA				AML	AML		
	comp=E,5052μm,0.5s						
GUMA				AML	AML		
	comp=E,5543μm,0.4s						
GUMA				AML	AML		
	comp=N,4588μm,0.5s						
GUMA				AML	AML		
	comp=N,5235μm,0.3s						
SEF1	**Sefro**	**0.36**	**337**	⇓P	Pg	12 41 15.8	+0.5
SEF1				AML	AML		
	comp=E,2620μm,0.9s						
SEF1				AML	AML		
	comp=N,3185μm,0.9s						
SEF1				AML	AML		
	comp=N,3009μm,0.2s						
SEF1				AML	AML		
	comp=E,2331μm,0.2s						
ARRO	**Arrone**	**0.36**	**229**	⇓P	Pg	12 41 15.9	+0.6
ARRO				AML	AML		
	comp=E,598μm,0.2s						
ARRO				AML	AML		
	comp=N,921μm,0.2s						
MDAR	**Monte D'Aria**	**0.38**	**1**	P	Pb	12 41 16.4	-0.7
MDAR				AML	AML		
	comp=N,1255μm,0.1s						
MDAR				AML	AML		
	comp=E,1299μm,0.1s						
TERO	**Teramo**	**0.39**	**119**	P	Pg	12 41 16.4	+0.5
TERO				AML	AML		
	comp=N,934μm,0.1s						
TERO				AML	AML		
	comp=E,645μm,0.1s						
TERO				AML	AML		
	comp=N,807μm,0.1s						

TERO			AML	AML	
	comp=E,566μm,0.1s				
ASSB	**Assisi San Ben**	**0.42 303**	⇑P	Pg	12 41 17.0 +0.6
ASSB			AML	AML	
	comp=E,788μm,0.2s				
ASSB			AML	AML	
	comp=N,597μm,0.1s				
GAG1	**Gagliole**	**0.43 353**	⇓P	Pb	12 41 17.2 -0.6
CESX	**Cesi**	**0.46 244**	S	Sb	12 41 25.0 -0.3
SNTG	**Esanatoglia**	**0.46 342**	⇑P	Pg	12 41 17.6 +0.4
SNTG			AML	AML	
	comp=E,426μm,0.3s				
SNTG			AML	AML	
	comp=N,453μm,0.1s				
SNTG			AML	AML	
	comp=N,454μm,0.1s				
SNTG			AML	AML	
	comp=E,425μm,0.1s				
EL6	**Elcito**	**0.52 357**	⇑P	Pg	12 41 18.7 +0.5
EL6			S	Sb	12 41 27.0 0.0
EL6			AML	AML	
	comp=N,1469μm,0.2s				
EL6			AML	AML	
	comp=E,1205μm,0.1s				
ATCC	**AVT- Casa Cast**	**0.52 316**	P	Pg	12 41 18.8 +0.5
ATCC			AML	AML	
	comp=E,631μm,0.1s				
FOSV	**Fossato di Vic**	**0.55 330**	⇓P	Pg	12 41 19.4 +0.5
FOSV			AML	AML	
	comp=E,394μm,0.4s				
FOSV			AML	AML	
	comp=N,285μm,0.3s				
ARVD	**Arcevia**	**0.70 348**	S	Sb	12 41 33.0 +0.8
PIEI	**Pieia**	**0.84 329**	S	Sn	12 41 39.0 +0.2

PRU ***30*** *12:49:18.2±0.0, 42°.49N×13°.69E, h0km*
ROM ***30*** *12:49:21.5±0.1, 42°.735N±0°.003×13°.186E±0°.004, h10km, ML3.2/44, Error ellipse: s-maj=0.3km s-min=0.2km az=13.0*
IDC ***30*** *12:49:21.4±1.8, 42°.77N×13°.24E, h0km, mb3.4/2, mbtmp3.2/3, ML2.9/1, MS3.1/1, Error ellipse: s-maj=55.0km s-min=17.7km az=95.0*

ISC 30 12:49:22.8±0.8, 42.73N±0°.02×13°.21E±0°.02, h9km±5km, n84, σ1§22/97, 20C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.10**	**126**	⇓P		**Pg**	**12 49 24.9**	**-0.5**
T1204				S		**Sg**	**12 49 27.5**	**+0.2**
T1204				AML		AML		
	comp=E,37050μm,1.1s							
T1204				AML		AML		
	comp=N,24600μm,0.7s							
T1204				AML		AML		
	comp=E,37050μm,0.9s							
LNSS	**Leonessa**	**0.18**	**224**	⇑P		**Pg**	**12 49 25.8**	**-0.8**
LNSS				S		**Sg**	**12 49 29.0**	**-0.3**
LNSS				AML		AML		
	comp=E,10025μm,0.9s							
LNSS				AML		AML		
	comp=N,32950μm,0.4s							
LNSS				AML		AML		
	comp=E,10030μm,0.9s							
T1243	**Rocca Santa Ma**	**0.18**	**101**	⇓P		**Pg**	**12 49 26.1**	**-0.5**
T1243				S		**Sg**	**12 49 29.5**	**+0.2**
MMO1	**Montemonaco**	**0.19**	**27**	P		**Pg**	**12 49 26.0**	**-0.8**
MMO1				S		**Sg**	**12 49 29.2**	**-0.3**
T1241	**Roccafluvione,**	**0.20**	**53**	⇑P		**Pg**	**12 49 26.8**	**-0.2**
T1241				S		**Sg**	**12 49 30.6**	**+0.6**
T1241				AML		AML		
	comp=E,14550μm,0.9s							
T1241				AML		AML		
	comp=N,20250μm,0.6s							
T1241				AML		AML		
	comp=N,20250μm,0.6s							
T1241				AML		AML		
	comp=N,19550μm,0.6s							
T1241				AML		AML		
	comp=E,14600μm,0.9s							
T1241				AML		AML		
	comp=E,14600μm,0.9s							
T1217	**Poggiodomo (PG**	**0.21**	**264**	P		**Pg**	**12 49 26.2**	**-0.9**
T1217				S		**Sg**	**12 49 29.6**	**-0.5**
T1217				AML		AML		
	comp=N,13700μm,1.0s							
T1217				AML		AML		
	comp=E,9550μm,0.7s							
T1217				AML		AML		
	comp=E,9345μm,0.7s							
T1217				AML		AML		
	comp=E,9535μm,0.7s							
T1217				AML		AML		
	comp=E,9370μm,0.7s							
T1217				AML		AML		
	comp=N,13700μm,1.0s							
T1217				AML		AML		
	comp=E,9510μm,0.7s							
T1217				AML		AML		
	comp=N,13950μm,0.9s							
T1217				AML		AML		
	comp=E,9370μm,0.7s							
T1217				AML		AML		
	comp=N,13900μm,0.9s							
T1217				AML		AML		
	comp=E,9510μm,0.7s							
RM33	**Pellescritta (**	**0.22**	**179**	P		**Pg**	**12 49 26.8**	**-0.6**
RM33				S		**Sg**	**12 49 30.8**	**+0.3**
RM33				AML		AML		
	comp=E,8780μm,0.2s							
RM33				AML		AML		
	comp=N,12170μm,0.3s							
RM33				AML		AML		
	comp=E,9320μm,0.2s							
RM33				AML		AML		
	comp=N,11635μm,0.3s							
RM33				AML		AML		
	comp=E,8820μm,0.2s							
RM33				AML		AML		
	comp=N,12175μm,0.3s							
RM33				AML		AML		
	comp=E,9365μm,0.2s							
RM33				AML		AML		
	comp=E,8785μm,0.2s							
RM33				AML		AML		
	comp=N,12165μm,0.3s							
RM33				AML		AML		
	comp=E,9370μm,0.2s							
RM33				AML		AML		
	comp=N,12185μm,0.3s							
RM33				AML		AML		
	comp=E,8810μm,0.2s							
RM33				AML		AML		
	comp=N,11680μm,0.3s							
RM33				AML		AML		
	comp=E,9325μm,0.2s							
CAMP	**Campotosto**	**0.25**	**143**	⇓P		**Pg**	**12 49 27.3**	**-0.5**
CAMP				S		**Sg**	**12 49 31.7**	**+0.5**
CAMP				AML		AML		
	comp=E,7700μm,0.7s							
CAMP				AML		AML		
	comp=N,5795μm,0.7s							
FEMA	**Monte Fema**	**0.26**	**333**	P		**Pg**	**12 49 27.3**	**-0.8**
T1215	**Vallo di Nera,**	**0.26**	**286**	P		**Pg**	**12 49 26.8**	**-1.3**
T1215				S		**Sg**	**12 49 30.9**	**-0.8**
T1215				AML		AML		
	comp=N,7180μm,1.4s							
T1215				AML		AML		
	comp=N,7070μm,1.4s							
T1215				AML		AML		
	comp=E,5170μm,1.3s							
T1215				AML		AML		
	comp=E,5465μm,0.8s							
T1215				AML		AML		
	comp=N,7065μm,1.4s							
T1215				AML		AML		
	comp=E,5165μm,1.3s							
T1215				AML		AML		
	comp=E,5470μm,0.8s							
T1215				AML		AML		
	comp=N,7180μm,1.4s							
T1215				AML		AML		
	comp=N,7060μm,1.4s							
T1215				AML		AML		
	comp=E,5470μm,1.2s							
T1215				AML		AML		
	comp=E,5165μm,0.7s							
T1215				AML		AML		
	comp=N,7180μm,0.6s							
T1215				AML		AML		
	comp=N,7060μm,0.6s							
AM05	**Amandola Campo**	**0.27**	**23**	S		**Sg**	**12 49 33.0**	**+1.2**
T1247	**Pizzolo (AQ)**	**0.30**	**167**	⇓P		**Pg**	**12 49 28.2**	**-0.6**
T1247				AML		AML		
	comp=E,12100μm,0.7s							
T1247				AML		AML		
	comp=N,8630μm,0.7s							
T1247				AML		AML		
	comp=N,8630μm,1.3s							
TERO	**Teramo**	**0.31**	**111**	P		**Pg**	**12 49 28.4**	**-0.6**
TERO				S		**Sb**	**12 49 33.6**	**-2.1**
TERO				AML		AML		
	comp=N,8540μm,0.7s							
TERO				AML		AML		
	comp=E,7560μm,0.5s							
TERO				AML		AML		
	comp=N,8855μm,0.7s							
TERO				AML		AML		
	comp=E,7565μm,0.5s							
TERO				AML		AML		
	comp=E,7770μm,0.5s							
TERO				AML		AML		
	comp=N,8545μm,0.7s							
T1211	**Morro Reatino**	**0.33**	**233**	P		**Pg**	**12 49 28.3**	**-1.0**
T1211				S		**Sg**	**12 49 33.8**	**0.0**
T1211				AML		AML		
	comp=N,9800μm,0.5s							
T1211				AML		AML		
	comp=E,5540μm,0.6s							
T1211				AML		AML		
	comp=N,9750μm,0.5s							
T1211				AML		AML		
	comp=E,5545μm,0.6s							
T1211				AML		AML		
	comp=N,9840μm,0.5s							
T1211				AML		AML		
	comp=E,5540μm,0.6s							
T1211				AML		AML		
	comp=N,9730μm,0.5s							
T1211				AML		AML		
	comp=E,5540μm,0.6s							
T1211				AML		AML		
	comp=N,9835μm,0.5s							
T1211				AML		AML		
	comp=E,5540μm,1.4s							
T1211				AML		AML		
	comp=E,5540μm,1.4s							
T1211				AML		AML		
	comp=N,9725μm,0.5s							
GUMA	**Gualdo di Mace**	**0.34**	**16**	⇑P		**Pg**	**12 49 29.0**	**-0.6**
GUMA				S		**Sb**	**12 49 35.4**	**-1.3**
GUMA				AML		AML		
	comp=E,23900μm,0.3s							
GUMA				AML		AML		
	comp=N,28400μm,0.5s							
GUMA				AML		AML		
	comp=E,27300μm,0.3s							
GUMA				AML		AML		
	comp=N,27350μm,0.5s							
ARRO	**Arrone**	**0.36**	**245**	⇓P		**Pg**	**12 49 28.9**	**-1.0**
ARRO				S		**Sg**	**12 49 34.7**	**0.0**
GIGS	**Gran Sasso**	**0.39**	**137**	⇓P		**Pg**	**12 49 29.9**	**-0.5**
GIGS				S		**Sg**	**12 49 36.0**	**+0.4**
GIGS				AML		AML		
	comp=E,1350μm,0.9s							
GIGS				AML		AML		
	comp=N,914μm,0.3s							
GIGS				AML		AML		
	comp=E,1350μm,1.1s							
AQU	**L'Aquila**	**0.40**	**159**	⇓P		**Pg**	**12 49 30.0**	**-0.7**
AQU				AML		AML		
	comp=E,4400μm,1.1s							
AQU				AML		AML		
	comp=E,4440μm,1.1s							
AQU				AML		AML		
	comp=N,3060μm,1.0s							
AQU				AML		AML		
	comp=N,3155μm,1.0s							
AQU				AML		AML		
	comp=N,3060μm,1.0s							
AQU				AML		AML		
	comp=N,3155μm,1.0s							
OFFI	**Offida**	**0.40**	**60**	⇑P		**Pb**	**12 49 30.8**	**-1.3**
OFFI				AML		AML		
	comp=N,10625μm,0.5s							
OFFI				AML		AML		
	comp=E,8350μm,0.5s							
OFFI				AML		AML		
	comp=N,10625μm,1.5s							
MNTP	**Montappone**	**0.45**	**25**	S		**Sb**	**12 49 41.0**	**+1.4**
SEF1	**Sefro**	**0.46**	**335**	P		**Pg**	**12 49 30.6**	**-1.1**
MDAR	**Monte D'Aria**	**0.46**	**354**	P		**Pg**	**12 49 31.1**	**-0.7**
FIAM	**Fiamignano**	**0.47**	**188**	⇓P		**Pg**	**12 49 31.0**	**-1.0**
FIAM				AML		AML		
	comp=E,2150μm,0.7s							
FIAM				AML		AML		
	comp=N,2020μm,0.5s							
FIAM				AML		AML		
	comp=E,2155μm,0.7s							
FIAM				AML		AML		
	comp=N,2020μm,1.5s							
FIAM				AML		AML		
	comp=E,2155μm,1.3s							
CESX	**Cesi**	**0.48**	**255**	P		**Pg**	**12 49 31.2**	**-0.9**
CESX				S		**Sg**	**12 49 37.9**	**-0.5**
CESX				AML		AML		
	comp=N,3875μm,0.4s							
CESX				AML		AML		
	comp=E,3570μm,0.6s							
ASSB	**Assisi San Ben**	**0.51**	**308**	P		**Pg**	**12 49 31.0**	**-1.7**
ASSB				AML		AML		
	comp=E,3565μm,0.6s							
ASSB				AML		AML		
	comp=N,3240μm,0.7s							
ASSB				AML		AML		
	comp=E,3565μm,1.4s							
ASSB				AML		AML		
	comp=N,3240μm,1.3s							
TRTR	**Tortoreto Alta**	**0.52**	**81**	P		**Pg**	**12 49 31.8**	**-1.1**
TRTR				AML		AML		
	comp=E,7590μm,1.3s							
TRTR				AML		AML		
	comp=N,5055μm,0.7s							
TRTR				AML		AML		
	comp=E,7590μm,0.7s							
FAGN	**Fagnano**	**0.54**	**149**	⇑P		**Pg**	**12 49 32.4**	**-0.9**
FAGN				AML		AML		
	comp=E,5285μm,0.3s							
FAGN				AML		AML		
	comp=N,4850μm,0.4s							
VCEL	**Villa Celiera**	**0.58**	**126**	⇓P		**Pg**	**12 49 33.5**	**-0.4**
VCEL				AML		AML		
	comp=E,4725μm,0.6s							
VCEL				AML		AML		
	comp=N,5085μm,1.0s							
EL6	**Elcito**	**0.60**	**352**	S		**Sg**	**12 49 41.0**	**-1.4**
ATCC	**AVT- Casa Cast**	**0.62**	**317**	⇑P		**Pg**	**12 49 33.2**	**-1.5**
ATCC				AML		AML		
	comp=N,2895μm,0.7s							
ATCC				AML		AML		
	comp=E,3490μm,0.6s							
ATCC				AML		AML		
	comp=N,2890μm,0.7s							
ATCC				AML		AML		
	comp=N,2890μm,1.3s							
FOSV	**Fossato di Vic**	**0.65**	**330**	⇑P		**Pg**	**12 49 33.9**	**-1.5**
FOSV				AML		AML		
	comp=E,1325μm,1.1s							
FOSV				AML		AML		
	comp=N,1920μm,0.5s							
FOSV				AML		AML		
	comp=N,1920μm,1.5s							
T0110	**Collepietro**	**0.66**	**140**	⇑P		**Pg**	**12 49 34.6**	**-0.9**
T0110				AML		AML		
	comp=E,4090μm,0.4s							
T0110				AML		AML		
	comp=N,4015μm,1.4s							
T0110				AML		AML		
	comp=N,4015μm,0.6s							
PP3	**Marolino**	**0.71**	**24**	P		**Pg**	**12 49 35.7**	**-0.7**
PP3				AML		AML		
	comp=N,4440μm,0.3s							
PP3				AML		AML		
	comp=N,4480μm,0.3s							
PP3				AML		AML		
	comp=E,7010μm,0.5s							
PP3				AML		AML		
	comp=E,6970μm,0.5s							
SRES	**S.Oreste - Sor**	**0.72**	**226**	⇑P		**Pg**	**12 49 35.5**	**-1.1**
SRES				AML		AML		
	comp=E,778μm,1.2s							
SRES				AML		AML		
	comp=N,800μm,1.6s							
SRES				AML		AML		
	comp=E,778μm,0.8s							
ATTE	**AVT- Monte Tez**	**0.78**	**307**	AML		AML		
	comp=N,906μm,0.4s							
ATTE				AML		AML		
	comp=E,1014μm,1.1s							
ATTE				AML		AML		
	comp=E,1014μm,0.9s							
ATFO	**Monte Foce - G**	**0.79**	**324**	⇓P		**Pg**	**12 49 36.2**	**-1.8**
ATFO				AML		AML		
	comp=N,1124μm,0.6s							
ATFO				AML		AML		
	comp=E,1225μm,0.5s							
ATFO				AML		AML		
	comp=E,1225μm,1.5s							
CERT	**Cerreto**	**0.80**	**192**	⇑P		**Pg**	**12 49 37.2**	**-1.0**
CERT				AML		AML		
	comp=N,854μm,1.5s							
CERT				AML		AML		
	comp=E,1460μm,0.6s							
CERT				AML		AML		
	comp=N,854μm,0.5s							
MGAB	**Montegabbione**	**0.83**	**283**	⇓P		**Pg**	**12 49 38.7**	**0.0**
MGAB				AML		AML		
	comp=E,2125μm,1.5s							
MGAB				AML		AML		
	comp=N,2865μm,0.4s							
MGAB				AML		AML		
	comp=E,2250μm,0.4s							
MGAB				AML		AML		
	comp=N,2640μm,0.5s							
MGAB				AML		AML		
	comp=E,2125μm,0.5s							
ATVO	**AVT- Monte Val**	**0.88**	**318**	⇓P		**Pg**	**12 49 38.0**	**-1.7**
ATVO				AML		AML		
	comp=E,863μm,0.8s							
ATVO				AML		AML		
	comp=N,862μm,0.6s							
ATVO				AML		AML		
	comp=E,863μm,1.2s							
RCAV	**Rocca di Cave**	**0.91**	**193**	P		**Pb**	**12 49 40.8**	**+0.1**
RCAV				AML		AML		
	comp=E,1280μm,0.4s							
RCAV				AML		AML		
	comp=N,1282μm,1.2s							
ATPI	**Pietralunga -**	**0.93**	**321**	⇑P		**Pg**	**12 49 38.8**	**-1.9**
ATPI				AML		AML		
	comp=E,804μm,0.5s							
ATPI				AML		AML		
	comp=N,821μm,0.9s							
ATPI				AML		AML		
	comp=N,822μm,0.9s							
ATPI				AML		AML		
	comp=N,822μm,1.1s							
ATPI				AML		AML		
	comp=E,803μm,0.5s							
MPAG	**Monte Paganucc**	**0.95**	**340**	AML		AML		
	comp=N,962μm,0.5s							
MPAG				AML		AML		
	comp=E,794μm,0.7s							
MPAG				AML		AML		
	comp=E,794μm,1.3s							
MPAG				AML		AML		
	comp=N,962μm,1.5s							
LPEL	**Lama dei Pelig**	**0.99**	**133**	P		**Pg**	**12 49 39.1**	**-2.8**
LPEL				AML		AML		
	comp=N,745μm,0.4s							
LPEL				AML		AML		
	comp=E,868μm,0.9s							
LPEL				AML		AML		
	comp=N,745μm,1.6s							
LPEL				AML		AML		
	comp=E,868μm,1.1s							
RDP	**Rocca di Papa**	**1.04**	**201**	⇓P		**Pb**	**12 49 43.7**	**+0.8**
RDP				AML		AML		
	comp=E,1950μm,0.5s							
RDP				AML		AML		
	comp=N,2440μm,0.4s							
BADI	**Badiali**	**1.05**	**318**	⇑P		**Pg**	**12 49 41.5**	**-1.5**
POFI	**Posta Fibreno**	**1.08**	**160**	P		**Pg**	**12 49 42.0**	**-1.6**
POFI				AML		AML		
	comp=E,508μm,0.6s							
POFI				AML		AML		
	comp=N,344μm,1.3s							
POFI				AML		AML		
	comp=E,508μm,1.4s							
POFI				AML		AML		
	comp=N,344μm,0.7s							
CAFI	**Castiglion Fio**	**1.09**	**304**	⇓P		**Pg**	**12 49 42.2**	**-1.5**
CAFI				AML		AML		
	comp=E,792μm,0.5s							
CAFI				AML		AML		
	comp=N,550μm,0.7s							
TOLF	**Tolfa**	**1.12**	**234**	⇑P		**Pg**	**12 49 42.6**	**-1.6**
TOLF				AML		AML		
	comp=E,524μm,1.0s							
TOLF				AML		AML		
	comp=N,414μm,1.5s							
TOLF				AML		AML		
	comp=N,414μm,0.5s							
CRE	**Caprese Michel**	**1.28**	**314**	⇓P		**Pg**	**12 49 46.5**	**-0.8**
CRE				AML		AML		
	comp=N,346μm,0.5s							
CRE				AML		AML		
	comp=E,338μm,1.3s							
CRE				AML		AML		
	comp=E,338μm,0.7s							
TRIV	**Trivento**	**1.39**	**134**	⇑P		**Pb**	**12 49 49.9**	**+1.0**
TRIV				AML		AML		
	comp=N,706μm,0.9s							
TRIV				AML		AML		
	comp=E,547μm,0.9s							
TRIV				AML		AML		
TRIV				AML		AML		
TRIV				AML		AML		
TRIV				AML		AML		
MODR	**Mondragone**	**1.66**	**162**	⇑P		**Pg**	**12 49 55.3**	**+0.7**
CASP	**Castiglione de**	**1.73**	**273**	P		**Pn**	**12 49 51.5**	**-1.4**
CASP				AML		AML		
	comp=N,75μm,0.6s							
CASP				AML		AML		
	comp=E,67μm,0.7s							
BRSN	**Barisano**	**1.76**	**332**	⇑P		**Pg**	**12 49 56.3**	**-0.1**
VITU	**Vitulano (BN)**	**1.88**	**145**	P		**Pn**	**12 49 54.5**	**-0.5**
VITU				AML		AML		
	comp=E,160μm,0.6s							
VITU				AML		AML		
	comp=N,226μm,1.6s							
VITU				AML		AML		
	comp=E,160μm,1.4s							
VITU				AML		AML		
	comp=N,226μm,0.4s							
MTCR	**Monte La Croce**	**2.07**	**309**	⇓P		**Pn**	**12 49 57.6**	**-0.1**
SGRT	**San Giovanni R**	**2.12**	**117**	P		**Pn**	**12 49 57.8**	**-0.6**
SGRT				AML		AML		
	comp=E,258μm,0.6s							
SGRT				AML		AML		
	comp=N,259μm,0.6s							
SGRT				AML		AML		
	comp=E,258μm,1.4s							
HVAR	**Hvar**	**2.42**	**78**	⇑P		**Pn**	**12 50 03.1**	**+0.6**
MCRV	**Calabrutti - M**	**2.44**	**142**	S		**Sg**	**12 50 41.0**	**-0.1**
MNTV	**Mantova**	**2.98**	**325**	S		**Sg**	**12 50 59.0**	**+0.5**
AMUR	**Altamura**	**3.12**	**125**	P		**Pn**	**12 50 11.9**	**-0.2**
STON	**Ston**	**3.31**	**86**	⇑P		**Pn**	**12 50 13.2**	**-1.4**
STON				AML		AML		
	comp=E,50μm,1.1s							
STON				AML		AML		
	comp=N,40μm,0.9s							
STON				AML		AML		
	comp=E,50μm,0.9s							
LTRZ	**Laterza**	**3.44**	**127**	⇑P		**Pn**	**12 50 17.7**	**+1.2**
CTI	**Castel Tesino**	**3.50**	**342**	S		**Sn**	**12 50 59.0**	**0.0**
OBKA	**Obir**	**3.90**	**14**	*e*Pn		**Pn**	**12 50 21.4**	**-1.4**
	comp=E,1.1nm,0.2s							
CANO	**Canova, Maglio**	**3.91**	**294**	S		**Sn**	**12 51 11.0**	**+2.0**
ABTA	**Abfaltersbach**	**4.04**	**353**	Pn		**Pn**	**12 50 25.7**	**+0.8**

comp=E,8.2nm,0.5s,SNR=12
VSL Villasalto 4.34 223 ⇑P **Pn 12 50 29.6 +0.7**
MUGIO Muggio 4.37 318 P **Pn 12 50 33.4 +4.1**
VARE Varese 4.47 316 ⇓P **Pb 12 50 41.9 +0.5**
FETA Feichten 4.64 339 *e*Pn **Pn 12 50 34.9 +1.8**
comp=E,1.3nm,0.3s
WTTA Wattenberg 4.67 347 *e*Pn **Pn 12 50 35.3 +1.8**
comp=E,2.1nm,0.5s
SQTA Sankt Quirin 4.71 343 *e*Pn **Pn 12 50 36.3 +2.3**
comp=E,3.8nm,0.3s
WATA Walderalm 4.75 346 *e*Pn **Pn 12 50 36.7 +2.1**
comp=E,3.1nm,0.2s
ARSA Arzberg 4.81 19 *e*Pn **Pn 12 50 37.2 +1.9**
comp=E,1.7nm,0.4s
BIOA Bad Ischl, Aus 4.97 3 *e*Pn **Pn 12 50 39.5 +2.0**
comp=E,2.3nm,0.3s
GMB Gambarie 4.98 155 P Pn 12 50 43.7 +5.9
RETA Reutte 5.06 341 *e*Pn **Pn 12 50 40.9 +2.1**
comp=E,0.9nm,0.3s
DAVA Damuels 5.13 334 *e*Pn **Pn 12 50 41.8 +1.9**
comp=E,3.6nm,0.4s
CONA Conrad Observa 5.52 19 *e*Pn **Pn 12 50 45.3 +0.1**
comp=E,1.4nm,0.2s
GERES GERESS Array B 6.12 3 Pn **Pn 12 50 52.5 -1.0**
comp=E,0.2nm,0.3s,baz=175,slow=13,SNR=3.1
GERES Sn **Sn 12 52 03.0 -0.6**
comp=E,0.9nm,0.3s,baz=178,slow=26,SNR=6.1
comp=E,0.3nm,0.4s
KHC Kasperske Hory 6.41 2 *e*PN **Pn 12 50 55.8 -1.4**
KHC *e*SN **Sn 12 52 09.5 -0.9**
TORD Torodi Ar. Bea 31.12 202 P **P 12 55 42.1 +0.5**
comp=E,0.4nm,0.8s,baz=3.2,slow=7.8,SNR=2.4
comp=E,0.4nm,0.8s
MKAR Makanchi Array 47.78 60 P **P 12 58 00.3 +0.1**
comp=E,0.5nm,0.7s,baz=297,slow=9.5,SNR=1.8
comp=E,0.5nm,0.7s
LSZ Lusaka 59.34 163 LR LR 13 24 48.6
comp=E,16nm,19.2s,baz=234,slow=36

ROM 30 12:54:15.7±0.1, 42°.846N±0°.006×13°.118E±0°.005, h10km, ML3.0/33, 12C-15D, Error ellipse: s-maj=0.8km s-min=0.1km az=333.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.05**	**79**	P	Pg	12 54 18.4	+0.4
T1245				S	Sg	12 54 20.0	+0.4
T1245	comp=N,33800μm,0.8s			AML	AML		
T1245	comp=N,34250μm,0.2s			AML	AML		
T1245	comp=E,39400μm,0.2s			AML	AML		
T1245	comp=N,33750μm,0.8s			AML	AML		
T1245	comp=E,35400μm,0.2s			AML	AML		
T1245	comp=N,99100μm,0.3s			AML	AML		
T1245	comp=E,68250μm,1.3s			AML	AML		
T1245	comp=N,99150μm,0.3s			AML	AML		
T1245	comp=E,70150μm,1.3s			AML	AML		
T1245	comp=N,34232μm,0.2s			AML	AML		
T1245	comp=E,39400μm,0.2s			AML	AML		
T1245	comp=N,33551μm,0.4s			AML	AML		
T1245	comp=E,35405μm,0.2s			AML	AML		
MMO1	**Montemonaco**	**0.16**	**71**	⇑P	Pg	12 54 19.8	+0.5
MMO1				S	Sg	12 54 22.6	+0.7
T1215	**Vallo di Nera,**	**0.19**	**257**	P	Pg	12 54 20.4	+0.6
T1215				S	Sg	12 54 23.6	+1.0
T1215	comp=E,1365μm,0.5s			AML	AML		
T1215	comp=N,1505μm,0.5s			AML	AML		
T1215	comp=E,2945μm,1.4s			AML	AML		
T1215	comp=N,5150μm,0.8s			AML	AML		
T1215	comp=E,2850μm,0.6s			AML	AML		
T1215	comp=N,5260μm,0.8s			AML	AML		
T1215	comp=N,1135μm,0.1s			AML	AML		
T1215	comp=N,1164μm,0.1s			AML	AML		
T1215	comp=E,1140μm,0.1s			AML	AML		
T1215	comp=E,1181μm,0.1s			AML	AML		
T1217	**Poggiodomo (PG**	**0.19**	**226**	P	Pg	12 54 20.5	+0.7
T1217				S	Sg	12 54 23.8	+1.2
T1217	comp=E,2240μm,1.1s			AML	AML		
T1217	comp=N,2635μm,1.2s			AML	AML		
T1217	comp=E,3965μm,0.7s			AML	AML		
T1217	comp=E,3760μm,0.8s			AML	AML		
T1217	comp=N,5895μm,0.6s			AML	AML		
T1217	comp=N,5915μm,0.6s			AML	AML		
T1217	comp=N,2288μm,0.2s			AML	AML		
T1217	comp=N,2335μm,0.3s			AML	AML		
T1217	comp=E,2129μm,0.2s			AML	AML		
T1217	comp=E,2028μm,0.2s			AML	AML		
AM05	**Amandola Campo**	**0.22**	**53**	⇑P	Pg	12 54 20.8	+0.6
AM05	comp=E,5490μm,0.5s			AML	AML		
AM05	comp=N,4605μm,1.3s			AML	AML		
AM05	comp=E,23000μm,0.5s			AML	AML		
AM05	comp=N,575μm,1.1s			AML	AML		
AM05	comp=E,7030μm,0.7s			AML	AML		
AM05	comp=N,6095μm,0.9s			AML	AML		
AM05	comp=N,594μm,1.0s			AML	AML		
AM05	comp=E,24350μm,1.4s			AML	AML		
AM05	comp=N,197μm,0.1s			AML	AML		
AM05	comp=E,562μm,0.1s			AML	AML		
AM05	comp=N,543μm,0.1s			AML	AML		
AM05	comp=E,2220μm,0.1s			AML	AML		
T1204	**Amatrice, Fraz**	**0.22**	**139**	⇓P	Pg	12 54 21.0	+0.6
T1204	comp=E,7420μm,0.5s			AML	AML		
T1204	comp=N,4500μm,0.6s			AML	AML		
T1204	comp=E,10850μm,1.0s			AML	AML		
T1204	comp=N,4565μm,0.7s			AML	AML		
T1204	comp=N,3617μm,0.1s			AML	AML		
T1204	comp=E,3472μm,0.2s			AML	AML		
T1241	**Roccafluvione,**	**0.23**	**87**	P	Pb	12 54 21.4	-0.6
T1241				S	Sg	12 54 25.2	+1.5
T1241	comp=E,4160μm,0.2s			AML	AML		
T1241	comp=N,8360μm,0.7s			AML	AML		
T1241	comp=E,4555μm,0.2s			AML	AML		
T1241	comp=N,8245μm,0.2s			AML	AML		
T1241	comp=N,8325μm,0.7s			AML	AML		
T1241	comp=E,4560μm,0.2s			AML	AML		
T1241	comp=N,8220μm,0.2s			AML	AML		
T1241	comp=N,13400μm,1.4s			AML	AML		
T1241	comp=N,12850μm,1.4s			AML	AML		
T1241	comp=E,13600μm,0.7s			AML	AML		
T1241	comp=E,13350μm,1.6s			AML	AML		
T1241	comp=E,4159μm,0.2s			AML	AML		
T1241	comp=N,8319μm,0.2s			AML	AML		
T1241	comp=E,4558μm,0.2s			AML	AML		
T1241	comp=N,8220μm,0.2s			AML	AML		
LNSS	**Leonessa**	**0.25**	**193**	⇓P	Pb	12 54 21.6	-0.7
LNSS				S	Sg	12 54 25.7	+1.4
LNSS	comp=E,2680μm,0.2s			AML	AML		
LNSS	comp=N,8345μm,0.7s			AML	AML		
LNSS	comp=E,3280μm,0.2s			AML	AML		
LNSS	comp=N,8340μm,0.7s			AML	AML		
LNSS	comp=E,2679μm,0.2s			AML	AML		
LNSS	comp=N,7266μm,0.1s			AML	AML		
T1243	**Rocca Santa Ma**	**0.28**	**122**	⇑P	Pg	12 54 21.9	+0.5
T1243				S	Sb	12 54 26.7	-1.1
SEF1	**Sefro**	**0.33**	**337**	⇓P	Pg	12 54 22.6	+0.4
SEF1	comp=E,17900μm,0.3s			AML	AML		
SEF1	comp=N,11550μm,0.6s			AML	AML		
SEF1	comp=E,1480μm,0.3s			AML	AML		
SEF1	comp=N,1726μm,0.3s			AML	AML		
RM33	**Pellescritta (**	**0.34**	**168**	⇑P	Pg	12 54 23.0	+0.5
RM33	comp=E,1260μm,0.3s			AML	AML		
RM33	comp=N,1205μm,0.8s			AML	AML		
RM33	comp=E,1260μm,0.3s			AML	AML		
RM33	comp=N,1170μm,0.2s			AML	AML		
RM33	comp=E,1265μm,0.3s			AML	AML		
RM33	comp=E,1255μm,0.3s			AML	AML		
RM33	comp=N,1175μm,0.2s			AML	AML		
RM33	comp=E,3170μm,1.0s			AML	AML		
RM33	comp=E,3260μm,1.0s			AML	AML		
RM33	comp=N,2260μm,0.9s			AML	AML		
RM33	comp=N,2260μm,0.9s			AML	AML		
RM33	comp=E,1257μm,0.3s			AML	AML		
RM33	comp=N,990μm,0.1s			AML	AML		
RM33	comp=E,1261μm,0.2s			AML	AML		
RM33	comp=N,1026μm,0.1s			AML	AML		
T1211	**Morro Reatino**	**0.37**	**212**	⇑P	Pb	12 54 24.0	-0.4
T1211	comp=E,1685μm,1.5s			AML	AML		
T1211	comp=N,2040μm,0.8s			AML	AML		
T1211	comp=E,1663μm,0.1s			AML	AML		
T1211	comp=N,2100μm,0.8s			AML	AML		
T1211	comp=N,2580μm,1.0s			AML	AML		
T1211	comp=N,2620μm,1.3s			AML	AML		
T1211	comp=E,2195μm,0.8s			AML	AML		
T1211	comp=E,2170μm,0.8s			AML	AML		
T1211	comp=N,1952μm,0.2s			AML	AML		
T1211	comp=E,1665μm,0.1s			AML	AML		
T1211	comp=N,1968μm,0.2s			AML	AML		
T1211	comp=E,1631μm,0.1s			AML	AML		
ARRO	**Arrone**	**0.37**	**224**	⇓P	Pg	12 54 23.1	+0.1
ARRO				S	Sb	12 54 29.4	-0.8
ARRO	comp=E,1475μm,0.2s			AML	AML		
ARRO	comp=N,906μm,1.1s			AML	AML		
ARRO	comp=N,1790μm,0.7s			AML	AML		
ARRO	comp=E,2075μm,0.9s			AML	AML		
ARRO	comp=N,801μm,0.2s			AML	AML		
ARRO	comp=E,1478μm,0.2s			AML	AML		
CAMP	**Campotosto**	**0.38**	**145**	⇓P	Pg	12 54 23.4	+0.2
CAMP	comp=E,529μm,0.5s			AML	AML		
CAMP	comp=N,380μm,1.0s			AML	AML		
CAMP	comp=E,2885μm,0.7s			AML	AML		
CAMP	comp=N,2650μm,0.6s			AML	AML		
CAMP	comp=E,497μm,0.2s			AML	AML		
CAMP	comp=N,286μm,0.2s			AML	AML		
ASSB	**Assisi San Ben**	**0.39**	**300**	P	Pb	12 54 24.4	-0.3
ASSB	comp=E,2430μm,0.2s			AML	AML		
ASSB	comp=N,1054μm,1.1s			AML	AML		
TERO	**Teramo**	**0.42**	**122**	P	Pg	12 54 24.2	+0.2
TERO	comp=E,1260μm,1.3s			AML	AML		
TERO	comp=N,1645μm,0.9s			AML	AML		
TERO	comp=E,1420μm,0.4s			AML	AML		
TERO	comp=N,1845μm,0.9s			AML	AML		
TERO	comp=N,4315μm,0.9s			AML	AML		
TERO	comp=N,4190μm,0.7s			AML	AML		
TERO	comp=E,4175μm,0.6s			AML	AML		
TERO	comp=E,4065μm,0.6s			AML	AML		
TERO	comp=E,1158μm,0.1s			AML	AML		
TERO	comp=N,1301μm,0.1s			AML	AML		
TERO	comp=N,1520μm,0.1s			AML	AML		
TERO	comp=E,1021μm,0.1s			AML	AML		
OFFI	**Offida**	**0.43**	**78**	P	Pb	12 54 25.3	+0.1
OFFI	comp=E,7630μm,0.6s			AML	AML		
OFFI	comp=N,10250μm,0.9s			AML	AML		
OFFI	comp=N,1148μm,0.5s			AML	AML		
OFFI	comp=E,1035μm,0.7s			AML	AML		
T1247	**Pizzolo (AQ)**	**0.43**	**162**	⇓P	Pg	12 54 24.4	+0.4
T1247	comp=E,1180μm,1.6s			AML	AML		
T1247	comp=N,1555μm,0.1s			AML	AML		
T1247	comp=E,2970μm,1.2s			AML	AML		
T1247	comp=N,3020μm,1.0s			AML	AML		
T1247	comp=N,1558μm,0.1s			AML	AML		
T1247	comp=E,980μm,0.1s			AML	AML		
SNTG	**Esanatoglia**	**0.43**	**342**	⇑P	Pg	12 54 24.3	+0.2
SNTG	comp=E,590μm,0.5s			AML	AML		
SNTG	comp=N,842μm,0.6s			AML	AML		
SNTG	comp=E,558μm,0.5s			AML	AML		
SNTG	comp=N,869μm,0.7s			AML	AML		
SNTG	comp=N,3075μm,0.6s			AML	AML		
SNTG	comp=E,2575μm,1.4s			AML	AML		
SNTG	comp=N,2860μm,0.6s			AML	AML		
SNTG	comp=E,2695μm,1.4s			AML	AML		
SNTG	comp=N,304μm,0.3s			AML	AML		
SNTG	comp=N,281μm,0.3s			AML	AML		
SNTG	comp=E,333μm,0.1s			AML	AML		
SNTG	comp=E,324μm,0.1s			AML	AML		
CESX	**Cesi**	**0.46**	**239**	⇑P	Pg	12 54 24.9	+0.2
CESX	comp=E,415μm,1.3s			AML	AML		
CESX	comp=N,491μm,0.4s			AML	AML		
CESX	comp=E,2490μm,1.0s			AML	AML		
CESX	comp=N,2245μm,0.6s			AML	AML		
CESX	comp=N,491μm,0.4s			AML	AML		
CESX	comp=E,330μm,0.2s			AML	AML		
EL6	**Elcito**	**0.48**	**359**	⇓P	Pg	12 54 22.9	-2.3
ATCC	**AVT- Casa Cast**	**0.49**	**314**	⇓P	Pg	12 54 25.5	+0.3
ATCC	comp=E,1175μm,0.8s			AML	AML		
ATCC	comp=N,1018μm,0.6s			AML	AML		
ATCC	comp=E,4755μm,1.1s			AML	AML		
ATCC	comp=N,4745μm,0.5s			AML	AML		
ATCC	comp=N,735μm,0.3s			AML	AML		
ATCC	comp=E,890μm,0.3s			AML	AML		
GIGS	**Gran Sasso**	**0.52**	**140**	⇑P	Pg	12 54 25.6	-0.2
GIGS	comp=E,213μm,1.4s			AML	AML		
GIGS	comp=N,272μm,0.7s			AML	AML		
GIGS	comp=N,581μm,0.3s			AML	AML		
GIGS	comp=E,662μm,0.3s			AML	AML		
GIGS	comp=E,210μm,0.1s			AML	AML		
GIGS	comp=N,170μm,0.1s			AML	AML		
FOSV	**Fossato di Vic**	**0.52**	**330**	⇑P	Pg	12 54 26.0	+0.2
FOSV	comp=E,769μm,0.8s			AML	AML		
FOSV	comp=N,736μm,0.7s			AML	AML		
FOSV	comp=N,3460μm,0.4s			AML	AML		
FOSV	comp=E,2985μm,1.0s			AML	AML		
FOSV	comp=E,208μm,0.3s			AML	AML		
FOSV	comp=N,288μm,0.3s			AML	AML		
AQU	**L'Aquila**	**0.54**	**157**	P	Pg	12 54 26.1	0.0
AQU	comp=E,1750μm,1.0s			AML	AML		
AQU	comp=N,1366μm,1.6s			AML	AML		
AQU	comp=E,1805μm,1.5s			AML	AML		
AQU	comp=N,1486μm,1.4s			AML	AML		
AQU	comp=E,274μm,0.2s			AML	AML		
AQU	comp=N,308μm,0.3s			AML	AML		
AQU	comp=N,320μm,0.2s			AML	AML		
AQU	comp=E,271μm,0.4s			AML	AML		
FIAM	**Fiamignano**	**0.58**	**180**	⇑P	Pg	12 54 26.9	0.0
FIAM				S	Sb	12 54 36.0	-0.2
FIAM	comp=E,659μm,0.3s			AML	AML		
FIAM	comp=N,265μm,1.4s			AML	AML		
FIAM	comp=E,1066μm,1.6s			AML	AML		
FIAM	comp=N,1070μm,0.9s			AML	AML		
FIAM	comp=N,258μm,0.4s			AML	AML		
FIAM	comp=E,659μm,0.3s			AML	AML		
TRTR	**Tortoreto Alta**	**0.59**	**93**	⇓P	Pb	12 54 28.4	+0.5
TRTR	comp=E,7680μm,1.0s			AML	AML		
TRTR	comp=N,8700μm,0.3s			AML	AML		
TRTR	comp=E,1154μm,0.5s			AML	AML		
TRTR	comp=N,1408μm,0.4s			AML	AML		
ATFO	**Monte Foce - G**	**0.66**	**323**	⇑P	Pg	12 54 28.4	0.0
ATFO	comp=E,404μm,0.7s			AML	AML		
ATFO	comp=N,619μm,0.7s			AML	AML		
ATFO	comp=E,1565μm,0.6s			AML	AML		
ATFO	comp=N,1680μm,1.1s			AML	AML		
ATFO	comp=E,249μm,0.3s			AML	AML		
ATFO	comp=N,218μm,0.3s			AML	AML		
ATTE	**AVT- Monte Tez**	**0.66**	**302**	S	Sb	12 54 40.0	+1.4
ARVD	**Arcevia**	**0.66**	**349**	⇑P	Pg	12 54 28.5	0.0
ARVD	comp=E,258μm,0.2s			AML	AML		
ARVD	comp=N,308μm,0.9s			AML	AML		
ARVD	comp=N,1265μm,0.8s			AML	AML		
ARVD	comp=E,2080μm,0.3s			AML	AML		
ARVD	comp=E,118μm,0.1s			AML	AML		
ARVD	comp=N,92μm,0.2s			AML	AML		
FAGN	**Fagnano**	**0.67**	**149**	⇓P	Pg	12 54 29.1	+0.4
FAGN	comp=E,582μm,0.4s			AML	AML		
FAGN	comp=N,442μm,0.6s			AML	AML		
FAGN	comp=E,2045μm,0.9s			AML	AML		
FAGN	comp=N,1560μm,0.4s			AML	AML		

FAGN			AML	AML		
	comp=N,341μm,0.4s					
FAGN			AML	AML		
	comp=E,581μm,0.4s					
VCEL	**Villa Celiera**	**0.70 130**	⇓P	Pg	12 54 29.2	+0.1
VCEL			AML	AML		
	comp=E,632μm,0.8s					
VCEL			AML	AML		
	comp=N,492μm,0.2s					
VCEL			AML	AML		
	comp=E,1910μm,0.8s					
VCEL			AML	AML		
	comp=N,2335μm,0.8s					
VCEL			AML	AML		
	comp=N,493μm,0.2s					
VCEL			AML	AML		
	comp=E,524μm,0.1s					
SRES	**S.Oreste - Sor**	**0.76 217**	⇓P	Pb	12 54 31.3	+0.4
SRES			AML	AML		
	comp=E,231μm,1.2s					
SRES			AML	AML		
	comp=N,214μm,1.1s					
SRES			AML	AML		
	comp=E,601μm,0.3s					
SRES			AML	AML		
	comp=N,652μm,0.6s					
SRES			AML	AML		
	comp=N,185μm,0.5s					
SRES			AML	AML		
	comp=E,209μm,0.3s					
T0110	**Collepietro**	**0.79 142**	⇓P	Pg	12 54 30.6	-0.3
T0110			AML	AML		
	comp=E,2320μm,0.8s					
T0110			AML	AML		
	comp=N,1770μm,0.6s					
T0110			AML	AML		
	comp=N,343μm,0.3s					
T0110			AML	AML		
	comp=E,333μm,0.5s					
ATMI	**Monte Miggiano**	**0.79 308**	S	Sn	12 54 44.0	-0.8
MPAG	**Monte Paganucc**	**0.82 342**	⇓P	Pg	12 54 31.8	+0.1
MPAG			AML	AML		
	comp=E,330μm,0.7s					
MPAG			AML	AML		
	comp=N,450μm,0.9s					
MPAG			AML	AML		
	comp=N,1310μm,0.7s					
MPAG			AML	AML		
	comp=E,1360μm,0.8s					
MPAG			AML	AML		
	comp=N,122μm,0.5s					
MPAG			AML	AML		
	comp=E,135μm,0.5s					
MPAG			AML	AML		
	comp=N,716μm,0.8s					
FSSB	**Fossombrone**	**0.88 344**	P	Pg	12 54 32.6	-0.1
FSSB			AML	AML		
	comp=E,563μm,0.4s					
FSSB			AML	AML		
	comp=N,970μm,0.3s					
FSSB			AML	AML		
	comp=N,5510μm,0.3s					
FSSB			AML	AML		
	comp=E,2820μm,0.8s					
FSSB			AML	AML		
	comp=E,472μm,0.3s					
FSSB			AML	AML		
	comp=N,603μm,0.4s					
LPEL	**Lama dei Pelig**	**1.12 135**	⇓P	Pb	12 54 36.2	-1.0
LPEL			AML	AML		
	comp=N,477μm,0.8s					
LPEL			AML	AML		
	comp=E,762μm,0.9s					
PIGN	**Pignataro Magg**	**1.82 154**	P	Pn	12 54 46.1	-1.0
PIGN			AML	AML		
	comp=N,67μm,0.7s					
PIGN			AML	AML		
	comp=E,73μm,1.1s					

PRU ***30*** *12:55:02.5±0.0, 42°.72N×13°.94E, h10km*
VIE 30 12:55:09.8±1.6, 43°.12N×13°.12E, h10km, mb3.1/11, ml3.1/13, Error ellipse: s-maj=15.6km s-min=12.2km az=65.0 103 km SSE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir**	**3.54**	**16**	*e*Pn	Pn	12 56 05.6	+0.8
	8.8nm,0.4s						
ABTA	**Abfaltersbach**	**3.65**	**353**	Pn	Pn	12 56 06.2	-0.2
	15nm,0.6s,SNR=10						
ABTA				*e*Sn	Sn	12 56 50.7	+1.2
	21nm,0.7s						
FETA	**Feichten**	**4.25**	**337**	Pn	Pn	12 56 15.7	+1.0
	4.3nm,0.4s,SNR=5.4						
WTTA	**Wattenberg**	**4.27**	**346**	Pn	Pn	12 56 16.2	+1.2
	8.1nm,0.6s,SNR=6.3						
SQTA	**Sankt Quirin**	**4.32**	**342**	Pn	Pn	12 56 16.0	+0.5
	18nm,0.5s,SNR=6.2						
WATA	**Walderalm**	**4.35**	**346**	Pn	Pn	12 56 16.8	+0.8
	2.9nm,0.2s,SNR=5.7						
MOTA	**Moosalm**	**4.46**	**342**	Pn	Pn	12 56 19.0	+1.6
	12nm,0.7s,SNR=12						
ARSA	**Arzberg**	**4.46**	**22**	*e*Pn	Pn	12 56 20.5	+3.0
	0.7nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.58**	**4**	*e*Pn	Pn	12 56 19.6	+0.5
	4.0nm,0.3s						
RETA	**Reutte**	**4.67**	**340**	Pn	Pn	12 56 21.1	+0.7
	3.4nm,0.3s,SNR=5.7						
DAVA	**Damuels**	**4.75**	**332**	*i* Pn	Pn	12 56 23.1	+1.5
	18nm,0.9s,SNR=6.1						
KHC	**Kasperske Hory**	**6.02**	**3**	*e*PN	Pn	12 56 36.8	-2.0
KHC				*e*SN	Sn	12 57 46.5	-1.3

IDC ***30*** *12:56:34.0±0.7, 6°.75N×72°.95W, h160km±7km, mb3.5/11, mbtmp4.0/16, Error ellipse: s-maj=17.1km s-min=7.3km az=131.0*
RSNC ***30*** *12:56:35.2±1.1, 6°.81N×73°.14W, h150km±4km, ML4.0, Mw4.1*
NEIC ***30*** *12:56:35.1±1.2, 6°.72N±0°.09×72°.92W±0°.09, h165km±9km, mb4.3/41, Error ellipse: s-maj=14.5km s-min=11.5km az=137.0*
ISC 30 12:56:33.7±0.6, 6°.85N±0°.03×73°.08W±0°.04, h155km±5km, n106, σ1$53/145, mb4.3/31, 9C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**202**	⇑*i*P	Pn	12 56 55.5	+0.3
BARC				*e*S	Sn	12 57 10.7	-0.8
BARC				*i*		12 57 11.8	
	comp=Z,4μm,0.2s						
PAMC	**Pamplona, Colo**	**0.61**	**38**	⇓*i*P	Pn	12 56 58.3	+1.4
PAMC				*e*S	Sn	12 57 15.4	+0.9
PAMC				*i*		12 57 20.1	
	comp=Z,1μm,0.6s						
BRRC	**Barranca, Sant**	**0.68**	**292**	⇑*i*P	Pn	12 56 57.3	+0.7
BRRC				*e*S	Sn	12 57 14.4	+0.2
BRRC				*i*		12 57 15.3	
	comp=Z,1μm,0.1s						
RUSC	**La Rusia**	**0.95**	**180**	⇑*i*P	Pn	12 56 59.3	+0.1
RUSC				*e*S	Sn	12 57 17.9	-0.8
RUSC				*i*		12 57 19.2	
	comp=Z,716nm,0.3s						
TAMC	**Tame, Arauca**	**1.34**	**108**	⇓*i*P	Pn	12 57 03.7	+1.5
TAMC				*i*		12 57 24.4	
	comp=Z,694nm,0.4s						
TAMC				*e*S	Sn	12 57 24.7	+0.8
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	⇑*i*P	Pn	12 57 01.9	-0.8
PTBC				*e*S	Sn	12 57 23.1	-1.8
PTBC				*i*		12 57 27.2	
	comp=Z,1μm,0.2s						
SPBC	**San Pablo de B**	**1.55**	**220**	⇑*i*P	Pn	12 57 04.3	0.0
SPBC				*e*S	Sn	12 57 26.5	-1.3
SPBC				*i*		12 57 30.1	
	comp=Z,1μm,0.2s						
NORC	**Norcasia**	**2.19**	**234**	*e*P	Pn	12 57 11.2	-0.3
NORC				*e*S	Sn	12 57 39.4	-1.2
NORC				*i*		12 57 47.4	
	comp=Z,953nm,0.4s						
CHIC	**Chingaza**	**2.30**	**196**	⇑*e*P	Pn	12 57 13.3	+0.1
CHIC				*e*S	Sn	12 57 42.8	-0.8
CHIC				*i*		12 57 50.2	
	comp=Z,490nm,0.4s						
ROSC	**El Rosal**	**2.35**	**212**	P	Pn	12 57 15.3	+1.6
	comp=Z,320nm,0.3s,baz=40,slow=16,SNR=404						
ROSC				S	Sn	12 57 44.8	+0.3
	comp=Z,1μm,0.4s,baz=47,slow=20,SNR=8.7						
ROSC	**El Rosal**	**2.35**	**212**	Pn	Pn	12 57 15.2	+1.4
ROSC	**El Rosal**	**2.35**	**212**	⇑*i*P	Pn	12 57 15.1	+1.4
ROSC				*e*S	Sn	12 57 45.8	+1.3
ROSC				*i*		12 57 53.1	
	comp=Z,1μm,0.5s						
HELC	**Santa Helena**	**2.52**	**255**	*e*P	Pn	12 57 15.7	-0.1
HELC				*e*S	Sn	12 57 47.5	-0.6
HELC				*i*		12 57 54.2	
	comp=Z,414nm,0.4s						
UREC	**San Jos de Ur**	**2.59**	**290**	*e*P	Pn	12 57 15.7	-0.6
UREC				*e*S	Sn	12 57 47.7	-1.4
UREC				*i*		12 57 49.4	
	comp=Z,737nm,0.1s						
LL1C	**La Loma 1 Cana**	**2.71**	**350**	*e*P	Pn	12 57 20.4	+2.7
LL1C				*e*S	Sn	12 57 55.2	+3.4
LL1C				*i*		12 58 03.8	
	comp=Z,1μm,0.4s						
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P	Pn	12 57 19.7	+0.5
GUY2C				*e*S	Sn	12 57 54.3	+0.1
GUY2C				*i*		12 58 02.1	
	comp=Z,1μm,0.3s						
VILC	**Villavicencio,**	**2.79**	**193**	*e*P	Pn	12 57 19.1	+0.3
VILC				*e*S	Sn	12 57 53.2	-0.6
PTGC	**Puerto Gaitan,**	**2.80**	**160**	⇑*i*P	Pn	12 57 18.5	-0.4
PTGC				*e*S	Sn	12 57 51.9	-1.9
PTGC				*i*		12 58 03.3	
	comp=Z,187nm,0.2s						
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*e*P	Pn	12 57 23.4	+0.9
CBOC				*e*S	Sn	12 57 59.0	-1.2
CBOC				*i*		12 58 11.9	
	comp=Z,254nm,0.6s						
DBBC	**Dabeiba**	**3.11**	**273**	*e*P	Pn	12 57 24.0	+1.2
DBBC				*e*S	Sn	12 57 59.9	-0.9
SDV	**Santo Domingo**	**3.15**	**50**	P	Pn	12 57 24.9	+1.5
	comp=Z,288nm,0.4s,baz=232,slow=9.6,SNR=150						
SDV				S	Sn	12 58 01.9	-0.1
	comp=Z,131nm,0.4s,baz=250,slow=23,SNR=15						
SDV	**Santo Domingo**	**3.15**	**50**	Pn	Pn	12 57 24.8	+1.3
ARGC	**Ariguani, Magd**	**3.20**	**339**	⇓*i*P	Pn	12 57 25.9	+2.0
ARGC				*e*S	Sn	12 58 04.0	+1.2
ARGC				*i*		12 58 10.9	
	comp=Z,120nm,0.3s						
ANIL	**Santa Ana**	**3.29**	**225**	*e*P	Pn	12 57 26.2	+0.8
ANIL				*e*S	Sn	12 58 08.1	+2.8
PRAC	**Prado**	**3.60**	**210**	*e*P	Pn	12 57 28.5	-0.6
PRAC				*e*S	Sn	12 58 11.6	-0.5
PRAC				*i*		12 58 18.0	
	comp=Z,770nm,0.3s						
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P	Pn	12 57 29.5	0.0
ORTC				*e*S	Sn	12 58 13.4	+0.6
ORTC				*i*		12 58 18.4	
	comp=Z,494nm,0.5s						
SJCC	**San Jacinto, C**	**3.67**	**326**	⇑*i*P	Pn	12 57 29.4	-0.5
SJCC				*e*S	Sn	12 58 11.7	-1.9
SJCC				*i*		12 58 15.6	
	comp=Z,270nm,0.5s						
PLMC	**San Jos del P**	**3.73**	**239**	*e*P	Pn	12 57 30.8	+0.1
PLMC				*e*S	Sn	12 58 16.2	+1.2
PLMC				*i*		12 58 18.8	
	comp=Z,188nm,0.2s						
LCBC	**Los crdobas,**	**3.82**	**302**	*e*P	Pn	12 57 30.9	-0.9
LCBC				*e*S	Sn	12 58 15.9	-1.1
LCBC				*i*		12 58 21.9	
	comp=Z,224nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	⇓*e*P	Pn	12 57 35.9	-0.3
CRJC				*e*S	Sn	12 58 22.2	-2.5
CRJC				*i*		12 58 27.4	
	comp=Z,184nm,0.5s						
GUVC	**San Jose del G**	**4.30**	**174**	*e*P	Pn	12 57 37.2	-1.0
GUVC				*e*S	Sn	12 58 27.8	-0.6
GUVC				*i*		12 58 33.2	
	comp=Z,194nm,0.2s						
YOTC	**Yotoco, Valle**	**4.33**	**229**	*e*P	Pn	12 57 37.9	-0.7
YOTC				*e*S	Sn	12 58 27.6	-1.4
PTAC	**Punta Ardita,**	**4.70**	**274**	*e*P	Pn	12 57 43.4	0.0
PTAC				*e*S	Sn	12 58 34.9	-2.8
URIC	**Uribia, Colomb**	**4.94**	**12**	⇓*e*P	Pn	12 57 46.0	-0.5
URIC				*e*S	Sn	12 58 41.8	-1.4
URIC				*i*		12 58 47.8	
	comp=Z,36nm,0.5s						
MALC	**Bahia Malaga**	**5.09**	**237**	*e*P	Pn	12 57 49.9	+1.4
MALC				*e*S	Sn	12 58 48.1	+1.2
GARC	**Garzon, Huila**	**5.22**	**208**	*e*P	Pn	12 57 49.7	-0.8
GARC				*e*S	Sn	12 58 47.7	-2.7
GARC				*i*		12 58 52.4	
	comp=Z,152nm,0.3s						
BAUV	**El Baul**	**5.40**	**67**	Pn	Pn	12 57 51.5	-1.1
FLOC	**Florencia**	**5.83**	**206**	*e*P	Pn	12 57 57.9	-0.5
FLOC				*e*S	Sn	12 59 04.5	-0.1
FLOC				*i*		12 59 09.6	
	comp=Z,29nm,0.4s						
BBAC	**Balboa, Cauca**	**6.35**	**221**	*e*P	Pn	12 58 05.1	-0.3
BBAC				*e*S	Sn	12 59 15.4	-1.8
BBAC				*i*		12 59 21.4	
	comp=Z,27nm,0.4s						
GCUF	**Volcan Galeras**	**7.03**	**217**	*e*P	Pn	12 58 16.0	+1.3
GCUF				*e*S	Sn	12 59 31.8	-2.0
GCUF				*i*		12 59 37.2	
	comp=Z,20nm,0.6s						
BCIP	**Isla Barro Col**	**7.08**	**289**	Pn	Pn	12 58 14.1	-0.7
PCRV	**Puerto La Cruz**	**8.98**	**68**	P	Pn	12 58 41.4	+1.1
	comp=Z,6.1nm,0.4s,baz=266,slow=13,SNR=17						
MTDJ	**Mount Denham**	**12.11**	**339**		Pn	12 59 24.8	+3.3
MTDJ	**Mount Denham**	**12.11**	**339**	*e*P	Pn	12 59 24.7	+3.3
MTDJ				*e*S	Sn	13 01 27.9	-7.6
DR12	**Loma Pena Alta**	**12.40**	**17**		Pn	12 59 24.1	-1.1
CELP	**Cerrillos**	**12.83**	**29**		Pn	12 59 29.5	-1.1
SJG	**San Juan**	**13.07**	**30**	P	Pn	12 59 33.7	0.0
	comp=Z,3.4nm,0.5s,baz=172,slow=14,SNR=2.1						
SJG				S	Sn	13 01 53.2	-5.3
	comp=Z,3.0nm,0.3s,baz=311,slow=19,SNR=2.6						
ATAH	**Atahualpa**	**14.87**	**201**	P	Pn	12 59 57.2	+0.3
	comp=Z,1.5nm,0.5s,baz=5.7,slow=10,SNR=1.8						
SAML	**Samuel**	**18.54**	**148**	P	P	13 00 37.6	-1.1
TEIG	**Tepich**	**19.85**	**314**	P	Pn	13 00 54.9	-1.1
LPAZ	**La Paz**	**23.51**	**168**	P	P	13 01 30.1	-0.5
	comp=Z,0.4nm,0.3s,baz=333,slow=4.5,SNR=2.5						
	comp=Z,0.4nm,0.3s						
Y49A	**Blount Mountai**	**29.57**	**337**	P	P	13 02 26.1	+2.1
Y49A				IAmb	IAmb	13 02 27.3	
	comp=Z,4.9nm,0.8s						
WVT	**Waverly**	**32.12**	**337**	P	P	13 02 47.9	+1.5
WVT				IAmb	IAmb	13 03 20.3	
	comp=Z,8.0nm,1.4s						
WHAR	**Wooly Hollow**	**33.36**	**331**	P	P	13 02 58.8	+1.6
WHAR				IAmb	IAmb	13 03 40.5	
	comp=Z,6.1nm,1.1s						
P52A	**Corning**	**33.64**	**347**	P	P	13 03 01.0	+1.5
P52A				IAmb	IAmb	13 03 03.0	
	comp=Z,7.8nm,0.8s						
FCAR	**Ozark Folk Cen**	**33.76**	**332**	P	P	13 03 02.1	+1.4
FCAR				IAmb	IAmb	13 03 02.5	
	comp=Z,4.3nm,1.0s						
CCM	**Cathedral Cave**	**35.16**	**335**	P	P	13 03 14.9	+2.2
R40A	**Maddies Statio**	**35.80**	**334**	P	P	13 03 19.0	+0.9
R40A				IAmb	IAmb	13 03 32.4	
	comp=Z,4.5nm,1.0s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	P	13 03 25.7	+1.5
	comp=Z,0.3nm,0.4s,baz=124,slow=9.6,SNR=9.3						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	P	13 03 25.4	+1.2
TX31	**Lajitas Ar. Si**	**36.47**	**312**	P	P	13 03 25.6	+1.4
TX32	**Lajitas Array**	**36.47**	**312**	P	P	13 03 25.4	+1.2
J57A	**Williamstown**	**36.50**	**356**	P	P	13 03 25.4	+1.4
J57A				IAmb	IAmb	13 03 44.4	
	comp=Z,12nm,1.0s						
P40A	**Paris**	**36.74**	**335**	P	P	13 03 27.2	+1.1
P40A				IAmb	IAmb	13 03 27.6	
	comp=Z,4.6nm,0.7s						
DELO	**Deloro Mine**	**37.73**	**355**	P	P	13 03 35.5	+1.2
L42A	**Oliver, Polo**	**37.97**	**340**	P	P	13 03 37.3	+0.8
JFWS	**Jewell Farm**	**38.98**	**340**	P	P	13 03 45.4	+0.6
E62A	**Clayton Lake**	**39.74**	**4**	P	P	13 03 51.6	+0.6
D62A	**Allapoint, All**	**40.23**	**4**	P	P	13 03 57.4	+2.3
D62A				IAmb	IAmb	13 04 24.6	
	comp=Z,16nm,1.2s						
E46A	**Sault Ste Mari**	**40.54**	**348**	P	P	13 03 59.4	+1.8
BATG	**Bathurst New B**	**40.72**	**7**	P	P	13 04 00.5	+1.4
ECSD	**EROS Data Cent**	**42.14**	**334**	P	P	13 04 11.4	+0.6
EYMN	**Ely**	**43.85**	**342**	P	P	13 04 25.3	+0.8
EYMN				IAmb	IAmb	13 04 26.3	
	comp=Z,8.1nm,0.9s						
ULM	**Lac du Bonnet**	**47.27**	**340**	P	P	13 04 51.8	+0.5
	comp=Z,4.0nm,0.4s,baz=134,slow=6.2,SNR=5.5						
	comp=Z,4.0nm,0.4s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	P	13 04 59.0	+1.1
	comp=Z,0.4nm,0.5s,baz=125,slow=8.8,SNR=4.8						
	comp=Z,0.4nm,0.5s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	P	13 04 58.6	+0.7
SCHQ	**Schefferville**	**48.10**	**5**	P	P	13 04 58.6	+1.0
	comp=Z,5.4nm,0.7s,baz=152,slow=6.2,SNR=4.4						
	comp=Z,5.4nm,0.7s						
BGU	**Big Grassy Mou**	**49.15**	**320**	P	P	13 05 06.7	+0.6
GCMT	**Greycliff**	**50.02**	**327**	P	P	13 05 14.2	+1.7
G08A	**Pilot Rock**	**55.12**	**322**	P	P	13 05 51.3	+1.3
G08A				IAmb	IAmb	13 06 06.4	
	comp=Z,4.5nm,1.4s						
EDM	**Edmonton**	**56.61**	**332**	P	P	13 06 01.5	+1.1
EDM				IAmb	IAmb	13 06 18.8	
	comp=Z,4.1nm,1.0s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	P	13 06 46.0	+0.6
	comp=Z,2.5nm,0.6s,baz=132,slow=7.2,SNR=7.0						
	comp=Z,2.5nm,0.6s						
DLBC	**Dease Lake**	**67.31**	**331**	P	P	13 07 13.1	+1.2
DBIC	**Dimbokro**	**67.69**	**86**	P	P	13 07 13.9	-1.0
	comp=Z,1.8nm,0.7s,baz=256,slow=4.2,SNR=2.3						
	comp=Z,1.8nm,0.7s						
N31M	**Braeburn, Yuko**	**71.18**	**333**	P	P	13 07 38.1	+2.6
N31M				IAmb	IAmb	13 07 54.6	
	comp=Z,8.1nm,1.4s						
M30M	**Minto, Yukon**	**72.02**	**334**	P	P	13 07 41.8	+1.3
INK	**Inuvik**	**73.01**	**340**	P	P	13 07 47.3	+1.1
INK				IAmb	IAmb	13 07 51.4	
	comp=Z,9.3nm,1.4s						
EPYK	**Eagle Plains**	**73.37**	**338**	P	P	13 07 49.9	+1.5
EPYK				IAmb	IAmb	13 08 01.2	
	comp=Z,4.8nm,1.1s						
DAWY	**Dawson**	**73.63**	**335**	P	P	13 07 51.6	+1.7
TORD	**Torodi Ar. Bea**	**73.69**	**78**	P	P	13 07 49.8	-1.4
	comp=Z,0.2nm,0.4s,baz=276,slow=4.2,SNR=2.3						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**73.69**	**78**	P	P	13 07 49.0	-2.2
BCAR	**Beaver Creek A**	**74.35**	**334**	P	P	13 07 55.9	+1.7
BMAR	**Burnt Mountain**	**76.65**	**338**	P	P	13 08 08.0	+0.8
ILAR	**Eielson Array**	**76.95**	**335**	P	P	13 08 09.7	+0.8
	comp=Z,0.2nm,0.6s,baz=103,slow=4.6,SNR=5.1						
	comp=Z,0.2nm,0.6s						
PPLA	**Purkeypile**	**78.97**	**333**	P	P	13 08 20.9	+0.7
M20K	**Styx River**	**79.30**	**332**	P	P	13 08 22.7	+0.7
M20K				IAmb	IAmb	13 08 26.3	
	comp=Z,17nm,1.5s						
J20K	**Nowinta River**	**79.97**	**334**	P	P	13 08 26.9	+1.5
J20K				IAmb	IAmb	13 08 38.8	
	comp=Z,10nm,1.4s						
L19K	**White Mountain**	**80.14**	**332**	P	P	13 08 26.1	-0.3
L19K				IAmb	IAmb	13 08 55.8	
	comp=Z,15nm,1.5s						
N18K	**Kilae Creek**	**80.54**	**330**	P	P	13 08 29.4	+0.8
N18K				IAmb	IAmb	13 09 04.4	
	comp=Z,11nm,1.4s						
GERES	**GERESS Array B**	**82.77**	**42**	P	P	13 08 38.5	-2.1
	comp=Z,0.1nm,0.3s,baz=282,slow=6.9,SNR=1.9						
	comp=Z,0.1nm,0.3s						
ARCES	**ARCESS Array B**	**86.63**	**20**	P	P	13 08 59.4	0.0
	comp=Z,1.1nm,0.6s,baz=273,slow=3.2,SNR=1.2						
	comp=Z,1.1nm,0.6s						
SNAA	**Sanae**	**90.36**	**163**	P	P	13 09 14.8	-2.1
SNAA				IAmb	IAmb	13 09 38.1	
	comp=Z,6.4nm,1.5s						
MKAR	**Makanchi Array**	**122.28**	**20**	PKP	**PKPdf**	13 15 10.2	-0.3
	comp=Z,0.2nm,0.3s,baz=301,slow=2.7,SNR=7.0						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	13 16 04.3	-0.5
	comp=Z,0.7nm,0.5s,baz=114,slow=3.7,SNR=7.4						
WRA	**Warramunga Arr**	**150.39**	**241**	PKPbc	**PKPbc**	13 16 07.5	-0.2
	comp=Z,0.6nm,0.4s,baz=107,slow=2.9,SNR=8.1						
CMAR	**Chiang Mai Arr**	**153.65**	**17**	PKPbc	**PKPbc**	13 16 15.0	-0.2
	comp=Z,0.7nm,0.5s,baz=318,slow=4.0,SNR=6.1						

ROM ***30*** *13:02:31.7±0.0, 42°.731N±0°.002×13°.152E±0°.002, h10km, ML3.5/34, Error ellipse: s-maj=0.2km s-min=0.2km az=237.0*
LDG ***30*** *13:02:32.0±0.1, 42°.67N×13°.17E, h10km, Ml3.2/11, Error ellipse: s-maj=5.1km s-min=2.8km az=39.0*
STR ***30*** *13:02:33.5±2.0, 43°N±19°×1°3E±1°2, h15km, MLv3.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=156.2, preliminary*
PRU ***30*** *13:02:33.1±0.0, 42°.63N×13°.58E, h10km*
ISC 30 13:02:30.7±0.7, 42°.71N±0°.01×13°.12E±0°.02, h17km±3km, n188, σ1$34/188, 20C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.01**	**18**	⇓P	Pg	13 02 33.7	-0.1
T1213				S	Sg	13 02 34.8	-1.2
T1218	**Civita (PG)**	**0.04**	**186**	⇑P	Pg	13 02 34.4	+0.4
T1218				S	Sg	13 02 36.1	-0.1
T1212	**Cascia, Frazio**	**0.07**	**304**	⇑P	Pg	13 02 34.5	+0.4
T1212				S	Sg	13 02 36.0	-0.4
T1214	**Arquata del Tr**	**0.08**	**55**	⇑P	Pg	13 02 34.0	-0.3
T1214				S	Sg	13 02 35.3	-1.4
T1201	**Domo (RI)**	**0.11**	**120**	⇑P	Pg	13 02 35.2	+0.7
T1201				S	Sg	13 02 37.6	+0.5
LNSS	**Leonessa**	**0.13**	**208**	⇑P	Pg	13 02 35.9	+1.2
LNSS				S	Sg	13 02 38.8	+1.4
LNSS				AML	AML		
	comp=E,55800μm,0.3s						
LNSS				AML	AML		
T1244	**Arquata del Tr**	**0.14**	**72**	⇑P	Pg	13 02 35.2	+0.4
T1244				S	Sg	13 02 37.4	-0.1
T1217	**Poggiodomo (PG**	**0.14**	**269**	⇑P	Pg	13 02 35.9	+1.1
T1217				S	Sg	13 02 38.8	+1.2
T1217				AML	AML		
	comp=E,19200μm,1.5s						
T1217				AML	AML		
	comp=N,28100μm,0.4s						
T1217				AML	AML		
	comp=E,18550μm,1.5s						
T1217				AML	AML		
	comp=E,19150μm,1.6s						
T1217				AML	AML		
	comp=N,28150μm,0.4s						
T1217				AML	AML		
	comp=E,19200μm,1.6s						
T1217				AML	AML		
	comp=E,18600μm,1.6s						
T1217				AML	AML		
	comp=N,28200μm,0.4s						
T1204	**Amatrice, Fraz**	**0.15**	**105**	⇑P	Pg	13 02 35.5	+0.5
T1204				S	Sg	13 02 38.1	+0.2
T1204				AML	AML		
	comp=E,73050μm,1.0s						
T1204				AML	AML		
	comp=N,42250μm,0.8s						
T1245	**Castelsantange**	**0.15**	**19**	⇑P	Pg	13 02 35.2	+0.2
T1245				S	Sg	13 02 37.5	-0.5
T1245				AML	AML		
T1245				AML	AML		
	comp=E,83800μm,0.2

comp=E,23850µm,0.2s
RM33 AML AML
comp=N,19950µm,0.3s
RM33 AML AML
comp=N,19250µm,0.3s
RM33 AML AML
comp=E,23350µm,0.2s
RM33 AML AML
comp=N,19300µm,0.3s
RM33 AML AML
comp=E,23900µm,0.2s
RM33 AML AML
comp=N,19900µm,0.3s
MMO1 Montemonaco 0.24 39 ⇑P **Pg 13 02 36.6 +0.4**
MMO1 S **Sb 13 02 40.2 -0.4**
T1243 Rocca Santa Ma 0.24 94 ⇑P **Pg 13 02 36.8 +0.5**
T1243 S **Sg 13 02 40.4 +0.2**
FEMA Monte Fema 0.25 348 P **Pg 13 02 37.3 +0.8**
FEMA AML AML
comp=N,17050µm,0.3s
FEMA AML AML
comp=E,19400µm,0.5s
FEMA AML AML
comp=N,17100µm,0.3s
FEMA AML AML
comp=E,18248µm,0.3s
T1211 Morro Reatino 0.27 227 ⇑P **Pg 13 02 38.2 +1.6**
T1211 S **Sn 13 02 43.1 -2.4**
T1211 AML AML
comp=E,14200µm,0.4s
T1211 AML AML
comp=N,25700µm,0.4s
T1211 AML AML
comp=E,14550µm,0.4s
T1211 AML AML
comp=E,14200µm,0.3s
T1211 AML AML
comp=N,25750µm,0.4s
T1211 AML AML
comp=N,25850µm,0.4s
T1211 AML AML
comp=E,14550µm,0.3s
T1241 Roccafluvione, 0.27 58 ⇑P **Pb 13 02 37.6 +0.6**
T1241 S **Sg 13 02 41.5 +0.7**
T1241 AML AML
comp=E,14300µm,1.2s
T1241 AML AML
comp=N,13400µm,0.7s
T1241 AML AML
comp=E,14250µm,1.2s
T1241 AML AML
comp=E,14750µm,1.2s
T1241 AML AML
comp=E,14800µm,1.2s
T1241 AML AML
comp=N,13900µm,0.9s
CAMP Campotosto 0.28 130 ⇓P **Pb 13 02 37.8 +0.5**
CAMP S **Sg 13 02 42.2 +1.1**
CAMP AML AML
comp=N,7250µm,0.6s
CAMP AML AML
comp=E,7425µm,0.3s
ARRO Arrone 0.29 243 ⇑P **Pn 13 02 38.7 -1.4**
ARRO S **Sb 13 02 43.7 +1.7**
ARRO AML AML
comp=N,10385µm,1.2s
ARRO AML AML
comp=E,13000µm,0.2s
ARRO AML AML
comp=N,10395µm,1.2s
T1247 Pizzolo (AQ) 0.30 154 ⇓P **Pb 13 02 38.5 +0.8**
T1247 S **Sb 13 02 43.4 +1.1**
T1247 AML AML
comp=N,23450µm,1.1s
T1247 AML AML
comp=E,14500µm,1.2s
T1256 Bolognola (MC) 0.30 15 P **Pb 13 02 37.9 +0.1**
T1256 S **Sg 13 02 42.3 +0.4**
T1246 Crognaleto (TE 0.30 115 ⇑P **Pb 13 02 38.1 +0.4**
T1246 S **Sb 13 02 42.7 +0.3**
AM05 Amandola Campo 0.31 33 ⇑P **Pb 13 02 38.1 +0.3**
AM05 S **Sb 13 02 43.0 +0.3**
AM05 AML AML
comp=E,5425µm,0.3s
AM05 AML AML
comp=N,3790µm,0.3s
AM05 AML AML
comp=E,24600µm,0.3s
AM05 AML AML
comp=N,1370µm,0.1s
AM05 AML AML
comp=E,5430µm,0.3s
AM05 AML AML
comp=N,3795µm,0.3s
FDMO Fiordimonte 0.32 356 P **Pb 13 02 38.4 +0.4**
FDMO S **Sb 13 02 43.1 +0.2**
TERO Teramo 0.37 104 ⇑P **Pb 13 02 39.0 +0.2**
TERO S **Sb 13 02 44.4 +0.2**
TERO AML AML
comp=E,11750µm,1.3s
TERO AML AML
comp=N,16850µm,1.5s
TERO AML AML
comp=N,18000µm,1.5s
TERO AML AML
comp=N,16900µm,1.5s
TERO AML AML
comp=E,13000µm,1.3s
CSP1 Cessapalombo 0.38 9 P **Pb 13 02 39.4 +0.3**
CSP1 S **Sb 13 02 45.2 +0.4**
GUMA Gualdo di Mace 0.38 24 P **Pb 13 02 39.6 +0.6**
GUMA S **Sb 13 02 45.6 +1.0**
GUMA AML AML
comp=N,30300µm,0.6s
GUMA AML AML
comp=E,30850µm,0.5s
GUMA AML AML
comp=N,30350µm,0.5s
GUMA AML AML
comp=N,38550µm,0.5s
GUMA AML AML
comp=E,28850µm,0.3s
GUMA AML AML
comp=E,30850µm,0.6s
CESX Cesi 0.41 256 ⇑P **Pb 13 02 40.5 +1.1**
CESX S **Sn 13 02 47.7 -1.4**
CESX AML AML
comp=N,7435µm,0.4s
CESX AML AML
comp=E,7315µm,0.5s
AQU L'Aquila 0.41 150 P **Pb 13 02 40.4 +0.9**
AQU S **Sb 13 02 46.8 +1.2**
AQU AML AML
comp=E,3960µm,1.0s
AQU AML AML
comp=N,4365µm,0.6s
AQU AML AML
comp=E,3910µm,1.1s
AQU AML AML
comp=E,3965µm,1.0s
AQU AML AML
comp=N,4405µm,0.6s
GIGS Gran Sasso 0.42 128 P **Pb 13 02 40.0 +0.3**
GIGS S **Sb 13 02 46.2 +0.4**
GIGS AML AML
comp=E,2165µm,0.3s
GIGS AML AML
comp=N,1315µm,0.3s
FIAM Fiamignano 0.45 180 P **Pn 13 02 41.0 -1.3**
FIAM S **Sn 13 02 48.2 -1.8**
FIAM AML AML
comp=N,3895µm,0.6s
FIAM AML AML
comp=E,4940µm,0.7s
FIAM AML AML
comp=N,3106µm,0.6s
SEF1 Sefro 0.45 344 P **Pb 13 02 40.5 +0.3**
SEF1 AML AML
comp=E,9975µm,0.3s
SEF1 AML AML
comp=N,6645µm,0.3s
SEF1 AML AML
comp=E,9990µm,0.3s
SEF1 AML AML
comp=N,6650µm,0.3s
OFFI Offida 0.47 62 P **Pn 13 02 41.6 -1.0**
OFFI AML AML
comp=E,13150µm,0.5s
OFFI AML AML
comp=N,13250µm,0.5s
ASSB Assisi San Ben 0.47 314 P **Pb 13 02 41.2 +0.7**
ASSB S **Sb 13 02 48.6 +1.4**
ASSB AML AML
comp=N,5715µm,0.4s
ASSB AML AML
comp=E,6705µm,0.4s
PIO1 Pioraco 0.47 348 P **Pb 13 02 40.8 +0.2**
MDAR Monte D'Aria 0.48 2 P **Pb 13 02 41.0 +0.4**
MDAR S **Sb 13 02 48.2 +0.8**
FIU1 Fiuminata 0.49 344 P **Pb 13 02 41.6 +0.7**
MNTP Montappone 0.49 31 P **Pb 13 02 41.8 +0.9**
SSM1 San Severino M 0.52 5 P **Pg 13 02 41.6 +0.6**
GAG1 Gagliole 0.53 356 P **Pg 13 02 42.1 +0.9**
SNTG Esanatoglia 0.56 346 P **Pg 13 02 42.3 +0.5**
SNTG AML AML
comp=N,1970µm,0.9s
SNTG AML AML
comp=N,2245µm,0.5s
SNTG AML AML
comp=E,2095µm,0.7s
SNTG AML AML
comp=E,2180µm,0.7s
FAGN Fagnano 0.56 142 P **Pg 13 02 42.7 +0.8**
FAGN AML AML
comp=E,6290µm,0.5s
FAGN AML AML
comp=N,4880µm,0.3s
ATCC AVT- Casa Cast 0.59 323 P **Pg 13 02 43.1 +0.7**
ATCC AML AML
comp=E,4645µm,0.7s
ATCC AML AML
comp=N,3615µm,1.1s
TRTR Tortoreto Alta 0.59 81 ⇑P **Pn 13 02 44.1 -0.1**
TRTR AML AML
comp=N,13300µm,0.4s
TRTR AML AML
comp=E,13350µm,1.4s
TRE1 Treia 0.61 13 P **Pn 13 02 44.1 -0.5**
EL6 Elcito 0.61 359 P **Pg 13 02 43.5 +0.6**
EL6 AML AML
comp=E,3130µm,0.3s
EL6 AML AML
comp=N,4290µm,0.5s
EL6 AML AML
comp=E,3135µm,0.3s
EL6 AML AML
comp=N,3176µm,0.4s
VCEL Villa Celiera 0.62 121 P **Pn 13 02 44.1 -0.7**
VCEL AML AML
comp=E,6085µm,0.3s
VCEL AML AML
comp=N,5535µm,1.4s
VCEL AML AML
comp=E,6080µm,0.3s
FOSV Fossato di Vic 0.64 336 P **Pg 13 02 43.7 +0.4**
FOSV AML AML
comp=N,1835µm,0.3s
FOSV AML AML
comp=E,1840µm,0.5s
SRES S.Oreste - Sor 0.66 224 P **Pn 13 02 44.8 -0.4**
SRES AML AML
comp=E,1895µm,1.1s
SRES AML AML
comp=N,1570µm,0.4s
CADA Capodarco di F 0.67 44 P **Pn 13 02 45.7 +0.3**
T0110 Collepietro 0.69 135 P **Pn 13 02 44.9 -0.8**
T0110 AML AML
comp=E,6660µm,0.3s
T0110 AML AML
comp=N,4170µm,0.4s
MURB Monte Urbino 0.70 322 P **Pn 13 02 46.0 +0.2**
MURB AML AML
comp=N,8565µm,1.5s
MURB AML AML
comp=N,8645µm,1.4s
MURB AML AML
comp=N,8565µm,1.4s
MURB AML AML
comp=E,8220µm,0.4s
MURB AML AML
comp=E,8000µm,0.4s
CIMA Civitanova Mar 0.72 34 P **Pn 13 02 46.1 +0.2**
PTQR Pietraquaria 0.72 163 P **Pn 13 02 45.6 -0.5**
PTQR AML AML
comp=E,884µm,0.4s
PTQR AML AML
comp=N,712µm,0.5s
MMUR Monte Murano 0.73 353 P **Pg 13 02 45.8 +0.7**
ATTE AVT- Monte Tez 0.74 311 P **Pn 13 02 46.0 -0.4**
ATTE AML AML
comp=E,1210µm,0.7s
ATTE AML AML
comp=N,1290µm,0.4s
MTCE Montecelio 0.74 202 P **Pn 13 02 46.1 -0.3**
MTCE AML AML
comp=E,1775µm,0.8s
MTCE AML AML
comp=N,1275µm,0.8s
PP3 Marolino 0.75 28 P **Pn 13 02 46.2 -0.2**
PP3 AML AML
comp=E,11495µm,0.4s
PP3 AML AML
comp=N,11060µm,0.3s
PP3 AML AML
comp=E,10575µm,0.4s
PP3 AML AML
comp=E,11490µm,0.4s
PP3 AML AML
comp=N,11100µm,0.3s
PP3 AML AML
comp=E,10590µm,0.4s
PP3 AML AML
comp=N,12200µm,0.3s
MGAB Montegabbione 0.77 285 P **Pn 13 02 46.9 +0.2**
MGAB AML AML
comp=N,3840µm,0.3s
MGAB AML AML
comp=N,3910µm,0.4s
MGAB AML AML
comp=E,5260µm,1.4s
MGAB AML AML
comp=E,5840µm,1.5s
CERT Cerreto 0.77 188 P **Pn 13 02 46.6 -0.1**
CERT AML AML
comp=E,2660µm,1.1s
CERT AML AML
comp=N,2055µm,1.6s
ARVD Arcevia 0.80 351 P **Pg 13 02 46.7 +0.5**
ARVD AML AML
comp=N,999µm,0.8s
ARVD AML AML
comp=E,1055µm,0.6s
ATLO AVT- Montelove 0.80 319 P **Pn 13 02 47.1 0.0**
ATVA AVT- Monte Val 0.83 313 P **Pn 13 02 48.0 +0.4**
TB01 Gubbio 0.83 323 P **Pg 13 02 47.3 +0.3**
ATVO AVT- Monte Val 0.85 322 P **Pg 13 02 47.3 +0.1**
ATVO AML AML
comp=N,1072µm,0.4s
ATVO AML AML
comp=E,1085µm,1.6s
FRON Frontone 0.85 340 P **Pn 13 02 48.0 +0.1**
FRON AML AML
comp=E,1070µm,0.5s
FRON AML AML
comp=N,1505µm,0.6s
TB03 Pietralunga 0.86 323 P **Pg 13 02 47.7 +0.2**
ATBU Serra di Buran 0.87 331 P **Pn 13 02 48.4 +0.2**
RCAV Rocca di Cave 0.88 189 P **Pn 13 02 49.0 +0.8**
ATMI Monte Miggiano 0.88 315 AML AML
comp=E,4275µm,0.4s
ATMI AML AML
comp=N,4890µm,0.4s
SACS San Casciano d 0.90 279 P **Pn 13 02 49.4 +0.8**
SACS AML AML
comp=E,1295µm,1.4s
SACS AML AML
comp=N,1345µm,0.5s
ATPI Pietralunga - 0.91 325 P **Pn 13 02 49.0 +0.4**
AOI Ancona 0.91 23 P **Pb 13 02 48.3 +0.4**
AOI AML AML
comp=E,2035µm,0.4s
AOI AML AML
comp=N,1630µm,0.4s
ATPC Poggio Castell 0.91 328 P **Pn 13 02 48.7 +0.1**
VVLD Villa Vallelon 0.92 156 P **Pn 13 02 49.0 +0.2**
VVLD AML AML
comp=E,821µm,0.6s
VVLD AML AML
comp=N,1028µm,0.5s
VVLD AML AML
comp=E,822µm,0.6s
VVLD AML AML
comp=N,1028µm,0.5s
PIEI Pieia 0.93 333 P **Pg 13 02 49.6 +0.9**
PIEI AML AML
comp=E,930µm,0.3s
PIEI AML AML
comp=N,571µm,0.5s
GUAR Guarcino 0.93 171 P **Pn 13 02 49.5 +0.6**
MPAG Monte Paganucc 0.95 344 P **Pg 13 02 49.6 +0.4**
MPAG AML AML
comp=E,878µm,0.5s
MPAG AML AML
comp=N,814µm,1.1s
RMP Rome, Mte Porz 0.95 199 P **Pg 13 02 50.9 +1.7**
LATE Laterza 0.98 265 P **Pg 13 02 51.1 +1.5**
RDP Rocca di Papa 1.00 198 P **Pg 13 02 50.7 +0.6**
RDP AML AML
comp=E,3540µm,0.5s
RDP AML AML
comp=N,4015µm,1.4s
MA9 Marino 1.00 200 P **Pg 13 02 51.5 +1.4**
FSSB Fossombrone 1.01 346 P **Pb 13 02 49.9 +0.2**
FSSB AML AML
comp=E,2715µm,1.5s
FSSB AML AML
comp=N,4120µm,0.3s
CAFR Castel Frentan 1.03 118 AML AML
comp=N,1415µm,0.7s
CAFR AML AML
comp=E,1385µm,0.5s
LPEL Lama dei Pelig 1.03 130 P **Pn 13 02 50.3 0.0**
LPEL AML AML
comp=E,1355µm,0.4s
LPEL AML AML
comp=N,1024µm,0.5s
CAFI Castiglion Fio 1.05 306 P **Pg 13 02 51.6 +0.7**
CAFI AML AML
comp=E,992µm,0.5s
CAFI AML AML
comp=N,1405µm,0.4s
CAFI AML AML
comp=N,1404µm,0.4s
CAFI AML AML
comp=E,986µm,2.3s
TOLF Tolfa 1.05 232 P **Pg 13 02 51.9 +0.8**
TOLF AML AML
comp=E,1098µm,0.5s
TOLF AML AML
comp=N,622µm,0.3s
MCIV Monte Civitell 1.07 274 P **Pg 13 02 52.5 +1.2**
MCIV AML AML
comp=E,816µm,0.3s
MCIV AML AML
comp=N,716µm,0.7s
SF11 Podere del Sol 1.07 279 P **Pg 13 02 52.7 +1.2**
POFI Posta Fibreno 1.09 156 P **Pg 13 02 52.3 +0.5**
POFI AML AML
comp=E,910µm,0.5s
POFI AML AML
comp=N,646µm,1.0s
SF13 Bagnolo 1.11 276 P **Pg 13 02 53.3 +1.1**
SF14 Selvena 1.11 273 P **Pg 13 02 53.0 +0.9**
LRP Arpino 1.12 162 AML AML
comp=E,528µm,0.6s
LRP AML AML
comp=N,747µm,0.9s
SSP9 Sansepolcro 1.12 320 P **Pg 13 02 52.6 +0.2**
SSP9 AML AML
comp=E,556µm,0.7s
SSP9 AML AML
comp=N,740µm,0.7s
GIUL Giuliano Di Ro 1.16 175 P **Pg 13 02 52.8 -0.3**
GIUL AML AML
comp=E,538µm,0.7s
GIUL AML AML
comp=N,684µm,0.7s
ARCI Arcidosso 1.22 277 P **Pg 13 02 55.1 +0.9**
ARCI AML AML
comp=E,274µm,0.6s
ARCI AML AML
comp=N,168µm,0.3s
LATB Latina 1.23 186 P **Pg 13 02 55.0 +0.6**
CRE Caprese Michel 1.25 317 P **Pg 13 02 54.8 +0.1**
CRE AML AML
comp=E,491µm,0.6s
CRE AML AML
comp=N,574µm,1.2s
CERA Filignano 1.30 149 P **Pg 13 02 55.9 +0.1**
MIDA Miranda 1.36 141 P **Pb 13 02 55.8 +0.1**
ASQU Asqua 1.46 319 P **Pb 13 02 58.1 +0.8**
MAON Monte Argentar 1.50 260 P **Pg 13 02 59.2 -0.2**
MAON AML AML
comp=E,236µm,1.6s
MAON AML AML
comp=N,170µm,0.6s
SFI Santa Sofia 1.51 322 P **Pg 13 02 59.5 -0.3**
FROS Frosini 1.52 290 P **Pg 13 02 59.9 -0.1**
CSNT Castellina Chi 1.54 300 P **Pg 13 03 00.4 +0.1**
OSSC Osservatorio P 1.59 301 P **Pb 13 03 00.1 +0.5**
BSSO Busso 1.60 136 P **Pg 13 03 00.9 -0.5**
RUFI Rufina 1.63 314 P **Pb 13 03 00.9 +0.7**
CASP Castiglione de 1.66 273 P **Pb 13 03 01.3 +0.5**
CASP AML AML
comp=E,146µm,0.4s
CASP AML AML
comp=N,93µm,0.7s
MELA Melanico ??? S 1.80 123 AML AML
comp=E,913µm,0.5s
MELA AML AML
comp=E,869µm,0.6s
MELA AML AML
comp=N,934µm,1.3s
MELA AML AML
comp=N,908µm,0.6s
A318A Donoratico (LI 1.92 283 P **Pb 13 03 05.5 +0.4**
MPPT Montemurlo 1.93 311 P **Pb 13 03 05.5 0.0**
MTCR Monte La Croce 2.03 311 P **Pb 13 03 06.8 -0.3**
APRC Apricena 2.04 117 P **Pb 13 03 06.7 -0.5**
APRC AML AML
comp=E,386µm,1.3s
APRC AML AML
comp=N,600µm,0.4s
CELB S.Piero in Cam 2.15 272 AML AML
comp=E,164µm,0.1s
CELB AML AML
comp=N,156µm,0.1s
SGRT San Giovanni R 2.17 115 P **Pb 13 03 09.0 -0.5**
SGRT AML AML
comp=E,380µm,0.8s
SGRT AML AML
comp=N,432µm,0.4s
ZCCA Zocca 2.26 317 AML AML
comp=E,120µm,0.8s
ZCCA AML AML
comp=N,116µm,0.7s
VULT Monte Vulture 2.56 132 AML AML
comp=N,523µm,0.9s
VULT AML AML
comp=E,567µm,0.9s
VULT AML AML
comp=E,217µm,0.8s
VULT AML AML
comp=N,288µm,0.9s
MORSI Morsiglia 2.77 276 P **Pb 13 03 17.8 -1.9**
MORSI S **Sb 13 03 52.1 -1.3**
SMPL Sampolo 2.91 259 P **Pb 13 03 19.1 -3.0**
SMPL S **Sb 13 03 56.7 -0.6**
PGF Pioggiola 3.05 268 eP **Pb 13 03 21.8 -2.6**
PGF Pioggiola 3.05 268 AML AML
comp=E,22µm,1.4s
PGF AML AML
comp=N,22µm,1.0s
PGF Pioggiola 3.05 268 P **Pb 13 03 21.9 -2.6**
PGF S **Sb 13 03 59.0 -2.4**
AMUR Altamura 3.17 124 AML AML
comp=N,142µm,0.5s
AMUR AML AML

	comp=E,132μm,0.4s					
CGRP	**Cima Grappa**	**3.31 344**	AML	AML		
	comp=E,153μm,0.4s					
CGRP			AML	AML		
	comp=N,153μm,0.6s					
LTRZ	**Laterza**	**3.48 126**	AML	AML		
	comp=N,55000μm,1.6s					
LTRZ			AML	AML		
	comp=E,50000μm,1.6s					
NOCI	**Noci**	**3.52 122**	AML	AML		
	comp=E,119μm,0.4s					
NOCI			AML	AML		
	comp=N,119μm,1.6s					
STAL	**STALIGIAL**	**3.56 355**	AML	AML		
	comp=N,72μm,0.7s					
STAL			AML	AML		
	comp=E,103μm,0.3s					
CIMO	**Cimolais**	**3.63 353**	AML	AML		
	comp=E,31μm,0.4s					
CIMO			AML	AML		
	comp=N,27μm,0.5s					
ACOM	**Acomizza, Ital**	**3.84 4**	AML	AML		
	comp=E,97μm,0.4s					
ACOM			AML	AML		
	comp=N,93μm,0.5s					
MYKA	**Terra Mystica**	**3.93 5**	*e*Pn	**Pb**	**13 03 35.9**	**-3.6**
	comp=N,3.3nm,0.3s					
ABTA	**Abfaltersbach**	**4.06 354**	*e*Pn	**Pn**	**13 03 35.8**	**+3.9**
	comp=N,10nm,0.4s					
SAOF	**Saorge**	**4.25 289**	P	**Pn**	**13 03 38.2**	**+3.5**
SBF	**Sospel**	**4.31 287**	*e*Pn	**Pn**	**13 03 35.6**	**+0.2**
SBF	**Sospel**	**4.31 287**	*e*P	**Pn**	**13 03 38.7**	**+3.3**
FETA	**Feichten**	**4.63 339**	*e*Pn	Pn	13 03 45.3	+5.4
	comp=N,3.2nm,0.4s					
CALF	**Calern**	**4.65 285**	P	**Pn**	**13 03 43.8**	**+3.7**
WTTA	**Wattenberg**	**4.67 347**	*e*Pn	Pn	13 03 45.9	+5.4
	comp=N,2.0nm,0.3s					
SQTA	**Sankt Quirin**	**4.71 344**	*e*Pn	Pn	13 03 46.5	+5.6
	comp=N,2.6nm,0.2s					
WATA	**Walderalm**	**4.75 347**	*e*Pn	Pb	13 03 47.6	-5.8
	comp=N,4.0nm,0.3s					
ARSA	**Arzberg**	**4.85 20**	*e*Pn	Pn	13 03 47.5	+4.7
	comp=N,1.8nm,0.3s					
MOTA	**Moosalm**	**4.85 344**	*e*Pn	Pn	13 03 48.2	+5.3
	comp=N,1.3nm,0.3s					
LMR	**La Mourre**	**4.89 280**	*e*Pn	**Pn**	**13 03 44.4**	**+1.1**
LMR	**La Mourre**	**4.89 280**	*e*P	**Pn**	**13 03 47.1**	**+3.8**
SURF	**Saint Ours**	**4.91 293**	P	**Pn**	**13 03 48.0**	**+4.2**
JAUF	**Jausiers**	**4.94 292**	P	Pn	13 03 49.2	+5.1
BIOA	**Bad Ischl, Aus**	**4.99 4**	*e*Pn	Pn	13 03 50.0	+5.3
	comp=N,4.7nm,0.3s					
TRIGF	**Trigance**	**5.01 284**	P	**Pn**	**13 03 49.2**	**+4.1**
MBDF	**Montbardon**	**5.02 296**	*e*P	Pn	13 03 50.5	+5.2
MBDF			*e*Sn	**Sn**	**13 04 41.7**	**-1.3**
	comp=N,5.8nm,0.6s					
RETA	**Reutte**	**5.06 342**	*e*Pn	Pn	13 03 51.4	+5.7
	comp=N,2.0nm,0.3s					
CREF	**Crivoux**	**5.06 293**	P	Pn	13 03 51.6	+5.7
DAVA	**Damuels**	**5.12 334**	*e*Pn	Pn	13 03 51.9	+5.4
	comp=N,1.8nm,0.3s					
LPG	**La Plagne**	**5.36 303**	*e*P	Pn	13 03 55.5	+5.4
LPG			*e*Sn	**Sn**	**13 04 50.3**	**-1.3**
	comp=N,11nm,0.9s					
LPL	**La Plagne**	**5.38 304**	*e*P	Pn	13 03 55.2	+4.9
LPL			*e*Sn	**Sn**	**13 04 50.8**	**-1.2**
	comp=N,4.6nm,0.6s					
ARTF	**Artigues**	**5.42 282**	P	**Pn**	**13 03 54.6**	**+3.9**
RONA	**Rosalia, Austr**	**5.47 23**	*e*Pn	Pn	13 03 56.8	+5.5
	comp=N,2.2nm,0.3s					
RSL	**Roselend**	**5.54 305**	P	Pn	13 03 57.9	+5.6
CONA	**Conrad Observa**	**5.56 19**	*e*Pn	**Pn**	**13 03 56.0**	**+3.3**
	comp=N,1.6nm,0.3s					
SMRF	**Simiane la Rot**	**5.65 285**	*e*Pn	**Pn**	**13 03 54.5**	**+0.8**
SMRF	**Simiane la Rot**	**5.65 285**	*e*P	Pn	13 03 58.5	+4.8
SMRF			*e*Sn	**Sn**	**13 04 56.7**	**-1.5**
	comp=N,24nm,1.5s					
ORIF	**Oris-en-Rattie**	**5.68 295**	*e*P	Pn	13 04 00.3	+6.0
ORIF			*e*Sn	**Sn**	**13 04 57.5**	**-1.7**
	comp=N,8.0nm,0.8s					
CABF	**La Chapelle**	**6.35 310**	*e*P	Pn	13 04 09.0	+5.5
KHC	**Kasperske Hory**	**6.43 3**	*e*PN	**Pn**	**13 04 07.5**	**+3.1**
KHC			*e*SN	**Sn**	**13 05 18.6**	**+1.3**
VIVF	**Saint-Julien-l**	**6.48 292**	*e*P	Pn	13 04 10.1	+4.9
VIVF			*e*Sn	**Sn**	**13 05 15.9**	**-2.8**
	comp=N,14nm,1.4s					
HINF	**Hinteralfeld**	**6.75 321**	*e*Pn	**Pn**	**13 04 09.3**	**+0.4**
HINF	**Hinteralfeld**	**6.75 321**	*e*P	Pn	13 04 13.7	+4.8
HINF			*e*Sn	**Sn**	**13 05 23.5**	**-1.9**
	comp=N,7.7nm,0.5s					
LASF	**Ste Croix**	**6.88 285**	*e*P	Pn	13 04 15.3	+4.6
CDF	**Champ du Feu**	**7.02 326**	*e*Pn	**Pn**	**13 04 14.4**	**+1.8**
CDF	**Champ du Feu**	**7.02 326**	*e*P	Pn	13 04 17.2	+4.6
HAU	**Haudompre**	**7.12 320**	*e*Pn	**Pn**	**13 04 15.6**	**+1.6**
HAU	**Haudompre**	**7.12 320**	*e*P	Pn	13 04 18.7	+4.7
HAU			*e*Sn	**Sn**	**13 05 32.4**	**-2.1**
	comp=N,9.2nm,0.5s					
SMF	**Signal de Mont**	**7.69 304**	*e*P	Pn	13 04 27.6	+5.8
SMF			*e*Sn	**Sn**	**13 05 46.1**	**-2.4**
	comp=N,6.0nm,0.8s					
SFTF	**Sexfontaines**	**7.90 317**	*e*Pn	**Pn**	**13 04 25.9**	**+1.3**
	baz=137					
LOR	**Lormes**	**7.99 308**	*e*P	Pn	13 04 31.8	+5.9
	baz=128					
LOR			*e*Sn	**Sn**	**13 05 52.7**	**-3.0**
	comp=N,24nm,1.4s					
MTLF	**Montolieu**	**8.01 278**	*e*P	Pn	13 04 33.0	+6.8
AVF	**Avril sur Loir**	**8.06 304**	*e*Pn	**Pn**	**13 04 28.5**	**+1.7**
MEZF	**Maizieres J'vi**	**8.09 318**	*e*Pn	**Pn**	**13 04 29.0**	**+1.8**
	baz=140					
SSF	**Saint Saulge**	**8.09 306**	*e*P	Pn	13 04 33.6	+6.3
SAVF	**Savonnieres en**	**8.13 319**	*e*Pn	**Pn**	**13 04 29.5**	**+1.7**
	baz=138					
CAF	**Calviac**	**8.30 289**	*e*P	Pn	13 04 36.2	+6.1
CLL	**Collm**	**8.60 360**	*ex*	x	13 06 08.0	
CLL			*ex*	x	13 06 17.0	
CLL			*e*(Sg)	Sn	13 07 04.0	+53
HYF	**Humbligny**	**8.71 305**	*e*Pn	**Pn**	**13 04 37.1**	**+1.3**
RJF	**Les Rejaudoux**	**8.76 291**	*e*P	Pn	13 04 42.1	+5.7
LFF	**La Frestale**	**9.22 288**	*e*Pn	**Pn**	**13 04 43.6**	**+0.8**
MFF	**Saint Martin d**	**10.22 297**	*e*Pn	**Pn**	**13 04 56.9**	**+0.5**
LDF	**La Druitiere**	**10.97 307**	*e*Pn	**Pn**	**13 05 07.4**	**+0.7**
SGMF	**Saint Gilles**	**12.31 302**	*e*P	P	13 05 31.5	-5.7

MAN 30 13:06:50.8, 8°.28N×125°.85E, h22km, mb3.8, ML2.6, MS2.1, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASP	**Talacogon, Agu**	**0.18**	**347**	‖ *i* P	Pb	13 06 57.3	+1.0
TASP				*i* S	Sb	13 07 01.0	+0.9
BIPH	**Bislig**	**0.51**	**100**	‖ *e* P	Pb	13 07 01.3	+0.1
BIPH				*i* S	Sb	13 07 08.3	+0.1
CDOP	**Cateel, Davao**	**0.76**	**130**	‖ *i* P	Pn	13 07 06.0	-0.2
CDOP				*i* S	Sn	13 07 16.7	-0.3

*NOU **30** 13:08:19.2, 16°.90S×169°.02E, h255km, MLv4.2/11, Vanuatu Islands*
*NEIC **30** 13:08:20.8±1.1, 16°.95S±0°.10×168°.7E±0°.1, h226km±7km, mb4.5/56, Error ellipse: s-maj=18.8km s-min=14.1km az=97.0*
*IDC **30** 13:08:22.1±1.4, 16°.99S×168°.65E, h246km±13km, mb3.8/17, mbtmp4.3/19, Error ellipse: s-maj=14.2km s-min=12.1km az=130.0*

ISC 30 13:08:22.6±0.4, 17°.07S±0°.06×168°.70E±0°.07, h250km, n120, σ0=96/122, mb4.3/40, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.77**	**200**	P	**Pn**	**13 08 55.4**	**-1.1**
DVP	**Devils Point**	**0.82**	**217**	P	**Pn**	**13 08 55.5**	**-1.2**
LIFNC	**LIFOU**	**3.94**	**200**		**Pn**	**13 09 23.6**	**-2.1**
MARNC	**Mare, Loyalty**	**4.43**	**188**		**Pn**	**13 09 29.4**	**-2.2**
MARNC	**Mare, Loyalty**	**4.43**	**188**	P	**Pn**	**13 09 29.6**	**-2.0**
DZM	**Mont Dzumac**	**5.41**	**203**	P	**Pn**	**13 09 43.7**	**+0.1**
	17nm,0.6s,baz=118,slow=11,SNR=48						
DZM				S	**S**	**13 10 48.1**	**-0.1**
	37nm,0.6s,baz=132,slow=20,SNR=11						
DZM	**Mont Dzumac**	**5.41**	**203**	Pn	**Pn**	**13 09 43.0**	**-0.6**
DZM	**Mont Dzumac**	**5.41**	**203**	P	**Pn**	**13 09 43.9**	**+0.3**
KOUNC	**Koumac, New Ca**	**5.43**	**230**	P	**Pn**	**13 09 44.8**	**+1.1**
NOUC	**Port Laguerre**	**5.49**	**204**	P	**Pn**	**13 09 44.6**	**+0.1**
MSVF	**Nonsavu**	**8.95**	**96**	P	**Pn**	**13 10 29.5**	**+1.5**
	28nm,0.9s,baz=246,slow=8.2,SNR=9.3						
MSVF	**Nonsavu**	**8.95**	**96**		**Pn**	**13 10 30.3**	**+2.2**
HNR	**Honiara**	**11.41**	**311**	P	**Pn**	**13 10 58.3**	**-0.6**
	1μm,0.6s,baz=184,slow=1.5,SNR=12						
HNR	**Honiara**	**11.41**	**311**	P	**Pn**	**13 10 58.7**	**-0.3**
CTA	**Charters Tower**	**21.49**	**258**	P	**P**	**13 12 51.8**	**-0.2**
	2.3nm,0.4s,baz=73,slow=8.3,SNR=8.2						
	2.3nm,0.4s						
CTAO	**Charters Tower**	**21.49**	**258**	P	**P**	**13 12 52.3**	**+0.2**
CTAO				IAmb	IAmb	13 13 32.2	
	comp=Z,17nm,1.4s						
HIZ	**Hauiti**	**22.04**	**167**	P	**P**	**13 12 59.2**	**+2.3**
URZ	**Urewera**	**22.36**	**162**	P	**P**	**13 13 01.3**	**+1.4**
	comp=Z,8.5nm,0.5s,baz=3.4,slow=2.0,SNR=10						
	comp=Z,8.5nm,0.5s						
URZ	**Urewera**	**22.36**	**162**	P	**P**	**13 13 00.6**	**+0.7**
URZ				IAmb	IAmb	13 13 04.7	
	comp=Z,33nm,1.2s						
BKZ	**Black Stump Fm**	**23.04**	**164**	P	**P**	**13 13 07.0**	**+0.9**
LTZ	**Lake Taylor**	**25.81**	**174**	P	**P**	**13 13 31.8**	**+0.8**
LTZ				IAmb	IAmb	13 13 40.2	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**28.64**	**234**	P	**P**	**13 13 57.0**	**+0.7**
	comp=Z,3.6nm,0.5s,baz=66,slow=6.3,SNR=5.0						
STKA				PcP	**PcP**	**13 16 59.9**	**-0.6**
	comp=Z,3.2nm,0.9s,baz=47,slow=6.6,SNR=3.0						
	comp=Z,3.6nm,0.5s						
STKA	**Stephens Creek**	**28.64**	**234**	P	**P**	**13 13 57.0**	**+0.7**
WR0	**Warramunga Arr**	**32.49**	**260**	P	**P**	**13 14 29.2**	**-1.0**
WR0				IAmb	IAmb	13 14 50.2	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**32.63**	**260**	P	**P**	**13 14 30.5**	**-1.0**
WRAB	**Tennant Creek**	**32.67**	**260**	P	**P**	**13 14 30.9**	**-0.8**
WRAB				IAmb	IAmb	13 14 46.3	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**32.68**	**260**	P	**P**	**13 14 30.6**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=83,slow=8.4,SNR=12						
WRA				PcP	**PcP**	**13 17 11.1**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=89,slow=3.4,SNR=7.7						
	comp=Z,1.6nm,0.9s						
AS31	**Alice Springs**	**33.21**	**253**	P	**P**	**13 14 35.5**	**-1.0**
ASAR	**Alice Springs**	**33.22**	**253**	P	**P**	**13 14 35.8**	**-0.7**
	comp=Z,11nm,0.6s,baz=79,slow=9.1,SNR=220						
ASAR				PcP	**PcP**	**13 17 12.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=94,slow=2.8,SNR=8.3						
ASAR				ScP	**ScP**	**13 20 34.6**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=93,slow=4.3,SNR=6.8						
	comp=Z,11nm,0.6s						
ASAR	**Alice Springs**	**33.22**	**253**	P	**P**	**13 14 35.3**	**-1.2**
BBOO	**Buckleboo**	**33.32**	**236**	P	**P**	**13 14 37.2**	**-0.1**
MTN	**Manton Dam**	**36.50**	**271**	P	**P**	**13 15 04.3**	**-0.3**
MTN				IAmb	IAmb	13 15 46.8	
	comp=Z,10nm,1.1s						
KNRA	**Kununurra**	**38.30**	**266**	P	**P**	**13 15 18.7**	**-0.9**
KNRA				IAmb	IAmb	13 15 23.7	
	comp=Z,34nm,1.4s						
FAKI	**Fak Fak**	**38.45**	**287**	P	**P**	**13 15 19.7**	**-1.2**
FAKI				IAmb	IAmb	13 15 23.1	
	comp=Z,24nm,1.1s						
FORT	**Forrest**	**39.36**	**242**	P	**P**	**13 15 27.9**	**-0.3**
PSA00	**Pilbara Seismi**	**46.18**	**256**	P	**P**	**13 16 22.6**	**-0.3**
MJAR	**Matsushiro Arr**	**60.60**	**332**	P	**P**	**13 18 06.2**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=167,slow=8.0,SNR=2.2						
	comp=Z,0.7nm,0.5s						
JSD	**Sado**	**61.83**	**333**	P	**P**	**13 18 15.4**	**+0.1**
CASY	**Casey**	**61.91**	**203**	P	**P**	**13 18 16.0**	**+0.5**
CASY				IAmb	IAmb	13 18 55.3	
	comp=Z,13nm,1.4s						
YSS	**Yuzh-Sakhalins**	**67.87**	**341**	P	**P**	**13 18 54.6**	**+0.5**
USA0B	**Ussuriysk Arra**	**69.58**	**333**	P	**P**	**13 19 05.5**	**+0.8**
USRK	**Ussuriysk Ar.**	**69.58**	**333**	P	**P**	**13 19 04.9**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=141,slow=5.8,SNR=6.4						
	comp=Z,3.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**69.58**	**333**	P	**P**	**13 19 05.6**	**+0.9**
PET	**Petropavlovsk**	**70.34**	**354**	P	**P**	**13 19 08.3**	**-0.6**
PEA0B	**Petropavlovsk-**	**70.53**	**353**	P	**P**	**13 19 09.8**	**-0.4**
PETK	**Petropavlovsk-**	**70.53**	**353**	P	**P**	**13 19 09.9**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=147,slow=6.9,SNR=12						
	comp=Z,3.6nm,0.6s						
PETK	**Petropavlovsk-**	**70.53**	**353**	P	**P**	**13 19 09.6**	**-0.5**
KULM	**Kulim**	**70.77**	**282**	P	**P**	**13 19 11.9**	**-0.7**
KULM				IAmb	IAmb	13 19 13.5	
	comp=Z,7.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**77.16**	**294**	P	**P**	**13 19 50.5**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=130,slow=5.2,SNR=4.5						
	comp=Z,1.3nm,0.5s						
PZH	**PanZhiHua**	**78.11**	**303**	P	**P**	**13 19 56.0**	**+1.4**
HHC	**Hu-ho-hao-te**	**78.25**	**319**	*e*P	**P**	**13 19 57.3**	**+2.3**
MAW	**Mawson**	**80.24**	**202**	P	**P**	**13 20 06.1**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=180,slow=4.2,SNR=2.3						
	comp=Z,1.1nm,0.7s						
MAW	**Mawson**	**80.24**	**202**	P	**P**	**13 20 06.8**	**+1.7**
OHAK	**Old Harbor**	**80.49**	**20**	P	**P**	**13 20 06.4**	**-0.1**
SEY	**Seymchan**	**80.76**	**353**	P	**P**	**13 20 06.9**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=147,slow=6.4,SNR=11						
	comp=Z,3.0nm,0.7s						
LZH	**Lanzhou**	**80.90**	**312**	*e*P	**P**	**13 20 10.0**	**+0.6**
LZH				pP	PcP	13 20 17.3	+2.1
LZH				sP	pP	13 20 20.3	-48
P18K	**Big Mountain,**	**81.66**	**18**	P	**P**	**13 20 11.4**	**-1.3**
P18K				IAmb	IAmb	13 20 12.4	
	comp=Z,12nm,0.9s						
Q19K	**Cape Douglas,**	**81.76**	**19**	P	**P**	**13 20 12.9**	**-0.3**
O18K	**Koktuh Hills**	**82.05**	**17**	P	**P**	**13 20 13.8**	**-0.9**
SVW2	**Sparrevohn**	**82.97**	**17**	P	**P**	**13 20 19.3**	**-0.1**
SVW2				IAmb	IAmb	13 20 38.5	
	comp=Z,8.0nm,1.1s						
CNPM	**China Poot**	**82.98**	**19**	P	**P**	**13 20 19.8**	**+0.3**
N19K	**Bonanza Creek**	**83.05**	**17**	P	**P**	**13 20 18.8**	**-1.1**
N19K				IAmb	IAmb	13 20 45.8	
	comp=Z,12nm,1.2s						
RSO	**Redoubt South**	**83.26**	**18**	P	**P**	**13 20 20.2**	**-0.9**
L19K	**White Mountain**	**84.07**	**16**	P	**P**	**13 20 25.1**	**+0.1**
L19K				IAmb	IAmb	13 20 27.7	
	comp=Z,14nm,1.1s						
M20K	**Styx River**	**84.30**	**17**	P	**P**	**13 20 26.9**	**+0.7**
M20K				IAmb	IAmb	13 20 32.2	
	comp=Z,9.9nm,1.4s						
SONM	**Songino Array**	**85.19**	**323**	P	**P**	**13 20 30.9**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=154,slow=5.4,SNR=13						
	comp=Z,2.3nm,0.8s						
SONM	**Songino Array**	**85.19**	**323**	P	**P**	**13 20 31.0**	**0.0**
GTA	**Gaotai**	**85.27**	**314**	*e*P	**P**	**13 20 32.3**	**+0.7**
GTA				pP	pP	13 21 22.0	-9.5
GTA				sP	sP	13 21 44.3	-13
GTA				PP	**PP**	**13 23 57.5**	**+4.0**
SMAI	**San Martin Ant**	**86.04**	**162**	P	**P**	**13 20 34.2**	**-0.5**
AFDM	**Forest Hills D**	**86.07**	**47**	P	**P**	**13 20 35.7**	**+0.2**
AFDM				IAmb	IAmb	13 20 36.2	
	comp=Z,7.5nm,1.2s						
CMB	**Columbia Colle**	**86.10**	**48**	P	**P**	**13 20 35.9**	**+0.3**
CMB				IAmb	IAmb	13 20 37.0	
	comp=Z,4.8nm,1.0s						
BEKR	**Beckworth**	**86.89**	**47**	P	**P**	**13 20 39.4**	**-0.2**
ESJX	**Sierra Juarez**	**87.04**	**55**	P	**P**	**13 20 40.9**	**+0.4**
IMAR	**Indian Mountai**	**87.47**	**14**	P	**P**	**13 20 42.1**	**+0.6**
PAHR	**Pah Rah Range**	**87.51**	**47**	P	**P**	**13 20 42.9**	**+0.4**
K05A	**Summer Lake**	**87.76**	**44**	P	**P**	**13 20 44.3**	**+0.7**
K05A				IAmb	IAmb	13 20 46.6	
	comp=Z,17nm,1.4s						
NVAR	**Mina Array Bea**	**87.76**	**49**	P	**P**	**13 20 43.6**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=230,slow=8.0,SNR=11						
	comp=Z,2.1nm,0.8s						
NVAR	**Mina Array Bea**	**87.76**	**49**	P	**P**	**13 20 44.0**	**+0.2**
MOD	**Modoc Plateau**	**87.80**	**45**	P	**P**	**13 20 44.0**	**+0.1**
CCB	**Clear Creek Bu**	**87.97**	**17**	P	**P**	**13 20 43.9**	**+0.1**
KVN	**Kaiserville**	**88.15**	**48**	P	**P**	**13 20 45.8**	**+0.2**
KVN				IAmb	IAmb	13 20 46.3	
	comp=Z,7.6nm,1.4s						
PINE	**Pine Mountain**	**88.19**	**43**	P	**P**	**13 20 46.9**	**+1.2**
PINE				IAmb	IAmb	13 20 46.9	
	comp=Z,4.4nm,0.8s						
ILAR	**Eielson Array**	**88.32**	**17**	P	**P**	**13 20 43.3**	**-2.3**
	comp=Z,1.2nm,0.8s,baz=238,slow=4.8,SNR=16						
	comp=Z,1.2nm,0.8s						
WCT	**Wildcat Mounta**	**88.34**	**51**	P	**P**	**13 20 46.9**	**+0.5**
TPH	**Tonopah**	**88.40**	**49**	P	**P**	**13 20 47.0**	**+0.3**
TPH				IAmb	IAmb	13 20 47.9	
	comp=Z,7.4nm,0.7s						
J25K	**Salcha River,**	**88.65**	**18**	P	**P**	**13 20 47.2**	**+0.1**
I07A	**Izee**	**89.25**	**43**	P	**P**	**13 20 51.0**	**+0.5**
I07A				IAmb	IAmb	13 20 51.6	
	comp=Z,5.7nm,0.8s						
BMN	**Battle Mountai**	**89.32**	**47**	P	**P**	**13 20 51.2**	**+0.2**
BMN				IAmb	IAmb	13 20 51.6	
	comp=Z,4.3nm,0.7s						
J08A	**Circle Bar Ran**	**89.63**	**44**	P	**P**	**13 20 52.5**	**+0.2**
J08A				IAmb	IAmb	13 20 53.2	
	comp=Z,6.5nm,0.8s						
PRN	**Pahroc Range**	**89.74**	**51**	P	**P**	**13 20 53.4**	**+0.4**
PRN				IAmb	IAmb	13 20 54.3	
	comp=Z,5.2nm,0.9s						
LTY	**Liberty**	**89.86**	**40**	P	**P**	**13 20 52.9**	**-0.3**
LTY				IAmb	IAmb	13 20 53.6	
	comp=Z,3.1nm,0.8s						
TROLL	**Troll, Antarti**	**90.65**	**184**	P	**P**	**13 20 56.2**	**-0.4**
SNAA	**Sanae**	**91.30**	**183**	P	**P**	**13 20 58.9**	**-0.7**
VNA3	**Neumayer Olymp**	**91.91**	**181**	P	**P**	**13 21 01.5**	**-0.9**
VNA2	**Neumayer--Watz**	**92.19**	**181**	P	**P**	**13 21 03.0**	**-0.6**
	baz=176,slow=5.0						
VNA1	**Neumayer--Stat**	**92.48**	**181**	P	**P**	**13 21 04.4**	**-0.5**
WMQ	**Urumqi**	**95.34**	**314**	*e*P	**P**	**13 21 19.8**	**+1.3**
PDAR	**Pinedale Array**	**95.52**	**47**	P	**P**	**13 21 18.4**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=171,slow=2.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**96.18**	**61**	P	**P**	**13 21 22.4**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=231,slow=5.0,SNR=6.1						
	comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**99.83**	**316**	P	**Pdif**	**13 21 38.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=91,slow=5.8,SNR=5.5						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**122.85**	**345**	PKP	**PKPdf**	**13 26 47.3**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=71,slow=2.3,SNR=32						
FINES	**FINESS Array B**	**128.39**	**338**	PKP	**PKPdf**	**13 26 58.3**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=270,slow=0.4,SNR=5.1						
NB2	**NORSAR Subarra**	**133.23**	**345**	PKPdf	**PKPdf**	**13 27 08.3**	**0.0**
	comp=Z,2.9nm,1.2s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**133.23**	**345**	PKP	**PKPdf**	**13 27 07.3**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=34,slow=2.1,SNR=4.2						
HFS	**Hagfors**	**133.35**	**343**	PKP	**PKPdf**	**13 27 07.7**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=116,slow=6.6,SNR=2.1						
BRTR	**Keskin Array B**	**135.06**	**310**	PKP	**PKPdf**	**13 27 12.8**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=15,slow=6.1,SNR=2.8						
EKA	**Eskdalemuir Ar**	**141.30**	**353**	PKhKP	PKPpre	13 27 17.0	
	comp=Z,0.3nm,0.5s,baz=1.6,slow=2.0,SNR=4.2						
SOKA	**Soboth**	**143.30**	**329**	*e*P	**PKPdf**	**13 27 26.8**	**-0.4**
	comp=Z,5.0nm,0.5s						
MYKA	**Terra Mystica**	**144.01**	**330**	*e*P	**PKPdf**	**13 27 27.4**	**-1.0**
	comp=Z,5.5nm,0.4s						
WATA	**Walderalm**	**144.41**	**333**	*e*P	PKPbc	13 27 28.0	-0.4
	comp=Z,3.1nm,0.5s						
WTTA	**Wattenberg**	**144.44**	**333**	*i* P	**PKPdf**	**13 27 28.7**	**-0.6**
	comp=Z,6.9nm,0.4s						
ABTA	**Abfaltersbach**	**144.44**	**331**	*e*P	**PKPab**	**13 27 27.6**	**-0.6**
	comp=Z,13nm,0.6s						
MOTA	**Moosalm**	**144.61**	**333**	*i* P	PKPbc	13 27 28.7	-0.3
	comp=Z,25nm,0.9s,SNR=8.0						
RETA	**Reutte**	**144.65**	**334**	*i* P	PKPbc	13 27 28.7	-0.3
	comp=Z,10nm,0.5s,SNR=5.5						
SQTA	**Sankt Quirin**	**144.66**	**333**	*i* P	PKPbc	13 27 28.9	-0.2
	comp=Z,23nm,0.6s,SNR=14						
FETA	**Feichten**	**145.03**	**333**	*e*P	**PKPab**	**13 27 30.2**	**-0.3**
	comp=Z,21nm,0.8s						
DAVA	**Damuels**	**145.17**	**334**	*i* P	**PKPab**	**13 27 30.8**	**-0.3**
	comp=Z,17nm,0.9s,SNR=4.5						
DAVOX	**Davos/Dischmat**	**145.57**	**334**	PKPbc	**PKPbc**	**13 27 31.9**	**-0.1**
	comp=Z,7.8nm,0.5s,baz=208,slow=9.7,SNR=4.1						
ESDC	**Sonseca Array**	**156.59**	**346**	PKPab	**PKPab**	**13 28 17.6**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=12,slow=4.0,SNR=6.9						
TORD	**Torodi Ar. Bea**	**166.86**	**255**	PKP	**PKPdf**	**13 27 58.5**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=256,slow=2.3,SNR=4.5						
TORD				PKPab	**pPKPdf**	**13 29 02.0**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=104,slow=4.2,SNR=4.2						

**ROM 30 13:13:22.5±0.1, 42°.798N±

	comp=E,1243μm,0.2s					
T1241				AML	AML	
	comp=N,706μm,0.3s					
LNSS	**Leonessa**	**0.22**	**207**	AML	AML	
	comp=E,1590μm,0.2s					
LNSS				AML	AML	
	comp=N,3515μm,0.3s					
AM05	**Amandola Campo**	**0.22**	**36**	P	Pg	13 13 27.6 +0.5
AM05				S	Sg	13 13 31.2 +1.0
AM05				AML	AML	
	comp=E,591μm,0.3s					
AM05				AML	AML	
	comp=N,692μm,1.0s					
AM05				AML	AML	
	comp=E,2855μm,0.3s					
AM05				AML	AML	
	comp=N,290μm,0.1s					
AM05				AML	AML	
	comp=N,5070μm,1.4s					
AM05				AML	AML	
	comp=N,1190μm,0.1s					
AM05				AML	AML	
	comp=E,4825μm,0.1s					
AM05				AML	AML	
	comp=E,19150μm,0.1s					
AM05				AML	AML	
	comp=E,2520μm,0.1s					
AM05				AML	AML	
	comp=E,553μm,0.1s					
AM05				AML	AML	
	comp=N,679μm,0.1s					
AM05				AML	AML	
	comp=N,290μm,0.1s					
T1215	**Vallo di Nera,**	**0.22**	**271**	AML	AML	
	comp=N,80100μm,0.2s					
T1215				AML	AML	
	comp=E,59850μm,0.6s					
T1215				AML	AML	
	comp=E,59950μm,0.6s					
T1215				AML	AML	
	comp=N,78550μm,0.2s					
T1215				AML	AML	
	comp=N,78550μm,0.1s					
T1215				AML	AML	
	comp=N,80100μm,0.2s					
T1215				AML	AML	
	comp=E,59900μm,0.6s					
T1243	**Rocca Santa Ma**	**0.23**	**116**	P	Pg	13 13 27.7 +0.5
T1243				S	Sg	13 13 31.5 +1.1
GUMA	**Gualdo di Mace**	**0.29**	**24**	P	Pb	13 13 29.1 -0.8
GUMA				S	Sb	13 13 34.0 -0.8
GUMA				AML	AML	
	comp=E,2630μm,0.2s					
GUMA				AML	AML	
	comp=N,3185μm,0.6s					
GUMA				AML	AML	
	comp=E,3140μm,0.3s					
GUMA				AML	AML	
	comp=N,3490μm,0.2s					
GUMA				AML	AML	
	comp=N,39350μm,0.5s					
GUMA				AML	AML	
	comp=E,33600μm,1.6s					
GUMA				AML	AML	
	comp=E,37400μm,0.4s					
GUMA				AML	AML	
	comp=N,44750μm,0.5s					
GUMA				AML	AML	
	comp=E,3141μm,0.3s					
GUMA				AML	AML	
	comp=N,3490μm,0.2s					
GUMA				AML	AML	
	comp=E,2627μm,0.2s					
GUMA				AML	AML	
	comp=N,2257μm,0.2s					
RM33	**Pellescritta (**	**0.29**	**174**	P	Pg	13 13 29.0 +0.6
RM33				S	Sb	13 13 33.9 -0.9
RM33				AML	AML	
	comp=E,1109μm,0.8s					
RM33				AML	AML	
	comp=N,1180μm,0.1s					
RM33				AML	AML	
	comp=E,1053μm,0.4s					
RM33				AML	AML	
	comp=N,1155μm,0.1s					
RM33				AML	AML	
	comp=E,1108μm,0.8s					
RM33				AML	AML	
	comp=N,1180μm,0.1s					
RM33				AML	AML	
	comp=E,1049μm,0.4s					
RM33				AML	AML	
	comp=N,1154μm,0.1s					
RM33				AML	AML	
	comp=E,14650μm,0.3s					
RM33				AML	AML	
	comp=N,17750μm,1.3s					
RM33				AML	AML	
	comp=E,14550μm,0.3s					
RM33				AML	AML	
	comp=N,17600μm,1.3s					
RM33				AML	AML	
	comp=E,860μm,0.2s					
RM33				AML	AML	
	comp=E,993μm,0.2s					
RM33				AML	AML	
	comp=N,1182μm,0.1s					
RM33				AML	AML	
	comp=E,1028μm,0.2s					
RM33				AML	AML	
	comp=N,1157μm,0.1s					
RM33				AML	AML	
	comp=E,969μm,0.2s					
CAMP	**Campotosto**	**0.32**	**146**	P	Pg	13 13 29.3 +0.5
CAMP				S	Sb	13 13 34.5 -1.1
CAMP				AML	AML	
	comp=E,210μm,0.7s					
CAMP				AML	AML	
	comp=N,192μm,0.9s					
CAMP				AML	AML	
	comp=N,6695μm,1.0s					
CAMP				AML	AML	
	comp=E,5455μm,1.1s					
CAMP				AML	AML	
	comp=E,185μm,0.3s					
CAMP				AML	AML	
	comp=N,191μm,0.3s					
T1246	**Crognaleto (TE**	**0.32**	**132**	P	Pg	13 13 29.4 +0.5
T1211	**Morro Reatino**	**0.35**	**222**	P	Pg	13 13 30.2 +0.7
T1211				AML	AML	
	comp=N,54400μm,0.2s					
T1211				AML	AML	
	comp=N,53500μm,0.3s					
T1211				AML	AML	
	comp=E,41700μm,1.2s					
T1211				AML	AML	
	comp=E,41400μm,1.2s					
T1211				AML	AML	
	comp=N,590μm,0.1s					
T1211				AML	AML	
	comp=E,573μm,0.1s					
T1211				AML	AML	
	comp=E,577μm,0.1s					
T1211				AML	AML	
	comp=N,571μm,0.2s					
TERO	**Teramo**	**0.36**	**119**	P	Pg	13 13 30.1 +0.4
TERO				AML	AML	
	comp=E,454μm,0.2s					
TERO				AML	AML	
	comp=N,542μm,0.9s					
TERO				AML	AML	
	comp=E,9150μm,1.2s					
TERO				AML	AML	
	comp=E,8220μm,1.1s					
TERO				AML	AML	
	comp=N,14250μm,1.5s					
TERO				AML	AML	
	comp=N,12850μm,1.5s					
TERO				AML	AML	
	comp=E,379μm,0.2s					
TERO				AML	AML	
	comp=E,437μm,0.2s					
TERO				AML	AML	
	comp=N,411μm,0.1s					
TERO				AML	AML	
	comp=N,464μm,0.1s					
T1247	**Pizzolo (AQ)**	**0.37**	**165**	P	Pg	13 13 30.5 +0.7
ARRO	**Arrone**	**0.37**	**234**	P	Pg	13 13 30.4 +0.5
ARRO				S	Sb	13 13 36.0 -1.0
ARRO				AML	AML	
	comp=E,332μm,0.8s					
ARRO				AML	AML	
	comp=N,265μm,1.1s					
ARRO				AML	AML	
	comp=E,18550μm,1.2s					
ARRO				AML	AML	
	comp=N,30400μm,0.7s					
ARRO				AML	AML	
	comp=E,316μm,0.2s					
ARRO				AML	AML	
	comp=N,227μm,0.2s					
SEF1	**Sefro**	**0.39**	**335**	P	Pg	13 13 30.8 +0.7
SEF1				S	Sb	13 13 36.6 -1.0
MDAR	**Monte D'Aria**	**0.40**	**357**	P	Pg	13 13 30.5 +0.2
MDAR				S	Sb	13 13 36.8 -1.1
OFFI	**Offida**	**0.40**	**70**	AML	AML	
	comp=N,743μm,0.5s					
OFFI				AML	AML	
	comp=E,624μm,0.3s					
OFFI				AML	AML	
	comp=N,744μm,0.5s					
OFFI				AML	AML	
	comp=E,12750μm,0.6s					
OFFI				AML	AML	
	comp=N,23350μm,0.6s					
OFFI				AML	AML	
	comp=E,624μm,0.3s					
MNTP	**Montappone**	**0.40**	**33**	P	Pb	13 13 31.5 -0.3
GAG1	**Gagliole**	**0.45**	**350**	P	Pb	13 13 32.0 -0.6
ASSB	**Assisi San Ben**	**0.45**	**303**	P	Pg	13 13 31.5 +0.2
ASSB				AML	AML	
	comp=E,864μm,0.2s					
ASSB				AML	AML	
	comp=N,558μm,0.7s					
ASSB				AML	AML	
	comp=E,18200μm,0.4s					
ASSB				AML	AML	
	comp=N,13700μm,0.5s					
ASSB				AML	AML	
	comp=N,343μm,0.2s					
ASSB				AML	AML	
	comp=E,481μm,0.1s					
GIGS	**Gran Sasso**	**0.46**	**140**	P	Pg	13 13 31.9 +0.5
GIGS				AML	AML	
	comp=E,64μm,0.3s					
GIGS				AML	AML	
	comp=N,60μm,1.0s					
GIGS				AML	AML	
	comp=E,2045μm,0.5s					
GIGS				AML	AML	
	comp=N,2005μm,1.5s					
GIGS				AML	AML	
	comp=N,42μm,0.2s					
GIGS				AML	AML	
	comp=E,50μm,0.3s					
SNTG	**Esanatoglia**	**0.49**	**340**	P	Pg	13 13 32.6 +0.6
SNTG				AML	AML	
	comp=E,205μm,0.1s					
SNTG				AML	AML	
	comp=N,225μm,0.2s					
SNTG				AML	AML	
	comp=E,5205μm,0.4s					
SNTG				AML	AML	
	comp=N,6215μm,0.6s					
SNTG				AML	AML	
	comp=N,6455μm,0.6s					
SNTG				AML	AML	
	comp=E,5160μm,0.4s					
SNTG				AML	AML	
	comp=E,5200μm,0.4s					
SNTG				AML	AML	
	comp=N,231μm,0.3s					
SNTG				AML	AML	
	comp=N,218μm,0.1s					
SNTG				AML	AML	
	comp=E,205μm,0.1s					
SNTG				AML	AML	
	comp=E,242μm,0.2s					
FIAM	**Fiamignano**	**0.53**	**184**	P	Pg	13 13 32.9 +0.1
EL6	**Elcito**	**0.53**	**354**	P	Pg	13 13 33.2 +0.3
EL6				S	Sb	13 13 41.6 -0.2
EL6				AML	AML	
	comp=E,9055μm,0.3s					
EL6				AML	AML	
	comp=N,8415μm,0.3s					
EL6				AML	AML	
	comp=E,9080μm,0.3s					
EL6				AML	AML	
	comp=N,423μm,0.2s					
EL6				AML	AML	
	comp=E,543μm,0.1s					
ATCC	**AVT- Casa Cast**	**0.55**	**315**	P	Pg	13 13 33.5 +0.3
ATCC				AML	AML	
	comp=E,422μm,0.2s					
ATCC				AML	AML	
	comp=N,373μm,0.3s					
ATCC				AML	AML	
	comp=E,6245μm,0.3s					
ATCC				AML	AML	
	comp=N,6520μm,0.4s					
ATCC				AML	AML	
	comp=E,6250μm,0.3s					
ATCC				AML	AML	
	comp=N,202μm,0.4s					
ATCC				AML	AML	
	comp=E,304μm,0.2s					
ATFO	**Monte Foce - G**	**0.72**	**322**	AML	AML	
	comp=N,3245μm,1.1s					
ATFO				AML	AML	
	comp=E,208μm,0.2s					
ATFO				AML	AML	
	comp=N,296μm,0.3s					
ATFO				AML	AML	
	comp=E,2845μm,1.1s					
ARVD	**Arcevia**	**0.72**	**346**	S	Sb	13 13 48.0 +0.8
PIEI	**Pieia**	**0.87**	**328**	P	Pg	13 13 39.3 0.0
PIEI				AML	AML	
	comp=E,222μm,0.3s					
PIEI				AML	AML	
	comp=N,208μm,0.3s					
PIEI				AML	AML	
	comp=N,1430μm,0.4s					
PIEI				AML	AML	
	comp=E,1735μm,0.3s					
PIEI				AML	AML	
	comp=N,40μm,0.4s					
PIEI				AML	AML	
	comp=E,67μm,0.3s					
MPAG	**Monte Paganucc**	**0.88**	**340**	AML	AML	
	comp=N,1680μm,0.5s					
MPAG				AML	AML	
	comp=E,103μm,0.2s					
MPAG				AML	AML	
	comp=N,156μm,0.5s					
MPAG				AML	AML	
	comp=N,1685μm,0.5s					
MPAG				AML	AML	
	comp=E,1490μm,1.2s					

ROM ***30*** *13:14:16.9±0.0, 42°.764N±0°.001×13°.062E±0°.001, h11km, ML3.5/74, Error ellipse: s-maj=0.1km s-min=0.1km az=243.0*
IDC ***30*** *13:14:16.1±1.3, 42°.84N×13°.35E, h0km, mb3.5/2, mbtmp3.5/9, ML3.3/7, Error ellipse: s-maj=22.0km s-min=13.8km az=89.0*
PRU ***30*** *13:14:17.4±0.0, 42°.74N×13°.14E, h10km*
PDG ***30*** *13:14:17.2±0.5, 42°.76N×13°.05E, h15km, ML3.9/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
LDG ***30*** *13:14:17.9±0.1, 42°.64N×13°.02E, h10km, Ml3.4/23, Error ellipse: s-maj=3.8km s-min=2.4km az=42.0*
STR ***30*** *13:14:19.9±1.5, 43°.N±14°×1°.3E±1°.0, h15km, MLv3.3/15, Error ellipse: s-maj=0.0km s-min=0.0km az=157.1, preliminary*

ISC 30 13:14:17.0±0.7, 42°.77N±0°.01×13°.05E±0°.01, h14km±3km, n269, σ1§70/327, 24C-11D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.01**	**204**	⇓P	**Pg**	**13 14 19.2**	**-0.4**
T1212				S	**Sg**	**13 14 20.7**	**-0.6**
T1213	**Norcia, Frazio**	**0.07**	**127**	⇓P	**Pg**	**13 14 19.5**	**-0.4**
T1213				S	**Sg**	**13 14 21.2**	**-0.6**
T1217	**Poggiodomo (PG**	**0.10**	**239**	⇑P	**Pg**	**13 14 20.2**	**-0.1**
T1217				S	**Sg**	**13 14 22.5**	**0.0**
T1217				AML	AML		
	comp=E,81450μm,0.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,78350μm,0.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,81400μm,0.4s						
T1217				AML	AML		
	comp=E,77900μm,0.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,81150μm,0.4s						
T1217				AML	AML		
T1217				AML	AML		
	comp=E,78150μm,0.4s						
T1217				AML	AML		
	comp=E,78000μm,0.4s						
T1217				AML	AML		
	comp=E,81350μm,0.4s						
T1217				AML	AML		
T1218	**Civita (PG)**	**0.11**	**154**	⇓P	**Pg**	**13 14 20.1**	**-0.2**
T1218				S	**Sg**	**13 14 22.4**	**-0.1**
T1214	**Arquata del Tr**	**0.12**	**93**	P	**Pg**	**13 14 20.2**	**-0.3**
T1214				S	**Sg**	**13 14 22.5**	**-0.3**
T1216	**Preci, Frazion**	**0.13**	**349**	⇓P	**Pg**	**13 14 20.4**	**-0.2**
T1216				S	**Sg**	**13 14 22.7**	**-0.3**
T1245	**Castelsantange**	**0.14**	**47**	⇓P	**Pg**	**13 14 20.5**	**-0.2**
T1245				S	**Sg**	**13 14 22.9**	**-0.4**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1215	**Vallo di Nera,**	**0.14**	**285**	⇑P	**Pg**	**13 14 20.7**	**0.0**
T1215				S	**Sg**	**13 14 23.3**	**+0.1**
T1215				AML	AML		
	comp=N,80100μm,0.2s						
T1215				AML	AML		
	comp=N,78500μm,0.2s						
T1215				AML	AML		
	comp=E,59800μm,0.6s						
T1215				AML	AML		
	comp=E,59950μm,0.6s						
T1215				AML	AML		
	comp=N,78550μm,0.2s						
T1215				AML	AML		
	comp=N,78550μm,0.1s						
T1215				AML	AML		
	comp=N,80100μm,0.2s						
T1215				AML	AML		
	comp=E,59900μm,0.6s						
T1215				AML	AML		
	comp=E,59850μm,0.6s						
LNSS	**Leonessa**	**0.16**	**183**	P	**Pg**	**13 14 21.1**	**0.0**
LNSS				S	**Sg**	**13 14 24.1**	**+0.3**
T1244	**Arquata del Tr**	**0.18**	**93**	⇑P	**Pg**	**13 14 21.4**	**0.0**
T1244				S	**Sg**	**13 14 24.7**	**+0.5**
T1201	**Domo (RI)**	**0.18**	**127**	P	**Pg**	**13 14 21.4**	**+0.1**
T1201				S	**Sb**	**13 14 24.8**	**-0.9**
FEMA	**Monte Fema**	**0.20**	**359**	⇑P	**Pg**	**13 14 21.5**	**-0.1**
FEMA				S	**Sg**	**13 14 24.9**	**+0.1**
FEMA				AML	AML		
	comp=E,58900μm,0.5s						
FEMA				AML	AML		
	comp=E,58850μm,0.5s						
FEMA				AML	AML		
	comp=N,59900μm,0.6s						
T1204	**Amatrice, Fraz**	**0.21**	**115**	⇑P	**Pg**	**13 14 21.9**	**0.0**
T1204				S	**Sg**	**13 14 25.4**	**+0.2**
T1204				AML	AML		
	comp=E,36200μm,0.9s						
T1204				AML	AML		
	comp=N,21650μm,0.6s						
T1204				AML	AML		
	comp=N,21600μm,0.6s						
T1204				AML	AML		
	comp=E,36150μm,0.9s						
FDMO	**Fiordimonte**	**0.27**	**5**	P	**Pg**	**13 14 22.8**	**0.0**
FDMO				S	**Sg**	**13 14 27.1**	**+0.4**
T1256	**Bolognola (MC)**	**0.27**	**28**	⇑P	**Pg**	**13 14 22.6**	**-0.2**
T1256				S	**Sg**	**13 14 27.1**	**+0.3**
T1211	**Morro Reatino**	**0.28**	**212**	⇑P	**Pg**	**13 14 23.0**	**+0.1**
T1211				S	**Sb**	**13 14 27.7**	**-0.6**
T1211				AML	AML		
	comp=E,41750μm,1.2s						
T1211				AML	AML		
	comp=N,53500μm,0.3s						
T1211				AML	AML		
	comp=N,53500μm,0.2s						
T1211				AML	AML		
	comp=E,41400μm,1.2s						
T1211				AML	AML		
	comp=E,41400μm,1.2s						
T1211				AML	AML		
	comp=N,54400μm,0.2s						
T1211				AML	AML		
	comp=E,41700μm,1.2s						
ARRO	**Arrone**	**0.28**	**229**	⇑P	**Pg**	**13 14 23.1**	**+0.2**
ARRO				S	**Sg**	**13 14 27.8**	**+0.9**
ARRO				AML	AML		
	comp=N,30400μm,0.7s						
ARRO				AML	AML		
	comp=E,18550μm,1.2s						
RM33	**Pellescritta (**	**0.28**	**155**	P	**Pg**	**13 14 22.9**	**-0.1**
RM33				S	**Sg**	**13 14 27.6**	**+0.5**
RM33				AML	AML		
	comp=E,14600μm,0.3s						
RM33				AML	AML		
	comp=N,17750μm,1.3s						
RM33				AML	AML		
	comp=E,14550μm,0.3s						
RM33				AML	AML		
	comp=N,17550μm,1.3s						
RM33				AML	AML		
	comp=N,17600μm,1.3s						
RM33				AML	AML		
	comp=E,14500μm,0.3s						
T1241	**Roccafluvione,**	**0.29**	**72**	⇑P	**Pg**	**13 14 23.4**	**+0.3**
T1241				S	**Sb**	**13 14 28.0**	**-0.9**
T1241				AML	AML		
	comp=E,26850μm,0.5s						
T1241				AML	AML		
	comp=N,13300μm,0.4s						
T1241				AML	AML		
	comp=E,27450μm,0.5s						
T1241				AML	AML		
	comp=N,13300μm,0.4s						
T1243	**Rocca Santa Ma**	**0.30**	**103**	⇓P	**Pg**	**13 14 23.1**	**-0.2**
T1243				S	**Sg**	**13 14 27.6**	**+0.1**
AM05	**Amandola Campo**	**0.30**	**46**	⇑P	**Pg**	**13 14 23.4**	**0.0**
AM05				S	**Sg**	**13 14 28.2**	**+0.5**
AM05				AML	AML		
	comp=E,4825μm,0.1s						
AM05				AML	AML		
	comp=N,6945μm,0.2s						
AM05				AML	AML		
	comp=N,1670μm,0.2s						
AM05				AML	AML		
	comp=E,21800μm,0.2s						
CAMP	**Campotosto**	**0.35**	**131**	P	**Pg**	**13 14 23.9**	**-0.2**
CAMP				S	**Sb**	**13 14 29.6**	**-0.9**
GUMA	**Gualdo di Mace**	**0.36**	**35**	P	**Pg**	**13 14 24.5**	**+0.2**
GUMA				S	**Sb**	**13 14 30.3**	**-0.5**
T1247	**Pizzolo (AQ)**	**0.37**	**151**	P	**Pg**	**13 14 24.5**	**0.0**
T1247				S	**Sg**	**13 14 30.1**	**+0.5**
T1246	**Crognaleto (TE**	**0.37**	**119**	⇑P	**Pg**	**13 14 24.3**	**-0.3**
T1246				S	**Sg**	**13 14 29.9**	**+0.2**
CESX	**Cesi**	**0.38**	**246**	⇑P	**Pg**	**13 14 24.7**	**0.0**
CESX				S	**Sb**	**13 14 30.9**	**-0.4**
CESX				AML	AML		
	comp=E,14100μm,1.6s						
CESX				AML	AML		
	comp=N,12100μm,0.2s						
SEF1	**Sefro**	**0.39**	**349**	⇑P	**Pg**	**13 14 24.9**	**0.0**
SEF1				S	**Sg**	**13 14 30.9**	**+0.7**
SEF1				AML	AML		
	comp=E,29800μm,0.3s						
SEF1				AML	AML		
	comp=N,21350μm,0.2s						
ASSB	**Assisi San Ben**	**0.40**	**314**	P	**Pg**	**13 14 25.2**	**+0.2**
ASSB				S	**Sg**	**13 14 31.4**	**+0.8**
PIO1	**Pioraco**	**0.41**	**353**	P	**Pb**	**13 14 26.2**	**0.0**
PIO1				S	**Sb**	**13 14 32.1**	**-0.3**
TERO	**Teramo**	**0.43**	**109**	⇑P	**Pg**	**13 14 25.2**	**-0.4**

TERO				S	Sg	13 14 31.7	+0.3
TERO				AML	AML		
	comp=N,12900μm,1.5s						
TERO				AML	AML		
	comp=E,8220μm,1.1s						
TERO				AML	AML		
	comp=E,9150μm,1.2s						
TERO				AML	AML		
	comp=N,14250μm,1.5s						
TERO				AML	AML		
	comp=N,12850μm,1.5s						
FIU1	**Fiuminata**	**0.43**	**348**	P	**Pg**	**13 14 25.6**	**0.0**
FIU1				S	**Sg**	**13 14 32.3**	**+0.8**
FIU1				AML	AML		
	comp=E,10700μm,0.2s						
FIU1				AML	AML		
	comp=N,11285μm,0.2s						
FIU1				AML	AML		
	comp=N,11305μm,0.2s						
FIU1				AML	AML		
	comp=E,10720μm,0.2s						
MDAR	**Monte D'Aria**	**0.43**	**9**	P	**Pg**	**13 14 25.6**	**-0.1**
MDAR				S	**Sg**	**13 14 32.2**	**+0.7**
GAG1	**Gagliole**	**0.47**	**1**	P	**Pg**	**13 14 26.5**	**+0.1**
GAG1				AML	AML		
	comp=E,16800μm,0.6s						
GAG1				AML	AML		
	comp=E,16750μm,0.6s						
GAG1				AML	AML		
	comp=N,24500μm,0.4s						
SSM1	**San Severino M**	**0.47**	**11**	P	**Pg**	**13 14 26.2**	**-0.1**
SSM1				S	**Sb**	**13 14 33.8**	**-0.2**
MNTP	**Montappone**	**0.48**	**39**	P	**Pb**	**13 14 26.9**	**-0.3**
MNTP				AML	AML		
	comp=E,18350μm,0.7s						
MNTP				AML	AML		
	comp=N,14350μm,0.9s						
AQU	**L'Aquila**	**0.49**	**148**	⇓P	**Pg**	**13 14 26.4**	**-0.2**
AQU				S	**Sb**	**13 14 34.1**	**-0.2**
AQU				AML	AML		
	comp=E,4255μm,0.9s						
AQU				AML	AML		
	comp=N,4340μm,0.9s						
AQU				AML	AML		
	comp=E,4295μm,0.9s						
AQU				AML	AML		
	comp=N,4385μm,1.0s						
AQU				AML	AML		
	comp=N,3863μm,0.3s						
AQU				AML	AML		
	comp=N,3773μm,1.1s						
GIGS	**Gran Sasso**	**0.49**	**129**	⇓P	**Pg**	**13 14 26.4**	**-0.4**
GIGS				S	**Sg**	**13 14 33.8**	**+0.3**
GIGS				AML	AML		
	comp=E,2045μm,0.5s						
GIGS				AML	AML		
	comp=N,2005μm,1.5s						
OFFI	**Offida**	**0.49**	**70**	⇑P	**Pb**	**13 14 27.4**	**-0.2**
SNTG	**Esanatoglia**	**0.50**	**350**	P	**Pg**	**13 14 26.7**	**-0.1**
SNTG				S	**Sb**	**13 14 34.6**	**-0.1**
SNTG				AML	AML		
	comp=E,5200μm,0.4s						
SNTG				AML	AML		
	comp=N,6220μm,0.7s						
SNTG				AML	AML		
	comp=E,5205μm,0.4s						
SNTG				AML	AML		
	comp=E,5160μm,0.4s						
SNTG				AML	AML		
	comp=N,6455μm,0.6s						
SNTG				AML	AML		
	comp=N,6215μm,0.6s						
FIAM	**Fiamignano**	**0.50**	**175**	P	**Pg**	**13 14 26.5**	**-0.4**
FIAM				S	**Sb**	**13 14 34.6**	**-0.2**
FIAM				AML	AML		
	comp=E,6955μm,0.9s						
FIAM				AML	AML		
	comp=N,5605μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.52**	**324**	⇓P	**Pg**	**13 14 27.1**	**-0.1**
ATCC				S	**Sb**	**13 14 35.2**	**-0.1**
ATCC				AML	AML		
	comp=E,6245μm,0.3s						
ATCC				AML	AML		
	comp=N,6520μm,0.4s						
ATCC				AML	AML		
	comp=E,6250μm,0.3s						
EL6	**Elcito**	**0.56**	**4**	P	**Pg**	**13 14 27.6**	**-0.5**
EL6				S	**Sb**	**13 14 36.9**	**+0.1**
EL6				AML	AML		
	comp=E,9060μm,0.3s						
EL6				AML	AML		
	comp=N,8410μm,0.3s						
EL6				AML	AML		
	comp=E,9055μm,0.3s						
EL6				AML	AML		
	comp=E,9080μm,0.3s						
EL6				AML	AML		
	comp=N,8415μm,0.3s						
FOSV	**Fossato di Vic**	**0.57**	**338**	P	**Pg**	**13 14 28.1**	**-0.2**
FOSV				AML	AML		
	comp=E,3320μm,0.4s						
FOSV				AML	AML		
	comp=E,3315μm,0.4s						
FOSV				AML	AML		
	comp=N,4240μm,1.1s						
TRE1	**Treia**	**0.58**	**19**	P	**Pg**	**13 14 28.6**	**+0.3**
MURB	**Monte Urbino**	**0.63**	**322**	P	**Pg**	**13 14 29.4**	**0.0**
MURB				AML	AML		
	comp=N,15950μm,0.3s						
MURB				AML	AML		
	comp=N,15950μm,0.3s						
MURB				AML	AML		
	comp=E,16650μm,0.3s						
MURB				AML	AML		
	comp=N,17500μm,0.3s						
MURB				AML	AML		
	comp=E,15100μm,0.3s						
FAGN	**Fagnano**	**0.64**	**142**	P	**Pb**	**13 14 29.6**	**-0.3**
FAGN				AML	AML		
	comp=E,8710μm,0.3s						
FAGN				AML	AML		
	comp=N,6595μm,0.5s						
SRES	**S.Oreste - Sor**	**0.66**	**217**	⇑P	**Pg**	**13 14 29.6**	**-0.4**
SRES				AML	AML		
	comp=N,4550μm,0.4s						
SRES				AML	AML		
	comp=E,4595μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.67**	**310**	P	**Pg**	**13 14 30.0**	**-0.1**
ATTE				AML	AML		
	comp=E,2210μm,0.3s						
ATTE				AML	AML		
	comp=N,2085μm,1.1s						
MMUR	**Monte Murano**	**0.68**	**357**	P	**Pg**	**13 14 29.9**	**-0.3**
VCEL	**Villa Celiera**	**0.69**	**122**	P	**Pg**	**13 14 30.1**	**-0.4**
VCEL				AML	AML		
	comp=E,8245μm,0.3s						
VCEL				AML	AML		
	comp=N,9130μm,0.3s						
VCEL				AML	AML		
	comp=E,8230μm,0.3s						
ATFO	**Monte Foce - G**	**0.70**	**330**	P	**Pg**	**13 14 30.5**	**-0.2**
ATFO				AML	AML		
	comp=E,2845μm,1.1s						
ATFO				AML	AML		
	comp=N,3245μm,1.1s						
MGAB	**Montegabbione**	**0.71**	**282**	P	**Pg**	**13 14 30.9**	**+0.1**
MGAB				AML	AML		
	comp=E,7375μm,0.4s						
MGAB				AML	AML		
	comp=N,8055μm,0.3s						
MGAB				AML	AML		
	comp=N,7005μm,0.3s						
MGAB				AML	AML		
	comp=E,8015μm,1.6s						
MGAB				AML	AML		
	comp=E,7370μm,0.4s						
ATSC	**Scheggia e Pas**	**0.71**	**338**	P	**Pg**	**13 14 30.4**	**-0.5**
ATLO	**AVT- Montelove**	**0.72**	**319**	P	**Pg**	**13 14 30.8**	**-0.3**
PP3	**Marolino**	**0.73**	**33**	P	**Pb**	**13 14 31.7**	**+0.1**
PP3				AML	AML		
	comp=E,8875μm,0.7s						
PP3				AML	AML		
	comp=N,11100μm,0.9s						
PP3				AML	AML		
	comp=N,11200μm,0.9s						
PP3				AML	AML		
	comp=E,8880μm,0.7s						
PP3				AML	AML		
	comp=E,8775μm,0.7s						
PP3				AML	AML		
	comp=N,11100μm,0.9s						
ARVD	**Arcevia**	**0.74**	**354**	P	**Pg**	**13 14 31.1**	**-0.2**
ARVD				AML	AML		
	comp=E,2345μm,0.8s						
ARVD				AML	AML		
	comp=N,2300μm,1.6s						
T0110	**Collepietro**	**0.76**	**135**	P	**Pg**	**13 14 31.1**	**-0.7**
T0110				AML	AML		
	comp=E,4925μm,0.7s						
T0110				AML	AML		
	comp=N,6535μm,0.5s						
ATVA	**AVT- Monte Val**	**0.76**	**313**	P	**Pb**	**13 14 32.2**	**+0.1**
TB01	**Gubbio**	**0.76**	**324**	P	**Pg**	**13 14 31.3**	**-0.5**
ATVO	**AVT- Monte Val**	**0.78**	**323**	P	**Pg**	**13 14 31.7**	**-0.4**
ATVO				AML	AML		
	comp=E,2340μm,0.6s						
ATVO				AML	AML		
	comp=N,2255μm,0.3s						
ATVO				AML	AML		
	comp=E,2335μm,0.6s						
MTCE	**Montecelio**	**0.78**	**197**	⇑P	**Pg**	**13 14 31.2**	**-0.9**
MTCE				AML	AML		
	comp=N,3060μm,0.4s						
MTCE				AML	AML		
	comp=E,2910μm,0.6s						
PTQR	**Pietraquaria**	**0.79**	**161**	P	**Pg**	**13 14 31.5**	**-0.8**
PTQR				AML	AML		
	comp=N,2100μm,0.4s						
PTQR				AML	AML		
	comp=E,2095μm,1.4s						
FRON	**Frontone**	**0.79**	**342**	P	**Pg**	**13 14 31.9**	**-0.4**
FRON				AML	AML		
	comp=N,3135μm,0.5s						
FRON				AML	AML		
	comp=E,2020μm,0.4s						
TB03	**Pietralunga**	**0.79**	**324**	P	**Pg**	**13 14 31.9**	**-0.4**
ATBU	**Serra di Buran**	**0.80**	**333**	P	**Pg**	**13 14 32.5**	**-0.1**
ATMI	**Monte Miggiano**	**0.81**	**315**	P	**Pb**	**13 14 33.1**	**+0.2**
ATMI				AML	AML		
	comp=N,8375μm,0.3s						
ATMI				AML	AML		
	comp=E,5930μm,0.4s						
CERT	**Cerreto**	**0.82**	**184**	P	**Pg**	**13 14 32.0**	**-0.9**
CERT				AML	AML		
	comp=N,3765μm,1.0s						
CERT				AML	AML		
	comp=E,5610μm,0.4s						
ATPI	**Pietralunga -**	**0.83**	**325**	P	**Pg**	**13 14 32.6**	**-0.6**
ATPI				AML	AML		
	comp=E,1835μm,0.5s						
ATPI				AML	AML		
	comp=E,1830μm,0.5s						
ATPI				AML	AML		
	comp=N,1700μm,0.5s						
ATPC	**Poggio Castell**	**0.84**	**329**	P	**Pg**	**13 14 32.9**	**-0.3**
SACS	**San Casciano d**	**0.85**	**276**	⇑P	**Pg**	**13 14 33.2**	**-0.2**
SACS				AML	AML		
	comp=E,2310μm,1.6s						
SACS				AML	AML		
	comp=N,2855μm,1.0s						
SACS				AML	AML		
	comp=E,2250μm,1.5s						
SACS				AML	AML		
	comp=N,2980μm,1.0s						
SACS				AML	AML		
	comp=E,2315μm,1.6s						
PIEI	**Pieia**	**0.86**	**334**	P	**Pg**	**13 14 33.3**	**-0.3**
PIEI				AML	AML		
	comp=N,1430μm,0.4s						
PIEI				AML	AML		
	comp=E,2115μm,0.8s						
AOI	**Ancona**	**0.88**	**27**	P	**Pg**	**13 14 33.5**	**-0.5**
AOI				AML	AML		
	comp=N,2920μm,0.4s						
AOI				AML	AML		
	comp=E,2795μm,0.4s						
MPAG	**Monte Paganucc**	**0.89**	**346**	P	**Pg**	**13 14 33.7**	**-0.5**
MPAG				AML	AML		
	comp=E,1495μm,1.2s						
MPAG				AML	AML		
	comp=E,1490μm,1.2s						
MPAG				AML	AML		
	comp=N,1685μm,0.5s						
MPAG				AML	AML		
	comp=N,1680μm,0.5s						
APEC	**Apecchio**	**0.92**	**330**	P	**Pg**	**13 14 34.8**	**0.0**
RCAV	**Rocca di Cave**	**0.92**	**185**	P	**Pg**	**13 14 34.2**	**-0.6**
RCAV				AML	AML		
	comp=E,4025μm,0.4s						
RCAV				AML	AML		
	comp=E,4030μm,0.4s						
RCAV				AML	AML		
	comp=N,3420μm,0.6s						
ATMC	**Monte Cedrone**	**0.93**	**318**	P	**Pg**	**13 14 34.7**	**-0.3**
LATE	**Laterza**	**0.93**	**261**	P	**Pg**	**13 14 34.9**	**-0.2**
FSSB	**Fossombrone**	**0.95**	**348**	P	**Pb**	**13 14 34.9**	**-0.4**
FSSB				AML	AML		
	comp=N,8110μm,0.4s						
FSSB				AML	AML		
	comp=E,4800μm,1.5s						
SENI	**Senigallia**	**0.95**	**8**	P	**Pg**	**13 14 35.5**	**+0.2**
CAFI	**Castiglion Fio**	**0.98**	**306**	P	**Pb**	**13 14 35.7**	**0.0**
CAFI				AML	AML		
	comp=N,1785μm,0.3s						
CAFI				AML	AML		
	comp=E,1910μm,0.3s						
CAFI				AML	AML		
	comp=N,1783μm,0.3s						
CAFI				AML	AML		
	comp=N,1915μm,0.3s						
CAFI				AML	AML		
	comp=E,1925μm,0.3s						
INTR	**Introdacqua**	**0.98**	**140**	P	**Pb**	**13 14 35.1**	**-0.8**
RMP	**Rome, Mte Porz**	**0.99**	**195**	P	**Pb**	**13 14 34.9**	**-1.0**
RMP				AML	AML		
	comp=N,5680μm,1.2s						
RMP				AML	AML		
	comp=E,3255μm,0.8s						
MCIV	**Monte Civitell**	**1.01**	**271**	P	**Pb**	**13 14 35.8**	**-0.6**
MCIV				AML	AML		
	comp=E,1285μm,0.3s						
MCIV				AML	AML		
	comp=N,1285μm,0.4s						
SF04	**Casetta**	**1.03**	**274**	AML	AML		
	comp=E,2300μm,0.3s						
SF04				AML	AML		
	comp=N,1620μm,1.1s						
RDP	**Rocca di Papa**	**1.04**	**194**	P	**Pb**	**13 14 36.3**	**-0.5**
RDP				AML	AML		
	comp=E,7660μm,0.3s						
RDP				AML	AML		
	comp=N,7445μm,0.4s						
TOLF	**Tolfa**	**1.05**	**228**	⇑P	**Pb**	**13 14 36.5**	**-0.5**
TOLF				AML	AML		
	comp=E,2460μm,1.3s						
TOLF				AML	AML		
	comp=N,1790μm,1.1s						
SSP9	**SansepolCro**	**1.05**	**320**	P	**Pg**	**13 14 37.4**	**0.0**
CAFR	**Castel Frentan**	**1.10**	**119**	P	**Pb**	**13 14 37.2**	**-0.5**
CAFR				AML	AML		
	comp=N,2195μm,0.5s						
CAFR				AML	AML		
	comp=E,2095μm,0.4s						
SF01	**Poggio Pratacc**	**1.10**	**273**	AML	AML		
	comp=N,1400μm,0.7s						
SF01				AML	AML		
	comp=E,1649μm,0.8s						
LPEL	**Lama dei Pelig**	**1.10**	**130**	P	**Pb**	**13 14 36.7**	**-1.2**
LPEL				AML	AML		
	comp=E,2765μm,0.5s						
LPEL				AML	AML		
	comp=N,1545μm,0.6s						
LAV9	**Lanuvio**	**1.12**	**194**	P	**Pb**	**13 14 37.8**	**-0.3**
LAV9				AML	AML		
	comp=E,6610μm,0.4s						
LAV9				AML	AML		
	comp=N,4795μm,0.3s						
LAV9				AML	AML		
	comp=E,7040μm,0.4s						
LAV9				AML	AML		
	comp=N,4970μm,0.3s						
ARCI	**Arcidosso**	**1.16**	**275**	P	**Pb**	**13 14 38.8**	**-0.2**
ARCI				AML	AML		
	comp=N,341μm,0.6s						
ARCI				AML	AML		
	comp=E,375μm,0.7s						
CPGN	**Carpegna, Ital**	**1.17**	**333**	P	**Pn**	**13 14 39.3**	**+0.3**
CRE	**Caprese Michel**	**1.17**	**317**	P	**Pb**	**13 14 39.1**	**0.0**
CRE				AML	AML		
	comp=E,736μm,0.5s						
CRE				AML	AML		
	comp=N,1205μm,0.6s						
LRP	**Arpino**	**1.19**	**160**	AML	AML		
	comp=N,1370μm,0.4s						
LRP				AML	AML		
	comp=E,744μm,0.4s						
GIUL	**Giuliano Di Ro**	**1.22**	**173**	P	**Pn**	**13 14 38.7**	**-0.9**
GIUL				AML	AML		
	comp=E,991μm,1.6s						
GIUL				AML	AML		
	comp=N,1195μm,0.5s						
CERA	**Filignano**	**1.37**	**148**	P	**Pn**	**13 14 41.5**	**-0.3**
CERA				AML	AML		
	comp=N,1120μm,1.6s						
CERA				AML	AML		
	comp=E,1330μm,0.7s						
FRES	**Fresagrandinar**	**1.44**	**123**	P	**Pn**	**13 14 43.0**	**+0.4**
MAON	**Monte Argentar**	**1.46**	**257**	⇑P	**Pn**	**13 14 42.9**	**0.0**
MAON				AML	AML		
	comp=E,274μm,0.5s						
MAON				AML	AML		
	comp=N,213μm,1.6s						
TRIV	**Trivento**	**1.49**	**131**	AML	AML		
TRIV				AML	AML		
	comp=E,774μm,0.6s						
TRIV				AML	AML		
	comp=N,751μm,1.6s						
TRIV				AML	AML		
RUFI	**Rufina**	**1.56**	**314**	P	**Pn**	**13 14 45.0**	**+0.7**
VAGA	**Valle Agricola**	**1.61**	**147**	P	**Pb**	**13 14 46.1**	**-0.4**
CASP	**Castiglione de**	**1.61**	**272**	P	**Pn**	**13 14 45.1**	**+0.1**
CASP				AML	AML		
	comp=E,182μm,0.4s						
CASP				AML	AML		
	comp=N,132μm,1.2s						
TRIF	**Trifonti**	**1.62**	**283**	⇑P	**Pn**	**13 14 45.9**	**+0.7**
TRIF				AML	AML		
	comp=E,343μm,0.3s						
TRIF				AML	AML		
	comp=N,383μm,0.8s						
LMD	**Lutirano**	**1.64**	**324**	AML	AML		
	comp=E,408μm,0.4s						
LMD				AML	AML		
	comp=N,467μm,0.5s						
MODR	**Mondragone**	**1.73**	**159**	P	**Pn**	**13 14 47.6**	**+0.9**
MODR				AML	AML		
	comp=N,257μm,0.8s						
MODR				AML	AML		
	comp=E,303μm,0.6s						
PIGN	**Pignataro Magg**	**1.78**	**151**	P	**Pn**	**13 14 48.2**	**+0.9**
PIGN				AML	AML		
	comp=N,196μm,0.7s						
PIGN				AML	AML		
	comp=E,183μm,1.0s						
BRIS	**BRISIGHELLA**	**1.78**	**321**	AML	AML		
	comp=N,698μm,0.5s						
BRIS				AML	AML		
	comp=E,686μm,0.6s						
MPPT	**Montemurlo**	**1.86**	**310**	P	**Pn**	**13 14 49.5**	**+0.9**
MELA	**Melanico ??? S**	**1.87**	**124**	P	**Pn**	**13 14 49.6**	**+1.0**
MELA				AML	AML		
	comp=N,1460μm,0.7s						
MELA				AML	AML		
	comp=N,1440μm,0.7s						
MELA				AML	AML		
	comp=E,930μm,0.4s						
MELA				AML	AML		
	comp=E,992μm,0.4s						
TREM	**Isole Tremiti**	**1.93**	**109**	P	**Pn**	**13 14 50.6**	**+1.2**
TREM				AML	AML		
	comp=E,1315μm,0.7s						
TREM				AML	AML		
	comp=N,1895μm,0.9s						
MTCR	**Monte La Croce**	**1.96**	**311**	P	**Pn**	**13 14 50.5**	**+0.6**
APRC	**Apricena**	**2.10**	**118**	AML	AML		
	comp=N,822μm,0.3s						
APRC				AML	AML		
	comp=E,558μm,0.4s						
MAIM	**Mastiano**	**2.19**	**302**	P	**Pn**	**13 14 54.1**	**+1.1**
MAIM				AML	AML		
	comp=E,195μm,0.3s						
MAIM				AML	AML		
	comp=N,162μm,0.5s						
BDI	**Bagni Di Lucca**	**2.21**	**307**	P	**Pn**	**13 14 54.1**	**+0.8**
BDI				AML	AML		
	comp=E,79μm,0.4s						
BDI				AML	AML		
	comp=N,77μm,1.2s						
SGRT	**San Giovanni R**	**2.24**	**116**	P	**Pn**	**13 14 54.8**	**+1.1**
SGRT				AML	AML		
	comp=N,544μm,0.9s						
SGRT				AML	AML		
	comp=E,640μm,0.6s						
VLC	**Villacollemand**	**2.39**	**307**	P	**Pn**	**13 14 56.3**	**+0.5**
VLC				AML	AML		
	comp=E,80μm,0.8s						
VLC				AML	AML		
	comp=N,100μm,1.1s						
EQUI	**Equi**	**2.53**	**305**	P	**Pn**	**13 14 58.3**	**+0.6**
EQUI				AML	AML		
	comp=N,108μm,1.0s						
EQUI				AML	AML		
	comp=E,69μm,1.6s						
MORSI	**Morsiglia**	**2.72**	**275**	P	**Pn**	**13 15 01.1**	**+0.8**
MORSI				S	**Sn**	**13 15 33.7**	**+0.7**
SKDS	**Skadanscina**	**2.87**	**14**	*i* Pn	**Pn**	**13 15 02.7**	**+0.4**
SMPL	**Sampolo**	**2.87**	**258**	AML	AML		
	comp=N,16μm,0.4s						
SMPL				AML	AML		
	comp=E,24μm,1.3s						
SMPL	**Sampolo**	**2.87**	**258**	P	**Pn**	**13 15 02.6**	**+0.2**
SMPL				S	**Sn**	**13 15 39.3**	**+2.6**
PGF	**Pioggiola**	**3.00**	**267**	*e*Pn	**Pn**	**13 15 03.9**	**-0.3**
PGF	**Pioggiola**	**3.00**	**267**	*e*P	**Pn**	**13 15 05.0**	**+0.8**
PGF				*e*Sn	**Sn**	**13 15 37.5**	**-2.5**
	comp=E,15nm,0.4s						
PGF	**Pioggiola**	**3.00**	**267**	AML	AML		
	comp=E,37μm,1.5s						
PGF				AML	AML		
	comp=N,25μm,0.5s						
PGF	**Pioggiola**	**3.00**	**267**	P	**Pn**	**13 15 05.3**	**+1.1**
PGF				S	**Sn**	**13 15 41.6**	**+1.6**
MSSA	**Maissana**	**3.00**	**302**	P	**Pn**	**13 15 04.8**	**+0.6**
MSSA				AML	AML		
	comp=E,53μm,0.6s						
MSSA				AML	AML		
	comp=N,68μm,0.8s						
CEY	**Cerknica**	**3.13**	**18**	*e*Pn	**Pn**	**13 15 04.2**	**-1.8**
SABO	**M.te Sabotino**	**3.24**	**7**	P	**Pn**	**13 15 08.1**	**+0.7**
SABO				AML	AML		
	comp=N,1455μm,0.8s						
SABO				AML	AML		
	comp=E,328μm,0.6s						
SABO				AML	AML		
	comp=E,1460μm,0.7s						
SABO				AML	AML		
	comp=N,372μm,0.8s						
CGRP	**Cima Grappa**	**3.24**	**344**	P	**Pn**	**13 15 08.5**	**+0.9**
CGRP				AML	AML		
	comp=E,319μm,0.6s						
CGRP				AML	AML		
	comp=E,274μm,0.5s						
CGRP				AML	AML		
	comp=N,344μm,0.6s						
CGRP				AML	AML		
	comp=N,262μm,0.5s						
SRKY	**Kupres RS**	**3.27**	**65**	*e*Pn	**Pb**	**13 15 12.3**	**-2.5**
AJAC	**Base Areonaval**	**3.29**	**257**	P	**Pn**	**13 15 09.7**	**+1.6**
MGRS	**Mrkonjic Grad**	**3.36**	**59**	*e*Pn	**Pn**	**13 15 11.6**	**+2.5**
SALO	**Salr**	**3.38**	**328**	P	**Pn**	**13 15 10.8**	**+1.3**
SALO				AML	AML		
	comp=E,150μm,0.4s						
SALO				AML	AML		
	comp=N,170μm,0.9s						
STON	**Ston**	**3.42**	**87**	*e*Pn	**Pn**	**13 15 09.7**	**-0.2**
STON	**Ston**	**3.42**	**87**	AML	AML		
	comp=N,82μm,0.8s						
STON				AML	AML		

comp=E,97μm,1.5s
CTI Castel Tesino 3.43 343 P Pn 13 15 11.6 +1.4
CTI AML AML
comp=N,196μm,1.5s
CTI AML AML
comp=E,174μm,0.2s
LJU Ljubljana 3.44 17 AML AML
LJU AML AML
comp=N,1029μm,0.7s
CADS Cadrg 3.50 8 *i* Pn **Pn 13 15 11.6 +0.6**
STAL STALIGIAL 3.50 356 P Pn 13 15 12.1 +1.0
STAL AML AML
comp=E,256μm,0.7s
STAL AML AML
comp=N,294μm,0.3s
STAL AML AML
comp=E,262μm,1.0s
STAL AML AML
comp=N,174μm,0.6s
LUSI Trento, Gardas 3.53 335 P Pn 13 15 12.6 +1.0
LUSI AML AML
comp=E,134μm,1.6s
LUSI AML AML
comp=N,196μm,0.5s
CIMO Cimolais 3.57 353 P Pn 13 15 13.0 +1.0
CIMO AML AML
comp=E,52μm,0.3s
CIMO AML AML
comp=N,56μm,0.6s
CIMO AML AML
comp=N,63μm,1.3s
CIMO AML AML
comp=E,53μm,1.5s
A051A Mrakovica 3.58 50 *e*Pn **Pn 13 15 13.8 +1.6**
BLY Banja Luka 3.59 55 *e*Pn **Pb 13 15 16.5 -3.8**
GAGG Gaggia 3.64 336 P Pn 13 15 14.3 +1.2
GAGG AML AML
comp=E,179μm,0.9s
GAGG AML AML
comp=N,119μm,0.8s
PTCC Patocco-Chiusa 3.65 3 P Pn 13 15 13.7 +0.6
PTCC AML AML
comp=N,89μm,0.6s
PTCC AML AML
comp=E,86μm,0.6s
ZONE Zone 3.67 326 AML AML
ZONE AML AML
comp=E,112μm,0.8s
MABI Malga Bissina 3.76 332 P Pn 13 15 15.9 +1.1
MABI AML AML
comp=N,74μm,0.4s
MABI AML AML
comp=E,59μm,0.7s
ZOU Zoufplan 3.79 359 AML AML
comp=E,121μm,1.2s
ZOU AML AML
comp=N,125μm,0.7s
ACOM Acomizza, Ital 3.80 5 P Pn 13 15 15.8 +0.5
ACOM AML AML
comp=E,155μm,0.6s
ACOM AML AML
comp=N,163μm,0.7s
KOSI Kohlern 3.88 343 AML AML
comp=N,125μm,1.3s
KOSI AML AML
comp=E,144μm,0.9s
MYKA Terra Mystica 3.89 6 *i* Pn **Pn 13 15 18.2 +1.8**
comp=E,4.1nm,0.2s,SNR=6.0
OBKA Obir 3.89 15 *e*Pn **Pn 13 15 17.7 +1.2**
OBKA Obir 3.89 15 *e*Pn **Pn 13 15 17.7 +1.2**
comp=E,1.6nm,0.2s
TREB Trebinje 3.90 89 *e*Pn **Pn 13 15 18.2 +1.7**
CET2 Cetraro 3.91 145 AML AML
comp=E,83μm,1.1s
CET2 AML AML
comp=N,90μm,0.8s
ABTA Abfaltersbach 4.00 355 *i* Pn **Pn 13 15 20.2 +2.2**
comp=N,12nm,0.3s,SNR=24
HCY Herceg Novi 4.03 93 *e*Pn **Pn 13 15 18.8 +0.5**
HCY Herceg Novi 4.03 93 *e*Pn **Pn 13 15 19.8 +1.5**
HCY *i* Sn **Sn 13 16 07.9 +2.6**
BRY Bratogost 4.04 86 *e*Pn **Pn 13 15 19.7 +1.2**
BRY Bratogost 4.04 86 *e*Pn **Pn 13 15 19.9 +1.4**
BRY *i* Sn **Sn 13 16 08.2 +2.5**
SAOF Saorge 4.19 289 P Pn 13 15 21.8 +1.3
SBF Sospel 4.24 287 *e*Pn **Pn 13 15 21.3 0.0**
SBF Sospel 4.24 287 *e*P **Pn 13 15 24.2 +2.9**
SBF *e*Sn **Sn 13 16 08.6 -2.1**
comp=N,14nm,0.4s
MUGIO Muggio 4.27 319 AML AML
comp=N,33μm,1.5s
MUGIO AML AML
comp=E,39μm,0.3s
VSL Villasalto 4.29 222 P Pn 13 15 22.9 +1.1
TURF col de Turini 4.30 288 P Pn 13 15 23.5 +1.3
UPM Unac-Piva 4.32 82 *e*Pn **Pn 13 15 24.7 +2.3**
UPM Unac-Piva 4.32 82 *e*Pn **Pn 13 15 23.8 +1.4**
CEME Cevo 4.33 91⇑ *i*Pn **Pn 13 15 24.0 +1.5**
CEME *i* Sn **Sn 13 16 15.2 +2.4**
BUM Brajici-Budva 4.34 94⇑ *i*Pn **Pn 13 15 24.1 +1.5**
BUM *i* Sn **Sn 13 16 15.5 +2.4**
NKME Niksic 4.34 88 *e*Pn **Pn 13 15 24.2 +1.5**
NKME *i* Sn **Sn 13 16 15.5 +2.4**
SPIF crte de Spivo 4.43 289 P Pn 13 15 26.2 +2.3
MVIF Mont Vial 4.45 287 P Pn 13 15 25.8 +1.6
HAPS Han Pijesak,BI 4.49 71 *e*Pn **Pn 13 15 26.2 +1.4**
FETA Feichten 4.56 340 *i* Pn **Pn 13 15 29.1 +3.3**
comp=E,5.8nm,0.4s,SNR=5.8
DRME Dracevica, Mon 4.57 95 *e*Pn **Pn 13 15 27.5 +1.8**
DRME Dracevica, Mon 4.57 95⇓ *i*Pn **Pn 13 15 27.3 +1.6**
DRME *i* Sn **Sn 13 16 21.1 +2.4**
CALF Calern 4.58 284 P Pn 13 15 27.1 +1.0
TTG Podgorica 4.59 92⇓ *i*Pn **Pn 13 15 27.6 +1.6**
TTG *i* Sn **Sn 13 16 21.5 +2.4**
ISO Isola 4.59 290 P Pn 13 15 29.6 +3.5
DAVOX Davos/Dischmat 4.61 332 Pn **Pn 13 15 29.1 +2.7**
comp=E,3.1nm,0.3s,baz=151,slow=19,SNR=28
DAVOX Sn **Sn 13 16 22.9 +3.1**
comp=E,1.0nm,0.3s,baz=246,slow=17,SNR=5.6
comp=E,17nm,0.4s
WTTA Wattenberg 4.61 348 *e*Pn **Pn 13 15 29.5 +3.1**
comp=E,2.2nm,0.2s
SQTA Sankt Quirin 4.64 344 *i* Pn **Pn 13 15 30.3 +3.5**
comp=E,5.2nm,0.2s,SNR=6.5
ULC Ulcinj 4.66 98 *e*Pn **Pn 13 15 28.5 +1.6**
ULC *i* Sn **Sn 13 16 23.1 +2.3**
PLE Pljevlja 4.68 81 *e*Pn **Pn 13 15 28.8 +1.5**
WATA Walderalm 4.69 348 *e*Pn **Pn 13 15 31.1 +3.6**
comp=E,4.6nm,0.2s
RUDO Rudo 4.70 77 *e*Pn **Pn 13 15 29.0 +1.5**
KOME Kolasin 4.75 87 *e*Pn **Pn 13 15 29.8 +1.5**
KOME *i* Sn **Sn 13 16 25.5 +2.2**
BBLS Lazići 4.76 74 *e*Pn **Pn 13 15 30.5 +2.1**
MOTA Moosalm 4.78 344 *e*Pn **Pn 13 15 33.2 +4.5**
comp=E,4.3nm,0.2s
ARSA Arzberg 4.81 20 *e*Pn **Pn 13 15 30.2 +1.1**
comp=E,1.6nm,0.2s
LMR La Mourre 4.83 279 *e*Pn **Pn 13 15 29.1 -0.2**
LMR La Mourre 4.83 279 *e*P **Pn 13 15 32.2 +2.9**
LMR *e*Sn **Sn 13 16 21.8 -3.2**
comp=E,28nm,1.5s
JAUF Jausiers 4.87 292 P Pn 13 15 32.5 +2.5
BIOA Bad Ischl, Aus 4.94 5 *i* Pn **Pn 13 15 32.6 +1.8**
comp=E,6.4nm,0.2s,SNR=9.7
TRIGF Trigance 4.95 284 P Pn 13 15 32.8 +1.7
MBDF Montbardon 4.96 295 *e*Pn **Pn 13 15 31.0 -0.1**
MBDF Montbardon 4.96 295 *e*P **Pn 13 15 34.4 +3.3**
MBDF *e*Sn **Sn 13 16 25.9 -2.4**
comp=E,7.4nm,0.6s
RETA Reutte 4.99 342 *e*Pn **Pn 13 15 34.8 +3.2**
comp=E,2.2nm,0.2s
CREF Crivoux 4.99 293 P Pn 13 15 32.9 +1.1
FLAF Flassans-sur-I 5.02 279 P Pn 13 15 32.9 +1.1
IVA Berane 5.03 86⇑ *i*Pn **Pn 13 15 33.7 +1.5**
IVA *i* Sn **Sn 13 16 32.3 +2.2**
DAVA Damuels 5.05 335 *i* Pn **Pn 13 15 35.5 +3.0**
comp=E,5.8nm,0.3s,SNR=6.4
MOA Molln 5.16 9 *e*Pn **Pn 13 15 35.2 +1.4**
comp=E,2.3nm,0.2s
DIVS Divibare 5.22 73 *e*Pn **Pn 13 15 35.6 +0.8**
LPG La Plagne 5.29 303 *e*Pn **Pn 13 15 37.4 +1.5**
LPG La Plagne 5.29 303 *e*P **Pn 13 15 39.8 +3.9**
LPG *e*Sn **Sn 13 16 34.0 -2.9**
comp=E,10nm,0.7s
LPL La Plagne 5.32 303 *e*Pn **Pn 13 15 36.6 +0.5**
LPL La Plagne 5.32 303 *e*P **Pn 13 15 39.8 +3.6**
LPL *e*Sn **Sn 13 16 35.1 -2.2**
comp=E,5.3nm,0.4s
ARTF Artigues 5.36 281 P Pn 13 15 38.1 +1.5
FRGS Fruska Gora 5.43 62 *e*Pn **Pn 13 15 38.4 +0.8**
RONA Rosalia, Austr 5.44 24 *e*Pn **Pn 13 15 38.8 +1.2**
comp=E,1.2nm,0.2s
CONA Conrad Observa 5.53 20 *e*Pn **Pn 13 15 39.9 +0.9**
comp=E,2.1nm,0.3s
SMRF Simiane la Rot 5.58 285 *e*Pn **Pn 13 15 39.4 -0.3**
SMRF Simiane la Rot 5.58 285 *e*P **Pn 13 15 43.2 +3.5**
SMRF *e*Sn **Sn 13 16 40.3 -3.3**
comp=E,4.2nm,0.6s
ORIF Oris-en-Rattie 5.62 295 *e*P **Pn 13 15 44.7 +4.5**
ORIF *e*Sn **Sn 13 16 41.3 -3.2**
comp=E,13nm,0.8s
GERES GERESS Array B 6.10 4 Pn **Pn 13 15 47.3 +0.5**
comp=E,0.6nm,0.3s,baz=171,slow=13,SNR=20
GERES Sn **Sn 13 16 54.0 -2.4**
comp=E,2.3nm,0.3s,baz=182,slow=24,SNR=8.3
comp=E,1.1nm,0.4s
CKRC Cesky Krumlov 6.12 8 *e*PN **Pn 13 15 47.7 +0.7**
CKRC *e*SN **Sn 13 16 55.2 -1.6**
CABF La Chapelle 6.28 310 *e*Pn **Pn 13 15 50.2 +0.9**
CABF *e*Sn **Sn 13 16 58.8 -2.0**
comp=E,8.1nm,0.7s
KHC Kasperske Hory 6.38 3 *e*PN **Pn 13 15 50.4 -0.2**
KHC *e*SN **Sn 13 17 01.1 -2.1**
VIVF Saint-Julien-I 6.41 292 *e*Pn **Pn 13 15 50.2 -0.9**
VIVF Saint-Julien-I 6.41 292 *e*P **Pn 13 15 55.3 +4.2**
HINF Hinteralfeld 6.68 321 *e*Pn **Pn 13 15 54.7 0.0**
HINF Hinteralfeld 6.68 321 *e*P Pn 13 15 59.6 +4.9
HINF *e*Sn **Sn 13 17 07.9 -2.7**
comp=E,22nm,0.7s
KRUC Moravsky 6.71 19 *e*PN **Pn 13 15 53.3 -1.8**
KRUC *e*SN **Sn 13 17 09.9 -1.5**
LASF Ste Croix 6.82 284 *e*Pn **Pn 13 15 56.1 -0.6**
LASF Ste Croix 6.82 284 *e*P **Pn 13 16 00.6 +3.9**
CDF Champ du Feu 6.95 326 *e*Pn **Pn 13 15 58.8 +0.4**
CDF Champ du Feu 6.95 326 *e*P **Pn 13 16 02.4 +4.0**
CDF *e*Sn **Sn 13 17 14.4 -2.9**
comp=E,13nm,0.7s
VRAC Vranov 6.99 19 Pn **Pn 13 15 59.0 0.0**
baz=201,slow=11,SNR=3.6
comp=E,1.6nm,0.5s
HAU Haudompre 7.05 320 *e*Pn **Pn 13 16 00.0 +0.2**
HAU Haudompre 7.05 320 *e*P **Pn 13 16 03.9 +4.1**
HAU *e*Sn **Sn 13 17 16.9 -2.8**
comp=E,29nm,0.8s
NKC Novy Kostel 7.48 357 *e*SN **Sn 13 17 28.3 -2.0**
KEST Kesra 7.59 203 Pn **Pn 13 16 11.8 +4.5**
comp=E,0.4nm,0.3s,baz=188,slow=14,SNR=2.7
comp=E,2.4nm,0.6s
SMF Signal de Mont 7.62 304 *e*Pn **Pn 13 16 07.7 +0.1**
SMF Signal de Mont 7.62 304 *e*P **Pn 13 16 12.3 +4.7**
SMF *e*Sn **Sn 13 17 30.1 -3.7**
comp=E,11nm,0.8s
PAGF Fort de Pagny 7.74 321 *e*Pn **Pn 13 16 08.5 -0.6**
baz=141
PAGF *e*Sn **Sn 13 17 32.8 -3.7**
comp=E,11nm,0.7s
SFTF Sexfontaines 7.83 317 *e*Pn **Pn 13 16 11.4 +1.0**
baz=139
SFTF *e*Sn **Sn 13 17 35.3 -3.5**
comp=E,15nm,0.9s
LOR Lormes 7.92 308 *e*Pn **Pn 13 16 11.6 -0.1**
baz=131
LOR Lormes 7.92 308 *e*P **Pn 13 16 16.3 +4.6**
LOR *e*Sn **Sn 13 17 37.3 -3.7**
comp=E,9.2nm,0.7s
MTLF Montolieu 7.96 278 *e*Pn **Pn 13 16 11.5 -0.7**
AVF Avril sur Loir 7.99 304 *e*Pn **Pn 13 16 12.6 0.0**
AVF Avril sur Loir 7.99 304 *e*P Pn 13 16 17.5 +4.9
AVF *e*Sn **Sn 13 17 38.1 -4.6**
comp=E,20nm,1.5s
MEZF Maizieres J'vi 8.02 318 *e*Pn **Pn 13 16 13.4 +0.4**
baz=140
MEZF Maizieres J'vi 8.02 318 *e*P **Pn 13 16 17.2 +4.2**
MEZF *e*Sn **Sn 13 17 39.7 -3.8**
comp=E,21nm,1.2s
SSF Saint Saulge 8.02 306 *e*Pn **Pn 13 16 12.0 -1.1**
SSF Saint Saulge 8.02 306 *e*P **Pn 13 16 17.5 +4.4**
SSF *e*Sn **Sn 13 17 39.2 -4.3**
comp=E,18nm,1.3s
SAVF Savonnieres en 8.06 319 *e*Pn **Pn 13 16 13.6 0.0**
baz=141
SAVF *e*Sn **Sn 13 17 41.0 -3.5**
comp=E,11nm,0.8s
BGF Bois d'Agland 8.20 301 *e*Pn **Pn 13 16 14.2 -1.4**
BGF Bois d'Agland 8.20 301 *e*P **Pn 13 16 19.6 +4.0**
CAF Calviac 8.23 289 *e*Pn **Pn 13 16 15.4 -0.6**
CAF Calviac 8.23 289 *e*P Pn 13 16 20.9 +4.9
TCF Toulx Ste Croi 8.51 298 *e*Pn **Pn 13 16 19.9 +0.1**
TCF Toulx Ste Croi 8.51 298 *e*P **Pn 13 16 24.5 +4.7**
RJF Les Rejaudoux 8.69 291 *e*Pn **Pn 13 16 21.0 -1.3**
LFF La Frestale 9.16 288 *e*Pn **Pn 13 16 28.6 -0.1**
GIVF Givet 9.28 325 *e*Pn **Pn 13 16 29.9 -0.4**
BAIF Baives 9.51 323 *e*Pn **Pn 13 16 34.4 +1.0**
MLR Muntele Rosu 9.66 69 Pn **Pn 13 16 34.5 -1.2**
comp=E,0.1nm,0.3s,baz=142,slow=24,SNR=1.6
comp=E,1.7nm,0.7s
MFF Saint Martin d 10.15 297 *e*Pn **Pn 13 16 40.8 -1.5**
MFF Saint Martin d 10.15 297 *e*P **Pn 13 16 46.7 +4.4**
SJPF Ste Jean 10.48 277 *e*Pn **Pn 13 16 44.6 -2.2**
IDI Anoyia 11.84 125 Pn **Pn 13 17 04.6 -0.9**
comp=E,0.1nm,0.3s,baz=20,slow=15,SNR=1.6
comp=E,2.0nm,0.7s
SGMF Saint Gilles 12.24 302 *e*Pn **Pn 13 17 08.4 -2.4**
QUIF Quistinic 12.51 300 *e*Pn **Pn 13 17 14.0 -0.5**
EKA Eskdalemuir Ar 16.41 326 Pn **P 13 18 09.2 -0.3**
baz=137,slow=14
comp=E,0.2nm,0.4s
FINES FINESS Array B 20.27 18 P P 13 18 52.9 +1.0
comp=E,3.5nm,1.0s,baz=203,slow=14,SNR=1.7
comp=E,3.5nm,1.0s
TORD Torodi Ar. Bea 31.11 202 P P 13 20 35.9 +0.9
comp=E,0.3nm,0.6s,baz=7.0,slow=9.6,SNR=3.3
comp=E,0.3nm,0.6s

ROM ***30*** *13:21:28.9±0.0, 43°.019N±0°.002×13°.121E±0°.003, h7km, ML3.6/44, Error ellipse: s-maj=0.2km s-min=0.1km az=57.0*
LDG ***30*** *13:21:29.4±0.1, 43°.02N×13°.06E, h9km, Ml3.4/16, Error ellipse: s-maj=3.6km s-min=2.7km az=36.0*
PRU ***30*** *13:21:30.1±0.0, 42°.98N×13°.58E, h10km*
IDC ***30*** *13:21:30.1±1.2, 43°.20N×13°.29E, h0km, mb3.6/3, mbtmp3.6/11, ML3.6/8, MS3.0/9, Error ellipse: s-maj=21.5km s-min=13.4km az=84.0*
ISC 30 13:21:29.1±0.7, 43°.02N±0°.01×13°.12E±0°.02, h6km±4km, n203, σ1§63/242, mb3.7/3, MS3.1/3, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.03**	**309**	P	**Pg**	**13 21 30.0**	**-0.4**
FDMO				S	**Sg**	**13 21 30.9**	**-0.5**
FEMA	**Monte Fema**	**0.07**	**221**	P	**Pg**	**13 21 31.3**	**+0.2**
FEMA				S	**Sg**	**13 21 33.3**	**+0.8**
FEMA				AML	AML		
FEMA				AML	AML		
T1256	**Bolognola (MC)**	**0.08**	**99**	P	**Pg**	**13 21 30.8**	**-0.4**
T1256				S	**Sg**	**13 21 32.5**	**-0.2**
T1219	**Muccia, Frazio**	**0.09**	**295**	P	**Pg**	**13 21 31.4**	**+0.2**
T1219				S	**Sg**	**13 21 33.4**	**+0.7**
T1220	**Camerino, Fraz**	**0.09**	**347**	P	**Pg**	**13 21 31.3**	**0.0**
T1220				S	**Sg**	**13 21 33.4**	**+0.6**
CSP1	**Cessapalombo**	**0.10**	**42**	P	**Pg**	**13 21 31.2**	**-0.2**
CSP1				S	**Sg**	**13 21 33.1**	**+0.1**
CSP1				AML	AML		
CSP1				AML	AML		
T1216	**Preci, Frazion**	**0.15**	**209**	P	**Pg**	**13 21 32.8**	**+0.6**
T1216				S	**Sg**	**13 21 36.0**	**+1.7**
GUMA	**Gualdo di Mace**	**0.17**	**75**	P	**Pg**	**13 21 33.2**	**+0.7**
GUMA				S	**Sg**	**13 21 36.4**	**+1.6**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1245	**Castelsantange**	**0.17**	**162**	P	**Pg**	**13 21 32.3**	**-0.4**
T1245				S	**Sg**	**13 21 36.1**	**+1.0**
T1245				AML	AML		
comp=E,85000μm,0.7s
T1245 AML AML
T1245 AML AML
comp=E,76350μm,0.7s
T1245 AML AML
T1245 AML AML
T1245 AML AML
comp=N,72070μm,0.4s
T1245 AML AML
comp=N,97268μm,0.7s
MDAR Monte D'Aria 0.17 6 P **Pg 13 21 32.9 +0.2**
MDAR S **Sg 13 21 36.0 +0.9**
MDAR AML AML
comp=E,26150μm,1.2s
MDAR AML AML
comp=N,33350μm,0.8s
MDAR AML AML
comp=N,33400μm,0.8s
MDAR AML AML
comp=E,26100μm,1.2s
AM05 Amandola Campo 0.18 103 ⇓P **Pg 13 21 33.0 +0.3**
AM05 S **Sg 13 21 36.1 +0.9**
AM05 AML AML
comp=E,11930μm,0.2s
AM05 AML AML
comp=N,12995μm,1.3s
AM05 AML AML
comp=E,11935μm,0.2s
AM05 AML AML
comp=N,13040μm,1.3s
AM05 AML AML
comp=N,1740μm,0.5s
AM05 AML AML
comp=E,11940μm,0.2s
AM05 AML AML
comp=E,52450μm,0.2s
AM05 AML AML
comp=N,13035μm,1.3s
SEF1 Sefro 0.18 316 P **Pg 13 21 33.1 +0.3**
SEF1 S **Sg 13 21 36.5 +1.3**
SEF1 AML AML
SEF1 AML AML
SEF1 AML AML
PIO1 Pioraco 0.19 329 P **Pg 13 21 33.4 +0.5**
PIO1 S **Sg 13 21 36.8 +1.3**
PIO1 AML AML
comp=E,26100μm,0.6s
PIO1 AML AML
comp=N,54100μm,0.9s
PIO1 AML AML
comp=N,54100μm,0.8s
PIO1 AML AML
comp=E,26150μm,0.6s
MMO1 Montemonaco 0.20 128 P **Pg 13 21 33.2 +0.2**
MMO1 S **Sg 13 21 36.6 +0.9**
SSM1 San Severino M 0.21 12 P **Pg 13 21 33.8 +0.4**
SSM1 S **Sg 13 21 37.6 +1.3**
FIU1 Fiuminata 0.22 321 P **Pg 13 21 33.8 +0.4**
FIU1 S **Sg 13 21 37.8 +1.4**
FIU1 AML AML
comp=N,13900μm,1.2s
FIU1 AML AML
comp=E,20000μm,1.2s
FIU1 AML AML
comp=N,13850μm,1.2s
FIU1 AML AML
comp=N,13850μm,1.2s
GAG1 Gagliole 0.22 351 P **Pg 13 21 34.2 +0.7**
GAG1 AML AML
comp=E,53650μm,0.3s
GAG1 AML AML
comp=E,53700μm,0.3s
GAG1 AML AML
comp=N,52700μm,0.4s
GAG1 AML AML
comp=E,53700μm,0.3s
GAG1 AML AML
comp=N,52650μm,0.4s
SNTG Esanatoglia 0.27 331 P **Pg 13 21 34.6 +0.1**
SNTG S **Sg 13 21 39.8 +1.8**
SNTG AML AML
comp=E,8950μm,0.7s
SNTG AML AML
comp=N,12180μm,0.5s
SNTG AML AML
comp=N,12365μm,0.5s
SNTG AML AML
comp=E,8570μm,0.7s
SNTG AML AML
comp=N,12185μm,0.5s
T1212 Cascia, Frazio 0.27 191 P **Pg 13 21 35.2 +0.7**
T1212 S **Sg 13 21 40.1 +2.0**
T1241 Roccafluvione, 0.28 125 P **Pg 13 21 35.4 +0.7**
T1241 S **Sg 13 21 39.7 +1.3**
MNTP Montappone 0.28 65 P **Pg 13 21 35.9 +1.2**
MNTP S **Sg 13 21 40.8 +2.3**
T1215 Vallo di Nera, 0.28 220 P **Pg 13 21 35.0 +0.3**
T1215 S **Sg 13 21 40.4 +1.9**
T1215 AML AML
comp=E,15850μm,1.2s
T1215 AML AML
comp=E,17400μm,1.1s
T1215 AML AML
comp=N,13000μm,1.4s
T1215 AML AML
comp=E,17350μm,1.1s
T1215 AML AML
comp=N,12950μm,1.4s
T1215 AML AML
comp=N,13450μm,1.2s
T1244 Arquata del Tr 0.29 153 P **Pg 13 21 35.5 +0.6**
T1244 S **Sb 13 21 40.9 -1.1**
EL6 Elcito 0.31 358 P **Pg 13 21 35.5 +0.3**
EL6 AML AML
comp=N,21550μm,1.5s
EL6 AML AML
comp=E,17100μm,0.4s
TRE1 Treia 0.33 26 P **Pg 13 21 36.3 +0.8**
TRE1 S **Sb 13 21 41.9 -0.9**
TRE1 AML AML
comp=E,29900μm,1.3s
TRE1 AML AML
comp=E,29850μm,1.3s
TRE1 AML AML
comp=N,27600μm,1.0s
T1217 Poggiodomo (PG 0.34 204 P **Pg 13 21 36.4 +0.7**
T1217 S **Sg 13 21 42.2 +2.1**
T1217 AML AML
comp=E,13150μm,1.6s
T1217 AML AML
comp=E,13150μm,1.5s
T1217 AML AML
comp=N,17850μm,0.6s
T1217 AML AML
comp=E,13600μm,1.5s
T1217 AML AML
comp=E,13600μm,1.5s
T1217 AML AML
comp=N,17650μm,0.6s
ASSB Assisi San Ben 0.34 274 P **Pg 13 21 36.1 +0.3**
ASSB S **Sg 13 21 42.2 +2.0**
ASSB AML AML
comp=E,23550μm,1.1s
ASSB AML AML
comp=N,24050μm,0.7s
T1201 Domo (RI) 0.38 165 P **Pg 13 21 37.0 +0.5**
T1201 S **Sb 13 21 43.5 -0.7**
FOSV Fossato di Vic 0.38 317 P **Pg 13 21 36.6 +0.1**
FOSV S **Sg 13 21 43.3 +1.7**
FOSV AML AML
comp=N,23450μm,0.3s
FOSV AML AML
comp=E,13750μm,0.9s
FOSV AML AML
comp=N,23500μm,0.3s
ATCC AVT- Casa Cast 0.39 296 P **Pg 13 21 37.1 +0.4**
ATCC S **Sg 13 21 44.2 +2.5**
ATCC AML AML
comp=E,30750μm,0.3s
ATCC AML AML
comp=N,24650μm,0.4s
T1243 Rocca Santa Ma 0.40 143 P **Pg 13 21 37.6 +0.6**
T1243 S **Sb 13 21 43.9 -1.3**
LNSS Leonessa 0.42 188 P **Pg 13 21 37.2 -0.1**
LNSS AML AML

comp=E,5620µm,0.7s
LNSS AML AML
comp=N,14350µm,0.6s
OFFI Offida 0.43 101 P **Pg 13 21 38.1 +0.7**
OFFI AML AML
comp=E,14500µm,0.9s
OFFI AML AML
comp=N,22100µm,0.6s
MMUR Monte Murano 0.43 348 P **Pg 13 21 37.9 +0.4**
MMUR S **Sg 13 21 45.0 +1.8**
MMUR AML AML
comp=N,13150µm,1.3s
MMUR AML AML
comp=N,13100µm,1.3s
MMUR AML AML
comp=E,17050µm,0.4s
ARVD Arcevia 0.50 345 P **Pg 13 21 39.2 +0.5**
ARVD S **Sg 13 21 47.2 +2.0**
ARVD AML AML
comp=N,3565µm,0.2s
ARVD AML AML
comp=E,5080µm,0.4s
MURB Monte Urbino 0.50 300 P **Pg 13 21 39.4 +0.6**
MURB S **Sg 13 21 47.7 +2.5**
MURB AML AML
comp=E,27400µm,0.3s
MURB AML AML
comp=E,30000µm,0.4s
MURB AML AML
comp=N,17200µm,0.3s
MURB AML AML
comp=N,18050µm,0.3s
PP3 Marolino 0.51 45 AML AML
comp=E,15600µm,1.1s
PP3 AML AML
comp=N,18400µm,0.8s
PP3 AML AML
comp=E,15600µm,1.1s
PP3 AML AML
comp=N,18400µm,0.8s
ARRO Arrone 0.51 211 P **Pg 13 21 40.1 +1.2**
ATSC Scheggia e Pas 0.51 322 P **Pg 13 21 39.1 +0.1**
ATSC S **Sg 13 21 48.2 +2.4**
RM33 Pellescritta (0.52 172 P **Pg 13 21 38.9 -0.2**
RM33 S **Sb 13 21 47.6 -0.7**
T1246 Crognaleto (TE 0.52 147 P **Pb 13 21 40.5 -0.2**
T1246 S **Sb 13 21 47.3 -1.1**
T1211 Morro Reatino 0.52 202 P **Pg 13 21 39.8 +0.5**
T1211 S **Sg 13 21 48.0 +1.9**
T1211 AML AML
comp=N,11260µm,0.8s
T1211 AML AML
comp=E,7745µm,1.3s
T1211 AML AML
comp=N,11260µm,0.9s
T1211 AML AML
comp=N,11270µm,0.8s
T1211 AML AML
comp=E,7500µm,1.3s
T1211 AML AML
comp=N,11250µm,0.9s
T1211 AML AML
comp=E,7725µm,1.3s
ATFO Monte Foce - G 0.53 311 P **Pg 13 21 39.8 +0.4**
ATFO S **Sg 13 21 48.7 +2.4**
ATFO AML AML
comp=N,5725µm,0.8s
ATFO AML AML
comp=E,6405µm,1.0s
ATFO AML AML
comp=E,4907µm,2.1s
CAMP Campotosto 0.53 156 P **Pg 13 21 39.4 0.0**
CAMP S **Sg 13 21 47.6 +1.4**
TERO Teramo 0.53 138 P **Pg 13 21 39.6 +0.2**
TERO S **Sb 13 21 47.9 -0.9**
CESX Cesi 0.57 224 P **Pg 13 21 40.5 +0.4**
CESX S **Sg 13 21 49.5 +2.1**
FRON Frontone 0.57 330 P **Pg 13 21 40.4 +0.1**
FRON S **Sg 13 21 49.7 +2.0**
FRON AML AML
comp=E,4390µm,1.2s
FRON AML AML
comp=N,7380µm,1.2s
ATTE AVT- Monte Tez 0.59 288 P **Pg 13 21 40.1 -0.3**
ATTE AML AML
comp=N,3300µm,0.6s
ATTE AML AML
comp=E,3045µm,0.5s
ATLO AVT- Montelove 0.60 300 P **Pg 13 21 40.8 +0.2**
ATLO S **Sg 13 21 50.5 +2.1**
TB01 Gubbio 0.62 306 P **Pg 13 21 41.2 +0.2**
ATBU Serra di Buran 0.62 318 P **Pg 13 21 41.6 +0.6**
ATVO AVT- Monte Val 0.63 305 P **Pg 13 21 41.6 +0.3**
ATVO AML AML
comp=E,3575µm,1.6s
ATVO AML AML
comp=N,3270µm,0.9s
ATVO AML AML
comp=N,2996µm,0.3s
AOI Ancona 0.64 34 P **Pg 13 21 41.6 +0.2**
AOI AML AML
comp=E,2865µm,0.7s
AOI AML AML
comp=N,2880µm,0.9s
TB03 Pietralunga 0.64 307 P **Pg 13 21 41.4 -0.1**
TB03 S **Sg 13 21 51.6 +1.8**
GIGS Gran Sasso 0.66 149 P **Pg 13 21 41.5 -0.3**
GIGS S **Sb 13 21 51.6 -0.9**
ATVA AVT- Monte Val 0.66 293 P **Pg 13 21 42.3 +0.4**
MPAG Monte Paganucc 0.66 337 P **Pg 13 21 42.2 +0.3**
MPAG AML AML
comp=N,3215µm,0.4s
MPAG AML AML
comp=N,3220µm,0.4s
MPAG AML AML
comp=E,3325µm,1.2s
ATPC Poggio Castell 0.67 314 P **Pg 13 21 42.0 0.0**
PIEI Pieia 0.67 321 P **Pg 13 21 42.1 +0.1**
PIEI AML AML
comp=E,2705µm,0.2s
PIEI AML AML
comp=N,3545µm,0.2s
ATPI Pietralunga - 0.68 310 P **Pg 13 21 42.4 +0.2**
ATPI S **Sg 13 21 53.0 +1.9**
ATPI AML AML
comp=N,2580µm,1.1s
ATPI AML AML
comp=E,3270µm,1.4s
ATPI AML AML
comp=N,2575µm,1.1s
SENI Senigallia 0.69 7 AML AML
comp=N,3465µm,1.0s
SENI AML AML
comp=E,9150µm,0.4s
SENI AML AML
comp=N,10750µm,1.4s
SENI AML AML
comp=E,3570µm,0.9s
AQU L'Aquila 0.70 162 P **Pg 13 21 42.5 0.0**
AQU S **Sb 13 21 53.4 -0.1**
NARO Abbazia di Nar 0.71 327 P **Pg 13 21 42.6 -0.1**
NARO AML AML
comp=N,1955µm,1.6s
NARO AML AML
comp=E,1970µm,1.3s
FSSB Fossombrone 0.72 340 P **Pg 13 21 43.2 +0.3**
FSSB S **Sg 13 21 54.0 +1.8**
FSSB AML AML
comp=E,8020µm,0.3s
FSSB AML AML
comp=N,18750µm,0.3s
FSSB AML AML
comp=E,7200µm,1.3s
APEC Apecchio 0.74 317 P **Pg 13 21 43.9 +0.5**
MGAB Montegabbione 0.74 262 P **Pg 13 21 42.8 -0.6**
MGAB AML AML
comp=E,3625µm,0.7s
MGAB AML AML
comp=N,6015µm,0.5s
MGAB AML AML
comp=E,3655µm,0.6s
MGAB AML AML
comp=N,6010µm,0.5s
MGAB AML AML
comp=N,5780µm,0.5s
ATMC Monte Cedrone 0.80 303 P **Pg 13 21 45.0 +0.5**

PE3 Peglio 0.81 326 AML AML
comp=E,25µm,0.2s
PE3 AML AML
comp=N,30µm,0.2s
VCEL Villa Celiera 0.82 139 P **Pg 13 21 45.1 +0.2**
CAFI Castiglion Fio 0.90 291 P **Pg 13 21 46.4 +0.1**
CAFI AML AML
comp=E,1835µm,0.6s
CAFI AML AML
comp=N,2590µm,1.6s
CAFI AML AML
comp=N,2485µm,1.6s
CAFI AML AML
comp=E,1850µm,0.6s
SACS San Casciano d 0.90 260 P **Pg 13 21 46.4 -0.1**
SSP9 Sansepolcro 0.91 308 P **Pg 13 21 47.0 +0.4**
T0110 Collepietro 0.93 148 P **Pg 13 21 46.5 -0.5**
CPGN Carpegna, Ital 0.97 324 P **Pg 13 21 46.8 -1.1**
RSM Repubblica di 1.03 332 P **Pg 13 21 47.9 -1.0**
MTCE Montecelio 1.03 196 P **Pg 13 21 48.4 -0.5**
CRE Caprese Michel 1.04 306 P **Pg 13 21 48.6 -0.6**
CRE AML AML
comp=E,1126µm,1.3s
CRE AML AML
comp=N,1830µm,0.5s
CRE AML AML
comp=E,1110µm,0.4s
SF11 Podere del Sol 1.07 262 P **Pg 13 21 48.4 -1.2**
CERT Cerreto 1.07 185 P **Pg 13 21 48.6 -1.1**
MCIV Monte Civitell 1.08 258 P **Pg 13 21 49.5 -0.4**
SF14 Selvena 1.14 257 P **Pg 13 21 49.7 -1.2**
INTR Introdacqua 1.16 150 P **Pg 13 21 50.4 -1.0**
RCAV Rocca di Cave 1.18 186 P **Pg 13 21 51.5 -0.2**
VVLD Villa Vallelon 1.21 162 P **Pg 13 21 51.3 -1.0**
GUAR Guarcino 1.23 173 P **Pg 13 21 52.3 -0.5**
TOLF Tolfa 1.26 221 P **Pn 13 21 53.1 -0.2**
SFI Santa Sofia 1.28 314 P **Pn 13 21 53.5 -0.1**
POFI Posta Fibreno 1.37 161 P **Pn 13 21 54.0 -0.9**
CSNT Castellina Chi 1.41 289 P **Pn 13 21 54.8 -0.5**
CSNT AML AML
comp=E,499µm,1.6s
CSNT AML AML
comp=N,492µm,0.6s
OSSC Osservatorio P 1.46 291 P **Pn 13 21 56.1 +0.1**
LMD Lutirano 1.47 316 AML AML
comp=N,853µm,1.0s
LMD AML AML
comp=E,944µm,1.0s
RNI2 Rionero Sannit 1.52 149 P **Pn 13 21 55.9 -1.1**
LATB Latina 1.53 184 AML AML
comp=E,436µm,1.3s
LATB AML AML
comp=N,384µm,1.6s
LATB AML AML
comp=N,384µm,1.6s
CERA Filignano 1.57 154 P **Pn 13 21 57.4 -0.1**
TRIV Trivento 1.64 139 P **Pn 13 21 59.3 +0.8**
CASP Castiglione de 1.67 263 P **Pn 13 21 59.0 +0.2**
CASP AML AML
comp=E,158µm,0.7s
CASP AML AML
comp=N,198µm,1.6s
MAIM Mastiano 2.11 296 P **Pn 13 22 05.6 +0.7**
CARD Cardoso 2.17 299 AML AML
comp=N,265µm,0.5s
CARD AML AML
comp=E,217µm,1.4s
PAOL Paolisi 2.26 151 AML AML
comp=N,347µm,1.6s
PAOL AML AML
comp=E,236µm,1.6s
GSCL Gusciola 2.27 307 P **Pn 13 22 06.8 -0.4**
TEOL Teolo 2.56 337 AML AML
comp=E,966µm,0.8s
TEOL AML AML
comp=N,945µm,1.0s
SKDS Skadanscina 2.61 14 *i* Pn **Pn 13 22 11.7 -0.1**
SKDS *i* Sn **Sn 13 22 43.4 -0.4**
MSSA Maissana 2.92 298 AML AML
comp=E,122µm,0.9s
MSSA AML AML
comp=N,115µm,1.3s
SABO M.te Sabotino 2.98 6 P **Pn 13 22 16.9 0.0**
SABO AML AML
comp=E,1310µm,0.9s
SABO AML AML
comp=N,1840µm,0.9s
SABO AML AML
comp=N,467µm,0.9s
SABO AML AML
comp=E,348µm,0.6s
ROVR Rover Verones 3.01 332 P **Pn 13 22 17.9 +0.5**
ROVR AML AML
comp=E,93µm,1.6s
ROVR AML AML
comp=N,118µm,0.8s
CGRP Cima Grappa 3.01 342 P **Pn 13 22 18.2 +0.7**
CGRP AML AML
comp=N,500µm,0.9s
CGRP AML AML
comp=E,513µm,0.9s
VARN Col Varnada, M 3.06 347 P **Pn 13 22 18.6 +0.6**
VARN AML AML
comp=E,462µm,1.2s
VARN AML AML
comp=N,356µm,1.1s
PGF Pioggiola 3.07 263 *e*Pn **Pn 13 22 16.2 -2.0**
PGF Pioggiola 3.07 263 *e*P **Pn 13 22 19.8 +1.6**
PGF *e*Sn **Sn 13 22 51.0 -4.2**
comp=N,18nm,0.7s
PGF Pioggiola 3.07 263 AML AML
comp=E,27µm,0.8s
PGF AML AML
comp=N,30µm,1.6s
LJU Ljubljana 3.19 18 AML AML
comp=E,1995µm,1.2s
LJU AML AML
comp=N,2375µm,1.1s
SALO Salr 3.20 325 P **Pn 13 22 20.8 +0.9**
SALO AML AML
comp=E,308µm,1.2s
SALO AML AML
comp=N,391µm,1.5s
CTI Castel Tesino 3.21 341 P **Pn 13 22 20.7 +0.6**
CTI AML AML
comp=E,348µm,1.3s
CTI AML AML
comp=N,236µm,0.7s
MPRI Monte Prat 3.22 358 P **Pn 13 22 21.0 +0.7**
MPRI AML AML
comp=E,324µm,0.8s
MPRI AML AML
comp=N,390µm,0.9s
CADS Cadrg 3.24 8 *i* Pn **Pn 13 22 20.5 +0.1**
STAL STALIGIAL 3.25 355 P **Pn 13 22 21.1 +0.5**
STAL AML AML
comp=N,323µm,1.4s
STAL AML AML
comp=N,292µm,1.1s
STAL AML AML
comp=E,296µm,1.5s
STAL AML AML
comp=E,277µm,0.4s
CIMO Cimolais 3.33 352 AML AML
comp=N,88µm,1.0s
CIMO AML AML
comp=E,101µm,1.1s
CIMO AML AML
comp=E,103µm,1.1s
CIMO AML AML
comp=N,82µm,1.0s
LUSI Trento, Gardas 3.33 333 P **Pn 13 22 21.2 -0.5**
LUSI AML AML
comp=E,220µm,1.1s
LUSI AML AML
comp=N,278µm,0.8s
AGOR Agordo 3.35 347 P **Pn 13 22 21.8 -0.2**
AGOR AML AML
comp=N,134µm,1.0s
AGOR AML AML
comp=E,176µm,1.3s
PTCC Patocco-Chiusa 3.39 3 P **Pn 13 22 22.6 0.0**
PTCC AML AML
comp=E,123µm,0.9s
PTCC AML AML
comp=N,172µm,0.7s

GAGG Gaggia 3.43 334 P **Pn 13 22 23.9 +0.7**
GAGG AML AML
comp=N,243µm,0.9s
GAGG AML AML
comp=E,376µm,1.0s
CLUD Cludinico 3.44 357 P **Pn 13 22 23.0 -0.3**
CLUD AML AML
comp=E,330µm,1.1s
CLUD AML AML
comp=N,196µm,0.9s
ZOU Zoufplan 3.54 358 AML AML
comp=N,241µm,1.1s
ZOU AML AML
comp=E,269µm,1.2s
ZOU AML AML
comp=N,236µm,1.2s
ZOU AML AML
comp=E,290µm,1.2s
ACOM Acomizza, Ital 3.54 4 P **Pn 13 22 24.8 +0.1**
ACOM AML AML
comp=E,313µm,0.7s
ACOM AML AML
comp=N,259µm,1.5s
ACOM AML AML
comp=E,321µm,0.7s
ACOM AML AML
comp=N,290µm,0.8s
FVI Forni Avoltri 3.58 356 P **Pn 13 22 26.1 +0.8**
FVI AML AML
comp=N,182µm,0.7s
FVI AML AML
comp=E,176µm,0.7s
MYKA Terra Mystica 3.63 6 *i* Pn **Pn 13 22 26.9 +1.0**
comp=E,9.6nm,0.5s,SNR=6.8
OBKA Obir 3.64 16 *e*Pn **Pn 13 22 27.4 +1.4**
comp=E,3.0nm,0.2s
KOSI Kohlern 3.66 341 P **Pn 13 22 27.0 +0.6**
KOSI AML AML
comp=E,289µm,0.9s
KOSI AML AML
comp=N,218µm,1.0s
ABTA Abfaltersbach 3.75 354 *i* Pn **Pn 13 22 28.9 +1.3**
comp=N,34nm,0.5s,SNR=15
SOKA Soboth 3.90 20 *e*Pn **Pn 13 22 28.5 -1.1**
comp=N,0.2nm,0.1s
RISI Rein 4.00 350 P **Pn 13 22 32.1 +1.1**
RISI AML AML
comp=N,394µm,0.4s
RISI AML AML
comp=E,268µm,0.5s
ROSI Rosskopf 4.09 343 P **Pn 13 22 33.5 +1.1**
ROSI AML AML
comp=E,262µm,0.9s
ROSI AML AML
comp=N,358µm,0.8s
MUGIO Muggio 4.11 316 P **Pn 13 22 33.5 +1.0**
MUGIO AML AML
comp=E,45µm,1.0s
SBF Sospel 4.22 283 *e*P **Pn 13 22 35.1 +1.1**
SBF *e*Sn **Sn 13 23 19.2 -4.4**
comp=E,30nm,0.5s
FETA Feichten 4.34 338 *i* Pn **Pn 13 22 38.3 +2.6**
comp=E,20nm,0.6s,SNR=11
WTTA Wattenberg 4.37 347 *i* Pn **Pn 13 22 38.8 +2.6**
comp=E,17nm,0.5s,SNR=8.5
WTTA Wattenberg 4.37 347 AML AML
comp=E,226µm,0.9s
WTTA AML AML
comp=N,169µm,1.1s
DAVOX Davos/Dischmat 4.41 330 Pn **Pn 13 22 39.0 +2.3**
comp=N,5.5nm,0.3s,baz=287,slow=4.9,SNR=18
DAVOX Sn **Sn 13 23 29.3 +0.9**
baz=120,slow=20
DAVOX LR LR 13 25 03.0
comp=N,110nm,19.1s,baz=82,slow=49
comp=N,12nm,0.3s
SQTA Sankt Quirin 4.41 343 *i* Pn **Pn 13 22 39.5 +2.8**
comp=N,15nm,0.4s,SNR=11
WATA Walderalm 4.45 346 *i* Pn **Pn 13 22 39.8 +2.5**
comp=N,31nm,0.6s,SNR=13
MOTA Moosalm 4.55 342 *i* Pn **Pn 13 22 41.6 +3.0**
comp=N,3.4nm,0.4s,SNR=8.0
ARSA Arzberg 4.56 21 *e*Pn **Pn 13 22 39.0 +0.4**
comp=N,1.2nm,0.3s
BIOA Bad Ischl, Aus 4.69 4 *i* Pn **Pn 13 22 41.4 +1.1**
comp=N,18nm,0.4s,SNR=8.4
RETA Reutte 4.77 340 *i* Pn **Pn 13 22 44.1 +2.6**
comp=N,5.0nm,0.3s,SNR=9.0
DAVA Damuels 4.84 333 *i* Pn **Pn 13 22 46.0 +3.4**
comp=N,7.2nm,0.5s,SNR=12
LMR La Mourre 4.84 276 *e*Pn Pn 13 22 38.8 -3.7
LMR La Mourre 4.84 276 *e*P **Pn 13 22 42.6 +0.1**
LMR *e*Sn **Sn 13 23 33.0 -5.8**
comp=N,4.9nm,0.6s
MBDF Montbardon 4.89 293 *e*Pn Pn 13 22 39.3 -4.0
MBDF Montbardon 4.89 293 *e*P **Pn 13 22 44.5 +1.2**
MBDF *e*Sn Sn 13 23 33.2 -7.1
comp=N,14nm,0.7s
MOA Molln 4.90 9 *e*Pn **Pn 13 22 44.2 +0.9**
comp=N,4.5nm,0.4s
RONA Rosalia, Austr 5.19 24 *e*Pn **Pn 13 22 48.0 +0.7**
comp=N,2.2nm,0.3s
LPG La Plagne 5.20 301 *e*P **Pn 13 22 48.1 +0.5**
LPG *e*Sn **Sn 13 23 42.4 -5.6**
comp=N,24nm,0.8s
LPL La Plagne 5.22 301 *e*P **Pn 13 22 48.6 +0.7**
LPL *e*Sn **Sn 13 23 42.7 -5.7**
comp=N,13nm,0.5s
CONA Conrad Observa 5.28 21 *e*Pn **Pn 13 22 48.9 +0.4**
comp=N,3.4nm,0.3s
ORIF Oris-en-Rattie 5.56 292 *e*P **Pn 13 22 55.0 +2.6**
ORIF *e*Sn **Sn 13 23 53.8 -2.8**
comp=N,38nm,1.2s
SMRF Simiane la Rot 5.57 282 *e*P **Pn 13 22 54.3 +1.8**
GERES GERESS Array B 5.84 4 Pn **Pn 13 22 56.1 -0.1**
comp=N,1.0nm,0.3s,baz=173,slow=13,SNR=13
GERES Sn **Sn 13 23 59.7 -3.9**
comp=N,0.7nm,0.3s,baz=176,slow=30,SNR=2.2
comp=N,1.2nm,0.3s
CKRC Cesky Krumlov 5.86 8 *e*PN **Pn 13 22 55.9 -0.6**
CKRC *e*SN **Sn 13 24 01.5 -2.4**
KHC Kasperske Hory 6.12 3 *e*PN **Pn 13 22 59.7 -0.4**
KHC *e*SN **Sn 13 24 08.3 -2.1**
CABF La Chapelle 6.16 308 *e*P **Pn 13 23 00.7 +0.1**
VIVF Saint-Julien-l 6.37 290 *e*Pn **Pn 13 23 00.4 -3.0**
VIVF Saint-Julien-l 6.37 290 *e*P **Pn 13 23 05.4 +2.0**
KRUC Moravsky 6.46 20 *e*PN **Pn 13 23 04.0 -0.7**
HINF Hinteralfeld 6.51 320 *e*P **Pn 13 23 04.9 -0.6**
HINF *e*Sn Sn 13 24 12.7 -7.3
comp=N,9.0nm,0.4s
VRAC Vranov 6.74 20 Pn **Pn 13 23 07.6 -0.9**
comp=N,0.6nm,0.3s,baz=203,slow=15,SNR=2.6
comp=N,1.9nm,0.5s
CDF Champ du Feu 6.77 325 *e*P **Pn 13 23 07.6 -1.4**
CDF *e*Sn Sn 13 24 19.1 -7.2
comp=N,32nm,1.0s
LASF Ste Croix 6.81 282 *e*Pn **Pn 13 23 06.4 -3.1**
LASF Ste Croix 6.81 282 *e*P **Pn 13 23 11.4 +1.9**
HAU Haudompre 6.89 319 *e*P **Pn 13 23 10.3 -0.3**
HAU *e*Sn Sn 13 24 21.4 -7.8
comp=N,19nm,0.4s
NKC Novy Kostel 7.23 357 *e*SN **Sn 13 24 35.0 -2.6**
SMF Signal de Mont 7.52 302 *e*P **Pn 13 23 20.5 +1.2**
SMF *e*Sn **Sn 13 24 39.1 -5.7**
comp=N,5.0nm,0.4s
PAGF Fort de Pagny 7.57 320 *e*P **Pn 13 23 19.8 -0.1**
baz=135
PAGF *e*Sn Sn 13 24 38.0 -8.0
comp=N,33nm,1.0s
SFTF Sexfontaines 7.68 315 *e*P **Pn 13 23 21.1 -0.3**
baz=133
LOR Lormes 7.80 306 *e*P **Pn 13 23 23.6 +0.5**
baz=124
LOR *e*Sn Sn 13 24 43.8 -7.9
comp=N,3.3nm,0.3s
KEST Kesra 7.84 203 Pn Pn 13 23 29.6 +5.9
comp=N,0.4nm,0.3s,baz=288,slow=4.1,SNR=5.4
KEST LR LR 13 26 37.8
comp=N,82nm,18.3s,baz=356,slow=38
comp=N,4.1nm,0.6s
MEZF Maizieres J'vi 7.86 317 *e*P **Pn 13 23 24.2 +0.3**
baz=133
AVF Avril sur Loir 7.89 302 *e*P **Pn 13 23 25.5 +1.2**
SAVF Savonnieres en 7.90 318 *e*P **Pn 13 23 23.6 -0.8**
baz=136
SSF Saint Saulge 7.91 304 *e*P **Pn 13 23 25.3 +0.7**
CAF Calviac 8.20 287 *e*P **Pn 13 23 30.4 +1.8**

CLL	**Collm**	**8.29**	**360**	*e*Pn	**Pn**	**13 23 27.0**	**-2.8**
CLL				*e*(Sn)	**Sn**	**13 24 56.0**	**-7.7**
CLL				*e*x	x	13 25 17.0	
CLL				*e*Sg	**Sg**	**13 25 53.0**	**-2.1**
	comp=Z,13nm,1.0s						
HYF	**Humbligny**	**8.54**	**303**	*e*P	**Pn**	**13 23 34.6**	**+1.4**
RJF	**Les Rejaudoux**	**8.65**	**289**	*e*P	**Pn**	**13 23 36.8**	**+2.1**
LFF	**La Frestale**	**9.13**	**286**	*e*P	**Pn**	**13 23 43.3**	**+2.0**
EPF	**Esparros**	**9.36**	**274**	*e*Pn	**Pn**	**13 23 41.5**	**-3.0**
MLR	**Muntele Rosu**	**9.53**	**71**	Pn	**Pn**	**13 23 48.2**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=144,slow=16,SNR=2.4						
MLR				LR	LR	13 28 08.2	
	comp=Z,151nm,21.3s,baz=248,slow=43						
	comp=Z,1.8nm,0.6s						
ETSF	**Etsaut**	**10.03**	**274**	*e*P	**Pn**	**13 23 57.4**	**+3.7**
MFF	**Saint Martin d**	**10.08**	**295**	*e*P	**Pn**	**13 23 55.5**	**+1.2**
SJPF	**Ste Jean**	**10.50**	**275**	*e*Pn	**Pn**	**13 23 57.3**	**-2.8**
LDF	**La Druitiere**	**10.79**	**306**	*e*P	**Pn**	**13 24 04.2**	**+0.2**
IDI	**Anoyia**	**11.95**	**126**	Pn	**Pn**	**13 24 22.0**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=197,slow=23,SNR=1.4						
IDI				Sn	**Sn**	**13 26 29.3**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=307,slow=16,SNR=2.4						
	comp=Z,2.6nm,0.8s						
SGMF	**Saint Gilles**	**12.15**	**301**	*e*P	**Pn**	**13 24 22.5**	**-0.1**
ESDC	**Sonseca Array**	**13.26**	**261**	LR	LR	13 29 50.2	
	comp=Z,50nm,21.7s,baz=66,slow=37						
BRTR	**Keskin Array B**	**15.75**	**95**	LR	LR	13 31 08.1	
	comp=Z,37nm,18.8s,baz=306,slow=37						
EKA	**Eskdalemuir Ar**	**16.23**	**325**	Pn	**Pn**	**13 25 18.9**	**+1.4**
	baz=138,slow=14						
	comp=Z,1.7nm,0.9s						
NOA	**NORSAR Array B**	**18.09**	**357**	LR	LR	13 33 34.5	
	comp=Z,19nm,19.1s,baz=245,slow=40						
FINES	**FINESS Array B**	**20.02**	**18**	P	**P**	**13 26 02.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=210,slow=8.0,SNR=1.0						
	comp=Z,1.5nm,0.8s						
BELG	**Belogornoye**	**24.83**	**56**	LR	LR	13 37 31.0	
	comp=Z,56nm,19.0s,baz=62,slow=39						
KIRV	**Kirov**	**27.29**	**43**	LR	LR	13 37 44.0	
	comp=Z,24nm,19.0s,baz=235,slow=36						
TORD	**Torodi Ar. Bea**	**31.36**	**202**	P	**P**	**13 27 53.2**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=15,slow=8.3,SNR=2.2						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**47.69**	**60**	P	**P**	**13 30 07.2**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=305,slow=5.1,SNR=1.9						
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**74.66**	**79**	P	**P**	**13 33 09.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=304,slow=6.4,SNR=4.5						
	comp=Z,0.4nm,0.3s						
YBH	**Yreka Blue Hor**	**86.73**	**329**	LR	LR	14 12 42.7	
	comp=Z,70nm,20.9s,baz=267,slow=36						

NEIC ***30*** *13:22:28.3±1.1,57°.24N±0°.07×156°.0W±0°.1,h58km±39km, Error ellipse: s-maj=10.8km s-min=7.6km az=144.0*
AEIC ***30*** *13:22:29±1.3,57°.29N±0°.07×156°.1W±0°.1,h72km±9km, ML3.3,ML3.4/54(NEIC),Error ellipse: s-maj=10.6km s-min=7.9km az=150.0*
IDC ***30*** *13:22:30.7±3.0,57°.77N×156°.13W,h76km±29km,mb3.7/6, mbtmp3.9/8,MS3.4/1,Error ellipse: s-maj=29.8km s-min=25.8km az=2.0*
ISC 30 13:22:27.5±0.8,57°.30N±0°.06×156°.06W±0°.05,h72km, n151,σ1§35/155,mb4.0/6,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**1.27**	**125**		**Pn**	**13 22 49.3**	**-0.2**
SII				Sn	**Sn**	**13 23 05.2**	**-0.7**
SII	**Sitkinak Islan**	**1.27**	**125**	P	**Pn**	**13 22 50.6**	**+1.1**
	baz=306						
KAHC	**Katmai Hardscr**	**1.47**	**22**	P	**Pn**	**13 22 53.8**	**+1.6**
	baz=203						
CHIR	**Chirikof Islan**	**1.50**	**171**	Pn	**Pn**	**13 22 51.6**	**-0.8**
CHIR				IAML		13 23 17.3	
	comp=E,413nm,0.5s						
CHIR	**Chirikof Islan**	**1.50**	**171**	P	**Pn**	**13 22 52.0**	**-0.5**
	baz=351						
OHAK	**Old Harbor**	**1.51**	**92**	Pn	**Pn**	**13 22 52.8**	**+0.2**
OHAK				IAML		13 23 18.6	
	comp=N,515nm,0.4s						
OHAK				IAML		13 23 19.4	
	comp=E,510nm,0.3s						
OHAK	**Old Harbor**	**1.51**	**92**	P	**Pn**	**13 22 52.9**	**+0.4**
	baz=274						
CHGN	**Chignik**	**1.64**	**233**		**Pn**	**13 22 54.6**	**+0.4**
CHGN				IAML		13 23 17.0	
	comp=E,709nm,0.3s						
CHGN				IAML		13 23 17.6	
	comp=N,448nm,0.1s						
CHGN	**Chignik**	**1.64**	**233**	P	**Pn**	**13 22 54.7**	**+0.4**
	baz=52						
CHGN				S	**Sn**	**13 23 14.5**	**0.0**
	baz=52						
KDAK	**Kodiak Island**	**1.94**	**74**	P	**Pn**	**13 22 59.1**	**+0.9**
	baz=237,slow=5.0						
KDAK				S	**Sn**	**13 23 25.0**	**+3.3**
	comp=N,94nm,0.4s,baz=104,slow=22,SNR=3.6						
KDAK	**Kodiak Island**	**1.94**	**74**		**Pn**	**13 22 59.0**	**+0.7**
KDAK				IAML		13 23 29.9	
	comp=N,188nm,0.5s						
Q19K	**Cape Douglas,**	**2.08**	**37**		**Pn**	**13 23 01.8**	**+1.5**
Q19K				IAML		13 23 36.0	
	comp=E,388nm,0.8s						
Q19K				IAML		13 23 40.0	
	comp=N,311nm,0.8s						
Q19K	**Cape Douglas,**	**2.08**	**37**	P	**Pn**	**13 23 02.0**	**+1.8**
	baz=219						
P18K	**Big Mountain,**	**2.15**	**11**		**Pn**	**13 23 02.5**	**+1.4**
P18K	**Big Mountain,**	**2.15**	**11**	P	**Pn**	**13 23 02.6**	**+1.4**
	baz=192						
O18K	**Koktuh Hills**	**2.60**	**9**		**Pn**	**13 23 08.8**	**+1.5**
O18K	**Koktuh Hills**	**2.60**	**9**	P	**Pn**	**13 23 09.2**	**+1.9**
	baz=190						
P19K	**Oil Pt**	**2.79**	**31**	Pn	**Pn**	**13 23 12.0**	**+2.2**
P19K				IAML		13 23 49.4	
	comp=E,151nm,0.6s						
P19K	**Oil Pt**	**2.79**	**31**	P	**Pn**	**13 23 12.2**	**+2.3**
	baz=213						
O19K	**Port Alsworth**	**3.04**	**17**		**Pn**	**13 23 15.3**	**+2.1**
O19K				IAML		13 24 08.8	
	comp=E,140nm,0.4s						
O19K				IAML		13 24 15.8	
	comp=N,92nm,0.4s						
O19K	**Port Alsworth**	**3.04**	**17**	P	**Pn**	**13 23 15.5**	**+2.3**
	baz=198						
SDPT	**Sand Point**	**3.14**	**233**	Pn	**Pn**	**13 23 15.4**	**+0.8**
SDPT				IAML		13 24 05.9	
	comp=E,134nm,1.3s						
SDPT	**Sand Point**	**3.14**	**233**	P	**Pn**	**13 23 15.8**	**+1.2**
	baz=50						
CNBA	**Chernabura Isl**	**3.17**	**220**	Pn	**Pn**	**13 23 16.0**	**+1.0**
CNBA				IAML		13 24 02.0	
	comp=N,95nm,0.7s						
CNBA				IAML		13 24 05.0	
	comp=E,94nm,0.6s						
HOM	**Homer**	**3.31**	**43**	Pn	**Pn**	**13 23 18.9**	**+2.0**
HOM	**Homer**	**3.31**	**43**	P	**Pn**	**13 23 19.1**	**+2.2**
	baz=226						
O20K	**Slope Mountain**	**3.32**	**31**	P	**Pn**	**13 23 19.1**	**+2.0**
	baz=214						
CNPM	**China Poot**	**3.38**	**47**		**Pn**	**13 23 19.4**	**+1.5**
CNPM				IAML		13 24 08.6	
	comp=N,134nm,0.7s						
N18K	**Kilae Creek**	**3.40**	**1**		**Pn**	**13 23 19.6**	**+1.5**
N18K	**Kilae Creek**	**3.40**	**1**	P	**Pn**	**13 23 19.9**	**+1.9**
	baz=182						
RSO	**Redoubt South**	**3.61**	**27**		**Pn**	**13 23 23.5**	**+2.4**
N19K	**Bonanza Creek**	**3.62**	**12**		**Pn**	**13 23 23.4**	**+2.2**
N19K	**Bonanza Creek**	**3.62**	**12**	P	**Pn**	**13 23 23.2**	**+2.0**
	baz=194						
BRLK	**Bradley Lake**	**3.67**	**45**	Pn	**Pn**	**13 23 22.6**	**+0.8**
BRLK				IAML		13 24 17.4	
	comp=E,67nm,0.7s						
BRLK				IAML		13 24 18.1	
	comp=N,78nm,0.5s						
BRSE	**Bradley Lake S**	**3.71**	**46**	P	**Pn**	**13 23 23.4**	**+1.0**
	baz=231						
SVW2	**Sparrevohn**	**3.82**	**3**	Pn	**Pn**	**13 23 25.4**	**+1.6**
SPU	**Mount Spurr**	**4.41**	**26**	Pn	**Pn**	**13 23 34.6**	**+2.7**
SEW	**Seward**	**4.45**	**48**	Pn	**Pn**	**13 23 32.5**	**+0.1**
SEW	**Seward**	**4.45**	**48**	P	**Pn**	**13 23 32.8**	**+0.4**
	baz=233						
O22K	**Cooper Landing**	**4.58**	**43**	Pn	**Pn**	**13 23 34.7**	**+0.6**
O22K	**Cooper Landing**	**4.58**	**43**	P	**Pn**	**13 23 36.0**	**+1.8**
	baz=228						
M19K	**Big River Lodg**	**4.70**	**10**	Pn	**Pn**	**13 23 37.3**	**+1.5**
M19K				IAML		13 26 12.3	
	comp=E,28nm,4.5s						
M19K				IAML		13 26 15.5	
	comp=N,30nm,3.9s						
M19K	**Big River Lodg**	**4.70**	**10**	P	**Pn**	**13 23 37.1**	**+1.3**
	baz=191						
M20K	**Styx River**	**4.83**	**17**		**Pn**	**13 23 40.6**	**+2.9**
M20K				IAML		13 25 55.0	
	comp=E,20nm,4.2s						
M20K				IAML		13 26 15.7	
	comp=N,25nm,4.6s						
L19K	**White Mountain**	**4.94**	**7**	Pn	**Pn**	**13 23 41.3**	**+2.2**
L19K				IAML		13 24 38.0	
	comp=N,30nm,0.8s						
L19K				IAML		13 26 57.9	
	comp=E,30nm,4.3s						
L19K	**White Mountain**	**4.94**	**7**	P	**Pn**	**13 23 41.1**	**+2.0**
	baz=188						
SUA	**Susitna One**	**4.98**	**31**	Pn	**Pn**	**13 23 41.5**	**+1.7**
SUA	**Susitna One**	**4.98**	**31**	P	**Pn**	**13 23 41.4**	**+1.7**
	baz=215						
RC01	**Rabbit Creek A**	**5.00**	**38**	Pn	**Pn**	**13 23 40.8**	**+0.8**
RC01				IAML		13 24 41.3	
	comp=N,32nm,0.5s						
RC01				IAML		13 24 43.8	
	comp=E,38nm,0.5s						
RC01	**Rabbit Creek A**	**5.00**	**38**	P	**Pn**	**13 23 41.3**	**+1.4**
	baz=223						
SKT	**Skwentna**	**5.23**	**24**	Pn	**Pn**	**13 23 44.2**	**+1.2**
SKT				IAML		13 24 53.2	
	comp=N,23nm,2.9s						
SKT				IAML		13 25 29.2	
	comp=E,27nm,3.7s						
L20K	**Farewell, AK**	**5.31**	**11**	P	**Pn**	**13 23 46.3**	**+2.1**
	baz=193						
PWL	**Port Wells**	**5.35**	**45**	Pn	**Pn**	**13 23 45.2**	**+0.5**
M22K	**Willow**	**5.39**	**32**	Pn	**Pn**	**13 23 46.4**	**+1.2**
M22K	**Willow**	**5.39**	**32**	P	**Pn**	**13 23 46.1**	**+0.9**
	baz=217						
Q23K	**Middleton Isla**	**5.54**	**63**	Pn	**Pn**	**13 23 47.6**	**+0.4**
Q23K	**Middleton Isla**	**5.54**	**63**	P	**Pn**	**13 23 47.7**	**+0.4**
	baz=251						
MID	**Middleton Isla**	**5.54**	**63**	Pn	**Pn**	**13 23 47.1**	**-0.2**
PMR	**Palmer**	**5.57**	**36**	Pn	**Pn**	**13 23 48.6**	**+0.9**
TTA	**Tatalina**	**5.65**	**0**	Pn	**Pn**	**13 23 50.4**	**+1.5**
KNK	**Knik Glacier**	**5.67**	**40**	Pn	**Pn**	**13 23 49.8**	**+0.7**
KNK	**Knik Glacier**	**5.67**	**40**	P	**Pn**	**13 23 49.9**	**+0.9**
	baz=226						
GHO	**Glory Hole Cre**	**5.77**	**36**	Pn	**Pn**	**13 23 51.4**	**+0.9**
GLI	**Glacier Island**	**5.85**	**48**	Pn	**Pn**	**13 23 51.8**	**+0.3**
GLI	**Glacier Island**	**5.85**	**48**	P	**Pn**	**13 23 51.6**	**+0.1**
	baz=236						
HIN	**Hinchinbrook I**	**5.85**	**54**	Pn	**Pn**	**13 23 52.1**	**+0.5**
SML	**Sawmill**	**5.99**	**38**	Pn	**Pn**	**13 23 54.1**	**+0.6**
SML	**Sawmill**	**5.99**	**38**	P	**Pn**	**13 23 54.3**	**+0.9**
	baz=224						
FID	**Port Fidalgo**	**6.04**	**51**	Pn	**Pn**	**13 23 53.2**	**-0.8**
EYAK	**Cordova Ski Ar**	**6.25**	**54**	Pn	**Pn**	**13 23 57.0**	**+0.1**
EYAK	**Cordova Ski Ar**	**6.25**	**54**	P	**Pn**	**13 23 57.1**	**+0.1**
	baz=243						
SCM	**Sheep Creek Mo**	**6.35**	**41**	Pn	**Pn**	**13 23 59.1**	**+0.7**
KAIM	**Kayak Island**	**6.63**	**62**	Pn	**Pn**	**13 24 02.7**	**+0.6**
KAIM	**Kayak Island**	**6.63**	**62**	P	**Pn**	**13 24 02.9**	**+0.8**
	baz=252						
KLU	**Klutina**	**6.67**	**47**		**Pn**	**13 24 03.3**	**+0.6**
KLU	**Klutina**	**6.67**	**47**	P	**Pn**	**13 24 03.3**	**+0.6**
	baz=235						
WAT6	**Susitna Watana**	**6.75**	**35**	P	**Pn**	**13 24 04.3**	**+0.5**
	baz=222						
TRF	**Thorofare Moun**	**6.80**	**22**	Pn	**Pn**	**13 24 05.6**	**+1.0**
TRF	**Thorofare Moun**	**6.80**	**22**	P	**Pn**	**13 24 04.9**	**+0.3**
	baz=207						
M24K	**Tolsona, Glenn**	**6.94**	**42**	Pn	**Pn**	**13 24 07.6**	**+1.2**
M24K	**Tolsona, Glenn**	**6.94**	**42**	P	**Pn**	**13 24 07.2**	**+0.7**
	baz=230						
BMRM	**Bremner River**	**6.95**	**53**	Pn	**Pn**	**13 24 06.6**	**+0.1**
BMRM	**Bremner River**	**6.95**	**53**	P	**Pn**	**13 24 06.8**	**+0.3**
	baz=243						
J20K	**Nowinta River**	**6.97**	**7**	Pn	**Pn**	**13 24 08.8**	**+2.1**
BERG	**Berg Lake**	**7.12**	**59**	Pn	**Pn**	**13 24 09.1**	**+0.2**
DHY	**Denali Highway**	**7.23**	**33**	Pn	**Pn**	**13 24 11.7**	**+1.3**
N25K	**Chitina, Valde**	**7.26**	**49**	Pn	**Pn**	**13 24 11.6**	**+0.8**
N25K	**Chitina, Valde**	**7.26**	**49**	P	**Pn**	**13 24 11.7**	**+0.9**
	baz=238						
BPAW	**Bear Paw Mtn.**	**7.26**	**18**	Pn	**Pn**	**13 24 12.1**	**+1.3**
MCK	**McKinley**	**7.35**	**26**	Pn	**Pn**	**13 24 13.4**	**+1.4**
SNH	**Sunshine Point**	**7.46**	**62**	Pn	**Pn**	**13 24 14.0**	**+0.5**
HARP	**HAARP**	**7.50**	**42**	P	**Pn**	**13 24 14.8**	**+0.8**
	baz=232						
GLB	**Gilahina Butte**	**7.51**	**51**	Pn	**Pn**	**13 24 14.3**	**+0.1**
WAX	**Waxell Ridge**	**7.54**	**60**		**Pn**	**13 24 14.7**	**+0.1**
VRDI	**Verde Repeater**	**7.56**	**53**	Pn	**Pn**	**13 24 15.3**	**+0.2**
PAX	**Paxson**	**7.76**	**38**	Pn	**Pn**	**13 24 18.8**	**+1.1**
MCARA	**McCarthy VSAT**	**7.82**	**53**	Pn	**Pn**	**13 24 19.1**	**+0.7**
MCARA	**McCarthy VSAT**	**7.82**	**53**	P	**Pn**	**13 24 18.0**	**-0.3**
	baz=244						
ISLE	**Juniper Island**	**7.83**	**59**	Pn	**Pn**	**13 24 19.3**	**+0.6**
MESA	**MESA**	**7.88**	**63**	Pn	**Pn**	**13 24 20.0**	**+0.5**
MESA	**MESA**	**7.88**	**63**	P	**Pn**	**13 24 20.2**	**+0.7**
	baz=255						
YAH	**Yahtse**	**8.03**	**62**	Pn	**Pn**	**13 24 22.2**	**+0.7**
NEA2	**Nenana**	**8.07**	**22**	Pn	**Pn**	**13 24 22.9**	**+1.2**
I21K	**Tanana**	**8.15**	**12**	Pn	**Pn**	**13 24 24.2**	**+1.4**
MLY	**Manley**	**8.17**	**16**	Pn	**Pn**	**13 24 25.4**	**+2.2**
WRH	**Wood River Hil**	**8.17**	**25**	Pn	**Pn**	**13 24 22.9**	**-0.3**
BARN	**Barnard Glacie**	**8.29**	**57**	Pn	**Pn**	**13 24 25.9**	**+0.8**
M26K	**Nabesna, AK**	**8.32**	**47**	Pn	**Pn**	**13 24 26.6**	**+1.3**
M26K	**Nabesna, AK**	**8.32**	**47**	P	**Pn**	**13 24 26.0**	**+0.7**
	baz=238						
TABL	**Table Mountain**	**8.34**	**62**	Pn	**Pn**	**13 24 26.6**	**+0.9**
MENT	**Mentasta**	**8.35**	**42**	Pn	**Pn**	**13 24 27.4**	**+1.7**
CCB	**Clear Creek Bu**	**8.39**	**25**	Pn	**Pn**	**13 24 25.1**	**-1.0**
I23K	**Minto, Yukon-K**	**8.51**	**19**	Pn	**Pn**	**13 24 28.2**	**+0.5**
MDM	**Murphy Dome**	**8.56**	**23**	Pn	**Pn**	**13 24 28.1**	**-0.5**
PCA	**Pinnacle**	**8.69**	**65**	Pn	**Pn**	**13 24 31.3**	**+0.9**
PINM	**Pinnacle**	**8.69**	**65**	P	**Pn**	**13 24 31.1**	**+0.7**
	baz=258						
IL31		**8.71**	**27**	Pn	**Pn**	**13 24 31.0**	**+0.5**
ILAR	**Eielson Array**	**8.71**	**27**	P	**Pn**	**13 24 29.1**	**-1.4**
	comp=E,0.8nm,0.6s,baz=219,slow=12,SNR=15						
ILAR				S	**Sn**	**13 26 00.3**	**-6.6**
	comp=E,0.5nm,0.5s,baz=202,slow=15,SNR=6.9						
ILAR	**Eielson Array**	**8.71**	**27**	Pn	**Pn**	**13 24 31.1**	**+0.6**
M27K	**Edge Creek, AK**	**8.75**	**49**	Pn	**Pn**	**13 24 32.4**	**+1.2**
IMAR	**Indian Mountai**	**8.79**	**6**	Pn	**Pn**	**13 24 33.6**	**+2.0**
SCRK	**Sand Creek**	**8.93**	**36**	Pn	**Pn**	**13 24 35.2**	**+1.6**
BCPM	**Bancas Point**	**8.97**	**66**	Pn	**Pn**	**13 24 34.6**	**+0.5**
J25K	**Salcha River,**	**8.98**	**31**	Pn	**Pn**	**13 24 34.7**	**+0.5**
J25K	**Salcha River,**	**8.98**	**31**	P	**Pn**	**13 24 34.6**	**+0.3**
	baz=220						
YUK3	**Moose Creek**	**9.10**	**54**	P	**Pn**	**13 24 36.8**	**+0.8**
	baz=247						
H23K	**Yukon River**	**9.10**	**17**	Pn	**Pn**	**13 24 37.1**	**+1.3**
H23K	**Yukon River**	**9.10**	**17**	P	**Pn**	**13 24 37.1**	**+1.3**
	baz=203						
L27K	**Beaver Creek,**	**9.13**	**45**	Pn	**Pn**	**13 24 37.5**	**+1.2**
L27K	**Beaver Creek,**	**9.13**	**45**	P	**Pn**	**13 24 37.3**	**+1.0**
	baz=237						
BCAR	**Beaver Creek A**	**9.15**	**45**	Pn	**Pn**	**13 24 37.4**	**+0.8**
H24K	**Noodor Dome**	**9.40**	**21**	Pn	**Pn**	**13 24 40.2**	**+0.2**
J26L	**Joseph Creek**	**9.43**	**35**	Pn	**Pn**	**13 24 41.5**	**+1.0**
PRP	**Porcupine Dome**	**9.65**	**27**	Pn	**Pn**	**13 24 43.6**	**+0.1**
P29M	**Windy Craggy**	**9.87**	**69**	Pn	**Pn**	**13 24 46.7**	**+0.3**
I26K	**Coal Creek Min**	**10.13**	**32**	Pn	**Pn**	**13 24 51.0**	**+1.2**
HYT	**Haines Junctio**	**10.18**	**62**	Pn	**Pn**	**13 24 51.8**	**+1.1**
DAWY	**Dawson**	**10.59**	**43**	Pn	**Pn**	**13 24 57.7**	**+1.5**
M30M	**Minto, Yukon**	**10.99**	**53**	Pn	**Pn**	**13 25 02.6**	**+0.9**
SKAG	**Skagway**	**11.09**	**70**	Pn	**Pn**	**13 25 04.5**	**+1.6**
N31M	**Braeburn, Yuko**	**11.14**	**59**	Pn	**Pn**	**13 25 04.2**	**+0.5**
WHY	**Whitehorse**	**11.42**	**64**	Pn	**Pn**	**13 25 08.3**	**+0.8**
JIS	**Juneau Island**	**11.60**	**76**	Pn	**Pn**	**13 25 11.0**	**+1.1**
FARO	**Faro, Yukon**	**12.43**	**57**	Pn	**Pn**	**13 25 21.9**	**+0.7**
INK	**Inuvik**	**14.97**	**33**	P	**Pn**	**13 25 54.5**	**-0.2**
	comp=E,1.5nm,0.9s,baz=15,slow=22,SNR=1.4						
YKA	**Yellowknife Ar**	**21.14**	**58**	P	**P**	**13 27 07.1**	**+1.0**
	comp=E,1.8nm,0.8s,baz=286,slow=18,SNR=1.4						
	comp=E,1.8nm,0.8s						
PETK	**Petropavlovsk-**	**26.31**	**281**	P	**P**	**13 27 58.7**	**+2.6**
	comp=E,8.3nm,1.1s,baz=70,slow=14,SNR=2.0						
	comp=E,8.3nm,1.1s						
ARCES	**ARCESS Array B**	**53.47**	**359**	P	**P**	**13 31 38.3**	**-1.3**
	comp=E,6.4nm,1.2s,baz=6.1,slow=9.3,SNR=1.8						
ARCES				LR	LR	13 57 56.6	
	comp=E,37nm,18.5s,baz=358,slow=40						
	comp=E,6.4nm,1.2s						
HFS	**Hagfors**	**62.63**	**6**	P	**P**	**13 32 42.5**	**-1.1**
	comp=E,2.8nm,0.9s,baz=1.9,slow=4.3,SNR=5.7						
	comp=E,2.8nm,0.9s						
EKA	**Eskdalemuir Ar**	**65.60**	**17**	P	**P**	**13 33 04.0**	**+0.8**
	comp=E,0.4nm,0.4s,baz=336,slow=5.2,SNR=11						
	comp=E,0.4nm,0.4s						
AKASG	**Malin Array Be**	**72.28**	**356**	P	**P**	**13 33 43.8**	**-0.8**
	comp=E,0.4nm,0.4s,baz=9.0,slow=6.2,SNR=2.7						
	comp=E,0.4nm,0.4s						

PRU ***30*** *13:34:53.4±0.0,42°.65N×13°.10E,h10km,M4.6*
ROM ***30*** *13:34:54.4±0.0,42°.806N±0°.001×13°.166E±0°.003, h10km,ML4.5/34,Mw4.1,Error ellipse: s-maj=0.2km s-min=0.1km az=262.0,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr~0.84; Mθθ0.95; Mφφ~0.12; Mrθ~0.45; Mθφ~0.85; Mφr0.96; Fault plane solution: M0 1.62158×10^15 NP1:φ=266.00000°,δ36.00000°, λ~146.00000°. NP2:φs147.00000°,δ71.00000°, λ~59.00000°.*
STR ***30*** *13:34:54.0,42°.80N×13°.17E,h9km,MLv4.7/11, preliminary*
IDC ***30*** *13:34:54.4±0.7,42°.89N×13°.11E,h0km,mb4.2/18, mbtmp4.1/30,ML3.7/11,MS3.4/32,Error ellipse: s-maj=12.4km s-min=10.1km az=73.0*
MED_RC ***30*** *13:34:54.0±0.5,42°.80N×13°.17E,h21km±2km,MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c13; Duration: 1§0 Moment tensor: Scale 10^15Nm; Mrr~3.00±.75; Mθθ3.19±.45; Mφφ~0.19±.40; Mrθ~1.20±.44; Mφφ~2.39±.30; Mφr1.20±.41; Best double couple: M0 4.11000×10^15 NP1:φs130.00000°,δ58.00000°,λ~74.00000°. NP2: φs281.00000°,δ35.00000°,λ~114.00000°. Principal axes: T 4.7700, Plg12.0000°, Azm208.0000°; N -1.3000, Plg13.0000°, Azm301.0000°; P -3.4600, Plg72.0000°, Azm78.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
PDG ***30*** *13:34:54.9±0.6,42°.83N×13°.22E,h6km,ML4.4/13 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
MOS ***30*** *13:34:55.0±1.1,42°.92N×13°.15E,h12km,mb4.6/23,Error ellipse: s-maj=6.6km s-min=3.6km az=77.8*
NEIC ***30*** *13:34:55.8±2.0,42°.80N±0°.03×13°.12E±0°.06,h10km±1km, mb4.6/31,ML4.5(VIE),ML4.5(ROM),Error ellipse: s-maj=9.1km s-min=3.0km az=235.0*
BEO ***30*** *13:34:55.0±0.7,42°.70N×13°.02E,h12km±3km,ML4.4/13*
LDG ***30*** *13:34:56.1±0.1,42°.66N×13°.11E,h9km,Ml4.1/30,Error ellipse: s-maj=3.7km s-min=2.1km az=42.0*
TIR ***30*** *13:34:56.8,42°.68N×13°.14E,h12km±20km,Ml4.7*
ISC 30 13:34:55.5±0.6,42°.79N±0°.01×13°.15E±0°.01,h9km±3km, n694,σ1§66/798,mb4.5/40,MS3.4/23,62C-29D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.06**	**127**	⇓P	**Pg**	**13 34 56.8**	**-0.9**
T1214				S	**Sg**	**13 34 58.2**	**-1.0**
T1245	**Castelsantange**	**0.07**	**26**	⇑P	**Pg**	**13 34 56.7**	**-1.1**
T1245				S	**Sg**	**13 34 58.0**	**-1.5**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1213	**Norcia, Frazio**	**0.07**	**193**	⇓P	**Pg**	**13 34 57.2**	**-0.6**
T1213				S	**Sg**	**13 34 58.9**	**-0.4**
T1212	**Cascia, Frazio**	**0.09**	**241**	⇑P	**Pg**	**13 34 57.6**	**-0.3**
T1212				S	**Sg**	**13 34 59.8**	**+0.2**
T1244	**Arquata del Tr**	**0.12**	**108**	⇑P	**Pg**	**13 34 57.7**	**-0.6**
T1244				S	**Sg**	**13 34 59.9**	**-0.4**
T1218	**Civita (PG)**	**0.13**	**191**	⇑P	**Pg**	**13 34 58.2**	**-0.3**
T1218				S	**Sg**	**13 35 01.1**	**+0.5**
T1216	**Preci, Frazion**	**0.14**	**316**	⇓P	**Pg**	**13 34 58.0**	**-0.6**
T1216				S	**Sg**	**13 35 00.5**	**-0.3**
T1201	**Domo (RI)**	**0.16**	**151**	P	**Pg**	**13 34 58.8**	**-0.2**
T1201				S	**Sg**	**13 35 02.1**	**+0.8**
MMO1	**Montemonaco**	**0.17**	**52**	⇑P	**Pg**	**13 34 58.2**	**-1.0**
MMO1				S	**Sg**	**13 35 00.9**	**-0.8**
T1204	**Amatrice, Fraz**	**0.17**	**133**	⇓P	**Pg**	**13 34 58.7**	**-0.5**
T1204

CAMP				Sg	Sg	13 35 05.7	-0.6
CAMP	**Campotosto**	**0.32 143**	⇓	P	Pg	13 35 01.2	-0.8
CAMP				S	Sg	13 35 06.5	+0.3
CAMP				AML	AML		
comp=N,96100µm,0.6s							
CAMP				AML	AML		
T1246	**Crognaleto (TE**	**0.33 129**	⇓	P	Pg	13 35 01.3	-0.9
T1246				S	Sg	13 35 06.4	-0.1
T1211	**Morro Reatino**	**0.34 220**		P	Pg	13 35 01.9	-0.3
T1211				S	Sg	13 35 08.0	+1.2
T1211				AML	AML		
comp=E,76850µm,0.9s							
T1211				AML	AML		
T1211				AML	AML		
comp=E,73800µm,0.6s							
T1211				AML	AML		
T1211				AML	AML		
comp=E,76750µm,0.9s							
T1211				AML	AML		
T1211				AML	AML		
comp=E,76700µm,0.9s							
ARRO	**Arrone**	**0.35 233**	⇑	P	Pg	13 35 02.2	-0.3
ARRO				S	Sb	13 35 08.4	-1.2
ARRO				AML	AML		
comp=N,80600µm,0.7s							
ARRO				AML	AML		
comp=E,47750µm,1.0s							
ARRO				AML	AML		
comp=E,47700µm,1.0s							
T1247	**Pizzolo (AQ)**	**0.37 162**		P	Pg	13 35 02.3	-0.6
T1247				AML	AML		
T1247				AML	AML		
TERO	**Teramo**	**0.38 117**		P	Pg	13 35 01.9	-1.1
TERO				S	Sg	13 35 07.8	-0.1
TERO				AML	AML		
comp=E,79650µm,1.0s							
TERO				AML	AML		
TERO				AML	AML		
comp=E,79600µm,1.0s							
TERO				AML	AML		
TERO				AML	AML		
comp=E,85100µm,1.0s							
SEF1	**Sefro**	**0.38 338**		P	Pg	13 35 02.4	-0.7
SEF1				S	Sg	13 35 08.6	+0.5
SEF1				AML	AML		
comp=E,82600µm,0.7s							
SEF1				AML	AML		
comp=N,78950µm,1.3s							
MDAR	**Monte D'Aria**	**0.40 360**	⇑	P	Pg	13 35 02.5	-0.9
MDAR				S	Sg	13 35 08.6	-0.1
MDAR				AML	AML		
comp=N,57250µm,0.5s							
MDAR				AML	AML		
comp=E,60950µm,1.4s							
MDAR				AML	AML		
comp=N,57200µm,0.5s							
MDAR				AML	AML		
comp=E,60900µm,1.4s							
MDAR				AML	AML		
comp=N,57200µm,0.5s							
PIO1	**Pioraco**	**0.40 343**	⇑	P	Pg	13 35 02.6	-0.8
PIO1				AML	AML		
comp=E,44800µm,0.6s							
PIO1				AML	AML		
comp=N,79200µm,0.8s							
PIO1				AML	AML		
comp=E,44850µm,0.6s							
MNTP	**Montappone**	**0.42 34**	⇑	P	Pg	13 35 03.3	-0.4
MNTP				AML	AML		
MNTP				AML	AML		
OFFI	**Offida**	**0.42 70**		P	Pg	13 35 03.6	-0.2
OFFI				AML	AML		
OFFI				AML	AML		
FIU1	**Fiuminata**	**0.42 338**		P	Pg	13 35 03.1	-0.7
FIU1				AML	AML		
comp=N,35150µm,0.4s							
FIU1				AML	AML		
comp=E,29050µm,1.0s							
FIU1				AML	AML		
comp=N,35150µm,0.4s							
SSM1	**San Severino M**	**0.43 3**		P	Pg	13 35 03.1	-0.9
SSM1				S	Sg	13 35 10.1	+0.3
ASSB	**Assisi San Ben**	**0.44 305**		P	Pg	13 35 03.4	-0.7
ASSB				AML	AML		
comp=E,32500µm,0.5s							
ASSB				AML	AML		
comp=N,54000µm,0.8s							
GAG1	**Gagliole**	**0.45 353**		P	Pg	13 35 03.5	-0.8
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
CESX	**Cesi**	**0.46 246**			Pg	13 35 03.5	-0.9
CESX	**Cesi**	**0.46 246**	⇑	P	Pg	13 35 03.8	-0.7
CESX				AML	AML		
comp=E,65650µm,0.6s							
CESX				AML	AML		
comp=N,58250µm,1.3s							
GIGS	**Gran Sasso**	**0.46 138**		P	Pg	13 35 03.5	-1.1
GIGS				S	Sg	13 35 10.5	-0.2
GIGS				AML	AML		
comp=N,15650µm,0.5s							
GIGS				AML	AML		
comp=E,21250µm,0.4s							
AQU	**L'Aquila**	**0.48 157**			Pg	13 35 04.1	-0.7
AQU				Sg	Sg	13 35 11.4	+0.3
AQU	**L'Aquila**	**0.48 157**		P	Pg	13 35 04.1	-0.7
AQU	**L'Aquila**	**0.48 157**		P	Pg	13 35 04.2	-0.7
AQU				AML	AML		
comp=E,93000µm,0.6s							
AQU				AML	AML		
comp=E,95500µm,0.6s							
AQU				AML	AML		
comp=N,81550µm,1.6s							
AQU				AML	AML		
comp=N,79900µm,1.6s							
SNTG	**Esanatoglia**	**0.48 342**		P	Pg	13 35 04.1	-0.9
SNTG				AML	AML		
comp=E,24450µm,0.8s							
SNTG				AML	AML		
comp=N,24100µm,0.8s							
SNTG				AML	AML		
comp=N,24100µm,0.8s							
SNTG				AML	AML		
comp=N,25650µm,0.6s							
SNTG				AML	AML		
comp=E,24650µm,0.6s							
SNTG				AML	AML		
comp=E,24450µm,0.8s							
FIAM	**Fiamignano**	**0.53 182**		P	Pg	13 35 04.9	-0.8
TRE1	**Treia**	**0.53 13**		P	Pg	13 35 05.3	-0.6
TRE1				AML	AML		
comp=N,63850µm,1.3s							
TRE1				AML	AML		
comp=E,81700µm,1.1s							
ATCC	**AVT- Casa Cast**	**0.54 317**		P	Pg	13 35 05.4	-0.6
ATCC				AML	AML		
comp=E,50950µm,0.7s							
ATCC				AML	AML		
comp=N,47100µm,0.8s							
ATCC				AML	AML		
comp=N,47050µm,0.8s							
TRTR	**Tortoreto Alta**	**0.56 88**		P	Pg	13 35 06.5	+0.1
TRTR				AML	AML		
TRTR				AML	AML		
FOSV	**Fossato di Vic**	**0.57 331**		P	Pg	13 35 05.8	-0.9
FOSV				AML	AML		
comp=E,21900µm,1.0s							
FOSV				AML	AML		
comp=N,30750µm,0.5s							
FOSV				AML	AML		
comp=E,21850µm,1.0s							
FOSV				AML	AML		
comp=N,30700µm,0.5s							
CADA	**Capodarco di F**	**0.60 48**		P	Pb	13 35 07.7	-0.5
CADA				AML	AML		
CADA				AML	AML		
FAGN	**Fagnano**	**0.62 148**		P	Pg	13 35 06.3	-1.2
FAGN				AML	AML		
comp=E,97200µm,0.6s							
FAGN				AML	AML		
comp=N,75500µm,0.3s							
CIMA	**Civitanova Mar**	**0.64 37**		P	Pg	13 35 07.8	0.0
CIMA				AML	AML		
comp=E,53300µm,1.4s							
CIMA				AML	AML		
comp=N,67600µm,0.8s							
VCEL	**Villa Celiera**	**0.65 128**	⇑	P	Pg	13 35 07.1	-1.0
VCEL				AML	AML		
comp=E,65550µm,0.6s							
VCEL				AML	AML		
comp=N,51100µm,0.5s							
MURB	**Monte Urbino**	**0.65 316**			Pg	13 35 07.0	-1.2
MURB				Sg	Sg	13 35 14.9	-1.8
MURB	**Monte Urbino**	**0.65 316**		P	Pg	13 35 07.4	-0.8
MURB				AML	AML		
comp=E,53300µm,1.5s							
MURB				AML	AML		
comp=N,52650µm,1.0s							
MURB				AML	AML		
comp=E,61150µm,1.4s							
MURB				AML	AML		
comp=N,58850µm,1.5s							
MURB				AML	AML		
comp=N,58800µm,1.5s							
MURB				AML	AML		
comp=N,52700µm,1.0s							
MMUR	**Monte Murano**	**0.66 350**		P	Pg	13 35 07.2	-1.1
MMUR				AML	AML		
comp=E,40450µm,0.3s							
MMUR				AML	AML		
comp=N,30450µm,0.8s							
MMUR				AML	AML		
comp=E,40400µm,0.3s							
MMUR				AML	AML		
comp=N,30400µm,0.8s							
PP3	**Marolino**	**0.68 30**		P	Pg	13 35 08.2	-0.3
PP3				AML	AML		
comp=E,57150µm,0.8s							
PP3				AML	AML		
comp=N,89150µm,0.4s							
PP3				AML	AML		
comp=E,54250µm,0.7s							
PP3				AML	AML		
comp=N,92650µm,0.4s							
PP3				AML	AML		
comp=E,57900µm,0.8s							
PP3				AML	AML		
comp=N,89100µm,0.4s							
PP3				AML	AML		
comp=E,57750µm,0.8s							
PP3				AML	AML		
comp=N,92700µm,0.4s							
ATTE	**AVT- Monte Tez**	**0.71 305**		P	Pg	13 35 08.5	-0.7
ATTE				AML	AML		
comp=E,15150µm,0.8s							
ATTE				AML	AML		
comp=N,13450µm,0.6s							
ATFO	**Monte Foce - G**	**0.71 324**		P	Pg	13 35 08.3	-1.0
ATFO				AML	AML		
comp=E,17850µm,0.7s							
ATFO				AML	AML		
comp=N,17750µm,0.5s							
ARVD	**Arcevia**	**0.72 348**		P	Pg	13 35 08.2	-1.2
ARVD				AML	AML		
comp=E,12750µm,0.9s							
ARVD				AML	AML		
comp=N,10480µm,0.8s							
SRES	**S.Oreste - Sor**	**0.73 220**		P	Pg	13 35 08.6	-1.0
SRES				AML	AML		
comp=N,9960µm,0.6s							
SRES				AML	AML		
comp=E,12100µm,1.2s							
T0110	**Collepietro**	**0.73 140**		P	Pg	13 35 08.4	-1.3
T0110				AML	AML		
comp=E,75350µm,0.6s							
T0110				AML	AML		
comp=N,60250µm,0.5s							
MGAB	**Montegabbione**	**0.77 279**		P	Pg	13 35 09.9	-0.4
MGAB				AML	AML		
comp=E,30100µm,0.8s							
MGAB				AML	AML		
comp=N,28050µm,0.7s							
MGAB				AML	AML		
comp=E,28350µm,0.6s							
MGAB				AML	AML		
comp=N,32800µm,0.8s							
FRON	**Frontone**	**0.79 337**		P	Pg	13 35 09.3	-1.3
FRON				AML	AML		
comp=E,12450µm,0.6s							
FRON				AML	AML		
comp=N,14350µm,1.6s							
PTQR	**Pietraquaria**	**0.79 166**		P	Pg	13 35 09.2	-1.6
PTQR				AML	AML		
comp=E,14650µm,1.0s							
PTQR				AML	AML		
comp=N,11960µm,0.7s							
ATVO	**AVT- Monte Val**	**0.80 318**		P	Pg	13 35 09.8	-1.2
ATVO				AML	AML		
comp=E,11650µm,1.4s							
ATVO				AML	AML		
comp=N,15650µm,0.7s							
AOI	**Ancona**	**0.83 24**		P	Pg	13 35 10.2	-1.2
AOI				AML	AML		
comp=E,15300µm,1.2s							
AOI				AML	AML		
comp=N,15350µm,0.5s							
MTCE	**Montecelio**	**0.83 201**		P	Pg	13 35 09.9	-1.6
MTCE				AML	AML		
comp=E,18350µm,0.8s							
MTCE				AML	AML		
comp=N,14350µm,0.7s							
ATMI	**Monte Miggiano**	**0.84 310**		P	Pg	13 35 11.0	-0.7
ATMI				AML	AML		
comp=N,35300µm,0.8s							
ATMI				AML	AML		
comp=E,32800µm,0.8s							
ATPI	**Pietralunga -**	**0.85 321**		P	Pg	13 35 10.4	-1.5
ATPI				AML	AML		
comp=E,14400µm,1.5s							
ATPI				AML	AML		
comp=N,9825µm,0.8s							
CERT	**Cerreto**	**0.85 188**		P	Pg	13 35 10.4	-1.6
CERT				AML	AML		
comp=E,26650µm,1.1s							
CERT				AML	AML		
comp=N,22350µm,1.2s							
PIEI	**Pieia**	**0.87 329**		P	Pg	13 35 10.8	-1.4
PIEI				AML	AML		
comp=E,10500µm,0.8s							
PIEI				AML	AML		
comp=N,7950µm,1.1s							
SACS	**San Casciano d**	**0.91 274**		P	Pg	13 35 12.3	-0.8
SACS				AML	AML		
comp=E,10950µm,1.2s							
SACS				AML	AML		
comp=N,19400µm,1.0s							
SACS				AML	AML		
comp=E,8440µm,1.1s							
SACS				AML	AML		
comp=N,19050µm,1.0s							
SACS				AML	AML		
comp=N,19350µm,1.0s							
SENI	**Senigallia**	**0.91 4**		P	Pg	13 35 12.5	-0.6
SENI				AML	AML		
comp=E,59200µm,0.9s							
SENI				AML	AML		
comp=N,48250µm,0.4s							
SENI				AML	AML		
comp=E,20300µm,0.9s							
SENI				AML	AML		
comp=N,19855µm,0.7s							
SENI				AML	AML		
comp=N,19805µm,0.7s							
APEC	**Apecchio**	**0.93 325**		P	Pg	13 35 12.3	-1.1
APEC				AML	AML		
comp=E,2745µm,0.5s							
APEC				AML	AML		
comp=N,3120µm,0.7s							
FSSB	**Fossombrone**	**0.94 343**		P	Pg	13 35 12.2	-1.4
FSSB				AML	AML		
comp=E,27450µm,0.4s							
FSSB				AML	AML		
comp=N,36700µm,0.4s							
RCAV	**Rocca di Cave**	**0.96 189**		P	Pg	13 35 12.1	-1.9
RCAV				AML	AML		
comp=E,19700µm,1.6s							
RCAV				AML	AML		
comp=N,21800µm,1.2s							
VVLD	**Villa Vallelon**	**0.99 159**		P	Pg	13 35 13.0	-1.5
VVLD				AML	AML		
comp=E,21200µm,1.6s							
VVLD				AML	AML		
comp=N,19400µm,0.7s							
LATE	**Laterza**	**1.01 260**			Pg	13 35 14.2	-0.7
LATE	**Laterza**	**1.01 260**		P	Pg	13 35 14.1	-0.8
GUAR	**Guarcino**	**1.01 173**		P	Pg	13 35 13.5	-1.3
GUAR				AML	AML		
comp=E,18450µm,0.5s							
GUAR				AML	AML		
comp=N,22250µm,1.1s							
CAFI	**Castiglion Fio**	**1.02 302**		P	Pg	13 35 13.9	-1.1
CAFI				AML	AML		
comp=E,7090µm,0.9s							
CAFI				AML	AML		
comp=N,10840µm,0.8s							
CAFI				AML	AML		
comp=E,7280µm,0.9s							
CAFI				AML	AML		
comp=N,11210µm,0.8s							
PE3	**Peglio**	**1.02 332**		P	Pg	13 35 14.0	-1.1
RMP	**Rome, Mte Porz**	**1.04 199**		P	Pg	13 35 13.5	-2.0
RMP				AML	AML		
comp=E,16350µm,1.0s							
RMP				AML	AML		
comp=N,18050µm,0.5s							
CAFR	**Castel Frentan**	**1.05 122**		P	Pg	13 35 14.1	-1.6
CAFR				AML	AML		
comp=E,9915µm,1.0s							
CAFR				AML	AML		
comp=N,11850µm,0.7s							
LPEL	**Lama dei Pelig**	**1.07 134**		P	Pg	13 35 13.6	-2.5
LPEL				AML	AML		
comp=E,17950µm,1.6s							
LPEL				AML	AML		
comp=N,21150µm,0.6s							
SSP9	**Sansepolcro**	**1.08 317**		P	Pg	13 35 15.4	-0.8
SSP9				AML	AML		
comp=E,10710µm,0.9s							
SSP9				AML	AML		
comp=N,9670µm,1.6s							
VIVA	**Pratoni del Vi**	**1.08 195**		P	Pg	13 35 14.7	-1.6
VIVA				AML	AML		
comp=E,30650µm,0.5s							
VIVA				AML	AML		
comp=N,28950µm,0.5s							
MCIV	**Monte Civitell**	**1.08 270**		P	Pg	13 35 15.6	-0.8
MCIV				AML	AML		
comp=E,6280µm,0.9s							
MCIV				AML	AML		
comp=N,5700µm,0.7s							
RDP	**Rocca di Papa**	**1.08 197**		P	Pg	13 35 14.4	-1.9
RDP				AML	AML		
comp=E,36400µm,0.4s							
RDP				AML	AML		
comp=N,30200µm,0.5s							
SAMA	**S.Maria delle**	**1.09 202**		P	Pg	13 35 15.2	-1.3
SAMA				AML	AML		
comp=E,8685µm,0.9s							
SAMA				AML	AML		
comp=N,8210µm,0.8s							
SF04	**Casetta**	**1.09 273**		P	Pg	13 35 15.8	-0.7
SF04				AML	AML		
comp=E,6640µm,0.3s							
SF04				AML	AML		
comp=N,8265µm,1.4s							
TOLF	**Tolfa**	**1.12 230**		P	Pg	13 35 15.6	-1.4
TOLF				AML	AML		
comp=E,9395µm,1.0s							
TOLF				AML	AML		
comp=N,6050µm,0.4s							
POFI	**Posta Fibreno**	**1.16 159**		P	Pb	13 35 16.0	-1.7
POFI				AML	AML		
comp=E,12850µm,1.0s							
POFI				AML	AML		
comp=N,8210µm,0.7s							
POFI				AML	AML		
comp=E,13150µm,1.1s							
POFI				AML	AML		
comp=N,8680µm,0.7s							
LAV9	**Lanuvio**	**1.16 197**		P	Pb	13 35 16.2	-1.5
LAV9				AML	AML		
comp=E,30800µm,1.5s							
LAV9				AML	AML		
comp=N,19850µm,0.6s							
LAV9				AML	AML		
comp=E,32600µm,1.4s							
LAV9				AML	AML		
comp=N,21550µm,0.5s							
SF01	**Poggio Pratacc**	**1.17 271**		P	Pb	13 35 16.8	-1.0
SF01				AML	AML		
comp=E,8940µm,0.5s							
SF01				AML	AML		
comp=N,9395µm,0.7s							
LRP	**Arpino**	**1.19 164**		P	Pb	13 35 17.2	-1.1
LRP				AML	AML		
comp=E,8440µm,1.3s							
LRP				AML	AML		
comp=N,13100µm,0.6s							
CRE	**Caprese Michel**	**1.20 314**		P	Pb	13 35 17.6	-0.9
CRE				AML	AML		
comp=E,4345µm,0.6s							
CRE				AML	AML		
comp=N,4510µm,0.7s							
ARCI	**Arcidosso**	**1.23 273**		P	Pg	13 35 19.5	+0.3
ARCI				AML	AML		
comp=E,2635µm,0.8s							
ARCI				AML	AML		
comp=N,2120µm,0.7s							
GIUL	**Giuliano Di Ro**	**1.24 176**		P	Pn	13 35 17.1	-1.9
GIUL				AML	AML		
comp=E,7960µm,0.6s							
GIUL				AML	AML		
comp=N,11550µm,0.7s							
LATB	**Latina**	**1.31 186**		P	Pn	13 35 17.7	-2.2
LATB				AML	AML		
comp=E,2565µm,0.7s							
LATB				AML	AML		
comp=N,2275µm,1.0s							
LIK	**San Giovanni I**	**1.32 167**		P	Pb	13 35 20.6	+0.1
LIK				AML	AML		
comp=E,18000µm,0.8s							
LIK				AML	AML		
comp=N,16700µm,1.0s							
CERA	**Filignano**	**1.36 151**		P	Pn	13 35 19.6	-1.1
CERA				AML	AML		
comp=E,17400µm,0.8s							
CERA				AML	AML		
comp=N,12245µm,0.8s							
ASQU	**Asqua**	**1.41 316**		P	Pn	13 35 20.8	-0.6
ASQU				AML	AML		
comp=E,4125µm,0.9s							
ASQU				AML	AML		
comp=N,6445µm,0.8s							
BLLA	**Bellaria**	**1.44 340**		P	Pg	13 35 23.4	+0.3
SFI	**Santa Sofia**	**1.46 320**		P	Pn	13 35 21.5	-0.6
SFI				AML	AML		
comp=E,3040µm,0.7s							
SFI				AML	AML		
comp=N,4490µm,1.2s							
TRIV	**Trivento**	**1.46 134**		P	Pb	13 35 22.5	-0.4
TRIV				AML	AML		
comp=E,67850µm,1.3s							
TRIV				AML	AML		
comp=N,64700µm,1.2s							
TRIV				AML	AML		
comp=E,9450µm,0.8s							
TRIV				AML	AML		
comp=N,10495µm,1.3s							
CSNT	**Castellina Chi**	**1.52 297**		P	Pn	13 35 22.8	-0.1
CSNT				AML	AML		
comp=E,2015µm,0.9s							
CSNT				AML	AML		
comp=N,2215µm,1.0s							
FROS	**Frosini**	**1.52 287**		P	Pn	13 35 22.3	-0.5
FROS				AML	AML		
comp=E,4120µm,0.8s							
FROS				AML	AML		
comp=N,3120µm,0.9s							
MAON	**Monte Argentar**	**1.53 257**		P	Pn	13 35 22.2	-0.8
MAON				AML	AML		
comp=E,2610µm,0.9s							
MAON				AML	AML		
comp=N,2220µm,0.7s							
OSSC	**Osservatorio P**	**1.57 298**			Pn	13 35 22.3	-1.3
OSSC	**Osservatorio P**	**1.57 298**		P	Pn	13 35 22.0	-1.5
OSSC				AML	AML		
comp=E,2335µm,0.7s							
OSSC				AML	AML		
comp=N,2340µm,0.6s							

OSSC				AML	AML	
	comp=E,2320μm,0.6s					
OSSC				AML	AML	
	comp=N,2290μm,0.7s					
RUFI	**Rufina**	**1.59**	**312**	P	**Pn**	**13 35 23.1 -0.7**
RUFI				AML	AML	
	comp=E,3711μm,0.8s					
RUFI				AML	AML	
	comp=N,3285μm,0.9s					
VAGA	**Valle Agricola**	**1.60**	**149**	P	**Pb**	**13 35 25.6 +0.4**
VAGA				AML	AML	
	comp=E,3960μm,1.0s					
VAGA				AML	AML	
	comp=N,4400μm,1.0s					
VAGA				AML	AML	
	comp=E,4085μm,0.9s					
VAGA				AML	AML	
	comp=N,4550μm,1.0s					
BSSO	**Busso**	**1.65**	**139**	P	**Pb**	**13 35 26.0 -0.1**
BSSO				AML	AML	
	comp=E,4950μm,0.8s					
BSSO				AML	AML	
	comp=N,5885μm,1.6s					
LMD	**Lutirano**	**1.66**	**321**	P	**Pn**	**13 35 25.3 +0.6**
LMD				AML	AML	
	comp=E,3000μm,1.2s					
LMD				AML	AML	
	comp=N,3085μm,0.6s					
CASP	**Castiglione de**	**1.68**	**271**		**Pn**	**13 35 24.0 -1.0**
CASP	**Castiglione de**	**1.68**	**271**	P	**Pn**	**13 35 24.2 -0.9**
CASP				AML	AML	
	comp=E,1046μm,0.8s					
CASP				AML	AML	
	comp=N,962μm,0.8s					
TRIF	**Trifonti**	**1.68**	**282**	P	**Pn**	**13 35 24.6 -0.4**
TRIF				AML	AML	
	comp=E,1520μm,0.8s					
TRIF				AML	AML	
	comp=N,2050μm,0.6s					
CIGN	**Sant'Elia a Pi**	**1.73**	**131**	P	**Pb**	**13 35 26.8 -0.6**
CIGN				AML	AML	
	comp=E,3130μm,0.7s					
CIGN				AML	AML	
	comp=N,3140μm,0.8s					
MODR	**Mondragone**	**1.73**	**161**	P	**Pn**	**13 35 25.8 0.0**
PIGN	**Pignataro Magg**	**1.77**	**154**	P	**Pn**	**13 35 26.6 +0.3**
PIGN				AML	AML	
	comp=E,3315μm,1.6s					
PIGN				AML	AML	
	comp=N,2920μm,0.7s					
PIGN				AML	AML	
	comp=E,3200μm,0.9s					
PIGN				AML	AML	
	comp=N,3015μm,1.0s					
BRIS	**BRISIGHELLA**	**1.80**	**319**	P	**Pb**	**13 35 27.8 -0.9**
BRIS				AML	AML	
	comp=E,5930μm,1.5s					
BRIS				AML	AML	
	comp=N,5365μm,0.7s					
BRIS				AML	AML	
	comp=E,6335μm,1.5s					
BRIS				AML	AML	
	comp=N,5610μm,0.7s					
SEI	**Scarperia**	**1.81**	**315**	P	**Pb**	**13 35 28.1 -0.7**
MELA	**Melanico ??? S**	**1.83**	**126**	P	**Pn**	**13 35 27.7 +0.6**
MELA				AML	AML	
	comp=E,8715μm,0.8s					
MELA				AML	AML	
	comp=N,11200μm,0.9s					
MELA				AML	AML	
	comp=E,8985μm,0.8s					
MELA				AML	AML	
	comp=N,11500μm,0.9s					
GATE	**Gambatesa**	**1.83**	**134**	P	**Pb**	**13 35 29.5 +0.3**
GATE				AML	AML	
	comp=E,2735μm,1.2s					
GATE				AML	AML	
	comp=N,2825μm,0.7s					
GATE				AML	AML	
	comp=E,1975μm,0.7s					
GATE				AML	AML	
	comp=N,2925μm,0.7s					
IMOL	**Imola, Italy**	**1.87**	**327**	P	**Pg**	**13 35 31.0 -0.3**
TREM	**Isole Tremiti**	**1.87**	**110**	P	**Pn**	**13 35 27.9 +0.3**
TREM				AML	AML	
	comp=E,7170μm,0.5s					
TREM				AML	AML	
	comp=N,8940μm,0.8s					
MPPT	**Montemurlo**	**1.90**	**308**	P	**Pn**	**13 35 28.0 -0.1**
MPPT				AML	AML	
	comp=E,2340μm,0.7s					
MPPT				AML	AML	
	comp=N,2410μm,1.3s					
VITU	**Vitulano (BN)**	**1.95**	**145**	P	**Pb**	**13 35 30.4 -0.9**
VITU				AML	AML	
	comp=E,1235μm,1.5s					
VITU				AML	AML	
	comp=N,3205μm,0.7s					
VITU				AML	AML	
	comp=E,3385μm,0.6s					
VITU				AML	AML	
	comp=N,3270μm,0.7s					
PSB1	**Pescosannita**	**2.00**	**141**	P	**Pb**	**13 35 31.6 -0.4**
PSB1				AML	AML	
	comp=E,4140μm,1.5s					
PSB1				AML	AML	
	comp=N,2815μm,0.9s					
PSB1				AML	AML	
	comp=E,4270μm,1.5s					
PSB1				AML	AML	
	comp=N,2860μm,0.8s					
VENT	**Ventotene**	**2.01**	**174**	P	**Pb**	**13 35 31.5 -0.7**
VENT				AML	AML	
	comp=E,3245μm,1.6s					
VENT				AML	AML	
	comp=N,2220μm,1.2s					
PAOL	**Paolisi**	**2.06**	**148**		**Pn**	**13 35 30.3 0.0**
PAOL	**Paolisi**	**2.06**	**148**	P	**Pb**	**13 35 31.7 -1.3**
PAOL				AML	AML	
	comp=E,1330μm,0.6s					
PAOL				AML	AML	
	comp=N,1855μm,0.9s					
PAOL				AML	AML	
	comp=E,1355μm,0.5s					
PAOL				AML	AML	
	comp=N,1785μm,0.9s					
APRC	**Apricena**	**2.06**	**119**	P	**Pn**	**13 35 30.2 -0.1**
APRC				AML	AML	
	comp=E,3160μm,0.7s					
APRC				AML	AML	
	comp=N,6735μm,0.7s					
MOCO	**Biccari - m.te**	**2.07**	**133**	P	**Pn**	**13 35 31.6 +1.2**
MOCO				AML	AML	
	comp=E,1760μm,1.6s					
MOCO				AML	AML	
	comp=N,1280μm,0.8s					
MOCO				AML	AML	
	comp=E,1820μm,1.0s					
MOCO				AML	AML	
	comp=N,1338μm,0.9s					
PII	**Pisa**	**2.13**	**297**	P	**Pn**	**13 35 31.1 -0.1**
PII				AML	AML	
	comp=E,1195μm,0.6s					
PII				AML	AML	
	comp=N,1016μm,0.4s					
BRJN	**Brijuni**	**2.15**	**11**	P	**Pn**	**13 35 31.1 -0.4**
CELB	**S.Piero in Cam**	**2.16**	**270**	P	**Pn**	**13 35 30.8 -0.9**
CELB				AML	AML	
	comp=E,427μm,1.2s					
CELB				AML	AML	
	comp=N,394μm,0.8s					
SGRT	**San Giovanni R**	**2.19**	**117**		**Pn**	**13 35 32.1 0.0**
SGRT	**San Giovanni R**	**2.19**	**117**	P	**Pn**	**13 35 32.3 +0.2**
	baz=114					
SGRT				S	**Sn**	**13 36 00.3 +0.9**
	baz=114					
SGRT				AMP		
	comp=N,13nm,0.8s,baz=114					
SGRT	**San Giovanni R**	**2.19**	**117**	P	**Pn**	**13 35 32.4 +0.2**
SGRT				AML	AML	
	comp=E,4265μm,0.8s					
SGRT				AML	AML	
	comp=N,3985μm,0.8s					
ZCCA	**Zocca**	**2.22**	**315**		**Pn**	**13 35 32.0 -0.5**
MAIM	**Mastiano**	**2.24**	**301**	P	**Pn**	**13 35 32.0 -0.7**
MAIM				AML	AML	
	comp=E,1209μm,0.6s					
MAIM				AML	AML	
	comp=N,864μm,1.0s					
BDI	**Bagni Di Lucca**	**2.25**	**305**	P	**Pn**	**13 35 32.0 -1.0**
BDI				AML	AML	
	comp=E,1390μm,1.0s					
BDI				AML	AML	
	comp=N,1154μm,0.9s					
BDI				AML	AML	
	comp=E,484μm,1.0s					
BDI				AML	AML	
	comp=N,458μm,0.9s					
CARD	**Cardoso**	**2.30**	**303**	P	**Pn**	**13 35 33.0 -0.5**
CARD				AML	AML	
	comp=E,1425μm,0.7s					
CARD				AML	AML	
	comp=N,1195μm,1.0s					
SGTA	**Sant Agata di**	**2.34**	**134**	P	**Pn**	**13 35 35.2 +1.0**
SGTA				AML	AML	
	comp=E,2745μm,0.7s					
SGTA				AML	AML	
	comp=N,1770μm,0.8s					
SGTA				AML	AML	
	comp=E,2770μm,0.7s					
SGTA				AML	AML	
	comp=N,1755μm,0.8s					
CAFE	**Carife**	**2.35**	**138**	P	**Pb**	**13 35 36.4 -1.7**
CAFE				AML	AML	
	comp=E,2345μm,1.6s					
CAFE				AML	AML	
	comp=N,1740μm,0.9s					
CAFE				AML	AML	
	comp=E,2425μm,1.6s					
CAFE				AML	AML	
	comp=N,1770μm,0.9s					
VLC	**Villacollemand**	**2.43**	**305**		**Pn**	**13 35 34.1 -1.2**
VLC	**Villacollemand**	**2.43**	**305**	P	**Pn**	**13 35 34.2 -1.2**
VLC				AML	AML	
	comp=E,740μm,1.1s					
VLC				AML	AML	
	comp=N,844μm,1.6s					
VLC				AML	AML	
	comp=E,744μm,1.1s					
VLC				AML	AML	
	comp=N,829μm,1.6s					
EQUI	**Equi**	**2.58**	**303**	P	**Pn**	**13 35 36.9 -0.4**
EQUI				AML	AML	
	comp=E,570μm,1.1s					
EQUI				AML	AML	
	comp=N,551μm,0.9s					
CAPA	**Cerignola FG**	**2.58**	**128**	P	**Pn**	**13 35 37.7 +0.3**
CAPA				AML	AML	
	comp=E,4040μm,1.0s					
CAPA				AML	AML	
	comp=N,5095μm,1.0s					
RIY	**Rijeka**	**2.71**	**20**	*e*Pn	**Pn**	**13 35 38.9 -0.3**
RIY				*e*Sn	**Sn**	**13 36 13.2 +1.2**
PLMA	**Palmaria, Port**	**2.71**	**299**	P	**Pn**	**13 35 39.1 -0.1**
PLMA				AML	AML	
	comp=E,299μm,0.8s					
PLMA				AML	AML	
	comp=N,380μm,0.8s					
TEOL	**Teolo**	**2.78**	**338**		**Pn**	**13 35 39.0 -1.1**
PALZ	**Palazzo San Ge**	**2.80**	**130**	P	**Pn**	**13 35 41.2 +0.8**
PALZ				AML	AML	
	comp=E,4455μm,0.9s					
PALZ				AML	AML	
	comp=N,4225μm,0.9s					
GRAM	**Graiana**	**2.81**	**308**	P	**Pn**	**13 35 41.6 +1.0**
GRAM				AML	AML	
	comp=E,1510μm,1.1s					
GRAM				AML	AML	
	comp=N,1405μm,0.8s					
CDRU	**Civita di Ruta**	**2.81**	**144**	P	**Pn**	**13 35 41.8 +1.1**
CDRU				AML	AML	
	comp=E,430μm,1.0s					
CDRU				AML	AML	
	comp=N,374μm,1.5s					
SKDS	**Skadanscina**	**2.82**	**12**	*i* Pn	**Pn**	**13 35 39.7 -1.0**
SKDS				*i* Sn	**Sn**	**13 36 14.3 -0.6**
SKDS				IAML		13 36 15.0
	comp=Z,357nm,0.4s					
MRVN	**Minervino Murg**	**2.86**	**126**	P	**Pn**	**13 35 41.4 +0.1**
MRVN				AML	AML	
	comp=E,914μm,0.6s					
MRVN				AML	AML	
	comp=N,1018μm,0.8s					
ACER	**Acerenza**	**2.90**	**133**	P	**Pn**	**13 35 42.5 +0.7**
ACER				AML	AML	
	comp=E,1375μm,1.6s					
ACER				AML	AML	
	comp=N,1635μm,1.3s					
ACER				AML	AML	
	comp=E,1465μm,0.8s					
ACER				AML	AML	
	comp=N,1715μm,1.3s					
SMPL	**Sampolo**	**2.94**	**258**	P	**Pn**	**13 35 42.0 -0.4**
SMPL				AML	AML	
	comp=E,99μm,1.3s					
SMPL				AML	AML	
	comp=N,108μm,1.1s					
MSSA	**Maissana**	**3.04**	**301**		**Pn**	**13 35 43.3 -0.6**
MSSA	**Maissana**	**3.04**	**301**	P	**Pn**	**13 35 43.7 -0.2**
MSSA				AML	AML	
	comp=E,518μm,0.9s					
MSSA				AML	AML	
	comp=N,524μm,0.9s					
PGF	**Pioggiola**	**3.07**	**267**	*e*Pn	**Pn**	**13 35 43.1 -1.1**
PGF	**Pioggiola**	**3.07**	**267**	*e*P	**Pn**	**13 35 44.6 +0.4**
PGF				*e*Sn	**Sn**	**13 36 17.7 -3.4**
	comp=N,138nm,0.7s					
PGF	**Pioggiola**	**3.07**	**267**	AML	AML	
	comp=N,112μm,1.1s					
PGF				AML	AML	
	comp=E,188μm,1.0s					
CEY	**Cerknica**	**3.08**	**17**	*e*Pn	**Pn**	**13 35 42.4 -2.0**
MCEL	**Monticello**	**3.17**	**140**	P	**Pn**	**13 35 47.3 +1.6**
MCEL				AML	AML	
	comp=E,548μm,1.2s					
MCEL				AML	AML	
	comp=N,663μm,1.1s					
MCEL				AML	AML	
	comp=E,560μm,1.2s					
MCEL				AML	AML	
	comp=N,673μm,1.1s					
SRKY	**Kupres RS**	**3.19**	**65**	*e*Pn	**Pn**	**13 35 48.3 +2.4**
MTSN	**Montesano sull**	**3.19**	**141**	P	**Pn**	**13 35 47.4 +1.5**
MTSN				AML	AML	
	comp=E,666μm,0.8s					
MTSN				AML	AML	
	comp=N,558μm,1.3s					
AMUR	**Altamura**	**3.20**	**125**	P	**Pn**	**13 35 46.3 +0.4**
AMUR				AML	AML	
	comp=E,1012μm,0.7s					
AMUR				AML	AML	
	comp=N,1195μm,0.6s					
SABO	**M.te Sabotino**	**3.20**	**6**	P	**Pn**	**13 35 45.2 -0.8**
SABO				AML	AML	
	comp=E,8345μm,0.7s					
SABO				AML	AML	
	comp=N,8635μm,1.0s					
SABO				AML	AML	
	comp=E,2055μm,0.7s					
SABO				AML	AML	
	comp=N,2295μm,1.0s					
MGR	**Morigerati**	**3.21**	**145**	P	**Pn**	**13 35 48.1 +2.0**
ROVR	**Rover Verones**	**3.22**	**333**	P	**Pn**	**13 35 46.8 +0.4**
ROVR				AML	AML	
	comp=E,1165μm,0.7s					
ROVR				AML	AML	
	comp=N,1280μm,0.8s					
ROVR				AML	AML	
	comp=E,442μm,0.7s					
ROVR				AML	AML	
	comp=N,503μm,0.8s					
MGRS	**Mrkonjic Grad**	**3.29**	**59**	*e*Pn	**Pn**	**13 35 47.5 +0.3**
SIRI	**Monte Sirino -**	**3.31**	**141**	P	**Pn**	**13 35 49.7 +2.1**
SIRI				AML	AML	
	comp=E,434μm,1.6s					
SIRI				AML	AML	
	comp=N,639μm,1.4s					
SIRI				AML	AML	
	comp=E,421μm,1.6s					
SIRI				AML	AML	
	comp=N,643μm,1.4s					
STON	**Ston**	**3.35**	**87**	*e*Pn	**Pn**	**13 35 46.7 -1.3**
STON	**Ston**	**3.35**	**87**	*e*Pn	**Pn**	**13 35 47.1 -0.9**
STON				*e*Sn	**Sn**	**13 36 27.9 +0.1**
STON	**Ston**	**3.35**	**87**	AML	AML	
	comp=E,580μm,0.7s					
STON				AML	AML	
	comp=N,524μm,0.9s					
AJAC	**Base Areonaval**	**3.36**	**257**	P	**Pn**	**13 35 48.6 +0.5**
AJAC				AML	AML	
	comp=E,378μm,0.3s					
AJAC				AML	AML	
	comp=N,249μm,1.6s					
PRIJ	**Prijedor**	**3.38**	**49**	*e*Pn	**Pb**	**13 35 54.5 -1.0**
SALO	**Salr**	**3.40**	**327**		**Pn**	**13 35 48.4 -0.2**
SALO	**Salr**	**3.40**	**327**	P	**Pn**	**13 35 49.9 +1.2**
SALO				AML	AML	
	comp=E,1370μm,1.4s					
SALO				AML	AML	
	comp=N,1895μm,1.4s					
SALO				AML	AML	
	comp=E,1290μm,1.4s					
SALO				AML	AML	
	comp=N,1885μm,1.0s					
LJU	**Ljubljana**	**3.40**	**16**	P	**Pn**	**13 35 48.0 -0.6**
LJU				AML	AML	
	comp=E,9375μm,0.8s					
LJU				AML	AML	
	comp=N,7545μm,0.8s					
MATE	**Matera**	**3.42**	**128**	⇑P	**Pn**	**13 35 49.8 +0.9**
MATE	**Matera**	**3.42**	**128**	P	**Pn**	**13 35 49.5 +0.6**
MATE				AML	AML	
	comp=E,814μm,0.6s					
MATE				AML	AML	
	comp=N,1070μm,0.7s					
CTI	**Castel Tesino**	**3.42**	**342**		**Pn**	**13 35 48.4 -0.7**
CTI	**Castel Tesino**	**3.42**	**342**	P	**Pn**	**13 35 48.4 -0.7**
CTI	**Castel Tesino**	**3.42**	**342**	P	**Pn**	**13 35 49.3 +0.2**
CTI				AML	AML	
	comp=E,1236μm,1.0s					
CTI				AML	AML	
	comp=N,1195μm,0.6s					
CUC	**Castrocucco**	**3.44**	**143**		**Pn**	**13 35 50.0 +0.6**
MPRI	**Monte Prat**	**3.45**	**358**	P	**Pn**	**13 35 49.3 -0.1**
MPRI				AML	AML	
	comp=E,1615μm,0.7s					
MPRI				AML	AML	
	comp=N,2285μm,0.8s					
CADS	**Cadrg**	**3.46**	**7**	*i* Pn	**Pn**	**13 35 48.7 -0.9**
CADS				*i* Sn	**Sn**	**13 36 29.8 -0.8**
CADS				IAML		13 37 04.4
	comp=Z,457nm,0.8s					
CRAC	**Craco**	**3.46**	**133**	P	**Pn**	**13 35 50.7 +1.2**
CRAC				AML	AML	
	comp=E,1605μm,1.0s					
CRAC				AML	AML	
	comp=N,1930μm,1.0s					
STAL	**STALIGIAL**	**3.48**	**355**		**Pn**	**13 35 49.2 -0.6**
STAL	**STALIGIAL**	**3.48**	**355**	P	**Pn**	**13 35 49.5 -0.4**
STAL				AML	AML	
	comp=E,1365μm,0.9s					
STAL				AML	AML	
	comp=N,975μm,0.4s					
STAL				AML	AML	
	comp=E,1755μm,1.2s					
STAL				AML	AML	
	comp=N,1004μm,0.9s					
A051A	**Mrakovica**	**3.51**	**50**	*e*Pn	**Pn**	**13 35 50.4 +0.2**
LTRZ	**Laterza**	**3.51**	**127**	P	**Pn**	**13 35 51.3 +1.0**
LTRZ				AML	AML	
	comp=E,876μm,1.0s					
LTRZ				AML	AML	
	comp=N,695μm,1.6s					
BLY	**Banja Luka**	**3.52**	**55**	*e*Pn	**Pn**	**13 35 52.0 +1.7**
BLY	**Banja Luka**	**3.52**	**55**	*e*Pn	**Pn**	**13 35 51.6 +1.3**
BLY				*e*Sn	**Sn**	**13 36 34.4 +2.4**
LUSI	**Trento, Gardas**	**3.54**	**334**	P	**Pn**	**13 35 51.1 +0.4**
LUSI				AML	AML	
	comp=E,1019μm,0.8s					
LUSI				AML	AML	
	comp=N,1130μm,0.8s					
NOCI	**Noci**	**3.55**	**123**	P	**Pn**	**13 35 51.0 +0.2**
	baz=121					
NOCI				S	**Sn**	**13 36 31.9 -0.9**
	baz=121					
NOCI				AMP		
	comp=E,2.2nm,0.5s,baz=121					
NOCI	**Noci**	**3.55**	**123**	P	**Pn**	**13 35 51.0 +0.2**
CIMO	**Cimolais**	**3.55**	**352**	P	**Pn**	**13 35 50.1 -0.7**
CIMO				AML	AML	
	comp=E,526μm,1.1s					
CIMO				AML	AML	
	comp=N,476μm,0.8s					
CIMO				AML	AML	
	comp=E,518μm,1.1s					
CIMO				AML	AML	
	comp=N,456μm,0.8s					
AGOR	**Agordo**	**3.58**	**348**	P	**Pn**	**13 35 51.1 0.0**
AGOR				AML	AML	
	comp=E,944μm,1.3s					
AGOR				AML	AML	
	comp=N,730μm,1.2s					
AGOR				AML	AML	
	comp=E,692μm,1.3s					
AGOR				AML	AML	
	comp=N,580μm,1.2s					
DGI	**Dorgali Grotta**	**3.63**	**228**	P	**Pn**	**13 35 51.8 0.0**
GAGG	**Gaggia**	**3.64**	**335**	P	**Pn**	**13 35 52.9 +0.7**
GAGG				AML	AML	
	comp=E,891μm,1.0s					
GAGG				AML	AML	
	comp=N,1850μm,1.0s					
GAGG				AML	AML	
	comp=E,1935μm,1.0s					
GAGG				AML	AML	
	comp=N,906μm,1.0s					
PRED	**Cave del Predi**	**3.66**	**5**		**Pn**	**13 35 51.6 -0.7**
CLUD	**Cludinico**	**3.67**	**357**		**Pn**	**13 35 51.8 -0.6**
CLUD	**Cludinico**	**3.67**	**357**	P	**Pn**	**13 35 52.0 -0.4**
CLUD				AML	AML	
	comp=E,1074μm,0.9s					
CLUD				AML	AML	
	comp=N,916μm,0.9s					
CLUD				AML	AML	
	comp=E,1048μm,0.7s					
CLUD				AML	AML	
	comp=N,926μm,0.9s					
ZONE	**Zone**	**3.68**	**325**	P	**Pn**	**13 35 53.3 +0.7**
ZONE				AML	AML	
	comp=E,592μm,1.3s					
ZONE				AML	AML	
	comp=N,735μm,0.8s					
ACOM	**Acomizza, Ital**	**3.76**	**4**	P	**Pn**	**13 35 53.9 0.0**
ACOM				AML	AML	
	comp=E,1430μm,1.3s					
ACOM				AML	AML	
	comp=N,1445μm,0.7s					
ACOM				AML	AML	
	comp=E,1385μm,1.3s					
ACOM				AML	AML	
	comp=N,1370μm,0.7s					
ZOU	**Zoufplan**	**3.76**	**358**	P	**Pn**	**13 35 53.4 -0.4**
ZOU				AML	AML	
	comp=E,1087μm,1.3s					
ZOU				AML	AML	
	comp=N,1110μm,1.0s					
ZOU				AML	AML	
	comp=E,1064μm,1.3s					
ZOU				AML	AML	
	comp=N,1105μm,1.0s					
EUCT	**Pavia**	**3.77**	**311**	AML	AML	
	comp=E,1237μm,1.2s					
EUCT				AML	AML	
	comp=N,1520μm,1.3s					
MABI	**Malga Bissina**	**3.77**	**331**	P	**Pn**	**13 35 54.5 +0.6**
MABI				AML	AML	
	comp=E,344μm,0.7s					
MABI				AML	AML	
	comp=N,280μm,0.6s					
QLNO	**Quiliano**	**3.81**	**295**	P	**Pn**	**13 35 54.2 -0.1**
QLNO				AML	AML	
	comp=E,140μm,0.6s					
QLNO				AML	AML	
	comp=N,208μm,1.5s					
FVI	**Forni Avoltri**	**3.81**	**356**	P	**Pn**	**13 35 54.5 +0.1**
FVI				AML	AML	
	comp=E,950μm,1.4s					
FVI				AML	AML	
	comp=N,987μm,0.7s					

TREB Trebinje 3.83 89 *e*Pn **Pn 13 35 55.2 +0.6**
TREB Trebinje 3.83 89 *e*Pn **Pn 13 35 55.1 +0.5**
TREB *e*Sn **Sn 13 36 39.4 -0.4**
TAR1 Taranto 3.84 125 AML AML
comp=E,1022µm,0.6s
TAR1 AML AML
comp=N,834µm,0.8s
OBKA Obir 3.85 15 *e*Pn **Pn 13 35 53.4 -1.5**
OBKA Obir 3.85 15 *i* Pn **Pn 13 35 55.5 +0.6**
comp=N,14nm,0.4s,SNR=14
OBKA *e*Sn **Sg 13 37 00.5 +1.4**
comp=N,274nm,0.5s
MYKA Terra Mystica 3.85 5 *i* Pn **Pn 13 35 55.5 +0.6**
comp=N,95nm,0.6s,SNR=43
MYKA *e*Sn **Sn 13 36 42.5 +2.2**
comp=N,59nm,0.4s
KOSI Kohlern 3.88 342 P **Pn 13 35 56.4 +1.0**
KOSI AML AML
comp=E,1590µm,0.9s
KOSI AML AML
comp=N,1175µm,1.2s
HCY Herceg Novi 3.96 93 *e*Pn **Pn 13 35 56.6 +0.2**
HCY Herceg Novi 3.96 93⇑*i*Pn **Pn 13 35 56.8 +0.4**
HCY *i* Sn **Sn 13 36 43.8 +0.8**
BRY Bratogost 3.97 87 *e*Pn **Pn 13 35 56.5 -0.1**
BRY Bratogost 3.97 87⇑*i*Pn **Pn 13 35 56.9 +0.3**
BRY *i* Sn **Sn 13 36 43.8 +0.5**
ABTA Abfaltersbach 3.98 354 *i* Pn **Pn 13 35 57.3 +0.5**
comp=N,206nm,0.6s,SNR=113
ABTA *e*Sn **Sb 13 36 52.4 -1.6**
comp=N,291nm,0.7s
SOKA Soboth 4.11 18 *i* Pn **Pn 13 35 59.6 +1.0**
comp=N,17nm,0.5s,SNR=12
RISI Rein 4.22 350 P **Pn 13 36 01.1 +1.0**
RISI AML AML
comp=E,1525µm,0.5s
RISI AML AML
comp=N,1540µm,0.4s
CAR1 CAROLEI 4.23 146 P **Pn 13 36 01.9 +1.8**
CAR1 AML AML
comp=E,346µm,0.8s
CAR1 AML AML
comp=N,295µm,0.8s
UPM Unac-Piva 4.24 83 *e*Pn **Pn 13 36 01.8 +1.3**
UPM Unac-Piva 4.24 83 *e*Pn **Pn 13 36 00.8 +0.3**
UPM *i* Sn **Sn 13 36 50.6 +0.4**
CEME Cevo 4.26 91⇓*i*Pn **Pn 13 36 01.0 +0.4**
CEME *i* Sn **Sn 13 36 51.0 +0.5**
KOGS Kog 4.27 30 P **Pn 13 36 00.4 -0.3**
KOGS AML AML
comp=E,5190µm,0.9s
KOGS AML AML
comp=N,6015µm,0.9s
BUM Brajici-Budva 4.27 95⇓*i*Pn **Pn 13 36 01.1 +0.3**
BUM *i* Sn **Sn 13 36 51.3 +0.5**
NKME Niksic 4.27 88⇓*i*Pn **Pn 13 36 01.2 +0.5**
NKME *i* Sn **Sn 13 36 51.3 +0.6**
SBF Sospel 4.30 286 *e*Pn **Pn 13 36 00.3 -0.8**
SBF Sospel 4.30 286 *e*P **Pn 13 36 02.9 +1.8**
SBF *e*Sn **Sn 13 36 48.7 -2.7**
comp=N,115nm,0.7s
ROSI Rosskopf 4.31 344 P **Pn 13 36 02.4 +1.0**
VSL Villasalto 4.35 222 P **Pn 13 36 02.2 +0.4**
VSL AML AML
comp=E,252µm,0.4s
VSL AML AML
comp=N,294µm,0.7s
VARE Varese 4.39 316 AML AML
comp=E,393µm,1.0s
VARE AML AML
comp=N,1340µm,0.1s
HAPS Han Pijesak,BI 4.42 71 *e*Pn **Pn 13 36 03.6 +0.8**
BEHE Becsehely 4.50 34 P **Pn 13 36 06.4 +2.7**
DRME Dracevica, Mon 4.51 96 *e*Pn **Pn 13 36 03.8 -0.1**
DRME Dracevica, Mon 4.51 96⇑*i*Pn **Pn 13 36 04.4 +0.5**
DRME *i* Sn **Sn 13 36 56.9 +0.5**
PDG Podgorica 4.52 93⇑⇑P **Pn 13 36 05.1 +1.0**
PDG Podgorica 4.52 93 **Pn 13 36 04.1 0.0**
PDG Podgorica 4.52 93 *e*Pn **Pn 13 36 04.7 +0.6**
PDG *e*Sn **Sn 13 36 55.3 -1.5**
TTG Podgorica 4.52 93⇓*i*Pn **Pn 13 36 04.7 +0.6**
TTG *i* Sn **Sn 13 36 57.3 +0.5**
TIP Timpagrande 4.53 142⇑P **Pn 13 36 05.2 +0.9**
FETA Feichten 4.56 339 *i* Pn **Pn 13 36 06.2 +1.4**
comp=N,29nm,0.5s,SNR=41
FETA *e*Sn **Sb 13 37 04.7 -6.2**
comp=N,89nm,0.9s
TUE Stuetta 4.57 325 **Pn 13 36 04.2 -0.7**
ULC Ulcinj 4.59 98⇑*i*Pn **Pn 13 36 05.4 +0.3**
ULC *i* Sn **Sn 13 36 59.0 +0.4**
WTTA Wattenberg 4.60 347 *i* Pn **Pn 13 36 06.8 +1.6**
comp=N,79nm,0.7s,SNR=52
WTTA *e*Sn **Sn 13 37 02.7 +3.9**
comp=N,96nm,0.5s
WTTA Wattenberg 4.60 347 *e*Pn **Pn 13 36 06.8 +1.6**
WTTA Wattenberg 4.60 347 P **Pn 13 36 07.1 +1.9**
WTTA AML AML
comp=E,986µm,0.9s
WTTA AML AML
comp=N,776µm,0.9s
PLE Pljevlja 4.61 81 *e*Pn **Pn 13 36 05.7 +0.3**
PLE *i* Sn **Sn 13 36 59.3 +0.3**
DAVOX Davos/Dischmat 4.61 331 Pn **Pn 13 36 06.4 +0.8**
comp=N,22nm,0.3s,baz=157,slow=17,SNR=72
DAVOX Sn **Sn 13 37 00.3 +1.0**
comp=N,9.5nm,0.3s,baz=130,slow=23,SNR=6.5
comp=N,84nm,0.5s
DAVOX Davos/Dischmat 4.61 331 P **Pn 13 36 08.2 +2.7**
RUDO Rudo 4.62 78 *e*Pn **Pn 13 36 05.2 -0.3**
SQTA Sankt Quirin 4.63 343 **Pn 13 36 07.3 +1.6**
SQTA **Sn 13 37 03.2 +3.5**
SQTA Sankt Quirin 4.63 343 *i* Pn **Pn 13 36 07.3 +1.6**
comp=N,50nm,0.3s,SNR=44
SQTA *e*Sn **Sn 13 37 03.2 +3.5**
comp=N,117nm,0.4s
JOPP Joppolo 4.67 153 P **Pn 13 36 07.8 +1.6**
JOPP AML AML
comp=E,86µm,1.6s
JOPP AML AML
comp=N,93µm,0.6s
WATA Walderalm 4.68 347 **Pn 13 36 08.7 +2.3**
WATA **Sn 13 37 04.0 +3.2**
WATA Walderalm 4.68 347 *i* Pn **Pn 13 36 08.7 +2.3**
comp=N,137nm,0.6s,SNR=73
WATA *e*Sn **Sn 13 37 04.0 +3.2**
comp=N,95nm,0.6s
KOME Kolasin 4.69 87⇓*i*Pn **Pn 13 36 06.8 +0.4**
KOME *i* Sn **Sn 13 37 01.2 +0.3**
BBLS Lazići 4.69 75 *e*Pn **Pn 13 36 07.5 +1.1**
BBLS Lazići 4.69 75 *e*Pn **Pn 13 36 07.6 +1.1**
BBLS *e*Sn **Sn 13 37 01.5 +0.5**
ARSA Arzberg 4.76 20 *i* Pn **Pn 13 36 07.2 -0.2**
comp=N,7.1nm,0.4s,SNR=13
ARSA Arzberg 4.76 20 *e*Pn **Pn 13 36 07.2 -0.2**
ARSA Arzberg 4.76 20 P **Pn 13 36 07.3 -0.2**
MOTA Moosalm 4.78 343 **Pn 13 36 09.8 +2.1**
MOTA **Sn 13 37 07.8 +4.6**
MOTA Moosalm 4.78 343 *i* Pn **Pn 13 36 09.8 +2.1**
comp=N,65nm,0.6s,SNR=47
MOTA *e*Sn **Sn 13 37 07.8 +4.6**
comp=N,79nm,0.7s
SCTE Santa Cesarea 4.84 122 **Pn 13 36 08.4 0.0**
SCTE Santa Cesarea 4.84 122 P **Pn 13 36 07.5 -0.9**
baz=121
SCTE S **Sn 13 37 02.6 -1.9**
baz=121
SCTE AMP
comp=E,0.8nm,0.9s,baz=121
KOVH Kovagotottos 4.84 45 P **Pn 13 36 07.4 -1.0**
KOVH S **Sn 13 37 01.1 -3.5**
FUSIO Fusio 4.86 320 P **Pn 13 36 09.5 +0.6**
ZUGS Zugspitze, Sch 4.87 342 *e*Pn **Pn 13 36 11.9 +2.8**
LMR La Mourre 4.89 279 *e*Pn **Pn 13 36 08.2 -1.0**
LMR La Mourre 4.89 279 *e*P **Pn 13 36 10.7 +1.5**
LMR *e*Sn **Sn 13 37 01.8 -4.1**
comp=E,29nm,0.7s
BIOA Bad Ischl, Aus 4.91 4 **Pn 13 36 09.6 +0.1**
BIOA **Sn 13 37 09.4 +3.0**
BIOA Bad Ischl, Aus 4.91 4 *i* Pn **Pn 13 36 09.6 +0.1**
comp=E,78nm,0.5s,SNR=58
BIOA *e*Sn **Sn 13 37 09.4 +3.0**
comp=E,271nm,0.9s
PART Garmisch-Parte 4.92 344 *e*Pn **Pn 13 36 11.8 +2.2**
RJOB Jochberg 4.95 357 *e*Pn **Pn 13 36 10.7 +0.6**

IVA Berane 4.96 87 *e*Pn **Pn 13 36 10.7 +0.5**
IVA *i* Sn **Sn 13 37 07.9 +0.2**
RETA Reutte 4.99 341 *i* Pn **Pn 13 36 12.7 +2.1**
comp=E,11nm,0.3s,SNR=22
RETA *e*Sn **Sn 13 37 10.6 +2.3**
comp=E,63nm,1.0s
MBDF Montbardon 5.00 295 *e*Pn **Pn 13 36 10.8 -0.1**
MBDF Montbardon 5.00 295 *e*P **Pn 13 36 13.3 +2.4**
MBDF *e*Sn **Sn 13 37 06.1 -2.8**
comp=E,117nm,0.8s
PVY Plav 5.03 90 *e*Pn **Pn 13 36 11.6 +0.5**
PVY *i* Sn **Sn 13 37 09.5 +0.1**
SJES Sjenica 5.03 82 *e*Pn **Pn 13 36 12.2 +1.1**
SJES *e*Sn **Sn 13 37 09.3 -0.1**
OBER Oberstdorf 5.04 337 *e*Pn **Pn 13 36 14.3 +3.1**
DAVA Damuels 5.05 334 *i* Pn **Pn 13 36 14.3 +2.8**
comp=E,34nm,0.4s,SNR=38
DAVA Damuels 5.05 334 *e*Pn **Pn 13 36 13.8 +2.3**
EMBD Embd, Matterta 5.11 314 P **Pn 13 36 16.6 +4.2**
MOA Molln 5.12 8 *e*Pn **Pn 13 36 12.6 +0.3**
MOA *e*Sn **Sn 13 37 11.5 0.0**
MOA Molln 5.12 8 *i* Pn **Pn 13 36 12.9 +0.6**
comp=E,31nm,0.5s,SNR=13
MOA Molln 5.12 8 *e*Pn **Pn 13 36 12.8 +0.6**
BCI Bajram Curri 5.13 92 P **Pn 13 36 13.9 +1.5**
baz=91
BCI S **Sn 13 37 11.0 -0.7**
baz=91
BCI AMP
comp=E,2.5nm,0.7s,baz=91
DIVS Divibare 5.15 73 **Pn 13 36 12.3 -0.5**
DIVS Divibare 5.15 73 *e*Pn **Pn 13 36 12.9 +0.1**
DIVS Divibare 5.15 73 *e*Pn **Pn 13 36 13.8 +1.0**
DIVS *e*Sn **Sn 13 37 12.1 -0.3**
IVAS Ivanjica 5.18 79 *e*Pn **Pn 13 36 13.3 +0.1**
TIR Tirane 5.21 104⇑⇑P **Pn 13 36 14.2 +0.7**
TIR Tirane 5.21 104 **Pn 13 36 13.5 +0.1**
TIR Tirane 5.21 104 P **Pn 13 36 13.7 +0.2**
TIR Tirane 5.21 104 *e*Pn **Pn 13 36 13.9 +0.4**
TIR *e*Sn **Sn 13 37 12.6 -1.0**
TIR Tirane 5.21 104 P **Pn 13 36 13.5 +0.1**
TIR Tirane 5.21 104 P **Pn 13 36 13.6 +0.1**
baz=102
TIR S **Sn 13 37 12.9 -0.7**
baz=102
TIR AMP
comp=E,0.9nm,0.5s,baz=102
MORH Mrgy, Hungar 5.21 47⇑P **Pn 13 36 13.7 +0.2**
MORH Mrgy, Hungar 5.21 47 P **Pn 13 36 14.9 +1.4**
VLO Vlora 5.29 114 **Pn 13 36 15.6 +0.9**
VLO Vlora 5.29 114 P **Pn 13 36 15.9 +1.2**
VLO Vlora 5.29 114 P **Pn 13 36 15.6 +0.9**
VLO Vlora 5.29 114 P **Pn 13 36 15.8 +1.2**
baz=112
LPG La Plagne 5.34 303 *e*Pn **Pn 13 36 14.6 -1.0**
LPG La Plagne 5.34 303 *e*P **Pn 13 36 18.6 +3.0**
LPG *e*Sn **Sn 13 37 13.8 -3.5**
comp=E,108nm,0.9s
UBR Ueberruh 5.34 337 *e*Pn **Pn 13 36 17.7 +2.3**
FRGS Fruska Gora 5.36 62⇑P **Pn 13 36 15.9 +0.2**
FRGS Fruska Gora 5.36 62 *e*Pn **Pn 13 36 14.8 -0.8**
FRGS Fruska Gora 5.36 62 *e*Pn **Pn 13 36 15.8 +0.2**
LPL La Plagne 5.36 303 *e*Pn **Pn 13 36 15.6 -0.2**
LPL La Plagne 5.36 303 *e*P **Pn 13 36 18.8 +3.0**
LPL *e*Sn **Sn 13 37 14.5 -3.2**
comp=E,129nm,0.9s
MPLH Magyarpolny 5.37 34 P **Pn 13 36 15.7 0.0**
RONA Rosalia, Austr 5.38 23 **Pn 13 36 15.9 -0.1**
RONA Rosalia, Austr 5.38 23 *i* Pn **Pn 13 36 15.9 -0.1**
comp=E,13nm,0.4s,SNR=14
SOP Sopron 5.45 25 P **Pn 13 36 17.5 +0.7**
TRUS Trudelj 5.47 72 *e*Pn **Pn 13 36 17.0 -0.1**
CONA Conrad Observa 5.48 19 *i* Pn **Pn 13 36 17.1 -0.2**
comp=E,32nm,0.5s,SNR=28
PHP Peshkopia 5.53 99 P **Pn 13 36 18.6 +0.6**
PHP Peshkopia 5.53 99 P **Pn 13 36 19.2 +1.2**
baz=97
PHP S **Sn 13 37 21.1 -0.5**
baz=97
PHP AMP
comp=N,1.5nm,0.9s,baz=97
GRUS Gruza 5.63 76 *e*Pn **Pn 13 36 19.5 +0.2**
SMRF Simiane la Rot 5.64 285 *e*P **Pn 13 36 22.0 +2.5**
SMRF *e*Sn **Sn 13 37 20.3 -4.2**
comp=N,47nm,0.9s
ORIF Oris-en-Rattie 5.67 294 *e*P **Pn 13 36 23.1 +3.2**
ORIF *e*Sn **Sn 13 37 20.8 -4.3**
comp=N,100nm,0.9s
SELS Selova 5.86 83 *e*Pn **Pn 13 36 22.2 -0.3**
SELS *e*Sn **Sn 13 37 29.2 -0.6**
KEK Kerkira 5.88 119 **Pn 13 36 23.3 +0.5**
KEK Kerkira 5.88 119 P **Pn 13 36 23.5 +0.7**
SRN Sarande 5.92 117 P **Pn 13 36 24.2 +0.8**
SRN Sarande 5.92 117 P **Pn 13 36 24.1 +0.8**
baz=116
TORNY Torny/Romont 5.93 314 P **Pn 13 36 26.1 +2.5**
OHR Ohrid 5.95 104 *i* Pn **Pn 13 36 24.9 +1.2**
SLE Schleitheim 5.96 328 P **Pn 13 36 24.3 +0.5**
BALST Balsthal 5.96 322 P **Pn 13 36 24.7 +0.8**
GEC2 GERESS Array S 6.06 3 **Pn 13 36 24.3 -1.1**
GEC2 GERESS Array S 6.06 3 *e*Pn **Pn 13 36 24.6 -0.8**
GERES GERESS Array B 6.06 3 Pn **Pn 13 36 23.8 -1.5**
comp=N,2.2nm,0.3s,baz=190,slow=21,SNR=71
GERES Sn **Sn 13 37 30.9 -4.0**
comp=N,12nm,0.3s,baz=162,slow=24,SNR=14
comp=N,19nm,0.7s
GERES GERESS Array B 6.06 3 **Pn 13 36 23.4 -2.0**
ZST Bratislava 6.08 26 *e*P **Pn 13 36 25.1 -0.3**
CKRC Cesky Krumlov 6.08 7 *e*PN **Pn 13 36 24.3 -1.2**
CKRC *e*SN **Sn 13 37 33.1 -2.1**
KBN Korca 6.12 108 **Pn 13 36 25.5 -0.6**
KBN Korca 6.12 108 P **Pn 13 36 26.8 +0.7**
KBN Korca 6.12 108 P **Pn 13 36 25.5 -0.6**
KBN Korca 6.12 108 P **Pn 13 36 26.7 +0.7**
baz=107
KBN S **Sn 13 37 35.4 -0.7**
baz=107
KBN AMP
comp=N,1.2nm,0.8s,baz=107
LSK Leskovik 6.19 113 P **Pn 13 36 28.3 +1.2**
LSK Leskovik 6.19 113 P **Pn 13 36 27.8 +0.7**
baz=111
LSK S **Sn 13 37 35.6 -2.4**
baz=111
SKO Skopje 6.20 95 *i* Pn **Pn 13 36 27.9 +0.8**
BOURR Bourrignon 6.22 320 P **Pn 13 36 28.9 +1.5**
MODS Modra-Piesok 6.29 26 *e*P **Pn 13 36 29.0 +0.7**
BRANT Les Verrieres 6.30 313 P **Pn 13 36 30.0 +1.4**
BOVS Bovan 6.31 79⇑⇑P **Pn 13 36 28.5 -0.1**
BOVS Bovan 6.31 79 *e*Pn **Pn 13 36 28.2 -0.5**
CABF La Chapelle 6.31 310 *e*Pn **Pn 13 36 28.5 -0.3**
CABF La Chapelle 6.31 310 *e*P **Pn 13 36 31.5 +2.7**
CABF *e*Sn **Sn 13 37 37.5 -3.5**
comp=N,97nm,1.0s
IGT Igoumenitsa 6.33 119 P **Pn 13 36 29.8 +0.9**
IGT Igoumenitsa 6.33 119 P **Pn 13 36 30.0 +1.1**
baz=117
KIZ Kirchzarten 6.34 326 P **Pn 13 36 29.4 +0.4**
KHC Kasperske Hory 6.34 3 **Pn 13 36 27.8 -1.4**
KHC Kasperske Hory 6.34 3 *e*P **Pn 13 36 27.9 -1.3**
KHC *e* 13 37 39.6
KHC Kasperske Hory 6.34 3 *e*PN **Pn 13 36 27.9 -1.3**
KHC *e*SN **Sn 13 37 39.6 -2.1**
WET Wettzell 6.35 358 *e*Pn **Pn 13 36 27.9 -1.3**
BARS Barje 6.38 87 *e*Pn **Pn 13 36 29.7 +0.1**
NEST Nestorio 6.38 109 P **Pn 13 36 31.1 +1.3**
VIVF Saint-Julien-I 6.47 291 *e*Pn **Pn 13 36 29.7 -1.1**
VIVF Saint-Julien-I 6.47 291 *e*P **Pn 13 36 34.0 +3.2**
VIVF *e*Sn **Sn 13 37 40.1 -4.6**
comp=N,12nm,0.6s
FNA Florina 6.47 105 P **Pn 13 36 30.2 -0.7**
FNA Florina 6.47 105 P **Pn 13 36 31.2 +0.3**
baz=104
FNA S **Sn 13 37 42.1 -2.8**
baz=104
BFO Black Forest 6.49 330 **Pn 13 36 30.8 -0.3**
BFO Black Forest 6.49 330 P **Pn 13 36 30.8 -0.3**
BFO Black Forest 6.49 330 *e*Pn **Pn 13 36 31.5 +0.4**
MDVR Moldovita 6.51 69⇑⇑P **Pn 13 36 31.9 +0.4**
MOF Molkenrain 6.60 322 P **Pn 13 36 33.2 +0.5**
JAN Janina 6.60 116 P **Pn 13 36 32.5 -0.2**
BOUC Bouclans 6.61 315 P **Pn 13 36 33.6 +0.9**
KRUC Moravsky 6.67 19 *e*PN **Pn 13 36 32.5 -1.0**

KRUC *e*SN **Sn 13 37 46.9 -2.6**
HINF Hinteralfeld 6.70 321 *e*Pn **Pn 13 36 34.6 +0.5**
HINF Hinteralfeld 6.70 321 *e*P **Pn 13 36 37.1 +3.0**
HINF *e*Sn **Sn 13 37 46.5 -4.0**
comp=N,145nm,0.8s
ZAGS Zajecar 6.71 78 *e*Pn **Pn 13 36 33.8 -0.3**
BZS Buzias 6.71 62⇑⇑P **Pn 13 36 35.5 +1.4**
RONF Ronchamp 6.72 319 P Pn 13 36 29.3 -5.0
JAVC Velka Javorina 6.84 26 *e*PN **Pn 13 36 35.8 -0.2**
ECH Echery 6.86 324 **Pn 13 36 36.0 -0.2**
ECH Echery 6.86 324 P **Pn 13 36 36.0 -0.2**
ECH Echery 6.86 324 P **Pn 13 36 37.7 +1.4**
ECH Echery 6.86 324 P **Pn 13 36 36.1 -0.2**
LASF Ste Croix 6.88 284 *e*Pn **Pn 13 36 35.0 -1.6**
LASF Ste Croix 6.88 284 *e*P **Pn 13 36 39.7 +3.1**
KZN Kozani 6.93 108 P **Pn 13 36 37.4 +0.1**
TSLK Tsoukalades, L 6.94 122 P **Pn 13 36 38.8 +1.5**
VRAC Vranov 6.94 19⇑⇑P **Pn 13 36 37.5 +0.2**
VRAC Vranov 6.94 19 Pn **Pn 13 36 36.7 -0.6**
comp=N,0.8nm,0.3s,baz=194,slow=13,SNR=12
VRAC Sn **Sn 13 37 52.3 -4.0**
comp=N,0.9nm,0.3s,baz=275,slow=14,SNR=3.3
VRAC LR LR 13 39 52.0
comp=N,342nm,18.6s,baz=200,slow=43
comp=N,7.4nm,0.6s
VRAC Vranov 6.94 19 *e*PN **Pn 13 36 36.8 -0.5**
VYHS Vyhne 6.95 33 *e*P **Pn 13 36 38.2 +0.7**
LKD2 Lefkada island 6.96 123 P **Pn 13 36 38.7 +1.0**
CDF Champ du Feu 6.96 326 *e*Pn **Pn 13 36 37.4 -0.3**
CDF Champ du Feu 6.96 326 *e*P **Pn 13 36 40.6 +2.9**
CDF *e*Sn **Sn 13 37 53.2 -3.8**
comp=N,134nm,0.9s
ZAPS Zavoj 6.97 83 *e*Sn **Pn 13 36 38.2 +0.5**
ZAPS Zavoj 6.97 83 *e*Pn **Sn 13 37 54.6 -2.5**
DRAG Dragano-Lefkad 6.97 124 P **Pn 13 36 38.7 +0.9**
PSZ Piszkesteto 6.99 41⇑P **Pn 13 36 38.6 +0.6**
PSZ Piszkesteto 6.99 41 P Pn 13 36 44.3 +6.3
SIRR Siria 7.00 57⇑⇑P **Pn 13 36 38.8 +0.6**
ROTZ Rotzenmuhle 7.00 355 *e*Pn **Pn 13 36 37.6 -0.6**
BLKB Belogradchik 7.01 80⇑⇑P **Pn 13 36 38.9 +0.6**
HERR Herculane 7.02 70⇑⇑P **Pn 13 36 39.3 +0.9**
GRA1 Grafenberg Arr 7.03 350 **Pn 13 36 37.3 -1.2**
GRF Grafenberg Arr 7.03 350 P **Pn 13 36 37.3 -1.2**
DJES Djerdap 7.04 71⇑⇑P **Pn 13 36 38.6 -0.1**
EVGI Lefkada island 7.06 124 P **Pn 13 36 40.1 +1.1**
HAU Haudompre 7.07 320 *e*Pn **Pn 13 36 38.2 -1.0**
HAU Haudompre 7.07 320 *e*P **Pn 13 36 41.8 +2.6**
HAU *e*Sn **Sn 13 37 55.4 -4.2**
comp=N,74nm,0.4s
DMLN Damoulianata-K 7.14 127 P **Pn 13 36 41.2 +1.1**
KEF4 Livadi, Kephal 7.16 127 P **Pn 13 36 41.6 +1.3**
VAY Valandovo 7.17 99 *i* Pn **Pn 13 36 40.8 +0.4**
GOPC GO Pecny, Ondr 7.21 8 *e*P **Pn 13 36 39.6 -1.4**
GOPC GO Pecny, Ondr 7.21 8 *e*PN **Pn 13 36 39.6 -1.4**
PRU Pruhonice 7.26 7 *e*P **Pn 13 36 40.3 -1.4**
PRU *e* 13 38 01.5
PRU Pruhonice 7.26 7 *e*PN **Pn 13 36 40.3 -1.4**
PRU *e*SN **Sn 13 38 01.5 -2.7**
MAHO Mahon 7.28 250 **Pn 13 36 41.7 -0.3**
VLS Valsamata 7.31 127 P **Pn 13 36 43.3 +0.9**
MAUC Maruska 7.33 25 *e*PN **Pn 13 36 40.9 -1.8**
PSDA Pessada-Kefalo 7.35 127 P **Pn 13 36 44.2 +1.3**
GZR Gura Zlata 7.40 66⇑⇑P **Pn 13 36 43.4 -0.3**
KKB Krupnik 7.42 94 *e*P **Pn 13 36 45.4 +1.5**
THL Klokotos Trika 7.42 113 P **Pn 13 36 45.2 +1.2**
VTS Vitosha 7.43 88⇑⇑P **Pn 13 36 44.8 +0.6**
VTS Vitosha 7.43 88 **Pn 13 36 43.9 -0.3**
VTS Vitosha 7.43 88 P **Pn 13 36 43.9 -0.3**
VTS Vitosha 7.43 88 *e*P **Pn 13 36 44.4 +0.2**
NKC Novy Kostel 7.46 357 *e*P **Pn 13 36 43.3 -1.1**
NKC *e* 13 38 06.0
NKC Novy Kostel 7.46 357 *e*PN **Pn 13 36 43.3 -1.1**
NKC *e*SN **Sn 13 38 06.0 -3.0**
MORC Moravsky Berou 7.62 22⇑⇑P **Pn 13 36 48.0 +1.4**
MORC Moravsky Berou 7.62 22 **Pn 13 36 46.1 -0.5**
MORC Moravsky Berou 7.62 22 P **Pn 13 36 46.1 -0.5**
MORC Moravsky Berou 7.62 22 *e*PN **Pn 13 36 46.6 0.0**
EVR Evrytania 7.62 118 P **Pn 13 36 48.1 +1.3**
KEST Kesra 7.64 204 Pn **Pn 13 36 50.7 +3.7**
comp=N,2.6nm,0.3s,baz=308,slow=4.2,SNR=20
KEST LR LR 13 39 59.1
comp=N,304nm,19.0s,baz=240,slow=40
DEV Deva 7.64 63⇑⇑P **Pn 13 36 47.3 +0.3**
SMF Signal de Mont 7.66 303 *e*Pn **Pn 13 36 46.7 -0.5**
SMF Signal de Mont 7.66 303 *e*P **Pn 13 36 50.5 +3.3**
SMF *e*Sn **Sn 13 38 09.3 -4.8**
comp=N,35nm,0.7s
KECS Kecovo 7.67 40 *e*P **Pn 13 36 50.2 +2.9**
PAGF Fort de Pagny 7.76 321 *e*Pn **Pn 13 36 49.5 +1.0**
baz=138
PAGF *e*Sn **Sn 13 38 11.9 -4.5**
comp=N,65nm,0.8s
MPEP Malo Peshtene 7.78 82 *e*P **Pn 13 36 49.5 +0.7**
MAKR Makrakomi, Fth 7.78 116 P **Pn 13 36 50.0 +1.1**
SFTF Sexfontaines 7.85 316 *e*Pn **Pn 13 36 50.1 +0.3**
baz=136
SFTF *e*Sn **Sn 13 38 14.1 -4.7**
comp=N,155nm,1.1s
DPC Dobruska-Polom 7.87 15 *e*P **Pn 13 36 48.8 -1.3**
DPC Dobruska-Polom 7.87 15 *e*PN **Pn 13 36 48.8 -1.3**
DRGR 7.89 56⇑⇑P **Pn 13 36 51.3 +0.9**
DRGR 7.89 56 P **Pn 13 36 53.3 +2.9**
MOX Moxa 7.92 353 P **Pn 13 36 51.5 +0.7**
MOX Moxa 7.92 353 *e*Pn **Pn 13 36 50.2 -0.5**
MMB Musomiste 7.95 95 *e*P **Pn 13 36 52.0 +0.8**
LOR Lormes 7.95 307 *e*Pn **Pn 13 36 51.2 0.0**
baz=129
LOR Lormes 7.95 307 *e*P **Pn 13 36 55.3 +4.1**
LOR *e*Sn **Sn 13 38 16.3 -5.0**
comp=N,42nm,0.7s
UPC Upice 7.96 13 *e*P **Pn 13 36 50.2 -1.1**
UPC Upice 7.96 13 *e*PN **Pn 13 36 50.2 -1.1**
SRS Serrai 7.96 99 P **Pn 13 36 52.2 +0.8**
MTLF Montolieu 8.02 278 *e*Pn **Pn 13 36 50.6 -1.6**
MTLF Montolieu 8.02 278 *e*P **Pn 13 36 55.4 +3.2**
MTLF *e*Sn **Sn 13 38 16.4 -6.6**
comp=N,11nm,0.8s
AVF Avril sur Loir 8.03 303 *e*Pn **Pn 13 36 50.9 -1.3**
AVF Avril sur Loir 8.03 303 *e*P **Pn 13 36 55.6 +3.4**
AVF *e*Sn **Sn 13 38 18.0 -5.1**
comp=N,21nm,0.9s
MEZF Maizieres J'vi 8.04 318 *e*Pn **Pn 13 36 51.8 -0.6**
baz=140
MEZF *e*Sn **Sn 13 38 19.1 -4.3**
comp=N,57nm,0.8s
OSTC Ostas 8.05 14 *e*PN **Pn 13 36 51.5 -1.0**
CHVC Chvalec 8.05 13 *e*PN **Pn 13 36 51.5 -1.0**
SSF Saint Saulge 8.06 305 *e*Pn **Pn 13 36 51.8 -0.9**
SSF Saint Saulge 8.06 305 *e*P **Pn 13 36 56.1 +3.4**
SSF *e*Sn **Sn 13 38 18.2 -5.7**
comp=N,64nm,1.3s
SAVF Savonnieres en 8.09 319 *e*Pn **Pn 13 36 53.5 +0.5**
baz=139
SAVF *e*Sn **Sn 13 38 20.0 -4.4**
comp=N,66nm,0.9s
LOT Lotru 8.09 67⇑⇑P **Pn 13 36 53.2 0.0**
BRG Berggiesshubel 8.10 4 *e*P **Pn 13 36 52.7 -0.5**
BRG *e* 13 38 21.9
BRG pmax pmax
comp=Z,4.0nm,0.5s
NVR Nevrokopi 8.10 97 P **Pn 13 36 53.3 0.0**
TNS Taunus Mts 8.11 338 *e*Pn **Pn 13 36 54.7 +1.4**
LAKA Lakka 8.12 121 P **Pn 13 36 55.2 +1.7**
BGF Bois d'Agland 8.25 301 *e*Pn **Pn 13 36 54.9 -0.3**
BGF Bois d'Agland 8.25 301 *e*P **Pn 13 36 58.3 +3.1**
BGF *e*Sn **Sn 13 38 23.1 -5.4**
comp=Z,26nm,0.6s
CAF Calviac 8.29 289 *e*Pn **Pn 13 36 55.2 -0.6**
CAF Calviac 8.29 289 *e*P **Pn 13 36 59.1 +3.3**
KSP Ksiaz 8.34 14 *e*P **Pn 13 36 56.9 +0.5**
WLF Walferdange 8.41 327 **Pn 13 36 57.6 +0.2**
WLF Walferdange 8.41 327 P **Pn 13 36 57.6 +0.2**
WLF Walferdange 8.41 327 *d*P **Pn 13 37 00.2 +2.8**
WLF Walferdange 8.41 327 *e*Pn **Pn 13 37 00.0 +2.6**
PLVB Pleven 8.42 82⇑⇑P **Pn 13 36 58.2 +0.6**
CRVS Cervenica-Dubn 8.42 41 *e*P **Pn 13 37 01.1 +3.5**
CLL Collm 8.52 359 **Pn 13 36 58.2 -0.7**
CLL Collm 8.52 359 *e*P **Pn 13 36 58.0 -0.9**
CLL Collm 8.52 359 *e*Pn **Pn 13 36 58.0 -0.9**
CLL *ex* x 13 37 09.0
CLL *ex* x 13 37 41.0
CLL *e*Sn Sn 13 38 23.0 -12

CLL ex x 13 38 30.0
CLL ex x 13 38 40.0
CLL ex x 13 38 57.0
CLL eSg **Sg** **13 39 29.0 +0.3**
comp=Z,98nm,1.2s
CLL LmV 13 40 00.0
comp=N,100nm,21.1s
CLL LmV 13 40 00.0
comp=E,300nm,21.1s
CLL Lmax 13 42 00.0
TCF Toulx Ste Croi 8.56 298 eP **Pn** **13 37 02.8 +3.3**
TCF eSn **Sn** **13 38 30.2 -5.9**
comp=E,8.0nm,0.6s
RZN Rozhen 8.65 93 eP **Pn** **13 37 01.7 +0.7**
UZH Uzhgorod 8.66 44 eP **Pn** **13 37 01.7 +0.9**
UZH eS **Sn** **13 38 38.0 -0.5**
UZH MLR MLR
comp=N,100nm,10.0s
UZH MLR MLR
comp=E,100nm,10.0s
UZH MLR MLR
comp=Z,50nm,10.0s
ARR Arges 8.66 69 ⇑P **Pn** **13 37 02.1 +1.1**
HYF Humbligny 8.68 305 eP **Pn** **13 37 04.8 +3.6**
STHS Stebnicka Huta 8.69 38 eP **Pn** **13 37 05.1 +3.8**
RJF Les Rejaudoux 8.74 291 eP **Pn** **13 37 05.1 +3.0**
ITM Ithomi 8.76 127 Pn **Pn** **13 37 04.0 +1.6**
ITM Ithomi 8.76 127 P **Pn** **13 37 04.2 +1.8**
KOLS Kolonicke sedl 8.84 43 eP Pn 13 37 09.3 +5.9
THAS Thassos island 8.93 100 P Pn 13 36 58.8 -5.8
VOIR 8.96 69 ⇑P **Pn** **13 37 05.6 +0.5**
RCHB Rochefort 9.16 326 dP **Pn** **13 37 10.2 +2.5**
RCHB dS **Sn** **13 38 48.9 -2.1**
KDZ Kurdzhali 9.18 93 eP **Pn** **13 37 07.9 -0.1**
DIM Dimitrovgrad 9.19 90 eP **Pn** **13 37 09.0 +0.8**
LFF La Frestale 9.22 288 eP **Pn** **13 37 11.1 +2.6**
MEM Membach 9.22 330 dP **Pn** **13 37 12.8 +4.2**
GIVF Givet 9.29 325 ePn **Pn** **13 37 10.7 +1.2**
GIVF eSn **Sn** **13 38 48.9 -5.2**
comp=Z,68nm,1.1s
BCLA Clavier 9.34 327 dP **Pn** **13 37 12.0 +1.8**
BCLA dS **Sn** **13 38 50.0 -5.3**
KRND KRANIDI 9.38 122 P **Pn** **13 37 11.3 +0.6**
RDO Rodhopi 9.38 96 **Pn** **13 37 10.7 0.0**
RDO Rodhopi 9.38 96 P **Pn** **13 37 10.8 0.0**
DOU Dourbes 9.38 324 dP **Pn** **13 37 13.4 +2.6**
BGES Gesves 9.40 327 dP **Pn** **13 37 13.9 +2.9**
BGES dx x 13 37 27.9
EPF Esparros 9.40 276 eP **Pn** **13 37 14.4 +3.3**
PTL Penteli 9.45 117 P **Pn** **13 37 12.8 +1.1**
BMRD Maredsous 9.47 325 dP **Pn** **13 37 14.7 +2.8**
DION Dionisos Attik 9.47 116 P **Pn** **13 37 12.4 +0.3**
VLY Voula,Athens 9.51 118 P **Pn** **13 37 13.1 +0.5**
BAIF Baives 9.53 323 ePn **Pn** **13 37 11.6 -1.2**
BAIF Baives 9.53 323 eP **Pn** **13 37 16.6 +3.8**
BAIF eSn **Sn** **13 38 55.1 -4.8**
comp=Z,38nm,1.0s
MLR Muntele Rosu 9.59 69 ⇑P **Pn** **13 37 14.8 +1.0**
MLR Muntele Rosu 9.59 69 Pn **Pn** **13 37 15.3 +1.6**
comp=Z,0.8nm,0.3s,baz=129,slow=18,SNR=6.1
MLR LR LR 13 40 55.7
comp=Z,253nm,20.2s,baz=256,slow=38
comp=Z,3.5nm,0.6s
VLI Velial 9.67 126 P **Pn** **13 37 17.6 +2.8**
RAZG Razgrad 9.79 81 ⇑P **Pn** **13 37 16.6 +0.1**
SNF Seneffe 9.83 325 dP **Pn** **13 37 19.8 +3.0**
ETSF Etsaut 10.07 275 eP **Pn** **13 37 24.4 +4.1**
MFF Saint Martin d 10.20 296 ePn **Pn** **13 37 20.7 -1.3**
VRI Vrincioaia 10.20 68 ⇑P **Pn** **13 37 22.7 +0.6**
LVV L'vov 10.29 43 eP **Pn** **13 37 24.3 +1.1**
SJPF Ste Jean 10.54 277 eP **Pn** **13 37 30.3 +3.6**
SJPF eSn **Sn** **13 39 17.0 -7.9**
comp=Z,34nm,1.6s
TLBR Topalu 10.94 76 ⇓P **Pn** **13 37 32.3 +0.2**
LDF La Druitiere 10.94 307 eP Pn 13 37 37.8 +5.7
FLN La Foliniere 11.23 307 eP **Pn** **13 37 40.3 +4.3**
GRR Gorron 11.29 305 ePn **Pn** **13 37 34.7 -2.2**
IDI Anoyia 11.80 126 Pn **Pn** **13 37 43.8 -0.3**
comp=Z,0.5nm,0.3s,baz=348,slow=15,SNR=1.8
IDI Sn **Sn** **13 39 48.3 -7.6**
comp=Z,0.8nm,0.3s,baz=263,slow=22,SNR=3.7
IDI LR LR 13 43 48.3
comp=Z,63nm,20.5s,baz=333,slow=45
comp=Z,2.6nm,0.5s
IDI Anoyia 11.80 126 Pn **Pn** **13 37 43.5 -0.5**
QUIF Quistinic 12.56 300 eP **Pn** **13 37 58.1 +3.9**
ESDC Sonseca Array 13.25 262 Pn **Pn** **13 38 03.8 0.0**
baz=68,slow=14,SNR=20
comp=Z,1.3nm,0.8s
AKASG Malin Array Be 13.55 49 Pn **Pn** **13 38 08.6 +0.9**
comp=Z,0.4nm,0.5s,baz=240,slow=12,SNR=1.4
AKASG LR LR 13 44 01.7
comp=Z,135nm,18.1s,baz=236,slow=40
ISP Isparta 14.15 105⇑eP **P** **13 38 20.4 -3.4**
ISP pmax pmax
comp=Z,3.0nm,0.9s
ELL Elmali 14.23 110 P **P** **13 38 25.2 +0.6**
ELL Elmali 14.23 110 P **P** **13 38 25.2 +0.6**
PBRG Braganca 14.75 273 eP **P** **13 38 33.2 +2.8**
NACGM Naroch 15.04 32 eP **Pn** **13 38 27.0 -1.1**
comp=Z,20nm,0.9s,baz=222
MVO Moncorvo 15.10 271 eP **P** **13 38 37.3 +3.1**
MNK Minsk 15.20 34 i P **Pn** **13 38 28.9 -1.1**
MNK i S **Sn** **13 41 18.3 0.0**
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=Z,6.0nm,0.8s
MNK pmax pmax
comp=N,13nm,0.8s
MNK MLR MLR
comp=E,19nm,16.0s
MNK MLR MLR
comp=Z,137nm,16.0s
MNK MLR MLR
comp=N,187nm,15.0s
MNK Minsk 15.20 34 i P **Pn** **13 38 29.0 -1.1**
comp=E,1.0nm,0.8s
MNK i P **Pn** **13 38 29.0 -1.1**
comp=N,13nm,0.8s
MNK i P **Pn** **13 38 29.0 -1.1**
comp=Z,6.0nm,0.8s,baz=226
MNK i PP **PnPn** **13 38 37.1 -1.0**
MNK i S **Sn** **13 41 18.3 0.0**
MNK i SS **SnSn** **13 41 32.3 +1.4**
MNK i LQ LQ 13 42 45.9
MNK i LR LR 13 44 06.3
MNK i LRM MLR 13 44 47.6
comp=E,19nm,15.7s
MNK i LRM MLR 13 45 02.8
comp=Z,137nm,15.5s
MNK i LRM MLR 13 45 11.1
comp=N,187nm,15.3s
PVRL Vila Real 15.58 271 eP **P** **13 38 43.0 +3.5**
MTE Manteigas 15.66 268 eP **P** **13 38 43.2 +2.7**
comp=N,16nm,1.7s
MTE A A 13 45 53.5
comp=N,89nm,14.0s
BR131 Keskin Array S 15.71 94⇓eP **P** **13 38 41.0 -0.1**
BRTR Keskin Array B 15.71 94 Pn **Pn** **13 38 37.5 +0.4**
comp=N,0.1nm,0.3s,baz=274,slow=11,SNR=2.3
BRTR LR LR 13 46 14.2
comp=N,102nm,19.0s,baz=312,slow=43
comp=N,1.9nm,0.9s
PMRV Marv??o 15.84 265 eP **Pn** **13 38 39.1 +0.5**
comp=N,14nm,1.6s
PMRV A A 13 45 14.6
comp=N,68nm,18.0s
PVIS Viseu 15.84 270 eP **P** **13 38 45.4 +2.9**
comp=N,18nm,1.5s
PESTR Estremoz 16.17 263 eP **P** **13 38 49.6 +3.5**
comp=N,15nm,2.0s
EKA Eskdalemuir Ar 16.43 325 Pn **Pn** **13 38 45.4 -0.6**
baz=139,slow=14
comp=N,2.0nm,0.6s
PMTG Montargil 16.57 264 eP **P** **13 38 53.0 +2.5**
comp=N,17nm,1.3s
KONO Kongsberg 17.02 354⇑eP **Pn** **13 38 53.0 -0.5**
KONO pmax pmax
comp=Z,6.0nm,1.3s
MDT Midelt 17.18 240 LR LR 13 44 15.6
comp=Z,61nm,21.4s,baz=94,slow=33
HFS Hagfors 17.37 1 P **P** **13 38 58.7 -0.5**
comp=Z,0.1nm,0.3s,baz=149,slow=15,SNR=1.8
HFS LR LR 13 46 18.5
comp=Z,122nm,20.2s,baz=184,slow=40
comp=Z,2.1nm,0.8s
PFVI Vila Bisbo 17.75 259 **Pn** **13 39 02.5 -0.3**
PFVI IAmb IAmb 13 39 02.7
comp=Z,50nm,1.2s
VSU Vasula 17.84 24⇑eP **Pn** **13 39 02.7 -1.0**
VSU pmax pmax
comp=Z,57nm,1.3s
NC602 NORSAR Array S 18.00 357 **Pn** **13 39 05.3 -0.3**
NC602 IAmb IAmb 13 39 29.4
comp=Z,41nm,1.4s
NOA NORSAR Array B 18.31 357 P **Pn** **13 39 09.4 -0.1**
baz=174,slow=12,SNR=6.6
NOA LR LR 13 46 34.1
comp=Z,88nm,20.1s,baz=180,slow=38
comp=Z,1.3nm,0.7s
VSR Storozhevoye 19.56 55 eP **P** **13 39 21.5 -1.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 19.59 43 P **P** **13 39 22.1 -1.5**
comp=Z,0.8nm,0.3s,baz=211,slow=5.7,SNR=5.0
OBN LR LR 13 47 23.4
comp=Z,28nm,18.0s,baz=199,slow=38
comp=Z,3.9nm,0.5s
OBN Obninsk 19.59 43⇑eP **P** **13 39 23.3 -0.4**
OBN eS **S** **13 43 00.3 -4.4**
OBN pmax pmax
comp=Z,21nm,0.8s
OBN MLR MLR
comp=Z,94nm,17.0s
VORR Voronezh 19.71 54 eP P 13 39 13.1 -12
VORR pmax pmax
comp=Z,80nm,0.5s
LPSR Galich'ya Gora 19.83 51 eP **P** **13 39 26.0 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.9s
MMAI Mount Meron Ar 20.04 112 P Pn 13 39 29.8 -0.8
comp=Z,13nm,0.7s,baz=327,slow=10,SNR=7.4
comp=Z,13nm,0.7s
FINES FINESS Array B 20.22 18 P **P** **13 39 30.3 -0.2**
comp=Z,9.2nm,0.8s,baz=212,slow=7.3,SNR=14
FINES LR LR 13 48 21.7
comp=Z,123nm,18.9s,baz=212,slow=40
comp=Z,9.2nm,0.8s
FINES FINESS Array B 20.22 18 P **P** **13 39 30.6 +0.1**
FINES FINESS Array B 20.22 18 P **P** **13 39 30.6 +0.1**
FIA1 FINESS Array S 20.22 18 P **P** **13 39 31.3 +0.8**
FIA1 IAmb IAmb 13 39 39.4
comp=Z,21nm,0.9s
MOS Moscow 20.43 42 eP **P** **13 39 31.4 -1.3**
MOS e 13 40 02.2
MOS pmax pmax
comp=Z,43nm,1.1s
VRH Novokhopyorsk 21.12 57 eP **P** **13 39 39.9 -0.4**
VRH pmax pmax
comp=Z,20nm,0.8s
KIV Kislovodsk 21.46 77 P **P** **13 39 43.2 -0.9**
KIV IAmb IAmb 13 39 46.4
comp=Z,15nm,0.9s
KIV Kislovodsk 21.46 77 eP **P** **13 39 45.0 +0.9**
KIV pmax pmax
comp=Z,55nm,14.2s
KIV MLR MLR
comp=Z,55nm,14.0s
ASF Jabal al Asfar 21.56 112 P **P** **13 39 47.1 +1.9**
comp=Z,4.9nm,0.6s,baz=289,slow=1.3,SNR=6.5
comp=Z,4.9nm,0.6s
KBZ Khabaz 21.64 77 P **P** **13 39 46.9 +1.0**
comp=Z,8.9nm,0.9s,baz=296,slow=5.2,SNR=8.7
KBZ LR LR 13 49 45.5
comp=Z,63nm,19.5s,baz=312,slow=41
comp=Z,8.9nm,0.9s
KBZ Khabaz 21.64 77ceP **P** **13 39 47.0 +1.1**
ONI Oni 22.22 80 P **P** **13 39 52.6 +0.3**
ONI Oni 22.22 80 P **P** **13 39 52.6 +0.3**
ONI pmax pmax
comp=Z,14nm,1.1s
GURO Guroymak-BITLI 22.26 91 P **P** **13 39 52.2 -0.6**
ZEI Tsey 22.51 79 eP **P** **13 39 57.9 +2.3**
ZEI pmax pmax
comp=Z,11nm,1.4s
GNI Garni 23.75 86 LR LR 13 52 00.9
comp=Z,40nm,19.1s,baz=320,slow=43
KLMR Klimovskoe 24.07 32 eP **P** **13 40 08.6 -2.2**
KLMR pmax pmax
comp=Z,31nm,1.4s
KLMR Klimovskoe 24.07 32 eP **P** **13 40 08.7 -2.1**
KLMR AMP 13 40 12.5
comp=Z,31nm,1.4s
BELG Belogornoye 24.94 55 P **P** **13 40 19.7 +0.9**
comp=Z,11nm,0.4s,baz=112,slow=4.5,SNR=1.3
comp=Z,11nm,0.4s
BELG Belogornoye 24.94 55⇓eP **P** **13 40 19.1 +0.3**
BELG pmax pmax
comp=Z,8.0nm,1.0s
PRGR Permogore 26.97 34 eP **P** **13 40 39.1 +2.1**
PRGR pmax pmax
comp=Z,7.0nm,0.5s
KIRV Kirov 27.44 42 LR LR 13 52 20.2
comp=Z,94nm,19.6s,baz=253,slow=38
TORD Torodi Ar. Bea 31.16 202 P **P** **13 41 15.2 +0.5**
comp=Z,1.7nm,0.5s,baz=19,slow=9.1,SNR=14
comp=Z,1.7nm,0.5s
TORD Torodi Ar. Bea 31.16 202 P **P** **13 41 14.9 +0.2**
AKTO Aktyubinsk 31.35 60 LR LR 13 53 31.8
comp=Z,30nm,21.9s,baz=302,slow=36
ARU Arti 31.80 49 LR LR 13 55 35.5
comp=Z,95nm,18.4s,baz=248,slow=39
ARU Arti 31.80 49 P **P** **13 41 18.9 -1.1**
ARU Arti 31.80 49d iP **P** **13 41 19.3 -0.7**
ARU S **S** **13 46 30.5 +0.5**
ARU SS **SnSn** **13 48 21.6 +4.6**
ARU pmax pmax
comp=Z,15nm,1.4s
ABKAR Akbulak array 32.70 62 P **P** **13 41 26.5 -1.4**
SVE Sverdlovsk 32.98 48 eP **P** **13 41 30.4 +0.1**
GEYT Alibeck 34.30 83 P **P** **13 41 41.4 -0.7**
comp=Z,2.4nm,0.6s,baz=294,slow=7.4,SNR=5.0
comp=Z,2.4nm,0.6s
GEYT Alibeck 34.30 83 P **P** **13 41 42.6 +0.5**
BRVK Borovoye 38.67 54 P **P** **13 42 19.7 +0.6**
BRVK IAmb IAmb 13 42 25.8
comp=Z,13nm,0.9s
BRVK Borovoye 38.67 54d iP **P** **13 42 19.7 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,0.7s
BVAR Borovoye Array 38.73 54 LR LR 13 58 24.0
comp=Z,37nm,19.8s,baz=273,slow=36
DBIC Dimbokro 39.33 209 LR LR 14 00 55.7
comp=Z,66nm,18.1s,baz=6.5,slow=40
KK31 Karatay Array 41.27 69 P **P** **13 42 41.4 +0.5**
KK31 Karatay Array 41.27 69 P **P** **13 42 41.4 +0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.27 69 P **P** **13 42 41.3 +0.4**
KKAR Karatay Array 41.27 69 P **P** **13 42 41.3 +0.4**
WSAR Wadi Sarin 42.25 103 LR LR 14 05 24.6
comp=Z,27nm,19.4s,baz=330,slow=43
AAK Ala-Archa 44.17 68 LR LR 14 05 50.2
comp=Z,38nm,21.7s,baz=320,slow=42
AAK Ala-Archa 44.17 68⇑eP **P** **13 43 05.9 +1.3**
AAK pmax pmax
comp=Z,6.0nm,1.7s
KURK Kurchatov 44.21 56 P **P** **13 43 04.5 -0.1**
KURK Kurchatov 44.21 56 P **P** **13 43 04.5 -0.1**
KURK pmax pmax
comp=Z,7.0nm,1.3s
NRIK Noril'sk 45.33 29 LR LR 14 04 58.9
comp=Z,70nm,19.2s,baz=200,slow=40
NRIK Noril'sk 45.33 29⇑eP **P** **13 43 14.0 +0.7**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
MBAR Mbarara 46.01 155 LR LR 14 04 13.1
comp=Z,20nm,18.6s,baz=232,slow=38
KSH Kashi 46.45 72 P **P** **13 43 24.0 +1.3**
KSH pP pP 13 43 26.3 +0.3
ZALV Zalesovo Beam 46.94 50 P **P** **13 43 25.6 -0.6**
comp=Z,1.2nm,0.5s,baz=286,slow=8.6,SNR=6.2
ZALV LR LR 14 05 25.5
comp=Z,56nm,19.6s,baz=272,slow=39
comp=Z,1.2nm,0.5s
ZALV Zalesovo Beam 46.94 50 i P **P** **13 43 28.8 +2.6**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 47.79 60 P **P** **13 43 32.9 0.0**
MK31 IAmb IAmb 13 43 36.1
comp=Z,2.6nm,0.8s
MK31 Makanchi Array 47.79 60⇑eP **P** **13 43 32.9 0.0**
MKAR Makanchi Array 47.79 60 P **P** **13 43 33.2 +0.2**
comp=Z,3.3nm,0.7s,baz=285,slow=7.0,SNR=14
MKAR LR LR 14 07 05.8
comp=Z,38nm,18.2s,baz=304,slow=40
comp=Z,3.3nm,0.7s
MKAR Makanchi Array 47.79 60 P **P** **13 43 32.9 -0.1**
KMBO Kilima Mbogo 48.81 147⇓eP **P** **13 43 45.0 +3.6**
DGZ Jazzator, Alta 49.89 55⇑iP **P** **13 43 50.2 +1.0**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 51.23 313 P **P** **13 43 57.3 -1.8**
comp=Z,4.3nm,0.7s,baz=28,slow=6.0,SNR=3.9
comp=Z,4.3nm,0.7s
WMQ Urumqi 52.48 62 eP **P** **13 44 11.5 +2.8**
DANN Dangsing 57.65 80 eP **P** **13 44 46.0 -0.5**
comp=Z,11nm,0.7s
GKN Gorkha 58.48 80 eP **P** **13 44 51.1 -1.0**
DMN Daman 59.05 80 eP **P** **13 44 55.9 -0.3**
comp=Z,26nm,1.0s
PKIN Phulchoki 59.27 80 eP **P** **13 44 57.4 -0.4**
PKI Pulchoki 59.29 80 eP **P** **13 44 57.1 -0.9**
comp=Z,12nm,0.9s
GUN Gumba 59.43 79 eP **P** **13 44 58.5 -0.5**
comp=Z,12nm,0.6s
JIRN Jiri 59.80 79 eP **P** **13 45 01.0 -0.6**
comp=Z,9.4nm,0.7s
RAMN Ramite 60.51 79 eP **P** **13 45 05.3 -1.0**
comp=Z,15nm,0.7s
SONM Songino Array 61.83 50 P **P** **13 45 15.8 +1.0**
comp=Z,5.0nm,0.8s,baz=296,slow=8.5,SNR=24
SONM LR LR 14 14 30.3
comp=Z,61nm,18.1s,baz=248,slow=38
comp=Z,5.0nm,0.8s
SONM Songino Array 61.83 50 P **P** **13 45 15.5 +0.7**
SONM IAmb IAmb 13 45 19.2
comp=Z,4.5nm,0.9s
SONM Songino Array 61.83 50 P **P** **13 45 15.5 +0.7**
SONM pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 62.18 49⇓eP **P** **13 45 18.6 +1.4**
ULN pmax pmax
comp=Z,4.0nm,1.3s
INK Inuvik 66.44 347 P **P** **13 45 45.4 +0.9**
INK IAmb IAmb 13 45 55.2
comp=Z,6.9nm,1.2s
INK Inuvik 66.44 347 P **P** **13 45 45.4 +0.9**
INK pmax pmax
comp=Z,7.0nm,1.3s
YKA Yellowknife Ar 67.03 337 P **P** **13 45 48.4 0.0**
comp=Z,3.0nm,0.7s,baz=53,slow=5.9,SNR=2.9
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 67.03 337ceP **P** **13 45 52.2 +3.8**
YKA pmax pmax
comp=Z,4.0nm,1.0s
LBTB Lobatse 68.44 168 LR LR 14 18 02.7
comp=Z,19nm,19.0s,baz=306,slow=38
HHC Hu-ho-hao-te 68.94 54 eP **P** **13 45 59.5 -1.4**
IMAR Indian Mountai 71.08 354 P **P** **13 46 15.1 +1.6**
H21K Melozitna Rive 71.33 354 P **P** **13 46 16.1 +1.1**
H21K IAmb IAmb 13 46 20.2
comp=Z,6.5nm,0.9s
J26L Joseph Creek 71.48 350 P **P** **13 46 17.1 +1.0**
J26L IAmb IAmb 13 46 20.1
comp=Z,4.6nm,1.1s
PZH PanZhiHua 71.54 71 P **P** **13 46 17.5 +0.4**
ILAR Eielson Array 71.63 351 P **P** **13 46 18.0 +1.2**
comp=Z,1.0nm,0.8s,baz=4.6,slow=6.1,SNR=12
comp=Z,1.0nm,0.8s
BOSA Boshof 71.92 169 P **P** **13 46 18.8 -0.2**
comp=Z,2.5nm,0.9s,baz=353,slow=5.8,SNR=4.5
comp=Z,2.5nm,0.9s
BOSA Boshof 71.92 169 P **P** **13 46 19.3 +0.2**
BOSA IAmb IAmb 13 46 33.0
comp=Z,9.2nm,1.2s
BOSA Boshof 71.92 169 P **P** **13 46 19.3 +0.2**
BOSA pmax pmax
comp=Z,9.0nm,1.3s
BCAR Beaver Creek A 72.60 348 P **P** **13 46 24.1 +1.4**
L27K Beaver Creek, 72.61 348 P **P** **13 46 24.4 +1.6**
J20K Nowinta River 72.90 354 P **P** **13 46 25.1 +0.7**
J20K IAmb IAmb 13 46 29.1
comp=Z,4.5nm,0.9s
TRF Thorofare Moun 73.28 352 P **P** **13 46 27.3 +0.4**
TRF IAmb IAmb 13 46 31.9
comp=Z,8.8nm,1.2s
DHY Denali Highway 73.33 351 P **P** **13 46 27.4 +0.2**
P33M Teslin, Yukon 73.62 343 P **P** **13 46 29.8 +0.9**
K20K Telida 73.70 354 P **P** **13 46 30.6 +1.4**
KLR Kul'dur 73.73 37 LR LR 14 22 33.9
comp=Z,69nm,18.6s,baz=300,slow=39
HYT Haines Junctio 74.00 346 P **P** **13 46 32.6 +1.5**
HYT IAmb IAmb 13 46 35.7
comp=Z,4.2nm,0.9s
CMAR Chiang Mai Arr 74.68 79 P **P** **13 46 35.3 -0.3**
comp=Z,2.3nm,0.8s,baz=306,slow=7.0,SNR=15
comp=Z,2.3nm,0.8s
CMAR Chiang Mai Arr 74.68 79ceP **P** **13 46 37.7 +2.1**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
EGMT Eagleton 76.51 325 P **P** **13 46 46.9 +1.2**
USRK Ussuriysk Ar. 77.59 40 LR LR 14 26 34.0
comp=Z,28nm,18.3s,baz=200,slow=40
USRK Ussuriysk Ar. 77.59 40 P **P** **13 46 52.6 +0.8**
USRK Ussuriysk Ar. 77.59 40 P **P** **13 46 52.6 +0.8**
KAN06 Argonia West S 78.61 311 P **P** **13 46 57.3 -0.3**
NEW Newport 79.30 329 LR LR 14 21 38.4
comp=Z,40nm,18.1s,baz=18,slow=35
LRM Limekiln Ridge 79.38 325 P **P** **13 47 02.5 +0.6**
PETK Petropavlovsk- 79.72 21 LR LR 14 26 58.2
comp=Z,31nm,21.6s,baz=11,slow=39
DLMT Dillon 79.81 324 P **P** **13 47 04.6 +0.4**
DLMT IAmb IAmb 13 47 08.7
comp=Z,5.2nm,0.7s
YSS Yuzh-Sakhalins 80.11 32 P **P** **13 47 06.0 +0.5**
YSS Yuzh-Sakhalins 80.11 32 eP **P** **13 47 06.7 +1.1**
MCMT McKenzie Canyo 80.34 324 P **P** **13 47 07.4 +0.2**
PDAR Pinedale Array 80.50 321 P **P** **13 47 08.3 +0.2**
comp=Z,0.5nm,0.5s,baz=67,slow=4.3,SNR=5.6
PDAR LR LR 14 21 47.2
comp=Z,21nm,19.0s,baz=30,slow=35
comp=Z,0.5nm,0.5s
KSRS Korea Array 80.54 47 P **P** **13 47 08.8 +0.8**
comp=Z,1.2nm,0.8s,baz=295,slow=4.6,SNR=3.9
comp=Z,1.2nm,0.8s
BMO Blue Mountains 82.18 327 P **P** **13 47 17.1 +0.4**
BMO Blue Mountains 82.18 327 P **P** **13 47 17.2 +0.4**
BMO pmax pmax
comp=Z,6.0nm,0.8s
SRU San Rafael Swe 83.81 319 P **P** **13 47 25.8 +0.4**
SRU IAmb IAmb 13 47 28.3
comp=Z,2.8nm,0.7s
SRU San Rafael Swe 83.81 319 P **P** **13 47 25.8 +0.4**
SRU pmax pmax
comp=Z,3.0nm,0.7s
MJAR Matsushiro Arr 86.52 41 LR LR 14 30 26.4
comp=Z,41nm,18.3s,baz=340,slow=38
TXAR Lajitas Array 87.71 309 P **P** **13 47 46.0 +1.2**
comp=Z,0.4nm,0.7s,baz=74,slow=4.2,SNR=3.5
comp=Z,0.4nm,0.7s
ASAR Alice Springs 127.98 88 PKP **PKPdf** **13 54 00.9 -1.0**
comp=Z,0.4nm,0.8s,baz=331,slow=1.9,SNR=2.8

ROM 30 13:37:45.6±0.1, 42°86N±0°02×11°45E±0°01, h5km±1km,
ML1.8/4,1C, Error ellipse: s-maj=1.9km s-min=0.7km
az=26.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARCI	**Arcidosso**	**0.02**	**109**	P	Pg		13 37 46.8	0.0
ARCI				S	Sg		13 37 47.3	-0.3
ARCI				AML	AML			
comp=E,17848μm,0.2s								
ARCI				AML	AML			
comp=N,10062μm,0.2s								
SF01	**Poggio Pratacc**	**0.10**	**119**	⇑P	Pg		13 37 48.2	+0.5
SF01				S	Sg		13 37 49.7	+0.6
SF01				AML	AML			
comp=E,1006μm,0.2s								
SF01				AML	AML			
comp=N,1289μm,0.4s								
SF13	**Bagnolo**	**0.13**	**108**	P	Pg		13 37 49.0	+0.6
SF13				S	Sg		13 37 51.0	+0.8
SF04	**Casetta**	**0.16**	**98**	P	Pg		13 37 49.4	+0.5

SF04			S	Sg	13 37 51.7 +0.7
SF04			AML	AML	
	comp=E,1414μm,0.2s				
SF04			AML	AML	
	comp=N,1723μm,0.2s				
SF14	**Selvena**	**0.16 130**	P	Pg	13 37 49.6 +0.7
SF14			S	Sg	13 37 51.9 +0.9
MCIV	**Monte Civitell**	**0.19 115**	P	Pg	13 37 50.0 +0.6
MCIV			S	Sg	13 37 52.5 +0.7
MCIV			AML	AML	
	comp=E,714μm,0.2s				
MCIV			AML	AML	
	comp=N,735μm,0.6s				
MCIV			AML	AML	
	comp=N,667μm,0.2s				
MCIV			AML	AML	
	comp=E,714μm,0.2s				
CASP	**Castiglione de**	**0.43 261**	P	Pb	13 37 54.9 -0.9
CASP			AML	AML	
	comp=E,38μm,0.3s				
TRIF	**Trifonti**	**0.47 303**	P	Pb	13 37 56.5 0.0
TRIF			S	Sb	13 38 02.7 -1.1

ROM 30 13:38:35.1±0.4, 42°.76N±0°.01×13°.21E±0°.02, h19km±3km, ML3.1/23, 12C-9D, Error ellipse: s-maj=1.9km s-min=0.3km az=275.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**352**	P	Pg	13 38 39.4	+0.2
T1245				S	Sg	13 38 42.7	+0.8
T1201	**Domo (RI)**	**0.11**	**162**	P	Pg	13 38 39.5	+0.4
T1204	**Amatrice, Fraz**	**0.12**	**136**	P	Pg	13 38 39.6	+0.3
T1204				S	Sg	13 38 41.5	-0.7
T1204				AML	AML		
	comp=E,92300μm,1.0s						
T1204				AML	AML		
	comp=N,43100μm,0.3s						
T1204				AML	AML		
	comp=E,92400μm,1.0s						
T1204				AML	AML		
	comp=N,43050μm,0.3s						
T1204				AML	AML		
	comp=E,92350μm,1.0s						
T1204				AML	AML		
	comp=E,1534μm,0.1s						
T1204				AML	AML		
	comp=N,878μm,0.1s						
T1243	**Rocca Santa Ma**	**0.19**	**109**	P	Pg	13 38 40.8	+0.6
T1243				S	Sg	13 38 43.9	+0.3
FEMA	**Monte Fema**	**0.23**	**330**	AML	AML		
	comp=E,22655μm,0.2s						
FEMA				AML	AML		
	comp=N,31800μm,0.5s						
FEMA				AML	AML		
	comp=E,27000μm,0.8s						
FEMA				AML	AML		
	comp=E,27000μm,0.8s						
FEMA				AML	AML		
	comp=N,23036μm,0.6s						
AM05	**Amandola Campo**	**0.24**	**26**	P	Pg	13 38 41.1	+0.3
AM05				S	Sg	13 38 44.8	0.0
RM33	**Pellescritta (**	**0.25**	**179**	P	Pg	13 38 41.4	+0.4
RM33				S	Sb	13 38 44.8	+0.2
RM33				AML	AML		
	comp=E,11200μm,0.2s						
RM33				AML	AML		
	comp=N,10090μm,0.3s						
RM33				AML	AML		
	comp=N,10005μm,0.3s						
RM33				AML	AML		
	comp=N,10100μm,0.3s						
RM33				AML	AML		
	comp=E,11250μm,0.2s						
RM33				AML	AML		
	comp=N,10085μm,0.3s						
RM33				AML	AML		
	comp=E,11150μm,0.2s						
RM33				AML	AML		
	comp=E,11250μm,0.2s						
RM33				AML	AML		
	comp=N,10075μm,0.3s						
RM33				AML	AML		
	comp=N,9990μm,0.3s						
RM33				AML	AML		
	comp=E,668μm,0.2s						
RM33				AML	AML		
	comp=E,687μm,0.2s						
RM33				AML	AML		
	comp=N,718μm,0.2s						
RM33				AML	AML		
	comp=N,730μm,0.3s						
T1215	**Vallo di Nera,**	**0.25**	**280**	P	Pb	13 38 40.5	-0.4
T1215				AML	AML		
	comp=E,2525μm,1.5s						
T1215				AML	AML		
	comp=N,2695μm,1.5s						
T1215				AML	AML		
	comp=E,2550μm,0.2s						
T1215				AML	AML		
	comp=N,2745μm,1.5s						
T1215				AML	AML		
	comp=E,2505μm,0.7s						
T1215				AML	AML		
	comp=N,2665μm,1.5s						
T1215				AML	AML		
	comp=N,2670μm,1.5s						
T1215				AML	AML		
	comp=N,2660μm,1.5s						
T1215				AML	AML		
	comp=E,2499μm,1.1s						
T1215				AML	AML		
	comp=E,927μm,0.3s						
T1215				AML	AML		
	comp=N,1122μm,0.1s						
T1215				AML	AML		
	comp=E,928μm,0.3s						
T1215				AML	AML		
	comp=N,1119μm,0.1s						
CAMP	**Campotosto**	**0.27**	**146**	P	Pg	13 38 41.6	+0.3
CAMP				AML	AML		
	comp=E,3650μm,0.7s						
CAMP				AML	AML		
	comp=N,4215μm,0.5s						
CAMP				AML	AML		
	comp=N,148μm,0.2s						
CAMP				AML	AML		
	comp=E,346μm,0.3s						
GUMA	**Gualdo di Mace**	**0.32**	**17**	P	Pg	13 38 41.5	-0.6
TERO	**Teramo**	**0.32**	**115**	⇓P	Pb	13 38 43.0	+0.7
TERO				AML	AML		
	comp=E,6405μm,0.7s						
TERO				AML	AML		
	comp=N,8700μm,0.5s						
TERO				AML	AML		
	comp=E,6400μm,0.7s						
TERO				AML	AML		
	comp=E,7280μm,0.7s						
TERO				AML	AML		
	comp=N,9020μm,0.5s						
TERO				AML	AML		
	comp=N,8695μm,0.5s						
TERO				AML	AML		
	comp=N,634μm,0.4s						
TERO				AML	AML		
	comp=N,609μm,0.4s						
TERO				AML	AML		
	comp=E,492μm,0.3s						
TERO				AML	AML		
	comp=E,436μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.33**	**168**	⇑P	Pn	13 38 47.0	+2.2
T1247				AML	AML		
	comp=E,10550μm,0.1s						
T1247				AML	AML		
	comp=N,7680μm,1.1s						
ARRO	**Arrone**	**0.37**	**241**	S	Sn	13 38 55.0	+2.9
OFFI	**Offida**	**0.39**	**63**	S	Sg	13 38 46.0	-2.9
SEF1	**Sefro**	**0.43**	**334**	⇓P	Pg	13 38 41.3	-2.7
SEF1				AML	AML		
	comp=E,7100μm,1.3s						
SEF1				AML	AML		
	comp=N,8325μm,1.2s						
SEF1				AML	AML		
	comp=N,8320μm,1.2s						
SEF1				AML	AML		
	comp=N,7473μm,0.2s						
SEF1				AML	AML		
	comp=E,6464μm,0.4s						
MDAR	**Monte D'Aria**	**0.43**	**354**	P	Pg	13 38 39.8	-4.3
MDAR				AML	AML		
	comp=E,3670μm,0.3s						
MDAR				AML	AML		
	comp=N,4605μm,1.2s						
MDAR				AML	AML		
	comp=E,3670μm,0.3s						
MDAR				AML	AML		
	comp=N,4194μm,0.4s						
CESX	**Cesi**	**0.48**	**252**	⇑P	Pn	13 38 47.7	+0.7
CESX				S	Sn	13 38 57.0	+2.1
CESX				AML	AML		
	comp=E,1905μm,0.4s						
CESX				AML	AML		
	comp=N,1425μm,1.3s						
CESX				AML	AML		
	comp=E,1130μm,0.5s						
CESX				AML	AML		
	comp=N,1135μm,0.3s						
GAG1	**Gagliole**	**0.49**	**348**	P	Pg	13 38 40.7	-4.3
GAG1				AML	AML		
	comp=E,6240μm,1.6s						
GAG1				AML	AML		
	comp=N,5355μm,0.6s						
GAG1				AML	AML		
	comp=E,6240μm,1.5s						
GAG1				AML	AML		
	comp=N,5298μm,0.4s						
GAG1				AML	AML		
	comp=E,5647μm,0.5s						
ASSB	**Assisi San Ben**	**0.49**	**305**	⇓P	Pg	13 38 43.8	-1.3
ASSB				AML	AML		
	comp=E,2765μm,0.4s						
ASSB				AML	AML		
	comp=N,2710μm,0.2s						
ASSB				AML	AML		
	comp=E,2762μm,0.4s						
ASSB				AML	AML		
	comp=N,2353μm,0.3s						
SNTG	**Esanatoglia**	**0.53**	**339**	⇑P	Pb	13 38 42.9	-2.8
SNTG				AML	AML		
	comp=E,1495μm,0.7s						
SNTG				AML	AML		
	comp=N,1795μm,0.8s						
SNTG				AML	AML		
	comp=E,1490μm,0.7s						
SNTG				AML	AML		
	comp=N,1600μm,0.8s						
SNTG				AML	AML		
	comp=N,1595μm,0.8s						
SNTG				AML	AML		
	comp=E,1425μm,0.7s						
SNTG				AML	AML		
	comp=N,1232μm,0.2s						
SNTG				AML	AML		
	comp=E,1261μm,0.3s						
SNTG				AML	AML		
	comp=E,1287μm,0.3s						
SNTG				AML	AML		
	comp=N,1108μm,0.2s						
EL6	**Elcito**	**0.57**	**352**	⇓P	Pb	13 38 44.0	-2.5
EL6				AML	AML		
	comp=E,2660μm,0.3s						
EL6				AML	AML		
	comp=N,2390μm,0.3s						
EL6				AML	AML		
	comp=E,2660μm,0.3s						
EL6				AML	AML		
	comp=N,2390μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.59**	**316**	⇓P	Pb	13 38 44.9	-1.9
ATCC				AML	AML		
	comp=N,1955μm,0.2s						
ATCC				AML	AML		
	comp=N,1960μm,0.2s						
ATCC				AML	AML		
	comp=E,2885μm,0.2s						
ATCC				AML	AML		
	comp=N,1956μm,0.2s						
ATCC				AML	AML		
	comp=E,2881μm,0.2s						
FOSV	**Fossato di Vic**	**0.63**	**329**	⇓P	Pb	13 38 44.8	-2.5
FOSV				AML	AML		
	comp=E,778μm,0.8s						
FOSV				AML	AML		
	comp=N,1985μm,0.3s						
FOSV				AML	AML		
	comp=E,778μm,0.8s						
FOSV				AML	AML		
	comp=E,572μm,0.3s						
FOSV				AML	AML		
	comp=N,1986μm,0.3s						
PP3	**Marolino**	**0.69**	**25**	⇑P	Pg	13 38 48.9	+0.3
MURB	**Monte Urbino**	**0.71**	**315**	⇑P	Pb	13 38 47.0	-1.8
MURB				AML	AML		
	comp=N,2955μm,0.4s						
MURB				AML	AML		
	comp=E,3605μm,0.4s						
MURB				AML	AML		
	comp=N,2790μm,0.4s						
MURB				AML	AML		
	comp=E,3610μm,0.4s						
MURB				AML	AML		
	comp=E,3380μm,0.4s						
MURB				AML	AML		
	comp=N,2950μm,0.4s						
MURB				AML	AML		
	comp=E,1999μm,0.4s						
MURB				AML	AML		
	comp=N,1700μm,0.3s						
MURB				AML	AML		
	comp=N,1611μm,0.3s						
MURB				AML	AML		
	comp=E,1769μm,0.4s						
ARVD	**Arcevia**	**0.76**	**345**	⇑P	Pb	13 38 47.2	-2.6
ARVD				S	Sb	13 38 56.0	-3.8
ARVD				AML	AML		
	comp=E,762μm,0.8s						
ARVD				AML	AML		
	comp=N,470μm,1.1s						
ARVD				AML	AML		
	comp=E,642μm,0.3s						
ARVD				AML	AML		
	comp=N,421μm,0.4s						
FRON	**Frontone**	**0.84**	**335**	⇑P	Pb	13 38 48.4	-2.6
FRON				AML	AML		
	comp=E,489μm,1.0s						
FRON				AML	AML		
	comp=N,526μm,0.3s						
FRON				AML	AML		
	comp=N,525μm,0.3s						
FRON				AML	AML		
	comp=E,459μm,0.2s						
ATVO	**AVT- Monte Val**	**0.85**	**317**	⇓P	Pb	13 38 49.2	-2.1
ATVO				AML	AML		
	comp=N,302μm,1.3s						
ATVO				AML	AML		
	comp=E,420μm,1.0s						
ATVO				AML	AML		
	comp=N,214μm,0.3s						
ATVO				AML	AML		
	comp=E,240μm,0.2s						
PIEI	**Pieia**	**0.92**	**328**	⇑P	Pb	13 38 50.3	-2.1
PIEI				AML	AML		
	comp=E,390μm,0.2s						
PIEI				AML	AML		
	comp=N,359μm,0.2s						
PIEI				AML	AML		
	comp=N,358μm,0.2s						
PIEI				AML	AML		
	comp=E,316μm,0.2s						
PIEI				AML	AML		
	comp=N,359μm,0.2s						
MPAG	**Monte Paganucc**	**0.93**	**340**	⇑P	Pb	13 38 50.2	-2.4
MPAG				S	Sb	13 39 03.0	-1.6
MPAG				AML	AML		
	comp=E,462μm,0.7s						
MPAG				AML	AML		
	comp=N,350μm,0.7s						
MPAG				AML	AML		
	comp=N,349μm,0.7s						
MPAG				AML	AML		
	comp=E,363μm,0.4s						
MPAG				AML	AML		
	comp=N,336μm,0.4s						
APEC	**Apecchio**	**0.98**	**324**	S	Sb	13 39 05.0	-1.1
FSSB	**Fossombrone**	**0.98**	**342**	⇓P	Pb	13 38 51.2	-2.3
FSSB				AML	AML		
	comp=N,1425μm,0.4s						
FSSB				AML	AML		
	comp=N,1430μm,0.4s						
FSSB				AML	AML		
	comp=E,1135μm,0.3s						
FSSB				AML	AML		
	comp=E,1135μm,0.3s						
FSSB				AML	AML		
	comp=N,1333μm,0.2s						
BADI	**Badiali**	**1.03**	**317**	⇑P	Pb	13 38 52.8	-1.4
BADI				S	Sb	13 39 07.0	-0.4
PE3	**Peglio**	**1.07**	**331**	⇑P	Pb	13 38 53.1	-1.9
CAFI	**Castiglion Fio**	**1.07**	**302**	⇑P	Pg	13 38 55.8	-0.1
CAFI				AML	AML		
	comp=E,281μm,0.7s						
CAFI				AML	AML		
	comp=N,239μm,0.6s						
SF01	**Poggio Pratacc**	**1.21**	**273**	P	Pg	13 38 59.9	+1.4
CRE	**Caprese Michel**	**1.26**	**314**	⇓P	Pb	13 38 58.8	+0.6
ARCI	**Arcidosso**	**1.28**	**275**	P	Pb	13 38 58.5	-0.1
ARCI				S	Sg	13 39 19.0	+2.5
ARCI				AML	AML		
	comp=E,1230μm,0.3s						
ARCI				AML	AML		
	comp=N,1250μm,0.5s						
CASP	**Castiglione de**	**1.72**	**272**	S	Sg	13 39 31.0	+0.3
FERS	**Ferrara-Casagl**	**2.46**	**331**	S	Sn	13 39 42.0	-1.6
CMPR	**Campora**	**2.90**	**146**	S	Sg	13 40 07.0	-1.4
STON	**Ston**	**3.31**	**87**	P	Pn	13 39 26.4	+0.7
SCHR	**S. Chirico Rap**	**3.34**	**139**	S	Sb	13 40 18.0	+3.9
CIMO	**Cimolais**	**3.59**	**351**	S	Sn	13 40 11.0	-0.6
BERNI	**Berninapass**	**4.30**	**329**	P	Pn	13 39 38.9	-0.8

ROM 30 13:38:59.9±0.1, 42°.674N±0°.004×13°.242E±0°.005, h11km, ML3.0/21, 14C-10D, Error ellipse: s-maj=0.5km s-min=0.4km az=179.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.02**	**159**	P	Pg	13 39 02.2	+0.3
T1201				S	Sg	13 39 03.4	0.0
T1204	**Amatrice, Fraz**	**0.06**	**88**	P	Pg	13 39 02.5	+0.3
T1204				S	Sg	13 39 04.0	0.0
T1204				AML	AML		
	comp=E,92300μm,1.0s						
T1204				AML	AML		
	comp=N,43100μm,0.3s						
T1204				AML	AML		
	comp=E,92400μm,1.0s						
T1204				AML	AML		
	comp=N,43050μm,0.3s						
T1204				AML	AML		
	comp=E,92350μm,1.0s						
T1243	**Rocca Santa Ma**	**0.15**	**82**	⇑P	Pg	13 39 03.9	+0.4
T1243				S	Sg	13 39 06.4	+0.4
LNSS	**Leonessa**	**0.17**	**244**	⇑P	Pg	13 39 04.2	+0.6
LNSS				S	Sg	13 39 07.1	+0.9
LNSS				AML	AML		
	comp=N,23300μm,0.4s						
LNSS				AML	AML		
	comp=N,23250μm,0.4s						
LNSS				AML	AML		
	comp=E,6815μm,1.3s						
RM33	**Pellescritta (**	**0.17**	**187**	⇑P	Pg	13 39 04.3	+0.6
RM33				S	Sg	13 39 07.3	+1.0
RM33				AML	AML		
	comp=E,11200μm,0.2s						
RM33				AML	AML		
	comp=N,10090μm,0.3s						
RM33				AML	AML		
	comp=E,11150μm,0.2s						
RM33				AML	AML		
	comp=N,10005μm,0.3s						
RM33				AML	AML		
	comp=N,10100μm,0.3s						
RM33				AML	AML		
	comp=E,11250μm,0.2s						
RM33				AML	AML		
	comp=N,10085μm,0.3s						
RM33				AML	AML		
	comp=N,10075μm,0.3s						
RM33				AML	AML		
	comp=E,11250μm,0.2s						
RM33				AML	AML		
	comp=N,9990μm,0.3s						
CAMP	**Campotosto**	**0.18**	**138**	⇓P	Pg	13 39 04.6	+0.6
CAMP				S	Sg	13 39 07.7	+0.9
CAMP				AML	AML		
	comp=E,3650μm,0.7s						
CAMP				AML	AML		
	comp=N,4215μm,0.5s						
CAMP				AML	AML		
	comp=N,4215μm,1.5s						
T1245	**Castelsantange**	**0.19**	**348**	P	Pb	13 39 05.4	-0.1
T1246	**Crognaleto (TE**	**0.21**	**116**	P	Pg	13 39 04.9	+0.6
T1246				S	Sg	13 39 08.4	+1.1
T1241	**Roccafluvione,**	**0.23**	**37**	P	Pb	13 39 05.5	-0.7
T1241				S	Sg	13 39 09.1	+1.1
T1217	**Poggiodomo (PG**	**0.23**	**279**	P	Pg	13 39 05.1	+0.3
T1217				S	Sg	13 39 08.8	+0.8
T1217				AML	AML		
	comp=E,6955μm,0.5s						
T1217				AML	AML		
	comp=N,8525μm,0.2s						
T1217				AML	AML		
	comp=N,8685μm,0.2s						
T1217				AML	AML		
	comp=E,6895μm,0.5s						
T1217				AML	AML		
	comp=E,6890μm,0.5s						
T1217				AML	AML		
	comp=N,8530μm,0.2s						
T1217				AML	AML		
	comp=N,8665μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.24**	**170**	⇑P	Pb	13 39 05.6	-0.7
T1247				S	Sg	13 39 09.5	+1.4
T1247				AML	AML		
	comp=E,10550μm,0.1s						
T1247				AML	AML		
	comp=N,7680μm,1.1s						
T1247				AML	AML		
	comp=N,7680μm,0.9s						
T1247				AML	AML		
	comp=E,10550μm,1.9s						
TERO	**Teramo**	**0.27**	**101**	P	Pg	13 39 05.9	+0.4
TERO				S	Sg	13 39 10.2	+1.0
TERO				AML	AML		
	comp=E,6405μm,0.7s						
TERO				AML	AML		
	comp=N,8700μm,0.5s						
TERO				AML	AML		
	comp=N,9020μm,0.5s						
TERO				AML	AML		
	comp=E,6400μm,0.7s						
TERO				AML	AML		
	comp=E,7280μm,0.7s						
TERO				AML	AML		
	comp=N,8695μm,0.5s						
T1215	**Vallo di Nera,**	**0.30**	**295**	P	Pg	13 39 06.3	+0.2
T1215				S	Sg	13 39 11.0	+0.8
T1215				AML	AML		
	comp=E,2515μm,0.7s						
T1215				AML	AML		
	comp=N,2670μm,1.5s						
T1215				AML	AML		
	comp=E,2500μm,0.7s						
T1215				AML	AML		
	comp=N,2660μm,1.5s						
T1215				AML	AML		
	comp=N,2660μm,0.5s						
T1211	**Morro Reatino**	**0.32**	**244**	P	Pg	13 39 06.6	+0.2
T1211				S	Sb	13 39 12.0	-0.9
T1211				AML	AML		
	comp=E,6425μm,0.5s						
T1211				AML	AML		
	comp=N,6000μm,1.6s						
T1211				AML	AML		
	comp=N,5980μm,1.0s						
T1211				AML	AML		
	comp=E,6420μm,0.5s						
T1211				AML	AML		
	comp=E,6340μm,0.5s						
T1211				AML	AML		

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     comp=N,5985µm,1.6s
T1211                          AML   AML
     comp=N,5975µm,1.0s
T1211                          AML   AML
     comp=N,5985µm,0.4s
T1211                          AML   AML
     comp=N,5975µm,1.0s
GIGS Gran Sasso       0.33 133 ⇑P    Pg    13 39 07.0 +0.4
GIGS                           S     Sg    13 39 11.9 +0.9
GIGS                           AML   AML
     comp=N,774µm,0.2s
GIGS                           AML   AML
     comp=E,947µm,0.2s
ARRO Arrone           0.36 255 ⇓P    Pg    13 39 07.6 +0.4
ARRO                           AML   AML
     comp=E,3175µm,0.8s
ARRO                           AML   AML
     comp=N,3110µm,0.2s
FIAM Fiamignano       0.42 193 ⇑P    Pg    13 39 08.5 +0.4
FIAM                           S     Sb    13 39 14.9 -0.9
FIAM                           AML   AML
     comp=E,3220µm,1.2s
FIAM                           AML   AML
     comp=N,1220µm,0.4s
OFFI Offida           0.42  51 ⇑P    Pb    13 39 09.4 +0.1
OFFI                           AML   AML
     comp=E,7725µm,1.6s
OFFI                           AML   AML
     comp=N,5110µm,0.6s
OFFI                           AML   AML
     comp=E,7725µm,0.4s
FAGN Fagnano          0.48 148 ⇑P    Pb    13 39 10.4  0.0
FAGN                           AML   AML
     comp=E,3085µm,1.2s
FAGN                           AML   AML
     comp=N,2775µm,1.5s
FAGN                           AML   AML
     comp=E,3080µm,1.2s
FAGN                           AML   AML
     comp=E,3080µm,0.8s
CESX Cesi             0.49 263 ⇓P    Pg    13 39 09.8 +0.3
TRTR Tortoreto Alta   0.51  75 ⇑P    Pb    13 39 11.5 +0.5
TRTR                           AML   AML
     comp=N,2620µm,1.5s
TRTR                           AML   AML
     comp=E,3290µm,0.5s
TRTR                           AML   AML
     comp=N,2620µm,0.5s
TRTR                           AML   AML
     comp=E,3290µm,1.5s
VCEL Villa Celiera    0.52 122 ⇓P    Pb    13 39 10.9 -0.4
VCEL                           S     Sb    13 39 20.0 +1.1
VCEL                           AML   AML
     comp=E,2405µm,1.5s
VCEL                           AML   AML
     comp=N,2470µm,0.7s
VCEL                           AML   AML
     comp=E,2400µm,1.5s
ASSB Assisi San Ben   0.56 311 ⇑P    Pb    13 39 11.5 -0.4
T0110 Collepietro     0.60 138 ⇓P    Pg    13 39 11.9 +0.4
T0110                          S     Sb    13 39 22.0 +1.0
T0110                          AML   AML
     comp=N,2570µm,0.4s
T0110                          AML   AML
     comp=E,2085µm,0.7s
T0110                          AML   AML
     comp=E,2085µm,1.3s
EL6  Elcito           0.66 351 S     Sb    13 39 24.0 +1.1
SRES S.Oreste - Sor   0.70 231 ⇑P    Pg    13 39 13.6 +0.3
SRES                           S     Sb    13 39 25.0 +1.3
SRES                           AML   AML
     comp=N,350µm,0.5s
SRES                           AML   AML
     comp=E,442µm,0.8s
SRES                           AML   AML
     comp=E,442µm,1.2s
MTCE Montecelio       0.75 210 ⇑P    Pg    13 39 13.8 -0.5
MTCE                           AML   AML
     comp=E,558µm,0.6s
MTCE                           AML   AML
     comp=N,277µm,0.7s
MTCE                           AML   AML
     comp=N,277µm,1.3s
CERT Cerreto          0.75 195 ⇓P    Pg    13 39 14.0 -0.4
CERT                           AML   AML
     comp=N,696µm,0.4s
CERT                           AML   AML
     comp=E,746µm,0.3s
PP3  Marolino         0.75  21 ⇑P    Pb    13 39 15.7 +0.7
ARVD Arcevia          0.85 345 ⇓P    Pg    13 39 16.2 -0.2
RCAV Rocca di Cave    0.85 195 ⇓P    Pn    13 39 18.6 +0.6
LPEL Lama dei Pelig   0.94 132 ⇑P    Pg    13 39 17.4 -0.6
LPEL                           S     Sn    13 39 32.0 -0.6
LPEL                           AML   AML
     comp=N,594µm,1.2s
LPEL                           AML   AML
     comp=E,510µm,0.3s
PIEI Pieia            1.00 329 ⇓P    Pn    13 39 22.2 +2.2
MPAG Monte Paganucc   1.02 340 S     Sn    13 39 36.0 +1.4
GIUL Giuliano Di Ro   1.11 180 ⇓P    Pn    13 39 23.5 +1.9
CAFI Castiglion Fio   1.14 305 S     Sn    13 39 39.0 +1.4
SF04 Casetta          1.18 278 P     Pb    13 39 21.3 -1.0
SF04                           S     Sn    13 39 40.0 +1.5
SF01 Poggio Pratacc   1.24 277 S     Sb    13 39 39.0 -0.6
PAOL Paolisi          1.92 148 P     Pn    13 39 30.9 -1.7
CMPO Campotto Po      2.17 332 S     Sn    13 40 02.0 -0.9
GSCL Gusciola         2.56 312 S     Sb    13 40 16.0 -1.3
TREG Tregnago         3.22 333 P     Pn    13 39 49.3 -1.1
```

*PRU **30** 13:42:03.2±0.0, 42°.75N×13°.94E, h10km*
ROM 30 13:42:05.3±0.2, 42°.901N±0°.010×13°.222E±0°.010,
h4km±1km, ML3.3/28, 15C-17D, Error ellipse:
s-min=0.9km s-min=0.8km az=342.0, Central Italy

```
Code Station Name     Δ°   AZ°  Phase ID        Time      Res
                                Op    ISC       h m s     ISC
AM05 Amandola Campo   0.12  52 ⇑P    Pg    13 42 08.0 +0.2
AM05                           S     Sg    13 42 10.1 +0.7
AM05                           AML   AML
     comp=E,13800µm,0.8s
AM05                           AML   AML
     comp=E,55400µm,0.8s
AM05                           AML   AML
     comp=N,9200µm,1.2s
AM05                           AML   AML
     comp=N,2350µm,0.1s
AM05                           AML   AML
     comp=N,9195µm,1.2s
AM05                           AML   AML
     comp=E,55450µm,0.8s
AM05                           AML   AML
     comp=N,9195µm,0.8s
AM05                           AML   AML
     comp=E,13800µm,1.2s
AM05                           AML   AML
     comp=E,55450µm,1.2s
T1215 Vallo di Nera,  0.28 249 P     Pg    13 42 11.3 +0.7
T1215                          S     Sg    13 42 15.6 +1.3
T1215                          AML   AML
     comp=E,4110µm,1.5s
T1215                          AML   AML
     comp=N,7175µm,1.1s
T1215                          AML   AML
     comp=E,4300µm,1.5s
T1215                          AML   AML
     comp=N,7480µm,1.1s
T1215                          AML   AML
     comp=E,4105µm,1.5s
T1215                          AML   AML
     comp=N,7175µm,1.1s
T1215                          AML   AML
     comp=E,4325µm,1.5s
T1215                          AML   AML
     comp=E,4105µm,1.4s
T1215                          AML   AML
     comp=E,4330µm,1.5s
T1215                          AML   AML
     comp=E,4105µm,0.6s
T1215                          AML   AML
     comp=E,4330µm,0.5s
T1215                          AML   AML
     comp=N,7470µm,1.1s
T1217 Poggiodomo (PG  0.28 229 P     Pg    13 42 11.9 +1.1
T1217                          S     Sb    13 42 16.7 -1.5
T1217                          AML   AML
     comp=E,6140µm,1.4s
T1217                          AML   AML
     comp=E,6235µm,1.4s
T1217                          AML   AML
     comp=E,6130µm,1.4s
T1217                          AML   AML
     comp=N,6495µm,0.6s
T1217                          AML   AML
     comp=E,6190µm,1.4s
T1217                          AML   AML
     comp=N,6485µm,0.6s
T1217                          AML   AML
     comp=E,6240µm,1.4s
T1217                          AML   AML
     comp=E,6125µm,1.4s
T1217                          AML   AML
     comp=N,6410µm,0.6s
T1217                          AML   AML
     comp=E,6240µm,0.6s
T1217                          AML   AML
     comp=E,6125µm,0.6s
T1217                          AML   AML
     comp=N,6500µm,0.6s
LNSS Leonessa         0.33 204 P     Pg    13 42 12.2 +0.6
LNSS                           S     Sb    13 42 18.6 -0.9
OFFI Offida           0.34  84 P     Pb    13 42 13.4 -0.5
OFFI                           S     Sb    13 42 21.0 +1.2
RM33 Pellescritta (   0.39 181 P     Pg    13 42 13.5 +0.7
RM33                           S     Sb    13 42 20.8 -0.5
TERO Teramo           0.40 135 P     Pg    13 42 13.7 +0.8
TERO                           S     Sb    13 42 20.6 -0.8
ASSB Assisi San Ben   0.44 289 P     Pg    13 42 13.2 -0.5
T1211 Morro Reatino   0.46 216 P     Pb    13 42 15.9  0.0
T1211                          S     Sb    13 42 23.1 -0.1
T1247 Pizzolo (AQ)    0.46 173 P     Pb    13 42 15.7 -0.3
T1247                          S     Sb    13 42 23.4 +0.1
ARRO Arrone           0.47 226 ⇑P    Pg    13 42 14.9 +0.8
ARRO                           AML   AML
     comp=N,2095µm,1.6s
ARRO                           AML   AML
     comp=E,4160µm,1.2s
ARRO                           AML   AML
     comp=E,4160µm,0.8s
TRTR Tortoreto Alta   0.52 100 S     Sg    13 42 18.0 -3.9
FOSV Fossato di Vic   0.52 320 ⇓P    Pg    13 42 14.4 -0.8
FOSV                           S     Sg    13 42 23.0 +1.0
FOSV                           AML   AML
     comp=N,14250µm,1.6s
FOSV                           AML   AML
     comp=E,7440µm,0.3s
GIGS Gran Sasso       0.52 150 P     Pg    13 42 15.6 +0.4
GIGS                           S     Sb    13 42 24.5 -0.5
CESX Cesi             0.56 239 ⇓P    Pg    13 42 15.8 -0.1
CESX                           S     Sb    13 42 26.0 +0.1
CESX                           AML   AML
     comp=N,3570µm,0.9s
CESX                           AML   AML
     comp=E,3740µm,1.0s
CESX                           AML   AML
     comp=E,3740µm,1.0s
PP3  Marolino         0.56  31 ⇑P    Pg    13 42 16.6 +0.7
AQU  L'Aquila         0.56 166 S     Sg    13 42 17.0 -6.4
ARVD Arcevia          0.63 341 ⇓P    Pg    13 42 16.2 -1.1
ARVD                           S     Sb    13 42 27.0 -1.2
ARVD                           AML   AML
     comp=N,2290µm,0.3s
ARVD                           AML   AML
     comp=E,4940µm,1.6s
ARVD                           AML   AML
     comp=N,2290µm,1.7s
ARVD                           AML   AML
     comp=E,4940µm,0.4s
FIAM Fiamignano       0.64 187 S     Sg    13 42 19.0 -6.8
FAGN Fagnano          0.69 157 S     Sg    13 42 21.0 -6.4
FRON Frontone         0.71 330 ⇓P    Pg    13 42 17.8 -1.2
FRON                           AML   AML
     comp=N,6020µm,1.3s
FRON                           AML   AML
     comp=E,5040µm,0.7s
FRON                           AML   AML
     comp=N,6020µm,0.7s
T0110 Collepietro     0.79 148 S     Sg    13 42 21.0  -10
SENI Senigallia       0.80   1 ⇑P    Pg    13 42 20.7  0.0
SENI                           AML   AML
     comp=N,10835µm,0.3s
SENI                           AML   AML
     comp=E,11550µm,0.4s
PIEI Pieia            0.81 322 ⇓P    Pg    13 42 19.5 -1.3
PIEI                           S     Sg    13 42 32.0 +0.7
PIEI                           AML   AML
     comp=E,3035µm,0.3s
PIEI                           AML   AML
     comp=N,1960µm,0.3s
MGAB Montegabbione    0.81 271 ⇓P    Pb    13 42 22.0  0.0
MGAB                           AML   AML
     comp=E,2435µm,1.1s
MGAB                           AML   AML
     comp=E,2430µm,1.1s
MGAB                           AML   AML
     comp=E,2685µm,0.6s
MGAB                           AML   AML
     comp=N,6100µm,0.5s
MGAB                           AML   AML
     comp=N,5950µm,0.5s
MGAB                           AML   AML
     comp=E,2430µm,0.9s
FSSB Fossombrone      0.85 338 S     Sb    13 42 35.0 +0.4
APEC Apecchio         0.88 319 S     Sb    13 42 35.0 -0.3
BADI Badiali          0.94 311 ⇑P    Pg    13 42 22.3 -1.0
BADI                           S     Sb    13 42 38.0 +1.0
PE3  Peglio           0.95 327 ⇑P    Pg    13 42 22.6 -1.0
SACS San Casciano d   0.97 267 ⇑P    Pg    13 42 24.1 +0.3
SACS                           AML   AML
     comp=N,1715µm,0.6s
SACS                           AML   AML
     comp=N,1710µm,0.6s
SACS                           AML   AML
     comp=E,1480µm,0.8s
SACS                           AML   AML
     comp=E,1554µm,1.3s
CAFI Castiglion Fio   1.01 295 ⇓P    Pg    13 42 24.4 -0.3
CAFI                           AML   AML
     comp=E,1310µm,1.5s
CAFI                           AML   AML
     comp=E,1310µm,0.5s
CAFI                           AML   AML
     comp=N,1040µm,0.9s
SSP9 Sansepolcro      1.04 311 ⇓P    Pg    13 42 24.0 -1.2
VVLD Villa Vallelon   1.07 164 S     Sg    13 42 31.0 -8.7
CRE  Caprese Michel   1.17 308 ⇑P    Pb    13 42 28.1 -0.1
CRE                            AML   AML
     comp=N,764µm,0.8s
CRE                            AML   AML
     comp=E,906µm,0.6s
CRE                            AML   AML
     comp=N,764µm,1.2s
TOLF Tolfa            1.23 228 ⇓P    Pb    13 42 29.1  0.0
CSNT Castellina Chi   1.52 293 P     Pn    13 42 31.6 -1.8
CSNT                           AML   AML
     comp=N,374µm,0.7s
CSNT                           AML   AML
     comp=E,361µm,0.8s
CSNT                           AML   AML
     comp=E,361µm,1.2s
LMD  Lutirano         1.61 317 ⇑P    Pg    13 42 36.1  0.0
LMD                            AML   AML
     comp=N,623µm,0.7s
LMD                            AML   AML
     comp=E,466µm,0.7s
CMPR Campora          3.02 148 S     Sn    13 43 30.0 -0.5
PGF  Pioggiola        3.13 265 P     Pn    13 42 52.7 -2.8
PGF                            AML   AML
     comp=E,21µm,1.3s
PGF                            AML   AML
     comp=N,22µm,1.6s
CGRP Cima Grappa      3.15 342 ⇓P    Pn    13 42 55.1 -0.7
CGRP                           AML   AML
     comp=E,362µm,1.2s
CGRP                           AML   AML
     comp=E,362µm,0.8s
CGRP                           AML   AML
     comp=N,312µm,0.6s
CTI  Castel Tesino    3.34 341 P     Pn    13 42 56.2 -2.3
CTI                            AML   AML
     comp=E,186µm,1.0s
CTI                            AML   AML
     comp=N,171µm,1.1s
CTI                            AML   AML
     comp=E,186µm,1.0s
CTI                            AML   AML
     comp=N,171µm,0.9s
STAL STALIGIAL        3.38 354 ⇑P    Pn    13 42 58.2 -0.6
STAL                           AML   AML
     comp=E,284µm,1.3s
STAL                           AML   AML
     comp=N,284µm,0.9s
STAL                           AML   AML
     comp=E,276µm,1.0s
STAL                           AML   AML
     comp=N,284µm,1.1s
STAL                           AML   AML
     comp=E,284µm,0.7s
STAL                           AML   AML
     comp=N,186µm,0.7s
LEOD Capriano del C   3.39 320 P     Pn    13 42 55.5 -3.4
CIMO Cimolais         3.45 351 ⇑P    Pn    13 42 59.3 -0.6
CIMO                           AML   AML
     comp=E,79µm,0.8s
CIMO                           AML   AML
     comp=N,105µm,0.9s
CIMO                           AML   AML
     comp=N,98µm,0.9s
CIMO                           AML   AML
     comp=E,78µm,0.8s
LUSI Trento, Gardas   3.47 333 ⇑P    Pn    13 43 01.0 +0.9
LUSI                           AML   AML
     comp=E,155µm,0.8s
LUSI                           AML   AML
     comp=N,165µm,1.2s
LUSI                           AML   AML
     comp=E,155µm,1.2s
RNCA Ronca, Sant'Ol   3.47 298 S     Sb    13 43 50.0 +0.1
PTCC Patocco-Chiusa   3.50   1 ⇓P    Pn    13 42 59.8 -0.9
PTCC                           AML   AML
     comp=E,116µm,1.5s
PTCC                           AML   AML
     comp=N,87µm,1.6s
PTCC                           AML   AML
     comp=E,116µm,0.5s
PTCC                           AML   AML
     comp=N,87µm,0.4s
NOCI Noci             3.56 125 P     Pn    13 43 02.5 +1.1
ACOM Acomizza, Ital   3.65   3 ⇓P    Pn    13 43 03.1 +0.4
ACOM                           AML   AML
     comp=N,214µm,0.7s
ACOM                           AML   AML
     comp=E,272µm,0.7s
ACOM                           AML   AML
     comp=E,244µm,0.7s
ACOM                           AML   AML
     comp=N,200µm,0.7s
ACOM                           AML   AML
     comp=E,272µm,1.3s
ACOM                           AML   AML
     comp=E,244µm,1.3s
ZOU  Zoufplan         3.66 357 ⇓P    Pn    13 43 02.1 -0.8
ZOU                            AML   AML
     comp=E,204µm,1.4s
ZOU                            AML   AML
     comp=N,171µm,1.5s
ZOU                            AML   AML
     comp=N,174µm,0.8s
ZOU                            AML   AML
     comp=E,264µm,1.4s
ZOU                            AML   AML
     comp=E,264µm,0.6s
ZOU                            AML   AML
     comp=E,204µm,0.6s
ZOU                            AML   AML
     comp=N,171µm,0.5s
MABI Malga Bissina    3.70 329 ⇓P    Pn    13 43 04.3 +0.9
MABI                           AML   AML
     comp=E,58µm,0.9s
MABI                           AML   AML
     comp=N,55µm,0.6s
MABI                           AML   AML
     comp=E,58µm,1.1s
MABI                           AML   AML
     comp=N,55µm,1.4s
OBKA Obir             3.73  14 ePn   Pn    13 43 03.9 +0.2
     comp=N,1.4nm,0.3s
EUCT Pavia            3.74 309 S     Sn    13 43 50.0 +1.8
MYKA Terra Mystica    3.74   4 ePn   Pn    13 43 03.7 -0.2
     comp=N,2.5nm,0.2s
KOSI Kohlern          3.80 340 ⇓P    Pn    13 43 05.1 +0.3
KOSI                           AML   AML
     comp=N,230µm,1.5s
KOSI                           AML   AML
     comp=E,202µm,0.7s
KOSI                           AML   AML
     comp=N,230µm,0.5s
SALB San Lorenzo Be   3.83 141 S     Sn    13 43 40.0  -11
ABTA Abfaltersbach    3.88 353 i Pn  Pn    13 43 06.0 +0.2
     comp=N,22nm,0.4s,SNR=20
BRES Bressanone       3.94 345 ⇓P    Pn    13 43 07.1 +0.3
RISI Rein             4.13 349 ⇑P    Pn    13 43 09.9 +0.6
ROSI Rosskopf         4.23 343 ⇓P    Pn    13 43 11.2 +0.5
ROSI                           AML   AML
     comp=N,242µm,0.9s
ROSI                           AML   AML
     comp=E,202µm,1.0s
FETA Feichten         4.48 338 Pn    Pn    13 43 14.5 +0.3
     comp=E,18nm,1.0s,SNR=22
WTTA Wattenberg       4.50 346 Pn    Pn    13 43 15.7 +1.2
     comp=E,5.6nm,0.3s,SNR=15
WTTA Wattenberg       4.50 346 ⇑P    Pn    13 43 15.9 +1.5
SQTA Sankt Quirin     4.55 342 Pn    Pn    13 43 16.0 +1.0
     comp=E,21nm,0.4s,SNR=26
DAVOX Davos/Dischmat  4.55 330 P     Pn    13 43 15.3 +0.2
WATA Walderalm        4.58 346 Pn    Pn    13 43 17.1 +1.6
     comp=E,15nm,0.5s,SNR=14
MOTA Moosalm          4.69 342 Pn    Pn    13 43 18.1 +1.1
     comp=E,19nm,0.6s,SNR=20
BIOA Bad Ischl, Aus   4.80   3 Pn    Pn    13 43 18.4  0.0
     comp=E,7.0nm,0.3s,SNR=9.2
RETA Reutte           4.90 340 Pn    Pn    13 43 21.1 +1.2
     comp=E,11nm,0.3s,SNR=21
DAVA Damuels          4.98 333 Pn    Pn    13 43 22.3 +1.2
     comp=E,11nm,0.5s,SNR=14
MOA  Molln            5.00   8 Pn    Pn    13 43 21.9 +0.7
     comp=E,0.9nm,0.2s,SNR=7.5
VLO  Vlora            5.29 115 P     Pn    13 43 28.5 +3.4
CONA Conrad Observa   5.36  19 ePn   Pn    13 43 25.9 -0.2
     comp=E,0.9nm,0.2s
CKRC Cesky Krumlov    5.97   7 ePN   Pn    13 43 32.7 -1.7
KBN  Korca            6.10 109 ⇑P    Pb    13 43 48.9 -3.3
KHC  Kasperske Hory   6.24   2 ePN   Pn    13 43 36.4 -1.7
KHC                            eSN   Sn    13 44 46.4 -3.4
CLL  Collm            8.41 359 ePn   Pn    13 44 06.0 -1.9
CLL                            eSn   Sn    13 45 24.0  -19
CLL                            ex    x     13 45 42.0
CLL                            ex    x     13 46 06.0
CLL                            eSg   Sg    13 46 29.0 -6.1
     comp=Z,24nm,1.6s
```

*PRU **30** 13:47:22.7±0.0, 42°.59N×14°.17E, h10km*
ROM 30 13:47:26.8±0.1, 42°.905N±0°.003×13°.199E±0°.004,
h9km, ML3.1/24, 20C-14D, Error ellipse: s-maj=0.3km
s-min=0.2km az=8.0, Central Italy

```
Code Station Name     Δ°   AZ°  Phase ID        Time      Res
                                Op    ISC       h m s     ISC
FEMA Monte Fema       0.12 298 ⇓P    Pg    13 47 30.3 +0.5
FEMA                           AML   AML
     comp=E,43450µm,0.8s
FEMA                           AML   AML
     comp=N,41800µm,1.3s
FEMA                           AML   AML
     comp=N,41800µm,0.7s
AM05 Amandola Campo   0.13  57 P     Pg    13 47 30.1 +0.2
AM05                           S     Sg    13 47 32.8 +0.8
AM05                           AML   AML
     comp=N,4890µm,0.5s
AM05                           AML   AML
     comp=E,5510µm,1.4s
AM05                           AML   AML
     comp=E,21200µm,1.3s
AM05                           AML   AML
     comp=N,750µm,1.6s
AM05                           AML   AML
     comp=E,5510µm,0.6s
AM05                           AML   AML
```

	comp=N,750μm,0.4s					
T1241	**Roccafluvione,**	**0.18 106**	P	Pg	13 47 31.3	+0.7
T1241			S	Sg	13 47 34.5	+1.4
T1241			AML	AML		
	comp=N,13815μm,1.0s					
T1241			AML	AML		
	comp=N,13825μm,1.0s					
T1241			AML	AML		
	comp=E,13350μm,0.6s					
T1241			AML	AML		
	comp=N,13820μm,1.0s					
CSP1	**Cessapalombo**	**0.19 1**	P	Pg	13 47 30.9	+0.1
CSP1			AML	AML		
	comp=E,8990μm,1.1s					
CSP1			AML	AML		
	comp=N,17000μm,1.0s					
CSP1			AML	AML		
	comp=E,9065μm,1.1s					
CSP1			AML	AML		
	comp=N,17200μm,1.0s					
CSP1			AML	AML		
	comp=E,9065μm,0.9s					
T1204	**Amatrice, Fraz**	**0.24 159**	P	Pg	13 47 32.7	+0.9
T1204			S	Sg	13 47 37.1	+2.0
T1215	**Vallo di Nera,**	**0.26 247**	P	Pg	13 47 32.9	+0.8
T1215			S	Sb	13 47 37.5	-1.0
T1215			AML	AML		
	comp=E,3895μm,1.1s					
T1215			AML	AML		
	comp=N,3940μm,1.4s					
T1215			AML	AML		
	comp=E,4070μm,1.1s					
T1215			AML	AML		
	comp=N,3900μm,1.4s					
T1215			AML	AML		
	comp=E,3905μm,1.1s					
T1215			AML	AML		
	comp=N,3930μm,1.4s					
T1215			AML	AML		
	comp=N,3900μm,1.4s					
T1215			AML	AML		
	comp=E,3865μm,1.1s					
T1215			AML	AML		
	comp=N,3950μm,1.4s					
T1215			AML	AML		
	comp=N,3920μm,1.4s					
T1215			AML	AML		
	comp=E,3910μm,1.1s					
T1215			AML	AML		
	comp=N,3920μm,0.6s					
T1215			AML	AML		
	comp=N,3900μm,0.6s					
T1215			AML	AML		
	comp=E,4070μm,0.9s					
T1215			AML	AML		
	comp=E,3910μm,0.9s					
T1217	**Poggiodomo (PG**	**0.28 226**	P	Pb	13 47 33.2	-0.8
T1217			S	Sb	13 47 38.0	-0.8
T1217			AML	AML		
	comp=E,5330μm,0.9s					
T1217			AML	AML		
	comp=N,6565μm,0.9s					
T1217			AML	AML		
	comp=E,5290μm,0.9s					
T1217			AML	AML		
	comp=N,6565μm,0.9s					
T1217			AML	AML		
	comp=E,5315μm,0.9s					
T1217			AML	AML		
	comp=N,6460μm,0.9s					
T1217			AML	AML		
	comp=E,5335μm,0.9s					
T1217			AML	AML		
	comp=E,5295μm,0.9s					
T1243	**Rocca Santa Ma**	**0.28 138**	P	Pg	13 47 32.9	+0.5
T1243			S	Sb	13 47 37.6	-1.3
MNTP	**Montappone**	**0.31 40**	P	Pb	13 47 33.9	-0.6
MNTP			S	Sb	13 47 39.3	-0.3
MNTP			AML	AML		
	comp=E,9795μm,0.4s					
MNTP			AML	AML		
	comp=N,12230μm,1.2s					
MNTP			AML	AML		
	comp=N,12230μm,0.8s					
LNSS	**Leonessa**	**0.32 201**	P	Pb	13 47 34.3	-0.6
GAG1	**Gagliole**	**0.35 344**	⇑P	Pb	13 47 34.8	-0.5
OFFI	**Offida**	**0.36 85**	P	Pb	13 47 35.1	-0.3
OFFI			AML	AML		
	comp=E,7885μm,0.5s					
OFFI			AML	AML		
	comp=N,10170μm,0.8s					
T1246	**Crognaleto (TE**	**0.39 146**	P	Pb	13 47 35.2	-0.7
RM33	**Pellescritta (**	**0.40 178**	P	Pg	13 47 35.2	+0.6
RM33			S	Sb	13 47 41.7	-0.6
RM33			AML	AML		
	comp=N,3130μm,1.6s					
RM33			AML	AML		
	comp=E,3300μm,0.7s					
RM33			AML	AML		
	comp=N,3220μm,1.6s					
RM33			AML	AML		
	comp=E,3495μm,0.7s					
RM33			AML	AML		
	comp=N,3125μm,1.6s					
RM33			AML	AML		
	comp=E,3295μm,0.7s					
RM33			AML	AML		
	comp=N,3225μm,1.6s					
RM33			AML	AML		
	comp=N,3125μm,1.6s					
RM33			AML	AML		
	comp=E,3490μm,0.7s					
RM33			AML	AML		
	comp=N,3125μm,0.4s					
RM33			AML	AML		
	comp=N,3225μm,0.4s					
CAMP	**Campotosto**	**0.40 157**	P	Pg	13 47 35.0	+0.3
CAMP			S	Sb	13 47 41.5	-0.9
CAMP			AML	AML		
	comp=E,2675μm,0.7s					
CAMP			AML	AML		
	comp=N,3050μm,0.9s					
CAMP			AML	AML		
	comp=N,3050μm,1.1s					
TERO	**Teramo**	**0.41 133**	P	Pg	13 47 35.2	+0.3
TERO			S	Sb	13 47 41.8	-0.9
TERO			AML	AML		
	comp=N,5805μm,0.7s					
TERO			AML	AML		
	comp=N,5925μm,0.7s					
TERO			AML	AML		
	comp=E,3960μm,0.7s					
TERO			AML	AML		
	comp=N,5800μm,0.7s					
TERO			AML	AML		
	comp=N,5925μm,1.3s					
TERO			AML	AML		
	comp=N,5800μm,1.3s					
TERO			AML	AML		
	comp=E,4045μm,0.7s					
ASSB	**Assisi San Ben**	**0.42 289**	P	Pg	13 47 35.5	+0.4
ASSB			S	Sb	13 47 42.3	-0.7
ASSB			AML	AML		
	comp=E,3560μm,0.6s					
ASSB			AML	AML		
	comp=N,3500μm,0.6s					
T1211	**Morro Reatino**	**0.45 214**	P	Pg	13 47 36.1	+0.5
ARRO	**Arrone**	**0.46 225**	P	Pg	13 47 36.4	+0.7
ARRO			AML	AML		
	comp=E,2090μm,1.1s					
ARRO			AML	AML		
	comp=N,1875μm,1.0s					
ARRO			AML	AML		
	comp=E,2095μm,1.1s					
T1247	**Pizzolo (AQ)**	**0.47 171**	P	Pb	13 47 36.8	-0.5
T1247			AML	AML		
	comp=E,4330μm,1.0s					
T1247			AML	AML		
	comp=N,4355μm,0.9s					
ATCC	**AVT- Casa Cast**	**0.50 305**	⇓P	Pg	13 47 36.8	+0.3
ATCC			S	Sb	13 47 46.0	+0.8
ATCC			AML	AML		
	comp=E,4635μm,0.7s					
ATCC			AML	AML		
	comp=E,4640μm,0.7s					
ATCC			AML	AML		
	comp=N,5000μm,1.5s					
ATCC			AML	AML		
	comp=E,4640μm,1.3s					
ATCC			AML	AML		
	comp=N,5000μm,0.5s					
FOSV	**Fossato di Vic**	**0.51 321**	⇓P	Pg	13 47 36.9	+0.3
FOSV			S	Sb	13 47 46.0	+0.6
FOSV			AML	AML		
	comp=E,1930μm,0.6s					
FOSV			AML	AML		
	comp=E,1925μm,0.6s					
FOSV			AML	AML		
	comp=N,2565μm,0.3s					
GIGS	**Gran Sasso**	**0.53 149**	P	Pg	13 47 37.4	+0.3
GIGS			S	Sb	13 47 45.5	-0.7
GIGS			AML	AML		
	comp=E,678μm,0.7s					
GIGS			AML	AML		
	comp=N,462μm,0.8s					
TRTR	**Tortoreto Alta**	**0.53 100**	⇓P	Pb	13 47 38.9	+0.5
TRTR			AML	AML		
	comp=N,7195μm,0.9s					
TRTR			AML	AML		
	comp=E,7580μm,0.5s					
TRTR			AML	AML		
	comp=N,7195μm,1.1s					
CESX	**Cesi**	**0.54 237**	P	Pg	13 47 37.6	+0.3
CESX			S	Sb	13 47 46.3	-0.2
CESX			AML	AML		
	comp=E,2710μm,1.1s					
CESX			AML	AML		
	comp=N,1980μm,0.5s					
CESX			AML	AML		
	comp=N,1980μm,1.5s					
PP3	**Marolino**	**0.56 32**	⇓P	Pb	13 47 39.2	+0.4
PP3			AML	AML		
	comp=E,6800μm,0.3s					
PP3			AML	AML		
	comp=N,6335μm,1.3s					
PP3			AML	AML		
	comp=N,6055μm,0.4s					
PP3			AML	AML		
	comp=E,7080μm,0.3s					
PP3			AML	AML		
	comp=N,6055μm,1.6s					
AQU	**L'Aquila**	**0.57 165**	P	Pg	13 47 38.1	+0.3
ARVD	**Arcevia**	**0.62 342**	P	Pg	13 47 38.9	0.0
ARVD			AML	AML		
	comp=E,1385μm,0.9s					
ARVD			AML	AML		
	comp=N,842μm,0.5s					
FIAM	**Fiamignano**	**0.64 185**	⇑P	Pg	13 47 39.6	+0.4
FIAM			AML	AML		
	comp=E,1260μm,0.9s					
FIAM			AML	AML		
	comp=N,1400μm,1.1s					
FIAM			AML	AML		
	comp=E,1260μm,1.1s					
ATTE	**AVT- Monte Tez**	**0.69 296**	⇑P	Pb	13 47 41.6	+0.6
ATTE			AML	AML		
	comp=E,808μm,0.7s					
ATTE			AML	AML		
	comp=N,1018μm,1.2s					
ATTE			AML	AML		
	comp=N,1018μm,0.8s					
ATTE			AML	AML		
	comp=E,808μm,1.3s					
VCEL	**Villa Celiera**	**0.70 137**	⇑P	Pb	13 47 40.8	-0.4
VCEL			AML	AML		
	comp=E,2145μm,0.9s					
VCEL			AML	AML		
	comp=E,2140μm,0.9s					
VCEL			AML	AML		
	comp=N,2975μm,1.6s					
VCEL			AML	AML		
	comp=N,2975μm,0.4s					
FAGN	**Fagnano**	**0.70 156**	P	Pg	13 47 40.4	+0.1
FAGN			AML	AML		
	comp=E,2580μm,0.6s					
FAGN			AML	AML		
	comp=N,1515μm,0.4s					
FAGN			AML	AML		
	comp=N,1515μm,1.6s					
FRON	**Frontone**	**0.70 331**	⇓P	Pg	13 47 40.3	-0.1
FRON			AML	AML		
	comp=E,1435μm,1.3s					
FRON			AML	AML		
	comp=E,1435μm,0.7s					
FRON			AML	AML		
	comp=N,1370μm,0.9s					
AOI	**Ancona**	**0.71 24**	S	Sn	13 47 54.0	-0.2
ATVO	**AVT- Monte Val**	**0.75 310**	⇓P	Pg	13 47 41.3	0.0
ATVO			AML	AML		
	comp=N,1345μm,0.7s					
ATVO			AML	AML		
	comp=N,1345μm,1.3s					
ATVO			AML	AML		
	comp=E,812μm,0.5s					
PIEI	**Pieia**	**0.80 323**	P	Pg	13 47 41.9	-0.3
PIEI			AML	AML		
	comp=E,819μm,0.3s					
PIEI			AML	AML		
	comp=N,656μm,1.3s					
PIEI			AML	AML		
	comp=N,656μm,0.7s					
ATPI	**Pietralunga -**	**0.80 313**	⇓P	Pn	13 47 43.8	-0.6
ATPI			S	Sb	13 47 55.0	+1.1
ATPI			AML	AML		
	comp=N,1000μm,1.0s					
ATPI			AML	AML		
	comp=E,1040μm,0.6s					
MGAB	**Montegabbione**	**0.80 271**	⇓P	Pn	13 47 43.8	-0.5
MGAB			AML	AML		
	comp=E,1166μm,0.4s					
MGAB			AML	AML		
	comp=N,2410μm,1.0s					
MGAB			AML	AML		
	comp=E,1167μm,0.4s					
MGAB			AML	AML		
	comp=E,1390μm,0.4s					
MGAB			AML	AML		
	comp=N,2415μm,1.0s					
MGAB			AML	AML		
	comp=N,2330μm,1.0s					
T0110	**Collepietro**	**0.80 148**	⇑P	Pg	13 47 42.2	-0.1
T0110			AML	AML		
	comp=E,1890μm,0.6s					
T0110			AML	AML		
	comp=N,1850μm,1.2s					
T0110			AML	AML		
	comp=N,1850μm,0.8s					
ATMI	**Monte Miggiano**	**0.81 303**	⇓P	Pn	13 47 45.0	+0.6
ATMI			AML	AML		
	comp=N,2060μm,0.9s					
ATMI			AML	AML		
	comp=E,2495μm,0.6s					
ATMI			AML	AML		
	comp=N,2060μm,1.1s					
FSSB	**Fossombrone**	**0.84 339**	⇑P	Pg	13 47 43.3	+0.2
FSSB			AML	AML		
	comp=N,3615μm,1.5s					
FSSB			AML	AML		
	comp=N,3615μm,0.5s					
FSSB			AML	AML		
	comp=E,2225μm,0.3s					
APEC	**Apecchio**	**0.87 319**	S	Sn	13 47 59.0	+0.9
SACS	**San Casciano d**	**0.95 267**	⇑P	Pn	13 47 46.0	-0.4
SACS			AML	AML		
	comp=E,698μm,0.9s					
SACS			AML	AML		
	comp=N,1040μm,1.2s					
SACS			AML	AML		
	comp=E,733μm,0.9s					
SACS			AML	AML		
	comp=N,1066μm,1.2s					
SACS			AML	AML		
	comp=E,733μm,1.1s					
SACS			AML	AML		
	comp=E,698μm,1.1s					
CPGN	**Carpegna, Ital**	**1.10 325**	⇑P	Pn	13 47 48.9	+0.3
CRE	**Caprese Michel**	**1.16 309**	⇑P	Pn	13 47 49.5	+0.1
CRE			AML	AML		
	comp=E,327μm,0.7s					
CRE			AML	AML		
	comp=N,344μm,1.6s					
CRE			AML	AML		
	comp=E,328μm,0.7s					
CRE			AML	AML		
	comp=N,344μm,0.4s					
TOLF	**Tolfa**	**1.22 227**	⇑P	Pg	13 47 51.1	+0.8
TOLF			AML	AML		
	comp=E,398μm,0.7s					
TOLF			AML	AML		
	comp=N,420μm,0.9s					
TOLF			AML	AML		
	comp=E,398μm,1.3s					
TOLF			AML	AML		
	comp=N,420μm,1.1s					
POFI	**Posta Fibreno**	**1.25 162**	⇑P	Pg	13 47 53.3	+2.5
BRSN	**Barisano**	**1.60 330**	⇑P	Pb	13 47 57.0	+0.4
BRSN			AML	AML		
	comp=N,2690μm,1.5s					
BRSN			AML	AML		
	comp=E,2940μm,1.4s					
PTRJ	**Pietraroja**	**1.83 147**	P	Pn	13 47 57.3	-1.3
PTRJ			AML	AML		
	comp=E,2470μm,0.5s					
PTRJ			AML	AML		
	comp=N,4695μm,0.2s					
ZCCA	**Zocca**	**2.17 313**	⇑P	Pg	13 48 11.0	+2.7
GSCL	**Gusciola**	**2.38 308**	⇓P	Pg	13 48 15.8	+3.3
TEOL	**Teolo**	**2.69 336**	S	Sn	13 48 43.0	0.0
CGRP	**Cima Grappa**	**3.14 342**	⇓P	Pn	13 48 18.8	+2.1
CGRP			AML	AML		
	comp=E,221μm,1.5s					
CGRP			AML	AML		
	comp=N,258μm,1.4s					
CGRP			AML	AML		
	comp=E,194μm,1.1s					
CGRP			AML	AML		
	comp=N,135μm,0.5s					
CGRP			AML	AML		
	comp=N,258μm,0.6s					
CGRP			AML	AML		
	comp=E,194μm,0.9s					
CGRP			AML	AML		
	comp=E,221μm,0.5s					
CTI	**Castel Tesino**	**3.33 341**	P	Pg	13 48 30.5	-0.2
CTI			S	Sn	13 48 56.0	-3.0
LUSI	**Trento, Gardas**	**3.46 333**	⇑P	Pn	13 48 23.6	+2.8
ACOM	**Acomizza, Ital**	**3.65 3**	⇑P	Pn	13 48 25.7	+2.0
ACOM			AML	AML		
	comp=E,126μm,1.2s					
ACOM			AML	AML		
	comp=N,102μm,0.6s					
ACOM			AML	AML		
	comp=E,126μm,0.8s					
ACOM			AML	AML		
	comp=N,102μm,1.4s					
MABI	**Malga Bissina**	**3.69 330**	⇑P	Pn	13 48 27.6	+3.4
EUCT	**Pavia**	**3.72 309**	S	Sn	13 49 12.0	+3.6
EUCT			S	Sg	13 49 29.0	+2.7
MYKA	**Terra Mystica**	**3.74 5**	*e*Pn	Pn	13 48 28.5	+3.8
	comp=N,2.2nm,0.2s					
KOSI	**Kohlern**	**3.79 341**	⇑P	Pn	13 48 27.7	+2.2
KOSI			AML	AML		
	comp=E,93μm,1.5s					
KOSI			AML	AML		
	comp=N,69μm,0.9s					
KOSI			AML	AML		
	comp=N,69μm,1.1s					
MILN	**Milano**	**3.84 313**	P	Pn	13 48 26.4	+0.2
ABTA	**Abfaltersbach**	**3.87 353**	Pn	Pn	13 48 28.5	+1.9
	comp=N,11nm,0.5s,SNR=10					
RORO	**Rocca Rossa**	**3.92 290**	S	Sg	13 49 38.0	+5.2
MGRO	**Montegrosso**	**4.08 288**	P	Pb	13 48 35.0	-4.0
RISI	**Rein**	**4.12 349**	⇓P	Pn	13 48 32.6	+2.4
MUGIO	**Muggio**	**4.24 317**	S	Sg	13 49 43.0	+0.1
SPS2	**Spezzano della**	**4.32 146**	⇑P	Pb	13 48 42.6	-0.3
FETA	**Feichten**	**4.47 338**	Pn	Pn	13 48 37.9	+2.9
	comp=N,4.8nm,0.6s,SNR=9.1					
WTTA	**Wattenberg**	**4.50 346**	Pn	Pn	13 48 38.8	+3.5
	comp=N,2.5nm,0.2s,SNR=7.2					
WTTA	**Wattenberg**	**4.50 346**	⇑P	Pn	13 48 38.5	+3.3
SQTA	**Sankt Quirin**	**4.54 343**	*i* Pn	Pn	13 48 38.4	+2.6
	comp=N,7.1nm,0.3s,SNR=9.9					
WATA	**Walderalm**	**4.58 346**	Pn	Pn	13 48 39.9	+3.6
	comp=N,3.6nm,0.3s,SNR=7.1					
LLI	**Lipari**	**4.65 163**	S	Sb	13 49 47.0	+2.4
MOTA	**Moosalm**	**4.68 342**	Pn	Pn	13 48 40.2	+2.4
	comp=N,6.9nm,0.6s,SNR=9.8					
RETA	**Reutte**	**4.89 340**	*i* Pn	Pn	13 48 43.6	+3.0
	comp=N,4.5nm,0.3s,SNR=8.1					
PLLN	**Pollina**	**4.96 171**	⇑P	Pb	13 48 52.7	-1.2
DAVA	**Damuels**	**4.97 333**	Pn	Pn	13 48 45.3	+3.5
	comp=N,5.8nm,0.6s,SNR=8.2					
VLO	**Vlora**	**5.30 115**	P	Pb	13 49 03.4	+3.7
CLTB	**Caltabellotta**	**5.32 180**	⇓P	Pn	13 48 45.7	-0.8
CONA	**Conrad Observa**	**5.36 20**	*e*Pn	Pn	13 48 48.6	+1.5
	comp=N,0.6nm,0.2s					
CKRC	**Cesky Krumlov**	**5.97 7**	*e*SN	Sn	13 50 02.2	-1.6
KHC	**Kasperske Hory**	**6.23 2**	*e*PN	Pn	13 48 58.5	-0.5
KHC			*e*SN	Sn	13 50 10.3	-0.1

DDA ***30*** *13:52:57.0±0.0, 36°.79N×45°.36E, h2km, ML3.2*
ISN ***30*** *13:52:58.6±1.6, 37°.08N×45°.01E, h15km±15km, ML3.1*
TEH ***30*** *13:52:59.8, 36°.91N×45°.27E, h5km, ML3.1*
ISC 30 13:53:01.0±1.3, 36°.95N±0°.04×45°.26E±0°.03, h2km±12km, n21, σ1s20/31, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MAHB	**Mahabad**	**0.40**	**117**	*e*Sg		**Sg**	**13 53 13.7**	**-0.3**
MAHB				*e*Pg		**Pg**	**13 53 08.0**	**-0.8**
IAZR	**Azarshahr**	**0.93**	**38**	*e*Pg		**Pb**	**13 53 19.4**	**-0.6**
IAZR				*e*Sg		**Sn**	**13 53 35.2**	**-0.2**
IAZR				*e*			13 53 47.2	
	comp=Z,12μm,0.4s							
YOVA	**Hakkari_Yksek**	**1.00**	**310**	P		**Pb**	**13 53 19.8**	**-1.4**
YOVA				S		**Sn**	**13 53 36.4**	**-0.8**
ISHB	**Shabestar**	**1.36**	**12**	*e*Pn		**Pn**	**13 53 26.2**	**-1.1**
ISHB				*e*			13 53 53.9	
	comp=Z,5μm,0.4s							
HAKT	**HAKKARI**	**1.38**	**296**	P		**Pn**	**13 53 26.2**	**-1.4**
HAKT				S		**Sg**	**13 53 48.6**	**+3.2**
HAKT				*i* AML	AML		13 53 50.0	
	comp=Z,412nm,0.3s							
HAKT				*i* AML	AML		13 53 53.0	
	comp=Z,343nm,0.6s							
ITBZ	**Tabriz**	**1.46**	**29**	*e*Pn		**Pb**	**13 53 28.5**	**-0.6**
ITBZ				*e*			13 53 58.9	
	comp=Z,2μm,0.3s							
IBST	**Bostanabad**	**1.50**	**60**	*e*Pn		**Pn**	**13 53 29.0**	**-0.2**
IBST				*e*			13 53 55.7	
	comp=Z,2μm,0.4s							
IHSH	**Hashtrud**	**1.64**	**77**	*e*Pn		**Pn**	**13 53 31.3**	**+0.1**
IHSH				*e*			13 54 01.4	
	comp=Z,2μm,0.3s							
IKRK	**Kirkuk**	**1.72**	**206**	*e*Pg		**Pn**	**13 53 31.0**	**-1.0**
IKRK				*e*Sg		**Sn**	**13 53 53.0**	**-1.5**
IKRK				AML	AML		13 53 57.4	
	comp=E,478nm,0.5s							
IKRK				AML	AML		13 54 00.6	
	comp=N,355nm,0.5s							
IMRD	**Marand**	**1.79**	**11**	*e*Pn		**Pb**	**13 53 34.5**	**-0.2**
IMRD				*e*			13 54 07.2	
	comp=Z,2μm,0.4s							
IHRS	**Heris**	**1.96**	**45**	*e*Pn		**Pb**	**13 53 37.6**	**-0.1**
IHRS				*e*			13 54 10.0	
	comp=Z,1μm,0.3s							
GEVA	**Gevas**	**2.21**	**309**	P		**Pb**	**13 53 41.2**	**-0.7**
GEVA				S		**Sg**	**13 54 12.4**	**+0.2**
IDHR	**Dehrash**	**2.43**	**158**	*e*Pn		**Pn**	**13 53 42.2**	**+0.3**
BTMN	**Batman**	**3.31**	**288**	P		**Pb**	**13 54 00.2**	**-0.3**
BTMN				S		**Sb**	**13 54 44.5**	**+3.1**
BTMN				*i* AML	AML		13 54 53.0	
	comp=Z,50nm,0.8s							
BTMN				*i* AML	AML		13 54 56.0	
	comp=Z,80nm,1.2s							
IKOM	**Komasi**	**3.32**	**146**	*e*Pn		**Pn**	**13 53 55.6**	**+1.4**
MARD	**Mardin**	**3.60**	**277**	P		**Pn**	**13 53 57.5**	**-0.5**
MARD				S		**Sb**	**13 54 51.3**	**+1.6**
MARD				*i* AML	AML		13 55 01.0	
	comp=Z,87nm,0.4s							
MARD				*i* AML	AML		13 55 01.0	
	comp=Z,72nm,0.5s							
QABG	**Abgarm-Qazvin**	**3.70**	**108**	*e*Pn		**Pn**	**13 53 59.1**	**-0.4**
BHD	**Baghdad**	**3.74**	**191**	*e*Pn		**Pn**	**13 53 59.0**	**-0.8**
BHD				*e*Sn		**Sn**	**13 54 44.0**	**-0.5**
IBDR	**Badra**	**3.87**	**172**	*e*Pn		**Pn**	**13 54 01.0**	**-0.6**
IBDR				*e*Sn		**Sn**	**13 54 48.0**	**+0.3**
IBDR				AML	AML		13 55 00.8	

comp=E,32nm,0.5s
IBDR AML AML 13 55 04.6
comp=N,25nm,0.5s
IDOB Doab 3.96 142 *e*Pn **Pn 13 54 03.2 +0.2**
IKFM Kafar-mosalman 4.02 147 *e*Pn **Pn 13 54 04.7 +1.1**

*PRU **30** 13:54:32.4±0.0, 42°.99N×13°.86E, h10km*
ROM 30 13:54:27.0±0.1, 42°.805N±0'.005×13°.145E±0'.006, h10km, ML2.9/40, 27C-19D, Error ellipse: s-maj=0.5km s-min=0.5km az=327.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.17**	**336**	⇓P	Pg	13 54 29.8	-1.1
FEMA				AML	AML		
	comp=N,12450μm,1.2s						
FEMA				AML	AML		
	comp=E,23400μm,0.5s						
FEMA				AML	AML		
	comp=N,12450μm,0.8s						
T1204	**Amatrice, Fraz**	**0.18**	**135**	⇑P	Pg	13 54 31.6	+0.6
T1204				S	Sg	13 54 34.8	+1.1
T1204				AML	AML		
	comp=E,17200μm,1.2s						
T1204				AML	AML		
	comp=N,14450μm,1.2s						
T1217	**Poggiodomo (PG**	**0.18**	**240**	P	Pg	13 54 31.7	+0.7
T1217				S	Sg	13 54 34.5	+0.8
T1217				AML	AML		
	comp=N,10405μm,0.6s						
T1217				AML	AML		
	comp=E,6690μm,0.8s						
T1217				AML	AML		
	comp=N,10195μm,0.6s						
T1217				AML	AML		
	comp=E,6840μm,0.6s						
T1217				AML	AML		
	comp=N,10415μm,0.6s						
T1217				AML	AML		
	comp=E,6695μm,0.8s						
T1217				AML	AML		
	comp=N,10215μm,0.6s						
T1217				AML	AML		
	comp=N,10410μm,0.6s						
T1217				AML	AML		
	comp=N,10205μm,0.6s						
T1217				AML	AML		
	comp=E,6700μm,0.8s						
T1217				AML	AML		
	comp=E,6845μm,0.6s						
T1217				AML	AML		
	comp=N,10210μm,0.6s						
T1217				AML	AML		
	comp=N,10430μm,0.6s						
T1215	**Vallo di Nera,**	**0.20**	**269**	⇑P	Pg	13 54 32.0	+0.7
T1215				S	Sg	13 54 35.5	+1.2
LNSS	**Leonessa**	**0.22**	**201**	⇑P	Pg	13 54 32.3	+0.7
LNSS				S	Sg	13 54 36.3	+1.6
LNSS				AML	AML		
	comp=E,9820μm,0.7s						
LNSS				AML	AML		
	comp=N,23050μm,0.3s						
T1241	**Roccafluvione,**	**0.22**	**76**	⇑P	Pb	13 54 32.6	-0.5
T1241				S	Sg	13 54 36.0	+1.3
T1241				AML	AML		
	comp=N,17150μm,0.2s						
T1241				AML	AML		
	comp=E,14700μm,0.2s						
T1241				AML	AML		
	comp=E,16050μm,0.2s						
T1241				AML	AML		
	comp=N,17200μm,0.2s						
T1241				AML	AML		
	comp=E,14750μm,0.2s						
T1241				AML	AML		
	comp=N,17300μm,0.2s						
AM05	**Amandola Campo**	**0.23**	**41**	⇑P	Pg	13 54 32.5	+0.7
AM05				S	Sg	13 54 36.0	+1.0
AM05				AML	AML		
	comp=E,2465μm,0.7s						
AM05				AML	AML		
	comp=E,14950μm,0.6s						
AM05				AML	AML		
	comp=N,1110μm,0.1s						
AM05				AML	AML		
	comp=E,2470μm,0.7s						
AM05				AML	AML		
	comp=E,15000μm,0.6s						
AM05				AML	AML		
	comp=N,1105μm,0.1s						
AM05				AML	AML		
	comp=N,4190μm,0.5s						
T1243	**Rocca Santa Ma**	**0.25**	**116**	⇓P	Pg	13 54 32.6	+0.5
T1243				S	Sg	13 54 36.7	+1.1
RM33	**Pellescritta (**	**0.30**	**170**	⇑P	Pg	13 54 33.6	+0.5
RM33				AML	AML		
	comp=E,4680μm,0.8s						
RM33				AML	AML		
	comp=N,3415μm,0.8s						
RM33				AML	AML		
	comp=E,4780μm,0.8s						
RM33				AML	AML		
	comp=N,3325μm,0.8s						
RM33				AML	AML		
	comp=N,3410μm,0.8s						
RM33				AML	AML		
	comp=E,4775μm,0.8s						
RM33				AML	AML		
	comp=E,4685μm,0.8s						
RM33				AML	AML		
	comp=N,3415μm,0.8s						
RM33				AML	AML		
	comp=E,4680μm,0.8s						
RM33				AML	AML		
	comp=N,3330μm,0.8s						
CAMP	**Campotosto**	**0.33**	**144**	⇑P	Pg	13 54 34.0	+0.4
CAMP				AML	AML		
	comp=E,5395μm,0.3s						
CAMP				AML	AML		
	comp=N,1895μm,0.2s						
T1211	**Morro Reatino**	**0.35**	**218**	⇑P	Pg	13 54 34.5	+0.5
T1211				S	Sb	13 54 41.0	+0.1
T1211				AML	AML		
	comp=E,3660μm,1.1s						
T1211				AML	AML		
	comp=N,6590μm,0.2s						
T1211				AML	AML		
	comp=E,3895μm,1.1s						
T1211				AML	AML		
	comp=N,6500μm,0.3s						
T1211				AML	AML		
	comp=E,3655μm,1.1s						
T1211				AML	AML		
	comp=N,6595μm,0.2s						
T1211				AML	AML		
	comp=E,3900μm,1.1s						
T1211				AML	AML		
	comp=E,3655μm,0.9s						
T1211				AML	AML		
	comp=E,3900μm,0.9s						
ARRO	**Arrone**	**0.36**	**231**	⇑P	Pg	13 54 34.8	+0.6
ARRO				AML	AML		
	comp=N,2195μm,1.0s						
ARRO				AML	AML		
	comp=E,1740μm,0.4s						
ARRO				AML	AML		
	comp=N,2190μm,1.0s						
ARRO				AML	AML		
	comp=N,2190μm,1.0s						
SEF1	**Sefro**	**0.37**	**337**	⇑P	Pg	13 54 34.8	+0.4
SEF1				AML	AML		
	comp=N,5925μm,0.2s						
SEF1				AML	AML		
	comp=E,6445μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.38**	**163**	⇑P	Pg	13 54 34.9	+0.4
T1247				AML	AML		
	comp=E,4165μm,0.7s						
T1247				AML	AML		
	comp=N,4700μm,0.5s						
TERO	**Teramo**	**0.38**	**118**	P	Pg	13 54 34.9	+0.2
TERO				S	Sb	13 54 40.9	-1.1
TERO				AML	AML		
	comp=E,2440μm,0.6s						
TERO				AML	AML		
	comp=N,3840μm,0.4s						
TERO				AML	AML		
	comp=N,4160μm,0.4s						
TERO				AML	AML		
	comp=N,3845μm,0.4s						
TERO				AML	AML		
	comp=E,2445μm,0.6s						
TERO				AML	AML		
	comp=E,2675μm,0.6s						
MDAR	**Monte D'Aria**	**0.39**	**360**	⇑P	Pg	13 54 35.1	+0.4
MNTP	**Montappone**	**0.41**	**36**	⇑P	Pb	13 54 36.3	0.0
MNTP				AML	AML		
	comp=E,6055μm,1.1s						
MNTP				AML	AML		
	comp=N,5455μm,1.3s						
MNTP				AML	AML		
	comp=E,6055μm,1.0s						
MNTP				AML	AML		
	comp=N,5455μm,0.7s						
MNTP				AML	AML		
	comp=E,6055μm,1.0s						
FIU1	**Fiuminata**	**0.41**	**338**	⇓P	Pg	13 54 35.6	+0.4
OFFI	**Offida**	**0.42**	**72**	P	Pb	13 54 36.6	+0.1
OFFI				AML	AML		
	comp=E,5070μm,0.4s						
OFFI				AML	AML		
	comp=N,5365μm,0.4s						
ASSB	**Assisi San Ben**	**0.43**	**304**	⇓P	Pg	13 54 35.9	+0.4
ASSB				AML	AML		
	comp=E,1720μm,1.6s						
ASSB				AML	AML		
	comp=N,2000μm,0.6s						
ASSB				AML	AML		
	comp=E,1720μm,0.4s						
CESX	**Cesi**	**0.46**	**245**	⇑P	Pg	13 54 36.4	+0.4
CESX				AML	AML		
	comp=E,1305μm,0.7s						
CESX				AML	AML		
	comp=N,1920μm,0.4s						
CESX				AML	AML		
	comp=E,1305μm,1.3s						
GIGS	**Gran Sasso**	**0.47**	**138**	⇓P	Pg	13 54 36.2	-0.1
GIGS				AML	AML		
	comp=E,688μm,0.4s						
GIGS				AML	AML		
	comp=N,638μm,0.5s						
GIGS				AML	AML		
	comp=E,688μm,0.4s						
GIGS				AML	AML		
	comp=N,638μm,1.5s						
GIGS				AML	AML		
	comp=E,688μm,1.6s						
AQU	**L'Aquila**	**0.49**	**157**	⇓P	Pg	13 54 36.9	+0.4
AQU				S	Sb	13 54 46.0	+1.1
AQU				AML	AML		
	comp=E,1820μm,0.4s						
AQU				AML	AML		
	comp=N,1765μm,1.2s						
AQU				AML	AML		
	comp=E,1735μm,0.4s						
AQU				AML	AML		
	comp=N,1795μm,1.2s						
AQU				AML	AML		
	comp=N,1760μm,1.2s						
AQU				AML	AML		
	comp=E,1825μm,0.4s						
AQU				AML	AML		
	comp=N,1795μm,0.8s						
AQU				AML	AML		
	comp=N,1760μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.53**	**316**	⇓P	Pg	13 54 37.8	+0.4
FIAM	**Fiamignano**	**0.54**	**182**	⇑P	Pg	13 54 37.6	+0.1
FIAM				AML	AML		
	comp=E,996μm,0.5s						
FIAM				AML	AML		
	comp=N,968μm,0.9s						
FIAM				AML	AML		
	comp=E,995μm,0.5s						
FIAM				AML	AML		
	comp=N,967μm,0.9s						
FIAM				AML	AML		
	comp=N,967μm,1.1s						
TRTR	**Tortoreto Alta**	**0.57**	**89**	⇑P	Pb	13 54 39.5	+0.6
TRTR				AML	AML		
	comp=N,3845μm,0.4s						
TRTR				AML	AML		
	comp=E,3885μm,0.5s						
FAGN	**Fagnano**	**0.63**	**149**	⇓P	Pg	13 54 39.2	0.0
FAGN				AML	AML		
	comp=N,2905μm,0.4s						
FAGN				AML	AML		
	comp=N,2910μm,0.4s						
FAGN				AML	AML		
	comp=E,3085μm,0.4s						
VCEL	**Villa Celiera**	**0.66**	**128**	⇓P	Pb	13 54 40.2	-0.4
VCEL				AML	AML		
	comp=N,2005μm,0.5s						
VCEL				AML	AML		
	comp=E,1535μm,0.6s						
VCEL				AML	AML		
	comp=N,2005μm,1.5s						
PP3	**Marolino**	**0.67**	**31**	P	Pb	13 54 41.2	+0.5
PP3				AML	AML		
	comp=N,10900μm,0.4s						
PP3				AML	AML		
	comp=E,11900μm,0.4s						
PP3				AML	AML		
	comp=E,11800μm,0.4s						
PP3				AML	AML		
	comp=N,11150μm,0.4s						
ATFO	**Monte Foce - G**	**0.70**	**323**	⇑P	Pg	13 54 40.8	+0.2
ARVD	**Arcevia**	**0.71**	**348**	⇓P	Pg	13 54 41.0	+0.3
ARVD				S	Sb	13 54 52.0	+0.7
ARVD				AML	AML		
	comp=E,708μm,0.6s						
ARVD				AML	AML		
	comp=E,708μm,1.4s						
ARVD				AML	AML		
	comp=N,489μm,0.5s						
SRES	**S.Oreste - Sor**	**0.74**	**220**	⇓P	Pb	13 54 41.7	-0.2
SRES				AML	AML		
	comp=E,393μm,0.5s						
SRES				AML	AML		
	comp=E,393μm,1.5s						
SRES				AML	AML		
	comp=N,500μm,0.4s						
T0110	**Collepietro**	**0.74**	**141**	⇓P	Pg	13 54 41.2	-0.2
T0110				AML	AML		
	comp=N,2015μm,0.3s						
T0110				AML	AML		
	comp=E,1895μm,0.5s						
MGAB	**Montegabbione**	**0.77**	**278**	⇓P	Pb	13 54 42.9	+0.4
MGAB				AML	AML		
	comp=E,843μm,0.4s						
MGAB				AML	AML		
	comp=N,860μm,0.5s						
MGAB				AML	AML		
	comp=E,1020μm,0.4s						
MGAB				AML	AML		
	comp=N,874μm,0.5s						
FRON	**Frontone**	**0.78**	**337**	P	Pg	13 54 42.1	+0.1
FRON				AML	AML		
	comp=E,619μm,0.8s						
FRON				AML	AML		
	comp=N,1055μm,0.4s						
ATVO	**AVT- Monte Val**	**0.79**	**317**	⇑P	Pg	13 54 42.3	0.0
ATVO				AML	AML		
	comp=E,376μm,1.6s						
ATVO				AML	AML		
	comp=N,342μm,0.8s						
ATVO				AML	AML		
	comp=N,342μm,1.2s						
ATVO				AML	AML		
	comp=E,376μm,0.4s						
PTQR	**Pietraquaria**	**0.81**	**166**	⇓P	Pg	13 54 42.4	-0.1
PTQR				AML	AML		
	comp=E,504μm,1.0s						
PTQR				AML	AML		
	comp=N,353μm,0.7s						
AOI	**Ancona**	**0.82**	**24**	⇓P	Pb	13 54 43.2	-0.1
AOI				S	Sn	13 54 58.0	+1.2
AOI				AML	AML		
	comp=N,819μm,0.3s						
AOI				AML	AML		
	comp=E,1016μm,1.4s						
MTCE	**Montecelio**	**0.84**	**201**	P	Pg	13 54 42.8	-0.4
MTCE				AML	AML		
	comp=E,844μm,0.5s						
MTCE				AML	AML		
	comp=N,440μm,1.2s						
MTCE				AML	AML		
	comp=N,440μm,0.8s						
ATPI	**Pietralunga -**	**0.84**	**320**	⇓P	Pg	13 54 43.3	0.0
ATPI				AML	AML		
	comp=E,380μm,0.8s						
ATPI				AML	AML		
	comp=N,420μm,0.6s						
ATPI				AML	AML		
	comp=E,380μm,1.2s						
PIEI	**Pieia**	**0.86**	**329**	⇓P	Pg	13 54 42.2	-1.3
PIEI				S	Sn	13 54 58.0	+0.2
PIEI				AML	AML		
	comp=N,332μm,1.4s						
PIEI				AML	AML		
	comp=E,493μm,1.6s						
PIEI				AML	AML		
	comp=N,332μm,0.6s						
CERT	**Cerreto**	**0.86**	**188**	P	Pg	13 54 43.3	-0.3
CERT				S	Sn	13 54 58.0	+0.1
CERT				AML	AML		
	comp=N,648μm,0.4s						
CERT				AML	AML		
	comp=E,1495μm,0.5s						
CERT				AML	AML		
	comp=E,1495μm,1.5s						
SENI	**Senigallia**	**0.90**	**4**	⇓P	Pn	13 54 45.4	-0.3
SENI				AML	AML		
	comp=E,663μm,0.9s						
SENI				AML	AML		
	comp=N,680μm,0.9s						
SENI				AML	AML		
	comp=E,670μm,0.9s						
SENI				AML	AML		
	comp=N,700μm,0.9s						
SENI				AML	AML		
	comp=N,700μm,1.1s						
SACS	**San Casciano d**	**0.91**	**273**	P	Pn	13 54 46.9	+1.0
SACS				AML	AML		
	comp=E,385μm,0.6s						
SACS				AML	AML		
	comp=E,404μm,0.7s						
SACS				AML	AML		
	comp=N,348μm,0.8s						
SACS				AML	AML		
	comp=N,367μm,0.8s						
SACS				AML	AML		
	comp=N,348μm,1.2s						
SACS				AML	AML		
	comp=N,367μm,1.2s						
APEC	**Apecchio**	**0.92**	**325**	⇓P	Pb	13 54 45.3	+0.2
FSSB	**Fossombrone**	**0.93**	**343**	⇓P	Pg	13 54 44.2	-0.7
FSSB				S	Sn	13 55 01.0	+1.5
FSSB				AML	AML		
	comp=N,2100μm,0.3s						
FSSB				AML	AML		
	comp=E,1565μm,0.3s						
FSSB				AML	AML		
	comp=N,2100μm,1.7s						
BADI	**Badiali**	**0.96**	**317**	⇓P	Pg	13 54 45.7	+0.1
PE3	**Peglio**	**1.01**	**332**	⇑P	Pg	13 54 46.1	-0.3
CAFI	**Castiglion Fio**	**1.01**	**302**	⇑P	Pn	13 54 47.0	-0.3
CAFI				AML	AML		
	comp=E,226μm,0.8s						
CAFI				AML	AML		
	comp=N,345μm,0.8s						
CAFI				AML	AML		
	comp=N,345μm,1.2s						
CAFI				AML	AML		
	comp=E,226μm,1.2s						
LPEL	**Lama dei Pelig**	**1.08**	**134**	⇓P	Pb	13 54 48.0	+0.2
LPEL				AML	AML		
	comp=E,538μm,0.7s						
LPEL				AML	AML		
	comp=N,432μm,0.7s						
LPEL				AML	AML		
	comp=E,538μm,1.3s						
ROM9	**Roma**	**1.08**	**206**	⇑P	Pb	13 54 46.7	-1.0
TOLF	**Tolfa**	**1.12**	**229**	⇑P	Pb	13 54 48.2	-0.4
TOLF				AML	AML		
	comp=N,306μm,0.4s						
TOLF				AML	AML		
	comp=E,322μm,0.7s						
LAV9	**Lanuvio**	**1.17**	**197**	P	Pb	13 54 49.1	-0.3
LAV9				AML	AML		
	comp=E,830μm,0.7s						
LAV9				AML	AML		
	comp=N,779μm,0.3s						
LAV9				AML	AML		
	comp=N,762μm,0.3s						
LAV9				AML	AML		
	comp=E,861μm,0.6s						
CRE	**Caprese Michel**	**1.19**	**313**	⇓P	Pg	13 54 50.3	+0.4
CRE				AML	AML		
	comp=E,190μm,0.5s						
CRE				AML	AML		
	comp=N,183μm,0.4s						
GIUL	**Giuliano Di Ro**	**1.25**	**176**	⇓P	Pg	13 54 51.5	+0.5
GIUL				AML	AML		
	comp=N,258μm,0.5s						
GIUL				AML	AML		
	comp=E,206μm,0.6s						
GIUL				AML	AML		
	comp=E,206μm,1.4s						
CASP	**Castiglione de**	**1.68**	**270**	⇑P	Pn	13 54 56.7	+0.3
CASP				AML	AML		
	comp=N,25μm,1.1s						
CASP				AML	AML		
	comp=E,24μm,1.1s						
CASP				AML	AML		
	comp=N,25μm,0.9s						
CASP				AML	AML		
	comp=E,24μm,0.9s						
PAOL	**Paolisi**	**2.07**	**149**	S	Sb	13 55 31.0	+0.7
SMPL	**Sampolo**	**2.94**	**257**	⇑P	Pn	13 55 16.4	+2.6
LJU	**Ljubljana**	**3.39**	**17**	P	Pn	13 55 21.1	+1.2
LJU				AML	AML		
	comp=E,280μm,0.5s						
LJU				AML	AML		
	comp=N,389μm,0.4s						
LJU				AML	AML		
	comp=E,280μm,1.5s						
STAL	**STALIGIAL**	**3.47**	**355**	⇓P	Pn	13 55 22.8	+1.7
STAL				AML	AML		
	comp=N,38μm,1.6s						
STAL				AML	AML		
	comp=E,54μm,0.6s						
STAL				AML	AML		
	comp=N,38μm,0.4s						
RNCA	**Ronca, Sant'Ol**	**3.47**	**300**	P	Pb	13 55 25.6	-3.0
LUSI	**Trento, Gardas**	**3.53**	**334**	⇑P	Pn	13 55 25.1	+3.2
CIMO	**Cimolais**	**3.54**	**352**	⇓P	Pn	13 55 23.6	+1.6
ZOU	**Zoufplan**	**3.75**	**358**	P	Pn	13 55 27.0	+1.9
MABI	**Malga Bissina**	**3.76**	**331**	⇓P	Pn	13 55 28.1	+2.9
PCP	**Piancastagn**	**3.76**	**299**	⇓P	Pn	13 55 24.1	-1.0
MILN	**Milano**	**3.88**	**315**	P	Pb	13 55 35.9	+0.3
BOSI	**Bolzano**	**3.91**	**341**	⇑P	Pg	13 55 40.5	-1.4
ABTA	**Abfaltersbach**	**3.97**	**354**	*e*Pn	Pn	13 55 30.0	+2.1
	comp=N,12nm,0.6s						
RISI	**Rein**	**4.21**	**350**	⇓P	Pn	13 55 33.6	+2.2
MONC	**Moncucco Torin**	**4.40**	**303**	⇑P	Pb	13 55 40.2	-4.1
SQTA	**Sankt Quirin**	**4.62**	**343**	*e*Pn	Pn	13 55 40.9	+3.8
	comp=N,2.6nm,0.3s						
KHC	**Kasperske Hory**	**6.33**	**3**	*e*PN	Pn	13 56 02.4	+2.0
KHC				*e*SN	Sn	13 57 10.5	-2.3

ROM 30 14:03:02.2±0.1, 42°.811N±0'.006×13°.168E±0'.007, h10km, Md1.4/3, 11C-19D, Error ellipse: s-maj=0.7km s-min=0.4km az=326.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**18**	P	Pg	14 03 04.7	+0.4
T1245				S	Sg	14 03 06.0	+0.1
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,54870μm,0.2s						
T1245				AML	AML		
	comp=N,30477μm,0.3s						
T1245				AML	AML		
	comp=E,55180μm,0.2s						

T1245 AML AML
comp=N,30959μm,0.2s
MMO1 Montemonaco 0.15 53 P Pg 14 03 05.2 -0.4
T1204 Amatrice, Fraz 0.17 141 P Pg 14 03 06.0 0.0
T1204 AML AML
comp=E,70500μm,0.5s
T1204 AML AML
comp=N,38800μm,0.8s
T1204 AML AML
comp=N,38850μm,0.8s
T1204 AML AML
comp=N,1655μm,0.3s
T1204 AML AML
comp=E,3509μm,0.2s
FEMA Monte Fema 0.17 330 P Pg 14 03 07.3 +1.3
FEMA S Sg 14 03 08.8 +0.1
FEMA AML AML
comp=E,86450μm,1.5s
FEMA AML AML
comp=N,83550μm,1.5s
FEMA AML AML
comp=N,83400μm,1.5s
FEMA AML AML
comp=E,86400μm,1.5s
FEMA AML AML
comp=N,83250μm,1.5s
FEMA AML AML
comp=E,6576μm,0.2s
FEMA AML AML
comp=N,3256μm,0.1s
FEMA END
FEMA END
T1241 Roccafluvione, 0.20 77 ⇓P Pg 14 03 07.5 +1.1
T1241 S Sg 14 03 11.1 +1.9
T1241 AML AML
comp=N,55200μm,1.2s
T1241 AML AML
T1241 AML AML
comp=N,52000μm,0.8s
T1241 AML AML
T1241 AML AML
comp=N,52000μm,0.8s
T1241 AML AML
comp=N,55150μm,1.2s
T1241 AML AML
comp=N,1280μm,0.2s
T1241 AML AML
comp=E,2218μm,0.2s
T1241 AML AML
comp=E,2264μm,0.2s
T1241 AML AML
comp=N,1234μm,0.2s
T1217 Poggiodomo (PG 0.20 241 P Pg 14 03 07.1 +0.8
T1217 S Sg 14 03 10.8 +1.5
T1217 END
AM05 Amandola Campo 0.21 39 ⇑P Pg 14 03 07.5 +0.9
AM05 S Sg 14 03 11.1 +1.4
AM05 AML AML
comp=E,34300μm,1.1s
AM05 AML AML
comp=N,21350μm,1.6s
AM05 AML AML
comp=N,3365μm,0.3s
AM05 AML AML
comp=E,34300μm,1.2s
AM05 AML AML
AM05 AML AML
comp=N,3365μm,0.3s
AM05 AML AML
comp=N,484μm,0.1s
T1215 Vallo di Nera, 0.22 268 P Pg 14 03 07.5 +0.7
T1215 S Sg 14 03 11.2 +1.4
T1215 END
LNSS Leonessa 0.23 204 P Pg 14 03 07.7 +0.8
LNSS S Sg 14 03 11.7 +1.6
T1243 Rocca Santa Ma 0.24 119 ⇑P Pg 14 03 07.7 +0.6
GUMA Gualdo di Mace 0.28 26 ⇑P Pb 14 03 08.9 -0.4
GUMA AML AML
GUMA AML AML
comp=N,84750μm,1.6s
GUMA AML AML
GUMA AML AML
GUMA AML AML
comp=N,84800μm,1.6s
GUMA AML AML
comp=N,88850μm,1.0s
GUMA AML AML
comp=N,4770μm,0.1s
RM33 Pellescritta (0.30 174 ⇑P Pg 14 03 08.1 -0.1
RM33 S Sb 14 03 13.9 -1.0
RM33 AML AML
comp=E,15700μm,0.5s
RM33 AML AML
comp=E,15450μm,0.5s
RM33 AML AML
comp=E,18050μm,1.2s
RM33 AML AML
comp=N,19400μm,0.4s
RM33 AML AML
comp=E,17600μm,1.2s
RM33 AML AML
comp=N,19400μm,0.4s
RM33 AML AML
comp=E,18000μm,1.2s
RM33 AML AML
comp=E,1781μm,0.2s
RM33 AML AML
comp=N,1549μm,0.2s
RM33 AML AML
comp=N,1572μm,0.2s
RM33 AML AML
comp=E,1799μm,0.2s
CAMP Campotosto 0.33 147 P Pg 14 03 09.2 +0.5
CAMP AML AML
comp=E,17050μm,1.0s
CAMP AML AML
comp=N,19350μm,1.6s
T1211 Morro Reatino 0.36 220 ⇓P Pg 14 03 10.0 +0.6
T1211 AML AML
comp=E,9555μm,1.0s
T1211 AML AML
comp=N,16800μm,1.2s
T1211 AML AML
comp=E,8975μm,1.0s
T1211 AML AML
comp=E,9565μm,1.0s
T1211 AML AML
comp=E,8990μm,1.0s
T1211 AML AML
comp=N,16700μm,1.3s
T1211 AML AML
comp=E,1016μm,0.2s
T1211 AML AML
comp=N,1197μm,0.1s
T1211 AML AML
comp=E,977μm,0.2s
T1211 AML AML
comp=N,1181μm,0.1s
TERO Teramo 0.37 120 P Pg 14 03 09.9 +0.4
TERO AML AML
comp=N,20250μm,0.4s
TERO AML AML
comp=E,22250μm,0.7s
TERO AML AML
comp=N,19600μm,0.4s
TERO AML AML
comp=E,22950μm,0.7s
TERO AML AML
comp=N,1191μm,0.1s
SEF1 Sefro 0.37 334 ⇓P Pb 14 03 10.4 -0.6
SEF1 AML AML
comp=N,27300μm,0.7s
SEF1 AML AML
comp=E,46900μm,0.4s
SEF1 AML AML
comp=N,27350μm,0.7s
ARRO Arrone 0.38 232 ⇑P Pb 14 03 10.3 -0.7
ARRO AML AML
comp=E,7890μm,1.1s
ARRO AML AML
comp=N,7800μm,1.2s
ARRO AML AML
comp=N,551μm,0.2s
ARRO AML AML
comp=E,474μm,0.2s
T1247 Pizzolo (AQ) 0.38 165 ⇓P Pg 14 03 10.3 +0.6
T1247 S Sb 14 03 16.4 -0.6
T1247 AML AML
comp=N,18900μm,1.0s
T1247 AML AML
comp=E,22250μm,1.0s
T1247 AML AML
comp=N,18950μm,1.0s
OFFI Offida 0.40 72 ⇓P Pb 14 03 11.1 -0.3
OFFI AML AML
comp=N,57450μm,0.7s
OFFI AML AML
comp=E,38200μm,0.8s
GAG1 Gagliole 0.43 350 P Pb 14 03 11.6 -0.4
GAG1 AML AML
comp=E,34850μm,1.4s
GAG1 AML AML
comp=E,34850μm,1.4s
GAG1 AML AML
comp=N,37950μm,0.5s
ASSB Assisi San Ben 0.44 302 ⇑P Pg 14 03 11.2 +0.4
ASSB AML AML
comp=E,11500μm,0.9s
ASSB AML AML
comp=N,13300μm,1.3s
ASSB AML AML
comp=E,766μm,0.2s
GIGS Gran Sasso 0.47 140 P Pg 14 03 11.9 +0.6
GIGS AML AML
comp=E,4650μm,0.4s
GIGS AML AML
comp=N,4860μm,0.3s
SNTG Esanatoglia 0.47 339 ⇓P Pb 14 03 12.2 -0.5
SNTG AML AML
comp=E,8070μm,1.2s
SNTG AML AML
comp=E,7565μm,0.6s
SNTG AML AML
comp=E,8065μm,1.2s
SNTG AML AML
comp=N,8925μm,0.3s
SNTG AML AML
comp=N,9415μm,0.4s
SNTG AML AML
comp=E,316μm,0.1s
CESX Cesi 0.48 245 ⇓P Pg 14 03 12.0 +0.5
CESX AML AML
comp=E,8145μm,1.2s
CESX AML AML
comp=N,6160μm,1.2s
EL6 Elcito 0.52 355 ⇓P Pb 14 03 13.0 -0.5
EL6 S Sb 14 03 22.0 +0.8
EL6 AML AML
comp=N,20700μm,0.7s
EL6 AML AML
comp=E,16200μm,1.4s
EL6 AML AML
comp=N,20650μm,0.7s
ATCC AVT- Casa Cast 0.54 314 ⇓P Pg 14 03 12.9 +0.3
ATCC AML AML
comp=E,16750μm,1.3s
ATCC AML AML
comp=N,11610μm,1.3s
ATCC AML AML
comp=E,16700μm,1.3s
ATCC AML AML
comp=N,11585μm,1.3s
FIAM Fiamignano 0.54 184 S Sb 14 03 22.0 +0.2
TRTR Tortoreto Alta 0.55 90 ⇑P Pb 14 03 14.5 +0.6
TRTR AML AML
comp=E,34200μm,0.7s
TRTR AML AML
comp=N,46300μm,0.8s
VCEL Villa Celiera 0.65 130 ⇑P Pb 14 03 15.3 -0.3
VCEL AML AML
comp=E,9535μm,0.6s
VCEL AML AML
comp=E,9555μm,0.6s
VCEL AML AML
comp=N,9580μm,0.9s
PP3 Marolino 0.65 30 ⇓P Pb 14 03 16.2 +0.5
PP3 AML AML
comp=E,15550μm,1.5s
PP3 AML AML
comp=N,15350μm,1.2s
PP3 AML AML
comp=E,15450μm,1.5s
PP3 AML AML
comp=E,16200μm,1.3s
PP3 AML AML
comp=E,16100μm,1.3s
PP3 AML AML
comp=N,15000μm,1.2s
PP3 AML AML
comp=E,2781μm,0.3s
MURB Monte Urbino 0.65 314 P Pb 14 03 15.3 -0.4
MURB AML AML
comp=E,15600μm,0.9s
MURB AML AML
comp=N,15200μm,0.3s
MURB AML AML
comp=E,16150μm,0.9s
MURB AML AML
comp=E,15600μm,0.9s
MURB AML AML
comp=N,15200μm,0.3s
MURB AML AML
comp=N,15500μm,0.3s
ARVD Arcevia 0.71 347 ⇑P Pb 14 03 16.4 -0.2
ARVD AML AML
comp=E,5600μm,0.4s
ARVD AML AML
comp=N,2860μm,0.7s
ATFO Monte Foce - G 0.71 322 ⇑P Pb 14 03 16.3 -0.3
ATTE AVT- Monte Tez 0.71 303 P Pb 14 03 16.4 -0.3
ATTE AML AML
comp=E,4140μm,1.6s
ATTE AML AML
comp=N,3295μm,1.0s
T0110 Collepietro 0.74 142 ⇓P Pb 14 03 16.9 -0.3
T0110 AML AML
comp=E,9610μm,0.4s
T0110 AML AML
comp=N,9340μm,0.9s
T0110 AML AML
comp=N,305μm,0.4s
MGAB Montegabbione 0.78 278 ⇓P Pb 14 03 17.8 -0.1
MGAB AML AML
comp=N,7365μm,1.2s
MGAB AML AML
comp=E,3615μm,1.0s
MGAB AML AML
comp=N,7785μm,1.2s
MGAB AML AML
comp=E,4440μm,0.9s
ATVO AVT- Monte Val 0.80 316 P Pg 14 03 17.8 +0.2
ATVO AML AML
comp=E,3375μm,1.4s
ATVO AML AML
comp=N,3745μm,0.8s
ATPI Pietralunga - 0.85 319 ⇓P Pg 14 03 18.8 +0.2
ATPI AML AML
comp=E,3435μm,1.1s
ATPI AML AML
comp=N,4060μm,1.1s
PIEI Pieia 0.86 328 P Pn 14 03 19.9 -0.5
PIEI AML AML
comp=E,3355μm,0.3s
PIEI AML AML
comp=N,3035μm,0.7s
MPAG Monte Paganucc 0.87 340 ⇓P Pb 14 03 19.8 +0.3
MPAG AML AML
comp=N,4700μm,0.7s
MPAG AML AML
comp=E,2970μm,0.8s
FSSB Fossombrone 0.93 342 ⇓P Pb 14 03 20.4 +0.1
FSSB AML AML
comp=E,7775μm,1.3s
FSSB AML AML
comp=N,12400μm,0.3s
APEC Apecchio 0.93 324 ⇓P Pg 14 03 18.3 -1.7
APEC AML AML
comp=E,812μm,1.5s
APEC AML AML
comp=N,1130μm,0.6s
SACS San Casciano d 0.93 273 ⇓P Pn 14 03 21.7 +0.3
SACS AML AML
comp=E,2955μm,1.0s
SACS AML AML
comp=N,4125μm,0.9s
SACS AML AML
comp=E,2795μm,1.1s
SACS AML AML
comp=N,4110μm,0.9s
INTR Introdacqua 0.97 145 S Sn 14 03 35.0 -0.8
BADI Badiali 0.97 316 ⇑P Pb 14 03 21.2 +0.1
CAFI Castiglion Fio 1.02 301 P Pb 14 03 22.2 +0.2
CAFI AML AML
comp=E,2040μm,0.9s
CAFI AML AML
comp=N,1835μm,0.8s
CAFI AML AML
comp=E,2100μm,0.9s
CAFI AML AML
comp=N,1925μm,0.7s
LPEL Lama dei Pelig 1.07 135 ⇓P Pn 14 03 23.1 -0.2
LPEL AML AML
comp=E,3830μm,1.1s
LPEL AML AML
comp=N,2775μm,0.5s
LATB Latina 1.32 187 S Sb 14 03 42.0 -2.1
ASQU Asqua 1.41 315 ⇓P Pn 14 03 28.3 +0.3
ASQU AML AML
comp=E,1210μm,1.1s
ASQU AML AML
comp=N,1058μm,1.6s
IMOL Imola, Italy 1.86 327 S Sg 14 04 03.0 +1.0
PAOL Paolisi 2.06 149 S Sn 14 04 03.0 +0.2
CMPR Campora 2.96 147 P Pn 14 03 48.2 -1.1
ZONE Zone 3.68 324 P Pn 14 04 01.6 +2.5

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*LDG **30** 14:03:18.4±0.1, 42°.96N×13°.17E, h9km, Ml3.2/24, Error ellipse: s-maj=4.8km s-min=2.3km az=41.0*
*PRU **30** 14:03:18.2±0.0, 42°.90N×13°.54E, h0km*
*ROM **30** 14:03:18.1±0.0, 42°.939N±0°.002×13°.211E±0°.003, h8km, ML3.6/81, Error ellipse: s-maj=0.2km s-min=0.2km az=59.0*
*MOS **30** 14:03:18.3±1.1, 43°.03N×13°.30E, h10km, mb4.3/11, Error ellipse: s-maj=9.0km s-min=5.7km az=81.1*
*STR **30** 14:03:18.0, 42°.94N×13°.21E, h8km, MLv4.2/6, preliminary*
*PDG **30** 14:03:18.9±0.7, 42°.98N×13°.25E, h9km, ML3.8/11, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*IDC **30** 14:03:18.9±1.0, 43°.03N×13°.37E, h0km, mb3.8/10, mbtmp3.8/18, ML3.4/8, MS3.0/8, Error ellipse: s-maj=18.8km s-min=12.7km az=75.0*

ISC 30 14:03:18.9±0.7, 42°.94N±0°.01×13°.20E±0°.01, h8km±4km, n255, σ2s05/320, mb4.0/19, 13C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.07**	**17**	P	**Pg**	**14 03 20.1**	**-0.9**
T1256				S	**Sg**	**14 03 21.5**	**-1.0**
T1245	**Castelsantange**	**0.09**	**185**	⇑P	**Pg**	**14 03 20.6**	**-0.6**
T1245				S	**Sg**	**14 03 22.6**	**-0.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.10**	**115**	⇑P	**Pg**	**14 03 20.5**	**-0.8**
MMO1				S	**Sg**	**14 03 22.2**	**-0.9**
FEMA	**Monte Fema**	**0.11**	**280**	P	**Pg**	**14 03 21.3**	**-0.3**
FEMA				S	**Sg**	**14 03 23.9**	**+0.5**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
AM05	**Amandola Campo**	**0.12**	**73**	⇑P	**Pg**	**14 03 21.0**	**-0.6**
AM05				S	**Sg**	**14 03 23.2**	**-0.2**
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
FDMO	**Fiordimonte**	**0.12**	**319**	⇑P	**Pg**	**14 03 21.3**	**-0.4**
FDMO				S	**Sg**	**14 03 23.8**	**+0.2**
T1216	**Preci, Frazion**	**0.14**	**249**	P	**Pg**	**14 03 21.8**	**-0.2**
T1216				S	**Sg**	**14 03 24.7**	**+0.7**
CSP1	**Cessapalombo**	**0.15**	**2**	P	**Pg**	**14 03 21.8**	**-0.3**
CSP1				S	**Sg**	**14 03 24.6**	**+0.2**
CSP1				AML	AML		
CSP1				AML	AML		
GUMA	**Gualdo di Mace**	**0.16**	**40**	P	**Pg**	**14 03 22.1**	**-0.2**
GUMA				S	**Sg**	**14 03 25.0**	**+0.5**
T1219	**Muccia, Frazio**	**0.18**	**309**	P	**Pg**	**14 03 22.5**	**-0.2**
T1219				S	**Sg**	**14 03 26.1**	**+0.9**
T1214	**Arquata del Tr**	**0.18**	**178**	P	**Pg**	**14 03 22.5**	**-0.2**
T1214				S	**Sg**	**14 03 26.1**	**+0.8**
T1220	**Camerino, Fraz**	**0.19**	**334**	P	**Pg**	**14 03 22.5**	**-0.2**
T1220				S	**Sg**	**14 03 26.2**	**+0.9**
T1241	**Roccafluvione,**	**0.19**	**117**	P	**Pg**	**14 03 22.7**	**-0.1**
T1241				S	**Sg**	**14 03 26.0**	**+0.5**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1244	**Arquata del Tr**	**0.20**	**158**	P	**Pg**	**14 03 22.8**	**-0.2**
T1244				S	**Sg**	**14 03 26.6**	**+0.9**
T1212	**Cascia, Frazio**	**0.22**	**211**	P	**Pg**	**14 03 23.2**	**-0.2**
T1212				S	**Sg**	**14 03 27.5**	**+1.1**
MDAR	**Monte D'Aria**	**0.25**	**351**	P	**Pg**	**14 03 23.8**	**-0.2**
MDAR				S	**Sg**	**14 03 28.3**	**+0.8**
SEF1	**Sefro**	**0.28**	**318**	P	**Pg**	**14 03 24.4**	**+0.1**
SEF1				S	**Sg**	**14 03 29.6**	**+1.5**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
MNTP	**Montappone**	**0.28**	**45**	P	**Pg**	**14 03 25.0**	**+0.6**
MNTP				S	**Sb**	**14 03 30.4**	**-0.7**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
T1204	**Amatrice, Fraz**	**0.28**	**162**	P	**Pg**	**14 03 24.4**	**-0.2**
T1204				S	**Sg**	**14 03 29.0**	**+0.8**
T1215	**Vallo di Nera,**	**0.28**	**240**	P	**Pg**	**14 03 24.5**	**0.0**
T1215				S	**Sg**	**14 03 29.4**	**+1.2**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
PIO1	**Pioraco**	**0.28**	**326**	P	**Pg**	**14 03 24.4**	**-0.1**
PIO1				S	**Sg**	**14 03 29.8**	**+1.5**

T1201	**Domo (RI)**	**0.29 172**	P	**Pg**	**14 03 24.8 +0.1**	
T1201			S	**Sg**	**14 03 29.9 +1.4**	
T1217	**Poggiodomo (PG**	**0.30 221**	P	**Pg**	**14 03 25.5 +0.6**	
T1217			S	**Sg**	**14 03 30.3 +1.3**	
T1217			AML	AML		
	comp=E,22350µm,0.9s					
T1217			AML	AML		
	comp=N,25200µm,1.0s					
T1217			AML	AML		
	comp=N,25200µm,1.0s					
T1217			AML	AML		
	comp=E,22350µm,0.9s					
T1217			AML	AML		
	comp=E,21950µm,0.9s					
T1217			AML	AML		
	comp=N,25200µm,0.7s					
T1243	**Rocca Santa Ma**	**0.31 143**	P	**Pg**	**14 03 24.6 -0.4**	
T1243			S	**Sg**	**14 03 29.5 +0.4**	
GAG1	**Gagliole**	**0.31 342**	P	**Pg**	**14 03 25.1 0.0**	
GAG1			S	**Sg**	**14 03 30.7 +1.5**	
GAG1			AML	AML		
	comp=E,34850µm,1.4s					
GAG1			AML	AML		
	comp=E,34850µm,1.4s					
GAG1			AML	AML		
	comp=N,37950µm,0.5s					
GAG1			AML	AML		
	comp=N,38000µm,0.5s					
FIU1	**Fiuminata**	**0.31 322**	P	**Pg**	**14 03 25.0 -0.1**	
FIU1			S	**Sg**	**14 03 30.8 +1.4**	
FIU1			AML	AML		
	comp=N,10250µm,0.9s					
FIU1			AML	AML		
	comp=E,8995µm,1.3s					
FIU1			AML	AML		
	comp=N,10260µm,0.9s					
FIU1			AML	AML		
	comp=N,10255µm,0.9s					
OFFI	**Offida**	**0.36 91**	P	**Pg**	**14 03 26.4 +0.5**	
OFFI			AML	AML		
	comp=E,38200µm,0.8s					
OFFI			AML	AML		
	comp=N,57450µm,0.7s					
LNSS	**Leonessa**	**0.36 199**	P	**Pg**	**14 03 26.0 0.0**	
LNSS			S	**Sb**	**14 03 32.3 -1.2**	
SNTG	**Esanatoglia**	**0.36 329**	P	**Pg**	**14 03 25.8 -0.3**	
SNTG			S	**Sg**	**14 03 32.4 +1.4**	
SNTG			AML	AML		
	comp=E,8070µm,1.2s					
SNTG			AML	AML		
	comp=E,8065µm,1.2s					
SNTG			AML	AML		
	comp=N,8925µm,0.3s					
SNTG			AML	AML		
	comp=E,7565µm,0.6s					
SNTG			AML	AML		
	comp=N,9415µm,0.4s					
SNTG			AML	AML		
	comp=E,8070µm,1.2s					
EL6	**Elcito**	**0.39 350**	P	**Pg**	**14 03 26.5 -0.1**	
ASSB	**Assisi San Ben**	**0.41 284**	P	**Pg**	**14 03 26.6 -0.3**	
ASSB			AML	AML		
	comp=N,13300µm,1.3s					
ASSB			AML	AML		
	comp=E,11500µm,0.9s					
T1246	**Crognaleto (TE**	**0.42 149**	P	**Pg**	**14 03 26.5 -0.6**	
T1246			S	**Sg**	**14 03 33.2 +0.6**	
RM33	**Pellescritta (**	**0.43 178**	P	**Pg**	**14 03 26.9 -0.5**	
RM33			S	**Sg**	**14 03 34.0 +1.0**	
CAMP	**Campotosto**	**0.43 159**	⇑P	**Pg**	**14 03 26.9 -0.5**	
CAMP			S	**Sg**	**14 03 33.7 +0.6**	
CAMP			AML	AML		
	comp=E,17050µm,1.0s					
CAMP			AML	AML		
	comp=N,19350µm,1.6s					
TERO	**Teramo**	**0.44 137**	P	**Pg**	**14 03 26.6 -0.8**	
TERO			S	**Sg**	**14 03 33.7 +0.6**	
ATCC	**AVT- Casa Cast**	**0.48 301**	P	**Pg**	**14 03 28.2 0.0**	
ATCC			AML	AML		
	comp=E,16750µm,1.3s					
ATCC			AML	AML		
	comp=N,11610µm,1.3s					
ATCC			AML	AML		
	comp=N,11585µm,1.3s					
ATCC			AML	AML		
	comp=E,16700µm,1.3s					
FOSV	**Fossato di Vic**	**0.48 318**	P	**Pg**	**14 03 27.9 -0.3**	
FOSV			S	**Sb**	**14 03 36.2 -0.6**	
T1211	**Morro Reatino**	**0.48 212**	P	**Pg**	**14 03 28.3 +0.1**	
T1211			S	**Sg**	**14 03 35.8 +1.2**	
T1211			AML	AML		
	comp=E,9555µm,1.0s					
T1211			AML	AML		
	comp=N,16750µm,1.2s					
T1211			AML	AML		
	comp=E,8975µm,1.0s					
T1211			AML	AML		
	comp=E,9565µm,1.0s					
T1211			AML	AML		
	comp=N,16800µm,1.2s					
T1211			AML	AML		
	comp=E,8990µm,1.0s					
T1211			AML	AML		
	comp=N,16700µm,1.2s					
T1211			AML	AML		
	comp=N,16750µm,1.2s					
T1211			AML	AML		
	comp=E,9575µm,1.0s					
T1211			AML	AML		
	comp=E,8995µm,1.0s					
ARRO	**Arrone**	**0.48 221**	P	**Pg**	**14 03 28.0 -0.3**	
ARRO			AML	AML		
	comp=E,7895µm,1.1s					
ARRO			AML	AML		
	comp=N,7800µm,1.2s					
ARRO			AML	AML		
	comp=N,7795µm,1.2s					
ARRO			AML	AML		
	comp=E,7890µm,1.1s					
CIMA	**Civitanova Mar**	**0.50 43**	P	**Pg**	**14 03 27.6 -1.0**	
T1247	**Pizzolo (AQ)**	**0.51 172**	P	**Pg**	**14 03 28.2 -0.5**	
T1247			S	**Sg**	**14 03 36.4 +1.1**	
T1247			AML	AML		
	comp=N,18950µm,1.0s					
T1247			AML	AML		
	comp=E,22250µm,1.0s					
T1247			AML	AML		
	comp=N,18900µm,1.0s					
PP3	**Marolino**	**0.53 35**	P	**Pb**	**14 03 29.9 -0.6**	
TRTR	**Tortoreto Alta**	**0.54 104**	P	**Pb**	**14 03 30.1 -0.6**	
TRTR			AML	AML		
	comp=E,34200µm,0.7s					
TRTR			AML	AML		
	comp=N,46300µm,0.8s					
GIGS	**Gran Sasso**	**0.56 151**	P	**Pg**	**14 03 28.9 -0.9**	
GIGS			S	**Sg**	**14 03 37.7 +0.5**	
GIGS			AML	AML		
	comp=E,4650µm,0.4s					
GIGS			AML	AML		
	comp=N,4860µm,0.3s					
CESX	**Cesi**	**0.56 234**	P	**Pg**	**14 03 29.4 -0.5**	
CESX			S	**Sb**	**14 03 39.1 -0.2**	
CESX			AML	AML		
	comp=N,6160µm,1.2s					
CESX			AML	AML		
	comp=E,8145µm,1.2s					
ARVD	**Arcevia**	**0.59 341**	P	**Pg**	**14 03 29.9 -0.3**	
ARVD			S	**Sb**	**14 03 40.0 +0.1**	
ARVD			AML	AML		
	comp=E,5600µm,0.4s					
ARVD			AML	AML		
	comp=N,2860µm,0.7s					
MURB	**Monte Urbino**	**0.59 303**	P	**Pg**	**14 03 30.0 -0.3**	
MURB			S	**Sb**	**14 03 40.4 +0.3**	
MURB			AML	AML		
	comp=N,15200µm,0.3s					
MURB			AML	AML		
	comp=N,15500µm,0.3s					
MURB			AML	AML		
	comp=E,15600µm,0.9s					
MURB			AML	AML		
	comp=E,16150µm,0.9s					
AQU	**L'Aquila**	**0.61 166**	P	**Pg**	**14 03 29.9 -0.7**	
AQU	**L'Aquila**	**0.61 166**	P	**Pg**	**14 03 29.9 -0.7**	
AQU			S	**Sb**	**14 03 39.6 -0.9**	
AQU			AML	AML		
	comp=E,10430µm,1.0s					
AQU			AML	AML		
	comp=N,12700µm,0.3s					
AQU			AML	AML		
	comp=E,10305µm,0.4s					
AQU			AML	AML		
	comp=N,12350µm,0.4s					
AQU			AML	AML		
	comp=E,10455µm,1.0s					
AQU			AML	AML		
	comp=N,12750µm,0.3s					
ATTE	**AVT- Monte Tez**	**0.67 293**	P	**Pg**	**14 03 32.5 +0.6**	
ATTE			AML	AML		
	comp=N,3295µm,1.0s					
ATTE			AML	AML		
	comp=E,4140µm,1.6s					
FRON	**Frontone**	**0.67 329**	P	**Pg**	**14 03 31.3 -0.6**	
FRON			S	**Sb**	**14 03 42.5 +0.1**	
FRON			AML	AML		
	comp=E,4385µm,0.6s					
FRON			AML	AML		
	comp=N,6600µm,0.6s					
AOI	**Ancona**	**0.68 26**	P	**Pg**	**14 03 31.9 0.0**	
AOI			AML	AML		
	comp=N,2305µm,1.3s					
AOI			AML	AML		
	comp=E,3390µm,0.3s					
FIAM	**Fiamignano**	**0.68 185**	P	**Pg**	**14 03 31.5 -0.5**	
FIAM			S	**Sb**	**14 03 41.8 -0.8**	
ATLO	**AVT- Montelove**	**0.69 303**	P	**Pg**	**14 03 31.5 -0.7**	
VCEL	**Villa Celiera**	**0.72 139**	P	**Pg**	**14 03 32.3 -0.5**	
VCEL			S	**Sb**	**14 03 43.8 -0.2**	
VCEL			AML	AML		
	comp=E,9555µm,0.6s					
VCEL			AML	AML		
	comp=N,9580µm,0.9s					
VCEL			AML	AML		
	comp=N,9585µm,0.9s					
VCEL			AML	AML		
	comp=E,9535µm,0.6s					
ATVO	**AVT- Monte Val**	**0.73 307**	P	**Pg**	**14 03 32.2 -0.7**	
ATVO			AML	AML		
	comp=E,3375µm,1.4s					
ATVO			AML	AML		
	comp=N,3745µm,0.8s					
FAGN	**Fagnano**	**0.73 157**	P	**Pg**	**14 03 32.6 -0.5**	
FAGN			S	**Sb**	**14 03 43.4 -0.8**	
ATVA	**AVT- Monte Val**	**0.75 297**	P	**Pg**	**14 03 31.3 -2.0**	
MPAG	**Monte Paganucc**	**0.76 335**	P	**Pg**	**14 03 33.1 -0.4**	
MPAG			AML	AML		
	comp=E,2970µm,0.8s					
MPAG			AML	AML		
	comp=N,4700µm,0.7s					
PIEI	**Pieia**	**0.77 321**	P	**Pg**	**14 03 33.2 -0.5**	
PIEI			S	**Sb**	**14 03 45.6 +0.4**	
PIEI			AML	AML		
	comp=N,3035µm,0.7s					
PIEI			AML	AML		
	comp=E,3355µm,0.3s					
ATPI	**Pietralunga -**	**0.77 311**	P	**Pg**	**14 03 33.2 -0.6**	
ATPI			AML	AML		
	comp=E,3435µm,1.1s					
ATPI			AML	AML		
	comp=N,4060µm,1.1s					
MGAB	**Montegabbione**	**0.80 268**	P	**Pb**	**14 03 35.4 +0.3**	
MGAB			AML	AML		
	comp=E,3615µm,1.0s					
MGAB			AML	AML		
	comp=E,4440µm,0.9s					
MGAB			AML	AML		
	comp=N,7365µm,1.2s					
MGAB			AML	AML		
	comp=N,7785µm,1.2s					
FSSB	**Fossombrone**	**0.81 338**	P	**Pg**	**14 03 34.1 -0.4**	
FSSB			AML	AML		
	comp=E,7775µm,1.3s					
FSSB			AML	AML		
	comp=N,12400µm,0.3s					
T0110	**Collepietro**	**0.83 149**	P	**Pg**	**14 03 33.6 -1.3**	
T0110			AML	AML		
	comp=E,9610µm,0.4s					
T0110			AML	AML		
	comp=N,9340µm,0.9s					
APEC	**Apecchio**	**0.84 318**	P	**Pg**	**14 03 35.0 0.0**	
APEC			AML	AML		
	comp=N,1130µm,0.6s					
APEC			AML	AML		
	comp=E,812µm,1.5s					
APEC			AML	AML		
	comp=N,1132µm,0.6s					
PE3	**Peglio**	**0.91 326**	P	**Pg**	**14 03 35.9 -0.5**	
PTQR	**Pietraquaria**	**0.93 171**	P	**Pg**	**14 03 35.6 -1.2**	
PTQR			AML	AML		
	comp=N,2440µm,1.1s					
PTQR			AML	AML		
	comp=E,2385µm,1.3s					
SACS	**San Casciano d**	**0.95 265**	P	**Pg**	**14 03 36.5 -0.7**	
CAFI	**Castiglion Fio**	**0.98 294**	P	**Pg**	**14 03 37.5 -0.3**	
CAFI			AML	AML		
	comp=E,2040µm,0.9s					
CAFI			AML	AML		
	comp=N,1925µm,0.7s					
CAFI			AML	AML		
	comp=N,1835µm,0.8s					
CAFI			AML	AML		
	comp=E,2100µm,0.9s					
LATE	**Laterza**	**1.08 253**	P	**Pg**	**14 03 39.2 -0.4**	
VVLD	**Villa Vallelon**	**1.12 164**	P	**Pg**	**14 03 40.0 -0.3**	
VVLD			AML	AML		
	comp=E,3220µm,0.6s					
VVLD			AML	AML		
	comp=N,5110µm,1.6s					
MCIV	**Monte Civitell**	**1.13 262**	P	**Pg**	**14 03 40.6 0.0**	
MCIV			AML	AML		
	comp=E,1165µm,1.0s					
MCIV			AML	AML		
	comp=N,1655µm,1.2s					
CRE	**Caprese Michel**	**1.14 307**	P	**Pg**	**14 03 40.7 0.0**	
CRE			AML	AML		
	comp=N,1765µm,1.4s					
CRE			AML	AML		
	comp=E,1420µm,1.5s					
LPEL	**Lama dei Pelig**	**1.15 141**	P	**Pg**	**14 03 39.6 -1.5**	
SAMA	**S.Maria delle**	**1.25 201**	P	**Pg**	**14 03 42.0 -0.8**	
SAMA			AML	AML		
	comp=E,2580µm,1.4s					
SAMA			AML	AML		
	comp=N,1840µm,1.4s					
TOLF	**Tolfa**	**1.25 226**	P	**Pg**	**14 03 41.4 -1.4**	
TOLF			AML	AML		
	comp=N,2010µm,1.0s					
TOLF			AML	AML		
	comp=E,1780µm,1.3s					
ARCI	**Arcidosso**	**1.27 266**	P	**Pg**	**14 03 42.9 -0.3**	
ARCI			AML	AML		
	comp=N,434µm,0.9s					
ARCI			AML	AML		
	comp=E,440µm,0.9s					
POFI	**Posta Fibreno**	**1.28 163**	P	**Pb**	**14 03 43.5 +0.1**	
POFI			AML	AML		
	comp=N,2035µm,0.8s					
POFI			AML	AML		
	comp=E,1790µm,0.8s					
POFI			AML	AML		
	comp=N,1900µm,0.8s					
POFI			AML	AML		
	comp=E,1800µm,0.8s					
BLLA	**Bellaria**	**1.31 336**	AML	AML		
	comp=N,4765µm,1.5s					
BLLA			AML	AML		
	comp=E,3865µm,1.3s					
LRP	**Arpino**	**1.33 167**	P	**Pg**	**14 03 45.0 +0.7**	
LRP			AML	AML		
	comp=E,1625µm,0.9s					
LRP			AML	AML		
	comp=N,2030µm,0.9s					
ASQU	**Asqua**	**1.34 310**	P	**Pn**	**14 03 44.2 +0.2**	
SFI	**Santa Sofia**	**1.38 315**	P	**Pg**	**14 03 45.5 +0.1**	
RNI2	**Rionero Sannit**	**1.43 150**	P	**Pn**	**14 03 45.5 +0.2**	
RNI2			AML	AML		
	comp=E,3755µm,1.4s					
RNI2			AML	AML		
	comp=N,3170µm,1.1s					
RNI2			AML	AML		
	comp=E,3685µm,1.4s					
RNI2			AML	AML		
	comp=N,3125µm,1.1s					
FRES	**Fresagrandinar**	**1.46 131**	P	**Pb**	**14 03 46.1 -0.2**	
LIK	**San Giovanni I**	**1.46 169**	P	**Pg**	**14 03 46.8 -0.2**	
LIK			AML	AML		
	comp=N,3438µm,1.2s					
LIK			AML	AML		
	comp=E,2825µm,0.7s					
CERA	**Filignano**	**1.48 155**	P	**Pn**	**14 03 45.8 -0.1**	
CERA			AML	AML		
	comp=E,3035µm,1.3s					
CERA			AML	AML		
	comp=E,2940µm,1.3s					
CERA			AML	AML		
	comp=N,3730µm,1.0s					
CERA			AML	AML		
	comp=N,3825µm,1.0s					
CSNT	**Castellina Chi**	**1.49 291**	P	**Pn**	**14 03 45.7 -0.4**	
CSNT			AML	AML		
	comp=E,593µm,1.6s					
CSNT			AML	AML		
	comp=N,628µm,0.9s					
FROS	**Frosini**	**1.52 281**	P	**Pn**	**14 03 45.9 -0.5**	
RUFI	**Rufina**	**1.52 307**	P	**Pn**	**14 03 46.4 0.0**	
RUFI			AML	AML		
	comp=E,1036µm,1.6s					
RUFI			AML	AML		
	comp=N,1012µm,1.2s					
OSSC	**Osservatorio P**	**1.54 293**	P	**Pn**	**14 03 45.4 -1.3**	
OSSC			AML	AML		
	comp=E,772µm,1.2s					
OSSC			AML	AML		
	comp=N,736µm,0.9s					
TRIV	**Trivento**	**1.54 139**	P	**Pn**	**14 03 47.3 +0.5**	
TRIV			AML	AML		
	comp=E,2825µm,0.9s					
TRIV			AML	AML		
	comp=N,2775µm,1.4s					
TRIF	**Trifonti**	**1.69 277**	P	**Pn**	**14 03 48.1 -0.7**	
BSSO	**Busso**	**1.74 143**	P	**Pb**	**14 03 50.9 -0.2**	
BSSO			AML	AML		
	comp=N,492µm,1.2s					
BSSO			AML	AML		
	comp=E,690µm,1.3s					
CIGN	**Sant'Elia a Pi**	**1.81 135**	P	**Pn**	**14 03 51.2 +0.9**	
CIGN			AML	AML		
	comp=E,1320µm,1.2s					
CIGN			AML	AML		
	comp=N,846µm,1.6s					
MELA	**Melanico ??? S**	**1.89 130**	P	**Pn**	**14 03 52.1 +0.6**	
MELA			AML	AML		
	comp=E,2225µm,0.7s					
MELA			AML	AML		
	comp=N,2805µm,1.4s					
MELA			AML	AML		
	comp=N,2840µm,1.4s					
MELA			AML	AML		
	comp=E,2295µm,1.0s					
TREM	**Isole Tremiti**	**1.90 115**	AML	AML		
	comp=N,2165µm,1.1s					
TREM			AML	AML		
	comp=E,2870µm,1.1s					
PSB1	**Pescosannita**	**2.10 145**	P	**Pb**	**14 03 56.3 -0.9**	
PSB1			AML	AML		
	comp=E,948µm,1.2s					
PSB1			AML	AML		
	comp=N,980µm,1.3s					
PSB1			AML	AML		
	comp=E,996µm,1.2s					
PSB1			AML	AML		
	comp=N,1000µm,1.3s					
APRC	**Apricena**	**2.10 123**	P	**Pn**	**14 03 54.9 +0.4**	
APRC			AML	AML		
	comp=E,1085µm,0.6s					
APRC			AML	AML		
	comp=N,1160µm,1.4s					
MAIM	**Mastiano**	**2.20 297**	P	**Pn**	**14 03 56.0 +0.2**	
MAIM			AML	AML		
	comp=N,350µm,1.1s					
MAIM			AML	AML		
	comp=E,422µm,0.9s					
SGRT	**San Giovanni R**	**2.23 121**	P	**Pn**	**14 03 56.7 +0.4**	
SGRT			AML	AML		
	comp=N,803µm,0.9s					
SGRT			AML	AML		
	comp=E,1046µm,0.5s					
SKDS	**Skadanscina**	**2.67 12**	*i* Pn	**Pn**	**14 04 01.9 -0.4**	
KNDS	**Knezji Dol**	**2.72 18**	*i* Pn	**Pn**	**14 04 02.5 -0.5**	
PALZ	**Palazzo San Ge**	**2.87 133**	P	**Pn**	**14 04 05.7 +0.7**	
PALZ			AML	AML		
	comp=E,1235µm,1.4s					
PALZ			AML	AML		
	comp=N,1270µm,1.4s					
SMPL	**Sampolo**	**3.02 255**	AML	AML		
	comp=E,25µm,1.6s					
SMPL			AML	AML		
	comp=N,35µm,1.6s					
SABO	**M.te Sabotino**	**3.05 5**	P	**Pn**	**14 04 06.9 -0.6**	
SABO			AML	AML		
	comp=N,830µm,0.9s					
SABO			AML	AML		
	comp=E,519µm,0.7s					
SABO			AML	AML		
	comp=E,2175µm,0.7s					
SABO			AML	AML		
	comp=N,3420µm,0.9s					
CMPR	**Campora**	**3.06 148**	AML	AML		
	comp=N,96µm,1.5s					
CMPR			AML	AML		
	comp=E,150µm,0.9s					
CGRP	**Cima Grappa**	**3.10 342**	P	**Pn**	**14 04 08.7 +0.3**	
CGRP			AML	AML		
	comp=E,718µm,1.1s					
CGRP			AML	AML		
	comp=N,500µm,0.9s					
CGRP			AML	AML		
	comp=E,698µm,1.1s					
CGRP			AML	AML		
	comp=N,490µm,0.8s					
ROVR	**Rover Verones**	**3.10 331**	P	**Pn**	**14 04 08.5 +0.2**	
ROVR			AML	AML		
	comp=E,113µm,1.3s					
ROVR			AML	AML		
	comp=N,142µm,0.9s					
PGF	**Pioggiola**	**3.12 264**	*e*P	**Pn**	**14 04 08.9 +0.4**	
PGF			*e*Sn	**Sn**	**14 04 41.1 -4.9**	
	comp=N,5.6nm,0.4s					
PGF	**Pioggiola**	**3.12 264**	AML	AML		
	comp=N,38µm,1.6s					
PGF			AML	AML		
	comp=E,40µm,1.4s					
LJU	**Ljubljana**	**3.24 17**	AML	AML		
	comp=E,1450µm,0.8s					
LJU			AML	AML		
	comp=N,1875µm,0.9s					
AMUR	**Altamura**	**3.25 128**	P	**Pn**	**14 04 10.7 +0.4**	
AMUR			AML	AML		
	comp=E,277µm,0.7s					
AMUR			AML	AML		
	comp=N,380µm,0.9s					
MTSN	**Montesano sull**	**3.29 144**	P	**Pn**	**14 04 12.9 +2.0**	
MTSN			AML	AML		
	comp=N,125µm,1.3s					
MTSN			AML	AML		
	comp=E,185µm,0.9s					
SALO	**Salr**	**3.29 325**	P	**Pn**	**14 04 12.0 +1.2**	
SALO			AML	AML		
	comp=N,490µm,1.2s					
SALO			AML	AML		
	comp=N,484µm,1.3s					
SALO			AML	AML		
	comp=E,467µm,0.9s					
SALO			AML	AML		
	comp=E,454µm,0.9s					
MPRI	**Monte Prat**	**3.30 357**	P	**Pn**	**14 04 11.1 +0.1**	
MPRI			AML	AML		
	comp=N,513µm,1.3s					
MPRI			AML	AML		
	comp=E,493µm,1.1s					
STON	**Ston**	**3.31 90**	AML	AML		
	comp=N,147µm,1.6s					
STON			AML	AML		
	comp=E,124µm,1.1s					
ROBS	**Robic**	**3.31 4**	*i* Pn	**Pn**	**14 04 11.1 +0.1**	
CIMO	**Cimolais**	**3.41 351**	P	**Pn**	**14 04 12.4 -0.1**	
CIMO			AML	AML		
	comp=E,134µm,1.4s					
CIMO			AML	AML		

comp=E,135μm,1.4s
CIMO AML AML
comp=N,126μm,1.5s
CIMO AML AML
comp=N,122μm,1.5s
LUSI Trento, Gardas 3.42 333 P Pn 14 04 13.2 +0.5
LUSI AML AML
comp=N,283μm,1.1s
LUSI AML AML
comp=E,304μm,0.9s
AGOR Agordo 3.44 347 P Pn 14 04 13.2 +0.4
AGOR AML AML
comp=E,159μm,1.2s
AGOR AML AML
comp=N,124μm,1.1s
PTCC Patocco-Chiusa 3.46 2 P Pn 14 04 12.5 -0.7
PTCC AML AML
comp=E,242μm,1.0s
PTCC AML AML
comp=N,157μm,1.0s
CLUD Cludinico 3.52 356 P Pn 14 04 13.6 -0.4
CLUD AML AML
comp=E,284μm,0.9s
CLUD AML AML
comp=N,265μm,1.4s
GAGG Gaggia 3.52 334 P Pn 14 04 15.0 +0.9
GAGG AML AML
comp=E,412μm,1.2s
GAGG AML AML
comp=N,305μm,0.9s
LTRZ Laterza 3.58 130 P Pn 14 04 15.7 +0.9
ZONE Zone 3.58 323 AML AML
comp=N,199μm,0.9s
ZONE AML AML
comp=E,166μm,0.9s
NOCI Noci 3.60 125 P Pn 14 04 15.2 +0.2
NOCI AML AML
comp=E,222μm,0.6s
NOCI AML AML
comp=N,336μm,1.0s
ACOM Acomizza, Ital 3.61 3 P Pn 14 04 15.9 +0.5
ACOM AML AML
comp=N,345μm,0.9s
ACOM AML AML
comp=E,260μm,1.0s
ACOM AML AML
comp=N,328μm,0.9s
ACOM AML AML
comp=E,266μm,1.0s
ZOU Zoufplan 3.62 358 P Pn 14 04 15.1 -0.3
ZOU AML AML
comp=E,348μm,1.3s
ZOU AML AML
comp=N,305μm,1.3s
ZOU AML AML
comp=E,340μm,1.3s
ZOU AML AML
comp=N,323μm,1.4s
MABI Malga Bissina 3.66 329 P Pn 14 04 16.8 +0.8
MABI AML AML
comp=E,126μm,1.2s
MABI AML AML
comp=N,114μm,1.3s
FVI Forni Avoltri 3.67 355 P Pn 14 04 16.3 +0.3
FVI AML AML
comp=N,196μm,0.6s
FVI AML AML
comp=E,148μm,1.4s
OBKA Obir 3.69 15 *e*Pn **Pn 14 04 16.9 +0.5**
comp=E,4.5nm,0.4s
MYKA Terra Mystica 3.70 5 *e*Pn **Pn 14 04 17.3 +0.8**
comp=E,4.7nm,0.3s
KOSI Kohlern 3.75 340 P Pn 14 04 18.1 +0.8
KOSI AML AML
comp=N,308μm,1.2s
KOSI AML AML
comp=E,405μm,1.0s
APPI Appiano 3.80 339 P Pn 14 04 18.8 +0.9
APPI AML AML
comp=N,230μm,0.5s
APPI AML AML
comp=E,167μm,1.3s
MILN Milano 3.82 313 AML AML
comp=E,480μm,0.4s
MILN AML AML
comp=N,466μm,0.4s
ABTA Abfaltersbach 3.84 353 *i* Pn **Pn 14 04 19.1 +0.7**
comp=N,40nm,0.4s,SNR=26
SALB San Lorenzo Be 3.87 141 AML AML
comp=E,98μm,1.2s
SALB AML AML
comp=N,72μm,1.6s
BRY Bratogost 3.92 89 *e*Pn **Pn 14 04 20.1 +0.5**
BRY *i* Sn **Sn 14 05 06.6 +0.7**
HCY Herceg Novi 3.93 95 *e*Pn **Pn 14 04 20.3 +0.7**
HCY *i* Sn **Sn 14 05 07.0 +1.0**
RISI Rein 4.08 349 P Pn 14 04 22.9 +1.0
RISI AML AML
comp=E,370μm,0.8s
RISI AML AML
comp=N,327μm,0.5s
CEME Cevo 4.23 93‖ *i*Pn **Pn 14 04 24.5 +0.7**
CEME *i* Sn **Sn 14 05 14.2 +0.8**
NKME Niksic 4.23 90⇑ *i*Pn **Pn 14 04 24.5 +0.7**
NKME *i* Sn **Sn 14 05 14.3 +0.8**
BUM Brajici-Budva 4.25 97 *e*Pn **Pn 14 04 24.8 +0.8**
BUM *i* Sn **Sn 14 05 14.8 +0.9**
SBF Sospel 4.30 284 *e*P **Pn 14 04 25.5 +0.8**
SBF *e*Sn **Sn 14 05 09.0 -6.1**
comp=N,11nm,0.3s
FETA Feichten 4.44 338 *i* Pn **Pn 14 04 28.4 +1.7**
comp=N,24nm,0.8s,SNR=26
WTTA Wattenberg 4.46 346 *i* Pn **Pn 14 04 29.4 +2.4**
comp=N,9.0nm,0.2s,SNR=9.4
WTTA Wattenberg 4.46 346 AML AML
comp=N,206μm,1.2s
WTTA AML AML
comp=E,199μm,1.2s
DRME Dracevica, Mon 4.49 98⇑ *i*Pn **Pn 14 04 28.0 +0.8**
DRME *i* Sn **Sn 14 05 20.4 +0.8**
VSL Villasalto 4.49 221 P **Pn 14 04 28.1 +0.8**
TTG Podgorica 4.49 94 *e*Pn **Pn 14 04 28.2 +0.9**
TTG *i* Sn **Sn 14 05 20.7 +1.0**
SQTA Sankt Quirin 4.50 342 *i* Pn **Pn 14 04 29.3 +1.8**
comp=E,30nm,0.4s,SNR=19
DAVOX Davos/Dischmat 4.50 330 Pn **Pn 14 04 30.2 +2.6**
comp=E,5.7nm,0.3s,baz=172,slow=22,SNR=37
DAVOX Sn **Sn 14 05 22.7 +2.4**
comp=E,2.6nm,0.3s,baz=299,slow=23,SNR=11
DAVOX LR LR 14 06 46.2
comp=E,112nm,20.4s,baz=264,slow=46
comp=E,23nm,0.5s
WATA Walderalm 4.54 346 *i* Pn **Pn 14 04 30.4 +2.3**
comp=E,9.4nm,0.3s,SNR=16
ULC Ulcinj 4.58 100 *e*Pn **Pn 14 04 29.4 +0.9**
ULC *i* Sn **Sn 14 05 22.7 +0.8**
ARSA Arzberg 4.61 20 *e*Pn **Pn 14 04 29.3 +0.3**
comp=E,1.9nm,0.3s
KOME Kolasin 4.64 89 *e*Pn **Pn 14 04 30.2 +0.8**
KOME *i* Sn **Sn 14 05 24.1 +0.5**
MOTA Moosalm 4.64 342 *i* Pn **Pn 14 04 31.5 +1.9**
comp=E,13nm,0.4s,SNR=14
BIOA Bad Ischl, Aus 4.76 4 *i* Pn **Pn 14 04 31.5 +0.6**
comp=E,19nm,0.3s,SNR=13
RETA Reutte 4.86 340 *i* Pn **Pn 14 04 34.3 +1.9**
comp=E,23nm,0.4s,SNR=16
LMR La Mourre 4.91 277 *e*P **Pn 14 04 32.8 -0.2**
LMR *e*Sn **Sn 14 05 23.9 -6.1**
comp=E,1.7nm,0.3s
IVA Berane 4.92 89 *e*Pn **Pn 14 04 34.0 +0.8**
IVA *i* Sn **Sn 14 05 30.8 +0.4**
DAVA Damuels 4.94 333 *i* Pn **Pn 14 04 35.6 +2.0**
comp=E,30nm,0.8s,SNR=16
MOA Molln 4.96 8 *e*Pn **Pn 14 04 34.8 +1.0**
comp=E,1.9nm,0.2s
MBDF Montbardon 4.98 293 *e*P **Pn 14 04 35.2 +1.1**
MBDF *e*Sn **Sn 14 05 25.4 -6.6**
comp=E,4.2nm,0.4s
PVY Plav 4.99 92 *e*Pn **Pn 14 04 35.0 +0.8**
PVY *i* Sn **Sn 14 05 32.6 +0.4**
RONA Rosalia, Austr 5.23 24 *e*Pn **Pn 14 04 37.0 -0.5**
comp=E,1.6nm,0.2s
LPG La Plagne 5.29 301 *e*P **Pn 14 04 39.9 +1.4**
LPG *e*Sn **Sn 14 05 33.3 -6.5**
comp=E,4.5nm,0.4s
LPG La Plagne 5.29 301 P **Pn 14 04 39.9 +1.4**
LPL La Plagne 5.31 301 *e*P **Pn 14 04 40.0 +1.3**
LPL *e*Sn **Sn 14 05 33.6 -6.6**
comp=E,6.5nm,0.4s
CONA Conrad Observa 5.33 20 *e*Pn **Pn 14 04 39.0 +0.2**
comp=E,2.7nm,0.2s
ORIF Oris-en-Rattie 5.64 293 *e*P **Pn 14 04 45.0 +1.8**
ORIF *e*Sn **Sn 14 05 41.4 -6.8**
comp=E,3.4nm,0.4s
SMRF Simiane la Rot 5.64 283 *e*P **Pn 14 04 44.7 +1.5**
SMRF *e*Sn **Sn 14 05 41.2 -7.0**
comp=E,1.0nm,0.3s
BALST Balsthal 5.87 320 P **Pn 14 04 48.1 +1.9**
GERES GERESS Array B 5.91 3 Pn **Pn 14 04 46.7 -0.2**
comp=E,0.9nm,0.3s,baz=175,slow=13,SNR=28
GERES Sn **Sn 14 05 52.4 -2.5**
comp=E,2.5nm,0.3s,baz=173,slow=27,SNR=3.0
comp=E,1.5nm,0.3s
CKRC Cesky Krumlov 5.93 7 *e*PN **Pn 14 04 45.9 -1.1**
CKRC *e*SN **Sn 14 05 53.8 -1.4**
OHR Ohrid 5.95 105 *i* Pn **Pn 14 04 49.2 +1.9**
BOURR Bourrignon 6.13 319 P **Pn 14 04 52.8 +2.9**
MODS Modra-Piesok 6.14 26 *e*P **Pn 14 04 50.8 +0.9**
KHC Kasperske Hory 6.20 2 *e*P **Pn 14 04 49.8 -0.9**
KHC *e* 14 05 59.1
KHC Kasperske Hory 6.20 2 *e*PN **Pn 14 04 49.8 -0.9**
KHC *e*SN **Sn 14 05 59.1 -2.6**
BRANT Les Verrieres 6.22 312 P **Pn 14 04 55.3 +4.1**
KIZ Kirchzarten 6.24 325 P **Pn 14 04 52.7 +1.4**
CABF La Chapelle 6.25 308 *e*P **Pn 14 04 53.2 +1.7**
CABF *e*Sn **Sn 14 05 56.0 -7.2**
comp=E,2.8nm,0.4s
BFO Black Forest 6.38 329 *e*P **Pn 14 04 53.6 +0.4**
VIVF Saint-Julien-l 6.45 290 *e*P **Pn 14 04 55.8 +1.6**
VIVF Saint-Julien-l 6.45 290 P **Pn 14 04 56.4 +2.2**
MOF Molkenrain 6.50 321 P **Pn 14 04 55.9 +0.9**
KRUC Moravsky 6.51 19 *e*PN **Pn 14 04 54.4 -0.6**
KRUC *e*SN **Sn 14 06 06.9 -2.6**
BOUC Bouclans 6.53 314 P **Pn 14 04 57.2 +1.9**
HINF Hinteralfeld 6.61 320 *e*P **Pn 14 04 57.3 +0.9**
HINF *e*Sn **Sn 14 06 04.4 -7.6**
comp=E,9.0nm,0.3s
ECH Echery 6.76 323 P **Pn 14 04 59.1 +0.6**
VRAC Vranov 6.79 19 Pn **Pn 14 04 58.1 -0.7**
comp=E,0.7nm,0.3s,baz=194,slow=13,SNR=3.1
VRAC LR LR 14 08 13.0
comp=E,72nm,18.2s,baz=199,slow=44
comp=E,1.7nm,0.4s
VRAC Vranov 6.79 19 *e*PN **Pn 14 04 57.6 -1.2**
VYHS Vyhne 6.81 33 *e*P **Pn 14 04 59.9 +0.8**
CDF Champ du Feu 6.86 325 *e*P **Pn 14 05 01.0 +1.1**
CDF *e*Sn **Sn 14 06 09.9 -8.4**
comp=E,3.5nm,0.3s
LASF Ste Croix 6.89 283 *e*P **Pn 14 05 01.8 +1.6**
HAU Haudompre 6.99 319 *e*P **Pn 14 05 02.4 +0.9**
HAU *e*Sn **Sn 14 06 13.3 -7.9**
comp=E,20nm,0.4s
PRU Pruhonice 7.11 7 *e*P **Pn 14 05 02.3 -0.9**
PRU Pruhonice 7.11 7 *e*PN **Pn 14 05 02.3 -0.9**
VAY Valandovo 7.15 100 *i* Pn **Pn 14 05 04.6 +0.8**
NKC Novy Kostel 7.31 356 *e*SN **Sn 14 06 27.6 -1.6**
SMF Signal de Mont 7.62 302 *e*P **Pn 14 05 11.7 +1.5**
SMF *e*Sn **Sn 14 06 28.3 -8.3**
comp=E,1.7nm,0.2s
PAGF Fort de Pagny 7.67 320 *e*P **Pn 14 05 12.3 +1.4**
PAGF *e*Sn Sn 14 06 29.0 -8.9
comp=E,3.6nm,0.3s
SFTF Sexfontaines 7.77 315 *e*P **Pn 14 05 13.1 +0.8**
baz=134
SFTF *e*Sn Sn 14 06 31.8 -8.7
comp=E,4.1nm,0.4s
MOX Moxa 7.78 353 P **Pn 14 05 12.5 +0.1**
KEST Kesra 7.79 204 Pn **Pn 14 05 14.0 +1.3**
comp=E,0.1nm,0.3s,baz=216,slow=15,SNR=1.6
comp=E,1.4nm,0.4s
LOR Lormes 7.89 306 *e*P **Pn 14 05 15.4 +1.4**
baz=126
LOR *e*Sn **Sn 14 06 35.0 -8.5**
comp=E,4.0nm,0.3s
MEZF Maizieres J'vi 7.96 317 *e*P **Pn 14 05 16.1 +1.2**
baz=123
MEZF *e*Sn **Sn 14 06 36.8 -8.3**
comp=E,3.9nm,0.3s
AVF Avril sur Loir 7.98 302 *e*P **Pn 14 05 16.6 +1.4**
AVF *e*Sn **Sn 14 06 37.1 -8.5**
comp=E,1.0nm,0.3s
SAVF Savonnieres en 8.00 318 *e*P **Pn 14 05 16.8 +1.4**
baz=137
SAVF *e*Sn Sn 14 06 37.1 -8.9
comp=E,3.0nm,0.3s
SSF Saint Saulge 8.01 304 *e*P **Pn 14 05 17.3 +1.8**
SSF *e*Sn **Sn 14 06 37.7 -8.6**
comp=E,1.8nm,0.3s
CAF Calviac 8.28 288 P **Pn 14 05 21.5 +2.2**
CLL Collm 8.37 359 *e*P **Pn 14 05 19.0 -1.5**
CLL *e* 14 06 50.0
CLL Collm 8.37 359 *e*Pn **Pn 14 05 19.0 -1.5**
CLL *e*x x 14 05 25.0
CLL *e*x x 14 05 32.0
CLL *e*Sn **Sn 14 06 50.0 -5.1**
CLL *e*x x 14 07 05.0
CLL *e*x x 14 07 13.0
CLL *e*x x 14 07 24.0
CLL *e*Sg **Sg 14 07 44.0 -3.4**
comp=Z,21nm,1.2s
TCF Toulx Ste Croi 8.52 297 *e*Sn Sn 14 06 50.2 -8.8
comp=Z,1.2nm,0.1s
MLR Muntele Rosu 9.50 70 Pn **Pn 14 05 34.8 -1.3**
comp=Z,0.1nm,0.3s,baz=259,slow=17,SNR=1.8
MLR LR LR 14 10 07.2
comp=Z,154nm,18.8s,baz=282,slow=44
comp=Z,1.5nm,0.6s
IDI Anoyia 11.86 126 Pn **Pn 14 06 09.2 +0.8**
comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=2.4
IDI Sn **Sn 14 08 15.1 -5.9**
comp=Z,0.3nm,0.3s,baz=133,slow=23,SNR=6.3
comp=Z,2.6nm,0.8s
ESDC Sonseca Array 13.31 262 LR LR 14 10 44.7
comp=Z,38nm,21.0s,baz=28,slow=33
AKBB Malin Array Si 13.42 49‖ *e*P **Pn 14 06 30.3 +0.7**
ISP Isparta 14.15 105‖ *e*P **Pn 14 06 39.7 -0.1**
BR131 Keskin Array S 15.68 95‖ *e*P **Pn 14 06 58.6 -1.7**
BRTR Keskin Array B 15.68 95 LR LR 14 14 07.3
comp=Z,77nm,19.6s,baz=312,slow=42
EKA Eskdalemuir Ar 16.33 325 Pn **Pn 14 07 10.0 +1.6**
baz=136,slow=14
comp=Z,0.6nm,0.6s
EKA Eskdalemuir Ar 16.33 325 P **Pn 14 07 10.0 +1.6**
NOA NORSAR Array B 18.16 357 LR LR 14 14 21.6
comp=Z,20nm,19.2s,baz=240,slow=37
OBN Obninsk 19.46 43⇑ *e*P **P 14 07 45.0 -0.8**
OBN pmax pmax
comp=Z,4.0nm,0.9s
VORR Voronezh 19.59 55 *e*P **P 14 07 47.7 +0.4**
VORR pmax pmax
comp=Z,110nm,0.4s
FINES FINESS Array B 20.07 18 P **P 14 07 52.6 +0.2**
comp=Z,0.1nm,0.3s,baz=203,slow=10,SNR=3.4
comp=Z,4.8nm,0.9s
KIV Kislovodsk 21.39 77 *e*P **P 14 08 08.3 +1.3**
KIV pmax pmax
comp=Z,15nm,1.1s
KBZ Khabaz 21.57 78 P **P 14 08 07.8 -1.0**
comp=Z,8.5nm,1.0s,baz=290,slow=3.8,SNR=5.1
comp=Z,8.5nm,1.0s
KBZ Khabaz 21.57 78‖ *e*P **P 14 08 08.0 -0.8**
KBZ pmax pmax
comp=Z,13nm,1.1s
ZEI Tsey 22.45 80 *e*P **P 14 08 19.9 +1.4**
ZEI pmax pmax
comp=Z,7.0nm,1.3s
KLMR Klimovskoe 23.92 32 *e*P **P 14 08 31.8 -1.2**
KLMR pmax pmax
comp=Z,16nm,1.9s
KLMR Klimovskoe 23.92 32 *e*P **P 14 08 31.9 -1.1**
KLMR AMP 14 08 43.8
comp=Z,16nm,1.9s
BELG Belogornoye 24.82 56⇑ *e*P **P 14 08 41.8 +0.4**
BELG pmax pmax
comp=Z,1.0nm,0.9s
TORD Torodi Ar. Bea 31.31 202 P **P 14 09 40.5 +0.8**
comp=Z,0.4nm,0.6s,baz=15,slow=11,SNR=3.5
comp=Z,0.4nm,0.6s
ARU Arti 31.67 49 P **P 14 09 42.3 -0.2**
comp=Z,4.8nm,0.8s,baz=282,slow=5.3,SNR=5.9
comp=Z,4.8nm,0.8s
ARU Arti 31.67 49*c i*P **P 14 09 42.5 0.0**
ARU 14 10 41.1
ARU 14 12 32.2
ARU S **S 14 14 51.9 0.0**
ARU SS **SnSn 14 16 36.3 -1.4**
ARU pmax pmax
comp=Z,12nm,1.5s
GEYT Alibeck 34.24 83 P **P 14 10 06.6 +1.4**
comp=Z,0.9nm,0.5s,baz=286,slow=10,SNR=2.3
comp=Z,0.9nm,0.5s
BBTS Babate 38.01 231 LR LR 14 26 46.5
comp=Z,38nm,18.1s,baz=164,slow=37
BRVK Borovoye 38.55 54‖ *e*P **P 14 10 42.7 +0.9**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 38.62 54 P **P 14 10 43.2 +0.8**
comp=Z,1.3nm,0.8s,baz=276,slow=5.8,SNR=6.7
comp=Z,1.3nm,0.8s
KURBB Kurchatov Arra 44.07 56 P **P 14 11 27.2 0.0**
comp=Z,0.5nm,0.6s,baz=296,slow=10,SNR=5.4
comp=Z,0.5nm,0.6s
AAK Ala-Archa 44.08 68 LR LR 14 33 08.9
comp=Z,41nm,18.1s,baz=347,slow=41
KURK Kurchatov 44.10 56‖ *e*P **P 14 11 27.8 +0.4**
KURK pmax pmax
comp=Z,5.0nm,1.4s
ZALV Zalesovo Beam 46.81 50 *i* P P 14 11 56.0 +7.2
ZALV pmax pmax
comp=Z,1.0nm,0.6s
MK31 Makanchi Array 47.68 60‖ *e*P **P 14 11 54.4 -1.4**
MKAR Makanchi Array 47.68 60 P **P 14 11 55.9 +0.1**
comp=Z,1.1nm,0.7s,baz=271,slow=7.2,SNR=5.0
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 47.68 60*ce*P **P 14 11 58.4 +2.6**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
DGZ Jazzator, Alta 49.77 55‖ *e*P **P 14 12 13.5 +1.5**
DGZ pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 61.70 50 P **P 14 13 38.8 +1.2**
comp=Z,1.3nm,1.0s,baz=297,slow=9.5,SNR=5.4
comp=Z,1.3nm,1.0s
BILL Bilibino 67.50 11 *i* P **P 14 14 19.1 +4.2**
BILL pmax pmax
comp=Z,13nm,1.3s
ILAR Eielson Array 71.49 351 P **P 14 14 40.8 +1.1**
comp=Z,0.6nm,1.0s,baz=2.8,slow=6.3,SNR=5.1
comp=Z,0.6nm,1.0s
CMAR Chiang Mai Arr 74.61 79 P **P 14 14 59.0 +0.1**
comp=Z,0.3nm,0.3s,baz=301,slow=7.0,SNR=5.9
comp=Z,0.3nm,0.3s
CMAR Chiang Mai Arr 74.61 79*ce*P **P 14 15 01.7 +2.8**

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*IDC **30** 14:07:19.8±1.4, 42°.83N×13°.34E, h0km, mb3.3/2, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=39.2km s-min=13.7km az=89.0*
*PRU **30** 14:07:20.6±0.0, 42°.78N×13°.36E, h0km*
*ROM **30** 14:07:20.2±0.1, 42°.790N±0°.004×13°.069E±0°.004, h10km, ML3.2/79, Error ellipse: s-maj=0.3km s-min=0.3km az=291.0*
ISC 30 14:07:20.9±0.8, **42°.79N**±0°.01×**13°.13E**±0°.02, **h11**km±5km, **n129**,σ1°.54/149, **38C-31D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
T1245	**Castelsantange**	**0.08**	**32**	P	**Pg**	**14 07 23.4**	**-0.2**
T1245				S	**Sg**	**14 07 25.5**	**+0.1**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1217	**Poggiodomo (PG**	**0.17**	**243**	P	**Pg**	**14 07 23.8**	**-0.8**
T1217				S	**Sg**	**14 07 26.4**	**-0.9**
T1204	**Amatrice, Fraz**	**0.18**	**129**	P	**Pg**	**14 07 25.3**	**+0.4**
T1204				S	**Sg**	**14 07 29.2**	**+1.6**
T1204				AML	AML		
	comp=E,22000μm,0.4s						
T1204				AML	AML		
	comp=E,21950μm,0.4s						
T1204				AML	AML		
	comp=N,16300μm,0.4s						
FEMA	**Monte Fema**	**0.18**	**341**	AML	AML		
	comp=N,52000μm,0.3s						
FEMA				AML	AML		
	comp=E,56650μm,0.4s						
T1215	**Vallo di Nera,**	**0.19**	**274**	AML	AML		
	comp=E,15750μm,0.8s						
T1215				AML	AML		
	comp=E,15000μm,0.8s						
T1215				AML	AML		
	comp=N,32200μm,0.2s						
T1215				AML	AML		
	comp=N,32400μm,0.2s						
LNSS	**Leonessa**	**0.20**	**200**	P	**Pg**	**14 07 24.9**	**-0.3**
LNSS				S	**Sg**	**14 07 28.2**	**0.0**
LNSS				AML	AML		
	comp=E,15050μm,0.2s						
LNSS				AML	AML		
	comp=N,29400μm,0.9s						
LNSS				AML	AML		
	comp=N,29400μm,1.1s						
T1241	**Roccafluvione,**	**0.23**	**73**	P	**Pg**	**14 07 26.4**	**+0.7**
T1241				S	**Sg**	**14 07 31.0**	**+1.9**
T1241				AML	AML		
	comp=E,18150μm,0.6s						
T1241				AML	AML		
	comp=N,13950μm,0.5s						
AM05	**Amandola Campo**	**0.25**	**41**	P	**Pg**	**14 07 23.4**	**-2.7**
AM05				S	**Sg**	**14 07 25.4**	**-4.1**
AM05				AML	AML		
	comp=N,1860μm,0.1s						
AM05				AML	AML		
	comp=E,25200μm,0.8s						
AM05				AML	AML		
	comp=E,6040μm,0.8s						
AM05				AML	AML		
	comp=N,6335μm,0.4s						
T1243	**Rocca Santa Ma**	**0.25**	**111**	P	**Pg**	**14 07 26.3**	**+0.2**
RM33	**Pellescritta (**	**0.29**	**167**	⇑P	**Pg**	**14 07 26.7**	**-0.1**
RM33				AML	AML		
	comp=E,6135μm,0.7s						
RM33				AML	AML		
	comp=N,5960μm,1.1s						
RM33				AML	AML		
	comp=E,6250μm,0.7s						
RM33				AML	AML		
	comp=N,6010μm,1.1s						
RM33				AML	AML		
	comp=N,5955μm,1.1s						
RM33				AML	AML		
	comp=N,5955μm,0.9s						
RM33				AML	AML		
	comp=E,6135μm,1.3s						
RM33				AML	AML		
	comp=E,6250μm,1.3s						
RM33				AML	AML		
	comp=N,6010μm,0.9s						
CAMP	**Campotosto**	**0.33**	**141**	P	**Pg**	**14 07 27.6**	**+0.1**
CAMP				AML	AML		
	comp=E,2840μm,0.9s						
CAMP				AML	AML		
	comp=N,2215μm,0.9s						
CAMP				AML	AML		
	comp=E,2840μm,1.1s						
T1211	**Morro Reatino**	**0.33**	**219**	⇑P	**Pg**	**14 07 26.7**	**-0.8**
T1211				S	**Sg**	**14 07 33.0**	**+1.1**
T1211				AML	AML		
	comp=E,6825μm,1.1s						
T1211				AML	AML		
	comp=N,10695μm,0.5s						
T1211				AML	AML		
	comp=E,6755μm,0.1s						
T1211				AML	AML		
	comp=N,10730μm,0.6s						
T1211				AML	AML		
	comp=N,10710μm,0.5s						
T1211				AML	AML		
	comp=E,6750μm,0.1s						
T1211				AML	AML		
	comp=N,10750μm,0.6s						
T1211				AML	AML		
	comp=E,6825μm,1.1s						

ARRO	**Arrone**	**0.34 232**	⇑P		**Pg**	**14 07 26.9**	**-0.9**
ARRO			AML	AML			
	comp=E,7005μm,1.3s						
ARRO			AML	AML			
	comp=N,8325μm,0.6s						
ARRO			AML	AML			
	comp=N,8320μm,0.6s						
ARRO			AML	AML			
	comp=E,7010μm,1.3s						
ARRO			AML	AML			
	comp=E,7010μm,0.7s						
T1247	**Pizzolo (AQ)**	**0.37 160**	⇑P		**Pb**	**14 07 28.1**	**-1.4**
T1247			AML	AML			
	comp=E,4655μm,1.5s						
T1247			AML	AML			
	comp=E,4660μm,1.5s						
T1247			AML	AML			
	comp=N,4970μm,0.3s						
T1247			AML	AML			
	comp=E,4660μm,0.5s						
SEF1	**Sefro**	**0.38 340**	P		**Pg**	**14 07 27.8**	**-0.8**
SEF1			S		**Sg**	**14 07 33.7**	**+0.1**
SEF1			AML	AML			
	comp=E,21850μm,0.3s						
SEF1			AML	AML			
	comp=N,23400μm,0.2s						
SEF1			AML	AML			
	comp=N,23400μm,0.1s						
SEF1			AML	AML			
	comp=E,21900μm,0.3s						
TERO	**Teramo**	**0.39 115**	P		**Pb**	**14 07 28.6**	**-1.3**
TERO			AML	AML			
	comp=N,3185μm,0.4s						
TERO			AML	AML			
	comp=N,3585μm,0.4s						
TERO			AML	AML			
	comp=E,3325μm,0.9s						
TERO			AML	AML			
	comp=E,3715μm,0.9s						
TERO			AML	AML			
	comp=E,3715μm,1.1s						
TERO			AML	AML			
	comp=E,3325μm,1.1s						
MDAR	**Monte D'Aria**	**0.40 1**	P		**Pg**	**14 07 28.4**	**-0.6**
MDAR			AML	AML			
	comp=E,7485μm,0.4s						
MDAR			AML	AML			
	comp=N,7410μm,0.3s						
MDAR			AML	AML			
	comp=E,7480μm,0.4s						
MDAR			AML	AML			
	comp=E,7480μm,1.6s						
PIO1	**Pioraco**	**0.40 345**	P		**Pg**	**14 07 28.2**	**-0.7**
PIO1			AML	AML			
	comp=E,5125μm,0.7s						
PIO1			AML	AML			
	comp=E,5120μm,0.7s						
PIO1			AML	AML			
	comp=N,6050μm,1.0s						
PIO1			AML	AML			
	comp=N,6050μm,1.0s						
FIU1	**Fiuminata**	**0.43 340**	P		**Pg**	**14 07 28.7**	**-0.7**
FIU1			AML	AML			
	comp=N,7835μm,1.6s						
FIU1			AML	AML			
	comp=N,7840μm,1.6s						
FIU1			AML	AML			
	comp=N,7840μm,0.4s						
FIU1			AML	AML			
	comp=E,7945μm,0.8s						
MNTP	**Montappone**	**0.43 35**	P		**Pb**	**14 07 29.9**	**-0.6**
MNTP			AML	AML			
	comp=E,8080μm,0.3s						
MNTP			AML	AML			
	comp=N,8525μm,0.4s						
MNTP			AML	AML			
	comp=N,8530μm,0.4s						
MNTP			AML	AML			
	comp=E,8075μm,0.3s						
MNTP			AML	AML			
	comp=N,8530μm,1.6s						
ASSB	**Assisi San Ben**	**0.43 306**	P		**Pg**	**14 07 28.2**	**-1.2**
ASSB			S		**Sg**	**14 07 34.5**	**-0.7**
ASSB			AML	AML			
	comp=E,8995μm,0.3s						
ASSB			AML	AML			
	comp=N,9885μm,0.3s						
OFFI	**Offida**	**0.43 70**	⇑P		**Pb**	**14 07 28.8**	**-1.8**
OFFI			AML	AML			
	comp=E,5770μm,0.9s						
OFFI			AML	AML			
	comp=N,6895μm,0.7s						
OFFI			AML	AML			
	comp=N,6895μm,1.3s						
OFFI			AML	AML			
	comp=E,5770μm,1.1s						
SSM1	**San Severino M**	**0.44 4**	⇑P		**Pg**	**14 07 29.7**	**+0.1**
CESX	**Cesi**	**0.44 246**	P		**Pg**	**14 07 28.3**	**-1.3**
CESX			AML	AML			
	comp=N,7555μm,0.3s						
CESX			AML	AML			
	comp=E,10580μm,0.5s						
GAG1	**Gagliole**	**0.45 354**	P		**Pg**	**14 07 29.4**	**-0.5**
GAG1			AML	AML			
	comp=E,16000μm,1.4s						
GAG1			AML	AML			
	comp=N,12000μm,0.4s						
GAG1			AML	AML			
	comp=E,15950μm,1.4s						
GAG1			AML	AML			
	comp=E,15950μm,0.6s						
GIGS	**Gran Sasso**	**0.47 136**	⇑P		**Pb**	**14 07 29.8**	**-1.5**
GIGS			AML	AML			
	comp=N,627μm,0.9s						
GIGS			AML	AML			
	comp=E,626μm,0.9s						
GIGS			AML	AML			
	comp=E,626μm,0.9s						
GIGS			AML	AML			
	comp=E,626μm,1.1s						
AQU	**L'Aquila**	**0.48 155**	⇑P		**Pb**	**14 07 30.2**	**-1.2**
AQU			AML	AML			
	comp=E,2110μm,1.1s						
AQU			AML	AML			
	comp=E,2105μm,1.1s						
AQU			AML	AML			
	comp=N,1990μm,0.9s						
AQU			AML	AML			
	comp=E,2020μm,1.0s						
AQU			AML	AML			
	comp=N,1890μm,0.9s						
AQU			AML	AML			
	comp=E,2020μm,1.0s						
AQU			AML	AML			
	comp=E,2105μm,0.9s						
AQU			AML	AML			
	comp=N,1890μm,1.1s						
AQU			AML	AML			
	comp=N,1990μm,1.1s						
SNTG	**Esanatoglia**	**0.49 343**	⇑P		**Pg**	**14 07 29.6**	**-0.8**
SNTG			AML	AML			
	comp=E,4895μm,0.5s						
SNTG			AML	AML			
	comp=N,4515μm,0.3s						
SNTG			AML	AML			
	comp=N,4510μm,0.3s						
SNTG			AML	AML			
	comp=E,4840μm,0.5s						
SNTG			AML	AML			
	comp=N,4855μm,0.3s						
SNTG			AML	AML			
	comp=N,4515μm,0.3s						
SNTG			AML	AML			
	comp=E,4900μm,0.5s						
SNTG			AML	AML			
	comp=E,4840μm,1.5s						
SNTG			AML	AML			
	comp=E,4900μm,1.5s						
FIAM	**Fiamignano**	**0.52 181**	⇓P		**Pb**	**14 07 30.5**	**-1.6**
FIAM			AML	AML			
	comp=N,1645μm,0.3s						
FIAM			AML	AML			
	comp=E,1710μm,0.5s						
FIAM			AML	AML			
	comp=N,1645μm,1.7s						
FIAM			AML	AML			
	comp=E,1710μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.54 318**	⇓P		**Pg**	**14 07 30.2**	**-1.2**
ATCC			AML	AML			
	comp=N,3730μm,0.8s						
ATCC			AML	AML			
	comp=E,5175μm,1.5s						
ATCC			AML	AML			
	comp=N,3725μm,0.8s						
ATCC			AML	AML			
	comp=N,3725μm,1.2s						
TRE1	**Treia**	**0.54 14**	⇑P		**Pb**	**14 07 32.1**	**-0.4**
TRE1			AML	AML			
	comp=E,8630μm,1.2s						
TRE1			AML	AML			
	comp=N,5915μm,0.7s						
TRE1			AML	AML			
	comp=E,8625μm,1.2s						
TRE1			AML	AML			
	comp=N,5915μm,1.3s						
EL6	**Elcito**	**0.54 358**	⇓P		**Pg**	**14 07 28.7**	**-2.8**
EL6			S		**Sg**	**14 07 40.0**	**+1.3**
EL6			AML	AML			
	comp=E,8970μm,0.3s						
EL6			AML	AML			
	comp=N,8180μm,0.3s						
EL6			AML	AML			
	comp=E,8970μm,1.7s						
TRTR	**Tortoreto Alta**	**0.58 88**	⇓P		**Pb**	**14 07 32.3**	**-0.8**
TRTR			AML	AML			
	comp=E,6150μm,0.6s						
TRTR			AML	AML			
	comp=N,6355μm,0.4s						
FAGN	**Fagnano**	**0.62 147**	⇑P		**Pb**	**14 07 32.3**	**-1.5**
FAGN			AML	AML			
	comp=E,3760μm,0.7s						
FAGN			AML	AML			
	comp=E,3760μm,1.3s						
FAGN			AML	AML			
	comp=N,2685μm,0.3s						
MURB	**Monte Urbino**	**0.65 317**	⇑P		**Pg**	**14 07 32.3**	**-1.2**
MURB			AML	AML			
	comp=E,10035μm,0.3s						
MURB			AML	AML			
	comp=N,8530μm,0.4s						
MURB			AML	AML			
	comp=N,8680μm,0.4s						
MURB			AML	AML			
	comp=E,11200μm,0.3s						
MURB			AML	AML			
	comp=N,8685μm,0.4s						
MURB			AML	AML			
	comp=N,8530μm,1.6s						
MURB			AML	AML			
	comp=N,8685μm,1.6s						
VCEL	**Villa Celiera**	**0.66 127**	⇑P		**Pn**	**14 07 33.5**	**-2.8**
VCEL			AML	AML			
	comp=E,2965μm,0.4s						
VCEL			AML	AML			
	comp=E,2970μm,0.4s						
VCEL			AML	AML			
	comp=N,2900μm,0.6s						
MMUR	**Monte Murano**	**0.66 352**	S		**Sg**	**14 07 44.0**	**+1.5**
PP3	**Marolino**	**0.69 31**	⇑P		**Pg**	**14 07 32.3**	**-1.9**
PP3			AML	AML			
	comp=E,5170μm,0.4s						
PP3			AML	AML			
	comp=N,6830μm,0.4s						
PP3			AML	AML			
	comp=N,6835μm,0.4s						
PP3			AML	AML			
	comp=N,6725μm,0.4s						
PP3			AML	AML			
	comp=E,5715μm,0.4s						
PP3			AML	AML			
	comp=E,5165μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.70 306**	⇓P		**Pg**	**14 07 33.3**	**-1.2**
ATTE			AML	AML			
	comp=N,1560μm,0.3s						
ATTE			AML	AML			
	comp=E,1565μm,0.4s						
ATFO	**Monte Foce - G**	**0.71 325**	S		**Sg**	**14 07 46.0**	**+2.0**
SRES	**S.Oreste - Sor**	**0.72 220**	⇓P		**Pg**	**14 07 33.8**	**-1.0**
SRES			AML	AML			
	comp=N,1560μm,0.9s						
SRES			AML	AML			
	comp=E,1850μm,0.9s						
SRES			AML	AML			
	comp=N,1560μm,1.1s						
ARVD	**Arcevia**	**0.72 349**	⇓P		**Pg**	**14 07 32.5**	**-2.5**
ARVD			S		**Sg**	**14 07 46.0**	**+1.6**
ARVD			AML	AML			
	comp=E,2335μm,0.3s						
ARVD			AML	AML			
	comp=N,1550μm,0.4s						
ARVD			AML	AML			
	comp=E,2335μm,1.7s						
T0110	**Collepietro**	**0.74 139**	⇓P		**Pb**	**14 07 34.7**	**-1.2**
T0110			AML	AML			
	comp=N,2430μm,1.6s						
T0110			AML	AML			
	comp=E,2530μm,0.4s						
T0110			AML	AML			
	comp=N,2430μm,0.4s						
MGAB	**Montegabbione**	**0.76 280**	⇑P		**Pg**	**14 07 34.1**	**-1.5**
MGAB			AML	AML			
	comp=N,4430μm,1.3s						
MGAB			AML	AML			
	comp=E,3950μm,1.1s						
MGAB			AML	AML			
	comp=N,4515μm,1.3s						
MGAB			AML	AML			
	comp=N,4425μm,1.3s						
MGAB			AML	AML			
	comp=E,3810μm,1.1s						
FRON	**Frontone**	**0.79 338**	⇑P		**Pg**	**14 07 33.7**	**-2.4**
FRON			AML	AML			
	comp=E,1345μm,0.4s						
FRON			AML	AML			
	comp=N,2135μm,0.7s						
ATVO	**AVT- Monte Val**	**0.80 318**	P		**Pg**	**14 07 34.8**	**-1.5**
ATVO			AML	AML			
	comp=E,1025μm,0.6s						
ATVO			AML	AML			
	comp=N,1091μm,0.4s						
MTCE	**Montecelio**	**0.82 201**	P		**Pg**	**14 07 35.5**	**-1.2**
MTCE			AML	AML			
	comp=N,1090μm,1.1s						
MTCE			AML	AML			
	comp=E,1520μm,1.6s						
MTCE			AML	AML			
	comp=E,1520μm,0.4s						
MTCE			AML	AML			
	comp=N,1090μm,0.9s						
AOI	**Ancona**	**0.84 24**	⇓P		**Pb**	**14 07 37.0**	**-0.6**
AOI			AML	AML			
	comp=N,2305μm,0.3s						
AOI			AML	AML			
	comp=E,1615μm,0.5s						
CERT	**Cerreto**	**0.85 188**	⇑P		**Pb**	**14 07 36.0**	**-1.7**
CERT			S		**Sn**	**14 07 51.0**	**-0.3**
CERT			AML	AML			
	comp=E,2140μm,0.7s						
CERT			AML	AML			
	comp=N,1086μm,0.3s						
CERT			AML	AML			
	comp=E,2140μm,1.3s						
ATPI	**Pietralunga -**	**0.85 321**	⇑P		**Pg**	**14 07 35.8**	**-1.6**
ATPI			AML	AML			
	comp=E,1058μm,0.7s						
ATPI			AML	AML			
	comp=N,940μm,0.4s						
ATPI			AML	AML			
	comp=E,1056μm,0.7s						
ATPI			AML	AML			
	comp=N,940μm,0.4s						
PIEI	**Pieia**	**0.86 330**	⇓P		**Pg**	**14 07 35.5**	**-2.1**
PIEI			S		**Sg**	**14 07 51.0**	**+2.1**
PIEI			AML	AML			
	comp=E,1193μm,1.5s						
PIEI			AML	AML			
	comp=N,1028μm,0.7s						
PIEI			AML	AML			
	comp=N,1028μm,1.3s						
PIEI			AML	AML			
	comp=E,1193μm,0.5s						
MPAG	**Monte Paganucc**	**0.88 342**	⇑P		**Pg**	**14 07 35.7**	**-2.3**
MPAG			S		**Sg**	**14 07 52.0**	**+2.5**
MPAG			AML	AML			
	comp=N,1465μm,0.5s						
MPAG			AML	AML			
	comp=E,1750μm,0.8s						
MPAG			AML	AML			
	comp=N,1465μm,1.5s						
SACS	**San Casciano d**	**0.90 274**	⇑P		**Pg**	**14 07 36.8**	**-1.5**
SACS			AML	AML			
	comp=E,1116μm,1.5s						
SACS			AML	AML			
	comp=N,1520μm,1.6s						
SACS			AML	AML			
	comp=N,1465μm,1.6s						
SACS			AML	AML			
	comp=N,1465μm,0.4s						
SACS			AML	AML			
	comp=E,1116μm,0.5s						
SACS			AML	AML			
	comp=N,1520μm,0.4s						
SACS			AML	AML			
	comp=E,1050μm,0.5s						
FSSB	**Fossombrone**	**0.94 344**	⇓P		**Pg**	**14 07 36.7**	**-2.3**
FSSB			S		**Sb**	**14 07 54.0**	**+2.2**
FSSB			AML	AML			
	comp=N,6500μm,0.5s						
FSSB			AML	AML			
	comp=N,6500μm,1.5s						
FSSB			AML	AML			
	comp=E,4105μm,0.4s						
BADI	**Badiali**	**0.97 318**	⇑P		**Pg**	**14 07 38.9**	**-0.8**
VVLD	**Villa Vallelon**	**0.99 158**	⇑P		**Pn**	**14 07 40.7**	**-0.1**
VVLD			AML	AML			
	comp=N,858μm,1.3s						
VVLD			AML	AML			
	comp=E,758μm,1.2s						
VVLD			AML	AML			
	comp=N,858μm,0.7s						
VVLD			AML	AML			
	comp=E,758μm,0.8s						
LATE	**Laterza**	**0.99 260**	⇓P		**Pg**	**14 07 39.4**	**-0.7**
CAFI	**Castiglion Fio**	**1.01 303**	⇓P		**Pg**	**14 07 38.8**	**-1.5**
CAFI			S		**Sg**	**14 07 54.0**	**+0.4**
CAFI			AML	AML			
	comp=E,1300μm,0.6s						
CAFI			AML	AML			
	comp=N,1065μm,0.8s						
CAFI			AML	AML			
	comp=N,1065μm,1.2s						
PE3	**Peglio**	**1.02 333**	⇓P		**Pg**	**14 07 37.3**	**-3.2**
PE3			AML	AML			
	comp=E,15μm,1.2s						
PE3			AML	AML			
	comp=N,17μm,0.5s						
MCIV	**Monte Civitell**	**1.07 270**	P		**Pg**	**14 07 40.5**	**-1.0**
MCIV			AML	AML			
	comp=N,670μm,0.5s						
MCIV			AML	AML			
	comp=E,760μm,0.3s						
SSP9	**Sansepolcro**	**1.07 317**	⇓P		**Pg**	**14 07 42.2**	**+0.7**
RDP	**Rocca di Papa**	**1.07 197**	S		**Sn**	**14 07 58.0**	**+1.0**
LPEL	**Lama dei Pelig**	**1.07 133**	⇓P		**Pn**	**14 07 40.6**	**-1.5**
LPEL			AML	AML			
	comp=N,968μm,1.2s						
LPEL			AML	AML			
	comp=E,797μm,0.4s						
LPEL			AML	AML			
	comp=E,797μm,1.6s						
LPEL			AML	AML			
	comp=N,968μm,0.8s						
SF04	**Casetta**	**1.08 273**	P		**Pg**	**14 07 40.4**	**-1.4**
SF04			AML	AML			
	comp=E,1150μm,0.3s						
SF04			AML	AML			
	comp=N,935μm,0.3s						
TOLF	**Tolfa**	**1.11 230**	⇑P		**Pg**	**14 07 40.3**	**-1.9**
TOLF			S		**Sb**	**14 07 58.0**	**+1.5**
TOLF			AML	AML			
	comp=E,1118μm,0.5s						
TOLF			AML	AML			
	comp=N,1042μm,0.4s						
TOLF			AML	AML			
	comp=E,1118μm,1.5s						
POFI	**Posta Fibreno**	**1.15 158**	⇑P		**Pn**	**14 07 43.1**	**-0.1**
POFI			AML	AML			
	comp=E,474μm,0.5s						
POFI			AML	AML			
	comp=N,369μm,1.0s						
POFI			AML	AML			
	comp=N,367μm,1.0s						
POFI			AML	AML			
	comp=E,472μm,0.7s						
POFI			AML	AML			
	comp=N,367μm,1.0s						
POFI			AML	AML			
	comp=N,369μm,1.0s						
SF01	**Poggio Pratacc**	**1.15 272**	⇑P		**Pg**	**14 07 41.7**	**-1.4**
CPGN	**Carpegna, Ital**	**1.17 330**	P		**Pg**	**14 07 40.8**	**-2.7**
CPGN			AML	AML			
	comp=E,1445μm,1.1s						
CPGN			AML	AML			
	comp=E,1445μm,0.9s						
CPGN			AML	AML			
	comp=N,1700μm,0.6s						
LRP	**Arpino**	**1.19 163**	⇑P		**Pn**	**14 07 45.3**	**+1.8**
LRP			AML	AML			
	comp=E,290μm,0.6s						
LRP			AML	AML			
	comp=N,548μm,1.2s						
CRE	**Caprese Michel**	**1.20 314**	⇑P		**Pg**	**14 07 42.8**	**-1.1**
CRE			AML	AML			
	comp=N,516μm,0.4s						
CRE			AML	AML			
	comp=E,390μm,0.6s						
SFI	**Santa Sofia**	**1.46 320**	⇑P		Pn	14 07 44.0	-3.3
SFI			AML	AML			
	comp=E,264μm,0.6s						
SFI			AML	AML			
	comp=N,348μm,0.8s						
SFI			AML	AML			
	comp=N,348μm,1.2s						
TRIV	**Trivento**	**1.47 134**	⇓P		**Pb**	**14 07 49.8**	**+1.5**
TRIV			AML	AML			
	comp=E,386μm,0.7s						
TRIV			AML	AML			
	comp=N,385μm,0.9s						
TRIV			AML	AML			
	comp=N,385μm,1.1s						
MAON	**Monte Argentar**	**1.52 257**	P		**Pn**	**14 07 46.8**	**-1.3**
MAON			AML	AML			
	comp=E,160μm,0.6s						
MAON			AML	AML			
	comp=N,162μm,0.5s						
OSSC	**Osservatorio P**	**1.56 299**	P		**Pn**	**14 07 46.8**	**-1.9**
RUFI	**Rufina**	**1.58 312**	⇓P		**Pn**	**14 07 49.4**	**+0.4**
RUFI			AML	AML			
	comp=E,239μm,0.7s						
RUFI			AML	AML			
	comp=N,255μm,1.6s						
RUFI			AML	AML			
	comp=E,239μm,1.3s						
RUFI			AML	AML			
	comp=N,255μm,0.4s						
LMD	**Lutirano**	**1.65 322**	⇓P		**Pb**	**14 07 52.6**	**+1.2**
CASP	**Castiglione de**	**1.67 271**	⇓P		**Pn**	**14 07 48.8**	**-1.4**
CASP			AML	AML			
	comp=E,91μm,0.7s						
CASP			AML	AML			
	comp=N,70μm,0.5s						
CASP			AML	AML			
	comp=E,91μm,1.3s						
TRIF	**Trifonti**	**1.67 282**	⇑P		**Pn**	**14 07 49.3**	**-0.9**
TRIF			AML	AML			
	comp=E,188μm,0.7s						
TRIF			AML	AML			
	comp=N,187μm,0.5s						
TRIF			AML	AML			
	comp=E,188μm,1.3s						
TRIF			AML	AML			
	comp=N,187μm,1.5s						
TREM	**Isole Tremiti**	**1.88 110**	S		**Sg**	**14 08 21.0**	**-0.4**
PAOL	**Paolisi**	**2.06 148**	P		**Pg**	**14 08 01.2**	**+0.8**
BRJN	**Brijuni**	**2.16 12**	⇓P		**Pn**	**14 07 57.7**	**+0.8**
CARD	**Cardoso**	**2.29 304**	S		**Sn**	**14 08 26.0**	**-1.0**
HVAR	**Hvar**	**2.47 80**	⇓P		**Pb**	**14 08 01.9**	**-3.4**
MRLC	**Muro Lucano**	**2.69 138**	P		**Pb**	**14 08 06.6**	**-2.5**
MRLC			AML	AML			
	comp=E,55μm,0.7s						

MRLC AML AML
comp=N,66μm,1.6s
MRLC AML AML
comp=N,66μm,0.4s
GRAM Graiana 2.80 308 ⇓P **Pn 14 08 04.8 -1.0**
GRAM AML AML
comp=E,152μm,1.5s
GRAM AML AML
comp=N,113μm,0.8s
GRAM AML AML
comp=E,152μm,0.5s
MSSA Maissana 3.04 301 ⇑P **Pn 14 08 09.2 +0.2**
MSSA AML AML
comp=E,40μm,0.6s
MSSA AML AML
comp=N,42μm,0.8s
PGF Pioggiola 3.06 267 P **Pn 14 08 09.2 -0.1**
ROVR Rover Verones 3.22 333 ⇓P **Pn 14 08 12.0 +0.5**
ROVR AML AML
comp=N,71μm,1.0s
ROVR AML AML
comp=E,45μm,0.9s
ROVR AML AML
comp=N,71μm,1.0s
CGRP Cima Grappa 3.23 343 ⇑P **Pn 14 08 13.1 +1.2**
CGRP S **Sn 14 08 50.0 -0.5**
CGRP AML AML
comp=E,243μm,1.6s
CGRP AML AML
comp=N,189μm,0.5s
CGRP AML AML
comp=E,190μm,0.4s
CGRP AML AML
comp=N,213μm,1.5s
CGRP AML AML
comp=N,189μm,1.5s
CGRP AML AML
comp=E,243μm,0.4s
CGRP AML AML
comp=E,190μm,1.6s
SALO Salr 3.39 327 ⇑P **Pn 14 08 14.9 +1.1**
SALO AML AML
comp=N,117μm,0.7s
SALO AML AML
comp=E,120μm,0.8s
SALO AML AML
comp=N,119μm,0.8s
SALO AML AML
comp=E,119μm,0.8s
SALO AML AML
comp=N,119μm,1.2s
CTI Castel Tesino 3.43 342 ⇑P **Pn 14 08 15.4 +1.0**
CTI AML AML
comp=N,143μm,1.3s
CTI AML AML
comp=E,172μm,0.4s
STAL STALIGIAL 3.48 355 ⇓P **Pn 14 08 16.1 +1.0**
STAL AML AML
comp=E,148μm,1.5s
STAL AML AML
comp=N,111μm,0.5s
STAL AML AML
comp=N,111μm,1.5s
STAL AML AML
comp=E,148μm,0.5s
LUSI Trento, Gardas 3.54 334 ⇑P **Pn 14 08 16.4 +0.5**
LUSI AML AML
comp=E,99μm,0.6s
LUSI AML AML
comp=N,152μm,0.4s
LUSI AML AML
comp=E,99μm,1.4s
CIMO Cimolais 3.56 352 ⇓P **Pn 14 08 17.3 +1.2**
CIMO S **Sn 14 08 59.0 +0.8**
CIMO AML AML
comp=E,30μm,0.5s
CIMO AML AML
comp=N,33μm,0.6s
PTCC Patocco-Chiusa 3.62 2 ⇑P **Pn 14 08 17.4 +0.4**
PTCC AML AML
comp=E,61μm,0.5s
PTCC AML AML
comp=N,52μm,0.5s
SARZ Sarezzano 3.69 306 ⇓P **Pn 14 08 14.9 -3.1**
EUCT Pavia 3.76 311 S **Sn 14 09 06.0 +2.9**
MABI Malga Bissina 3.77 331 ⇓P **Pn 14 08 20.1 +0.9**
MABI AML AML
comp=E,42μm,0.3s
MABI AML AML
comp=N,48μm,1.4s
MABI AML AML
comp=N,48μm,0.6s
ACOM Acomizza, Ital 3.77 4 ⇓P **Pn 14 08 20.2 +1.0**
ACOM AML AML
comp=N,102μm,1.4s
ACOM AML AML
comp=E,113μm,0.3s
ACOM AML AML
comp=N,102μm,0.6s
ZOU Zoufplan 3.77 358 ⇑P **Pn 14 08 18.0 -1.2**
ZOU AML AML
comp=E,95μm,0.8s
ZOU AML AML
comp=N,79μm,1.0s
ZOU AML AML
comp=N,79μm,1.0s
SALB San Lorenzo Be 3.78 139 P **Pg 14 08 32.8 -0.6**
MYKA Terra Mystica 3.86 5 *e*Pn **Pn 14 08 21.6 +1.2**
comp=N,5.8nm,0.4s
KOSI Kohlern 3.88 342 ⇑P **Pn 14 08 22.4 +1.7**
KOSI AML AML
comp=E,104μm,0.8s
KOSI AML AML
comp=N,66μm,0.7s
BOSI Bolzano 3.93 341 S **Sn 14 09 06.0 -1.2**
APPI Appiano 3.93 340 P **Pn 14 08 22.8 +1.4**
APPI AML AML
comp=N,104μm,0.4s
APPI AML AML
comp=E,75μm,0.3s
ABTA Abfaltersbach 3.98 354 *e*Pn **Pn 14 08 21.9 -0.1**
comp=E,21nm,0.5s
VSL Villasalto 4.34 222 ⇑P **Pn 14 08 27.6 +0.7**
VSL AML AML
comp=E,30μm,0.8s
VSL AML AML
comp=E,30μm,1.2s
VSL AML AML
comp=N,28μm,0.4s
FETA Feichten 4.56 339 *e*Pn **Pn 14 08 32.8 +2.7**
comp=N,3.3nm,0.4s
WTTA Wattenberg 4.60 347 *e*Pn **Pn 14 08 32.5 +1.9**
comp=N,1.2nm,0.2s
DAVOX Davos/Dischmat 4.61 331 Pn **Pn 14 08 32.9 +2.1**
comp=N,3.2nm,0.3s,baz=142,slow=17,SNR=10
DAVOX Sn **Sn 14 09 28.5 +4.0**
comp=N,1.8nm,0.3s,baz=275,slow=23,SNR=3.1
comp=N,8.9nm,0.4s
DAVOX Davos/Dischmat 4.61 331 ⇓P **Pn 14 08 32.9 +2.1**
SQTA Sankt Quirin 4.64 344 *e*Pn **Pn 14 08 32.3 +1.2**
comp=N,3.7nm,0.2s
WATA Walderalm 4.68 347 *e*Pn **Pn 14 08 33.9 +2.3**
comp=N,1.5nm,0.2s
ARSA Arzberg 4.77 20 *e*Pn **Pn 14 08 33.2 +0.4**
comp=N,1.6nm,0.3s
ARSA Arzberg 4.77 20 ⇓P **Pn 14 08 33.4 +0.5**
MOTA Moosalm 4.78 343 *e*Pn **Pn 14 08 35.9 +2.9**
comp=N,4.8nm,0.6s
BIOA Bad Ischl, Aus 4.92 4 Pn **Pn 14 08 37.5 +2.7**
comp=N,10nm,0.3s
RETA Reutte 4.99 341 *e*Pn **Pn 14 08 37.1 +1.2**
comp=N,2.8nm,0.3s
DAVA Damuels 5.05 334 *e*Pn **Pn 14 08 38.9 +2.1**
comp=N,4.7nm,0.4s
MOA Molln 5.12 9 *e*Pn **Pn 14 08 39.1 +1.4**
comp=N,2.7nm,0.4s
VLO Vlora 5.30 114 P **Pn 14 08 40.7 +0.6**
VAE Valguarnera 5.39 169 Pn **Pn 14 08 43.0 +1.6**
comp=N,3.5nm,0.3s,baz=274,slow=20,SNR=10
VAE Sn **Sn 14 09 44.5 +1.0**
comp=N,6.3nm,0.3s,baz=141,slow=20,SNR=2.5
comp=N,4.4nm,0.3s
RONA Rosalia, Austr 5.40 23 *e*Pn **Pn 14 08 43.1 +1.7**
comp=N,4.2nm,0.5s
CONA Conrad Observa 5.49 20 *e*Pn **Pn 14 08 43.3 +0.6**
comp=N,3.4nm,0.5s
GERES GERESS Array B 6.07 4 Pn **Pn 14 08 50.6 -0.1**
comp=N,0.4nm,0.3s,baz=173,slow=13,SNR=6.5
GERES Sn **Sn 14 09 58.7 -1.5**
comp=N,1.4nm,0.3s,baz=180,slow=26,SNR=9.1
comp=N,0.7nm,0.4s
CKRC Cesky Krumlov 6.09 7 *e*SN **Sn 14 09 58.8 -1.7**
KHC Kasperske Hory 6.35 3 *e*PN **Pn 14 08 53.8 -0.7**
KHC *e*SN **Sn 14 10 05.6 -1.4**
TORD Torodi Ar. Bea 31.15 202 P **P 14 13 40.3 +0.4**
comp=N,0.1nm,0.4s,baz=27,slow=9.7,SNR=1.8
comp=N,0.1nm,0.4s
MKAR Makanchi Array 47.80 60 P **P 14 15 58.0 -0.3**
comp=N,0.4nm,0.7s,baz=293,slow=7.7,SNR=2.1
comp=N,0.4nm,0.7s

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*IDC **30** 14:07:55.6±1.2, 39°.15N×73°.51E, h0km, mb3.7/12, mbtmp3.6/17, ML2.8/5, Error ellipse: s-maj=22.4km s-min=16.8km az=134.0*
*SOME **30** 14:07:56.4, 39°.45N×73°.60E, h10km*
*KRNET **30** 14:07:56.8±0.1, 39°.37N×73°.54E, mb3.8*
*NNC **30** 14:07:58.3±2.8, 39°.01N×72°.69E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=21.8km s-min=13.2km az=179.0*
ISC 30 14:07:57.3±0.7, 39°.35N±0°.05×73°.55E±0°.03, h10km, n64, σ2*39/98, mb3.6/12, 27C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**334**	⇑*iP*	**Pb**	**14 08 21.0**	**-1.1**
OHH	baz=33			⇑*iS*	**Sg**	**14 08 38.9**	**-0.7**
BTK	**Batken**	**2.22**	**289**	⇓*iP*	**Pb**	**14 08 36.5**	**-1.1**
BTK	baz=89			⇓*iS*	**Sb**	**14 09 05.5**	**+0.3**
GAR	**Garm**	**2.53**	**263**	⇑*iP*	**Pb**	**14 08 41.1**	**-1.9**
GAR	baz=63			⇑*iS*	**Sb**	**14 09 13.1**	**-1.2**
ARLS	**Aral**	**2.58**	**13**	⇑*iP*	**Pb**	**14 08 41.4**	**-2.4**
ARLS	baz=13			⇑*iS*	**Sb**	**14 09 13.9**	**-1.7**
AML	**Almayashu**	**2.78**	**2**	P	**Pb**	**14 08 46.1**	**-1.2**
TRKS	**Terek-Say**	**2.85**	**321**	⇓*iP*	**Pn**	**14 08 44.2**	**+1.2**
TRKS	baz=20			⇓*iS*	**Sn**	**14 09 19.0**	**+1.5**
UCH	**Uchtor**	**2.97**	**14**	P	**Pb**	**14 08 49.5**	**-1.1**
UCH	**Uchtor**	**2.97**	**14**	⇑*iP*	**Pb**	**14 08 46.9**	**-3.7**
UCH	baz=14			⇑*iS*	**Sb**	**14 09 23.6**	**-3.5**
EKS2	**Erkin-Say**	**3.31**	**3**	P	**Pb**	**14 08 54.1**	**-2.1**
EKS2	**Erkin-Say**	**3.31**	**3**	⇑*eP*	**Pn**	**14 08 51.4**	**+2.0**
EKS2	baz=3.0			⇑*iS*	**Sn**	**14 09 31.4**	**+2.5**
AAK	**Ala-Archa**	**3.36**	**12**	P	**Pb**	**14 08 55.2**	**-2.0**
AAK	**Ala-Archa**	**3.36**	**12**	Pn	**Pb**	**14 08 55.1**	**-2.0**
AAK	4.6nm,0.3s,baz=174,slow=14,SNR=44			Sn	**Sb**	**14 09 39.9**	**+1.7**
AAK	**Ala-Archa**	**3.36**	**12**	⇑*iP*	**Pn**	**14 08 52.2**	**+2.1**
AAK	baz=12			⇑*iS*	**Sn**	**14 09 32.7**	**+2.6**
MRKS	**Merke**	**3.40**	**356**	*e*P	**Pb**	**14 08 57.9**	**+0.2**
MRKS	15nm,0.4s			*e*S	**Sg**	**14 09 43.3**	**-3.3**
KBK	**Karagaybulak**	**3.47**	**17**	P	**Pb**	**14 08 58.5**	**-0.5**
KBK	**Karagaybulak**	**3.47**	**17**	⇑*iP*	**Pn**	**14 08 53.6**	**+2.0**
KBK	baz=18			⇑*iS*	**Sn**	**14 09 35.1**	**+2.3**
ULHL	**Ulahol**	**3.54**	**34**	P	**Pb**	**14 08 59.5**	**-0.7**
ULHL	**Ulahol**	**3.54**	**34**	⇓*iP*	**Pn**	**14 08 54.7**	**+2.1**
ULHL	baz=35			⇓*iS*	**Sn**	**14 09 37.1**	**+2.4**
FRU1	**Bishkek**	**3.55**	**13**	⇑*iP*	**Pn**	**14 08 55.0**	**+2.4**
FRU1	baz=13			⇑*iS*	**Sn**	**14 09 37.5**	**+2.8**
CHMS	**Chumysh**	**3.76**	**14**	P	**Pb**	**14 09 00.7**	**-3.1**
CHMS	**Chumysh**	**3.76**	**14**	⇑*iP*	**Pn**	**14 08 57.6**	**+2.2**
CHMS	baz=14			⇑*iS*	**Sn**	**14 09 42.0**	**+2.3**
CHMS	**Chumysh**	**3.76**	**14**	⇑P	**Pb**	**14 09 02.9**	**-0.9**
CHMS	9.5nm,0.5s			⇓S	**Sg**	**14 09 55.0**	**-2.9**
IUG	**Iuzhnay**	**3.87**	**317**	*e*P	**Pg**	**14 09 09.7**	**-1.7**
IUG	313nm,0.3s			*e*S	**Sg**	**14 10 03.5**	**+2.1**
TKM2	**Tokmak 2**	**3.89**	**23**	P	**Pb**	**14 09 02.6**	**-3.5**
TKM2	**Tokmak 2**	**3.89**	**23**	⇑*iP*	**Pn**	**14 08 59.7**	**+2.3**
TKM2	baz=23			⇑*iS*	**Sn**	**14 09 45.6**	**+2.4**
TKM2	**Tokmak 2**	**3.89**	**23**	⇓P	**Pb**	**14 09 06.0**	**-0.1**
TKM2	3.6nm,0.5s			⇑S	**Sg**	**14 10 01.4**	**-0.8**
USP	**Ospenovka**	**3.98**	**10**	P	**Pb**	**14 09 03.0**	**-4.6**
USP	**Ospenovka**	**3.98**	**10**	⇑*iP*	**Pn**	**14 09 00.7**	**+2.3**
USP	baz=10.0			⇑*iS*	**Sn**	**14 09 47.2**	**+2.0**
KST	**Kastek**	**4.12**	**26**	*e*P	**Pg**	**14 09 12.8**	**-3.3**
KST	5.8nm,0.3s			*e*S	**Sg**	**14 10 08.2**	**-1.3**
SGDS	**Sogindy**	**4.18**	**11**	*e*P	**Pb**	**14 09 12.9**	**+2.0**
SGDS	5.8nm,0.4s			*e*S	**Sg**	**14 10 07.7**	**-3.8**
CHM	**Chimkent**	**4.21**	**316**	*e*P	**Pb**	**14 09 12.9**	**+1.4**
CHM	8.6nm,1.1s			*e*S	**Sg**	**14 10 08.5**	**-4.1**
DGS	**Degeres**	**4.24**	**23**	*e*P	**Pg**	**14 09 15.7**	**-2.7**
DGS	19nm,0.5s			*e*S	**Sg**	**14 10 12.7**	**-0.6**
MTBS	**Maitube**	**4.36**	**29**	*e*P	**Pg**	**14 09 17.6**	**-3.2**
MTBS	33nm,0.8s			*e*S	**Sg**	**14 10 16.0**	**-1.3**
KK31	**Karatay Array**	**4.39**	**330**	⇑P	**Pn**	**14 09 07.8**	**+3.7**
KK31	14nm,0.4s			⇓S	**Sn**	**14 10 00.5**	**+5.2**
TNSS	**Tian-Shan**	**4.49**	**34**	*e*P	**Pg**	**14 09 20.1**	**-3.2**
TNSS	13nm,0.4s			*e*S	**Sg**	**14 10 19.8**	**-1.7**
MDOK	**Medeo**	**4.63**	**34**	*e*P	**Pg**	**14 09 22.7**	**-3.4**
MDOK	9.1nm,0.4s			*e*S	**Sg**	**14 10 25.0**	**-1.1**
MDOK	**Medeo**	**4.63**	**34**	⇓P	**Pb**	**14 09 20.1**	**+1.3**
MDOK	9.5nm,0.7s			S	**Sg**	**14 10 23.0**	**-3.1**
KTBS	**Karatobe**	**4.95**	**27**	*e*P	**Pg**	**14 09 28.7**	**-3.5**
KTBS	7.2nm,0.5s			*e*S	**Sg**	**14 10 35.2**	**-1.2**
KUU	**Kurty**	**5.00**	**24**	*e*P	**Pg**	**14 09 28.9**	**-4.1**
KUU	5.1nm,0.6s			*e*S	**Sg**	**14 10 36.0**	**-1.7**
	25nm,0.7s						
BTLS	**Baital**	**5.70**	**4**	*e*P	**Pb**	**14 09 37.1**	**+0.3**
BTLS	2.3nm,0.5s			*e*S	**Sb**	**14 10 49.4**	**+4.2**
ARXS	**Arharly**	**5.82**	**32**	*e*P	**Pg**	**14 09 45.5**	**-3.3**
ARXS	8.9nm,0.8s			*e*S	**Sg**	**14 11 04.1**	**+0.1**
PDGK	**Podgornoye**	**5.98**	**46**	⇑P	**Pb**	**14 09 39.6**	**-2.2**
PDGK	4.2nm,0.7s			⇓S	**Sb**	**14 10 58.1**	**+4.6**
OTUK	**Ortayu**	**8.94**	**355**	⇓P	Pn	14 10 12.0	+5.6
OTUK	2.8nm,1.2s			⇓S	Sn	14 12 00.6	+13
KURBB	**Kurchatov Arra**	**11.81**	**16**	Pn	**Pn**	**14 10 47.8**	**+2.1**
KURBB	baz=197,slow=12,SNR=1.6			Lg	Lg	14 14 11.4	
GEYT	**Alibeck**	**12.15**	**268**	Pn	**Pn**	**14 10 53.8**	**+3.3**
GEYT	0.2nm,0.3s,baz=271,slow=20,SNR=1.8			Sn	**Sn**	**14 12 59.8**	**-6.3**
BVAR	**Borovoye Array**	**13.85**	**352**	Pn	**P**	**14 11 20.5**	**-1.5**
AB31	**Akbulak array**	**13.87**	**320**	P	**Pn**	**14 11 13.2**	**-0.6**
AB31	0.6nm,0.6s,baz=134,slow=12,SNR=16			⇑S	**Sn**	**14 13 45.8**	**-2.0**
AKTO	**Aktyubinsk**	**15.58**	**320**	Pn	**Pn**	**14 11 37.3**	**+0.4**
AKTO	**Aktyubinsk**	**15.58**	**320**	⇓P	**Pn**	**14 11 35.5**	**-1.5**
ZALV	**Zalesovo Beam**	**16.49**	**24**	Pn	**P**	**14 11 49.6**	**-1.6**
ARU	**Arti**	**19.75**	**335**	P	**Pn**	**14 12 28.8**	**+0.3**
SONM	**Songino Array**	**25.11**	**59**	P	**P**	**14 13 24.9**	**+2.6**
BRTR	**Keskin Array B**	**30.61**	**284**	P	**P**	**14 14 09.6**	**-2.0**
AKASG	**Malin Array Be**	**32.85**	**305**	P	**P**	**14 14 32.2**	**+1.2**
FINES	**FINESS Array B**	**36.33**	**323**	P	**P**	**14 15 02.1**	**+1.2**
ARCES	**ARCESS Array B**	**39.33**	**336**	P	**P**	**14 15 27.8**	**+1.6**
HFS	**Hagfors**	**42.13**	**320**	P	**P**	**14 15 50.0**	**+0.6**
NB2	**NORSAR Subarra**	**43.37**	**321**	P	**P**	**14 16 00.7**	**+1.1**
NOA	**NORSAR Array B**	**43.37**	**321**	P	**P**	**14 16 00.6**	**+1.0**
EKA	**Eskdalemuir Ar**	**51.67**	**315**	P	**P**	**14 17 04.7**	**+0.6**
ESDC	**Sonseca Array**	**57.93**	**297**	P	**P**	**14 17 50.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**	**14 18 55.4**	**-0.3**
INK	**Inuvik**	**70.76**	**10**	P	**P**	**14 19 14.1**	**+0.9**
WRA	**Warramunga Arr**	**81.85**	**124**	P	**P**	**14 20 15.7**	**-1.1**

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*ROM **30** 14:14:19.9±0.0, 42°.900N±0°.002×13°.195E±0°.004, h8km, ML3.5/12, Error ellipse: s-maj=0.3km s-min=0.0km az=255.0*
*IDC **30** 14:14:19.1±1.5, 42°.91N×13°.62E, h0km, mb3.7/3, mbtmp3.6/6, ML3.5/3, MS2.7/2, Error ellipse: s-maj=33.6km s-min=20.8km az=91.0*
*LDG **30** 14:14:20.0±0.1, 42°.93N×13°.17E, h10km, Ml3.3/11, Error ellipse: s-maj=4.7km s-min=2.5km az=48.0*
ISC 30 14:14:20.3±0.7, 42°.90N±0°.01×13°.18E±0°.02, h13km±4km, n184, σ1*91/226, mb3.7/3, 11C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**170**	*e*P	**Pg**	**14 14 21.5**	**-1.4**
T1245				S	**Sg**	**14 14 23.1**	**-1.5**
MMO1	**Montemonaco**	**0.11**	**89**	P	**Pg**	**14 14 22.7**	**-0.8**
MMO1				S	**Sg**	**14 14 24.5**	**-1.2**
FEMA	**Monte Fema**	**0.11**	**305**	*e*P	**Pg**	**14 14 23.3**	**-0.3**
FEMA				S	**Sg**	**14 14 25.6**	**-0.3**
T1256	**Bolognola (MC)**	**0.12**	**18**	P	**Pg**	**14 14 22.6**	**-1.0**
T1256				S	**Sg**	**14 14 24.9**	**-1.1**
T1216	**Preci, Frazion**	**0.12**	**267**	P	**Pg**	**14 14 23.5**	**0.0**
T1216				S	**Sg**	**14 14 26.0**	**+0.2**
T1214	**Arquata del Tr**	**0.14**	**171**	P	**Pg**	**14 14 23.4**	**-0.5**
T1214				S	**Sg**	**14 14 26.8**	**+0.3**
AM05	**Amandola Campo**	**0.15**	**58**	P	**Pg**	**14 14 22.9**	**-1.0**
AM05				AML	AML		
AM05	comp=E,20550μm,0.5s			AML	AML		
AM05	comp=N,3990μm,0.7s			AML	AML		
AM05	comp=N,21700μm,0.8s			AML	AML		
AM05	comp=N,3995μm,0.7s			AML	AML		
AM05	comp=E,84050μm,1.2s			AML	AML		
AM05	comp=N,1822μm,0.3s			AML	AML		
AM05	comp=N,8720μm,0.3s			AML	AML		
AM05	comp=E,12740μm,0.6s			AML	AML		
AM05	comp=E,44722μm,0.6s						
FDMO	**Fiordimonte**	**0.15**	**334**	P	**Pg**	**14 14 23.9**	**-0.1**
FDMO				S	**Sg**	**14 14 26.8**	**+0.1**
T1244	**Arquata del Tr**	**0.17**	**148**	P	**Pg**	**14 14 23.8**	**-0.5**
T1244				S	**Sg**	**14 14 27.7**	**+0.7**
T1212	**Cascia, Frazio**	**0.17**	**214**	P	**Pg**	**14 14 24.7**	**+0.3**
T1212				S	**Sg**	**14 14 28.2**	**+1.0**
T1213	**Norcia, Frazio**	**0.18**	**193**	P	**Pg**	**14 14 24.1**	**-0.3**
T1213				S	**Sg**	**14 14 28.1**	**+0.8**
T1241	**Roccafluvione,**	**0.19**	**102**	P	**Pg**	**14 14 24.7**	**+0.1**
T1241				S	**Sg**	**14 14 28.0**	**+0.5**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241	comp=N,93300μm,0.6s			AML	AML		
T1241	comp=N,94500μm,0.6s			AML	AML		
T1241	comp=E,49240μm,0.7s			AML	AML		
T1241	comp=N,44085μm,2.0s			AML	AML		
T1241	comp=E,49208μm,0.7s			AML	AML		
T1241	comp=N,39266μm,0.5s			AML	AML		
GUMA	**Gualdo di Mace**	**0.20**	**35**	P	**Pg**	**14 14 24.4**	**-0.4**
GUMA				S	**Sg**	**14 14 28.4**	**+0.5**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA	comp=E,33559μm,0.7s						
T1219	**Muccia, Frazio**	**0.20**	**322**	P	**Pg**	**14 14 24.8**	**0.0**
T1219				S	**Sg**	**14 14 28.4**	**+0.5**
T1220	**Camerino, Fraz**	**0.22**	**343**	P	**Pg**	**14 14 25.0**	**-0.1**
T1220				S	**Sg**	**14 14 29.1**	**+0.6**
T1218	**Civita (PG)**	**0.23**	**192**	P	**Pg**	**14 14 25.2**	**-0.1**
T1218				S	**Sg**	**14 14 30.1**	**+1.3**
T1204	**Amatrice, Fraz**	**0.24**	**155**	*e*P	**Pg**	**14 14 25.2**	**-0.3**

T1204			S	Sg	14 14 30.0	+0.9
T1204			AML	AML		
T1204			AML	AML		
T1204			AML	AML		
T1204			AML	AML		
	comp=N,28248µm,0.3s					
T1204			AML	AML		
	comp=E,31070µm,0.2s					
T1201	**Domo (RI)**	**0.25 167**	P	**Pg**	**14 14 25.5**	**-0.1**
T1201			S	**Sg**	**14 14 30.8**	**+1.7**
T1215	**Vallo di Nera,**	**0.25 247**	P	**Pg**	**14 14 25.7**	**+0.2**
T1215			S	**Sg**	**14 14 30.2**	**+1.2**
T1215			AML	AML		
	comp=E,31050µm,0.3s					
T1215			AML	AML		
	comp=N,29300µm,1.0s					
T1215			AML	AML		
	comp=E,32500µm,0.3s					
T1215			AML	AML		
	comp=N,28100µm,0.9s					
T1215			AML	AML		
	comp=N,28150µm,0.9s					
T1215			AML	AML		
	comp=E,32550µm,0.3s					
T1217	**Poggiodomo (PG**	**0.26 225**	P	**Pg**	**14 14 26.2**	**+0.4**
T1217			S	**Sg**	**14 14 31.0**	**+1.5**
T1243	**Rocca Santa Ma**	**0.28 135**	*e*P	**Pg**	**14 14 26.0**	**-0.2**
T1243			S	**Sg**	**14 14 30.4**	**+0.3**
MDAR	**Monte D'Aria**	**0.30 355**	P	**Pg**	**14 14 26.4**	**-0.1**
MDAR			S	**Sg**	**14 14 31.4**	**+0.8**
MDAR			AML	AML		
	comp=E,21800µm,0.4s					
MDAR			AML	AML		
	comp=N,23150µm,0.3s					
MDAR			AML	AML		
	comp=E,21850µm,0.4s					
MDAR			AML	AML		
	comp=N,23200µm,0.3s					
SEF1	**Sefro**	**0.30 326**	P	**Pg**	**14 14 26.6**	**+0.1**
LNSS	**Leonessa**	**0.31 199**	P	**Pb**	**14 14 27.4**	**-0.3**
LNSS			S	**Sb**	**14 14 32.5**	**-0.3**
LNSS			AML	AML		
LNSS			AML	AML		
	comp=E,56950µm,1.4s					
PIO1	**Pioraco**	**0.32 333**	P	**Pg**	**14 14 26.7**	**0.0**
MNTP	**Montappone**	**0.32 42**	*e*P	**Pg**	**14 14 27.5**	**+0.6**
MNTP			S	**Sb**	**14 14 33.3**	**+0.2**
MNTP			AML	AML		
	comp=E,54600µm,0.6s					
MNTP			AML	AML		
	comp=N,72100µm,0.4s					
MNTP			AML	AML		
	comp=E,54650µm,0.6s					
MNTP			AML	AML		
	comp=N,72050µm,0.4s					
SSM1	**San Severino M**	**0.33 360**	P	**Pg**	**14 14 27.0**	**-0.1**
FIU1	**Fiuminata**	**0.34 328**	P	**Pg**	**14 14 27.1**	**-0.2**
GAG1	**Gagliole**	**0.35 347**	P	**Pg**	**14 14 27.4**	**0.0**
GAG1			S	**Sb**	**14 14 33.7**	**-0.2**
GAG1			AML	AML		
	comp=E,38550µm,0.5s					
GAG1			AML	AML		
	comp=N,46600µm,0.4s					
GAG1			AML	AML		
	comp=E,15048µm,0.4s					
OFFI	**Offida**	**0.38 84**	*e*P	**Pg**	**14 14 28.2**	**+0.4**
OFFI			AML	AML		
	comp=E,49550µm,0.6s					
OFFI			AML	AML		
	comp=N,52650µm,0.5s					
RM33	**Pellescritta (**	**0.39 176**	P	**Pg**	**14 14 28.0**	**-0.1**
RM33			S	**Sb**	**14 14 34.2**	**-0.8**
RM33			AML	AML		
	comp=E,39450µm,1.2s					
RM33			AML	AML		
	comp=N,26250µm,1.4s					
RM33			AML	AML		
	comp=E,40200µm,1.2s					
RM33			AML	AML		
	comp=N,26650µm,1.4s					
RM33			AML	AML		
	comp=E,40150µm,1.2s					
RM33			AML	AML		
	comp=E,39500µm,1.2s					
SNTG	**Esanatoglia**	**0.40 334**	*e*P	**Pg**	**14 14 28.1**	**-0.1**
SNTG			S	**Sb**	**14 14 34.8**	**-0.5**
SNTG			AML	AML		
	comp=E,9335µm,0.4s					
SNTG			AML	AML		
	comp=E,9340µm,0.4s					
SNTG			AML	AML		
	comp=E,9680µm,0.5s					
SNTG			AML	AML		
	comp=N,11350µm,0.2s					
SNTG			AML	AML		
	comp=N,12150µm,0.2s					
SNTG			AML	AML		
	comp=E,9345µm,0.4s					
SNTG			AML	AML		
	comp=N,6241µm,0.8s					
SNTG			AML	AML		
	comp=E,5043µm,0.5s					
SNTG			AML	AML		
	comp=E,5934µm,2.5s					
SNTG			AML	AML		
	comp=N,6583µm,0.8s					
CAMP	**Campotosto**	**0.40 155**	*e*P	**Pg**	**14 14 27.6**	**-0.7**
CAMP			S	**Sg**	**14 14 34.3**	**+0.6**
CAMP			AML	AML		
	comp=N,12600µm,0.6s					
CAMP			AML	AML		
	comp=E,15050µm,1.1s					
CAMP			AML	AML		
	comp=E,9117µm,0.2s					
ASSB	**Assisi San Ben**	**0.41 291**	*e*P	**Pg**	**14 14 27.9**	**-0.5**
ASSB			S	**Sb**	**14 14 35.5**	**-0.1**
ASSB			AML	AML		
	comp=E,21250µm,0.3s					
ASSB			AML	AML		
	comp=N,22750µm,0.4s					
TERO	**Teramo**	**0.42 131**	*e*P	**Pg**	**14 14 28.2**	**-0.4**
TERO			S	**Sg**	**14 14 34.7**	**+0.5**
TERO			AML	AML		
	comp=E,30050µm,0.3s					
TERO			AML	AML		
	comp=N,42600µm,0.4s					
TERO			AML	AML		
	comp=N,44150µm,0.4s					
TERO			AML	AML		
	comp=N,42650µm,0.4s					
TERO			AML	AML		
	comp=E,31100µm,0.3s					
TERO			AML	AML		
	comp=N,44168µm,0.4s					
TERO			AML	AML		
	comp=N,42636µm,0.4s					
TERO			AML	AML		
	comp=E,30047µm,0.3s					
TERO			AML	AML		
	comp=E,31126µm,0.3s					
TRE1	**Treia**	**0.43 13**	P	**Pg**	**14 14 29.1**	**+0.3**
T1211	**Morro Reatino**	**0.43 213**	P	**Pg**	**14 14 29.0**	**+0.1**
T1211			S	**Sb**	**14 14 36.6**	**+0.3**
T1211			AML	AML		
	comp=E,25050µm,0.3s					
T1211			AML	AML		
	comp=N,46450µm,0.3s					
T1211			AML	AML		
	comp=E,26350µm,0.3s					
T1211			AML	AML		
	comp=N,45850µm,0.3s					
T1211			AML	AML		
	comp=N,46450µm,0.3s					
EL6	**Elcito**	**0.44 353**	*e*P	**Pg**	**14 14 28.7**	**-0.3**
EL6			S	**Sb**	**14 14 36.7**	**+0.3**
EL6			AML	AML		
	comp=E,20150µm,0.4s					
EL6			AML	AML		
	comp=N,26750µm,0.2s					
ARRO	**Arrone**	**0.44 224**	*e*P	**Pg**	**14 14 29.2**	**+0.2**
T1247	**Pizzolo (AQ)**	**0.46 169**	P	**Pg**	**14 14 29.7**	**+0.2**
T1247			S	**Sb**	**14 14 36.7**	**-0.5**
T1247			AML	AML		
	comp=E,27550µm,1.6s					
T1247			AML	AML		
	comp=N,30800µm,0.3s					
CING	**Cingoli**	**0.48 2**	P	**Pg**	**14 14 29.5**	**-0.2**
ATCC	**AVT- Casa Cast**	**0.49 306**	*e*P	**Pg**	**14 14 29.9**	**0.0**
ATCC			S	**Sb**	**14 14 38.5**	**+0.7**
ATCC			AML	AML		
	comp=N,16900µm,0.8s					
ATCC			AML	AML		
	comp=N,16950µm,0.8s					
ATCC			AML	AML		
	comp=E,19950µm,1.4s					
CADA	**Capodarco di F**	**0.52 55**	P	**Pb**	**14 14 31.8**	**+0.5**
CESX	**Cesi**	**0.53 237**	*e*P	**Pg**	**14 14 30.6**	**0.0**
CESX			AML	AML		
	comp=E,17500µm,0.5s					
CESX			AML	AML		
	comp=N,12950µm,0.4s					
GIGS	**Gran Sasso**	**0.53 147**	*e*P	**Pg**	**14 14 29.8**	**-1.0**
GIGS			S	**Sb**	**14 14 38.5**	**-0.6**
GIGS			AML	AML		
	comp=E,3910µm,0.5s					
GIGS			AML	AML		
	comp=N,3600µm,0.2s					
CIMA	**Civitanova Mar**	**0.55 41**	P	**Pb**	**14 14 32.5**	**+0.7**
TRTR	**Tortoreto Alta**	**0.55 99**	*e*P	**Pg**	**14 14 31.5**	**+0.5**
TRTR			AML	AML		
	comp=N,33450µm,0.4s					
TRTR			AML	AML		
	comp=E,50300µm,0.6s					
MMUR	**Monte Murano**	**0.56 346**	P	**Pg**	**14 14 31.2**	**-0.1**
MMUR			S	**Sb**	**14 14 40.8**	**+0.8**
AQU	**L'Aquila**	**0.57 163**	*e*P	**Pg**	**14 14 30.4**	**-1.0**
AQU			S	**Sb**	**14 14 40.2**	**+0.1**
AQU			AML	AML		
	comp=E,13000µm,0.3s					
AQU			AML	AML		
	comp=N,10380µm,0.8s					
AQU			AML	AML		
	comp=N,10890µm,0.8s					
AQU			AML	AML		
	comp=E,13050µm,0.3s					
AQU			AML	AML		
	comp=E,13050µm,0.3s					
AQU			AML	AML		
	comp=N,10340µm,0.8s					
AQU			AML	AML		
	comp=N,3910µm,0.3s					
PP3	**Marolino**	**0.57 33**	*e*P	**Pg**	**14 14 32.1**	**+0.6**
PP3			AML	AML		
	comp=E,40050µm,0.7s					
PP3			AML	AML		
	comp=N,37950µm,0.3s					
PP3			AML	AML		
	comp=E,41550µm,0.7s					
PP3			AML	AML		
	comp=N,38200µm,0.3s					
PP3			AML	AML		
	comp=E,40050µm,0.7s					
PP3			AML	AML		
	comp=E,41600µm,0.7s					
PP3			AML	AML		
	comp=N,38000µm,0.3s					
MURB	**Monte Urbino**	**0.60 308**	*e*P	**Pg**	**14 14 32.0**	**0.0**
MURB			S	**Sb**	**14 14 42.8**	**+1.6**
MURB			AML	AML		
	comp=E,33200µm,0.3s					
MURB			AML	AML		
	comp=N,22450µm,1.5s					
MURB			AML	AML		
	comp=N,22450µm,0.3s					
MURB			AML	AML		
	comp=E,36250µm,1.0s					
MURB			AML	AML		
	comp=E,33250µm,0.3s					
MURB			AML	AML		
	comp=E,5483µm,0.2s					
ARVD	**Arcevia**	**0.62 344**	P	**Pg**	**14 14 32.2**	**-0.3**
ARVD			S	**Sb**	**14 14 42.7**	**+0.9**
ARVD			AML	AML		
	comp=N,5010µm,0.4s					
ARVD			AML	AML		
	comp=E,5450µm,1.1s					
FIAM	**Fiamignano**	**0.63 184**	*e*P	**Pg**	**14 14 31.6**	**-1.0**
FIAM			S	**Sb**	**14 14 42.3**	**+0.3**
FIAM			AML	AML		
	comp=E,10550µm,1.0s					
FIAM			AML	AML		
	comp=N,8395µm,0.8s					
FIAM			AML	AML		
	comp=N,2876µm,0.4s					
ATSC	**Scheggia e Pas**	**0.64 326**	P	**Pg**	**14 14 32.4**	**-0.4**
ATFO	**Monte Foce - G**	**0.65 317**	P	**Pg**	**14 14 32.6**	**-0.3**
ATFO			S	**Sb**	**14 14 43.6**	**+1.1**
ATFO			AML	AML		
	comp=E,9265µm,0.8s					
ATFO			AML	AML		
	comp=N,6375µm,0.7s					
ATTE	**AVT- Monte Tez**	**0.68 297**	*e*P	**Pg**	**14 14 33.2**	**-0.2**
ATTE			AML	AML		
	comp=E,6205µm,0.3s					
ATTE			AML	AML		
	comp=N,4930µm,1.4s					
FAGN	**Fagnano**	**0.70 154**	*e*P	**Pg**	**14 14 33.6**	**-0.2**
FAGN			S	**Sb**	**14 14 44.6**	**+0.7**
FAGN			AML	AML		
	comp=E,21050µm,0.6s					
FAGN			AML	AML		
	comp=N,15550µm,1.5s					
VCEL	**Villa Celiera**	**0.70 136**	*e*P	**Pg**	**14 14 33.9**	**0.0**
VCEL			AML	AML		
	comp=E,15750µm,0.8s					
VCEL			AML	AML		
	comp=N,15400µm,0.4s					
FRON	**Frontone**	**0.70 332**	*e*P	**Pg**	**14 14 33.3**	**-0.7**
FRON			AML	AML		
	comp=N,10215µm,0.5s					
FRON			AML	AML		
	comp=E,5200µm,0.7s					
AOI	**Ancona**	**0.72 25**	*e*P	**Pg**	**14 14 34.5**	**+0.2**
AOI			AML	AML		
	comp=E,11850µm,0.3s					
AOI			AML	AML		
	comp=N,10440µm,0.3s					
ATVO	**AVT- Monte Val**	**0.74 311**	*e*P	**Pg**	**14 14 34.4**	**-0.3**
ATVO			AML	AML		
	comp=E,5350µm,0.8s					
ATVO			AML	AML		
	comp=N,5205µm,1.1s					
ATVO			AML	AML		
	comp=E,1040µm,0.4s					
MGAB	**Montegabbione**	**0.78 271**	*e*P	**Pb**	**14 14 35.9**	**+0.1**
MGAB			AML	AML		
	comp=E,15650µm,1.0s					
MGAB			AML	AML		
	comp=N,9640µm,1.4s					
MGAB			AML	AML		
	comp=E,15700µm,1.0s					
MGAB			AML	AML		
	comp=N,9635µm,1.4s					
MGAB			AML	AML		
	comp=N,8415µm,1.4s					
MGAB			AML	AML		
	comp=E,16300µm,1.0s					
ATPI	**Pietralunga -**	**0.79 315**	*e*P	**Pg**	**14 14 35.3**	**-0.3**
ATPI			AML	AML		
	comp=N,3690µm,0.5s					
ATPI			AML	AML		
	comp=N,3695µm,0.5s					
ATPI			AML	AML		
	comp=E,4635µm,0.5s					
MPAG	**Monte Paganucc**	**0.79 337**	*e*P	**Pg**	**14 14 35.4**	**-0.3**
MPAG			AML	AML		
	comp=E,4900µm,0.4s					
MPAG			AML	AML		
	comp=N,6260µm,0.8s					
MPAG			AML	AML		
	comp=E,4900µm,0.4s					
MPAG			AML	AML		
	comp=N,6200µm,1.1s					
MPAG			AML	AML		
	comp=N,6260µm,0.8s					
MPAG			AML	AML		
	comp=E,4655µm,0.4s					
PIEI	**Pieia**	**0.79 324**	*e*P	**Pg**	**14 14 35.2**	**-0.5**
PIEI			AML	AML		
	comp=N,3490µm,0.4s					
PIEI			AML	AML		
	comp=E,3950µm,1.1s					
ATMI	**Monte Miggiano**	**0.80 304**	P	**Pb**	**14 14 36.5**	**+0.5**
ATMI			AML	AML		
	comp=N,12050µm,1.2s					
ATMI			AML	AML		
	comp=E,14600µm,0.7s					
T0110	**Collepietro**	**0.80 146**	*e*P	**Pg**	**14 14 34.7**	**-1.1**
T0110			S	**Sb**	**14 14 47.9**	**+1.0**
T0110			AML	AML		
	comp=E,11600µm,0.5s					
T0110			AML	AML		
	comp=N,12200µm,0.5s					
SRES	**S.Oreste - Sor**	**0.82 217**	*e*P	**Pb**	**14 14 36.6**	**+0.2**
SRES			AML	AML		
	comp=N,3120µm,1.6s					
SRES			AML	AML		
	comp=E,2930µm,1.4s					
FSSB	**Fossombrone**	**0.85 340**	*e*P	**Pg**	**14 14 36.3**	**-0.3**
FSSB			AML	AML		
	comp=N,20850µm,0.4s					
FSSB			AML	AML		
	comp=E,14600µm,0.4s					
APEC	**Apecchio**	**0.86 320**	P	**Pb**	**14 14 37.2**	**+0.1**
APEC			AML	AML		
	comp=N,1085µm,0.5s					
APEC			AML	AML		
	comp=E,1423µm,1.2s					
APEC			AML	AML		
	comp=N,1085µm,0.5s					
PTQR	**Pietraquaria**	**0.89 169**	*e*P	**Pg**	**14 14 36.5**	**-1.0**
PTQR			AML	AML		
	comp=E,2740µm,0.6s					
PTQR			AML	AML		
	comp=N,2830µm,0.5s					
SACS	**San Casciano d**	**0.93 267**	P	**Pb**	**14 14 38.4**	**0.0**
SACS			AML	AML		
	comp=E,4850µm,1.6s					
SACS			AML	AML		
	comp=N,6170µm,1.1s					
SACS			AML	AML		
	comp=E,4655µm,1.6s					
SACS			AML	AML		
	comp=N,6175µm,1.1s					
PE3	**Peglio**	**0.94 328⇑**	*e*P	**Pg**	**14 14 38.4**	**-0.1**
PE3			AML	AML		
	comp=E,38µm,0.9s					
PE3			AML	AML		
	comp=N,54µm,0.2s					
CERT	**Cerreto**	**0.96 189**	*e*P	**Pg**	**14 14 38.4**	**-0.4**
CERT			AML	AML		
	comp=N,4985µm,1.3s					
CERT			AML	AML		
	comp=E,8625µm,0.4s					
CAFI	**Castiglion Fio**	**0.99 296**	P	**Pb**	**14 14 39.3**	**+0.1**
CAFI			AML	AML		
	comp=E,3785µm,0.7s					
CAFI			AML	AML		
	comp=E,3840µm,0.7s					
CAFI			AML	AML		
	comp=N,3310µm,1.1s					
CAFI			AML	AML		
	comp=N,3150µm,0.8s					
LATE	**Laterza**	**1.05 255**	P	**Pb**	**14 14 40.7**	**+0.3**
VVLD	**Villa Vallelon**	**1.08 162**	P	**Pg**	**14 14 40.2**	**-0.9**
VVLD			AML	AML		
	comp=E,2545µm,0.7s					
VVLD			AML	AML		
	comp=N,3165µm,0.5s					
CPGN	**Carpegna, Ital**	**1.10 326**	P	**Pb**	**14 14 41.7**	**+0.4**
CPGN			AML	AML		
	comp=E,6735µm,0.8s					
CPGN			AML	AML		
	comp=N,5280µm,0.7s					
CPGN			AML	AML		
	comp=N,5275µm,0.7s					
GUAR	**Guarcino**	**1.11 175**	P	**Pn**	**14 14 42.2**	**+0.7**
GUAR			AML	AML		
	comp=E,3950µm,0.7s					
GUAR			AML	AML		
	comp=N,3600µm,0.5s					
MCIV	**Monte Civitell**	**1.11 264**	P	**Pb**	**14 14 41.6**	**+0.2**
SF04	**Casetta**	**1.12 267**	AML	AML		
	comp=N,2445µm,1.3s					
SF04			AML	AML		
	comp=E,2160µm,1.1s					
LPEL	**Lama dei Pelig**	**1.13 138**	P	**Pg**	**14 14 41.0**	**-1.0**
LPEL			AML	AML		
	comp=N,3320µm,0.9s					
LPEL			AML	AML		
	comp=E,3600µm,1.1s					
CRE	**Caprese Michel**	**1.15 309**	AML	AML		
	comp=N,2490µm,1.3s					
CRE			AML	AML		
	comp=E,1935µm,0.5s					
SF01	**Poggio Pratacc**	**1.19 266**	AML	AML		
	comp=E,1698µm,0.6s					
SF01			AML	AML		
	comp=N,2150µm,1.4s					
TOLF	**Tolfa**	**1.21 227**	P	**Pb**	**14 14 42.9**	**0.0**
TOLF			AML	AML		
	comp=N,1755µm,1.0s					
TOLF			AML	AML		
	comp=E,1630µm,1.2s					
POFI	**Posta Fibreno**	**1.24 161**	P	**Pn**	**14 14 43.7**	**+0.2**
POFI			AML	AML		
	comp=N,1425µm,1.0s					
POFI			AML	AML		
	comp=E,1895µm,1.4s					
POFI			AML	AML		
	comp=E,2105µm,1.4s					
POFI			AML	AML		
	comp=N,1405µm,1.1s					
ARCI	**Arcidosso**	**1.25 269**	P	**Pg**	**14 14 44.5**	**+0.1**
GIUL	**Giuliano Di Ro**	**1.34 178**	P	**Pg**	**14 14 46.2**	**+0.2**
GIUL			AML	AML		
	comp=E,1585µm,0.7s					
GIUL			AML	AML		
	comp=N,2015µm,0.9s					
ASQU	**Asqua**	**1.35 312**	P	**Pb**	**14 14 46.0**	**+0.4**
SFI	**Santa Sofia**	**1.40 317**	P	**Pg**	**14 14 47.4**	**+0.2**
LIK	**San Giovanni I**	**1.42 168**	AML	AML		
	comp=N,3785µm,0.6s					
LIK			AML	AML		
	comp=E,3005µm,1.6s					
FRES	**Fresagrandinar**	**1.44 129**	P	**Pg**	**14 14 48.3**	**+0.4**
FRES			AML	AML		
	comp=N,1127µm,0.7s					
FRES			AML	AML		
	comp=E,1965µm,0.6s					
CERA	**Filignano**	**1.44 154**	P	**Pg**	**14 14 48.7**	**+0.7**
CERA			AML	AML		
	comp=N,2095µm,0.5s					
CERA			AML	AML		
	comp=N,2170µm,0.5s					
CERA			AML	AML		
	comp=E,2415µm,1.1s					
CERA			AML	AML		
	comp=E,2350µm,1.1s					
CSNT	**Castellina Chi**	**1.50 293**	P	**Pb**	**14 14 47.8**	**-0.2**
FROS	**Frosini**	**1.52 283**	P	**Pb**	**14 14 48.3**	**+0.1**
TRIV	**Trivento**	**1.52 138**	P	**Pg**	**14 14 49.6**	**+0.1**
TRIV			AML	AML		
	comp=E,1990µm,0.7s					
TRIV			AML	AML		
	comp=N,1950µm,0.9s					
RUFI	**Rufina**	**1.54 308**	P	**Pb**	**14 14 49.1**	**+0.4**
OSSC	**Osservatorio P**	**1.54 295**	P	**Pn**	**14 14 47.5**	**0.0**
MAON	**Monte Argentar**	**1.58 253**	P	**Pn**	**14 14 48.7**	**+0.7**
MAON			AML	AML		
	comp=N,439µm,1.3s					
MAON			AML	AML		
	comp=E,560µm,0.9s					
TRIF	**Trifonti**	**1.68 278**	P	**Pn**	**14 14 50.1**	**+0.6**
CASP	**Castiglione de**	**1.70 267**	P	**Pn**	**14 14 50.1**	**+0.4**
CASP			AML	AML		
	comp=E,297µm,0.5s					
CASP			AML	AML		
	comp=N,216µm,1.1s					
MELA	**Melanico ??? S**	**1.87 129**	P	**Pb**	**14 14 54.5**	**+0.2**

MELA AML AML
comp=N,2870μm,1.5s
MELA AML AML
comp=E,2600μm,0.7s
MELA AML AML
comp=N,2915μm,1.4s
MELA AML AML
comp=E,2540μm,0.7s
PSB1 Pescosannita 2.07 143 P **Pb 14 14 57.3 -0.4**
SGRT San Giovanni R 2.22 120 P **Pn 14 14 58.5 +1.6**
SGRT AML AML
comp=N,1186μm,0.4s
SGRT AML AML
comp=E,1020μm,0.5s
PLMA Palmaria, Port 2.68 297 AML AML
comp=N,158μm,0.6s
PLMA AML AML
comp=E,158μm,0.8s
PALZ Palazzo San Ge 2.85 132 P **Pn 14 15 07.3 +1.8**
PALZ AML AML
comp=E,1275μm,0.9s
PALZ AML AML
comp=N,1240μm,1.0s
SMPL Sampolo 2.99 256 P **Pn 14 15 09.3 +1.9**
SMPL AML AML
comp=E,43μm,0.8s
SMPL AML AML
comp=N,42μm,1.6s
SABO M.te Sabotino 3.10 5 P **Pn 14 15 09.7 +0.8**
SABO AML AML
comp=N,3710μm,0.8s
SABO AML AML
comp=E,4190μm,1.6s
SABO AML AML
comp=E,1022μm,1.6s
SABO AML AML
comp=N,968μm,0.8s
SABO AML AML
comp=N,3715μm,0.8s
PGF Pioggiola 3.10 265 *e*P **Pn 14 15 10.4 +1.4**
PGF *e*Sn **Sn 14 15 42.4 -3.5**
comp=N,16nm,0.3s
PGF Pioggiola 3.10 265 AML AML
comp=E,41μm,0.5s
PGF AML AML
comp=N,41μm,1.6s
LJU Ljubljana 3.29 17 AML AML
comp=E,2245μm,0.8s
LJU AML AML
comp=N,3860μm,1.2s
MPRI Monte Prat 3.35 358 P **Pn 14 15 13.5 +1.1**
MPRI AML AML
comp=E,500μm,1.6s
MPRI AML AML
comp=N,938μm,0.5s
STAL STALIGIAL 3.38 354 P **Pn 14 15 13.8 +1.1**
STAL AML AML
comp=E,509μm,0.7s
STAL AML AML
comp=N,402μm,0.2s
STAL AML AML
comp=E,572μm,0.9s
STAL AML AML
comp=N,408μm,0.7s
STAL AML AML
comp=N,402μm,0.2s
CIMO Cimolais 3.45 351 P **Pn 14 15 14.9 +1.1**
CIMO AML AML
comp=N,176μm,1.2s
CIMO AML AML
comp=E,128μm,0.5s
CIMO AML AML
comp=E,126μm,0.5s
CIMO AML AML
comp=N,176μm,1.2s
LUSI Trento, Gardas 3.46 333 P **Pn 14 15 16.2 +2.4**
LUSI AML AML
comp=N,376μm,1.6s
LUSI AML AML
comp=E,407μm,0.7s
MATE Matera 3.46 129 ⇑P **Pb 14 15 18.2 -3.2**
ACOM Acomizza, Ital 3.66 4 P **Pn 14 15 18.5 +1.8**
ACOM AML AML
comp=N,426μm,0.9s
ACOM AML AML
comp=E,440μm,0.5s
ACOM AML AML
comp=N,422μm,0.6s
ACOM AML AML
comp=E,446μm,1.0s
ZOU Zoufplan 3.66 358 P **Pn 14 15 18.0 +1.2**
ZOU AML AML
comp=E,334μm,1.1s
ZOU AML AML
comp=N,400μm,1.1s
ZOU AML AML
comp=N,420μm,1.1s
ZOU AML AML
comp=E,330μm,0.9s
KOSI Kohlern 3.79 341 P **Pn 14 15 20.7 +2.2**
KOSI AML AML
comp=E,492μm,1.2s
KOSI AML AML
comp=N,358μm,0.8s
ABTA Abfaltersbach 3.88 353 *i* Pn **Pn 14 15 21.9 +2.2**
comp=N,24nm,0.5s,SNR=20
SBF Sospel 4.30 285 *e*P **Pn 14 15 27.2 +1.8**
SBF *e*Sn **Sn 14 16 10.9 -4.5**
comp=N,27nm,0.5s
BEHE Becsehely 4.40 34 P **Pn 14 15 25.7 -1.0**
FETA Feichten 4.47 338 *i* Pn **Pn 14 15 30.5 +2.6**
comp=N,4.0nm,0.5s,SNR=14
WTTA Wattenberg 4.50 346 *i* Pn **Pn 14 15 31.5 +3.2**
comp=N,3.8nm,0.2s,SNR=13
WTTA Wattenberg 4.50 346 *e*Pn **Pn 14 15 31.3 +2.9**
PDG Podgorica 4.51 94 ⇑P **Pn 14 15 30.8 +2.6**
DAVOX Davos/Dischmat 4.54 330 Pn **Pn 14 15 30.4 +1.6**
comp=N,2.1nm,0.3s,baz=151,slow=18,SNR=21
comp=N,11nm,0.6s
SQTA Sankt Quirin 4.54 343 *i* Pn **Pn 14 15 31.6 +2.8**
comp=N,18nm,0.4s,SNR=15
WATA Walderalm 4.58 346 *i* Pn **Pn 14 15 32.8 +3.4**
comp=N,14nm,0.5s,SNR=11
TIP Timpagrande 4.60 143 ⇑P **Pg 14 15 47.4 -0.9**
MOTA Moosalm 4.68 342 *i* Pn **Pn 14 15 33.9 +3.1**
comp=N,8.3nm,0.6s,SNR=14
KOVH Kovagotottos 4.75 46 P **Pn 14 15 31.0 -0.5**
BIOA Bad Ischl, Aus 4.80 4 *e*Pn **Pn 14 15 34.2 +1.9**
comp=N,7.0nm,0.3s
PART Garmisch-Parte 4.83 343 *e*Pn **Pn 14 15 36.2 +3.5**
RJOB Jochberg 4.85 357 *e*Pn **Pn 14 15 35.3 +2.3**
RETA Reutte 4.90 340 *i* Pn **Pn 14 15 37.0 +3.3**
comp=N,4.2nm,0.4s,SNR=10
LMR La Mourre 4.90 277 *e*P **Pn 14 15 35.9 +2.3**
LMR *e*Sn **Sn 14 16 25.5 -4.7**
comp=N,4.5nm,0.5s
OBER Oberstdorf 4.95 337 *e*Pn **Pn 14 15 38.5 +4.1**
DAVA Damuels 4.97 333 *e*Pn **Pn 14 15 38.5 +3.8**
comp=N,4.8nm,0.3s
MBDF Montbardon 4.98 294 *e*P **Pn 14 15 37.1 +2.2**
MBDF *e*Sn **Sn 14 16 28.1 -4.4**
comp=N,12nm,0.6s
MOA Molln 5.01 8 *e*Pn **Pn 14 15 37.7 +2.5**
TIR Tirane 5.21 105 ⇑P **Pn 14 15 41.0 +3.2**
UBR Ueberruh 5.25 337 *e*Pn **Pn 14 15 41.6 +3.1**
FRGS Fruska Gora 5.29 62 ⇑P Pn 14 15 44.4 +5.4
LPG La Plagne 5.30 302 *e*P **Pn 14 15 41.9 +2.5**
LPG *e*Sn **Sn 14 16 34.4 -6.1**
comp=N,17nm,0.6s
LPL La Plagne 5.32 302 *e*P **Pn 14 15 42.4 +2.8**
LPL *e*Sn **Sn 14 16 36.2 -4.7**
comp=N,14nm,0.6s
SMRF Simiane la Rot 5.64 284 *e*P **Pn 14 15 46.2 +2.4**
ORIF Oris-en-Rattie 5.65 293 *e*P **Pn 14 15 46.5 +2.5**
ORIF *e*Sn **Sn 14 16 43.6 -5.1**
comp=N,14nm,0.6s
GERES GERESS Array B 5.96 3 Pn **Pn 14 15 48.9 +0.6**
comp=N,0.5nm,0.3s,baz=172,slow=13,SNR=12
comp=N,0.8nm,0.2s
CABF La Chapelle 6.27 309 *e*P **Pn 14 15 54.5 +2.0**
CABF *e*Sn **Sn 14 16 58.7 -5.3**
comp=N,8.9nm,0.7s
BFO Black Forest 6.41 330 *e*Pn **Pn 14 15 57.3 +2.9**
VIVF Saint-Julien-l 6.45 291 *e*P **Pn 14 15 57.7 +2.7**
HINF Hinteralfeld 6.64 320 *e*P **Pn 14 15 58.8 +1.3**
HINF *e*Sn **Sn 14 17 06.1 -6.9**
comp=N,4.8nm,0.5s
BZS Buzias 6.64 63 ⇓P **Pn 14 16 02.0 +4.5**
VRAC Vranov 6.84 19 LR LR 14 19 16.3
comp=N,53nm,20.2s,baz=222,slow=44
LASF Ste Croix 6.88 283 *e*P **Pn 14 16 03.8 +2.9**
CDF Champ du Feu 6.89 325 *e*P **Pn 14 16 02.5 +1.4**
CDF *e*Sn **Sn 14 17 12.8 -6.6**
comp=N,3.6nm,0.5s
SIRR Siria 6.93 58 ⇑P Pn 14 16 08.1 +6.6
BLKB Belogradchik 6.97 81 ⇑P **Pn 14 16 03.7 +1.6**
HAU Haudompre 7.01 319 *e*P **Pn 14 16 04.2 +1.6**
HAU *e*Sn **Sn 14 17 16.1 -6.1**
comp=N,6.8nm,0.4s
GZR Gura Zlata 7.34 67 ⇓P **Pn 14 16 10.9 +3.7**
KKB Krupnik 7.41 95 *e*P **Pn 14 16 10.9 +2.8**
VTS Vitosha 7.41 89 ⇑P **Pn 14 16 09.5 +1.3**
VTS Vitosha 7.41 89 *e*P **Pn 14 16 10.9 +2.7**
SMF Signal de Mont 7.63 303 *e*P **Pn 14 16 14.2 +3.1**
PAGF Fort de Pagny 7.69 320 *e*P **Pn 14 16 14.4 +2.4**
MPEP Malo Peshtene 7.74 83 *e*P **Pb 14 16 34.9 +0.6**
SFTF Sexfontaines 7.79 316 *e*P **Pn 14 16 15.7 +2.3**
baz=135
DRGR 7.81 57 ⇑P Pn 14 16 20.0 +6.4
LOR Lormes 7.91 307 *e*P **Pn 14 16 17.2 +2.2**
MMB Musomiste 7.94 96 *e*P **Pn 14 16 18.1 +2.7**
MEZF Maizieres J'vi 7.98 317 *e*P **Pn 14 16 18.7 +2.8**
baz=137
AVF Avril sur Loir 7.99 303 *e*P **Pn 14 16 17.4 +1.3**
SSF Saint Saulge 8.02 305 *e*P **Pn 14 16 19.2 +2.7**
SAVF Savonnieres en 8.02 318 *e*P **Pn 14 16 18.6 +2.1**
CLL Collm 8.41 359 *e*(Pn) **Pn 14 16 25.0 +3.2**
CLL *ex* x 14 16 43.0
CLL *ex* x 14 18 16.0
CLL *e*Sg **Sg 14 18 47.0 -3.1**
comp=Z,13nm,0.9s
RZN Rozhen 8.64 94 *e*P **Pn 14 16 28.8 +3.7**
RJF Les Rejaudoux 8.73 290 *e*P **Pn 14 16 28.9 +2.7**
VOIR 8.90 69 ⇑P **Pn 14 16 31.6 +3.0**
EKA Eskdalemuir Ar 16.35 325 Pn **P 14 18 13.5 +1.2**
baz=136,slow=13
comp=Z,0.9nm,0.8s
FINES FINESS Array B 20.12 18 LR LR 14 27 04.3
comp=Z,28nm,21.9s,baz=253,slow=38
TORD Torodi Ar. Bea 31.26 202 P **P 14 20 42.0 +2.2**
comp=Z,0.5nm,0.7s,baz=15,slow=9.0,SNR=4.1
comp=Z,0.5nm,0.7s
ARU Arti 31.71 49 P **P 14 20 42.5 -1.0**
comp=Z,1.7nm,0.6s,baz=281,slow=6.9,SNR=3.9
comp=Z,1.7nm,0.6s
MKAR Makanchi Array 47.72 60 P **P 14 22 54.2 -2.4**
comp=Z,0.5nm,0.8s,baz=297,slow=6.3,SNR=2.1
comp=Z,0.5nm,0.8s

PRU ***30*** *14:14:37.6±0.0, 42°.78N×13°.13E, h0km*
IDC ***30*** *14:14:38.7±1.2, 42°.86N×13°.03E, h0km, mb3.9/10, mbtmp3.8/17, ML3.9/6, MS3.0/4, Error ellipse: s-maj=22.0km s-min=13.3km az=72.0*
LDG ***30*** *14:14:40.0±0.2, 42°.84N×13°.02E, h8km, Ml3.3/18, Error ellipse: s-maj=6.9km s-min=3.4km az=34.0*
ISC 30 14:14:39.7±0.6,**42°.80N**±0°.02×**13°.05E**±0°.02,**h13**km±3km,
n161,σ2**s09**/216,**mb3.9**/9,**7C-7D**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.05**	**181**	⇑P	**Pg**	**14 14 41.4**	**-0.9**
T1212				S	**Sg**	**14 14 42.9**	**-1.2**
T1216	**Preci, Frazion**	**0.09**	**348**	P	**Pg**	**14 14 42.3**	**-0.4**
T1216				S	**Sg**	**14 14 44.5**	**-0.4**
T1213	**Norcia, Frazio**	**0.10**	**142**	⇓P	**Pg**	**14 14 41.7**	**-1.0**
T1213				S	**Sg**	**14 14 43.3**	**-1.6**
T1245	**Castelsantange**	**0.12**	**61**	⇓*i*P	**Pg**	**14 14 42.2**	**-0.9**
T1245				S	**Sg**	**14 14 44.3**	**-1.3**
T1217	**Poggiodomo (PG**	**0.12**	**224**	*e*P	**Pg**	**14 14 42.8**	**-0.3**
T1217				S	**Sg**	**14 14 45.5**	**0.0**
T1217				AML	AML		
	comp=E,37650μm,0.5s						
T1217				AML	AML		
	comp=N,48150μm,1.6s						
T1217				AML	AML		
	comp=N,48600μm,1.6s						
T1217				AML	AML		
	comp=E,37650μm,0.4s						
T1217				AML	AML		
	comp=N,48150μm,1.6s						
T1217				AML	AML		
	comp=E,35700μm,0.3s						
T1217				AML	AML		
	comp=E,35700μm,0.3s						
T1217				AML	AML		
	comp=N,48650μm,1.6s						
T1217				AML	AML		
	comp=E,37700μm,0.5s						
T1217				AML	AML		
	comp=N,48200μm,1.6s						
T1214	**Arquata del Tr**	**0.13**	**108**	⇓P	**Pg**	**14 14 42.1**	**-1.1**
T1214				S	**Sg**	**14 14 44.1**	**-1.6**
T1215	**Vallo di Nera,**	**0.13**	**271**	⇑*e*P	**Pg**	**14 14 43.0**	**-0.2**
T1215				S	**Sg**	**14 14 45.9**	**+0.3**
T1215				AML	AML		
	comp=E,31000μm,0.3s						
T1215				AML	AML		
	comp=E,31050μm,0.3s						
T1215				AML	AML		
	comp=E,31000μm,0.3s						
T1215				AML	AML		
	comp=N,29300μm,1.0s						
T1218	**Civita (PG)**	**0.14**	**158**	P	**Pg**	**14 14 42.5**	**-0.8**
T1218				S	**Sg**	**14 14 44.9**	**-1.0**
FEMA	**Monte Fema**	**0.16**	**1**	*e*P	**Pg**	**14 14 43.4**	**-0.4**
FEMA				S	**Sg**	**14 14 46.4**	**-0.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1244	**Arquata del Tr**	**0.19**	**103**	*e*P	**Pg**	**14 14 43.3**	**-0.8**
T1244				S	**Sg**	**14 14 46.4**	**-0.7**
LNSS	**Leonessa**	**0.20**	**181**	*e*P	**Pg**	**14 14 43.7**	**-0.5**
LNSS				S	**Sg**	**14 14 46.9**	**-0.4**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,56950μm,1.4s						
T1201	**Domo (RI)**	**0.21**	**133**	⇓*i*P	**Pg**	**14 14 43.8**	**-0.6**
T1201				S	**Sg**	**14 14 47.2**	**-0.4**
T1204	**Amatrice, Fraz**	**0.23**	**122**	⇑*i*P	**Pg**	**14 14 44.1**	**-0.8**
T1204				S	**Sg**	**14 14 47.6**	**-0.8**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
FDMO	**Fiordimonte**	**0.24**	**7**	P	**Pg**	**14 14 44.6**	**-0.3**
FDMO				S	**Sg**	**14 14 48.7**	**+0.3**
T1256	**Bolognola (MC)**	**0.25**	**33**	*e*P	**Pg**	**14 14 44.6**	**-0.5**
T1256				S	**Sg**	**14 14 48.5**	**-0.2**
AM05	**Amandola Campo**	**0.29**	**52**	⇑P	**Pg**	**14 14 45.2**	**-0.6**
AM05				S	**Sg**	**14 14 49.4**	**-0.4**
AM05				AML	AML		
	comp=E,84050μm,1.2s						
AM05				AML	AML		
	comp=N,3990μm,0.7s						
AM05				AML	AML		
	comp=E,84000μm,1.2s						
AM05				AML	AML		
	comp=N,3995μm,0.7s						
T1241	**Roccafluvione,**	**0.29**	**79**	⇑*i*P	**Pg**	**14 14 45.2**	**-0.5**
T1241				S	**Sg**	**14 14 49.6**	**-0.2**
T1241				AML	AML		
	comp=N,94550μm,0.6s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,93300μm,0.6s						
T1241				AML	AML		
	comp=N,94500μm,0.6s						
T1241				AML	AML		
T1241				AML	AML		
T1211	**Morro Reatino**	**0.30**	**208**	*e*P	**Pg**	**14 14 45.8**	**-0.2**
T1211				S	**Sg**	**14 14 50.4**	**+0.2**
T1211				AML	AML		
	comp=E,25050μm,0.3s						
T1211				AML	AML		
	comp=E,26400μm,0.3s						
T1211				AML	AML		
	comp=N,45850μm,0.3s						
T1211				AML	AML		
	comp=N,45850μm,0.3s						
T1211				AML	AML		
	comp=N,46450μm,0.3s						
T1211				AML	AML		
	comp=N,46450μm,0.3s						
T1211				AML	AML		
	comp=E,26350μm,0.3s						
T1211				AML	AML		
	comp=E,25050μm,0.3s						
ARRO	**Arrone**	**0.30**	**223**	*e*P	**Pg**	**14 14 46.0**	**0.0**
T1243	**Rocca Santa Ma**	**0.31**	**109**	P	**Pg**	**14 14 45.2**	**-1.1**
T1243				S	**Sg**	**14 14 49.5**	**-1.1**
RM33	**Pellescritta (**	**0.32**	**157**	*e*P	**Pg**	**14 14 45.5**	**-0.7**
RM33				S	**Sg**	**14 14 50.0**	**-0.7**
RM33				AML	AML		
	comp=E,40150μm,1.2s						
RM33				AML	AML		
	comp=N,26650μm,1.4s						
RM33				AML	AML		
	comp=E,39450μm,1.2s						
RM33				AML	AML		
	comp=N,26250μm,1.4s						
RM33				AML	AML		
	comp=E,40200μm,1.2s						
RM33				AML	AML		
	comp=E,39500μm,1.2s						
GUMA	**Gualdo di Mace**	**0.34**	**39**	*e*P	**Pb**	**14 14 46.4**	**-1.3**
GUMA				S	**Sb**	**14 14 51.7**	**-1.2**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SEF1	**Sefro**	**0.35**	**348**	*e*P	**Pb**	**14 14 47.0**	**-1.0**
SEF1				S	**Sb**	**14 14 52.4**	**-1.0**
ASSB	**Assisi San Ben**	**0.37**	**311**	*e*P	**Pb**	**14 14 47.3**	**-0.9**
ASSB				S	**Sb**	**14 14 53.1**	**-0.9**
ASSB				AML	AML		
	comp=E,21250μm,0.3s						
ASSB				AML	AML		
	comp=N,22750μm,0.4s						
CAMP	**Campotosto**	**0.38**	**134**	*e*P	**Pg**	**14 14 46.4**	**-0.9**
PIO1	**Pioraco**	**0.38**	**353**	*e*P	**Pb**	**14 14 47.3**	**-1.1**
PIO1				AML	AML		
	comp=E,19300μm,0.6s						
PIO1				AML	AML		
	comp=N,22800μm,0.5s						
CESX	**Cesi**	**0.39**	**241**	*e*P	**Pb**	**14 14 47.7**	**-0.8**
CESX				S	**Sb**	**14 14 53.7**	**-0.8**
T1246	**Crognaleto (TE**	**0.39**	**123**	*e*P	**Pg**	**14 14 46.5**	**-1.2**
T1246				S	**Sg**	**14 14 52.0**	**-1.0**
FIU1	**Fiuminata**	**0.40**	**348**	*e*P	**Pb**	**14 14 47.7**	**-1.0**
FIU1				S	**Sb**	**14 14 53.9**	**-0.7**
MDAR	**Monte D'Aria**	**0.40**	**10**	*e*P	**Pb**	**14 14 47.4**	**-1.3**
MDAR				S	**Sb**	**14 14 53.5**	**-1.3**
T1247	**Pizzolo (AQ)**	**0.40**	**152**	*e*P	**Pg**	**14 14 47.0**	**-0.8**
T1247				S	**Sg**	**14 14 52.5**	**-0.8**
T1247				AML	AML		
	comp=N,30800μm,0.3s						
T1247				AML	AML		
	comp=E,27550μm,1.6s						
GAG1	**Gagliole**	**0.44**	**2**	*e*P	**Pb**	**14 14 48.3**	**-1.0**
GAG1				S	**Sb**	**14 14 55.5**	**-0.4**
GAG1				AML	AML		
	comp=N,46600μm,0.4s						
GAG1				AML	AML		
	comp=E,38550μm,0.5s						
GAG1				AML	AML		
	comp=N,46600μm,0.4s						
SSM1	**San Severino M**	**0.44**	**13**	*e*P	**Pb**	**14 14 48.1**	**-1.2**
SSM1				S	**Sb**	**14 14 55.0**	**-0.9**
TERO	**Teramo**	**0.45**	**113**	⇑*i*P	**Pg**	**14 14 47.3**	**-1.3**
TERO				S	**Sg**	**14 14 53.6**	**-1.1**
MNTP	**Montappone**	**0.46**	**42**	*e*P	**Pb**	**14 14 49.1**	**-0.6**
MNTP				S	**Sb**	**14 14 56.4**	**0.0**
MNTP				AML	AML		
	comp=E,54600μm,0.6s						
MNTP				AML	AML		
	comp=N,72050μm,0.4s						
MNTP				AML	AML		
	comp=N,72100μm,0.4s						
MNTP				AML	AML		
	comp=E,54600μm,0.6s						
SNTG	**Esanatoglia**	**0.46**	**350**	*e*P	**Pb**	**14 14 48.8**	**-0.9**
SNTG				S	**Sb**	**14 14 56.1**	**-0.4**
SNTG				AML	AML		
	comp=E,9335μm,0.4s						
SNTG				AML	AML		
	comp=N,11350μm,0.2s						
SNTG				AML	AML		
	comp=E,9340μm,0.4s						
SNTG				AML	AML		
	comp=E,9680μm,0.5s						
SNTG				AML	AML		
	comp=E,9345μm,0.4s						
SNTG				AML	AML		
	comp=N,12150μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.49**	**322**	*e*P	**Pb**	**14 14 49.3**	**-0.9**
ATCC				S	**Sb**	**14 14 57.3**	**+0.1**
ATCC				AML	AML		
	comp=N,16900μm,0.8s						
ATCC				AML	AML		
	comp=E,19950μm,1.4s						
ATCC				AML	AML		
	comp=N,16950μm,0.8s						
OFFI	**Offida**	**0.49**	**74**	*e*P	**Pb**	**14 14 49.4**	**-0.7**
OFFI				S	**Sb**	**14 14 56.7**	**-0.6**
OFFI				AML	AML		
	comp=N,52650μm,0.5s						
OFFI				AML	AML		
	comp=E,49550μm,0.6s						
AQU	**L'Aquila**	**0.52**	**149**	P	**Pg**	**14 14 49.1**	**-0.8**
GIGS	**Gran Sasso**	**0.52**	**132**	*e*P	**Pg**	**14 14 48.7**	**-1.3**
GIGS				S	**Sg**	**14 14 55.7**	**-1.2**
GIGS				AML	AML		
	comp=E,3910μm,0.5s						
GIGS				AML	AML		
	comp=N,3600μm,0.2s						
EL6	**Elcito**	**0.53**	**4**	*e*P	**Pb**	**14 14 49.8**	**-1.1**
EL6				S	**Sb**	**14 14 58.2**	**-0.3**
FIAM	**Fiamignano**	**0.53**	**174**	P	**Pg**	**14 14 49.5**	**-0.8**
TRE1	**Treia**	**0.55**	**21**	*e*P	**Pb**	**14 14 50.5**	**-0.7**
TRE1				S	**Sb**	**14 14 59.0**	**+0.1**
TRE1				AML	AML		
	comp=E,46700μm,0.3s						
TRE1				AML	AML		
	comp=N,29600μm,0.8s						
TRE1				AML	AML		
	comp=E,46750μm,0.3s						
TRE1				AML	AML		
	comp=N,29650μm,0.8s						
CING	**Cingoli**	**0.59**	**11**	P	**Pb**	**14 14 50.9**	**-0.9**
CING				S	**Sb**	**14 15 00.1**	**0.0**
MURB	**Monte Urbino**	**0.60**	**321**	P	**Pb**	**14 14 51.4**	**-0.7**
TRTR	**Tortoreto Alta**	**0.64**	**89**	⇓P	**Pb**	**14 14 52.3**	**-0.4**
TRTR				AML	AML		
	comp=E,50300μm,0.6s						
TRTR				AML	AML		
	comp=N,33450μm,0.4s						
MMUR	**Monte Murano**	**0.64**	**357**	*e*P	**Pb**	**14 14 52.1**	**-0.7**
MMUR				S	**Sb**	**14 15 02.0**	**+0.2**
MMUR				AML	AML		
	comp=E,17600μm,0.6s						
MMUR				AML	AML		
	comp=N,14300μm,0.3s						
MMUR				AML	AML		
	comp=N,14250μm,0.3s						
MMUR				AML	AML		
	comp=E,17650μm,0.6s						
CADA	**Capodarco di F**	**0.66**	**53**	P	**Pb**	**14 14 53.3**	**+0.3**
FAGN	**Fagnano**	**0.67**	**143**	*e*P	**Pg**	**14 14 52.3**	**-0.4**
FAGN				S	**Sg**	**14 15 00.8**	**-0.7**
CIMA	**Civitanova Mar**	**0.68**	**42**	P	**Pb**	**14 14 53.2**	**-0.3**
SRES	**S.Oreste - Sor**	**0.69**	**215**	P	**Pg**	**14 14 51.3**	**-1.8**
ATLO	**AVT- Montelove**	**0.70**	**318**	P	**Pb**	**14 14 53.1**	**-0.6**
MGAB	**Montegabbione**	**0.70**	**280**	P	**Pb**	**14 14 53.6**	**-0.1**
ARVD	**Arcevia**	**0.70**	**354**	*e*P	**Pb**	**14 14 53.6**	**-0.2**
ARVD				S	**Sb**	**14 15 04.0**	**+0.6**
PP3	**Marolino**	**0.71**	**35**	P	**Pb**	**14 14 53.9**	**0.0**
PP3				AML	AML		
	comp=E,40050μm,0.7s						
PP3				AML	AML		
	comp=N,37950μm,0.3s						
PP3				AML	AML		
	comp=E,41550μm,0.7s						

PP3 AML AML
comp=N,38200µm,0.3s
PP3 AML AML
comp=E,40050µm,0.7s
PP3 AML AML
comp=E,41600µm,0.7s
PP3 AML AML
comp=N,38000µm,0.3s
VCEL Villa Celiera 0.71 124 P **Pg 14 14 52.6 -1.0**
ATVA AVT- Monte Val 0.73 311 P **Pb 14 14 54.6 +0.2**
ATPI Pietralunga - 0.80 324 P **Pb 14 14 55.9 +0.3**
PIEI Pieia 0.83 333 P **Pb 14 14 55.9 -0.1**
SACS San Casciano d 0.84 274 P **Pb 14 14 55.7 -0.5**
CERT Cerreto 0.85 183 P **Pg 14 14 54.5 -1.7**
AOI Ancona 0.85 28 P **Pb 14 14 56.2 -0.2**
FSSB Fossombrone 0.91 348 P **Pn 14 14 58.1 -0.1**
CAFI Castiglion Fio 0.95 304 P **Pn 14 14 58.4 -0.4**
VVLD Villa Vallelon 1.02 155 P **Pg 14 14 59.2 -0.2**
LPEL Lama dei Pelig 1.13 131 P **Pg 14 14 58.6 -2.9**
CPGN Carpegna, Ital 1.13 332 *e*P **Pn 14 15 02.5 +1.1**
CPGN AML AML
comp=N,5280µm,0.7s
CPGN AML AML
comp=N,5290µm,0.9s
CPGN AML AML
comp=N,5275µm,0.7s
CPGN AML AML
comp=E,6735µm,0.8s
CPGN AML AML
comp=E,6425µm,0.9s
GIUL Giuliano Di Ro 1.25 173 P **Pg 14 15 03.5 -0.3**
ASQU Asqua 1.35 318 P **Pn 14 15 05.3 +0.9**
RNI2 Rionero Sannit 1.37 143 P **Pb 14 15 07.2 +1.9**
CERA Filignano 1.40 149 P **Pn 14 15 05.0 0.0**
SFI Santa Sofia 1.41 322 P **Pb 14 15 08.5 +2.6**
FROS Frosini 1.45 287 P **Pb 14 15 06.1 -0.3**
CSNT Castellina Chi 1.45 298 P **Pb 14 15 09.7 +3.2**
FRES Fresagrandinar 1.46 124 P **Pn 14 15 06.6 +0.9**
FRES AML AML
comp=E,1965µm,0.6s
FRES AML AML
comp=N,1127µm,0.7s
MIDA Miranda 1.46 142 P **Pn 14 15 05.1 -0.8**
OSSC Osservatorio P 1.50 299 P **Pn 14 15 06.3 0.0**
RUFI Rufina 1.53 313 P **Pg 14 15 07.5 -1.6**
CASP Castiglione de 1.60 270 P **Pn 14 15 07.8 0.0**
CASP AML AML
comp=E,297µm,0.5s
CASP AML AML
comp=N,216µm,1.1s
TRIF Trifonti 1.60 282 P **Pn 14 15 08.2 +0.5**
TRIF AML AML
comp=N,509µm,0.7s
TRIF AML AML
comp=E,617µm,0.7s
BSSO Busso 1.70 137 P **Pb 14 15 11.2 +0.3**
CIGN Sant'Elia a Pi 1.79 129 P **Pb 14 15 12.3 -0.1**
CIGN AML AML
comp=E,984µm,1.1s
CIGN AML AML
comp=N,956µm,1.3s
MELA Melanico ??? S 1.89 125 P **Pn 14 15 12.8 +1.1**
MELA AML AML
comp=N,2915µm,1.4s
MELA AML AML
comp=N,2870µm,1.5s
MELA AML AML
comp=E,2540µm,0.7s
MELA AML AML
comp=E,2600µm,0.7s
TREM Isole Tremiti 1.94 109 P **Pn 14 15 13.2 +0.8**
TREM AML AML
comp=E,1895µm,0.7s
TREM AML AML
comp=N,2740µm,0.7s
CELB S.Piero in Cam 2.09 270 AML AML
comp=N,125µm,1.0s
CELB AML AML
comp=E,134µm,0.6s
MOCO Biccari - m.te 2.12 132 P **Pn 14 15 17.0 +2.1**
MOCO AML AML
comp=E,472µm,1.5s
MOCO AML AML
comp=E,460µm,1.4s
MOCO AML AML
comp=N,360µm,1.3s
MOCO AML AML
comp=N,338µm,1.3s
SGRT San Giovanni R 2.26 117 P **Pn 14 15 17.3 +0.5**
SGRT AML AML
comp=N,1186µm,0.4s
SGRT AML AML
comp=E,1020µm,0.5s
VULT Monte Vulture 2.66 133 P **Pn 14 15 23.9 +1.5**
VULT AML AML
comp=E,646µm,0.5s
VULT AML AML
comp=N,940µm,0.9s
VULT AML AML
comp=E,634µm,0.9s
VULT AML AML
comp=N,876µm,1.0s
PALZ Palazzo San Ge 2.86 129 P **Pn 14 15 26.1 +1.1**
PALZ AML AML
comp=E,1275µm,0.9s
PALZ AML AML
comp=N,1240µm,1.0s
SMPL Sampolo 2.87 257 AML AML
comp=E,43µm,0.8s
SMPL AML AML
comp=N,42µm,1.6s
MRVN Minervino Murg 2.92 125 P **Pn 14 15 26.6 +0.7**
MRVN AML AML
comp=N,238µm,0.9s
MRVN AML AML
comp=E,207µm,1.6s
PGF Pioggiola 2.99 267 *e*P **Pn 14 15 28.2 +1.3**
PGF *e*Sn **Sn 14 15 59.5 -3.2**
comp=E,8.2nm,0.3s
ROVR Rover Verones 3.18 334 P **Pn 14 15 31.0 +1.5**
ROVR AML AML
comp=E,148µm,1.0s
ROVR AML AML
comp=N,220µm,0.8s
SABO M.te Sabotino 3.21 7 P **Pn 14 15 30.7 +0.9**
SABO AML AML
comp=E,4190µm,1.6s
SABO AML AML
comp=N,3715µm,0.8s
SABO AML AML
comp=N,968µm,0.8s
SABO AML AML
comp=E,1022µm,1.6s
SABO AML AML
comp=N,3710µm,0.8s
CGRP Cima Grappa 3.21 344 P **Pn 14 15 31.9 +1.9**
CGRP AML AML
comp=E,950µm,0.7s
CGRP AML AML
comp=E,925µm,0.7s
CGRP AML AML
comp=N,876µm,0.6s
CGRP AML AML
comp=N,858µm,0.6s
AMUR Altamura 3.26 124 P **Pn 14 15 31.4 +0.8**
AMUR AML AML
comp=N,320µm,1.1s
AMUR AML AML
comp=E,286µm,0.6s
SALO Salr 3.35 328 P **Pn 14 15 33.9 +2.1**
CTI Castel Tesino 3.40 343 P **Pn 14 15 34.2 +1.7**
CTI AML AML
comp=E,476µm,0.6s
CTI AML AML
comp=N,447µm,0.5s
LJU Ljubljana 3.41 18 AML AML
comp=N,3860µm,1.2s
LJU AML AML
comp=E,2250µm,0.8s
STON Ston 3.42 87 AML AML
comp=E,133µm,0.3s
STON AML AML
comp=N,203µm,0.9s
MPRI Monte Prat 3.44 359 P **Pn 14 15 34.1 +1.1**
MPRI AML AML
comp=N,938µm,0.5s
MPRI AML AML
comp=E,500µm,1.6s
STAL STALIGIAL 3.47 356 P **Pn 14 15 34.8 +1.4**
STAL AML AML
comp=N,402µm,0.2s
STAL AML AML
comp=E,572µm,0.9s
STAL AML AML
comp=N,402µm,0.2s
STAL AML AML
comp=E,510µm,0.7s
STAL AML AML
comp=N,408µm,0.7s
LUSI Trento, Gardas 3.50 335 P **Pn 14 15 35.4 +1.6**
LUSI AML AML
comp=N,376µm,1.6s
LUSI AML AML
comp=E,407µm,0.7s
CIMO Cimolais 3.54 353 P **Pn 14 15 35.6 +1.3**
CIMO AML AML
comp=E,126µm,0.5s
CIMO AML AML
comp=N,176µm,1.2s
CIMO AML AML
comp=N,176µm,1.2s
CIMO AML AML
comp=E,128µm,0.5s
LTRZ Laterza 3.58 127 P **Pn 14 15 35.8 +1.0**
PTCC Patocco-Chiusa 3.61 3 P **Pn 14 15 35.9 +0.6**
PTCC AML AML
comp=N,229µm,0.8s
PTCC AML AML
comp=E,229µm,0.6s
NOCI Noci 3.61 122 P **Pn 14 15 36.2 +0.8**
NOCI AML AML
comp=N,308µm,1.0s
NOCI AML AML
comp=E,246µm,0.7s
MABI Malga Bissina 3.73 332 P **Pn 14 15 38.7 +1.7**
MABI AML AML
comp=N,181µm,0.4s
MABI AML AML
comp=E,119µm,1.3s
ZOU Zoufplan 3.76 359 P **Pn 14 15 38.6 +1.1**
ZOU AML AML
comp=E,372µm,1.2s
ZOU AML AML
comp=N,446µm,0.9s
ZOU AML AML
comp=N,468µm,1.0s
ZOU AML AML
comp=E,414µm,1.3s
KOSI Kohlern 3.85 343 P **Pn 14 15 41.2 +2.5**
KOSI AML AML
comp=E,492µm,1.2s
KOSI AML AML
comp=N,392µm,0.9s
APPI Appiano 3.90 341 P **Pn 14 15 41.7 +2.3**
APPI AML AML
comp=N,240µm,0.3s
APPI AML AML
comp=E,274µm,0.4s
TAR1 Taranto 3.90 124 AML AML
comp=E,206µm,0.7s
TAR1 AML AML
comp=N,279µm,0.6s
SBF Sospel 4.23 286 *e*P **Pn 14 15 45.5 +1.6**
SBF *e*Sn **Sn 14 16 28.8 -4.3**
comp=N,18nm,0.4s
VSL Villasalto 4.31 221 P **Pn 14 15 46.4 +1.5**
DAVOX Davos/Dischmat 4.57 332 Pn **Pn 14 15 50.0 +1.3**
comp=N,8.7nm,0.3s,baz=163,slow=15,SNR=13
DAVOX Sn **Sn 14 16 45.0 +3.2**
comp=N,3.1nm,0.3s,baz=242,slow=20,SNR=5.0
comp=N,11nm,0.3s
LMR La Mourre 4.82 279 *e*P **Pn 14 15 53.0 +1.1**
LMR *e*Sn **Sn 14 16 42.9 -4.6**
comp=N,2.6nm,0.3s
MBDF Montbardon 4.94 295 *e*P **Pn 14 15 55.9 +2.2**
MBDF *e*Sn **Sn 14 16 45.9 -4.7**
comp=N,4.1nm,0.4s
LPG La Plagne 5.27 303 *e*P **Pn 14 16 00.5 +2.1**
LPG *e*Sn **Sn 14 16 54.1 -5.0**
comp=N,5.1nm,0.3s
LPL La Plagne 5.29 303 *e*P **Pn 14 16 00.9 +2.3**
LPL *e*Sn **Sn 14 16 54.7 -4.8**
comp=N,5.2nm,0.3s
SMRF Simiane la Rot 5.57 285 *e*P **Pn 14 16 04.4 +2.1**
SMRF *e*Sn **Sn 14 17 01.0 -5.1**
comp=N,1.6nm,0.3s
ORIF Oris-en-Rattie 5.60 295 *e*P **Pn 14 16 06.3 +3.6**
GERES GERESS Array B 6.06 4 Pn **Pn 14 16 09.8 +0.7**
comp=N,1.9nm,0.3s,baz=173,slow=12,SNR=12
GERES Sn **Sn 14 17 15.8 -2.5**
comp=N,4.1nm,0.3s,baz=194,slow=26,SNR=8.1
GERES LR LR 14 18 10.8
comp=N,56nm,19.1s,baz=234,slow=35
comp=N,2.2nm,0.3s
CKRC Cesky Krumlov 6.09 8 *e*PN **Pn 14 16 08.8 -0.5**
CKRC *e*SN **Sn 14 17 17.2 -1.6**
CABF La Chapelle 6.25 310 *e*P **Pn 14 16 13.6 +1.9**
CABF *e*Sn **Sn 14 17 17.2 -5.8**
comp=N,4.2nm,0.4s
KHC Kasperske Hory 6.34 3 *e*PN **Pn 14 16 13.3 +0.4**
KHC *e*SN **Sn 14 17 23.4 -1.7**
VIVF Saint-Julien-l 6.40 292 *e*P **Pn 14 16 16.5 +2.9**
HINF Hinteralfeld 6.65 321 *e*P **Pn 14 16 19.9 +2.8**
HINF *e*Sn **Sn 14 17 26.9 -5.8**
comp=N,13nm,0.3s
KRUC Moravsky 6.68 19 *e*PN **Pn 14 16 13.9 -3.6**
KRUC *e*SN **Sn 14 17 30.4 -3.1**
LASF Ste Croix 6.81 284 *e*P **Pn 14 16 22.1 +2.8**
JAVC Velka Javorina 6.87 26 *e*PN **Pn 14 16 19.8 -0.3**
CDF Champ du Feu 6.92 326 *e*P **Pn 14 16 23.5 +2.7**
CDF *e*Sn **Sn 14 17 32.1 -7.2**
comp=N,6.6nm,0.3s
VRAC Vranov 6.96 20 Pn **Pn 14 16 21.7 +0.3**
comp=N,0.4nm,0.3s,baz=99,slow=23,SNR=1.9
VRAC Sn **Sn 14 17 36.1 -4.2**
comp=N,1.0nm,0.3s,baz=130,slow=19,SNR=2.5
comp=N,2.2nm,0.5s
VRAC Vranov 6.96 20 *e*PN **Pn 14 16 20.9 -0.4**
VRAC *e*SN **Sn 14 17 36.9 -3.4**
HAU Haudompre 7.02 320 *e*P **Pn 14 16 25.9 +3.7**
HAU *e*Sn **Sn 14 17 35.7 -6.1**
comp=N,19nm,0.4s
PRU Pruhonice 7.26 8 *e*PN **Pn 14 16 25.2 -0.3**
PRU *e*SN **Sn 14 17 45.8 -1.9**
NKC Novy Kostel 7.45 357 *e*SN **Sn 14 17 49.9 -2.4**
KEST Kesra 7.62 203 LR LR 14 19 37.0
comp=N,81nm,18.3s,baz=194,slow=39
MORC Moravsky Berou 7.64 22 ⇑P **Pn 14 16 30.3 -0.4**
PAGF Fort de Pagny 7.71 321 *e*P Pn 14 16 38.0 +6.5
PAGF *e*Sn **Sn 14 17 52.3 -6.3**
comp=N,7.6nm,0.5s
SFTF Sexfontaines 7.80 317 *e*P **Pn 14 16 34.9 +2.1**
LOR Lormes 7.89 308 *e*P **Pn 14 16 37.0 +2.9**
LOR *e*Sn **Sn 14 17 56.4 -6.8**
comp=N,3.3nm,0.3s
MEZF Maizieres J'vi 7.99 318 *e*P Pn 14 16 41.6 +6.2
MEZF *e*Sn **Sn 14 17 58.6 -7.0**
comp=N,4.6nm,0.4s
SSF Saint Saulge 8.00 305 *e*Sn **Sn 14 17 59.1 -6.7**
comp=N,2.8nm,0.4s
SAVF Savonnieres en 8.03 319 *e*P Pn 14 16 42.1 +6.1
SAVF *e*Sn **Sn 14 17 59.4 -7.2**
WLF Walferdange 8.36 328 *d*S **Sn 14 18 14.5 -0.2**
BCLA Clavier 9.29 328 *d*S **Sn 14 18 32.0 -5.6**
MLR Muntele Rosu 9.66 69 Pn **Pn 14 17 01.9 +3.5**
comp=N,0.3nm,0.3s,baz=269,slow=11,SNR=3.8
MLR LR LR 14 21 10.8
comp=N,128nm,18.6s,baz=254,slow=41
comp=N,3.7nm,0.8s
IDI Anoyia 11.87 125 Pn **Pn 14 17 28.7 +0.1**
comp=N,0.3nm,0.3s,baz=77,slow=20,SNR=1.2
comp=N,1.4nm,0.4s
EKA Eskdalemuir Ar 16.38 326 Pn **P 14 18 31.2 -0.7**
baz=139,slow=14
comp=N,0.3nm,0.4s
NOA NORSAR Array B 18.30 357 P **P 14 18 54.7 +1.5**
comp=N,0.8nm,0.9s,baz=172,slow=12,SNR=3.4
FINES FINESS Array B 20.24 18 P **P 14 19 15.0 +0.7**
comp=N,2.6nm,0.8s,baz=187,slow=9.8,SNR=1.7
comp=N,2.6nm,0.8s
KBZ Khabaz 21.71 77 P **P 14 19 31.6 +1.3**
comp=N,4.8nm,0.8s,baz=311,slow=8.4,SNR=5.1
comp=N,4.8nm,0.8s
BELG Belogornoye 25.00 55 P **P 14 20 03.8 +0.9**
comp=N,8.5nm,0.9s,baz=197,slow=5.3,SNR=5.2
comp=N,8.5nm,0.9s
TORD Torodi Ar. Bea 31.14 202 P **P 14 20 59.1 +1.0**
comp=N,0.5nm,0.9s,baz=19,slow=9.3,SNR=2.9
comp=N,0.5nm,0.9s
ARU Arti 31.85 49 P **P 14 21 04.5 +0.4**
comp=N,3.5nm,0.6s,baz=255,slow=7.0,SNR=7.1
comp=N,3.5nm,0.6s
WSAR Wadi Sarin 42.32 103 LR LR 14 43 25.5
comp=N,30nm,18.6s,baz=53,slow=41
ZALV Zalesovo Beam 46.99 50 P **P 14 23 09.5 -0.6**
comp=N,0.5nm,0.5s,baz=23,slow=31,SNR=2.3
comp=N,0.5nm,0.5s
MKAR Makanchi Array 47.85 60 P **P 14 23 17.6 +0.6**
comp=N,1.4nm,0.8s,baz=298,slow=5.6,SNR=6.7
comp=N,1.4nm,0.8s
SONM Songino Array 61.88 50 P **P 14 25 00.3 +1.6**
comp=N,1.2nm,0.7s,baz=294,slow=10.0,SNR=6.6
comp=N,1.2nm,0.7s
CMAR Chiang Mai Arr 74.75 79 P **P 14 26 19.6 +0.1**
comp=N,0.5nm,0.5s,baz=313,slow=8.4,SNR=5.4
comp=N,0.5nm,0.5s
KSRS Korea Array 80.59 47 P **P 14 26 53.0 +1.2**
comp=N,0.9nm,0.8s,baz=321,slow=6.0,SNR=3.2
comp=N,0.9nm,0.8s

ROM 30 14:16:11.1±0.1, 42°.773N±0°.008×13°.106E±0°.007,
h11km, ML3.1/18, 19C-9D, Error ellipse: s-maj=0.8km
s-min=0.6km az=189.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.14**	**245**	P	Pg	14 16 15.0	+0.5
T1217				S	Sg	14 16 17.8	+1.0
T1217				AML	AML		
	comp=N,18100µm,0.2s						
T1217				AML	AML		
	comp=E,12000µm,0.4s						
T1217				AML	AML		
	comp=N,17700µm,0.2s						
T1217				AML	AML		
	comp=E,12100µm,0.4s						
T1217				AML	AML		
	comp=E,12100µm,1.6s						
T1217				AML	AML		
	comp=E,12000µm,1.6s						
LNSS	**Leonessa**	**0.18**	**196**	⇓P	Pg	14 16 15.2	+0.2
LNSS				S	Sg	14 16 19.1	+1.4
LNSS				AML	AML		
	comp=E,5870µm,1.4s						
LNSS				AML	AML		
	comp=E,5865µm,1.4s						
LNSS				AML	AML		
	comp=N,27400µm,0.1s						
LNSS				AML	AML		
	comp=E,5865µm,0.6s						
T1215	**Vallo di Nera,**	**0.18**	**279**	P	Pg	14 16 15.3	+0.3
T1215				S	Sg	14 16 18.5	+0.8
T1215				AML	AML		
	comp=E,3990µm,0.5s						
T1215				AML	AML		
	comp=N,3485µm,0.7s						
T1215				AML	AML		
	comp=E,3955µm,0.5s						
T1215				AML	AML		
	comp=E,3990µm,0.5s						
T1215				AML	AML		
	comp=N,3480µm,0.7s						
T1215				AML	AML		
	comp=E,3960µm,0.5s						
T1215				AML	AML		
	comp=N,3660µm,1.4s						
T1215				AML	AML		
	comp=E,3965µm,0.5s						
T1215				AML	AML		
	comp=N,3655µm,1.4s						
T1204	**Amatrice, Fraz**	**0.18**	**122**	P	Pg	14 16 15.8	+0.6
T1204				S	Sg	14 16 19.4	+1.4
T1204				AML	AML		
	comp=E,14615µm,0.6s						
T1204				AML	AML		
	comp=E,14600µm,0.6s						
T1204				AML	AML		
	comp=N,8295µm,0.2s						
T1204				AML	AML		
	comp=E,14650µm,0.6s						
T1204				AML	AML		
	comp=E,14650µm,1.4s						
T1204				AML	AML		
	comp=N,8290µm,0.2s						
T1241	**Roccafluvione,**	**0.25**	**71**	⇓P	Pb	14 16 17.2	-0.5
T1241				S	Sb	14 16 21.2	-1.0
T1241				AML	AML		
	comp=N,10525µm,1.2s						
T1241				AML	AML		
	comp=N,10525µm,0.8s						
T1241				AML	AML		
	comp=E,15600µm,0.2s						
T1243	**Rocca Santa Ma**	**0.26**	**107**	⇑P	Pg	14 16 16.4	-0.2
AM05	**Amandola Campo**	**0.27**	**42**	⇑P	Pg	14 16 17.1	+0.4
AM05				S	Sg	14 16 21.4	+1.0
AM05				AML	AML		
	comp=N,2570µm,0.6s						
AM05				AML	AML		
	comp=N,603µm,0.1s						
AM05				AML	AML		
	comp=E,2005µm,0.2s						
AM05				AML	AML		
	comp=E,9020µm,1.4s						
RM33	**Pellescritta (**	**0.28**	**163**	⇑P	Pg	14 16 17.4	+0.7
RM33				AML	AML		
	comp=E,6600µm,1.4s						
RM33				AML	AML		
	comp=N,3980µm,1.3s						
RM33				AML	AML		
	comp=E,6595µm,1.4s						
RM33				AML	AML		
	comp=E,6455µm,1.4s						
RM33				AML	AML		
	comp=N,4025µm,1.3s						
RM33				AML	AML		
	comp=N,4020µm,1.3s						
RM33				AML	AML		
	comp=N,3980µm,0.7s						
RM33				AML	AML		
	comp=E,6600µm,0.6s						
RM33				AML	AML		
	comp=E,6455µm,0.6s						
RM33				AML	AML		
	comp=N,4020µm,0.7s						
T1211	**Morro Reatino**	**0.30**	**218**	⇑P	Pg	14 16 17.7	+0.5
T1211				S	Sb	14 16 23.0	-0.6
T1211				AML	AML		
	comp=E,7300µm,1.0s						
T1211				AML	AML		
	comp=N,8585µm,0.2s						
T1211				AML	AML		
	comp=E,7305µm,1.0s						
T1211				AML	AML		
	comp=N,8580µm,0.2s						
T1211				AML	AML		
	comp=E,7235µm,1.0s						
T1211				AML	AML		
	comp=E,7320µm,1.0s						
T1211				AML	AML		
	comp=N,8560µm,0.2s						
T1211				AML	AML		
	comp=N,8575µm,0.2s						
ARRO	**Arrone**	**0.32**	**232**	⇑P	Pg	14 16 18.0	+0.6
ARRO				AML	AML		
	comp=E,4540µm,0.5s						
ARRO				AML	AML		
	comp=N,4550µm,0.2s						
ARRO				AML	AML		
	comp=N,4550µm,1.8s						
CAMP	**Campotosto**	**0.33**	**137**	P	Pg	14 16 18.3	+0.6
CAMP				AML	AML		
	comp=N,1895µm,0.8s						
CAMP				AML	AML		
	comp=E,1805µm,0.6s						
GUMA	**Gualdo di Mace**	**0.34**	**30**	⇑P	Pg	14 16 18.4	+0.6
GUMA				S	Sb	14 16 24.0	-0.5
GUMA				AML	AML		
	comp=E,15550µm,0.5s						
GUMA				AML	AML		

	comp=N,12300μm,0.6s					
GUMA				AML	AML	
	comp=N,15950μm,0.4s					
GUMA				AML	AML	
	comp=E,13500μm,0.5s					
GUMA				AML	AML	
	comp=E,15550μm,1.5s					
GUMA				AML	AML	
	comp=N,15950μm,1.6s					
T1247	**Pizzolo (AQ)**	**0.36 157**	⇑P		Pg	14 16 18.7 +0.5
T1247				AML	AML	
	comp=E,3590μm,0.5s					
T1247				AML	AML	
	comp=N,3690μm,0.2s					
T1247				AML	AML	
	comp=N,3690μm,1.8s					
TERO	**Teramo**	**0.40 112**	⇓P		Pg	14 16 18.8 -0.1
TERO				AML	AML	
	comp=E,2395μm,0.9s					
TERO				AML	AML	
	comp=N,2490μm,0.3s					
TERO				AML	AML	
	comp=E,2600μm,0.9s					
TERO				AML	AML	
	comp=N,2640μm,0.3s					
MDAR	**Monte D'Aria**	**0.42 4**	⇑P		Pg	14 16 19.6 +0.2
MDAR				AML	AML	
	comp=E,2395μm,0.3s					
MDAR				AML	AML	
	comp=E,2390μm,0.3s					
MDAR				AML	AML	
	comp=N,2185μm,0.4s					
CESX	**Cesi**	**0.42 247**	⇑P		Pg	14 16 19.6 +0.3
CESX			S		Sb	14 16 26.4 -0.5
CESX				AML	AML	
	comp=E,3140μm,0.5s					
CESX				AML	AML	
	comp=N,2495μm,0.3s					
CESX				AML	AML	
	comp=E,3140μm,1.5s					
ASSB	**Assisi San Ben**	**0.42 309**	S		Sb	14 16 27.0 -0.1
MNTP	**Montappone**	**0.45 36**	⇓P		Pb	14 16 21.3 +0.2
OFFI	**Offida**	**0.46 69**	⇑P		Pb	14 16 20.7 -0.5
OFFI				AML	AML	
	comp=N,5380μm,0.7s					
OFFI				AML	AML	
	comp=E,4770μm,0.8s					
GAG1	**Gagliole**	**0.47 357**	P		Pg	14 16 20.5 +0.3
GAG1				AML	AML	
	comp=N,5285μm,0.4s					
GAG1				AML	AML	
	comp=E,4450μm,0.6s					
GIGS	**Gran Sasso**	**0.47 133**	⇑P		Pg	14 16 20.6 +0.3
GIGS				AML	AML	
	comp=E,466μm,0.4s					
GIGS				AML	AML	
	comp=N,356μm,0.3s					
GIGS				AML	AML	
	comp=N,356μm,0.3s					
GIGS				AML	AML	
	comp=E,466μm,1.6s					
SNTG	**Esanatoglia**	**0.50 346**	⇓P		Pg	14 16 20.9 +0.1
SNTG				AML	AML	
	comp=E,812μm,0.5s					
SNTG				AML	AML	
	comp=N,1045μm,0.6s					
SNTG				AML	AML	
	comp=E,812μm,1.5s					
FIAM	**Fiamignano**	**0.51 179**	⇓P		Pg	14 16 21.3 +0.3
FIAM			S		Sb	14 16 30.0 +0.5
FIAM				AML	AML	
	comp=E,1455μm,0.8s					
FIAM				AML	AML	
	comp=E,1455μm,1.2s					
FIAM				AML	AML	
	comp=N,1116μm,0.8s					
ATCC	**AVT- Casa Cast**	**0.54 320**	⇓P		Pg	14 16 21.6 +0.1
ATCC			S		Sb	14 16 32.0 +1.7
ATCC				AML	AML	
	comp=N,1985μm,0.6s					
ATCC				AML	AML	
	comp=E,2125μm,0.7s					
EL6	**Elcito**	**0.56 360**	⇓P		Pg	14 16 21.9 0.0
TRTR	**Tortoreto Alta**	**0.60 86**	⇑P		Pb	14 16 23.9 +0.4
VCEL	**Villa Celiera**	**0.66 125**	S		Sn	14 16 37.0 0.0
CERT	**Cerreto**	**0.83 186**	S		Sn	14 16 42.0 +0.9
MPAG	**Monte Paganucc**	**0.89 344**	⇑P		Pg	14 16 28.0 -0.3
FSSB	**Fossombrone**	**0.95 345**	⇓P		Pg	14 16 29.5 +0.1
FSSB				AML	AML	
	comp=E,1870μm,0.4s					
FSSB				AML	AML	
	comp=N,1885μm,0.4s					
FSSB				AML	AML	
	comp=N,1885μm,1.6s					
LATE	**Laterza**	**0.97 261**	⇑P		Pb	14 16 30.0 0.0
MCIV	**Monte Civitell**	**1.05 271**	⇑P		Pn	14 16 32.2 +0.4
GIUL	**Giuliano Di Ro**	**1.22 175**	⇑P		Pg	14 16 36.1 +1.6
PIGN	**Pignataro Magg**	**1.76 153**	S		Sg	14 17 11.0 +3.2
PAOL	**Paolisi**	**2.05 147**	S		Sn	14 17 11.0 -0.3
MRB1	**Monte Rocchett**	**2.16 139**	⇑P		Pn	14 16 46.4 -0.6
VBKN	**Vesuvio Bunker**	**2.18 153**	⇑P		Pn	14 16 47.0 -0.4
GSCL	**Gusciola**	**2.42 312**	⇑P		Pn	14 16 51.3 +0.7
PZUN	**Potenza**	**2.93 136**	S		Sn	14 17 32.0 -0.9
MGR	**Morigerati**	**3.21 144**	S		Sn	14 17 37.0 -2.8
SCHR	**S. Chirico Rap**	**3.41 138**	S		Sn	14 17 45.0 +0.3
ZAG	**Zagreb**	**3.69 33**	P		Pn	14 17 07.7 -0.3

*LDG **30** 14:24:42.1±0.3, 42°.79N×13°.29E, h10km, Ml3.2/17, Error ellipse: s-maj=5.7km s-min=4.9km az=94.0*
*ROM **30** 14:24:44.4±0.0, 42°.763N±0°.002×13°.066E±0°.002, h10km, ML3.4/72, Mw3.4, Error ellipse: s-maj=0.2km s-min=0.1km az=237.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.39; $M_{\theta\theta}$0.06; $M_{\phi\phi}$0.33; $M_{r\theta}$0.08; $M_{\theta\phi}$0.31; $M_{\phi r}$-1.31; Fault plane solution: $M_0$1.3974×10^{14} NP1:ϕ_s240.00000°, δ15.00000°, λ-30.00000°. NP2:ϕ_s359.00000°, δ82.00000°, λ-103.00000°.*
*IDC **30** 14:24:44.8±1.4, 42°.90N×12°.98E, h0km, mb3.7/4, mbtmp3.6/7, ML3.5/3, MS2.5/1 Error ellipse: s-maj=34.7km s-min=15.5km az=96.0*
*PDG **30** 14:24:44.7±0.4, 42°.76N×13°.07E, h13km, ML3.9/12, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0*
*PRU **30** 14:24:44.6±0.0, 42°.77N×13°.07E, h0km*
*STR **30** 14:24:48.7±1.2, 43°N±6°×1°.3E±°, h10km, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=114.4, preliminary*
ISC 30 14:24:44.8±0.7,**42°.77N**±0°.01×**13°.04E**±0°.01,**h12**km±3km, **n240**,σ1^{s}**95**/290,**mb3.5**/3,**24C-14D**,**Central Italy**

Code	Station Name	Δ° AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.02 178**	⇓P		**Pg**	**14 24 46.5 -0.5**
T1212			S		**Sg**	**14 24 47.5 -0.9**
T1213	**Norcia, Frazio**	**0.07 126**	⇓P		**Pg**	**14 24 46.9 -0.5**
T1213			S		**Sg**	**14 24 48.2 -1.0**
T1217	**Poggiodomo (PG**	**0.10 236**	⇑P		**Pg**	**14 24 47.7 +0.1**
T1217			S		**Sg**	**14 24 49.9 +0.1**
T1217				AML	AML	
T1217				AML	AML	
	comp=N,99600μm,0.4s					
T1217				AML	AML	
	comp=E,66950μm,0.6s					
T1217				AML	AML	
T1217				AML	AML	
	comp=E,67600μm,0.6s					
T1217				AML	AML	
	comp=N,99600μm,0.4s					
T1218	**Civita (PG)**	**0.11 152**	⇑P		**Pg**	**14 24 47.6 -0.3**
T1218			S		**Sg**	**14 24 49.6 -0.5**
T1214	**Arquata del Tr**	**0.12 94**	⇓P		**Pg**	**14 24 47.6 -0.4**
T1214			S		**Sg**	**14 24 49.6 -0.7**
T1216	**Preci, Frazion**	**0.12 352**	⇑P		**Pg**	**14 24 47.9 -0.1**
T1216			S		**Sg**	**14 24 50.3 0.0**
T1215	**Vallo di Nera,**	**0.13 285**	⇑P		**Pg**	**14 24 48.3 +0.2**
T1215			S		**Sg**	**14 24 50.8 +0.3**
T1215				AML	AML	
	comp=E,35450μm,0.5s					
T1215				AML	AML	
	comp=N,32400μm,0.3s					
T1215				AML	AML	
	comp=E,35450μm,1.6s					
T1215				AML	AML	
	comp=E,35400μm,0.5s					
T1215				AML	AML	
	comp=N,34850μm,0.3s					
T1215				AML	AML	
	comp=N,32400μm,0.3s					
T1215				AML	AML	
	comp=N,34800μm,0.3s					
T1215				AML	AML	
	comp=E,35450μm,1.6s					
T1215				AML	AML	
	comp=E,35450μm,0.5s					
T1245	**Castelsantange**	**0.14 50**	⇓P		**Pg**	**14 24 47.9 -0.3**
T1245			S		**Sg**	**14 24 50.2 -0.5**
T1245				AML	AML	
T1245				AML	AML	
T1245				AML	AML	
T1245				AML	AML	
T1245				AML	AML	
T1245				AML	AML	
LNSS	**Leonessa**	**0.17 181**	P		**Pg**	**14 24 48.8 +0.2**
LNSS			S		**Sg**	**14 24 51.6 +0.3**
LNSS				AML	AML	
	comp=N,58700μm,0.1s					
LNSS				AML	AML	
	comp=E,22900μm,0.2s					
T1244	**Arquata del Tr**	**0.19 93**	P		**Pg**	**14 24 48.9 -0.1**
T1244			S		**Sg**	**14 24 52.1 +0.3**
T1201	**Domo (RI)**	**0.19 126**	⇑P		**Pg**	**14 24 49.0 0.0**
T1201			S		**Sg**	**14 24 52.2 +0.3**
FEMA	**Monte Fema**	**0.19 1**	P		**Pg**	**14 24 49.1 0.0**
FEMA			S		**Sg**	**14 24 52.5 +0.4**
FEMA				AML	AML	
	comp=N,61650μm,1.0s					
FEMA				AML	AML	
T1204	**Amatrice, Fraz**	**0.22 114**	⇑P		**Pg**	**14 24 49.4 -0.2**
T1204			S		**Sg**	**14 24 53.0 +0.2**
T1204				AML	AML	
	comp=N,32100μm,0.8s					
T1204				AML	AML	
	comp=E,53650μm,0.4s					
T1204				AML	AML	
	comp=N,32200μm,0.8s					
T1204				AML	AML	
	comp=E,53600μm,0.4s					
MMO1	**Montemonaco**	**0.25 58**	⇑P		**Pg**	**14 24 49.8 -0.2**
MMO1			S		**Sg**	**14 24 53.5 0.0**
T1211	**Morro Reatino**	**0.27 211**	P		**Pg**	**14 24 50.9 +0.5**
T1211			S		**Sb**	**14 24 55.6 -0.8**
T1211				AML	AML	
	comp=N,25650μm,0.4s					
T1211				AML	AML	
	comp=E,15200μm,1.3s					
T1211				AML	AML	
	comp=N,25050μm,0.4s					
T1211				AML	AML	
	comp=E,14550μm,1.5s					
T1211				AML	AML	
	comp=E,15150μm,1.2s					
T1211				AML	AML	
	comp=N,25100μm,0.4s					
T1211				AML	AML	
	comp=N,25050μm,0.4s					
T1211				AML	AML	
	comp=E,14550μm,1.5s					
T1211				AML	AML	
	comp=N,25650μm,0.4s					
T1211				AML	AML	
	comp=E,15200μm,1.2s					
T1256	**Bolognola (MC)**	**0.27 29**	P		**Pg**	**14 24 50.5 0.0**
T1256			S		**Sg**	**14 24 54.8 +0.4**
ARRO	**Arrone**	**0.28 227**	P		**Pg**	**14 24 51.0 +0.5**
ARRO			S		**Sg**	**14 24 55.5 +1.2**
ARRO				AML	AML	
	comp=N,18200μm,0.3s					
ARRO				AML	AML	
	comp=E,14900μm,0.3s					
ARRO				AML	AML	
	comp=N,18150μm,0.3s					
ARRO				AML	AML	
	comp=E,14850μm,0.3s					
RM33	**Pellescritta (**	**0.29 154**	⇑P		**Pg**	**14 24 50.4 -0.3**
RM33			S		**Sg**	**14 24 55.0 +0.3**
RM33				AML	AML	
	comp=E,12400μm,1.5s					
RM33				AML	AML	
	comp=N,20250μm,0.8s					
RM33				AML	AML	
	comp=E,12100μm,1.5s					
RM33				AML	AML	
	comp=E,12350μm,1.5s					
RM33				AML	AML	
	comp=N,20300μm,0.8s					
RM33				AML	AML	
	comp=N,20250μm,0.8s					
RM33				AML	AML	
	comp=E,12350μm,1.5s					
RM33				AML	AML	
	comp=E,12400μm,1.5s					
RM33				AML	AML	
	comp=E,12150μm,1.5s					
T1241	**Roccafluvione,**	**0.30 73**	P		**Pg**	**14 24 51.2 +0.3**
T1241			S		**Sg**	**14 24 55.7 +0.7**
T1243	**Rocca Santa Ma**	**0.31 103**	⇑P		**Pg**	**14 24 50.6 -0.4**
T1243			S		**Sg**	**14 24 55.2 0.0**
AM05	**Amandola Campo**	**0.31 47**	P		**Pg**	**14 24 51.1 +0.1**
AM05			S		**Sg**	**14 24 55.6 +0.3**
AM05				AML	AML	
	comp=N,1710μm,0.6s					
AM05				AML	AML	
	comp=E,6660μm,0.6s					
AM05				AML	AML	
	comp=N,6815μm,0.4s					
AM05				AML	AML	
	comp=E,34100μm,0.4s					
AM05				AML	AML	
	comp=E,6665μm,0.6s					
AM05				AML	AML	
	comp=N,6810μm,0.4s					
CSP1	**Cessapalombo**	**0.34 20**	P		**Pg**	**14 24 51.9 +0.1**
CSP1			S		**Sg**	**14 24 57.1 +0.7**
CSP1				AML	AML	
	comp=E,23050μm,0.3s					
CSP1				AML	AML	
	comp=N,23200μm,0.4s					
CAMP	**Campotosto**	**0.36 131**	P		**Pg**	**14 24 51.4 -0.5**
CAMP			S		**Sg**	**14 24 56.7 0.0**
CAMP				AML	AML	
	comp=E,6630μm,1.0s					
CAMP				AML	AML	
	comp=N,5305μm,0.5s					
GUMA	**Gualdo di Mace**	**0.36 36**	P		**Pg**	**14 24 52.3 +0.2**
GUMA			S		**Sb**	**14 24 58.2 -0.8**
GUMA				AML	AML	
	comp=E,56400μm,0.6s					
GUMA				AML	AML	
	comp=N,57150μm,0.4s					
GUMA				AML	AML	
	comp=E,56350μm,0.6s					
GUMA				AML	AML	
	comp=N,58100μm,0.4s					
GUMA				AML	AML	
	comp=N,57150μm,0.4s					
GUMA				AML	AML	
	comp=E,54550μm,0.6s					
GUMA				AML	AML	
	comp=E,56400μm,0.6s					
T1247	**Pizzolo (AQ)**	**0.38 150**	⇑P		**Pg**	**14 24 52.0 -0.3**
T1247			S		**Sg**	**14 24 57.9 +0.6**
T1247				AML	AML	
	comp=N,15300μm,0.4s					
T1247				AML	AML	
	comp=E,16700μm,0.3s					
CESX	**Cesi**	**0.38 245**	P		**Pg**	**14 24 52.4 +0.1**
CESX			S		**Sg**	**14 24 58.3 +1.0**
CESX				AML	AML	
	comp=E,11250μm,1.0s					
CESX				AML	AML	
	comp=N,12550μm,0.7s					
T1246	**Crognaleto (TE**	**0.38 119**	P		**Pg**	**14 24 51.8 -0.5**
T1246			S		**Sg**	**14 24 57.5 0.0**
SEF1	**Sefro**	**0.39 349**	P		**Pg**	**14 24 52.3 -0.1**
SEF1			S		**Sb**	**14 24 58.5 -1.1**
SEF1				AML	AML	
	comp=N,21250μm,1.1s					
SEF1				AML	AML	
	comp=E,23450μm,0.3s					
ASSB	**Assisi San Ben**	**0.39 314**	P		**Pg**	**14 24 52.7 0.0**
PIO1	**Pioraco**	**0.41 354**	P		**Pg**	**14 24 52.7 -0.2**
FIU1	**Fiuminata**	**0.43 349**	P		**Pg**	**14 24 53.0 -0.2**
FIU1				AML	AML	
	comp=E,12600μm,0.6s					
FIU1				AML	AML	
	comp=N,10820μm,1.0s					
MDAR	**Monte D'Aria**	**0.43 10**	P		**Pg**	**14 24 52.9 -0.4**
MDAR				AML	AML	
	comp=E,9310μm,0.7s					
MDAR				AML	AML	
	comp=N,13000μm,0.3s					
TERO	**Teramo**	**0.44 109**	P		**Pg**	**14 24 52.8 -0.6**
TERO			S		**Sg**	**14 24 59.2 -0.1**
TERO				AML	AML	
	comp=E,11450μm,0.3s					
TERO				AML	AML	
	comp=N,14900μm,0.6s					
TERO				AML	AML	
	comp=E,11400μm,0.3s					
TERO				AML	AML	
	comp=N,14500μm,0.6s					
TERO				AML	AML	
	comp=E,12000μm,0.3s					
GAG1	**Gagliole**	**0.47 2**	⇓P		**Pg**	**14 24 54.2 +0.1**
GAG1				AML	AML	
	comp=N,23550μm,0.4s					
GAG1				AML	AML	
	comp=E,20050μm,1.1s					
SSM1	**San Severino M**	**0.47 12**	P		**Pg**	**14 24 53.8 -0.2**
MNTP	**Montappone**	**0.48 40**	P		**Pb**	**14 24 54.7 -0.6**
MNTP				AML	AML	
	comp=N,13750μm,0.9s					
MNTP				AML	AML	
	comp=E,15100μm,0.7s					
AQU	**L'Aquila**	**0.49 147**	P		**Pg**	**14 24 53.9 -0.5**
AQU				AML	AML	
	comp=N,4925μm,0.6s					
AQU				AML	AML	
	comp=N,4815μm,1.0s					
AQU				AML	AML	
	comp=E,4870μm,1.0s					
AQU				AML	AML	
	comp=E,4695μm,1.1s					
SNTG	**Esanatoglia**	**0.49 351**	P		**Pg**	**14 24 54.2 -0.2**
SNTG			S		**Sb**	**14 25 02.5 -0.2**
SNTG				AML	AML	
	comp=E,7110μm,0.5s					
SNTG				AML	AML	
	comp=E,6675μm,0.6s					
SNTG				AML	AML	
	comp=N,5945μm,0.6s					
SNTG				AML	AML	
	comp=N,6545μm,0.6s					
GIGS	**Gran Sasso**	**0.50 129**	P		**Pg**	**14 24 53.7 -0.9**
GIGS				AML	AML	
	comp=N,1282μm,0.4s					
GIGS				AML	AML	
	comp=E,1400μm,0.5s					
OFFI	**Offida**	**0.50 70**	P		**Pb**	**14 24 55.0 -0.5**
OFFI				AML	AML	
	comp=N,27650μm,0.4s					
OFFI				AML	AML	
	comp=E,24300μm,0.5s					
FIAM	**Fiamignano**	**0.50 174**	P		**Pg**	**14 24 54.1 -0.5**
FIAM				AML	AML	
	comp=N,3215μm,0.6s					
FIAM				AML	AML	
	comp=E,4635μm,0.8s					
ATCC	**AVT- Casa Cast**	**0.51 325**	⇑P		**Pg**	**14 24 54.8 0.0**
EL6	**Elcito**	**0.56 4**	P		**Pg**	**14 24 55.5 -0.3**
EL6			S		**Sb**	**14 25 04.5 -0.2**
EL6				AML	AML	
	comp=E,8795μm,0.4s					
EL6				AML	AML	
	comp=N,11310μm,0.2s					
EL6				AML	AML	
	comp=N,11280μm,0.2s					
FOSV	**Fossato di Vic**	**0.57 339**	P		**Pg**	**14 24 55.4 -0.4**
FOSV			S		**Sb**	**14 25 04.6 -0.2**
FOSV				AML	AML	
	comp=E,4320μm,0.7s					
FOSV				AML	AML	
	comp=N,5070μm,0.3s					
TRE1	**Treia**	**0.58 20**	P		**Pg**	**14 24 56.1 +0.1**
TRE1				AML	AML	
	comp=E,12245μm,0.3s					
TRE1				AML	AML	
	comp=N,10030μm,0.4s					
CING	**Cingoli**	**0.62 10**	P		**Pg**	**14 24 56.4 -0.4**
MURB	**Monte Urbino**	**0.62 323**	P		**Pg**	**14 24 56.9 -0.1**
MURB				AML	AML	
	comp=E,19450μm,0.8s					
MURB				AML	AML	
	comp=N,17000μm,0.3s					
MURB				AML	AML	
	comp=N,17800μm,0.3s					
MURB				AML	AML	
	comp=E,18050μm,0.8s					
FAGN	**Fagnano**	**0.64 141**	P		**Pg**	**14 24 56.3 -1.0**
FAGN				AML	AML	
	comp=E,9285μm,0.5s					
FAGN				AML	AML	
	comp=N,6130μm,0.4s					
TRTR	**Tortoreto Alta**	**0.64 86**	P		**Pb**	**14 24 57.6 -0.3**
TRTR				AML	AML	
	comp=E,18850μm,0.4s					
TRTR				AML	AML	
	comp=N,14000μm,0.4s					
SRES	**S.Oreste - Sor**	**0.66 217**	P		**Pg**	**14 24 57.5 -0.1**
SRES				AML	AML	
	comp=E,1825μm,0.6s					
SRES				AML	AML	
	comp=N,2155μm,0.6s					
ATTE	**AVT- Monte Tez**	**0.66 311**	P		**Pg**	**14 24 57.5 -0.2**
ATTE				AML	AML	
	comp=E,3565μm,1.3s					
ATTE				AML	AML	
	comp=N,3705μm,0.4s					
MMUR	**Monte Murano**	**0.67 357**	P		**Pg**	**14 24 57.5 -0.4**
CADA	**Capodarco di F**	**0.68 51**	P		**Pb**	**14 24 59.0 +0.5**
ATFO	**Monte Foce - G**	**0.69 330**	P		**Pg**	**14 24 58.0 -0.2**
ATFO				AML	AML	
	comp=E,4090μm,0.3s					
ATFO				AML	AML	
	comp=N,3625μm,0.3s					
VCEL	**Villa Celiera**	**0.70 122**	P		**Pg**	**14 24 57.8 -0.6**
VCEL				AML	AML	
	comp=E,5635μm,0.8s					
VCEL				AML	AML	
	comp=N,6635μm,0.9s					
MGAB	**Montegabbione**	**0.70 282**	P		**Pg**	**14 24 58.8 +0.4**
MGAB				AML	AML	
	comp=E,17000μm,0.5s					
MGAB				AML	AML	
	comp=N,13050μm,0.6s					
MGAB				AML	AML	
	comp=E,17050μm,0.5s					
MGAB				AML	AML	
	comp=N,12950μm,0.4s					
MGAB				AML	AML	
	comp=E,16950μm,0.5s					
ATSC	**Scheggia e Pas**	**0.71 338**	P		**Pg**	**14 24 58.0 -0.5**
CIMA	**Civitanova Mar**	**0.71 40**	P		**Pb**	**14 24 59.2 +0.1**
ARVD	**Arcevia**	**0.73 354**	P		**Pg**	**14 24 58.6 -0.4**
ARVD				AML	AML	
	comp=N,1950μm,0.6s					
ARVD				AML	AML	
	comp=E,2790μm,0.7s					
PP3	**Marolino**	**0.74 34**	P		**Pg**	**14 24 59.1 +0.1**
PP3				AML	AML	
	comp=N,7610μm,0.3s					
PP3				AML	AML	
	comp=N,7555μm,0.7s					
PP3				AML	AML	
	comp=E,12700μm,0.4s					
PP3				AML	AML	
	comp=E,12050μm,0.4s					
T0110	**Collepietro**	**0.77 135**	⇑P		**Pg**	**14 24 58.5 -1.2**
T0110				AML	AML	
	comp=E,5360μm,0.5s					
T0110				AML	AML	
	comp=N,4540μm,0.6s					
ATVO	**AVT- Monte Val**	**0.77 323**	P		**Pg**	**14 24 59.5 -0.2**
ATVO				AML	AML	
	comp=N,4335μm,0.4s					
ATVO				AML	AML	

comp=E,3240µm,1.5s
MTCE Montecelio 0.78 197 P Pg 14 24 59.4 -0.4
MTCE AML AML
comp=E,2485µm,0.5s
MTCE AML AML
comp=N,1575µm,0.6s
FRON Frontone 0.79 343 ⇓P Pg 14 24 59.9 -0.1
FRON AML AML
comp=E,2255µm,0.5s
FRON AML AML
comp=N,3610µm,0.3s
PTQR Pietraquaria 0.79 160 P Pg 14 24 59.0 -1.1
ATMI Monte Miggiano 0.80 315 P Pb 14 25 00.7 -0.1
ATMI AML AML
comp=E,8710µm,0.6s
ATMI AML AML
comp=N,10910µm,1.3s
CERT Cerreto 0.82 183 P Pg 14 25 00.3 -0.4
CERT AML AML
comp=E,3975µm,1.3s
CERT AML AML
comp=N,2885µm,1.2s
ATPI Pietralunga - 0.83 326 P Pg 14 25 00.4 -0.4
ATPI AML AML
comp=N,2295µm,1.3s
ATPI AML AML
comp=E,2120µm,0.4s
SACS San Casciano d 0.84 276 P Pg 14 25 00.8 -0.2
SACS AML AML
comp=N,2730µm,1.1s
SACS AML AML
comp=E,3370µm,0.6s
SACS AML AML
comp=N,2570µm,1.1s
SACS AML AML
comp=E,3450µm,0.6s
PIEI Pieia 0.85 334 P Pg 14 25 01.0 -0.3
PIEI AML AML
comp=E,2965µm,0.3s
PIEI AML AML
comp=N,1595µm,0.3s
AOI Ancona 0.88 27 P Pg 14 25 01.6 -0.2
AOI AML AML
comp=E,2740µm,1.5s
AOI AML AML
comp=N,2040µm,0.6s
MPAG Monte Paganucc 0.89 347 P Pg 14 25 01.4 -0.5
MPAG AML AML
comp=N,2080µm,1.1s
MPAG AML AML
comp=E,2360µm,0.4s
PCRO Pietralacroce 0.91 23 P Pb 14 25 02.6 0.0
APEC Apecchio 0.91 330 ⇑P Pg 14 25 02.4 0.0
LATE Laterza 0.93 261 ⇓P Pb 14 25 02.9 0.0
FSSB Fossombrone 0.94 348 P Pg 14 25 02.4 -0.7
FSSB AML AML
comp=E,9990µm,0.4s
FSSB AML AML
comp=N,10600µm,0.3s
CAFI Castiglion Fio 0.97 306 P Pg 14 25 03.0 -0.5
CAFI AML AML
comp=N,1510µm,0.7s
CAFI AML AML
comp=E,2510µm,0.7s
CAFI AML AML
comp=E,2430µm,0.7s
CAFI AML AML
comp=N,1570µm,0.7s
INTR Introdacqua 0.99 140 AML AML
comp=N,3840µm,0.9s
INTR AML AML
comp=E,1595µm,0.6s
GUAR Guarcino 0.99 168 P Pg 14 25 03.5 -0.5
GUAR AML AML
comp=N,2485µm,0.6s
GUAR AML AML
comp=E,2090µm,0.5s
MCIV Monte Civitell 1.01 271 P Pg 14 25 03.5 -0.7
MCIV AML AML
comp=N,1735µm,0.4s
MCIV AML AML
comp=E,1780µm,0.8s
SF04 Casetta 1.02 274 AML AML
comp=N,2810µm,0.3s
SF04 AML AML
comp=E,2660µm,0.3s
TOLF Tolfa 1.04 228 P Pb 14 25 04.5 -0.4
TOLF AML AML
comp=N,1495µm,1.6s
TOLF AML AML
comp=E,1840µm,0.7s
SSP9 Sansepolcro 1.05 321 P Pb 14 25 04.8 0.0
SF01 Poggio Pratacc 1.09 273 AML AML
comp=N,2270µm,0.7s
SF01 AML AML
comp=E,2955µm,0.5s
CAFR Castel Frentan 1.10 119 AML AML
comp=E,1590µm,0.3s
CAFR AML AML
comp=N,1610µm,0.7s
LPEL Lama dei Pelig 1.11 130 P Pb 14 25 04.5 -1.5
ARCI Arcidosso 1.16 275 P Pb 14 25 06.7 -0.1
ARCI AML AML
comp=N,531µm,0.3s
ARCI AML AML
comp=E,578µm,0.9s
CPGN Carpegna, Ital 1.16 333 P Pb 14 25 06.1 -0.8
POFI Posta Fibreno 1.16 154 P Pb 14 25 05.7 -1.2
POFI AML AML
comp=N,590µm,1.4s
POFI AML AML
comp=E,986µm,1.4s
CRE Caprese Michel 1.17 317 ⇓P Pb 14 25 07.0 0.0
CRE AML AML
comp=E,1118µm,1.2s
CRE AML AML
comp=N,1350µm,0.4s
LRP Arpino 1.19 160 P Pn 14 25 07.2 -0.1
LRP AML AML
comp=E,668µm,0.5s
LRP AML AML
comp=N,1122µm,1.0s
GIUL Giuliano Di Ro 1.22 173 P Pn 14 25 06.7 -1.0
GIUL AML AML
comp=E,981µm,1.1s
GIUL AML AML
comp=N,1066µm,0.9s
CERA Filignano 1.38 148 P Pn 14 25 09.0 -0.9
CERA AML AML
comp=N,1126µm,0.6s
CERA AML AML
comp=N,1089µm,0.6s
CERA AML AML
comp=E,1352µm,0.6s
CERA AML AML
comp=E,1340µm,0.6s
ASQU Asqua 1.38 319 ⇑P Pn 14 25 10.2 +0.2
ASQU AML AML
comp=E,608µm,0.5s
ASQU AML AML
comp=N,793µm,0.8s
FRES Fresagrandinar 1.44 123 P Pb 14 25 11.8 +0.2
MAON Monte Argentar 1.45 257 ⇓P Pn 14 25 11.0 +0.1
MAON AML AML
comp=E,305µm,0.5s
MAON AML AML
comp=N,213µm,1.4s
TRIV Trivento 1.50 131 P Pg 14 25 13.1 -0.5
OSSC Osservatorio P 1.52 300 P Pn 14 25 11.2 -0.6
OSSC AML AML
comp=N,384µm,0.6s
OSSC AML AML
comp=E,404µm,1.6s
OSSC AML AML
comp=N,406µm,0.6s
OSSC AML AML
comp=E,348µm,0.7s
RUFI Rufina 1.55 314 P Pn 14 25 12.6 +0.4
CASP Castiglione de 1.60 272 P Pn 14 25 12.9 -0.1
CASP AML AML
comp=N,184µm,0.8s
CASP AML AML
comp=E,212µm,0.5s
TRIF Trifonti 1.61 283 P Pn 14 25 13.4 +0.3
TRIF AML AML
comp=E,404µm,0.4s
TRIF AML AML
comp=N,372µm,0.9s
BSSO Busso 1.68 136 P Pb 14 25 15.0 -0.7
BSSO AML AML
comp=N,178µm,1.1s
BSSO AML AML
comp=E,168µm,0.7s
MODR Mondragone 1.74 159 AML AML
comp=N,230µm,1.0s
MODR AML AML
comp=E,186µm,0.8s
MPPT Montemurlo 1.86 311 ⇓P Pb 14 25 17.7 -1.0
MPPT AML AML
comp=N,358µm,1.1s
MPPT AML AML
comp=E,304µm,0.6s
MELA Melanico ??? S 1.88 124 P Pb 14 25 17.9 -1.1
MELA AML AML
comp=E,859µm,1.4s
MELA AML AML
comp=E,897µm,1.4s
MELA AML AML
comp=N,1106µm,0.5s
MELA AML AML
comp=N,1127µm,0.5s
TREM Isole Tremiti 1.94 109 P Pn 14 25 17.0 -0.5
TREM AML AML
comp=N,1215µm,0.8s
TREM AML AML
comp=E,976µm,0.6s
VITU Vitulano (BN) 1.98 143 P Pb 14 25 20.5 -0.3
VITU AML AML
comp=E,314µm,0.6s
VITU AML AML
comp=N,402µm,0.5s
APRC Apricena 2.11 118 P Pn 14 25 20.9 +0.9
APRC AML AML
comp=N,578µm,1.3s
APRC AML AML
comp=E,444µm,1.3s
MAIM Mastiano 2.19 302 ⇑P Pn 14 25 22.0 +1.0
MAIM AML AML
comp=N,194µm,0.5s
MAIM AML AML
comp=E,229µm,0.5s
SGRT San Giovanni R 2.25 116 P Pn 14 25 23.0 +1.1
SGRT AML AML
comp=N,416µm,0.5s
SGRT AML AML
comp=E,460µm,0.5s
VLC Villacollemand 2.38 307 AML AML
comp=N,120µm,1.6s
VLC AML AML
comp=E,93µm,0.6s
EQUI Equi 2.53 305 P Pn 14 25 26.3 +0.7
EQUI AML AML
comp=N,127µm,1.3s
EQUI AML AML
comp=E,112µm,0.6s
MORSI Morsiglia 2.71 275 P Pn 14 25 29.1 +0.9
MORSI S Sn 14 26 01.6 +0.6
SMPL Sampolo 2.86 258 P Pn 14 25 31.1 +0.8
SMPL Sampolo 2.86 258 AML AML
comp=E,18µm,1.3s
SMPL AML AML
comp=N,16µm,0.7s
SMPL Sampolo 2.86 258 P Pn 14 25 31.2 +0.8
SKDS Skadanscina 2.86 14 *i* Pn **Pn 14 25 30.9 +0.5**
SKDS *i* Sn **Sn 14 26 05.0 +0.3**
SKDS IAML 14 26 08.9
comp=Z,46nm,0.2s
CORF Corte 2.91 262 P Pn 14 25 32.4 +1.4
PGF Pioggiola 2.99 267 *eP* **Pn 14 25 33.4 +1.2**
PGF Pioggiola 2.99 267 AML AML
comp=N,23µm,1.0s
PGF AML AML
comp=E,29µm,0.8s
PGF Pioggiola 2.99 267 P Pn 14 25 33.2 +1.0
SABO M.te Sabotino 3.24 7 P Pn 14 25 36.2 +0.7
SABO AML AML
comp=E,1170µm,0.6s
SABO AML AML
comp=E,288µm,0.6s
SABO AML AML
comp=N,1356µm,0.9s
SABO AML AML
comp=N,364µm,0.8s
CGRP Cima Grappa 3.24 344 P Pn 14 25 36.8 +1.2
CGRP AML AML
comp=E,390µm,0.5s
CGRP AML AML
comp=N,323µm,0.5s
AMUR Altamura 3.25 124 P Pn 14 25 36.7 +1.1
AMUR AML AML
comp=N,108µm,1.4s
AMUR AML AML
comp=E,128µm,0.7s
AJAC Base Areonaval 3.28 257 P Pn 14 25 37.5 +1.5
SALO Salr 3.38 328 P Pn 14 25 38.5 +1.1
SALO AML AML
comp=N,232µm,0.9s
SALO AML AML
comp=E,196µm,0.7s
STON Ston 3.43 87 AML AML
comp=E,134µm,0.4s
STON AML AML
comp=N,75µm,1.2s
CTI Castel Tesino 3.43 344 P Pn 14 25 39.0 +0.8
CTI AML AML
comp=E,225µm,1.2s
CTI AML AML
comp=N,212µm,0.3s
LJU Ljubljana 3.44 17 AML AML
comp=E,1039µm,0.5s
LJU AML AML
comp=N,1360µm,1.5s
MATE Matera 3.46 126 ⇑P Pn 14 25 39.5 +0.9
STAL STALIGIAL 3.50 356 P Pn 14 25 40.0 +0.9
STAL AML AML
comp=N,224µm,0.8s
STAL AML AML
comp=E,288µm,1.5s
LUSI Trento, Gardas 3.53 335 P Pn 14 25 40.4 +0.9
LUSI AML AML
comp=E,130µm,0.6s
LUSI AML AML
comp=N,205µm,0.3s
LTRZ Laterza 3.56 126 P Pn 14 25 41.1 +1.2
NOCI Noci 3.60 122 P Pn 14 25 41.8 +1.3
NOCI AML AML
comp=E,103µm,1.4s
NOCI AML AML
comp=N,144µm,0.9s
GAGG Gaggia 3.64 336 P Pn 14 25 42.4 +1.3
GAGG AML AML
comp=N,128µm,0.7s
GAGG AML AML
comp=E,160µm,1.0s
PTCC Patocco-Chiusa 3.64 3 P Pn 14 25 42.1 +1.0
PTCC AML AML
comp=N,89µm,0.9s
PTCC AML AML
comp=E,92µm,0.4s
MABI Malga Bissina 3.75 332 P Pn 14 25 44.0 +1.3
MABI AML AML
comp=N,77µm,0.3s
MABI AML AML
comp=E,81µm,0.9s
ZOU Zoufplan 3.79 359 AML AML
comp=E,136µm,0.7s
ZOU AML AML
comp=N,138µm,1.5s
FVI Forni Avoltri 3.83 357 P Pn 14 25 45.2 +1.5
FVI AML AML
comp=N,100µm,0.7s
FVI AML AML
comp=E,92µm,0.6s
KOSI Kohlern 3.88 343 P Pn 14 25 46.4 +1.9
KOSI AML AML
comp=N,134µm,0.5s
KOSI AML AML
comp=E,126µm,1.1s
MYKA Terra Mystica 3.88 6 *eP*n **Pn 14 25 46.2 +1.8**
comp=E,6.5nm,0.3s
OBKA Obir 3.89 16 *eP*n **Pn 14 25 46.2 +1.7**
comp=E,1.5nm,0.2s
APPI Appiano 3.93 341 P Pn 14 25 46.6 +1.6
APPI AML AML
comp=E,163µm,0.4s
APPI AML AML
comp=N,178µm,0.4s
ABTA Abfaltersbach 4.00 355 Pn Pn 14 25 47.9 +1.9
comp=N,13nm,0.3s,SNR=12
HCY Herceg Novi 4.04 93⇑ *i* Pn **Pn 14 25 47.3 +0.9**
HCY *i* Sn **Sn 14 26 35.1 +1.5**
BRY Bratogost 4.04 86⇑ *i* Pn **Pn 14 25 47.5 +0.8**
BRY *i* Sn **Sn 14 26 35.3 +1.3**
SOKA Soboth 4.16 19 *e*Pn **Pn 14 25 51.7 +3.5**
comp=N,1.9nm,0.2s
BRMO Bormio 4.17 334 P Pn 14 25 50.8 +2.4
BRMO AML AML
comp=N,46µm,0.6s
BRMO AML AML
comp=E,45µm,0.7s
SAOF Saorge 4.18 289 P Pn 14 25 50.3 +1.8
RISI Rein 4.24 351 P Pn 14 25 51.7 +2.3
RISI AML AML
comp=N,364µm,0.5s
RISI AML AML
comp=E,240µm,0.4s
SBF Sospel 4.24 287 *e*P **Pn 14 25 50.7 +1.5**
ESCA l'Escarene 4.27 286 P Pn 14 25 50.1 +0.4
ESCA S **Sn 14 26 39.0 -0.5**
VSL Villasalto 4.28 221 P Pn 14 25 51.3 +1.5
VSL AML AML
comp=E,32µm,1.4s
VSL AML AML
comp=N,29µm,1.2s
TURF col de Turini 4.29 288 P Pn 14 25 50.7 +0.6
UPM Unac-Piva 4.32 82⇓ *i* Pn **Pn 14 25 51.3 +0.8**
UPM *i* Sn **Sn 14 26 41.9 +0.9**
CEME Cevo 4.34 91⇓ *i* Pn **Pn 14 25 51.6 +1.0**
CEME *i* Sn **Sn 14 26 42.2 +1.0**
BUM Brajici-Budva 4.35 94⇓ *i* Pn **Pn 14 25 51.6 +0.8**
BUM *i* Sn **Sn 14 26 42.5 +1.1**
NKME Niksic 4.35 88⇓ *i* Pn **Pn 14 25 51.7 +0.9**
NKME *i* Sn **Sn 14 26 42.6 +1.1**
SPIF crte de Spivo 4.42 289 P Pn 14 25 54.1 +2.3
FETA Feichten 4.56 340 *e*Pn **Pn 14 25 56.3 +2.6**
comp=N,4.7nm,0.4s
CALF Calern 4.58 284 P Pn 14 25 55.0 +1.0
DRME Dracevica, Mon 4.58 95 *e*Pn **Pn 14 25 54.8 +0.9**
DRME *i* Sn **Sn 14 26 48.1 +1.1**
ISO Isola 4.59 290 P Pn 14 25 56.3 +2.3
TTG Podgorica 4.60 92⇑ *i* Pn **Pn 14 25 55.1 +1.0**
TTG *i* Sn **Sn 14 26 48.6 +1.1**
DAVOX Davos/Dischmat 4.60 332 LR LR 14 28 13.9
comp=N,56nm,19.5s,baz=84,slow=47
DAVOX Davos/Dischmat 4.60 332 P Pn 14 25 57.5 +3.1
WTTA Wattenberg 4.61 348 *e*Pn **Pn 14 25 57.5 +3.1**
comp=N,3.0nm,0.2s
SQTA Sankt Quirin 4.64 344 Pn Pn 14 25 58.2 +3.4
comp=N,5.2nm,0.2s,SNR=6.3
ULC Ulcinj 4.66 98⇑ *i* Pn **Pn 14 25 56.0 +0.9**
ULC *i* Sn **Sn 14 26 50.2 +1.0**
WATA Walderalm 4.68 348 *i* Pn **Pn 14 25 58.8 +3.4**
comp=N,4.3nm,0.1s,SNR=6.0
KOME Kolasin 4.76 87 *e*Pn **Pn 14 25 57.4 +0.9**
KOME *i* Sn **Sn 14 26 52.6 +0.9**
MOTA Moosalm 4.78 344 *e*Pn **Pn 14 26 00.1 +3.3**
comp=N,1.0nm,0.2s
ARSA Arzberg 4.81 21 *e*Pn **Pn 14 25 58.3 +1.1**
comp=N,4.5nm,0.3s
LMR La Mourre 4.82 279 *e*P **Pn 14 25 58.2 +1.0**
SURF Saint Ours 4.84 293 P Pn 14 25 58.7 +1.1
JAUF Jausiers 4.86 292 P Pn 14 26 00.5 +2.6
BIOA Bad Ischl, Aus 4.94 5 *e*Pn **Pn 14 26 02.2 +3.3**
comp=N,12nm,0.4s
TRIGF Trigance 4.95 284 P Pn 14 26 00.7 +1.7
MBDF Montbardon 4.95 295 *e*P **Pn 14 26 00.8 +1.7**
MBDF *e*Sn **Sn 14 26 51.1 -5.2**
comp=N,3.7nm,0.4s
CREF Crivoux 4.99 293 P Pn 14 26 01.3 +1.6
RETA Reutte 4.99 342 *e*Pn **Pn 14 26 02.8 +3.2**
comp=N,4.6nm,0.3s
FLAF Flassans-sur-l 5.01 279 P Pn 14 26 01.1 +1.3
OGAG Argentiere 5.01 292 P Pn 14 26 06.0 +6.0
OGAG S **Sn 14 27 04.7 +6.8**
IVA Berane 5.04 87 *e*Pn **Pn 14 26 01.3 +1.0**
IVA *i* Sn **Sn 14 26 59.3 +0.8**
DAVA Damuels 5.04 335 Pn Pn 14 26 04.0 +3.6
comp=N,6.8nm,0.4s,SNR=4.1
PVY Plav 5.10 90 *e*Pn **Pn 14 26 02.1 +0.9**
PVY *i* Sn **Sn 14 27 00.7 +0.6**
MOA Molln 5.15 9 *e*Pn **Pn 14 26 03.9 +2.1**
comp=N,3.6nm,0.2s
DIX Grande Dixence 5.22 311 P Pn 14 26 04.4 +1.5
BLAF les Blancs 5.24 285 P Pn 14 26 05.2 +2.2
LPG La Plagne 5.29 303 *e*P **Pn 14 26 06.1 +2.2**
LPG *e*Sn **Sn 14 26 59.5 -5.4**
comp=N,2.9nm,0.4s
LPL La Plagne 5.31 303 *e*P **Pn 14 26 06.3 +2.2**
LPL *e*Sn **Sn 14 26 59.9 -5.4**
comp=N,4.6nm,0.4s
FRGS Fruska Gora 5.44 62 ⇑P Pn 14 26 06.6 +0.9
RONA Rosalia, Austr 5.44 24 *e*Pn **Pn 14 26 07.3 +1.6**
comp=N,2.0nm,0.2s
RSL Roselend 5.46 305 P Pn 14 26 08.9 +2.8
BSTF la Bastide-des 5.51 284 P Pn 14 26 08.3 +1.6
CONA Conrad Observa 5.53 20 *e*Pn **Pn 14 26 08.1 +1.0**
comp=N,3.8nm,0.2s
SMRF Simiane la Rot 5.58 285 *e*P **Pn 14 26 10.1 +2.5**
ORIF Oris-en-Rattie 5.61 295 *e*P **Pn 14 26 10.6 +2.5**
ORIF *e*Sn **Sn 14 27 07.0 -5.5**
comp=N,2.4nm,0.3s
BALST Balsthal 5.93 322 P Pn 14 26 13.4 +0.9
SLE Schleitheim 5.94 329 P Pn 14 26 13.6 +1.0
GERES GERESS Array B 6.09 4 Pn **Pn 14 26 15.5 +0.7**
comp=N,0.6nm,0.3s,baz=184,slow=14,SNR=6.7
GERES Sn **Sn 14 27 21.3 -3.2**
comp=N,1.4nm,0.3s,baz=186,slow=16,SNR=2.2
comp=N,1.1nm,0.4s
CKRC Cesky Krumlov 6.12 8 *e*PN **Pn 14 26 14.6 -0.4**
CKRC *e*SN **Sn 14 27 23.4 -1.5**
BOURR Bourrignon 6.19 320 P Pn 14 26 17.3 +1.2
FELD Feldberg im Sc 6.22 327 P Pn 14 26 17.2 +0.7
FELD Feldberg im Sc 6.22 327 S Sn 14 27 26.3 -1.4
KIZ Kirchzarten 6.32 327 P Pn 14 26 18.1 +0.3
KIZ Kirchzarten 6.32 327 S Sn 14 27 28.5 -1.5
KHC Kasperske Hory 6.38 3 *e*PN **Pn 14 26 18.8 +0.2**
KHC *e*SN **Sn 14 27 30.1 -1.2**
BOVS Bovan 6.39 79 ⇑P Pn 14 26 18.3 -0.4
VIVF Saint-Julien-l 6.41 292 *e*P **Pn 14 26 21.7 +2.7**
VIVF *e*Sn **Sn 14 27 25.9 -6.2**
comp=N,1.6nm,0.4s
VOGT Vogtsburg - To 6.52 326 P Pn 14 26 21.6 +1.1
MOF Molkenrain 6.57 323 P Pn 14 26 22.1 +0.8
HINF Hinteralfeld 6.67 321 *e*P **Pn 14 26 24.4 +1.7**
HINF *e*Sn **Sn 14 27 32.3 -6.4**
comp=N,11nm,0.4s
RONF Ronchamp 6.69 320 P Pn 14 26 22.7 -0.2
BZS Buzias 6.79 62 ⇑P Pn 14 26 24.2 0.0
LASF Ste Croix 6.82 284 *e*P **Pn 14 26 26.0 +1.4**
LASF *e*Sn **Sn 14 27 35.5 -6.7**
comp=N,0.8nm,0.2s
ECH Echery 6.84 325 P Pn 14 26 25.5 +0.6
WLS Welschbruch 6.91 327 P Pn 14 26 26.8 +0.8
CDF Champ du Feu 6.94 326 *e*P **Pn 14 26 27.7 +1.3**
CDF *e*Sn **Sn 14 27 38.7 -6.7**
comp=N,7.3nm,0.3s
HAU Haudompre 7.04 320 *e*P **Pn 14 26 30.3 +2.5**
HAU *e*Sn **Sn 14 27 41.1 -6.7**
comp=N,13nm,0.4s
BLKB Belogradchik 7.09 80 ⇑P Pn 14 26 28.8 +0.4
NKC Novy Kostel 7.48 357 *e*SN **Sn 14 27 56.6 -1.8**
KEST Kesra 7.59 203 Pn **Pn 14 26 39.4 +4.1**
comp=N,0.4nm,0.3s,baz=255,slow=21,SNR=1.6
comp=N,1.4nm,0.5s
SMF Signal de Mont 7.62 304 *e*P **Pn 14 26 36.5 +0.9**
PAGF Fort de Pagny 7.73 321 *e*P **Pn 14 26 39.8 +2.7**
baz=141
PAGF *e*Sn **Sn 14 27 57.6 -7.0**
comp=N,3.1nm,0.4s
SFTF Sexfontaines 7.82 317 *e*P **Pn 14 26 41.0 +2.6**
baz=136
SFTF *e*Sn **Sn 14 27 59.5 -7.3**
comp=N,2.9nm,0.3s
LOR Lormes 7.91 308 *e*P **Pn 14 26 42.8 +3.2**
baz=128
LOR *e*Sn **Sn 14 28 01.7 -7.3**

comp=N,3.1nm,0.4s
MTLF Montolieu 7.95 278 *e*P **Pn 14 26 43.4 +3.2**
AVF Avril sur Loir 7.98 304 *e*P **Pn 14 26 43.7 +3.1**
MEZF Maizieres J'vi 8.01 318 *e*P **Pn 14 26 44.1 +3.1**
baz=139
MEZF *e*Sn **Sn 14 28 04.2 -7.3**
comp=N,3.6nm,0.4s
SSF Saint Saulge 8.01 306 *e*P **Pn 14 26 43.5 +2.5**
SAVF Savonnieres en 8.05 319 *e*Sn **Sn 14 28 05.4 -7.2**
comp=N,3.8nm,0.3s
CAF Calviac 8.22 289 *e*P **Pn 14 26 46.9 +2.9**
CLL Collm 8.54 360 *ex* x 14 26 50.0
CLL Collm 8.54 360 *ex* x 14 28 30.0
CLL *e*Sg **Sg 14 29 17.0 -1.7**
EKA Eskdalemuir Ar 16.40 326 Pn **P 14 28 36.5 -1.0**
baz=130,slow=13
comp=N,0.5nm,0.7s
FINES FINESS Array B 20.27 18 P **P 14 29 20.2 +0.3**
comp=N,8.0nm,1.1s,baz=223,slow=11,SNR=2.1
comp=N,8.0nm,1.1s
KBZ Khabaz 21.72 77 P **P 14 29 38.1 +2.4**
comp=N,1.7nm,0.8s,baz=256,slow=12,SNR=2.2
comp=N,1.7nm,0.8s
TORD Torodi Ar. Bea 31.11 202 P **P 14 31 04.4 +1.2**
comp=N,0.4nm,0.6s,baz=21,slow=8.5,SNR=2.9
comp=N,0.4nm,0.6s
MKAR Makanchi Array 47.87 60 P **P 14 33 24.0 +1.5**
comp=N,1.2nm,0.8s,baz=299,slow=5.9,SNR=4.8
comp=N,1.2nm,0.8s

IDC 30 14:28:27.2±3.0, 32.89S×178.39W, h0km, mb3.6/2, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=69.9km s-min=36.0km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.49**	**213**	Pn	Pn	14 30 04.4	+0.4
	1.7nm,0.3s,baz=342,slow=3.5,SNR=14						
URZ				Sn	Sn	14 31 17.0	-1.7
	1.8nm,0.3s,baz=74,slow=23,SNR=8.7						
	4.3nm,0.3s						
ASAR	**Alice Springs**	**42.70**	**270**	P	P	14 36 26.2	+0.1
	0.4nm,0.6s,baz=111,slow=7.8,SNR=11						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**43.92**	**275**	P	P	14 36 35.8	-0.1
	0.5nm,0.5s,baz=115,slow=7.8,SNR=17						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**147.34**	**338**	PKPbc	PKPbc	14 48 11.0	-1.0
	3.1nm,0.9s,baz=64,slow=6.3,SNR=6.2						

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*PRU **30** 14:31:21.4±0.0, 42.97N×14.01E, h0km*
ROM 30 14:31:21.6±0.1, 42.963N±0.006×13.218E±0.009, h3km, ML3.0/52, 19C-26D, Error ellipse: s-maj=0.7km s-min=0.7km az=278.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AM05	**Amandola Campo**	**0.10**	**82**	⇓P	Pg	14 31 23.8	+0.3
AM05				S	Sg	14 31 25.8	+0.9
AM05				AML	AML		
	comp=E,4165μm,1.0s						
AM05				AML	AML		
	comp=N,3620μm,1.0s						
AM05				AML	AML		
	comp=N,3615μm,1.0s						
AM05				AML	AML		
	comp=E,4160μm,1.0s						
AM05				AML	AML		
	comp=E,14800μm,0.7s						
AM05				AML	AML		
	comp=N,644μm,0.1s						
AM05				AML	AML		
	comp=E,4160μm,1.0s						
T1245	**Castelsantange**	**0.11**	**191**	P	Pg	14 31 23.6	-0.2
T1245				S	Sg	14 31 25.8	+0.6
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.12**	**269**	⇓P	Pg	14 31 24.4	+0.4
FEMA				S	Sg	14 31 27.1	+1.4
FEMA				AML	AML		
	comp=N,19000μm,0.5s						
FEMA				AML	AML		
	comp=N,18950μm,0.5s						
FEMA				AML	AML		
	comp=E,17700μm,1.4s						
FEMA				AML	AML		
	comp=E,17700μm,0.6s						
GUMA	**Gualdo di Mace**	**0.13**	**41**	⇓P	Pg	14 31 25.0	+0.9
GUMA				S	Sg	14 31 26.6	+0.7
GUMA				AML	AML		
	comp=E,23800μm,0.7s						
GUMA				AML	AML		
	comp=N,26850μm,0.7s						
GUMA				AML	AML		
	comp=E,22550μm,1.3s						
GUMA				AML	AML		
	comp=E,22550μm,0.7s						
GUMA				AML	AML		
	comp=N,23150μm,0.5s						
T1241	**Roccafluvione,**	**0.19**	**124**	⇓P	Pg	14 31 25.6	+0.3
T1241				S	Sg	14 31 29.2	+1.5
T1241				AML	AML		
	comp=E,10855μm,0.6s						
T1241				AML	AML		
	comp=E,10865μm,0.6s						
T1241				AML	AML		
	comp=N,6995μm,0.4s						
GAG1	**Gagliole**	**0.30**	**338**	S	Sg	14 31 33.0	+1.9
T1204	**Amatrice, Fraz**	**0.30**	**166**	P	Pg	14 31 27.2	-0.1
T1204				S	Sg	14 31 32.5	+1.3
T1204				AML	AML		
	comp=N,10800μm,0.6s						
T1204				AML	AML		
	comp=E,16500μm,0.3s						
T1204				AML	AML		
	comp=N,10800μm,1.4s						
T1215	**Vallo di Nera,**	**0.30**	**238**	P	Pg	14 31 27.9	+0.5
T1215				AML	AML		
	comp=E,4600μm,0.6s						
T1215				AML	AML		
	comp=N,4930μm,0.7s						
T1215				AML	AML		
	comp=E,4710μm,0.6s						
T1215				AML	AML		
	comp=N,4745μm,1.1s						
T1215				AML	AML		
	comp=N,4735μm,1.1s						
T1215				AML	AML		
	comp=E,4600μm,0.6s						
T1215				AML	AML		
	comp=N,4925μm,0.7s						
T1215				AML	AML		
	comp=E,4710μm,0.6s						
T1243	**Rocca Santa Ma**	**0.32**	**147**	P	Pg	14 31 27.4	-0.2
T1243				S	Sb	14 31 35.0	-0.5
T1217	**Poggiodomo (PG**	**0.33**	**220**	P	Pb	14 31 29.7	-0.4
T1217				AML	AML		
	comp=E,5885μm,0.1s						
T1217				AML	AML		
	comp=N,8175μm,0.3s						
T1217				AML	AML		
	comp=N,8175μm,0.3s						
T1217				AML	AML		
	comp=E,5870μm,0.1s						
T1217				AML	AML		
	comp=E,5890μm,0.1s						
T1217				AML	AML		
	comp=E,5865μm,0.1s						
T1217				AML	AML		
	comp=N,8170μm,0.3s						
OFFI	**Offida**	**0.34**	**95**	P	Pg	14 31 29.1	+0.9
SNTG	**Esanatoglia**	**0.35**	**325**	S	Sb	14 31 36.0	-0.6
EL6	**Elcito**	**0.38**	**347**	⇑P	Pg	14 31 29.4	+0.6
EL6				S	Sb	14 31 36.2	-1.0
EL6				AML	AML		
	comp=N,3625μm,0.5s						
EL6				AML	AML		
	comp=E,3340μm,0.4s						
LNSS	**Leonessa**	**0.38**	**200**	P	Pb	14 31 30.2	-0.8
LNSS				AML	AML		
	comp=E,15950μm,0.2s						
LNSS				AML	AML		
	comp=N,37750μm,0.2s						
ASSB	**Assisi San Ben**	**0.42**	**281**	⇓P	Pn	14 31 34.2	-0.4
ASSB				AML	AML		
	comp=E,2595μm,0.8s						
ASSB				AML	AML		
	comp=N,2165μm,1.6s						
ASSB				AML	AML		
	comp=E,2595μm,1.2s						
ASSB				AML	AML		
	comp=N,2165μm,0.4s						
TERO	**Teramo**	**0.44**	**140**	P	Pg	14 31 30.9	+0.8
TERO				AML	AML		
	comp=E,2700μm,0.5s						
TERO				AML	AML		
	comp=E,2420μm,0.5s						
TERO				AML	AML		
	comp=N,3365μm,1.3s						
TERO				AML	AML		
	comp=N,3065μm,1.3s						
TERO				AML	AML		
	comp=E,2700μm,1.5s						
TERO				AML	AML		
	comp=E,2420μm,1.5s						
CAMP	**Campotosto**	**0.45**	**162**	P	Pb	14 31 32.3	0.0
CAMP				AML	AML		
	comp=E,3195μm,0.6s						
CAMP				AML	AML		
	comp=N,3105μm,0.6s						
CAMP				AML	AML		
	comp=E,3195μm,1.4s						
RM33	**Pellescritta (**	**0.45**	**180**	P	Pb	14 31 31.8	-0.4
RM33				AML	AML		
	comp=N,4385μm,1.2s						
RM33				AML	AML		
	comp=N,4320μm,1.2s						
RM33				AML	AML		
	comp=E,4430μm,0.6s						
RM33				AML	AML		
	comp=N,4385μm,1.2s						
RM33				AML	AML		
	comp=E,4530μm,0.6s						
RM33				AML	AML		
	comp=N,4385μm,0.8s						
RM33				AML	AML		
	comp=N,4320μm,0.8s						
FOSV	**Fossato di Vic**	**0.47**	**315**	⇓P	Pg	14 31 31.2	+0.6
FOSV				AML	AML		
	comp=E,1630μm,0.8s						
FOSV				AML	AML		
	comp=N,2070μm,1.0s						
FOSV				AML	AML		
	comp=E,1635μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.48**	**298**	⇑P	Pg	14 31 31.2	+0.5
ATCC				AML	AML		
	comp=E,2540μm,0.7s						
ATCC				AML	AML		
	comp=E,2540μm,1.3s						
ATCC				AML	AML		
	comp=N,2450μm,1.0s						
PP3	**Marolino**	**0.50**	**35**	⇑P	Pb	14 31 32.7	-0.4
PP3				AML	AML		
	comp=E,3385μm,0.4s						
PP3				AML	AML		
	comp=N,2795μm,1.2s						
PP3				AML	AML		
	comp=E,3160μm,0.4s						
PP3				AML	AML		
	comp=E,3385μm,0.4s						
PP3				AML	AML		
	comp=N,2800μm,1.2s						
PP3				AML	AML		
	comp=E,3165μm,0.4s						
PP3				AML	AML		
	comp=N,3040μm,0.6s						
PP3				AML	AML		
	comp=N,2800μm,0.8s						
PP3				AML	AML		
	comp=E,3165μm,1.6s						
T1211	**Morro Reatino**	**0.51**	**212**	⇓P	Pb	14 31 32.3	-0.9
T1211				AML	AML		
	comp=E,5385μm,0.6s						
T1211				AML	AML		
	comp=N,7650μm,0.1s						
T1211				AML	AML		
	comp=N,7650μm,0.1s						
T1211				AML	AML		
	comp=E,5390μm,0.6s						
T1211				AML	AML		
	comp=N,7640μm,0.1s						
T1211				AML	AML		
	comp=E,5450μm,0.6s						
ARRO	**Arrone**	**0.51**	**221**	⇑P	Pb	14 31 32.7	-0.5
ARRO				AML	AML		
	comp=E,1825μm,1.5s						
ARRO				AML	AML		
	comp=N,2180μm,0.9s						
ARRO				AML	AML		
	comp=E,1825μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.53**	**173**	P	Pb	14 31 34.1	+0.6
T1247				AML	AML		
	comp=E,4665μm,0.9s						
T1247				AML	AML		
	comp=E,4665μm,1.1s						
T1247				AML	AML		
	comp=N,4155μm,0.2s						
TRTR	**Tortoreto Alta**	**0.54**	**107**	⇑P	Pb	14 31 33.0	-0.6
TRTR				AML	AML		
	comp=E,5220μm,0.5s						
TRTR				AML	AML		
	comp=N,3985μm,0.6s						
TRTR				AML	AML		
	comp=N,3985μm,1.4s						
ARVD	**Arcevia**	**0.57**	**339**	⇑P	Pg	14 31 33.0	+0.4
ARVD				AML	AML		
	comp=E,761μm,0.6s						
ARVD				AML	AML		
	comp=N,496μm,0.5s						
ARVD				AML	AML		
	comp=E,761μm,1.4s						
GIGS	**Gran Sasso**	**0.57**	**153**	⇑P	Pb	14 31 34.6	+0.3
GIGS				AML	AML		
	comp=E,726μm,0.5s						
GIGS				AML	AML		
	comp=N,531μm,1.3s						
GIGS				AML	AML		
	comp=E,725μm,0.5s						
GIGS				AML	AML		
	comp=E,725μm,1.5s						
CESX	**Cesi**	**0.59**	**233**	⇓P	Pb	14 31 35.0	+0.4
CESX				AML	AML		
	comp=E,1635μm,0.7s						
CESX				AML	AML		
	comp=N,2080μm,0.5s						
CESX				AML	AML		
	comp=N,2080μm,1.5s						
MURB	**Monte Urbino**	**0.59**	**301**	⇑P	Pg	14 31 33.3	+0.4
MURB				S	Sb	14 31 45.0	+1.6
MURB				AML	AML		
	comp=E,3585μm,0.4s						
MURB				AML	AML		
	comp=N,2835μm,0.4s						
MURB				AML	AML		
	comp=E,3585μm,0.4s						
MURB				AML	AML		
	comp=E,3945μm,0.4s						
MURB				AML	AML		
	comp=N,2600μm,0.3s						
ATFO	**Monte Foce - G**	**0.62**	**311**	⇑P	Pg	14 31 33.4	0.0
ATFO				AML	AML		
	comp=E,970μm,0.6s						
ATFO				AML	AML		
	comp=N,980μm,1.0s						
ATFO				AML	AML		
	comp=N,980μm,1.0s						
AOI	**Ancona**	**0.65**	**25**	S	Sg	14 31 42.0	-0.5
FRON	**Frontone**	**0.66**	**327**	⇓P	Pg	14 31 34.5	+0.3
FRON				AML	AML		
	comp=N,1230μm,1.0s						
FRON				AML	AML		
	comp=E,938μm,1.3s						
FRON				AML	AML		
	comp=E,938μm,0.7s						
FRON				AML	AML		
	comp=N,1230μm,1.0s						
ATTE	**AVT- Monte Tez**	**0.68**	**291**	⇑P	Pn	14 31 37.1	-1.0
ATTE				AML	AML		
	comp=N,622μm,0.9s						
ATTE				AML	AML		
	comp=E,678μm,1.1s						
ATTE				AML	AML		
	comp=E,678μm,0.9s						
FIAM	**Fiamignano**	**0.70**	**186**	⇓P	Pg	14 31 35.6	+0.6
FIAM				S	Sg	14 31 44.0	0.0
FIAM				AML	AML		
	comp=N,1110μm,0.7s						
FIAM				AML	AML		
	comp=E,1850μm,0.7s						
ATVO	**AVT- Monte Val**	**0.73**	**305**	⇑P	Pg	14 31 35.2	-0.3
ATVO				AML	AML		
	comp=N,640μm,1.2s						
ATVO				AML	AML		
	comp=E,558μm,0.9s						
VCEL	**Villa Celiera**	**0.73**	**141**	⇓P	Pn	14 31 38.4	-0.5
VCEL				AML	AML		
	comp=E,1940μm,0.7s						
VCEL				AML	AML		
	comp=N,1600μm,1.3s						
VCEL				AML	AML		
	comp=N,1605μm,1.3s						
VCEL				AML	AML		
	comp=E,1945μm,0.7s						
MPAG	**Monte Paganucc**	**0.74**	**333**	⇓P	Pg	14 31 36.2	+0.3
MPAG				AML	AML		
	comp=E,718μm,0.8s						
MPAG				AML	AML		
	comp=N,716μm,1.6s						
MPAG				AML	AML		
	comp=N,716μm,0.4s						
MPAG				AML	AML		
	comp=E,718μm,0.8s						
FAGN	**Fagnano**	**0.75**	**159**	⇓P	Pb	14 31 36.9	-0.3
FAGN				AML	AML		
	comp=N,1630μm,1.3s						
FAGN				AML	AML		
	comp=E,2550μm,0.6s						
FAGN				AML	AML		
	comp=N,1630μm,0.7s						
PIEI	**Pieia**	**0.76**	**319**	⇓P	Pg	14 31 36.3	+0.2
PIEI				S	Sb	14 31 49.0	+0.7
PIEI				AML	AML		
	comp=N,483μm,1.6s						
PIEI				AML	AML		
	comp=E,558μm,0.9s						
PIEI				AML	AML		
	comp=N,483μm,0.4s						
ATPI	**Pietralunga -**	**0.77**	**310**	⇓P	Pg	14 31 36.8	+0.5
ATPI				AML	AML		
	comp=E,652μm,1.1s						
ATPI				AML	AML		
	comp=N,543μm,0.8s						
ATPI				AML	AML		
	comp=E,652μm,1.1s						
ATPI				AML	AML		
	comp=E,652μm,0.9s						
ATMI	**Monte Miggiano**	**0.79**	**298**	⇓P	Pn	14 31 39.4	-0.3
ATMI				AML	AML		
	comp=E,1415μm,0.6s						
ATMI				AML	AML		
	comp=N,2330μm,0.6s						
FSSB	**Fossombrone**	**0.80**	**336**	⇑P	Pg	14 31 37.3	+0.5
FSSB				AML	AML		
	comp=E,1665μm,0.5s						
FSSB				AML	AML		
	comp=N,2500μm,0.4s						
APEC	**Apecchio**	**0.83**	**316**	S	Sn	14 31 53.0	-0.1
T0110	**Collepietro**	**0.84**	**150**	⇑P	Pg	14 31 36.6	-1.2
T0110				S	Sb	14 31 52.0	+1.3
T0110				AML	AML		
	comp=E,1640μm,0.6s						
T0110				AML	AML		
	comp=N,1605μm,0.5s						
SRES	**S.Oreste - Sor**	**0.89**	**216**	⇑P	Pb	14 31 39.3	-0.5
SRES				AML	AML		
	comp=N,486μm,1.1s						
SRES				AML	AML		
	comp=N,486μm,0.9s						
SRES				AML	AML		
	comp=E,620μm,0.9s						
BADI	**Badiali**	**0.90**	**308**	⇓P	Pg	14 31 38.8	+0.1
PE3	**Peglio**	**0.90**	**325**	⇑P	Pb	14 31 40.1	+0.2
CAFI	**Castiglion Fio**	**0.99**	**292**	⇓P	Pg	14 31 40.6	+0.1
CAFI				AML	AML		
	comp=N,766μm,0.7s						
CAFI				AML	AML		
	comp=E,384μm,0.7s						
MTCE	**Montecelio**	**1.00**	**201**	⇑P	Pg	14 31 41.0	+0.3
MTCE				AML	AML		
	comp=E,1140μm,0.6s						
MTCE				AML	AML		
	comp=E,1140μm,1.4s						
MTCE				AML	AML		
	comp=N,570μm,0.9s						
CERT	**Cerreto**	**1.03**	**190**	⇓P	Pb	14 31 42.0	0.0
CERT				AML	AML		
	comp=N,788μm,0.5s						
CERT				AML	AML		
	comp=E,1405μm,0.6s						
INTR	**Introdacqua**	**1.08**	**152**	⇓P	Pg	14 31 40.7	-1.5
INTR				AML	AML		
	comp=N,714nm,0.9s						
INTR				AML	AML		
	comp=E,846μm,0.9s						
INTR				AML	AML		
	comp=E,900nm,0.9s						
INTR				AML	AML		
	comp=N,1082μm,0.9s						
INTR				AML	AML		
	comp=N,714nm,1.1s						
INTR				AML	AML		
	comp=E,900nm,1.1s						
INTR				AML	AML		
	comp=E,846μm,1.1s						
INTR				AML	AML		
	comp=N,1082μm,1.1s						
CRE	**Caprese Michel**	**1.13**	**306**	⇓P	Pn	14 31 44.6	+0.1
CRE				AML	AML		
	comp=N,434μm,0.6s						
CRE				AML	AML		
	comp=E,209μm,0.5s						
CRE				AML	AML		
	comp=E,209μm,1.5s						
RMP	**Rome, Mte Porz**	**1.21**	**199**	⇓P	Pg	14 31 42.6	-2.1
RMP				AML	AML		
	comp=N,1170μm,0.7s						
RMP				AML	AML		
	comp=E,876μm,1.0s						
RMP				AML	AML		
	comp=E,876μm,1.0s						
TOLF	**Tolfa**	**1.27**	**225**	⇑P	Pg	14 31 45.3	-0.6
TOLF				AML	AML		
	comp=E,346μm,0.9s						
TOLF				AML	AML		
	comp=N,324μm,1.1s						
TOLF				AML	AML		
	comp=N,324μm,0.9s						
POFI	**Posta Fibreno**	**1.30**	**163**	⇓P	Pn	14 31 47.6	+0.9
POFI				AML	AML		
	comp=E,313μm,1.6s						
POFI				AML	AML		
	comp=E,353μm,1.6s						
POFI				AML	AML		
	comp=N,374μm,1.6s						
POFI				AML	AML		
	comp=E,313μm,0.4s						
POFI				AML	AML		
	comp=E,353μm,0.4s						
POFI				AML	AML		
	comp=N,372μm,1.6s						
GIUL	**Giuliano Di Ro**	**1.40**	**179**	⇓P	Pg	14 31 49.7	+1.3
GIUL				AML	AML		
	comp=N,326μm,1.0s						
GIUL				AML	AML		
	comp=N,326μm,1.0s						
GIUL				AML	AML		
	comp=E,366μm,0.8s						
RNI2	**Rionero Sannit**	**1.44**	**151**	⇓P	Pg	14 31 49.9	+0.8
RNI2				AML	AML		
	comp=E,430μm,0.8s						
RNI2				AML	AML		
	comp=N,378μm,1.0s						
RNI2				AML	AML		
	comp=E,442μm,0.8s						
RNI2				AML	AML		
	comp=E,430μm,1.2s						

RNI2			AML	AML		
	comp=E,442μm,1.2s					
RNI2			AML	AML		
	comp=N,380μm,1.0s					
RUFI	**Rufina**	**1.52 306**	P	Pn	14 31 48.3	-1.5
TRIV	**Trivento**	**1.55 140**	⇑P	Pg	14 31 51.2	-0.1
TRIV			AML	AML		
	comp=N,242μm,0.9s					
TRIV			AML	AML		
	comp=E,322μm,0.9s					
TRIV			AML	AML		
	comp=E,322μm,1.1s					
BRSN	**Barisano**	**1.56 328**	S	Sn	14 32 09.0	-1.9
MAON	**Monte Argentar**	**1.63 252**	⇑P	Pg	14 31 52.7	0.0
MAON			AML	AML		
	comp=N,78μm,0.6s					
MAON			AML	AML		
	comp=E,112μm,0.8s					
CASP	**Castiglione de**	**1.74 265**	⇓P	Pg	14 31 55.0	+0.1
CASP			AML	AML		
	comp=N,38μm,0.9s					
CASP			AML	AML		
	comp=E,49μm,0.5s					
PTRP	**Pietrapertosa**	**3.24 138**	P	Pn	14 32 12.3	-1.1
PTRP			AML	AML		
	comp=E,95μm,1.4s					
PTRP			AML	AML		
	comp=N,103μm,1.6s					
PTRP			AML	AML		
	comp=E,95μm,0.6s					
PTRP			AML	AML		
	comp=N,103μm,0.4s					
ABTA	**Abfaltersbach**	**3.82 353**	Pn	Pn	14 32 22.2	+0.8
	comp=N,7.7nm,0.4s,SNR=11					
FETA	**Feichten**	**4.42 337**	*e*Pn	Pn	14 32 31.5	+1.8
	comp=N,1.5nm,0.3s					
WTTA	**Wattenberg**	**4.44 346**	*e*Pn	Pn	14 32 32.2	+2.2
	comp=N,1.2nm,0.2s					
SQTA	**Sankt Quirin**	**4.49 342**	Pn	Pn	14 32 32.5	+1.9
	comp=N,4.2nm,0.3s,SNR=6.1					
WATA	**Walderalm**	**4.52 346**	*e*Pn	Pn	14 32 33.5	+2.4
	comp=N,1.5nm,0.2s					
RETA	**Reutte**	**4.84 340**	Pn	Pn	14 32 37.5	+2.1
	comp=N,4.0nm,0.5s,SNR=7.2					
DAVA	**Damuels**	**4.93 333**	*e*Pn	Pn	14 32 39.5	+2.8
	comp=N,0.9nm,0.2s					
KHC	**Kasperske Hory**	**6.17 2**	*e*PN	Pn	14 32 53.2	-0.5
KHC			*e*SN	Sn	14 34 01.4	-3.4
CLL	**Collm**	**8.35 359**	*e*Sg	Sg	14 35 45.0	-4.4
CLL			*ex*	x	14 36 05.0	

IDC 30 14:32:33.8±1.2, 19°.26N×145°.09E, h0km, mb3.8/4, mbtmp3.8/4, MS3.2/1, Error ellipse: s-maj=73.9km s-min=27.3km az=110.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.36**	**196**	P	P	14 40 13.6	+0.1
	0.8nm,0.7s,baz=19,slow=8.6,SNR=31						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**44.04**	**195**	P	P	14 40 43.3	-0.1
	0.8nm,1.0s,baz=15,slow=7.0,SNR=9.2						
	0.8nm,1.0s						
AFI	**Afiamalu**	**53.76**	**125**	LR	LR	15 00 43.6	
	comp=Z,21nm,20.4s,baz=80,slow=31						
NVAR	**Mina Array Bea**	**83.25**	**52**	P	P	14 45 04.0	+1.2
	0.5nm,0.5s,baz=262,slow=5.4,SNR=5.5						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**86.14**	**335**	P	P	14 45 16.3	-0.3
	2.1nm,1.0s,baz=45,slow=6.1,SNR=1.8						
	2.1nm,1.0s						
LPAZ	**La Paz**	**148.25**	**90**	PKPbc	PKPdf	14 52 21.1	+0.9
	0.4nm,0.5s,baz=233,slow=5.1,SNR=1.7						

PRU ***30*** *14:40:28.6±0.0, 42°.60N×14°.12E, h10km*
ROM 30 14:40:30.3±0.1, 42°.797N±0°.007×13°.205E±0°.009, h11km, ML2.9/35, 22C-18D, Error ellipse: s-maj=0.7km s-min=0.6km az=121.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.15**	**146**	P	Pg	14 40 33.9	+0.2
T1204				AML	AML		
	comp=E,8065μm,1.3s						
T1204				AML	AML		
	comp=N,6045μm,0.9s						
T1241	**Roccafluvione,**	**0.18**	**70**	⇓P	Pb	14 40 35.0	-0.6
T1241				S	Sg	14 40 37.9	+1.0
T1241				AML	AML		
	comp=N,11105μm,0.5s						
T1241				AML	AML		
	comp=N,11800μm,0.6s						
T1241				AML	AML		
	comp=E,21850μm,0.4s						
T1241				AML	AML		
	comp=N,11120μm,0.5s						
T1241				AML	AML		
	comp=E,21800μm,0.4s						
T1241				AML	AML		
	comp=E,21200μm,0.4s						
T1241				AML	AML		
	comp=E,21250μm,0.4s						
T1241				AML	AML		
	comp=N,11850μm,0.6s						
T1241				AML	AML		
	comp=N,11095μm,0.5s						
T1241				AML	AML		
	comp=N,11100μm,0.5s						
T1241				AML	AML		
	comp=N,11747μm,0.5s						
T1241				AML	AML		
	comp=E,21845μm,0.4s						
T1241				AML	AML		
	comp=E,21220μm,0.4s						
SMA1	**SAN MARTINO**	**0.19**	**150**	⇑P	Pg	14 40 34.8	+0.4
SMA1				AML	AML		
	comp=N,11475μm,0.5s						
SMA1				AML	AML		
	comp=E,7655μm,0.4s						
SMA1				AML	AML		
	comp=N,11510μm,0.5s						
SMA1				AML	AML		
	comp=E,7660μm,0.4s						
SMA1				AML	AML		
	comp=N,11470μm,0.5s						
SMA1				AML	AML		
	comp=N,11486μm,0.5s						
SMA1				AML	AML		
	comp=E,7662μm,0.4s						
FEMA	**Monte Fema**	**0.20**	**325**	⇑P	Pb	14 40 35.8	-0.4
FEMA				S	Sg	14 40 37.8	+0.1
FEMA				AML	AML		
	comp=E,13600μm,0.1s						
FEMA				AML	AML		
	comp=N,17650μm,0.4s						
FEMA				AML	AML		
	comp=E,13650μm,0.1s						
FEMA				AML	AML		
	comp=N,17700μm,0.4s						
FEMA				AML	AML		
	comp=E,13618μm,0.1s						
FEMA				AML	AML		
	comp=N,11449μm,0.1s						
T1243	**Rocca Santa Ma**	**0.20**	**119**	⇓P	Pg	14 40 35.0	+0.3
AM05	**Amandola Campo**	**0.21**	**31**	⇓P	Pg	14 40 35.4	+0.7
AM05				S	Sg	14 40 38.8	+1.0
AM05				AML	AML		
	comp=E,4340μm,0.1s						
AM05				AML	AML		
	comp=E,15900μm,0.4s						
AM05				AML	AML		
	comp=N,804μm,0.3s						
AM05				AML	AML		
	comp=N,4345μm,1.4s						
AM05				AML	AML		
	comp=N,804μm,0.3s						
AM05				AML	AML		
	comp=E,4335μm,0.1s						
AM05				AML	AML		
	comp=E,4340μm,0.1s						
AM05				AML	AML		
	comp=N,3923μm,0.2s						
AM05				AML	AML		
	comp=E,14689μm,0.2s						
AM05				AML	AML		
	comp=N,753μm,0.1s						
T1217	**Poggiodomo (PG**	**0.22**	**247**	P	Pg	14 40 35.3	+0.4
T1217				S	Sg	14 40 39.7	+1.6
T1217				AML	AML		
	comp=N,3580μm,0.3s						
T1217				AML	AML		
	comp=E,3265μm,0.4s						
T1217				AML	AML		
	comp=N,3580μm,0.3s						
T1217				AML	AML		
	comp=E,3260μm,0.4s						
T1217				AML	AML		
	comp=N,3680μm,1.2s						
T1217				AML	AML		
	comp=N,3665μm,1.2s						
T1217				AML	AML		
	comp=E,3315μm,1.1s						
T1217				AML	AML		
	comp=E,3264μm,0.4s						
T1217				AML	AML		
	comp=E,3265μm,0.4s						
T1217				AML	AML		
	comp=N,3578μm,0.3s						
T1217				AML	AML		
	comp=N,3406μm,0.3s						
T1217				AML	AML		
	comp=E,3286μm,0.4s						
LNSS	**Leonessa**	**0.23**	**212**	⇑P	Pg	14 40 35.8	+0.7
LNSS				S	Sg	14 40 40.1	+1.8
LNSS				AML	AML		
	comp=E,2925μm,0.3s						
LNSS				AML	AML		
	comp=N,8855μm,0.6s						
LNSS				AML	AML		
	comp=N,8376μm,0.2s						
LNSS				AML	AML		
	comp=E,2926μm,0.3s						
T1215	**Vallo di Nera,**	**0.25**	**271**	P	Pb	14 40 36.4	-0.5
T1215				S	Sg	14 40 39.1	+0.2
T1215				AML	AML		
	comp=E,2535μm,0.5s						
T1215				AML	AML		
	comp=N,1980μm,0.7s						
T1215				AML	AML		
	comp=E,2595μm,0.5s						
T1215				AML	AML		
	comp=N,1966μm,0.7s						
T1215				AML	AML		
	comp=E,2530μm,0.5s						
T1215				AML	AML		
	comp=N,1980μm,0.7s						
T1215				AML	AML		
	comp=N,3035μm,0.4s						
T1215				AML	AML		
	comp=N,3170μm,0.4s						
T1215				AML	AML		
	comp=E,2620μm,0.8s						
T1215				AML	AML		
	comp=E,2585μm,0.5s						
T1215				AML	AML		
	comp=E,1754μm,0.1s						
T1215				AML	AML		
	comp=E,1720μm,0.2s						
T1215				AML	AML		
	comp=N,1593μm,0.1s						
T1215				AML	AML		
	comp=N,1676μm,0.1s						
GUMA	**Gualdo di Mace**	**0.28**	**20**	⇓P	Pb	14 40 37.0	-0.4
GUMA				AML	AML		
	comp=E,25650μm,0.3s						
GUMA				AML	AML		
	comp=N,17550μm,0.3s						
GUMA				AML	AML		
	comp=E,32150μm,0.4s						
GUMA				AML	AML		
	comp=N,17550μm,0.3s						
GUMA				AML	AML		
	comp=N,18300μm,0.3s						
GUMA				AML	AML		
	comp=E,25652μm,0.3s						
GUMA				AML	AML		
	comp=E,32162μm,0.4s						
GUMA				AML	AML		
	comp=N,18293μm,0.3s						
GUMA				AML	AML		
	comp=N,17558μm,0.3s						
RM33	**Pellescritta (**	**0.29**	**179**	P	Pg	14 40 36.8	+0.7
RM33				S	Sb	14 40 41.6	-0.8
RM33				AML	AML		
	comp=N,4360μm,1.4s						
RM33				AML	AML		
	comp=E,5660μm,0.9s						
RM33				AML	AML		
	comp=E,5685μm,0.9s						
RM33				AML	AML		
	comp=N,4090μm,1.4s						
RM33				AML	AML		
	comp=E,5057μm,0.2s						
RM33				AML	AML		
	comp=N,3765μm,0.3s						
RM33				AML	AML		
	comp=N,3847μm,0.3s						
RM33				AML	AML		
	comp=E,5110μm,0.2s						
CAMP	**Campotosto**	**0.30**	**150**	⇑P	Pg	14 40 36.7	+0.3
CAMP				S	Sg	14 40 41.5	+1.0
CAMP				AML	AML		
	comp=E,1280μm,1.6s						
CAMP				AML	AML		
	comp=E,1540μm,0.3s						
CAMP				AML	AML		
	comp=N,1460μm,1.5s						
CAMP				AML	AML		
	comp=N,1341μm,0.4s						
CAMP				AML	AML		
	comp=E,1212μm,0.4s						
TERO	**Teramo**	**0.34**	**120**	⇑P	Pg	14 40 37.2	+0.1
TERO				S	Sg	14 40 42.4	+0.7
TERO				AML	AML		
	comp=N,2830μm,1.6s						
TERO				AML	AML		
	comp=E,3280μm,0.5s						
TERO				AML	AML		
	comp=N,2825μm,1.6s						
TERO				AML	AML		
	comp=E,3450μm,0.5s						
TERO				AML	AML		
	comp=N,2925μm,0.5s						
TERO				AML	AML		
	comp=E,3285μm,0.5s						
TERO				AML	AML		
	comp=E,3453μm,0.5s						
TERO				AML	AML		
	comp=N,2817μm,0.5s						
TERO				AML	AML		
	comp=E,3285μm,0.5s						
TERO				AML	AML		
	comp=N,2926μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.36**	**169**	⇑P	Pg	14 40 38.0	+0.5
T1247				AML	AML		
	comp=E,3290μm,0.9s						
T1247				AML	AML		
	comp=N,3430μm,0.5s						
T1247				AML	AML		
	comp=N,3430μm,0.5s						
T1247				AML	AML		
	comp=E,3291μm,0.9s						
T1211	**Morro Reatino**	**0.37**	**225**	P	Pg	14 40 38.2	+0.5
T1211				AML	AML		
	comp=N,3540μm,0.5s						
T1211				AML	AML		
	comp=N,3550μm,0.5s						
T1211				AML	AML		
	comp=E,1695μm,0.6s						
T1211				AML	AML		
	comp=E,1735μm,0.6s						
T1211				AML	AML		
	comp=N,3545μm,0.5s						
T1211				AML	AML		
	comp=N,3535μm,0.5s						
T1211				AML	AML		
	comp=N,3323μm,0.3s						
T1211				AML	AML		
	comp=N,3337μm,0.3s						
T1211				AML	AML		
	comp=E,1494μm,0.2s						
T1211				AML	AML		
	comp=E,1470μm,0.1s						
OFFI	**Offida**	**0.38**	**68**	⇓P	Pb	14 40 39.1	0.0
OFFI				AML	AML		
	comp=N,5610μm,1.3s						
OFFI				AML	AML		
	comp=E,5550μm,0.6s						
OFFI				AML	AML		
	comp=E,5550μm,0.6s						
OFFI				AML	AML		
	comp=N,5405μm,0.5s						
ARRO	**Arrone**	**0.39**	**236**	⇓P	Pb	14 40 38.8	-0.5
ARRO				AML	AML		
	comp=E,1054μm,0.6s						
ARRO				AML	AML		
	comp=N,1158μm,1.0s						
ARRO				AML	AML		
	comp=N,1155μm,1.0s						
ARRO				AML	AML		
	comp=N,1154μm,1.0s						
ARRO				AML	AML		
	comp=E,1058μm,0.6s						
ARRO				AML	AML		
	comp=N,1081μm,0.2s						
ARRO				AML	AML		
	comp=E,1042μm,0.2s						
SEF1	**Sefro**	**0.40**	**332**	⇑P	Pb	14 40 38.9	-0.5
SEF1				AML	AML		
	comp=E,4757μm,0.2s						
SEF1				AML	AML		
	comp=N,3675μm,0.2s						
GIGS	**Gran Sasso**	**0.44**	**142**	⇑P	Pg	14 40 39.2	+0.3
GIGS				AML	AML		
	comp=N,367μm,0.5s						
GIGS				AML	AML		
	comp=N,366μm,0.5s						
GIGS				AML	AML		
	comp=E,345μm,1.2s						
GIGS				AML	AML		
	comp=E,297μm,0.4s						
GIGS				AML	AML		
	comp=N,317μm,0.2s						
ASSB	**Assisi San Ben**	**0.47**	**302**	⇑P	Pb	14 40 40.1	-0.6
ASSB				AML	AML		
	comp=N,1970μm,1.5s						
ASSB				AML	AML		
	comp=E,2560μm,1.1s						
ASSB				AML	AML		
	comp=E,2543μm,0.2s						
ASSB				AML	AML		
	comp=N,1883μm,0.2s						
CESX	**Cesi**	**0.50**	**248**	P	Pg	14 40 39.9	-0.1
CESX				AML	AML		
	comp=E,1390μm,0.6s						
CESX				AML	AML		
	comp=N,1505μm,1.1s						
CESX				AML	AML		
	comp=E,1389μm,0.6s						
CESX				AML	AML		
	comp=N,1505μm,0.4s						
SNTG	**Esanatoglia**	**0.50**	**337**	⇑P	Pg	14 40 40.5	+0.5
SNTG				S	Sb	14 40 48.0	-0.4
SNTG				AML	AML		
	comp=E,1230μm,1.5s						
SNTG				AML	AML		
	comp=N,1470μm,0.5s						
SNTG				AML	AML		
	comp=N,1601μm,0.8s						
SNTG				AML	AML		
	comp=E,1230μm,1.5s						
SNTG				AML	AML		
	comp=N,1474μm,0.5s						
SNTG				AML	AML		
	comp=E,1090μm,0.1s						
SNTG				AML	AML		
	comp=N,1351μm,0.2s						
SNTG				AML	AML		
	comp=E,1094μm,0.1s						
SNTG				AML	AML		
	comp=E,1089μm,0.1s						
SNTG				AML	AML		
	comp=N,1484μm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**89**	⇓P	Pb	14 40 42.2	+0.7
TRTR				AML	AML		
	comp=N,3240μm,1.3s						
TRTR				AML	AML		
	comp=E,3255μm,0.5s						
TRTR				AML	AML		
	comp=N,2983μm,0.4s						
TRTR				AML	AML		
	comp=E,3253μm,0.5s						
FIAM	**Fiamignano**	**0.53**	**187**	⇑P	Pg	14 40 40.9	+0.2
FIAM				S	Sb	14 40 50.0	+0.5
FIAM				AML	AML		
	comp=E,1705μm,0.6s						
FIAM				AML	AML		
	comp=N,1051μm,0.8s						
FIAM				AML	AML		
	comp=E,1497μm,0.3s						
FIAM				AML	AML		
	comp=N,937μm,0.3s						
FOSV	**Fossato di Vic**	**0.59**	**327**	⇑P	Pb	14 40 42.3	-0.4
FOSV				S	Sn	14 40 53.0	-1.5
FOSV				AML	AML		
	comp=N,2215μm,0.3s						
FOSV				AML	AML		
	comp=E,1235μm,0.6s						
FOSV				AML	AML		
	comp=E,1186μm,0.3s						
FOSV				AML	AML		
	comp=N,2216μm,0.3s						
FAGN	**Fagnano**	**0.60**	**152**	⇓P	Pb	14 40 42.5	-0.4
FAGN				AML	AML		
	comp=N,1295μm,0.4s						
FAGN				AML	AML		
	comp=E,2030μm,0.7s						
FAGN				AML	AML		
	comp=E,2026μm,0.7s						
FAGN				AML	AML		
	comp=N,1299μm,0.4s						
VCEL	**Villa Celiera**	**0.62**	**130**	⇓P	Pg	14 40 42.6	+0.3
VCEL				AML	AML		
	comp=N,1285μm,0.5s						
VCEL				AML	AML		
	comp=E,1075μm,1.1s						
VCEL				AML	AML		
	comp=N,1285μm,0.5s						
VCEL				AML	AML		
	comp=E,1074μm,0.6s						
PP3	**Marolino**	**0.65**	**27**	⇓P	Pb	14 40 44.6	+0.9
PP3				AML	AML		
	comp=E,4130μm,0.6s						
PP3				AML	AML		
	comp=N,6865μm,1.2s						
PP3				AML	AML		
	comp=E,4130μm,0.6s						
PP3				AML	AML		
	comp=N,6730μm,1.2s						
PP3				AML	AML		
	comp=E,4390μm,0.6s						
PP3				AML	AML		
	comp=N,6870μm,1.2s						
PP3				AML	AML		
	comp=E,4391μm,0.6s						
PP3				AML	AML		
	comp=E,4056μm,0.4s						
PP3				AML	AML		
	comp=N,5926μm,0.4s						
PP3				AML	AML		
	comp=N,5992μm,0.4s						
MURB	**Monte Urbino**	**0.68**	**313**	⇓P	Pb	14 40 44.3	0.0
MURB				AML	AML		
	comp=N,3965μm,0.3s						
MURB				AML	AML		
	comp=E,4565μm,0.3s						
MURB				AML	AML		
	comp=N,3970μm,0.3s						
MURB				AML	AML		
	comp=N,4175μm,0.3s						
MURB				AML	AML		
	comp=E,3935μm,0.3s						
MURB				AML	AML		
	comp=N,3969μm,0.3s						
MURB				AML	AML		
	comp=E,3938μm,0.3s						
MURB				AML	AML		
	comp=E,4564μm,0.3s						
MURB				AML	AML		
	comp=N,4178μm,0.3s						

T0110	Collepietro	0.71 143	⇑P	Pg	14 40 43.8	-0.2
T0110			AML	AML		
	comp=E,1205μm,0.4s					
T0110			AML	AML		
	comp=N,1414μm,0.6s					
T0110			AML	AML		
	comp=N,1399μm,0.5s					
T0110			AML	AML		
	comp=E,1205μm,0.4s					
ARVD	Arcevia	0.73 345	⇑P	Pb	14 40 44.7	-0.3
ARVD			S	Sb	14 40 56.0	+1.0
ARVD			AML	AML		
	comp=E,512μm,1.0s					
ARVD			AML	AML		
	comp=N,494μm,0.7s					
ARVD			AML	AML		
	comp=N,415μm,0.2s					
ARVD			AML	AML		
	comp=E,441μm,0.3s					
ATFO	Monte Foce - G	0.73 321	⇑P	Pg	14 40 44.8	+0.3
ATFO			AML	AML		
	comp=E,680μm,0.4s					
ATFO			AML	AML		
	comp=E,681μm,0.4s					
ATFO			AML	AML		
	comp=N,743μm,0.9s					
ATFO			AML	AML		
	comp=N,659μm,0.4s					
ATFO			AML	AML		
	comp=E,681μm,0.4s					
ATTE	AVT- Monte Tez	0.74 303	⇓P	Pn	14 40 47.5	+0.7
ATTE			AML	AML		
	comp=N,545μm,0.3s					
ATTE			AML	AML		
	comp=E,450μm,0.6s					
ATTE			AML	AML		
	comp=N,545μm,0.3s					
ATTE			AML	AML		
	comp=E,451μm,0.6s					
SRES	S.Oreste - Sor	0.76 223	P	Pg	14 40 45.2	+0.2
SRES			S	Sn	14 40 59.0	+0.5
SRES			AML	AML		
	comp=E,530μm,0.7s					
SRES			AML	AML		
	comp=N,384μm,0.4s					
SRES			AML	AML		
	comp=E,416μm,0.5s					
SRES			AML	AML		
	comp=N,383μm,0.4s					
PTQR	Pietraquaria	0.79 169	⇓P	Pn	14 40 47.0	-0.5
PTQR			AML	AML		
	comp=N,208μm,0.4s					
PTQR			AML	AML		
	comp=E,270μm,0.8s					
PTQR			AML	AML		
	comp=N,207μm,0.4s					
PTQR			AML	AML		
	comp=E,270μm,0.8s					
PTQR			AML	AML		
	comp=N,207μm,0.4s					
FRON	Frontone	0.80 334	⇑P	Pg	14 40 45.8	+0.1
FRON			AML	AML		
	comp=E,589μm,0.9s					
FRON			AML	AML		
	comp=N,1034μm,0.3s					
FRON			AML	AML		
	comp=N,1034μm,0.3s					
FRON			AML	AML		
	comp=E,580μm,0.2s					
MGAB	Montegabbione	0.81 279	⇓P	Pn	14 40 49.0	+1.3
MGAB			AML	AML		
	comp=E,1106μm,0.5s					
MGAB			AML	AML		
	comp=N,1550μm,1.2s					
MGAB			AML	AML		
	comp=N,1760μm,0.3s					
MGAB			AML	AML		
	comp=E,1040μm,1.1s					
MGAB			AML	AML		
	comp=N,1756μm,0.3s					
MGAB			AML	AML		
	comp=N,1510μm,0.3s					
MGAB			AML	AML		
	comp=E,969μm,0.6s					
MGAB			AML	AML		
	comp=E,1105μm,0.5s					
ATVO	AVT- Monte Val	0.83 315	⇑P	Pg	14 40 46.4	+0.1
ATVO			AML	AML		
	comp=N,531μm,0.4s					
ATVO			AML	AML		
	comp=E,530μm,0.3s					
ATVO			AML	AML		
	comp=N,532μm,0.4s					
ATVO			AML	AML		
	comp=E,531μm,0.3s					
ATVO			AML	AML		
	comp=N,531μm,0.4s					
CERT	Cerreto	0.86 191	⇓P	Pn	14 40 48.3	-0.2
CERT			AML	AML		
	comp=N,766μm,1.1s					
CERT			AML	AML		
	comp=E,1335μm,0.5s					
CERT			AML	AML		
	comp=E,1336μm,0.5s					
CERT			AML	AML		
	comp=N,739μm,0.4s					
ATPI	Pietralunga -	0.88 318	⇑P	Pg	14 40 47.4	+0.1
ATPI			AML	AML		
	comp=N,396μm,1.5s					
ATPI			AML	AML		
	comp=E,494μm,0.5s					
ATPI			AML	AML		
	comp=N,376μm,0.5s					
ATPI			AML	AML		
	comp=E,494μm,0.5s					
MPAG	Monte Paganucc	0.89 339	⇓P	Pb	14 40 47.9	0.0
MPAG			AML	AML		
	comp=E,508μm,0.7s					
MPAG			AML	AML		
	comp=N,498μm,0.7s					
MPAG			AML	AML		
	comp=E,509μm,0.7s					
MPAG			AML	AML		
	comp=E,1311μm,0.6s					
MPAG			AML	AML		
	comp=E,509μm,0.7s					
MPAG			AML	AML		
	comp=N,1317μm,0.7s					
MPAG			AML	AML		
	comp=N,468μm,0.5s					
FSSB	Fossombrone	0.95 341	⇓P	Pb	14 40 48.8	0.0
FSSB			AML	AML		
	comp=N,2610μm,0.3s					
FSSB			AML	AML		
	comp=E,1875μm,0.4s					
FSSB			AML	AML		
	comp=N,2612μm,0.3s					
FSSB			AML	AML		
	comp=E,1876μm,0.4s					
SACS	San Casciano d	0.95 274	⇑P	Pn	14 40 50.8	+1.0
SACS			AML	AML		
	comp=E,392μm,1.2s					
SACS			AML	AML		
	comp=N,480μm,0.9s					
SACS			AML	AML		
	comp=E,394μm,1.6s					
SACS			AML	AML		
	comp=N,516μm,0.9s					
SACS			AML	AML		
	comp=E,391μm,1.2s					
SACS			AML	AML		
	comp=E,363μm,0.9s					
SACS			AML	AML		
	comp=N,461μm,0.6s					
SACS			AML	AML		
	comp=N,494μm,0.6s					
VVLD	Villa Vallelon	0.97 161	⇑P	Pg	14 40 48.7	-0.4
VVLD			AML	AML		
	comp=E,274μm,0.9s					
VVLD			AML	AML		
	comp=N,248μm,0.9s					
VVLD			AML	AML		
	comp=N,247μm,0.9s					
VVLD			AML	AML		
	comp=E,274μm,0.9s					
BADI	Badiali	1.00 316	⇓P	Pb	14 40 49.9	+0.2
CAFI	Castiglion Fio	1.05 301	⇑P	Pn	14 40 51.1	+0.1
CAFI			AML	AML		
	comp=E,374μm,0.4s					
CAFI			AML	AML		
	comp=N,256μm,0.4s					
CAFI			AML	AML		
	comp=N,243μm,0.4s					
CAFI			AML	AML		
	comp=N,257μm,0.4s					
CAFI			AML	AML		
	comp=E,374μm,0.4s					
CAFI			AML	AML		
	comp=E,376μm,0.4s					
LAV9	Lanuvio	1.18 199	S	Sb	14 41 06.0	-2.0
GIUL	Giuliano Di Ro	1.24 178	P	Pg	14 40 54.8	+0.7
GIUL			AML	AML		
	comp=E,177μm,0.5s					
GIUL			AML	AML		
	comp=N,316μm,0.7s					
GIUL			AML	AML		
	comp=N,316μm,0.7s					
GIUL			AML	AML		
	comp=E,177μm,0.5s					
RNI2	Rionero Sannit	1.30 147	⇑P	Pn	14 40 53.8	-0.7
RNI2			AML	AML		
	comp=E,264μm,0.7s					
RNI2			AML	AML		
	comp=N,290μm,1.2s					
RNI2			AML	AML		
	comp=E,272μm,0.7s					
RNI2			AML	AML		
	comp=N,288μm,1.3s					
RNI2			AML	AML		
	comp=N,254μm,0.9s					
RNI2			AML	AML		
	comp=N,261μm,0.9s					
RNI2			AML	AML		
	comp=E,264μm,0.7s					
RNI2			AML	AML		
	comp=E,272μm,0.7s					
CMPR	Campora	2.93 147	S	Sb	14 42 01.0	+2.4
ABTA	Abfaltersbach	3.98 353	*e*Pn	Pn	14 41 33.4	+2.1
	comp=E,4.8nm,0.4s					
FETA	Feichten	4.58 338	*e*Pn	Pn	14 41 42.7	+3.1
	comp=E,0.4nm,0.2s					
WTTA	Wattenberg	4.60 347	*e*Pn	Pn	14 41 43.9	+4.0
	comp=E,0.7nm,0.2s					
SQTA	Sankt Quirin	4.64 343	*e*Pn	Pn	14 41 44.3	+3.9
KHC	Kasperske Hory	6.34 2	*e*SN	Sn	14 43 15.4	-0.7

LDG ***30*** *14:45:22.9±0.1, 42°.98N×13°.18E, h8km, MI3.2/22, Error ellipse: s-maj=3.7km s-min=2.4km az=45.0*
PRU ***30*** *14:45:22.9±0.0, 43°.00N×12°.89E, h0km*
ROM ***30*** *14:45:22.5±0.0, 42°.901N±0°.001×13°.164E±0°.003, h9km, ML3.6/88, Error ellipse: s-maj=0.2km s-min=0.1km az=79.0*
IDC ***30*** *14:45:22.7±1.2, 43°.02N×13°.08E, h0km, mb3.6/4, mbtmp3.5/7, ML3.5/3, MS2.9/9, Error ellipse: s-maj=34.3km s-min=13.9km az=98.0*
PDG ***30*** *14:45:23.5±0.8, 42°.92N×13°.16E, h9km±1km, ML3.8/10, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
ISC 30 14:45:22.9±0.7, 42°.90N±0°.01×13°.13E±0°.01, h10km±4km, n249, σ2s08/310, mb3.7/3, 14C-15D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.06	138	⇑P	Pg	14 45 24.4	-0.9
T1245				S	Sg	14 45 25.6	-1.4
T1216	Preci, Frazion	0.08	261	P	Pg	14 45 25.6	+0.2
T1216				S	Sg	14 45 27.8	+0.7
FEMA	Monte Fema	0.08	315	P	Pg	14 45 25.4	-0.1
FEMA				S	Sg	14 45 27.6	+0.2
T1256	Bolognola (MC)	0.12	34	⇑P	Pg	14 45 25.4	-0.6
T1256				S	Sg	14 45 27.7	-0.6
FDMO	Fiordimonte	0.14	347	P	Pg	14 45 26.1	-0.1
FDMO				S	Sg	14 45 29.0	+0.6
MMO1	Montemonaco	0.14	91	⇑P	Pg	14 45 25.6	-0.7
MMO1				S	Sg	14 45 27.7	-0.9
T1214	Arquata del Tr	0.15	158	P	Pg	14 45 26.5	+0.1
T1214				S	Sg	14 45 29.0	+0.1
T1212	Cascia, Frazio	0.16	203	P	Pg	14 45 26.9	+0.3
T1212				S	Sg	14 45 30.2	+1.1
T1219	Muccia, Frazio	0.18	329	⇓P	Pg	14 45 27.0	+0.2
T1219				S	Sg	14 45 30.6	+1.1
T1213	Norcia, Frazio	0.18	181	P	Pg	14 45 26.8	0.0
T1213				S	Sg	14 45 30.4	+0.9
AM05	Amandola Campo	0.18	65	P	Pg	14 45 26.3	-0.5
AM05				S	Sg	14 45 29.3	-0.2
T1244	Arquata del Tr	0.19	140	P	Pg	14 45 26.9	-0.1
T1244				S	Sg	14 45 30.2	+0.4
CSP1	Cessapalombo	0.20	16	⇑P	Pg	14 45 26.9	-0.2
CSP1				S	Sg	14 45 30.6	+0.5
T1220	Camerino, Fraz	0.21	352	P	Pg	14 45 27.5	+0.1
T1220				S	Sg	14 45 31.7	+1.3
T1215	Vallo di Nera,	0.22	242	⇓P	Pg	14 45 28.1	+0.6
T1215				S	Sg	14 45 32.2	+1.6
GUMA	Gualdo di Mace	0.22	43	P	Pg	14 45 27.4	-0.1
GUMA				S	Sg	14 45 31.4	+0.8
T1241	Roccafluvione,	0.23	102	P	Pg	14 45 27.6	-0.1
T1241				S	Sg	14 45 31.1	+0.3
T1218	Civita (PG)	0.23	183	P	Pg	14 45 28.0	+0.2
T1218				S	Sg	14 45 31.9	+0.8
T1217	Poggiodomo (PG	0.24	218	P	Pg	14 45 28.4	+0.5
T1217				S	Sg	14 45 33.0	+1.7
T1201	Domo (RI)	0.26	160	P	Pg	14 45 28.5	+0.3
T1201				S	Sg	14 45 32.9	+1.0
T1204	Amatrice, Fraz	0.27	149	P	Pg	14 45 28.3	-0.1
T1204				S	Sg	14 45 32.8	+0.8
SEF1	Sefro	0.28	331	P	Pg	14 45 28.8	+0.2
SEF1				S	Sb	14 45 33.9	-0.9
MDAR	Monte D'Aria	0.29	2	P	Pg	14 45 28.7	-0.1
MDAR				S	Sg	14 45 33.7	+1.0
PIO1	Pioraco	0.29	339	P	Pg	14 45 29.0	+0.1
PIO1				S	Sb	14 45 34.1	-1.2
LNSS	Leonessa	0.31	193	P	Pg	14 45 29.7	+0.5
LNSS				S	Sg	14 45 34.5	+1.2
SMA1	SAN MARTINO	0.31	151	P	Pg	14 45 29.4	+0.1
T1243	Rocca Santa Ma	0.31	131	P	Pg	14 45 29.1	-0.1
T1243				S	Sg	14 45 33.5	+0.1
FIU1	Fiuminata	0.32	333	P	Pg	14 45 29.5	+0.1
FIU1				S	Sb	14 45 35.4	-0.6
SSM1	San Severino M	0.33	6	P	Pg	14 45 29.5	0.0
SSM1				S	Sb	14 45 34.9	-1.3
GAG1	Gagliole	0.34	352	P	Pg	14 45 29.7	0.0
GAG1				S	Sb	14 45 35.8	-0.8
MNTP	Montappone	0.34	47	P	Pg	14 45 29.9	+0.2
MNTP				AML	AML		
	comp=N,31750μm,1.5s						
MNTP				AML	AML		
	comp=E,33750μm,0.4s						
ASSB	Assisi San Ben	0.37	292	P	Pg	14 45 30.7	+0.4
ASSB				S	Sb	14 45 37.4	-0.2
ASSB				AML	AML		
	comp=E,9455μm,0.5s						
ASSB				AML	AML		
	comp=N,10450μm,0.5s						
SNTG	Esanatoglia	0.38	338	P	Pg	14 45 30.5	+0.1
SNTG				S	Sb	14 45 37.0	-0.7
SNTG				AML	AML		
	comp=N,10750μm,0.6s						
SNTG				AML	AML		
	comp=E,12900μm,0.6s						
SNTG				AML	AML		
	comp=E,12550μm,0.6s						
SNTG				AML	AML		
	comp=N,10035μm,0.6s						
RM33	Pellescritta (	0.40	171	P	Pg	14 45 30.7	-0.1
RM33				S	Sg	14 45 36.9	+0.8
OFFI	Offida	0.41	85	P	Pg	14 45 31.4	+0.4
T1246	Crognaleto (TE	0.42	140	P	Pg	14 45 30.6	-0.5
T1246				S	Sg	14 45 36.8	+0.2
CAMP	Campotosto	0.42	151	P	Pg	14 45 30.7	-0.5
CAMP				S	Sg	14 45 37.3	+0.5
ARRO	Arrone	0.42	220	P	Pg	14 45 31.8	+0.6
ARRO				S	Sb	14 45 38.6	-0.3
ARRO				AML	AML		
	comp=E,9245μm,1.2s						
ARRO				AML	AML		
	comp=E,9270μm,1.2s						
ARRO				AML	AML		
	comp=E,9235μm,1.2s						
ARRO				AML	AML		
	comp=N,8290μm,1.2s						
T1211	Morro Reatino	0.42	209	P	Pg	14 45 31.2	-0.1
T1211				S	Sb	14 45 38.4	-0.6
T1211				AML	AML		
	comp=E,12390μm,1.5s						
T1211				AML	AML		
	comp=N,21500μm,1.6s						
T1211				AML	AML		
	comp=E,13020μm,1.5s						
T1211				AML	AML		
	comp=E,12415μm,1.5s						
T1211				AML	AML		
	comp=N,21500μm,1.6s						
T1211				AML	AML		
	comp=E,12980μm,1.5s						
T1211				AML	AML		
	comp=N,21750μm,1.6s						
T1211				AML	AML		
	comp=E,12940μm,1.5s						
T1211				AML	AML		
	comp=N,21700μm,1.6s						
T1211				AML	AML		
	comp=E,12420μm,1.5s						
T1211				AML	AML		
	comp=E,12955μm,1.5s						
T1211				AML	AML		
	comp=N,21800μm,1.6s						
EL6	Elcito	0.43	357	P	Pg	14 45 31.4	0.0
EL6				S	Sb	14 45 38.6	-0.6
EL6				AML	AML		
	comp=E,28650μm,0.3s						
EL6				AML	AML		
	comp=N,29350μm,0.4s						
TRE1	Treia	0.43	18	P	Pb	14 45 31.9	-0.7
TRE1				AML	AML		
	comp=N,24350μm,0.3s						
TRE1				AML	AML		
	comp=E,30100μm,1.5s						
TERO	Teramo	0.45	129	P	Pg	14 45 31.3	-0.4
TERO				S	Sg	14 45 37.7	+0.1
TERO				AML	AML		
	comp=N,27200μm,0.5s						
TERO				AML	AML		
	comp=E,29200μm,0.4s						
TERO				AML	AML		
	comp=N,28400μm,0.5s						
TERO				AML	AML		
	comp=E,27850μm,0.4s						
TERO				AML	AML		
	comp=N,27150μm,0.5s						
ATCC	AVT- Casa Cast	0.46	308	P	Pg	14 45 32.2	+0.3
ATCC				S	Sb	14 45 40.0	0.0
FOSV	Fossato di Vic	0.48	325	⇓P	Pg	14 45 32.4	+0.2
FOSV				S	Sb	14 45 40.5	0.0
FOSV				AML	AML		
	comp=E,14600μm,0.3s						
FOSV				AML	AML		
	comp=N,20700μm,0.3s						
T1247	Pizzolo (AQ)	0.48	165	P	Pg	14 45 31.8	-0.5
T1247				S	Sg	14 45 39.6	+1.0
T1247				AML	AML		
	comp=E,26250μm,1.6s						
T1247				AML	AML		
	comp=N,22550μm,0.6s						
CESX	Cesi	0.50	234	P	Pg	14 45 32.9	+0.2
CESX				S	Sg	14 45 40.3	+1.0
CESX				AML	AML		
	comp=N,9435μm,1.4s						
CESX				AML	AML		
	comp=E,11750μm,0.5s						
CADA	Capodarco di F	0.55	58	P	Pb	14 45 34.8	+0.2
MMUR	Monte Murano	0.55	350	⇓P	Pg	14 45 33.6	0.0
MMUR				AML	AML		
	comp=E,19350μm,0.2s						
MMUR				AML	AML		
	comp=N,11350μm,0.5s						
MMUR				AML	AML		
	comp=E,19350μm,0.2s						
MMUR				AML	AML		
	comp=N,11350μm,0.5s						
GIGS	Gran Sasso	0.56	144	P	Pg	14 45 33.2	-0.5
GIGS				S	Sg	14 45 41.2	+0.1
GIGS				AML	AML		
	comp=E,2910μm,0.6s						
GIGS				AML	AML		
	comp=N,2870μm,0.7s						
CIMA	Civitanova Mar	0.56	44	P	Pg	14 45 34.2	+0.3
MURB	Monte Urbino	0.57	309	⇓P	Pg	14 45 34.4	+0.3
MURB				S	Sb	14 45 43.1	-0.2
MURB				AML	AML		
	comp=E,11700μm,1.6s						
MURB				AML	AML		
	comp=E,10185μm,1.6s						
MURB				AML	AML		
	comp=N,15150μm,0.2s						
MURB				AML	AML		
	comp=N,15300μm,0.3s						
AQU	L'Aquila	0.58	160	P	Pg	14 45 33.7	-0.6
AQU				AML	AML		
	comp=E,13400μm,1.6s						
AQU				AML	AML		
	comp=N,10900μm,1.2s						
AQU				AML	AML		
	comp=N,10500μm,1.2s						
AQU				AML	AML		
	comp=E,13200μm,1.6s						
TRTR	Tortoreto Alta	0.58	99	P	Pb	14 45 34.9	-0.3
TRTR				AML	AML		
	comp=N,31400μm,1.0s						
TRTR				AML	AML		
	comp=E,28250μm,1.1s						
PP3	Marolino	0.59	36	P	Pb	14 45 34.8	-0.5
PP3				AML	AML		
	comp=E,16450μm,0.4s						
PP3				AML	AML		
	comp=E,16550μm,0.4s						
PP3				AML	AML		
	comp=N,16950μm,0.3s						
PP3				AML	AML		
	comp=N,16800μm,0.3s						
ARVD	Arcevia	0.61	347	P	Pg	14 45 34.6	-0.2
ARVD				S	Sb	14 45 44.3	-0.1
ARVD				AML	AML		
	comp=N,3085μm,1.0s						
ARVD				AML	AML		
	comp=E,6285μm,0.3s						
ATFO	Monte Foce - G	0.62	319	⇓P	Pg	14 45 35.1	+0.1
ATFO				AML	AML		
	comp=E,5085μm,1.1s						
ATFO				AML	AML		
	comp=N,4320μm,0.8s						
FIAM	Fiamignano	0.64	181	P	Pg	14 45 34.7	-0.6
FIAM				AML	AML		
	comp=E,9660μm,1.2s						
FIAM				AML	AML		
	comp=N,8995μm,0.8s						
ATTE	AVT- Monte Tez	0.64	298	P	Pg	14 45 35.5	+0.1
ATTE				AML	AML		
	comp=N,2165μm,1.2s						
ATTE				AML	AML		
	comp=E,2715μm,0.6s						
FRON	Frontone	0.68	334	⇓P	Pg	14 45 35.9	-0.2
FRON				AML	AML		
	comp=E,3820μm,0.3s						
FRON				AML	AML		
	comp=N,6745μm,0.5s						
ATVO	AVT- Monte Val	0.71	312	⇓P	Pg	14 45 36.7	-0.1
ATVO				AML	AML		
	comp=E,2995μm,1.3s						
ATVO				AML	AML		
	comp=N,2875μm,0.7s						
FAGN	Fagnano	0.72	152	P	Pg	14 45 36.0	-0.9
FAGN				AML	AML		
	comp=N,9855μm,0.4s						
FAGN				AML	AML		
	comp=E,14950μm,0.4s						
VCEL	Villa Celiera	0.73	134	P	Pg	14 45 36.5	-0.5
VCEL				AML	AML		
	comp=E,8055μm,1.1s						
VCEL				AML	AML		
	comp=N,14100μm,1.3s						
AOI	Ancona	0.73	28	P	Pg	14 45 37.0	-0.1
AOI				AML	AML		
	comp=E,4340μm,0.3s						
AOI				AML	AML		
	comp=N,3870μm,1.2s						

MGAB	**Montegabbione**	**0.75 271**	⇓P	**Pg**	**14 45 37.6 +0.2**	
MGAB			AML	AML		
	comp=N,7975μm,0.3s					
MGAB			AML	AML		
	comp=N,7850μm,0.3s					
MGAB			AML	AML		
	comp=E,3895μm,0.7s					
MGAB			AML	AML		
	comp=E,4265μm,0.8s					
ATPI	**Pietralunga -**	**0.76 316**	⇓P	**Pg**	**14 45 37.7 0.0**	
ATPI			AML	AML		
	comp=E,2760μm,0.7s					
ATPI			AML	AML		
	comp=N,2075μm,1.1s					
ATMI	**Monte Miggiano**	**0.77 305**	P	**Pb**	**14 45 38.1 -0.3**	
ATMI			AML	AML		
	comp=N,6155μm,0.4s					
ATMI			AML	AML		
	comp=E,5460μm,0.5s					
PIEI	**Pieia**	**0.77 326**	⇓P	**Pg**	**14 45 37.4 -0.4**	
PIEI			AML	AML		
	comp=N,2195μm,0.9s					
PIEI			AML	AML		
	comp=E,2815μm,0.3s					
MPAG	**Monte Paganucc**	**0.78 340**	P	**Pg**	**14 45 37.7 -0.3**	
MPAG			AML	AML		
	comp=E,4295μm,0.4s					
MPAG			AML	AML		
	comp=N,4530μm,1.4s					
MPAG			AML	AML		
	comp=E,3855μm,0.4s					
MPAG			AML	AML		
	comp=N,4425μm,1.5s					
SRES	**S.Oreste - Sor**	**0.81 215**	P	**Pg**	**14 45 38.4 -0.2**	
SRES			AML	AML		
	comp=N,2920μm,0.4s					
SRES			AML	AML		
	comp=E,2105μm,1.6s					
T0110	**Collepietro**	**0.83 144**	P	**Pg**	**14 45 37.7 -1.2**	
FSSB	**Fossombrone**	**0.83 342**	P	**Pg**	**14 45 38.8 -0.2**	
FSSB			AML	AML		
	comp=E,8930μm,0.4s					
FSSB			AML	AML		
	comp=N,12700μm,0.4s					
SACS	**San Casciano d**	**0.90 267**	P	**Pg**	**14 45 40.4 +0.1**	
SACS			AML	AML		
	comp=N,2430μm,0.8s					
SACS			AML	AML		
	comp=E,2435μm,1.0s					
SACS			AML	AML		
	comp=N,2430μm,0.7s					
SACS			AML	AML		
	comp=E,2445μm,1.0s					
PE3	**Peglio**	**0.92 330**	P	**Pg**	**14 45 40.4 -0.2**	
MTCE	**Montecelio**	**0.93 198**	P	**Pg**	**14 45 39.8 -1.0**	
MTCE			AML	AML		
	comp=N,3010μm,1.0s					
MTCE			AML	AML		
	comp=E,4080μm,0.5s					
CAFI	**Castiglion Fio**	**0.95 297**	⇓P	**Pg**	**14 45 41.1 -0.2**	
CAFI			AML	AML		
	comp=N,1705μm,0.8s					
CAFI			AML	AML		
	comp=E,1590μm,0.8s					
CAFI			AML	AML		
	comp=N,1645μm,0.8s					
CAFI			AML	AML		
	comp=E,1645μm,0.8s					
CERT	**Cerreto**	**0.96 187**	P	**Pg**	**14 45 40.7 -0.7**	
CERT			AML	AML		
	comp=E,6490μm,0.9s					
CERT			AML	AML		
	comp=N,2920μm,1.2s					
SSP9	**Sansepolcro**	**0.99 313**	P	**Pg**	**14 45 42.0 0.0**	
SSP9			AML	AML		
	comp=E,3330μm,1.6s					
SSP9			AML	AML		
	comp=N,3104μm,1.4s					
INTR	**Introdacqua**	**1.06 147**	AML	AML		
	comp=E,4μm,1.0s					
INTR			AML	AML		
	comp=N,4μm,1.2s					
INTR			AML	AML		
	comp=N,6095μm,1.2s					
INTR			AML	AML		
	comp=E,4010μm,1.0s					
MCIV	**Monte Civitell**	**1.08 264**	P	**Pg**	**14 45 43.2 -0.4**	
MCIV			AML	AML		
	comp=N,1195μm,1.5s					
MCIV			AML	AML		
	comp=E,1280μm,1.2s					
SF04	**Casetta**	**1.08 267**	AML	AML		
	comp=N,1415μm,1.6s					
SF04			AML	AML		
	comp=E,1520μm,1.0s					
VVLD	**Villa Vallelon**	**1.09 160**	P	**Pg**	**14 45 42.4 -1.5**	
VVLD			AML	AML		
	comp=N,3210μm,1.2s					
VVLD			AML	AML		
	comp=E,2580μm,0.9s					
GUAR	**Guarcino**	**1.12 173**	P	**Pb**	**14 45 43.7 -0.6**	
GUAR			AML	AML		
	comp=E,3760μm,1.1s					
GUAR			AML	AML		
	comp=N,4430μm,0.8s					
CRE	**Caprese Michel**	**1.12 310**	P	**Pb**	**14 45 44.0 -0.4**	
CRE			AML	AML		
	comp=E,964μm,1.3s					
CRE			AML	AML		
	comp=N,969μm,0.3s					
RMP	**Rome, Mte Porz**	**1.14 196**	P	**Pb**	**14 45 43.6 -1.1**	
RMP			AML	AML		
	comp=E,4770μm,1.1s					
RMP			AML	AML		
	comp=N,4510μm,0.5s					
LPEL	**Lama dei Pelig**	**1.16 137**	P	**Pb**	**14 45 43.6 -1.4**	
LPEL			AML	AML		
	comp=E,3095μm,0.6s					
LPEL			AML	AML		
	comp=N,2695μm,0.7s					
TOLF	**Tolfa**	**1.18 225**	P	**Pb**	**14 45 45.0 -0.4**	
TOLF			AML	AML		
	comp=N,1840μm,1.0s					
TOLF			AML	AML		
	comp=E,1398μm,1.6s					
RDP	**Rocca di Papa**	**1.19 195**	P	**Pb**	**14 45 44.0 -1.5**	
RDP			AML	AML		
	comp=E,6585μm,0.6s					
RDP			AML	AML		
	comp=N,8500μm,0.5s					
SAMA	**S.Maria delle**	**1.19 200**	P	**Pb**	**14 45 44.2 -1.3**	
SAMA			AML	AML		
	comp=E,2380μm,1.6s					
SAMA			AML	AML		
	comp=N,3035μm,1.6s					
ARCI	**Arcidosso**	**1.22 268**	P	**Pn**	**14 45 45.4 -0.7**	
ARCI			AML	AML		
	comp=N,390μm,1.6s					
ARCI			AML	AML		
	comp=E,409μm,0.7s					
POFI	**Posta Fibreno**	**1.26 160**	P	**Pg**	**14 45 47.2 +0.1**	
POFI			AML	AML		
	comp=N,1535μm,1.2s					
POFI			AML	AML		
	comp=E,1595μm,0.7s					
POFI			AML	AML		
	comp=E,1740μm,0.7s					
POFI			AML	AML		
	comp=N,1495μm,1.1s					
GIUL	**Giuliano Di Ro**	**1.35 176**	P	**Pn**	**14 45 46.9 -1.0**	
GIUL			AML	AML		
	comp=E,1550μm,0.6s					
GIUL			AML	AML		
	comp=N,2625μm,0.9s					
SFI	**Santa Sofia**	**1.37 317**	P	**Pn**	**14 45 47.8 -0.4**	
SFI			AML	AML		
	comp=N,903μm,1.0s					
SFI			AML	AML		
	comp=E,645μm,0.9s					
LATB	**Latina**	**1.41 185**	P	**Pn**	**14 45 48.3 -0.3**	
LATB			AML	AML		
	comp=E,688μm,1.5s					
LATB			AML	AML		
	comp=N,704μm,0.8s					
LATB			AML	AML		
	comp=N,705μm,0.8s					
CERA	**Filignano**	**1.46 153**	P	**Pb**	**14 45 49.9 -0.4**	
CERA			AML	AML		
	comp=N,1765μm,0.7s					
CERA			AML	AML		
	comp=E,2370μm,1.0s					
CERA			AML	AML		
	comp=N,1855μm,0.7s					
CERA			AML	AML		
	comp=N,1760μm,0.7s					
CERA			AML	AML		
	comp=E,2330μm,1.0s					
CSNT	**Castellina Chi**	**1.46 294**	P	**Pn**	**14 45 49.7 +0.3**	
CSNT			AML	AML		
	comp=E,440μm,0.6s					
CSNT			AML	AML		
	comp=N,415μm,1.0s					
CSNT			AML	AML		
	comp=E,440μm,0.6s					
CSNT			AML	AML		
	comp=N,416μm,1.0s					
FRES	**Fresagrandinar**	**1.47 129**	P	**Pn**	**14 45 49.0 -0.5**	
RUFI	**Rufina**	**1.51 309**	P	**Pn**	**14 45 50.3 +0.3**	
OSSC	**Osservatorio P**	**1.51 295**	AML	AML		
	comp=E,488μm,0.9s					
OSSC			AML	AML		
	comp=E,488μm,0.9s					
OSSC			AML	AML		
	comp=N,512μm,1.1s					
OSSC			AML	AML		
	comp=E,448μm,1.0s					
OSSC			AML	AML		
	comp=N,492μm,0.9s					
OSSC			AML	AML		
	comp=N,491μm,0.9s					
TRIV	**Trivento**	**1.55 137**	P	**Pg**	**14 45 52.6 0.0**	
TRIV			AML	AML		
TRIV			AML	AML		
TRIV			AML	AML		
TRIV			AML	AML		
TRIV			AML	AML		
	comp=E,2645μm,1.2s					
TRIV			AML	AML		
	comp=N,2295μm,1.4s					
MAON	**Monte Argentar**	**1.55 253**	P	**Pn**	**14 45 50.7 +0.1**	
MAON			AML	AML		
	comp=E,254μm,1.3s					
MAON			AML	AML		
	comp=N,347μm,1.6s					
LMD	**Lutirano**	**1.57 319**	P	**Pb**	**14 45 51.4 -0.6**	
LMD			AML	AML		
	comp=E,836μm,1.4s					
LMD			AML	AML		
	comp=N,718μm,1.0s					
CASP	**Castiglione de**	**1.67 267**	P	**Pn**	**14 45 52.3 +0.1**	
CASP			AML	AML		
	comp=E,181μm,1.5s					
CASP			AML	AML		
	comp=N,205μm,1.6s					
BRIS	**BRISIGHELLA**	**1.71 317**	AML	AML		
	comp=N,908μm,0.6s					
BRIS			AML	AML		
	comp=E,1104μm,1.3s					
BRIS			AML	AML		
	comp=N,968μm,0.4s					
BRIS			AML	AML		
	comp=E,1198μm,1.3s					
BSSO	**Busso**	**1.74 141**	P	**Pn**	**14 45 53.5 +0.3**	
BSSO			AML	AML		
	comp=N,528μm,1.6s					
BSSO			AML	AML		
	comp=E,1230μm,1.3s					
BSSO			AML	AML		
	comp=E,486μm,1.3s					
BSSO			AML	AML		
	comp=N,1345μm,1.6s					
MELA	**Melanico ??? S**	**1.90 128**	P	**Pb**	**14 45 57.0 -0.7**	
MELA			AML	AML		
	comp=N,2085μm,1.1s					
MELA			AML	AML		
	comp=E,2550μm,0.7s					
MELA			AML	AML		
	comp=N,2145μm,1.1s					
MELA			AML	AML		
	comp=E,2460μm,0.7s					
TREM	**Isole Tremiti**	**1.92 113**	P	**Pn**	**14 45 55.2 -0.5**	
TREM			AML	AML		
	comp=E,2005μm,0.6s					
TREM			AML	AML		
	comp=N,2655μm,0.7s					
BRJN	**Brijuni**	**2.05 12**	P	**Pn**	**14 45 57.8 +0.4**	
POPM	**Popiglio**	**2.07 304**	P	**Pn**	**14 45 58.5 +0.7**	
POPM			AML	AML		
	comp=E,306μm,1.3s					
POPM			AML	AML		
	comp=N,380μm,0.8s					
APRC	**Apricena**	**2.12 122**	P	**Pn**	**14 45 57.9 -0.7**	
APRC			AML	AML		
	comp=E,714μm,0.9s					
APRC			AML	AML		
	comp=N,1004μm,0.5s					
MOCO	**Biccari - m.te**	**2.15 135**	P	**Pn**	**14 45 58.6 -0.3**	
MOCO			AML	AML		
	comp=E,465μm,1.0s					
MOCO			AML	AML		
	comp=N,321μm,1.6s					
MAIM	**Mastiano**	**2.17 299**	P	**Pn**	**14 45 59.7 +0.6**	
MAIM			AML	AML		
	comp=E,200μm,1.0s					
MAIM			AML	AML		
	comp=N,213μm,1.0s					
SGRT	**San Giovanni R**	**2.25 120**	P	**Pn**	**14 46 00.1 -0.2**	
SGRT			AML	AML		
	comp=E,738μm,1.0s					
SGRT			AML	AML		
	comp=N,922μm,1.0s					
GSCL	**Gusciola**	**2.35 309**	AML	AML		
	comp=E,502μm,0.7s					
GSCL			AML	AML		
	comp=N,390μm,1.6s					
VLC	**Villacollemand**	**2.36 303**	P	**Pn**	**14 46 02.1 +0.4**	
VLC			AML	AML		
	comp=E,250μm,1.6s					
VLC			AML	AML		
	comp=N,184μm,1.3s					
VLC			AML	AML		
	comp=N,204μm,1.6s					
VLC			AML	AML		
	comp=E,265μm,1.6s					
EQUI	**Equi**	**2.51 301**	P	**Pn**	**14 46 04.5 +0.8**	
EQUI			AML	AML		
	comp=E,113μm,1.2s					
EQUI			AML	AML		
	comp=N,148μm,0.9s					
PLMA	**Palmaria, Port**	**2.65 297**	P	**Pn**	**14 46 06.5 +0.9**	
PLMA			AML	AML		
	comp=N,112μm,1.1s					
PLMA			AML	AML		
	comp=E,118μm,0.7s					
SBPO	**S.Benedetto Po**	**2.67 324**	AML	AML		
	comp=N,1465μm,0.1s					
SBPO			AML	AML		
	comp=E,8220μm,0.1s					
GRAM	**Graiana**	**2.73 307**	P	**Pn**	**14 46 07.1 +0.2**	
GRAM			AML	AML		
	comp=N,281μm,0.5s					
GRAM			AML	AML		
	comp=E,342μm,1.3s					
SMPL	**Sampolo**	**2.96 255**	P	**Pn**	**14 46 10.3 +0.4**	
SMPL			AML	AML		
	comp=E,28μm,1.6s					
SMPL			AML	AML		
	comp=N,25μm,1.4s					
MSSA	**Maissana**	**2.98 300**	P	**Pn**	**14 46 11.2 +0.9**	
MSSA			AML	AML		
	comp=N,142μm,1.6s					
MSSA			AML	AML		
	comp=E,105μm,0.7s					
CEY	**Cerknica**	**2.98 18**	*e*Pn	**Pn**	**14 46 10.2 -0.1**	
PGF	**Pioggiola**	**3.06 265**	*e*P	**Pn**	**14 46 12.9 +1.4**	
PGF			*e*Sn	**Sn**	**14 46 44.5 -3.8**	
	comp=E,6.2nm,0.3s					
PGF	**Pioggiola**	**3.06 265**	AML	AML		
	comp=E,29μm,1.2s					
PGF			AML	AML		
	comp=N,38μm,1.1s					
SABO	**M.te Sabotino**	**3.10 6**	⇓P	**Pn**	**14 46 12.3 +0.5**	
SABO			AML	AML		
	comp=E,2360μm,0.8s					
SABO			AML	AML		
	comp=N,704μm,0.6s					
SABO			AML	AML		
	comp=E,526μm,0.8s					
SABO			AML	AML		
	comp=N,2690μm,0.5s					
CGRP	**Cima Grappa**	**3.12 343**	P	**Pn**	**14 46 13.2 +0.8**	
CGRP			AML	AML		
	comp=E,508μm,0.5s					
CGRP			AML	AML		
	comp=N,528μm,0.6s					
CGRP			AML	AML		
	comp=N,496μm,0.6s					
CGRP			AML	AML		
	comp=E,532μm,0.5s					
SRKY	**Kupres RS**	**3.16 67**	*e*Pn	**Pn**	**14 46 15.8 +3.0**	
MGRS	**Mrkonjic Grad**	**3.24 61**	*e*Pn	**Pn**	**14 46 16.3 +2.4**	
GORR	**Gorreto**	**3.26 303**	AML	AML		
	comp=N,120μm,0.8s					
GORR			AML	AML		
	comp=E,127μm,1.5s					
AMUR	**Altamura**	**3.27 126**	P	**Pn**	**14 46 14.6 +0.4**	
AMUR			AML	AML		
	comp=E,240μm,0.6s					
AMUR			AML	AML		
	comp=N,254μm,0.4s					
LJU	**Ljubljana**	**3.29 17**	AML	AML		
	comp=E,1702μm,1.5s					
LJU			AML	AML		
	comp=N,2010μm,0.3s					
SALO	**Salr**	**3.30 326**	P	**Pn**	**14 46 15.8 +1.2**	
SALO			AML	AML		
	comp=E,288μm,0.6s					
SALO			AML	AML		
	comp=E,287μm,0.6s					
SALO			AML	AML		
	comp=N,468μm,1.6s					
SALO			AML	AML		
	comp=N,498μm,1.6s					
CTI	**Castel Tesino**	**3.32 342**	P	**Pn**	**14 46 15.4 +0.4**	
CTI			AML	AML		
	comp=E,318μm,1.5s					
CTI			AML	AML		
	comp=N,304μm,1.6s					
MPRI	**Monte Prat**	**3.34 358**	P	**Pn**	**14 46 15.8 +0.6**	
MPRI			AML	AML		
	comp=E,380μm,1.6s					
MPRI			AML	AML		
	comp=N,483μm,0.6s					
STON	**Ston**	**3.36 89**	*e*Pn	**Pn**	**14 46 14.0 -1.4**	
STAL	**STALIGIAL**	**3.37 355**	P	**Pn**	**14 46 16.3 +0.6**	
STAL			AML	AML		
	comp=E,284μm,0.6s					
STAL			AML	AML		
	comp=N,282μm,0.5s					
STAL			AML	AML		
	comp=N,332μm,1.6s					
STAL			AML	AML		
	comp=E,408μm,0.7s					
RNCA	**Ronca, Sant'Ol**	**3.41 299**	AML	AML		
	comp=E,30μm,1.5s					
RNCA			AML	AML		
	comp=N,28μm,0.8s					
LUSI	**Trento, Gardas**	**3.43 334**	P	**Pn**	**14 46 17.2 +0.7**	
LUSI			AML	AML		
	comp=E,202μm,0.8s					
LUSI			AML	AML		
	comp=N,258μm,1.4s					
CIMO	**Cimolais**	**3.44 352**	P	**Pn**	**14 46 17.2 +0.6**	
CIMO			AML	AML		
	comp=N,98μm,0.7s					
CIMO			AML	AML		
	comp=N,100μm,0.7s					
CIMO			AML	AML		
	comp=E,96μm,0.7s					
CIMO			AML	AML		
	comp=E,91μm,0.6s					
A051A	**Mrakovica**	**3.45 51**	*e*Pn	**Pn**	**14 46 18.8 +2.1**	
BLY	**Banja Luka**	**3.46 56**	*e*Pn	**Pb**	**14 46 24.3 0.0**	
PTCC	**Patocco-Chiusa**	**3.50 3**	P	**Pn**	**14 46 17.8 +0.3**	
PTCC			AML	AML		
	comp=N,136μm,0.9s					
PTCC			AML	AML		
	comp=E,157μm,0.5s					
CLUD	**Cludinico**	**3.56 357**	P	**Pn**	**14 46 18.9 +0.6**	
CLUD			AML	AML		
	comp=N,199μm,1.2s					
CLUD			AML	AML		
	comp=E,286μm,1.0s					
CLUD			AML	AML		
	comp=E,276μm,0.9s					
CLUD			AML	AML		
	comp=N,214μm,1.1s					
ZAG	**Zagreb**	**3.57 34**	AML	AML		
	comp=N,699μm,1.4s					
ZAG			AML	AML		
	comp=E,605μm,1.4s					
NOCI	**Noci**	**3.62 124**	P	**Pn**	**14 46 18.7 -0.3**	
NOCI			AML	AML		
	comp=E,166μm,1.0s					
NOCI			AML	AML		
	comp=N,235μm,1.6s					
ACOM	**Acomizza, Ital**	**3.66 4**	P	**Pn**	**14 46 19.8 +0.1**	
ACOM			AML	AML		
	comp=N,258μm,0.4s					
ACOM			AML	AML		
	comp=E,334μm,1.2s					
ZOU	**Zoufplan**	**3.66 358**	P	**Pn**	**14 46 20.4 +0.7**	
ZOU			AML	AML		
	comp=N,402μm,1.4s					
ZOU			AML	AML		
	comp=N,384μm,1.4s					
ZOU			AML	AML		
	comp=E,374μm,1.3s					
ZOU			AML	AML		
	comp=E,338μm,1.3s					
MABI	**Malga Bissina**	**3.67 330**	P	**Pn**	**14 46 21.2 +1.4**	
MABI			AML	AML		
	comp=E,86μm,0.8s					
MABI			AML	AML		
	comp=N,72μm,0.6s					
FVI	**Forni Avoltri**	**3.70 356**	P	**Pn**	**14 46 21.1 +0.8**	
FVI			AML	AML		
	comp=E,209μm,0.7s					
FVI			AML	AML		
	comp=N,190μm,0.6s					
MYKA	**Terra Mystica**	**3.74 5**	*i* Pn	**Pn**	**14 46 22.6 +1.8**	
	comp=N,5.9nm,0.2s,SNR=9.0					
OBKA	**Obir**	**3.75 15**	*e*Pn	**Pn**	**14 46 21.0 +0.2**	
OBKA	**Obir**	**3.75 15**	*e*Pn	**Pn**	**14 46 22.0 +1.1**	
	comp=N,1.5nm,0.2s					
KOSI	**Kohlern**	**3.77 341**	P	**Pn**	**14 46 23.3 +2.0**	
KOSI			AML	AML		
	comp=E,355μm,0.9s					
KOSI			AML	AML		
	comp=N,226μm,0.8s					
APPI	**Appiano**	**3.82 340**	P	**Pn**	**14 46 22.3 +0.4**	
APPI			AML	AML		
	comp=N,180μm,1.3s					
APPI			AML	AML		
	comp=E,156μm,0.4s					
TREB	**Trebinje**	**3.84 91**	*e*Pn	**Pn**	**14 46 22.7 +0.6**	
ABTA	**Abfaltersbach**	**3.87 354**	*i* Pn	**Pn**	**14 46 24.2 +1.7**	
	comp=E,33nm,0.5s,SNR=30					
BRY	**Bratogost**	**3.97 88**	*e*Pn	**Pn**	**14 46 24.3 +0.3**	
BRY	**Bratogost**	**3.97 88**	*e*Pn	**Pn**	**14 46 25.6 +1.6**	
BRY			*i* Sn	**Sn**	**14 47 12.9 +2.2**	
HCY	**Herceg Novi**	**3.98 95**	*e*Pn	**Pn**	**14 46 25.8 +1.8**	
HCY			*i* Sn	**Sn**	**14 47 13.1 +2.4**	
SOKA	**Soboth**	**4.01 19**	*e*Pn	**Pn**	**14 46 26.6 +2.1**	
	comp=E,4.1nm,0.4s					
RISI	**Rein**	**4.11 350**	P	**Pn**	**14 46 28.1 +2.1**	
ROSI	**Rosskopf**	**4.21 344**	P	**Pn**	**14 46 29.3 +2.0**	
ROSI			AML	AML		
	comp=N,336μm,0.4s					
ROSI			AML	AML		
	comp=E,287μm,0.7s					
SBF	**Sospel**	**4.26 285**	*e*P	**Pn**	**14 46 29.2 +1.3**	
SBF			*e*Sn	**Sn**	**14 47 13.0 -4.7**	
	comp=E,9.2nm,0.4s					
CEME	**Cevo**	**4.28 93**	*e*Pn	**Pn**	**14 46 29.8 +1.7**	
CEME			*i* Sn	**Sn**	**14 47 20.3 +2.2**	
NKME	**Niksic**	**4.28 90**	*e*Pn	**Pn**	**14 46 30.0 +1.8**	
NKME			*i* Sn	**Sn**	**14 47 20.4 +2.2**	
BUM	**Brajici-Budva**	**4.30 96**	*e*Pn	**Pn**	**14 46 30.2 +1.8**	
BUM			*i* Sn	**Sn**	**14 47 20.7 +2.1**	

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VARE Varese          4.31 315  AML     AML
     comp=E,216µm,1.2s
VARE                           AML     AML
     comp=N,1785µm,0.2s
HAPS Han Pijesak,Bl  4.40  72  ePn     Pn      14 46 31.6 +1.8
FETA Feichten        4.46 338  i Pn    Pn      14 46 33.3 +2.6
     comp=N,13nm,0.7s,SNR=15
WTTA Wattenberg      4.49 347  i Pn    Pn      14 46 33.9 +2.8
     comp=N,7.8nm,0.2s,SNR=12
WTTA Wattenberg      4.49 347  P       Pn      14 46 33.4 +2.2
WTTA                           AML     AML
     comp=E,148µm,0.9s
WTTA                           AML     AML
     comp=N,140µm,1.1s
DAVOX Davos/Dischmat 4.51 330  LR      LR      14 48 37.9
     comp=N,84nm,20.1s,baz=81,slow=44
SQTA Sankt Quirin    4.53 343  i Pn    Pn      14 46 33.9 +2.3
     comp=N,26nm,0.4s,SNR=21
DRME Dracevica, Mon  4.53  97  ePn     Pn      14 46 32.8 +1.3
DRME Dracevica, Mon  4.53  97  ePn     Pn      14 46 33.4 +1.9
DRME                           i Sn    Sn      14 47 26.4 +2.2
PDG  Podgorica       4.54  94  ⇑P      Pn      14 46 32.6 +0.9
TTG  Podgorica       4.54  94  ePn     Pn      14 46 33.5 +1.8
TTG                            i Sn    Sn      14 47 26.6 +2.1
WATA Walderalm       4.57 347  i Pn    Pn      14 46 35.0 +2.9
     comp=N,20nm,0.5s,SNR=20
RUDO Rudo            4.61  79  ePn     Pn      14 46 35.1 +2.4
ULC  Ulcinj          4.62 100  ePn     Pn      14 46 34.7 +1.9
ULC                            i Sn    Sn      14 47 26.0 -0.5
ARSA Arzberg         4.67  20  ePn     Pn      14 46 34.3 +0.8
     comp=N,1.4nm,0.3s
ARSA Arzberg         4.67  20  P       Pn      14 46 34.0 +0.6
MOTA Moosalm         4.67 343  i Pn    Pn      14 46 36.1 +2.5
     comp=N,23nm,0.7s,SNR=11
BBLS Lazi&#263;i     4.67  76  ePn     Pn      14 46 36.0 +2.4
KOME Kolasin         4.69  88  ⇓i Pn   Pn      14 46 35.6 +1.7
KOME                           i Sn    Sn      14 47 30.3 +1.9
KOVH Kovagotottos    4.77  46  P       Pn      14 46 34.9  0.0
KOVH                           S       Sn      14 47 27.7 -2.5
BIOA Bad Ischl, Aus  4.80   4  i Pn    Pn      14 46 37.0 +1.7
     comp=N,13nm,0.3s,SNR=14
LMR  La Mourre       4.87 277  eP      Pn      14 46 37.0 +0.9
LMR                            eSn     Sn      14 47 27.4 -5.1
     comp=N,1.8nm,0.4s
RETA Reutte          4.88 341  i Pn    Pn      14 46 39.2 +2.8
     comp=N,7.2nm,0.3s,SNR=12
DAVA Damuels         4.95 333  i Pn    Pn      14 46 40.4 +3.0
     comp=N,9.3nm,0.3s,SNR=14
MBDF Montbardon      4.95 294  eP      Pn      14 46 39.5 +2.1
MBDF                           eSn     Sn      14 47 29.7 -5.1
     comp=N,3.3nm,0.4s
IVA  Berane          4.97  88  ePn     Pn      14 46 39.4 +1.7
IVA                            i Sn    Sn      14 47 37.0 +1.8
MOA  Molln           5.01   9  ePn     Pn      14 46 39.6 +1.5
     comp=N,1.6nm,0.2s
DIVS Divibare        5.13  74  ePn     Pn      14 46 42.0 +2.1
MORH Mrgy, Hungar    5.14  48  ⇑P      Pn      14 46 39.8 -0.1
MORH Mrgy, Hungar    5.14  48  P       Pn      14 46 39.0 -0.9
LPG  La Plagne       5.27 302  eP      Pn      14 46 44.0 +2.0
LPG                            eSn     Sn      14 47 37.3 -5.5
     comp=N,3.6nm,0.3s
LPL  La Plagne       5.29 302  eP      Pn      14 46 44.2 +2.0
LPL                            eSn     Sn      14 47 37.9 -5.4
     comp=N,4.4nm,0.3s
RONA Rosalia, Austr  5.29  24  ePn     Pn      14 46 42.5 +0.5
     comp=N,1.3nm,0.3s
FRGS Fruska Gora     5.32  63  ⇑P      Pn      14 46 45.3 +2.9
SMRF Simiane la Rot  5.61 284  eP      Pn      14 46 48.7 +2.4
SMRF                           eSn     Sn      14 47 45.5 -5.3
     comp=N,1.1nm,0.3s
ORIF Oris-en-Rattie  5.61 294  eP      Pn      14 46 49.3 +2.8
ORIF                           eSn     Sn      14 47 45.4 -5.6
     comp=N,2.6nm,0.4s
GERES GERESS Array B 5.96   4  Pn      Pn      14 46 51.6 +0.4
     comp=N,1.8nm,0.3s,baz=171,slow=13,SNR=37
GERES                          Sn      Sn      14 47 56.8 -2.7
     comp=N,4.2nm,0.3s,baz=181,slow=24,SNR=10
GERES                          LR      LR      14 48 56.2
     comp=N,40nm,21.7s,baz=181,slow=36
     comp=N,1.9nm,0.3s
CKRC Cesky Krumlov   5.97   8  ePN     Pn      14 46 51.1 -0.3
CKRC                           eSN     Sn      14 47 57.5 -2.3
OHR  Ohrid           5.99 105  i Pn    Pn      14 46 54.1 +2.5
CABF La Chapelle     6.24 309  eP      Pn      14 46 57.1 +2.1
CABF                           eSn     Sn      14 48 00.4 -6.0
     comp=N,28nm,1.0s
KHC  Kasperske Hory  6.24   3  ePN     Pn      14 46 55.1 +0.1
KHC                            eSN     Sn      14 48 04.1 -2.2
BOVS Bovan           6.30  80  ⇑P      Pn      14 46 57.6 +1.7
VIVF Saint-Julien-l  6.42 291  eP      Pn      14 46 59.9 +2.4
KRUC Moravsky        6.56  19  eSN     Sn      14 48 11.9 -2.4
HINF Hinteralfeld    6.61 320  eP      Pn      14 47 02.6 +2.5
HINF                           eSn     Sn      14 48 08.9 -6.6
     comp=N,18nm,0.5s
BZS  Buzias          6.67  63  ⇑P      Pn      14 47 04.0 +3.0
VRAC Vranov          6.84  19  LR      LR      14 50 27.1
     comp=N,97nm,19.8s,baz=216,slow=45
VRAC Vranov          6.84  19  eSN     Sn      14 48 19.3 -1.9
LASF Ste Croix       6.85 283  eP      Pn      14 47 05.6 +2.2
CDF  Champ du Feu    6.87 325  eP      Pn      14 47 05.9 +2.2
CDF                            eSn     Sn      14 48 15.1 -6.8
     comp=N,7.6nm,0.6s
SIRR Siria           6.96  58  ⇑P      Pn      14 47 06.1 +1.3
HAU  Haudompre       6.98 319  eP      Pn      14 47 07.6 +2.4
HAU                            eSn     Sn      14 48 17.7 -7.0
     comp=N,20nm,0.4s
HERR Herculane       6.99  70  ⇓P      Pn      14 47 09.2 +3.9
BLKB Belogradchik    7.00  81  ⇑P      Pn      14 47 07.6 +2.0
VAY  Valandovo       7.20 100  i Pn    Pn      14 47 10.4 +2.3
NKC  Novy Kostel     7.35 357  eSN     Sn      14 48 29.8 -3.8
GZR  Gura Zlata      7.37  67  ⇑P      Pn      14 47 13.6 +3.0
VTS  Vitosha         7.44  89  ⇑P      Pn      14 47 12.6 +0.9
SMF  Signal de Mont  7.59 303  eP      Pn      14 47 16.5 +2.9
SMF                            eSn     Sn      14 48 32.7 -7.0
     comp=N,8.3nm,0.6s
PAGF Fort de Pagny   7.67 320  eP      Pn      14 47 17.4 +2.8
     baz=140
PAGF                           eSn     Sn      14 48 34.5 -6.9
     comp=N,22nm,0.8s
KEST Kesra           7.74 204  Pn      Pn      14 47 18.2 +2.5
     comp=N,0.5nm,0.3s,baz=193,slow=9.9,SNR=2.0
     comp=N,1.7nm,0.4s
SFTF Sexfontaines    7.77 316  eP      Pn      14 47 18.2 +2.2
     baz=136
SFTF                           eSn     Sn      14 48 36.6 -7.3
     comp=N,6.1nm,0.4s
DRGR                 7.84  57  ⇑P      Pn      14 47 18.1 +1.1
LOR  Lormes          7.88 307  eP      Pn      14 47 19.5 +2.0
     baz=126
LOR                            eSn     Sn      14 48 39.5 -7.2
     comp=N,5.4nm,0.3s
MEZF Maizieres J'vi  7.96 318  eP      Pn      14 47 21.2 +2.7
     baz=137
MEZF                           eSn     Sn      14 48 41.0 -7.5
     comp=N,7.9nm,0.6s
AVF  Avril sur Loir  7.96 303  eP      Pn      14 47 21.1 +2.5
SSF  Saint Saulge    7.99 305  eP      Pn      14 47 21.7 +2.7
SAVF Savonnieres en  8.00 318  eP      Pn      14 47 21.7 +2.6
     baz=138
SAVF                           eSn     Sn      14 48 41.9 -7.6
     comp=N,4.4nm,0.5s
MTLF Montolieu       8.00 277  eP      Pn      14 47 23.5 +4.4
CAF  Calviac         8.24 288  eP      Pn      14 47 25.5 +3.0
CLL  Collm           8.41 359  ePn     Pn      14 47 25.0 +0.3
CLL                            eSn     Sn      14 48 53.0 -6.6
CLL                            eSg     Sg      14 49 54.0 +1.4
     comp=Z,61nm,2.1s
TCF  Toulx Ste Croi  8.49 297  eP      Pn      14 47 29.0 +3.0
RJF  Les Rejaudoux   8.70 290  eP      Pn      14 47 31.1 +2.4
GIVF Givet           9.20 324  eP      Pn      14 47 38.4 +2.9
BAIF Baives          9.43 322  eP      Pn      14 47 42.4 +3.6
BAIF                           eSn     Sn      14 49 15.8 -9.0
MLR  Muntele Rosu    9.56  70  LR      LR      14 52 38.1
     comp=Z,95nm,21.9s,baz=256,slow=46
ESDC Sonseca Array   13.25 262  Pn      Pn      14 48 32.9 +1.8
     baz=65,slow=13,SNR=1.8
ESDC                           LR      LR      14 53 45.2
     comp=Z,56nm,18.1s,baz=4.5,slow=38
     comp=Z,0.2nm,0.6s
BRTR Keskin Array B  15.73  95  LR      LR      14 55 52.5
     comp=Z,64nm,19.0s,baz=303,slow=40
NOA  NORSAR Array B  18.20 357  LR      LR      14 57 30.4
     comp=Z,30nm,19.7s,baz=255,slow=40
FINES FINESS Array B 20.12  18  P       P       14 49 57.2 +0.5
     comp=Z,4.5nm,1.0s,baz=188,slow=8.4,SNR=2.5
     comp=Z,4.5nm,1.0s
TORD Torodi Ar. Bea  31.25 202  P       P       14 51 44.1 +1.2
     comp=Z,0.5nm,0.6s,baz=17,slow=8.9,SNR=3.7
     comp=Z,0.5nm,0.6s
ARU  Arti            31.74  49  LR      LR      15 05 46.5
     comp=Z,34nm,18.4s,baz=260,slow=39
MKAR Makanchi Array  47.74  60  P       P       14 54 01.0 +1.1
     comp=Z,0.4nm,0.6s,baz=292,slow=7.6,SNR=1.9
MKAR                           LR      LR      15 18 41.1
     comp=Z,21nm,18.6s,baz=18,slow=42
     comp=Z,0.4nm,0.6s
CMAR Chiang Mai Arr  74.67  79  P       P       14 57 04.5 +1.7
     comp=Z,0.3nm,0.3s,baz=297,slow=6.0,SNR=4.3
     comp=Z,0.3nm,0.3s
```

IDC 30 14:49:53.1±5.4, 18°.49S×177°.72W, h576km±33km, mb2.7/3, mbtmp3.6/4, Error ellipse: s-maj=148.5km s-min=32.3km az=142.0, Fiji Islands region

```
Code Station Name        Δ°   AZ°   Phase ID   Time      Res
                                    Op   ISC   h m s     ISC
MSVF Nonsavu         4.10 280       P    P     14 51 17.9 +0.3
     13nm,0.9s,baz=112,slow=9.9,SNR=4.9
WRA  Warramunga Arr  45.18 260       P    P     14 57 19.1 -0.6
     0.6nm,0.6s,baz=97,slow=6.9,SNR=19
WRA                                  PcP  PcP   14 58 47.7 +0.1
     0.3nm,1.0s,baz=99,slow=3.4,SNR=1.6
     0.6nm,0.6s
ASAR Alice Springs   45.27 255       P    P     14 57 20.4  0.0
     0.8nm,0.5s,baz=93,slow=7.6,SNR=34
ASAR                                 PcP  PcP   14 58 48.1 +0.3
     0.2nm,0.4s,baz=106,slow=3.8,SNR=6.5
     0.8nm,0.5s
ILAR Eielson Array   86.30  13       P    P     15 01 33.5 -0.5
     0.1nm,0.4s,baz=222,slow=4.9,SNR=4.1
     0.1nm,0.4s
```

*ROM **30** 14:50:34.8±0.1, 42°.688N±0°.003×13°.186E±0°.004, h13km, ML3.1/52, Error ellipse: s-maj=0.3km s-min=0.1km az=22.0*
*PDG **30** 14:50:35.4±0.1, 42°.32N×13°.20E, h9km±11km, ML3.6/8, Error ellipse: s-maj=8.9km s-min=193.7km az=0.0*
*PRU **30** 14:50:36.0±0.0, 42°.67N×13°.26E, h0km*

ISC 30 14:50:36.1±0.8, 42°.67N±0°.02×13°.16E±0°.02, h10km±5km, n85, σ1.9 07/117, 33C-22D, Central Italy

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Code Station Name        Δ°   AZ°   Phase ID   Time      Res
                                    Op   ISC   h m s     ISC
T1201 Domo (RI)      0.07 103       P    Pg    14 50 37.8 -0.4
T1201                               S    Sg    14 50 39.5 -0.3
T1204 Amatrice, Fraz 0.11  88       ⇑P   Pg    14 50 38.4 -0.6
T1204                               S    Sg    14 50 40.3 -0.6
T1204                               AML  AML
     comp=N,30600µm,0.2s
T1204                               AML  AML
     comp=E,46300µm,0.9s
T1204                               AML  AML
     comp=N,30550µm,0.2s
T1204                               AML  AML
     comp=E,46250µm,0.9s
T1204                               AML  AML
     comp=N,30562µm,0.2s
T1204                               AML  AML
     comp=E,45920µm,0.2s
LNSS Leonessa        0.12 233       ⇑P   Pg    14 50 38.9 -0.1
LNSS                                S    Sg    14 50 41.5 +0.5
LNSS                                AML  AML
     comp=E,30350µm,0.2s
LNSS                                AML  AML
     comp=N,48800µm,0.2s
LNSS                                AML  AML
     comp=E,30363µm,0.2s
LNSS                                AML  AML
     comp=N,48820µm,0.2s
SMA1 SAN MARTINO     0.13 108       ⇑P   Pg    14 50 38.8 -0.4
SMA1                                S    Sg    14 50 41.2 -0.2
SMA1                                AML  AML
     comp=N,77050µm,0.2s
SMA1                                AML  AML
SMA1                                AML  AML
     comp=N,77046µm,0.2s
SMA1                                AML  AML
RM33 Pellescritta (  0.17 167       ⇓P   Pg    14 50 39.6 -0.1
RM33                                S    Sg    14 50 42.6 +0.4
RM33                                AML  AML
     comp=E,11600µm,0.9s
RM33                                AML  AML
     comp=E,11600µm,0.9s
RM33                                AML  AML
     comp=N,16050µm,0.2s
RM33                                AML  AML
     comp=N,16050µm,0.3s
RM33                                AML  AML
     comp=N,15550µm,0.2s
RM33                                AML  AML
     comp=E,11550µm,0.9s
RM33                                AML  AML
     comp=N,15500µm,0.2s
RM33                                AML  AML
     comp=N,12974µm,0.3s
RM33                                AML  AML
     comp=N,13284µm,0.3s
RM33                                AML  AML
     comp=E,10903µm,0.2s
RM33                                AML  AML
     comp=E,10931µm,0.2s
T1217 Poggiodomo (PG 0.18 283       P    Pg    14 50 39.6 -0.2
T1217                               S    Sg    14 50 42.9 +0.4
T1245 Castelsantange 0.18   5       P    Pg    14 50 38.8 -1.3
T1245                               S    Sg    14 50 42.3 -0.6
T1243 Rocca Santa Ma 0.21  83       ⇓P   Pg    14 50 39.7 -0.8
T1243                               S    Sg    14 50 43.0 -0.4
CAMP Campotosto      0.23 127       P    Pg    14 50 40.2 -0.6
CAMP                                S    Sg    14 50 43.8 -0.1
CAMP                                AML  AML
     comp=E,7945µm,0.9s
CAMP                                AML  AML
     comp=N,9300µm,0.3s
CAMP                                AML  AML
     comp=E,7048µm,0.3s
CAMP                                AML  AML
     comp=N,9306µm,0.3s
T1247 Pizzolo (AQ)   0.25 157       ⇑P   Pg    14 50 40.9 -0.2
T1247                               S    Sg    14 50 45.1 +0.5
T1247                               AML  AML
     comp=N,17550µm,0.4s
T1247                               AML  AML
     comp=E,12400µm,0.7s
T1247                               AML  AML
     comp=N,17544µm,0.4s
T1247                               AML  AML
     comp=E,11128µm,0.2s
T1215 Vallo di Nera, 0.25 301       ⇑P   Pg    14 50 40.5 -0.7
T1215                               S    Sg    14 50 45.0 +0.3
T1215                               AML  AML
     comp=E,3960µm,0.5s
T1215                               AML  AML
     comp=E,3800µm,0.5s
T1215                               AML  AML
     comp=E,3795µm,0.5s
T1215                               AML  AML
     comp=N,6095µm,0.2s
T1215                               AML  AML
     comp=E,3960µm,0.5s
T1215                               AML  AML
     comp=N,6219µm,0.2s
T1215                               AML  AML
     comp=N,6097µm,0.2s
T1215                               AML  AML
     comp=E,3164µm,0.3s
T1215                               AML  AML
     comp=E,3005µm,0.1s
T1215                               AML  AML
     comp=N,6220µm,0.2s
MMO1 Montemonaco     0.26  28       P    Pg    14 50 40.4 -0.9
MMO1                                S    Sg    14 50 44.5 -0.3
T1211 Morro Reatino  0.27 239       ⇑P   Pg    14 50 41.3 -0.2
T1211                               S    Sg    14 50 45.7 +0.6
T1211                               AML  AML
     comp=E,20050µm,0.7s
T1211                               AML  AML
     comp=N,21650µm,0.4s
T1211                               AML  AML
     comp=E,19900µm,0.7s
T1211                               AML  AML
     comp=E,20100µm,0.7s
T1211                               AML  AML
     comp=E,19950µm,0.7s
T1211                               AML  AML
     comp=N,21350µm,0.4s
T1211                               AML  AML
     comp=E,20050µm,0.7s
T1211                               AML  AML
     comp=E,19900µm,0.7s
T1211                               AML  AML
     comp=N,21650µm,0.3s
T1211                               AML  AML
     comp=N,21350µm,0.3s
T1211                               AML  AML
     comp=E,18420µm,0.2s
T1211                               AML  AML
     comp=E,18486µm,0.2s
T1211                               AML  AML
     comp=N,19766µm,0.2s
T1211                               AML  AML
     comp=N,19796µm,0.2s
T1241 Roccafluvione, 0.27  47       P    Pg    14 50 39.8 -1.7
T1241                               S    Sg    14 50 44.5 -0.6
T1241                               AML  AML
     comp=E,11050µm,0.4s
T1241                               AML  AML
     comp=N,8295µm,0.4s
T1241                               AML  AML
     comp=E,11000µm,0.4s
T1241                               AML  AML
     comp=N,8670µm,0.4s
T1241                               AML  AML
     comp=E,11100µm,0.4s
T1241                               AML  AML
     comp=E,11100µm,0.4s
T1241                               AML  AML
     comp=E,11060µm,0.4s
T1241                               AML  AML
     comp=N,8295µm,0.4s
ARRO Arrone          0.31 253       P    Pg    14 50 41.9 -0.3
ARRO                                AML  AML
     comp=E,5690µm,0.2s
ARRO                                AML  AML
     comp=N,7185µm,0.2s
ARRO                                AML  AML
     comp=E,5690µm,0.2s
ARRO                                AML  AML
     comp=N,7187µm,0.2s
TERO Teramo          0.33  98       ⇑P   Pg    14 50 41.7 -0.9
TERO                                S    Sg    14 50 46.6 -0.4
TERO                                AML  AML
     comp=E,11120µm,0.9s
TERO                                AML  AML
     comp=N,11225µm,0.5s
TERO                                AML  AML
     comp=E,11140µm,0.9s
TERO                                AML  AML
     comp=E,11970µm,0.9s
TERO                                AML  AML
     comp=N,11685µm,0.5s
TERO                                AML  AML
     comp=E,11125µm,0.9s
TERO                                AML  AML
     comp=N,11220µm,0.5s
TERO                                AML  AML
     comp=E,9636µm,0.3s
TERO                                AML  AML
     comp=E,10044µm,0.1s
TERO                                AML  AML
     comp=N,11456µm,0.4s
TERO                                AML  AML
     comp=N,11087µm,0.4s
AM05 Amandola Campo  0.34  24       P    Pg    14 50 42.8  0.0
AM05                                AML  AML
     comp=E,1260µm,0.8s
AM05                                AML  AML
     comp=N,1105µm,0.3s
AM05                                AML  AML
     comp=E,5065µm,0.4s
AM05                                AML  AML
     comp=N,273µm,0.1s
AM05                                AML  AML
     comp=N,323µm,0.4s
AM05                                AML  AML
     comp=E,1265µm,0.8s
AM05                                AML  AML
     comp=N,1266µm,0.1s
AM05                                AML  AML
     comp=N,273µm,0.1s
AM05                                AML  AML
     comp=E,1075µm,0.1s
AM05                                AML  AML
     comp=E,3934µm,0.1s
AM05                                AML  AML
     comp=N,819µm,0.1s
AQU  L'Aquila        0.36 151       ⇓P   Pg    14 50 42.9 -0.4
AQU                                 AML  AML
     comp=E,3180µm,0.5s
AQU                                 AML  AML
     comp=N,3765µm,0.3s
AQU                                 AML  AML
     comp=N,3655µm,0.3s
AQU                                 AML  AML
     comp=N,3770µm,0.3s
AQU                                 AML  AML
     comp=E,2925µm,0.5s
AQU                                 AML  AML
     comp=E,3180µm,0.5s
AQU                                 AML  AML
     comp=N,3767µm,0.3s
AQU                                 AML  AML
     comp=E,2924µm,0.5s
AQU                                 AML  AML
     comp=N,3655µm,0.3s
GIGS Gran Sasso      0.37 126       ⇑P   Pg    14 50 42.5 -1.0
GIGS                                S    Sg    14 50 47.9 -0.4
GIGS                                AML  AML
     comp=N,1980µm,0.3s
GIGS                                AML  AML
     comp=E,1835µm,0.9s
GIGS                                AML  AML
     comp=N,1463µm,0.1s
GIGS                                AML  AML
     comp=E,1561µm,0.4s
FIAM Fiamignano      0.41 185       ⇑P   Pg    14 50 43.6 -0.4
FIAM                                AML  AML
     comp=E,2260µm,1.4s
FIAM                                AML  AML
     comp=N,2355µm,0.6s
FIAM                                AML  AML
     comp=N,2359µm,0.6s
FIAM                                AML  AML
     comp=E,2103µm,0.2s
CESX Cesi            0.44 262       ⇑P   Pg    14 50 44.0 -0.6
CESX                                AML  AML
     comp=E,4215µm,0.2s
CESX                                AML  AML
     comp=N,3685µm,0.4s
CESX                                AML  AML
     comp=N,3685µm,0.4s
CESX                                AML  AML
     comp=E,4212µm,0.2s
OFFI Offida          0.47  55       ⇑P   Pg    14 50 43.9 -1.3
OFFI                                AML  AML
     comp=N,11755µm,0.5s
OFFI                                AML  AML
     comp=E,10315µm,0.7s
OFFI                                AML  AML
     comp=N,11776µm,0.5s
OFFI                                AML  AML
     comp=E,10334µm,0.7s
FAGN Fagnano         0.51 142       ⇑P   Pg    14 50 45.1 -0.9
FAGN                                S    Sb    14 50 54.0 -0.7
FAGN                                AML  AML
     comp=E,6910µm,1.4s
FAGN                                AML  AML
     comp=N,6155µm,0.5s
FAGN                                AML  AML
     comp=E,6703µm,0.3s
FAGN                                AML  AML
     comp=N,6159µm,0.5s
MNTP Montappone      0.52  26       ⇓P   Pg    14 50 46.2 +0.1
MNTP                                AML  AML
     comp=E,4640µm,1.1s
MNTP                                AML  AML
     comp=N,4605µm,0.3s
MNTP                                AML  AML
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	comp=N,4610μm,0.3s						
MNTP				AML	AML		
	comp=E,4176μm,0.4s						
MNTP				AML	AML		
	comp=N,4606μm,0.3s						
TRTR	**Tortoreto Alta**	**0.57**	**76**	⇑P	**Pg**	**14 50 47.1**	**0.0**
TRTR				AML	AML		
	comp=E,7360μm,0.5s						
TRTR				AML	AML		
	comp=N,5020μm,0.5s						
TRTR				AML	AML		
	comp=N,5021μm,0.5s						
TRTR				AML	AML		
	comp=E,7362μm,0.5s						
VCEL	**Villa Celiera**	**0.57**	**119**	⇑P	**Pg**	**14 50 46.4**	**-0.7**
VCEL				AML	AML		
	comp=E,6310μm,0.3s						
VCEL				AML	AML		
	comp=N,8055μm,0.4s						
VCEL				AML	AML		
	comp=N,8054μm,0.4s						
VCEL				AML	AML		
	comp=E,6311μm,0.3s						
T0110	**Collepietro**	**0.64**	**134**	⇑P	**Pg**	**14 50 47.3**	**-1.1**
T0110				AML	AML		
	comp=E,3645μm,1.1s						
T0110				AML	AML		
	comp=N,4665μm,1.6s						
T0110				AML	AML		
	comp=E,3650μm,1.1s						
T0110				AML	AML		
	comp=N,4523μm,0.6s						
T0110				AML	AML		
	comp=E,3534μm,0.4s						
SRES	**S.Oreste - Sor**	**0.65**	**228**	⇓P	**Pg**	**14 50 48.1**	**-0.5**
SRES				S	**Sb**	**14 50 59.0**	**+0.3**
SRES				AML	AML		
	comp=E,862μm,0.4s						
SRES				AML	AML		
	comp=N,958μm,0.4s						
SRES				AML	AML		
	comp=E,861μm,0.4s						
SRES				AML	AML		
	comp=N,960μm,0.4s						
EL6	**Elcito**	**0.66**	**356**	S	**Sb**	**14 50 60.0**	**+1.0**
PTQR	**Pietraquaria**	**0.67**	**165**	P	**Pg**	**14 50 47.5**	**-1.5**
PTQR				AML	AML		
	comp=N,522μm,0.8s						
PTQR				AML	AML		
	comp=E,496μm,0.2s						
PTQR				AML	AML		
	comp=N,439μm,0.3s						
PTQR				AML	AML		
	comp=E,496μm,0.2s						
MTCE	**Montecelio**	**0.72**	**206**	⇓P	**Pg**	**14 50 48.9**	**-1.0**
MTCE				S	**Sb**	**14 51 01.0**	**+0.3**
MTCE				AML	AML		
	comp=E,794μm,0.5s						
MTCE				AML	AML		
	comp=N,521μm,0.4s						
MTCE				AML	AML		
	comp=E,793μm,0.5s						
MTCE				AML	AML		
	comp=N,521μm,0.4s						
CERT	**Cerreto**	**0.73**	**191**	⇑P	**Pg**	**14 50 49.2**	**-1.0**
CERT				AML	AML		
	comp=N,940μm,0.5s						
CERT				AML	AML		
	comp=E,1115μm,0.4s						
CERT				AML	AML		
	comp=E,1113μm,0.4s						
CERT				AML	AML		
	comp=N,940μm,0.5s						
PP3	**Marolino**	**0.78**	**25**	P	**Pb**	**14 50 51.4**	**-0.3**
PP3				S	**Sg**	**14 51 01.0**	**-0.2**
PP3				AML	AML		
	comp=E,5040μm,0.4s						
PP3				AML	AML		
	comp=N,4635μm,0.5s						
PP3				AML	AML		
	comp=E,5435μm,0.4s						
PP3				AML	AML		
	comp=N,4370μm,0.4s						
PP3				AML	AML		
	comp=N,4640μm,0.5s						
PP3				AML	AML		
	comp=N,4375μm,0.4s						
PP3				AML	AML		
	comp=E,5440μm,0.4s						
PP3				AML	AML		
	comp=E,5043μm,0.4s						
PP3				AML	AML		
	comp=N,4372μm,0.4s						
PP3				AML	AML		
	comp=E,5439μm,0.4s						
PP3				AML	AML		
	comp=N,4638μm,0.5s						
MGAB	**Montegabbione**	**0.81**	**288**	⇓P	**Pg**	**14 50 51.0**	**-0.6**
MGAB				S	**Sn**	**14 51 05.0**	**-0.8**
MGAB				AML	AML		
	comp=E,3485μm,0.9s						
MGAB				AML	AML		
	comp=E,3150μm,0.9s						
MGAB				AML	AML		
	comp=N,3005μm,0.5s						
MGAB				AML	AML		
	comp=N,3315μm,0.5s						
MGAB				AML	AML		
	comp=N,3317μm,0.5s						
MGAB				AML	AML		
	comp=E,3150μm,0.9s						
MGAB				AML	AML		
	comp=E,3487μm,0.9s						
MGAB				AML	AML		
	comp=N,3004μm,0.5s						
ARVD	**Arcevia**	**0.84**	**349**	⇑P	**Pg**	**14 50 50.8**	**-1.5**
ARVD				AML	AML		
	comp=E,548μm,0.7s						
ARVD				AML	AML		
	comp=N,526μm,0.6s						
ARVD				AML	AML		
	comp=N,526μm,0.6s						
ARVD				AML	AML		
	comp=E,548μm,0.7s						
ATVO	**AVT- Monte Val**	**0.90**	**322**	⇑P	**Pg**	**14 50 52.4**	**-1.0**
ATVO				AML	AML		
	comp=E,742μm,1.5s						
ATVO				AML	AML		
	comp=N,607μm,0.5s						
ATVO				AML	AML		
	comp=E,651μm,0.5s						
ATVO				AML	AML		
	comp=N,607μm,0.5s						
RMP	**Rome, Mte Porz**	**0.93**	**202**	⇑P	**Pn**	**14 50 55.2**	**0.0**
RMP				AML	AML		
	comp=N,1028μm,0.4s						
RMP				AML	AML		
	comp=N,1027μm,0.4s						
RMP				AML	AML		
	comp=E,922μm,0.4s						
RMP				AML	AML		
	comp=N,1028μm,1.6s						
RMP				AML	AML		
	comp=E,923μm,0.4s						
SACS	**San Casciano d**	**0.94**	**281**	P	**Pg**	**14 50 53.4**	**-0.7**
SACS				AML	AML		
	comp=N,716μm,1.0s						
SACS				AML	AML		
	comp=E,689μm,0.6s						
SACS				AML	AML		
	comp=E,754μm,0.6s						
SACS				AML	AML		
	comp=N,740μm,1.0s						
SACS				AML	AML		
	comp=N,696μm,0.6s						
SACS				AML	AML		
	comp=E,754μm,0.6s						
SACS				AML	AML		
	comp=E,689μm,0.6s						
SACS				AML	AML		
	comp=N,713μm,0.3s						
VIVA	**Pratoni del Vi**	**0.97**	**198**	⇓P	**Pb**	**14 50 54.9**	**0.0**
VIVA				AML	AML		
	comp=E,2060μm,0.3s						
VIVA				AML	AML		
	comp=N,2305μm,0.5s						
VIVA				AML	AML		
	comp=E,2057μm,0.3s						
VIVA				AML	AML		
	comp=N,2305μm,0.5s						
PIEI	**Pieia**	**0.98**	**332**	⇓P	**Pg**	**14 50 54.2**	**-0.6**
PIEI				AML	AML		
	comp=N,436μm,1.5s						
PIEI				AML	AML		
	comp=E,468μm,0.8s						
PIEI				AML	AML		
	comp=E,464μm,0.3s						
PIEI				AML	AML		
	comp=N,386μm,0.4s						
LPEL	**Lama dei Pelig**	**0.98**	**129**	⇓P	**Pg**	**14 50 53.0**	**-1.9**
LPEL				S	**Sb**	**14 51 08.0**	**-0.2**
LPEL				AML	AML		
	comp=E,1235μm,0.4s						
LPEL				AML	AML		
	comp=N,914μm,1.3s						
LPEL				AML	AML		
	comp=N,881μm,0.2s						
LPEL				AML	AML		
	comp=E,1234μm,0.4s						
APEC	**Apecchio**	**1.04**	**329**	P	**Pg**	**14 50 52.7**	**-3.4**
APEC				AML	AML		
	comp=N,499μm,0.9s						
LAV9	**Lanuvio**	**1.05**	**199**	⇓P	**Pg**	**14 50 54.4**	**-1.9**
LAV9				AML	AML		
	comp=E,1650μm,0.4s						
LAV9				AML	AML		
	comp=N,1540μm,0.3s						
LAV9				AML	AML		
	comp=N,1660μm,0.3s						
LAV9				AML	AML		
	comp=E,1730μm,0.5s						
LAV9				AML	AML		
	comp=E,1728μm,0.5s						
LAV9				AML	AML		
	comp=N,1661μm,0.3s						
LAV9				AML	AML		
	comp=E,1649μm,0.4s						
LAV9				AML	AML		
	comp=N,1542μm,0.3s						
TOLF	**Tolfa**	**1.05**	**235**	⇑P	**Pg**	**14 50 55.8**	**-0.5**
TOLF				AML	AML		
	comp=N,513μm,1.2s						
TOLF				AML	AML		
	comp=E,714μm,0.4s						
TOLF				AML	AML		
	comp=E,714μm,0.4s						
TOLF				AML	AML		
	comp=N,431μm,0.3s						
FSSB	**Fossombrone**	**1.06**	**345**	⇓P	**Pg**	**14 50 56.4**	**0.0**
FSSB				AML	AML		
	comp=E,1875μm,0.4s						
FSSB				AML	AML		
	comp=N,2025μm,0.4s						
FSSB				AML	AML		
	comp=N,2023μm,0.4s						
FSSB				AML	AML		
	comp=E,1872μm,0.4s						
CAFI	**Castiglion Fio**	**1.10**	**307**	⇓P	**Pg**	**14 50 56.4**	**-0.7**
CAFI				AML	AML		
	comp=N,566μm,0.7s						
CAFI				AML	AML		
	comp=E,442μm,0.6s						
CAFI				AML	AML		
	comp=N,566μm,0.7s						
CAFI				AML	AML		
	comp=E,449μm,0.6s						
CAFI				AML	AML		
	comp=N,550μm,0.7s						
CAFI				AML	AML		
	comp=E,442μm,0.6s						
MCIV	**Monte Civitell**	**1.10**	**276**	⇓P	**Pg**	**14 50 57.0**	**-0.2**
MCIV				AML	AML		
	comp=N,276μm,0.8s						
MCIV				AML	AML		
	comp=E,324μm,0.3s						
MCIV				AML	AML		
	comp=E,324μm,0.3s						
MCIV				AML	AML		
	comp=N,276μm,0.8s						
GIUL	**Giuliano Di Ro**	**1.11**	**177**	⇓P	**Pn**	**14 50 58.0**	**+0.2**
GIUL				AML	AML		
	comp=E,235μm,0.6s						
GIUL				AML	AML		
	comp=N,330μm,0.7s						
GIUL				AML	AML		
	comp=N,329μm,0.7s						
GIUL				AML	AML		
	comp=E,231μm,0.7s						
SF01	**Poggio Pratacc**	**1.19**	**277**	⇓P	**Pb**	**14 50 58.6**	**-0.1**
SF01				AML	AML		
	comp=N,635μm,0.5s						
SF01				AML	AML		
	comp=E,772μm,0.7s						
SF01				AML	AML		
	comp=E,771μm,0.7s						
SF01				AML	AML		
	comp=N,635μm,0.5s						
ARCI	**Arcidosso**	**1.26**	**279**	⇑P	**Pn**	**14 50 59.7**	**-0.1**
ARCI				AML	AML		
	comp=N,104μm,0.9s						
ARCI				AML	AML		
	comp=E,136μm,0.6s						
ARCI				AML	AML		
	comp=E,136μm,0.6s						
ARCI				AML	AML		
	comp=N,96μm,0.7s						
CRE	**Caprese Michel**	**1.30**	**317**	⇑P	**Pb**	**14 51 00.7**	**+0.1**
CRE				AML	AML		
	comp=E,224μm,0.3s						
CRE				AML	AML		
	comp=N,349μm,0.3s						
CRE				AML	AML		
	comp=E,223μm,0.3s						
CRE				AML	AML		
	comp=N,349μm,0.3s						
TRIV	**Trivento**	**1.37**	**131**	⇓P	**Pg**	**14 51 02.4**	**+0.1**
TRIV				AML	AML		
	comp=N,345μm,1.0s						
TRIV				AML	AML		
	comp=E,355μm,1.0s						
TRIV				AML	AML		
	comp=E,355μm,1.0s						
TRIV				AML	AML		
	comp=N,345μm,1.0s						
MAON	**Monte Argentar**	**1.52**	**261**	P	**Pn**	**14 51 02.7**	**-0.7**
MAON				AML	AML		
	comp=E,163μm,0.4s						
MAON				AML	AML		
	comp=N,121μm,0.8s						
MAON				AML	AML		
	comp=E,163μm,0.4s						
MAON				AML	AML		
	comp=N,121μm,0.8s						
RUFI	**Rufina**	**1.68**	**315**	P	**Pn**	**14 51 05.2**	**-0.3**
CASP	**Castiglione de**	**1.70**	**275**	⇑P	**Pn**	**14 51 05.2**	**-0.6**
CASP				AML	AML		
	comp=E,47μm,0.5s						
CASP				AML	AML		
	comp=N,44μm,0.7s						
CASP				AML	AML		
	comp=N,44μm,0.7s						
CASP				AML	AML		
	comp=E,47μm,0.5s						
MELA	**Melanico ??? S**	**1.75**	**123**	⇑P	**Pb**	**14 51 07.6**	**-0.7**
MELA				AML	AML		
	comp=N,578μm,1.6s						
MELA				AML	AML		
	comp=E,474μm,1.5s						
MELA				AML	AML		
	comp=E,482μm,1.5s						
MELA				AML	AML		
	comp=N,678μm,0.7s						
MELA				AML	AML		
	comp=E,370μm,0.6s						
MELA				AML	AML		
	comp=N,504μm,0.4s						
MELA				AML	AML		
	comp=E,353μm,0.6s						
MELA				AML	AML		
	comp=N,678μm,0.8s						
PAOL	**Paolisi**	**1.95**	**147**	P	**Pn**	**14 51 07.6**	**-1.7**
PAOL				S	**Sg**	**14 51 38.0**	**-0.6**
PAOL				AML	AML		
	comp=N,74μm,0.9s						
PAOL				AML	AML		
	comp=E,75μm,1.5s						
PAOL				AML	AML		
	comp=E,60μm,0.4s						
PAOL				AML	AML		
	comp=E,155μm,0.7s						
PAOL				AML	AML		
	comp=N,62μm,0.5s						
PAOL				AML	AML		
	comp=N,251μm,1.5s						
VBKN	**Vesuvio Bunker**	**2.07**	**152**	⇑P	**Pg**	**14 51 16.1**	**+0.4**
MNTV	**Mantova**	**3.01**	**326**	S	**Sg**	**14 52 12.0**	**-0.8**
AMUR	**Altamura**	**3.12**	**123**	⇓P	**Pn**	**14 51 26.0**	**+0.7**
AMUR				AML	AML		
	comp=E,63μm,0.4s						
AMUR				AML	AML		
	comp=N,70μm,0.3s						
CGRP	**Cima Grappa**	**3.35**	**343**	⇓P	**Pn**	**14 51 29.8**	**+1.1**
CGRP				AML	AML		
	comp=E,94μm,0.6s						
CGRP				AML	AML		
	comp=N,77μm,0.5s						
CGRP				AML	AML		
	comp=E,94μm,0.6s						
CGRP				AML	AML		
	comp=N,77μm,0.5s						
ZEN8	**San Zeno di Mo**	**3.44**	**330**	S	**Sn**	**14 52 09.0**	**-1.7**
LUSI	**Trento, Gardas**	**3.65**	**335**	⇓P	**Pn**	**14 51 34.0**	**+1.2**
LUSI				AML	AML		
	comp=E,54μm,0.6s						
LUSI				AML	AML		
	comp=N,76μm,0.7s						
LUSI				AML	AML		
	comp=N,60μm,0.3s						
LUSI				AML	AML		
	comp=E,47μm,0.4s						
CIMO	**Cimolais**	**3.67**	**352**	S	**Sn**	**14 52 19.0**	**+2.6**
SALB	**San Lorenzo Be**	**3.68**	**138**	⇑P	**Pn**	**14 51 36.6**	**+3.5**
TDS	**Terranova Siba**	**3.85**	**140**	⇓P	**Pn**	**14 51 34.5**	**-0.8**
MABI	**Malga Bissina**	**3.88**	**332**	P	**Pn**	**14 51 36.7**	**+0.7**
MABI				AML	AML		
	comp=E,23μm,0.4s						
MABI				AML	AML		
	comp=N,27μm,0.6s						
MABI				AML	AML		
	comp=E,23μm,0.4s						
MABI				AML	AML		
	comp=N,26μm,0.3s						
ACOM	**Acomizza, Ital**	**3.88**	**4**	⇑P	**Pn**	**14 51 37.6**	**+1.6**
ACOM				AML	AML		
	comp=N,34μm,0.4s						
HCY	**Herceg Novi**	**3.94**	**91**	⇑*i*Pn	**Pn**	**14 51 36.9**	**+0.2**
HCY				*i* Sn	**Sn**	**14 52 24.2**	**+1.2**
BRY	**Bratogost**	**3.96**	**85**	*e*Pn	**Pn**	**14 51 38.0**	**+0.9**
BRY				*i* Sn	**Sn**	**14 52 25.5**	**+1.8**
MILN	**Milano**	**3.99**	**316**	P	**Pb**	**14 51 47.4**	**+0.9**
KOSI	**Kohlern**	**4.00**	**342**	⇑P	**Pn**	**14 51 39.1**	**+1.6**
ABTA	**Abfaltersbach**	**4.10**	**354**	*e*Pn	**Pn**	**14 51 39.4**	**+0.5**
	comp=N,2.9nm,0.3s						
CAR1	**CAROLEI**	**4.12**	**145**	P	**Pn**	**14 51 37.7**	**-1.4**
ISTR	**Stromboli Gino**	**4.18**	**158**	⇓P	**Pb**	**14 51 48.0**	**-1.6**
CEME	**Cevo**	**4.25**	**90**	*e*Pn	**Pn**	**14 51 41.5**	**+0.6**
CEME				*i* Sn	**Sn**	**14 52 31.7**	**+1.1**
BUM	**Brajici-Budva**	**4.25**	**93**	⇑*i*Pn	**Pn**	**14 51 41.4**	**+0.4**
BUM				*i* Sn	**Sn**	**14 52 31.4**	**+0.7**
NKME	**Niksic**	**4.27**	**87**	⇑*i*Pn	**Pn**	**14 51 42.1**	**+1.0**
NKME				*i* Sn	**Sn**	**14 52 32.6**	**+1.6**
LLI	**Lipari**	**4.43**	**162**	⇑P	**Pn**	**14 51 46.8**	**+3.4**
DRME	**Dracevica, Mon**	**4.48**	**94**	*e*Pn	**Pn**	**14 51 44.5**	**+0.4**
DRME				*i* Sn	**Sn**	**14 52 36.8**	**+0.5**
KOME	**Kolasin**	**4.68**	**86**	*e*Pn	**Pn**	**14 51 47.9**	**+1.0**
KOME				*i* Sn	**Sn**	**14 52 42.8**	**+1.5**
IVA	**Berane**	**4.96**	**85**	⇑*i*Pn	**Pn**	**14 51 51.8**	**+1.1**
IVA				*i* Sn	**Sn**	**14 52 49.6**	**+1.5**
CONA	**Conrad Observa**	**5.59**	**19**	*e*Pn	**Pn**	**14 52 01.2**	**+1.9**
	comp=N,1.3nm,0.3s						
KHC	**Kasperske Hory**	**6.47**	**2**	*e*PN	**Pn**	**14 52 11.6**	**+0.3**
KHC				*e*SN	**Sn**	**14 53 23.3**	**-1.9**
CLL	**Collm**	**8.64**	**359**	*e*(Sg)	**Sg**	**14 55 12.0**	**-1.1**

*IDC **30** 15:01:09.4±2.9, 17°.21S×174°.26W, h109km±30km, mb3.8/6, mbtmp4.3/7, Error ellipse: s-maj=39.3km s-min=17.6km az=126.0*

*NEIC **30** 15:01:09.5±1.1, 17°.24S±0°.09×174°.2W±0°.1, h109km±7km, mb4.5/12, Error ellipse: s-maj=19.6km s-min=12.6km az=107.0*

ISC 30 15:01:09.7±0.8, 17°.25S±0°.08×174°.1W±0°.1, h124km, n26, σ2s16/24, mb4.4/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.01**	**34**	P	**Pn**	**15 02 09.8**	**+0.2**
	155nm,0.3s,baz=221,slow=2.8,SNR=140						
AFI				S	**Sn**	**15 02 51.9**	**-4.1**
	323nm,0.3s,baz=198,slow=20,SNR=19						
AFI	**Afiamalu**	**4.01**	**34**		**Pn**	**15 02 09.3**	**-0.3**
NIUE	**Niue**	**4.38**	**115**		**Pn**	**15 02 15.3**	**+0.9**
MSVF	**Nonsavu**	**7.49**	**265**	P	Pn	15 03 02.1	+5.6
	9.2nm,0.7s,baz=73,slow=13,SNR=6.0						
URZ	**Urewera**	**22.30**	**198**	P	**P**	**15 05 56.6**	**-0.4**
	12nm,0.4s,baz=5.7,slow=3.1,SNR=36						
URZ				S	**S**	**15 09 46.1**	**-7.5**
	12nm,1.1s,baz=331,slow=19,SNR=2.5						
	12nm,0.4s						
HIZ	**Hauiti**	**23.29**	**202**	P	**P**	**15 06 07.3**	**+0.9**
BKZ	**Black Stump Fm**	**23.33**	**199**	P	**P**	**15 06 06.8**	**-0.1**
LTZ	**Lake Taylor**	**27.97**	**202**	P	**P**	**15 06 47.8**	**-0.9**
OXZ	**Oxford**	**28.53**	**201**	P	**P**	**15 06 53.4**	**-0.2**
OXZ				IAmb	IAmb	15 07 02.3	
	comp=Z,7.4nm,0.6s						
RPZ	**Rata Peaks**	**29.22**	**202**	P	**P**	**15 07 02.5**	**+2.7**
	comp=Z,4.1nm,0.6s,baz=74,slow=12,SNR=0.9						
	comp=Z,4.1nm,0.6s						
WR0	**Warramunga Arr**	**48.59**	**258**	P	**P**	**15 09 41.1**	**+0.1**
WB2	**Warramunga Arr**	**48.77**	**258**	P	**P**	**15 09 42.5**	**0.0**
WB2				IAmb	IAmb	15 09 50.2	
	comp=Z,11nm,1.5s						
WRAB	**Tennant Creek**	**48.77**	**258**	P	**P**	**15 09 42.5**	**0.0**
WRAB				IAmb	IAmb	15 09 49.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**48.78**	**258**	P	**P**	**15 09 42.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.2,SNR=24						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**48.78**	**258**	P	**P**	**15 09 42.2**	**-0.4**
AS31	**Alice Springs**	**48.91**	**253**	P	**P**	**15 09 44.1**	**+0.6**
ASAR	**Alice Springs**	**48.91**	**253**	P	**P**	**15 09 43.7**	**+0.2**
	comp=Z,3.3nm,0.5s,baz=90,slow=8.5,SNR=95						
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**48.91**	**253**	P	**P**	**15 09 43.3**	**-0.2**
PDAR	**Pinedale Array**	**84.09**	**42**	P	**P**	**15 13 28.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=211,slow=4.7,SNR=4.2						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**84.38**	**11**	P	**P**	**15 13 28.9**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=224,slow=5.5,SNR=18						
	comp=Z,0.3nm,0.5s						
J25K	**Salcha River,**	**84.53**	**12**	P	**P**	**15 13 30.7**	**+2.2**
J25K				IAmb	IAmb	15 13 32.0	
	comp=Z,10nm,1.5s						
POKR	**Poker Plat Res**	**84.59**	**11**	P	**P**	**15 13 30.3**	**+1.6**
POKR				IAmb	IAmb	15 13 59.9	
	comp=Z,6.4nm,1.5s						
H03S2	**Juan Fernandez**	**84.76**	**124**	T	T	16 46 32.9	
	baz=250,slow=75,SNR=6.0						
H03S1	**Juan Fernandez**	**84.77**	**124**	T	T	16 46 33.8	
	baz=250,slow=75,SNR=7.3						
H03S3	**Juan Fernandez**	**84.77**	**124**	T	T	16 46 30.1	
	baz=250,slow=75,SNR=5.9						
DAWY	**Dawson**	**85.37**	**15**	P	**P**	**15 13 34.3**	**+1.6**
DAWY				IAmb	IAmb	15 13 36.9	
	comp=Z,6.8nm,1.4s						

*PRU **30** 15:03:26.5±0.0, 42°.87N×13°.60E, h0km*

ROM 30 15:03:25.3±0.0, 42°.851N±0°.002×13°.218E±0°.004, h9km, ML2.8/32, 11C-13D, Error ellipse: s-maj=0.2km s-min=0.2km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**284**	P	Pg	15 03 27.3	+0.1
T1245				S	Sg	15 03 28.5	-0.1
T1245				AML	AML		
T1245				AML	AML		
T1241	**Roccafluvione,**	**0.16**	**88**	P	Pg	15 03 29.6	+0.8

T1241			S	Sg	15 03 32.2	+1.1
T1241			AML	AML		
	comp=N,13400µm,0.6s					
T1241			AML	AML		
	comp=E,27550µm,0.9s					
T1241			AML	AML		
	comp=E,22632µm,0.3s					
T1241			AML	AML		
	comp=N,13367µm,0.6s					
AM05	**Amandola Campo**	**0.16 38**	P	Pg	15 03 29.4	+0.6
AM05			S	Sg	15 03 32.0	+0.8
AM05			AML	AML		
	comp=N,1310µm,0.1s					
AM05			AML	AML		
	comp=E,4265µm,0.1s					
AM05			AML	AML		
	comp=N,5260µm,0.1s					
AM05			AML	AML		
	comp=E,18600µm,0.1s					
AM05			AML	AML		
	comp=E,18590µm,0.1s					
AM05			AML	AML		
	comp=E,4264µm,0.1s					
AM05			AML	AML		
	comp=N,5260µm,0.1s					
AM05			AML	AML		
	comp=N,1313µm,0.1s					
FEMA	**Monte Fema**	**0.17 312**	P	Pg	15 03 29.7	+0.7
FEMA			S	Sg	15 03 32.7	+1.2
FEMA			AML	AML		
	comp=N,23600µm,0.5s					
FEMA			AML	AML		
	comp=E,29450µm,0.2s					
FEMA			AML	AML		
	comp=N,23600µm,0.4s					
FEMA			AML	AML		
	comp=E,29500µm,0.2s					
FEMA			AML	AML		
	comp=N,18861µm,0.2s					
FEMA			AML	AML		
	comp=E,29470µm,0.2s					
T1204	**Amatrice, Fraz**	**0.19 157**	P	Pg	15 03 30.2	+0.8
T1204			S	Sg	15 03 33.4	+1.3
T1204			AML	AML		
	comp=N,5800µm,0.9s					
T1204			AML	AML		
	comp=E,7755µm,0.5s					
T1204			AML	AML		
	comp=N,5790µm,0.9s					
T1204			AML	AML		
	comp=N,5259µm,0.3s					
T1204			AML	AML		
	comp=E,7456µm,0.2s					
GUMA	**Gualdo di Mace**	**0.23 22**	P	Pg	15 03 30.8	+0.8
GUMA			S	Sg	15 03 34.8	+1.6
GUMA			AML	AML		
	comp=E,10750µm,0.3s					
GUMA			AML	AML		
	comp=N,11150µm,1.6s					
GUMA			AML	AML		
	comp=E,13100µm,0.2s					
GUMA			AML	AML		
	comp=N,9495µm,0.2s					
GUMA			AML	AML		
	comp=N,11930µm,0.3s					
GUMA			AML	AML		
	comp=N,12350µm,0.3s					
GUMA			AML	AML		
	comp=E,12550µm,0.6s					
GUMA			AML	AML		
	comp=E,14035µm,0.3s					
GUMA			AML	AML		
	comp=N,9497µm,0.2s					
GUMA			AML	AML		
	comp=E,13081µm,0.2s					
GUMA			AML	AML		
	comp=E,10756µm,0.3s					
GUMA			AML	AML		
	comp=N,10346µm,0.2s					
T1243	**Rocca Santa Ma**	**0.23 132**	P	Pg	15 03 30.5	+0.5
T1243			S	Sg	15 03 34.4	+1.2
SMA1	**SAN MARTINO**	**0.24 159**	P	Pg	15 03 30.8	+0.6
SMA1			S	Sg	15 03 34.7	+1.3
SMA1			AML	AML		
	comp=E,4420µm,0.6s					
SMA1			AML	AML		
	comp=N,5835µm,0.3s					
SMA1			AML	AML		
	comp=N,5830µm,0.3s					
SMA1			AML	AML		
	comp=E,4425µm,0.6s					
SMA1			AML	AML		
	comp=N,5834µm,0.3s					
SMA1			AML	AML		
	comp=E,4120µm,0.6s					
CSP1	**Cessapalombo**	**0.24 358**	P	Pg	15 03 30.8	+0.5
CSP1			S	Sg	15 03 34.8	+1.2
CSP1			AML	AML		
	comp=E,12100µm,1.2s					
CSP1			AML	AML		
	comp=N,12190µm,0.5s					
CSP1			AML	AML		
	comp=E,11536µm,0.3s					
CSP1			AML	AML		
	comp=N,11883µm,0.2s					
T1217	**Poggiodomo (PG**	**0.25 237**	P	Pb	15 03 31.4	-0.7
T1217			S	Sb	15 03 35.7	-0.9
T1217			AML	AML		
	comp=E,3020µm,0.2s					
T1217			AML	AML		
	comp=N,2960µm,0.3s					
T1217			AML	AML		
	comp=E,2940µm,0.2s					
T1217			AML	AML		
	comp=N,3005µm,0.3s					
T1217			AML	AML		
	comp=E,3015µm,0.2s					
T1217			AML	AML		
	comp=N,2965µm,0.4s					
T1217			AML	AML		
	comp=E,2945µm,0.2s					
T1217			AML	AML		
	comp=N,3005µm,0.4s					
T1217			AML	AML		
	comp=E,3015µm,0.2s					
T1217			AML	AML		
	comp=E,2945µm,0.2s					
T1217			AML	AML		
	comp=N,2960µm,0.4s					
T1217			AML	AML		
	comp=N,3000µm,0.4s					
T1217			AML	AML		
	comp=N,2512µm,0.4s					
T1217			AML	AML		
	comp=E,2944µm,0.2s					
T1217			AML	AML		
	comp=N,2380µm,0.4s					
T1217			AML	AML		
	comp=E,3016µm,0.2s					
T1215	**Vallo di Nera,**	**0.26 259**	P	Pb	15 03 31.5	-0.7
T1215			S	Sb	15 03 35.8	-1.1
T1215			AML	AML		
	comp=N,3940µm,1.3s					
T1215			AML	AML		
	comp=E,3545µm,0.3s					
T1215			AML	AML		
	comp=N,3810µm,1.3s					
T1215			AML	AML		
	comp=E,3385µm,0.2s					
T1215			AML	AML		
	comp=E,3540µm,0.3s					
T1215			AML	AML		
	comp=N,3802µm,1.3s					
T1215			AML	AML		
	comp=E,3390µm,0.2s					
T1215			AML	AML		
	comp=N,3474µm,0.2s					
T1215			AML	AML		
	comp=N,3613µm,0.2s					
T1215			AML	AML		
	comp=E,3387µm,0.2s					
T1215			AML	AML		
	comp=E,3547µm,0.3s					
LNSS	**Leonessa**	**0.28 208**	P	Pb	15 03 32.0	-0.6
LNSS			S	Sb	15 03 36.9	-0.5
LNSS			AML	AML		
	comp=E,2905µm,0.3s					
LNSS			AML	AML		
	comp=N,5425µm,0.4s					
LNSS			AML	AML		
	comp=E,2910µm,0.3s					
LNSS			AML	AML		
	comp=N,5420µm,0.4s					
LNSS			AML	AML		
	comp=E,2908µm,0.3s					
LNSS			AML	AML		
	comp=N,4832µm,0.1s					
MNTP	**Montappone**	**0.34 33**	P	Pb	15 03 33.2	-0.3
MNTP			AML	AML		
	comp=E,4610µm,0.3s					
MNTP			AML	AML		
	comp=N,4580µm,0.3s					
MNTP			AML	AML		
	comp=N,4583µm,0.3s					
MNTP			AML	AML		
	comp=E,4477µm,0.2s					
RM33	**Pellescritta (**	**0.34 180**	P	Pb	15 03 33.0	-0.6
RM33			AML	AML		
	comp=E,2215µm,0.7s					
RM33			AML	AML		
	comp=N,1400µm,0.4s					
RM33			AML	AML		
	comp=N,1365µm,0.7s					
RM33			AML	AML		
	comp=N,1395µm,0.4s					
RM33			AML	AML		
	comp=E,2220µm,0.6s					
RM33			AML	AML		
	comp=E,2100µm,0.6s					
RM33			AML	AML		
	comp=E,1799µm,0.3s					
RM33			AML	AML		
	comp=N,1398µm,0.4s					
RM33			AML	AML		
	comp=N,1359µm,0.4s					
RM33			AML	AML		
	comp=E,2036µm,0.4s					
CAMP	**Campotosto**	**0.34 156**	P	Pg	15 03 32.8	+0.6
CAMP			AML	AML		
	comp=E,1735µm,1.1s					
CAMP			AML	AML		
	comp=N,1890µm,0.6s					
CAMP			AML	AML		
	comp=N,1726µm,0.3s					
CAMP			AML	AML		
	comp=E,1378µm,0.3s					
MDAR	**Monte D'Aria**	**0.35 351**	P	Pg	15 03 32.6	+0.4
MDAR			S	Sb	15 03 38.4	-0.9
MDAR			AML	AML		
	comp=N,3985µm,0.2s					
MDAR			AML	AML		
	comp=E,5244µm,0.2s					
OFFI	**Offida**	**0.35 76**	P	Pb	15 03 33.5	-0.3
OFFI			AML	AML		
	comp=E,4330µm,0.6s					
OFFI			AML	AML		
	comp=N,6605µm,0.6s					
OFFI			AML	AML		
	comp=E,4331µm,0.6s					
OFFI			AML	AML		
	comp=N,6602µm,0.6s					
SEF1	**Sefro**	**0.36 326**	P	Pg	15 03 32.9	+0.5
SEF1			S	Sb	15 03 38.9	-0.7
SEF1			AML	AML		
	comp=N,12900µm,0.2s					
SEF1			AML	AML		
	comp=N,12850µm,0.2s					
SEF1			AML	AML		
	comp=E,8515µm,0.2s					
SEF1			AML	AML		
	comp=E,8514µm,0.2s					
SEF1			AML	AML		
	comp=N,12881µm,0.1s					
TERO	**Teramo**	**0.36 129**	P	Pg	15 03 32.9	+0.3
TERO			S	Sb	15 03 38.6	-1.1
TERO			AML	AML		
	comp=E,6825µm,0.3s					
TERO			AML	AML		
	comp=N,3475µm,0.6s					
TERO			AML	AML		
	comp=E,6410µm,0.3s					
TERO			AML	AML		
	comp=E,6830µm,0.3s					
TERO			AML	AML		
	comp=N,3470µm,0.6s					
TERO			AML	AML		
	comp=N,3305µm,0.6s					
TERO			AML	AML		
	comp=N,3007µm,0.5s					
TERO			AML	AML		
	comp=E,6409µm,0.3s					
TERO			AML	AML		
	comp=E,6829µm,0.3s					
TERO			AML	AML		
	comp=N,2906µm,0.5s					
PIO1	**Pioraco**	**0.37 332**	P	Pg	15 03 33.0	+0.4
PIO1			S	Sb	15 03 39.4	-0.5
PIO1			AML	AML		
	comp=E,2935µm,0.5s					
PIO1			AML	AML		
	comp=N,4740µm,1.2s					
PIO1			AML	AML		
	comp=E,2553µm,0.3s					
PIO1			AML	AML		
	comp=N,4095µm,0.3s					
SSM1	**San Severino M**	**0.38 355**	P	Pg	15 03 33.2	+0.4
FIU1	**Fiuminata**	**0.40 328**	P	Pg	15 03 33.5	+0.3
FIU1			AML	AML		
	comp=E,3509µm,0.2s					
FIU1			AML	AML		
	comp=N,2741µm,0.2s					
GAG1	**Gagliole**	**0.40 344**	P	Pg	15 03 33.8	+0.5
GAG1			AML	AML		
	comp=E,11900µm,0.3s					
GAG1			AML	AML		
	comp=N,9870µm,0.8s					
GAG1			AML	AML		
	comp=E,11850µm,0.3s					
GAG1			AML	AML		
	comp=N,9845µm,0.8s					
GAG1			AML	AML		
	comp=E,11884µm,0.3s					
GAG1			AML	AML		
	comp=N,7365µm,0.1s					
T1247	**Pizzolo (AQ)**	**0.41 172**	⇓P	Pg	15 03 34.0	+0.6
T1247			AML	AML		
	comp=E,2450µm,0.3s					
T1247			AML	AML		
	comp=N,2650µm,1.1s					
T1247			AML	AML		
	comp=E,2137µm,0.1s					
T1247			AML	AML		
	comp=N,2443µm,0.2s					
T1211	**Morro Reatino**	**0.42 220**	P	Pg	15 03 33.9	+0.4
T1211			AML	AML		
	comp=E,992µm,1.6s					
T1211			AML	AML		
	comp=N,1920µm,1.2s					
T1211			AML	AML		
	comp=N,1915µm,1.2s					
T1211			AML	AML		
	comp=E,991µm,1.6s					
T1211			AML	AML		
	comp=E,982µm,0.1s					
T1211			AML	AML		
	comp=E,1032µm,0.1s					
T1211			AML	AML		
	comp=N,1835µm,0.2s					
T1211			AML	AML		
	comp=N,1828µm,0.2s					
ARRO	**Arrone**	**0.43 231**	P	Pb	15 03 34.4	-0.6
ARRO			AML	AML		
	comp=N,822µm,1.0s					
ARRO			AML	AML		
	comp=N,823µm,1.0s					
ARRO			AML	AML		
	comp=E,810µm,0.2s					
ARRO			AML	AML		
	comp=N,786µm,0.2s					
ARRO			AML	AML		
	comp=E,809µm,0.2s					
SNTG	**Esanatoglia**	**0.45 333**	P	Pg	15 03 34.5	+0.3
SNTG			AML	AML		
	comp=E,1965µm,1.2s					
SNTG			AML	AML		
	comp=N,1920µm,1.5s					
SNTG			AML	AML		
	comp=E,1975µm,1.2s					
SNTG			AML	AML		
	comp=N,2260µm,1.5s					
SNTG			AML	AML		
	comp=E,1782µm,0.1s					
SNTG			AML	AML		
	comp=E,1756µm,0.1s					
SNTG			AML	AML		
	comp=N,1792µm,0.2s					
SNTG			AML	AML		
	comp=N,2034µm,0.1s					
ASSB	**Assisi San Ben**	**0.45 295**	P	Pg	15 03 34.6	+0.4
ASSB			AML	AML		
	comp=E,4495µm,1.4s					
ASSB			AML	AML		
	comp=N,7690µm,0.2s					
ASSB			AML	AML		
	comp=N,7692µm,0.2s					
ASSB			AML	AML		
	comp=E,3765µm,0.1s					
EL6	**Elcito**	**0.49 350**	P	Pg	15 03 35.1	+0.3
EL6			AML	AML		
	comp=E,5200µm,0.2s					
EL6			AML	AML		
	comp=N,4325µm,0.2s					
EL6			AML	AML		
	comp=N,4330µm,0.2s					
EL6			AML	AML		
	comp=E,5201µm,0.2s					
EL6			AML	AML		
	comp=N,4326µm,0.2s					
TRTR	**Tortoreto Alta**	**0.51 95**	⇓P	Pb	15 03 37.0	+0.5
TRTR			AML	AML		
	comp=E,3555µm,0.6s					
TRTR			AML	AML		
	comp=N,2930µm,0.5s					
TRTR			AML	AML		
	comp=E,3559µm,0.6s					
TRTR			AML	AML		
	comp=N,2928µm,0.5s					
CESX	**Cesi**	**0.53 243**	P	Pg	15 03 35.4	-0.2
ATCC	**AVT- Casa Cast**	**0.54 308**	P	Pg	15 03 36.3	+0.5
ATCC			AML	AML		
	comp=E,3750µm,0.1s					
ATCC			AML	AML		
	comp=N,3655µm,1.4s					
ATCC			AML	AML		
	comp=E,3752µm,0.1s					
ATCC			AML	AML		
	comp=N,3310µm,0.1s					
FOSV	**Fossato di Vic**	**0.56 323**	P	Pg	15 03 36.5	+0.3
FOSV			S	Sb	15 03 45.4	0.0
FOSV			AML	AML		
	comp=N,4915µm,0.3s					
FOSV			AML	AML		
	comp=N,4910µm,0.3s					
FOSV			AML	AML		
	comp=E,5930µm,0.2s					
FOSV			AML	AML		
	comp=N,4915µm,0.3s					
FOSV			AML	AML		
	comp=E,5931µm,0.2s					
FIAM	**Fiamignano**	**0.59 187**	S	Sb	15 03 47.0	+0.7
PP3	**Marolino**	**0.60 28**	P	Pb	15 03 37.8	-0.2
PP3			AML	AML		
	comp=E,3115µm,0.2s					
PP3			AML	AML		
	comp=N,2935µm,0.4s					
PP3			AML	AML		
	comp=N,2920µm,0.4s					
PP3			AML	AML		
	comp=N,2935µm,0.4s					
PP3			AML	AML		
	comp=E,3115µm,0.3s					
PP3			AML	AML		
	comp=E,3180µm,0.3s					
PP3			AML	AML		
	comp=E,3116µm,0.3s					
PP3			AML	AML		
	comp=E,3182µm,0.3s					
PP3			AML	AML		
	comp=N,2809µm,0.2s					
PP3			AML	AML		
	comp=N,2833µm,0.3s					
MMUR	**Monte Murano**	**0.61 345**	P	Pg	15 03 37.5	+0.3
VCEL	**Villa Celiera**	**0.65 135**	⇑P	Pb	15 03 38.4	-0.4
VCEL			AML	AML		
	comp=E,1006µm,0.5s					
VCEL			AML	AML		
	comp=N,1134µm,1.1s					
VCEL			AML	AML		
	comp=E,1004µm,0.5s					
VCEL			AML	AML		
	comp=N,1135µm,1.1s					
VCEL			AML	AML		
	comp=E,1005µm,0.5s					
VCEL			AML	AML		
	comp=N,1108µm,0.6s					
MURB	**Monte Urbino**	**0.65 309**	P	Pg	15 03 38.3	+0.3
MURB			AML	AML		
	comp=N,3975µm,0.9s					
MURB			AML	AML		
	comp=E,5845µm,0.2s					
MURB			AML	AML		
	comp=N,3980µm,0.9s					
MURB			AML	AML		
	comp=E,4785µm,0.2s					
MURB			AML	AML		
	comp=N,4260µm,0.2s					
MURB			AML	AML		
	comp=N,4261µm,0.2s					
MURB			AML	AML		
	comp=E,4786µm,0.2s					
MURB			AML	AML		
	comp=N,3960µm,0.2s					
MURB			AML	AML		
	comp=E,5846µm,0.2s					
ARVD	**Arcevia**	**0.68 343**	⇑P	Pg	15 03 38.5	+0.1
ARVD			S	Sb	15 03 50.0	+1.2
ARVD			AML	AML		
	comp=E,1195µm,0.5s					
ARVD			AML	AML		
	comp=N,802µm,0.5s					
ARVD			AML	AML		
	comp=N,540µm,0.1s					
ARVD			AML	AML		
	comp=E,953µm,0.2s					
ATFO	**Monte Foce - G**	**0.70 318**	P	Pg	15 03 39.0	+0.1
ATFO			AML	AML		
	comp=N,854µm,0.4s					
ATFO			AML	AML		
	comp=E,1075µm,0.6s					
ATFO			AML	AML		
	comp=E,1063µm,0.3s					
ATFO			AML	AML		
	comp=N,853µm,0.5s					
ATTE	**AVT- Monte Tez**	**0.72 299**	P	Pg	15 03 39.4	+0.1
ATTE			AML	AML		
	comp=E,538µm,0.2s					
ATTE			AML	AML		
	comp=N,458µm,0.8s					
ATTE			AML	AML		
	comp=E,538µm,0.2s					
ATTE			AML	AML		
	comp=N,421µm,0.4s					
T0110	**Collepietro**	**0.75 146**	⇓P	Pg	15 03 39.6	-0.1
T0110			AML	AML		
	comp=N,1375µm,0.6s					
T0110			AML	AML		
	comp=E,965µm,0.8s					
T0110			AML	AML		
	comp=N,1373µm,0.6s					
T0110			AML	AML		
	comp=E,964µm,0.8s					
AOI	**Ancona**	**0.75 22**	P	Pb	15 03 40.5	-0.2
AOI			S	Sn	15 03 54.0	+0.3
AOI			AML	AML		
	comp=E,654µm,0.3s					
AOI			AML	AML		
	comp=N,556µm,0.6s					
AOI			AML	AML		
	comp=E,655µm,0.3s					
AOI			AML	AML		
	comp=N,551µm,0.1s					

FRON	**Frontone**	**0.76 332**	⇑P	Pg	15 03 40.0	0.0
FRON			AML	AML		
	comp=N,1310μm,0.4s					
FRON			AML	AML		
	comp=E,964μm,0.7s					
FRON			AML	AML		
	comp=E,877μm,0.3s					
FRON			AML	AML		
	comp=N,1306μm,0.4s					
ATVO	**AVT- Monte Val**	**0.80 312**	P	Pg	15 03 40.6	-0.1
ATVO			AML	AML		
	comp=E,1010μm,0.2s					
ATVO			AML	AML		
	comp=N,670μm,0.7s					
ATVO			AML	AML		
	comp=N,659μm,0.3s					
ATVO			AML	AML		
	comp=E,1009μm,0.2s					
MGAB	**Montegabbione**	**0.81 275**	⇓P	Pb	15 03 41.8	+0.1
MGAB			AML	AML		
	comp=E,716μm,0.9s					
MGAB			AML	AML		
	comp=E,724μm,1.0s					
MGAB			AML	AML		
	comp=N,741μm,0.3s					
MGAB			AML	AML		
	comp=N,778μm,0.3s					
MGAB			AML	AML		
	comp=E,682μm,0.4s					
MGAB			AML	AML		
	comp=N,778μm,0.3s					
MGAB			AML	AML		
	comp=N,741μm,0.3s					
MGAB			AML	AML		
	comp=E,719μm,0.3s					
ATPI	**Pietralunga -**	**0.85 315**	P	Pg	15 03 41.5	-0.1
ATPI			AML	AML		
	comp=E,522μm,0.7s					
ATPI			AML	AML		
	comp=N,488μm,0.5s					
ATMI	**Monte Miggiano**	**0.85 305**	⇑P	Pb	15 03 42.0	-0.2
ATMI			S	Sn	15 03 56.0	0.0
ATMI			AML	AML		
	comp=E,1166μm,1.0s					
ATMI			AML	AML		
	comp=N,1273μm,0.8s					
ATMI			AML	AML		
	comp=E,1166μm,1.0s					
ATMI			AML	AML		
	comp=E,1106μm,0.3s					
ATMI			AML	AML		
	comp=N,1230μm,0.5s					
MPAG	**Monte Paganucc**	**0.85 337**	⇓P	Pg	15 03 41.8	+0.1
MPAG			S	Sn	15 03 56.0	-0.1
MPAG			AML	AML		
	comp=E,574μm,1.1s					
MPAG			AML	AML		
	comp=N,499μm,0.4s					
MPAG			AML	AML		
	comp=N,429μm,0.3s					
MPAG			AML	AML		
	comp=E,574μm,0.9s					
MPAG			AML	AML		
	comp=E,486μm,0.2s					
PIEI	**Pieia**	**0.85 324**	S	Sn	15 03 55.0	-1.0
FSSB	**Fossombrone**	**0.90 339**	⇑P	Pg	15 03 42.9	+0.2
FSSB			S	Sn	15 03 59.0	+1.7
FSSB			AML	AML		
	comp=E,1350μm,0.2s					
FSSB			AML	AML		
	comp=N,2445μm,0.4s					
FSSB			AML	AML		
	comp=E,1349μm,0.2s					
FSSB			AML	AML		
	comp=N,2448μm,0.4s					
APEC	**Apecchio**	**0.92 321**	P	Pb	15 03 43.5	+0.1
APEC			S	Sn	15 03 58.0	+0.3
APEC			AML	AML		
	comp=N,360μm,0.3s					
SACS	**San Casciano d**	**0.96 270**	⇑P	Pn	15 03 45.3	+0.3
SACS			AML	AML		
	comp=E,299μm,0.4s					
SACS			AML	AML		
	comp=N,276μm,0.6s					
SACS			AML	AML		
	comp=N,277μm,0.6s					
SACS			AML	AML		
	comp=E,299μm,0.5s					
SACS			AML	AML		
	comp=N,285μm,0.4s					
SACS			AML	AML		
	comp=E,306μm,0.5s					
BADI	**Badiali**	**0.97 313**	⇓P	Pg	15 03 44.1	+0.1
BADI			AML	AML		
	comp=N,245μm,0.6s					
PE3	**Peglio**	**1.00 328**	⇓P	Pb	15 03 45.0	+0.2
PE3			AML	AML		
	comp=E,7μm,1.4s					
PE3			AML	AML		
	comp=N,11μm,0.7s					
VVLD	**Villa Vallelon**	**1.02 163**	P	Pb	15 03 45.1	-0.1
VVLD			AML	AML		
	comp=N,249μm,0.6s					
VVLD			AML	AML		
	comp=E,278μm,1.1s					
VVLD			AML	AML		
	comp=E,278μm,1.1s					
VVLD			AML	AML		
	comp=N,249μm,0.6s					
CAFI	**Castiglion Fio**	**1.03 298**	P	Pg	15 03 45.2	0.0
CAFI			AML	AML		
	comp=E,326μm,0.7s					
CAFI			AML	AML		
	comp=N,262μm,0.2s					
CAFI			AML	AML		
	comp=E,292μm,0.2s					
CAFI			AML	AML		
	comp=E,305μm,0.3s					
CAFI			AML	AML		
	comp=N,262μm,0.2s					
CAFI			AML	AML		
	comp=N,239μm,0.2s					
LPEL	**Lama dei Pelig**	**1.07 138**	⇓P	Pb	15 03 46.2	+0.1
LPEL			AML	AML		
	comp=N,216μm,1.3s					
LPEL			AML	AML		
	comp=E,295μm,0.6s					
LPEL			AML	AML		
	comp=E,287μm,0.5s					
LPEL			AML	AML		
	comp=N,208μm,0.5s					
CPGN	**Carpegna, Ital**	**1.15 326**	P	Pn	15 03 48.0	+0.2
CRE	**Caprese Michel**	**1.20 310**	⇓P	Pg	15 03 48.7	+0.2
CRE			AML	AML		
	comp=N,203μm,0.3s					
CRE			AML	AML		
	comp=E,196μm,0.4s					
CRE			AML	AML		
	comp=E,196μm,0.4s					
CRE			AML	AML		
	comp=N,203μm,0.3s					
TRIV	**Trivento**	**1.47 137**	⇑P	Pg	15 03 54.5	+1.1
VAGA	**Valle Agricola**	**1.62 152**	P	Pg	15 03 57.8	+1.3
BRSN	**Barisano**	**1.66 330**	S	Sg	15 04 21.0	+2.5
MRB1	**Monte Rocchett**	**2.16 142**	S	Sb	15 04 32.0	+0.4
GRAM	**Graiana**	**2.81 307**	⇓P	Pn	15 04 10.7	+0.2
GRAM			AML	AML		
	comp=E,41μm,1.0s					
GRAM			AML	AML		
	comp=N,42μm,0.4s					
GRAM			AML	AML		
	comp=E,41μm,0.5s					
GRAM			AML	AML		
	comp=N,37μm,0.4s					
PZUN	**Potenza**	**2.93 138**	P	Pg	15 04 20.3	-1.2
CMPR	**Campora**	**2.98 148**	P	Pn	15 04 15.4	+2.7
PGF	**Pioggiola**	**3.12 266**	S	Sb	15 04 56.0	-3.3
SABO	**M.te Sabotino**	**3.14 5**	⇑P	Pn	15 04 15.7	+0.8
SABO			AML	AML		
	comp=N,68μm,1.3s					
SABO			AML	AML		
	comp=E,55μm,0.7s					
SABO			AML	AML		
	comp=N,239μm,1.1s					
SABO			AML	AML		
	comp=N,59μm,0.5s					
SABO			AML	AML		
	comp=E,55μm,0.5s					
SABO			AML	AML		
	comp=E,218μm,0.6s					
MPRI	**Monte Prat**	**3.39 357**	⇑P	Pn	15 04 19.9	+1.4
MPRI			AML	AML		
	comp=E,43μm,1.0s					
MPRI			AML	AML		
	comp=N,64μm,0.9s					
MPRI			AML	AML		
	comp=E,39μm,0.5s					
MPRI			AML	AML		
	comp=E,43μm,0.6s					
MPRI			AML	AML		
	comp=N,64μm,0.9s					
LEOD	**Capriano del C**	**3.43 321**	P	Pn	15 04 22.0	+3.2
STAL	**STALIGIAL**	**3.43 354**	⇑P	Pn	15 04 19.8	+0.9
STAL			AML	AML		
	comp=E,48μm,1.4s					
STAL			AML	AML		
	comp=N,44μm,1.5s					
STAL			AML	AML		
	comp=E,44μm,0.3s					
STAL			AML	AML		
	comp=N,191μm,0.8s					
STAL			AML	AML		
	comp=E,156μm,1.0s					
CIMO	**Cimolais**	**3.50 351**	⇑P	Pn	15 04 20.8	+0.9
CIMO			AML	AML		
	comp=N,11μm,0.7s					
CIMO			AML	AML		
	comp=N,22μm,0.8s					
CIMO			AML	AML		
	comp=E,12μm,0.8s					
ZONE	**Zone**	**3.67 324**	S	Sn	15 05 09.0	+3.5
ZOU	**Zoufplan**	**3.71 357**	⇓P	Pn	15 04 23.9	+1.0
ZOU			AML	AML		
	comp=N,25μm,1.3s					
ZOU			AML	AML		
	comp=E,35μm,1.8s					
ZOU			AML	AML		
	comp=N,67μm,0.7s					
ZOU			AML	AML		
	comp=E,79μm,1.0s					
MABI	**Malga Bissina**	**3.74 330**	P	Pn	15 04 25.7	+2.3
KOSI	**Kohlern**	**3.84 341**	⇓P	Pn	15 04 26.8	+2.1
MILN	**Milano**	**3.89 314**	S	Sg	15 05 33.0	+2.8
ABTA	**Abfaltersbach**	**3.93 353**	*e*Pn	Pn	15 04 27.4	+1.6
	comp=E,8.5nm,0.4s					
TDS	**Terranova Siba**	**3.96 143**	P	Pn	15 04 28.4	+2.2
TDS			P	Pg	15 04 40.6	-0.6
BURY	**Giardini Botan**	**4.24 285**	S	Sg	15 05 39.0	-2.3
MUGIO	**Muggio**	**4.29 317**	P	Pn	15 04 31.1	+0.3
MUGIO			AML	AML		
	comp=E,14μm,1.6s					
MUGIO			AML	AML		
	comp=N,14μm,0.9s					
MUGIO			AML	AML		
	comp=N,13μm,0.4s					
MUGIO			AML	AML		
	comp=E,9μm,0.4s					
FETA	**Feichten**	**4.53 338**	*e*Pn	Pn	15 04 39.0	+4.8
	comp=E,0.8nm,0.4s					
WTTA	**Wattenberg**	**4.55 346**	*e*Pn	Pn	15 04 37.6	+3.1
	comp=E,1.4nm,0.3s					
SQTA	**Sankt Quirin**	**4.59 343**	*e*Pn	Pn	15 04 39.0	+3.9
	comp=E,1.5nm,0.2s					
WATA	**Walderalm**	**4.63 346**	*e*Pn	Pn	15 04 38.7	+3.2
	comp=E,0.8nm,0.2s					
MOTA	**Moosalm**	**4.74 342**	*e*Pn	Pn	15 04 40.5	+3.5
	comp=E,0.4nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.85 3**	*e*Pn	Pn	15 04 40.7	+2.3
	comp=E,1.4nm,0.3s					
RETA	**Reutte**	**4.95 340**	*e*Pn	Pn	15 04 42.9	+3.0
	comp=E,0.5nm,0.2s					
DAVA	**Damuels**	**5.03 333**	*e*Pn	Pn	15 04 45.4	+4.4
	comp=E,0.6nm,0.2s					
CLTB	**Caltabellotta**	**5.27 180**	S	Sn	15 05 47.0	+1.9
VLO	**Vlora**	**5.27 115**	S	Sg	15 06 12.0	-2.5
CAGR	**Agira**	**5.31 169**	⇓P	Pb	15 04 55.2	-3.2
HLNI	**Lentini**	**5.64 166**	S	Sb	15 06 12.0	+0.4
CKRC	**Cesky Krumlov**	**6.02 7**	*e*SN	Sn	15 06 02.5	-1.0
KHC	**Kasperske Hory**	**6.29 2**	*e*PN	Pn	15 04 58.8	+0.6
KHC			*e*SN	Sn	15 06 08.3	-1.8

ROM 30 15:04:22.2±0.1, 42°.855N±0°.005×13°.084E±0°.007,
h7km±1km, ML2.7/11, 6C-9D, Error ellipse: s-maj=0.7km
s-min=0.2km az=315.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**89**	P	Pg	15 04 24.1	-0.1
T1245				AML	AML		
	comp=E,33100μm,0.3s						
T1245				AML	AML		
	comp=N,51550μm,0.4s						
T1245				AML	AML		
	comp=N,51550μm,0.4s						
T1245				AML	AML		
	comp=E,32350μm,0.3s						
T1245				AML	AML		
	comp=N,52750μm,0.4s						
T1245				AML	AML		
	comp=E,33150μm,0.3s						
T1245				AML	AML		
	comp=E,33137μm,0.3s						
T1245				AML	AML		
	comp=N,51530μm,0.4s						
T1245				AML	AML		
	comp=E,32375μm,0.3s						
T1245				AML	AML		
	comp=N,52731μm,0.4s						
FEMA	**Monte Fema**	**0.11**	**347**	P	Pg	15 04 25.8	+1.1
FEMA				S	Sg	15 04 27.3	+0.9
FEMA				AML	AML		
	comp=E,6335μm,0.4s						
FEMA				AML	AML		
	comp=N,6750μm,0.4s						
FEMA				AML	AML		
	comp=E,6335μm,0.4s						
FEMA				AML	AML		
	comp=N,6745μm,0.4s						
FEMA				AML	AML		
	comp=E,5432μm,0.3s						
FEMA				AML	AML		
	comp=N,6749μm,0.4s						
T1215	**Vallo di Nera,**	**0.17**	**252**	⇑P	Pg	15 04 26.0	+0.4
T1215				S	Sg	15 04 28.6	+0.7
T1215				AML	AML		
	comp=E,1290μm,0.4s						
T1215				AML	AML		
	comp=N,1335μm,0.2s						
T1215				AML	AML		
	comp=N,773μm,0.3s						
T1215				AML	AML		
	comp=E,1290μm,0.4s						
T1215				AML	AML		
	comp=N,687μm,0.3s						
T1215				AML	AML		
	comp=E,1228μm,0.4s						
T1217	**Poggiodomo (PG**	**0.18**	**218**	⇓P	Pg	15 04 26.6	+0.8
T1217				S	Sg	15 04 29.7	+1.3
T1217				AML	AML		
	comp=E,1484μm,0.8s						
T1217				AML	AML		
	comp=N,1605μm,0.3s						
T1217				AML	AML		
	comp=E,1425μm,0.8s						
T1217				AML	AML		
	comp=N,1550μm,0.3s						
T1217				AML	AML		
	comp=E,998μm,0.3s						
T1217				AML	AML		
	comp=N,1543μm,0.3s						
T1217				AML	AML		
	comp=N,1604μm,0.3s						
T1217				AML	AML		
	comp=E,1029μm,0.3s						
AM05	**Amandola Campo**	**0.23**	**58**	⇓P	Pg	15 04 27.4	+0.6
AM05				AML	AML		
	comp=N,2895μm,0.2s						
AM05				AML	AML		
	comp=E,12450μm,0.2s						
AM05				AML	AML		
	comp=E,12500μm,0.2s						
AM05				AML	AML		
	comp=N,476μm,1.2s						
AM05				AML	AML		
	comp=E,2285μm,1.4s						
AM05				AML	AML		
	comp=E,2278μm,0.2s						
AM05				AML	AML		
	comp=N,2893μm,0.2s						
AM05				AML	AML		
	comp=E,12472μm,0.2s						
AM05				AML	AML		
	comp=N,473μm,0.2s						
T1204	**Amatrice, Fraz**	**0.25**	**136**	P	Pg	15 04 27.7	+0.5
T1204				AML	AML		
	comp=N,1831μm,0.2s						
T1204				AML	AML		
	comp=E,2445μm,0.5s						
T1204				AML	AML		
	comp=N,1832μm,0.2s						
T1204				AML	AML		
	comp=N,1827μm,0.2s						
T1204				AML	AML		
	comp=E,2320μm,0.2s						
T1204				AML	AML		
	comp=N,1829μm,0.2s						
CSP1	**Cessapalombo**	**0.25**	**20**	⇓P	Pg	15 04 27.9	+0.6
CSP1				S	Sg	15 04 31.5	+0.9
CSP1				AML	AML		
	comp=E,2165μm,0.5s						
CSP1				AML	AML		
	comp=N,2850μm,0.9s						
CSP1				AML	AML		
	comp=N,2845μm,0.9s						
CSP1				AML	AML		
	comp=E,2170μm,0.5s						
CSP1				AML	AML		
	comp=E,1891μm,0.4s						
CSP1				AML	AML		
	comp=N,2470μm,0.3s						
LNSS	**Leonessa**	**0.25**	**187**	S	Sb	15 04 33.0	-0.9
T1241	**Roccafluvione,**	**0.26**	**90**	P	Pb	15 04 28.5	-0.7
T1241				AML	AML		
	comp=E,4960μm,1.6s						
T1241				AML	AML		
	comp=N,4675μm,0.4s						
T1241				AML	AML		
	comp=N,4820μm,0.5s						
T1241				AML	AML		
	comp=N,4675μm,0.5s						
T1241				AML	AML		
	comp=N,4815μm,0.5s						
T1241				AML	AML		
	comp=E,4960μm,1.5s						
T1241				AML	AML		
	comp=E,4805μm,1.6s						
T1241				AML	AML		
	comp=E,4544μm,0.4s						
T1241				AML	AML		
	comp=N,4817μm,0.5s						
T1241				AML	AML		
	comp=N,4674μm,0.5s						
T1241				AML	AML		
	comp=E,4743μm,0.6s						
GUMA	**Gualdo di Mace**	**0.28**	**41**	⇑P	Pg	15 04 28.6	+0.9
GUMA				AML	AML		
	comp=E,12600μm,0.6s						
GUMA				AML	AML		
	comp=E,12550μm,0.6s						
GUMA				AML	AML		
	comp=N,11930μm,0.3s						
GUMA				AML	AML		
	comp=N,12350μm,0.3s						
GUMA				AML	AML		
	comp=N,11900μm,0.3s						
GUMA				AML	AML		
	comp=E,14035μm,0.3s						
GUMA				AML	AML		
	comp=E,14051μm,0.3s						
GUMA				AML	AML		
	comp=N,11917μm,0.3s						
GUMA				AML	AML		
	comp=N,12320μm,0.3s						
GUMA				AML	AML		
	comp=E,12580μm,0.6s						
T1243	**Rocca Santa Ma**	**0.31**	**120**	P	Pb	15 04 29.3	-0.9
RM33	**Pellescritta (**	**0.36**	**164**	S	Sb	15 04 37.0	+0.1
T1211	**Morro Reatino**	**0.36**	**208**	S	Sb	15 04 37.0	0.0
SNTG	**Esanatoglia**	**0.41**	**345**	⇑P	Pg	15 04 30.2	0.0
SNTG				AML	AML		
	comp=N,538μm,1.3s						
SNTG				AML	AML		
	comp=E,527μm,0.6s						
SNTG				AML	AML		
	comp=N,526μm,0.6s						
SNTG				AML	AML		
	comp=E,487μm,0.6s						
SNTG				AML	AML		
	comp=E,526μm,0.6s						
SNTG				AML	AML		
	comp=N,538μm,1.3s						
SNTG				AML	AML		
	comp=N,411μm,0.3s						
SNTG				AML	AML		
	comp=N,416μm,0.3s						
SNTG				AML	AML		
	comp=E,449μm,0.4s						
SNTG				AML	AML		
	comp=E,484μm,0.4s						
CESX	**Cesi**	**0.45**	**237**	⇓P	Pn	15 04 35.4	+0.4
TERO	**Teramo**	**0.45**	**121**	⇓P	Pb	15 04 32.8	+0.3
TERO				AML	AML		
	comp=E,938μm,0.4s						
TERO				AML	AML		
	comp=N,1245μm,0.4s						
TERO				AML	AML		
	comp=E,982μm,0.4s						
TERO				AML	AML		
	comp=N,1290μm,0.4s						
TERO				AML	AML		
	comp=N,1290μm,0.4s						
TERO				AML	AML		
	comp=N,1244μm,0.4s						
TERO				AML	AML		
	comp=E,704μm,0.1s						
TERO				AML	AML		
	comp=E,776μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.46**	**316**	P	Pg	15 04 31.4	+0.3
ATCC				S	Sb	15 04 39.6	-0.3
ATCC				AML	AML		
	comp=E,750μm,0.6s						
ATCC				AML	AML		
	comp=N,684μm,0.9s						
ATCC				AML	AML		
	comp=N,684μm,0.9s						
ATCC				AML	AML		
	comp=E,750μm,0.6s						
ATCC				AML	AML		
	comp=N,655μm,0.3s						
ATCC				AML	AML		
	comp=E,750μm,0.6s						
EL6	**Elcito**	**0.47**	**2**	⇑P	Pb	15 04 33.2	+0.2
EL6				AML	AML		
	comp=N,1111μm,0.5s						
EL6				AML	AML		
	comp=E,980μm,0.3s						
ATFO	**Monte Foce - G**	**0.64**	**324**	⇑P	Pb	15 04 36.6	+0.9
ATFO				AML	AML		
	comp=N,285μm,0.4s						
ATFO				AML	AML		
	comp=E,302μm,0.5s						
ARVD	**Arcevia**	**0.65**	**351**	⇑P	Pb	15 04 36.7	+0.7
ARVD				S	Sn	15 04 47.0	-1.6
ARVD				AML	AML		
	comp=E,285μm,0.9s						
ARVD				AML	AML		
	comp=N,158μm,1.6s						
ARVD				AML	AML		
	comp=E,243μm,0.3s						
ARVD				AML	AML		
	comp=N,140μm,0.3s						
FRON	**Frontone**	**0.71**	**339**	S	Sn	15 04 50.0	-0.1
VCEL	**Villa Celiera**	**0.72**	**129**	⇓P	Pn	15 04 39.0	0.0
VCEL				AML	AML		
	comp=E,379μm,0.5s						
VCEL				AML	AML		
	comp=N,404μm,0.6s						
PIEI	**Pieia**	**0.79**	**330**	S	Sn	15 04 52.0	0.0

MPAG	**Monte Paganucc**	**0.81 343**	⇓P	Pn	15 04 40.1	-0.1
MPAG			AML	AML		
	comp=E,162μm,0.5s					
T0110	**Collepietro**	**0.81 140**	⇓P	Pn	15 04 40.0	-0.2
T0110			AML	AML		
	comp=N,395μm,0.5s					
T0110			AML	AML		
	comp=E,420μm,0.4s					
FSSB	**Fossombrone**	**0.87 345**	S	Sn	15 04 55.0	+1.1
MCIV	**Monte Civitell**	**1.04 266**	⇓P	Pn	15 04 45.1	+1.8
VIVA	**Pratoni del Vi**	**1.13 192**	P	Pn	15 04 46.6	+2.1
VIVA			AML	AML		
	comp=N,1000μm,0.6s					
VIVA			AML	AML		
	comp=N,1000μm,0.6s					
VIVA			AML	AML		
	comp=E,1930μm,0.0s					
PAOL	**Paolisi**	**2.13 148**	S	Sg	15 05 31.0	+0.3

UCR ***30*** *15:09:21.6±1.5, 7°.35N×82°.91W, h5km, MW4.4*
ISC 30 15:09:18.6±1.3, 7°.26N±0°.07×82°.69W±0°.06, h12km, n42, σ1§82/53, 2C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**1.17**	**346**	*e*P	**Pb**	**15 09 40.9**	**0.0**
CCOL				*e*S	**Sn**	**15 09 56.9**	**+0.1**
PIRO	**Carate, Puerto**	**1.30**	**330**	*e*P	**Pn**	**15 09 41.8**	**-0.9**
BRU2	**Volcan**	**1.52**	**360**	*e*P	**Pn**	**15 09 46.3**	**+0.5**
BRU2				*e*S	**Sg**	**15 10 06.1**	**-1.6**
BRU2				*i*		15 10 16.8	
	comp=Z,262nm,0.5s						
EDSV	**San Vito**	**1.57**	**350**	*e*P	**Pn**	**15 09 47.3**	**+0.8**
EDPN	**Palmar Norte**	**1.85**	**336**	*e*P	**Pn**	**15 09 50.4**	**+0.1**
SRBA	**San Rafael, Bu**	**2.07**	**341**	*e*P	**Pn**	**15 09 53.8**	**+0.5**
EDDO	**Dominical**	**2.30**	**330**	*e*P	**Pn**	**15 09 56.5**	**+0.1**
RGM0	**Gandoca**	**2.31**	**2**	*e*P	**Pb**	**15 10 00.0**	**-0.3**
PEZE	**Perez Zeledon,**	**2.32**	**335**	*e*P	**Pn**	**15 09 57.4**	**+0.6**
CDM	**Cerro de Muert**	**2.51**	**335**	*e*P	**Pn**	**15 10 00.3**	**+0.6**
RIMA	**Rio Macho**	**2.75**	**335**	*e*P	**Pn**	**15 10 03.4**	**+0.6**
LCR2	**La Lucha 2**	**2.79**	**332**	*e*P	**Pn**	**15 10 03.8**	**+0.5**
HAYA	**Volcan Irazu**	**2.93**	**337**	*e*P	**Pn**	**15 10 06.8**	**+1.3**
HDC	**Heredia**	**3.07**	**333**	*e*P	**Pn**	**15 10 08.6**	**+1.5**
JACO	**JACO, Garabito**	**3.08**	**321**	*e*P	**Pn**	**15 10 06.9**	**-0.3**
BCIP	**Isla Barro Col**	**3.40**	**56**	*e*P	**Pn**	**15 10 14.3**	**+2.8**
BCIP				*e*S	**Sb**	**15 10 57.4**	**-2.6**
BCIP				*i*		15 11 06.1	
	comp=Z,67nm,0.7s						
UPA	**Univ. de Panam**	**3.56**	**61**	*e*P	**Pn**	**15 10 16.6**	**+3.0**
UPA				*e*S	**Sn**	**15 10 57.0**	**+1.3**
JTS	**Las Juntas de**	**3.75**	**323**	*e*P	**Pn**	**15 10 16.9**	**+0.5**
CEDE	**Laguna Cedeo**	**3.77**	**328**	*e*P	**Pn**	**15 10 18.7**	**+1.9**
INDI	**Punta indio, G**	**3.80**	**313**	*e*P	**Pn**	**15 10 17.2**	**+0.2**
COVE	**Coope Vega, Sa**	**3.83**	**334**	*e*P	**Pn**	**15 10 18.8**	**+1.4**
ACAL	**Aguas Claras**	**4.08**	**325**	⇑*e*P	**Pn**	**15 10 22.8**	**+1.9**
ACAL				*e*S	**Sn**	**15 11 08.7**	**+0.1**
SAJU	**San Juanillo,**	**4.09**	**313**	*e*P	**Pn**	**15 10 21.0**	**0.0**
ORTG	**Ortega, Santa**	**4.12**	**319**	*e*P	**Pn**	**15 10 22.2**	**+0.6**
CUI	**Cuipilapa**	**4.17**	**324**	⇑*e*P	**Pn**	**15 10 23.8**	**+1.6**
COLC	**Colonia**	**4.20**	**324**	*e*P	**Pn**	**15 10 24.4**	**+1.8**
HORNC	**Hornillas**	**4.22**	**324**	*e*P	**Pn**	**15 10 23.7**	**+0.8**
LIM1	**Limonal**	**4.25**	**324**	*e*P	**Pn**	**15 10 24.8**	**+1.5**
MESS	**Mesas**	**4.25**	**325**	*e*P	**Pn**	**15 10 24.4**	**+1.1**
VMAR	**Armenia, Volca**	**4.27**	**326**	*e*P	**Pn**	**15 10 25.2**	**+1.7**
GPS2	**Hotel Rincn d**	**4.36**	**323**	*e*P	**Pn**	**15 10 26.4**	**+1.7**
LAPC	**Finca la Perla**	**4.42**	**322**	*e*P	**Pn**	**15 10 26.9**	**+1.4**
BUEV	**Buena Vista**	**4.42**	**323**	*e*P	**Pn**	**15 10 27.3**	**+1.6**
GBS3	**Finca Las Img**	**4.44**	**322**	*e*P	**Pn**	**15 10 27.4**	**+1.5**
BUAI	**Buenos Aires**	**4.44**	**324**	*e*P	**Pn**	**15 10 24.8**	**-1.0**
PTAC	**Punta Ardita,**	**4.84**	**91**	*e*P	**Pn**	**15 10 31.1**	**-0.2**
PTAC				*e*S	**Sn**	**15 11 22.3**	**-5.1**
PTAC				*i*		15 11 29.9	
	comp=Z,24nm,0.2s						
YOTC	**Yotoco, Valle**	**7.10**	**117**	*e*P	**Pn**	**15 11 02.8**	**+0.3**
YOTC				*e*S	**Sn**	**15 12 20.7**	**-2.6**
GUY2C	**Guyana, Caldas**	**7.55**	**105**	*e*P	**Pn**	**15 11 13.2**	**+4.2**
GUY2C				*e*S	**Sn**	**15 12 34.6**	**-0.3**
SJCC	**San Jacinto, C**	**7.87**	**70**	*e*P	**Pn**	**15 11 15.1**	**+2.0**
SJCC				*e*S	**Sn**	**15 12 38.7**	**-3.5**
SJCC				*i*		15 12 49.3	
	comp=Z,3.1nm,0.5s						
NORC	**Norcasia**	**7.95**	**102**	*e*P	**Pn**	**15 11 17.9**	**+3.8**
NORC				*e*S	**Sn**	**15 12 45.9**	**+1.8**
ORTC	**Ortega, Tolima**	**8.12**	**114**	*e*P	**Pn**	**15 11 19.6**	**+3.2**
ORTC				*e*S	**Sn**	**15 12 47.6**	**-0.6**
PTBC	**PUERTO BERRIO,**	**8.20**	**95**	*e*P	Pn	15 11 23.4	+5.9
PTBC				*e*S	**Sn**	**15 12 49.1**	**-1.1**

IDC ***30*** *15:11:19.7±1.7, 43°.02N×13°.44E, h0km, mb3.3/2, mbtmp3.2/3, ML3.0/1, MS3.0/1, Error ellipse: s-maj=51.8km s-min=17.9km az=94.0*
ROM ***30*** *15:11:20.3±0.1, 42°.938N±0°.003×13°.203E±0°.005, h9km, ML3.1/45, Error ellipse: s-maj=0.3km s-min=0.3km az=60.0*
PRU ***30*** *15:11:22.1±0.0, 42°.93N×13°.88E, h10km*
ISC 30 15:11:21.0±0.8, 42°.92N±0°.02×13°.22E±0°.02, h10km±4km, n78, σ1§24/91, 22C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**202**	P	**Pg**	**15 11 22.9**	**-0.4**
T1245				S	**Sg**	**15 11 24.8**	**-0.2**
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.08**	**106**	⇓P	**Pg**	**15 11 23.0**	**-0.3**
MMO1				S	**Sg**	**15 11 24.6**	**-0.4**
AM05	**Amandola Campo**	**0.11**	**59**	P	**Pg**	**15 11 23.4**	**-0.3**
AM05				S	**Sg**	**15 11 25.4**	**-0.3**
AM05				AML	AML		
	comp=E,11400μm,0.6s						
AM05				AML	AML		
	comp=N,16850μm,0.2s						
AM05				AML	AML		
	comp=E,44000μm,0.1s						
AM05				AML	AML		
	comp=N,5215μm,0.2s						
AM05				AML	AML		
	comp=N,5220μm,0.2s						
AM05				AML	AML		
	comp=N,16850μm,1.8s						
FEMA	**Monte Fema**	**0.13**	**288**	⇑P	**Pg**	**15 11 23.6**	**-0.5**
FEMA				S	**Sg**	**15 11 25.9**	**-0.5**
FEMA				AML	AML		
	comp=E,22000μm,1.5s						
FEMA				AML	AML		
	comp=E,22000μm,1.4s						
FEMA				AML	AML		
	comp=N,26750μm,0.3s						
FEMA				AML	AML		
	comp=E,22000μm,0.6s						
GUMA	**Gualdo di Mace**	**0.16**	**30**	⇓P	**Pg**	**15 11 24.5**	**-0.1**
GUMA				S	**Sg**	**15 11 27.4**	**+0.4**
GUMA				AML	AML		
	comp=E,37150μm,0.8s						
GUMA				AML	AML		
	comp=E,47950μm,0.9s						
GUMA				AML	AML		
	comp=N,37350μm,0.3s						
GUMA				AML	AML		
	comp=E,37150μm,1.2s						
GUMA				AML	AML		
	comp=E,47950μm,1.1s						
GUMA				AML	AML		
	comp=N,37800μm,0.3s						
T1241	**Roccafluvione,**	**0.17**	**113**	⇓P	**Pg**	**15 11 25.1**	**+0.5**
T1241				S	**Sg**	**15 11 28.4**	**+1.3**
T1241				AML	AML		
	comp=N,15900μm,0.5s						
T1241				AML	AML		
	comp=E,34450μm,1.6s						
T1241				AML	AML		
	comp=E,34450μm,0.4s						
T1241				AML	AML		
	comp=N,15900μm,1.5s						
CSP1	**Cessapalombo**	**0.17**	**355**	⇑P	**Pg**	**15 11 24.1**	**-0.6**
CSP1				S	**Sg**	**15 11 26.7**	**-0.6**
CSP1				AML	AML		
	comp=E,9485μm,0.2s						
CSP1				AML	AML		
	comp=N,14405μm,1.1s						
CSP1				AML	AML		
	comp=E,9485μm,1.8s						
CSP1				AML	AML		
	comp=N,14405μm,0.9s						
T1204	**Amatrice, Fraz**	**0.26**	**164**	P	**Pg**	**15 11 26.8**	**+0.6**
T1204				S	**Sg**	**15 11 31.4**	**+1.7**
MDAR	**Monte D'Aria**	**0.28**	**348**	P	**Pg**	**15 11 26.1**	**-0.5**
T1243	**Rocca Santa Ma**	**0.28**	**144**	⇑P	**Pg**	**15 11 26.4**	**-0.2**
MNTP	**Montappone**	**0.28**	**40**	P	**Pg**	**15 11 27.0**	**+0.4**
MNTP				AML	AML		
	comp=E,13950μm,1.5s						
MNTP				AML	AML		
	comp=N,9610μm,0.6s						
MNTP				AML	AML		
	comp=N,9615μm,0.6s						
MNTP				AML	AML		
	comp=N,9605μm,0.7s						
MNTP				AML	AML		
	comp=E,13900μm,1.5s						
MNTP				AML	AML		
	comp=E,13900μm,0.5s						
T1215	**Vallo di Nera,**	**0.29**	**246**	P	**Pg**	**15 11 26.6**	**-0.1**
T1215				AML	AML		
	comp=E,2570μm,1.3s						
T1215				AML	AML		
	comp=N,3305μm,1.1s						
T1215				AML	AML		
	comp=E,2720μm,1.1s						
T1215				AML	AML		
	comp=N,3430μm,1.1s						
T1215				AML	AML		
	comp=N,3310μm,1.1s						
T1215				AML	AML		
	comp=N,3310μm,1.1s						
T1215				AML	AML		
	comp=E,2735μm,1.1s						
T1215				AML	AML		
	comp=N,3415μm,1.1s						
T1215				AML	AML		
	comp=E,2575μm,1.3s						
T1215				AML	AML		
	comp=N,3415μm,0.9s						
T1215				AML	AML		
	comp=E,2735μm,0.9s						
T1215				AML	AML		
	comp=E,2575μm,0.7s						
T1215				AML	AML		
	comp=N,3310μm,0.9s						
T1217	**Poggiodomo (PG**	**0.30**	**226**	P	**Pg**	**15 11 27.0**	**-0.1**
T1217				AML	AML		
	comp=E,3540μm,1.1s						
T1217				AML	AML		
	comp=E,3490μm,1.1s						
T1217				AML	AML		
	comp=N,4465μm,1.0s						
T1217				AML	AML		
	comp=E,3545μm,1.1s						
T1217				AML	AML		
	comp=N,4535μm,0.9s						
SMA1	**SAN MARTINO**	**0.30**	**164**	P	**Pb**	**15 11 27.3**	**-1.3**
SMA1				AML	AML		
	comp=E,14300μm,0.5s						
SMA1				AML	AML		
	comp=N,11600μm,1.5s						
SMA1				AML	AML		
	comp=N,11650μm,1.5s						
SMA1				AML	AML		
	comp=E,14350μm,0.5s						
SMA1				AML	AML		
	comp=N,11650μm,0.5s						
SMA1				AML	AML		
	comp=E,14350μm,1.5s						
SEF1	**Sefro**	**0.30**	**318**	⇓P	**Pg**	**15 11 26.6**	**-0.4**
SEF1				AML	AML		
	comp=E,11350μm,0.3s						
SEF1				AML	AML		
	comp=N,9675μm,0.3s						
SEF1				AML	AML		
	comp=E,11400μm,0.3s						
SEF1				AML	AML		
	comp=N,9680μm,0.3s						
SEF1				AML	AML		
	comp=N,9685μm,0.3s						
SEF1				AML	AML		
	comp=E,11400μm,1.7s						
SSM1	**San Severino M**	**0.31**	**354**	P	**Pg**	**15 11 26.7**	**-0.5**
OFFI	**Offida**	**0.34**	**88**	P	**Pb**	**15 11 28.9**	**-0.2**
OFFI				AML	AML		
	comp=E,7745μm,0.8s						
OFFI				AML	AML		
	comp=N,12750μm,0.7s						
OFFI				AML	AML		
	comp=E,7750μm,0.8s						
FIU1	**Fiuminata**	**0.34**	**321**	P	**Pg**	**15 11 27.5**	**-0.3**
LNSS	**Leonessa**	**0.35**	**203**	P	**Pb**	**15 11 28.2**	**-1.1**
SNTG	**Esanatoglia**	**0.39**	**328**	⇓P	**Pg**	**15 11 28.3**	**-0.4**
SNTG				AML	AML		
	comp=E,2395μm,1.2s						
SNTG				AML	AML		
	comp=N,2395μm,1.3s						
SNTG				AML	AML		
	comp=N,2655μm,1.3s						
SNTG				AML	AML		
	comp=E,2390μm,1.2s						
SNTG				AML	AML		
	comp=N,2400μm,1.3s						
SNTG				AML	AML		
	comp=N,2655μm,0.7s						
SNTG				AML	AML		
	comp=N,2400μm,0.7s						
SNTG				AML	AML		
	comp=E,2400μm,0.3s						
CAMP	**Campotosto**	**0.41**	**160**	P	**Pb**	**15 11 29.0**	**-1.4**
CAMP				S	**Sb**	**15 11 35.8**	**-0.9**
CAMP				AML	AML		
	comp=N,4550μm,0.5s						
CAMP				AML	AML		
	comp=E,4485μm,0.4s						
CAMP				AML	AML		
	comp=N,4550μm,1.5s						
TERO	**Teramo**	**0.41**	**137**	⇓P	**Pg**	**15 11 28.8**	**-0.3**
TERO				AML	AML		
	comp=E,6180μm,1.0s						
TERO				AML	AML		
	comp=N,4805μm,0.5s						
TERO				AML	AML		
	comp=E,6420μm,1.0s						
TERO				AML	AML		
	comp=N,5105μm,0.5s						
TERO				AML	AML		
	comp=E,6175μm,1.0s						
TERO				AML	AML		
	comp=N,5105μm,1.5s						
TERO				AML	AML		
	comp=N,4805μm,1.5s						
RM33	**Pellescritta (**	**0.41**	**181**	P	**Pb**	**15 11 29.2**	**-1.2**
RM33				AML	AML		
	comp=E,5615μm,0.8s						
RM33				AML	AML		
	comp=N,4030μm,0.5s						
RM33				AML	AML		
	comp=E,5615μm,0.8s						
RM33				AML	AML		
	comp=N,4080μm,1.4s						
RM33				AML	AML		
	comp=N,4025μm,0.5s						
RM33				AML	AML		
	comp=N,4080μm,1.4s						
RM33				AML	AML		
	comp=E,5610μm,0.8s						
RM33				AML	AML		
	comp=N,4075μm,1.4s						
RM33				AML	AML		
	comp=N,4030μm,1.5s						
RM33				AML	AML		
	comp=E,5625μm,0.8s						
RM33				AML	AML		
	comp=N,4075μm,0.6s						
EL6	**Elcito**	**0.42**	**348**	P	**Pg**	**15 11 28.4**	**-0.8**
ASSB	**Assisi San Ben**	**0.43**	**286**	⇑P	**Pg**	**15 11 28.9**	**-0.6**
ASSB				AML	AML		
	comp=N,2775μm,1.4s						
ASSB				AML	AML		
	comp=N,2775μm,0.6s						
ASSB				AML	AML		
	comp=E,2250μm,0.4s						
ARRO	**Arrone**	**0.48**	**225**	P	**Pg**	**15 11 30.2**	**-0.2**
ARRO				AML	AML		
	comp=E,1790μm,1.1s						
ARRO				AML	AML		
	comp=N,1850μm,1.0s						
ARRO				AML	AML		
	comp=N,1845μm,1.0s						
ARRO				AML	AML		
	comp=E,1795μm,1.1s						
T1247	**Pizzolo (AQ)**	**0.48**	**173**	⇑P	**Pb**	**15 11 30.7**	**-0.9**
T1247				AML	AML		
	comp=E,7250μm,0.5s						
T1247				AML	AML		
	comp=N,6305μm,0.5s						
T1247				AML	AML		
	comp=E,7245μm,0.5s						
T1247				AML	AML		
	comp=N,6305μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.50**	**302**	⇑P	**Pg**	**15 11 30.2**	**-0.6**
ATCC				AML	AML		
	comp=E,3415μm,0.6s						
ATCC				AML	AML		
	comp=N,3065μm,1.5s						
ATCC				AML	AML		
	comp=E,3420μm,0.6s						
ATCC				AML	AML		
	comp=N,3065μm,0.5s						
FOSV	**Fossato di Vic**	**0.50**	**318**	P	**Pg**	**15 11 30.1**	**-0.7**
FOSV				AML	AML		
	comp=E,2590μm,0.6s						
FOSV				AML	AML		
	comp=E,2585μm,0.6s						
FOSV				AML	AML		
	comp=N,3455μm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**102**	⇓P	**Pb**	**15 11 32.4**	**+0.2**
TRTR				S	**Sb**	**15 11 44.0**	**+4.2**
TRTR				AML	AML		
	comp=E,11650μm,0.3s						
TRTR				AML	AML		
	comp=N,10080μm,0.5s						
GIGS	**Gran Sasso**	**0.54**	**152**	⇑P	**Pg**	**15 11 30.1**	**-1.3**
GIGS				AML	AML		
	comp=E,1135μm,0.4s						
GIGS				AML	AML		
	comp=N,1341μm,0.5s						
GIGS				AML	AML		
	comp=E,1135μm,1.6s						
PP3	**Marolino**	**0.54**	**32**	⇓P	**Pb**	**15 11 32.1**	**-0.4**
PP3				AML	AML		
	comp=E,2940μm,1.5s						
PP3				AML	AML		
	comp=N,3485μm,0.3s						
PP3				AML	AML		
	comp=E,2945μm,1.5s						
PP3				AML	AML		
	comp=E,3180μm,1.6s						
PP3				AML	AML		
	comp=E,2945μm,0.5s						
PP3				AML	AML		
	comp=N,3375μm,0.3s						
PP3				AML	AML		
	comp=E,3180μm,0.4s						
CESX	**Cesi**	**0.57**	**237**	⇑P	**Pg**	**15 11 31.5**	**-0.5**
CESX				AML	AML		
	comp=N,1995μm,1.0s						
CESX				AML	AML		
	comp=E,1750μm,1.3s						
AQU	**L'Aquila**	**0.58**	**167**	S	**Sb**	**15 11 43.0**	**+1.3**
ARVD	**Arcevia**	**0.61**	**340**	S	**Sb**	**15 11 43.0**	**+0.5**
MURB	**Monte Urbino**	**0.62**	**304**	P	**Pg**	**15 11 32.3**	**-0.7**
MURB				S	**Sb**	**15 11 43.0**	**+0.3**
MURB				AML	AML		
	comp=E,4550μm,0.3s						
MURB				AML	AML		
	comp=N,3420μm,1.4s						
MURB				AML	AML		
	comp=N,3345μm,1.0s						
MURB				AML	AML		
	comp=E,4055μm,0.3s						
MURB				AML	AML		
	comp=N,3345μm,1.0s						
MURB				AML	AML		
	comp=N,3420μm,0.6s						
ATFO	**Monte Foce - G**	**0.65**	**313**	⇓P	**Pg**	**15 11 32.7**	**-0.9**
ATFO				AML	AML		
	comp=N,1160μm,1.6s						
ATFO				AML	AML		
	comp=E,1645μm,1.0s						
ATFO				AML	AML		
	comp=N,1160μm,0.4s						
FIAM	**Fiamignano**	**0.66**	**187**	⇓P	**Pg**	**15 11 33.5**	**-0.2**
FIAM				AML	AML		
	comp=E,2065μm,0.6s						
FIAM				AML	AML		
	comp=N,1360μm,1.1s						
FIAM				AML	AML		
	comp=N,1360μm,0.9s						
ATTE	**AVT- Monte Tez**	**0.69**	**294**	⇓P	**Pb**	**15 11 36.5**	**+1.2**
ATTE				AML	AML		
	comp=E,914μm,1.5s						
ATTE				AML	AML		
	comp=N,695μm,1.3s						
ATTE				AML	AML		
	comp=N,695μm,0.7s						
ATTE				AML	AML		
	comp=E,914μm,0.5s						
VCEL	**Villa Celiera**	**0.70**	**139**	⇑P	**Pb**	**15 11 34.5**	**-0.8**
VCEL				AML	AML		
	comp=E,2545μm,1.0s						
VCEL				AML	AML		
	comp=N,3265μm,1.0s						
FRON	**Frontone**	**0.70**	**329**	⇑P	**Pg**	**15 11 33.5**	**-0.9**
FRON				AML	AML		
	comp=E,1040μm,0.5s						
FRON				AML	AML		
	comp=N,2025μm,0.5s						
FRON				AML	AML		
	comp=N,2025μm,1.5s						
ATVO	**AVT- Monte Val**	**0.76**	**308**	⇑P	**Pg**	**15 11 34.5**	**-1.0**
ATVO				AML	AML		
	comp=N,981μm,0.9s						
ATVO				AML	AML		
	comp=E,716μm,1.4s						
ATVO				AML	AML		
	comp=N,980μm,0.9s						
ATVO				AML	AML		
	comp=E,716μm,0.6s						
ATVO				AML	AML		
	comp=N,980μm,1.1s						
MPAG	**Monte Paganucc**	**0.79**	**335**	⇑P	**Pg**	**15 11 35.5**	**-0.6**
MPAG				S	**Sb**	**15 11 49.0**	**+1.5**
MPAG				AML	AML		
	comp=N,980μm,0.6s						
MPAG				AML	AML		
	comp=N,977μm,0.6s						
MPAG				AML	AML		
	comp=E,774μm,1.0s						
PIEI	**Pieia**	**0.79**	**321**	⇑P	**Pg**	**15 11 35.2**	**-1.1**
PIEI				AML	AML		
	comp=N,732μm,0.7s						
PIEI				AML	AML		
	comp=E,706μm,0.2s						
PIEI				AML	AML		
	comp=E,706μm,1.8s						
ATPI	**Pietralunga -**	**0.80**	**312**	⇓P	**Pg**	**15 11 35.1**	**-1.3**
ATPI				AML	AML		
	comp=N,854μm,0.9s						
ATPI				AML	AML		
	comp=E,681μm,1.3s						
ATPI				AML	AML		
	comp=N,856μm,0.9s						
ATPI				AML	AML		
	comp=N,856μm,1.1s						
T0110	**Collepietro**	**0.81**	**149**	⇑P	**Pb**	**15 11 36.2**	**-0.9**
T0110				AML	AML		
	comp=E,2745μm,0.5s						
T0110				AML	AML		
	comp=N,2390μm,0.3s						
MGAB	**Montegabbione**	**0.82**	**270**	⇑P	**Pb**	**15 11 38.2**	**+1.0**
MGAB				AML	AML		
	comp=E,1077μm,0.7s						
MGAB				AML	AML		
	comp=N,1660μm,0.4s						
MGAB				AML	AML		
	comp=N,1690μm,0.4s						
MGAB				AML	AML		
	comp=N,1690μm,1.6s						
MGAB				AML	AML		
	comp=E,996μm,0.5s						

MGAB				AML	AML		
	comp=N,1660μm,1.6s						
FSSB	**Fossombrone**	**0.84**	**337**	⇑P	**Pg**	**15 11 36.4**	**-0.7**
FSSB				AML	AML		
	comp=E,1935μm,1.2s						
FSSB				AML	AML		
	comp=N,4650μm,0.4s						
FSSB				AML	AML		
	comp=E,1935μm,0.8s						
BADI	**Badiali**	**0.93**	**310**	P	**Pg**	**15 11 38.0**	**-0.9**
PE3	**Peglio**	**0.94**	**326**	⇑P	**Pg**	**15 11 38.6**	**-0.4**
SACS	**San Casciano d**	**0.97**	**266**	⇓P	**Pb**	**15 11 40.8**	**+0.9**
SACS				AML	AML		
	comp=E,612μm,1.6s						
SACS				AML	AML		
	comp=N,566μm,1.0s						
SACS				AML	AML		
	comp=E,579μm,1.6s						
SACS				AML	AML		
	comp=N,598μm,1.0s						
CAFI	**Castiglion Fio**	**1.01**	**294**	⇓P	**Pg**	**15 11 39.8**	**-0.5**
CAFI				AML	AML		
	comp=E,442μm,1.3s						
CAFI				AML	AML		
	comp=E,442μm,0.7s						
CAFI				AML	AML		
	comp=N,337μm,0.8s						
CPGN	**Carpegna, Ital**	**1.10**	**323**	⇓P	**Pg**	**15 11 42.5**	**+0.4**
MCIV	**Monte Civitell**	**1.15**	**263**	⇓P	**Pb**	**15 11 43.4**	**+0.4**
MCIV				AML	AML		
	comp=N,290μm,0.8s						
MCIV				AML	AML		
	comp=E,242μm,1.1s						
MCIV				AML	AML		
	comp=E,242μm,0.9s						
GIUL	**Giuliano Di Ro**	**1.36**	**179**	⇑P	**Pg**	**15 11 47.6**	**+0.5**
GIUL				AML	AML		
	comp=N,536μm,0.7s						
GIUL				AML	AML		
	comp=E,424μm,0.8s						
GIUL				AML	AML		
	comp=E,424μm,1.2s						
TRIV	**Trivento**	**1.52**	**139**	⇑P	**Pg**	**15 11 50.7**	**+0.6**
TRIF	**Trifonti**	**1.71**	**277**	⇑P	**Pn**	**15 11 51.2**	**+0.2**
TRIF				AML	AML		
	comp=E,81μm,1.1s						
TRIF				AML	AML		
	comp=N,90μm,0.9s						
MELA	**Melanico ??? S**	**1.86**	**130**	S	**Sn**	**15 12 17.0**	**+0.5**
APRC	**Apricena**	**2.08**	**123**	⇓P	**Pb**	**15 11 57.6**	**-1.2**
APRC				AML	AML		
	comp=E,224μm,0.8s						
APRC				AML	AML		
	comp=N,288μm,0.4s						
APRC				AML	AML		
	comp=E,224μm,1.2s						
MRB1	**Monte Rocchett**	**2.22**	**143**	⇑P	**Pn**	**15 11 56.3**	**-1.5**
MRB1				AML	AML		
	comp=N,376μm,1.5s						
MRB1				AML	AML		
	comp=E,258μm,1.0s						
MRB1				AML	AML		
	comp=N,376μm,0.5s						
SABO	**M.te Sabotino**	**3.07**	**5**	⇑P	**Pn**	**15 12 09.8**	**+0.2**
SABO				AML	AML		
	comp=N,632μm,0.8s						
SABO				AML	AML		
	comp=E,474μm,0.7s						
SABO				AML	AML		
	comp=N,154μm,0.9s						
SABO				AML	AML		
	comp=E,116μm,1.4s						
SABO				AML	AML		
	comp=N,632μm,1.2s						
SABO				AML	AML		
	comp=N,154μm,1.1s						
SABO				AML	AML		
	comp=E,116μm,0.6s						
OBKA	**Obir**	**3.71**	**14**	*e*Pn	**Pn**	**15 12 19.1**	**+0.7**
	comp=E,0.8nm,0.2s						
MYKA	**Terra Mystica**	**3.72**	**4**	*e*Pn	**Pn**	**15 12 19.3**	**+0.7**
	comp=E,1.4nm,0.2s						
ABTA	**Abfaltersbach**	**3.86**	**353**	Pn	**Pn**	**15 12 21.5**	**+1.0**
	comp=E,9.8nm,0.5s,SNR=12						
FETA	**Feichten**	**4.46**	**338**	*e*Pn	**Pn**	**15 12 32.1**	**+3.2**
	comp=E,3.1nm,0.4s						
WTTA	**Wattenberg**	**4.49**	**346**	Pn	**Pn**	**15 12 31.4**	**+2.2**
	comp=E,1.9nm,0.2s,SNR=7.0						
SQTA	**Sankt Quirin**	**4.53**	**342**	Pn	**Pn**	**15 12 32.3**	**+2.5**
	comp=E,8.2nm,0.4s,SNR=6.8						
WATA	**Walderalm**	**4.56**	**346**	*e*Pn	**Pn**	**15 12 32.5**	**+2.3**
	comp=E,1.9nm,0.2s						
MOTA	**Moosalm**	**4.67**	**342**	*e*Pn	**Pn**	**15 12 34.4**	**+2.7**
	comp=E,1.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.78**	**3**	*e*Pn	**Pn**	**15 12 34.7**	**+1.6**
	comp=E,1.4nm,0.3s						
RETA	**Reutte**	**4.88**	**340**	Pn	**Pn**	**15 12 36.7**	**+2.1**
	comp=E,1.9nm,0.2s,SNR=7.9						
MOA	**Molln**	**4.98**	**8**	*e*Pn	**Pn**	**15 12 37.5**	**+1.7**
	comp=E,0.4nm,0.2s						
GERES	**GERESS Array B**	**5.93**	**3**	Pn	**Pn**	**15 12 48.2**	**-0.8**
	comp=E,0.2nm,0.3s,baz=175,slow=13,SNR=8.7						
GERES				Sn	**Sn**	**15 13 54.1**	**-3.0**
	comp=E,0.6nm,0.3s,baz=182,slow=19,SNR=2.5						
	comp=E,0.4nm,0.3s						
CKRC	**Cesky Krumlov**	**5.95**	**7**	*e*SN	**Sn**	**15 13 54.6**	**-2.7**
KHC	**Kasperske Hory**	**6.22**	**2**	*e*PN	**Pn**	**15 12 52.7**	**-0.1**
KHC				*e*SN	**Sn**	**15 14 01.3**	**-2.6**
MLR	**Muntele Rosu**	**9.49**	**70**	LR	LR	15 18 33.1	
	comp=E,85nm,19.1s,baz=254,slow=47						
TORD	**Torodi Ar. Bea**	**31.30**	**202**	P	**P**	**15 17 42.7**	**+1.4**
	comp=E,0.1nm,0.3s,baz=17,slow=10,SNR=2.1						
	comp=E,0.1nm,0.3s						
MKAR	**Makanchi Array**	**47.67**	**60**	P	**P**	**15 19 56.1**	**-1.4**
	comp=E,0.5nm,0.7s,baz=281,slow=8.7,SNR=2.4						
	comp=E,0.5nm,0.7s						

*IDC **30** 15:18:42.2±2.0, 37.°81N×73.°55E, h0km, mb3.7/5, mbtmp3.8/11, ML3.5/6, Error ellipse: s-maj=34.4km s-min=21.0km az=143.0*
*NNC **30** 15:18:55.9±4.2, 38.°59N×73.°39E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=33.9km s-min=21.9km az=171.0*
*MOS **30** 15:18:57.7±0.9, 38.°52N×73.°69E, h121km, mb4.1/8, Error ellipse: s-maj=11.0km s-min=5.3km az=86.6*
*NEIC **30** 15:18:58.7±1.9, 38.°48N±0.°07×73.°7E±0.°1, h121km±13km, mb4.2/2, Error ellipse: s-maj=12.2km s-min=9.4km az=124.0*
*SOME **30** 15:19:01.1, 39.°17N×72.°93E, h15km*

ISC 30 15:18:56.5±0.5, 38.°39N±0.°04×73.°67E±0.°06, h100km, n101, σ2°=42/97, mb4.1/10, 14C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.12**	**57**	Pg	**Pn**	**15 19 27.5**	**-3.3**
KSH				Sg	Sn	15 19 48.0	-8.9
GAR	**Garm**	**2.69**	**284**		**Pn**	**15 19 41.5**	**+3.3**
BTK	**Batken**	**2.77**	**308**		**Pn**	**15 19 41.0**	**+1.7**
BTK	**Batken**	**2.77**	**308**	PN	**Pn**	**15 19 41.0**	**+1.7**
CHGR	**Chuyangaron**	**3.55**	**276**		**Pn**	**15 19 52.4**	**+2.7**
CHGR	**Chuyangaron**	**3.55**	**276**	PN	**Pn**	**15 19 52.4**	**+2.7**
AML	**Almayashu**	**3.74**	**0**	P	**Pn**	**15 19 54.8**	**+2.2**
	SNR=310						
UCH	**Uchtor**	**3.89**	**9**	P	**Pn**	**15 19 56.8**	**+2.2**
	SNR=95						
EKS2	**Erkin-Say**	**4.27**	**1**	P	**Pn**	**15 20 02.1**	**+2.6**
	SNR=44						
AAK	**Ala-Archa**	**4.29**	**8**	P	**Pn**	**15 20 02.1**	**+2.3**
	SNR=10						
AAK	**Ala-Archa**	**4.29**	**8**	Pn	**Pn**	**15 20 01.3**	**+1.5**
	5.5nm,0.3s,baz=165,slow=6.8,SNR=34						
AAK				Sn	**Sn**	**15 20 50.3**	**+1.5**
	2.8nm,0.3s,baz=150,slow=11,SNR=4.4						
AAK				Lg	Lg	15 21 13.3	
	1.8nm,0.3s,baz=116,slow=22,SNR=1.6						
	10nm,0.3s						
AAK	**Ala-Archa**	**4.29**	**8**	Pn	**Pn**	**15 20 01.9**	**+2.1**
AAK	**Ala-Archa**	**4.29**	**8**	*d i*PN	**Pn**	**15 20 02.0**	**+2.3**
MRKS	**Merke**	**4.37**	**356**	*e*P	**Pn**	**15 20 04.9**	**+4.3**
	33nm,0.7s						
MRKS				*e*S	**Sn**	**15 20 50.0**	**-0.5**
	144nm,0.2s						
KBK	**Karagaybulak**	**4.38**	**12**	P	**Pn**	**15 20 03.2**	**+2.4**
	SNR=19						

IUG	**Iuzhnay**	**4.67**	**325**	*e*P	Pn	15 20 09.9	+5.1
	302nm,0.3s						
IUG				*e*S	**Sn**	**15 20 58.7**	**+0.7**
	211nm,0.4s						
CHMS	**Chumysh**	**4.68**	**10**	P	**Pn**	**15 20 07.2**	**+2.3**
	SNR=5.0						
CHMS	**Chumysh**	**4.68**	**10**	PN	**Pn**	**15 20 06.9**	**+2.0**
CHMS	**Chumysh**	**4.68**	**10**	⇓Pn	**Pn**	**15 20 06.9**	**+2.0**
	5.8nm,0.3s						
CHMS				⇓Pg		15 20 20.6	
	32nm,0.7s						
CHMS				⇑Lg	Lg	15 21 22.5	
	16nm,0.7s						
CHCP	**Chirah Chowk**	**4.73**	**184**	P	**Pn**	**15 20 09.8**	**+4.2**
NIL	**Nilore**	**4.74**	**184**	Pn	**Pn**	**15 20 09.3**	**+3.6**
NIL	**Nilore**	**4.74**	**184**	PN	**Pn**	**15 20 09.3**	**+3.6**
TKM2	**Tokmak 2**	**4.76**	**17**	P	**Pn**	**15 20 08.0**	**+1.9**
	SNR=24						
TKM2	**Tokmak 2**	**4.76**	**17**	PN	**Pn**	**15 20 07.7**	**+1.6**
TKM2				SN	**Sn**	**15 20 59.7**	**-0.5**
TKM2	**Tokmak 2**	**4.76**	**17**	⇓Pn	**Pn**	**15 20 07.7**	**+1.6**
	11nm,0.5s						
TKM2				⇑Pg		15 20 20.5	
	12nm,0.5s						
TKM2				⇑Sn	**Sn**	**15 20 59.7**	**-0.5**
	18nm,0.5s						
TKM2				⇓Lg	Lg	15 21 23.4	
	20nm,0.8s						
CEP	**Cherat**	**4.77**	**198**	P	Pn	15 20 11.7	+5.4
CEP				S	**Sn**	**15 21 06.0**	**+5.5**
DZA	**Taraz**	**4.84**	**339**	*e*P	Pn	15 20 12.4	+5.4
	39nm,0.4s						
DZA				*e*S	**Sn**	**15 21 02.8**	**+1.0**
	263nm,0.3s						
KST	**Kastek**	**4.97**	**20**	*e*P	Pn	15 20 23.8	+15
	13nm,0.5s						
KST				*e*S	Sn	15 21 22.5	+17
	16nm,0.9s						
CHM	**Chimkent**	**5.01**	**323**	*e*P	Pn	15 20 14.3	+5.1
	44nm,0.1s						
CHM				*e*S	**Sn**	**15 21 06.3**	**+0.4**
	145nm,0.3s						
SGDS	**Sogindy**	**5.11**	**8**	*e*P	Pn	15 20 24.3	+14
	11nm,0.6s						
SGDS				*e*S	Sn	15 21 23.5	+15
	8.7nm,0.8s						
TNSS	**Tian-Shan**	**5.27**	**27**	*e*P	Pn	15 20 30.2	+17
	6.6nm,0.5s						
TNSS				*e*S	Sn	15 21 33.4	+21
	7.7nm,0.8s						
KK31	**Karatay Array**	**5.29**	**334**	Pn	**Pn**	**15 20 15.2**	**+2.1**
KK31	**Karatay Array**	**5.29**	**334**	PN	**Pn**	**15 20 15.4**	**+2.4**
KK31	**Karatay Array**	**5.29**	**334**	⇑Pn	**Pn**	**15 20 15.4**	**+2.4**
	17nm,0.4s,baz=137,slow=12,SNR=391						
KK31				⇑Sn	**Sn**	**15 21 12.0**	**-0.7**
	17nm,0.4s,baz=146,slow=22,SNR=9.9						
KKAR	**Karatay Array**	**5.29**	**334**		**Pn**	**15 20 15.3**	**+2.3**
KKAR	**Karatay Array**	**5.29**	**334**	PN	**Pn**	**15 20 15.3**	**+2.3**
KBL	**Kabul**	**5.35**	**226**	Pn	**Pn**	**15 20 18.4**	**+4.2**
KBL	**Kabul**	**5.35**	**226**	PN	**Pn**	**15 20 18.4**	**+4.2**
MDOK	**Medeo**	**5.42**	**27**	PN	**Pn**	**15 20 16.2**	**+1.3**
MDOK				SN	**Sn**	**15 21 23.2**	**+7.1**
MDOK	**Medeo**	**5.42**	**27**	⇑Pn	**Pn**	**15 20 16.2**	**+1.3**
	6.0nm,0.7s						
MDOK				Pg		15 20 31.3	
MDOK				⇓Sn	**Sn**	**15 21 23.2**	**+7.1**
	19nm,0.6s						
JMU	**Jammu**	**5.75**	**170**	*e*P	**Pn**	**15 20 20.6**	**+1.3**
JMU				*e*S	**Sn**	**15 21 22.1**	**-1.8**
THW	**Thamme Wali**	**5.80**	**196**	P	**Pn**	**15 20 22.9**	**+2.8**
PDGK	**Podgornoye**	**6.62**	**40**	PN	**Pn**	**15 20 31.7**	**+0.4**
PDGK				SN	Sn	15 21 54.9	+10
PDGK	**Podgornoye**	**6.62**	**40**	⇑Pn	**Pn**	**15 20 31.1**	**-0.2**
	9.1nm,0.8s						
PDGK				⇑Sn	Sn	15 21 54.9	+10
	25nm,1.0s						
BHK	**Bhakra**	**7.31**	**161**	*e*P	**Pn**	**15 20 42.0**	**+1.4**
BHK				*e*S	Sn	15 21 55.9	-6.1
SMLA	**Simla**	**7.79**	**157**	*e*P	**Pn**	**15 20 47.6**	**+0.4**
SMLA				*e*S	Sn	15 22 05.6	-8.1
SMLA				IAML		15 22 07.4	
	comp=E,70nm,0.3s						
SMLA				IAML		15 22 07.9	
	comp=N,87nm,0.4s						
DDI	**Dehra Dun**	**8.82**	**154**	*e*P	**Pn**	**15 21 02.0**	**+0.8**
OTUK	**Ortayu**	**9.90**	**355**	P	**Pn**	**15 21 15.2**	**-0.5**
OTUK	**Ortayu**	**9.90**	**355**	⇑Pn	**Pn**	**15 21 15.2**	**-0.5**
	comp=N,8.2nm,0.6s						
OTUK				⇑Lg	Lg	15 24 04.6	
	comp=N,4.9nm,0.9s						
MAKZ	**Makanchi**	**10.40**	**33**	Pn	**Pn**	**15 21 23.0**	**+0.4**
MAKZ	**Makanchi**	**10.40**	**33**	P	**Pn**	**15 21 23.0**	**+0.4**
MK31	**Makanchi Array**	**10.53**	**34**	Pn	**Pn**	**15 21 24.2**	**-0.1**
MK31	**Makanchi Array**	**10.53**	**34**	*d i*P	**Pn**	**15 21 24.6**	**+0.3**
MKAR	**Makanchi Array**	**10.53**	**34**	Pn	**Pn**	**15 21 22.5**	**-1.8**
	comp=N,0.4nm,0.3s,baz=210,slow=16,SNR=21						
	comp=N,2.2nm,0.6s						
MKAR	**Makanchi Array**	**10.53**	**34**	Pn	**Pn**	**15 21 24.0**	**-0.3**
MKAR	**Makanchi Array**	**10.53**	**34**	*e*P	**Pn**	**15 21 23.0**	**-1.3**
WMQ	**Urumqi**	**11.89**	**58**	*e*P	**Pn**	**15 21 44.5**	**+1.9**
GEYT	**Alibeck**	**12.25**	**273**	Sn	Sn	15 23 55.9	-6.3
	comp=N,0.4nm,0.3s,baz=93,slow=21,SNR=2.0						
KURBB	**Kurchatov Arra**	**12.71**	**14**	Pn	**Pn**	**15 21 51.1**	**-2.3**
	comp=N,0.1nm,0.3s,baz=202,slow=11,SNR=9.3						
	comp=N,0.8nm,0.6s						
KURK	**Kurchatov**	**12.82**	**14**	⇓*e*P	**Pn**	**15 21 52.2**	**-2.6**
DANN	**Dangsing**	**13.08**	**137**	*e*P	Pn	15 21 53.7	-5.0
	comp=N,11nm,0.3s						
KOLN	**Koldanda**	**13.46**	**139**	*e*P	Pn	15 21 59.1	-4.5
GKN	**Gorkha**	**13.83**	**135**	*e*P	Pn	15 22 03.8	-4.6
	comp=N,8.7nm,0.3s						
DMN	**Daman**	**14.39**	**135**	*e*P	Pn	15 22 11.1	-4.7
PKIN	**Phulchoki**	**14.58**	**134**	*e*P	Pn	15 22 14.0	-4.2
	comp=N,7.1nm,0.4s						
PKI	**Pulchoki**	**14.59**	**134**	*e*P	Pn	15 22 14.4	-4.0
	comp=N,4.6nm,0.3s						
GUN	**Gumba**	**14.61**	**132**	*e*P	Pn	15 22 14.3	-4.2
AB31	**Akbulak array**	**14.68**	**322**	P	**Pn**	**15 22 18.7**	**-0.2**
AB31	**Akbulak array**	**14.68**	**322**	Pn	**Pn**	**15 22 18.1**	**-0.8**
	comp=N,0.9nm,0.5s,baz=125,slow=12,SNR=28						
ABKAR	**Akbulak array**	**14.68**	**322**	Pn	**Pn**	**15 22 18.7**	**-0.2**
BVAR	**Borovoye Array**	**14.81**	**352**	Pn	**Pn**	**15 22 18.8**	**-1.9**
	comp=N,0.1nm,0.3s,baz=162,slow=10,SNR=3.9						
	comp=N,0.5nm,0.6s						
BRVK	**Borovoye**	**14.86**	**352**		**Pn**	**15 22 24.0**	**+2.8**
BRVK	**Borovoye**	**14.86**	**352**	⇑*e*P	**Pn**	**15 22 20.3**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
JIRN	**Jiri**	**14.97**	**132**	*e*P	**Pn**	**15 22 19.5**	**-3.8**
	comp=Z,8.6nm,0.3s						
DGZ	**Jazzator, Alta**	**15.00**	**37**	⇓*e*P	**Pn**	**15 22 22.5**	**-0.7**
BHPL	**Bhopal**	**15.44**	**167**	*e*S	Sn	15 25 05.5	-14
RAMN	**Ramite**	**15.75**	**133**	*e*P	Pn	15 22 27.9	-5.0
	comp=Z,8.1nm,0.4s						
AKTO	**Aktyubinsk**	**16.39**	**322**	Pn	**Pn**	**15 22 37.8**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=105,slow=12,SNR=11						
AKTO				Sn	**Sn**	**15 25 33.4**	**-8.7**
	comp=Z,0.1nm,0.3s,baz=332,slow=18,SNR=1.7						
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.39**	**322**	P	**Pn**	**15 22 40.7**	**+0.2**
AKTO	**Aktyubinsk**	**16.39**	**322**	⇓Pn	**Pn**	**15 22 40.7**	**+0.2**
	comp=Z,4.5nm,1.1s						
ZAA0	**Zalesovo Array**	**17.34**	**23**	P	**Pn**	**15 22 50.4**	**-1.6**
ZAA0				IAmb	IAmb	15 22 51.4	
	comp=Z,4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**17.34**	**23**	P	**Pn**	**15 22 50.8**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=216,slow=11,SNR=21						
	comp=Z,4.3nm,0.5s						
ZALV	**Zalesovo Beam**	**17.34**	**23**	P	**Pn**	**15 22 50.5**	**-1.5**
ARU	**Arti**	**20.66**	**336**	P	**P**	**15 23 28.1**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=286,slow=22,SNR=2.0						
	comp=Z,2.3nm,0.5s						
ARU	**Arti**	**20.66**	**336**	*d i*P	**P**	**15 23 28.8**	**+0.8**
ARU						15 23 56.4	
ARU				pmax	pmax		
	comp=Z,13nm,1.9s						
BELG	**Belogornoye**	**22.87**	**316**	⇑*e*P	**P**	**15 23 48.6**	**-2.7**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	**Kislovodsk**	**23.89**	**293**	*e*P	**P**	**15 24 01.0**	**+0.1**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
SONM	**Songino Array**	**25.52**	**58**	P	**P**	**15 24 17.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=166,slow=3.0,SNR=1.4						
	comp=Z,0.3nm,0.5s						
KIRV	**Kirov**	**25.57**	**330**	⇑*e*P	**P**	**15 24 15.1**	**-0.7**

PZH	**PanZhiHua**	**26.39**	**108**	P	**P**	**15 24 24.3**	**+0.6**
FINES	**FINESS Array B**	**37.16**	**324**	P	**P**	**15 25 57.4**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=111,slow=10,SNR=9.3						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**37.16**	**324**	P	**P**	**15 25 58.0**	**+0.7**
FINES	**FINESS Array B**	**37.16**	**324**	*i* P	**P**	**15 25 58.2**	**+0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.25**	**336**	P	**P**	**15 26 23.1**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=107,slow=7.9,SNR=9.2						
	comp=Z,0.6nm,0.4s						
ARCES	**ARCESS Array B**	**40.25**	**336**	P	**P**	**15 26 23.9**	**+0.9**
ARCES				IAmb	IAmb	15 26 46.1	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**40.25**	**336**	P	**P**	**15 26 23.9**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,12nm,1.4s						
YAK	**Yakutsk**	**41.20**	**36**	⇓*e*P	**P**	**15 26 31.3**	**+0.4**
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	**Tiksi**	**43.23**	**22**	⇓*e*P	**P**	**15 26 47.2**	**0.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KONO	**Kongsberg**	**44.99**	**320**	⇓*e*P	**P**	**15 27 01.1**	**-0.3**
KONO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MA2	**Magadan**	**51.57**	**39**	⇑*e*P	**P**	**15 27 48.7**	**-3.3**
MA2				pmax	pmax		
	comp=Z,26nm,1.3s						
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**15 29 42.2**	**-2.3**
	comp=Z,0.6nm,0.5s,baz=51,slow=6.3,SNR=7.0						
	comp=Z,0.6nm,0.5s						

*IDC **30** 15:24:49.2±2.4, 6.°79S×129.°77E, h139km±26km, mb3.4/2, mbtmp3.9/6, Error ellipse: s-maj=34.4km s-min=19.9km az=79.0*
*NEIC **30** 15:24:51.1±1.3, 6.°72S±0.°06×129.°74E±0.°09, h149km±10km, mb4.1/7, Error ellipse: s-maj=13.8km s-min=8.6km az=78.0*

ISC 30 15:24:49.8±0.6, 6.°79S±0.°06×129.°64E±0.°07, h150km, n37, σ2°=08/39, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.03**	**126**	Pn	**Pn**	**15 25 27.5**	**+2.3**
SAUI	**Saumlaki**	**2.03**	**126**	P	**Pn**	**15 25 27.7**	**+2.5**
FAKI	**Fak Fak**	**4.64**	**34**	Pn	**Pn**	**15 25 58.1**	**-0.4**
SOEI	**Soe**	**6.08**	**241**	Pn	**Pn**	**15 26 19.9**	**+2.2**
SIJI	**Sorong**	**6.10**	**15**	P	**Pn**	**15 26 16.9**	**-1.0**
	1.6nm,0.3s,baz=198,slow=20,SNR=2.3						
SIJI				S	**Sn**	**15 27 22.6**	**-4.2**
	9.5nm,0.2s,baz=219,slow=23,SNR=15						
MTN	**Manton Dam**	**6.19**	**166**		**Pn**	**15 26 19.1**	**0.0**
MTN	**Manton Dam**	**6.19**	**166**	P	**Pn**	**15 26 19.4**	**+0.3**
KDU	**Kakadu**	**6.49**	**155**	P	**Pn**	**15 26 23.0**	**-0.1**
BATI	**Baumata**	**6.82**	**240**	P	**Pn**	**15 26 28.7**	**+1.2**
	23nm,0.4s,baz=116,slow=16,SNR=15						
BATI				S	**Sn**	**15 27 40.6**	**-3.5**
	17nm,0.3s,baz=37,slow=20,SNR=2.9						
KNRA	**Kununurra**	**8.88**	**185**	Pn	**Pn**	**15 26 54.1**	**-0.8**
KNRA	**Kununurra**	**8.88**	**185**	P	**Pn**	**15 26 54.1**	**-0.8**
PLAI	**Plampang**	**11.93**	**259**	P	**Pn**	**15 27 35.5**	**+0.3**
WB0	**Warramunga Arr**	**13.70**	**161**	Pn	**Pn**	**15 27 55.3**	**-2.7**
WRAB	**Tennant Creek**	**13.84**	**161**	Pn	Pn	15 27 56.7	-3.1
WRA	**Warramunga Arr**	**13.85**	**161**	P	**Pn**	**15 27 57.3**	**-2.6**
	1.0nm,0.4s,baz=342,slow=13,SNR=11						
WRA				S	Sn	15 30 24.0	-9.4
	1.5nm,0.4s,baz=334,slow=22,SNR=9.0						
WRA	**Warramunga Arr**	**13.85**	**161**	Pn	**Pn**	**15 27 56.9**	**-3.0**
WB2	**Warramunga Arr**	**13.85**	**161**	Pn	**Pn**	**15 27 57.3**	**-2.6**
COEN	**Coen**	**15.09**	**119**	Pn	**Pn**	**15 28 15.2**	**-0.3**
COEN				IAmb	IAmb	15 28 32.2	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**15.09**	**119**	P	**P**	**15 28 19.1**	**+2.0**
	comp=Z,16nm,1.2s						
QIS	**Mount Isa**	**16.75**	**146**	P	**P**	**15 28 36.7**	**+1.2**
AS31	**Alice Springs**	**17.27**	**167**	P	**P**	**15 28 42.3**	**+1.1**
ASAR	**Alice Springs**	**17.27**	**167**	P	**P**	**15 28 42.3**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=346,slow=10,SNR=56						
ASAR				S	**S**	**15 31 47.3**	**-6.3**
	comp=Z,0.3nm,0.4s,baz=358,slow=29,SNR=5.1						
ASAR	**Alice Springs**	**17.27**	**167**	P	**P**	**15 28 43.0**	**+1.8**
AS01	**Alice Springs**	**17.28**	**167**	P	**P**	**15 28 42.9**	**+1.6**
PSA00	**Pilbara Seismi**	**17.48**	**212**	P	**P**	**15 28 45.4**	**+1.9**
PSA00				IAmb	IAmb	15 28 49.5	
	comp=Z,12nm,1.1s						
WRKA	**Warakurna**	**18.19**	**184**	P	**P**	**15 28 53.3**	**+2.0**
MTSU	**Mount Surprise**	**18.22**	**130**	P	**Pn**	**15 28 53.9**	**+0.6**
STKA	**Stephens Creek**	**27.34**	**157**	P	**P**	**15 30 20.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=351,slow=10,SNR=3.6						
	comp=Z,0.7nm,0.5s						
STKA	**Stephens Creek**	**27.34**	**157**	P	**P**	**15 30 21.7**	**+0.9**
STKA				IAmb	IAmb	15 30 35.0	
	comp=Z,3.4nm,1.4s						
JHJ2	**Mitsune**	**40.84**	**13**	P	**P**	**15 32 16.0**	**-0.8**
TUWZ	**Tuamarina**	**52.28**	**138**	P	**P**	**15 33 46.5**	**+0.6**
MK31	**Makanchi Array**	**67.86**	**327**	P	**P**	**15 35

	comp=E,10175µm,0.4s					
SMA1				AML	AML	
	comp=E,10176µm,0.4s					
SMA1				AML	AML	
	comp=N,11301µm,0.4s					
T1241	**Roccafluvione,**	**0.19**	**64**	⇑P	Pb	15 25 11.2 -0.6
T1241				S	Sg	15 25 14.3 +1.1
T1241				AML	AML	
	comp=E,8575µm,0.6s					
T1241				AML	AML	
	comp=N,8040µm,0.6s					
T1241				AML	AML	
	comp=E,8080µm,0.6s					
T1241				AML	AML	
	comp=N,8135µm,0.6s					
T1241				AML	AML	
	comp=N,8045µm,0.6s					
T1241				AML	AML	
	comp=E,8825µm,0.2s					
T1241				AML	AML	
	comp=E,8820µm,0.2s					
T1241				AML	AML	
	comp=E,8570µm,0.6s					
T1241				AML	AML	
	comp=N,8135µm,0.6s					
T1241				AML	AML	
	comp=E,7873µm,0.5s					
T1241				AML	AML	
	comp=E,8572µm,0.6s					
T1241				AML	AML	
	comp=N,8045µm,0.6s					
T1243	**Rocca Santa Ma**	**0.20**	**113**	P	Pg	15 25 11.0 +0.4
T1243				S	Sg	15 25 14.4 +0.9
LNSS	**Leonessa**	**0.21**	**215**	P	Pb	15 25 11.5 -0.7
LNSS				S	Sg	15 25 15.1 +1.3
T1217	**Poggiodomo (PG**	**0.21**	**253**	P	Pg	15 25 11.4 +0.7
T1217				S	Sg	15 25 15.1 +1.3
AM05	**Amandola Campo**	**0.23**	**29**	⇑P	Pb	15 25 11.9 -0.7
AM05				S	Sg	15 25 16.0 +1.6
AM05				AML	AML	
	comp=E,2250µm,1.5s					
AM05				AML	AML	
	comp=N,2285µm,1.1s					
AM05				AML	AML	
	comp=N,2280µm,1.1s					
AM05				AML	AML	
	comp=N,648µm,0.1s					
AM05				AML	AML	
	comp=E,10575µm,0.5s					
AM05				AML	AML	
	comp=N,1317µm,0.4s					
AM05				AML	AML	
	comp=E,5003µm,0.5s					
AM05				AML	AML	
	comp=N,393µm,0.1s					
AM05				AML	AML	
	comp=E,1553µm,0.3s					
T1215	**Vallo di Nera,**	**0.25**	**277**	P	Pg	15 25 11.4 +0.1
T1215				S	Sg	15 25 15.9 +1.1
RM33	**Pellescritta (**	**0.27**	**178**	⇓P	Pg	15 25 12.4 +0.7
RM33				S	Sb	15 25 16.7 -1.0
RM33				AML	AML	
	comp=E,10135µm,0.2s					
RM33				AML	AML	
	comp=E,9865µm,0.2s					
RM33				AML	AML	
	comp=N,15700µm,0.2s					
RM33				AML	AML	
	comp=E,9880µm,0.2s					
RM33				AML	AML	
	comp=N,15450µm,0.2s					
RM33				AML	AML	
	comp=N,15750µm,0.2s					
RM33				AML	AML	
	comp=E,9870µm,0.2s					
RM33				AML	AML	
	comp=E,10115µm,0.2s					
RM33				AML	AML	
	comp=N,15400µm,0.2s					
RM33				AML	AML	
	comp=E,9889µm,0.2s					
RM33				AML	AML	
	comp=E,10132µm,0.2s					
RM33				AML	AML	
	comp=N,15709µm,0.2s					
RM33				AML	AML	
	comp=N,15425µm,0.2s					
CAMP	**Campotosto**	**0.28**	**147**	P	Pg	15 25 12.6 +0.5
CAMP				S	Sg	15 25 17.1 +1.2
CAMP				AML	AML	
	comp=E,2535µm,0.9s					
CAMP				AML	AML	
	comp=N,2370µm,0.6s					
CAMP				AML	AML	
	comp=N,2371µm,0.6s					
CAMP				AML	AML	
	comp=E,2250µm,0.3s					
GUMA	**Gualdo di Mace**	**0.30**	**19**	⇑P	Pb	15 25 13.4 -0.4
GUMA				AML	AML	
	comp=N,13950µm,1.4s					
GUMA				AML	AML	
	comp=N,15000µm,0.3s					
GUMA				AML	AML	
	comp=E,14100µm,0.4s					
GUMA				AML	AML	
	comp=E,14450µm,0.3s					
GUMA				AML	AML	
	comp=N,14000µm,1.4s					
GUMA				AML	AML	
	comp=E,14114µm,0.4s					
GUMA				AML	AML	
	comp=N,9089µm,0.5s					
GUMA				AML	AML	
	comp=N,10925µm,0.4s					
GUMA				AML	AML	
	comp=E,13746µm,0.6s					
TERO	**Teramo**	**0.33**	**117**	⇓P	Pg	15 25 13.4 +0.4
TERO				AML	AML	
	comp=N,4725µm,0.4s					
TERO				AML	AML	
	comp=N,5010µm,0.4s					
TERO				AML	AML	
	comp=E,3235µm,0.7s					
TERO				AML	AML	
	comp=N,4730µm,0.4s					
TERO				AML	AML	
	comp=E,3240µm,0.7s					
TERO				AML	AML	
	comp=E,3355µm,0.7s					
TERO				AML	AML	
	comp=N,3877µm,0.5s					
TERO				AML	AML	
	comp=E,2802µm,0.4s					
TERO				AML	AML	
	comp=N,3463µm,0.3s					
TERO				AML	AML	
	comp=E,2699µm,0.4s					
T1247	**Pizzolo (AQ)**	**0.34**	**168**	⇓P	Pg	15 25 13.7 +0.6
T1247				S	Sb	15 25 19.1 -0.8
T1247				AML	AML	
	comp=E,5600µm,1.3s					
T1247				AML	AML	
	comp=N,5620µm,0.4s					
T1247				AML	AML	
	comp=N,5623µm,0.4s					
T1247				AML	AML	
	comp=E,4458µm,0.3s					
T1211	**Morro Reatino**	**0.35**	**227**	⇑P	Pg	15 25 13.7 +0.4
T1211				S	Sb	15 25 19.2 -1.1
T1211				AML	AML	
	comp=N,7850µm,0.5s					
T1211				AML	AML	
	comp=N,7740µm,0.5s					
T1211				AML	AML	
	comp=E,7090µm,0.4s					
T1211				AML	AML	
	comp=N,7845µm,0.4s					
T1211				AML	AML	
	comp=E,7210µm,0.4s					
T1211				AML	AML	
	comp=N,7760µm,0.4s					
T1211				AML	AML	
	comp=E,5808µm,0.4s					
T1211				AML	AML	
	comp=N,7047µm,0.3s					
T1211				AML	AML	
	comp=E,5825µm,0.4s					
T1211				AML	AML	
	comp=N,6970µm,0.3s					
ARRO	**Arrone**	**0.38**	**239**	P	Pg	15 25 14.2 +0.5
ARRO				S	Sb	15 25 20.0 -0.8
ARRO				AML	AML	
	comp=E,3760µm,1.2s					
ARRO				AML	AML	
	comp=N,4540µm,0.2s					
OFFI	**Offida**	**0.39**	**66**	P	Pb	15 25 15.2 -0.1
OFFI				AML	AML	
	comp=E,5415µm,0.7s					
OFFI				AML	AML	
	comp=N,6450µm,0.4s					
OFFI				AML	AML	
	comp=E,5417µm,0.7s					
OFFI				AML	AML	
	comp=N,6451µm,0.4s					
MNTP	**Montappone**	**0.41**	**28**	P	Pb	15 25 16.2 +0.6
MNTP				AML	AML	
	comp=E,3895µm,0.3s					
MNTP				AML	AML	
	comp=N,3515µm,0.5s					
MNTP				AML	AML	
	comp=E,3895µm,0.3s					
MNTP				AML	AML	
	comp=N,3515µm,0.5s					
MNTP				AML	AML	
	comp=E,3097µm,0.3s					
MNTP				AML	AML	
	comp=N,3517µm,0.5s					
SEF1	**Sefro**	**0.42**	**334**	⇓P	Pb	15 25 15.2 -0.5
SEF1				AML	AML	
	comp=E,8090µm,1.6s					
SEF1				AML	AML	
	comp=N,6215µm,0.7s					
SEF1				AML	AML	
	comp=N,6220µm,0.7s					
SEF1				AML	AML	
	comp=E,8100µm,1.6s					
SEF1				AML	AML	
	comp=N,2428µm,0.3s					
SEF1				AML	AML	
	comp=E,2350µm,0.4s					
GIGS	**Gran Sasso**	**0.42**	**140**	⇑P	Pg	15 25 15.1 +0.5
GIGS				AML	AML	
	comp=E,526µm,1.0s					
GIGS				AML	AML	
	comp=E,526µm,1.0s					
GIGS				AML	AML	
	comp=N,464µm,0.1s					
GIGS				AML	AML	
	comp=E,400µm,0.2s					
GIGS				AML	AML	
	comp=N,464µm,0.1s					
AQU	**L'Aquila**	**0.45**	**160**	P	Pb	15 25 15.9 -0.3
AQU				AML	AML	
	comp=N,1830µm,0.9s					
AQU				AML	AML	
	comp=N,1755µm,0.7s					
AQU				AML	AML	
	comp=E,1715µm,1.6s					
AQU				AML	AML	
	comp=E,1710µm,0.9s					
AQU				AML	AML	
	comp=E,1589µm,0.6s					
AQU				AML	AML	
	comp=N,1654µm,0.9s					
AQU				AML	AML	
	comp=E,1659µm,0.7s					
AQU				AML	AML	
	comp=N,1760µm,0.8s					
ASSB	**Assisi San Ben**	**0.48**	**304**	⇑P	Pg	15 25 16.2 +0.5
ASSB				AML	AML	
	comp=E,1485µm,1.5s					
ASSB				AML	AML	
	comp=N,1385µm,0.7s					
ASSB				AML	AML	
	comp=E,1362µm,0.2s					
ASSB				AML	AML	
	comp=N,1117µm,0.2s					
CESX	**Cesi**	**0.49**	**250**	⇑P	Pg	15 25 16.0 +0.2
CESX				AML	AML	
	comp=E,1915µm,0.4s					
CESX				AML	AML	
	comp=N,2015µm,1.2s					
CESX				AML	AML	
	comp=N,1776µm,0.3s					
CESX				AML	AML	
	comp=E,1915µm,0.4s					
FIAM	**Fiamignano**	**0.51**	**187**	⇑P	Pg	15 25 16.5 +0.2
FIAM				S	Sb	15 25 25.0 +0.2
FIAM				AML	AML	
	comp=N,1255µm,0.8s					
FIAM				AML	AML	
	comp=E,2020µm,0.6s					
FIAM				AML	AML	
	comp=N,1185µm,0.4s					
FIAM				AML	AML	
	comp=E,1675µm,0.5s					
SNTG	**Esanatoglia**	**0.52**	**338**	P	Pb	15 25 17.0 -0.5
SNTG				S	Sb	15 25 26.0 +1.0
SNTG				AML	AML	
	comp=E,1545µm,1.1s					
SNTG				AML	AML	
	comp=N,1020µm,0.2s					
SNTG				AML	AML	
	comp=E,1540µm,1.1s					
SNTG				AML	AML	
	comp=N,1022µm,0.2s					
SNTG				AML	AML	
	comp=N,1015µm,1.5s					
SNTG				AML	AML	
	comp=E,1560µm,1.1s					
SNTG				AML	AML	
	comp=E,511µm,0.7s					
SNTG				AML	AML	
	comp=E,638µm,0.7s					
SNTG				AML	AML	
	comp=N,835µm,0.5s					
SNTG				AML	AML	
	comp=N,830µm,0.5s					
TRTR	**Tortoreto Alta**	**0.53**	**86**	⇑P	Pb	15 25 18.2 +0.7
TRTR				AML	AML	
	comp=E,3905µm,0.8s					
TRTR				AML	AML	
	comp=N,4215µm,0.4s					
TRTR				AML	AML	
	comp=E,4065µm,0.4s					
TRTR				AML	AML	
	comp=E,3905µm,0.8s					
TRTR				AML	AML	
	comp=N,4212µm,0.4s					
EL6	**Elcito**	**0.56**	**353**	S	Sn	15 25 29.0 -0.7
ATCC	**AVT- Casa Cast**	**0.58**	**315**	⇓P	Pg	15 25 18.0 +0.4
ATCC				AML	AML	
	comp=E,1535µm,0.5s					
ATCC				AML	AML	
	comp=N,1255µm,0.8s					
ATCC				AML	AML	
	comp=E,1530µm,0.5s					
ATCC				AML	AML	
	comp=N,1250µm,0.8s					
ATCC				AML	AML	
	comp=E,1179µm,0.3s					
ATCC				AML	AML	
	comp=N,1194µm,0.5s					
FAGN	**Fagnano**	**0.58**	**151**	⇑P	Pb	15 25 18.4 -0.2
FAGN				AML	AML	
	comp=E,2840µm,0.5s					
FAGN				AML	AML	
	comp=N,2465µm,0.3s					
FAGN				AML	AML	
	comp=E,2839µm,0.5s					
FAGN				AML	AML	
	comp=N,2466µm,0.3s					
VCEL	**Villa Celiera**	**0.61**	**129**	P	Pg	15 25 18.5 +0.4
VCEL				AML	AML	
	comp=E,1425µm,0.7s					
VCEL				AML	AML	
	comp=E,1420µm,0.7s					
VCEL				AML	AML	
	comp=N,1590µm,0.7s					
VCEL				AML	AML	
	comp=N,1591µm,0.7s					
VCEL				AML	AML	
	comp=E,1342µm,0.7s					
FOSV	**Fossato di Vic**	**0.61**	**328**	⇑P	Pg	15 25 18.6 +0.4
FOSV				AML	AML	
	comp=E,1048µm,0.4s					
FOSV				AML	AML	
	comp=N,1835µm,0.4s					
FOSV				AML	AML	
	comp=N,1033µm,0.5s					
FOSV				AML	AML	
	comp=E,549µm,0.5s					
PP3	**Marolino**	**0.67**	**26**	⇑P	Pb	15 25 20.5 +0.5
PP3				AML	AML	
	comp=E,5110µm,0.6s					
PP3				AML	AML	
	comp=E,5315µm,0.6s					
PP3				AML	AML	
	comp=N,5440µm,0.3s					
PP3				AML	AML	
	comp=N,5105µm,0.3s					
PP3				AML	AML	
	comp=E,5310µm,0.6s					
PP3				AML	AML	
	comp=E,5110µm,0.6s					
PP3				AML	AML	
	comp=E,5313µm,0.6s					
PP3				AML	AML	
	comp=N,3015µm,0.5s					
PP3				AML	AML	
	comp=E,5109µm,0.6s					
PP3				AML	AML	
	comp=N,3101µm,0.5s					
T0110	**Collepietro**	**0.69**	**142**	⇑P	Pg	15 25 19.7 0.0
T0110				AML	AML	
	comp=E,1595µm,0.4s					
T0110				AML	AML	
	comp=N,1755µm,0.4s					
T0110				AML	AML	
	comp=E,1594µm,0.4s					
T0110				AML	AML	
	comp=N,1753µm,0.4s					
MURB	**Monte Urbino**	**0.70**	**315**	P	Pb	15 25 20.3 -0.2
MURB				AML	AML	
	comp=N,2295µm,0.3s					
MURB				AML	AML	
	comp=E,1925µm,0.3s					
MURB				AML	AML	
	comp=N,2370µm,1.5s					
MURB				AML	AML	
	comp=N,2290µm,0.3s					
MURB				AML	AML	
	comp=E,2085µm,0.3s					
MURB				AML	AML	
	comp=E,1825µm,0.8s					
MURB				AML	AML	
	comp=N,2195µm,0.3s					
MURB				AML	AML	
	comp=E,1897µm,0.4s					
MURB				AML	AML	
	comp=E,1709µm,0.4s					
MURB				AML	AML	
	comp=N,2099µm,0.3s					
ARVD	**Arcevia**	**0.75**	**345**	⇓P	Pb	15 25 21.4 0.0
ARVD				S	Sn	15 25 34.0 -0.3
ARVD				AML	AML	
	comp=N,436µm,0.6s					
ARVD				AML	AML	
	comp=E,503µm,0.6s					
ARVD				AML	AML	
	comp=N,436µm,0.6s					
ARVD				AML	AML	
	comp=E,413µm,0.8s					
ATFO	**Monte Foce - G**	**0.75**	**322**	⇓P	Pb	15 25 21.2 -0.3
ATFO				AML	AML	
	comp=E,542µm,1.2s					
ATFO				AML	AML	
	comp=N,577µm,0.5s					
ATFO				AML	AML	
	comp=E,640µm,1.4s					
ATFO				AML	AML	
	comp=E,476µm,0.8s					
ATFO				AML	AML	
	comp=N,577µm,0.5s					
MGAB	**Montegabbione**	**0.81**	**280**	⇓P	Pn	15 25 24.7 +1.0
CERT	**Cerreto**	**0.84**	**191**	⇓P	Pg	15 25 22.5 0.0
CERT				AML	AML	
	comp=E,788µm,0.5s					
CERT				AML	AML	
	comp=N,815µm,0.9s					
CERT				AML	AML	
	comp=E,788µm,0.5s					
CERT				AML	AML	
	comp=N,706µm,0.4s					
ATVO	**AVT- Monte Val**	**0.84**	**317**	P	Pb	15 25 22.8 -0.2
ATVO				AML	AML	
	comp=E,444µm,0.4s					
ATVO				AML	AML	
	comp=N,360µm,0.5s					
ATVO				AML	AML	
	comp=E,444µm,0.4s					
ATVO				AML	AML	
	comp=E,383µm,0.5s					
ATVO				AML	AML	
	comp=N,361µm,0.5s					
ATPI	**Pietralunga -**	**0.89**	**319**	⇑P	Pg	15 25 23.3 -0.2
ATPI				AML	AML	
	comp=E,416µm,0.7s					
ATPI				AML	AML	
	comp=N,400µm,0.5s					
ATPI				AML	AML	
	comp=E,415µm,0.7s					
ATPI				AML	AML	
	comp=N,400µm,0.5s					
ATPI				AML	AML	
	comp=E,415µm,0.7s					
PIEI	**Pieia**	**0.90**	**328**	P	Pg	15 25 23.9 +0.1
PIEI				S	Sn	15 25 39.0 +0.9
PIEI				AML	AML	
	comp=E,383µm,0.3s					
PIEI				AML	AML	
	comp=N,331µm,1.2s					
PIEI				AML	AML	
	comp=E,296µm,0.4s					
PIEI				AML	AML	
	comp=N,328µm,0.5s					
MPAG	**Monte Paganucc**	**0.91**	**339**	⇓P	Pb	15 25 24.1 -0.1
MPAG				AML	AML	
	comp=E,558µm,0.3s					
MPAG				AML	AML	
	comp=N,538µm,0.4s					
MPAG				AML	AML	
	comp=E,1677µm,0.9s					
MPAG				AML	AML	
	comp=E,452µm,0.6s					
MPAG				AML	AML	
	comp=N,425µm,0.7s					
MPAG				AML	AML	
	comp=N,1749µm,0.9s					
SACS	**San Casciano d**	**0.95**	**275**	⇓P	Pn	15 25 26.5 +0.8
SACS				AML	AML	
	comp=E,380µm,1.3s					
SACS				AML	AML	
	comp=N,500µm,0.8s					
SACS				AML	AML	
	comp=E,390µm,1.6s					
SACS				AML	AML	
	comp=N,498µm,0.8s					
SACS				AML	AML	
	comp=E,331µm,0.7s					
SACS				AML	AML	
	comp=E,350µm,0.7s					
SACS				AML	AML	
	comp=N,500µm,0.8s					
SACS				AML	AML	
	comp=N,499µm,0.8s					
FSSB	**Fossombrone**	**0.97**	**342**	⇑P	Pb	15 25 25.4 +0.3
FSSB				S	Sn	15 25 42.0 +2.3
FSSB				AML	AML	
	comp=E,1280µm,0.4s					
FSSB				AML	AML	
	comp=E,1275µm,0.4s					
FSSB				AML	AML	
	comp=N,2020µm,0.3s					
FSSB				AML	AML	
	comp=E,1170µm,0.4s					
FSSB				AML	AML	
	comp=N,1641µm,0.4s					
BADI	**Badiali**	**1.01**	**317**	P	Pn	15 25 26.7 +0.1
BADI				AML	AML	
	comp=E,98µm,0.3s					

BADI				AML	AML	
	comp=N,330μm,0.8s					
BADI				AML	AML	
	comp=N,329μm,0.8s					
LPEL	**Lama dei Pelig**	**1.03 135**	⇓P	Pg	15 25 25.9	-0.2
LPEL				AML	AML	
	comp=E,530μm,0.3s					
LPEL				AML	AML	
	comp=N,368μm,1.0s					
LPEL				AML	AML	
	comp=E,530μm,0.3s					
LPEL				AML	AML	
	comp=N,365μm,0.3s					
CAFI	**Castiglion Fio**	**1.06 302**	⇑P	Pn	15 25 27.9	+0.7
CAFI				AML	AML	
	comp=E,210μm,0.7s					
CAFI				AML	AML	
	comp=N,268μm,0.7s					
CAFI				AML	AML	
	comp=N,258μm,0.5s					
CAFI				AML	AML	
	comp=E,175μm,0.4s					
CAFI				AML	AML	
	comp=E,181μm,0.4s					
CAFI				AML	AML	
	comp=N,265μm,0.5s					
TOLF	**Tolfa**	**1.14 232**	⇓P	Pb	15 25 27.8	-0.2
TOLF				AML	AML	
	comp=E,337μm,0.4s					
TOLF				AML	AML	
	comp=N,304μm,0.8s					
TOLF				AML	AML	
	comp=E,337μm,0.4s					
TOLF				AML	AML	
	comp=N,289μm,0.5s					
LAV9	**Lanuvio**	**1.16 199**	⇓P	Pg	15 25 30.2	+1.7
LAV9				AML	AML	
	comp=E,1210μm,0.4s					
LAV9				AML	AML	
	comp=N,1195μm,0.4s					
LAV9				AML	AML	
	comp=E,1260μm,0.4s					
LAV9				AML	AML	
	comp=N,1175μm,0.4s					
LAV9				AML	AML	
	comp=N,1174μm,0.4s					
LAV9				AML	AML	
	comp=E,1209μm,0.5s					
LAV9				AML	AML	
	comp=N,1199μm,0.4s					
LAV9				AML	AML	
	comp=E,1257μm,0.4s					
GIUL	**Giuliano Di Ro**	**1.22 178**	P	Pg	15 25 31.9	+2.3
ABTA	**Abfaltersbach**	**4.00 353**	*e*Pn	Pn	15 26 10.2	+2.6
	comp=E,6.0nm,0.5s					
FETA	**Feichten**	**4.59 338**	*e*Pn	Pn	15 26 21.2	+5.3
	comp=E,1.2nm,0.6s					
CONA	**Conrad Observa**	**5.48 19**	*e*Pn	Pn	15 26 31.7	+3.6
	comp=E,0.8nm,0.3s					

ROM 30 15:25:38.7±0.0, 42°806N±0°002×13°144E±0°003,
h10km, ML3.1/8, 19C-5D, Error ellipse: s-maj=0.2km
s-min=0.2km az=37.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**33**	⇑P		Pg	15 25 41.4	+0.3
T1245				S		Sg	15 25 43.0	+0.2
T1245					AML	AML		
	comp=E,90250μm,0.4s							
T1245					AML	AML		
T1245					AML	AML		
	comp=E,86850μm,0.3s							
T1245					AML	AML		
	comp=E,90150μm,0.3s							
T1245					AML	AML		
T1245					AML	AML		
	comp=E,90200μm,0.3s							
T1245					AML	AML		
T1245					AML	AML		
	comp=E,55314μm,0.2s							
T1245					AML	AML		
	comp=N,58674μm,0.3s							
T1245					AML	AML		
	comp=E,53785μm,0.2s							
T1245					AML	AML		
	comp=N,57685μm,0.2s							
MMO1	**Montemonaco**	**0.16**	**55**	⇓P		Pg	15 25 42.9	+0.5
MMO1				S		Sg	15 25 45.8	+0.8
FEMA	**Monte Fema**	**0.17**	**336**	⇓P		Pg	15 25 43.1	+0.5
FEMA				S		Sg	15 25 46.0	+0.8
FEMA					AML	AML		
	comp=E,11600μm,0.2s							
FEMA					AML	AML		
	comp=N,13450μm,0.3s							
FEMA					AML	AML		
	comp=E,11550μm,0.2s							
FEMA					AML	AML		
	comp=N,13400μm,0.3s							
FEMA					AML	AML		
	comp=E,11567μm,0.2s							
FEMA					AML	AML		
	comp=N,13437μm,0.3s							
T1204	**Amatrice, Fraz**	**0.18**	**136**	⇑P		Pg	15 25 43.4	+0.7
T1204				S		Sg	15 25 46.3	+0.8
T1204					AML	AML		
	comp=E,5532μm,0.1s							
T1204					AML	AML		
	comp=N,2683μm,0.2s							
T1217	**Poggiodomo (PG**	**0.18**	**239**	P		Pg	15 25 43.4	+0.7
T1217				S		Sg	15 25 46.5	+1.1
T1217					AML	AML		
	comp=E,6805μm,0.3s							
T1217					AML	AML		
	comp=E,6790μm,0.3s							
T1217					AML	AML		
	comp=E,6775μm,0.3s							
T1217					AML	AML		
	comp=N,7890μm,0.5s							
T1217					AML	AML		
	comp=N,8040μm,0.5s							
T1217					AML	AML		
	comp=E,6810μm,0.3s							
T1217					AML	AML		
	comp=N,7076μm,0.3s							
T1217					AML	AML		
	comp=E,4992μm,0.2s							
T1217					AML	AML		
	comp=E,5002μm,0.2s							
T1217					AML	AML		
	comp=N,6767μm,0.3s							
T1215	**Vallo di Nera,**	**0.20**	**269**	⇑P		Pg	15 25 43.7	+0.6
T1215				S		Sg	15 25 47.0	+1.0
T1215					AML	AML		
	comp=E,3905μm,1.1s							
T1215					AML	AML		
	comp=E,4055μm,1.1s							
T1215					AML	AML		
	comp=N,3795μm,0.3s							
T1215					AML	AML		
	comp=N,3860μm,0.2s							
T1215					AML	AML		
	comp=N,3790μm,0.3s							
T1215					AML	AML		
	comp=E,3900μm,1.1s							
T1215					AML	AML		
	comp=E,4060μm,1.1s							
T1215					AML	AML		
	comp=N,3791μm,0.3s							
T1215					AML	AML		
	comp=N,3860μm,0.2s							
T1215					AML	AML		
	comp=E,3785μm,0.2s							
T1215					AML	AML		
	comp=E,3852μm,0.2s							
LNSS	**Leonessa**	**0.22**	**201**	⇑P		Pg	15 25 44.0	+0.7
LNSS				S		Sg	15 25 47.9	+1.4
LNSS					AML	AML		
	comp=E,14150μm,0.2s							
LNSS					AML	AML		
	comp=N,34850μm,0.2s							
LNSS					AML	AML		
	comp=N,34847μm,0.2s							
LNSS					AML	AML		
	comp=E,14131μm,0.2s							
T1241	**Roccafluvione,**	**0.22**	**77**	⇑P		Pb	15 25 44.2	-0.6
T1241				S		Sg	15 25 47.9	+1.5
T1241					AML	AML		
	comp=E,8455μm,0.2s							
T1241					AML	AML		
	comp=N,6035μm,0.8s							
T1241					AML	AML		
	comp=E,8825μm,0.2s							
T1241					AML	AML		
	comp=E,8820μm,0.2s							
T1241					AML	AML		
	comp=N,5995μm,0.8s							
T1241					AML	AML		
	comp=E,8823μm,0.2s							
T1241					AML	AML		
	comp=N,5727μm,0.5s							
SMA1	**SAN MARTINO**	**0.23**	**141**	⇑P		Pb	15 25 44.2	-0.8
SMA1				S		Sg	15 25 48.1	+1.5
SMA1					AML	AML		
	comp=E,8265μm,0.3s							
SMA1					AML	AML		
	comp=N,6270μm,0.4s							
SMA1					AML	AML		
	comp=N,4815μm,0.3s							
SMA1					AML	AML		
	comp=E,5004μm,0.3s							
SMA1					AML	AML		
	comp=N,5405μm,0.4s							
AM05	**Amandola Campo**	**0.23**	**42**	⇑P		Pg	15 25 44.2	+0.7
AM05				S		Sg	15 25 47.8	+1.1
AM05					AML	AML		
	comp=E,2250μm,1.5s							
AM05					AML	AML		
	comp=N,2285μm,1.1s							
AM05					AML	AML		
	comp=E,10585μm,0.5s							
AM05					AML	AML		
	comp=N,648μm,0.1s							
AM05					AML	AML		
	comp=E,10580μm,0.5s							
AM05					AML	AML		
	comp=E,1698μm,0.3s							
AM05					AML	AML		
	comp=N,1969μm,0.1s							
AM05					AML	AML		
	comp=E,8395μm,0.4s							
AM05					AML	AML		
	comp=N,648μm,0.1s							
T1243	**Rocca Santa Ma**	**0.25**	**116**	⇑P		Pg	15 25 44.5	+0.6
T1243				S		Sg	15 25 48.7	+1.4
CSP1	**Cessapalombo**	**0.29**	**9**	⇑P		Pg	15 25 45.1	+0.5
CSP1				S		Sg	15 25 49.8	+1.2
CSP1					AML	AML		
	comp=E,6155μm,1.0s							
CSP1					AML	AML		
	comp=N,6120μm,0.4s							
CSP1					AML	AML		
	comp=E,5454μm,0.4s							
CSP1					AML	AML		
	comp=N,6091μm,0.4s							
GUMA	**Gualdo di Mace**	**0.29**	**29**	⇑P		Pb	15 25 45.5	-0.6
GUMA					AML	AML		
	comp=E,14450μm,0.3s							
GUMA					AML	AML		
	comp=N,14000μm,1.3s							
GUMA					AML	AML		
	comp=E,13900μm,0.3s							
GUMA					AML	AML		
	comp=N,15000μm,0.3s							
GUMA					AML	AML		
	comp=N,13828μm,0.4s							
GUMA					AML	AML		
	comp=E,14454μm,0.3s							
GUMA					AML	AML		
	comp=E,13913μm,0.3s							
GUMA					AML	AML		
	comp=N,15001μm,0.3s							
RM33	**Pellescritta (**	**0.30**	**170**	⇓P		Pg	15 25 45.4	+0.5
RM33				S		Sb	15 25 50.5	-0.9
RM33					AML	AML		
	comp=N,2436μm,0.2s							
RM33					AML	AML		
	comp=E,2041μm,0.2s							
RM33					AML	AML		
	comp=E,2068μm,0.2s							
RM33					AML	AML		
	comp=N,2394μm,0.2s							
CAMP	**Campotosto**	**0.33**	**144**	⇑P		Pg	15 25 45.8	+0.4
CAMP				S		Sg	15 25 51.0	+1.1
CAMP					AML	AML		
	comp=N,936μm,0.5s							
CAMP					AML	AML		
	comp=E,1127μm,0.2s							
T1211	**Morro Reatino**	**0.35**	**218**	⇑P		Pg	15 25 46.1	+0.5
T1211					AML	AML		
	comp=E,2355μm,0.1s							
T1211					AML	AML		
	comp=E,2277μm,0.1s							
T1211					AML	AML		
	comp=N,5613μm,0.2s							
T1211					AML	AML		
	comp=N,5636μm,0.2s							
ARRO	**Arrone**	**0.36**	**231**	⇑P		Pg	15 25 46.4	+0.5
ARRO					AML	AML		
	comp=N,1934μm,0.2s							
ARRO					AML	AML		
	comp=E,1434μm,0.2s							
SEF1	**Sefro**	**0.37**	**337**	⇓P		Pg	15 25 46.5	+0.4
SEF1					AML	AML		
	comp=E,8090μm,1.6s							
SEF1					AML	AML		
	comp=N,6215μm,0.7s							
SEF1					AML	AML		
	comp=E,8100μm,1.6s							
SEF1					AML	AML		
	comp=N,6215μm,0.7s							
SEF1					AML	AML		
	comp=N,6117μm,0.2s							
SEF1					AML	AML		
	comp=E,7821μm,0.3s							
T1247	**Pizzolo (AQ)**	**0.38**	**163**	⇑P		Pg	15 25 46.7	+0.4
T1247					AML	AML		
	comp=N,1778μm,0.3s							
T1247					AML	AML		
	comp=E,1588μm,0.5s							
MDAR	**Monte D'Aria**	**0.39**	**360**	P		Pg	15 25 46.9	+0.5
TERO	**Teramo**	**0.39**	**118**	⇓P		Pg	15 25 46.8	+0.5
TERO					AML	AML		
	comp=E,1434μm,0.3s							
TERO					AML	AML		
	comp=N,1402μm,0.6s							
TERO					AML	AML		
	comp=E,1333μm,0.3s							
TERO					AML	AML		
	comp=N,1457μm,0.2s							
ASSB	**Assisi San Ben**	**0.43**	**304**	⇑P		Pb	15 25 47.9	-0.5
ASSB					AML	AML		
	comp=E,2120μm,0.7s							
ASSB					AML	AML		
	comp=N,2320μm,0.8s							
ASSB					AML	AML		
	comp=E,739μm,0.2s							
ASSB					AML	AML		
	comp=N,1233μm,0.2s							
ASSB					AML	AML		
	comp=E,1114μm,0.2s							
GAG1	**Gagliole**	**0.43**	**353**	P		Pg	15 25 47.8	+0.5
GAG1					AML	AML		
	comp=N,4055μm,0.2s							
GAG1					AML	AML		
	comp=E,5650μm,0.6s							
CESX	**Cesi**	**0.46**	**245**	⇑P		Pb	15 25 48.4	-0.5
CESX					AML	AML		
	comp=E,1634μm,0.7s							
CESX					AML	AML		
	comp=N,1257μm,0.3s							
SNTG	**Esanatoglia**	**0.47**	**342**	P		Pg	15 25 48.3	+0.3
SNTG					AML	AML		
	comp=N,1021μm,0.2s							
SNTG					AML	AML		
	comp=E,1521μm,0.2s							
SNTG					AML	AML		
	comp=E,1446μm,0.2s							
SNTG					AML	AML		
	comp=N,1011μm,0.2s							
GIGS	**Gran Sasso**	**0.47**	**138**	⇑P		Pg	15 25 48.0	0.0
GIGS					AML	AML		
	comp=N,204μm,0.3s							
GIGS					AML	AML		
	comp=E,271μm,0.3s							
EL6	**Elcito**	**0.52**	**357**	⇑P		Pg	15 25 49.2	+0.2
EL6					AML	AML		
	comp=N,2533μm,0.2s							
EL6					AML	AML		
	comp=E,1903μm,0.2s							
ATCC	**AVT- Casa Cast**	**0.53**	**316**	P		Pg	15 25 49.5	+0.4
ATCC					AML	AML		
	comp=N,1047μm,0.6s							
ATCC					AML	AML		
	comp=E,1533μm,0.5s							
PP3	**Marolino**	**0.67**	**31**	⇑P		Pb	15 25 53.1	+0.7
PP3					AML	AML		
	comp=N,5103μm,0.3s							
PP3					AML	AML		
	comp=E,4861μm,0.4s							
PP3					AML	AML		
	comp=N,5442μm,0.3s							
PP3					AML	AML		
	comp=E,4655μm,0.4s							
ARVD	**Arcevia**	**0.71**	**348**	S		Sb	15 26 04.0	+1.0
SRES	**S.Oreste - Sor**	**0.74**	**220**	S		Sn	15 26 06.0	-0.5
VIVA	**Pratoni del Vi**	**1.09**	**195**	S		Sn	15 26 17.0	+1.8

ROM 30 15:26:27.4±0.1, 42°768N±0°003×13°169E±0°004,
h10km, ML2.9/13, 3C-6D, Error ellipse: s-maj=0.3km
s-min=0.2km az=92.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**9**	P		Pg	15 26 30.2	+0.1
T1245					AML	AML		
	comp=E,30250μm,0.2s							
T1245					AML	AML		
	comp=N,41300μm,0.7s							
T1245					AML	AML		
	comp=E,31750μm,0.2s							
T1245					AML	AML		
	comp=N,39150μm,0.6s							
T1201	**Domo (RI)**	**0.13**	**151**	P		Pg	15 26 31.2	+0.7
T1201				S		Sg	15 26 34.0	+1.3
T1204	**Amatrice, Fraz**	**0.14**	**130**	P		Pg	15 26 31.4	+0.5
T1204				S		Sg	15 26 34.1	+0.9
T1204					AML	AML		
	comp=N,7325μm,0.4s							
T1204					AML	AML		
	comp=E,11550μm,0.3s							
T1204					AML	AML		
	comp=N,7320μm,0.4s							
T1204					AML	AML		
	comp=N,6749μm,0.3s							
T1204					AML	AML		
	comp=E,11544μm,0.3s							
MMO1	**Montemonaco**	**0.17**	**42**	P		Pg	15 26 31.7	+0.3
MMO1				S		Sg	15 26 34.5	+0.5
T1217	**Poggiodomo (PG**	**0.18**	**252**	P		Pg	15 26 32.0	+0.6
T1217				S		Sg	15 26 35.3	+1.1
T1217					AML	AML		
	comp=E,12550μm,0.5s							
T1217					AML	AML		
	comp=N,15200μm,0.3s							
T1217					AML	AML		
	comp=E,12950μm,0.5s							
T1217					AML	AML		
	comp=N,15205μm,1.2s							
T1217					AML	AML		
	comp=N,15180μm,1.2s							
T1217					AML	AML		
	comp=N,15195μm,1.1s							
T1217					AML	AML		
	comp=E,12550μm,0.5s							
T1217					AML	AML		
	comp=E,12900μm,0.5s							
T1217					AML	AML		
	comp=N,15255μm,0.3s							
T1217					AML	AML		
	comp=E,2791μm,0.3s							
T1217					AML	AML		
	comp=E,2845μm,0.3s							
T1217					AML	AML		
	comp=N,4095μm,0.2s							
T1217					AML	AML		
	comp=N,4260μm,0.2s							
SMA1	**SAN MARTINO**	**0.18**	**138**	P		Pg	15 26 32.0	+0.5
SMA1				S		Sg	15 26 35.4	+1.1
SMA1					AML	AML		
	comp=E,8265μm,0.3s							
SMA1					AML	AML		
	comp=N,6270μm,0.4s							
SMA1					AML	AML		
	comp=N,6269μm,0.4s							
SMA1					AML	AML		
	comp=E,6418μm,0.4s							
LNSS	**Leonessa**	**0.19**	**210**	P		Pg	15 26 32.2	+0.6
LNSS				S		Sg	15 26 35.9	+1.5
LNSS					AML	AML		
	comp=N,13650μm,1.3s							
LNSS					AML	AML		
	comp=E,5370μm,0.8s							
LNSS					AML	AML		
	comp=E,4504μm,0.2s							
LNSS					AML	AML		
	comp=N,12248μm,0.2s							
T1241	**Roccafluvione,**	**0.21**	**65**	P		Pg	15 26 32.6	+0.7
T1241				S		Sg	15 26 36.4	+1.4
FEMA	**Monte Fema**	**0.21**	**336**	P		Pg	15 26 32.3	+0.3
T1243	**Rocca Santa Ma**	**0.22**	**109**	P		Pg	15 26 32.4	+0.3
T1243				S		Sg	15 26 36.1	+0.9
T1215	**Vallo di Nera,**	**0.22**	**279**	P		Pg	15 26 32.6	+0.4
T1215				S		Sg	15 26 36.4	+1.1
T1215					AML	AML		
	comp=N,5375μm,1.0s							
T1215					AML	AML		
	comp=E,5470μm,0.3s							
T1215					AML	AML		
	comp=N,5285μm,1.0s							
T1215					AML	AML		
	comp=E,5615μm,0.3s							
T1215					AML	AML		
	comp=E,5460μm,0.3s							
T1215					AML	AML		
	comp=N,5280μm,1.0s							
T1215					AML	AML		
	comp=E,5465μm,0.3s							
T1215					AML	AML		
	comp=N,5275μm,1.0s							
T1215					AML	AML		
	comp=N,1697μm,0.2s							
T1215					AML	AML		
	comp=N,1869μm,0.2s							
T1215					AML	AML		
	comp=E,1869μm,0.1s							
T1215					AML	AML		
	comp=E,1786μm,0.1s							
AM05	**Amandola Campo**	**0.25**	**33**	P		Pg	15 26 33.1	+0.5
AM05				S		Sg	15 26 37.6	+1.5
AM05					AML	AML		
	comp=E,2100μm,0.8s							
AM05					AML	AML		
	comp=E,2105μm,0.8s							
AM05					AML	AML		
	comp=N,2115μm,0.1s							
AM05					AML	AML		
	comp=N,552μm,0.8s							
AM05					AML	AML		
	comp=E,8545μm,0.8s							
AM05					AML	AML		
	comp=E,1855μm,0.1s							
AM05					AML	AML		
	comp=N,2116μm,0.1s							
AM05					AML	AML		
	comp=E,7604μm,0.1s							
AM05					AML	AML		
	comp=N,517μm,0.1s							
RM33	**Pellescritta (**	**0.26**	**173**	P		Pg	15 26 33.3	+0.5
RM33				S		Sb	15 26 37.8	-1.1
RM33					AML	AML		
	comp=E,3075μm,1.4s							
RM33					AML	AML		
	comp=E,3070μm,1.4s							
RM33					AML	AML		
	comp=E,3120μm,1.4s							
RM33					AML	AML		
	comp=N,3965μm,0.2s							
RM33					AML	AML		

	comp=N,4000μm,0.2s					
RM33				AML	AML	
	comp=N,4001μm,0.2s					
RM33				AML	AML	
	comp=N,3967μm,0.2s					
RM33				AML	AML	
	comp=E,2209μm,0.3s					
RM33				AML	AML	
	comp=E,2219μm,0.3s					
CAMP	**Campotosto**	**0.29**	**143**	P	Pg	15 26 33.8 +0.4
CAMP				S	Sg	15 26 38.4 +1.1
CAMP				AML	AML	
	comp=E,1217μm,0.2s					
CAMP				AML	AML	
	comp=N,903μm,0.2s					
T1246	**Crognaleto (TE**	**0.30**	**128**	P	Pg	15 26 34.0 +0.4
T1246				S	Sb	15 26 38.9 -1.1
GUMA	**Gualdo di Mace**	**0.32**	**23**	P	Pg	15 26 34.5 +0.7
GUMA				S	Sb	15 26 40.1 -0.3
GUMA				AML	AML	
	comp=E,8135μm,0.6s					
GUMA				AML	AML	
	comp=N,9520μm,0.5s					
GUMA				AML	AML	
	comp=E,4489μm,0.3s					
GUMA				AML	AML	
	comp=N,11025μm,0.6s					
GUMA				AML	AML	
	comp=E,7576μm,0.3s					
GUMA				AML	AML	
	comp=N,8596μm,0.4s					
CSP1	**Cessapalombo**	**0.33**	**5**	P	Pg	15 26 34.4 +0.4
CSP1				S	Sb	15 26 39.8 -0.9
CSP1				AML	AML	
	comp=E,3335μm,1.0s					
CSP1				AML	AML	
	comp=N,3080μm,1.1s					
CSP1				AML	AML	
	comp=E,3086μm,0.2s					
CSP1				AML	AML	
	comp=N,2960μm,0.4s					
T1211	**Morro Reatino**	**0.33**	**225**	P	Pg	15 26 34.6 +0.5
T1211				AML	AML	
	comp=E,3705μm,0.1s					
T1211				AML	AML	
	comp=N,6335μm,0.4s					
T1211				AML	AML	
	comp=E,3980μm,1.0s					
T1211				AML	AML	
	comp=N,7405μm,0.4s					
T1211				AML	AML	
	comp=N,7385μm,0.4s					
T1211				AML	AML	
	comp=E,4040μm,1.0s					
T1211				AML	AML	
	comp=N,7400μm,0.4s					
T1211				AML	AML	
	comp=E,3371μm,0.2s					
T1211				AML	AML	
	comp=E,3286μm,0.2s					
T1211				AML	AML	
	comp=N,5627μm,0.2s					
T1211				AML	AML	
	comp=N,5658μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.34**	**164**	P	Pg	15 26 34.7 +0.4
T1247				S	Sb	15 26 40.6 -0.5
T1247				AML	AML	
	comp=N,2695μm,0.3s					
T1247				AML	AML	
	comp=E,2340μm,0.6s					
T1247				AML	AML	
	comp=N,2690μm,0.3s					
T1247				AML	AML	
	comp=E,2315μm,0.1s					
T1247				AML	AML	
	comp=N,2097μm,0.1s					
ARRO	**Arrone**	**0.35**	**238**	P	Pg	15 26 34.8 +0.4
ARRO				S	Sb	15 26 41.0 -0.3
TERO	**Teramo**	**0.35**	**114**	P	Pg	15 26 34.6 +0.1
TERO				S	Sb	15 26 40.4 -1.0
TERO				AML	AML	
	comp=N,2480μm,0.4s					
TERO				AML	AML	
	comp=N,2310μm,0.4s					
TERO				AML	AML	
	comp=E,1915μm,0.3s					
TERO				AML	AML	
	comp=E,2075μm,0.3s					
TERO				AML	AML	
	comp=N,2011μm,0.2s					
TERO				AML	AML	
	comp=N,2147μm,0.2s					
TERO				AML	AML	
	comp=E,1849μm,0.3s					
TERO				AML	AML	
	comp=E,1931μm,0.2s					
OFFI	**Offida**	**0.41**	**66**	P	Pb	15 26 36.6 -0.3
OFFI				AML	AML	
	comp=E,2074μm,0.2s					
OFFI				AML	AML	
	comp=N,2857μm,0.6s					
MNTP	**Montappone**	**0.43**	**31**	P	Pb	15 26 36.8 -0.3
MNTP				AML	AML	
	comp=N,2807μm,0.2s					
MNTP				AML	AML	
	comp=E,4704μm,0.2s					
GIGS	**Gran Sasso**	**0.43**	**137**	P	Pg	15 26 36.1 +0.1
GIGS				S	Sg	15 26 42.7 +1.0
GIGS				AML	AML	
	comp=N,209μm,0.3s					
GIGS				AML	AML	
	comp=E,556μm,0.2s					
AQU	**L'Aquila**	**0.45**	**157**	P	Pg	15 26 36.7 +0.4
AQU				AML	AML	
	comp=E,725μm,0.9s					
AQU				AML	AML	
	comp=E,535μm,0.4s					
AQU				AML	AML	
	comp=N,782μm,0.8s					
AQU				AML	AML	
	comp=N,602μm,0.3s					
CESX	**Cesi**	**0.46**	**250**	P	Pg	15 26 36.6 +0.1
CESX				AML	AML	
	comp=E,1400μm,1.2s					
CESX				AML	AML	
	comp=N,1700μm,0.5s					
CESX				AML	AML	
	comp=N,1240μm,0.3s					
CESX				AML	AML	
	comp=E,1139μm,0.5s					
ASSB	**Assisi San Ben**	**0.46**	**306**	P	Pg	15 26 36.8 +0.2
ASSB				S	Sb	15 26 43.9 -0.7
ASSB				AML	AML	
	comp=E,2120μm,0.7s					
ASSB				AML	AML	
	comp=N,2320μm,0.8s					
ASSB				AML	AML	
	comp=E,2125μm,1.3s					
ASSB				AML	AML	
	comp=N,2243μm,0.2s					
ASSB				AML	AML	
	comp=E,1950μm,0.2s					
FIAM	**Fiamignano**	**0.50**	**184**	P	Pg	15 26 36.9 -0.3
FIAM				AML	AML	
	comp=E,720μm,0.9s					
FIAM				AML	AML	
	comp=N,668μm,0.4s					
FIAM				AML	AML	
	comp=N,716μm,0.4s					
FIAM				AML	AML	
	comp=E,989μm,0.3s					
FIAM				AML	AML	
	comp=N,668μm,0.4s					
FIAM				AML	AML	
	comp=E,644μm,0.3s					
SNTG	**Esanatoglia**	**0.51**	**341**	⇓P	Pb	15 26 38.0 -0.5
SNTG				S	Sb	15 26 47.0 +0.9
SNTG				AML	AML	
	comp=E,452μm,0.1s					
SNTG				AML	AML	
	comp=N,574μm,0.2s					
SNTG				AML	AML	
	comp=E,445μm,0.1s					
SNTG				AML	AML	
	comp=N,551μm,0.2s					
TRTR	**Tortoreto Alta**	**0.55**	**86**	⇑P	Pb	15 26 39.7 +0.6
TRTR				AML	AML	
	comp=N,2133μm,0.3s					
TRTR				AML	AML	
	comp=E,1645μm,0.5s					
EL6	**Elcito**	**0.56**	**355**	⇑P	Pg	15 26 38.9 +0.5
EL6				AML	AML	
	comp=N,1705μm,1.5s					
EL6				AML	AML	
	comp=E,1900μm,1.2s					
EL6				AML	AML	
	comp=E,1391μm,0.2s					
EL6				AML	AML	
	comp=N,1233μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.57**	**317**	⇓P	Pg	15 26 38.1 -0.4
ATCC				AML	AML	
	comp=N,1304μm,0.3s					
ATCC				AML	AML	
	comp=E,1207μm,0.3s					
FOSV	**Fossato di Vic**	**0.60**	**331**	⇓P	Pg	15 26 39.5 +0.3
FOSV				AML	AML	
	comp=E,593μm,0.2s					
FOSV				AML	AML	
	comp=N,775μm,0.3s					
VCEL	**Villa Celiera**	**0.62**	**127**	P	Pg	15 26 39.9 +0.3
VCEL				AML	AML	
	comp=E,1340μm,0.5s					
VCEL				AML	AML	
	comp=N,1355μm,0.5s					
VCEL				AML	AML	
	comp=N,1355μm,0.5s					
VCEL				AML	AML	
	comp=E,1342μm,0.5s					
MURB	**Monte Urbino**	**0.68**	**317**	P	Pg	15 26 41.1 +0.4
MURB				AML	AML	
	comp=N,2163μm,0.3s					
MURB				AML	AML	
	comp=N,2376μm,0.3s					
MURB				AML	AML	
	comp=E,1753μm,0.3s					
MURB				AML	AML	
	comp=E,1611μm,0.2s					
T0110	**Collepietro**	**0.70**	**140**	P	Pg	15 26 41.1 0.0
T0110				AML	AML	
	comp=E,989μm,0.6s					
T0110				AML	AML	
	comp=N,956μm,0.4s					
SRES	**S.Oreste - Sor**	**0.72**	**223**	S	Sn	15 26 55.0 +0.3
ARVD	**Arcevia**	**0.75**	**347**	⇓P	Pb	15 26 42.4 -0.2
ARVD				S	Sn	15 26 55.0 -0.4
ARVD				AML	AML	
	comp=N,229μm,0.2s					
ARVD				AML	AML	
	comp=E,307μm,0.2s					
MGAB	**Montegabbione**	**0.79**	**281**	⇓P	Pn	15 26 45.5 +0.9
MPAG	**Monte Paganucc**	**0.91**	**341**	S	Sn	15 27 01.0 +1.5
CAFI	**Castiglion Fio**	**1.04**	**303**	⇓P	Pb	15 26 47.7 +0.1
CAFI				AML	AML	
	comp=E,292μm,0.4s					
CAFI				AML	AML	
	comp=N,228μm,0.4s					
CAFI				AML	AML	
	comp=N,126μm,0.3s					
CAFI				AML	AML	
	comp=E,152μm,0.6s					
CAFI				AML	AML	
	comp=E,162μm,0.6s					
CAFI				AML	AML	
	comp=N,134μm,0.3s					
TOLF	**Tolfa**	**1.11**	**231**	P	Pb	15 26 48.6 -0.2
TOLF				AML	AML	
	comp=N,249μm,0.5s					
TOLF				AML	AML	
	comp=E,192μm,0.4s					
CASP	**Castiglione de**	**1.70**	**272**	⇑P	Pn	15 26 57.8 +0.7

ROM 30 15:27:14.3±0.0, 42°.759N±0°.002×13°.107E±0°.002, h12km, ML2.8/37, 21C-21D, Error ellipse: s-maj=0.2km s-min=0.1km az=141.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.11**	**32**	P	Pg	15 27 17.8	+0.3
T1245				S	Sg	15 27 20.1	+0.2
T1245				AML	AML		
	comp=E,62650μm,0.6s						
T1245				AML	AML		
	comp=N,53450μm,0.3s						
T1245				AML	AML		
	comp=N,53550μm,0.3s						
T1245				AML	AML		
	comp=E,62700μm,0.6s						
T1245				AML	AML		
	comp=N,53450μm,0.3s						
T1245				AML	AML		
	comp=E,58100μm,0.6s						
T1245				AML	AML		
	comp=E,56716μm,0.3s						
T1245				AML	AML		
	comp=N,53560μm,0.3s						
T1245				AML	AML		
	comp=E,60204μm,0.3s						
T1245				AML	AML		
	comp=N,53444μm,0.3s						
T1217	**Poggiodomo (PG**	**0.14**	**250**	P	Pg	15 27 18.2	+0.4
T1217				S	Sg	15 27 20.8	+0.5
T1217				AML	AML		
	comp=N,15200μm,0.3s						
T1217				AML	AML		
	comp=N,15205μm,1.2s						
T1217				AML	AML		
	comp=E,12550μm,0.5s						
T1217				AML	AML		
	comp=E,12950μm,0.5s						
T1217				AML	AML		
	comp=N,15180μm,1.2s						
T1217				AML	AML		
	comp=N,15195μm,1.1s						
T1217				AML	AML		
	comp=N,15255μm,0.3s						
T1217				AML	AML		
	comp=E,12550μm,0.5s						
T1217				AML	AML		
	comp=E,12900μm,0.5s						
T1217				AML	AML		
	comp=N,14380μm,0.1s						
T1217				AML	AML		
	comp=E,8838μm,0.1s						
T1217				AML	AML		
	comp=N,14128μm,0.1s						
T1217				AML	AML		
	comp=E,8726μm,0.1s						
LNSS	**Leonessa**	**0.16**	**197**	⇑P	Pg	15 27 18.6	+0.4
LNSS				S	Sg	15 27 21.6	+0.7
LNSS				AML	AML		
	comp=E,5265μm,1.0s						
LNSS				AML	AML		
	comp=N,10850μm,0.4s						
LNSS				AML	AML		
	comp=E,4849μm,0.2s						
LNSS				AML	AML		
	comp=N,10787μm,0.1s						
T1204	**Amatrice, Fraz**	**0.18**	**118**	P	Pg	15 27 18.8	+0.4
T1204				AML	AML		
	comp=N,2730μm,0.9s						
T1204				AML	AML		
	comp=N,2725μm,0.9s						
T1204				AML	AML		
	comp=E,4460μm,0.3s						
T1204				AML	AML		
	comp=N,2720μm,0.9s						
T1204				AML	AML		
	comp=E,4460μm,0.3s						
T1204				AML	AML		
	comp=N,2110μm,0.3s						
T1215	**Vallo di Nera,**	**0.18**	**284**	P	Pg	15 27 18.8	+0.4
T1215				AML	AML		
	comp=E,5615μm,0.3s						
T1215				AML	AML		
	comp=N,5375μm,1.0s						
T1215				AML	AML		
	comp=E,5470μm,0.3s						
T1215				AML	AML		
	comp=N,5285μm,1.0s						
T1215				AML	AML		
	comp=E,5460μm,0.3s						
T1215				AML	AML		
	comp=N,5280μm,1.0s						
T1215				AML	AML		
	comp=E,5465μm,0.3s						
T1215				AML	AML		
	comp=N,5275μm,1.0s						
T1215				AML	AML		
	comp=N,4633μm,0.1s						
T1215				AML	AML		
	comp=E,5614μm,0.3s						
T1215				AML	AML		
	comp=E,5462μm,0.3s						
T1215				AML	AML		
	comp=N,4704μm,0.1s						
FEMA	**Monte Fema**	**0.21**	**348**	P	Pb	15 27 19.6	-0.5
FEMA				AML	AML		
	comp=E,8645μm,0.5s						
FEMA				AML	AML		
	comp=N,6995μm,0.6s						
FEMA				AML	AML		
	comp=N,31050μm,0.3s						
FEMA				AML	AML		
	comp=E,53900μm,0.4s						
FEMA				AML	AML		
	comp=N,31000μm,0.3s						
FEMA				AML	AML		
	comp=E,7088μm,0.1s						
FEMA				AML	AML		
	comp=N,5908μm,0.3s						
SMA1	**SAN MARTINO**	**0.21**	**127**	P	Pg	15 27 19.3	+0.4
SMA1				AML	AML		
	comp=E,5880μm,0.4s						
SMA1				AML	AML		
	comp=N,5085μm,0.8s						
SMA1				AML	AML		
	comp=N,4916μm,0.6s						
SMA1				AML	AML		
	comp=E,5879μm,0.4s						
MMO1	**Montemonaco**	**0.21**	**49**	P	Pg	15 27 19.3	+0.3
MMO1				S	Sg	15 27 23.0	+0.8
T1241	**Roccafluvione,**	**0.26**	**68**	P	Pb	15 27 20.4	-0.5
T1241				AML	AML		
	comp=N,2055μm,1.0s						
T1241				AML	AML		
	comp=N,2065μm,1.0s						
T1241				AML	AML		
	comp=E,2975μm,0.3s						
T1241				AML	AML		
	comp=N,2060μm,1.0s						
T1241				AML	AML		
	comp=E,2683μm,0.4s						
T1241				AML	AML		
	comp=N,1682μm,0.5s						
T1241				AML	AML		
	comp=E,2259μm,0.1s						
T1241				AML	AML		
	comp=N,1723μm,0.3s						
T1243	**Rocca Santa Ma**	**0.26**	**104**	⇑P	Pg	15 27 20.1	+0.3
RM33	**Pellescritta (**	**0.26**	**162**	⇑P	Pg	15 27 20.2	+0.4
RM33				S	Sg	15 27 24.5	+1.0
RM33				AML	AML		
	comp=E,2275μm,0.7s						
RM33				AML	AML		
	comp=N,2275μm,0.9s						
RM33				AML	AML		
	comp=E,2280μm,0.7s						
RM33				AML	AML		
	comp=E,2300μm,0.7s						
RM33				AML	AML		
	comp=E,2275μm,0.7s						
RM33				AML	AML		
	comp=N,2240μm,0.9s						
RM33				AML	AML		
	comp=E,2295μm,0.7s						
RM33				AML	AML		
	comp=E,1799μm,0.4s						
RM33				AML	AML		
	comp=N,1907μm,0.3s						
RM33				AML	AML		
	comp=E,1819μm,0.4s						
RM33				AML	AML		
	comp=N,1907μm,0.3s						
AM05	**Amandola Campo**	**0.28**	**40**	P	Pg	15 27 20.6	+0.5
AM05				AML	AML		
	comp=E,1835μm,0.1s						
AM05				AML	AML		
	comp=N,1760μm,0.1s						
AM05				AML	AML		
	comp=N,1765μm,0.1s						
AM05				AML	AML		
	comp=E,7400μm,0.1s						
AM05				AML	AML		
	comp=N,444μm,1.1s						
AM05				AML	AML		
	comp=E,1840μm,0.1s						
AM05				AML	AML		
	comp=N,402μm,0.1s						
AM05				AML	AML		
	comp=E,1836μm,0.1s						
AM05				AML	AML		
	comp=E,7402μm,0.1s						
AM05				AML	AML		
	comp=N,1763μm,0.1s						
T1211	**Morro Reatino**	**0.29**	**219**	P	Pg	15 27 20.7	+0.3
T1211				S	Sb	15 27 25.5	-0.9
T1211				AML	AML		
	comp=E,3975μm,1.0s						
T1211				AML	AML		
	comp=N,7405μm,0.3s						
T1211				AML	AML		
	comp=E,4060μm,1.0s						
T1211				AML	AML		
	comp=E,3980μm,1.0s						
T1211				AML	AML		
	comp=N,7400μm,0.3s						
T1211				AML	AML		
	comp=E,4045μm,1.0s						
T1211				AML	AML		
	comp=N,7385μm,0.3s						
T1211				AML	AML		
	comp=E,3980μm,1.0s						
T1211				AML	AML		
	comp=N,7405μm,0.4s						
T1211				AML	AML		
	comp=N,7400μm,0.4s						
T1211				AML	AML		
	comp=N,7402μm,0.3s						
T1211				AML	AML		
	comp=E,3717μm,0.1s						
T1211				AML	AML		
	comp=E,3709μm,0.1s						
T1211				AML	AML		
	comp=N,7382μm,0.3s						
ARRO	**Arrone**	**0.31**	**235**	⇑P	Pg	15 27 21.0	+0.4
CAMP	**Campotosto**	**0.32**	**135**	P	Pg	15 27 21.0	+0.2
CAMP				S	Sg	15 27 26.1	+1.0
CAMP				AML	AML		
	comp=N,1021μm,0.4s						
CAMP				AML	AML		
	comp=E,820μm,1.5s						
CAMP				AML	AML		
	comp=N,1020μm,0.4s						
CAMP				AML	AML		
	comp=E,755μm,0.3s						
GUMA	**Gualdo di Mace**	**0.35**	**29**	⇑P	Pb	15 27 21.9	-0.5
GUMA				AML	AML		
	comp=E,6230μm,1.1s						
GUMA				AML	AML		
	comp=N,7835μm,1.2s						
GUMA				AML	AML		
	comp=E,7410μm,0.3s						
GUMA				AML	AML		
	comp=N,7835μm,1.2s						
GUMA				AML	AML		
	comp=N,7200μm,0.4s						
GUMA				AML	AML		
	comp=E,6230μm,1.1s						
GUMA				AML	AML		
	comp=E,6153μm,0.4s						
GUMA				AML	AML		
	comp=E,7413μm,0.3s						
GUMA				AML	AML		
	comp=N,7201μm,0.4s						
GUMA				AML	AML		
	comp=N,7738μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.35**	**156**	⇑P	Pg	15 27 21.7	+0.3
T1247				AML	AML		
	comp=N,2690μm,1.1s						
T1247				AML	AML		
	comp=E,1790μm,0.6s						

T1247				AML	AML		
	comp=E,1721μm,0.3s						
T1247				AML	AML		
	comp=N,2293μm,0.3s						
TERO	**Teramo**	**0.39**	**110**	P	Pg	15 27 22.3	+0.2
TERO				AML	AML		
	comp=E,1390μm,0.8s						
TERO				AML	AML		
	comp=N,1820μm,0.6s						
TERO				AML	AML		
	comp=E,1460μm,0.8s						
TERO				AML	AML		
	comp=N,1710μm,0.6s						
TERO				AML	AML		
	comp=E,1108μm,0.3s						
TERO				AML	AML		
	comp=N,1179μm,0.3s						
TERO				AML	AML		
	comp=E,1117μm,0.3s						
TERO				AML	AML		
	comp=N,1627μm,0.5s						
SEF1	**Sefro**	**0.41**	**343**	⇑P	Pb	15 27 23.3	-0.1
SEF1				AML	AML		
	comp=E,3005μm,1.4s						
SEF1				AML	AML		
	comp=N,2535μm,0.3s						
SEF1				AML	AML		
	comp=E,3000μm,1.4s						
SEF1				AML	AML		
	comp=N,2536μm,0.3s						
SEF1				AML	AML		
	comp=E,2735μm,0.2s						
CESX	**Cesi**	**0.42**	**249**	⇑P	Pg	15 27 22.7	+0.1
CESX				AML	AML		
	comp=E,1400μm,1.2s						
CESX				AML	AML		
	comp=N,1700μm,0.5s						
CESX				AML	AML		
	comp=E,1326μm,0.4s						
CESX				AML	AML		
	comp=N,1700μm,0.5s						
ASSB	**Assisi San Ben**	**0.43**	**311**	⇑P	Pg	15 27 23.1	+0.2
ASSB				AML	AML		
	comp=E,2125μm,1.3s						
ASSB				AML	AML		
	comp=N,1690μm,0.5s						
ASSB				AML	AML		
	comp=E,1760μm,0.3s						
ASSB				AML	AML		
	comp=N,1627μm,0.2s						
AQU	**L'Aquila**	**0.46**	**152**	⇑P	Pg	15 27 23.9	+0.5
AQU				AML	AML		
	comp=N,457μm,0.4s						
AQU				AML	AML		
	comp=E,666μm,0.9s						
AQU				AML	AML		
	comp=E,475μm,0.6s						
AQU				AML	AML		
	comp=N,648μm,0.5s						
GIGS	**Gran Sasso**	**0.46**	**132**	⇑P	Pg	15 27 23.4	0.0
GIGS				AML	AML		
	comp=N,232μm,0.4s						
GIGS				AML	AML		
	comp=E,278μm,0.5s						
GIGS				AML	AML		
	comp=N,232μm,0.4s						
GIGS				AML	AML		
	comp=E,277μm,0.2s						
GIGS				AML	AML		
	comp=N,202μm,0.1s						
OFFI	**Offida**	**0.46**	**67**	⇓P	Pb	15 27 24.4	0.0
OFFI				AML	AML		
	comp=N,2785μm,0.5s						
OFFI				AML	AML		
	comp=E,2530μm,1.5s						
OFFI				AML	AML		
	comp=E,2319μm,0.3s						
OFFI				AML	AML		
	comp=N,2308μm,0.6s						
FIAM	**Fiamignano**	**0.49**	**179**	⇑P	Pg	15 27 24.0	0.0
FIAM				AML	AML		
	comp=E,989μm,0.3s						
FIAM				AML	AML		
	comp=N,716μm,0.4s						
FIAM				AML	AML		
	comp=N,716μm,0.4s						
FIAM				AML	AML		
	comp=E,987μm,0.3s						
SNTG	**Esanatoglia**	**0.51**	**346**	P	Pg	15 27 24.7	+0.4
SNTG				AML	AML		
	comp=E,787μm,1.1s						
SNTG				AML	AML		
	comp=N,673μm,0.4s						
SNTG				AML	AML		
	comp=E,770μm,1.1s						
SNTG				AML	AML		
	comp=E,788μm,1.1s						
SNTG				AML	AML		
	comp=N,674μm,0.4s						
SNTG				AML	AML		
	comp=E,770μm,1.1s						
SNTG				AML	AML		
	comp=N,671μm,0.4s						
SNTG				AML	AML		
	comp=E,766μm,0.1s						
SNTG				AML	AML		
	comp=E,765μm,0.1s						
SNTG				AML	AML		
	comp=N,532μm,0.1s						
SNTG				AML	AML		
	comp=N,505μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.55**	**321**	⇑P	Pg	15 27 25.3	+0.3
ATCC				S	Sb	15 27 35.0	+1.4
ATCC				AML	AML		
	comp=E,1540μm,1.2s						
ATCC				AML	AML		
	comp=N,1130μm,0.7s						
ATCC				AML	AML		
	comp=E,1535μm,1.2s						
ATCC				AML	AML		
	comp=N,1135μm,0.7s						
ATCC				AML	AML		
	comp=E,1382μm,0.2s						
ATCC				AML	AML		
	comp=N,997μm,0.2s						
EL6	**Elcito**	**0.57**	**360**	⇓P	Pg	15 27 25.2	-0.3
EL6				S	Sb	15 27 36.0	+1.6
FOSV	**Fossato di Vic**	**0.59**	**335**	⇓P	Pg	15 27 26.0	+0.1
FOSV				AML	AML		
	comp=E,498μm,0.7s						
FOSV				AML	AML		
	comp=N,464μm,0.3s						
FOSV				AML	AML		
	comp=N,465μm,0.3s						
FOSV				AML	AML		
	comp=E,401μm,0.3s						
FOSV				AML	AML		
	comp=N,465μm,0.3s						
TRTR	**Tortoreto Alta**	**0.60**	**85**	⇑P	Pb	15 27 27.2	+0.5
TRTR				AML	AML		
	comp=E,1854μm,0.4s						
TRTR				AML	AML		
	comp=N,2098μm,0.6s						
FAGN	**Fagnano**	**0.61**	**144**	⇓P	Pb	15 27 26.8	0.0
FAGN				AML	AML		
	comp=E,1153μm,0.5s						
FAGN				AML	AML		
	comp=N,723μm,0.4s						
VCEL	**Villa Celiera**	**0.65**	**124**	⇓P	Pb	15 27 27.4	-0.3
VCEL				AML	AML		
	comp=E,784μm,0.2s						
VCEL				AML	AML		
	comp=N,745μm,0.4s						
MURB	**Monte Urbino**	**0.66**	**320**	⇑P	Pb	15 27 27.9	+0.1
MURB				S	Sn	15 27 39.0	-0.9
MURB				AML	AML		
	comp=N,2030μm,0.3s						
MURB				AML	AML		
	comp=E,2470μm,0.3s						
MURB				AML	AML		
	comp=N,2265μm,0.8s						
MURB				AML	AML		
	comp=N,2030μm,0.3s						
MURB				AML	AML		
	comp=E,2185μm,0.3s						
MURB				AML	AML		
	comp=N,2206μm,0.2s						
MURB				AML	AML		
	comp=E,2470μm,0.3s						
MURB				AML	AML		
	comp=N,2183μm,0.3s						
MURB				AML	AML		
	comp=N,2031μm,0.3s						
SRES	**S.Oreste - Sor**	**0.68**	**220**	⇓P	Pg	15 27 27.6	0.0
SRES				AML	AML		
	comp=E,358μm,0.8s						
SRES				AML	AML		
	comp=N,232μm,1.6s						
SRES				AML	AML		
	comp=E,293μm,0.3s						
SRES				AML	AML		
	comp=N,223μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.71**	**309**	⇓P	Pb	15 27 29.3	+0.7
ATTE				AML	AML		
	comp=E,346μm,0.4s						
ATTE				AML	AML		
	comp=N,337μm,0.3s						
ATTE				AML	AML		
	comp=E,346μm,0.4s						
ATTE				AML	AML		
	comp=N,337μm,0.3s						
PP3	**Marolino**	**0.72**	**31**	P	Pb	15 27 28.9	+0.2
PP3				AML	AML		
	comp=E,3280μm,0.4s						
PP3				AML	AML		
	comp=N,1765μm,0.3s						
PP3				AML	AML		
	comp=N,1665μm,0.3s						
PP3				AML	AML		
	comp=N,1765μm,0.3s						
PP3				AML	AML		
	comp=N,1660μm,0.3s						
PP3				AML	AML		
	comp=E,3420μm,0.4s						
PP3				AML	AML		
	comp=E,3280μm,0.4s						
PP3				AML	AML		
	comp=N,1662μm,0.3s						
PP3				AML	AML		
	comp=E,3423μm,0.4s						
PP3				AML	AML		
	comp=N,1766μm,0.3s						
ATFO	**Monte Foce - G**	**0.72**	**327**	⇓P	Pb	15 27 28.6	-0.2
ATFO				AML	AML		
	comp=E,420μm,0.6s						
ATFO				AML	AML		
	comp=E,420μm,0.6s						
ATFO				AML	AML		
	comp=N,424μm,0.9s						
ATFO				AML	AML		
	comp=E,397μm,0.4s						
ATFO				AML	AML		
	comp=N,420μm,0.3s						
T0110	**Collepietro**	**0.73**	**137**	⇓P	Pg	15 27 28.1	-0.3
T0110				AML	AML		
	comp=N,654μm,1.4s						
T0110				AML	AML		
	comp=E,654μm,1.4s						
T0110				AML	AML		
	comp=E,790μm,0.4s						
T0110				AML	AML		
	comp=N,565μm,0.5s						
T0110				AML	AML		
	comp=E,790μm,0.4s						
ARVD	**Arcevia**	**0.75**	**351**	⇑P	Pb	15 27 29.3	0.0
ARVD				S	Sn	15 27 41.0	-1.0
ARVD				AML	AML		
	comp=N,296μm,1.4s						
ARVD				AML	AML		
	comp=E,325μm,0.6s						
ARVD				AML	AML		
	comp=E,269μm,0.2s						
ARVD				AML	AML		
	comp=N,257μm,0.2s						
MGAB	**Montegabbione**	**0.75**	**282**	⇓P	Pb	15 27 29.2	0.0
MGAB				AML	AML		
	comp=N,1100μm,1.0s						
MGAB				AML	AML		
	comp=N,1100μm,1.0s						
MGAB				AML	AML		
	comp=E,1110μm,0.3s						
MGAB				AML	AML		
	comp=E,1305μm,0.3s						
MGAB				AML	AML		
	comp=E,1114μm,0.3s						
MGAB				AML	AML		
	comp=E,1308μm,0.3s						
MGAB				AML	AML		
	comp=N,1031μm,0.3s						
MGAB				AML	AML		
	comp=N,991μm,0.3s						
MTCE	**Montecelio**	**0.78**	**200**	⇑P	Pg	15 27 29.2	-0.2
MTCE				AML	AML		
	comp=N,306μm,0.8s						
MTCE				AML	AML		
	comp=E,523μm,0.4s						
MTCE				AML	AML		
	comp=N,288μm,0.6s						
MTCE				AML	AML		
	comp=E,523μm,0.4s						
ATVO	**AVT- Monte Val**	**0.81**	**321**	⇓P	Pg	15 27 29.1	-0.8
CERT	**Cerreto**	**0.81**	**187**	⇓P	Pg	15 27 29.9	-0.2
CERT				AML	AML		
	comp=E,1175μm,0.5s						
CERT				AML	AML		
	comp=N,487μm,0.6s						
CERT				AML	AML		
	comp=E,1178μm,0.5s						
CERT				AML	AML		
	comp=N,449μm,0.5s						
AOI	**Ancona**	**0.87**	**24**	P	Pn	15 27 31.9	-0.4
AOI				AML	AML		
	comp=N,538μm,0.3s						
AOI				AML	AML		
	comp=E,426μm,0.4s						
AOI				AML	AML		
	comp=N,538μm,0.3s						
AOI				AML	AML		
	comp=E,361μm,0.3s						
PIEI	**Pieia**	**0.88**	**332**	⇑P	Pn	15 27 32.3	-0.2
PIEI				S	Sn	15 27 47.0	+1.7
PIEI				AML	AML		
	comp=E,310μm,0.1s						
PIEI				AML	AML		
	comp=N,244μm,0.2s						
SACS	**San Casciano d**	**0.89**	**276**	⇑P	Pg	15 27 31.4	0.0
SACS				AML	AML		
	comp=N,324μm,0.6s						
SACS				AML	AML		
	comp=E,298μm,0.6s						
SACS				AML	AML		
	comp=E,314μm,0.6s						
SACS				AML	AML		
	comp=N,336μm,0.6s						
MPAG	**Monte Paganucc**	**0.91**	**344**	⇑P	Pb	15 27 32.4	+0.5
FSSB	**Fossombrone**	**0.96**	**346**	⇓P	Pg	15 27 32.9	0.0
FSSB				AML	AML		
	comp=N,1375μm,0.4s						
FSSB				AML	AML		
	comp=E,926μm,0.3s						
FSSB				AML	AML		
	comp=N,1373μm,0.4s						
FSSB				AML	AML		
	comp=E,927μm,0.3s						
LATE	**Laterza**	**0.97**	**262**	⇓P	Pn	15 27 33.5	-0.3
RMP	**Rome, Mte Porz**	**0.99**	**198**	S	Sn	15 27 50.0	+2.0
CAFI	**Castiglion Fio**	**1.01**	**305**	⇓P	Pn	15 27 34.1	-0.2
CAFI				AML	AML		
	comp=N,228μm,0.4s						
CAFI				AML	AML		
	comp=E,292μm,0.4s						
CAFI				AML	AML		
	comp=N,229μm,0.3s						
CAFI				AML	AML		
	comp=E,295μm,0.4s						
CAFI				AML	AML		
	comp=N,217μm,0.3s						
CAFI				AML	AML		
	comp=E,291μm,0.4s						
SF04	**Casetta**	**1.07**	**275**	⇑P	Pn	15 27 36.2	+1.1
SF04				AML	AML		
	comp=N,204μm,0.3s						
SF04				AML	AML		
	comp=E,290μm,0.2s						
LPEL	**Lama dei Pelig**	**1.07**	**131**	⇓P	Pn	15 27 35.1	0.0
LPEL				AML	AML		
	comp=N,239μm,0.5s						
LPEL				AML	AML		
	comp=E,216μm,0.5s						
TOLF	**Tolfa**	**1.07**	**230**	⇓P	Pb	15 27 34.6	-0.2
TOLF				AML	AML		
	comp=E,211μm,0.5s						
TOLF				AML	AML		
	comp=N,183μm,0.4s						
SF01	**Poggio Pratacc**	**1.14**	**273**	⇓P	Pg	15 27 36.2	+0.1
SF01				AML	AML		
	comp=N,145μm,0.3s						
SF01				AML	AML		
	comp=E,243μm,0.4s						
ARCI	**Arcidosso**	**1.20**	**275**	⇓P	Pg	15 27 38.3	+0.8
CRE	**Caprese Michel**	**1.21**	**316**	⇓P	Pg	15 27 38.7	+1.2
CASP	**Castiglione de**	**1.65**	**272**	P	Pn	15 27 43.1	0.0
CASP				AML	AML		
	comp=N,20μm,0.4s						
CASP				AML	AML		
	comp=E,25μm,0.2s						
TRIF	**Trifonti**	**1.66**	**283**	⇓P	Pn	15 27 43.9	+0.7
TRIF				AML	AML		
	comp=N,43μm,0.3s						
OVO	**Vesuviano**	**2.16**	**153**	P	Pn	15 27 50.0	0.0
VBKN	**Vesuvio Bunker**	**2.17**	**152**	S	Sn	15 28 15.0	-2.0

ROM 30 15:39:57.1±0.3, 42°.74N±0°.01×13°.17E±0°.01, h14km±2km, ML2.7/4, 3C-4D, Error ellipse: s-maj=1.1km s-min=1.0km az=212.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.12**	**6**	⇓P	Pg	15 40 00.9	+0.1
T1245				S	Sg	15 40 02.9	-0.3
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,4790μm,0.3s						
T1245				AML	AML		
	comp=N,5484μm,0.1s						
T1245				AML	AML		
	comp=E,4134μm,0.3s						
T1245				AML	AML		
	comp=N,5216μm,0.1s						
T1204	**Amatrice, Fraz**	**0.12**	**120**	⇑P	Pb	15 40 01.4	+0.1
T1204				AML	AML		
	comp=E,6550μm,0.8s						
T1204				AML	AML		
	comp=N,5435μm,0.1s						
T1204				AML	AML		
	comp=N,5430μm,0.1s						
T1204				AML	AML		
	comp=E,6615μm,0.8s						
T1204				AML	AML		
	comp=E,1884μm,0.2s						
T1204				AML	AML		
	comp=N,1027μm,0.1s						
LNSS	**Leonessa**	**0.17**	**216**	⇑P	Pb	15 40 01.9	-0.1
LNSS				S	Sg	15 40 04.6	+0.5
LNSS				AML	AML		
	comp=E,2365μm,0.4s						
LNSS				AML	AML		
	comp=N,5160μm,0.8s						
LNSS				AML	AML		
	comp=E,1214μm,0.1s						
LNSS				AML	AML		
	comp=N,3356μm,0.3s						
T1217	**Poggiodomo (PG**	**0.18**	**262**	P	Pg	15 40 01.3	-0.1
T1217				AML	AML		
	comp=E,4015μm,0.5s						
T1217				AML	AML		
	comp=N,4920μm,0.9s						
T1217				AML	AML		
	comp=N,4925μm,0.9s						
T1217				AML	AML		
	comp=E,3940μm,0.5s						
T1217				AML	AML		
	comp=N,1223μm,0.2s						
T1217				AML	AML		
	comp=E,830μm,0.2s						
T1217				AML	AML		
	comp=N,1224μm,0.2s						
T1217				AML	AML		
	comp=E,798μm,0.2s						
T1243	**Rocca Santa Ma**	**0.21**	**101**	⇓P	Pb	15 40 02.8	0.0
T1243				S	Sb	15 40 06.0	-0.5
RM33	**Pellescritta (**	**0.23**	**172**	⇑P	Pg	15 40 02.6	+0.3
RM33				S	Sg	15 40 05.8	0.0
RM33				AML	AML		
	comp=E,2130μm,0.3s						
RM33				AML	AML		
	comp=N,1610μm,0.2s						
RM33				AML	AML		
	comp=N,1605μm,0.2s						
RM33				AML	AML		
	comp=N,1935μm,0.9s						
RM33				AML	AML		
	comp=E,2130μm,0.3s						
RM33				AML	AML		
	comp=E,2155μm,1.6s						
RM33				AML	AML		
	comp=N,1910μm,0.9s						
RM33				AML	AML		
	comp=E,666μm,0.2s						
RM33				AML	AML		
	comp=N,741μm,0.2s						
RM33				AML	AML		
	comp=N,770μm,0.2s						
RM33				AML	AML		
	comp=E,663μm,0.1s						
T1215	**Vallo di Nera,**	**0.23**	**286**	⇓P	Pg	15 39 58.0	-4.3
TERO	**Teramo**	**0.34**	**110**	P	Pb	15 40 04.7	-0.2
TERO				S	Sg	15 40 09.4	+0.5
TERO				AML	AML		
	comp=E,822μm,0.3s						
TERO				AML	AML		
	comp=N,880μm,0.4s						
TERO				AML	AML		
	comp=N,6895μm,0.5s						
TERO				AML	AML		
	comp=E,4470μm,0.5s						
TERO				AML	AML		
	comp=N,6690μm,0.5s						
TERO				AML	AML		
	comp=E,4310μm,0.5s						
TERO				AML	AML		
	comp=E,304μm,0.2s						
TERO				AML	AML		
	comp=N,365μm,0.1s						
TERO				AML	AML		
	comp=N,429μm,0.1s						
TERO				AML	AML		
	comp=E,266μm,0.2s						
GIGS	**Gran Sasso**	**0.41**	**134**	⇓P	Pg	15 40 05.8	+0.3
GIGS				S	Sg	15 40 11.4	+0.3
GIGS				AML	AML		
	comp=N,311μm,0.6s						
GIGS				AML	AML		
	comp=E,373μm,0.3s						
GIGS				AML	AML		
	comp=N,54μm,0.1s						
GIGS				AML	AML		
	comp=E,65μm,0.3s						

*PRU **30** 15:40:47.9±0.0, 42°.75N×13°.84E, h0km*

ROM 30 15:40:49.0±0.0, 42°.882N±0°.003×13°.195E±0°.004, h9km, ML2.9/22, 7C-9D, Error ellipse: s-maj=0.3km s-min=0.3km az=82.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**191**	P	Pg	15 40 50.8	-0.1
T1245				S	Sg	15 40 51.8	-0.4
T1245				AML	AML		
	comp=E,98882μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,94518μm,0.3s						
T1245				AML	AML		
MMO1	**Montemonaco**	**0.10**	**80**	P	Pg	15 40 51.8	+0.2

MMO1			S	Sg	15 40 53.5	+0.1
FEMA	**Monte Fema**	**0.13 307**	P	Pg	15 40 52.7	+0.6
FEMA			S	Sg	15 40 55.0	+0.6
FEMA			AML	AML		
	comp=N,15200µm,1.3s					
FEMA			AML	AML		
	comp=E,24400µm,0.5s					
FEMA			AML	AML		
	comp=N,15200µm,1.3s					
FEMA			AML	AML		
	comp=E,24400µm,0.6s					
FEMA			AML	AML		
	comp=E,24382µm,0.6s					
FEMA			AML	AML		
	comp=N,14920µm,0.3s					
AM05	**Amandola Campo**	**0.15 50**	P	Pg	15 40 52.9	+0.5
AM05			S	Sg	15 40 55.5	+0.9
AM05			AML	AML		
	comp=E,4150µm,0.3s					
AM05			AML	AML		
	comp=N,8145µm,0.2s					
AM05			AML	AML		
	comp=N,1380µm,0.2s					
AM05			AML	AML		
	comp=E,4155µm,0.3s					
AM05			AML	AML		
	comp=N,8150µm,0.2s					
AM05			AML	AML		
	comp=E,17850µm,0.2s					
AM05			AML	AML		
	comp=N,1382µm,0.2s					
AM05			AML	AML		
	comp=E,14994µm,0.3s					
AM05			AML	AML		
	comp=E,3411µm,0.2s					
AM05			AML	AML		
	comp=N,8145µm,0.2s					
T1241	**Roccafluvione,**	**0.18 98**	P	Pg	15 40 53.8	+1.0
T1241			S	Sg	15 40 56.8	+1.5
T1241			AML	AML		
	comp=E,11790µm,0.9s					
T1241			AML	AML		
	comp=N,14750µm,0.4s					
GUMA	**Gualdo di Mace**	**0.21 30**	P	Pg	15 40 54.1	+0.7
GUMA			S	Sg	15 40 57.8	+1.5
GUMA			AML	AML		
	comp=E,28950µm,0.6s					
GUMA			AML	AML		
	comp=N,25500µm,0.5s					
GUMA			AML	AML		
	comp=E,34400µm,0.3s					
GUMA			AML	AML		
	comp=N,28850µm,0.5s					
GUMA			AML	AML		
	comp=E,28900µm,0.6s					
GUMA			AML	AML		
	comp=N,28861µm,0.5s					
GUMA			AML	AML		
	comp=E,28929µm,0.6s					
GUMA			AML	AML		
	comp=E,34419µm,0.3s					
GUMA			AML	AML		
	comp=N,25531µm,0.5s					
T1204	**Amatrice, Fraz**	**0.22 156**	P	Pg	15 40 54.4	+0.8
T1204			S	Sg	15 40 58.7	+1.9
T1204			AML	AML		
	comp=E,6600µm,0.8s					
T1204			AML	AML		
	comp=N,3700µm,1.3s					
T1204			AML	AML		
	comp=N,5235µm,0.1s					
T1204			AML	AML		
	comp=E,6615µm,0.8s					
T1204			AML	AML		
	comp=E,6622µm,0.8s					
T1204			AML	AML		
	comp=N,3701µm,0.5s					
T1215	**Vallo di Nera,**	**0.25 252**	P	Pb	15 40 55.0	-0.8
T1215			S	Sb	15 40 59.4	-0.9
T1215			AML	AML		
	comp=E,4065µm,1.1s					
T1215			AML	AML		
	comp=N,2600µm,0.7s					
T1215			AML	AML		
	comp=E,4170µm,1.1s					
T1215			AML	AML		
	comp=E,4060µm,1.1s					
T1215			AML	AML		
	comp=N,2595µm,0.7s					
T1215			AML	AML		
	comp=E,4155µm,1.1s					
T1215			AML	AML		
	comp=N,2645µm,0.7s					
T1215			AML	AML		
	comp=E,4065µm,1.1s					
T1215			AML	AML		
	comp=E,4170µm,1.1s					
T1215			AML	AML		
	comp=N,1611µm,0.2s					
T1215			AML	AML		
	comp=N,1933µm,0.4s					
T1215			AML	AML		
	comp=E,3663µm,0.5s					
T1215			AML	AML		
	comp=E,3811µm,0.5s					
T1217	**Poggiodomo (PG**	**0.26 229**	P	Pb	15 40 55.2	-0.7
T1217			S	Sb	15 40 59.7	-0.8
T1217			AML	AML		
	comp=E,4015µm,0.5s					
T1217			AML	AML		
	comp=N,4930µm,0.9s					
T1217			AML	AML		
	comp=N,4920µm,0.9s					
T1217			AML	AML		
	comp=E,3935µm,0.5s					
T1217			AML	AML		
	comp=N,4935µm,0.9s					
T1217			AML	AML		
	comp=E,3940µm,0.5s					
T1217			AML	AML		
	comp=N,4925µm,0.9s					
T1217			AML	AML		
	comp=E,3670µm,0.6s					
T1217			AML	AML		
	comp=E,3540µm,0.6s					
T1217			AML	AML		
	comp=N,4033µm,0.5s					
T1217			AML	AML		
	comp=N,3925µm,0.5s					
T1243	**Rocca Santa Ma**	**0.26 135**	P	Pg	15 40 55.0	+0.6
T1243			S	Sb	15 40 59.7	-1.0
SMA1	**SAN MARTINO**	**0.27 158**	P	Pg	15 40 55.2	+0.7
SMA1			AML	AML		
	comp=E,5095µm,0.6s					
SMA1			AML	AML		
	comp=N,5210µm,0.7s					
SMA1			AML	AML		
	comp=N,5215µm,0.7s					
SMA1			AML	AML		
	comp=E,5100µm,0.6s					
SMA1			AML	AML		
	comp=N,5212µm,0.7s					
SMA1			AML	AML		
	comp=E,5098µm,0.6s					
LNSS	**Leonessa**	**0.30 202**	P	Pg	15 40 55.4	+0.4
LNSS			S	Sb	15 41 01.3	-0.4
LNSS			AML	AML		
	comp=E,2365µm,0.4s					
LNSS			AML	AML		
	comp=N,5160µm,0.8s					
LNSS			AML	AML		
	comp=N,4091µm,0.3s					
LNSS			AML	AML		
	comp=E,2368µm,0.4s					
MDAR	**Monte D'Aria**	**0.31 353**	P	Pg	15 40 55.6	+0.3
SEF1	**Sefro**	**0.32 326**	P	Pg	15 40 55.9	+0.5
SEF1			S	Sb	15 41 01.1	-1.2
SEF1			AML	AML		
	comp=E,8070µm,0.2s					
SEF1			AML	AML		
	comp=N,9965µm,0.3s					
SEF1			AML	AML		
	comp=E,8065µm,0.2s					
SEF1			AML	AML		
	comp=N,9925µm,0.3s					
SEF1			AML	AML		
	comp=N,9946µm,0.3s					
SEF1			AML	AML		
	comp=E,8066µm,0.2s					
MNTP	**Montappone**	**0.33 38**	P	Pb	15 40 56.6	-0.5
MNTP			AML	AML		
	comp=E,8090µm,0.8s					
MNTP			AML	AML		
	comp=N,7030µm,1.3s					
MNTP			AML	AML		
	comp=N,7035µm,1.3s					
MNTP			AML	AML		
	comp=E,8095µm,0.8s					
MNTP			AML	AML		
	comp=E,6960µm,0.4s					
MNTP			AML	AML		
	comp=N,5807µm,0.3s					
PIO1	**Pioraco**	**0.33 333**	P	Pg	15 40 56.1	+0.4
PIO1			AML	AML		
	comp=E,3810µm,0.5s					
PIO1			AML	AML		
	comp=N,5530µm,0.8s					
PIO1			AML	AML		
	comp=E,3805µm,0.5s					
PIO1			AML	AML		
	comp=N,5525µm,0.8s					
PIO1			AML	AML		
	comp=N,4889µm,0.7s					
PIO1			AML	AML		
	comp=E,3809µm,0.5s					
PIO1			AML	AML		
	comp=N,5525µm,1.2s					
SSM1	**San Severino M**	**0.35 358**	P	Pg	15 40 56.6	+0.7
FIU1	**Fiuminata**	**0.36 328**	P	Pg	15 40 56.9	+0.7
OFFI	**Offida**	**0.36 81**	P	Pb	15 40 57.5	-0.1
OFFI			AML	AML		
	comp=E,7380µm,0.8s					
OFFI			AML	AML		
	comp=N,7055µm,0.6s					
OFFI			AML	AML		
	comp=N,7055µm,0.6s					
OFFI			AML	AML		
	comp=E,7377µm,0.8s					
T1246	**Crognaleto (TE**	**0.37 144**	P	Pg	15 40 56.8	+0.4
RM33	**Pellescritta (**	**0.37 178**	P	Pg	15 40 57.0	+0.6
RM33			AML	AML		
	comp=E,2160µm,1.6s					
RM33			AML	AML		
	comp=N,1910µm,0.9s					
RM33			AML	AML		
	comp=E,2020µm,1.5s					
RM33			AML	AML		
	comp=E,2155µm,1.6s					
RM33			AML	AML		
	comp=N,1935µm,0.9s					
RM33			AML	AML		
	comp=E,1672µm,0.3s					
RM33			AML	AML		
	comp=N,1536µm,0.8s					
RM33			AML	AML		
	comp=N,1515µm,0.5s					
RM33			AML	AML		
	comp=E,1624µm,0.6s					
CAMP	**Campotosto**	**0.38 155**	P	Pg	15 40 56.9	+0.4
CAMP			AML	AML		
	comp=E,1345µm,0.7s					
CAMP			AML	AML		
	comp=N,1255µm,0.6s					
CAMP			AML	AML		
	comp=N,1256µm,0.6s					
CAMP			AML	AML		
	comp=E,1277µm,0.2s					
TERO	**Teramo**	**0.40 131**	P	Pg	15 40 57.4	+0.5
TERO			S	Sb	15 41 04.0	-0.5
TERO			AML	AML		
	comp=E,4310µm,0.5s					
TERO			AML	AML		
	comp=N,6690µm,0.5s					
TERO			AML	AML		
	comp=E,4470µm,0.5s					
TERO			AML	AML		
	comp=N,6895µm,0.5s					
TERO			AML	AML		
	comp=E,4311µm,0.4s					
TERO			AML	AML		
	comp=N,6689µm,0.5s					
TERO			AML	AML		
	comp=N,6898µm,0.5s					
TERO			AML	AML		
	comp=E,4311µm,0.5s					
SNTG	**Esanatoglia**	**0.42 334**	P	Pg	15 40 57.4	+0.2
SNTG			S	Sb	15 41 04.3	-0.8
SNTG			AML	AML		
	comp=E,2225µm,0.7s					
SNTG			AML	AML		
	comp=N,2275µm,1.2s					
SNTG			AML	AML		
	comp=E,2080µm,0.7s					
SNTG			AML	AML		
	comp=E,2220µm,0.7s					
SNTG			AML	AML		
	comp=N,2270µm,1.2s					
SNTG			AML	AML		
	comp=N,2645µm,1.5s					
SNTG			AML	AML		
	comp=E,1900µm,0.3s					
SNTG			AML	AML		
	comp=N,2264µm,0.2s					
SNTG			AML	AML		
	comp=E,1783µm,0.2s					
SNTG			AML	AML		
	comp=N,2064µm,0.2s					
ASSB	**Assisi San Ben**	**0.42 292**	P	Pg	15 40 57.9	+0.5
ASSB			AML	AML		
	comp=N,2160µm,0.3s					
TRE1	**Treia**	**0.44 11**	P	Pb	15 40 58.8	-0.2
T1247	**Pizzolo (AQ)**	**0.45 170**	P	Pg	15 40 58.4	+0.6
T1247			AML	AML		
	comp=N,2850µm,0.6s					
T1247			AML	AML		
	comp=E,2380µm,0.6s					
T1247			AML	AML		
	comp=E,2375µm,0.6s					
T1247			AML	AML		
	comp=E,2278µm,0.6s					
T1247			AML	AML		
	comp=N,2850µm,0.6s					
EL6	**Elcito**	**0.45 351**	⇓P	Pg	15 40 58.2	+0.3
EL6			S	Sb	15 41 07.0	+0.8
EL6			AML	AML		
	comp=E,6015µm,0.2s					
EL6			AML	AML		
	comp=N,6885µm,0.2s					
EL6			AML	AML		
	comp=E,6016µm,0.2s					
EL6			AML	AML		
	comp=N,6886µm,0.2s					
ATCC	**AVT- Casa Cast**	**0.51 307**	P	Pb	15 40 59.5	-0.6
ATCC			AML	AML		
	comp=N,2840µm,1.0s					
ATCC			AML	AML		
	comp=N,2845µm,1.0s					
ATCC			AML	AML		
	comp=E,2485µm,0.5s					
ATCC			AML	AML		
	comp=N,2450µm,0.4s					
ATCC			AML	AML		
	comp=E,2485µm,0.5s					
GIGS	**Gran Sasso**	**0.51 147**	P	Pg	15 40 59.3	+0.3
GIGS			AML	AML		
	comp=E,372µm,0.3s					
GIGS			AML	AML		
	comp=E,373µm,0.3s					
GIGS			AML	AML		
	comp=N,311µm,0.6s					
GIGS			AML	AML		
	comp=E,373µm,0.3s					
GIGS			AML	AML		
	comp=N,273µm,0.4s					
FOSV	**Fossato di Vic**	**0.52 323**	P	Pg	15 40 59.5	+0.3
FOSV			S	Sb	15 41 07.9	-0.2
FOSV			AML	AML		
	comp=N,2985µm,0.5s					
FOSV			AML	AML		
	comp=E,1705µm,0.4s					
FOSV			AML	AML		
	comp=N,2986µm,0.5s					
FOSV			AML	AML		
	comp=E,1707µm,0.4s					
CESX	**Cesi**	**0.53 239**	P	Pb	15 41 00.1	-0.4
TRTR	**Tortoreto Alta**	**0.53 98**	⇓P	Pb	15 41 01.3	+0.7
TRTR			AML	AML		
	comp=E,5820µm,0.3s					
TRTR			AML	AML		
	comp=N,9875µm,0.4s					
AQU	**L'Aquila**	**0.55 164**	P	Pg	15 40 59.9	+0.3
AQU			AML	AML		
	comp=N,908µm,0.8s					
AQU			AML	AML		
	comp=E,963µm,1.5s					
AQU			AML	AML		
	comp=N,1037µm,0.8s					
AQU			AML	AML		
	comp=N,908µm,0.8s					
AQU			AML	AML		
	comp=E,1080µm,1.5s					
AQU			AML	AML		
	comp=E,964µm,1.5s					
AQU			AML	AML		
	comp=N,1028µm,0.7s					
AQU			AML	AML		
	comp=N,908µm,0.8s					
AQU			AML	AML		
	comp=E,1076µm,0.8s					
PP3	**Marolino**	**0.58 31**	⇓P	Pb	15 41 01.8	+0.4
PP3			AML	AML		
	comp=N,3175µm,0.4s					
PP3			AML	AML		
	comp=N,3045µm,0.4s					
PP3			AML	AML		
	comp=E,3695µm,1.2s					
PP3			AML	AML		
	comp=E,3740µm,0.2s					
PP3			AML	AML		
	comp=N,3040µm,0.4s					
PP3			AML	AML		
	comp=N,3180µm,0.4s					
PP3			AML	AML		
	comp=N,3044µm,0.4s					
PP3			AML	AML		
	comp=N,3177µm,0.4s					
PP3			AML	AML		
	comp=E,3740µm,0.2s					
PP3			AML	AML		
	comp=E,3573µm,0.2s					
FIAM	**Fiamignano**	**0.62 185**	P	Pg	15 41 01.2	+0.2
FIAM			AML	AML		
	comp=E,772µm,1.1s					
FIAM			AML	AML		
	comp=E,772µm,1.1s					
FIAM			AML	AML		
	comp=N,643µm,0.6s					
FIAM			AML	AML		
	comp=N,643µm,0.6s					
FIAM			AML	AML		
	comp=E,709µm,0.7s					
MURB	**Monte Urbino**	**0.62 308**	P	Pb	15 41 01.6	-0.5
MURB			AML	AML		
	comp=E,2645µm,0.3s					
MURB			AML	AML		
	comp=N,2785µm,0.5s					
MURB			AML	AML		
	comp=E,2865µm,0.3s					
MURB			AML	AML		
	comp=E,2640µm,0.3s					
MURB			AML	AML		
	comp=N,2790µm,0.5s					
MURB			AML	AML		
	comp=N,2880µm,0.6s					
MURB			AML	AML		
	comp=N,2883µm,0.6s					
MURB			AML	AML		
	comp=N,2786µm,0.5s					
MURB			AML	AML		
	comp=E,2867µm,0.3s					
MURB			AML	AML		
	comp=E,2642µm,0.3s					
ARVD	**Arcevia**	**0.64 343**	⇑P	Pg	15 41 01.7	+0.2
ARVD			S	Sb	15 41 13.0	+1.4
ARVD			AML	AML		
	comp=E,1190µm,0.5s					
ARVD			AML	AML		
	comp=N,828µm,0.3s					
ARVD			AML	AML		
	comp=E,1108µm,0.2s					
ARVD			AML	AML		
	comp=N,555µm,0.2s					
ATFO	**Monte Foce - G**	**0.67 317**	⇑P	Pg	15 41 02.2	+0.3
ATFO			S	Sn	15 41 14.0	-1.4
ATFO			AML	AML		
	comp=N,1080µm,0.7s					
ATFO			AML	AML		
	comp=E,1215µm,1.1s					
ATFO			AML	AML		
	comp=N,1078µm,0.7s					
ATFO			AML	AML		
	comp=E,1071µm,0.7s					
VCEL	**Villa Celiera**	**0.68 135**	⇑P	Pb	15 41 02.9	-0.2
VCEL			AML	AML		
	comp=N,2040µm,0.7s					
VCEL			AML	AML		
	comp=E,1425µm,0.5s					
VCEL			AML	AML		
	comp=E,1425µm,0.5s					
VCEL			AML	AML		
	comp=N,2037µm,0.7s					
ATTE	**AVT- Monte Tez**	**0.69 297**	⇓P	Pb	15 41 04.0	+0.6
ATTE			AML	AML		
	comp=N,832µm,1.5s					
ATTE			AML	AML		
	comp=E,632µm,1.1s					
ATTE			AML	AML		
	comp=E,573µm,0.9s					
ATTE			AML	AML		
	comp=N,626µm,0.4s					
FRON	**Frontone**	**0.72 332**	⇑P	Pg	15 41 03.0	0.0
FRON			AML	AML		
	comp=E,1032µm,0.7s					
FRON			AML	AML		
	comp=N,2200µm,0.3s					
FRON			AML	AML		
	comp=E,782µm,0.3s					
FRON			AML	AML		
	comp=N,2199µm,0.3s					
AOI	**Ancona**	**0.73 24**	S	Sn	15 41 17.0	+0.1
ATVO	**AVT- Monte Val**	**0.76 311**	⇑P	Pg	15 41 03.8	+0.1
ATVO			S	Sn	15 41 17.0	-0.7
ATVO			AML	AML		
	comp=E,675µm,0.8s					
ATVO			AML	AML		
	comp=N,722µm,0.8s					
ATVO			AML	AML		
	comp=E,581µm,0.6s					
ATVO			AML	AML		
	comp=N,722µm,0.8s					
T0110	**Collepietro**	**0.79 146**	⇓P	Pg	15 41 04.1	0.0
T0110			AML	AML		
	comp=E,1205µm,0.5s					
T0110			AML	AML		
	comp=N,1405µm,0.5s					
T0110			AML	AML		
	comp=N,1408µm,0.5s					
T0110			AML	AML		
	comp=E,1204µm,0.5s					
MGAB	**Montegabbione**	**0.80 273**	P	Pb	15 41 04.8	-0.3
MGAB			AML	AML		
	comp=E,1030µm,0.5s					
MGAB			AML	AML		
	comp=N,1665µm,0.5s					
MGAB			AML	AML		
	comp=N,1720µm,0.5s					
MGAB			AML	AML		
	comp=E,1235µm,0.6s					
MGAB			AML	AML		
	comp=E,1026µm,0.5s					
MGAB			AML	AML		
	comp=N,1663µm,0.5s					
MGAB			AML	AML		
	comp=N,1717µm,0.5s					
MGAB			AML	AML		
	comp=E,1028µm,0.5s					
MGAB			AML	AML		
	comp=E,1239µm,0.6s					
ATPI	**Pietralunga -**	**0.81 315**	P	Pb	15 41 05.3	0.0
ATPI			AML	AML		
	comp=E,852µm,0.5s					

ATPI				AML	AML	
	comp=N,612µm,0.4s					
MPAG	**Monte Paganucc**	**0.81**	**337**	⇓P	Pg	15 41 04.8 +0.1
MPAG				S	Sn	15 41 19.0 0.0
MPAG				AML	AML	
	comp=E,799µm,0.4s					
MPAG				AML	AML	
	comp=N,980µm,0.3s					
MPAG				AML	AML	
	comp=N,985µm,0.3s					
MPAG				AML	AML	
	comp=E,802µm,0.4s					
MPAG				AML	AML	
	comp=N,983µm,0.3s					
MPAG				AML	AML	
	comp=E,800µm,0.4s					
PIEI	**Pieia**	**0.81**	**324**	⇓P	Pg	15 41 05.0 +0.3
PIEI				S	Sn	15 41 19.0 +0.1
PIEI				AML	AML	
	comp=E,509µm,0.5s					
PIEI				AML	AML	
	comp=N,502µm,0.5s					
PIEI				AML	AML	
	comp=E,444µm,0.4s					
PIEI				AML	AML	
	comp=N,332µm,0.2s					
FSSB	**Fossombrone**	**0.86**	**340**	S	Sn	15 41 21.0 +0.8
CDCA	**Citt' di Caste**	**0.91**	**310**	⇓P	Pn	15 41 09.1 +1.2
BADI	**Badiali**	**0.94**	**312**	P	Pb	15 41 07.4 0.0
BADI				S	Sn	15 41 23.0 +1.1
BADI				AML	AML	
	comp=N,421µm,0.8s					
PE3	**Peglio**	**0.96**	**328**	⇑P	Pn	15 41 08.5 -0.2
CAFI	**Castiglion Fio**	**1.00**	**297**	⇓P	Pn	15 41 09.5 +0.2
CAFI				AML	AML	
	comp=E,345µm,1.3s					
CAFI				AML	AML	
	comp=N,284µm,0.6s					
CAFI				AML	AML	
	comp=N,269µm,0.5s					
CAFI				AML	AML	
	comp=N,284µm,0.6s					
CAFI				AML	AML	
	comp=E,318µm,0.9s					
CAFI				AML	AML	
	comp=E,315µm,0.9s					
CRE	**Caprese Michel**	**1.17**	**309**	⇑P	Pn	15 41 13.3 +1.6
PTRJ	**Pietraroja**	**1.81**	**146**	S	Sg	15 41 47.0 -0.3
ABTA	**Abfaltersbach**	**3.90**	**353**	Pn	Pn	15 41 51.4 +2.2
	comp=E,3.8nm,0.3s,SNR=6.3					
FETA	**Feichten**	**4.49**	**338**	*e*Pn	Pn	15 42 00.9 +3.5
	comp=E,3.3nm,0.4s					
WTTA	**Wattenberg**	**4.52**	**346**	Pn	Pn	15 42 01.3 +3.5
	comp=E,2.1nm,0.2s,SNR=5.1					
SQTA	**Sankt Quirin**	**4.56**	**343**	Pn	Pn	15 42 02.4 +4.1
	comp=E,9.9nm,0.4s,SNR=7.3					
WATA	**Walderalm**	**4.60**	**346**	Pn	Pn	15 42 03.0 +4.2
	comp=E,3.9nm,0.4s,SNR=6.6					
MOTA	**Moosalm**	**4.70**	**342**	Pn	Pn	15 42 03.9 +3.6
	comp=E,5.3nm,0.4s,SNR=7.0					
RETA	**Reutte**	**4.92**	**340**	*e*Pn	Pn	15 42 07.3 +4.2
	comp=E,4.4nm,0.3s					
CONA	**Conrad Observa**	**5.38**	**19**	*e*Pn	Pn	15 42 11.1 +1.6
	comp=E,0.4nm,0.2s					
CKRC	**Cesky Krumlov**	**5.99**	**7**	*e*SN	Sn	15 43 25.8 -0.7
KHC	**Kasperske Hory**	**6.26**	**2**	*e*PN	Pn	15 42 21.4 -0.1
KHC				*e*SN	Sn	15 43 33.0 -0.1

ROM 30 15:52:18.5±0.0, 42°.869N±0°.002×13°.034E±0°.003,
h11km, ML2.6/40, 15C-14D, Error ellipse: s-maj=0.2km
s-min=0.2km az=298.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.09**	**7**	P		P	Pg	15 52 21.6	+0.4
FEMA				S		S	Sg	15 52 23.6	+0.4
FEMA				AML		AML			
	comp=E,11915µm,0.3s								
FEMA				AML		AML			
	comp=N,12400µm,1.0s								
FEMA				AML		AML			
	comp=E,11895µm,0.3s								
FEMA				AML		AML			
	comp=N,12400µm,0.9s								
FEMA				AML		AML			
	comp=E,11885µm,0.3s								
T1245	**Castelsantange**	**0.11**	**96**	P		P	Pg	15 52 21.9	+0.4
T1245				S		S	Sg	15 52 24.3	+0.6
T1245				AML		AML			
	comp=E,37550µm,0.5s								
T1245				AML		AML			
	comp=N,42350µm,0.3s								
T1245				AML		AML			
	comp=E,34600µm,0.5s								
T1245				AML		AML			
	comp=N,43000µm,0.3s								
T1215	**Vallo di Nera,**	**0.14**	**241**	P		P	Pg	15 52 22.3	+0.6
T1215				S		S	Sg	15 52 24.9	+0.8
T1215				AML		AML			
	comp=N,3040µm,0.4s								
T1215				AML		AML			
	comp=E,4355µm,0.5s								
T1215				AML		AML			
	comp=N,2835µm,0.4s								
T1215				AML		AML			
	comp=E,4250µm,0.5s								
T1215				AML		AML			
	comp=E,4250µm,0.5s								
T1215				AML		AML			
	comp=N,3045µm,0.4s								
T1215				AML		AML			
	comp=E,4355µm,0.5s								
T1215				AML		AML			
	comp=N,2835µm,0.4s								
T1215				AML		AML			
	comp=N,2833µm,0.4s								
T1215				AML		AML			
	comp=N,3040µm,0.4s								
T1215				AML		AML			
	comp=N,3040µm,1.6s								
T1215				AML		AML			
	comp=E,4355µm,1.5s								
T1215				AML		AML			
	comp=E,4250µm,1.5s								
T1215				AML		AML			
	comp=N,2833µm,1.6s								
T1217	**Poggiodomo (PG**	**0.17**	**206**	P		P	Pg	15 52 22.9	+0.6
T1217				S		S	Sg	15 52 26.0	+1.0
T1217				AML		AML			
	comp=E,5855µm,0.2s								
T1217				AML		AML			
	comp=N,5090µm,0.4s								
T1217				AML		AML			
	comp=N,5095µm,0.4s								
T1217				AML		AML			
	comp=E,5730µm,0.2s								
T1217				AML		AML			
	comp=N,4950µm,0.4s								
T1217				AML		AML			
	comp=E,5730µm,0.2s								
T1217				AML		AML			
	comp=E,5855µm,0.2s								
T1217				AML		AML			
	comp=N,4945µm,0.4s								
MMO1	**Montemonaco**	**0.22**	**82**	⇑P		P	Pg	15 52 23.5	+0.4
MMO1				S		S	Sg	15 52 27.2	+1.0
CSP1	**Cessapalombo**	**0.26**	**29**	⇑P		P	Pg	15 52 24.2	+0.4
CSP1				S		S	Sg	15 52 28.4	+1.1
CSP1				AML		AML			
	comp=N,4905µm,0.2s								
CSP1				AML		AML			
	comp=E,3420µm,1.5s								
CSP1				AML		AML			
	comp=N,4910µm,0.2s								
CSP1				AML		AML			
	comp=E,3430µm,1.5s								
AM05	**Amandola Campo**	**0.26**	**65**	AML		AML			
	comp=E,12450µm,0.1s								
AM05				AML		AML			
	comp=E,2955µm,0.1s								
AM05				AML		AML			
	comp=N,2550µm,0.1s								
AM05				AML		AML			
	comp=N,773µm,0.6s								
LNSS	**Leonessa**	**0.27**	**179**	P		P	Pg	15 52 24.4	+0.5
LNSS				S		S	Sb	15 52 28.9	-1.1
LNSS				AML		AML			
	comp=E,2490µm,1.0s								
LNSS				AML		AML			
	comp=N,8630µm,0.7s								
T1204	**Amatrice, Fraz**	**0.28**	**133**	P		P	Pg	15 52 24.7	+0.4
T1204				S		S	Sb	15 52 29.6	-0.9
T1204				AML		AML			
	comp=E,3430µm,0.8s								
T1204				AML		AML			
	comp=E,3435µm,0.8s								
T1204				AML		AML			
	comp=E,3435µm,1.2s								
T1204				AML		AML			
	comp=N,2245µm,0.9s								
SEF1	**Sefro**	**0.28**	**347**	⇑P		P	Pg	15 52 25.0	+0.7
GUMA	**Gualdo di Mace**	**0.29**	**49**	P		P	Pg	15 52 25.1	+0.7
GUMA				S		S	Sb	15 52 30.1	-0.7
GUMA				AML		AML			
	comp=E,5160µm,0.6s								
GUMA				AML		AML			
	comp=N,5480µm,1.4s								
GUMA				AML		AML			
	comp=N,5160µm,1.4s								
GUMA				AML		AML			
	comp=N,5485µm,1.4s								
GUMA				AML		AML			
	comp=E,5520µm,0.7s								
GUMA				AML		AML			
	comp=N,5485µm,0.6s								
GUMA				AML		AML			
	comp=N,5160µm,0.6s								
ASSB	**Assisi San Ben**	**0.33**	**302**	⇑P		P	Pg	15 52 25.3	+0.3
ASSB				S		S	Sb	15 52 30.7	-1.0
ASSB				AML		AML			
	comp=N,1235µm,0.4s								
ASSB				AML		AML			
	comp=E,1685µm,0.8s								
ARRO	**Arrone**	**0.35**	**214**	P		P	Pg	15 52 25.9	+0.4
ARRO				AML		AML			
	comp=E,1495µm,0.7s								
ARRO				AML		AML			
	comp=N,1120µm,0.9s								
ARRO				AML		AML			
	comp=E,1495µm,1.3s								
ARRO				AML		AML			
	comp=N,1120µm,1.1s								
T1243	**Rocca Santa Ma**	**0.35**	**119**	P		P	Pg	15 52 25.7	+0.2
T1211	**Morro Reatino**	**0.36**	**201**	P		P	Pg	15 52 26.0	+0.4
T1211				S		S	Sb	15 52 31.9	-0.7
T1211				AML		AML			
	comp=E,1975µm,1.3s								
T1211				AML		AML			
	comp=N,3060µm,1.6s								
T1211				AML		AML			
	comp=E,2065µm,1.4s								
T1211				AML		AML			
	comp=E,1980µm,1.3s								
T1211				AML		AML			
	comp=N,3170µm,1.5s								
T1211				AML		AML			
	comp=N,3054µm,1.5s								
T1211				AML		AML			
	comp=E,2060µm,1.4s								
T1211				AML		AML			
	comp=N,3170µm,0.5s								
T1211				AML		AML			
	comp=N,3054µm,0.5s								
T1211				AML		AML			
	comp=E,2060µm,0.6s								
T1211				AML		AML			
	comp=E,1980µm,0.7s								
GAG1	**Gagliole**	**0.37**	**4**	⇓P		P	Pb	15 52 26.6	-0.5
RM33	**Pellescritta (**	**0.38**	**160**	P		P	Pg	15 52 26.4	+0.3
RM33				S		S	Sb	15 52 32.5	-0.8
RM33				AML		AML			
	comp=E,1670µm,1.0s								
RM33				AML		AML			
	comp=N,1485µm,0.2s								
RM33				AML		AML			
	comp=E,1665µm,1.0s								
RM33				AML		AML			
	comp=E,1670µm,1.0s								
SNTG	**Esanatoglia**	**0.39**	**350**	⇓P		P	Pg	15 52 26.6	+0.3
SNTG				AML		AML			
	comp=E,514µm,0.4s								
SNTG				AML		AML			
	comp=N,518µm,0.6s								
SNTG				AML		AML			
	comp=E,511µm,0.5s								
SNTG				AML		AML			
	comp=E,514µm,0.5s								
SNTG				AML		AML			
	comp=N,518µm,0.6s								
SNTG				AML		AML			
	comp=N,548µm,0.6s								
CESX	**Cesi**	**0.42**	**232**	⇑P		P	Pg	15 52 27.0	+0.2
CESX				AML		AML			
	comp=N,1400µm,0.6s								
CESX				AML		AML			
	comp=E,1225µm,0.5s								
CESX				AML		AML			
	comp=E,1225µm,1.5s								
ATCC	**AVT- Casa Cast**	**0.43**	**318**	P		P	Pg	15 52 27.3	+0.4
CAMP	**Campotosto**	**0.43**	**140**	P		P	Pg	15 52 27.0	0.0
CAMP				S		S	Sb	15 52 33.8	-0.9
CAMP				AML		AML			
	comp=E,538µm,0.2s								
CAMP				AML		AML			
	comp=N,398µm,0.3s								
CAMP				AML		AML			
	comp=E,537µm,0.2s								
CAMP				AML		AML			
	comp=N,398µm,1.7s								
EL6	**Elcito**	**0.46**	**6**	⇑P		P	Pg	15 52 27.8	+0.2
T1247	**Pizzolo (AQ)**	**0.47**	**155**	⇓P		P	Pg	15 52 28.1	+0.4
T1247				S		S	Sb	15 52 37.0	+1.2
T1247				AML		AML			
	comp=E,991µm,0.4s								
T1247				AML		AML			
	comp=N,1320µm,0.1s								
T1247				AML		AML			
	comp=E,990µm,0.4s								
T1247				AML		AML			
	comp=N,1315µm,0.1s								
FOSV	**Fossato di Vic**	**0.47**	**335**	⇑P		P	Pg	15 52 27.0	-0.7
FOSV				AML		AML			
	comp=N,335µm,0.6s								
FOSV				AML		AML			
	comp=E,320µm,0.5s								
OFFI	**Offida**	**0.48**	**82**	⇑P		P	Pb	15 52 28.9	-0.1
OFFI				AML		AML			
	comp=E,2495µm,0.7s								
OFFI				AML		AML			
	comp=N,2520µm,0.3s								
OFFI				AML		AML			
	comp=N,2520µm,1.7s								
TERO	**Teramo**	**0.49**	**120**	P		P	Pg	15 52 28.0	0.0
TERO				AML		AML			
	comp=N,1420µm,0.3s								
TERO				AML		AML			
	comp=E,1430µm,0.4s								
TERO				AML		AML			
	comp=N,1420µm,1.7s								
MURB	**Monte Urbino**	**0.54**	**317**	P		Pb	15 52 29.6	-0.5
MURB				AML		AML			
	comp=E,1560µm,0.3s								
MURB				AML		AML			
	comp=N,1575µm,0.3s								
MURB				AML		AML			
	comp=N,1670µm,0.3s								
MURB				AML		AML			
	comp=E,1565µm,0.3s								
MURB				AML		AML			
	comp=E,1730µm,0.3s								
MURB				AML		AML			
	comp=N,1570µm,0.3s								
GIGS	**Gran Sasso**	**0.57**	**136**	⇓P		P	Pg	15 52 29.4	-0.2
GIGS				AML		AML			
	comp=E,185µm,0.6s								
GIGS				AML		AML			
	comp=E,184µm,0.6s								
GIGS				AML		AML			
	comp=N,178µm,1.0s								
GIGS				AML		AML			
	comp=E,185µm,1.4s								
AQU	**L'Aquila**	**0.58**	**152**	⇓P		Pb	15 52 30.4	-0.3
AQU				AML		AML			
	comp=E,358µm,1.2s								
AQU				AML		AML			
	comp=N,314µm,0.3s								
AQU				AML		AML			
	comp=N,314µm,1.7s								
AQU				AML		AML			
	comp=E,358µm,0.8s								
ATTE	**AVT- Monte Tez**	**0.60**	**304**	⇑P		Pn	15 52 33.0	0.0	
ATTE				AML		AML			
	comp=E,378µm,0.4s								
ATTE				AML		AML			
	comp=N,295µm,0.3s								
ATTE				AML		AML			
	comp=N,295µm,1.7s								
ATFO	**Monte Foce - G**	**0.60**	**326**	P		Pg	15 52 30.5	+0.3	
ATFO				AML		AML			
	comp=E,311µm,0.3s								
ATFO				AML		AML			
	comp=N,306µm,0.3s								
FIAM	**Fiamignano**	**0.60**	**174**	⇓P		Pg	15 52 30.2	0.0	
FIAM				S		Sb	15 52 40.0	+0.3	
FIAM				AML		AML			
	comp=E,584µm,0.8s								
FIAM				AML		AML			
	comp=N,470µm,1.4s								
ARVD	**Arcevia**	**0.63**	**354**	⇑P		Pg	15 52 31.2	+0.4	
ARVD				S		Sb	15 52 42.0	+1.5	
ARVD				AML		AML			
	comp=E,256µm,0.5s								
ARVD				AML		AML			
	comp=N,218µm,1.3s								
ARVD				AML		AML			
	comp=E,256µm,1.5s								
TRTR	**Tortoreto Alta**	**0.65**	**95**	⇓P		Pb	15 52 32.3	+0.4	
TRTR				AML		AML			
	comp=N,2005µm,0.3s								
TRTR				AML		AML			
	comp=E,2225µm,1.2s								
PP3	**Marolino**	**0.66**	**39**	⇓P		Pb	15 52 32.3	+0.3	
MGAB	**Montegabbione**	**0.68**	**274**	⇓P		Pg	15 52 31.9	+0.3	
MGAB				AML		AML			
	comp=E,777µm,1.4s								
MGAB				AML		AML			
	comp=N,952µm,1.4s								
MGAB				AML		AML			
	comp=E,970µm,1.4s								
MGAB				AML		AML			
	comp=N,1065µm,1.4s								
MGAB				AML		AML			
	comp=E,778µm,1.4s								
MGAB				AML		AML			
	comp=N,1070µm,1.4s								
MGAB				AML		AML			
	comp=E,778µm,0.6s								
MGAB				AML		AML			
	comp=N,952µm,0.6s								
MGAB				AML		AML			
	comp=N,1070µm,0.6s								
MGAB				AML		AML			
	comp=E,970µm,0.6s								
ATVO	**AVT- Monte Val**	**0.69**	**318**	⇑P		Pg	15 52 32.0	+0.2	
ATVO				AML		AML			
	comp=N,197µm,0.4s								
ATVO				AML		AML			
	comp=E,258µm,0.9s								
ATVO				AML		AML			
	comp=E,258µm,1.1s								
FAGN	**Fagnano**	**0.73**	**146**	P		Pg	15 52 31.9	-0.6	
FAGN				AML		AML			
	comp=E,770µm,0.3s								
FAGN				AML		AML			
	comp=E,770µm,0.3s								
FAGN				AML		AML			
	comp=N,499µm,1.6s								
FAGN				AML		AML			
	comp=N,499µm,0.4s								
SRES	**S.Oreste - Sor**	**0.74**	**212**	P		Pg	15 52 32.9	+0.1	
SRES				AML		AML			
	comp=E,434µm,0.7s								
SRES				AML		AML			
	comp=N,255µm,0.4s								
SRES				AML		AML			
	comp=E,434µm,1.3s								
ATPI	**Pietralunga -**	**0.74**	**322**	⇑P		Pg	15 52 32.9	+0.1	
PIEI	**Pieia**	**0.76**	**332**	⇑P		Pg	15 52 33.5	+0.3	
PIEI				AML		AML			
	comp=E,214µm,0.3s								
PIEI				AML		AML			
	comp=N,146µm,0.4s								
VCEL	**Villa Celiera**	**0.76**	**128**	⇓P		Pg	15 52 33.4	+0.2	
VCEL				S		Sn	15 52 46.0	-0.8	
VCEL				AML		AML			
	comp=N,666µm,0.3s								
VCEL				AML		AML			
	comp=N,666µm,0.3s								
VCEL				AML		AML			
	comp=E,761µm,0.4s								
SACS	**San Casciano d**	**0.83**	**269**	⇓P		Pb	15 52 34.8	-0.1	
SACS				AML		AML			
	comp=N,270µm,0.7s								
SACS				AML		AML			
	comp=E,224µm,0.4s								
T0110	**Collepietro**	**0.85**	**139**	⇑P		Pg	15 52 34.3	-0.4	
T0110				AML		AML			
	comp=E,462µm,1.2s								
T0110				AML		AML			
	comp=N,464µm,0.5s								
T0110				AML		AML			
	comp=N,464µm,1.5s								
BADI	**Badiali**	**0.86**	**318**	P		Pb	15 52 35.5	0.0	
MTCE	**Montecelio**	**0.87**	**194**	P		Pg	15 52 34.4	-0.9	
MTCE				AML		AML			
	comp=E,260µm,0.4s								
MTCE				AML		AML			
	comp=N,212µm,0.5s								
CAFI	**Castiglion Fio**	**0.91**	**301**	P		Pb	15 52 36.5	+0.2	
CAFI				S		Sn	15 52 50.0	-0.4	
CAFI				AML		AML			
	comp=N,230µm,0.8s								
CAFI				AML		AML			
	comp=E,270µm,0.4s								
CAFI				AML		AML			
	comp=E,262µm,0.4s								
CAFI				AML		AML			
	comp=N,244µm,0.8s								
CERT	**Cerreto**	**0.92**	**182**	⇓P		Pg	15 52 35.2	-1.0	
CERT				AML		AML			
	comp=N,217µm,0.7s								
CERT				AML		AML			
	comp=E,434µm,0.4s								
CERT				AML		AML			
	comp=N,218µm,0.7s								
CERT				AML		AML			
	comp=N,218µm,1.3s								
MCIV	**Monte Civitell**	**1.00**	**265**	⇓P		Pn	15 52 38.5	-0.1	
MCIV				AML		AML			
	comp=E,141µm,1.4s								
MCIV				AML		AML			
	comp=N,116µm,0.6s								
MCIV				AML		AML			
	comp=E,141µm,1.4s								
MCIV				AML		AML			
	comp=N,117µm,0.6s								
MCIV				AML		AML			
	comp=E,141µm,0.6s								
MCIV				AML		AML			
	comp=N,117µm,1.4s								
CRE	**Caprese Michel**	**1.09**	**314**	P		Pn	15 52 40.9	+1.1	
CRE				AML		AML			
	comp=N,106µm,1.6s								
CRE				AML		AML			
	comp=E,81µm,1.4s								
CRE				AML		AML			
	comp=E,81µm,0.6s								
CRE				AML		AML			
	comp=N,106µm,0.4s								
TOLF	**Tolfa**	**1.11**	**224**	P		Pb	15 52 39.6	-0.1	
TOLF				AML		AML			
	comp=N,129µm,0.5s								
TOLF				AML		AML			
	comp=E,128µm,0.5s								
LPEL	**Lama dei Pelig**	**1.18**	**134**	⇓P		Pb	15 52 40.7	-0.3	
LPEL				AML		AML			
	comp=N,138µm,1.0s								
LPEL				AML		AML			
	comp=E,138µm,0.4s								
ZCCA	**Zocca**	**2.10**	**315**	P		Pb	15 52 56.1	-0.5	

NDIM	Novi di Modena	2.54 323	⇑P	Pg	15 53 06.3 -0.8
MCRV	Calabrutti - M	2.62 142	S	Sg	15 53 44.0 +1.2
MNTV	Mantova	2.80 325	S	Sb	15 53 41.0 -1.7
TREG	Tregnago	2.98 334	S	Sn	15 53 42.0 +0.6

ROM 30 15:53:01.8±0.2, 42°.760N±0°.009×13°.17E±0°.02, h11km, ML2.4/1, 6C, Error ellipse: s-maj=1.4km s-min=1.0km az=285.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.10	10	S	Sg	15 53 07.0	+0.2
T1201	Domo (RI)	0.12	148	P	Pg	15 53 04.5	-0.4
T1204	Amatrice, Fraz	0.14	127	P	Pb	15 53 06.1	-0.4
T1204				AML	AML		
	comp=N,985μm,0.2s						
T1204				AML	AML		
	comp=E,1591μm,0.2s						
LNSS	Leonessa	0.18	211	P	Pb	15 53 06.8	-0.4
LNSS				S	Sg	15 53 09.5	+0.9
LNSS				AML	AML		
	comp=E,1034μm,0.2s						
LNSS				AML	AML		
	comp=E,1033μm,0.2s						
LNSS				AML	AML		
	comp=N,2540μm,0.3s						
LNSS				AML	AML		
	comp=E,1033μm,0.2s						
LNSS				AML	AML		
	comp=N,2538μm,0.3s						
MMO1	Montemonaco	0.18	40	P	Pb	15 53 07.0	-0.3
MMO1				S	Sg	15 53 09.2	+0.5
T1243	Rocca Santa Ma	0.22	107	P	Pg	15 53 06.9	+0.5
FEMA	Monte Fema	0.22	337	P	Pb	15 53 07.3	-0.6
FEMA				S	Sg	15 53 10.1	+0.4
FEMA				AML	AML		
	comp=E,2615μm,0.1s						
FEMA				AML	AML		
	comp=N,1870μm,0.2s						
FEMA				AML	AML		
	comp=E,5865μm,0.2s						
FEMA				AML	AML		
	comp=N,2460μm,0.5s						
FEMA				AML	AML		
	comp=E,5870μm,0.2s						
FEMA				AML	AML		
	comp=N,3660μm,0.1s						
FEMA				AML	AML		
	comp=E,2614μm,0.1s						
FEMA				AML	AML		
	comp=N,1870μm,0.2s						
T1215	Vallo di Nera,	0.22	281	⇑P	Pg	15 53 05.2	-1.3
T1215				AML	AML		
	comp=N,434μm,0.1s						
T1215				AML	AML		
	comp=N,417μm,0.1s						
RM33	Pellescritta (	0.25	172	P	Pg	15 53 07.4	+0.4
AM05	Amandola Campo	0.26	32	S	Sg	15 53 08.0	-2.7
T1211	Morro Reatino	0.32	225	⇑P	Pg	15 53 05.0	-3.3
T1211				AML	AML		
	comp=N,477μm,0.3s						
T1211				AML	AML		
	comp=E,351μm,0.1s						
T1211				AML	AML		
	comp=E,331μm,0.1s						
T1211				AML	AML		
	comp=N,476μm,0.2s						
GUMA	Gualdo di Mace	0.33	22	S	Sg	15 53 09.0	-3.8
CSP1	Cessapalombo	0.33	5	P	Pg	15 53 08.7	+0.2
CSP1				AML	AML		
	comp=E,359μm,0.2s						
CSP1				AML	AML		
	comp=N,494μm,0.2s						
T1247	Pizzolo (AQ)	0.33	163	P	Pg	15 53 08.6	+0.1
T1247				S	Sb	15 53 14.6	-0.5
ARRO	Arrone	0.34	239	P	Pg	15 53 06.6	-2.0
TERO	Teramo	0.35	113	P	Pg	15 53 00.2	-8.6
OFFI	Offida	0.42	65	S	Sg	15 53 13.0	-2.7
MNTP	Montappone	0.44	30	S	Sg	15 53 12.0	-4.3
ASSB	Assisi San Ben	0.47	307	⇑P	Pb	15 53 12.9	+0.8
ASSB				AML	AML		
	comp=E,368μm,0.2s						
ASSB				AML	AML		
	comp=N,341μm,0.1s						
SNTG	Esanatoglia	0.52	342	⇑P	Pb	15 53 12.5	-0.5
SNTG				AML	AML		
	comp=E,158μm,0.1s						
SNTG				AML	AML		
	comp=N,158μm,0.2s						
EL6	Elcito	0.57	355	S	Sg	15 53 21.0	+0.5
ATCC	AVT- Casa Cast	0.57	318	⇑P	Pb	15 53 13.9	0.0
ATCC				AML	AML		
	comp=E,185μm,0.3s						
ATCC				AML	AML		
	comp=N,147μm,0.2s						
FOSV	Fossato di Vic	0.61	331	P	Pb	15 53 14.2	-0.3
FOSV				AML	AML		
	comp=E,560μm,0.3s						
FOSV				AML	AML		
	comp=N,778μm,0.2s						
FOSV				AML	AML		
	comp=E,108μm,0.3s						
FOSV				AML	AML		
	comp=N,154μm,0.3s						
PIEI	Pieia	0.90	329	S	Sn	15 53 33.0	-0.5
PE3	Peglio	1.06	333	S	Sg	15 53 34.0	-1.9
SAMA	S.Maria delle	1.07	204	P	Pb	15 53 14.8	-7.4
MAON	Monte Argentar	1.54	258	P	Pn	15 53 25.4	-3.7
PAOL	Paolisi	2.02	148	S	Sn	15 53 56.0	-5.0
OVO	Vesuviano	2.14	154	⇑P	Pn	15 53 33.4	-4.0
MNTV	Mantova	2.94	325	S	Sn	15 54 22.0	-1.7
TREG	Tregnago	3.12	333	S	Sn	15 54 28.0	-0.1
MTSN	Montesano sull	3.16	141	S	Sn	15 54 25.0	-4.2
RNCA	Ronca, Sant'Ol	3.51	301	P	Pn	15 53 59.5	+3.3
RNCA				S	Sn	15 54 41.0	+3.4
CAR1	CAROLEI	4.19	146	S	Sn	15 54 56.0	+1.3
IST3	Stromboli F	4.25	158	S	Sn	15 54 52.0	-4.1
LLI	Lipari	4.52	162	P	Pb	15 54 18.4	-2.7

IDC 30 15:56:04.1±2.0, 6°.62S×154°.26E, h0km, mb3.4/3, mbtmp3.8/4, ML4.7/1, Error ellipse: s-maj=47.0km s-min=28.3km az=17.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.29	117	Pn	Pn	15 57 37.2	-0.9
	18nm,0.3s,baz=277,slow=19,SNR=1.3						
HNR				Sn	Sn	15 58 53.6	+2.8
	16nm,0.3s,baz=244,slow=16,SNR=1.7						
	236nm,0.6s						
WRA	Warramunga Arr	23.44	234	P	P	16 01 16.6	+1.3
	0.4nm,0.4s,baz=58,slow=10,SNR=3.0						
	0.4nm,0.4s						
ASAR	Alice Springs	25.89	227	P	P	16 01 37.0	-0.9
	0.3nm,0.6s,baz=60,slow=8.5,SNR=5.9						
	0.3nm,0.6s						
CMAR	Chiang Mai Arr	59.96	296	P	P	16 06 12.9	+0.1
	0.3nm,0.3s,baz=122,slow=5.7,SNR=4.8						
	0.3nm,0.3s						

*IDC **30** 16:00:57.0±1.1, 29°.72N×42°.89W, h0km, mb3.5/7, mbtmp3.5/7, MS3.4/27, Error ellipse: s-maj=35.3km s-min=24.2km az=9.0*

ISC 30 16:00:59.2±0.9, 29°.7N±0°.2×42°.9W±0°.1, h14km, n34, σ1§10/7, mb3.6/7, MS3.5/27, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	San Juan	24.15	247	LR	LR	16 12 33.1	
	comp=Z,18nm,21.5s,baz=295,slow=29						
BBTS	Babate	28.51	116	LR	LR	16 15 49.7	
	comp=Z,104nm,18.4s,baz=350,slow=31						
SCHQ	Schefferville	30.46	332	LR	LR	16 18 35.0	
	comp=Z,52nm,19.8s,baz=146,slow=35						
SADO	Sadowa	32.27	308	LR	LR	16 18 25.8	
	comp=Z,63nm,21.1s,baz=172,slow=32						
SDV	Santo Domingo	33.23	237	LR	LR	16 19 20.7	
	comp=Z,18nm,18.5s,baz=31,slow=33						
ESDC	Sonseca Array	33.29	62	P	P	16 07 37.1	+0.8
	0.1nm,0.3s,baz=265,slow=17,SNR=1.9						
ESDC				LR	LR	16 18 02.4	
	comp=Z,50nm,19.1s,baz=172,slow=31						
	0.1nm,0.3s						
TKL	Tuckaleechee C	34.76	291	LR	LR	16 19 08.0	
	comp=Z,46nm,19.8s,baz=75,slow=31						
SFJD	Kangerlussuaq	37.63	355	LR	LR	16 21 18.5	
	comp=Z,44nm,18.2s,baz=173,slow=32						
FRB	Frobisher Bay	37.80	342	LR	LR	16 22 21.1	
	comp=Z,26nm,20.5s,baz=205,slow=34						
DBIC	Dimbokro	42.45	115	LR	LR	16 23 25.7	
	comp=Z,83nm,21.7s,baz=314,slow=32						
JTS	Las Juntas de	43.70	253	LR	LR	16 25 29.9	
	comp=Z,23nm,18.7s,baz=78,slow=34						
TORD	Torodi Ar. Bea	44.33	102	P	P	16 09 08.3	-0.8
	1.1nm,1.1s,baz=293,slow=7.5,SNR=4.1						
TORD				LR	LR	16 26 49.2	
	comp=Z,51nm,18.7s,baz=214,slow=35						
	1.1nm,1.1s						
H10N2	ASCENSION HYDR	46.23	139	T	T	16 58 34.1	
	baz=325,slow=75,SNR=478						
H10N3	ASCENSION HYDR	46.23	139	T	T	16 58 41.5	
	baz=325,slow=75,SNR=458						
H10N1	ASCENSION HYDR	46.24	139	T	T	16 58 31.9	
	baz=325,slow=75,SNR=406						
H10S3	ASCENSION HYDR	47.05	140	T	T	16 59 37.7	
	baz=255,slow=74,SNR=152						
H10S2	ASCENSION HYDR	47.06	140	T	T	16 59 32.6	
	baz=325,slow=74,SNR=60						
CMIG	Matias Romero	48.99	267	LR	LR	16 28 43.0	
	comp=Z,21nm,20.9s,baz=18,slow=34						
LPAZ	La Paz	51.80	211	P	P	16 10 08.0	+0.5
	2.5nm,1.1s,baz=12,slow=9.7,SNR=5.4						
	2.5nm,1.1s						
TXAR	Lajitas Array	52.34	286	P	P	16 10 11.7	+0.7
	0.2nm,0.7s,baz=103,slow=7.6,SNR=2.7						
	0.2nm,0.7s						
ANMO	Albuquerque	53.20	293	LR	LR	16 30 29.9	
	comp=Z,51nm,21.2s,baz=78,slow=33						
PDAR	Pinedale Array	54.06	303	P	P	16 10 22.8	-0.8
	1.2nm,0.9s,baz=81,slow=9.2,SNR=6.9						
PDAR				LR	LR	16 32 05.2	
	comp=Z,60nm,19.8s,baz=84,slow=35						
	1.2nm,0.9s						
YKA	Yellowknife Ar	55.73	328	LR	LR	16 33 31.9	
	comp=Z,46nm,20.5s,baz=14,slow=35						
NEW	Newport	58.37	311	LR	LR	16 33 42.6	
	comp=Z,38nm,21.0s,baz=60,slow=34						
ELK	Elko	58.62	302	LR	LR	16 35 05.6	
	comp=Z,51nm,19.0s,baz=60,slow=35						
NVAR	Mina Array Bea	61.52	300	P	P	16 11 14.6	-1.4
	0.4nm,0.8s,baz=85,slow=11,SNR=2.1						
NVAR				LR	LR	16 36 19.9	
	comp=Z,33nm,21.7s,baz=89,slow=35						
	0.4nm,0.8s						
PFO	Pinyon Flats O	61.53	294	LR	LR	16 36 29.1	
	comp=Z,44nm,19.0s,baz=80,slow=35						
INK	Inuvik	63.01	335	LR	LR	16 37 43.7	
	comp=Z,82nm,18.0s,baz=289,slow=35						
DLBC	Dease Lake	63.78	324	LR	LR	16 38 12.2	
	comp=Z,73nm,21.1s,baz=109,slow=35						
YBH	Yreka Blue Hor	63.79	305	LR	LR	16 39 22.9	
	comp=Z,48nm,18.1s,baz=67,slow=36						
BBB	Bella Bella	64.36	317	LR	LR	16 38 33.6	
	comp=Z,48nm,20.4s,baz=30,slow=35						
BELG	Belogornoye	67.37	42	LR	LR	16 42 03.3	
	comp=Z,13nm,18.7s,baz=336,slow=37						
ILAR	Eielson Array	69.21	334	P	P	16 12 05.6	+0.4
	0.5nm,1.0s,baz=66,slow=4.4,SNR=3.3						
ILAR				LR	LR	16 41 47.3	
	comp=Z,42nm,18.1s,baz=64,slow=35						
	0.5nm,1.0s						
KDAK	Kodiak Island	75.00	329	LR	LR	16 46 43.9	
	comp=Z,91nm,18.1s,baz=239,slow=37						

*MDD **30** 16:02:59.7±0.3, 35°.54N×3°.77W, h0km, mb_Lg2.3/15, Error ellipse: s-maj=2.8km s-min=2.4km az=5.0*
*SFS **30** 16:02:59.0, 35°.45N×3°.76W, h14km, ML2.6, ALBORAN SUR*
*CNRM **30** 16:03:00.4, 35°.50N×3°.73W, h27km, ml2.4*

ISC 30 16:02:59.9±1.2, 35°.53N±0°.02×3°.73W±0°.02, h20km±3km, n40, σ1§26/71, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	Palemas	0.35	209	P	Pg	16 03 07.0	-0.5
PALE				S	Sg	16 03 11.8	-0.8
PVLZ	Peæn de	0.58	233	P	Pb	16 03 10.6	-0.8
PVLZ				S	Sb	16 03 18.5	-0.7
WMELI	Melilla	0.67	108	P	Pn	16 03 13.8	-0.4
WMELI				S	Sn	16 03 23.6	-0.5
EMEL	Melilla	0.67	109	Pg	Pn	16 03 13.9	-0.3
EMEL				Sg	Sg	16 03 23.1	+0.9
GOG	Mont Gurugu	0.67	117	P	Pn	16 03 14.2	-0.1
GOG				S	Sg	16 03 22.3	0.0
EALB	Alboran	0.70	54	Pg	Pn	16 03 14.5	-0.2
EALB				Sg	Sg	16 03 23.9	+0.8
AKLM	AKL	1.02	186	P	Pb	16 03 18.5	-0.4
AKLM				S	Sb	16 03 31.7	-0.2
CHAS	Isla Isabel II	1.12	107	P	Pn	16 03 20.2	-0.2
CHAS				S	Sb	16 03 34.0	-0.6
TAF	Taforalt	1.29	123	P	Pn	16 03 23.0	+0.1
TAF				S	Sn	16 03 37.4	-2.2
EMIJ	Mijas	1.34	321	Pg	Pn	16 03 23.2	-0.3
EMIJ				Sg	Sn	16 03 40.3	-0.4
EMIJ				*i* Vmb_Lg		16 03 46.9	
ELGU	Los Guajares,	1.34	4	Pg	Pn	16 03 23.5	-0.1
ELGU				Sg	Sn	16 03 39.9	-1.0
ELGU				*i* Vmb_Lg		16 03 45.2	
EMAL	Malaga-Limoner	1.36	336	P	Pb	16 03 25.2	+0.6
EMAL				S	Sg	16 03 43.5	-0.4
CHEFC	Chefchaouen	1.38	253	P	Pb	16 03 25.6	+0.6
CEU	Ceuta	1.39	286	P	Pn	16 03 23.5	-0.6
ECEU	Ceuta	1.39	286	Pg	Pb	16 03 24.7	-0.5
ECEU				Sg	Sn	16 03 38.4	-3.6
ECEU				*i* Vmb_Lg		16 03 44.4	
JBK	JBK	1.52	141	P	Pn	16 03 25.9	-0.2
JBK				S	Sn	16 03 44.3	-1.3
EBER	Berja	1.53	26	Pn	Pn	16 03 26.5	+0.2
EBER				Sg	Sn	16 03 45.4	-0.2
EBER				*i* Vmb_Lg		16 03 50.1	
EGOR	Sierra Gorda,	1.61	349	Pn	Pn	16 03 26.9	-0.4
EGOR				Sn	Sn	16 03 47.9	+0.2
EGOR				*i* Vmb_Lg		16 03 52.6	
EQUE	Quentar	1.69	8	Pn	Pb	16 03 30.5	+0.1
EQUE				*i* Vmb_Lg		16 04 00.9	
ENIJ	Nijar	1.90	40	Pn	Pn	16 03 30.3	-0.9
ENIJ				Sn	Sn	16 03 53.1	-1.4
ENIJ				*i* Vmb_Lg		16 03 57.6	
LCRM	LCR	2.06	207	P	Pb	16 03 37.2	+0.5
LCRM				S	Sb	16 04 00.4	-1.5
IFR	Ifrane	2.31	210	P	Pn	16 03 35.8	-1.2
IFR				S	Sn	16 04 03.9	-1.1
EQES	Quesada	2.33	13	Pn	Pb	16 03 40.2	-1.2
EQES				Sn	Sb	16 04 07.9	-1.9
EQES				*i* Vmb_Lg		16 04 17.3	
CZD	Col de Zad	2.71	204	P	Pn	16 03 43.8	+1.2
CZD				S	Sn	16 04 14.2	-0.9
EADA	Adamuz	2.72	346	Pn	Pb	16 03 45.6	-2.4
EADA				Sn	Sb	16 04 19.0	-1.9
EADA				*i* Vmb_Lg		16 04 26.9	
MD31	MD31	2.79	198	P	Pn	16 03 44.3	+0.8
MD31				S	Sn	16 04 15.4	-1.1
MDT	Midelt	2.80	195	P	Pn	16 03 44.4	+0.8
MDT				S	Sn	16 04 16.8	-0.1
ECAB	El Cabril	2.88	332	Pn	Pb	16 03 48.5	-2.2
ECAB				Sn	Sn	16 04 18.5	-0.3
ECAB				*i* Vmb_Lg		16 04 39.5	
CART	Cartagena	3.01	46	P	Pn	16 03 46.8	+0.3
EMUR	La Murta	3.06	40	Sn	Sn	16 04 20.9	-2.3
EMUR				*i* Vmb_Lg		16 04 25.3	
EMIN	Mina Concepcio	3.26	314	Pn	Pn	16 03 51.5	+1.6
EMIN				Sn	Sn	16 04 26.4	-1.6
ETOB	Tobarra	3.57	29	Pn	Pn	16 03 57.2	+3.0
ETOB				Sn	Sn	16 04 38.4	+2.6
ETOB				*i* Vmb_Lg		16 04 41.6	
EGRO	El Granado	3.63	305	Pn	Pn	16 03 55.9	+1.0
EGRO				Sn	Sn	16 04 35.6	-1.6
EGRO				*i* Vmb_Lg		16 04 40.9	
PVAQ	Vaqueiros	3.72	301	*e*Sn	Sn	16 04 38.7	-0.7
PVAQ				A	A	16 04 45.3	
	2.6nm,0.7s						
PVAQ	Vaqueiros	3.72	301	P	Pn	16 03 56.4	+0.2
PVAQ				S	Sn	16 04 37.3	-2.2
PBAR	Barrancos	3.75	316	*e*Sn	Sn	16 04 38.8	-1.3
EBAD	Badajoz	4.16	322	Pn	Pn	16 04 02.9	+0.7
EBAD				Sn	Sn	16 04 49.9	-0.3
EBAD				*i* Vmb_Lg		16 04 54.4	
MORF	Marmelete	4.35	296	*e*Sn	Sn	16 04 53.8	-1.2
MORF				A	A	16 05 05.8	
	3.0nm,0.9s						
PTEO	Sao Teotonio	4.50	298	*e*Sn	Sn	16 04 57.7	-0.9
PNCL	Nicolau / Gran	4.63	305	*e*Pn	Pn	16 04 11.1	+2.3
PNCL				*e*Sn	Sn	16 05 00.5	-1.5

*NNC **30** 16:06:21.9±5.7, 43°.92N×83°.82E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=46.6km s-min=17.3km az=121.0*
*SOME **30** 16:06:27.1, 44°.08N×83°.62E, h20km*

ISC 30 16:06:26.7±2.1, 43°.95N±0°.10×83°.9E±0°.1, h20km, n13, σ1§21/20, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	2.96	279	*e*P	Pb	16 07 18.7	0.0
	1.3nm,0.4s						
DJR				*e*S	Sb	16 07 55.7	+1.2
	7.4nm,0.3s						
DJR	Jarkent	2.96	279	Pg	Pb	16 07 18.3	-0.5
	1.2nm,0.1s						
DJR				Lg	Lg	16 07 56.3	
	5.9nm,0.4s						
MK31	Makanchi Array	3.05	339	⇑Pg	Pb	16 07 19.0	-1.3
	2.5nm,0.8s,baz=153,slow=16,SNR=10						
MK31				⇓Lg	Lg	16 07 58.7	
	0.6nm,0.3s,baz=157,slow=26,SNR=4.0						
MAKZ	Makanchi	3.15	336	⇓Pg	Pb	16 07 19.1	-3.0
	7.2nm,1.2s						
MAKZ				⇑Lg	Lg	16 08 00.4	
	4.1nm,1.2s						
PDGK	Podgornoye	3.24	260	Pg	Pb	16 07 22.4	-1.1
	0.7nm,0.3s						
PDGK				Lg	Lg	16 08 03.5	
	1.0nm,0.4s						
PDGK	Podgornoye	3.24	260	⇑Pg	Pn	16 07 16.7	+0.2
	4.8nm,1.1s						
PDGK				⇑Lg	Lg	16 08 03.4	
	1.7nm,0.6s						
SHLS	Shalkode	3.30	258	*e*P	Pn	16 07 18.1	+0.8
	1.2nm,0.2s						
SHLS				*e*S	Sn	16 07 54.8	-1.2
	6.0nm,0.4s						
SHLS	Shalkode	3.30	258	Pg	Pn	16 07 17.7	+0.4
	1.8nm,0.3s						
SHLS				Lg	Lg	16 07 55.3	
	6.0nm,0.4s						
ZSN	Zaisan	3.57	11	*e*P	Pb	16 07 29.1	0.0
	1.7nm,0.2s						
ZSN				*e*S	Sb	16 08 13.7	+1.7
	4.4nm,0.4s						
UZB	Uzynbulak	3.61	259	*e*P	Pb	16 07 29.0	-0.9
	1.0nm,0.4s						
UZB				*e*S	Sb	16 08 13.2	-0.1
	3.5nm,0.4s						
KPKS	Kokpek	3.79	264	*e*P	Pb	16 07 32.5	-0.4
	1.3nm,0.3s						
KPKS				*e*S	Sb	16 08 18.9	+0.6
	3.6nm,0.3s						
TDK	Taldyqorghan	4.05	287	*e*P	Pb	16 07 37.2	0.0
	16nm,0.2s						
TDK				*e*S	Sb	16 08 27.9	+2.1
	12nm,0.1s						
SATY	Saty	4.07	259	*e*P	Pb	16 07 37.3	-0.5
	1.3nm,0.4s						
SATY				*e*S	Sb	16 08 27.0	+0.4
	2.7nm,0.4s						

ROM 30 16:06:30.4±0.0, 42°.859N±0°.003×13°.086E±0°.004, h12km, ML3.4/18, 10C-6D, Error ellipse: s-maj=0.3km s-min=0.1km az=134.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.07	92	P	Pg	16 06 33.4	+0.3
T1245				S	Sg	16 06 35.3	+0.3
FEMA	Monte Fema	0.11	345	P	Pg	16 06 33.8	+0.4
FEMA				S	Sg	16 06 35.9	+0.3
T1215	Vallo di Nera,	0.17	250	P	Pg	16 06 34.7	+0.5
T1215				S	Sg	16 06 37.7	+0.8
T1215				AML	AML		
	comp=N,7230μm,0.2s						
T1215				AML	AML		
	comp=E,7820μm,0.5s						
T1215				AML	AML		
	comp=N,7150μm,0.3s						
T1215				AML	AML		
	comp=E,7410μm,0.5s						
T1215				AML	AML		
	comp=N,7235μm,0.2s						
T1215				AML	AML		
	comp=E,7825μm,0.5s						
T1215				AML	AML		
	comp=N,7155μm,0.3s						
T1215				AML	AML		
	comp=E,12550μm,1.5s						
T1215				AML	AML		
	comp=N,10045μm,1.1s						
T1215				AML	AML		
	comp=E,11900μm,1.5s						
T1215				AML	AML		
	comp=N,10450μm,1.1s						
T1215				AML	AML		
	comp=N,10030μm,1.1s						
T1215				AML	AML		
	comp=N,10445μm,1.1s						
T1215				AML	AML		
	comp=E,12500μm,1.5s						
T1215				AML	AML		
	comp=E,11900μm,1.5s						
T1215				AML	AML		
	comp=N,5703μm,0.1s						
T1215				AML	AML		
	comp=E,4889μm,0.2s						
T1215				AML	AML		
	comp=N,6224μm,0.1s						
T1215				AML	AML		
	comp=E,5261μm,0.2s						
MMO1	Montemonaco	0.18	77	P	Pg	16 06 34.8	+0.4
MMO1				S	Sg	16 06 37.9	+0.7
T1217	Poggiodomo (PG	0.19	218	P	Pg	16 06 34.9	+0.4
T1217				S	Sg	16 06 38.2	+0.8
T1217				AML	AML		
	comp=E,8235μm,0.2s						
T1217				AML	AML		
	comp=N,8415μm,1.1s						
T1217				AML	AML		
	comp=E,8250μm,0.2s						
T1217				AML	AML		
	comp=N,8260μm,1.1s						
T1217				AML	AML		
	comp=E,8230μm,0.2s						
T1217				AML	AML		
	comp=N,8415μm,1.0s						
T1217				AML	AML		
	comp=E,25150μm,0.4s						
T1217				AML	AML		
	comp=N,30150μm,0.4s						
T1217				AML	AML		
	comp=N,29400μm,0.4s						
T1217				AML	AML		
	comp=E,25200μm,0.4s						
T1217				AML	AML		
	comp=N,7322μm,0.2s						
T1217				AML	AML		
	comp=E,8231μm,0.2s						
T1217				AML	AML		
	comp=E,8245μm,0.2s						
T1217				AML	AML		
	comp=N,7135μm,0.2s						
AM05	Amandola Campo	0.23	59	P	Pg	16 06 35.7	+0.5
AM05				S	Sg	16 06 39.5	+1.1
T1201	Domo (RI)	0.23	149	P	Pg	16 06 35.9	+0.6
T1201				S	Sg	16 06 40.2	+1.5
T1204	Amatrice, Fraz	0.25	137	P	Pg	16 06 36.0	+0.4
T1204				AML	AML		
	comp=E,5485μm,0.4s						
T1204				AML	AML		
	comp=N,3395μm,1.0s						
T1241	Roccafluvione,	0.25	91	P	Pb	16 06 36.3	-0.6
T1241				S	Sb	16 06 40.6	-0.7
LNSS	Leonessa	0.26	188	P	Pg	16 06 36.3	+0.5
LNSS				S	Sg	16 06 40.4	+1.0

LNSS				AML	AML	
	comp=E,6000μm,0.2s					
LNSS				AML	AML	
	comp=N,11950μm,0.8s					
LNSS				AML	AML	
	comp=E,11600μm,0.7s					
LNSS				AML	AML	
	comp=N,21900μm,1.1s					
LNSS				AML	AML	
	comp=E,6000μm,0.1s					
LNSS				AML	AML	
	comp=N,11578μm,0.1s					
GUMA	**Gualdo di Mace**	**0.27**	**42**	P	Pb	16 06 36.7 -0.6
T1243	**Rocca Santa Ma**	**0.31**	**121**	P	Pg	16 06 37.0 +0.2
T1243				S	Sg	16 06 41.9 +1.0
PIO1	**Pioraco**	**0.33**	**347**	P	Pg	16 06 37.3 +0.3
ASSB	**Assisi San Ben**	**0.36**	**300**	P	Pg	16 06 37.9 +0.3
ASSB				S	Sb	16 06 43.7 -0.8
RM33	**Pellescritta (**	**0.36**	**165**	P	Pg	16 06 38.1 +0.5
RM33				S	Sb	16 06 43.8 -0.7
RM33				AML	AML	
	comp=E,1700μm,1.3s					
RM33				AML	AML	
	comp=N,1515μm,0.4s					
RM33				AML	AML	
	comp=E,1610μm,1.3s					
RM33				AML	AML	
	comp=N,1510μm,0.4s					
RM33				AML	AML	
	comp=E,1695μm,1.3s					
RM33				AML	AML	
	comp=N,1510μm,0.4s					
RM33				AML	AML	
	comp=N,8330μm,0.5s					
RM33				AML	AML	
	comp=E,9770μm,0.3s					
RM33				AML	AML	
	comp=E,9720μm,1.0s					
RM33				AML	AML	
	comp=N,8435μm,0.5s					
RM33				AML	AML	
	comp=N,1378μm,0.3s					
RM33				AML	AML	
	comp=E,1483μm,0.1s					
RM33				AML	AML	
	comp=N,1341μm,0.3s					
RM33				AML	AML	
	comp=E,1522μm,0.1s					
ARRO	**Arrone**	**0.37**	**220**	P	Pg	16 06 37.9 +0.2
T1211	**Morro Reatino**	**0.37**	**208**	P	Pg	16 06 38.1 +0.4
T1211				S	Sb	16 06 44.1 -0.6
T1211				AML	AML	
	comp=E,4470μm,0.2s					
T1211				AML	AML	
	comp=N,5160μm,0.2s					
T1211				AML	AML	
	comp=E,4635μm,0.2s					
T1211				AML	AML	
	comp=N,5010μm,0.2s					
T1211				AML	AML	
	comp=E,4470μm,0.2s					
T1211				AML	AML	
	comp=N,5160μm,0.2s					
T1211				AML	AML	
	comp=E,4635μm,0.2s					
T1211				AML	AML	
	comp=N,5015μm,0.2s					
T1211				AML	AML	
	comp=E,10240μm,0.9s					
T1211				AML	AML	
	comp=N,16600μm,1.5s					
T1211				AML	AML	
	comp=E,9865μm,0.9s					
T1211				AML	AML	
	comp=N,16300μm,1.4s					
T1211				AML	AML	
	comp=N,5158μm,0.2s					
T1211				AML	AML	
	comp=E,4634μm,0.2s					
T1211				AML	AML	
	comp=N,5009μm,0.2s					
T1211				AML	AML	
	comp=E,4473μm,0.2s					
MNTP	**Montappone**	**0.40**	**45**	P	Pb	16 06 38.8 -0.5
CAMP	**Campotosto**	**0.40**	**144**	P	Pg	16 06 38.3 0.0
CAMP				S	Sg	16 06 44.5 +0.8
CAMP				AML	AML	
	comp=E,793μm,0.4s					
CAMP				AML	AML	
	comp=N,848μm,0.3s					
CAMP				AML	AML	
	comp=N,6805μm,0.5s					
CAMP				AML	AML	
	comp=E,13550μm,0.3s					
CAMP				AML	AML	
	comp=E,793μm,0.4s					
CAMP				AML	AML	
	comp=N,848μm,0.3s					
T1246	**Crognaleto (TE**	**0.41**	**132**	P	Pg	16 06 38.5 +0.1
T1247	**Pizzolo (AQ)**	**0.45**	**159**	P	Pg	16 06 39.5 +0.3
T1247				S	Sb	16 06 46.1 -0.8
T1247				AML	AML	
	comp=E,1720μm,0.7s					
T1247				AML	AML	
	comp=N,1740μm,1.5s					
T1247				AML	AML	
	comp=E,12150μm,1.5s					
T1247				AML	AML	
	comp=N,9485μm,0.5s					
T1247				AML	AML	
	comp=E,1485μm,0.3s					
T1247				AML	AML	
	comp=N,1671μm,0.2s					
CESX	**Cesi**	**0.45**	**236**	P	Pg	16 06 39.0 -0.1
CESX				S	Sb	16 06 46.5 -0.4
CESX				AML	AML	
	comp=E,1530μm,0.3s					
CESX				AML	AML	
	comp=N,1775μm,0.2s					
CESX				AML	AML	
	comp=N,8775μm,0.7s					
CESX				AML	AML	
	comp=E,10440μm,0.5s					
CESX				AML	AML	
	comp=N,1774μm,0.2s					
CESX				AML	AML	
	comp=E,1529μm,0.3s					
TERO	**Teramo**	**0.45**	**122**	P	Pg	16 06 39.1 -0.1
TERO				S	Sg	16 06 45.9 +0.7
EL6	**Elcito**	**0.47**	**1**	S	Sb	16 06 49.0 +1.3
GIGS	**Gran Sasso**	**0.54**	**139**	P	Pg	16 06 40.9 -0.1
GIGS				S	Sg	16 06 48.6 +0.5
GIGS				AML	AML	
	comp=E,236μm,1.2s					
GIGS				AML	AML	
	comp=N,252μm,0.1s					
GIGS				AML	AML	
	comp=E,2430μm,0.4s					
GIGS				AML	AML	
	comp=N,2390μm,0.4s					
GIGS				AML	AML	
	comp=N,252μm,0.1s					
GIGS				AML	AML	
	comp=E,210μm,0.2s					
MMUR	**Monte Murano**	**0.59**	**354**	S	Sn	16 06 53.0 -1.2
FIAM	**Fiamignano**	**0.59**	**178**	P	Pg	16 06 41.8 -0.1
FIAM				AML	AML	
	comp=E,819μm,0.4s					
FIAM				AML	AML	
	comp=N,644μm,0.3s					
FIAM				AML	AML	
	comp=E,4130μm,1.5s					
FIAM				AML	AML	
	comp=N,3285μm,0.7s					
FIAM				AML	AML	
	comp=E,819μm,0.4s					
FIAM				AML	AML	
	comp=N,644μm,0.3s					
PP3	**Marolino**	**0.65**	**36**	AML	AML	
	comp=E,2510μm,0.3s					
PP3				AML	AML	
	comp=N,2195μm,0.3s					
PP3				AML	AML	
	comp=E,2360μm,0.3s					
PP3				AML	AML	
	comp=N,2300μm,0.3s					
ARVD	**Arcevia**	**0.65**	**351**	S	Sb	16 06 54.0 +1.3
MGAB	**Montegabbione**	**0.72**	**275**	⇓P	Pb	16 06 44.6 -0.3
MGAB				AML	AML	
	comp=E,1150μm,1.6s					
MGAB				AML	AML	
	comp=N,1395μm,0.4s					
MGAB				AML	AML	
	comp=E,1230μm,0.4s					
MGAB				AML	AML	
	comp=N,1580μm,0.3s					
MGAB				AML	AML	
	comp=N,3305μm,0.6s					
MGAB				AML	AML	
	comp=N,3795μm,0.6s					
MGAB				AML	AML	
	comp=E,4160μm,0.5s					
MGAB				AML	AML	
	comp=E,4865μm,0.5s					
MGAB				AML	AML	
	comp=N,1580μm,0.3s					
MGAB				AML	AML	
	comp=E,1053μm,0.4s					
MGAB				AML	AML	
	comp=N,1398μm,0.4s					
MGAB				AML	AML	
	comp=E,1228μm,0.4s					
SRES	**S.Oreste - Sor**	**0.75**	**215**	P	Pg	16 06 44.4 -0.5
SRES				S	Sg	16 06 54.9 +0.1
SRES				AML	AML	
	comp=E,477μm,0.8s					
SRES				AML	AML	
	comp=N,746μm,0.5s					
SRES				AML	AML	
	comp=E,3285μm,0.7s					
SRES				AML	AML	
	comp=N,3485μm,0.5s					
SRES				AML	AML	
	comp=E,398μm,0.3s					
SRES				AML	AML	
	comp=N,746μm,0.5s					
ATMI	**Monte Miggiano**	**0.77**	**309**	⇑P	Pn	16 06 48.5 +1.5
ATMI				S	Sn	16 06 58.0 -0.6
AOI	**Ancona**	**0.79**	**28**	⇓P	Pb	16 06 46.4 +0.4
AOI				AML	AML	
	comp=E,1016μm,1.6s					
AOI				AML	AML	
	comp=N,1234μm,1.6s					
AOI				AML	AML	
	comp=E,4915μm,0.3s					
AOI				AML	AML	
	comp=N,5050μm,0.3s					
AOI				AML	AML	
	comp=E,497μm,0.2s					
AOI				AML	AML	
	comp=N,590μm,0.4s					
MPAG	**Monte Paganucc**	**0.81**	**343**	AML	AML	
	comp=E,413μm,0.4s					
MPAG				AML	AML	
	comp=N,380μm,0.5s					
T0110	**Collepietro**	**0.81**	**141**	⇑P	Pg	16 06 46.0 -0.1
SACS	**San Casciano d**	**0.86**	**270**	⇓P	Pb	16 06 47.3 -0.1
SACS				AML	AML	
	comp=E,448μm,1.5s					
SACS				AML	AML	
	comp=N,504μm,0.9s					
SACS				AML	AML	
	comp=E,458μm,1.5s					
SACS				AML	AML	
	comp=N,467μm,0.9s					
SACS				AML	AML	
	comp=E,2075μm,0.6s					
SACS				AML	AML	
	comp=N,2755μm,1.3s					
SACS				AML	AML	
	comp=N,2630μm,1.3s					
SACS				AML	AML	
	comp=E,2315μm,0.6s					
SACS				AML	AML	
	comp=N,397μm,0.8s					
SACS				AML	AML	
	comp=E,366μm,0.8s					
SACS				AML	AML	
	comp=N,413μm,0.8s					
SACS				AML	AML	
	comp=E,395μm,0.8s					
CERT	**Cerreto**	**0.91**	**185**	⇑P	Pg	16 06 48.0 +0.1
CERT				AML	AML	
	comp=E,610μm,0.5s					
CERT				AML	AML	
	comp=N,348μm,0.3s					
CERT				AML	AML	
	comp=E,3665μm,0.6s					
CERT				AML	AML	
	comp=N,1860μm,0.5s					
CERT				AML	AML	
	comp=E,610μm,0.5s					
CERT				AML	AML	
	comp=N,348μm,0.3s					
CAFI	**Castiglion Fio**	**0.94**	**300**	AML	AML	
	comp=N,476μm,0.8s					
CAFI				AML	AML	
	comp=E,505μm,0.4s					
CAFI				AML	AML	
	comp=E,517μm,0.4s					
CAFI				AML	AML	
	comp=N,509μm,0.8s					
MCIV	**Monte Civitell**	**1.04**	**266**	⇓P	Pg	16 06 50.4 0.0
MCIV				AML	AML	
	comp=E,439μm,0.7s					
MCIV				AML	AML	
	comp=N,538μm,1.6s					
MCIV				AML	AML	
	comp=E,1067μm,0.6s					
MCIV				AML	AML	
	comp=N,842μm,0.8s					
SF04	**Casetta**	**1.05**	**269**	⇑P	Pn	16 06 51.4 +0.5
SF04				AML	AML	
	comp=E,472μm,0.7s					
SF04				AML	AML	
	comp=N,356μm,1.4s					
SF04				AML	AML	
	comp=E,951μm,0.9s					
SF04				AML	AML	
	comp=N,876μm,0.9s					
SF04				AML	AML	
	comp=N,197μm,0.4s					
SF04				AML	AML	
	comp=E,269μm,0.2s					
SF01	**Poggio Pratacc**	**1.12**	**268**	⇑P	Pn	16 06 52.1 +0.1
SF01				AML	AML	
	comp=E,210μm,0.4s					
SF01				AML	AML	
	comp=N,218μm,0.3s					
TOLF	**Tolfa**	**1.13**	**226**	⇓P	Pb	16 06 51.9 0.0
TOLF				AML	AML	
	comp=N,1255μm,0.5s					
TOLF				AML	AML	
	comp=E,1460μm,0.9s					
TOLF				AML	AML	
	comp=E,193μm,0.5s					
TOLF				AML	AML	
	comp=N,158μm,0.5s					
LPEL	**Lama dei Pelig**	**1.15**	**135**	AML	AML	
	comp=N,895μm,0.5s					
LPEL				AML	AML	
	comp=E,1470μm,1.6s					
ARCI	**Arcidosso**	**1.18**	**270**	⇑P	Pg	16 06 53.7 +0.5
ARCI				AML	AML	
	comp=E,342μm,0.8s					
ARCI				AML	AML	
	comp=N,352μm,0.7s					
ARCI				AML	AML	
	comp=E,65μm,0.5s					
ARCI				AML	AML	
	comp=N,49μm,0.6s					
RAVA	**Ravarino**	**2.37**	**324**	⇑P	Pb	16 07 11.6 -1.4
VENL	**Venezia Lido**	**2.61**	**349**	P	Pn	16 07 11.9 -0.5
VENL				AML	AML	
	comp=E,992μm,1.3s					
VENL				AML	AML	
	comp=N,1094μm,1.0s					
SALO	**Salr**	**3.32**	**327**	⇑P	Pn	16 07 25.0 +2.9
EUCT	**Pavia**	**3.69**	**311**	⇑P	Pb	16 07 33.8 -1.7
EUCT				S	Sn	16 08 15.0 +4.4
CANO	**Canova, Maglio**	**3.77**	**293**	S	Sn	16 08 14.0 +1.2
KOSI	**Kohlern**	**3.80**	**342**	⇓P	Pn	16 07 31.6 +2.6
RISI	**Rein**	**4.15**	**350**	P	Pg	16 07 48.6 -1.2
VARE	**Varese**	**4.32**	**316**	P	Pb	16 07 46.0 -0.2
VSL	**Villasalto**	**4.37**	**221**	⇑P	Pn	16 07 38.4 +1.8

*ROM **30** 16:07:21.5±0.0, 43°.061N±0°.002×13°.064E±0°.003, h8km, ML3.6/67, Error ellipse: s-maj=0.2km s-min=0.1km az=60.0*
*LDG **30** 16:07:21.2±0.1, 43°.06N×13°.07E, h9km, Ml3.0/21, Error ellipse: s-maj=3.0km s-min=1.9km az=43.0*
*PDG **30** 16:07:22.3±0.6, 43°.06N×13°.10E, h10km, ML3.7/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*PRU **30** 16:07:22.4±0.0, 43°.14N×13°.08E, h0km*
*IDC **30** 16:07:22.0±1.1, 43°.21N×13°.28E, h0km, mb3.6/6, mbtmp3.6/13, ML3.5/7, MS2.7/3, Error ellipse: s-maj=26.5km s-min=13.0km az=90.0*
ISC 30 16:07:21.9±0.7, 43°.07N±0°.01×13°.05E±0°.02, h10km±3km, n213, σ2s00/282, mb3.7/6, 9C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1219	**Muccia, Frazio**	**0.03**	**253**	⇑P	**Pg**	**16 07 23.6**	**-0.3**
T1219				S	**Sg**	**16 07 24.9**	**-0.4**
FDMO	**Fiordimonte**	**0.04**	**139**	⇓P	**Pg**	**16 07 23.3**	**-0.6**
FDMO				S	**Sg**	**16 07 24.2**	**-1.1**
T1220	**Camerino, Fraz**	**0.05**	**31**	⇑P	**Pg**	**16 07 23.5**	**-0.5**
T1220				S	**Sg**	**16 07 24.7**	**-0.8**
FEMA	**Monte Fema**	**0.10**	**181**	P	**Pg**	**16 07 24.6**	**-0.1**
FEMA				S	**Sg**	**16 07 26.8**	**+0.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
SEF1	**Sefro**	**0.11**	**317**	P	**Pg**	**16 07 25.0**	**+0.2**
SEF1				S	**Sg**	**16 07 27.2**	**+0.5**
SEF1				AML	AML		
	comp=E,64900μm,0.4s						
SEF1				AML	AML		
	comp=N,67150μm,0.4s						
SEF1				AML	AML		
	comp=N,67200μm,0.4s						
SEF1				AML	AML		
	comp=E,64850μm,0.4s						
PIO1	**Pioraco**	**0.12**	**336**	P	**Pg**	**16 07 24.9**	**0.0**
PIO1				S	**Sg**	**16 07 27.4**	**+0.4**
PIO1				AML	AML		
	comp=E,31500μm,0.7s						
PIO1				AML	AML		
	comp=E,31550μm,0.7s						
PIO1				AML	AML		
	comp=N,47700μm,0.6s						
T1256	**Bolognola (MC)**	**0.14**	**115**	P	**Pg**	**16 07 24.9**	**-0.3**
T1256				S	**Sg**	**16 07 27.2**	**-0.4**
MDAR	**Monte D'Aria**	**0.14**	**28**	⇑P	**Pg**	**16 07 25.0**	**-0.3**
MDAR				S	**Sg**	**16 07 27.4**	**-0.2**
MDAR				AML	AML		
	comp=E,53850μm,0.5s						
MDAR				AML	AML		
	comp=N,58350μm,0.6s						
MDAR				AML	AML		
	comp=N,58350μm,0.6s						
MDAR				AML	AML		
	comp=N,58300μm,0.6s						
MDAR				AML	AML		
	comp=E,53850μm,0.5s						
FIU1	**Fiuminata**	**0.15**	**324**	P	**Pg**	**16 07 25.4**	**+0.1**
FIU1				S	**Sg**	**16 07 28.4**	**+0.7**
FIU1				AML	AML		
	comp=E,12600μm,0.7s						
FIU1				AML	AML		
	comp=N,13700μm,1.3s						
FIU1				AML	AML		
	comp=N,13750μm,1.3s						
FIU1				AML	AML		
	comp=E,12635μm,0.7s						
GAG1	**Gagliole**	**0.17**	**4**	P	**Pg**	**16 07 25.8**	**+0.1**
GAG1				S	**Sg**	**16 07 29.1**	**+0.8**
GAG1				AML	AML		
	comp=E,93700μm,0.5s						
GAG1				AML	AML		
	comp=N,93800μm,0.6s						
GAG1				AML	AML		
	comp=E,93600μm,0.5s						
GAG1				AML	AML		
	comp=N,94000μm,0.6s						
GAG1				AML	AML		
	comp=E,93550μm,0.5s						
T1216	**Preci, Frazion**	**0.18**	**188**	⇑P	**Pg**	**16 07 25.9**	**+0.1**
T1216				S	**Sg**	**16 07 29.2**	**+0.8**
SSM1	**San Severino M**	**0.19**	**29**	P	**Pg**	**16 07 25.8**	**-0.1**
SSM1				S	**Sg**	**16 07 28.9**	**+0.2**
SNTG	**Esanatoglia**	**0.21**	**337**	P	**Pg**	**16 07 26.4**	**+0.1**
SNTG				S	**Sg**	**16 07 30.2**	**+0.9**
SNTG				AML	AML		
	comp=E,10550μm,0.7s						
SNTG				AML	AML		
	comp=E,10300μm,0.7s						
SNTG				AML	AML		
	comp=E,10600μm,0.7s						
SNTG				AML	AML		
	comp=N,13350μm,0.5s						
SNTG				AML	AML		
	comp=E,10600μm,0.7s						
SNTG				AML	AML		
	comp=N,12200μm,0.9s						
GUMA	**Gualdo di Mace**	**0.21**	**91**	P	**Pg**	**16 07 26.4**	**+0.1**
GUMA				S	**Sg**	**16 07 30.0**	**+0.7**
T1245	**Castelsantange**	**0.23**	**154**	P	**Pg**	**16 07 26.8**	**0.0**
T1245				S	**Sg**	**16 07 30.7**	**+0.6**
T1245				AML	AML		
T1245				AML	AML		
	comp=N,99100μm,0.6s						
T1245				AML	AML		
	comp=N,91700μm,0.7s						
T1245				AML	AML		
T1245				AML	AML		
AM05	**Amandola Campo**	**0.24**	**112**	P	**Pg**	**16 07 26.8**	**-0.1**
AM05				S	**Sg**	**16 07 30.4**	**+0.3**
AM05				AML	AML		
	comp=E,33700μm,0.2s						
AM05				AML	AML		
	comp=N,25050μm,0.2s						
AM05				AML	AML		
AM05				AML	AML		
AM05				AML	AML		
	comp=N,6430μm,0.3s						
AM05				AML	AML		
	comp=E,33750μm,0.2s						
MMO1	**Montemonaco**	**0.26**	**129**	P	**Pg**	**16 07 27.1**	**-0.2**
MMO1				S	**Sg**	**16 07 31.1**	**+0.2**
EL6	**Elcito**	**0.27**	**8**	⇑P	**Pg**	**16 07 27.4**	**0.0**
EL6				S	**Sg**	**16 07 32.0**	**+0.9**
ASSB	**Assisi San Ben**	**0.29**	**266**	P	**Pg**	**16 07 28.1**	**+0.3**
ASSB				S	**Sb**	**16 07 33.3**	**-0.9**
T1215	**Vallo di Nera,**	**0.30**	**207**	P	**Pg**	**16 07 28.2**	**+0.3**
T1215				S	**Sg**	**16 07 33.0**	**+1.1**
T1215				AML	AML		
	comp=E,12540μm,1.5s						
T1215				AML	AML		
	comp=N,10000μm,1.1s						
T1215				AML	AML		
	comp=E,11870μm,1.5s						
T1215				AML	AML		
	comp=N,10455μm,1.1s						
T1215				AML	AML		
	comp=E,12550μm,1.5s						
T1215				AML	AML		
	comp=E,11900μm,1.5s						
T1215				AML	AML		
	comp=N,10045μm,1.1s						
T1215				AML	AML		
	comp=E,12500μm,1.5s						
T1215				AML	AML		
	comp=E,11900μm,1.5s						
T1215				AML	AML		
	comp=N,10480μm,1.1s						
T1215				AML	AML		
	comp=E,11905μm,1.5s						
T1215				AML	AML		
	comp=E,12510μm,1.5s						
TRE1	**Treia**	**0.31**	**38**	P	**Pg**	**16 07 28.5**	**+0.3**
TRE1				S	**Sb**	**16 07 34.2**	**-0.6**
TRE1				AML	AML		
	comp=E,41100μm,0.4s						
TRE1				AML	AML		
	comp=N,33400μm,0.4s						
TRE1				AML	AML		

comp=E,4105 0μm,0.4s
TRE1 AML AML
comp=N,3335 0μm,0.4s
FOSV Fossato di Vic 0.31 317 P Pg 16 07 28.6 +0.3
FOSV S Sb 16 07 34.0 -0.8
MNTP Montappone 0.31 77 P Pg 16 07 28.5 +0.3
MNTP S Sb 16 07 34.2 -0.6
MNTP AML AML
comp=N,6780 0μm,0.5s
MNTP AML AML
comp=E,6295 0μm,0.2s
ATCC AVT- Casa Cast 0.32 292 P Pg 16 07 28.9 +0.4
ATCC S Sb 16 07 34.7 -0.5
ATCC AML AML
comp=N,1920 0μm,0.4s
ATCC AML AML
comp=E,2295 0μm,0.6s
CING Cingoli 0.33 19 P Pg 16 07 28.4 -0.1
T1241 Roccafluvione, 0.35 127 P Pg 16 07 29.1 +0.2
T1241 S Sb 16 07 34.5 -1.4
T1241 AML AML
comp=E,2650 0μm,0.4s
T1241 AML AML
comp=E,2785 0μm,0.4s
T1241 AML AML
comp=N,2805 0μm,0.6s
T1241 AML AML
comp=E,2780 0μm,0.4s
T1241 AML AML
comp=N,2885 0μm,0.5s
T1241 AML AML
comp=E,2650 0μm,0.4s
T1244 Arquata del Tr 0.36 150 P Pg 16 07 29.1 0.0
T1244 S Sb 16 07 35.1 -1.1
T1217 Poggiodomo (PG 0.36 194 P Pg 16 07 29.4 +0.2
T1217 S Sb 16 07 35.4 -1.0
T1217 AML AML
comp=E,2515 0μm,0.3s
T1217 AML AML
comp=E,2520 0μm,0.3s
T1217 AML AML
comp=E,2520 0μm,0.4s
T1217 AML AML
comp=N,3015 0μm,0.4s
T1217 AML AML
comp=N,2940 0μm,0.4s
T1217 AML AML
comp=E,2515 0μm,0.4s
MMUR Monte Murano 0.38 354 P Pg 16 07 29.5 +0.1
MMUR S Sb 16 07 35.8 -1.0
MMUR AML AML
comp=E,2145 0μm,0.4s
MMUR AML AML
comp=N,1930 0μm,0.3s
MMUR AML AML
comp=E,2140 0μm,0.4s
MMUR AML AML
comp=N,1930 0μm,0.3s
MURB Monte Urbino 0.43 297 P Pg 16 07 30.7 +0.3
MURB AML AML
comp=E,1720 0μm,0.3s
MURB AML AML
comp=E,1910 0μm,0.4s
MURB AML AML
comp=E,1725 0μm,0.4s
MURB AML AML
comp=N,1415 0μm,1.5s
MURB AML AML
comp=N,1215 0μm,1.4s
T1201 Domo (RI) 0.43 160 P Pg 16 07 30.6 +0.1
T1201 S Sb 16 07 37.8 -0.5
T1204 Amatrice, Fraz 0.44 153 P Pg 16 07 30.4 -0.2
T1204 S Sg 16 07 37.2 +0.9
T1204 AML AML
comp=N,2115 0μm,0.2s
T1204 AML AML
comp=E,5735 0μm,0.3s
T1204 AML AML
comp=N,2110 0μm,0.2s
ARVD Arcevia 0.44 349 P Pg 16 07 30.5 -0.1
ARVD S Sb 16 07 37.9 -0.6
ARVD AML AML
comp=N,4830 0μm,0.5s
ARVD AML AML
comp=E,7225 0μm,1.6s
ATSC Scheggia e Pas 0.45 323 P Pg 16 07 31.2 +0.4
ATFO Monte Foce - G 0.46 311 P Pg 16 07 31.2 +0.2
ATFO AML AML
comp=E,7055 0μm,0.7s
ATFO AML AML
comp=N,5585 0μm,0.7s
LNSS Leonessa 0.46 181 P Pg 16 07 31.1 0.0
LNSS AML AML
comp=E,1160 0μm,0.7s
LNSS AML AML
comp=N,2190 0μm,1.1s
LNSS AML AML
comp=N,2955 0μm,0.7s
T1243 Rocca Santa Ma 0.47 142 P Pg 16 07 30.8 -0.4
T1243 S Sg 16 07 37.9 +0.5
OFFI Offida 0.48 106 P Pb 16 07 32.2 -0.3
OFFI AML AML
comp=N,5480 0μm,0.6s
OFFI AML AML
comp=E,3040 0μm,0.5s
FRON Frontone 0.51 332 AML AML
comp=N,7945 0μm,0.4s
FRON AML AML
comp=E,5015 0μm,0.7s
CIMA Civitanova Mar 0.51 62 P Pb 16 07 32.6 -0.4
PP3 Marolino 0.51 52 P Pb 16 07 32.5 -0.6
PP3 AML AML
comp=E,2310 0μm,1.3s
PP3 AML AML
comp=N,2740 0μm,0.3s
PP3 AML AML
comp=N,2880 0μm,1.2s
PP3 AML AML
comp=E,2105 0μm,1.3s
PP3 AML AML
comp=N,2735 0μm,0.3s
PP3 AML AML
comp=E,2310 0μm,1.3s
ATTE AVT- Monte Tez 0.53 285 P Pg 16 07 32.4 +0.2
ATTE AML AML
comp=N,3275 0μm,0.5s
ATTE AML AML
comp=E,3905 0μm,0.5s
ARRO Arrone 0.53 204 P Pg 16 07 32.1 -0.2
ATLO AVT- Montelove 0.53 298 P Pg 16 07 32.4 0.0
CADA Capodarco di F 0.54 76 P Pb 16 07 33.4 0.0
TB01 Gubbio 0.55 305 P Pg 16 07 32.9 +0.2
ATBU Serra di Buran 0.55 318 P Pg 16 07 33.3 +0.6
T1211 Morro Reatino 0.55 195 P Pg 16 07 32.4 -0.2
T1211 S Sb 16 07 41.6 -0.2
TB02 Pietralunga 0.56 303 P Pg 16 07 33.1 +0.2
ATVO AVT- Monte Val 0.57 304 P Pg 16 07 33.1 +0.1
ATVO AML AML
comp=E,3745 0μm,1.4s
ATVO AML AML
comp=N,4110 0μm,0.7s
RM33 Pellescritta (0.57 168 P Pg 16 07 32.8 -0.3
RM33 AML AML
comp=E,9745 0μm,0.3s
RM33 AML AML
comp=N,8430 0μm,0.5s
RM33 AML AML
comp=E,9730 0μm,1.0s
RM33 AML AML
comp=N,8330 0μm,0.5s
RM33 AML AML
comp=E,9770 0μm,0.3s
RM33 AML AML
comp=E,9720 0μm,1.0s
RM33 AML AML
comp=N,8435 0μm,0.5s
RM33 AML AML
comp=E,9735 0μm,1.0s
RM33 AML AML
comp=E,9750 0μm,0.3s
CESX Cesi 0.57 217 P Pg 16 07 32.8 -0.3
CESX S Sb 16 07 41.9 -0.4
CESX AML AML
comp=N,8775 0μm,0.7s
CESX AML AML
comp=E,10440 0μm,0.5s

TB03 Pietralunga 0.58 306 P Pg 16 07 33.3 +0.1
T1246 Crognaleto (TE 0.58 146 ‖P Pg 16 07 32.6 -0.6
T1246 S Sg 16 07 41.5 +0.6
CAMP Campotosto 0.59 154 P Pg 16 07 32.8 -0.7
CAMP S Sg 16 07 41.8 +0.6
CAMP AML AML
comp=N,6805 0μm,0.5s
CAMP AML AML
comp=E,13550 0μm,0.3s
ATPC Poggio Castell 0.60 314 P Pg 16 07 33.8 +0.2
TERO Teramo 0.60 137 P Pg 16 07 33.0 -0.6
TERO S Sb 16 07 42.4 -0.7
TERO AML AML
comp=N,9950 0μm,1.2s
TERO AML AML
comp=E,9980 0μm,0.6s
TERO AML AML
comp=N,10500 0μm,1.2s
TERO AML AML
comp=E,9560 0μm,0.6s
TERO AML AML
comp=N,9945 0μm,1.2s
MPAG Monte Paganucc 0.60 339 P Pg 16 07 33.8 +0.1
MPAG S Sb 16 07 43.7 +0.5
MPAG AML AML
comp=E,3660 0μm,0.4s
MPAG AML AML
comp=N,3725 0μm,1.3s
MPAG AML AML
comp=N,3720 0μm,1.3s
PIEI Pieia 0.60 321 P Pg 16 07 33.4 -0.3
PIEI S Sb 16 07 43.6 +0.4
PIEI AML AML
comp=E,2850 0μm,0.4s
PIEI AML AML
comp=N,2820 0μm,1.4s
ATPI Pietralunga - 0.61 309 P Pg 16 07 33.9 0.0
ATPI AML AML
comp=N,2590 0μm,0.6s
ATPI AML AML
comp=N,2595 0μm,0.6s
ATPI AML AML
comp=E,3060 0μm,0.5s
AOI Ancona 0.63 39 P Pg 16 07 34.0 -0.2
AOI AML AML
comp=E,4915 0μm,0.3s
AOI AML AML
comp=N,5050 0μm,0.3s
ATMI Monte Miggiano 0.63 295 P Pg 16 07 33.8 -0.5
PCRO Pietralacroce 0.65 33 P Pg 16 07 34.5 +0.1
T1247 Pizzolo (AQ) 0.65 164 P Pg 16 07 33.9 -0.6
SENI Senigallia 0.65 12 P Pb 16 07 35.2 -0.2
SENI AML AML
comp=N,19250 0μm,0.5s
SENI AML AML
comp=E,20250 0μm,0.4s
SENI AML AML
comp=N,19250 0μm,0.5s
FSSB Fossombrone 0.66 342 P Pg 16 07 34.7 0.0
FSSB S Sb 16 07 45.8 +1.0
FSSB AML AML
comp=E,8425 0μm,0.2s
FSSB AML AML
comp=N,19900 0μm,0.3s
APEC Apecchio 0.68 317 P Pg 16 07 35.5 +0.5
APEC AML AML
comp=E,709 0μm,0.7s
APEC AML AML
comp=N,982 0μm,0.6s
APEC AML AML
comp=N,984 0μm,0.6s
APEC AML AML
comp=E,708 0μm,0.7s
TRTR Tortoreto Alta 0.68 112 P Pb 16 07 36.3 +0.4
TRTR AML AML
comp=N,26950 0μm,0.4s
TRTR AML AML
comp=E,32050 0μm,0.4s
MGAB Montegabbione 0.71 258 P Pg 16 07 35.8 +0.1
MGAB AML AML
comp=N,3790 0μm,0.6s
MGAB AML AML
comp=N,3305 0μm,0.6s
MGAB AML AML
comp=E,4160 0μm,0.5s
MGAB AML AML
comp=E,4865 0μm,0.5s
MGAB AML AML
comp=N,3795 0μm,0.6s
GIGS Gran Sasso 0.72 148 P Pg 16 07 35.1 -0.8
GIGS AML AML
comp=E,2430 0μm,0.4s
GIGS AML AML
comp=N,2390 0μm,0.4s
ATMC Monte Cedrone 0.73 302 P Pg 16 07 36.4 +0.2
AQU L'Aquila 0.76 160 P Pg 16 07 35.5 -1.1
AQU AML AML
comp=E,7440 0μm,1.5s
AQU AML AML
comp=E,7220 0μm,1.6s
AQU AML AML
comp=N,5065 0μm,0.9s
AQU AML AML
comp=N,5250 0μm,0.8s
AQU AML AML
comp=E,7435 0μm,1.5s
FIAM Fiamignano 0.80 177 P Pg 16 07 36.4 -0.9
FIAM AML AML
comp=N,4360 0μm,0.8s
FIAM AML AML
comp=E,4440 0μm,0.6s
CAFI Castiglion Fio 0.84 289 P Pg 16 07 38.1 0.0
CAFI AML AML
comp=E,1705 0μm,0.5s
CAFI AML AML
comp=N,1615 0μm,1.2s
CAFI AML AML
comp=E,1685 0μm,0.5s
CAFI AML AML
comp=N,1530 0μm,1.3s
SSP9 Sansepolcro 0.84 307 P Pg 16 07 38.3 +0.1
SACS San Casciano d 0.87 256 P Pg 16 07 38.6 0.0
SACS AML AML
comp=E,2315 0μm,0.6s
SACS AML AML
comp=E,2075 0μm,0.6s
SACS AML AML
comp=N,2755 0μm,1.3s
SACS AML AML
comp=N,2630 0μm,1.3s
VCEL Villa Celiera 0.89 139 P Pg 16 07 38.2 -0.9
VCEL AML AML
comp=E,9605 0μm,0.5s
VCEL AML AML
comp=E,9595 0μm,0.5s
VCEL AML AML
comp=N,7455 0μm,0.5s
FAGN Fagnano 0.89 154 P Pg 16 07 38.5 -0.6
FAGN AML AML
comp=E,11200 0μm,0.4s
FAGN AML AML
comp=N,9960 0μm,0.5s
CPGN Carpegna, Ital 0.91 324 P Pb 16 07 40.2 +0.4
CPGN AML AML
comp=E,3185 0μm,1.1s
CPGN AML AML
comp=N,2820 0μm,0.9s
CPGN AML AML
comp=E,2760 0μm,0.7s
CPGN AML AML
comp=N,2925 0μm,1.0s
CPGN AML AML
comp=N,2920 0μm,1.0s
CPGN AML AML
comp=E,3190 0μm,1.1s
CPGN AML AML
comp=E,2760 0μm,0.7s
CRE Caprese Michel 0.98 305 P Pn 16 07 41.7 -0.1
CRE AML AML
comp=E,1174 0μm,0.5s
CRE AML AML
comp=N,1316 0μm,0.5s
T0110 Collepietro 1.00 147 P Pg 16 07 39.5 -1.6
T0110 AML AML
comp=N,7775 0μm,0.4s
T0110 AML AML

comp=E,8705 0μm,0.6s
LATE Laterza 1.02 244 P Pg 16 07 41.0 -0.6
MTCE Montecelio 1.07 192 P Pg 16 07 40.9 -1.6
MTCE AML AML
comp=N,1945 0μm,0.6s
MTCE AML AML
comp=E,2670 0μm,0.7s
PTQR Pietraquaria 1.07 166 P Pg 16 07 41.3 -1.3
PTQR AML AML
comp=N,1775 0μm,0.6s
PTQR AML AML
comp=E,1975 0μm,1.0s
SF13 Bagnolo 1.08 257 P Pg 16 07 42.5 -0.2
SF14 Selvena 1.10 254 P Pg 16 07 42.8 -0.3
CERT Cerreto 1.12 183 P Pg 16 07 42.6 -0.8
ASQU Asqua 1.18 309 P Pn 16 07 45.3 +0.8
ARCI Arcidosso 1.18 260 P Pn 16 07 45.3 +0.7
ARCI AML AML
comp=E,514 0μm,1.0s
ARCI AML AML
comp=N,352 0μm,0.7s
SFI Santa Sofia 1.21 314 P Pg 16 07 46.4 +1.1
VVLD Villa Vallelon 1.27 160 P Pn 16 07 44.9 -0.8
VVLD AML AML
comp=E,2195 0μm,1.0s
VVLD AML AML
comp=N,2420 0μm,0.7s
TOLF Tolfa 1.27 218 P Pn 16 07 45.1 -0.6
TOLF AML AML
comp=N,1255 0μm,0.5s
TOLF AML AML
comp=E,1460 0μm,0.9s
CAFR Castel Frentan 1.27 131 P Pn 16 07 45.1 -0.6
LPEL Lama dei Pelig 1.32 140 P Pn 16 07 45.3 -1.1
LPEL AML AML
comp=E,2980 0μm,0.4s
LPEL AML AML
comp=N,3055 0μm,1.0s
RUFI Rufina 1.36 305 P Pg 16 07 48.1 0.0
OSSC Osservatorio P 1.40 290 P Pn 16 07 46.9 -0.6
LRP Arpino 1.47 164 P Pg 16 07 50.3 +0.1
GIUL Giuliano Di Ro 1.51 174 P Pb 16 07 50.0 -0.1
GIUL AML AML
comp=E,1345 0μm,0.5s
GIUL AML AML
comp=N,1565 0μm,0.8s
TRIF Trifonti 1.57 273 P Pn 16 07 49.9 -0.1
TRIF AML AML
comp=E,414 0μm,1.0s
TRIF AML AML
comp=N,450 0μm,0.5s
FRES Fresagrandinar 1.62 132 P Pb 16 07 52.0 +0.1
TRIV Trivento 1.71 139 P Pb 16 07 53.8 +0.3
TRIV AML AML
comp=N,1620 0μm,0.7s
TRIV AML AML
comp=E,1525 0μm,0.7s
VAGA Valle Agricola 1.87 152 P Pb 16 07 56.6 +0.5
CIGN Sant'Elia a Pi 1.97 135 P Pb 16 07 58.0 +0.2
CEY Cerknica 2.85 20 *e*Pn **Pn 16 08 08.1 +0.6**
SABO M.te Sabotino 2.94 7 P Pn 16 08 09.1 +0.3
SABO AML AML
comp=E,2425 0μm,0.5s
SABO AML AML
comp=N,2720 0μm,0.7s
SABO AML AML
comp=N,700 0μm,0.7s
SABO AML AML
comp=E,573 0μm,0.7s
CGRP Cima Grappa 2.95 343 P Pn 16 08 11.8 +2.7
PGF Pioggiola 3.03 262 *e*P **Pn 16 08 11.0 +1.0**
PGF *e*Sn **Sn 16 08 41.7 -4.7**
comp=E,3.5nm,0.3s
CTI Castel Tesino 3.15 342 P Pn 16 08 14.2 +2.5
CTI AML AML
comp=E,330 0μm,0.8s
CTI AML AML
comp=N,270 0μm,1.5s
SRKY Kupres RS 3.15 70 *e*Pn **Pn 16 08 14.2 +2.5**
LJU Ljubljana 3.16 19 P Pn 16 08 12.7 +1.0
LJU AML AML
comp=N,3140 0μm,0.6s
LJU AML AML
comp=E,1635 0μm,0.8s
MPRI Monte Prat 3.18 359 P Pn 16 08 13.4 +1.4
MPRI AML AML
comp=E,426 0μm,0.9s
MPRI AML AML
comp=N,378 0μm,0.6s
MPRI AML AML
comp=E,359 0μm,0.9s
MPRI AML AML
comp=N,482 0μm,1.3s
STAL STALIGIAL 3.20 356 P Pn 16 08 13.2 +0.8
STAL AML AML
comp=E,398 0μm,0.7s
STAL AML AML
comp=N,369 0μm,1.1s
MGRS Mrkonjic Grad 3.22 64 *e*Pn **Pn 16 08 13.6 +1.0**
CIMO Cimolais 3.27 353 P Pn 16 08 13.8 +0.5
CIMO AML AML
comp=N,134 0μm,1.5s
CIMO AML AML
comp=N,118 0μm,1.5s
CIMO AML AML
comp=E,136 0μm,1.1s
CIMO AML AML
comp=E,137 0μm,1.1s
PTCC Patocco-Chiusa 3.35 4 P Pn 16 08 15.5 +1.1
PTCC AML AML
comp=N,160 0μm,1.1s
PTCC AML AML
comp=E,208 0μm,0.7s
A051A Mrakovica 3.39 54 *e*Pn **Pb 16 08 19.8 -2.4**
STON Ston 3.42 92 *e*Pn Pn 16 08 03.7 -12
STON Ston 3.42 92 AML AML
comp=N,128 0μm,0.6s
STON AML AML
comp=E,110 0μm,0.8s
BLY Banja Luka 3.43 59 *e*Pn **Pb 16 08 20.8 -1.9**
MABI Malga Bissina 3.50 330 P Pn 16 08 19.3 +2.8
ACOM Acomizza, Ital 3.50 5 P Pn 16 08 18.2 +1.7
ACOM AML AML
comp=E,444 0μm,1.6s
ACOM AML AML
comp=E,458 0μm,0.8s
ACOM AML AML
comp=N,376 0μm,0.7s
ACOM AML AML
comp=N,398 0μm,0.7s
FVI Forni Avoltri 3.54 357 P Pn 16 08 19.4 +2.5
MYKA Terra Mystica 3.59 7 *i* Pn **Pn 16 08 20.3 +2.6**
comp=N,12nm,0.6s,SNR=8.2
KOSI Kohlern 3.60 341 P Pn 16 08 20.4 +2.5
OBKA Obir 3.60 17 *e*Pn **Pn 16 08 19.1 +1.2**
ABTA Abfaltersbach 3.70 354 *i* Pn **Pn 16 08 20.9 +1.6**
comp=N,15nm,0.2s,SNR=24
NOCI Noci 3.76 126 P Pn 16 08 20.3 +0.3
NOCI AML AML
comp=E,179 0μm,0.7s
NOCI AML AML
comp=N,266 0μm,1.1s
TREB Trebinje 3.91 93 *e*Pn Pn 16 08 14.3 -7.7
BRY Bratogost 4.03 90 *e*Pn **Pn 16 08 25.1 +1.3**
BRY *i* Sn **Sn 16 09 12.0 +0.9**
ROSI Rosskopf 4.03 344 P Pn 16 08 25.8 +1.9
SALB San Lorenzo Be 4.03 141 AML AML
comp=E,75 0μm,1.1s
SALB AML AML
comp=N,63 0μm,1.1s
MUGIO Muggio 4.05 316 P Pn 16 08 23.9 -0.1
MUGIO AML AML
comp=E,43 0μm,0.4s
MUGIO AML AML
comp=N,56 0μm,0.7s
HCY Herceg Novi 4.05 97 ‖ *i* Pn **Pn 16 08 25.5 +1.5**
HCY *i* Sn **Sn 16 09 12.6 +1.0**
SBF Sospel 4.17 283 *e*P **Pn 16 08 26.7 +1.1**
SBF *e*Sn **Sn 16 09 11.0 -3.4**
comp=N,11nm,0.4s
FETA Feichten 4.28 338 *i* Pn **Pn 16 08 30.4 +3.1**
comp=N,24nm,0.6s,SNR=16
UPM Unac-Piva 4.29 86 *e*Pn **Pn 16 08 28.7 +1.3**
UPM *i* Sn **Sn 16 09 18.3 +0.8**
WTTA Wattenberg 4.32 347 *e*Pn **Pn 16 08 31.4 +3.6**

comp=N,12nm,0.5s
DAVOX **Davos/Dischmat 4.34 330** Pn **Pn 16 08 30.6 +2.5**
comp=N,5.9nm,0.3s,baz=142,slow=11,SNR=40
DAVOX Sn **Sn 16 09 17.8 -1.2**
comp=N,0.3nm,0.3s,baz=161,slow=18,SNR=0.9
comp=N,31nm,0.5s
NKME Niksic 4.34 92⇑ *i*Pn **Pn 16 08 29.5 +1.4**
NKME *i* Sn **Sn 16 09 19.7 +0.9**
CEME Cevo 4.35 95⇑ *i*Pn **Pn 16 08 29.5 +1.4**
CEME *i* Sn **Sn 16 09 19.7 +0.8**
SQTA Sankt Quirin 4.35 343 *i* Pn **Pn 16 08 32.2 +4.0**
comp=N,8.5nm,0.2s,SNR=10.0
BUM Brajici-Budva 4.37 98⇑ *i*Pn **Pn 16 08 29.9 +1.4**
BUM *i* Sn **Sn 16 09 20.4 +0.9**
WATA Walderalm 4.39 347 *i* Pn **Pn 16 08 32.8 +3.9**
comp=N,10nm,0.4s,SNR=11
HAPS Han Pijesak,Bl 4.41 75 *e*Pn **Pn 16 08 30.1 +1.1**
MOTA Moosalm 4.50 343 *i* Pn **Pn 16 08 33.9 +3.7**
comp=N,4.0nm,0.3s,SNR=10
ARSA Arzberg 4.54 22 *e*Pn **Pn 16 08 31.2 +0.5**
comp=N,3.4nm,0.3s
DRME Dracevica, Mon 4.61 99 *e*Pn **Pn 16 08 32.9 +1.2**
DRME Dracevica, Mon 4.61 99⇓ *i*Pn **Pn 16 08 33.2 +1.5**
DRME *i* Sn **Sn 16 09 26.2 +1.0**
TTG Podgorica 4.61 96 *e*Pn **Pn 16 08 33.2 +1.5**
TTG *i* Sn **Sn 16 09 26.2 +0.9**
PLE Pljevlja 4.64 85 *e*Pn **Pn 16 08 33.7 +1.5**
PLE *i* Sn **Sn 16 09 26.9 +0.7**
RUDO Rudo 4.64 81 *e*Pn **Pn 16 08 34.5 +2.4**
BIOA Bad Ischl, Aus 4.64 5 *i* Pn **Pn 16 08 34.4 +2.2**
comp=N,14nm,0.4s,SNR=13
BBLS Lazići 4.69 78 *e*Pn **Pn 16 08 34.7 +1.8**
KOVH Kovagotottos 4.70 48 P **Pn 16 08 35.7 +2.7**
RETA Reutte 4.71 341 *e*Pn **Pn 16 08 32.8 -0.2**
comp=N,1.5nm,0.2s
ULC Ulcinj 4.71 101 *e*Pn **Pn 16 08 34.5 +1.5**
ULC *i* Sn **Sn 16 09 28.6 +0.9**
KOME Kolasin 4.75 90 *e*Pn **Pn 16 08 35.2 +1.5**
KOME *i* Sn **Sn 16 09 29.5 +0.7**
DAVA Damuels 4.78 333 *i* Pn **Pn 16 08 38.1 +4.0**
comp=N,13nm,0.6s,SNR=8.8
LMR La Mourre 4.79 275 *e*P **Pn 16 08 35.9 +1.8**
LMR *e*Sn **Sn 16 09 25.3 -4.4**
comp=N,1.5nm,0.3s
MBDF Montbardon 4.83 292 *e*P **Pn 16 08 36.8 +1.9**
MBDF *e*Sn **Sn 16 09 27.9 -3.1**
comp=N,3.2nm,0.4s
MOA Molln 4.86 10 *i* Pn **Pn 16 08 37.3 +2.2**
comp=N,5.5nm,0.4s,SNR=7.8
IVA Berane 5.02 90⇓ *i*Pn **Pn 16 08 39.0 +1.6**
IVA *i* Sn **Sn 16 09 36.3 +0.7**
MORH Mrgy, Hungar 5.08 50 P **Pn 16 08 40.9 +2.8**
PVY Plav 5.10 93⇑ *i*Pn **Pn 16 08 40.1 +1.6**
PVY *i* Sn **Sn 16 09 38.2 +0.7**
LPG La Plagne 5.13 300 *e*P **Pn 16 08 41.2 +2.1**
LPG *e*Sn **Sn 16 09 36.0 -2.6**
comp=N,3.5nm,0.3s
DIVS Divibare 5.15 76 *e*Pn **Pn 16 08 41.9 +2.8**
LPL La Plagne 5.16 301 *e*P **Pn 16 08 41.3 +1.9**
LPL *e*Sn **Sn 16 09 36.4 -2.6**
comp=N,3.7nm,0.3s
RONA Rosalia, Austr 5.17 25 *e*Pn **Pn 16 08 40.9 +1.5**
comp=N,4.5nm,0.4s
MPLH Magyarpolny 5.19 36 P Pn 16 08 44.5 +4.9
CONA Conrad Observa 5.25 21 *e*Pn **Pn 16 08 40.8 +0.3**
comp=N,3.9nm,0.3s
FRGS Fruska Gora 5.30 64 *e*Pn **Pn 16 08 41.8 +0.7**
ORIF Oris-en-Rattie 5.50 292 *e*P **Pn 16 08 45.5 +1.6**
ORIF *e*Sn **Sn 16 09 43.6 -3.6**
comp=N,2.4nm,0.4s
SMRF Simiane la Rot 5.51 282 *e*P **Pn 16 08 45.8 +1.7**
SMRF *e*Sn **Sn 16 09 42.8 -4.7**
comp=N,2.0nm,0.4s
GERES GERESS Array B 5.80 4 Pn **Pn 16 08 47.7 -0.3**
comp=N,1.5nm,0.3s,baz=168,slow=14,SNR=26
GERES Sn **Sn 16 09 51.8 -2.9**
comp=N,2.2nm,0.3s,baz=179,slow=24,SNR=9.2
comp=N,1.7nm,0.3s
CKRC Cesky Krumlov 5.82 8 *e*PN **Pn 16 08 48.9 +0.6**
CKRC *e*SN **Sn 16 09 52.9 -2.2**
KHC Kasperske Hory 6.08 3 *e*PN **Pn 16 08 52.8 +1.0**
KHC *e*SN **Sn 16 09 59.1 -2.3**
CABF La Chapelle 6.09 308 *e*P **Pn 16 08 53.9 +1.8**
VIVF Saint-Julien-l 6.31 289 *e*P **Pn 16 08 58.3 +3.3**
VIVF *e*Sn **Sn 16 10 02.6 -4.5**
comp=N,0.8nm,0.3s
KRUC Moravsky 6.43 20 *e*PN **Pn 16 08 56.6 -0.1**
HINF Hinteralfeld 6.45 320 *e*Pn **Pn 16 08 54.1 -2.8**
HINF Hinteralfeld 6.45 320 *e*P **Pn 16 08 57.4 +0.5**
HINF *e*Sn **Sn 16 10 02.6 -8.0**
comp=N,7.3nm,0.4s
CDF Champ du Feu 6.70 325 *e*Pn **Pn 16 08 57.3 -3.1**
CDF Champ du Feu 6.70 325 *e*P **Pn 16 09 01.3 +0.9**
CDF *e*Sn **Sn 16 10 09.2 -7.6**
comp=N,3.4nm,0.4s
VRAC Vranov 6.71 20 Pn **Pn 16 08 58.8 -1.6**
comp=N,0.4nm,0.3s,baz=212,slow=13,SNR=1.9
VRAC Sn **Sn 16 10 08.5 -8.5**
comp=N,0.1nm,0.3s,baz=233,slow=18,SNR=1.7
VRAC LR LR 16 12 01.7
comp=N,84nm,20.7s,baz=184,slow=43
comp=N,0.9nm,0.3s
VRAC Vranov 6.71 20 *e*PN **Pn 16 09 00.0 -0.5**
LASF Ste Croix 6.75 282 *e*P **Pn 16 09 03.9 +2.8**
LASF *e*Sn **Sn 16 10 12.5 -5.6**
comp=N,1.1nm,0.2s
HAU Haudompre 6.82 319 *e*Pn **Pn 16 08 59.1 -3.0**
HAU Haudompre 6.82 319 *e*P **Pn 16 09 02.9 +0.8**
HAU *e*Sn **Sn 16 10 12.2 -7.5**
comp=N,9.9nm,0.3s
PRU Pruhonice 7.00 8 *e*PN **Pn 16 09 04.9 +0.4**
PRU *e*SN **Sn 16 10 22.0 -2.1**
NKC Novy Kostel 7.18 357 *e*SN **Sn 16 10 27.1 -1.5**
SMF Signal de Mont 7.46 302 *e*P **Pn 16 09 12.7 +1.9**
SMF *e*Sn **Sn 16 10 30.6 -4.8**
comp=N,2.2nm,0.3s
PAGF Fort de Pagny 7.50 320 *e*Pn **Pn 16 09 08.1 -3.3**
PAGF Fort de Pagny 7.50 320 *e*P **Pn 16 09 13.0 +1.6**
PAGF *e*Sn **Sn 16 10 28.1 -8.4**
comp=N,4.8nm,0.5s
SFTF Sexfontaines 7.61 315 *e*P **Pn 16 09 15.1 +2.3**
baz=128
LOR Lormes 7.74 306 *e*Pn **Pn 16 09 11.6 -3.0**
LOR Lormes 7.74 306 *e*P **Pn 16 09 16.7 +2.1**
LOR *e*Sn **Sn 16 10 33.6 -8.6**
comp=N,3.1nm,0.4s
MEZF Maizieres J'vi 7.80 317 *e*P **Pn 16 09 18.9 +3.5**
baz=136
AVF Avril sur Loir 7.83 302 *e*P **Pn 16 09 18.1 +2.3**
AVF *e*Sn **Sn 16 10 40.0 -4.4**
comp=N,1.1nm,0.3s
SAVF Savonnieres en 7.84 318 *e*P **Pn 16 09 19.4 +3.5**
baz=137
SSF Saint Saulge 7.85 304 *e*P **Pn 16 09 17.7 +1.6**
SSF *e*Sn Sn 16 10 35.8 -9.2
comp=N,1.6nm,0.4s
KEST Kesra 7.87 203 Pn Pn 16 09 22.0 +5.6
comp=N,0.7nm,0.3s,baz=84,slow=19,SNR=7.2
KEST LR LR 16 11 25.8
comp=N,38nm,21.2s,baz=224,slow=30
comp=N,3.2nm,0.5s
MTLF Montolieu 7.92 276 *e*P **Pn 16 09 19.6 +2.5**
CLL Collm 8.25 360 *e*(Pn) **Pn 16 09 23.0 +1.5**
CLL *ex* x 16 09 32.0
CLL *ex* x 16 10 22.0
CLL *e*Sn Sn 16 10 39.0 -16
CLL *ex* x 16 10 50.0
CLL *ex* x 16 11 00.0
CLL *ex* x 16 11 08.0
CLL *ex* x 16 11 25.0
CLL *e*Sg **Sg 16 11 41.0 -5.4**
comp=Z,15nm,1.1s
MLR Muntele Rosu 9.56 71 LR LR 16 14 36.0
comp=Z,70nm,20.6s,baz=170,slow=46
IDI Anoyia 12.02 126 Pn **Pn 16 10 15.2 +1.8**
comp=Z,0.2nm,0.3s,baz=276,slow=13,SNR=1.7
comp=Z,2.3nm,0.8s
EKA Eskdalemuir Ar 16.16 325 Pn **Pn 16 11 09.5 +0.5**
baz=137,slow=14
comp=Z,0.2nm,0.4s
FINES FINESS Array B 19.99 18 P **P 16 11 53.9 -0.3**
comp=Z,0.1nm,0.3s,baz=224,slow=9.8,SNR=5.3
comp=Z,4.3nm,1.0s
TORD Torodi Ar. Bea 31.39 202 P **P 16 13 44.4 +1.4**
comp=Z,0.4nm,0.6s,baz=26,slow=7.3,SNR=3.8
comp=Z,0.4nm,0.6s
ARU Arti 31.67 49 P **P 16 13 44.5 -0.7**
comp=Z,0.7nm,0.3s,baz=265,slow=18,SNR=0.9
comp=Z,0.7nm,0.3s
MKAR Makanchi Array 47.71 60 P **P 16 15 59.4 +0.7**
comp=Z,0.8nm,0.8s,baz=284,slow=9.9,SNR=3.2
comp=Z,0.8nm,0.8s
SONM Songino Array 61.71 50 P **P 16 17 41.6 +1.4**
comp=Z,0.6nm,0.8s,baz=292,slow=7.8,SNR=3.5
comp=Z,0.6nm,0.8s
ILAR Eielson Array 71.36 351 P **P 16 18 43.2 +1.7**
comp=Z,0.3nm,0.7s,baz=354,slow=6.3,SNR=3.7
comp=Z,0.3nm,0.7s
CMAR Chiang Mai Arr 74.69 79 P **P 16 19 01.7 -0.3**
comp=Z,0.3nm,0.6s,baz=289,slow=8.5,SNR=2.5
comp=Z,0.3nm,0.6s

PRU ***30*** *16:13:50.8s 0.0, 42°.69N × 13°.82E, h0km*
ROM 30 16:13:52.4s 0.0, 42°.819N 0°.003 × 13°.157E 0°.004,
h10km, ML3.1/54, 29C-20D, Error ellipse: s-maj=0.2km
s-min=0.2km az=144.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**32**	⇑P	Pg	16 13 54.8	+0.3
T1245				S	Sg	16 13 56.1	0.0
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.12**	**305**	P	Pg	16 13 56.0	+0.6
T1216				AML	AML		
	comp=E,14850µm,0.4s						
T1216				AML	AML		
	comp=E,14795µm,0.4s						
T1216				AML	AML		
	comp=E,14800µm,0.4s						
T1216				AML	AML		
	comp=N,17000µm,0.3s						
MMO1	**Montemonaco**	**0.15**	**57**	⇑P	Pg	16 13 56.3	+0.5
MMO1				S	Sg	16 13 58.7	+0.5
FEMA	**Monte Fema**	**0.16**	**331**	⇓P	Pg	16 13 56.7	+0.6
FEMA				S	Sg	16 13 59.5	+0.8
FEMA				AML	AML		
	comp=N,20250µm,0.4s						
FEMA				AML	AML		
	comp=E,21250µm,1.0s						
FEMA				AML	AML		
	comp=E,21250µm,1.0s						
FEMA				AML	AML		
	comp=N,20300µm,0.4s						
T1204	**Amatrice, Fraz**	**0.18**	**140**	P	Pg	16 13 57.1	+0.6
T1204				S	Sg	16 14 00.4	+1.2
T1204				AML	AML		
	comp=N,9455µm,0.9s						
T1204				AML	AML		
	comp=E,15850µm,0.9s						
T1204				AML	AML		
	comp=N,9455µm,1.1s						
T1217	**Poggiodomo (PG**	**0.20**	**237**	P	Pg	16 13 57.4	+0.8
T1217				S	Sg	16 14 00.6	+1.2
T1217				AML	AML		
	comp=E,10750µm,0.3s						
T1217				AML	AML		
	comp=N,7975µm,0.6s						
T1217				AML	AML		
	comp=N,7940µm,0.6s						
T1217				AML	AML		
	comp=E,10785µm,0.3s						
T1217				AML	AML		
	comp=N,7990µm,0.6s						
T1217				AML	AML		
	comp=E,10490µm,0.3s						
T1217				AML	AML		
	comp=N,7905µm,0.7s						
T1217				AML	AML		
	comp=N,7915µm,0.7s						
T1217				AML	AML		
	comp=N,7975µm,1.4s						
T1217				AML	AML		
	comp=N,7915µm,1.3s						
T1217				AML	AML		
	comp=E,10505µm,0.3s						
T1217				AML	AML		
	comp=E,10800µm,0.3s						
T1241	**Roccafluvione,**	**0.20**	**79**	P	Pg	16 13 57.7	+1.0
T1241				S	Sg	16 14 01.2	+1.5
T1241				AML	AML		
	comp=E,20300µm,0.3s						
T1241				AML	AML		
	comp=N,9620µm,1.3s						
T1241				AML	AML		
	comp=N,8775µm,1.3s						
T1241				AML	AML		
	comp=N,9665µm,1.3s						
T1241				AML	AML		
	comp=E,21100µm,0.3s						
T1241				AML	AML		
	comp=N,8780µm,1.3s						
T1241				AML	AML		
	comp=N,9635µm,1.3s						
T1241				AML	AML		
	comp=E,21150µm,0.3s						
T1241				AML	AML		
	comp=E,20350µm,0.3s						
T1241				AML	AML		
	comp=N,8780µm,0.7s						
T1241				AML	AML		
	comp=N,9635µm,0.7s						
T1215	**Vallo di Nera,**	**0.21**	**265**	⇑P	Pg	16 13 57.6	+0.7
T1215				S	Sg	16 14 01.0	+1.1
T1215				AML	AML		
	comp=E,7500µm,1.2s						
T1215				AML	AML		
	comp=N,7025µm,0.1s						
T1215				AML	AML		
	comp=E,7860µm,1.2s						
T1215				AML	AML		
	comp=N,7025µm,0.1s						
T1215				AML	AML		
	comp=E,7850µm,1.2s						
T1215				AML	AML		
	comp=N,7320µm,0.1s						
T1215				AML	AML		
	comp=N,7320µm,0.1s						
T1215				AML	AML		
	comp=E,7500µm,1.2s						
AM05	**Amandola Campo**	**0.21**	**42**	⇑P	Pg	16 13 57.6	+0.7
AM05				S	Sg	16 14 01.0	+1.1
AM05				AML	AML		
	comp=E,2735µm,0.4s						
AM05				AML	AML		
	comp=E,14200µm,0.4s						
AM05				AML	AML		
	comp=N,616µm,0.1s						
AM05				AML	AML		
	comp=E,14150µm,0.4s						
AM05				AML	AML		
	comp=N,2730µm,0.7s						
LNSS	**Leonessa**	**0.23**	**202**	P	Pg	16 13 58.0	+0.8
LNSS				S	Sg	16 14 02.1	+1.6
LNSS				AML	AML		
	comp=N,84350µm,0.2s						
LNSS				AML	AML		
	comp=E,21850µm,0.2s						
T1243	**Rocca Santa Ma**	**0.25**	**120**	⇑P	Pg	16 13 58.1	+0.6
T1243				S	Sg	16 14 02.1	+1.2
GUMA	**Gualdo di Mace**	**0.28**	**28**	⇓P	Pb	16 13 58.9	-0.6
GUMA				AML	AML		
	comp=N,33350µm,0.5s						
GUMA				AML	AML		
	comp=E,31400µm,0.6s						
GUMA				AML	AML		
	comp=E,33250µm,0.6s						
GUMA				AML	AML		
	comp=N,28900µm,0.5s						
GUMA				AML	AML		
	comp=E,31400µm,1.4s						
RM33	**Pellescritta (**	**0.31**	**172**	P	Pg	16 13 59.2	+0.5
RM33				AML	AML		
	comp=N,4315µm,0.4s						
RM33				AML	AML		
	comp=E,4305µm,0.2s						
RM33				AML	AML		
	comp=N,4405µm,0.4s						
RM33				AML	AML		
	comp=E,4300µm,0.2s						
RM33				AML	AML		
	comp=N,4410µm,0.4s						
RM33				AML	AML		
	comp=E,4380µm,0.2s						
RM33				AML	AML		
	comp=E,4300µm,1.8s						
RM33				AML	AML		
	comp=N,4315µm,0.4s						
RM33				AML	AML		
	comp=E,4380µm,1.8s						
CAMP	**Campotosto**	**0.34**	**147**	⇑P	Pg	16 13 59.7	+0.5
CAMP				AML	AML		
	comp=N,1910µm,0.3s						
CAMP				AML	AML		
	comp=E,2130µm,0.7s						
CAMP				AML	AML		
	comp=E,2130µm,1.3s						
SEF1	**Sefro**	**0.36**	**335**	⇑P	Pg	16 14 00.1	+0.5
SEF1				AML	AML		
	comp=E,7485µm,0.3s						
SEF1				AML	AML		
	comp=N,7535µm,0.2s						
T1211	**Morro Reatino**	**0.36**	**218**	⇑P	Pg	16 14 00.2	+0.6
T1211				AML	AML		
	comp=E,6505µm,0.3s						
T1211				AML	AML		
	comp=N,17950µm,0.3s						
T1211				AML	AML		
	comp=E,6635µm,0.3s						
T1211				AML	AML		
	comp=N,17750µm,0.3s						
T1211				AML	AML		
	comp=N,17800µm,0.3s						
T1211				AML	AML		
	comp=E,6510µm,0.3s						
T1211				AML	AML		
	comp=N,17900µm,0.3s						
T1211				AML	AML		
	comp=E,6635µm,0.3s						
MDAR	**Monte D'Aria**	**0.37**	**358**	P	Pg	16 14 00.3	+0.5
ARRO	**Arrone**	**0.38**	**230**	P	Pg	16 14 00.4	+0.5
ARRO				AML	AML		
	comp=E,3095µm,0.3s						
ARRO				AML	AML		
	comp=N,4575µm,1.3s						
ARRO				AML	AML		
	comp=N,4575µm,0.7s						
TERO	**Teramo**	**0.38**	**121**	P	Pg	16 14 00.3	+0.3
TERO				AML	AML		
	comp=E,2960µm,0.7s						
TERO				AML	AML		
	comp=N,3940µm,0.3s						
TERO				AML	AML		
	comp=E,3190µm,0.7s						
TERO				AML	AML		
	comp=N,4230µm,0.3s						
T1247	**Pizzolo (AQ)**	**0.39**	**164**	⇓P	Pg	16 14 00.6	+0.5
T1247				AML	AML		
	comp=N,5685µm,0.4s						
T1247				AML	AML		
	comp=N,5680µm,0.4s						
T1247				AML	AML		
	comp=E,4775µm,0.5s						
MNTP	**Montappone**	**0.39**	**36**	P	Pb	16 14 01.4	-0.2
MNTP				AML	AML		
	comp=E,5980µm,0.3s						
MNTP				AML	AML		
	comp=N,4660µm,0.4s						
MNTP				AML	AML		
	comp=E,5980µm,0.3s						
MNTP				AML	AML		
	comp=N,4660µm,0.4s						
MNTP				AML	AML		
	comp=E,5980µm,1.7s						
OFFI	**Offida**	**0.41**	**73**	P	Pb	16 14 01.6	-0.2
OFFI				AML	AML		
	comp=N,7135µm,0.7s						
OFFI				AML	AML		
	comp=E,5345µm,0.5s						
GAG1	**Gagliole**	**0.42**	**351**	P	Pg	16 14 01.4	+0.6
GAG1				AML	AML		
	comp=E,6875µm,1.3s						
GAG1				AML	AML		
	comp=N,8610µm,0.4s						
GAG1				AML	AML		
	comp=E,6880µm,1.3s						
GAG1				AML	AML		
	comp=N,8605µm,0.4s						
GAG1				AML	AML		
	comp=E,6880µm,0.7s						
ASSB	**Assisi San Ben**	**0.43**	**302**	⇑P	Pg	16 14 01.4	+0.5
ASSB				AML	AML		
	comp=E,5890µm,0.1s						
ASSB				AML	AML		
	comp=N,3640µm,0.5s						
SNTG	**Esanatoglia**	**0.46**	**340**	P	Pg	16 14 01.8	+0.3
SNTG				AML	AML		
	comp=E,1645µm,0.8s						
SNTG				AML	AML		
	comp=N,1585µm,0.2s						
SNTG				AML	AML		
	comp=E,1730µm,0.8s						
SNTG				AML	AML		
	comp=E,1645µm,0.8s						
SNTG				AML	AML		
	comp=N,1580µm,0.2s						
SNTG				AML	AML		
	comp=N,1580µm,0.2s						
CESX	**Cesi**	**0.47**	**244**	⇓P	Pg	16 14 02.3	+0.6
CESX				AML	AML		
	comp=N,3110µm,0.7s						
CESX				AML	AML		
	comp=E,2345µm,0.3s						
CESX				AML	AML		
	comp=N,3110µm,1.3s						
GIGS	**Gran Sasso**	**0.48**	**140**	P	Pg	16 14 01.9	+0.2
GIGS				AML	AML		
	comp=E,453µm,0.7s						
GIGS				AML	AML		
	comp=N,429µm,0.7s						
GIGS				AML	AML		
	comp=E,452µm,0.7s						
GIGS				AML	AML		
	comp=N,428µm,0.7s						
GIGS				AML	AML		
	comp=N,428µm,1.3s						
GIGS				AML	AML		
	comp=E,452µm,1.3s						
EL6	**Elcito**	**0.51**	**356**	⇓P	Pg	16 14 02.7	+0.3
EL6				AML	AML		
	comp=E,3285µm,1.1s						
EL6				AML	AML		
	comp=E,3290µm,1.1s						
EL6				AML	AML		
	comp=N,3185µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.53**	**314**	⇓P	Pg	16 14 03.1	+0.4
ATCC				AML	AML		
	comp=E,4380µm,0.9s						
ATCC				AML	AML		
	comp=N,4005µm,0.3s						
ATCC				AML	AML		
	comp=E,4375µm,0.9s						
ATCC				AML	AML		
	comp=N,4010µm,0.3s						
ATCC				AML	AML		
	comp=E,4375µm,1.1s						
FOSV	**Fossato di Vic**	**0.56**	**329**	⇓P	Pg	16 14 03.5	+0.2
FOSV				AML	AML		
	comp=E,2165µm,0.4s						
FOSV				AML	AML		
	comp=N,2330µm,0.3s						
TRTR	**Tortoreto Alta**	**0.56**	**91**	⇓P	Pn	16 14 05.6	-0.9
TRTR				AML	AML		
	comp=E,4390µm,0.6s						
TRTR				AML	AML		
	comp=N,3340µm,0.4s						
TRTR				AML	AML		
	comp=E,4390µm,1.4s						
FAGN	**Fagnano**	**0.64**	**150**	⇑P	Pb	16 14 05.2	-0.4
FAGN				AML	AML		
	comp=E,3270µm,0.4s						
FAGN				AML	AML		
	comp=N,2110µm,1.4s						
MURB	**Monte Urbino**	**0.64**	**314**	P	Pg	16 14 05.3	+0.4

MURB				S	Sb	16 14 16.0 +1.1
MURB				AML	AML	
	comp=E,5000µm,0.3s					
MURB				AML	AML	
	comp=N,5525µm,1.6s					
MURB				AML	AML	
	comp=N,4935µm,1.6s					
MURB				AML	AML	
	comp=E,5440µm,0.3s					
MURB				AML	AML	
	comp=N,5525µm,0.4s					
MURB				AML	AML	
	comp=N,4935µm,0.4s					
MURB				AML	AML	
	comp=E,5440µm,1.7s					
MURB				AML	AML	
	comp=E,5000µm,1.7s					
PP3	**Marolino**	**0.65**	**31**	⇑P	Pb	16 14 06.2 +0.3
PP3				AML	AML	
	comp=E,11850µm,0.4s					
PP3				AML	AML	
	comp=N,6275µm,1.3s					
PP3				AML	AML	
	comp=N,6810µm,1.3s					
PP3				AML	AML	
	comp=N,6805µm,1.3s					
PP3				AML	AML	
	comp=E,11300µm,0.4s					
PP3				AML	AML	
	comp=E,11800µm,0.4s					
PP3				AML	AML	
	comp=N,6805µm,0.7s					
PP3				AML	AML	
	comp=N,6275µm,0.7s					
PP3				AML	AML	
	comp=E,11800µm,1.6s					
VCEL	**Villa Celiera**	**0.66**	**130**	⇓P	Pb	16 14 05.9 -0.2
VCEL				AML	AML	
	comp=E,1610µm,0.5s					
VCEL				AML	AML	
	comp=N,1310µm,0.7s					
VCEL				AML	AML	
	comp=E,1610µm,1.5s					
ATFO	**Monte Foce - G**	**0.69**	**322**	⇑P	Pg	16 14 06.1 +0.2
ATFO				AML	AML	
	comp=N,919µm,1.0s					
ATFO				AML	AML	
	comp=E,965µm,0.9s					
ATFO				AML	AML	
	comp=N,920µm,1.0s					
ATFO				AML	AML	
	comp=N,920µm,1.0s					
ARVD	**Arcevia**	**0.70**	**347**	⇓P	Pg	16 14 06.0 +0.1
ARVD				S	Sn	16 14 18.0 -1.3
ARVD				AML	AML	
	comp=E,818µm,0.6s					
ARVD				AML	AML	
	comp=N,782µm,0.8s					
ARVD				AML	AML	
	comp=E,818µm,1.4s					
ARVD				AML	AML	
	comp=N,782µm,1.2s					
ATTE	**AVT- Monte Tez**	**0.70**	**303**	⇑P	Pb	16 14 06.4 -0.4
ATTE				AML	AML	
	comp=E,840µm,0.3s					
ATTE				AML	AML	
	comp=N,782µm,0.3s					
T0110	**Collepietro**	**0.75**	**142**	⇑P	Pg	16 14 06.9 0.0
T0110				AML	AML	
	comp=E,978µm,0.9s					
T0110				AML	AML	
	comp=N,1208µm,0.4s					
T0110				AML	AML	
	comp=N,1208µm,0.4s					
T0110				AML	AML	
	comp=E,978µm,0.9s					
FRON	**Frontone**	**0.77**	**336**	⇑P	Pg	16 14 07.2 0.0
FRON				AML	AML	
	comp=E,924µm,0.2s					
FRON				AML	AML	
	comp=N,1070µm,1.4s					
FRON				AML	AML	
	comp=N,1070µm,0.6s					
MGAB	**Montegabbione**	**0.77**	**277**	⇑P	Pb	16 14 08.3 +0.3
MGAB				AML	AML	
	comp=E,1565µm,1.1s					
MGAB				AML	AML	
	comp=N,2510µm,0.4s					
MGAB				AML	AML	
	comp=N,2400µm,0.4s					
MGAB				AML	AML	
	comp=N,2400µm,1.6s					
MGAB				AML	AML	
	comp=N,2510µm,1.6s					
MGAB				AML	AML	
	comp=E,1855µm,1.1s					
MGAB				AML	AML	
	comp=E,1560µm,1.1s					
ATVO	**AVT- Monte Val**	**0.79**	**316**	⇑P	Pg	16 14 07.6 0.0
ATVO				AML	AML	
	comp=E,790µm,0.8s					
ATVO				AML	AML	
	comp=N,511µm,0.7s					
AOI	**Ancona**	**0.80**	**24**	⇑P	Pb	16 14 08.6 +0.1
AOI				AML	AML	
	comp=E,862µm,0.4s					
AOI				AML	AML	
	comp=N,796µm,0.5s					
AOI				AML	AML	
	comp=N,796µm,1.5s					
ATMI	**Monte Miggiano**	**0.83**	**309**	⇑P	Pb	16 14 09.6 +0.6
ATMI				S	Sn	16 14 23.0 +0.4
ATMI				AML	AML	
	comp=E,2220µm,0.5s					
ATMI				AML	AML	
	comp=N,2395µm,0.6s					
ATMI				AML	AML	
	comp=N,2395µm,1.4s					
ATPI	**Pietralunga -**	**0.84**	**319**	⇓P	Pg	16 14 08.5 -0.1
ATPI				S	Sn	16 14 22.0 -0.8
ATPI				AML	AML	
	comp=E,700µm,0.6s					
ATPI				AML	AML	
	comp=N,579µm,0.5s					
ATPI				AML	AML	
	comp=E,700µm,0.6s					
ATPI				AML	AML	
	comp=N,580µm,0.5s					
PIEI	**Pieia**	**0.85**	**328**	⇑P	Pg	16 14 08.8 0.0
PIEI				S	Sn	16 14 22.0 -1.1
PIEI				AML	AML	
	comp=N,470µm,1.4s					
PIEI				AML	AML	
	comp=E,708µm,0.3s					
PIEI				AML	AML	
	comp=N,470µm,0.6s					
CERT	**Cerreto**	**0.88**	**189**	⇓P	Pn	16 14 10.7 -0.3
CERT				AML	AML	
	comp=E,1080µm,1.2s					
CERT				AML	AML	
	comp=E,1080µm,0.8s					
CERT				AML	AML	
	comp=N,1037µm,0.5s					
FSSB	**Fossombrone**	**0.92**	**343**	⇓P	Pg	16 14 09.9 -0.1
FSSB				S	Sn	16 14 26.0 +1.3
FSSB				AML	AML	
	comp=N,2580µm,0.3s					
FSSB				AML	AML	
	comp=E,2420µm,1.2s					
SACS	**San Casciano d**	**0.92**	**272**	⇑P	Pn	16 14 11.9 +0.4
SACS				AML	AML	
	comp=E,459µm,0.7s					
SACS				AML	AML	
	comp=E,459µm,1.3s					
SACS				AML	AML	
	comp=N,716µm,0.7s					
BADI	**Badiali**	**0.96**	**316**	⇑P	Pb	16 14 11.1 -0.1
PE3	**Peglio**	**1.00**	**331**	⇓P	Pb	16 14 12.2 +0.3
RMP	**Rome, Mte Porz**	**1.06**	**199**	S	Sn	16 14 29.0 +0.7
LPEL	**Lama dei Pelig**	**1.08**	**135**	⇑P	Pg	16 14 13.0 -0.3
LPEL				S	Sn	16 14 30.0 +1.1
LPEL				AML	AML	
	comp=E,380µm,0.4s					
LPEL				AML	AML	
	comp=N,390µm,0.6s					
LPEL				AML	AML	
	comp=E,380µm,1.6s					
MCIV	**Monte Civitell**	**1.09**	**268**	⇓P	Pn	16 14 14.5 +0.6
MCIV				AML	AML	
	comp=E,199µm,0.5s					
MCIV				AML	AML	
	comp=N,172µm,0.5s					
TOLF	**Tolfa**	**1.14**	**229**	⇓P	Pb	16 14 14.2 -0.1
TOLF				AML	AML	
	comp=E,555µm,0.4s					
TOLF				AML	AML	
	comp=N,453µm,0.9s					
TOLF				AML	AML	
	comp=N,453µm,1.1s					
CPGN	**Carpegna, Ital**	**1.16**	**328**	⇑P	Pn	16 14 15.8 +1.0
POFI	**Posta Fibreno**	**1.18**	**159**	⇓P	Pn	16 14 16.2 +1.2
CRE	**Caprese Michel**	**1.19**	**313**	⇓P	Pg	16 14 17.0 +1.7
CRE				AML	AML	
	comp=E,266µm,0.5s					
CRE				AML	AML	
	comp=N,288µm,0.3s					
TRIF	**Trifonti**	**1.68**	**281**	P	Pn	16 14 22.6 +0.6
TRIF				AML	AML	
	comp=E,68µm,0.7s					
TRIF				AML	AML	
	comp=N,95µm,0.8s					
TRIF				AML	AML	
	comp=E,68µm,1.3s					
CASP	**Castiglione de**	**1.69**	**270**	P	Pn	16 14 22.1 +0.1
CASP				AML	AML	
	comp=N,37µm,0.6s					
CASP				AML	AML	
	comp=E,38µm,1.4s					
CASP				AML	AML	
	comp=E,38µm,0.6s					
CASP				AML	AML	
	comp=N,37µm,1.4s					
MTCR	**Monte La Croce**	**1.98**	**308**	⇑P	Pn	16 14 26.9 +0.8
BRJN	**Brijuni**	**2.13**	**11**	⇓P	Pn	16 14 28.4 +0.3
POPM	**Popiglio**	**2.13**	**306**	⇑P	Pg	16 14 34.2 +0.8
SABO	**M.te Sabotino**	**3.18**	**6**	⇓P	Pn	16 14 43.1 +0.6
SABO				AML	AML	
	comp=N,102µm,0.8s					
SABO				AML	AML	
	comp=N,102µm,1.2s					
SABO				AML	AML	
	comp=E,86µm,0.6s					
CGRP	**Cima Grappa**	**3.21**	**343**	⇑P	Pn	16 14 44.6 +1.5
STAL	**STALIGIAL**	**3.46**	**355**	⇑P	Pn	16 14 47.3 +0.9
STAL				AML	AML	
	comp=E,77µm,0.4s					
STAL				AML	AML	
	comp=N,57µm,1.4s					
STAL				AML	AML	
	comp=E,77µm,1.6s					
ACOM	**Acomizza, Ital**	**3.74**	**4**	⇑P	Pn	16 14 52.0 +1.7
ZOU	**Zoufplan**	**3.74**	**358**	P	Pb	16 14 60.0 +1.3
SALB	**San Lorenzo Be**	**3.79**	**140**	S	Sn	16 15 39.0 +3.2
ABTA	**Abfaltersbach**	**3.96**	**354**	*e*Pn	Pn	16 14 55.2 +2.0
	comp=E,9.6nm,0.3s					
WTTA	**Wattenberg**	**4.57**	**347**	*e*Pn	Pn	16 15 05.2 +3.3
	comp=E,0.9nm,0.2s					
SQTA	**Sankt Quirin**	**4.61**	**343**	*e*Pn	Pn	16 15 05.6 +3.3
	comp=E,4.1nm,0.3s					
WATA	**Walderalm**	**4.65**	**347**	*e*Pn	Pn	16 15 06.4 +3.5
	comp=E,4.8nm,0.4s					
BIOA	**Bad Ischl, Aus**	**4.88**	**4**	*e*Pn	Pn	16 15 07.4 +1.4
	comp=E,2.2nm,0.2s					
CONA	**Conrad Observa**	**5.45**	**20**	*e*Pn	Pn	16 15 14.9 +1.1
	comp=E,2.5nm,0.4s					
CKRC	**Cesky Krumlov**	**6.06**	**7**	*e*SN	Sn	16 16 31.1 -0.3
KHC	**Kasperske Hory**	**6.32**	**3**	*e*PN	Pn	16 15 25.6 -0.1
KHC				*e*SN	Sn	16 16 37.1 -0.8

ROM ***30*** *16:18:35.9±0.1, 42°.827N±0°.004×13°.050E±0°.005, h10km, ML3.2/81, Error ellipse: s-maj=0.4km s-min=0.3km az=314.0*
PRU ***30*** *16:18:36.2±0.0, 42°.83N×13°.23E, h0km*
IDC ***30*** *16:18:39.4±2.0, 43°.15N×12°.71E, h0km, mb3.4/1, mbtmp3.5/3, ML3.2/2, MS3.5/1, Error ellipse: s-maj=108.0km s-min=18.2km az=101.0*
ISC 30 16:18:36.5±0.8, **42°.82N**±0°.01×**13°.06E**±0°.02, **h11**km±4km, **n132**, σ1§**15**/155, **37C-45D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**334**	P	**Pg**	**16 18 38.6**	**-0.5**
T1216				S	**Sg**	**16 18 39.6**	**-1.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.10**	**70**	⇓P	**Pg**	**16 18 39.2**	**-0.2**
T1245				S	**Sg**	**16 18 41.3**	**-0.1**
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.14**	**356**	⇓P	**Pg**	**16 18 39.7**	**-0.3**
FEMA				S	**Sg**	**16 18 42.2**	**-0.2**
FEMA				AML	AML		
	comp=N,96500µm,1.1s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,96650µm,1.1s						
FEMA				AML	AML		
	comp=N,96400µm,1.1s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,96350µm,1.1s						
FEMA				AML	AML		
	comp=N,96350µm,0.9s						
T1215	**Vallo di Nera,**	**0.14**	**262**	P	**Pg**	**16 18 39.7**	**-0.2**
T1215				S	**Sg**	**16 18 42.1**	**-0.2**
T1215				AML	AML		
	comp=E,16400µm,0.6s						
T1215				AML	AML		
	comp=N,20150µm,0.8s						
T1215				AML	AML		
	comp=E,15500µm,0.6s						
T1215				AML	AML		
	comp=E,16350µm,0.6s						
T1215				AML	AML		
	comp=E,15550µm,0.6s						
T1215				AML	AML		
	comp=N,20700µm,0.8s						
T1215				AML	AML		
	comp=E,16350µm,0.6s						
T1215				AML	AML		
	comp=E,15600µm,0.6s						
T1215				AML	AML		
	comp=N,20650µm,0.8s						
T1215				AML	AML		
	comp=N,20700µm,0.8s						
T1215				AML	AML		
	comp=N,20150µm,0.8s						
T1215				AML	AML		
	comp=E,16400µm,0.6s						
T1215				AML	AML		
	comp=E,15550µm,0.6s						
T1217	**Poggiodomo (PG**	**0.15**	**221**	P	**Pg**	**16 18 39.9**	**-0.1**
T1217				S	**Sg**	**16 18 42.7**	**+0.2**
T1217				AML	AML		
	comp=E,15950µm,0.7s						
T1217				AML	AML		
	comp=N,20850µm,0.5s						
T1217				AML	AML		
	comp=E,15950µm,0.8s						
T1217				AML	AML		
	comp=N,20450µm,0.2s						
T1217				AML	AML		
	comp=E,15900µm,0.7s						
T1217				AML	AML		
	comp=E,16000µm,0.8s						
T1217				AML	AML		
	comp=N,20800µm,0.5s						
T1217				AML	AML		
	comp=N,20450µm,0.2s						
T1217				AML	AML		
	comp=E,15950µm,0.8s						
T1217				AML	AML		
	comp=E,15950µm,1.3s						
MMO1	**Montemonaco**	**0.21**	**68**	P	**Pg**	**16 18 41.0**	**0.0**
MMO1				S	**Sg**	**16 18 44.5**	**+0.4**
LNSS	**Leonessa**	**0.22**	**184**	P	**Pg**	**16 18 41.3**	**0.0**
LNSS				S	**Sg**	**16 18 45.1**	**+0.7**
LNSS				AML	AML		
	comp=E,15600µm,1.4s						
LNSS				AML	AML		
	comp=N,31800µm,0.5s						
LNSS				AML	AML		
	comp=E,15600µm,0.6s						
T1204	**Amatrice, Fraz**	**0.24**	**128**	P	**Pg**	**16 18 41.0**	**-0.6**
T1204				AML	AML		
	comp=E,11400µm,0.5s						
T1204				AML	AML		
	comp=N,8490µm,1.4s						
T1204				AML	AML		
	comp=E,11375µm,0.5s						
T1204				AML	AML		
	comp=N,8495µm,1.4s						
T1204				AML	AML		
	comp=N,8500µm,1.4s						
T1204				AML	AML		
	comp=N,8475µm,1.4s						
T1204				AML	AML		
	comp=E,11380µm,0.5s						
T1204				AML	AML		
	comp=N,8475µm,0.6s						
AM05	**Amandola Campo**	**0.26**	**54**	P	**Pg**	**16 18 42.0**	**+0.1**
AM05				S	**Sg**	**16 18 46.3**	**+0.7**
AM05				AML	AML		
	comp=E,6585µm,0.2s						
AM05				AML	AML		
	comp=N,1705µm,1.6s						
AM05				AML	AML		
	comp=N,6605µm,0.4s						
AM05				AML	AML		
	comp=N,6610µm,0.4s						
AM05				AML	AML		
	comp=E,25900µm,1.1s						
AM05				AML	AML		
	comp=N,6610µm,1.6s						
AM05				AML	AML		
	comp=E,6580µm,0.2s						
AM05				AML	AML		
	comp=N,1710µm,1.6s						
AM05				AML	AML		
	comp=E,25900µm,0.9s						
T1241	**Roccafluvione,**	**0.27**	**83**	P	**Pg**	**16 18 42.5**	**+0.4**
T1241				S	**Sg**	**16 18 47.1**	**+1.2**
T1241				AML	AML		
	comp=N,16600µm,0.2s						
T1241				AML	AML		
	comp=N,17600µm,0.2s						
T1241				AML	AML		
	comp=E,14650µm,0.6s						
T1241				AML	AML		
	comp=E,15250µm,0.6s						
T1241				AML	AML		
	comp=N,16550µm,0.2s						
T1241				AML	AML		
	comp=E,14600µm,0.6s						
CSP1	**Cessapalombo**	**0.29**	**21**	⇑P	**Pg**	**16 18 42.2**	**-0.2**
CSP1				AML	AML		
	comp=E,28000µm,0.3s						
CSP1				AML	AML		
	comp=N,29450µm,0.5s						
T1243	**Rocca Santa Ma**	**0.31**	**114**	P	**Pg**	**16 18 42.8**	**-0.1**
T1243				S	**Sg**	**16 18 48.2**	**+1.1**
GUMA	**Gualdo di Mace**	**0.31**	**40**	⇑P	**Pg**	**16 18 42.6**	**-0.2**
GUMA				S	**Sb**	**16 18 48.4**	**-0.9**
GUMA				AML	AML		
	comp=E,42400µm,0.8s						
GUMA				AML	AML		
	comp=N,34300µm,0.4s						
GUMA				AML	AML		
	comp=N,41750µm,0.7s						
GUMA				AML	AML		
	comp=E,42350µm,0.8s						
GUMA				AML	AML		
	comp=N,41800µm,0.7s						
GUMA				AML	AML		
	comp=E,42400µm,0.8s						
GUMA				AML	AML		
	comp=E,38400µm,0.8s						
GUMA				AML	AML		
	comp=N,41800µm,1.3s						
GUMA				AML	AML		
	comp=E,42400µm,1.2s						
GUMA				AML	AML		
	comp=E,38400µm,1.2s						
ARRO	**Arrone**	**0.33**	**222**	P	**Pg**	**16 18 43.0**	**-0.2**
ARRO				S	**Sg**	**16 18 48.3**	**+0.8**
ARRO				AML	AML		
	comp=E,6050µm,1.4s						
ARRO				AML	AML		
	comp=N,9505µm,0.2s						
ARRO				AML	AML		
	comp=N,9495µm,0.2s						
ARRO				AML	AML		
	comp=E,6050µm,0.6s						
ARRO				AML	AML		
	comp=N,9495µm,1.8s						
T1211	**Morro Reatino**	**0.33**	**208**	P	**Pg**	**16 18 43.0**	**-0.2**
T1211				S	**Sg**	**16 18 48.5**	**+0.9**
T1211				AML	AML		
	comp=E,10550µm,1.2s						
T1211				AML	AML		
	comp=E,11025µm,1.2s						
T1211				AML	AML		
	comp=N,15150µm,0.3s						
T1211				AML	AML		
	comp=E,10550µm,1.2s						
T1211				AML	AML		
	comp=N,15150µm,0.3s						
T1211				AML	AML		
	comp=E,11040µm,1.2s						
T1211				AML	AML		
	comp=N,15100µm,0.3s						
T1211				AML	AML		
	comp=E,10550µm,0.8s						
T1211				AML	AML		
	comp=E,11040µm,0.8s						
RM33	**Pellescritta (**	**0.33**	**160**	P	**Pg**	**16 18 43.3**	**0.0**
RM33				S	**Sg**	**16 18 48.7**	**+1.0**
RM33				AML	AML		
	comp=E,4565µm,0.8s						
RM33				AML	AML		
	comp=E,4595µm,0.8s						
RM33				AML	AML		
	comp=N,5415µm,1.2s						
RM33				AML	AML		
	comp=N,5175µm,1.2s						
RM33				AML	AML		
	comp=E,4565µm,0.8s						
RM33				AML	AML		
	comp=E,4565µm,1.2s						
RM33				AML	AML		
	comp=E,4595µm,1.2s						
RM33				AML	AML		
	comp=N,5180µm,1.2s						
RM33				AML	AML		
	comp=N,5410µm,1.2s						
SEF1	**Sefro**	**0.34**	**345**	⇑P	**Pg**	**16 18 43.0**	**-0.3**
SEF1				S	**Sg**	**16 18 48.1**	**+0.3**
SEF1				AML	AML		
	comp=E,16500µm,0.2s						
SEF1				AML	AML		
	comp=N,17250µm,0.3s						
SEF1				AML	AML		
	comp=E,16550µm,0.2s						
SEF1				AML	AML		
	comp=N,17250µm,0.3s						
PIO1	**Pioraco**	**0.36**	**351**	⇑P	**Pg**	**16 18 43.7**	**0.0**
PIO1				AML	AML		
	comp=E,5565µm,0.7s						
PIO1				AML	AML		
	comp=N,8150µm,0.4s						
PIO1				AML	AML		
	comp=E,5565µm,0.8s						
PIO1				AML	AML		
	comp=N,8150µm,0.4s						
PIO1				AML	AML		
	comp=E,5565µm,1.2s						
ASSB	**Assisi San Ben**	**0.37**	**307**	P	**Pg**	**16 18 43.4**	**-0.5**
ASSB				S	**Sg**	**16 18 48.8**	**-0.1**
MDAR	**Monte D'Aria**	**0.37**	**9**	⇓P	**Pg**	**16 18 43.7**	**-0.4**
MDAR				AML	AML		
	comp=E,11250µm,0.2s						
MDAR				AML	AML		
	comp=N,12370µm,0.3s						
MDAR				AML	AML		
	comp=N,12350µm,0.3s						
MDAR				AML	AML		
	comp=E,11235µm,0.2s						

CAMP	**Campotosto**	**0.38**	**138**	⇓P	**Pg**	**16 18 43.4**	**-0.8**
CAMP				AML	AML		
	comp=N,2030µm,0.5s						
CAMP				AML	AML		
	comp=E,1865µm,0.5s						
SSM1	**San Severino M**	**0.41**	**12**	⇓P	**Pg**	**16 18 44.8**	**+0.1**
CESX	**Cesi**	**0.41**	**239**	⇑P	**Pg**	**16 18 44.2**	**-0.5**
CESX				AML	AML		
	comp=E,6355µm,0.6s						
CESX				AML	AML		
	comp=N,7815µm,0.3s						
CESX				AML	AML		
	comp=E,6355µm,1.4s						
GAG1	**Gagliole**	**0.41**	**0**	P	**Pg**	**16 18 44.6**	**-0.1**
T1247	**Pizzolo (AQ)**	**0.42**	**155**	⇓P	**Pg**	**16 18 44.6**	**-0.2**
T1247				AML	AML		
	comp=N,4700µm,0.3s						
T1247				AML	AML		
	comp=E,4490µm,0.4s						
T1247				AML	AML		
	comp=N,4705µm,0.3s						
MNTP	**Montappone**	**0.43**	**43**	⇓P	**Pg**	**16 18 45.6**	**+0.5**
MNTP				AML	AML		
	comp=E,13400µm,0.3s						
MNTP				AML	AML		
	comp=E,13400µm,0.2s						
MNTP				AML	AML		
	comp=N,11300µm,0.3s						
SNTG	**Esanatoglia**	**0.44**	**348**	⇑P	**Pg**	**16 18 44.7**	**-0.5**
SNTG				AML	AML		
	comp=E,4055µm,1.0s						
SNTG				AML	AML		
	comp=E,4050µm,0.9s						
SNTG				AML	AML		
	comp=N,4595µm,0.6s						
SNTG				AML	AML		
	comp=N,4600µm,0.6s						
SNTG				AML	AML		
	comp=E,3885µm,0.1s						
SNTG				AML	AML		
	comp=E,4050µm,1.1s						
SNTG				AML	AML		
	comp=N,5015µm,0.6s						
TERO	**Teramo**	**0.45**	**117**	⇓P	**Pg**	**16 18 43.9**	**-1.5**
TERO				AML	AML		
	comp=E,3865µm,0.4s						
TERO				AML	AML		
	comp=N,3565µm,1.2s						
TERO				AML	AML		
	comp=E,3865µm,1.6s						
TERO				AML	AML		
	comp=N,3565µm,0.8s						
OFFI	**Offida**	**0.47**	**76**	⇑P	**Pg**	**16 18 45.0**	**-0.8**
OFFI				AML	AML		
	comp=E,8500µm,1.4s						
OFFI				AML	AML		
	comp=N,8045µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.48**	**319**	⇑P	**Pg**	**16 18 45.4**	**-0.5**
ATCC				AML	AML		
	comp=E,5930µm,0.3s						
ATCC				AML	AML		
	comp=N,6320µm,1.1s						
EL6	**Elcito**	**0.51**	**3**	⇑P	**Pg**	**16 18 46.0**	**-0.5**
EL6				S	**Sb**	**16 18 55.0**	**0.0**
EL6				AML	AML		
	comp=E,7745µm,1.3s						
EL6				AML	AML		
	comp=N,10185µm,0.2s						
EL6				AML	AML		
	comp=N,10155µm,0.2s						
EL6				AML	AML		
	comp=E,7740µm,1.3s						
EL6				AML	AML		
	comp=E,7740µm,0.7s						
FOSV	**Fossato di Vic**	**0.52**	**335**	⇓P	**Pg**	**16 18 46.1**	**-0.6**
FOSV				S	**Sb**	**16 18 56.0**	**+0.7**
FOSV				AML	AML		
	comp=N,2485µm,0.3s						
FOSV				AML	AML		
	comp=N,2490µm,0.3s						
FOSV				AML	AML		
	comp=E,3140µm,0.4s						
TRE1	**Treia**	**0.52**	**20**	⇓P	**Pb**	**16 18 47.6**	**-0.2**
TRE1				AML	AML		
	comp=E,11900µm,0.4s						
TRE1				AML	AML		
	comp=N,8195µm,0.3s						
TRE1				AML	AML		
	comp=N,8150µm,0.3s						
TRE1				AML	AML		
	comp=E,11950µm,0.4s						
GIGS	**Gran Sasso**	**0.53**	**135**	⇓P	**Pg**	**16 18 45.7**	**-1.2**
GIGS				AML	AML		
	comp=E,734µm,1.0s						
GIGS				AML	AML		
	comp=N,516µm,0.4s						
GIGS				AML	AML		
	comp=N,516µm,0.4s						
GIGS				AML	AML		
	comp=E,734µm,1.0s						
AQU	**L'Aquila**	**0.53**	**152**	⇑P	**Pg**	**16 18 47.6**	**+0.7**
AQU				AML	AML		
	comp=E,1800µm,0.6s						
AQU				AML	AML		
	comp=N,1549µm,1.3s						
AQU				AML	AML		
	comp=N,1600µm,0.4s						
AQU				AML	AML		
	comp=E,1770µm,0.6s						
FIAM	**Fiamignano**	**0.56**	**176**	⇓P	**Pg**	**16 18 47.1**	**-0.3**
FIAM				S	**Sg**	**16 18 56.0**	**+1.2**
FIAM				AML	AML		
	comp=N,2295µm,0.4s						
FIAM				AML	AML		
	comp=E,2360µm,0.5s						
FIAM				AML	AML		
	comp=N,2290µm,0.4s						
MURB	**Monte Urbino**	**0.59**	**318**	P	**Pg**	**16 18 47.5**	**-0.6**
MURB				AML	AML		
	comp=E,7385µm,0.3s						
MURB				AML	AML		
	comp=N,6210µm,1.0s						
MURB				AML	AML		
	comp=N,6215µm,1.0s						
MURB				AML	AML		
	comp=E,8475µm,0.4s						
MURB				AML	AML		
	comp=N,6660µm,1.0s						
MURB				AML	AML		
	comp=E,7385µm,0.4s						
MURB				AML	AML		
	comp=N,6215µm,1.0s						
MURB				AML	AML		
	comp=N,6660µm,1.0s						
MMUR	**Monte Murano**	**0.62**	**356**	S	**Sb**	**16 18 59.0**	**+0.8**
TRTR	**Tortoreto Alta**	**0.63**	**91**	P	**Pg**	**16 18 48.0**	**-0.7**
TRTR				AML	AML		
	comp=E,7080µm,0.6s						
TRTR				AML	AML		
	comp=N,9370µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.64**	**306**	⇓P	**Pg**	**16 18 48.5**	**-0.5**
ATTE				AML	AML		
	comp=N,1540µm,1.0s						
ATTE				AML	AML		
	comp=E,1490µm,0.4s						
ATTE				AML	AML		
	comp=N,1535µm,1.0s						
ATFO	**Monte Foce - G**	**0.65**	**327**	⇑P	**Pg**	**16 18 48.8**	**-0.5**
ATFO				AML	AML		
	comp=E,1530µm,1.0s						
ATFO				AML	AML		
	comp=N,1510µm,0.4s						
FAGN	**Fagnano**	**0.68**	**145**	P	**Pg**	**16 18 50.4**	**+0.7**
FAGN				AML	AML		
	comp=E,3170µm,0.4s						
FAGN				AML	AML		
	comp=N,2415µm,0.3s						
ARVD	**Arcevia**	**0.68**	**353**	⇓P	**Pg**	**16 18 49.0**	**-0.7**
ARVD				S	**Sb**	**16 18 60.0**	**+0.1**
ARVD				AML	AML		
	comp=E,2450µm,0.5s						
ARVD				AML	AML		
	comp=E,2450µm,1.5s						
ARVD				AML	AML		
	comp=N,1330µm,0.8s						
PP3	**Marolino**	**0.68**	**36**	⇑P	**Pg**	**16 18 49.7**	**-0.1**
PP3				AML	AML		
	comp=E,5355µm,0.8s						
PP3				AML	AML		
	comp=N,7135µm,0.7s						
PP3				AML	AML		
	comp=E,5125µm,0.8s						
PP3				AML	AML		
	comp=N,7275µm,0.7s						
PP3				AML	AML		
	comp=E,5130µm,0.8s						
PP3				AML	AML		
	comp=N,7140µm,0.7s						
PP3				AML	AML		
	comp=N,7275µm,1.3s						
PP3				AML	AML		
	comp=N,7140µm,1.3s						
MGAB	**Montegabbione**	**0.70**	**278**	⇑P	**Pg**	**16 18 49.6**	**-0.6**
MGAB				AML	AML		
	comp=N,6180µm,1.3s						
MGAB				AML	AML		
	comp=E,3790µm,0.6s						
MGAB				AML	AML		
	comp=N,6410µm,1.3s						
MGAB				AML	AML		
	comp=E,3750µm,1.0s						
MGAB				AML	AML		
	comp=N,6410µm,0.7s						
MGAB				AML	AML		
	comp=N,6180µm,0.7s						
SRES	**S.Oreste - Sor**	**0.71**	**215**	⇑P	**Pg**	**16 18 49.6**	**-0.7**
SRES				AML	AML		
	comp=E,2140µm,1.3s						
SRES				AML	AML		
	comp=N,2135µm,0.4s						
SRES				AML	AML		
	comp=E,2140µm,0.7s						
VCEL	**Villa Celiera**	**0.72**	**126**	P	**Pg**	**16 18 50.3**	**-0.1**
VCEL				AML	AML		
	comp=E,2375µm,0.4s						
VCEL				AML	AML		
	comp=N,2430µm,1.4s						
VCEL				AML	AML		
	comp=N,2430µm,0.6s						
ATVO	**AVT- Monte Val**	**0.74**	**319**	P	**Pg**	**16 18 50.0**	**-0.8**
ATVO				AML	AML		
	comp=E,1380µm,0.4s						
ATVO				AML	AML		
	comp=E,1375µm,0.4s						
ATVO				AML	AML		
	comp=N,1330µm,0.5s						
FRON	**Frontone**	**0.74**	**341**	⇓P	**Pg**	**16 18 50.0**	**-0.8**
FRON				AML	AML		
	comp=N,1785µm,0.3s						
FRON				AML	AML		
	comp=E,1109µm,0.6s						
ATMI	**Monte Miggiano**	**0.78**	**312**	⇑P	**Pb**	**16 18 52.9**	**+0.8**
ATMI				S	**Sb**	**16 19 04.0**	**+1.3**
ATMI				AML	AML		
	comp=N,2995µm,0.4s						
ATMI				AML	AML		
	comp=E,3835µm,0.4s						
ATPI	**Pietralunga -**	**0.79**	**323**	⇓P	**Pg**	**16 18 51.2**	**-0.6**
ATPI				AML	AML		
	comp=E,1055µm,0.5s						
ATPI				AML	AML		
	comp=N,1022µm,0.7s						
ATPI				AML	AML		
	comp=N,1024µm,0.7s						
ATPI				AML	AML		
	comp=E,1053µm,0.5s						
ATPI				AML	AML		
	comp=N,1024µm,1.3s						
T0110	**Collepietro**	**0.80**	**138**	⇓P	**Pg**	**16 18 51.7**	**-0.3**
T0110				AML	AML		
	comp=E,2250µm,0.4s						
T0110				AML	AML		
	comp=N,2200µm,0.4s						
T0110				AML	AML		
	comp=E,2255µm,0.4s						
PIEI	**Pieia**	**0.81**	**332**	⇓P	**Pg**	**16 18 51.6**	**-0.6**
PIEI				S	**Sb**	**16 19 05.0**	**+1.3**
PIEI				AML	AML		
	comp=N,1068µm,0.2s						
PIEI				AML	AML		
	comp=E,1165µm,1.4s						
PIEI				AML	AML		
	comp=E,1165µm,0.6s						
AOI	**Ancona**	**0.83**	**28**	⇑P	**Pg**	**16 18 52.2**	**-0.3**
AOI				AML	AML		
	comp=E,1730µm,1.6s						
AOI				AML	AML		
	comp=N,1925µm,0.4s						
AOI				AML	AML		
	comp=E,1730µm,0.4s						
MTCE	**Montecelio**	**0.83**	**197**	⇓P	**Pg**	**16 18 51.6**	**-1.1**
MTCE				AML	AML		
	comp=E,1675µm,1.3s						
MTCE				AML	AML		
	comp=N,1300µm,0.5s						
MPAG	**Monte Paganucc**	**0.84**	**345**	⇑P	**Pg**	**16 18 52.1**	**-0.6**
MPAG				S	**Sb**	**16 19 06.0**	**+1.5**
MPAG				AML	AML		
	comp=E,1645µm,0.6s						
MPAG				AML	AML		
	comp=N,1940µm,0.5s						
PTQR	**Pietraquaria**	**0.84**	**163**	⇓P	**Pg**	**16 18 53.3**	**+0.5**
PTQR				AML	AML		
	comp=N,730µm,0.4s						
PTQR				AML	AML		
	comp=E,1018µm,0.7s						
PTQR				AML	AML		
	comp=E,1018µm,1.3s						
SACS	**San Casciano d**	**0.85**	**272**	⇑P	**Pg**	**16 18 52.3**	**-0.7**
SACS				AML	AML		
	comp=E,1585µm,0.6s						
SACS				AML	AML		
	comp=N,1495µm,0.8s						
SACS				AML	AML		
	comp=E,1590µm,0.6s						
SACS				AML	AML		
	comp=E,1510µm,0.6s						
SACS				AML	AML		
	comp=N,1490µm,0.8s						
SACS				AML	AML		
	comp=N,1610µm,0.8s						
CERT	**Cerreto**	**0.88**	**184**	⇑P	**Pg**	**16 18 52.7**	**-0.7**
CERT				AML	AML		
	comp=E,1705µm,0.4s						
CERT				AML	AML		
	comp=N,1485µm,0.5s						
FSSB	**Fossombrone**	**0.89**	**347**	⇓P	**Pg**	**16 18 53.0**	**-0.8**
FSSB				AML	AML		
	comp=E,5445µm,0.4s						
FSSB				AML	AML		
	comp=N,5370µm,0.3s						
FSSB				AML	AML		
	comp=E,5445µm,1.6s						
BADI	**Badiali**	**0.91**	**319**	⇓P	**Pg**	**16 18 54.0**	**-0.2**
CAFI	**Castiglion Fio**	**0.95**	**303**	⇓P	**Pg**	**16 18 54.2**	**-0.7**
CAFI				AML	AML		
	comp=E,872µm,0.6s						
CAFI				AML	AML		
	comp=N,838µm,1.0s						
CAFI				AML	AML		
	comp=N,891µm,1.0s						
CAFI				AML	AML		
	comp=E,872µm,0.6s						
CAFI				AML	AML		
	comp=N,892µm,1.0s						
CAFI				AML	AML		
	comp=E,894µm,0.6s						
CAFI				AML	AML		
	comp=N,835µm,1.0s						
LATE	**Laterza**	**0.95**	**258**	⇓P	**Pg**	**16 18 54.9**	**+0.1**
PE3	**Peglio**	**0.97**	**335**	⇑P	**Pb**	**16 18 56.0**	**+0.6**
PE3				AML	AML		
	comp=E,13µm,1.3s						
PE3				AML	AML		
	comp=N,18µm,0.1s						
PE3				AML	AML		
	comp=E,13µm,0.7s						
PE3				AML	AML		
	comp=N,18µm,1.9s						
MCIV	**Monte Civitell**	**1.02**	**268**	⇓P	**Pg**	**16 18 55.5**	**-0.7**
MCIV				AML	AML		
	comp=N,567µm,0.4s						
MCIV				AML	AML		
	comp=N,567µm,1.6s						
MCIV				AML	AML		
	comp=E,639µm,0.4s						
SF04	**Casetta**	**1.03**	**271**	⇑P	**Pg**	**16 18 55.9**	**-0.5**
TOLF	**Tolfa**	**1.09**	**226**	⇑P	**Pg**	**16 18 56.2**	**-1.4**
TOLF				AML	AML		
	comp=E,1080µm,0.4s						
TOLF				AML	AML		
	comp=N,996µm,0.4s						
TOLF				AML	AML		
	comp=E,1080µm,1.6s						
VIVA	**Pratoni del Vi**	**1.09**	**192**	⇓P	**Pg**	**16 18 55.3**	**-2.3**
VIVA				AML	AML		
	comp=E,3235µm,0.5s						
VIVA				AML	AML		
	comp=N,4240µm,0.5s						
SF01	**Poggio Pratacc**	**1.10**	**270**	⇓P	**Pg**	**16 18 57.1**	**-0.7**
LPEL	**Lama dei Pelig**	**1.14**	**133**	⇓P	**Pg**	**16 18 57.9**	**-0.5**
LPEL				AML	AML		
	comp=E,899µm,0.5s						
LPEL				AML	AML		
	comp=N,872µm,0.9s						
LPEL				AML	AML		
	comp=N,872µm,1.1s						
CRE	**Caprese Michel**	**1.14**	**315**	⇓P	**Pg**	**16 18 57.6**	**-0.8**
CRE				AML	AML		
	comp=N,554µm,0.3s						
CRE				AML	AML		
	comp=E,338µm,0.3s						
ARCI	**Arcidosso**	**1.17**	**272**	⇑P	**Pn**	**16 18 59.7**	**+0.8**
ARCI				AML	AML		
	comp=E,190µm,1.1s						
ARCI				AML	AML		
	comp=N,198µm,0.4s						
POFI	**Posta Fibreno**	**1.21**	**156**	⇓P	**Pn**	**16 19 00.9**	**+1.5**
LRP	**Arpino**	**1.24**	**162**	⇓P	**Pb**	**16 19 01.8**	**+1.9**
ASQU	**Asqua**	**1.35**	**317**	⇑P	**Pn**	**16 18 58.5**	**-2.9**
ASQU				AML	AML		
	comp=E,326µm,1.0s						
ASQU				AML	AML		
	comp=N,352µm,0.7s						
ASQU				AML	AML		
	comp=E,326µm,1.0s						
LIK	**San Giovanni I**	**1.37**	**164**	⇓P	**Pn**	**16 19 01.3**	**-0.2**
SFI	**Santa Sofia**	**1.40**	**321**	⇑P	**Pg**	**16 19 04.5**	**+1.1**
MAON	**Monte Argentar**	**1.48**	**255**	⇑P	**Pn**	**16 19 02.4**	**-0.7**
MAON				AML	AML		
	comp=N,128µm,1.3s						
MAON				AML	AML		
	comp=E,196µm,0.6s						
MAON				AML	AML		
	comp=N,128µm,0.7s						
OSSC	**Osservatorio P**	**1.50**	**298**	⇓P	**Pn**	**16 19 01.6**	**-1.9**
OSSC				AML	AML		
	comp=E,168µm,0.9s						
OSSC				AML	AML		
	comp=N,272µm,0.8s						
OSSC				AML	AML		
	comp=N,272µm,1.2s						
OSSC				AML	AML		
	comp=E,168µm,1.1s						
RUFI	**Rufina**	**1.52**	**312**	P	**Pn**	**16 19 04.3**	**+0.6**
TRIF	**Trifonti**	**1.61**	**281**	⇑P	**Pn**	**16 19 04.6**	**-0.4**
TRIF				AML	AML		
	comp=N,172µm,1.5s						
TRIF				AML	AML		
	comp=N,172µm,0.5s						
TRIF				AML	AML		
	comp=E,172µm,0.6s						
CASP	**Castiglione de**	**1.62**	**270**	⇑P	**Pn**	**16 19 04.3**	**-0.7**
CASP				AML	AML		
	comp=E,87µm,0.3s						
CASP				AML	AML		
	comp=N,73µm,1.0s						
CASP				AML	AML		
	comp=N,73µm,1.0s						
MPPT	**Montemurlo**	**1.83**	**309**	⇑P	**Pb**	**16 19 09.8**	**-0.3**
MPPT				AML	AML		
	comp=N,166µm,1.1s						
MPPT				AML	AML		
	comp=N,166µm,0.9s						
MPPT				AML	AML		
	comp=E,162µm,1.1s						
MTCR	**Monte La Croce**	**1.93**	**309**	⇓P	**Pb**	**16 19 11.5**	**-0.2**
BRJN	**Brijuni**	**2.14**	**13**	⇓P	**Pn**	**16 19 12.2**	**+0.1**
HVAR	**Hvar**	**2.51**	**81**	⇑P	**Pb**	**16 19 20.7**	**-0.9**
PLMA	**Palmaria, Port**	**2.64**	**299**	P	**Pn**	**16 19 19.6**	**+0.5**
PZUN	**Potenza**	**2.99**	**136**	P	**Pn**	**16 19 23.1**	**-0.8**
PGF	**Pioggiola**	**3.01**	**266**	P	**Pn**	**16 19 24.6**	**+0.3**
PGF				AML	AML		
	comp=N,17µm,1.4s						
PGF				AML	AML		
	comp=N,17µm,0.6s						
PGF				AML	AML		
	comp=E,18µm,0.5s						
SABO	**M.te Sabotino**	**3.18**	**7**	⇑P	**Pn**	**16 19 26.5**	**0.0**
SABO				AML	AML		
	comp=E,167µm,0.4s						
SABO				AML	AML		
	comp=N,233µm,0.8s						
SABO				AML	AML		
	comp=N,233µm,1.2s						
CGRP	**Cima Grappa**	**3.19**	**344**	⇓P	**Pn**	**16 19 28.0**	**+1.2**
CGRP				AML	AML		
	comp=N,196µm,1.6s						
CGRP				AML	AML		
	comp=N,186µm,0.5s						
CGRP				AML	AML		
	comp=E,240µm,0.4s						
CGRP				AML	AML		
	comp=N,196µm,0.4s						
CGRP				AML	AML		
	comp=E,264µm,0.4s						
LJU	**Ljubljana**	**3.39**	**18**	⇑P	**Pn**	**16 19 30.1**	**+0.7**
LJU				AML	AML		
	comp=E,738µm,0.6s						
LJU				AML	AML		
	comp=N,804µm,0.6s						
STON	**Ston**	**3.41**	**88**	⇓P	**Pn**	**16 19 29.4**	**-0.2**
STON				AML	AML		
	comp=N,40µm,1.4s						
STON				AML	AML		
	comp=E,44µm,0.9s						
STON				AML	AML		
	comp=N,40µm,0.6s						
MPRI	**Monte Prat**	**3.42**	**359**	⇑P	**Pn**	**16 19 31.0**	**+1.1**
MPRI				AML	AML		
	comp=E,125µm,1.0s						
MPRI				AML	AML		
	comp=N,168µm,0.6s						
STAL	**STALIGIAL**	**3.45**	**356**	⇓P	**Pn**	**16 19 30.9**	**+0.7**
STAL				S	**Sn**	**16 20 13.0**	**+2.0**
STAL				AML	AML		
	comp=E,144µm,0.7s						
STAL				AML	AML		
	comp=N,126µm,0.3s						
STAL				AML	AML		
	comp=E,144µm,1.3s						
STAL				AML	AML		
	comp=N,126µm,1.7s						
LUSI	**Trento, Gardas**	**3.48**	**335**	⇓P	**Pn**	**16 19 33.8**	**+3.0**
CIMO	**Cimolais**	**3.52**	**353**	⇑P	**Pn**	**16 19 32.4**	**+1.2**
CIMO				AML	AML		
	comp=E,31µm,0.6s						
CIMO				AML	AML		
	comp=N,39µm,1.0s						
CIMO				AML	AML		
	comp=N,39µm,1.0s						
CIMO				AML	AML		
	comp=E,31µm,1.4s						
PTCC	**Patocco-Chiusa**	**3.59**	**3**	⇓P	**Pn**	**16 19 32.1**	**-0.1**
PTCC				AML	AML		
	comp=E,71µm,0.4s						
PTCC				AML	AML		
	comp=N,59µm,0.3s						
CLUD	**Cludinico**	**3.64**	**358**	⇑P	**Pn**	**16 19 33.9**	**+1.1**
CLUD				AML	AML		
	comp=E,88µm,1.2s						
CLUD				AML	AML		
	comp=N,80µm,1.1s						
CLUD				AML	AML		
	comp=N,80µm,0.9s						
CLUD				AML	AML		
	comp=E,88µm,0.8s						
EUCT	**Pavia**	**3.70**	**311**	S	**Sg**	**16 20 38.0**	**+2.7**
MABI	**Malga Bissina**	**3.71**	**331**	⇑P	**Pn**	**16 19 35.4**	**+1.5**
MABI				AML	AML		

comp=N,44μm,0.7s
MABI AML AML
comp=N,44μm,1.3s
MABI AML AML
comp=E,35μm,0.8s
ZOU Zoufplan 3.73 359 ⇓P Pn 16 19 35.0 +0.6
ZOU AML AML
comp=E,97μm,1.3s
ZOU AML AML
comp=N,82μm,1.6s
ZOU AML AML
comp=N,82μm,0.4s
ACOM Acomizza, Ital 3.74 5 ⇓P Pn 16 19 35.0 +0.7
ACOM AML AML
comp=N,105μm,0.6s
ACOM AML AML
comp=E,114μm,0.8s
ACOM AML AML
comp=N,105μm,1.4s
MYKA Terra Mystica 3.83 6 *e*Pn Pn 16 19 36.5 +1.0
comp=N,2.5nm,0.2s
KOSI Kohlern 3.83 342 ⇓P Pn 16 19 37.5 +1.9
OBKA Obir 3.83 16 *e*Pn Pn 16 19 36.3 +0.7
comp=N,8.6nm,0.4s
APPI Appiano 3.88 341 P Pn 16 19 37.3 +1.0
ABTA Abfaltersbach 3.94 354 *e*Pn Pn 16 19 38.5 +1.5
comp=N,10nm,0.5s
SOKA Soboth 4.10 19 *e*Pn Pn 16 19 40.0 +0.8
comp=N,1.7nm,0.3s
RISI Rein 4.18 351 P Pn 16 19 41.7 +1.3
VSL Villasalto 4.33 221 ⇓P Pn 16 19 43.6 +1.2
IFIL Filicudi I Eol 4.41 164 S Sn 16 20 34.0 -0.6
FETA Feichten 4.51 339 *e*Pn Pn 16 19 50.6 +5.7
comp=N,1.5nm,0.3s
WTTA Wattenberg 4.55 348 *e*Pn Pn 16 19 48.4 +2.9
comp=N,3.5nm,0.3s
WTTA Wattenberg 4.55 348 ⇓P Pn 16 19 48.3 +2.8
SQTA Sankt Quirin 4.59 344 *e*Pn Pn 16 19 49.7 +3.7
comp=N,3.2nm,0.3s
WATA Walderalm 4.63 347 *e*Pn Pn 16 19 50.0 +3.3
comp=N,3.9nm,0.2s
MOTA Moosalm 4.73 344 *e*Pn Pn 16 19 51.1 +3.2
comp=N,2.5nm,0.3s
ARSA Arzberg 4.76 21 *e*Pn Pn 16 19 48.4 +0.2
comp=N,3.7nm,0.3s
ARSA Arzberg 4.76 21 ⇑P Pn 16 19 48.3 +0.1
BIOA Bad Ischl, Aus 4.88 5 *e*Pn Pn 16 19 51.3 +1.3
comp=N,8.7nm,0.3s
DAVA Damuels 5.00 334 *e*Pn Pn 16 19 55.2 +3.6
comp=N,0.7nm,0.2s
MOA Molln 5.10 9 *e*Pn Pn 16 19 53.8 +0.9
comp=N,0.8nm,0.1s
RONA Rosalia, Austr 5.38 24 *e*Pn Pn 16 19 57.6 +0.8
comp=N,3.3nm,0.3s
CONA Conrad Observa 5.47 20 *e*Pn Pn 16 19 58.3 +0.3
comp=N,6.8nm,0.5s
GERES GERESS Array B 6.04 4 Pn Pn 16 20 05.7 -0.2
comp=N,0.6nm,0.3s,baz=174,slow=13,SNR=8.9
GERES Sn **Sn 16 21 12.2 -2.8**
comp=N,1.2nm,0.3s,baz=180,slow=18,SNR=2.9
comp=N,0.8nm,0.3s
CKRC Cesky Krumlov 6.06 8 *e*PN Pn 16 20 05.5 -0.6
CKRC *e*SN **Sn 16 21 13.7 -1.7**
KHC Kasperske Hory 6.32 3 *e*PN Pn 16 20 09.1 -0.6
KHC *e*SN **Sn 16 21 19.0 -2.8**
PRU Pruhonice 7.24 8 *e*SN Sn 16 21 42.1 -2.3
FINES FINESS Array B 20.21 18 P Pn 16 23 14.8 +1.7
comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=4.7
comp=N,2.5nm,0.9s
BORG Borgarnes 29.28 330 LR LR 16 35 31.8
comp=N,84nm,18.4s,baz=52,slow=35
TORD Torodi Ar. Bea 31.16 202 P P 16 25 01.8 +6.3
comp=N,0.2nm,0.4s,baz=13,slow=7.4,SNR=2.2
comp=N,0.2nm,0.4s

*IDC **30** 16:26:26.6±0.8, 8°.19N×94°.29E, h0km, mb3.7/14, mbtmp3.7/16, ML3.8/2, MS3.3/22, Error ellipse: s-maj=34.5km s-min=16.4km az=56.0*
*NEIC **30** 16:26:35.1±2.7, 8°.2N±0°.1×94°.3E±0°.1, h54km±10km, mb4.5/9, Error ellipse: s-maj=17.7km s-min=13.1km az=55.0*
ISC 30 16:26:30.7±0.6,**8°.19N**±0°.08×**94°.26E**±0°.09,**h21**km,**n57,**
σ1§30/41,mb3.8/18,MS3.3/18,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.97**	**138**		Pn	**Pn**	**16 27 33.2**	**+2.8**
SRIT	**Nakonsritamara**	**5.30**	**85**		Pn	**Pn**	**16 27 50.8**	**+2.2**
KULM	**Kulim**	**6.97**	**114**			**Pn**	**16 28 12.6**	**+1.0**
PSI	**Prapat**	**7.08**	**139**		Pn	**Pn**	**16 28 13.3**	**0.0**
	0.7nm,0.3s,baz=335,slow=14,SNR=1.7							
PSI				LR	LR	LR	16 31 29.3	
	comp=Z,467nm,18.2s,baz=306,slow=42							
	2.8nm,0.5s							
RPSI	**Rantau Prapat**	**7.16**	**139**		Pn	**Pn**	**16 28 15.3**	**+1.0**
IPM	**Ipoh**	**7.67**	**118**			**Pn**	**16 28 21.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**11.18**	**24**		Pn	**Pn**	**16 29 08.6**	**-0.8**
	0.3nm,0.3s,baz=213,slow=14,SNR=15							
CMAR				LR	LR	LR	16 33 44.3	
	comp=Z,144nm,18.5s,baz=210,slow=39							
	1.2nm,0.5s							
MYKOM	**Kota Tinggi**	**11.47**	**123**		Pn	**Pn**	**16 29 14.2**	**+0.8**
CHTO	**Chiang Mai**	**11.50**	**23**			**Pn**	**16 29 15.9**	**+2.1**
PALK	**Pallekele**	**13.47**	**267**		Sn	Sn	16 31 55.5	-14
	0.3nm,0.3s,baz=164,slow=8.1,SNR=1.2							
PALK				LR	LR	LR	16 34 12.5	
	comp=Z,194nm,20.8s,baz=184,slow=34							
SALM	**Salem**	**16.19**	**284**	*e*P		**Pn**	**16 30 19.0**	**+2.0**
KOHI	**KOHIMA**	**17.44**	**360**	*e*P		**Pn**	**16 30 30.2**	**-2.7**
KOHI					IAmb	IAmb	16 30 35.0	
	comp=Z,10nm,0.8s							
HYBB	**Hyderabad (bro**	**17.84**	**302**	*e*P		**P**	**16 30 39.8**	**+1.4**
BLSP	**Bilaspur**	**18.12**	**321**	*ex*		**Pn**	**16 30 42.4**	**+1.1**
LEM	**Lembang**	**20.00**	**138**		LR	LR	16 40 14.9	
	comp=Z,160nm,18.3s,baz=222,slow=42							
H08S3	**Diego Garcia H**	**26.80**	**235**		T	T	16 59 03.1	
	baz=53,slow=75,SNR=32							
H08S2	**Diego Garcia H**	**26.80**	**235**		T	T	16 59 06.7	
	baz=53,slow=75,SNR=19							
H08S1	**Diego Carcia H**	**26.82**	**235**		T	T	16 59 07.4	
	baz=53,slow=75,SNR=5.6							
KAPI	**Kappang**	**28.61**	**116**		LR	LR	16 43 52.3	
	comp=Z,49nm,19.1s,baz=300,slow=37							
DAV	**Davao City (W)**	**31.06**	**90**		LR	LR	16 46 22.5	
	comp=Z,44nm,20.0s,baz=26,slow=38							
NIL	**Nilore**	**31.91**	**326**		P	**P**	**16 32 56.8**	**+2.0**
NIL					IAmb	IAmb	16 33 03.6	
	comp=Z,7.8nm,0.9s							
JOW	**Kunigami**	**37.18**	**56**		LR	LR	16 51 05.0	
	comp=Z,38nm,18.7s,baz=338,slow=40							
WSAR	**Wadi Sarin**	**37.29**	**298**		LR	LR	16 49 49.5	
	comp=Z,40nm,19.4s,baz=112,slow=38							
SIJI	**Sorong**	**37.97**	**102**		LR	LR	16 51 48.2	
	comp=Z,27nm,20.9s,baz=256,slow=40							
AAK	**Ala-Archa**	**38.47**	**336**		LR	LR	16 51 03.1	
	comp=Z,97nm,20.4s,baz=162,slow=38							
MK31	**Makanchi Array**	**39.81**	**347**		P	**P**	**16 34 01.0**	**-1.3**
MKAR	**Makanchi Array**	**39.81**	**347**		P	**P**	**16 34 00.9**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=182,slow=8.5,SNR=4.4							
MKAR					LR	LR	16 53 27.2	
	comp=Z,21nm,19.1s,baz=346,slow=41							
	comp=Z,0.7nm,0.7s							
SONM	**Songino Array**	**40.83**	**13**		P	**P**	**16 34 10.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=196,slow=9.9,SNR=1.7							
SONM					LR	LR	16 53 35.6	
	comp=Z,49nm,18.2s,baz=186,slow=40							
	comp=Z,0.2nm,0.3s							
GEYT	**Alibeck**	**44.05**	**318**		P	**P**	**16 34 35.9**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=159,slow=8.9,SNR=3.9							
	comp=Z,1.4nm,0.6s							
GEYT	**Alibeck**	**44.05**	**318**		P	**P**	**16 34 37.9**	**+0.8**
GEYT					IAmb	IAmb	16 34 45.3	
	comp=Z,15nm,1.4s							
GYA0B	**ALIBECK ARRAY**	**44.05**	**318**		P	**P**	**16 34 37.8**	**+0.6**
KURBB	**Kurchatov Arra**	**44.27**	**346**		P	**P**	**16 34 37.4**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=167,slow=6.7							
	comp=Z,0.8nm,0.5s							
ZAA0	**Zalesovo Array**	**46.26**	**352**		P	**P**	**16 34 53.8**	**-0.6**
ZAA0					IAmb	IAmb	16 35 01.8	
	comp=Z,8.9nm,1.4s							
ZALV	**Zalesovo Beam**	**46.26**	**352**		P	**P**	**16 34 53.8**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=184,slow=7.1,SNR=10							
ZALV					LR	LR	16 55 37.4	
	comp=Z,38nm,18.6s,baz=180,slow=38							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**46.26**	**352**		P	**P**	**16 34 54.0**	**-0.5**
WB0	**Warramunga Arr**	**48.30**	**126**		P	**P**	**16 35 10.7**	**-0.1**
WB0					IAmb	IAmb	16 35 41.4	
	comp=Z,8.3nm,1.4s							
WRA	**Warramunga Arr**	**48.35**	**126**		P	**P**	**16 35 10.3**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=305,slow=8.6,SNR=5.0							
WRA				PcP		**PcP**	**16 36 36.8**	**-1.0**
	comp=Z,0.6nm,1.1s,baz=326,slow=2.2,SNR=1.7							
WRA					LR	LR	16 55 44.2	
	comp=Z,7.7nm,21.9s,baz=222,slow=36							
	comp=Z,0.8nm,0.8s							
MJAR	**Matsushiro Arr**	**48.86**	**48**		LR	LR	16 57 30.8	
	comp=Z,34nm,18.6s,baz=250,slow=38							
RAYN	**Ar Rayn**	**49.07**	**294**		P	**P**	**16 35 15.9**	**-0.9**
RAYN					IAmb	IAmb	16 35 25.4	
	comp=Z,5.3nm,1.1s							
ABKAR	**Akbulak array**	**50.01**	**331**		P	**P**	**16 35 24.0**	**+0.5**
AS31	**Alice Springs**	**50.03**	**130**		P	**P**	**16 35 24.2**	**+0.2**
ASAR	**Alice Springs**	**50.03**	**130**		P	**P**	**16 35 22.1**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=302,slow=7.5,SNR=4.3							
ASAR				PcP		**PcP**	**16 36 43.5**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=302,slow=3.4,SNR=1.4							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**50.03**	**130**		P	**P**	**16 35 24.0**	**-0.1**
ATD	**Arta Tunnel**	**50.71**	**278**		LR	LR	16 53 33.0	
	comp=Z,36nm,21.4s,baz=6.5,slow=32							
GNI	**Garni**	**54.30**	**314**		LR	LR	17 00 43.8	
	comp=Z,12nm,21.5s,baz=87,slow=38							
ARU	**Arti**	**55.65**	**337**		LR	LR	17 01 21.4	
	comp=Z,55nm,20.6s,baz=125,slow=38							
YAK	**Yakutsk**	**59.66**	**18**		LR	LR	17 05 53.7	
	comp=Z,19nm,18.6s,baz=265,slow=40							
BRTR	**Keskin Array B**	**62.31**	**311**		P	**P**	**16 36 51.4**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=64,slow=6.6,SNR=2.4							
	comp=Z,0.8nm,0.9s							
MBAR	**Mbarara**	**63.91**	**265**		LR	LR	17 00 33.9	
	comp=Z,42nm,21.5s,baz=25,slow=32							
FINES	**FINESS Array B**	**72.49**	**332**		P	**P**	**16 37 54.1**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=81,slow=8.9,SNR=1.6							
	comp=Z,1.4nm,0.8s							
ARCES	**ARCESS Array B**	**75.01**	**340**		LR	LR	17 13 50.1	
	comp=Z,51nm,18.7s,baz=151,slow=38							
GERES	**GERESS Array B**	**77.67**	**318**		P	**P**	**16 38 26.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=120,slow=5.8,SNR=1.8							
	comp=Z,0.1nm,0.3s							
NOA	**NORSAR Array B**	**79.52**	**331**		P	**P**	**16 38 36.8**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=75,slow=9.1,SNR=2.3							
NOA					LR	LR	17 16 11.8	
	comp=Z,14nm,21.4s,baz=285,slow=38							
	comp=Z,0.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**90.64**	**283**		P	**P**	**16 39 31.6**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=33,slow=5.5,SNR=1.8							
	comp=Z,0.4nm,0.9s							
ESDC	**Sonseca Array**	**91.11**	**310**		P	**P**	**16 39 34.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=38,slow=3.7,SNR=1.7							
	comp=Z,0.2nm,0.7s							
ILAR	**Eielson Array**	**94.41**	**22**		P	**P**	**16 39 46.7**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=310,slow=7.0,SNR=2.3							
	comp=Z,0.1nm,0.3s							
PLCA	**Paso Flores**	**144.88**	**200**	PKP		**PKPab**	**16 46 06.0**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=199,slow=4.0,SNR=2.8							

*GUC **30** 16:38:14.7±0.6, 23°.87S×67°.17W, h250km±10km, ML3.8*
*IDC **30** 16:38:14.3±1.7, 23°.58S×66°.70W, h208km±36km, mb3.1/1, mbtmp3.6/6, Error ellipse: s-maj=45.4km s-min=20.5km az=127.0*
ISC 30 16:38:13.7±1.1,**23°.78S**±0°.08×**66°.8W**±0°.1,**h218**km±19km,
n17,σ1§21/29,6C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.24**	**301**		P	**Pn**	**16 38 57.1**	**+0.7**
	17nm,0.4s,baz=124,slow=5.6,SNR=19							
LVC					S	**S**	**16 39 29.0**	**-0.4**
	21nm,0.3s,baz=54,slow=19,SNR=24							
LVC	**Limon Verde**	**2.24**	**301**	⇑	*i*P	**Pn**	**16 38 57.4**	**+1.0**
LVC					*e*S	**S**	**16 39 30.2**	**+0.8**
LVC					IAML		16 39 31.6	
	202nm,0.4s							
PB15	**IPOC Station P**	**2.49**	**283**	⇑	*i*P	**Pn**	**16 38 59.6**	**+0.8**
PB15					*e*S	**S**	**16 39 33.5**	**-0.4**
PB06	**IPOC Station P**	**2.74**	**292**	⇑	*i*P	**Pn**	**16 39 02.5**	**+0.9**
PB06					*e*S	**S**	**16 39 38.1**	**-0.5**
PB06					IAML		16 39 40.0	
	comp=N,151nm,0.1s							
GO02	**Mina Guanaco**	**2.87**	**241**	⇑	*i*P	**Pn**	**16 39 02.8**	**-0.3**
GO02					*e*S	**S**	**16 39 40.2**	**-1.3**
GO02					IAML		16 39 42.1	
	comp=N,149nm,0.4s							
PB09	**IPOC Station P**	**2.97**	**311**		*e*P	**Pn**	**16 39 05.8**	**+1.5**
PB09					*e*S	**S**	**16 39 44.8**	**+1.2**
PB03	**IPOC Station P**	**3.20**	**302**	⇑	*i*P	**Pn**	**16 39 07.6**	**+0.8**
PB03					*e*S	**S**	**16 39 47.0**	**-1.1**
PB04	**IPOC Station P**	**3.38**	**295**		*e*P	**Pn**	**16 39 09.5**	**+0.6**
PB04					*e*S	**S**	**16 39 50.4**	**-1.5**
PB10	**IPOC Station P**	**3.42**	**274**	⇑	*i*P	**Pn**	**16 39 09.5**	**+0.3**
PB10					*e*S	**S**	**16 39 50.3**	**-2.3**
PB07	**IPOC Station P**	**3.48**	**305**		*e*P	**Pn**	**16 39 10.9**	**+0.8**
PB07					*e*S	**S**	**16 39 53.0**	**-1.2**
PB01	**IPOC Station P**	**3.67**	**317**		*e*P	**Pn**	**16 39 13.3**	**+1.0**
PB01					*e*S	**S**	**16 39 57.6**	**-0.4**
PB02	**IPOC Station P**	**3.75**	**310**		*e*P	**Pn**	**16 39 14.0**	**+0.8**
PB02					*e*S	**S**	**16 39 58.4**	**-1.4**
LPAZ	**La Paz**	**7.55**	**350**		P	**Pn**	**16 40 02.1**	**+0.2**
	comp=N,0.4nm,0.3s,baz=163,slow=6.0,SNR=2.8							
SIV	**San Ignacio**	**9.45**	**36**		P	**Pn**	**16 40 23.7**	**-2.1**
	comp=N,1.2nm,0.6s,baz=206,slow=13,SNR=6.9							
PLCA	**Paso Flores**	**17.19**	**190**		P	**Pn**	**16 42 03.7**	**+2.5**
	comp=N,0.9nm,0.5s,baz=13,slow=8.6,SNR=4.4							
BDFB	**Brasilia**	**19.46**	**69**		P	**P**	**16 42 23.5**	**-0.8**
	comp=N,3.6nm,0.7s,baz=258,slow=9.3,SNR=6.2							
TORD	**Torodi Ar. Bea**	**76.35**	**69**		P	**P**	**16 49 39.4**	**+0.2**
	comp=N,0.3nm,0.4s,baz=256,slow=4.7,SNR=2.8							
	comp=N,0.3nm,0.4s							

*IDC **30** 16:48:13.2±2.0, 4°.88N×126°.30E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=162.1km s-min=25.1km az=65.0*
*MAN **30** 16:48:22.2, 4°.87N×126°.68E, h1km, mb4.8, ML3.7, MS3.6*
ISC 30 16:48:23.9±1.9,**5°.1N**±0°.3×**127°.2E**±0°.5,**h100**km,**n5,**
σ1§43/6,mb3.4/3,1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.83**	**313**	⇓	*i*P	**Pn**	**16 49 07.3**	**-0.2**
KCP					*i* S	**Sn**	**16 49 40.8**	**-0.1**
CGP	**Cagayan de Oro**	**4.17**	**324**	⇑	*e*P	Pn	16 49 38.6	+13
CGP					*e*S	**Sn**	**16 50 14.6**	**+1.6**
WRA	**Warramunga Arr**	**25.83**	**164**		P	**P**	**16 53 47.7**	**+1.6**
	0.6nm,0.5s,baz=342,slow=10,SNR=29							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**29.30**	**167**		P	**P**	**16 54 17.1**	**-0.1**
	0.3nm,0.9s,baz=348,slow=7.7,SNR=4.4							
	0.3nm,0.9s							
MKAR	**Makanchi Array**	**56.72**	**325**		P	**P**	**16 57 56.2**	**-1.1**
	0.4nm,0.4s,baz=121,slow=7.5,SNR=9.5							
	0.4nm,0.4s							

*JMA **30** 16:51:56.3±0.2, 33°.N±2°.×13°.8E±°, h385km, MV3.2/29, FAR S OFF TOKAI DISTRICT*
*IDC **30** 16:52:02.6±0.9, 32°.98N×137°.86E, h323km±21km, mb2.9/4, mbtmp3.6/8, Error ellipse: s-maj=54.4km s-min=13.8km az=62.0*
ISC 30 16:52:02.6±0.9,**33°.14N**±0°.08×**138°.10E**±0°.08,**h341**km,**n34,**
σ1§00/37,mb3.1/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.86**	**341**		P	**Pn**	**16 52 47.3**	**+0.9**
TTO3	**TONANKAI O.B.S**	**0.93**	**321**		*e*P	**Pn**	**16 52 47.7**	**+0.9**
TTO4	**TONANKAI O.B.S**	**0.99**	**332**		P	**Pn**	**16 52 47.7**	**+0.8**
TTO1	**TONANKAI O.B.S**	**1.20**	**294**		P	**Pn**	**16 52 48.3**	**+0.5**
JHJ	**Hachijo jima 2**	**1.42**	**90**		P	**Pn**	**16 52 48.1**	**-1.2**
	343nm,0.7s,baz=246,slow=20,SNR=1.3							
JHJ					S	**S**	**16 53 26.4**	**-0.3**
	140nm,0.5s,baz=344,slow=12,SNR=1.3							
JIE	**Ise**	**1.71**	**318**		P	**Pn**	**16 52 51.3**	**+0.4**
JTNC	**Tanabenakahech**	**2.19**	**289**		P	**Pn**	**16 52 54.1**	**-0.3**
JOD2	**Odawara 2**	**2.28**	**21**		P	**Pn**	**16 52 55.8**	**+0.7**
JWY	**Kouya**	**2.35**	**298**		P	**Pn**	**16 52 56.0**	**+0.3**
INU	**Inuyama**	**2.38**	**338**		P	**Pn**	**16 52 56.6**	**+0.8**
JYN	**Shimob**	**2.39**	**9**		*e*P	**Pn**	**16 52 57.5**	**+1.6**
JGF	**Kuroka**	**2.54**	**346**		P	**Pn**	**16 52 58.0**	**+0.9**
JYTA	**Yamagatataniai**	**2.70**	**336**		P	**Pn**	**16 52 59.1**	**+0.6**
BSO1	**Boso 1**	**2.83**	**57**		P	**Pn**	**16 52 58.1**	**-1.0**
BSO1					*e*S	**S**	**16 53 43.0**	**-1.5**
JRY	**Ryogami san**	**2.95**	**13**		P	**Pn**	**16 53 01.9**	**+1.2**
JWT	**Wachi**	**3.10**	**315**		P	**Pn**	**16 53 02.5**	**+0.5**
JAI	**Aioi**	**3.12**	**283**		P	**Pn**	**16 53 02.1**	**-0.2**
MJAR	**Matsushiro Arr**	**3.40**	**2**		P	**Pn**	**16 53 05.3**	**+0.4**
	4.4nm,0.4s,baz=171,slow=9.1,SNR=39							
MJAR					S	**S**	**16 53 53.1**	**-2.0**
	0.9nm,0.3s,baz=188,slow=14,SNR=1.9							
MAJO	**Matsushiro**	**3.40**	**1**		P	**Pn**	**16 53 05.9**	**+1.0**
MAT	**Matsushiro**	**3.40**	**1**		P	**Pn**	**16 53 05.9**	**+0.9**
JAG	**Ashikaga**	**3.47**	**18**		P	**Pn**	**16 53 05.4**	**-0.1**
JAG					*e*S	**S**	**16 53 53.6**	**-2.7**
JYT	**Yasato**	**3.54**	**29**		P	**Pn**	**16 53 05.3**	**-0.9**
JTO	**Tosashimizu**	**4.46**	**268**		*e*P	**Pn**	**16 53 15.4**	**-0.5**
JHS	**Saijyo**	**4.53**	**296**		P	**Pn**	**16 53 17.1**	**+0.5**
JSD	**Sado**	**4.89**	**2**		P	**Pn**	**16 53 21.8**	**+1.3**
JMM	**Marumori**	**5.21**	**24**		P	**Pn**	**16 53 23.8**	**-0.1**
JCJ	**Chichijima**	**6.98**	**148**		P	Pn	16 53 39.4	-5.2
	34nm,0.7s,baz=294,slow=20,SNR=1.6							
JCJ					S	S	16 54 56.6	-11
	39nm,0.3s,baz=271,slow=23,SNR=13							
KSRS	**Korea Array**	**9.36**	**300**		P	**Pn**	**16 54 12.2**	**-0.6**
	1.3nm,0.6s,baz=111,slow=14,SNR=7.4							
USRK	**Ussuriysk Ar.**	**12.03**	**338**		P	**Pn**	**16 54 44.6**	**0.0**
	1.3nm,0.7s,baz=150,slow=11,SNR=5.3							
KLR	**Kul'dur**	**16.76**	**345**		P	**Pn**	**16 55 39.2**	**-0.7**
	1.2nm,0.5s,baz=165,slow=12,SNR=2.7							
MKAR	**Makanchi Array**	**44.01**	**305**		P	**P**	**16 59 38.2**	**+0.9**
	0.1nm,0.3s,baz=93,slow=9.3,SNR=1.6							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**46.36**	**311**		P	**P**	**16 59 56.6**	**+1.2**
	0.6nm,0.5s,baz=92,slow=6.3,SNR=4.7							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**52.90**	**184**		P	**P**	**17 00 44.7**	**+0.1**
	0.4nm,0.4s,baz=0.9,slow=7.5,SNR=21							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**56.63**	**185**		P	**P**	**17 01 11.8**	**+0.7**
	0.4nm,0.5s,baz=15,slow=9.5,SNR=24							
	0.4nm,0.5s							

*NEIC **30** 17:06:55.4±2.2, 23°.64S±0°.10×175°.16W±0°.09, h10km±1km, mb5.3/50, Error ellipse: s-maj=16.4km s-min=13.8km az=181.0*
*BJI **30** 17:06:56.0±0.0, 23°.60S×175°.50W, h5km, mb5.4/51, mB5.7/32, Ms5.2/39, Ms7 5.0/39*
*IDC **30** 17:06:56.4±0.4, 23°.80S×175°.49W, h0km, mb4.9/29, mbtmp4.8/29, MS4.9/45, Error ellipse: s-maj=15.5km s-min=13.0km az=169.0*
*MOS **30** 17:06:57.5±1.3, 23°.77S×175°.68W, h10km, mb5.5/31, MS4.9/8, Error ellipse: s-maj=12.2km s-min=9.5km az=134.9*
*GCMT **30** 17:07:02.4±0.2, 23°.68S±0°.01×175°.14W±0°.01, h20km, MW5.2/126, Moment Tensor Solution. s87,c125; s126,c195; Duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr0.61±.02; Mθθ-0.05±.01; Mφφ-0.55±.01; Mrθ0.04±.03; Mφφ-0.29±.01; Mθφ0.54±.03; Best double couple: M0 0.84600×10^17 NP1:φs11.00000°, δ65.00000°, λ77.00000°. NP2:φs220.00000°, δ28.00000°, λ116.00000°. Principal axes: T 0.8230, Plg67.0000°, Azm257.0000°; N 0.0470, Plg12.0000°, Azm16.0000°; P -0.8700, Plg19.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 17:06:58.6±0.4,**23°.82S**±0°.05×**175°.37W**±0°.05,**h18**km±2km,
h17km:**pP-P,n584,σ1§82/582,mb5.2/87,MS5.0/66,**
53C-38D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.87**	**202**		Pn	**Pn**	**17 08 28.7**	**+3.8**
	90nm,0.3s,baz=90,slow=20,SNR=2.0							
RAO					Sn	**Sn**	**17 09 32.0**	**+0.3**
	86nm,0.3s,baz=48,slow=23,SNR=1.4							
NIUE	**Niue**	**6.92**	**48**		P	Pn	17 08 32.6	-6.7
	baz=6.6,SNR=31							
NIUE	**Niue**	**6.92**	**48**		Pn	Pn	17 08 32.4	-6.9
MSVF	**Nonsavu**	**8.63**	**313**		Pn	**Pn**	**17 09 06.1**	**+3.2**
	4.3nm,0.3s,baz=144,slow=11,SNR=37							
MSVF					LR	LR	17 12 05.8	
	comp=Z,12μm,19.2s,baz=113,slow=36							
MSVF	**Nonsavu**	**8.63**	**313**		Pn	**Pn**	**17 09 05.3**	**+2.4**
MSVF	**Nonsavu**	**8.63**	**313**	*c*	*i*P	**Pn**	**17 09 05.6**	**+2.7**
MSVF					pmax	pmax		
	comp=Z,268nm,1.1s							
AFI	**Afiamalu**	**10.43**	**20**		Pn	Pn	17 09 19.8	-7.6
	comp=Z,15nm,0.3s,baz=201,slow=4.8,SNR=11							
AFI					Sn	Sn	17 11 07.9	-16
	comp=Z,8.9nm,0.3s,baz=120,slow=20,SNR=1.6							
AFI	**Afiamalu**	**10.43**	**20**		Pn	Pn	17 09 19.4	-8.1
RAR	**Rarotonga**	**14.64**	**83**		Pn	Pn	17 10 19.4	-5.6
	comp=Z,11nm,0.3s,baz=243,slow=7.5,SNR=33							
RAR					Sn	Sn	17 12 47.5	-19
	comp=

MEH	Mehetia	26.17	82	eT		T	17 40 04.6
	comp=Z,24nm,0.3s						
HNR	Honiara	27.57	297	P		P	17 12 45.3 +0.3
	comp=Z,663nm,1.0s,baz=180,slow=9.1,SNR=4.2						
HNR					LR	LR	17 23 35.0
	comp=Z,25µm,18.3s,baz=164,slow=36						
HNR	Honiara	27.57	297	P		P	17 12 41.6 -3.4
HNR	Honiara	27.57	297	P		P	17 12 41.6 -3.4
HNR				pmax		pmax	
	comp=Z,118nm,0.8s						
ARMA	Armidale	30.03	250	P		P	17 13 08.6 +1.8
	baz=30,SNR=3.8						
ARMA	Armidale	30.03	250	P		P	17 13 07.8 +1.0
ARMA				IAmb		IAmb	17 13 22.6
	comp=Z,42nm,1.1s						
EIDS	Eidsvold	30.50	260	P		P	17 13 11.7 +0.7
	baz=31,SNR=5.0						
EIDS				P		P	17 13 11.7 +0.7
	baz=31,SNR=5.0						
EIDS	Eidsvold	30.50	260	P		P	17 13 10.3 -0.7
EIDS				IAmb		IAmb	17 13 25.4
	comp=Z,38nm,1.1s						
RMQ	Roma	32.52	258	P		P	17 13 30.6 +1.9
	baz=33,SNR=18						
CMSA	Cobar Meteorol	35.19	249	P		P	17 13 52.2 +0.3
	baz=36,SNR=10						
CTA	Charters Tower	35.72	268	P		P	17 13 56.0 -0.5
	comp=Z,26nm,0.9s,baz=95,slow=11,SNR=13						
CTA				LR		LR	17 27 34.1
	comp=Z,1µm,18.4s,baz=100,slow=35						
	comp=Z,26nm,0.9s						
CTA	Charters Tower	35.72	268	P		P	17 13 56.0 -0.5
CTAO	Charters Tower	35.72	268	P		P	17 13 56.0 -0.5
CTAO				IAmb		IAmb	17 14 10.0
	comp=Z,61nm,1.1s						
CTAO	Charters Tower	35.72	268	P		P	17 13 56.0 -0.5
CTAO				pmax		pmax	
	comp=Z,61nm,1.1s						
QLP	Quilpie	36.55	257	P		P	17 14 03.3 -0.3
	baz=37,SNR=6.3						
TAOE	Nuku Hiva Isla	36.79	72	eS		S	17 19 44.7 -4.8
	comp=Z,184nm,25.0s						
TAOE				eLR		LR	17 23 51.8
	comp=Z,989nm,25.6s						
RABL	Rabaul	36.89	297	P		P	17 14 05.0 -1.5
RABL				IAmb		IAmb	17 14 23.8
	comp=Z,30nm,0.7s						
RKT	Rikitea	36.97	97	eT		T	17 53 44.4
	comp=Z,5.8nm,0.4s						
MTSU	Mount Surprise	37.97	271	P		P	17 14 15.7 -0.1
	baz=38,SNR=11						
PMG	Port Moresby	38.52	285	P		P	17 14 21.7 +1.3
	comp=Z,44nm,0.9s,baz=186,slow=5.5,SNR=5.2						
PMG				LR		LR	17 28 57.9
	comp=Z,2µm,18.4s,baz=124,slow=34						
	comp=Z,44nm,0.9s						
PMG	Port Moresby	38.52	285	P		P	17 14 19.0 -1.4
PMG	Port Moresby	38.52	285	deP		P	17 14 19.2 -1.2
PMG				pmax		pmax	
	comp=Z,86nm,1.3s						
PMG	Port Moresby	38.52	285	P		P	17 14 19.0 -1.4
	comp=Z,1µmcomp=Z,174nm,1.0s						
STKA	Stephens Creek	38.69	248	P		P	17 14 21.7 +0.1
	comp=Z,11nm,1.0s,baz=96,slow=12,SNR=14						
STKA				LR		LR	17 29 36.0
	comp=Z,3µm,18.6s,baz=80,slow=35						
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	38.69	248	P		P	17 14 22.4 +0.8
	baz=39,SNR=4.3						
STKA	Stephens Creek	38.69	248	‖eP		P	17 14 21.9 +0.3
COEN	Coen	40.30	276	P		P	17 14 35.2 -0.1
	baz=41,SNR=5.8						
COEN	Coen	40.30	276	P		P	17 14 33.5 -1.8
HTT	Hallett	40.98	246	P		P	17 14 41.2 +0.5
	baz=41,SNR=5.6						
QIS	Mount Isa	41.69	265	P		P	17 14 47.1 +0.4
	baz=42,SNR=6.7						
QIS				P		P	17 14 47.1 +0.4
	baz=42,SNR=6.7						
BBOO	Buckleboo	43.38	247	P		P	17 14 59.3 -1.0
	baz=44,SNR=4.9						
BBOO	Buckleboo	43.38	247	P		P	17 14 59.0 -1.3
AS31	Alice Springs	46.22	259	P		P	17 15 21.3 -1.8
ASAR	Alice Springs	46.23	259	P		P	17 15 22.1 -1.1
	comp=Z,13nm,0.9s,baz=98,slow=7.1,SNR=5.7						
ASAR				S		S	17 22 04.2 -5.0
	comp=Z,0.8nm,0.9s,baz=97,slow=15,SNR=2.8						
ASAR				LR		LR	17 34 37.6
	comp=Z,4µm,18.1s,baz=112,slow=36						
	comp=Z,13nm,0.9s						
ASAR	Alice Springs	46.23	259	P		P	17 15 22.4 -0.7
ASAR	Alice Springs	46.23	259	P		P	17 15 22.4 -0.7
WR0	Warramunga Arr	46.45	265	P		P	17 15 22.0 -2.9
WB2	Warramunga Arr	46.63	265	P		P	17 15 24.8 -1.5
WRAB	Tennant Creek	46.63	265	P		P	17 15 24.3 -2.0
WRAB				IAmb		IAmb	17 15 40.0
	comp=Z,35nm,0.9s						
WRAB	Tennant Creek	46.63	265	P		P	17 15 24.3 -2.0
WRAB				pmax		pmax	
	comp=Z,35nm,1.0s						
WB0	Warramunga Arr	46.63	265	P		P	17 15 24.4 -2.0
WB0				IAmb		IAmb	17 15 39.5
	comp=Z,36nm,1.0s						
WRA	Warramunga Arr	46.64	265	P		P	17 15 24.2 -2.1
	comp=Z,14nm,0.9s,baz=101,slow=8.3,SNR=34						
WRA				S		S	17 22 06.9 -8.2
	comp=Z,2.9nm,1.1s,baz=108,slow=15,SNR=4.8						
WRA				LR		LR	17 34 46.1
	comp=Z,3µm,18.2s,baz=99,slow=36						
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	46.64	265	P		P	17 15 23.9 -2.4
WRA	Warramunga Arr	46.64	265	P		P	17 15 24.0 -2.4
WRA				pmax		pmax	
	comp=Z,3.0nm,1.0s						
KIP	Kipapa	48.04	22	‖eP		P	17 15 37.3 +0.3
KIP				pmax		pmax	
	comp=Z,306nm,2.5s						
FORT	Forrest	50.31	249	P		P	17 15 52.9 -1.6
FORT				IAmb		IAmb	17 16 21.2
	comp=Z,56nm,1.0s						
KDU	Kakadu	50.51	273	P		P	17 15 54.5 -1.7
	baz=51,SNR=3.2						
WRKA	Warakurna	50.98	256	P		P	17 15 58.6 -1.1
	baz=51,SNR=28						
MTN	Manton Dam	51.68	272	P		P	17 16 08.1 +3.1
	baz=52,SNR=3.0						
MTN	Manton Dam	51.68	272	P		P	17 16 03.9 -1.1
KNRA	Kununurra	52.93	268	P		P	17 16 13.3 -0.9
	baz=53,SNR=4.9						
KNRA	Kununurra	52.93	268	P		P	17 16 13.4 -0.8
KNRA				IAmb		IAmb	17 16 31.3
	comp=Z,33nm,0.8s						
SBA	Scott Base	54.75	185	P		P	17 16 28.9 +2.3
SBA	Scott Base	54.75	185	P		P	17 16 29.0 +2.3
SBA				pmax		pmax	
	comp=Z,60nm,1.2s						
VNDA	Vanda	54.85	186	P		P	17 16 28.1 +0.7
	comp=Z,4.9nm,1.1s,baz=16,slow=7.5,SNR=7.3						
VNDA				LR		LR	17 40 16.7
	comp=Z,308nm,18.1s,baz=14,slow=36						
	comp=Z,4.9nm,1.1s						
VNDA	Vanda	54.85	186	P		P	17 16 28.6 +1.2
VNDA	Vanda	54.85	186	P		P	17 16 28.6 +1.2
VNDA				pmax		pmax	
	comp=Z,20nm,1.1s						
SIJI	Sorong	56.46	286	P		P	17 16 38.7 -1.2
	comp=Z,33nm,0.7s,baz=78,slow=6.2,SNR=23						
SIJI				LR		LR	17 41 25.4
	comp=Z,995nm,19.6s,baz=104,slow=37						
	comp=Z,33nm,0.7s						
KLBR	Kellerberrin	58.92	246	P		P	17 16 57.0 0.0
	baz=59,SNR=4.1						
KLBR				P		P	17 16 57.0 0.0
	baz=59,SNR=4.1						
NWAO	Narrogin (SRO)	59.12	245	LR		LR	17 41 53.3
	comp=Z,1µm,18.4s,baz=286,slow=36						
MEEK	Meekatharra	59.19	252	P		P	17 17 00.2 +1.2
	baz=59,SNR=4.4						
MEEK				P		P	17 17 00.2 +1.2
	baz=59,SNR=4.4						
PSA00	Pilbara Seismi	59.34	258	P		P	17 16 58.4 -1.7
PSA00				IAmb		IAmb	17 17 04.9
	comp=Z,27nm,1.4s						
BATI	Baumata	59.46	272	LR		LR	17 43 00.8
	comp=Z,3µm,19.2s,baz=160,slow=36						
BLDU	Ballidu	59.98	247	P		P	17 17 04.2 -0.2
	baz=60,SNR=6.4						
MUN	Mundaring	60.14	246	P		P	17 17 06.5 +1.1
	baz=60,SNR=3.2						
TNTI	Ternate	60.67	285	P		P	17 17 07.3 -2.0
TNTI				IAmb		IAmb	17 17 17.4
	comp=Z,33nm,1.1s						
MORW	Morawa	60.87	249	P		P	17 17 12.4 +1.9
	baz=61,SNR=6.5						
CASY	Casey	62.04	206	P		P	17 17 20.4 +2.6
GIRL	Giralia	64.05	255	P		P	17 17 30.1 -1.7
GTOI	Gorontalo	64.48	283	P		P	17 17 39.0 +4.3
	comp=Z,206nmcomp=Z,13nm,1.4s						
KAPI	Kappang	65.03	276	P		P	17 17 36.8 -1.5
KAPI				IAmb		IAmb	17 18 03.4
	comp=Z,25nm,1.1s						
KAPI	Kappang	65.03	276	P		P	17 17 36.8 -1.5
KAPI				pmax		pmax	
	comp=Z,25nm,1.2s						
JCJ	Chichijima	65.13	318	LR		LR	17 42 05.2
	comp=Z,815nm,20.1s,baz=129,slow=32						
MRSI	Marisa	65.37	282	P		P	17 17 51.9 +11
SPSI	Sidrap Palu	65.44	277	P		P	17 17 44.9 +3.9
	comp=Z,24nm,1.1s						
QSPA	South Pole Qui	66.27	180	P		P	17 17 45.6 -0.1
	comp=Z,19nm,1.2s,baz=45,slow=1.2,SNR=31						
QSPA				LR		LR	17 42 51.8
	comp=Z,987nm,20.4s,baz=36,slow=32						
	comp=Z,19nm,1.2s						
QSPA	South Pole Qui	66.27	180	P		P	17 17 45.6 -0.1
JHJ	Hachijo jima 2	70.94	321	LR		LR	17 49 05.4
	comp=Z,300nm,18.6s,baz=326,slow=36						
KKM	Kota Kinabalu	72.96	285	P		P	17 18 39.7 +12
JYT	Yasato	73.00	324	P		P	17 18 23.9 -3.4
JYT				IAmb		IAmb	17 18 34.3
	comp=Z,40nm,1.1s						
JOW	Kunigami	74.15	309	LR		LR	17 48 35.7
	comp=Z,674nm,19.7s,baz=124,slow=34						
MJAR	Matsushiro Arr	74.32	323	P		P	17 18 33.7 -1.4
	comp=Z,4.0nm,1.1s,baz=155,slow=6.1,SNR=5.1						
MJAR				LR		LR	17 49 42.2
	comp=Z,394nm,19.1s,baz=140,slow=35						
	comp=Z,4.0nm,1.1s						
MAJO	Matsushiro	74.32	323	‖eP		P	17 18 33.6 -1.5
MAJO				pmax		pmax	
	comp=Z,3.0nm,0.8s						
LEM	Lembang	75.42	269	LR		LR	17 52 53.2
	comp=Z,538nm,18.5s,baz=150,slow=37						
BELA	Belgrano 2	75.96	172	P		P	17 18 43.0 -1.1
BELA				IAmb		IAmb	17 19 00.6
	comp=Z,21nm,0.9s						
JHS	Saijyo	76.20	319	P		P	17 18 43.3 -2.7
JHS				IAmb		IAmb	17 18 47.8
	comp=Z,48nm,1.2s						
SHEM	Shemya Is, Ala	76.78	353	LR		LR	17 48 59.0
	comp=Z,981nm,19.3s,baz=119,slow=33						
PPBI	Pangkal Pinang	78.61	273	P		P	17 19 12.2 +12
FMP	Fort Macarthur	78.87	45	P		P	17 19 02.0 +1.1
	baz=231						
LPIG	La Paz	79.06	58	LR		LR	17 48 27.9
	comp=Z,1µm,18.3s,baz=224,slow=32						
MAW	Mawson	79.27	199	P		P	17 19 03.4 +0.8
	comp=Z,7.1nm,0.9s,baz=110,slow=7.2,SNR=10						
MAW				LR		LR	17 53 44.7
	comp=Z,1µm,19.1s,baz=118,slow=35						
	comp=Z,7.1nm,0.9s						
MAW	Mawson	79.27	199	P		P	17 19 04.5 +1.9
	baz=79,SNR=7.1						
MURC	Murrieta	79.52	46	P		P	17 19 06.1 +1.6
	baz=232						
MONP2	Monument Peak	79.61	47	P		P	17 19 06.1 +0.8
	baz=233						
BFSC	Mount Baldy Ra	79.61	45	P		P	17 19 05.8 +0.7
	baz=232						
IKP	In-Ko-Pah, Jac	79.67	47	P		P	17 19 05.8 +0.3
	baz=233						
EDW2	Edwards Air Fo	79.79	45	P		P	17 19 06.5 +0.5
	baz=231						
PET	Petropavlovsk	79.79	344	eP		P	17 19 11.5 +6.1
PET				eS		S	17 29 09.4 +2.1
PET				pmax		pmax	
	comp=Z,20nm,0.8s						
PET				pmax		pmax	
	comp=Z,100nm,11.1s						
PET				MLR		MLR	
	comp=Z,600nm,13.0s						
PET				MLR		MLR	
	comp=Z,500nm,16.0s						
SDPT	Sand Point	79.87	9	P		P	17 19 08.5 +2.7
	baz=194						
YSS	Yuzh-Sakhalins	79.95	332	eP		P	17 19 06.8 +0.4
YSS				e			17 19 10.9
YSS				eS		S	17 29 07.1 -2.2
YSS				pmax		pmax	
	comp=Z,60nm,1.0s						
ISA	Isabella, Lake	79.97	44	P		P	17 19 07.6 +0.6
	baz=231						
PFO	Pinyon Flats O	80.01	47	P		P	17 19 08.9 +1.6
	comp=Z,2.5nm,0.9s,baz=273,slow=5.6,SNR=3.4						
PFO				LR		LR	17 50 15.7
	comp=Z,869nm,18.1s,baz=236,slow=32						
	comp=Z,2.5nm,0.9s						
PFO	Pinyon Flats O	80.01	47	‖eP		P	17 19 09.4 +2.1
PFO				pmax		pmax	
	comp=Z,6.0nm,1.1s						
PFO	Pinyon Flats O	80.01	47	P		P	17 19 07.9 +0.5
	baz=233						
TPFO	Pinon Flats	80.01	47	P		P	17 19 08.0 +0.6
	baz=233						
PEA0B	Petropavlovsk-	80.11	344	⇑eP		P	17 19 08.2 +1.0
PETK	Petropavlovsk-	80.11	344	P		P	17 19 08.4 +1.2
	comp=Z,23nm,0.8s,baz=162,slow=11,SNR=10						
PETK				LR		LR	17 52 35.5
	comp=Z,409nm,19.1s,baz=158,slow=34						
	comp=Z,23nm,0.8s						
BELC	Belle Mtn. Jos	80.56	46	P		P	17 19 11.2 +1.0
	baz=233						
CWC	Cottonwood Cre	80.70	43	P		P	17 19 12.5 +1.5
	baz=231						
BC3	Big Chuckawall	80.71	47	P		P	17 19 11.9 +0.9
	baz=233						
GLA	Glamis	80.78	48	P		P	17 19 12.3 +0.9
	baz=234						
GSC	Goldstone, Bar	80.81	45	P		P	17 19 12.9 +1.3
	baz=232						
HEC	Hector,Ludlow	80.83	46	P		P	17 19 13.6 +2.0
	baz=233						
MPMC	Manual Prospec	80.84	44	P		P	17 19 13.5 +1.7
	baz=232						
KSRS	Korea Array	80.98	318	P		P	17 19 12.9 +0.8
	comp=Z,2.7nm,0.9s,baz=137,slow=6.1,SNR=7.3						
KSRS				LR		LR	17 51 02.5
	comp=Z,468nm,20.2s,baz=140,slow=33						
	comp=Z,2.7nm,0.9s						
KSRS	Korea Array	80.98	318	P		P	17 19 13.0 +0.8
MLAC	Mammoth, Mammc	80.98	42	P		P	17 19 14.4 +1.9
	baz=230						
IRM	Iron Mountain	81.22	47	P		P	17 19 15.2 +1.6
	baz=233						
GMRC	Granite Mounta	81.25	46	P		P	17 19 15.4 +1.5
	baz=233						
TPRI	Tanjung Pinang	81.32	275	P		P	17 19 29.6 +15
YBH	Yreka Blue Hor	81.40	37	P		P	17 19 15.5 +1.0
	comp=Z,4.5nm,0.9s,baz=198,slow=6.4,SNR=5.0						
YBH				LR		LR	17 50 06.0
	comp=Z,574nm,19.1s,baz=230,slow=32						
	comp=Z,4.5nm,0.9s						
214A	Organ Pipe Nat	81.53	50	P		P	17 19 16.8 +1.5
	baz=235						
NVAR	Mina Array Bea	81.81	42	P		P	17 19 17.6 +0.7
	comp=Z,7.5nm,1.0s,baz=224,slow=8.3,SNR=25						
NVAR				LR		LR	17 52 31.9
	comp=Z,555nm,18.1s,baz=272,slow=33						
	comp=Z,7.5nm,1.0s						
PDMCI	Parker Dam,Lak	81.97	47	P		P	17 19 19.6 +2.0
	baz=234						
H03S2	Juan Fernandez	82.12	123	T		T	18 51 10.5
	baz=245,slow=74,SNR=22						
H03S1	Juan Fernandez	82.14	123	T		T	18 51 12.9
	baz=245,slow=74,SNR=20						
H03S3	Juan Fernandez	82.14	123	T		T	18 51 11.7
	baz=245,slow=74,SNR=23						
H03N2	Juan Fernandez	82.27	123	T		T	18 51 05.0
	baz=247,slow=74						
H03N3	Juan Fernandez	82.27	123	T		T	18 51 24.1
	baz=247,slow=74						
H03N1	Juan Fernandez	82.29	123	T		T	18 51 09.7
	baz=247						
MYKOM	Kota Tinggi	82.29	275	P		P	17 19 32.7 +13
OHAK	Old Harbor	82.84	12	P		P	17 19 24.5 +2.9
	baz=200						
TYV	Tymovskoe	83.06	335	eP		P	17 19 23.9 +1.1
TYV				pmax		pmax	
	comp=Z,400nm,3.6s						
TYV				pmax		pmax	
	comp=Z,47nm,1.2s						
USRK	Ussuriysk Ar.	83.07	325	P		P	17 19 23.6 +0.6
	comp=Z,26nm,1.0s,baz=125,slow=3.4,SNR=19						
	comp=Z,26nm,1.0s						
TUC	Tucson	83.15	50	P		P	17 19 25.6 +1.7
	baz=236						
R11A	Troy Canyon, C	83.44	43	P		P	17 19 27.6 +2.2
	baz=233						
KDAK	Kodiak Island	83.50	12	LR		LR	17 51 09.5
	comp=Z,590nm,21.0s,baz=242,slow=32						
NJ2	Nanjing	83.86	309	eP		P	17 19 28.3 +0.9
NJ2				pmax		pmax	
	comp=Z,8.0nm,0.5s						
Q18K	Katmai Hardscr	83.88	11	P		P	17 19 29.9 +2.9
	baz=198						
TROLL	Troll, Antarti	84.42	179	P		P	17 19 27.6 -2.3
QIZ	Qiongzhong	84.42	293	P		P	17 19 31.5 +0.9
QIZ				S		S	17 29 56.0 -0.5
QIZ				LR		LR	
	comp=Z,470nm,8.4s						
QIZ				LR		LR	
	comp=Z,460nm,16.3s						
QIZ				LR		LR	
	comp=Z,420nm,15.9s						
U15A	North Rim	84.43	46	P		P	17 19 26.9 -3.7
U15A				IAmb		IAmb	17 19 46.9
	comp=Z,26nm,1.0s						
WUAZ	Wupatki	84.53	47	P		P	17 19 32.4 +1.4
	baz=236						
P18K	Big Mountain,	84.55	10	P		P	17 19 31.5 +1.1
	baz=198						
MDJ	Mudanjiang	84.62	324	P		P	17 19 32.3 +1.3
MDJ				S		S	17 30 01.0 +3.6
MDJ				pmax		pmax	
	comp=Z,35nm,1.2s						
MDJ				pmax		pmax	
	comp=Z,240nm,4.2s						
SNAA	Sanae	84.62	178	P		P	17 19 28.6 -2.3
SNAA	Sanae	84.62	178	LR		LR	17 52 59.6
	comp=Z,767nm,20.8s,baz=190,slow=33						
SNAA	Sanae	84.62	178	P		P	17 19 28.5 -2.3
SNAA				IAmb		IAmb	17 19 51.8
	comp=Z,21nm,1.0s						
SNAA	Sanae	84.62	178	ceP		P	17 19 33.2 +2.3
SNAA				pmax		pmax	
	comp=Z,18nm,1.2s						
VNA3	Neumayer Olymp	84.67	175	P		P	17 19 29.0 -2.0
O18K	Koktuh Hills	85.00	10	P		P	17 19 33.6 +1.0
	baz=198						
PKCU	Pink Cliffs	85.00	45	P		P	17 19 27.8 -5.7
PKCU				IAmb		IAmb	17 19 50.2
	comp=Z,25nm,1.0s						
N16K	Nishlik Lake	85.08	8	P		P	17 19 33.5 +0.6
	baz=195						
ELK	Elko	85.10	41	LR		LR	17 54 35.7
	comp=Z,622nm,18.2s,baz=230,slow=34						
GO06	Curarrehue	85.13	131	P		P	17 19 30.5 -3.6
P19K	Oil Pt	85.14	11	P		P	17 19 33.9 +0.6
	baz=200						
VNA2	Neumayer--Watz	85.14	176	P		P	17 19 31.9 -1.5
	baz=200,slow=4.0						
PLCA	Paso Flores	85.23	133	P		P	17 19 37.1 +2.6
	comp=Z,9.6nm,1.2s,baz=234,slow=5.1,SNR=9.0						
	comp=Z,9.6nm,1.2s						
VNA1	Neumayer--Stat	85.35	176	P		P	17 19 32.7 -1.6
121A	Cookes Peak, D	85.41	52	P		P	17 19 37.6 +2.1
	baz=238						
121A	Cookes Peak, D	85.41	52	P		P	17 19 36.1 +0.6
	baz=238						
O19K	Port Alsworth	85.46	10	P		P	17 19 33.8 -1.0
	baz=199						
NVL	N'lazarevskaya	85.54	182	eP		P	17 19 24.5 -11
NVL				eS		S	17 29 57.5 -8.4
NVL				pmax		pmax	
	comp=Z,4.0nm,0.5s						
GRNR	Gornyy	85.57	332	⇑iP		P	17 19 37.1 +1.5
GRNR				pmax		pmax	
	comp=Z,20nm,1.2s						
GRNR				MLR		MLR	
	comp=E,160nm,17.0s						
GRNR				MLR		MLR	
	comp=N,220nm,15.0s						
GRNR				MLR		MLR	
	comp=Z,300nm,13.0s						
O20K	Slope Mountain	85.65	11	P		P	17 19 35.5 -0.4
	baz=201						
N19K	Bonanza Creek	86.02	10	P		P	17 19 37.9 +0.1
	baz=199						
BBB	Bella Bella	86.20	27	LR		LR	17 54 44.4
	comp=Z,576nm,18.1s,baz=231,slow=33						
DUG	Dugway, Tooele	86.26	43	P		P	17 19 37.7 -1.8
	baz=234						
WHN	Wuhan	86.36	306	⇑P		P	17 19 42.5 +2.5
WHN				LR		LR	
	comp=Z,1µm,14.6s						
CN2	Changchun	86.41	321	eP		P	17 19 39.5 -0.4
CN2				PP		PP	17 23 03.0 +1.3
CN2				SKS		SKSac	17 30 02.5 -2.9
CN2				sS		ScS	17 30 26.5 +3.1
CN2				pmax		pmax	
	comp=Z,40nm,1.3s						
CN2				pmax		pmax	
	comp=Z,250nm,3.0s						
CN2				LR		LR	
	comp=Z,270nm,21.0s						
CN2				LR		LR	
	comp=Z,460nm,21.0s						
CN2				LR		LR	
	comp=Z,620nm,22.0s						
BNX	BinXian	86.53	324	⇑P		P	17 19 41.0 +0.5
BNX				pP		sP	17 19 44.5 -1.1
BNX				sP		pP	17 19 46.5 +2.3
BNX				PP		PP	17 22 58.5 -4.2
BNX				S		S	17 30 19.5 +3.4
BNX				sS		ScS	17 30 24.3 -0.1
BNX				pmax		pmax	
	comp=Z,43nm,1.2s						
BNX				pmax		pmax	
	comp=Z,190nm,8.6s						
BNX				LR		LR	
	comp=Z,340nm,18.5s						
BNX				LR		LR	
	comp=Z,490nm,18.8s						
BNX				LR		LR	
	comp=Z,580nm,19.7s						
Q16A	Castle Valley	86.58	45	P		P	17 19 38.2 -3.0
SBM	South Baldy	86.59	51	P		P	17 19 38.3 -3.3
KLR	Kul'dur	86.62	328	P		P	17 19 41.0 +0.1
	comp=Z,14nm,1.1s,baz=134,slow=4.6,SNR=12						
KLR				LR		LR	17 55 40.5
	comp=Z,514nm,19.3s,baz=139,slow=34						
	comp=Z,14nm,1.1s						
KLR	Kul'dur	86.62	328	deP		P	17 19 42.8 +2.0
KLR				pmax		pmax	
	comp=Z,17nm,1.2s						
Y22A	Socorro	86.73	51	P		P	17 19 43.4 +1.4
	baz=238						
TX31	Lajitas Ar. Si	86.83	56	P		P	17 19 39.8 -2.7
TX31	Lajitas Ar. Si	86.83	56	P		P	17 19 44.2 +1.7
	baz=240						
TX32	Lajitas Array	86.83	56	P		P	17 19 40.2 -2.3
TX32				IAmb		IAmb	17 19 45.4
	comp=Z,28nm,1.2s						
TXAR	Lajitas Array	86.83	56	P		P	17 19 44.0 +1.6
	comp=Z,13nm,1.0s,baz=216,slow=6.2,SNR=63						
TXAR				LR		LR	17 52 55.2
	comp=Z,601nm,18.5s,baz=230,slow=32						
	comp=Z,13nm,1.0s						
PWL	Port Wells	87.19	13	P		P	17 19 45.6 +2.2
	baz=204						
PSI	Prapat	87.19	274	P		P	17 19 44.3 -0.3
	com

TIA				pmax	pmax		
	comp=Z,27nm,1.2s						
TIA				pmax	pmax		
	comp=Z,160nm,3.2s						
TIA				LR	LR		
	comp=Z,300nm,16.7s						
TIA				LR	LR		
	comp=Z,260nm,14.5s						
TIA				LR	LR		
	comp=Z,340nm,15.2s						
GAMB	**Gambell**	**87.35**	**2**	P	**P**	**17 19 43.3**	**-0.7**
	baz=183						
MVCO	**Mesa Verde**	**87.40**	**47**	P	**P**	**17 19 45.6**	**+0.3**
	baz=237						
ANMO	**Albuquerque**	**87.61**	**50**	LR	LR	17 54 29.2	
	comp=Z,1μm,18.6s,baz=246,slow=32						
ANMO	**Albuquerque**	**87.61**	**50**	*ce*P	**P**	**17 19 48.3**	**+2.0**
ANMO				pmax	pmax		
	comp=Z,20nm,1.1s						
ANMO	**Albuquerque**	**87.61**	**50**	P	**P**	**17 19 48.0**	**+1.8**
	baz=239						
ANMO	**Albuquerque**	**87.61**	**50**	P	**P**	**17 19 44.2**	**-2.0**
	baz=239						
SKT	**Skwentna**	**87.61**	**11**	P	**P**	**17 19 45.3**	**-0.1**
	baz=202						
MA2	**Magadan**	**87.63**	**344**	P	**P**	**17 19 46.5**	**+1.0**
	comp=Z,14nm,1.0s,baz=131,slow=11,SNR=1.9						
	comp=Z,14nm,1.0s						
MA2	**Magadan**	**87.63**	**344⇑**	*e*P	**P**	**17 19 49.7**	**+4.2**
MA2				pmax	pmax		
	comp=Z,57nm,1.9s						
L20K	**Farewell, AK**	**87.69**	**10**	P	**P**	**17 19 46.0**	**+0.2**
	baz=199						
PMR	**Palmer**	**87.70**	**12**	P	**P**	**17 19 44.8**	**-0.9**
	baz=204						
S31K	**Pelican**	**87.77**	**20**	P	**P**	**17 19 44.1**	**-2.1**
	baz=215						
TTA	**Tatalina**	**87.81**	**9**	P	**P**	**17 19 46.3**	**-0.1**
	baz=198						
WRAK	**Wrangell Islan**	**87.81**	**22**	P	**P**	**17 19 45.1**	**-1.3**
	baz=218						
GSI	**Gunungsitoli**	**87.83**	**272**	P	**P**	**17 19 44.2**	**-3.4**
S32K	**Killisnoo**	**87.90**	**21**	P	**P**	**17 19 47.4**	**+0.6**
	baz=217						
SML	**Sawmill**	**88.05**	**12**	P	**P**	**17 19 48.7**	**+1.2**
	baz=204						
BMRM	**Bremner River**	**88.09**	**14**	P	**P**	**17 19 47.2**	**-0.5**
	baz=208						
M23K	**Glacier View**	**88.16**	**13**	P	**P**	**17 19 47.9**	**-0.1**
	baz=205						
CUT	**Chulitna**	**88.23**	**11**	P	**P**	**17 19 48.6**	**+0.3**
	baz=203						
KLU	**Klutina**	**88.27**	**14**	P	**P**	**17 19 48.4**	**-0.2**
	baz=207						
PNL	**Peninsula**	**88.27**	**17**	P	**P**	**17 19 48.0**	**-0.6**
	baz=212						
SCM	**Sheep Creek Mo**	**88.28**	**13**	P	**P**	**17 19 47.7**	**-1.0**
	baz=205						
PINM	**Pinnacle**	**88.41**	**17**	P	**P**	**17 19 49.8**	**+0.6**
	baz=212						
CMIG	**Matias Romero**	**88.42**	**71**	P	**P**	**17 19 51.1**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=286,slow=7.1,SNR=5.2						
	comp=Z,4.1nm,0.9s						
K20K	**Telida**	**88.50**	**9**	P	**P**	**17 19 49.8**	**+0.2**
	baz=199						
R32K	**Eaglecrest**	**88.56**	**20**	P	**P**	**17 19 50.0**	**0.0**
	baz=217						
N25K	**Chitina, Valde**	**88.66**	**14**	P	**P**	**17 19 49.0**	**-1.5**
	baz=208						
NEW	**Newport**	**88.67**	**35**	LR	LR	17 56 32.9	
	comp=Z,1μm,18.3s,baz=218,slow=34						
NEW	**Newport**	**88.67**	**35**	P	**P**	**17 19 50.2**	**-0.6**
	baz=231						
P29M	**Windy Craggy**	**88.70**	**18**	P	**P**	**17 19 48.5**	**-2.1**
	baz=214						
M24K	**Tolsona, Glenn**	**88.76**	**13**	P	**P**	**17 19 50.1**	**-0.8**
	baz=206						
S22A	**4UR Ranch, Cre**	**88.81**	**48**	P	**P**	**17 19 49.9**	**-2.1**
	baz=238						
MCARA	**McCarthy VSAT**	**88.83**	**15**	P	**P**	**17 19 49.4**	**-1.7**
	baz=209						
CAST	**Castle Rocks**	**88.87**	**10**	P	**P**	**17 19 50.9**	**-0.4**
	baz=201						
WAT6	**Susitna Watana**	**88.87**	**12**	P	**P**	**17 19 50.3**	**-1.2**
	baz=205,SNR=5.9						
WAT1	**Susitna Watana**	**88.94**	**12**	P	**P**	**17 19 52.6**	**+0.9**
	baz=204						
PLBC	**Pleasant Camp**	**88.96**	**19**	P	**P**	**17 19 51.8**	**+0.1**
	baz=215						
T35M	**Bob Quinn**	**88.98**	**23**	P	**P**	**17 19 50.9**	**-1.1**
	baz=220						
O28M	**Mount Upton**	**89.00**	**16**	P	**P**	**17 19 52.6**	**+0.3**
	baz=212						
O29M	**Mount Kennedy**	**89.03**	**17**	P	**P**	**17 19 53.5**	**+1.3**
	baz=213						
O20A	**White River Ci**	**89.14**	**45**	P	**P**	**17 19 52.2**	**-1.2**
	baz=237						
TRF	**Thorofare Moun**	**89.20**	**11**	P	**P**	**17 19 54.1**	**+1.1**
	baz=203						
HARP	**HAARP**	**89.24**	**14**	P	**P**	**17 19 54.9**	**+1.8**
	baz=207						
J20K	**Nowinta River**	**89.26**	**9**	P	**P**	**17 19 54.4**	**+1.3**
	baz=199						
CHUM	**Lake Minchumin**	**89.26**	**10**	P	**P**	**17 19 54.4**	**+1.3**
	baz=201						
SKAG	**Skagway**	**89.27**	**19**	P	**P**	**17 19 54.6**	**+1.4**
	baz=216						
P30M	**Million Dollar**	**89.33**	**18**	P	**P**	**17 19 53.9**	**+0.2**
	baz=214						
S34M	**Telegraph Cree**	**89.39**	**22**	P	**P**	**17 19 55.5**	**+1.6**
	baz=220						
DHY	**Denali Highway**	**89.39**	**12**	P	**P**	**17 19 55.0**	**+1.0**
	baz=205						
GCSA	**Galena City Sc**	**89.44**	**8**	P	**P**	**17 19 54.9**	**+1.1**
	baz=197						
MSO	**Missoula**	**89.50**	**37**	P	**P**	**17 19 55.0**	**+0.2**
	baz=233						
YUK8	**Steele Glacier**	**89.54**	**16**	P	**P**	**17 19 54.9**	**0.0**
	baz=212						
HNS	**HongShan**	**89.57**	**312**	⇑P	**P**	**17 19 56.8**	**+1.6**
HNS				SKS	**SKSac**	**17 30 24.3**	**-0.5**
HNS				pmax	pmax		
	comp=Z,18nm,1.0s						
HNS				LR	LR		
	comp=Z,300nm,16.7s						
HNS				LR	LR		
	comp=Z,370nm,17.3s						
HNS				LR	LR		
	comp=Z,460nm,17.1s						
YUK6	**Outpost Mounta**	**89.62**	**17**	P	**P**	**17 19 56.6**	**+1.5**
	baz=213						
833A	**Chaparral WMA,**	**89.65**	**59**	P	**P**	**17 19 53.0**	**-2.8**
	baz=243						
BPAW	**Bear Paw Mtn.**	**89.68**	**10**	P	**P**	**17 19 55.9**	**+0.8**
	baz=202						
PAX	**Paxson**	**89.68**	**13**	P	**P**	**17 19 56.3**	**+1.1**
	baz=207						
MCK	**McKinley**	**89.70**	**11**	P	**P**	**17 19 56.4**	**+1.2**
	baz=204						
SDCO	**Great Sand Dun**	**89.71**	**48**	P	**P**	**17 19 57.6**	**+1.4**
	baz=239						
SDCO	**Great Sand Dun**	**89.71**	**48**	P	**P**	**17 19 56.8**	**+0.5**
	baz=239						
M26K	**Nabesna, AK**	**89.72**	**14**	P	**P**	**17 19 56.8**	**+1.4**
	baz=209						
LYN	**LuoYang**	**89.72**	**308**	⇑*i*P	**P**	**17 19 57.8**	**+1.8**
LYN				pP	sP	17 20 02.3	+1.2
LYN				pmax	pmax		
	comp=Z,50nm,1.3s						
LYN				pmax	pmax		
	comp=Z,230nm,5.8s						
LYN				LR	LR		
	comp=Z,310nm,19.1s						
LYN				LR	LR		
	comp=Z,390nm,18.9s						
BW06	**Boulder Array**	**89.73**	**42**	P	**P**	**17 19 55.3**	**-0.9**
	baz=236						
PDAR	**Pinedale Array**	**89.73**	**42**	P	**P**	**17 19 56.5**	**+0.3**
	comp=Z,2.2nm,1.0s,baz=204,slow=3.3,SNR=11						
PDAR				LR	LR	17 57 34.6	
	comp=Z,310nm,18.0s,baz=250,slow=34						
	comp=Z,2.2nm,1.0s						
MSTX	**Muleshoe**	**89.75**	**52**	P	**P**	**17 19 54.1**	**-2.2**
MSTX				IAmb	IAmb	17 20 01.8	
	comp=Z,27nm,1.1s						
MSTX	**Muleshoe**	**89.75**	**52**	P	**P**	**17 19 57.6**	**+1.3**
	baz=241						
MSTX	**Muleshoe**	**89.75**	**52**	P	**P**	**17 19 56.6**	**+0.3**
	baz=241						
HYT	**Haines Junctio**	**89.76**	**18**	P	**P**	**17 19 56.9**	**+1.2**
	baz=214						
YUK3	**Moose Creek**	**89.79**	**16**	P	**P**	**17 19 57.2**	**+1.3**
	baz=211,SNR=7.5						
Q32M	**Nakina River**	**89.83**	**21**	P	**P**	**17 19 57.2**	**+1.1**
	baz=219						
P32M	**Atlin**	**89.86**	**20**	P	**P**	**17 19 55.2**	**-0.9**
	baz=217						
YUK4	**Talbot Arm**	**89.89**	**17**	P	**P**	**17 19 57.2**	**+0.9**
	baz=213						
M27K	**Edge Creek, AK**	**89.94**	**15**	P	**P**	**17 19 57.4**	**+0.8**
	baz=210,SNR=11						
BJI	**Beijing**	**89.95**	**314**	P	**P**	**17 19 58.0**	**+1.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,110nm,3.9s						
H17A	**Grant Village**	**90.02**	**40**	P	**P**	**17 19 55.4**	**-2.1**
	baz=236						
BOZ	**Bozeman (W)**	**90.08**	**39**	P	**P**	**17 19 58.4**	**+0.8**
	baz=235						
O30N	**Mendenhall**	**90.11**	**18**	P	**P**	**17 19 59.5**	**+2.2**
	baz=215,SNR=6.9						
T25A	**Trinidad**	**90.15**	**49**	P	**P**	**17 19 58.6**	**+0.4**
	baz=240						
SEY	**Seymchan**	**90.16**	**346**	P	**P**	**17 19 57.7**	**+0.4**
	comp=Z,9.8nm,0.8s,baz=147,slow=5.4,SNR=14						
	comp=Z,9.8nm,0.8s						
SEY	**Seymchan**	**90.16**	**346⇓**	*e*P	**P**	**17 19 58.3**	**+1.0**
SEY				pmax	pmax		
	comp=Z,16nm,1.1s						
DLBC	**Dease Lake**	**90.17**	**22**	LR	LR	17 56 10.4	
	comp=Z,314nm,18.2s,baz=236,slow=33						
DLBC	**Dease Lake**	**90.17**	**22**	P	**P**	**17 19 55.0**	**-2.6**
DLBC				IAmb	IAmb	17 20 13.0	
	comp=Z,20nm,1.2s						
DLBC	**Dease Lake**	**90.17**	**22**	P	**P**	**17 19 59.1**	**+1.5**
	baz=220						
L26K	**Log Cabin Wild**	**90.19**	**14**	P	**P**	**17 19 59.0**	**+1.5**
	baz=209						
BVCY	**Beaver Creek**	**90.23**	**15**	P	**P**	**17 19 59.5**	**+1.8**
	baz=211						
JCT	**Junction City**	**90.32**	**57**	P	**P**	**17 20 01.1**	**+2.1**
	baz=242						
JCT	**Junction City**	**90.32**	**57**	P	**P**	**17 19 59.5**	**+0.5**
	baz=242						
K24K	**Donnelly Dome**	**90.37**	**13**	P	**P**	**17 19 59.5**	**+1.2**
	baz=207						
WHY	**Whitehorse**	**90.37**	**19**	P	**P**	**17 19 59.4**	**+0.9**
	baz=216						
GYA	**Guiyang**	**90.39**	**299**	⇓P	**P**	**17 20 01.3**	**+1.8**
GYA				pmax	pmax		
	comp=Z,23nm,1.8s						
N30M	**Aishikik Lake**	**90.40**	**17**	P	**P**	**17 19 59.7**	**+1.1**
	baz=214						
RIDG	**Independent Ri**	**90.50**	**13**	P	**P**	**17 20 00.6**	**+1.6**
	baz=208						
I21K	**Tanana**	**90.53**	**10**	P	**P**	**17 19 59.6**	**+0.6**
	baz=201						
L27K	**Beaver Creek,**	**90.56**	**15**	P	**P**	**17 19 59.0**	**-0.2**
	baz=210						
Q24A	**Divide**	**90.57**	**47**	P	**P**	**17 19 60.0**	**-0.3**
	baz=239						
BCAR	**Beaver Creek A**	**90.58**	**15**	P	**P**	**17 19 58.0**	**-1.3**
MLY	**Manley**	**90.59**	**10**	P	**P**	**17 20 00.6**	**+1.2**
	baz=202						
R33M	**Jennings River**	**90.59**	**21**	P	**P**	**17 20 00.8**	**+1.2**
	baz=220,SNR=5.7						
P33M	**Teslin, Yukon**	**90.64**	**20**	P	**P**	**17 20 00.9**	**+1.2**
	baz=218						
HDA	**Harding Lake**	**90.68**	**12**	P	**P**	**17 20 00.7**	**+0.9**
	baz=206						
N31M	**Braeburn, Yuko**	**90.78**	**18**	P	**P**	**17 20 01.7**	**+1.3**
	baz=216						
H21K	**Melozitna Rive**	**90.86**	**9**	P	**P**	**17 20 01.8**	**+1.3**
	baz=200						
M29M	**Somme Creek**	**90.86**	**16**	P	**P**	**17 20 02.1**	**+1.4**
	baz=213,SNR=5.6						
SCRK	**Sand Creek**	**90.89**	**13**	P	**P**	**17 20 01.9**	**+1.0**
	baz=208						
I23K	**Minto, Yukon-K**	**90.92**	**11**	P	**P**	**17 20 01.1**	**+0.3**
	baz=204						
TCOL	**CIGO, UAF Yank**	**90.94**	**11**	P	**P**	**17 20 01.2**	**+0.3**
	baz=205						
COLA	**College**	**90.94**	**11⇓**	*e*P	**P**	**17 20 01.7**	**+0.8**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
COLA	**College**	**90.94**	**11**	P	**P**	**17 20 01.2**	**+0.3**
	baz=205						
AMTX	**Amarillo**	**90.98**	**52**	P	P	17 19 56.2	-5.8
AMTX				IAmb	IAmb	17 20 17.8	
	comp=Z,20nm,1.1s						
AMTX	**Amarillo**	**90.98**	**52**	P	**P**	**17 20 03.2**	**+1.2**
	baz=241						
AMTX	**Amarillo**	**90.98**	**52**	P	**P**	**17 20 02.3**	**+0.3**
	baz=241						
IL31		**91.02**	**12**		**P**	**17 19 59.7**	**-1.5**
IL31				IAmb	IAmb	17 20 17.7	
	comp=Z,38nm,1.4s						
ILAR	**Eielson Array**	**91.02**	**12**	P	**P**	**17 20 01.2**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=221,slow=5.1,SNR=14						
ILAR				PP	**PP**	**17 23 38.8**	**+0.6**
	comp=Z,1.6nm,1.2s,baz=226,slow=7.3,SNR=3.7						
	comp=Z,2.4nm,1.0s						
ILAR	**Eielson Array**	**91.02**	**12**	P	**P**	**17 19 58.8**	**-2.5**
J25K	**Salcha River,**	**91.17**	**12**	P	**P**	**17 20 01.4**	**-0.8**
J25K				IAmb	IAmb	17 20 21.9	
	comp=Z,13nm,0.9s						
J25K	**Salcha River,**	**91.17**	**12**	P	**P**	**17 20 02.9**	**+0.8**
	baz=207,SNR=5.7						
RLMT	**Red Lodge**	**91.20**	**40**	P	**P**	**17 20 02.7**	**-0.2**
	baz=237						
H22K	**Ishtalitna Cre**	**91.29**	**10**	P	**P**	**17 20 03.8**	**+1.3**
	baz=202						
N32M	**Quiet Lake**	**91.30**	**19**	P	**P**	**17 20 04.7**	**+1.9**
	baz=218						
K27K	**Chicken**	**91.35**	**14**	P	**P**	**17 20 04.0**	**+1.2**
	baz=210						
M30M	**Minto, Yukon**	**91.40**	**17**	P	**P**	**17 20 04.2**	**+1.0**
	baz=215						
ABTX	**Abilene, Hawle**	**91.43**	**55**	P	**P**	**17 20 00.7**	**-3.3**
ABTX	**Abilene, Hawle**	**91.43**	**55**	P	**P**	**17 20 05.1**	**+1.1**
	baz=242						
ABTX	**Abilene, Hawle**	**91.43**	**55**	P	**P**	**17 20 04.3**	**+0.3**
	baz=242						
J26L	**Joseph Creek**	**91.44**	**13**	P	**P**	**17 20 05.0**	**+1.6**
	baz=209,SNR=11						
L29M	**L29M**	**91.50**	**16**	P	**P**	**17 20 05.4**	**+1.8**
	baz=214,SNR=8.4						
H23K	**Yukon River**	**91.52**	**10**	P	**P**	**17 20 03.7**	**0.0**
	baz=203						
K22A	**Casper**	**91.56**	**43**	P	**P**	**17 20 03.5**	**-1.1**
	baz=239						
G21K	**Allakaket**	**91.56**	**9**	P	**P**	**17 20 03.5**	**-0.4**
	baz=200						
ZEA	**Zeya**	**91.71**	**330**	*e*P	**P**	**17 20 06.8**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
M31M	**Drury Creek, Y**	**91.75**	**18**	P	**P**	**17 20 05.8**	**+1.0**
	baz=217						
WTLY	**Watson Lake, Y**	**91.85**	**21**	P	**P**	**17 20 05.9**	**+0.6**
	baz=222						
PRP	**Porcupine Dome**	**91.95**	**12**	P	**P**	**17 20 04.0**	**-1.8**
PRP				IAmb	IAmb	17 20 25.9	
	comp=Z,20nm,1.2s						
PRP	**Porcupine Dome**	**91.95**	**12**	P	**P**	**17 20 07.0**	**+1.3**
	baz=207,SNR=6.8						
DAWY	**Dawson**	**91.99**	**15**	P	**P**	**17 20 05.3**	**-0.6**
DAWY				IAmb	IAmb	17 20 22.4	
	comp=Z,23nm,1.2s						
DAWY	**Dawson**	**91.99**	**15**	P	**P**	**17 20 07.8**	**+1.9**
	baz=212,SNR=5.4						
XAN	**Xi'an**	**92.07**	**306**	P	**P**	**17 20 08.5**	**+1.5**
XAN				pmax	pmax		
	comp=Z,30nm,1.1s						
XAN				LR	LR		
	comp=Z,380nm,21.0s						
XAN				LR	LR		
	comp=Z,430nm,20.0s						
XAN				LR	LR		
	comp=Z,760nm,21.2s						
FARO	**Faro, Yukon**	**92.07**	**18**	P	**P**	**17 20 07.3**	**+1.0**
	baz=218						
435B	**Jarrell**	**92.16**	**57**	P	**P**	**17 20 06.7**	**-0.8**
	baz=244						
EGAK	**Eagle**	**92.20**	**14**	P	**P**	**17 20 06.6**	**-0.2**
	baz=211						
G22K	**Bettles**	**92.23**	**9**	P	**P**	**17 20 07.7**	**+0.9**
	baz=202						
I26K	**Coal Creek Min**	**92.23**	**13**	P	**P**	**17 20 08.8**	**+1.8**
	baz=209						
F21K	**Alatna River**	**92.23**	**8**	P	**P**	**17 20 07.5**	**+0.6**
	baz=200						
G23K	**Bananza Creek**	**92.26**	**10**	P	**P**	**17 20 07.2**	**+0.1**
	baz=203						
K29M	**Barlow Dome**	**92.26**	**16**	P	**P**	**17 20 08.0**	**+0.8**
	baz=214,SNR=5.4						
KSCO	**Kaye Shedlock'**	**92.30**	**48**	P	**P**	**17 20 07.5**	**-0.6**
	baz=241						
EGMT	**Eagleton**	**92.51**	**38**	P	**P**	**17 20 08.3**	**-0.5**
	baz=236						
BILL	**Bilibino**	**92.59**	**353**	*i* P	P	17 20 15.3	+6.8
BILL				*i*		17 23 54.2	
BILL				pmax	pmax		
	comp=Z,19nm,1.2s						
BILL				MLR	MLR		
	comp=Z,495nm,19.0s						
WHTX	**Lake Whitney,**	**92.80**	**56**	P	**P**	**17 20 10.3**	**-0.1**
	baz=244						
I27K	**Kandik River**	**92.81**	**13**	P	**P**	**17 20 10.6**	**+0.9**
	baz=210						
NNA	**Nana**	**92.86**	**104**	LR	LR	17 54 05.6	
	comp=Z,806nm,19.2s,baz=216,slow=30						
MMPY	**Sheldon Lake,**	**92.98**	**19**	P	**P**	**17 20 11.8**	**+1.2**
	baz=220						
KMI	**Kunming**	**93.01**	**296**	⇑P	**P**	**17 20 13.8**	**+2.0**
KMI				pP	sP	17 20 17.0	+0.1
KMI				SKS	**SKSac**	**17 30 46.5**	**+1.0**
KMI				S	**ScS**	**17 31 20.5**	**+0.9**
KMI				pmax	pmax		
	comp=Z,25nm,1.0s						
KMI				pmax	pmax		
	comp=Z,200nm,3.9s						
KMI				LR	LR		
	comp=Z,180nm,8.1s						
KMI				LR	LR		
	comp=Z,270nm,18.3s						
KMI				LR	LR		
	comp=Z,390nm,21.7s						
HKT	**Hockley**	**93.16**	**59⇑**	*e*P	**P**	**17 20 14.0**	**+2.0**
HKT				pmax	pmax		
	comp=Z,13nm,1.6s						
E22K	**Anaktuvuk Pass**	**93.32**	**9**	P	**P**	**17 20 12.1**	**+0.2**
	baz=201						
I29M	**Ogilvie Camp,**	**93.34**	**15**	P	**P**	**17 20 12.7**	**+0.6**
	baz=213						
F24K	**Squaw Lake**	**93.34**	**10**	P	**P**	**17 20 13.1**	**+1.0**
	baz=205						
H27K	**Steamboat Moun**	**93.37**	**13**	P	**P**	**17 20 13.6**	**+1.4**
	baz=210						
HHC	**Hu-ho-hao-te**	**93.40**	**313**	*e*P	**P**	**17 20 14.5**	**+1.4**
HHC				SKS	**SKSac**	**17 30 50.8**	**+4.1**
HHC				S	**ScS**	**17 31 23.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,340nm,4.8s						
HHC				LR	LR		
	comp=Z,550nm,19.7s						
HHC				LR	LR		
	comp=Z,480nm,18.4s						
HHC				LR	LR		
	comp=Z,790nm,18.4s						
ATAH	**Atahualpa**	**93.48**	**99**	P	**P**	**17 20 16.5**	**+2.0**
	comp=Z,3.0nm,0.9s,baz=264,slow=7.9,SNR=1.7						
ATAH				LR	LR	17 54 05.8	
	comp=Z,544nm,19.6s,baz=241,slow=30						
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.50**	**289**	P	**P**	**17 20 15.9**	**+2.0**
	comp=Z,23nm,1.1s,baz=121,slow=3.0,SNR=83						
	comp=Z,23nm,1.1s						
CMAR	**Chiang Mai Arr**	**93.50**	**289**	*ce*P	**P**	**17 20 16.1**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,25nm,1.1s						
Z35A	**Perchaven, San**	**93.54**	**55**	P	**P**	**17 20 15.3**	**+1.5**
	baz=244						
G26K	**Porcupine Rive**	**93.55**	**12**	P	**P**	**17 20 15.1**	**+2.2**
	baz=208						
U32A	**Winter Ranch,**	**93.61**	**52**	P	**P**	**17 20 15.8**	**+1.7**
	baz=243						
CHTO	**Chiang Mai**	**93.64**	**289**	P	**P**	**17 20 15.2**	**+0.7**
CHTO	**Chiang Mai**	**93.64**	**289**	P	**P**	**17 20 15.2**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,33nm,1.2s						
LAO	**LASA Array**	**93.83**	**40**	P	**P**	**17 20 17.0**	**+2.1**
	baz=239						
LAO	**LASA Array**	**93.83**	**40**	P	**P**	**17 20 16.6**	**+1.8**
	baz=239						
G27K	**Doyon Strip**	**93.84**	**13**	P	**P**	**17 20 14.8**	**+0.4**
	baz=210						
RSSD	**Black Hills**	**93.87**	**43**	P	**P**	**17 20 16.6**	**+1.3**
	baz=240						
RSSD	**Black Hills**	**93.87**	**43**	P	**P**	**17 20 16.7**	**+1.4**
	baz=240						
F26K	**Sheenjek River**	**94.14**	**11**	P	**P**	**17 20 15.9**	**+0.1**
	baz=208						
BTO	**Baotou**	**94.32**	**313**	*e*P	**P**	**17 20 19.3**	**+2.0**
BTO				LR	LR		
	comp=Z,1μm,19.0s						
BTO				LR	LR		
	comp=Z,1μm,17.6s						
PZH	**PanZhiHua**	**94.40**	**297**	P	**P**	**17 20 18.5**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,110nm,5.9s						
JTS	**Las Juntas de**	**94.46**	**81**	LR	LR	17 55 15.4	
	comp=Z,97nm,18.7s,baz=326,slow=31						
EPYK	**Eagle Plains**	**94.54**	**15**	P	**P**	**17 20 15.6**	**-2.0**
	baz=215						
R32A	**Long Quarter,**	**94.73**	**50**	P	**P**	**17 20 20.5**	**+1.3**
	baz=243						
LVC	**Limon Verde**	**94.95**	**117**	LR	LR	17 56 49.3	
	comp=Z,368nm,18.1s,baz=226,slow=32						
T35B	**Sooner Cattle**	**95.64**	**52**	P	**P**	**17 20 24.8**	**+1.5**
	baz=244						
TUL1	**Leonard**	**95.74**	**53**	P	**P**	**17 20 24.1**	**+0.3**
	baz=245						
YAK	**Yakutsk**	**96.10**	**337**	*e*P	**P**	**17 20 25.4**	**+0.7**
YAK				pmax	pmax		
	comp=Z,16nm,1.5s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
F31M	**Tsiigehtchic**	**96.11**	**15**	P	**P**	**17 20 24.5**	**-0.1**
	baz=218						
LZH	**Lanzhou**	**96.70**	**306**	*e*P	**P**	**17 20 26.0**	**-2.4**
LZH				pP	sP	17 20 32.5	-1.0
LZH				sP	pP	17 20 35.0	+2.9
LZH				SKS	**SKSac**	**17 31 08.0**	**+3.3**
LZH				S	**S**	**17 31 42.3**	**-7.1**
LZH				sS	ScS	17 31 51.5	+1.7
LZH				pmax	pmax		
	comp=E,12nm,1.1s						
LZH				pmax	pmax		
	comp=E,170nm,4.5s						
LZH				LR	LR		
	comp=E,320nm,15.5s						
LZH				LR	LR		
	comp=E,430nm,15.3s						
LZH				LR	LR		
	comp=E,600nm,17.0s						
INK	**Inuvik**	**96.84**	**14**	LR	LR	18 01 39.0	
	comp=E,302nm,18.3s,baz=208,slow=34						
ECSD	**EROS Data Cent**	**98.46**	**46**	P	Pdif	17 20 37.0	+1.1
	baz=245						
YKA	**Yellowknife Ar**	**98.51**	**24**	LR	LR	17 59 19.6	
	comp=E,338nm,20.2s,baz=230,slow=32						
LPAZ	**La Paz**	**98.55**	**112**	LR	LR	17 59 04.1	
	comp=E,306nm,18.1s,baz=261,slow=32						
ULN	**Ulaanbaatar**	**99.45**	**318⇓**	*e*P	**Pdif**	**17 20 41.0**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN

GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,71nm,5.5s
GTA LR LR
comp=Z,190nm,22.2s
GTA LR LR
comp=Z,250nm,21.1s
GTA LR LR
comp=Z,340nm,20.7s
EYMN Ely 103.39 43 P **Pdif 17 20 56.2 -1.5**
baz=249
SFIN Lafayette 103.77 52 P **Pdif 17 20 57.5 -2.1**
baz=250
BLA Blacksburg 107.75 57 P **PKiKP 17 25 22.3 -2.8**
baz=253
SSPA Standing Stone 110.56 54 P **PKiKP 17 25 27.8 -2.4**
baz=256
PCHI Peechi 110.82 273 *eP* PKiKP 17 25 21.2 -10
PCHI *ex* x 17 35 46.2
WMQ Urumqi 110.93 310 *e*PKP **PKiKP 17 25 28.5 -2.4**
WMQ LR LR
comp=Z,280nm,22.1s
WMQ LR LR
comp=Z,310nm,22.5s
ZALV Zalesovo Beam 114.59 320 PKP PKPdf 17 25 37.0 -0.5
comp=Z,1.7nm,0.6s,baz=100,slow=1.6,SNR=5.2
MKAR Makanchi Array 115.23 312 PKP **PKiKP 17 25 39.6 +0.7**
comp=Z,1.9nm,1.0s,baz=28,slow=5.5,SNR=5.2
KURK Kurchatov 118.07 316 PKIKP **PKPdf 17 25 44.1 -0.2**
KURBB Kurchatov Arra 118.12 316 PKP **PKPdf 17 25 44.1 -0.2**
comp=Z,2.0nm,0.7s,baz=98,slow=1.9,SNR=9.9
AAK Ala-Archa 120.25 307 PKP **PKiKP 17 25 49.9 +0.8**
comp=Z,1.4nm,0.6s,baz=194,slow=5.6,SNR=3.5
AAK Ala-Archa 120.25 307 ⇓*i*PKIKP **PKiKP 17 25 50.3 +1.3**
AAK pmax pmax
comp=Z,4.0nm,1.3s
BRVK Borovoye 123.24 319 ⇑*i*PKIKP **PKiKP 17 25 55.4 +1.0**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BOSA Boshof 124.21 202 PKP **PKiKP 17 25 58.9 +1.5**
comp=Z,8.0nm,1.2s,baz=198,slow=3.2,SNR=3.2
SUMG Summit 125.76 15 *i* P **PKiKP 17 25 59.2 -0.2**
SVE Sverdlovsk 128.09 325 *i* PKIKP **PKiKP 17 26 04.9 +1.0**
SVE pmax pmax
comp=Z,29nm,1.5s
SVE MLR MLR
comp=Z,426nm,22.0s
ARU Arti 129.31 325 *i* PKIKP **PKiKP 17 26 07.2 +0.9**
ARU 17 28 14.4
ARU 17 33 15.2
ARU SP SP 17 38 14.8 -6.4
ARU SS **SS 17 45 31.8 -3.2**
GEYT Alibeck 132.59 300 PKP **PKiKP 17 26 13.4 -0.2**
comp=Z,4.7nm,0.7s,baz=72,slow=0.5,SNR=8.1
GEYT SKP 17 29 47.0
comp=Z,10nm,1.2s,baz=48,slow=2.2,SNR=11
ARCES ARCESS Array B 132.60 350 PKP **PKiKP 17 26 12.9 +0.3**
comp=Z,2.6nm,0.8s,baz=14,slow=1.9,SNR=7.2
KIRV Kirov 133.04 330 ⇓*i*PKIKP **PKiKP 17 26 15.9 +2.1**
PRGR Permogore 133.07 335 *e*PKIKP **PKPdf 17 26 12.4 -0.2**
PRGR *e* 17 28 41.2
PRGR pmax pmax
comp=Z,10.0nm,0.9s
FINES FINESS Array B 139.62 344 PKhKP PKPpre 17 26 20.9
comp=Z,2.9nm,1.0s,baz=105,slow=3.3,SNR=6.1
MOS Moscow 139.96 331 *e*PKHKP PKPpre 17 26 17.4
VRH Novokhopyorsk 140.51 323 *e*PKIKP **PKiKP 17 26 28.1 -1.1**
VRH pmax pmax
comp=Z,20nm,1.6s
OBN Obninsk 140.82 331 *e*PKIKP **PKPdf 17 26 27.6 +0.5**
OBN *i* 17 26 31.8
OBN *e*SS SS 17 47 53.4 +0.7
OBN pmax pmax
comp=Z,29nm,1.2s
LPSR Galich'ya Gora 141.23 327 *e*PKIKP **PKiKP 17 26 34.1 +3.4**
LPSR pmax pmax
comp=Z,20nm,1.5s
VORR Voronezh 141.61 325 *e*PKIKP **PKPdf 17 26 28.9 +0.3**
VORR pmax pmax
comp=Z,40nm,0.4s
VSR Storozhevoye 141.88 325 *e*PKIKP **PKiKP 17 26 33.1 +1.0**
VSR pmax pmax
comp=Z,20nm,1.7s
NB2 NORSAR Subarra142.52 355 PKP **PKPdf 17 26 26.3 -3.8**
comp=Z,1.9nm,1.2s,baz=16,slow=3.2
NOA NORSAR Array B142.52 355 PKP **PKPdf 17 26 29.7 -0.4**
comp=Z,1.8nm,0.8s,baz=16,slow=4.5,SNR=6.3
ZEI Tsey 142.54 310 *i* PKIKP **PKPdf 17 26 30.6 -0.3**
ZEI pmax pmax
comp=Z,8.0nm,1.4s
KIV Kislovodsk 143.00 312 *i* PKIKP **PKPdf 17 26 31.3 -0.2**
KIV pmax pmax
comp=Z,9.0nm,1.0s
LODK Lodwar 144.06 240 PKPdf **PKPdf 17 26 33.5 -0.8**
STRU Stroemstad 144.51 354 *i* P PKPbc 17 26 32.4 +0.3
MNK Minsk 144.78 336 *i* PKIKP **PKPdf 17 26 33.5 -0.6**
MNK *i* 17 26 37.8
MNK *i* 17 29 49.7
MNK *i* SS SS 17 48 40.0 +1.7
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=E,1.0nm,1.0s
MNK pmax pmax
comp=Z,12nm,1.0s
MNK MLR MLR
comp=N,1μm,20.0s
MNK MLR MLR
comp=Z,257nm,19.0s
MNK MLR MLR
comp=E,27nm,21.0s
MNK Minsk 144.78 336 *i* PKP **PKPdf 17 26 33.5 -0.6**
comp=E,1.0nm,1.0s
MNK *i* PKP **PKPdf 17 26 33.5 -0.6**
comp=N,16nm,1.0s
MNK *i* PKP **PKPdf 17 26 33.5 -0.6**
comp=Z,12nm,1.0s,baz=38
MNK *i* PKiKP **PKiKP 17 26 37.9 0.0**
MNK *i* PP **PP 17 29 49.7 -1.4**
MNK *i* PPP PPP 17 33 32.0
MNK *i* SKS SKSdf 17 34 02.8 +20
MNK *i* SKKS SKKPab 17 38 01.2 -13
MNK *i* SS **SS 17 48 40.0 +1.8**
MNK *i* SSS SSS 17 53 44.2
MNK *i* LR LR 18 26 01.4
MNK *i* LRM MLR 18 30 55.1
comp=N,1μm,19.5s
MNK *i* LRM MLR 18 31 12.3
comp=Z,257nm,19.4s
MNK *i* LRM MLR 18 31 54.3
comp=E,27nm,20.6s
NACGM Naroch 144.86 338 *e*PKP **PKPdf 17 26 35.0 +0.7**
comp=Z,48nm,1.0s,baz=38
MBAR Mbarara 144.90 230 **PKPdf 17 26 36.5 +0.6**
MBAR Mbarara 144.90 230 PKIKP **PKPdf 17 26 36.5 +0.6**
GURO Guroymak-BITLI 145.06 304 **PKPab 17 26 34.9 +0.1**
SNART Snartemo 145.46 358 *i* P **PKPab 17 26 35.9 +0.5**
HOMB Homborsund 145.47 356 *i* P **PKPbc 17 26 28.6 -6.6**
BORU Boraas 145.71 352 *i* P **PKPdf 17 26 29.0 -6.7**
ONAU Onsala 146.04 353 *i* P **PKPdf 17 26 29.1 -7.1**
DEL Delary 146.69 351 *i* P **PKPdf 17 26 37.2 -0.1**
AKASG Malin Array Be 147.09 331 PKPbc **PKPbc 17 26 40.0 -0.3**
comp=Z,5.2nm,0.6s,baz=38,slow=3.7,SNR=26
AKASG Malin Array Be 147.09 331 PKP2 **PKPbc 17 26 40.0 -0.3**
MUD Monsted U'grnd 147.23 355 *i* P **PKPbc 17 26 40.9 +0.4**
LUNU Lund 147.56 351 *i* P **PKPbc 17 26 41.9 +0.5**
SIM Simferopol' 148.09 319 *e*PKP2 **PKPab 17 26 45.7 -0.4**
SIM pmax pmax
comp=Z,130nm,0.9s
BEL Belsk 149.40 340 *e*PKP **PKiKP 17 26 48.1 +0.6**
MILM Milestii Mici 149.89 326 ⇓P **PKPbc 17 26 47.5 -0.2**
MILM Milestii Mici 149.89 326 *e*PKP **PKPbc 17 26 47.0 -0.7**
comp=Z,240nm,1.5s
MILM LRM MLR 18 38 25.0
comp=Z,200nm,24.0s
MILM Milestii Mici 149.89 326 *e*PKHKP PKPpre 17 26 47.0
MILM pmax pmax
comp=Z,310nm,1.6s
LVV L'vov 149.94 335 *e*PKHKP PKPpre 17 26 47.0
BRTR Keskin Array B 150.85 310 PKPbc **PKPbc 17 26 50.5 0.0**
comp=Z,6.2nm,0.8s,baz=134,slow=3.6,SNR=14
VLDR Vladesti 150.98 325 ⇑P **PKiKP 17 26 51.3 +0.3**
OJC Ojcow 151.12 340 *e*PKP **PKPbc 17 26 49.8 -0.8**
BUR01 Bucovina Ar. S 151.14 330 ⇑P **PKPbc 17 26 48.8 -2.1**
GHRR 151.19 326 ⇑P **PKiKP 17 26 54.8 +3.4**
TESR Tescani 151.26 327 ⇑P **PKiKP 17 26 52.9 +1.4**
STHS Stebnicka Huta 151.31 337 *e*PKIKP **PKiKP 17 26 51.4 -0.2**
KOLS Kolonicke sedl 151.33 335 *e*PKIKP **PKiKP 17 26 52.5 +0.9**
ANTO Ankara 151.38 311 ⇓P **PKiKP 17 26 53.1 +1.0**
CFR Carcaliu 151.39 324 ⇑P **PKPdf 17 26 43.4 -1.9**
CFR Carcaliu 151.39 324 ⇑PKIKP **PKPdf 17 26 43.4 -1.9**
TPGR Topolog 151.44 323 ⇓P **PKiKP 17 26 53.4 +1.4**
KSP Ksiaz 151.55 344 *e*PKP **PKiKP 17 26 53.2 +1.2**
UZH Uzhgorod 151.57 335 *e*PKIKP **PKiKP 17 26 52.0 -0.1**
UZH *e* 17 26 57.5
CRVS Cervenica-Dubn 151.66 336 *e*PKIKP **PKiKP 17 26 53.2 +0.9**
VRI Vrincioaia 151.67 326 ⇑P **PKiKP 17 26 53.0 +0.6**
VRI Vrincioaia 151.67 326 ⇑PKIKP **PKiKP 17 26 53.0 +0.6**
PLOR Plostina 151.72 326 ⇓P **PKPdf 17 26 42.6 -3.3**
PLOR Plostina 151.72 326 ⇓PKIKP **PKPdf 17 26 42.6 -3.3**
CLL Collm 151.81 349 *i* PKIKP **PKiKP 17 26 53.3 +0.8**
CLL *i* 17 27 00.7
CLL pmax pmax
comp=Z,19nm,0.9s
CLL pmax pmax
comp=Z,29nm,1.0s
CLL MLR MLR
comp=Z,300nm,18.3s
CLL Collm 151.81 349 *e*PKPdf **PKPdf 17 26 45.0 -0.7**
CLL *i* PKPbc **PKiKP 17 26 53.3 +0.8**
comp=Z,19nm,0.9s
CLL *i* x x 17 26 57.5
comp=Z,44nm,1.1s
CLL *i* PKPab **PKPab 17 27 00.7 -0.3**
comp=Z,29nm,1.0s
CLL *i* x x 17 27 04.3
comp=Z,89nm,1.0s
CLL *e*SKPdf **SKPdf 17 30 15.0 -3.3**
CLL *ex* x 17 30 44.0
CLL *e*SS **SS 17 49 53.0 -3.7**
CLL *ex* x 17 54 42.0
CLL *e*SSS SSS 17 55 48.0
CLL LmH 18 45 00.0
comp=N,200nm,18.5s
CLL LmH 18 45 00.0
comp=E,100nm,19.5s
HARR Harsova 151.82 323 ⇓P **PKPbc 17 26 49.1 -3.2**
HARR Harsova 151.82 323 ⇓PKIKP **PKPbc 17 26 49.1 -3.2**
OSTC Ostas 151.83 344 ⇑*e*PKP **PKiKP 17 26 53.5 +0.9**
OSTC *e*PKPAB **sPKPab 17 27 06.6 +0.2**
CHVC Chvalec 151.84 344 ⇑*e*PKP **PKiKP 17 26 52.9 +0.2**
CHVC *e*PKPAB **sPKPbc 17 26 58.2 +0.7**
TRPA Tarpa 151.88 334 ⇓P **PKiKP 17 26 54.0 +1.2**
TRPA Tarpa 151.88 334 PKP **PKiKP 17 26 55.1 +2.4**
BISRR Bisoca 151.90 326 ⇑P **PKiKP 17 26 55.0 +2.0**
UPC Upice 151.93 344 *e*PKIKP **PKiKP 17 26 53.6 +0.8**
UPC Upice 151.93 344 ⇑*e*PKP **PKiKP 17 26 53.6 +0.8**
UPC *ep*PKP **sPKPab 17 27 06.2 -0.6**
OKC Ostrava-Krasne 151.96 341 *e*PKIKP **PKiKP 17 26 53.7 +0.8**
OKC Ostrava-Krasne 151.96 341 ⇑*e*PKP **PKiKP 17 26 53.7 +0.8**
OKC *ex* x 17 27 05.7
OZUR 151.98 328 ⇑P **PKiKP 17 26 54.9 +1.8**
DPC Dobruska-Polom 151.99 344 *e*PKIKP **PKiKP 17 26 53.5 +0.5**
DPC Dobruska-Polom 151.99 344 ⇑*e*PKP **PKiKP 17 26 53.5 +0.5**
DPC *ex* x 17 27 06.7
MANR Mangalia 152.00 321 ⇑P **PKiKP 17 26 53.8 +0.7**
BRG Berggiesshubel 152.04 347 *e*PKIKP **PKPdf 17 26 45.9 -0.2**
BRG pmax pmax
comp=Z,3.0nm,0.5s
KRLC Kraliky 152.13 343 *e*PKIKP **PKiKP 17 26 54.1 +0.8**
KRLC Kraliky 152.13 343 ⇑*e*PKP **PKiKP 17 26 54.1 +0.8**
KRLC *ex* x 17 27 06.3
MORC Moravsky Berou 152.19 342 ⇑P **PKiKP 17 26 54.6 +1.2**
MORC Moravsky Berou 152.19 342 ⇑PKIKP **PKiKP 17 26 54.6 +1.2**
MORC Moravsky Berou 152.19 342 *e*PKP **PKPbc 17 26 52.4 -0.7**
PVCC Panska Ves 152.24 346 *e*PKIKP **PKiKP 17 26 54.1 +0.7**
PVCC Panska Ves 152.24 346 ⇑*e*PKP **PKiKP 17 26 54.1 +0.7**
PVCC *ep*PKP **sPKPab 17 27 07.5 -0.5**
ABAH Abaujker 152.25 336 PKP **PKiKP 17 26 56.7 +3.2**
DOPR Dopca 152.26 328 ⇓P **PKPdf 17 26 45.7 -0.9**
MLR Muntele Rosu 152.32 327 ⇓P **PKPbc 17 26 52.4 -1.3**
MLR Muntele Rosu 152.32 327 ⇓PKIKP **PKPbc 17 26 52.4 -1.3**
MAUC Maruska 152.47 341 ⇑*e*PKP **PKiKP 17 26 55.2 +1.2**
MAUC *e*PKPAB **sPKPab 17 27 07.0 -2.1**
PRU Pruhonice 152.75 346 *e*PKIKP **PKPbc 17 26 52.2 -2.1**
PRU *e* 17 27 06.2
PRU Pruhonice 152.75 346 ⇑*e*PKP **PKPbc 17 26 52.2 -2.1**
PRU *e*PKPAB **pPKPab 17 27 06.2 -2.6**
GOPC GO Pecny, Ondr 152.77 346 *e*PKIKP **PKiKP 17 26 55.1 +0.5**
GOPC GO Pecny, Ondr 152.77 346 ⇑*e*PKP **PKiKP 17 26 55.1 +0.5**
GOPC *e*PKPAB **pPKPab 17 27 07.2 -1.7**
VOIR 152.81 327 ⇑P **PKiKP 17 26 55.7 +0.8**
VOIR 152.81 327 ⇑PKIKP **PKiKP 17 26 55.7 +0.8**
DRGR 152.87 332 ⇑P **PKPbc 17 26 54.0 -0.8**
VRAC Vranov 152.88 343 *e*PKP **PKPbc 17 26 53.4 -1.2**
VYHS Vyhne 152.93 339 *e*PKIKP **PKiKP 17 26 56.9 +2.0**
NKC Novy Kostel 152.94 349 *e*PKIKP **PKiKP 17 26 55.9 +1.0**
NKC Novy Kostel 152.94 349 ⇑*e*PKP **PKiKP 17 26 55.9 +1.0**
NKC *e*PKPAB **pPKPab 17 27 07.5 -2.1**
JAVC Velka Javorina 152.97 341 *e*PKP **PKPbc 17 26 54.3 -0.6**
PSZ Piszkesteto 153.06 337 ⇑P **PKiKP 17 26 58.1 +2.8**
PSZ Piszkesteto 153.06 337 ⇑PKIKP **PKiKP 17 26 58.1 +2.8**
PSZ Piszkesteto 153.06 337 PKP **PKiKP 17 26 58.6 +3.3**
ARR Arges 153.06 328 ⇓P **PKPdf 17 26 48.6 +0.7**
KRUC Moravsky 153.15 343 *e*PKP **PKPbc 17 26 53.5 -1.7**
TREC Trest 153.18 344 *e*PKIKP **PKiKP 17 26 56.4 +1.0**
TREC *e* 17 27 08.1
TREC Trest 153.18 344 ⇑*e*PKP **PKiKP 17 26 56.4 +1.0**
TREC *e*PKPAB **pPKPab 17 27 08.1 -2.6**
MEM Membach 153.24 358 *d*PKP **PKPab 17 27 08.7 +1.6**
BTNL Ternell 153.25 358 *d*PKiKP **PKiKP 17 26 56.2 +0.6**
BTNL *d*PKP **pPKPab 17 27 08.3 -2.6**
BSTI Sart Tilman 153.27 359 *d*PKiKP **PKiKP 17 26 57.6 +2.1**
BSTI *d*PKP **pPKPab 17 27 08.2 -2.8**
SNF Seneffe 153.36 0 *d*PKP **PKPab 17 27 09.1 +1.5**
BGES Gesves 153.48 359 *d*PKP **PKPab 17 27 08.8 +0.7**
DEV Deva 153.49 331 ⇑P **PKiKP 17 26 59.1 +3.0**
DEV Deva 153.49 331 ⇑PKIKP **PKiKP 17 26 59.1 +3.0**
MODS Modra-Piesok 153.52 341 *e*PKIKP **PKiKP 17 26 58.5 +2.3**
MODS *e* 17 27 09.5
BMRD Maredsous 153.56 360 *d*PKiKP **PKPbc 17 26 53.4 -2.7**
BMRD *d*PKP **sPKPbc 17 27 02.1 +0.8**
RCHB Rochefort 153.71 359 *d*PKiKP **PKiKP 17 27 01.9 +5.4**
RCHB *d*PKP **PKPab 17 27 09.7 +0.6**
DOU Dourbes 153.77 0 *d*PKiKP **PKiKP 17 26 59.3 +2.7**
DOU *d*PKP **PKPab 17 27 05.8 -3.5**
KHC Kasperske Hory 153.77 347 *e*PKIKP **PKPdf 17 26 50.6 +1.8**
KHC *e* 17 26 58.4
KHC *e* 17 27 09.8
KHC Kasperske Hory 153.77 347 *e*PKPDF **PKPdf 17 26 50.6 +1.8**
KHC ⇑*e*PKP **pPKPbc 17 26 58.4 -2.1**
KHC *e*PKPAB **PKPab 17 27 09.8 +0.3**
CKRC Cesky Krumlov 153.90 345 *e*PKPDF **PKPdf 17 26 49.7 +0.8**
CKRC *e*PKPAB **PKPab 17 27 10.5 +0.5**
GERES GERESS Array B 154.02 346 PKP **PKPdf 17 26 49.9 +0.7**
comp=Z,0.4nm,0.6s,baz=2.9,slow=2.0,SNR=3.9
GERES PKPbc **PKiKP 17 26 58.2 +1.0**
comp=Z,1.8nm,0.9s,baz=47,slow=1.9,SNR=7.2
GERES PKPab **PKPab 17 27 10.1 -0.5**
comp=Z,6.2nm,0.9s,baz=33,slow=2,3,SNR=13
BZS Buzias 154.26 332 ⇑P **PKPdf 17 26 50.0 +0.5**
BZS Buzias 154.26 332 ⇑PKIKP **PKPdf 17 26 50.0 +0.5**
CONA Conrad Observa 154.33 342 *e*P **PKiKP 17 26 59.8 +1.9**
comp=Z,12nm,1.3s
CONA *e*P **PKPab 17 27 11.6 -0.3**
comp=Z,30nm,1.4s
HERR Herculane 154.47 330 ⇑P **PKPdf 17 26 51.6 +1.8**
MPLH Magyarpolny 154.51 339 PKP **PKiKP 17 27 00.6 +2.4**
MORH Mrgy, Hungar 154.96 337 ⇓P **PKPdf 17 26 53.1 +2.7**
KOVH Kovagotottos 155.26 337 PKP PKPab 17 27 05.1 -11
BLKB Belogradchik 155.29 327 ⇑P **PKPdf 17 26 53.6 +2.6**
BOVS Bovan 155.75 329 ⇑P **PKPdf 17 26 53.8 +2.3**
ABTA Abfaltersbach 156.26 346 *e*P **PKPdf 17 26 53.8 +1.5**
comp=Z,6.1nm,1.2s
PGAV Gavieira, Arco 158.95 28 *e*LR LR 18 30 12.2
comp=Z,346nm,18.0s
POLO Lamas de Olo 159.64 28 *e*PKPdf **PKPdf 17 26 58.4 +1.8**
MVO Moncorvo 160.14 27 *e*PKPdf **PKPdf 17 26 56.2 -1.0**
MVO Moncorvo 160.14 27 *e*LR LR 18 29 26.4
comp=Z,319nm,18.0s
MTE Manteigas 160.55 29 *e*PKPdf **PKPdf 17 26 56.0 -1.6**
MTE Manteigas 160.55 29 *e*LR LR 18 31 11.9
comp=Z,328nm,20.0s
PCBR Castelo Branco 161.03 30 *e*PKPdf **PKPdf 17 27 00.5 +2.4**
PMRV Marv??o 161.40 30 *e*PKPdf **PKPdf 17 27 01.1 +2.6**
PMRV Marv??o 161.40 30 *e*LR LR 18 35 49.9
comp=Z,515nm,20.0s
PESTR Estremoz 161.75 32 *e*PKPdf **PKPdf 17 27 01.5 +2.6**
PNCL Nicolau / Gran 161.85 35 *e*PKPdf **PKPdf 17 27 00.8 +1.8**
PBAR Barrancos 162.56 32 *e*PKPdf **PKPdf 17 26 57.2 -2.5**
ESDC Sonseca Array 162.60 23 PKP **PKPdf 17 27 01.4 +1.7**
comp=Z,1.3nm,1.0s,baz=330,slow=1.9,SNR=9.0
PVAQ Vaqueiros 162.81 35 *e*LR LR 18 32 53.4
comp=Z,477nm,18.0s
KEST Kesra 167.45 342 PKPab **PKPab 17 28 11.2 +1.9**
comp=Z,7.0nm,0.9s,baz=11,slow=7.8,SNR=3.8
TORD Torodi Ar. Bea 169.03 165 PKP **PKPdf 17 27 06.1 +0.5**
comp=Z,3.0nm,1.1s,baz=143,slow=1.1,SNR=7.5
TORD PKPab **pPKPab 17 28 18.5 -1.8**
comp=Z,1.6nm,0.9s,baz=194,slow=3.0,SNR=2.0
TORD PP **PP 17 32 05.0 +0.4**
comp=Z,1.2nm,1.0s,baz=180,slow=3.9,SNR=3.8

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*IDC **30** 17:07:32.0±33.0, 23°.49S×177°.97W, h330km±291km, mb3.7/6, mbtmp4.3/6, Error ellipse: s-maj=155.5km s-min=43.1km az=74.0*

ISC 30 17:07:33.3±1.6, 23°.4S±0°.3×177°.9W±0°.3, h350km, n9, σ1§12/9, mb3.9/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.39**	**269**	P	**P**	**17 13 40.9**	**+0.4**
	5.9nm,0.3s,baz=99,slow=10,SNR=31						
	5.9nm,0.3s						
STKA	**Stephens Creek**	**36.69**	**248**	P	**P**	**17 14 07.5**	**-0.6**
	3.6nm,0.7s,baz=85,slow=8.6,SNR=14						
	3.6nm,0.7s						
ASAR	**Alice Springs**	**44.01**	**260**	P	**P**	**17 15 07.2**	**-0.5**
	1.5nm,0.3s,baz=95,slow=7.3,SNR=62						
	1.5nm,0.3s						
WRA	**Warramunga Arr**	**44.35**	**265**	P	**P**	**17 15 09.6**	**-0.8**
	4.8nm,0.6s,baz=96,slow=8.2,SNR=120						
	4.8nm,0.6s						
MAW	**Mawson**	**78.89**	**200**	P	**P**	**17 18 58.6**	**+0.4**
	2.3nm,0.8s,baz=135,slow=4.3,SNR=2.7						
	2.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**91.15**	**290**	P	**P**	**17 20 01.6**	**+2.0**
	0.3nm,0.8s,baz=133,slow=5.0,SNR=3.0						
	0.3nm,0.8s						
ARCES	**ARCESS Array B**	**131.76**	**349**	PKP	**PKiKP**	**17 26 04.6**	**-0.8**
	2.1nm,0.8s,baz=48,slow=1.3,SNR=3.5						
AKASG	**Malin Array Be**	**145.54**	**329**	PKPbc	**PKPab**	**17 26 30.8**	**-0.9**
	2.4nm,0.5s,baz=41,slow=4.0,SNR=23						
BRTR	**Keskin Array B**	**148.77**	**309**	PKPbc	**PKiKP**	**17 26 40.8**	**-0.5**
	1.2nm,0.7s,baz=96,slow=2.4,SNR=6.4						

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*PRU **30** 17:11:10.0±0.0, 42°.67N×13°.33E, h0km*

ROM 30 17:11:07.7±0.1, 42°.563N±0°.004×13°.251E±0°.004, h12km, ML3.0/40, 32C-25D, Error ellipse: s-maj=0.3km s-min=0.2km az=22.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.06**	**206**	⇑P	Pg	17 11 10.7	+0.4
RM33				S	Sg	17 11 12.4	+0.3
RM33				AML	AML		
	comp=N,76500μm,1.1s						
RM33				AML	AML		
	comp=N,79300μm,1.1s						
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=N,76450μm,1.1s						
RM33				AML	AML		
RM33				AML	AML		
	comp=N,72473μm,0.2s						
RM33				AML	AML		
	comp=N,74235μm,0.2s						
RM33				AML	AML		
CAMP	**Campotosto**	**0.12**	**103**	⇓P	Pg	17 11 11.4	+0.5
CAMP				S	Sg	17 11 13.8	+0.4
CAMP				AML	AML		
	comp=N,9545μm,0.7s						
CAMP				AML	AML		
	comp=E,9450μm,0.3s						
CAMP				AML	AML		
	comp=E,9449μm,0.3s						
CAMP				AML	AML		
	comp=N,8405μm,0.3s						
T1204	**Amatrice, Fraz**	**0.12**	**23**	⇑P	Pg	17 11 11.5	+0.4
T1204				S	Sg	17 11 13.8	+0.3
T1204				AML	AML		
	comp=E,51100μm,0.8s						
T1204				AML	AML		
	comp=N,25100μm,1.5s						
T1204				AML	AML		
	comp=E,51150μm,0.8s						
T1204				AML	AML		
	comp=N,25150μm,1.5s						
T1204				AML	AML		
	comp=E,33488μm,0.2s						
T1204				AML	AML		
	comp=N,23302μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.13**	**164**	⇑P	Pb	17 11 11.6	-0.5
T1247				S	Sg	17 11 13.8	+0.5
T1247				AML	AML		
	comp=N,20350μm,0.5s						
T1247				AML	AML		
	comp=E,22900μm,0.3s						
T1247				AML	AML		
	comp=N,17591μm,0.1s						
T1247				AML	AML		
	comp=E,22904μm,0.3s						
LNSS	**Leonessa**	**0.16**	**284**	⇑P	Pg	17 11 12.0	+0.5
LNSS				S	Sg	17 11 14.9	+0.7
LNSS				AML	AML		
	comp=N,40150μm,0.1s						
LNSS				AML	AML		
	comp=E,17850μm,0.3s						
LNSS				AML	AML		
	comp=E,17888μm,0.3s						
LNSS				AML	AML		
	comp=N,40163μm,0.1s						
T1243	**Rocca Santa Ma**	**0.20**	**48**	⇑P	Pg	17 11 12.5	+0.3
T1243				S	Sg	17 11 15.7	+0.5
AQU	**L'Aquila**	**0.24**	**152**	⇓P	Pg	17 11 13.4	+0.6
AQU				S	Sg	17 11 17.5	+1.3
AQU				AML	AML		
	comp=N,3950μm,0.6s						
AQU				AML	AML		
	comp=E,4370μm,0.3s						
AQU				AML	AML		
	comp=E,4155μm,0.4s						
AQU				AML	AML		
	comp=N,3485μm,1.6s						
AQU				AML	AML		
	comp=N,3883μm,0.3s						
AQU				AML	AML		
	comp=E,4154μm,0.4s						
AQU				AML	AML		
	comp=E,4371μm,0.3s						
AQU				AML	AML		
	comp=N,3372μm,0.2s						
GIGS	**Gran Sasso**	**0.26**	**116**	⇑P	Pg	17 11 13.5	+0.3
GIGS				S	Sg	17 11 17.5	+0.6
GIGS				AML	AML		
	comp=E,1445μm,1.1s						
GIGS				AML	AML		
	comp=N,1525μm,1.3s						
GIGS				AML	AML		
	comp=E,1305μm,0.2s						
GIGS				AML	AML		
	comp=N,1451μm,0.2s						
TERO	**Teramo**	**0.27**	**77**	⇑P	Pg	17 11 13.6	+0.2
TERO				S	Sg	17 11 17.7	+0.7
TERO				AML	AML		
	comp=E,19200μm,0.2s						
TERO				AML	AML		
	comp=N,17950μm,0.2s						
TERO				AML	AML		
	comp=N,19850μm,0.2s						
TERO				AML	AML		
	comp=E,19250μm,0.2s						
TERO				AML	AML		
	comp=N,18000μm,0.2s						
TERO				AML	AML		
	comp=E,21000μm,0.1s						
TERO				AML	AML		
	comp=N,19874μm,0.2s						

TERO				AML	AML		
	comp=N,17965µm,0.2s						
TERO				AML	AML		
	comp=E,19226µm,0.2s						
TERO				AML	AML		
	comp=E,21022µm,0.1s						
T1217	**Poggiodomo (PG**	**0.28**	**302**	P	Pg	17 11 13.8	+0.2
T1217				S	Sg	17 11 18.2	+0.8
T1217				AML	AML		
	comp=E,4905µm,0.3s						
T1217				AML	AML		
	comp=N,5635µm,1.2s						
T1217				AML	AML		
	comp=E,4845µm,0.3s						
T1217				AML	AML		
	comp=N,5805µm,1.2s						
T1217				AML	AML		
	comp=E,5375µm,0.7s						
T1217				AML	AML		
	comp=N,9485µm,0.3s						
T1217				AML	AML		
	comp=E,5255µm,0.7s						
T1217				AML	AML		
	comp=N,9430µm,0.3s						
T1217				AML	AML		
	comp=N,9460µm,0.3s						
T1217				AML	AML		
	comp=E,5255µm,0.7s						
T1217				AML	AML		
	comp=N,9450µm,0.3s						
T1217				AML	AML		
	comp=N,9415µm,0.3s						
T1217				AML	AML		
	comp=N,9470µm,0.3s						
T1217				AML	AML		
	comp=E,5370µm,0.7s						
T1217				AML	AML		
	comp=N,4942µm,0.1s						
T1217				AML	AML		
	comp=N,4866µm,0.1s						
T1217				AML	AML		
	comp=E,4432µm,0.1s						
T1217				AML	AML		
	comp=E,4226µm,0.1s						
T1211	**Morro Reatino**	**0.29**	**264**	⇑P	Pg	17 11 14.1	+0.3
T1211				S	Sg	17 11 18.6	+0.7
T1211				AML	AML		
	comp=E,8615µm,0.1s						
T1211				AML	AML		
	comp=N,15600µm,0.2s						
T1211				AML	AML		
	comp=E,8390µm,1.1s						
T1211				AML	AML		
	comp=N,15500µm,0.2s						
T1211				AML	AML		
	comp=E,8395µm,1.1s						
T1211				AML	AML		
	comp=N,15580µm,0.2s						
T1211				AML	AML		
	comp=N,15498µm,0.2s						
T1211				AML	AML		
	comp=E,8310µm,0.1s						
T1211				AML	AML		
	comp=N,15588µm,0.2s						
T1211				AML	AML		
	comp=E,8615µm,0.1s						
T1245	**Castelsantange**	**0.30**	**351**	P	Pg	17 11 14.3	+0.3
T1245				S	Sb	17 11 19.1	-1.0
T1245				AML	AML		
	comp=E,11924µm,0.2s						
T1245				AML	AML		
	comp=N,17890µm,0.5s						
T1245				AML	AML		
	comp=N,17365µm,0.5s						
T1245				AML	AML		
	comp=E,11060µm,0.2s						
FIAM	**Fiamignano**	**0.31**	**199**	⇑P	Pg	17 11 14.5	+0.3
FIAM				AML	AML		
	comp=E,3960µm,0.7s						
FIAM				AML	AML		
	comp=N,3360µm,0.5s						
FIAM				AML	AML		
	comp=E,3593µm,0.6s						
FIAM				AML	AML		
	comp=N,3357µm,0.5s						
T1241	**Roccafluvione,**	**0.32**	**24**	⇑P	Pg	17 11 14.9	+0.6
T1241				S	Sb	17 11 19.8	-0.8
T1241				AML	AML		
	comp=E,5385µm,0.2s						
T1241				AML	AML		
	comp=N,4355µm,1.5s						
T1241				AML	AML		
	comp=N,4285µm,1.5s						
T1241				AML	AML		
	comp=E,5175µm,0.2s						
T1241				AML	AML		
	comp=E,5180µm,0.2s						
T1241				AML	AML		
	comp=E,5182µm,0.2s						
T1241				AML	AML		
	comp=E,5383µm,0.2s						
T1241				AML	AML		
	comp=N,4146µm,0.1s						
T1241				AML	AML		
	comp=N,3879µm,0.1s						
MMO1	**Montemonaco**	**0.34**	**9**	⇑P	Pg	17 11 15.0	+0.3
MMO1				S	Sb	17 11 20.3	-0.9
ARRO	**Arrone**	**0.36**	**273**	⇑P	Pg	17 11 15.2	+0.2
ARRO				AML	AML		
	comp=N,2995µm,0.2s						
ARRO				AML	AML		
	comp=E,2680µm,1.4s						
ARRO				AML	AML		
	comp=N,2990µm,0.2s						
ARRO				AML	AML		
	comp=E,2567µm,0.3s						
ARRO				AML	AML		
	comp=N,2992µm,0.2s						
T1215	**Vallo di Nera,**	**0.37**	**310**	⇓P	Pg	17 11 15.3	+0.2
T1215				AML	AML		
	comp=N,1340µm,0.1s						
T1215				AML	AML		
	comp=E,1523µm,0.1s						
T1215				AML	AML		
	comp=E,1459µm,0.1s						
T1215				AML	AML		
	comp=N,1287µm,0.1s						
T1216	**Preci, Frazion**	**0.37**	**333**	⇑P	Pg	17 11 12.4	-2.7
T1216				AML	AML		
	comp=N,3669µm,0.2s						
T1216				AML	AML		
	comp=E,2980µm,0.2s						
AM05	**Amandola Campo**	**0.42**	**10**	⇑P	Pg	17 11 16.4	+0.3
AM05				AML	AML		
	comp=E,2110µm,0.9s						
AM05				AML	AML		
	comp=N,2755µm,0.1s						
AM05				AML	AML		
	comp=E,2115µm,0.9s						
AM05				AML	AML		
	comp=N,865µm,0.1s						
AM05				AML	AML		
	comp=E,10700µm,0.9s						
AM05				AML	AML		
	comp=N,865µm,0.1s						
AM05				AML	AML		
	comp=E,2087µm,0.1s						
AM05				AML	AML		
	comp=E,9695µm,0.1s						
AM05				AML	AML		
	comp=N,2755µm,0.1s						
VCEL	**Villa Celiera**	**0.47**	**111**	⇓P	Pb	17 11 17.6	-0.4
VCEL				AML	AML		
	comp=E,4220µm,0.5s						
VCEL				AML	AML		
	comp=N,3400µm,1.0s						
VCEL				AML	AML		
	comp=E,4225µm,0.5s						
VCEL				AML	AML		
	comp=N,2985µm,0.2s						
VCEL				AML	AML		
	comp=E,3611µm,0.2s						
OFFI	**Offida**	**0.49**	**41**	⇑P	Pb	17 11 18.4	+0.1
OFFI				AML	AML		
	comp=E,9200µm,0.2s						
OFFI				AML	AML		
	comp=N,5370µm,0.6s						
OFFI				AML	AML		
	comp=N,4405µm,0.2s						
OFFI				AML	AML		
	comp=E,9201µm,0.2s						
CESX	**Cesi**	**0.50**	**276**	⇓P	Pg	17 11 17.4	0.0
CESX				AML	AML		
	comp=N,1710µm,0.4s						
CESX				AML	AML		
	comp=E,1450µm,0.4s						
CESX				AML	AML		
	comp=N,1708µm,0.4s						
CESX				AML	AML		
	comp=E,1450µm,0.4s						
GUMA	**Gualdo di Mace**	**0.50**	**7**	⇑P	Pb	17 11 18.1	-0.4
GUMA				AML	AML		
	comp=E,11159µm,0.3s						
GUMA				AML	AML		
	comp=N,6962µm,0.5s						
GUMA				AML	AML		
	comp=N,7098µm,0.3s						
GUMA				AML	AML		
	comp=E,7768µm,0.3s						
T0110	**Collepietro**	**0.52**	**131**	⇓P	Pg	17 11 18.1	+0.2
T0110				AML	AML		
	comp=E,1990µm,0.4s						
T0110				AML	AML		
	comp=N,1820µm,0.8s						
T0110				AML	AML		
	comp=E,1991µm,0.4s						
T0110				AML	AML		
	comp=N,1504µm,0.5s						
TRTR	**Tortoreto Alta**	**0.55**	**63**	⇑P	Pb	17 11 19.7	+0.4
TRTR				AML	AML		
	comp=N,4665µm,0.3s						
TRTR				AML	AML		
	comp=E,4265µm,0.5s						
TRTR				AML	AML		
	comp=E,4266µm,0.5s						
TRTR				AML	AML		
	comp=N,4668µm,0.3s						
PTQR	**Pietraquaria**	**0.55**	**168**	⇓P	Pg	17 11 18.4	-0.1
PTQR				AML	AML		
	comp=E,431µm,0.3s						
PTQR				AML	AML		
	comp=N,409µm,0.6s						
PTQR				AML	AML		
	comp=N,410µm,0.6s						
PTQR				AML	AML		
	comp=E,430µm,0.3s						
PTQR				AML	AML		
	comp=E,431µm,0.3s						
PTQR				AML	AML		
	comp=N,349µm,0.2s						
MNTP	**Montappone**	**0.60**	**16**	⇓P	Pb	17 11 20.0	-0.2
MNTP				AML	AML		
	comp=N,3307µm,0.2s						
MNTP				AML	AML		
	comp=E,3362µm,0.2s						
SRES	**S.Oreste - Sor**	**0.64**	**240**	⇓P	Pb	17 11 20.8	0.0
SRES				AML	AML		
	comp=E,622µm,0.3s						
SRES				AML	AML		
	comp=N,816µm,0.4s						
SRES				AML	AML		
	comp=E,622µm,0.3s						
SRES				AML	AML		
	comp=N,818µm,0.4s						
CERT	**Cerreto**	**0.65**	**198**	⇑P	Pg	17 11 19.9	-0.4
CERT				AML	AML		
	comp=E,1795µm,0.4s						
CERT				AML	AML		
	comp=N,864µm,1.2s						
CERT				AML	AML		
	comp=N,844µm,0.4s						
CERT				AML	AML		
	comp=E,1795µm,0.4s						
ASSB	**Assisi San Ben**	**0.65**	**318**	⇓P	Pb	17 11 20.8	-0.2
ASSB				AML	AML		
	comp=N,853µm,0.2s						
ASSB				AML	AML		
	comp=E,780µm,0.3s						
MTCE	**Montecelio**	**0.66**	**215**	⇑P	Pg	17 11 19.2	-1.3
MTCE				AML	AML		
	comp=E,1190µm,0.9s						
MTCE				AML	AML		
	comp=N,808µm,0.8s						
MTCE				AML	AML		
	comp=E,1054µm,0.3s						
MTCE				AML	AML		
	comp=N,751µm,0.5s						
SNTG	**Esanatoglia**	**0.73**	**342**	⇓P	Pg	17 11 22.0	+0.2
SNTG				AML	AML		
	comp=N,557µm,0.2s						
SNTG				AML	AML		
	comp=E,456µm,0.2s						
SNTG				AML	AML		
	comp=N,525µm,0.2s						
SNTG				AML	AML		
	comp=E,409µm,0.1s						
INTR	**Introdacqua**	**0.73**	**138**	⇓P	Pg	17 11 18.1	-3.9
INTR				AML	AML		
	comp=E,503µm,0.5s						
INTR				AML	AML		
	comp=N,907µm,1.0s						
INTR				AML	AML		
	comp=E,497nm,0.6s						
INTR				AML	AML		
	comp=N,646nm,0.5s						
INTR				AML	AML		
	comp=N,888µm,0.4s						
INTR				AML	AML		
	comp=E,503µm,0.6s						
RCAV	**Rocca di Cave**	**0.75**	**198**	S	Sg	17 11 25.0	-7.1
GUAR	**Guarcino**	**0.77**	**177**	S	Sg	17 11 27.0	-5.7
EL6	**Elcito**	**0.77**	**352**	⇑P	Pg	17 11 22.4	-0.4
EL6				S	Sn	17 11 36.0	-0.2
EL6				AML	AML		
	comp=E,1699µm,0.3s						
EL6				AML	AML		
	comp=N,2207µm,0.5s						
FOSV	**Fossato di Vic**	**0.81**	**334**	⇓P	Pb	17 11 24.3	+0.5
FOSV				AML	AML		
	comp=E,492µm,0.3s						
FOSV				AML	AML		
	comp=N,501µm,0.3s						
RMP	**Rome, Mte Porz**	**0.85**	**209**	S	Sg	17 11 27.0	-8.4
PP3	**Marolino**	**0.86**	**18**	⇓P	Pb	17 11 25.0	+0.5
PP3				AML	AML		
	comp=N,2793µm,0.5s						
PP3				AML	AML		
	comp=E,2135µm,0.3s						
PP3				AML	AML		
	comp=N,2877µm,0.5s						
PP3				AML	AML		
	comp=E,2248µm,0.3s						
LPEL	**Lama dei Pelig**	**0.86**	**126**	⇓P	Pg	17 11 23.8	-0.6
LPEL				AML	AML		
	comp=E,440µm,1.0s						
LPEL				AML	AML		
	comp=N,404µm,1.6s						
LPEL				AML	AML		
	comp=E,429µm,0.2s						
LPEL				AML	AML		
	comp=N,331µm,0.4s						
ARVD	**Arcevia**	**0.96**	**346**	S	Sn	17 11 41.0	+0.3
GIUL	**Giuliano Di Ro**	**1.00**	**180**	S	Sg	17 11 30.0	-10
AOI	**Ancona**	**1.02**	**15**	⇓P	Pb	17 11 27.2	-0.1
AOI				AML	AML		
	comp=N,625µm,0.5s						
AOI				AML	AML		
	comp=E,618µm,0.4s						
TOLF	**Tolfa**	**1.05**	**242**	⇓P	Pb	17 11 27.4	-0.6
TOLF				S	Sn	17 11 44.0	+1.0
TOLF				AML	AML		
	comp=E,344µm,0.7s						
TOLF				AML	AML		
	comp=N,358µm,1.1s						
TOLF				AML	AML		
	comp=N,278µm,0.4s						
TOLF				AML	AML		
	comp=E,345µm,0.7s						
CERA	**Filignano**	**1.12**	**149**	P	Pg	17 11 31.6	+2.3
CERA				AML	AML		
	comp=E,316µm,1.2s						
CERA				AML	AML		
	comp=N,354µm,0.6s						
CERA				AML	AML		
	comp=N,346µm,0.7s						
CERA				AML	AML		
	comp=E,253µm,0.6s						
CERA				AML	AML		
	comp=N,353µm,0.6s						
CERA				AML	AML		
	comp=E,266µm,0.6s						
CRE	**Caprese Michel**	**1.42**	**318**	⇑P	Pg	17 11 34.8	-0.2
CRE				AML	AML		
	comp=E,119µm,0.7s						
CRE				AML	AML		
	comp=N,158µm,1.5s						
CRE				AML	AML		
	comp=N,128µm,0.2s						
CRE				AML	AML		
	comp=E,111µm,0.5s						
PTRJ	**Pietraroja**	**1.53**	**141**	S	Sn	17 11 50.0	-4.9
MAON	**Monte Argentar**	**1.57**	**266**	⇑P	Pn	17 11 35.7	+0.2
MAON				AML	AML		
	comp=E,62µm,0.4s						
MAON				AML	AML		
	comp=N,55µm,1.2s						
MAON				AML	AML		
	comp=E,62µm,0.4s						
MAON				AML	AML		
	comp=N,48µm,0.7s						
MELA	**Melanico ??? S**	**1.64**	**121**	⇓P	Pg	17 11 38.8	-0.4
MELA				AML	AML		
	comp=E,1352µm,1.5s						
MELA				AML	AML		
	comp=N,418µm,0.9s						
MELA				AML	AML		
	comp=N,1015µm,1.3s						
MELA				AML	AML		
	comp=E,300µm,0.6s						
MELA				AML	AML		
	comp=E,1298µm,0.5s						
MELA				AML	AML		
	comp=N,1005µm,0.9s						
MELA				AML	AML		
	comp=N,419µm,0.9s						
MELA				AML	AML		
	comp=E,301µm,0.6s						
TREM	**Isole Tremiti**	**1.73**	**104**	⇑P	Pn	17 11 38.4	+0.7
TREM				AML	AML		
	comp=N,558µm,1.5s						
TREM				AML	AML		
	comp=E,460µm,1.6s						
TREM				AML	AML		
	comp=E,441µm,1.3s						
RUFI	**Rufina**	**1.80**	**316**	⇓P	Pb	17 11 40.2	-0.5
RUFI				AML	AML		
	comp=N,81µm,0.8s						
RUFI				AML	AML		
	comp=E,73µm,0.5s						
VBKN	**Vesuvio Bunker**	**1.94**	**153**	⇑P	Pn	17 11 31.2	-9.5
VBKN				S	Sn	17 11 52.0	-13
SGRT	**San Giovanni R**	**2.02**	**113**	P	Pn	17 11 42.2	+0.5
SGRT				AML	AML		
	comp=E,166µm,0.5s						
SGRT				AML	AML		
	comp=N,160µm,1.4s						
SGRT				AML	AML		
	comp=E,163µm,0.3s						
SGRT				AML	AML		
	comp=N,143µm,0.4s						
IMOL	**Imola, Italy**	**2.10**	**329**	⇓P	Pg	17 11 50.4	+2.3
MPPT	**Montemurlo**	**2.10**	**312**	⇓P	Pg	17 11 47.5	-0.7
MPPT				AML	AML		
	comp=E,45µm,0.5s						
MPPT				AML	AML		
	comp=N,37µm,0.7s						
BRJN	**Brijuni**	**2.37**	**9**	⇑P	Pn	17 11 47.3	+0.9
HVAR	**Hvar**	**2.43**	**74**	⇓P	Pn	17 11 48.6	+1.3
NDIM	**Novi di Modena**	**2.88**	**325**	S	Sn	17 12 27.0	-1.0
CORF	**Corte**	**3.04**	**266**	S	Sn	17 12 31.0	-1.1
PGF	**Pioggiola**	**3.14**	**271**	P	Pn	17 11 58.6	+1.5
MMN	**Mormanno**	**3.38**	**141**	P	Pn	17 12 00.0	-0.2
MMN				AML	AML		
	comp=N,47µm,1.6s						
MMN				AML	AML		
	comp=E,18µm,1.6s						
SABO	**M.te Sabotino**	**3.42**	**4**	P	Pn	17 12 01.5	+0.5
SABO				AML	AML		
	comp=N,78µm,0.6s						
SABO				AML	AML		
	comp=E,61µm,0.4s						
SABO				AML	AML		
	comp=E,241µm,0.4s						
SABO				AML	AML		
	comp=E,61µm,0.4s						
SABO				AML	AML		
	comp=N,358µm,0.6s						
SABO				AML	AML		
	comp=N,75µm,0.5s						
CGRP	**Cima Grappa**	**3.48**	**343**	⇑P	Pn	17 12 03.2	+1.4
CGRP				AML	AML		
	comp=E,64µm,0.7s						
CGRP				AML	AML		
	comp=N,71µm,0.6s						
CGRP				AML	AML		
	comp=E,62µm,0.3s						
CGRP				AML	AML		
	comp=E,130µm,0.6s						
CGRP				AML	AML		
	comp=N,71µm,0.6s						
CGRP				AML	AML		
	comp=N,133µm,1.1s						
LJU	**Ljubljana**	**3.60**	**14**	⇑P	Pn	17 12 05.2	+1.8
LJU				AML	AML		
	comp=N,356µm,0.7s						
LJU				AML	AML		
	comp=E,322µm,0.7s						
LJU				AML	AML		
	comp=N,311µm,0.6s						
LJU				AML	AML		
	comp=E,260µm,0.5s						
CET2	**Cetraro**	**3.66**	**145**	S	Sn	17 12 44.0	-3.2
CET2				S	Sg	17 13 04.0	-1.2
STAL	**STALIGIAL**	**3.72**	**354**	⇑P	Pn	17 12 06.3	+1.4
STAL				S	Sn	17 12 51.0	+2.3
STAL				AML	AML		
	comp=N,84µm,0.9s						
STAL				AML	AML		
	comp=E,118µm,0.9s						
STAL				AML	AML		
	comp=E,109µm,0.3s						
STAL				AML	AML		
	comp=E,135µm,0.3s						
STAL				AML	AML		
	comp=N,83µm,0.2s						
LUSI	**Trento, Gardas**	**3.78**	**335**	⇑P	Pn	17 12 07.3	+1.5
LUSI				AML	AML		
	comp=E,33µm,1.2s						
LUSI				AML	AML		
	comp=N,48µm,0.5s						
LUSI				AML	AML		
	comp=E,28µm,0.5s						
LUSI				AML	AML		
	comp=N,41µm,0.2s						
CIMO	**Cimolais**	**3.79**	**351**	⇑P	Pn	17 12 07.4	+1.4
CIMO				AML	AML		
	comp=E,18µm,1.3s						
CIMO				AML	AML		
	comp=N,17µm,1.6s						
CIMO				AML	AML		
	comp=N,13µm,0.4s						
CIMO				AML	AML		
	comp=E,15µm,0.2s						
CIMO				AML	AML		
	comp=E,24µm,0.7s						
MABI	**Malga Bissina**	**4.00**	**332**	⇑P	Pn	17 12 10.8	+1.7
MABI				AML	AML		
	comp=E,15µm,0.2s						
MABI				AML	AML		
	comp=N,15µm,0.2s						
KOSI	**Kohlern**	**4.12**	**342**	⇓P	Pn	17 12 13.0	+2.3
KOSI				AML	AML		
	comp=N,31µm,0.5s						
KOSI				AML	AML		
	comp=E,36µm,1.6s						
KOSI				AML	AML		
	comp=E,36µm,1.6s						
KOSI				AML	AML		
	comp=N,31µm,0.5s						
VSL	**Villasalto**	**4.24**	**225**	⇓P	Pn	17 12 14.0	+1.8
VSL				AML	AML		

```
     comp=N,12μm,0.8s
VSL                                AML     AML
     comp=E,12μm,0.2s
GMB  Gambarie          4.81 155    P       Pn      17 12 20.6 +0.5
TRAV Traversella       4.94 308   ⇓P       Pb      17 12 37.5 +3.3
KBN  Korca             5.97 106   ⇑P       Pn      17 12 36.2 +0.2
CKRC Cesky Krumlov     6.30   6   eSN      Sn      17 13 50.8 -1.5
KHC  Kasperske Hory    6.57   2   eSN      Sn      17 13 56.8 -2.2
```

PRU ***30*** *17:13:18.2±0.0, 42°.83N×13°.79E, h0km*
ROM 30 17:13:14.1±0.1, 42°.811N±0°.004×13°.095E±0°.006,
h15km±1km, ML3.0/62, 29C-31D, Error ellipse:
s-maj=0.5km s-min=0.1km az=353.0, Central Italy

```
Code Station Name      Δ°   AZ°  Phase ID          Time      Res
                                Op    ISC         h m  s    ISC
T1245 Castelsantange   0.08  56  P     Pg          17 13 17.0 -0.4
T1245                           S     Sg          17 13 20.3 +0.7
T1245                           AML   AML
T1245                           AML   AML
T1245                           AML   AML
T1245                           AML   AML
T1216 Preci, Frazion   0.10 325  P     Pg          17 13 17.4  0.0
T1216                           AML   AML
     comp=E,69250μm,0.3s
T1216                           AML   AML
T1216                           AML   AML
T1216                           AML   AML
     comp=E,69300μm,0.3s
FEMA  Monte Fema       0.15 348  P     Pg          17 13 18.1 -0.1
FEMA                            AML   AML
     comp=E,31200μm,0.5s
FEMA                            AML   AML
     comp=N,31850μm,1.1s
FEMA                            AML   AML
     comp=N,31850μm,0.9s
FEMA                            AML   AML
     comp=E,31200μm,1.5s
T1217 Poggiodomo (PG   0.16 231 ⇓P    Pb          17 13 18.5 -0.2
T1217                           S     Sb          17 13 21.6 -0.2
T1217                           AML   AML
     comp=N,7080μm,0.6s
T1217                           AML   AML
     comp=E,5600μm,0.4s
T1217                           AML   AML
     comp=N,7035μm,0.6s
T1217                           AML   AML
     comp=E,5780μm,0.4s
T1217                           AML   AML
     comp=N,7085μm,0.6s
T1217                           AML   AML
     comp=N,7040μm,0.6s
T1217                           AML   AML
     comp=E,5590μm,0.4s
T1217                           AML   AML
     comp=N,7040μm,0.6s
T1217                           AML   AML
     comp=E,5590μm,1.6s
T1217                           AML   AML
     comp=E,5780μm,1.6s
T1215 Vallo di Nera,   0.17 267  P     Pg          17 13 18.6 +0.3
T1215                           S     Sg          17 13 21.6 +0.5
T1215                           AML   AML
     comp=N,6835μm,0.4s
T1215                           AML   AML
     comp=E,4955μm,0.5s
T1215                           AML   AML
     comp=N,6645μm,0.4s
T1215                           AML   AML
     comp=E,4950μm,0.5s
T1215                           AML   AML
     comp=E,4800μm,0.4s
T1215                           AML   AML
     comp=E,4800μm,1.6s
T1215                           AML   AML
     comp=N,6650μm,0.4s
T1215                           AML   AML
     comp=N,6840μm,0.4s
MMO1 Montemonaco       0.19  62  P     Pg          17 13 18.6 -0.1
MMO1                            S     Sb          17 13 23.0 +0.2
LNSS Leonessa          0.21 191  P     Pg          17 13 19.0  0.0
LNSS                            AML   AML
     comp=E,6060μm,0.3s
LNSS                            AML   AML
     comp=N,11850μm,0.5s
T1204 Amatrice, Fraz   0.21 129  P     Pg          17 13 19.2 +0.1
T1204                           S     Sb          17 13 23.0 -0.5
T1204                           AML   AML
     comp=E,7895μm,0.7s
T1204                           AML   AML
     comp=N,8210μm,1.0s
T1204                           AML   AML
     comp=E,7900μm,0.7s
T1204                           AML   AML
     comp=N,8235μm,1.0s
T1204                           AML   AML
     comp=E,7910μm,0.7s
T1204                           AML   AML
     comp=N,8215μm,1.0s
T1241 Roccafluvione,   0.25  79 ⇓P    Pb          17 13 20.0 -0.3
T1241                           AML   AML
     comp=E,16350μm,0.5s
T1241                           AML   AML
     comp=N,10650μm,0.7s
T1241                           AML   AML
T1241                           AML   AML
     comp=N,10300μm,0.3s
AM05 Amandola Campo    0.25  49 ⇑P    Pg          17 13 19.8 +0.2
AM05                            AML   AML
     comp=N,5795μm,0.5s
AM05                            AML   AML
     comp=E,7695μm,0.1s
AM05                            AML   AML
     comp=E,28500μm,0.1s
AM05                            AML   AML
     comp=N,2130μm,0.3s
AM05                            AML   AML
     comp=N,5790μm,0.5s
AM05                            AML   AML
     comp=E,7695μm,1.9s
T1243 Rocca Santa Ma   0.28 113 ⇓P    Pg          17 13 20.2 +0.1
CSP1  Cessapalombo     0.29  16 ⇓P    Pg          17 13 20.6 +0.2
CSP1                            AML   AML
     comp=E,15800μm,0.6s
CSP1                            AML   AML
     comp=N,18450μm,1.1s
GUMA Gualdo di Mace    0.31  35 ⇓P    Pb          17 13 21.0 -0.3
GUMA                            AML   AML
     comp=E,20300μm,0.4s
GUMA                            AML   AML
     comp=E,26000μm,0.4s
GUMA                            AML   AML
     comp=N,25950μm,0.3s
GUMA                            AML   AML
     comp=N,22200μm,0.6s
GUMA                            AML   AML
     comp=N,25950μm,1.7s
RM33 Pellescritta (    0.31 164 ⇑P    Pg          17 13 21.0 +0.3
RM33                            AML   AML
     comp=E,2645μm,0.3s
RM33                            AML   AML
     comp=N,2865μm,1.0s
RM33                            AML   AML
     comp=E,2625μm,0.3s
RM33                            AML   AML
     comp=E,2645μm,0.3s
RM33                            AML   AML
     comp=N,2860μm,1.0s
RM33                            AML   AML
     comp=N,2830μm,1.0s
RM33                            AML   AML
     comp=N,2860μm,1.0s
RM33                            AML   AML
     comp=N,2830μm,1.0s
RM33                            AML   AML
     comp=E,2645μm,1.7s
RM33                            AML   AML
     comp=E,2625μm,1.7s
T1211 Morro Reatino    0.33 213 ⇓P    Pb          17 13 21.6 -0.1
T1211                           AML   AML
     comp=E,2785μm,0.3s
T1211                           AML   AML
     comp=N,5095μm,0.3s
T1211                           AML   AML
     comp=E,2745μm,0.3s
T1211                           AML   AML
     comp=N,4975μm,0.3s
T1211                           AML   AML
     comp=E,2745μm,0.3s
T1211                           AML   AML
     comp=N,4970μm,0.3s
T1211                           AML   AML
     comp=N,5090μm,0.3s
T1211                           AML   AML
     comp=E,2785μm,0.3s
ARRO Arrone            0.34 226 ⇑P    Pb          17 13 21.5 -0.2
ARRO                            AML   AML
     comp=E,2375μm,0.8s
ARRO                            AML   AML
     comp=E,2380μm,0.8s
ARRO                            AML   AML
     comp=E,2630μm,0.3s
SEF1 Sefro             0.35 342 ⇑P    Pg          17 13 21.6 +0.3
SEF1                            AML   AML
     comp=E,10100μm,0.2s
SEF1                            AML   AML
     comp=E,10090μm,0.2s
SEF1                            AML   AML
     comp=N,8955μm,0.2s
SEF1                            AML   AML
     comp=E,10085μm,0.2s
SEF1                            AML   AML
     comp=N,8950μm,0.2s
CAMP Campotosto        0.36 140 ⇑P    Pg          17 13 21.6 +0.1
CAMP                            AML   AML
     comp=E,1920μm,0.2s
CAMP                            AML   AML
     comp=N,1285μm,0.4s
MDAR Monte D'Aria      0.38   5  P     Pn          17 13 25.0 -0.2
MDAR                            AML   AML
     comp=E,7320μm,1.2s
MDAR                            AML   AML
     comp=N,8515μm,0.3s
ASSB Assisi San Ben    0.40 306 ⇑P    Pb          17 13 22.5 -0.3
ASSB                            AML   AML
     comp=E,6465μm,0.3s
ASSB                            AML   AML
     comp=N,6755μm,0.2s
ASSB                            AML   AML
     comp=E,6465μm,1.7s
ASSB                            AML   AML
     comp=N,6755μm,1.8s
FIU1 Fiuminata         0.40 342 ⇓P    Pb          17 13 22.5 -0.3
T1247 Pizzolo (AQ)     0.40 158  P    Pg          17 13 22.0 -0.1
T1247                           AML   AML
     comp=E,2560μm,1.1s
T1247                           AML   AML
     comp=N,2570μm,0.5s
T1247                           AML   AML
     comp=E,2560μm,0.9s
TERO Teramo            0.42 116 ⇑P    Pg          17 13 22.5  0.0
TERO                            AML   AML
     comp=N,3650μm,0.5s
TERO                            AML   AML
     comp=N,3925μm,0.5s
TERO                            AML   AML
     comp=E,2660μm,1.2s
TERO                            AML   AML
     comp=E,2470μm,1.2s
TERO                            AML   AML
     comp=E,2660μm,0.8s
TERO                            AML   AML
     comp=E,2470μm,0.8s
TERO                            AML   AML
     comp=N,3645μm,0.5s
SSM1 San Severino M    0.42   8 ⇓P    Pn          17 13 25.7 +0.1
MNTP Montappone        0.43  40 ⇓P    Pb          17 13 23.7 +0.4
MNTP                            AML   AML
     comp=E,11135μm,0.2s
MNTP                            AML   AML
     comp=N,11140μm,0.5s
MNTP                            AML   AML
     comp=N,11130μm,0.5s
MNTP                            AML   AML
     comp=E,11150μm,0.2s
GAG1 Gagliole          0.43 357 ⇑P    Pb          17 13 23.1 -0.3
GAG1                            AML   AML
     comp=E,11450μm,1.3s
GAG1                            AML   AML
     comp=N,12200μm,1.2s
GAG1                            AML   AML
     comp=N,12150μm,1.2s
GAG1                            AML   AML
     comp=E,11500μm,1.3s
GAG1                            AML   AML
     comp=E,11500μm,0.7s
GAG1                            AML   AML
     comp=N,12200μm,0.8s
CESX Cesi              0.43 242 ⇑P    Pb          17 13 23.1 -0.2
CESX                            AML   AML
     comp=N,2910μm,0.4s
CESX                            AML   AML
     comp=E,2745μm,0.6s
OFFI Offida            0.45  74 ⇓P    Pb          17 13 24.1 +0.4
OFFI                            AML   AML
     comp=E,5970μm,0.5s
OFFI                            AML   AML
     comp=N,5440μm,0.4s
ATCC AVT- Casa Cast    0.50 318 ⇑P    Pg          17 13 24.3 +0.3
GIGS Gran Sasso        0.50 136 ⇑P    Pg          17 13 23.6 -0.4
GIGS                            AML   AML
     comp=N,376μm,0.8s
GIGS                            AML   AML
     comp=N,376μm,0.8s
GIGS                            AML   AML
     comp=E,386μm,1.2s
GIGS                            AML   AML
     comp=E,386μm,0.8s
GIGS                            AML   AML
     comp=N,376μm,1.2s
AQU  L'Aquila          0.51 153 ⇓P    Pg          17 13 24.3 +0.1
AQU                             AML   AML
     comp=E,982μm,0.9s
AQU                             AML   AML
     comp=N,1010μm,0.6s
AQU                             AML   AML
     comp=E,946μm,0.9s
AQU                             AML   AML
     comp=N,1010μm,0.6s
AQU                             AML   AML
     comp=E,984μm,0.9s
AQU                             AML   AML
     comp=E,946μm,1.1s
AQU                             AML   AML
     comp=E,984μm,1.1s
AQU                             AML   AML
     comp=N,982μm,0.6s
EL6  Elcito            0.52   1  S     Sn          17 13 36.0 +0.4
FIAM Fiamignano        0.54 178  P     Pg          17 13 24.9 +0.1
FIAM                            AML   AML
     comp=E,990μm,1.3s
FIAM                            AML   AML
     comp=E,990μm,1.3s
FIAM                            AML   AML
     comp=E,990μm,0.7s
FIAM                            AML   AML
     comp=N,1030μm,0.4s
FOSV Fossato di Vic    0.54 333 ⇓P    Pg          17 13 24.1 -0.8
FOSV                            AML   AML
     comp=N,2095μm,0.2s
FOSV                            AML   AML
     comp=E,1500μm,1.1s
FOSV                            AML   AML
     comp=N,2090μm,0.2s
TRTR Tortoreto Alta    0.60  90 ⇑P    Pb          17 13 26.9 +0.7
TRTR                            AML   AML
     comp=E,5005μm,0.5s
TRTR                            AML   AML
     comp=N,4840μm,0.3s
MURB Monte Urbino      0.62 317  P     Pb          17 13 26.4 -0.1
MURB                            AML   AML
     comp=N,4245μm,0.3s
MURB                            AML   AML
     comp=N,4235μm,0.2s
MURB                            AML   AML
     comp=E,3970μm,0.4s
MURB                            AML   AML
     comp=N,4240μm,0.3s
MURB                            AML   AML
     comp=E,4640μm,0.9s
MURB                            AML   AML
     comp=E,4640μm,1.1s
FAGN Fagnano           0.65 146 ⇑P    Pg          17 13 26.6 -0.2
FAGN                            AML   AML
     comp=E,2070μm,0.4s
FAGN                            AML   AML
     comp=N,1475μm,0.5s
FAGN                            AML   AML
     comp=E,2070μm,1.6s
ATTE AVT- Monte Tez    0.67 306 ⇑P    Pn          17 13 30.2 +1.1
ATTE                            AML   AML
     comp=N,867μm,0.3s
ATTE                            AML   AML
     comp=E,1025μm,0.3s
ATFO Monte Foce - G    0.68 326 ⇑P    Pg          17 13 27.4 +0.1
ATFO                            AML   AML
     comp=E,1042μm,0.5s
ATFO                            AML   AML
     comp=N,1160μm,0.2s
ATFO                            AML   AML
     comp=N,1160μm,1.8s
ATFO                            AML   AML
     comp=E,1042μm,1.5s
PP3  Marolino          0.68  33 ⇓P    Pn          17 13 28.5 -0.6
PP3                             AML   AML
     comp=E,4505μm,0.8s
PP3                             AML   AML
     comp=E,4755μm,0.7s
PP3                             AML   AML
     comp=N,3745μm,1.4s
PP3                             AML   AML
     comp=E,4750μm,0.7s
PP3                             AML   AML
     comp=N,3865μm,1.5s
PP3                             AML   AML
     comp=N,3745μm,0.6s
PP3                             AML   AML
     comp=N,3865μm,0.5s
PP3                             AML   AML
     comp=E,4750μm,1.3s
PP3                             AML   AML
     comp=E,4505μm,1.2s
VCEL Villa Celiera     0.69 127 ⇓P    Pg          17 13 27.6  0.0
VCEL                            AML   AML
     comp=E,1515μm,0.4s
VCEL                            AML   AML
     comp=N,1815μm,0.3s
VCEL                            AML   AML
     comp=E,1515μm,1.6s
ARVD Arcevia           0.70 351 ⇓P    Pg          17 13 27.8 +0.1
ARVD                            AML   AML
     comp=E,1655μm,0.3s
ARVD                            AML   AML
     comp=N,1074μm,0.1s
MGAB Montegabbione     0.73 278 ⇑P    Pb          17 13 28.6 +0.2
MGAB                            AML   AML
     comp=N,2085μm,0.5s
MGAB                            AML   AML
     comp=E,2080μm,1.4s
MGAB                            AML   AML
     comp=N,1985μm,0.5s
MGAB                            AML   AML
     comp=E,2170μm,1.4s
FRON Frontone          0.76 339 ⇑P    Pg          17 13 28.8 -0.1
FRON                            AML   AML
     comp=E,892μm,1.0s
FRON                            AML   AML
     comp=N,1174μm,0.3s
FRON                            AML   AML
     comp=E,890μm,1.0s
FRON                            AML   AML
     comp=N,1175μm,0.3s
FRON                            AML   AML
     comp=N,1175μm,1.7s
ATVO AVT- Monte Val    0.76 319 ⇑P    Pb          17 13 29.0  0.0
ATVO                            AML   AML
     comp=E,838μm,0.9s
ATVO                            AML   AML
     comp=N,766μm,0.6s
ATVO                            AML   AML
     comp=E,838μm,1.1s
ATVO                            AML   AML
     comp=N,766μm,1.4s
T0110 Collepietro      0.77 139 ⇓P    Pg          17 13 28.6 -0.6
T0110                           AML   AML
     comp=N,1335μm,0.4s
T0110                           AML   AML
     comp=N,1340μm,0.4s
T0110                           AML   AML
     comp=N,1340μm,1.6s
T0110                           AML   AML
     comp=E,1480μm,0.6s
ATMI Monte Miggiano    0.80 311 ⇓P    Pn          17 13 31.7 +0.9
ATMI                            AML   AML
     comp=N,2395μm,0.5s
ATMI                            AML   AML
     comp=E,2720μm,0.3s
ATMI                            AML   AML
     comp=N,2395μm,1.5s
ATPI Pietralunga -     0.82 322 ⇓P    Pb          17 13 30.1 +0.2
ATPI                            AML   AML
     comp=N,688μm,1.2s
ATPI                            AML   AML
     comp=E,842μm,0.6s
ATPI                            AML   AML
     comp=N,688μm,1.2s
AOI  Ancona            0.83  26 ⇑P    Pg          17 13 30.6 +0.5
AOI                             AML   AML
     comp=E,1515μm,0.3s
AOI                             AML   AML
     comp=N,1405μm,0.3s
PIEI Pieia             0.83 331  P    Pg          17 13 30.4 +0.1
PIEI                            AML   AML
     comp=E,840μm,1.2s
PIEI                            AML   AML
     comp=N,612μm,0.4s
PIEI                            AML   AML
     comp=E,840μm,0.8s
PIEI                            AML   AML
     comp=N,612μm,1.6s
SACS San Casciano d    0.87 273 ⇓P    Pg          17 13 31.4 +0.4
SACS                            AML   AML
     comp=E,607μm,1.5s
SACS                            AML   AML
     comp=N,910μm,0.8s
FSSB Fossombrone       0.91 345 ⇑P    Pg          17 13 31.8  0.0
FSSB                            AML   AML
     comp=N,2680μm,1.5s
FSSB                            AML   AML
     comp=E,2650μm,0.3s
FSSB                            AML   AML
     comp=N,2680μm,0.5s
BADI Badiali           0.94 319 ⇓P    Pg          17 13 32.3 +0.1
BADI                            AML   AML
     comp=E,66μm,1.1s
BADI                            AML   AML
     comp=N,404μm,0.5s
BADI                            AML   AML
     comp=E,70μm,1.1s
BADI                            AML   AML
     comp=N,404μm,0.5s
CAFI Castiglion Fio    0.98 302 ⇓P    Pn          17 13 33.3 +0.1
CAFI                            AML   AML
     comp=N,518μm,1.4s
CAFI                            AML   AML
     comp=E,815μm,0.5s
CAFI                            AML   AML
     comp=N,518μm,1.4s
PE3  Peglio            0.99 334  P    Pb          17 13 30.6 -2.2
MCIV Monte Civitell    1.04 269 ⇑P    Pg          17 13 34.6 +0.3
MCIV                            AML   AML
     comp=E,314μm,0.5s
MCIV                            AML   AML
     comp=N,373μm,0.5s
SF04 Casetta           1.05 272 ⇓P    Pg          17 13 35.1 +0.6
VIVA Pratoni del Vi    1.09 193 ⇑P    Pb          17 13 34.6  0.0
VIVA                            AML   AML
     comp=E,1145μm,0.3s
VIVA                            AML   AML
     comp=N,1155μm,0.4s
LPEL Lama dei Pelig    1.11 133 ⇓P    Pb          17 13 35.0  0.0
LPEL                            AML   AML
     comp=N,414μm,0.7s
LPEL                            AML   AML
     comp=E,554μm,0.9s
LPEL                            AML   AML
     comp=E,554μm,1.1s
CRE  Caprese Michel    1.16 314 ⇑P    Pg          17 13 37.8 +1.3
CRE                             AML   AML
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comp=E,292μm,0.4s
CRE AML AML
comp=N,340μm,0.3s
ARCI Arcidosso 1.19 273 ⇓P Pg 17 13 38.3 +1.3
ARCI AML AML
comp=E,110μm,0.9s
ARCI AML AML
comp=N,109μm,0.6s
ARCI AML AML
comp=E,110μm,1.1s
LATB Latina 1.32 184 P Pg 17 13 40.1 +0.7
CSNT Castellina Chi 1.48 297 P Pb 17 13 41.3 +0.1
CSNT AML AML
comp=E,92μm,0.7s
CSNT AML AML
comp=N,103μm,0.8s
OSSC Osservatorio P 1.53 298 P Pg 17 13 43.7 +0.3
OSSC AML AML
comp=N,126μm,0.7s
OSSC AML AML
comp=E,88μm,0.7s
RUFI Rufina 1.55 312 ⇑P Pb 17 13 42.9 +0.5
TRIF Trifonti 1.64 281 ⇓P Pb 17 13 43.5 -0.4
TRIF AML AML
comp=E,101μm,0.8s
TRIF AML AML
comp=N,82μm,1.1s
CASP Castiglione de 1.64 270 ⇓P Pb 17 13 43.2 -0.8
CASP AML AML
comp=N,41μm,0.8s
CASP AML AML
comp=E,48μm,0.9s
CASP AML AML
comp=N,41μm,1.2s
MTCR Monte La Croce 1.95 309 ⇓P Pb 17 13 48.8 -0.6
NDIM Novi di Modena 2.61 323 S Sg 17 14 37.0 -1.1
MNTV Mantova 2.87 325 P Pg 17 14 09.6 +0.6
CMPR Campora 2.99 146 S Sb 17 14 41.0 -2.4
SABO M.te Sabotino 3.19 6 ⇑P Pb 17 14 08.9 -1.5
LJU Ljubljana 3.39 17 ⇑P Pb 17 14 11.1 -2.7
CTI Castel Tesino 3.40 343 ⇑P Pn 17 14 09.2 +2.6
CTI AML AML
comp=E,68μm,0.5s
CTI AML AML
comp=N,72μm,0.6s
SCHR S. Chirico Rap 3.44 138 P Pb 17 14 17.2 +2.6
STAL STALIGIAL 3.46 356 ⇓P Pn 17 14 09.8 +2.4
STAL AML AML
comp=E,81μm,1.3s
STAL AML AML
comp=E,81μm,0.7s
STAL AML AML
comp=N,83μm,0.3s
LUSI Trento, Gardas 3.51 335 ⇑P Pn 17 14 10.8 +2.8
LUSI AML AML
comp=N,74μm,1.0s
LUSI AML AML
comp=E,39μm,1.2s
LUSI AML AML
comp=E,39μm,0.8s
LUSI AML AML
comp=N,74μm,1.0s
CIMO Cimolais 3.53 353 ⇓P Pb 17 14 12.4 -3.8
ZONE Zone 3.65 325 S Sb 17 14 60.0 -2.2
EUCT Pavia 3.73 311 P Pb 17 14 18.2 -1.3
EUCT S Sn 17 14 56.0 +1.5
ACOM Acomizza, Ital 3.75 4 ⇓P Pn 17 14 13.9 +2.5
ACOM AML AML
comp=E,104μm,0.9s
ACOM AML AML
comp=E,76μm,0.3s
ACOM AML AML
comp=N,55μm,1.0s
ACOM AML AML
comp=N,83μm,1.0s
ACOM AML AML
comp=E,104μm,1.1s
ACOM AML AML
comp=N,55μm,1.0s
KOSI Kohlern 3.85 342 ⇑P Pn 17 14 15.7 +2.9
KOSI AML AML
comp=N,42μm,0.6s
KOSI AML AML
comp=E,51μm,0.7s
ABTA Abfaltersbach 3.96 354 *e*Pn Pn 17 14 17.2 +3.0
comp=E,5.2nm,0.4s
TDS Terranova Siba 3.99 141 S Sb 17 15 13.0 +1.0
BURY Giardini Botan 4.16 285 P Pg 17 14 33.8 +0.1
IFIL Filicudi I Eol 4.39 165 S Sb 17 15 22.0 -1.5
SQTA Sankt Quirin 4.61 344 *e*Pn Pb 17 14 29.3 -5.4
comp=E,3.0nm,0.2s
WATA Walderalm 4.65 347 *e*Pn Pn 17 14 29.6 +5.7
comp=E,1.6nm,0.2s
CLTB Caltabellotta 5.23 179 ⇓P Pb 17 14 43.8 -1.4
CONA Conrad Observa 5.48 20 *e*Pn Pn 17 14 40.3 +5.2
comp=E,1.1nm,0.2s
CKRC Cesky Krumlov 6.07 8 *e*SN Sn 17 15 54.9 +2.5
KHC Kasperske Hory 6.33 3 *e*PN Pn 17 14 50.8 +4.0
KHC *e*SN Sn 17 16 01.5 +2.7

PRU ***30*** *17:20:34.6±0.0, 42°.85N×13°.58E, h10km*
ROM 30 17:19:47.1±0.0, 42°.762N±0°.003×13°.149E±0°.005,
h12km±1km, ML3.0/29, 17C-15D, Error ellipse:
s-maj=0.4km s-min=0.1km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**17**	P	Pg	17 19 50.4	+0.4
T1245				S	Sg	17 19 52.5	+0.2
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1201	**Domo (RI)**	**0.13**	**144**	P	Pb	17 19 51.2	-0.4
T1204	**Amatrice, Fraz**	**0.15**	**125**	P	Pg	17 19 51.0	+0.2
T1204				S	Sg	17 19 54.1	+0.8
T1204				AML	AML		
	comp=E,15750μm,0.2s						
T1204				AML	AML		
	comp=N,10700μm,0.2s						
T1204				AML	AML		
	comp=E,15800μm,0.2s						
T1204				AML	AML		
	comp=N,10670μm,0.2s						
T1204				AML	AML		
	comp=N,10692μm,0.2s						
T1204				AML	AML		
	comp=E,15772μm,0.2s						
T1216	**Preci, Frazion**	**0.16**	**323**	P	Pg	17 19 51.2	+0.4
T1216				S	Sg	17 19 53.9	+0.5
T1216				AML	AML		
	comp=E,21800μm,0.4s						
T1216				AML	AML		
	comp=E,32950μm,0.4s						
T1216				AML	AML		
	comp=E,32950μm,0.4s						
T1216				AML	AML		
	comp=N,29150μm,0.4s						
T1216				AML	AML		
	comp=E,20070μm,0.1s						
T1216				AML	AML		
	comp=N,25279μm,0.2s						
T1217	**Poggiodomo (PG**	**0.17**	**253**	P	Pg	17 19 51.5	+0.5
T1217				S	Sg	17 19 54.6	+0.9
T1217				AML	AML		
	comp=E,6535μm,0.4s						
T1217				AML	AML		
	comp=N,8510μm,0.4s						
T1217				AML	AML		
	comp=E,6430μm,0.4s						
T1217				AML	AML		
	comp=N,8460μm,0.4s						
T1217				AML	AML		
	comp=E,6535μm,0.4s						
T1217				AML	AML		
	comp=N,8505μm,0.4s						
T1217				AML	AML		
	comp=E,6430μm,0.4s						
T1217				AML	AML		
	comp=N,8445μm,0.4s						
T1217				AML	AML		
	comp=E,6435μm,0.4s						
T1217				AML	AML		
	comp=E,6440μm,0.4s						
T1217				AML	AML		
	comp=N,8490μm,0.4s						
T1217				AML	AML		
	comp=N,8460μm,0.4s						
T1217				AML	AML		
	comp=N,8170μm,0.3s						
T1217				AML	AML		
	comp=N,8371μm,0.3s						
T1217				AML	AML		
	comp=E,4143μm,0.4s						
T1217				AML	AML		
	comp=E,4112μm,0.4s						
LNSS	**Leonessa**	**0.18**	**207**	P	Pb	17 19 51.8	-0.6
LNSS				S	Sg	17 19 55.4	+1.5
LNSS				AML	AML		
	comp=E,2530μm,0.3s						
LNSS				AML	AML		
	comp=N,8525μm,0.4s						
LNSS				AML	AML		
	comp=E,5460μm,0.2s						
LNSS				AML	AML		
	comp=N,11100μm,0.8s						
LNSS				AML	AML		
	comp=N,8527μm,0.4s						
LNSS				AML	AML		
	comp=E,2529μm,0.3s						
MMO1	**Montemonaco**	**0.19**	**43**	P	Pg	17 19 51.6	+0.3
MMO1				S	Sg	17 19 55.0	+0.8
T1215	**Vallo di Nera,**	**0.21**	**281**	P	Pg	17 19 52.1	+0.5
T1215				S	Sg	17 19 55.7	+1.0
T1215				AML	AML		
	comp=E,6395μm,1.0s						
T1215				AML	AML		
	comp=E,6245μm,1.0s						
T1215				AML	AML		
	comp=E,6390μm,1.0s						
T1215				AML	AML		
	comp=N,4500μm,0.4s						
T1215				AML	AML		
	comp=N,4435μm,0.4s						
T1215				AML	AML		
	comp=E,6385μm,1.0s						
T1215				AML	AML		
	comp=N,4495μm,0.4s						
T1215				AML	AML		
	comp=E,6250μm,1.0s						
T1215				AML	AML		
	comp=E,6375μm,1.0s						
T1215				AML	AML		
	comp=N,4101μm,0.2s						
T1215				AML	AML		
	comp=N,4032μm,0.1s						
T1215				AML	AML		
	comp=E,4905μm,0.2s						
T1215				AML	AML		
	comp=E,4856μm,0.2s						
FEMA	**Monte Fema**	**0.21**	**340**	P	Pg	17 19 52.1	+0.4
T1243	**Rocca Santa Ma**	**0.23**	**106**	P	Pg	17 19 52.3	+0.3
T1243				S	Sg	17 19 56.0	+0.6
RM33	**Pellescritta (**	**0.26**	**169**	P	Pg	17 19 52.9	+0.5
RM33				S	Sb	17 19 57.3	-0.9
RM33				AML	AML		
	comp=E,2565μm,0.3s						
RM33				AML	AML		
	comp=N,3355μm,0.3s						
RM33				AML	AML		
	comp=N,3385μm,0.9s						
RM33				AML	AML		
	comp=E,2560μm,0.3s						
RM33				AML	AML		
	comp=E,2585μm,0.3s						
RM33				AML	AML		
	comp=E,2895μm,1.1s						
RM33				AML	AML		
	comp=E,2915μm,1.1s						
RM33				AML	AML		
	comp=N,3355μm,0.4s						
RM33				AML	AML		
	comp=E,2581μm,0.3s						
RM33				AML	AML		
	comp=E,2563μm,0.3s						
RM33				AML	AML		
	comp=N,3353μm,0.3s						
RM33				AML	AML		
	comp=N,3292μm,0.4s						
AM05	**Amandola Campo**	**0.26**	**35**	P	Pg	17 19 52.9	+0.4
AM05				S	Sg	17 19 57.2	+1.0
AM05				AML	AML		
	comp=N,1295μm,1.1s						
AM05				AML	AML		
	comp=N,5725μm,1.1s						
AM05				AML	AML		
	comp=E,6925μm,0.9s						
AM05				AML	AML		
	comp=E,24450μm,0.8s						
AM05				AML	AML		
	comp=N,1300μm,1.1s						
AM05				AML	AML		
	comp=E,1669μm,0.1s						
AM05				AML	AML		
	comp=E,7394μm,0.1s						
AM05				AML	AML		
	comp=N,2248μm,0.1s						
AM05				AML	AML		
	comp=N,651μm,0.1s						
CAMP	**Campotosto**	**0.30**	**140**	P	Pg	17 19 53.5	+0.3
CAMP				S	Sg	17 19 58.1	+0.9
CAMP				AML	AML		
	comp=E,1920μm,1.5s						
CAMP				AML	AML		
	comp=N,2795μm,0.4s						
CAMP				AML	AML		
	comp=E,1915μm,1.5s						
CAMP				AML	AML		
	comp=E,1918μm,0.6s						
CAMP				AML	AML		
	comp=N,2797μm,0.4s						
T1246	**Crognaleto (TE**	**0.31**	**125**	P	Pg	17 19 53.6	+0.1
T1246				S	Sg	17 19 58.6	+0.9
T1211	**Morro Reatino**	**0.32**	**224**	P	Pg	17 19 52.6	-0.9
GUMA	**Gualdo di Mace**	**0.33**	**24**	P	Pb	17 19 54.4	-0.6
GUMA				AML	AML		
	comp=E,36300μm,0.4s						
GUMA				AML	AML		
	comp=N,40300μm,0.6s						
GUMA				AML	AML		
	comp=E,53450μm,0.3s						
GUMA				AML	AML		
	comp=N,37950μm,0.3s						
GUMA				AML	AML		
	comp=E,36350μm,0.4s						
GUMA				AML	AML		
	comp=N,40350μm,0.6s						
GUMA				AML	AML		
	comp=E,36300μm,0.4s						
GUMA				AML	AML		
	comp=N,12225μm,0.2s						
GUMA				AML	AML		
	comp=E,12104μm,0.4s						
GUMA				AML	AML		
	comp=N,16082μm,0.6s						
GUMA				AML	AML		
	comp=E,18186μm,0.3s						
CSP1	**Cessapalombo**	**0.33**	**7**	⇓P	Pg	17 19 54.1	+0.3
CSP1				AML	AML		
	comp=N,13145μm,1.2s						
CSP1				AML	AML		
	comp=E,7925μm,0.9s						
CSP1				AML	AML		
	comp=N,5049μm,0.2s						
CSP1				AML	AML		
	comp=E,3850μm,0.1s						
ARRO	**Arrone**	**0.34**	**237**	P	Pg	17 19 54.3	+0.5
T1247	**Pizzolo (AQ)**	**0.34**	**161**	P	Pg	17 19 54.2	+0.3
T1247				S	Sb	17 19 60.0	-0.5
T1247				AML	AML		
	comp=E,2915μm,1.5s						
T1247				AML	AML		
	comp=N,6750μm,0.4s						
T1247				AML	AML		
	comp=N,6750μm,0.4s						
T1247				AML	AML		
	comp=E,2888μm,0.4s						
TERO	**Teramo**	**0.36**	**112**	P	Pg	17 19 54.5	+0.1
TERO				AML	AML		
	comp=E,4290μm,0.4s						
TERO				AML	AML		
	comp=N,4010μm,0.7s						
TERO				AML	AML		
	comp=E,4435μm,0.4s						
TERO				AML	AML		
	comp=N,4120μm,0.7s						
TERO				AML	AML		
	comp=N,5740μm,0.6s						
TERO				AML	AML		
	comp=N,5945μm,0.6s						
TERO				AML	AML		
	comp=E,4285μm,0.4s						
TERO				AML	AML		
	comp=N,2913μm,0.3s						
TERO				AML	AML		
	comp=N,3056μm,0.3s						
TERO				AML	AML		
	comp=E,4285μm,0.4s						
TERO				AML	AML		
	comp=E,4433μm,0.4s						
SEF1	**Sefro**	**0.41**	**339**	P	Pg	17 19 55.4	+0.1
SEF1				S	Sb	17 20 02.1	-0.6
SEF1				AML	AML		
	comp=E,12025μm,0.8s						
SEF1				AML	AML		
	comp=E,12000μm,0.8s						
SEF1				AML	AML		
	comp=N,10215μm,0.3s						
SEF1				AML	AML		
	comp=N,10175μm,0.3s						
SEF1				AML	AML		
	comp=E,12050μm,0.8s						
SEF1				AML	AML		
	comp=N,6398μm,0.2s						
SEF1				AML	AML		
	comp=E,7868μm,0.2s						
MDAR	**Monte D'Aria**	**0.43**	**359**	P	Pg	17 19 55.6	0.0
MDAR				AML	AML		
	comp=N,1988μm,0.1s						
MDAR				AML	AML		
	comp=E,2116μm,0.2s						
OFFI	**Offida**	**0.43**	**66**	P	Pg	17 19 56.0	+0.5
OFFI				AML	AML		
	comp=E,9145μm,0.3s						
OFFI				AML	AML		
	comp=N,8535μm,0.3s						
OFFI				AML	AML		
	comp=E,9143μm,0.3s						
OFFI				AML	AML		
	comp=N,8534μm,0.3s						
PIO1	**Pioraco**	**0.43**	**344**	P	Pg	17 19 55.7	+0.1
PIO1				S	Sb	17 20 02.8	-0.4
GIGS	**Gran Sasso**	**0.44**	**135**	P	Pg	17 19 55.9	+0.1
GIGS				AML	AML		
	comp=E,514μm,1.1s						
GIGS				AML	AML		
	comp=N,604μm,1.1s						
GIGS				AML	AML		
	comp=E,514μm,1.1s						
GIGS				AML	AML		
	comp=N,604μm,1.1s						
GIGS				AML	AML		
	comp=N,574μm,0.4s						
GIGS				AML	AML		
	comp=E,481μm,0.2s						
MNTP	**Montappone**	**0.44**	**32**	P	Pb	17 19 57.0	+0.2
CESX	**Cesi**	**0.45**	**250**	P	Pg	17 19 55.9	0.0
AQU	**L'Aquila**	**0.45**	**155**	P	Pg	17 19 56.2	+0.3
AQU				S	Sb	17 20 03.7	+0.1
FIU1	**Fiuminata**	**0.46**	**340**	P	Pg	17 19 56.3	+0.2
ASSB	**Assisi San Ben**	**0.46**	**308**	P	Pg	17 19 56.1	0.0
ASSB				S	Sb	17 20 03.2	-0.7
ASSB				AML	AML		
	comp=E,3525μm,0.5s						
ASSB				AML	AML		
	comp=N,3780μm,0.1s						
ASSB				AML	AML		
	comp=E,3017μm,0.2s						
ASSB				AML	AML		
	comp=N,3779μm,0.1s						
GAG1	**Gagliole**	**0.48**	**353**	P	Pg	17 19 56.7	+0.2
GAG1				AML	AML		
	comp=E,7035μm,0.3s						
GAG1				AML	AML		
	comp=N,8475μm,1.2s						
GAG1				AML	AML		
	comp=E,7040μm,0.3s						
GAG1				AML	AML		
	comp=N,5379μm,0.2s						
GAG1				AML	AML		
	comp=E,4213μm,0.2s						
FIAM	**Fiamignano**	**0.49**	**183**	⇑P	Pg	17 19 57.2	+0.4
FIAM				AML	AML		
	comp=E,1130μm,0.5s						
FIAM				AML	AML		
	comp=N,1082μm,0.3s						
FIAM				AML	AML		
	comp=E,1135μm,0.5s						
FIAM				AML	AML		
	comp=N,1082μm,0.3s						
FIAM				AML	AML		
	comp=N,1083μm,0.3s						
FIAM				AML	AML		
	comp=E,1133μm,0.5s						
SNTG	**Esanatoglia**	**0.52**	**343**	P	Pg	17 19 57.0	-0.2
SNTG				AML	AML		
	comp=E,2285μm,0.2s						
SNTG				AML	AML		
	comp=N,2180μm,0.2s						
SNTG				AML	AML		
	comp=E,2280μm,0.2s						
SNTG				AML	AML		
	comp=N,2180μm,0.2s						
SNTG				AML	AML		
	comp=E,2355μm,0.2s						
SNTG				AML	AML		
	comp=N,2375μm,0.2s						
SNTG				AML	AML		
	comp=E,1463μm,0.2s						
SNTG				AML	AML		
	comp=E,1398μm,0.1s						
SNTG				AML	AML		
	comp=N,1589μm,0.1s						
SNTG				AML	AML		
	comp=N,1398μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.56**	**319**	P	Pg	17 19 58.1	0.0
ATCC				S	Sb	17 20 06.5	-0.5
ATCC				AML	AML		
	comp=E,2590μm,0.3s						
ATCC				AML	AML		
	comp=N,2505μm,1.2s						
TRTR	**Tortoreto Alta**	**0.56**	**85**	⇑P	Pn	17 20 01.6	+0.6
EL6	**Elcito**	**0.57**	**357**	⇑P	Pg	17 19 58.2	0.0
EL6				S	Sb	17 20 08.0	+0.8
EL6				AML	AML		
	comp=E,3665μm,1.0s						
EL6				AML	AML		
	comp=N,3775μm,0.2s						
EL6				AML	AML		
	comp=E,3670μm,1.0s						
EL6				AML	AML		
	comp=N,3770μm,0.2s						
EL6				AML	AML		
	comp=N,2129μm,0.3s						
EL6				AML	AML		
	comp=E,2652μm,0.2s						
FOSV	**Fossato di Vic**	**0.60**	**332**	P	Pg	17 19 58.6	-0.3
FOSV				AML	AML		
	comp=E,2070μm,0.2s						
FOSV				AML	AML		
	comp=N,3400μm,0.5s						
FOSV				AML	AML		
	comp=N,1078μm,0.4s						
FOSV				AML	AML		
	comp=E,1154μm,0.3s						
VCEL	**Villa Celiera**	**0.63**	**125**	⇓P	Pb	17 19 59.8	-0.3
VCEL				S	Sn	17 20 11.0	-1.0
VCEL				AML	AML		
	comp=E,2360μm,0.4s						

VCEL				AML	AML	
	comp=N,2400μm,0.4s					
VCEL				AML	AML	
	comp=N,2395μm,0.4s					
VCEL				AML	AML	
	comp=E,2360μm,0.4s					
VCEL				AML	AML	
	comp=N,2396μm,0.4s					
MURB	**Monte Urbino**	**0.68 318**		P	Pg	17 20 00.5 +0.2
MURB				AML	AML	
	comp=E,5160μm,0.3s					
MURB				AML	AML	
	comp=N,3790μm,0.2s					
MURB				AML	AML	
	comp=E,5160μm,0.3s					
MURB				AML	AML	
	comp=E,5385μm,0.3s					
MURB				AML	AML	
	comp=N,3615μm,0.4s					
MURB				AML	AML	
	comp=N,3791μm,0.2s					
MURB				AML	AML	
	comp=N,3614μm,0.4s					
MURB				AML	AML	
	comp=E,5382μm,0.3s					
MURB				AML	AML	
	comp=E,5160μm,0.3s					
PP3	**Marolino**	**0.70 29**		⇑P	Pb	17 20 01.9 +0.6
PP3				AML	AML	
	comp=E,5385μm,1.5s					
PP3				AML	AML	
	comp=N,4970μm,0.3s					
PP3				AML	AML	
	comp=N,5255μm,0.3s					
PP3				AML	AML	
	comp=E,5065μm,1.5s					
PP3				AML	AML	
	comp=N,3026μm,0.4s					
PP3				AML	AML	
	comp=E,2143μm,0.4s					
PP3				AML	AML	
	comp=E,2047μm,0.4s					
PP3				AML	AML	
	comp=N,3036μm,0.4s					
T0110	**Collepietro**	**0.71 139**		⇑P	Pg	17 20 00.8 0.0
T0110				AML	AML	
	comp=E,1590μm,0.4s					
T0110				AML	AML	
	comp=N,2720μm,0.3s					
T0110				AML	AML	
	comp=N,2722μm,0.3s					
T0110				AML	AML	
	comp=E,1594μm,0.4s					
ATTE	**AVT- Monte Tez**	**0.73 307**		⇓P	Pg	17 20 01.5 +0.3
ATTE				S	Sn	17 20 14.0 -0.5
ATTE				AML	AML	
	comp=E,935μm,0.7s					
ATTE				AML	AML	
	comp=N,795μm,1.5s					
ATTE				AML	AML	
	comp=E,940μm,0.7s					
ATTE				AML	AML	
	comp=N,1017μm,0.7s					
ATTE				AML	AML	
	comp=N,781μm,0.4s					
ATTE				AML	AML	
	comp=E,938μm,0.7s					
ATFO	**Monte Foce - G**	**0.74 325**		⇑P	Pg	17 20 01.4 0.0
ATFO				S	Sn	17 20 14.0 -0.7
ATFO				AML	AML	
	comp=N,1395μm,0.3s					
ATFO				AML	AML	
	comp=E,1235μm,0.3s					
ATFO				AML	AML	
	comp=N,1398μm,0.3s					
ATFO				AML	AML	
	comp=E,1239μm,0.3s					
ARVD	**Arcevia**	**0.75 348**		⇑P	Pg	17 20 01.4 -0.2
ARVD				S	Sn	17 20 14.0 -1.0
ARVD				AML	AML	
	comp=N,532μm,1.5s					
ARVD				AML	AML	
	comp=N,592μm,1.2s					
ARVD				AML	AML	
	comp=E,1150μm,1.2s					
ARVD				AML	AML	
	comp=N,494μm,0.2s					
ARVD				AML	AML	
	comp=E,689μm,0.1s					
MGAB	**Montegabbione**	**0.78 282**		⇓P	Pn	17 20 04.6 +0.7
MGAB				AML	AML	
	comp=E,1185μm,0.4s					
MGAB				AML	AML	
	comp=E,1345μm,0.4s					
MGAB				AML	AML	
	comp=N,2280μm,0.5s					
MGAB				AML	AML	
	comp=N,2220μm,0.5s					
MGAB				AML	AML	
	comp=E,1342μm,0.4s					
MGAB				AML	AML	
	comp=N,1158μm,0.2s					
MGAB				AML	AML	
	comp=E,1185μm,0.4s					
MGAB				AML	AML	
	comp=N,1168μm,0.5s					
FRON	**Frontone**	**0.82 338**		P	Pg	17 20 02.6 -0.2
FRON				AML	AML	
	comp=E,1080μm,0.2s					
FRON				AML	AML	
	comp=N,1460μm,0.5s					
FRON				AML	AML	
	comp=E,1085μm,0.2s					
FRON				AML	AML	
	comp=N,825μm,0.3s					
FRON				AML	AML	
	comp=E,686μm,0.2s					
ATVO	**AVT- Monte Val**	**0.82 319**		⇑P	Pg	17 20 02.8 -0.3
ATVO				S	Sn	17 20 17.0 +0.2
ATVO				AML	AML	
	comp=E,890μm,0.4s					
ATVO				AML	AML	
	comp=N,834μm,0.4s					
ATVO				AML	AML	
	comp=N,1024μm,0.7s					
ATVO				AML	AML	
	comp=N,1025μm,0.7s					
ATVO				AML	AML	
	comp=E,892μm,0.4s					
ATVO				AML	AML	
	comp=N,834μm,0.4s					
AOI	**Ancona**	**0.85 23**		⇑P	Pn	17 20 05.2 +0.2
AOI				AML	AML	
	comp=E,689μm,0.4s					
AOI				AML	AML	
	comp=N,621μm,0.5s					
AOI				AML	AML	
	comp=E,1310μm,0.3s					
AOI				AML	AML	
	comp=N,838μm,1.5s					
AOI				AML	AML	
	comp=E,539μm,0.3s					
AOI				AML	AML	
	comp=N,561μm,0.4s					
ATPI	**Pietralunga -**	**0.88 322**		⇓P	Pb	17 20 04.3 -0.1
ATPI				AML	AML	
	comp=E,675μm,0.5s					
ATPI				AML	AML	
	comp=N,667μm,0.5s					
ATPI				AML	AML	
	comp=E,868μm,0.5s					
ATPI				AML	AML	
	comp=N,750μm,0.6s					
ATPI				AML	AML	
	comp=E,675μm,0.5s					
ATPI				AML	AML	
	comp=N,667μm,0.5s					
PIEI	**Pieia**	**0.90 330**		S	Sn	17 20 19.0 +0.5
MPAG	**Monte Paganucc**	**0.91 342**		⇑P	Pb	17 20 05.0 +0.1
MPAG				S	Sn	17 20 20.0 +1.0
MPAG				AML	AML	
	comp=E,524μm,0.4s					
MPAG				AML	AML	
	comp=N,662μm,0.3s					
MPAG				AML	AML	
	comp=E,1128μm,0.7s					
MPAG				AML	AML	
	comp=N,1036μm,1.2s					
MPAG				AML	AML	
	comp=E,1133μm,0.7s					
MPAG				AML	AML	
	comp=N,1037μm,1.2s					
MPAG				AML	AML	
	comp=N,662μm,0.3s					
MPAG				AML	AML	
	comp=E,524μm,0.4s					
FSSB	**Fossombrone**	**0.97 344**		⇓P	Pn	17 20 06.2 -0.4
FSSB				AML	AML	
	comp=E,2555μm,0.3s					
FSSB				AML	AML	
	comp=N,2545μm,0.3s					
FSSB				AML	AML	
	comp=E,2558μm,0.3s					
FSSB				AML	AML	
	comp=N,2546μm,0.3s					
BADI	**Badiali**	**1.00 319**		⇑P	Pn	17 20 06.8 -0.2
CAFI	**Castiglion Fio**	**1.04 304**		⇓P	Pg	17 20 07.1 +0.1
CAFI				AML	AML	
	comp=E,600μm,0.8s					
CAFI				AML	AML	
	comp=N,482μm,0.4s					
CAFI				AML	AML	
	comp=N,376μm,0.4s					
CAFI				AML	AML	
	comp=N,408μm,0.4s					
CAFI				AML	AML	
	comp=E,405μm,0.8s					
CAFI				AML	AML	
	comp=E,449μm,0.8s					
PE3	**Peglio**	**1.05 333**		S	Sn	17 20 25.0 +2.7
CRE	**Caprese Michel**	**1.23 315**		⇑P	Pg	17 20 10.9 +0.2
CRE				AML	AML	
	comp=N,388μm,1.3s					
CRE				AML	AML	
	comp=E,343μm,1.6s					
CRE				AML	AML	
	comp=N,298μm,0.6s					
CRE				AML	AML	
	comp=E,187μm,0.5s					
CSNT	**Castellina Chi**	**1.54 298**		⇓P	Pb	17 20 15.2 -0.3
CSNT				AML	AML	
	comp=E,118μm,0.6s					
CSNT				AML	AML	
	comp=N,170μm,0.7s					
CSNT				AML	AML	
	comp=N,84μm,0.7s					
CSNT				AML	AML	
	comp=E,91μm,0.5s					
RUFI	**Rufina**	**1.61 313**		⇑P	Pg	17 20 17.5 -0.4
RUFI				AML	AML	
	comp=N,155μm,0.7s					
RUFI				AML	AML	
	comp=N,180μm,0.7s					
CASP	**Castiglione de**	**1.68 272**		⇓P	Pn	17 20 16.5 +0.2
CASP				AML	AML	
	comp=E,40μm,0.8s					
CASP				AML	AML	
	comp=N,44μm,0.7s					
CASP				AML	AML	
	comp=E,29μm,0.5s					
CASP				AML	AML	
	comp=N,25μm,0.4s					
TRIF	**Trifonti**	**1.69 283**		P	Pn	17 20 17.0 +0.5
TRIF				AML	AML	
	comp=N,87μm,0.6s					
TRIF				AML	AML	
	comp=E,108μm,0.8s					
TRIF				AML	AML	
	comp=N,82μm,0.5s					
TRIF				AML	AML	
	comp=E,59μm,0.5s					
MTCR	**Monte La Croce**	**2.01 310**		⇓P	Pn	17 20 21.7 +0.6
BRJN	**Brijuni**	**2.19 11**		P	Pb	17 20 25.1 -1.4
MAIM	**Mastiano**	**2.25 302**		S	Sn	17 20 53.0 +1.0
EQUI	**Equi**	**2.59 304**		⇑P	Pn	17 20 29.9 +1.0
EQUI				AML	AML	
	comp=N,45μm,1.2s					
EQUI				AML	AML	
	comp=E,34μm,0.9s					
EQUI				AML	AML	
	comp=E,22μm,0.6s					
PLMA	**Palmaria, Port**	**2.73 299**		⇑P	Pn	17 20 31.7 +1.0
PLMA				AML	AML	
	comp=N,24μm,0.6s					
ROVR	**Rover Verones**	**3.25 333**		⇑P	Pn	17 20 40.6 +2.6
CTI	**Castel Tesino**	**3.46 342**		P	Pn	17 20 42.3 +1.4
CTI				AML	AML	
	comp=E,86μm,1.6s					
CTI				AML	AML	
	comp=N,78μm,1.0s					
STAL	**STALIGIAL**	**3.51 355**		⇓P	Pn	17 20 42.7 +1.2
STAL				AML	AML	
	comp=N,92μm,0.4s					
STAL				AML	AML	
	comp=E,83μm,0.9s					
STAL				AML	AML	
	comp=E,63μm,0.3s					
STAL				AML	AML	
	comp=N,54μm,0.2s					
STAL				AML	AML	
	comp=N,207μm,1.0s					
STAL				AML	AML	
	comp=E,118μm,0.6s					
LUSI	**Trento, Gardas**	**3.57 334**		⇑P	Pn	17 20 44.4 +2.1
CIMO	**Cimolais**	**3.58 352**		P	Pn	17 20 43.7 +1.2
CIMO				AML	AML	
	comp=N,21μm,1.1s					
CIMO				AML	AML	
	comp=E,23μm,0.5s					
CIMO				AML	AML	
	comp=N,24μm,0.7s					
CIMO				AML	AML	
	comp=E,24μm,0.8s					
CIMO				AML	AML	
	comp=N,14μm,0.6s					
CIMO				AML	AML	
	comp=E,17μm,0.5s					
CAPR	**Capriolo**	**3.69 322**		P	Pg	17 20 56.5 -1.2
MABI	**Malga Bissina**	**3.79 331**		⇓P	Pn	17 20 47.3 +1.7
MABI				AML	AML	
	comp=E,22μm,0.6s					
MABI				AML	AML	
	comp=N,29μm,1.1s					
MABI				AML	AML	
	comp=N,18μm,0.5s					
MABI				AML	AML	
	comp=E,17μm,0.3s					
CET2	**Cetraro**	**3.86 146**		S	Sg	17 21 47.0 -4.1
KOSI	**Kohlern**	**3.91 342**		⇓P	Pn	17 20 49.8 +2.7
ABTA	**Abfaltersbach**	**4.01 354**		*e*Pn	Pn	17 20 50.4 +1.9
	comp=E,0.8nm,0.1s					
ROSI	**Rosskopf**	**4.34 344**		⇓P	Pn	17 20 55.7 +2.5
ROSI				S	Sn	17 21 41.0 -2.8
WTTA	**Wattenberg**	**4.63 347**		*e*Pn	Pn	17 21 00.5 +3.5
	comp=E,0.7nm,0.2s					
SQTA	**Sankt Quirin**	**4.67 344**		*e*Pn	Pn	17 21 01.1 +3.7
	comp=E,0.6nm,0.1s					
WATA	**Walderalm**	**4.71 347**		*e*Pn	Pn	17 21 02.0 +4.0
	comp=E,1.8nm,0.3s					
CORL	**Corleone**	**4.86 179**		P	Pn	17 21 00.5 +0.4
MOA	**Molln**	**5.15 8**		*e*Pn	Pn	17 21 07.1 +3.1
	comp=E,0.3nm,0.1s					
VLO	**Vlora**	**5.28 114**		⇓P	Pb	17 21 13.2 -6.1
CKRC	**Cesky Krumlov**	**6.11 7**		*e*SN	Sg	17 23 09.7 +6.5
KHC	**Kasperske Hory**	**6.38 3**		*e*PN	Pg	17 22 06.1 +17
KHC				*e*SN	Sg	17 23 15.5 +3.8

ROM 30 17:22:39.5±0.0, 42°.844N±0°.002×13°.123E±0°.004,
h10km, ML3.1/38, 18C-17D, Error ellipse: s-maj=0.3km
s-min=0.1km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.09**	**301**	P	Pg	17 22 42.6	+0.5
T1216				S	Sg	17 22 44.7	+0.7
T1216				AML	AML		
	comp=E,39850μm,0.2s						
T1216				AML	AML		
	comp=E,39850μm,0.2s						
T1216				AML	AML		
	comp=N,78150μm,0.2s						
T1216				AML	AML		
	comp=E,39900μm,0.2s						
T1216				AML	AML		
	comp=N,78150μm,0.2s						
T1216				AML	AML		
	comp=E,39900μm,0.2s						
T1216				AML	AML		
	comp=N,78146μm,0.2s						
T1216				AML	AML		
	comp=E,39855μm,0.2s						
FEMA	**Monte Fema**	**0.13 336**		P	Pg	17 22 43.2	+0.5
FEMA				S	Sg	17 22 45.8	+0.7
FEMA				AML	AML		
	comp=E,29700μm,0.3s						
FEMA				AML	AML		
	comp=N,25300μm,0.5s						
FEMA				AML	AML		
	comp=E,40000μm,0.2s						
FEMA				AML	AML		
	comp=N,25300μm,0.5s						
FEMA				AML	AML		
	comp=E,39950μm,0.2s						
FEMA				AML	AML		
	comp=N,22400μm,0.3s						
FEMA				AML	AML		
	comp=E,29695μm,0.3s						
MMO1	**Montemonaco**	**0.16 70**		P	Pg	17 22 43.6	+0.5
MMO1				S	Sg	17 22 46.6	+0.9
T1215	**Vallo di Nera,**	**0.19 257**		P	Pg	17 22 44.3	+0.6
T1215				S	Sg	17 22 47.6	+1.1
T1215				AML	AML		
	comp=E,7950μm,0.3s						
T1215				AML	AML		
	comp=N,7910μm,0.6s						
T1215				AML	AML		
	comp=E,8270μm,0.3s						
T1215				AML	AML		
	comp=N,8170μm,0.7s						
T1215				AML	AML		
	comp=N,8165μm,0.7s						
T1215				AML	AML		
	comp=E,7441μm,0.1s						
T1215				AML	AML		
	comp=E,7945μm,0.1s						
T1215				AML	AML		
	comp=N,7648μm,0.1s						
T1215				AML	AML		
	comp=N,7690μm,0.1s						
T1217	**Poggiodomo (PG**	**0.19 227**		P	Pg	17 22 44.4	+0.7
T1217				S	Sg	17 22 47.7	+1.1
T1217				AML	AML		
	comp=E,14200μm,1.0s						
T1217				AML	AML		
	comp=N,13200μm,0.9s						
T1217				AML	AML		
	comp=N,13000μm,0.9s						
T1217				AML	AML		
	comp=E,14150μm,1.0s						
T1217				AML	AML		
	comp=E,14200μm,1.0s						
T1217				AML	AML		
	comp=N,13000μm,0.9s						
T1217				AML	AML		
	comp=E,14200μm,1.0s						
T1217				AML	AML		
	comp=N,13200μm,0.9s						
T1217				AML	AML		
	comp=E,14200μm,1.0s						
T1217				AML	AML		
	comp=E,11995μm,0.1s						
T1217				AML	AML		
	comp=E,11692μm,0.1s						
T1217				AML	AML		
	comp=N,10928μm,0.1s						
T1217				AML	AML		
	comp=N,10908μm,0.1s						
AM05	**Amandola Campo**	**0.21 52**		AML	AML		
	comp=N,480μm,0.4s						
AM05				AML	AML		
	comp=E,2125μm,0.6s						
AM05				AML	AML		
	comp=N,1515μm,0.5s						
AM05				AML	AML		
	comp=E,8190μm,0.6s						
T1204	**Amatrice, Fraz**	**0.22 140**		P	Pg	17 22 44.8	+0.6
T1204				AML	AML		
	comp=E,16700μm,1.2s						
T1204				AML	AML		
	comp=N,9460μm,1.1s						
T1204				AML	AML		
	comp=E,16650μm,1.2s						
T1204				AML	AML		
	comp=N,9470μm,1.1s						
T1204				AML	AML		
	comp=N,9475μm,1.1s						
T1204				AML	AML		
	comp=N,7924μm,0.2s						
T1204				AML	AML		
	comp=E,13753μm,0.2s						
T1241	**Roccafluvione,**	**0.23 87**		P	Pg	17 22 45.0	+0.7
T1241				S	Sg	17 22 48.8	+1.4
T1241				AML	AML		
	comp=E,6750μm,0.6s						
T1241				AML	AML		
	comp=N,12600μm,0.3s						
T1241				AML	AML		
	comp=N,12600μm,0.3s						
T1241				AML	AML		
	comp=N,12650μm,0.3s						
T1241				AML	AML		
	comp=E,7145μm,0.4s						
T1241				AML	AML		
	comp=N,12595μm,0.3s						
T1241				AML	AML		
	comp=E,7144μm,0.4s						
T1241				AML	AML		
	comp=N,12581μm,0.3s						
T1241				AML	AML		
	comp=N,12651μm,0.3s						
T1241				AML	AML		
	comp=E,6702μm,0.3s						
LNSS	**Leonessa**	**0.25 194**		P	Pg	17 22 45.3	+0.6
LNSS				S	Sg	17 22 49.7	+1.5
LNSS				AML	AML		
	comp=E,10280μm,0.2s						
LNSS				AML	AML		
	comp=N,37800μm,0.7s						
LNSS				AML	AML		
	comp=E,10260μm,0.2s						
LNSS				AML	AML		
	comp=N,31852μm,0.1s						
SMA1	**SAN MARTINO**	**0.27 144**		P	Pg	17 22 45.6	+0.6
SMA1				AML	AML		
	comp=N,9375μm,0.3s						
SMA1				AML	AML		
	comp=E,7655μm,0.3s						
SMA1				AML	AML		
	comp=N,9385μm,0.3s						
SMA1				AML	AML		
	comp=N,9386μm,0.3s						
SMA1				AML	AML		
	comp=E,7656μm,0.3s						
GUMA	**Gualdo di Mace**	**0.27 35**		P	Pb	17 22 45.8	-0.6
GUMA				S	Sb	17 22 50.4	-0.7
GUMA				AML	AML		
	comp=E,12650μm,0.6s						
GUMA				AML	AML		
	comp=N,10955μm,0.5s						
GUMA				AML	AML		
	comp=N,10990μm,0.5s						
GUMA				AML	AML		
	comp=E,11800μm,0.3s						
GUMA				AML	AML		
	comp=N,12700μm,0.7s						
GUMA				AML	AML		
	comp=N,10980μm,0.5s						
GUMA				AML	AML		
	comp=E,12652μm,0.6s						
GUMA				AML	AML		
	comp=E,11788μm,0.3s						
GUMA				AML	AML		
	comp=N,12660μm,0.7s						
T1243	**Rocca Santa Ma**	**0.28 121**		P	Pg	17 22 45.8	+0.5
T1243				S	Sb	17 22 50.4	-1.1
SEF1	**Sefro**	**0.33 337**		P	Pg	17 22 46.5	+0.3
SEF1				S	Sb	17 22 51.8	-1.1
SEF1				AML	AML		
	comp=E,6115μm,0.3s						
SEF1				AML	AML		

	comp=N,4300µm,0.2s					
SEF1			AML	AML		
	comp=N,4295µm,0.2s					
SEF1			AML	AML		
	comp=E,6114µm,0.3s					
SEF1			AML	AML		
	comp=N,4297µm,0.2s					
RM33	**Pellescritta (**	**0.34 169**	P	Pg	17 22 46.8	+0.4
RM33			S	Sb	17 22 52.6	-0.6
RM33			AML	AML		
	comp=N,6065µm,0.3s					
RM33			AML	AML		
	comp=N,6230µm,0.3s					
RM33			AML	AML		
	comp=E,6915µm,0.1s					
RM33			AML	AML		
	comp=N,6070µm,0.3s					
RM33			AML	AML		
	comp=E,6685µm,0.5s					
RM33			AML	AML		
	comp=N,6230µm,0.3s					
RM33			AML	AML		
	comp=N,6069µm,0.3s					
RM33			AML	AML		
	comp=E,6601µm,0.1s					
RM33			AML	AML		
	comp=E,6913µm,0.1s					
PIO1	**Pioraco**	**0.35 343**	P	Pg	17 22 46.8	+0.3
PIO1			AML	AML		
	comp=E,2175µm,0.9s					
PIO1			AML	AML		
	comp=N,2760µm,0.4s					
PIO1			AML	AML		
	comp=E,2175µm,0.9s					
PIO1			AML	AML		
	comp=N,2760µm,0.4s					
PIO1			AML	AML		
	comp=E,2005µm,0.4s					
PIO1			AML	AML		
	comp=N,2759µm,0.4s					
T1211	**Morro Reatino**	**0.37 212**	P	Pg	17 22 47.5	+0.7
T1211			S	Sb	17 22 53.2	-0.7
T1211			AML	AML		
	comp=N,8275µm,0.4s					
T1211			AML	AML		
	comp=E,7560µm,0.1s					
T1211			AML	AML		
	comp=N,8200µm,0.4s					
T1211			AML	AML		
	comp=E,7505µm,0.1s					
T1211			AML	AML		
	comp=N,8260µm,0.4s					
T1211			AML	AML		
	comp=N,8195µm,0.4s					
T1211			AML	AML		
	comp=E,7555µm,0.1s					
T1211			AML	AML		
	comp=E,7560µm,0.1s					
T1211			AML	AML		
	comp=N,7574µm,0.3s					
T1211			AML	AML		
	comp=N,7486µm,0.3s					
T1211			AML	AML		
	comp=E,7503µm,0.1s					
FIU1	**Fiuminata**	**0.37 338**	P	Pg	17 22 47.1	+0.2
FIU1			AML	AML		
	comp=E,1969µm,0.2s					
FIU1			AML	AML		
	comp=N,2106µm,0.1s					
ARRO	**Arrone**	**0.37 225**	P	Pg	17 22 47.4	+0.5
ARRO			S	Sg	17 22 52.8	+1.0
ARRO			AML	AML		
	comp=E,6130µm,1.1s					
ARRO			AML	AML		
	comp=N,5995µm,1.1s					
ARRO			AML	AML		
	comp=E,5452µm,0.2s					
ARRO			AML	AML		
	comp=N,4841µm,0.1s					
CAMP	**Campotosto**	**0.37 146**	P	Pg	17 22 47.3	+0.3
CAMP			S	Sg	17 22 53.0	+1.0
CAMP			AML	AML		
	comp=E,3455µm,0.3s					
CAMP			AML	AML		
	comp=N,2235µm,0.2s					
CAMP			AML	AML		
	comp=N,2231µm,0.2s					
CAMP			AML	AML		
	comp=E,3455µm,0.3s					
ASSB	**Assisi San Ben**	**0.39 300**	P	Pg	17 22 47.6	+0.3
ASSB			S	Sb	17 22 53.8	-1.0
ASSB			AML	AML		
	comp=N,6665µm,0.3s					
ASSB			AML	AML		
	comp=E,11225µm,0.2s					
ASSB			AML	AML		
	comp=N,6665µm,0.3s					
ASSB			AML	AML		
	comp=E,11245µm,0.2s					
GAG1	**Gagliole**	**0.40 354**	P	Pg	17 22 47.8	+0.4
GAG1			AML	AML		
	comp=E,6440µm,0.4s					
GAG1			AML	AML		
	comp=N,6100µm,0.5s					
GAG1			AML	AML		
	comp=N,6100µm,0.5s					
GAG1			AML	AML		
	comp=E,6442µm,0.4s					
TERO	**Teramo**	**0.42 122**	P	Pg	17 22 48.1	+0.4
TERO			S	Sb	17 22 54.6	-0.8
TERO			AML	AML		
	comp=E,5915µm,0.4s					
TERO			AML	AML		
	comp=E,5500µm,0.4s					
TERO			AML	AML		
	comp=N,7285µm,0.4s					
TERO			AML	AML		
	comp=N,6660µm,0.4s					
TERO			AML	AML		
	comp=N,5703µm,0.1s					
TERO			AML	AML		
	comp=E,4280µm,0.1s					
TERO			AML	AML		
	comp=N,5114µm,0.1s					
TERO			AML	AML		
	comp=E,3993µm,0.1s					
T1247	**Pizzolo (AQ)**	**0.42 162**	P	Pg	17 22 48.1	+0.2
T1247			AML	AML		
	comp=E,4720µm,0.1s					
T1247			AML	AML		
	comp=N,6105µm,1.5s					
T1247			AML	AML		
	comp=N,4642µm,0.3s					
T1247			AML	AML		
	comp=E,4719µm,0.1s					
OFFI	**Offida**	**0.42 77**	P	Pb	17 22 49.0	-0.1
OFFI			AML	AML		
	comp=N,3080µm,0.5s					
OFFI			AML	AML		
	comp=E,3170µm,0.4s					
OFFI			AML	AML		
	comp=E,3172µm,0.4s					
OFFI			AML	AML		
	comp=N,3078µm,0.5s					
SNTG	**Esanatoglia**	**0.43 342**	P	Pg	17 22 48.1	0.0
SNTG			AML	AML		
	comp=E,1176µm,0.7s					
SNTG			AML	AML		
	comp=N,965µm,1.3s					
SNTG			AML	AML		
	comp=N,1024µm,0.5s					
SNTG			AML	AML		
	comp=E,1174µm,0.7s					
SNTG			AML	AML		
	comp=E,1121µm,0.9s					
SNTG			AML	AML		
	comp=N,966µm,1.3s					
SNTG			AML	AML		
	comp=E,954µm,0.3s					
SNTG			AML	AML		
	comp=E,910µm,0.3s					
SNTG			AML	AML		
	comp=N,880µm,0.2s					
SNTG			AML	AML		
	comp=N,857µm,0.3s					
CESX	**Cesi**	**0.46 240**	P	Pg	17 22 48.7	+0.1
CESX			S	Sb	17 22 55.9	-0.8
CESX			AML	AML		
	comp=N,3435µm,0.5s					
CESX			AML	AML		
	comp=E,2745µm,0.6s					
CESX			AML	AML		
	comp=E,2538µm,0.4s					
CESX			AML	AML		
	comp=N,2991µm,0.5s					
EL6	**Elcito**	**0.48 358**	⇓P	Pg	17 22 49.2	+0.2
EL6			AML	AML		
	comp=E,2485µm,1.1s					
EL6			AML	AML		
	comp=N,2440µm,1.3s					
EL6			AML	AML		
	comp=E,2450µm,1.1s					
EL6			AML	AML		
	comp=N,2500µm,1.3s					
EL6			AML	AML		
	comp=E,2335µm,0.4s					
EL6			AML	AML		
	comp=N,2362µm,0.4s					
ATCC	**AVT- Casa Cast**	**0.49 314**	P	Pg	17 22 49.3	+0.2
ATCC			AML	AML		
	comp=N,4230µm,1.5s					
ATCC			AML	AML		
	comp=E,3680µm,0.3s					
ATCC			AML	AML		
	comp=N,4225µm,1.5s					
ATCC			AML	AML		
	comp=E,3682µm,0.3s					
ATCC			AML	AML		
	comp=N,3809µm,0.5s					
GIGS	**Gran Sasso**	**0.51 140**	P	Pg	17 22 49.4	-0.2
GIGS			S	Sg	17 22 57.2	+0.8
GIGS			AML	AML		
	comp=E,948µm,0.5s					
GIGS			AML	AML		
	comp=N,848µm,0.3s					
GIGS			AML	AML		
	comp=E,952µm,0.5s					
GIGS			AML	AML		
	comp=E,866µm,0.3s					
GIGS			AML	AML		
	comp=N,574µm,0.3s					
FOSV	**Fossato di Vic**	**0.52 330**	P	Pg	17 22 49.7	0.0
FOSV			S	Sb	17 22 57.9	-0.6
FOSV			AML	AML		
	comp=E,1027µm,1.5s					
FOSV			AML	AML		
	comp=N,1625µm,0.4s					
FOSV			AML	AML		
	comp=N,1625µm,0.4s					
FOSV			AML	AML		
	comp=E,977µm,0.5s					
AQU	**L'Aquila**	**0.53 157**	P	Pg	17 22 49.9	0.0
AQU			AML	AML		
	comp=E,1775µm,1.1s					
AQU			AML	AML		
	comp=N,1745µm,0.7s					
AQU			AML	AML		
	comp=E,1760µm,1.1s					
AQU			AML	AML		
	comp=N,1740µm,0.7s					
AQU			AML	AML		
	comp=N,1640µm,0.3s					
AQU			AML	AML		
	comp=E,1489µm,0.5s					
AQU			AML	AML		
	comp=E,1520µm,0.5s					
AQU			AML	AML		
	comp=N,1641µm,0.3s					
AQU			AML	AML		
	comp=N,1652µm,0.3s					
FIAM	**Fiamignano**	**0.58 180**	P	Pg	17 22 50.6	-0.1
FIAM			S	Sb	17 22 59.4	-0.6
FIAM			AML	AML		
	comp=N,1325µm,0.9s					
FIAM			AML	AML		
	comp=E,2175µm,1.3s					
FIAM			AML	AML		
	comp=E,2105µm,0.3s					
FIAM			AML	AML		
	comp=N,1214µm,0.3s					
MMUR	**Monte Murano**	**0.60 351**	P	Pg	17 22 51.7	+0.4
MMUR			AML	AML		
	comp=E,1970µm,0.4s					
MMUR			AML	AML		
	comp=N,1147µm,0.3s					
MURB	**Monte Urbino**	**0.61 314**	P	Pg	17 22 51.4	+0.1
MURB			AML	AML		
	comp=E,7280µm,1.1s					
MURB			AML	AML		
	comp=N,7015µm,1.1s					
MURB			AML	AML		
	comp=E,7275µm,1.1s					
MURB			AML	AML		
	comp=E,8005µm,0.3s					
MURB			AML	AML		
	comp=N,7085µm,0.3s					
MURB			AML	AML		
	comp=E,7049µm,0.3s					
MURB			AML	AML		
	comp=E,8006µm,0.3s					
MURB			AML	AML		
	comp=N,6802µm,0.3s					
MURB			AML	AML		
	comp=N,7087µm,0.3s					
PP3	**Marolino**	**0.64 34**	⇓P	Pb	17 22 53.2	+0.5
PP3			AML	AML		
	comp=E,2225µm,0.6s					
PP3			AML	AML		
	comp=E,2315µm,1.0s					
PP3			AML	AML		
	comp=E,2560µm,0.8s					
PP3			AML	AML		
	comp=N,3140µm,0.5s					
PP3			AML	AML		
	comp=N,3105µm,0.5s					
PP3			AML	AML		
	comp=N,3135µm,0.5s					
PP3			AML	AML		
	comp=E,2555µm,0.8s					
PP3			AML	AML		
	comp=N,3106µm,0.5s					
PP3			AML	AML		
	comp=E,2560µm,0.8s					
PP3			AML	AML		
	comp=N,3138µm,0.5s					
PP3			AML	AML		
	comp=E,2555µm,0.8s					
ATFO	**Monte Foce - G**	**0.66 322**	⇓P	Pg	17 22 52.4	0.0
ATFO			AML	AML		
	comp=E,1215µm,1.1s					
ATFO			AML	AML		
	comp=N,1300µm,1.0s					
ATFO			AML	AML		
	comp=E,1171µm,0.3s					
ATFO			AML	AML		
	comp=N,1300µm,0.3s					
ATTE	**AVT- Monte Tez**	**0.67 302**	P	Pg	17 22 52.9	+0.4
ATTE			AML	AML		
	comp=N,1485µm,0.5s					
ATTE			AML	AML		
	comp=E,1305µm,1.3s					
ATTE			AML	AML		
	comp=N,1483µm,0.5s					
ATTE			AML	AML		
	comp=E,1289µm,0.5s					
ARVD	**Arcevia**	**0.67 349**	⇓P	Pg	17 22 52.4	0.0
ARVD			AML	AML		
	comp=N,466µm,0.4s					
ARVD			AML	AML		
	comp=E,454µm,0.8s					
ARVD			AML	AML		
	comp=N,453µm,0.6s					
ARVD			AML	AML		
	comp=E,375µm,0.2s					
FAGN	**Fagnano**	**0.67 149**	P	Pg	17 22 52.5	-0.1
FAGN			AML	AML		
	comp=E,3510µm,0.4s					
FAGN			AML	AML		
	comp=E,3510µm,0.4s					
FAGN			AML	AML		
	comp=N,2655µm,0.4s					
VCEL	**Villa Celiera**	**0.69 130**	P	Pg	17 22 53.1	+0.1
VCEL			AML	AML		
	comp=N,2235µm,0.7s					
VCEL			AML	AML		
	comp=E,2010µm,0.2s					
VCEL			AML	AML		
	comp=E,2008µm,0.2s					
VCEL			AML	AML		
	comp=N,1908µm,0.3s					
FRON	**Frontone**	**0.73 337**	⇑P	Pg	17 22 53.6	-0.2
FRON			AML	AML		
	comp=N,1340µm,0.3s					
FRON			AML	AML		
	comp=E,794µm,0.5s					
FRON			AML	AML		
	comp=N,1340µm,0.3s					
FRON			AML	AML		
	comp=E,795µm,0.5s					
MGAB	**Montegabbione**	**0.75 276**	⇓P	Pg	17 22 54.0	0.0
MGAB			AML	AML		
	comp=N,2670µm,0.6s					
MGAB			AML	AML		
	comp=E,2440µm,0.4s					
MGAB			AML	AML		
	comp=E,2205µm,0.4s					
MGAB			AML	AML		
	comp=N,2610µm,0.3s					
MGAB			AML	AML		
	comp=E,2443µm,0.4s					
MGAB			AML	AML		
	comp=N,2396µm,0.4s					
MGAB			AML	AML		
	comp=N,2607µm,0.3s					
MGAB			AML	AML		
	comp=E,2206µm,0.4s					
ATVO	**AVT- Monte Val**	**0.75 316**	⇓P	Pg	17 22 53.8	-0.2
ATVO			AML	AML		
	comp=E,1425µm,0.6s					
ATVO			AML	AML		
	comp=N,1012µm,0.5s					
ATVO			AML	AML		
	comp=E,1424µm,0.6s					
ATVO			AML	AML		
	comp=N,1013µm,0.5s					
SRES	**S.Oreste - Sor**	**0.76 217**	P	Pb	17 22 54.5	-0.3
SRES			AML	AML		
	comp=E,1330µm,0.3s					
SRES			AML	AML		
	comp=N,1142µm,1.0s					
SRES			AML	AML		
	comp=E,1326µm,0.3s					
SRES			AML	AML		
	comp=N,1122µm,0.5s					
T0110	**Collepietro**	**0.79 142**	P	Pg	17 22 54.2	-0.5
T0110			AML	AML		
	comp=E,1780µm,0.4s					
T0110			AML	AML		
	comp=N,1990µm,0.5s					
T0110			AML	AML		
	comp=N,1995µm,0.5s					
T0110			AML	AML		
	comp=N,1992µm,0.5s					
T0110			AML	AML		
	comp=E,1783µm,0.4s					
AOI	**Ancona**	**0.79 26**	⇑P	Pb	17 22 56.0	+0.7
AOI			AML	AML		
	comp=N,1095µm,0.5s					
AOI			AML	AML		
	comp=E,710µm,0.5s					
AOI			AML	AML		
	comp=N,1095µm,0.5s					
AOI			AML	AML		
	comp=E,651µm,0.4s					
ATMI	**Monte Miggiano**	**0.80 308**	S	Sn	17 23 08.0	-0.7
ATPI	**Pietralunga -**	**0.80 319**	⇓P	Pb	17 22 55.3	-0.3
ATPI			AML	AML		
	comp=E,890µm,0.5s					
ATPI			AML	AML		
	comp=E,890µm,0.5s					
ATPI			AML	AML		
	comp=N,954µm,0.6s					
ATPI			AML	AML		
	comp=N,954µm,0.6s					
ATPI			AML	AML		
	comp=E,890µm,0.5s					
PIEI	**Pieia**	**0.81 328**	⇑P	Pg	17 22 55.4	+0.1
PIEI			S	Sb	17 23 08.0	+1.2
PIEI			AML	AML		
	comp=E,528µm,1.0s					
PIEI			AML	AML		
	comp=N,651µm,0.4s					
PIEI			AML	AML		
	comp=N,651µm,0.4s					
PIEI			AML	AML		
	comp=E,523µm,0.2s					
MPAG	**Monte Paganucc**	**0.83 341**	⇓P	Pg	17 22 55.3	-0.3
MPAG			AML	AML		
	comp=E,718µm,0.4s					
MPAG			AML	AML		
	comp=N,647µm,0.6s					
MPAG			AML	AML		
	comp=N,648µm,0.6s					
MPAG			AML	AML		
	comp=E,719µm,0.4s					
MPAG			AML	AML		
	comp=N,647µm,0.6s					
MPAG			AML	AML		
	comp=E,719µm,0.4s					
PTQR	**Pietraquaria**	**0.85 166**	P	Pg	17 22 55.4	-0.5
PTQR			AML	AML		
	comp=E,542µm,0.3s					
PTQR			AML	AML		
	comp=N,370µm,0.7s					
PTQR			AML	AML		
	comp=N,352µm,0.4s					
PTQR			AML	AML		
	comp=E,542µm,0.3s					
MTCE	**Montecelio**	**0.87 199**	⇓P	Pg	17 22 56.0	-0.2
MTCE			AML	AML		
	comp=E,1015µm,0.4s					
MTCE			AML	AML		
	comp=N,808µm,0.3s					
MTCE			AML	AML		
	comp=E,1012µm,0.4s					
MTCE			AML	AML		
	comp=N,809µm,0.3s					
FSSB	**Fossombrone**	**0.88 344**	⇑P	Pg	17 22 56.5	-0.1
FSSB			AML	AML		
	comp=E,1825µm,0.4s					
FSSB			AML	AML		
	comp=N,3535µm,0.4s					
FSSB			AML	AML		
	comp=E,1826µm,0.4s					
FSSB			AML	AML		
	comp=N,3533µm,0.4s					
SACS	**San Casciano d**	**0.89 271**	⇑P	Pg	17 22 56.8	+0.1
SACS			AML	AML		
	comp=N,757µm,1.4s					
SACS			AML	AML		
	comp=E,520µm,0.6s					
SACS			AML	AML		
	comp=E,520µm,0.6s					
SACS			AML	AML		
	comp=N,599µm,0.4s					
SACS			AML	AML		
	comp=E,523µm,0.5s					
SACS			AML	AML		
	comp=N,607µm,0.4s					
CERT	**Cerreto**	**0.90 187**	⇑P	Pg	17 22 56.2	-0.7
CERT			AML	AML		
	comp=E,1585µm,0.3s					
CERT			AML	AML		
	comp=N,958µm,1.4s					
CERT			AML	AML		
	comp=N,778µm,0.5s					
CERT			AML	AML		
	comp=E,1586µm,0.3s					
BADI	**Badiali**	**0.93 316**	⇓P	Pb	17 22 57.7	0.0
BADI			AML	AML		
	comp=N,537µm,0.5s					
PE3	**Peglio**	**0.97 332**	⇑P	Pb	17 22 58.5	+0.1
CAFI	**Castiglion Fio**	**0.98 300**	⇑P	Pb	17 22 58.7	+0.2
CAFI			AML	AML		
	comp=E,1420µm,0.5s					
CAFI			AML	AML		
	comp=N,1385µm,0.8s					
CAFI			AML	AML		
	comp=N,1057µm,0.5s					
CAFI			AML	AML		
	comp=N,1120µm,0.5s					

CAFI				AML	AML	
	comp=E,1371µm,0.5s					
CAFI				AML	AML	
	comp=E,1417µm,0.5s					
LATE	**Laterza**	**1.00 257**		P	Pn	17 22 59.3 -0.3
VVLD	**Villa Vallelon**	**1.04 159**		P	Pg	17 22 57.3 -2.2
MCIV	**Monte Civitell**	**1.07 267**	⇓P		Pb	17 23 00.1 0.0
MCIV				AML	AML	
	comp=E,269µm,1.1s					
MCIV				AML	AML	
	comp=N,302µm,0.4s					
MCIV				AML	AML	
	comp=N,302µm,0.5s					
MCIV				AML	AML	
	comp=E,240µm,0.3s					
LPEL	**Lama dei Pelig**	**1.12 135**	⇑P		Pb	17 23 00.2 -0.8
LPEL			S		Sn	17 23 18.0 +1.3
LPEL				AML	AML	
	comp=N,494µm,1.3s					
LPEL				AML	AML	
	comp=E,584µm,0.4s					
LPEL				AML	AML	
	comp=N,459µm,0.5s					
LPEL				AML	AML	
	comp=E,584µm,0.4s					
TOLF	**Tolfa**	**1.14 227**	⇓P		Pb	17 23 01.0 -0.3
TOLF			S		Sn	17 23 19.0 +1.9
TOLF				AML	AML	
	comp=E,591µm,0.5s					
TOLF				AML	AML	
	comp=N,774µm,0.3s					
TOLF				AML	AML	
	comp=N,774µm,0.3s					
TOLF				AML	AML	
	comp=E,591µm,0.5s					
CRE	**Caprese Michel**	**1.16 313**	⇓P		Pn	17 23 02.6 +0.8
CRE				AML	AML	
	comp=E,315µm,1.1s					
CRE				AML	AML	
	comp=N,399µm,0.3s					
CRE				AML	AML	
	comp=N,399µm,0.3s					
CRE				AML	AML	
	comp=E,297µm,0.5s					
POFI	**Posta Fibreno**	**1.21 159**	⇑P		Pg	17 23 03.5 +0.8
POFI				AML	AML	
	comp=E,266µm,0.7s					
POFI				AML	AML	
	comp=N,240µm,1.4s					
POFI				AML	AML	
	comp=N,197µm,0.5s					
POFI				AML	AML	
	comp=N,220µm,0.5s					
POFI				AML	AML	
	comp=E,267µm,0.7s					
ARCI	**Arcidosso**	**1.21 271**	⇑P		Pg	17 23 03.3 +0.5
ARCI				AML	AML	
	comp=E,90µm,0.6s					
ARCI				AML	AML	
	comp=N,72µm,0.7s					
ARCI				AML	AML	
	comp=E,90µm,0.6s					
ARCI				AML	AML	
	comp=N,72µm,0.7s					
LRP	**Arpino**	**1.25 164**	⇑P		Pg	17 23 05.2 +1.7
LATB	**Latina**	**1.35 185**	⇓P		Pb	17 23 05.2 +0.2
LATB				AML	AML	
	comp=N,130µm,1.0s					
LATB				AML	AML	
	comp=E,148µm,1.0s					
LATB				AML	AML	
	comp=N,130µm,1.0s					
LATB				AML	AML	
	comp=E,117µm,0.6s					
MAON	**Monte Argentar**	**1.53 255**	⇑P		Pn	17 23 06.7 -0.1
MAON				AML	AML	
	comp=E,59µm,0.7s					
MAON				AML	AML	
	comp=N,46µm,0.9s					
RUFI	**Rufina**	**1.54 311**	⇑P		Pg	17 23 09.3 +0.2
VAGA	**Valle Agricola**	**1.65 150**	⇑P		Pg	17 23 12.4 +1.2
TRIF	**Trifonti**	**1.65 280**	⇓P		Pn	17 23 08.9 +0.3
TRIF				AML	AML	
	comp=N,89µm,0.8s					
TRIF				AML	AML	
	comp=E,95µm,0.4s					
TRIF				AML	AML	
	comp=E,95µm,0.4s					
TRIF				AML	AML	
	comp=N,89µm,0.8s					
CASP	**Castiglione de**	**1.66 269**	⇑P		Pn	17 23 08.5 -0.2
CASP				AML	AML	
	comp=E,34µm,0.4s					
CASP				AML	AML	
	comp=N,40µm,0.8s					
PAOL	**Paolisi**	**2.11 149**		P	Pn	17 23 16.3 +1.4
PGF	**Pioggiola**	**3.05 266**	⇓P		Pn	17 23 28.9 +1.0
SABO	**M.te Sabotino**	**3.15 6**		P	Pn	17 23 29.6 +0.4
SABO				AML	AML	
	comp=E,75µm,0.6s					
SABO				AML	AML	
	comp=N,93µm,0.6s					
SABO				AML	AML	
	comp=N,355µm,0.5s					
SABO				AML	AML	
	comp=E,310µm,0.6s					
CTI	**Castel Tesino**	**3.37 342**		P	Pn	17 23 33.6 +1.3
MPRI	**Monte Prat**	**3.40 358**	⇑P		Pn	17 23 33.7 +1.1
ZAG	**Zagreb**	**3.62 34**		P	Pg	17 23 46.4 -2.5
ZONE	**Zone**	**3.63 325**		S	Sn	17 24 16.0 -2.6
ZOU	**Zoufplan**	**3.71 358**	⇑P		Pn	17 23 37.9 +0.8
CANO	**Canova, Maglio**	**3.81 293**		S	Sb	17 24 37.0 +4.1
KOSI	**Kohlern**	**3.83 342**	⇓P		Pn	17 23 41.5 +2.9
ABTA	**Abfaltersbach**	**3.93 354**	*e*Pn		Pn	17 23 41.7 +1.8
	comp=E,11nm,0.5s					

ROM 30 17:23:15.9±0.2, 43°60N±0°01×10°97E±0°02, h7km±2km, ML1.4/3, Error ellipse: s-maj=1.4km s-min=1.1km az=47.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRMI	**Carmignano**	**0.20**	**359**	P	Pg	17 23 20.9	+1.1
CRMI				S	Sg	17 23 23.9	+1.4
OSSC	**Osservatorio P**	**0.21**	**110**	AML	AML		
	comp=N,161µm,0.6s						
OSSC				AML	AML		
	comp=E,134µm,0.7s						
OSSC				AML	AML		
	comp=N,161µm,1.4s						
CSNT	**Castellina Chi**	**0.26**	**118**	P	Pg	17 23 21.7	+0.6
CSNT				S	Sg	17 23 25.7	+1.2
CSNT				AML	AML		
	comp=E,118µm,0.5s						
CSNT				AML	AML		
	comp=N,130µm,1.0s						
CSNT				AML	AML		
	comp=N,130µm,1.0s						
PII	**Pisa**	**0.35**	**292**	P	Pb	17 23 24.0	-0.4
PII				S	Sb	17 23 28.8	-1.3
PII				AML	AML		
	comp=N,93µm,0.7s						
PII				AML	AML		
	comp=E,74µm,0.3s						
MAIM	**Mastiano**	**0.47**	**313**	P	Pb	17 23 26.1	-0.5
MAIM				S	Sg	17 23 32.3	+1.1
TRIF	**Trifonti**	**0.48**	**186**	P	Pb	17 23 26.4	-0.3

ROM 30 17:24:26.6±0.0, 42°802N±0°003×13°168E±0°003, h10km, ML2.3/24, 12C-10D, Error ellipse: s-maj=0.2km s-min=0.2km az=350.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**15**	P	Pg	17 24 29.1	+0.2
T1245				S	Sg	17 24 30.6	0.0
T1245				AML	AML		
	comp=E,21150µm,0.2s						
T1245				AML	AML		
	comp=N,12950µm,0.2s						
T1245				AML	AML		
	comp=E,20550µm,0.2s						
T1245				AML	AML		
	comp=N,12950µm,0.2s						
T1245				AML	AML		
	comp=E,21100µm,0.2s						
T1245				AML	AML		
	comp=N,12400µm,0.2s						
T1245				AML	AML		
	comp=N,12900µm,0.2s						
T1245				AML	AML		
	comp=E,20521µm,0.2s						
T1245				AML	AML		
	comp=N,12401µm,0.1s						
T1245				AML	AML		
	comp=E,21108µm,0.2s						
T1245				AML	AML		
	comp=N,12930µm,0.2s						
T1216	**Preci, Frazion**	**0.14**	**309**	P	Pg	17 24 30.3	+0.5
T1216				S	Sg	17 24 32.7	+0.6
T1216				AML	AML		
	comp=E,3485µm,1.2s						
T1216				AML	AML		
	comp=N,3740µm,0.4s						
T1216				AML	AML		
	comp=E,3480µm,1.2s						
T1216				AML	AML		
	comp=N,3740µm,0.4s						
T1216				AML	AML		
	comp=E,3495µm,1.2s						
T1216				AML	AML		
	comp=E,3381µm,0.3s						
T1216				AML	AML		
	comp=N,3306µm,0.1s						
MMO1	**Montemonaco**	**0.15**	**50**	P	Pg	17 24 30.5	+0.4
MMO1				S	Sg	17 24 33.2	+0.7
T1204	**Amatrice, Fraz**	**0.17**	**139**	P	Pg	17 24 31.0	+0.7
T1204				AML	AML		
	comp=E,2130µm,1.0s						
T1204				AML	AML		
	comp=E,2140µm,1.0s						
T1204				AML	AML		
	comp=N,1525µm,0.6s						
T1204				AML	AML		
	comp=E,2132µm,1.0s						
T1204				AML	AML		
	comp=N,1456µm,0.1s						
T1204				AML	AML		
	comp=E,1745µm,0.2s						
FEMA	**Monte Fema**	**0.18**	**332**	P	Pg	17 24 31.1	+0.5
FEMA				AML	AML		
	comp=E,2406µm,0.2s						
FEMA				AML	AML		
	comp=N,2077µm,0.3s						
T1217	**Poggiodomo (PG**	**0.20**	**243**	P	Pg	17 24 31.4	+0.6
T1217				S	Sg	17 24 34.9	+1.3
T1217				AML	AML		
	comp=N,877µm,0.1s						
T1217				AML	AML		
	comp=E,875µm,0.2s						
T1217				AML	AML		
	comp=E,888µm,0.2s						
T1217				AML	AML		
	comp=N,891µm,0.1s						
T1241	**Roccafluvione,**	**0.20**	**74**	P	Pb	17 24 31.7	-0.6
T1241				S	Sg	17 24 35.2	+1.4
T1241				AML	AML		
	comp=E,1590µm,0.2s						
T1241				AML	AML		
	comp=N,1945µm,0.1s						
T1241				AML	AML		
	comp=E,1590µm,0.3s						
T1241				AML	AML		
	comp=N,1940µm,0.1s						
T1241				AML	AML		
	comp=N,1840µm,0.1s						
T1241				AML	AML		
	comp=E,1710µm,0.3s						
T1241				AML	AML		
	comp=E,1711µm,0.3s						
T1241				AML	AML		
	comp=N,1840µm,0.1s						
SMA1	**SAN MARTINO**	**0.21**	**144**	P	Pg	17 24 31.6	+0.6
SMA1				AML	AML		
	comp=N,978µm,0.9s						
SMA1				AML	AML		
	comp=N,977µm,0.9s						
SMA1				AML	AML		
	comp=E,978µm,0.2s						
SMA1				AML	AML		
	comp=N,878µm,0.2s						
SMA1				AML	AML		
	comp=E,978µm,0.2s						
LNSS	**Leonessa**	**0.22**	**205**	⇑P	Pb	17 24 32.0	-0.7
LNSS				S	Sg	17 24 36.0	+1.7
LNSS				AML	AML		
	comp=E,1430µm,0.2s						
LNSS				AML	AML		
	comp=N,2550µm,0.1s						
LNSS				AML	AML		
	comp=N,2549µm,0.1s						
LNSS				AML	AML		
	comp=E,1431µm,0.2s						
T1215	**Vallo di Nera,**	**0.22**	**270**	P	Pg	17 24 31.8	+0.6
T1215				AML	AML		
	comp=N,746µm,0.2s						
T1215				AML	AML		
	comp=E,712µm,0.4s						
T1215				AML	AML		
	comp=E,598µm,0.2s						
T1215				AML	AML		
	comp=N,697µm,0.1s						
T1215				AML	AML		
	comp=N,656µm,0.1s						
T1215				AML	AML		
	comp=E,597µm,0.2s						
AM05	**Amandola Campo**	**0.22**	**38**	P	Pb	17 24 32.1	-0.6
AM05				S	Sg	17 24 36.0	+1.7
AM05				AML	AML		
	comp=E,406µm,0.6s						
AM05				AML	AML		
	comp=N,465µm,0.1s						
AM05				AML	AML		
	comp=E,1985µm,0.1s						
AM05				AML	AML		
	comp=N,124µm,0.3s						
AM05				AML	AML		
	comp=N,464µm,0.1s						
AM05				AML	AML		
	comp=E,1980µm,0.1s						
AM05				AML	AML		
	comp=E,405µm,0.6s						
AM05				AML	AML		
	comp=N,124µm,0.3s						
AM05				AML	AML		
	comp=N,433µm,0.1s						
AM05				AML	AML		
	comp=E,1576µm,0.1s						
AM05				AML	AML		
	comp=N,122µm,0.1s						
AM05				AML	AML		
	comp=E,389µm,0.1s						
T1243	**Rocca Santa Ma**	**0.23**	**117**	P	Pg	17 24 31.9	+0.5
T1243				S	Sg	17 24 35.9	+1.2
GUMA	**Gualdo di Mace**	**0.29**	**25**	⇓P	Pb	17 24 33.3	-0.6
GUMA				AML	AML		
	comp=E,1515µm,0.2s						
GUMA				AML	AML		
	comp=N,1168µm,0.5s						
GUMA				AML	AML		
	comp=N,1595µm,0.2s						
GUMA				AML	AML		
	comp=N,1700µm,0.6s						
GUMA				AML	AML		
	comp=N,1975µm,0.2s						
GUMA				AML	AML		
	comp=E,1690µm,0.3s						
GUMA				AML	AML		
	comp=N,816µm,0.3s						
GUMA				AML	AML		
	comp=E,1356µm,0.3s						
GUMA				AML	AML		
	comp=E,1254µm,0.6s						
GUMA				AML	AML		
	comp=N,925µm,0.3s						
RM33	**Pellescritta (**	**0.29**	**173**	P	Pg	17 24 33.1	+0.5
RM33				S	Sb	17 24 38.1	-0.9
RM33				AML	AML		
	comp=N,456µm,0.4s						
RM33				AML	AML		
	comp=E,664µm,0.2s						
RM33				AML	AML		
	comp=E,664µm,0.2s						
RM33				AML	AML		
	comp=N,346µm,0.1s						
RM33				AML	AML		
	comp=E,647µm,0.2s						
RM33				AML	AML		
	comp=N,363µm,0.1s						
CAMP	**Campotosto**	**0.32**	**146**	P	Pg	17 24 33.4	+0.4
CAMP				S	Sg	17 24 38.4	+1.1
CAMP				AML	AML		
	comp=E,338µm,0.2s						
CAMP				AML	AML		
	comp=N,366µm,0.5s						
CAMP				AML	AML		
	comp=E,337µm,0.2s						
CAMP				AML	AML		
	comp=N,367µm,0.5s						
CAMP				AML	AML		
	comp=E,262µm,0.2s						
T1211	**Morro Reatino**	**0.35**	**221**	⇓P	Pg	17 24 34.0	+0.4
T1211				AML	AML		
	comp=E,810µm,1.0s						
T1211				AML	AML		
	comp=N,757µm,0.2s						
T1211				AML	AML		
	comp=N,757µm,0.2s						
T1211				AML	AML		
	comp=E,808µm,1.0s						
T1211				AML	AML		
	comp=N,757µm,0.2s						
T1211				AML	AML		
	comp=N,753µm,0.2s						
T1211				AML	AML		
	comp=E,721µm,0.1s						
T1211				AML	AML		
	comp=E,712µm,0.1s						
TERO	**Teramo**	**0.37**	**119**	⇑P	Pg	17 24 34.2	+0.3
TERO				AML	AML		
	comp=E,612µm,0.1s						
TERO				AML	AML		
	comp=N,942µm,0.1s						
TERO				AML	AML		
	comp=E,613µm,0.1s						
TERO				AML	AML		
	comp=N,802µm,0.1s						
TERO				AML	AML		
	comp=E,525µm,0.1s						
TERO				AML	AML		
	comp=N,943µm,0.1s						
ARRO	**Arrone**	**0.37**	**233**	P	Pg	17 24 34.5	+0.6
ARRO				AML	AML		
	comp=E,296µm,0.2s						
ARRO				AML	AML		
	comp=N,322µm,0.2s						
ARRO				AML	AML		
	comp=N,408µm,0.6s						
ARRO				AML	AML		
	comp=E,328µm,0.2s						
ARRO				AML	AML		
	comp=E,215µm,0.2s						
ARRO				AML	AML		
	comp=N,322µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.37**	**165**	⇓P	Pg	17 24 34.6	+0.6
T1247				AML	AML		
	comp=E,574µm,0.1s						
T1247				AML	AML		
	comp=N,674µm,0.4s						
T1247				AML	AML		
	comp=E,575µm,0.1s						
T1247				AML	AML		
	comp=E,575µm,0.1s						
T1247				AML	AML		
	comp=N,609µm,0.1s						
OFFI	**Offida**	**0.40**	**71**	⇓P	Pb	17 24 35.6	-0.2
OFFI				AML	AML		
	comp=E,548µm,0.6s						
OFFI				AML	AML		
	comp=N,634µm,0.3s						
OFFI				AML	AML		
	comp=N,634µm,0.3s						
OFFI				AML	AML		
	comp=E,387µm,0.5s						
ASSB	**Assisi San Ben**	**0.45**	**303**	⇑P	Pg	17 24 35.6	+0.3
ASSB				AML	AML		
	comp=E,365µm,0.2s						
ASSB				AML	AML		
	comp=N,522µm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**140**	P	Pg	17 24 35.5	0.0
GIGS				AML	AML		
	comp=E,104µm,0.5s						
GIGS				AML	AML		
	comp=N,87µm,0.8s						
GIGS				AML	AML		
	comp=N,86µm,0.8s						
GIGS				AML	AML		
	comp=E,104µm,0.5s						
GIGS				AML	AML		
	comp=N,65µm,0.1s						
GIGS				AML	AML		
	comp=E,93µm,0.1s						
CESX	**Cesi**	**0.47**	**246**	S	Sb	17 24 44.0	0.0
SNTG	**Esanatoglia**	**0.48**	**340**	P	Pg	17 24 36.4	+0.4
SNTG				AML	AML		
	comp=E,170µm,0.9s						
SNTG				AML	AML		
	comp=N,169µm,0.3s						
SNTG				AML	AML		
	comp=N,238µm,0.5s						
SNTG				AML	AML		
	comp=E,174µm,0.2s						
SNTG				AML	AML		
	comp=E,143µm,0.1s						
SNTG				AML	AML		
	comp=N,169µm,0.3s						
EL6	**Elcito**	**0.53**	**355**	⇑P	Pg	17 24 37.3	+0.4
EL6				S	Sb	17 24 46.0	+0.2
EL6				AML	AML		
	comp=E,452µm,0.3s						
EL6				AML	AML		
	comp=N,456µm,0.3s						
FIAM	**Fiamignano**	**0.54**	**184**	⇓P	Pb	17 24 37.5	-0.5
FIAM				S	Sb	17 24 46.0	+0.1
FIAM				AML	AML		
	comp=N,81µm,0.5s						
FIAM				AML	AML		
	comp=E,90µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.55**	**315**	⇑P	Pg	17 24 37.5	+0.3
ATCC				AML	AML		
	comp=E,372µm,1.2s						
ATCC				AML	AML		
	comp=N,402µm,1.5s						
ATCC				AML	AML		
	comp=N,402µm,1.5s						
ATCC				AML	AML		
	comp=E,372µm,1.2s						
ATCC				AML	AML		
	comp=E,353µm,0.1s						
ATCC				AML	AML		
	comp=N,350µm,0.2s						
FOSV	**Fossato di Vic**	**0.58**	**329**	⇑P	Pg	17 24 37.9	+0.2
FOSV				S	Sb	17 24 48.0	+1.0
FOSV				AML	AML		
	comp=E,142µm,0.2s						
FOSV				AML	AML		
	comp=N,230µm,0.4s						
FOSV				AML	AML		
	comp=N,231µm,0.4s						
FOSV				AML	AML		
	comp=E,142µm,0.2s						
FOSV				AML	AML		
	comp=E,142µm,0.2s						
FOSV				AML	AML		
	comp=N,231µm,0.4s						
VCEL	**Villa Celiera**	**0.64**	**129**	⇓P	Pb	17 24 39.6	-0.3
VCEL				AML	AML		
	comp=E,227µm,0.4s						
VCEL				AML	AML		
	comp=N,166µm,0.2s						
MURB	**Monte Urbino**	**0.66**	**315**	⇑P	Pg	17 24 39.6	+0.3
MURB				AML	AML		
	comp=N,566µm,0.2s						
MURB				AML	AML		
	comp=E,532µm,0.8s						
MURB				AML	AML		
	comp=E,438µm,0.2s						
MURB				AML	AML		

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     comp=N,566µm,0.2s
MURB                          AML     AML
     comp=N,582µm,0.2s
MURB                          AML     AML
     comp=E,500µm,0.2s
ATFO Monte Foce - G     0.71 322  P     Pg      17 24 40.5 +0.1
ATFO                          AML     AML
     comp=N,81µm,0.4s
ATFO                          AML     AML
     comp=E,107µm,0.2s
ARVD Arcevia            0.72 347 ⇑P     Pg      17 24 40.7 +0.3
ARVD                          S       Sb      17 24 52.0 +1.0
ARVD                          AML     AML
     comp=E,100µm,1.2s
ARVD                          AML     AML
     comp=N,67µm,0.6s
ARVD                          AML     AML
     comp=N,67µm,0.6s
ARVD                          AML     AML
     comp=E,101µm,1.2s
ARVD                          AML     AML
     comp=E,84µm,0.2s
ARVD                          AML     AML
     comp=N,61µm,0.2s
T0110 Collepietro       0.73 142  P     Pg      17 24 40.8 +0.1
T0110                         AML     AML
     comp=N,182µm,0.3s
T0110                         AML     AML
     comp=E,176µm,0.5s
MGAB Montegabbione      0.79 278 ⇓P     Pb      17 24 42.3  0.0
MGAB                          AML     AML
     comp=E,131µm,0.4s
MGAB                          AML     AML
     comp=N,133µm,1.5s
MGAB                          AML     AML
     comp=E,131µm,0.4s
MGAB                          AML     AML
     comp=E,155µm,0.4s
MGAB                          AML     AML
     comp=N,111µm,0.5s
MGAB                          AML     AML
     comp=N,101µm,0.5s
FRON Frontone           0.79 336 ⇑P     Pg      17 24 41.7  0.0
FRON                          AML     AML
     comp=E,98µm,0.3s
FRON                          AML     AML
     comp=N,147µm,0.2s
ATVO AVT- Monte Val     0.81 316 ⇓P     Pg      17 24 42.0 -0.1
ATVO                          AML     AML
     comp=N,55µm,0.4s
ATVO                          AML     AML
     comp=E,66µm,0.2s
ATPI Pietralunga -      0.86 319 ⇑P     Pg      17 24 43.1  0.0
ATPI                          S       Sn      17 24 57.0 -0.4
ATPI                          AML     AML
     comp=E,77µm,0.5s
ATPI                          AML     AML
     comp=N,52µm,0.7s
PIEI Pieia              0.87 328 ⇓P     Pg      17 24 43.3  0.0
PIEI                          S       Sn      17 24 57.0 -0.6
PIEI                          AML     AML
     comp=N,49µm,0.4s
PIEI                          AML     AML
     comp=E,80µm,0.3s
MPAG Monte Paganucc     0.88 340 ⇑P     Pg      17 24 43.7 +0.2
MPAG                          S       Sn      17 24 58.0  0.0
MPAG                          AML     AML
     comp=E,118µm,0.3s
MPAG                          AML     AML
     comp=N,71µm,1.0s
MPAG                          AML     AML
     comp=E,118µm,0.3s
MPAG                          AML     AML
     comp=N,67µm,0.2s
FSSB Fossombrone        0.94 342 ⇓P     Pb      17 24 44.8 -0.1
FSSB                          AML     AML
     comp=N,424µm,0.3s
FSSB                          AML     AML
     comp=E,223µm,0.3s
FSSB                          AML     AML
     comp=E,223µm,0.3s
FSSB                          AML     AML
     comp=N,424µm,0.3s
BADI Badiali            0.98 317 ⇑P     Pb      17 24 45.5 -0.1
CAFI Castiglion Fio     1.03 301  P     Pb      17 24 46.4  0.0
CAFI                          AML     AML
     comp=N,32µm,0.4s
CAFI                          AML     AML
     comp=E,38µm,0.3s
```

ROM 30 17:30:26.4±0.1, 42°.871N±0°.004×13°.075E±0°.005,
h10^km, ML3.1/34, 24C-23D, Error ellipse: s-maj=0.5km
s-min=0.3km az=323.0, Central Italy

```
Code Station Name       Δ°   AZ°  Phase ID                Time      Res
                                  Op      ISC             h  m  s   ISC
T1216 Preci, Frazion    0.05 296 ⇓P       Pg              17 30 28.8 +0.4
T1216                            S       Sg              17 30 30.2 +0.3
T1216                            AML     AML
     comp=N,92350µm,0.3s
T1216                            AML     AML
     comp=N,92300µm,0.3s
T1216                            AML     AML
     comp=N,92350µm,0.2s
T1216                            AML     AML
     comp=E,65200µm,0.6s
T1216                            AML     AML
     comp=E,64322µm,0.3s
T1216                            AML     AML
     comp=N,92333µm,0.3s
T1245 Castelsantange    0.09 100  P       Pg              17 30 29.5 +0.5
T1245                            S       Sg              17 30 31.5 +0.7
FEMA Monte Fema         0.09 349 ⇓P       Pg              17 30 29.4 +0.3
FEMA                             S       Sg              17 30 31.1 +0.1
FEMA                             AML     AML
     comp=E,17250µm,0.2s
FEMA                             AML     AML
     comp=N,20850µm,0.3s
FEMA                             AML     AML
     comp=N,20800µm,0.3s
FEMA                             AML     AML
     comp=E,17250µm,0.2s
FEMA                             AML     AML
     comp=N,20850µm,0.3s
FEMA                             AML     AML
     comp=N,20839µm,0.3s
FEMA                             AML     AML
     comp=E,17257µm,0.2s
T1215 Vallo di Nera,    0.17 246 ⇑P       Pg              17 30 30.6 +0.6
T1215                            S       Sg              17 30 33.4 +0.8
T1215                            AML     AML
     comp=E,6700µm,0.7s
T1215                            AML     AML
     comp=E,6705µm,0.7s
T1215                            AML     AML
     comp=N,4915µm,0.8s
T1215                            AML     AML
     comp=E,6700µm,0.7s
T1215                            AML     AML
     comp=E,6705µm,0.7s
T1215                            AML     AML
     comp=N,4915µm,0.8s
T1215                            AML     AML
     comp=E,6705µm,0.7s
T1215                            AML     AML
     comp=N,5325µm,0.8s
T1215                            AML     AML
     comp=E,6695µm,0.7s
T1215                            AML     AML
     comp=N,4920µm,0.8s
T1215                            AML     AML
     comp=N,3681µm,0.1s
T1215                            AML     AML
     comp=E,4652µm,0.2s
T1215                            AML     AML
     comp=E,4657µm,0.1s
T1215                            AML     AML
     comp=N,3721µm,0.1s
MMO1 Montemonaco        0.19  81 ⇑P       Pg              17 30 31.0 +0.5
MMO1                             S       Sg              17 30 34.2 +1.0
T1217 Poggiodomo (PG    0.19 214  P       Pg              17 30 31.2 +0.7
T1217                            S       Sg              17 30 34.4 +1.1
T1217                            AML     AML
     comp=E,8005µm,1.1s
T1217                            AML     AML
     comp=N,12110µm,1.0s
T1217                            AML     AML
     comp=E,7640µm,1.1s
T1217                            AML     AML
     comp=N,12190µm,1.0s
T1217                            AML     AML
     comp=E,8010µm,1.1s
T1217                            AML     AML
     comp=N,12125µm,1.1s
T1217                            AML     AML
     comp=E,7630µm,1.1s
T1217                            AML     AML
     comp=N,12210µm,1.0s
T1217                            AML     AML
     comp=E,7625µm,1.1s
T1217                            AML     AML
     comp=N,12135µm,1.0s
T1217                            AML     AML
     comp=N,12175µm,1.0s
T1217                            AML     AML
     comp=N,11215µm,0.2s
T1217                            AML     AML
     comp=E,7631µm,0.3s
T1217                            AML     AML
     comp=E,7428µm,0.3s
T1217                            AML     AML
     comp=N,11181µm,0.2s
AM05 Amandola Campo     0.23  62 ⇑P       Pg              17 30 31.8 +0.6
AM05                             S       Sg              17 30 35.1 +0.7
AM05                             AML     AML
     comp=N,3730µm,0.2s
AM05                             AML     AML
     comp=N,1235µm,0.1s
AM05                             AML     AML
     comp=E,13100µm,0.1s
AM05                             AML     AML
     comp=E,3425µm,0.4s
AM05                             AML     AML
     comp=N,1230µm,0.1s
AM05                             AML     AML
     comp=N,2269µm,0.1s
AM05                             AML     AML
     comp=N,567µm,0.1s
AM05                             AML     AML
     comp=E,8752µm,0.1s
AM05                             AML     AML
     comp=E,1828µm,0.1s
T1241 Roccafluvione,    0.26  93 ⇑P       Pb              17 30 32.7 -0.6
T1241                            S       Sb              17 30 37.0 -0.9
T1241                            AML     AML
     comp=E,13495µm,1.0s
T1241                            AML     AML
     comp=N,13150µm,0.3s
T1241                            AML     AML
     comp=E,14255µm,1.0s
T1241                            AML     AML
     comp=N,11780µm,0.3s
T1241                            AML     AML
     comp=E,13500µm,1.0s
T1241                            AML     AML
     comp=N,13200µm,0.3s
T1241                            AML     AML
     comp=E,14220µm,1.0s
T1241                            AML     AML
     comp=N,11775µm,0.3s
T1241                            AML     AML
     comp=E,14265µm,1.0s
T1241                            AML     AML
     comp=N,11770µm,0.3s
T1241                            AML     AML
     comp=E,11819µm,0.4s
T1241                            AML     AML
     comp=E,12709µm,0.3s
T1241                            AML     AML
     comp=N,13177µm,0.3s
T1241                            AML     AML
     comp=N,11784µm,0.3s
T1204 Amatrice, Fraz    0.26 137  P       Pg              17 30 32.0 +0.2
T1204                            S       Sb              17 30 37.0 -1.0
T1204                            AML     AML
     comp=E,10513µm,0.1s
T1204                            AML     AML
     comp=N,9382µm,0.2s
LNSS Leonessa           0.27 185 ⇓P       Pg              17 30 32.6 +0.7
LNSS                             S       Sb              17 30 37.1 -1.0
LNSS                             AML     AML
     comp=E,8910µm,0.4s
LNSS                             AML     AML
     comp=N,25950µm,0.5s
LNSS                             AML     AML
     comp=E,8920µm,0.4s
LNSS                             AML     AML
     comp=N,17877µm,0.2s
GUMA Gualdo di Mace     0.27  45 ⇑P       Pg              17 30 32.6 +0.7
GUMA                             S       Sb              17 30 37.6 -0.6
GUMA                             AML     AML
     comp=N,25500µm,0.3s
GUMA                             AML     AML
     comp=N,23350µm,0.6s
GUMA                             AML     AML
     comp=E,17550µm,0.3s
GUMA                             AML     AML
     comp=E,23000µm,0.2s
GUMA                             AML     AML
     comp=N,25450µm,0.3s
GUMA                             AML     AML
     comp=N,10287µm,0.5s
GUMA                             AML     AML
     comp=N,11265µm,0.2s
GUMA                             AML     AML
     comp=E,10374µm,0.3s
GUMA                             AML     AML
     comp=E,8259µm,0.4s
SMA1 SAN MARTINO        0.31 141 ⇓P       Pg              17 30 33.3 +0.7
SMA1                             AML     AML
     comp=E,7725µm,0.3s
SMA1                             AML     AML
     comp=N,7330µm,0.4s
SMA1                             AML     AML
     comp=N,7165µm,0.4s
SMA1                             AML     AML
     comp=E,7725µm,0.3s
SMA1                             AML     AML
     comp=N,6858µm,0.2s
MDAR Monte D'Aria       0.33   9 ⇓P       Pg              17 30 33.6 +0.6
MDAR                             AML     AML
     comp=N,2200µm,0.2s
MDAR                             AML     AML
     comp=E,2579µm,0.4s
T1243 Rocca Santa Ma    0.33 122 ⇑P       Pg              17 30 33.4 +0.4
T1243                            S       Sb              17 30 38.6 -1.2
ASSB Assisi San Ben     0.35 300 ⇑P       Pg              17 30 33.5 +0.1
ASSB                             AML     AML
     comp=N,1664µm,0.2s
GAG1 Gagliole           0.37 359 ⇓P       Pg              17 30 34.4 +0.7
GAG1                             AML     AML
     comp=E,4910µm,0.3s
GAG1                             AML     AML
     comp=N,5415µm,1.6s
GAG1                             AML     AML
     comp=E,4905µm,0.3s
GAG1                             AML     AML
     comp=N,4658µm,0.4s
GAG1                             AML     AML
     comp=E,4910µm,0.3s
ARRO Arrone             0.37 218 ⇑P       Pg              17 30 34.2 +0.5
ARRO                             AML     AML
     comp=E,2225µm,1.1s
ARRO                             AML     AML
     comp=N,2265µm,1.6s
ARRO                             AML     AML
     comp=E,2220µm,1.1s
ARRO                             AML     AML
     comp=N,2260µm,1.6s
ARRO                             AML     AML
     comp=N,1971µm,0.6s
ARRO                             AML     AML
     comp=E,2087µm,0.2s
T1211 Morro Reatino     0.37 206 ⇓P       Pg              17 30 34.5 +0.6
T1211                            S       Sb              17 30 41.0 -0.1
T1211                            AML     AML
     comp=E,6850µm,0.3s
T1211                            AML     AML
     comp=N,6285µm,0.3s
T1211                            AML     AML
     comp=E,6980µm,0.3s
T1211                            AML     AML
     comp=N,6220µm,0.3s
T1211                            AML     AML
     comp=N,6225µm,0.3s
T1211                            AML     AML
     comp=N,6290µm,0.3s
T1211                            AML     AML
     comp=E,6850µm,0.3s
T1211                            AML     AML
     comp=E,6980µm,0.3s
T1211                            AML     AML
     comp=N,6061µm,0.3s
T1211                            AML     AML
     comp=E,6980µm,0.3s
T1211                            AML     AML
     comp=N,6141µm,0.4s
T1211                            AML     AML
     comp=E,6852µm,0.3s
RM33 Pellescritta (     0.38 164 ⇓P       Pg              17 30 34.4 +0.5
RM33                             AML     AML
     comp=E,7815µm,1.4s
RM33                             AML     AML
     comp=N,8345µm,0.2s
RM33                             AML     AML
     comp=N,8115µm,0.2s
RM33                             AML     AML
     comp=N,8355µm,0.2s
RM33                             AML     AML
     comp=E,7850µm,1.4s
RM33                             AML     AML
     comp=E,7810µm,1.4s
RM33                             AML     AML
     comp=E,4371µm,0.1s
RM33                             AML     AML
     comp=N,3561µm,0.2s
RM33                             AML     AML
     comp=E,4413µm,0.1s
RM33                             AML     AML
     comp=N,3579µm,0.2s
SNTG Esanatoglia        0.40 346 ⇓P       Pg              17 30 34.7 +0.4
SNTG                             AML     AML
     comp=N,766µm,0.8s
SNTG                             AML     AML
     comp=E,843µm,1.1s
SNTG                             AML     AML
     comp=E,769µm,0.3s
SNTG                             AML     AML
     comp=N,798µm,0.2s
SNTG                             AML     AML
     comp=E,797µm,0.3s
SNTG                             AML     AML
     comp=E,769µm,0.3s
SNTG                             AML     AML
     comp=N,798µm,0.2s
SNTG                             AML     AML
     comp=N,746µm,0.2s
CAMP Campotosto         0.42 144 ⇓P       Pg              17 30 35.0 +0.4
CAMP                             AML     AML
     comp=N,2585µm,0.7s
CAMP                             AML     AML
     comp=E,3845µm,0.3s
CAMP                             AML     AML
     comp=N,1750µm,0.5s
CAMP                             AML     AML
     comp=E,2007µm,0.2s
ATCC AVT- Casa Cast     0.45 315 ⇑P       Pg              17 30 35.4 +0.2
ATCC                             AML     AML
     comp=N,1480µm,1.0s
ATCC                             AML     AML
     comp=E,1675µm,0.9s
ATCC                             AML     AML
     comp=E,1389µm,0.3s
ATCC                             AML     AML
     comp=N,1422µm,0.3s
CESX Cesi               0.45 235 ⇑P       Pg              17 30 35.3 +0.2
CESX                             AML     AML
     comp=E,2135µm,0.6s
CESX                             AML     AML
     comp=N,2155µm,0.4s
CESX                             AML     AML
     comp=N,2153µm,0.4s
CESX                             AML     AML
     comp=E,2134µm,0.6s
OFFI Offida             0.45  82  P       Pb              17 30 36.4 -0.1
OFFI                             AML     AML
     comp=E,4550µm,0.7s
OFFI                             AML     AML
     comp=N,5220µm,0.5s
OFFI                             AML     AML
     comp=E,4551µm,0.7s
OFFI                             AML     AML
     comp=N,4925µm,1.1s
EL6  Elcito             0.46   2 ⇓P       Pg              17 30 35.6 +0.1
T1247 Pizzolo (AQ)      0.46 159 ⇑P       Pg              17 30 35.5 +0.1
T1247                            AML     AML
     comp=E,5920µm,0.1s
T1247                            AML     AML
     comp=N,5975µm,0.7s
T1247                            AML     AML
     comp=E,3325µm,0.2s
T1247                            AML     AML
     comp=N,3802µm,0.2s
TERO Teramo             0.46 122  P       Pg              17 30 35.5  0.0
TERO                             S       Sb              17 30 43.0 -0.6
TERO                             AML     AML
     comp=E,3990µm,0.7s
TERO                             AML     AML
     comp=E,4265µm,1.5s
TERO                             AML     AML
     comp=N,4465µm,0.3s
TERO                             AML     AML
     comp=N,4215µm,0.3s
TERO                             AML     AML
     comp=N,4215µm,0.3s
TERO                             AML     AML
     comp=N,4463µm,0.3s
TERO                             AML     AML
     comp=E,3712µm,0.2s
TERO                             AML     AML
     comp=E,4038µm,0.2s
FOSV Fossato di Vic     0.48 332 ⇑P       Pg              17 30 36.1 +0.2
GIGS Gran Sasso         0.56 139 ⇓P       Pg              17 30 37.3 +0.1
GIGS                             AML     AML
     comp=E,605µm,0.5s
GIGS                             AML     AML
     comp=N,700µm,0.4s
GIGS                             AML     AML
     comp=N,588µm,0.3s
GIGS                             AML     AML
     comp=E,549µm,0.2s
MURB Monte Urbino       0.56 314 ⇓P       Pg              17 30 37.9 +0.5
MURB                             AML     AML
     comp=E,2005µm,1.6s
MURB                             AML     AML
     comp=E,2005µm,1.6s
MURB                             AML     AML
     comp=E,2250µm,0.3s
MURB                             AML     AML
     comp=N,2155µm,0.3s
MURB                             AML     AML
     comp=N,1980µm,0.3s
MURB                             AML     AML
     comp=E,1981µm,0.3s
MURB                             AML     AML
     comp=E,2249µm,0.3s
MURB                             AML     AML
     comp=N,2155µm,0.3s
MURB                             AML     AML
     comp=N,1978µm,0.3s
AQU  L'Aquila           0.57 155 ⇑P       Pb              17 30 38.2 -0.3
AQU                              AML     AML
     comp=E,1230µm,0.8s
AQU                              AML     AML
     comp=E,1290µm,0.7s
AQU                              AML     AML
     comp=N,1140µm,1.1s
AQU                              AML     AML
     comp=N,1175µm,1.1s
AQU                              AML     AML
     comp=N,1080µm,0.4s
AQU                              AML     AML
     comp=N,1048µm,0.3s
AQU                              AML     AML
     comp=E,1024µm,0.3s
AQU                              AML     AML
     comp=E,1007µm,0.3s
FIAM Fiamignano         0.60 177 ⇓P       Pg              17 30 38.3 +0.2
FIAM                             S       Sb              17 30 48.0 +0.3
FIAM                             AML     AML
     comp=E,2225µm,1.2s
```

FIAM				AML	AML	
	comp=N,2095µm,0.6s					
FIAM				AML	AML	
	comp=N,1960µm,0.3s					
FIAM				AML	AML	
	comp=E,2134µm,0.4s					
ATFO	**Monte Foce - G**	**0.62 324**	P	Pg	17 30 38.8 +0.3	
ATFO			AML	AML		
	comp=E,535µm,1.4s					
ATFO			AML	AML		
	comp=N,517µm,1.0s					
ATFO			AML	AML		
	comp=E,478µm,0.6s					
ATFO			AML	AML		
	comp=N,455µm,0.3s					
TRTR	**Tortoreto Alta**	**0.62 96**	⇑P	Pb	17 30 39.8 +0.4	
TRTR			AML	AML		
	comp=E,4370µm,0.5s					
TRTR			AML	AML		
	comp=N,4095µm,0.5s					
TRTR			AML	AML		
	comp=E,4370µm,0.5s					
TRTR			AML	AML		
	comp=N,4092µm,0.5s					
ATTE	**AVT- Monte Tez**	**0.62 302**	P	Pb	17 30 39.2 -0.3	
ATTE			AML	AML		
	comp=E,418µm,0.6s					
ATTE			AML	AML		
	comp=N,541µm,0.4s					
ATTE			AML	AML		
	comp=N,541µm,0.4s					
ATTE			AML	AML		
	comp=E,417µm,0.6s					
ARVD	**Arcevia**	**0.64 351**	⇑P	Pg	17 30 39.1 +0.4	
ARVD			AML	AML		
	comp=E,338µm,0.7s					
ARVD			AML	AML		
	comp=N,291µm,0.5s					
ARVD			AML	AML		
	comp=N,205µm,0.4s					
ARVD			AML	AML		
	comp=E,310µm,0.2s					
PP3	**Marolino**	**0.64 38**	⇑P	Pb	17 30 39.7 0.0	
PP3			AML	AML		
	comp=E,1439µm,1.6s					
PP3			AML	AML		
	comp=E,1530µm,0.4s					
PP3			AML	AML		
	comp=E,1437µm,1.6s					
PP3			AML	AML		
	comp=N,2560µm,0.5s					
PP3			AML	AML		
	comp=N,2515µm,0.5s					
PP3			AML	AML		
	comp=E,1525µm,0.4s					
PP3			AML	AML		
	comp=N,1790µm,0.3s					
PP3			AML	AML		
	comp=E,1287µm,0.3s					
PP3			AML	AML		
	comp=N,1784µm,0.3s					
PP3			AML	AML		
	comp=E,1358µm,0.3s					
FRON	**Frontone**	**0.69 339**	⇑P	Pb	17 30 40.3 -0.4	
FRON			AML	AML		
	comp=N,607µm,0.3s					
FRON			AML	AML		
	comp=E,364µm,0.7s					
FRON			AML	AML		
	comp=N,607µm,0.3s					
FRON			AML	AML		
	comp=E,267µm,0.2s					
ATVO	**AVT- Monte Val**	**0.71 316**	P	Pg	17 30 39.8 -0.3	
ATVO			AML	AML		
	comp=N,396µm,0.6s					
ATVO			AML	AML		
	comp=E,394µm,0.6s					
ATVO			AML	AML		
	comp=N,396µm,0.6s					
ATVO			AML	AML		
	comp=E,395µm,0.6s					
MGAB	**Montegabbione**	**0.71 274**	⇑P	Pb	17 30 40.6 -0.3	
MGAB			AML	AML		
	comp=N,926µm,0.9s					
MGAB			AML	AML		
	comp=N,972µm,1.0s					
MGAB			AML	AML		
	comp=E,776µm,0.4s					
MGAB			AML	AML		
	comp=E,730µm,0.4s					
MGAB			AML	AML		
	comp=N,741µm,0.3s					
MGAB			AML	AML		
	comp=E,776µm,0.5s					
MGAB			AML	AML		
	comp=E,730µm,0.4s					
MGAB			AML	AML		
	comp=N,924µm,0.9s					
FAGN	**Fagnano**	**0.71 148**	⇓P	Pb	17 30 40.8 -0.2	
FAGN			AML	AML		
	comp=E,3415µm,0.6s					
FAGN			AML	AML		
	comp=N,2840µm,1.5s					
FAGN			AML	AML		
	comp=N,2817µm,0.5s					
FAGN			AML	AML		
	comp=E,3413µm,0.6s					
VCEL	**Villa Celiera**	**0.74 130**	P	Pg	17 30 40.9 +0.2	
VCEL			AML	AML		
	comp=E,2745µm,0.5s					
VCEL			AML	AML		
	comp=N,2310µm,0.6s					
VCEL			AML	AML		
	comp=E,2750µm,0.5s					
VCEL			AML	AML		
	comp=N,2315µm,0.6s					
VCEL			AML	AML		
	comp=E,2747µm,0.5s					
VCEL			AML	AML		
	comp=N,2312µm,0.6s					
ATMI	**Monte Miggiano**	**0.75 308**	⇓P	Pn	17 30 43.1 0.0	
ATPI	**Pietralunga -**	**0.76 320**	⇑P	Pg	17 30 41.3 +0.2	
ATPI			AML	AML		
	comp=E,337µm,1.1s					
ATPI			AML	AML		
	comp=N,284µm,1.6s					
ATPI			AML	AML		
	comp=N,284µm,1.6s					
ATPI			AML	AML		
	comp=N,282µm,0.5s					
ATPI			AML	AML		
	comp=E,328µm,0.6s					
PIEI	**Pieia**	**0.77 329**	⇑P	Pb	17 30 41.7 -0.3	
PIEI			S	Sn	17 30 54.0 -1.2	
PIEI			AML	AML		
	comp=E,319µm,0.8s					
PIEI			AML	AML		
	comp=N,235µm,1.2s					
PIEI			AML	AML		
	comp=E,320µm,0.8s					
PIEI			AML	AML		
	comp=E,267µm,0.3s					
PIEI			AML	AML		
	comp=N,232µm,0.5s					
MPAG	**Monte Paganucc**	**0.79 343**	⇑P	Pg	17 30 42.0 +0.3	
MPAG			AML	AML		
	comp=E,409µm,0.9s					
MPAG			AML	AML		
	comp=N,354µm,0.8s					
MPAG			AML	AML		
	comp=N,355µm,0.8s					
MPAG			AML	AML		
	comp=E,304µm,0.5s					
MPAG			AML	AML		
	comp=N,355µm,0.8s					
T0110	**Collepietro**	**0.83 141**	⇓P	Pg	17 30 42.2 -0.2	
T0110			AML	AML		
	comp=E,2035µm,0.4s					
T0110			AML	AML		
	comp=N,2290µm,0.5s					
T0110			AML	AML		
	comp=E,2033µm,0.4s					
T0110			AML	AML		
	comp=N,2290µm,0.5s					
FSSB	**Fossombrone**	**0.85 345**	⇓P	Pb	17 30 43.4 +0.1	
FSSB			AML	AML		
	comp=E,936µm,1.2s					
FSSB			AML	AML		
	comp=N,1265µm,0.4s					
FSSB			AML	AML		
	comp=N,1266µm,0.4s					
FSSB			AML	AML		
	comp=E,905µm,0.4s					
SACS	**San Casciano d**	**0.86 269**	⇑P	Pg	17 30 43.0 +0.1	
SACS			AML	AML		
	comp=N,440µm,1.6s					
SACS			AML	AML		
	comp=E,485µm,1.5s					
SACS			AML	AML		
	comp=E,394µm,1.0s					
SACS			AML	AML		
	comp=N,408µm,1.0s					
SACS			AML	AML		
	comp=E,409µm,1.1s					
SACS			AML	AML		
	comp=N,396µm,1.0s					
MTCE	**Montecelio**	**0.88 196**	S	Sn	17 30 57.0 -0.8	
CERT	**Cerreto**	**0.92 184**	⇓P	Pg	17 30 43.9 -0.3	
CERT			AML	AML		
	comp=E,1740µm,0.6s					
CERT			AML	AML		
	comp=N,1080µm,0.6s					
CERT			AML	AML		
	comp=N,1084µm,0.6s					
CERT			AML	AML		
	comp=E,1743µm,0.6s					
PE3	**Peglio**	**0.93 333**	⇓P	Pn	17 30 45.5 -0.1	
CAFI	**Castiglion Fio**	**0.93 300**	P	Pb	17 30 44.7 0.0	
CAFI			AML	AML		
	comp=E,335µm,1.6s					
CAFI			AML	AML		
	comp=N,310µm,1.2s					
CAFI			AML	AML		
	comp=E,226µm,0.9s					
CAFI			AML	AML		
	comp=N,238µm,0.8s					
CAFI			AML	AML		
	comp=N,233µm,0.8s					
CAFI			AML	AML		
	comp=E,237µm,0.6s					
MCIV	**Monte Civitell**	**1.03 265**	⇓P	Pn	17 30 47.4 +0.3	
MCIV			AML	AML		
	comp=E,150µm,1.0s					
MCIV			AML	AML		
	comp=N,154µm,1.3s					
MCIV			AML	AML		
	comp=N,151µm,0.7s					
MCIV			AML	AML		
	comp=E,150µm,1.0s					
SF04	**Casetta**	**1.04 269**	⇓P	Pn	17 30 47.5 +0.3	
SF04			AML	AML		
	comp=N,214µm,0.3s					
SF04			AML	AML		
	comp=E,184µm,0.3s					
VVLD	**Villa Vallelon**	**1.08 158**	⇑P	Pn	17 30 49.5 +1.9	
RMP	**Rome, Mte Porz**	**1.09 195**	⇑P	Pn	17 30 49.5 +1.7	
TOLF	**Tolfa**	**1.13 225**	P	Pb	17 30 47.5 -0.6	
TOLF			AML	AML		
	comp=E,417µm,0.6s					
TOLF			AML	AML		
	comp=N,639µm,0.6s					
TOLF			AML	AML		
	comp=N,639µm,0.6s					
TOLF			AML	AML		
	comp=E,417µm,0.6s					
RDP	**Rocca di Papa**	**1.14 194**	S	Sn	17 31 06.0 +1.7	
LPEL	**Lama dei Pelig**	**1.16 135**	S	Sn	17 31 06.0 +1.2	
ARCI	**Arcidosso**	**1.18 270**	P	Pn	17 30 50.0 +1.0	
POFI	**Posta Fibreno**	**1.25 157**	⇓P	Pg	17 30 52.2 +1.9	
ABTA	**Abfaltersbach**	**3.90 354**	*e*Pn	Pn	17 31 28.4 +1.9	
	comp=E,2.9nm,0.3s					
BIOA	**Bad Ischl, Aus**	**4.84 5**	*e*Pn	Pn	17 31 41.0 +1.7	
	comp=E,2.4nm,0.4s					

ROM 30 17:31:00.9±0.1, 42°.799N±0°.003×13°.217E±0°.003, h13km, ML3.1/10, 8C-8D, Error ellipse: s-maj=0.2km s-min=0.2km az=214.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**340**	P	Pg	17 31 03.9	+0.2
T1245				S	Sg	17 31 05.8	+0.2
T1245				AML	AML		
	comp=E,19600µm,0.5s						
T1245				AML	AML		
	comp=E,18650µm,0.4s						
T1245				AML	AML		
	comp=E,19650µm,0.5s						
T1245				AML	AML		
	comp=N,30400µm,0.3s						
T1245				AML	AML		
	comp=N,29150µm,0.3s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,18567µm,0.1s						
T1245				AML	AML		
	comp=N,30353µm,0.3s						
T1245				AML	AML		
	comp=E,18640µm,0.4s						
T1245				AML	AML		
	comp=N,29161µm,0.3s						
MMO1	**Montemonaco**	**0.13**	**39**	⇑P	Pg	17 31 04.6	+0.3
MMO1				S	Sg	17 31 07.2	+0.4
T1241	**Roccafluvione,**	**0.17**	**70**	P	Pb	17 31 05.5	-0.4
T1241				S	Sb	17 31 08.5	-0.8
T1241				AML	AML		
	comp=E,10550µm,0.3s						
T1241				AML	AML		
	comp=N,4440µm,0.2s						
T1241				AML	AML		
	comp=N,3212µm,0.3s						
T1241				AML	AML		
	comp=E,10848µm,0.3s						
T1216	**Preci, Frazion**	**0.17**	**302**	P	Pg	17 31 05.3	+0.3
T1216				S	Sg	17 31 08.3	+0.6
T1216				AML	AML		
T1216				AML	AML		
	comp=N,96050µm,1.1s						
T1216				AML	AML		
	comp=E,6328µm,0.4s						
T1216				AML	AML		
	comp=N,9699µm,0.3s						
T1243	**Rocca Santa Ma**	**0.20**	**121**	P	Pg	17 31 05.7	+0.3
T1243				S	Sg	17 31 09.1	+0.6
FEMA	**Monte Fema**	**0.20**	**323**	P	Pg	17 31 05.8	+0.3
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=E,6025µm,0.2s						
FEMA				AML	AML		
	comp=N,4820µm,0.1s						
AM05	**Amandola Campo**	**0.20**	**29**	P	Pg	17 31 05.9	+0.5
AM05				S	Sb	17 31 09.5	-0.8
AM05				AML	AML		
	comp=E,3425µm,0.4s						
AM05				AML	AML		
	comp=N,3730µm,0.2s						
AM05				AML	AML		
	comp=E,13100µm,0.1s						
AM05				AML	AML		
	comp=N,1235µm,0.1s						
AM05				AML	AML		
	comp=E,5785µm,0.8s						
AM05				AML	AML		
	comp=N,6640µm,0.6s						
AM05				AML	AML		
	comp=E,26700µm,0.6s						
AM05				AML	AML		
	comp=N,1230µm,0.1s						
AM05				AML	AML		
	comp=E,13119µm,0.1s						
AM05				AML	AML		
	comp=E,2878µm,0.1s						
AM05				AML	AML		
	comp=N,3730µm,0.2s						
AM05				AML	AML		
	comp=N,1232µm,0.1s						
T1217	**Poggiodomo (PG**	**0.23**	**248**	P	Pg	17 31 06.2	+0.4
T1217				S	Sb	17 31 10.2	-0.8
T1217				AML	AML		
	comp=N,3304µm,0.2s						
T1217				AML	AML		
	comp=N,3273µm,0.2s						
T1217				AML	AML		
	comp=E,2073µm,0.2s						
T1217				AML	AML		
	comp=E,2037µm,0.2s						
LNSS	**Leonessa**	**0.23**	**214**	P	Pg	17 31 06.4	+0.4
LNSS				AML	AML		
	comp=E,4430µm,0.1s						
LNSS				AML	AML		
	comp=N,10250µm,0.1s						
LNSS				AML	AML		
	comp=N,10238µm,0.1s						
LNSS				AML	AML		
	comp=E,4429µm,0.1s						
T1215	**Vallo di Nera,**	**0.26**	**271**	⇓P	Pg	17 31 06.2	-0.1
T1215				AML	AML		
	comp=E,3610µm,0.6s						
T1215				AML	AML		
	comp=N,1775µm,0.9s						
T1215				AML	AML		
	comp=E,1624µm,0.1s						
T1215				AML	AML		
	comp=N,1057µm,0.1s						
T1215				AML	AML		
	comp=N,1052µm,0.1s						
T1215				AML	AML		
	comp=E,1568µm,0.1s						
T1215				AML	AML		
	comp=N,1775µm,1.1s						
T1215				AML	AML		
	comp=E,3610µm,1.4s						
GUMA	**Gualdo di Mace**	**0.28**	**18**	⇑P	Pb	17 31 07.4	-0.4
GUMA				AML	AML		
	comp=E,17550µm,0.3s						
GUMA				AML	AML		
	comp=N,25500µm,0.3s						
GUMA				AML	AML		
	comp=E,23000µm,0.2s						
GUMA				AML	AML		
	comp=N,23350µm,0.6s						
GUMA				AML	AML		
	comp=N,66800µm,0.5s						
GUMA				AML	AML		
	comp=E,82700µm,0.3s						
GUMA				AML	AML		
	comp=N,71700µm,0.4s						
GUMA				AML	AML		
	comp=E,71850µm,0.6s						
GUMA				AML	AML		
	comp=E,85500µm,0.7s						
GUMA				AML	AML		
	comp=E,17553µm,0.3s						
GUMA				AML	AML		
	comp=E,22998µm,0.2s						
GUMA				AML	AML		
	comp=N,23371µm,0.6s						
GUMA				AML	AML		
	comp=N,25457µm,0.3s						
RM33	**Pellescritta (**	**0.29**	**180**	⇓P	Pg	17 31 07.4	+0.5
RM33				AML	AML		
	comp=E,7815µm,1.4s						
RM33				AML	AML		
	comp=N,8345µm,0.2s						
RM33				AML	AML		
	comp=E,7850µm,1.4s						
RM33				AML	AML		
	comp=N,8355µm,0.2s						
RM33				AML	AML		
	comp=N,8115µm,0.2s						
RM33				AML	AML		
	comp=E,7810µm,1.4s						
RM33				AML	AML		
	comp=N,7064µm,0.1s						
RM33				AML	AML		
	comp=E,6639µm,0.1s						
RM33				AML	AML		
	comp=N,7226µm,0.1s						
RM33				AML	AML		
	comp=E,6652µm,0.1s						
CAMP	**Campotosto**	**0.30**	**152**	P	Pg	17 31 07.3	+0.2
CAMP				S	Sg	17 31 12.1	+0.8
CAMP				AML	AML		
	comp=N,2585µm,0.7s						
CAMP				AML	AML		
	comp=E,3845µm,0.3s						
CAMP				AML	AML		
	comp=N,2505µm,0.3s						
CAMP				AML	AML		
	comp=E,3846µm,0.3s						
TERO	**Teramo**	**0.34**	**121**	P	Pg	17 31 08.0	+0.3
TERO				AML	AML		
	comp=N,3015µm,0.6s						
TERO				AML	AML		
	comp=E,3370µm,1.0s						
TERO				AML	AML		
	comp=N,2366µm,0.1s						
TERO				AML	AML		
	comp=E,2731µm,0.1s						
TERO				AML	AML		
	comp=E,3224µm,0.1s						
TERO				AML	AML		
	comp=N,2075µm,0.1s						
T1247	**Pizzolo (AQ)**	**0.36**	**170**	⇓P	Pg	17 31 08.7	+0.5
T1247				AML	AML		
	comp=E,5920µm,0.1s						
T1247				AML	AML		
	comp=N,5975µm,0.7s						
T1247				AML	AML		
	comp=N,5292µm,0.2s						
T1247				AML	AML		
	comp=E,5916µm,0.1s						
OFFI	**Offida**	**0.37**	**68**	⇑P	Pb	17 31 09.5	+0.2
OFFI				AML	AML		
	comp=E,2579µm,0.3s						
OFFI				AML	AML		
	comp=N,5141µm,0.5s						
T1211	**Morro Reatino**	**0.38**	**225**	⇓P	Pg	17 31 08.8	+0.3
T1211				AML	AML		
	comp=E,2163µm,0.1s						
T1211				AML	AML		
	comp=N,3451µm,0.2s						
T1211				AML	AML		
	comp=N,3450µm,0.2s						
T1211				AML	AML		
	comp=E,2196µm,0.1s						
MNTP	**Montappone**	**0.39**	**29**	⇓P	Pb	17 31 09.5	-0.1
MNTP				AML	AML		
	comp=N,2725µm,0.1s						
MNTP				AML	AML		
	comp=E,3691µm,0.2s						
ARRO	**Arrone**	**0.40**	**237**	⇑P	Pg	17 31 08.9	+0.1
ARRO				AML	AML		
	comp=E,1028µm,0.2s						
ARRO				AML	AML		
	comp=N,885µm,0.2s						
SEF1	**Sefro**	**0.40**	**331**	⇑P	Pg	17 31 09.2	+0.3
SEF1				AML	AML		
	comp=N,18700µm,0.3s						
SEF1				AML	AML		
	comp=E,22600µm,0.4s						
SEF1				AML	AML		
	comp=E,1836µm,0.3s						
SEF1				AML	AML		
	comp=N,1615µm,0.2s						
GIGS	**Gran Sasso**	**0.43**	**143**	P	Pg	17 31 09.5	0.0
GIGS				AML	AML		
	comp=E,517µm,0.1s						
GIGS				AML	AML		
	comp=N,458µm,0.1s						
ASSB	**Assisi San Ben**	**0.48**	**301**	⇑P	Pg	17 31 10.6	+0.3
ASSB				AML	AML		
	comp=E,1625µm,0.4s						
ASSB				AML	AML		
	comp=N,2165µm,0.4s						
ASSB				AML	AML		
	comp=E,951µm,0.2s						
ASSB				AML	AML		
	comp=N,741µm,0.2s						
SNTG	**Esanatoglia**	**0.50**	**336**	⇑P	Pg	17 31 10.9	+0.1
SNTG				AML	AML		
	comp=E,3695µm,0.7s						
SNTG				AML	AML		
	comp=N,6505µm,0.2s						
SNTG				AML	AML		
	comp=N,6140µm,0.2s						

SNTG				AML	AML	
	comp=E,3835μm,0.7s					
SNTG				AML	AML	
	comp=E,396μm,0.3s					
SNTG				AML	AML	
	comp=N,378μm,0.4s					
SNTG				AML	AML	
	comp=E,368μm,0.3s					
SNTG				AML	AML	
	comp=N,383μm,0.2s					
CESX	**Cesi**	**0.51**	**248**	⇓P	Pg	17 31 11.0 +0.2
CESX				AML	AML	
	comp=E,824μm,0.4s					
CESX				AML	AML	
	comp=N,928μm,0.6s					
FIAM	**Fiamignano**	**0.54**	**188**	S	Sb	17 31 20.0 +0.2
EL6	**Elcito**	**0.54**	**351**	⇓P	Pg	17 31 11.7 +0.3
EL6				S	Sb	17 31 21.0 +1.1
EL6				AML	AML	
	comp=E,737μm,0.5s					
EL6				AML	AML	
	comp=N,1056μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.57**	**313**	⇓P	Pg	17 31 12.4 +0.3
ATCC				AML	AML	
	comp=E,662μm,0.5s					
ATCC				AML	AML	
	comp=N,599μm,0.4s					
FAGN	**Fagnano**	**0.60**	**153**	S	Sb	17 31 23.0 +1.4
FOSV	**Fossato di Vic**	**0.60**	**326**	S	Sb	17 31 22.0 +0.4
PP3	**Marolino**	**0.65**	**26**	P	Pb	17 31 14.1 +0.1
PP3				AML	AML	
	comp=N,2512μm,0.5s					
PP3				AML	AML	
	comp=E,1159μm,0.4s					
PP3				AML	AML	
	comp=N,2560μm,0.5s					
PP3				AML	AML	
	comp=E,1526μm,0.4s					
MURB	**Monte Urbino**	**0.69**	**313**	S	Sn	17 31 26.0 -1.0
ARVD	**Arcevia**	**0.73**	**344**	S	Sn	17 31 27.0 -0.9
AOI	**Ancona**	**0.80**	**20**	⇑P	Pb	17 31 16.9 +0.2
AOI				AML	AML	
	comp=E,497μm,0.3s					
AOI				AML	AML	
	comp=N,366μm,0.4s					

*PRU **30** 17:32:08.8±0.0, 42°.93N×13°.34E, h0km*
*IDC **30** 17:32:09.6±1.6, 43°.03N×12°.77E, h0km, mb3.4/5, mbtmp3.4/6, ML3.5/1, MS2.8/4, Error ellipse: s-maj=48.0km s-min=15.8km az=91.0*
*ROM **30** 17:32:09.2±0.1, 42°.889N±0°.004×13°.159E±0°.005, h8km, ML3.4/64, Error ellipse: s-maj=0.4km s-min=0.3km az=341.0*

ISC 30 17:32:10.0±0.9, 42°.92N±0°.02×13°.16E±0°.02, h4km±6km, n121, σ1§30/152, mb3.6/4, 42C-34D, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**160**	⇓P	**Pg**	**17 32 11.1**	**-0.4**
T1245				S	**Sg**	**17 32 12.3**	**-0.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.11**	**257**	P	**Pg**	**17 32 12.2**	**0.0**
T1216				S	**Sg**	**17 32 14.3**	**+0.6**
T1216				AML	AML		
	comp=N,95800μm,1.1s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,96000μm,1.1s						
T1216				AML	AML		
	comp=N,94590μm,0.3s						
T1216				AML	AML		
MMO1	**Montemonaco**	**0.12**	**97**	⇑P	**Pg**	**17 32 12.4**	**-0.1**
MMO1				S	**Sg**	**17 32 14.4**	**+0.2**
AM05	**Amandola Campo**	**0.15**	**66**	⇑P	**Pg**	**17 32 13.3**	**+0.2**
AM05				S	**Sg**	**17 32 16.1**	**+0.9**
AM05				AML	AML		
	comp=E,9790μm,0.6s						
AM05				AML	AML		
	comp=E,40500μm,0.6s						
AM05				AML	AML		
	comp=N,1645μm,0.6s						
AM05				AML	AML		
	comp=E,9825μm,0.6s						
AM05				AML	AML		
	comp=N,8010μm,0.8s						
AM05				AML	AML		
	comp=E,9815μm,0.6s						
AM05				AML	AML		
	comp=N,8005μm,0.8s						
AM05				AML	AML		
	comp=N,6213μm,0.3s						
AM05				AML	AML		
	comp=E,25426μm,0.3s						
AM05				AML	AML		
	comp=N,1638μm,0.1s						
AM05				AML	AML		
	comp=E,5464μm,0.3s						
GUMA	**Gualdo di Mace**	**0.20**	**41**	⇑P	**Pg**	**17 32 14.3**	**+0.5**
GUMA				S	**Sg**	**17 32 18.3**	**+1.8**
GUMA				AML	AML		
	comp=E,92150μm,0.6s						
GUMA				AML	AML		
	comp=E,85500μm,0.7s						
GUMA				AML	AML		
	comp=E,82700μm,0.3s						
GUMA				AML	AML		
	comp=N,87650μm,0.6s						
GUMA				AML	AML		
	comp=E,92200μm,0.6s						
GUMA				AML	AML		
	comp=N,66800μm,0.5s						
GUMA				AML	AML		
	comp=N,66784μm,0.5s						
GUMA				AML	AML		
	comp=N,87620μm,0.6s						
GUMA				AML	AML		
	comp=E,82700μm,0.3s						
GUMA				AML	AML		
	comp=E,92185μm,0.6s						
T1241	**Roccafluvione,**	**0.21**	**106**	⇑P	**Pg**	**17 32 14.3**	**+0.2**
T1241				S	**Sg**	**17 32 17.7**	**+0.8**
T1241				AML	AML		
	comp=E,30050μm,0.8s						
T1241				AML	AML		
	comp=E,30000μm,0.8s						
T1241				AML	AML		
	comp=N,29350μm,0.6s						
T1241				AML	AML		
	comp=E,25132μm,0.6s						
T1241				AML	AML		
	comp=N,29351μm,0.6s						
T1215	**Vallo di Nera,**	**0.24**	**242**	⇓P	**Pg**	**17 32 14.6**	**-0.1**
T1215				S	**Sg**	**17 32 18.7**	**+0.8**
T1215				AML	AML		
	comp=N,15150μm,1.1s						
T1215				AML	AML		
	comp=E,10900μm,0.5s						
T1215				AML	AML		
	comp=N,14750μm,0.9s						
T1215				AML	AML		
	comp=E,12210μm,0.8s						
T1215				AML	AML		
	comp=E,10900μm,0.5s						
T1215				AML	AML		
	comp=E,12180μm,0.8s						
T1215				AML	AML		
	comp=N,15100μm,1.1s						
T1215				AML	AML		
	comp=N,13350μm,0.5s						
T1215				AML	AML		
	comp=E,10714μm,0.4s						
T1215				AML	AML		
	comp=E,11017μm,0.4s						
T1215				AML	AML		
	comp=N,14614μm,0.6s						
T1217	**Poggiodomo (PG**	**0.26**	**220**	P	**Pg**	**17 32 14.9**	**-0.3**
T1217				S	**Sg**	**17 32 19.4**	**+0.8**
T1217				AML	AML		
	comp=E,12500μm,1.2s						
T1217				AML	AML		
	comp=N,14200μm,0.5s						
T1217				AML	AML		
	comp=E,12650μm,1.2s						
T1217				AML	AML		
	comp=N,14350μm,1.0s						
T1217				AML	AML		
	comp=E,12475μm,1.2s						
T1217				AML	AML		
	comp=E,12700μm,1.2s						
T1217				AML	AML		
	comp=E,12650μm,1.2s						
T1217				AML	AML		
	comp=N,14300μm,1.0s						
T1217				AML	AML		
	comp=N,14250μm,0.5s						
T1217				AML	AML		
	comp=E,12480μm,1.2s						
T1217				AML	AML		
	comp=N,14249μm,0.5s						
T1217				AML	AML		
	comp=E,11820μm,0.6s						
T1217				AML	AML		
	comp=E,11998μm,0.7s						
T1217				AML	AML		
	comp=N,14072μm,0.5s						
T1204	**Amatrice, Fraz**	**0.27**	**154**	AML	AML		
	comp=E,17600μm,0.6s						
T1204				AML	AML		
	comp=N,11650μm,0.7s						
MDAR	**Monte D'Aria**	**0.28**	**358**	P	**Pb**	**17 32 16.4**	**-1.3**
MDAR				AML	AML		
	comp=N,31150μm,1.4s						
MDAR				AML	AML		
	comp=E,21650μm,0.6s						
MDAR				AML	AML		
	comp=N,31100μm,1.4s						
MDAR				AML	AML		
	comp=N,30695μm,0.4s						
MDAR				AML	AML		
	comp=E,20567μm,0.3s						
SEF1	**Sefro**	**0.28**	**326**	⇓P	**Pb**	**17 32 15.8**	**-1.8**
SEF1				AML	AML		
	comp=E,35200μm,0.3s						
SEF1				AML	AML		
	comp=N,18700μm,0.3s						
SEF1				AML	AML		
	comp=N,18700μm,0.3s						
SEF1				AML	AML		
	comp=N,18712μm,0.3s						
SEF1				AML	AML		
	comp=E,35197μm,0.3s						
PIO1	**Pioraco**	**0.29**	**334**	⇓P	**Pb**	**17 32 16.5**	**-1.4**
PIO1				AML	AML		
	comp=E,12900μm,0.4s						
PIO1				AML	AML		
	comp=N,23100μm,0.6s						
PIO1				AML	AML		
	comp=E,12900μm,0.4s						
PIO1				AML	AML		
	comp=N,23100μm,0.6s						
PIO1				AML	AML		
	comp=E,12909μm,0.4s						
PIO1				AML	AML		
	comp=N,23095μm,0.6s						
SSM1	**San Severino M**	**0.31**	**2**	P	**Pb**	**17 32 16.6**	**-1.7**
FIU1	**Fiuminata**	**0.32**	**329**	⇑P	**Pb**	**17 32 17.0**	**-1.3**
FIU1				AML	AML		
	comp=E,5890μm,0.5s						
FIU1				AML	AML		
	comp=E,5885μm,0.5s						
FIU1				AML	AML		
	comp=N,5765μm,0.2s						
FIU1				AML	AML		
	comp=N,5764μm,0.2s						
FIU1				AML	AML		
	comp=E,5889μm,0.5s						
LNSS	**Leonessa**	**0.32**	**196**	⇑P	**Pg**	**17 32 15.1**	**-1.2**
LNSS				S	**Sg**	**17 32 21.1**	**+0.5**
LNSS				AML	AML		
	comp=N,21750μm,0.4s						
LNSS				AML	AML		
	comp=E,6890μm,1.3s						
LNSS				AML	AML		
	comp=N,18366μm,0.1s						
LNSS				AML	AML		
	comp=E,5420μm,0.2s						
GAG1	**Gagliole**	**0.33**	**348**	P	**Pb**	**17 32 16.8**	**-1.7**
GAG1				AML	AML		
	comp=N,48600μm,0.3s						
GAG1				AML	AML		
	comp=N,48550μm,0.3s						
GAG1				AML	AML		
	comp=E,39800μm,0.3s						
GAG1				AML	AML		
	comp=N,48553μm,0.3s						
GAG1				AML	AML		
	comp=E,39788μm,0.3s						
SNTG	**Esanatoglia**	**0.38**	**335**	⇓P	**Pg**	**17 32 17.3**	**0.0**
SNTG				AML	AML		
	comp=E,6555μm,0.6s						
SNTG				AML	AML		
	comp=N,7170μm,0.5s						
SNTG				AML	AML		
	comp=N,7530μm,0.5s						
SNTG				AML	AML		
	comp=E,6550μm,0.6s						
SNTG				AML	AML		
	comp=E,5925μm,0.6s						
SNTG				AML	AML		
	comp=N,7175μm,0.5s						
SNTG				AML	AML		
	comp=N,7436μm,0.7s						
SNTG				AML	AML		
	comp=N,7033μm,0.3s						
SNTG				AML	AML		
	comp=E,6551μm,0.6s						
SNTG				AML	AML		
	comp=E,5923μm,0.6s						
ASSB	**Assisi San Ben**	**0.39**	**289**	⇓P	**Pg**	**17 32 17.5**	**0.0**
ASSB				S	**Sb**	**17 32 23.8**	**-2.1**
OFFI	**Offida**	**0.39**	**87**	⇓P	**Pb**	**17 32 18.1**	**-1.4**
OFFI				S	**Sb**	**17 32 24.6**	**-1.2**
OFFI				AML	AML		
	comp=E,18350μm,0.7s						
OFFI				AML	AML		
	comp=N,16300μm,1.4s						
OFFI				AML	AML		
	comp=E,18372μm,0.7s						
OFFI				AML	AML		
	comp=N,16178μm,1.0s						
RM33	**Pellescritta (**	**0.41**	**174**	P	**Pg**	**17 32 17.1**	**-0.8**
RM33				S	**Sg**	**17 32 23.7**	**+0.5**
RM33				AML	AML		
	comp=E,9170μm,1.6s						
RM33				AML	AML		
	comp=N,7010μm,0.5s						
RM33				AML	AML		
	comp=E,9020μm,1.6s						
RM33				AML	AML		
	comp=N,7025μm,0.5s						
TRE1	**Treia**	**0.41**	**16**	⇓P	**Pb**	**17 32 19.1**	**-0.7**
TRE1				AML	AML		
	comp=N,20200μm,0.6s						
TRE1				AML	AML		
	comp=E,20500μm,0.8s						
TRE1				AML	AML		
	comp=N,20220μm,0.6s						
TRE1				AML	AML		
	comp=E,19190μm,0.5s						
EL6	**Elcito**	**0.42**	**354**	⇑P	**Pb**	**17 32 18.1**	**-1.9**
CAMP	**Campotosto**	**0.42**	**154**	⇓P	**Pg**	**17 32 17.5**	**-0.7**
CAMP				S	**Sg**	**17 32 24.0**	**+0.3**
CAMP				AML	AML		
	comp=E,5855μm,1.2s						
CAMP				AML	AML		
	comp=N,8020μm,0.2s						
CAMP				AML	AML		
	comp=N,8020μm,0.2s						
CAMP				AML	AML		
	comp=E,5708μm,1.0s						
TERO	**Teramo**	**0.44**	**132**	P	**Pg**	**17 32 17.8**	**-0.7**
TERO				S	**Sg**	**17 32 24.5**	**+0.4**
TERO				AML	AML		
	comp=E,6570μm,1.2s						
TERO				AML	AML		
	comp=N,7960μm,0.5s						
TERO				AML	AML		
	comp=N,8300μm,0.5s						
TERO				AML	AML		
	comp=E,6910μm,1.2s						
TERO				AML	AML		
	comp=E,6565μm,1.2s						
TERO				AML	AML		
	comp=E,5849μm,0.5s						
TERO				AML	AML		
	comp=N,8278μm,0.4s						
TERO				AML	AML		
	comp=E,6134μm,0.5s						
TERO				AML	AML		
	comp=N,7959μm,0.5s						
T1211	**Morro Reatino**	**0.44**	**210**	⇑P	**Pg**	**17 32 18.6**	**0.0**
T1211				S	**Sg**	**17 32 25.4**	**+1.1**
T1211				AML	AML		
	comp=N,9550μm,1.4s						
T1211				AML	AML		
	comp=E,5160μm,1.3s						
T1211				AML	AML		
	comp=N,9700μm,1.3s						
T1211				AML	AML		
	comp=N,9545μm,1.4s						
T1211				AML	AML		
	comp=N,9735μm,1.4s						
T1211				AML	AML		
	comp=E,5155μm,1.3s						
T1211				AML	AML		
	comp=E,5420μm,1.3s						
T1211				AML	AML		
	comp=N,9093μm,0.6s						
T1211				AML	AML		
	comp=E,4207μm,0.5s						
T1211				AML	AML		
	comp=E,4573μm,0.5s						
T1211				AML	AML		
	comp=N,9235μm,0.6s						
ARRO	**Arrone**	**0.44**	**221**	⇑P	**Pg**	**17 32 18.1**	**-0.4**
ARRO				S	**Sg**	**17 32 25.2**	**+0.9**
ARRO				AML	AML		
	comp=N,4510μm,0.4s						
ARRO				AML	AML		
	comp=N,4515μm,0.4s						
ARRO				AML	AML		
	comp=E,5000μm,1.3s						
ARRO				AML	AML		
	comp=E,3419μm,0.8s						
ARRO				AML	AML		
	comp=N,4511μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.47**	**305**	⇓P	**Pg**	**17 32 19.0**	**0.0**
ATCC				S	**Sb**	**17 32 28.0**	**-0.1**
ATCC				AML	AML		
	comp=E,8960μm,1.4s						
ATCC				AML	AML		
	comp=N,8040μm,0.5s						
ATCC				AML	AML		
	comp=E,8432μm,0.3s						
ATCC				AML	AML		
	comp=N,8042μm,0.5s						
FOSV	**Fossato di Vic**	**0.48**	**323**	⇓P	**Pg**	**17 32 19.0**	**-0.2**
FOSV				AML	AML		
	comp=E,13150μm,0.3s						
FOSV				AML	AML		
	comp=N,10650μm,0.3s						
FOSV				AML	AML		
	comp=E,13100μm,0.3s						
FOSV				AML	AML		
	comp=N,10645μm,0.3s						
FOSV				AML	AML		
	comp=E,13138μm,0.3s						
FOSV				AML	AML		
	comp=N,10652μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.48**	**168**	⇑P	**Pg**	**17 32 18.8**	**-0.5**
T1247				S	**Sg**	**17 32 26.3**	**+0.7**
T1247				AML	AML		
	comp=E,11725μm,1.1s						
T1247				AML	AML		
	comp=N,7780μm,1.0s						
T1247				AML	AML		
	comp=N,6916μm,0.6s						
T1247				AML	AML		
	comp=E,11731μm,1.1s						
CESX	**Cesi**	**0.52**	**235**	⇑P	**Pg**	**17 32 19.4**	**-0.7**
CESX				AML	AML		
	comp=N,6215μm,0.7s						
CESX				AML	AML		
	comp=E,7215μm,0.7s						
CESX				AML	AML		
	comp=E,7215μm,0.7s						
CESX				AML	AML		
	comp=N,4966μm,0.5s						
MMUR	**Monte Murano**	**0.54**	**347**	S	**Sb**	**17 32 30.0**	**-0.3**
GIGS	**Gran Sasso**	**0.56**	**147**	⇑P	**Pg**	**17 32 19.9**	**-0.8**
GIGS				S	**Sg**	**17 32 28.2**	**+0.3**
GIGS				AML	AML		
	comp=E,1165μm,0.6s						
GIGS				AML	AML		
	comp=N,1081μm,0.5s						
GIGS				AML	AML		
	comp=N,985μm,0.2s						
GIGS				AML	AML		
	comp=E,1156μm,0.4s						
TRTR	**Tortoreto Alta**	**0.56**	**101**	⇑P	**Pb**	**17 32 21.8**	**-0.7**
TRTR				AML	AML		
	comp=E,13100μm,0.9s						
TRTR				AML	AML		
	comp=N,13100μm,1.2s						
TRTR				AML	AML		
	comp=E,13103μm,0.9s						
TRTR				AML	AML		
	comp=N,11558μm,0.8s						
PP3	**Marolino**	**0.57**	**35**	⇑P	**Pb**	**17 32 21.7**	**-0.8**
PP3				AML	AML		
	comp=E,11200μm,0.4s						
PP3				AML	AML		
	comp=E,10815μm,0.4s						
PP3				AML	AML		
	comp=N,12850μm,0.7s						
PP3				AML	AML		
	comp=N,12800μm,0.7s						
PP3				AML	AML		
	comp=N,12500μm,0.8s						
PP3				AML	AML		
	comp=E,10840μm,0.4s						
PP3				AML	AML		
	comp=N,12196μm,0.7s						
PP3				AML	AML		
	comp=E,10831μm,0.4s						
PP3				AML	AML		
	comp=E,11205μm,0.4s						
PP3				AML	AML		
	comp=N,12426μm,0.7s						
MURB	**Monte Urbino**	**0.58**	**307**	⇑P	**Pb**	**17 32 21.2**	**-1.5**
MURB				S	**Sb**	**17 32 32.0**	**+0.6**
MURB				AML	AML		
	comp=N,10950μm,0.3s						
MURB				AML	AML		
	comp=N,11200μm,0.9s						
MURB				AML	AML		
	comp=E,13200μm,0.3s						
MURB				AML	AML		
	comp=E,13850μm,0.3s						
MURB				AML	AML		
	comp=N,10935μm,0.3s						
MURB				AML	AML		
	comp=N,10543μm,0.3s						
MURB				AML	AML		
	comp=E,13183μm,0.3s						
MURB				AML	AML		
	comp=E,13856μm,0.3s						
AQU	**L'Aquila**	**0.59**	**162**	P	**Pg**	**17 32 20.2**	**-1.1**
AQU				S	**Sg**	**17 32 29.6**	**+0.6**
AQU				AML	AML		
	comp=N,4715μm,1.4s						
AQU				AML	AML		
	comp=N,4710μm,1.4s						
AQU				AML	AML		
	comp=N,4780μm,1.4s						
AQU				AML	AML		
	comp=E,5185μm,1.6s						
AQU				AML	AML		
	comp=E,5150μm,1.6s						
AQU				AML	AML		

comp=N,4559μm,1.2s
AQU AML AML
comp=N,4693μm,1.2s
AQU AML AML
comp=E,4475μm,1.9s
AQU AML AML
comp=E,4303μm,1.9s
ARVD Arcevia 0.60 345 ⇑P Pb 17 32 21.5 -1.7
ARVD S **Sb 17 32 32.0 -0.1**
ARVD AML AML
comp=E,4755μm,0.8s
ARVD AML AML
comp=N,2340μm,0.3s
ARVD AML AML
comp=E,4198μm,0.3s
ARVD AML AML
comp=N,2339μm,0.3s
ATFO Monte Foce - G 0.62 317 ⇓P Pg 17 32 21.8 -0.2
ATFO AML AML
comp=N,2985μm,0.4s
ATFO AML AML
comp=E,2935μm,0.4s
ATFO AML AML
comp=N,2987μm,0.4s
ATFO AML AML
comp=E,2935μm,0.4s
FIAM Fiamignano 0.65 183 P Pg 17 32 21.1 -1.4
FIAM S **Sg 17 32 31.0 +0.1**
FIAM AML AML
comp=E,3410μm,0.6s
FIAM AML AML
comp=N,2785μm,1.1s
FIAM AML AML
comp=E,3413μm,0.6s
FIAM AML AML
comp=N,2786μm,1.1s
ATTE AVT- Monte Tez 0.65 296 ⇑P Pg 17 32 22.4 -0.2
ATTE AML AML
comp=N,2020μm,0.5s
ATTE AML AML
comp=N,2025μm,0.5s
ATTE AML AML
comp=E,3065μm,0.4s
ATTE AML AML
comp=N,2022μm,0.5s
ATTE AML AML
comp=E,3067μm,0.5s
FRON Frontone 0.68 332 ⇓P Pg 17 32 22.6 -0.4
FRON AML AML
comp=N,4800μm,0.5s
FRON AML AML
comp=N,4795μm,0.5s
FRON AML AML
comp=E,2145μm,0.7s
FRON AML AML
comp=N,4799μm,0.5s
FRON AML AML
comp=E,2135μm,0.3s
AOI Ancona 0.71 27 ⇓P Pb 17 32 23.9 -1.1
AOI S **Sn 17 32 37.0 -1.4**
AOI AML AML
comp=E,2815μm,0.3s
AOI AML AML
comp=N,2385μm,1.3s
AOI AML AML
comp=E,2815μm,0.3s
AOI AML AML
comp=N,2151μm,0.3s
FAGN Fagnano 0.72 154 ⇓P Pg 17 32 23.0 -0.8
FAGN S **Sg 17 32 33.3 +0.1**
FAGN AML AML
comp=E,5350μm,0.5s
FAGN AML AML
comp=E,5345μm,0.5s
FAGN AML AML
comp=N,6255μm,0.5s
FAGN AML AML
comp=E,5347μm,0.5s
FAGN AML AML
comp=N,6255μm,0.5s
ATVO AVT- Monte Val 0.72 311 ⇓P Pg 17 32 23.4 -0.5
ATVO AML AML
comp=N,2335μm,0.5s
ATVO AML AML
comp=E,2040μm,0.4s
ATVO AML AML
comp=E,2038μm,0.4s
ATVO AML AML
comp=N,2336μm,0.5s
VCEL Villa Celiera 0.72 136 ⇑P Pg 17 32 23.0 -0.9
VCEL S **Sg 17 32 33.0 -0.3**
VCEL AML AML
comp=N,3895μm,0.6s
VCEL AML AML
comp=E,3800μm,0.4s
VCEL AML AML
comp=N,3893μm,0.6s
VCEL AML AML
comp=E,3800μm,0.5s
MGAB Montegabbione 0.77 270 ⇑P Pg 17 32 24.2 -0.5
MGAB AML AML
comp=E,3090μm,1.4s
MGAB AML AML
comp=N,12900μm,0.4s
MGAB AML AML
comp=N,12950μm,0.4s
MGAB AML AML
comp=E,3085μm,1.4s
MGAB AML AML
comp=E,3775μm,0.4s
MGAB AML AML
comp=E,3029μm,0.4s
MGAB AML AML
comp=N,12923μm,0.4s
MGAB AML AML
comp=E,3774μm,0.4s
MGAB AML AML
comp=N,12936μm,0.4s
ATPI Pietralunga - 0.77 314 ⇓P Pg 17 32 24.4 -0.4
ATPI AML AML
comp=N,1820μm,1.0s
ATPI AML AML
comp=E,2545μm,0.6s
ATPI AML AML
comp=N,1825μm,1.0s
ATPI AML AML
comp=E,2546μm,0.6s
ATPI AML AML
comp=N,1659μm,0.6s
PIEI Pieia 0.77 324 ⇓P Pg 17 32 24.2 -0.6
PIEI AML AML
comp=E,1650μm,0.3s
PIEI AML AML
comp=N,1740μm,0.3s
PIEI AML AML
comp=N,1738μm,0.3s
PIEI AML AML
comp=E,1650μm,0.3s
MPAG Monte Paganucc 0.77 338 ⇑P Pb 17 32 24.7 -1.4
MPAG S **Sn 17 32 38.0 -1.9**
MPAG AML AML
comp=N,2895μm,0.5s
MPAG AML AML
comp=E,2840μm,0.2s
MPAG AML AML
comp=N,2900μm,0.5s
MPAG AML AML
comp=E,2819μm,0.2s
MPAG AML AML
comp=E,2840μm,0.2s
MPAG AML AML
comp=N,2704μm,0.5s
MPAG AML AML
comp=N,2895μm,0.5s
ATMI Monte Miggiano 0.78 303 ⇑P Pb 17 32 26.4 +0.3
ATMI AML AML
comp=E,4170μm,0.8s
ATMI AML AML
comp=N,7135μm,0.6s
ATMI AML AML
comp=N,7137μm,0.6s
ATMI AML AML
comp=E,4171μm,0.8s
FSSB Fossombrone 0.82 340 ⇑P Pb 17 32 25.7 -1.3
FSSB S **Sn 17 32 40.0 -1.1**
FSSB AML AML
comp=E,10265μm,0.4s
FSSB AML AML
comp=N,9350μm,0.4s
FSSB AML AML
comp=E,10271μm,0.4s
FSSB AML AML
comp=N,9338μm,0.4s
T0110 Collepietro 0.83 146 ⇓P Pg 17 32 24.5 -1.4
T0110 AML AML
comp=E,4470μm,0.4s
T0110 AML AML
comp=N,3560μm,0.6s
T0110 AML AML
comp=N,3558μm,0.6s
T0110 AML AML
comp=E,4471μm,0.4s
BADI Badiali 0.89 312 ⇑P Pb 17 32 26.8 -1.3
BADI S **Sn 17 32 42.0 -0.8**
BADI AML AML
comp=N,1399μm,0.7s
BADI AML AML
comp=E,605μm,3.3s
PE3 Peglio 0.92 328 ⇑P Pg 17 32 26.4 -1.3
PE3 S **Sn 17 32 43.0 -0.4**
SACS San Casciano d 0.92 266 ⇑P Pg 17 32 27.1 -0.6
SACS AML AML
comp=N,1765μm,0.7s
SACS AML AML
comp=E,1445μm,1.6s
SACS AML AML
comp=N,1840μm,1.6s
SACS AML AML
comp=E,1530μm,1.6s
SACS AML AML
comp=N,1753μm,0.7s
SACS AML AML
comp=N,1767μm,0.7s
SACS AML AML
comp=E,1412μm,0.6s
SACS AML AML
comp=E,1404μm,0.6s
MTCE Montecelio 0.94 199 ⇓P Pg 17 32 26.8 -1.3
MTCE AML AML
comp=N,1555μm,0.6s
MTCE AML AML
comp=E,1820μm,1.4s
MTCE AML AML
comp=E,1678μm,1.1s
MTCE AML AML
comp=N,1552μm,0.6s
CAFI Castiglion Fio 0.97 296 ⇑P Pg 17 32 28.1 -0.4
CAFI AML AML
comp=N,1195μm,1.6s
CAFI AML AML
comp=E,1370μm,1.5s
CAFI AML AML
comp=E,1360μm,0.5s
CAFI AML AML
comp=N,922μm,0.5s
CAFI AML AML
comp=E,1312μm,0.5s
CAFI AML AML
comp=N,962μm,0.6s
CERT Cerreto 0.97 188 ⇑P Pg 17 32 27.7 -0.9
CERT AML AML
comp=N,1985μm,0.9s
CERT AML AML
comp=E,2795μm,0.5s
CERT AML AML
comp=N,1986μm,0.9s
CERT AML AML
comp=E,2797μm,0.5s
MCIV Monte Civitell 1.10 263 P Pg 17 32 30.7 -0.4
MCIV AML AML
comp=E,888μm,0.8s
MCIV AML AML
comp=N,846μm,0.8s
MCIV AML AML
comp=N,846μm,0.8s
MCIV AML AML
comp=E,888μm,0.8s
SF04 Casetta 1.10 266 ⇑P Pn 17 32 31.8 -0.5
SF04 AML AML
comp=N,723μm,0.3s
SF04 AML AML
comp=E,922μm,0.4s
CAFR Castel Frentan 1.11 128 ⇓P Pg 17 32 30.1 -1.2
CAFR AML AML
comp=E,1014μm,0.5s
CAFR AML AML
comp=N,1060μm,1.0s
CAFR AML AML
comp=E,1016μm,0.5s
CAFR AML AML
comp=N,1039μm,0.6s
CRE Caprese Michel 1.13 309 ⇑P Pb 17 32 31.3 -0.9
CRE AML AML
comp=E,694μm,1.6s
CRE AML AML
comp=N,990μm,1.1s
CRE AML AML
comp=E,656μm,0.5s
CRE AML AML
comp=N,850μm,0.7s
LPEL Lama dei Pelig 1.15 139 ⇓P Pg 17 32 30.8 -1.3
LPEL S **Sn 17 32 49.0 -0.2**
LPEL AML AML
comp=E,1445μm,1.3s
LPEL AML AML
comp=N,840μm,0.9s
LPEL AML AML
comp=E,1366μm,0.7s
LPEL AML AML
comp=N,777μm,0.6s
TOLF Tolfa 1.21 226 P Pg 17 32 31.9 -1.2
TOLF AML AML
comp=N,880μm,1.2s
TOLF AML AML
comp=E,1120μm,1.1s
TOLF AML AML
comp=E,1122μm,1.1s
TOLF AML AML
comp=N,825μm,0.8s
ASQU Asqua 1.33 312 ⇓P Pn 17 32 35.8 +0.3
ASQU AML AML
comp=E,688μm,0.9s
ASQU AML AML
comp=N,773μm,0.8s
ASQU AML AML
comp=N,776μm,0.8s
ASQU AML AML
comp=E,687μm,0.9s
GIUL Giuliano Di Ro 1.36 177 ⇓P Pb 17 32 36.3 +0.3
CERA Filignano 1.46 154 ⇑P Pb 17 32 38.4 +0.6
LMD Lutirano 1.57 318 ⇑P Pg 17 32 40.6 +0.5
MELA Melanico ??? S 1.90 129 ⇑P Pb 17 32 44.2 -1.0
VITU Vitulano (BN) 2.05 147 ⇓P Pn 17 32 46.2 +0.9
APRC Apricena 2.11 122 ⇓P Pn 17 32 46.8 +0.6
PAOL Paolisi 2.16 150 ⇓P Pg 17 32 50.2 -1.1
SABO M.te Sabotino 3.08 6 ⇑P Pn 17 32 59.3 -0.2
SABO AML AML
comp=E,378μm,0.8s
SABO AML AML
comp=N,506μm,0.6s
SABO AML AML
comp=E,1575μm,0.8s
SABO AML AML
comp=N,1905μm,0.6s
SABO AML AML
comp=E,378μm,0.8s
SABO AML AML
comp=N,505μm,0.6s
SABO AML AML
comp=E,1576μm,0.8s
SABO AML AML
comp=N,1906μm,0.6s
ROVR Rover Verones 3.12 332 ⇓P Pn 17 33 01.5 +1.5
CGRP Cima Grappa 3.12 342 S Sn 17 33 38.0 0.0
LJU Ljubljana 3.28 17 P Pn 17 33 02.5 +0.4
LJU S **Sn 17 33 43.0 +1.4**
LJU AML AML
comp=N,1320μm,0.9s
LJU AML AML
comp=E,1376μm,0.7s
LJU AML AML
comp=N,1296μm,0.5s
LJU AML AML
comp=E,1373μm,0.7s
CTI Castel Tesino 3.31 341 ⇓P Pn 17 33 04.1 +1.4
MPRI Monte Prat 3.33 358 ⇑P Pn 17 33 03.1 +0.2
MPRI AML AML
comp=E,284μm,0.7s
MPRI AML AML
comp=N,550μm,0.5s
MPRI AML AML
comp=N,550μm,0.5s
MPRI AML AML
comp=E,227μm,0.5s
MPRI AML AML
comp=E,277μm,0.5s
MPRI AML AML
comp=N,414μm,0.5s
STAL STALIGIAL 3.36 355 ⇑P Pn 17 33 03.2 -0.1
STAL AML AML
comp=E,246μm,0.6s
STAL AML AML
comp=N,244μm,0.7s
STAL AML AML
comp=E,237μm,0.8s
STAL AML AML
comp=N,200μm,0.7s
STAL AML AML
comp=E,232μm,0.5s
LUSI Trento, Gardas 3.43 333 ⇓P Pn 17 33 04.7 +0.4
LUSI AML AML
comp=E,153μm,1.3s
LUSI AML AML
comp=N,225μm,0.7s
LUSI AML AML
comp=E,119μm,0.7s
LUSI AML AML
comp=N,153μm,0.5s
CIMO Cimolais 3.43 352 ⇑P Pn 17 33 04.1 -0.2
CIMO AML AML
comp=N,64μm,0.6s
CIMO AML AML
comp=N,61μm,0.7s
CIMO AML AML
comp=E,75μm,0.8s
CIMO AML AML
comp=E,76μm,0.8s
CIMO AML AML
comp=E,75μm,0.8s
CIMO AML AML
comp=N,60μm,0.7s
CIMO AML AML
comp=N,59μm,0.8s
CIMO AML AML
comp=E,76μm,0.8s
PTCC Patocco-Chiusa 3.49 2 ⇑P Pn 17 33 04.6 -0.5
PTCC S **Sn 17 33 47.0 0.0**
PTCC AML AML
comp=E,132μm,0.7s
PTCC AML AML
comp=N,114μm,0.7s
PTCC AML AML
comp=N,114μm,0.7s
PTCC AML AML
comp=N,107μm,0.7s
ZAG Zagreb 3.55 34 S Sn 17 33 50.0 +1.8
ZONE Zone 3.59 324 ⇓P Pn 17 33 07.9 +1.4
ACOM Acomizza, Ital 3.64 4 ⇑P Pn 17 33 07.7 +0.4
ACOM AML AML
comp=E,280μm,0.8s
ACOM AML AML
comp=N,222μm,0.5s
ACOM AML AML
comp=N,252μm,0.6s
ACOM AML AML
comp=E,274μm,0.8s
ACOM AML AML
comp=E,194μm,0.6s
ACOM AML AML
comp=N,222μm,0.6s
ACOM AML AML
comp=N,252μm,0.6s
ACOM AML AML
comp=E,193μm,0.4s
ZOU Zoufplan 3.64 358 ⇑P Pn 17 33 07.3 0.0
ZOU AML AML
comp=N,192μm,1.2s
ZOU AML AML
comp=E,216μm,0.8s
ZOU AML AML
comp=E,238μm,0.8s
ZOU AML AML
comp=N,194μm,1.1s
ZOU AML AML
comp=E,106μm,0.5s
ZOU AML AML
comp=N,171μm,1.1s
ZOU AML AML
comp=E,125μm,0.7s
ZOU AML AML
comp=N,172μm,1.1s
MABI Malga Bissina 3.67 330 ⇓P Pn 17 33 08.7 +1.1
MYKA Terra Mystica 3.73 5 *e*Pn Pn 17 33 09.0 +0.5
comp=N,8.8nm,0.5s
KOSI Kohlern 3.77 341 ⇓P Pn 17 33 09.9 +0.9
ABTA Abfaltersbach 3.86 353 Pn Pn 17 33 11.0 +0.8
comp=N,13nm,0.4s,SNR=14
RISI Rein 4.11 350 ⇓P Pn 17 33 14.4 +0.7
ROSI Rosskopf 4.20 343 ⇑P Pn 17 33 16.1 +1.1
CAR1 CAROLEI 4.33 147 ⇑P Pn 17 33 13.6 -2.9
FETA Feichten 4.45 338 *e*Pn Pn 17 33 20.9 +2.5
comp=N,4.8nm,0.4s
WTTA Wattenberg 4.48 347 *e*Pn Pn 17 33 20.6 +1.8
comp=N,5.7nm,0.4s
DAVOX Davos/Dischmat 4.51 330 LR LR 17 35 09.9
comp=N,51nm,19.0s,baz=78,slow=42
DAVOX Davos/Dischmat 4.51 330 P Pn 17 33 18.2 -1.1
DAVOX AML AML
comp=E,45μm,0.6s
DAVOX AML AML
comp=N,52μm,0.6s
DAVOX AML AML
comp=E,45μm,0.6s
DAVOX AML AML
comp=N,52μm,0.6s
SQTA Sankt Quirin 4.52 343 *i* Pn Pn 17 33 22.3 +3.0
comp=N,12nm,0.4s,SNR=6.1
WATA Walderalm 4.56 346 Pn Pn 17 33 21.7 +1.8
comp=N,8.4nm,0.4s,SNR=6.3
ARSA Arzberg 4.65 20 *e*Pn Pn 17 33 24.3 +3.3
comp=N,2.4nm,0.5s
MOTA Moosalm 4.66 343 *e*Pn Pn 17 33 23.4 +2.0
comp=N,11nm,0.6s
BIOA Bad Ischl, Aus 4.79 4 Pn Pn 17 33 23.9 +1.0
comp=N,18nm,0.4s,SNR=16
RETA Reutte 4.88 341 *e*Pn Pn 17 33 26.1 +2.0
comp=N,5.7nm,0.4s
DAVA Damuels 4.95 333 *e*Pn Pn 17 33 27.6 +2.3
comp=N,1.0nm,0.3s
MOA Molln 5.00 9 *e*Pn Pn 17 33 26.3 +0.5
comp=N,4.5nm,0.4s
TIR Tirane 5.23 105 ⇑P Pn 17 33 29.4 +0.5
CONA Conrad Observa 5.36 20 Pn Pn 17 33 31.1 +0.2
comp=N,1.5nm,0.2s,SNR=4.8
GERES GERESS Array B 5.94 3 Pn Pn 17 33 37.8 -1.0
comp=N,0.8nm,0.3s,baz=184,slow=12,SNR=12
GERES Sn **Sn 17 34 45.2 -2.1**
comp=N,2.3nm,0.3s,baz=177,slow=23,SNR=10
comp=N,1.1nm,0.4s
CKRC Cesky Krumlov 5.96 7 *e*PN Pn 17 33 38.3 -0.7
CKRC *e*SN **Sn 17 34 44.1 -3.6**
KHC Kasperske Hory 6.22 3 *e*PN Pn 17 33 42.0 -0.6
KHC *e*SN **Sn 17 34 50.8 -3.4**
VRAC Vranov 6.82 19 LR LR 17 36 56.9
comp=N,79nm,18.6s,baz=210,slow=42
PRU Pruhonice 7.14 7 *e*SN Sn 17 35 11.6 -5.1
NKC Novy Kostel 7.34 356 *e*SN Sn 17 35 17.8 -3.8
CLL Collm 8.40 359 *e*Pn Pn 17 34 12.0 -0.4
CLL *ex* x 17 34 52.0
CLL *e*Sn Sn 17 35 25.0 -23
CLL *ex* x 17 35 44.0
CLL *ex* x 17 35 59.0
CLL *ex* x 17 36 16.0
CLL *e*Sg **Sg 17 36 36.0 -3.4**
comp=Z,22nm,1.4s
HFS Hagfors 17.25 1 LR LR 17 43 40.7
comp=Z,62nm,18.2s,baz=59,slow=40
NOA NORSAR Array B 18.19 357 LR LR 17 42 40.4
comp=Z,23nm,20.2s,baz=270,slow=35
FINES FINESS Array B 20.11 18 P Pn 17 36 45.2 -1.0
comp=Z,1.4nm,0.8s,baz=196,slow=9.8,SNR=1.3

comp=Z,1.4nm,0.8s
TORD Torodi Ar. Bea 31.27 202 P P 17 38 31.2 +0.1
comp=Z,0.3nm,0.5s,baz=27,slow=9.7,SNR=2.8
comp=Z,0.3nm,0.5s
MKAR Makanchi Array 47.72 60 P P 17 40 47.6 -0.2
comp=Z,0.5nm,0.7s,baz=282,slow=6.9,SNR=1.9
comp=Z,0.5nm,0.7s
SONM Songino Array 61.74 50 P P 17 42 31.5 +1.9
comp=Z,0.4nm,0.8s,baz=298,slow=6.1,SNR=2.3
comp=Z,0.4nm,0.8s
CMAR Chiang Mai Arr 74.65 79 P P 17 43 53.4 +2.6
comp=Z,0.2nm,0.7s,baz=302,slow=6.3,SNR=4.2
comp=Z,0.2nm,0.7s

IDC 30 17:41:42.8±1.6, 27°.89N×103°.42E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=44.8km s-min=29.6km az=65.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.67**	**59**	P	P	17 46 45.5	-0.3
	1.1nm,0.6s,baz=247,slow=9.9,SNR=7.5						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**25.13**	**324**	P	P	17 47 09.4	-0.1
	0.3nm,0.5s,baz=132,slow=8.3,SNR=2.0						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**56.18**	**144**	P	P	17 51 24.4	-0.2
	0.3nm,0.9s,baz=332,slow=8.5,SNR=1.9						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**59.09**	**147**	P	P	17 51 45.2	+0.1
	0.3nm,0.6s,baz=328,slow=6.8,SNR=7.3						
	0.3nm,0.6s						

IDC 30 17:43:50.4±11.0, 4°.86N×94°.37E, h0km, mb3.6/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=276.4km s-min=48.5km az=83.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.23**	**18**	Pn	Pn	17 47 13.3	-0.1
	0.1nm,0.3s,baz=209,slow=13,SNR=5.8						
	0.5nm,0.6s						
H08S2	**Diego Garcia H**	**25.12**	**240**	T	T	18 16 35.7	
	baz=60,slow=76,SNR=6.7						
H08S3	**Diego Garcia H**	**25.12**	**241**	T	T	18 16 32.7	
	baz=60,slow=76,SNR=11						
H08S1	**Diego Garcia H**	**25.13**	**240**	T	T	18 16 37.3	
	baz=60,slow=76,SNR=4.7						
WRA	**Warramunga Arr**	**46.38**	**123**	P	P	17 52 19.4	+0.4
	0.4nm,0.7s,baz=303,slow=9.1,SNR=4.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**47.85**	**128**	P	P	17 52 30.0	-0.5
	0.7nm,0.6s,baz=301,slow=7.8,SNR=20						
	0.7nm,0.6s						

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*STR **30** 17:49:10.4±1.6, 43°N±7°×1°4E±1°3, h15km, MLv3.8/19, Error ellipse: s-maj=0.0km s-min=0.0km az=92.9, preliminary*
*ROM **30** 17:49:13.7±0.0, 42°.913N±0°.001×13°.133E±0°.003, h9km, ML3.5/81, Error ellipse: s-maj=0.2km s-min=0.1km az=76.0*
*IDC **30** 17:49:14.1±1.5, 43°.02N×13°.04E, h0km, mb3.5/6, mbtmp3.4/9, ML3.1/3, MS3.5/2, Error ellipse: s-maj=35.4km s-min=14.9km az=87.0*
*LDG **30** 17:49:14.6±0.2, 42°.83N×13°.02E, h10km, Ml3.1/24, Error ellipse: s-maj=6.7km s-min=4.3km az=46.0*
*PRU **30** 17:49:19.0±0.0, 43°.22N×13°.24E, h0km*
ISC 30 17:49:14.1±0.7, 42°.91N±0°.01×13°.11E±0°.01, h12km±4km, n224, σ2°33/300, mb3.5/5, 9C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**254**	⇑P	**Pg**	**17 49 16.7**	**+0.2**
T1216				S	**Sg**	**17 49 18.6**	**+0.2**
T1216				AML	AML		
T1216				AML	AML		
	comp=N,74850μm,1.1s						
T1216				AML	AML		
T1216				AML	AML		
	comp=N,75050μm,1.1s						
FEMA	**Monte Fema**	**0.07**	**323**	P	**Pg**	**17 49 16.5**	**-0.2**
FEMA				S	**Sg**	**17 49 18.3**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1245	**Castelsantange**	**0.08**	**131**	P	**Pg**	**17 49 16.4**	**-0.4**
T1245				S	**Sg**	**17 49 18.0**	**-0.8**
T1245				AML	AML		
	comp=E,96350μm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,89850μm,0.6s						
T1245				AML	AML		
FDMO	**Fiordimonte**	**0.13**	**354**	⇓P	**Pg**	**17 49 17.2**	**-0.2**
FDMO				S	**Sg**	**17 49 19.2**	**-0.4**
T1256	**Bolognola (MC)**	**0.13**	**42**	⇑P	**Pg**	**17 49 16.9**	**-0.6**
T1256				S	**Sg**	**17 49 18.9**	**-1.1**
MMO1	**Montemonaco**	**0.16**	**93**	⇑P	**Pg**	**17 49 17.4**	**-0.5**
MMO1				S	**Sg**	**17 49 19.8**	**-0.8**
T1212	**Cascia, Frazio**	**0.16**	**196**	P	**Pg**	**17 49 18.3**	**+0.4**
T1212				S	**Sg**	**17 49 21.5**	**+0.9**
T1219	**Muccia, Frazio**	**0.16**	**334**	P	**Pg**	**17 49 17.9**	**+0.1**
T1219				S	**Sg**	**17 49 20.9**	**+0.3**
T1214	**Arquata del Tr**	**0.17**	**153**	P	**Pg**	**17 49 18.0**	**0.0**
T1214				S	**Sg**	**17 49 21.1**	**+0.3**
T1213	**Norcia, Frazio**	**0.18**	**175**	P	**Pg**	**17 49 18.5**	**+0.3**
T1213				S	**Sg**	**17 49 21.5**	**+0.5**
AM05	**Amandola Campo**	**0.20**	**69**	⇑P	**Pg**	**17 49 18.0**	**-0.4**
AM05				S	**Sg**	**17 49 21.0**	**-0.3**
AM05				AML	AML		
	comp=E,14650μm,0.2s						
AM05				AML	AML		
	comp=N,17150μm,1.0s						
AM05				AML	AML		
	comp=E,70400μm,0.2s						
AM05				AML	AML		
	comp=N,17200μm,1.0s						
AM05				AML	AML		
	comp=N,6695μm,0.1s						
AM05				AML	AML		
	comp=E,14600μm,0.2s						
T1220	**Camerino, Fraz**	**0.20**	**357**	⇓P	**Pg**	**17 49 18.4**	**-0.1**
T1220				S	**Sg**	**17 49 21.6**	**+0.1**
T1215	**Vallo di Nera,**	**0.20**	**238**	⇑P	**Pg**	**17 49 19.1**	**+0.6**
T1215				S	**Sg**	**17 49 22.9**	**+1.3**
T1215				AML	AML		
	comp=E,7175μm,1.4s						
T1215				AML	AML		
	comp=N,10175μm,0.9s						
T1215				AML	AML		
	comp=E,6960μm,1.4s						
T1215				AML	AML		
	comp=N,10695μm,0.9s						
T1215				AML	AML		
	comp=N,10150μm,0.9s						
T1215				AML	AML		
	comp=E,6945μm,1.4s						
T1215				AML	AML		
	comp=N,10680μm,0.9s						
T1215				AML	AML		
	comp=N,10660μm,0.9s						
T1215				AML	AML		
	comp=N,10145μm,0.9s						
T1244	**Arquata del Tr**	**0.21**	**137**	P	**Pg**	**17 49 18.7**	**+0.1**
T1244				S	**Sg**	**17 49 22.2**	**+0.5**
GUMA	**Gualdo di Mace**	**0.23**	**48**	⇑P	**Pg**	**17 49 18.9**	**-0.1**
GUMA				S	**Sg**	**17 49 22.6**	**+0.3**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1217	**Poggiodomo (PG**	**0.23**	**213**	P	**Pg**	**17 49 19.6**	**+0.5**
T1217				S	**Sg**	**17 49 23.9**	**+1.5**
T1217				AML	AML		
	comp=E,20350μm,0.2s						
T1217				AML	AML		
	comp=E,20300μm,0.2s						
T1217				AML	AML		
	comp=E,20300μm,0.2s						
T1217				AML	AML		
	comp=N,29850μm,0.7s						
T1217				AML	AML		
	comp=E,20300μm,0.2s						
T1217				AML	AML		
	comp=N,29900μm,0.7s						
T1217				AML	AML		
	comp=N,29900μm,0.7s						
T1218	**Civita (PG)**	**0.24**	**178**	P	**Pg**	**17 49 19.4**	**+0.2**
T1218				S	**Sg**	**17 49 23.4**	**+0.8**
T1241	**Roccafluvione,**	**0.25**	**102**	P	**Pg**	**17 49 19.3**	**0.0**
T1241				S	**Sg**	**17 49 23.0**	**+0.3**
T1241				AML	AML		
	comp=N,20750μm,0.7s						
T1241				AML	AML		
	comp=E,22600μm,0.6s						
T1241				AML	AML		
	comp=N,19750μm,0.7s						
T1241				AML	AML		
	comp=E,21050μm,0.6s						
T1241				AML	AML		
	comp=N,20700μm,0.7s						
SEF1	**Sefro**	**0.26**	**334**	P	**Pg**	**17 49 19.7**	**+0.1**
SEF1				S	**Sg**	**17 49 24.2**	**+0.9**
SEF1				AML	AML		
	comp=E,54500μm,1.4s						
SEF1				AML	AML		
	comp=E,54550μm,1.4s						
SEF1				AML	AML		
	comp=N,47750μm,0.2s						
T1201	**Domo (RI)**	**0.27**	**157**	P	**Pg**	**17 49 20.1**	**+0.3**
T1201				S	**Sb**	**17 49 25.1**	**-0.6**
T1204	**Amatrice, Fraz**	**0.28**	**146**	P	**Pg**	**17 49 19.9**	**0.0**
T1204				S	**Sg**	**17 49 24.6**	**+0.8**
PIO1	**Pioraco**	**0.28**	**342**	P	**Pg**	**17 49 19.9**	**-0.1**
PIO1				S	**Sg**	**17 49 24.2**	**+0.4**
PIO1				AML	AML		
	comp=N,30450μm,1.1s						
PIO1				AML	AML		
	comp=E,17850μm,0.3s						
MDAR	**Monte D'Aria**	**0.28**	**6**	P	**Pg**	**17 49 19.9**	**-0.1**
MDAR				S	**Sg**	**17 49 24.3**	**+0.4**
MDAR				AML	AML		
	comp=N,56300μm,0.3s						
MDAR				AML	AML		
	comp=E,57450μm,0.4s						
FIU1	**Fiuminata**	**0.31**	**336**	P	**Pg**	**17 49 20.4**	**0.0**
FIU1				S	**Sg**	**17 49 25.5**	**+1.0**
FIU1				AML	AML		
	comp=E,18250μm,0.3s						
FIU1				AML	AML		
	comp=N,13950μm,1.0s						
LNSS	**Leonessa**	**0.31**	**189**	P	**Pg**	**17 49 20.8**	**+0.3**
LNSS				S	**Sg**	**17 49 25.7**	**+1.1**
LNSS				AML	AML		
	comp=E,10765μm,0.3s						
LNSS				AML	AML		
	comp=N,24150μm,0.4s						
SSM1	**San Severino M**	**0.32**	**9**	P	**Pg**	**17 49 20.5**	**-0.2**
SSM1				S	**Sg**	**17 49 25.6**	**+0.6**
SMA1	**SAN MARTINO**	**0.33**	**149**	P	**Pg**	**17 49 20.5**	**-0.2**
SMA1				S	**Sg**	**17 49 25.7**	**+0.6**
GAG1	**Gagliole**	**0.33**	**355**	P	**Pg**	**17 49 20.9**	**+0.1**
GAG1				S	**Sg**	**17 49 26.1**	**+0.8**
GAG1				AML	AML		
	comp=E,70950μm,0.2s						
GAG1				AML	AML		
	comp=N,71950μm,0.3s						
GAG1				AML	AML		
	comp=E,70950μm,0.3s						
T1243	**Rocca Santa Ma**	**0.33**	**130**	P	**Pg**	**17 49 20.4**	**-0.4**
T1243				S	**Sg**	**17 49 25.4**	**+0.1**
MNTP	**Montappone**	**0.35**	**49**	P	**Pg**	**17 49 21.2**	**+0.1**
MNTP				S	**Sb**	**17 49 27.3**	**-0.6**
MNTP				AML	AML		
	comp=E,43850μm,0.4s						
MNTP				AML	AML		
	comp=N,34250μm,0.5s						
MNTP				AML	AML		
	comp=E,43850μm,0.3s						
ASSB	**Assisi San Ben**	**0.35**	**292**	⇑P	**Pg**	**17 49 21.5**	**+0.3**
ASSB				S	**Sb**	**17 49 27.6**	**-0.4**
SNTG	**Esanatoglia**	**0.37**	**341**	P	**Pg**	**17 49 21.3**	**-0.1**
SNTG				S	**Sg**	**17 49 27.2**	**+0.8**
SNTG				AML	AML		
	comp=N,10645μm,0.8s						
SNTG				AML	AML		
	comp=E,12725μm,1.4s						
SNTG				AML	AML		
	comp=N,11850μm,0.8s						
SNTG				AML	AML		
	comp=N,10640μm,0.8s						
SNTG				AML	AML		
	comp=E,12495μm,1.4s						
RM33	**Pellescritta (**	**0.41**	**169**	P	**Pg**	**17 49 22.1**	**-0.1**
RM33				S	**Sb**	**17 49 28.8**	**-0.8**
RM33				AML	AML		
	comp=N,7335μm,0.4s						
RM33				AML	AML		
	comp=N,7340μm,0.4s						
RM33				AML	AML		
	comp=E,7540μm,0.1s						
RM33				AML	AML		
	comp=E,7545μm,0.1s						
RM33				AML	AML		
	comp=N,7390μm,0.4s						
RM33				AML	AML		
	comp=E,7560μm,0.1s						
ARRO	**Arrone**	**0.41**	**217**	P	**Pg**	**17 49 22.6**	**+0.4**
ARRO				S	**Sb**	**17 49 29.4**	**-0.2**
ARRO				AML	AML		
	comp=E,5860μm,0.2s						
ARRO				AML	AML		
	comp=N,7305μm,0.2s						
ARRO				AML	AML		
	comp=N,7310μm,0.2s						
ARRO				AML	AML		
	comp=E,5855μm,0.2s						
T1211	**Morro Reatino**	**0.42**	**206**	P	**Pg**	**17 49 23.1**	**+0.7**
T1211				S	**Sb**	**17 49 29.5**	**-0.4**
T1211				AML	AML		
	comp=E,8015μm,0.1s						
T1211				AML	AML		
	comp=E,8125μm,0.1s						
T1211				AML	AML		
	comp=N,11750μm,0.4s						
T1211				AML	AML		
	comp=E,8015μm,0.1s						
T1211				AML	AML		
	comp=E,8145μm,0.1s						
T1211				AML	AML		
	comp=N,11900μm,0.4s						
T1211				AML	AML		
	comp=N,11800μm,0.4s						
EL6	**Elcito**	**0.42**	**360**	P	**Pg**	**17 49 22.3**	**-0.1**
EL6				S	**Sg**	**17 49 28.9**	**+0.8**
OFFI	**Offida**	**0.43**	**86**	⇑P	**Pg**	**17 49 22.8**	**+0.3**
OFFI				AML	AML		
	comp=E,21450μm,0.7s						
OFFI				AML	AML		
	comp=N,26650μm,0.8s						
TRE1	**Treia**	**0.43**	**21**	P	**Pg**	**17 49 22.9**	**+0.3**
TRE1				S	**Sb**	**17 49 29.9**	**-0.2**
TRE1				AML	AML		
	comp=N,42000μm,0.5s						
TRE1				AML	AML		
	comp=E,46500μm,1.0s						
T1246	**Crognaleto (TE**	**0.43**	**139**	P	**Pg**	**17 49 22.3**	**-0.4**
CAMP	**Campotosto**	**0.43**	**149**	P	**Pg**	**17 49 22.4**	**-0.3**
CAMP				S	**Sg**	**17 49 29.0**	**+0.5**
CAMP				AML	AML		
	comp=N,3940μm,0.4s						
CAMP				AML	AML		
	comp=E,3590μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.44**	**309**	P	**Pg**	**17 49 23.0**	**+0.3**
ATCC				S	**Sb**	**17 49 30.5**	**+0.1**
ATCC				AML	AML		
	comp=E,18800μm,0.4s						
ATCC				AML	AML		
	comp=N,23650μm,1.0s						
TERO	**Teramo**	**0.47**	**128**	P	**Pg**	**17 49 22.7**	**-0.5**
TERO				S	**Sg**	**17 49 29.6**	**+0.2**
TERO				AML	AML		
	comp=E,9125μm,0.5s						
TERO				AML	AML		
	comp=E,9140μm,0.5s						
TERO				AML	AML		
	comp=N,14600μm,0.4s						
TERO				AML	AML		
	comp=N,15150μm,0.4s						
TERO				AML	AML		
	comp=E,9690μm,0.5s						
TERO				AML	AML		
	comp=E,9120μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.49**	**163**	P	**Pg**	**17 49 23.5**	**-0.2**
T1247				S	**Sb**	**17 49 31.2**	**-0.6**
T1247				AML	AML		
	comp=N,7755μm,0.9s						
T1247				AML	AML		
	comp=E,5735μm,1.2s						
CESX	**Cesi**	**0.49**	**232**	⇑P	**Pg**	**17 49 23.9**	**+0.2**
CESX				S	**Sb**	**17 49 31.8**	**0.0**
CESX				AML	AML		
	comp=N,5325μm,0.4s						
CESX				AML	AML		
	comp=E,4395μm,0.5s						
MMUR	**Monte Murano**	**0.54**	**352**	P	**Pg**	**17 49 24.5**	**-0.2**
MMUR				S	**Sb**	**17 49 33.1**	**-0.2**
MMUR				AML	AML		
	comp=N,18600μm,1.3s						
MMUR				AML	AML		
	comp=N,18550μm,1.3s						
MMUR				AML	AML		
	comp=E,21750μm,0.3s						
MURB	**Monte Urbino**	**0.55**	**310**	P	**Pg**	**17 49 25.1**	**+0.2**
MURB				S	**Sb**	**17 49 34.0**	**+0.3**
MURB				AML	AML		
	comp=E,17650μm,0.3s						
MURB				AML	AML		
	comp=N,25650μm,1.0s						
MURB				AML	AML		
	comp=E,17700μm,0.3s						
MURB				AML	AML		
	comp=E,19250μm,0.3s						
MURB				AML	AML		
	comp=N,26250μm,1.0s						
CADA	**Capodarco di F**	**0.56**	**59**	P	**Pb**	**17 49 25.9**	**0.0**
GIGS	**Gran Sasso**	**0.57**	**143**	P	**Pg**	**17 49 24.6**	**-0.7**
GIGS				S	**Sg**	**17 49 33.0**	**+0.1**
GIGS				AML	AML		
	comp=N,1110μm,1.4s						
GIGS				AML	AML		
	comp=E,1470μm,0.5s						
CIMA	**Civitanova Mar**	**0.57**	**46**	P	**Pb**	**17 49 25.7**	**-0.4**
AQU	**L'Aquila**	**0.60**	**158**	P	**Pg**	**17 49 25.2**	**-0.5**
AQU				AML	AML		
	comp=E,3230μm,1.5s						
AQU				AML	AML		
	comp=N,2340μm,1.4s						
AQU				AML	AML		
	comp=E,3210μm,1.5s						
AQU				AML	AML		
	comp=N,2555μm,0.8s						
AQU				AML	AML		
	comp=N,2335μm,1.4s						
PP3	**Marolino**	**0.60**	**38**	P	**Pg**	**17 49 26.0**	**+0.3**
PP3				AML	AML		
	comp=E,29450μm,1.1s						
PP3				AML	AML		
	comp=E,27750μm,1.1s						
PP3				AML	AML		
	comp=E,29400μm,1.1s						
PP3				AML	AML		
	comp=N,27950μm,0.3s						
PP3				AML	AML		
	comp=N,26250μm,0.3s						
ATSC	**Scheggia e Pas**	**0.60**	**329**	P	**Pg**	**17 49 25.7**	**-0.1**
ARVD	**Arcevia**	**0.60**	**349**	P	**Pg**	**17 49 25.5**	**-0.3**
ARVD				S	**Sb**	**17 49 35.0**	**-0.1**
ATFO	**Monte Foce - G**	**0.60**	**320**	P	**Pg**	**17 49 25.8**	**-0.1**
ATFO				S	**Sb**	**17 49 35.2**	**0.0**
ATFO				AML	AML		
	comp=N,5085μm,0.4s						
ATFO				AML	AML		
	comp=E,6685μm,0.7s						
TRTR	**Tortoreto Alta**	**0.60**	**99**	P	**Pb**	**17 49 26.4**	**-0.2**
TRTR				AML	AML		
	comp=E,14650μm,0.7s						
TRTR				AML	AML		
	comp=N,26550μm,0.7s						
ATTE	**AVT- Monte Tez**	**0.62**	**298**	P	**Pg**	**17 49 26.3**	**+0.1**
ATTE				AML	AML		
	comp=N,4090μm,1.3s						
ATTE				AML	AML		
	comp=E,3585μm,0.6s						
FIAM	**Fiamignano**	**0.64**	**179**	P	**Pg**	**17 49 26.0**	**-0.6**
FIAM				S	**Sb**	**17 49 35.9**	**-0.4**
FIAM				AML	AML		
	comp=E,2300μm,0.6s						
FIAM				AML	AML		
	comp=N,2115μm,0.6s						
ATLO	**AVT- Montelove**	**0.65**	**309**	P	**Pg**	**17 49 26.7**	**-0.1**
ATLO				S	**Sb**	**17 49 37.0**	**+0.4**
FRON	**Frontone**	**0.67**	**336**	P	**Pg**	**17 49 26.7**	**-0.4**
FRON				S	**Sb**	**17 49 37.2**	**+0.2**
ATVO	**AVT- Monte Val**	**0.70**	**313**	P	**Pg**	**17 49 27.3**	**-0.3**
ATVO				S	**Sb**	**17 49 38.3**	**+0.5**
ATVO				AML	AML		
	comp=N,4650μm,1.2s						
ATVO				AML	AML		
	comp=E,4655μm,0.7s						
ATBU	**Serra di Buran**	**0.70**	**324**	P	**Pg**	**17 49 27.7**	**0.0**
ATVA	**AVT- Monte Val**	**0.70**	**302**	P	**Pg**	**17 49 27.7**	**-0.1**
TB03	**Pietralunga**	**0.71**	**314**	P	**Pg**	**17 49 27.6**	**-0.3**
TB03				S	**Sb**	**17 49 38.7**	**+0.5**
MGAB	**Montegabbione**	**0.73**	**271**	P	**Pg**	**17 49 28.4**	**+0.2**
MGAB				AML	AML		
	comp=N,5885μm,0.6s						
MGAB				AML	AML		
	comp=N,5965μm,0.6s						
MGAB				AML	AML		
	comp=N,5880μm,0.6s						
MGAB				AML	AML		
	comp=E,4110μm,1.5s						
MGAB				AML	AML		
	comp=E,4490μm,1.5s						
FAGN	**Fagnano**	**0.73**	**151**	P	**Pg**	**17 49 28.2**	**-0.1**
FAGN				AML	AML		
	comp=N,4025μm,1.5s						
FAGN				AML	AML		
	comp=E,5745μm,0.5s						
AOI	**Ancona**	**0.74**	**29**	P	**Pg**	**17 49 27.9**	**-0.5**
AOI				S	**Sb**	**17 49 39.3**	**+0.3**
AOI				AML	AML		
	comp=N,9410μm,0.3s						
AOI				AML	AML		
	comp=E,9325μm,0.3s						
ATPC	**Poggio Castell**	**0.74**	**321**	P	**Pg**	**17 49 28.3**	**-0.2**
ATMI	**Monte Miggiano**	**0.75**	**305**	P	**Pg**	**17 49 28.4**	**-0.2**
ATMI				AML	AML		
	comp=E,8540μm,0.8s						
ATMI				AML	AML		
	comp=N,8940μm,0.9s						
ATMI				AML	AML		
	comp=E,8535μm,0.8s						
ATPI	**Pietralunga -**	**0.75**	**317**	P	**Pg**	**17 49 28.4**	**-0.2**
ATPI				S	**Sb**	**17 49 39.9**	**+0.6**
ATPI				AML	AML		
	comp=E,4315μm,0.8s						
ATPI				AML	AML		
	comp=N,3540μm,0.4s						
ATPI				AML	AML		
	comp=E,4320μm,0.8s						
VCEL	**Villa Celiera**	**0.75**	**133**	P	**Pg**	**17 49 28.1**	**-0.5**
VCEL				AML	AML		
	comp=E,5095μm,1.3s						
VCEL				AML	AML		
	comp=N,7275μm,0.6s						
VCEL				AML	AML		
	comp=N,7270μm,0.6s						
PIEI	**Pieia**	**0.75**	**327**	P	**Pg**	**17 49 28.1**	**-0.6**
PIEI				S	**Sb**	**17 49 39.9**	**+0.4**
PIEI				AML	AML		
	comp=E,3780μm,0.3s						
PIEI				AML	AML		
	comp=N,3185μm,0.4s						
MPAG	**Monte Paganucc**	**0.76**	**341**	P	**Pg**	**17 49 28.5**	**-0.4**
MPAG				AML	AML		
	comp=E,4260μm,0.3s						
MPAG				AML	AML		
	comp=N,4470μm,0.2s						

MPAG AML AML
comp=E,4330µm,0.4s
MPAG AML AML
comp=N,4605µm,0.3s
NARO Abbazia di Nar 0.80 332 P Pg 17 49 28.9 -0.6
NARO AML AML
comp=N,2155µm,0.6s
NARO AML AML
comp=E,2170µm,0.5s
SENI Senigallia 0.80 7 P Pb 17 49 30.1 +0.1
SENI AML AML
comp=E,23250µm,1.0s
SENI AML AML
comp=N,16900µm,0.3s
SENI AML AML
comp=E,4350µm,0.3s
SENI AML AML
comp=N,16900µm,0.3s
SENI AML AML
comp=N,3185µm,1.3s
SENI AML AML
comp=E,23300µm,1.0s
SENI AML AML
comp=E,4345µm,0.3s
SRES S.Oreste - Sor 0.80 213 P Pg 17 49 29.4 -0.2
FSSB Fossombrone 0.82 343 P Pg 17 49 29.7 -0.2
FSSB AML AML
comp=E,16200µm,0.4s
FSSB AML AML
comp=N,15550µm,0.4s
T0110 Collepietro 0.84 144 P Pg 17 49 29.4 -1.0
T0110 AML AML
comp=N,5035µm,0.5s
T0110 AML AML
comp=E,5205µm,0.6s
ATMC Monte Cedrone 0.86 309 P Pg 17 49 30.6 -0.1
SACS San Casciano d 0.88 267 P Pg 17 49 31.2 +0.1
SACS AML AML
comp=E,2080µm,0.9s
SACS AML AML
comp=N,1720µm,0.9s
SACS AML AML
comp=N,1875µm,1.3s
SACS AML AML
comp=E,2005µm,1.1s
PE3 Peglio 0.90 331 P Pg 17 49 31.6 0.0
PTQR Pietraquaria 0.91 166 P Pg 17 49 30.7 -1.1
MTCE Montecelio 0.93 197 P Pg 17 49 31.3 -0.6
MTCE AML AML
comp=E,1565µm,0.5s
MTCE AML AML
comp=N,1230µm,0.9s
CAFI Castiglion Fio 0.93 297 P Pg 17 49 31.9 -0.2
CAFI AML AML
comp=E,2745µm,1.0s
CAFI AML AML
comp=E,2655µm,1.0s
CAFI AML AML
comp=N,3690µm,1.1s
CAFI AML AML
comp=N,3555µm,1.1s
CERT Cerreto 0.96 185 P Pg 17 49 32.1 -0.6
CERT AML AML
comp=N,1018µm,0.5s
CERT AML AML
comp=E,2395µm,1.3s
SSP9 Sansepolcro 0.97 313 P Pg 17 49 32.7 -0.1
LATE Laterza 1.00 253 P Pg 17 49 33.6 +0.2
MCIV Monte Civitell 1.06 263 P Pg 17 49 34.0 -0.5
MCIV AML AML
comp=N,595µm,1.6s
MCIV AML AML
comp=E,744µm,0.7s
SF04 Casetta 1.06 267 AML AML
comp=N,692µm,1.6s
SF04 AML AML
comp=E,858µm,1.4s
CRE Caprese Michel 1.10 311 P Pb 17 49 35.0 -0.2
CRE AML AML
comp=E,1280µm,0.7s
CRE AML AML
comp=N,1865µm,0.7s
VVLD Villa Vallelon 1.11 160 P Pn 17 49 36.1 +0.6
GUAR Guarcino 1.12 172 P Pn 17 49 36.0 +0.2
GUAR AML AML
comp=E,1135µm,0.8s
GUAR AML AML
comp=N,1355µm,0.5s
LPEL Lama dei Pelig 1.17 137 P Pb 17 49 35.2 -1.2
LPEL AML AML
comp=E,1955µm,1.0s
LPEL AML AML
comp=N,1885µm,1.0s
TOLF Tolfa 1.18 224 P Pb 17 49 35.9 -0.5
TOLF AML AML
comp=E,1050µm,0.7s
TOLF AML AML
comp=N,938µm,1.1s
POFI Posta Fibreno 1.27 159 P Pn 17 49 37.2 -0.6
POFI AML AML
comp=E,944µm,1.0s
POFI AML AML
comp=N,616µm,1.3s
SFI Santa Sofia 1.35 318 P Pb 17 49 39.7 +0.3
SFI AML AML
comp=E,1054µm,1.1s
SFI AML AML
comp=N,1195µm,0.8s
SFI AML AML
comp=N,1275µm,0.8s
SFI AML AML
comp=E,1160µm,1.1s
GIUL Giuliano Di Ro 1.35 175 P Pb 17 49 39.7 +0.2
GIUL AML AML
comp=E,733µm,0.7s
GIUL AML AML
comp=N,607µm,0.8s
RNI2 Rionero Sannit 1.43 147 P Pb 17 49 40.8 -0.1
CSNT Castellina Chi 1.44 294 P Pn 17 49 40.6 +0.5
FROS Frosini 1.46 283 P Pn 17 49 40.5 +0.2
FROS AML AML
comp=N,986µm,0.9s
FROS AML AML
comp=E,932µm,1.6s
RUFI Rufina 1.49 309 P Pn 17 49 41.2 +0.5
RUFI AML AML
comp=E,918µm,0.6s
RUFI AML AML
comp=N,938µm,1.6s
OSSC Osservatorio P 1.49 295 P Pn 17 49 40.1 -0.7
MIDA Miranda 1.53 146 P Pn 17 49 41.3 0.0
LMD Lutirano 1.55 319 P Pb 17 49 43.3 +0.6
LMD AML AML
comp=N,918µm,0.9s
LMD AML AML
comp=E,884µm,0.9s
TRIV Trivento 1.57 136 P Pg 17 49 44.1 -0.1
TRIV AML AML
TRIV AML AML
comp=N,1250µm,1.2s
TRIV AML AML
TRIV AML AML
comp=E,1007µm,1.1s
TRIF Trifonti 1.63 278 P Pn 17 49 42.8 +0.1
TRIF AML AML
comp=N,341µm,0.7s
TRIF AML AML
comp=E,326µm,0.8s
CASP Castiglione de 1.65 267 P Pn 17 49 43.0 +0.1
CASP AML AML
comp=E,132µm,1.5s
CASP AML AML
comp=N,145µm,0.9s
BRIS BRISIGHELLA 1.70 317 P Pg 17 49 47.0 +0.3
VAGA Valle Agricola 1.71 150 P Pg 17 49 46.3 -0.7
BSSO Busso 1.75 140 P Pg 17 49 47.1 -0.6
BSSO AML AML
comp=N,208µm,0.8s
BSSO AML AML
comp=E,280µm,1.6s
MPPT Montemurlo 1.80 306 P Pn 17 49 46.4 +1.3
MPPT AML AML
comp=E,642µm,0.9s
MPPT AML AML
comp=N,524µm,1.2s
MTCR Monte La Croce 1.90 307 P Pn 17 49 47.0 +0.6

FNVD Fontana Vidola 1.91 312 P Pb 17 49 49.2 +0.2
MELA Melanico ??? S 1.92 128 P Pb 17 49 47.9 -1.2
MELA AML AML
comp=E,1190µm,1.2s
MELA AML AML
comp=E,1215µm,1.0s
MELA AML AML
comp=N,1390µm,1.1s
MELA AML AML
comp=N,1355µm,1.0s
SACR S. Croce Del S 1.92 141 P Pb 17 49 49.5 +0.4
PII Pisa 2.05 294 AML AML
comp=N,374µm,0.8s
PII AML AML
comp=E,366µm,0.6s
POPM Popiglio 2.05 304 P Pn 17 49 50.3 +1.8
POPM AML AML
comp=E,296µm,1.1s
POPM AML AML
comp=N,382µm,0.9s
APRC Apricena 2.14 122 P Pb 17 49 51.4 -1.5
APRC AML AML
comp=N,889µm,1.6s
APRC AML AML
comp=E,572µm,0.9s
MAIM Mastiano 2.15 299 P Pn 17 49 50.2 +0.3
MAIM AML AML
comp=N,242µm,0.8s
MAIM AML AML
comp=E,260µm,1.1s
PLMA Palmaria, Port 2.63 297 P Pn 17 49 56.9 +0.6
PLMA AML AML
comp=E,94µm,0.8s
PLMA AML AML
comp=N,117µm,0.9s
SKDS Skadanscina 2.72 14 *i* Pn **Pn 17 49 57.8 +0.2**
SKDS *i* Sn **Sn 17 50 30.0 -0.4**
SKDS IAML 17 50 30.8
comp=Z,140nm,0.3s
MORSI Morsiglia 2.75 272 P Pn 17 49 59.0 +1.0
SMPL Sampolo 2.94 255 P Pn 17 50 02.8 +2.1
MSSA Maissana 2.96 300 P Pn 17 50 02.0 +1.0
MSSA AML AML
comp=N,140µm,0.7s
MSSA AML AML
comp=E,120µm,0.7s
PGF Pioggiola 3.05 265 *eP* **Pn 17 50 03.5 +1.3**
PGF *eSn* **Sn 17 50 34.6 -4.1**
comp=E,3.8nm,0.3s
PGF Pioggiola 3.05 265 AML AML
comp=N,27µm,1.0s
PGF AML AML
comp=E,26µm,1.4s
PGF Pioggiola 3.05 265 P Pn 17 50 03.4 +1.1
SABO M.te Sabotino 3.09 6 P Pn 17 50 03.0 +0.3
SABO AML AML
comp=E,2245µm,0.6s
SABO AML AML
comp=E,550µm,0.6s
SABO AML AML
comp=N,2830µm,0.8s
SABO AML AML
comp=N,747µm,0.8s
ROVR Rover Verones 3.10 333 P Pn 17 50 05.1 +2.1
ROVR AML AML
comp=N,166µm,0.5s
ROVR AML AML
comp=E,103µm,1.0s
CGRP Cima Grappa 3.11 343 P Pn 17 50 04.8 +1.6
CGRP AML AML
comp=N,482µm,0.7s
CGRP AML AML
comp=E,538µm,0.8s
SALO Salr 3.28 327 P Pn 17 50 08.3 +2.9
LJU Ljubljana 3.29 18 AML AML
comp=E,1880µm,0.4s
LJU AML AML
comp=N,2900µm,0.4s
CTI Castel Tesino 3.31 342 P Pn 17 50 07.3 +1.5
MPRI Monte Prat 3.33 359 P Pn 17 50 07.0 +0.9
MPRI AML AML
comp=E,374µm,0.7s
MPRI AML AML
comp=N,580µm,0.6s
ROBS Robic 3.35 5 *i* Pn **Pn 17 50 06.4 +0.2**
STAL STALIGIAL 3.36 355 P Pn 17 50 08.0 +1.5
STAL AML AML
comp=E,447µm,0.8s
STAL AML AML
comp=N,309µm,0.9s
LUSI Trento, Gardas 3.42 334 P Pn 17 50 09.1 +1.7
LUSI AML AML
comp=E,239µm,1.3s
LUSI AML AML
comp=N,303µm,0.7s
CIMO Cimolais 3.43 352 P Pn 17 50 08.5 +1.0
CIMO AML AML
comp=E,77µm,1.0s
CIMO AML AML
comp=N,96µm,0.7s
CIMO AML AML
comp=E,80µm,0.7s
CIMO AML AML
comp=N,97µm,0.9s
PTCC Patocco-Chiusa 3.50 3 P Pn 17 50 08.5 +0.1
PTCC AML AML
comp=N,154µm,0.5s
PTCC AML AML
comp=E,148µm,0.5s
GAGG Gaggia 3.53 335 P Pn 17 50 11.6 +2.7
ZOU Zoufplan 3.65 359 P Pn 17 50 11.3 +0.7
ZOU AML AML
comp=N,192µm,0.9s
ZOU AML AML
comp=E,289µm,0.9s
ZOU AML AML
comp=E,324µm,0.9s
ZOU AML AML
comp=N,202µm,1.0s
ACOM Acomizza, Ital 3.65 4 P Pn 17 50 11.8 +1.2
ACOM AML AML
comp=E,380µm,0.6s
ACOM AML AML
comp=N,256µm,0.7s
ACOM AML AML
comp=N,296µm,1.6s
ACOM AML AML
comp=E,389µm,0.6s
MABI Malga Bissina 3.65 330 P Pn 17 50 12.6 +2.0
MABI AML AML
comp=E,81µm,0.8s
MABI AML AML
comp=N,88µm,0.9s
KOSI Kohlern 3.76 341 AML AML
comp=E,276µm,0.9s
KOSI AML AML
comp=N,252µm,1.6s
APPI Appiano 3.81 340 P Pn 17 50 14.6 +1.9
ABTA Abfaltersbach 3.86 354 *i* Pn **Pn 17 50 15.2 +1.8**
comp=N,57nm,0.5s,SNR=15
BRMO Bormio 4.06 332 P Pn 17 50 20.0 +3.7
RISI Rein 4.10 350 P Pn 17 50 18.9 +2.0
RISI AML AML
comp=N,480µm,0.5s
RISI AML AML
comp=E,450µm,0.5s
SAOF Saorge 4.18 287 P Pn 17 50 21.1 +3.4
MUGIO Muggio 4.19 317 P Pn 17 50 19.5 +1.6
ROSI Rosskopf 4.20 344 P Pn 17 50 20.5 +2.4
SBF Sospel 4.24 285 *eP* **Pn 17 50 19.4 +0.8**
SBF *eSn* **Sn 17 51 03.0 -5.1**
comp=E,12nm,0.4s
VSL Villasalto 4.42 221 P Pn 17 50 23.3 +2.3
VSL AML AML
comp=N,22µm,0.7s
VSL AML AML
comp=E,26µm,0.8s
SPIF crte de Spivo 4.42 287 P Pb 17 50 27.0 -4.8
WTTA Wattenberg 4.48 347 *eP*n **Pb 17 50 28.5 -4.3**
comp=E,21nm,0.6s
DAVOX Davos/Dischmat 4.50 330 Pn **Pn 17 50 25.8 +3.5**
comp=E,3.8nm,0.3s,baz=160,slow=20,SNR=9.6
DAVOX Sn **Sn 17 51 16.8 +2.2**
comp=E,3.0nm,0.3s,baz=284,slow=23,SNR=11
SQTA Sankt Quirin 4.52 343 Pn **Pn 17 50 26.8 +4.4**
comp=E,16nm,0.4s,SNR=7.9

WATA Walderalm 4.56 347 Pn **Pn 17 50 27.2 +4.2**
comp=E,16nm,0.5s,SNR=8.4
CALF Calern 4.59 283 P Pn 17 50 25.0 +1.6
CALF S **Sb 17 51 28.8 -1.1**
MOTA Moosalm 4.66 343 Pn **Pn 17 50 28.6 +4.2**
comp=E,14nm,0.5s,SNR=6.2
ARSA Arzberg 4.67 21 *e*Pn **Pn 17 50 28.4 +4.0**
comp=E,2.4nm,0.3s
BIOA Bad Ischl, Aus 4.80 4 *e*Pn **Pn 17 50 28.5 +2.3**
comp=E,12nm,0.3s
SURF Saint Ours 4.83 291 P Pn 17 50 28.5 +1.8
LMR La Mourre 4.85 277 *eP* **Pn 17 50 27.8 +0.9**
LMR *eSn* **Sn 17 51 17.4 -5.5**
comp=E,1.8nm,0.3s
JAUF Jausiers 4.85 290 P Pn 17 50 30.5 +3.4
MBDF Montbardon 4.93 294 *eP* **Pn 17 50 29.4 +1.2**
MBDF *eSn* **Sn 17 51 19.5 -5.7**
comp=E,4.0nm,0.3s
DAVA Damuels 4.94 334 P Pn 17 50 33.7 +5.5
comp=E,19nm,0.5s,SNR=4.9
TRIGF Trigance 4.96 282 P Pn 17 50 30.2 +1.7
CREF Crivoux 4.97 291 P Pn 17 50 32.8 +4.0
MORH Mrgy, Hungar 5.16 48 S Sn 17 51 28.4 -2.1
DIX Grande Dixence 5.16 310 P Pn 17 50 35.4 +4.0
LPG La Plagne 5.25 302 *eP* **Pn 17 50 35.5 +2.8**
LPG *eSn* **Sn 17 51 27.1 -6.2**
comp=E,3.0nm,0.3s
LPL La Plagne 5.27 302 *eP* **Pn 17 50 33.7 +0.8**
LPL *eSn* **Sn 17 51 27.9 -5.8**
comp=E,5.2nm,0.4s
MPLH Magyarpolny 5.29 35 P Pn 17 50 32.6 -0.4
MPLH S **Sn 17 51 32.0 -1.9**
RSL Roselend 5.42 303 P Pn 17 50 39.0 +4.2
AIGLE Aigle 5.57 310 P Pn 17 50 40.7 +3.8
AIGLE Aigle 5.57 310 S Sn 17 51 45.6 +4.8
SMRF Simiane la Rot 5.58 284 *eP* **Pn 17 50 38.9 +1.8**
SMRF *eSn* **Sn 17 51 35.1 -6.1**
comp=E,1.6nm,0.4s
ORIF Oris-en-Rattie 5.59 294 *eP* **Pn 17 50 39.2 +2.0**
ORIF *eSn* **Sn 17 51 35.5 -5.9**
comp=E,2.4nm,0.4s
SULZ Cheisacher 5.81 324 P Pn 17 50 42.2 +2.1
BALST Balsthal 5.85 321 P Pn 17 50 43.9 +3.2
BALST Balsthal 5.85 321 S Sn 17 51 45.9 -1.8
GERES GERESS Array B 5.95 4 Pn **Pn 17 50 42.4 +0.3**
comp=E,1.0nm,0.3s,baz=169,slow=13,SNR=13
GERES Sn **Sn 17 51 48.7 -1.5**
comp=E,5.8nm,0.3s,baz=179,slow=22,SNR=11
comp=E,1.7nm,0.3s
CKRC Cesky Krumlov 5.97 8 *e*PN **Pn 17 50 45.1 +2.8**
CKRC *e*SN **Sn 17 51 47.7 -2.9**
BOURR Bourrignon 6.11 319 P Pn 17 50 46.7 +2.5
BOURR Bourrignon 6.11 319 S Sn 17 51 54.5 +0.3
CABF La Chapelle 6.22 309 *eP* **Pn 17 50 47.8 +2.0**
CABF *e*Sn **Sn 17 51 50.1 -6.7**
comp=E,2.8nm,0.4s
KIZ Kirchzarten 6.23 326 P Pn 17 50 47.7 +1.9
KHC Kasperske Hory 6.23 3 *e*PN **Pn 17 50 48.6 +2.7**
KHC *e*SN **Sn 17 51 53.8 -3.3**
RIVEL MONT RIVEL 6.39 309 P Pb 17 51 02.2 -3.1
VIVF Saint-Julien-l 6.40 291 *eP* **Pn 17 50 49.8 +1.6**
KRUC Moravsky 6.57 19 *e*PN **Pn 17 50 52.2 +1.7**
KRUC *e*SN **Sn 17 52 01.9 -3.4**
HINF Hinteralfeld 6.59 320 *eP* **Pn 17 50 52.8 +1.9**
HINF *e*Sn **Sn 17 51 58.8 -7.2**
comp=E,8.2nm,0.3s
RONF Ronchamp 6.62 319 P Pn 17 50 53.7 +2.5
ECH Echery 6.75 324 P Pn 17 50 54.7 +1.7
ECH S **Sn 17 52 05.9 -4.0**
LASF Ste Croix 6.83 283 *eP* **Pn 17 50 56.4 +2.3**
LASF *e*Sn **Sn 17 52 04.6 -7.1**
comp=E,0.6nm,0.2s
VRAC Vranov 6.84 20 Pn **Pn 17 50 56.4 +2.1**
comp=E,0.1nm,0.3s,baz=215,slow=15,SNR=1.2
comp=E,1.0nm,0.5s
VRAC Vranov 6.84 20 *e*SN **Sn 17 52 09.0 -3.1**
CDF Champ du Feu 6.85 325 *eP* **Pn 17 50 56.4 +1.9**
CDF *e*Sn **Sn 17 52 04.9 -7.5**
comp=E,6.2nm,0.4s
HAU Haudompre 6.97 319 *eP* **Pn 17 50 57.3 +1.3**
HAU *e*Sn **Sn 17 52 07.8 -7.3**
comp=E,17nm,0.4s
PRU Pruhonice 7.15 7 *e*PN **Pn 17 51 01.6 +3.1**
PRU *e*SN **Sn 17 52 15.3 -4.3**
NKC Novy Kostel 7.34 357 *e*SN **Sn 17 52 21.5 -2.8**
SMF Signal de Mont 7.58 303 *eP* **Pn 17 51 06.8 +2.5**
SMF *e*Sn **Sn 17 52 22.4 -7.7**
comp=E,2.1nm,0.3s
PAGF Fort de Pagny 7.65 320 *eP* **Pn 17 51 07.3 +2.0**
baz=139
PAGF *e*Sn **Sn 17 52 24.0 -7.9**
comp=E,4.1nm,0.4s
SFTF Sexfontaines 7.75 316 *eP* **Pn 17 51 08.7 +2.0**
baz=135
SFTF *e*Sn **Sn 17 52 26.6 -7.8**
comp=E,3.8nm,0.3s
LOR Lormes 7.86 307 *eP* **Pn 17 51 10.0 +1.8**
baz=127
LOR *e*Sn **Sn 17 52 29.0 -8.1**
comp=E,5.2nm,0.4s
LOR Lormes 7.86 307 P Pn 17 51 10.7 +2.5
LOR Lormes 7.86 307 S Sn 17 52 37.5 +0.4
MEZF Maizieres J'vi 7.94 318 *eP* **Pn 17 51 12.1 +2.8**
baz=137
MEZF *e*Sn **Sn 17 52 31.1 -7.9**
comp=E,4.0nm,0.3s
AVF Avril sur Loir 7.94 303 *eP* **Pn 17 51 10.9 +1.6**
SSF Saint Saulge 7.97 305 *eP* **Pn 17 51 12.1 +2.4**
SSF *e*Sn **Sn 17 52 31.8 -8.0**
comp=E,1.8nm,0.4s
MTLF Montolieu 7.98 277 *eP* **Pn 17 51 12.1 +2.2**
SAVF Savonnieres en 7.98 318 *eP* **Pn 17 51 12.6 +2.8**
baz=139
SAVF *e*Sn **Sn 17 52 31.9 -8.1**
comp=E,3.0nm,0.4s
BGF Bois d'Agland 8.16 300 *eP* **Pn 17 51 14.3 +1.9**
CLL Collm 8.40 360 *e*Pn **Pn 17 51 17.0 +1.4**
CLL *e*Sn Sn 17 52 27.0 -23
CLL *e*x x 17 52 46.0
CLL *e*x x 17 53 05.0
CLL *e*Sg Sg 17 53 33.0 -11
comp=Z,23nm,1.3s
MLR Muntele Rosu 9.58 70 LR LR 17 56 03.9
comp=Z,117nm,18.5s,baz=148,slow=43
EKA Eskdalemuir Ar 16.31 325 Pn **Pn 17 53 00.3 -2.6**
baz=134,slow=14
NOA NORSAR Array B 18.20 357 P P 17 53 27.9 +1.3
baz=161,slow=12,SNR=3.5
comp=Z,0.3nm,0.7s
FINES FINESS Array B 20.12 18 P P 17 53 46.7 -0.9
comp=Z,2.7nm,0.9s,baz=193,slow=11,SNR=2.6
comp=Z,2.7nm,0.9s
KBZ Khabaz 21.64 78 P P 17 54 06.5 +2.3
comp=Z,2.6nm,0.9s,baz=280,slow=11,SNR=3.8
comp=Z,2.6nm,0.9s
TORD Torodi Ar. Bea 31.25 202 P P 17 55 36.4 +2.6
comp=Z,0.3nm,0.7s,baz=26,slow=8.8,SNR=2.3
comp=Z,0.3nm,0.7s
WSAR Wadi Sarin 42.30 103 LR LR 18 17 46.0
comp=Z,146nm,21.4s,baz=128,slow=40
KURBB Kurchatov Arra 44.15 56 P P 17 57 23.8 +1.4
comp=Z,0.2nm,0.4s,baz=291,slow=7.8,SNR=2.9
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 47.76 60 P P 17 57 53.5 +2.6
comp=Z,0.7nm,0.7s,baz=273,slow=7.7,SNR=3.2
comp=Z,0.7nm,0.7s
CMAR Chiang Mai Arr 74.69 79 P P 18 00 55.0 +1.1
comp=Z,0.4nm,0.7s,baz=311,slow=8.2,SNR=5.4
comp=Z,0.4nm,0.7s

ROM 30 17:51:58.1±0.0, 42°.790N±0°.003×13°.133E±0°.003,
h13km, ML2.5/38, 12C-24D, Error ellipse: s-maj=0.2km
s-min=0.1km az=162.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
T1245	**Castelsantange**	**0.08**	**31**	P	Pg	17 52 01.2	+0.2
T1245				S	Sg	17 52 03.4	+0.3
T1245				AML	AML		
	comp=N,19774µm,0.2s						
T1245				AML	AML		
	comp=E,16959µm,0.3s						
T1245				AML	AML		
	comp=N,21484µm,0.1s						
T1245				AML	AML		

comp=E,16543µm,0.3s
T1216 Preci, Frazion 0.13 320 ⇓P Pg 17 52 01.8 +0.3
T1216 S Sg 17 52 04.3 +0.4
T1216 AML AML
comp=E,7855µm,0.4s
T1216 AML AML
comp=N,10905µm,0.3s
T1216 AML AML
comp=N,10870µm,0.3s
T1216 AML AML
comp=N,9821µm,0.2s
T1216 AML AML
comp=E,7846µm,0.2s
T1217 Poggiodomo (PG 0.17 242 P Pg 17 52 02.4 +0.4
T1217 S Sg 17 52 05.6 +0.7
T1204 Amatrice, Fraz 0.18 130 P Pg 17 52 02.5 +0.3
T1204 S Sg 17 52 05.8 +0.7
MMO1 Montemonaco 0.18 52 ⇑P Pg 17 52 02.6 +0.3
MMO1 S Sg 17 52 05.8 +0.6
FEMA Monte Fema 0.18 340 ⇑P Pg 17 52 02.7 +0.3
FEMA S Sg 17 52 05.8 +0.5
FEMA AML AML
comp=E,12250µm,0.4s
FEMA AML AML
comp=N,9275µm,1.0s
FEMA AML AML
comp=E,12260µm,0.4s
FEMA AML AML
comp=N,9295µm,1.0s
FEMA AML AML
comp=N,9270µm,1.0s
FEMA AML AML
comp=E,9380µm,0.2s
FEMA AML AML
comp=N,8274µm,0.1s
T1215 Vallo di Nera, 0.20 274 ⇓P Pg 17 52 02.8 +0.3
T1215 S Sg 17 52 06.3 +0.8
T1215 AML AML
comp=E,2610µm,0.6s
T1215 AML AML
comp=N,2865µm,0.4s
T1215 AML AML
comp=N,2437µm,0.2s
T1215 AML AML
comp=E,2221µm,0.1s
T1215 AML AML
comp=N,2452µm,0.2s
T1215 AML AML
comp=E,2420µm,0.1s
SMA1 SAN MARTINO 0.22 137 P Pg 17 52 03.2 +0.4
SMA1 S Sg 17 52 07.0 +0.8
SMA1 AML AML
comp=E,4400µm,0.9s
SMA1 AML AML
comp=N,2820µm,0.3s
SMA1 AML AML
comp=E,4109µm,0.2s
SMA1 AML AML
comp=N,2818µm,0.3s
T1241 Roccafluvione, 0.23 73 ⇓P Pb 17 52 03.6 -0.5
T1241 AML AML
comp=E,2495µm,1.2s
T1241 AML AML
comp=N,3440µm,0.6s
T1241 AML AML
comp=E,2500µm,1.3s
T1241 AML AML
comp=E,2505µm,1.3s
T1241 AML AML
comp=N,3365µm,0.6s
T1241 AML AML
comp=N,2176µm,0.1s
T1241 AML AML
comp=N,2109µm,0.2s
T1241 AML AML
comp=E,2049µm,0.2s
T1241 AML AML
comp=E,2155µm,0.2s
AM05 Amandola Campo 0.25 41 ⇑P Pg 17 52 03.8 +0.5
AM05 S Sb 17 52 08.0 -0.8
AM05 AML AML
comp=N,1300µm,0.1s
AM05 AML AML
comp=N,467µm,1.4s
AM05 AML AML
comp=E,1080µm,0.1s
AM05 AML AML
comp=N,1305µm,0.1s
AM05 AML AML
comp=E,4115µm,0.7s
AM05 AML AML
comp=N,466µm,1.4s
AM05 AML AML
comp=E,4049µm,0.1s
AM05 AML AML
comp=N,462µm,0.1s
AM05 AML AML
comp=E,1080µm,0.1s
AM05 AML AML
comp=N,1304µm,0.1s
T1243 Rocca Santa Ma 0.25 112 ⇓P Pg 17 52 03.6 +0.2
RM33 Pellescritta (0.29 168 AML AML
comp=N,2215µm,0.4s
RM33 AML AML
comp=E,3040µm,0.9s
RM33 AML AML
comp=N,2165µm,0.4s
RM33 AML AML
comp=E,3035µm,0.9s
RM33 AML AML
comp=N,2160µm,0.4s
RM33 AML AML
comp=E,2925µm,0.9s
CAMP Campotosto 0.33 141 ⇓P Pg 17 52 04.9 +0.2
CAMP AML AML
comp=E,1880µm,0.8s
CAMP AML AML
comp=N,878µm,0.4s
CAMP AML AML
comp=N,878µm,0.4s
CAMP AML AML
comp=E,1686µm,0.3s
T1211 Morro Reatino 0.33 219 ⇓P Pg 17 52 05.3 +0.5
T1211 AML AML
comp=E,2860µm,0.2s
T1211 AML AML
comp=N,3245µm,1.4s
T1211 AML AML
comp=E,2820µm,0.2s
T1211 AML AML
comp=N,3255µm,0.7s
T1211 AML AML
comp=E,2820µm,0.2s
T1211 AML AML
comp=N,3008µm,0.1s
T1211 AML AML
comp=E,2863µm,0.1s
T1211 AML AML
comp=N,2973µm,0.1s
ARRO Arrone 0.34 232 ⇓P Pg 17 52 05.4 +0.4
ARRO S Sb 17 52 10.7 -0.8
ARRO AML AML
comp=E,2185µm,0.7s
ARRO AML AML
comp=N,1925µm,0.2s
ARRO AML AML
comp=E,2122µm,0.2s
ARRO AML AML
comp=N,1926µm,0.2s
T1247 Pizzolo (AQ) 0.37 161 ⇓P Pg 17 52 05.8 +0.3
T1247 AML AML
comp=E,3720µm,0.3s
T1247 AML AML
comp=N,2910µm,1.0s
T1247 AML AML
comp=N,2886µm,0.2s
T1247 AML AML
comp=E,3716µm,0.3s
TERO Teramo 0.39 116 ⇓P Pg 17 52 05.6 -0.2
TERO AML AML
comp=E,1370µm,0.8s
TERO AML AML
comp=N,1165µm,1.1s
TERO AML AML
comp=E,1316µm,0.2s
TERO AML AML
comp=E,1227µm,0.2s
TERO AML AML
comp=N,841µm,0.1s
TERO AML AML
comp=N,1065µm,0.3s
ASSB Assisi San Ben 0.43 306 ⇑P Pg 17 52 06.5 -0.2
ASSB S Sb 17 52 13.3 -0.7
ASSB AML AML
comp=E,1405µm,0.1s
ASSB AML AML
comp=N,1089µm,0.3s
ASSB AML AML
comp=N,778µm,0.1s
ASSB AML AML
comp=E,1410µm,0.1s
OFFI Offida 0.43 70 ⇓P Pb 17 52 07.8 +0.1
OFFI AML AML
comp=N,6510µm,0.4s
OFFI AML AML
comp=E,4405µm,0.4s
OFFI AML AML
comp=N,6516µm,0.4s
OFFI AML AML
comp=E,4404µm,0.4s
CESX Cesi 0.45 246 P Pg 17 52 07.0 +0.1
CESX S Sb 17 52 13.8 -0.6
CESX AML AML
comp=E,1685µm,0.2s
CESX AML AML
comp=N,2240µm,0.7s
GIGS Gran Sasso 0.47 136 P Pg 17 52 07.3 -0.1
GIGS AML AML
comp=N,205µm,0.4s
GIGS AML AML
comp=E,396µm,0.5s
GIGS AML AML
comp=N,195µm,0.2s
GIGS AML AML
comp=E,356µm,0.3s
AQU L'Aquila 0.48 155 ⇓P Pg 17 52 07.6 0.0
AQU AML AML
comp=E,882µm,0.9s
AQU AML AML
comp=E,850µm,0.3s
AQU AML AML
comp=N,1009µm,0.6s
AQU AML AML
comp=N,1075µm,0.6s
AQU AML AML
comp=E,850µm,0.3s
AQU AML AML
comp=N,818µm,0.3s
AQU AML AML
comp=E,862µm,0.3s
AQU AML AML
comp=N,847µm,0.2s
SNTG Esanatoglia 0.49 343 ⇓P Pg 17 52 07.9 +0.2
SNTG AML AML
comp=E,791µm,0.8s
SNTG AML AML
comp=N,552µm,0.9s
SNTG AML AML
comp=N,587µm,1.3s
SNTG AML AML
comp=N,586µm,1.3s
SNTG AML AML
comp=E,792µm,0.8s
SNTG AML AML
comp=E,746µm,0.8s
SNTG AML AML
comp=E,545µm,0.3s
SNTG AML AML
comp=N,546µm,0.4s
SNTG AML AML
comp=N,510µm,0.3s
SNTG AML AML
comp=E,575µm,0.3s
FIAM Fiamignano 0.52 181 P Pg 17 52 08.1 -0.2
FIAM AML AML
comp=N,538µm,0.2s
FIAM AML AML
comp=E,760µm,0.5s
FIAM AML AML
comp=E,760µm,0.5s
FIAM AML AML
comp=N,537µm,0.2s
ATCC AVT- Casa Cast 0.54 318 ⇑P Pg 17 52 08.7 +0.1
ATCC S Sb 17 52 17.0 -0.1
ATCC AML AML
comp=E,1315µm,1.4s
ATCC AML AML
comp=N,1200µm,0.5s
ATCC AML AML
comp=E,1310µm,1.4s
ATCC AML AML
comp=N,1205µm,0.5s
ATCC AML AML
comp=E,1179µm,0.1s
ATCC AML AML
comp=N,909µm,0.2s
EL6 Elcito 0.54 358 S Sb 17 52 18.0 +0.7
TRTR Tortoreto Alta 0.57 88 ⇓P Pb 17 52 10.5 +0.5
TRTR AML AML
comp=E,2070µm,0.4s
TRTR AML AML
comp=N,2220µm,0.6s
TRTR AML AML
comp=E,2071µm,0.4s
TRTR AML AML
comp=N,2222µm,0.6s
FAGN Fagnano 0.62 147 ⇑P Pb 17 52 10.8 -0.1
FAGN S Sn 17 52 22.0 -0.6
FAGN AML AML
comp=E,1855µm,0.3s
FAGN AML AML
comp=N,1236µm,0.3s
FAGN AML AML
comp=E,1857µm,0.3s
FAGN AML AML
comp=N,1238µm,0.3s
MURB Monte Urbino 0.65 317 S Sn 17 52 22.0 -1.4
VCEL Villa Celiera 0.66 127 ⇓P Pg 17 52 10.8 0.0
VCEL AML AML
comp=N,586µm,0.4s
VCEL AML AML
comp=E,726µm,1.0s
VCEL AML AML
comp=N,587µm,0.4s
VCEL AML AML
comp=E,720µm,0.4s
VCEL AML AML
comp=N,508µm,0.2s
ATFO Monte Foce - G 0.71 325 S Sn 17 52 24.0 -0.8
SRES S.Oreste - Sor 0.72 220 ⇑P Pg 17 52 12.3 +0.2
SRES AML AML
comp=E,271µm,1.2s
SRES AML AML
comp=N,241µm,0.5s
SRES AML AML
comp=N,241µm,0.5s
SRES AML AML
comp=E,270µm,0.3s
ARVD Arcevia 0.72 349 S Sn 17 52 24.0 -1.1
T0110 Collepietro 0.74 139 ⇑P Pg 17 52 11.9 -0.5
T0110 S Sb 17 52 24.0 +1.1
T0110 AML AML
comp=E,835µm,0.5s
T0110 AML AML
comp=N,856µm,0.4s
T0110 AML AML
comp=N,855µm,0.4s
T0110 AML AML
comp=E,835µm,0.5s
T0110 AML AML
comp=N,855µm,0.4s
MGAB Montegabbione 0.76 280 ⇓P Pb 17 52 13.1 -0.2
MGAB AML AML
comp=N,306µm,0.4s
MGAB AML AML
comp=E,262µm,0.2s
MGAB AML AML
comp=E,244µm,0.2s
MGAB AML AML
comp=N,315µm,0.4s
MGAB AML AML
comp=E,262µm,0.2s
MGAB AML AML
comp=N,307µm,0.4s
MGAB AML AML
comp=E,243µm,0.2s
MGAB AML AML
comp=N,315µm,0.4s
ATVO AVT- Monte Val 0.80 318 ⇓P Pg 17 52 13.1 -0.5
ATVO S Sn 17 52 26.0 -0.9
ATVO AML AML
comp=N,281µm,0.7s
ATVO AML AML
comp=N,280µm,0.7s
ATVO AML AML
comp=E,254µm,1.4s
ATVO AML AML
comp=N,253µm,0.6s
ATVO AML AML
comp=E,250µm,0.3s
AOI Ancona 0.83 24 P Pb 17 52 14.6 +0.1
AOI AML AML
comp=N,194µm,1.4s
AOI AML AML
comp=E,242µm,1.6s
AOI AML AML
comp=E,184µm,0.4s
AOI AML AML
comp=N,174µm,0.3s
ATMI Monte Miggiano 0.84 311 S Sn 17 52 28.0 +0.1
CERT Cerreto 0.85 188 ⇑P Pg 17 52 14.0 -0.5
CERT AML AML
comp=N,213µm,0.3s
CERT AML AML
comp=E,296µm,1.4s
CERT AML AML
comp=N,213µm,0.3s
CERT AML AML
comp=E,264µm,0.5s
ATPI Pietralunga - 0.85 321 ⇓P Pg 17 52 14.1 -0.5
ATPI S Sn 17 52 28.0 -0.3
ATPI AML AML
comp=E,306µm,0.5s
ATPI AML AML
comp=N,241µm,0.4s
ATPI AML AML
comp=N,241µm,0.4s
ATPI AML AML
comp=E,306µm,0.5s
PIEI Pieia 0.86 330 ⇑P Pg 17 52 13.3 -1.5
PIEI S Sn 17 52 28.0 -0.6
PIEI AML AML
comp=N,234µm,0.3s
PIEI AML AML
comp=E,309µm,0.9s
PIEI AML AML
comp=N,233µm,0.3s
PIEI AML AML
comp=E,287µm,0.2s
MPAG Monte Paganucc 0.88 342 ⇓P Pg 17 52 14.2 -1.0
MPAG AML AML
comp=N,234µm,0.3s
MPAG AML AML
comp=E,285µm,0.3s
MPAG AML AML
comp=E,285µm,0.3s
MPAG AML AML
comp=N,234µm,0.3s
MPAG AML AML
comp=E,405µm,0.8s
SACS San Casciano d 0.90 274 ⇓P Pg 17 52 15.2 -0.3
SACS AML AML
comp=N,143µm,0.4s
SACS AML AML
comp=E,141µm,1.6s
SACS AML AML
comp=N,149µm,0.4s
SACS AML AML
comp=E,127µm,0.4s
SACS AML AML
comp=N,143µm,0.4s
SACS AML AML
comp=E,110µm,0.4s
NARO Abbazia di Nar 0.92 334 ⇓P Pg 17 52 15.5 -0.3
NARO S Sn 17 52 30.0 +0.2
NARO AML AML
comp=E,150µm,1.3s
NARO AML AML
comp=N,148µm,1.4s
NARO AML AML
comp=E,133µm,0.2s
NARO AML AML
comp=N,138µm,0.3s
FSSB Fossombrone 0.94 344 ⇑P Pg 17 52 16.0 -0.2
FSSB S Sn 17 52 31.0 +0.6
FSSB AML AML
comp=E,998µm,0.3s
FSSB AML AML
comp=N,1460µm,0.3s
FSSB AML AML
comp=E,998µm,0.3s
FSSB AML AML
comp=N,1456µm,0.3s
VVLD Villa Vallelon 0.99 158 AML AML
comp=N,138µm,0.4s
VVLD AML AML
comp=E,141µm,0.5s
CAFI Castiglion Fio 1.01 303 ⇓P Pb 17 52 17.6 0.0
CAFI AML AML
comp=E,107µm,1.2s
CAFI AML AML
comp=N,101µm,1.1s
CAFI AML AML
comp=N,83µm,0.3s
CAFI AML AML
comp=N,84µm,0.3s
CAFI AML AML
comp=E,97µm,0.3s
CAFI AML AML
comp=E,100µm,0.6s
MCIV Monte Civitell 1.07 270 ⇑P Pn 17 52 19.2 +0.3
MCIV AML AML
comp=E,82µm,0.8s
MCIV AML AML
comp=N,78µm,0.3s
MCIV AML AML
comp=N,78µm,0.3s
MCIV AML AML
comp=E,81µm,0.4s
SF04 Casetta 1.08 273 P Pn 17 52 19.1 0.0
SF04 AML AML
comp=E,169µm,0.4s
SF04 AML AML
comp=N,98µm,0.3s
TOLF Tolfa 1.11 230 ⇓P Pb 17 52 18.9 -0.3
TOLF AML AML
comp=N,154µm,0.4s
TOLF AML AML
comp=E,162µm,0.3s
TOLF AML AML
comp=E,162µm,0.3s
TOLF AML AML
comp=N,153µm,0.4s
LRP Arpino 1.19 163 P Pg 17 52 21.6 +0.6
LRP AML AML
comp=N,102µm,0.9s
LRP AML AML
comp=E,60µm,0.6s
LRP AML AML
comp=E,60µm,0.6s
LRP AML AML
comp=N,92µm,0.3s
CRE Caprese Michel 1.20 314 ⇓P Pb 17 52 20.8 +0.1
CRE AML AML
comp=N,88µm,0.4s
CRE AML AML
comp=E,77µm,1.4s
CRE AML AML
comp=N,88µm,0.4s
CRE AML AML
comp=E,62µm,0.4s
GIUL Giuliano Di Ro 1.23 176 P Pg 17 52 22.9 +1.1
ASQU Asqua 1.41 316 P Pb 17 52 24.4 +0.2
ASQU AML AML
comp=E,60µm,0.5s
ASQU AML AML
comp=N,71µm,0.6s
ASQU AML AML
comp=N,71µm,0.6s
ASQU AML AML
comp=E,60µm,0.5s

RUFI	**Rufina**	**1.58**	**312**	⇓P	Pb	17 52 26.8	-0.5

ROM 30 17:52:25.3±0.0, 42°.756N±0°.003×13°.197E±0°.004, h10km, ML2.4/3, 7C-5D, Error ellipse: s-maj=0.3km s-min=0.3km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**356**	P	Pg	17 52 28.5	+0.4
T1245				S	Sg	17 52 30.4	+0.2
T1245				AML	AML		
	comp=E,11000µm,0.2s						
T1245				AML	AML		
	comp=N,13350µm,0.3s						
T1245				AML	AML		
	comp=E,11950µm,0.2s						
T1245				AML	AML		
	comp=N,12300µm,0.4s						
T1245				AML	AML		
	comp=N,23800µm,0.3s						
T1245				AML	AML		
	comp=E,20050µm,0.1s						
SMA1	**SAN MARTINO**	**0.16**	**141**	⇑P	Pg	17 52 29.7	+0.7
SMA1				AML	AML		
	comp=E,1267µm,0.3s						
SMA1				AML	AML		
	comp=N,1433µm,0.2s						
MMO1	**Montemonaco**	**0.17**	**34**	⇑P	Pg	17 52 29.8	+0.6
MMO1				S	Sg	17 52 32.8	+1.0
T1216	**Preci, Frazion**	**0.19**	**316**	⇑P	Pg	17 52 30.1	+0.7
T1216				S	Sg	17 52 33.1	+0.9
T1216				AML	AML		
	comp=N,2480µm,0.2s						
T1216				AML	AML		
	comp=E,1423µm,0.3s						
LNSS	**Leonessa**	**0.19**	**217**	⇑P	Pg	17 52 30.2	+0.7
LNSS				S	Sg	17 52 33.6	+1.3
LNSS				AML	AML		
	comp=E,2800µm,0.3s						
LNSS				AML	AML		
	comp=N,7185µm,0.1s						
LNSS				AML	AML		
	comp=E,2801µm,0.3s						
LNSS				AML	AML		
	comp=N,7184µm,0.1s						
LNSS				AML	AML		
	comp=N,7185µm,1.9s						
T1243	**Rocca Santa Ma**	**0.20**	**108**	P	Pg	17 52 30.1	+0.6
T1243				S	Sg	17 52 33.3	+0.9
T1241	**Roccafluvione,**	**0.20**	**60**	⇑P	Pb	17 52 30.5	-0.6
T1241				S	Sg	17 52 33.9	+1.4
T1241				AML	AML		
	comp=E,567µm,0.3s						
T1241				AML	AML		
	comp=N,676µm,0.2s						
T1217	**Poggiodomo (PG**	**0.20**	**257**	P	Pg	17 52 30.2	+0.6
T1217				S	Sg	17 52 33.7	+1.2
T1217				AML	AML		
	comp=E,770µm,0.1s						
T1217				AML	AML		
	comp=E,724µm,0.1s						
T1217				AML	AML		
	comp=N,1000µm,0.2s						
T1217				AML	AML		
	comp=N,976µm,0.1s						
T1215	**Vallo di Nera,**	**0.25**	**281**	P	Pg	17 52 30.9	+0.5
T1215				AML	AML		
	comp=E,609µm,0.1s						
T1215				AML	AML		
	comp=E,641µm,0.1s						
T1215				AML	AML		
	comp=N,465µm,0.1s						
T1215				AML	AML		
	comp=N,450µm,0.1s						
RM33	**Pellescritta (**	**0.25**	**177**	⇓P	Pg	17 52 31.2	+0.7
RM33				S	Sg	17 52 35.5	+1.6
RM33				AML	AML		
	comp=E,708µm,0.2s						
RM33				AML	AML		
	comp=E,701µm,0.2s						
RM33				AML	AML		
	comp=N,606µm,0.1s						
RM33				AML	AML		
	comp=N,598µm,0.1s						
AM05	**Amandola Campo**	**0.25**	**27**	⇓P	Pb	17 52 31.3	-0.6
AM05				AML	AML		
	comp=N,219µm,0.1s						
AM05				AML	AML		
	comp=N,650µm,0.1s						
AM05				AML	AML		
	comp=E,2892µm,0.1s						
AM05				AML	AML		
	comp=E,759µm,0.1s						
CAMP	**Campotosto**	**0.27**	**145**	⇑P	Pg	17 52 31.4	+0.6
CAMP				S	Sb	17 52 35.8	-1.2
CAMP				AML	AML		
	comp=E,908µm,0.2s						
CAMP				AML	AML		
	comp=N,280µm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**18**	⇓P	Pb	17 52 32.8	-0.4
GUMA				AML	AML		
	comp=E,2189µm,0.2s						
GUMA				AML	AML		
	comp=N,1962µm,0.2s						
GUMA				AML	AML		
	comp=N,1648µm,0.2s						
GUMA				AML	AML		
	comp=E,2091µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.32**	**167**	P	Pg	17 52 32.0	+0.2
T1247				S	Sb	17 52 38.1	-0.4
TERO	**Teramo**	**0.33**	**114**	⇑P	Pg	17 52 32.4	+0.5
TERO				S	Sb	17 52 37.5	-1.1
TERO				AML	AML		
	comp=N,792µm,0.1s						
TERO				AML	AML		
	comp=E,647µm,0.6s						
TERO				AML	AML		
	comp=N,756µm,0.3s						
TERO				AML	AML		
	comp=E,638µm,0.1s						
TERO				AML	AML		
	comp=N,665µm,0.1s						
TERO				AML	AML		
	comp=E,517µm,0.1s						
T1211	**Morro Reatino**	**0.34**	**229**	P	Pg	17 52 32.7	+0.6
T1211				S	Sb	17 52 37.9	-1.0
ARRO	**Arrone**	**0.36**	**241**	⇓P	Pg	17 52 33.0	+0.5
ARRO				AML	AML		
	comp=E,350µm,0.1s						
ARRO				AML	AML		
	comp=N,386µm,0.2s						
GIGS	**Gran Sasso**	**0.41**	**138**	⇓P	Pg	17 52 33.6	+0.2
GIGS				S	Sg	17 52 39.8	+0.9
GIGS				AML	AML		
	comp=N,103µm,0.1s						
GIGS				AML	AML		
	comp=E,179µm,0.1s						
SNTG	**Esanatoglia**	**0.53**	**339**	S	Sb	17 52 45.0	+0.5
EL6	**Elcito**	**0.58**	**353**	S	Sn	17 52 48.0	-1.2
ARVD	**Arcevia**	**0.77**	**346**	S	Sn	17 52 53.0	-0.8

*DDA **30** 17:55:23.3±0.0, 40°.76N×27°.39E, h7km±4km, ML2.1*
*ISK **30** 17:55:23.1, 40°.78N×27°.42E, h9km, ML2.5/7*

ISC 30 17:55:22.8±1.0, 40°.79N±0°.03×27°.45E±0°.05, h12km±10km, n17, σ0°.45/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.21**	**149**	PG	Pb	17 55 28.0	-0.7
SART	**Tekirdag**	**0.23**	**245**	P	Pg	17 55 27.7	0.0
SART				*i* AML	AML	17 55 31.0	
	comp=E,307nm,0.5s						
SART				*i* AML	AML	17 55 31.0	
	comp=N,294nm,0.5s						
SART				S	Sg	17 55 31.1	+0.1
RKY	**Sarkoy-Tekirda**	**0.23**	**245**	PG	Pg	17 55 27.8	+0.1
RKY				SG	Sg	17 55 31.3	+0.3
CRLT	**Corlu**	**0.41**	**32**	PG	Pb	17 55 32.0	0.0
KNL	**Balıkesir**	**0.52**	**174**	P	Pb	17 55 33.9	0.0
KNL				*i* AML	AML	17 55 41.0	
	comp=E,158nm,0.3s						
KNL				S	Sb	17 55 41.5	+0.2
KNL				*i* AML	AML	17 55 42.0	
	comp=N,177nm,0.6s						
EDC	**Edincik**	**0.54**	**144**	PG	Pb	17 55 34.2	-0.1
EDC				SG	Sb	17 55 42.2	+0.2
KESN	**Edirne-Kesan**	**0.59**	**274**	P	Pg	17 55 34.3	0.0
KESN				S	Sg	17 55 41.6	-0.5
KESN				*i* AML	AML	17 55 42.0	
	comp=E,144nm,0.2s						
KESN				*i* AML	AML	17 55 44.0	
	comp=N,133nm,0.1s						
SLVT	**Silivri**	**0.73**	**52**	PG	Pn	17 55 38.1	-0.9
GONE	**Gonen-Balikesi**	**0.76**	**166**	PG	Pb	17 55 38.2	+0.2
GONE				SG	Sb	17 55 49.2	+0.9
ELBA	**Catalca**	**0.83**	**64**	P	Pn	17 55 39.6	-0.7
ELBA				S	Sn	17 55 52.4	-0.1
ELBA				*i* AML	AML	17 55 53.0	
	comp=E,87nm,0.1s						
ELBA				*i* AML	AML	17 55 53.0	
	comp=N,139nm,0.1s						
VIZE	**Kirklareli, Vi**	**0.84**	**20**	P	Pn	17 55 39.7	-0.9
VIZE				S	Sb	17 55 51.0	+0.2
VIZE				*i* AML	AML	17 55 53.0	
	comp=N,61nm,0.2s						
VIZE				*i* AML	AML	17 55 55.0	
	comp=E,38nm,0.1s						
CTKS	**Kestanelik-??a**	**0.92**	**60**	PG	Pn	17 55 41.7	+0.1
CTKS				SG	Sn	17 55 55.1	+0.4
CTYL	**Yalikoy Yolu**	**0.94**	**42**	PG	Pn	17 55 41.9	+0.1
CTYL				SG	Sn	17 55 55.7	+0.5
CAVK	**Edirne/Enez-Ca**	**0.98**	**265**	P	Pb	17 55 41.7	0.0
CAVK				S	Sg	17 55 54.1	-0.3
CAVK				*i* AML	AML	17 55 57.0	
	comp=N,82nm,0.6s						
CAVK				*i* AML	AML	17 55 58.0	
	comp=E,58nm,0.4s						
BALY	**Balya**	**1.05**	**173**	P	Pb	17 55 42.6	-0.4
BALY				S	Sb	17 55 57.2	+0.4
BALY				*i* AML	AML	17 55 59.0	
	comp=N,143nm,0.4s						
BALY				*i* AML	AML	17 55 59.0	
	comp=E,198nm,0.4s						
EDRB	**Edirne**	**1.19**	**334**	PN	Pg	17 55 46.2	+0.5
BAYC	**CANAKKALE_Bayr**	**1.25**	**214**	P	Pn	17 55 46.0	-0.2
BAYC				S	Sg	17 56 03.2	0.0
BAYC				*i* AML	AML	17 56 06.0	
	comp=N,26nm,0.3s						
BAYC				*i* AML	AML	17 56 07.0	
	comp=E,30nm,0.1s						

*NEIC **30** 17:58:04.4±1.8, 38°.81N±0°.01×122°.69W±0°.02, h6km±5km, Error ellipse: s-maj=2.7km s-min=1.7km az=54.0*

NCEDC 30 17:58:04.2±1.1, 38°.79N±0°.02×122°.76W±0°.03, h2km±6km, ML3.2/54, ML3.0/48(NEIC), Error ellipse: s-maj=3.4km s-min=1.7km az=61.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.03**	**302**		Pg	17 58 05.1	+0.1
GDXM	**Geysers**	**0.03**	**302**	IAML		17 58 05.6	
	comp=E,41µm,0.1s						
GDXM				IAML		17 58 05.6	
	comp=N,77µm,0.3s						
GCRM	**Castle Rock Sp**	**0.04**	**117**		Pg	17 58 05.2	+0.1
GBGM	**Boggs Mountain**	**0.07**	**71**		Pg	17 58 06.0	+0.4
GAXM	**Alexander Vall**	**0.08**	**177**		Pg	17 58 05.9	+0.1
GSGM	**Seigler Mounta**	**0.09**	**28**		Pg	17 58 06.6	+0.6
GACM	**Adobe Creek**	**0.11**	**316**		Pg	17 58 06.8	+0.4
NHSM	**Mount Saint He**	**0.18**	**140**		Pg	17 58 07.8	+0.2
GCVM	**Cloverdale**	**0.20**	**264**		Pg	17 58 08.6	+0.6
GSSM	**Skaggs Springs**	**0.22**	**246**		Pg	17 58 08.9	+0.6
MAC	**Mark West Spri**	**0.24**	**173**		Pg	17 58 09.4	+0.5
NMTM	**Middletown**	**0.25**	**87**		Pg	17 58 09.3	+0.3
HOPS	**Hopland Field**	**0.32**	**310**	Pg	Pg	17 58 09.8	-0.5
HOPS					Sg	17 58 11.0	-3.4
HOPS				IAML		17 58 18.5	
	comp=E,2µm,0.9s						
HOPS				IAML		17 58 18.6	
	comp=N,2µm,1.0s						
GHLM	**Highland Sprin**	**0.32**	**321**		Pg	17 58 10.9	+0.5
GWKM	**Walker Ridge**	**0.34**	**39**		Pg	17 58 11.4	+0.8
GHGM	**Hogback Ridge**	**0.34**	**352**		Pg	17 58 11.2	+0.4
GBMM	**Baldy Mountain**	**0.41**	**31**		Pg	17 58 12.8	+0.7
NTYM	**Taylor**	**0.41**	**169**		Pg	17 58 12.4	+0.3
NBPM	**Berryessa Peak**	**0.46**	**105**		Pb	17 58 14.3	-0.8
CVS	**Carmenet Viney**	**0.51**	**152**		Pg	17 58 14.2	+0.3
NAPC	**Atlas Peak**	**0.53**	**131**		Pg	17 58 14.6	+0.1
GTSM	**Trough Springs**	**0.53**	**13**		Pb	17 58 15.5	-0.9
NBRB	**Beebe Ranch Br**	**0.56**	**163**		Pg	17 58 15.2	+0.4
GGLM	**Gualala**	**0.58**	**277**		Pg	17 58 16.1	+0.8
GWRM	**Wonder Ranch**	**0.59**	**315**		Pg	17 58 16.1	+0.5
MCCM	**Marconi Confer**	**0.65**	**188**	Pg	Pg	17 58 17.5	+0.7
MCCM					Sg	17 58 17.6	-7.6
SNT	**Sears Point**	**0.65**	**158**		Pg	17 58 16.7	-0.1
GHOM	**Hamilton Openi**	**0.66**	**293**		Pb	17 58 17.7	-0.8
NGVM		**0.67**	**140**		Pg	17 58 17.3	+0.3
GHMM	**Hull Mountain**	**0.71**	**349**		Pb	17 58 19.6	+0.1
NOLM	**Olema**	**0.75**	**182**		Pg	17 58 19.1	+0.4
GNAM	**Navarro Ridge**	**0.79**	**301**		Pb	17 58 20.5	-0.2
NPRM	**Point Reyes**	**0.82**	**194**		Pg	17 58 20.4	+0.5
NLHM	**Lake Herman**	**0.83**	**144**		Pg	17 58 20.3	+0.2
OSUM	**Sutter Buttes**	**0.85**	**56**		Pg	17 58 20.6	0.0
GTC	**Three Chop Rid**	**0.87**	**315**		Pb	17 58 21.6	-0.4
HERB	**Hercules**	**0.87**	**153**		Pg	17 58 21.1	+0.2
SUTB	**Sutter Butte**	**0.88**	**60**		Pg	17 58 21.0	0.0
CPMM	**Point Molate**	**0.89**	**162**		Pg	17 58 21.2	-0.1
CSPM	**San Pablo Ridg**	**0.91**	**157**		Pg	17 58 22.0	+0.5
CPIM	**Pinole Ridge**	**0.91**	**152**		Pg	17 58 21.8	+0.1
RFSB	**Richmond Field**	**0.94**	**159**		Pg	17 58 22.4	+0.2
CTAM	**Taylor**	**0.96**	**142**		Pb	17 58 23.3	-0.3
KFPM	**Farley Peak**	**0.99**	**329**		Pb	17 58 24.1	-0.1
BL67	**Building 67, L**	**1.00**	**156**		Pg	17 58 23.5	+0.1
BRK	**Berkeley--Havi**	**1.00**	**157**		Pg	17 58 23.1	-0.3
VAK	**Adit at Lawren**	**1.00**	**156**		Pg	17 58 23.2	-0.2
CVPM	**Vollmer Peak**	**1.00**	**155**		Pg	17 58 22.8	-0.6
BKS	**Berkeley--Byer**	**1.00**	**155**		Pg	17 58 22.5	-0.9
JPRM	**Presidio of Sa**	**1.02**	**167**		Pg	17 58 23.8	0.0
CYBM	**Yerba Buena Is**	**1.03**	**162**		Pg	17 58 23.9	0.0
SMCB	**Saint Mary's C**	**1.08**	**152**		Pg	17 58 24.9	0.0
BDM	**Black Diamond**	**1.09**	**140**		Pg	17 58 24.1	-1.0
KCPM	**Cahto Peak**	**1.10**	**325**		Pn	17 58 26.6	-0.2
KCPM				IAML		17 58 33.8	
	comp=N,214nm,0.8s						
KCPM				IAML		17 58 52.0	
	comp=E,329nm,0.8s						
CRPB	**Russellman Par**	**1.10**	**142**		Pg	17 58 24.6	-0.8
CRHM	**Round Hill Res**	**1.11**	**147**		Pg	17 58 25.1	-0.5
BGC	**Bolinger Road**	**1.12**	**150**		Pg	17 58 25.5	-0.2
KIPM	**Iron Peak**	**1.16**	**331**		Pn	17 58 27.9	+0.3
JMGM	**Milagra Ridge**	**1.18**	**169**		Pg	17 58 26.5	-0.2
CSLM	**San Leandro Hi**	**1.18**	**154**		Pg	17 58 26.4	-0.4
OWYM	**Wyandotte**	**1.19**	**56**		Pg	17 58 25.1	-2.0
OGOM	**Van Goodin Ran**	**1.24**	**46**		Pg	17 58 26.0	-2.0
ORV	**Oroville**	**1.24**	**52**		Pg	17 58 26.1	-1.9
ORV	**Oroville**	**1.24**	**52**		Pg	17 58 26.3	-1.7
ORV				IAML		17 58 56.6	
	comp=E,33nm,1.4s						
ORV				IAML		17 58 57.7	
	comp=N,37nm,1.0s						
JCPM	**Coyote Point**	**1.25**	**164**		Pg	17 58 26.8	-1.4
CNIC	**Niles Canyon**	**1.34**	**152**		Pg	17 58 28.1	-1.8
AFDM	**Forest Hills D**	**1.41**	**83**		Pn	17 58 28.6	-2.3
WENL	**Wente Vineyard**	**1.41**	**146**		Pn	17 58 29.3	-1.6
JRSC	**Jasper Ridge**	**1.45**	**163**		Pn	17 58 29.5	-1.9
CMLM	**Mount Lewis**	**1.58**	**146**		Pn	17 58 31.9	-1.4
KMRM	**Mail Ridge**	**1.60**	**333**	Pn	Pn	17 58 33.7	0.0
KMRM				IAML		17 59 17.7	
	comp=E,164nm,1.1s						
KMRM				IAML		17 59 23.4	
	comp=N,116nm,1.8s						
JSGM	**Saratoga Golf**	**1.61**	**159**		Pn	17 58 32.6	-1.0
CCOB	**Coe Ranch Numb**	**1.75**	**150**		Pn	17 58 34.3	-1.3
JLAB	**Laurel Hill**	**1.82**	**153**		Pn	17 58 34.5	-2.1
MCUB	**Copperopolis B**	**1.87**	**115**		Pn	17 58 35.5	-1.8
CMB	**Columbia Colle**	**2.01**	**111**		Pn	17 58 38.1	-1.1
CMB	**Columbia Colle**	**2.01**	**111**	Pn	Pn	17 58 38.0	-1.2
CMB	**Columbia Colle**	**2.01**	**111**	IAML		17 59 08.9	
	comp=N,65nm,0.6s						
CDC	**Canada Road**	**2.03**	**150**		Pn	17 58 37.9	-1.6
EMB	**Emerald Bay**	**2.08**	**84**		Pn	17 58 40.6	+0.2
EMB	**Emerald Bay**	**2.08**	**84**	IAML		17 59 09.6	
	comp=E,142nm,0.8s						
EMB				IAML		17 59 14.8	
	comp=N,104nm,0.8s						
HPCM	**Pacheco Lake**	**2.09**	**145**		Pn	17 58 38.5	-1.8
HFEM	**San Felipe**	**2.10**	**149**		Pn	17 58 38.7	-1.7
LOY	**Loyalton**	**2.14**	**65**		Pn	17 58 41.6	+0.4
BEKR	**Beckworth**	**2.15**	**59**		Pn	17 58 41.4	+0.1
MPK	**Martis Peak**	**2.19**	**76**		Pn	17 58 40.4	-1.4
FRP	**Fremont Peak**	**2.27**	**153**		Pn	17 58 40.1	-2.7
SAO	**San Andreas Ge**	**2.28**	**152**	Pn	Pn	17 58 41.0	-1.8
MYLM	**Yosemite Lake**	**2.32**	**127**		Pn	17 58 42.1	-1.3
BPCNC	**Pine Canyon**	**2.39**	**158**		Pn	17 58 42.5	-1.9
BJOM	**Mount Johnson**	**2.45**	**152**		Pn	17 58 44.2	-0.9
MBUM	**Mount Bullion**	**2.45**	**119**		Pn	17 58 45.1	-0.2
VCNR	**Virginia City**	**2.47**	**77**		Pn	17 58 44.7	-1.0
VCNR				IAML		17 59 33.1	
	comp=N,61nm,0.9s						
VCNR				IAML		17 59 47.1	
	comp=E,53nm,0.9s						
PNTR	**Pine Nut**	**2.48**	**82**	Pn	Pn	17 58 43.5	-2.4
WAKR	**Walker**	**2.62**	**95**	Pn	Pn	17 58 47.8	0.0
WAKR				IAML		17 59 26.6	
	comp=E,80nm,0.9s						
WAKR				IAML		17 59 28.4	
	comp=N,43nm,0.8s						
YERR	**Yerington**	**2.75**	**85**	Pn	Pn	17 58 50.5	+0.9
YERR				IAML		17 59 38.7	
	comp=N,57nm,0.8s						
YERR				IAML		17 59 41.9	
	comp=E,76nm,0.8s						
PAHR	**Pah Rah Range**	**2.78**	**70**		Pn	17 58 49.3	-0.6
YBH	**Yreka Blue Hor**	**2.94**	**1**	Pn	Pn	17 58 52.1	+0.1
YBH				IAML		17 59 49.9	
	comp=N,29nm,4.6s						
PMPB	**Monarch Peak**	**3.01**	**148**	Pn	Pn	17 58 51.3	-1.6
OMMB	**Old Mammoth Mi**	**3.19**	**110**	Pn	Pn	17 58 54.4	-1.3
OMMB				IAML		17 59 41.6	
	comp=N,39nm,1.1s						
OMMB				IAML		17 59 45.8	
	comp=E,27nm,1.0s						
RYN	**Ryan**	**3.32**	**91**		Pn	17 58 57.2	-0.2
RYN				IAML		17 59 53.0	
	comp=N,34nm,1.1s						
RYN				IAML		17 59 56.9	
	comp=E,32nm,1.3s						
LHV	**Little Huntoon**	**3.38**	**98**	Pn	Pn	17 58 58.1	+0.1
NVAR	**Mina Array Bea**	**3.51**	**95**	Pn	Pn	17 58 59.8	-0.3
NV11	**Mina Array Sit**	**3.63**	**94**	Pn	Pn	17 59 01.6	+0.1
NV11				IAML		18 00 02.3	
	comp=N,30nm,1.7s						
NV11				IAML		18 00 04.3	
	comp=E,15nm,2.0s						
KVN	**Kaiserville**	**3.65**	**84**	Pn	Pn	17 59 01.5	-0.4

*MEX **30** 18:00:47.5±0.7, 14°.68N×92°.55W, h71km±9km, MD4.0*
*GCG **30** 18:00:48.5±0.3, 14°.98N×92°.47W, h44km±35km, MD4.0*
*SNET **30** 18:00:50.5±0.4, 14°.98N×92°.26W, h48km±18km, ML4.0*
*UCR **30** 18:00:50.5±0.4, 14°.98N×92°.26W, h48km±18km, ML3.7*

ISC 30 18:00:45.3±1.4, 14°.60N±0°.05×92°.70W±0°.04, h30km±12km, n26, σ1°.27/41, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.52**	**54**	*e*P	Pn	18 00 58.0	+1.3
THIG				*e*S	Sn	18 01 05.7	+1.2
PATR	**El Naranjo**	**0.68**	**41**	*e*P	Pb	18 00 59.0	+0.2
PATR				*e*S	Sn	18 01 08.8	-0.1
CHUJ	**Union Juarez**	**0.75**	**49**	*e*P	Pb	18 01 00.1	+0.1
CHUJ				*e*S	Sb	18 01 10.4	+0.3
PAVE	**Pavencul**	**0.77**	**41**	*e*P	Pb	18 01 00.4	0.0
PAVE				*e*S	Sb	18 01 10.6	-0.1
RTAL	**Retalhuleu**	**0.97**	**95**	*e*S	Sb	18 01 15.1	-1.1
STG3	**Santiaguito 3,**	**1.10**	**84**	⇓*e*P	Pb	18 01 05.5	-0.3
PCIG		**1.20**	**335**	*e*P	Pb	18 01 07.4	-0.2
PCIG				*e*S	Sb	18 01 22.4	-0.4
CCIG	**Comitan**	**1.75**	**18**	*e*P	Pn	18 01 14.8	+0.9
CCIG				*e*S	Sn	18 01 34.0	-1.3
PCG	**Pacaya**	**2.04**	**96**	*e*P	Pn	18 01 19.4	+1.5
PCG				*e*S	Sn	18 01 43.5	+1.1
TGIG		**2.20**	**349**	*e*P	Pn	18 01 19.5	-0.4
TGIG				*e*S	Sn	18 01 44.0	-2.2
NBG	**Las Nubes**	**2.28**	**90**	*e*P	Pb	18 01 25.3	-0.7
NILT	**Santiago Nilte**	**2.69**	**317**	*e*P	Pn	18 01 28.4	+1.8
NILT				*e*S	Sn	18 01 59.0	+0.9
NUBE	**Las Nubes**	**2.91**	**104**	*e*P	Pn	18 01 30.8	+0.9
NUBE				*e*S	Sn	18 02 01.9	-2.1
NUBE	**Las Nubes**	**2.91**	**104**	*e*P	Pn	18 01 30.8	+0.9
NUBE				*e*S	Sn	18 02 01.9	-2.1
UXUV	**UXUV**	**3.04**	**333**	*e*P	Pn	18 01 33.0	+1.6
UXUV				*e*S	Sn	18 02 07.5	+0.7
SBLS	**San Blas**	**3.08**	**104**	*e*P	Pn	18 01 33.9	+1.7
SBLS				IAML		18 02 19.5	
	comp=Z,515nm,0.3s						
SBLS	**San Blas**	**3.08**	**104**	*e*P	Pn	18 01 33.9	+1.7
SBLS				IAML		18 02 19.5	
	comp=Z,515nm,0.3s						
CEVE	**Cerro Verde**	**3.08**	**104**	*e*P	Pn	18 01 33.6	+1.4
CEVE	**Cerro Verde**	**3.08**	**104**	*e*P	Pn	18 01 33.6	+1.4
MTO3	**Montecristo**	**3.24**	**93**	*e*P	Pn	18 01 34.7	+0.3
MTO3	**Montecristo**	**3.24**	**93**	*e*P	Pn	18 01 34.7	+0.3
CMIG	**Matias Romero**	**3.25**	**320**	*e*P	Pn	18 01 35.5	+1.2
CMIG				*e*S	Sn	18 02 11.4	-0.6
HUIG	**Huatulco**	**3.49**	**290**	*e*P	Pn	18 01 39.0	+1.4
HUIG				*e*S	Sn	18 02 15.8	-2.1
NEUV	**Arroyo Zacate**	**4.29**	**316**	*e*P	Pn	18 01 50.1	+1.4
NEUV				*i* S	Sn	18 02 36.4	-1.4
PEIG	**Puerto Escondi**	**4.51**	**288**	*e*P	Pn	18 01 53.3	+1.6
JAUV	**Jalcomulco**	**6.15**	**321**	*e*	Pn	18 02 13.6	-0.7
JAUV				*e*		18 03 15.7	

*PRU **30** 18:06:53.0±0.0, 42°.68N×13°.22E, h0km*

ROM 30 18:06:57.8±0.1, 42°.916N±0°.003×13°.215E±0°.004, h8km, ML3.0/27, 12C-12D, Error ellipse: s-maj=0.3km s-min=0.2km az=118.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**198**	P	Pg	18 07 00.1	+0.2
T1245				S	Sg	18 07 01.7	+0.3
T1245				AML	AML		
	comp=E,90550µm,1.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,82250µm,1.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,79226µm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,86368µm,0.2s						
T1245				AML	AML		
MMO1	**Montemonaco**	**0.08**	**102**	⇓P	Pg	18 07 00.3	+0.2
MMO1				S	Sg	18 07 01.9	+0.3
AM05	**Amandola Campo**	**0.12**	**59**	⇓P	Pg	18 07 01.0	+0.5
AM05				S	Sg	18 07 03.2	+0.8
AM05				AML	AML		
	comp=N,9490µm,0.2s						
AM05				AML	AML		
	comp=E,21400µm

	comp=E,18750μm,0.5s					
FEMA			AML	AML		
	comp=N,17900μm,0.3s					
FEMA			AML	AML		
	comp=N,22400μm,1.4s					
FEMA			AML	AML		
	comp=E,28050μm,0.6s					
FEMA			AML	AML		
	comp=E,18757μm,0.5s					
FEMA			AML	AML		
	comp=N,17888μm,0.3s					
T1216	**Preci, Frazion**	**0.15 260**	⇑P	Pg	18 07 01.4	+0.5
T1216			S	Sg	18 07 04.2	+1.0
T1216			AML	AML		
	comp=E,20500μm,0.4s					
T1216			AML	AML		
	comp=N,16150μm,1.5s					
T1216			AML	AML		
	comp=E,20450μm,0.4s					
T1216			AML	AML		
	comp=N,16150μm,1.5s					
T1216			AML	AML		
	comp=N,74600μm,0.2s					
T1216			AML	AML		
	comp=E,75450μm,0.4s					
T1216			AML	AML		
	comp=N,14922μm,0.5s					
T1216			AML	AML		
	comp=E,20434μm,0.4s					
GUMA	**Gualdo di Mace**	**0.17 31**	⇓P	Pg	18 07 02.1	+0.7
GUMA			S	Sg	18 07 05.4	+1.5
GUMA			AML	AML		
	comp=E,30700μm,0.4s					
GUMA			AML	AML		
	comp=E,30700μm,0.4s					
GUMA			AML	AML		
	comp=N,35000μm,0.4s					
GUMA			AML	AML		
	comp=E,37150μm,0.3s					
GUMA			AML	AML		
	comp=N,27000μm,1.1s					
GUMA			AML	AML		
	comp=E,37137μm,0.3s					
GUMA			AML	AML		
	comp=N,35016μm,0.4s					
GUMA			AML	AML		
	comp=N,23463μm,0.3s					
GUMA			AML	AML		
	comp=E,30724μm,0.4s					
T1215	**Vallo di Nera,**	**0.28 246**	P	Pg	18 07 02.1	-1.3
T1215			AML	AML		
	comp=N,2100μm,0.4s					
T1215			AML	AML		
	comp=E,3195μm,0.4s					
T1215			AML	AML		
	comp=N,1950μm,1.4s					
T1215			AML	AML		
	comp=E,3050μm,0.5s					
T1215			AML	AML		
	comp=N,2100μm,0.4s					
T1215			AML	AML		
	comp=N,3655μm,0.8s					
T1215			AML	AML		
	comp=E,3050μm,0.5s					
T1215			AML	AML		
	comp=N,2007μm,0.4s					
T1215			AML	AML		
	comp=N,1792μm,0.6s					
T1215			AML	AML		
	comp=E,2965μm,0.4s					
T1243	**Rocca Santa Ma**	**0.28 142**	P	Pg	18 07 03.8	+0.5
T1243			S	Sb	18 07 09.0	-1.0
T1217	**Poggiodomo (PG**	**0.29 226**	⇑P	Pg	18 07 02.0	-1.6
T1217			AML	AML		
	comp=E,4235μm,0.3s					
T1217			AML	AML		
	comp=N,4950μm,0.6s					
T1217			AML	AML		
	comp=N,3446μm,0.4s					
T1217			AML	AML		
	comp=N,3277μm,0.4s					
SMA1	**SAN MARTINO**	**0.30 163**	P	Pg	18 07 04.4	+0.6
LNSS	**Leonessa**	**0.34 202**	P	Pb	18 07 05.3	-0.8
LNSS			S	Sb	18 07 11.3	-0.3
GAG1	**Gagliole**	**0.34 342**	P	Pb	18 07 05.4	-0.7
GAG1			AML	AML		
	comp=E,6235μm,0.3s					
GAG1			AML	AML		
	comp=N,5985μm,0.3s					
GAG1			AML	AML		
	comp=E,6235μm,0.4s					
GAG1			AML	AML		
	comp=N,5985μm,0.3s					
OFFI	**Offida**	**0.35 87**	⇑P	Pb	18 07 06.4	+0.2
OFFI			AML	AML		
	comp=E,5285μm,1.3s					
OFFI			AML	AML		
	comp=N,7195μm,0.7s					
OFFI			AML	AML		
	comp=E,5186μm,0.4s					
OFFI			AML	AML		
	comp=N,7191μm,0.7s					
SNTG	**Esanatoglia**	**0.39 329**	⇓P	Pg	18 07 05.8	+0.3
SNTG			AML	AML		
	comp=E,1570μm,0.5s					
SNTG			AML	AML		
	comp=N,1185μm,0.6s					
SNTG			AML	AML		
	comp=N,1245μm,0.7s					
SNTG			AML	AML		
	comp=N,1430μm,0.5s					
SNTG			AML	AML		
	comp=N,1520μm,0.5s					
SNTG			AML	AML		
	comp=N,1155μm,0.2s					
SNTG			AML	AML		
	comp=N,1176μm,0.2s					
SNTG			AML	AML		
	comp=E,1470μm,0.5s					
SNTG			AML	AML		
	comp=E,1508μm,0.3s					
SNTG			AML	AML		
	comp=E,1456μm,0.3s					
CAMP	**Campotosto**	**0.41 159**	P	Pg	18 07 06.5	+0.7
CAMP			S	Sb	18 07 13.0	-0.6
CAMP			AML	AML		
	comp=E,1360μm,0.2s					
CAMP			AML	AML		
	comp=N,2070μm,0.6s					
CAMP			AML	AML		
	comp=N,2070μm,0.6s					
CAMP			AML	AML		
	comp=E,1358μm,0.2s					
TERO	**Teramo**	**0.41 136**	S	Sb	18 07 14.0	+0.3
EL6	**Elcito**	**0.42 349**	⇓P	Pg	18 07 06.6	+0.5
EL6			AML	AML		
	comp=E,2885μm,0.4s					
EL6			AML	AML		
	comp=N,2740μm,1.6s					
EL6			AML	AML		
	comp=E,2880μm,0.4s					
EL6			AML	AML		
	comp=N,2715μm,1.6s					
EL6			AML	AML		
	comp=E,2882μm,0.4s					
EL6			AML	AML		
	comp=N,2541μm,0.4s					
ASSB	**Assisi San Ben**	**0.43 287**	⇑P	Pg	18 07 06.3	+0.2
ASSB			AML	AML		
	comp=E,2335μm,0.6s					
ASSB			AML	AML		
	comp=N,1975μm,1.5s					
ASSB			AML	AML		
	comp=E,4060μm,0.5s					
ASSB			AML	AML		
	comp=N,3510μm,0.4s					
ASSB			AML	AML		
	comp=N,1863μm,0.3s					
ASSB			AML	AML		
	comp=E,2337μm,0.6s					
T1247	**Pizzolo (AQ)**	**0.48 173**	S	Sb	18 07 16.0	+0.3
ATCC	**AVT- Casa Cast**	**0.50 303**	⇑P	Pg	18 07 07.9	+0.4
ATCC			AML	AML		
	comp=E,2410μm,0.9s					
ATCC			AML	AML		
	comp=N,2455μm,0.5s					
ATCC			AML	AML		
	comp=E,2770μm,0.4s					
ATCC			AML	AML		
	comp=N,2460μm,0.5s					
ATCC			AML	AML		
	comp=E,2410μm,0.9s					
ATCC			AML	AML		
	comp=N,2229μm,0.4s					
FOSV	**Fossato di Vic**	**0.50 319**	⇓P	Pg	18 07 07.7	+0.1
FOSV			AML	AML		
	comp=E,1605μm,0.5s					
FOSV			AML	AML		
	comp=N,2045μm,0.3s					
FOSV			AML	AML		
	comp=E,1601μm,0.5s					
FOSV			AML	AML		
	comp=N,2044μm,0.3s					
TRTR	**Tortoreto Alta**	**0.53 102**	⇓P	Pb	18 07 09.9	+0.6
TRTR			S	Sn	18 07 21.0	+0.4
TRTR			AML	AML		
	comp=E,8075μm,0.4s					
TRTR			AML	AML		
	comp=N,6980μm,0.3s					
TRTR			AML	AML		
	comp=E,8074μm,0.4s					
TRTR			AML	AML		
	comp=N,6981μm,0.3s					
GIGS	**Gran Sasso**	**0.53 151**	⇓P	Pg	18 07 08.7	+0.5
GIGS			AML	AML		
	comp=N,448μm,0.2s					
GIGS			AML	AML		
	comp=E,697μm,0.3s					
GIGS			AML	AML		
	comp=N,448μm,0.2s					
GIGS			AML	AML		
	comp=E,697μm,0.3s					
PP3	**Marolino**	**0.54 32**	⇑P	Pb	18 07 09.9	+0.3
PP3			AML	AML		
	comp=E,3455μm,1.2s					
PP3			AML	AML		
	comp=N,4785μm,0.4s					
PP3			AML	AML		
	comp=N,4995μm,0.4s					
PP3			AML	AML		
	comp=E,3460μm,1.2s					
PP3			AML	AML		
	comp=N,4780μm,0.4s					
PP3			AML	AML		
	comp=E,3560μm,1.1s					
PP3			AML	AML		
	comp=N,5000μm,0.4s					
PP3			AML	AML		
	comp=E,3337μm,0.2s					
PP3			AML	AML		
	comp=N,4999μm,0.4s					
PP3			AML	AML		
	comp=E,3315μm,0.4s					
PP3			AML	AML		
	comp=N,4783μm,0.4s					
AQU	**L'Aquila**	**0.58 166**	⇑P	Pg	18 07 09.3	+0.3
AQU			S	Sb	18 07 20.0	+1.5
AQU			AML	AML		
	comp=N,969μm,0.9s					
AQU			AML	AML		
	comp=E,834μm,0.9s					
AQU			AML	AML		
	comp=N,968μm,0.9s					
AQU			AML	AML		
	comp=N,926μm,1.1s					
AQU			AML	AML		
	comp=E,858μm,0.5s					
AQU			AML	AML		
	comp=E,858μm,0.5s					
AQU			AML	AML		
	comp=E,753μm,0.5s					
AQU			AML	AML		
	comp=N,878μm,0.4s					
AQU			AML	AML		
	comp=N,837μm,0.4s					
MURB	**Monte Urbino**	**0.61 305**	P	Pg	18 07 09.9	+0.2
MURB			S	Sb	18 07 21.0	+1.4
MURB			AML	AML		
	comp=E,3145μm,1.0s					
MURB			AML	AML		
	comp=N,2520μm,1.6s					
MURB			AML	AML		
	comp=E,3400μm,0.3s					
MURB			AML	AML		
	comp=N,2665μm,1.6s					
MURB			AML	AML		
	comp=E,3915μm,0.3s					
MURB			AML	AML		
	comp=N,4095μm,0.4s					
MURB			AML	AML		
	comp=E,4340μm,0.9s					
MURB			AML	AML		
	comp=N,3840μm,0.3s					
MURB			AML	AML		
	comp=E,3106μm,0.3s					
MURB			AML	AML		
	comp=E,3398μm,0.3s					
MURB			AML	AML		
	comp=N,2278μm,0.3s					
MURB			AML	AML		
	comp=N,2095μm,0.4s					
ARVD	**Arcevia**	**0.61 341**	S	Sb	18 07 21.0	+1.4
ATFO	**Monte Foce - G**	**0.65 314**	⇓P	Pg	18 07 10.4	0.0
ATFO			AML	AML		
	comp=N,758μm,0.6s					
ATFO			AML	AML		
	comp=N,985μm,0.4s					
ATFO			AML	AML		
	comp=E,1058μm,1.1s					
ATFO			AML	AML		
	comp=N,758μm,0.6s					
ATFO			AML	AML		
	comp=E,969μm,0.7s					
FIAM	**Fiamignano**	**0.65 186**	S	Sb	18 07 22.0	+1.3
ATTE	**AVT- Monte Tez**	**0.69 294**	⇓P	Pn	18 07 13.9	0.0
ATTE			AML	AML		
	comp=N,579μm,0.4s					
ATTE			AML	AML		
	comp=E,793μm,0.3s					
ATTE			AML	AML		
	comp=N,579μm,0.4s					
ATTE			AML	AML		
	comp=E,560μm,0.3s					
AOI	**Ancona**	**0.69 24**	S	Sn	18 07 24.0	-0.9
ATVO	**AVT- Monte Val**	**0.75 308**	⇑P	Pg	18 07 12.1	-0.1
ATVO			AML	AML		
	comp=E,483μm,0.8s					
ATVO			AML	AML		
	comp=N,438μm,0.6s					
ATVO			AML	AML		
	comp=E,484μm,0.8s					
ATVO			AML	AML		
	comp=N,454μm,1.6s					
ATVO			AML	AML		
	comp=E,459μm,0.4s					
ATVO			AML	AML		
	comp=N,438μm,0.6s					
T0110	**Collepietro**	**0.81 149**	⇓P	Pb	18 07 13.7	-0.4
T0110			AML	AML		
	comp=N,1485μm,0.3s					
T0110			AML	AML		
	comp=N,1480μm,0.3s					
T0110			AML	AML		
	comp=E,1290μm,1.0s					
T0110			AML	AML		
	comp=N,1481μm,0.3s					
T0110			AML	AML		
	comp=E,1080μm,0.3s					
MGAB	**Montegabbione**	**0.81 270**	⇑P	Pb	18 07 14.1	0.0
MGAB			AML	AML		
	comp=E,797μm,0.4s					
MGAB			AML	AML		
	comp=E,830μm,0.4s					
MGAB			AML	AML		
	comp=N,1410μm,0.5s					
MGAB			AML	AML		
	comp=E,1106μm,1.3s					
MGAB			AML	AML		
	comp=N,1375μm,0.5s					
MGAB			AML	AML		
	comp=E,1365μm,0.3s					
MGAB			AML	AML		
	comp=N,1374μm,0.5s					
MGAB			AML	AML		
	comp=N,1413μm,0.5s					
MGAB			AML	AML		
	comp=E,797μm,0.4s					
MGAB			AML	AML		
	comp=E,830μm,0.4s					
FSSB	**Fossombrone**	**0.84 338**	S	Sn	18 07 28.0	-0.4
PE3	**Peglio**	**0.94 326**	⇓P	Pn	18 07 18.1	+0.8
SACS	**San Casciano d**	**0.96 266**	⇑P	Pn	18 07 18.1	+0.5
SACS			AML	AML		
	comp=E,410μm,1.4s					
SACS			AML	AML		
	comp=N,462μm,0.6s					
SACS			AML	AML		
	comp=N,476μm,0.6s					
SACS			AML	AML		
	comp=E,410μm,1.5s					
SACS			AML	AML		
	comp=E,382μm,0.9s					
SACS			AML	AML		
	comp=N,419μm,1.0s					
SACS			AML	AML		
	comp=N,432μm,1.0s					
SACS			AML	AML		
	comp=E,379μm,0.9s					
CERT	**Cerreto**	**0.98 190**	S	Sn	18 07 34.0	+2.0
MCIV	**Monte Civitell**	**1.14 264**	P	Pn	18 07 20.6	+0.5
MCIV			AML	AML		
	comp=E,186μm,1.5s					
MCIV			AML	AML		
	comp=N,184μm,0.4s					
MCIV			AML	AML		
	comp=N,184μm,0.4s					
MCIV			AML	AML		
	comp=E,171μm,0.4s					
CRE	**Caprese Michel**	**1.16 308**	P	Pn	18 07 21.4	+1.0
CRE			AML	AML		
	comp=N,234μm,0.4s					
CRE			AML	AML		
	comp=E,273μm,0.6s					
CRE			AML	AML		
	comp=N,234μm,0.4s					
CRE			AML	AML		
	comp=E,273μm,0.6s					
POFI	**Posta Fibreno**	**1.25 163**	⇑P	Pg	18 07 24.3	+2.4
POFI			AML	AML		
	comp=E,201μm,0.7s					
POFI			AML	AML		
	comp=N,189μm,1.0s					
ABTA	**Abfaltersbach**	**3.86 353**	*e*Pn	Pn	18 07 59.0	+1.5
	comp=N,6.8nm,0.5s					
SQTA	**Sankt Quirin**	**4.53 342**	*e*Pn	Pn	18 08 09.8	+3.0
	comp=N,5.8nm,0.4s					
RETA	**Reutte**	**4.89 340**	*e*Pn	Pn	18 08 14.4	+2.8
	comp=N,3.7nm,0.4s					
KHC	**Kasperske Hory**	**6.22 2**	*e*PN	Pn	18 08 29.4	-0.5
KHC			*e*SN	Sn	18 09 40.2	-0.9

ROM 30 18:07:50.5±0.0, 42°.859N±0°.003×13°.065E±0°.004,
h11km, ML2.7/18, 3C-3D, Error ellipse: s-maj=0.3km
s-min=0.1km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**313**	P	Pg	18 07 53.1	+0.4
T1216				S	Sg	18 07 54.5	+0.3
T1245	**Castelsantange**	**0.09**	**92**	P	Pg	18 07 53.6	+0.3
T1245				S	Sg	18 07 55.5	+0.3
T1245				AML	AML		
	comp=N,58900μm,0.3s						
T1245				AML	AML		
	comp=E,46750μm,0.8s						
T1245				AML	AML		
	comp=N,59400μm,0.3s						
T1245				AML	AML		
	comp=E,46450μm,0.8s						
T1245				AML	AML		
	comp=E,46700μm,0.8s						
T1245				AML	AML		
	comp=N,59400μm,0.3s						
T1245				AML	AML		
	comp=N,59412μm,0.3s						
T1245				AML	AML		
	comp=E,41866μm,0.2s						
T1245				AML	AML		
	comp=N,58915μm,0.3s						
T1245				AML	AML		
	comp=E,42756μm,0.2s						
FEMA	**Monte Fema**	**0.10**	**354**	P	Pg	18 07 53.9	+0.4
FEMA				S	Sg	18 07 55.9	+0.4
FEMA				AML	AML		
	comp=E,28050μm,0.6s						
FEMA				AML	AML		
	comp=N,22400μm,1.4s						
FEMA				AML	AML		
	comp=N,22350μm,1.4s						
FEMA				AML	AML		
	comp=N,22400μm,1.4s						
FEMA				AML	AML		
	comp=N,21506μm,0.1s						
FEMA				AML	AML		
	comp=E,17960μm,0.1s						
T1215	**Vallo di Nera,**	**0.15**	**248**	P	Pg	18 07 54.6	+0.6
T1215				S	Sg	18 07 57.5	+0.9
T1217	**Poggiodomo (PG**	**0.18**	**214**	P	Pg	18 07 55.0	+0.6
T1217				S	Sg	18 07 58.2	+1.0
T1217				AML	AML		
	comp=E,4235μm,0.3s						
T1217				AML	AML		
	comp=N,4945μm,0.6s						
T1217				AML	AML		
	comp=N,4780μm,0.6s						
T1217				AML	AML		
	comp=N,4950μm,0.6s						
T1217				AML	AML		
	comp=E,4205μm,0.7s						
T1217				AML	AML		
	comp=N,4785μm,0.6s						
T1217				AML	AML		
	comp=E,4200μm,0.7s						
T1217				AML	AML		
	comp=N,4273μm,0.2s						
T1217				AML	AML		
	comp=E,4232μm,0.3s						
T1217				AML	AML		
	comp=N,4157μm,0.2s						
T1217				AML	AML		
	comp=E,4181μm,0.3s						
MMO1	**Montemonaco**	**0.20**	**78**	P	Pg	18 07 55.1	+0.3
MMO1				S	Sg	18 07 58.5	+0.8
AM05	**Amandola Campo**	**0.24**	**61**	P	Pg	18 07 55.9	+0.4
AM05				S	Sg	18 07 59.8	+0.8
AM05				AML	AML		
	comp=N,1024μm,0.1s						
AM05				AML	AML		
	comp=E,2430μm,1.0s						
AM05				AML	AML		
	comp=E,11000μm,0.4s						
AM05				AML	AML		
	comp=N,1026μm,0.1s						
AM05				AML	AML		
	comp=N,2210μm,0.1s						
AM05				AML	AML		
	comp=N,1026μm,0.1s						
AM05				AML	AML		
	comp=E,9650μm,0.1s						
AM05				AML	AML		
	comp=E,2050μm,0.2s						
AM05				AML	AML		
	comp=N,2210μm,0.1s						
T1201	**Domo (RI)**	**0.24**	**146**	P	Pb	18 07 56.5	-0.5
LNSS	**Leonessa**	**0.26**	**184**	P	Pb	18 07 57.0	-0.2
LNSS				S	Sb	18 08 01.0	-0.8
GUMA	**Gualdo di Mace**	**0.28**	**44**	P	Pg	18 07 56.9	+0.5
GUMA				S	Sb	18 08 01.8	-0.7
GUMA				AML	AML		
	comp=E,11400μm,0.4s						
GUMA				AML	AML		
	comp=N,10300μm,0.4s						
GUMA				AML	AML		
	comp=E,12800μm,0.4s						
GUMA				AML	AML		
	comp=E,11450μm,0.4s						
GUMA				AML	AML		
	comp=N,10300μm,0.5s						
GUMA				AML	AML		
	comp=N,10000μm,0.4s						
GUMA				AML	AML		

	comp=E,7925μm,0.5s					
GUMA			AML	AML		
	comp=E,8118μm,0.2s					
GUMA			AML	AML		
	comp=N,6228μm,0.5s					
GUMA			AML	AML		
	comp=N,9009μm,0.2s					
SEF1	**Sefro**	**0.30 343**	P	Pg	18 07 56.9	+0.3
SEF1			S	Sb	18 08 01.8	-1.1
SEF1			AML	AML		
	comp=E,5895μm,0.3s					
SEF1			AML	AML		
	comp=N,5280μm,1.2s					
SEF1			AML	AML		
	comp=E,6255μm,1.5s					
SEF1			AML	AML		
	comp=E,6250μm,1.5s					
SEF1			AML	AML		
	comp=N,5475μm,0.2s					
SEF1			AML	AML		
	comp=N,4158μm,0.2s					
SEF1			AML	AML		
	comp=E,5899μm,0.3s					
SMA1	**SAN MARTINO**	**0.30 139**	P	Pb	18 07 57.5	-0.6
SMA1			AML	AML		
	comp=N,2995μm,0.4s					
SMA1			AML	AML		
	comp=E,4470μm,0.4s					
SMA1			AML	AML		
	comp=E,4471μm,0.4s					
SMA1			AML	AML		
	comp=N,2997μm,0.4s					
PIO1	**Pioraco**	**0.32 349**	P	Pg	18 07 57.4	+0.4
PIO1			S	Sb	18 08 02.9	-0.7
T1243	**Rocca Santa Ma**	**0.33 120**	P	Pg	18 07 57.4	+0.3
T1243			S	Sg	18 08 02.5	+1.0
MDAR	**Monte D'Aria**	**0.34 10**	P	Pg	18 07 57.6	+0.3
FIU1	**Fiuminata**	**0.34 344**	P	Pg	18 07 57.8	+0.3
ASSB	**Assisi San Ben**	**0.35 302**	P	Pg	18 07 57.8	+0.2
ARRO	**Arrone**	**0.36 218**	P	Pg	18 07 58.0	+0.4
ARRO			AML	AML		
	comp=E,1725μm,0.3s					
ARRO			AML	AML		
	comp=N,1235μm,0.2s					
T1211	**Morro Reatino**	**0.36 205**	P	Pg	18 07 57.7	0.0
RM33	**Pellescritta (**	**0.37 162**	P	Pb	18 07 58.6	-0.5
RM33			S	Sb	18 08 03.9	-1.0
SSM1	**San Severino M**	**0.38 13**	P	Pg	18 07 58.3	+0.2
SSM1			S	Sb	18 08 04.3	-0.9
SNTG	**Esanatoglia**	**0.41 347**	P	Pg	18 07 58.7	+0.2
SNTG			S	Sb	18 08 05.1	-0.9
SNTG			AML	AML		
	comp=E,1320μm,0.6s					
SNTG			AML	AML		
	comp=N,1430μm,0.5s					
SNTG			AML	AML		
	comp=N,1430μm,0.5s					
SNTG			AML	AML		
	comp=N,1520μm,0.5s					
SNTG			AML	AML		
	comp=E,1290μm,0.6s					
SNTG			AML	AML		
	comp=N,1132μm,0.1s					
SNTG			AML	AML		
	comp=E,1288μm,0.1s					
SNTG			AML	AML		
	comp=N,1352μm,0.1s					
SNTG			AML	AML		
	comp=E,1228μm,0.1s					
MNTP	**Montappone**	**0.41 47**	P	Pb	18 07 59.4	-0.4
MNTP			AML	AML		
	comp=E,3825μm,0.3s					
MNTP			AML	AML		
	comp=N,3280μm,0.4s					
MNTP			AML	AML		
	comp=E,3820μm,0.3s					
MNTP			AML	AML		
	comp=N,3285μm,0.4s					
MNTP			AML	AML		
	comp=E,3822μm,0.3s					
MNTP			AML	AML		
	comp=N,3282μm,0.4s					
CAMP	**Campotosto**	**0.41 142**	P	Pg	18 07 58.9	+0.2
CAMP			AML	AML		
	comp=E,557μm,0.3s					
CAMP			AML	AML		
	comp=N,606μm,1.6s					
CAMP			AML	AML		
	comp=E,493μm,0.6s					
CAMP			AML	AML		
	comp=N,493μm,0.5s					
T1246	**Crognaleto (TE**	**0.42 131**	P	Pg	18 07 58.8	-0.1
CESX	**Cesi**	**0.43 235**	P	Pg	18 07 59.0	-0.1
CESX			AML	AML		
	comp=N,1780μm,0.5s					
CESX			AML	AML		
	comp=E,1645μm,0.5s					
CESX			AML	AML		
	comp=N,1778μm,0.5s					
CESX			AML	AML		
	comp=E,1579μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.45 316**	P	Pg	18 07 59.5	+0.1
ATCC			S	Sb	18 08 07.0	-0.3
ATCC			AML	AML		
	comp=N,1855μm,1.4s					
ATCC			AML	AML		
	comp=N,1850μm,1.4s					
ATCC			AML	AML		
	comp=E,2770μm,0.4s					
ATCC			AML	AML		
	comp=E,2540μm,0.1s					
ATCC			AML	AML		
	comp=N,1726μm,0.5s					
TERO	**Teramo**	**0.46 121**	P	Pg	18 07 59.5	-0.1
TERO			AML	AML		
	comp=E,1055μm,0.6s					
TERO			AML	AML		
	comp=N,1340μm,1.6s					
TERO			AML	AML		
	comp=E,1130μm,0.6s					
TERO			AML	AML		
	comp=N,1390μm,1.6s					
TERO			AML	AML		
	comp=E,1052μm,0.6s					
TERO			AML	AML		
	comp=N,1286μm,0.4s					
TERO			AML	AML		
	comp=N,1350μm,0.4s					
TERO			AML	AML		
	comp=E,1005μm,0.3s					
TERO			AML	AML		
	comp=E,918μm,0.3s					
OFFI	**Offida**	**0.46 80**	P	Pb	18 08 00.2	-0.5
OFFI			AML	AML		
	comp=N,3150μm,0.4s					
OFFI			AML	AML		
	comp=E,2359μm,0.3s					
EL6	**Elcito**	**0.47 3**	P	Pg	18 07 59.9	+0.2
EL6			AML	AML		
	comp=E,2595μm,0.2s					
EL6			AML	AML		
	comp=N,2286μm,0.4s					
EL6			AML	AML		
	comp=E,2600μm,0.2s					
EL6			AML	AML		
	comp=N,2290μm,0.4s					
EL6			AML	AML		
	comp=N,2289μm,0.4s					
EL6			AML	AML		
	comp=E,2598μm,0.2s					
FOSV	**Fossato di Vic**	**0.49 333**	P	Pg	18 08 00.0	-0.1
FOSV			AML	AML		
	comp=E,926μm,0.3s					
FOSV			AML	AML		
	comp=N,1515μm,0.3s					
FOSV			AML	AML		
	comp=N,1510μm,0.3s					
FOSV			AML	AML		
	comp=N,804μm,0.2s					
FOSV			AML	AML		
	comp=E,672μm,0.3s					
GIGS	**Gran Sasso**	**0.55 138**	P	Pg	18 08 01.1	-0.2
GIGS			AML	AML		
	comp=N,182μm,0.2s					
GIGS			AML	AML		
	comp=N,181μm,0.2s					
GIGS			AML	AML		
	comp=E,232μm,0.2s					
GIGS			AML	AML		
	comp=E,181μm,0.3s					
GIGS			AML	AML		
	comp=N,145μm,0.4s					
MURB	**Monte Urbino**	**0.56 316**	P	Pg	18 08 01.7	+0.1
MURB			AML	AML		
	comp=N,4095μm,0.4s					
MURB			AML	AML		
	comp=E,4340μm,0.9s					
MURB			AML	AML		
	comp=E,3915μm,0.3s					
MURB			AML	AML		
	comp=N,3840μm,0.3s					
MURB			AML	AML		
	comp=E,3917μm,0.3s					
MURB			AML	AML		
	comp=N,3840μm,0.3s					
MURB			AML	AML		
	comp=E,4255μm,0.3s					
MURB			AML	AML		
	comp=N,4094μm,0.4s					
FIAM	**Fiamignano**	**0.59 176**	S	Sb	18 08 12.0	+0.6
ATTE	**AVT- Monte Tez**	**0.62 303**	P	Pg	18 08 02.7	+0.1
ATTE			AML	AML		
	comp=N,524μm,0.5s					
ATTE			AML	AML		
	comp=E,793μm,0.3s					
ATTE			AML	AML		
	comp=N,524μm,0.5s					
ATTE			AML	AML		
	comp=E,793μm,0.3s					
ATFO	**Monte Foce - G**	**0.62 325**	P	Pg	18 08 02.7	+0.1
ATFO			AML	AML		
	comp=N,986μm,0.4s					
ATFO			AML	AML		
	comp=E,742μm,0.2s					
ATFO			AML	AML		
	comp=N,985μm,0.4s					
ATFO			AML	AML		
	comp=E,741μm,0.2s					
ATFO			AML	AML		
	comp=N,985μm,0.4s					
TRTR	**Tortoreto Alta**	**0.63 94**	P	Pb	18 08 03.2	-0.3
TRTR			AML	AML		
	comp=N,1944μm,0.3s					
TRTR			AML	AML		
	comp=E,2457μm,0.4s					
ARVD	**Arcevia**	**0.65 352**	P	Pg	18 08 03.1	+0.1
ARVD			AML	AML		
	comp=E,683μm,0.2s					
ARVD			AML	AML		
	comp=N,426μm,0.6s					
ARVD			AML	AML		
	comp=N,424μm,0.2s					
ARVD			AML	AML		
	comp=E,491μm,0.1s					
FRON	**Frontone**	**0.70 339**	P	Pg	18 08 04.0	-0.2
FRON			AML	AML		
	comp=N,783μm,0.3s					
FRON			AML	AML		
	comp=N,782μm,0.3s					
FRON			AML	AML		
	comp=E,496μm,0.9s					
FRON			AML	AML		
	comp=E,471μm,0.2s					
FRON			AML	AML		
	comp=N,783μm,0.3s					
ATVO	**AVT- Monte Val**	**0.71 318**	P	Pg	18 08 04.1	-0.2
ATVO			AML	AML		
	comp=E,464μm,0.9s					
ATVO			AML	AML		
	comp=N,454μm,1.6s					
ATVO			AML	AML		
	comp=E,464μm,0.9s					
ATVO			AML	AML		
	comp=N,454μm,1.6s					
ATVO			AML	AML		
	comp=N,428μm,0.5s					
ATVO			AML	AML		
	comp=E,403μm,0.3s					
ATMI	**Monte Miggiano**	**0.75 309**	P	Pg	18 08 04.6	-0.4
PIEI	**Pieia**	**0.78 330**	P	Pg	18 08 05.5	-0.1
PIEI			AML	AML		
	comp=E,470μm,0.3s					
PIEI			AML	AML		
	comp=N,450μm,0.3s					
PIEI			AML	AML		
	comp=E,470μm,0.3s					
PIEI			AML	AML		
	comp=N,450μm,0.3s					
MPAG	**Monte Paganucc**	**0.80 344**	⇑P	Pg	18 08 06.0	-0.1
MPAG			S	Sn	18 08 20.0	+0.1
MPAG			AML	AML		
	comp=N,439μm,0.6s					
MPAG			AML	AML		
	comp=E,487μm,0.4s					
MPAG			AML	AML		
	comp=N,433μm,0.4s					
MPAG			AML	AML		
	comp=E,472μm,0.2s					
SACS	**San Casciano d**	**0.85 270**	⇑P	Pb	18 08 07.5	+0.2
SACS			AML	AML		
	comp=E,337μm,0.5s					
SACS			AML	AML		
	comp=N,476μm,0.6s					
SACS			AML	AML		
	comp=N,462μm,0.6s					
SACS			AML	AML		
	comp=E,352μm,0.5s					
FSSB	**Fossombrone**	**0.86 346**	⇓P	Pg	18 08 06.9	-0.2
FSSB			S	Sn	18 08 21.0	-0.2
FSSB			AML	AML		
	comp=E,1095μm,0.2s					
FSSB			AML	AML		
	comp=N,2220μm,0.3s					
FSSB			AML	AML		
	comp=E,1094μm,0.2s					
FSSB			AML	AML		
	comp=N,2218μm,0.3s					
BADI	**Badiali**	**0.89 318**	P	Pg	18 08 07.4	-0.2
BADI			AML	AML		
	comp=N,235μm,0.3s					
CAFI	**Castiglion Fio**	**0.93 301**	⇑P	Pb	18 08 08.7	0.0
CAFI			AML	AML		
	comp=N,490μm,0.8s					
CAFI			AML	AML		
	comp=E,474μm,0.4s					
CAFI			AML	AML		
	comp=E,454μm,0.4s					
CAFI			AML	AML		
	comp=N,490μm,0.8s					
CAFI			AML	AML		
	comp=N,452μm,0.8s					
CAFI			AML	AML		
	comp=E,474μm,0.4s					
PE3	**Peglio**	**0.93 334**	⇓P	Pn	18 08 09.7	0.0
SF04	**Casetta**	**1.03 269**	⇓P	Pn	18 08 11.2	+0.2
SF04			AML	AML		
	comp=E,400μm,0.3s					
SF04			AML	AML		
	comp=N,237μm,0.3s					
SF01	**Poggio Pratacc**	**1.10 268**	S	Sn	18 08 29.0	+1.7

*IDC **30** 18:10:21.1±3.7, 23°.90N×123°.46E, h0km, mb3.5/2, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=108.6km s-min=29.7km az=110.0*
*TAP **30** 18:10:23.8, 24°.47N×122°.92E, h72km, ML3.5, B*
*JMA **30** 18:10:24.1±0.1, 25°.N±1°.×123°.0E±0°.4, h70km, MV3.0/12, NW OFF ISHIGAKIJIMA IS*
ISC 30 18:10:24.3±0.9, 24°.42N±0°.04×122°.91E±0°.02, h70km±6km, n143, σ0.97/170, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.05**	**49**	P	**Pn**	**18 10 34.4**	**0.0**
JYNG				S	**Sn**	**18 10 42.1**	**+0.4**
YOJ	**Yonaguni jima**	**0.10**	**66**	*i* P	**Pn**	**18 10 34.5**	**0.0**
	baz=94						
YOJ				*i* S	**Sn**	**18 10 42.2**	**+0.2**
	baz=94						
YOJ	**Yonaguni jima**	**0.10**	**66**	P	**Pn**	**18 10 34.5**	**0.0**
YOJ				S	**Sn**	**18 10 42.0**	**+0.1**
IRIF	**Iriomote-Funau**	**0.76**	**96**	P	**Pn**	**18 10 39.7**	**-0.1**
HATJ	**Hateruma jima**	**0.90**	**114**	*e*P	**Pn**	**18 10 42.1**	**+0.6**
HATJ				*e*S	**Sn**	**18 10 55.5**	**+1.2**
TWC	**Suao**	**0.98**	**281**	*i* P	**Pn**	**18 10 42.2**	**-0.3**
	baz=286						
TWC				S	**Sn**	**18 10 55.1**	**-1.0**
	baz=286						
TWB1	**Santiao Chiao**	**1.02**	**305**	P	**Pn**	**18 10 42.6**	**-0.4**
	baz=302						
JKRS	**Kuro-shima**	**1.02**	**100**	P	**Pn**	**18 10 43.3**	**+0.2**
JKRS				S	**Sn**	**18 10 57.4**	**+0.4**
ENA	**Nanau**	**1.06**	**271**	*i* P	**Pn**	**18 10 43.5**	**0.0**
	baz=267						
ILA	**Ilan**	**1.11**	**288**	*e*P	**Pn**	**18 10 44.0**	**-0.1**
	baz=285						
TIPB	**Shuangxi**	**1.13**	**299**	*i* P	**Pn**	**18 10 44.0**	**-0.4**
	baz=296						
JIJ	**Ishigaki jima**	**1.13**	**93**	P	**Pn**	**18 10 44.0**	**-0.4**
JIJ				S	**Sn**	**18 10 58.7**	**-0.7**
SXI1	**Grass Mountain**	**1.15**	**306**	*i* P	**Pn**	**18 10 44.7**	**-0.1**
	baz=303						
TWE	**Neicheng**	**1.17**	**285**	*i* P	**Pn**	**18 10 44.8**	**0.0**
	baz=286						
TWE				*e*S	**Sn**	**18 10 59.6**	**-0.7**
	baz=286						
ETL	**Fush Village**	**1.20**	**258**	*e*P	**Pn**	**18 10 45.3**	**0.0**
	baz=255						
NWF	**Wu-fen Shan**	**1.21**	**303**	*i* P	**Pn**	**18 10 45.5**	**0.0**
	baz=291						
WFSB	**Wu-fen Shan**	**1.21**	**303**	*e*P	**Pn**	**18 10 45.5**	**+0.1**
	baz=292						
NACB	**Ningnanchiao**	**1.22**	**259**	*e*P	**Pn**	**18 10 45.5**	**-0.1**
	baz=256						
NACB				*i* S	**Sn**	**18 11 01.2**	**-0.3**
	baz=256						
ENTT	**Nioudou**	**1.24**	**280**	*e*P	**Pn**	**18 10 45.5**	**-0.4**
	baz=283						
TWD	**Chiawan**	**1.24**	**254**	P	**Pn**	**18 10 45.7**	**-0.1**
	baz=252						
FUSB	**Fushanzhiwuyua**	**1.25**	**286**	*e*P	**Pn**	**18 10 46.0**	**+0.1**
	baz=288						
TNOU	**National Taiwa**	**1.26**	**305**	*i* P	**Pn**	**18 10 46.0**	**0.0**
	baz=294						
LATG	**Datong**	**1.26**	**276**	*i* P	**Pn**	**18 10 46.7**	**+0.5**
	baz=263						
HWA	**Hwalien**	**1.27**	**250**	*e*P	**Pn**	**18 10 46.5**	**+0.3**
	baz=248						
NDT	**Datong Townshi**	**1.28**	**278**	*e*P	**Pn**	**18 10 45.1**	**-1.3**
	baz=281						
JISG	**Ishigakijimahi**	**1.29**	**82**	P	**Pn**	**18 10 45.8**	**-0.7**
JISG				*e*S	**Sn**	**18 11 02.2**	**-0.9**
TEYL	**Yanliau Villag**	**1.31**	**246**	*e*P	**Pn**	**18 10 46.6**	**-0.2**
	baz=237						
ETLH	**Xiulin Townshi**	**1.32**	**261**	*e*P	**Pn**	**18 10 46.8**	**-0.1**
	baz=251						
TWA	**Mucha**	**1.32**	**295**	*i* P	**Pn**	**18 10 47.2**	**+0.2**
	baz=282						
ETM	**Tongmen**	**1.37**	**251**	P	**Pn**	**18 10 47.4**	**-0.1**
	baz=242						
ETM				S	**Sn**	**18 11 04.5**	**-0.4**
	baz=242						
NHDH	**Xindian Distri**	**1.37**	**294**	*i* P	**Pn**	**18 10 47.6**	**+0.1**
	baz=283						
NNSB	**Datong**	**1.39**	**271**	*e*P	**Pn**	**18 10 48.1**	**+0.2**
	baz=259						
NNS	**Nan Shan**	**1.40**	**271**	*e*P	**Pn**	**18 10 47.4**	**-0.6**
	baz=259						
TATO	**Taipei**	**1.40**	**294**	P	**Pn**	**18 10 48.0**	**+0.1**
	baz=291						
YM01	**YM01**	**1.41**	**301**	*i* P	**Pn**	**18 10 48.2**	**0.0**
	baz=290						
YM01				*e*S	**Sn**	**18 11 05.7**	**-0.4**
	baz=290						
YHNB	**Yeheng**	**1.42**	**280**	*e*P	**Pn**	**18 10 48.9**	**+0.7**
	baz=278						
YM08	**YM08**	**1.42**	**303**	*e*P	**Pn**	**18 10 48.0**	**-0.2**
	baz=300						
NSK	**Sanguang**	**1.43**	**281**	*e*P	**Pn**	**18 10 48.2**	**-0.2**
	baz=278						
TEGC	**Jichi Village**	**1.43**	**241**	*e*P	**Pn**	**18 10 48.4**	**+0.1**
	baz=239						
TWY	**Chenhua**	**1.46**	**306**	P	**Pn**	**18 10 49.0**	**+0.3**
	baz=296						
ANP	**Anpu**	**1.47**	**302**	P	**Pn**	**18 10 48.8**	**-0.1**
	baz=291						
ESL	**Shilin**	**1.47**	**246**	P	**Pn**	**18 10 48.7**	**-0.2**
	baz=244						
TWS1	**Kuangyinshan**	**1.51**	**297**	P	**Pn**	**18 10 49.7**	**+0.3**
	baz=285						
NTST	**Danshui**	**1.52**	**300**	P	**Pn**	**18 10 49.7**	**+0.2**
	baz=297						
WHF	**Hehuan Shan**	**1.52**	**260**	P	**Pn**	**18 10 49.8**	**-0.1**
	baz=250						
FUSS	**Fushou**	**1.52**	**264**	P	**Pn**	**18 10 50.1**	**+0.4**
	baz=262						
EGFH	**Guangfu**	**1.54**	**241**	*e*P	**Pn**	**18 10 49.9**	**0.0**
	baz=239						
EGFH				*e*S	**Sn**	**18 11 08.8**	**-0.3**
	baz=239						
TDCB	**Techi**	**1.60**	**264**	*e*P	**Pn**	**18 10 51.4**	**+0.6**
	baz=262						
CHGB	**Renai**	**1.62**	**258**	*e*P	**Pn**	**18 10 51.4**	**+0.3**
	baz=249						
HGSD	**Ruisui**	**1.64**	**236**	*e*P	**Pn**	**18 10 51.0**	**-0.1**
	baz=235						
NFF	**Wufeng Townshi**	**1.64**	**278**	*e*P	**Pn**	**18 10 51.0**	**-0.2**
	baz=276						
OWD	**Renai**	**1.65**	**254**	*e*P	**Pn**	**18 10 51.6**	**+0.3**
	baz=252						
JTJ	**Tarama**	**1.65**	**82**	P	**Pn**	**18 10 51.1**	**-0.1**
JTJ				*e*S	**Sn**	**18 11 10.8**	**-0.8**
NCUH	**Zhongli**	**1.66**	**290**	*e*P	**Pn**	**18 10 51.6**	**+0.3**
	baz=287						
NJD	**Zhudong**	**1.68**	**281**	*e*P	**Pn**	**18 10 52.2**	**+0.5**
	baz=279						
WUSB	**Renai**	**1.69**	**256**	*e*P	**Pn**	**18 10 52.4**	**+0.5**
	baz=248						
EHY	**Hungye**	**1.71**	**238**	*e*P	**Pn**	**18 10 51.9**	**-0.1**
	baz=246						
ECBN	**Changbin**	**1.73**	**231**	*e*P	**Pn**	**18 10 51.4**	**-0.8**
	baz=230						
LIOB	**Emei**	**1.74**	**278**	*e*P	**Pn**	**18 10 52.9**	**+0.5**
	baz=276						
VWDT	**VWDT**	**1.74**	**248**	*e*P	**Pn**	**18 10 53.1**	**+0.6**
	baz=246						
NSTT	**Nanjuang**	**1.75**	**277**	*e*P	**Pn**	**18 10 53.1**	**+0.6**
	baz=275						
YULB	**Yu-li**	**1.79**	**236**	*e*P	**Pn**	**18 10 53.3**	**+0.1**
	baz=244						
YULB				*e*S	**Sn**	**18 11 14.5**	**-0.6**
	baz=244						
WHP	**Taichung City**	**1.79**	**266**	*e*P	**Pn**	**18 10 54.6**	**+1.3**
	baz=257						
EYUL	**Yuli**	**1.80**	**234**	*e*P	**Pn**	**18 10 53.7**	**+0.4**
	baz=233						
TWF1	**Yuli**	**1.81**	**235**	*e*P	**Pn**	**18 10 53.7**	**+0.2**
	baz=233						
WPL	**Puli Township**	**1.82**	**258**	*e*P	**Pn**	**18 10 54.5**	**+1.0**
	baz=250						
DPDB	**Guoxing**	**1.85**	**258**	*e*P	**Pn**	**18 10 55.0**	**+1.1**
	baz=251						
WCS	**Beigang Elemen**	**1.85**	**259**	*e*P	**Pn**	**18 10 54.1**	**+0.1**
	baz=252						
SSLB	**Suanglung**	**1.89**	**251**	*e*P	**Pn**	**18 10 55.0**	**+0.5**
	baz=249						
SMLT	**Sun Moon Lake**	**1.91**	**254**	*e*P	**Pn**	**18 10 55.6**	**+0.8**
	baz=246						
FULB	**Fuli**	**1.91**	**231**	*e*P	**Pn**	**18 10 54.8**	**0.0**
	baz=229						
FULB				*e*S	**Sn**	**18 11 17.8**	**-0.2**
	baz=229						
NMLH	**Miaoli**	**1.93**	**274**	*e*P	**Pn**	**18 10 55.8**	**+0.8**
	baz=272						
TYC	**Yuchr**	**1.94**	**255**	*e*P	**Pn**	**18 10 56.0**	**+0.9**
	baz=247						
TWQ1	**Liyutan**	**1.95**	**268**	*e*P	**Pn**	**18 10 56.3**	**+1.1**
	baz=266						
NSY	**Sanyi**	**1.96**	**270**	*e*P	**Pn**	**18 10 55.4**	**+0.1**
	baz=268						
EHD	**Haiduan**	**2.01**	**231**	*e*P	**Pn**	**18 10 54.8**	**-1.2**
	baz=242						
EHD				*e*S	**Sn**	**18 11 18.5**	**-1.6**
	baz=242						
WHYT	**Xinyi Township**	**2.01**	**249**	*e*P	**Pn**	**18 10 57.3**	**+1.2**
	baz=243						
YUS	**Yu-Shan**	**2.01**	**243**	*e*P	**Pn**	**18 10 57.3**	**+0.7**
	baz=235						
ECS	**Chishang**	**2.03**	**230**	*e*P	**Pn**	**18 10 56.9**	**+0.5**
	baz=223						
WWF	**Wufeng**	**2.05**	**260**	*e*P	**Pn**	**18 10 57.4**	**+0.8**

	baz=271				
TCU	**Taichung**	**2.05 263**	*e*P	**Pn**	**18 10 57.6 +1.0**
	baz=273				
EDH	**Donghe**	**2.06 226**	*e*P	**Pn**	**18 10 56.3 -0.4**
EDH	baz=220		*e*S	**Sn**	**18 11 20.3 -1.1**
	baz=220				
WJS	**Zhushan**	**2.08 254**	*e*P	**Pn**	**18 10 59.0 +2.1**
	baz=247				
WNT1	**Nantou City**	**2.10 256**	*e*P	**Pn**	**18 10 59.2 +2.0**
	baz=255				
WNT	**Mingjian**	**2.10 256**	*e*P	**Pn**	**18 10 59.2 +2.0**
	baz=246				
JIRB	**Irabujima**	**2.10 78**	P	**Pn**	**18 10 57.0 -0.3**
ELDTW	**Lidau**	**2.12 235**	*e*P	**Pn**	**18 10 57.7 0.0**
	baz=234				
ALS	**Alishan**	**2.12 245**	*e*P	**Pn**	**18 10 59.1 +1.3**
	baz=244				
WCHH	**Zhanghua**	**2.17 262**	*e*P	**Pn**	**18 10 59.3 +1.1**
	baz=270				
WYL	**Yuanlin Townsh**	**2.17 258**	*e*P	**Pn**	**18 10 59.4 +1.2**
	baz=268				
LDUT	**Ludao**	**2.18 217**	*e*P	**Pn**	**18 10 58.0 -0.4**
	baz=211				
LDUT			*e*S	**Sn**	**18 11 22.9 -1.4**
	baz=211				
CHN5	**Tsauling**	**2.19 249**	*e*P	**Pn**	**18 10 59.3 +0.7**
	baz=247				
JMJ	**Miyako jima 2**	**2.21 79**	*i*P	**Pn**	**18 10 59.6 +0.9**
	baz=81				
LONT	**Longtian**	**2.22 228**	*e*P	**Pn**	**18 10 58.9 0.0**
	baz=236				
LONT			*e*S	**Sn**	**18 11 25.1 -0.2**
	baz=236				
JMJ2	**Miyako jima3**	**2.23 81**	P	**Pn**	**18 10 59.4 +0.4**
JMJ2			*e*S	**Sn**	**18 11 26.3 +0.8**
WGK	**Gukeng**	**2.26 252**	*e*P	**Pn**	**18 11 01.4 +2.0**
	baz=250				
WDLH	**Douliu**	**2.28 252**	*e*P	**Pn**	**18 11 01.6 +1.9**
	baz=251				
TWGBT	**Beinan**	**2.31 227**	*e*P	**Pn**	**18 11 00.1 0.0**
	baz=234				
TWGBT			*e*S	**Sn**	**18 11 27.0 -0.6**
	baz=234				
STYH	**Taoyuan**	**2.31 238**	*e*P	**Pn**	**18 11 00.5 +0.4**
	baz=237				
TWG	**Pinlang**	**2.31 227**	*e*P	**Pn**	**18 11 00.1 0.0**
	baz=234				
TWG			*e*S	**Sn**	**18 11 26.9 -0.7**
	baz=234				
WCKO	**Fanlu**	**2.32 246**	*e*P	**Pn**	**18 11 01.2 +0.9**
	baz=244				
WCKO			*e*S	**Sn**	**18 11 29.9 +2.0**
	baz=244				
STYT	**Tauyuan**	**2.33 238**	*e*P	**Pn**	**18 11 01.8 +1.4**
	baz=237				
TPUB	**Ta-pu**	**2.36 242**	*e*P	**Pn**	**18 11 02.5 +1.7**
	baz=241				
WRL	**Guolierlin Hig**	**2.37 258**	*e*P	**Pn**	**18 11 00.8 0.0**
	baz=266				
CHN4	**Tsaushan**	**2.37 244**	*e*P	**Pn**	**18 11 02.1 +1.2**
	baz=243				
CHN2	**Minshiung**	**2.39 249**	*e*P	**Pn**	**18 11 02.5 +1.3**
	baz=248				
WTP	**Ta-pu**	**2.40 241**	*e*P	**Pn**	**18 11 03.1 +1.7**
	baz=240				
CHY	**Chiayi**	**2.45 248**	*e*P	**Pn**	**18 11 03.9 +1.9**
	baz=247				
TWK	**Hsinying**	**2.49 243**	*e*P	**Pn**	**18 11 04.5 +1.8**
	baz=242				
CHN1	**Nanshi**	**2.50 241**	*e*P	**Pn**	**18 11 04.7 +2.0**
	baz=240				
SNST	**Tainan City**	**2.51 242**	*e*P	**Pn**	**18 11 06.9 +4.1**
	baz=241				
SGST	**Jiashian**	**2.51 238**	*e*P	**Pn**	**18 11 04.0 +1.1**
	baz=238				
ECL	**Taimali**	**2.55 225**	*e*P	**Pn**	**18 11 03.3 0.0**
	baz=231				
ECL			*e*S	**Sn**	**18 11 32.1 -1.3**
	baz=231				
WSF	**Szhu**	**2.57 253**	*e*P	**Pn**	**18 11 04.8 +1.1**
	baz=252				
WSL	**Shuilin Townsh**	**2.61 251**	*e*P	**Pn**	**18 11 04.4 +0.3**
	baz=249				
ICHU	**Yijhu**	**2.62 247**	*e*P	**Pn**	**18 11 05.8 +1.4**
	baz=246				
SSD	**Sandimen**	**2.67 232**	*e*P	**Pn**	**18 11 06.5 +1.5**
	baz=227				
LAY	**Lan-yu**	**2.68 208**	*e*P	**Pn**	**18 11 05.2 0.0**
	baz=208				
TSMG	**Majia**	**2.69 231**	*e*P	**Pn**	**18 11 06.4 +1.2**
	baz=226				
SCST	**Cishan**	**2.69 236**	*e*P	**Pn**	**18 11 07.8 +2.5**
	baz=246				
CHN8	**Yiju**	**2.69 247**	*e*P	**Pn**	**18 11 06.5 +1.3**
	baz=246				
LYUB	**Lan-yu**	**2.70 207**	*e*P	**Pn**	**18 11 04.2 -1.1**
	baz=207				
LYUB			*e*S	**Sn**	**18 11 34.6 -2.3**
	baz=207				
EAST	**Anshuo**	**2.77 223**	*e*P	**Pn**	**18 11 06.5 +0.1**
	baz=229				
TWM1	**Shoushan**	**2.78 236**	*e*P	**Pn**	**18 11 10.2 +3.7**
	baz=234				
TAWH	**Dawu Township**	**2.78 222**	*e*P	**Pn**	**18 11 06.3 -0.1**
	baz=227				
TAWH			*e*S	**Sn**	**18 11 37.5 -1.4**
	baz=227				
TSCK	**Chigu Township**	**2.88 244**	*e*P	**Pn**	**18 11 08.1 +0.3**
	baz=244				
SLIU	**Shizi**	**2.92 222**	*e*P	**Pn**	**18 11 08.8 +0.3**
	baz=227				
SCZT	**Fangliau**	**2.93 226**	*e*P	**Pn**	**18 11 09.8 +1.3**
	baz=228				
SMST	**Manzhou Townsh**	**3.05 219**	*e*P	**Pn**	**18 11 10.7 +0.4**
	baz=219				
PNG	**Penghu**	**3.18 255**	*e*P	**Pn**	**18 11 11.9 0.0**
	baz=254				
PHUB	**P'eng-hu**	**3.18 254**	*e*P	**Pn**	**18 11 11.9 -0.1**
	baz=253				
MATB	**Ma-tsu**	**3.19 303**	*e*P	**Pn**	**18 11 11.8 -0.2**
	baz=301				
WDGT	**Dungji**	**3.19 249**	*e*P	**Pn**	**18 11 12.8 +0.8**
	baz=248				
VWUC	**VWUC**	**3.19 281**	*e*P	**Pn**	**18 11 11.8 -0.3**
	baz=270				
PTMZ	**Houxiangcun**	**3.50 281**	*e*P	**Pn**	**18 11 16.0 -0.2**
	baz=269				
KNMB	**Chin-men Tao**	**4.12 272**	*e*P	**Pn**	**18 11 24.0 -0.7**
	baz=270				
AXDP	**Jialang**	**4.52 277**	*e*P	**Pn**	**18 11 30.0 -0.1**
	baz=275				
ZPLA	**Ao Xicun**	**4.73 265**	*e*P	**Pn**	**18 11 32.6 -0.6**
	baz=272				
JOW	**Kunigami**	**5.41 62**	Pn	**Pn**	**18 11 40.4 -2.0**
	3.6nm,0.3s,baz=149,slow=5.9,SNR=23				
	7.1nm,0.3s				
JOW	**Kunigami**	**5.41 62**	*e*P	**Pn**	**18 11 40.4 -2.0**
	baz=64				
KSRS	**Korea Array**	**13.68 17**	Pn	**P**	**18 13 41.2 -0.2**
	0.1nm,0.3s,baz=200,slow=12,SNR=1.8				
	0.4nm,0.5s				
WRA	**Warramunga Arr**	**45.48 165**	P	**P**	**18 18 37.0 +0.3**
	0.6nm,0.5s,baz=346,slow=8.6,SNR=9.6				
	0.6nm,0.5s				
ASAR	**Alice Springs**	**48.98 167**	P	**P**	**18 19 04.9 +1.0**
	0.2nm,0.5s,baz=352,slow=7.7,SNR=11				
	0.2nm,0.5s				

MED_RC ***30*** *18:21:09.0±0.6, 42°.79N×13°.15E, h10km, MW4.3/9, Moment Tensor Solution. Mantle waves: s9,c10; Duration: 1±0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.32±.24; $M_{\theta\theta}$0.52±.24; $M_{\phi\phi}$1.80±.17; $M_{r\theta}$2.10±.62; $M_{\theta\phi}$-0.13±.25; $M_{\phi r}$-2.91±.57; Best double couple: $M_0$4.11000×10^{15} NP1:ϕ_n329.00000°, δ76.00000°, λ-98.00000°. NP2: ϕ_s178.00000°, δ16.00000°, λ-62.00000°. Principal axes: T 3.7300, Plg30.0000°, Azm65.0000°; N 0.7700, Plg8.0000°, Azm331.0000°; P -4.4900, Plg59.0000°, Azm228.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

IDC ***30*** *18:21:09.7±0.7, 42°.87N×13°.00E, h0km, mb4.1/16, mbtmp4.0/25, ML3.5/10, MS3.6/8 Error ellipse: s-maj=13.7km s-min=12.6km az=133.0*

PRU ***30*** *18:21:09.3±0.0, 42°.77N×13°.04E, h0km, M4.3*

LDG ***30*** *18:21:09.3±0.1, 42°.75N×13°.15E, h10km, Ml4.0/12, Error ellipse: s-maj=5.2km s-min=2.7km az=45.0*

NEIC ***30*** *18:21:09.7±2.3, 42°.78N±0°.04×13°.06E±0°.05, h10km±1km, Error ellipse: s-maj=7.7km s-min=4.1km az=313.0*

ROM ***30*** *18:21:09.0±0.0, 42°.782N±0°.001×13°.150E±0°.003, h8km, ML4.0/124, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.1km az=245.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.23; $M_{\theta\theta}$0.34; $M_{\phi\phi}$0.89; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.15; $M_{\phi r}$0.15; Fault plane solution: $M_0$1.09170×10^{15} NP1:ϕ_s341.00000°, δ42.00000°, λ-97.00000°. NP2:ϕ_s170.00000°, δ49.00000°, λ-84.00000°.*

PDG ***30*** *18:21:09.8±0.7, 42°.79N×13°.16E, h10km, ML4.1/11 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

MOS ***30*** *18:21:10.0±1.7, 42°.84N×13°.19E, h16km, mb4.5/19, Error ellipse: s-maj=6.8km s-min=3.7km az=78.7*

NEIC ***30*** *18:21:10, 42°.76N×13°.06E, h2km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.46; $M_{\theta\theta}$0.51; $M_{\phi\phi}$0.95; $M_{r\theta}$-0.11; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.54; Fault plane solution: $M_0$1.42000×10^{15} NP1:ϕ_s159.32000°, δ56.61000°, λ-85.98000°. NP2:ϕ_s332.04000°, δ33.60000°, λ-96.07000°. Principal axes: T 1.1896, Plg12.0000°, Azm246.0000°; N 0.3835, Plg3.0000°, Azm337.0000°; P -1.5731, Plg78.0000°, Azm83.0000°;*

ISC 30 18:21:09.8±0.7, 42.79N±0°.01×13.13E±0°.01, h6km±4km, n505, σ1§74/578, mb4.3/34, MS3.8/4, 53C-19D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.06**	**185**	⇑P	**Pg**	**18 21 11.1**	**-0.3**
T1213				S	**Sg**	**18 21 12.6**	**0.0**
T1214	**Arquata del Tr**	**0.06**	**115**	⇑P	**Pg**	**18 21 10.7**	**-0.8**
T1214				S	**Sg**	**18 21 11.9**	**-0.8**
T1212	**Cascia, Frazio**	**0.07**	**243**	P	**Pg**	**18 21 11.7**	**+0.1**
T1212				S	**Sg**	**18 21 13.5**	**+0.6**
T1245	**Castelsantange**	**0.08**	**30**	⇑P	**Pg**	**18 21 11.2**	**-0.7**
T1245				S	**Sg**	**18 21 12.8**	**-0.5**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1218	**Civita (PG)**	**0.12**	**186**	⇑P	**Pg**	**18 21 12.3**	**0.0**
T1218				S	**Sg**	**18 21 14.4**	**+0.4**
T1244	**Arquata del Tr**	**0.12**	**103**	⇑P	**Pg**	**18 21 12.1**	**-0.3**
T1244				S	**Sg**	**18 21 14.9**	**+0.6**
T1216	**Preci, Frazion**	**0.14**	**322**	P	**Pg**	**18 21 12.9**	**+0.3**
T1216				S	**Sg**	**18 21 15.4**	**+0.9**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1201	**Domo (RI)**	**0.15**	**146**	P	**Pg**	**18 21 13.1**	**+0.2**
T1201				S	**Sg**	**18 21 16.2**	**+1.1**
T1217	**Poggiodomo (PG**	**0.17**	**244**	P	**Pg**	**18 21 13.5**	**+0.4**
T1217				S	**Sg**	**18 21 16.6**	**+1.2**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1204	**Amatrice, Fraz**	**0.17**	**129**	P	**Pg**	**18 21 13.2**	**-0.2**
T1204				S	**Sg**	**18 21 16.1**	**+0.4**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
MMO1	**Montemonaco**	**0.18**	**51**	⇑P	**Pg**	**18 21 13.0**	**-0.5**
MMO1				S	**Sg**	**18 21 16.1**	**+0.1**
FEMA	**Monte Fema**	**0.19**	**341**	P	**Pg**	**18 21 13.7**	**+0.2**
FEMA				S	**Sg**	**18 21 17.0**	**+0.9**
FEMA				AML	AML		
	comp=N,93700μm,0.6s						
FEMA				AML	AML		
	comp=N,93450μm,0.6s						
FEMA				AML	AML		
	comp=N,93650μm,0.6s						
FEMA				AML	AML		
LNSS	**Leonessa**	**0.20**	**201**	P	**Pg**	**18 21 13.8**	**+0.1**
LNSS				S	**Sg**	**18 21 17.1**	**+0.8**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,69000μm,0.9s						
T1215	**Vallo di Nera,**	**0.20**	**275**	⇑P	**Pg**	**18 21 13.8**	**+0.1**
T1215				S	**Sg**	**18 21 17.9**	**+1.6**
T1215				AML	AML		
	comp=N,41950μm,1.6s						
T1215				AML	AML		
	comp=E,52150μm,1.1s						
T1215				AML	AML		
	comp=N,47250μm,1.6s						
T1215				AML	AML		
	comp=E,52100μm,1.3s						
T1215				AML	AML		
	comp=E,52150μm,1.1s						
T1215				AML	AML		
	comp=N,47200μm,1.6s						
SMA1	**SAN MARTINO**	**0.21**	**136**	P	**Pg**	**18 21 13.9**	**-0.1**
SMA1				S	**Sg**	**18 21 17.6**	**+0.7**
SMA1				AML	AML		
SMA1				AML	AML		
T1241	**Roccafluvione,**	**0.23**	**72**	P	**Pg**	**18 21 14.5**	**+0.1**
T1241				S	**Sg**	**18 21 18.2**	**+0.8**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1256	**Bolognola (MC)**	**0.23**	**17**	P	**Pg**	**18 21 14.1**	**-0.3**
T1256				S	**Sg**	**18 21 18.2**	**+0.7**
T1243	**Rocca Santa Ma**	**0.25**	**111**	P	**Pg**	**18 21 14.3**	**-0.4**
T1243				S	**Sg**	**18 21 18.6**	**+0.6**
AM05	**Amandola Campo**	**0.25**	**40**	P	**Pg**	**18 21 14.3**	**-0.4**
AM05				S	**Sg**	**18 21 18.8**	**+0.7**
AM05				AML	AML		
	comp=E,64400μm,0.6s						
AM05				AML	AML		
	comp=E,15800μm,0.4s						
AM05				AML	AML		
	comp=N,2000μm,0.7s						
AM05				AML	AML		
	comp=E,64450μm,0.6s						
AM05				AML	AML		
	comp=N,16750μm,1.5s						
FDMO	**Fiordimonte**	**0.25**	**352**	⇑P	**Pg**	**18 21 14.7**	**-0.1**
FDMO				S	**Sg**	**18 21 19.0**	**+0.9**
RM33	**Pellescritta (**	**0.28**	**168**	P	**Pg**	**18 21 15.2**	**-0.1**
RM33				S	**Sg**	**18 21 20.0**	**+1.0**
RM33				AML	AML		
	comp=E,80700μm,0.5s						
RM33				AML	AML		
	comp=N,98200μm,1.0s						
RM33				AML	AML		
	comp=E,82000μm,0.5s						
RM33				AML	AML		
	comp=N,99950μm,1.0s						
RM33				AML	AML		
	comp=N,99850μm,1.0s						
RM33				AML	AML		
	comp=E,81950μm,0.5s						
CSP1	**Cessapalombo**	**0.31**	**10**	P	**Pg**	**18 21 15.9**	**0.0**
CSP1				S	**Sg**	**18 21 21.2**	**+1.1**
CSP1				AML	AML		
	comp=E,66150μm,0.4s						
CSP1				AML	AML		
	comp=N,91550μm,0.5s						
GUMA	**Gualdo di Mace**	**0.32**	**28**	P	**Pg**	**18 21 16.0**	**0.0**
GUMA				S	**Sb**	**18 21 21.6**	**-1.7**
CAMP	**Campotosto**	**0.32**	**141**		**Pg**	**18 21 15.8**	**-0.3**
CAMP				Sg	**Sg**	**18 21 21.3**	**+0.9**
CAMP	**Campotosto**	**0.32**	**141**	P	**Pg**	**18 21 15.5**	**-0.6**
CAMP				S	**Sg**	**18 21 21.1**	**+0.7**
CAMP				AML	AML		
	comp=E,42250μm,0.8s						
CAMP				AML	AML		
	comp=N,51700μm,1.2s						
T1211	**Morro Reatino**	**0.33**	**219**	P	**Pg**	**18 21 16.2**	**+0.1**
T1211				AML	AML		
	comp=E,33350μm,0.8s						
T1211				AML	AML		
	comp=E,35200μm,0.8s						
T1211				AML	AML		
	comp=N,69200μm,1.2s						
T1211				AML	AML		
	comp=N,66300μm,1.2s						
T1211				AML	AML		
	comp=N,68900μm,1.2s						
T1211				AML	AML		
	comp=N,66300μm,1.2s						
T1211				AML	AML		
	comp=N,69150μm,1.2s						
T1211				AML	AML		
	comp=E,33350μm,0.8s						
T1246	**Crognaleto (TE**	**0.33**	**127**	P	**Pg**	**18 21 15.8**	**-0.5**
T1246				S	**Sg**	**18 21 21.5**	**+0.8**
ARRO	**Arrone**	**0.34**	**233**	P	**Pg**	**18 21 16.6**	**+0.2**
ARRO				AML	AML		
	comp=E,32500μm,1.6s						
ARRO				AML	AML		
	comp=N,45350μm,1.1s						
ARRO				AML	AML		
	comp=E,32550μm,1.6s						
T1247	**Pizzolo (AQ)**	**0.36**	**160**	⇓P	**Pg**	**18 21 16.7**	**-0.1**
T1247				S	**Sg**	**18 21 22.6**	**+1.0**
T1247				AML	AML		
	comp=N,54700μm,1.0s						
T1247				AML	AML		
	comp=E,63750μm,0.8s						
TERO	**Teramo**	**0.38**	**115**	P	**Pg**	**18 21 16.7**	**-0.5**
TERO				S	**Sg**	**18 21 22.8**	**+0.5**
TERO				AML	AML		
	comp=E,39950μm,0.6s						
TERO				AML	AML		
	comp=N,47200μm,1.1s						
TERO				AML	AML		
	comp=E,41100μm,0.6s						
TERO				AML	AML		
	comp=N,48350μm,0.6s						
TERO				AML	AML		
	comp=N,47150μm,1.1s						
SEF1	**Sefro**	**0.39**	**339**	P	**Pg**	**18 21 17.3**	**0.0**
SEF1				S	**Sb**	**18 21 24.1**	**-1.2**
SEF1				AML	AML		
	comp=E,33850μm,0.7s						
SEF1				AML	AML		
	comp=N,31350μm,0.3s						
SEF1				AML	AML		
	comp=E,33850μm,0.6s						
MDAR	**Monte D'Aria**	**0.41**	**1**	P	**Pg**	**18 21 17.7**	**-0.1**
MDAR				S	**Sg**	**18 21 24.1**	**+1.0**
MDAR				AML	AML		
	comp=N,23300μm,0.7s						
MDAR				AML	AML		
	comp=E,20750μm,0.4s						
MDAR				AML	AML		
	comp=N,23250μm,0.6s						
PIO1	**Pioraco**	**0.41**	**344**	P	**Pg**	**18 21 17.7**	**0.0**
PIO1				S	**Sb**	**18 21 24.3**	**-1.6**
FIU1	**Fiuminata**	**0.43**	**340**	P	**Pg**	**18 21 18.1**	**0.0**
FIU1				S	**Sb**	**18 21 25.1**	**-1.4**
FIU1				AML	AML		
	comp=E,16850μm,0.6s						
FIU1				AML	AML		
	comp=N,15200μm,1.2s						
FIU1				AML	AML		
	comp=N,15200μm,1.1s						
FIU1				AML	AML		
	comp=E,16850μm,0.6s						
MNTP	**Montappone**	**0.43**	**35**	P	**Pg**	**18 21 18.0**	**-0.1**
ASSB	**Assisi San Ben**	**0.43**	**307**	P	**Pg**	**18 21 18.0**	**-0.2**
OFFI	**Offida**	**0.43**	**70**	P	**Pb**	**18 21 18.6**	**-1.2**
OFFI				AML	AML		
	comp=E,82750μm,0.8s						
OFFI				AML	AML		
CESX	**Cesi**	**0.44**	**247**		**Pg**	**18 21 17.8**	**-0.5**
CESX	**Cesi**	**0.44**	**247**	P	**Pg**	**18 21 18.3**	**0.0**
CESX				AML	AML		
	comp=E,23400μm,1.4s						
CESX				AML	AML		
	comp=N,25500μm,1.2s						
SSM1	**San Severino M**	**0.44**	**4**	P	**Pg**	**18 21 18.1**	**-0.3**
SSM1				S	**Sb**	**18 21 25.4**	**-1.5**
GAG1	**Gagliole**	**0.46**	**354**	P	**Pg**	**18 21 18.5**	**-0.1**
GAG1				S	**Sb**	**18 21 26.0**	**-1.3**
GAG1				AML	AML		
	comp=E,58100μm,0.8s						
GAG1				AML	AML		
	comp=N,63200μm,0.7s						
GAG1				AML	AML		
	comp=E,58050μm,0.8s						
GAG1				AML	AML		
	comp=N,63200μm,0.7s						
GIGS	**Gran Sasso**	**0.47**	**136**	P	**Pg**	**18 21 18.1**	**-0.7**
GIGS				S	**Sg**	**18 21 25.4**	**+0.5**
GIGS				AML	AML		
	comp=N,8175μm,0.8s						
GIGS				AML	AML		
	comp=E,9160μm,1.1s						
AQU	**L'Aquila**	**0.47**	**155**		**Pg**	**18 21 18.3**	**-0.6**
AQU				Sg	**Sb**	**18 21 27.1**	**-0.7**
AQU	**L'Aquila**	**0.47**	**155**	P	**Pg**	**18 21 18.6**	**-0.3**
AQU				S	**Sb**	**18 21 27.1**	**-0.7**
AQU	**L'Aquila**	**0.47**	**155**	⇓P	**Pg**	**18 21 18.6**	**-0.3**
AQU				AML	AML		
	comp=N,28450μm,1.2s						
AQU				AML	AML		
	comp=N,28000μm,0.9s						
AQU				AML	AML		
	comp=E,49400μm,1.4s						
AQU				AML	AML		
	comp=E,51250μm,1.4s						
AQU				AML	AML		
	comp=N,28500μm,1.2s						
SNTG	**Esanatoglia**	**0.49**	**343**	P	**Pg**	**18 21 18.9**	**-0.3**
SNTG				S	**Sb**	**18 21 26.8**	**-1.5**
SNTG				AML	AML		
	comp=E,13450μm,0.4s						
SNTG				AML	AML		
	comp=E,12900μm,0.4s						
SNTG				AML	AML		
	comp=N,12950μm,0.6s						
SNTG				AML	AML		
	comp=N,14100μm,0.6s						
SNTG				AML	AML		
	comp=E,13450μm,0.4s						
FIAM	**Fiamignano**	**0.52**	**181**	P	**Pg**	**18 21 19.3**	**-0.4**
FIAM				S	**Sg**	**18 21 26.9**	**+0.5**
FIAM				AML	AML		
	comp=N,25950μm,1.1s						
FIAM				AML	AML		
	comp=E,33100μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.54**	**318**	P	**Pg**	**18 21 20.1**	**0.0**
ATCC				AML	AML		
	comp=N,23000μm,1.1s						
ATCC				AML	AML		
	comp=E,27950μm,1.1s						
TRE1	**Treia**	**0.54**	**14**	P	**Pg**	**18 21 20.5**	**+0.2**
TRE1				AML	AML		
	comp=E,51950μm,0.8s						
TRE1				AML	AML		
	comp=N,39550μm,0.5s						
TRE1				AML	AML		
	comp=E,51900μm,0.8s						
TRE1				AML	AML		
	comp=N,39550μm,0.5s						
EL6	**Elcito**	**0.54**	**358**	P	**Pg**	**18 21 19.8**	**-0.5**
EL6				S	**Sb**	**18 21 28.6**	**-1.3**
TRTR	**Tortoreto Alta**	**0.57**	**87**	P	**Pb**	**18 21 21.6**	**-0.6**
TRTR				AML	AML		
	comp=E,78200μm,1.1s						
TRTR				AML	AML		
	comp=N,90650μm,1.2s						
FOSV	**Fossato di Vic**	**0.58**	**332**	P	**Pg**	**18 21 20.7**	**-0.2**
FOSV				AML	AML		
	comp=E,14100μm,0.5s						
FOSV				AML	AML		
	comp=N,16750μm,0.5s						
FOSV				AML	AML		
	comp=N,16800μm,0.5s						
FOSV				AML	AML		
	comp=E,14050μm,0.5s						
CADA	**Capodarco di F**	**0.62**	**48**	P	**Pb**	**18 21 22.6**	**-0.4**

FAGN	**Fagnano**	**0.62 147**	P	**Pg**	**18 21 20.7**	**-0.9**	
FAGN			AML	AML			
	comp=E,34000µm,1.1s						
FAGN			AML	AML			
	comp=N,31200µm,0.4s						
VCEL	**Villa Celiera**	**0.65 127**	P	**Pg**	**18 21 21.9**	**-0.5**	
VCEL			AML	AML			
	comp=E,41050µm,0.5s						
VCEL			AML	AML			
	comp=N,36900µm,1.1s						
VCEL			AML	AML			
	comp=N,36850µm,1.1s						
CIMA	**Civitanova Mar**	**0.65 37**	P	**Pb**	**18 21 23.4**	**-0.2**	
MURB	**Monte Urbino**	**0.65 317**		**Pg**	**18 21 22.3**	**-0.1**	
MURB			Sg	**Sb**	**18 21 32.7**	**-0.3**	
MURB	**Monte Urbino**	**0.65 317**	P	**Pg**	**18 21 22.1**	**-0.2**	
MURB			AML	AML			
	comp=N,31700µm,0.4s						
MURB			AML	AML			
	comp=E,25500µm,0.4s						
MURB			AML	AML			
	comp=E,29600µm,0.4s						
MURB			AML	AML			
	comp=N,30300µm,0.4s						
MMUR	**Monte Murano**	**0.66 351**	P	**Pg**	**18 21 22.4**	**-0.2**	
PP3	**Marolino**	**0.69 30**	P	**Pg**	**18 21 23.1**	**+0.1**	
PP3			AML	AML			
	comp=E,57050µm,0.6s						
PP3			AML	AML			
	comp=E,53900µm,0.6s						
PP3			AML	AML			
	comp=N,33550µm,0.6s						
PP3			AML	AML			
	comp=N,33800µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.70 306**	P	**Pg**	**18 21 23.2**	**-0.1**	
ATTE			AML	AML			
	comp=E,6145µm,0.9s						
ATTE			AML	AML			
	comp=N,9525µm,1.4s						
ATFO	**Monte Foce - G**	**0.71 325**	P	**Pg**	**18 21 23.0**	**-0.5**	
ATFO			AML	AML			
	comp=E,11110µm,1.3s						
ATFO			AML	AML			
	comp=N,11150µm,0.6s						
SRES	**S.Oreste - Sor**	**0.72 220**	P	**Pg**	**18 21 22.9**	**-0.6**	
SRES			AML	AML			
	comp=N,9000µm,1.2s						
SRES			AML	AML			
	comp=E,7975µm,1.2s						
ARVD	**Arcevia**	**0.73 349**	P	**Pg**	**18 21 23.3**	**-0.4**	
T0110	**Collepietro**	**0.73 139**	P	**Pg**	**18 21 22.8**	**-1.1**	
T0110			AML	AML			
	comp=E,34300µm,1.3s						
T0110			AML	AML			
	comp=N,25400µm,0.4s						
ATLO	**AVT- Montelove**	**0.75 315**	P	**Pg**	**18 21 23.7**	**-0.5**	
MGAB	**Montegabbione**	**0.76 280**	P	**Pg**	**18 21 24.4**	**0.0**	
MGAB			AML	AML			
	comp=E,22250µm,1.2s						
MGAB			AML	AML			
	comp=N,17950µm,0.8s						
MGAB			AML	AML			
	comp=E,22300µm,1.2s						
MGAB			AML	AML			
	comp=E,24250µm,1.3s						
MGAB			AML	AML			
	comp=N,17650µm,1.2s						
TB01	**Gubbio**	**0.79 320**	P	**Pg**	**18 21 23.9**	**-1.0**	
PTQR	**Pietraquaria**	**0.79 165**	P	**Pg**	**18 21 23.7**	**-1.2**	
PTQR			AML	AML			
	comp=E,6220µm,1.6s						
PTQR			AML	AML			
	comp=N,4950µm,1.3s						
FRON	**Frontone**	**0.79 338**	P	**Pg**	**18 21 24.3**	**-0.7**	
FRON			AML	AML			
	comp=E,5455µm,0.9s						
FRON			AML	AML			
	comp=N,9430µm,0.9s						
FRON			AML	AML			
	comp=N,9390µm,0.9s						
ATVA	**AVT- Monte Val**	**0.79 309**	P	**Pg**	**18 21 24.8**	**-0.2**	
ATVO	**AVT- Monte Val**	**0.80 319**	P	**Pg**	**18 21 24.5**	**-0.7**	
ATVO			AML	AML			
	comp=E,8145µm,0.8s						
ATVO			AML	AML			
	comp=E,8140µm,0.8s						
ATVO			AML	AML			
	comp=N,7815µm,1.2s						
ATBU	**Serra di Buran**	**0.81 328**	P	**Pg**	**18 21 25.0**	**-0.4**	
TB03	**Pietralunga**	**0.81 320**	P	**Pg**	**18 21 24.8**	**-0.5**	
MTCE	**Montecelio**	**0.81 201**	⇓P	**Pg**	**18 21 24.4**	**-1.1**	
MTCE			AML	AML			
	comp=E,11900µm,0.5s						
MTCE			AML	AML			
	comp=N,8345µm,1.6s						
AOI	**Ancona**	**0.84 24**	P	**Pg**	**18 21 25.2**	**-0.6**	
AOI			AML	AML			
	comp=E,8055µm,0.6s						
AOI			AML	AML			
	comp=N,6205µm,0.5s						
ATMI	**Monte Miggiano**	**0.84 311**	P	**Pg**	**18 21 25.6**	**-0.3**	
ATMI			AML	AML			
	comp=E,14650µm,0.8s						
ATMI			AML	AML			
	comp=N,17050µm,1.4s						
CERT	**Cerreto**	**0.84 188**	P	**Pg**	**18 21 24.8**	**-1.2**	
CERT			AML	AML			
	comp=E,13150µm,0.6s						
CERT			AML	AML			
	comp=N,9935µm,1.1s						
ATPC	**Poggio Castell**	**0.85 325**	P	**Pg**	**18 21 25.5**	**-0.7**	
ATPI	**Pietralunga -**	**0.85 321**	P	**Pg**	**18 21 25.7**	**-0.4**	
ATPI			AML	AML			
	comp=E,6630µm,0.7s						
ATPI			AML	AML			
	comp=N,8350µm,1.1s						
PIEI	**Pieia**	**0.87 330**	⇓P	**Pg**	**18 21 25.8**	**-0.7**	
PIEI			AML	AML			
	comp=E,4330µm,1.1s						
PIEI			AML	AML			
	comp=N,3770µm,1.2s						
PCRO	**Pietralacroce**	**0.87 19**	P	**Pg**	**18 21 26.2**	**-0.3**	
MPAG	**Monte Paganucc**	**0.89 342**	⇑P	**Pg**	**18 21 26.2**	**-0.6**	
MPAG			AML	AML			
	comp=E,6540µm,1.2s						
MPAG			AML	AML			
	comp=N,8025µm,1.3s						
MPAG			AML	AML			
	comp=E,6565µm,1.2s						
MPAG			AML	AML			
	comp=E,6540µm,1.2s						
MPAG			AML	AML			
	comp=N,8420µm,1.3s						
MPAG			AML	AML			
	comp=E,6570µm,1.2s						
MPAG			AML	AML			
	comp=N,8050µm,1.3s						
SACS	**San Casciano d**	**0.90 274**	P	**Pg**	**18 21 26.8**	**-0.3**	
SACS			AML	AML			
	comp=N,13400µm,1.2s						
SACS			AML	AML			
	comp=E,15100µm,1.1s						
SACS			AML	AML			
	comp=E,14650µm,1.1s						
SACS			AML	AML			
	comp=N,12850µm,1.2s						
SENI	**Senigallia**	**0.92 5**	P	**Pg**	**18 21 26.8**	**-0.6**	
APEC	**Apecchio**	**0.93 326**	P	**Pg**	**18 21 27.4**	**-0.3**	
FSSB	**Fossombrone**	**0.94 344**	P	**Pg**	**18 21 26.9**	**-1.0**	
FSSB			AML	AML			
	comp=E,12150µm,0.5s						
FSSB			AML	AML			
	comp=N,19050µm,0.4s						
RCAV	**Rocca di Cave**	**0.95 188**	P	**Pg**	**18 21 26.7**	**-1.3**	
VVLD	**Villa Vallelon**	**0.98 158**	P	**Pg**	**18 21 26.9**	**-1.7**	
LATE	**Laterza**	**0.99 261**		**Pg**	**18 21 28.7**	**-0.1**	
LATE	**Laterza**	**0.99 261**	P	**Pg**	**18 21 28.5**	**-0.4**	
GUAR	**Guarcino**	**1.00 172**	P	**Pg**	**18 21 27.8**	**-1.1**	
CAFI	**Castiglion Fio**	**1.01 303**	P	**Pg**	**18 21 28.5**	**-0.7**	
CAFI			AML	AML			
	comp=N,4805µm,0.9s						
CAFI			AML	AML			
	comp=N,5090µm,0.9s						
CAFI			AML	AML			
	comp=E,4195µm,0.9s						
CAFI			AML	AML			
	comp=E,4270µm,0.9s						
PE3	**Peglio**	**1.02 333**	P	**Pg**	**18 21 28.4**	**-1.0**	
PE3			AML	AML			
	comp=E,32µm,1.5s						
PE3			AML	AML			
	comp=N,21µm,0.5s						
RMP	**Rome, Mte Porz**	**1.02 198**	P	**Pg**	**18 21 28.1**	**-1.4**	
CAFR	**Castel Frentan**	**1.06 121**	P	**Pg**	**18 21 28.9**	**-1.2**	
VIVA	**Pratoni del Vi**	**1.07 195**	P	**Pg**	**18 21 29.2**	**-1.1**	
LPEL	**Lama dei Pelig**	**1.07 133**	P	**Pg**	**18 21 28.3**	**-2.0**	
LPEL			AML	AML			
	comp=N,7370µm,1.1s						
LPEL			AML	AML			
	comp=E,9635µm,1.0s						
MCIV	**Monte Civitell**	**1.07 270**	P	**Pg**	**18 21 29.4**	**-0.9**	
MCIV			AML	AML			
	comp=E,4140µm,1.0s						
MCIV			AML	AML			
	comp=N,3280µm,1.0s						
RDP	**Rocca di Papa**	**1.07 197**	P	**Pg**	**18 21 29.0**	**-1.4**	
RDP			AML	AML			
	comp=N,19400µm,1.1s						
RDP			AML	AML			
	comp=E,14300µm,0.5s						
SF11	**Podere del Sol**	**1.07 275**	P	**Pg**	**18 21 29.3**	**-1.1**	
MA9	**Marino**	**1.07 199**	P	**Pg**	**18 21 29.4**	**-0.9**	
SSP9	**Sansepolcro**	**1.08 317**	P	**Pg**	**18 21 29.7**	**-0.8**	
SSP9			AML	AML			
	comp=E,8160µm,1.6s						
SSP9			AML	AML			
	comp=N,8430µm,1.3s						
SAMA	**S.Maria delle**	**1.08 202**	P	**Pb**	**18 21 29.7**	**-1.2**	
SF04	**Casetta**	**1.08 273**	AML	AML			
	comp=E,3665µm,1.2s						
SF04			AML	AML			
	comp=N,3700µm,1.4s						
TOLF	**Tolfa**	**1.11 230**	⇑P	**Pb**	**18 21 30.0**	**-1.3**	
TOLF			AML	AML			
	comp=N,3820µm,1.3s						
TOLF			AML	AML			
	comp=E,5900µm,0.9s						
SF13	**Bagnolo**	**1.11 272**	P	**Pb**	**18 21 30.4**	**-1.1**	
SF14	**Selvena**	**1.12 269**	P	**Pb**	**18 21 30.6**	**-1.0**	
POFI	**Posta Fibreno**	**1.15 158**	P	**Pb**	**18 21 30.4**	**-1.7**	
POFI			AML	AML			
	comp=N,4525µm,1.2s						
POFI			AML	AML			
	comp=N,4665µm,1.3s						
POFI			AML	AML			
	comp=E,5995µm,0.8s						
POFI			AML	AML			
	comp=E,5635µm,0.8s						
LAV9	**Lanuvio**	**1.15 196**	P	**Pb**	**18 21 30.7**	**-1.4**	
SF01	**Poggio Pratacc**	**1.16 272**	AML	AML			
	comp=N,6080µm,1.2s						
SF01			AML	AML			
	comp=E,6290µm,0.7s						
CPGN	**Carpegna, Ital**	**1.18 330**	P	**Pb**	**18 21 31.3**	**-1.3**	
LRP	**Arpino**	**1.19 163**	P	**Pb**	**18 21 31.7**	**-1.0**	
LRP			AML	AML			
	comp=N,4990µm,0.8s						
LRP			AML	AML			
	comp=E,3050µm,1.2s						
CRE	**Caprese Michel**	**1.20 314**	P	**Pb**	**18 21 32.0**	**-1.0**	
CRE			AML	AML			
	comp=E,2705µm,0.9s						
CRE			AML	AML			
	comp=N,2995µm,1.2s						
ARCI	**Arcidosso**	**1.22 274**	P	**Pn**	**18 21 32.8**	**-0.7**	
ARCI			AML	AML			
	comp=N,2450µm,1.3s						
ARCI			AML	AML			
	comp=E,2645µm,1.1s						
GIUL	**Giuliano Di Ro**	**1.23 176**	⇑P	**Pn**	**18 21 31.7**	**-1.8**	
GIUL			AML	AML			
	comp=E,3895µm,1.1s						
GIUL			AML	AML			
	comp=N,5250µm,1.0s						
RSM	**Repubblica di**	**1.25 337**	P	**Pn**	**18 21 32.8**	**-1.0**	
LATB	**Latina**	**1.30 186**	P	**Pn**	**18 21 32.2**	**-2.2**	
LATB			AML	AML			
	comp=E,1730µm,1.0s						
LATB			AML	AML			
	comp=N,1810µm,1.3s						
RNI2	**Rionero Sannit**	**1.32 145**	P	**Pn**	**18 21 33.7**	**-1.1**	
CERA	**Filignano**	**1.36 151**	P	**Pn**	**18 21 33.9**	**-1.4**	
CERA			AML	AML			
	comp=E,7170µm,1.6s						
CERA			AML	AML			
	comp=N,5070µm,0.9s						
CERA			AML	AML			
	comp=N,5250µm,0.9s						
CERA			AML	AML			
	comp=E,7320µm,1.6s						
FRES	**Fresagrandinar**	**1.40 125**	P	**Pg**	**18 21 36.4**	**-0.2**	
FRES			AML	AML			
	comp=E,4285µm,0.9s						
FRES			AML	AML			
	comp=N,2855µm,1.6s						
ASQU	**Asqua**	**1.41 316**	P	**Pn**	**18 21 35.0**	**-1.0**	
ASQU			AML	AML			
	comp=E,3330µm,1.3s						
ASQU			AML	AML			
	comp=N,2750µm,0.8s						
MIDA	**Miranda**	**1.41 144**	P	**Pn**	**18 21 34.6**	**-1.5**	
BLLA	**Bellaria**	**1.44 341**	P	**Pn**	**18 21 35.2**	**-1.2**	
BLLA			AML	AML			
	comp=N,11425µm,1.4s						
BLLA			AML	AML			
	comp=E,8795µm,1.6s						
SFI	**Santa Sofia**	**1.46 320**	P	**Pn**	**18 21 36.2**	**-0.5**	
TRIV	**Trivento**	**1.46 134**	P	**Pb**	**18 21 36.6**	**-0.8**	
TRIV			AML	AML			
TRIV			AML	AML			
	comp=N,5035µm,1.5s						
TRIV			AML	AML			
TRIV			AML	AML			
	comp=E,6155µm,0.7s						
FROS	**Frosini**	**1.51 287**	P	**Pn**	**18 21 36.9**	**-0.5**	
FROS			AML	AML			
	comp=N,1945µm,1.2s						
FROS			AML	AML			
	comp=E,3540µm,1.5s						
CSNT	**Castellina Chi**	**1.51 298**	P	**Pn**	**18 21 37.0**	**-0.5**	
MAON	**Monte Argentar**	**1.52 257**	⇓P	**Pn**	**18 21 36.9**	**-0.6**	
MAON			AML	AML			
	comp=N,1600µm,1.1s						
MAON			AML	AML			
	comp=E,1555µm,1.5s						
OSSC	**Osservatorio P**	**1.57 299**	Pn	**Pn**	**18 21 36.6**	**-1.6**	
OSSC	**Osservatorio P**	**1.57 299**	⇑P	**Pn**	**18 21 37.0**	**-1.1**	
OSSC			AML	AML			
	comp=N,1695µm,1.6s						
OSSC			AML	AML			
	comp=E,1680µm,1.6s						
OSSC			AML	AML			
	comp=E,1990µm,1.3s						
OSSC			AML	AML			
	comp=N,1995µm,1.3s						
RUFI	**Rufina**	**1.59 312**	P	**Pn**	**18 21 38.3**	**-0.1**	
RUFI			AML	AML			
	comp=E,1920µm,1.6s						
RUFI			AML	AML			
	comp=N,2390µm,1.6s						
VAGA	**Valle Agricola**	**1.60 149**	P	**Pn**	**18 21 37.8**	**-0.8**	
VAGA			AML	AML			
	comp=E,2580µm,1.0s						
VAGA			AML	AML			
	comp=N,2870µm,1.1s						
VAGA			AML	AML			
	comp=N,2775µm,1.1s						
VAGA			AML	AML			
	comp=E,2510µm,0.9s						
BSSO	**Busso**	**1.65 138**	P	**Pb**	**18 21 40.3**	**-0.3**	
BSSO			AML	AML			
	comp=E,4300µm,1.5s						
BSSO			AML	AML			
	comp=E,1735µm,1.4s						
BSSO			AML	AML			
	comp=N,3485µm,1.1s						
BSSO			AML	AML			
	comp=N,1370µm,1.1s						
LMD	**Lutirano**	**1.66 322**	P	**Pb**	**18 21 40.2**	**-0.5**	
LMD			AML	AML			
	comp=E,2190µm,1.2s						
LMD			AML	AML			
	comp=N,1610µm,1.3s						
CASP	**Castiglione de**	**1.67 271**		**Pn**	**18 21 37.6**	**-1.9**	
CASP	**Castiglione de**	**1.67 271**	⇓P	**Pn**	**18 21 39.0**	**-0.5**	
CASP			AML	AML			
	comp=N,812µm,1.0s						
CASP			AML	AML			
	comp=E,780µm,1.1s						
TRIF	**Trifonti**	**1.67 282**	⇓P	**Pn**	**18 21 39.3**	**-0.3**	
TRIF			AML	AML			
	comp=N,1082µm,1.0s						
TRIF			AML	AML			
	comp=E,1225µm,0.8s						
MODR	**Mondragone**	**1.73 161**	P	**Pn**	**18 21 39.5**	**-0.9**	
MODR			AML	AML			
	comp=E,1355µm,1.1s						
MODR			AML	AML			
	comp=N,1304µm,1.4s						
CIGN	**Sant'Elia a Pi**	**1.73 130**	P	**Pb**	**18 21 41.2**	**-0.8**	
CIGN			AML	AML			
	comp=N,3065µm,1.2s						
CIGN			AML	AML			
	comp=E,2195µm,1.6s						
PIGN	**Pignataro Magg**	**1.77 153**	P	**Pn**	**18 21 40.2**	**-0.7**	
PIGN			AML	AML			
	comp=N,1975µm,1.1s						
PIGN			AML	AML			
	comp=E,1550µm,1.4s						
PIGN			AML	AML			
	comp=N,1845µm,1.1s						
PIGN			AML	AML			
	comp=E,1590µm,1.5s						
MELA	**Melanico ??? S**	**1.83 125**	P	**Pb**	**18 21 42.6**	**-1.1**	
MELA			AML	AML			
	comp=E,5505µm,1.2s						
MELA			AML	AML			
	comp=N,4645µm,1.6s						
MELA			AML	AML			
	comp=N,4850µm,1.6s						
MELA			AML	AML			
	comp=E,5675µm,1.2s						
TREM	**Isole Tremiti**	**1.88 110**	P	**Pn**	**18 21 41.9**	**-0.5**	
TREM			AML	AML			
	comp=E,5645µm,1.6s						
TREM			AML	AML			
	comp=N,4990µm,0.7s						
PAOL	**Paolisi**	**2.05 148**	Pn	**Pn**	**18 21 44.8**	**-0.1**	
APRC	**Apricena**	**2.06 119**	P	**Pn**	**18 21 44.5**	**-0.5**	
APRC			AML	AML			
	comp=N,3360µm,1.3s						
APRC			AML	AML			
	comp=E,1925µm,0.6s						
POPM	**Popiglio**	**2.14 307**	P	**Pn**	**18 21 45.5**	**-0.5**	
CELB	**S.Piero in Cam**	**2.15 270**	P	**Pn**	**18 21 45.7**	**-0.5**	
CELB			AML	AML			
	comp=E,236µm,1.1s						
CELB			AML	AML			
	comp=N,408µm,1.3s						
BRJN	**Brijuni**	**2.17 12**	P	**Pn**	**18 21 45.8**	**-0.6**	
SGRT	**San Giovanni R**	**2.19 117**	Pn	**Pn**	**18 21 46.9**	**+0.1**	
SGRT	**San Giovanni R**	**2.19 117**	P	**Pn**	**18 21 45.8**	**-1.0**	
SGRT			AML	AML			
	comp=N,1800µm,1.1s						
SGRT			AML	AML			
	comp=E,1880µm,1.0s						
ZCCA	**Zocca**	**2.21 316**		**Pn**	**18 21 46.0**	**-1.1**	
MAIM	**Mastiano**	**2.23 301**	P	**Pn**	**18 21 47.1**	**-0.1**	
MAIM			AML	AML			
	comp=N,551µm,1.4s						
MAIM			AML	AML			
	comp=E,774µm,1.0s						
BDI	**Bagni Di Lucca**	**2.25 306**	P	**Pn**	**18 21 47.2**	**-0.4**	
BDI			AML	AML			
	comp=E,968µm,1.2s						
BDI			AML	AML			
	comp=N,758µm,1.4s						
BDI			AML	AML			
	comp=N,288µm,1.4s						
BDI			AML	AML			
	comp=E,410µm,1.3s						
SGTA	**Sant Agata di**	**2.34 134**	P	**Pn**	**18 21 49.9**	**+1.0**	
SGTA			AML	AML			
	comp=N,1375µm,1.0s						
SGTA			AML	AML			
	comp=E,1555µm,1.1s						
SGTA			AML	AML			
	comp=E,1595µm,1.1s						
SGTA			AML	AML			
	comp=N,1400µm,1.0s						
SNAL	**S. Angelo Dei**	**2.42 139**	P	**Pn**	**18 21 49.0**	**-0.9**	
SNAL			AML	AML			
	comp=E,2125µm,1.3s						
SNAL			AML	AML			
	comp=N,1595µm,1.6s						
SNAL			AML	AML			
	comp=N,1630µm,1.6s						
SNAL			AML	AML			
	comp=E,2110µm,1.4s						
VLC	**Villacollemand**	**2.43 305**		**Pn**	**18 21 48.7**	**-1.2**	
VLC	**Villacollemand**	**2.43 305**	P	**Pn**	**18 21 49.2**	**-0.8**	
VLC			AML	AML			
	comp=E,520µm,1.5s						
VLC			AML	AML			
	comp=E,541µm,1.1s						
VLC			AML	AML			
	comp=N,650µm,1.6s						
VLC			AML	AML			
	comp=N,673µm,1.6s						
EQUI	**Equi**	**2.57 303**	P	**Pn**	**18 21 51.8**	**-0.2**	
EQUI			AML	AML			
	comp=N,460µm,1.2s						
EQUI			AML	AML			
	comp=E,392µm,1.6s						
CAPA	**Cerignola FG**	**2.58 128**	P	**Pn**	**18 21 51.0**	**-1.0**	
CAPA			AML	AML			
	comp=N,3285µm,1.3s						
CAPA			AML	AML			
	comp=E,2975µm,1.3s						
PLMA	**Palmaria, Port**	**2.71 299**	P	**Pn**	**18 21 53.5**	**-0.2**	
PLMA			AML	AML			
	comp=N,256µm,1.2s						
PLMA			AML	AML			
	comp=E,244µm,0.9s						
TEOL	**Teolo**	**2.78 338**		**Pn**	**18 21 55.0**	**+0.1**	
PALZ	**Palazzo San Ge**	**2.80 130**	P	**Pn**	**18 21 56.1**	**+1.0**	
PALZ			AML	AML			
	comp=E,2795µm,1.3s						
PALZ			AML	AML			
	comp=N,3330µm,1.4s						
SKDS	**Skadanscina**	**2.83 13**	*i* Pn	**Pn**	**18 21 55.0**	**-0.6**	
SKDS			*i* Sn	**Sn**	**18 22 30.0**	**0.0**	
SKDS			IAML		18 23 03.9		
	comp=Z,400nm,0.8s						
ACER	**Acerenza**	**2.90 133**	P	**Pn**	**18 21 55.4**	**-1.1**	
ACER			AML	AML			
	comp=E,996µm,1.2s						
ACER			AML	AML			
	comp=N,1076µm,1.1s						
ACER			AML	AML			
	comp=N,1063µm,1.1s						
ACER			AML	AML			
	comp=E,1003µm,1.3s						
SMPL	**Sampolo**	**2.93 258**	P	**Pn**	**18 21 56.2**	**-0.7**	
SMPL			AML	AML			
	comp=E,114µm,1.2s						
SMPL			AML	AML			
	comp=N,117µm,1.1s						
GBRS	**Gornja Briga**	**3.00 23**	*i* Pn	**Pn**	**18 21 58.2**	**+0.4**	
GBRS			IAML		18 22 58.5		
	comp=Z,870nm,1.6s						
MSSA	**Maissana**	**3.04 301**	Pn	**Pn**	**18 21 58.2**	**-0.3**	
MSSA	**Maissana**	**3.04 301**	P	**Pn**	**18 21 58.0**	**-0.5**	
MSSA			AML	AML			
	comp=E,298µm,1.6s						
MSSA			AML	AML			
	comp=N,468µm,1.0s						
PGF	**Pioggiola**	**3.06 267**	*e*P	**Pn**	**18 21 59.3**	**+0.6**	
PGF	**Pioggiola**	**3.06 267**	AML	AML			
	comp=E,127µm,1.2s						
PGF			AML	AML			
	comp=N,152µm,1.2s						
CEY	**Cerknica**	**3.10 17**	⇑*i*Pn	**Pn**	**18 21 59.1**	**-0.1**	
AMUR	**Altamura**	**3.20 125**	P	**Pn**	**18 21 59.8**	**-0.8**	
AMUR			AML	AML			
	comp=N,624µm,1.2s						
AMUR			AML	AML			
	comp=E,651µm,1.3s						

SRKY Kupres RS 3.21 65 *e*Pn **Pn 18 22 02.7 +1.9**
SABO M.te Sabotino 3.21 6 P **Pn 18 22 00.3 -0.4**
SABO AML AML
comp=E,5340µm,1.6s
SABO AML AML
comp=E,1310µm,1.5s
SABO AML AML
comp=N,1380µm,1.1s
SABO AML AML
comp=N,5095µm,1.1s
ROVR Rover Verones 3.22 333 P **Pn 18 22 00.3 -0.7**
ROVR AML AML
comp=E,230µm,1.0s
ROVR AML AML
comp=N,204µm,1.1s
CGRP Cima Grappa 3.24 343 P **Pn 18 22 00.7 -0.6**
CGRP AML AML
comp=E,1595µm,1.5s
CGRP AML AML
comp=E,1538µm,1.5s
CGRP AML AML
comp=N,1360µm,1.2s
CGRP AML AML
comp=N,1318µm,1.2s
MGRS Mrkonjic Grad 3.30 59 *e*Pn **Pn 18 22 04.2 +2.2**
STON Ston 3.36 87⇑*i*Pn **Pn 18 22 01.9 -0.9**
SALO Salr 3.40 327 Pn **Pn 18 22 04.2 +0.9**
SALO Salr 3.40 327 P **Pn 18 22 04.5 +1.2**
SALO AML AML
comp=N,1042µm,1.4s
SALO AML AML
comp=E,1084µm,1.0s
SALO AML AML
comp=E,960µm,1.0s
SALO AML AML
comp=N,993µm,1.4s
LJU Ljubljana 3.41 17 P **Pn 18 22 03.2 -0.3**
LJU AML AML
comp=N,4405µm,0.9s
LJU AML AML
comp=E,5275µm,1.5s
MATE Matera 3.42 127⇑P **Pn 18 22 05.6 +2.0**
CTI Castel Tesino 3.43 342 **Pn 18 22 04.9 +1.0**
CTI Castel Tesino 3.43 342 P **Pn 18 22 04.9 +1.0**
CTI Castel Tesino 3.43 342 P **Pn 18 22 03.6 -0.2**
CTI AML AML
comp=N,450µm,1.1s
CTI AML AML
comp=E,689µm,1.2s
MPRI Monte Prat 3.46 358 P **Pn 18 22 04.0 -0.2**
MPRI AML AML
comp=N,986µm,1.1s
MPRI AML AML
comp=N,1260µm,1.1s
MPRI AML AML
comp=E,1030µm,1.2s
MPRI AML AML
comp=E,790µm,1.2s
CADS Cadrg 3.47 7 *i*Pn **Pn 18 22 03.9 -0.4**
STAL STALIGIAL 3.49 355 **Pn 18 22 04.7 +0.2**
STAL STALIGIAL 3.49 355 P **Pn 18 22 04.3 -0.2**
STAL AML AML
comp=E,637µm,1.0s
STAL AML AML
comp=E,828µm,0.9s
STAL AML AML
comp=N,807µm,1.0s
STAL AML AML
comp=N,720µm,1.0s
LTRZ Laterza 3.52 127 P **Pn 18 22 06.0 +1.0**
A051A Mrakovica 3.52 49⇑*i*Pn **Pn 18 22 05.8 +0.7**
BLY Banja Luka 3.53 55⇑*i*Pn **Pn 18 22 07.8 +2.7**
LUSI Trento, Gardas 3.54 334 P **Pn 18 22 05.0 -0.4**
LUSI AML AML
comp=E,520µm,0.7s
LUSI AML AML
comp=N,530µm,1.0s
NOCI Noci 3.55 123 P *e*Pn **Pn 18 22 06.4 +0.9**
NOCI AML AML
comp=E,420µm,1.2s
NOCI AML AML
comp=N,573µm,0.8s
CIMO Cimolais 3.56 352 P **Pn 18 22 05.4 -0.1**
CIMO AML AML
comp=E,254µm,1.5s
CIMO AML AML
comp=N,250µm,0.8s
CIMO AML AML
comp=N,258µm,0.9s
CIMO AML AML
comp=E,256µm,1.5s
DGI Dorgali Grotta 3.62 228 P **Pn 18 22 06.4 +0.1**
PTCC Patocco-Chiusa 3.62 2 P **Pn 18 22 06.2 -0.3**
PTCC AML AML
comp=E,366µm,0.8s
PTCC AML AML
comp=N,293µm,1.6s
GAGG Gaggia 3.65 335 P **Pn 18 22 07.6 +0.7**
GAGG AML AML
comp=E,720µm,0.9s
GAGG AML AML
comp=N,1110µm,1.0s
GAGG AML AML
comp=E,1122µm,1.0s
GAGG AML AML
comp=N,756µm,0.9s
PRED Cave del Predi 3.67 5 **Pn 18 22 06.7 -0.5**
CLUD Cludinico 3.68 357 **Pn 18 22 07.1 -0.1**
CLUD Cludinico 3.68 357 P **Pn 18 22 07.0 -0.1**
CLUD AML AML
comp=N,729µm,1.2s
CLUD AML AML
comp=N,740µm,1.2s
CLUD AML AML
comp=E,662µm,1.4s
CLUD AML AML
comp=E,637µm,1.4s
ZONE Zone 3.68 325 AML AML
comp=N,336µm,0.6s
ZONE AML AML
comp=E,336µm,0.7s
MABI Malga Bissina 3.77 331 P **Pn 18 22 08.5 -0.1**
MABI AML AML
comp=E,195µm,1.5s
MABI AML AML
comp=N,162µm,1.2s
ACOM Acomizza, Ital 3.77 4 P **Pn 18 22 08.7 0.0**
ACOM AML AML
comp=E,822µm,1.0s
ACOM AML AML
comp=E,814µm,1.1s
ACOM AML AML
comp=N,742µm,0.8s
ACOM AML AML
comp=N,708µm,0.8s
ZOU Zoufplan 3.77 358 P **Pn 18 22 08.4 -0.2**
ZOU AML AML
comp=E,618µm,1.2s
ZOU AML AML
comp=N,688µm,1.2s
ZOU AML AML
comp=E,599µm,1.1s
ZOU AML AML
comp=N,686µm,1.6s
FVI Forni Avoltri 3.82 356 P **Pn 18 22 09.4 +0.2**
FVI AML AML
comp=N,467µm,1.3s
FVI AML AML
comp=E,486µm,1.3s
TREB Trebinje 3.84 89 *e*Pn **Pn 18 22 10.1 +0.7**
OBKA Obir 3.86 15 *e*Pn **Pn 18 22 10.0 +0.3**
OBKA Obir 3.86 15 *e*Pn **Pn 18 22 10.1 +0.4**
comp=E,2.3nm,0.4s
OBKA Obir 3.86 15 *e*Pn **Pn 18 22 09.5 -0.2**
MYKA Terra Mystica 3.86 5 *i*Pn **Pn 18 22 10.3 +0.6**
comp=E,26nm,0.5s,SNR=19
KOSI Kohlern 3.88 342 P **Pn 18 22 10.4 +0.3**
KOSI AML AML
comp=E,905µm,0.9s
KOSI AML AML
comp=N,652µm,0.8s
HCY Herceg Novi 3.97 93 *e*Pn **Pn 18 22 11.3 +0.1**
HCY Herceg Novi 3.97 93⇓*i*Pn **Pn 18 22 11.8 +0.6**
HCY *i*Sn **Sn 18 22 59.3 +1.2**
BRY Bratogost 3.98 86 *e*Pn **Pn 18 22 12.1 +0.7**
BRY Bratogost 3.98 86⇑*i*Pn **Pn 18 22 11.9 +0.5**
BRY *i*Sn **Sn 18 22 59.4 +1.0**
ABTA Abfaltersbach 3.99 354 *i*Pn **Pn 18 22 12.3 +0.8**
comp=N,46nm,0.4s,SNR=70
SOKA Soboth 4.12 19 *e*Pn **Pn 18 22 13.8 +0.4**
comp=N,3.7nm,0.3s
BRMO Bormio 4.18 333 P **Pn 18 22 16.5 +2.3**
BRMO AML AML
comp=E,246µm,1.2s
BRMO AML AML
comp=N,147µm,1.1s
RISI Rein 4.23 350 P **Pn 18 22 16.1 +1.2**
RISI AML AML
comp=E,1125µm,0.5s
RISI AML AML
comp=N,730µm,0.6s
UPM Unac-Piva 4.25 82 *e*Pn **Pn 18 22 17.7 +2.4**
UPM Unac-Piva 4.25 82 *e*Pn **Pn 18 22 15.7 +0.4**
UPM *i*Sn **Sn 18 23 06.1 +0.8**
CEME Cevo 4.27 91⇑*i*Pn **Pn 18 22 15.9 +0.5**
CEME *i*Sn **Sn 18 23 06.5 +0.9**
BUM Brajici-Budva 4.28 95⇓*i*Pn **Pn 18 22 16.2 +0.7**
BUM *i*Sn **Sn 18 23 06.9 +1.0**
KOGS Kog 4.29 30 AML AML
comp=N,3385µm,1.2s
KOGS AML AML
comp=E,4175µm,1.5s
NKME Niksic 4.29 88⇓*i*Pn **Pn 18 22 16.2 +0.7**
NKME *i*Sn **Sn 18 23 06.9 +1.1**
MUGIO Muggio 4.29 318 P **Pn 18 22 15.3 -0.4**
SBF Sospel 4.29 286 *e*P **Pn 18 22 16.5 +0.8**
ROSI Rosskopf 4.32 344 P **Pn 18 22 17.4 +1.3**
ROSI AML AML
comp=N,794µm,1.0s
ROSI AML AML
comp=E,687µm,1.5s
VSL Villasalto 4.34 222 P **Pn 18 22 15.8 -0.4**
VSL AML AML
comp=N,88µm,1.3s
VSL AML AML
comp=E,151µm,1.5s
FUORN Ofenpass-Fuorn 4.35 333 **Pn 18 22 18.0 +1.4**
VARE Varese 4.39 316 P **Pn 18 22 17.2 +0.2**
VARE AML AML
comp=E,244µm,1.0s
VARE AML AML
comp=N,217µm,0.8s
HAPS Han Pijesak,Bl 4.43 71 *e*Pn **Pn 18 22 18.4 +0.8**
BEHE Becsehely 4.51 34 P **Pn 18 22 20.8 +2.3**
DRME Dracevica, Mon 4.51 96 *e*Pn **Pn 18 22 18.4 -0.3**
DRME Dracevica, Mon 4.51 96⇓*i*Pn **Pn 18 22 19.3 +0.6**
DRME *i*Sn **Sn 18 23 12.4 +0.9**
TIP Timpagrande 4.53 142⇓P Pn 18 22 23.4 +4.5
PDG Podgorica 4.53 92⇑P **Pn 18 22 21.1 +2.2**
PDG Podgorica 4.53 92 Pn **Pn 18 22 19.4 +0.5**
TTG Podgorica 4.53 92⇓*i*Pn **Pn 18 22 19.6 +0.7**
TTG *i*Sn **Sn 18 23 12.9 +1.0**
FETA Feichten 4.57 339 *i*Pn **Pn 18 22 22.2 +2.7**
comp=N,21nm,1.1s,SNR=53
TUE Stuetta 4.57 325 **Pn 18 22 20.4 +0.8**
ULC Ulcinj 4.60 98⇓*i*Pn **Pn 18 22 20.6 +0.7**
ULC *i*Sn **Sn 18 23 14.3 +0.7**
WTTA Wattenberg 4.60 347 *i*Pn **Pn 18 22 22.1 +2.1**
comp=N,46nm,0.8s,SNR=38
WTTA Wattenberg 4.60 347 *e*Pn **Pn 18 22 21.5 +1.5**
WTTA Wattenberg 4.60 347 P **Pn 18 22 21.8 +1.8**
WTTA AML AML
comp=N,536µm,1.3s
WTTA AML AML
comp=E,594µm,0.8s
DAVOX Davos/Dischmat 4.62 331 Pn **Pn 18 22 21.9 +1.7**
comp=E,8.5nm,0.3s,baz=152,slow=18,SNR=130
DAVOX Sn **Sn 18 23 16.8 +2.6**
comp=E,3.0nm,0.3s,baz=92,slow=23,SNR=0.9
DAVOX LR LR 18 24 41.4
comp=E,397nm,21.6s,baz=168,slow=47
DAVOX Davos/Dischmat 4.62 331 P **Pn 18 22 22.8 +2.6**
PLE Pljevlja 4.62 81 *e*Pn **Pn 18 22 20.8 +0.6**
PLE *i*Sn **Sn 18 23 14.9 +0.8**
RUDO Rudo 4.63 78 *e*Pn **Pn 18 22 21.3 +1.0**
SQTA Sankt Quirin 4.64 344 **Pn 18 22 22.4 +1.9**
SQTA Sankt Quirin 4.64 344 P **Pn 18 22 22.4 +1.9**
SQTA Sankt Quirin 4.64 344 *i*Pn **Pn 18 22 22.4 +1.9**
comp=E,19nm,0.3s,SNR=31
WATA Walderalm 4.68 347 **Pn 18 22 23.2 +2.1**
WATA Walderalm 4.68 347 P **Pn 18 22 23.2 +2.1**
WATA Walderalm 4.68 347 *i*Pn **Pn 18 22 23.2 +2.1**
comp=E,21nm,0.4s,SNR=50
KOME Kolasin 4.70 87 *e*Pn **Pn 18 22 21.9 +0.7**
KOME *i*Sn **Sn 18 23 16.8 +0.8**
BBLS Lazići 4.70 75 *e*Pn **Pn 18 22 22.5 +1.2**
TRAV Traversella 4.74 307 P **Pn 18 22 21.6 -0.2**
TRAV AML AML
comp=N,78µm,1.5s
TRAV AML AML
comp=E,128µm,1.1s
ARSA Arzberg 4.78 20 *i*Pn **Pn 18 22 22.4 +0.1**
comp=E,4.7nm,0.3s,SNR=10
ARSA Arzberg 4.78 20 *e*Pn **Pn 18 22 22.2 -0.1**
ARSA *e*Sn **Sn 18 23 15.2 -2.7**
ARSA Arzberg 4.78 20 P **Pn 18 22 21.8 -0.4**
MOTA Moosalm 4.78 343 **Pn 18 22 24.5 +2.1**
MOTA Moosalm 4.78 343 P **Pn 18 22 24.5 +2.1**
MOTA Moosalm 4.78 343 *i*Pn **Pn 18 22 24.5 +2.1**
comp=E,32nm,0.6s,SNR=34
KOVH Kovagotottos 4.85 45 P **Pn 18 22 23.0 -0.3**
KOVH S **Sn 18 23 17.9 -1.9**
FUSIO Fusio 4.86 321 P **Pn 18 22 23.7 +0.1**
LMR La Mourre 4.88 279 *e*P **Pn 18 22 23.8 +0.1**
BIOA Bad Ischl, Aus 4.92 4 **Pn 18 22 24.9 +0.6**
BIOA Bad Ischl, Aus 4.92 4 *i*Pn **Pn 18 22 24.9 +0.6**
comp=E,9.6nm,0.3s,SNR=32
PART Garmisch-Parte 4.92 344 *e*Pn **Pn 18 22 27.1 +2.7**
RJOB Jochberg 4.96 357 *e*Pn **Pn 18 22 26.2 +1.4**
RJOB *e*Sn **Sn 18 23 24.8 +2.3**
IVA Berane 4.97 87⇑*i*Pn **Pn 18 22 25.7 +0.7**
IVA *i*Sn **Sn 18 23 23.6 +0.7**
CEL Celeste 4.99 154 **Pn 18 22 25.0 -0.2**
RETA Reutte 4.99 341 *i*Pn **Pn 18 22 27.5 +2.3**
comp=E,9.8nm,0.4s,SNR=33
MBDF Montbardon 5.00 295 *e*P **Pn 18 22 26.3 +0.8**
PVY Plav 5.04 90 *e*Pn **Pn 18 22 26.6 +0.7**
PVY *i*Sn **Sn 18 23 25.1 +0.6**
OBER Oberstdorf 5.04 337 *e*Pn **Pn 18 22 29.1 +3.1**
DAVA Damuels 5.06 334 *i*Pn **Pn 18 22 28.8 +2.5**
comp=E,52nm,0.6s,SNR=40
DAVA Damuels 5.06 334 *e*Pn **Pn 18 22 28.6 +2.3**
MOA Molln 5.13 9 *i*Pn **Pn 18 22 27.8 +0.8**
comp=E,26nm,0.7s,SNR=18
MOA Molln 5.13 9 *e*Pn **Pn 18 22 27.4 +0.4**
MOA *e*Sn **Sn 18 23 25.8 -0.8**
DIVS Divibare 5.16 73 **Pn 18 22 27.2 -0.4**
DIVS Divibare 5.16 73 *e*Pn **Pn 18 22 28.2 +0.5**
BNI Bardonecchia 5.18 298 P **Pn 18 22 30.0 +2.0**
TIR Tirane 5.21 104⇑P **Pn 18 22 30.0 +1.8**
TIR Tirane 5.21 104 **Pn 18 22 27.8 -0.4**
TIR Tirane 5.21 104 P **Pn 18 22 27.8 -0.4**
MORH Mrgy, Hungar 5.22 47 P **Pn 18 22 28.8 +0.5**
BNALP Bannalp 5.28 322 P **Pn 18 22 31.0 +1.7**
VLO Vlora 5.30 114 **Pn 18 22 28.9 -0.5**
VLO Vlora 5.30 114 P **Pn 18 22 28.9 -0.5**
LPG La Plagne 5.33 303 *e*P **Pn 18 22 32.8 +2.6**
UBR Ueberruh 5.34 337 *e*Pn **Pn 18 22 32.2 +2.2**
LPL La Plagne 5.35 303 *e*P **Pn 18 22 32.6 +2.2**
FRGS Fruska Gora 5.37 62 *e*Pn **Pn 18 22 30.3 -0.1**
MPLH Magyarpolny 5.38 34 P **Pn 18 22 32.9 +2.3**
RONA Rosalia, Austr 5.40 23 **Pn 18 22 31.3 +0.5**
RONA Rosalia, Austr 5.40 23 *i*Pn **Pn 18 22 31.3 +0.5**
comp=E,4.1nm,0.3s,SNR=9.2
SOP Sopron 5.46 25 P **Pn 18 22 31.9 +0.2**
CONA Conrad Observa 5.49 20 *i*Pn **Pn 18 22 32.4 +0.2**
comp=E,9.1nm,0.4s,SNR=11
SENIN Lac Senin/Sane 5.49 313 **Pn 18 22 31.2 -1.1**
SMRF Simiane la Rot 5.63 285 *e*P **Pn 18 22 36.1 +2.0**
ORIF Oris-en-Rattie 5.66 295 *e*P **Pn 18 22 37.1 +2.6**
KEK Kerkira 5.89 119 **Pn 18 22 37.6 +0.1**
OHR Ohrid 5.96 104 *i*Pn **Pn 18 22 40.8 +2.3**
GEC2 GERESS Array S 6.07 4 **Pn 18 22 39.5 -0.7**
GEC2 GERESS Array S 6.07 4 *e*Pn **Pn 18 22 39.6 -0.6**
GEC2 *e*Sn **Sn 18 23 48.6 -1.4**
GERES GERESS Array B 6.07 4 Pn **Pn 18 22 39.8 -0.4**
comp=E,1.5nm,0.3s,baz=177,slow=12,SNR=49
GERES Sn **Sn 18 23 48.4 -1.6**
comp=E,3.7nm,0.3s,baz=180,slow=24,SNR=8.9
GERES LR LR 18 25 43.5
comp=E,224nm,21.8s,baz=89,slow=46
comp=E,4.0nm,0.4s
GERES GERESS Array B 6.07 4 **Pn 18 22 37.3 -2.9**
CKRC Cesky Krumlov 6.09 7 *e*Pn **Pn 18 22 39.8 -0.5**
CKRC *e*SN **Sn 18 23 47.7 -2.6**
KBN Korca 6.12 108 **Pn 18 22 39.3 -1.5**
KBN Korca 6.12 108 P **Pn 18 22 39.3 -1.5**
SKO Skopje 6.21 95 *i*Pn **Pn 18 22 43.6 +1.7**
MODS Modra-Piesok 6.30 26 *e*P **Pn 18 22 45.3 +2.1**
MODS *e* 18 23 55.7
BOVS Bovan 6.32 79⇑P **Pn 18 22 44.4 +0.9**
KHC Kasperske Hory 6.35 3 **Pn 18 22 41.6 -2.3**
KHC Kasperske Hory 6.35 3 *e*P **Pn 18 22 43.0 -0.9**
KHC *e* 18 23 55.5
KHC Kasperske Hory 6.35 3 *e*PN **Pn 18 22 43.0 -0.9**
KHC *e*SN **Sn 18 23 55.5 -1.3**
WET Wettzell 6.36 358 *e*Pn **Pn 18 22 43.3 -0.8**
WET *e*Sn **Sn 18 23 55.2 -1.8**
VIVF Saint-Julien-l 6.46 292 *e*P **Pn 18 22 46.7 +1.3**
BFO Black Forest 6.49 330 **Pn 18 22 44.9 -0.9**
BFO Black Forest 6.49 330 *e*P **Pn 18 22 47.0 +1.2**
BFO Black Forest 6.49 330 *e*Pn **Pn 18 22 46.8 +1.0**
MDVR Moldovita 6.52 69⇑P **Pn 18 22 47.9 +1.6**
KRUC Moravsky 6.68 19 *e*PN **Pn 18 22 47.6 -0.7**
KRUC *e*SN **Sn 18 24 01.7 -3.0**
HINF Hinteralfeld 6.70 321 *e*P **Pn 18 22 50.5 +1.8**
HINF *e*Sn **Sn 18 23 58.1 -7.2**
comp=E,108nm,0.9s
TREC Trest 6.71 13 *e*P **Pn 18 22 48.9 0.0**
TREC *e* 18 24 03.2
TREC Trest 6.71 13 *e*PN **Pn 18 22 48.9 0.0**
TREC *e*SN **Sn 18 24 03.2 -2.4**
BZS Buzias 6.72 62⇑P **Pn 18 22 51.1 +2.2**
JAVC Velka Javorina 6.85 26 *e*PN **Pn 18 22 50.6 -0.2**
ECH Echery 6.86 324 **Pn 18 22 50.9 0.0**
ECH Echery 6.86 324 P **Pn 18 22 50.9 0.0**
LASF Ste Croix 6.88 284 *e*P **Pn 18 22 51.6 +0.5**
VRAC Vranov 6.95 19 Pn **Pn 18 22 51.7 -0.4**
comp=E,0.4nm,0.3s,baz=209,slow=13,SNR=4.0
VRAC Sn **Sn 18 24 08.0 -3.5**
comp=E,1.0nm,0.3s,baz=297,slow=21,SNR=4.9
comp=E,1.8nm,0.5s
VRAC Vranov 6.95 19 *e*PN **Pn 18 22 51.6 -0.5**
CDF Champ du Feu 6.96 326 *e*P **Pn 18 22 54.0 +1.6**
CDF *e*Sn **Sn 18 24 04.6 -7.3**
comp=E,22nm,0.6s
VYHS Vyhne 6.97 33 *e*P **Pn 18 22 55.4 +3.1**
VYHS *e* 18 24 11.6
ROTZ Rotzenmuhle 7.01 355 *e*Pn **Pn 18 22 53.1 +0.1**
BLKB Belogradchik 7.02 80⇑P **Pn 18 22 55.0 +1.8**
GRFO Grafenberg 7.03 350 **Pn 18 22 52.9 -0.3**
GRFO Grafenberg 7.03 350 P **Pn 18 22 52.9 -0.3**
HERR Herculane 7.03 70⇑P **Pn 18 22 55.2 +2.0**
GRF Grafenberg Arr 7.03 350 *e*Pn **Pn 18 22 55.0 +1.8**
HAU Haudompre 7.07 320 *e*P **Pn 18 22 55.2 +1.4**
HAU *e*Sn **Sn 18 24 07.5 -7.0**
comp=E,93nm,0.7s
VAY Valandovo 7.17 99 *i*Pn **Pn 18 22 56.3 +1.1**
GOPC GO Pecny, Ondr 7.22 9 *e*P **Pn 18 22 55.2 -0.6**
GOPC GO Pecny, Ondr 7.22 9 *e*PN **Pn 18 22 55.2 -0.6**
MANZ Manzenberg 7.24 355 *e*Pn **Pn 18 22 56.3 +0.2**
MANZ *e*Sn **Sn 18 24 14.2 -4.3**
MAHO Mahon 7.27 250 **Pn 18 22 55.2 -1.2**
PRU Pruhonice 7.27 7 *e*P **Pn 18 22 56.3 -0.2**
PRU *e* 18 24 15.9
PRU Pruhonice 7.27 7 *e*PN **Pn 18 22 56.3 -0.2**
PRU *e*SN **Sn 18 24 15.9 -3.4**
MAUC Maruska 7.34 25 *e*PN **Pn 18 22 56.8 -0.7**
GZR Gura Zlata 7.42 66⇑P **Pn 18 23 00.9 +2.3**
KKB Krupnik 7.43 94 P **Pn 18 23 00.0 +1.3**
VTS Vitosha 7.44 88⇑P **Pn 18 23 01.0 +2.0**
VTS Vitosha 7.44 88 **Pn 18 22 58.9 -0.1**
VTS Vitosha 7.44 88 P **Pn 18 22 58.9 -0.1**
VTS Vitosha 7.44 88 P **Pn 18 22 59.7 +0.7**
NKC Novy Kostel 7.46 357 *e*P **Pn 18 22 58.4 -0.8**
NKC *e* 18 24 20.9
NKC Novy Kostel 7.46 357 *e*PN **Pn 18 22 58.4 -0.8**
NKC *e*SN **Sn 18 24 20.9 -3.2**
MORC Moravsky Berou 7.63 22⇓P Pn 18 23 06.5 +5.1
MORC Moravsky Berou 7.63 22 **Pn 18 23 01.1 -0.4**
MORC Moravsky Berou 7.63 22 P **Pn 18 23 01.1 -0.4**
MORC Moravsky Berou 7.63 22 *e*PN **Pn 18 23 02.0 +0.6**
KEST Kesra 7.63 204 Pn **Pn 18 23 05.5 +4.0**
comp=E,0.4nm,0.3s,baz=344,slow=8.2,SNR=7.2
KEST Sn **Sn 18 24 33.5 +5.2**
baz=336,slow=19
DEV Deva 7.66 63⇑P **Pn 18 23 04.4 +2.6**
SMF Signal de Mont 7.66 303 *e*P **Pn 18 23 02.0 +0.2**
KRLC Kraliky 7.71 18 *e*P **Pn 18 23 02.3 -0.3**
KRLC Kraliky 7.71 18 *e*PN **Pn 18 23 02.3 -0.3**
PAGF Fort de Pagny 7.76 321 *e*P **Pn 18 23 05.0 +1.8**
baz=140
PAGF *e*Sn **Sn 18 24 23.8 -7.5**
comp=E,133nm,1.2s
SFTF Sexfontaines 7.85 316 *e*P **Pn 18 23 06.2 +1.7**
baz=137
SFTF *e*Sn **Sn 18 24 25.8 -7.8**
comp=E,59nm,1.0s
DPC Dobruska-Polom 7.88 15 *e*P **Pn 18 23 04.8 -0.1**
DPC Dobruska-Polom 7.88 15 *e*PN **Pn 18 23 04.8 -0.1**
DRGR 7.90 56⇑P **Pn 18 23 07.2 +2.0**
DRGR 7.90 56 P **Pn 18 23 08.9 +3.7**
MOX Moxa 7.93 353 P **Pn 18 23 04.3 -1.2**
MOX Moxa 7.93 353 *e*Pn **Pn 18 23 04.0 -1.5**
MOX *e*Sn **Sn 18 24 31.0 -4.6**
LOR Lormes 7.95 307 *e*P **Pn 18 23 08.1 +2.3**
baz=126
LOR *e*Sn **Sn 18 24 28.6 -7.5**
comp=E,20nm,0.8s
MMB Musomiste 7.96 95 P **Pn 18 23 06.9 +0.9**
MTLF Montolieu 8.01 278 *e*P **Pn 18 23 07.2 +0.5**
MEZF Maizieres J'vi 8.04 318 *e*P **Pn 18 23 09.4 +2.3**
baz=138
MEZF *e*Sn **Sn 18 24 30.3 -8.0**
comp=E,36nm,0.9s
OSTC Ostas 8.06 14 *e*PN **Pn 18 23 06.4 -0.9**
CHVC Chvalec 8.06 13 *e*PN **Pn 18 23 07.5 +0.2**
SAVF Savonnieres en 8.09 319 *e*P **Pn 18 23 09.1 +1.5**
baz=139
SAVF *e*Sn **Sn 18 24 31.6 -7.7**
comp=E,36nm,0.9s
LOT Lotru 8.10 67⇑P **Pn 18 23 11.1 +3.0**
BRG Berggiesshubel 8.11 4 *e*P **Pn 18 23 07.0 -1.0**
BRG *e* 18 24 37.3
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG MLR MLR
comp=Z,394nm,14.5s
BRG MLR MLR
comp=N,87nm,11.2s
BRG MLR MLR
comp=E,266nm,12.3s
MESR Meseseni 8.21 55⇑P **Pn 18 23 12.6 +3.2**
CAF Calviac 8.28 289 *e*P **Pn 18 23 11.9 +1.5**
WLF Walferdange 8.41 327 *e*Pn **Pn 18 23 14.1 +2.1**
PLVB Pleven 8.43 82⇑P **Pn 18 23 14.4 +2.0**
TRPA Tarpa 8.50 48 P Pn 18 23 19.7 +6.4
CLL Collm 8.53 359 **Pn 18 23 13.5 -0.1**
CLL Collm 8.53 359 *e*P **Pn 18 23 14.0 +0.3**
CLL Collm 8.53 359 *e*Pn **Pn 18 23 14.0 +0.3**
CLL *e*Sn Sn 18 24 34.0 -16
CLL *e*x x 18 24 44.0
CLL *e*x x 18 25 17.0
CLL *e*Sg **Sg 18 25 43.0 -0.3**
comp=Z,37nm,1.0s
CLL Lm MLR 18 26 00.0
comp=Z,300nm,18.3s
CLL Lmax 18 27 00.0
RZN Rozhen 8.66 93 P **Pn 18 23 16.9 +1.1**
ARR Arges 8.67 69⇑P **Pn 18 23 18.3 +2.6**
STHS Stebnicka Huta 8.70 38 *e*P Pn 18 23 21.2 +5.1
RJF Les Rejaudoux 8.74 291 *e*P **Pn 18 23 18.6 +2.0**
HUMR Humele 8.77 75⇑P **Pn 18 23 19.1 +2.1**
ITM Ithomi 8.77 127 Pn **Pn 18 23 17.2 +0.1**
VOIR 8.97 69⇓P **Pn 18 23 22.8 +2.9**
LFF La Frestale 9.21 288 *e*P **Pn 18 23 25.6 +2.5**
GIVF Givet 9.29 325 *e*P **Pn 18 23 27.1 +2.9**
GIVF *e*Sn **Sn 18 25 00.2 -8.8**
DOPR Dopca 9.34 66⇑P **Pn 18 23 26.6 +1.8**
RDO Rodhopi 9.39 96 **Pn 18 23 26.7 +1.3**
BAIF Baives 9.53 323 *e*P **Pn 18 23 30.1 +2.7**

BAIF *e*Sn Sn 18 25 05.4 -9.4
comp=Z,18nm,0.9s
MLR Muntele Rosu 9.60 69 ⇑P **Pn 18 23 29.7 +1.1**
MLR Muntele Rosu 9.60 69 Pn **Pn 18 23 31.7 +3.2**
comp=Z,0.2nm,0.3s,baz=262,slow=14,SNR=5.6
MLR LR LR 18 28 02.2
comp=Z,640nm,20.0s,baz=281,slow=43
comp=Z,3.8nm,0.7s
MLR Muntele Rosu 9.60 69 Pn 18 23 26.4 -2.2
MLR Muntele Rosu 9.60 69 P **Pn 18 23 26.4 -2.2**
BURAR Bucovina Array 9.80 56 ⇑P **Pn 18 23 33.8 +2.5**
BURAR Bucovina Array 9.80 56 P **Pn 18 23 33.7 +2.5**
ETSF Etsaut 10.06 275 *e*P **Pn 18 23 37.4 +2.6**
VRI Vrincioaia 10.22 68 ⇑P **Pn 18 23 38.1 +1.2**
VRI Vrincioaia 10.22 68 P **Pn 18 23 38.0 +1.2**
IDI Anoyia 11.81 125 Pn **Pn 18 24 01.9 +3.2**
comp=Z,0.7nm,0.3s,baz=332,slow=13,SNR=8.8
IDI Sn **Sn 18 26 02.6 -8.3**
comp=Z,0.3nm,0.3s,baz=355,slow=22,SNR=1.9
comp=Z,2.6nm,0.6s
IDI Anoyia 11.81 125 Pn **Pn 18 23 56.8 -2.0**
ESDC Sonseca Array 13.24 262 Pn **Pn 18 24 16.6 -1.7**
comp=Z,0.1nm,0.3s,baz=69,slow=11,SNR=18
comp=Z,1.2nm,0.8s
AKASG Malin Array Be 13.56 49 Pn **Pn 18 24 21.6 -0.9**
comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=1.7
AKBB Malin Array Si 13.56 49⇑*e*P **Pn 18 24 22.9 +0.4**
PBRG Braganca 14.74 273 *e*P **P 18 24 46.0 +1.0**
MVO Moncorvo 15.09 271 *e*P **P 18 24 51.5 +2.7**
comp=Z,15nm,1.5s
PVRL Vila Real 15.57 272 *e*P **P 18 24 56.6 +2.5**
comp=Z,18nm,1.7s
POLO Lamas de Olo 15.60 272 *e*P **Pn 18 24 51.7 +1.4**
comp=Z,8.5nm,1.5s
MTE Manteigas 15.65 268 *e*P **P 18 24 56.9 +1.8**
comp=Z,16nm,1.3s
MTE Manteigas 15.65 268 Pn **Pn 18 24 49.1 -1.8**
MTE IAmb IAmb 18 24 57.5
comp=Z,14nm,1.1s
BR131 Keskin Array S 15.72 94⇓*e*P **P 18 24 54.9 -1.1**
BRTR Keskin Array B 15.72 94 Pn **P 18 24 54.7 -1.3**
comp=Z,0.1nm,0.3s,baz=284,slow=9.9,SNR=3.9
comp=Z,0.8nm,0.8s
PMRV Marv??o 15.83 265 *e*P **Pn 18 24 53.4 +0.3**
comp=Z,10nm,1.6s
PVIS Viseu 15.83 270 *e*P **Pn 18 24 53.0 -0.2**
comp=Z,18nm,1.5s
PBAR Barrancos 16.02 260 *e*P **Pn 18 24 55.2 -0.4**
PESTR Estremoz 16.16 263 *e*P **Pn 18 24 57.4 0.0**
comp=Z,16nm,1.9s
EKA Eskdalemuir Ar 16.43 325 Pn **Pn 18 25 00.5 -0.2**
baz=132,slow=14
comp=Z,6.1nm,1.1s
PCAS Casmilo, Conde 16.45 268 *e*P **P 18 25 04.2 +0.3**
comp=Z,28nm,1.6s
PMTG Montargil 16.56 264 *e*P **Pn 18 25 00.1 -2.3**
comp=Z,20nm,1.3s
VSU Vasula 17.85 24⇓*e*P **P 18 25 19.9 +0.7**
VSU pmax pmax
comp=Z,49nm,1.0s
NB2 NORSAR Subarra 18.32 357 P **P 18 25 25.2 +0.8**
comp=Z,6.2nm,1.1s,baz=172,slow=12
NOA NORSAR Array B 18.32 357 P **P 18 25 24.7 +0.2**
baz=176,slow=11,SNR=6.9
NOA LR LR 18 33 50.0
comp=Z,96nm,18.0s,baz=355,slow=42
comp=Z,1.1nm,0.9s
VSR Storozhevoye 19.57 55 *e*P P 18 25 29.0 -9.2
VSR pmax pmax
comp=Z,10.0nm,1.3s
OBN Obninsk 19.61 43 P **Pn 18 25 38.6 -1.2**
comp=Z,0.4nm,0.3s,baz=208,slow=11,SNR=3.3
comp=Z,1.4nm,0.4s
OBN Obninsk 19.61 43⇑*e*P **P 18 25 37.7 -0.8**
OBN *e*S **S 18 29 15.7 -4.3**
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,290nm,18.0s
VORR Voronezh 19.73 54 *e*P **P 18 25 39.7 -0.2**
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 19.85 51 *e*P **P 18 25 39.3 -1.9**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
FINES FINESS Array B 20.23 18 P Pn 18 25 45.8 -1.5
comp=Z,4.4nm,0.8s,baz=193,slow=7.8,SNR=6.8
comp=Z,4.4nm,0.8s
MOS Moscow 20.44 42 *e*P **P 18 25 46.4 -1.2**
MOS pmax pmax
comp=Z,32nm,0.8s
TAM Tamanrasset 20.92 200 P **P 18 25 49.2 -4.0**
TAM Tamanrasset 20.92 200 P **P 18 25 49.2 -4.0**
TAM pmax pmax
comp=Z,6.0nm,1.2s
VRH Novokhopyorsk 21.13 57 *e*P **P 18 25 53.5 -1.6**
VRH pmax pmax
comp=Z,20nm,1.3s
KIV Kislovodsk 21.47 77 P **P 18 25 54.1 -4.9**
KIV IAmb IAmb 18 26 01.6
comp=Z,21nm,1.2s
KIV Kislovodsk 21.47 77 *e*P **P 18 26 00.6 +1.7**
KIV pmax pmax
comp=Z,17nm,1.1s
KVAR Kislovodsk Arr 21.48 77 P **P 18 26 02.5 +3.5**
comp=Z,7.2nm,1.0s,baz=262,slow=19
comp=Z,7.2nm,1.0s
ASF Jabal al Asfar 21.56 112 P **P 18 26 04.9 +4.9**
comp=Z,3.4nm,0.8s,baz=280,slow=2.7,SNR=6.7
KBZ Khabaz 21.65 77 P **P 18 26 02.6 +1.9**
comp=Z,6.0nm,0.9s,baz=265,slow=5.2,SNR=6.1
comp=Z,6.0nm,0.9s
KBZ Khabaz 21.65 77*ce*P **P 18 26 02.7 +1.9**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
MARD Mardin 21.81 95 P **P 18 26 00.4 -2.2**
MARD IAmb IAmb 18 26 12.9
comp=Z,16nm,1.3s
KLMR Klimovskoe 24.08 32 *e*P **P 18 26 24.0 -1.6**
KLMR pmax pmax
comp=Z,33nm,2.0s
KLMR Klimovskoe 24.08 32 *e*P **P 18 26 24.0 -1.6**
KLMR AMP 18 26 32.6
comp=Z,33nm,2.0s
BELG Belogornoye 24.95 55 P **P 18 26 36.0 +2.4**
comp=Z,39nm,0.9s,baz=241,slow=4.0,SNR=12
comp=Z,39nm,0.9s
BELG Belogornoye 24.95 55⇑*e*P **P 18 26 36.3 +2.6**
BELG pmax pmax
comp=Z,8.0nm,1.0s
KIRV Kirov 27.46 42⇑*e*P **P 18 26 58.3 +2.1**
TORD Torodi Ar. Bea 31.15 202 P **P 18 27 29.9 +0.6**
comp=Z,4.2nm,0.8s,baz=14,slow=9.0,SNR=30
comp=Z,4.2nm,0.8s
TORD Torodi Ar. Bea 31.15 202 P **P 18 27 26.4 -2.9**
TORD IAmb IAmb 18 27 31.4
comp=Z,5.3nm,0.9s
ARU Arti 31.81 49 P **P 18 27 32.4 -2.5**
ARU Arti 31.81 49*c i*P **P 18 27 35.1 +0.2**
ARU 18 28 37.5
ARU 18 30 22.0
ARU S **S 18 32 46.5 +1.2**
ARU SS **SnSn 18 34 32.2 0.0**
ARU pmax pmax
comp=Z,14nm,1.0s
SVE Sverdlovsk 32.99 48 *e*P **P 18 27 46.1 +0.9**
SVE pmax pmax
comp=Z,12nm,1.0s
GEYT Alibeck 34.31 83 P **P 18 27 58.2 +1.3**
comp=Z,1.8nm,0.8s,baz=299,slow=15,SNR=4.4
comp=Z,1.8nm,0.8s
BRVK Borovoye 38.68 54 P **P 18 28 32.5 -1.5**
BRVK IAmb IAmb 18 28 36.2
comp=Z,5.5nm,0.8s
BRVK Borovoye 38.68 54*ce*P **P 18 28 35.5 +1.5**
BRVK pmax pmax
comp=Z,8.0nm,1.3s
DBIC Dimbokro 39.32 209 P **P 18 28 39.6 -0.1**
comp=Z,3.7nm,0.8s,baz=324,slow=8.7,SNR=3.4
comp=Z,3.7nm,0.8s
KK31 Karatay Array 41.28 69 P **P 18 28 52.2 -3.6**
KK31 Karatay Array 41.28 69 P **P 18 28 52.2 -3.6**
KK31 pmax pmax
comp=Z,3.0nm,1.0s
KKAR Karatay Array 41.28 69 P **P 18 28 53.4 -2.4**
KKAR Karatay Array 41.28 69 P **P 18 28 53.4 -2.4**
AAK Ala-Archa 44.18 68 LR LR 18 48 48.5
comp=Z,78nm,18.1s,baz=310,slow=38
AAK Ala-Archa 44.18 68⇓*e*P **P 18 29 21.6 +2.1**
AAK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 44.23 56 P **P 18 29 19.3 -0.2**
KURK IAmb IAmb 18 29 21.4
comp=Z,7.8nm,1.4s
KURK Kurchatov 44.23 56 P **P 18 29 19.3 -0.2**
KURK pmax pmax
comp=Z,8.0nm,1.4s
NRIK Noril'sk 45.34 29 P **P 18 29 29.9 +1.7**
comp=Z,1.7nm,0.5s,baz=230,slow=1.9,SNR=2.8
comp=Z,1.7nm,0.5s
NRIK Noril'sk 45.34 29⇑*e*P **P 18 29 30.8 +2.6**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 46.46 72 P **P 18 29 38.5 +0.9**
KSH pP sP 18 29 43.5 +2.8
KSH pmax pmax
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 46.95 50 P **P 18 29 42.0 +1.0**
comp=Z,1.7nm,0.8s,baz=297,slow=6.5,SNR=8.5
ZALV LR LR 18 49 15.4
comp=Z,66nm,18.1s,baz=322,slow=36
comp=Z,1.7nm,0.8s
ZALV Zalesovo Beam 46.95 50 P **P 18 29 39.4 -1.6**
ZALV Zalesovo Beam 46.95 50 *i* P **P 18 29 42.9 +1.9**
ZALV pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 47.80 60 P **P 18 29 48.5 +0.6**
comp=Z,2.1nm,0.8s,baz=284,slow=4.9,SNR=8.7
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 47.80 60 P **P 18 29 45.0 -2.9**
MKAR Makanchi Array 47.80 60*ce*P **P 18 29 48.7 +0.9**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
DGZ Jazzator, Alta 49.90 55⇑*i*P **P 18 30 05.3 +1.2**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
WMQ Urumqi 52.50 62 *e*P **P 18 30 26.3 +2.8**
SONM Songino Array 61.84 50 P **P 18 31 31.0 +1.3**
comp=Z,4.0nm,0.9s,baz=297,slow=8.5,SNR=24
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 62.19 49⇑*e*P **P 18 31 33.7 +1.7**
ULN pmax pmax
comp=Z,2.0nm,1.1s
GTA Gaotai 62.55 61 *e*P **P 18 31 35.8 +1.3**
GTA pP sP 18 31 40.3 +2.6
GTA sP pP 18 31 42.5 +5.7
GTA pmax pmax
comp=Z,2.0nm,1.1s
YAK Yakutsk 63.78 28⇑*e*P **P 18 31 43.2 +1.1**
YAK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 66.44 347 P **P 18 31 59.8 +0.5**
comp=Z,2.4nm,1.0s,baz=23,slow=6.9,SNR=1.8
comp=Z,2.4nm,1.0s
BRDH Bariadhala 66.74 80 LR LR 19 07 18.5
comp=Z,77nm,19.5s,baz=206,slow=41
BILL Bilibino 67.66 11 *i* P **P 18 32 06.4 -0.7**
BILL *i* 18 32 35.7
BILL pmax pmax
comp=Z,11nm,1.2s
HHC Hu-ho-hao-te 68.96 54 *e*P **P 18 32 14.5 -1.3**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,120nm,3.6s
PZH PanZhiHua 71.56 71 P **P 18 32 32.0 0.0**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
ILAR Eielson Array 71.64 351 P **P 18 32 33.3 +1.6**
comp=Z,1.3nm,0.9s,baz=356,slow=4.5,SNR=8.8
comp=Z,1.3nm,0.9s
CMAR Chiang Mai Arr 74.69 79 P **P 18 32 50.6 +0.1**
comp=Z,0.8nm,0.8s,baz=302,slow=7.3,SNR=7.0
comp=Z,0.8nm,0.8s
CMAR Chiang Mai Arr 74.69 79 *i* P **P 18 32 53.0 +2.5**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 80.50 321 P **P 18 33 23.4 +0.5**
comp=Z,0.7nm,0.9s,baz=15,slow=3.8,SNR=4.7
comp=Z,0.7nm,0.9s
ANMO Albuquerque 84.99 314*ce*P **P 18 33 49.9 +3.6**
ANMO pmax pmax
comp=Z,3.0nm,1.7s
MJAR Matsushiro Arr 86.53 41 LR LR 19 16 24.5
comp=Z,46nm,18.4s,baz=356,slow=38
TXAR Lajitas Array 87.70 309 P **P 18 34 01.2 +1.6**
comp=Z,0.7nm,1.0s,baz=43,slow=2.4,SNR=5.1
comp=Z,0.7nm,1.0s

IDC 30 18:25:34.6±27.0, 22°.08S×173°.01W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=495.4km s-min=155.8km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.98	265	P	P	18 32 55.3	+0.8
	2.5nm,0.4s,baz=95,slow=9.9,SNR=11						
	2.5nm,0.4s						
STKA	Stephens Creek	41.36	246	P	P	18 33 21.2	-1.3
	1.4nm,0.5s,baz=102,slow=9.3,SNR=4.1						
	1.4nm,0.5s						
ASAR	Alice Springs	48.70	257	P	P	18 34 20.9	-0.3
	0.4nm,0.5s,baz=95,slow=7.4,SNR=26						
	0.4nm,0.5s						
WRA	Warramunga Arr	49.00	262	P	P	18 34 23.5	0.0
	1.0nm,0.4s,baz=96,slow=8.3,SNR=39						
	1.0nm,0.4s						

*STR **30** 18:39:25.3±2.5, 43°.7N×17°.4E±1°.5, h10km, MLv3.6/19, Error ellipse: s-maj=0.0km s-min=0.0km az=139.3, preliminary*
*IDC **30** 18:39:28.9±1.4, 42°.87N×13°.28E, h0km, mb3.6/4, mbtmp3.5/8, ML3.6/4, Error ellipse: s-maj=30.2km s-min=15.1km az=88.0*
*LDG **30** 18:39:28.6±0.1, 42°.80N×13°.11E, h10km, Ml3.3/23, Error ellipse: s-maj=1.8km s-min=0.9km az=48.0*
*ROM **30** 18:39:29.2±0.0, 42°.816N±0°.002×13°.093E±0°.004, h10km, ML3.5/5, Error ellipse: s-maj=0.3km s-min=0.1km az=76.0*
*PRU **30** 18:39:29.0±0.0, 42°.67N×13°.41E, h13km*
ISC 30 18:39:29.5±0.7, 42°.82N±0°.02×13°.06E±0°.01, h13km±4km, n218, σ2§21/285, mb3.5/3, 26C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	Cascia, Frazio	0.07	189	⇑P	Pg	18 39 32.1	-0.2
T1212				S	Sg	18 39 33.8	-0.4
T1216	Preci, Frazion	0.07	336	⇓P	Pg	18 39 32.1	-0.1
T1216				S	Sg	18 39 33.9	-0.3
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	Castelsantange	0.10	71	⇓P	Pg	18 39 32.1	-0.6
T1245				S	Sg	18 39 33.8	-1.1
T1245				AML	AML		
T1245				AML	AML		
T1213	Norcia, Frazio	0.11	153	⇑P	Pg	18 39 32.2	-0.4
T1213				S	Sg	18 39 34.1	-0.8
T1214	Arquata del Tr	0.13	120	⇓P	Pg	18 39 32.4	-0.5
T1214				S	Sg	18 39 34.4	-1.0
FEMA	Monte Fema	0.14	357	P	Pg	18 39 33.1	0.0
FEMA				S	Sg	18 39 35.7	-0.1
T1215	Vallo di Nera,	0.14	261	⇑P	Pg	18 39 33.5	+0.4
T1215				S	Sg	18 39 36.3	+0.7
T1215				AML	AML		
	comp=E,40150μm,0.4s						
T1215				AML	AML		
	comp=N,34500μm,0.8s						
T1215				AML	AML		
	comp=E,38900μm,0.4s						
T1215				AML	AML		
	comp=N,34600μm,0.8s						
T1215				AML	AML		
	comp=E,40150μm,0.4s						
T1215				AML	AML		
	comp=E,38950μm,0.4s						
T1215				AML	AML		
	comp=N,34550μm,0.8s						
T1215				AML	AML		
	comp=E,40200μm,0.4s						
T1215				AML	AML		
	comp=N,34500μm,0.8s						
T1215				AML	AML		
	comp=N,34600μm,0.8s						
T1217	**Poggiodomo (PG**	**0.15**	**220**	⇑P	**Pg**	**18 39 33.4**	**+0.2**
T1217				S	**Sg**	**18 39 36.3**	**+0.6**
T1217				AML	AML		
	comp=E,24700μm,0.4s						
T1217				AML	AML		
	comp=N,35650μm,0.4s						
T1217				AML	AML		
	comp=E,24100μm,0.4s						
T1217				AML	AML		
	comp=N,34900μm,0.4s						
T1217				AML	AML		
	comp=E,24750μm,0.3s						
T1217				AML	AML		
	comp=N,35700μm,0.4s						
T1217				AML	AML		
	comp=N,34850μm,0.4s						
T1217				AML	AML		
	comp=N,34900μm,0.4s						
T1217				AML	AML		
	comp=N,35700μm,0.4s						
T1217				AML	AML		
	comp=E,24700μm,0.3s						
T1217				AML	AML		
	comp=E,24050μm,0.3s						
T1218	**Civita (PG)**	**0.16**	**165**	⇑P	**Pg**	**18 39 33.2**	**-0.2**
T1218				S	**Sg**	**18 39 35.9**	**-0.2**
MMO1	**Montemonaco**	**0.21**	**69**	⇑P	**Pg**	**18 39 33.8**	**-0.4**
MMO1				S	**Sg**	**18 39 36.9**	**-0.5**
FDMO	**Fiordimonte**	**0.21**	**6**	⇑P	**Pg**	**18 39 34.3**	**+0.1**
FDMO				S	**Sg**	**18 39 37.9**	**+0.4**
T1201	**Domo (RI)**	**0.22**	**140**	P	**Pg**	**18 39 34.3**	**0.0**
T1201				S	**Sg**	**18 39 38.1**	**+0.5**
T1256	**Bolognola (MC)**	**0.22**	**34**	⇑P	**Pg**	**18 39 34.1**	**-0.3**
T1256				S	**Sg**	**18 39 37.8**	**+0.1**
LNSS	**Leonessa**	**0.22**	**184**	P	**Pg**	**18 39 34.3**	**0.0**
LNSS				S	**Sg**	**18 39 38.4**	**+0.7**
T1219	**Muccia, Frazio**	**0.23**	**351**	⇑P	**Pg**	**18 39 34.7**	**+0.1**
T1219				S	**Sg**	**18 39 38.5**	**+0.5**
T1204	**Amatrice, Fraz**	**0.24**	**128**	P	**Pg**	**18 39 34.5**	**-0.2**
AM05	**Amandola Campo**	**0.27**	**54**	⇑P	**Pg**	**18 39 34.9**	**-0.2**
AM05				S	**Sg**	**18 39 39.0**	**+0.2**
T1241	**Roccafluvione,**	**0.28**	**83**	P	**Pb**	**18 39 35.2**	**-1.2**
T1241				S	**Sb**	**18 39 39.3**	**-1.6**
SMA1	**SAN MARTINO**	**0.28**	**133**	P	**Pg**	**18 39 35.1**	**-0.3**
SMA1				S	**Sg**	**18 39 39.6**	**+0.3**
T1243	**Rocca Santa Ma**	**0.31**	**114**	P	**Pg**	**18 39 35.4**	**-0.6**
T1243				S	**Sg**	**18 39 40.0**	**-0.3**
GUMA	**Gualdo di Mace**	**0.31**	**40**	⇑P	**Pg**	**18 39 36.1**	**+0.1**
GUMA				S	**Sg**	**18 39 41.3**	**+1.0**
ARRO	**Arrone**	**0.33**	**222**	⇑P	**Pg**	**18 39 36.5**	**+0.3**
ARRO				S	**Sg**	**18 39 42.0**	**+1.4**
T1211	**Morro Reatino**	**0.33**	**207**	⇑P	**Pg**	**18 39 36.3**	**+0.1**
T1211				S	**Sg**	**18 39 41.9**	**+1.2**
RM33	**Pellescritta (**	**0.33**	**160**	P	**Pg**	**18 39 36.0**	**-0.3**
RM33				S	**Sg**	**18 39 41.3**	**+0.4**
SEF1	**Sefro**	**0.33**	**346**	P	**Pb**	**18 39 36.4**	**-0.9**
SEF1				S	**Sb**	**18 39 42.1**	**-0.5**
PIO1	**Pioraco**	**0.36**	**351**	P	**Pb**	**18 39 36.8**	**-1.0**
PIO1				S	**Sb**	**18 39 42.9**	**-0.5**
ASSB	**Assisi San Ben**	**0.37**	**307**	P	**Pb**	**18 39 37.2**	**-0.7**
ASSB				S	**Sb**	**18 39 43.3**	**-0.3**
MDAR	**Monte D'Aria**	**0.37**	**9**	P	**Pb**	**18 39 37.0**	**-1.1**
MDAR				S	**Sb**	**18 39 43.0**	**-0.9**
FIU1	**Fiuminata**	**0.38**	**346**	P	**Pb**	**18 39 37.3**	**-0.8**
FIU1				S	**Sb**	**18 39 43.4**	**-0.4**
CAMP	**Campotosto**	**0.39**	**138**	P	**Pg**	**18 39 36.7**	**-0.5**
CAMP				S	**Sg**	**18 39 42.3**	**-0.2**
T1246	**Crognaleto (TE**	**0.40**	**127**	P	**Pg**	**18 39 36.9**	**-0.6**
CESX	**Cesi**	**0.41**	**239**	⇑P	**Pg**	**18 39 37.9**	**+0.2**
CESX				S	**Sg**	**18 39 44.4**	**+1.1**
GAG1	**Gagliole**	**0.41**	**1**	P	**Pb**	**18 39 37.9**	**-0.8**
GAG1				S	**Sb**	**18 39 44.8**	**-0.2**
T1247	**Pizzolo (AQ)**	**0.42**	**155**	P	**Pg**	**18 39 37.6**	**-0.3**
MNTP	**Montappone**	**0.43**	**44**	P	**Pb**	**18 39 38.5**	**-0.6**
SNTG	**Esanatoglia**	**0.44**	**349**	⇑P	**Pb**	**18 39 38.2**	**-0.9**
SNTG				S	**Sb**	**18 39 45.5**	**-0.2**
TERO	**Teramo**	**0.45**	**116**	P	**Pg**	**18 39 37.7**	**-0.7**
TERO				S	**Sg**	**18 39 44.2**	**-0.2**
OFFI	**Offida**	**0.47**	**76**	⇑P	**Pb**	**18 39 39.1**	**-0.6**
ATCC	**AVT- Casa Cast**	**0.47**	**320**	P	**Pb**	**18 39 39.2**	**-0.5**
ATCC				S	**Sb**	**18 39 47.2**	**+0.5**
EL6	**Elcito**	**0.51**	**4**	⇑P	**Pb**	**18 39 39.4**	**-0.9**
EL6				S	**Sb**	**18 39 47.6**	**-0.1**
FOSV	**Fossato di Vic**	**0.52**	**335**	⇑P	**Pb**	**18 39 39.8**	**-0.7**
FOSV				S	**Sb**	**18 39 48.2**	**+0.3**
TRE1	**Treia**	**0.52**	**21**	P	**Pb**	**18 39 40.0**	**-0.5**
TRE1				S	**Sb**	**18 39 48.8**	**+0.8**
GIGS	**Gran Sasso**	**0.53**	**135**	P	**Pg**	**18 39 39.2**	**-0.7**
GIGS				S	**Sg**	**18 39 46.9**	**0.0**
AQU	**L'Aquila**	**0.53**	**152**	P	**Pg**	**18 39 39.8**	**-0.1**
FIAM	**Fiamignano**	**0.56**	**176**	P	**Pg**	**18 39 39.8**	**-0.6**
FIAM				S	**Sg**	**18 39 48.1**	**+0.3**
CING	**Cingoli**	**0.56**	**10**	P	**Pb**	**18 39 40.3**	**-0.9**
MURB	**Monte Urbino**	**0.59**	**318**	P	**Pb**	**18 39 41.2**	**-0.5**
MMUR	**Monte Murano**	**0.62**	**356**	P	**Pb**	**18 39 41.4**	**-0.9**
MMUR				S	**Sb**	**18 39 51.2**	**+0.3**
TRTR	**Tortoreto Alta**	**0.63**	**91**	⇑P	**Pb**	**18 39 42.2**	**-0.1**
CADA	**Capodarco di F**	**0.64**	**54**	P	**Pn**	**18 39 42.8**	**-1.4**
ATTE	**AVT- Monte Tez**	**0.64**	**306**	P	**Pb**	**18 39 42.3**	**-0.2**
ATFO	**Monte Foce - G**	**0.65**	**327**	P	**Pb**	**18 39 42.5**	**-0.3**
CIMA	**Civitanova Mar**	**0.66**	**43**	P	**Pb**	**18 39 42.8**	**0.0**
ATSC	**Scheggia e Pas**	**0.66**	**336**	P	**Pb**	**18 39 42.2**	**-0.7**
ARVD	**Arcevia**	**0.68**	**353**	P	**Pb**	**18 39 42.5**	**-0.7**
ARVD				S	**Sn**	**18 39 53.5**	**-1.9**
PP3	**Marolino**	**0.69**	**36**	P	**Pb**	**18 39 43.2**	**-0.1**
ATLO	**AVT- Montelove**	**0.69**	**316**	P	**Pb**	**18 39 42.9**	**-0.4**
MGAB	**Montegabbione**	**0.70**	**278**	P	**Pg**	**18 39 43.3**	**+0.1**
SRES	**S.Oreste - Sor**	**0.71**	**215**	P	**Pg**	**18 39 42.9**	**-0.5**
VCEL	**Villa Celiera**	**0.72**	**126**	P	**Pg**	**18 39 42.9**	**-0.6**
ATVA	**AVT- Monte Val**	**0.73**	**309**	P	**Pb**	**18 39 44.2**	**+0.1**
ATVO	**AVT- Monte Val**	**0.73**	**320**	P	**Pb**	**18 39 43.5**	**-0.6**
FRON	**Frontone**	**0.74**	**341**	P	**Pb**	**18 39 43.3**	**-0.9**
TB03	**Pietralunga**	**0.75**	**321**	P	**Pb**	**18 39 43.5**	**-0.9**
ATBU	**Serra di Buran**	**0.75**	**330**	P	**Pb**	**18 39 44.1**	**-0.4**
ATMI	**Monte Miggiano**	**0.77**	**312**	P	**Pb**	**18 39 45.2**	**+0.4**
ATPI	**Pietralunga -**	**0.79**	**323**	P	**Pb**	**18 39 44.0**	**-1.1**
ATPC	**Poggio Castell**	**0.79**	**326**	P	**Pb**	**18 39 44.9**	**-0.3**
T0110	**Collepietro**	**0.80**	**138**	P	**Pg**	**18 39 44.2**	**-0.8**
PIEI	**Pieia**	**0.81**	**332**	P	**Pb**	**18 39 44.8**	**-0.6**
AOI	**Ancona**	**0.83**	**28**	⇑P	**Pb**	**18 39 45.1**	**-0.7**
MTCE	**Montecelio**	**0.83**	**196**	P	**Pg**	**18 39 44.4**	**-1.2**
MPAG	**Monte Paganucc**	**0.83**	**345**	P	**Pb**	**18 39 45.2**	**-0.7**
PTQR	**Pietraquaria**	**0.84**	**162**	P	**Pg**	**18 39 44.6**	**-1.1**
SACS	**San Casciano d**	**0.85**	**272**	P	**Pb**	**18 39 46.3**	**+0.3**
APEC	**Apecchio**	**0.87**	**328**	P	**Pn**	**18 39 46.8**	**-0.7**
CERT	**Cerreto**	**0.88**	**184**	P	**Pg**	**18 39 45.3**	**-1.1**
SENI	**Senigallia**	**0.89**	**8**	P	**Pn**	**18 39 46.5**	**-1.2**
FSSB	**Fossombrone**	**0.89**	**347**	P	**Pb**	**18 39 46.4**	**-0.5**
CAFI	**Castiglion Fio**	**0.95**	**303**	P	**Pb**	**18 39 47.6**	**-0.2**
LATE	**Laterza**	**0.95**	**258**	P	**Pg**	**18 39 48.2**	**+0.4**
PE3	**Peglio**	**0.96**	**335**	P	**Pn**	**18 39 48.5**	**-0.2**
RCAV	**Rocca di Cave**	**0.98**	**185**	P	**Pg**	**18 39 48.5**	**+0.2**
SSP9	**Sansepolcro**	**1.01**	**318**	P	**Pn**	**18 39 49.5**	**+0.1**
MCIV	**Monte Civitell**	**1.02**	**268**	P	**Pg**	**18 39 49.3**	**+0.1**
RMP	**Rome, Mte Porz**	**1.05**	**195**	P	**Pg**	**18 39 49.1**	**-0.6**
TOLF	**Tolfa**	**1.09**	**226**	⇑P	**Pg**	**18 39 49.8**	**-0.7**
SAMA	**S.Maria delle**	**1.10**	**199**	P	**Pg**	**18 39 49.8**	**-0.8**
SAMA				AML	AML		
	comp=E,1280μm,0.5s						
SAMA				AML	AML		
	comp=N,1119μm,1.0s						
CPGN	**Carpegna, Ital**	**1.12**	**331**	P	**Pn**	**18 39 51.0**	**0.0**
ARCI	**Arcidosso**	**1.17**	**272**	P	**Pb**	**18 39 52.3**	**+0.8**
LRP	**Arpino**	**1.24**	**161**	P	**Pg**	**18 39 53.8**	**+0.5**
LRP				AML	AML		
	comp=N,964μm,0.5s						
LRP				AML	AML		
	comp=E,586μm,1.4s						
LRP				AML	AML		
	comp=N,963μm,0.5s						
GIUL	**Giuliano Di Ro**	**1.27**	**173**	P	**Pg**	**18 39 52.5**	**-1.4**
ASQU	**Asqua**	**1.34**	**317**	P	**Pn**	**18 39 55.3**	**+1.3**
CSNT	**Castellina Chi**	**1.45**	**297**	P	**Pn**	**18 39 56.0**	**+0.6**

FROS Frosini 1.45 286 P **Pn 18 39 55.9 +0.5**
MAON Monte Argentar 1.48 255 P **Pn 18 39 56.1 +0.4**
OSSC Osservatorio P 1.50 298 P **Pn 18 39 55.7 -0.4**
RUFI Rufina 1.52 312 P **Pn 18 39 56.8 +0.5**
TRIV Trivento 1.53 133 P **Pn 18 39 58.0 +1.4**
LMD Lutirano 1.59 322 P **Pg 18 39 59.5 -0.6**
TRIF Trifonti 1.61 281 P **Pn 18 39 58.3 +0.7**
CASP Castiglione de 1.61 270 P **Pn 18 39 57.6 -0.1**
VAGA Valle Agricola 1.66 148 P **Pn 18 40 00.3 +2.0**
MTCR Monte La Croce 1.92 309 P **Pn 18 40 02.1 +0.1**
POPM Popiglio 2.07 307 P **Pb 18 40 05.6 -1.4**
BRJN Brijuni 2.14 13 P **Pn 18 40 05.1 +0.3**
SGRT San Giovanni R 2.26 117 P **Pn 18 40 07.8 +1.2**
MORSI Morsiglia 2.72 274 P **Pn 18 40 14.3 +1.5**
MORSI S **Sn 18 40 48.4 +2.8**
SKDS Skadanscina 2.81 14⇑*i*Pn **Pn 18 40 14.4 +0.3**
SKDS *e*Sn **Sn 18 40 49.4 +1.6**
SKDS IAML 18 40 51.5
comp=Z,77nm,0.3s
SMPL Sampolo 2.89 257 P **Pn 18 40 17.9 +2.7**
PGF Pioggiola 3.01 266 *e*P **Pn 18 40 18.3 +1.4**
PGF *e*Sn **Sn 18 40 49.6 -3.2**
comp=Z,15nm,0.6s
PGF Pioggiola 3.01 266 P **Pn 18 40 18.4 +1.5**
PGF Pioggiola 3.01 266 S **Sn 18 40 56.2 +3.4**
CEY Cerknica 3.08 18 *e*Pn **Pn 18 40 18.1 +0.3**
CEY Cerknica 3.08 18 *i* Pn **Pn 18 40 18.3 +0.5**
SRKY Kupres RS 3.24 66 *e*Pn **Pn 18 40 22.6 +2.5**
AJAC Base Areonaval 3.31 256 P **Pn 18 40 23.2 +2.3**
MGRS Mrkonjic Grad 3.33 60 *e*Pn **Pn 18 40 22.4 +1.1**
STON Ston 3.41 88 *e*Pn Pn 18 40 17.5 -4.8
CADS Cadrg 3.44 8 *i* Pn **Pn 18 40 23.3 +0.5**
A051A Mrakovica 3.54 50 *e*Pn **Pn 18 40 25.0 +0.8**
BLY Banja Luka 3.55 56 *e*Pn **Pn 18 40 25.7 +1.4**
MYKA Terra Mystica 3.83 6 *i* Pn **Pn 18 40 29.5 +1.3**
comp=Z,13nm,0.4s,SNR=10
OBKA Obir 3.84 16 *e*Pn **Pn 18 40 28.4 +0.1**
OBKA Obir 3.84 16 *e*Pn **Pn 18 40 29.2 +0.9**
comp=Z,3.2nm,0.2s
TREB Trebinje 3.90 90 *e*Pn **Pn 18 40 30.1 +1.1**
ABTA Abfaltersbach 3.94 355 *i* Pn **Pn 18 40 31.7 +2.0**
comp=Z,38nm,0.6s,SNR=24
ABTA *e*Sn **Sn 18 41 17.7 +1.8**
comp=Z,14nm,0.6s
HCY Herceg Novi 4.03 94 *e*Pn **Pn 18 40 30.5 -0.3**
BRY Bratogost 4.03 87 *e*Pn **Pn 18 40 31.9 +0.9**
SOKA Soboth 4.10 19 *e*Pn **Pn 18 40 33.2 +1.3**
comp=Z,3.9nm,0.3s
SAOF Saorge 4.17 288 P **Pn 18 40 34.7 +1.8**
SBF Sospel 4.23 286 *e*P **Pn 18 40 35.7 +2.0**
SBF *e*Sn **Sn 18 41 19.2 -3.8**
comp=Z,18nm,0.5s
TURF col de Turini 4.29 288 P **Pn 18 40 36.7 +2.2**
SPIF crte de Spivo 4.42 288 P Pn 18 40 41.7 +5.4
HAPS Han Pijesak,BI 4.47 72 *e*Pn **Pn 18 40 38.6 +1.6**
FETA Feichten 4.51 339 *i* Pn **Pn 18 40 41.1 +3.5**
comp=Z,4.7nm,0.4s,SNR=6.4
WTTA Wattenberg 4.55 348 *e*Pn **Pn 18 40 41.4 +3.2**
comp=Z,4.8nm,0.3s
DAVOX Davos/Dischmat 4.56 331 Pn **Pn 18 40 41.7 +3.4**
comp=Z,3.1nm,0.3s,baz=147,slow=9.9,SNR=28
DAVOX Sn **Sn 18 41 34.1 +2.9**
comp=Z,2.7nm,0.3s,baz=308,slow=19,SNR=6.7
comp=Z,8.1nm,0.3s
DRME Dracevica, Mon 4.57 96 *e*Pn **Pn 18 40 39.3 +1.0**
CALF Calern 4.58 284 P **Pn 18 40 39.9 +1.4**
SQTA Sankt Quirin 4.59 344 *i* Pn **Pn 18 40 41.9 +3.2**
comp=Z,6.6nm,0.2s,SNR=9.1
PDG Podgorica 4.59 93 P **Pn 18 40 40.3 +1.8**
WATA Walderalm 4.63 347 *i* Pn **Pn 18 40 42.7 +3.4**
comp=Z,4.5nm,0.2s,SNR=7.2
RUDO Rudo 4.68 78 *e*Pn **Pn 18 40 40.6 +0.8**
MOTA Moosalm 4.73 344 *e*Pn **Pn 18 40 44.5 +3.9**
comp=Z,1.1nm,0.3s
BBLS Lazići 4.74 75 *e*Pn **Pn 18 40 41.3 +0.6**
ARSA Arzberg 4.76 21 *i* Pn **Pn 18 40 41.7 +0.8**
comp=Z,5.4nm,0.4s,SNR=7.0
LMR La Mourre 4.83 278 *e*P **Pn 18 40 43.6 +1.8**
LMR *e*Sn **Sn 18 41 32.9 -4.6**
comp=Z,3.5nm,0.5s
SURF Saint Ours 4.83 292 P **Pn 18 40 44.8 +2.8**
JAUF Jausiers 4.85 291 P **Pn 18 40 45.0 +2.6**
BIOA Bad Ischl, Aus 4.88 5 *i* Pn **Pn 18 40 44.2 +1.6**
comp=Z,16nm,0.3s,SNR=19
MBDF Montbardon 4.94 295 *e*P **Pn 18 40 45.4 +2.0**
MBDF *e*Sn **Sn 18 41 35.7 -4.7**
comp=Z,9.0nm,0.7s
RETA Reutte 4.94 342 *e*Pn **Pn 18 40 46.5 +3.1**
comp=Z,4.2nm,0.3s
TRIGF Trigance 4.94 283 P **Pn 18 40 45.6 +2.1**
CREF Crivoux 4.98 292 P **Pn 18 40 48.4 +4.4**
DAVA Damuels 5.00 334 *i* Pn **Pn 18 40 47.5 +3.1**
comp=Z,5.3nm,0.5s,SNR=6.0
FLAF Flassans-sur-I 5.01 279 P **Pn 18 40 46.1 +1.7**
MOA Molln 5.10 9 *e*Pn **Pn 18 40 46.9 +1.3**
comp=Z,6.3nm,0.4s
DIX Grande Dixence 5.19 311 P **Pn 18 40 50.8 +3.7**
MORH Mrgy, Hungar 5.24 48 P **Pn 18 40 50.9 +3.4**
LPG La Plagne 5.27 303 *e*P **Pn 18 40 50.6 +2.5**
LPG *e*Sn **Sn 18 41 44.1 -4.7**
comp=Z,11nm,0.7s
LPL La Plagne 5.29 303 *e*P **Pn 18 40 51.4 +3.1**
LPL *e*Sn **Sn 18 41 44.4 -4.8**
comp=Z,5.4nm,0.4s
ARTF Artigues 5.36 281 P **Pn 18 40 51.3 +2.2**
RONA Rosalia, Austr 5.38 24 *e*Pn **Pn 18 40 50.3 +0.8**
comp=Z,3.0nm,0.2s
FRGS Fruska Gora 5.40 62 *e*Pn **Pn 18 40 46.3 -3.4**
CONA Conrad Observa 5.47 20 *i* Pn **Pn 18 40 51.5 +0.8**
comp=Z,5.2nm,0.2s,SNR=8.1
BSTF la Bastide-des 5.51 284 P **Pn 18 40 53.2 +2.0**
SMRF Simiane la Rot 5.57 284 *e*P **Pn 18 40 55.2 +3.1**
SMRF *e*Sn **Sn 18 41 51.1 -4.9**
comp=Z,3.0nm,0.6s
ORIF Oris-en-Rattie 5.60 294 *e*P **Pn 18 40 55.5 +3.0**
ORIF *e*Sn **Sn 18 41 51.4 -5.3**
comp=Z,10nm,0.6s
ORIF Oris-en-Rattie 5.60 294 P **Pn 18 40 56.0 +3.5**
BALST Balsthal 5.90 322 P **Pn 18 40 59.3 +2.8**
SLE Schleitheim 5.90 328 P **Pn 18 40 58.6 +2.1**
GERES GERESS Array B 6.04 4 Pn **Pn 18 40 58.9 +0.4**
comp=Z,1.6nm,0.3s,baz=175,slow=13,SNR=47
GERES Sn **Sn 18 42 07.5 0.0**
comp=Z,2.9nm,0.3s,baz=179,slow=26,SNR=10.0
comp=Z,2.0nm,0.3s
CKRC Cesky Krumlov 6.06 8 *e*PN **Pn 18 40 59.0 +0.2**
CKRC *e*SN **Sn 18 42 07.5 -0.5**
BOURR Bourrignon 6.16 320 P **Pn 18 41 03.0 +2.9**
BRANT Les Verrieres 6.23 314 P **Pn 18 41 04.3 +3.2**
CABF La Chapelle 6.25 310 *e*P **Pn 18 41 04.1 +2.7**
CABF *e*Sn **Sn 18 42 07.0 -5.6**
comp=Z,13nm,0.8s
KIZ Kirchzarten 6.28 327 P **Pn 18 41 03.6 +1.8**
KHC Kasperske Hory 6.32 3 *e*PN **Pn 18 41 02.7 +0.4**
KHC *e*SN **Sn 18 42 14.3 -0.1**
BOVS Bovan 6.37 80 ⇓P **Pn 18 41 03.7 +0.8**
VIVF Saint-Julien-l 6.40 291 *e*P **Pn 18 41 06.3 +2.9**
BOUC Bouclans 6.54 315 P **Pn 18 41 08.2 +2.9**
HINF Hinteralfeld 6.64 321 *e*P **Pn 18 41 09.6 +2.9**
HINF *e*Sn **Sn 18 42 16.2 -6.0**
comp=Z,8.0nm,0.3s
KRUC Moravsky 6.66 19 *e*PN **Pn 18 41 06.9 0.0**
KRUC *e*SN **Sn 18 42 20.6 -2.0**
RONF Ronchamp 6.66 319 P **Pn 18 41 08.9 +1.9**
BZS Buzias 6.75 63 ⇑P **Pn 18 41 10.6 +2.4**
ECH Echery 6.80 324 P **Pn 18 41 10.4 +1.5**
LASF Ste Croix 6.81 284 *e*P **Pn 18 41 11.8 +2.7**
CDF Champ du Feu 6.90 326 *e*P **Pn 18 41 12.3 +1.9**
CDF *e*Sn **Sn 18 42 22.3 -6.5**
comp=Z,11nm,0.5s
VRAC Vranov 6.94 20 Pn **Pn 18 41 10.8 0.0**
comp=Z,0.2nm,0.3s,baz=202,slow=18,SNR=1.9
VRAC Sn **Sn 18 42 25.9 -3.6**
comp=Z,0.5nm,0.3s,baz=109,slow=20,SNR=2.2
comp=Z,1.0nm,0.4s
VRAC Vranov 6.94 20 *e*PN **Pn 18 41 14.1 +3.3**
HAU Haudompre 7.01 320 *e*P **Pn 18 41 14.6 +2.8**
HAU *e*Sn **Sn 18 42 25.2 -6.1**
comp=Z,29nm,0.5s
BLKB Belogradchik 7.07 80 ⇑P **Pn 18 41 14.1 +1.4**
HERR Herculane 7.07 70 ⇓P **Pn 18 41 14.6 +2.0**
PRU Pruhonice 7.24 8 *e*SN **Sn 18 42 34.8 -2.1**
NKC Novy Kostel 7.42 357 *e*SN **Sn 18 42 40.7 -0.8**

GZR Gura Zlata 7.45 67 ⇓P **Pn 18 41 20.8 +2.9**
SMF Signal de Mont 7.59 303 *e*P **Pn 18 41 22.6 +2.8**
SMF *e*Sn **Sn 18 42 38.7 -7.0**
comp=Z,8.1nm,0.7s
KEST Kesra 7.64 203 Pn Pn 18 41 26.4 +5.9
comp=Z,0.5nm,0.3s,baz=4.7,slow=6.1,SNR=6.6
DEV Deva 7.69 63 ⇑P **Pn 18 41 23.6 +2.5**
PAGF Fort de Pagny 7.69 321 *e*P **Pn 18 41 24.3 +3.2**
PAGF *e*Sn **Sn 18 42 41.4 -6.7**
comp=Z,8.7nm,0.5s
SFTF Sexfontaines 7.79 316 *e*P **Pn 18 41 26.0 +3.5**
SFTF *e*Sn **Sn 18 42 43.8 -6.6**
comp=Z,10nm,0.7s
LOR Lormes 7.88 307 *e*P **Pn 18 41 26.8 +3.0**
LOR *e*Sn **Sn 18 42 46.1 -6.8**
comp=Z,3.8nm,0.4s
MTLF Montolieu 7.96 277 *e*P **Pn 18 41 27.4 +2.6**
AVF Avril sur Loir 7.96 303 *e*P **Pn 18 41 28.1 +3.3**
MEZF Maizieres J'vi 7.98 318 *e*P **Pn 18 41 29.4 +4.4**
MEZF *e*Sn **Sn 18 42 48.5 -6.6**
comp=Z,6.5nm,0.5s
SSF Saint Saulge 7.99 305 *e*P **Pn 18 41 28.6 +3.4**
SSF *e*Sn **Sn 18 42 48.3 -7.1**
comp=Z,4.8nm,0.7s
SAVF Savonnieres en 8.02 319 *e*P **Pn 18 41 28.6 +3.0**
SAVF *e*Sn **Sn 18 42 49.2 -6.9**
comp=Z,8.1nm,0.6s
MARR Marisel-Cluj 8.13 58 P **Pn 18 41 29.7 +2.5**
BGF Bois d'Agland 8.18 301 *e*P **Pn 18 41 30.4 +2.6**
BGF *e*Sn **Sn 18 42 52.7 -7.3**
comp=Z,5.6nm,0.5s
CAF Calviac 8.22 289 *e*P **Pn 18 41 31.2 +2.8**
CLL Collm 8.49 360 *e*Pn **Pn 18 41 32.0 0.0**
CLL *e*Pg Pg 18 42 10.0 -1.8
CLL *e*Sn Sn 18 42 51.0 -17
CLL *e*x x 18 43 10.0
CLL *e*x x 18 43 40.0
CLL *e*Sg Sg 18 43 54.0 -7.6
comp=Z,34nm,2.0s
ARR Arges 8.71 69 ⇑P **Pn 18 41 38.0 +2.9**
EKA Eskdalemuir Ar 16.36 326 Pn **P 18 43 21.7 +0.1**
baz=135,slow=14
comp=Z,0.2nm,0.5s
FINES FINESS Array B 20.21 18 P **P 18 44 04.1 +0.3**
comp=Z,2.9nm,0.8s,baz=195,slow=9.9,SNR=4.9
comp=Z,2.9nm,0.8s
TORD Torodi Ar. Bea 31.16 202 P **P 18 45 49.3 +1.2**
comp=Z,0.4nm,0.6s,baz=14,slow=9.5,SNR=4.0
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 47.83 60 P **P 18 48 07.7 +1.0**
comp=Z,1.0nm,0.8s,baz=289,slow=7.4,SNR=3.5
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 74.74 79 P **P 18 51 10.9 +1.6**
comp=Z,0.2nm,0.6s,baz=303,slow=7.0,SNR=1.7
comp=Z,0.2nm,0.6s

AAE 30 18:45:36.8±0.7, 2°83N×34°55E, h0km±28km, Uganda

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODK	**Lodwar**	**1.00**	**54**	*e*P	Pg	18 45 53.8	-2.2
LODK				*e*S	Sg	18 46 08.7	-0.3
LODK	**Lodwar**	**1.00**	**54**	*e*P	Pg	18 45 54.2	-1.8
LODK				*e*S	Sg	18 46 09.0	-0.1
LODK	**Lodwar**	**1.00**	**54**	*e*P	Pg	18 45 54.4	-1.7
LODK				*e*S	Sg	18 46 08.3	-0.7
LODK	**Lodwar**	**1.00**	**54**	*e*P	Pg	18 45 54.4	-1.7
LODK				*e*S	Sg	18 46 08.8	-0.3
ENT	**Entebbe**	**3.45**	**217**	*e*P	Pn	18 46 27.6	-4.3
ENT				*e*S	Sb	18 47 23.7	+2.3
KMBO	**Kilima Mbogo**	**4.77**	**145**	*e*P	Pn	18 46 35.5	-15
KMBO				*e*S	Sn	18 47 32.4	-14
KMBO	**Kilima Mbogo**	**4.77**	**145**	*e*P	Pn	18 46 45.4	-4.8
KMBO				*e*S	Sn	18 47 21.3	-25
KMBO	**Kilima Mbogo**	**4.77**	**145**	*e*P	Pn	18 46 39.2	-11
MBAR	**Mbarara**	**5.11**	**228**	*e*P	Pn	18 46 53.1	-1.8
MBAR				*e*S	Sg	18 48 19.8	-1.5
MBAR	**Mbarara**	**5.11**	**228**	*e*P	Pn	18 46 52.2	-2.6
MBAR				*e*S	Sg	18 48 18.0	-3.2
MBAR	**Mbarara**	**5.11**	**228**	*e*P	Pn	18 46 52.8	-2.0
MBAR	**Mbarara**	**5.11**	**228**	*e*P	Pn	18 46 52.8	-2.1
KIL	**Kilembe**	**5.24**	**240**	*e*P	Pn	18 46 57.3	+0.7
KIL				*e*S	Sb	18 48 12.3	-0.7

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*SKHL **30** 18:45:47.8±0.1, 44°30N×148°20E, h49km±2km, mb4.4/2*
*JMA **30** 18:45:47.2±0.3, 44°N±1°×14°8E±°, h0km, MV3.9/30, SE OFF ETOROFU*
ISC 30 18:45:42.2±3.7, 44°21N±0°09×148°4E±0°2, h11km±20km, n17, σ2°13/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.09**	**340**	*i* P	**Pn**	**18 46 04.2**	**+0.9**
KUR				AMB	AMB	18 46 05.1	
150nm,0.3s							
KUR				*e*S	**Sg**	**18 46 16.6**	**-0.7**
KUR				A	A	18 46 18.8	
590nm,0.4s							
KUR				A	A	18 46 18.8	
720nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.84**	**265**	*i* P	**Pb**	**18 46 14.9**	**-0.8**
YUK				AMB	AMB	18 46 16.8	
220nm,0.4s							
YUK				*i* S	**Sn**	**18 46 35.2**	**-1.6**
YUK				A	A	18 46 41.2	
630nm,0.5s							
YUK				A	A	18 46 41.2	
710nm,0.5s							
NEM2	**Nemuro 2**	**2.10**	**247**	*e*P	**Pn**	**18 46 18.4**	**+1.2**
NEM2				*e*S	**Sn**	**18 46 41.4**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.11**	**247**	*i* P	**Pn**	**18 46 18.4**	**+1.0**
NMR				*i* S	**Sn**	**18 46 41.4**	**-2.1**
JRA	**Rausu**	**2.38**	**264**	*e*P	**Pb**	**18 46 23.4**	**-1.6**
JRA				*e*S	**Sn**	**18 46 49.7**	**-0.4**
JNSB	**Nemuroshibetsu**	**2.49**	**261**	*e*P	**Pn**	**18 46 24.7**	**+2.2**
JKHN	**Kushirohamanak**	**2.61**	**245**	*e*P	**Pn**	**18 46 25.9**	**+1.6**
JKHN				*e*S	**Sn**	**18 46 54.1**	**-1.8**
JNK	**Nakash**	**2.73**	**258**	*e*P	**Pn**	**18 46 28.0**	**+2.0**
JNK				*e*S	**Sn**	**18 46 57.7**	**-1.2**
AKK	**Akkeshi**	**2.85**	**246**	*e*P	**Pn**	**18 46 29.0**	**+1.5**
AKK				*e*S	**Sn**	**18 46 59.7**	**-2.0**
JAK	**Akkeshi**	**2.95**	**247**	*e*P	**Pn**	**18 46 30.6**	**+1.6**
JTKR	**Abashiri--Toko**	**3.25**	**267**	*e*P	**Pn**	**18 46 36.5**	**+3.5**
JAR	**Ashorobuto**	**3.48**	**256**	*e*P	**Pn**	**18 46 38.9**	**+2.7**
JAR				*e*S	**Sn**	**18 47 17.3**	**0.0**
JOB	**Onbets**	**3.57**	**250**	*e*P	**Pn**	**18 46 39.8**	**+2.4**
JOB				*e*S	**Sn**	**18 47 18.8**	**-0.7**
JMP	**Maruseppu**	**3.64**	**268**	*e*P	**Pn**	**18 46 41.9**	**+3.5**
JCH	**Churui**	**4.00**	**248**	*e*P	**Pn**	**18 46 45.4**	**+2.0**
JCH				*e*S	**Sn**	**18 47 29.1**	**-1.2**
JKK2	**Kamakawa 2**	**4.09**	**267**	*e*P	**Pn**	**18 46 48.2**	**+3.6**
JNBK	**Urakawa-nobuka**	**4.56**	**247**	*e*P	**Pn**	**18 46 53.8**	**+2.8**

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*PRU **30** 18:53:22.2±0.0, 42°70N×13°91E, h10km*
ROM 30 18:53:22.7±0.1, 42°858N±0°004×13°206E±0°004, h5km±1km, ML3.1/50, 24C-18D, Error ellipse: s-maj=0.4km s-min=0.1km az=152.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.01**	**262**	⇑P	Pg	18 53 23.6	-0.2
T1245				S	Sg	18 53 24.1	-0.5
MMO1	**Montemonaco**	**0.10**	**65**	⇑P	Pg	18 53 24.9	+0.1
MMO1				S	Sg	18 53 26.9	+0.7
T1216	**Preci, Frazion**	**0.14**	**283**	P	Pg	18 53 26.0	+0.5
T1216				S	Sg	18 53 29.0	+1.5
T1216				AML	AML		
comp=E,26150μm,1.4s							
T1216				AML	AML		
comp=E,26150μm,1.4s							
T1216				AML	AML		
comp=N,24850μm,0.4s							
T1216				AML	AML		
comp=N,24800μm,0.4s							
T1216				AML	AML		
comp=E,26150μm,0.6s							
FEMA	**Monte Fema**	**0.15**	**312**	P	Pg	18 53 26.3	+0.5
FEMA				S	Sg	18 53 29.1	+1.2
FEMA				AML	AML		
comp=N,20700μm,0.2s							
FEMA				AML	AML		
comp=E,24500μm,0.2s							
FEMA				AML	AML		
comp=N,20650μm,0.2s							
FEMA				AML	AML		
comp=E,24550μm,0.2s							
AM05	**Amandola Campo**	**0.16**	**42**	P	Pg	18 53 26.2	+0.3
AM05				S	Sg	18 53 29.3	+1.2
AM05				AML	AML		
comp=E,3030μm,0.1s							
AM05				AML	AML		
comp=E,10525μm,0.1s							
AM05				AML	AML		
comp=N,946μm,0.1s							
AM05				AML	AML		
comp=E,10500μm,0.1s							
AM05				AML	AML		
comp=N,947μm,0.1s							
AM05				AML	AML		
comp=N,4695μm,1.5s							
T1241	**Roccafluvione,**	**0.17**	**91**	P	Pg	18 53 26.7	+0.7
T1241				S	Sg	18 53 29.7	+1.5
T1241				AML	AML		
comp=E,23150μm,0.7s							
T1241				AML	AML		
comp=N,19000μm,0.6s							
T1241				AML	AML		
comp=E,24500μm,0.7s							
T1241				AML	AML		
comp=E,23150μm,0.7s							
T1241				AML	AML		
comp=N,18950μm,0.6s							
T1241				AML	AML		
comp=N,19550μm,0.6s							
T1241				AML	AML		
comp=N,19000μm,0.6s							
T1241				AML	AML		
comp=E,23100μm,0.7s							
T1204	**Amatrice, Fraz**	**0.20**	**156**	P	Pg	18 53 27.4	+0.8
T1204				AML	AML		
comp=E,10235μm,0.3s							
T1204				AML	AML		
comp=N,8155μm,0.7s							
T1204				AML	AML		
comp=N,8160μm,0.7s							
T1204				AML	AML		
comp=E,10245μm,0.3s							
T1204				AML	AML		
comp=N,8165μm,0.7s							
T1204				AML	AML		
comp=E,10265μm,0.3s							
T1204				AML	AML		
comp=N,8155μm,1.3s							
GUMA	**Gualdo di Mace**	**0.23**	**25**	P	Pg	18 53 27.6	+0.5
GUMA				S	Sg	18 53 31.8	+1.7
GUMA				AML	AML		
comp=N,21950μm,0.5s							
GUMA				AML	AML		
comp=E,16400μm,0.7s							
GUMA				AML	AML		
comp=E,21000μm,0.6s							
GUMA				AML	AML		
comp=N,25700μm,0.5s							
GUMA				AML	AML		
comp=N,21900μm,0.5s							
GUMA				AML	AML		
comp=E,21000μm,1.4s							
CSP1	**Cessapalombo**	**0.23**	**360**	P	Pg	18 53 27.4	+0.2
CSP1				S	Sg	18 53 31.5	+1.1
CSP1				AML	AML		
comp=N,6860μm,0.7s							
CSP1				AML	AML		
comp=E,6740μm,1.0s							
CSP1				AML	AML		
comp=E,6740μm,1.0s							
T1243	**Rocca Santa Ma**	**0.24**	**132**	P	Pg	18 53 27.9	+0.5
T1243				S	Sg	18 53 32.1	+1.6
T1217	**Poggiodomo (PG**	**0.25**	**234**	P	Pg	18 53 27.7	+0.2
T1217				S	Sg	18 53 32.5	+1.7
T1217				AML	AML		
comp=E,7140μm,0.7s							
T1217				AML	AML		
comp=N,6495μm,0.9s							
T1217				AML	AML		
comp=N,6815μm,0.9s							
T1217				AML	AML		
comp=N,6500μm,0.9s							
T1217				AML	AML		
comp=E,7110μm,0.5s							
T1217				AML	AML		
comp=N,6820μm,0.9s							
T1217				AML	AML		
comp=N,6500μm,1.1s							
T1217				AML	AML		
comp=N,6820μm,1.1s							
T1217				AML	AML		
comp=E,7140μm,1.3s							
T1217				AML	AML		
comp=E,7110μm,1.5s							
T1215	**Vallo di Nera,**	**0.26**	**257**	P	Pg	18 53 28.2	+0.6
T1215				S	Sb	18 53 32.8	-1.8
T1215				AML	AML		
comp=E,4970μm,1.2s							
T1215				AML	AML		
comp=N,3550μm,0.8s							
T1215				AML	AML		
comp=E,4970μm,1.2s							
T1215				AML	AML		
comp=N,3610μm,0.8s							
T1215				AML	AML		
comp=E,4730μm,1.2s							
T1215				AML	AML		
comp=N,3545μm,0.8s							
T1215				AML	AML		
comp=E,4975μm,1.2s							
T1215				AML	AML		
comp=N,3605μm,0.8s							
T1215				AML	AML		
comp=E,4730μm,0.8s							
T1215				AML	AML		
comp=E,4975μm,0.8s							
T1215				AML	AML		
comp=N,3605μm,1.2s							
LNSS	**Leonessa**	**0.28**	**206**	P	Pg	18 53 29.1	+0.9
LNSS				S	Sb	18 53 33.8	-1.7
LNSS				AML	AML		
comp=N,7045μm,0.6s							
LNSS				AML	AML		
comp=E,4400μm,1.5s							
LNSS				AML	AML		
comp=N,7045μm,1.4s							
SEF1	**Sefro**	**0.34**	**327**	⇓P	Pg	18 53 29.7	+0.3
SEF1				AML	AML		
comp=E,9835μm,1.2s							
SEF1				AML	AML		
comp=N,9035μm,0.3s							
SEF1				AML	AML		
comp=E,9865μm,1.2s							
SEF1				AML	AML		
comp=N,9010μm,0.3s							
RM33	**Pellescritta (**	**0.35**	**179**	⇑P	Pg	18 53 30.2	+0.7
RM33				AML	AML		
comp=E,6130μm,0.5s							
RM33				AML	AML		
comp=E,6225μm,0.5s							
RM33				AML	AML		
comp=N,5650μm,1.0s							
RM33				AML	AML		
comp=N,5530μm,1.0s							
CAMP	**Campotosto**	**0.35**	**155**	⇓P	Pg	18 53 30.0	+0.4
CAMP				AML	AML		
comp=E,2820μm,0.8s							
CAMP				AML	AML		
comp=N,3345μm,0.8s							
OFFI	**Offida**	**0.36**	**78**	⇑P	Pb	18 53 30.9	-0.8
OFFI				AML	AML		
comp=E,9795μm,0.6s							
OFFI				AML	AML		
comp=E,9795μm,1.4s							
OFFI				AML	AML		
comp=N,11100μm,0.6s							
TERO	**Teramo**	**0.38**	**129**	⇑P	Pg	18 53 30.3	+0.3
TERO				AML	AML		
comp=E,4735μm,1.3s							
TERO				AML	AML		
comp=N,12650μm,0.4s							
TERO				AML	AML		
comp=E,4740μm,1.3s							

TERO			AML	AML		
	comp=N,12200μm,0.4s					
TERO			AML	AML		
	comp=E,4960μm,1.3s					
TERO			AML	AML		
	comp=N,12650μm,1.6s					
TERO			AML	AML		
	comp=N,12200μm,1.6s					
TERO			AML	AML		
	comp=E,4960μm,0.7s					
TERO			AML	AML		
	comp=E,4735μm,0.7s					
GAG1	**Gagliole**	**0.39 345**	⇑P	Pg	18 53 30.9	+0.6
GAG1			AML	AML		
	comp=N,8270μm,0.8s					
GAG1			AML	AML		
	comp=N,8255μm,0.8s					
GAG1			AML	AML		
	comp=E,8185μm,0.8s					
GAG1			AML	AML		
	comp=E,8185μm,1.2s					
T1211	**Morro Reatino**	**0.42 219**	⇑P	Pg	18 53 31.1	+0.4
T1211			AML	AML		
	comp=E,2710μm,0.8s					
T1211			AML	AML		
	comp=N,5920μm,0.5s					
T1211			AML	AML		
	comp=E,2604μm,0.9s					
T1211			AML	AML		
	comp=N,5895μm,0.5s					
T1211			AML	AML		
	comp=E,2710μm,0.8s					
T1211			AML	AML		
	comp=E,2604μm,0.8s					
T1211			AML	AML		
	comp=N,5925μm,0.5s					
T1211			AML	AML		
	comp=N,5895μm,0.5s					
T1247	**Pizzolo (AQ)**	**0.42 171**	⇑P	Pg	18 53 31.4	+0.5
T1247			AML	AML		
	comp=E,4555μm,1.1s					
T1247			AML	AML		
	comp=E,4560μm,1.1s					
T1247			AML	AML		
	comp=N,4165μm,0.9s					
T1247			AML	AML		
	comp=E,4560μm,0.9s					
T1247			AML	AML		
	comp=N,4165μm,1.1s					
ARRO	**Arrone**	**0.43 229**	P	Pg	18 53 31.6	+0.7
ARRO			AML	AML		
	comp=N,2190μm,0.6s					
ARRO			AML	AML		
	comp=E,2490μm,1.2s					
ARRO			AML	AML		
	comp=N,2190μm,1.4s					
ARRO			AML	AML		
	comp=E,2490μm,0.8s					
ASSB	**Assisi San Ben**	**0.44 295**	⇑P	Pg	18 53 31.4	+0.2
ASSB			AML	AML		
	comp=N,2245μm,1.3s					
ASSB			AML	AML		
	comp=E,1885μm,1.2s					
SNTG	**Esanatoglia**	**0.44 334**	⇑P	Pg	18 53 31.2	0.0
SNTG			AML	AML		
	comp=N,2160μm,0.2s					
SNTG			AML	AML		
	comp=N,2080μm,0.7s					
SNTG			AML	AML		
	comp=E,1715μm,0.2s					
SNTG			AML	AML		
	comp=E,1695μm,1.2s					
EL6	**Elcito**	**0.48 351**	⇓P	Pg	18 53 31.8	-0.1
EL6			S	Sb	18 53 41.0	-0.1
EL6			AML	AML		
	comp=E,3385μm,0.2s					
EL6			AML	AML		
	comp=N,5310μm,1.2s					
EL6			AML	AML		
	comp=N,5305μm,1.2s					
EL6			AML	AML		
	comp=E,3390μm,0.2s					
GIGS	**Gran Sasso**	**0.49 147**	P	Pg	18 53 32.4	+0.3
GIGS			AML	AML		
	comp=E,682μm,0.6s					
GIGS			AML	AML		
	comp=N,650μm,1.2s					
GIGS			AML	AML		
	comp=E,682μm,0.6s					
GIGS			AML	AML		
	comp=E,682μm,1.4s					
TRTR	**Tortoreto Alta**	**0.52 95**	⇑P	Pb	18 53 34.3	-0.1
TRTR			AML	AML		
	comp=N,8815μm,0.7s					
TRTR			AML	AML		
	comp=E,8980μm,0.6s					
TRTR			AML	AML		
	comp=E,8980μm,1.4s					
AQU	**L'Aquila**	**0.52 164**	P	Pg	18 53 32.9	+0.1
AQU			AML	AML		
	comp=N,2505μm,1.1s					
AQU			AML	AML		
	comp=E,3795μm,1.4s					
AQU			AML	AML		
	comp=E,3560μm,1.4s					
AQU			AML	AML		
	comp=N,2550μm,1.1s					
AQU			AML	AML		
	comp=N,2550μm,0.9s					
AQU			AML	AML		
	comp=N,2505μm,0.9s					
AQU			AML	AML		
	comp=E,3560μm,0.6s					
AQU			AML	AML		
	comp=E,3795μm,0.6s					
CESX	**Cesi**	**0.52 242**	⇑P	Pg	18 53 33.2	+0.4
CESX			S	Sb	18 53 42.0	-0.3
CESX			AML	AML		
	comp=N,1735μm,0.8s					
CESX			AML	AML		
	comp=E,1920μm,0.7s					
ATCC	**AVT- Casa Cast**	**0.53 308**	⇑P	Pg	18 53 32.9	+0.1
ATCC			AML	AML		
	comp=E,3310μm,1.0s					
ATCC			AML	AML		
	comp=E,3305μm,1.0s					
ATCC			AML	AML		
	comp=N,2980μm,1.0s					
FOSV	**Fossato di Vic**	**0.55 323**	⇑P	Pg	18 53 33.2	+0.1
FOSV			S	Sb	18 53 42.0	-0.9
FOSV			AML	AML		
	comp=E,1196μm,1.0s					
FOSV			AML	AML		
	comp=N,1460μm,1.0s					
FOSV			AML	AML		
	comp=N,1455μm,1.0s					
FOSV			AML	AML		
	comp=E,1195μm,1.0s					
FIAM	**Fiamignano**	**0.59 186**	⇓P	Pg	18 53 34.1	0.0
FIAM			AML	AML		
	comp=E,1820μm,0.6s					
FIAM			AML	AML		
	comp=N,1645μm,0.9s					
PP3	**Marolino**	**0.60 30**	⇓P	Pb	18 53 36.0	+0.3
PP3			AML	AML		
	comp=E,4060μm,1.1s					
PP3			AML	AML		
	comp=N,2695μm,1.4s					
PP3			AML	AML		
	comp=N,2680μm,1.6s					
PP3			AML	AML		
	comp=E,3980μm,1.6s					
PP3			AML	AML		
	comp=N,2695μm,0.6s					
PP3			AML	AML		
	comp=N,2680μm,0.4s					
PP3			AML	AML		
	comp=E,3980μm,0.4s					
MURB	**Monte Urbino**	**0.64 309**	P	Pg	18 53 35.2	+0.1
MURB			AML	AML		
	comp=E,2735μm,1.4s					
MURB			AML	AML		
	comp=N,2180μm,0.2s					
MURB			AML	AML		
	comp=E,3110μm,1.4s					
MURB			AML	AML		
	comp=N,2155μm,0.3s					
MURB			AML	AML		
	comp=E,2730μm,1.4s					
MURB			AML	AML		
	comp=E,3110μm,0.6s					
MURB			AML	AML		
	comp=E,2730μm,0.6s					
MURB			AML	AML		
	comp=N,2175μm,0.3s					
FAGN	**Fagnano**	**0.66 155**	⇑P	Pg	18 53 35.7	+0.4
FAGN			AML	AML		
	comp=E,3070μm,0.5s					
FAGN			AML	AML		
	comp=E,3070μm,1.5s					
FAGN			AML	AML		
	comp=N,3205μm,0.5s					
VCEL	**Villa Celiera**	**0.66 134**	⇓P	Pg	18 53 35.6	+0.3
VCEL			S	Sn	18 53 48.0	-1.7
VCEL			AML	AML		
	comp=N,3770μm,1.6s					
VCEL			AML	AML		
	comp=E,2160μm,0.9s					
VCEL			AML	AML		
	comp=N,3775μm,1.6s					
VCEL			AML	AML		
	comp=N,3775μm,0.4s					
VCEL			AML	AML		
	comp=E,2160μm,1.1s					
ARVD	**Arcevia**	**0.67 343**	⇓P	Pg	18 53 35.2	-0.3
ARVD			S	Sb	18 53 47.0	+0.5
ARVD			AML	AML		
	comp=E,782μm,0.7s					
ARVD			AML	AML		
	comp=N,744μm,1.6s					
ARVD			AML	AML		
	comp=N,744μm,0.4s					
ATFO	**Monte Foce - G**	**0.69 318**	⇓P	Pg	18 53 35.7	-0.2
ATFO			AML	AML		
	comp=E,1047μm,1.2s					
ATFO			AML	AML		
	comp=E,1048μm,1.2s					
ATFO			AML	AML		
	comp=N,1065μm,1.6s					
ATFO			AML	AML		
	comp=N,1065μm,0.4s					
ATTE	**AVT- Monte Tez**	**0.71 299**	⇑P	Pg	18 53 36.8	+0.4
ATTE			AML	AML		
	comp=N,618μm,1.2s					
ATTE			AML	AML		
	comp=N,617μm,1.2s					
ATTE			AML	AML		
	comp=E,800μm,1.4s					
ATTE			AML	AML		
	comp=E,800μm,0.6s					
ATTE			AML	AML		
	comp=N,617μm,0.8s					
FRON	**Frontone**	**0.75 332**	⇓P	Pg	18 53 36.9	-0.2
FRON			S	Sb	18 53 50.0	+1.2
FRON			AML	AML		
	comp=E,1225μm,0.2s					
FRON			AML	AML		
	comp=N,1120μm,0.3s					
FRON			AML	AML		
	comp=N,1120μm,0.3s					
FRON			AML	AML		
	comp=E,1225μm,1.8s					
T0110	**Collepietro**	**0.76 146**	⇓P	Pg	18 53 36.9	-0.4
T0110			S	Sb	18 53 50.0	+0.8
T0110			AML	AML		
	comp=N,2945μm,0.5s					
T0110			AML	AML		
	comp=E,2330μm,0.5s					
T0110			AML	AML		
	comp=N,2950μm,0.5s					
ATVO	**AVT- Monte Val**	**0.79 312**	⇓P	Pg	18 53 37.6	-0.2
ATVO			AML	AML		
	comp=E,640μm,1.3s					
ATVO			AML	AML		
	comp=N,508μm,0.7s					
ATVO			AML	AML		
	comp=E,640μm,0.7s					
MGAB	**Montegabbione**	**0.81 274**	P	Pg	18 53 38.2	0.0
MGAB			AML	AML		
	comp=N,1845μm,0.5s					
MGAB			AML	AML		
	comp=E,1185μm,0.4s					
MGAB			AML	AML		
	comp=N,1665μm,0.5s					
MGAB			AML	AML		
	comp=E,1055μm,1.0s					
ATPI	**Pietralunga -**	**0.83 315**	⇑P	Pg	18 53 38.7	0.0
ATPI			AML	AML		
	comp=N,824μm,1.1s					
ATPI			AML	AML		
	comp=E,866μm,0.8s					
ATPI			AML	AML		
	comp=N,825μm,1.1s					
ATPI			AML	AML		
	comp=N,825μm,0.9s					
PIEI	**Pieia**	**0.84 324**	⇓P	Pg	18 53 38.4	-0.3
PIEI			AML	AML		
	comp=E,472μm,0.7s					
PIEI			AML	AML		
	comp=N,478μm,0.9s					
MPAG	**Monte Paganucc**	**0.84 337**	⇓P	Pg	18 53 38.8	0.0
MPAG			S	Sn	18 53 53.0	-1.0
MPAG			AML	AML		
	comp=N,828μm,1.2s					
MPAG			AML	AML		
	comp=E,781μm,1.1s					
MPAG			AML	AML		
	comp=E,781μm,0.9s					
MPAG			AML	AML		
	comp=N,828μm,0.8s					
NARO	**Abbazia di Nar**	**0.88 329**	⇑P	Pg	18 53 39.1	-0.4
NARO			AML	AML		
	comp=E,450μm,0.9s					
NARO			AML	AML		
	comp=N,434μm,1.2s					
NARO			AML	AML		
	comp=N,434μm,0.8s					
FSSB	**Fossombrone**	**0.89 340**	⇑P	Pg	18 53 39.7	-0.1
FSSB			AML	AML		
	comp=N,2290μm,0.4s					
FSSB			AML	AML		
	comp=E,1945μm,0.5s					
MTCE	**Montecelio**	**0.90 203**	⇓P	Pb	18 53 41.4	+0.5
MTCE			AML	AML		
	comp=E,918μm,1.6s					
MTCE			AML	AML		
	comp=N,556μm,1.5s					
MTCE			AML	AML		
	comp=N,556μm,0.5s					
CERT	**Cerreto**	**0.92 190**	⇑P	Pn	18 53 42.0	-0.4
CERT			AML	AML		
	comp=E,1265μm,0.5s					
CERT			AML	AML		
	comp=N,900μm,0.7s					
CERT			AML	AML		
	comp=N,900μm,1.3s					
CERT			AML	AML		
	comp=E,1265μm,1.5s					
SACS	**San Casciano d**	**0.95 270**	⇑P	Pn	18 53 43.2	+0.3
PE3	**Peglio**	**0.98 328**	⇑P	Pb	18 53 42.4	+0.1
CAFI	**Castiglion Fio**	**1.02 298**	⇓P	Pg	18 53 42.4	+0.1
CAFI			AML	AML		
	comp=E,410μm,1.2s					
CAFI			AML	AML		
	comp=N,422μm,1.2s					
CAFI			AML	AML		
	comp=E,410μm,0.8s					
CPGN	**Carpegna, Ital**	**1.14 326**	⇑P	Pn	18 53 45.6	+0.1
VIVA	**Pratoni del Vi**	**1.15 196**	S	Sg	18 53 58.0	-1.7
TOLF	**Tolfa**	**1.19 229**	⇓P	Pg	18 53 45.7	+0.1
TOLF			AML	AML		
	comp=N,332μm,1.4s					
TOLF			AML	AML		
	comp=E,431μm,1.1s					
LRP	**Arpino**	**1.24 167**	⇑P	Pn	18 53 48.2	+1.4
RUFI	**Rufina**	**1.58 309**	⇓P	Pg	18 53 52.8	-0.2
VAGA	**Valle Agricola**	**1.63 152**	⇓P	Pn	18 53 52.5	+0.4
VAGA			AML	AML		
	comp=E,180μm,0.8s					
VAGA			AML	AML		
	comp=N,309μm,0.8s					
VAGA			AML	AML		
	comp=N,309μm,1.2s					
VAGA			AML	AML		
	comp=E,180μm,1.2s					
MCRV	**Calabrutti - M**	**2.54 144**	P	Pb	18 54 06.9	-2.0
PZUN	**Potenza**	**2.94 138**	S	Sn	18 54 43.0	-2.9
ABTA	**Abfaltersbach**	**3.92 353**	*e*Pn	Pn	18 54 24.9	+1.3
	comp=E,16nm,0.5s					
WTTA	**Wattenberg**	**4.54 346**	*e*Pn	Pn	18 54 35.9	+3.6
	comp=E,1.3nm,0.2s					
SQTA	**Sankt Quirin**	**4.59 343**	*e*Pn	Pn	18 54 36.1	+3.3
	comp=E,4.7nm,0.4s					
BIOA	**Bad Ischl, Aus**	**4.84 3**	*e*Pn	Pn	18 54 38.6	+2.4
	comp=E,3.8nm,0.4s					
KHC	**Kasperske Hory**	**6.28 2**	*e*PN	Pn	18 54 56.5	+0.5
KHC			*e*SN	Sn	18 56 06.9	-1.2

NEIC ***30*** *19:26:47.0±0.3,36°.25N±0°.01×97°.227W±0°.007,h5km±1km, Error ellipse: s-maj=2.9km s-min=2.0km az=115.0*
ANF ***30*** *19:26:46.4±0.2,36°.27N×97°.20W,h5km,ML3.7/9,Error ellipse: s-maj=2.8km s-min=2.3km az=7.0*
TUL ***30*** *19:26:46.4±0.5,36°.25N±0°.01×97°.22W±0°.01,h8km±4km, ML3.3,mb_Lg3.3/88(NEIC),Error ellipse: s-maj=1.8km s-min=1.6km az=66.0*

ISC 30 19:26:46.2±1.2,36°.25N±0°.02×97°.23W±0°.02,h5km±11km, n86,σ0°56/54,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	**E0420 Rd and N**	**0.17**	**339**	Pg	**Pg**	**19 26 50.1**	**+0.5**
OK048	**Pawnee Station**	**0.29**	**54**	Pg	**Pg**	**19 26 52.3**	**+0.5**
OK046	**Pawnee Station**	**0.30**	**60**		**Pg**	**19 26 52.5**	**+0.5**
OK033	**Mehan**	**0.31**	**131**	Pg	**Pg**	**19 26 52.7**	**+0.5**
OK045	**Pawnee Station**	**0.32**	**51**		**Pg**	**19 26 52.9**	**+0.5**
OK044	**Pawnee Station**	**0.37**	**70**	Pg	**Pg**	**19 26 53.8**	**+0.4**
OK051	**E0350 and S346**	**0.41**	**51**	Pg	**Pg**	**19 26 54.3**	**+0.2**
OK031	**S. Brethren Rd**	**0.43**	**133**	Pg	**Pg**	**19 26 54.7**	**+0.2**
OK034	**N. Norfolk Rd.**	**0.48**	**119**	Pg	**Pg**	**19 26 55.8**	**+0.4**
OK029	**Liberty Lake**	**0.49**	**202**	Pg	**Pg**	**19 26 55.9**	**+0.4**
OK025	**Westminster Rd**	**0.67**	**188**	Pg	**Pg**	**19 26 59.4**	**+0.3**
KAN13	**South Haven SW**	**0.79**	**345**		**Pg**	**19 27 01.5**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.86**	**191**	Pg	**Pg**	**19 27 02.6**	**-0.1**
T35A	**Sooner Cattle**	**0.88**	**41**		**Pg**	**19 27 03.1**	**0.0**
T35B	**Sooner Cattle**	**0.88**	**41**	P	**Pg**	**19 27 03.1**	**0.0**
	baz=221						
T35B				S	**Sg**	**19 27 14.7**	**+0.1**
	baz=221						
KAN17	**Caldwell West**	**0.90**	**332**		**Pg**	**19 27 03.4**	**-0.2**
KAN14	**Manchester OK**	**0.92**	**320**		**Pg**	**19 27 03.8**	**-0.1**
KAN09	**Caldwell North**	**0.94**	**341**		**Pg**	**19 27 04.2**	**-0.1**
OK032	**Salt Plains WL**	**0.96**	**305**	Pg	**Pg**	**19 27 04.5**	**-0.2**
FNO	**Franklin**	**1.00**	**188**		**Pg**	**19 27 05.1**	**-0.2**
KAN01	**Argonia South**	**1.00**	**335**		**Pg**	**19 27 05.1**	**-0.3**
KS20	**Mayfield South**	**1.01**	**345**		**Pg**	**19 27 05.3**	**-0.4**
KS21	**Milan North St**	**1.09**	**342**		**Pg**	**19 27 07.0**	**-0.2**
KAN06	**Argonia West S**	**1.12**	**333**		**Pg**	**19 27 07.4**	**-0.3**
KAN08	**Anthony NE Sta**	**1.14**	**329**		**Pb**	**19 27 07.9**	**-0.6**
KAN16	**Harper SW Stat**	**1.18**	**326**		**Pb**	**19 27 08.6**	**-0.6**
TUL1	**Leonard**	**1.21**	**106**		**Pb**	**19 27 08.6**	**-1.0**
TUL1	**Leonard**	**1.21**	**106**	P	**Pb**	**19 27 08.6**	**-1.0**
	baz=287						
TUL1				S	**Sb**	**19 27 25.1**	**-0.6**
	baz=287						
KAN12	**Harper NE Stat**	**1.22**	**330**		**Pb**	**19 27 09.2**	**-0.6**
OK035	**E0210 Rd and N**	**1.28**	**291**		**Pn**	**19 27 10.3**	**-0.5**
U32A	**Winter Ranch,**	**1.44**	**276**		**Pn**	**19 27 12.7**	**-0.3**
U32A	**Winter Ranch,**	**1.44**	**276**	P	**Pn**	**19 27 12.8**	**-0.2**
	baz=95						
U32A				S	**Sg**	**19 27 32.7**	**+0.3**
	baz=95						
X34A	**Smith Ranch, M**	**1.72**	**197**	Pn	**Pb**	**19 27 17.7**	**-0.5**
WMOK	**Wichita Mounta**	**1.97**	**220**		**Pn**	**19 27 21.1**	**+0.9**
WMOK				IAmb_Lg		19 27 54.1	
	comp=Z,134nm,0.7s						
WMOK	**Wichita Mounta**	**1.97**	**220**	P	**Pn**	**19 27 21.0**	**+0.7**
	baz=40						
WMOK				S	**Sb**	**19 27 48.0**	**+0.6**
	baz=40						
X37A	**Clayton**	**2.25**	**137**	Pn	**Pn**	**19 27 24.7**	**+0.7**
X37A				IAmb_Lg		19 28 01.5	
	comp=Z,95nm,0.8s						
X37A	**Clayton**	**2.25**	**137**	P	**Pn**	**19 27 24.7**	**+0.7**
	baz=318						
X37A				Sb	**Sg**	**19 27 57.4**	**-0.9**
	baz=318						
U38A	**Gravette**	**2.30**	**84**	Pn	**Pn**	**19 27 25.2**	**+0.3**
R32A	**Long Quarter,**	**2.47**	**332**		**Pn**	**19 27 27.2**	**0.0**
R32A	**Long Quarter,**	**2.47**	**332**	P	**Pn**	**19 27 28.0**	**+0.8**
	baz=151						
R32A				S	**Sn**	**19 27 58.8**	**+1.0**
	baz=151						
KSU1	**Kansas State U**	**2.89**	**10**	IAmb_Lg		19 28 25.3	
	comp=Z,101nm,0.9s						
Z35A	**Perchaven, San**	**2.91**	**180**	P	**Pn**	**19 27 34.0**	**+0.8**
	baz=0.4						
CBKS	**Cedar Bluff**	**3.25**	**323**	P	**Pn**	**19 27 38.6**	**+0.8**
	baz=141						
MIAR	**Mount Ida**	**3.43**	**119**	Pn	**Pn**	**19 27 41.2**	**+0.8**
MIAR	**Mount Ida**	**3.43**	**119**	P	**Pn**	**19 27 41.1**	**+0.8**
	baz=301						
AMTX	**Amarillo**	**3.88**	**251**	Pn	**Pn**	**19 27 47.4**	**+0.9**
AMTX				IAmb_Lg		19 28 57.6	
	comp=Z,72nm,0.9s						
MGMO	**Mountain Grove**	**4.09**	**76**	IAmb_Lg		19 28 54.2	
	comp=Z,53nm,0.9s						
ABTX	**Abilene, Hawle**	**4.13**	**210**	IAmb_Lg		19 28 56.1	
	comp=Z,48nm,0.7s						
WHAR	**Wooly Hollow**	**4.13**	**102**	Pn	**Pn**	**19 27 50.6**	**+0.6**
WHAR				IAmb_Lg		19 29 05.5	
	comp=Z,76nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.15**	**93**	IAmb_Lg		19 29 04.3	
	comp=Z,71nm,0.7s						
WLAR	**White Oak Lake**	**4.24**	**126**	Pn	**Pn**	**19 27 51.4**	**0.0**
WLAR				IAmb_Lg		19 29 07.9	
	comp=Z,58nm,0.9s						
UALR	**University of**	**4.25**	**109**	IAmb_Lg		19 29 11.7	
	comp=Z,86nm,1.0s						
R40A	**Maddies Statio**	**4.45**	**61**	IAmb_Lg		19 29 10.3	
	comp=Z,48nm,0.8s						
P38A	**Dawn**	**4.46**	**40**	IAmb_Lg		19 29 10.9	
	comp=Z,66nm,0.7s						
LCAR	**Lake Charles**	**4.92**	**90**	IAmb_Lg		19 29 21.7	
	comp=Z,72nm,1.0s						
CCAR	**Cane Creek**	**5.04**	**116**	IAmb_Lg		19 29 37.8	
	comp=Z,68nm,0.9s						
KSCO	**Kaye Shedlock'**	**5.09**	**304**	IAmb_Lg		19 29 33.5	
	comp=Z,57nm,0.7s						
CCM	**Cathedral Cave**	**5.11**	**68**	IAmb_Lg		19 29 25.6	
	comp=Z,43nm,0.8s						
P40A	**Paris**	**5.25**	**50**	IAmb_Lg		19 29 30.8	
	comp=Z,63nm,0.8s						
435B	**Jarrell**	**5.46**	**183**	IAmb_Lg		19 29 52.9	
	comp=Z,52nm,0.8s						
PBMO	**Poplar Bluff**	**5.50**	**82**	IAmb_Lg		19 29 46.0	
	comp=Z,57nm,0.8s						
N38A	**Joes South For**	**5.51**	**33**	IAmb_Lg		19 29 46.1	
	comp=Z,54nm,0.7s						
T25A	**Trinidad**	**5.84**	**281**	IAmb_Lg		19 30 01.5	
	comp=Z,56nm,0.9s						
OGNE	**Ogallala**	**6.01**	**323**	IAmb_Lg		19 29 60.0	
	comp=Z,36nm,0.8s						
SLM	**Saint Louis**	**6.05**	**65**	IAmb_Lg		19 30 00.6	
	comp=Z,33nm,0.7s						
K31A	**O'Neill**	**6.47**	**350**	IAmb_Lg		19 30 15.3	
	comp=Z,52nm,0.8s						
S44A	**Carbondale**	**6.54**	**75**	IAmb_Lg		19 30 24.6	
	comp=Z,33nm,0.8s						
W45A	**Hickory Valley**	**6.63**	**97**	IAmb_Lg		19 30 36.0	
	comp=Z,35nm,0.8s						
Y45A	**Yeager Farm, C**	**6.74**	**108**	IAmb_Lg		19 30 31.7	
	comp=Z,34nm,0.9s						
SDCO	**Great Sand Dun**	**6.79**	**285**	IAmb_Lg		19 30 24.2	
	comp=Z,32nm,0.9s						
Q24A	**Divide**	**6.85**	**296**	IAmb_Lg		19 30 36.7	
	comp=Z,26nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.97**	**59**	IAmb_Lg		19 30 32.5	
	comp=Z,40nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.04**	**65**	IAmb_Lg		19 30 31.9	
	comp=Z,26nm,0.7s						
BRIGG	**Briggsdale**	**7.05**	**310**	IAmb_Lg		19 30 34.5	
	comp=Z,33nm,0.8s						
L40A	**Anamosa**	**7.45**	**37**	IAmb_Lg		19 30 51.4	
	comp=Z,28nm,0.8s						
ECSD	**EROS Data Cent**	**7.49**	**3**	Pn	**Pn**	**19 28 36.3**	**+0.2**
PLAL	**Pickwick Lake**	**7.56**	**97**	IAmb_Lg		19 30 50.7	
	comp=Z,28nm,0.9s						
USIN	**University of**	**7.83**	**75**	IAmb_Lg		19 30 51.4	

comp=Z,31nm,1.1s
O44A Mansfield 7.92 58 IAmb_Lg 19 30 60.0
comp=Z,30nm,0.9s
L42A Oliver, Polo 8.22 43 IAmb_Lg 19 31 15.9
comp=Z,34nm,0.8s
Y22D IRIS PASSCAL I 8.23 258 IAmb_Lg 19 31 13.9
comp=Z,30nm,0.9s
N23A Red Feather La 8.25 307 IAmb_Lg 19 31 14.2
comp=Z,28nm,0.9s
SUSD Miller 8.29 351 IAmb_Lg 19 31 22.8
comp=Z,23nm,0.7s
JFWS Jewell Farm 8.56 37 IAmb_Lg 19 31 18.9
comp=Z,36nm,0.8s
I40A Norwalk 9.16 32 IAmb_Lg 19 31 55.6
comp=Z,17nm,0.8s
K22A Casper 9.62 314 IAmb_Lg 19 32 06.8
comp=Z,22nm,1.0s

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*IDC **30** 19:27:30.5±1.7, 42°.83N×13°.35E, h0km, mb3.4/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=39.0km s-min=17.6km az=91.0*
*PRU **30** 19:27:32.7±0.0, 42°.75N×13°.28E, h10km*
*VIE **30** 19:27:36.6±0.9, 43°.06N×13°.37E, h8km, mb2.9/16, ml2.9/16, Error ellipse: s-maj=9.3km s-min=7.2km az=144.0 120 km SE of San Marino*
ISC 30 19:27:33.4±1.3, 42°.81N±0°.09×13°.4E±0°.1, h17km, n18, σ1§09/21, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica** 4.0nm,0.3s	**3.83**	**2**	*e*Pn	**Pn**	**19 28 32.3**	**+0.7**
ABTA	**Abfaltersbach** 15nm,0.4s,SNR=29	**3.99**	**351**	Pn	**Pn**	**19 28 34.2**	**+0.3**
FETA	**Feichten** 2.0nm,0.5s,SNR=7.8	**4.62**	**337**	Pn	**Pn**	**19 28 43.4**	**+0.9**
WTTA	**Wattenberg** 3.1nm,0.4s	**4.63**	**345**	*e*Pn	**Pn**	**19 28 44.3**	**+1.6**
SQTA	**Sankt Quirin** 5.0nm,0.4s,SNR=13	**4.68**	**341**	Pn	**Pn**	**19 28 44.1**	**+0.8**
ARSA	**Arzberg** 1.1nm,0.3s	**4.69**	**18**	*e*Pn	**Pn**	**19 28 45.4**	**+2.1**
DAVOX	**Davos/Dischmat** 1.4nm,0.3s,baz=145,slow=13,SNR=17	**4.70**	**329**	Pn	**Pn**	**19 28 43.5**	**-0.1**
DAVOX	12nm,0.7s			Sn	**Sn**	**19 29 37.2**	**-0.7**
WATA	**Walderalm** 5.5nm,0.4s,SNR=12	**4.71**	**345**	Pn	**Pn**	**19 28 45.3**	**+1.5**
MOTA	**Moosalm** 3.3nm,0.5s,SNR=5.9	**4.82**	**341**	*i* Pn	**Pn**	**19 28 46.4**	**+1.1**
BIOA	**Bad Ischl, Aus** 6.1nm,0.5s,SNR=8.7	**4.89**	**2**	*i* Pn	**Pn**	**19 28 47.0**	**+0.9**
RETA	**Reutte** 1.5nm,0.4s,SNR=6.9	**5.04**	**339**	Pn	**Pn**	**19 28 49.1**	**+0.9**
MOA	**Molln** 0.6nm,0.2s	**5.08**	**7**	*e*Pn	**Pn**	**19 28 49.2**	**+0.5**
DAVA	**Damuels** 6.9nm,0.6s	**5.13**	**332**	*e*Pn	**Pn**	**19 28 51.4**	**+1.9**
CONA	**Conrad Observa** 1.2nm,0.4s	**5.40**	**18**	*e*Pn	**Pn**	**19 28 54.0**	**+0.8**
GERES	**GERESS Array B** 0.3nm,0.3s,baz=174,slow=14,SNR=8.0	**6.04**	**2**	Pn	**Pn**	**19 29 01.4**	**-0.6**
GERES	0.5nm,0.3s,baz=187,slow=24,SNR=2.7 0.4nm,0.3s			Sn	**Sn**	**19 30 10.0**	**-0.8**
KHC	**Kasperske Hory**	**6.33**	**1**	*e*PN	**Pn**	**19 29 05.2**	**-0.6**
KHC				*e*SN	**Sn**	**19 30 17.1**	**-0.6**
TORD	**Torodi Ar. Bea** 0.4nm,0.7s,baz=18,slow=9.2,SNR=2.7 0.4nm,0.7s	**31.24**	**202**	P	**P**	**19 33 51.8**	**-0.3**
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=286,slow=6.8,SNR=2.4 0.6nm,0.8s	**47.61**	**60**	P	**P**	**19 36 07.8**	**-0.4**

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*PRU **30** 19:31:52.5±0.0, 42°.35N×13°.68E, h10km*
*IDC **30** 19:31:56.3±1.5, 42°.76N×13°.14E, h0km, mb3.4/3, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=36.8km s-min=16.8km az=89.0*
*VIE **30** 19:31:56.6±1.4, 42°.70N×13°.39E, h0km, mb3.1/3, ml2.9/8, ms3.4/1, Error ellipse: s-maj=16.5km s-min=11.0km az=123.0 116 km NE of Rome*
ISC 30 19:31:58.4±1.2, 42°.75N±0°.09×13°.3E±0°.1, h11km, n16, σ1§13/20, mb3.6/3, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir** 0.8nm,0.2s	**3.87**	**13**	*e*Pn	**Pn**	**19 32 58.3**	**+0.5**
MYKA	**Terra Mystica** 4.6nm,0.4s	**3.89**	**4**	*e*Pn	**Pn**	**19 32 57.8**	**-0.3**
ABTA	**Abfaltersbach** 19nm,0.5s	**4.04**	**352**	*e*Pn	**Pn**	**19 33 00.2**	**+0.1**
WTTA	**Wattenberg** 1.1nm,0.2s	**4.66**	**346**	*e*Pn	**Pn**	**19 33 10.0**	**+1.2**
DAVOX	**Davos/Dischmat** 1.5nm,0.3s,baz=146,slow=18,SNR=5.5	**4.70**	**330**	Pn	**Pn**	**19 33 09.9**	**+0.5**
DAVOX	0.3nm,0.3s,baz=213,slow=22,SNR=1.4 4.9nm,0.4s			Sn	**Sn**	**19 34 01.5**	**-2.5**
SQTA	**Sankt Quirin** 3.8nm,0.3s	**4.71**	**343**	*e*Pn	**Pn**	**19 33 10.5**	**+1.1**
ARSA	**Arzberg** 1.3nm,0.4s	**4.77**	**19**	*e*Pn	**Pn**	**19 33 10.1**	**-0.1**
BIOA	**Bad Ischl, Aus** 5.9nm,0.3s	**4.95**	**3**	*e*Pn	**Pn**	**19 33 13.1**	**+0.5**
DAVA	**Damuels** 3.0nm,0.3s	**5.14**	**333**	*e*Pn	**Pn**	**19 33 16.6**	**+1.3**
CONA	**Conrad Observa** 1.1nm,0.2s	**5.49**	**18**	*e*Pn	**Pn**	**19 33 19.8**	**-0.3**
GERES	**GERESS Array B** 0.4nm,0.3s,baz=175,slow=14,SNR=7.8	**6.10**	**3**	Pn	**Pn**	**19 33 27.1**	**-1.5**
GERES	0.7nm,0.3s,baz=180,slow=24,SNR=5.9 0.4nm,0.3s			Sn	**Sn**	**19 34 39.0**	**+0.7**
CKRC	**Cesky Krumlov**	**6.11**	**6**	*e*PN	**Pn**	**19 33 26.8**	**-1.8**
CKRC				*e*SN	**Sn**	**19 34 39.2**	**+0.7**
KHC	**Kasperske Hory**	**6.39**	**2**	*e*PN	**Pn**	**19 33 30.9**	**-1.5**
KHC				*e*SN	**Sn**	**19 34 45.0**	**-0.3**
TORD	**Torodi Ar. Bea** 0.3nm,0.8s,baz=0.0,slow=8.9,SNR=2.9 0.3nm,0.8s	**31.15**	**202**	P	**P**	**19 38 16.4**	**-0.9**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=300,slow=6.1,SNR=2.5 0.5nm,0.7s	**47.72**	**60**	P	**P**	**19 40 36.0**	**+0.9**
SONM	**Songino Array** 0.5nm,1.0s,baz=302,slow=8.3,SNR=2.8 0.5nm,1.0s	**61.78**	**50**	P	**P**	**19 42 17.5**	**+0.4**

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*IDC **30** 19:33:21.9±0.8, 54°.99S×31°.04W, h0km, mb4.0/7, mbtmp4.0/7, MS3.5/10, Error ellipse: s-maj=38.6km s-min=18.8km az=65.0*
*NEIC **30** 19:33:23.1±1.9, 55°.13S±0°.08×31°.4W±0°.3, h10km±2km, mb4.5/16, Error ellipse: s-maj=28.4km s-min=3.3km az=62.0*
ISC 30 19:33:23.1±0.7, 55°.0S±0°.1×31°.4W±0°.1, h10km, n39, σ1§02/31, mb4.4/12, MS3.4/9, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.07**	**282**		**Pn**	**19 34 11.7**	**+0.1**
VNA1	**Neumayer--Stat**	**18.66**	**156**	P	**P**	**19 37 41.2**	**+0.5**
VNA3	**Neumayer Olymp**	**18.78**	**158**	P	**P**	**19 37 42.9**	**+0.9**
PMSA	**Palmer Station** comp=Z,133nm,18.1s,baz=102,slow=35	**18.83**	**226**	LR	LR	19 44 22.5	
VNA2	**Neumayer--Watz** baz=306,slow=11	**19.06**	**156**	P	**P**	**19 37 45.1**	**0.0**
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**19 38 02.3**	**-0.3**
SNAA	**Sanae** 7.8nm,0.9s,baz=312,slow=11,SNR=16 7.8nm,0.9s	**20.65**	**155**	P	**P**	**19 38 01.8**	**-0.8**
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**19 38 00.1**	**-2.5**
TROLL	**Troll, Antarti**	**22.22**	**153**	P	**P**	**19 38 20.1**	**+0.6**
BELA	**Belgrano 2**	**22.96**	**182**	P	**P**	**19 38 25.7**	**-1.5**
PLTB	**Pedras Altas**	**28.09**	**317**	P	**P**	**19 39 14.2**	**-0.6**
PLTB	comp=Z,9.3nm,1.1s			IAmb	IAmb	19 39 14.7	
PLCA	**Paso Flores** comp=Z,66nm,18.3s,baz=155,slow=36	**29.47**	**283**	LR	LR	19 51 24.0	
CPUP	**Villa Florida** comp=Z,3.4nm,1.0s,baz=138,slow=10,SNR=4.0	**34.39**	**316**	P	**P**	**19 40 10.6**	**+0.3**
CPUP	comp=Z,39nm,18.0s,baz=216,slow=38 comp=Z,3.4nm,1.0s			LR	LR	19 55 24.1	
MT09	**Talagante**	**34.73**	**291**	P	**P**	**19 40 13.2**	**-0.2**
MT09	comp=Z,12nm,1.2s			IAmb	IAmb	19 40 51.6	
MT01	**Popeta**	**34.81**	**291**	P	**P**	**19 40 14.2**	**+0.3**
QSPA	**South Pole Qui** comp=Z,1.3nm,0.7s,baz=225,slow=2.9,SNR=4.2	**35.21**	**180**	P	**P**	**19 40 17.3**	**+0.1**
QSPA	comp=Z,72nm,19.1s,baz=187,slow=35 comp=Z,1.3nm,0.7s			LR	LR	19 53 48.1	
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**19 40 17.8**	**+0.6**
VA06	**Catapilco**	**35.83**	**292**	P	**P**	**19 40 24.1**	**+1.4**
CO02	**Combarbal**	**36.73**	**294**	P	**P**	**19 40 30.3**	**-0.2**
MAW	**Mawson** comp=Z,2.0nm,0.8s,baz=244,slow=7.8,SNR=2.4 comp=Z,2.0nm,0.8s	**42.35**	**145**	P	**P**	**19 41 16.5**	**-0.3**
LVC	**Limon Verde** comp=Z,19nm,22.0s,baz=265,slow=35	**42.75**	**304**	LR	LR	19 58 28.4	
PB01	**IPOC Station P**	**44.37**	**304**	P	**P**	**19 41 31.5**	**-2.1**
PB01	comp=Z,5.4nm,0.9s			IAmb	IAmb	19 41 35.9	
PATCX	**Punta Patache**	**44.87**	**304**	P	**P**	**19 41 37.2**	**-0.5**
PATCX	comp=Z,10nm,0.9s			IAmb	IAmb	19 41 43.3	
PB16	**IPOC Station P**	**46.71**	**306**	P	**P**	**19 41 51.6**	**-1.2**
PB16	comp=Z,6.4nm,1.4s			IAmb	IAmb	19 42 07.3	
PB12	**IPOC Station P**	**46.85**	**305**	P	**P**	**19 41 51.5**	**-1.8**
VNDA	**Vanda** comp=Z,0.5nm,0.7s,baz=194,slow=4.9,SNR=6.0 comp=Z,0.5nm,0.7s	**47.45**	**184**	P	**P**	**19 41 59.0**	**+1.8**
VNDA	**Vanda**	**47.45**	**184**	P	**P**	**19 41 57.6**	**+0.4**
LPAZ	**La Paz** comp=Z,3.0nm,0.6s,baz=131,slow=4.9,SNR=18 comp=Z,3.0nm,0.6s	**47.87**	**309**	P	**P**	**19 42 03.4**	**+1.4**
LPAZ	**La Paz**	**47.87**	**309**	P	**P**	**19 42 01.5**	**-0.4**
LPAZ	comp=Z,3.8nm,0.8s			IAmb	IAmb	19 42 03.9	
SAML	**Samuel**	**52.44**	**319**	P	**P**	**19 42 35.7**	**-0.1**
SAML	comp=Z,7.2nm,1.2s			IAmb	IAmb	19 42 39.6	
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.5s,baz=199,slow=5.8,SNR=5.1 comp=Z,0.5nm,0.5s	**73.44**	**34**	P	**P**	**19 44 55.6**	**+0.2**
MBAR	**Mbarara** comp=Z,47nm,19.2s,baz=212,slow=33	**73.87**	**67**	LR	LR	20 13 49.8	
SJG	**San Juan** comp=Z,7.9nm,19.4s,baz=294,slow=37	**78.64**	**326**	LR	LR	20 21 53.1	
MDT	**Midelt** comp=Z,48nm,20.8s,baz=225,slow=31	**90.47**	**22**	LR	LR	20 20 30.5	
ATD	**Arta Tunnel** comp=Z,38nm,18.7s,baz=1.0,slow=35	**90.51**	**71**	LR	LR	20 25 51.5	
ESDC	**Sonseca Array** comp=Z,51nm,20.5s,baz=218,slow=32	**97.22**	**21**	LR	LR	20 25 00.7	
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.6s,baz=242,slow=3.1,SNR=3.1	**144.07**	**65**	PKP	**PKPab**	**19 52 55.8**	**+0.6**
ILAR	**Eielson Array** comp=Z,2.0nm,0.7s,baz=121,slow=1.6,SNR=17	**147.68**	**314**	PKPbc	**PKPbc**	**19 53 06.1**	**-0.3**
SONM	**Songino Array** comp=Z,0.9nm,0.7s,baz=217,slow=3.1,SNR=7.0	**153.05**	**88**	PKPbc	**PKPbc**	**19 53 19.5**	**-0.5**

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*NSSP **30** 19:35:41.6, 38°.33N×45°.52E, h10km, Ms3.3*
*AZER **30** 19:35:46.1±0.3, 38°.57N×45°.30E, h9km±1km, Error ellipse: s-maj=3.2km s-min=1.3km az=229.0*
ISC 30 19:35:45.8±1.6, 38°.47N±0°.06×45°.44E±0°.04, h14km±11km, n27, σ1§43/52, 9C-3D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORD	**Ordubad** SNR=16	**0.63**	**43**	P	**Pb**	**19 35 58.7**	**0.0**
ORD				S	**Sn**	**19 36 10.6**	**+0.3**
NAX	**Nakhchivan** SNR=62	**0.70**	**4**	P	**Pg**	**19 35 59.1**	**-0.4**
NAX				S	**Sb**	**19 36 10.0**	**+0.6**
SBZ	**Shahbuz** SNR=37	**0.93**	**5**	P	**Pb**	**19 36 03.3**	**-0.5**
SBZ				S	**Sg**	**19 36 17.1**	**+1.1**
HYR	**Heyderabad** SNR=5.5	**1.33**	**340**	P	**Pn**	**19 36 09.6**	**-0.4**
HYR				S	**Sg**	**19 36 29.2**	**+0.5**
NRKZ	**NAREK**	**1.64**	**339**	⇓*i*P	**Pn**	**19 36 13.7**	**-0.6**
NRKZ				⇑*i*S	**Sg**	**19 36 38.0**	**-0.7**
GNI	**Garni**	**1.76**	**342**	⇓*i*P	**Pb**	**19 36 17.4**	**-0.5**
GNI				⇓*i*S	**Sg**	**19 36 44.5**	**+1.9**
QRD	**Qoradiz**	**1.77**	**55**	P	**Pg**	**19 36 20.5**	**+0.7**
QRD				S	**Sg**	**19 36 46.2**	**+3.5**
KAPZ	**Kaputan**	**1.93**	**343**	⇑*i*P	**Pb**	**19 36 21.2**	**+0.2**
KAPZ				⇑*i*S	**Sg**	**19 36 50.6**	**+2.6**
METS	**Metsamor**	**1.98**	**328**	⇑*i*P	**Pn**	**19 36 19.4**	**+0.5**
METS				⇑*i*S	**Sg**	**19 36 48.2**	**-1.3**
VNNZ	**Vanand**	**2.06**	**323**	⇑*i*P	**Pb**	**19 36 23.0**	**+0.1**
VNNZ				⇑*i*S	**Sg**	**19 36 53.6**	**+1.7**
BLQ	**Beylaqan** SNR=9.7	**2.07**	**52**	P	**Pg**	**19 36 24.5**	**-1.0**
BLQ				S	**Sg**	**19 36 53.5**	**+1.2**
AGDM	**Agdam**	**2.08**	**38**	P	**Pg**	**19 36 24.5**	**-1.3**
AGDM				S	**Sg**	**19 36 54.8**	**+1.9**
ARUZ	**Aruch**	**2.09**	**330**	⇑*i*P	**Pb**	**19 36 23.4**	**-0.2**
ARUZ				⇑*i*S	**Sg**	**19 36 54.5**	**+1.5**
YRD	**Yardimli** SNR=13	**2.24**	**78**	P	**Pb**	**19 36 26.8**	**+0.7**
YRD				S	**Sg**	**19 37 00.1**	**+2.3**
BRDA	**Brd**	**2.24**	**36**	P	**Pb**	**19 36 26.6**	**+0.5**
BRDA				S	**Sg**	**19 36 58.3**	**+0.4**
GDB	**GEDABAY** SNR=13	**2.26**	**6**	P	**Pb**	**19 36 26.3**	**-0.2**
GDB				S	**Sb**	**19 36 56.4**	**+2.1**
GANJ	**Ganja** SNR=11	**2.28**	**17**	P	**Pb**	**19 36 26.6**	**-0.1**
GANJ				S	**Sg**	**19 36 58.4**	**-0.6**
LRK	**Lerik** SNR=11	**2.28**	**85**	P	**Pg**	**19 36 28.2**	**-1.3**
LRK				S	**Sg**	**19 37 00.4**	**+1.2**
GLBA	**Clilabad** SNR=6.0	**2.43**	**71**	P	**Pg**	**19 36 30.5**	**-1.9**
GLBA				S	**Sg**	**19 37 03.0**	**-0.9**
ZRD	**Zardab**	**2.51**	**43**	S	**Sb**	**19 37 03.2**	**+2.0**
QZX	**Qazax, Azerbai**	**2.58**	**359**	P	**Pb**	**19 36 30.6**	**-1.3**
QZX				S	**Sb**	**19 37 04.7**	**+1.2**
ASTR	**Astara**	**2.63**	**87**	P	**Pb**	**19 36 33.5**	**+0.9**
ASTR				S	**Sg**	**19 37 08.9**	**-1.4**
SAAT	**Saatly**	**2.70**	**58**	S	**Sb**	**19 37 07.8**	**+1.0**
SEKA	**Sheki**	**3.05**	**26**	P	**Pb**	**19 36 39.0**	**-0.9**
SEKA				S	**Sb**	**19 37 18.0**	**+1.0**
QBL	**Gabala**	**3.09**	**36**	P	**Pb**	**19 36 38.4**	**-2.1**
QBL				S	**Sb**	**19 37 18.4**	**+0.4**
ZKTA	**Zakatala**	**3.29**	**16**	P	**Pb**	**19 36 41.1**	**-2.9**
ZKTA				S	**Sb**	**19 37 21.9**	**-1.9**
PQL	**Pirkuli**	**3.36**	**45**	P	**Pb**	**19 36 42.3**	**-2.9**
PQL				S	**Sb**	**19 37 26.5**	**+0.5**

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*IDC **30** 19:42:58.1±0.7, 34°.69S×54°.50E, h0km, mb3.9/10, mbtmp3.9/11, ML3.8/1, MS3.6/3, Error ellipse: s-maj=27.0km s-min=20.7km az=79.0*
ISC 30 19:42:59.6±0.7, 34°.7S±0°.1×54°.5E±0°.2, h10km, n20, σ0§66/12, mb4.0/10, MS3.5/3, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo** baz=144,slow=14,SNR=3.4 1.7nm,0.4s	**17.28**	**336**	P	**P**	**19 47 02.2**	**-0.6**
H08S1	**Diego Carcia H** baz=208,slow=76,SNR=64	**31.59**	**36**	T	T	20 22 15.6	
H08S2	**Diego Garcia H** baz=208,slow=76,SNR=84	**31.60**	**36**	T	T	20 22 17.9	
H08S3	**Diego Garcia H** baz=208,slow=76,SNR=111	**31.61**	**36**	T	T	20 22 12.4	
SNAA	**Sanae** 1.6nm,0.8s,baz=105,slow=8.0,SNR=5.8 1.6nm,0.8s	**47.31**	**201**	P	**P**	**19 51 33.4**	**+0.4**
H01W2	**Cape Leeuwin H** baz=252,slow=75,SNR=7.5	**48.35**	**108**	T	T	20 43 24.9	
H01W3	**Cape Leeuwin H** baz=252,slow=75,SNR=11	**48.36**	**108**	T	T	20 43 25.6	
H01W1	**Cape Leeuwin H** baz=252,slow=75,SNR=17	**48.37**	**108**	T	T	20 43 26.4	
QSPA	**South Pole Qui** 2.9nm,0.7s,baz=260,slow=5.3,SNR=9.0	**55.52**	**180**	P	**P**	**19 52 33.8**	**-0.9**
QSPA	comp=Z,42nm,19.5s,baz=292,slow=33 2.9nm,0.7s			LR	LR	20 13 15.1	
VNDA	**Vanda** 1.0nm,1.0s,baz=264,slow=9.5,SNR=2.2 1.0nm,1.0s	**60.07**	**166**	P	**P**	**19 53 06.8**	**+0.5**
CMAR	**Chiang Mai Arr** 0.6nm,0.4s,baz=233,slow=7.6,SNR=7.1 0.6nm,0.4s	**67.66**	**46**	P	**P**	**19 53 57.5**	**+0.4**
ASAR	**Alice Springs** 0.4nm,0.5s,baz=234,slow=5.9,SNR=11 0.4nm,0.5s	**68.63**	**105**	P	**P**	**19 54 03.3**	**0.0**
TORD	**Torodi Ar. Bea** 1.5nm,1.3s,baz=133,slow=6.3,SNR=3.1 1.5nm,1.3s	**69.03**	**304**	P	**P**	**19 54 05.8**	**+0.1**
WRA	**Warramunga Arr** 1.0nm,0.7s,baz=235,slow=5.3,SNR=9.0 1.0nm,0.7s	**70.84**	**101**	P	**P**	**19 54 16.5**	**-0.5**
MKAR	**Makanchi Array** 1.3nm,1.0s,baz=222,slow=5.0,SNR=3.3 1.3nm,1.0s	**84.87**	**19**	P	**P**	**19 55 34.8**	**+0.5**
AKASG	**Malin Array Be** 0.4nm,0.5s,baz=168,slow=3.7,SNR=2.3 0.4nm,0.5s	**87.87**	**344**	P	**P**	**19 55 48.5**	**-0.3**
VRAC	**Vranov** comp=Z,16nm,18.5s,baz=204,slow=36	**90.12**	**336**	LR	LR	20 37 36.4	
ESDC	**Sonseca Array** 0.5nm,1.0s,baz=150,slow=4.0,SNR=4.2 0.5nm,1.0s	**91.54**	**319**	P	**P**	**19 56 07.1**	**+0.7**
GUMO	**Guam** comp=Z,50nm,21.5s,baz=95,slow=32	**97.93**	**79**	LR	LR	20 35 07.2	
ILAR	**Eielson Array** 0.4nm,0.7s,baz=320,slow=3.5,SNR=4.2	**147.20**	**17**	PKPbc	**PKPbc**	**20 02 41.1**	**-1.1**

IDC 30 19:48:40.7±19.0, 29°.93N×69°.95E, h0km, mb3.7/3, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=397.8km s-min=41.8km az=158.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=212,slow=9.2,SNR=4.0 0.7nm,0.7s	**19.38**	**26**	P	P	19 53 08.1	0.0
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=229,slow=11,SNR=2.3 0.3nm,0.4s	**26.32**	**20**	P	P	19 54 18.0	0.0
BRTR	**Keskin Array B** 0.5nm,0.8s,baz=101,slow=12,SNR=1.4 0.5nm,0.8s	**31.19**	**298**	P	P	19 55 01.8	0.0
ARCES	**ARCESS Array B** 2.7nm,0.9s,baz=129,slow=8.3,SNR=6.2 2.7nm,0.9s	**46.95**	**340**	P	P	19 57 12.7	-0.1

IDC 30 19:53:53.4±12.0, 27°.73N×139°.99E, h117km±110km, mb3.6/3, mbtmp4.0/3, MS3.3/2, Error ellipse: s-maj=105.8km s-min=24.7km az=87.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami** comp=Z,98nm,20.8s,baz=133,slow=34	**10.46**	**268**	LR	LR	19 59 50.1	
KLR	**Kul'dur** 2.1nm,0.9s,baz=162,slow=9.6,SNR=4.0 2.1nm,0.9s	**22.39**	**346**	P	P	19 58 42.1	+0.2
WRA	**Warramunga Arr** 4.1nm,0.9s,baz=6.2,slow=7.8,SNR=11 4.1nm,0.9s	**47.70**	**187**	P	P	20 02 18.1	-0.2
FINES	**FINESS Array B** 1.5nm,0.9s,baz=77,slow=7.6,SNR=1.4	**76.51**	**333**	P	P	20 05 30.2	0.0
FINES	comp=Z,36nm,18.4s,baz=260,slow=38 1.5nm,0.9s			LR	LR	20 42 12.6	
LPAZ	**La Paz** 0.6nm,0.6s,baz=315,slow=2.9,SNR=4.5	**151.62**	**72**	PKPbc	PKPbc	20 13 34.9	-0.5
PLCA	**Paso Flores** 1.6nm,0.8s,baz=258,slow=3.5,SNR=3.6	**151.77**	**125**	PKPbc	PKiKP	20 13 34.6	-0.1

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*IDC **30** 19:54:24.7±0.9, 0°.63S×133°.72E, h0km, mb3.8/6, mbtmp4.0/9, ML4.2/3, MS3.3/12, Error ellipse: s-maj=26.1km s-min=18.1km az=82.0*
*NEIC **30** 19:54:27.7±1.3, 0°.7S±0°.1×133°.92E±0°.09, h10km±2km, mb4.3/11, Error ellipse: s-maj=23.2km s-min=15.1km az=4.0*
*DJA **30** 19:54:30.1±1.4, 1°.S±8°.×13°.4E±°., h12km±9km, M4.7/10, mb4.9/10, mB5.1/6, MLv4.7/8, Mw(mB)4.5/6*
ISC 30 19:54:25.7±0.7, 0°.60S±0°.07×133°.72E±0°.05, h10km, n54, σ2§11/39, mb4.1/9, MS3.3/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.02**	**153**	P	**Pn**	**19 54 47.2**	**+1.1**
RKPI				S	**Sn**	**19 55 03.6**	**+3.2**
SIJI	**Sorong** 27nm,0.3s,baz=39,slow=18,SNR=189	**2.47**	**264**	Pn	**Pn**	**19 55 05.6**	**-0.4**
SIJI	126nm,0.3s,baz=319,slow=19,SNR=12			Sn	**Sb**	**19 55 38.2**	**-2.5**
SIJI	comp=Z,296nm,20.2s,baz=210,slow=37 117nm,0.5s			LR	LR	19 55 55.7	
SIJI	**Sorong**	**2.47**	**264**	P	**Pn**	**19 55 06.0**	**0.0**
FAKI	**Fak Fak**	**2.73**	**212**		**Pb**	**19 55 10.9**	**-3.8**
FAKI	**Fak Fak**	**2.73**	**212**	P	**Pn**	**19 55 10.8**	**+1.1**
SRPI	**Serui, Papua**	**2.82**	**117**	P	**Pb**	**19 55 13.9**	**-2.3**
BNDI	**Bandanaira** 1.6nm4µm269nm,0.5s	**5.45**	**224**	P	**Pn**	**19 55 48.9**	**+1.8**
MSAI	**Masohi** 0.2nm42nm,0.8s	**5.51**	**240**	P	Pn	19 55 52.2	+4.3
KRAI	**Karang Ratu** 0.6nm2µm163nm,1.2s	**5.97**	**243**	P	**Pn**	**19 55 57.1**	**+2.9**
LBMI	**Labuha** 0.2nm819nm66nm,1.2s	**6.22**	**270**	P	Pn	19 56 02.2	+4.6
AAI	**Ambon** 0.6nm2µm206nm,0.7s	**6.32**	**241**	P	Pn	19 56 03.0	+4.0
SANI	**Sanana**	**7.86**	**259**	P	Pn	19 56 29.6	+9.4
GTOI	**Gorontalo**	**10.78**	**277**	P	Pn	19 57 14.4	+14
LUWI	**Luwuk**	**10.95**	**268**	Pn	**Pn**	**19 57 06.3**	**+3.6**
LUWI	**Luwuk**	**10.95**	**268**	P	Pn	19 57 14.3	+12
DAV	**Davao City (W)** comp=Z,59nm,19.1s,baz=136,slow=38	**11.13**	**313**	LR	LR	20 01 33.8	
APSI	**Ampana** 568nm44nm,0.7s	**12.07**	**268**	P	**Pn**	**19 57 21.2**	**+3.2**
BBSI	**Bau Bau**	**12.14**	**246**	P	Pn	19 57 33.9	+15
MTN	**Manton Dam**	**12.43**	**192**		**Pn**	**19 57 23.6**	**+0.7**
SOEI	**Soe**	**13.08**	**226**	Pn	**Pn**	**19 57 34.2**	**+2.3**
SOEI	**Soe** 39nm,0.9s	**13.08**	**226**	P	Pn	19 57 35.7	+3.8
BATI	**Baumata** 2.6nm,0.3s,baz=11,slow=7.2,SNR=9.6	**13.82**	**226**	Pn	**Pn**	**19 57 42.4**	**+0.5**
BATI	0.3nm,0.3s,baz=68,slow=22,SNR=1.8			Sn	**Sn**	**20 00 19.1**	**+3.4**
BATI	comp=Z,166nm,18.8s,baz=74,slow=39 31nm,0.9s			LR	LR	20 03 26.6	
BATI	**Baumata** 54nm,0.8s	**13.82**	**226**	P	**Pn**	**19 57 44.7**	**+2.8**
KAPI	**Kappang**	**14.62**	**252**	Pn	**P**	**19 57 56.0**	**-3.2**
KNRA	**Kununurra**	**15.76**	**198**		**Pn**	**19 58 06.4**	**-1.6**
PMG	**Port Moresby** comp=Z,98nm,19.5s,baz=304,slow=40	**15.98**	**124**	LR	LR	20 05 01.9	
PMG	**Port Moresby** comp=Z,36nm,1.2s	**15.98**	**124**	Pn	**Pn**	**19 58 05.5**	**-5.4**
PMG				IAmb	IAmb	19 58 33.5	
COEN	**Coen** comp=Z,25nm,1.4s	**16.24**	**145**	Pn	**Pn**	**19 58 12.4**	**-1.7**
COEN				IAmb	IAmb	19 58 26.9	
WB0	**Warramunga Arr** comp=Z,26nm,1.4s	**19.06**	**178**	P	**Pn**	**19 58 49.9**	**+0.7**
WB0				IAmb	IAmb	19 59 22.8	
WRA	**Warramunga Arr** comp=Z,0.7nm,0.3s,baz=358,slow=11,SNR=18	**19.23**	**178**	P	**Pn**	**19 58 50.3**	**-0.9**
WRA	comp=Z,122nm

AS31	**Alice Springs**	**22.93 180**	P	**P**	**19 59 29.9**	**-0.3**
AS31			IAmb	IAmb	19 59 45.8	
	comp=Z,5.1nm,0.6s					
ASAR	**Alice Springs**	**22.93 180**	P	**P**	**19 59 29.6**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=359,slow=10.0,SNR=32					
ASAR			S	**S**	**20 03 39.1**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=5.2,slow=21,SNR=2.3					
ASAR			LR	LR	20 10 03.6	
	comp=Z,98nm,19.6s,baz=345,slow=41					
	comp=Z,1.7nm,0.6s					
ASAR	**Alice Springs**	**22.93 180**	P	**P**	**19 59 31.2**	**+1.0**
MBWA	**Marble Bar**	**24.58 213**	P	**P**	**19 59 47.3**	**+1.2**
PSA00	**Pilbara Seismi**	**24.85 212**	P	**P**	**19 59 49.7**	**+1.1**
PSA00			IAmb	IAmb	20 00 08.1	
	comp=Z,19nm,1.4s					
JOW	**Kunigami**	**27.77 350**	LR	LR	20 11 25.2	
	comp=Z,67nm,18.6s,baz=146,slow=37					
JCJ	**Chichijima**	**28.71 16**	LR	LR	20 09 25.3	
	comp=Z,30nm,19.9s,baz=278,slow=31					
STKA	**Stephens Creek**	**31.99 167**	P	**P**	**20 00 53.7**	**+1.5**
	comp=Z,2.8nm,1.0s,baz=333,slow=6.8,SNR=3.3					
	comp=Z,2.8nm,1.0s					
MJAR	**Matsushiro Arr**	**37.19 6**	LR	LR	20 13 47.9	
	comp=Z,49nm,19.3s,baz=190,slow=31					
KSRS	**Korea Array**	**38.24 353**	LR	LR	20 17 03.2	
	comp=Z,25nm,19.0s,baz=150,slow=36					
H11N1	**WAKE ISLAND Hy 38.27 56**		T	T	20 42 49.2	
	baz=243,slow=75,SNR=13					
H11N2	**WAKE ISLAND Hy 38.29 56**		T	T	20 42 50.1	
	baz=243,slow=75,SNR=12					
H11N3	**WAKE ISLAND Hy 38.29 56**		T	T	20 42 57.0	
	baz=243,slow=75,SNR=13					
MSVF	**Nonsavu**	**46.78 114**	LR	LR	20 22 44.4	
	comp=Z,89nm,18.0s,baz=186,slow=36					
SONM	**Songino Array**	**53.78 337**	P	**P**	**20 03 49.9**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=153,slow=8.0,SNR=4.6					
	comp=Z,0.5nm,0.6s					
MKAR	**Makanchi Array**	**65.11 324**	P	**P**	**20 05 07.8**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=117,slow=8.1,SNR=10					
	comp=Z,0.9nm,0.6s					
ZALV	**Zalesovo Beam**	**67.65 331**	P	**P**	**20 05 23.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=115,slow=6.5,SNR=1.6					
	comp=Z,0.3nm,0.3s					
ILAR	**Eielson Array**	**86.02 25**	P	**P**	**20 07 06.6**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=260,slow=5.1,SNR=5.6					
	comp=Z,0.8nm,0.8s					
CPUP	**Villa Florida**	**151.19 159**	PKPbc	**PKiKP**	**20 14 20.2**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=225,slow=1.4,SNR=3.1					

ROM 30 20:07:29.9±0.1,42.789N±0.004×13.167E±0.005,
h9km,ML2.9/29,9C-12D,Error ellipse: s-maj=0.4km
s-min=0.1km az=134.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**13**	P	Pg	20 07 32.6	+0.4
T1245				S	Sg	20 07 34.2	+0.5
T1245				AML	AML		
	comp=E,37200μm,0.2s						
T1245				AML	AML		
	comp=N,61750μm,0.7s						
T1245				AML	AML		
	comp=N,60800μm,0.7s						
T1245				AML	AML		
	comp=E,39500μm,1.0s						
T1245				AML	AML		
	comp=N,58967μm,0.2s						
T1245				AML	AML		
	comp=E,37201μm,0.2s						
T1245				AML	AML		
	comp=E,35157μm,0.2s						
T1245				AML	AML		
	comp=N,61307μm,0.2s						
T1216	**Preci, Frazion**	**0.15**	**313**	⇓P	Pg	20 07 33.8	+0.7
T1216				S	Sg	20 07 36.1	+0.7
T1216				AML	AML		
	comp=E,6280μm,0.1s						
T1216				AML	AML		
	comp=N,7980μm,0.4s						
T1216				AML	AML		
	comp=N,7990μm,0.4s						
T1216				AML	AML		
	comp=E,6560μm,0.2s						
T1216				AML	AML		
	comp=E,6280μm,0.1s						
T1216				AML	AML		
	comp=N,6570μm,0.1s						
T1204	**Amatrice, Fraz**	**0.16**	**136**	P	Pg	20 07 33.7	+0.3
T1204				AML	AML		
	comp=N,2345μm,0.7s						
T1204				AML	AML		
	comp=E,3180μm,0.4s						
T1204				AML	AML		
	comp=N,2340μm,0.7s						
T1204				AML	AML		
	comp=E,3175μm,0.4s						
T1204				AML	AML		
	comp=E,3121μm,0.3s						
T1204				AML	AML		
	comp=N,1918μm,0.3s						
MMO1	**Montemonaco**	**0.16**	**47**	P	Pg	20 07 33.9	+0.5
MMO1				S	Sg	20 07 36.7	+0.9
T1217	**Poggiodomo (PG**	**0.19**	**246**	P	Pg	20 07 34.5	+0.7
T1217				S	Sg	20 07 37.9	+1.3
T1217				AML	AML		
	comp=N,3680μm,1.5s						
T1217				AML	AML		
	comp=E,4425μm,0.2s						
T1217				AML	AML		
	comp=N,3580μm,0.2s						
T1217				AML	AML		
	comp=E,4505μm,0.2s						
T1217				AML	AML		
	comp=N,3655μm,0.5s						
T1217				AML	AML		
	comp=N,3680μm,1.5s						
T1217				AML	AML		
	comp=E,4428μm,0.2s						
T1217				AML	AML		
	comp=E,4427μm,0.1s						
T1217				AML	AML		
	comp=N,3579μm,0.2s						
T1217				AML	AML		
	comp=N,3607μm,0.2s						
T1217				AML	AML		
	comp=E,4506μm,0.1s						
FEMA	**Monte Fema**	**0.19**	**334**	P	Pg	20 07 34.3	+0.3
FEMA				S	Sg	20 07 37.9	+1.1
FEMA				AML	AML		
	comp=N,35450μm,0.3s						
FEMA				AML	AML		
	comp=E,50600μm,0.1s						
FEMA				AML	AML		
	comp=E,3465μm,0.2s						
FEMA				AML	AML		
	comp=N,3118μm,0.2s						
SMA1	**SAN MARTINO**	**0.20**	**142**	P	Pg	20 07 34.3	+0.2
SMA1				AML	AML		
	comp=N,3080μm,1.6s						
SMA1				AML	AML		
	comp=E,3290μm,0.4s						
SMA1				AML	AML		
	comp=N,3085μm,1.6s						
SMA1				AML	AML		
	comp=E,3290μm,0.4s						
SMA1				AML	AML		
	comp=N,3085μm,0.4s						
T1241	**Roccafluvione,**	**0.21**	**71**	P	Pg	20 07 35.0	+0.9
T1241				S	Sg	20 07 38.5	+1.4
T1241				AML	AML		
	comp=E,10235μm,0.2s						
T1241				AML	AML		
	comp=N,6990μm,0.2s						
T1241				AML	AML		
	comp=E,10255μm,0.2s						
T1241				AML	AML		
	comp=N,6990μm,0.2s						
T1241				AML	AML		
	comp=E,10950μm,0.2s						
T1241				AML	AML		
	comp=N,6345μm,0.2s						
T1241				AML	AML		
	comp=E,10250μm,0.2s						
T1241				AML	AML		
	comp=N,6348μm,0.2s						
T1241				AML	AML		
	comp=N,6990μm,0.2s						
T1241				AML	AML		
	comp=E,10246μm,0.2s						
T1241				AML	AML		
	comp=E,10959μm,0.2s						
LNSS	**Leonessa**	**0.21**	**207**	P	Pg	20 07 35.0	+0.8
LNSS				S	Sg	20 07 38.8	+1.6
T1215	**Vallo di Nera,**	**0.22**	**273**	⇓P	Pg	20 07 35.1	+0.7
T1215				S	Sg	20 07 38.7	+1.2
T1215				AML	AML		
	comp=E,2945μm,0.2s						
T1215				AML	AML		
	comp=N,2985μm,0.4s						
T1215				AML	AML		
	comp=E,2940μm,0.2s						
T1215				AML	AML		
	comp=N,3080μm,0.4s						
T1215				AML	AML		
	comp=N,5740μm,0.2s						
T1215				AML	AML		
	comp=N,5810μm,0.2s						
T1215				AML	AML		
	comp=E,3600μm,0.1s						
T1215				AML	AML		
	comp=E,3540μm,0.2s						
T1215				AML	AML		
	comp=N,2275μm,0.1s						
T1215				AML	AML		
	comp=E,2944μm,0.2s						
T1215				AML	AML		
	comp=E,2941μm,0.2s						
T1215				AML	AML		
	comp=N,2249μm,0.1s						
T1243	**Rocca Santa Ma**	**0.23**	**114**	⇑P	Pg	20 07 32.0	-2.6
AM05	**Amandola Campo**	**0.23**	**36**	⇓P	Pg	20 07 34.4	-0.2
AM05				AML	AML		
	comp=N,1790μm,1.3s						
AM05				AML	AML		
	comp=E,7885μm,0.1s						
AM05				AML	AML		
	comp=N,500μm,0.2s						
AM05				AML	AML		
	comp=E,2050μm,0.1s						
AM05				AML	AML		
	comp=E,7890μm,0.1s						
AM05				AML	AML		
	comp=N,500μm,0.2s						
AM05				AML	AML		
	comp=N,1985μm,0.3s						
AM05				AML	AML		
	comp=N,499μm,0.1s						
AM05				AML	AML		
	comp=N,1586μm,0.1s						
AM05				AML	AML		
	comp=E,7889μm,0.1s						
AM05				AML	AML		
	comp=E,2048μm,0.1s						
RM33	**Pellescritta (**	**0.28**	**173**	S	Sg	20 07 37.0	-2.4
GUMA	**Gualdo di Mace**	**0.30**	**24**	P	Pb	20 07 36.8	-0.8
GUMA				S	Sb	20 07 42.2	-0.4
GUMA				AML	AML		
	comp=E,6360μm,1.5s						
GUMA				AML	AML		
	comp=N,6805μm,0.3s						
GUMA				AML	AML		
	comp=E,6610μm,0.3s						
GUMA				AML	AML		
	comp=N,6420μm,0.3s						
GUMA				AML	AML		
	comp=E,13450μm,0.2s						
GUMA				AML	AML		
	comp=N,8250μm,0.2s						
GUMA				AML	AML		
	comp=N,13000μm,0.3s						
GUMA				AML	AML		
	comp=E,19400μm,0.3s						
GUMA				AML	AML		
	comp=N,6424μm,0.3s						
GUMA				AML	AML		
	comp=E,4706μm,0.2s						
GUMA				AML	AML		
	comp=N,6803μm,0.3s						
GUMA				AML	AML		
	comp=E,6609μm,0.3s						
CAMP	**Campotosto**	**0.31**	**145**	S	Sg	20 07 37.0	-3.3
T1211	**Morro Reatino**	**0.34**	**222**	⇓P	Pg	20 07 37.4	+0.6
T1211				AML	AML		
	comp=E,3110μm,1.2s						
T1211				AML	AML		
	comp=N,3660μm,1.0s						
T1211				AML	AML		
	comp=N,3660μm,1.0s						
T1211				AML	AML		
	comp=E,3115μm,1.2s						
T1211				AML	AML		
	comp=N,3452μm,0.3s						
T1211				AML	AML		
	comp=N,3511μm,0.3s						
T1211				AML	AML		
	comp=E,2464μm,0.1s						
T1211				AML	AML		
	comp=E,2530μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.36**	**164**	S	Sg	20 07 40.0	-1.8
ARRO	**Arrone**	**0.36**	**235**	P	Pg	20 07 37.5	+0.5
ARRO				S	Sb	20 07 43.4	-0.9
ARRO				AML	AML		
	comp=E,1365μm,1.1s						
ARRO				AML	AML		
	comp=N,1360μm,0.4s						
ARRO				AML	AML		
	comp=E,1370μm,1.1s						
ARRO				AML	AML		
	comp=N,1275μm,0.2s						
ARRO				AML	AML		
	comp=E,1334μm,0.3s						
TERO	**Teramo**	**0.36**	**117**	S	Sg	20 07 38.0	-3.9
SEF1	**Sefro**	**0.39**	**336**	⇑P	Pg	20 07 38.1	+0.5
SEF1				AML	AML		
	comp=E,3320μm,1.2s						
SEF1				AML	AML		
	comp=N,4180μm,0.9s						
SEF1				AML	AML		
	comp=N,12095μm,1.0s						
SEF1				AML	AML		
	comp=E,13200μm,0.3s						
SEF1				AML	AML		
	comp=E,3191μm,0.2s						
SEF1				AML	AML		
	comp=N,3987μm,0.2s						
OFFI	**Offida**	**0.41**	**69**	P	Pg	20 07 37.1	-0.8
OFFI				AML	AML		
	comp=E,1750μm,1.5s						
OFFI				AML	AML		
	comp=N,2160μm,0.7s						
OFFI				AML	AML		
	comp=N,2158μm,0.7s						
OFFI				AML	AML		
	comp=E,1740μm,0.4s						
ASSB	**Assisi San Ben**	**0.45**	**304**	⇑P	Pg	20 07 39.0	+0.3
ASSB				AML	AML		
	comp=E,1110μm,0.2s						
ASSB				AML	AML		
	comp=N,1023μm,0.8s						
ASSB				AML	AML		
	comp=N,1017μm,0.1s						
CESX	**Cesi**	**0.47**	**248**	⇑P	Pb	20 07 40.4	+0.1
CESX				AML	AML		
	comp=E,841μm,0.6s						
CESX				AML	AML		
	comp=N,1044μm,0.8s						
CESX				AML	AML		
	comp=E,1004μm,1.3s						
CESX				AML	AML		
	comp=N,1137μm,0.4s						
CESX				AML	AML		
	comp=N,1008μm,0.3s						
CESX				AML	AML		
	comp=E,809μm,0.5s						
SNTG	**Esanatoglia**	**0.49**	**340**	⇑P	Pg	20 07 39.9	+0.4
SNTG				AML	AML		
	comp=E,893μm,1.1s						
SNTG				AML	AML		
	comp=N,787μm,1.1s						
SNTG				AML	AML		
	comp=E,853μm,1.2s						
SNTG				AML	AML		
	comp=N,869μm,0.1s						
SNTG				AML	AML		
	comp=E,3795μm,1.3s						
SNTG				AML	AML		
	comp=E,3735μm,0.2s						
SNTG				AML	AML		
	comp=N,2950μm,0.2s						
SNTG				AML	AML		
	comp=N,2875μm,0.2s						
SNTG				AML	AML		
	comp=E,770μm,0.1s						
SNTG				AML	AML		
	comp=E,752μm,0.1s						
SNTG				AML	AML		
	comp=N,745μm,0.1s						
SNTG				AML	AML		
	comp=N,869μm,0.1s						
FIAM	**Fiamignano**	**0.52**	**184**	⇓P	Pg	20 07 40.3	+0.3
FIAM				AML	AML		
	comp=E,338μm,0.8s						
FIAM				AML	AML		
	comp=N,406μm,1.2s						
FIAM				AML	AML		
	comp=N,354μm,0.5s						
FIAM				AML	AML		
	comp=E,331μm,0.4s						
EL6	**Elcito**	**0.54**	**355**	⇓P	Pg	20 07 40.7	+0.3
EL6				S	Sb	20 07 50.0	+0.4
EL6				AML	AML		
	comp=E,3358μm,0.7s						
EL6				AML	AML		
	comp=N,3265μm,1.3s						
EL6				AML	AML		
	comp=N,1320μm,0.1s						
EL6				AML	AML		
	comp=E,1943μm,0.1s						
TRTR	**Tortoreto Alta**	**0.55**	**88**	P	Pb	20 07 42.1	+0.4
ATCC	**AVT- Casa Cast**	**0.55**	**316**	P	Pg	20 07 40.9	+0.3
ATCC				AML	AML		
	comp=E,859μm,0.9s						
ATCC				AML	AML		
	comp=N,870μm,0.3s						
ATCC				AML	AML		
	comp=E,1056μm,0.4s						
ATCC				AML	AML		
	comp=N,1650μm,0.2s						
ATCC				AML	AML		
	comp=E,762μm,0.2s						
ATCC				AML	AML		
	comp=N,870μm,0.3s						
FOSV	**Fossato di Vic**	**0.59**	**330**	⇓P	Pg	20 07 41.5	+0.3
FOSV				AML	AML		
	comp=E,930μm,0.4s						
FOSV				AML	AML		
	comp=N,1580μm,0.3s						
FOSV				AML	AML		
	comp=E,524μm,0.3s						
FOSV				AML	AML		
	comp=N,652μm,1.7s						
MURB	**Monte Urbino**	**0.67**	**315**	⇓P	Pb	20 07 43.4	-0.4
MURB				AML	AML		
	comp=E,1024μm,0.7s						
MURB				AML	AML		
	comp=N,1310μm,0.9s						
MURB				AML	AML		
	comp=E,1329μm,0.3s						
MURB				AML	AML		
	comp=E,1480μm,0.3s						
MURB				AML	AML		
	comp=N,1116μm,0.9s						
MURB				AML	AML		
	comp=E,970μm,0.2s						
MURB				AML	AML		
	comp=N,1105μm,0.3s						
MURB				AML	AML		
	comp=N,1184μm,0.2s						
MURB				AML	AML		
	comp=E,835μm,0.2s						
PP3	**Marolino**	**0.67**	**29**	⇓P	Pg	20 07 39.6	-3.3
PP3				AML	AML		
	comp=E,1258μm,1.5s						
PP3				AML	AML		
	comp=N,1004μm,0.3s						
PP3				AML	AML		
	comp=E,1124μm,0.3s						
PP3				AML	AML		
	comp=N,1185μm,0.3s						
PP3				AML	AML		
	comp=E,1260μm,1.5s						
PP3				AML	AML		
	comp=N,1190μm,0.3s						
PP3				AML	AML		
	comp=E,1122μm,0.3s						
PP3				AML	AML		
	comp=N,1001μm,0.3s						
PP3				AML	AML		
	comp=E,1122μm,0.3s						
PP3				AML	AML		
	comp=E,1252μm,0.3s						
PP3				AML	AML		
	comp=N,1003μm,0.3s						
PP3				AML	AML		
	comp=N,1187μm,0.3s						
T0110	**Collepietro**	**0.72**	**141**	⇑P	Pg	20 07 38.8	-5.1
T0110				AML	AML		
	comp=E,374μm,0.3s						
T0110				AML	AML		
	comp=N,356μm,0.4s						
T0110				AML	AML		
	comp=E,374μm,0.3s						
T0110				AML	AML		
	comp=N,356μm,0.4s						
T0110				AML	AML		
	comp=E,264μm,0.4s						
ATFO	**Monte Foce - G**	**0.72**	**323**	⇑P	Pg	20 07 44.3	+0.4
ATFO				AML	AML		
	comp=E,294μm,0.5s						
ATFO				AML	AML		
	comp=N,334μm,0.3s						
ATFO				AML	AML		
	comp=E,330μm,1.0s						
ATFO				AML	AML		
	comp=N,334μm,0.3s						
ATFO				AML	AML		
	comp=N,334μm,0.3s						
ATFO				AML	AML		
	comp=E,276μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.72**	**305**	⇓P	Pn	20 07 46.1	-0.3
ATTE				AML	AML		
	comp=E,154μm,1.1s						
ATTE				AML	AML		
	comp=N,191μm,1.6s						
ATTE				AML	AML		
	comp=E,213μm,0.4s						
ATTE				AML	AML		
	comp=N,184μm,0.5s						
ATTE				AML	AML		
	comp=E,149μm,0.4s						
ARVD	**Arcevia**	**0.73**	**347**	S	Sb	20 07 56.0	+1.1
MGAB	**Montegabbione**	**0.79**	**279**	⇓P	Pn	20 07 47.6	+0.4
MGAB				AML	AML		
	comp=N,450μm,1.0s						
MGAB				AML	AML		
	comp=E,484μm,0.4s						
MGAB				AML	AML		
	comp=E,522μm,1.5s						
MGAB				AML	AML		
	comp=N,458μm,1.0s						
MGAB				AML	AML		
	comp=E,522μm,1.5s						
MGAB				AML	AML		
	comp=N,498μm,1.3s						
MGAB				AML	AML		
	comp=E,484μm,0.4s						
MGAB				AML	AML		
	comp=N,443μm,0.3s						
MGAB				AML	AML		
	comp=E,494μm,0.4s						
MGAB				AML	AML		
	comp=E,484μm,0.5s						
MGAB				AML	AML		
	comp=N,405μm,0.3s						
ATVO	**AVT- Monte Val**	**0.81**	**317**	S	Sn	20 07 59.0	-0.8
PIEI	**Pieia**	**0.88**	**328**	S	Sn	20 08 01.0	-0.4
SACS	**San Casciano d**	**0.93**	**274**	⇓P	Pb	20 07 48.3	+0.1
SACS				AML	AML		
	comp=E,167μm,1.0s						
SACS				AML	AML		
	comp=N,177μm,0.3s						
SACS				AML	AML		

comp=N,177μm,0.3s
SACS AML AML
comp=N,174μm,0.4s
SACS AML AML
comp=E,157μm,0.5s
SACS AML AML
comp=E,162μm,0.5s
APEC Apecchio 0.94 325 S Sb 20 08 02.0 +0.9
FSSB Fossombrone 0.95 343 S Sn 20 08 04.0 +0.9
TOLF Tolfa 1.13 230 S Sn 20 08 09.0 +1.5
CPGN Carpegna, Ital 1.19 329 ⇑P Pn 20 07 54.5 +1.7
RUFI Rufina 1.60 312 ⇑P Pb 20 07 59.7 +0.1
RUFI AML AML
comp=E,78μm,1.6s
RUFI AML AML
comp=N,55μm,1.6s
PTRJ Pietraroja 1.75 144 P Pn 20 07 59.3 -1.2
PTRJ AML AML
comp=E,795μm,1.3s
PTRJ AML AML
comp=N,822μm,1.3s
PTRJ AML AML
comp=E,698μm,1.3s
PTRJ AML AML
comp=N,952μm,0.3s

PRU 30 20:08:28.2±0.0, 42°.88N×12°.60E, h10km, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHC	**Kasperske Hory**	**6.29**	**6**	*e*SN	Sn	20 11 09.8	-3.1

*NEIC **30** 20:13:50.0±2.8, 0°.12N±0°.05×126°.34E±0°.06, h10km±1km, mb4.7/22, Error ellipse: s-maj=10.2km s-min=8.5km az=289.0*
*BJI **30** 20:13:52.5±0.0, 0°.07S×126°.08E, h41km, mb4.5/34, mB5.0/20, Ms4.5/3, Ms7 4.1/3*
*IDC **30** 20:13:54.6±1.6, 0°.15N×126°.21E, h44km±16km, mb4.2/16, mbtmp4.4/20, ML4.1/4, MS3.4/10, Error ellipse: s-maj=14.1km s-min=10.1km az=77.0*
*DJA **30** 20:13:55.2±0.4, 0°.N±3°×12°.6E±°, h39km±5km, M4.4/19, mb4.7/12, mB4.9/5, MLv4.4/19, Mw(mB)4.2/5, MwMwp6.0/1, Mwp6.0/1*
ISC 30 20:13:53.7±0.4, 0°.14N±0°.04×126°.30E±0°.05, h35km, n130, σ1.99/128, mb4.7/35, MS3.5/9, 1C-5D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**59**	Pn	**Pn**	**20 14 13.6**	**-0.9**
TNTI	**Ternate**	**1.24**	**59**	P	**Pn**	**20 14 13.4**	**-1.2**
TNTI	**Ternate**	**1.24**	**59**	P	**Pn**	**20 14 13.7**	**-0.9**
LBMI	**Labuha**	**1.43**	**123**	P	**Pn**	**20 14 17.3**	**+0.1**
LBMI				S	**Sn**	**20 14 35.0**	**+0.3**
SANI	**Sanana**	**2.20**	**188**	P	**Pn**	**20 14 28.3**	**+0.5**
SANI				S	**Sn**	**20 14 55.1**	**+1.4**
SANI	**Sanana**	**2.20**	**188**	P	**Pn**	**20 14 29.3**	**+1.5**
GAMI	**Galela, Maluku**	**2.25**	**41**	P	**Pn**	**20 14 28.3**	**-0.2**
GTOI	**Gorontalo**	**3.33**	**279**	P	**Pn**	**20 14 47.7**	**+4.4**
NLAI	**Namlea**	**3.45**	**167**	P	**Pn**	**20 14 46.7**	**+1.7**
SGSI	**Sangihe**	**3.61**	**348**	P	**Pn**	**20 14 47.0**	**-0.2**
LUWI	**Luwuk**	**3.72**	**252**		**Pn**	**20 14 49.1**	**+0.4**
LUWI	**Luwuk**	**3.72**	**252**	P	**Pn**	**20 14 52.6**	**+3.9**
LUWI	**Luwuk**	**3.72**	**252**	P	Pn	20 14 53.7	+5.0
KRAI	**Karang Ratu**	**4.02**	**149**	P	**Pn**	**20 14 56.3**	**+3.4**
AAI	**Ambon**	**4.25**	**154**	P	**Pn**	**20 14 58.6**	**+2.6**
MSAI	**Masohi**	**4.34**	**143**	P	**Pn**	**20 15 01.6**	**+4.3**
MRSI	**Marisa**	**4.37**	**274**	P	**Pn**	**20 14 59.0**	**+1.3**
APSI	**Ampana**	**4.77**	**257**	P	**Pn**	**20 15 05.0**	**+1.9**
SIJI	**Sorong**	**5.07**	**101**	P	**Pn**	**20 15 09.3**	**+2.0**
	2.3nm,0.3s,baz=233,slow=15,SNR=29						
SIJI				S	**Sn**	**20 16 08.2**	**+3.6**
	17nm,1.0s,baz=219,slow=19,SNR=1.4						
SIJI				LR	LR	20 17 22.4	
	comp=Z,332nm,21.2s,baz=277,slow=40						
	8.2nm,0.5s						
SIJI	**Sorong**	**5.07**	**101**	P	**Pn**	**20 15 09.6**	**+2.3**
	0.1nm77nm22nm,0.8s						
TOLI2	**Tolitoli**	**5.60**	**280**		**Pn**	**20 15 16.1**	**+1.5**
TOLI2	**Tolitoli**	**5.60**	**280**	P	**Pn**	**20 15 17.0**	**+2.4**
DDMP	**Don Marcelino,**	**5.96**	**354**⇓	*e*P	**Pn**	**20 15 19.8**	**+0.3**
DDMP				*e*S	**Sn**	**20 16 29.1**	**+2.6**
KKSI	**Kolaka, Sulawe**	**6.32**	**227**	P	**Pn**	**20 15 25.9**	**+1.4**
	0.1nm24nm,0.6s						
MPSI	**Mapaga**	**6.41**	**272**	P	**Pn**	**20 15 28.9**	**+3.2**
	0.1nm308nm27nm,0.8s						
FAKI	**Fak Fak**	**6.68**	**117**	P	**Pn**	**20 15 30.5**	**+1.1**
BBSI	**Bau Bau**	**6.72**	**214**	P	Pn	20 15 44.7	+15
MATI	**Mati**	**6.76**	**360**⇓	*e*P	**Pn**	**20 15 33.5**	**+2.9**
MATI				*e*S	Sn	20 16 29.7	-17
KCP	**Kidapawan**	**6.93**	**350**⇓	*i*P	**Pn**	**20 15 35.6**	**+2.7**
KCP				*i* S	**Sn**	**20 16 41.8**	**-8.9**
CTBH	**Cotabato--PC H**	**7.33**	**344**⇓	*i*P	**Pn**	**20 15 41.9**	**+3.5**
BNSI	**Bone**	**7.66**	**234**	P	**Pn**	**20 15 45.1**	**+2.2**
	0.1nm35nm,0.9s						
SPSI	**Sidrap Palu**	**7.70**	**238**	P	**Pn**	**20 15 45.8**	**+2.4**
	0.3nm908nm100nm,0.6s						
BUKP	**Musuan**	**7.79**	**351**⇓	*e*P	Pn	20 15 50.0	+5.3
BUKP				*e*S	**Sn**	**20 17 16.9**	**+5.1**
BIPH	**Bislig**	**7.99**	**0**⇑	*e*P	**Pn**	**20 15 49.0**	**+1.6**
BIPH				*e*S	**Sn**	**20 17 19.1**	**+2.4**
BKSI	**Bulukumba**	**8.21**	**229**	P	**Pn**	**20 15 54.8**	**+4.3**
	0.1nm42nm,0.8s						
BKSI				S	**Pn**	**20 15 53.4**	**+2.9**
	0.1nm42nm,0.8s						
KAPI	**Kappang**	**8.30**	**232**	P	**Pn**	**20 15 53.2**	**+1.4**
	2.5nm,0.3s,baz=14,slow=9.9,SNR=6.8						
KAPI				S	**Sn**	**20 17 23.4**	**-1.0**
	3.7nm,0.6s,baz=324,slow=20,SNR=1.1						
	11nm,0.9s						
KAPI	**Kappang**	**8.30**	**232**	Pn	**Pn**	**20 15 51.0**	**-0.8**
KAPI	**Kappang**	**8.30**	**232**	P	Pn	20 16 01.0	+9.2
KAPI	**Kappang**	**8.30**	**232**	P	**Pn**	**20 15 56.2**	**+4.4**
MYLDM	**Lahad Datu**	**9.26**	**303**	Pn	**Pn**	**20 16 04.9**	**0.0**
MYLDM	**Lahad Datu**	**9.26**	**303**	P	Pn	20 16 12.0	+7.1
BATI	**Baumata**	**10.61**	**194**	P	**Pn**	**20 16 22.1**	**-1.3**
	0.6nm,0.3s,baz=7.9,slow=10,SNR=1.9						
	4.6nm,0.5s						
MTN	**Manton Dam**	**13.76**	**160**	Pn	**Pn**	**20 17 07.1**	**+0.6**
SBUM	**Sibu**	**14.26**	**279**	Pn	**Pn**	**20 17 14.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**14.82**	**234**	Pn	Pn	20 17 15.8	-5.1
KNRA	**Kununurra**	**15.90**	**171**	Pn	**Pn**	**20 17 32.7**	**-2.3**
KNRA	**Kununurra**	**15.90**	**171**	P	**Pn**	**20 17 35.6**	**+0.6**
LEM	**Lembang**	**19.88**	**249**	P	**P**	**20 18 22.1**	**-0.3**
	2.5nm,0.3s,baz=9.6,slow=18,SNR=2.4						
	21nm,0.8s						
BBJI	**Bungbulang**	**20.07**	**248**	P	Pn	20 18 28.6	+2.2
	49nm,0.7s						
WB0	**Warramunga Arr**	**21.31**	**159**	P	**P**	**20 18 37.8**	**+0.1**
WB0				IAmb	IAmb	20 18 43.0	
	comp=Z,17nm,0.6s						
WRAB	**Tennant Creek**	**21.45**	**159**	P	**P**	**20 18 36.6**	**-2.5**
WRAB				IAmb	IAmb	20 18 46.9	
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**21.45**	**159**	P	**P**	**20 18 39.6**	**+0.4**
WRA	**Warramunga Arr**	**21.45**	**159**	P	**P**	**20 18 38.9**	**-0.3**
	comp=Z,8.3nm,0.4s,baz=338,slow=11,SNR=84						
WRA				S	**S**	**20 22 30.6**	**-5.0**
	comp=Z,0.6nm,0.9s,baz=44,slow=25,SNR=1.5						
	comp=Z,8.3nm,0.4s						
WRA	**Warramunga Arr**	**21.45**	**159**	P	**P**	**20 18 38.6**	**-0.7**
WB2	**Warramunga Arr**	**21.46**	**159**	P	**P**	**20 18 38.7**	**-0.6**
WB2				IAmb	IAmb	20 18 46.9	
	comp=Z,19nm,0.8s						
WR0	**Warramunga Arr**	**21.54**	**158**	P	**P**	**20 18 39.7**	**-0.5**
WR0				IAmb	IAmb	20 18 43.7	
	comp=Z,15nm,0.5s						
PSA00	**Pilbara Seismi**	**22.48**	**196**	P	**P**	**20 18 50.1**	**-0.1**
PSA00				IAmb	IAmb	20 18 55.2	
	comp=Z,44nm,1.5s						
PMG	**Port Moresby**	**22.83**	**115**	LR	LR	20 29 25.6	
	comp=Z,160nm,18.7s,baz=300,slow=41						
QIS	**Mount Isa**	**24.34**	**148**	P	**P**	**20 19 10.5**	**+2.0**
AS31	**Alice Springs**	**24.79**	**163**	P	**P**	**20 19 13.4**	**+0.8**
ASAR	**Alice Springs**	**24.79**	**163**	P	**P**	**20 19 13.2**	**+0.7**
	comp=Z,16nm,0.6s,baz=340,slow=9.1,SNR=162						
ASAR				PcP	**PcP**	**20 22 48.5**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=352,slow=2.3,SNR=3.6						
ASAR				S	**S**	**20 23 33.0**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=355,slow=20,SNR=3.2						
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**24.79**	**163**	P	**P**	**20 19 09.4**	**-3.2**
AS01	**Alice Springs**	**24.80**	**163**	P	**P**	**20 19 13.9**	**+1.2**
WRKA	**Warakurna**	**25.10**	**176**	P	**P**	**20 19 17.3**	**+1.9**
JOW	**Kunigami**	**26.61**	**4**	P	**P**	**20 19 29.9**	**+0.9**
	comp=Z,20nm,0.9s,baz=219,slow=6.5,SNR=2.5						
	comp=Z,20nm,0.9s						
MEEK	**Meekatharra**	**27.63**	**195**	P	**P**	**20 19 38.7**	**+0.5**
OOD	**Oodnadatta**	**29.20**	**163**	P	**P**	**20 19 54.3**	**+2.2**
FORT	**Forrest**	**30.79**	**177**	P	**P**	**20 20 05.2**	**-1.0**
FORT	**Forrest**	**30.79**	**177**	P	**P**	**20 20 06.6**	**+0.4**
MULG	**Mulgathing**	**31.14**	**167**	P	**P**	**20 20 11.9**	**+2.6**
CMAR	**Chiang Mai Arr**	**32.46**	**306**	LR	LR	20 35 07.9	
	comp=Z,16nm,19.5s,baz=115,slow=39						
NJ2	**Nanjing**	**32.51**	**348**	*e*P	**P**	**20 20 22.5**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BBOO	**Buckleboo**	**34.04**	**165**	P	**P**	**20 20 33.7**	**-1.0**
BBOO				IAmb	IAmb	20 20 40.1	
	comp=Z,9.7nm,1.0s						
BBOO	**Buckleboo**	**34.04**	**165**	P	**P**	**20 20 35.7**	**+1.0**
STKA	**Stephens Creek**	**34.98**	**157**	P	**P**	**20 20 43.6**	**+0.9**
	comp=Z,6.0nm,0.7s,baz=313,slow=12,SNR=12						
	comp=Z,6.0nm,0.7s						
PZH	**PanZhiHua**	**35.30**	**320**	P	**P**	**20 20 47.8**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,160nm,5.7s						
KSRS	**Korea Array**	**37.16**	**2**	P	**P**	**20 21 01.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=180,slow=9.7,SNR=6.5						
	comp=Z,2.2nm,0.8s						
XAN	**Xi'an**	**37.46**	**336**	P	**P**	**20 21 05.5**	**+1.5**
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
MJAR	**Matsushiro Arr**	**37.87**	**16**	P	**P**	**20 21 06.1**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=185,slow=9.4,SNR=7.1						
	comp=Z,1.8nm,0.7s						
ARPS	**Mount Arapiles**	**39.45**	**160**	P	**P**	**20 21 22.6**	**+2.0**
JMM	**Marumori**	**39.85**	**18**	P	**P**	**20 21 23.0**	**-0.9**
JMM				IAmb	IAmb	20 21 26.1	
	comp=Z,11nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.67**	**343**	*e*P	**P**	**20 21 50.5**	**+3.2**
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
USA0B	**Ussuriysk Arra**	**44.16**	**6**	P	**P**	**20 21 59.4**	**+0.4**
USA0B				IAmb	IAmb	20 22 20.4	
	comp=Z,20nm,1.4s						
USRK	**Ussuriysk Ar.**	**44.16**	**6**	P	**P**	**20 21 59.1**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=194,slow=6.3,SNR=15						
	comp=Z,2.6nm,0.6s						
TAPN	**Taipejung**	**45.87**	**309**	*e*P	**P**	**20 22 10.6**	**-2.7**
GTA	**Gaotai**	**45.98**	**331**	*e*P	**P**	**20 22 13.0**	**-0.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAMN	**Ramite**	**46.54**	**308**	*e*P	**P**	**20 22 17.4**	**-1.1**
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**47.20**	**309**	*e*P	**P**	**20 22 22.2**	**-1.6**
	comp=Z,7.8nm,0.5s						
GUN	**Gumba**	**47.56**	**309**	*e*P	**P**	**20 22 25.2**	**-1.4**
	comp=Z,18nm,0.8s						
PKI	**Pulchoki**	**47.77**	**308**	*e*P	**P**	**20 22 26.3**	**-1.9**
DMN	**Daman**	**48.02**	**308**	*e*P	**P**	**20 22 28.7**	**-1.4**
GKN	**Gorkha**	**48.57**	**308**	*e*P	**P**	**20 22 32.8**	**-1.4**
	comp=Z,14nm,1.1s						
DANN	**Dangsing**	**49.42**	**308**	*e*P	**P**	**20 22 39.6**	**-1.2**
	comp=Z,20nm,0.7s						
ULN	**Ulaanbaatar**	**50.40**	**343**	P	**P**	**20 22 48.7**	**+0.9**
	comp=Z,26nm,0.9s						
SONM	**Songino Array**	**50.56**	**343**	P	**P**	**20 22 48.2**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=158,slow=7.4,SNR=22						
SONM				LR	LR	20 49 42.3	
	comp=Z,18nm,18.2s,baz=173,slow=42						
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**50.56**	**343**	P	**P**	**20 22 48.6**	**-0.4**
MSVF	**Nonsavu**	**53.89**	**112**	LR	LR	20 46 27.5	
	comp=Z,84nm,18.1s,baz=160,slow=36						
WMQ	**Urumqi**	**55.44**	**327**	*e*P	**P**	**20 23 25.8**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,32nm,0.6s						
PEA0B	**Petropavlovsk-**	**58.90**	**22**	P	**P**	**20 23 47.9**	**-1.3**
PETK	**Petropavlovsk-**	**58.90**	**22**	P	**P**	**20 23 49.0**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=187,slow=3.7,SNR=7.6						
	comp=Z,2.4nm,0.6s						
PETK	**Petropavlovsk-**	**58.90**	**22**	P	**P**	**20 23 47.9**	**-1.2**
URZ	**Urewera**	**60.27**	**135**	LR	LR	20 51 44.9	
	comp=Z,31nm,18.0s,baz=26,slow=38						
MK31	**Makanchi Array**	**60.27**	**327**	P	**P**	**20 23 58.0**	**-0.7**
MK31				IAmb	IAmb	20 24 02.4	
	comp=Z,5.8nm,0.7s						
MKAR	**Makanchi Array**	**60.27**	**327**	P	**P**	**20 23 57.6**	**-1.2**
	comp=Z,7.3nm,0.6s,baz=125,slow=8.6,SNR=48						
MKAR				LR	LR	20 52 58.5	
	comp=Z,20nm,18.1s,baz=121,slow=39						
	comp=Z,7.3nm,0.6s						
MKAR	**Makanchi Array**	**60.27**	**327**	P	**P**	**20 23 58.1**	**-0.7**
MAKZ	**Makanchi**	**60.45**	**327**	P	**P**	**20 23 59.1**	**-0.9**
TKM2	**Tokmak 2**	**62.17**	**320**	P	**P**	**20 24 11.7**	**-0.3**
	SNR=5.4						
UCH	**Uchtor**	**62.55**	**319**	P	**P**	**20 24 15.4**	**+0.6**
	SNR=6.5						
USP	**Ospenovka**	**63.04**	**320**	P	**P**	**20 24 17.1**	**-0.4**
	SNR=5.8						
AML	**Almayashu**	**63.04**	**318**	P	**P**	**20 24 18.1**	**0.0**
	SNR=6.7						
EKS2	**Erkin-Say**	**63.23**	**319**	P	**P**	**20 24 18.9**	**-0.1**
	SNR=5.9						
ZALV	**Zalesovo Beam**	**63.59**	**334**	P	**P**	**20 24 19.6**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=132,slow=6.1,SNR=10						
	comp=Z,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	**63.59**	**334**	P	**P**	**20 24 19.2**	**-1.6**
GAR	**Garm**	**64.06**	**314**	P	**P**	**20 24 23.0**	**-1.5**
BTK	**Batken**	**64.12**	**315**	P	**P**	**20 24 23.4**	**-1.4**
BTK				IAmb	IAmb	20 24 30.5	
	comp=Z,3.2nm,0.6s						
KURK	**Kurchatov**	**64.54**	**329**	P	**P**	**20 24 26.5**	**-0.7**
KKAR	**Karatay Array**	**65.58**	**318**	P	**P**	**20 24 33.5**	**-0.6**
BRVK	**Borovoye**	**70.17**	**328**	P	**P**	**20 25 00.7**	**-2.1**
BRVK				IAmb	IAmb	20 25 03.4	
	comp=Z,10nm,1.1s						
GEYT	**Alibeck**	**72.82**	**310**	P	**P**	**20 25 18.3**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=134,slow=4.3,SNR=4.2						
	comp=Z,0.9nm,0.3s						
NRIK	**Noril'sk**	**73.80**	**347**	P	**P**	**20 25 24.3**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=107,slow=3.4,SNR=3.7						
	comp=Z,2.4nm,0.5s						
ABKAR	**Akbulak array**	**74.66**	**322**	P	**P**	**20 25 29.2**	**-0.4**
ARU	**Arti**	**77.73**	**328**	P	**P**	**20 25 45.8**	**-1.2**
ARU				IAmb	IAmb	20 25 46.9	
	comp=Z,5.2nm,0.8s						
VNDA	**Vanda**	**79.94**	**173**	P	**P**	**20 25 58.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=322,slow=4.6,SNR=5.8						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**79.94**	**173**	P	**P**	**20 25 57.2**	**-1.5**
BELG	**Belogornoye**	**82.98**	**323**	LR	LR	21 05 20.5	
	comp=Z,24nm,18.8s,baz=294,slow=37						
GNI	**Garni**	**83.45**	**310**	LR	LR	21 08 52.9	
	comp=Z,18nm,19.0s,baz=68,slow=40						
BRTR	**Keskin Array B**	**91.97**	**310**	P	**P**	**20 26 59.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=57,slow=10,SNR=2.6						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**93.65**	**340**	P	**P**	**20 27 06.9**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=72,slow=5.8,SNR=4.5						
	comp=Z,2.2nm,0.8s						
MBAR	**Mbarara**	**95.56**	**269**	LR	LR	21 09 34.0	
	comp=Z,15nm,20.4s,baz=24,slow=35						
TORD	**Torodi Ar. Bea**	**123.55**	**286**	PKP	**PKPdf**	**20 32 48.9**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=48,slow=0.2,SNR=4.0						

*SNET **30** 20:21:09.7±1.2, 12°.96N×88°.81W, h53km, ML3.7*
*INET **30** 20:21:09.9±1.0, 12°.94N×88°.80W, h53km±23km, MW3.4*
ISC 30 20:21:09.6±1.6, 12°.9N±0°.1×88°.80W±0°.06, h61km±15km, n27, σ0.46/39, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.44**	**31**	*e*P	**Pn**	**20 21 20.8**	**-0.3**
ALJI				*e*S	**Sn**	**20 21 29.8**	**+0.3**
COEB	**Comit de Eme**	**0.61**	**26**	*e*P	**Pn**	**20 21 22.6**	**-0.4**
COEB				*e*S	**Sn**	**20 21 32.8**	**0.0**
COEG	**Centro de Oper**	**0.68**	**353**	*e*S	**Sn**	**20 21 33.5**	**-0.6**
SJTE	**Alcalda de S**	**0.70**	**343**	*e*P	**Pn**	**20 21 23.4**	**-0.6**
PACA	**Pacayal**	**0.70**	**42**	*e*P	**Pn**	**20 21 24.3**	**+0.2**
PACA				*e*S	**Sn**	**20 21 35.2**	**+0.5**
PACA	**Pacayal**	**0.70**	**42**	*e*P	**Pn**	**20 21 24.2**	**+0.2**
PQSS	**Presa 15 de Se**	**0.71**	**19**	*e*P	**Pn**	**20 21 24.1**	**0.0**
SCLA	**Alcaldia de Sa**	**0.76**	**5**	*e*P	**Pn**	**20 21 24.6**	**-0.1**
SCLA				*e*S	**Sn**	**20 21 36.5**	**+0.8**
PAVA	**Las Pavas**	**0.78**	**350**	*e*P	**Pn**	**20 21 24.7**	**-0.3**
PAVA				*e*S	**Sn**	**20 21 36.8**	**+0.5**
SNET	**Serv Nac Est T**	**0.85**	**330**	*e*P	**Pn**	**20 21 25.5**	**-0.4**
LFU	**La Fuente**	**0.86**	**339**	*e*P	**Pn**	**20 21 26.0**	**0.0**
UEES	**Universidad Ev**	**0.88**	**331**	*e*P	**Pn**	**20 21 25.9**	**-0.4**
BOQS	**Boqueron**	**0.91**	**329**	*e*P	**Pn**	**20 21 26.6**	**-0.3**
LCND	**La Caada**	**0.96**	**68**⇑	*e*P	**Pn**	**20 21 27.4**	**+0.2**
LCND				*e*S	**Sn**	**20 21 40.1**	**-0.1**
CNCH	**Conchagua**	**1.00**	**71**	*e*P	**Pn**	**20 21 27.4**	**-0.4**
CNCH				*e*P	**Pn**	**20 21 27.6**	**-0.2**
P5NO	**Presa 5 de nov**	**1.04**	**2**	*e*P	**Pn**	**20 21 27.8**	**-0.4**
P5NO				*e*S	**Sn**	**20 21 41.5**	**-0.5**
CEVE	**Cerro Verde**	**1.19**	**318**	*e*S	**Sn**	**20 21 47.3**	**+1.4**
SBLS	**San Blas**	**1.20**	**318**	*e*P	**Pn**	**20 21 30.6**	**0.0**
SNJE	**San Jose**	**1.21**	**320**	*e*P	**Pn**	**20 21 30.7**	**+0.1**
NUBE	**Las Nubes**	**1.35**	**315**	*e*P	**Pn**	**20 21 32.4**	**-0.1**
NUBE				*e*S	**Sn**	**20 21 49.4**	**-0.1**
MTO3	**Montecristo**	**1.54**	**339**	*e*P	**Pn**	**20 21 35.0**	**-0.1**
MTO3				*e*S	**Sn**	**20 21 53.6**	**-0.7**
MTO3	**Montecristo**	**1.54**	**339**	*e*P	**Pn**	**20 21 35.1**	**-0.1**
ESQI	**Esquipulas**	**1.69**	**342**	*e*P	**Pn**	**20 21 37.4**	**+0.3**
ESQI				*e*S	**Sn**	**20 21 58.2**	**+0.5**
CRIN	**San Cristobal**	**1.73**	**98**	*e*P	**Pn**	**20 21 37.9**	**+0.4**
CRIN				*e*S	**Sn**	**20 21 59.0**	**+0.5**
COPN	**Copaltepe**	**2.29**	**109**	*e*P	**Pn**	**20 21 44.4**	**-0.6**
MATN	**Matagalpa**	**2.80**	**90**	*e*P	**Pn**	**20 21 51.9**	**-0.2**
BOAB	**BOACO BROADBAN**	**3.10**	**99**	*i* P	**Pn**	**20 21 55.6**	**-0.5**

ROM 30 20:30:50.9±0.1, 42°.618N±0°.004×13°.280E±0°.004, h12km, ML2.9/28, 25C-19D, Error ellipse: s-maj=0.4km s-min=0.2km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.04**	**73**	P	Pg	20 30 53.9	+0.6
SMA1				S	Sg	20 30 55.2	+0.2
SMA1				AML	AML		
	comp=E,72300μm,0.5s						
SMA1				AML	AML		
	comp=N,20600μm,0.4s						
SMA1				AML	AML		
	comp=N,19289μm,0.3s						
SMA1				AML	AML		
	comp=E,64465μm,0.3s						
T1204	**Amatrice, Fraz**	**0.06**	**25**	P	Pg	20 30 53.9	+0.3
T1204				S	Sg	20 30 55.4	0.0
T1204				AML	AML		
	comp=E,34600μm,0.8s						
T1204				AML	AML		
	comp=N,15790μm,0.8s						
T1204				AML	AML		
	comp=E,34550μm,0.8s						
T1204				AML	AML		
	comp=N,15800μm,0.8s						
T1204				AML	AML		
	comp=N,15850μm,0.8s						
T1204				AML	AML		
	comp=N,12737μm,0.2s						
T1204				AML	AML		
	comp=E,31901μm,0.2s						
RM33	**Pellescritta (**	**0.12**	**204**	⇑P	Pg	20 30 54.6	+0.5
RM33				S	Sg	20 30 56.7	+0.3
RM33				AML	AML		
	comp=E,14350μm,0.2s						
RM33				AML	AML		
	comp=N,8405μm,0.4s						
RM33				AML	AML		
	comp=E,14300μm,0.2s						
RM33				AML	AML		
	comp=N,8250μm,0.4s						
RM33				AML	AML		
	comp=E,14000μm,0.2s						
RM33				AML	AML		
	comp=N,8410μm,0.4s						
RM33				AML	AML		
	comp=N,8255μm,0.4s						
RM33				AML	AML		
	comp=E,14316μm,0.2s						
RM33				AML	AML		
	comp=E,14001μm,0.2s						
RM33				AML	AML		
	comp=N,8408μm,0.4s						
RM33				AML	AML		
	comp=N,8254μm,0.4s						
CAMP	**Campotosto**	**0.13**	**131**	⇑P	Pg	20 30 54.7	+0.6
CAMP				AML	AML		
	comp=N,1970μm,0.4s						
CAMP				AML	AML		
	comp=E,1250μm,0.2s						
CAMP				AML	AML		
	comp=N,1967μm,0.4s						
CAMP				AML	AML		
	comp=E,1064μm,0.4s						
T1243	**Rocca Santa Ma**	**0.15**	**58**	⇑P	Pg	20 30 54.9	+0.4
T1243				S	Sg	20 30 57.7	+0.6
T1247	**Pizzolo (AQ)**	**0.18**	**176**	⇑P	Pg	20 30 55.5	+0.6
T1247				AML	AML		
	comp=E,4580μm,0.2s						
T1247				AML	AML		
	comp=N,5515μm,0.3s						
T1247				AML	AML		
	comp=N,5510μm,0.3s						
T1247				AML	AML		
	comp=E,4581μm,0.2s						
LNSS	**Leonessa**	**0.18**	**265**	⇑P	Pg	20 30 55.4	+0.4
LNSS

GIGS				AML	AML	
	comp=E,460µm,1.4s					
GIGS				AML	AML	
	comp=N,378µm,0.9s					
GIGS				AML	AML	
	comp=N,237µm,0.3s					
GIGS				AML	AML	
	comp=E,307µm,0.3s					
T1217	**Poggiodomo (PG**	**0.27**	**290**	⇑P	Pg	20 30 57.2 +0.6
T1217				AML	AML	
	comp=E,7780µm,0.5s					
T1217				AML	AML	
	comp=E,7665µm,0.5s					
T1217				AML	AML	
	comp=N,10995µm,0.3s					
T1217				AML	AML	
	comp=N,11010µm,0.3s					
T1217				AML	AML	
	comp=E,7685µm,0.5s					
T1217				AML	AML	
	comp=N,11150µm,0.3s					
T1217				AML	AML	
	comp=E,7780µm,0.5s					
T1217				AML	AML	
	comp=E,2755µm,0.1s					
T1217				AML	AML	
	comp=N,2395µm,0.2s					
T1217				AML	AML	
	comp=N,2438µm,0.3s					
T1217				AML	AML	
	comp=E,2700µm,0.1s					
AQU	**L'Aquila**	**0.28**	**161**	⇑P	Pg	20 30 57.2 +0.6
AQU				AML	AML	
	comp=N,1375µm,0.3s					
AQU				AML	AML	
	comp=E,1260µm,1.1s					
AQU				AML	AML	
	comp=E,1195µm,1.1s					
AQU				AML	AML	
	comp=N,1350µm,0.3s					
AQU				AML	AML	
	comp=N,1380µm,0.3s					
AQU				AML	AML	
	comp=E,1017µm,0.4s					
AQU				AML	AML	
	comp=N,1351µm,0.3s					
AQU				AML	AML	
	comp=E,1130µm,0.5s					
AQU				AML	AML	
	comp=N,1377µm,0.3s					
MMO1	**Montemonaco**	**0.28**	**7**	⇓P	Pg	20 30 57.2 +0.4
T1211	**Morro Reatino**	**0.33**	**255**	⇑P	Pg	20 30 57.7 +0.2
T1211				S	Sg	20 31 02.8 +0.9
T1211				AML	AML	
	comp=E,4755µm,0.9s					
T1211				AML	AML	
	comp=E,4685µm,0.9s					
T1211				AML	AML	
	comp=N,11160µm,0.3s					
T1211				AML	AML	
	comp=N,11050µm,0.3s					
T1211				AML	AML	
	comp=E,4675µm,0.2s					
T1211				AML	AML	
	comp=E,4750µm,0.9s					
T1211				AML	AML	
	comp=E,2608µm,0.1s					
T1211				AML	AML	
	comp=N,5986µm,0.3s					
T1211				AML	AML	
	comp=E,2493µm,0.1s					
T1211				AML	AML	
	comp=N,6061µm,0.3s					
T1216	**Preci, Frazion**	**0.33**	**325**	⇓P	Pg	20 30 58.0 +0.3
T1216				AML	AML	
	comp=N,21100µm,0.2s					
T1216				AML	AML	
	comp=E,20250µm,0.5s					
T1215	**Vallo di Nera,**	**0.35**	**301**	AML	AML	
	comp=E,1565µm,0.9s					
T1215				AML	AML	
	comp=N,1263µm,0.4s					
T1215				AML	AML	
	comp=E,1625µm,0.9s					
T1215				AML	AML	
	comp=N,1329µm,0.3s					
AM05	**Amandola Campo**	**0.36**	**8**	⇑P	Pg	20 30 58.6 +0.4
AM05				AML	AML	
	comp=N,2025µm,0.4s					
AM05				AML	AML	
	comp=E,1750µm,1.1s					
AM05				AML	AML	
	comp=E,7980µm,1.1s					
AM05				AML	AML	
	comp=N,518µm,0.1s					
AM05				AML	AML	
	comp=E,1317µm,0.1s					
AM05				AML	AML	
	comp=E,5199µm,0.1s					
AM05				AML	AML	
	comp=N,1275µm,0.1s					
AM05				AML	AML	
	comp=N,519µm,0.1s					
FIAM	**Fiamignano**	**0.37**	**199**	⇑P	Pg	20 30 58.6 +0.3
FIAM				AML	AML	
	comp=E,1380µm,0.3s					
FIAM				AML	AML	
	comp=N,1350µm,0.3s					
FIAM				AML	AML	
	comp=N,911µm,0.7s					
FIAM				AML	AML	
	comp=E,1162µm,0.6s					
ARRO	**Arrone**	**0.38**	**264**	⇑P	Pg	20 30 58.6 +0.1
ARRO				AML	AML	
	comp=E,4355µm,0.4s					
ARRO				AML	AML	
	comp=N,3905µm,1.6s					
ARRO				AML	AML	
	comp=E,4350µm,0.4s					
ARRO				AML	AML	
	comp=E,1382µm,0.2s					
ARRO				AML	AML	
	comp=N,1446µm,0.3s					
FEMA	**Monte Fema**	**0.38**	**334**	⇑P	Pb	20 30 59.8 0.0
FEMA				AML	AML	
	comp=E,10090µm,1.1s					
FEMA				AML	AML	
	comp=N,9995µm,0.5s					
FEMA				AML	AML	
	comp=E,10110µm,1.1s					
FEMA				AML	AML	
	comp=N,2009µm,0.1s					
FEMA				AML	AML	
	comp=E,2276µm,0.3s					
FAGN	**Fagnano**	**0.42**	**147**	⇓P	Pg	20 30 59.6 +0.4
FAGN				AML	AML	
	comp=E,1600µm,0.4s					
FAGN				AML	AML	
	comp=N,1315µm,1.6s					
FAGN				AML	AML	
	comp=E,1605µm,0.4s					
FAGN				AML	AML	
	comp=N,1475µm,0.4s					
FAGN				AML	AML	
	comp=N,1082µm,0.4s					
FAGN				AML	AML	
	comp=E,1549µm,0.7s					
OFFI	**Offida**	**0.43**	**43**	⇑P	Pb	20 31 00.7 +0.1
OFFI				AML	AML	
	comp=E,4275µm,0.5s					
OFFI				AML	AML	
	comp=N,3915µm,0.8s					
OFFI				AML	AML	
	comp=N,2210µm,0.5s					
OFFI				AML	AML	
	comp=E,1838µm,0.3s					
GUMA	**Gualdo di Mace**	**0.45**	**5**	⇑P	Pb	20 31 00.3 -0.5
GUMA				AML	AML	
	comp=E,10345µm,0.6s					
GUMA				AML	AML	
	comp=N,11385µm,0.4s					
GUMA				AML	AML	
	comp=E,9100µm,0.5s					
GUMA				AML	AML	
	comp=N,11350µm,0.4s					
GUMA				AML	AML	
	comp=N,14200µm,0.5s					
GUMA				AML	AML	
	comp=E,10350µm,0.6s					
GUMA				AML	AML	
	comp=E,3263µm,0.3s					
GUMA				AML	AML	
	comp=E,4787µm,0.3s					
GUMA				AML	AML	
	comp=N,4091µm,0.3s					
GUMA				AML	AML	
	comp=N,4146µm,0.4s					
VCEL	**Villa Celiera**	**0.47**	**118**	⇓P	Pb	20 31 01.1 -0.1
VCEL				AML	AML	
	comp=E,1070µm,0.4s					
VCEL				AML	AML	
	comp=N,1380µm,0.4s					
VCEL				AML	AML	
	comp=E,1072µm,0.4s					
VCEL				AML	AML	
	comp=N,1194µm,0.3s					
CSP1	**Cessapalombo**	**0.48**	**353**	⇑P	Pg	20 31 00.4 +0.1
CSP1				AML	AML	
	comp=E,1285µm,0.3s					
CSP1				AML	AML	
	comp=N,1280µm,0.4s					
CSP1				AML	AML	
	comp=N,1223µm,0.3s					
CSP1				AML	AML	
	comp=E,942µm,0.2s					
TRTR	**Tortoreto Alta**	**0.50**	**68**	⇑P	Pb	20 31 02.2 +0.5
TRTR				AML	AML	
	comp=E,2855µm,0.5s					
TRTR				AML	AML	
	comp=N,3345µm,0.9s					
TRTR				AML	AML	
	comp=N,1597µm,0.4s					
TRTR				AML	AML	
	comp=E,2330µm,0.4s					
CESX	**Cesi**	**0.52**	**269**	⇓P	Pg	20 31 01.0 -0.1
CESX				S	Sb	20 31 10.0 +0.5
CESX				AML	AML	
	comp=E,3635µm,0.5s					
CESX				AML	AML	
	comp=N,2165µm,0.3s					
CESX				AML	AML	
	comp=N,870µm,0.2s					
CESX				AML	AML	
	comp=E,732µm,0.2s					
T0110	**Collepietro**	**0.54**	**136**	⇓P	Pg	20 31 01.7 +0.2
T0110				AML	AML	
	comp=E,978µm,0.5s					
T0110				AML	AML	
	comp=N,952µm,0.5s					
T0110				AML	AML	
	comp=E,1545µm,0.3s					
T0110				AML	AML	
	comp=N,1087µm,0.5s					
T0110				AML	AML	
	comp=E,593µm,0.3s					
T0110				AML	AML	
	comp=N,775µm,0.5s					
SNTG	**Esanatoglia**	**0.68**	**339**	P	Pb	20 31 04.7 -0.2
SNTG				AML	AML	
	comp=N,823µm,0.6s					
SNTG				AML	AML	
	comp=N,868µm,0.6s					
SNTG				AML	AML	
	comp=E,632µm,1.5s					
SNTG				AML	AML	
	comp=E,542µm,0.5s					
SNTG				AML	AML	
	comp=N,824µm,0.6s					
SNTG				AML	AML	
	comp=N,355µm,0.3s					
SNTG				AML	AML	
	comp=N,396µm,0.2s					
SNTG				AML	AML	
	comp=E,263µm,0.1s					
SNTG				AML	AML	
	comp=E,268µm,0.1s					
SRES	**S.Oreste - Sor**	**0.69**	**237**	⇓P	Pg	20 31 04.1 -0.1
SRES				AML	AML	
	comp=E,909µm,0.9s					
SRES				AML	AML	
	comp=N,898µm,0.5s					
SRES				AML	AML	
	comp=N,234µm,0.3s					
SRES				AML	AML	
	comp=E,194µm,0.2s					
CERT	**Cerreto**	**0.70**	**198**	P	Pg	20 31 04.1 -0.5
CERT				AML	AML	
	comp=E,1365µm,0.5s					
CERT				AML	AML	
	comp=N,716µm,1.3s					
CERT				AML	AML	
	comp=N,470µm,0.4s					
CERT				AML	AML	
	comp=E,695µm,0.4s					
MTCE	**Montecelio**	**0.72**	**214**	⇑P	Pg	20 31 04.2 -0.6
MTCE				AML	AML	
	comp=N,598µm,0.3s					
MTCE				AML	AML	
	comp=E,610µm,0.5s					
MTCE				AML	AML	
	comp=N,251µm,0.4s					
MTCE				AML	AML	
	comp=E,610µm,0.5s					
EL6	**Elcito**	**0.72**	**350**	⇓P	Pg	20 31 04.8 -0.2
EL6				AML	AML	
	comp=E,1722µm,0.3s					
EL6				AML	AML	
	comp=N,1495µm,0.3s					
EL6				AML	AML	
	comp=E,1722µm,0.3s					
EL6				AML	AML	
	comp=N,1496µm,0.3s					
EL6				AML	AML	
	comp=E,819µm,0.1s					
EL6				AML	AML	
	comp=N,764µm,0.2s					
ATCC	**AVT- Casa Cast**	**0.74**	**321**	⇓P	Pg	20 31 05.1 -0.1
ATCC				AML	AML	
	comp=E,1355µm,0.9s					
ATCC				AML	AML	
	comp=N,1285µm,1.0s					
ATCC				AML	AML	
	comp=E,424µm,0.3s					
ATCC				AML	AML	
	comp=N,385µm,0.3s					
FOSV	**Fossato di Vic**	**0.78**	**331**	⇑P	Pg	20 31 05.8 -0.1
FOSV				AML	AML	
	comp=E,564µm,0.6s					
FOSV				AML	AML	
	comp=N,592µm,0.6s					
FOSV				AML	AML	
	comp=N,395µm,0.5s					
FOSV				AML	AML	
	comp=E,217µm,0.3s					
VVLD	**Villa Vallelon**	**0.79**	**161**	⇓P	Pn	20 31 08.8 +0.8
PP3	**Marolino**	**0.80**	**18**	P	Pg	20 31 06.1 -0.2
PP3				AML	AML	
	comp=N,1810µm,1.5s					
PP3				AML	AML	
	comp=N,1820µm,1.0s					
PP3				AML	AML	
	comp=E,1282µm,0.5s					
PP3				AML	AML	
	comp=E,1355µm,0.5s					
PP3				AML	AML	
	comp=E,788µm,0.6s					
PP3				AML	AML	
	comp=N,563µm,0.4s					
PP3				AML	AML	
	comp=E,758µm,0.6s					
PP3				AML	AML	
	comp=N,532µm,0.4s					
ATTE	**AVT- Monte Tez**	**0.89**	**311**	⇑P	Pn	20 31 10.2 +0.7
MGAB	**Montegabbione**	**0.91**	**289**	⇑P	Pg	20 31 08.5 +0.1
MGAB				AML	AML	
	comp=N,1675µm,0.5s					
MGAB				AML	AML	
	comp=E,1235µm,0.5s					
MGAB				AML	AML	
	comp=E,1118µm,0.5s					
MGAB				AML	AML	
	comp=N,1770µm,0.5s					
ATFO	**Monte Foce - G**	**0.91**	**325**	⇑P	Pg	20 31 08.3 -0.2
ATFO				AML	AML	
	comp=E,336µm,0.8s					
ATFO				AML	AML	
	comp=N,410µm,1.5s					
ATFO				AML	AML	
	comp=E,337µm,0.8s					
ATFO				AML	AML	
	comp=N,410µm,1.5s					
ARVD	**Arcevia**	**0.91**	**344**	⇑P	Pg	20 31 08.3 -0.2
ARVD				AML	AML	
	comp=E,406µm,0.6s					
ARVD				AML	AML	
	comp=N,274µm,1.0s					
ARVD				AML	AML	
	comp=N,160µm,0.2s					
RMP	**Rome, Mte Porz**	**0.91**	**208**	⇑P	Pn	20 31 09.8 +0.2
RMP				AML	AML	
	comp=N,998µm,0.7s					
RMP				AML	AML	
	comp=E,862µm,0.5s					
RMP				AML	AML	
	comp=E,340µm,0.4s					
RMP				AML	AML	
	comp=N,438µm,0.4s					
VIVA	**Pratoni del Vi**	**0.95**	**204**	P	Pg	20 31 08.7 -0.5
VIVA				AML	AML	
	comp=E,1305µm,1.4s					
VIVA				AML	AML	
	comp=N,1460µm,1.4s					
FRON	**Frontone**	**0.99**	**336**	P	Pg	20 31 09.4 -0.5
FRON				AML	AML	
	comp=E,341µm,0.9s					
FRON				AML	AML	
	comp=N,432µm,1.4s					
FRON				AML	AML	
	comp=E,235µm,0.4s					
ATVO	**AVT- Monte Val**	**1.00**	**320**	⇑P	Pb	20 31 10.3 +0.1
ATVO				AML	AML	
	comp=E,282µm,0.5s					
ATVO				AML	AML	
	comp=N,318µm,0.7s					
ATVO				AML	AML	
	comp=E,168µm,0.4s					
ATVO				AML	AML	
	comp=N,160µm,0.4s					
SACS	**San Casciano d**	**1.04**	**283**	⇓P	Pn	20 31 11.9 +0.5
SACS				AML	AML	
	comp=E,480µm,0.8s					
SACS				AML	AML	
	comp=N,496µm,0.7s					
SACS				AML	AML	
	comp=E,179µm,0.7s					
SACS				AML	AML	
	comp=E,182µm,0.7s					
ATPI	**Pietralunga -**	**1.05**	**323**	⇓P	Pb	20 31 11.1 0.0
ATPI				AML	AML	
	comp=E,304µm,1.5s					
ATPI				AML	AML	
	comp=N,251µm,0.5s					
ATPI				AML	AML	
	comp=E,200µm,0.5s					
ATPI				AML	AML	
	comp=N,210µm,0.4s					
GIUL	**Giuliano Di Ro**	**1.06**	**181**	⇓P	Pn	20 31 13.0 +1.4
PIEI	**Pieia**	**1.07**	**329**	P	Pb	20 31 11.0 -0.4
PIEI				AML	AML	
	comp=E,228µm,0.4s					
PIEI				AML	AML	
	comp=N,222µm,0.4s					
PIEI				AML	AML	
	comp=E,195µm,0.3s					
PIEI				AML	AML	
	comp=N,184µm,0.3s					
TOLF	**Tolfa**	**1.10**	**240**	⇓P	Pb	20 31 11.4 -0.4
TOLF				AML	AML	
	comp=E,516µm,0.4s					
TOLF				AML	AML	
	comp=N,452µm,0.7s					
TOLF				AML	AML	
	comp=E,186µm,0.5s					
TOLF				AML	AML	
	comp=N,144µm,0.7s					
LIK	**San Giovanni I**	**1.13**	**169**	S	Sn	20 31 30.0 +1.9
FSSB	**Fossombrone**	**1.14**	**341**	⇓P	Pb	20 31 12.2 -0.3
FSSB				AML	AML	
	comp=E,827µm,0.4s					
FSSB				AML	AML	
	comp=N,1002µm,0.4s					
CAFI	**Castiglion Fio**	**1.20**	**307**	⇓P	Pg	20 31 15.2 +1.2
PE3	**Peglio**	**1.22**	**332**	⇑P	Pg	20 31 15.7 +1.3
CRE	**Caprese Michel**	**1.40**	**316**	⇓P	Pg	20 31 17.8 0.0
OBKA	**Obir**	**4.00**	**13**	*e*Pn	Pn	20 31 54.3 +2.3
	comp=N,0.6nm,0.3s					
ABTA	**Abfaltersbach**	**4.17**	**353**	*e*Pn	Pn	20 31 56.1 +1.7
	comp=N,2.3nm,0.4s					
FETA	**Feichten**	**4.76**	**338**	*e*Pn	Pn	20 32 07.0 +4.4
	comp=N,0.7nm,0.4s					
SQTA	**Sankt Quirin**	**4.83**	**343**	*e*Pn	Pn	20 32 08.1 +4.5
	comp=N,0.7nm,0.2s					
BIOA	**Bad Ischl, Aus**	**5.08**	**3**	*e*Pn	Pn	20 32 06.0 -0.9
	comp=N,1.3nm,0.2s					
MOA	**Molln**	**5.28**	**7**	*e*Pn	Pn	20 32 12.1 +2.4
	comp=N,0.1nm,0.1s					

ROM 30 20:31:18.7±0.1, 42°.809N±0°.003×13°.090E±0°.003, h10km, ML3.0/24, 18C-10D, Error ellipse: s-maj=0.3km s-min=0.1km az=153.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**56**	⇓P	Pg	20 31 21.8	+0.4
T1245				S	Sg	20 31 23.7	+0.4
T1245				AML	AML		
	comp=N,63700µm,0.4s						
T1245				AML	AML		
	comp=E,63250µm,0.5s						
T1245				AML	AML		
	comp=N,63750µm,0.4s						
T1245				AML	AML		
	comp=N,69650µm,0.4s						
T1245				AML	AML		
	comp=E,63250µm,0.6s						
T1245				AML	AML		
	comp=E,56850µm,0.6s						
T1216	**Preci, Frazion**	**0.10**	**327**	P	Pg	20 31 21.8	+0.4
T1216				S	Sg	20 31 23.7	+0.5
T1216				AML	AML		
	comp=E,20250µm,0.5s						
T1216				AML	AML		
	comp=E,20250µm,0.5s						
T1216				AML	AML		
	comp=N,21100µm,0.2s						
T1217	**Poggiodomo (PG**	**0.15**	**230**	P	Pg	20 31 22.8	+0.6
T1217				S	Sg	20 31 25.6	+1.0
T1217				AML	AML		
	comp=E,7780µm,0.5s						
T1217				AML	AML		
	comp=N,11155µm,0.3s						
T1217				AML	AML		
	comp=N,11040µm,0.3s						
T1217				AML	AML		
	comp=E,7665µm,0.5s						
T1217				AML	AML		
	comp=N,10995µm,0.3s						
T1217				AML	AML		
	comp=E,7790µm,0.5s						
T1217				AML	AML		
	comp=E,7655µm,0.5s						
T1217				AML	AML		
	comp=N,11010µm,0.3s						
T1217				AML	AML		
	comp=N,11150µm,0.3s						
T1217				AML	AML		
	comp=N,11150µm,1.7s						
T1217				AML	AML		
	comp=E,7655µm,1.5s						
T1217				AML	AML		
	comp=E,7790µm,1.5s						
T1217				AML	AML		
	comp=N,11010µm,1.7s						
FEMA	**Monte Fema**	**0.16**	**349**	P	Pg	20 31 22.8	+0.5
FEMA				AML	AML		
	comp=E,10115µm,1.1s						
FEMA				AML	AML		
	comp=E,10090µm,1.1s						
FEMA				AML	AML		
	comp=N,9995µm,0.5s						
FEMA				AML	AML		

comp=E,10110μm,1.1s
FEMA AML AML
comp=N,9990μm,0.5s
FEMA AML AML
comp=N,9990μm,1.5s
FEMA AML AML
comp=E,10110μm,0.9s
T1215 Vallo di Nera, 0.16 268 P Pg 20 31 22.9 +0.6
T1215 S Sg 20 31 25.7 +0.9
T1215 AML AML
comp=E,4370μm,0.3s
T1215 AML AML
comp=N,4965μm,1.2s
T1215 AML AML
comp=N,4830μm,0.8s
T1215 AML AML
comp=N,4955μm,1.2s
T1215 AML AML
comp=N,4950μm,1.2s
T1215 AML AML
comp=N,4830μm,0.8s
T1215 AML AML
comp=E,4605μm,0.4s
T1215 AML AML
comp=N,4830μm,1.2s
T1215 AML AML
comp=N,4950μm,0.8s
T1215 AML AML
comp=E,4370μm,0.3s
MMO1 Montemonaco 0.20 62 P Pg 20 31 23.4 +0.5
MMO1 S Sg 20 31 26.8 +1.0
LNSS Leonessa 0.21 190 ⇑P Pg 20 31 23.8 +0.6
LNSS S Sg 20 31 27.3 +1.2
LNSS AML AML
comp=N,33650μm,1.0s
LNSS AML AML
comp=E,15000μm,0.2s
T1204 Amatrice, Fraz 0.21 128 P Pg 20 31 24.0 +0.7
T1204 S Sg 20 31 27.6 +1.3
T1204 AML AML
comp=E,11500μm,0.5s
T1204 AML AML
comp=N,7200μm,1.1s
T1204 AML AML
comp=N,7255μm,1.1s
T1204 AML AML
comp=E,11450μm,0.5s
T1241 Roccafluvione, 0.26 79 ⇑P Pb 20 31 24.8 -0.7
T1241 AML AML
comp=E,6580μm,0.4s
T1241 AML AML
comp=N,5535μm,0.9s
T1241 AML AML
comp=E,6960μm,0.4s
T1241 AML AML
comp=N,5155μm,0.9s
T1241 AML AML
comp=E,6960μm,1.6s
T1241 AML AML
comp=E,6580μm,1.6s
AM05 Amandola Campo 0.26 49 ⇑P Pg 20 31 24.6 +0.6
T1243 Rocca Santa Ma 0.29 113 ⇑P Pg 20 31 25.1 +0.5
GUMA Gualdo di Mace 0.31 35 ⇑P Pb 20 31 25.8 -0.6
GUMA AML AML
comp=E,10345μm,0.6s
GUMA AML AML
comp=N,14200μm,0.5s
GUMA AML AML
comp=E,9100μm,0.5s
GUMA AML AML
comp=E,10350μm,0.6s
GUMA AML AML
comp=N,11385μm,0.4s
RM33 Pellescritta (0.31 163 ⇑P Pg 20 31 25.6 +0.5
RM33 AML AML
comp=E,4570μm,0.2s
RM33 AML AML
comp=N,3345μm,0.4s
RM33 AML AML
comp=E,4580μm,0.2s
RM33 AML AML
comp=E,4580μm,1.8s
RM33 AML AML
comp=E,4570μm,1.8s
RM33 AML AML
comp=N,3330μm,0.4s
T1211 Morro Reatino 0.33 212 ⇑P Pg 20 31 25.8 +0.5
T1211 S Sb 20 31 32.0 0.0
T1211 AML AML
comp=E,4755μm,0.9s
T1211 AML AML
comp=E,4685μm,0.9s
T1211 AML AML
comp=E,4750μm,0.9s
T1211 AML AML
comp=N,11160μm,0.3s
T1211 AML AML
comp=N,11050μm,0.3s
T1211 AML AML
comp=N,11050μm,1.7s
T1211 AML AML
comp=N,11160μm,1.7s
T1211 AML AML
comp=E,4675μm,0.2s
ARRO Arrone 0.33 226 ⇑P Pg 20 31 25.9 +0.5
ARRO AML AML
comp=E,4355μm,0.4s
ARRO AML AML
comp=N,3905μm,1.6s
ARRO AML AML
comp=E,4350μm,0.4s
ARRO AML AML
comp=E,4350μm,1.6s
CAMP Campotosto 0.36 139 ⇓P Pg 20 31 26.4 +0.5
ASSB Assisi San Ben 0.39 307 ⇓P Pg 20 31 27.1 +0.6
ASSB AML AML
comp=E,1340μm,0.8s
ASSB AML AML
comp=N,1265μm,1.3s
ASSB AML AML
comp=N,1265μm,0.7s
T1247 Pizzolo (AQ) 0.40 157 ⇑P Pg 20 31 27.1 +0.5
TERO Teramo 0.42 116 ⇓P Pg 20 31 27.3 +0.3
TERO AML AML
comp=E,2195μm,0.3s
TERO AML AML
comp=N,1965μm,0.7s
TERO AML AML
comp=E,2350μm,0.5s
TERO AML AML
comp=N,2170μm,0.7s
TERO AML AML
comp=N,2175μm,0.7s
TERO AML AML
comp=N,2175μm,1.3s
CESX Cesi 0.42 242 ⇑P Pg 20 31 27.3 +0.3
CESX AML AML
comp=E,3635μm,0.5s
CESX AML AML
comp=N,2165μm,0.3s
CESX AML AML
comp=E,3635μm,1.5s
GAG1 Gagliole 0.43 358 P Pb 20 31 28.3 -0.1
MNTP Montappone 0.43 40 ⇓P Pb 20 31 28.3 -0.1
MNTP AML AML
comp=N,2910μm,0.9s
MNTP AML AML
comp=E,4220μm,0.4s
MNTP AML AML
comp=N,2910μm,1.1s
OFFI Offida 0.46 74 ⇑P Pb 20 31 28.9 0.0
OFFI AML AML
comp=E,4275μm,0.5s
OFFI AML AML
comp=N,3915μm,0.8s
SNTG Esanatoglia 0.46 346 ⇓P Pb 20 31 28.9 -0.1
SNTG AML AML
comp=N,823μm,0.6s
SNTG AML AML
comp=E,542μm,0.5s
SNTG AML AML
comp=E,632μm,1.5s
SNTG AML AML
comp=N,824μm,0.6s
SNTG AML AML
comp=N,868μm,0.6s
SNTG AML AML
comp=N,868μm,1.4s
SNTG AML AML
comp=N,824μm,1.4s
ATCC AVT- Casa Cast 0.50 319 ⇑P Pg 20 31 29.0 +0.5
ATCC AML AML
comp=N,1285μm,1.0s
ATCC AML AML
comp=E,1355μm,0.9s
ATCC AML AML
comp=E,1355μm,1.1s
GIGS Gran Sasso 0.50 135 P Pg 20 31 28.8 +0.3
GIGS AML AML
comp=N,379μm,0.9s
GIGS AML AML
comp=N,378μm,0.9s
GIGS AML AML
comp=E,460μm,1.4s
GIGS AML AML
comp=E,460μm,0.6s
AQU L'Aquila 0.51 153 ⇑P Pb 20 31 30.1 +0.4
FIAM Fiamignano 0.54 178 ⇑P Pg 20 31 29.7 +0.5
FIAM S Sb 20 31 39.0 +0.8
FIAM AML AML
comp=E,1380μm,0.3s
FIAM AML AML
comp=N,1350μm,0.3s
TRTR Tortoreto Alta 0.61 90 ⇓P Pb 20 31 31.5 +0.1
PP3 Marolino 0.68 34 ⇓P Pb 20 31 33.4 +0.6
PP3 AML AML
comp=E,1283μm,0.5s
PP3 AML AML
comp=N,1815μm,1.5s
PP3 AML AML
comp=N,1810μm,1.4s
PP3 AML AML
comp=E,1280μm,0.5s
PP3 AML AML
comp=N,1820μm,1.0s
PP3 AML AML
comp=E,1355μm,0.5s
PP3 AML AML
comp=N,1810μm,0.6s
PP3 AML AML
comp=N,1820μm,1.0s
VCEL Villa Celiera 0.69 127 ⇓P Pg 20 31 32.5 +0.4
ARVD Arcevia 0.70 351 S Sb 20 31 44.0 +1.3
MGAB Montegabbione 0.73 279 ⇑P Pn 20 31 35.7 +0.6
ATPI Pietralunga - 0.82 322 ⇑P Pb 20 31 34.9 -0.1
ATPI AML AML
comp=N,251μm,0.5s
ATPI AML AML
comp=E,304μm,1.5s
ATPI AML AML
comp=E,304μm,1.5s
ATPI AML AML
comp=E,304μm,0.5s
PIEI Pieia 0.83 331 S Sn 20 31 49.0 +0.1
CERT Cerreto 0.86 185 ⇑P Pb 20 31 36.1 +0.3
TOLF Tolfa 1.10 228 ⇑P Pb 20 31 39.6 -0.2
TOLF AML AML
comp=N,452μm,0.7s
TOLF AML AML
comp=E,516μm,0.4s
TOLF AML AML
comp=N,452μm,1.3s
LPEL Lama dei Pelig 1.11 133 S Sn 20 31 56.0 +0.2
GIUL Giuliano Di Ro 1.26 174 ⇓P Pg 20 31 44.4 +1.6
PTRJ Pietraroja 1.80 143 P Pg 20 31 54.4 +1.2

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*GUC **30** 20:39:52.1±0.4, 24°.04S×67°.23W, h243km±9km, ML4.0*
*IDC **30** 20:39:56.4±10.0, 23°.62S×66°.42W, h214km±85km, mb2.8/1, mbtmp3.3/2, Error ellipse: s-maj=139.9km s-min=87.8km az=55.0*
ISC 30 20:39:51.4±1.3, 24°.05S±0°.07×66°.94W±0°.09, h200km, n16, σ1º01/30, 4C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.46**	**289**	⇑iP	**Pn**	**20 40 36.2**	**+1.1**
PB15				eS	**Sn**	**20 41 09.9**	**+0.8**
GO02	**Mina Guanaco**	**2.65**	**245**	⇑iP	**Pn**	**20 40 37.3**	**0.0**
GO02				eS	**Sn**	**20 41 13.0**	**-0.2**
GO02				IAML		20 41 13.9	
comp=E,312nm,0.2s							
PB06	**IPOC Station P**	**2.76**	**298**	⇑iP	**Pn**	**20 40 39.4**	**+1.0**
PB06				eS	**Sn**	**20 41 15.3**	**+0.3**
PB06				IAML		20 41 17.9	
comp=N,191nm,0.1s							
PB09	**IPOC Station P**	**3.08**	**316**	eP	**Pn**	**20 40 44.1**	**+1.9**
PB09				eS	**Sn**	**20 41 23.0**	**+1.1**
PB03	**IPOC Station P**	**3.26**	**307**	eP	**Pn**	**20 40 45.2**	**+0.9**
PB03				eS	**Sn**	**20 41 25.6**	**-0.2**
PB10	**IPOC Station P**	**3.35**	**278**	⇑iP	**Pn**	**20 40 45.6**	**+0.4**
PB10				eS	**Sn**	**20 41 25.9**	**-1.4**
PB04	**IPOC Station P**	**3.41**	**299**	eP	**Pn**	**20 40 46.6**	**+0.6**
PB04				eS	**Sn**	**20 41 28.3**	**-0.5**
PB07	**IPOC Station P**	**3.56**	**310**	eP	**Pn**	**20 40 48.5**	**+0.5**
PB07				eS	**Sn**	**20 41 31.2**	**-1.1**
PB01	**IPOC Station P**	**3.80**	**321**	eP	**Pn**	**20 40 51.4**	**+0.5**
PB01				eS	**Sn**	**20 41 37.4**	**-0.1**
PB02	**IPOC Station P**	**3.85**	**314**	eP	**Pn**	**20 40 52.0**	**+0.6**
PB02				eS	**Sn**	**20 41 37.8**	**-0.7**
PATCX	**Punta Patache**	**4.37**	**317**	eP	**Pn**	**20 40 58.5**	**+0.5**
PATCX				eS	**Sn**	**20 41 48.9**	**-1.4**
PB08	**IPOC Station P**	**4.39**	**332**	eP	**Pn**	**20 40 59.7**	**+1.2**
PB08				eS	**Sn**	**20 41 52.6**	**+1.4**
HMBC	**Humberstone**	**4.64**	**323**	eP	**Pn**	**20 41 00.5**	**-0.9**
HMBC				eS	**Sn**	**20 41 54.7**	**-1.7**
LPAZ	**La Paz**	**7.80**	**352**	P	**Pn**	**20 41 43.4**	**+0.7**
comp=N,0.7nm,0.3s,baz=168,slow=12,SNR=8.1							
LPAZ				S	**Sn**	**20 43 09.2**	**-1.9**
comp=N,0.3nm,0.4s,baz=81,slow=19,SNR=1.3							
TORD	**Torodi Ar. Bea**	**76.54**	**69**	P	**P**	**20 51 20.1**	**+0.1**
comp=N,0.3nm,1.0s,baz=236,slow=6.2,SNR=1.9							
comp=N,0.3nm,1.0s							
MKAR	**Makanchi Array**	**146.53**	**40**	PKPbc	**PKPab**	**20 59 09.7**	**-0.8**
comp=N,0.7nm,0.9s,baz=330,slow=4.0,SNR=2.9							

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*VIE **30** 20:41:46.8±1.5, 43°.66N×13°.77E, h8km, mb2.4/1, ml2.5/4, Error ellipse: s-maj=19.6km s-min=5.5km az=122.0 108 km ESE of San Marino*
*PRU **30** 20:41:53.8±0.0, 42°.75N×13°.71E, h10km*
*IDC **30** 20:41:54.7±2.3, 43°.01N×13°.51E, h0km, mb3.1/1, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=100.8km s-min=15.8km az=99.0*
*ROM **30** 20:41:54.4±0.1, 42°.943N±0°.004×13°.219E±0°.005, h9km, ML3.1/43, Error ellipse: s-maj=0.4km s-min=0.4km az=295.0*
ISC 30 20:41:55.2±0.8, 42°.93N±0°.02×13°.23E±0°.02, h8km±5km, n69, σ0º96/89, 22C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**201**	⇑P	**Pg**	**20 41 57.1**	**-0.3**
T1245				S	**Sg**	**20 41 59.2**	**+0.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.08**	**112**	⇓P	**Pg**	**20 41 56.9**	**-0.5**
MMO1				S	**Sg**	**20 41 58.5**	**-0.4**
AM05	**Amandola Campo**	**0.10**	**63**	⇓P	**Pg**	**20 41 57.3**	**-0.4**
AM05				S	**Sg**	**20 41 59.3**	**-0.1**
AM05				AML	AML		
comp=N,978μm,1.4s							
AM05				AML	AML		
comp=N,6215μm,0.8s							
AM05				AML	AML		
comp=E,25250μm,0.7s							
AM05				AML	AML		
comp=N,982μm,1.4s							
AM05				AML	AML		
comp=N,980μm,1.4s							
AM05				AML	AML		
comp=E,25200μm,0.7s							
AM05				AML	AML		
comp=E,6610μm,0.7s							
AM05				AML	AML		
comp=N,980μm,0.6s							
AM05				AML	AML		
comp=E,25200μm,1.3s							
AM05				AML	AML		
comp=E,6610μm,1.3s							
FEMA Monte Fema 0.13 284				P	**Pg**	**20 41 57.8**	**-0.4**
FEMA				S	**Sg**	**20 42 00.4**	**+0.1**
FEMA				AML	AML		
comp=N,30250μm,0.4s							
FEMA				AML	AML		
comp=E,21850μm,1.1s							
FEMA				AML	AML		
comp=N,30250μm,0.5s							
GUMA Gualdo di Mace 0.16 31				⇓P	**Pg**	**20 41 58.3**	**-0.2**
GUMA				S	**Sg**	**20 42 01.5**	**+0.7**
GUMA				AML	AML		
comp=N,34150μm,1.3s							
GUMA				AML	AML		
comp=E,42500μm,1.2s							
GUMA				AML	AML		
comp=E,43000μm,1.2s							
GUMA				AML	AML		
comp=N,37900μm,0.4s							
T1216 Preci, Frazion 0.16 256				P	**Pg**	**20 41 58.3**	**-0.2**
T1216				S	**Sg**	**20 42 01.3**	**+0.5**
T1216				AML	AML		
comp=E,19250μm,1.1s							
T1216				AML	AML		
comp=N,17100μm,0.4s							
T1216				AML	AML		
comp=E,19200μm,1.1s							
T1216				AML	AML		
comp=N,17100μm,0.4s							
T1216				AML	AML		
comp=E,19200μm,0.9s							
T1216				AML	AML		
comp=N,17050μm,0.4s							
CSP1 Cessapalombo 0.16 355				⇓P	**Pg**	**20 41 58.0**	**-0.6**
CSP1				S	**Sg**	**20 42 00.7**	**-0.4**
CSP1				AML	AML		
comp=E,10560μm,1.6s							
CSP1				AML	AML		
comp=N,13550μm,0.6s							
CSP1				AML	AML		
comp=E,10560μm,0.4s							
T1241 Roccafluvione, 0.17 116				P	**Pg**	**20 41 58.9**	**+0.2**
T1241				S	**Sg**	**20 42 02.7**	**+1.6**
T1241				AML	AML		
comp=E,11400μm,1.2s							
T1241				AML	AML		
comp=N,9065μm,1.6s							
T1241				AML	AML		
comp=E,11450μm,1.2s							
T1241				AML	AML		
comp=N,9065μm,1.6s							
T1241				AML	AML		
comp=N,9070μm,1.6s							
T1241				AML	AML		
comp=E,11450μm,1.2s							
T1241				AML	AML		
comp=N,9070μm,0.4s							
T1241				AML	AML		
comp=E,11450μm,0.8s							
T1204 Amatrice, Fraz 0.26 165				⇓P	**Pg**	**20 42 00.6**	**+0.1**
T1204				S	**Sb**	**20 42 05.6**	**-1.4**
T1204				AML	AML		
comp=E,13100μm,0.3s							
T1204				AML	AML		
comp=N,6345μm,0.4s							
T1204				AML	AML		
comp=E,13050μm,0.3s							
T1204				AML	AML		
comp=N,6350μm,0.4s							
T1204				AML	AML		
comp=E,13050μm,1.7s							
T1204				AML	AML		
comp=N,6350μm,1.6s							
MNTP Montappone 0.27 41				P	**Pg**	**20 42 00.9**	**+0.3**
MNTP				AML	AML		
comp=E,9870μm,0.7s							
MNTP				AML	AML		
comp=N,12250μm,0.9s							
MNTP				AML	AML		
comp=E,9890μm,0.7s							
MNTP				AML	AML		
comp=E,9870μm,0.7s							
MNTP				AML	AML		
comp=N,12200μm,0.9s							
MNTP				AML	AML		
comp=E,9870μm,1.3s							
T1243 Rocca Santa Ma 0.28 145				⇓P	**Pg**	**20 42 00.7**	**-0.1**
T1243				S	**Sb**	**20 42 06.1**	**-1.5**
SEF1 Sefro 0.30 317				P	**Pg**	**20 42 00.7**	**-0.4**
SEF1				S	**Sg**	**20 42 05.8**	**+0.7**
PIO1 Pioraco 0.30 325				P	**Pg**	**20 42 00.6**	**-0.7**
T1217 Poggiodomo (PG 0.31 225				⇑P	**Pg**	**20 42 01.3**	**0.0**
T1217				S	**Sb**	**20 42 06.9**	**-1.3**
T1217				AML	AML		
comp=E,3625μm,0.7s							
T1217				AML	AML		
comp=N,4840μm,1.0s							
T1217				AML	AML		
comp=E,3630μm,0.7s							
SMA1 SAN MARTINO 0.31 165				⇑P	**Pg**	**20 42 01.4**	**0.0**
SMA1				AML	AML		
comp=N,5245μm,0.7s							
SMA1				AML	AML		
comp=E,9435μm,0.6s							
SMA1				AML	AML		
comp=N,5250μm,0.7s							
SMA1				AML	AML		
comp=E,9440μm,0.6s							
SMA1				AML	AML		
comp=N,5250μm,1.3s							
FIU1 Fiuminata 0.34 320				P	**Pg**	**20 42 01.9**	**+0.1**
OFFI Offida 0.34 89				⇑P	**Pb**	**20 42 02.9**	**-0.6**
OFFI				AML	AML		
comp=E,5780μm,1.0s							
OFFI				AML	AML		
comp=N,8020μm,0.9s							
OFFI				AML	AML		
comp=E,5780μm,1.0s							
LNSS Leonessa 0.35 203				⇓P	**Pg**	**20 42 02.3**	**+0.1**
LNSS				AML	AML		
comp=E,13850μm,0.2s							
LNSS				AML	AML		
comp=N,14750μm,0.4s							
SNTG Esanatoglia 0.39 327				S	**Sg**	**20 42 09.0**	**+1.1**
EL6 Elcito 0.41 347				⇑P	**Pg**	**20 42 02.9**	**-0.4**
EL6				AML	AML		
comp=N,5290μm,0.8s							
EL6				AML	AML		
comp=E,4830μm,0.4s							
EL6				AML	AML		
comp=E,4830μm,1.6s							
EL6				AML	AML		
comp=N,5285μm,0.8s							
TERO Teramo 0.41 138				P	**Pg**	**20 42 02.8**	**-0.5**
TERO				AML	AML		
comp=N,2305μm,0.9s							
TERO				AML	AML		
comp=E,2510μm,0.4s							
TERO				AML	AML		
comp=N,2385μm,0.9s							
TERO				AML	AML		
comp=E,2630μm,0.4s							
TERO				AML	AML		
comp=E,2505μm,0.4s							
TERO				AML	AML		
comp=N,2385μm,1.1s							
TERO				AML	AML		
comp=N,2305μm,1.1s							
CAMP Campotosto 0.42 161				⇓P	**Pg**	**20 42 03.1**	**-0.3**
CAMP				S	**Sb**	**20 42 10.2**	**-1.1**
CAMP				AML	AML		
comp=E,3965μm,0.6s							
CAMP				AML	AML		
comp=N,3040μm,0.5s							
RM33 Pellescritta (0.42 181				⇓P	**Pg**	**20 42 03.5**	**+0.1**
RM33				AML	AML		
comp=E,3770μm,0.4s							
RM33				AML	AML		
comp=N,3515μm,1.0s							
RM33				AML	AML		
comp=E,3915μm,1.1s							
RM33				AML	AML		
comp=E,3910μm,1.1s							
RM33				AML	AML		
comp=N,3310μm,0.9s							

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RM33                                AML   AML
      comp=E,3910µm,0.9s
RM33                                AML   AML
      comp=N,3510µm,1.0s
RM33                                AML   AML
      comp=E,3765µm,0.4s
ASSB  Assisi San Ben      0.43 285  ⇑P    Pg    20 42 03.1 -0.5
ASSB                                AML   AML
      comp=E,3155µm,0.7s
ASSB                                AML   AML
      comp=N,3575µm,0.4s
ARRO  Arrone              0.49 224  ⇓P    Pg    20 42 04.5 -0.1
ARRO                                S     Sb    20 42 14.0 +0.7
ARRO                                AML   AML
      comp=E,1470µm,0.2s
ARRO                                AML   AML
      comp=E,1465µm,0.2s
ARRO                                AML   AML
      comp=N,1285µm,1.5s
ARRO                                AML   AML
      comp=N,1285µm,0.5s
T1247 Pizzolo (AQ)        0.49 174  ⇑P    Pg    20 42 04.6 -0.1
T1247                               AML   AML
      comp=E,3685µm,0.9s
T1247                               AML   AML
      comp=E,3685µm,1.1s
T1247                               AML   AML
      comp=N,3735µm,0.4s
FOSV  Fossato di Vic      0.50 317  ⇑P    Pg    20 42 04.6 -0.3
FOSV                                AML   AML
      comp=N,4110µm,1.1s
FOSV                                AML   AML
      comp=E,2515µm,0.8s
ATCC  AVT- Casa Cast      0.50 301  ⇑P    Pg    20 42 04.4 -0.5
ATCC                                AML   AML
      comp=N,3135µm,1.6s
ATCC                                AML   AML
      comp=N,3130µm,1.6s
ATCC                                AML   AML
      comp=E,3545µm,0.4s
ATCC                                AML   AML
      comp=N,3130µm,0.4s
TRTR  Tortoreto Alta      0.52 103  ⇓P    Pb    20 42 06.4 -0.2
TRTR                                AML   AML
      comp=N,4785µm,0.5s
TRTR                                AML   AML
      comp=E,4665µm,0.6s
PP3   Marolino            0.53  32  ⇑P    Pb    20 42 06.1 -0.6
PP3                                 AML   AML
      comp=E,2395µm,1.4s
PP3                                 AML   AML
      comp=N,3280µm,1.0s
PP3                                 AML   AML
      comp=N,3190µm,1.1s
PP3                                 AML   AML
      comp=E,2400µm,1.4s
PP3                                 AML   AML
      comp=N,3195µm,1.1s
PP3                                 AML   AML
      comp=E,2540µm,1.4s
PP3                                 AML   AML
      comp=N,3280µm,1.1s
PP3                                 AML   AML
      comp=E,2540µm,0.6s
PP3                                 AML   AML
      comp=E,2400µm,0.6s
PP3                                 AML   AML
      comp=N,3190µm,0.9s
PP3                                 AML   AML
      comp=N,3280µm,0.9s
GIGS  Gran Sasso          0.54 152  ⇓P    Pg    20 42 05.3 -0.4
GIGS                                S     Sb    20 42 15.0  0.0
GIGS                                AML   AML
      comp=N,506µm,1.5s
GIGS                                AML   AML
      comp=E,942µm,0.7s
GIGS                                AML   AML
      comp=E,942µm,0.7s
GIGS                                AML   AML
      comp=N,506µm,0.5s
CESX  Cesi                0.57 236  ⇑P    Pg    20 42 05.7 -0.5
CESX                                S     Sb    20 42 16.0 +0.2
CESX                                AML   AML
      comp=E,1920µm,0.4s
CESX                                AML   AML
      comp=N,2225µm,0.3s
AQU   L'Aquila            0.59 167  ⇓P    Pg    20 42 06.3 -0.3
AQU                                 AML   AML
      comp=E,1985µm,0.5s
AQU                                 AML   AML
      comp=N,2050µm,0.6s
AQU                                 AML   AML
      comp=N,2000µm,0.6s
AQU                                 AML   AML
      comp=E,2065µm,0.5s
AQU                                 AML   AML
      comp=E,1980µm,0.5s
ARVD  Arcevia             0.60 340  S     Sb    20 42 17.0 +0.2
MURB  Monte Urbino        0.61 303  S     Sb    20 42 18.0 +1.0
ATFO  Monte Foce - G      0.65 313  ⇑P    Pg    20 42 07.2 -0.5
ATFO                                AML   AML
      comp=E,1365µm,0.6s
ATFO                                AML   AML
      comp=N,1470µm,1.1s
FIAM  Fiamignano          0.67 187  S     Sb    20 42 19.0 +0.4
ATTE  AVT- Monte Tez      0.69 293  ⇓P    Pb    20 42 09.2 -0.4
ATTE                                AML   AML
      comp=E,918µm,1.1s
ATTE                                AML   AML
      comp=N,962µm,1.6s
ATTE                                AML   AML
      comp=N,962µm,0.4s
FAGN  Fagnano             0.71 158  S     Sn    20 42 22.0 -0.8
ATVO  AVT- Monte Val      0.75 307  ⇑P    Pg    20 42 08.9 -0.7
ATVO                                AML   AML
      comp=N,892µm,1.1s
ATVO                                AML   AML
      comp=E,816µm,0.4s
ATVO                                AML   AML
      comp=N,892µm,0.9s
MPAG  Monte Paganucc      0.78 334  S     Sb    20 42 23.0 +1.2
T0110 Collepietro         0.81 150  ⇑P    Pg    20 42 10.1 -0.7
T0110                               AML   AML
      comp=N,1725µm,0.5s
T0110                               AML   AML
      comp=E,1620µm,0.9s
T0110                               AML   AML
      comp=E,1620µm,1.1s
T0110                               AML   AML
      comp=N,1725µm,1.5s
MGAB  Montegabbione       0.82 269  ⇓P    Pn    20 42 12.3 -0.8
MGAB                                AML   AML
      comp=E,1020µm,0.4s
MGAB                                AML   AML
      comp=E,1255µm,0.4s
MGAB                                AML   AML
      comp=N,2625µm,0.5s
MGAB                                AML   AML
      comp=E,1021µm,0.4s
MGAB                                AML   AML
      comp=N,2590µm,0.5s
MCIV  Monte Civitell      1.15 263  ⇓P    Pn    20 42 17.4 -0.2
MCIV                                AML   AML
      comp=N,223µm,0.9s
MCIV                                AML   AML
      comp=E,250µm,0.6s
MCIV                                AML   AML
      comp=N,223µm,1.1s
CRE   Caprese Michel      1.16 307  ⇑P    Pg    20 42 17.3 -0.1
CRE                                 AML   AML
      comp=N,455µm,1.2s
CRE                                 AML   AML
      comp=E,346µm,0.6s
ASQU  Asqua               1.36 310  ⇓P    Pg    20 42 23.5 +2.2
ASQU                                AML   AML
      comp=E,352µm,0.9s
ASQU                                AML   AML
      comp=N,286µm,1.3s
ASQU                                AML   AML
      comp=E,352µm,1.1s
CSNT  Castellina Chi      1.52 292  ⇑P    Pn    20 42 22.7 +0.1
CSNT                                AML   AML
      comp=E,121µm,0.9s
CSNT                                AML   AML
      comp=N,127µm,1.0s
CSNT                                AML   AML
      comp=E,121µm,1.1s
TRIV  Trivento            1.52 139  ⇑P    Pg    20 42 24.6 +0.3
TRIV                                AML   AML
      comp=N,300µm,1.0s
TRIV                                AML   AML
      comp=N,300µm,1.0s
TRIV                                AML   AML
      comp=E,381µm,0.7s
PTRJ  Pietraroja          1.84 148  S     Sg    20 42 55.0 +0.7
MELA  Melanico ??? S      1.87 130  ⇓P    Pb    20 42 28.5 -1.0
MELA                                AML   AML
      comp=N,423µm,0.7s
MELA                                AML   AML
      comp=E,429µm,0.6s
SGRT  San Giovanni R      2.21 121  ⇑P    Pn    20 42 33.1 +0.9
SGRT                                AML   AML
      comp=N,156µm,1.3s
SGRT                                AML   AML
      comp=E,180µm,0.6s
SGRT                                AML   AML
      comp=N,156µm,0.7s
CRTO  Cratere Ovest,      2.29 157  S     Sg    20 43 07.0 -1.7
NDIM  Novi di Modena      2.58 320  P     Pg    20 42 44.1 -0.5
MNTV  Mantova             2.83 322  S     Sn    20 43 16.0 +1.1
SABO  M.te Sabotino       3.06   5  P     Pn    20 42 43.6 -0.3
SABO                                AML   AML
      comp=N,136µm,0.9s
SABO                                AML   AML
      comp=E,474µm,0.6s
SABO                                AML   AML
      comp=E,114µm,1.4s
SABO                                AML   AML
      comp=N,534µm,0.9s
CGRP  Cima Grappa         3.12 341  ⇑P    Pn    20 42 45.1 +0.2
CGRP                                AML   AML
      comp=E,134µm,1.3s
CGRP                                AML   AML
      comp=N,113µm,0.6s
CGRP                                AML   AML
      comp=E,134µm,0.7s
LJU   Ljubljana           3.25  16  ⇓P    Pn    20 42 45.7 -0.8
LJU                                 AML   AML
      comp=E,388µm,1.0s
LJU                                 AML   AML
      comp=N,489µm,0.8s
STON  Ston                3.29  89  P     Pn    20 42 46.6 -0.4
RNCA  Ronca, Sant'Ol      3.46 298  ⇑P    Pg    20 42 59.1 -2.4
RNCA                                S     Sg    20 43 43.0 -3.3
ACOM  Acomizza, Ital      3.62   3  ⇓P    Pn    20 42 52.7 +0.9
ACOM                                AML   AML
      comp=E,120µm,0.7s
ACOM                                AML   AML
      comp=E,90µm,0.8s
ACOM                                AML   AML
      comp=N,96µm,1.2s
ACOM                                AML   AML
      comp=N,71µm,0.6s
ACOM                                AML   AML
      comp=N,96µm,0.8s
ACOM                                AML   AML
      comp=E,90µm,1.2s
ACOM                                AML   AML
      comp=E,120µm,1.3s
ZOU   Zoufplan            3.63 357  ⇑P    Pn    20 42 52.0 +0.1
ZOU                                 AML   AML
      comp=N,80µm,1.2s
ZOU                                 AML   AML
      comp=E,70µm,1.0s
APPI  Appiano             3.82 339  P     Pn    20 42 54.8 +0.4
BRES  Bressanone          3.92 345  ⇓P    Pn    20 42 56.9 +1.0
RISI  Rein                4.10 349  ⇑P    Pn    20 42 59.6 +1.3
GERES GERESS Array B      5.93   3  Pn    Pn    20 43 22.9 -0.4
      comp=E,0.2nm,0.3s,baz=175,slow=13,SNR=8.5
GERES                               Sn    Sn    20 44 29.8 -1.6
      comp=E,0.7nm,0.3s,baz=182,slow=27,SNR=3.1
      comp=E,0.3nm,0.3s
CKRC  Cesky Krumlov       5.94   7  ePN   Pn    20 43 23.3 -0.1
CKRC                               eSN   Sn    20 44 30.0 -1.6
KHC   Kasperske Hory      6.21   2  ePN   Pn    20 43 26.1 -1.0
KHC                                eSN   Sn    20 44 37.6 -0.7
KEST  Kesra               7.79 204  Pn    Pn    20 43 52.5 +3.5
      comp=E,0.1nm,0.3s,baz=0.0,slow=18,SNR=1.7
      comp=E,1.2nm,0.8s
TORD  Torodi Ar. Bea     31.31 202  P     P     20 48 17.6 +1.7
      comp=E,0.2nm,0.8s,baz=27,slow=10,SNR=1.8
      comp=E,0.2nm,0.8s
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ROM ***30*** *20:47:08.1±0.0, 42°.934N±0°.002×13°.199E±0°.004, h10km, ML3.2/66, Error ellipse: s-maj=0.3km s-min=0.2km az=72.0*
IDC ***30*** *20:47:09.5±1.4, 43°.10N×13°.19E, h0km, mb3.4/2, mbtmp3.4/4, ML3.0/2, MS3.0/2, Error ellipse: s-maj=39.4km s-min=14.7km az=95.0*
PRU ***30*** *20:47:09.8±0.0, 42°.92N×13°.43E, h10km*
ISC 30 20:47:09.2±0.8, 42°.94N±0°.01×13°.20E±0°.02, h5km±6km, n128, σ1°08/149, 26C-28D, Central Italy

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op    ISC       h m  s    ISC
T1245 Castelsantange      0.08 184   P     Pg        20 47 10.7 -0.5
T1245                                S     Sg        20 47 12.5  0.0
T1245                                AML   AML
      comp=E,98750µm,1.4s
T1245                                AML   AML
MMO1  Montemonaco         0.10 113   P     Pg        20 47 10.9 -0.6
MMO1                                 S     Sg        20 47 12.8 -0.3
FEMA  Monte Fema          0.11 282   P     Pg        20 47 11.5 -0.1
FEMA                                 S     Sg        20 47 13.7 +0.5
FEMA                                 AML   AML
      comp=N,38350µm,0.7s
FEMA                                 AML   AML
      comp=E,47650µm,1.3s
FEMA                                 AML   AML
      comp=N,38350µm,0.7s
FEMA                                 AML   AML
      comp=E,47650µm,0.7s
AM05  Amandola Campo      0.12  72   P     Pg        20 47 11.4 -0.4
AM05                                 S     Sg        20 47 13.7 +0.3
AM05                                 AML   AML
      comp=E,10550µm,1.5s
AM05                                 AML   AML
      comp=N,12050µm,0.1s
AM05                                 AML   AML
      comp=N,3825µm,0.2s
AM05                                 AML   AML
      comp=E,41550µm,1.6s
AM05                                 AML   AML
      comp=E,41550µm,0.4s
AM05                                 AML   AML
      comp=E,10550µm,0.5s
T1216 Preci, Frazion      0.14 249   P     Pg        20 47 11.8 -0.2
T1216                                S     Sg        20 47 14.5 +0.6
T1216                                AML   AML
      comp=E,39300µm,1.2s
T1216                                AML   AML
      comp=N,37600µm,1.0s
T1216                                AML   AML
      comp=N,37550µm,1.0s
T1216                                AML   AML
      comp=E,39300µm,1.2s
T1216                                AML   AML
      comp=N,37550µm,1.0s
GUMA  Gualdo di Mace      0.16  40   P     Pg        20 47 12.4 -0.1
GUMA                                 S     Sg        20 47 15.6 +1.0
GUMA                                 AML   AML
      comp=E,70850µm,1.4s
GUMA                                 AML   AML
      comp=N,68950µm,0.5s
GUMA                                 AML   AML
      comp=E,70850µm,1.4s
GUMA                                 AML   AML
      comp=E,71950µm,0.7s
GUMA                                 AML   AML
      comp=N,69000µm,0.5s
GUMA                                 AML   AML
      comp=N,76800µm,0.4s
GUMA                                 AML   AML
      comp=E,70850µm,0.6s
T1241 Roccafluvione,      0.19 116   P     Pg        20 47 12.9 -0.2
T1241                                S     Sg        20 47 16.2 +0.7
T1241                                AML   AML
      comp=E,12950µm,0.5s
T1241                                AML   AML
      comp=E,12900µm,0.5s
T1241                                AML   AML
      comp=N,18850µm,1.3s
T1241                                AML   AML
      comp=N,18500µm,1.3s
T1241                                AML   AML
      comp=N,18900µm,1.3s
T1241                                AML   AML
      comp=E,12650µm,0.5s
T1241                                AML   AML
      comp=N,18900µm,0.7s
T1241                                AML   AML
      comp=N,18500µm,0.7s
MDAR  Monte D'Aria        0.26 351   P     Pg        20 47 14.0 -0.3
MDAR                                 S     Sg        20 47 18.6 +0.9
MDAR                                 AML   AML
      comp=E,6450µm,1.1s
MDAR                                 AML   AML
      comp=N,9310µm,0.6s
MDAR                                 AML   AML
      comp=E,6445µm,1.1s
MDAR                                 AML   AML
      comp=E,6450µm,1.1s
MDAR                                 AML   AML
      comp=N,9310µm,1.4s
MDAR                                 AML   AML
      comp=E,6450µm,0.9s
SEF1  Sefro               0.28 319   P     Pg        20 47 14.4 -0.2
T1215 Vallo di Nera,      0.28 240   P     Pg        20 47 14.4 -0.2
T1215                                S     Sg        20 47 19.0 +0.7
T1215                                AML   AML
      comp=E,4650µm,0.4s
T1215                                AML   AML
      comp=N,6680µm,1.3s
T1215                                AML   AML
      comp=E,4965µm,0.4s
T1215                                AML   AML
      comp=N,6110µm,1.3s
T1215                                AML   AML
      comp=N,6695µm,1.3s
T1215                                AML   AML
      comp=N,6695µm,0.7s
T1215                                AML   AML
      comp=N,6110µm,0.7s
T1204 Amatrice, Fraz      0.28 161   P     Pg        20 47 14.3 -0.4
T1204                                S     Sb        20 47 19.4 -2.3
T1204                                AML   AML
      comp=E,9895µm,1.0s
T1204                                AML   AML
      comp=N,5435µm,0.8s
T1204                                AML   AML
      comp=E,9870µm,1.0s
T1204                                AML   AML
      comp=N,5425µm,0.8s
T1204                                AML   AML
      comp=N,5425µm,1.2s
MNTP  Montappone          0.28  45   P     Pg        20 47 15.1 +0.3
MNTP                                 AML   AML
      comp=E,27650µm,1.6s
MNTP                                 AML   AML
      comp=N,23100µm,1.1s
MNTP                                 AML   AML
      comp=E,27600µm,1.6s
MNTP                                 AML   AML
      comp=N,23150µm,1.1s
MNTP                                 AML   AML
      comp=N,23150µm,0.9s
PIO1  Pioraco             0.28 327   P     Pg        20 47 14.5 -0.3
PIO1                                 S     Sg        20 47 19.8 +1.2
PIO1                                 AML   AML
      comp=N,8265µm,0.9s
PIO1                                 AML   AML
      comp=E,8525µm,0.5s
PIO1                                 AML   AML
      comp=N,8260µm,0.9s
T1201 Domo (RI)           0.28 172   P     Pg        20 47 14.9 +0.1
SSM1  San Severino M      0.29 357   P     Pg        20 47 14.4 -0.5
T1217 Poggiodomo (PG      0.30 221   P     Pg        20 47 14.7 -0.3
T1217                                S     Sg        20 47 19.9 +0.9
T1217                                AML   AML
      comp=E,5075µm,0.9s
T1217                                AML   AML
      comp=E,4820µm,0.9s
T1217                                AML   AML
      comp=N,8185µm,0.6s
T1217                                AML   AML
      comp=E,5075µm,0.9s
T1217                                AML   AML
      comp=N,8210µm,0.6s
T1217                                AML   AML
      comp=N,8290µm,0.6s
T1217                                AML   AML
      comp=E,4810µm,0.9s
T1243 Rocca Santa Ma      0.31 142   P     Pg        20 47 14.6 -0.6
T1243                                S     Sg        20 47 19.9 +0.6
GAG1  Gagliole            0.31 343   P     Pg        20 47 15.1 -0.3
GAG1                                 S     Sg        20 47 20.9 +1.5
GAG1                                 AML   AML
      comp=E,17250µm,0.3s
GAG1                                 AML   AML
      comp=N,18500µm,0.4s
FIU1  Fiuminata           0.32 322   P     Pg        20 47 15.0 -0.4
FIU1                                 S     Sg        20 47 20.6 +1.0
SMA1  SAN MARTINO         0.33 162   P     Pg        20 47 15.0 -0.6
SMA1                                 S     Sg        20 47 20.6 +0.7
SMA1                                 AML   AML
      comp=E,8375µm,1.2s
SMA1                                 AML   AML
      comp=N,10535µm,0.7s
SMA1                                 AML   AML
      comp=E,8420µm,1.2s
SMA1                                 AML   AML
      comp=E,8420µm,0.8s
LNSS  Leonessa            0.35 199   P     Pg        20 47 16.0 -0.2
LNSS                                 AML   AML
      comp=E,3655µm,1.0s
LNSS                                 AML   AML
      comp=N,8945µm,0.5s
LNSS                                 AML   AML
      comp=N,8940µm,0.5s
OFFI  Offida              0.36  91   P     Pg        20 47 16.4 +0.2
OFFI                                 AML   AML
      comp=N,9425µm,1.1s
OFFI                                 AML   AML
      comp=E,8300µm,1.6s
OFFI                                 AML   AML
      comp=N,9425µm,0.9s
OFFI                                 AML   AML
      comp=E,8300µm,0.4s
SNTG  Esanatoglia         0.37 329   P     Pg        20 47 15.8 -0.6
SNTG                                 S     Sg        20 47 22.4 +1.2
SNTG                                 AML   AML
      comp=E,3505µm,1.1s
SNTG                                 AML   AML
      comp=N,3755µm,0.6s
SNTG                                 AML   AML
      comp=N,3755µm,0.7s
SNTG                                 AML   AML
      comp=N,3980µm,0.2s
SNTG                                 AML   AML
      comp=E,3280µm,1.1s
SNTG                                 AML   AML
      comp=E,3280µm,0.9s
SNTG                                 AML   AML
      comp=E,3505µm,0.9s
SNTG                                 AML   AML
      comp=N,3755µm,1.3s
TRE1  Treia               0.38  13   P     Pg        20 47 17.0 +0.4
EL6   Elcito              0.40 350   P     Pg        20 47 16.3 -0.6
EL6                                  AML   AML
      comp=E,6330µm,1.6s
EL6                                  AML   AML
      comp=N,7025µm,1.6s
EL6                                  AML   AML
      comp=E,6335µm,1.6s
EL6                                  AML   AML
      comp=N,7025µm,0.4s
EL6                                  AML   AML
      comp=E,6335µm,0.4s
ASSB  Assisi San Ben      0.41 285   P     Pg        20 47 16.7 -0.4
ASSB                                 AML   AML
      comp=E,6705µm,0.5s
ASSB                                 AML   AML
      comp=N,6415µm,1.1s
ASSB                                 AML   AML
      comp=E,6705µm,1.5s
ASSB                                 AML   AML
      comp=N,6415µm,0.9s
T1246 Crognaleto (TE      0.42 148   P     Pg        20 47 16.6 -0.7
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RM33	**Pellescritta (**	**0.43 178**	P	**Pg**	**20 47 16.9**	**-0.7**	
RM33			AML	AML			
	comp=E,5040µm,0.9s						
RM33			AML	AML			
	comp=N,3720µm,1.6s						
RM33			AML	AML			
	comp=E,4910µm,0.9s						
RM33			AML	AML			
	comp=N,3585µm,1.6s						
RM33			AML	AML			
	comp=N,3715µm,1.6s						
RM33			AML	AML			
	comp=E,4915µm,0.9s						
RM33			AML	AML			
	comp=N,3590µm,1.6s						
RM33			AML	AML			
	comp=E,5040µm,1.1s						
RM33			AML	AML			
	comp=N,3590µm,0.4s						
RM33			AML	AML			
	comp=N,3715µm,0.4s						
RM33			AML	AML			
	comp=E,4915µm,1.1s						
CAMP	**Campotosto**	**0.43 159**	P	**Pg**	**20 47 16.8**	**-0.8**	
CAMP			AML	AML			
	comp=E,3210µm,0.7s						
CAMP			AML	AML			
	comp=N,2590µm,0.6s						
CING	**Cingoli**	**0.44 360**	P	**Pg**	**20 47 17.1**	**-0.5**	
TERO	**Teramo**	**0.44 136**	P	**Pg**	**20 47 16.8**	**-0.8**	
TERO			AML	AML			
	comp=E,3370µm,1.5s						
TERO			AML	AML			
	comp=N,4635µm,0.8s						
TERO			AML	AML			
	comp=N,4770µm,0.8s						
TERO			AML	AML			
	comp=E,3525µm,1.1s						
TERO			AML	AML			
	comp=N,4630µm,0.8s						
TERO			AML	AML			
	comp=E,3525µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.48 301**	P	**Pg**	**20 47 18.0**	**-0.4**	
ATCC			AML	AML			
	comp=E,5795µm,1.5s						
ATCC			AML	AML			
	comp=E,5800µm,1.5s						
ATCC			AML	AML			
	comp=N,7215µm,1.4s						
ATCC			AML	AML			
	comp=E,5800µm,0.5s						
FOSV	**Fossato di Vic**	**0.48 318**	P	**Pg**	**20 47 17.8**	**-0.6**	
FOSV			AML	AML			
	comp=N,5990µm,0.3s						
FOSV			AML	AML			
	comp=E,4120µm,0.3s						
FOSV			AML	AML			
	comp=N,5995µm,0.3s						
T1211	**Morro Reatino**	**0.48 212**	P	**Pg**	**20 47 18.2**	**-0.3**	
T1211			AML	AML			
	comp=E,2490µm,0.9s						
T1211			AML	AML			
	comp=E,2595µm,0.9s						
T1211			AML	AML			
	comp=N,4555µm,0.3s						
T1211			AML	AML			
	comp=E,2600µm,0.9s						
T1211			AML	AML			
	comp=N,4560µm,0.3s						
T1211			AML	AML			
	comp=E,2490µm,0.9s						
T1211			AML	AML			
	comp=N,4590µm,0.3s						
ARRO	**Arrone**	**0.48 221**	P	**Pg**	**20 47 17.9**	**-0.5**	
ARRO			AML	AML			
	comp=E,2695µm,1.4s						
ARRO			AML	AML			
	comp=N,1940µm,1.1s						
ARRO			AML	AML			
	comp=E,2695µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.50 171**	P	**Pg**	**20 47 18.4**	**-0.5**	
T1247			AML	AML			
	comp=E,4950µm,1.1s						
T1247			AML	AML			
	comp=E,4955µm,1.1s						
T1247			AML	AML			
	comp=N,4810µm,0.7s						
T1247			AML	AML			
	comp=E,4955µm,0.9s						
PP3	**Marolino**	**0.53 35**	⇑P	**Pg**	**20 47 20.0**	**+0.6**	
PP3			AML	AML			
	comp=E,8470µm,1.6s						
PP3			AML	AML			
	comp=N,5740µm,0.8s						
PP3			AML	AML			
	comp=N,6005µm,0.5s						
PP3			AML	AML			
	comp=E,8820µm,1.6s						
PP3			AML	AML			
	comp=N,6010µm,0.5s						
PP3			AML	AML			
	comp=N,5740µm,0.8s						
PP3			AML	AML			
	comp=E,8470µm,1.6s						
PP3			AML	AML			
	comp=E,8820µm,0.4s						
PP3			AML	AML			
	comp=N,5740µm,1.2s						
PP3			AML	AML			
	comp=E,8470µm,0.4s						
TRTR	**Tortoreto Alta**	**0.54 104**	⇑P	**Pb**	**20 47 20.4**	**-0.8**	
TRTR			AML	AML			
	comp=E,9125µm,1.6s						
TRTR			AML	AML			
	comp=N,10350µm,1.4s						
TRTR			AML	AML			
	comp=N,10350µm,0.6s						
TRTR			AML	AML			
	comp=E,9125µm,0.4s						
CESX	**Cesi**	**0.56 234**	P	**Pg**	**20 47 19.2**	**-0.8**	
CESX			AML	AML			
	comp=N,2960µm,0.4s						
CESX			AML	AML			
	comp=N,2960µm,1.6s						
CESX			AML	AML			
	comp=E,3870µm,0.4s						
ARVD	**Arcevia**	**0.59 342**	⇓P	**Pg**	**20 47 19.9**	**-0.7**	
ARVD			S	**Sb**	**20 47 31.0**	**+0.4**	
ARVD			AML	AML			
	comp=N,1610µm,0.3s						
ARVD			AML	AML			
	comp=E,3230µm,0.5s						
ARVD			AML	AML			
	comp=E,3230µm,1.5s						
MURB	**Monte Urbino**	**0.59 304**	P	**Pg**	**20 47 20.1**	**-0.5**	
MURB			AML	AML			
	comp=E,5775µm,0.2s						
MURB			AML	AML			
	comp=E,6015µm,0.3s						
MURB			AML	AML			
	comp=E,5780µm,0.3s						
MURB			AML	AML			
	comp=N,5875µm,1.4s						
MURB			AML	AML			
	comp=N,6750µm,1.4s						
AQU	**L'Aquila**	**0.60 165**	P	**Pg**	**20 47 19.7**	**-1.1**	
AQU			AML	AML			
	comp=E,2575µm,1.6s						
AQU			AML	AML			
	comp=E,2540µm,1.6s						
AQU			AML	AML			
	comp=N,1985µm,1.6s						
AQU			AML	AML			
	comp=N,1810µm,1.1s						
AQU			AML	AML			
	comp=E,2540µm,0.4s						
AQU			AML	AML			
	comp=E,2575µm,0.4s						
AQU			AML	AML			
	comp=N,1985µm,0.4s						
ATFO	**Monte Foce - G**	**0.62 313**	⇓P	**Pg**	**20 47 20.7**	**-0.5**	
ATFO			AML	AML			
	comp=N,2310µm,1.5s						
ATFO			AML	AML			
	comp=N,2315µm,1.5s						
ATFO			AML	AML			
	comp=E,2510µm,0.7s						
ATFO			AML	AML			
	comp=N,2315µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.67 293**	⇓P	**Pg**	**20 47 21.4**	**-0.7**	
ATTE			AML	AML			
	comp=N,1146µm,0.7s						
ATTE			AML	AML			
	comp=E,1435µm,0.4s						
FRON	**Frontone**	**0.67 329**	⇓P	**Pg**	**20 47 21.4**	**-0.8**	
FRON			AML	AML			
	comp=E,1950µm,0.7s						
FRON			AML	AML			
	comp=N,3195µm,0.3s						
FRON			AML	AML			
	comp=E,1950µm,1.3s						
FIAM	**Fiamignano**	**0.67 185**	P	**Pg**	**20 47 21.0**	**-1.2**	
FIAM			AML	AML			
	comp=E,1780µm,0.7s						
FIAM			AML	AML			
	comp=N,1730µm,1.2s						
FIAM			AML	AML			
	comp=N,1730µm,0.8s						
FIAM			AML	AML			
	comp=E,1780µm,1.3s						
AOI	**Ancona**	**0.68 26**	⇑P	**Pg**	**20 47 22.3**	**+0.1**	
AOI			AML	AML			
	comp=E,1770µm,0.8s						
AOI			AML	AML			
	comp=N,1455µm,0.4s						
VCEL	**Villa Celiera**	**0.72 139**	P	**Pn**	**20 47 25.2**	**-1.0**	
ATVO	**AVT- Monte Val**	**0.73 308**	⇓P	**Pg**	**20 47 22.4**	**-0.8**	
ATVO			AML	AML			
	comp=N,1080µm,1.2s						
ATVO			AML	AML			
	comp=E,1270µm,0.9s						
ATVO			AML	AML			
	comp=N,1080µm,0.8s						
ATVO			AML	AML			
	comp=E,1270µm,1.1s						
FAGN	**Fagnano**	**0.73 157**	P	**Pg**	**20 47 22.3**	**-1.0**	
FAGN			AML	AML			
	comp=E,2385µm,1.5s						
FAGN			AML	AML			
	comp=N,2585µm,0.5s						
FAGN			AML	AML			
	comp=E,2390µm,1.5s						
FAGN			AML	AML			
	comp=E,2390µm,0.5s						
PIEI	**Pieia**	**0.77 321**	⇓P	**Pg**	**20 47 22.9**	**-1.0**	
PIEI			AML	AML			
	comp=N,1155µm,1.2s						
PIEI			AML	AML			
	comp=E,1485µm,0.3s						
ATPI	**Pietralunga -**	**0.77 312**	⇓P	**Pg**	**20 47 23.3**	**-0.8**	
ATPI			AML	AML			
	comp=E,1500µm,0.6s						
ATPI			AML	AML			
	comp=N,1335µm,0.9s						
ATPI			AML	AML			
	comp=N,1335µm,1.1s						
ATPI			AML	AML			
	comp=E,1500µm,1.4s						
ATMI	**Monte Miggiano**	**0.79 300**	⇑P	**Pg**	**20 47 24.1**	**-0.2**	
ATMI			AML	AML			
	comp=E,2485µm,0.6s						
ATMI			AML	AML			
	comp=N,2765µm,0.6s						
MGAB	**Montegabbione**	**0.80 268**	⇑P	**Pg**	**20 47 24.3**	**-0.2**	
MGAB			AML	AML			
	comp=E,1765µm,1.2s						
MGAB			AML	AML			
	comp=N,4515µm,1.3s						
MGAB			AML	AML			
	comp=E,2035µm,1.2s						
MGAB			AML	AML			
	comp=E,1770µm,1.2s						
MGAB			AML	AML			
	comp=N,4520µm,1.3s						
MGAB			AML	AML			
	comp=N,4485µm,0.4s						
MGAB			AML	AML			
	comp=E,2035µm,0.8s						
MGAB			AML	AML			
	comp=E,1770µm,0.8s						
FSSB	**Fossombrone**	**0.81 338**	⇓P	**Pg**	**20 47 24.1**	**-0.7**	
FSSB			S	**Sb**	**20 47 38.0**	**+0.9**	
FSSB			AML	AML			
	comp=E,3980µm,0.3s						
FSSB			AML	AML			
	comp=N,6870µm,0.3s						
T0110	**Collepietro**	**0.83 149**	P	**Pg**	**20 47 23.7**	**-1.5**	
T0110			AML	AML			
	comp=E,2090µm,1.2s						
T0110			AML	AML			
	comp=N,2155µm,1.4s						
T0110			AML	AML			
	comp=N,2155µm,0.6s						
APEC	**Apecchio**	**0.84 318**	⇑P	**Pg**	**20 47 24.9**	**-0.4**	
SRES	**S.Oreste - Sor**	**0.86 216**	P	**Pg**	**20 47 24.7**	**-1.1**	
SRES			AML	AML			
	comp=E,853µm,1.2s						
SRES			AML	AML			
	comp=N,1123µm,1.3s						
BADI	**Badiali**	**0.90 310**	⇓P	**Pg**	**20 47 25.7**	**-0.8**	
BADI			S	**Sn**	**20 47 41.0**	**-0.9**	
PE3	**Peglio**	**0.91 326**	⇑P	**Pg**	**20 47 26.1**	**-0.6**	
PE3			AML	AML			
	comp=E,10µm,0.2s						
PE3			AML	AML			
	comp=N,13µm,0.1s						
SACS	**San Casciano d**	**0.95 265**	⇓P	**Pg**	**20 47 27.1**	**-0.3**	
SACS			AML	AML			
	comp=E,889µm,1.4s						
SACS			AML	AML			
	comp=N,971µm,1.0s						
SACS			AML	AML			
	comp=N,920µm,1.0s						
SACS			AML	AML			
	comp=E,926µm,1.4s						
MTCE	**Montecelio**	**0.98 200**	⇑P	**Pb**	**20 47 28.3**	**-0.3**	
MTCE			AML	AML			
	comp=N,624µm,1.6s						
MTCE			AML	AML			
	comp=E,876µm,1.6s						
MTCE			AML	AML			
	comp=E,876µm,0.4s						
MTCE			AML	AML			
	comp=N,624µm,0.4s						
CAFI	**Castiglion Fio**	**0.98 294**	⇓P	**Pg**	**20 47 27.1**	**-0.9**	
CAFI			AML	AML			
	comp=E,1010µm,1.2s						
CAFI			AML	AML			
	comp=N,767µm,0.8s						
CAFI			AML	AML			
	comp=E,1010µm,0.8s						
CERT	**Cerreto**	**1.00 189**	⇓P	**Pn**	**20 47 29.9**	**-0.1**	
CERT			AML	AML			
	comp=E,1475µm,0.8s						
CERT			AML	AML			
	comp=N,934µm,1.4s						
CERT			AML	AML			
	comp=N,934µm,0.6s						
SSP9	**Sansepolcro**	**1.00 310**	⇑P	**Pg**	**20 47 27.7**	**-0.7**	
CPGN	**Carpegna, Ital**	**1.07 324**	⇑P	**Pg**	**20 47 29.7**	**-0.1**	
MCIV	**Monte Civitell**	**1.13 262**	⇑P	**Pn**	**20 47 31.3**	**-0.3**	
MCIV			AML	AML			
	comp=N,636µm,1.4s						
MCIV			AML	AML			
	comp=E,395µm,1.1s						
MCIV			AML	AML			
	comp=E,395µm,0.9s						
CRE	**Caprese Michel**	**1.14 307**	⇑P	**Pg**	**20 47 30.4**	**-0.6**	
CRE			AML	AML			
	comp=E,451µm,0.4s						
CRE			AML	AML			
	comp=N,581µm,1.4s						
CRE			AML	AML			
	comp=N,581µm,0.6s						
LPEL	**Lama dei Pelig**	**1.15 140**	⇑P	**Pb**	**20 47 31.3**	**-0.3**	
LPEL			AML	AML			
	comp=E,954µm,0.9s						
LPEL			AML	AML			
	comp=N,902µm,0.9s						
LPEL			AML	AML			
	comp=E,954µm,1.1s						
TOLF	**Tolfa**	**1.24 226**	P	**Pg**	**20 47 31.7**	**-1.3**	
TOLF			AML	AML			
	comp=N,493µm,0.5s						
TOLF			AML	AML			
	comp=E,610µm,0.4s						
TOLF			AML	AML			
	comp=N,493µm,1.5s						
TOLF			AML	AML			
	comp=E,610µm,1.6s						
LAV9	**Lanuvio**	**1.31 196**	S	**Sb**	**20 47 50.0**	**-1.5**	
ASQU	**Asqua**	**1.34 310**	P	**Pn**	**20 47 33.1**	**-1.4**	
ASQU			AML	AML			
	comp=E,342µm,1.6s						
ASQU			AML	AML			
	comp=N,486µm,0.8s						
ASQU			AML	AML			
	comp=E,342µm,0.4s						
SFI	**Santa Sofia**	**1.38 315**	⇑P	**Pn**	**20 47 34.6**	**-0.5**	
SFI			AML	AML			
	comp=E,405µm,1.6s						
SFI			AML	AML			
	comp=N,537µm,1.3s						
SFI			AML	AML			
	comp=E,338µm,1.5s						
SFI			AML	AML			
	comp=N,560µm,0.8s						
SFI			AML	AML			
	comp=E,338µm,0.5s						
SFI			AML	AML			
	comp=E,405µm,0.4s						
SFI			AML	AML			
	comp=N,537µm,0.7s						
GIUL	**Giuliano Di Ro**	**1.38 178**	P	**Pg**	**20 47 36.0**	**+0.3**	
GIUL			AML	AML			
	comp=E,404µm,0.7s						
GIUL			AML	AML			
	comp=N,417µm,1.1s						
GIUL			AML	AML			
	comp=N,417µm,0.9s						
TRIV	**Trivento**	**1.54 139**	⇓P	**Pg**	**20 47 39.0**	**+0.2**	
LMD	**Lutirano**	**1.57 317**	⇓P	**Pg**	**20 47 40.1**	**+0.8**	
MELA	**Melanico ??? S**	**1.89 130**	⇓P	**Pb**	**20 47 43.7**	**-0.4**	
MTCR	**Monte La Croce**	**1.93 305**	⇑P	**Pn**	**20 47 42.6**	**-0.2**	
FNVD	**Fontana Vidola**	**1.94 310**	P	**Pn**	**20 47 42.7**	**-0.2**	
FNVD			AML	AML			
	comp=N,245µm,1.4s						
FNVD			AML	AML			
	comp=E,319µm,0.9s						
FNVD			AML	AML			
	comp=N,245µm,0.6s						
BRJN	**Brijuni**	**2.01 11**	⇑P	**Pn**	**20 47 43.8**	**+0.1**	
GRAM	**Graiana**	**2.75 305**	⇑P	**Pb**	**20 47 56.8**	**-2.0**	
MRLC	**Muro Lucano**	**2.77 141**	⇑P	**Pb**	**20 47 57.8**	**-1.5**	
SABO	**M.te Sabotino**	**3.05 5**	⇓P	**Pn**	**20 47 57.2**	**-0.9**	
SABO			AML	AML			
	comp=E,845µm,1.5s						
SABO			AML	AML			
	comp=N,248µm,1.4s						
SABO			AML	AML			
	comp=N,1024µm,0.7s						
SABO			AML	AML			
	comp=E,196µm,0.5s						
SABO			AML	AML			
	comp=E,845µm,0.5s						
SABO			AML	AML			
	comp=N,248µm,0.6s						
ROVR	**Rover Verones**	**3.11 331**	⇑P	**Pn**	**20 48 00.3**	**+1.4**	
SALO	**Salr**	**3.29 325**	P	**Pn**	**20 48 02.3**	**+0.9**	
CTI	**Castel Tesino**	**3.30 341**	⇑P	**Pn**	**20 48 02.2**	**+0.6**	
CTI			AML	AML			
	comp=E,134µm,1.6s						
CTI			AML	AML			
	comp=N,112µm,0.7s						
CTI			AML	AML			
	comp=E,134µm,0.4s						
MPRI	**Monte Prat**	**3.31 358**	⇓P	**Pn**	**20 48 01.2**	**-0.4**	
MPRI			AML	AML			
	comp=N,210µm,0.7s						
MPRI			AML	AML			
	comp=E,148µm,1.0s						
MPRI			AML	AML			
	comp=N,210µm,1.3s						
MPRI			AML	AML			
	comp=E,148µm,1.0s						
STON	**Ston**	**3.31 90**	⇓P	**Pn**	**20 48 01.0**	**-0.5**	
STON			AML	AML			
	comp=N,44µm,1.6s						
STON			AML	AML			
	comp=E,45µm,1.4s						
STON			AML	AML			
	comp=N,44µm,0.4s						
STON			AML	AML			
	comp=E,45µm,0.6s						
STAL	**STALIGIAL**	**3.34 354**	⇑P	**Pn**	**20 48 01.9**	**-0.1**	
STAL			AML	AML			
	comp=E,180µm,0.7s						
STAL			AML	AML			
	comp=N,118µm,0.7s						
STAL			AML	AML			
	comp=E,180µm,1.3s						
CIMO	**Cimolais**	**3.41 351**	⇓P	**Pn**	**20 48 02.9**	**-0.2**	
CIMO			AML	AML			
	comp=E,42µm,0.8s						
CIMO			AML	AML			
	comp=N,50µm,0.7s						
CIMO			AML	AML			
	comp=E,42µm,1.2s						
LUSI	**Trento, Gardas**	**3.42 333**	⇑P	**Pn**	**20 48 03.6**	**+0.4**	
PTCC	**Patocco-Chiusa**	**3.47 2**	⇓P	**Pn**	**20 48 03.2**	**-0.6**	
PTCC			AML	AML			
	comp=N,56µm,0.9s						
PTCC			AML	AML			
	comp=E,74µm,0.6s						
CRAC	**Craco**	**3.54 136**	S	**Sn**	**20 48 50.0**	**+3.1**	
NOCI	**Noci**	**3.60 125**	⇓P	**Pn**	**20 48 06.3**	**+0.7**	
ACOM	**Acomizza, Ital**	**3.62 3**	⇓P	**Pn**	**20 48 06.3**	**+0.3**	
ZOU	**Zoufplan**	**3.62 358**	⇓P	**Pn**	**20 48 05.7**	**-0.4**	
ZOU			AML	AML			
	comp=N,102µm,0.8s						
ZOU			AML	AML			
	comp=N,140µm,1.6s						
ZOU			AML	AML			
	comp=E,136µm,1.2s						
ZOU			AML	AML			
	comp=E,159µm,1.1s						
ZOU			AML	AML			
	comp=N,140µm,0.4s						
ZOU			AML	AML			
	comp=E,136µm,0.8s						
ZOU			AML	AML			
	comp=N,102µm,1.2s						
MABI	**Malga Bissina**	**3.66 329**	⇑P	**Pn**	**20 48 08.0**	**+1.4**	
OBKA	**Obir**	**3.70 15**	*e*Pn	**Pn**	**20 48 07.6**	**+0.5**	
	comp=N,1.5nm,0.4s						
KOSI	**Kohlern**	**3.75 340**	⇑P	**Pn**	**20 48 08.8**	**+0.9**	
BOSI	**Bolzano**	**3.80 340**	⇓P	**Pn**	**20 48 05.1**	**-3.2**	
BOSI			AML	AML			
	comp=E,365µm,1.3s						
BOSI			AML	AML			
	comp=N,384µm,1.6s						
BOSI			AML	AML			
	comp=N,384µm,0.4s						
BOSI			AML	AML			
	comp=E,365µm,0.7s						
APPI	**Appiano**	**3.81 339**	⇓P	**Pn**	**20 48 09.2**	**+0.7**	
ABTA	**Abfaltersbach**	**3.84 353**	Pn	**Pn**	**20 48 09.3**	**+0.3**	
	comp=E,25nm,0.4s,SNR=22						
BRES	**Bressanone**	**3.90 345**	⇓P	**Pn**	**20 48 10.6**	**+0.6**	
SOKA	**Soboth**	**3.96 19**	*e*Pn	**Pn**	**20 48 11.6**	**+1.0**	
	comp=E,0.7nm,0.3s						
RISI	**Rein**	**4.09 349**	⇑P	**Pn**	**20 48 13.4**	**+1.0**	
ROSI	**Rosskopf**	**4.18 343**	⇓P	**Pn**	**20 48 14.6**	**+0.8**	
MUGIO	**Muggio**	**4.21 316**	⇓P	**Pn**	**20 48 14.2**	**+0.1**	
MUGIO			AML	AML			
	comp=N,27µm,1.6s						
MUGIO			AML	AML			
	comp=E,27µm,1.3s						
MUGIO			AML	AML			
	comp=N,27µm,0.4s						
FETA	**Feichten**	**4.44 338**	Pn	**Pn**	**20 48 18.4**	**+1.1**	
	comp=N,6.0nm,0.4s,SNR=17						
WTTA	**Wattenberg**	**4.46 346**	Pn	**Pn**	**20 48 19.1**	**+1.5**	
	comp=N,4.5nm,0.3s,SNR=13						
WTTA	**Wattenberg**	**4.46 346**	⇑P	**Pn**	**20 48 19.4**	**+1.8**	
SQTA	**Sankt Quirin**	**4.51 342**	Pn	**Pn**	**20 48 19.3**	**+1.1**	
	comp=N,14nm,0.4s,SNR=31						
WATA	**Walderalm**	**4.54 346**	Pn	**Pn**	**20 48 20.2**	**+1.5**	
	comp=N,7.3nm,0.6s,SNR=13						
MOTA	**Moosalm**	**4.65 342**	Pn	**Pn**	**20 48 21.6**	**+1.5**	

comp=N,7.7nm,0.5s,SNR=13
BIOA Bad Ischl, Aus 4.76 4 Pn Pn 20 48 22.7 +1.1
comp=N,4.2nm,0.3s,SNR=10
RETA Reutte 4.86 340 Pn Pn 20 48 24.6 +1.6
comp=N,7.9nm,0.4s,SNR=19
DAVA Damuels 4.94 333 *e*Pn Pn 20 48 25.5 +1.4
comp=N,8.9nm,0.6s,SNR=9.4
MOA Molln 4.97 8 Pn Pn 20 48 24.8 +0.3
comp=N,1.2nm,0.3s,SNR=5.1
GMB Gambarie 5.17 156 P Pn 20 48 22.3 -5.1
CONA Conrad Observa 5.33 20 *e*Pn Pn 20 48 29.2 -0.2
comp=N,0.6nm,0.2s
GERES GERESS Array B 5.92 3 Pn Pn 20 48 36.5 -1.0
comp=N,0.4nm,0.3s,baz=175,slow=13,SNR=17
GERES Sn **Sn 20 49 42.8 -2.9**
comp=N,1.1nm,0.3s,baz=182,slow=25,SNR=7.3
comp=N,0.5nm,0.2s
CKRC Cesky Krumlov 5.93 7 *e*PN Pn 20 48 36.1 -1.6
CKRC *e*SN **Sn 20 49 42.9 -3.1**
KHC Kasperske Hory 6.20 2 *e*PN Pn 20 48 39.9 -1.4
KHC *e*SN **Sn 20 49 49.1 -3.4**
KEST Kesra 7.79 204 Pn **Pn 20 49 07.1 +3.8**
comp=N,0.1nm,0.3s,baz=22,slow=19,SNR=2.1
comp=N,1.8nm,0.7s
CLL Collm 8.37 359 *e*(Pn) **Pn 20 49 11.0 -0.1**
CLL *ex* x 20 50 42.0
CLL *ex* x 20 51 08.0
CLL *e*Sg **Sg 20 51 35.0 -2.8**
comp=Z,18nm,1.4s
MLR Muntele Rosu 9.50 70 LR LR 20 53 48.3
comp=Z,76nm,19.5s,baz=230,slow=42
MMAI Mount Meron Ar 20.06 112 LR LR 21 02 07.8
comp=Z,42nm,19.8s,baz=112,slow=45
TORD Torodi Ar. Bea 31.31 202 P **P 20 53 32.4 +2.1**
comp=Z,0.1nm,0.5s,baz=21,slow=8.5,SNR=2.0
comp=Z,0.1nm,0.5s
GEYT Alibeck 34.24 83 P **P 20 53 57.0 +1.1**
comp=Z,0.7nm,0.5s,baz=267,slow=12,SNR=3.7
comp=Z,0.7nm,0.5s

ROM 30 20:50:48.5±0.1, 42°.687N±0°.004×13°.203E±0°.004, h12km, ML2.6/25, 15C-9D, Error ellipse: s-maj=0.4km s-min=0.1km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.09**	**98**	P	Pg	20 50 51.6	+0.3
T1204				S	Sg	20 50 53.4	0.0
SMA1	**SAN MARTINO**	**0.11**	**120**	⇑P	Pg	20 50 52.1	+0.5
SMA1				S	Sg	20 50 54.4	+0.5
SMA1				AML	AML		
	comp=E,4260μm,0.4s						
SMA1				AML	AML		
	comp=N,3860μm,0.4s						
SMA1				AML	AML		
	comp=E,3684μm,0.3s						
SMA1				AML	AML		
	comp=N,3860μm,0.4s						
LNSS	**Leonessa**	**0.15**	**235**	P	Pg	20 50 52.6	+0.5
LNSS				S	Sg	20 50 55.1	+0.4
RM33	**Pellescritta (**	**0.18**	**177**	⇑P	Pg	20 50 53.0	+0.5
RM33				S	Sg	20 50 56.2	+0.8
RM33				AML	AML		
	comp=E,3025μm,1.4s						
RM33				AML	AML		
	comp=E,3030μm,1.4s						
RM33				AML	AML		
	comp=N,2355μm,1.1s						
RM33				AML	AML		
	comp=E,3045μm,1.4s						
RM33				AML	AML		
	comp=N,2305μm,1.1s						
RM33				AML	AML		
	comp=N,2360μm,1.1s						
RM33				AML	AML		
	comp=N,2107μm,0.1s						
RM33				AML	AML		
	comp=E,2710μm,0.3s						
RM33				AML	AML		
	comp=E,2584μm,0.3s						
RM33				AML	AML		
	comp=N,2080μm,0.2s						
T1243	**Rocca Santa Ma**	**0.18**	**87**	⇑P	Pg	20 50 53.0	+0.3
T1217	**Poggiodomo (PG**	**0.20**	**277**	⇓P	Pg	20 50 53.4	+0.4
T1217				S	Sg	20 50 56.7	+0.7
T1217				AML	AML		
	comp=E,2300μm,0.1s						
T1217				AML	AML		
	comp=N,3705μm,0.3s						
T1217				AML	AML		
	comp=E,2235μm,0.3s						
T1217				AML	AML		
	comp=N,3785μm,0.3s						
T1217				AML	AML		
	comp=N,3705μm,0.3s						
T1217				AML	AML		
	comp=E,2240μm,0.3s						
T1217				AML	AML		
	comp=N,3785μm,0.3s						
T1217				AML	AML		
	comp=N,3700μm,0.3s						
T1217				AML	AML		
	comp=E,2234μm,0.3s						
T1217				AML	AML		
	comp=N,3703μm,0.3s						
T1217				AML	AML		
	comp=E,2299μm,0.1s						
T1217				AML	AML		
	comp=N,3784μm,0.3s						
T1217				AML	AML		
	comp=E,2203μm,0.1s						
CAMP	**Campotosto**	**0.21**	**135**	P	Pg	20 50 53.6	+0.4
CAMP				AML	AML		
	comp=E,912μm,0.8s						
CAMP				AML	AML		
	comp=N,1138μm,0.3s						
CAMP				AML	AML		
	comp=E,229μm,0.2s						
CAMP				AML	AML		
	comp=N,298μm,0.6s						
MMO1	**Montemonaco**	**0.23**	**23**	⇓P	Pg	20 50 53.9	+0.5
T1241	**Roccafluvione,**	**0.24**	**45**	⇑P	Pb	20 50 54.2	-0.6
T1241				AML	AML		
	comp=E,7640μm,0.2s						
T1241				AML	AML		
	comp=N,6530μm,1.0s						
T1241				AML	AML		
	comp=E,7645μm,0.2s						
T1241				AML	AML		
	comp=N,349μm,0.3s						
T1241				AML	AML		
	comp=E,754μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.26**	**164**	P	Pg	20 50 54.3	+0.5
T1247				S	Sb	20 50 58.7	-0.8
T1247				AML	AML		
	comp=E,1195μm,0.6s						
T1247				AML	AML		
	comp=E,1200μm,0.6s						
T1247				AML	AML		
	comp=N,1290μm,0.8s						
T1247				AML	AML		
	comp=E,1019μm,0.2s						
T1247				AML	AML		
	comp=N,968μm,0.4s						
T1215	**Vallo di Nera,**	**0.27**	**295**	P	Pg	20 50 54.5	+0.4
T1215				AML	AML		
	comp=E,595μm,0.9s						
T1215				AML	AML		
	comp=N,578μm,0.2s						
T1215				AML	AML		
	comp=E,2300μm,0.4s						
T1215				AML	AML		
	comp=N,1490μm,0.5s						
T1215				AML	AML		
	comp=E,2305μm,0.4s						
T1215				AML	AML		
	comp=N,1485μm,0.5s						
T1215				AML	AML		
	comp=N,578μm,0.2s						
T1215				AML	AML		
	comp=N,619μm,0.2s						
T1215				AML	AML		
	comp=E,489μm,0.1s						
T1215				AML	AML		
	comp=E,480μm,0.1s						
T1211	**Morro Reatino**	**0.30**	**239**	⇑P	Pg	20 50 55.0	+0.3
T1211				AML	AML		
	comp=E,1242μm,0.1s						
T1211				AML	AML		
	comp=E,1210μm,0.2s						
T1211				AML	AML		
	comp=E,1243μm,0.1s						
T1211				AML	AML		
	comp=N,2770μm,0.2s						
T1211				AML	AML		
	comp=N,2755μm,0.2s						
T1211				AML	AML		
	comp=E,746μm,0.1s						
T1211				AML	AML		
	comp=N,1172μm,0.5s						
T1211				AML	AML		
	comp=N,1166μm,0.5s						
T1211				AML	AML		
	comp=E,743μm,0.1s						
TERO	**Teramo**	**0.30**	**102**	⇑P	Pg	20 50 54.9	+0.2
TERO				S	Sg	20 50 59.5	+0.7
TERO				AML	AML		
	comp=E,2740μm,0.4s						
TERO				AML	AML		
	comp=N,4755μm,0.4s						
TERO				AML	AML		
	comp=N,4760μm,0.4s						
TERO				AML	AML		
	comp=N,4920μm,0.4s						
TERO				AML	AML		
	comp=E,2835μm,0.4s						
TERO				AML	AML		
	comp=N,704μm,0.2s						
TERO				AML	AML		
	comp=E,552μm,0.1s						
TERO				AML	AML		
	comp=E,631μm,0.1s						
TERO				AML	AML		
	comp=N,762μm,0.2s						
AM05	**Amandola Campo**	**0.31**	**21**	⇓P	Pg	20 50 55.0	+0.2
AM05				AML	AML		
	comp=E,2830μm,0.2s						
AM05				AML	AML		
	comp=N,1520μm,0.1s						
AM05				AML	AML		
	comp=E,2835μm,0.2s						
AM05				AML	AML		
	comp=N,4760μm,0.3s						
AM05				AML	AML		
	comp=E,14000μm,0.1s						
AM05				AML	AML		
	comp=E,13950μm,0.1s						
AM05				AML	AML		
	comp=N,1525μm,0.1s						
AM05				AML	AML		
	comp=E,319μm,0.1s						
AM05				AML	AML		
	comp=E,1295μm,0.1s						
AM05				AML	AML		
	comp=N,374μm,0.1s						
AM05				AML	AML		
	comp=N,130μm,0.1s						
ARRO	**Arrone**	**0.34**	**252**	⇑P	Pg	20 50 55.7	+0.3
ARRO				AML	AML		
	comp=E,676μm,0.2s						
ARRO				AML	AML		
	comp=N,692μm,0.3s						
ARRO				AML	AML		
	comp=E,677μm,0.2s						
ARRO				AML	AML		
	comp=N,692μm,0.3s						
ARRO				AML	AML		
	comp=N,514μm,0.2s						
ARRO				AML	AML		
	comp=E,432μm,0.2s						
GIGS	**Gran Sasso**	**0.36**	**131**	P	Pg	20 50 56.0	+0.2
GIGS				AML	AML		
	comp=E,340μm,0.6s						
GIGS				AML	AML		
	comp=E,240μm,0.2s						
GIGS				AML	AML		
	comp=E,55μm,0.3s						
GIGS				AML	AML		
	comp=N,45μm,0.2s						
AQU	**L'Aquila**	**0.36**	**156**	P	Pb	20 50 56.7	-0.2
AQU				AML	AML		
	comp=E,538μm,0.4s						
AQU				AML	AML		
	comp=N,536μm,0.8s						
AQU				AML	AML		
	comp=E,535μm,0.4s						
AQU				AML	AML		
	comp=N,508μm,0.8s						
AQU				AML	AML		
	comp=E,185μm,0.3s						
AQU				AML	AML		
	comp=N,204μm,0.3s						
AQU				AML	AML		
	comp=N,181μm,0.3s						
AQU				AML	AML		
	comp=E,201μm,0.3s						
GUMA	**Gualdo di Mace**	**0.39**	**15**	⇓P	Pb	20 50 57.0	-0.3
GUMA				AML	AML		
	comp=E,10210μm,0.3s						
GUMA				AML	AML		
	comp=N,13850μm,0.3s						
GUMA				AML	AML		
	comp=E,10180μm,0.3s						
GUMA				AML	AML		
	comp=E,16800μm,0.7s						
GUMA				AML	AML		
	comp=N,12950μm,1.2s						
GUMA				AML	AML		
	comp=E,10215μm,0.3s						
GUMA				AML	AML		
	comp=E,1631μm,0.5s						
GUMA				AML	AML		
	comp=N,1471μm,0.3s						
GUMA				AML	AML		
	comp=N,1307μm,0.4s						
GUMA				AML	AML		
	comp=E,1273μm,0.4s						
FIAM	**Fiamignano**	**0.42**	**189**	⇑P	Pg	20 50 57.0	+0.1
FIAM				AML	AML		
	comp=E,398μm,0.6s						
FIAM				AML	AML		
	comp=N,289μm,0.8s						
FIAM				AML	AML		
	comp=E,399μm,0.6s						
FIAM				AML	AML		
	comp=N,330μm,0.6s						
FIAM				AML	AML		
	comp=N,330μm,0.6s						
FIAM				AML	AML		
	comp=E,230μm,0.3s						
OFFI	**Offida**	**0.43**	**55**	⇑P	Pb	20 50 58.2	+0.2
OFFI				AML	AML		
	comp=N,2260μm,0.4s						
OFFI				AML	AML		
	comp=E,2550μm,0.4s						
OFFI				AML	AML		
	comp=E,856μm,0.5s						
OFFI				AML	AML		
	comp=N,561μm,0.2s						
CESX	**Cesi**	**0.47**	**261**	⇑P	Pg	20 50 57.7	0.0
CESX				AML	AML		
	comp=N,1130μm,0.4s						
CESX				AML	AML		
	comp=E,952μm,1.5s						
CESX				AML	AML		
	comp=N,254μm,0.2s						
CESX				AML	AML		
	comp=E,267μm,0.3s						
FAGN	**Fagnano**	**0.51**	**146**	S	Sb	20 51 08.0	+1.3
ASSB	**Assisi San Ben**	**0.54**	**312**	⇓P	Pb	20 51 00.0	+0.2
TRTR	**Tortoreto Alta**	**0.54**	**77**	⇓P	Pb	20 51 00.4	+0.6
TRTR				AML	AML		
	comp=E,3770μm,0.4s						
TRTR				AML	AML		
	comp=N,3665μm,0.4s						
VCEL	**Villa Celiera**	**0.56**	**122**	⇑P	Pb	20 51 00.2	+0.1
VCEL				AML	AML		
	comp=N,1076μm,1.1s						
VCEL				AML	AML		
	comp=E,730μm,0.7s						
VCEL				AML	AML		
	comp=N,1072μm,1.1s						
VCEL				AML	AML		
	comp=N,191μm,0.2s						
VCEL				AML	AML		
	comp=E,224μm,0.4s						
T0110	**Collepietro**	**0.63**	**137**	⇓P	Pg	20 51 00.9	+0.2
T0110				AML	AML		
	comp=E,722μm,0.8s						
T0110				AML	AML		
	comp=N,772μm,0.4s						
T0110				AML	AML		
	comp=N,142μm,0.4s						
SRES	**S.Oreste - Sor**	**0.68**	**229**	⇑P	Pb	20 51 02.1	-0.2
SRES				AML	AML		
	comp=N,165μm,1.2s						
SRES				AML	AML		
	comp=E,212μm,0.4s						
SRES				AML	AML		
	comp=N,176μm,0.4s						
SRES				AML	AML		
	comp=E,60μm,0.3s						
SRES				AML	AML		
	comp=N,53μm,0.3s						
PP3	**Marolino**	**0.75**	**23**	⇓P	Pb	20 51 04.0	+0.6
PP3				AML	AML		
	comp=E,1145μm,0.6s						
PP3				AML	AML		
	comp=N,1398μm,0.6s						
PP3				AML	AML		
	comp=E,1190μm,0.6s						
PP3				AML	AML		
	comp=N,1362μm,0.6s						
PP3				AML	AML		
	comp=N,1395μm,0.6s						
PP3				AML	AML		
	comp=E,1195μm,0.6s						
PP3				AML	AML		
	comp=N,1360μm,0.6s						
PP3				AML	AML		
	comp=E,1145μm,0.6s						
PP3				AML	AML		
	comp=N,552μm,0.4s						
CERT	**Cerreto**	**0.76**	**193**	P	Pg	20 51 02.7	-0.4
CERT				AML	AML		
	comp=E,468μm,0.5s						
CERT				AML	AML		
	comp=N,256μm,0.8s						
CERT				AML	AML		
	comp=N,104μm,0.6s						
CERT				AML	AML		
	comp=E,170μm,0.5s						
ARVD	**Arcevia**	**0.83**	**347**	⇑P	Pg	20 51 03.2	-1.4
ARVD				S	Sn	20 51 19.0	+0.7
MGAB	**Montegabbione**	**0.83**	**286**	⇓P	Pn	20 51 07.1	+1.0
VVLD	**Villa Vallelon**	**0.87**	**159**	P	Pn	20 51 07.6	+0.9
VVLD				AML	AML		
	comp=E,149μm,0.6s						
VVLD				AML	AML		
	comp=N,206μm,0.4s						
FRON	**Frontone**	**0.90**	**337**	P	Pb	20 51 06.3	+0.2
FRON				AML	AML		
	comp=E,386μm,1.4s						
FRON				AML	AML		
	comp=N,605μm,0.4s						
SACS	**San Casciano d**	**0.97**	**280**	P	Pb	20 51 07.2	0.0
SACS				AML	AML		
	comp=E,200μm,0.9s						
SACS				AML	AML		
	comp=N,229μm,1.6s						
VIVA	**Pratoni del Vi**	**0.99**	**199**	⇑P	Pg	20 51 06.6	-1.0
VIVA				AML	AML		
	comp=E,1050μm,0.4s						
VIVA				AML	AML		
	comp=N,1175μm,0.1s						
VIVA				AML	AML		
	comp=E,1055μm,0.4s						
VIVA				AML	AML		
	comp=N,1170μm,0.1s						
MPAG	**Monte Paganucc**	**1.00**	**341**	⇑P	Pn	20 51 08.4	+0.1
MPAG				AML	AML		
	comp=E,372μm,0.6s						
MPAG				AML	AML		
	comp=N,346μm,1.1s						

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*ROM **30** 20:51:11.5±0.1, 42°.893N±0°.004×13°.195E±0°.006, h8km, ML2.8/11, Error ellipse: s-maj=0.5km s-min=0.4km az=110.0*

ISC 30 20:51:12.0±0.8, 42°.87N±0°.02×13°.18E±0°.02, h8km±5km, n47, σ1s10/67, 13C-10D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**167**	P	**Pg**	**20 51 13.5**	**-0.1**
T1245				S	**Sg**	**20 51 14.7**	**0.0**
T1245				AML	AML		
	comp=E,47210μm,0.3s						
T1245				AML	AML		
	comp=N,89302μm,0.3s						
MMO1	**Montemonaco**	**0.11**	**76**	⇑P	**Pg**	**20 51 14.2**	**-0.4**
MMO1				S	**Sg**	**20 51 15.8**	**-0.5**
T1216	**Preci, Frazion**	**0.12**	**279**	P	**Pg**	**20 51 14.2**	**-0.5**
T1216				S	**Sg**	**20 51 17.5**	**+0.9**
FEMA	**Monte Fema**	**0.13**	**312**	P	**Pg**	**20 51 14.8**	**-0.1**
FEMA				S	**Sg**	**20 51 17.2**	**+0.2**
FEMA				AML	AML		
	comp=E,10480μm,0.3s						
FEMA				AML	AML		
	comp=N,9165μm,0.3s						
FEMA				AML	AML		
	comp=E,10495μm,0.3s						
FEMA				AML	AML		
	comp=N,9185μm,0.3s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,63550μm,0.5s						
FEMA				AML	AML		
	comp=E,10480μm,0.3s						
FEMA				AML	AML		
	comp=N,9160μm,0.3s						
AM05	**Amandola Campo**	**0.16**	**50**	P	**Pg**	**20 51 15.1**	**-0.3**
AM05				S	**Sg**	**20 51 17.5**	**-0.2**
AM05				AML	AML		
	comp=E,13950μm,0.1s						
AM05				AML	AML		
	comp=E,2835μm,0.2s						
AM05				AML	AML		
	comp=N,4760μm,0.3s						
AM05				AML	AML		
	comp=N,1525μm,0.1s						
AM05				AML	AML		
	comp=N,6990μm,0.7s						
AM05				AML	AML		
	comp=N,2045μm,0.1s						
AM05				AML	AML		
	comp=E,5390μm,0.5s						
AM05				AML	AML		
	comp=E,26400μm,0.5s						
AM05				AML	AML		
	comp=N,4462μm,0.1s						
AM05				AML	AML		
	comp=N,1523μm,0.1s						
AM05				AML	AML		
	comp=E,13963μm,0.1s						
AM05				AML	AML		
	comp=E,2483μm,0.1s						
T1241	**Roccafluvione,**	**0.18**	**95**	P	**Pg**	**20 51 16.0**	**+0.3**
T1241				S	**Sg**	**20 51 19.2**	**+0.9**
T1241				AML	AML		
	comp=E,7645μm,0.2s						
T1241				AML	AML		
	comp=N,6530μm,1.0s						
T1241				AML	AML		
	comp=N,7270μm,0.3s						
T1241				AML	AML		
	comp=E,7860μm,0.2s						
T1241				AML	AML		
	comp=E,7644μm,0.2s						
T1241				AML	AML		
	comp=N,6326μm,0.1s						
GUMA	**Gualdo di Mace**	**0.22**	**30**	P	**Pg**	**20 51 16.2**	**-0.2**
GUMA				S	**Sg**	**20 51 19.7**	**+0.3**
GUMA				AML	AML		
	comp=E,10210μm,0.3s						
GUMA				AML	AML		
	comp=N,13850μm,0.3s						
GUMA				AML	AML		
	comp=E,16800μm,0.7s						
GUMA				AML	AML		
	comp=N,12950μm,1.2s						

GUMA				AML	AML	
	comp=E,36650μm,0.6s					
GUMA				AML	AML	
	comp=E,51100μm,0.8s					
GUMA				AML	AML	
	comp=N,39350μm,0.4s					
GUMA				AML	AML	
	comp=N,59100μm,0.4s					
GUMA				AML	AML	
	comp=N,13849μm,0.3s					
GUMA				AML	AML	
	comp=N,11599μm,0.4s					
GUMA				AML	AML	
	comp=E,15494μm,0.2s					
GUMA				AML	AML	
	comp=E,10205μm,0.3s					
T1204	**Amatrice, Fraz**	**0.22 153**	P	**Pg**	**20 51 17.2 +0.7**	
T1204			S	**Sg**	**20 51 21.5 +2.0**	
T1204			AML	AML		
	comp=E,8780μm,0.3s					
T1204			AML	AML		
	comp=N,3580μm,0.1s					
T1204			AML	AML		
	comp=E,3498μm,0.2s					
T1204			AML	AML		
	comp=N,2283μm,0.2s					
T1243	**Rocca Santa Ma**	**0.26 132**	P	**Pg**	**20 51 17.6 +0.4**	
T1243			S	**Sb**	**20 51 22.2 -1.6**	
SMA1	**SAN MARTINO**	**0.27 155**	⇑P	**Pg**	**20 51 17.9 +0.7**	
SMA1			S	**Sb**	**20 51 22.7 -1.1**	
SMA1			AML	AML		
	comp=N,2670μm,0.6s					
SMA1			AML	AML		
	comp=E,2106μm,0.7s					
LNSS	**Leonessa**	**0.29 201**	P	**Pg**	**20 51 17.9 +0.2**	
LNSS			S	**Sb**	**20 51 24.2 -0.3**	
MNTP	**Mappone**	**0.34 38**	P	**Pb**	**20 51 18.8 -1.5**	
MNTP			S	**Sb**	**20 51 24.8 -1.1**	
MNTP			AML	AML		
	comp=N,2335μm,0.2s					
MNTP			AML	AML		
	comp=E,3260μm,0.6s					
MNTP			AML	AML		
	comp=N,2340μm,0.2s					
MNTP			AML	AML		
	comp=N,7925μm,0.4s					
MNTP			AML	AML		
	comp=E,7930μm,0.4s					
MNTP			AML	AML		
	comp=E,3194μm,0.3s					
MNTP			AML	AML		
	comp=N,2337μm,0.2s					
RM33	**Pellescritta (**	**0.36 176**	⇓P	**Pg**	**20 51 19.8 +0.7**	
RM33			S	**Sb**	**20 51 26.4 -0.3**	
RM33			AML	AML		
	comp=E,1360μm,0.3s					
RM33			AML	AML		
	comp=N,1340μm,0.4s					
RM33			AML	AML		
	comp=N,1338μm,0.4s					
RM33			AML	AML		
	comp=N,1344μm,0.4s					
RM33			AML	AML		
	comp=E,1360μm,0.3s					
RM33			AML	AML		
	comp=E,1408μm,0.3s					
OFFI	**Offida**	**0.38 80**	⇓P	**Pb**	**20 51 20.2 -0.6**	
OFFI			AML	AML		
	comp=N,2260μm,0.4s					
OFFI			AML	AML		
	comp=E,2550μm,0.4s					
OFFI			AML	AML		
	comp=N,2261μm,0.5s					
OFFI			AML	AML		
	comp=E,2550μm,0.4s					
CAMP	**Campotosto**	**0.38 154**	P	**Pg**	**20 51 19.6 +0.2**	
CAMP			S	**Sb**	**20 51 26.1 -0.9**	
CAMP			AML	AML		
	comp=N,1138μm,0.3s					
CAMP			AML	AML		
	comp=N,1139μm,0.3s					
CAMP			AML	AML		
	comp=E,904μm,0.3s					
CAMP			AML	AML		
	comp=E,912μm,0.8s					
TERO	**Teramo**	**0.40 129**	⇓P	**Pg**	**20 51 20.1 +0.3**	
TERO			S	**Sb**	**20 51 26.5 -1.1**	
TERO			AML	AML		
	comp=N,4755μm,0.4s					
TERO			AML	AML		
	comp=N,4920μm,0.4s					
TERO			AML	AML		
	comp=N,4760μm,0.4s					
TERO			AML	AML		
	comp=E,2835μm,0.4s					
TERO			AML	AML		
	comp=E,2740μm,0.4s					
TERO			AML	AML		
	comp=N,3769μm,0.2s					
TERO			AML	AML		
	comp=E,2683μm,0.4s					
TERO			AML	AML		
	comp=N,3936μm,0.2s					
TERO			AML	AML		
	comp=E,2513μm,0.4s					
T1211	**Morro Reatino**	**0.42 216**	P	**Pg**	**20 51 18.4 -1.7**	
T1211			S	**Sb**	**20 51 28.2 0.0**	
ASSB	**Assisi San Ben**	**0.42 294**	⇑P	**Pg**	**20 51 20.1 0.0**	
ASSB			AML	AML		
	comp=E,1490μm,0.4s					
ASSB			AML	AML		
	comp=N,2195μm,0.3s					
SNTG	**Esanatoglia**	**0.42 335**	⇓P	**Pg**	**20 51 20.0 -0.2**	
SNTG			AML	AML		
	comp=E,1141μm,0.2s					
SNTG			AML	AML		
	comp=N,800μm,1.4s					
SNTG			AML	AML		
	comp=E,1154μm,0.2s					
SNTG			AML	AML		
	comp=N,876μm,1.4s					
SNTG			AML	AML		
	comp=N,4770μm,0.2s					
SNTG			AML	AML		
	comp=N,5360μm,0.2s					
SNTG			AML	AML		
	comp=E,4970μm,0.1s					
SNTG			AML	AML		
	comp=E,5055μm,0.1s					
SNTG			AML	AML		
	comp=E,1152μm,0.2s					
SNTG			AML	AML		
	comp=E,1142μm,0.2s					
SNTG			AML	AML		
	comp=N,873μm,0.2s					
SNTG			AML	AML		
	comp=N,792μm,0.2s					
ARRO	**Arrone**	**0.42 226**	P	**Pb**	**20 51 21.1 -0.6**	
ARRO			S	**Sb**	**20 51 28.1 -0.1**	
ARRO			AML	AML		
	comp=E,1165μm,0.8s					
ARRO			AML	AML		
	comp=N,1325μm,0.4s					
ARRO			AML	AML		
	comp=N,692μm,0.3s					
ARRO			AML	AML		
	comp=E,677μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.44 169**	⇑P	**Pb**	**20 51 22.0 0.0**	
T1247			AML	AML		
	comp=N,1154μm,0.4s					
T1247			AML	AML		
	comp=E,980μm,0.5s					
EL6	**Elcito**	**0.46 353**	⇓P	**Pg**	**20 51 20.4 -0.5**	
EL6			AML	AML		
	comp=E,9855μm,0.7s					
EL6			AML	AML		
	comp=N,10280μm,0.5s					
EL6			AML	AML		
	comp=E,1060μm,0.1s					
EL6			AML	AML		
	comp=N,1419μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.51 308**	⇑P	**Pg**	**20 51 21.6 -0.1**	
ATCC			AML	AML		
	comp=E,1314μm,1.4s					
ATCC			AML	AML		
	comp=N,1395μm,0.5s					
ATCC			AML	AML		
	comp=E,20200μm,0.2s					
ATCC			AML	AML		
	comp=N,7755μm,0.9s					
ATCC			AML	AML		
	comp=N,1392μm,0.5s					
ATCC			AML	AML		
	comp=E,1249μm,0.3s					
GIGS	**Gran Sasso**	**0.51 146**	⇑P	**Pg**	**20 51 22.1 +0.3**	
GIGS			AML	AML		
	comp=E,340μm,0.6s					
GIGS			AML	AML		
	comp=N,240μm,0.2s					
GIGS			AML	AML		
	comp=N,239μm,0.2s					
GIGS			AML	AML		
	comp=E,329μm,0.2s					
CESX	**Cesi**	**0.52 240**	⇓P	**Pb**	**20 51 22.7 -0.6**	
CESX			S	**Sb**	**20 51 32.0 +1.1**	
CESX			AML	AML		
	comp=N,1130μm,0.4s					
CESX			AML	AML		
	comp=E,952μm,1.5s					
CESX			AML	AML		
	comp=N,2395μm,0.8s					
CESX			AML	AML		
	comp=E,899μm,0.3s					
CESX			AML	AML		
	comp=N,1132μm,0.4s					
FOSV	**Fossato di Vic**	**0.52 324**	⇓P	**Pg**	**20 51 21.8 -0.3**	
FOSV			S	**Sb**	**20 51 30.0 -1.2**	
FOSV			AML	AML		
	comp=E,756μm,0.2s					
FOSV			AML	AML		
	comp=N,1955μm,0.4s					
FOSV			AML	AML		
	comp=N,25050μm,0.3s					
FOSV			AML	AML		
	comp=E,5470μm,0.7s					
FOSV			AML	AML		
	comp=E,755μm,0.2s					
FOSV			AML	AML		
	comp=N,1956μm,0.4s					
TRTR	**Tortoreto Alta**	**0.54 97**	⇑P	**Pb**	**20 51 23.6 -0.1**	
TRTR			AML	AML		
	comp=N,3665μm,0.4s					
TRTR			AML	AML		
	comp=E,3770μm,0.4s					
TRTR			AML	AML		
	comp=E,3770μm,0.4s					
TRTR			AML	AML		
	comp=N,3660μm,0.4s					
PP3	**Marolino**	**0.59 32**	⇑P	**Pb**	**20 51 24.1 -0.5**	
PP3			AML	AML		
	comp=E,1077μm,0.3s					
PP3			AML	AML		
	comp=N,1294μm,0.3s					
PP3			AML	AML		
	comp=E,1013μm,0.2s					
PP3			AML	AML		
	comp=N,1297μm,0.3s					
FIAM	**Fiamignano**	**0.61 185**	P	**Pg**	**20 51 23.9 +0.2**	
FIAM			AML	AML		
	comp=E,324μm,0.2s					
FIAM			AML	AML		
	comp=N,296μm,0.5s					
MURB	**Monte Urbino**	**0.62 309**	P	**Pg**	**20 51 23.9 0.0**	
MURB			S	**Sb**	**20 51 35.0 +1.0**	
MURB			AML	AML		
	comp=E,2090μm,0.4s					
MURB			AML	AML		
	comp=N,1575μm,0.3s					
MURB			AML	AML		
	comp=E,2265μm,0.4s					
MURB			AML	AML		
	comp=N,1640μm,0.4s					
MURB			AML	AML		
	comp=E,10015μm,1.1s					
MURB			AML	AML		
	comp=N,8350μm,0.2s					
MURB			AML	AML		
	comp=N,8025μm,0.2s					
MURB			AML	AML		
	comp=E,9065μm,0.3s					
MURB			AML	AML		
	comp=N,1574μm,0.3s					
MURB			AML	AML		
	comp=N,1637μm,0.4s					
MURB			AML	AML		
	comp=E,2090μm,0.4s					
MURB			AML	AML		
	comp=E,2266μm,0.4s					
ARVD	**Arcevia**	**0.65 344**	S	**Sb**	**20 51 35.0 +0.2**	
ATFO	**Monte Foce - G**	**0.67 318**	⇑P	**Pg**	**20 51 24.4 -0.5**	
ATFO			AML	AML		
	comp=E,438μm,0.5s					
ATFO			AML	AML		
	comp=N,420μm,0.3s					
ATFO			AML	AML		
	comp=N,1805μm,1.6s					
ATFO			AML	AML		
	comp=E,2610μm,0.3s					
ATFO			AML	AML		
	comp=E,438μm,0.5s					
ATFO			AML	AML		
	comp=N,420μm,0.3s					
FAGN	**Fagnano**	**0.68 154**	S	**Sb**	**20 51 37.0 +1.4**	
VCEL	**Villa Celiera**	**0.68 134**	⇑P	**Pb**	**20 51 25.5 -0.7**	
VCEL			AML	AML		
	comp=E,730μm,0.7s					
VCEL			AML	AML		
	comp=N,1076μm,1.1s					
VCEL			AML	AML		
	comp=N,1072μm,1.1s					
VCEL			AML	AML		
	comp=E,625μm,0.5s					
VCEL			AML	AML		
	comp=N,964μm,0.2s					
AOI	**Ancona**	**0.74 24**	S	**Sn**	**20 51 39.0 -1.3**	
ATVO	**AVT- Monte Val**	**0.76 312**	⇓P	**Pg**	**20 51 26.1 -0.5**	
ATVO			AML	AML		
	comp=E,448μm,0.5s					
ATVO			AML	AML		
	comp=N,342μm,0.9s					
ATVO			AML	AML		
	comp=N,1475μm,0.5s					
ATVO			AML	AML		
	comp=E,1695μm,0.3s					
ATVO			AML	AML		
	comp=E,448μm,0.5s					
ATVO			AML	AML		
	comp=N,337μm,0.5s					
T0110	**Collepietro**	**0.78 145**	⇑P	**Pb**	**20 51 27.3 -0.6**	
T0110			AML	AML		
	comp=E,722μm,0.8s					
T0110			AML	AML		
	comp=N,772μm,0.4s					
T0110			AML	AML		
	comp=N,773μm,0.4s					
T0110			AML	AML		
	comp=E,721μm,0.4s					
MGAB	**Montegabbione**	**0.79 273**	S	**Sn**	**20 51 41.0 -0.4**	
ATPI	**Pietralunga -**	**0.81 316**	⇓P	**Pg**	**20 51 27.0 -0.5**	
ATPI			AML	AML		
	comp=E,412μm,0.6s					
ATPI			AML	AML		
	comp=N,292μm,0.5s					
ATPI			AML	AML		
	comp=N,974μm,0.4s					
ATPI			AML	AML		
	comp=E,1100μm,0.3s					
ATPI			AML	AML		
	comp=E,412μm,0.6s					
ATPI			AML	AML		
	comp=N,292μm,0.5s					
CAFI	**Castiglion Fio**	**1.00 298**	⇑P	**Pn**	**20 51 32.1 -0.2**	
CAFI			AML	AML		
	comp=N,172μm,0.6s					
CAFI			AML	AML		
	comp=E,273μm,0.7s					
CAFI			AML	AML		
	comp=E,172μm,0.4s					
CAFI			AML	AML		
	comp=N,172μm,0.6s					
CAFI			AML	AML		
	comp=N,180μm,0.6s					
CAFI			AML	AML		
	comp=E,174μm,0.7s					
CPGN	**Carpegna, Ital**	**1.12 326**	⇑P	**Pn**	**20 51 33.7 -0.4**	
LAV9	**Lanuvio**	**1.25 197**	P	**Pn**	**20 51 33.0 -2.8**	
LMD	**Lutirano**	**1.61 319**	⇓P	**Pg**	**20 51 43.3 +0.4**	
ABTA	**Abfaltersbach**	**3.90 353**	*e*Pn	**Pn**	**20 52 13.4 +1.1**	
	comp=E,3.2nm,0.4s					
FETA	**Feichten**	**4.50 338**	*e*Pn	**Pn**	**20 52 24.6 +4.1**	
	comp=E,1.3nm,0.3s					
SQTA	**Sankt Quirin**	**4.57 343**	*e*Pn	**Pn**	**20 52 24.4 +2.9**	
	comp=E,1.5nm,0.2s					
WATA	**Walderalm**	**4.61 346**	*e*Pn	**Pn**	**20 52 25.1 +3.1**	
	comp=E,0.8nm,0.2s					

*ROM **30** 20:52:16.4±0.0, 42°.943N±0°.002×13°.137E±0°.004, h11km, ML3.4/8, Error ellipse: s-maj=0.3km s-min=0.2km az=71.0*
*IDC **30** 20:52:17.1±2.0, 43°.19N×12°.20E, h0km, mb3.3/2, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=167.5km s-min=17.6km az=103.0*
*PRU **30** 20:52:18.9±0.0, 42°.97N×13°.57E, h10km*
ISC 30 20:52:16.5±0.8, **42°.97N**±0°.02×**13°.09E**±0°.03, **h16**km±4km, **n45**, σ1**9**92/66, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**263**	P	**Pg**	**20 52 19.0**	**-0.4**
FEMA				S	**Sg**	**20 52 20.8**	**-0.7**
T1216	**Preci, Frazion**	**0.09**	**213**	P	**Pg**	**20 52 19.5**	**-0.3**
T1216				S	**Sg**	**20 52 21.7**	**-0.3**
T1216				AML	AML		
	comp=E,47700μm,0.4s						
T1216				AML	AML		
	comp=N,31050μm,0.4s						
T1216				AML	AML		
	comp=N,31050μm,0.4s						
T1216				AML	AML		
	comp=N,31050μm,0.4s						
T1245	**Castelsantange**	**0.13**	**145**	P	**Pg**	**20 52 19.9**	**-0.5**
T1245				S	**Sg**	**20 52 21.5**	**-1.5**
MMO1	**Montemonaco**	**0.19**	**110**	P	**Pg**	**20 52 20.1**	**-1.0**
MMO1				S	**Sg**	**20 52 22.7**	**-1.5**
AM05	**Amandola Campo**	**0.20**	**86**	P	**Pg**	**20 52 20.4**	**-0.8**
AM05				S	**Sg**	**20 52 23.4**	**-0.9**
GUMA	**Gualdo di Mace**	**0.21**	**62**	P	**Pg**	**20 52 21.1**	**-0.2**
GUMA				S	**Sg**	**20 52 24.8**	**+0.1**
SEF1	**Sefro**	**0.21**	**331**	P	**Pg**	**20 52 22.0**	**+0.6**
SEF1				S	**Sg**	**20 52 26.1**	**+1.4**
T1215	**Vallo di Nera,**	**0.23**	**224**	P	**Pg**	**20 52 21.9**	**+0.3**
T1215				S	**Sg**	**20 52 25.8**	**+0.6**
T1215				AML	AML		
	comp=E,3585μm,0.4s						
T1215				AML	AML		
	comp=N,6580μm,0.9s						
T1215				AML	AML		
	comp=E,3345μm,0.4s						
T1215				AML	AML		
	comp=N,7025μm,0.9s						
T1215				AML	AML		
	comp=E,3335μm,0.4s						
T1215				AML	AML		
	comp=E,3590μm,0.4s						
T1215				AML	AML		
	comp=N,6580μm,0.9s						
T1215				AML	AML		
	comp=N,7025μm,0.9s						
MDAR	**Monte D'Aria**	**0.23**	**10**	P	**Pg**	**20 52 22.0**	**+0.2**
MDAR				S	**Sg**	**20 52 26.0**	**+0.7**
FIU1	**Fiuminata**	**0.25**	**333**	P	**Pg**	**20 52 22.9**	**+0.9**
FIU1				S	**Sg**	**20 52 27.5**	**+1.7**
SSM1	**San Severino M**	**0.27**	**14**	P	**Pb**	**20 52 22.8**	**-0.2**
SSM1				S	**Sb**	**20 52 27.5**	**+0.1**
GAG1	**Gagliole**	**0.27**	**357**	P	**Pb**	**20 52 23.1**	**+0.1**
GAG1				S	**Sb**	**20 52 28.0**	**+0.6**
T1241	**Roccafluvione,**	**0.28**	**113**	P	**Pg**	**20 52 21.9**	**-0.5**
T1241				S	**Sg**	**20 52 25.6**	**-1.0**
T1217	**Poggiodomo (PG**	**0.28**	**204**	P	**Pb**	**20 52 22.4**	**-0.8**
T1217				S	**Sb**	**20 52 27.0**	**-0.6**
T1217				AML	AML		
	comp=E,9560μm,0.3s						
T1217				AML	AML		
	comp=N,14250μm,0.2s						
T1217				AML	AML		
	comp=E,9530μm,0.3s						
T1217				AML	AML		
	comp=N,13900μm,0.2s						
T1217				AML	AML		
	comp=E,9535μm,0.3s						
T1217				AML	AML		
	comp=E,9500μm,0.3s						
T1217				AML	AML		
	comp=N,14250μm,0.2s						
T1217				AML	AML		
	comp=E,9570μm,0.3s						
T1217				AML	AML		
	comp=E,9495μm,0.3s						
T1217				AML	AML		
	comp=N,13900μm,0.2s						
SNTG	**Esanatoglia**	**0.31**	**340**	S	**Sb**	**20 52 30.0**	**+1.5**
ASSB	**Assisi San Ben**	**0.32**	**284**	S	**Sg**	**20 52 24.0**	**-3.9**
MNTP	**Montappone**	**0.33**	**58**	P	**Pb**	**20 52 23.6**	**-0.4**
T1204	**Amatrice, Fraz**	**0.34**	**150**	P	**Pg**	**20 52 23.2**	**-0.4**
T1204				S	**Sg**	**20 52 27.9**	**-0.4**
T1204				AML	AML		
	comp=E,10975μm,0.3s						
T1204				AML	AML		
	comp=N,4965μm,1.3s						
T1204				AML	AML		
	comp=E,10960μm,0.3s						
T1204				AML	AML		
	comp=N,4985μm,1.3s						
T1204				AML	AML		
	comp=N,4990μm,1.3s						
T1204				AML	AML		
	comp=E,10955μm,0.3s						
T1204				AML	AML		
	comp=N,4990μm,0.7s						
LNSS	**Leonessa**	**0.36**	**185**	P	**Pb**	**20 52 24.0**	**-0.6**
LNSS				S	**Sb**	**20 52 29.3**	**-0.8**
T1243	**Rocca Santa Ma**	**0.38**	**135**	P	**Pg**	**20 52 23.4**	**-0.9**
T1243				S	**Sg**	**20 52 28.9**	**-0.7**
SMA1	**SAN MARTINO**	**0.38**	**151**	P	**Pg**	**20 52 23.6**	**-0.7**
SMA1				S	**Sg**	**20 52 29.6**	**-0.1**
TRE1	**Treia**	**0.38**	**26**	S	**Sg**	**20 52 26.0**	**-3.7**
ATCC	**AVT- Casa Cast**	**0.39**	**304**	S	**Sb**	**20 52 33.0**	**+2.1**
FOSV	**Fossato di Vic**	**0.41**	**324**	S	**Sg**	**20 52 26.0**	**-4.4**
MMUR	**Monte Murano**	**0.48**	**352**	S	**Sb**	**20 52 36.0**	**+2.5**
CAMP	**Campotosto**	**0.49**	**151**	P	**Pg**	**20 52 25.4**	**-0.9**
CAMP				S	**Sg**	**20 52 32.4**	**-0.6**
TERO	**Teramo**	**0.51**	**132**	P	**Pg**	**20 52 25.7**	**-1.0**
ARVD	**Arcevia**	**0.54**	**349**	S	**Sg**	**20 52 28.0**	**-6.5**
ARVD				S	**Sn**	**20 52 38.0**	**-0.4**
MYKA	**Terra Mystica**	**3.69**	**6**	*e*Pn	**Pb**	**20 53 17.1**	**-4.1**
	comp=N,2.7nm,0.2s						
OBKA	**Obir**	**3.69**	**16**	*e*Pn	**Pn**	**20 53 16.7**	**+3.8**
	comp=N,3.9nm,0.5s						
ABTA	**Abfaltersbach**	**3.80**	**354**	*e*Pn	**Pn**	**20 53 17.2**	**+2.7**
	comp=N,8.9nm,0.5s						
WTTA	**Wattenberg**	**4.42**	**347**	*e*Pn	**Pn**	**20 53 21.2**	**-1.8**
	comp=N,1.1nm,0.2s						
SQTA	**Sankt Quirin**	**4.46**	**343**	*e*Pn	**Pn**	**20 53 20.9**	**-2.5**
	comp=N,1.8nm,0.3s						
WATA	**Walderalm**	**4.50**	**347**	*e*Pn	**Pn**	**20 53 20.7**	**-3.3**
	comp=N,1.1nm,0.2s						
ARSA	**Arzberg**	**4.62**	**21**	*e*Pn	Pb	20 53 31.2	-5.9
	comp=N,0.9nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.74**	**5**	*e*Pn	**Pn**	**20 53 31.3**	**+4.1**
	comp=N,6.9nm,0.3s						
RETA	**Reutte**	**4.81**	**341**	*e*Pn	**Pn**	**20 53 26.8**	**-1.4**
	comp=N,1.1nm,0.5s						
CONA	**Conrad Observa**	**5.33**	**21**	*e*Pn	**Pn**	**20 53 37.0**	**+1.6**
	comp=N,1.1nm,0.3s						
GERES	**GERESS Array B**	**5.90**	**4**	Pn	**Pn**	**20 53 44.4**	**+1.2**
	comp=N,0.5nm,0.3s,baz=175,slow=13,SNR=9.8						
GERES				Sn	**Sn**	**20 54 50.0**	**-0.4**
	comp=N,1.3nm,0.3s,baz=167,slow=25,SNR=7.4						
	comp=N,0.6nm,0.3s						
CKRC	**Cesky Krumlov**	**5.92**	**8**	*e*PN	**Pn**	**20 53 44.6**	**+1.2**
CKRC				*e*SN	**Sn**	**20 54 49.6**	**-1.3**
KHC	**Kasperske Hory**	**6.18**	**3**	*e*PN	**Pn**	**20 53 49.5**	**+2.5**
KHC				*e*SN	**Sn**	**20 54 56.7**	**-0.6**
NKC	**Novy Kostel**	**7.28**	**357**	*e*SN	**Sn**	**20 55 25.0**	**+0.5**
CLL	**Collm**	**8.35**	**360**	*e*(Sn)	**Sn**	**20 55 49.0**	**-1.5**
CLL				*ex*	x	20 55 57.0	
CLL				*e*Sg		20 56 42.0	

```
CLL                                   ex        x        20 57 03.0
     comp=Z,8.0nm,1.3s
FINES FINESS Array B     20.07  18   P         Pn       20 56 51.9 +1.2
     comp=Z,3.1nm,1.1s,baz=229,slow=13,SNR=1.6
     comp=Z,3.1nm,1.1s
TORD Torodi Ar. Bea      31.30 202   P         P        20 58 38.6 +2.8
     comp=Z,0.2nm,0.7s,baz=358,slow=7.2,SNR=2.2
     comp=Z,0.2nm,0.7s
```

ROM 30 21:03:33.9±0.1, 42°802N±0°005×13°126E±0°006,
h10km, ML2.5/29, 19C-14D, Error ellipse: s-maj=0.6km
s-min=0.5km az=334.0, Central Italy

```
Code  Station Name        Δ°   AZ°  Phase ID                Time      Res
                                    Op      ISC             h m s     ISC
T1245 Castelsantange     0.07   40  ⇑P      Pg              21 03 36.9 +0.5
T1245                               S       Sg              21 03 38.6 +0.4
T1245                               AML     AML
     comp=N,25900µm,0.6s
T1245                               AML     AML
     comp=N,24050µm,0.9s
T1245                               AML     AML
     comp=E,36600µm,0.2s
T1245                               AML     AML
     comp=N,25850µm,0.6s
T1245                               AML     AML
     comp=N,25900µm,0.6s
T1245                               AML     AML
     comp=E,36700µm,0.2s
T1245                               AML     AML
     comp=E,36725µm,0.2s
T1245                               AML     AML
     comp=N,21865µm,0.3s
T1245                               AML     AML
     comp=E,36619µm,0.2s
T1245                               AML     AML
     comp=N,22659µm,0.1s
T1216 Preci, Frazion     0.12 318    AML     AML
     comp=E,11100µm,0.3s
T1216                               AML     AML
     comp=N,14250µm,0.4s
T1216                               AML     AML
     comp=N,14200µm,0.4s
T1216                               AML     AML
     comp=N,14250µm,0.4s
T1216                               AML     AML
     comp=E,11100µm,0.3s
T1216                               AML     AML
     comp=N,14250µm,1.6s
FEMA  Monte Fema         0.17 341  ⇓P      Pg              21 03 38.1 +0.3
FEMA                                S       Sg              21 03 41.2 +0.8
FEMA                                AML     AML
     comp=E,10545µm,0.9s
FEMA                                AML     AML
     comp=N,10360µm,0.5s
FEMA                                AML     AML
     comp=N,10340µm,0.5s
FEMA                                AML     AML
     comp=E,10535µm,0.9s
FEMA                                AML     AML
     comp=N,10325µm,0.5s
FEMA                                AML     AML
     comp=E,9832µm,0.1s
FEMA                                AML     AML
     comp=N,8475µm,0.1s
T1217 Poggiodomo (PG     0.17 238    P       Pg              21 03 37.6 -0.1
T1217                               AML     AML
     comp=N,2250µm,0.3s
T1217                               AML     AML
     comp=E,2210µm,0.2s
T1217                               AML     AML
     comp=N,2210µm,0.3s
T1217                               AML     AML
     comp=E,2290µm,0.2s
T1217                               AML     AML
     comp=E,2295µm,0.2s
T1217                               AML     AML
     comp=E,2193µm,0.1s
T1217                               AML     AML
     comp=N,1939µm,0.2s
T1217                               AML     AML
     comp=E,2244µm,0.1s
T1217                               AML     AML
     comp=N,2000µm,0.2s
MMO1 Montemonaco         0.18  57    P       Pg              21 03 38.4 +0.5
T1204 Amatrice, Fraz     0.19 132    P       Pb              21 03 38.8 -0.8
T1204                               AML     AML
     comp=E,4210µm,0.5s
T1204                               AML     AML
     comp=N,2865µm,0.6s
T1204                               AML     AML
     comp=N,2194µm,0.2s
T1204                               AML     AML
     comp=E,3798µm,0.2s
LNSS  Leonessa           0.21 198    P       Pb              21 03 39.2 -0.7
LNSS                                S       Sg              21 03 43.0 +1.6
SMA1  SAN MARTINO        0.23 138    P       Pg              21 03 39.5 +0.7
SMA1                                S       Sg              21 03 43.4 +1.4
SMA1                                AML     AML
     comp=N,2766µm,0.4s
SMA1                                AML     AML
     comp=E,2918µm,0.5s
T1241 Roccafluvione,     0.23  76  ⇑P      Pg              21 03 39.3 +0.6
T1241                               S       Sg              21 03 43.3 +1.3
T1241                               AML     AML
     comp=E,1835µm,0.5s
T1241                               AML     AML
     comp=N,2755µm,0.4s
T1241                               AML     AML
     comp=E,3855µm,0.3s
T1241                               AML     AML
     comp=E,1813µm,0.3s
T1241                               AML     AML
     comp=N,2749µm,0.3s
AM05  Amandola Campo     0.24  43    P       Pb              21 03 39.7 -0.7
AM05                                AML     AML
     comp=N,713µm,1.0s
AM05                                AML     AML
     comp=E,3330µm,1.1s
AM05                                AML     AML
     comp=N,245µm,0.1s
AM05                                AML     AML
     comp=E,818µm,1.3s
AM05                                AML     AML
     comp=N,714µm,1.0s
AM05                                AML     AML
     comp=E,3335µm,1.1s
AM05                                AML     AML
     comp=N,244µm,0.1s
AM05                                AML     AML
     comp=E,817µm,1.3s
AM05                                AML     AML
     comp=N,557µm,0.1s
AM05                                AML     AML
     comp=E,2987µm,0.1s
AM05                                AML     AML
     comp=N,197µm,0.1s
AM05                                AML     AML
     comp=E,710µm,0.1s
T1243 Rocca Santa Ma     0.26 114    P       Pg              21 03 39.9 +0.6
T1243                               S       Sg              21 03 43.6 +0.8
CSP1  Cessapalombo       0.29  11  ⇓P      Pg              21 03 38.0 -1.9
CSP1                                AML     AML
     comp=N,4025µm,0.4s
CSP1                                AML     AML
     comp=E,3485µm,0.8s
CSP1                                AML     AML
     comp=N,4020µm,0.4s
CSP1                                AML     AML
     comp=E,2711µm,0.1s
CSP1                                AML     AML
     comp=N,3449µm,0.3s
RM33  Pellescritta (     0.30 167  ⇓P      Pb              21 03 40.7 -0.7
RM33                                S       Sb              21 03 45.6 -0.8
RM33                                AML     AML
     comp=E,1710µm,1.5s
RM33                                AML     AML
     comp=N,1336µm,0.2s
RM33                                AML     AML
     comp=N,1310µm,0.2s
RM33                                AML     AML
     comp=E,1705µm,1.5s
RM33                                AML     AML
     comp=E,1572µm,0.2s
RM33                                AML     AML
     comp=N,1335µm,0.2s
RM33                                AML     AML
     comp=E,1565µm,0.2s
RM33                                AML     AML
     comp=N,1310µm,0.2s
GUMA  Gualdo di Mace     0.30  30  ⇑P      Pb              21 03 40.9 -0.5
GUMA                                AML     AML
     comp=E,7240µm,0.9s
GUMA                                AML     AML
     comp=N,4690µm,0.5s
GUMA                                AML     AML
     comp=N,4640µm,0.5s
GUMA                                AML     AML
     comp=N,4685µm,0.5s
GUMA                                AML     AML
     comp=E,7240µm,0.9s
GUMA                                AML     AML
     comp=E,6735µm,0.4s
GUMA                                AML     AML
     comp=E,6733µm,0.4s
GUMA                                AML     AML
     comp=N,4637µm,0.5s
GUMA                                AML     AML
     comp=N,4492µm,0.4s
GUMA                                AML     AML
     comp=E,6665µm,0.2s
T1211 Morro Reatino      0.34 217  ⇓P      Pb              21 03 41.4 -0.6
T1211                               S       Sb              21 03 46.4 -1.1
T1211                               AML     AML
     comp=E,2135µm,0.2s
T1211                               AML     AML
     comp=N,2930µm,1.1s
T1211                               AML     AML
     comp=E,2114µm,0.2s
T1211                               AML     AML
     comp=N,2920µm,1.1s
T1211                               AML     AML
     comp=E,2135µm,0.2s
T1211                               AML     AML
     comp=N,2935µm,1.1s
T1211                               AML     AML
     comp=E,2117µm,0.2s
T1211                               AML     AML
     comp=N,2925µm,1.1s
T1211                               AML     AML
     comp=E,1546µm,0.2s
T1211                               AML     AML
     comp=N,2574µm,0.2s
T1211                               AML     AML
     comp=N,2565µm,0.3s
T1211                               AML     AML
     comp=E,1553µm,0.2s
CAMP  Campotosto         0.34 142  ⇓P      Pg              21 03 41.2 +0.4
CAMP                                S       Sg              21 03 46.3 +1.1
CAMP                                AML     AML
     comp=N,536µm,0.3s
CAMP                                AML     AML
     comp=E,630µm,0.2s
ARRO  Arrone             0.35 230  ⇓P      Pb              21 03 41.7 -0.5
ARRO                                AML     AML
     comp=N,807µm,0.4s
ARRO                                AML     AML
     comp=E,695µm,0.4s
ARRO                                AML     AML
     comp=N,806µm,0.4s
ARRO                                AML     AML
     comp=E,695µm,0.4s
ARRO                                AML     AML
     comp=N,756µm,0.2s
SEF1  Sefro              0.37 339  ⇑P      Pb              21 03 42.1 -0.5
SEF1                                AML     AML
     comp=N,2811µm,0.2s
SEF1                                AML     AML
     comp=E,2009µm,0.2s
T1247 Pizzolo (AQ)       0.38 161  ⇓P      Pg              21 03 42.0 +0.5
T1247                               S       Sb              21 03 48.1 -0.7
T1247                               AML     AML
     comp=N,1205µm,0.4s
T1247                               AML     AML
     comp=E,1445µm,0.4s
T1247                               AML     AML
     comp=N,994µm,0.3s
T1247                               AML     AML
     comp=E,1215µm,0.1s
TERO  Teramo             0.40 117    P       Pg              21 03 41.2 -0.6
TERO                                AML     AML
     comp=E,1150µm,0.3s
TERO                                AML     AML
     comp=N,1630µm,0.9s
TERO                                AML     AML
     comp=E,1270µm,0.3s
TERO                                AML     AML
     comp=N,1795µm,0.9s
TERO                                AML     AML
     comp=E,1149µm,0.3s
TERO                                AML     AML
     comp=N,1790µm,0.9s
TERO                                AML     AML
     comp=E,1149µm,0.3s
TERO                                AML     AML
     comp=E,1272µm,0.3s
TERO                                AML     AML
     comp=N,1114µm,0.1s
TERO                                AML     AML
     comp=N,1006µm,0.2s
ASSB  Assisi San Ben     0.42 305  ⇑P      Pb              21 03 43.4 -0.1
OFFI  Offida             0.43  72  ⇓P      Pb              21 03 43.4 -0.2
OFFI                                AML     AML
     comp=E,778µm,0.5s
OFFI                                AML     AML
     comp=N,1069µm,0.6s
CESX  Cesi               0.45 245  ⇑P      Pg              21 03 43.2 +0.5
CESX                                AML     AML
     comp=E,420µm,0.6s
CESX                                AML     AML
     comp=N,493µm,0.5s
CESX                                AML     AML
     comp=N,493µm,0.5s
CESX                                AML     AML
     comp=E,383µm,0.2s
SNTG  Esanatoglia        0.47 343    P       Pg              21 03 43.7 +0.5
SNTG                                AML     AML
     comp=N,502µm,0.2s
SNTG                                AML     AML
     comp=N,543µm,0.2s
SNTG                                AML     AML
     comp=N,502µm,0.2s
SNTG                                AML     AML
     comp=E,548µm,1.4s
SNTG                                AML     AML
     comp=E,558µm,0.7s
SNTG                                AML     AML
     comp=E,482µm,0.2s
SNTG                                AML     AML
     comp=E,480µm,0.2s
SNTG                                AML     AML
     comp=N,502µm,0.1s
SNTG                                AML     AML
     comp=N,543µm,0.2s
GIGS  Gran Sasso         0.48 137  ⇑P      Pg              21 03 43.4  0.0
GIGS                                S       Sg              21 03 50.3 +0.6
GIGS                                AML     AML
     comp=E,164µm,0.3s
GIGS                                AML     AML
     comp=N,189µm,0.3s
GIGS                                AML     AML
     comp=E,165µm,0.3s
GIGS                                AML     AML
     comp=N,188µm,0.3s
GIGS                                AML     AML
     comp=E,160µm,0.1s
GIGS                                AML     AML
     comp=N,159µm,0.2s
AQU   L'Aquila           0.49 155  ⇑P      Pg              21 03 43.9 +0.4
AQU                                 AML     AML
     comp=E,420µm,0.6s
AQU                                 AML     AML
     comp=N,446µm,1.2s
AQU                                 AML     AML
     comp=E,396µm,1.6s
AQU                                 AML     AML
     comp=N,406µm,0.8s
AQU                                 AML     AML
     comp=N,446µm,1.2s
AQU                                 AML     AML
     comp=E,420µm,0.6s
AQU                                 AML     AML
     comp=N,363µm,0.3s
AQU                                 AML     AML
     comp=E,420µm,0.6s
AQU                                 AML     AML
     comp=E,362µm,0.5s
AQU                                 AML     AML
     comp=N,434µm,1.1s
ATCC  AVT- Casa Cast     0.52 317  ⇓P      Pb              21 03 44.8 -0.4
ATCC                                AML     AML
     comp=E,760µm,0.8s
ATCC                                AML     AML
     comp=N,822µm,0.2s
ATCC                                AML     AML
     comp=E,761µm,0.8s
ATCC                                AML     AML
     comp=N,824µm,0.2s
ATCC                                AML     AML
     comp=E,733µm,0.4s
ATCC                                AML     AML
     comp=N,822µm,0.2s
EL6   Elcito             0.53 358  ⇑P      Pg              21 03 44.5 +0.3
EL6                                 S       Sb              21 03 54.0 +1.0
EL6                                 AML     AML
     comp=E,1215µm,0.3s
EL6                                 AML     AML
     comp=N,1217µm,0.2s
FIAM  Fiamignano         0.53 181  ⇓P      Pg              21 03 44.6 +0.3
FIAM                                AML     AML
     comp=E,674µm,0.8s
FIAM                                AML     AML
     comp=N,518µm,0.7s
FIAM                                AML     AML
     comp=N,459µm,0.5s
FIAM                                AML     AML
     comp=E,674µm,0.8s
TRTR  Tortoreto Alta     0.58  89  ⇓P      Pb              21 03 46.7 +0.6
TRTR                                AML     AML
     comp=E,1535µm,0.7s
TRTR                                AML     AML
     comp=N,1610µm,1.0s
TRTR                                AML     AML
     comp=N,1525µm,0.3s
TRTR                                AML     AML
     comp=E,1430µm,0.3s
FAGN  Fagnano            0.63 148  ⇑P      Pb              21 03 47.3 +0.2
FAGN                                AML     AML
     comp=N,730µm,0.4s
FAGN                                AML     AML
     comp=E,864µm,0.5s
FAGN                                AML     AML
     comp=E,865µm,0.5s
FAGN                                AML     AML
     comp=N,729µm,0.4s
MURB  Monte Urbino       0.64 316  ⇑P      Pb              21 03 47.0 -0.2
MURB                                AML     AML
     comp=E,1760µm,0.3s
MURB                                AML     AML
     comp=N,2290µm,1.1s
MURB                                AML     AML
     comp=E,1950µm,0.3s
MURB                                AML     AML
     comp=N,2250µm,1.1s
MURB                                AML     AML
     comp=N,2290µm,1.1s
MURB                                AML     AML
     comp=E,1760µm,0.3s
MURB                                AML     AML
     comp=E,1950µm,0.3s
MURB                                AML     AML
     comp=N,2267µm,0.4s
MURB                                AML     AML
     comp=N,2176µm,0.4s
MURB                                AML     AML
     comp=E,1759µm,0.3s
VCEL  Villa Celiera      0.67 127  ⇑P      Pg              21 03 47.2 +0.3
VCEL                                AML     AML
     comp=E,546µm,0.3s
VCEL                                AML     AML
     comp=N,592µm,0.3s
VCEL                                AML     AML
     comp=N,592µm,0.3s
VCEL                                AML     AML
     comp=N,592µm,0.3s
VCEL                                AML     AML
     comp=E,545µm,0.3s
PP3   Marolino           0.68  31  ⇑P      Pb              21 03 48.5 +0.7
PP3                                 AML     AML
     comp=E,2010µm,0.5s
PP3                                 AML     AML
     comp=N,1151µm,0.3s
PP3                                 AML     AML
     comp=E,2010µm,0.6s
PP3                                 AML     AML
     comp=N,1154µm,0.4s
PP3                                 AML     AML
     comp=N,1130µm,0.4s
PP3                                 AML     AML
     comp=E,1955µm,0.6s
PP3                                 AML     AML
     comp=N,944µm,0.3s
PP3                                 AML     AML
     comp=E,2014µm,0.6s
PP3                                 AML     AML
     comp=N,1006µm,0.5s
PP3                                 AML     AML
     comp=E,1958µm,0.6s
ATTE  AVT- Monte Tez     0.69 305  ⇑P      Pn              21 03 50.2 +0.4
ATTE                                AML     AML
     comp=E,322µm,0.4s
ATTE                                AML     AML
     comp=N,342µm,0.4s
ATTE                                AML     AML
     comp=N,342µm,0.4s
ATTE                                AML     AML
     comp=N,342µm,0.4s
ATTE                                AML     AML
     comp=E,322µm,0.4s
ATFO  Monte Foce - G     0.69 324  ⇑P      Pb              21 03 48.0 -0.2
ATFO                                AML     AML
     comp=E,344µm,0.3s
ATFO                                AML     AML
     comp=N,346µm,0.3s
ATFO                                AML     AML
     comp=N,346µm,0.3s
ATFO                                AML     AML
     comp=N,346µm,0.3s
ATFO                                AML     AML
     comp=E,344µm,0.3s
SRES  S.Oreste - Sor     0.73 219    S       Sn              21 04 01.0 -0.4
T0110 Collepietro        0.75 140  ⇑P      Pg              21 03 48.4  0.0
T0110                               AML     AML
     comp=N,527µm,0.6s
T0110                               AML     AML
     comp=E,392µm,1.5s
T0110                               AML     AML
     comp=N,527µm,0.6s
T0110                               AML     AML
     comp=E,376µm,0.2s
MGAB  Montegabbione      0.75 279  ⇓P      Pg              21 03 47.1 -1.4
MGAB                                AML     AML
     comp=E,986µm,0.6s
MGAB                                AML     AML
     comp=N,664µm,0.4s
MGAB                                AML     AML
     comp=E,998µm,0.6s
MGAB                                AML     AML
     comp=N,732µm,0.4s
MGAB                                AML     AML
     comp=E,990µm,0.6s
MGAB                                AML     AML
     comp=N,664µm,0.5s
MGAB                                AML     AML
     comp=E,988µm,0.6s
MGAB                                AML     AML
     comp=E,1001µm,0.6s
MGAB                                AML     AML
     comp=N,732µm,0.5s
ATVO  AVT- Monte Val     0.78 318  ⇑P      Pb              21 03 49.7 +0.1
ATVO                                AML     AML
     comp=E,278µm,1.4s
ATVO                                AML     AML
     comp=N,244µm,0.9s
ATVO                                AML     AML
     comp=E,279µm,1.4s
ATVO                                AML     AML
     comp=N,231µm,0.3s
ATVO                                AML     AML
     comp=E,249µm,0.3s
ATMI  Monte Miggiano     0.82 311    S       Sn              21 04 04.0 +0.2
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MTCE	**Montecelio**	**0.83 200**	P	Pg	21 03 49.9 0.0
MTCE			AML	AML	
	comp=E,220μm,0.4s				
MTCE			AML	AML	
	comp=N,112μm,1.4s				
MTCE			AML	AML	
	comp=E,221μm,0.4s				
MTCE			AML	AML	
	comp=N,112μm,1.4s				
MTCE			AML	AML	
	comp=E,221μm,0.5s				
MTCE			AML	AML	
	comp=N,97μm,0.4s				
ATPI	**Pietralunga -**	**0.84 321**	⇑P	Pb	21 03 50.5 -0.1
ATPI			AML	AML	
	comp=E,192μm,1.2s				
ATPI			AML	AML	
	comp=N,241μm,0.5s				
ATPI			AML	AML	
	comp=N,242μm,0.5s				
ATPI			AML	AML	
	comp=E,189μm,0.5s				
ATPI			AML	AML	
	comp=N,241μm,0.5s				
CAFI	**Castiglion Fio**	**1.00 302**	⇓P	Pn	21 03 53.9 -0.1
CAFI			S	Sn	21 04 09.0 +0.8
CAFI			AML	AML	
	comp=N,226μm,0.9s				
CAFI			AML	AML	
	comp=E,283μm,0.6s				
CAFI			AML	AML	
	comp=E,283μm,0.6s				
CAFI			AML	AML	
	comp=E,273μm,0.5s				
CAFI			AML	AML	
	comp=N,195μm,0.6s				
CAFI			AML	AML	
	comp=N,204μm,0.8s				
PE3	**Peglio**	**1.00 333**	⇑P	Pb	21 03 53.7 +0.2
SF04	**Casetta**	**1.08 272**	S	Sn	21 04 12.0 +1.9
CPGN	**Carpegna, Ital**	**1.16 330**	P	Pn	21 03 57.1 +0.8
GIUL	**Giuliano Di Ro**	**1.25 176**	⇓P	Pg	21 03 59.5 +1.7
GIUL			AML	AML	
	comp=N,126μm,0.9s				
GIUL			AML	AML	
	comp=E,81μm,0.5s				
GIUL			AML	AML	
	comp=N,125μm,0.9s				
GIUL			AML	AML	
	comp=E,81μm,0.5s				
CERA	**Filignano**	**1.37 151**	P	Pg	21 04 01.8 +1.5
CERA			AML	AML	
	comp=N,82μm,0.7s				
CERA			AML	AML	
	comp=E,100μm,0.6s				
CERA			AML	AML	
	comp=N,82μm,0.7s				
CERA			AML	AML	
	comp=E,100μm,0.6s				
CERA			AML	AML	
	comp=N,74μm,0.7s				
CERA			AML	AML	
	comp=E,102μm,0.8s				
PTRJ	**Pietraroja**	**1.78 144**	S	Sg	21 04 34.0 +3.0
PAOL	**Paolisi**	**2.07 148**	S	Sn	21 04 35.0 +0.4
VENL	**Venezia Lido**	**2.67 349**	S	Sb	21 04 52.0 -2.5

ROM 30 21:04:06.0±0.1, 42°.806N±0°.004×13°.167E±0°.005, h11km, ML2.8/2, 3C-2D, Error ellipse: s-maj=0.4km s-min=0.4km az=92.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**17**	⇑P	Pg	21 04 08.6	+0.3
T1245				S	Sg	21 04 10.2	+0.1
T1245				AML	AML		
	comp=E,27650μm,0.7s						
T1245				AML	AML		
	comp=N,13050μm,0.3s						
T1245				AML	AML		
	comp=N,14150μm,0.2s						
T1245				AML	AML		
	comp=E,28950μm,0.7s						
T1245				AML	AML		
	comp=N,13048μm,0.3s						
T1245				AML	AML		
	comp=E,23424μm,0.2s						
T1245				AML	AML		
	comp=N,14139μm,0.2s						
T1245				AML	AML		
	comp=E,24834μm,0.2s						
T1216	**Preci, Frazion**	**0.14**	**308**	P	Pg	21 04 09.2	-0.1
T1216				AML	AML		
	comp=N,1986μm,0.1s						
T1216				AML	AML		
	comp=E,2123μm,0.3s						
MMO1	**Montemonaco**	**0.15**	**51**	⇓P	Pg	21 04 10.0	+0.5
MMO1				S	Sg	21 04 12.7	+0.7
T1204	**Amatrice, Fraz**	**0.17**	**139**	⇑P	Pg	21 04 07.8	-2.0
FEMA	**Monte Fema**	**0.18**	**331**	P	Pb	21 04 10.8	-0.7
FEMA				S	Sg	21 04 13.7	+0.9
FEMA				AML	AML		
	comp=E,2442μm,0.1s						
FEMA				AML	AML		
	comp=N,1448μm,0.2s						
T1217	**Poggiodomo (PG**	**0.20**	**242**	P	Pg	21 04 10.9	+0.6
T1217				S	Sg	21 04 14.4	+1.2
T1241	**Roccafluvione,**	**0.20**	**75**	⇑P	Pb	21 04 11.2	-0.6
T1241				S	Sg	21 04 14.6	+1.4
T1241				AML	AML		
	comp=E,3853μm,0.3s						
T1241				AML	AML		
	comp=N,1060μm,0.3s						
SMA1	**SAN MARTINO**	**0.21**	**145**	P	Pb	21 04 11.3	-0.7
SMA1				AML	AML		
	comp=N,756μm,0.3s						
SMA1				AML	AML		
	comp=E,977μm,0.3s						
AM05	**Amandola Campo**	**0.22**	**38**	⇓P	Pb	21 04 11.6	-0.5
AM05				S	Sg	21 04 15.1	+1.4
AM05				AML	AML		
	comp=E,646μm,0.8s						
AM05				AML	AML		
	comp=N,713μm,1.0s						
AM05				AML	AML		
	comp=N,245μm,0.1s						
AM05				AML	AML		
	comp=N,714μm,1.0s						
AM05				AML	AML		
	comp=N,244μm,0.1s						
AM05				AML	AML		
	comp=E,3060μm,1.0s						
AM05				AML	AML		
	comp=E,645μm,0.8s						
AM05				AML	AML		
	comp=N,701μm,0.1s						
AM05				AML	AML		
	comp=N,245μm,0.1s						
AM05				AML	AML		
	comp=E,2994μm,0.1s						
AM05				AML	AML		
	comp=E,616μm,0.1s						
T1215	**Vallo di Nera,**	**0.22**	**269**	P	Pg	21 04 11.1	+0.4
T1215				S	Sg	21 04 14.9	+1.1
LNSS	**Leonessa**	**0.22**	**205**	P	Pg	21 04 11.3	+0.6
LNSS				S	Sg	21 04 15.2	+1.3
T1243	**Rocca Santa Ma**	**0.23**	**118**	P	Pg	21 04 11.4	+0.5
T1243				S	Sg	21 04 15.3	+1.1
CSP1	**Cessapalombo**	**0.29**	**6**	P	Pg	21 04 11.4	-0.5
CSP1				AML	AML		
	comp=E,1333μm,0.3s						
CSP1				AML	AML		
	comp=N,1317μm,0.4s						
RM33	**Pellescritta (**	**0.30**	**173**	P	Pg	21 04 12.4	+0.4
RM33				S	Sb	21 04 17.6	-0.8
T1247	**Pizzolo (AQ)**	**0.38**	**165**	S	Sg	21 04 14.0	-4.5
GAG1	**Gagliole**	**0.44**	**350**	P	Pg	21 04 14.8	+0.1
GIGS	**Gran Sasso**	**0.46**	**140**	P	Pb	21 04 15.9	-0.4
GIGS				AML	AML		
	comp=N,45μm,0.4s						
GIGS				AML	AML		
	comp=E,62μm,0.4s						
SNTG	**Esanatoglia**	**0.48**	**340**	P	Pb	21 04 16.0	-0.6
SNTG				S	Sb	21 04 23.5	-0.1
SNTG				AML	AML		
	comp=E,178μm,0.1s						
SNTG				AML	AML		
	comp=E,181μm,0.1s						
SNTG				AML	AML		
	comp=N,191μm,0.4s						
EL6	**Elcito**	**0.53**	**355**	P	Pb	21 04 17.4	0.0
EL6				AML	AML		
	comp=E,418μm,0.1s						
EL6				AML	AML		
	comp=N,390μm,0.3s						

KRNET 30 21:09:38.3±0.1, 39°.41N×72°.66E, h15km, mb2.9
NNC 30 21:09:45.0±2.8, 39°.73N×72°.65E, h0km, mb3.6, mpv3.2,
Error ellipse: s-maj=21.6km s-min=11.3km az=3.0
SOME 30 21:09:54.7, 40°.20N×72°.63E, h5km
ISC 30 21:09:41.2±1.1, 39°.44N±0°.05×72°.54E±0°.03, h10km, n31, σ2°.00/50, 20C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.57**	**275**	⇑*i*P	**Pg**	**21 09 51.4**	**-1.0**
	baz=76						
DRK				⇑*i*S	**Sb**	**21 10 00.9**	**-0.9**
	baz=76						
OHH	**Osh**	**1.10**	**10**	⇑*i*P	**Pb**	**21 09 59.5**	**-3.0**
	baz=5.0						
OHH				⇑*i*S	**Sg**	**21 10 15.1**	**-1.7**
	baz=5.0						
BTK	**Batken**	**1.46**	**296**	⇑*i*P	**Pb**	**21 10 07.6**	**-1.0**
	baz=95						
BTK				⇑*i*S	**Sg**	**21 10 29.0**	**+0.7**
	baz=95						
GAR	**Garm**	**1.78**	**256**	⇑*i*P	**Pb**	**21 10 12.9**	**-1.1**
	baz=58						
GAR				⇑*i*S	**Sg**	**21 10 38.3**	**-0.1**
	baz=58						
TRKS	**Terek-Say**	**2.35**	**333**	⇓*i*P	**Pn**	**21 10 20.1**	**+0.1**
	baz=32						
TRKS				⇓*i*S	**Sb**	**21 10 50.5**	**-2.3**
	baz=32						
ARK	**Arkit**	**2.40**	**350**	⇑*i*P	**Pn**	**21 10 21.4**	**+0.7**
	baz=48						
ARK				⇑*i*S	**Sb**	**21 10 53.0**	**-1.2**
	baz=48						
CHGR	**Chuyangaron**	**2.74**	**255**	⇑*e*P	**Pn**	**21 10 26.8**	**+1.4**
	baz=56						
CHGR				⇑*i*S	**Sb**	**21 11 02.2**	**-1.9**
	baz=56						
AML	**Almayashu**	**2.83**	**18**	P	**Pn**	**21 10 27.9**	**+1.0**
	SNR=39						
UCH	**Uchtor**	**3.17**	**28**	P	**Pn**	**21 10 32.1**	**+0.6**
	SNR=7.2						
UCH	**Uchtor**	**3.17**	**28**	⇑*e*P	**Pn**	**21 10 31.3**	**-0.2**
	baz=26						
UCH				⇑*i*S	**Sn**	**21 11 10.1**	**+0.5**
	baz=26						
IUG	**Iuzhnay**	**3.31**	**326**	*e*P	**Pg**	**21 10 45.4**	**+0.8**
	115nm,0.4s						
IUG				*e*S	**Sb**	**21 11 22.3**	**+1.9**
	32nm,1.2s						
IUG	**Iuzhnay**	**3.31**	**326**	Pg	**Pb**	**21 10 40.8**	**+0.8**
	130nm,0.4s						
IUG				Lg	Lg	21 11 18.9	
	28nm,0.9s						
MRKS	**Merke**	**3.35**	**9**	*e*P	**Pg**	**21 10 43.4**	**-1.9**
	3.4nm,0.5s						
MRKS				*e*S	**Sb**	**21 11 18.8**	**-2.7**
	28nm,0.5s						
MRKS	**Merke**	**3.35**	**9**	Pg	**Pb**	**21 10 40.6**	**-0.1**
	4.8nm,0.4s						
MRKS				Lg	Lg	21 11 18.6	
	28nm,0.5s						
EKS2	**Erkin-Say**	**3.35**	**16**	P	**Pn**	**21 10 36.5**	**+2.7**
	SNR=6.9						
AAK	**Ala-Archa**	**3.52**	**24**	P	**Pn**	**21 10 37.6**	**+1.4**
	SNR=14						
DZA	**Taraz**	**3.57**	**346**	*e*P	**Pg**	**21 10 48.3**	**-1.3**
	17nm,0.2s						
DZA				*e*S	**Sb**	**21 11 26.8**	**-1.0**
	43nm,0.4s						
CHM	**Chimkent**	**3.64**	**323**	*e*P	**Pg**	**21 10 52.6**	**+1.7**
	24nm,0.2s						
CHM				*e*S	**Sg**	**21 11 34.4**	**-3.6**
	69nm,0.5s						
CHMS	**Chumysh**	**3.93**	**24**	P	**Pn**	**21 10 43.0**	**+1.3**
	SNR=5.0						
CHMS	**Chumysh**	**3.93**	**24**	⇓Pn	**Pn**	**21 10 42.7**	**+1.1**
	4.1nm,0.5s						
CHMS				⇑Lg	Lg	21 11 44.2	
	4.4nm,0.7s						
KK31	**Karatay Array**	**3.97**	**338**	⇑Pn	**Pn**	**21 10 44.1**	**+2.0**
	0.3nm,0.2s,baz=147,slow=11,SNR=15						
KK31				⇑Pg	**Pb**	**21 10 53.1**	**+1.8**
	0.9nm,0.3s,baz=157,slow=15,SNR=5.5						
KK31				⇑Sn	**Sn**	**21 11 31.2**	**+2.4**
	3.4nm,0.3s,baz=160,slow=23,SNR=11						
KK31				⇑Lg	Lg	21 11 44.2	
	2.3nm,0.3s						
TKM2	**Tokmak 2**	**4.18**	**33**	⇑Pg	**Pb**	**21 10 53.8**	**-1.1**
	2.2nm,0.5s						
TKM2				⇓Lg	Lg	21 11 49.2	
	2.1nm,0.5s						
KST	**Kastek**	**4.43**	**35**	*e*P	**Pg**	**21 11 04.4**	**-1.7**
	2.5nm,0.3s						
KST				*e*S	**Sb**	**21 11 54.3**	**+1.5**
	4.5nm,0.6s						
DGS	**Degeres**	**4.51**	**32**	*e*P	**Pg**	**21 11 04.7**	**-3.0**
	3.2nm,0.3s						
DGS				*e*S	**Sb**	**21 11 55.2**	**+0.1**
	4.9nm,0.8s						
DGS	**Degeres**	**4.51**	**32**	Pg	**Pb**	**21 11 03.3**	**+2.7**
	5.5nm,0.6s						
DGS				Lg	Lg	21 11 57.7	
	4.9nm,0.8s						
KRBS	**Karabastau**	**4.86**	**28**	*e*P	**Pg**	**21 11 11.2**	**-3.2**
	1.3nm,0.5s						
KRBS				*e*S	**Sb**	**21 12 06.3**	**+1.2**
	1.6nm,1.0s						
KRBS	**Karabastau**	**4.86**	**28**	Pg	**Pb**	**21 11 08.2**	**+1.6**
	1.2nm,0.5s						
KRBS				Lg	Lg	21 12 06.3	
	2.0nm,0.7s						
MDOK	**Medeo**	**5.04**	**41**	*e*P	**Pg**	**21 11 16.5**	**-1.3**
	2.8nm,0.6s						
MDOK				*e*S	**Sb**	**21 12 15.1**	**+4.8**
	2.9nm,0.8s						
MDOK	**Medeo**	**5.04**	**41**	Pg	**Pb**	**21 11 09.4**	**-0.2**
	4.2nm,0.9s						
MDOK				Lg	Lg	21 12 17.1	
	4.3nm,1.0s						
KTBS	**Karatobe**	**5.28**	**35**	*e*P	**Pg**	**21 11 20.1**	**-2.3**
	1.7nm,0.5s						
KTBS				*e*S	**Sb**	**21 12 21.4**	**+4.3**
	4.3nm,0.5s						
KTBS	**Karatobe**	**5.28**	**35**	Pg	**Pg**	**21 11 18.9**	**-3.5**
	1.7nm,0.6s						
KTBS				Lg	Lg	21 12 24.4	
	5.8nm,0.8s						

PRU 30 21:16:55.0±0.0, 43°.03N×14°.35E, h10km
ROM 30 21:16:53.1±0.1, 43°.037N±0°.004×13°.096E±0°.005, h9km, ML2.7/38, 16C-15D, Error ellipse: s-maj=0.4km s-min=0.3km az=218.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**204**	P	Pg	21 16 55.8	+0.3
FEMA				S	Sg	21 16 57.8	+0.6
SEF1	**Sefro**	**0.15**	**315**	P	Pg	21 16 56.9	+0.5
SEF1				S	Sg	21 16 59.9	+1.1
SEF1				AML	AML		
	comp=N,8080μm,1.0s						
SEF1				AML	AML		
	comp=E,10450μm,0.4s						
SEF1				AML	AML		
	comp=E,10480μm,0.4s						
SEF1				AML	AML		
	comp=N,8075μm,1.0s						
T1216	**Preci, Frazion**	**0.16**	**201**	AML	AML		
	comp=N,16650μm,0.8s						
T1216				AML	AML		
	comp=E,14500μm,0.3s						
T1216				AML	AML		
	comp=N,16650μm,0.8s						
T1216				AML	AML		
	comp=E,14450μm,0.3s						
T1216				AML	AML		
	comp=N,16700μm,0.8s						
MDAR	**Monte D'Aria**	**0.16**	**12**	P	Pg	21 16 57.0	+0.4
MDAR				S	Sg	21 16 59.7	+0.7
MDAR				AML	AML		
	comp=E,5020μm,0.5s						
MDAR				AML	AML		
	comp=N,7965μm,0.5s						
MDAR				AML	AML		
	comp=E,5025μm,0.5s						
MDAR				AML	AML		
	comp=N,7965μm,0.5s						
MDAR				AML	AML		
	comp=N,7965μm,1.5s						
GUMA	**Gualdo di Mace**	**0.18**	**82**	⇑P	Pg	21 16 57.6	+0.8
GUMA				S	Sg	21 17 01.1	+1.6
GUMA				AML	AML		
	comp=E,20200μm,0.5s						
GUMA				AML	AML		
	comp=N,18450μm,0.3s						
GUMA				AML	AML		
	comp=E,20200μm,0.5s						
GUMA				AML	AML		
	comp=E,21650μm,0.4s						
GUMA				AML	AML		
	comp=N,20400μm,0.6s						
GUMA				AML	AML		
	comp=N,18450μm,0.3s						
T1245	**Castelsantange**	**0.19**	**160**	AML	AML		
	comp=N,31250μm,0.8s						
T1245				AML	AML		
	comp=E,33000μm,0.2s						
T1245				AML	AML		
	comp=N,29500μm,0.8s						
T1245				AML	AML		
	comp=E,33050μm,0.2s						
T1245				AML	AML		
	comp=N,29550μm,0.8s						
T1245				AML	AML		
	comp=E,33000μm,1.8s						
T1245				AML	AML		
	comp=E,33050μm,1.8s						
AM05	**Amandola Campo**	**0.20**	**108**	⇑P	Pg	21 16 57.8	+0.6
AM05				S	Sg	21 17 01.2	+1.2
AM05				AML	AML		
	comp=E,2300μm,0.2s						
AM05				AML	AML		
	comp=E,2305μm,0.2s						
AM05				AML	AML		
	comp=N,1840μm,0.5s						
AM05				AML	AML		
	comp=E,9105μm,0.2s						
AM05				AML	AML		
	comp=N,564μm,0.1s						
AM05				AML	AML		
	comp=N,1835μm,0.5s						
AM05				AML	AML		
	comp=E,9110μm,0.2s						
SSM1	**San Severino M**	**0.20**	**17**	⇓P	Pg	21 16 58.0	+0.8
GAG1	**Gagliole**	**0.20**	**354**	P	Pg	21 16 58.0	+0.8
GAG1				S	Sg	21 17 01.7	+1.6
GAG1				AML	AML		
	comp=E,7095μm,0.3s						
GAG1				AML	AML		
	comp=E,7090μm,0.3s						
GAG1				AML	AML		
	comp=N,6325μm,0.4s						
GAG1				AML	AML		
	comp=N,6325μm,1.6s						
MMO1	**Montemonaco**	**0.22**	**129**	P	Pg	21 16 58.0	+0.4
MMO1				S	Sg	21 17 01.8	+1.1
SNTG	**Esanatoglia**	**0.25**	**332**	P	Pg	21 16 58.6	+0.5
SNTG				S	Sg	21 17 03.0	+1.5
SNTG				AML	AML		
	comp=E,1455μm,1.0s						
SNTG				AML	AML		
	comp=N,1495μm,0.3s						
SNTG				AML	AML		
	comp=E,1405μm,0.5s						
SNTG				AML	AML		
	comp=N,1595μm,0.3s						
SNTG				AML	AML		
	comp=N,1500μm,0.3s						
SNTG				AML	AML		
	comp=N,1495μm,0.3s						
SNTG				AML	AML		
	comp=E,1450μm,1.0s						
SNTG				AML	AML		
	comp=E,1450μm,1.0s						
MNTP	**Montappone**	**0.29**	**70**	P	Pb	21 17 00.1	-0.4
MNTP				AML	AML		
	comp=N,4740μm,0.5s						
MNTP				AML	AML		
	comp=E,7165μm,0.3s						
MNTP				AML	AML		
	comp=N,4735μm,0.5s						
EL6	**Elcito**	**0.29**	**1**	P	Pg	21 16 59.4	+0.4
EL6				S	Sb	21 17 04.4	-1.1
EL6				AML	AML		
	comp=N,4490μm,0.2s						
EL6				AML	AML		
	comp=E,3660μm,0.3s						
T1241	**Roccafluvione,**	**0.30**	**126**	AML	AML		
	comp=E,3275μm,0.9s						
T1241				AML	AML		
	comp=N,2195μm,0.4s						
ASSB	**Assisi San Ben**	**0.32**	**271**	S	Sb	21 17 06.0	-0.3
T1217	**Poggiodomo (PG**	**0.35**	**201**	S	Sb	21 17 06.0	-1.1
FOSV	**Fossato di Vic**	**0.35**	**317**	⇑P	Pg	21 17 00.7	+0.6
FOSV				S	Sb	21 17 06.8	-0.5
FOSV				AML	AML		
	comp=N,4200μm,0.3s						
FOSV				AML	AML		
	comp=E,1570μm,1.3s						
FOSV				AML	AML		
	comp=N,4195μm,0.3s						
FOSV				AML	AML		
	comp=E,1570μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.36**	**294**	⇑P	Pg	21 17 01.0	+0.7
ATCC				AML	AML		
	comp=E,4560μm,0.2s						
ATCC				AML	AML		
	comp=N,3645μm,0.2s						
ATCC				AML	AML		
	comp=N,3650μm,0.2s						
ATCC				AML	AML		
	comp=E,4565μm,0.2s						
T1204	**Amatrice, Fraz**	**0.40**	**156**	⇑P	Pb	21 17 02.5	+0.2
T1204				AML	AML		
	comp=E,4855μm,0.7s						
T1204				AML	AML		
	comp=N,2660μm,1.0s						
MMUR	**Monte Murano**	**0.41**	**350**	⇓P	Pb	21 17 02.3	-0.2
MMUR				AML	AML		
	comp=E,2720μm,1.3s						
MMUR				AML	AML		
	comp=N,2660μm,0.1s						
MMUR				AML	AML		
	comp=E,2715μm,1.3s						
MMUR				AML	AML		
	comp=N,2655μm,0.1s						
MMUR				AML	AML		
	comp=E,2715μm,0.7s						
T1243	**Rocca Santa Ma**	**0.43**	**143**	P	Pg	21 17 02.1	+0.7
T1243				S	Sb	21 17 10.0	+0.6
LNSS	**Leonessa**	**0.44**	**185**	S	Sg	21 17 08.0	+0.6
SMA1	**SAN MARTINO**	**0.44**	**157**	⇑P	Pg	21 17 02.0	+0.3
SMA1				AML	AML		
	comp=E,2390μm,1.4s						
SMA1				AML	AML		
	comp=N,2955μm,0.6s						
SMA1				AML	AML		
	comp=N,2960μm,0.6s						
SMA1				AML	AML		
	comp=E,2385μm,1.4s						
SMA1				AML	AML		
	comp=E,2385μm,0.6s						
OFFI	**Offida**	**0.44**	**103**	P	Pb	21 17 03.2	+0.1
OFFI				AML	AML		
	comp=E,2305μm,0.6s						
OFFI				AML	AML		
	comp=N,2145μm,0.7s						
OFFI				AML	AML		
	comp=E,2305μm,1.4s						
ARVD	**Arcevia**	**0.47**	**346**	⇓P	Pg	21 17 02.8	+0.4
ARVD				S	Sb	21 17 11.0	+0.3
ARVD				AML	AML		

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     comp=E,912µm,0.2s
ARVD                    AML   AML
     comp=N,666µm,0.8s
MURB Monte Urbino       0.47 299 ⇓P   Pb   21 17 03.0 -0.6
MURB                            S    Sb   21 17 12.0 +1.2
MURB                            AML  AML
     comp=E,2630µm,0.5s
MURB                            AML  AML
     comp=N,2520µm,0.2s
MURB                            AML  AML
     comp=E,2625µm,0.5s
MURB                            AML  AML
     comp=N,2920µm,0.2s
MURB                            AML  AML
     comp=N,2525µm,0.2s
MURB                            AML  AML
     comp=E,2865µm,0.5s
ATFO Monte Foce - G     0.51 311 ⇓P   Pg   21 17 03.5 +0.5
ATFO                            S    Sb   21 17 13.0 +1.3
ATFO                            AML  AML
     comp=N,552µm,0.5s
ATFO                            AML  AML
     comp=N,552µm,0.5s
ATFO                            AML  AML
     comp=E,598µm,0.9s
ARRO Arrone             0.52 208 ⇑P   Pb   21 17 04.0 -0.4
ARRO                            AML  AML
     comp=E,1920µm,0.2s
ARRO                            AML  AML
     comp=E,1915µm,0.2s
ARRO                            AML  AML
     comp=N,1635µm,0.6s
T1211 Morro Reatino     0.53 199 S    Sg   21 17 10.0 -0.5
RM33 Pellescritta (     0.54 171 S    Sg   21 17 10.0 -0.5
FRON Frontone           0.55 331 ⇑P   Pg   21 17 04.1 +0.3
FRON                            AML  AML
     comp=N,914µm,0.3s
FRON                            AML  AML
     comp=E,720µm,1.5s
FRON                            AML  AML
     comp=E,720µm,0.5s
FRON                            AML  AML
     comp=N,918µm,0.3s
CAMP Campotosto         0.55 155 ⇑P   Pg   21 17 03.9 +0.1
CAMP                            AML  AML
     comp=E,696µm,0.2s
CAMP                            AML  AML
     comp=N,631µm,0.7s
CAMP                            AML  AML
     comp=E,696µm,0.2s
CAMP                            AML  AML
     comp=N,630µm,0.7s
TERO Teramo             0.56 138 P    Pg   21 17 04.2 +0.3
TERO                            AML  AML
     comp=E,935µm,0.5s
TERO                            AML  AML
     comp=N,1085µm,0.4s
TERO                            AML  AML
     comp=E,980µm,1.0s
TERO                            AML  AML
     comp=N,1190µm,0.4s
TERO                            AML  AML
     comp=N,1084µm,0.4s
TERO                            AML  AML
     comp=E,934µm,0.5s
ATTE AVT- Monte Tez     0.57 287 ⇑P   Pb   21 17 05.2  0.0
ATTE                            AML  AML
     comp=E,585µm,0.4s
ATTE                            AML  AML
     comp=N,380µm,1.5s
ATTE                            AML  AML
     comp=N,380µm,0.5s
CESX Cesi               0.57 222 ⇑P   Pg   21 17 04.4 +0.2
CESX                            AML  AML
     comp=N,1465µm,0.3s
CESX                            AML  AML
     comp=E,1400µm,0.3s
ATVO AVT- Monte Val     0.61 305 ⇑P   Pg   21 17 05.2 +0.3
ATVO                            AML  AML
     comp=E,356µm,0.3s
ATVO                            AML  AML
     comp=N,440µm,0.8s
ATVO                            AML  AML
     comp=E,356µm,0.3s
ATVO                            AML  AML
     comp=N,440µm,0.8s
ATVO                            AML  AML
     comp=N,440µm,1.2s
ATVO                            AML  AML
     comp=E,356µm,1.7s
T1247 Pizzolo (AQ)      0.61 166 ⇓P   Pb   21 17 06.5 +0.5
T1247                           AML  AML
     comp=N,1450µm,0.6s
T1247                           AML  AML
     comp=E,1425µm,0.3s
T1247                           AML  AML
     comp=N,1450µm,1.4s
AOI  Ancona             0.63  36 P    Pb   21 17 05.8 -0.4
AOI                             AML  AML
     comp=N,466µm,0.2s
AOI                             AML  AML
     comp=E,520µm,0.3s
AOI                             AML  AML
     comp=N,466µm,0.2s
MPAG Monte Paganucc     0.64 338 ⇓P   Pb   21 17 06.0 -0.5
MPAG                            AML  AML
     comp=E,488µm,0.9s
MPAG                            AML  AML
     comp=E,488µm,1.1s
MPAG                            AML  AML
     comp=N,394µm,0.3s
TRTR Tortoreto Alta     0.64 111 ⇓P   Pn   21 17 07.7 -0.6
TRTR                            S    Sb   21 17 16.0 +0.5
TRTR                            AML  AML
     comp=E,1935µm,0.5s
TRTR                            AML  AML
     comp=N,1820µm,0.9s
TRTR                            AML  AML
     comp=N,1820µm,1.1s
PIEI Pieia              0.65 321 ⇓P   Pg   21 17 05.8 +0.2
PIEI                            AML  AML
     comp=E,374µm,1.1s
PIEI                            AML  AML
     comp=E,375µm,1.1s
PIEI                            AML  AML
     comp=N,340µm,0.2s
PIEI                            AML  AML
     comp=E,375µm,0.9s
ATMI Monte Miggiano     0.68 296 ⇓P   Pn   21 17 08.4 -0.4
ATMI                            AML  AML
     comp=E,610µm,0.3s
ATMI                            AML  AML
     comp=N,610µm,0.3s
GIGS Gran Sasso         0.68 149 ⇓P   Pg   21 17 06.3  0.0
GIGS                            AML  AML
     comp=E,261µm,0.5s
GIGS                            AML  AML
     comp=N,218µm,0.5s
FSSB Fossombrone        0.69 341 ⇓P   Pb   21 17 07.0 -0.3
FSSB                            AML  AML
     comp=E,1210µm,0.2s
FSSB                            AML  AML
     comp=N,2235µm,0.4s
MGAB Montegabbione      0.73 261 P    Pb   21 17 07.7 -0.3
MGAB                            AML  AML
     comp=E,632µm,0.4s
MGAB                            AML  AML
     comp=N,750µm,1.1s
MGAB                            AML  AML
     comp=E,587µm,0.4s
MGAB                            AML  AML
     comp=N,686µm,1.1s
MGAB                            AML  AML
     comp=E,632µm,1.6s
MGAB                            AML  AML
     comp=E,587µm,1.6s
MGAB                            AML  AML
     comp=N,750µm,0.9s
MGAB                            AML  AML
     comp=N,686µm,0.9s
BADI Badiali            0.78 307 ⇓P   Pb   21 17 08.5 -0.3
BADI                            AML  AML
     comp=N,265µm,0.4s
BADI                            AML  AML
     comp=E,116µm,1.6s
PE3  Peglio             0.79 327 ⇑P   Pn   21 17 10.1 -0.3
PE3                             AML  AML
     comp=E,5µm,1.3s
PE3                             AML  AML
     comp=N,7µm,0.4s
VCEL Villa Celiera      0.84 139 ⇑P   Pg   21 17 09.5 +0.1
VCEL                            AML  AML
     comp=E,682µm,1.6s
VCEL                            AML  AML
     comp=E,681µm,1.6s
VCEL                            AML  AML
     comp=N,692µm,0.5s
VCEL                            AML  AML
     comp=E,681µm,0.4s
FAGN Fagnano            0.85 155 ⇑P   Pn   21 17 11.1 -0.1
FAGN                            AML  AML
     comp=N,762µm,0.4s
FAGN                            AML  AML
     comp=N,762µm,0.4s
FAGN                            AML  AML
     comp=E,1029µm,0.5s
CAFI Castiglion Fio     0.88 290 P    Pb   21 17 10.5  0.0
SACS San Casciano d     0.89 258 ⇓P   Pn   21 17 11.3 -0.5
SACS                            AML  AML
     comp=E,276µm,1.5s
SACS                            AML  AML
     comp=N,198µm,0.5s
SACS                            AML  AML
     comp=E,276µm,0.5s
T0110 Collepietro       0.95 148 ⇑P   Pg   21 17 11.3 -0.1
T0110                           AML  AML
     comp=E,614µm,0.6s
T0110                           AML  AML
     comp=N,602µm,0.4s
CRE  Caprese Michel     1.02 305 ⇓P   Pn   21 17 14.1 +0.5
CRE                             AML  AML
     comp=E,126µm,0.4s
CRE                             AML  AML
     comp=N,188µm,1.0s
OBKA Obir               3.62  16 ePn  Pn   21 17 51.9 +2.5
     comp=N,0.8nm,0.2s
ABTA Abfaltersbach      3.73 354 ePn  Pn   21 17 53.0 +2.1
     comp=N,5.2nm,0.4s
FETA Feichten           4.32 338 ePn  Pb   21 18 05.5 -3.8
     comp=N,0.9nm,0.4s
SQTA Sankt Quirin       4.39 343 ePn  Pn   21 18 03.7 +3.8
     comp=N,0.7nm,0.2s
WATA Walderalm          4.43 346 ePn  Pn   21 18 04.6 +4.0
     comp=N,2.9nm,0.4s
BIOA Bad Ischl, Aus     4.67   5 ePn  Pn   21 18 07.3 +3.6
     comp=N,0.8nm,0.2s
RETA Reutte             4.75 340 ePn  Pn   21 18 08.5 +3.7
     comp=N,0.5nm,0.3s
DAVA Damuels            4.82 333 ePn  Pb   21 18 14.4 -3.3
     comp=N,0.9nm,0.2s
RONA Rosalia, Austr     5.18  25 ePn  Pn   21 18 12.3 +1.6
     comp=N,2.8nm,0.5s
CONA Conrad Observa     5.26  21 ePn  Pn   21 18 13.4 +1.5
     comp=N,0.7nm,0.4s
CKRC Cesky Krumlov      5.84   8 eSN  Sn   21 19 24.2 -2.7
KHC  Kasperske Hory     6.10   3 ePN  Pn   21 18 25.5 +2.1
KHC                             eSN  Sn   21 19 33.0 -0.3
```

PRU ***30*** *21:19:46.7±0.0, 42°.77N×14°.09E, h10km*
VIE 30 21:19:50.9±1.2, 43°.07N×13°.50E, h8km, mb2.6/2, ml2.2/9,
Error ellipse: s-maj=14.7km s-min=8.5km az=123.0
126 km SE of San Marino, Central Italy

```
Code Station Name       Δ°   AZ°  Phase ID          Time      Res
                                     Op    ISC    h m s     ISC
ABTA Abfaltersbach      3.75 350  ePn   Pn    21 20 48.4 -0.7
     5.1nm,0.5s
WTTA Wattenberg         4.40 343  ePn   Pn    21 20 58.6 +0.5
     1.0nm,0.2s
FETA Feichten           4.42 335  ePn   Pn    21 20 58.4 +0.1
     0.5nm,0.3s
SQTA Sankt Quirin       4.46 339  ePn   Pn    21 20 59.9 +1.0
     2.1nm,0.4s
WATA Walderalm          4.48 343  ePn   Pn    21 20 59.5 +0.2
     1.3nm,0.4s
MOTA Moosalm            4.60 339  ePn   Pn    21 21 01.5 +0.6
     1.0nm,0.4s
MOA  Molln              4.81   6  ePn   Pn    21 21 04.1 +0.4
     0.3nm,0.2s
RETA Reutte             4.82 337  ePn   Pn    21 21 03.2 -0.7
     1.0nm,0.4s
CONA Conrad Observa     5.14  18  ePn   Pn    21 21 08.7 +0.5
     0.3nm,0.2s
KHC  Kasperske Hory     6.07   0  ePN   Pn    21 21 19.2 -1.7
KHC                                eSN   Sn    21 22 30.0 -0.5
```

ROM 30 21:20:44.7±0.0, 42°.732N±0°.003×13°.181E±0°.004,
h13km, ML2.3/15, 5C-2D, Error ellipse: s-maj=0.3km
s-min=0.1km az=26.0, Central Italy

```
Code Station Name       Δ°   AZ°  Phase ID          Time      Res
                                     Op    ISC    h m s     ISC
T1201 Domo (RI)         0.09 145  P     Pg    21 20 48.0 +0.3
T1204 Amatrice, Fraz    0.12 119  P     Pg    21 20 48.2 +0.1
T1204                             S     Sg    21 20 50.6 +0.1
T1204                             AML   AML
     comp=E,2375µm,0.6s
T1204                             AML   AML
     comp=N,2090µm,1.0s
T1204                             AML   AML
     comp=N,2090µm,1.0s
T1204                             AML   AML
     comp=E,2377µm,0.6s
T1204                             AML   AML
     comp=E,2295µm,0.2s
T1204                             AML   AML
     comp=N,1656µm,0.1s
T1245 Castelsantange    0.12   2  AML   AML
     comp=E,6495µm,0.1s
T1245                             AML   AML
     comp=N,8725µm,1.1s
T1245                             AML   AML
     comp=N,8765µm,1.1s
T1245                             AML   AML
     comp=E,5865µm,0.2s
T1245                             AML   AML
     comp=E,5860µm,0.2s
T1245                             AML   AML
     comp=N,8825µm,0.2s
T1245                             AML   AML
     comp=N,8760µm,1.1s
T1245                             AML   AML
     comp=E,6495µm,1.9s
SMA1 SAN MARTINO        0.15 132  P     Pg    21 20 48.9 +0.3
SMA1                              S     Sg    21 20 51.8 +0.6
SMA1                              AML   AML
     comp=N,1440µm,1.1s
SMA1                              AML   AML
     comp=E,1415µm,1.5s
SMA1                              AML   AML
     comp=E,1270µm,0.4s
SMA1                              AML   AML
     comp=N,1218µm,0.1s
LNSS Leonessa           0.17 219  P     Pg    21 20 49.1 +0.3
LNSS                              S     Sg    21 20 52.1 +0.6
LNSS                              AML   AML
     comp=E,1094µm,0.3s
LNSS                              AML   AML
     comp=E,1094µm,0.3s
LNSS                              AML   AML
     comp=N,2535µm,0.3s
LNSS                              AML   AML
     comp=E,1094µm,0.3s
LNSS                              AML   AML
     comp=E,849µm,0.2s
LNSS                              AML   AML
     comp=N,1724µm,0.1s
T1217 Poggiodomo (PG    0.18 264  P     Pg    21 20 49.2 +0.2
T1217                             S     Sg    21 20 52.3 +0.3
T1216 Preci, Frazion    0.20 323  AML   AML
     comp=E,3350µm,0.4s
T1216                             AML   AML
     comp=E,1526µm,0.1s
T1216                             AML   AML
     comp=N,1565µm,0.5s
T1216                             AML   AML
     comp=E,3345µm,0.4s
T1216                             AML   AML
     comp=E,3345µm,0.4s
T1216                             AML   AML
     comp=N,3045µm,0.3s
T1216                             AML   AML
     comp=N,3040µm,0.3s
MMO1 Montemonaco        0.20  33 P     Pg    21 20 49.3 +0.1
MMO1                              S     Sg    21 20 52.6 +0.2
T1243 Rocca Santa Ma    0.20 100  P     Pg    21 20 49.4 +0.1
T1243                             S     Sg    21 20 52.9 +0.4
T1241 Roccafluvione,    0.22  56  P     Pg    21 20 50.0 +0.4
T1241                             S     Sg    21 20 53.6 +0.7
T1241                             AML   AML
     comp=E,990µm,1.0s
T1241                             AML   AML
     comp=N,788µm,1.1s
T1241                             AML   AML
     comp=E,991µm,1.0s
T1241                             AML   AML
     comp=N,497µm,0.1s
T1241                             AML   AML
     comp=E,853µm,0.1s
RM33 Pellescritta (     0.22 174  P     Pg    21 20 50.1 +0.5
RM33                              S     Sb    21 20 54.1 -0.6
RM33                              AML   AML
     comp=N,522µm,0.1s
RM33                              AML   AML
     comp=E,660µm,0.1s
RM33                              AML   AML
     comp=N,523µm,0.1s
RM33                              AML   AML
     comp=N,523µm,0.1s
RM33                              AML   AML
     comp=N,524µm,0.1s
RM33                              AML   AML
     comp=E,660µm,0.1s
T1215 Vallo di Nera,    0.24 287  P     Pg    21 20 50.1 +0.2
T1215                             S     Sg    21 20 53.9 +0.5
T1215                             AML   AML
     comp=E,1380µm,0.2s
T1215                             AML   AML
     comp=E,1258µm,0.2s
T1215                             AML   AML
     comp=N,1255µm,0.3s
T1215                             AML   AML
     comp=E,1385µm,0.2s
T1215                             AML   AML
     comp=E,1262µm,0.2s
T1215                             AML   AML
     comp=N,1254µm,0.3s
T1215                             AML   AML
     comp=N,1180µm,0.3s
T1215                             AML   AML
     comp=N,1065µm,0.2s
T1215                             AML   AML
     comp=E,954µm,0.1s
T1215                             AML   AML
     comp=E,888µm,0.1s
T1215                             AML   AML
     comp=N,950µm,0.1s
CAMP Campotosto         0.26 139  P     Pg    21 20 50.5 +0.2
CAMP                              S     Sg    21 20 54.8 +0.8
CAMP                              AML   AML
     comp=E,378µm,0.3s
CAMP                              AML   AML
     comp=N,284µm,0.2s
CAMP                              AML   AML
     comp=E,343µm,0.2s
CAMP                              AML   AML
     comp=N,284µm,0.2s
T1246 Crognaleto (TE    0.27 123  P     Pg    21 20 50.7 +0.2
T1246                             S     Sb    21 20 55.3 -0.8
AM05 Amandola Campo     0.28  27  P     Pg    21 20 50.8 +0.2
AM05                              AML   AML
     comp=N,148µm,0.6s
AM05                              AML   AML
     comp=N,148µm,0.6s
AM05                              AML   AML
     comp=N,148µm,0.1s
AM05                              AML   AML
     comp=E,328µm,0.1s
AM05                              AML   AML
     comp=E,1370µm,0.1s
AM05                              AML   AML
     comp=N,397µm,0.1s
T1247 Pizzolo (AQ)      0.30 163  P     Pb    21 20 51.7 -0.3
T1247                             AML   AML
     comp=N,472µm,0.1s
T1247                             AML   AML
     comp=E,415µm,0.1s
T1211 Morro Reatino     0.31 230  P     Pg    21 20 51.5 +0.3
T1211                             S     Sb    21 20 56.6 -0.6
T1211                             AML   AML
     comp=E,505µm,1.2s
T1211                             AML   AML
     comp=N,644µm,0.4s
T1211                             AML   AML
     comp=E,482µm,0.1s
T1211                             AML   AML
     comp=N,593µm,0.2s
T1211                             AML   AML
     comp=N,603µm,0.2s
T1211                             AML   AML
     comp=E,482µm,0.1s
TERO Teramo             0.33 109  P     Pg    21 20 51.7 +0.2
TERO                              S     Sb    21 20 57.0 -0.7
TERO                              AML   AML
     comp=N,1152µm,0.3s
TERO                              AML   AML
     comp=N,1345µm,0.3s
TERO                              AML   AML
     comp=E,772µm,1.1s
TERO                              AML   AML
     comp=N,1152µm,0.3s
TERO                              AML   AML
     comp=E,856µm,0.9s
TERO                              AML   AML
     comp=N,1151µm,0.3s
TERO                              AML   AML
     comp=N,1298µm,0.1s
TERO                              AML   AML
     comp=E,798µm,0.1s
TERO                              AML   AML
     comp=E,685µm,0.1s
TERO                              AML   AML
     comp=N,1129µm,0.1s
ARRO Arrone             0.34 244  P     Pg    21 20 52.0 +0.4
ARRO                              AML   AML
     comp=E,298µm,0.2s
ARRO                              AML   AML
     comp=N,248µm,0.6s
ARRO                              AML   AML
     comp=E,299µm,0.2s
ARRO                              AML   AML
     comp=N,248µm,0.6s
ARRO                              AML   AML
     comp=N,231µm,0.2s
ARRO                              AML   AML
     comp=E,299µm,0.2s
GUMA Gualdo di Mace     0.35  19  P     Pb    21 20 52.4 -0.4
GUMA                              S     Sb    21 20 57.9 -0.4
GUMA                              AML   AML
     comp=E,1022µm,0.6s
GUMA                              AML   AML
     comp=N,1130µm,0.5s
GUMA                              AML   AML
     comp=E,980µm,0.5s
GUMA                              AML   AML
     comp=N,1127µm,0.5s
GUMA                              AML   AML
     comp=N,968µm,0.4s
GUMA                              AML   AML
     comp=E,839µm,0.3s
GIGS Gran Sasso         0.40 134  P     Pg    21 20 52.6 -0.2
GIGS                              S     Sg    21 20 58.9 +0.6
GIGS                              AML   AML
     comp=E,93µm,0.2s
GIGS                              AML   AML
     comp=N,69µm,0.1s
AQU  L'Aquila           0.41 157  P     Pb    21 20 53.5 -0.4
OFFI Offida             0.42  61  P     Pb    21 20 53.9 -0.1
OFFI                              AML   AML
     comp=N,703µm,0.3s
OFFI                              AML   AML
     comp=E,645µm,0.4s
MNTP Montappone         0.46  28  P     Pb    21 20 54.4 -0.3
CESX Cesi               0.46 255  P     Pg    21 20 54.0 +0.2
CESX                              AML   AML
     comp=E,188µm,0.4s
CESX                              AML   AML
     comp=N,177µm,0.2s
FIAM Fiamignano         0.47 186 ⇑P   Pg    21 20 54.2 +0.3
```

FIAM				AML	AML	
	comp=E,107μm,0.2s					
FIAM				AML	AML	
	comp=N,91μm,0.3s					
ASSB	**Assisi San Ben**	**0.49**	**309**	P	Pg	21 20 54.7 +0.2
ASSB				AML	AML	
	comp=E,234μm,0.3s					
ASSB				AML	AML	
	comp=N,268μm,0.1s					
ASSB				AML	AML	
	comp=E,208μm,0.1s					
ASSB				AML	AML	
	comp=N,268μm,0.1s					
TRTR	**Tortoreto Alta**	**0.55**	**82**	⇑P	Pb	21 20 56.7 +0.6
TRTR				AML	AML	
	comp=E,652μm,0.5s					
TRTR				AML	AML	
	comp=N,586μm,0.4s					
SNTG	**Esanatoglia**	**0.55**	**341**	⇑P	Pb	21 20 56.2 -0.1
SNTG				AML	AML	
	comp=E,75μm,0.2s					
SNTG				AML	AML	
	comp=N,90μm,0.1s					
VCEL	**Villa Celiera**	**0.59**	**124**	⇓P	Pb	21 20 56.9 -0.1
VCEL				AML	AML	
	comp=E,229μm,0.5s					
VCEL				AML	AML	
	comp=N,248μm,0.2s					
EL6	**Elcito**	**0.60**	**354**	⇓P	Pg	21 20 56.6 +0.1
EL6				S	Sb	21 21 06.0 +0.5
EL6				AML	AML	
	comp=E,162μm,0.2s					
EL6				AML	AML	
	comp=N,208μm,1.5s					
ATCC	**AVT- Casa Cast**	**0.60**	**319**	P	Pg	21 20 56.5 0.0
ATCC				AML	AML	
	comp=E,196μm,0.1s					
ATCC				AML	AML	
	comp=N,144μm,0.2s					
T0110	**Collepietro**	**0.67**	**139**	⇑P	Pg	21 20 57.6 -0.2
T0110				AML	AML	
	comp=N,166μm,0.5s					
T0110				AML	AML	
	comp=E,166μm,0.7s					
SRES	**S.Oreste - Sor**	**0.70**	**225**	S	Sn	21 21 11.0 0.0
ARVD	**Arcevia**	**0.79**	**347**	P	Pb	21 21 00.3 +0.1
ARVD				AML	AML	
	comp=N,34μm,0.3s					
ARVD				AML	AML	
	comp=E,41μm,0.1s					
MGAB	**Montegabbione**	**0.81**	**283**	⇑P	Pb	21 21 00.6 0.0
MGAB				AML	AML	
	comp=N,114μm,0.5s					
MGAB				AML	AML	
	comp=E,117μm,0.5s					
MGAB				AML	AML	
	comp=E,94μm,0.3s					
MGAB				AML	AML	
	comp=N,114μm,0.7s					
LRP	**Arpino**	**1.13**	**164**	P	Pg	21 21 08.8 +2.4
PTRJ	**Pietraroja**	**1.70**	**143**	S	Sg	21 21 42.0 +2.7
PAOL	**Paolisi**	**1.99**	**148**	S	Sg	21 21 50.0 +1.3

ROM 30 21:26:05.3±0.1, 42°.727N±0°.004×13°.190E±0°.005,
h9km, ML2.5/23, 11C-15D, Error ellipse: s-maj=0.4km
s-min=0.2km az=156.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.11**	**119**	⇑P	Pg	21 26 08.4	+0.5
T1204				S	Sg	21 26 10.3	+0.5
T1204				AML	AML		
	comp=E,6325μm,1.4s						
T1204				AML	AML		
	comp=N,3885μm,0.3s						
T1204				AML	AML		
	comp=E,6350μm,1.4s						
T1204				AML	AML		
	comp=N,3880μm,0.3s						
T1204				AML	AML		
	comp=E,6330μm,1.4s						
T1204				AML	AML		
	comp=N,3882μm,0.3s						
T1204				AML	AML		
	comp=E,6187μm,0.3s						
SMA1	**SAN MARTINO**	**0.14**	**132**	⇓P	Pg	21 26 09.1	+0.7
SMA1				S	Sg	21 26 11.7	+1.1
SMA1				AML	AML		
	comp=E,8770μm,0.3s						
SMA1				AML	AML		
	comp=N,7955μm,0.2s						
SMA1				AML	AML		
	comp=E,8775μm,0.3s						
SMA1				AML	AML		
	comp=N,8000μm,0.2s						
SMA1				AML	AML		
	comp=N,7979μm,0.2s						
SMA1				AML	AML		
	comp=E,5847μm,0.4s						
LNSS	**Leonessa**	**0.17**	**222**	⇓P	Pg	21 26 09.5	+0.6
LNSS				S	Sg	21 26 12.4	+1.1
LNSS				AML	AML		
	comp=N,6220μm,0.7s						
LNSS				AML	AML		
	comp=E,2955μm,0.5s						
LNSS				AML	AML		
	comp=N,6225μm,0.7s						
LNSS				AML	AML		
	comp=E,2572μm,0.3s						
LNSS				AML	AML		
	comp=N,5729μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**265**	⇓P	Pg	21 26 09.9	+0.7
T1217				S	Sg	21 26 13.4	+1.5
T1217				AML	AML		
	comp=E,1695μm,0.3s						
T1217				AML	AML		
	comp=N,1925μm,0.4s						
T1217				AML	AML		
	comp=E,1615μm,0.4s						
T1217				AML	AML		
	comp=N,1910μm,0.3s						
T1217				AML	AML		
	comp=E,1690μm,0.3s						
T1217				AML	AML		
	comp=N,1920μm,0.4s						
T1217				AML	AML		
	comp=E,1694μm,0.3s						
T1217				AML	AML		
	comp=N,1925μm,0.4s						
T1217				AML	AML		
	comp=E,1692μm,0.3s						
T1217				AML	AML		
	comp=N,1720μm,0.3s						
T1217				AML	AML		
	comp=E,1614μm,0.3s						
T1217				AML	AML		
	comp=N,1753μm,0.3s						
T1243	**Rocca Santa Ma**	**0.19**	**99**	⇓P	Pg	21 26 09.8	+0.5
T1243				S	Sg	21 26 13.0	+1.0
MMO1	**Montemonaco**	**0.20**	**30**	⇓P	Pg	21 26 10.0	+0.6
MMO1				S	Sg	21 26 13.5	+1.3
T1216	**Preci, Frazion**	**0.21**	**322**	⇑P	Pg	21 26 10.3	+0.8
T1216				AML	AML		
	comp=N,1413μm,0.2s						
T1216				AML	AML		
	comp=E,1604μm,0.4s						
T1241	**Roccafluvione,**	**0.22**	**54**	⇑P	Pg	21 26 10.5	+0.8
T1241				S	Sg	21 26 14.3	+1.5
T1241				AML	AML		
	comp=N,2635μm,0.5s						
T1241				AML	AML		
	comp=E,2110μm,0.7s						
T1215	**Vallo di Nera,**	**0.25**	**288**	P	Pg	21 26 10.8	+0.5
CAMP	**Campotosto**	**0.25**	**140**	P	Pg	21 26 10.9	+0.6
CAMP				S	Sg	21 26 14.6	+0.9
CAMP				AML	AML		
	comp=N,1091μm,0.5s						
CAMP				AML	AML		
	comp=N,1092μm,0.5s						
CAMP				AML	AML		
	comp=E,993μm,0.8s						
CAMP				AML	AML		
	comp=E,993μm,0.8s						
CAMP				AML	AML		
	comp=N,1093μm,0.5s						
AM05	**Amandola Campo**	**0.28**	**26**	P	Pb	21 26 11.8	-0.7
AM05				S	Sb	21 26 16.4	-0.9
AM05				AML	AML		
	comp=N,435μm,1.0s						
AM05				AML	AML		
	comp=E,1630μm,0.9s						
AM05				AML	AML		
	comp=N,128μm,0.8s						
AM05				AML	AML		
	comp=N,436μm,1.0s						
AM05				AML	AML		
	comp=E,1625μm,0.9s						
AM05				AML	AML		
	comp=N,129μm,0.8s						
AM05				AML	AML		
	comp=E,432μm,0.9s						
AM05				AML	AML		
	comp=N,114μm,0.1s						
AM05				AML	AML		
	comp=E,311μm,0.2s						
AM05				AML	AML		
	comp=N,427μm,0.1s						
AM05				AML	AML		
	comp=E,1287μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.30**	**164**	P	Pg	21 26 11.8	+0.7
T1247				S	Sb	21 26 18.0	+0.1
T1211	**Morro Reatino**	**0.31**	**232**	P	Pg	21 26 11.8	+0.2
T1211				S	Sb	21 26 17.3	-1.1
T1211				AML	AML		
	comp=E,1090μm,1.1s						
T1211				AML	AML		
	comp=N,2755μm,0.3s						
T1211				AML	AML		
	comp=E,1034μm,0.6s						
T1211				AML	AML		
	comp=N,2760μm,0.3s						
T1211				AML	AML		
	comp=E,1088μm,1.1s						
T1211				AML	AML		
	comp=E,1036μm,0.6s						
T1211				AML	AML		
	comp=N,2760μm,0.3s						
T1211				AML	AML		
	comp=N,2755μm,0.3s						
T1211				AML	AML		
	comp=E,1032μm,0.6s						
T1211				AML	AML		
	comp=E,1087μm,1.1s						
T1211				AML	AML		
	comp=E,980μm,0.1s						
T1211				AML	AML		
	comp=N,2754μm,0.3s						
T1211				AML	AML		
	comp=N,2763μm,0.3s						
T1211				AML	AML		
	comp=E,991μm,0.1s						
TERO	**Teramo**	**0.32**	**109**	P	Pg	21 26 11.8	+0.2
TERO				AML	AML		
	comp=E,1195μm,0.2s						
TERO				AML	AML		
	comp=N,1400μm,0.5s						
TERO				AML	AML		
	comp=E,1240μm,0.2s						
TERO				AML	AML		
	comp=E,1190μm,0.2s						
TERO				AML	AML		
	comp=N,1465μm,0.5s						
TERO				AML	AML		
	comp=N,1228μm,0.3s						
TERO				AML	AML		
	comp=N,1286μm,0.3s						
TERO				AML	AML		
	comp=E,1191μm,0.2s						
TERO				AML	AML		
	comp=E,1240μm,0.2s						
ARRO	**Arrone**	**0.35**	**245**	⇓P	Pg	21 26 12.7	+0.6
ARRO				AML	AML		
	comp=E,850μm,0.7s						
ARRO				AML	AML		
	comp=N,717μm,0.3s						
ARRO				AML	AML		
	comp=E,686μm,0.4s						
ARRO				AML	AML		
	comp=N,717μm,0.3s						
GUMA	**Gualdo di Mace**	**0.35**	**18**	⇓P	Pb	21 26 13.3	-0.5
GUMA				AML	AML		
	comp=E,5815μm,0.4s						
GUMA				AML	AML		
	comp=N,5355μm,0.5s						
GUMA				AML	AML		
	comp=E,5820μm,0.4s						
GUMA				AML	AML		
	comp=N,6250μm,0.4s						
GUMA				AML	AML		
	comp=E,8740μm,0.3s						
GUMA				AML	AML		
	comp=N,5353μm,0.5s						
GUMA				AML	AML		
	comp=E,5816μm,0.4s						
GUMA				AML	AML		
	comp=E,8749μm,0.3s						
GUMA				AML	AML		
	comp=N,6251μm,0.4s						
GIGS	**Gran Sasso**	**0.39**	**135**	⇓P	Pg	21 26 13.5	+0.5
GIGS				AML	AML		
	comp=E,258μm,0.6s						
GIGS				AML	AML		
	comp=N,238μm,0.6s						
GIGS				AML	AML		
	comp=E,259μm,0.6s						
GIGS				AML	AML		
	comp=N,171μm,0.4s						
GIGS				AML	AML		
	comp=E,156μm,0.2s						
AQU	**L'Aquila**	**0.41**	**157**	⇓P	Pb	21 26 14.0	-0.7
AQU				S	Sb	21 26 20.7	-0.3
AQU				AML	AML		
	comp=E,457μm,1.0s						
AQU				AML	AML		
	comp=N,486μm,0.7s						
AQU				AML	AML		
	comp=N,459μm,0.3s						
AQU				AML	AML		
	comp=N,429μm,0.3s						
AQU				AML	AML		
	comp=E,411μm,0.5s						
AQU				AML	AML		
	comp=E,434μm,0.9s						
OFFI	**Offida**	**0.42**	**60**	⇑P	Pb	21 26 14.8	-0.1
OFFI				AML	AML		
	comp=E,1217μm,0.6s						
OFFI				AML	AML		
	comp=E,1222μm,0.6s						
OFFI				AML	AML		
	comp=N,1845μm,0.6s						
OFFI				AML	AML		
	comp=E,1220μm,0.6s						
OFFI				AML	AML		
	comp=N,1845μm,0.6s						
FIAM	**Fiamignano**	**0.46**	**187**	S	Sb	21 26 22.0	-0.7
CESX	**Cesi**	**0.47**	**256**	⇑P	Pg	21 26 14.9	+0.6
CESX				AML	AML		
	comp=E,624μm,0.3s						
CESX				AML	AML		
	comp=N,642μm,0.3s						
CESX				AML	AML		
	comp=N,642μm,0.3s						
CESX				AML	AML		
	comp=E,624μm,0.3s						
ASSB	**Assisi San Ben**	**0.50**	**309**	⇓P	Pg	21 26 15.3	+0.2
ASSB				AML	AML		
	comp=E,483μm,1.1s						
ASSB				AML	AML		
	comp=N,438μm,0.2s						
ASSB				AML	AML		
	comp=N,439μm,0.2s						
ASSB				AML	AML		
	comp=E,378μm,0.2s						
TRTR	**Tortoreto Alta**	**0.54**	**81**	⇓P	Pb	21 26 17.3	+0.3
TRTR				AML	AML		
	comp=N,927μm,1.1s						
TRTR				AML	AML		
	comp=E,1380μm,1.0s						
TRTR				AML	AML		
	comp=N,929μm,1.1s						
TRTR				AML	AML		
	comp=E,1262μm,0.4s						
FAGN	**Fagnano**	**0.55**	**148**	⇓P	Pg	21 26 16.2	+0.4
FAGN				S	Sb	21 26 26.0	+1.0
FAGN				AML	AML		
	comp=E,1025μm,0.3s						
FAGN				AML	AML		
	comp=E,1024μm,0.3s						
FAGN				AML	AML		
	comp=N,1008μm,0.3s						
FAGN				AML	AML		
	comp=E,1024μm,0.3s						
FAGN				AML	AML		
	comp=N,1007μm,0.3s						
SNTG	**Esanatoglia**	**0.56**	**341**	S	Sb	21 26 26.0	+0.6
VCEL	**Villa Celiera**	**0.58**	**124**	⇓P	Pg	21 26 17.2	+0.6
VCEL				S	Sb	21 26 26.0	-0.2
VCEL				AML	AML		
	comp=N,848μm,0.8s						
VCEL				AML	AML		
	comp=N,848μm,0.8s						
VCEL				AML	AML		
	comp=E,751μm,0.3s						
VCEL				AML	AML		
	comp=N,624μm,0.3s						
VCEL				AML	AML		
	comp=E,751μm,0.3s						
EL6	**Elcito**	**0.60**	**354**	S	Sb	21 26 28.0	+1.2
ATCC	**AVT- Casa Cast**	**0.61**	**319**	⇑P	Pg	21 26 17.3	+0.2
ATCC				S	Sb	21 26 28.0	+1.1
ATCC				AML	AML		
	comp=E,348μm,0.4s						
ATCC				AML	AML		
	comp=N,268μm,0.3s						
ATCC				AML	AML		
	comp=N,243μm,0.3s						
ATCC				AML	AML		
	comp=E,348μm,0.4s						
FOSV	**Fossato di Vic**	**0.65**	**331**	S	Sb	21 26 29.0	+1.0
T0110	**Collepietro**	**0.66**	**139**	⇓P	Pg	21 26 18.1	0.0
T0110				S	Sb	21 26 29.0	+0.5
T0110				AML	AML		
	comp=N,720μm,0.4s						
T0110				AML	AML		
	comp=E,623μm,0.5s						
T0110				AML	AML		
	comp=N,719μm,0.4s						
T0110				AML	AML		
	comp=E,623μm,0.5s						
SRES	**S.Oreste - Sor**	**0.70**	**226**	S	Sn	21 26 31.0	-1.4
PP3	**Marolino**	**0.72**	**25**	S	Sn	21 26 32.0	-0.8
MURB	**Monte Urbino**	**0.72**	**318**	S	Sn	21 26 32.0	-1.1
ARVD	**Arcevia**	**0.79**	**347**	⇑P	Pg	21 26 19.0	-1.5
ARVD				S	Sn	21 26 34.0	-0.7
MGAB	**Montegabbione**	**0.81**	**284**	⇓P	Pn	21 26 23.6	+0.6
ATVO	**AVT- Monte Val**	**0.87**	**319**	⇑P	Pg	21 26 22.0	0.0
ATVO				AML	AML		
	comp=E,115μm,1.1s						
ATVO				AML	AML		
	comp=N,107μm,0.8s						
ATVO				AML	AML		
	comp=N,107μm,0.8s						
ATVO				AML	AML		
	comp=E,115μm,1.1s						
ATVO				AML	AML		
	comp=N,107μm,0.8s						
ATVO				AML	AML		
	comp=E,105μm,0.4s						
PIEI	**Pieia**	**0.94**	**330**	⇑P	Pb	21 26 23.7	-0.1
PIEI				S	Sn	21 26 39.0	+0.6
PIEI				AML	AML		
	comp=N,64μm,0.5s						
PIEI				AML	AML		
	comp=E,83μm,0.9s						
PIEI				AML	AML		
	comp=E,83μm,0.4s						
PIEI				AML	AML		
	comp=N,64μm,0.5s						
SACS	**San Casciano d**	**0.95**	**278**	⇑P	Pn	21 26 24.8	-0.1
SACS				AML	AML		
	comp=E,206μm,1.3s						
SACS				AML	AML		
	comp=N,204μm,0.2s						
SACS				AML	AML		
	comp=N,171μm,0.4s						
SACS				AML	AML		
	comp=E,206μm,0.3s						
SACS				AML	AML		
	comp=N,153μm,0.4s						
SACS				AML	AML		
	comp=E,200μm,0.3s						
MPAG	**Monte Paganucc**	**0.95**	**341**	⇑P	Pg	21 26 23.8	+0.1
MPAG				AML	AML		
	comp=E,118μm,0.7s						
MPAG				AML	AML		
	comp=N,88μm,0.5s						
LPEL	**Lama dei Pelig**	**1.00**	**132**	S	Sn	21 26 40.0	+0.1
ABTA	**Abfaltersbach**	**4.05**	**353**	*e*Pn	Pn	21 27 09.9	+2.3
	comp=N,1.9nm,0.5s						

ROM 30 21:26:32.4±0.1, 42°.688N±0°.007×11°.915E±0°.007,
h8km±1km, ML1.2/3, Error ellipse: s-maj=0.6km
s-min=0.5km az=174.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LATE	**Laterza**	**0.11**	**228**	P	Pg	21 26 35.4	+0.4
SACS	**San Casciano d**	**0.16**	**359**	P	Pg	21 26 36.1	+0.3
SACS				S	Sg	21 26 39.3	+1.1
SACS				AML	AML		
	comp=E,206μm,1.3s						
SACS				AML	AML		
	comp=N,204μm,0.2s						
SACS				AML	AML		
	comp=E,206μm,0.7s						
SACS				AML	AML		
	comp=N,204μm,1.8s						
MCIV	**Monte Civitell**	**0.20**	**297**	P	Pg	21 26 37.1	+0.7
MCIV				S	Sg	21 26 40.5	+1.3
MCIV				AML	AML		
	comp=E,104μm,1.5s						
MCIV				AML	AML		
	comp=N,87μm,1.2s						
MCIV				AML	AML		
	comp=E,104μm,1.5s						
MCIV				AML	AML		
	comp=N,87μm,1.1s						
MCIV				AML	AML		
	comp=E,104μm,1.5s						
MCIV				AML	AML		
	comp=N,87μm,1.1s						
MCIV				AML	AML		
	comp=E,104μm,0.5s						
SF04	**Casetta**	**0.24**	**308**	P	Pg	21 26 37.7	+0.5
SF04				S	Sg	21 26 41.9	+1.4
MGAB	**Montegabbione**	**0.27**	**33**	P	Pb	21 26 39.1	-0.4
MGAB				S	Sb	21 26 43.1	-1.1
SF01	**Poggio Pratacc**	**0.29**	**296**	P	Pb	21 26 39.4	-0.4
SF01				S	Sb	21 26 43.7	-1.1
ARCI	**Arcidosso**	**0.36**	**297**	P	Pb	21 26 40.6	-0.6
ARCI				AML	AML		
	comp=E,35μm,0.5s						
ARCI				AML	AML		
	comp=N,33μm,0.8s						
CESX	**Cesi**	**0.50**	**99**	P	Pg	21 26 42.2	+0.1
SRES	**S.Oreste - Sor**	**0.63**	**135**	P	Pb	21 26 45.5	-0.1
LNSS	**Leonessa**	**0.83**	**95**	AML	AML		
	comp=E,2190μm,0.3s						
LNSS				AML	AML		
	comp=N,4690μm,1.2s						
T1245	**Castelsantange**	**0.95**	**79**	AML	AML		
	comp=N,6490μm,1.1s						
T1245				AML	AML		
	comp=E,4365μm,0.4s						
T1245				AML	AML		
	comp=N,6495μm,1.1s						
T1245				AML	AML		
	comp=E,4855μm,0.4s						
T1245				AML	AML		
	comp=N,5890μm,1.1s						
T1245				AML	AML		
	comp=N,5895μm,1.1s						
RM33	**Pellescritta (**	**0.98**	**100**	AML	AML		
	comp=E,928μm,0.6s						
RM33				AML	AML		
	comp=N,1500μm,0.2s						
RM33				AML	AML		
	comp=E,920μm,0.6s						

RM33				AML	AML
	comp=E,929μm,0.6s				
RM33				AML	AML
	comp=N,1500μm,0.2s				
RM33				AML	AML
	comp=E,920μm,0.6s				
RM33				AML	AML
	comp=N,1475μm,0.2s				
T1204	**Amatrice, Fraz**	**1.03**	**90**	AML	AML
	comp=N,1975μm,1.0s				
T1204				AML	AML
	comp=E,3420μm,1.6s				
SMA1	**SAN MARTINO**	**1.05**	**93**	AML	AML
	comp=N,4980μm,0.5s				
SMA1				AML	AML
	comp=N,4975μm,0.5s				
SMA1				AML	AML
	comp=E,8775μm,0.3s				
CAMP	**Campotosto**	**1.11**	**97**	AML	AML
	comp=N,618μm,1.3s				
CAMP				AML	AML
	comp=N,618μm,1.3s				
CAMP				AML	AML
	comp=E,356μm,0.2s				
MNTV	**Mantova**	**2.59**	**342**	AML	AML
	comp=E,768μm,0.6s				
MNTV				AML	AML
	comp=N,3477μm,1.0s				

*IDC **30** 21:28:19.5±5.7, 6°.89S×130°.35E, h33^{km}±44^{km}, mb4.2/12, mbtmp4.4/14, ML5.1/2, MS3.4/5, Error ellipse: s-maj=26.1km s-min=15.4km az=52.0*
*NEIC **30** 21:28:25.7±2.2, 6°.975±0°.07×130°.63E±0°.10, h108^{km}±10^{km}, mb4.5/16, Error ellipse: s-maj=14.3km s-min=10.3km az=81.0*
*DJA **30** 21:28:25.8±0.2, 7°S±2°×13°1E±°, h97^{km}±4^{km}, M4.7/25, mB5.2/17, mb4.9/25, MLv5.1/16, Mw(mB)4.6/17*
ISC 30 21:28:25.6±0.4, **6°.93S**±0°.05×**130°.56E**±0°.05, **h100**^{km}, **n129,** σ1°**96**/125, **mb4.5**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.28**	**145**	Pn	**Pn**	**21 28 49.0**	**-0.2**
SAUI				Sn	**Sn**	**21 29 06.3**	**-0.8**
SAUI	**Saumlaki**	**1.28**	**145**	P	**Pn**	**21 28 50.2**	**+1.0**
SAUI	**Saumlaki**	**1.28**	**145**	P	**Pn**	**21 28 50.4**	**+1.2**
BNDI	**Bandanaira**	**2.48**	**345**	P	**Pn**	**21 29 05.3**	**+0.9**
BNDI	**Bandanaira**	**2.48**	**345**	P	**Pn**	**21 29 05.5**	**+1.1**
MSAI	**Masohi**	**3.91**	**335**	P	**Pn**	**21 29 25.2**	**+1.6**
AAI	**Ambon**	**3.99**	**324**	P	**Pn**	**21 29 26.3**	**+1.6**
KRAI	**Karang Ratu**	**4.18**	**329**	P	**Pn**	**21 29 29.7**	**+2.4**
FAKI	**Fak Fak**	**4.32**	**23**	Pn	**Pn**	**21 29 27.9**	**-1.2**
FAKI	**Fak Fak**	**4.32**	**23**	P	**Pn**	**21 29 28.0**	**-1.2**
FAKI	**Fak Fak**	**4.32**	**23**	P	**Pn**	**21 29 28.3**	**-0.9**
NLAI	**Namlea**	**5.03**	**317**	P	**Pn**	**21 29 41.8**	**+3.1**
	0.6nm5μm139nm,0.6s						
MTN	**Manton Dam**	**5.91**	**175**	Pn	**Pn**	**21 29 49.2**	**-1.4**
MTN	**Manton Dam**	**5.91**	**175**	P	**Pn**	**21 29 50.3**	**-0.3**
KDU	**Kakadu**	**6.03**	**162**	P	**Pn**	**21 29 51.3**	**-1.0**
SIJI	**Sorong**	**6.06**	**7**	Pn	**Pn**	**21 29 50.5**	**-2.2**
	68nm,0.3s,baz=201,slow=9.2,SNR=179						
SIJI				Sn	**Sn**	**21 30 54.3**	**-6.5**
	23nm,0.3s,baz=328,slow=23,SNR=8.8						
SIJI	**Sorong**	**6.06**	**7**	P	**Pn**	**21 29 50.8**	**-2.0**
	1.7nm13μm131nm,0.6s						
SWI	**Sorong**	**6.06**	**7**	P	**Pn**	**21 29 51.0**	**-1.8**
	1.1nm4μm217nm,0.6s						
RKPI	**Ransiki, Papua**	**6.48**	**34**	P	**Pn**	**21 29 58.1**	**-0.3**
	7.1nm6μm677nm,1.0s						
SANI	**Sanana**	**6.65**	**317**	P	**Pn**	**21 30 03.5**	**+2.7**
	0.3nm795nm57nm,0.9s						
SANI	**Sanana**	**6.65**	**317**	P	**Pn**	**21 30 03.9**	**+3.1**
SOEI	**Soe**	**6.83**	**245**		**Pn**	**21 30 03.3**	**0.0**
SOEI	**Soe**	**6.83**	**245**	P	**Pn**	**21 30 03.6**	**+0.3**
	2.3nm2μm131nm,0.7s						
SOEI	**Soe**	**6.83**	**245**	P	**Pn**	**21 30 03.6**	**+0.3**
MWPI	**Manokwari, Pap**	**6.89**	**30**	P	**Pn**	**21 30 04.8**	**+0.7**
	2.4nm2μm231nm,0.8s						
LBMI	**Labuha**	**6.95**	**334**	P	**Pn**	**21 30 06.3**	**+1.4**
	0.7nm1μm106nm,0.6s						
BATI	**Baumata**	**7.56**	**244**	Pn	**Pn**	**21 30 13.6**	**+0.4**
	27nm,0.3s,baz=143,slow=2.6,SNR=14						
BATI				Sn	**Sn**	**21 31 32.2**	**-5.1**
	89nm,0.3s,baz=119,slow=22,SNR=19						
BATI	**Baumata**	**7.56**	**244**	P	**Pn**	**21 30 13.3**	**+0.2**
	1.6nm2μm88nm,0.5s						
BBSI	**Bau Bau**	**8.07**	**280**	P	**Pn**	**21 30 23.9**	**+3.8**
	135nm,1.1s						
MMRI	**Maumere**	**8.42**	**258**	Pn	**Pn**	**21 30 25.4**	**+0.6**
MMRI	**Maumere**	**8.42**	**258**	P	**Pn**	**21 30 25.4**	**+0.6**
	31nm,0.7s						
KNRA	**Kununurra**	**8.87**	**191**	Pn	**Pn**	**21 30 28.6**	**-2.4**
KNRA	**Kununurra**	**8.87**	**191**	P	**Pn**	**21 30 29.7**	**-1.3**
SMPI	**Sarmi**	**9.49**	**59**	P	**Pn**	**21 30 41.1**	**+1.7**
	2μm83nm,1.0s						
LUWI	**Luwuk**	**9.72**	**307**		**Pn**	**21 30 43.2**	**+0.6**
BKSI	**Bulukumba**	**10.50**	**278**	P	**Pn**	**21 30 54.8**	**+1.6**
	48nm,1.1s						
GTOI	**Gorontalo**	**10.64**	**315**	P	Pn	21 31 06.8	+12
BNSI	**Bone**	**10.70**	**283**	P	Pn	21 31 04.1	+8.2
APSI	**Ampana**	**10.71**	**304**	P	**Pn**	**21 30 58.5**	**+2.5**
	864nm98nm,1.1s						
KAPI	**Kappang**	**10.92**	**279**	Pn	**Pn**	**21 30 57.3**	**-1.6**
	0.5nm,0.3s,baz=142,slow=19,SNR=1.0						
SPSI	**Sidrap Palu**	**11.14**	**285**	P	Pn	21 31 08.1	+6.3
MRSI	**Marisa**	**11.32**	**310**	P	**Pn**	**21 31 06.4**	**+2.2**
	513nm53nm,1.0s						
TOLI2	**Tolitoli**	**12.61**	**309**	Pn	**Pn**	**21 31 23.7**	**+2.3**
TOLI2	**Tolitoli**	**12.61**	**309**	P	**Pn**	**21 31 23.8**	**+2.4**
PLAI	**Plampang**	**12.80**	**261**	P	**Pn**	**21 31 23.1**	**-0.9**
	44nm,0.6s						
PLAI	**Plampang**	**12.80**	**261**	P	**Pn**	**21 31 22.2**	**-1.8**
MPSI	**Mapaga**	**12.85**	**304**	P	**P**	**21 31 34.7**	**+3.1**
WB0	**Warramunga Arr**	**13.29**	**164**	Pn	**Pn**	**21 31 25.8**	**-4.6**
WRAB	**Tennant Creek**	**13.44**	**164**		**Pn**	**21 31 27.6**	**-4.8**
WRA	**Warramunga Arr**	**13.45**	**165**	Pn	Pn	21 31 27.5	-4.9
	9.9nm,0.3s,baz=348,slow=13,SNR=113						
WRA				Sn	Sn	21 33 47.3	-13
	6.1nm,0.3s,baz=345,slow=22,SNR=18						
WRA	**Warramunga Arr**	**13.45**	**165**	Pn	Pn	21 31 26.6	-5.8
WB2	**Warramunga Arr**	**13.45**	**164**		**Pn**	**21 31 28.0**	**-4.5**
WR0	**Warramunga Arr**	**13.52**	**164**		**Pn**	**21 31 28.9**	**-4.4**
COEN	**Coen**	**14.23**	**120**	Pn	**Pn**	**21 31 41.5**	**-1.1**
COEN	**Coen**	**14.23**	**120**	P	**Pn**	**21 31 42.2**	**-0.4**
KLNI	**Mataram**	**14.41**	**263**	P	**Pn**	**21 31 46.7**	**+1.8**
	926nm11nm,0.4s						
DAV	**Davao City (W)**	**14.77**	**340**	LR	LR	21 38 15.4	
	comp=Z,46nm,20.1s,baz=62,slow=41						
BBKI	**Banjar Baru**	**16.03**	**282**	P	**P**	**21 32 09.3**	**+2.5**
	127nm,1.0s						
QIS	**Mount Isa**	**16.14**	**148**	P	**Pn**	**21 32 05.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**16.33**	**264**	P	**Pn**	**21 32 08.0**	**-1.1**
PMG	**Port Moresby**	**16.61**	**100**	Pn	**P**	**21 32 12.6**	**-0.7**
	12nm,0.7s,baz=263,slow=8.1,SNR=2.1						
PMG				LR	LR	21 39 56.5	
	comp=Z,73nm,20.3s,baz=106,slow=41						
MTKI	**Muara Teweh, K**	**16.71**	**290**	P	**P**	**21 32 17.7**	**+3.2**
AS31	**Alice Springs**	**16.95**	**169**		**Pn**	**21 32 14.4**	**-2.3**
ASAR	**Alice Springs**	**16.95**	**169**	P	**Pn**	**21 32 13.5**	**-3.2**
	6.8nm,0.3s,baz=1.3,slow=13,SNR=234						
ASAR				S	Sn	21 35 11.4	-14
	11nm,0.7s,baz=352,slow=24,SNR=8.2						
ASAR				LR	LR	21 39 10.9	
	comp=Z,48nm,19.8s,baz=354,slow=38						
	21nm,0.6s						
ASAR	**Alice Springs**	**16.95**	**169**		**Pn**	**21 32 14,7**	**-2.0**
AS01	**Alice Springs**	**16.96**	**169**	P	**Pn**	**21 32 14.6**	**-2.2**
MTSU	**Mount Surprise**	**17.43**	**131**	P	**Pn**	**21 32 22.5**	**-0.1**
MBWA	**Marble Bar**	**17.61**	**215**	P	**P**	**21 32 22.5**	**-1.7**
MBWA				IAmb	IAmb	21 32 26.4	
	comp=Z,41nm,1.4s						
MBWA	**Marble Bar**	**17.61**	**215**	P	**P**	**21 32 22.8**	**-1.4**
PSA00	**Pilbara Seismi**	**17.87**	**214**	P	**P**	**21 32 26.0**	**-1.1**
PSA00	**Pilbara Seismi**	**17.87**	**214**	P	**P**	**21 32 25.3**	**-1.8**
PSA00				IAmb	IAmb	21 32 28.2	
	comp=Z,23nm,0.9s						
PSA00	**Pilbara Seismi**	**17.87**	**214**	P	**Pn**	**21 32 27.9**	**+0.1**
WRKA	**Warakurna**	**18.14**	**187**	P	**P**	**21 32 29.1**	**-1.0**
PWJI	**Pagerwojo**	**18.63**	**265**	P	**P**	**21 32 34.6**	**-0.9**
KKM	**Kota Kinabalu**	**19.26**	**312**	P	**P**	**21 32 43.0**	**+0.5**
PBKI	**Pangkalan Bun**	**19.28**	**282**	P	**P**	**21 32 44.5**	**+1.8**
	comp=Z,1μmcomp=Z,76nm,0.9s						
CTA	**Charters Tower**	**20.07**	**132**	P	**Pn**	**21 32 53.7**	**-0.2**
	comp=Z,10nm,0.8s,baz=311,slow=11,SNR=7.1						
CTA				S	**S**	**21 36 27.6**	**-3.8**
	comp=Z,1.3nm,0.4s,baz=321,slow=6.5,SNR=1.6						
	comp=Z,10nm,0.8s						
SBUM	**Sibu**	**20.54**	**296**	P	**P**	**21 32 56.8**	**+0.5**
SBUM				IAmb	IAmb	21 32 59.3	
	comp=Z,21nm,0.8s						
SBUM	**Sibu**	**20.54**	**296**	P	**P**	**21 32 58.4**	**+2.1**
	comp=Z,33nm,1.2s						
OOD	**Oodnadatta**	**21.32**	**167**	P	**P**	**21 33 06.2**	**+1.7**
GIRL	**Giralia**	**22.17**	**223**	P	**P**	**21 33 14.8**	**+1.2**
MEEK	**Meekatharra**	**22.66**	**209**	P	**P**	**21 33 19.6**	**+0.9**
BBJI	**Bungbulang**	**22.73**	**267**	P	**P**	**21 33 21.9**	**+2.3**
LEM	**Lembang**	**22.78**	**269**	P	**P**	**21 33 18.9**	**-1.2**
	comp=Z,13nm,0.4s,baz=68,slow=17,SNR=4.5						
	comp=Z,13nm,0.4s						
INKA	**Innaminka**	**22.84**	**156**	P	**P**	**21 33 21.3**	**+0.9**
MULG	**Mulgathing**	**23.46**	**172**	P	**P**	**21 33 28.1**	**+1.8**
CBJI	**Citeko**	**23.55**	**270**	P	**P**	**21 33 32.5**	**+5.3**
FORT	**Forrest**	**23.84**	**185**	P	**P**	**21 33 31.6**	**+1.9**
LCRK	**Leigh Creek**	**24.48**	**164**	P	**P**	**21 33 37.8**	**+2.4**
MORW	**Morawa**	**25.94**	**210**	P	**P**	**21 33 51.4**	**+2.7**
BBOO	**Buckleboo**	**26.26**	**169**	P	**P**	**21 33 52.8**	**+1.3**
STKA	**Stephens Creek**	**26.88**	**159**	P	**P**	**21 33 59.1**	**+2.0**
	comp=Z,1.8nm,0.6s,baz=322,slow=12,SNR=3.8						
	comp=Z,1.8nm,0.6s						
HNR	**Honiara**	**29.19**	**97**	LR	LR	21 47 18.3	
	comp=Z,494nm,19.4s,baz=193,slow=39						
RPSI	**Rantau Prapat**	**32.99**	**286**	P	**P**	**21 34 51.2**	**-0.1**
RPSI				IAmb	IAmb	21 35 01.6	
	comp=Z,8.1nm,0.9s						
PSI	**Prapat**	**33.02**	**286**	P	**P**	**21 34 49.3**	**-2.5**
	comp=Z,6.9nm,0.8s,baz=128,slow=6.9,SNR=5.0						
	comp=Z,6.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.11**	**309**	P	**P**	**21 35 51.1**	**-0.7**
	comp=Z,4.3nm,0.6s,baz=134,slow=7.0,SNR=26						
	comp=Z,4.3nm,0.6s						
CHTO	**Chiang Mai**	**40.32**	**310**	P	**P**	**21 35 54.2**	**+0.6**
SHL	**Shillong**	**49.56**	**312**	P	**P**	**21 37 06.6**	**-0.3**
SHL				IAmb	IAmb	21 37 08.9	
	comp=Z,8.7nm,0.9s						
LSA	**Lhasa**	**52.53**	**316**	P	**P**	**21 37 28.8**	**-0.6**
RAMN	**Ramite**	**54.27**	**310**	*e*P	**P**	**21 37 42.4**	**+0.4**
	comp=Z,55nm,0.5s						
JIRN	**Jiri**	**54.96**	**311**	*e*P	**P**	**21 37 47.1**	**0.0**
	comp=Z,22nm,0.5s						
GUN	**Gumba**	**55.32**	**311**	*e*P	**P**	**21 37 49.9**	**+0.2**
	comp=Z,43nm,0.5s						
PKI	**Pulchoki**	**55.50**	**310**	*e*P	**P**	**21 37 50.5**	**-0.4**
	comp=Z,11nm,0.6s						
PKIN	**Phulchoki**	**55.51**	**310**	*e*P	**P**	**21 37 50.6**	**-0.3**
	comp=Z,10nm,0.6s						
KKN	**Kakani**	**55.71**	**310**	*e*P	**P**	**21 37 52.4**	**+0.1**
	comp=Z,1.7nm,0.6s						
DMN	**Daman**	**55.75**	**310**	*e*P	**P**	**21 37 52.8**	**+0.2**
	comp=Z,12nm,0.5s						
GKN	**Gorkha**	**56.31**	**310**	*e*P	**P**	**21 37 56.5**	**0.0**
	comp=Z,29nm,0.4s						
AFI	**Afiamalu**	**57.02**	**102**	LR	LR	22 01 39.0	
	comp=Z,53nm,21.5s,baz=32,slow=35						
DANN	**Dangsing**	**57.15**	**310**	*e*P	**P**	**21 38 02.6**	**0.0**
ULN	**Ulaanbaatar**	**58.37**	**342**	P	**P**	**21 38 09.4**	**-1.1**
ULN				IAmb	IAmb	21 38 12.9	
	comp=Z,4.1nm,0.7s						
ULN	**Ulaanbaatar**	**58.37**	**342**	P	**P**	**21 38 12.6**	**+2.0**
	comp=Z,24nm,0.7s						
SONM	**Songino Array**	**58.55**	**341**	P	**P**	**21 38 13.2**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=163,slow=6.9,SNR=20						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlovsk-**	**64.08**	**18**	P	**P**	**21 38 50.1**	**+1.2**
	comp=Z,6.2nm,0.9s,baz=69,slow=4.9,SNR=5.4						
	comp=Z,6.2nm,0.9s						
NIL	**Nilore**	**67.59**	**311**	P	**P**	**21 39 10.8**	**-1.1**
KSH	**Kashi**	**68.34**	**317**	P	**P**	**21 39 19.0**	**+2.5**
MK31	**Makanchi Array**	**68.47**	**327**	P	**P**	**21 39 17.2**	**+0.2**
MKAR	**Makanchi Array**	**68.47**	**327**	P	**P**	**21 39 18.3**	**+1.3**
	comp=Z,2.6nm,0.4s,baz=116,slow=7.4,SNR=57						
	comp=Z,2.6nm,0.4s						
MKAR	**Makanchi Array**	**68.47**	**327**	P	**P**	**21 39 16.8**	**-0.2**
AAK	**Ala-Archa**	**70.85**	**320**	P	**P**	**21 39 31.4**	**-0.5**
ZALV	**Zalesovo Beam**	**71.77**	**334**	P	**P**	**21 39 36.5**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=112,slow=3.5,SNR=4.4						
	comp=Z,0.7nm,0.5s						
GAR	**Garm**	**72.01**	**315**	P	**P**	**21 39 38.5**	**-0.4**
GAR				IAmb	IAmb	21 39 41.7	
	comp=Z,7.3nm,0.8s						
CHGR	**Chuyangaron**	**72.69**	**314**	P	**P**	**21 39 42.9**	**0.0**
CHGR				IAmb	IAmb	21 39 44.3	
	comp=Z,7.1nm,0.8s						
MAW	**Mawson**	**75.22**	**202**	P	**P**	**21 39 57.6**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=67,slow=7.7,SNR=2.3						
	comp=Z,1.5nm,0.8s						
GEYT	**Alibeck**	**80.59**	**310**	P	**P**	**21 40 27.3**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=96,slow=7.2,SNR=2.3						
	comp=Z,0.8nm,0.5s						
NRIK	**Noril'sk**	**81.62**	**346**	P	**P**	**21 40 31.8**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=131,slow=5.8,SNR=3.6						
	comp=Z,2.1nm,0.5s						
TXAR	**Lajitas Array**	**124.41**	**59**	PKP	**PKiKP**	**21 47 16.0**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=197,slow=2.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**129.34**	**281**	PKP	**PKiKP**	**21 47 24.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=85,slow=1.6,SNR=11						
CPUP	**Villa Florida**	**146.06**	**167**	PKPbc	**PKiKP**	**21 47 57.1**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=170,slow=6.1,SNR=4.0						
LPAZ	**La Paz**	**150.43**	**141**	PKPbc	**PKiKP**	**21 48 09.2**	**+1.2**
	comp=Z,1.9nm,0.4s,baz=231,slow=7.7,SNR=9.5						

ROM 30 21:35:12.6±0.2, **42°.680N**±0°.008×**11°.92E**±0°.01, **h10**^{km}, **ML2.0**/5, **1C**, **Error ellipse: s-maj=1.0km s-min=0.2km az=297.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LATE	**Laterza**	**0.11**	**233**	⇑P	Pg	21 35 15.9	+0.6
SACS	**San Casciano d**	**0.17**	**356**	P	Pg	21 35 16.7	+0.3
SACS				S	Sg	21 35 19.9	+1.0
SACS				AML	AML		
	comp=E,530μm,1.3s						
SACS				AML	AML		
	comp=N,500μm,0.3s						
SACS				AML	AML		
	comp=E,528μm,1.3s						
SACS				AML	AML		
	comp=N,476μm,0.3s						
SACS				AML	AML		
	comp=N,499μm,0.3s						
SACS				AML	AML		
	comp=E,529μm,1.3s						
SACS				AML	AML		
	comp=E,530μm,1.3s						
SF04	**Casetta**	**0.25**	**309**	P	Pg	21 35 18.3	+0.6
SF04				S	Sg	21 35 22.2	+1.0
MGAB	**Montegabbione**	**0.27**	**31**	P	Pg	21 35 18.5	+0.4
MGAB				S	Sb	21 35 23.3	-1.1
MGAB				AML	AML		
	comp=E,334μm,0.3s						
MGAB				AML	AML		
	comp=N,306μm,1.5s						
MGAB				AML	AML		
	comp=E,360μm,0.3s						
MGAB				AML	AML		
	comp=N,321μm,1.4s						
MGAB				AML	AML		
	comp=E,662μm,0.3s						
MGAB				AML	AML		
	comp=N,1064μm,0.4s						
MGAB				AML	AML		
	comp=N,970μm,0.3s						
MGAB				AML	AML		
	comp=E,766μm,0.3s						
SF01	**Poggio Pratacc**	**0.30**	**296**	P	Pb	21 35 19.4	-0.7
SF01				S	Sg	21 35 23.9	+1.2
SF01				AML	AML		
	comp=E,336μm,0.4s						
SF01				AML	AML		
	comp=N,255μm,0.6s						
ARCI	**Arcidosso**	**0.37**	**298**	P	Pg	21 35 20.4	+0.4
ARCI				AML	AML		
	comp=N,90μm,0.9s						
ARCI				AML	AML		
	comp=E,91μm,0.5s						
CESX	**Cesi**	**0.49**	**98**	P	Pg	21 35 22.1	0.0
ATTE	**AVT- Monte Tez**	**0.61**	**31**	P	Pb	21 35 25.3	-0.1
TOLF	**Tolfa**	**0.62**	**175**	P	Pg	21 35 24.7	+0.1
MAON	**Monte Argentar**	**0.64**	**247**	P	Pb	21 35 25.8	-0.1
CAFI	**Castiglion Fio**	**0.65**	**3**	P	Pb	21 35 25.7	-0.4
CAFI				S	Sb	21 35 35.3	+0.1
CAFI				AML	AML		
	comp=E,44μm,0.9s						
CAFI				AML	AML		
	comp=N,41μm,0.6s						
CAFI				AML	AML		
	comp=E,270μm,0.5s						
CAFI				AML	AML		
	comp=N,222μm,0.9s						

*PRU **30** 21:36:01.6±0.0, 42°.96N×13°.43E, h10^{km}*
VIE 30 21:36:03.0±1.2, **43°.11N**×**13°.48E**, **h8**^{km}, **mb2.6**/5, **ml2.5**/9, **Error ellipse: s-maj=14.9km s-min=8.4km az=126.0**
122 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**3.71**	**350**	*e*Pn	Pn	21 36 60.0	-0.7
	1.3nm,0.2s						
WTTA	**Wattenberg**	**4.36**	**343**	*e*Pn	Pn	21 37 10.2	+0.5
	1.2nm,0.3s						
FETA	**Feichten**	**4.37**	**334**	*e*Pn	Pn	21 37 10.9	+1.0
SQTA	**Sankt Quirin**	**4.42**	**339**	*e*Pn	Pn	21 37 10.4	0.0
	1.4nm,0.2s						
WATA	**Walderalm**	**4.44**	**343**	*e*Pn	Pn	21 37 11.2	+0.4
	0.8nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.59**	**1**	*e*Pn	Pn	21 37 13.6	+0.9
	1.5nm,0.3s						
RETA	**Reutte**	**4.78**	**337**	*e*Pn	Pn	21 37 14.9	-0.5
	0.6nm,0.3s						
DAVA	**Damuels**	**4.89**	**330**	*e*Pn	Pn	21 37 17.1	+0.1
	0.4nm,0.2s						
CONA	**Conrad Observa**	**5.10**	**18**	*e*Pn	Pn	21 37 20.3	+0.4
	0.1nm,0.2s						
CKRC	**Cesky Krumlov**	**5.74**	**5**	*e*SN	Sn	21 38 34.6	-0.1
KHC	**Kasperske Hory**	**6.03**	**1**	*e*SN	Sn	21 38 40.2	-1.5

ROM 30 21:36:52.5±0.0, **42°.826N**±0°.003×**13°.090E**±0°.004, **h10**^{km}, **ML2.8**/25, **6C-7D**, **Error ellipse: s-maj=0.3km s-min=0.2km az=277.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**67**	P	Pg	21 36 55.4	+0.4
T1245				S	Sg	21 36 57.2	+0.4
T1245				AML	AML		
	comp=E,34800μm,0.7s						
T1245				AML	AML		
	comp=N,46400μm,0.3s						
T1245				AML	AML		
	comp=E,32550μm,0.7s						
T1245				AML	AML		
	comp=N,46400μm,0.3s						
T1245				AML	AML		
	comp=E,49700μm,1.0s						
T1245				AML	AML		
	comp=N,53300μm,0.3s						
T1245				AML	AML		
	comp=E,46850μm,1.0s						
T1245				AML	AML		
	comp=N,57150μm,0.3s						
T1245				AML	AML		
	comp=E,49700μm,1.0s						
T1245				AML	AML		
	comp=N,53350μm,0.3s						
T1245				AML	AML		
	comp=E,49750μm,1.0s						
T1245				AML	AML		
	comp=E,30563μm,0.3s						
T1245				AML	AML		
	comp=E,27344μm,0.1s						
T1245				AML	AML		
	comp=N,37670μm,0.2s						
T1245				AML	AML		
	comp=E,29634μm,0.1s						
T1245				AML	AML		
	comp=N,37593μm,0.2s						
T1216	**Preci, Frazion**	**0.08**	**321**	P	Pg	21 36 55.3	+0.4
T1216				S	Sg	21 36 57.1	+0.4
T1216				AML	AML		
	comp=E,21500μm,0.6s						
T1216				AML	AML		
	comp=N,25850μm,0.7s						
T1216				AML	AML		
	comp=E,21550μm,0.6s						
T1216				AML	AML		
	comp=N,25700μm,0.7s						
T1216				AML	AML		
	comp=E,21600μm,0.6s						
T1216				AML	AML		
	comp=N,25096μm,0.2s						
T1216				AML	AML		
	comp=E,15208μm,0.1s						
FEMA	**Monte Fema**	**0.14**	**348**	P	Pg	21 36 56.2	+0.4
FEMA				S	Sg	21 36 58.7	+0.6
FEMA				AML	AML		
	comp=E,24450μm,0.4s						
FEMA				AML	AML		
	comp=N,24900μm,0.3s						
FEMA				AML	AML		
	comp=N,24850μm,0.3s						
FEMA				AML	AML		
	comp=E,24400μm,0.4s						
FEMA				AML	AML		
	comp=E,21972μm,0.1s						
FEMA				AML	AML		
	comp=N,22674μm,0.1s						
T1217	**Poggiodomo (PG**	**0.16**	**226**	⇑P	Pg	21 36 56.7	+0.6
T1217				S	Sg	21 36 59.8	+1.1
T1217				AML	AML		
	comp=E,1516μm,0.1s						
T1217				AML	AML		
	comp=E,1881μm,0.1s						
T1217				AML	AML		
	comp=E,1878μm,0.3s						
T1217				AML	AML		
	comp=N,3449μm,0.2s						
T1217				AML	AML		
	comp=N,3454μm,0.2s						
T1215	**Vallo di Nera,**	**0.17**	**262**	⇑P	Pg	21 36 56.7	+0.6
T1215				S	Sg	21 36 59.5	+0.9
T1215				AML	AML		
	comp=N,5940μm,0.3s						
T1215				AML	AML		
	comp=E,5905μm,0.2s						
T1215				AML	AML		
	comp=E,5595μm,0.2s						
T1215				AML	AML		
	comp=N,5935μm,0.3s						
T1215				AML	AML		
	comp=E,5900μm,0.2s						
T1215				AML	AML		
	comp=N,5955μm,0.3s						
T1215				AML	AML		
	comp=N,5960μm

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LNSS                                AML   AML
      comp=E,3480µm,0.2s
LNSS                                AML   AML
      comp=N,7365µm,1.5s
LNSS                                AML   AML
      comp=N,6908µm,0.1s
LNSS                                AML   AML
      comp=E,3478µm,0.1s
AM05  Amandola Campo     0.24  52   P     Pg    21 36 58.0 +0.5
AM05                                S     Sg    21 37 02.0 +1.1
AM05                                AML   AML
      comp=E,16400µm,0.1s
AM05                                AML   AML
      comp=E,4250µm,0.1s
AM05                                AML   AML
      comp=N,1830µm,0.1s
AM05                                AML   AML
      comp=E,16450µm,0.1s
AM05                                AML   AML
      comp=N,1825µm,0.1s
AM05                                AML   AML
      comp=N,4280µm,0.1s
AM05                                AML   AML
      comp=E,4249µm,0.1s
AM05                                AML   AML
      comp=N,4280µm,0.1s
AM05                                AML   AML
      comp=N,1827µm,0.1s
AM05                                AML   AML
      comp=E,16418µm,0.1s
SMA1  SAN MARTINO        0.27 137   P     Pg    21 36 58.5 +0.5
SMA1                                S     Sb    21 37 03.0 -1.1
SMA1                                AML   AML
      comp=E,3445µm,0.3s
SMA1                                AML   AML
      comp=N,3030µm,0.2s
SMA1                                AML   AML
      comp=N,3535µm,0.4s
SMA1                                AML   AML
      comp=E,3440µm,0.3s
SMA1                                AML   AML
      comp=E,2318µm,0.4s
SMA1                                AML   AML
      comp=N,3030µm,0.2s
T1243 Rocca Santa Ma     0.29 116   P     Pg    21 36 58.8 +0.4
T1243                               S     Sb    21 37 03.7 -1.1
GUMA  Gualdo di Mace     0.30  37   P     Pg    21 36 59.2 +0.7
GUMA                                S     Sb    21 37 04.0 -0.9
GUMA                                AML   AML
      comp=E,7245µm,0.5s
GUMA                                AML   AML
      comp=N,6715µm,0.2s
GUMA                                AML   AML
      comp=E,6675µm,0.6s
GUMA                                AML   AML
      comp=N,7915µm,0.6s
GUMA                                AML   AML
      comp=E,9920µm,0.2s
GUMA                                AML   AML
      comp=E,14650µm,0.2s
GUMA                                AML   AML
      comp=N,10425µm,1.1s
GUMA                                AML   AML
      comp=N,11970µm,1.2s
GUMA                                AML   AML
      comp=E,6252µm,0.4s
GUMA                                AML   AML
      comp=N,6712µm,0.2s
GUMA                                AML   AML
      comp=N,7081µm,0.2s
GUMA                                AML   AML
      comp=E,6736µm,0.2s
RM33  Pellescritta (     0.33 164   P     Pg    21 36 59.6 +0.5
RM33                                S     Sb    21 37 05.0 -0.9
RM33                                AML   AML
      comp=E,1745µm,0.6s
RM33                                AML   AML
      comp=E,1665µm,0.6s
RM33                                AML   AML
      comp=E,2075µm,0.2s
RM33                                AML   AML
      comp=N,1790µm,1.3s
RM33                                AML   AML
      comp=N,1755µm,1.3s
RM33                                AML   AML
      comp=E,2200µm,1.2s
RM33                                AML   AML
      comp=E,1461µm,0.1s
RM33                                AML   AML
      comp=E,1475µm,0.1s
RM33                                AML   AML
      comp=N,1595µm,0.2s
RM33                                AML   AML
      comp=N,1627µm,0.2s
SEF1  Sefro              0.34 342   P     Pb    21 37 00.2 -0.4
SEF1                                S     Sb    21 37 04.9 -1.1
SEF1                                AML   AML
      comp=E,4022µm,0.1s
SEF1                                AML   AML
      comp=N,3640µm,0.2s
T1211 Morro Reatino      0.34 211   P     Pg    21 36 59.7 +0.4
T1211                               S     Sb    21 37 05.5 -0.7
T1211                               AML   AML
      comp=E,2195µm,0.9s
T1211                               AML   AML
      comp=E,2260µm,0.9s
T1211                               AML   AML
      comp=E,2266µm,0.9s
T1211                               AML   AML
      comp=N,2445µm,0.3s
T1211                               AML   AML
      comp=N,2365µm,0.3s
T1211                               AML   AML
      comp=E,1923µm,0.2s
T1211                               AML   AML
      comp=N,2236µm,0.2s
T1211                               AML   AML
      comp=E,1930µm,0.2s
T1211                               AML   AML
      comp=N,2260µm,0.2s
ARRO  Arrone             0.34 224 ⇑P     Pg    21 36 59.8 +0.5
ARRO                                S     Sb    21 37 06.0 -0.1
ARRO                                AML   AML
      comp=E,1036µm,0.2s
ARRO                                AML   AML
      comp=N,1245µm,1.4s
ARRO                                AML   AML
      comp=E,1038µm,0.2s
ARRO                                AML   AML
      comp=E,1034µm,0.2s
ARRO                                AML   AML
      comp=N,1081µm,0.3s
ARRO                                AML   AML
      comp=E,1036µm,0.2s
MDAR  Monte D'Aria       0.37   6   P     Pg    21 37 00.0 +0.2
MDAR                                S     Sg    21 37 05.8 +1.0
CAMP  Campotosto         0.37 141   P     Pg    21 37 00.2 +0.2
CAMP                                S     Sg    21 37 05.9 +1.0
CAMP                                AML   AML
      comp=E,4325µm,0.2s
CAMP                                AML   AML
      comp=N,2575µm,0.5s
CAMP                                AML   AML
      comp=N,497µm,0.6s
CAMP                                AML   AML
      comp=E,462µm,0.2s
T1246 Crognaleto (TE     0.38 129   P     Pg    21 37 00.4 +0.3
T1246                               S     Sb    21 37 06.5 -1.0
GAG1  Gagliole           0.41 358   S     Sg    21 37 02.0 -4.1
T1247 Pizzolo (AQ)       0.41 158 ⇑P     Pg    21 37 01.2 +0.5
T1247                               AML   AML
      comp=E,1520µm,0.5s
T1247                               AML   AML
      comp=N,1395µm,0.9s
T1247                               AML   AML
      comp=N,1895µm,0.9s
T1247                               AML   AML
      comp=E,1825µm,0.4s
T1247                               AML   AML
      comp=E,1204µm,0.1s
T1247                               AML   AML
      comp=N,1264µm,0.1s
MNTP  Montappone         0.42  42   P     Pb    21 37 01.5 -0.4
MNTP                                S     Sb    21 37 09.2 +0.8
TERO  Teramo             0.43 118   P     Pg    21 37 01.1 +0.2
TERO                                S     Sb    21 37 07.8 -0.9
TERO                                AML   AML
      comp=E,2655µm,0.3s
TERO                                AML   AML
      comp=N,5660µm,0.3s
TERO                                AML   AML
      comp=E,2660µm,0.3s
TERO                                AML   AML
      comp=E,3075µm,0.3s
TERO                                AML   AML
      comp=N,6285µm,0.3s
TERO                                AML   AML
      comp=E,751µm,0.1s
TERO                                AML   AML
      comp=N,725µm,0.1s
TERO                                AML   AML
      comp=N,833µm,0.1s
TERO                                AML   AML
      comp=E,648µm,0.1s
CESX  Cesi               0.43 240   P     Pg    21 37 01.1 +0.1
CESX                                S     Sb    21 37 07.9 -0.9
CESX                                AML   AML
      comp=N,1400µm,0.4s
CESX                                AML   AML
      comp=E,1114µm,0.3s
CESX                                AML   AML
      comp=E,1115µm,0.3s
CESX                                AML   AML
      comp=N,1399µm,0.4s
SNTG  Esanatoglia        0.44 346   P     Pg    21 37 01.1  0.0
SNTG                                S     Sb    21 37 08.3 -0.8
OFFI  Offida             0.45  76   P     Pb    21 37 02.5 -0.1
OFFI                                AML   AML
      comp=E,2090µm,1.2s
OFFI                                AML   AML
      comp=N,2445µm,0.7s
OFFI                                AML   AML
      comp=N,1769µm,0.5s
OFFI                                AML   AML
      comp=E,1295µm,0.5s
ATCC  AVT- Casa Cast     0.49 318   P     Pg    21 37 02.3 +0.3
EL6   Elcito             0.50   1   P     Pg    21 37 02.4 +0.1
EL6                                 S     Sb    21 37 10.5 -0.4
TRE1  Treia              0.51  19   P     Pb    21 37 03.0 -0.5
GIGS  Gran Sasso         0.52 137 ⇓P     Pg    21 37 01.5 -1.1
GIGS                                AML   AML
      comp=N,446µm,0.1s
GIGS                                AML   AML
      comp=E,487µm,1.1s
GIGS                                AML   AML
      comp=N,188µm,0.1s
GIGS                                AML   AML
      comp=E,181µm,0.1s
AQU   L'Aquila           0.53 154 ⇓P     Pb    21 37 03.3 -0.5
AQU                                 AML   AML
      comp=E,670µm,0.4s
AQU                                 AML   AML
      comp=N,632µm,0.8s
AQU                                 AML   AML
      comp=E,694µm,0.4s
AQU                                 AML   AML
      comp=N,637µm,0.3s
AQU                                 AML   AML
      comp=N,382µm,0.4s
AQU                                 AML   AML
      comp=N,376µm,0.4s
AQU                                 AML   AML
      comp=E,412µm,0.2s
AQU                                 AML   AML
      comp=E,438µm,0.2s
FOSV  Fossato di Vic     0.53 333   P     Pg    21 37 02.9 +0.1
FIAM  Fiamignano         0.56 178 ⇓P     Pg    21 37 03.4 +0.1
FIAM                                S     Sb    21 37 13.0 +0.5
FIAM                                AML   AML
      comp=N,584µm,0.4s
FIAM                                AML   AML
      comp=E,714µm,0.5s
FIAM                                AML   AML
      comp=E,714µm,0.5s
FIAM                                AML   AML
      comp=N,584µm,0.4s
MURB  Monte Urbino       0.60 317   P     Pg    21 37 04.5 +0.4
TRTR  Tortoreto Alta     0.61  91 ⇓P     Pb    21 37 05.6 +0.4
TRTR                                AML   AML
      comp=E,1241µm,0.6s
TRTR                                AML   AML
      comp=N,1501µm,0.3s
ATFO  Monte Foce - G     0.66 325   S     Sg    21 37 06.0 -8.0
PP3   Marolino           0.67  34   S     Sg    21 37 07.0 -7.2
ARVD  Arcevia            0.68 351   S     Sg    21 37 06.0 -8.6
VCEL  Villa Celiera      0.70 128 ⇑P     Pg    21 37 06.3 +0.3
VCEL                                AML   AML
      comp=E,1075µm,0.8s
VCEL                                AML   AML
      comp=N,986µm,0.9s
VCEL                                AML   AML
      comp=N,371µm,0.3s
VCEL                                AML   AML
      comp=E,429µm,0.3s
SRES  S.Oreste - Sor     0.73 216 ⇑P     Pg    21 37 06.9 +0.3
SRES                                AML   AML
      comp=E,388µm,1.0s
SRES                                AML   AML
      comp=N,376µm,0.5s
SRES                                AML   AML
      comp=N,376µm,0.5s
SRES                                AML   AML
      comp=E,298µm,0.4s
FRON  Frontone           0.74 339   S     Sg    21 37 07.0 -10
T0110 Collepietro        0.79 139 ⇓P     Pg    21 37 07.5 -0.1
T0110                               AML   AML
      comp=E,1018µm,0.2s
T0110                               AML   AML
      comp=N,740µm,0.4s
T0110                               AML   AML
      comp=E,446µm,0.4s
T0110                               AML   AML
      comp=N,554µm,0.4s
SACS  San Casciano d     0.87 272 ⇓P     Pb    21 37 09.5 -0.1
SACS                                AML   AML
      comp=N,174µm,0.6s
SACS                                AML   AML
      comp=E,164µm,0.6s
SACS                                AML   AML
      comp=N,173µm,0.9s
SACS                                AML   AML
      comp=E,157µm,0.6s
CERT  Cerreto            0.88 185 ⇓P     Pb    21 37 09.7 -0.1
CERT                                AML   AML
      comp=E,432µm,0.5s
CERT                                AML   AML
      comp=N,265µm,0.4s
CERT                                AML   AML
      comp=N,265µm,0.4s
CERT                                AML   AML
      comp=E,432µm,0.5s
SENI  Senigallia         0.89   7   S     Sg    21 37 11.0 -10
TOLF  Tolfa              1.11 227   P     Pb    21 37 13.2 -0.5
TOLF                                AML   AML
      comp=N,103µm,0.6s
TOLF                                AML   AML
      comp=E,127µm,0.5s
GSCL  Gusciola           2.37 311   P     Pn    21 37 29.9 -1.6
```

ROM 30 21:52:53.6±0.0, 42°.880N±0°.003×13°.191E±0°.004,
h10km, ML2.8/16, 7C-11D, Error ellipse: s-maj=0.3km
s-min=0.2km az=45.0, Central Italy

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Code  Station Name       Δ°   AZ°   Phase ID                Time      Res
                                    Op    ISC             h m  s    ISC
T1245 Castelsantange     0.02 185   ⇓P    Pg    21 52 55.9 +0.3
T1245                               S     Sg    21 52 57.5 +0.4
T1245                               AML   AML
      comp=N,12900µm,0.8s
T1245                               AML   AML
      comp=N,13000µm,0.8s
T1245                               AML   AML
      comp=E,16800µm,0.8s
T1245                               AML   AML
      comp=N,12850µm,0.8s
T1245                               AML   AML
      comp=E,16750µm,0.8s
T1245                               AML   AML
      comp=N,17150µm,0.3s
T1245                               AML   AML
      comp=N,16100µm,0.3s
T1245                               AML   AML
      comp=N,17200µm,0.3s
T1245                               AML   AML
      comp=E,16900µm,0.4s
T1245                               AML   AML
      comp=E,14716µm,0.1s
T1245                               AML   AML
      comp=N,11829µm,0.2s
T1245                               AML   AML
      comp=E,15467µm,0.2s
T1245                               AML   AML
      comp=N,11545µm,0.3s
MMO1  Montemonaco        0.10  79   P     Pg    21 52 56.6 +0.3
MMO1                                S     Sg    21 52 58.7 +0.4
T1216 Preci, Frazion     0.13 275   P     Pg    21 52 57.0 +0.4
T1216                               S     Sg    21 52 59.2 +0.4
FEMA  Monte Fema         0.13 309   P     Pg    21 52 57.2 +0.4
FEMA                                S     Sg    21 52 59.6 +0.5
FEMA                                AML   AML
      comp=E,5025µm,0.6s
FEMA                                AML   AML
      comp=N,5275µm,0.1s
FEMA                                AML   AML
      comp=E,5020µm,0.6s
FEMA                                AML   AML
      comp=N,5280µm,0.1s
FEMA                                AML   AML
      comp=E,50200µm,0.4s
FEMA                                AML   AML
      comp=N,61750µm,0.4s
FEMA                                AML   AML
      comp=E,4628µm,0.1s
FEMA                                AML   AML
      comp=N,5278µm,0.1s
AM05  Amandola Campo     0.15  51   P     Pg    21 52 57.6 +0.5
AM05                                AML   AML
      comp=E,361µm,0.9s
AM05                                AML   AML
      comp=N,412µm,0.4s
AM05                                AML   AML
      comp=E,1705µm,0.9s
AM05                                AML   AML
      comp=N,125µm,0.4s
AM05                                AML   AML
      comp=E,2240µm,0.4s
AM05                                AML   AML
      comp=N,2090µm,1.3s
AM05                                AML   AML
      comp=N,474µm,0.1s
AM05                                AML   AML
      comp=N,473µm,0.1s
AM05                                AML   AML
      comp=E,9200µm,0.4s
AM05                                AML   AML
      comp=N,125µm,0.1s
AM05                                AML   AML
      comp=E,1548µm,0.1s
AM05                                AML   AML
      comp=E,353µm,0.1s
AM05                                AML   AML
      comp=N,389µm,0.1s
T1241 Roccafluvione,     0.18  97 ⇑P     Pg    21 52 58.1 +0.7
T1241                               S     Sg    21 53 01.3 +1.2
T1241                               AML   AML
      comp=E,2400µm,0.2s
T1241                               AML   AML
      comp=N,980µm,1.3s
T1241                               AML   AML
      comp=E,2350µm,0.2s
T1241                               AML   AML
      comp=N,1089µm,0.6s
T1241                               AML   AML
      comp=N,980µm,1.3s
T1241                               AML   AML
      comp=N,1090µm,0.6s
T1241                               AML   AML
      comp=E,4355µm,0.2s
T1241                               AML   AML
      comp=N,3385µm,0.2s
T1241                               AML   AML
      comp=E,4415µm,0.2s
T1241                               AML   AML
      comp=N,3640µm,0.2s
T1241                               AML   AML
      comp=N,3645µm,0.2s
T1241                               AML   AML
      comp=E,4360µm,0.2s
T1241                               AML   AML
      comp=E,2350µm,0.1s
T1241                               AML   AML
      comp=N,1019µm,0.2s
T1241                               AML   AML
      comp=E,2399µm,0.2s
T1241                               AML   AML
      comp=N,781µm,0.1s
GUMA  Gualdo di Mace     0.21  30   P     Pb    21 52 58.8 -0.8
GUMA                                S     Sg    21 53 02.7 +1.6
GUMA                                AML   AML
      comp=E,1800µm,0.5s
GUMA                                AML   AML
      comp=N,1795µm,0.5s
GUMA                                AML   AML
      comp=E,1475µm,0.4s
GUMA                                AML   AML
      comp=N,2170µm,0.4s
GUMA                                AML   AML
      comp=E,19000µm,1.0s
GUMA                                AML   AML
      comp=N,18700µm,0.2s
GUMA                                AML   AML
      comp=E,19400µm,0.4s
GUMA                                AML   AML
      comp=N,26500µm,0.2s
GUMA                                AML   AML
      comp=E,1247µm,0.2s
GUMA                                AML   AML
      comp=E,1444µm,0.3s
GUMA                                AML   AML
      comp=N,1793µm,0.5s
GUMA                                AML   AML
      comp=N,2170µm,0.5s
T1204 Amatrice, Fraz     0.22 155   P     Pg    21 52 58.9 +0.6
T1204                               S     Sg    21 53 02.9 +1.4
T1204                               AML   AML
      comp=E,1168µm,0.2s
T1204                               AML   AML
      comp=N,954µm,0.2s
T1201 Domo (RI)          0.23 169   P     Pb    21 52 59.2 -0.6
T1215 Vallo di Nera,     0.25 252   P     Pg    21 52 59.1 +0.4
T1215                               S     Sg    21 53 03.1 +1.0
T1243 Rocca Santa Ma     0.26 134   P     Pg    21 52 59.5 +0.5
T1243                               S     Sg    21 53 03.7 +1.1
SMA1  SAN MARTINO        0.27 157   P     Pg    21 52 59.5 +0.4
SMA1                                S     Sg    21 53 04.0 +1.2
LNSS  Leonessa           0.30 202   P     Pg    21 53 00.3 +0.7
LNSS                                S     Sb    21 53 05.0 -1.1
MDAR  Monte D'Aria       0.32 354   P     Pg    21 53 00.2 +0.2
MDAR                                S     Sg    21 53 05.0 +0.8
SEF1  Sefro              0.32 326   P     Pg    21 53 00.2 +0.2
SEF1                                AML   AML
      comp=N,27100µm,0.2s
SEF1                                AML   AML
      comp=E,40700µm,0.2s
SEF1                                AML   AML
      comp=N,27050µm,0.2s
SEF1                                AML   AML
      comp=E,1250µm,0.4s
SEF1                                AML   AML
      comp=N,1125µm,0.3s
OFFI  Offida             0.37  81 ⇓P     Pb    21 53 02.2  0.0
OFFI                                AML   AML
      comp=E,4320µm,0.5s
OFFI                                AML   AML
      comp=N,3320µm,0.7s
OFFI                                AML   AML
      comp=N,533µm,0.6s
OFFI                                AML   AML
      comp=E,440µm,0.4s
GAG1  Gagliole           0.37 346   P     Pb    21 53 01.9 -0.3
GAG1                                S     Sb    21 53 07.2 -0.8
TERO  Teramo             0.40 130   P     Pg    21 53 01.7 +0.2
TERO                                S     Sb    21 53 07.9 -0.9
TERO                                AML   AML
      comp=E,469µm,0.3s
TERO                                AML   AML
      comp=N,518µm,0.1s
TERO                                AML   AML
      comp=E,528µm,0.1s
TERO                                AML   AML
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	comp=N,557μm,0.1s					
TERO			AML	AML		
	comp=E,932μm,1.1s					
TERO			AML	AML		
	comp=N,1017μm,0.9s					
TERO			AML	AML		
	comp=E,1030μm,0.8s					
TERO			AML	AML		
	comp=N,1125μm,0.9s					
TERO			AML	AML		
	comp=E,934μm,1.1s					
TERO			AML	AML		
	comp=N,1019μm,0.9s					
TERO			AML	AML		
	comp=E,527μm,0.1s					
TERO			AML	AML		
	comp=E,467μm,0.1s					
TERO			AML	AML		
	comp=N,557μm,0.1s					
TERO			AML	AML		
	comp=N,518μm,0.1s					
SNTG	**Esanatoglia**	**0.42 334**	⇓P	Pg	21 53 02.0	+0.2
SNTG			AML	AML		
	comp=E,236μm,0.5s					
SNTG			AML	AML		
	comp=N,342μm,1.1s					
SNTG			AML	AML		
	comp=N,3370μm,0.2s					
SNTG			AML	AML		
	comp=E,4220μm,0.6s					
SNTG			AML	AML		
	comp=N,3590μm,0.2s					
SNTG			AML	AML		
	comp=N,3375μm,0.2s					
SNTG			AML	AML		
	comp=E,4100μm,0.6s					
SNTG			AML	AML		
	comp=N,196μm,0.3s					
SNTG			AML	AML		
	comp=E,173μm,0.2s					
SNTG			AML	AML		
	comp=N,212μm,0.6s					
SNTG			AML	AML		
	comp=E,196μm,0.3s					
ASSB	**Assisi San Ben**	**0.42 293**	P	Pg	21 53 01.9	0.0
ASSB			AML	AML		
	comp=E,1077μm,0.3s					
ASSB			AML	AML		
	comp=N,762μm,0.3s					
ASSB			AML	AML		
	comp=E,3795μm,0.3s					
ASSB			AML	AML		
	comp=N,5905μm,0.3s					
ASSB			AML	AML		
	comp=E,275μm,0.3s					
ASSB			AML	AML		
	comp=N,418μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.45 170**	S	Sb	21 53 11.0	+0.8
EL6	**Elcito**	**0.45 352**	⇓P	Pg	21 53 02.7	+0.2
ATCC	**AVT- Casa Cast**	**0.51 307**	P	Pg	21 53 03.6	+0.2
ATCC			S	Sb	21 53 11.7	-0.3
ATCC			AML	AML		
	comp=E,630μm,0.6s					
ATCC			AML	AML		
	comp=N,722μm,0.8s					
ATCC			AML	AML		
	comp=E,6520μm,0.2s					
ATCC			AML	AML		
	comp=N,6500μm,0.9s					
ATCC			AML	AML		
	comp=N,179μm,0.3s					
ATCC			AML	AML		
	comp=E,176μm,0.2s					
GIGS	**Gran Sasso**	**0.51 147**	⇓P	Pg	21 53 03.6	0.0
GIGS			AML	AML		
	comp=E,68μm,0.6s					
GIGS			AML	AML		
	comp=N,51μm,0.4s					
GIGS			AML	AML		
	comp=E,166μm,1.6s					
GIGS			AML	AML		
	comp=N,114μm,1.2s					
GIGS			AML	AML		
	comp=E,66μm,0.2s					
GIGS			AML	AML		
	comp=N,46μm,0.3s					
FOSV	**Fossato di Vic**	**0.52 323**	⇑P	Pg	21 53 03.8	+0.1
FOSV			S	Sb	21 53 11.8	-0.6
FOSV			AML	AML		
	comp=E,289μm,0.6s					
FOSV			AML	AML		
	comp=N,382μm,0.3s					
FOSV			AML	AML		
	comp=E,2665μm,0.5s					
FOSV			AML	AML		
	comp=N,6410μm,0.3s					
FOSV			AML	AML		
	comp=E,2670μm,0.5s					
FOSV			AML	AML		
	comp=E,222μm,0.2s					
FOSV			AML	AML		
	comp=N,382μm,0.3s					
CESX	**Cesi**	**0.52 239**	P	Pb	21 53 04.4	-0.5
CESX			S	Sb	21 53 11.9	-0.5
CESX			AML	AML		
	comp=E,160μm,0.9s					
CESX			AML	AML		
	comp=N,184μm,0.3s					
CESX			AML	AML		
	comp=N,1875μm,0.6s					
CESX			AML	AML		
	comp=E,1675μm,1.3s					
CESX			AML	AML		
	comp=N,184μm,0.3s					
CESX			AML	AML		
	comp=E,148μm,0.4s					
PP3	**Marolino**	**0.58 31**	⇓P	Pb	21 53 06.0	+0.2
PP3			AML	AML		
	comp=N,3375μm,0.3s					
PP3			AML	AML		
	comp=E,3155μm,0.5s					
PP3			AML	AML		
	comp=N,3545μm,0.3s					
PP3			AML	AML		
	comp=N,3540μm,0.3s					
PP3			AML	AML		
	comp=E,3280μm,0.5s					
PP3			AML	AML		
	comp=N,275μm,0.1s					
PP3			AML	AML		
	comp=N,273μm,0.1s					
PP3			AML	AML		
	comp=E,243μm,0.4s					
PP3			AML	AML		
	comp=E,266μm,0.5s					
MURB	**Monte Urbino**	**0.62 308**	⇑P	Pg	21 53 05.8	+0.1
MURB			AML	AML		
	comp=E,950μm,0.3s					
MURB			AML	AML		
	comp=N,956μm,0.3s					
MURB			AML	AML		
	comp=E,1036μm,0.4s					
MURB			AML	AML		
	comp=N,961μm,0.2s					
MURB			AML	AML		
	comp=E,9770μm,0.3s					
MURB			AML	AML		
	comp=N,7705μm,0.9s					
MURB			AML	AML		
	comp=N,7495μm,1.0s					
MURB			AML	AML		
	comp=N,7500μm,1.0s					
MURB			AML	AML		
	comp=E,9790μm,0.3s					
MURB			AML	AML		
	comp=E,10500μm,0.3s					
MURB			AML	AML		
	comp=N,7700μm,0.9s					
MURB			AML	AML		
	comp=N,467μm,0.2s					
MURB			AML	AML		
	comp=N,365μm,0.3s					
MURB			AML	AML		
	comp=E,392μm,0.3s					
MURB			AML	AML		
	comp=E,379μm,0.3s					
ARVD	**Arcevia**	**0.64 344**	⇓P	Pg	21 53 06.1	0.0
ARVD			S	Sb	21 53 17.0	+1.0
ARVD			AML	AML		
	comp=E,184μm,0.4s					
ARVD			AML	AML		
	comp=N,184μm,0.4s					
ARVD			AML	AML		
	comp=E,2465μm,0.1s					
ARVD			AML	AML		
	comp=N,1525μm,0.1s					
ARVD			AML	AML		
	comp=E,81μm,0.1s					
ARVD			AML	AML		
	comp=N,49μm,0.2s					
ATFO	**Monte Foce - G**	**0.67 317**	⇓P	Pg	21 53 06.5	0.0
ATFO			AML	AML		
	comp=E,240μm,0.3s					
ATFO			AML	AML		
	comp=N,178μm,1.5s					
ATFO			AML	AML		
	comp=E,1305μm,0.4s					
ATFO			AML	AML		
	comp=N,1159μm,0.3s					
ATFO			AML	AML		
	comp=N,1160μm,0.3s					
ATFO			AML	AML		
	comp=N,64μm,0.5s					
ATFO			AML	AML		
	comp=E,71μm,0.3s					
FAGN	**Fagnano**	**0.68 155**	⇑P	Pg	21 53 07.1	+0.4
FAGN			AML	AML		
	comp=N,557μm,0.4s					
FAGN			AML	AML		
	comp=E,515μm,1.3s					
FAGN			AML	AML		
	comp=N,98μm,0.3s					
FAGN			AML	AML		
	comp=E,173μm,0.4s					
VCEL	**Villa Celiera**	**0.68 135**	⇓P	Pg	21 53 06.8	+0.1
VCEL			AML	AML		
	comp=N,593μm,0.5s					
VCEL			AML	AML		
	comp=E,503μm,0.8s					
VCEL			AML	AML		
	comp=N,136μm,0.3s					
VCEL			AML	AML		
	comp=E,166μm,0.2s					
ATVO	**AVT- Monte Val**	**0.76 311**	⇓P	Pg	21 53 08.1	-0.2
ATVO			AML	AML		
	comp=E,278μm,0.8s					
ATVO			AML	AML		
	comp=N,148μm,0.2s					
ATVO			AML	AML		
	comp=E,1445μm,0.4s					
ATVO			AML	AML		
	comp=N,1440μm,0.4s					
ATVO			AML	AML		
	comp=N,50μm,0.2s					
ATVO			AML	AML		
	comp=E,51μm,0.4s					
T0110	**Collepietro**	**0.79 146**	⇓P	Pg	21 53 08.6	-0.2
T0110			AML	AML		
	comp=E,361μm,1.5s					
T0110			AML	AML		
	comp=N,355μm,0.5s					
T0110			AML	AML		
	comp=E,122μm,0.4s					
T0110			AML	AML		
	comp=N,128μm,0.4s					
ATPI	**Pietralunga -**	**0.81 315**	⇑P	Pg	21 53 08.3	-0.9
ATPI			AML	AML		
	comp=E,93μm,0.2s					
ATPI			AML	AML		
	comp=N,91μm,0.3s					
ATPI			AML	AML		
	comp=E,1260μm,0.4s					
ATPI			AML	AML		
	comp=N,697μm,0.4s					
ATPI			AML	AML		
	comp=E,41μm,0.4s					
ATPI			AML	AML		
	comp=N,42μm,0.3s					
MPAG	**Monte Paganucc**	**0.81 337**	⇑P	Pg	21 53 09.5	+0.3
MPAG			AML	AML		
	comp=E,109μm,1.3s					
MPAG			AML	AML		
	comp=N,132μm,0.5s					
MPAG			AML	AML		
	comp=E,1110μm,0.4s					
MPAG			AML	AML		
	comp=N,1230μm,0.3s					
MPAG			AML	AML		
	comp=E,51μm,0.3s					
MPAG			AML	AML		
	comp=N,46μm,0.4s					
FSSB	**Fossombrone**	**0.87 340**	⇑P	Pg	21 53 10.2	-0.1
FSSB			AML	AML		
	comp=E,236μm,0.3s					
FSSB			AML	AML		
	comp=N,554μm,0.2s					
FSSB			AML	AML		
	comp=E,3820μm,0.3s					
FSSB			AML	AML		
	comp=N,4340μm,0.3s					
FSSB			AML	AML		
	comp=N,161μm,0.3s					
FSSB			AML	AML		
	comp=E,159μm,0.3s					
SACS	**San Casciano d**	**0.94 269**	P	Pb	21 53 12.2	+0.2
SACS			AML	AML		
	comp=E,154μm,0.9s					
SACS			AML	AML		
	comp=N,75μm,1.6s					
SACS			AML	AML		
	comp=N,512μm,0.8s					
SACS			AML	AML		
	comp=E,561μm,0.7s					
SACS			AML	AML		
	comp=E,560μm,0.7s					
SACS			AML	AML		
	comp=N,581μm,0.8s					
SACS			AML	AML		
	comp=E,620μm,0.7s					
SACS			AML	AML		
	comp=E,36μm,0.7s					
SACS			AML	AML		
	comp=N,44μm,0.6s					
MODR	**Mondragone**	**1.81 163**	P	Pn	21 53 24.4	-0.3
PIGN	**Pignataro Magg**	**1.83 156**	P	Pn	21 53 23.9	-1.2

PRU ***30*** *21:53:47.3±0.0, 42°.92N×13°.85E, h10km*
ROM 30 21:53:46.7±0.0, 42°.985N±0°.002×13°.041E±0°.004, h9km, ML2.9/49, 34C-19D, Error ellipse: s-maj=0.3km s-min=0.1km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.02**	**164**	⇓P	Pg	21 53 49.0	+0.3
FEMA				S	Sg	21 53 50.4	+0.4
FEMA				AML	AML		
	comp=N,61700μm,0.4s						
FEMA				AML	AML		
	comp=N,61700μm,0.4s						
FEMA				AML	AML		
	comp=E,50200μm,0.4s						
T1216	**Preci, Frazion**	**0.10**	**190**	⇑P	Pg	21 53 49.8	+0.6
T1216				S	Sg	21 53 51.7	+0.7
T1216				AML	AML		
	comp=N,11285μm,0.7s						
T1216				AML	AML		
	comp=N,11250μm,0.7s						
T1216				AML	AML		
	comp=E,16100μm,0.8s						
T1216				AML	AML		
	comp=N,11250μm,0.7s						
T1216				AML	AML		
	comp=E,16100μm,1.2s						
T1216				AML	AML		
	comp=N,11250μm,1.3s						
T1245	**Castelsantange**	**0.17**	**140**	⇑P	Pg	21 53 51.0	+0.5
T1245				S	Sg	21 53 54.1	+1.1
T1245				AML	AML		
	comp=E,10800μm,0.8s						
T1245				AML	AML		
	comp=E,10750μm,0.8s						
T1245				AML	AML		
	comp=N,16100μm,0.3s						
T1245				AML	AML		
	comp=N,17150μm,0.3s						
T1245				AML	AML		
	comp=E,11550μm,0.8s						
T1245				AML	AML		
	comp=N,17200μm,0.3s						
T1245				AML	AML		
	comp=E,11550μm,1.2s						
SEF1	**Sefro**	**0.18**	**337**	⇓P	Pg	21 53 51.1	+0.6
SEF1				S	Sg	21 53 54.2	+1.2
SEF1				AML	AML		
	comp=E,40750μm,0.2s						
SEF1				AML	AML		
	comp=N,27100μm,0.2s						
SEF1				AML	AML		
	comp=E,40700μm,0.2s						
SEF1				AML	AML		
	comp=N,27050μm,0.2s						
PIO1	**Pioraco**	**0.20**	**348**	P	Pg	21 53 51.5	+0.6
PIO1				S	Sg	21 53 54.9	+1.2
FIU1	**Fiuminata**	**0.22**	**339**	P	Pg	21 53 52.0	+0.7
FIU1				S	Sg	21 53 55.5	+1.2
MDAR	**Monte D'Aria**	**0.22**	**20**	⇓P	Pg	21 53 51.9	+0.6
MDAR				S	Sg	21 53 55.7	+1.2
MDAR				AML	AML		
	comp=E,23650μm,0.4s						
MDAR				AML	AML		
	comp=N,25300μm,0.3s						
MDAR				AML	AML		
	comp=E,23600μm,0.4s						
MDAR				AML	AML		
	comp=N,25300μm,0.3s						
T1215	**Vallo di Nera,**	**0.22**	**215**	⇓P	Pg	21 53 52.0	+0.7
T1215				S	Sg	21 53 55.6	+1.2
T1215				AML	AML		
	comp=E,2285μm,0.9s						
T1215				AML	AML		
	comp=N,2990μm,1.5s						
T1215				AML	AML		
	comp=E,2340μm,1.0s						
T1215				AML	AML		
	comp=N,3085μm,1.0s						
T1215				AML	AML		
	comp=N,3090μm,1.0s						
T1215				AML	AML		
	comp=E,2280μm,0.9s						
T1215				AML	AML		
	comp=E,2340μm,0.9s						
T1215				AML	AML		
	comp=N,2990μm,0.5s						
T1215				AML	AML		
	comp=N,3090μm,1.0s						
MMO1	**Montemonaco**	**0.23**	**112**	P	Pg	21 53 51.9	+0.5
MMO1				S	Sg	21 53 55.7	+1.1
AM05	**Amandola Campo**	**0.23**	**92**	⇑P	Pg	21 53 52.1	+0.7
AM05				S	Sg	21 53 55.9	+1.3
AM05				AML	AML		
	comp=E,2240μm,0.4s						
AM05				AML	AML		
	comp=N,474μm,0.1s						
AM05				AML	AML		
	comp=N,2090μm,1.3s						
AM05				AML	AML		
	comp=N,473μm,0.1s						
AM05				AML	AML		
	comp=N,2090μm,0.7s						
AM05				AML	AML		
	comp=E,9200μm,0.4s						
GUMA	**Gualdo di Mace**	**0.23**	**70**	⇑P	Pg	21 53 52.3	+0.9
GUMA				S	Sg	21 53 56.5	+1.9
GUMA				AML	AML		
	comp=N,18700μm,0.3s						
GUMA				AML	AML		
	comp=E,19400μm,0.4s						
GUMA				AML	AML		
	comp=E,19000μm,1.0s						
GUMA				AML	AML		
	comp=N,18700μm,0.2s						
GUMA				AML	AML		
	comp=N,26500μm,0.2s						
GUMA				AML	AML		
	comp=E,19000μm,1.0s						
GAG1	**Gagliole**	**0.25**	**4**	⇓P	Pg	21 53 52.7	+0.8
GAG1				S	Sb	21 53 57.1	-0.9
GAG1				AML	AML		
	comp=N,27150μm,1.5s						
GAG1				AML	AML		
	comp=E,27950μm,0.4s						
GAG1				AML	AML		
	comp=N,27100μm,1.5s						
GAG1				AML	AML		
	comp=N,27100μm,0.5s						
SSM1	**San Severino M**	**0.26**	**22**	P	Pg	21 53 52.7	+0.7
SSM1				S	Sb	21 53 57.1	-1.2
SNTG	**Esanatoglia**	**0.28**	**345**	⇓P	Pg	21 53 52.9	+0.5
SNTG				S	Sg	21 53 57.5	+1.3
SNTG				AML	AML		
	comp=E,4095μm,0.6s						
SNTG				AML	AML		
	comp=N,3370μm,0.2s						
SNTG				AML	AML		
	comp=N,3370μm,0.2s						
SNTG				AML	AML		
	comp=E,4220μm,0.6s						
SNTG				AML	AML		
	comp=E,4100μm,0.6s						
SNTG				AML	AML		
	comp=N,3590μm,0.2s						
SNTG				AML	AML		
	comp=N,3375μm,0.2s						
T1217	**Poggiodomo (PG**	**0.28**	**197**	P	Pg	21 53 53.0	+0.6
T1217				S	Sb	21 53 57.6	-1.3
ASSB	**Assisi San Ben**	**0.29**	**282**	⇑P	Pg	21 53 53.0	+0.5
ASSB				S	Sg	21 53 57.6	+1.2
ASSB				AML	AML		
	comp=E,3795μm,0.3s						
ASSB				AML	AML		
	comp=E,3795μm,1.7s						
ASSB				AML	AML		
	comp=N,5905μm,0.3s						
T1241	**Roccafluvione,**	**0.31**	**114**	⇑P	Pg	21 53 53.6	+0.6
T1241				S	Sb	21 53 58.8	-0.9
T1241				AML	AML		
	comp=N,3640μm,0.2s						
T1241				AML	AML		
	comp=E,4355μm,0.2s						
T1241				AML	AML		
	comp=E,4360μm,0.2s						
T1241				AML	AML		
	comp=E,4415μm,0.2s						
T1241				AML	AML		
	comp=N,3385μm,0.2s						
T1241				AML	AML		
	comp=N,3645μm,0.2s						
T1241				AML	AML		
	comp=N,3385μm,1.8s						
T1241				AML	AML		
	comp=N,3645μm,1.8s						
EL6	**Elcito**	**0.35**	**7**	⇑P	Pg	21 53 54.1	+0.4
EL6				S	Sb	21 53 59.8	-0.9
EL6				AML	AML		
	comp=E,14800μm,0.4s						
EL6				AML	AML		
	comp=N,15950μm,0.4s						
MNTP	**Montappone**	**0.35**	**64**	⇑P	Pb	21 53 54.7	-0.4
MNTP				S	Sb	21 54 01.2	+0.5
MNTP				AML	AML		
	comp=E,6970μm,1.4s						
MNTP				AML	AML		
	comp=E,6970μm,1.5s						
MNTP				AML	AML		
	comp=N,6160μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.36**	**304**	⇑P	Pg	21 53 54.3	+0.6
ATCC				S	Sb	21 54 00.3	-0.7
T1204	**Amatrice, Fraz**	**0.37**	**147**	P	Pg	21 53 54.5	+0.4
T1204				AML	AML		
	comp=E,1950μm,0.6s						
T1204				AML	AML		
	comp=N,1375μm,0.3s						
T1204				AML	AML		
	comp=N,1372μm,0.3s						
T1204				AML	AML		
	comp=E,1945μm,0.6s						
FOSV	**Fossato di Vic**	**0.37**	**327**	⇑P	Pg	21 53 54.5	+0.4
FOSV				S	Sb	21 54 00.6	-0.8
FOSV				AML	AML		
	comp=E,2670μm,0.5s						

FOSV				AML	AML		
	comp=N,6405μm,0.3s						
FOSV				AML	AML		
	comp=E,2665μm,0.5s						
FOSV				AML	AML		
	comp=N,6410μm,0.3s						
FOSV				AML	AML		
	comp=E,2670μm,1.5s						
LNSS	**Leonessa**	**0.38**	**180**	⇓P	Pg	21 53 54.7	+0.4
LNSS				AML	AML		
	comp=E,1405μm,0.2s						
LNSS				AML	AML		
	comp=N,3890μm,0.1s						
TRE1	**Treia**	**0.38**	**31**	⇓P	Pb	21 53 55.4	-0.2
TRE1				AML	AML		
	comp=N,6665μm,0.3s						
TRE1				AML	AML		
	comp=N,6665μm,0.2s						
TRE1				AML	AML		
	comp=E,7310μm,0.4s						
SMA1	**SAN MARTINO**	**0.41**	**148**	P	Pg	21 53 55.1	+0.2
SMA1				AML	AML		
	comp=E,1505μm,0.6s						
SMA1				AML	AML		
	comp=N,1450μm,0.5s						
SMA1				AML	AML		
	comp=N,1455μm,0.5s						
SMA1				AML	AML		
	comp=E,1500μm,0.6s						
SMA1				AML	AML		
	comp=N,1455μm,1.5s						
T1243	**Rocca Santa Ma**	**0.41**	**134**	⇑P	Pg	21 53 55.1	+0.2
ARRO	**Arrone**	**0.45**	**207**	⇑P	Pg	21 53 56.0	+0.5
ARRO				S	Sb	21 54 03.2	-0.5
ARRO				AML	AML		
	comp=E,1124μm,0.7s						
ARRO				AML	AML		
	comp=N,736μm,1.4s						
ARRO				AML	AML		
	comp=E,1122μm,0.7s						
ARRO				AML	AML		
	comp=N,736μm,1.4s						
ARRO				AML	AML		
	comp=E,1122μm,1.3s						
ARRO				AML	AML		
	comp=N,736μm,0.6s						
MMUR	**Monte Murano**	**0.46**	**356**	⇓P	Pb	21 53 56.6	-0.4
MMUR				AML	AML		
	comp=E,7045μm,0.2s						
MMUR				AML	AML		
	comp=N,5120μm,1.5s						
MMUR				AML	AML		
	comp=N,5120μm,0.5s						
MURB	**Monte Urbino**	**0.47**	**307**	⇑P	Pg	21 53 56.4	+0.5
MURB				S	Sb	21 54 04.0	-0.2
MURB				AML	AML		
	comp=E,9785μm,0.3s						
MURB				AML	AML		
	comp=N,7700μm,0.9s						
MURB				AML	AML		
	comp=N,7500μm,1.0s						
MURB				AML	AML		
	comp=E,9770μm,0.3s						
MURB				AML	AML		
	comp=N,7705μm,0.9s						
MURB				AML	AML		
	comp=N,7495μm,1.0s						
MURB				AML	AML		
	comp=E,10500μm,0.3s						
MURB				AML	AML		
	comp=N,7700μm,0.9s						
MURB				AML	AML		
	comp=E,9790μm,0.3s						
MURB				AML	AML		
	comp=N,7500μm,1.0s						
T1211	**Morro Reatino**	**0.47**	**197**	⇓P	Pg	21 53 56.5	+0.5
T1211				S	Sb	21 54 04.7	+0.3
T1211				AML	AML		
	comp=E,1145μm,0.4s						
T1211				AML	AML		
	comp=N,1365μm,1.0s						
T1211				AML	AML		
	comp=N,1360μm,1.0s						
T1211				AML	AML		
	comp=N,1360μm,1.0s						
OFFI	**Offida**	**0.48**	**96**	⇑P	Pb	21 53 57.2	0.0
OFFI				S	Sb	21 54 06.2	+1.9
OFFI				AML	AML		
	comp=N,3320μm,0.7s						
OFFI				AML	AML		
	comp=E,4320μm,0.5s						
OFFI				AML	AML		
	comp=N,3320μm,1.3s						
OFFI				AML	AML		
	comp=E,4320μm,1.5s						
RM33	**Pellescritta (**	**0.49**	**165**	P	Pg	21 53 56.8	+0.5
RM33				AML	AML		
	comp=E,788μm,1.0s						
RM33				AML	AML		
	comp=N,758μm,0.4s						
RM33				AML	AML		
	comp=E,782μm,0.6s						
RM33				AML	AML		
	comp=N,758μm,0.4s						
RM33				AML	AML		
	comp=N,787μm,0.4s						
RM33				AML	AML		
	comp=E,790μm,1.0s						
RM33				AML	AML		
	comp=E,781μm,0.6s						
RM33				AML	AML		
	comp=E,781μm,1.4s						
CESX	**Cesi**	**0.51**	**222**	⇑P	Pg	21 53 56.7	+0.2
CESX				S	Sb	21 54 05.0	-0.2
CESX				AML	AML		
	comp=N,1875μm,0.6s						
CESX				AML	AML		
	comp=E,1675μm,1.3s						
CESX				AML	AML		
	comp=E,1675μm,0.7s						
ATFO	**Monte Foce - G**	**0.51**	**318**	⇑P	Pg	21 53 57.1	+0.4
ATFO				S	Sb	21 54 05.3	-0.2
ATFO				AML	AML		
	comp=E,1305μm,0.4s						
ATFO				AML	AML		
	comp=N,1159μm,0.3s						
ATFO				AML	AML		
	comp=N,1160μm,0.3s						
ARVD	**Arcevia**	**0.52**	**352**	⇑P	Pg	21 53 57.1	+0.3
ARVD				S	Sb	21 54 06.0	+0.4
ARVD				AML	AML		
	comp=N,1525μm,0.1s						
ARVD				AML	AML		
	comp=E,2465μm,0.1s						
CAMP	**Campotosto**	**0.52**	**149**	P	Pg	21 53 56.9	0.0
CAMP				S	Sg	21 54 04.8	+1.0
CAMP				AML	AML		
	comp=E,578μm,0.7s						
CAMP				AML	AML		
	comp=N,438μm,0.7s						
CAMP				AML	AML		
	comp=E,578μm,1.3s						
ATTE	**AVT- Monte Tez**	**0.55**	**293**	⇑P	Pg	21 53 57.6	+0.2
ATTE				AML	AML		
	comp=E,863μm,0.3s						
ATTE				AML	AML		
	comp=E,862μm,0.3s						
ATTE				AML	AML		
	comp=E,862μm,1.7s						
ATTE				AML	AML		
	comp=N,939μm,0.7s						
TERO	**Teramo**	**0.55**	**131**	⇑P	Pg	21 53 57.4	0.0
TERO				S	Sb	21 54 05.9	-0.6
TERO				AML	AML		
	comp=E,932μm,1.1s						
TERO				AML	AML		
	comp=N,1019μm,0.9s						
TERO				AML	AML		
	comp=E,1030μm,0.8s						
TERO				AML	AML		
	comp=N,1125μm,0.9s						
TERO				AML	AML		
	comp=E,932μm,1.1s						
TERO				AML	AML		
	comp=N,1017μm,0.9s						
TERO				AML	AML		
	comp=E,1030μm,0.8s						
TERO				AML	AML		
	comp=N,1019μm,1.1s						
TERO				AML	AML		
	comp=E,934μm,1.1s						
TERO				AML	AML		
	comp=N,1125μm,1.1s						
PP3	**Marolino**	**0.57**	**46**	⇑P	Pb	21 53 59.0	+0.1
PP3				S	Sn	21 54 09.2	-1.3
PP3				AML	AML		
	comp=E,3285μm,0.5s						
PP3				AML	AML		
	comp=N,3370μm,0.3s						
PP3				AML	AML		
	comp=N,3545μm,0.3s						
PP3				AML	AML		
	comp=E,3280μm,0.5s						
PP3				AML	AML		
	comp=N,3375μm,0.3s						
PP3				AML	AML		
	comp=E,3155μm,0.5s						
PP3				AML	AML		
	comp=N,3540μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.57**	**161**	⇓P	Pg	21 53 58.2	+0.3
T1247				AML	AML		
	comp=E,852μm,1.1s						
T1247				AML	AML		
	comp=E,851μm,1.1s						
T1247				AML	AML		
	comp=N,1135μm,0.7s						
T1247				AML	AML		
	comp=N,1135μm,1.3s						
ATVO	**AVT- Monte Val**	**0.61**	**311**	⇑P	Pg	21 53 58.7	+0.1
ATVO				S	Sb	21 54 09.0	+0.7
ATVO				AML	AML		
	comp=N,1440μm,0.4s						
ATVO				AML	AML		
	comp=E,1445μm,0.4s						
ATPI	**Pietralunga -**	**0.66**	**315**	⇑P	Pg	21 53 59.6	+0.1
ATPI				S	Sb	21 54 11.0	+1.3
ATPI				AML	AML		
	comp=E,1260μm,0.4s						
ATPI				AML	AML		
	comp=N,697μm,0.4s						
GIGS	**Gran Sasso**	**0.66**	**144**	P	Pg	21 53 59.2	-0.3
GIGS				AML	AML		
	comp=N,127μm,1.4s						
GIGS				AML	AML		
	comp=N,128μm,1.4s						
GIGS				AML	AML		
	comp=E,166μm,1.6s						
GIGS				AML	AML		
	comp=E,166μm,0.4s						
GIGS				AML	AML		
	comp=N,128μm,0.6s						
PIEI	**Pieia**	**0.66**	**326**	⇑P	Pg	21 53 59.5	-0.1
PIEI				S	Sb	21 54 11.0	+1.2
PIEI				AML	AML		
	comp=N,758μm,1.6s						
PIEI				AML	AML		
	comp=E,1095μm,0.9s						
PIEI				AML	AML		
	comp=N,758μm,0.4s						
ATMI	**Monte Miggiano**	**0.67**	**302**	⇓P	Pb	21 54 00.3	-0.2
ATMI				S	Sb	21 54 11.0	+1.1
ATMI				AML	AML		
	comp=N,2915μm,1.0s						
ATMI				AML	AML		
	comp=E,2755μm,0.8s						
ATMI				AML	AML		
	comp=N,2920μm,1.0s						
ATMI				AML	AML		
	comp=N,2920μm,1.0s						
TRTR	**Tortoreto Alta**	**0.67**	**105**	⇑P	Pb	21 54 00.8	+0.3
TRTR				AML	AML		
	comp=N,3090μm,1.0s						
TRTR				AML	AML		
	comp=N,3090μm,1.0s						
TRTR				AML	AML		
	comp=E,3355μm,0.5s						
MPAG	**Monte Paganucc**	**0.68**	**342**	⇓P	Pg	21 54 00.1	+0.3
MPAG				S	Sn	21 54 12.0	-1.3
MPAG				AML	AML		
	comp=E,1112μm,0.4s						
MPAG				AML	AML		
	comp=N,1225μm,0.3s						
MGAB	**Montegabbione**	**0.69**	**264**	⇑P	Pg	21 54 00.1	+0.2
MGAB				AML	AML		
	comp=N,1850μm,0.4s						
MGAB				AML	AML		
	comp=E,2060μm,0.4s						
MGAB				AML	AML		
	comp=N,1640μm,0.7s						
MGAB				AML	AML		
	comp=E,1545μm,0.4s						
MGAB				AML	AML		
	comp=N,1850μm,1.6s						
MGAB				AML	AML		
	comp=E,2060μm,1.6s						
MGAB				AML	AML		
	comp=E,1545μm,1.6s						
AOI	**Ancona**	**0.70**	**36**	⇑P	Pb	21 54 00.8	-0.3
AOI				AML	AML		
	comp=N,1560μm,0.3s						
AOI				AML	AML		
	comp=E,1280μm,0.4s						
FIAM	**Fiamignano**	**0.72**	**175**	⇓P	Pg	21 54 00.8	+0.2
FIAM				AML	AML		
	comp=N,411μm,0.9s						
FIAM				AML	AML		
	comp=N,410μm,0.9s						
FIAM				AML	AML		
	comp=E,479μm,0.8s						
FIAM				AML	AML		
	comp=N,410μm,1.1s						
FIAM				AML	AML		
	comp=E,479μm,1.2s						
FSSB	**Fossombrone**	**0.73**	**345**	⇑P	Pg	21 54 00.4	-0.4
FSSB				S	Sn	21 54 14.0	-0.6
FSSB				AML	AML		
	comp=N,4340μm,0.3s						
FSSB				AML	AML		
	comp=E,3820μm,0.3s						
BADI	**Badiali**	**0.78**	**312**	⇑P	Pg	21 54 02.0	+0.2
PE3	**Peglio**	**0.81**	**331**	P	Pg	21 54 02.7	+0.3
PE3				AML	AML		
	comp=N,21μm,0.4s						
PE3				AML	AML		
	comp=E,14μm,1.0s						
FAGN	**Fagnano**	**0.82**	**151**	⇑P	Pg	21 54 02.8	+0.2
FAGN				AML	AML		
	comp=E,874μm,0.4s						
FAGN				AML	AML		
	comp=N,668μm,1.5s						
FAGN				AML	AML		
	comp=E,875μm,0.4s						
VCEL	**Villa Celiera**	**0.83**	**135**	⇑P	Pg	21 54 02.6	-0.2
VCEL				AML	AML		
	comp=E,1080μm,1.0s						
VCEL				AML	AML		
	comp=N,814μm,0.6s						
VCEL				AML	AML		
	comp=E,1080μm,1.0s						
VCEL				AML	AML		
	comp=E,1080μm,1.0s						
VCEL				AML	AML		
	comp=N,814μm,1.4s						
SACS	**San Casciano d**	**0.84**	**261**	⇓P	Pb	21 54 03.3	-0.2
SACS				AML	AML		
	comp=E,620μm,0.7s						
SACS				AML	AML		
	comp=N,512μm,0.8s						
SACS				AML	AML		
	comp=E,561μm,0.7s						
SACS				AML	AML		
	comp=N,581μm,0.8s						
SACS				AML	AML		
	comp=E,560μm,0.7s						
SACS				AML	AML		
	comp=E,620μm,1.3s						
SACS				AML	AML		
	comp=N,581μm,1.2s						
SRES	**S.Oreste - Sor**	**0.84**	**208**	⇓P	Pb	21 54 03.7	+0.2
SRES				AML	AML		
	comp=E,303μm,1.4s						
SRES				AML	AML		
	comp=N,376μm,0.7s						
SRES				AML	AML		
	comp=E,303μm,0.6s						
CAFI	**Castiglion Fio**	**0.86**	**294**	⇑P	Pg	21 54 03.3	0.0
CAFI				AML	AML		
	comp=E,500μm,0.9s						
CAFI				AML	AML		
	comp=N,488μm,0.8s						
CAFI				AML	AML		
	comp=E,500μm,1.1s						
T0110	**Collepietro**	**0.93**	**144**	⇓P	Pg	21 54 04.2	-0.5
T0110				AML	AML		
	comp=E,752μm,0.7s						
T0110				AML	AML		
	comp=N,610μm,0.5s						
T0110				AML	AML		
	comp=E,752μm,0.7s						
CPGN	**Carpegna, Ital**	**0.97**	**327**	⇑P	Pn	21 54 06.3	-0.3
CRE	**Caprese Michel**	**1.02**	**309**	⇓P	Pb	21 54 06.5	-0.1
CRE				AML	AML		
	comp=E,268μm,1.2s						
CRE				AML	AML		
	comp=N,400μm,1.2s						
CRE				AML	AML		
	comp=N,400μm,0.8s						
CRE				AML	AML		
	comp=E,268μm,0.8s						
MCIV	**Monte Civitell**	**1.02**	**259**	⇓P	Pn	21 54 07.4	+0.1
MCIV				AML	AML		
	comp=N,212μm,0.7s						
MCIV				AML	AML		
	comp=E,206μm,1.3s						
MCIV				AML	AML		
	comp=N,212μm,1.3s						
SFI	**Santa Sofia**	**1.27**	**317**	⇑P	Pg	21 54 12.8	+1.8
PTRJ	**Pietraroja**	**1.96**	**145**	P	Pn	21 54 17.9	-2.3
BRJN	**Brijuni**	**1.99**	**15**	⇑P	Pn	21 54 21.1	+0.7
VBKN	**Vesuvio Bunker**	**2.39**	**154**	S	Sb	21 54 60.0	+0.5
MCRV	**Calabrutti - M**	**2.71**	**143**	S	Sn	21 55 05.0	+1.5
MYKA	**Terra Mystica**	**3.67**	**6**	Pn	Pn	21 54 45.3	+1.6
	comp=N,4.7nm,0.4s,SNR=5.3						
OBKA	**Obir**	**3.68**	**16**	*e*Pn	Pn	21 54 44.2	+0.3
	comp=N,1.3nm,0.2s						
ABTA	**Abfaltersbach**	**3.78**	**354**	*i* Pn	Pn	21 54 47.1	+1.9
	comp=N,4.1nm,0.5s,SNR=8.3						
SOKA	**Soboth**	**3.96**	**20**	*e*Pn	Pn	21 54 48.3	+0.7
	comp=N,0.8nm,0.3s						
FETA	**Feichten**	**4.36**	**339**	*e*Pn	Pn	21 54 58.1	+4.9
	comp=N,1.4nm,0.3s						
WTTA	**Wattenberg**	**4.39**	**347**	*e*Pn	Pn	21 54 56.9	+3.2
	comp=N,1.4nm,0.2s						
SQTA	**Sankt Quirin**	**4.43**	**344**	Pn	Pn	21 54 57.9	+3.7
	comp=N,3.0nm,0.2s,SNR=5.9						
WATA	**Walderalm**	**4.47**	**347**	*i* Pn	Pn	21 54 58.4	+3.7
	comp=N,1.4nm,0.2s,SNR=6.8						
MOTA	**Moosalm**	**4.57**	**343**	*e*Pn	Pn	21 55 00.4	+4.3
	comp=N,0.8nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.73**	**5**	Pn	Pn	21 54 59.7	+1.6
	comp=N,3.8nm,0.4s,SNR=11						
RETA	**Reutte**	**4.78**	**341**	*e*Pn	Pn	21 55 02.1	+3.2
	comp=N,0.3nm,0.2s						
DAVA	**Damuels**	**4.85**	**334**	*e*Pn	Pn	21 55 05.3	+5.3
	comp=N,0.7nm,0.2s						
MOA	**Molln**	**4.94**	**10**	Pn	Pn	21 55 02.3	+1.2
	comp=N,0.8nm,0.2s,SNR=5.7						
RONA	**Rosalia, Austr**	**5.24**	**25**	*e*Pn	Pn	21 55 06.5	+1.3
	comp=N,2.0nm,0.3s						
CONA	**Conrad Observa**	**5.33**	**21**	Pn	Pn	21 55 07.2	+0.7
	comp=N,1.7nm,0.3s,SNR=5.4						
CKRC	**Cesky Krumlov**	**5.90**	**8**	*e*PN	Pn	21 55 14.1	-0.2
CKRC				*e*SN	Sn	21 56 19.7	-2.3
KHC	**Kasperske Hory**	**6.16**	**3**	*e*PN	Pn	21 55 17.6	-0.2
KHC				*e*SN	Sn	21 56 27.1	-1.2
PRU	**Pruhonice**	**7.08**	**8**	*e*SN	Sn	21 56 47.6	-3.4

*JMA **30** 21:56:43.0±0.3,23°N±1°×124°.9E±0°.8,h38km,MV3.6/13, NEAR ISHIGAKIJIMA ISLAND*
*NIED **30** 21:56:43.0,23°.10N×124°.90E,h38km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.25; $M_{\theta\theta}$5.07; $M_{\phi\phi}$-2.82; $M_{r\theta}$0.61; $M_{\theta\phi}$0.55; $M_{\phi r}$-4.36; Fault plane solution: $M_0$6.04000×10^{14} NP1:χ_ϕ51.00000°, δ58.00000°,λ-149.00000°. NP2:χ_ϕ303.00000°, δ64.00000°,λ-36.00000°.*
*IDC **30** 21:56:47.0±8.6,23°.17N×125°.43E,h76km±94km,mb3.3/6, mbtmp3.7/7,ML3.2/1,MS2.6/3 Error ellipse: s-maj=71.1km s-min=17.9km az=66.0*

ISC 30 21:56:41.6±0.9,23°.12N±0°.06×125°.03E±0°.06,h24km,n23, σ0°93/33,mb3.7/6,1D,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**1.45**	**320**	P		**Pn**	**21 57 07.3**	**+0.9**
JKRS				S		**Sn**	**21 57 24.6**	**0.0**
HATJ	**Hateruma jima**	**1.46**	**310**	P		**Pn**	**21 57 06.2**	**-0.3**
HATJ				S		**Sn**	**21 57 23.2**	**-1.6**
JIJ	**Ishigaki jima**	**1.48**	**327**	P		**Pn**	**21 57 07.4**	**+0.6**
JIJ				*e*S		**Sn**	**21 57 24.6**	**-0.8**
JTJ	**Tarama**	**1.54**	**349**	P		**Pb**	**21 57 08.9**	**-0.6**
JTJ				S		**Sb**	**21 57 28.6**	**0.0**
JISG	**Ishigakijimahi**	**1.60**	**336**	P		**Pn**	**21 57 09.2**	**+0.8**
JISG				*e*S		**Sn**	**21 57 28.6**	**+0.2**
JMJ2	**Miyako jima3**	**1.64**	**10**	P		**Pb**	**21 57 10.5**	**-0.6**
JMJ2				*e*S		**Sb**	**21 57 31.1**	**-0.3**
JOGS	**Gusukube**	**1.67**	**12**	P		**Pb**	**21 57 11.4**	**-0.3**
JOGS				*e*S		**Sb**	**21 57 32.7**	**+0.4**
IRIF	**Iriomote-Funau**	**1.70**	**316**	*e*P		**Pn**	**21 57 10.4**	**+0.6**
IRIF				*e*S		**Sn**	**21 57 30.4**	**-0.3**
JIRB	**Irabujima**	**1.71**	**4**	P		**Pb**	**21 57 11.3**	**-1.0**
JIRB				S		**Sb**	**21 57 32.7**	**-0.6**
JIKM	**Ikemajima**	**1.81**	**6**	P		**Pb**	**21 57 13.3**	**-0.8**
JIKM				*e*S		**Sb**	**21 57 36.2**	**-0.1**
YOJ	**Yonaguni jima**	**2.28**	**306**	P		**Pn**	**21 57 18.5**	**+0.7**
YOJ				S		**Sn**	**21 57 44.1**	**-1.0**
JYNG	**Yonagunijimaku**	**2.32**	**305**	P		**Pn**	**21 57 19.1**	**+0.7**
JYNG				S		**Sn**	**21 57 44.8**	**-1.4**
JOW	**Kunigami**	**4.73**	**38**	P		**Pn**	**21 57 52.6**	**+1.2**
	2.6nm,0.3s,baz=196,slow=17,SNR=6.4							
JOW				S		**Sn**	**21 58 43.5**	**-2.0**
	13nm,0.5s,baz=284,slow=19,SNR=7.4							
	22nm,0.7s							
LQP	**Lukban**	**9.55**	**201**	⇓*e*P		**Pn**	**21 58 57.6**	**-0.3**
KSRS	**Korea Array**	**14.50**	**9**	LR		LR	22 06 27.1	
	comp=Z,24nm,18.2s,baz=205,slow=40							
DAV	**Davao City (W)**	**15.97**	**178**	LR		LR	22 06 37.1	
	comp=Z,16nm,21.1s,baz=284,slow=37							
SIJI	**Sorong**	**24.61**	**165**	LR		LR	22 10 12.3	
	comp=Z,15nm,20.6s,baz=88,slow=33							
MKAR	**Makanchi Array**	**41.56**	**315**	P		**P**	**22 04 28.9**	**+1.5**
	1.2nm,0.8s,baz=96,slow=8.1,SNR=12							
	1.2nm,0.8s							
ZALV	**Zalesovo Beam**	**43.07**	**326**	P		**P**	**22 04 40.5**	**+1.0**
	1.1nm,0.5s,baz=111,slow=8.1,SNR=5.8							
	1.1nm,0.5s							
WRA	**Warramunga Arr**	**43.76**	**167**	P		**P**	**22 04 44.4**	**-1.0**
	1.2nm,0.8s,baz=348,slow=8.9,SNR=6.0							
	1.2nm,0.8s							
KURBB	**Kurchatov Arra**	**45.20**	**319**	P		**P**	**22 04 58.4**	**+1.7**
	0.6nm,0.8s,baz=112,slow=7.4,SNR=5.1							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**47.30**	**169**	P		**P**	**22 05 13.3**	**-0.1**
	0.6nm,0.8s,baz=349,slow=9.5,SNR=5.6							
	0.6nm,0.8s							
BVAR	**Borovoye Array**	**50.73**	**320**	P		**P**	**22 05 40.0**	**+0.6**
	0.3nm,0.6s,baz=104,slow=6.3,SNR=3.6							
	0.3nm,0.6s							

*PRU **30** 21:57:06.8±0.0,42°.39N×15°.08E,h10km*

ROM 30 21:57:10.9±0.0,42°.785N±0°.002×13°.073E±0°.003, h10km,ML3.1/10,Error ellipse: s-maj=0.2km s-min=0.2km az=306.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.11**	**50**	P		Pg	21 57 14.3	+0.4
T1245				S		Sg	21 57 16.4	+0.5
T1245				AML		AML		
	comp=E,99750μm,0.2s							
T1245				AML		AML		
	comp=E,87400μm,0.2s							
T1245				AML		AML		
	comp=E,99800μm,0.2s							
T1245				AML		AML		
T1245				AML		AML		
	comp=E,99850μm,0.2s							

T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,99971µm,0.2s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,87411µm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**340**	P	Pg	21 57 14.2	+0.4
T1216				S	Sg	21 57 16.4	+0.5
T1216				AML	AML		
	comp=E,47000µm,0.3s						
T1216				AML	AML		
	comp=N,37300µm,0.7s						
T1216				AML	AML		
	comp=N,37350µm,0.7s						
T1216				AML	AML		
	comp=E,22156µm,0.1s						
T1216				AML	AML		
	comp=N,35148µm,0.2s						
T1217	**Poggiodomo (PG**	**0.13**	**235**	P	Pg	21 57 14.6	+0.6
T1217				S	Sg	21 57 17.2	+1.0
T1217				AML	AML		
	comp=E,6085µm,0.8s						
T1217				AML	AML		
	comp=N,7610µm,0.3s						
T1217				AML	AML		
	comp=E,5880µm,0.8s						
T1217				AML	AML		
	comp=N,7490µm,0.3s						
T1217				AML	AML		
	comp=E,5875µm,0.8s						
T1217				AML	AML		
	comp=N,7495µm,0.3s						
T1217				AML	AML		
	comp=N,7615µm,0.3s						
T1217				AML	AML		
	comp=N,7515µm,0.3s						
T1217				AML	AML		
	comp=E,5870µm,0.8s						
T1217				AML	AML		
	comp=E,4889µm,0.5s						
T1217				AML	AML		
	comp=N,6322µm,0.2s						
T1217				AML	AML		
	comp=E,5050µm,0.5s						
T1217				AML	AML		
	comp=N,6182µm,0.2s						
T1215	**Vallo di Nera,**	**0.15**	**277**	P	Pg	21 57 14.9	+0.5
T1215				S	Sg	21 57 17.6	+0.8
T1215				AML	AML		
	comp=E,5820µm,1.1s						
T1215				AML	AML		
	comp=N,7695µm,0.9s						
T1215				AML	AML		
	comp=E,5550µm,1.1s						
T1215				AML	AML		
	comp=N,7575µm,0.9s						
T1215				AML	AML		
	comp=E,5825µm,1.1s						
T1215				AML	AML		
	comp=N,7675µm,0.9s						
T1215				AML	AML		
	comp=N,6885µm,0.2s						
T1215				AML	AML		
	comp=E,5820µm,1.1s						
T1215				AML	AML		
	comp=N,7070µm,0.2s						
T1215				AML	AML		
	comp=N,7575µm,1.0s						
T1215				AML	AML		
	comp=N,7690µm,1.0s						
T1215				AML	AML		
	comp=E,5555µm,1.1s						
T1215				AML	AML		
	comp=E,3962µm,0.1s						
T1215				AML	AML		
	comp=N,6719µm,0.1s						
T1215				AML	AML		
	comp=N,5319µm,0.1s						
T1215				AML	AML		
	comp=E,4166µm,0.1s						
FEMA	**Monte Fema**	**0.18**	**355**	P	Pg	21 57 15.4	+0.5
FEMA				S	Sg	21 57 18.6	+0.9
FEMA				AML	AML		
	comp=E,19600µm,0.2s						
FEMA				AML	AML		
	comp=N,18000µm,0.3s						
FEMA				AML	AML		
	comp=E,19650µm,0.1s						
FEMA				AML	AML		
	comp=E,13608µm,0.2s						
FEMA				AML	AML		
	comp=N,13653µm,0.3s						
LNSS	**Leonessa**	**0.18**	**188**	P	Pg	21 57 15.5	+0.6
LNSS				S	Sg	21 57 18.9	+1.2
T1204	**Amatrice, Fraz**	**0.21**	**121**	P	Pg	21 57 16.1	+0.6
T1204				S	Sg	21 57 19.9	+1.5
T1204				AML	AML		
	comp=E,11550µm,0.3s						
T1204				AML	AML		
	comp=N,6860µm,1.1s						
T1204				AML	AML		
	comp=E,11600µm,0.3s						
T1204				AML	AML		
	comp=N,6865µm,1.1s						
T1204				AML	AML		
	comp=E,11576µm,0.3s						
T1204				AML	AML		
	comp=N,6571µm,0.3s						
MMO1	**Montemonaco**	**0.22**	**58**	P	Pg	21 57 16.0	+0.4
MMO1				S	Sg	21 57 19.7	+1.0
SMA1	**SAN MARTINO**	**0.25**	**128**	P	Pg	21 57 16.6	+0.6
SMA1				S	Sg	21 57 21.0	+1.5
AM05	**Amandola Campo**	**0.28**	**47**	P	Pg	21 57 17.2	+0.6
AM05				S	Sb	21 57 21.9	-1.1
T1243	**Rocca Santa Ma**	**0.29**	**108**	P	Pg	21 57 17.2	+0.3
T1243				S	Sb	21 57 22.1	-1.1
RM33	**Pellescritta (**	**0.29**	**159**	P	Pg	21 57 17.5	+0.6
RM33				S	Sb	21 57 22.2	-1.1
RM33				AML	AML		
	comp=E,2110µm,0.4s						
RM33				AML	AML		
	comp=N,3025µm,0.1s						
RM33				AML	AML		
	comp=E,2105µm,0.4s						
RM33				AML	AML		
	comp=N,3030µm,0.1s						
RM33				AML	AML		
	comp=E,2155µm,0.4s						
RM33				AML	AML		
	comp=N,3000µm,0.1s						
RM33				AML	AML		
	comp=E,2110µm,0.4s						
RM33				AML	AML		
	comp=N,3030µm,0.1s						
RM33				AML	AML		
	comp=N,3005µm,0.1s						
RM33				AML	AML		
	comp=E,1854µm,0.2s						
RM33				AML	AML		
	comp=E,1835µm,0.2s						
RM33				AML	AML		
	comp=N,3029µm,0.1s						
RM33				AML	AML		
	comp=N,3001µm,0.1s						
T1211	**Morro Reatino**	**0.30**	**213**	P	Pg	21 57 17.5	+0.5
T1211				S	Sb	21 57 22.5	-1.0
ARRO	**Arrone**	**0.31**	**228**	P	Pg	21 57 17.6	+0.5
ARRO				S	Sb	21 57 22.7	-0.8
GUMA	**Gualdo di Mace**	**0.34**	**35**	P	Pb	21 57 18.4	-0.6
GUMA				S	Sb	21 57 24.2	-0.4
CAMP	**Campotosto**	**0.35**	**135**	P	Pg	21 57 18.3	+0.4
CAMP				S	Sg	21 57 23.8	+1.1
SEF1	**Sefro**	**0.37**	**346**	P	Pg	21 57 18.7	+0.3
SEF1				S	Sb	21 57 24.6	-1.0
T1247	**Pizzolo (AQ)**	**0.38**	**154**	P	Pg	21 57 18.9	+0.4
ASSB	**Assisi San Ben**	**0.40**	**310**	P	Pg	21 57 19.3	+0.5
CESX	**Cesi**	**0.40**	**244**	P	Pg	21 57 19.2	+0.3
TERO	**Teramo**	**0.42**	**112**	P	Pg	21 57 19.4	+0.1
TERO				S	Sb	21 57 26.1	-0.9
TERO				AML	AML		
	comp=E,3870µm,0.4s						
TERO				AML	AML		
	comp=E,3740µm,0.3s						
TERO				AML	AML		
	comp=N,7795µm,0.5s						
TERO				AML	AML		
	comp=N,7510µm,0.5s						
TERO				AML	AML		
	comp=E,1880µm,0.3s						
TERO				AML	AML		
	comp=N,2374µm,0.5s						
MNTP	**Montappone**	**0.46**	**39**	P	Pb	21 57 20.8	-0.3
OFFI	**Offida**	**0.47**	**71**	P	Pb	21 57 21.4	0.0
OFFI				AML	AML		
	comp=E,3930µm,0.6s						
OFFI				AML	AML		
	comp=N,4540µm,0.4s						
AQU	**L'Aquila**	**0.49**	**150**	P	Pg	21 57 21.0	+0.4
GIGS	**Gran Sasso**	**0.50**	**132**	P	Pg	21 57 20.8	+0.1
GIGS				S	Sb	21 57 28.3	-0.8
GIGS				AML	AML		
	comp=E,401µm,0.5s						
GIGS				AML	AML		
	comp=N,364µm,0.5s						
GIGS				AML	AML		
	comp=E,400µm,0.5s						
GIGS				AML	AML		
	comp=N,365µm,0.5s						
GIGS				AML	AML		
	comp=E,400µm,0.5s						
GIGS				AML	AML		
	comp=N,365µm,0.5s						
GIGS				AML	AML		
	comp=E,348µm,0.6s						
ABTA	**Abfaltersbach**	**3.98**	**354**	*e*Pn	Pn	21 58 14.5	+2.4
	comp=E,7.1nm,0.5s						
WATA	**Walderalm**	**4.67**	**347**	*e*Pn	Pn	21 58 26.2	+4.6
	comp=E,1.8nm,0.3s						
CKRC	**Cesky Krumlov**	**6.10**	**8**	*e*SN	Sn	21 59 52.5	+1.6
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN	Pn	21 58 47.1	+2.4
KHC				*e*SN	Sn	22 00 00.6	+3.3

MAN 30 22:19:00.8, 14°.80N×119°.14E, h200km, mb4.1, ML2.9, MS2.5, 5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**1.51**	**134**	⇓*e*P	Pn	22 19 35.0	+0.4
LUBP				*e*S	Sn	22 20 00.2	-0.5
MACP	**Maragondon, Ca**	**1.62**	**109**	⇓*e*P	Pn	22 19 38.5	+3.0
MACP				*e*S	Sn	22 20 06.2	+3.8
SMPP	**San Manuel, Pa**	**2.00**	**48**	⇓*e*P	Pn	22 19 39.6	+0.3
SMPP				*e*S	Sn	22 20 09.5	+0.1
PCPH	**Palayan**	**2.04**	**68**	⇓*e*P	Pn	22 19 42.0	+2.4
PCPH				*e*S	Sn	22 20 13.7	+3.9
LQP	**Lukban**	**2.42**	**106**	⇓*e*P	Pn	22 19 42.0	-2.0
LQP				*e*S	Sn	22 20 13.7	-3.9

*IDC **30** 22:19:43.3±1.8, 42°.97N×13°.52E, h0km, mb3.4/1, mbtmp3.5/4, ML3.1/3, MS2.5/3, Error ellipse: s-maj=81.2km s-min=14.3km az=99.0*
*ROM **30** 22:19:43.1±0.1, 42°.912N±0°.003×13°.158E±0°.004, h8km, ML3.4/85, Error ellipse: s-maj=0.3km s-min=0.2km az=255.0*
*PRU **30** 22:19:47.1±0.0, 43°.11N×13°.48E, h0km*

ISC 30 22:19:43.9±0.8, 42°.92N±0°.01×13°.10E±0°.02, h9km±4km, n148, σ1s61/185, 42C-29D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.06**	**323**	P	**Pg**	**22 19 46.0**	**0.0**
FEMA				S	**Sg**	**22 19 47.7**	**+0.1**
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.06**	**246**	P	**Pg**	**22 19 46.1**	**+0.2**
T1216				S	**Sg**	**22 19 48.3**	**+0.8**
T1245	**Castelsantange**	**0.09**	**132**	P	**Pg**	**22 19 45.4**	**-1.0**
T1245				S	**Sg**	**22 19 46.6**	**-1.6**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.17**	**96**	⇑P	**Pg**	**22 19 46.5**	**-1.0**
AM05	**Amandola Campo**	**0.20**	**72**	P	**Pg**	**22 19 47.2**	**-0.8**
AM05				S	**Sg**	**22 19 49.9**	**-0.9**
AM05				AML	AML		
	comp=E,7435µm,0.6s						
AM05				AML	AML		
	comp=N,7040µm,0.8s						
AM05				AML	AML		
	comp=N,1490µm,0.1s						
AM05				AML	AML		
	comp=E,28250µm,0.6s						
AM05				AML	AML		
	comp=E,28200µm,0.6s						
AM05				AML	AML		
	comp=N,1485µm,0.1s						
T1215	**Vallo di Nera,**	**0.20**	**236**	P	**Pg**	**22 19 48.8**	**+0.7**
T1215				S	**Sg**	**22 19 52.8**	**+1.8**
T1215				AML	AML		
	comp=N,10205µm,0.9s						
T1215				AML	AML		
	comp=E,13050µm,0.4s						
T1215				AML	AML		
	comp=E,13500µm,0.4s						
T1215				AML	AML		
	comp=E,13000µm,0.4s						
T1215				AML	AML		
	comp=N,10185µm,0.9s						
T1215				AML	AML		
	comp=N,10845µm,1.0s						
T1215				AML	AML		
	comp=N,10185µm,1.1s						
T1215				AML	AML		
	comp=E,13550µm,0.4s						
GUMA	**Gualdo di Mace**	**0.23**	**50**	⇑P	**Pg**	**22 19 48.2**	**-0.4**
GUMA				S	**Sg**	**22 19 51.9**	**+0.2**
GUMA				AML	AML		
	comp=E,83200µm,0.6s						
GUMA				AML	AML		
	comp=N,62700µm,0.4s						
GUMA				AML	AML		
	comp=N,87300µm,0.4s						
GUMA				AML	AML		
	comp=E,91700µm,0.7s						
GUMA				AML	AML		
	comp=N,62700µm,0.4s						
GUMA				AML	AML		
	comp=N,87300µm,1.6s						
GUMA				AML	AML		
	comp=E,83200µm,0.6s						
T1217	**Poggiodomo (PG**	**0.24**	**211**	P	**Pg**	**22 19 49.2**	**+0.4**
T1217				AML	AML		
	comp=E,20750µm,0.6s						
T1217				AML	AML		
	comp=N,22500µm,0.7s						
T1217				AML	AML		
	comp=E,20700µm,0.6s						
T1217				AML	AML		
	comp=N,22400µm,0.7s						
T1217				AML	AML		
	comp=N,22000µm,0.7s						
T1217				AML	AML		
	comp=E,20700µm,0.6s						
T1217				AML	AML		
	comp=E,20300µm,0.6s						
T1217				AML	AML		
	comp=N,22450µm,0.7s						
T1241	**Roccafluvione,**	**0.25**	**104**	P	**Pg**	**22 19 48.2**	**-0.8**
T1241				AML	AML		
	comp=E,14000µm,1.4s						
T1241				AML	AML		
	comp=E,13400µm,0.6s						
T1241				AML	AML		
	comp=N,15350µm,0.8s						
T1241				AML	AML		
	comp=N,16050µm,0.8s						
T1241				AML	AML		
	comp=E,13350µm,0.6s						
T1241				AML	AML		
	comp=N,16100µm,0.8s						
T1241				AML	AML		
	comp=E,14050µm,1.4s						
T1241				AML	AML		
	comp=E,14050µm,0.6s						
SEF1	**Sefro**	**0.26**	**335**	P	**Pg**	**22 19 49.3**	**+0.3**
SEF1				S	**Sg**	**22 19 54.5**	**+2.0**
SEF1				AML	AML		
	comp=N,33150µm,0.2s						
SEF1				AML	AML		
	comp=E,34600µm,0.7s						
SEF1				AML	AML		
	comp=N,33100µm,0.2s						
MDAR	**Monte D'Aria**	**0.28**	**7**	P	**Pg**	**22 19 49.4**	**-0.2**
MDAR				S	**Sg**	**22 19 54.1**	**+0.8**
MDAR				AML	AML		
	comp=E,15450µm,0.6s						
MDAR				AML	AML		
	comp=N,20550µm,0.6s						
T1204	**Amatrice, Fraz**	**0.29**	**146**	⇓P	**Pg**	**22 19 49.2**	**-0.5**
T1204				AML	AML		
	comp=E,12245µm,0.8s						
T1204				AML	AML		
	comp=N,9855µm,1.5s						
T1204				AML	AML		
	comp=N,9880µm,1.5s						
T1204				AML	AML		
	comp=N,9880µm,0.5s						
T1204				AML	AML		
	comp=E,12250µm,0.8s						
LNSS	**Leonessa**	**0.32**	**188**	P	**Pg**	**22 19 50.2**	**0.0**
LNSS				S	**Sb**	**22 19 55.6**	**-1.4**
LNSS				AML	AML		
	comp=E,4515µm,1.3s						
LNSS				AML	AML		
	comp=N,14900µm,0.5s						
LNSS				AML	AML		
	comp=E,4515µm,0.7s						
GAG1	**Gagliole**	**0.32**	**356**	P	**Pg**	**22 19 50.4**	**+0.1**
GAG1				S	**Sb**	**22 19 56.2**	**-1.0**
SMA1	**SAN MARTINO**	**0.34**	**148**	⇓P	**Pg**	**22 19 49.9**	**-0.6**
SMA1				S	**Sg**	**22 19 55.1**	**+0.1**
SMA1				AML	AML		
	comp=E,13550µm,0.6s						
SMA1				AML	AML		
	comp=E,13600µm,0.6s						
SMA1				AML	AML		
	comp=N,14850µm,1.6s						
SMA1				AML	AML		
	comp=N,14850µm,0.4s						
T1243	**Rocca Santa Ma**	**0.34**	**130**	P	**Pg**	**22 19 49.7**	**-1.0**
T1243				S	**Sg**	**22 19 55.0**	**-0.1**
ASSB	**Assisi San Ben**	**0.34**	**292**	⇑P	**Pb**	**22 19 51.3**	**-0.9**
ASSB				S	**Sb**	**22 19 57.7**	**-0.1**
ASSB				AML	AML		
	comp=N,10980µm,0.5s						
ASSB				AML	AML		
	comp=E,17250µm,1.1s						
ASSB				AML	AML		
	comp=E,17250µm,0.9s						
MNTP	**Montappone**	**0.35**	**51**	P	**Pg**	**22 19 50.8**	**0.0**
MNTP				S	**Sg**	**22 19 57.2**	**+1.7**
MNTP				AML	AML		
	comp=E,32200µm,0.9s						
MNTP				AML	AML		
	comp=E,32250µm,0.9s						
MNTP				AML	AML		
	comp=N,25000µm,0.9s						
SNTG	**Esanatoglia**	**0.36**	**341**	P	**Pg**	**22 19 51.0**	**0.0**
SNTG				S	**Sb**	**22 19 57.2**	**-1.0**
SNTG				AML	AML		
	comp=E,9490µm,0.5s						
SNTG				AML	AML		
	comp=N,9740µm,1.4s						
SNTG				AML	AML		
	comp=N,9335µm,1.4s						
SNTG				AML	AML		
	comp=E,8920µm,0.5s						
SNTG				AML	AML		
	comp=E,9495µm,0.5s						
SNTG				AML	AML		
	comp=E,9495µm,1.5s						
SNTG				AML	AML		
	comp=N,9335µm,0.6s						
SNTG				AML	AML		
	comp=N,9740µm,0.6s						
SNTG				AML	AML		
	comp=E,8920µm,1.5s						
ARRO	**Arrone**	**0.42**	**216**	P	**Pb**	**22 19 52.3**	**-1.1**
ARRO				S	**Sb**	**22 20 00.4**	**+0.6**
ARRO				AML	AML		
	comp=E,5100µm,1.1s						
ARRO				AML	AML		
	comp=N,3215µm,0.7s						
ARRO				AML	AML		
	comp=E,5095µm,1.1s						
ARRO				AML	AML		
	comp=N,3215µm,1.3s						
ARRO				AML	AML		
	comp=E,5095µm,0.9s						
RM33	**Pellescritta (**	**0.42**	**168**	⇓P	**Pg**	**22 19 51.6**	**-0.4**
RM33				S	**Sg**	**22 19 58.4**	**+0.9**
RM33				AML	AML		
	comp=E,5275µm,1.5s						
RM33				AML	AML		
	comp=N,5795µm,1.5s						
RM33				AML	AML		
	comp=N,5640µm,1.5s						
RM33				AML	AML		
	comp=N,5645µm,1.5s						
RM33				AML	AML		
	comp=E,5220µm,1.5s						
RM33				AML	AML		
	comp=N,5795µm,1.5s						
RM33				AML	AML		
	comp=E,5270µm,1.5s						
RM33				AML	AML		
	comp=N,5795µm,0.5s						
T1211	**Morro Reatino**	**0.42**	**205**	⇓P	**Pb**	**22 19 52.6**	**-1.0**
T1211				S	**Sb**	**22 20 00.1**	**0.0**
T1211				AML	AML		
	comp=E,4630µm,1.5s						
T1211				AML	AML		
	comp=E,4560µm,1.5s						
T1211				AML	AML		
	comp=N,7885µm,0.8s						
T1211				AML	AML		
	comp=N,7995µm,0.8s						
T1211				AML	AML		
	comp=E,4630µm,1.5s						
T1211				AML	AML		
	comp=E,4555µm,1.5s						
T1211				AML	AML		
	comp=N,7890µm,0.8s						
T1211				AML	AML		
	comp=E,4555µm,0.5s						
T1211				AML	AML		
	comp=E,4630µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.43**	**309**	AML	AML		
	comp=N,14100µm,0.6s						
ATCC				AML	AML		
	comp=E,13250µm,1.6s						
OFFI	**Offida**	**0.43**	**87**	⇑P	**Pg**	**22 19 52.5**	**+0.2**
OFFI				AML	AML		
	comp=N,14800µm,0.6s						
OFFI				AML	AML		
	comp=E,11715µm,0.7s						
OFFI				AML	AML		
	comp=N,14800µm,1.4s						
OFFI				AML	AML		
	comp=E,11715µm,1.3s						
CAMP	**Campotosto**	**0.45**	**149**	⇓P	**Pg**	**22 19 51.7**	**-0.8**
CAMP				S	**Sg**	**22 19 58.5**	**+0.1**
CAMP				AML	AML		
	comp=N,4390µm,0.2s						
CAMP				AML	AML		
	comp=E,3285µm,1.0s						
FOSV	**Fossato di Vic**	**0.45**	**327**	⇓P	**Pb**	**22 19 52.9**	**-1.1**
FOSV				S	**Sb**	**22 20 02.0**	**+1.1**
FOSV				AML	AML		
	comp=E,10600µm,0.4s						
FOSV				AML	AML		
	comp=N,11050µm,0.5s						
FOSV				AML	AML		
	comp=E,10610µm,0.4s						
TERO	**Teramo**	**0.47**	**128**	P	**Pg**	**22 19 52.0**	**-1.1**
TERO				S	**Sg**	**22 19 59.3**	**-0.1**
TERO				AML	AML		
	comp=N,6400µm,0.9s						
TERO				AML	AML		
	comp=N,6560µm,0.9s						
TERO				AML	AML		
	comp=E,4885µm,0.7s						
TERO				AML	AML		
	comp=N,6405µm,0.9s						

TERO				AML	AML		
	comp=N,6405µm,1.1s						
TERO				AML	AML		
	comp=E,4665µm,0.7s						
TERO				AML	AML		
	comp=N,6560µm,1.1s						
CESX	**Cesi**	**0.49**	**231**	⇑P	**Pb**	**22 19 53.6**	**-1.0**
CESX				S	**Sb**	**22 20 01.9**	**0.0**
CESX				AML	AML		
	comp=E,6765µm,1.4s						
CESX				AML	AML		
	comp=N,5770µm,0.3s						
CESX				AML	AML		
	comp=E,6765µm,0.6s						
T1247	**Pizzolo (AQ)**	**0.50**	**163**	⇓P	**Pg**	**22 19 53.0**	**-0.6**
T1247				S	**Sg**	**22 20 00.9**	**+0.8**
T1247				AML	AML		
	comp=N,7620µm,0.5s						
T1247				AML	AML		
	comp=E,6920µm,1.2s						
T1247				AML	AML		
	comp=N,7620µm,1.5s						
T1247				AML	AML		
	comp=E,6920µm,0.8s						
MURB	**Monte Urbino**	**0.54**	**310**	P	**Pb**	**22 19 54.9**	**-0.7**
MURB				S	**Sb**	**22 20 06.0**	**+2.4**
MURB				AML	AML		
	comp=E,12650µm,0.2s						
MURB				AML	AML		
	comp=N,11100µm,1.5s						
MURB				AML	AML		
	comp=N,11100µm,1.5s						
MURB				AML	AML		
	comp=N,11900µm,0.3s						
MURB				AML	AML		
	comp=E,13155µm,0.2s						
MURB				AML	AML		
	comp=E,12700µm,0.2s						
MURB				AML	AML		
	comp=N,11100µm,0.5s						
GIGS	**Gran Sasso**	**0.58**	**143**	P	**Pg**	**22 19 53.9**	**-1.3**
GIGS				S	**Sg**	**22 20 02.7**	**-0.1**
GIGS				AML	AML		
	comp=N,910µm,0.8s						
GIGS				AML	AML		
	comp=E,1061µm,1.0s						
GIGS				AML	AML		
	comp=N,910µm,1.2s						
ARVD	**Arcevia**	**0.59**	**349**	⇑P	**Pg**	**22 19 55.1**	**-0.2**
ARVD				S	**Sb**	**22 20 06.0**	**+1.1**
ARVD				AML	AML		
	comp=N,2295µm,1.6s						
ARVD				AML	AML		
	comp=E,3265µm,1.6s						
ARVD				AML	AML		
	comp=E,3265µm,0.4s						
PP3	**Marolino**	**0.59**	**39**	⇑P	**Pg**	**22 19 55.0**	**-0.4**
PP3				S	**Sg**	**22 20 04.0**	**+0.8**
PP3				AML	AML		
	comp=E,11950µm,0.6s						
PP3				AML	AML		
	comp=E,11750µm,0.7s						
PP3				AML	AML		
	comp=N,16150µm,0.4s						
PP3				AML	AML		
	comp=E,11760µm,0.7s						
PP3				AML	AML		
	comp=N,16200µm,0.4s						
PP3				AML	AML		
	comp=E,11915µm,0.7s						
PP3				AML	AML		
	comp=N,16200µm,1.6s						
PP3				AML	AML		
	comp=N,16150µm,1.6s						
AQU	**L'Aquila**	**0.61**	**158**	P	**Pg**	**22 19 54.6**	**-1.0**
AQU				S	**Sg**	**22 20 04.2**	**+0.7**
AQU				AML	AML		
	comp=E,4180µm,1.2s						
AQU				AML	AML		
	comp=N,4940µm,1.2s						
AQU				AML	AML		
	comp=E,4155µm,1.2s						
AQU				AML	AML		
	comp=N,4945µm,1.2s						
AQU				AML	AML		
	comp=E,4175µm,1.2s						
AQU				AML	AML		
	comp=N,4795µm,1.1s						
AQU				AML	AML		
	comp=N,4945µm,0.8s						
TRTR	**Tortoreto Alta**	**0.61**	**100**	⇓P	**Pg**	**22 19 55.9**	**+0.2**
TRTR				AML	AML		
	comp=N,13650µm,0.6s						
TRTR				AML	AML		
	comp=E,10450µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.61**	**298**	⇑P	**Pb**	**22 19 56.0**	**-0.8**
ATTE				AML	AML		
	comp=N,2245µm,0.4s						
ATTE				AML	AML		
	comp=E,2215µm,0.5s						
FRON	**Frontone**	**0.66**	**336**	⇑P	**Pb**	**22 19 56.4**	**-1.1**
FRON				AML	AML		
	comp=E,3260µm,0.7s						
FRON				AML	AML		
	comp=N,4780µm,1.6s						
ATVO	**AVT- Monte Val**	**0.69**	**313**	⇓P	**Pb**	**22 19 57.2**	**-0.9**
ATVO				AML	AML		
	comp=E,2435µm,1.5s						
ATVO				AML	AML		
	comp=N,2710µm,0.3s						
MGAB	**Montegabbione**	**0.72**	**270**	⇑P	**Pn**	**22 19 58.3**	**-2.0**
MGAB				AML	AML		
	comp=E,3545µm,0.5s						
MGAB				AML	AML		
	comp=N,7840µm,0.5s						
MGAB				AML	AML		
	comp=E,4285µm,0.5s						
MGAB				AML	AML		
	comp=N,7510µm,0.6s						
AOI	**Ancona**	**0.73**	**30**	⇑P	**Pg**	**22 19 58.0**	**0.0**
AOI				S	**Sb**	**22 20 10.0**	**+1.0**
AOI				AML	AML		
	comp=N,4380µm,1.2s						
AOI				AML	AML		
	comp=N,4380µm,0.8s						
AOI				AML	AML		
	comp=E,2115µm,0.3s						
ATMI	**Monte Miggiano**	**0.74**	**305**	⇑P	**Pn**	**22 19 59.3**	**-1.2**
ATMI				AML	AML		
	comp=N,6070µm,0.8s						
ATMI				AML	AML		
	comp=E,5905µm,0.5s						
ATMI				AML	AML		
	comp=N,6075µm,0.8s						
ATMI				AML	AML		
	comp=N,6075µm,1.2s						
ATPI	**Pietralunga -**	**0.74**	**317**	⇓P	**Pb**	**22 19 58.1**	**-0.8**
ATPI				S	**Sn**	**22 20 12.0**	**+0.1**
ATPI				AML	AML		
	comp=N,2445µm,0.5s						
ATPI				AML	AML		
	comp=E,2885µm,0.6s						
ATPI				AML	AML		
	comp=N,2445µm,1.5s						
ATPI				AML	AML		
	comp=E,2885µm,1.4s						
FAGN	**Fagnano**	**0.74**	**151**	P	**Pg**	**22 19 57.0**	**-1.2**
FAGN				AML	AML		
	comp=N,3175µm,0.3s						
FAGN				AML	AML		
	comp=E,4495µm,0.5s						
PIEI	**Pieia**	**0.74**	**327**	⇑P	**Pb**	**22 19 58.0**	**-1.0**
PIEI				S	**Sn**	**22 20 11.0**	**-1.0**
PIEI				AML	AML		
	comp=E,2380µm,0.3s						
PIEI				AML	AML		
	comp=N,2075µm,1.3s						
MPAG	**Monte Paganucc**	**0.75**	**341**	⇑P	**Pb**	**22 19 58.3**	**-0.9**
MPAG				S	**Sn**	**22 20 12.0**	**-0.3**
MPAG				AML	AML		
	comp=N,2640µm,0.3s						
MPAG				AML	AML		
	comp=E,3835µm,0.7s						
MPAG				AML	AML		
	comp=E,3835µm,1.3s						
VCEL	**Villa Celiera**	**0.76**	**133**	⇓P	**Pg**	**22 19 57.4**	**-1.1**
VCEL				AML	AML		
	comp=N,4570µm,1.6s						
VCEL				AML	AML		
	comp=E,3375µm,0.5s						
VCEL				AML	AML		
	comp=N,4575µm,1.6s						
VCEL				AML	AML		
	comp=E,3375µm,1.5s						
VCEL				AML	AML		
	comp=N,4575µm,0.4s						
SRES	**S.Oreste - Sor**	**0.81**	**213**	⇑P	**Pb**	**22 19 59.1**	**-0.9**
SRES				AML	AML		
	comp=N,2285µm,0.6s						
SRES				AML	AML		
	comp=E,2470µm,0.9s						
SRES				AML	AML		
	comp=N,2285µm,1.4s						
FSSB	**Fossombrone**	**0.81**	**343**	⇓P	**Pb**	**22 19 59.4**	**-0.8**
FSSB				S	**Sn**	**22 20 13.0**	**-0.6**
FSSB				AML	AML		
	comp=N,8775µm,0.4s						
FSSB				AML	AML		
	comp=E,5790µm,0.3s						
T0110	**Collepietro**	**0.85**	**144**	⇓P	**Pg**	**22 19 58.7**	**-1.6**
T0110				AML	AML		
	comp=E,3740µm,0.7s						
T0110				AML	AML		
	comp=N,3070µm,0.7s						
T0110				AML	AML		
	comp=N,3070µm,1.3s						
BADI	**Badiali**	**0.86**	**314**	⇑P	**Pb**	**22 20 00.5**	**-0.5**
SACS	**San Casciano d**	**0.88**	**266**	⇑P	**Pn**	**22 20 01.1**	**-1.4**
SACS				AML	AML		
	comp=N,2350µm,1.0s						
SACS				AML	AML		
	comp=E,2005µm,0.9s						
SACS				AML	AML		
	comp=N,2355µm,1.0s						
SACS				AML	AML		
	comp=N,2305µm,1.0s						
SACS				AML	AML		
	comp=E,2060µm,0.9s						
PE3	**Peglio**	**0.89**	**331**	⇓P	**Pn**	**22 20 01.7**	**-0.9**
PE3				AML	AML		
	comp=E,15µm,0.3s						
PE3				AML	AML		
	comp=N,16µm,1.0s						
PE3				AML	AML		
	comp=N,16µm,1.0s						
PE3				AML	AML		
	comp=E,15µm,0.3s						
PE3				AML	AML		
	comp=N,16µm,1.0s						
PE3				AML	AML		
	comp=E,15µm,1.7s						
CAFI	**Castiglion Fio**	**0.93**	**297**	⇑P	**Pn**	**22 20 01.8**	**-1.3**
CAFI				AML	AML		
	comp=E,2190µm,1.6s						
CAFI				AML	AML		
	comp=N,1525µm,0.6s						
CAFI				AML	AML		
	comp=E,2190µm,0.4s						
MTCE	**Montecelio**	**0.93**	**196**	P	**Pg**	**22 20 00.9**	**-0.8**
MTCE				AML	AML		
	comp=E,2005µm,1.6s						
MTCE				AML	AML		
	comp=N,1215µm,1.1s						
MTCE				AML	AML		
	comp=N,1215µm,0.9s						
CERT	**Cerreto**	**0.97**	**185**	P	**Pg**	**22 20 01.3**	**-1.3**
CERT				AML	AML		
	comp=N,1370µm,0.5s						
CERT				AML	AML		
	comp=E,2935µm,0.6s						
LATE	**Laterza**	**1.00**	**253**	⇑P	**Pn**	**22 20 04.6**	**+0.5**
CPGN	**Carpegna, Ital**	**1.05**	**328**	⇓P	**Pn**	**22 20 04.8**	**-0.1**
MCIV	**Monte Civitell**	**1.05**	**263**	⇑P	**Pn**	**22 20 04.9**	**+0.1**
MCIV				AML	AML		
	comp=E,794µm,0.4s						
MCIV				AML	AML		
	comp=N,890µm,0.8s						
SF04	**Casetta**	**1.06**	**266**	⇓P	**Pn**	**22 20 05.7**	**+0.8**
CRE	**Caprese Michel**	**1.09**	**310**	P	**Pn**	**22 20 05.0**	**-0.4**
CRE				AML	AML		
	comp=N,1190µm,0.6s						
CRE				AML	AML		
	comp=N,1190µm,1.4s						
CRE				AML	AML		
	comp=E,801µm,0.8s						
SF01	**Poggio Pratacc**	**1.13**	**265**	P	**Pn**	**22 20 06.3**	**+0.4**
SF01				AML	AML		
	comp=E,1133µm,1.0s						
SF01				AML	AML		
	comp=N,1302µm,1.1s						
RMP	**Rome, Mte Porz**	**1.14**	**195**	⇑P	**Pn**	**22 20 07.0**	**+1.0**
RMP				AML	AML		
	comp=E,1805µm,0.7s						
RMP				AML	AML		
	comp=N,1795µm,1.1s						
CAFR	**Castel Frentan**	**1.15**	**126**	⇑P	**Pn**	**22 20 07.7**	**+1.6**
CAFR				AML	AML		
	comp=E,1045µm,0.9s						
CAFR				AML	AML		
	comp=N,1080µm,0.7s						
CAFR				AML	AML		
	comp=E,1045µm,1.1s						
TOLF	**Tolfa**	**1.18**	**224**	⇑P	**Pn**	**22 20 06.8**	**+0.3**
TOLF				AML	AML		
	comp=E,879µm,1.2s						
TOLF				AML	AML		
	comp=N,1060µm,1.6s						
TOLF				AML	AML		
	comp=N,1060µm,0.4s						
TOLF				AML	AML		
	comp=E,879µm,0.8s						
LPEL	**Lama dei Pelig**	**1.18**	**137**	⇑P	**Pg**	**22 20 05.1**	**-1.5**
LPEL				S	**Sg**	**22 20 23.0**	**+1.0**
LPEL				AML	AML		
	comp=N,888µm,1.1s						
LPEL				AML	AML		
	comp=E,1550µm,0.8s						
ARCI	**Arcidosso**	**1.19**	**267**	⇑P	**Pn**	**22 20 07.5**	**+0.7**
ARCI				AML	AML		
	comp=N,306µm,1.0s						
ARCI				AML	AML		
	comp=E,338µm,0.9s						
ARCI				AML	AML		
	comp=E,338µm,1.1s						
ARCI				AML	AML		
	comp=N,306µm,1.0s						
SAMA	**S.Maria delle**	**1.20**	**198**	S	**Sn**	**22 20 23.0**	**0.0**
ASQU	**Asqua**	**1.30**	**313**	⇑P	**Pn**	**22 20 08.9**	**+0.7**
ASQU				AML	AML		
	comp=E,874µm,0.5s						
ASQU				AML	AML		
	comp=E,874µm,1.5s						
ASQU				AML	AML		
	comp=N,626µm,0.6s						
LRP	**Arpino**	**1.32**	**164**	⇑P	**Pb**	**22 20 10.0**	**+1.2**
LRP				AML	AML		
	comp=E,620µm,0.9s						
LRP				AML	AML		
	comp=N,954µm,0.9s						
LRP				AML	AML		
	comp=E,620µm,1.1s						
GIUL	**Giuliano Di Ro**	**1.36**	**175**	⇑P	**Pg**	**22 20 10.4**	**+0.4**
GIUL				AML	AML		
	comp=E,609µm,1.1s						
GIUL				AML	AML		
	comp=N,926µm,1.0s						
GIUL				AML	AML		
	comp=N,926µm,1.0s						
GIUL				AML	AML		
	comp=E,609µm,0.9s						
LATB	**Latina**	**1.43**	**184**	⇓P	**Pg**	**22 20 10.6**	**-0.6**
LATB				AML	AML		
	comp=E,296µm,1.0s						
LATB				AML	AML		
	comp=N,214µm,1.5s						
LATB				AML	AML		
	comp=E,296µm,1.0s						
CSNT	**Castellina Chi**	**1.43**	**293**	P	**Pg**	**22 20 10.8**	**-0.6**
CSNT				AML	AML		
	comp=E,394µm,0.6s						
CSNT				AML	AML		
	comp=N,467µm,0.7s						
FROS	**Frosini**	**1.45**	**282**	⇓P	**Pg**	**22 20 11.7**	**0.0**
FROS				AML	AML		
	comp=E,676µm,1.6s						
FROS				AML	AML		
	comp=N,515µm,0.8s						
FROS				AML	AML		
	comp=E,676µm,0.4s						
RUFI	**Rufina**	**1.48**	**309**	⇑P	**Pg**	**22 20 12.3**	**0.0**
CERA	**Filignano**	**1.48**	**152**	⇑P	**Pg**	**22 20 12.6**	**+0.2**
CERA				AML	AML		
	comp=E,1006µm,1.2s						
CERA				AML	AML		
	comp=E,1029µm,1.2s						
CERA				AML	AML		
	comp=N,754µm,1.6s						
CERA				AML	AML		
	comp=N,750µm,1.6s						
CERA				AML	AML		
	comp=N,754µm,0.4s						
CERA				AML	AML		
	comp=N,750µm,0.4s						
CERA				AML	AML		
	comp=E,1029µm,0.8s						
CERA				AML	AML		
	comp=E,1006µm,0.8s						
TRIV	**Trivento**	**1.57**	**136**	⇓P	**Pb**	**22 20 13.5**	**+0.3**
TRIV				AML	AML		
	comp=E,890µm,0.8s						
TRIV				AML	AML		
	comp=E,890µm,1.2s						
TRIV				AML	AML		
	comp=N,912µm,0.9s						
TRIF	**Trifonti**	**1.62**	**278**	⇑P	**Pg**	**22 20 14.0**	**-1.0**
TRIF				AML	AML		
	comp=E,329µm,0.8s						
TRIF				AML	AML		
	comp=N,348µm,0.5s						
TRIF				AML	AML		
	comp=E,329µm,1.2s						
CASP	**Castiglione de**	**1.65**	**266**	⇑P	**Pg**	**22 20 13.3**	**-2.1**
CASP				AML	AML		
	comp=N,142µm,1.2s						
CASP				AML	AML		
	comp=E,130µm,1.6s						
CASP				AML	AML		
	comp=N,142µm,0.8s						
CASP				AML	AML		
	comp=E,130µm,0.4s						
BRIS	**BRISIGHELLA**	**1.69**	**317**	⇑P	**Pg**	**22 20 16.7**	**+0.4**
BRIS				AML	AML		
	comp=N,917µm,1.6s						
BRIS				AML	AML		
	comp=N,917µm,0.4s						
BRIS				AML	AML		
	comp=E,796µm,0.7s						
VAGA	**Valle Agricola**	**1.72**	**150**	⇓P	**Pg**	**22 20 17.3**	**+0.4**
MTCR	**Monte La Croce**	**1.89**	**307**	P	**Pb**	**22 20 17.5**	**-1.1**
MTCR				AML	AML		
	comp=E,500µm,0.9s						
MTCR				AML	AML		
	comp=N,618µm,1.1s						
MTCR				AML	AML		
	comp=N,618µm,0.9s						
MELA	**Melanico ??? S**	**1.93**	**128**	⇓P	**Pn**	**22 20 17.7**	**+0.8**
MELA				AML	AML		
	comp=N,944µm,0.8s						
MELA				AML	AML		
	comp=E,960µm,0.7s						
BRJN	**Brijuni**	**2.04**	**13**	⇓P	**Pn**	**22 20 19.7**	**+1.3**
CEY	**Cerknica**	**2.98**	**18**	*e*Pn	**Pn**	**22 20 30.5**	**-0.8**
PGF	**Pioggiola**	**3.04**	**264**	⇓P	**Pb**	**22 20 34.5**	**-3.7**
PGF				AML	AML		
	comp=E,24µm,1.4s						
PGF				AML	AML		
	comp=N,18µm,1.3s						
PGF				AML	AML		
	comp=N,18µm,0.7s						
PGF				AML	AML		
	comp=E,24µm,0.6s						
SABO	**M.te Sabotino**	**3.08**	**7**	⇑P	**Pn**	**22 20 33.0**	**+0.2**
SABO				AML	AML		
	comp=N,498µm,0.6s						
SABO				AML	AML		
	comp=E,372µm,0.7s						
SABO				AML	AML		
	comp=N,1870µm,0.6s						
SABO				AML	AML		
	comp=E,1670µm,0.7s						
SABO				AML	AML		
	comp=N,498µm,1.4s						
SABO				AML	AML		
	comp=N,1870µm,1.4s						
ROVR	**Rover Verones**	**3.09**	**333**	⇓P	**Pn**	**22 20 35.3**	**+2.3**
ROVR				AML	AML		
	comp=E,69µm,0.9s						
ROVR				AML	AML		
	comp=N,105µm,0.8s						
ROVR				AML	AML		
	comp=E,69µm,1.1s						
ROVR				AML	AML		
	comp=N,105µm,1.2s						
CGRP	**Cima Grappa**	**3.10**	**343**	⇓P	**Pn**	**22 20 35.6**	**+2.4**
CGRP				AML	AML		
	comp=N,378µm,0.8s						
CGRP				AML	AML		
	comp=E,452µm,0.6s						
SRKY	**Kupres RS**	**3.18**	**67**	*e*Pn	**Pn**	**22 20 35.5**	**+1.4**
MGRS	**Mrkonjic Grad**	**3.26**	**61**	*e*Pn	**Pn**	**22 20 36.7**	**+1.6**
SALO	**Salr**	**3.27**	**327**	⇓P	**Pn**	**22 20 37.8**	**+2.4**
SALO				AML	AML		
	comp=N,317µm,1.0s						
SALO				AML	AML		
	comp=E,250µm,0.7s						
SALO				AML	AML		
	comp=E,250µm,1.3s						
LJU	**Ljubljana**	**3.29**	**18**	⇑P	**Pn**	**22 20 36.4**	**+0.9**
LJU				AML	AML		
	comp=E,1670µm,0.7s						
LJU				AML	AML		
	comp=N,1210µm,0.7s						
CTI	**Castel Tesino**	**3.30**	**342**	P	**Pn**	**22 20 37.7**	**+2.0**
CTI				AML	AML		
	comp=N,212µm,0.4s						
CTI				AML	AML		
	comp=E,172µm,0.6s						
CTI				AML	AML		
	comp=E,172µm,1.4s						
PRIJ	**Prijedor**	**3.33**	**51**	*e*Pn	**Pg**	**22 20 46.3**	**-1.3**
STAL	**STALIGIAL**	**3.35**	**355**	⇓P	**Pn**	**22 20 37.5**	**+1.0**
STAL				AML	AML		
	comp=N,230µm,0.9s						
STAL				AML	AML		
	comp=E,274µm,0.4s						
STON	**Ston**	**3.38**	**89**	*e*Pn	**Pn**	**22 20 35.7**	**-1.1**
STON	**Ston**	**3.38**	**89**	⇑P	**Pn**	**22 20 36.0**	**-0.8**
STON				AML	AML		
	comp=E,63µm,1.0s						
STON				AML	AML		
	comp=N,71µm,0.8s						
LUSI	**Trento, Gardas**	**3.41**	**334**	⇓P	**Pn**	**22 20 39.3**	**+2.0**
LUSI				AML	AML		
	comp=E,142µm,0.8s						
LUSI				AML	AML		
	comp=N,202µm,0.3s						
CIMO	**Cimolais**	**3.42**	**352**	⇓P	**Pn**	**22 20 38.5**	**+1.0**
CIMO				AML	AML		
	comp=E,85µm,0.7s						
CIMO				AML	AML		
	comp=N,82µm,0.7s						
CIMO				AML	AML		
	comp=N,83µm,0.7s						
CIMO				AML	AML		
	comp=E,86µm,0.7s						
A051A	**Mrakovica**	**3.46**	**51**	*e*Pn	**Pn**	**22 20 42.6**	**+4.7**
BLY	**Banja Luka**	**3.48**	**57**	*e*Pn	**Pb**	**22 20 44.8**	**-0.8**
ZOU	**Zoufplan**	**3.64**	**359**	⇑P	**Pn**	**22 20 41.2**	**+0.6**
ZOU				AML	AML		
	comp=E,338µm,1.0s						
ZOU				AML	AML		
	comp=N,202µm,1.4s						
ZOU				AML	AML		
	comp=N,202µm,1.4s						
ZOU				AML	AML		
	comp=E,344µm,0.9s						
ZOU				AML	AML		
	comp=N,202µm,0.6s						
MABI	**Malga Bissina**	**3.64**	**330**	⇑P	**Pn**	**22 20 43.0**	**+2.4**
MABI				AML	AML		
	comp=E,53µm,1.6s						

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MABI                                    AML     AML
        comp=N,65μm,1.5s
MABI                                    AML     AML
        comp=E,53μm,0.4s
ACOM  Acomizza, Ital     3.64   5 ⇑P     Pn      22 20 41.7 +1.1
ACOM                                    AML     AML
        comp=N,240μm,1.2s
ACOM                                    AML     AML
        comp=E,220μm,1.0s
ACOM                                    AML     AML
        comp=E,254μm,1.1s
ACOM                                    AML     AML
        comp=N,216μm,1.1s
ACOM                                    AML     AML
        comp=N,240μm,0.8s
EUCT  Pavia              3.66 310 S      Sg      22 21 43.0 +1.7
MYKA  Terra Mystica      3.73   6 Pn     Pn      22 20 43.2 +1.5
        comp=N,9.0nm,0.4s,SNR=5.9
OBKA  Obir               3.74  16 ePn    Pn      22 20 45.5 +3.7
OBKA  Obir               3.74  16 ePn    Pn      22 20 43.0 +1.2
        comp=N,1.6nm,0.2s
KOSI  Kohlern            3.75 342 ⇑P     Pn      22 20 43.9 +1.8
KOSI                                    AML     AML
        comp=E,220μm,1.6s
KOSI                                    AML     AML
        comp=N,205μm,1.6s
KOSI                                    AML     AML
        comp=N,205μm,0.4s
KOSI                                    AML     AML
        comp=E,220μm,0.4s
ABTA  Abfaltersbach      3.85 354 Pn     Pn      22 20 44.8 +1.4
        comp=E,18nm,0.4s,SNR=26
ABTA                                    eSn     Sn      22 21 29.7 +0.9
        comp=E,47nm,0.8s
TREB  Trebinje           3.87  91 ePn    Pn      22 20 43.7 +0.2
BRY   Bratogost          4.00  88 ePn    Pn      22 20 49.5 +4.1
SOKA  Soboth             4.01  19 ePn    Pn      22 20 49.9 +4.4
        comp=E,2.9nm,0.4s
HCY   Herceg Novi        4.01  95 ePn    Pn      22 20 45.5 +0.1
CET2  Cetraro            4.01 147 S      Sb      22 21 46.0 +2.6
RISI  Rein               4.10 350 ⇑P     Pn      22 20 49.7 +2.9
RISI                                    AML     AML
        comp=N,361μm,0.5s
RISI                                    AML     AML
        comp=E,438μm,0.5s
KOGS  Kog                4.19  31 P      Pb      22 20 57.1 -0.5
ROSI  Rosskopf           4.19 344 ⇑P     Pn      22 20 49.9 +1.8
ROSI                                    AML     AML
        comp=E,268μm,1.4s
ROSI                                    AML     AML
        comp=N,262μm,0.5s
ROSI                                    AML     AML
        comp=N,262μm,1.5s
ROSI                                    AML     AML
        comp=E,268μm,0.6s
HAPS  Han Pijesak,Bl     4.42  73 ePn    Pn      22 20 52.4 +1.3
FETA  Feichten           4.43 339 Pn     Pn      22 20 54.1 +2.6
        comp=E,5.0nm,0.4s,SNR=11
FETA                                    eSn     Sn      22 21 45.5 +2.3
        comp=E,9.2nm,0.4s
WTTA  Wattenberg         4.47 347 Pn     Pn      22 20 54.4 +2.5
        comp=E,1.5nm,0.2s,SNR=6.2
DAVOX Davos/Dischmat     4.49 330 LR     LR      22 23 10.7
        comp=E,45nm,18.6s,baz=70,slow=45
SQTA  Sankt Quirin       4.51 343 Pn     Pn      22 20 54.5 +2.1
        comp=E,12nm,0.3s,SNR=19
WATA  Walderalm          4.55 347 Pn     Pn      22 20 55.7 +2.7
        comp=E,11nm,0.5s,SNR=14
DRME  Dracevica, Mon     4.56  97 ePn    Pn      22 20 52.8 -0.1
RUDO  Rudo               4.63  79 ePn    Pn      22 20 54.6 +0.6
MOTA  Moosalm            4.65 343 Pn     Pn      22 20 57.3 +2.9
        comp=E,9.1nm,0.8s,SNR=8.4
ARSA  Arzberg            4.66  21 ePn    Pn      22 20 55.7 +1.2
        comp=E,2.1nm,0.4s
ARSA                                    eSn     Sn      22 21 47.5 -1.1
        comp=E,3.6nm,0.4s
BBLS  Lazi&#263;i        4.69  76 ePn    Pn      22 20 55.7 +0.8
BIOA  Bad Ischl, Aus     4.79   4 Pn     Pn      22 20 57.7 +1.5
        comp=E,19nm,0.4s,SNR=28
RETA  Reutte             4.86 341 Pn     Pn      22 20 59.9 +2.7
        comp=E,7.6nm,0.4s,SNR=18
DAVA  Damuels            4.93 334 ePn    Pn      22 21 01.5 +3.3
        comp=E,7.1nm,0.4s
MOA   Molln              5.00   9 i Pn   Pn      22 21 00.3 +1.3
        comp=E,2.2nm,0.3s,SNR=8.7
DIVS  Divibare           5.15  74 ePn    Pn      22 21 00.6 -0.6
RONA  Rosalia, Austr     5.29  24 ePn    Pn      22 21 04.3 +1.3
        comp=E,0.8nm,0.2s
CONA  Conrad Observa     5.38  20 i Pn   Pn      22 21 05.1 +0.8
        comp=E,0.8nm,0.2s,SNR=6.5
GERES GERESS Array B     5.95   4 Pn     Pn      22 21 12.0 -0.1
        comp=E,0.8nm,0.3s,baz=177,slow=14,SNR=14
GERES                                   Sn      Sn      22 22 19.3 -1.0
        comp=E,2.2nm,0.3s,baz=177,slow=23,SNR=9.0
        comp=E,0.8nm,0.3s
CKRC  Cesky Krumlov      5.96   8 ePN    Pn      22 21 13.4 +1.1
CKRC                                    eSN     Sn      22 22 17.9 -2.8
KHC   Kasperske Hory     6.22   3 ePN    Pn      22 21 15.9  0.0
KHC                                     eSN     Sn      22 22 23.8 -3.3
KRUC  Moravsky           6.56  19 ePN    Pn      22 21 24.2 +3.7
VRAC  Vranov             6.84  20 LR     LR      22 23 48.6
        comp=E,17nm,18.6s,baz=181,slow=37
PRU   Pruhonice          7.14   8 eSN    Sn      22 22 45.1 -4.6
NKC   Novy Kostel        7.33 357 eSN    Sn      22 22 50.4 -4.0
KEST  Kesra              7.74 203 Pn     Pn      22 21 41.3 +4.6
        comp=E,0.3nm,0.3s,baz=356,slow=6.7,SNR=7.2
        comp=E,2.1nm,0.6s
CLL   Collm              8.39 360 ePn    Pn      22 21 45.0 -0.6
CLL                                     eSn     Sn      22 23 15.0 -5.4
CLL                                     ex      x       22 23 45.0
CLL                                     ex      x       22 23 58.0
CLL                                     eSg     Sg      22 24 07.0 -6.1
        comp=Z,9.0nm,0.9s
MLR   Muntele Rosu       9.58  70 LR     LR      22 26 24.9
        comp=Z,63nm,18.5s,baz=269,slow=43
FINES FINESS Array B    20.12  18 P      P       22 24 18.4 +0.7
        comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=2.6
        comp=Z,2.7nm,0.9s
TORD  Torodi Ar. Bea    31.26 202 P      P       22 26 05.4 +1.5
        comp=Z,0.3nm,0.5s,baz=15,slow=8.9,SNR=5.9
        comp=Z,0.3nm,0.5s
```

*TRN **30** 22:26:26.3, 10˚.69N×62˚.37W, h61km, MD3.6*
*FUNV **30** 22:26:27.6, 10˚.71N×62˚.33W, h27km, MW3.6*

ISC 30 22:26:25.7±1.4, 10˚.68N±0˚.06×62˚.33W±0˚.05, h86km±14km, n29, σ1°45/44, Near coast of Venezuela

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Code  Station Name       Δ°   AZ°  Phase ID        Time        Res
                                  Op    ISC       h m s       ISC
CRUV  Carupano           0.89 270  eP    Pn        22 26 44.2 +0.4
CRUV                               eS    Sn        22 26 56.1 -1.3
TRN   Trinidad (W)       0.91  92  eP    Pn        22 26 45.1 +1.1
TRN                                eS    Sn        22 26 57.3 -0.5
GRFF  Grenada Fort F     1.48  23  eP    Pn        22 26 50.7 -0.4
GRFF                               eS    Sn        22 27 08.7 -1.6
COAV  Cumanacoa          1.56 251  eP    Pn        22 26 53.9 +1.8
COAV                               eS    Sn        22 27 12.5 +0.3
GRGR  Grenville          1.59  25  eP    Pn        22 26 52.4 -0.1
GRGR                               eS    Sn        22 27 12.1 -0.7
CUMV  Cumana_UDO         1.85 262  eP    Pn        22 26 57.6 +1.9
CUMV                               eS    Sn        22 27 19.2 +0.6
TOSP  Speyside           1.87  71  eP    Pn        22 26 55.6 -0.4
TOSP                               eS    Sn        22 27 19.0 -0.1
GCMP  Grenada, Carri     2.00  26  eP    Pn        22 26 58.1 +0.3
GCMP                               eS    Sn        22 27 21.4 -0.9
PCRV  Puerto La Cruz     2.32 258  eP    Pn        22 27 03.3 +1.2
PCRV                               eS    Sn        22 27 29.4 -0.6
SVB   Belmont            2.79  22  eP    Pn        22 27 09.3 +1.0
SVB                                eS    Sn        22 27 40.6 -0.5
PRGV  PARIAGUAN          2.97 230  eP    Pn        22 27 11.7 +0.9
PRGV                               eS    Sn        22 27 45.3 -0.2
MCLT  Moule a Chique     3.31  24  eP    Pn        22 27 15.8 +0.5
MCLT                               eS    Sn        22 27 52.1 -1.5
SLB   Belfond            3.38  22  eP    Pn        22 27 17.4 +1.1
SLB                                eS    Sn        22 27 54.7 -0.6
SLCP  Castries, St.      3.56  21  eS    Sn        22 27 59.8 +0.1
SLBI  Saint Lucia, B     3.58  22  eP    Pn        22 27 19.8 +0.8
SLBI                               eS    Sn        22 27 58.8 -1.4
BIM   Bigot              4.01  18  eP    Pn        22 27 26.0 +1.1
MPOM  Morne Pois Mar     4.01  21  eP    Pn        22 27 25.0 +0.2
MPOM  Morne Pois Mar     4.01  21  eS    Sn        22 28 10.1 -0.6
MERV  Las Mercedes       4.16 250  eP    Pn        22 27 28.2 +1.4
MERV                               eS    Sn        22 28 12.9 -1.4
FDF   Fort de France     4.19  16  eP    Pn        22 27 29.2 +1.8
PML   Morne Lenard       4.23  15  eP    Pn        22 27 29.7 +1.9
CXM   Morne La Croix     4.26  15  eP    Pn        22 27 19.5 -8.9
BAMF  Morne Balai        4.27  16  eP    Pn        22 27 31.9 +3.4
MAGL  Barre de l'ile     5.34  11  eP    Pn        22 27 44.8 +1.8
TURV  Turiamo            5.42 268  eP    Pn        22 27 44.7 +0.7
BAUV  El Baul            5.89 253  eP    Pn        22 27 50.7 +0.3
BAUV  El Baul            5.89 253  eS    Sn        22 28 53.7 -2.8
BAUV  El Baul            5.89 253  eP    Pn        22 27 50.6 +0.2
BAUV                               eS    Sn        22 28 51.7 -4.8
MAPV  Macapo             6.09 263  eP    Pn        22 27 53.5 +0.3
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KRSC 30 22:29:04.8±2.1, 49˚.42N×156˚.94E, h48km±38km, ML4.1, Kuril Islands

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Code  Station Name       Δ°   AZ°  Phase ID        Time        Res
                                  Op    ISC       h m s       ISC
SKR   Severo-Kuril's     1.37 338  P     Pn        22 29 27.7 +0.2
SKR                                S     Sn        22 29 44.3 -0.2
PAU   Pauzhetka          2.05 358  P     Pn        22 29 38.8 +2.0
PAU                                S     Sn        22 30 03.2 +2.0
KDTR  Khodutka, Kamc     2.50  16  P     Pn        22 29 46.7 +3.8
KDTR                               S     Sn        22 30 16.8 +4.6
ASAK  Asacha             3.03  11  P     Pn        22 29 54.2 +3.9
ASAK                               S     Sn        22 30 31.0 +5.6
MTVR  Mutnovka           3.17  14  P     Pn        22 29 56.2 +4.0
MTVR                               S     Sn        22 30 33.6 +4.8
RUS   Russkaya           3.18  18  P     Pn        22 29 55.5 +3.3
RUS                                S     Sn        22 30 32.2 +3.4
GRL   Gorelyy            3.22  12  P     Pn        22 29 56.8 +3.9
GRL                                S     Sn        22 30 35.1 +5.1
DALK  Dalny              3.79  17  S     Sn        22 30 48.9 +5.0
UGLR  Uglovaya           3.98  17  P     Pn        22 30 07.3 +4.0
AVH   Avacha             4.01  16  P     Pn        22 30 08.5 +4.7
KOK   Koryaka            4.02  15  P     Pn        22 30 08.0 +4.1
SMAR  Somma              4.02  16  P     Pn        22 30 08.1 +4.1
KRER  Koryakskii         4.05  16  P     Pn        22 30 08.8 +4.4
SDLR  Sedlovina          4.05  17  P     Pn        22 30 07.8 +3.4
KRX   Arik               4.09  15  P     Pn        22 30 08.7 +3.8
SPN   Mys Shipunski      4.16  27  S     Sn        22 30 59.0 +6.0
GNL   Ganaly             4.33   8  P     Pn        22 30 10.2 +2.1
MKZ   Mys Kozlova        5.93  28  P     Pn        22 30 32.7 +2.7
MKZ                                S     Sn        22 31 38.9 +2.3
TUMR  Tumrok             6.19  17  P     Pn        22 30 38.7 +5.0
```

*IDC **30** 22:44:15.7±2.5, 42˚.96N×14˚.09E, h0km, mb3.1/1, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=75.6km s-min=15.5km az=97.0*
*ROM **30** 22:44:16.8±0.1, 42˚.902N±0˚.004×13˚.198E±0˚.004, h8km, ML3.0/50, Error ellipse: s-maj=0.3km s-min=0.3km az=111.0*
*PRU **30** 22:44:18.6±0.0, 42˚.97N×13˚.72E, h0km*

ISC 30 22:44:17.6±0.8, 42˚.91N±0˚.02×13˚.17E±0˚.02, h6km±5km, n82, σ1°39/116, 29C-19D, Central Italy

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Code  Station Name       Δ°   AZ°  Phase ID        Time        Res
                                  Op    ISC       h m s       ISC
T1245 Castelsantange     0.05 165  P     Pg        22 44 18.9 -0.3
T1245                              S     Sg        22 44 20.2 -0.1
FEMA  Monte Fema         0.11 303  P     Pg        22 44 20.0  0.0
FEMA                               S     Sg        22 44 22.5 +0.9
T1216 Preci, Frazion     0.11 263  P     Pg        22 44 20.3 +0.3
T1216                              S     Sg        22 44 22.8 +1.2
MMO1  Montemonaco        0.12  93 ⇑P    Pg        22 44 19.4 -0.6
MMO1                               S     Sg        22 44 21.1 -0.7
AM05  Amandola Campo     0.15  61 ⇑P    Pg        22 44 20.2 -0.5
AM05                               S     Sg        22 44 22.6 -0.2
AM05                               AML   AML
        comp=E,4500μm,1.4s
AM05                               AML   AML
        comp=N,4710μm,0.7s
AM05                               AML   AML
        comp=E,4495μm,1.4s
AM05                               AML   AML
        comp=E,17300μm,1.4s
AM05                               AML   AML
        comp=N,4710μm,1.3s
AM05                               AML   AML
        comp=N,1205μm,0.8s
AM05                               AML   AML
        comp=E,4500μm,0.6s
AM05                               AML   AML
        comp=E,17300μm,0.6s
T1241 Roccafluvione,     0.20 104 ⇑P    Pg        22 44 21.3 -0.2
T1241                              S     Sg        22 44 24.4 +0.2
T1241                              AML   AML
        comp=E,25200μm,0.5s
T1241                              AML   AML
        comp=N,22600μm,0.6s
T1241                              AML   AML
        comp=N,23650μm,0.6s
T1241                              AML   AML
        comp=E,25250μm,0.5s
T1241                              AML   AML
        comp=E,24750μm,0.5s
T1241                              AML   AML
        comp=N,22600μm,0.6s
T1241                              AML   AML
        comp=N,23700μm,0.6s
T1241                              AML   AML
        comp=E,25200μm,1.5s
T1241                              AML   AML
        comp=E,24750μm,1.5s
GUMA  Gualdo di Mace     0.20  37 ⇑P    Pg        22 44 21.4 -0.2
GUMA                               S     Sg        22 44 24.8 +0.5
GUMA                               AML   AML
        comp=E,26700μm,0.7s
GUMA                               AML   AML
        comp=N,22700μm,0.5s
GUMA                               AML   AML
        comp=E,26600μm,0.7s
GUMA                               AML   AML
        comp=E,26750μm,0.7s
GUMA                               AML   AML
        comp=N,22750μm,0.5s
GUMA                               AML   AML
        comp=N,23100μm,0.5s
T1215 Vallo di Nera,     0.24 245  P     Pg        22 44 22.7 +0.3
T1215                              S     Sg        22 44 27.5 +1.9
T1215                              AML   AML
        comp=N,3470μm,0.5s
T1215                              AML   AML
        comp=E,4805μm,0.4s
T1215                              AML   AML
        comp=E,5090μm,0.6s
T1215                              AML   AML
        comp=N,3120μm,0.5s
T1215                              AML   AML
        comp=E,5090μm,1.4s
T1204 Amatrice, Fraz     0.25 155  P     Pg        22 44 22.5 -0.1
T1204                              S     Sg        22 44 27.0 +1.1
T1204                              AML   AML
        comp=E,13550μm,0.6s
T1204                              AML   AML
        comp=N,8615μm,0.3s
T1204                              AML   AML
        comp=N,8595μm,0.3s
T1204                              AML   AML
        comp=E,13600μm,0.6s
T1204                              AML   AML
        comp=E,13600μm,1.4s
T1243 Rocca Santa Ma     0.29 135  P     Pg        22 44 22.9 -0.4
T1243                              S     Sg        22 44 27.6 +0.4
SMA1  SAN MARTINO        0.30 156 ⇓P    Pg        22 44 23.3 -0.2
SMA1                               S     Sg        22 44 28.3 +0.8
SMA1                               AML   AML
        comp=E,8695μm,0.6s
SMA1                               AML   AML
        comp=N,9285μm,0.6s
LNSS  Leonessa           0.32 198  P     Pb        22 44 24.1 -1.6
LNSS                               S     Sb        22 44 29.4 -1.7
LNSS                               AML   AML
        comp=E,13850μm,0.3s
LNSS                               AML   AML
        comp=N,24050μm,0.4s
MNTP  Montappone         0.32  43  P     Pg        22 44 23.8  0.0
MNTP                               S     Sg        22 44 30.1 +2.0
MNTP                               AML   AML
        comp=E,9730μm,0.6s
MNTP                               AML   AML
        comp=E,9750μm,0.7s
MNTP                               AML   AML
        comp=N,6825μm,0.7s
MNTP                               AML   AML
        comp=E,9760μm,0.6s
MNTP                               AML   AML
        comp=E,9760μm,1.4s
OFFI  Offida             0.38  85 ⇑P    Pg        22 44 25.2 +0.3
OFFI                               AML   AML
        comp=N,9650μm,0.6s
OFFI                               AML   AML
        comp=E,11000μm,0.6s
SNTG  Esanatoglia        0.39 334  P     Pg        22 44 24.9 -0.2
SNTG                               AML   AML
        comp=E,1700μm,0.5s
SNTG                               AML   AML
        comp=N,1565μm,0.9s
SNTG                               AML   AML
        comp=N,1635μm,0.9s
SNTG                               AML   AML
        comp=E,1710μm,0.5s
SNTG                               AML   AML
        comp=N,1565μm,1.1s
SNTG                               AML   AML
        comp=N,1635μm,1.1s
SNTG                               AML   AML
        comp=E,1700μm,1.5s
SNTG                               AML   AML
        comp=E,1710μm,1.5s
RM33  Pellescritta (     0.40 175 ⇓P    Pg        22 44 25.2 -0.1
RM33                               S     Sb        22 44 31.8 -1.7
RM33                               AML   AML
        comp=N,4925μm,0.4s
RM33                               AML   AML
        comp=N,4855μm,0.4s
RM33                               AML   AML
        comp=E,4995μm,0.9s
RM33                               AML   AML
        comp=E,4890μm,0.9s
RM33                               AML   AML
        comp=E,4995μm,1.1s
RM33                               AML   AML
        comp=E,4890μm,1.1s
ASSB  Assisi San Ben     0.40 290 ⇑P    Pg        22 44 25.3 -0.1
ASSB                               S     Sb        22 44 32.0 -1.4
ASSB                               AML   AML
        comp=N,2545μm,0.7s
ASSB                               AML   AML
        comp=E,2265μm,1.3s
ASSB                               AML   AML
        comp=N,2545μm,1.3s
CAMP  Campotosto         0.41 154 ⇓P    Pg        22 44 25.1 -0.5
CAMP                               S     Sg        22 44 31.6 +0.7
CAMP                               AML   AML
        comp=E,1875μm,0.7s
CAMP                               AML   AML
        comp=N,3590μm,0.4s
TERO  Teramo             0.43 131  P     Pg        22 44 25.3 -0.5
TERO                               S     Sg        22 44 31.9 +0.5
TERO                               AML   AML
        comp=E,8220μm,1.1s
TERO                               AML   AML
        comp=E,8665μm,1.0s
TERO                               AML   AML
        comp=N,12300μm,0.5s
TERO                               AML   AML
        comp=N,11950μm,0.5s
TERO                               AML   AML
        comp=E,8235μm,1.1s
EL6   Elcito             0.43 353 ⇓P    Pg        22 44 25.4 -0.4
T1211 Morro Reatino      0.44 212 ⇑P    Pb        22 44 25.8 -1.9
T1211                              S     Sb        22 44 33.6 -1.0
T1211                              AML   AML
        comp=E,2765μm,0.9s
T1211                              AML   AML
        comp=N,6015μm,0.3s
T1211                              AML   AML
        comp=E,2875μm,0.9s
T1211                              AML   AML
        comp=N,6020μm,0.3s
T1211                              AML   AML
        comp=E,2875μm,0.9s
T1211                              AML   AML
        comp=N,6015μm,0.3s
T1211                              AML   AML
        comp=E,2765μm,1.1s
ARRO  Arrone             0.44 223  P     Pb        22 44 26.1 -1.7
T1247 Pizzolo (AQ)       0.47 168 ⇓P    Pg        22 44 26.4 -0.3
T1247                              S     Sb        22 44 34.9 -0.7
T1247                              AML   AML
        comp=E,4880μm,0.6s
T1247                              AML   AML
        comp=N,4780μm,0.4s
T1247                              AML   AML
        comp=N,4780μm,1.6s
ATCC  AVT- Casa Cast     0.48 306 ⇑P    Pg        22 44 26.8 -0.1
ATCC                               S     Sb        22 44 35.2 -0.6
ATCC                               AML   AML
        comp=N,2240μm,0.8s
ATCC                               AML   AML
        comp=E,2965μm,1.1s
FOSV  Fossato di Vic     0.49 323 ⇑P    Pg        22 44 26.9 -0.1
FOSV                               AML   AML
        comp=N,2070μm,0.8s
FOSV                               AML   AML
        comp=E,1540μm,0.7s
FOSV                               AML   AML
        comp=E,1545μm,0.7s
FOSV                               AML   AML
        comp=N,2065μm,0.8s
FOSV                               AML   AML
        comp=N,2065μm,1.2s
CESX  Cesi               0.53 236 ⇑P    Pb        22 44 27.5 -1.7
CESX                               S     Sb        22 44 37.0  0.0
CESX                               AML   AML
        comp=E,2115μm,1.4s
CESX                               AML   AML
        comp=N,2605μm,0.4s
CESX                               AML   AML
        comp=E,2115μm,0.6s
GIGS  Gran Sasso         0.54 147  P     Pg        22 44 27.3 -0.7
GIGS                               S     Sg        22 44 36.0 +0.9
GIGS                               AML   AML
        comp=N,980μm,0.2s
GIGS                               AML   AML
        comp=E,1490μm,0.6s
TRTR  Tortoreto Alta     0.56 100 ⇑P    Pg        22 44 28.8 +0.6
TRTR                               S     Sb        22 44 40.0 +2.1
TRTR                               AML   AML
        comp=E,11450μm,0.4s
TRTR                               AML   AML
        comp=N,10320μm,0.4s
TRTR                               AML   AML
        comp=E,11450μm,1.6s
AQU   L'Aquila           0.58 163 ⇓P    Pg        22 44 28.1 -0.6
AQU                               AML   AML
        comp=E,1440μm,1.5s
AQU                               AML   AML
        comp=N,2010μm,0.8s
AQU                               AML   AML
        comp=E,1440μm,1.1s
AQU                               AML   AML
        comp=N,1950μm,0.8s
AQU                               AML   AML
        comp=N,2010μm,1.2s
AQU                               AML   AML
        comp=E,1440μm,0.9s
AQU                               AML   AML
        comp=E,1440μm,0.5s
AQU                               AML   AML
        comp=N,1950μm,1.2s
MURB  Monte Urbino       0.59 307 ⇑P    Pg        22 44 28.9 -0.2
MURB                               S     Sn        22 44 40.0 -2.6
MURB                               AML   AML
        comp=N,2440μm,0.9s
MURB                               AML   AML
        comp=E,2620μm,0.4s
MURB                               AML   AML
        comp=N,2435μm,0.9s
MURB                               AML   AML
        comp=E,2455μm,0.4s
MURB                               AML   AML
        comp=N,2240μm,0.9s
ARVD  Arcevia            0.62 344 ⇑P    Pg        22 44 28.6 -0.8
ARVD                               S     Sb        22 44 40.0 +0.3
ARVD                               AML   AML
        comp=E,705μm,0.9s
ARVD                               AML   AML
        comp=N,739μm,0.6s
ARVD                               AML   AML
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	comp=N,739μm,1.4s					
ATFO	**Monte Foce - G**	**0.64 317**	⇑P		**Pg**	**22 44 29.4 -0.4**
ATFO			AML		AML	
	comp=N,1083μm,1.0s					
ATFO			AML		AML	
	comp=E,1080μm,1.0s					
ATFO			AML		AML	
	comp=N,1084μm,1.0s					
ATFO			AML		AML	
	comp=N,1084μm,1.0s					
FIAM	**Fiamignano**	**0.64 184**	P		**Pg**	**22 44 29.2 -0.7**
FIAM			S		**Sb**	**22 44 40.0 -0.4**
FIAM			AML		AML	
	comp=E,1520μm,1.1s					
FIAM			AML		AML	
	comp=N,1380μm,0.5s					
FIAM			AML		AML	
	comp=E,1520μm,0.9s					
ATTE	**AVT- Monte Tez**	**0.67 296**	⇓P		**Pg**	**22 44 30.1 -0.3**
ATTE			AML		AML	
	comp=E,622μm,0.9s					
ATTE			AML		AML	
	comp=N,704μm,0.7s					
ATTE			AML		AML	
	comp=E,622μm,0.9s					
ATTE			AML		AML	
	comp=N,705μm,0.7s					
FRON	**Frontone**	**0.69 332**	⇑P		**Pg**	**22 44 30.3 -0.6**
FRON			AML		AML	
	comp=E,765μm,0.8s					
FRON			AML		AML	
	comp=N,1360μm,0.5s					
FRON			AML		AML	
	comp=E,765μm,1.2s					
FAGN	**Fagnano**	**0.71 154**	⇑P		**Pg**	**22 44 30.4 -0.8**
FAGN			S		**Sb**	**22 44 43.0 +0.7**
FAGN			AML		AML	
	comp=N,3655μm,1.4s					
FAGN			AML		AML	
	comp=E,3715μm,0.5s					
FAGN			AML		AML	
	comp=N,3655μm,0.6s					
VCEL	**Villa Celiera**	**0.71 136**	⇓P		**Pg**	**22 44 30.6 -0.7**
VCEL			S		**Sb**	**22 44 43.0 +0.5**
VCEL			AML		AML	
	comp=E,2765μm,0.6s					
VCEL			AML		AML	
	comp=N,2760μm,1.1s					
VCEL			AML		AML	
	comp=E,2760μm,0.6s					
VCEL			AML		AML	
	comp=N,2765μm,1.1s					
VCEL			AML		AML	
	comp=N,2765μm,0.9s					
VCEL			AML		AML	
	comp=E,2760μm,1.4s					
AOI	**Ancona**	**0.72 26**	⇑P		**Pg**	**22 44 31.1 -0.3**
AOI			AML		AML	
	comp=N,687μm,1.3s					
AOI			AML		AML	
	comp=E,740μm,0.4s					
ATVO	**AVT- Monte Val**	**0.73 311**	⇑P		**Pg**	**22 44 31.1 -0.6**
ATVO			AML		AML	
	comp=E,680μm,0.8s					
ATVO			AML		AML	
	comp=E,681μm,0.8s					
ATVO			AML		AML	
	comp=N,756μm,0.6s					
ATVO			AML		AML	
	comp=E,681μm,1.2s					
MGAB	**Montegabbione**	**0.78 271**	⇑P		**Pb**	**22 44 32.2 -1.3**
MGAB			AML		AML	
	comp=E,964μm,0.5s					
MGAB			AML		AML	
	comp=N,1590μm,0.5s					
MGAB			AML		AML	
	comp=E,1135μm,0.5s					
MGAB			AML		AML	
	comp=N,1450μm,0.5s					
ATPI	**Pietralunga -**	**0.78 314**	P		**Pg**	**22 44 32.3 -0.4**
ATPI			AML		AML	
	comp=E,721μm,0.7s					
ATPI			AML		AML	
	comp=E,720μm,0.7s					
ATPI			AML		AML	
	comp=N,508μm,0.6s					
ATPI			AML		AML	
	comp=N,508μm,1.4s					
PIEI	**Pieia**	**0.78 324**	⇓P		**Pg**	**22 44 32.0 -0.6**
PIEI			AML		AML	
	comp=E,460μm,0.3s					
PIEI			AML		AML	
	comp=N,543μm,0.7s					
PIEI			AML		AML	
	comp=N,543μm,1.3s					
PIEI			AML		AML	
	comp=E,459μm,0.3s					
MPAG	**Monte Paganucc**	**0.78 338**	⇓P		**Pg**	**22 44 32.4 -0.3**
MPAG			AML		AML	
	comp=E,704μm,1.3s					
MPAG			AML		AML	
	comp=N,636μm,1.0s					
MPAG			AML		AML	
	comp=E,704μm,1.3s					
MPAG			AML		AML	
	comp=E,704μm,0.7s					
MPAG			AML		AML	
	comp=N,636μm,1.0s					
ATMI	**Monte Miggiano**	**0.79 303**	⇓P		**Pn**	**22 44 35.0 -0.2**
T0110	**Collepietro**	**0.81 146**	⇓P		**Pg**	**22 44 32.0 -1.2**
T0110			S		**Sb**	**22 44 46.0 +0.6**
T0110			AML		AML	
	comp=E,2795μm,0.6s					
T0110			AML		AML	
	comp=N,3040μm,0.5s					
NARO	**Abbazia di Nar**	**0.83 329**	⇓P		**Pg**	**22 44 32.6 -0.8**
NARO			AML		AML	
	comp=N,512μm,0.7s					
NARO			AML		AML	
	comp=E,449μm,1.1s					
NARO			AML		AML	
	comp=E,449μm,0.9s					
SRES	**S.Oreste - Sor**	**0.83 216**	⇑P		**Pn**	**22 44 33.8 -1.9**
SRES			AML		AML	
	comp=N,688μm,0.6s					
SRES			AML		AML	
	comp=E,1063μm,0.5s					
SRES			AML		AML	
	comp=N,688μm,1.4s					
FSSB	**Fossombrone**	**0.84 340**	⇓P		**Pg**	**22 44 33.3 -0.4**
FSSB			S		**Sn**	**22 44 48.0 -0.6**
FSSB			AML		AML	
	comp=N,1925μm,0.3s					
FSSB			AML		AML	
	comp=E,1475μm,0.4s					
SACS	**San Casciano d**	**0.93 267**	⇓P		**Pb**	**22 44 35.0 -1.2**
SACS			AML		AML	
	comp=N,695μm,1.0s					
SACS			AML		AML	
	comp=E,574μm,1.5s					
SACS			AML		AML	
	comp=E,574μm,0.5s					
PE3	**Peglio**	**0.93 328**	⇓P		**Pg**	**22 44 35.5 +0.1**
PE3			AML		AML	
	comp=N,5μm,0.5s					
PE3			AML		AML	
	comp=E,4μm,1.6s					
CERT	**Cerreto**	**0.96 188**	P		**Pg**	**22 44 35.0 -1.1**
CERT			AML		AML	
	comp=E,1450μm,0.5s					
CERT			AML		AML	
	comp=N,754μm,0.9s					
CAFI	**Castiglion Fio**	**0.98 296**	⇑P		**Pb**	**22 44 35.9 -1.0**
CAFI			AML		AML	
	comp=N,340μm,0.7s					
CAFI			AML		AML	
	comp=E,462μm,0.7s					
CAFI			AML		AML	
	comp=N,340μm,1.3s					
CAFI			AML		AML	
	comp=E,462μm,1.3s					
LATE	**Laterza**	**1.05 254**	⇑P		**Pn**	**22 44 38.0 -0.8**
MCIV	**Monte Civitell**	**1.11 264**	⇓P		**Pn**	**22 44 39.5 -0.2**
MCIV			AML		AML	
	comp=E,235μm,0.6s					
MCIV			AML		AML	
	comp=N,235μm,0.8s					
MCIV			AML		AML	
	comp=E,235μm,1.4s					
LPEL	**Lama dei Pelig**	**1.14 139**	P		**Pg**	**22 44 38.0 -1.4**
LPEL			S		**Sb**	**22 44 56.0 +1.3**
LPEL			AML		AML	
	comp=N,604μm,0.9s					
LPEL			AML		AML	
	comp=E,944μm,0.4s					
RMP	**Rome, Mte Porz**	**1.15 198**	⇓P		**Pn**	**22 44 39.5 -0.7**
RMP			AML		AML	
	comp=E,802μm,0.5s					
RMP			AML		AML	
	comp=N,944μm,0.9s					
RMP			AML		AML	
	comp=E,802μm,1.5s					
RMP			AML		AML	
	comp=N,944μm,1.1s					
POFI	**Posta Fibreno**	**1.25 161**	⇑P		**Pg**	**22 44 43.1 +1.5**
LRP	**Arpino**	**1.29 166**	⇑P		**Pg**	**22 44 43.7 +1.3**
GIUL	**Giuliano Di Ro**	**1.35 177**	⇑P		**Pg**	**22 44 43.9 +0.5**
GIUL			AML		AML	
	comp=E,297μm,0.9s					
GIUL			AML		AML	
	comp=N,298μm,0.5s					
GIUL			AML		AML	
	comp=E,297μm,1.1s					
LIK	**San Giovanni I**	**1.43 168**	⇑P		**Pn**	**22 44 41.6 -2.4**
LIK			AML		AML	
	comp=E,552μm,0.9s					
LIK			AML		AML	
	comp=N,636μm,0.6s					
LIK			AML		AML	
	comp=N,636μm,1.4s					
LIK			AML		AML	
	comp=E,552μm,1.1s					
CERA	**Filignano**	**1.45 154**	⇑P		**Pb**	**22 44 45.3 +0.3**
CERA			AML		AML	
	comp=E,586μm,0.5s					
CERA			AML		AML	
	comp=N,492μm,0.7s					
CERA			AML		AML	
	comp=E,586μm,1.5s					
CERA			AML		AML	
	comp=N,492μm,1.3s					
TRIV	**Trivento**	**1.53 138**	⇑P		**Pn**	**22 44 45.6 +0.2**
TRIV			AML		AML	
	comp=E,451μm,1.2s					
TRIV			AML		AML	
	comp=N,442μm,0.9s					
VAGA	**Valle Agricola**	**1.69 152**	⇑P		**Pb**	**22 44 49.0 0.0**
PTRJ	**Pietraroja**	**1.84 146**	P		**Pb**	**22 44 51.5 -0.2**
PII	**Pisa**	**2.10 294**	⇓P		**Pb**	**22 44 54.8 -1.2**
OBKA	**Obir**	**3.73 15**	*e*Pn		**Pg**	**22 45 28.1 -1.0**
	comp=N,8.7nm,0.6s					
ABTA	**Abfaltersbach**	**3.87 353**	*i* Pn		**Pn**	**22 45 18.2 +0.6**
	comp=N,12nm,0.5s,SNR=23					
FETA	**Feichten**	**4.47 338**	Pn		**Pn**	**22 45 29.5 +3.5**
	comp=N,1.8nm,0.3s,SNR=9.1					
WTTA	**Wattenberg**	**4.49 347**	Pn		**Pn**	**22 45 28.3 +2.0**
	comp=N,1.1nm,0.2s					
DAVOX	**Davos/Dischmat**	**4.53 330**	Pn		**Pn**	**22 45 30.0 +3.2**
	comp=N,1.5nm,0.3s,baz=167,slow=18,SNR=16					
DAVOX			Sn		**Sn**	**22 46 22.8 +3.0**
	comp=N,0.4nm,0.3s,baz=286,slow=23,SNR=3.3					
	comp=N,8.0nm,0.6s					
SQTA	**Sankt Quirin**	**4.53 343**	*e*Pn		**Pn**	**22 45 30.1 +3.3**
	comp=N,6.2nm,0.5s					
WATA	**Walderalm**	**4.57 346**	Pn		**Pn**	**22 45 29.4 +2.0**
	comp=N,3.0nm,0.3s,SNR=6.8					
MOTA	**Moosalm**	**4.67 342**	Pn		**Pn**	**22 45 32.3 +3.5**
	comp=N,1.4nm,0.3s,SNR=5.2					
BIOA	**Bad Ischl, Aus**	**4.80 4**	*e*Pn		**Pn**	**22 45 31.5 +1.1**
	comp=N,4.3nm,0.4s					
RETA	**Reutte**	**4.89 340**	Pn		**Pn**	**22 45 35.0 +3.3**
	comp=N,3.6nm,0.4s,SNR=7.1					
DAVA	**Damuels**	**4.96 333**	Pn		**Pn**	**22 45 36.7 +4.0**
	comp=N,3.7nm,0.5s,SNR=4.7					
CONA	**Conrad Observa**	**5.37 20**	*e*Pn		**Pn**	**22 45 37.7 -0.6**
	comp=N,1.1nm,0.4s					
GERES	**GERESS Array B**	**5.95 3**	Pn		**Pn**	**22 45 45.3 -1.0**
	comp=N,0.2nm,0.3s,baz=182,slow=12,SNR=5.4					
GERES			Sn		**Sn**	**22 46 52.3 -2.5**
	comp=N,0.5nm,0.3s,baz=174,slow=20,SNR=10					
	comp=N,0.3nm,0.4s					
CKRC	**Cesky Krumlov**	**5.97 7**	*e*SN		**Sn**	**22 46 52.5 -2.6**
KHC	**Kasperske Hory**	**6.23 2**	*e*PN		**Pn**	**22 45 49.5 -0.6**
KHC			*e*SN		**Sn**	**22 46 58.3 -3.3**
KEST	**Kesra**	**7.75 204**	Pn		**Pn**	**22 46 14.4 +3.4**
	comp=N,0.1nm,0.3s,baz=21,slow=14,SNR=2.2					
	comp=N,1.8nm,0.8s					
TORD	**Torodi Ar. Bea**	**31.27 202**	P		**P**	**22 50 40.1 +1.9**
	comp=N,0.2nm,0.8s,baz=8.9,slow=10,SNR=1.9					
	comp=N,0.2nm,0.8s					

IDC ***30*** *22:47:00.9±2.0, 42°.80N×14°.16E, h0km, mb3.3/1, mbtmp3.4/6, ML3.2/5, MS2.5/2, Error ellipse: s-maj=57.0km s-min=15.4km az=97.0*
ROM ***30*** *22:47:03.1±0.0, 42°.807N±0°.002×13°.194E±0°.004, h10km, ML3.4/90, Error ellipse: s-maj=0.3km s-min=0.1km az=68.0*
PRU ***30*** *22:47:04.1±0.0, 42°.73N×13°.86E, h10km*
STR ***30*** *22:47:06.6±2.4, 43°N±21°×1°3E±1°7, h10km, MLv3.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=162.0, preliminary*
ISC 30 22:47:03.7±0.7, 42°.80N±0°.01×13°.21E±0°.01, h10km±4km, n168, σ1§47/209, 48C-41D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**342**	⇓P	**Pg**	**22 47 05.6**	**-0.4**
T1245				S	**Sg**	**22 47 07.0**	**-0.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.13**	**41**	⇑P	**Pg**	**22 47 06.8**	**-0.1**
MMO1				S	**Sg**	**22 47 09.2**	**+0.1**
T1201	**Domo (RI)**	**0.15**	**169**	P	**Pb**	**22 47 07.6**	**-1.0**
T1204	**Amatrice, Fraz**	**0.15**	**149**	P	**Pg**	**22 47 07.4**	**+0.3**
T1204				S	**Sg**	**22 47 10.5**	**+0.9**
T1204				AML	AML		
	comp=E,36600μm,0.5s						
T1204				AML	AML		
	comp=N,21650μm,1.0s						
T1204				AML	AML		
	comp=E,36550μm,0.5s						
T1216	**Preci, Frazion**	**0.17**	**302**	⇓P	**Pg**	**22 47 07.2**	**-0.3**
T1216				S	**Sg**	**22 47 09.8**	**-0.2**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
SMA1	**SAN MARTINO**	**0.19**	**152**	P	**Pg**	**22 47 08.0**	**+0.1**
SMA1				S	**Sg**	**22 47 11.6**	**+0.9**
SMA1				AML	AML		
	comp=E,27300μm,0.7s						
SMA1				AML	AML		
	comp=N,20200μm,0.6s						
SMA1				AML	AML		
	comp=E,27350μm,0.7s						
SMA1				AML	AML		
	comp=E,27350μm,1.3s						
FEMA	**Monte Fema**	**0.20**	**323**	⇓P	**Pg**	**22 47 07.8**	**-0.2**
FEMA				S	**Sg**	**22 47 10.9**	**0.0**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,98100μm,0.5s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,98200μm,0.5s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,98550μm,0.5s						
FEMA				AML	AML		
	comp=N,98300μm,0.5s						
FEMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.20**	**121**	⇓P	**Pg**	**22 47 08.2**	**+0.2**
T1243				S	**Sg**	**22 47 11.8**	**+0.8**
AM05	**Amandola Campo**	**0.20**	**30**	⇑P	**Pg**	**22 47 08.2**	**+0.1**
AM05				S	**Sg**	**22 47 11.7**	**+0.8**
AM05				AML	AML		
	comp=E,10350μm,1.3s						
AM05				AML	AML		
	comp=N,8590μm,0.6s						
AM05				AML	AML		
	comp=E,40600μm,1.3s						
AM05				AML	AML		
	comp=N,3360μm,0.6s						
AM05				AML	AML		
	comp=N,8585μm,0.6s						
AM05				AML	AML		
	comp=N,3365μm,0.6s						
AM05				AML	AML		
	comp=E,10300μm,1.3s						
AM05				AML	AML		
	comp=N,3365μm,1.4s						
AM05				AML	AML		
	comp=N,8585μm,1.4s						
AM05				AML	AML		
	comp=E,40600μm,0.7s						
AM05				AML	AML		
	comp=E,10300μm,0.7s						
T1217	**Poggiodomo (PG**	**0.23**	**247**	P	**Pg**	**22 47 08.3**	**-0.2**
T1217				S	**Sg**	**22 47 12.4**	**+0.7**
T1217				AML	AML		
	comp=E,18200μm,0.7s						
T1217				AML	AML		
	comp=E,18550μm,0.3s						
T1217				AML	AML		
	comp=N,17050μm,0.6s						
T1217				AML	AML		
	comp=E,18200μm,0.7s						
T1217				AML	AML		
	comp=N,16500μm,0.6s						
T1217				AML	AML		
	comp=E,18550μm,0.3s						
T1217				AML	AML		
	comp=N,16500μm,0.6s						
T1217				AML	AML		
	comp=E,18250μm,0.7s						
T1217				AML	AML		
	comp=N,17050μm,0.6s						
LNSS	**Leonessa**	**0.24**	**213**	⇑P	**Pg**	**22 47 08.8**	**+0.1**
LNSS				S	**Sg**	**22 47 13.0**	**+1.0**
T1215	**Vallo di Nera,**	**0.25**	**270**	⇑P	**Pg**	**22 47 08.7**	**-0.2**
T1215				S	**Sg**	**22 47 12.6**	**+0.2**
T1215				AML	AML		
	comp=E,20050μm,1.1s						
T1215				AML	AML		
	comp=E,20100μm,1.1s						
T1215				AML	AML		
	comp=E,21900μm,1.2s						
T1215				AML	AML		
	comp=N,27900μm,0.3s						
T1215				AML	AML		
	comp=N,28750μm,0.2s						
T1215				AML	AML		
	comp=E,21850μm,1.2s						
T1215				AML	AML		
	comp=N,27950μm,0.3s						
T1215				AML	AML		
	comp=N,28800μm,0.2s						
T1215				AML	AML		
	comp=N,28800μm,1.8s						
T1215				AML	AML		
	comp=E,20100μm,0.9s						
T1215				AML	AML		
	comp=E,21850μm,0.8s						
T1215				AML	AML		
	comp=N,27900μm,1.7s						
GUMA	**Gualdo di Mace**	**0.28**	**19**	⇑P	**Pg**	**22 47 09.6**	**+0.3**
GUMA				S	**Sg**	**22 47 14.3**	**+1.2**
GUMA				AML	AML		
	comp=E,70300μm,0.4s						
GUMA				AML	AML		
	comp=N,70600μm,0.4s						
GUMA				AML	AML		
	comp=N,49350μm,0.5s						
GUMA				AML	AML		
	comp=E,70350μm,0.4s						
GUMA				AML	AML		
	comp=N,70550μm,0.4s						
GUMA				AML	AML		
	comp=E,82150μm,0.4s						
RM33	**Pellescritta (**	**0.29**	**180**	P	**Pg**	**22 47 09.8**	**+0.1**
RM33				S	**Sb**	**22 47 14.8**	**-1.3**
RM33				AML	AML		
	comp=E,10600μm,0.6s						
RM33				AML	AML		
	comp=N,9205μm,0.8s						
RM33				AML	AML		
	comp=E,10530μm,0.6s						
RM33				AML	AML		
	comp=N,9240μm,0.8s						
RM33				AML	AML		
	comp=E,10515μm,0.6s						
RM33				AML	AML		
	comp=N,9115μm,0.8s						
RM33				AML	AML		
	comp=E,10525μm,0.6s						
RM33				AML	AML		
	comp=N,9210μm,0.8s						
RM33				AML	AML		
	comp=N,9105μm,0.8s						
CAMP	**Campotosto**	**0.30**	**151**	⇓P	**Pg**	**22 47 09.9**	**0.0**
CAMP				S	**Sb**	**22 47 14.9**	**-1.5**
CAMP				AML	AML		
	comp=N,7835μm,0.5s						
CAMP				AML	AML		
	comp=E,8675μm,0.2s						
TERO	**Teramo**	**0.34**	**122**	⇓P	**Pg**	**22 47 10.5**	**0.0**
TERO				S	**Sb**	**22 47 16.0**	**-1.4**
TERO				AML	AML		
	comp=E,8825μm,0.8s						
TERO				AML	AML		
	comp=N,14000μm,0.8s						
TERO				AML	AML		
	comp=E,8810μm,0.8s						
TERO				AML	AML		
	comp=N,14450μm,0.8s						
TERO				AML	AML		
	comp=N,13950μm,0.8s						
TERO				AML	AML		
	comp=E,8785μm,0.8s						
TERO				AML	AML		
	comp=N,14450μm,1.2s						
TERO				AML	AML		
	comp=N,13950μm,1.2s						
TERO				AML	AML		
	comp=E,9435μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.36**	**170**	⇓P	**Pg**	**22 47 11.0**	**+0.1**
T1247				AML	AML		
	comp=N,7230μm,1.0s						
T1247				AML	AML		
	comp=E,7545μm,0.8s						
T1247				AML	AML		
	comp=N,7235μm,1.0s						
T1247				AML	AML		
	comp=E,7550μm,0.8s						
OFFI	**Offida**	**0.37**	**69**	⇑P	**Pb**	**22 47 12.0**	**-0.4**
OFFI				AML	AML		
	comp=E,15700μm,0.7s						
OFFI				AML	AML		
	comp=N,24150μm,0.7s						
OFFI				AML	AML		
	comp=E,15700μm,1.3s						
T1211	**Morro Reatino**	**0.38**	**225**	⇑P	**Pg**	**22 47 11.0**	**-0.2**
T1211				S	**Sb**	**22 47 17.0**	**-1.4**
T1211				AML	AML		
	comp=E,12850μm,0.5s						
T1211				AML	AML		
	comp=E,13100μm,0.5s						
T1211				AML	AML		
	comp=E,12900μm,0.5s						
T1211				AML	AML		
	comp=N,20100μm,0.2s						
T1211				AML	AML		
	comp=E,13150μm,0.5s						
T1211				AML	AML		
	comp=N,19900μm,0.2s						
MNTP	**Montappone**	**0.39**	**29**	P	**Pg**	**22 47 11.8**	**+0.4**
MNTP				AML	AML		
	comp=E,25800μm,0.7s						
MNTP				AML	AML		
	comp=N,20300μm,0.7s						
MDAR	**Monte D'Aria**	**0.39**	**353**	P	**Pg**	**22 47 11.2**	**-0.4**
MDAR				AML	AML		
	comp=E,8395μm,0.6s						

MDAR				AML	AML	
	comp=N,9610µm,0.3s					
MDAR				AML	AML	
	comp=E,8385µm,0.6s					
MDAR				AML	AML	
	comp=N,11435µm,1.3s					
MDAR				AML	AML	
	comp=N,11420µm,1.3s					
MDAR				AML	AML	
	comp=E,8360µm,0.6s					
MDAR				AML	AML	
	comp=N,11420µm,0.7s					
SEF1	**Sefro**	**0.40**	**331**	P	**Pg**	**22 47 11.2 -0.4**
SEF1				S	**Sg**	**22 47 17.2 +0.4**
SEF1				AML	AML	
	comp=E,27350µm,0.7s					
SEF1				AML	AML	
	comp=N,18850µm,0.2s					
SEF1				AML	AML	
	comp=N,18900µm,0.2s					
SEF1				AML	AML	
	comp=E,27300µm,0.7s					
ARRO	**Arrone**	**0.40**	**236**	⇑P	**Pg**	**22 47 11.4 -0.2**
PIO1	**Pioraco**	**0.41**	**336**	P	**Pg**	**22 47 11.4 -0.5**
PIO1				AML	AML	
	comp=E,8785µm,0.8s					
PIO1				AML	AML	
	comp=N,10650µm,0.9s					
PIO1				AML	AML	
	comp=N,10650µm,0.9s					
PIO1				AML	AML	
	comp=E,8785µm,0.8s					
SSM1	**San Severino M**	**0.43**	**356**	P	**Pg**	**22 47 11.8 -0.3**
FIU1	**Fiuminata**	**0.44**	**332**	P	**Pg**	**22 47 12.0 -0.4**
FIU1				AML	AML	
	comp=E,9025µm,0.5s					
FIU1				AML	AML	
	comp=E,9010µm,0.5s					
FIU1				AML	AML	
	comp=N,7435µm,0.8s					
GIGS	**Gran Sasso**	**0.44**	**143**	P	**Pg**	**22 47 11.9 -0.5**
GIGS				AML	AML	
	comp=N,1490µm,0.6s					
GIGS				AML	AML	
	comp=N,1495µm,0.6s					
GIGS				AML	AML	
	comp=E,1540µm,0.7s					
GIGS				AML	AML	
	comp=N,1495µm,1.4s					
AQU	**L'Aquila**	**0.47**	**163**	P	**Pg**	**22 47 12.5 -0.4**
AQU				AML	AML	
	comp=E,3510µm,1.0s					
AQU				AML	AML	
	comp=N,3775µm,0.8s					
AQU				AML	AML	
	comp=N,4115µm,0.8s					
AQU				AML	AML	
	comp=E,3335µm,1.0s					
AQU				AML	AML	
	comp=E,3505µm,1.0s					
AQU				AML	AML	
	comp=E,3505µm,1.0s					
AQU				AML	AML	
	comp=E,3335µm,1.0s					
ASSB	**Assisi San Ben**	**0.47**	**301**	⇑P	**Pg**	**22 47 12.4 -0.6**
ASSB				AML	AML	
	comp=E,13550µm,0.2s					
ASSB				AML	AML	
	comp=N,15750µm,0.3s					
ASSB				AML	AML	
	comp=E,17200µm,1.2s					
ASSB				AML	AML	
	comp=N,15750µm,1.7s					
SNTG	**Esanatoglia**	**0.49**	**336**	⇓P	**Pg**	**22 47 12.8 -0.6**
SNTG				AML	AML	
	comp=E,5445µm,0.1s					
SNTG				AML	AML	
	comp=E,5435µm,0.1s					
SNTG				AML	AML	
	comp=N,6750µm,0.3s					
SNTG				AML	AML	
	comp=E,5440µm,0.1s					
SNTG				AML	AML	
	comp=N,6700µm,0.3s					
CESX	**Cesi**	**0.50**	**248**	⇑P	**Pg**	**22 47 13.0 -0.5**
CESX				S	**Sb**	**22 47 22.0 -0.1**
CESX				AML	AML	
	comp=N,4650µm,0.5s					
CESX				AML	AML	
	comp=E,7325µm,0.4s					
TRE1	**Treia**	**0.52**	**8**	⇓P	**Pg**	**22 47 14.3 +0.5**
TRE1				AML	AML	
	comp=E,14110µm,0.4s					
TRE1				AML	AML	
	comp=N,17400µm,0.9s					
TRE1				AML	AML	
	comp=N,17400µm,0.9s					
TRE1				AML	AML	
	comp=E,14130µm,0.4s					
TRTR	**Tortoreto Alta**	**0.52**	**89**	⇑P	**Pb**	**22 47 15.1 +0.2**
TRTR				AML	AML	
	comp=E,18650µm,0.8s					
TRTR				AML	AML	
	comp=N,14800µm,0.5s					
EL6	**Elcito**	**0.53**	**351**	⇓P	**Pg**	**22 47 13.7 -0.5**
EL6				S	**Sb**	**22 47 23.0 0.0**
EL6				AML	AML	
	comp=E,9955µm,1.4s					
EL6				AML	AML	
	comp=N,13050µm,0.9s					
EL6				AML	AML	
	comp=E,10000µm,1.4s					
EL6				AML	AML	
	comp=N,13000µm,0.9s					
EL6				AML	AML	
	comp=E,9950µm,1.4s					
FIAM	**Fiamignano**	**0.54**	**188**	⇓P	**Pg**	**22 47 14.0 -0.2**
FIAM				AML	AML	
	comp=E,4260µm,0.8s					
FIAM				AML	AML	
	comp=N,3255µm,0.6s					
FOSV	**Fossato di Vic**	**0.59**	**326**	⇑P	**Pg**	**22 47 14.6 -0.6**
FOSV				S	**Sg**	**22 47 24.0 +0.9**
FOSV				AML	AML	
	comp=N,10120µm,0.3s					
FOSV				AML	AML	
	comp=E,7255µm,0.4s					
FOSV				AML	AML	
	comp=N,10130µm,0.3s					
FOSV				AML	AML	
	comp=N,10135µm,0.3s					
FOSV				AML	AML	
	comp=E,7260µm,0.4s					
FAGN	**Fagnano**	**0.60**	**153**	⇑P	**Pg**	**22 47 15.3 -0.1**
FAGN				AML	AML	
	comp=E,4590µm,0.6s					
FAGN				AML	AML	
	comp=N,4775µm,0.7s					
FAGN				AML	AML	
	comp=E,4590µm,1.4s					
VCEL	**Villa Celiera**	**0.62**	**131**	⇓P	**Pg**	**22 47 15.7 0.0**
VCEL				S	**Sn**	**22 47 27.0 -1.6**
VCEL				AML	AML	
	comp=N,6330µm,1.1s					
VCEL				AML	AML	
	comp=E,6585µm,0.7s					
PP3	**Marolino**	**0.65**	**27**	⇑P	**Pg**	**22 47 16.8 +0.6**
PP3				AML	AML	
	comp=E,28450µm,0.4s					
PP3				AML	AML	
	comp=N,23750µm,0.3s					
PP3				AML	AML	
	comp=N,23000µm,0.3s					
PP3				AML	AML	
	comp=E,28150µm,0.4s					
PP3				AML	AML	
	comp=E,28400µm,0.4s					
PP3				AML	AML	
	comp=E,28100µm,0.4s					
PP3				AML	AML	
	comp=N,23700µm,0.3s					
MMUR	**Monte Murano**	**0.66**	**346**	⇓P	**Pg**	**22 47 16.1 -0.5**
MMUR				S	**Sb**	**22 47 27.0 +0.4**
MMUR				AML	AML	
	comp=E,9585µm,0.6s					
MMUR				AML	AML	
	comp=N,6150µm,0.5s					
MMUR				AML	AML	
	comp=E,9570µm,0.6s					
MMUR				AML	AML	
	comp=N,6155µm,0.5s					
MURB	**Monte Urbino**	**0.68**	**313**	P	**Pg**	**22 47 16.3 -0.7**
MURB				S	**Sb**	**22 47 28.0 +0.7**
MURB				AML	AML	
	comp=E,14450µm,1.5s					
MURB				AML	AML	
	comp=N,15400µm,1.5s					
MURB				AML	AML	
	comp=E,16650µm,0.8s					
MURB				AML	AML	
	comp=E,14400µm,1.5s					
MURB				AML	AML	
	comp=E,14400µm,1.6s					
MURB				AML	AML	
	comp=N,16100µm,0.2s					
MURB				AML	AML	
	comp=E,14400µm,0.4s					
MURB				AML	AML	
	comp=E,16650µm,1.2s					
MURB				AML	AML	
	comp=N,15400µm,0.5s					
T0110	**Collepietro**	**0.71**	**144**	⇓P	**Pg**	**22 47 16.9 -0.6**
T0110				S	**Sn**	**22 47 29.0 -1.9**
T0110				AML	AML	
	comp=E,4380µm,1.2s					
T0110				AML	AML	
	comp=N,3795µm,0.5s					
T0110				AML	AML	
	comp=N,3795µm,1.5s					
ARVD	**Arcevia**	**0.72**	**344**	⇓P	**Pg**	**22 47 17.0 -0.8**
ARVD				S	**Sb**	**22 47 29.0 +0.6**
ARVD				AML	AML	
	comp=E,2765µm,1.4s					
ARVD				AML	AML	
	comp=E,2765µm,0.6s					
ARVD				AML	AML	
	comp=N,1905µm,0.6s					
ATFO	**Monte Foce - G**	**0.73**	**320**	⇓P	**Pg**	**22 47 17.2 -0.8**
ATFO				AML	AML	
	comp=N,3810µm,0.8s					
ATFO				AML	AML	
	comp=E,3745µm,1.0s					
ATFO				AML	AML	
	comp=E,3740µm,1.0s					
ATTE	**AVT- Monte Tez**	**0.74**	**302**	P	**Pg**	**22 47 17.2 -0.9**
ATTE				AML	AML	
	comp=N,2600µm,0.5s					
ATTE				AML	AML	
	comp=N,2600µm,1.5s					
ATTE				AML	AML	
	comp=E,2240µm,0.4s					
SRES	**S.Oreste - Sor**	**0.77**	**223**	⇓P	**Pg**	**22 47 18.1 -0.5**
SRES				S	**Sn**	**22 47 31.0 -1.2**
SRES				AML	AML	
	comp=N,1860µm,0.5s					
SRES				AML	AML	
	comp=E,1460µm,0.8s					
SRES				AML	AML	
	comp=N,1860µm,1.5s					
SRES				AML	AML	
	comp=E,1460µm,1.2s					
AOI	**Ancona**	**0.80**	**21**	⇑P	**Pg**	**22 47 19.2 +0.1**
AOI				S	**Sn**	**22 47 33.0 -0.1**
AOI				AML	AML	
	comp=E,2780µm,0.3s					
AOI				AML	AML	
	comp=N,2085µm,1.1s					
AOI				AML	AML	
	comp=N,2085µm,0.9s					
FRON	**Frontone**	**0.80**	**334**	⇓P	**Pg**	**22 47 18.2 -1.0**
FRON				AML	AML	
	comp=E,3015µm,0.6s					
FRON				AML	AML	
	comp=N,4090µm,0.7s					
FRON				AML	AML	
	comp=N,4090µm,1.3s					
MGAB	**Montegabbione**	**0.82**	**278**	⇑P	**Pg**	**22 47 18.7 -0.8**
MGAB				AML	AML	
	comp=E,5305µm,0.3s					
MGAB				AML	AML	
	comp=N,6735µm,0.6s					
MGAB				AML	AML	
	comp=N,5985µm,0.6s					
MGAB				AML	AML	
	comp=N,6740µm,0.6s					
MGAB				AML	AML	
	comp=E,6300µm,0.3s					
MGAB				AML	AML	
	comp=E,5310µm,0.3s					
ATVO	**AVT- Monte Val**	**0.83**	**315**	⇓P	**Pg**	**22 47 18.7 -1.0**
ATVO				S	**Sb**	**22 47 32.0 +0.5**
ATVO				AML	AML	
	comp=E,2630µm,1.2s					
ATVO				AML	AML	
	comp=N,3225µm,0.8s					
ATVO				AML	AML	
	comp=E,2630µm,0.8s					
ATVO				AML	AML	
	comp=N,3225µm,1.2s					
MTCE	**Montecelio**	**0.85**	**204**	P	**Pg**	**22 47 19.3 -0.9**
MTCE				AML	AML	
	comp=E,2105µm,0.6s					
MTCE				AML	AML	
	comp=N,964µm,1.4s					
MTCE				AML	AML	
	comp=N,964µm,0.6s					
CERT	**Cerreto**	**0.87**	**191**	⇑P	**Pg**	**22 47 19.8 -0.7**
CERT				AML	AML	
	comp=E,2410µm,0.5s					
CERT				AML	AML	
	comp=N,2590µm,0.5s					
ATMI	**Monte Miggiano**	**0.87**	**308**	⇑P	**Pg**	**22 47 20.3 -0.3**
ATMI				AML	AML	
	comp=E,7920µm,0.8s					
ATMI				AML	AML	
	comp=N,8255µm,0.4s					
ATMI				AML	AML	
	comp=N,8255µm,1.6s					
ATPI	**Pietralunga -**	**0.88**	**318**	⇓P	**Pg**	**22 47 19.8 -0.9**
ATPI				S	**Sb**	**22 47 34.0 +1.1**
ATPI				AML	AML	
	comp=N,2645µm,0.7s					
ATPI				AML	AML	
	comp=N,2640µm,0.7s					
ATPI				AML	AML	
	comp=E,2245µm,1.2s					
PIEI	**Pieia**	**0.89**	**326**	⇑P	**Pg**	**22 47 19.7 -1.1**
PIEI				S	**Sb**	**22 47 34.0 +0.9**
PIEI				AML	AML	
	comp=N,1545µm,0.6s					
PIEI				AML	AML	
	comp=E,2250µm,0.9s					
MPAG	**Monte Paganucc**	**0.89**	**338**	⇓P	**Pg**	**22 47 20.0 -0.9**
MPAG				S	**Sn**	**22 47 35.0 -0.4**
SENI	**Senigallia**	**0.90**	**1**	⇑P	**Pg**	**22 47 21.3 +0.2**
FSSB	**Fossombrone**	**0.94**	**340**	⇑P	**Pg**	**22 47 20.8 -1.2**
FSSB				S	**Sn**	**22 47 37.0 +0.3**
FSSB				AML	AML	
	comp=N,10570µm,1.3s					
FSSB				AML	AML	
	comp=E,6995µm,0.4s					
APEC	**Apecchio**	**0.95**	**323**	⇑P	**Pg**	**22 47 21.4 -0.6**
APEC				S	**Sn**	**22 47 37.0 +0.1**
SACS	**San Casciano d**	**0.96**	**273**	⇑P	**Pg**	**22 47 21.4 -0.8**
SACS				AML	AML	
	comp=E,2345µm,0.9s					
SACS				AML	AML	
	comp=E,2350µm,0.9s					
SACS				AML	AML	
	comp=E,2370µm,0.9s					
SACS				AML	AML	
	comp=N,2160µm,1.1s					
SACS				AML	AML	
	comp=N,2235µm,1.1s					
VVLD	**Villa Vallelon**	**0.98**	**162**	⇓P	**Pg**	**22 47 22.0 -0.5**
VVLD				AML	AML	
	comp=N,1480µm,0.6s					
VVLD				AML	AML	
	comp=E,1170µm,0.8s					
BADI	**Badiali**	**1.00**	**315**	⇓P	**Pg**	**22 47 22.3 -0.7**
CAFR	**Castel Frentan**	**1.02**	**124**	⇑P	**Pg**	**22 47 22.5 -0.7**
CAFR				AML	AML	
	comp=N,981µm,0.6s					
CAFR				AML	AML	
	comp=E,938µm,0.7s					
PE3	**Peglio**	**1.04**	**330**	⇑P	**Pb**	**22 47 22.8 -0.9**
PE3				AML	AML	
	comp=E,25µm,0.4s					
PE3				AML	AML	
	comp=N,31µm,0.7s					
PE3				AML	AML	
	comp=E,25µm,0.4s					
LPEL	**Lama dei Pelig**	**1.04**	**136**	⇓P	**Pg**	**22 47 22.8 -1.0**
LPEL				AML	AML	
	comp=N,911µm,1.5s					
LPEL				AML	AML	
	comp=E,1625µm,0.5s					
LPEL				AML	AML	
	comp=N,911µm,0.5s					
CAFI	**Castiglion Fio**	**1.05**	**300**	⇑P	**Pb**	**22 47 23.1 -1.0**
CAFI				S	**Sn**	**22 47 40.0 +0.6**
CAFI				AML	AML	
	comp=E,1950µm,0.4s					
CAFI				AML	AML	
	comp=N,2420µm,0.8s					
CAFI				AML	AML	
	comp=N,2460µm,0.8s					
CAFI				AML	AML	
	comp=E,2000µm,0.4s					
CAFI				AML	AML	
	comp=N,2460µm,1.2s					
CAFI				AML	AML	
	comp=N,2420µm,1.2s					
LATE	**Laterza**	**1.05**	**260**	P	**Pb**	**22 47 23.4 -0.7**
SSP9	**Sansepolcro**	**1.10**	**315**	⇓P	**Pb**	**22 47 24.7 -0.2**
SSP9				AML	AML	
	comp=N,1538µm,0.6s					
SSP9				AML	AML	
	comp=E,1476µm,0.7s					
MCIV	**Monte Civitell**	**1.13**	**269**	P	**Pb**	**22 47 24.7 -0.7**
MCIV				AML	AML	
	comp=E,672µm,0.4s					
MCIV				AML	AML	
	comp=N,745µm,0.8s					
SF04	**Casetta**	**1.14**	**272**	⇑P	**Pb**	**22 47 25.4 -0.2**
TOLF	**Tolfa**	**1.16**	**231**	P	**Pb**	**22 47 24.6 -1.3**
TOLF				AML	AML	
	comp=N,980µm,0.5s					
TOLF				AML	AML	
	comp=E,779µm,1.0s					
TOLF				AML	AML	
	comp=N,980µm,1.5s					
TOLF				AML	AML	
	comp=E,779µm,1.0s					
LAV9	**Lanuvio**	**1.19**	**199**	⇑P	**Pg**	**22 47 27.4 +0.9**
LAV9				AML	AML	
	comp=E,2405µm,0.7s					
LAV9				AML	AML	
	comp=E,2515µm,0.5s					
LAV9				AML	AML	
	comp=N,2255µm,0.5s					
LAV9				AML	AML	
	comp=N,2095µm,0.5s					
LRP	**Arpino**	**1.19**	**166**	P	**Pg**	**22 47 27.4 +0.9**
LRP				AML	AML	
	comp=E,476µm,1.1s					
LRP				AML	AML	
	comp=N,616µm,0.6s					
CPGN	**Carpegna, Ital**	**1.19**	**327**	⇓P	**Pn**	**22 47 26.5 -0.1**
SF01	**Poggio Pratacc**	**1.21**	**271**	⇓P	**Pn**	**22 47 26.2 -0.6**
SF01				AML	AML	
	comp=N,1168µm,0.5s					
SF01				AML	AML	
	comp=E,1757µm,0.6s					
CRE	**Caprese Michel**	**1.23**	**312**	⇑P	**Pn**	**22 47 26.5 -0.6**
CRE				AML	AML	
	comp=E,965µm,0.6s					
CRE				AML	AML	
	comp=N,1130µm,0.4s					
CRE				AML	AML	
	comp=E,965µm,1.4s					
ARCI	**Arcidosso**	**1.28**	**273**	P	**Pn**	**22 47 27.7 -0.1**
ARCI				AML	AML	
	comp=N,340µm,1.0s					
ARCI				AML	AML	
	comp=E,284µm,0.8s					
ARCI				AML	AML	
	comp=N,340µm,1.0s					
ARCI				AML	AML	
	comp=E,284µm,1.2s					
RNI2	**Rionero Sannit**	**1.30**	**147**	P	**Pg**	**22 47 29.9 +1.2**
RNI2				AML	AML	
	comp=N,1305µm,1.0s					
RNI2				AML	AML	
	comp=N,1345µm,1.1s					
RNI2				AML	AML	
	comp=E,1030µm,1.2s					
RNI2				AML	AML	
	comp=E,1026µm,1.2s					
CERA	**Filignano**	**1.34**	**153**	⇓P	**Pg**	**22 47 30.5 +1.0**
CERA				AML	AML	
	comp=N,708µm,0.8s					
CERA				AML	AML	
	comp=E,916µm,0.8s					
CERA				AML	AML	
	comp=E,899µm,0.8s					
CERA				AML	AML	
	comp=N,738µm,0.8s					
FRES	**Fresagrandinar**	**1.36**	**127**	⇓P	**Pg**	**22 47 30.2 +0.4**
FRES				AML	AML	
	comp=N,581µm,1.0s					
FRES				AML	AML	
	comp=E,701µm,0.7s					
TRIV	**Trivento**	**1.43**	**136**	⇑P	**Pg**	**22 47 32.0 +0.8**
TRIV				AML	AML	
	comp=N,748µm,0.9s					
TRIV				AML	AML	
	comp=E,925µm,0.8s					
TRIV				AML	AML	
	comp=N,748µm,1.1s					
ASQU	**Asqua**	**1.44**	**314**	⇑P	**Pn**	**22 47 30.2 +0.3**
ASQU				AML	AML	
	comp=E,603µm,0.6s					
ASQU				AML	AML	
	comp=N,711µm,0.7s					
ASQU				AML	AML	
	comp=N,711µm,1.3s					
BLLA	**Bellaria**	**1.45**	**338**	⇑P	**Pg**	**22 47 31.5 0.0**
BLLA				AML	AML	
	comp=N,1528µm,1.0s					
BLLA				AML	AML	
	comp=E,1424µm,1.3s					
BLLA				AML	AML	
	comp=E,1424µm,0.7s					
FROS	**Frosini**	**1.56**	**286**	⇓P	**Pn**	**22 47 31.4 -0.1**
FROS				AML	AML	
	comp=E,766µm,0.5s					
FROS				AML	AML	
	comp=N,540µm,1.0s					
FROS				AML	AML	
	comp=N,540µm,1.0s					
MAON	**Monte Argentar**	**1.58**	**257**	P	**Pn**	**22 47 30.2 -1.6**
MAON				AML	AML	
	comp=E,172µm,1.1s					
MAON				AML	AML	
	comp=N,164µm,1.1s					
MAON				AML	AML	
	comp=N,164µm,0.9s					
OSSC	**Osservatorio P**	**1.61**	**297**	⇓P	**Pn**	**22 47 31.9 -0.3**
OSSC				AML	AML	
	comp=E,354µm,0.6s					
OSSC				AML	AML	
	comp=N,354µm,0.8s					
BSSO	**Busso**	**1.62**	**140**	⇑P	**Pg**	**22 47 35.2 +0.4**
TRIF	**Trifonti**	**1.73**	**281**	⇑P	**Pn**	**22 47 33.6 -0.2**
TRIF				AML	AML	
	comp=E,227µm,0.7s					
TRIF				AML	AML	
	comp=N,442µm,0.7s					
CASP	**Castiglione de**	**1.73**	**270**	⇑P	**Pn**	**22 47 33.1 -0.7**
CASP				AML	AML	
	comp=E,104µm,0.7s					
CASP				AML	AML	
	comp=N,136µm,0.7s					
PTRJ	**Pietraroja**	**1.74**	**145**	S	**Sg**	**22 48 01.0 +1.4**
MELA	**Melanico ??? S**	**1.79**	**127**	⇓P	**Pb**	**22 47 36.2 -0.5**
MELA				AML	AML	
	comp=E,935µm,0.7s					
MELA				AML	AML	
	comp=N,1225µm,0.8s					

MELA				AML	AML	
	comp=N,1138μm,0.8s					
MELA				AML	AML	
	comp=E,926μm,0.7s					
MPPT	**Montemurlo**	**1.93**	**307**	⇑P	**Pn**	**22 47 37.2 +0.6**
APRC	**Apricena**	**2.02**	**120**	P	**Pb**	**22 47 39.0 -1.6**
APRC				AML	AML	
	comp=N,392μm,1.0s					
APRC				AML	AML	
	comp=E,328μm,0.6s					
APRC				AML	AML	
	comp=N,392μm,1.0s					
MTCR	**Monte La Croce**	**2.03**	**308**	⇓P	**Pn**	**22 47 37.7 -0.3**
BRJN	**Brijuni**	**2.14**	**10**	⇑P	**Pn**	**22 47 40.3 +0.9**
SGRT	**San Giovanni R**	**2.15**	**118**	⇑P	**Pb**	**22 47 41.4 -1.4**
SGRT				AML	AML	
	comp=E,324μm,1.3s					
SGRT				AML	AML	
	comp=N,352μm,0.5s					
PII	**Pisa**	**2.17**	**296**	⇓P	**Pb**	**22 47 42.3 -0.7**
MAIM	**Mastiano**	**2.27**	**300**	P	**Pn**	**22 47 42.4 +1.1**
MAIM				AML	AML	
	comp=E,156μm,0.8s					
MAIM				AML	AML	
	comp=N,192μm,0.5s					
MAIM				AML	AML	
	comp=E,156μm,1.2s					
MORSI	**Morsiglia**	**2.83**	**274**	P	**Pn**	**22 47 49.5 +0.5**
MORSI				S	**Sn**	**22 48 23.9 +0.7**
PZUN	**Potenza**	**2.90**	**137**	⇑P	**Pn**	**22 47 51.8 +1.9**
SMPL	**Sampolo**	**2.99**	**258**	P	**Pn**	**22 47 52.3 +1.1**
SMPL				S	**Sb**	**22 48 30.7 -2.9**
CEY	**Cerknica**	**3.06**	**16**	*e*Pn	Pn	22 47 42.9 -9.3
PGF	**Pioggiola**	**3.12**	**267**	⇓P	**Pn**	**22 47 53.8 +0.7**
PGF				AML	AML	
	comp=N,18μm,1.4s					
PGF				AML	AML	
	comp=E,25μm,1.2s					
PGF				AML	AML	
	comp=E,25μm,0.8s					
PGF				AML	AML	
	comp=N,18μm,0.6s					
PGF	**Pioggiola**	**3.12**	**267**	P	**Pn**	**22 47 53.7 +0.7**
SRKY	**Kupres RS**	**3.15**	**65**	*e*Pn	**Pn**	**22 47 52.6 -0.8**
SABO	**M.te Sabotino**	**3.19**	**5**	⇓P	**Pn**	**22 47 54.8 +0.9**
SABO				AML	AML	
	comp=N,1235μm,0.7s					
SABO				AML	AML	
	comp=E,1022μm,0.7s					
SABO				AML	AML	
	comp=E,238μm,1.4s					
SABO				AML	AML	
	comp=E,1022μm,1.3s					
SABO				AML	AML	
	comp=N,312μm,0.7s					
CGRP	**Cima Grappa**	**3.24**	**342**	⇓P	**Pn**	**22 47 55.7 +0.9**
CGRP				AML	AML	
	comp=E,274μm,1.1s					
CGRP				AML	AML	
	comp=N,270μm,0.5s					
MGRS	**Mrkonjic Grad**	**3.24**	**59**	*e*Pn	**Pb**	**22 47 58.4 -3.0**
STON	**Ston**	**3.30**	**87**	*e*Pn	Pn	22 47 47.3 -8.1
STON				*e*Pn	Pb	22 47 54.8 -7.5
STON	**Ston**	**3.30**	**87**	⇑P	**Pn**	**22 47 55.5 +0.1**
STON				AML	AML	
	comp=E,56μm,1.0s					
STON				AML	AML	
	comp=N,60μm,1.1s					
STON				AML	AML	
	comp=N,60μm,0.9s					
LJU	**Ljubljana**	**3.38**	**16**	P	**Pn**	**22 47 57.3 +0.9**
LJU				AML	AML	
	comp=E,742μm,0.5s					
LJU				AML	AML	
	comp=N,701μm,0.5s					
LJU				AML	AML	
	comp=E,742μm,1.5s					
SALO	**Salr**	**3.42**	**326**	P	**Pn**	**22 47 58.9 +1.8**
CTI	**Castel Tesino**	**3.43**	**342**	⇑P	**Pn**	**22 47 58.6 +1.3**
CTI				AML	AML	
	comp=N,198μm,1.0s					
CTI				AML	AML	
	comp=N,198μm,1.0s					
CTI				AML	AML	
	comp=E,199μm,0.3s					
A051A	**Mrakovica**	**3.46**	**49**	*e*Pn	**Pb**	**22 48 01.6 -3.6**
BLY	**Banja Luka**	**3.47**	**55**	*e*Pn	**Pb**	**22 48 02.3 -3.0**
STAL	**STALIGIAL**	**3.48**	**354**	⇓P	**Pn**	**22 47 59.0 +1.1**
STAL				AML	AML	
	comp=E,232μm,0.4s					
STAL				AML	AML	
	comp=N,182μm,0.3s					
LTRZ	**Laterza**	**3.48**	**128**	⇑P	**Pn**	**22 47 59.3 +1.4**
CIMO	**Cimolais**	**3.55**	**351**	⇓P	**Pn**	**22 47 59.6 +0.7**
CIMO				AML	AML	
	comp=N,56μm,0.5s					
CIMO				AML	AML	
	comp=E,48μm,0.7s					
CIMO				AML	AML	
	comp=N,56μm,1.5s					
LUSI	**Trento, Gardas**	**3.55**	**334**	⇑P	**Pn**	**22 48 00.5 +1.5**
PTCC	**Patocco-Chiusa**	**3.60**	**2**	⇓P	**Pn**	**22 47 59.7 +0.1**
PTCC				AML	AML	
	comp=E,81μm,0.4s					
PTCC				AML	AML	
	comp=N,78μm,0.8s					
ZONE	**Zone**	**3.70**	**324**	S	**Sn**	**22 48 47.0 +2.3**
ACOM	**Acomizza, Ital**	**3.75**	**3**	⇑P	**Pn**	**22 48 02.9 +1.1**
ACOM				AML	AML	
	comp=N,158μm,0.7s					
ACOM				AML	AML	
	comp=E,150μm,0.7s					
ACOM				AML	AML	
	comp=N,150μm,0.7s					
ACOM				AML	AML	
	comp=E,185μm,0.7s					
ZOU	**Zoufplan**	**3.76**	**357**	⇓P	**Pn**	**22 48 02.4 +0.5**
ZOU				AML	AML	
	comp=E,114μm,1.0s					
ZOU				AML	AML	
	comp=E,125μm,0.9s					
ZOU				AML	AML	
	comp=N,156μm,1.1s					
ZOU				AML	AML	
	comp=N,136μm,1.1s					
ZOU				AML	AML	
	comp=E,114μm,1.0s					
ZOU				AML	AML	
	comp=E,125μm,1.1s					
TREB	**Trebinje**	**3.78**	**90**	*e*Pn	**Pn**	**22 48 03.3 +1.2**
EUCT	**Pavia**	**3.80**	**311**	⇑P	**Pg**	**22 48 15.6 -0.8**
OBKA	**Obir**	**3.83**	**14**	*e*Pn	**Pn**	**22 48 02.5 -0.3**
MYKA	**Terra Mystica**	**3.84**	**4**	*e*Pn	**Pn**	**22 48 06.2 +3.3**
	comp=E,10nm,0.4s					
KOSI	**Kohlern**	**3.89**	**341**	⇑P	**Pn**	**22 48 05.3 +1.7**
BRY	**Bratogost**	**3.92**	**87**	*e*Pn	**Pn**	**22 48 06.5 +2.5**
BOSI	**Bolzano**	**3.93**	**341**	S	**Sb**	**22 49 03.0 +2.3**
APPI	**Appiano**	**3.94**	**340**	⇑P	**Pn**	**22 48 05.8 +1.5**
ABTA	**Abfaltersbach**	**3.98**	**353**	Pn	**Pn**	**22 48 06.1 +1.3**
	comp=E,24nm,0.7s,SNR=16					
ABTA				*e*Sn	**Sn**	**22 48 51.9 +0.4**
	comp=E,22nm,0.4s					
BRES	**Bressanone**	**4.04**	**345**	⇑P	**Pn**	**22 48 08.2 +2.4**
BRES				S	**Sn**	**22 48 56.0 +2.8**
SOKA	**Soboth**	**4.09**	**18**	*e*Pn	**Pn**	**22 48 09.7 +3.4**
	comp=E,1.3nm,0.3s					
DRME	**Dracevica, Mon**	**4.46**	**96**	*e*Pn	**Pn**	**22 48 12.7 +1.4**
FETA	**Feichten**	**4.57**	**338**	*e*Pn	**Pn**	**22 48 17.3 +4.3**
	comp=E,8.4nm,0.6s					
FETA				*e*Sn	**Sn**	**22 49 07.8 +1.5**
	comp=E,6.2nm,0.4s					
RUDO	**Rudo**	**4.57**	**78**	*e*Pn	**Pn**	**22 48 13.1 +0.2**
WTTA	**Wattenberg**	**4.60**	**346**	*e*Pn	**Pn**	**22 48 16.0 +2.5**
	comp=E,8.0nm,0.6s					
DAVOX	**Davos/Dischmat**	**4.63**	**330**	Pn	**Pn**	**22 48 16.5 +2.6**
	comp=E,1.7nm,0.3s,baz=154,slow=20,SNR=12					
DAVOX				Sn	**Sn**	**22 49 12.8 +5.0**
	comp=E,2.1nm,0.3s,baz=295,slow=22,SNR=3.6					
DAVOX				LR	LR	22 50 10.4
	comp=E,22nm,21.2s,baz=80,slow=38					
	comp=E,16nm,0.7s					
BBLS	**Lazići**	**4.64**	**75**	*e*Pn	**Pn**	**22 48 16.4 +2.5**
SQTA	**Sankt Quirin**	**4.64**	**343**	*e*Pn	**Pn**	**22 48 16.7 +2.8**
	comp=E,8.5nm,0.4s,SNR=8.7					
WATA	**Walderalm**	**4.68**	**346**	Pn	**Pn**	**22 48 18.3 +3.8**
	comp=E,6.4nm,0.5s,SNR=12					
CALF	**Calern**	**4.69**	**284**	P	**Pn**	**22 48 15.0 +0.4**
ARSA	**Arzberg**	**4.74**	**19**	*e*Pn	Pn	22 48 21.0 +5.8
	comp=E,2.2nm,0.3s					
MOTA	**Moosalm**	**4.78**	**343**	*e*Pn	**Pn**	**22 48 18.9 +3.0**
	comp=E,4.5nm,0.5s					
BIOA	**Bad Ischl, Aus**	**4.90**	**3**	Pn	**Pn**	**22 48 19.0 +1.6**
	comp=E,19nm,0.6s,SNR=15					
JAUF	**Jausiers**	**4.97**	**291**	P	**Pn**	**22 48 20.0 +1.6**
RETA	**Reutte**	**5.00**	**341**	*e*Pn	**Pn**	**22 48 21.4 +2.6**
	comp=E,3.7nm,0.4s					
TRIGF	**Trigance**	**5.06**	**283**	P	**Pn**	**22 48 20.6 +0.9**
DAVA	**Damuels**	**5.07**	**333**	*i* Pn	**Pn**	**22 48 23.6 +3.7**
	comp=E,3.0nm,0.4s,SNR=5.1					
CREF	**Crivoux**	**5.09**	**292**	P	**Pn**	**22 48 22.1 +2.0**
MOA	**Molln**	**5.10**	**8**	*e*Pn	**Pn**	**22 48 21.6 +1.4**
	comp=E,0.8nm,0.1s					
VLO	**Vlora**	**5.25**	**114**	P	**Pb**	**22 48 35.3 -0.3**
FRGS	**Fruska Gora**	**5.31**	**61**	*e*Pn	**Pn**	**22 48 26.7 +3.6**
RONA	**Rosalia, Austr**	**5.36**	**23**	*e*Pn	**Pn**	**22 48 25.6 +1.8**
	comp=E,0.6nm,0.2s					
CONA	**Conrad Observa**	**5.46**	**19**	*e*Pn	**Pn**	**22 48 25.9 +0.8**
	comp=E,1.7nm,0.3s					
RSL	**Roselend**	**5.54**	**304**	P	**Pn**	**22 48 29.3 +3.0**
GERES	**GERESS Array B**	**6.05**	**3**	Pn	**Pn**	**22 48 32.4 -0.9**
	comp=E,0.6nm,0.3s,baz=171,slow=13,SNR=12					
GERES				Sn	**Sn**	**22 49 42.6 0.0**
	comp=E,1.8nm,0.3s,baz=169,slow=22,SNR=10.0					
	comp=E,1.1nm,0.3s					
CKRC	**Cesky Krumlov**	**6.07**	**7**	*e*PN	**Pn**	**22 48 32.8 -0.7**
CKRC				*e*SN	**Sn**	**22 49 40.0 -2.9**
KHC	**Kasperske Hory**	**6.34**	**2**	*e*PN	**Pn**	**22 48 37.8 +0.7**
KHC				*e*SN	**Sn**	**22 49 48.2 -1.3**
PRU	**Pruhonice**	**7.25**	**7**	*e*SN	**Sn**	**22 50 09.6 -2.3**
NKC	**Novy Kostel**	**7.45**	**356**	*e*SN	**Sn**	**22 50 16.1 -0.9**
KEST	**Kesra**	**7.67**	**204**	Pn	**Pn**	**22 48 56.2 +0.7**
	comp=E,0.1nm,0.3s,baz=41,slow=20,SNR=2.0					
	comp=E,1.7nm,0.8s					
CLL	**Collm**	**8.51**	**359**	*e*Pn	**Pn**	**22 49 10.0 +3.1**
CLL				*e*(Sn)	**Sn**	**22 50 44.0 +1.1**
CLL				*ex*	x	22 51 16.0
CLL				*e*Sg	**Sg**	**22 51 31.0 -5.7**
	comp=Z,22nm,2.0s					
BRTR	**Keskin Array B**	**15.66**	**94**	LR	LR	22 57 51.3
	comp=Z,38nm,18.1s,baz=317,slow=44					
EKA	**Eskdalemuir Ar**	**16.45**	**325**	Pn	**P**	**22 50 58.5 +1.4**
	baz=140,slow=14					
	comp=Z,0.3nm,0.6s					
FINES	**FINESS Array B**	**20.20**	**18**	P	**P**	**22 51 33.7 -4.6**
	comp=Z,0.1nm,0.3s,baz=201,slow=15,SNR=1.7					
	comp=Z,2.6nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.18**	**202**	P	**P**	**22 53 25.6 +2.6**
	comp=Z,0.3nm,0.7s,baz=16,slow=8.4,SNR=2.6					
	comp=Z,0.3nm,0.7s					

ROM 30 22:52:57.1±0.1, 42°.918N±0°.004×13°.121E±0°.004, h9km, ML2.5/11, 11C-5D, Error ellipse: s-maj=0.3km s-min=0.3km az=258.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**310**	P	Pg	22 52 59.8	+0.4
FEMA				S	Sg	22 53 01.3	+0.5
T1245	**Castelsantange**	**0.08**	**141**	⇓P	Pg	22 52 59.7	+0.3
T1245				S	Sg	22 53 01.3	+0.2
T1245				AML	AML		
	comp=E,9705μm,0.3s						
T1245				AML	AML		
	comp=N,21150μm,0.4s						
T1245				AML	AML		
	comp=N,21150μm,0.5s						
T1245				AML	AML		
	comp=E,9685μm,0.3s						
T1245				AML	AML		
	comp=E,9705μm,0.2s						
T1245				AML	AML		
	comp=N,20450μm,0.5s						
T1245				AML	AML		
	comp=E,9716μm,0.2s						
T1245				AML	AML		
	comp=N,19206μm,0.3s						
T1245				AML	AML		
	comp=E,9667μm,0.3s						
T1245				AML	AML		
	comp=N,18495μm,0.3s						
T1216	**Preci, Frazion**	**0.08**	**250**	⇑P	Pg	22 52 59.9	+0.6
T1216				S	Sg	22 53 01.7	+0.8
T1216				AML	AML		
	comp=N,10490μm,0.4s						
T1216				AML	AML		
	comp=E,6915μm,0.3s						
T1216				AML	AML		
	comp=N,10455μm,0.4s						
T1216				AML	AML		
	comp=E,6920μm,0.3s						
T1216				AML	AML		
	comp=N,10480μm,0.4s						
T1216				AML	AML		
	comp=E,6915μm,0.3s						
T1216				AML	AML		
	comp=E,6916μm,0.3s						
T1216				AML	AML		
	comp=N,10460μm,0.4s						
MMO1	**Montemonaco**	**0.15**	**97**	P	Pg	22 53 00.9	+0.4
MMO1				S	Sg	22 53 03.4	+0.7
AM05	**Amandola Campo**	**0.18**	**71**	⇑P	Pg	22 53 01.5	+0.6
AM05				S	Sg	22 53 04.5	+1.0
AM05				AML	AML		
	comp=N,1300μm,0.3s						
AM05				AML	AML		
	comp=E,3950μm,0.6s						
AM05				AML	AML		
	comp=N,346μm,0.1s						
AM05				AML	AML		
	comp=E,1102μm,1.1s						
AM05				AML	AML		
	comp=N,1211μm,0.1s						
AM05				AML	AML		
	comp=E,3900μm,0.1s						
AM05				AML	AML		
	comp=N,346μm,0.1s						
AM05				AML	AML		
	comp=E,952μm,0.1s						
GUMA	**Gualdo di Mace**	**0.21**	**47**	⇑P	Pg	22 53 02.3	+0.8
GUMA				S	Sg	22 53 06.3	+1.8
GUMA				AML	AML		
	comp=N,2971μm,0.3s						
GUMA				AML	AML		
	comp=N,3286μm,0.2s						
GUMA				AML	AML		
	comp=E,2728μm,0.5s						
GUMA				AML	AML		
	comp=E,2945μm,0.4s						
T1215	**Vallo di Nera,**	**0.22**	**238**	⇑P	Pg	22 53 02.4	+0.8
T1215				S	Sg	22 53 06.1	+1.5
T1215				AML	AML		
	comp=N,1237μm,0.1s						
T1215				AML	AML		
	comp=E,783μm,0.2s						
T1215				AML	AML		
	comp=N,1238μm,0.1s						
T1215				AML	AML		
	comp=E,682μm,0.2s						
T1241	**Roccafluvione,**	**0.24**	**105**	P	Pg	22 53 02.6	+0.7
T1241				S	Sg	22 53 06.5	+1.4
T1241				AML	AML		
	comp=E,1395μm,0.2s						
T1241				AML	AML		
	comp=N,1140μm,0.5s						
T1241				AML	AML		
	comp=N,874μm,0.2s						
T1241				AML	AML		
	comp=N,1089μm,0.5s						
T1241				AML	AML		
	comp=E,1361μm,0.2s						
T1241				AML	AML		
	comp=E,1393μm,0.2s						
T1217	**Poggiodomo (PG**	**0.25**	**214**	⇑P	Pg	22 53 02.8	+0.7
T1217				S	Sg	22 53 07.1	+1.6
T1217				AML	AML		
	comp=E,1910μm,0.2s						
T1217				AML	AML		
	comp=N,2445μm,0.3s						
T1217				AML	AML		
	comp=E,1995μm,0.2s						
T1217				AML	AML		
	comp=N,2430μm,0.3s						
T1217				AML	AML		
	comp=N,1262μm,0.2s						
T1217				AML	AML		
	comp=N,1277μm,0.2s						
T1217				AML	AML		
	comp=E,692μm,0.2s						
T1217				AML	AML		
	comp=E,699μm,0.2s						
SEF1	**Sefro**	**0.26**	**331**	P	Pg	22 53 03.1	+0.7
SEF1				S	Sb	22 53 07.5	-1.3
SEF1				AML	AML		
	comp=E,1775μm,0.2s						
SEF1				AML	AML		
	comp=N,2046μm,0.1s						
MDAR	**Monte D'Aria**	**0.28**	**3**	P	Pg	22 53 03.1	+0.5
MDAR				S	Sg	22 53 07.8	+1.4
MDAR				AML	AML		
	comp=E,1220μm,1.2s						
MDAR				AML	AML		
	comp=N,2095μm,0.5s						
MDAR				AML	AML		
	comp=N,2095μm,0.5s						
MDAR				AML	AML		
	comp=E,1217μm,1.2s						
MDAR				AML	AML		
	comp=N,1784μm,0.4s						
MDAR				AML	AML		
	comp=E,1130μm,0.2s						
LNSS	**Leonessa**	**0.32**	**191**	S	Sb	22 53 10.0	-0.5
GAG1	**Gagliole**	**0.32**	**353**	P	Pg	22 53 04.3	+0.7
GAG1				S	Sb	22 53 09.6	-0.9
T1243	**Rocca Santa Ma**	**0.33**	**132**	P	Pg	22 53 04.2	+0.6
T1243				S	Sb	22 53 10.0	-0.6
ASSB	**Assisi San Ben**	**0.36**	**290**	P	Pg	22 53 04.8	+0.6
ASSB				S	Sb	22 53 10.6	-1.0
ASSB				AML	AML		
	comp=N,1860μm,0.2s						
ASSB				AML	AML		
	comp=E,1267μm,0.1s						
SNTG	**Esanatoglia**	**0.36**	**339**	P	Pg	22 53 05.0	+0.7
SNTG				S	Sb	22 53 11.0	-0.7
EL6	**Elcito**	**0.41**	**358**	⇓P	Pg	22 53 04.9	-0.4
EL6				S	Sb	22 53 12.5	-0.7
EL6				AML	AML		
	comp=E,1172μm,0.2s						
EL6				AML	AML		
	comp=N,1855μm,0.2s						
EL6				AML	AML		
	comp=N,1855μm,0.2s						
EL6				AML	AML		
	comp=E,1170μm,0.2s						
OFFI	**Offida**	**0.41**	**87**	⇑P	Pb	22 53 06.4	-0.3
OFFI				AML	AML		
	comp=E,798μm,0.3s						
OFFI				AML	AML		
	comp=N,1055μm,0.6s						
TRE1	**Treia**	**0.42**	**20**	P	Pb	22 53 06.4	-0.4
ARRO	**Arrone**	**0.43**	**218**	⇓P	Pg	22 53 05.8	+0.4
ARRO				AML	AML		
	comp=E,421μm,0.2s						
ARRO				AML	AML		
	comp=N,355μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.44**	**307**	⇑P	Pg	22 53 06.4	+0.6
ATCC				AML	AML		
	comp=E,932μm,0.1s						
ATCC				AML	AML		
	comp=N,566μm,0.2s						
FOSV	**Fossato di Vic**	**0.46**	**325**	⇑P	Pg	22 53 06.6	+0.5
FOSV				S	Sb	22 53 14.0	-0.4
FOSV				AML	AML		
	comp=E,924μm,0.4s						
FOSV				AML	AML		
	comp=N,718μm,0.2s						
FOSV				AML	AML		
	comp=E,926μm,0.4s						
FOSV				AML	AML		
	comp=E,922μm,0.4s						
FOSV				AML	AML		
	comp=E,682μm,0.2s						
FOSV				AML	AML		
	comp=N,718μm,0.2s						
TERO	**Teramo**	**0.46**	**130**	P	Pg	22 53 06.2	+0.1
TERO				AML	AML		
	comp=E,277μm,0.3s						
TERO				AML	AML		
	comp=E,276μm,0.2s						
TERO				AML	AML		
	comp=N,297μm,0.2s						
TERO				AML	AML		
	comp=N,304μm,0.5s						
CESX	**Cesi**	**0.50**	**233**	⇑P	Pg	22 53 07.2	+0.3
CESX				AML	AML		
	comp=N,320μm,0.3s						
CESX				AML	AML		
	comp=E,314μm,0.3s						
MMUR	**Monte Murano**	**0.53**	**350**	S	Sb	22 53 17.0	+0.4
MURB	**Monte Urbino**	**0.56**	**308**	⇑P	Pg	22 53 08.5	+0.6
MURB				AML	AML		
	comp=E,1164μm,0.4s						
MURB				AML	AML		
	comp=N,882μm,0.2s						
MURB				AML	AML		
	comp=N,882μm,0.2s						
MURB				AML	AML		
	comp=E,1072μm,0.2s						
MURB				AML	AML		
	comp=E,1112μm,0.2s						
MURB				AML	AML		
	comp=N,926μm,0.3s						
GIGS	**Gran Sasso**	**0.57**	**145**	P	Pg	22 53 08.3	+0.1
GIGS				AML	AML		
	comp=E,188μm,0.2s						
GIGS				AML	AML		
	comp=N,81μm,1.3s						
GIGS				AML	AML		
	comp=N,51μm,0.3s						
GIGS				AML	AML		
	comp=E,76μm,0.5s						
PP3	**Marolino**	**0.58**	**38**	P	Pb	22 53 09.5	-0.1
PP3				S	Sn	22 53 20.2	-1.1
PP3				AML	AML		
	comp=N,727μm,1.0s						
PP3				AML	AML		
	comp=N,728μm,1.0s						
PP3				AML	AML		
	comp=E,734μm,0.7s						
PP3				AML	AML		
	comp=E,668μm,0.7s						
PP3				AML	AML		
	comp=N,764μm,0.4s						
PP3				AML	AML		
	comp=E,597μm,0.1s						
PP3				AML	AML		
	comp=E,595μm,0.2s						
PP3				AML	AML		
	comp=N,525μm,0.2s						
PP3				AML	AML		
	comp=N,526μm,0.2s						
ARVD	**Arcevia**	**0.59**	**347**	⇓P	Pg	22 53 09.1	+0.4
ARVD				S	Sb	22 53 19.0	+0.7
ARVD				AML	AML		
	comp=N,167μm,0.2s						
ARVD				AML	AML		
	comp=E,352μm,0.1s						
ATFO	**Monte Foce - G**	**0.60**	**318**	⇑P	Pg	22 53 09.3	+0.5
ATFO				AML	AML		
	comp=E,221μm,0.4s						
ATFO				AML	AML		
	comp=N,158μm,0.3s						
ATVO	**AVT- Monte Val**	**0.70**	**312**	S	Sb	22 53 22.0	+0.6
AOI	**Ancona**	**0.72**	**29**	⇓P	Pb	22 53 12.0	0.0
AOI				AML	AML		
	comp=N,246μm,1.4s						
AOI				AML	AML		
	comp=E,330μm,1.2s						
AOI				AML	AML		
	comp=E,326μm,0.3s						
AOI				AML	AML		
	comp=N,238μm,0.2s						
PIEI	**Pieia**	**0.75**	**325**	P	Pb	22 53 12.2	-0.3
PIEI				S	Sb	22 53 24.0	+1.1
PIEI				AML	AML		
	comp=N,118μm,0.4s						
PIEI				AML	AML		
	comp=N,118μm,0.4s						
PIEI				AML	AML		

comp=E,166μm,0.3s
PIEI AML AML
comp=N,118μm,1.6s
PIEI AML AML
comp=N,114μm,0.2s
PIEI AML AML
comp=E,133μm,0.2s
ABTA Abfaltersbach 3.85 354 *i* Pn Pn 22 53 58.5 +1.8
comp=E,1.1nm,0.4s

ROM 30 22:53:43.1±0.1, 42°.718N×0°.003×13°.206E±0°.005, h9km, ML2.4/18, 11C-8D, Error ellipse: s-maj=0.4km s-min=0.2km az=106.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.09**	**117**	P	Pg	22 53 46.3	+0.6
T1204				S	Sg	22 53 48.3	+0.8
T1204				AML	AML		
	comp=E,4200μm,0.2s						
T1204				AML	AML		
	comp=N,2515μm,0.6s						
T1204				AML	AML		
	comp=N,2520μm,0.6s						
T1204				AML	AML		
	comp=N,2294μm,0.1s						
T1204				AML	AML		
	comp=E,4199μm,0.2s						
SMA1	**SAN MARTINO**	**0.13**	**132**	P	Pg	22 53 45.7	-0.4
SMA1				S	Sg	22 53 49.7	+1.4
SMA1				AML	AML		
	comp=E,3050μm,0.4s						
SMA1				AML	AML		
	comp=E,3045μm,0.4s						
SMA1				AML	AML		
	comp=N,3030μm,0.4s						
SMA1				AML	AML		
	comp=N,3031μm,0.4s						
SMA1				AML	AML		
	comp=E,3047μm,0.4s						
T1245	**Castelsantange**	**0.14**	**355**	⇑P	Pg	22 53 46.9	+0.5
T1245				S	Sg	22 53 49.3	+0.7
T1245				AML	AML		
	comp=E,15050μm,0.6s						
T1245				AML	AML		
	comp=N,18400μm,0.1s						
T1245				AML	AML		
	comp=N,18250μm,0.1s						
T1245				AML	AML		
	comp=N,18300μm,0.1s						
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1245				AML	AML		
	comp=E,5555μm,0.3s						
T1245				AML	AML		
	comp=N,8343μm,0.2s						
T1245				AML	AML		
	comp=E,5395μm,0.2s						
T1245				AML	AML		
	comp=N,8012μm,0.2s						
LNSS	**Leonessa**	**0.17**	**227**	⇑P	Pg	22 53 47.5	+0.7
LNSS				S	Sg	22 53 50.4	+1.1
LNSS				AML	AML		
	comp=E,2390μm,0.2s						
LNSS				AML	AML		
	comp=N,5075μm,0.1s						
LNSS				AML	AML		
	comp=N,5070μm,0.1s						
LNSS				AML	AML		
	comp=E,2390μm,0.2s						
LNSS				AML	AML		
	comp=N,5072μm,0.1s						
T1243	**Rocca Santa Ma**	**0.18**	**97**	P	Pg	22 53 47.5	+0.5
T1243				S	Sg	22 53 50.7	+1.1
MMO1	**Montemonaco**	**0.20**	**26**	P	Pg	22 53 47.8	+0.4
MMO1				S	Sg	22 53 51.5	+1.2
T1217	**Poggiodomo (PG**	**0.20**	**268**	⇓P	Pg	22 53 47.9	+0.5
T1217				S	Sg	22 53 51.0	+0.8
T1217				AML	AML		
	comp=E,1915μm,0.2s						
T1217				AML	AML		
	comp=N,2450μm,0.3s						
T1217				AML	AML		
	comp=N,2430μm,0.3s						
T1217				AML	AML		
	comp=N,2430μm,0.3s						
T1217				AML	AML		
	comp=N,2445μm,0.3s						
T1217				AML	AML		
	comp=E,1995μm,0.2s						
T1217				AML	AML		
	comp=E,1912μm,0.2s						
T1217				AML	AML		
	comp=E,1912μm,0.2s						
T1217				AML	AML		
	comp=N,2445μm,0.3s						
T1217				AML	AML		
	comp=E,1995μm,0.2s						
T1217				AML	AML		
	comp=N,2430μm,0.3s						
RM33	**Pellescritta (**	**0.21**	**178**	P	Pg	22 53 48.2	+0.7
RM33				S	Sg	22 53 51.9	+1.5
T1241	**Roccafluvione,**	**0.22**	**50**	P	Pg	22 53 48.3	+0.7
T1241				S	Sg	22 53 51.9	+1.3
T1241				AML	AML		
	comp=E,1510μm,0.3s						
T1241				AML	AML		
	comp=N,1790μm,0.4s						
T1241				AML	AML		
	comp=E,1515μm,0.3s						
T1241				AML	AML		
	comp=E,854μm,0.1s						
T1241				AML	AML		
	comp=N,1401μm,0.6s						
T1241				AML	AML		
	comp=N,1401μm,0.6s						
T1241				AML	AML		
	comp=E,883μm,0.2s						
AM05	**Amandola Campo**	**0.28**	**23**	⇑P	Pg	22 53 49.3	+0.5
AM05				S	Sb	22 53 54.0	-1.2
AM05				AML	AML		
	comp=N,112μm,0.1s						
AM05				AML	AML		
	comp=E,309μm,0.1s						
AM05				AML	AML		
	comp=N,386μm,0.1s						
AM05				AML	AML		
	comp=E,1021μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.28**	**166**	P	Pg	22 53 49.4	+0.5
T1247				AML	AML		
	comp=N,874μm,0.5s						
T1247				AML	AML		
	comp=E,670μm,0.4s						
T1247				AML	AML		
	comp=N,874μm,0.5s						
T1247				AML	AML		
	comp=N,849μm,0.2s						
T1247				AML	AML		
	comp=E,634μm,0.1s						
TERO	**Teramo**	**0.31**	**108**	P	Pg	22 53 49.8	+0.5
TERO				S	Sb	22 53 54.8	-1.1
TERO				AML	AML		
	comp=E,375μm,1.1s						
TERO				AML	AML		
	comp=N,557μm,0.5s						
TERO				AML	AML		
	comp=E,926μm,0.3s						
TERO				AML	AML		
	comp=N,1202μm,0.5s						
TERO				AML	AML		
	comp=E,1058μm,0.3s						
TERO				AML	AML		
	comp=N,1335μm,0.5s						
TERO				AML	AML		
	comp=E,290μm,0.1s						
TERO				AML	AML		
	comp=N,448μm,0.3s						
TERO				AML	AML		
	comp=E,326μm,0.1s						
TERO				AML	AML		
	comp=N,417μm,0.3s						
T1211	**Morro Reatino**	**0.32**	**235**	P	Pg	22 53 50.1	+0.6
T1211				S	Sb	22 53 55.1	-1.2
T1211				AML	AML		
	comp=E,692μm,0.3s						
T1211				AML	AML		
	comp=N,988μm,1.1s						
T1211				AML	AML		
	comp=E,704μm,0.3s						
T1211				AML	AML		
	comp=N,990μm,0.4s						
T1211				AML	AML		
	comp=N,988μm,1.1s						
T1211				AML	AML		
	comp=E,647μm,0.1s						
T1211				AML	AML		
	comp=E,668μm,0.1s						
T1211				AML	AML		
	comp=N,934μm,0.2s						
T1211				AML	AML		
	comp=N,913μm,0.2s						
ARRO	**Arrone**	**0.35**	**247**	⇓P	Pb	22 53 51.3	-0.2
ARRO				AML	AML		
	comp=N,266μm,1.2s						
ARRO				AML	AML		
	comp=N,266μm,1.2s						
ARRO				AML	AML		
	comp=E,250μm,0.2s						
ARRO				AML	AML		
	comp=E,250μm,0.2s						
ARRO				AML	AML		
	comp=N,260μm,0.2s						
GUMA	**Gualdo di Mace**	**0.36**	**15**	⇑P	Pg	22 53 50.9	+0.7
GUMA				S	Sb	22 53 57.4	0.0
GUMA				AML	AML		
	comp=N,4395μm,0.2s						
GUMA				AML	AML		
	comp=E,4980μm,0.2s						
GUMA				AML	AML		
	comp=N,3505μm,0.7s						
GUMA				AML	AML		
	comp=E,2350μm,0.8s						
GUMA				AML	AML		
	comp=N,1340μm,0.3s						
GUMA				AML	AML		
	comp=N,1303μm,0.1s						
GUMA				AML	AML		
	comp=E,1303μm,0.3s						
GUMA				AML	AML		
	comp=E,1110μm,0.2s						
GIGS	**Gran Sasso**	**0.38**	**135**	P	Pg	22 53 51.0	+0.4
GIGS				S	Sg	22 53 56.7	+1.1
GIGS				AML	AML		
	comp=N,146μm,0.1s						
GIGS				AML	AML		
	comp=E,188μm,0.2s						
GIGS				AML	AML		
	comp=N,72μm,0.2s						
GIGS				AML	AML		
	comp=E,188μm,0.2s						
AQU	**L'Aquila**	**0.39**	**158**	P	Pg	22 53 51.5	+0.6
AQU				AML	AML		
	comp=N,227μm,1.5s						
AQU				AML	AML		
	comp=E,342μm,1.1s						
AQU				AML	AML		
	comp=N,227μm,0.3s						
AQU				AML	AML		
	comp=N,221μm,0.4s						
AQU				AML	AML		
	comp=E,302μm,0.5s						
AQU				AML	AML		
	comp=E,271μm,0.3s						
OFFI	**Offida**	**0.41**	**58**	⇑P	Pb	22 53 52.5	0.0
OFFI				S	Sb	22 54 00.3	+1.3
OFFI				AML	AML		
	comp=E,862μm,0.3s						
OFFI				AML	AML		
	comp=N,902μm,0.7s						
OFFI				AML	AML		
	comp=N,859μm,0.5s						
OFFI				AML	AML		
	comp=E,862μm,0.3s						
FIAM	**Fiamignano**	**0.45**	**188**	⇑P	Pg	22 53 52.3	+0.3
FIAM				S	Sb	22 53 59.7	-0.5
FIAM				AML	AML		
	comp=N,149μm,0.5s						
FIAM				AML	AML		
	comp=E,143μm,0.2s						
ASSB	**Assisi San Ben**	**0.52**	**309**	S	Sb	22 54 02.0	0.0
FAGN	**Fagnano**	**0.53**	**148**	⇑P	Pg	22 53 53.7	+0.3
FAGN				AML	AML		
	comp=E,550μm,0.5s						
FAGN				AML	AML		
	comp=N,398μm,0.6s						
FAGN				AML	AML		
	comp=N,397μm,0.6s						
FAGN				AML	AML		
	comp=E,550μm,0.5s						
VCEL	**Villa Celiera**	**0.57**	**124**	⇑P	Pb	22 53 55.3	0.0
VCEL				S	Sb	22 54 05.0	+1.5
VCEL				AML	AML		
	comp=E,357μm,0.5s						
VCEL				AML	AML		
	comp=N,404μm,0.9s						
VCEL				AML	AML		
	comp=E,358μm,0.5s						
VCEL				AML	AML		
	comp=E,189μm,0.4s						
VCEL				AML	AML		
	comp=N,218μm,0.4s						
SNTG	**Esanatoglia**	**0.57**	**340**	⇑P	Pg	22 53 54.2	0.0
SNTG				S	Sb	22 54 03.0	-0.5
SNTG				AML	AML		
	comp=N,190μm,1.0s						
SNTG				AML	AML		
	comp=E,240μm,0.6s						
SNTG				AML	AML		
	comp=N,190μm,1.0s						
SNTG				AML	AML		
	comp=E,220μm,0.1s						
SNTG				AML	AML		
	comp=N,172μm,0.2s						
SNTG				AML	AML		
	comp=E,213μm,0.1s						
SNTG				AML	AML		
	comp=N,180μm,0.2s						
EL6	**Elcito**	**0.62**	**353**	⇓P	Pg	22 53 55.0	0.0
EL6				S	Sb	22 54 04.9	0.0
EL6				AML	AML		
	comp=N,447μm,0.3s						
EL6				AML	AML		
	comp=E,457μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.62**	**319**	⇓P	Pg	22 53 55.3	0.0
ATCC				AML	AML		
	comp=E,382μm,0.7s						
ATCC				AML	AML		
	comp=N,284μm,0.4s						
ATCC				AML	AML		
	comp=E,797μm,0.3s						
ATCC				AML	AML		
	comp=N,424μm,0.2s						
ATCC				AML	AML		
	comp=N,266μm,0.2s						
ATCC				AML	AML		
	comp=E,346μm,0.1s						
T0110	**Collepietro**	**0.65**	**139**	⇑P	Pg	22 53 56.0	+0.4
T0110				S	Sb	22 54 06.5	+0.7
T0110				AML	AML		
	comp=E,231μm,0.4s						
T0110				AML	AML		
	comp=N,207μm,0.4s						
FOSV	**Fossato di Vic**	**0.66**	**331**	S	Sb	22 54 07.0	+0.8
SRES	**S.Oreste - Sor**	**0.70**	**227**	⇓P	Pb	22 53 57.5	0.0
SRES				S	Sb	22 54 08.4	+1.1
SRES				AML	AML		
	comp=N,92μm,0.4s						
SRES				AML	AML		
	comp=E,57μm,0.3s						
PP3	**Marolino**	**0.72**	**24**	⇓P	Pb	22 53 58.1	+0.3
PP3				AML	AML		
	comp=E,618μm,0.4s						
PP3				AML	AML		
	comp=N,763μm,0.4s						
PP3				AML	AML		
	comp=N,764μm,0.4s						
PP3				AML	AML		
	comp=E,618μm,0.4s						
PP3				AML	AML		
	comp=E,486μm,0.4s						
PP3				AML	AML		
	comp=N,703μm,0.3s						
PP3				AML	AML		
	comp=E,520μm,0.3s						
PP3				AML	AML		
	comp=N,763μm,0.4s						
CERT	**Cerreto**	**0.79**	**192**	⇑P	Pb	22 53 59.0	0.0
CERT				AML	AML		
	comp=E,119μm,0.8s						
CERT				AML	AML		
	comp=N,98μm,0.4s						
ATFO	**Monte Foce - G**	**0.80**	**325**	⇓P	Pg	22 53 58.5	0.0
ATFO				AML	AML		
	comp=E,160μm,0.3s						
ATFO				AML	AML		
	comp=N,115μm,0.3s						
ATFO				AML	AML		
	comp=E,160μm,0.3s						
ATFO				AML	AML		
	comp=N,115μm,0.3s						
ARVD	**Arcevia**	**0.80**	**346**	S	Sb	22 54 11.0	+0.8
PIEI	**Pieia**	**0.95**	**329**	S	Sn	22 54 17.0	+0.6
LPEL	**Lama dei Pelig**	**0.99**	**132**	P	Pg	22 54 02.1	0.0
LPEL				AML	AML		
	comp=N,44μm,0.2s						
LPEL				AML	AML		
	comp=E,62μm,0.6s						
ROM9	**Roma**	**1.03**	**210**	⇓P	Pn	22 54 03.6	0.0
PTRJ	**Pietraroja**	**1.67**	**143**	P	Pn	22 54 12.9	+0.3
PTRJ				AML	AML		
	comp=N,1880μm,1.0s						
PTRJ				AML	AML		
	comp=E,651μm,0.7s						
CAFE	**Carife**	**2.27**	**137**	S	Sn	22 54 50.0	+1.1

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*LDG **30** 23:05:30.6±0.1, 42°.95N×13°.28E, h10km, Ml3.4/21, Error ellipse: s-maj=3.3km s-min=1.7km az=60.0*
*IDC **30** 23:05:31.1±1.2, 42°.93N×13°.27E, h0km, mb3.5/3, mbtmp3.5/9, ML3.3/6, MS2.9/4, Error ellipse: s-maj=27.0km s-min=13.3km az=93.0*
*ROM **30** 23:05:31.3±0.0, 42°.914N±0°.002×13°.200E±0°.003, h8km, ML3.5/74, Error ellipse: s-maj=0.2km s-min=0.1km az=82.0*
*PRU **30** 23:05:33.7±0.0, 42°.95N×13°.36E, h10km*
*STR **30** 23:05:53.5±7.4, 43°N±14°×1°1E±6°1, h10km, MLv2.7/7, Error ellipse: s-maj=0.1km s-min=0.0km az=95.0, preliminary*

ISC 30 23:05:31.6±0.7, 42°.92N±0°.01×13°.19E±0°.02, h14km±4km, n189, σ2°32/244, 3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**182**	P	**Pg**	**23 05 33.4**	**-1.1**
T1245				S	**Sg**	**23 05 35.0**	**-1.5**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1256	**Bolognola (MC)**	**0.09**	**16**	P	**Pg**	**23 05 33.8**	**-1.0**
T1256				S	**Sg**	**23 05 35.7**	**-1.4**
MMO1	**Montemonaco**	**0.10**	**100**	P	**Pg**	**23 05 33.9**	**-1.0**
MMO1				S	**Sg**	**23 05 35.5**	**-1.5**
T1216	**Preci, Frazion**	**0.13**	**258**	P	**Pg**	**23 05 35.0**	**-0.2**
T1216				S	**Sg**	**23 05 37.7**	**+0.2**
T1216				AML	AML		
	comp=E,84450μm,0.4s						
T1216				AML	AML		
T1216				AML	AML		
	comp=E,84550μm,0.4s						
T1216				AML	AML		
AM05	**Amandola Campo**	**0.13**	**63**	P	**Pg**	**23 05 34.6**	**-0.5**
AM05				S	**Sg**	**23 05 37.0**	**-0.6**
AM05				AML	AML		
	comp=E,21350μm,1.5s						
AM05				AML	AML		
	comp=N,15350μm,0.7s						
AM05				AML	AML		
	comp=E,82650μm,1.5s						
AM05				AML	AML		
	comp=N,3480μm,1.4s						
AM05				AML	AML		
	comp=N,15400μm,0.7s						
AM05				AML	AML		
	comp=N,3485μm,1.4s						
FDMO	**Fiordimonte**	**0.14**	**327**	P	**Pg**	**23 05 34.8**	**-0.5**
FDMO				S	**Sg**	**23 05 37.4**	**-0.4**
T1214	**Arquata del Tr**	**0.16**	**175**	P	**Pg**	**23 05 35.3**	**-0.3**
T1214				S	**Sg**	**23 05 38.4**	**+0.1**
T1244	**Arquata del Tr**	**0.18**	**154**	P	**Pg**	**23 05 35.7**	**-0.1**
T1244				S	**Sg**	**23 05 39.2**	**+0.5**
T1241	**Roccafluvione,**	**0.19**	**109**	P	**Pg**	**23 05 35.8**	**-0.1**
T1241				S	**Sg**	**23 05 38.9**	**0.0**
T1241				AML	AML		
	comp=N,44650μm,0.8s						
T1241				AML	AML		
	comp=E,54300μm,0.6s						
T1241				AML	AML		
	comp=E,54800μm,0.7s						
T1241				AML	AML		
	comp=N,49900μm,0.8s						
T1219	**Muccia, Frazio**	**0.19**	**316**	⇓P	**Pg**	**23 05 35.9**	**-0.2**
T1219				S	**Sg**	**23 05 39.4**	**+0.3**
T1212	**Cascia, Frazio**	**0.20**	**213**	P	**Pg**	**23 05 36.2**	**+0.1**
T1212				S	**Sg**	**23 05 39.9**	**+0.7**
T1213	**Norcia, Frazio**	**0.20**	**194**	P	**Pg**	**23 05 36.1**	**0.0**
T1213				S	**Sg**	**23 05 39.5**	**+0.3**
T1220	**Camerino, Fraz**	**0.21**	**339**	P	**Pg**	**23 05 36.0**	**-0.3**
T1220				S	**Sg**	**23 05 40.2**	**+0.7**
T1218	**Civita (PG)**	**0.25**	**193**	P	**Pg**	**23 05 37.2**	**+0.1**
T1218				S	**Sb**	**23 05 41.8**	**-0.5**
T1204	**Amatrice, Fraz**	**0.26**	**159**	P	**Pg**	**23 05 37.1**	**-0.1**
T1204				S	**Sg**	**23 05 41.4**	**+0.4**
T1204				AML	AML		
	comp=N,30350μm,0.7s						
T1204				AML	AML		
	comp=E,37150μm,0.4s						
T1204				AML	AML		
	comp=E,37100μm,0.4s						
T1204				AML	AML		
	comp=N,30400μm,0.7s						
T1201	**Domo (RI)**	**0.26**	**170**	P	**Pg**	**23 05 37.5**	**+0.3**
T1201				S	**Sb**	**23 05 42.5**	**-0.1**
T1215	**Vallo di Nera,**	**0.26**	**244**	P	**Pg**	**23 05 37.4**	**+0.2**
T1215				S	**Sb**	**23 05 42.4**	**-0.1**
T1215				AML	AML		
	comp=E,12050μm,0.5s						
T1215				AML	AML		
	comp=N,14500μm,0.8s						
T1215				AML	AML		
	comp=E,12250μm,0.5s						
T1215				AML	AML		
	comp=N,14450μm,1.0s						
T1215				AML	AML		
	comp=E,12050μm,0.5s						
T1215				AML	AML		
	comp=N,14550μm,0.8s						
T1215				AML	AML		
	comp=E,12235μm,0.5s						
T1215				AML	AML		
	comp=N,14500μm,1.0s						
T1217	**Poggiodomo (PG**	**0.28**	**223**	P	**Pg**	**23 05 37.4**	**-0.1**
T1217				S	**Sb**	**23 05 42.7**	**-0.4**
T1217				AML	AML		
	comp=E,15900μm,0.6s						
T1217				AML	AML		
	comp=E,15700μm,1.2s						
T1217				AML	AML		
	comp=E,15650μm,0.6s						
T1217				AML	AML		
	comp=N,18050μm,0.5s						
T1217				AML	AML		
	comp=N,18300μm,0.5s						
T1243	**Rocca Santa Ma**	**0.29**	**139**	P	**Pg**	**23 05 37.5**	**-0.2**
T1243				S	**Sb**	**23 05 42.4**	**-1.0**
MNTP	**Montappone**	**0.30**	**43**	P	**Pb**	**23 05 38.3**	**-0.4**
MNTP				S	**Sb**	**23 05 44.0**	**+0.4**
MNTP				AML	AML		
	comp=N,28050μm,1.2s						
MNTP				AML	AML		
	comp=E,36300μm,1.2s						
SMA1	**SAN MARTINO**	**0.30**	**160**	P	**Pg**	**23 05 37.6**	**-0.3**
SMA1				S	**Sb**	**23 05 43.3**	**-0.5**
SMA1				AML	AML		
	comp=E,35300μm,0.6s						
SMA1				AML	AML		

	comp=N,41400µm,1.0s					
SMA1			AML	AML		
	comp=N,41450µm,0.9s					
LNSS	**Leonessa**	**0.33 200**	P	**Pg**	**23 05 38.8**	**+0.4**
LNSS			S	**Sb**	**23 05 44.3**	**-0.3**
LNSS			AML	AML		
	comp=N,64500µm,0.3s					
LNSS			AML	AML		
	comp=E,48500µm,0.2s					
OFFI	**Offida**	**0.36 87**	P	**Pb**	**23 05 39.7**	**-0.1**
OFFI			AML	AML		
	comp=N,35600µm,0.6s					
OFFI			AML	AML		
	comp=E,28050µm,0.6s					
T1246	**Crognaleto (TE**	**0.40 146**	P	**Pg**	**23 05 39.3**	**-0.4**
RM33	**Pellescritta (**	**0.41 178**	P	**Pg**	**23 05 39.7**	**-0.1**
RM33			S	**Sb**	**23 05 46.5**	**-0.2**
ASSB	**Assisi San Ben**	**0.41 288**	P	**Pg**	**23 05 39.9**	**0.0**
ASSB			S	**Sb**	**23 05 46.8**	**0.0**
ASSB			AML	AML		
	comp=E,9425µm,1.1s					
ASSB			AML	AML		
	comp=N,10025µm,0.4s					
CAMP	**Campotosto**	**0.41 157**	P	**Pg**	**23 05 39.5**	**-0.4**
CAMP			S	**Sb**	**23 05 46.3**	**-0.6**
CAMP			AML	AML		
	comp=N,15350µm,0.6s					
CAMP			AML	AML		
	comp=E,22600µm,0.2s					
EL6	**Elcito**	**0.42 351**	P	**Pg**	**23 05 39.8**	**-0.2**
EL6			S	**Sb**	**23 05 46.8**	**-0.2**
EL6			AML	AML		
	comp=N,12350µm,0.8s					
EL6			AML	AML		
	comp=N,12300µm,0.8s					
EL6			AML	AML		
	comp=E,10045µm,1.3s					
TERO	**Teramo**	**0.42 134**	P	**Pg**	**23 05 39.8**	**-0.2**
TERO			S	**Sb**	**23 05 46.7**	**-0.4**
TERO			AML	AML		
	comp=E,17350µm,0.3s					
TERO			AML	AML		
	comp=N,21450µm,0.3s					
TERO			AML	AML		
	comp=N,20600µm,0.4s					
TERO			AML	AML		
	comp=E,16700µm,0.3s					
T1211	**Morro Reatino**	**0.46 213**	P	**Pg**	**23 05 40.7**	**+0.1**
T1211			S	**Sb**	**23 05 48.4**	**+0.3**
T1211			AML	AML		
	comp=N,15650µm,1.4s					
T1211			AML	AML		
	comp=E,7275µm,1.4s					
T1211			AML	AML		
	comp=N,15650µm,1.4s					
T1211			AML	AML		
	comp=N,15650µm,1.4s					
T1211			AML	AML		
	comp=N,15600µm,1.4s					
T1211			AML	AML		
	comp=E,6735µm,0.5s					
T1211			AML	AML		
	comp=E,7270µm,1.4s					
CING	**Cingoli**	**0.46 0**	P	**Pg**	**23 05 40.5**	**-0.2**
CING			S	**Sb**	**23 05 48.4**	**+0.2**
ARRO	**Arrone**	**0.46 223**	P	**Pg**	**23 05 40.7**	**0.0**
T1247	**Pizzolo (AQ)**	**0.48 171**	P	**Pg**	**23 05 40.9**	**-0.2**
T1247			S	**Sb**	**23 05 48.5**	**-0.3**
T1247			AML	AML		
	comp=N,15850µm,0.5s					
T1247			AML	AML		
	comp=E,16100µm,0.8s					
ATCC	**AVT- Casa Cast**	**0.48 304**	P	**Pg**	**23 05 41.3**	**+0.1**
ATCC			S	**Sb**	**23 05 49.7**	**+0.8**
ATCC			AML	AML		
	comp=E,11480µm,0.9s					
ATCC			AML	AML		
	comp=N,10030µm,0.4s					
ATCC			AML	AML		
	comp=E,11450µm,0.9s					
ATCC			AML	AML		
	comp=N,10035µm,0.4s					
FOSV	**Fossato di Vic**	**0.49 320**	P	**Pg**	**23 05 41.2**	**-0.1**
FOSV			S	**Sb**	**23 05 49.6**	**+0.5**
FOSV			AML	AML		
	comp=N,16850µm,0.4s					
FOSV			AML	AML		
	comp=E,5725µm,0.7s					
TRTR	**Tortoreto Alta**	**0.54 101**	P	**Pb**	**23 05 43.4**	**+0.5**
TRTR			AML	AML		
	comp=N,34400µm,0.3s					
TRTR			AML	AML		
	comp=E,21850µm,0.5s					
MMUR	**Monte Murano**	**0.54 345**	P	**Pg**	**23 05 42.4**	**+0.1**
MMUR			S	**Sb**	**23 05 51.5**	**+0.9**
GIGS	**Gran Sasso**	**0.54 149**	P	**Pg**	**23 05 42.1**	**-0.2**
GIGS			AML	AML		
	comp=E,3605µm,0.6s					
GIGS			AML	AML		
	comp=N,1755µm,1.6s					
CESX	**Cesi**	**0.55 236**	P	**Pg**	**23 05 42.1**	**-0.1**
CESX			AML	AML		
	comp=N,8385µm,0.6s					
CESX			AML	AML		
	comp=E,7620µm,0.4s					
PP3	**Marolino**	**0.55 33**	P	**Pb**	**23 05 43.1**	**+0.1**
PP3			AML	AML		
	comp=E,18700µm,1.1s					
PP3			AML	AML		
	comp=N,15600µm,0.4s					
PP3			AML	AML		
	comp=N,15550µm,0.4s					
PP3			AML	AML		
	comp=E,18650µm,1.1s					
AQU	**L'Aquila**	**0.58 164**	P	**Pg**	**23 05 42.5**	**-0.5**
AQU			S	**Sb**	**23 05 52.0**	**+0.2**
AQU			AML	AML		
	comp=N,5955µm,1.1s					
AQU			AML	AML		
	comp=E,8900µm,1.3s					
AQU			AML	AML		
	comp=N,5990µm,1.1s					
AQU			AML	AML		
	comp=E,8945µm,1.3s					
MURB	**Monte Urbino**	**0.60 306**	P	**Pg**	**23 05 43.3**	**0.0**
MURB			AML	AML		
	comp=E,11560µm,0.9s					
MURB			AML	AML		
	comp=N,10540µm,0.3s					
MURB			AML	AML		
	comp=N,11800µm,0.3s					
MURB			AML	AML		
	comp=N,10505µm,0.3s					
MURB			AML	AML		
	comp=E,11400µm,0.9s					
ARVD	**Arcevia**	**0.61 343**	P	**Pg**	**23 05 43.3**	**-0.2**
ARVD			S	**Sb**	**23 05 53.6**	**+1.1**
ARVD			AML	AML		
	comp=N,2015µm,0.5s					
ARVD			AML	AML		
	comp=E,4020µm,0.3s					
ATSC	**Scheggia e Pas**	**0.63 324**	P	**Pg**	**23 05 43.5**	**-0.3**
ATFO	**Monte Foce - G**	**0.64 315**	⇓P	**Pg**	**23 05 43.9**	**-0.2**
ATFO			AML	AML		
	comp=E,3960µm,0.7s					
ATFO			AML	AML		
	comp=N,4205µm,0.5s					
FIAM	**Fiamignano**	**0.65 185**	P	**Pg**	**23 05 43.9**	**-0.5**
FIAM			AML	AML		
	comp=N,5735µm,0.3s					
FIAM			AML	AML		
	comp=E,5265µm,0.8s					
ATTE	**AVT- Monte Tez**	**0.68 295**	P	**Pg**	**23 05 44.6**	**-0.1**
ATTE			AML	AML		
	comp=E,2965µm,0.5s					
ATTE			AML	AML		
	comp=N,3055µm,1.2s					
FRON	**Frontone**	**0.69 331**	⇓P	**Pg**	**23 05 44.6**	**-0.4**
FRON			S	**Sb**	**23 05 55.7**	**+0.9**
FRON			AML	AML		
	comp=E,3250µm,0.9s					
FRON			AML	AML		
	comp=N,5405µm,0.8s					
VCEL	**Villa Celiera**	**0.71 137**	P	**Pg**	**23 05 45.2**	**-0.2**
VCEL			AML	AML		
	comp=E,5375µm,0.5s					
VCEL			AML	AML		
	comp=N,6225µm,0.5s					
FAGN	**Fagnano**	**0.71 156**	P	**Pg**	**23 05 45.2**	**-0.2**
FAGN			AML	AML		
	comp=N,11300µm,0.5s					
FAGN			AML	AML		
	comp=E,10070µm,0.6s					
ATBU	**Serra di Buran**	**0.73 320**	P	**Pg**	**23 05 45.5**	**-0.3**
ATVO	**AVT- Monte Val**	**0.74 309**	P	**Pg**	**23 05 45.6**	**-0.3**
ATVO			AML	AML		
	comp=E,2610µm,0.4s					
ATVO			AML	AML		
	comp=N,3200µm,0.5s					
MPAG	**Monte Paganucc**	**0.78 336**	P	**Pg**	**23 05 46.4**	**-0.3**
MPAG			AML	AML		
	comp=N,3050µm,1.4s					
MPAG			AML	AML		
	comp=N,2385µm,0.5s					
MPAG			AML	AML		
	comp=E,3055µm,1.3s					
MPAG			AML	AML		
	comp=E,2675µm,1.6s					
PIEI	**Pieia**	**0.78 322**	P	**Pg**	**23 05 46.2**	**-0.6**
PIEI			AML	AML		
	comp=E,2605µm,0.4s					
PIEI			AML	AML		
	comp=N,2160µm,0.5s					
ATPI	**Pietralunga -**	**0.79 313**	P	**Pg**	**23 05 46.5**	**-0.3**
ATPI			AML	AML		
	comp=N,2455µm,0.5s					
ATPI			AML	AML		
	comp=E,2155µm,1.3s					
SENI	**Senigallia**	**0.79 2**	P	**Pb**	**23 05 47.0**	**-0.1**
MGAB	**Montegabbione**	**0.79 270**	P	**Pg**	**23 05 46.9**	**-0.1**
MGAB			AML	AML		
	comp=E,4055µm,0.4s					
MGAB			AML	AML		
	comp=E,5220µm,0.4s					
MGAB			AML	AML		
	comp=N,12890µm,0.5s					
MGAB			AML	AML		
	comp=N,12620µm,0.5s					
ATMI	**Monte Miggiano**	**0.79 302**	P	**Pb**	**23 05 47.8**	**+0.6**
ATMI			AML	AML		
	comp=E,5885µm,0.8s					
ATMI			AML	AML		
	comp=N,7160µm,1.0s					
T0110	**Collepietro**	**0.82 148**	P	**Pg**	**23 05 46.7**	**-0.7**
T0110			AML	AML		
	comp=E,6575µm,0.5s					
T0110			AML	AML		
	comp=N,7285µm,1.4s					
NARO	**Abbazia di Nar**	**0.82 327**	P	**Pg**	**23 05 47.0**	**-0.6**
NARO			AML	AML		
	comp=E,1775µm,1.2s					
NARO			AML	AML		
	comp=N,1444µm,1.3s					
FSSB	**Fossombrone**	**0.83 339**	P	**Pg**	**23 05 47.5**	**-0.2**
FSSB			AML	AML		
	comp=E,6545µm,1.4s					
FSSB			AML	AML		
	comp=N,9935µm,0.3s					
SRES	**S.Oreste - Sor**	**0.85 217**	P	**Pg**	**23 05 47.3**	**-0.6**
SRES			AML	AML		
	comp=E,2495µm,1.0s					
SRES			AML	AML		
	comp=N,2220µm,1.0s					
APEC	**Apecchio**	**0.85 319**	P	**Pg**	**23 05 47.8**	**-0.3**
APEC			AML	AML		
	comp=E,648µm,0.8s					
APEC			AML	AML		
	comp=N,1135µm,0.6s					
PE3	**Peglio**	**0.93 327**	P	**Pb**	**23 05 49.2**	**-0.2**
PE3			AML	AML		
	comp=E,15µm,0.3s					
PE3			AML	AML		
	comp=N,15µm,0.5s					
SACS	**San Casciano d**	**0.94 266**	P	**Pb**	**23 05 50.0**	**+0.2**
SACS			AML	AML		
	comp=E,2635µm,0.9s					
SACS			AML	AML		
	comp=N,4280µm,1.0s					
SACS			AML	AML		
	comp=E,2450µm,0.9s					
SACS			AML	AML		
	comp=N,4115µm,1.0s					
MTCE	**Montecelio**	**0.95 201**	P	**Pb**	**23 05 48.9**	**-1.0**
MTCE			AML	AML		
	comp=N,1635µm,1.6s					
MTCE			AML	AML		
	comp=E,2195µm,1.6s					
CERT	**Cerreto**	**0.98 189**	P	**Pb**	**23 05 50.0**	**-0.4**
CERT			AML	AML		
	comp=N,3380µm,0.9s					
CERT			AML	AML		
	comp=E,4655µm,0.6s					
CAFI	**Castiglion Fio**	**0.99 295**	P	**Pb**	**23 05 50.4**	**-0.1**
CAFI			AML	AML		
	comp=E,1515µm,1.3s					
CAFI			AML	AML		
	comp=N,1875µm,0.9s					
CAFI			AML	AML		
	comp=E,1445µm,0.6s					
CAFI			AML	AML		
	comp=N,1830µm,0.9s					
INTR	**Introdacqua**	**1.05 150**	AML	AML		
	comp=N,2µm,0.8s					
INTR			AML	AML		
	comp=E,3µm,0.7s					
INTR			AML	AML		
	comp=E,2635µm,0.7s					
INTR			AML	AML		
	comp=N,3530µm,0.8s					
LATE	**Laterza**	**1.07 254**	P	**Pb**	**23 05 52.1**	**+0.3**
VVLD	**Villa Vallelon**	**1.09 163**	P	**Pb**	**23 05 51.6**	**-0.7**
MCIV	**Monte Civitell**	**1.12 263**	P	**Pb**	**23 05 53.0**	**+0.2**
MCIV			AML	AML		
	comp=E,1150µm,1.0s					
MCIV			AML	AML		
	comp=N,1330µm,0.8s					
GUAR	**Guarcino**	**1.13 175**	P	**Pg**	**23 05 53.1**	**-0.2**
SF04	**Casetta**	**1.13 266**	AML	AML		
	comp=N,1212µm,1.1s					
SF04			AML	AML		
	comp=E,1137µm,0.3s					
LPEL	**Lama dei Pelig**	**1.14 140**	P	**Pb**	**23 05 52.3**	**-0.7**
CRE	**Caprese Michel**	**1.15 308**	P	**Pn**	**23 05 53.6**	**+0.3**
CRE			AML	AML		
	comp=E,954µm,0.5s					
CRE			AML	AML		
	comp=N,1240µm,0.7s					
RMP	**Rome, Mte Porz**	**1.16 198**	P	**Pg**	**23 05 54.1**	**+0.1**
RMP			AML	AML		
	comp=E,2755µm,1.3s					
RMP			AML	AML		
	comp=N,3335µm,0.5s					
ROM9	**Roma**	**1.20 205**	AML	AML		
	comp=E,2450µm,1.5s					
ROM9			AML	AML		
	comp=N,2820µm,0.6s					
RDP	**Rocca di Papa**	**1.21 197**	P	**Pb**	**23 05 54.4**	**+0.1**
TOLF	**Tolfa**	**1.23 226**	P	**Pn**	**23 05 54.1**	**-0.2**
TOLF			AML	AML		
	comp=N,1870µm,0.5s					
TOLF			AML	AML		
	comp=E,1655µm,0.6s					
POFI	**Posta Fibreno**	**1.26 162**	P	**Pb**	**23 05 54.9**	**-0.2**
ARCI	**Arcidosso**	**1.26 268**	P	**Pg**	**23 05 56.1**	**+0.2**
ARCI			AML	AML		
	comp=E,436µm,0.6s					
ARCI			AML	AML		
	comp=N,434µm,0.9s					
BLLA	**Bellaria**	**1.33 337**	AML	AML		
	comp=E,2535µm,1.4s					
BLLA			AML	AML		
	comp=N,3375µm,1.5s					
ASQU	**Asqua**	**1.35 311**	P	**Pn**	**23 05 56.4**	**+0.4**
ASQU			AML	AML		
	comp=N,706µm,0.6s					
ASQU			AML	AML		
	comp=E,821µm,0.7s					
GIUL	**Giuliano Di Ro**	**1.36 178**	P	**Pg**	**23 05 57.5**	**-0.2**
SFI	**Santa Sofia**	**1.39 316**	P	**Pb**	**23 05 57.8**	**+0.5**
SFI			AML	AML		
	comp=E,813µm,0.8s					
SFI			AML	AML		
	comp=N,894µm,1.1s					
RNI2	**Rionero Sannit**	**1.41 149**	P	**Pg**	**23 05 58.6**	**0.0**
LATB	**Latina**	**1.43 187**	P	**Pb**	**23 05 57.9**	**-0.1**
LIK	**San Giovanni I**	**1.44 169**	P	**Pg**	**23 06 00.1**	**+0.9**
CSNT	**Castellina Chi**	**1.50 292**	P	**Pb**	**23 05 59.0**	**-0.1**
CSNT			AML	AML		
	comp=E,375µm,1.1s					
CSNT			AML	AML		
	comp=N,422µm,0.6s					
MIDA	**Miranda**	**1.50 148**	P	**Pn**	**23 05 58.3**	**+0.2**
FROS	**Frosini**	**1.52 282**	P	**Pn**	**23 05 58.8**	**+0.4**
FROS			AML	AML		
	comp=E,812µm,1.1s					
FROS			AML	AML		
	comp=N,711µm,1.0s					
TRIV	**Trivento**	**1.53 138**	P	**Pg**	**23 06 00.9**	**0.0**
RUFI	**Rufina**	**1.53 308**	P	**Pb**	**23 05 59.7**	**0.0**
OSSC	**Osservatorio P**	**1.55 294**	P	**Pb**	**23 05 59.9**	**-0.1**
OSSC			AML	AML		
	comp=E,563µm,1.0s					
OSSC			AML	AML		
	comp=N,520µm,1.2s					
OSSC			AML	AML		
	comp=E,504µm,1.6s					
OSSC			AML	AML		
	comp=N,494µm,0.8s					
LMD	**Lutirano**	**1.58 318**	P	**Pb**	**23 06 01.0**	**+0.3**
MAON	**Monte Argentar**	**1.60 253**	P	**Pn**	**23 05 59.9**	**+0.5**
MAON			AML	AML		
	comp=N,425µm,1.5s					
MAON			AML	AML		
	comp=E,287µm,0.6s					
BRIS	**BRISIGHELLA**	**1.74 316**	P	**Pb**	**23 06 03.4**	**+0.2**
BRIS			AML	AML		
	comp=N,1145µm,1.6s					
BRIS			AML	AML		
	comp=N,1030µm,1.6s					
BRIS			AML	AML		
	comp=E,1118µm,0.6s					
BRIS			AML	AML		
	comp=E,1139µm,0.6s					
MELA	**Melanico ??? S**	**1.88 129**	P	**Pb**	**23 06 04.7**	**-1.0**
APRC	**Apricena**	**2.09 123**	P	**Pb**	**23 06 08.4**	**-0.9**
PII	**Pisa**	**2.11 293**	P	**Pn**	**23 06 08.1**	**+1.8**
PII			AML	AML		
	comp=N,449µm,1.2s					
PII			AML	AML		
	comp=E,292µm,0.7s					
SGRT	**San Giovanni R**	**2.22 121**	P	**Pb**	**23 06 10.0**	**-1.5**
MORSI	**Morsiglia**	**2.81 272**	P	**Pn**	**23 06 17.8**	**+1.7**
SMPL	**Sampolo**	**3.00 255**	P	**Pn**	**23 06 21.4**	**+2.6**
PGF	**Pioggiola**	**3.11 265**	*e*P	**Pn**	**23 06 21.4**	**+1.1**
PGF			*e*Sn	**Sn**	**23 06 53.7**	**-3.6**
	comp=E,17nm,0.6s					
PGF	**Pioggiola**	**3.11 265**	AML	AML		
	comp=E,34µm,1.1s					
PGF			AML	AML		
	comp=N,29µm,1.2s					
PGF	**Pioggiola**	**3.11 265**	P	**Pn**	**23 06 22.5**	**+2.2**
ROVR	**Rover Verones**	**3.12 332**	P	**Pn**	**23 06 22.8**	**+2.3**
ROVR			AML	AML		
	comp=E,78µm,0.9s					
ROVR			AML	AML		
	comp=N,99µm,0.3s					
CGRP	**Cima Grappa**	**3.13 342**	P	**Pn**	**23 06 21.9**	**+1.3**
CGRP			AML	AML		
	comp=E,458µm,1.1s					
CGRP			AML	AML		
	comp=N,366µm,0.6s					
CGRP			AML	AML		
	comp=E,398µm,1.1s					
CGRP			AML	AML		
	comp=N,360µm,0.6s					
SALO	**Salr**	**3.31 326**	P	**Pn**	**23 06 25.2**	**+2.2**
SALO			AML	AML		
	comp=N,262µm,0.8s					
SALO			AML	AML		
	comp=E,353µm,0.9s					
CTI	**Castel Tesino**	**3.32 341**	P	**Pn**	**23 06 25.0**	**+1.8**
CTI			AML	AML		
	comp=E,266µm,1.5s					
CTI			AML	AML		
	comp=N,226µm,0.3s					
MPRI	**Monte Prat**	**3.33 358**	P	**Pn**	**23 06 24.8**	**+1.6**
MPRI			AML	AML		
	comp=N,421µm,1.0s					
MPRI			AML	AML		
	comp=E,276µm,0.8s					
STAL	**STALIGIAL**	**3.36 354**	P	**Pn**	**23 06 25.1**	**+1.4**
STAL			AML	AML		
	comp=E,260µm,0.7s					
STAL			AML	AML		
	comp=N,238µm,1.3s					
CIMO	**Cimolais**	**3.44 351**	P	**Pn**	**23 06 25.6**	**+0.9**
CIMO			AML	AML		
	comp=N,90µm,1.1s					
CIMO			AML	AML		
	comp=E,89µm,0.8s					
CIMO			AML	AML		
	comp=E,80µm,0.7s					
CIMO			AML	AML		
	comp=N,97µm,1.3s					
LUSI	**Trento, Gardas**	**3.44 333**	P	**Pn**	**23 06 26.9**	**+2.1**
PTCC	**Patocco-Chiusa**	**3.49 2**	P	**Pn**	**23 06 26.6**	**+1.1**
PTCC			AML	AML		
	comp=E,114µm,0.6s					
PTCC			AML	AML		
	comp=N,130µm,0.8s					
GAGG	**Gaggia**	**3.55 334**	P	**Pn**	**23 06 28.6**	**+2.3**
GAGG			AML	AML		
	comp=E,422µm,1.0s					
GAGG			AML	AML		
	comp=N,233µm,1.1s					
ACOM	**Acomizza, Ital**	**3.64 4**	P	**Pn**	**23 06 29.6**	**+2.0**
ACOM			AML	AML		
	comp=N,102µm,1.5s					
ACOM			AML	AML		
	comp=E,112µm,1.5s					
ACOM			AML	AML		
	comp=E,120µm,0.9s					
ACOM			AML	AML		
	comp=N,87µm,0.5s					
ZOU	**Zoufplan**	**3.64 358**	P	**Pn**	**23 06 29.1**	**+1.4**
ZOU			AML	AML		
	comp=E,274µm,1.2s					
ZOU			AML	AML		
	comp=E,273µm,1.2s					
ZOU			AML	AML		
	comp=N,274µm,1.5s					
ZOU			AML	AML		
	comp=N,272µm,1.5s					
MABI	**Malga Bissina**	**3.68 330**	P	**Pn**	**23 06 30.6**	**+2.5**
MABI			AML	AML		
	comp=E,77µm,0.9s					
MABI			AML	AML		
	comp=N,59µm,0.6s					
FVI	**Forni Avoltri**	**3.69 356**	P	**Pn**	**23 06 30.0**	**+1.8**
FVI			AML	AML		
	comp=E,127µm,0.5s					
FVI			AML	AML		
	comp=N,171µm,0.6s					
OBKA	**Obir**	**3.72 15**	*e*Pn	**Pb**	**23 06 39.3**	**+2.2**
	comp=N,7.5nm,0.4s					
MYKA	**Terra Mystica**	**3.73 5**	*e*Pn	**Pn**	**23 06 30.6**	**+1.8**
	comp=N,3.9nm,0.3s					
DGI	**Dorgali Grotta**	**3.74 227**	P	**Pn**	**23 06 30.7**	**+1.9**
KOSI	**Kohlern**	**3.77 341**	P	**Pn**	**23 06 31.8**	**+2.3**
KOSI			AML	AML		
	comp=E,309µm,1.4s					
KOSI			AML	AML		
	comp=N,190µm,1.5s					
APPI	**Appiano**	**3.83 339**	P	**Pn**	**23 06 32.3**	**+2.2**
APPI			AML	AML		
	comp=N,158µm,0.4s					
APPI			AML	AML		
	comp=E,154µm,1.1s					
ABTA	**Abfaltersbach**	**3.86 353**	Pn	**Pn**	**23 06 32.6**	**+2.0**
	comp=E,37nm,0.5s,SNR=12					
RISI	**Rein**	**4.11 349**	P	**Pn**	**23 06 35.6**	**+1.5**
RISI			AML	AML		
	comp=E,367µm,0.5s					
RISI			AML	AML		
	comp=N,288µm,0.5s					
ROSI	**Rosskopf**	**4.21 343**	P	**Pn**	**23 06 37.7**	**+2.3**
ROSI			AML	AML		
	comp=N,362µm,0.9s					
ROSI			AML	AML		

	comp=E,263μm,1.0s					
MUGIO	**Muggio**	4.23 317	P	Pn	23 06 37.3	+1.8
SBF	**Sospel**	4.30 285	eP	Pn	23 06 38.5	+1.9
TURF	**col de Turini**	4.35 286	P	Pn	23 06 41.7	+4.3
BEHE	**Becsehely**	4.38 34	P	Pb	23 06 44.4	-3.8
FETA	**Feichten**	4.46 338	Pn	Pn	23 06 42.1	+3.2
	comp=E,13nm,0.3s,SNR=17					
FETA			eSn	Sn	23 07 35.0	+4.4
	comp=E,12nm,0.6s					
VSL	**Villasalto**	4.47 221	P	Pn	23 06 41.3	+2.4
WTTA	**Wattenberg**	4.48 346	Pn	Pn	23 06 42.8	+3.6
	comp=E,17nm,0.5s,SNR=8.5					
DAVOX	**Davos/Dischmat**	4.52 330	Pn	Pn	23 06 43.1	+3.3
	comp=E,2.6nm,0.3s,baz=156,slow=17,SNR=23					
DAVOX			Sn	Sn	23 07 36.2	+3.9
	comp=E,2.5nm,0.3s,baz=133,slow=20,SNR=4.0					
	comp=E,24nm,0.8s					
DAVOX	**Davos/Dischmat**	4.52 330	P	Pn	23 06 43.5	+3.7
SQTA	**Sankt Quirin**	4.53 343	Pn	Pn	23 06 42.7	+3.0
	comp=E,21nm,0.4s,SNR=9.5					
SQTA			eSn	Sn	23 07 34.9	+2.7
	comp=E,18nm,0.3s					
WATA	**Walderalm**	4.56 346	Pn	Pn	23 06 44.5	+4.2
	comp=E,8.6nm,0.3s,SNR=7.1					
ARSA	**Arzberg**	4.64 20	ePn	Pn	23 06 42.7	+1.5
	comp=E,7.8nm,0.8s					
CALF	**Calern**	4.65 282	P	Pn	23 06 43.6	+2.1
MOTA	**Moosalm**	4.67 342	Pn	Pn	23 06 44.8	+3.1
	comp=E,16nm,0.6s,SNR=10					
KOVH	**Kovagotottos**	4.73 46	P	Pn	23 06 43.6	+1.1
BIOA	**Bad Ischl, Aus**	4.79 4	ePn	Pn	23 06 45.3	+2.1
	comp=E,9.6nm,0.3s					
RETA	**Reutte**	4.88 340	Pn	Pn	23 06 48.0	+3.4
	comp=E,11nm,0.3s,SNR=14					
LMR	**La Mourre**	4.91 277	eP	Pn	23 06 47.5	+2.6
LMR			eSn	Sn	23 07 36.6	-4.9
	comp=E,8.2nm,0.5s					
DAVA	**Damuels**	4.96 333	Pn	Pn	23 06 49.0	+3.2
	comp=E,18nm,0.8s,SNR=6.8					
MBDF	**Montbardon**	4.99 293	eP	Pn	23 06 48.3	+2.2
MBDF			eSn	Sn	23 07 38.7	-4.9
	comp=E,12nm,0.5s					
MOA	**Molln**	4.99 8	ePn	Pn	23 06 48.5	+2.5
	comp=E,1.6nm,0.2s					
TRIGF	**Trigance**	5.02 282	P	Pn	23 06 49.4	+2.9
CREF	**Crivoux**	5.03 291	P	Pn	23 06 51.1	+4.3
LPG	**La Plagne**	5.30 301	eP	Pn	23 06 53.3	+2.8
LPG			eSn	Sn	23 07 46.4	-5.1
	comp=E,22nm,0.8s					
LPL	**La Plagne**	5.32 301	eP	Pn	23 06 53.4	+2.6
LPL			eSn	Sn	23 07 46.8	-5.1
	comp=E,9.2nm,0.5s					
CONA	**Conrad Observa**	5.35 20	ePn	Pn	23 06 52.6	+1.5
	comp=E,1.3nm,0.3s					
BSTF	**la Bastide-des**	5.58 282	P	Pn	23 06 56.5	+2.3
SMRF	**Simiane la Rot**	5.64 283	eP	Pn	23 06 58.0	+2.9
SMRF			eSn	Sn	23 07 54.1	-5.6
	comp=E,2.2nm,0.4s					
ORIF	**Oris-en-Rattie**	5.65 293	eP	Pn	23 06 57.6	+2.5
ORIF			eSn	Sn	23 07 54.2	-5.6
	comp=E,11nm,0.7s					
GERES	**GERESS Array B**	5.94 3	Pn	Pn	23 07 00.1	+0.9
	comp=E,0.7nm,0.3s,baz=180,slow=12,SNR=7.4					
GERES			Sn	Sn	23 08 08.6	+1.6
	comp=E,2.4nm,0.3s,baz=170,slow=24,SNR=8.1					
GERES			Lg	Lg	23 08 41.7	
	baz=180,slow=28					
	comp=E,1.1nm,0.3s					
CKRC	**Cesky Krumlov**	5.96 7	ePN	Pn	23 06 59.8	+0.5
CKRC			eSN	Sn	23 08 05.8	-1.5
KHC	**Kasperske Hory**	6.22 2	ePN	Pn	23 07 03.8	+0.8
KHC			eSN	Sn	23 08 13.5	-0.3
CABF	**La Chapelle**	6.26 309	eP	Pn	23 07 06.1	+2.5
VIVF	**Saint-Julien-l**	6.45 290	eP	Pn	23 07 09.2	+3.0
VIVF			eSn	Sn	23 08 13.6	-6.0
	comp=E,2.4nm,0.5s					
KRUC	**Moravsky**	6.54 19	ePN	Pn	23 07 07.6	+0.3
KRUC			eSN	Sn	23 08 19.9	-1.7
HINF	**Hinteralfeld**	6.63 320	eP	Pn	23 07 10.3	+1.8
HINF			eSn	Sn	23 08 17.8	-6.1
	comp=E,22nm,0.4s					
CDF	**Champ du Feu**	6.88 325	eSn	Sn	23 08 24.1	-6.1
	comp=E,18nm,0.4s					
LASF	**Ste Croix**	6.89 283	eP	Pn	23 07 14.8	+2.7
LASF			eSn	Sn	23 08 23.8	-6.4
	comp=E,4.8nm,0.8s					
HAU	**Haudompre**	7.00 319	eP	Pn	23 07 15.7	+2.0
HAU			eSn	Sn	23 08 26.6	-6.4
	comp=E,29nm,0.6s					
NKC	**Novy Kostel**	7.34 356	eSN	Sn	23 08 38.7	-2.6
SMF	**Signal de Mont**	7.62 302	eP	Pn	23 07 24.8	+2.6
SMF			eSn	Sn	23 08 41.5	-6.9
	comp=E,5.0nm,0.4s					
PAGF	**Fort de Pagny**	7.68 320	eP	Pn	23 07 25.4	+2.4
PAGF			eSn	Sn	23 08 42.9	-6.9
	comp=E,17nm,0.6s					
KEST	**Kesra**	7.77 204	Pn	Pn	23 07 27.6	+3.4
	comp=E,0.1nm,0.3s,baz=346,slow=14,SNR=2.6					
KEST			LR	LR	23 10 39.3	
	comp=E,113nm,18.5s,baz=318,slow=40					
	comp=E,2.3nm,0.8s					
SFTF	**Sexfontaines**	7.79 316	eP	Pn	23 07 28.0	+3.6
	baz=134					
SFTF			eSn	Sn	23 08 45.3	-7.1
	comp=E,10nm,0.6s					
LOR	**Lormes**	7.91 307	eP	Pn	23 07 29.0	+2.9
	baz=127					
LOR			eSn	Sn	23 08 48.4	-6.9
	comp=E,4.7nm,0.5s					
MEZF	**Maizieres J'vi**	7.97 317	eP	Pn	23 07 29.8	+2.8
	baz=138					
MEZF			eSn	Sn	23 08 49.8	-7.1
	comp=E,7.5nm,0.5s					
AVF	**Avril sur Loir**	7.99 302	eP	Pn	23 07 30.1	+2.9
SAVF	**Savonnieres en**	8.01 318	eP	Pn	23 07 30.5	+3.0
	baz=138					
SSF	**Saint Saulge**	8.02 304	eP	Pn	23 07 30.0	+2.4
MTLF	**Montolieu**	8.04 277	eP	Pn	23 07 30.9	+3.0
MTLF			eSn	Sn	23 08 51.2	-7.4
	comp=E,2.4nm,0.4s					
BGF	**Bois d'Agland**	8.21 300	eP	Pn	23 07 33.2	+2.9
CLL	**Collm**	8.39 359	ePn	Pn	23 07 33.0	+0.3
CLL			ePg	Pg	23 08 09.0	-3.1
CLL			eSn	Sn	23 08 55.0	-12
CLL			ex	x	23 09 02.0	
CLL			ex	x	23 09 11.0	
CLL			ex	x	23 09 28.0	
CLL			eSg	Sg	23 09 54.0	-6.7
	comp=Z,18nm,1.2s					
MLR	**Muntele Rosu**	9.52 70	LR	LR	23 11 32.0	
	comp=Z,47nm,21.4s,baz=274,slow=38					
IDI	**Anoyia**	11.85 126	Pn	Pn	23 08 22.3	+2.2
	comp=Z,0.1nm,0.3s,baz=88,slow=20,SNR=1.4					
	comp=Z,2.8nm,0.8s					
ESDC	**Sonseca Array**	13.30 262	Pn	Pn	23 08 42.9	+3.0
	baz=74,slow=12,SNR=2.3					
ESDC			LR	LR	23 13 43.7	
	comp=Z,35nm,18.3s,baz=89,slow=37					
	comp=Z,0.3nm,0.8s					
BRTR	**Keskin Array B**	15.69 95	LR	LR	23 15 06.5	
	comp=Z,48nm,20.4s,baz=304,slow=37					
EKA	**Eskdalemuir Ar**	16.34 325	Pn	Pn	23 09 21.1	+0.7
	baz=138,slow=14					
	comp=Z,0.1nm,0.3s					
FINES	**FINESS Array B**	20.10 18	P	P	23 10 04.5	0.0
	comp=Z,1.9nm,0.8s,baz=208,slow=14,SNR=1.3					
	comp=Z,1.9nm,0.8s					
TORD	**Torodi Ar. Bea**	31.29 202	P	P	23 11 51.7	+0.6
	comp=Z,0.2nm,0.5s,baz=12,slow=9.7,SNR=2.8					
	comp=Z,0.2nm,0.5s					
MKAR	**Makanchi Array**	47.70 60	P	P	23 14 09.2	+1.6
	comp=Z,0.9nm,0.7s,baz=274,slow=7.1,SNR=7.3					
	comp=Z,0.9nm,0.7s					

*ROM **30** 23:06:59.6±0.1, 42.°916N±0.°003×13.°207E±0.°004, h9km, ML3.0/17, Error ellipse: s-maj=0.3km s-min=0.2km az=215.0*
*IDC **30** 23:07:00.3±1.7, 43.°04N×13.°24E, h0km, mb3.3/2, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=41.4km s-min=18.0km az=92.0*
ISC 30 23:07:00.2±0.8, 42.°93N±0.°02×13.°20E±0.°02, h5km±6km, n64, σ1.9±06/95, 14C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	0.08 188		P	Pg	23 07 01.8	-0.3
T1245				S	Sg	23 07 03.2	-0.2
MMO1	**Montemonaco**	0.10 111		P	Pg	23 07 02.2	-0.1
MMO1				S	Sg	23 07 03.8	+0.1
AM05	**Amandola Campo**	0.12 68		P	Pg	23 07 03.0	+0.3
AM05				S	Sg	23 07 05.3	+1.0
AM05				AML	AML		
	comp=E,9410μm,1.4s						
AM05				AML	AML		
	comp=E,36750μm,1.0s						
AM05				AML	AML		
	comp=N,1725μm,0.1s						
AM05				AML	AML		
	comp=N,8580μm,1.2s						
AM05				AML	AML		
	comp=N,8580μm,0.8s						
AM05				AML	AML		
	comp=E,36750μm,1.0s						
AM05				AML	AML		
	comp=E,9410μm,0.6s						
T1216	**Preci, Frazion**	0.14 252		P	Pg	23 07 03.2	+0.1
T1216				S	Sg	23 07 06.1	+1.1
T1216				AML	AML		
	comp=E,52800μm,0.3s						
T1216				AML	AML		
	comp=N,51200μm,0.4s						
T1216				AML	AML		
	comp=E,52850μm,0.3s						
T1216				AML	AML		
	comp=N,51200μm,0.4s						
T1216				AML	AML		
	comp=N,51200μm,1.6s						
T1241	**Roccafluvione,**	0.18 115		P	Pg	23 07 03.5	-0.3
T1241				S	Sg	23 07 07.4	+1.1
T1241				AML	AML		
	comp=E,11970μm,1.5s						
T1241				AML	AML		
	comp=N,11700μm,1.5s						
T1204	**Amatrice, Fraz**	0.27 162		P	Pg	23 07 05.5	0.0
T1204				S	Sg	23 07 10.3	+1.2
T1201	**Domo (RI)**	0.28 173		P	Pg	23 07 05.9	+0.2
T1215	**Vallo di Nera,**	0.28 242		P	Pg	23 07 05.7	+0.1
T1215				S	Sg	23 07 10.2	+0.8
T1215				AML	AML		
	comp=N,5160μm,0.8s						
T1215				AML	AML		
	comp=E,4695μm,1.5s						
T1215				AML	AML		
	comp=N,5220μm,0.7s						
T1215				AML	AML		
	comp=E,4615μm,1.2s						
T1215				AML	AML		
	comp=N,5225μm,0.8s						
T1215				AML	AML		
	comp=E,4615μm,1.2s						
T1215				AML	AML		
	comp=E,4690μm,1.5s						
T1215				AML	AML		
	comp=N,5230μm,0.7s						
T1215				AML	AML		
	comp=E,4685μm,1.5s						
T1215				AML	AML		
	comp=E,4685μm,0.5s						
T1215				AML	AML		
	comp=N,5160μm,1.2s						
T1215				AML	AML		
	comp=N,5230μm,1.3s						
T1215				AML	AML		
	comp=E,4615μm,0.8s						
MNTP	**Montappone**	0.28 44		P	Pb	23 07 06.7	-1.0
MNTP				S	Sb	23 07 11.6	-1.2
MNTP				AML	AML		
	comp=N,19050μm,1.4s						
MNTP				AML	AML		
	comp=E,27550μm,1.3s						
MNTP				AML	AML		
	comp=E,27550μm,0.7s						
T1243	**Rocca Santa Ma**	0.30 143		P	Pg	23 07 06.0	0.0
T1243				S	Sg	23 07 10.8	+0.8
T1217	**Poggiodomo (PG**	0.30 222		P	Pg	23 07 06.0	0.0
T1217				S	Sg	23 07 11.2	+1.2
SMA1	**SAN MARTINO**	0.32 162		P	Pg	23 07 06.1	-0.3
LNSS	**Leonessa**	0.35 200		P	Pg	23 07 07.0	0.0
LNSS				S	Sg	23 07 13.1	+1.4
OFFI	**Offida**	0.35 90	⇓	P	Pb	23 07 08.3	-0.6
OFFI				AML	AML		
	comp=N,8925μm,0.7s						
OFFI				AML	AML		
	comp=E,7080μm,0.8s						
OFFI				AML	AML		
	comp=N,8925μm,1.3s						
EL6	**Elcito**	0.40 349	⇓	P	Pg	23 07 08.1	+0.1
EL6				S	Sb	23 07 15.2	-1.1
EL6				AML	AML		
	comp=E,7845μm,0.2s						
EL6				AML	AML		
	comp=N,11230μm,0.4s						
T1246	**Crognaleto (TE**	0.41 149		P	Pg	23 07 07.8	-0.3
T1246				S	Sg	23 07 14.4	+0.9
ASSB	**Assisi San Ben**	0.41 285		P	Pg	23 07 08.4	+0.2
ASSB				S	Sg	23 07 14.9	+1.3
RM33	**Pellescritta (**	0.42 179		P	Pg	23 07 08.1	-0.3
CAMP	**Campotosto**	0.43 159		P	Pg	23 07 07.9	-0.5
CAMP				S	Sg	23 07 14.4	+0.5
CAMP				AML	AML		
	comp=N,2525μm,0.6s						
CAMP				AML	AML		
	comp=E,2005μm,1.0s						
TERO	**Teramo**	0.43 136		P	Pg	23 07 08.3	-0.2
TERO				AML	AML		
	comp=N,3675μm,0.5s						
TERO				AML	AML		
	comp=E,3340μm,0.5s						
TERO				AML	AML		
	comp=E,3180μm,0.4s						
TERO				AML	AML		
	comp=N,3805μm,0.5s						
TERO				AML	AML		
	comp=E,3180μm,1.6s						
TERO				AML	AML		
	comp=E,3340μm,1.5s						
ATCC	**AVT- Casa Cast**	0.48 301		P	Pg	23 07 09.3	-0.2
ATCC				S	Sb	23 07 17.6	-0.9
ATCC				AML	AML		
	comp=E,6435μm,0.7s						
ATCC				AML	AML		
	comp=N,7500μm,0.6s						
FOSV	**Fossato di Vic**	0.48 318	⇓	P	Pg	23 07 09.6	0.0
FOSV				S	Sb	23 07 17.7	-0.9
FOSV				AML	AML		
	comp=E,5820μm,0.3s						
FOSV				AML	AML		
	comp=N,12700μm,0.3s						
FOSV				AML	AML		
	comp=E,5820μm,1.7s						
T1247	**Pizzolo (AQ)**	0.50 172	⇓	P	Pg	23 07 09.9	+0.1
T1247				S	Sb	23 07 19.0	0.0
T1247				AML	AML		
	comp=N,2945μm,0.9s						
T1247				AML	AML		
	comp=E,3110μm,1.0s						
T1247				AML	AML		
	comp=N,2945μm,1.1s						
T1247				AML	AML		
	comp=E,3110μm,1.0s						
MMUR	**Monte Murano**	0.53 344		P	Pg	23 07 10.6	+0.2
MMUR				S	Sb	23 07 19.1	-0.8
PP3	**Marolino**	0.53 34	⇓	P	Pb	23 07 11.7	-0.3
PP3				AML	AML		
	comp=E,10150μm,1.4s						
PP3				AML	AML		
	comp=E,9830μm,1.3s						
PP3				AML	AML		
	comp=N,9865μm,0.4s						
PP3				AML	AML		
	comp=N,10635μm,0.4s						
PP3				AML	AML		
	comp=E,10150μm,0.6s						
PP3				AML	AML		
	comp=E,9830μm,0.7s						
TRTR	**Tortoreto Alta**	0.54 103	⇑	P	Pb	23 07 11.8	-0.2
TRTR				AML	AML		
	comp=N,7525μm,0.6s						
TRTR				AML	AML		
	comp=N,7525μm,1.4s						
TRTR				AML	AML		
	comp=E,7410μm,0.6s						
GIGS	**Gran Sasso**	0.55 151		P	Pg	23 07 10.4	-0.4
GIGS				S	Sb	23 07 20.0	-0.6
GIGS				AML	AML		
	comp=E,726μm,0.6s						
GIGS				AML	AML		
	comp=N,508μm,1.3s						
CESX	**Cesi**	0.56 235		P	Pg	23 07 11.1	+0.1
CESX				S	Sg	23 07 19.2	+0.9
CESX				AML	AML		
	comp=E,2885μm,0.9s						
CESX				AML	AML		
	comp=N,2630μm,0.7s						
CESX				AML	AML		
	comp=N,2630μm,1.3s						
ARVD	**Arcevia**	0.60 341	⇓	P	Pg	23 07 11.6	0.0
ARVD				S	Sb	23 07 22.0	+0.2
ARVD				AML	AML		
	comp=N,2230μm,0.2s						
ARVD				AML	AML		
	comp=E,4295μm,0.5s						
MURB	**Monte Urbino**	0.60 304	⇓	P	Pg	23 07 11.6	0.0
MURB				S	Sb	23 07 23.0	+1.1
MURB				AML	AML		
	comp=N,7475μm,0.3s						
MURB				AML	AML		
	comp=E,8745μm,0.3s						
MURB				AML	AML		
	comp=N,7315μm,0.3s						
MURB				AML	AML		
	comp=N,7475μm,1.7s						
MURB				AML	AML		
	comp=E,8800μm,0.3s						
MURB				AML	AML		
	comp=N,7315μm,1.7s						
ATFO	**Monte Foce - G**	0.63 313	⇓	P	Pg	23 07 12.2	-0.1
ATFO				S	Sb	23 07 24.0	+1.1
ATFO				AML	AML		
	comp=E,2800μm,0.6s						
ATFO				AML	AML		
	comp=N,2710μm,0.7s						
ATTE	**AVT- Monte Tez**	0.68 293	⇑	P	Pn	23 07 15.8	-0.7
FRON	**Frontone**	0.68 329	⇓	P	Pg	23 07 13.0	-0.3
FRON				AML	AML		
	comp=E,4120μm,0.7s						
FRON				AML	AML		
	comp=E,4120μm,1.3s						
FRON				AML	AML		
	comp=N,4760μm,0.4s						
ATVO	**AVT- Monte Val**	0.73 308	⇓	P	Pg	23 07 14.0	-0.3
ATVO				AML	AML		
	comp=E,1625μm,0.6s						
ATVO				AML	AML		
	comp=N,1258μm,0.9s						
ATVO				AML	AML		
	comp=N,1258μm,1.1s						
ATVO				AML	AML		
	comp=E,1625μm,1.4s						
MPAG	**Monte Paganucc**	0.77 335	⇓	P	Pg	23 07 14.7	-0.2
MPAG				S	Sn	23 07 28.0	-1.7
MPAG				AML	AML		
	comp=E,2340μm,0.9s						
MPAG				AML	AML		
	comp=N,2495μm,0.3s						
MPAG				AML	AML		
	comp=E,2335μm,0.9s						
MPAG				AML	AML		
	comp=N,2805μm,1.1s						
MPAG				AML	AML		
	comp=E,1950μm,0.9s						
MPAG				AML	AML		
	comp=N,2500μm,0.3s						
MPAG				AML	AML		
	comp=E,1945μm,0.9s						
PIEI	**Pieia**	0.78 321	⇓	P	Pg	23 07 14.5	-0.6
PIEI				S	Sb	23 07 28.0	+1.0
PIEI				AML	AML		
	comp=E,1995μm,0.3s						
PIEI				AML	AML		
	comp=N,1465μm,0.5s						
PIEI				AML	AML		
	comp=N,1465μm,1.5s						
ATPI	**Pietralunga -**	0.78 312		S	Sb	23 07 28.0	+0.8
ATMI	**Monte Miggiano**	0.79 301	⇓	P	Pn	23 07 18.4	+0.4
ATMI				S	Sn	23 07 29.0	-1.2
MGAB	**Montegabbione**	0.80 269	⇓	P	Pg	23 07 16.0	+0.4
MGAB				AML	AML		
	comp=E,1835μm,0.4s						
MGAB				AML	AML		
	comp=E,1930μm,1.0s						
MGAB				AML	AML		
	comp=N,4115μm,0.4s						
MGAB				AML	AML		
	comp=N,4075μm,0.4s						
MGAB				AML	AML		
	comp=E,1835μm,1.6s						
NARO	**Abbazia di Nar**	0.81 326	⇑	P	Pg	23 07 15.3	-0.5
NARO				S	Sb	23 07 29.0	+0.9
NARO				AML	AML		
	comp=E,1430μm,0.7s						
NARO				AML	AML		
	comp=N,962μm,1.0s						
FSSB	**Fossombrone**	0.82 338	⇑	P	Pg	23 07 15.8	-0.1
FSSB				S	Sn	23 07 30.0	-0.9
FSSB				AML	AML		
	comp=N,11250μm,0.3s						
FSSB				AML	AML		
	comp=E,5925μm,0.4s						
T0110	**Collepietro**	0.82 149	⇑	P	Pg	23 07 15.1	-0.9
T0110				AML	AML		
	comp=E,2230μm,0.7s						
T0110				AML	AML		
	comp=E,2235μm,0.7s						
T0110				AML	AML		
	comp=N,1540μm,1.4s						
APEC	**Apecchio**	0.85 318	⇑	P	Pg	23 07 16.5	+0.1
APEC				S	Sn	23 07 31.0	-0.6
BADI	**Badiali**	0.91 310	⇑	P	Pg	23 07 17.3	-0.3
BADI				S	Sn	23 07 32.0	-1.0
PE3	**Peglio**	0.92 326	⇑	P	Pg	23 07 17.8	0.0
PE3				AML	AML		
	comp=E,15μm,1.0s						
PE3				AML	AML		
	comp=N,17μm,1.2s						
PE3				AML	AML		
	comp=N,17μm,1.2s						
PE3				AML	AML		
	comp=E,15μm,1.0s						
PE3				AML	AML		
	comp=N,17μm,0.8s						
CAFI	**Castiglion Fio**	0.99 294	⇑	P	Pb	23 07 20.0	+0.3
CAFI				AML	AML		
	comp=E,1135μm,1.5s						
CAFI				AML	AML		
	comp=N,919μm,0.6s						
CAFI				AML	AML		
	comp=E,1135μm,0.5s						
SSP9	**Sansepolcro**	1.01 310	⇓	P	Pn	23 07 21.6	+0.6
LATE	**Laterza**	1.08 253	⇑	P	Pn	23 07 21.9	0.0
CPGN	**Carpegna, Ital**	1.08 324	⇑	P	Pg	23 07 20.4	-0.5
MCIV	**Monte Civitell**	1.13 263	⇓	P	Pg	23 07 22.0	+0.1
MCIV				AML	AML		
	comp=E,552μm,0.7s						
MCIV				AML	AML		
	comp=N,429μm,1.0s						
MCIV				AML	AML		
	comp=N,429μm,1.0s						
MCIV				AML	AML		
	comp=E,552μm,0.7s						
MA9	**Marino**	1.23 199		P	Pg	23 07 23.1	-0.7
TOLF	**Tolfa**	1.24 226	⇑	P	Pg	23 07 24.1	+0.1
ARCI	**Arcidosso**	1.27 267	⇑	P	Pb	23 07 25.2	+0.5
POFI	**Posta Fibreno**	1.27 163	⇓	P	Pg	23 07 26.4	+1.9
MNTV	**Mantova**	2.82 323	⇑	P	Pb	23 07 50.8	-0.1
MORSI	**Morsiglia**	2.82 272		S	Pb	23 07 46.2	-4.7
SMPL	**Sampolo**	3.02 255		Sg	Pb	23 07 50.0	-4.3
PGF	**Pioggiola**	3.12 264		S	Pb	23 07 50.7	-5.4
DAVOX	**Davos/Dischmat**	4.51 330		Pn	Pn	23 08 09.1	-0.2
	comp=E,1.6nm,0.3s,baz=139,slow=19,SNR=2.1						
DAVOX				Sn	Sn	23 09 04.9	+2.7
	comp=E,0.4nm,0.3s,baz=300,slow=21,SNR=1.7						
	comp=E,12nm,0.5s						
GERES	**GERESS Array B**	5.92 3		Pn	Pn	23 08 27.9	-0.7
	comp=E,1.2nm,0.3s,baz=180,slow=16,SNR=1.8						
GERES				Sn	Sn	23 09 34.9	-1.9
	comp=E,1.3nm,0.3s,baz=168,slow=23,SNR=1.8						

comp=E,2.3nm,0.5s
KHC Kasperske Hory 6.20 2 *e*SN **Sn 23 09 41.0 -2.6**
CLL Collm 8.38 359 *e*(Sg) Sg 23 11 39.0 +10
comp=Z,13nm,1.3s
TORD Torodi Ar. Bea 31.30 202 P **P 23 13 22.9 +1.7**
comp=Z,0.2nm,0.6s,baz=12,slow=8.9,SNR=2.1
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 47.68 60 P **P 23 15 38.3 +0.9**
comp=Z,0.4nm,0.7s,baz=292,slow=7.6,SNR=2.0
comp=Z,0.4nm,0.7s

ROM 30 23:12:53.9±0.0, 42°.883N±0°.003×13°.084E±0°.003, h10km, ML2.7/3, Error ellipse: s-maj=0.3km s-min=0.2km az=4.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**279**	P	Pg	23 12 56.4	+0.4
T1216				S	Sg	23 12 57.8	+0.3
T1245	**Castelsantange**	**0.08**	**109**	P	Pg	23 12 56.9	+0.5
T1245				S	Sg	23 12 58.8	+0.5
FEMA	**Monte Fema**	**0.08**	**342**	P	Pg	23 12 56.9	+0.4
FEMA				S	Sg	23 12 58.6	+0.3
FEMA				AML	AML		
	comp=E,41050μm,0.2s						
FEMA				AML	AML		
	comp=N,23650μm,1.2s						
FEMA				AML	AML		
	comp=E,41000μm,0.2s						
FEMA				AML	AML		
	comp=E,41014μm,0.2s						
FEMA				AML	AML		
	comp=N,23358μm,0.1s						
T1215	**Vallo di Nera,**	**0.18**	**243**	P	Pg	23 12 58.4	+0.6
T1215				S	Sg	23 13 01.4	+1.0
T1215				AML	AML		
	comp=E,2610μm,0.4s						
T1215				AML	AML		
	comp=E,2580μm,0.4s						
T1215				AML	AML		
	comp=N,2830μm,0.4s						
T1215				AML	AML		
	comp=E,2605μm,0.4s						
T1215				AML	AML		
	comp=N,2770μm,0.4s						
T1215				AML	AML		
	comp=E,2605μm,0.4s						
T1215				AML	AML		
	comp=E,1963μm,0.2s						
T1215				AML	AML		
	comp=N,2639μm,0.1s						
T1215				AML	AML		
	comp=E,1874μm,0.2s						
T1215				AML	AML		
	comp=N,2490μm,0.1s						
MMO1	**Montemonaco**	**0.18**	**85**	P	Pg	23 12 58.4	+0.6
MMO1				S	Sg	23 13 01.4	+0.9
T1217	**Poggiodomo (PG**	**0.20**	**213**	P	Pg	23 12 58.9	+0.6
T1217				S	Sg	23 13 02.5	+1.3
T1217				AML	AML		
	comp=E,2305μm,1.1s						
T1217				AML	AML		
	comp=N,4410μm,0.8s						
T1217				AML	AML		
	comp=N,4300μm,0.8s						
T1217				AML	AML		
	comp=E,2210μm,0.2s						
T1217				AML	AML		
	comp=N,3911μm,0.2s						
T1217				AML	AML		
	comp=N,4011μm,0.2s						
T1217				AML	AML		
	comp=E,2258μm,0.2s						
T1217				AML	AML		
	comp=E,2208μm,0.2s						
AM05	**Amandola Campo**	**0.22**	**64**	P	Pg	23 12 59.1	+0.7
AM05				S	Sg	23 13 02.7	+1.2
GUMA	**Gualdo di Mace**	**0.26**	**46**	P	Pb	23 13 00.0	-0.6
GUMA				S	Sb	23 13 04.5	-0.6
T1241	**Roccafluvione,**	**0.26**	**96**	P	Pb	23 12 59.9	-0.7
T1241				S	Sb	23 13 04.3	-0.9
T1204	**Amatrice, Fraz**	**0.27**	**140**	P	Pg	23 13 00.0	+0.6
LNSS	**Leonessa**	**0.28**	**187**	P	Pg	23 13 00.4	+0.7
LNSS				S	Sb	23 13 04.9	-1.0
SEF1	**Sefro**	**0.28**	**339**	P	Pg	23 13 00.1	+0.4
SEF1				S	Sb	23 13 04.8	-1.1
SMA1	**SAN MARTINO**	**0.31**	**144**	P	Pg	23 13 00.6	+0.4
SMA1				S	Sb	23 13 05.8	-1.0
T1243	**Rocca Santa Ma**	**0.33**	**125**	P	Pg	23 13 00.7	+0.3
T1243				S	Sb	23 13 06.1	-1.1
ASSB	**Assisi San Ben**	**0.35**	**297**	P	Pg	23 13 01.1	+0.2
ASSB				S	Sg	23 13 06.7	+1.1
GAG1	**Gagliole**	**0.35**	**358**	S	Sg	23 13 02.0	-3.7
ARRO	**Arrone**	**0.38**	**218**	P	Pg	23 13 02.0	+0.5
ARRO				S	Sb	23 13 08.6	-0.2
SNTG	**Esanatoglia**	**0.39**	**344**	S	Sg	23 13 02.0	-4.7
ATCC	**AVT- Casa Cast**	**0.44**	**313**	P	Pg	23 13 03.0	+0.3
ATCC				S	Sb	23 13 10.0	-0.5
TERO	**Teramo**	**0.46**	**124**	P	Pg	23 13 03.0	+0.1
TERO				S	Sb	23 13 10.3	-0.8
ABTA	**Abfaltersbach**	**3.88**	**354**	*e*Pn	Pn	23 13 55.7	+2.0
	comp=E,2.2nm,0.6s						

ROM 30 23:13:46.9±0.1, 42°.884N±0°.003×13°.156E±0°.005, h10km, ML2.7/13, 15C-13D, Error ellipse: s-maj=0.4km s-min=0.3km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**139**	⇓P	Pg	23 13 49.3	+0.3
T1245				S	Sg	23 13 50.9	+0.4
T1245				AML	AML		
	comp=E,10155μm,0.2s						
T1245				AML	AML		
	comp=E,9765μm,0.4s						
T1245				AML	AML		
	comp=E,10150μm,0.2s						
T1245				AML	AML		
	comp=N,19600μm,0.6s						
T1245				AML	AML		
	comp=E,13150μm,0.1s						
T1245				AML	AML		
	comp=E,13150μm,1.2s						
T1245				AML	AML		
	comp=N,20000μm,0.6s						
T1245				AML	AML		
	comp=E,9646μm,0.1s						
T1245				AML	AML		
	comp=N,14160μm,0.1s						
T1245				AML	AML		
	comp=E,10166μm,0.2s						
T1245				AML	AML		
	comp=N,14484μm,0.1s						
T1216	**Preci, Frazion**	**0.10**	**274**	P	Pg	23 13 49.8	+0.3
T1216				S	Sg	23 13 52.0	+0.6
T1216				AML	AML		
	comp=N,34550μm,0.1s						
T1216				AML	AML		
	comp=E,18150μm,0.8s						
T1216				AML	AML		
	comp=E,15457μm,0.4s						
T1216				AML	AML		
	comp=N,19637μm,0.2s						
MMO1	**Montemonaco**	**0.13**	**83**	P	Pg	23 13 50.3	+0.3
MMO1				S	Sg	23 13 52.9	+0.7
AM05	**Amandola Campo**	**0.17**	**57**	⇑P	Pg	23 13 51.1	+0.5
AM05				S	Sg	23 13 54.1	+0.8
AM05				AML	AML		
	comp=E,798μm,0.7s						
AM05				AML	AML		
	comp=N,1008μm,0.7s						
AM05				AML	AML		
	comp=N,249μm,0.1s						
AM05				AML	AML		
	comp=E,890μm,0.1s						
AM05				AML	AML		
	comp=E,3505μm,1.1s						
AM05				AML	AML		
	comp=N,1006μm,0.7s						
AM05				AML	AML		
	comp=N,248μm,0.1s						
AM05				AML	AML		
	comp=N,551μm,0.1s						
AM05				AML	AML		
	comp=E,2656μm,0.1s						
AM05				AML	AML		
	comp=N,211μm,0.1s						
AM05				AML	AML		
	comp=E,551μm,0.1s						
T1241	**Roccafluvione,**	**0.20**	**98**	⇑P	Pg	23 13 51.9	+0.7
GUMA	**Gualdo di Mace**	**0.22**	**36**	⇑P	Pg	23 13 52.1	+0.6
GUMA				S	Sg	23 13 56.2	+1.5
GUMA				AML	AML		
	comp=E,6840μm,0.6s						
GUMA				AML	AML		
	comp=N,7910μm,0.5s						
GUMA				AML	AML		
	comp=E,6835μm,0.6s						
GUMA				AML	AML		
	comp=N,7905μm,0.5s						
GUMA				AML	AML		
	comp=E,8665μm,0.6s						
GUMA				AML	AML		
	comp=N,9575μm,0.5s						
GUMA				AML	AML		
	comp=N,7907μm,0.5s						
GUMA				AML	AML		
	comp=N,9574μm,0.5s						
GUMA				AML	AML		
	comp=E,6837μm,0.6s						
GUMA				AML	AML		
	comp=E,8650μm,0.6s						
T1215	**Vallo di Nera,**	**0.23**	**249**	⇓P	Pg	23 13 51.9	+0.3
T1215				AML	AML		
	comp=E,736μm,0.6s						
T1215				AML	AML		
	comp=N,696μm,0.5s						
T1215				AML	AML		
	comp=E,5040μm,0.4s						
T1215				AML	AML		
	comp=E,5305μm,0.4s						
T1215				AML	AML		
	comp=N,8050μm,0.4s						
T1215				AML	AML		
	comp=N,7735μm,0.4s						
T1215				AML	AML		
	comp=E,5045μm,0.3s						
T1215				AML	AML		
	comp=E,5300μm,0.3s						
T1215				AML	AML		
	comp=N,469μm,0.1s						
T1215				AML	AML		
	comp=E,602μm,0.4s						
T1215				AML	AML		
	comp=N,465μm,0.1s						
T1215				AML	AML		
	comp=E,683μm,0.4s						
T1217	**Poggiodomo (PG**	**0.24**	**224**	P	Pg	23 13 52.3	+0.5
T1217				AML	AML		
	comp=E,3450μm,0.9s						
T1217				AML	AML		
	comp=E,3555μm,0.9s						
T1217				AML	AML		
	comp=E,3515μm,0.4s						
T1217				AML	AML		
	comp=N,7340μm,0.2s						
T1217				AML	AML		
	comp=E,3578μm,0.4s						
T1217				AML	AML		
	comp=N,7185μm,0.2s						
T1217				AML	AML		
	comp=N,720μm,0.4s						
T1217				AML	AML		
	comp=E,542μm,0.2s						
T1217				AML	AML		
	comp=E,519μm,0.2s						
T1217				AML	AML		
	comp=N,654μm,0.4s						
T1204	**Amatrice, Fraz**	**0.24**	**150**	P	Pg	23 13 52.8	+1.0
T1204				AML	AML		
	comp=N,3685μm,0.1s						
T1204				AML	AML		
	comp=E,4945μm,0.3s						
T1204				AML	AML		
	comp=E,845μm,0.3s						
T1204				AML	AML		
	comp=N,707μm,0.2s						
SMA1	**SAN MARTINO**	**0.28**	**152**	⇓P	Pg	23 13 53.2	+0.5
SMA1				AML	AML		
	comp=E,4070μm,0.5s						
SMA1				AML	AML		
	comp=N,7460μm,0.5s						
SMA1				AML	AML		
	comp=E,4075μm,0.5s						
SMA1				AML	AML		
	comp=N,680μm,0.5s						
SMA1				AML	AML		
	comp=E,465μm,0.4s						
T1243	**Rocca Santa Ma**	**0.28**	**131**	P	Pg	23 13 53.1	+0.4
T1243				S	Sb	23 13 58.0	-1.0
LNSS	**Leonessa**	**0.29**	**197**	⇑P	Pg	23 13 53.6	+0.7
LNSS				AML	AML		
	comp=E,4295μm,0.2s						
LNSS				AML	AML		
	comp=N,5645μm,0.4s						
LNSS				AML	AML		
	comp=N,5650μm,0.4s						
LNSS				AML	AML		
	comp=E,4300μm,0.2s						
LNSS				AML	AML		
	comp=E,378μm,0.1s						
LNSS				AML	AML		
	comp=N,993μm,0.3s						
SEF1	**Sefro**	**0.30**	**330**	P	Pg	23 13 53.5	+0.4
SEF1				S	Sg	23 13 58.0	+0.9
SEF1				AML	AML		
	comp=N,2920μm,0.2s						
SEF1				AML	AML		
	comp=E,2093μm,0.2s						
MDAR	**Monte D'Aria**	**0.31**	**358**	P	Pg	23 13 53.5	+0.4
MDAR				S	Sg	23 13 58.2	+0.9
MDAR				AML	AML		
	comp=N,2072μm,0.4s						
MDAR				AML	AML		
	comp=E,1306μm,0.2s						
RM33	**Pellescritta (**	**0.38**	**173**	P	Pg	23 13 55.1	+0.7
RM33				AML	AML		
	comp=E,1800μm,0.7s						
RM33				AML	AML		
	comp=N,2510μm,0.3s						
RM33				AML	AML		
	comp=E,1805μm,0.7s						
RM33				AML	AML		
	comp=N,2515μm,0.3s						
RM33				AML	AML		
	comp=E,1795μm,0.7s						
RM33				AML	AML		
	comp=N,2515μm,0.3s						
RM33				AML	AML		
	comp=E,1810μm,0.7s						
RM33				AML	AML		
	comp=N,2520μm,0.3s						
RM33				AML	AML		
	comp=E,383μm,0.2s						
RM33				AML	AML		
	comp=N,284μm,0.1s						
RM33				AML	AML		
	comp=N,296μm,0.4s						
RM33				AML	AML		
	comp=E,333μm,0.2s						
OFFI	**Offida**	**0.39**	**82**	⇑P	Pb	23 13 55.7	-0.3
OFFI				AML	AML		
	comp=E,1070μm,0.6s						
OFFI				AML	AML		
	comp=N,1320μm,1.2s						
OFFI				AML	AML		
	comp=E,1405μm,0.7s						
OFFI				AML	AML		
	comp=N,1665μm,0.5s						
OFFI				AML	AML		
	comp=N,1211μm,0.5s						
OFFI				AML	AML		
	comp=E,1021μm,0.6s						
CAMP	**Campotosto**	**0.40**	**152**	⇑P	Pg	23 13 55.0	+0.3
CAMP				S	Sb	23 14 01.3	-0.9
CAMP				AML	AML		
	comp=E,1186μm,0.2s						
CAMP				AML	AML		
	comp=N,1090μm,1.2s						
CAMP				AML	AML		
	comp=E,287μm,0.2s						
CAMP				AML	AML		
	comp=N,254μm,0.5s						
ASSB	**Assisi San Ben**	**0.40**	**294**	⇓P	Pg	23 13 54.8	+0.1
ASSB				S	Sg	23 14 00.9	+0.8
ASSB				AML	AML		
	comp=E,1525μm,0.3s						
ASSB				AML	AML		
	comp=N,1235μm,1.0s						
ASSB				AML	AML		
	comp=N,998μm,0.1s						
ASSB				AML	AML		
	comp=E,1525μm,0.3s						
SNTG	**Esanatoglia**	**0.40**	**337**	⇑P	Pg	23 13 55.2	+0.3
SNTG				S	Sg	23 14 01.2	+1.0
SNTG				AML	AML		
	comp=E,483μm,0.5s						
SNTG				AML	AML		
	comp=N,455μm,1.4s						
SNTG				AML	AML		
	comp=E,512μm,1.2s						
SNTG				AML	AML		
	comp=N,418μm,0.6s						
SNTG				AML	AML		
	comp=E,905μm,1.1s						
SNTG				AML	AML		
	comp=E,810μm,1.1s						
SNTG				AML	AML		
	comp=N,792μm,0.6s						
SNTG				AML	AML		
	comp=N,628μm,1.1s						
SNTG				AML	AML		
	comp=E,466μm,0.2s						
SNTG				AML	AML		
	comp=E,509μm,0.2s						
SNTG				AML	AML		
	comp=N,391μm,0.3s						
SNTG				AML	AML		
	comp=N,358μm,0.1s						
T1211	**Morro Reatino**	**0.41**	**212**	P	Pb	23 13 55.8	-0.6
T1211				S	Sb	23 14 02.3	-0.5
ARRO	**Arrone**	**0.42**	**224**	⇓P	Pg	23 13 55.5	+0.4
ARRO				AML	AML		
	comp=E,571μm,0.2s						
ARRO				AML	AML		
	comp=N,620μm,0.3s						
ARRO				AML	AML		
	comp=E,1315μm,0.2s						
ARRO				AML	AML		
	comp=N,1490μm,0.2s						
ARRO				AML	AML		
	comp=N,289μm,0.2s						
ARRO				AML	AML		
	comp=E,274μm,0.1s						
TERO	**Teramo**	**0.42**	**128**	P	Pg	23 13 55.4	+0.3
TERO				S	Sb	23 14 02.0	-0.9
TERO				AML	AML		
	comp=E,1108μm,0.3s						
TERO				AML	AML		
	comp=N,1695μm,0.6s						
TERO				AML	AML		
	comp=E,1215μm,0.7s						
TERO				AML	AML		
	comp=N,1780μm,0.6s						
TERO				AML	AML		
	comp=E,661μm,0.1s						
TERO				AML	AML		
	comp=N,474μm,0.1s						
TERO				AML	AML		
	comp=E,566μm,0.1s						
TERO				AML	AML		
	comp=N,556μm,0.1s						
EL6	**Elcito**	**0.45**	**355**	P	Pg	23 13 56.3	+0.6
EL6				S	Sb	23 14 03.0	-0.8
EL6				AML	AML		
	comp=E,1148μm,0.3s						
EL6				AML	AML		
	comp=N,1270μm,1.6s						
EL6				AML	AML		
	comp=N,1274μm,1.5s						
EL6				AML	AML		
	comp=E,1550μm,1.6s						
EL6				AML	AML		
	comp=E,1177μm,0.3s						
EL6				AML	AML		
	comp=N,1122μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.45**	**167**	S	Sb	23 14 05.0	+1.1
ATCC	**AVT- Casa Cast**	**0.48**	**309**	⇓P	Pg	23 13 56.5	+0.1
ATCC				S	Sb	23 14 04.0	-0.7
ATCC				AML	AML		
	comp=E,848μm,0.5s						
ATCC				AML	AML		
	comp=N,900μm,0.8s						
ATCC				AML	AML		
	comp=E,848μm,0.5s						
ATCC				AML	AML		
	comp=N,960μm,1.0s						
ATCC				AML	AML		
	comp=E,848μm,0.6s						
ATCC				AML	AML		
	comp=N,685μm,0.5s						
FOSV	**Fossato di Vic**	**0.50**	**325**	⇑P	Pg	23 13 56.8	+0.1
FOSV				S	Sb	23 14 04.5	-0.7
FOSV				AML	AML		
	comp=E,549μm,0.3s						
FOSV				AML	AML		
	comp=N,823μm,0.3s						
FOSV				AML	AML		
	comp=E,550μm,0.3s						
FOSV				AML	AML		
	comp=N,824μm,0.3s						
FOSV				AML	AML		
	comp=E,549μm,0.3s						
FOSV				AML	AML		
	comp=N,823μm,0.3s						
CESX	**Cesi**	**0.51**	**237**	⇓P	Pg	23 13 56.8	+0.1
CESX				AML	AML		
	comp=E,400μm,0.2s						
CESX				AML	AML		
	comp=N,466μm,0.6s						
CESX				AML	AML		
	comp=N,1114μm,0.6s						
CESX				AML	AML		
	comp=E,906μm,0.6s						
CESX				AML	AML		
	comp=N,446μm,0.4s						
CESX				AML	AML		
	comp=E,356μm,0.3s						
GIGS	**Gran Sasso**	**0.53**	**145**	⇓P	Pg	23 13 57.3	+0.1
GIGS				AML	AML		
	comp=N,156μm,1.3s						
GIGS				AML	AML		
	comp=E,364μm,0.3s						
GIGS				AML	AML		
	comp=N,47μm,0.1s						
GIGS				AML	AML		
	comp=E,57μm,0.1s						
PP3	**Marolino**	**0.59**	**34**	⇑P	Pb	23 13 59.4	0.0
PP3				S	Sb	23 14 09.4	+1.6
PP3				AML	AML		
	comp=E,884μm,0.5s						
PP3				AML	AML		
	comp=N,1105μm,0.3s						
PP3				AML	AML		
	comp=N,1094μm,0.3s						
PP3				AML	AML		
	comp=E,884μm,0.5s						
PP3				AML	AML		
	comp=E,920μm,0.5s						
PP3				AML	AML		
	comp=N,1092μm,0.3s						
PP3				AML	AML		
	comp=E,736μm,0.2s						
PP3				AML	AML		
	comp=N,1105μm,0.3s						
PP3				AML	AML		
	comp=N,1093μm,0.3s						
PP3				AML	AML		
	comp=E,723μm,0.3s						
MURB	**Monte Urbino**	**0.60**	**310**	P	Pg	23 13 59.0	+0.5
MURB				S	Sb	23 14 08.2	+0.1
MURB				AML	AML		
	comp=N,1105μm,0.3s						
MURB				AML	AML		
	comp=E,1325μm,0.3s						
MURB				AML	AML		
	comp=N,1200μm,0.9s						
MURB				AML	AML		

	comp=E,1323μm,0.3s				
MURB			AML	AML	
	comp=N,1103μm,0.3s				
MURB			AML	AML	
	comp=N,950μm,0.3s				
MURB			AML	AML	
	comp=E,1264μm,0.3s				
ARVD	**Arcevia**	**0.63 346**	⇓P	Pb	23 14 00.2 +0.1
ARVD			S	Sb	23 14 08.9 -0.1
ARVD			AML	AML	
	comp=E,212μm,0.6s				
ARVD			AML	AML	
	comp=N,160μm,1.0s				
ARVD			AML	AML	
	comp=E,304μm,1.6s				
ARVD			AML	AML	
	comp=N,254μm,0.6s				
ARVD			AML	AML	
	comp=E,175μm,0.2s				
ARVD			AML	AML	
	comp=N,154μm,0.4s				
ATFO	**Monte Foce - G**	**0.65 319**	⇓P	Pb	23 13 60.0 -0.3
ATFO			AML	AML	
	comp=E,293μm,1.1s				
ATFO			AML	AML	
	comp=N,264μm,0.7s				
ATFO			AML	AML	
	comp=E,422μm,1.2s				
ATFO			AML	AML	
	comp=N,288μm,0.3s				
ATFO			AML	AML	
	comp=E,259μm,0.4s				
ATFO			AML	AML	
	comp=N,253μm,0.3s				
ATTE	**AVT- Monte Tez**	**0.67 298**	⇑P	Pn	23 14 02.1 -0.4
VCEL	**Villa Celiera**	**0.70 134**	⇑P	Pg	23 14 00.6 +0.1
VCEL			S	Sg	23 14 10.0 +0.3
VCEL			AML	AML	
	comp=N,582μm,0.3s				
VCEL			AML	AML	
	comp=E,767μm,0.4s				
VCEL			AML	AML	
	comp=N,226μm,0.6s				
VCEL			AML	AML	
	comp=E,234μm,0.5s				
FRON	**Frontone**	**0.71 334**	⇓P	Pg	23 14 00.9 +0.3
FRON			AML	AML	
	comp=E,233μm,0.3s				
FRON			AML	AML	
	comp=N,328μm,0.5s				
FRON			AML	AML	
	comp=E,254μm,0.2s				
FRON			AML	AML	
	comp=N,328μm,0.5s				
FRON			AML	AML	
	comp=N,248μm,0.2s				
FRON			AML	AML	
	comp=E,233μm,0.3s				
ATVO	**AVT- Monte Val**	**0.74 312**	⇑P	Pb	23 14 01.7 -0.2
ATVO			S	Sb	23 14 12.3 +0.1
ATVO			AML	AML	
	comp=E,262μm,0.7s				
ATVO			AML	AML	
	comp=N,224μm,0.8s				
ATVO			AML	AML	
	comp=E,263μm,0.7s				
ATVO			AML	AML	
	comp=N,203μm,0.5s				
ATVO			AML	AML	
	comp=E,202μm,0.4s				
MGAB	**Montegabbione**	**0.77 273**	⇓P	Pn	23 14 03.8 -0.1
ATPI	**Pietralunga -**	**0.79 316**	P	Pb	23 14 02.5 -0.2
ATPI			S	Sb	23 14 14.0 +0.4
PIEI	**Pieia**	**0.80 325**	S	Sn	23 14 15.0 -1.2
T0110	**Collepietro**	**0.80 145**	⇓P	Pg	23 14 02.4 +0.1
T0110			AML	AML	
	comp=E,508μm,0.5s				
T0110			AML	AML	
	comp=N,472μm,0.3s				
T0110			AML	AML	
	comp=E,249μm,0.8s				
T0110			AML	AML	
	comp=N,271μm,0.6s				
NARO	**Abbazia di Nar**	**0.84 330**	⇑P	Pg	23 14 02.9 -0.2
NARO			S	Sb	23 14 16.0 +1.1
NARO			AML	AML	
	comp=N,124μm,0.9s				
NARO			AML	AML	
	comp=E,117μm,0.4s				
NARO			AML	AML	
	comp=N,111μm,0.5s				
NARO			AML	AML	
	comp=E,98μm,0.2s				
FSSB	**Fossombrone**	**0.85 341**	P	Pb	23 14 04.1 +0.3
FSSB			S	Sn	23 14 17.0 -0.6
FSSB			AML	AML	
	comp=E,653μm,0.4s				
FSSB			AML	AML	
	comp=N,661μm,0.4s				
FSSB			AML	AML	
	comp=E,901μm,0.4s				
FSSB			AML	AML	
	comp=N,661μm,0.4s				
FSSB			AML	AML	
	comp=E,653μm,0.4s				
SACS	**San Casciano d**	**0.92 268**	⇑P	Pn	23 14 05.8 -0.1
SACS			AML	AML	
	comp=E,210μm,0.5s				
SACS			AML	AML	
	comp=N,279μm,0.8s				
SACS			AML	AML	
	comp=N,159μm,0.7s				
SACS			AML	AML	
	comp=E,169μm,1.0s				
SACS			AML	AML	
	comp=N,168μm,0.7s				
SACS			AML	AML	
	comp=E,159μm,1.0s				
CAFI	**Castiglion Fio**	**0.98 297**	⇑P	Pb	23 14 05.9 -0.1
CAFI			S	Sn	23 14 21.0 +0.3
CAFI			AML	AML	
	comp=N,152μm,0.5s				
CAFI			AML	AML	
	comp=E,164μm,0.7s				
CAFI			AML	AML	
	comp=E,163μm,0.7s				
CAFI			AML	AML	
	comp=N,134μm,1.0s				
CAFI			AML	AML	
	comp=N,135μm,1.0s				
CAFI			AML	AML	
	comp=E,155μm,0.7s				

IDC 30 23:26:19.3±1.1, 3°.67N×123°.24E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=148.1km s-min=20.4km az=65.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.87**	**155**	P	P	23 31 52.8	-0.2
	0.4nm,0.5s,baz=334,slow=10,SNR=4.8 0.4nm,0.5s						
ASAR	**Alice Springs**	**29.09**	**160**	P	P	23 32 22.1	+0.3
	0.3nm,0.5s,baz=339,slow=9.1,SNR=1.8 0.3nm,0.5s						
SONM	**Songino Array**	**46.33**	**344**	P	P	23 34 47.9	+0.7
	0.6nm,0.8s,baz=148,slow=8.5,SNR=4.5 0.6nm,0.8s						
MKAR	**Makanchi Array**	**55.66**	**327**	P	P	23 35 58.0	+0.7
	0.7nm,0.5s,baz=122,slow=8.2,SNR=18 0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**59.11**	**335**	P	P	23 36 20.6	-0.9
	0.2nm,0.3s,baz=135,slow=6.6,SNR=1.9 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**59.95**	**329**	P	P	23 36 26.3	-1.0
	0.6nm,0.5s,baz=124,slow=6.6,SNR=8.2 0.6nm,0.5s						

*FUNV **30** 23:37:23.7, 8°.44N×71°.36W, h2km, MW3.1*

ISC 30 23:37:23.9±1.5, 8°.44N±0°.07×71°.37W±0°.04, h13km±13km, n12, σ1§47/22, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.53**	**106**	*e*P	**Pb**	**23 37 34.7**	**-0.4**
SOCV				*e*S	**Sg**	**23 37 41.4**	**-0.1**
CAPV	**Capacho**	**1.09**	**239**	*e*P	**Pg**	**23 37 44.3**	**-0.7**
CAPV				*e*S	**Sg**	**23 37 59.3**	**0.0**
PAMC	**Pamplona, Colo**	**1.71**	**230**	*e*P	**Pg**	**23 37 57.2**	**+0.5**
PAMC				*e*S	**Sg**	**23 38 21.3**	**+2.3**
PAMC				*i*		23 38 24.9	
	comp=Z,16nm,0.2s						
TAMC	**Tame, Arauca**	**2.03**	**192**	*e*P	**Pg**	**23 38 03.9**	**+1.0**
TAMC				*e*S	**Sg**	**23 38 31.1**	**+1.8**
TAMC				*i*		23 38 31.5	
	comp=Z,8.0nm,0.2s						
CURV	**Curarigua**	**2.10**	**42**	*e*S	**Sn**	**23 38 25.6**	**+0.8**
BARC	**Barichara**	**2.56**	**225**	*e*P	**Pg**	**23 38 12.2**	**-0.9**
BARC				*e*S	**Sg**	**23 38 46.5**	**+0.1**
BARC				*i*		23 38 53.4	
	comp=Z,10nm,0.7s						
DABV	**Dabajuro**	**2.58**	**16**	*e*S	**Sn**	**23 38 37.0**	**+0.5**
BRRC	**Barranca, Sant**	**2.67**	**241**	*e*P	**Pg**	**23 38 14.6**	**-0.4**
BRRC				*e*S	**Sb**	**23 38 47.1**	**+3.0**
SIQV	**Siquisique**	**2.69**	**35**	*e*P	**Pn**	**23 38 07.1**	**+0.2**
SIQV				*e*S	**Sn**	**23 38 39.2**	**-0.1**
RUSC	**La Rusia**	**3.04**	**214**	*e*P	**Pb**	**23 38 15.6**	**-2.7**
RUSC				*e*S	**Sg**	**23 39 00.3**	**-1.5**
RUSC				*i*		23 39 05.0	
	comp=Z,2.2nm,0.3s						
BAUV	**El Baul**	**3.33**	**81**	*e*P	**Pn**	**23 38 16.5**	**+0.8**
BAUV				*e*S	**Sn**	**23 38 52.9**	**-2.3**
BENV	**Beln**	**4.02**	**68**	*e*P	**Pn**	**23 38 26.0**	**+0.7**
BENV				*e*S	**Sn**	**23 39 10.8**	**-1.5**

IDC 30 23:48:11.0±7.2, 21°.28S×179°.64E, h621km±42km, mb2.7/2, mbtmp3.6/3, Error ellipse: s-maj=193.8km s-min=37.2km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.83**	**337**	P	P	23 49 36.9	-0.2
	2.2nm,0.3s,baz=76,slow=23,SNR=5.3						
ASAR	**Alice Springs**	**42.20**	**258**	P	P	23 55 11.9	+0.2
	0.5nm,0.5s,baz=96,slow=8.1,SNR=7.5						
ASAR				PcP	PcP	23 56 48.9	-2.0
	0.3nm,0.7s,baz=102,slow=3.9,SNR=1.6 0.5nm,0.5s						
WRA	**Warramunga Arr**	**42.31**	**263**	P	P	23 55 12.6	-0.1
	0.5nm,0.4s,baz=94,slow=8.2,SNR=11 0.5nm,0.4s						
BRTR	**Keskin Array B**	**145.69**	**310**	PKPbc	PKPdf	00 06 40.9	+0.4
	0.5nm,0.7s,baz=83,slow=3.5,SNR=2.1						
MMAI	**Mount Meron Ar**	**146.25**	**298**	PKPbc	PKiKP	00 06 45.0	-1.1
	1.4nm,0.5s,baz=72,slow=6.4,SNR=2.6						

*IDC **30** 23:52:28.6±1.1, 42°.86N×13°.18E, h0km, mb3.9/6, mbtmp3.5/14, ML3.2/8, Error ellipse: s-maj=20.4km s-min=13.0km az=94.0*

*PRU **30** 23:52:29.9±0.0, 42°.70N×13°.51E, h10km*

*ROM **30** 23:52:29.6±0.1, 42°.780N±0°.003×13°.117E±0°.004, h10km, ML3.4/118, Error ellipse: s-maj=0.3km s-min=0.2km az=83.0*

ISC 30 23:52:30.2±0.7, 42°.78N±0°.01×13°.13E±0°.01, h13km±4km, n206, σ1§39/259, mb4.0/5, 69C-56D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**29**	⇓P	**Pg**	**23 52 32.7**	**-0.6**
T1245				S	**Sg**	**23 52 34.6**	**-0.9**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1217	**Poggiodomo (PG**	**0.16**	**246**	⇑P	**Pg**	**23 52 33.6**	**-0.5**
T1217				S	**Sg**	**23 52 36.4**	**-0.4**
T1217				AML	AML		
	comp=N,67550μm,0.3s						
T1217				AML	AML		
	comp=E,46850μm,0.4s						
T1217				AML	AML		
	comp=E,45850μm,0.4s						
T1217				AML	AML		
	comp=N,67500μm,0.3s						
T1217				AML	AML		
	comp=E,45850μm,1.6s						
T1217				AML	AML		
	comp=E,46850μm,1.6s						
T1217				AML	AML		
	comp=N,66900μm,0.5s						
T1204	**Amatrice, Fraz**	**0.17**	**126**	P	**Pg**	**23 52 34.2**	**-0.1**
T1204				S	**Sg**	**23 52 37.5**	**+0.3**
T1204				AML	AML		
	comp=E,60650μm,0.6s						
T1204				AML	AML		
	comp=N,28850μm,0.3s						
LNSS	**Leonessa**	**0.18**	**200**	⇑P	**Pg**	**23 52 34.2**	**-0.4**
LNSS				S	**Sg**	**23 52 37.5**	**+0.1**
LNSS				AML	AML		
	comp=E,28750μm,0.2s						
LNSS				AML	AML		
	comp=N,60750μm,0.4s						
MMO1	**Montemonaco**	**0.19**	**50**	⇑P	**Pg**	**23 52 34.4**	**-0.2**
MMO1				S	**Sg**	**23 52 37.7**	**0.0**
T1215	**Vallo di Nera,**	**0.19**	**278**	⇑P	**Pg**	**23 52 34.0**	**-0.5**
T1215				S	**Sg**	**23 52 37.2**	**-0.3**
T1215				AML	AML		
	comp=E,23450μm,0.4s						
T1215				AML	AML		
	comp=N,22750μm,0.9s						
T1215				AML	AML		
	comp=N,22750μm,0.6s						
T1215				AML	AML		
	comp=N,22650μm,0.9s						
T1215				AML	AML		
	comp=N,22750μm,0.7s						
T1215				AML	AML		
	comp=N,22650μm,0.9s						
T1215				AML	AML		
	comp=E,23450μm,0.3s						
T1215				AML	AML		
	comp=E,23250μm,0.3s						
T1215				AML	AML		
	comp=E,23250μm,1.7s						
T1215				AML	AML		
	comp=E,23450μm,1.7s						
FEMA	**Monte Fema**	**0.19**	**343**	P	**Pg**	**23 52 34.2**	**-0.5**
FEMA				S	**Sg**	**23 52 37.5**	**-0.3**
FEMA				AML	AML		
	comp=E,56700μm,0.9s						
FEMA				AML	AML		
	comp=E,56750μm,0.9s						
FEMA				AML	AML		
	comp=N,47150μm,1.0s						
FEMA				AML	AML		
	comp=E,56750μm,1.1s						
SMA1	**SAN MARTINO**	**0.21**	**134**	⇑P	**Pg**	**23 52 34.8**	**-0.2**
SMA1				S	**Sg**	**23 52 38.6**	**+0.5**
SMA1				AML	AML		
	comp=E,32950μm,0.6s						
SMA1				AML	AML		
	comp=N,31900μm,1.0s						
SMA1				AML	AML		
	comp=E,33000μm,0.6s						
T1241	**Roccafluviove,**	**0.24**	**70**	P	**Pg**	**23 52 34.3**	**-1.0**
T1241				S	**Sg**	**23 52 39.3**	**+0.4**
T1243	**Rocca Santa Ma**	**0.25**	**109**	P	**Pg**	**23 52 35.2**	**-0.4**
T1243				S	**Sg**	**23 52 39.5**	**+0.3**
AM05	**Amandola Campo**	**0.26**	**40**	P	**Pg**	**23 52 35.2**	**-0.5**
AM05				S	**Sb**	**23 52 39.9**	**-1.3**
AM05				AML	AML		
	comp=N,11270μm,0.8s						
AM05				AML	AML		
	comp=E,32100μm,1.2s						
AM05				AML	AML		
	comp=N,2185μm,1.3s						
AM05				AML	AML		
	comp=E,6355μm,1.1s						
AM05				AML	AML		
	comp=N,11265μm,0.8s						
AM05				AML	AML		
	comp=N,2180μm,1.3s						
AM05				AML	AML		
	comp=E,6360μm,1.1s						
AM05				AML	AML		
	comp=E,32050μm,1.2s						
AM05				AML	AML		
	comp=N,11230μm,0.8s						
AM05				AML	AML		
	comp=N,2185μm,0.7s						
RM33	**Pellescritta (**	**0.28**	**166**	⇑P	**Pb**	**23 52 35.7**	**-1.4**
RM33				S	**Sb**	**23 52 40.5**	**-1.2**
RM33				AML	AML		
	comp=E,13700μm,0.1s						
RM33				AML	AML		
	comp=E,13700μm,0.1s						
RM33				AML	AML		
	comp=N,12550μm,0.6s						
RM33				AML	AML		
	comp=E,13750μm,0.2s						
RM33				AML	AML		
	comp=N,12350μm,0.6s						
RM33				AML	AML		
	comp=E,13700μm,0.2s						
RM33				AML	AML		
	comp=N,12400μm,0.6s						
RM33				AML	AML		
	comp=N,12400μm,1.4s						
RM33				AML	AML		
	comp=N,12550μm,1.4s						
T1211	**Morro Reatino**	**0.32**	**220**	⇑P	**Pg**	**23 52 36.3**	**-0.4**
T1211				S	**Sg**	**23 52 41.5**	**+0.4**
T1211				AML	AML		
	comp=E,17550μm,0.9s						
T1211				AML	AML		
	comp=N,25950μm,0.3s						
T1211				AML	AML		
	comp=E,17600μm,0.9s						
T1211				AML	AML		
	comp=N,25800μm,0.3s						
T1211				AML	AML		
	comp=N,20850μm,0.3s						
T1211				AML	AML		
	comp=N,21100μm,0.3s						
T1211				AML	AML		
	comp=E,17600μm,0.9s						
T1211				AML	AML		
	comp=N,26000μm,0.3s						
T1211				AML	AML		
	comp=N,25800μm,0.3s						
T1211				AML	AML		
	comp=N,25750μm,0.3s						
T1211				AML	AML		
	comp=N,25950μm,0.3s						
T1211				AML	AML		
	comp=E,17600μm,1.1s						
T1211				AML	AML		
	comp=E,17600μm,1.1s						
CAMP	**Campotosto**	**0.32**	**139**	⇑P	**Pb**	**23 52 36.5**	**-1.4**
CAMP				S	**Sb**	**23 52 42.1**	**-0.8**
CAMP				AML	AML		
	comp=E,5635μm,1.2s						
CAMP				AML	AML		
	comp=N,5230μm,0.8s						
CAMP				AML	AML		
	comp=E,5635μm,0.8s						
CSP1	**Cessapalombo**	**0.32**	**10**	⇑P	**Pg**	**23 52 36.5**	**-0.4**
CSP1				S	**Sg**	**23 52 41.8**	**+0.5**
CSP1				AML	AML		
	comp=N,32350μm,0.4s						
CSP1				AML	AML		
	comp=E,25550μm,0.3s						
GUMA	**Gualdo di Mace**	**0.32**	**28**	⇑P	**Pb**	**23 52 36.9**	**-1.0**
GUMA				S	**Sb**	**23 52 42.4**	**-0.7**
GUMA				AML	AML		
	comp=E,58900μm,0.5s						
GUMA				AML	AML		
	comp=E,70000μm,1.6s						
GUMA				AML	AML		
	comp=N,82700μm,0.3s						
GUMA				AML	AML		
	comp=N,76650μm,0.4s						
ARRO	**Arrone**	**0.33**	**234**	⇑P	**Pg**	**23 52 36.5**	**-0.4**
ARRO				S	**Sg**	**23 52 41.8**	**+0.3**
ARRO				AML	AML		
	comp=N,14050μm,0.7s						
ARRO				AML	AML		
	comp=E,12300μm,0.5s						
ARRO				AML	AML		
	comp=N,14050μm,1.3s						
T1247	**Pizzolo (AQ)**	**0.36**	**159**	⇑P	**Pb**	**23 52 37.2**	**-1.3**
T1247				S	**Sb**	**23 52 43.2**	**-0.9**
T1247				AML	AML		
	comp=N,11200μm,1.0s						
T1247				AML	AML		
	comp=E,11600μm,1.0s						
T1247				AML	AML		
	comp=E,11600μm,1.0s						
TERO	**Teramo**	**0.38**	**114**	P	**Pg**	**23 52 37.5**	**-0.4**
TERO				S	**Sb**	**23 52 43.8**	**-1.0**
TERO				AML	AML		
	comp=N,8295μm,0.6s						
TERO				AML	AML		
	comp=N,8270μm,0.6s						
TERO				AML	AML		
	comp=N,8605μm,0.6s						
TERO				AML	AML		
	comp=E,8030μm,0.5s						
TERO				AML	AML		
	comp=E,8620μm,0.5s						
TERO				AML	AML		
	comp=N,8270μm,1.4s						
TERO				AML	AML		
	comp=E,8620μm,1.5s						
TERO				AML	AML		
	comp=E,8030μm,1.5s						
SEF1	**Sefro**	**0.39**	**340**	P	**Pg**	**23 52 37.6**	**-0.5**
SEF1				S	**Sg**	**23 52 43.9**	**+0.5**
SEF1				AML	AML		
	comp=N,11850μm,1.5s						
SEF1				AML	AML		
	comp=E,14400μm,0.3s						
SEF1				AML	AML		
	comp=N,11900μm,1.5s						
PIO1	**Pioraco**	**0.41**	**345**	P	**Pg**	**23 52 38.0**	**-0.5**
PIO1				S	**Sg**	**23 52 44.5**	**+0.4**
PIO1				AML	AML		
	comp=E,6455μm,0.3s						
PIO1				AML	AML		
	comp=N,10020μm,0.5s						
PIO1				AML	AML		
	comp=N,10015μm,0.5s						
PIO1				AML	AML		
	comp=E,6460μm,0.3s						
MDAR	**Monte D'Aria**	**0.42**	**2**	P	**Pg**	**23 52 38.1**	**-0.5**
MDAR				S	**Sg**	**23 52 44.6**	**+0.4**
MDAR				AML	AML		
	comp=E,11400μm,0.5s						
MDAR				AML	AML		
	comp=E,11400μm,0.5s						
MDAR				AML	AML		
	comp=N,8160μm,0.5s						
MDAR				AML	AML		
	comp=E,11400μm,1.5s						
MDAR				AML	AML		
	comp=N,8160μm,1.5s						
ASSB	**Assisi San Ben**	**0.43**	**308**	⇑P	**Pg**	**23 52 38.2**	**-0.7**
ASSB				S	**Sg**	**23 52 44.8**	**0.0**
ASSB				AML	AML		
	comp=N,10600μm,0.2s						
ASSB				AML	AML		
	comp=E,12500μm,0.3s						
FIU1	**Fiuminata**	**0.44**	**341**	P	**Pg**	**23 52 38.3**	**-0.6**
FIU1				S	**Sg**	**23 52 45.4**	**+0.6**
FIU1				AML	AML		
	comp=E,7095μm,0.2s						
FIU1				AML	AML		
	comp=N,5715μm,0.9s						
FIU1				AML	AML		
	comp=N,5715μm,1.1s						
CESX	**Cesi**	**0.44**	**248**	⇑P	**Pg**	**23 52 38.2**	**-0.7**
CESX				S	**Sg**	**23 52 45.2**	**+0.5**
CESX				AML	AML		
	comp=E,16850μm,0.6s						
CESX				AML	AML		
	comp=N,10860μm,0.5s						
CESX				AML	AML		
	comp=E,16850μm,1.4s						
MNTP	**Montappone**	**0.44**	**35**	P	**Pb**	**23 52 39.1**	**-0.7**
MNTP				AML	AML		
	comp=E,17250μm,1.0s						

MNTP				AML	AML		
	comp=N,20200µm,0.4s						
OFFI	**Offida**	**0.44**	**69**	⇑P	**Pb**	**23 52 39.5**	**-0.4**
OFFI				AML	AML		
	comp=E,18300µm,0.5s						
OFFI				AML	AML		
	comp=N,25400µm,1.2s						
OFFI				AML	AML		
	comp=E,18300µm,1.5s						
SSM1	**San Severino M**	**0.45**	**5**	⇓P	**Pg**	**23 52 39.0**	**-0.2**
GAG1	**Gagliole**	**0.46**	**355**	⇑P	**Pg**	**23 52 39.1**	**-0.3**
GAG1				AML	AML		
	comp=E,23350µm,0.6s						
GAG1				AML	AML		
	comp=N,18550µm,0.4s						
AQU	**L'Aquila**	**0.47**	**154**	⇑P	**Pg**	**23 52 39.0**	**-0.5**
AQU				S	**Sb**	**23 52 46.9**	**-0.3**
AQU				AML	AML		
	comp=E,4075µm,0.5s						
AQU				AML	AML		
	comp=E,3890µm,0.5s						
AQU				AML	AML		
	comp=N,3320µm,0.8s						
AQU				AML	AML		
	comp=N,3380µm,0.8s						
AQU				AML	AML		
	comp=E,4070µm,0.5s						
AQU				AML	AML		
	comp=N,3320µm,1.2s						
AQU				AML	AML		
	comp=N,3380µm,1.2s						
AQU				AML	AML		
	comp=E,4070µm,1.5s						
AQU				AML	AML		
	comp=E,3890µm,1.5s						
SNTG	**Esanatoglia**	**0.50**	**344**	⇑P	**Pg**	**23 52 39.3**	**-0.7**
SNTG				S	**Sb**	**23 52 48.0**	**-0.1**
SNTG				AML	AML		
	comp=E,4665µm,0.5s						
SNTG				AML	AML		
	comp=N,3805µm,0.4s						
SNTG				AML	AML		
	comp=N,4265µm,0.4s						
SNTG				AML	AML		
	comp=N,3810µm,0.4s						
SNTG				AML	AML		
	comp=E,4580µm,0.5s						
FIAM	**Fiamignano**	**0.51**	**181**	⇑P	**Pg**	**23 52 39.6**	**-0.6**
FIAM				S	**Sb**	**23 52 47.3**	**-1.1**
FIAM				AML	AML		
	comp=E,4885µm,0.9s						
FIAM				AML	AML		
	comp=N,4805µm,0.6s						
FIAM				AML	AML		
	comp=N,4800µm,0.6s						
FIAM				AML	AML		
	comp=E,4885µm,1.1s						
ATCC	**AVT- Casa Cast**	**0.54**	**319**	⇑P	**Pg**	**23 52 40.2**	**-0.7**
ATCC				S	**Sg**	**23 52 48.7**	**+0.6**
ATCC				AML	AML		
	comp=E,8280µm,0.4s						
ATCC				AML	AML		
	comp=N,6740µm,0.8s						
ATCC				AML	AML		
	comp=E,8275µm,0.4s						
ATCC				AML	AML		
	comp=N,6735µm,0.8s						
ATCC				AML	AML		
	comp=E,8275µm,1.6s						
ATCC				AML	AML		
	comp=N,6735µm,1.2s						
TRE1	**Treia**	**0.55**	**14**	⇑P	**Pb**	**23 52 41.3**	**-0.5**
TRE1				AML	AML		
	comp=E,17100µm,0.5s						
TRE1				AML	AML		
	comp=N,18150µm,1.0s						
TRE1				AML	AML		
	comp=N,18150µm,1.0s						
EL6	**Elcito**	**0.55**	**358**	⇓P	**Pg**	**23 52 40.5**	**-0.6**
EL6				S	**Sb**	**23 52 50.0**	**+0.3**
EL6				AML	AML		
	comp=E,9635µm,0.2s						
EL6				AML	AML		
	comp=N,8075µm,0.3s						
EL6				AML	AML		
	comp=E,9650µm,0.2s						
EL6				AML	AML		
	comp=N,8070µm,0.3s						
EL6				AML	AML		
	comp=E,9640µm,0.2s						
TRTR	**Tortoreto Alta**	**0.58**	**87**	⇓P	**Pb**	**23 52 41.8**	**-0.4**
TRTR				AML	AML		
	comp=E,16700µm,0.7s						
TRTR				AML	AML		
	comp=N,11850µm,0.7s						
TRTR				AML	AML		
	comp=N,11850µm,1.3s						
TRTR				AML	AML		
	comp=E,16700µm,1.3s						
CING	**Cingoli**	**0.60**	**5**	⇓P	**Pg**	**23 52 41.3**	**-0.7**
FAGN	**Fagnano**	**0.61**	**146**	⇑P	**Pg**	**23 52 41.3**	**-0.9**
FAGN				S	**Sb**	**23 52 52.0**	**+0.6**
FAGN				AML	AML		
	comp=E,7630µm,0.5s						
FAGN				AML	AML		
	comp=E,7625µm,0.5s						
FAGN				AML	AML		
	comp=N,5355µm,0.5s						
FAGN				AML	AML		
	comp=E,7625µm,1.5s						
VCEL	**Villa Celiera**	**0.65**	**126**	⇑P	**Pg**	**23 52 42.4**	**-0.5**
VCEL				AML	AML		
	comp=E,4540µm,0.8s						
VCEL				AML	AML		
	comp=N,5540µm,0.7s						
MURB	**Monte Urbino**	**0.66**	**318**	⇑P	**Pg**	**23 52 42.2**	**-0.8**
MURB				AML	AML		
	comp=E,10840µm,0.4s						
MURB				AML	AML		
	comp=N,14650µm,1.0s						
MURB				AML	AML		
	comp=E,11930µm,0.4s						
MURB				AML	AML		
	comp=E,10830µm,0.4s						
MURB				AML	AML		
	comp=N,14600µm,1.0s						
MURB				AML	AML		
	comp=N,15900µm,1.0s						
MURB				AML	AML		
	comp=N,14600µm,1.0s						
MURB				AML	AML		
	comp=N,15900µm,1.0s						
MMUR	**Monte Murano**	**0.67**	**352**	⇓P	**Pg**	**23 52 42.9**	**-0.4**
MMUR				AML	AML		
	comp=E,8230µm,0.5s						
MMUR				AML	AML		
	comp=N,5635µm,0.9s						
PP3	**Marolino**	**0.70**	**30**	⇑P	**Pb**	**23 52 44.0**	**-0.2**
PP3				AML	AML		
	comp=E,12550µm,0.4s						
PP3				AML	AML		
	comp=N,20150µm,0.4s						
PP3				AML	AML		
	comp=E,12150µm,0.4s						
PP3				AML	AML		
	comp=N,20150µm,0.4s						
PP3				AML	AML		
	comp=E,12550µm,0.4s						
PP3				AML	AML		
	comp=N,20750µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.71**	**307**	⇑P	**Pg**	**23 52 43.0**	**-1.0**
ATTE				AML	AML		
	comp=N,2970µm,1.2s						
ATTE				AML	AML		
	comp=E,2890µm,0.6s						
SRES	**S.Oreste - Sor**	**0.71**	**220**	P	**Pg**	**23 52 43.4**	**-0.6**
SRES				S	**Sb**	**23 52 54.7**	**+0.7**
SRES				AML	AML		
	comp=N,2215µm,0.5s						
SRES				AML	AML		
	comp=E,2110µm,1.5s						
SRES				AML	AML		
	comp=E,2110µm,0.5s						
ATFO	**Monte Foce - G**	**0.72**	**326**	⇑P	**Pg**	**23 52 43.1**	**-1.0**
ATFO				S	**Sb**	**23 52 56.0**	**+1.6**
ATFO				AML	AML		
	comp=N,3895µm,0.5s						
ATFO				AML	AML		
	comp=E,4860µm,1.2s						
ATFO				AML	AML		
	comp=N,3900µm,0.5s						
ATFO				AML	AML		
	comp=E,4860µm,0.8s						
ATFO				AML	AML		
	comp=N,3900µm,1.5s						
T0110	**Collepietro**	**0.73**	**139**	⇑P	**Pg**	**23 52 43.4**	**-1.0**
T0110				AML	AML		
	comp=E,4485µm,0.7s						
T0110				AML	AML		
	comp=E,4485µm,1.3s						
T0110				AML	AML		
	comp=N,4300µm,0.5s						
ARVD	**Arcevia**	**0.73**	**349**	S	**Sb**	**23 52 56.0**	**+1.1**
MGAB	**Montegabbione**	**0.76**	**281**	⇑P	**Pg**	**23 52 44.1**	**-0.8**
MGAB				AML	AML		
	comp=E,10910µm,0.4s						
MGAB				AML	AML		
	comp=N,10245µm,0.5s						
MGAB				AML	AML		
	comp=E,11935µm,0.4s						
MGAB				AML	AML		
	comp=N,11035µm,0.5s						
MGAB				AML	AML		
	comp=N,10255µm,0.5s						
MGAB				AML	AML		
	comp=E,10895µm,0.4s						
PTQR	**Pietraquaria**	**0.78**	**165**	⇓P	**Pg**	**23 52 44.7**	**-0.7**
PTQR				AML	AML		
	comp=E,1232µm,0.9s						
PTQR				AML	AML		
	comp=N,1225µm,0.7s						
FRON	**Frontone**	**0.80**	**338**	⇑P	**Pg**	**23 52 44.5**	**-1.2**
FRON				AML	AML		
	comp=N,3485µm,0.5s						
FRON				AML	AML		
	comp=E,2085µm,1.0s						
FRON				AML	AML		
	comp=E,2085µm,1.0s						
ATVO	**AVT- Monte Val**	**0.80**	**319**	⇑P	**Pg**	**23 52 44.6**	**-1.2**
ATVO				S	**Sb**	**23 52 59.0**	**+2.1**
ATVO				AML	AML		
	comp=N,2430µm,0.6s						
ATVO				AML	AML		
	comp=E,2580µm,0.7s						
MTCE	**Montecelio**	**0.81**	**201**	⇑P	**Pg**	**23 52 44.7**	**-1.1**
MTCE				AML	AML		
	comp=E,2405µm,0.6s						
MTCE				AML	AML		
	comp=N,1600µm,0.7s						
CERT	**Cerreto**	**0.83**	**187**	⇑P	**Pg**	**23 52 45.1**	**-1.3**
CERT				AML	AML		
	comp=N,2530µm,1.3s						
CERT				AML	AML		
	comp=E,4000µm,0.5s						
CERT				AML	AML		
	comp=N,2530µm,0.7s						
ATMI	**Monte Miggiano**	**0.84**	**312**	⇓P	**Pb**	**23 52 46.5**	**-0.2**
ATMI				AML	AML		
	comp=E,7145µm,0.4s						
ATMI				AML	AML		
	comp=N,8090µm,1.6s						
AOI	**Ancona**	**0.85**	**24**	⇑P	**Pb**	**23 52 46.4**	**-0.4**
AOI				AML	AML		
	comp=E,2820µm,0.4s						
AOI				AML	AML		
	comp=N,2370µm,0.8s						
AOI				AML	AML		
	comp=E,2815µm,0.4s						
AOI				AML	AML		
	comp=N,2370µm,1.2s						
ATPI	**Pietralunga -**	**0.86**	**322**	⇑P	**Pg**	**23 52 45.7**	**-1.1**
ATPI				AML	AML		
	comp=E,2010µm,0.6s						
ATPI				AML	AML		
	comp=N,1990µm,1.2s						
ATPI				AML	AML		
	comp=N,1990µm,0.8s						
PIEI	**Pieia**	**0.87**	**330**	⇑P	**Pg**	**23 52 45.8**	**-1.4**
PIEI				S	**Sb**	**23 53 01.0**	**+2.1**
PIEI				AML	AML		
	comp=E,2105µm,0.4s						
PIEI				AML	AML		
	comp=N,1395µm,1.2s						
PIEI				AML	AML		
	comp=E,2110µm,0.4s						
MPAG	**Monte Paganucc**	**0.89**	**343**	⇓P	**Pg**	**23 52 46.7**	**-0.8**
MPAG				AML	AML		
	comp=E,1800µm,0.4s						
MPAG				AML	AML		
	comp=N,2325µm,1.0s						
MPAG				AML	AML		
	comp=N,2320µm,1.0s						
MPAG				AML	AML		
	comp=N,2320µm,1.0s						
SACS	**San Casciano d**	**0.90**	**275**	⇑P	**Pg**	**23 52 46.7**	**-0.9**
SACS				AML	AML		
	comp=N,3590µm,0.6s						
SACS				AML	AML		
	comp=E,3305µm,0.5s						
SACS				AML	AML		
	comp=E,3175µm,0.5s						
SACS				AML	AML		
	comp=N,3735µm,0.6s						
NARO	**Abbazia di Nar**	**0.92**	**335**	⇓P	**Pg**	**23 52 46.9**	**-1.2**
NARO				S	**Sn**	**23 53 03.0**	**+0.9**
NARO				AML	AML		
	comp=E,1930µm,0.6s						
NARO				AML	AML		
	comp=N,2225µm,1.0s						
NARO				AML	AML		
	comp=E,1930µm,1.4s						
NARO				AML	AML		
	comp=N,2225µm,1.0s						
SENI	**Senigallia**	**0.93**	**5**	⇑P	**Pb**	**23 52 48.3**	**+0.1**
SENI				AML	AML		
	comp=E,11500µm,0.4s						
SENI				AML	AML		
	comp=E,2605µm,0.9s						
SENI				AML	AML		
	comp=N,11950µm,0.4s						
SENI				AML	AML		
	comp=N,2183µm,0.7s						
SENI				AML	AML		
	comp=E,2605µm,1.1s						
FSSB	**Fossombrone**	**0.95**	**345**	⇑P	**Pg**	**23 52 47.4**	**-1.1**
FSSB				AML	AML		
	comp=E,8660µm,0.5s						
FSSB				AML	AML		
	comp=N,9090µm,0.4s						
FSSB				AML	AML		
	comp=N,9090µm,1.6s						
BADI	**Badiali**	**0.98**	**319**	⇓P	**Pg**	**23 52 48.5**	**-0.6**
LATE	**Laterza**	**0.99**	**261**	⇓P	**Pg**	**23 52 48.9**	**-0.4**
CAFI	**Castiglion Fio**	**1.01**	**303**	⇑P	**Pg**	**23 52 48.6**	**-1.2**
CAFI				AML	AML		
	comp=E,2240µm,0.5s						
CAFI				AML	AML		
	comp=N,1394µm,0.8s						
CAFI				AML	AML		
	comp=E,2285µm,0.5s						
CAFI				AML	AML		
	comp=N,1475µm,0.8s						
CAFI				AML	AML		
	comp=N,1395µm,0.8s						
RMP	**Rome, Mte Porz**	**1.01**	**198**	⇓P	**Pg**	**23 52 49.1**	**-0.7**
RMP				AML	AML		
	comp=E,2800µm,0.8s						
RMP				AML	AML		
	comp=N,2850µm,0.4s						
PE3	**Peglio**	**1.03**	**334**	⇓P	**Pg**	**23 52 49.4**	**-0.7**
PE3				AML	AML		
	comp=N,20µm,0.3s						
PE3				AML	AML		
	comp=E,18µm,0.3s						
PE3				AML	AML		
	comp=N,21µm,0.3s						
CAFR	**Castel Frentan**	**1.06**	**121**	⇓P	**Pb**	**23 52 49.9**	**-0.5**
CAFR				AML	AML		
	comp=N,1415µm,0.8s						
CAFR				AML	AML		
	comp=E,1600µm,0.6s						
VIVA	**Pratoni del Vi**	**1.06**	**195**	⇑P	**Pn**	**23 52 51.2**	**+0.4**
VIVA				AML	AML		
	comp=N,5465µm,0.4s						
VIVA				AML	AML		
	comp=E,4670µm,0.4s						
RDP	**Rocca di Papa**	**1.06**	**197**	⇓P	**Pn**	**23 52 51.0**	**+0.1**
RDP				AML	AML		
	comp=E,5835µm,0.5s						
RDP				AML	AML		
	comp=N,5805µm,0.4s						
RDP				AML	AML		
	comp=N,5805µm,1.6s						
MCIV	**Monte Civitell**	**1.07**	**271**	P	**Pg**	**23 52 50.1**	**-0.7**
MCIV				AML	AML		
	comp=E,1380µm,0.6s						
MCIV				AML	AML		
	comp=N,1700µm,0.6s						
MCIV				AML	AML		
	comp=E,1380µm,1.4s						
LPEL	**Lama dei Pelig**	**1.07**	**133**	⇓P	**Pg**	**23 52 49.2**	**-1.7**
LPEL				AML	AML		
	comp=E,1565µm,0.8s						
LPEL				AML	AML		
	comp=N,1605µm,0.9s						
SSP9	**Sansepolcro**	**1.08**	**318**	⇓P	**Pn**	**23 52 52.4**	**+1.3**
SSP9				AML	AML		
	comp=N,1370µm,0.6s						
SSP9				AML	AML		
	comp=E,1392µm,1.5s						
SSP9				AML	AML		
	comp=E,1392µm,0.5s						
SF04	**Casetta**	**1.08**	**274**	⇑P	**Pb**	**23 52 51.2**	**+0.4**
SF04				AML	AML		
	comp=E,3665µm,1.2s						
SF04				AML	AML		
	comp=N,2758µm,0.3s						
TOLF	**Tolfa**	**1.10**	**230**	P	**Pg**	**23 52 47.3**	**-4.1**
SF01	**Poggio Pratacc**	**1.15**	**272**	⇓P	**Pn**	**23 52 52.7**	**+0.6**
SF01				AML	AML		
	comp=N,2950µm,0.6s						
SF01				AML	AML		
	comp=E,3455µm,0.5s						
SF01				AML	AML		
	comp=E,3455µm,1.5s						
SF01				AML	AML		
	comp=N,2950µm,1.4s						
LRP	**Arpino**	**1.18**	**163**	⇑P	**Pn**	**23 52 54.4**	**+1.9**
LRP				AML	AML		
	comp=N,926µm,0.6s						
LRP				AML	AML		
	comp=E,752µm,0.7s						
CPGN	**Carpegna, Ital**	**1.18**	**330**	⇑P	**Pn**	**23 52 53.0**	**+0.5**
CRE	**Caprese Michel**	**1.20**	**315**	P	**Pg**	**23 52 52.0**	**-1.4**
CRE				AML	AML		
	comp=E,860µm,1.4s						
CRE				AML	AML		
	comp=N,1305µm,1.3s						
CRE				AML	AML		
	comp=E,860µm,0.6s						
ARCI	**Arcidosso**	**1.22**	**274**	⇓P	**Pb**	**23 52 53.3**	**+0.1**
ARCI				AML	AML		
	comp=N,458µm,0.5s						
ARCI				AML	AML		
	comp=E,410µm,1.2s						
ARCI				AML	AML		
	comp=E,410µm,0.8s						
GIUL	**Giuliano Di Ro**	**1.22**	**176**	⇑P	**Pb**	**23 52 53.0**	**-0.2**
GIUL				AML	AML		
	comp=E,1360µm,0.8s						
GIUL				AML	AML		
	comp=N,1095µm,0.9s						
CERA	**Filignano**	**1.35**	**150**	⇓P	**Pb**	**23 52 57.3**	**+1.9**
CERA				AML	AML		
	comp=N,937µm,0.8s						
CERA				AML	AML		
	comp=N,906µm,0.8s						
CERA				AML	AML		
	comp=E,804µm,1.1s						
CERA				AML	AML		
	comp=E,810µm,1.1s						
FRES	**Fresagrandinar**	**1.40**	**125**	⇑P	**Pb**	**23 52 57.2**	**+1.0**
FRES				AML	AML		
	comp=E,754µm,0.6s						
FRES				AML	AML		
	comp=N,450µm,0.7s						
FRES				AML	AML		
	comp=N,450µm,1.3s						
ASQU	**Asqua**	**1.41**	**317**	⇑P	**Pn**	**23 52 55.2**	**-0.5**
ASQU				AML	AML		
	comp=E,626µm,1.1s						
ASQU				AML	AML		
	comp=N,878µm,0.6s						
ASQU				AML	AML		
	comp=N,878µm,1.4s						
TRIV	**Trivento**	**1.46**	**133**	⇓P	**Pb**	**23 52 58.8**	**+1.5**
TRIV				AML	AML		
	comp=E,732µm,1.4s						
TRIV				AML	AML		
	comp=N,958µm,0.9s						
SFI	**Santa Sofia**	**1.46**	**321**	⇓P	**Pg**	**23 52 59.3**	**+1.0**
FROS	**Frosini**	**1.51**	**287**	⇑P	**Pn**	**23 52 56.9**	**0.0**
FROS				AML	AML		
	comp=N,665µm,1.2s						
FROS				AML	AML		
	comp=E,776µm,0.7s						
FROS				AML	AML		
	comp=N,665µm,0.8s						
CSNT	**Castellina Chi**	**1.51**	**298**	P	**Pn**	**23 52 56.8**	**-0.2**
CSNT				AML	AML		
	comp=E,324µm,0.6s						
CSNT				AML	AML		
	comp=N,380µm,0.6s						
CSNT				AML	AML		
	comp=N,380µm,1.4s						
MAON	**Monte Argentar**	**1.52**	**257**	⇓P	**Pn**	**23 52 56.5**	**-0.5**
MAON				AML	AML		
	comp=E,409µm,0.5s						
MAON				AML	AML		
	comp=N,246µm,0.5s						
OSSC	**Osservatorio P**	**1.57**	**299**	⇑P	**Pn**	**23 52 56.8**	**-1.0**
OSSC				AML	AML		
	comp=N,304µm,0.6s						
OSSC				AML	AML		
	comp=E,475µm,0.7s						
RUFI	**Rufina**	**1.59**	**313**	⇓P	**Pn**	**23 52 58.1**	**+0.1**
RUFI				AML	AML		
	comp=N,600µm,0.4s						
RUFI				AML	AML		
	comp=E,455µm,1.2s						
VAGA	**Valle Agricola**	**1.59**	**148**	⇑P	**Pg**	**23 53 00.4**	**-0.3**
VAGA				AML	AML		
	comp=E,390µm,0.7s						
VAGA				AML	AML		
	comp=N,520µm,1.0s						
VAGA				AML	AML		
	comp=N,520µm,1.0s						
VAGA				AML	AML		
	comp=E,390µm,1.3s						
CASP	**Castiglione de**	**1.67**	**271**	⇓P	**Pn**	**23 52 58.6**	**-0.5**
CASP				AML	AML		
	comp=N,227µm,0.5s						
CASP				AML	AML		
	comp=E,237µm,1.0s						
TRIF	**Trifonti**	**1.67**	**282**	P	**Pn**	**23 52 58.9**	**-0.3**
TRIF				AML	AML		
	comp=E,339µm,1.0s						
TRIF				AML	AML		
	comp=N,255µm,0.5s						
PTRJ	**Pietraroja**	**1.76**	**143**	S	**Sn**	**23 53 21.0**	**-1.7**
PTRJ				S	**Sg**	**23 53 27.0**	**+0.3**
BRIS	**BRISIGHELLA**	**1.81**	**320**	⇓P	**Pg**	**23 53 04.3**	**-0.6**
MELA	**Melanico ??? S**	**1.83**	**125**	⇑P	**Pb**	**23 53 02.8**	**-0.8**
MELA				AML	AML		
	comp=E,847µm,1.5s						
MELA				AML	AML		
	comp=N,1042µm,0.7s						
MELA				AML	AML		
	comp=E,847µm,0.5s						
TREM	**Isole Tremiti**	**1.88**	**109**	⇓P	**Pn**	**23 53 02.4**	**+0.3**
TREM				AML	AML		
	comp=E,962µm,1.6s						
TREM				AML	AML		
	comp=E,962µm,0.4s						
TREM				AML	AML		
	comp=N,1355µm,0.7s						
MPPT	**Montemurlo**	**1.90**	**309**	⇑P	**Pn**	**23 53 02.8**	**+0.5**
MTCR	**Monte La Croce**	**1.99**	**310**	⇑P	**Pn**	**23 53 03.4**	**-0.3**
APRC	**Apricena**	**2.06**	**119**	⇑P	**Pn**	**23 53 05.2**	**+0.5**
APRC				AML	AML		
	comp=N,596µm,0.5s						

APRC				AML	AML	
	comp=E,391μm,0.7s					
APRC				AML	AML	
	comp=E,391μm,1.3s					
PII	**Pisa**	**2.12**	**297**	⇓P	**Pn**	**23 53 06.0 +0.7**
PII				AML	AML	
	comp=E,265μm,0.6s					
PII				AML	AML	
	comp=N,262μm,0.4s					
PII				AML	AML	
	comp=E,265μm,1.4s					
POPM	**Popiglio**	**2.14**	**307**	⇑P	**Pn**	**23 53 06.6 +0.9**
POPM				AML	AML	
	comp=N,206μm,0.4s					
POPM				AML	AML	
	comp=E,184μm,0.4s					
POPM				AML	AML	
	comp=E,184μm,1.6s					
CELB	**S.Piero in Cam**	**2.15**	**270**	⇓P	**Pn**	**23 53 05.3 -0.5**
CELB				AML	AML	
	comp=E,80μm,0.5s					
CELB				AML	AML	
	comp=N,69μm,1.6s					
CELB				AML	AML	
	comp=N,69μm,0.4s					
BRJN	**Brijuni**	**2.17**	**12**	⇓P	**Pn**	**23 53 06.7 +0.6**
SGRT	**San Giovanni R**	**2.19**	**117**	⇓P	**Pn**	**23 53 07.9 +1.5**
SGRT				AML	AML	
	comp=E,550μm,0.8s					
SGRT				AML	AML	
	comp=N,424μm,0.6s					
SGRT				AML	AML	
	comp=E,550μm,1.2s					
MAIM	**Mastiano**	**2.23**	**301**	⇓P	**Pn**	**23 53 07.4 +0.5**
MAIM				AML	AML	
	comp=E,212μm,0.8s					
MAIM				AML	AML	
	comp=N,225μm,0.5s					
GSCL	**Gusciola**	**2.42**	**311**	⇑P	**Pn**	**23 53 09.3 -0.3**
GSCL				AML	AML	
	comp=E,282μm,0.8s					
GSCL				AML	AML	
	comp=N,288μm,0.4s					
GSCL				AML	AML	
	comp=E,282μm,1.2s					
VLC	**Villacollemand**	**2.43**	**306**	⇓P	**Pn**	**23 53 09.4 -0.2**
VLC				AML	AML	
	comp=E,134μm,0.7s					
VLC				AML	AML	
	comp=N,111μm,1.1s					
VLC				AML	AML	
	comp=N,108μm,1.0s					
VLC				AML	AML	
	comp=E,125μm,0.7s					
VLC				AML	AML	
	comp=N,111μm,0.9s					
VLC				AML	AML	
	comp=N,108μm,1.0s					
HVAR	**Hvar**	**2.47**	**80**	⇓P	**Pn**	**23 53 11.2 +1.0**
PLMA	**Palmaria, Port**	**2.71**	**299**	P	**Pn**	**23 53 13.7 +0.3**
PLMA				AML	AML	
	comp=E,76μm,1.4s					
PLMA				AML	AML	
	comp=N,112μm,0.5s					
PLMA				AML	AML	
	comp=E,76μm,0.6s					
MNTV	**Mantova**	**2.91**	**325**	P	**Pb**	**23 53 22.7 +0.8**
SMPL	**Sampolo**	**2.92**	**258**	⇑P	**Pn**	**23 53 17.5 +1.0**
SMPL				AML	AML	
	comp=E,24μm,0.7s					
SMPL				AML	AML	
	comp=N,23μm,0.8s					
SMPL				AML	AML	
	comp=E,24μm,1.3s					
MSSA	**Maissana**	**3.04**	**302**	⇑P	**Pn**	**23 53 19.1 +1.0**
MSSA				AML	AML	
	comp=N,107μm,0.7s					
MSSA				AML	AML	
	comp=E,94μm,0.7s					
CEY	**Cerknica**	**3.10**	**17**	*e*Pn	**Pn**	**23 53 18.7 -0.2**
AMUR	**Altamura**	**3.20**	**125**	⇓P	**Pn**	**23 53 21.8 +1.6**
AMUR				AML	AML	
	comp=E,154μm,0.8s					
AMUR				AML	AML	
	comp=E,154μm,1.2s					
AMUR				AML	AML	
	comp=N,124μm,0.7s					
SRKY	**Kupres RS**	**3.21**	**65**	*e*Pn	**Pn**	**23 53 22.5 +2.0**
SABO	**M.te Sabotino**	**3.22**	**6**	⇓P	**Pn**	**23 53 20.9 +0.4**
SABO				AML	AML	
	comp=E,283μm,0.4s					
SABO				AML	AML	
	comp=N,2010μm,0.6s					
SABO				AML	AML	
	comp=E,1170μm,0.4s					
SABO				AML	AML	
	comp=N,500μm,0.6s					
ROVR	**Rover Verones**	**3.23**	**333**	⇑P	**Pn**	**23 53 21.9 +1.2**
ROVR				AML	AML	
	comp=E,58μm,0.4s					
ROVR				AML	AML	
	comp=N,89μm,0.3s					
CGRP	**Cima Grappa**	**3.25**	**343**	⇓P	**Pn**	**23 53 22.4 +1.4**
CGRP				AML	AML	
	comp=E,366μm,0.5s					
CGRP				AML	AML	
	comp=N,304μm,0.9s					
CGRP				AML	AML	
	comp=E,366μm,1.5s					
MGRS	**Mrkonjic Grad**	**3.31**	**59**	*e*Pn	**Pn**	**23 53 22.7 +1.0**
STON	**Ston**	**3.37**	**87**	*e*Pn	**Pn**	**23 53 21.6 -0.8**
STON	**Ston**	**3.37**	**87**	⇑P	**Pn**	**23 53 21.8 -0.6**
STON				AML	AML	
	comp=E,61μm,1.2s					
STON				AML	AML	
	comp=N,57μm,0.8s					
STON				AML	AML	
	comp=E,61μm,0.8s					
PRIJ	**Prijedor**	**3.40**	**48**	*e*Pn	**Pg**	**23 53 32.6 -2.7**
SALO	**Salr**	**3.40**	**328**	⇓P	**Pn**	**23 53 24.7 +1.7**
SALO				AML	AML	
	comp=E,278μm,0.8s					
SALO				AML	AML	
	comp=N,206μm,1.0s					
SALO				AML	AML	
	comp=N,206μm,1.0s					
SALO				AML	AML	
	comp=E,278μm,1.2s					
LJU	**Ljubljana**	**3.42**	**17**	⇓P	**Pn**	**23 53 24.3 +1.1**
LJU				AML	AML	
	comp=E,1085μm,0.5s					
LJU				AML	AML	
	comp=N,1680μm,0.4s					
CTI	**Castel Tesino**	**3.44**	**343**	P	**Pn**	**23 53 27.0 +3.4**
MPRI	**Monte Prat**	**3.47**	**358**	⇓P	**Pn**	**23 53 25.1 +1.2**
MPRI				AML	AML	
	comp=E,250μm,0.5s					
MPRI				AML	AML	
	comp=N,358μm,0.4s					
MPRI				AML	AML	
	comp=E,250μm,1.5s					
STAL	**STALIGIAL**	**3.50**	**355**	⇓P	**Pn**	**23 53 25.2 +0.9**
STAL				AML	AML	
	comp=N,190μm,0.4s					
STAL				AML	AML	
	comp=E,230μm,1.6s					
STAL				AML	AML	
	comp=E,230μm,0.4s					
STAL				AML	AML	
	comp=N,190μm,1.6s					
LTRZ	**Laterza**	**3.52**	**127**	P	**Pn**	**23 53 25.8 +1.3**
A051A	**Mrakovica**	**3.53**	**49**	*e*Pn	**Pn**	**23 53 25.7 +0.9**
BLY	**Banja Luka**	**3.54**	**55**	*e*Pn	**Pn**	**23 53 26.8 +2.0**
LUSI	**Trento, Gardas**	**3.55**	**335**	⇑P	**Pn**	**23 53 26.0 +1.0**
LUSI				AML	AML	
	comp=N,255μm,0.3s					
LUSI				AML	AML	
	comp=E,172μm,1.1s					
LUSI				AML	AML	
	comp=E,172μm,0.9s					
NOCI	**Noci**	**3.55**	**123**	⇓P	**Pn**	**23 53 26.6 +1.6**
NOCI				AML	AML	
	comp=N,156μm,1.1s					
NOCI				AML	AML	
	comp=E,132μm,0.7s					
NOCI				AML	AML	
	comp=N,156μm,0.9s					
CIMO	**Cimolais**	**3.57**	**352**	⇓P	**Pn**	**23 53 26.1 +0.8**
CIMO				AML	AML	
	comp=E,59μm,0.7s					
CIMO				AML	AML	
	comp=N,72μm,0.8s					
CIMO				AML	AML	
	comp=E,56μm,0.7s					
CIMO				AML	AML	
	comp=N,69μm,0.7s					
CIMO				AML	AML	
	comp=E,59μm,1.3s					
CIMO				AML	AML	
	comp=E,56μm,1.3s					
DGI	**Dorgali Grotta**	**3.61**	**228**	⇑P	**Pn**	**23 53 26.6 +0.8**
GAGG	**Gaggia**	**3.65**	**336**	⇑P	**Pn**	**23 53 28.0 +1.4**
GAGG				AML	AML	
	comp=E,208μm,0.9s					
GAGG				AML	AML	
	comp=N,124μm,1.1s					
GAGG				AML	AML	
	comp=E,208μm,1.1s					
CLUD	**Cludinico**	**3.68**	**357**	⇓P	**Pn**	**23 53 27.7 +0.8**
CLUD				AML	AML	
	comp=E,131μm,0.7s					
CLUD				AML	AML	
	comp=N,120μm,0.8s					
CLUD				AML	AML	
	comp=E,131μm,1.3s					
CLUD				AML	AML	
	comp=N,120μm,1.2s					
MABI	**Malga Bissina**	**3.77**	**331**	P	**Pn**	**23 53 29.4 +1.2**
MABI				AML	AML	
	comp=E,76μm,0.6s					
MABI				AML	AML	
	comp=N,101μm,0.3s					
SALB	**San Lorenzo Be**	**3.78**	**139**	S	**Sn**	**23 54 13.0 +0.4**
ACOM	**Acomizza, Ital**	**3.78**	**4**	⇑P	**Pn**	**23 53 29.5 +1.1**
ACOM				AML	AML	
	comp=N,217μm,0.9s					
ACOM				AML	AML	
	comp=E,255μm,0.9s					
ACOM				AML	AML	
	comp=N,188μm,0.5s					
ACOM				AML	AML	
	comp=N,217μm,1.1s					
ACOM				AML	AML	
	comp=E,261μm,0.9s					
ZOU	**Zoufplan**	**3.78**	**358**	⇑P	**Pn**	**23 53 28.9 +0.6**
ZOU				AML	AML	
	comp=E,155μm,0.7s					
ZOU				AML	AML	
	comp=N,108μm,1.5s					
FVI	**Forni Avoltri**	**3.83**	**356**	P	**Pn**	**23 53 30.0 +1.1**
FVI				AML	AML	
	comp=E,105μm,0.6s					
FVI				AML	AML	
	comp=N,114μm,0.7s					
FVI				AML	AML	
	comp=N,114μm,1.3s					
FVI				AML	AML	
	comp=E,105μm,1.4s					
TAR1	**Taranto**	**3.84**	**124**	⇓P	**Pn**	**23 53 31.2 +2.2**
TREB	**Trebinje**	**3.85**	**89**	*e*Pn	**Pn**	**23 53 29.7 +0.6**
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pn**	**23 53 30.4 +0.9**
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pn**	**23 53 30.6 +1.2**
	comp=E,3.0nm,0.2s					
MYKA	**Terra Mystica**	**3.87**	**5**	*i* Pn	**Pn**	**23 53 30.6 +1.1**
	comp=E,3.0nm,0.3s,SNR=6.3					
KOSI	**Kohlern**	**3.89**	**342**	⇓P	**Pn**	**23 53 31.8 +1.9**
KOSI				AML	AML	
	comp=N,145μm,1.0s					
KOSI				AML	AML	
	comp=E,192μm,0.9s					
KOSI				AML	AML	
	comp=E,192μm,1.1s					
BRY	**Bratogost**	**3.98**	**86**	*e*Pn	**Pn**	**23 53 32.1 +1.0**
ABTA	**Abfaltersbach**	**3.99**	**354**	*i* Pn	**Pn**	**23 53 32.7 +1.5**
	comp=E,22nm,0.4s,SNR=19					
ABTA				*e*Sn	**Sn**	**23 54 18.7 +0.8**
	comp=E,49nm,0.7s					
BRES	**Bressanone**	**4.04**	**346**	⇑P	**Pn**	**23 53 34.6 +2.5**
SOKA	**Soboth**	**4.13**	**19**	*e*Pn	**Pn**	**23 53 34.3 +1.2**
	comp=E,2.1nm,0.3s					
SOKA				*e*Sn	**Sn**	**23 54 24.6 +3.3**
	comp=E,7.8nm,0.5s					
RISI	**Rein**	**4.24**	**350**	⇓P	**Pn**	**23 53 36.6 +2.0**
RISI				AML	AML	
	comp=E,306μm,0.5s					
RISI				AML	AML	
	comp=N,275μm,0.6s					
MUGIO	**Muggio**	**4.30**	**318**	⇑P	**Pn**	**23 53 35.7 +0.3**
MUGIO				AML	AML	
	comp=E,49μm,0.8s					
MUGIO				AML	AML	
	comp=N,47μm,0.5s					
MUGIO				AML	AML	
	comp=E,49μm,1.2s					
VSL	**Villasalto**	**4.33**	**222**	⇓P	**Pn**	**23 53 36.9 +1.1**
VSL				S	**Sn**	**23 54 28.0 +1.9**
VSL				AML	AML	
	comp=E,32μm,0.5s					
VSL				AML	AML	
	comp=N,40μm,0.6s					
VSL				AML	AML	
	comp=E,32μm,1.5s					
VSL				AML	AML	
	comp=N,40μm,1.4s					
HAPS	**Han Pijesak,Bl**	**4.44**	**71**	*e*Pn	**Pn**	**23 53 38.1 +0.8**
DRME	**Dracevica, Mon**	**4.52**	**95**	*e*Pn	**Pn**	**23 53 39.8 +1.5**
PDG	**Podgorica**	**4.54**	**92**	⇓P	**Pn**	**23 53 40.5 +1.9**
FETA	**Feichten**	**4.57**	**339**	*e*Pn	**Pn**	**23 53 41.7 +2.5**
	comp=N,4.0nm,0.4s					
WTTA	**Wattenberg**	**4.61**	**347**	*e*Pn	**Pn**	**23 53 42.5 +2.7**
	comp=N,1.8nm,0.2s					
WTTA				*e*Sn	**Sn**	**23 54 36.5 +3.3**
	comp=N,16nm,0.3s					
DAVOX	**Davos/Dischmat**	**4.62**	**331**	Pn	**Pn**	**23 53 42.5 +2.6**
	comp=N,3.2nm,0.3s,baz=150,slow=18,SNR=32					
DAVOX				Sn	**Sn**	**23 54 35.7 +2.1**
	comp=N,2.9nm,0.3s,baz=275,slow=16,SNR=4.0					
DAVOX	**Davos/Dischmat**	**4.62**	**331**	⇓P	**Pn**	**23 53 42.7 +2.8**
RUDO	**Rudo**	**4.64**	**77**	*e*Pn	**Pn**	**23 53 40.6 +0.6**
SQTA	**Sankt Quirin**	**4.65**	**344**	*i* Pn	**Pn**	**23 53 42.6 +2.4**
	comp=N,7.5nm,0.2s,SNR=9.6					
WATA	**Walderalm**	**4.69**	**347**	*e*Pn	**Pn**	**23 53 43.0 +2.2**
	comp=N,2.5nm,0.2s					
BBLS	**Lazići**	**4.71**	**74**	*e*Pn	**Pn**	**23 53 43.8 +2.8**
ARSA	**Arzberg**	**4.79**	**20**	*e*Pn	**Pn**	**23 53 42.5 +0.5**
	comp=N,3.0nm,0.4s					
MOTA	**Moosalm**	**4.79**	**343**	*e*Pn	**Pn**	**23 53 44.9 +2.8**
	comp=N,2.0nm,0.2s					
BIOA	**Bad Ischl, Aus**	**4.93**	**4**	*e*Pn	**Pn**	**23 53 45.4 +1.4**
	comp=N,9.6nm,0.3s,SNR=11					
BIOA				*e*Sn	**Sn**	**23 54 43.9 +3.1**
	comp=N,34nm,0.5s					
RETA	**Reutte**	**5.00**	**341**	*e*Pn	**Pn**	**23 53 47.7 +2.7**
	comp=N,4.0nm,0.3s					
RETA				*e*Sn	**Sn**	**23 54 45.6 +3.0**
	comp=N,7.4nm,0.3s					
GMB	**Gambarie**	**5.04**	**155**	P	**Pn**	**23 53 50.3 +4.7**
DAVA	**Damuels**	**5.06**	**334**	*e*Pn	**Pn**	**23 53 48.8 +2.9**
	comp=N,3.1nm,0.3s					
DAVA				*e*Sn	**Sn**	**23 54 45.6 +1.2**
	comp=N,16nm,0.4s					
MOA	**Molln**	**5.14**	**9**	*e*Pn	**Pn**	**23 53 48.2 +1.4**
	comp=N,5.0nm,0.5s					
DIVS	**Divibare**	**5.17**	**73**	*e*Pn	**Pn**	**23 53 48.6 +1.3**
TIR	**Tirane**	**5.21**	**104**	⇑P	**Pn**	**23 53 49.3 +1.4**
MRGE	**Morge**	**5.28**	**307**	S	**Sn**	**23 54 50.0 +0.2**
FRGS	**Fruska Gora**	**5.38**	**61**	*e*Pn	**Pn**	**23 53 47.9 -2.2**
RONA	**Rosala, Austr**	**5.41**	**23**	*e*Pn	**Pn**	**23 53 52.0 +1.5**
	comp=N,3.7nm,0.5s					
CONA	**Conrad Observa**	**5.50**	**20**	*e*Pn	**Pn**	**23 53 52.5 +0.6**
	comp=N,1.7nm,0.2s					
GERES	**GERESS Array B**	**6.08**	**4**	Pn	**Pn**	**23 53 59.6 -0.3**
	comp=N,0.7nm,0.3s,baz=189,slow=12,SNR=17					
GERES				Sn	**Sn**	**23 55 07.5 -1.8**
	comp=N,2.6nm,0.3s,baz=180,slow=24,SNR=10					
GERES				Lg	Lg	23 55 45.9
	baz=186,slow=26					
	comp=N,0.8nm,0.3s					
CKRC	**Cesky Krumlov**	**6.10**	**7**	*e*PN	**Pn**	**23 53 59.8 -0.2**
CKRC				*e*SN	**Sn**	**23 55 07.9 -1.8**
BOVS	**Bovan**	**6.33**	**79**	⇓P	**Pn**	**23 54 03.1 0.0**
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN	**Pn**	**23 54 03.5 -0.2**
KHC				*e*SN	**Sn**	**23 55 14.5 -1.7**
KRUC	**Moravsky**	**6.69**	**19**	*e*PN	**Pn**	**23 54 07.6 -0.5**
KRUC				*e*SN	**Sn**	**23 55 22.5 -1.6**
BZS	**Buzias**	**6.73**	**62**	⇓P	**Pn**	**23 54 10.5 +1.9**
VRAC	**Vranov**	**6.96**	**19**	Pn	**Pn**	**23 54 10.1 -1.8**
	comp=N,0.2nm,0.3s,baz=290,slow=15,SNR=1.6					
VRAC				Sn	**Sn**	**23 55 29.4 -1.5**
	baz=118,slow=21					
	comp=N,0.7nm,0.3s					
SIRR	**Siria**	**7.03**	**57**	⇓P	**Pn**	**23 54 15.7 +2.9**
BLKB	**Belogradchik**	**7.03**	**80**	⇑P	**Pn**	**23 54 14.1 +1.3**
PRU	**Pruhonice**	**7.28**	**7**	*e*SN	**Sn**	**23 55 35.4 -3.2**
VTS	**Vitosha**	**7.45**	**88**	⇓P	**Pn**	**23 54 20.5 +1.8**
NKC	**Novy Kostel**	**7.47**	**357**	*e*SN	**Sn**	**23 55 42.4 -1.1**
KEST	**Kesra**	**7.62**	**204**	Pn	**Pn**	**23 54 22.0 +1.0**
	comp=N,0.1nm,0.3s,baz=190,slow=18,SNR=1.5					
KEST				Sn	**Sn**	**23 55 48.7 +1.4**
	comp=N,0.1nm,0.3s,baz=215,slow=20,SNR=1.3					
	comp=N,1.2nm,0.5s					
CLL	**Collm**	**8.54**	**359**	*e*Pn	**Pn**	**23 54 33.0 -0.4**
CLL				*e*Sn	**Sn**	**23 56 03.0 -6.5**
CLL				*e*x	x	23 56 10.0
CLL				*e*x	x	23 56 40.0
CLL				*e*Sg	**Sg**	**23 56 59.0 -4.9**
	comp=Z,10.0nm,1.2s					
ARR	**Arges**	**8.68**	**69**	⇓P	**Pn**	**23 54 37.5 +2.1**
MLR	**Muntele Rosu**	**9.61**	**69**	Pn	**Pn**	**23 54 47.5 -0.8**
	comp=Z,0.2nm,0.3s,baz=54,slow=22,SNR=1.4					
	comp=Z,1.3nm,0.7s					
IDI	**Anoyia**	**11.81**	**125**	Pn	**Pn**	**23 55 18.9 +0.5**
	comp=Z,0.1nm,0.3s,baz=348,slow=17,SNR=1.2					
	comp=Z,2.4nm,0.8s					
ESDC	**Sonseca Array**	**13.23**	**262**	Pn	**Pn**	**23 55 37.8 -0.1**
	baz=66,slow=13,SNR=4.9					
	comp=Z,0.3nm,0.8s					
EKA	**Eskdalemuir Ar**	**16.43**	**325**	Pn	**Pn**	**23 56 19.7 -0.6**
	baz=135,slow=14					
	comp=Z,0.1nm,0.3s					
NOA	**NORSAR Array B**	**18.33**	**357**	P	**Pn**	**23 56 43.6 -0.3**
	baz=173,slow=12,SNR=2.6					
	comp=Z,0.3nm,0.8s					
FINES	**FINESS Array B**	**20.24**	**18**	P	**P**	**23 57 02.6 -2.3**
	comp=Z,3.2nm,1.1s,baz=209,slow=11,SNR=3.8					
	comp=Z,3.2nm,1.1s					
BELG	**Belogornoye**	**24.96**	**55**	P	**P**	**23 57 53.2 +0.1**
	comp=Z,10nm,0.9s,baz=267,slow=20,SNR=2.3					
	comp=Z,10nm,0.9s					
TORD	**Torodi Ar. Bea**	**31.14**	**202**	P	**P**	**23 58 49.4 +0.8**
	comp=Z,0.5nm,0.6s,baz=19,slow=9.6,SNR=5.9					
	comp=Z,0.5nm,0.6s					
ARU	**Arti**	**31.82**	**49**	P	**P**	**23 58 54.4 +0.1**
	comp=Z,1.9nm,0.5s,baz=240,slow=8.3,SNR=5.6					
	comp=Z,1.9nm,0.5s					
BVAR	**Borovoye Array**	**38.76**	**54**	P	**P**	**23 59 55.0 +1.0**
	comp=Z,0.5nm,0.6s,baz=275,slow=7.1,SNR=5.9					
	comp=Z,0.5nm,0.6s					
SONM	**Songino Array**	**61.85**	**50**	P	**P**	**00 02 49.3 +0.3**
	comp=Z,0.9nm,0.8s,baz=292,slow=7.9,SNR=5.1					
	comp=Z,0.9nm,0.8s					

IDC ***30*** *23:53:28.6±0.7, 57°.48S×23°.59W, h0km, mb4.0/5, mbtmp3.9/6, ML3.5/1, MS2.9/2, Error ellipse: s-maj=34.9km s-min=22.3km az=75.0*

NEIC ***30*** *23:53:31.2±1.6, 57°.28S±0°.08×23°.6W±0°.1, h10km±1km, mb4.5/16, Error ellipse: s-maj=15.2km s-min=11.8km az=137.0*

ISC 30 23:53:31.1±0.7, 57°.4S±0°.1×23°.8W±0°.1, h10km, n31, σ1§36/30, mb4.4/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.78**	**288**	Pn	**Pn**	**23 55 25.6**	**+1.4**
VNA1	**Neumayer--Stat**	**14.88**	**160**	P	**Pn**	**23 57 01.2**	**0.0**
VNA3	**Neumayer Olymp**	**15.13**	**162**	P	**Pn**	**23 57 04.0**	**-0.6**
VNA2	**Neumayer--Watz**	**15.27**	**159**	P	**Pn**	**23 57 05.5**	**-0.9**
	baz=328,slow=16						
SNAA	**Sanae**	**16.77**	**157**	P	**Pn**	**23 57 26.8**	**+0.9**
SNAA	**Sanae**	**16.77**	**157**	Pn	**Pn**	**23 57 24.8**	**-1.0**
	0.2nm,0.3s,baz=320,slow=11,SNR=14						
SNAA				Sn	Sn	00 00 17.0	-15
	0.1nm,0.3s,baz=335,slow=10,SNR=2.3						
SNAA				LR	LR	00 02 09.6	
	comp=Z,41nm,20.1s,baz=11,slow=31						
	1.1nm,0.6s						
SNAA	**Sanae**	**16.77**	**157**		**Pn**	**23 57 26.8**	**+0.9**
TROLL	**Troll, Antarti**	**18.22**	**154**	P	**P**	**23 57 45.4**	**+1.3**
EFI	**East Falkland**	**20.52**	**271**	P	**P**	**23 58 09.5**	**+0.4**
BELA	**Belgrano 2**	**20.91**	**186**	P	**P**	**23 58 15.6**	**+2.3**
TRQA	**Tornquist**	**31.54**	**291**	P	**P**	**23 59 52.3**	**-1.0**
TRQA				IAmb	IAmb	00 00 13.4	
	comp=Z,8.9nm,1.4s						
PLTB	**Pedras Altas**	**32.78**	**309**	P	**P**	**00 00 05.1**	**+0.9**
QSPA	**South Pole Qui**	**32.86**	**180**	P	**P**	**00 00 02.7**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=266,slow=5.0,SNR=2.3						
	comp=Z,0.7nm,0.5s						
MAW	**Mawson**	**37.96**	**142**	LR	LR	00 14 55.0	
	comp=Z,21nm,19.6s,baz=239,slow=34						
MAW	**Mawson**	**37.96**	**142**	P	**P**	**00 00 48.5**	**+0.1**
LCO	**Las Campanas**	**43.12**	**291**	P	**P**	**00 01 29.8**	**-2.0**
LCO				IAmb	IAmb	00 02 04.5	
	comp=Z,14nm,1.3s						
AC02	**Maricunga**	**44.12**	**294**	P	**P**	**00 01 39.6**	**-0.6**
VNDA	**Vanda**	**45.31**	**182**	P	**P**	**00 01 46.4**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=189,slow=6.3,SNR=5.3						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**45.31**	**182**	P	**P**	**00 01 49.0**	**+0.6**
VNDA				IAmb	IAmb	00 02 12.1	
	comp=Z,4.4nm,1.5s						
SIV	**San Ignacio**	**49.85**	**310**	P	**P**	**00 02 24.4**	**0.0**
	comp=Z,0.4nm,0.5s,baz=215,slow=18,SNR=2.7						
	comp=Z,0.4nm,0.5s						
LPAZ	**La Paz**	**52.66**	**302**	P	**P**	**00 02 46.9**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=157,slow=6.2,SNR=19						
	comp=Z,3.8nm,0.6s						
LPAZ	**La Paz**	**52.66**	**302**	P	**P**	**00 02 46.5**	**+0.3**
LPAZ				IAmb	IAmb	00 02 47.8	
	comp=Z,4.4nm,0.6s						
BOSC	**San Juan Bosco**	**68.98**	**299**	P	**P**	**00 04 36.0**	**-0.8**
BOSC				IAmb	IAmb	00 05 09.1	
	comp=Z,2.6nm,0.7s						
TULM	**Tulcn-Chalpat**	**72.05**	**302**	P	**P**	**00 04 56.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.38**	**26**	P	**P**	**00 05 02.5**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=194,slow=6.8,SNR=16						
	comp=Z,2.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.38**	**26**	P	**P**	**00 05 02.6**	**-0.4**
TORD				IAmb	IAmb	00 05 03.7	
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**124.72**	**27**	PKP	**PKPdf**	**00 12 28.0**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=176,slow=0.8,SNR=15						
ARCES	**ARCESS Array B**	**131.51**	**21**	PKP	**PKPdf**	**00 12 40.3**	**-1.9**
	comp=Z,4.1nm,1.0s,baz=232,slow=1.0,SNR=5.0						
NRIK	**Noril'sk**	**148.87**	**40**	PKPbc	**PKPdf**	**00 13 16.1**	**+2.8**
	comp=Z,1.1nm,0.3s,baz=160,slow=1.2,SNR=3.6						
SONM	**Songino Array**	**148.96**	**86**	PKPbc	**PKPdf**	**00 13 16.8**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=223,slow=2.8,SNR=9.7						
ILAR	**Eielson Array**	**152.39**	**309**	PKPbc	**PKPbc**	**00 13 24.9**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=117,slow=2.4,SNR=29						

VIE ***30*** *23:56:17.4±3.9, 42°.54N×13°.26E, h8km, mb3.3/14, ml3.4/12, ms3.4/2, Error ellipse: s-maj=42.9km s-min=10.6km az=174.0 96 km NE of Rome*

IDC ***30*** *23:56:19.6±1.0, 42°.93N×13°.03E, h0km, mb3.7/5, mbtmp3.5/16, ML3.1/9, MS2.9/6, Error ellipse: s-maj=18.6km s-min=12.3km az=91.0*

LDG ***30*** *23:56:19.3±0.1, 42°.83N×13°.08E, h10km, Ml2.9/24, Error ellipse: s-maj=2.9km s-min=1.7km az=55.0*

ROM ***30*** *23:56:19.3±0.0, 42°.828N±0°.002×13°.092E±0°.003, h11km, ML3.3/6, Error ellipse: s-maj=0.2km s-min=0.2km az=241.0*

PRU ***30*** *23:56:21.8±0.0, 42°.50N×13°.27E, h10km*

ISC 30 23:56:20.0±0.7, 42°.82N±0°.02×13°.05E±0°.02, h14km±3km, n153, σ2§68/191, mb3.8/4, 1C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.07**	**186**	⇑P	**Pg**	**23 56 22.4**	**-0.5**
T1212				S	**Sg**	**23 56 24.5**	**-0.4**
T1216	**Preci, Frazion**	**0.07**	**339**	P	**Pg**	**23 56 22.2**	**-0.7**
T1216				S	**Sg**	**23 56

comp=N,77100μm,0.3s
T1216 AML AML
comp=E,85950μm,0.5s
T1216 AML AML
comp=N,77064μm,0.3s
T1245 Castelsantange 0.10 71 P **Pg** **23 56 22.2 -1.1**
T1245 S **Sg** **23 56 24.1 -1.5**
T1245 AML AML
T1245 AML AML
T1245 AML AML
T1245 AML AML
T1245 AML AML
T1245 AML AML
T1245 AML AML
T1213 Norcia, Frazio 0.11 152 ||P **Pg** **23 56 22.6 -0.7**
T1213 S **Sg** **23 56 24.7 -0.8**
T1214 Arquata del Tr 0.13 119 P **Pg** **23 56 22.7 -0.9**
T1214 S **Sg** **23 56 25.0 -1.1**
T1215 Vallo di Nera, 0.14 262 P **Pg** **23 56 23.6 -0.1**
T1215 S **Sg** **23 56 26.6 +0.5**
T1215 AML AML
comp=N,17600μm,0.8s
T1215 AML AML
comp=E,15500μm,0.8s
T1215 AML AML
comp=E,17500μm,0.8s
T1215 AML AML
comp=N,16140μm,1.0s
T1215 AML AML
comp=E,15500μm,0.9s
T1215 AML AML
comp=E,17550μm,0.9s
T1215 AML AML
comp=N,16200μm,1.0s
T1215 AML AML
comp=E,13573μm,0.5s
T1215 AML AML
comp=N,9726μm,0.4s
T1215 AML AML
comp=N,10037μm,0.4s
T1215 AML AML
comp=E,13842μm,0.2s
FEMA Monte Fema 0.14 359 P **Pg** **23 56 23.1 -0.7**
FEMA S **Sg** **23 56 25.6 -0.7**
FEMA AML AML
comp=E,27500μm,1.3s
FEMA AML AML
comp=N,26050μm,1.0s
FEMA AML AML
comp=N,17694μm,0.4s
FEMA AML AML
comp=E,21068μm,0.5s
T1217 Poggiodomo (PG 0.14 219 P **Pg** **23 56 23.6 -0.1**
T1217 S **Sg** **23 56 26.6 +0.3**
T1217 AML AML
comp=E,42550μm,0.7s
T1217 AML AML
comp=E,41800μm,0.7s
T1217 AML AML
comp=N,30100μm,0.6s
T1217 AML AML
comp=E,42500μm,0.7s
T1217 AML AML
comp=N,30250μm,0.6s
T1217 AML AML
comp=E,15982μm,0.3s
T1217 AML AML
comp=N,13667μm,0.4s
T1217 AML AML
comp=N,13780μm,0.4s
T1217 AML AML
comp=E,15152μm,0.3s
T1218 Civita (PG) 0.16 164 P **Pg** **23 56 23.5 -0.5**
T1218 S **Sg** **23 56 26.1 -0.6**
T1244 Arquata del Tr 0.19 110 P **Pg** **23 56 23.7 -0.7**
T1244 S **Sg** **23 56 26.5 -0.9**
FDMO Fiordimonte 0.21 6 P **Pg** **23 56 24.2 -0.6**
FDMO S **Sg** **23 56 27.6 -0.5**
MMO1 Montemonaco 0.21 69 P **Pg** **23 56 23.7 -1.1**
MMO1 S **Sg** **23 56 27.0 -1.1**
T1201 Domo (RI) 0.22 139 P **Pg** **23 56 24.6 -0.3**
LNSS Leonessa 0.22 183 P **Pg** **23 56 24.6 -0.3**
LNSS S **Sg** **23 56 29.0 +0.8**
LNSS AML AML
T1256 Bolognola (MC) 0.22 34 P **Pg** **23 56 24.2 -0.9**
T1256 S **Sg** **23 56 27.7 -0.8**
T1219 Muccia, Frazio 0.24 352 P **Pg** **23 56 24.6 -0.6**
T1219 S **Sg** **23 56 28.5 -0.2**
T1204 Amatrice, Fraz 0.24 127 P **Pg** **23 56 24.6 -0.7**
T1204 S **Sg** **23 56 28.7 -0.2**
AM05 Amandola Campo 0.27 55 P **Pg** **23 56 24.9 -0.8**
AM05 S **Sg** **23 56 28.9 -0.7**
T1241 Roccafluvione, 0.28 83 P **Pg** **23 56 25.1 -0.8**
T1241 S **Sg** **23 56 29.4 -0.5**
SMA1 SAN MARTINO 0.28 133 P **Pg** **23 56 25.2 -0.7**
SMA1 S **Sg** **23 56 29.8 -0.2**
T1243 Rocca Santa Ma 0.32 113 P **Pg** **23 56 25.5 -1.0**
T1243 S **Sb** **23 56 31.0 -1.5**
GUMA Gualdo di Mace 0.32 41 P **Pg** **23 56 26.0 -0.5**
ARRO Arrone 0.32 221 P **Pg** **23 56 26.7 +0.1**
T1211 Morro Reatino 0.33 207 P **Pg** **23 56 27.0 +0.4**
SEF1 Sefro 0.33 346 P **Pg** **23 56 26.4 -0.5**
RM33 Pellescritta (0.34 159 P **Pg** **23 56 26.3 -0.6**
RM33 S **Sg** **23 56 31.2 -0.3**
ASSB Assisi San Ben 0.36 307 P **Pg** **23 56 27.1 -0.3**
MDAR Monte D'Aria 0.38 10 P **Pg** **23 56 26.7 -0.9**
CAMP Campotosto 0.39 137 P **Pg** **23 56 26.9 -0.9**
CAMP S **Sg** **23 56 32.8 -0.4**
T1246 Crognaleto (TE 0.40 126 P **Pg** **23 56 27.1 -1.0**
CESX Cesi 0.41 239 P **Pg** **23 56 28.0 -0.2**
GAG1 Gagliole 0.42 1 P **Pg** **23 56 27.8 -0.5**
SSM1 San Severino M 0.42 12 P **Pg** **23 56 27.8 -0.6**
T1247 Pizzolo (AQ) 0.42 155 P **Pg** **23 56 27.5 -0.9**
SNTG Esanatoglia 0.44 349 P **Pg** **23 56 28.4 -0.4**
TERO Teramo 0.45 116 P **Pg** **23 56 27.8 -1.2**
ATCC AVT- Casa Cast 0.47 320 P **Pg** **23 56 29.0 -0.3**
OFFI Offida 0.48 76 P **Pb** **23 56 29.1 -1.1**
EL6 Elcito 0.51 4 P **Pg** **23 56 29.2 -0.8**
FOSV Fossato di Vic 0.52 336 P **Pg** **23 56 29.5 -0.7**
TRE1 Treia 0.52 21 P **Pb** **23 56 30.0 -0.9**
GIGS Gran Sasso 0.53 134 P **Pg** **23 56 29.1 -1.4**
AQU L'Aquila 0.53 151 P **Pg** **23 56 29.7 -0.8**
FIAM Fiamignano 0.56 175 P **Pg** **23 56 30.2 -0.7**
CING Cingoli 0.56 11 P **Pg** **23 56 30.3 -0.8**
MURB Monte Urbino 0.59 319 P **Pg** **23 56 31.2 -0.3**
TRTR Tortoreto Alta 0.63 91 P **Pg** **23 56 31.2 -1.1**
ATTE AVT- Monte Tez 0.64 306 P **Pg** **23 56 32.0 -0.5**
ATFO Monte Foce - G 0.65 327 P **Pg** **23 56 31.9 -0.8**
ARVD Arcevia 0.68 353 P **Pg** **23 56 32.7 -0.6**
FAGN Fagnano 0.68 145 P **Pg** **23 56 32.7 -0.5**
PP3 Marolino 0.69 36 P **Pb** **23 56 33.1 -0.6**
MGAB Montegabbione 0.70 278 P **Pg** **23 56 33.4 -0.2**
SRES S.Oreste - Sor 0.71 215 P **Pg** **23 56 33.4 -0.4**
VCEL Villa Celiera 0.72 126 P **Pg** **23 56 32.8 -1.2**
ATVO AVT- Monte Val 0.73 320 P **Pg** **23 56 33.4 -0.9**
FRON Frontone 0.74 341 P **Pg** **23 56 33.7 -0.6**
ATMI Monte Miggiano 0.77 312 P **Pg** **23 56 34.6 -0.4**
ATPI Pietralunga - 0.79 323 P **Pg** **23 56 34.9 -0.4**
T0110 Collepietro 0.80 138 P **Pg** **23 56 34.0 -1.5**
PIEI Pieia 0.81 332 P **Pg** **23 56 34.9 -0.8**
AOI Ancona 0.83 29 P **Pg** **23 56 35.2 -0.9**
MTCE Montecelio 0.83 196 P **Pg** **23 56 35.1 -1.0**
MPAG Monte Paganucc 0.83 345 P **Pg** **23 56 35.2 -1.0**
SACS San Casciano d 0.84 272 P **Pg** **23 56 36.3 0.0**
NARO Abbazia di Nar 0.86 336 P **Pg** **23 56 35.9 -0.8**
CERT Cerreto 0.87 184 P **Pg** **23 56 35.7 -1.2**
FSSB Fossombrone 0.89 347 P **Pg** **23 56 36.0 -1.2**
CAFI Castiglion Fio 0.94 303 P **Pg** **23 56 37.9 -0.3**
LATE Laterza 0.94 258 P **Pg** **23 56 36.8 -1.5**
MCIV Monte Civitell 1.01 268 P **Pg** **23 56 39.4 -0.2**
RMP Rome, Mte Porz 1.04 195 P **Pg** **23 56 39.2 -0.9**
TOLF Tolfa 1.09 226 P **Pb** **23 56 39.2 -1.3**
VIVA Pratoni del Vi 1.09 191 AML AML
comp=E,10715μm,0.5s
VIVA AML AML
comp=N,9640μm,0.4s
CRE Caprese Michel 1.13 315 P **Pb** **23 56 41.1 -0.4**
LPEL Lama dei Pelig 1.14 132 P **Pb** **23 56 39.7 -1.8**
ARCI Arcidosso 1.16 272 P **Pb** **23 56 41.3 -0.6**
PGF Pioggiola 3.00 266 *e*P **Pn** **23 57 08.4 +1.2**
PGF *e*Sn **Sn** **23 57 39.5 -3.5**
comp=N,7.0nm,0.3s
CEY Cerknica 3.08 18 *e*Pn **Pn** **23 57 08.4 +0.2**
SRKY Kupres RS 3.24 66 *e*Pn **Pb** **23 57 14.3 -3.1**
MGRS Mrkonjic Grad 3.33 60 *e*Pn **Pn** **23 57 13.2 +1.5**
STON Ston 3.42 88 *e*Pn **Pn** **23 57 11.4 -1.4**
A051A Mrakovica 3.54 50 *e*Pn **Pb** **23 57 21.2 -1.2**
BLY Banja Luka 3.56 56 *e*Pn **Pb** **23 57 21.7 -0.9**
OBKA Obir 3.84 16 *e*Pn **Pn** **23 57 22.7 +4.0**
OBKA Obir 3.84 16 *e*Pn **Pn** **23 57 21.2 +2.5**
TREB Trebinje 3.90 90 *e*Pn **Pn** **23 57 20.4 +0.9**
ABTA Abfaltersbach 3.94 355 *e*Pn **Pn** **23 57 21.6 +1.5**
comp=N,13nm,0.5s
HCY Herceg Novi 4.03 93 *e*Pn **Pn** **23 57 22.3 +1.0**
BRY Bratogost 4.03 87 *e*Pn **Pn** **23 57 21.6 +0.2**
SOKA Soboth 4.11 19 *e*Pn **Pn** **23 57 25.0 +2.6**
comp=N,5.7nm,0.5s
SBF Sospel 4.23 286 *e*P **Pn** **23 57 25.4 +1.4**
SBF *e*Sn **Sn** **23 58 08.9 -4.3**
comp=N,9.7nm,0.4s
HAPS Han Pijesak,Bl 4.47 72 *e*Pn **Pn** **23 57 30.4 +2.9**
FETA Feichten 4.51 339 *i* Pn **Pn** **23 57 31.2 +3.2**
comp=N,7.1nm,0.7s,SNR=6.8
WTTA Wattenberg 4.55 348 *e*Pn **Pn** **23 57 30.8 +2.2**
comp=N,4.2nm,0.3s
DAVOX Davos/Dischmat 4.56 331 Pn **Pn** **23 57 30.5 +1.8**
comp=N,1.0nm,0.3s,baz=146,slow=16,SNR=3.8
DAVOX Sn **Sb** **23 58 32.3 -2.3**
comp=N,1.4nm,0.3s,baz=292,slow=23,SNR=5.6
DAVOX LR LR 23 59 13.8
comp=N,44nm,21.5s,baz=146,slow=39
comp=N,4.8nm,0.5s
DRME Dracevica, Mon 4.58 96 *e*Pn **Pn** **23 57 29.3 +0.5**
SQTA Sankt Quirin 4.59 344 *e*Pn **Pn** **23 57 31.3 +2.2**
comp=N,4.3nm,0.3s
WATA Walderalm 4.63 347 *e*Pn **Pn** **23 57 33.1 +3.4**
comp=N,9.4nm,0.4s
RUDO Rudo 4.68 78 *e*Pn **Pn** **23 57 32.2 +2.0**
MOTA Moosalm 4.73 344 *i* Pn **Pn** **23 57 33.9 +2.9**
comp=N,11nm,0.6s,SNR=6.0
BBLS Lazići 4.75 75 *e*Pn Pb 23 57 37.1 -5.9
LMR La Mourre 4.82 278 *e*P **Pn** **23 57 32.7 +0.6**
LMR *e*Sn **Sn** **23 58 22.6 -5.1**
comp=N,1.8nm,0.4s
BIOA Bad Ischl, Aus 4.89 5 *e*Pn **Pn** **23 57 34.7 +1.7**
comp=N,4.9nm,0.3s
MBDF Montbardon 4.93 295 *e*P **Pn** **23 57 35.7 +1.9**
MBDF *e*Sn **Sn** **23 58 25.8 -4.9**
comp=N,2.5nm,0.4s
DAVA Damuels 5.00 334 *e*Pn **Pn** **23 57 37.7 +3.0**
comp=N,2.2nm,0.5s
MOA Molln 5.10 9 *e*Pn **Pn** **23 57 37.3 +1.3**
comp=N,0.7nm,0.3s
DIVS Divibare 5.21 73 *e*Pn Pn 23 57 42.0 +4.5
LPG La Plagne 5.26 303 *e*P **Pn** **23 57 40.8 +2.3**
LPG *e*Sn **Sn** **23 58 33.6 -5.5**
comp=N,2.1nm,0.3s
LPL La Plagne 5.29 303 *e*P **Pn** **23 57 40.7 +2.0**
LPL *e*Sn **Sn** **23 58 34.0 -5.5**
comp=N,2.3nm,0.3s
RONA Rosalia, Austr 5.39 24 *e*Pn **Pn** **23 57 41.3 +1.4**
FRGS Fruska Gora 5.40 62 *e*Pn Pn 23 57 44.8 +4.7
VAE Valguarnera 5.44 169 Pn **Pn** **23 57 44.1 +3.5**
comp=N,6.8nm,0.8s,baz=177,slow=21,SNR=1.9
VAE Sn **Sn** **23 58 43.8 +0.7**
comp=N,0.1nm,0.3s,baz=210,slow=22,SNR=1.0
CONA Conrad Observa 5.47 20 *e*Pn **Pn** **23 57 42.1 +0.9**
comp=N,0.3nm,0.2s
SMRF Simiane la Rot 5.57 284 *e*P **Pn** **23 57 45.4 +3.0**
SMRF *e*Sn **Sn** **23 58 40.7 -5.6**
comp=N,1.0nm,0.3s
ORIF Oris-en-Rattie 5.59 294 *e*P **Pn** **23 57 45.7 +2.9**
ORIF *e*Sn **Sn** **23 58 41.7 -5.2**
comp=N,1.8nm,0.4s
OHR Ohrid 6.02 104 *i* Pn **Pn** **23 57 50.8 +2.2**
GERES GERESS Array B 6.04 4 Pn **Pn** **23 57 49.0 0.0**
comp=N,0.3nm,0.3s,baz=170,slow=13,SNR=6.4
GERES Sn **Sn** **23 58 57.2 -0.7**
comp=N,0.7nm,0.3s,baz=173,slow=22,SNR=1.7
GERES Lg Lg 23 59 35.1
baz=185,slow=29
comp=N,0.5nm,0.3s
CKRC Cesky Krumlov 6.06 8 *e*PN Pn 23 57 55.0 +5.8
CKRC *e*SN **Sn** **23 59 05.0 +6.7**
CABF La Chapelle 6.24 310 *e*P **Pn** **23 57 54.2 +2.5**
CABF *e*Sn **Sn** **23 58 56.8 -6.1**
comp=N,2.4nm,0.4s
KHC Kasperske Hory 6.32 3 *e*PN Pn 23 57 57.9 +5.2
KHC *e*SN **Sn** **23 59 11.4 +6.7**
VIVF Saint-Julien-l 6.39 291 *e*P **Pn** **23 57 56.5 +2.8**
VIVF *e*Sn **Sn** **23 59 00.4 -6.1**
comp=N,0.6nm,0.3s
HINF Hinteralfeld 6.63 321 *e*P **Pn** **23 57 59.2 +2.1**
HINF *e*Sn **Sn** **23 59 05.6 -6.9**
comp=N,7.4nm,0.4s
KRUC Moravsky 6.66 19 *e*PN Pn 23 58 02.4 +5.0
LASF Ste Croix 6.81 284 *e*P **Pn** **23 58 02.3 +2.8**
LASF *e*Sn **Sn** **23 59 10.2 -6.6**
comp=N,0.5nm,0.3s
CDF Champ du Feu 6.90 326 *e*P **Pn** **23 58 03.0 +2.2**
CDF *e*Sn **Sn** **23 59 12.1 -7.0**
comp=N,2.2nm,0.3s
VRAC Vranov 6.94 20 Pn **Pn** **23 58 00.7 -0.5**
comp=N,0.1nm,0.3s,baz=110,slow=12,SNR=1.9
VRAC Sn **Sn** **23 59 16.1 -3.7**
comp=N,0.2nm,0.3s,baz=132,slow=5.9,SNR=1.8
comp=N,1.6nm,0.7s
HAU Haudompre 7.01 320 *e*P **Pn** **23 58 04.8 +2.6**
HAU *e*Sn **Sn** **23 59 14.7 -6.9**
comp=N,5.2nm,0.2s
VAY Valandovo 7.24 99 *i* Pn **Pn** **23 58 09.5 +4.2**
SMF Signal de Mont 7.59 303 *e*P **Pn** **23 58 12.5 +2.4**
SMF *e*Sn **Sn** **23 59 28.4 -7.5**
comp=N,2.1nm,0.4s
KEST Kesra 7.64 203 Pn **Pn** **23 58 14.2 +3.3**
comp=N,0.1nm,0.3s,baz=26,slow=8.2,SNR=2.1
KEST Sn Sn 23 59 47.0 +10
baz=338,slow=23,SNR=1.7
comp=N,2.6nm,0.9s
PAGF Fort de Pagny 7.69 321 *e*P **Pn** **23 58 14.4 +2.9**
PAGF *e*Sn **Sn** **23 59 31.1 -7.3**
comp=N,2.1nm,0.3s
SFTF Sexfontaines 7.79 316 *e*P **Pn** **23 58 15.6 +2.8**
baz=136
LOR Lormes 7.88 307 *e*P **Pn** **23 58 17.2 +3.1**
baz=128
LOR *e*Sn **Sn** **23 59 35.8 -7.3**
comp=N,1.5nm,0.3s
AVF Avril sur Loir 7.96 303 *e*P **Pn** **23 58 17.5 +2.4**
AVF *e*Sn **Sn** **23 59 37.3 -7.6**
comp=N,0.6nm,0.3s
MEZF Maizieres J'vi 7.98 318 *e*P **Pn** **23 58 17.8 +2.4**
SSF Saint Saulge 7.99 305 *e*P **Pn** **23 58 18.5 +2.9**
SSF *e*Sn **Sn** **23 59 38.4 -7.3**
comp=N,1.1nm,0.4s
SAVF Savonnieres en 8.02 319 *e*P **Pn** **23 58 18.6 +2.6**
SAVF *e*Sn **Sn** **23 59 38.8 -7.6**
comp=N,3.4nm,0.4s
CAF Calviac 8.21 289 *e*P **Pn** **23 58 21.8 +3.1**
CLL Collm 8.49 360 *e*Pn Pn 23 58 30.0 +7.6
CLL *ex* x 00 00 08.0
CLL *e*Sg Sb 00 00 38.0 +11
CLL *ex* x 00 01 02.0
comp=Z,17nm,1.2s
MLR Muntele Rosu 9.64 70 Pn **Pn** **23 58 40.2 +1.8**
comp=Z,0.2nm,0.3s,baz=146,slow=19,SNR=2.5
MLR LR LR 00 03 05.2
comp=Z,181nm,21.6s,baz=250,slow=42
comp=Z,1.3nm,0.5s
IDI Anoyia 11.88 125 Pn **Pn** **23 59 10.8 +1.8**
comp=Z,0.1nm,0.3s,baz=327,slow=14,SNR=1.6
IDI Sn **Sn** **00 01 15.2 -6.1**
comp=Z,0.2nm,0.3s,baz=263,slow=12,SNR=1.8
comp=Z,3.7nm,1.0s
ESDC Sonseca Array 13.19 262 Pn **Pn** **23 59 28.4 +1.6**
baz=66,slow=14,SNR=2.0
ESDC LR LR 00 04 22.8
comp=Z,68nm,18.7s,baz=80,slow=37
comp=Z,0.5nm,0.7s
BRTR Keskin Array B 15.78 94 Pn **P** **00 00 05.0 -0.8**
baz=289,slow=8.8,SNR=2.0
BRTR LR LR 00 07 13.1
comp=Z,71nm,21.1s,baz=306,slow=41
comp=Z,0.6nm,0.9s
EKA Eskdalemuir Ar 16.36 326 Pn **Pn** **00 00 08.8 -0.3**
baz=141,slow=15
comp=Z,0.3nm,0.8s
NB2 NORSAR Subarra 18.28 357 P P 00 00 40.7 +7.6
comp=Z,2.8nm,0.8s,baz=175,slow=10
NOA NORSAR Array B 18.28 357 P **P** **00 00 34.5 +1.4**
comp=Z,0.4nm,0.9s,baz=174,slow=9.4,SNR=3.0
NOA LR LR 00 08 40.3
comp=Z,14nm,20.2s,baz=275,slow=41
FINES FINESS Array B 20.22 18 P Pn 00 00 55.1 -1.1
comp=Z,3.9nm,1.1s,baz=212,slow=9.8,SNR=2.1
comp=Z,3.9nm,1.1s
KBZ Khabaz 21.70 77 LR LR 00 10 54.8
comp=Z,32nm,19.6s,baz=322,slow=40
TORD Torodi Ar. Bea 31.16 202 P **P** **00 02 39.8 +1.3**
comp=Z,1.3nm,0.9s,baz=12,slow=9.3,SNR=7.6
comp=Z,1.3nm,0.9s
BVAR Borovoye Array 38.77 54 P **P** **00 03 46.0 +2.2**
comp=Z,1.4nm,1.0s,baz=302,slow=8.3,SNR=1.7
comp=Z,1.4nm,1.0s
ZALV Zalesovo Beam 46.97 50 P **P** **00 04 53.1 +2.9**
comp=Z,0.5nm,0.6s,baz=267,slow=9.8,SNR=1.6
comp=Z,0.5nm,0.6s
SONM Songino Array 61.86 50 P **P** **00 06 40.8 +2.1**
comp=Z,0.5nm,0.7s,baz=294,slow=8.6,SNR=4.3
comp=Z,0.5nm,0.7s

IDC ***30*** *23:57:11.8±2.7, 36°.07N×71°.34E, h67km±24km, mb3.8/24, mbtmp4.1/31, MS3.1/8, Error ellipse: s-maj=16.1km s-min=11.7km az=180.0*
BJI ***30*** *23:57:14.6±0.0, 36°.30N×71°.41E, h77km, mb4.5/16, mB4.3/10, Ms4.1/2, Ms7 3.9/2*
MOS ***30*** *23:57:14.0±1.0, 36°.32N×71°.49E, h86km, mb4.3/16, Error ellipse: s-maj=8.3km s-min=4.8km az=97.0*
NEIC ***30*** *23:57:16.2±1.6, 36°.34N±0°.05×71°.29E±0°.07, h93km±5km, mb4.4/55, Error ellipse: s-maj=8.9km s-min=7.6km az=107.0*
ISC 30 23:57:17.3±0.3, 36°.27N±0°.04×71°.48E±0°.05, h114km, n216, σ1§**93**/214, **mb4.2**/59, **9C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.47**	**172**	P	**Pn**	**23 57 57.4**	**+0.8**
CEP				S	**Sn**	**23 58 30.0**	**+3.2**
KBL	**Kabul**	**2.63**	**230**	Pn	**Pn**	**23 57 56.8**	**-2.0**
KBL	**Kabul**	**2.63**	**230**	PN	**Pn**	**23 57 56.8**	**-2.0**
GAR	**Garm**	**2.87**	**342**		**Pn**	**23 57 58.8**	**-3.0**
CHCP	**Chirah Chowk**	**2.99**	**150**	P	**Pn**	**23 58 03.6**	**+0.2**
NIL	**Nilore**	**3.00**	**150**	Pn	**Pn**	**23 58 03.8**	**+0.4**
NIL	**Nilore**	**3.00**	**150**	PN	**Pn**	**23 58 03.8**	**+0.4**
CHGR	**Chuyangaron**	**3.01**	**323**		**Pn**	**23 57 59.6**	**-4.0**
CHGR	**Chuyangaron**	**3.01**	**323**	PN	**Pn**	**23 57 59.6**	**-4.0**
DRK	**Karamyk**	**3.21**	**4**		**Pn**	**23 58 04.8**	**-1.7**
THW	**Thamme Wali**	**3.48**	**176**	P	**Pn**	**23 58 09.2**	**-0.6**
BTK	**Batken**	**3.81**	**352**	Pn	**Pn**	**23 58 12.6**	**-1.7**
BTK	**Batken**	**3.81**	**352**	PN	**Pn**	**23 58 12.6**	**-1.7**
JMU	**Jammu**	**4.54**	**140**	*e*P	**Pn**	**23 58 23.2**	**-0.7**
JMU				*e*S	**Sn**	**23 59 14.4**	**-1.2**
KSH	**Kashi**	**4.81**	**46**	P	Pn	23 58 22.5	-5.2
KSH				S	Sn	23 59 10.8	-12
KSH				smax	smax		
	comp=N,440nm,0.5s						
KSH				smax	smax		
	comp=E,330nm,0.5s						
THN	**Thein Dam**	**5.19**	**136**	*e*P	**Pn**	**23 58 34.0**	**+1.2**
THN				*e*S	**Sn**	**23 59 30.0**	**-1.5**
TAS	**Tashkent**	**5.33**	**342**	Pn	**Pn**	**23 58 31.4**	**-3.1**
TAS	**Tashkent**	**5.33**	**342**	PN	**Pn**	**23 58 31.4**	**-3.1**
AML	**Almayashu**	**6.10**	**16**	P	**Pn**	**23 58 43.1**	**-2.2**
SNR=132							
NRN	**Naryn**	**6.25**	**33**	Pn	**Pn**	**23 58 45.4**	**-1.9**
NRN	**Naryn**	**6.25**	**33**	PN	**Pn**	**23 58 45.4**	**-1.9**
BHK	**Bhakra**	**6.35**	**138**	*e*P	**Pn**	**23 58 46.8**	**-1.7**
BHK				*e*S	**Sn**	**23 59 56.9**	**-2.7**
UCH	**Uchtor**	**6.40**	**21**	P	**Pn**	**23 58 49.0**	**-0.5**
SNR=19							
EKS2	**Erkin-Say**	**6.62**	**15**	P	**Pn**	**23 58 51.4**	**-0.8**
SNR=21							
AAK	**Ala-Archa**	**6.77**	**19**	P	**Pn**	**23 58 53.2**	**-1.0**
SNR=42							
AAK	**Ala-Archa**	**6.77**	**19**	P	**Pn**	**23 58 52.9**	**-1.3**
22nm,0.3s,baz=203,slow=5.4,SNR=90							
AAK				S	**Sn**	**00 00 06.5**	**-3.4**
22nm,0.4s,baz=345,slow=20,SNR=7.2							
AAK				LR	LR	00 01 48.8	
comp=Z,54nm,20.0s,baz=202,slow=40							
AAK	**Ala-Archa**	**6.77**	**19**	Pn	**Pn**	**23 58 53.2**	**-1.0**
AAK	**Ala-Archa**	**6.77**	**19**	PN	**Pn**	**23 58 53.2**	**-1.0**
AAK	**Ala-Archa**	**6.77**	**19**	P	**Pn**	**23 58 53.1**	**-1.1**
KK31	**Karatay Array**	**6.86**	**354**	Pn	**Pn**	**23 58 52.6**	**-2.7**
KK31	**Karatay Array**	**6.86**	**354**	PN	**Pn**	**23 58 52.6**	**-2.7**
KKAR	**Karatay Array**	**6.86**	**354**		**Pn**	**23 58 52.4**	**-2.9**
KKAR	**Karatay Array**	**6.86**	**354**	PN	**Pn**	**23 58 52.4**	**-2.9**
KBK	**Karagaybulak**	**6.92**	**22**	P	**Pn**	**23 58 56.9**	**+0.6**
SNR=14							
SMLA	**Simla**	**6.99**	**136**	*e*P	**Pn**	**23 58 55.4**	**-1.6**
SMLA				*e*S	**Sn**	**00 00 11.0**	**-3.9**
SMLA				IAML		00 00 13.8	
comp=N,226nm,0.3s							
ULHL	**Ulahol**	**7.02**	**30**	P	**Pn**	**23 58 56.4**	**-1.2**
SNR=6.0							
CHMS	**Chumysh**	**7.18**	**20**	P	**Pn**	**23 58 58.5**	**-1.1**
SNR=7.2							
TKM2	**Tokmak 2**	**7.36**	**24**	P	**Pn**	**23 59 01.5**	**-0.7**
SNR=15							
USP	**Ospenovka**	**7.36**	**18**	P	**Pn**	**23 59 00.4**	**-1.7**
SNR=11							
HRA	**Herat**	**7.78**	**259**	Pn	Pn	23 59 02.9	-5.0
GEYT	**Alibeck**	**10.80**	**283**	P	Pn	23 59 41.2	-7.4
comp=N,20nm,0.5s,baz=103,slow=12,SNR=48							
GEYT				S	Sn	00 01 36.0	-11
comp=N,4.3nm,0.3s,baz=84,slow=14,SNR=2.9							
GEYT				LR	LR	00 05 04.2	
comp=N,27nm,21.4s,baz=186,slow=44							
GEYT	**Alibeck**	**10.80**	**283**	Pn	Pn	23 59 42.5	-6.2
GEYT	**Alibeck**	**10.80**	**283**	P	Pn	23 59 42.5	-6.1
GYA0	**ALIBECK ARRAY**	**10.80**	**283**	P	Pn	23 59 42.3	-6.3
GYA0B	**ALIBECK ARRAY**	**10.80**	**283**		Pn	23 59 42.3	-6.3
DANN	**Dangsing**	**13.04**	**124**	*e*P	**Pn**	**00 00 14.6**	**-4.0**
comp=N,35nm,0.4s							
MAKZ	**Makanchi**	**13.13**	**33**	Pn	**Pn**	**00 00 16.3**	**-3.0**
MAKZ	**Makanchi**	**13.13**	**33**	P	**Pn**	**00 00 16.3**	**-3.0**
MK31	**Makanchi Array**	**13.26**	**34**		**Pn**	**00 00 19.7**	**-1.2**
MK31	**Makanchi Array**	**13.26**	**34**	*e*P	**Pn**	**00 00 19.0**	**-2.0**
MKAR	**Makanchi Array**	**13.26**	**34**	P	**Pn**	**00 00 18.9**	**-2.1**
comp=N,1.1nm,0.7s,baz=216,slow=13,SNR=7.2							
MKAR				LR	LR	00 05 31.6	
comp=N,20nm,19.1s,baz=287,slow=37							
MKAR	**Makanchi Array**	**13.26**	**34**	Pn	**Pn**	**00 00 20.4**	**-0.6**
MKAR	**Makanchi Array**	**13.26**	**34**	*i* P	**Pn**	**00 00 19.3**	**-1.7**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
GKN	**Gorkha**	**13.86**	**123**	*e*P	**Pn**	**00 00 25.3**	**-3.7**
comp=Z,39nm,0.4s							
DMN	**Daman**	**14.43**	**123**	*e*P	**Pn**	**00 00 32.3**	**-4.1**
KKN	**Kakani**	**14.43**	**122**	*e*P	Pn	00 00 31.6	-4.8
WMQ	**Urumqi**	**14.52**	**54**	*e*P	**Pn**	**00 00 38.5**	**+1.3**
WMQ				pmax	pmax		
comp=Z,25nm,0.7s							
PKIN	**Phulchoki**	**14.65**	**122**	*e*P	**Pn**	**00 00 35.1**	**-4.1**
comp=Z,10nm,0.4s							
PKI	**Pulchoki**	**14.66**	**122**	*e*P	**Pn**	**00 00 35.3**	**-4.1**
GUN	**Gumba**	**14.77**	**120**	*e*P	Pn	00 00 36.0	-4.9
comp=Z,19nm,0.5s							
JBP	**Jabalpur**	**15.00**	**148**	*e*P	**P**	**00 00 46.4**	**+0.4**
JBP				*e*S	Sn	00 03 15.7	-13
JIRN	**Jiri**	**15.14**	**120**	*e*P	**Pn**	**00 00 40.9**	**-4.6**
comp=Z,27nm,0.4s							
KURBB	**Kurchatov Arra**	**15.22**	**17**	P	**Pn**	**00 00 45.5**	**-0.4**
comp=Z,5.2nm,0.8s,baz=206,slow=11,SNR=23							
KURK	**Kurchatov**	**15.33**	**17**		**P**	**00 00 48.6**	**-0.8**
KURK	**Kurchatov**	**15.33**	**17**	P	**P**	**00 00 48.7**	**-0.8**
KURK				pmax	pmax		
comp=Z,9.0nm,0.8s							
ABKAR	**Akbulak array**	**15.47**	**331**	Pn	**Pn**	**00 00 44.5**	**-4.6**
RAMN	**Ramite**	**15.87**	**122**	*e*P	**Pn**	**00 00 50.4**	**-4.1**
comp=Z,16nm,0.5s							
SHME	**Shamm**	**16.59**	**236**	P	**Pn**	**00 01 03.8**	**+0.7**
BVAR	**Borovoye Array**	**16.77**	**358**	P	**Pn**	**00 01 03.6**	**-1.5**
comp=Z,1.6nm,0.5s,baz=160,slow=13,SNR=21							
BVAR				S	**Sn**	**00 04 12.2**	**+0.8**
comp=Z,2.0nm,1.0s,baz=168,slow=22,SNR=3.7							
BRVK	**Borovoye**	**16.81**	**358**		**Pn**	**00 01 03.5**	**-2.0**
BRVK	**Borovoye**	**16.81**	**358**	*d* *i*P	**Pn**	**00 01 04.1**	**-1.4**
BRVK				pmax	pmax		
comp=Z,7.0nm,0.7s							

WSAR Wadi Sarin 17.10 224 P **P** **00 01 02.9 -6.4**
comp=Z,4.3nm,0.9s,baz=63,slow=18,SNR=1.4
AKTO Aktyubinsk 17.17 330 P **P** **00 01 07.6 -2.3**
comp=Z,17nm,0.8s,baz=113,slow=13,SNR=40
AKTO S **Sn** **00 04 12.1 -8.9**
comp=Z,0.9nm,0.6s,baz=118,slow=13,SNR=1.3
ASHO Ashiyiah 17.58 233 P **P** **00 01 15.1 +0.5**
DGZ Jazzator, Alta 17.74 36⇑ *e*P **P** **00 01 15.0 -1.2**
DGZ pmax pmax
comp=Z,14nm,2.5s
HYBB Hyderabad (bro 19.80 160 *e*P **Pn** **00 01 46.2 +4.7**
HYBB *e*S **Sn** **00 05 21.6 -3.0**
ZAA0 Zalesovo Array 19.97 24 P **P** **00 01 40.1 -0.2**
ZAA0 IAmb IAmb 00 01 40.6
comp=Z,22nm,1.0s
ZALV Zalesovo Beam 19.97 24 P **P** **00 01 39.9 -0.4**
comp=Z,14nm,0.5s,baz=210,slow=10.0,SNR=91
comp=Z,14nm,0.5s
ZALV Zalesovo Beam 19.97 24 *i* P **P** **00 01 39.9 -0.4**
ZALV pmax pmax
comp=Z,11nm,0.3s
MZR Muzera 20.44 235 P **P** **00 01 44.2 -1.5**
SHL Shillong 20.46 116 P **P** **00 01 46.8 +0.7**
SHL IAmb IAmb 00 02 23.1
comp=Z,7.1nm,0.6s
SHL Shillong 20.46 116 P **P** **00 01 46.8 +0.7**
SHL pmax pmax
comp=Z,7.0nm,0.6s
GNI Garni 21.33 289 P **P** **00 01 53.1 -2.1**
comp=Z,2.0nm,0.5s,baz=209,slow=21,SNR=1.7
comp=Z,2.0nm,0.5s
GNI Garni 21.33 289 P **P** **00 01 53.3 -1.9**
GNI IAmb IAmb 00 02 03.0
comp=Z,20nm,0.8s
GNI Garni 21.33 289 *ce*P **P** **00 01 56.9 +1.6**
GNI pmax pmax
comp=Z,13nm,1.0s
GNI Garni 21.33 289 P **P** **00 01 56.4 +1.2**
SVE Sverdlovsk 21.82 344 *e*P **P** **00 02 00.1 0.0**
ARU Arti 21.97 341 P **P** **00 02 01.8 +0.1**
comp=Z,4.6nm,0.5s,baz=161,slow=7.8,SNR=9.6
ARU S **S** **00 05 58.6 +1.8**
comp=Z,0.9nm,0.3s,baz=292,slow=21,SNR=1.3
comp=Z,4.6nm,0.5s
ARU Arti 21.97 341 P **P** **00 02 01.4 -0.4**
ARU IAmb IAmb 00 02 32.9
comp=Z,9.1nm,0.7s
ARU Arti 21.97 341 *c i* P **P** **00 02 01.6 -0.1**
ARU 00 02 25.8
ARU S **S** **00 05 59.2 +2.4**
ARU SS **SnSn** **00 06 36.6 +2.3**
ARU pmax pmax
comp=Z,12nm,1.0s
ZEI Tsey 22.18 296 *e*P **P** **00 02 06.7 +2.4**
ZEI pmax pmax
comp=Z,7.0nm,0.8s
ONI Oni 22.48 295 P **P** **00 02 07.6 +0.4**
ONI IAmb IAmb 00 02 45.7
comp=Z,14nm,1.0s
ONI Oni 22.48 295 P **P** **00 02 07.6 +0.4**
ONI pmax pmax
comp=Z,14nm,1.0s
NCK Nalchik 22.51 297⇓ *e*P **P** **00 02 08.6 +1.2**
NCK pmax pmax
comp=Z,8.0nm,0.4s
GTA Gaotai 22.56 73 *e*P **P** **00 02 10.8 +2.7**
GTA pP pP 00 02 28.0 -3.0
GTA sP sP 00 02 38.5 -7.2
GTA pmax pmax
comp=Z,12nm,1.1s
KBZ Khabaz 23.05 298 P **P** **00 02 11.9 -0.7**
comp=Z,3.7nm,0.8s,baz=110,slow=6.7,SNR=5.9
comp=Z,3.7nm,0.8s
KBZ Khabaz 23.05 298⇑ *e*P **P** **00 02 13.0 +0.4**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KVAR Kislovodsk Arr 23.23 298 P **P** **00 02 14.8 +0.4**
comp=Z,1.6nm,0.6s,baz=272,slow=23,SNR=1.1
comp=Z,1.6nm,0.6s
KIV Kislovodsk 23.23 298 *e*P **P** **00 02 16.3 +1.8**
KIV *e*S **S** **00 06 21.9 +4.2**
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,21nm,14.0s
BELG Belogornoye 23.31 321 P **P** **00 02 14.8 -0.1**
comp=Z,13nm,0.7s,baz=298,slow=5.4,SNR=2.2
comp=Z,13nm,0.7s
BELG Belogornoye 23.31 321⇓ *e*P **P** **00 02 14.9 0.0**
BELG pmax pmax
comp=Z,3.0nm,1.0s
RAYN Ar Rayn 25.76 248 P **P** **00 02 37.4 -0.1**
RAYN Ar Rayn 25.76 248 P **P** **00 02 37.4 -0.1**
RAYN pmax pmax
comp=Z,3.0nm,1.0s
RAYN Ar Rayn 25.76 248 P **P** **00 02 36.3 -1.3**
KIRV Kirov 26.61 334 *ce*P **P** **00 02 45.8 +1.1**
PZH PanZhiHua 27.52 102 P **P** **00 02 58.0 +4.7**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.0s
VORR Voronezh 27.57 314 *e*P **P** **00 02 58.6 +5.2**
SONM Songino Array 28.15 55 P **P** **00 02 60.0 +1.2**
comp=Z,2.3nm,0.9s,baz=255,slow=9.1,SNR=12
comp=Z,2.3nm,0.9s
SONM Songino Array 28.15 55 P **P** **00 03 00.4 +1.6**
SONM Songino Array 28.15 55 P **P** **00 03 00.4 +1.6**
SONM pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 28.59 55 P **P** **00 03 03.9 +1.2**
ULN Ulaanbaatar 28.59 55⇑ *e*P **P** **00 03 03.6 +0.9**
ULN pmax pmax
comp=Z,4.0nm,1.2s
MMAI Mount Meron Ar 29.75 274 LR LR 00 17 09.7
comp=Z,77nm,21.0s,baz=304,slow=40
BRTR Keskin Array B 29.87 288 P **P** **00 03 13.5 -0.6**
comp=Z,0.4nm,0.7s,baz=95,slow=8.7,SNR=1.7
comp=Z,0.4nm,0.7s
HHC Hu-ho-hao-te 31.48 69 *e*P **P** **00 03 30.3 +2.0**
HHC pmax pmax
comp=Z,21nm,0.8s
HHC pmax pmax
comp=Z,230nm,5.0s
ELL Elmali 33.23 283 P **P** **00 03 45.0 +1.5**
ELL Elmali 33.23 283 P **P** **00 03 45.0 +1.5**
ELL pmax pmax
comp=Z,57nm,1.3s
AKASG Malin Array Be 33.39 309 P **P** **00 03 44.6 0.0**
comp=Z,0.7nm,0.4s,baz=82,slow=7.1,SNR=6.4
AKASG LR LR 00 20 53.0
comp=Z,12nm,19.4s,baz=45,slow=42
comp=Z,0.7nm,0.4s
AKBB Malin Array Si 33.39 309⇑ *e*P **P** **00 03 45.1 +0.5**
MLR Muntele Rosu 35.23 300 LR LR 00 21 33.3
comp=Z,30nm,18.1s,baz=182,slow=42
MLR Muntele Rosu 35.23 300 P **P** **00 04 01.6 +0.9**
MLR Muntele Rosu 35.23 300 P **P** **00 04 01.6 +0.9**
MLR pmax pmax
comp=Z,8.0nm,0.9s
BURAR Bucovina Array 35.73 303 P **P** **00 04 06.3 +1.3**
BURAR Bucovina Array 35.73 303 P **P** **00 04 06.6 +1.6**
BURAR pmax pmax
comp=Z,2.0nm,0.9s
BUR08 Bucovina Ar. S 35.74 303 P **P** **00 04 06.0 +0.9**
BUR08 IAmb IAmb 00 04 14.0
comp=Z,3.3nm,1.1s
FIA1 FINESS Array S 37.88 326 P **P** **00 04 24.8 +1.9**
FINES FINESS Array B 37.89 326 P **P** **00 04 23.0 +0.1**
comp=Z,2.2nm,0.5s,baz=121,slow=8.8,SNR=28
comp=Z,2.2nm,0.5s
FINES FINESS Array B 37.89 326 P **P** **00 04 24.6 +1.7**
FINES FINESS Array B 37.89 326 *i* P **P** **00 04 24.7 +1.8**
FINES pmax pmax
comp=Z,2.0nm,0.5s
MORC Moravsky Berou 40.81 307 *e*P **P** **00 04 50.3 +2.9**
VRAC Vranov 41.44 306 *e*P **P** **00 04 54.9 +2.3**
ARA0 ARCESS Array S 41.50 338 *e*P **P** **00 04 53.5 +0.8**
ARCES ARCESS Array B 41.50 338 P **P** **00 04 53.2 +0.4**
comp=Z,2.2nm,0.5s,baz=114,slow=8.2,SNR=26
comp=Z,2.2nm,0.5s
ARCES ARCESS Array B 41.50 338 P **P** **00 04 53.9 +1.1**
ARCES ARCESS Array B 41.50 338 P **P** **00 04 53.9 +1.1**
ARCES pmax pmax
comp=Z,39nm,1.5s
ZEA Zeya 41.94 47 *e*P P 00 04 47.6 -8.9
ZEA pmax pmax
comp=Z,10.0nm,0.4s
KTK1 Kautokeino 41.98 336 *e*P **P** **00 04 57.5 +0.8**
HAMF Hammerfest 42.58 339 *e*P **P** **00 05 02.8 +1.4**
GERES GERESS Array B 43.37 306 P **P** **00 05 08.8 +0.5**
comp=Z,0.3nm,0.6s,baz=85,slow=6.0,SNR=2.7
comp=Z,0.3nm,0.6s
DGAR Diego Garcia 43.46 179⇑ *e*P **P** **00 05 08.9 -0.2**
HFS Hagfors 43.48 322 P **P** **00 05 09.4 +0.5**
comp=Z,4.2nm,0.5s,baz=98,slow=11,SNR=27
comp=Z,4.2nm,0.5s
TRO Tromso 43.63 336 *e*P **P** **00 05 10.8 +0.9**
CLL Collm 43.63 309 *e*P **P** **00 05 12.0 +1.8**
CLL Collm 43.63 309 *e*P **P** **00 05 12.0 +1.8**
YAK Yakutsk 43.93 35 LR LR 00 25 18.0
comp=Z,71nm,21.1s,baz=92,slow=38
FAUS Fauske 44.18 333 *e*P **P** **00 05 15.2 +0.8**
MOR8 Moi Rana 44.20 331 *e*P **P** **00 05 14.8 +0.2**
STEI Steigen 44.35 333 *e*P **P** **00 05 16.6 +0.9**
KSRS Korea Array 44.59 71 P **P** **00 05 18.5 +0.5**
comp=Z,2.2nm,0.8s,baz=282,slow=7.6,SNR=5.3
comp=Z,2.2nm,0.8s
NC602 NORSAR Array S 44.61 323 *e*P **P** **00 05 18.6 +0.8**
NC303 NORSAR Array S 44.73 323 P **P** **00 05 19.6 +0.7**
NC303 IAmb IAmb 00 05 24.9
comp=Z,9.9nm,0.8s
NB201 NORSAR Array S 44.76 323 P **P** **00 05 20.2 +1.1**
NB2 NORSAR Subarra 44.79 323 P **P** **00 05 19.6 +0.2**
comp=Z,2.6nm,0.7s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.79 323 P **P** **00 05 19.6 +0.2**
baz=96,slow=7.9
NOA NORSAR Array B 44.79 323 P **P** **00 05 19.4 0.0**
comp=Z,2.2nm,0.6s,baz=96,slow=7.8,SNR=24
comp=Z,2.2nm,0.6s
NAO01 NORSAR Array S 44.94 323 P **P** **00 05 20.8 +0.3**
NBO00 NORSAR Array S 45.00 323 P **P** **00 05 21.9 +0.9**
LOF Lofoten 45.02 333 *e*P **P** **00 05 21.7 +0.7**
NC204 NORSAR Array S 45.03 323 P **P** **00 05 22.1 +0.8**
NC204 IAmb IAmb 00 06 02.9
comp=Z,2.7nm,0.8s
KONO Kongsberg 45.50 321 P **P** **00 05 25.9 +1.1**
KONO IAmb IAmb 00 05 45.9
comp=Z,13nm,1.5s
KONO Kongsberg 45.50 321 P **P** **00 05 26.0 +1.1**
KONO pmax pmax
comp=Z,13nm,1.5s
KONO Kongsberg 45.50 321 *e*P **P** **00 05 26.0 +1.1**
SKAR Skarslia 46.19 323 *e*P **P** **00 05 31.5 +1.1**
MJAR Matsushiro Arr 52.68 68 P **P** **00 06 20.8 +0.8**
comp=Z,1.5nm,0.6s,baz=293,slow=9.9,SNR=4.3
comp=Z,1.5nm,0.6s
EKA Eskdalemuir Ar 52.72 316 P **P** **00 06 19.0 -0.9**
comp=Z,2.5nm,0.8s,baz=93,slow=7.3,SNR=8.3
comp=Z,2.5nm,0.8s
ESDC Sonseca Array 57.90 298 P **P** **00 06 56.2 -1.3**
comp=Z,0.2nm,0.7s,baz=45,slow=7.1,SNR=4.7
comp=Z,0.2nm,0.7s
TORD Torodi Ar. Bea 66.10 269 P **P** **00 07 50.5 -1.9**
comp=Z,1.3nm,0.7s,baz=48,slow=6.6,SNR=17
comp=Z,1.3nm,0.7s
TOLK Toolik Lake Re 71.05 15 P **P** **00 08 23.6 +1.2**
IMAR Indian Mountai 72.27 18 P **P** **00 08 30.4 +0.6**
BMAR Burnt Mountain 73.07 14 P **P** **00 08 36.3 +1.8**
H23K Yukon River 73.40 16 P **P** **00 08 36.7 +0.2**
H23K IAmb IAmb 00 08 38.8
comp=Z,4.3nm,0.8s
POGA Pongola 73.54 216 P **P** **00 08 39.0 +1.3**
J20K Nowinta River 73.62 19 P **P** **00 08 39.2 +1.5**
J20K IAmb IAmb 00 08 39.7
comp=Z,3.7nm,0.7s
H24K Noodor Dome 73.76 16 P **P** **00 08 39.9 +1.2**
H24K IAmb IAmb 00 08 40.7
comp=Z,3.3nm,0.8s
I23K Minto, Yukon-K 74.01 17 P **P** **00 08 41.5 +1.5**
C36M Paulatuk 74.07 6 P **P** **00 08 41.2 +1.0**
INK Inuvik 74.07 9 P **P** **00 08 41.6 +1.4**
INK IAmb IAmb 00 08 42.3
comp=Z,6.0nm,1.1s
INK Inuvik 74.07 9 P **P** **00 08 41.6 +1.4**
INK pmax pmax
comp=Z,6.0nm,1.1s
K20K Telida 74.30 20 P **P** **00 08 43.0 +1.3**
K20K IAmb IAmb 00 08 43.6
comp=Z,5.3nm,0.8s
MDM Murphy Dome 74.43 16 P **P** **00 08 44.4 +1.9**
MDM IAmb IAmb 00 09 28.9
comp=Z,5.6nm,1.4s
BPAW Bear Paw Mtn. 74.49 18 P **P** **00 08 43.4 +0.5**
CAST Castle Rocks 74.78 19 P **P** **00 08 45.6 +1.1**
CAST IAmb IAmb 00 08 46.2
comp=Z,4.7nm,0.8s
ILAR Eielson Array 74.89 16 P **P** **00 08 44.7 -0.4**
comp=Z,1.2nm,0.8s,baz=319,slow=4.6,SNR=12
comp=Z,1.2nm,0.8s
ILAR Eielson Array 74.89 16 P **P** **00 08 45.9 +0.7**
ILAR Eielson Array 74.89 16 P **P** **00 08 45.9 +0.7**
KTH Kantishna Hill 74.96 18 P **P** **00 08 46.7 +1.0**
KTH IAmb IAmb 00 09 11.3
comp=Z,10nm,1.3s
L19K White Mountain 75.02 21 P **P** **00 08 47.2 +1.3**
L19K IAmb IAmb 00 09 00.7
comp=Z,14nm,1.4s
PPLA Purkeypile 75.18 19 P **P** **00 08 48.1 +1.1**
J26L Joseph Creek 75.84 15 P **P** **00 08 51.4 +0.7**
J26L IAmb IAmb 00 08 52.1
comp=Z,2.5nm,0.8s
SCRK Sand Creek 76.22 15 P **P** **00 08 53.8 +0.9**
DHY Denali Highway 76.23 17 P **P** **00 08 53.8 +0.8**
DHY IAmb IAmb 00 08 55.4
comp=Z,4.2nm,0.9s
PAX Paxson 76.77 16 P **P** **00 08 56.4 +0.4**
PAX IAmb IAmb 00 08 57.0
comp=Z,2.8nm,0.7s
PAX Paxson 76.77 16 P **P** **00 08 56.4 +0.4**
PAX pmax pmax
comp=Z,3.0nm,0.7s
DAWY Dawson 77.06 13 P **P** **00 08 58.4 +0.9**
DAWY IAmb IAmb 00 09 05.8
comp=Z,10.0nm,1.5s
SCM Sheep Creek Mo 77.31 18 P **P** **00 08 59.6 +0.6**
SCM Sheep Creek Mo 77.31 18 P **P** **00 08 59.6 +0.6**
SCM pmax pmax
comp=Z,34nm,1.4s
MORW Morawa 77.33 141 P **P** **00 09 00.9 +1.5**
L27K Beaver Creek, 77.48 15 P **P** **00 09 01.4 +1.5**
BCAR Beaver Creek A 77.48 15 P **P** **00 09 01.2 +1.3**
BOSA Boshof 77.82 220 P **P** **00 09 00.5 -1.8**
comp=Z,4.7nm,0.8s,baz=39,slow=4.1,SNR=8.6
comp=Z,4.7nm,0.8s
BOSA Boshof 77.82 220 P **P** **00 09 03.2 +1.0**
BOSA IAmb IAmb 00 09 20.0
comp=Z,12nm,1.2s
BOSA Boshof 77.82 220 P **P** **00 09 03.3 +1.0**
BOSA pmax pmax
comp=Z,12nm,1.3s
M27K Edge Creek, AK 78.10 15 P **P** **00 09 04.9 +1.5**
M27K IAmb IAmb 00 09 25.5
comp=Z,6.5nm,1.2s
N25K Chitina, Valde 78.16 17 P **P** **00 09 03.9 +0.2**
N25K IAmb IAmb 00 09 31.0
comp=Z,10nm,1.2s
YKA Yellowknife Ar 81.45 3 P **P** **00 09 22.2 +0.9**
comp=Z,4.1nm,0.8s,baz=348,slow=5.0,SNR=4.1
comp=Z,4.1nm,0.8s
WB0 Warramunga Arr 81.46 122 P **P** **00 09 23.0 +1.0**
WB0 IAmb IAmb 00 09 38.5
comp=Z,4.2nm,1.1s
WRA Warramunga Arr 81.55 122 P **P** **00 09 22.9 +0.5**
comp=Z,1.0nm,0.6s,baz=322,slow=5.0,SNR=13
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 81.55 122 P **P** **00 09 23.5 +1.1**
WRA Warramunga Arr 81.55 122 *i* P **P** **00 09 23.2 +0.8**
WRA pmax pmax
comp=Z,1.0nm,0.6s
WB2 Warramunga Arr 81.55 122 P **P** **00 09 23.7 +1.2**
WB2 IAmb IAmb 00 09 55.0
comp=Z,7.0nm,1.4s
P33M Teslin, Yukon 81.80 12 P **P** **00 09 24.2 +0.8**
P33M IAmb IAmb 00 09 24.7
comp=Z,6.0nm,1.1s
ASAR Alice Springs 83.81 125 P **P** **00 09 34.2 +0.1**
comp=Z,1.1nm,0.6s,baz=308,slow=5.1,SNR=14
comp=Z,1.1nm,0.6s
SIT Sitka 84.31 14 P **P** **00 09 37.3 +1.2**
SIT Sitka 84.31 14 P **P** **00 09 37.3 +1.2**
SIT pmax pmax
comp=Z,28nm,1.4s
CTA Charters Tower 90.10 115 LR LR 00 55 41.9
comp=Z,84nm,19.9s,baz=106,slow=39
NEW Newport 95.49 6 LR LR 01 00 22.3
comp=Z,338nm,18.3s,baz=122,slow=40

IDC ***31*** *00:00:40.6±0.5, 40°.32S×91°.96W, h0km, mb4.6/16, mbtmp4.6/17, ML3.8/1, MS4.7/17, Error ellipse: s-maj=19.2km s-min=13.2km az=112.0*
BJI ***31*** *00:00:43.0±0.0, 40°.30S×92°.00W, h10km, mB5.2/12, Ms5.4/15, Ms7 5.3/15*
NEIC ***31*** *00:00:43.6±1.4, 40°.28S±0°.09×92°.0W±0°.1, h10km±1km, mb5.2/428, Error ellipse: s-maj=18.0km s-min=15.1km az=290.0*
GCMT ***31*** *00:00:43.6±0.1, 40°.27S±0°.01×91°.76W±0°.01, h12km, MW5.2/108, Moment Tensor Solution. s92,c135; s108,c175; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.82±.02; $M_{\theta\theta}$-0.16±.02; $M_{\phi\phi}$0.98±.01; $M_{r\theta}$0.13±.04; $M_{\theta\phi}$-0.09±.01; $M_{\phi r}$-0.09±.04; Best double couple: $M_0$0.92000×10^{17} NP1:ϕ_s346.00000°, δ49.00000°, λ-104.00000°. NP2:ϕ_s186.00000°, δ43.00000°, λ-75.00000°. Principal axes: T 0.9940, Plg3.0000°, Azm85.0000°; N -0.1470, Plg10.0000°, Azm355.0000°; P -0.8470, Plg79.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 00:00:43.6±0.3, 40°.27S±0°.06×91°.93W±0°.06, h15km, n562, σ1§**17**/512, **mb5.2**/202, **MS4.8**/20, **2C, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.21**	**62**	T	T	00 16 10.8	
baz=233,slow=73							
H03S1	**Juan Fernandez**	**12.21**	**62**	T	T	00 16 11.6	
baz=233,slow=73							
H03S3	**Juan Fernandez**	**12.22**	**62**	T	T	00 16 09.7	
baz=233,slow=73							
VA04	**Juan Fernndez**	**12.38**	**62**	Pn	**Pn**	**00 03 36.2**	**-3.1**
H03N3	**Juan Fernandez**	**12.43**	**61**	T	T	00 16 25.2	
baz=235,slow=71							
H03N2	**Juan Fernandez**	**12.44**	**61**	T	T	00 16 23.4	
baz=235,slow=71							
H03N1	**Juan Fernandez**	**12.45**	**61**	T	T	00 16 24.4	
baz=235,slow=71							
GO07	**Milladeo Hill,**	**13.94**	**108**		**Pn**	**00 04 02.2**	**+1.6**
LL05	**Los Muermos**	**14.02**	**101**	P	**P**	**00 04 09.4**	**-0.1**
LL07	**Hotel Espejo d**	**14.05**	**107**	P	**P**	**00 04 10.4**	**+0.5**
LL01	**San Ignacio de**	**14.81**	**105**	P	**P**	**00 04 19.3**	**+1.0**
LL03	**Petrohue**	**14.84**	**100**		**P**	**00 04 19.7**	**+1.1**
AY01	**Puyuhuapi**	**14.84**	**113**		**P**	**00 04 18.6**	**0.0**
LL04	**Puerto Octay**	**14.85**	**99**	P	**P**	**00 04 19.2**	**+0.5**
LR03	**Panguipulli**	**15.04**	**94**	P	**P**	**00 04 19.3**	**-1.5**
LR03				IAmb	IAmb	00 04 23.9	
comp=Z,132nm,1.2s							
BI05	**Punta Hualpn**	**15.08**	**83**	Pn	**P**	**00 04 19.4**	**-1.9**
BI05				IAmb	IAmb	00 04 24.1	
comp=Z,88nm,1.2s							
LL02	**Futaleuf**	**15.27**	**108**		**P**	**00 04 21.5**	**-1.9**
LL02				IAmb	IAmb	00 04 26.8	
comp=Z,97nm,1.2s							
COYC	**Coyhaique**	**15.46**	**117**	P	**P**	**00 04 25.2**	**-0.3**
GO06	**Curarrehue**	**15.71**	**94**		**Pn**	**00 04 26.5**	**+2.1**
PLCA	**Paso Flores**	**16.27**	**99**	Pn	**Pn**	**00 04 32.1**	**+0.6**
comp=Z,0.1nm,0.3s,baz=266,slow=12,SNR=8.8							
PLCA				LR	LR	00 09 13.4	
comp=Z,4μm,19.5s,baz=260,slow=32							
comp=Z,8.1nm,1.0s							
PLCA	**Paso Flores**	**16.27**	**99**		**P**	**00 04 34.1**	**-0.4**
GO05	**Hualа**	**16.68**	**78**		**Pn**	**00 04 37.2**	**+0.4**
ML02	**Panimavida**	**16.77**	**81**		**Pn**	**00 04 38.8**	**+0.9**
ML02				IAmb	IAmb	00 04 48.1	
comp=Z,229nm,1.5s							
GO09	**Cerro Castillo**	**17.48**	**135**	P	**P**	**00 04 48.1**	**+0.3**
GO09				IAmb	IAmb	00 04 55.2	
comp=Z,220nm,1.4s							
VA05	**Santo Domingo**	**17.51**	**74**	P	**P**	**00 04 49.0**	**+0.8**
VA05				IAmb	IAmb	00 04 57.2	
comp=Z,462nm,2.0s							
BO01	**Tunca**	**17.57**	**77**	P	**P**	**00 04 49.0**	**+0.1**
MG05	**Puerto Natales**	**17.61**	**137**	P	**P**	**00 04 50.1**	**+0.9**
MG05				IAmb	IAmb	00 04 57.2	
comp=Z,185nm,1.4s							
BO02	**Sierra Bellavi**	**17.63**	**79**	P	**P**	**00 04 50.0**	**+0.3**
MT01	**Popeta**	**17.68**	**75**	P	**Pn**	**00 04 49.1**	**-0.2**
MT09	**Talagante**	**17.91**	**75**	IAmb	IAmb	00 05 01.9	
comp=Z,277nm,1.9s							
MT02	**Curacav**	**18.05**	**74**		**P**	**00 04 55.1**	**+0.9**
ROC1	**El Roble**	**18.27**	**73**	P	**Pn**	**00 04 56.2**	**-0.7**
VA06	**Catapilco**	**18.28**	**72**	P	**Pn**	**00 04 56.1**	**-0.5**
MT05	**Renca**	**18.28**	**75**	P	**P**	**00 04 57.7**	**+0.9**
MT03	**Universidad Ad**	**18.40**	**75**	P	**P**	**00 04 58.5**	**+0.3**
VA03	**San Esteban**	**18.72**	**73**	P	**P**	**00 05 01.1**	**-0.6**
CO06	**Fray Jorge**	**19.07**	**66**	P	**P**	**00 05 04.5**	**-0.9**
RPN	**Rapa Nui**	**19.49**	**307**	LR	LR	00 10 27.6	
comp=Z,4μm,21.3s,baz=132,slow=30							
CO03	**El Pedregal**	**19.64**	**68**	P	**Pn**	**00 05 13.1**	**-0.1**
CO05	**La Serena**	**19.79**	**65**	P	**Pn**	**00 05 14.6**	**-0.3**
GO04	**Tololo Observa**	**19.94**	**66**	P	**P**	**00 05 16.3**	**+1.0**
GO04				IAmb	IAmb	00 05 26.4	
comp=Z,194nm,1.9s							
CO01	**Juntas del Tor**	**20.55**	**67**	P	**P**	**00 05 23.2**	**+1.3**
ZON	**Zonda**	**20.70**	**72**	IAmb	IAmb	00 05 31.5	
comp=Z,262nm,2.0s							
LCO	**Las Campanas**	**20.71**	**64**	P	**P**	**00 05 24.0**	**+0.4**
AC04	**Llanos de Chal**	**20.97**	**61**	P	**P**	**00 05 26.4**	**+0.3**
AC05	**El Transito**	**21.11**	**64**	P	**P**	**00 05 28.8**	**+0.9**
AC01	**Pan de Azucar**	**22.66**	**58**	IAmb	IAmb	00 05 52.9	
comp=Z,80nm,1.4s							
AC02	**Maricunga**	**23.17**	**62**	P	**P**	**00 05 51.0**	**+0.9**
TRQA	**Tornquist**	**23.28**	**94**	P	**P**	**00 05 50.8**	**+0.1**
PB14	**IPOC Station P**	**23.85**	**56**	IAmb	IAmb	00 06 03.1	
comp=Z,113nm,1.9s							
GO02	**Mina Guanaco**	**23.99**	**58**	IAmb	IAmb	00 06 06.2	
comp=Z,115nm,1.8s							
PB15	**IPOC Station P**	**25.46**	**55**	IAmb	IAmb	00 06 14.6	
comp=Z,51nm,1.3s							
PB04	**IPOC Station P**	**25.69**	**52**	IAmb	IAmb	00 06 22.1	
comp=Z,81nm,1.4s							
EFI	**East Falkland**	**25.92**	**127**	P	**P**	**00 06 14.6**	**-0.3**
PB03	**IPOC Station P**	**26.15**	**53**	IAmb	IAmb	00 06 26.9	
comp=Z,64nm,1.3s							
LVC	**Limon Verde**	**26.25**	**55**	P	**P**	**00 06 19.0**	**+0.4**
comp=Z,13nm,0.9s,baz=229,slow=7.6,SNR=10							
LVC				LR	LR	00 14 02.9	
comp=Z,3μm,19.8s,baz=214,slow=30							
comp=Z,13nm,0.9s							
LVC	**Limon Verde**	**26.25**	**55**	P	**P**	**00 06 19.3**	**+0.7**
LVC				IAmb	IAmb	00 06 25.9	
comp=Z,134nm,1.9s							
PB07	**IPOC Station P**	**26.31**	**52**	IAmb	IAmb	00 06 39.4	
comp=Z,106nm,1.8s							
AF01	**San Pedro de A**	**26.46**	**56**	P	**P**	**00 06 21.2**	**+0.8**
PB02	**IPOC Station P**	**26.61**	**51**	P	**P**	**00 06 21.6**	**-0.1**
PATCX	**Punta Patache**	**26.85**	**50**	P	**P**	**00 06 25.2**	**+1.5**
PATCX				IAmb	IAmb	00 06 29.0	
comp=Z,50nm,0.9s							
TA01	**Diego Aracena**	**27.03**	**50**	P	**P**	**00 06 26.0**	**+0.8**
TA01				IAmb	IAmb	00 06 30.7	
comp=Z,40nm,1.0s							
PB01	**IPOC Station P**	**27.07**	**52**	P	**P**	**00 06 26.6**	**+0.9**
PB01				IAmb	IAmb	00 06 33.3	
comp=Z,123nm,2.0s							
TA02	**Huaiquique**	**27.29**	**49**	P	**P**	**00 06 28.1**	**+0.6**
TA02				IAmb	IAmb	00 06 34.2	
comp=Z,48nm,1.1s							
LPA	**La Plata**	**27.36**	**90**	*ce*P	**P**	**00 06 21.2**	**-6.9**
LPA				PP	**PnPn**	**00 07 08.9**	**-3.2**
LPA				S	**S**	**00 11 04.8**	**-2.6**
LPA				PS	**PgS**	**00 11 29.6**	**+3.9**
LPA				SS	**SnSn**	**00 12 22.8**	**+6.4**
PB08	**IPOC Station P**	**27.96**	**51**	P	**P**	**00 06 33.9**	**-0.1**
GO01	**Chusmiza**	**28.30**	**50**	P	**P**	**00 06 37.4**	**+0.2**
PB12	**IPOC Station P**	**28.49**	**47**	P	**P**	**00 06 38.4**	**0.0**
PB16	**IPOC Station P**	**29.17**	**48**	IAmb	IAmb	00 06 53.1	
comp=Z,97nm,2.0s							
PMSA	**Palmer Station**	**29.36**	**156**	LR	LR	00 15 11.6	
comp=Z,2μm,19.4s,baz=304,slow=30							
ITQB	**Itaqui**	**30.62**	**81**	P	**P**	**00 06 57.1**	**-0.1**
ITQB				IAmb	IAmb	00 06 58.1	
comp=Z,50nm,1.3s							
NNA	**Nana**	**31.16**	**29**	P	**P**	**00 07 02.1**	**+0.1**

comp=Z,21nm,0.9s,baz=201,slow=10,SNR=7.2
comp=Z,21nm,0.9s
NNA Nana 31.16 29 P P 00 07 02.2 +0.2
NNA IAmb IAmb 00 07 04.1
comp=Z,25nm,0.9s
LPAZ La Paz 31.59 48 P P 00 07 07.0 +0.6
comp=Z,6.8nm,1.0s,baz=211,slow=7.8,SNR=15
comp=Z,6.8nm,1.0s
LPAZ La Paz 31.59 48 P P 00 07 07.1 +0.7
LPAZ IAmb IAmb 00 07 14.6
comp=Z,85nm,2.0s
CPUP Villa Florida 31.87 75 P P 00 07 07.2 -0.9
comp=Z,4.1nm,1.0s,baz=251,slow=9.6,SNR=5.6
CPUP LR LR 00 18 18.5
comp=Z,2μm,21.7s,baz=238,slow=33
comp=Z,4.1nm,1.0s
CPUP Villa Florida 31.87 75 IAmb IAmb 00 07 08.8
comp=Z,45nm,1.9s
PLTB Pedras Altas 31.94 87 P P 00 07 09.1 +0.3
PLTB IAmb IAmb 00 07 10.4
comp=Z,36nm,1.1s
SIV San Ignacio 36.10 57 P P 00 07 43.2 -1.8
comp=Z,5.1nm,0.9s,baz=233,slow=8.3,SNR=24
comp=Z,5.1nm,0.9s
TRCB Terra Rica 37.39 74 P P 00 07 56.4 +0.3
TRCB IAmb IAmb 00 07 56.9
comp=Z,82nm,1.3s
ARNL Arenillas 38.10 19 P P 00 08 01.7 -0.2
BOSC San Juan Bosco 38.90 22 P P 00 08 09.4 +0.6
BOSC IAmb IAmb 00 08 17.7
comp=Z,85nm,1.0s
PORT Chimborazo Vol 40.44 21 P P 00 08 23.3 +1.2
PORT IAmb IAmb 00 08 37.5
comp=Z,48nm,1.1s
SLOR San Lorenzo - 41.21 21 P P 00 08 29.5 +1.2
PULU Pululahua 41.93 20 P P 00 08 34.9 +0.7
IMBA Imbabura, San 42.25 21 P P 00 08 38.4 +1.5
IMBA IAmb IAmb 00 08 50.5
comp=Z,41nm,0.9s
TULM Tulcn-Chalpat 42.79 21 P P 00 08 42.6 +1.4
TULM IAmb IAmb 00 08 52.0
comp=Z,64nm,1.1s
BELA Belgrano 2 44.22 165 P P 00 08 51.7 +0.1
BELA IAmb IAmb 00 08 58.8
comp=Z,33nm,1.2s
FLOC Florencia 44.23 24 *eP* **P 00 08 53.2 +0.8**
GARC Garzon, Huila 44.85 24 *eP* **P 00 08 53.7 -3.9**
BDFB Brasilia 45.29 70 P **P 00 08 59.2 -1.8**
comp=Z,3.4nm,0.9s,baz=242,slow=11,SNR=3.8
comp=Z,3.4nm,0.9s
YOTC Yotoco, Valle 46.30 22 *eP* **P 00 09 07.7 -1.3**
ORTC Ortega, Tolima 46.56 23 *eP* **P 00 09 11.4 +0.5**
CHIC Chingaza 47.71 25 *eP* **P 00 09 21.3 +1.1**
ROSC El Rosal 47.72 24 P **P 00 09 21.1 +0.7**
comp=Z,16nm,1.0s,baz=130,slow=15,SNR=18
comp=Z,16nm,1.0s
ROSC El Rosal 47.72 24 P **P 00 09 22.0 +1.7**
GUY2C Guyana, Caldas 47.77 23 *eP* **P 00 09 22.1 +1.4**
PTGC Puerto Gaitan, 47.84 27 *eP* **P 00 09 21.1 +0.2**
SPBC San Pablo de B 48.56 24 *eP* **P 00 09 28.4 +1.9**
RUSC La Rusia 49.10 25 *eP* **P 00 09 30.7 -0.4**
PTBC PUERTO BERRIO, 49.28 23 *eP* **P 00 09 30.9 -1.1**
QSPA South Pole Qui 49.96 180 P **P 00 09 36.2 -0.5**
comp=Z,5.8nm,0.8s,baz=130,slow=3.7,SNR=17
QSPA LR LR 00 27 05.5
comp=Z,502nm,22.0s,baz=132,slow=32
comp=Z,5.8nm,0.8s
QSPA South Pole Qui 49.96 180 P **P 00 09 37.6 +0.9**
VNA3 Neumayer Olymp 50.02 155 P **P 00 09 36.5 -0.4**
VNA1 Neumayer--Stat 50.57 155 P **P 00 09 41.5 +0.5**
PAMC Pamplona, Colo 50.59 25 *eP* **P 00 09 42.0 -0.4**
VNA2 Neumayer--Watz 50.80 155 P **P 00 09 41.5 -1.3**
baz=259,slow=8.0
TBI Tubuai 50.86 271 *eS* **S 00 17 00.4 +0.8**
comp=Z,2μm,27.5s
TBI *e*LR LR 00 24 15.2
comp=Z,19μm,27.5s
COVE Coope Vega, Sa 51.21 10 P **P 00 09 46.8 +0.4**
COVE IAmb IAmb 00 10 08.9
comp=Z,40nm,1.4s
SNAA Sanae 52.07 156 P **P 00 09 50.8 -1.7**
SNAA Sanae 52.07 156 P **P 00 09 50.8 -1.7**
comp=Z,17nm,1.2s,baz=253,slow=7.2,SNR=19
SNAA LR LR 00 28 42.8
comp=Z,605nm,19.3s,baz=252,slow=32
comp=Z,17nm,1.2s
SNAA Sanae 52.07 156 P **P 00 09 51.5 -0.9**
SNAA IAmb IAmb 00 09 58.3
comp=Z,34nm,1.2s
ESPN Las Esperanzas 52.68 9 P **P 00 09 58.0 +0.7**
ESPN IAmb IAmb 00 10 05.2
comp=Z,84nm,1.8s
SDV Santo Domingo 52.73 27 P **P 00 09 57.5 -0.5**
SDV IAmb IAmb 00 09 58.9
comp=Z,35nm,1.2s
BOAB BOACO BROADBAND 52.77 8 P **P 00 09 58.0 -0.1**
CRIN San Cristobal 52.89 6 P **P 00 09 58.5 -0.5**
CRIN IAmb IAmb 00 11 44.3
comp=Z,38nm,1.0s
TAOE Nuku Hiva Isla 52.97 293 *eS* **S 00 17 29.1 +0.1**
comp=Z,445nm,25.2s
TAOE *e*LR LR 00 25 14.2
comp=Z,2μm,25.4s
MATN Matagalpa 53.22 7 P **P 00 10 01.8 +0.3**
SBA Scott Base 53.31 195 P **P 00 10 02.8 +1.4**
SBA IAmb IAmb 00 10 04.3
comp=Z,51nm,1.2s
TROLL Troll, Antarti 53.59 157 P **P 00 10 03.3 -0.5**
BAUV El Baul 53.72 30 P **P 00 10 04.3 -0.8**
TGUH Tegucigalpa,Un 54.22 6 P **P 00 10 08.9 0.0**
PPT2 Papeete2 54.27 277 *eS* **S 00 17 46.5 -0.1**
comp=Z,820nm,25.2s
PPT2 *e*LR LR 00 25 50.1
comp=Z,3μm,27.0s
PPT Papeete 54.29 277 LR LR 00 26 55.0
comp=Z,516nm,18.8s,baz=149,slow=29
VNDA Vanda 54.41 195 P **P 00 10 09.9 +0.5**
comp=Z,11nm,1.1s,baz=116,slow=6.8,SNR=32
VNDA LR LR 00 28 47.9
comp=Z,273nm,19.6s,baz=68,slow=31
comp=Z,11nm,1.1s
VNDA Vanda 54.41 195 P **P 00 10 10.5 +1.1**
VNDA IAmb IAmb 00 10 12.1
comp=Z,32nm,1.4s
MTO3 Montecristo 54.44 3 P **P 00 10 10.4 -0.1**
MTO3 IAmb IAmb 00 10 18.2
comp=Z,34nm,1.5s
ESQI Esquipulas 54.60 3 P **P 00 10 11.9 +0.3**
ESQI IAmb IAmb 00 11 19.2
comp=Z,22nm,0.6s
URIC Uribia, Colomb 54.92 24 *eP* **P 00 10 12.1 -1.7**
TLIG Tlapa 57.87 353 P **P 00 10 35.2 +0.3**
TOSP Speyside 58.98 37 P **P 00 10 42.5 -0.1**
RAR Rarotonga 59.94 267 LR LR 00 30 17.3
comp=Z,550nm,18.6s,baz=132,slow=30
MOIG Morelia 60.26 350 P **P 00 10 51.3 -0.3**
MOIG IAmb IAmb 00 11 51.0
comp=Z,18nm,0.6s
GTBY Guantanamo Bay 61.90 18 P **P 00 11 01.9 -0.6**
SDD Santo Domingo 61.92 24 P **P 00 11 02.5 -0.1**
MLPR Magueyes Islan 62.41 27 P **P 00 11 05.7 -0.2**
CRPR Cabo Rojo, PR 62.42 27 P **P 00 11 04.6 -1.3**
SC01 Santiago de lo 62.59 23 P **P 00 11 07.9 +0.8**
CBE Ff, Capester 62.75 33 P **P 00 11 08.3 0.0**
SJG San Juan 62.85 28 P **P 00 11 07.5 -1.4**
HUMP Col San Antoni 62.98 28 P **P 00 11 09.0 -0.7**
HUMP IAmb IAmb 00 12 05.6
comp=Z,19nm,1.1s
MTP Monte Pirata 63.05 28 P **P 00 11 09.7 -0.5**
MTP IAmb IAmb 00 11 23.1
comp=Z,14nm,1.1s
GCPR Guaynabo City 63.06 28 P **P 00 11 08.7 -1.5**
GCPR IAmb IAmb 00 11 09.4
comp=Z,27nm,1.4s
CBYP Canovanas 63.10 28 IAmb IAmb 00 11 16.7
comp=Z,21nm,1.0s
ZAIG Zacatecas 63.49 349 P **P 00 11 13.6 +0.2**
STVI Saint Thomas 63.50 29 P **P 00 11 11.8 -1.3**
STVI IAmb IAmb 00 11 14.5
comp=Z,14nm,1.0s
SMRT St. Maarten 63.94 31 P **P 00 11 14.7 -1.4**
URZ Urewera 67.23 239 LR LR 00 34 48.3
comp=Z,737nm,19.2s,baz=238,slow=30
RPZ Rata Peaks 67.94 231 LR LR 00 33 51.8
comp=Z,906nm,21.9s,baz=111,slow=29
HPIG 68.07 347 P **P 00 11 43.5 +0.8**

HIZ Hauiti 68.56 237 P **P 00 11 46.3 +0.6**
833A Chaparral WMA, 68.60 353 P **P 00 11 46.1 +0.4**
833A Chaparral WMA, 68.60 353 P **P 00 11 47.4 +1.7**
baz=174
QRZ Quartz Range 68.70 234 P **P 00 11 46.3 -0.2**
RAO Raoul Island 68.91 249 LR LR 00 33 44.1
comp=Z,509nm,21.8s,baz=120,slow=29
735A Kenedy 68.99 354 P **P 00 11 49.2 +1.0**
SRIG Santa Rosalia 69.85 341 P **P 00 11 54.0 +0.5**
SRIG IAmb IAmb 00 12 06.8
comp=Z,21nm,1.4s
HKT Hockley 69.96 356 P **P 00 11 54.8 +0.8**
HKT IAmb IAmb 00 11 57.0
comp=Z,45nm,1.8s
HKT Hockley 69.96 356 P **P 00 11 55.5 +1.4**
baz=177
TX32 Lajitas Array 70.11 349 P **P 00 11 56.0 +0.9**
TX32 IAmb IAmb 00 11 57.5
comp=Z,20nm,1.4s
TXAR Lajitas Array 70.11 349 P **P 00 11 54.9 -0.3**
comp=Z,1.8nm,0.7s,baz=166,slow=7.9,SNR=21
comp=Z,1.8nm,0.7s
TXAR Lajitas Array 70.11 349 P **P 00 11 55.6 +0.4**
TX31 Lajitas Ar. Si 70.11 349 P **P 00 11 55.9 +0.8**
TX31 Lajitas Ar. Si 70.11 349 P **P 00 11 56.0 +0.8**
baz=170,SNR=8.3
MAW Mawson 70.77 170 P **P 00 11 57.8 -0.9**
comp=Z,9.7nm,1.0s,baz=200,slow=6.0,SNR=12
MAW LR LR 00 41 57.2
comp=Z,358nm,18.2s,baz=186,slow=35
comp=Z,9.7nm,1.0s
MAW Mawson 70.77 170 P **P 00 11 58.7 0.0**
JCT Junction City 70.77 353 P **P 00 11 59.6 +0.4**
JCT Junction City 70.77 353 P **P 00 12 00.4 +1.3**
baz=174
435B Jarrell 70.89 355 P **P 00 12 00.4 +0.6**
435B IAmb IAmb 00 12 08.9
comp=Z,29nm,1.2s
HSIG 71.17 342 P **P 00 12 02.0 +0.4**
BRAL Brewton 71.22 4 P **P 00 12 03.1 +1.3**
342B Flagon Creek P 71.29 360 P **P 00 12 03.7 +1.5**
baz=180
346A Big Creek Wild 71.33 2 P **P 00 12 03.0 +0.5**
346A IAmb IAmb 00 13 39.4
comp=Z,28nm,1.0s
344A Westbrook Farm 71.37 1 P **P 00 12 03.4 +0.7**
352A Blakely 71.68 6 P **P 00 12 04.4 -0.1**
352A Blakely 71.68 6 P **P 00 12 05.2 +0.6**
baz=186
237A Washetta, Mont 72.00 357 P **P 00 12 07.3 +0.8**
250A Grady 72.08 5 P **P 00 12 07.5 +0.5**
WHTX Lake Whitney, 72.08 355 P **P 00 12 07.5 +0.5**
WHTX IAmb IAmb 00 12 08.6
comp=Z,27nm,1.2s
WHTX Lake Whitney, 72.08 355 P **P 00 12 07.0 +0.1**
baz=176
146A Union 72.59 3 P **P 00 12 10.4 +0.4**
152A Waverly Hall 72.88 6 P **P 00 12 11.6 -0.2**
152A IAmb IAmb 00 12 19.9
comp=Z,26nm,1.3s
152A Waverly Hall 72.88 6 P **P 00 12 11.7 0.0**
baz=186
ABTX Abilene, Hawle 72.88 353 P **P 00 12 12.1 +0.3**
ABTX IAmb IAmb 00 12 13.3
comp=Z,22nm,1.2s
ABTX Abilene, Hawle 72.88 353 P **P 00 12 12.5 +0.7**
baz=174
ABTX Abilene, Hawle 72.88 353 P **P 00 12 13.1 +1.3**
baz=174
154A Montrose 72.98 8 P **P 00 12 12.5 +0.2**
GDL2 Guadalupe Moun 73.02 349 P **P 00 12 13.4 +0.6**
319A Douglas 73.08 345 P **P 00 12 14.3 +1.2**
LRAL Lakeview Retre 73.08 4 P **P 00 12 12.8 -0.1**
baz=184
Z47A Carrollton 73.19 3 IAmb IAmb 00 12 15.0
comp=Z,43nm,1.4s
Z38A Mt. Pleasant 73.22 357 P **P 00 12 14.4 +0.7**
Z38A IAmb IAmb 00 12 22.5
comp=Z,35nm,1.4s
Z35A Perchaven, San 73.40 355 P **P 00 12 15.8 +1.0**
Z35A IAmb IAmb 00 12 16.0
comp=Z,17nm,0.9s
AFI Afiamalu 73.46 266 LR LR 00 37 26.8
comp=Z,748nm,18.3s,baz=101,slow=30
WLAR White Oak Lake 73.60 359 P **P 00 12 15.8 -0.1**
WLAR IAmb IAmb 00 12 25.1
comp=Z,31nm,1.1s
GOGA Godfrey 73.73 7 IAmb IAmb 00 12 17.9
comp=Z,25nm,1.4s
GOGA Godfrey 73.73 7 P **P 00 12 17.2 +0.5**
baz=187
Y45A Yeager Farm, C 73.80 2 P **P 00 12 17.7 +0.6**
Y45A Yeager Farm, C 73.80 2 P **P 00 12 17.9 +0.8**
baz=182
CCAR Cane Creek 73.82 0 P **P 00 12 18.2 +1.0**
CCAR IAmb IAmb 00 12 19.0
comp=Z,40nm,1.1s
Y52A Lilburn 74.12 7 P **P 00 12 18.6 -0.4**
PIX Pinacate 74.20 341 P **P 00 12 20.3 +0.7**
TUC Tucson 74.30 343 P **P 00 12 20.6 +0.4**
214A Organ Pipe Nat 74.42 342 P **P 00 12 21.7 +0.8**
214A Organ Pipe Nat 74.42 342 P **P 00 12 22.5 +1.7**
baz=164
OXF Oxford 74.45 2 P **P 00 12 19.9 -1.0**
OXF IAmb IAmb 00 14 28.8
comp=Z,15nm,0.6s
MIAR Mount Ida 74.46 359 IAmb IAmb 00 12 29.2
comp=Z,30nm,1.5s
X48A Hartselle 74.49 4 P **P 00 12 21.0 -0.1**
X48A IAmb IAmb 00 12 22.1
comp=Z,34nm,1.5s
X48A Hartselle 74.49 4 P **P 00 12 21.5 +0.4**
baz=184
MSTX Muleshoe 74.55 351 P **P 00 12 21.9 +0.2**
MSTX IAmb IAmb 00 12 34.0
comp=Z,21nm,1.1s
MSTX Muleshoe 74.55 351 P **P 00 12 22.4 +0.7**
baz=172,SNR=5.4
MSTX Muleshoe 74.55 351 P **P 00 12 22.5 +0.9**
baz=172
FPAL Fort Paine 74.67 5 P **P 00 12 22.2 -0.1**
FPAL IAmb IAmb 00 12 23.7
comp=Z,44nm,1.9s
HODGE Hodges 74.67 8 P **P 00 12 22.9 +0.7**
HODGE IAmb IAmb 00 12 23.6
comp=Z,42nm,1.4s
HODGE Hodges 74.67 8 P **P 00 12 22.8 +0.6**
baz=188,SNR=7.6
UALR University of 74.68 360 P **P 00 12 22.7 +0.5**
X34A Smith Ranch, M 74.70 355 P **P 00 12 23.1 +0.7**
X34A IAmb IAmb 00 12 23.9
comp=Z,30nm,1.4s
X51A Calhoun 74.75 6 P **P 00 12 22.9 +0.3**
X51A IAmb IAmb 00 12 24.0
comp=Z,56nm,1.5s
X51A Calhoun 74.75 6 P **P 00 12 23.0 +0.3**
baz=186
X51A P **P 00 12 23.0 +0.3**
baz=186
JSC Jenkinsville 74.83 9 P **P 00 12 23.1 0.0**
baz=188,SNR=5.2
WMOK Wichita Mounta 74.91 354 P **P 00 12 23.1 -0.5**
baz=175
PLAL Pickwick Lake 74.97 3 P **P 00 12 23.2 -0.7**
WHAR Wooly Hollow 75.19 360 P **P 00 12 25.5 +0.3**
ESJX Sierra Juarez 75.28 339 P **P 00 12 27.1 +1.1**
BNM Barren Site 75.29 347 P **P 00 12 27.3 +1.2**
BIRD Birdtown, Kers 75.29 10 P **P 00 12 26.1 +0.3**
PAULI Pauline 75.30 9 P **P 00 12 26.1 +0.3**
PAULI Pauline 75.30 9 P **P 00 12 26.4 +0.6**
baz=188,SNR=7.1
SWET Sewanee 75.32 5 IAmb IAmb 00 12 33.8
comp=Z,28nm,1.3s
AMTX Amarillo 75.32 352 P **P 00 12 26.8 +0.7**
AMTX IAmb IAmb 00 12 38.8
comp=Z,18nm,1.0s
FNO Franklin 75.33 355 **P 00 12 26.7 +0.7**
FNO IAmb IAmb 00 12 38.1
comp=Z,24nm,1.0s
W50A Signal Mountai 75.35 6 IAmb IAmb 00 12 27.2
comp=Z,33nm,1.5s
W50A Signal Mountai 75.35 6 P **P 00 12 25.2 -1.0**
baz=185
BG3 Lake Jocassee 75.35 8 IAmb IAmb 00 12 27.7
comp=Z,34nm,1.3s
CASEE Lake Jocassee 75.35 8 P **P 00 12 26.3 +0.2**

baz=187,SNR=6.5
W52A Murphy 75.36 7 P **P 00 12 26.3 +0.1**
W52A IAmb IAmb 00 12 27.6
comp=Z,26nm,1.4s
113A Mohawk Valley, 75.43 341 P **P 00 12 28.0 +1.4**
OK025 Westminster Rd 75.64 355 P **P 00 12 28.7 +0.9**
OK025 IAmb IAmb 00 12 29.0
comp=Z,49nm,1.6s
CPCT Cooper Cave 75.66 6 IAmb IAmb 00 12 29.0
comp=Z,25nm,1.4s
KMSC Kings Mountain 75.68 9 P **P 00 12 27.8 -0.1**
V48A Smith Brothers 75.78 4 IAmb IAmb 00 12 29.2
comp=Z,37nm,1.5s
V48A Smith Brothers 75.78 4 P **P 00 12 28.7 +0.1**
baz=184,SNR=5.2
FCAR Ozark Folk Cen 75.79 360 P **P 00 12 28.3 -0.3**
W57A Gilead 75.86 10 P **P 00 12 28.3 -0.7**
W57A IAmb IAmb 00 12 29.5
comp=Z,31nm,1.5s
W57A Gilead 75.86 10 P **P 00 12 28.4 -0.6**
baz=189
W57A P **P 00 12 28.4 -0.6**
baz=189
OK029 Liberty Lake 75.87 355 **P 00 12 29.8 +0.7**
YUH Yuha Desert 75.88 339 P **P 00 12 30.5 +1.4**
YUH IAmb IAmb 00 15 05.5
comp=Z,25nm,1.2s
GNAR Gosnell 75.88 2 P **P 00 12 29.3 +0.2**
TUL1 Leonard 75.89 357 **P 00 12 29.1 -0.1**
TUL1 Leonard 75.89 357 P **P 00 12 29.4 +0.2**
baz=177,SNR=5.3
TUL1 Leonard 75.89 357 P **P 00 12 29.5 +0.3**
baz=177
TKL Tuckaleechee C 75.93 7 P **P 00 12 28.9 -0.6**
GLA Glamis 75.97 340 P **P 00 12 30.8 +1.0**
LCAR Lake Charles 75.97 1 IAmb IAmb 00 12 36.5
comp=Z,27nm,1.5s
LCAR Lake Charles 75.97 1 P **P 00 12 29.3 -0.3**
baz=181,SNR=6.0
OK031 S. Brethren Rd 75.99 356 **P 00 12 30.2 +0.4**
V51A Loudon 76.02 6 P **P 00 12 29.8 -0.1**
V51A IAmb IAmb 00 12 41.0
comp=Z,23nm,1.4s
V51A Loudon 76.02 6 P **P 00 12 30.2 +0.3**
baz=186
V53A Saluda 76.03 8 IAmb IAmb 00 12 41.8
comp=Z,21nm,1.1s
V53A Saluda 76.03 8 P **P 00 12 29.4 -0.7**
baz=187,SNR=5.9
V53A P **P 00 12 29.4 -0.7**
baz=187,SNR=5.9
PEBM Pemiscott Bayo 76.03 2 P **P 00 12 30.9 +0.9**
ANMO Albuquerque 76.04 348 P **P 00 12 31.2 +0.9**
ANMO Albuquerque 76.04 348 P **P 00 12 31.6 +1.3**
baz=169
OK034 N. Norfolk Rd. 76.04 356 **P 00 12 30.6 +0.6**
OK034 IAmb IAmb 00 12 38.2
comp=Z,39nm,1.3s
OK033 Mehan 76.08 356 **P 00 12 30.6 +0.3**
WVT Waverly 76.12 3 P **P 00 12 29.8 -0.7**
WVT IAmb IAmb 00 12 30.9
comp=Z,35nm,1.6s
WVT Waverly 76.12 3 P **P 00 12 29.7 -0.7**
baz=183,SNR=6.0
CLTN Cedars of Leba 76.16 5 IAmb IAmb 00 12 37.5
comp=Z,31nm,1.7s
HHAR Hobbs 76.20 358 P **P 00 12 31.4 +0.4**
HHAR IAmb IAmb 00 12 32.1
comp=Z,27nm,1.4s
HHAR Hobbs 76.20 358 P **P 00 12 31.1 +0.1**
baz=178
MONP2 Monument Peak 76.24 339 P **P 00 12 34.1 +2.5**
baz=161
X18A Snowflake 76.27 345 P **P 00 12 33.4 +1.7**
X18A IAmb IAmb 00 12 35.6
comp=Z,50nm,1.7s
Y14A Wickenburg 76.36 342 P **P 00 12 33.2 +1.2**
U38A Gravette 76.37 358 IAmb IAmb 00 12 33.2
comp=Z,29nm,1.4s
U38A Gravette 76.37 358 P **P 00 12 32.3 +0.4**
baz=178,SNR=6.0
V55A Taylorsville 76.39 9 P **P 00 12 31.8 -0.3**
V55A IAmb IAmb 00 12 38.8
comp=Z,45nm,1.9s
OK044 Pawnee Station 76.40 356 P **P 00 12 32.5 +0.5**
109C Camp Elliot, M 76.43 338 P **P 00 12 34.3 +2.0**
109C IAmb IAmb 00 12 41.2
comp=Z,19nm,1.4s
OK046 Pawnee Station 76.43 356 P **P 00 12 33.0 +0.7**
OK046 IAmb IAmb 00 12 40.7
comp=Z,49nm,1.6s
OK050 Pawnee Station 76.43 356 P **P 00 12 32.7 +0.5**
OK050 IAmb IAmb 00 12 40.6
comp=Z,40nm,1.4s
HICK Hickman 76.48 2 P **P 00 12 32.7 +0.2**
OK045 Pawnee Station 76.48 356 IAmb IAmb 00 12 41.6
comp=Z,32nm,1.2s
OK051 E0350 and S346 76.54 356 **P 00 12 33.9 +1.0**
OK051 IAmb IAmb 00 12 45.0
comp=Z,34nm,1.3s
BBSR BB Station 76.55 23 P **P 00 12 33.8 +0.9**
U32A Winter Ranch, 76.55 354 **P 00 12 34.1 +1.1**
BLYC Blythe 76.56 341 P **P 00 12 34.4 +1.4**
BLYC IAmb IAmb 00 12 46.9
comp=Z,19nm,1.1s
V58A Windy Hill, Pi 76.61 11 P **P 00 12 33.4 +0.2**
V58A IAmb IAmb 00 12 39.4
comp=Z,53nm,2.0s
U49A Red Boiling Sp 76.62 5 IAmb IAmb 00 12 34.1
comp=Z,37nm,1.4s
U49A Red Boiling Sp 76.62 5 P **P 00 12 33.4 +0.1**
baz=185,SNR=7.2
OK038 West end E0370 76.63 354 P **P 00 12 33.4 0.0**
W18A Petrified Fore 76.79 345 P **P 00 12 35.6 +1.0**
W18A IAmb IAmb 00 12 48.1
comp=Z,40nm,1.7s
TZTN Tazewell 76.83 7 IAmb IAmb 00 12 35.5
comp=Z,29nm,1.3s
OK032 Salt Plains WL 76.92 355 **P 00 12 35.2 +0.2**
PFO Pinyon Flats O 76.93 339 P **P 00 12 36.4 +1.1**
SCI2 San Clemente I 76.93 337 P **P 00 12 36.1 +0.9**
baz=160
U56A King 76.98 10 P **P 00 12 35.5 +0.2**
U56A IAmb IAmb 00 13 08.5
comp=Z,25nm,1.4s
U54A Nelsons Funny 76.98 8 P **P 00 12 35.4 -0.1**
U54A IAmb IAmb 00 12 44.4
comp=Z,24nm,1.4s
PDMCI Parker Dam,Lak 76.99 341 P **P 00 12 37.2 +1.8**
baz=163
T47A Sharon Grove 77.01 4 P **P 00 12 35.3 -0.2**
T47A IAmb IAmb 00 12 43.6
comp=Z,33nm,1.4s
T47A Sharon Grove 77.01 4 P **P 00 12 35.1 -0.4**
baz=184,SNR=5.5
MGMO Mountain Grove 77.05 360 P **P 00 12 35.8 0.0**
MGMO IAmb IAmb 00 12 36.8
comp=Z,40nm,1.4s
KAN14 Manchester OK 77.05 355 P **P 00 12 36.6 +0.9**
KAN14 IAmb IAmb 00 12 44.4
comp=Z,39nm,1.4s
KAN13 South Haven SW 77.08 355 **P 00 12 36.4 +0.5**
MURC Murrieta 77.12 339 P **P 00 12 37.5 +1.3**
baz=160
T50A Nancy 77.19 6 P **P 00 12 36.0 -0.5**
KAN09 Caldwell North 77.21 355 P **P 00 12 37.4 +0.7**
ELS Elsinore Mount 77.23 338 P **P 00 12 38.2 +1.3**
KAN01 Argonia South 77.24 355 **P 00 12 37.4 +0.6**
KS20 Mayfield South 77.30 355 IAmb IAmb 00 12 49.8
comp=Z,24nm,1.1s
KAN08 Anthony NE Sta 77.32 355 P **P 00 12 38.3 +1.0**
KAN12 Harper NE Stat 77.39 355 **P 00 12 38.6 +0.9**
WUAZ Wupatki 77.52 344 P **P 00 12 40.4 +1.8**
WUAZ IAmb IAmb 00 12 42.7
comp=Z,47nm,1.8s
S39A Bolivar 77.60 359 IAmb IAmb 00 12 39.9
comp=Z,23nm,1.3s
W13A Hualapai Mount 77.68 342 P **P 00 12 40.7 +1.1**
GMRC Granite Mounta 77.83 340 P **P 00 12 42.4 +2.1**
baz=162
BFSC Mount Baldy Ra 77.85 338 P **P 00 12 42.2 +1.7**
baz=160
T25A Trinidad 77.88 350 P **P 00 12 41.4 +0.8**
T25A IAmb IAmb 00 12 43.5
comp=Z,23nm,1.2s

T25A	Trinidad	77.88	350	P	P	00 12 42.1	+1.5
	baz=170						
FVM	French Village	77.89	1	P	P	00 12 41.0	+0.6
S51A	Beattyville	77.91	7	IAmb	IAmb	00 12 48.4	
	comp=Z,18nm,1.1s						
S51A	Beattyville	77.91	7	P	P	00 12 40.6	+0.1
	baz=186,SNR=6.4						
S51A				P	P	00 12 40.6	+0.1
	baz=186,SNR=6.4						
PASC	Pasadena Art C	77.94	338	P	P	00 12 41.6	+0.8
PASC				IAmb	IAmb	00 12 43.6	
	comp=Z,35nm,1.7s						
CCM	Cathedral Cave	77.95	1	P	P	00 12 40.9	+0.1
CCM	Cathedral Cave	77.95	1	P	P	00 12 41.3	+0.6
	baz=181,SNR=13						
USIN	University of	77.96	3	P	P	00 12 41.0	+0.2
T59A	Double "B" Far	77.99	12	P	P	00 12 40.5	-0.5
T59A				IAmb	IAmb	00 12 52.7	
	comp=Z,42nm,1.8s						
HEC	Hector,Ludlow	78.05	340	P	P	00 12 43.8	+2.4
	baz=161						
T60A	Surry	78.29	12	P	P	00 12 42.3	-0.3
T60A				IAmb	IAmb	00 12 44.0	
	comp=Z,27nm,0.9s						
WCI	Wyandotte Cave	78.29	5	P	P	00 12 42.5	-0.2
WCI				IAmb	IAmb	00 12 42.7	
	comp=Z,45nm,1.6s						
WCI	Wyandotte Cave	78.29	5	P	P	00 12 42.1	-0.5
	baz=184						
S54A	Dingess, Beckl	78.30	9	P	P	00 12 42.0	-0.7
S54A				IAmb	IAmb	00 12 43.1	
	comp=Z,31nm,1.4s						
R49A	Shelbyville	78.43	5	IAmb	IAmb	00 12 44.3	
	comp=Z,37nm,1.6s						
R50A	Paris	78.49	6	IAmb	IAmb	00 12 44.4	
	comp=Z,25nm,1.3s						
R50A	Paris	78.49	6	P	P	00 12 43.8	+0.1
	baz=186						
R50A				P	P	00 12 43.8	+0.1
	baz=186						
TUQ	Turquoise Moun	78.51	340	P	P	00 12 46.2	+2.1
	baz=162						
V12A	Nelson	78.52	341	P	P	00 12 45.2	+1.1
SLM	Saint Louis	78.55	1	P	P	00 12 44.7	+0.7
EDW2	Edwards Air Fo	78.55	338	P	P	00 12 45.8	+1.6
	baz=160						
R32A	Long Quarter,	78.56	355	P	P	00 12 44.6	+0.5
R32A				IAmb	IAmb	00 12 53.1	
	comp=Z,23nm,1.4s						
U15A	North Rim	78.59	343	P	P	00 12 46.1	+1.4
U15A				IAmb	IAmb	00 12 47.8	
	comp=Z,24nm,1.4s						
MVCO	Mesa Verde	78.59	347	P	P	00 12 45.6	+1.0
MVCO				IAmb	IAmb	00 12 47.2	
	comp=Z,29nm,1.5s						
GSC	Goldstone, Bar	78.62	339	P	P	00 12 46.2	+1.6
GSC	Goldstone, Bar	78.62	339	P	P	00 12 46.6	+2.0
	baz=161						
SDCO	Great Sand Dun	78.63	349	P	P	00 12 45.9	+1.0
SDCO	Great Sand Dun	78.63	349	P	P	00 12 46.0	+1.1
	baz=170						
JSRW	J. Sargeant Re	78.65	11	P	P	00 12 43.0	-1.6
R53A	Hurricane	78.76	8	P	P	00 12 44.7	-0.5
R53A				IAmb	IAmb	00 12 46.1	
	comp=Z,52nm,1.6s						
R53A	Hurricane	78.76	8	P	P	00 12 46.0	+0.8
	baz=188						
R53A				P	P	00 12 46.0	+0.8
	baz=188						
MSVF	Nonsavu	78.78	256	LR	LR	00 38 33.7	
	comp=Z,502nm,21.5s,baz=135,slow=29						
S22A	4UR Ranch, Cre	78.83	348	P	P	00 12 47.4	+1.4
S22A				IAmb	IAmb	00 12 49.0	
	comp=Z,25nm,1.4s						
S22A	4UR Ranch, Cre	78.83	348	P	P	00 12 47.7	+1.7
	baz=168						
Q44A	Meyer Farm, Va	78.84	2	P	P	00 12 46.0	+0.4
	baz=182						
R58B	Mineral	78.92	11	P	P	00 12 45.9	-0.2
R58B				IAmb	IAmb	00 12 46.8	
	comp=Z,26nm,1.4s						
R55A	Marlinton	78.92	9	P	P	00 12 46.0	-0.2
R55A				IAmb	IAmb	00 12 54.5	
	comp=Z,53nm,1.8s						
BCW	Bitter Crk WRg	79.02	337	P	P	00 12 46.4	-0.4
BCW				IAmb	IAmb	00 12 56.8	
	comp=Z,34nm,1.4s						
CBKS	Cedar Bluff	79.03	354	P	P	00 12 47.5	+0.7
CBKS				IAmb	IAmb	00 12 55.8	
	comp=Z,30nm,1.2s						
PKM	Mcpherson Peak	79.09	337	P	P	00 12 49.3	+2.0
	baz=159						
KSU1	Kansas State U	79.11	356	P	P	00 12 47.5	+0.4
KSU1				IAmb	IAmb	00 12 48.7	
	comp=Z,47nm,1.6s						
KSU1	Kansas State U	79.11	356	P	P	00 12 48.1	+1.0
	baz=176						
BLO	Bloomington	79.22	4	P	P	00 12 46.7	-1.0
QSM	Queen of Sheba	79.26	340	P	P	00 12 49.3	+1.3
KNB	Kanab	79.27	343	P	P	00 12 50.1	+1.8
KNB				IAmb	IAmb	00 12 51.4	
	comp=Z,27nm,1.5s						
Q51A	Peebles	79.31	7	P	P	00 12 47.1	-1.1
SHPR	Sheep Range	79.33	341	P	P	00 12 50.0	+1.4
Q52A	Bidwell	79.35	8	P	P	00 12 48.7	+0.2
ISA	Isabella, Lake	79.42	338	P	P	00 12 50.5	+1.5
ISA	Isabella, Lake	79.42	338	P	P	00 12 51.0	+2.0
	baz=160						
P40A	Paris	79.42	360	IAmb	IAmb	00 12 49.7	
	comp=Z,38nm,1.4s						
PV01	Paradox Valley	79.51	347	P	P	00 12 50.1	+0.5
PV01				IAmb	IAmb	00 12 52.3	
	comp=Z,26nm,1.4s						
KSCO	Kaye Shedlock'	79.51	352	P	P	00 12 50.0	+0.5
MPMC	Manual Prospec	79.52	339	P	P	00 12 51.7	+2.0
	baz=160						
P38A	Dawn	79.53	359	P	P	00 12 49.6	+0.2
P38A				IAmb	IAmb	00 12 50.2	
	comp=Z,35nm,1.3s						
P38A	Dawn	79.53	359	P	P	00 12 49.6	+0.2
	baz=179,SNR=5.8						
PV05	Paradox Valley	79.55	346	P	P	00 12 50.5	+0.7
P43A	Skaggs, Pawnee	79.56	2	P	P	00 12 49.2	-0.3
P43A				IAmb	IAmb	00 12 50.4	
	comp=Z,48nm,1.5s						
PV13	Radium Mtn., P	79.57	347	P	P	00 12 51.0	+1.0
PV13				IAmb	IAmb	00 12 53.2	
	comp=Z,35nm,1.5s						
P48A	Milroy	79.58	5	IAmb	IAmb	00 14 01.3	
	comp=Z,40nm,1.7s						
PV02	Paradox Valley	79.61	347	P	P	00 12 50.8	+0.6
PV02				IAmb	IAmb	00 12 52.7	
	comp=Z,25nm,1.3s						
PV03	Paradox Valley	79.67	347	P	P	00 12 51.5	+1.1
PV03				IAmb	IAmb	00 12 53.7	
	comp=Z,71nm,2.0s						
PV18	Skein Mesa, Pa	79.67	346	P	P	00 12 51.7	+1.2
PV18				IAmb	IAmb	00 13 09.2	
	comp=Z,28nm,1.5s						
PV15	Paradox Valley	79.69	347	P	P	00 12 51.7	+1.0
P49A	Miami Univ. Ec	79.70	6	IAmb	IAmb	00 12 56.9	
	comp=Z,73nm,1.8s						
P49A	Miami Univ. Ec	79.70	6	P	P	00 12 50.6	+0.3
	baz=186						
PV11	David Mesa, Pa	79.72	347	P	P	00 12 51.8	+1.1
PV11				IAmb	IAmb	00 12 53.9	
	comp=Z,56nm,1.6s						
PV12	Saucer Basin,	79.72	347	P	P	00 12 51.6	+0.8
PV12				IAmb	IAmb	00 12 53.4	
	comp=Z,44nm,1.4s						
PV16	Nyswonger Mesa	79.74	346	P	P	00 12 51.5	+0.6
PV16				IAmb	IAmb	00 12 54.1	
	comp=Z,54nm,1.9s						
Q24A	Divide	79.78	350	P	P	00 12 52.3	+1.1
PV07	Paradox Valley	79.81	347	P	P	00 12 52.1	+0.8
PV04	Paradox Valley	79.82	347	P	P	00 12 51.3	+0.1
PV04				IAmb	IAmb	00 15 00.4	
	comp=Z,26nm,1.2s						
PV14	Lion Creek, Pa	79.82	346	P	P	00 12 50.9	-0.4
PV14				IAmb	IAmb	00 12 53.7	
	comp=Z,30nm,1.2s						
PV10	Paradox Valley	79.82	346	P	P	00 12 51.6	+0.3
PV23	Carpenter Ridg	79.89	346	P	P	00 12 52.3	+0.6
PV23				IAmb	IAmb	00 12 54.2	
	comp=Z,38nm,1.6s						
CCUT	Cedar City	79.90	343	P	P	00 12 53.4	+1.6
P53A	Whipple	79.96	8	IAmb	IAmb	00 12 59.5	
	comp=Z,34nm,1.3s						
WCT	Wildcat Mounta	79.98	340	P	P	00 12 53.2	+1.2
PV21	Cone Mtn., Par	79.99	347	P	P	00 12 51.7	-0.5
PV21				IAmb	IAmb	00 14 36.4	
	comp=Z,22nm,1.0s						
P52A	Corning	80.03	8	IAmb	IAmb	00 13 03.4	
	comp=Z,34nm,1.1s						
P52A	Corning	80.03	8	P	P	00 12 52.4	+0.3
	baz=188						
MTPU	Mount Pierson	80.12	344	P	P	00 12 54.1	+1.0
PRN	Pahroc Range	80.16	341	P	P	00 12 54.6	+1.6
SMCO	Snowmass	80.26	348	P	P	00 12 55.5	+1.6
SMCO				IAmb	IAmb	00 13 06.9	
	comp=Z,38nm,1.4s						
O48B	Farmland	80.39	5	P	P	00 12 53.6	-0.4
	baz=185						
HDIL	Hopedale	80.48	2	P	P	00 12 55.1	+0.6
HDIL				IAmb	IAmb	00 13 02.3	
	comp=Z,55nm,1.6s						
N38A	Joes South For	80.69	359	P	P	00 12 55.9	+0.3
N38A				IAmb	IAmb	00 12 56.6	
	comp=Z,46nm,1.6s						
TCRU	Three Creeks R	80.72	344	P	P	00 12 57.9	+1.7
TCRU				IAmb	IAmb	00 14 37.7	
	comp=Z,14nm,0.4s						
O53A	New Philadelph	80.73	8	P	P	00 12 56.5	+0.7
	baz=188						
Q16A	Castle Valley	80.75	345	P	P	00 12 57.4	+1.1
SRU	San Rafael Swe	80.81	345	P	P	00 12 57.9	+1.3
SRU				IAmb	IAmb	00 12 59.8	
	comp=Z,53nm,2.0s						
DSP	Deep Springs	80.88	339	P	P	00 12 58.2	+1.5
PSUT	Pine Spring	80.96	343	P	P	00 12 58.2	+0.8
TMUT	Trail Mountain	81.13	345	P	P	00 12 59.5	+1.1
TMUT				IAmb	IAmb	00 13 01.2	
	comp=Z,29nm,1.5s						
R11A	Troy Canyon, C	81.19	341	P	P	00 13 00.6	+2.0
R11A				IAmb	IAmb	00 13 26.1	
	comp=Z,20nm,1.0s						
P17A	Butcher Ranch,	81.20	345	P	P	00 12 59.4	+0.7
BRIGG	Briggsdale	81.26	350	P	P	00 13 00.5	+1.7
BRIGG				IAmb	IAmb	00 13 01.7	
	comp=Z,60nm,1.8s						
N51A	Ashland	81.28	7	P	P	00 13 00.0	+1.3
TPH	Tonopah	81.34	340	P	P	00 12 60.0	+0.5
TPH				IAmb	IAmb	00 13 13.1	
	comp=Z,30nm,1.0s						
M44A	Midewin, Midew	81.36	3	P	P	00 13 00.5	+1.3
OGNE	Ogallala	81.36	352	P	P	00 13 00.6	+1.3
O20A	White River Ci	81.40	347	IAmb	IAmb	00 13 30.1	
	comp=Z,30nm,1.6s						
O20A	White River Ci	81.40	347	P	P	00 13 00.9	+1.2
	baz=168						
BGNE	Belgrade	81.50	355	P	P	00 13 01.3	+1.4
N23A	Red Feather La	81.79	349	P	P	00 13 03.2	+1.4
N23A	Red Feather La	81.79	349	P	P	00 13 03.0	+1.2
	baz=169						
SCIA	State Center	81.81	359	P	P	00 13 01.7	+0.2
SCIA				IAmb	IAmb	00 13 02.8	
	comp=Z,26nm,1.1s						
MPU	Maple Canyon	81.90	345	P	P	00 13 03.1	+0.7
NV11	Mina Array Sit	81.92	339	IAmb	IAmb	00 13 15.2	
	comp=Z,33nm,1.9s						
NLU	North Lily Min	81.94	344	P	P	00 13 04.7	+2.1
NLU				IAmb	IAmb	00 13 16.5	
	comp=Z,36nm,1.5s						
NVAR	Mina Array Bea	81.96	339	P	P	00 13 03.0	+0.3
	comp=Z,1.2nm,0.6s,baz=173,slow=7.9,SNR=6.9						
	comp=Z,1.2nm,0.6s						
RDMU	Red Mountain	82.05	347	P	P	00 13 04.4	+1.3
L46A	Eue Claire	82.06	4	P	P	00 13 02.6	-0.2
PHWY	Pilot Hill	82.12	350	P	P	00 13 04.6	+1.0
PHWY				IAmb	IAmb	00 13 06.2	
	comp=Z,29nm,1.7s						
CMB	Columbia Colle	82.18	338	P	P	00 13 05.1	+1.4
RYN	Ryan	82.21	339	P	P	00 13 05.5	+1.6
RYN				IAmb	IAmb	00 13 06.8	
	comp=Z,41nm,1.7s						
DUG	Dugway, Tooele	82.32	344	P	P	00 13 06.0	+1.5
DUG				IAmb	IAmb	00 13 07.3	
	comp=Z,27nm,1.4s						
JLU	Jordanelle	82.43	345	P	P	00 13 06.6	+1.4
KVN	Kaiserville	82.49	340	P	P	00 13 06.6	+1.1
KVN				IAmb	IAmb	00 13 18.1	
	comp=Z,31nm,1.8s						
K31A	O'Neill	82.74	355	P	P	00 13 06.9	+0.4
JFWS	Jewell Farm	82.82	1	P	P	00 13 07.4	+0.6
JFWS				IAmb	IAmb	00 13 12.2	
	comp=Z,25nm,1.4s						
L56A	Greenwood	83.06	11	P	P	00 13 08.9	+0.8
BGU	Big Grassy Mou	83.07	344	P	P	00 13 07.7	-0.7
AFDM	Forest Hills D	83.19	338	P	P	00 13 09.9	+1.0
AFDM				IAmb	IAmb	00 13 11.3	
	comp=Z,42nm,2.0s						
KSCT	Kent School, K	83.32	14	P	P	00 13 09.4	+0.1
J47A	Sunmer	83.38	5	P	P	00 13 09.9	+0.2
ELK	Elko	83.38	342	P	P	00 13 10.9	+0.8
HWUT	Hardware Ranch	83.43	345	P	P	00 13 11.1	+0.8
HWUT				IAmb	IAmb	00 13 28.2	
	comp=Z,14nm,1.3s						
PAHR	Pah Rah Range	83.45	339	P	P	00 13 10.8	+0.4
PAHR				IAmb	IAmb	00 15 56.4	
	comp=Z,23nm,1.5s						
K22A	Casper	83.59	349	P	P	00 13 12.5	+1.5
	baz=169						
ECSD	EROS Data Cent	83.73	357	P	P	00 13 12.1	+0.6
I42A	Draeger Farm,	83.82	2	P	P	00 13 11.7	-0.2
I42A				IAmb	IAmb	00 13 12.9	
	comp=Z,18nm,1.2s						
HVU	Hansel Valley	83.83	344	P	P	00 13 13.2	+0.9
HVU				IAmb	IAmb	00 13 25.0	
	comp=Z,15nm,1.1s						
BEKR	Beckworth	83.87	338	P	P	00 13 13.1	+0.6
BEKR				IAmb	IAmb	00 13 15.2	
	comp=Z,16nm,1.4s						
ORV	Oroville	83.91	337	P	P	00 13 14.2	+1.7
I37B	Waseca	83.92	359	P	P	00 13 13.3	+0.9
	baz=179						
BW06	Boulder Array	84.18	347	IAmb	IAmb	00 13 16.2	
	comp=Z,18nm,1.2s						
PD31	Pinedale Array	84.18	347	P	P	00 13 14.7	+0.6
PD31				IAmb	IAmb	00 13 16.2	
	comp=Z,21nm,1.4s						
PDAR	Pinedale Array	84.18	347	P	P	00 13 14.2	+0.1
	comp=Z,5.4nm,0.9s,baz=160,slow=4.7,SNR=31						
	comp=Z,5.4nm,0.9s						
DZM	Mont Dzumac	84.41	246	*e*LR	LR	00 39 48.6	
	comp=Z,1μm,27.4s						
DZM	Mont Dzumac	84.41	246	LR	LR	00 45 18.9	
	comp=Z,358nm,18.1s,baz=178,slow=32						
H43A	Windswept, Lux	84.44	3	P	P	00 13 13.4	-1.6
AHID	Auburn Hatcher	84.46	346	P	P	00 13 16.2	+0.8
AHID				IAmb	IAmb	00 13 18.9	
	comp=Z,16nm,1.2s						
SUR	Sutherland	84.67	128	P	P	00 13 17.2	+0.1
	comp=Z,33nm,1.2s,baz=156,slow=3.2,SNR=3.7						
	comp=Z,33nm,1.2s						
SUR	Sutherland	84.67	128	P	P	00 13 17.5	+0.4
RSSD	Black Hills	84.72	351	P	P	00 13 18.0	+1.2
RSSD				IAmb	IAmb	00 13 19.1	
	comp=Z,19nm,1.2s						
RSSD	Black Hills	84.72	351	P	P	00 13 18.3	+1.5
	baz=171						
REDW	Red Top Meadow	84.99	346	P	P	00 13 18.8	+0.6
REDW				IAmb	IAmb	00 13 20.6	
	comp=Z,30nm,1.4s						
SNOW	Snow King Moun	85.07	346	P	P	00 13 19.6	+1.0
SNOW				IAmb	IAmb	00 13 31.1	
	comp=Z,15nm,1.2s						
G45A	Suttons Bay	85.12	4	P	P	00 13 18.4	0.0
SPMN	Marine on St.	85.12	359	P	P	00 13 18.4	0.0
SPMN				IAmb	IAmb	00 13 19.7	
	comp=Z,14nm,1.1s						
SPMN	Marine on St.	85.12	359	P	P	00 13 18.9	+0.5
	baz=179						
G40A	Rib Lake	85.17	1	IAmb	IAmb	00 13 30.5	
	comp=Z,16nm,1.2s						
LOHW	Long Hollow	85.19	347	P	P	00 13 19.8	+0.6
LOHW				IAmb	IAmb	00 13 32.2	
	comp=Z,16nm,1.3s						
FXWY	Fox Creek	85.29	346	P	P	00 13 20.7	+1.0
FXWY				IAmb	IAmb	00 13 22.0	
	comp=Z,21nm,1.4s						
IMW	Indian Meadow	85.52	346	IAmb	IAmb	00 13 23.4	
	comp=Z,24nm,1.4s						
FLWY	Flagg Ranch	85.66	347	P	P	00 13 22.6	+1.1
MOD	Modoc Plateau	85.75	339	P	P	00 13 23.6	+1.7
F36A	Milaca	85.76	359	IAmb	IAmb	00 13 29.3	
	comp=Z,15nm,1.2s						
WVOR	Wild Horse Val	85.81	341	P	P	00 13 22.9	+0.7
F33A	5 Mile Ranch,	85.82	357	IAmb	IAmb	00 13 22.1	
	comp=Z,22nm,1.4s						
HLID	Hailey	85.89	344	P	P	00 13 23.7	+1.1
HLID				IAmb	IAmb	00 13 25.4	
	comp=Z,17nm,1.4s						
YFT	Old Faithful	86.04	347	P	P	00 13 24.9	+1.5
YUF	Upper Falls	86.24	347	P	P	00 13 26.3	+1.9
YNR	Norris Junctio	86.27	347	P	P	00 13 26.6	+2.0
YNR				IAmb	IAmb	00 13 57.8	
	comp=Z,29nm,1.7s						
YMR	Madison River	86.27	347	P	P	00 13 26.3	+1.8
YHH	Holmes Hill	86.37	347	P	P	00 13 26.9	+1.8
YHH				IAmb	IAmb	00 13 28.2	
	comp=Z,27nm,1.3s						
YHB	Horse Butte	86.39	346	P	P	00 13 26.6	+1.5
RLMT	Red Lodge	86.43	348	P	P	00 13 26.4	+1.1
RLMT				IAmb	IAmb	00 13 27.9	
	comp=Z,18nm,1.4s						
YHL	Hebgen Lake	86.49	346	P	P	00 13 26.4	+0.7
YHL				IAmb	IAmb	00 13 42.2	
	comp=Z,15nm,1.3s						
QLMT	Earthquake Lak	86.52	346	P	P	00 13 27.7	+2.0
J08A	Circle Bar Ran	86.63	341	P	P	00 13 27.8	+1.6
J08A				IAmb	IAmb	00 16 15.0	
	comp=Z,15nm,1.1s						
DLMT	Dillon	87.25	346	P	P	00 13 30.6	+1.5
BOZ	Bozeman (W)	87.29	346	IAmb	IAmb	00 13 32.3	
	comp=Z,17nm,1.6s						
LAO	LASA Array	87.51	350	P	P	00 13 31.8	+1.5
LAO				IAmb	IAmb	00 13 32.7	
	comp=Z,25nm,1.3s						
I07A	Izee	87.57	340	P	P	00 13 31.8	+1.1
I07A				IAmb	IAmb	00 13 39.0	
	comp=Z,15nm,1.6s						
LRM	Limekiln Ridge	87.66	346	P	P	00 13 32.5	+1.2
PINE	Pine Mountain	87.68	339	P	P	00 13 32.7	+1.4
PINE				IAmb	IAmb	00 13 40.7	
	comp=Z,11nm,1.1s						
PLID	Pearl Lake	87.68	343	P	P	00 13 32.9	+1.5
PLID				IAmb	IAmb	00 13 35.0	
	comp=Z,18nm,1.6s						
MDND	Maddock	88.00	355	P	P	00 13 33.4	+0.9
G08A	Pilot Rock	88.57	341	P	P	00 13 36.4	+0.9
G08A				IAmb	IAmb	00 13 54.0	
	comp=Z,32nm,1.7s						
F10A	Beach Ranch, E	88.80	343	IAmb	IAmb	00 13 38.5	
	comp=Z,22nm,1.6s						
DGMT	Dagmar	89.03	352	P	P	00 13 38.0	+0.6
F07A	Phinny Hill Vi	89.37	341	P	P	00 13 41.2	+2.1
E08A	Dider Farm, El	89.72	342	P	P	00 13 42.2	+1.6
E08A				IAmb	IAmb	00 13 53.3	
	comp=Z,11nm,1.0s						
HAWA	Hanford	89.74	341	P	P	00 13 42.2	+1.5
HAWA				IAmb	IAmb	00 13 50.5	
	comp=Z,35nm,1.8s						
D08A	Wollman Farm,	90.21	342	P	P	00 13 44.6	+1.6
D08A				IAmb	IAmb	00 13 56.4	
	comp=Z,28nm,1.5s						
C09A	Chrisman Ranch	90.76	343	P	P	00 13 47.9	+2.4
C09A				IAmb	IAmb	00 13 48.0	
	comp=Z,22nm,1.4s						
B08A	Colville Reser	91.53	342	P	P	00 13 49.7	+0.6
STKA	Stephens Creek	92.79	223	P	P	00 13 55.1	-0.5
	comp=Z,5.7nm,1.0s,baz=119,slow=12,SNR=3.6						
	comp=Z,5.7nm,1.0s						
HNR	Honiara	97.47	251	LR	LR	00 50 02.2	
	comp=Z,5μm,21.9s,baz=124,slow=30						
H11S2	WAKE ISLAND Hyl	10.25	277	T	T	02 18 50.2	
	baz=127,slow=75						
H11S1	WAKE ISLAND Hyl	10.26	277	T	T	02 18 54.8	
	baz=127,slow=75						
H11S3	WAKE ISLAND Hyl	10.26	277	T	T	02 18 54.7	
	baz=127,slow=75						
H11N3	WAKE ISLAND Hyl	10.82	279	T	T	02 19 47.0	
	baz=128						
H11N1	WAKE ISLAND Hyl	10.83	279	T	T	02 19 35.6	
	baz=128						
H11N2	WAKE ISLAND Hyl	10.84	279	T	T	02 19 38.2	
	baz=128						
GRFO	Grafenberg	127.06	52		PKiKP	00 19 48.9	+1.9
CLL	Collm	128.68	51	*e*PKPdf	PKiKP	00 19 50.0	-0.1
	comp=Z,16nm,1.7s						
RAYN	Ar Rayn	140.60	102		PKPdf	00 20 12.9	+0.2
KLMR	Klimovskoe	144.03	39	*e*	PKPab	00 20 11.4	-3.6
KLMR				AMP		00 20 17.6	
	comp=Z,35nm,1.6s						
JNU	Nakatsue	145.21	272		PKPbc	00 20 18.9	-1.3
MZR	Muzera	146.16	110	*i* PKPab	PKPbc	00 20 23.8	+0.3
	SNR=11						
KIV	Kislovodsk	146.46	68		PKPbc	00 20 23.3	-0.5
KIV	Kislovodsk	146.46	68	PKPdf	PKPdf	00 20 21.5	-0.9
KBZ	Khabaz	146.57	69	PKPbc	PKPdf	00 20 21.8	-0.6
	comp=Z,4.7nm,1.1s,baz=27,slow=6.1,SNR=5.0						
GNI	Garni	147.15	76	PKPbc	PKPbc	00 20 26.3	+0.2
	comp=Z,14nm,1.2s,baz=248,slow=3.1,SNR=4.3						
USRK	Ussuriysk Ar.	147.54	292	PKPbc	PKPdf	00 20 24.4	+0.3
	comp=Z,4.2nm,0.8s,baz=197,slow=2.0,SNR=6.0						
ALNE	Al Ain	148.44	111	*i* PKPbc	PKPdf	00 20 27.9	+1.7
	SNR=7.3						
ASUD	Al Ashush, Dub	148.49	110	PKPbc	PKPdf	00 20 27.3	+1.0
PCHI	Peechi	148.61	157	*e*P	PKPab	00 20 36.4	+2.5
PCHI				*ex*	x	00 30 28.7	
FAQ	Al Faqa, Dubai	148.75	110	*i* PKPbc	PKPbc	00 20 28.8	-1.7
	SNR=6.8						
NAZ	Nazwa, Dubai	148.95	109	*i* PKPbc	PKPdf	00 20 29.1	+2.1
	SNR=9.2						
KSRS	Korea Array	149.02	278	PKPbc	PKPbc	00 20 29.1	-1.7
	comp=Z,7.2nm,1.1s,baz=128,slow=2.3,SNR=13						
ASHO	Ashiyiah	149.05	110	PKPbc	PKPdf	00 20 29.1	+1.8
HATD	Hatta, Dubai	149.19	110	PKPbc	PKPbc	00 20 30.2	-1.4
MDJ	Mudanjiang	149.30	292	PKPbc	PKPbc	00 20 31.5	+0.2
MSFE	Esma-Masafi	149.53	109	PKPbc	PKPdf	00 20 29.9	+1.9
SHME	Shamm	149.93	108	*i* PKPbc	PKPbc	00 20 31.4	-2.0
	SNR=8.1						
BELG	Belogornoye	149.95	53	PKPbc	PKPbc	00 20 31.7	-0.9
	comp=Z,23nm,0.9s,baz=11,slow=5.2,SNR=8.6						
NRIK	Noril'sk	150.87

CHGR						PKPab	00 21 45.4	+0.3
ZALV	Zalesovo Beam	166.14	8	PKP		PKPdf	00 20 44.5	-2.7
	comp=Z,2.8nm,0.9s,baz=294,slow=1.5,SNR=14							
NIL	Nilore	166.44	114	PKPdf		PKPdf	00 20 47.9	-0.3
NIL						PKPab	00 21 49.8	-0.3
LZH	Lanzhou	166.91	256	*e*PKP		PKPdf	00 20 48.3	-0.4
LZH				pPKP		pPKPdf	00 20 51.5	-1.2
LZH				AMB		AMB		
	comp=Z,130nm,4.5s							
LZH				LR		LR		
	comp=Z,400nm,16.1s							
LZH				LR		LR		
	comp=Z,270nm,17.2s							
LZH				LR		LR		
	comp=Z,680nm,17.2s							
KURK	Kurchatov	167.64	29			PKPdf	00 20 47.3	-1.2
KSH	Kashi	170.67	91	PKP		PKPdf	00 20 51.8	+0.8
KSH				PP		PP	00 26 04.5	+4.6
KSH				AMB		AMB		
	comp=Z,170nm,8.7s							
NRN	Naryn	170.78	79	PKPab		PKPab	00 22 09.2	-0.3
GTA	Gaotai	170.93	268	*e*PKP		PKPdf	00 20 50.5	-0.6
GTA				sPKP			00 20 56.3	
GTA				PKPab		PKPab	00 22 10.5	+0.5
GTA				LR		LR		
	comp=Z,240nm,21.5s							
GTA				LR		LR		
	comp=Z,250nm,22.9s							
GTA				LR		LR		
	comp=Z,450nm,24.4s							
MKAR	Makanchi Array	172.25	31	PKP		PKPdf	00 20 49.0	-2.3
	comp=Z,1.6nm,1.1s,baz=356,slow=3.9,SNR=5.4							
GOMU	GeErMu	173.32	235	PKP		PKPdf	00 20 53.0	+0.4
GOMU				pPKP		pPKPdf	00 20 56.8	+0.1
GOMU				sPKP			00 20 58.0	
WMQ	Urumqi	176.44	4	*e*PKP		PKPdf	00 20 54.3	+1.4
WMQ				LR		LR		
	comp=Z,290nm,18.9s							
WMQ				LR		LR		
	comp=Z,280nm,17.7s							
WMQ				LR		LR		
	comp=Z,230nm,20.1s							

PRU ***31*** *00:11:08.2±0.0, 42°.66N×13°.45E, h0km*
ROM ***31*** *00:11:10.6±0.0, 42°.782N±0°.002×13°.103E±0°.003, h10km, ML3.3/85, Error ellipse: s-maj=0.2km s-min=0.1km az=87.0*
IDC ***31*** *00:11:10.8±1.6, 42°.92N×13°.46E, h0km, mb3.3/1, mbtmp3.3/6, ML3.1/5, Error ellipse: s-maj=32.6km s-min=14.7km az=94.0*
ISC 31 00:11:11.0±0.7, 42°.75N±0°.01×13°.12E±0°.02, h13km±4km, n158, σ1$22/203, 43C-49D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.11	25	⇑P	Pg	00 11 13.8	-0.6
T1245				S	Sg	00 11 15.6	-1.2
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1201	Domo (RI)	0.14	136	P	Pb	00 11 15.1	-0.4
T1201				S	Sg	00 11 18.4	+1.3
T1217	Poggiodomo (PG	0.15	253	P	Pg	00 11 14.6	-0.2
T1217				S	Sg	00 11 17.3	0.0
T1216	Preci, Frazion	0.16	331	P	Pg	00 11 14.2	-0.7
T1216				S	Sg	00 11 16.5	-1.0
T1216				AML	AML		
	comp=E,63900μm,0.2s						
T1216				AML	AML		
	comp=N,70700μm,0.7s						
T1216				AML	AML		
	comp=N,70750μm,0.7s						
T1216				AML	AML		
	comp=E,63900μm,0.3s						
T1216				AML	AML		
	comp=N,70700μm,0.7s						
LNSS	Leonessa	0.16	202	⇑P	Pb	00 11 15.2	-0.7
LNSS				S	Sg	00 11 18.5	+0.7
T1204	Amatrice, Fraz	0.16	119	P	Pb	00 11 15.4	-0.6
T1204				S	Sg	00 11 18.7	+0.9
T1215	Vallo di Nera,	0.19	284	⇓P	Pg	00 11 15.1	-0.4
T1215				S	Sg	00 11 17.9	-0.5
T1215				AML	AML		
	comp=N,19800μm,0.1s						
T1215				AML	AML		
	comp=E,18450μm,0.5s						
T1215				AML	AML		
	comp=E,17550μm,0.5s						
T1215				AML	AML		
	comp=N,19750μm,0.1s						
T1215				AML	AML		
	comp=N,19050μm,0.1s						
T1215				AML	AML		
	comp=E,18500μm,0.5s						
SMA1	SAN MARTINO	0.20	128	P	Pb	00 11 15.9	-0.7
SMA1				S	Sg	00 11 20.2	+1.5
MMO1	Montemonaco	0.21	46	⇑P	Pg	00 11 15.4	-0.4
MMO1				S	Sg	00 11 18.7	-0.3
FEMA	Monte Fema	0.21	346	⇑P	Pg	00 11 15.2	-0.7
FEMA				S	Sg	00 11 18.3	-0.9
FEMA				AML	AML		
	comp=E,42150μm,0.3s						
FEMA				AML	AML		
	comp=N,32500μm,0.6s						
T1241	Roccafluvione,	0.25	66	P	Pg	00 11 16.4	0.0
T1241				S	Sg	00 11 20.5	+0.5
T1241				AML	AML		
	comp=E,45650μm,0.3s						
T1241				AML	AML		
	comp=N,46950μm,0.3s						
T1241				AML	AML		
	comp=N,46900μm,0.3s						
T1241				AML	AML		
	comp=E,44800μm,0.3s						
T1241				AML	AML		
	comp=N,48550μm,1.3s						
RM33	Pellescritta (	0.26	164	P	Pb	00 11 16.8	-0.7
RM33				S	Sg	00 11 21.4	+1.2
RM33				AML	AML		
	comp=E,15650μm,1.5s						
RM33				AML	AML		
	comp=N,11500μm,1.4s						
RM33				AML	AML		
	comp=E,15400μm,1.4s						
RM33				AML	AML		
	comp=N,11550μm,1.4s						
RM33				AML	AML		
	comp=N,11700μm,1.4s						
AM05	Amandola Campo	0.28	37	⇑P	Pg	00 11 16.6	-0.3
AM05				S	Sg	00 11 20.8	-0.1
AM05				AML	AML		
	comp=E,5470μm,1.0s						
AM05				AML	AML		
	comp=N,5600μm,0.2s						
AM05				AML	AML		
	comp=N,1375μm,0.1s						
AM05				AML	AML		
	comp=N,1370μm,0.1s						
AM05				AML	AML		
	comp=N,5595μm,0.2s						
AM05				AML	AML		
	comp=E,23400μm,0.7s						
T1211	Morro Reatino	0.30	222	P	Pb	00 11 17.4	-0.9
T1211				S	Sb	00 11 21.9	-1.2
T1211				AML	AML		
	comp=N,20050μm,0.3s						
T1211				AML	AML		
	comp=E,14200μm,0.7s						
T1211				AML	AML		
	comp=N,20100μm,0.3s						
T1211				AML	AML		
	comp=E,14200μm,0.7s						
CAMP	Campotosto	0.30	136	⇓P	Pb	00 11 17.6	-0.8
CAMP				S	Sb	00 11 22.8	-0.5
CAMP				AML	AML		
	comp=N,6485μm,0.8s						
CAMP				AML	AML		
	comp=E,6040μm,1.0s						
ARRO	Arrone	0.32	236	P	Pb	00 11 17.6	-0.9
ARRO				S	Sb	00 11 22.9	-0.6
T1247	Pizzolo (AQ)	0.34	157	⇑P	Pg	00 11 17.5	-0.5
T1247				AML	AML		
	comp=E,9865μm,1.2s						
T1247				AML	AML		
	comp=N,8405μm,1.0s						
CSP1	Cessapalombo	0.34	10	⇑P	Pg	00 11 17.4	-0.6
CSP1				S	Sg	00 11 22.5	-0.3
CSP1				AML	AML		
	comp=N,20750μm,1.1s						
CSP1				AML	AML		
	comp=E,24150μm,0.2s						
GUMA	Gualdo di Mace	0.35	27	⇑P	Pg	00 11 17.9	-0.2
GUMA				S	Sg	00 11 23.3	+0.5
GUMA				AML	AML		
	comp=E,24700μm,0.6s						
GUMA				AML	AML		
	comp=N,41450μm,0.5s						
GUMA				AML	AML		
	comp=E,29500μm,0.4s						
GUMA				AML	AML		
	comp=N,29250μm,0.5s						
SEF1	Sefro	0.41	342	P	Pg	00 11 18.5	-0.8
SEF1				S	Sg	00 11 24.4	-0.4
SEF1				AML	AML		
	comp=E,22650μm,0.2s						
SEF1				AML	AML		
	comp=N,11815μm,0.5s						
CESX	Cesi	0.42	250	⇑P	Pg	00 11 19.2	-0.3
CESX				S	Sg	00 11 25.5	+0.3
CESX				AML	AML		
	comp=E,9210μm,0.5s						
CESX				AML	AML		
	comp=N,9360μm,0.5s						
MDAR	Monte D'Aria	0.44	2	P	Pg	00 11 18.9	-0.8
MDAR				S	Sg	00 11 25.4	-0.3
MDAR				AML	AML		
	comp=N,12950μm,0.3s						
MDAR				AML	AML		
	comp=E,8605μm,0.4s						
ASSB	Assisi San Ben	0.45	310	⇓P	Pg	00 11 19.1	-0.8
ASSB				S	Sg	00 11 25.4	-0.5
ASSB				AML	AML		
	comp=N,5860μm,0.6s						
ASSB				AML	AML		
	comp=E,8015μm,1.3s						
GIGS	Gran Sasso	0.45	133	⇓P	Pb	00 11 19.8	-1.0
AQU	L'Aquila	0.45	153	⇓P	Pb	00 11 20.3	-0.5
AQU				AML	AML		
	comp=E,3875μm,1.3s						
AQU				AML	AML		
	comp=N,3065μm,1.2s						
AQU				AML	AML		
	comp=E,3880μm,1.3s						
AQU				AML	AML		
	comp=N,3025μm,1.2s						
FIU1	Fiuminata	0.46	342	P	Pg	00 11 19.3	-0.8
FIU1				S	Sg	00 11 25.9	-0.4
MNTP	Montappone	0.46	34	⇓P	Pg	00 11 20.3	+0.2
SSM1	San Severino M	0.48	5	P	Pg	00 11 19.7	-0.7
SSM1				S	Sg	00 11 26.8	-0.1
GAG1	Gagliole	0.48	355	P	Pg	00 11 20.0	-0.7
GAG1				S	Sg	00 11 27.1	0.0
GAG1				AML	AML		
	comp=E,17300μm,0.6s						
GAG1				AML	AML		
	comp=N,15350μm,1.4s						
FIAM	Fiamignano	0.49	180	⇑P	Pb	00 11 20.6	-0.8
FIAM				S	Sb	00 11 29.0	+0.5
FIAM				AML	AML		
	comp=E,4940μm,0.7s						
FIAM				AML	AML		
	comp=N,2840μm,0.7s						
ATCC	AVT- Casa Cast	0.56	321	⇓P	Pg	00 11 21.1	-0.8
ATCC				S	Sg	00 11 29.5	+0.1
ATCC				AML	AML		
	comp=E,6225μm,0.5s						
ATCC				AML	AML		
	comp=N,6500μm,0.6s						
TRE1	Treia	0.57	14	P	Pg	00 11 21.9	-0.3
TRE1				AML	AML		
	comp=E,9785μm,0.6s						
TRE1				AML	AML		
	comp=N,7425μm,1.5s						
EL6	Elcito	0.57	359	⇑P	Pg	00 11 21.4	-0.9
EL6				S	Sg	00 11 30.0	0.0
EL6				AML	AML		
	comp=E,9825μm,0.4s						
EL6				AML	AML		
	comp=N,11950μm,0.2s						
TRTR	Tortoreto Alta	0.58	84	⇑P	Pb	00 11 23.5	+0.4
TRTR				AML	AML		
	comp=N,11500μm,0.7s						
TRTR				AML	AML		
	comp=E,11250μm,0.7s						
FAGN	Fagnano	0.60	145	⇓P	Pb	00 11 22.5	-0.8
FAGN				AML	AML		
	comp=E,6360μm,0.5s						
FAGN				AML	AML		
	comp=N,3305μm,0.4s						
FOSV	Fossato di Vic	0.60	334	⇓P	Pg	00 11 21.8	-1.1
FOSV				S	Sg	00 11 30.1	-0.7
FOSV				AML	AML		
	comp=N,3800μm,0.3s						
FOSV				AML	AML		
	comp=E,3000μm,0.4s						
VCEL	Villa Celiera	0.64	124	⇓P	Pb	00 11 23.7	-0.5
VCEL				AML	AML		
	comp=E,3895μm,1.5s						
VCEL				AML	AML		
	comp=N,3475μm,0.6s						
MURB	Monte Urbino	0.67	319	P	Pg	00 11 23.2	-0.9
MURB				S	Sg	00 11 32.3	-0.7
SRES	S.Oreste - Sor	0.69	221	⇑P	Pg	00 11 24.0	-0.4
SRES				S	Sn	00 11 37.0	+0.1
SRES				AML	AML		
	comp=N,1340μm,0.4s						
SRES				AML	AML		
	comp=E,1180μm,1.4s						
ATTE	AVT- Monte Tez	0.72	308	⇓P	Pg	00 11 24.0	-1.0
ATTE				AML	AML		
	comp=E,1710μm,0.6s						
ATTE				AML	AML		
	comp=N,1240μm,0.3s						
ATTE				AML	AML		
	comp=N,1245μm,0.3s						
ATTE				AML	AML		
	comp=E,1715μm,0.6s						
T0110	Collepietro	0.72	137	⇓P	Pb	00 11 24.6	-0.8
T0110				AML	AML		
	comp=E,2205μm,0.5s						
T0110				AML	AML		
	comp=N,2655μm,0.4s						
PP3	Marolino	0.72	30	⇑P	Pg	00 11 25.1	+0.1
PP3				AML	AML		
	comp=E,4250μm,1.3s						
PP3				AML	AML		
	comp=E,4755μm,1.0s						
PP3				AML	AML		
	comp=N,4765μm,1.1s						
PP3				AML	AML		
	comp=N,5035μm,1.1s						
ATFO	Monte Foce - G	0.73	327	⇑P	Pg	00 11 24.3	-1.0
ATFO				AML	AML		
	comp=E,3275μm,0.4s						
ATFO				AML	AML		
	comp=N,3285μm,0.3s						
ARVD	Arcevia	0.76	350	⇑P	Pg	00 11 24.5	-1.2
ARVD				S	Sg	00 11 37.0	+1.4
ARVD				AML	AML		
	comp=N,1235μm,0.9s						
ARVD				AML	AML		
	comp=E,1790μm,1.3s						
MGAB	Montegabbione	0.76	282	⇓P	Pg	00 11 25.1	-0.7
MGAB				AML	AML		
	comp=E,3685μm,1.5s						
MGAB				AML	AML		
	comp=E,3945μm,1.5s						
MGAB				AML	AML		
	comp=N,3945μm,0.4s						
MGAB				AML	AML		
	comp=E,3690μm,1.5s						
MGAB				AML	AML		
	comp=N,4035μm,0.4s						
PTQR	Pietraquaria	0.76	164	⇑P	Pb	00 11 25.5	-0.7
PTQR				AML	AML		
	comp=E,872μm,0.9s						
PTQR				AML	AML		
	comp=N,628μm,1.6s						
MTCE	Montecelio	0.78	201	⇑P	Pg	00 11 24.1	-2.1
MTCE				AML	AML		
	comp=E,1270μm,0.5s						
MTCE				AML	AML		
	comp=N,994μm,0.6s						
CERT	Cerreto	0.81	187	⇑P	Pg	00 11 26.0	-0.8
CERT				AML	AML		
	comp=E,3290μm,0.6s						
CERT				AML	AML		
	comp=N,1575μm,1.1s						
FRON	Frontone	0.82	339	P	Pg	00 11 25.8	-1.1
FRON				S	Sg	00 11 38.0	+0.4
FRON				AML	AML		
	comp=E,1715μm,0.4s						
FRON				AML	AML		
	comp=N,2715μm,0.5s						
FRON				AML	AML		
	comp=E,1710μm,0.4s						
FRON				AML	AML		
	comp=N,2710μm,0.5s						
ATVO	AVT- Monte Val	0.82	320	⇓P	Pg	00 11 25.5	-1.3
ATVO				AML	AML		
	comp=N,1605μm,0.5s						
ATVO				AML	AML		
	comp=E,2495μm,0.4s						
ATMI	Monte Miggiano	0.85	313	⇑P	Pg	00 11 26.9	-0.7
ATMI				AML	AML		
	comp=E,4320μm,0.5s						
ATMI				AML	AML		
	comp=N,4145μm,0.9s						
ATMI				AML	AML		
	comp=E,4325μm,0.5s						
AOI	Ancona	0.87	24	⇓P	Pg	00 11 27.3	-0.6
AOI				S	Sn	00 11 42.0	+0.5
AOI				AML	AML		
	comp=N,1900μm,0.4s						
AOI				AML	AML		
	comp=E,2100μm,0.3s						
ATPI	Pietralunga -	0.87	323	⇓P	Pg	00 11 26.7	-1.3
ATPI				AML	AML		
	comp=N,1345μm,0.4s						
ATPI				AML	AML		
	comp=E,1520μm,0.6s						
PIEI	Pieia	0.89	331	⇓P	Pg	00 11 26.7	-1.6
PIEI				AML	AML		
	comp=E,1755μm,0.4s						
PIEI				AML	AML		
	comp=N,1520μm,0.2s						
SACS	San Casciano d	0.90	276	⇓P	Pg	00 11 27.7	-0.7
SACS				AML	AML		
	comp=E,1650μm,1.0s						
SACS				AML	AML		
	comp=E,1620μm,1.0s						
SACS				AML	AML		
	comp=N,1910μm,1.0s						
SACS				AML	AML		
	comp=N,1885μm,1.0s						
MPAG	Monte Paganucc	0.91	343	⇑P	Pg	00 11 27.4	-1.3
RCAV	Rocca di Cave	0.92	188	S	Sn	00 11 44.0	+1.3
NARO	Abbazia di Nar	0.94	335	⇓P	Pg	00 11 27.9	-1.3
NARO				S	Sb	00 11 43.0	+1.4
NARO				AML	AML		
	comp=N,1410μm,1.0s						
NARO				AML	AML		
	comp=E,1060μm,0.7s						
SENI	Senigallia	0.95	5	⇓P	Pg	00 11 29.4	0.0
SENI				AML	AML		
	comp=E,9440μm,0.6s						
SENI				AML	AML		
	comp=N,6825μm,0.3s						
SENI				AML	AML		
	comp=E,9440μm,0.6s						
SENI				AML	AML		
	comp=N,6825μm,0.3s						
FSSB	Fossombrone	0.97	345	⇑P	Pg	00 11 28.4	-1.3
FSSB				AML	AML		
	comp=E,6675μm,0.3s						
FSSB				AML	AML		
	comp=N,6810μm,0.4s						
LATE	Laterza	0.98	262	P	Pg	00 11 29.7	-0.3
BADI	Badiali	0.99	320	P	Pg	00 11 29.2	-1.0
CAFI	Castiglion Fio	1.02	305	⇑P	Pg	00 11 29.7	-1.1
CAFI				AML	AML		
	comp=E,1153μm,0.5s						
CAFI				AML	AML		
	comp=N,709μm,0.3s						
CAFI				AML	AML		
	comp=N,708μm,0.3s						
CAFI				AML	AML		
	comp=E,1154μm,0.5s						
RDP	Rocca di Papa	1.04	197	P	Pn	00 11 30.7	-0.6
RDP				AML	AML		
	comp=N,2545μm,1.3s						
RDP				AML	AML		
	comp=E,2670μm,0.4s						
MA9	Marino	1.04	199	⇓P	Pn	00 11 32.1	+0.8
MA9				AML	AML		
	comp=E,1410μm,0.5s						
MA9				AML	AML		
	comp=N,1625μm,0.6s						
PE3	Peglio	1.05	334	⇓P	Pb	00 11 30.2	-0.8
PE3				S	Sn	00 11 47.0	+1.1
PE3				AML	AML		
	comp=E,15μm,0.4s						
PE3				AML	AML		
	comp=N,15μm,0.4s						
CAFR	Castel Frentan	1.05	120	⇓P	Pb	00 11 30.8	-0.2
CAFR				AML	AML		
	comp=N,534μm,1.2s						
CAFR				AML	AML		
	comp=E,666μm,0.4s						
LPEL	Lama dei Pelig	1.06	132	⇑P	Pg	00 11 30.3	-1.1
LPEL				AML	AML		
	comp=N,593μm,0.9s						
LPEL				AML	AML		
	comp=E,854μm,0.7s						
MCIV	Monte Civitell	1.06	272	P	Pb	00 11 31.1	-0.3
MCIV				AML	AML		
	comp=E,1185μm,0.4s						
MCIV				AML	AML		
	comp=N,573μm,0.4s						
MCIV				AML	AML		
	comp=N,574μm,0.4s						
MCIV				AML	AML		
	comp=E,1185μm,0.4s						
SF04	Casetta	1.08	275	⇓P	Pb	00 11 31.5	0.0
SF04				AML	AML		
	comp=E,1374μm,0.5s						
SF04				AML	AML		
	comp=N,1134μm,0.3s						
SF04				AML	AML		
	comp=E,1370μm,0.5s						
SF04				AML	AML		
	comp=N,1133μm,0.3s						
TOLF	Tolfa	1.08	231	⇑P	Pg	00 11 31.0	-0.8
TOLF				AML	AML		
	comp=N,1048μm,0.6s						
TOLF				AML	AML		
	comp=E,1285μm,0.5s						
SSP9	Sansepolcro	1.09	319	⇓P	Pb	00 11 31.6	-0.2
SSP9				AML	AML		
	comp=E,809μm,0.7s						
SSP9				AML	AML		
	comp=N,760μm,1.5s						
SSP9				AML	AML		
	comp=N,770μm,1.5s						
SSP9				AML	AML		
	comp=E,810μm,0.7s						
LAV9	Lanuvio	1.12	196	P	Pn	00 11 33.2	+0.8
LAV9				AML	AML		
	comp=N,1820μm,1.5s						
LAV9				AML	AML		
	comp=E,2595μm,0.5s						
LAV9				AML	AML		
	comp=N,1950μm,1.5s						
LAV9				AML	AML		
	comp=E,2520μm,0.5s						
CPGN	Carpegna, Ital	1.20	331	⇓P	Pn	00 11 33.8	+0.2
CPGN				AML	AML		
	comp=N,2475μm,0.6s						
CPGN				AML	AML		
	comp=E,1855μm,0.7s						
GIUL	Giuliano Di Ro	1.20	175	P	Pg	00 11 33.9	-0.2
GIUL				AML	AML		
	comp=E,442μm,1.6s						
GIUL				AML	AML		

comp=N,742μm,0.6s
ARCI Arcidosso 1.22 275 ⇑P Pg 00 11 34.7 +0.2
CRE Caprese Michel 1.22 316 ⇓P Pn 00 11 32.8 -1.0
CRE AML AML
comp=E,614μm,1.4s
CRE AML AML
comp=N,617μm,1.3s
LATB Latina 1.27 185 ⇓P Pn 00 11 33.7 -0.6
LATB AML AML
comp=E,204μm,0.7s
LATB AML AML
comp=N,182μm,0.7s
FRES Fresagrandinar 1.39 124 ⇑P Pg 00 11 38.9 +1.2
MAON Monte Argentar 1.51 258 ⇓P Pn 00 11 37.6 -0.1
MAON AML AML
comp=N,166μm,1.6s
MAON AML AML
comp=E,208μm,1.1s
FROS Frosini 1.51 288 ⇓P Pn 00 11 38.1 +0.4
FROS AML AML
comp=N,261μm,0.5s
FROS AML AML
comp=E,257μm,0.4s
CSNT Castellina Chi 1.52 299 P Pn 00 11 37.8 -0.1
CSNT AML AML
comp=N,184μm,0.6s
CSNT AML AML
comp=E,152μm,1.1s
OSSC Osservatorio P 1.57 300 ⇑P Pn 00 11 37.6 -1.0
OSSC AML AML
comp=E,156μm,0.7s
OSSC AML AML
comp=N,164μm,1.4s
RUFI Rufina 1.60 313 ⇓P Pn 00 11 40.3 +1.3
CASP Castiglione de 1.66 272 ⇓P Pn 00 11 39.6 -0.2
CASP AML AML
comp=N,128μm,0.5s
CASP AML AML
comp=E,87μm,1.2s
TRIF Trifonti 1.67 283 ⇓P Pn 00 11 39.9 0.0
TRIF AML AML
comp=E,162μm,1.6s
TRIF AML AML
comp=N,184μm,0.2s
PTRJ Pietraroja 1.74 143 P Pg 00 11 43.6 -0.8
PTRJ S Sg 00 12 05.0 -2.0
MELA Melanico ??? S 1.82 124 ⇓P Pg 00 11 44.7 -1.2
BRIS BRISIGHELLA 1.82 320 ⇑P Pb 00 11 45.5 +1.3
MPPT Montemurlo 1.91 310 ⇑P Pn 00 11 43.9 +0.7
MTCR Monte La Croce 2.00 310 P Pn 00 11 44.6 0.0
APRC Apricena 2.06 118 ⇑P Pb 00 11 47.4 -0.8
PII Pisa 2.13 298 ⇓P Pn 00 11 47.1 +0.9
PII AML AML
comp=E,120μm,0.5s
PII AML AML
comp=N,130μm,1.6s
CELB S.Piero in Cam 2.14 271 ⇓P Pn 00 11 46.2 -0.3
CELB AML AML
comp=N,68μm,0.8s
CELB AML AML
comp=E,69μm,0.8s
POPM Popiglio 2.15 308 ⇑P Pn 00 11 47.4 +0.9
POPM AML AML
comp=N,100μm,0.3s
POPM AML AML
comp=E,119μm,0.4s
SGRT San Giovanni R 2.19 116 P Pn 00 11 47.2 +0.1
SGRT AML AML
comp=N,288μm,0.5s
SGRT AML AML
comp=E,248μm,1.6s
BRJN Brijuni 2.20 12 ⇑P Pn 00 11 47.6 +0.4
MAIM Mastiano 2.24 302 ⇓P Pn 00 11 48.1 +0.3
MAIM AML AML
comp=N,122μm,0.5s
MAIM AML AML
comp=E,106μm,0.5s
VLC Villacollemand 2.44 306 ⇓P Pn 00 11 50.2 -0.3
VLC AML AML
comp=E,75μm,1.1s
VLC AML AML
comp=N,54μm,1.4s
VLC AML AML
comp=E,52μm,1.3s
VLC AML AML
comp=N,86μm,1.5s
PLMA Palmaria, Port 2.71 300 P Pn 00 11 54.9 +0.7
PLMA AML AML
comp=N,48μm,0.3s
PLMA AML AML
comp=E,37μm,0.8s
GRAM Graiana 2.82 309 P Pn 00 11 56.7 +0.9
GRAM AML AML
comp=E,137μm,0.4s
GRAM AML AML
comp=N,138μm,0.5s
SMPL Sampolo 2.92 258 ⇑P Pn 00 11 59.0 +1.9
CORF Corte 2.97 263 S Sn 00 12 33.0 -0.3
PGF Pioggiola 3.05 268 ⇓P Pn 00 11 59.7 +0.7
SABO M.te Sabotino 3.24 6 ⇑P Pn 00 12 01.8 +0.2
SABO AML AML
comp=E,860μm,1.6s
SABO AML AML
comp=N,214μm,0.6s
SABO AML AML
comp=N,836μm,0.6s
SABO AML AML
comp=E,210μm,1.6s
CGRP Cima Grappa 3.27 344 ⇑P Pn 00 12 03.4 +1.4
STON Ston 3.37 86 P Pn 00 12 03.0 -0.2
STON AML AML
comp=N,43μm,0.8s
STON AML AML
comp=E,39μm,1.4s
SALO Salr 3.42 328 ⇓P Pn 00 12 05.5 +1.5
LJU Ljubljana 3.44 17 ⇑P Pn 00 12 05.2 +1.0
LJU AML AML
comp=E,607μm,1.1s
LJU AML AML
comp=N,782μm,0.5s
CTI Castel Tesino 3.46 343 P Pn 00 12 06.2 +1.6
MPRI Monte Prat 3.49 358 ⇓P Pn 00 12 05.9 +0.9
MPRI AML AML
comp=E,137μm,0.4s
MPRI AML AML
comp=N,204μm,0.7s
STAL STALIGIAL 3.52 355 ⇓P Pn 00 12 06.2 +0.8
STAL AML AML
comp=E,156μm,0.7s
STAL AML AML
comp=N,142μm,0.8s
LUSI Trento, Gardas 3.56 335 ⇓P Pn 00 12 07.2 +1.2
PTCC Patocco-Chiusa 3.65 3 ⇑P Pn 00 12 07.6 +0.3
PTCC AML AML
comp=N,60μm,0.6s
PTCC AML AML
comp=E,74μm,0.3s
CLUD Cludinico 3.71 357 ⇓P Pn 00 12 08.7 +0.8
CLUD AML AML
comp=E,92μm,1.6s
CLUD AML AML
comp=N,90μm,0.8s
CLUD AML AML
comp=E,89μm,0.8s
CLUD AML AML
comp=N,70μm,0.7s
MABI Malga Bissina 3.79 331 ⇑P Pn 00 12 10.2 +0.9
MABI AML AML
comp=E,34μm,1.6s
MABI AML AML
comp=N,50μm,0.4s
ACOM Acomizza, Ital 3.80 4 ⇑P Pn 00 12 10.5 +1.1
ZOU Zoufplan 3.80 358 ⇓P Pn 00 12 10.1 +0.7
ZOU AML AML
comp=N,74μm,1.0s
ZOU AML AML
comp=N,93μm,1.0s
ZOU AML AML
comp=E,100μm,1.2s
ZOU AML AML
comp=E,84μm,0.7s
FVI Forni Avoltri 3.85 356 ⇓P Pn 00 12 11.0 +1.1
FVI AML AML
comp=E,72μm,0.5s
FVI AML AML
comp=N,80μm,1.6s

OBKA Obir 3.89 15 ePn Pn 00 12 10.5 0.0
comp=N,2.4nm,0.3s
MYKA Terra Mystica 3.89 5 ePn Pn 00 12 11.0 +0.4
comp=N,2.3nm,0.2s
MILN Milano 3.91 316 ⇓P Pb 00 12 19.9 +0.2
KOSI Kohlern 3.91 342 ⇑P Pn 00 12 13.1 +2.2
APPI Appiano 3.96 341 P Pn 00 12 13.5 +2.0
ABTA Abfaltersbach 4.02 354 ePn Pn 00 12 13.7 +1.5
comp=N,15nm,0.4s,SNR=41
SOKA Soboth 4.15 18 ePn Pn 00 12 14.5 +0.4
comp=N,0.8nm,0.2s
SPS2 Spezzano della 4.23 144 S Sn 00 13 01.0 -3.3
RISI Rein 4.26 350 ⇓P Pn 00 12 17.7 +2.0
MUGIO Muggio 4.31 319 ⇑P Pn 00 12 16.6 +0.4
MUGIO AML AML
comp=N,26μm,0.5s
MUGIO AML AML
comp=E,26μm,1.3s
VSL Villasalto 4.31 222 ⇓P Pn 00 12 18.2 +1.9
IFIL Filicudi I Eol 4.33 165 S Sn 00 13 09.0 +2.3
ROSI Rosskopf 4.35 344 ⇑P Pn 00 12 19.1 +2.2
FETA Feichten 4.59 339 ePn Pn 00 12 22.2 +2.0
comp=E,2.7nm,0.3s
WTTA Wattenberg 4.63 347 ePn Pn 00 12 22.6 +1.9
comp=E,1.2nm,0.2s
DAVOX Davos/Dischmat 4.64 331 Pn Pn 00 12 23.0 +2.1
comp=E,1.8nm,0.3s,baz=141,slow=18,SNR=14
DAVOX Sn **Sn 00 13 16.4 +1.7**
comp=E,1.6nm,0.3s,baz=241,slow=16,SNR=4.2
comp=E,4.5nm,0.4s
SQTA Sankt Quirin 4.67 344 i Pn Pn 00 12 23.3 +2.1
comp=E,5.1nm,0.3s,SNR=13
WATA Walderalm 4.71 347 ePn Pn 00 12 24.0 +2.1
comp=E,3.0nm,0.2s,SNR=6.7
TRAV Traversella 4.75 307 P Pn 00 12 26.9 +4.5
ARSA Arzberg 4.81 20 ePn Pn 00 12 23.7 +0.6
comp=E,1.6nm,0.3s,SNR=6.5
MOTA Moosalm 4.81 343 i Pn Pn 00 12 25.4 +2.2
comp=E,1.7nm,0.2s,SNR=5.6
BIOA Bad Ischl, Aus 4.95 4 ePn Pn 00 12 25.9 +0.8
comp=E,2.7nm,0.2s,SNR=12
RETA Reutte 5.02 341 ePn Pn 00 12 28.3 +2.3
comp=E,2.5nm,0.3s,SNR=4.8
DAVA Damuels 5.08 334 Pn Pn 00 12 29.6 +2.6
comp=E,2.4nm,0.3s,SNR=4.8
MOA Molln 5.16 9 ePn Pn 00 12 28.3 +0.4
comp=E,0.7nm,0.1s,SNR=5.8
VAE Valguarnera 5.36 169 Pn Pn 00 12 33.4 +2.6
comp=E,0.6nm,0.3s,baz=0.0,slow=3.0,SNR=1.8
VAE Sn **Sn 00 13 32.6 +0.3**
comp=E,0.4nm,0.3s,baz=216,slow=19,SNR=1.9
comp=E,4.3nm,0.6s
RONA Rosalia, Austr 5.43 23 i Pn Pn 00 12 32.2 +0.6
comp=E,1.1nm,0.2s
CONA Conrad Observa 5.52 20 ePn Pn 00 12 33.1 +0.2
comp=E,2.6nm,0.4s,SNR=8.1
GERES GERESS Array B 6.11 4 Pn Pn 00 12 40.4 -0.6
comp=E,0.5nm,0.3s,baz=172,slow=13,SNR=16
GERES Sn **Sn 00 13 48.1 -2.6**
comp=E,1.7nm,0.3s,baz=176,slow=24,SNR=9.1
comp=E,0.6nm,0.3s
CKRC Cesky Krumlov 6.12 7 ePN Pn 00 12 40.5 -0.6
CKRC eSN **Sn 00 13 48.8 -2.2**
KHC Kasperske Hory 6.39 3 ePN Pn 00 12 44.5 -0.2
KHC eSN **Sn 00 13 55.9 -1.6**
KRUC Moravsky 6.71 19 ePN Pn 00 12 49.6 +0.5
TREC Trest 6.75 13 ePN Pn 00 12 49.1 -0.6
TREC eSN **Sn 00 14 03.5 -2.8**
VRAC Vranov 6.99 19 Pn Pn 00 12 51.0 -2.0
comp=E,0.1nm,0.3s,baz=199,slow=18,SNR=1.9
VRAC Sn **Sn 00 14 08.9 -3.2**
comp=E,0.3nm,0.3s,baz=283,slow=20,SNR=4.0
comp=E,0.7nm,0.5s
PRU Pruhonice 7.30 7 eSN Sn 00 14 16.3 -3.6
NKC Novy Kostel 7.50 357 eSN Sn 00 14 23.3 -1.5
KEST Kesra 7.60 204 Pn Pn 00 13 05.7 +4.2
comp=E,0.1nm,0.3s,baz=0.0,slow=5.1,SNR=1.8
comp=E,1.6nm,0.8s
CLL Collm 8.56 359 ePn Pn 00 13 14.0 -0.5
CLL ex x 00 13 34.0
CLL ex x 00 14 48.0
CLL ex x 00 15 01.0
CLL eSg **Sg 00 15 48.0 +2.6**
MKAR Makanchi Array 47.82 60 P P 00 19 49.0 +0.9
comp=E,0.3nm,0.6s,baz=272,slow=7.9,SNR=1.6
comp=E,0.3nm,0.6s

*UPP **31** 00:17:09.9±0.1, 67°.85N×20°.21E, h0km, ML2.3, Explosion*
*HEL **31** 00:17:10.7±0.1, 67°.84N×20°.18E, h0km, ML2.0, ML2.3(UPP), Explosion*
*IDC **31** 00:17:11.0±1.3, 67°.83N×20°.80E, h0km, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=22.5km s-min=8.1km az=120.0*
ISC 31 00:17:10.0±0.8, 67°.83N±0°.03×20°.27E±0°.03, h0km, n32, σ1 9 05/44, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOVU	**Salmi**	**0.39**	**354**	P	**Pg**	**00 17 17.2**	**-0.3**
KOVU				S	**Sg**	**00 17 22.4**	**-0.2**
KOVU	**Salmi**	**0.39**	**354**	*i* P	**Pg**	**00 17 17.2**	**-0.3**
KOVU				*i* S	**Sg**	**00 17 22.4**	**-0.2**
SALU	**Saltoluokta**	**0.81**	**237**	P	**Pg**	**00 17 24.9**	**-0.6**
SALU	**Saltoluokta**	**0.81**	**237**	*i* P	**Pg**	**00 17 24.9**	**-0.6**
KIF	**Kilpisjarvi**	**1.19**	**9**	*e*P	**Pb**	**00 17 32.9**	**-0.5**
KIF	**Kilpisjarvi**	**1.19**	**9**	*e*PB	**Pb**	**00 17 33.1**	**-0.3**
KIF				MSG		00 17 48.1	
	comp=Z,15nm,0.2s						
KIF				*e*S	**Sg**	**00 17 48.4**	**+0.1**
PAJU	**Pajala**	**1.37**	**125**	P	**Pg**	**00 17 35.5**	**-0.7**
PAJU	**Pajala**	**1.37**	**125**	*e*P	**Pg**	**00 17 35.5**	**-0.7**
HEF	**Hetta**	**1.40**	**64**	*e*P	**Pn**	**00 17 36.0**	**-0.7**
HEF	**Hetta**	**1.40**	**64**	*e*P	**Pn**	**00 17 36.0**	**-0.7**
HEF				MSG		00 17 53.5	
	comp=Z,12nm,0.2s						
HEF				*e*S	**Sg**	**00 17 54.5**	**-0.3**
ERTU	**Ertsjaerv**	**1.49**	**149**	P	**Pn**	**00 17 37.5**	**-0.4**
ERTU	**Ertsjaerv**	**1.49**	**149**	*e*P	**Pn**	**00 17 37.5**	**-0.4**
KTK1	**Kautokeino**	**1.61**	**42**	*e*PG	**Pn**	**00 17 40.1**	**+0.4**
KTK1				*e*SG	**Sb**	**00 18 01.5**	**0.0**
HARU	**Harads**	**1.70**	**170**	P	**Pn**	**00 17 41.5**	**+0.6**
HARU	**Harads**	**1.70**	**170**	*e*P	**Pn**	**00 17 41.5**	**+0.6**
TRO	**Tromso**	**1.87**	**346**	*e*PN	**Pn**	**00 17 43.7**	**+0.5**
TRO				*e*SG	**Sb**	**00 18 08.3**	**-0.6**
KALU	**Kalix**	**2.33**	**147**	P	**Pn**	**00 17 50.7**	**+1.3**
KALU	**Kalix**	**2.33**	**147**	*e*P	**Pn**	**00 17 50.7**	**+1.3**
TOF	**Tornio**	**2.38**	**136**	*e*PB	**Pn**	**00 17 51.9**	**+1.8**
	baz=322						
TOF				MSG		00 18 21.8	
	comp=Z,7.5nm,0.2s						
TOF				*e*SB	**Sb**	**00 18 23.8**	**+0.4**
SGF	**Sodankyl**	**2.43**	**96**	*e*PB	**Pb**	**00 17 53.3**	**-1.1**
	baz=285						
SGF				*e*SG	**Sb**	**00 18 26.3**	**+1.5**
RNF	**Rovaniemi**	**2.55**	**116**	*e*PB	**Pb**	**00 17 55.0**	**-1.6**
RNF				*e*SB	**Sb**	**00 18 28.1**	**-0.4**
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*P	**Pn**	**00 17 53.8**	**+1.1**
ARA0				*e*SB	**Sb**	**00 18 28.7**	**-0.2**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn	**Pn**	**00 17 53.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=225,slow=15,SNR=16						
ARCES				Lg	Lg	00 18 26.5	
	comp=Z,1.1nm,0.3s,baz=230,slow=24,SNR=17						
	comp=Z,0.8nm,0.3s						
KEV	**Kevo**	**3.12**	**49**	*e*S	**Sn**	**00 18 39.8**	**+1.7**
KEV				MSG		00 18 43.0	
	comp=Z,4.5nm,0.2s						
VRF	**Varrio**	**3.55**	**87**	*e*PG	**Pb**	**00 18 14.4**	**+0.8**
OUL	**Oulu**	**3.57**	**138**	*e*SG	**Sb**	**00 19 00.2**	**+2.7**
OBF8	**Ulkokalla**	**3.75**	**158**	*e*PG	**Pb**	**00 18 16.9**	**0.0**
OLKF	**Oulanka, Finla**	**3.88**	**109**	*e*P	**Pn**	**00 18 12.6**	**+1.7**
OLKF				*e*SG	**Sg**	**00 19 12.8**	**-1.7**
MSF	**Maaselka**	**3.96**	**115**	*e*P	**Pn**	**00 18 13.7**	**+1.8**
KU6	**Riekki**	**4.20**	**111**	*e*P	**Pn**	**00 18 16.5**	**+1.4**
KU6				*e*SG	**Sg**	**00 19 22.7**	**-2.0**
FINES	**FINESS Array B**	**6.88**	**156**	Pn	**Pn**	**00 18 51.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=340,slow=11,SNR=2.1						
FINES				Lg	Lg	00 20 46.4	
	comp=Z,0.3nm,0.3s,baz=344,slow=29,SNR=6.6						
	comp=Z,3.0nm,1.0s						
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**00 19 05.6**	**+0.2**
	baz=25,slow=12,SNR=1.6						
NOA				Lg	Lg	00 21 20.9	
	baz=35,slow=19,SNR=1.6						
	comp=Z,0.4nm,0.8s						

ROM 31 00:19:41.9±0.1, 42°.704N±0°.005×13°.155E±0°.004, h12km±1km, Md1.1/5, 1C, Error ellipse: s-maj=0.6km s-min=0.2km az=174.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.12**	**103**	P	Pb	00 19 45.7	-0.6
T1204				S	Sg	00 19 48.2	+0.7
T1204				AML	AML		
	comp=E,1785μm,0.5s						
T1204				AML	AML		
	comp=N,1390μm,0.2s						
LNSS	**Leonessa**	**0.13**	**220**	P	Pg	00 19 45.7	+0.5
LNSS				S	Sg	00 19 48.4	+0.8
LNSS				AML	AML		
	comp=E,1745μm,0.1s						
LNSS				AML	AML		
	comp=N,5875μm,0.7s						
LNSS				END			
SMA1	**SAN MARTINO**	**0.15**	**119**	P	Pg	00 19 45.9	+0.3
SMA1				S	Sg	00 19 48.8	+0.7
SMA1				END			
T1217	**Poggiodomo (PG**	**0.17**	**273**	P	Pg	00 19 46.1	+0.4
T1217				S	Sg	00 19 49.1	+0.7
T1217				AML	AML		
	comp=E,2235μm,0.2s						
T1217				AML	AML		
	comp=N,2855μm,0.4s						
T1217				AML	AML		
	comp=E,2145μm,0.2s						
T1217				AML	AML		
	comp=N,2910μm,0.4s						
T1217				AML	AML		
	comp=N,2855μm,0.4s						
T1217				AML	AML		
	comp=E,2148μm,0.2s						
T1217				AML	AML		
	comp=N,2911μm,0.4s						
T1217				END			
T1243	**Rocca Santa Ma**	**0.22**	**92**	P	Pg	00 19 46.9	+0.3
T1243				S	Sg	00 19 50.3	+0.6
T1243				END			
T1215	**Vallo di Nera,**	**0.23**	**295**	P	Pg	00 19 47.1	+0.3
T1215				S	Sg	00 19 50.9	+0.7
T1215				AML	AML		
	comp=E,1400μm,0.9s						
T1215				AML	AML		
	comp=N,2430μm,0.1s						
T1215				AML	AML		
	comp=E,1475μm,0.9s						
T1215				AML	AML		
	comp=N,2475μm,0.1s						
T1215				AML	AML		
	comp=E,1395μm,0.9s						
T1215				AML	AML		
	comp=N,2425μm,0.1s						
T1215				END			
MMO1	**Montemonaco**	**0.23**	**33**	P	Pg	00 19 47.3	+0.4
MMO1				S	Sg	00 19 51.1	+0.9
T1211	**Morro Reatino**	**0.28**	**232**	P	Pg	00 19 48.1	+0.4
T1211				S	Sb	00 19 52.8	-0.9
T1211				AML	AML		
	comp=E,1300μm,0.4s						
T1211				AML	AML		
	comp=N,1710μm,0.2s						
T1211				AML	AML		
	comp=E,1332μm,0.4s						
T1211				AML	AML		
	comp=N,1704μm,0.2s						
T1211				AML	AML		
	comp=E,1305μm,0.4s						
T1211				AML	AML		
	comp=N,1705μm,0.2s						
ARRO	**Arrone**	**0.31**	**247**	⇑P	Pg	00 19 48.5	+0.2
ARRO				AML	AML		
	comp=E,908μm,0.2s						
ARRO				AML	AML		
	comp=N,858μm,0.6s						
TERO	**Teramo**	**0.34**	**104**	P	Pg	00 19 48.9	+0.2
TERO				S	Sg	00 19 54.3	+0.9
TERO				AML	AML		
	comp=E,946μm,0.2s						
TERO				AML	AML		
	comp=N,799μm,0.5s						
TERO				AML	AML		
	comp=E,1030μm,0.2s						
TERO				AML	AML		
	comp=N,867μm,0.5s						
TERO				AML	AML		
	comp=E,946μm,0.2s						
TERO				AML	AML		
	comp=N,798μm,0.5s						
TERO				AML	AML		
	comp=N,868μm,0.5s						
GIGS	**Gran Sasso**	**0.40**	**130**	P	Pb	00 19 50.5	-0.5
GIGS				S	Sg	00 19 56.0	+0.8
GIGS				AML	AML		
	comp=E,143μm,0.2s						
GIGS				AML	AML		
	comp=N,116μm,0.3s						
GIGS				AML	AML		
	comp=E,144μm,0.2s						
FIAM	**Fiamignano**	**0.44**	**184**	S	Sb	00 19 58.0	-0.2
OFFI	**Offida**	**0.45**	**59**	P	Pb	00 19 52.0	+0.1
OFFI				AML	AML		
	comp=E,1510μm,1.5s						
OFFI				AML	AML		
	comp=N,1635μm,0.5s						

ROM 31 00:19:53.6±0.0, 42°.855N±0°.002×13°.083E±0°.003, h10km, ML2.5/25, 10C-7D, Error ellipse: s-maj=0.2km s-min=0.2km az=273.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**307**	P	Pg	00 19 56.3	+0.4
T1216				S	Sg	00 19 58.0	+0.5
T1216				AML	AML		
	comp=E,16200μm,0.3s						
T1216				AML	AML		
	comp=N,23200μm,0.3s						
T1216				AML	AML		
	comp=E,16200μm,0.3s						
T1245	**Castelsantange**	**0.08**	**89**	P	Pg	00 19 56.6	+0.4
T1245				S	Sg	00 19 58.5	+0.5
T1245				AML	AML		
	comp=E,7895μm,0.2s						
T1245				AML	AML		
	comp=N,11050μm,1.1s						
T1245				AML	AML		
	comp=E,7055μm,0.2s						
T1245				AML	AML		
	comp=N,10850μm,1.1s						
T1245				AML	AML		
	comp=E,9365μm,0.2s						
T1245				AML	AML		
	comp=N,11100μm,1.1s						
T1245				AML	AML		
	comp=E,9925μm,0.2s						
FEMA	**Monte Fema**	**0.11**	**347**	P	Pg	00 19 57.0	+0.4
FEMA				S	Sg	00 19 59.1	+0.4
FEMA				AML	AML		
	comp=N,5000μm,0.6s						
FEMA				AML	AML		
	comp=E,6760μm,0.3s						
FEMA				AML	AML		
	comp=N,6575μm,0.4s						
FEMA				AML	AML		
	comp=E,6760μm,0.3s						
FEMA				AML	AML		
	comp=N,6575μm,0.4s						
T1215	**Vallo di Nera,**	**0.17**	**251**	⇑P	Pg	00 19 57.9	+0.5
T1215				S	Sg	00 20 00.8	+0.9
T1215				AML	AML		
	comp=N,2430μm,0.1s						
T1215				AML	AML		
	comp=E,1475μm,0.9s						
T1215				AML	AML		
	comp=E,1400μm,0.9s						
T1215				AML	AML		
	comp=E,1480μm,0.9s						
T1215				AML	AML		

comp=E,2473μm,0.1s
T1215 AML AML
comp=E,1395μm,0.9s
T1215 AML AML
comp=N,2472μm,0.1s
T1215 AML AML
comp=N,2425μm,0.1s
T1215 AML AML
comp=N,2475μm,0.1s
T1217 Poggiodomo (PG 0.18 218 P Pg 00 19 58.2 +0.6
T1217 S Sg 00 20 01.4 +1.0
T1217 AML AML
comp=N,2855μm,0.4s
T1217 AML AML
comp=E,2145μm,0.2s
T1217 AML AML
comp=N,2910μm,0.4s
T1217 AML AML
comp=N,2855μm,0.4s
T1217 AML AML
comp=E,2148μm,0.2s
T1217 AML AML
comp=N,2910μm,0.5s
T1217 AML AML
comp=E,2235μm,0.2s
T1217 AML AML
comp=E,2148μm,0.2s
T1217 AML AML
comp=N,2911μm,0.4s
T1217 AML AML
comp=E,2148μm,0.2s
T1217 AML AML
comp=N,2915μm,0.5s
MMO1 Montemonaco 0.18 76 P Pg 00 19 58.1 +0.4
MMO1 S Sg 00 20 01.2 +0.8
AM05 Amandola Campo 0.23 58 P Pg 00 19 59.0 +0.5
AM05 S Sg 00 20 02.8 +1.0
T1201 Domo (RI) 0.23 148 P Pb 00 19 59.3 -0.7
T1201 S Sg 00 20 03.6 +1.8
T1204 Amatrice, Fraz 0.25 136 P Pg 00 19 59.4 +0.6
T1204 S Sg 00 20 03.6 +1.3
CSP1 Cessapalombo 0.25 21 P Pg 00 19 59.4 +0.5
CSP1 S Sg 00 20 03.5 +1.1
CSP1 AML AML
comp=E,1286μm,0.3s
CSP1 AML AML
comp=N,1945μm,0.8s
LNSS Leonessa 0.25 187 P Pg 00 19 59.5 +0.6
LNSS S Sg 00 20 03.5 +1.1
LNSS AML AML
comp=E,1745μm,0.1s
LNSS AML AML
comp=N,5875μm,0.7s
T1241 Roccafluvione, 0.26 90 ⇓P Pg 00 19 59.6 +0.7
T1241 AML AML
comp=E,2660μm,0.9s
T1241 AML AML
comp=N,1788μm,0.7s
T1241 AML AML
comp=E,2655μm,0.9s
T1241 AML AML
comp=N,17615μm,0.5s
T1241 AML AML
comp=N,17585μm,0.5s
T1241 AML AML
comp=E,2650μm,0.9s
GUMA Gualdo di Mace 0.28 42 P Pg 00 19 60.0 +0.7
GUMA AML AML
comp=E,3790μm,0.6s
GUMA AML AML
comp=E,3100μm,0.6s
GUMA AML AML
comp=N,2900μm,0.5s
GUMA AML AML
comp=N,3135μm,0.5s
SMA1 SAN MARTINO 0.29 140 P Pb 00 20 00.6 -0.4
SMA1 S Sg 00 20 04.6 +1.1
SEF1 Sefro 0.31 341 P Pg 00 20 00.5 +0.6
SEF1 S Sb 00 20 05.4 -1.0
T1243 Rocca Santa Ma 0.31 120 ⇑P Pg 00 20 00.4 +0.4
MDAR Monte D'Aria 0.34 7 P Pg 00 20 00.8 +0.3
MDAR S Sg 00 20 06.1 +1.1
ARRO Arrone 0.36 220 P Pg 00 20 01.2 +0.4
ARRO S Sb 00 20 06.9 -0.9
ARRO AML AML
comp=E,908μm,0.2s
ARRO AML AML
comp=N,858μm,0.6s
ASSB Assisi San Ben 0.36 301 P Pg 00 20 01.1 +0.2
ASSB S Sb 00 20 06.9 -1.1
ASSB AML AML
comp=E,792μm,0.8s
ASSB AML AML
comp=N,820μm,0.6s
T1211 Morro Reatino 0.36 208 ⇓P Pb 00 20 01.6 -0.6
T1211 AML AML
comp=E,1305μm,0.4s
T1211 AML AML
comp=N,1705μm,0.2s
T1211 AML AML
comp=N,1705μm,0.2s
T1211 AML AML
comp=E,1300μm,0.4s
CAMP Campotosto 0.40 143 ⇓P Pg 00 20 01.8 +0.2
CAMP AML AML
comp=E,326μm,0.3s
CAMP AML AML
comp=N,293μm,0.3s
CAMP AML AML
comp=E,326μm,0.3s
SNTG Esanatoglia 0.41 345 P Pb 00 20 02.5 -0.6
SNTG AML AML
comp=E,173μm,1.2s
SNTG AML AML
comp=E,174μm,1.2s
SNTG AML AML
comp=N,225μm,0.6s
CESX Cesi 0.44 237 P Pg 00 20 02.5 +0.2
CESX S Sb 00 20 09.3 -0.9
CESX AML AML
comp=E,700μm,1.1s
CESX AML AML
comp=N,907μm,0.9s
TERO Teramo 0.45 121 ⇑P Pg 00 20 02.5 +0.1
TERO AML AML
comp=E,944μm,0.2s
TERO AML AML
comp=E,1030μm,0.2s
TERO AML AML
comp=N,868μm,0.5s
TERO AML AML
comp=E,946μm,0.2s
TERO AML AML
comp=N,798μm,0.5s
TERO AML AML
comp=N,799μm,0.5s
TERO AML AML
comp=E,946μm,0.2s
ATCC AVT- Casa Cast 0.46 316 P Pg 00 20 03.0 +0.3
ATCC S Sb 00 20 10.2 -0.6
ATCC AML AML
comp=E,554μm,0.2s
ATCC AML AML
comp=N,468μm,0.2s
EL6 Elcito 0.47 2 P Pg 00 20 03.1 +0.2
EL6 S Sb 00 20 10.9 -0.3
GIGS Gran Sasso 0.54 138 ⇑P Pg 00 20 04.3 +0.1
GIGS AML AML
comp=E,144μm,0.2s
GIGS AML AML
comp=N,116μm,0.3s
GIGS AML AML
comp=E,144μm,0.2s
AQU L'Aquila 0.55 155 ⇓P Pb 00 20 05.2 -0.2
AQU S Sb 00 20 14.0 +0.6
AQU AML AML
comp=N,170μm,0.3s
AQU AML AML
comp=E,200μm,1.0s
TRTR Tortoreto Alta 0.61 94 ⇓P Pb 00 20 06.9 +0.5
TRTR AML AML
comp=N,984μm,0.9s
TRTR AML AML
comp=E,1265μm,1.3s
PP3 Marolino 0.65 36 ⇓P Pb 00 20 07.5 +0.5
PP3 AML AML
comp=E,566μm,0.6s
PP3 AML AML
comp=N,526μm,1.5s
PP3 AML AML
comp=E,565μm,0.6s
ARVD Arcevia 0.65 351 ⇑P Pb 00 20 07.3 +0.2
ARVD S Sn 00 20 18.0 -1.3
ARVD AML AML
comp=N,74μm,1.1s
ARVD AML AML
comp=E,104μm,0.8s
MGAB Montegabbione 0.72 275 ⇑P Pn 00 20 10.0 +0.2
ATVO AVT- Monte Val 0.72 317 ⇑P Pb 00 20 08.6 +0.2
ATVO AML AML
comp=E,139μm,0.3s
ATVO AML AML
comp=N,120μm,1.0s
ATVO AML AML
comp=N,120μm,1.0s
ATVO AML AML
comp=E,140μm,0.3s
SRES S.Oreste - Sor 0.75 215 S Sn 00 20 21.0 -0.6
ATMI Monte Miggiano 0.77 309 ⇓P Pn 00 20 10.9 +0.4
NARO Abbazia di Nar 0.84 334 P Pg 00 20 07.0 -2.8
SACS San Casciano d 0.86 270 ⇑P Pg 00 20 10.4 +0.1
SACS AML AML
comp=E,212μm,1.4s
SACS AML AML
comp=E,212μm,1.4s
SACS AML AML
comp=N,192μm,0.4s
FSSB Fossombrone 0.87 345 ⇑P Pb 00 20 10.8 +0.1
FSSB AML AML
comp=N,306μm,0.4s
FSSB AML AML
comp=E,222μm,0.4s
FSSB AML AML
comp=N,305μm,0.4s
TOLF Tolfa 1.13 226 ⇑P Pn 00 20 15.4 0.0
TOLF AML AML
comp=N,87μm,0.9s
TOLF AML AML
comp=E,64μm,0.6s
PTRJ Pietraroja 1.84 144 S Sb 00 20 51.0 +0.6
BRJN Brijuni 2.11 13 S Sn 00 20 54.0 -1.1

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*VAO **31** 00:20:09.8±0.5, 3.˙21N×74.˙42W, h10km, mb5.4*
*IDC **31** 00:20:09.9±1.6, 3.˙46N×74.˙54W, h35km±11km, mb4.5/26, mbtmp4.8/31, ML4.5/6, MS4.9/55, Error ellipse: s-maj=10.3km s-min=8.9km az=75.0*
*MOS **31** 00:20:10.7±0.9, 3.˙44N×74.˙57W, h50km, mb5.5/44, MS4.9/15, Error ellipse: s-maj=8.4km s-min=5.1km az=102.3*
*NEIC **31** 00:20:11.6±2.0, 3.˙45N±0.˙02×74.˙50W±0.˙06, h33km±1km, mb5.4/815, Ms_20 5.1/141, Mwb5.4/45, Mww5.6, Error ellipse: s-maj=10.0km s-min=2.6km az=249.0*
*NEIC **31** 00:20:12.6, 3.˙44N×74.˙46W, h30km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.49; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-1.53; $M_{r\theta}$-0.65; $M_{\theta\phi}$-0.66; $M_{\phi r}$0.17; Fault plane solution: $M_0$1.78000×10^{17} NP1:ϕ_s357.82000°, δ48.72000°, λ57.14000°. NP2:ϕ_s222.22000°, δ50.86000°, λ121.72000°. Principal axes: T 1.7917, Plg66.0000°, Azm198.0000°; N -0.0175, Plg24.0000°, Azm21.0000°; P -1.7742, Plg1.0000°, Azm290.0000°;*
*RSNC **31** 00:20:12.6±1.4, 3.˙41N×74.˙64W, h13km±4km, ML5.2, Mw5.3, Fault plane solution: NP1:ϕ_s0.00000°, δ41.00000°, λ58.00000°.*
*GCMT **31** 00:20:14.6±0.1, 3.˙37N±0.˙01×74.˙63W±0.˙01, h43km, MW5.6/139, Moment Tensor Solution. s138, c214; s139, c278; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.10±.04; $M_{\theta\theta}$0.86±.03; $M_{\phi\phi}$-2.96±.03; $M_{r\theta}$-1.04±.03; $M_{\theta\phi}$-0.40±.03; $M_{\phi r}$0.28±.04; Best double couple: $M_0$2.86600×10^{17} NP1:ϕ_s339.00000°, δ54.00000°, λ52.00000°. NP2:ϕ_s213.00000°, δ51.00000°, λ131.00000°. Principal axes: T 2.7240, Plg60.0000°, Azm189.0000°; N 0.2800, Plg30.0000°, Azm4.0000°; P -3.0070, Plg2.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **31** 00:20:17, 3.˙44N×74.˙44W, h46km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.24; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-2.43; $M_{r\theta}$-1.62; $M_{\theta\phi}$-0.13; $M_{\phi r}$-0.56; Fault plane solution: $M_0$2.91000×10^{17} NP1: ϕ_s340.00000°, δ43.00000°, λ48.00000°. NP2: ϕ_s210.00000°, δ60.00000°, λ122.00000°. Principal axes: T 3.1706, Plg61.0000°, Azm171.0000°; N -0.6264, Plg27.0000°, Azm13.0000°; P -2.5442, Plg9.0000°, Azm278.0000°;*

ISC 31 00:20:10.9±0.2, 3.˙38N±0.˙03×74.˙63W±0.˙03, h41km±1km, h41km:pP-P, n1595, σ1§57/1544, mb5.3/475, MS5.1/152, 22C-38D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRAC	**Prado**	**0.42**	**322**	*iP*	**Pn**	**00 20 19.6**	**-1.1**
PRAC				*eS*	**Sn**	**00 20 26.5**	**-1.0**
PRAC				IAML		00 20 29.6	
comp=Z,233μm,0.5s							
ORTC	**Ortega, Tolima**	**0.81**	**310**	⇓*iP*	**Pn**	**00 20 25.7**	**-0.2**
ORTC				*eS*	**Sn**	**00 20 37.0**	**+0.2**
ORTC				IAML		00 20 42.1	
comp=Z,208μm,0.5s							
BETC	**Betania**	**1.07**	**229**	⇓*eP*	**Pn**	**00 20 31.0**	**+1.4**
BETC				*eS*	**Sn**	**00 20 46.2**	**+2.9**
BETC				IAML		00 20 48.9	
comp=Z,118μm,0.4s							
VILC	**Villavicencio,**	**1.18**	**52**	⇓*iP*	**Pn**	**00 20 32.9**	**+1.8**
VILC				*eS*	**Sn**	**00 20 49.7**	**+3.7**
ANIL	**Santa Ana**	**1.34**	**325**	⇓*iP*	**Pn**	**00 20 33.1**	**-0.4**
ANIL				*eS*	**Sn**	**00 20 51.6**	**+1.3**
BOG	**Bogota**	**1.35**	**24**	*eP*	**Pn**	**00 20 36.1**	**+2.5**
BOG				*eS*	**Sn**	**00 20 55.6**	**+5.0**
GARC	**Garzon, Huila**	**1.47**	**216**	⇑*eP*	**Pn**	**00 20 37.2**	**+2.0**
GARC				*eS*	**Sn**	**00 20 58.2**	**+4.8**
ROSC	**El Rosal**	**1.48**	**12**	Pg	**Pn**	**00 20 36.9**	**+1.4**
comp=Z,10μm,0.3s,baz=171,slow=7.8,SNR=1662							
ROSC				Lg	Lg	00 20 58.1	
comp=Z,13μm,0.3s,baz=162,slow=20,SNR=8.5							
ROSC	**El Rosal**	**1.48**	**12**	Pn	**Pn**	**00 20 36.8**	**+1.4**
ROSC				Sn	**Sn**	**00 20 59.2**	**+5.5**
ROSC	**El Rosal**	**1.48**	**12**	⇑*iP*	**Pn**	**00 20 37.8**	**+2.4**
ROSC				*eS*	**Sn**	**00 21 00.4**	**+6.6**
ROSC				IAML		00 21 02.8	
comp=Z,41μm,0.5s							
CHIC	**Chingaza**	**1.53**	**36**	⇓*eP*	**Pn**	**00 20 38.1**	**+2.0**
CHIC				*eS*	**Sn**	**00 20 59.1**	**+4.2**
CHIC				IAML		00 21 06.3	
comp=Z,55μm,0.5s							
YOTC	**Yotoco, Valle**	**1.81**	**289**	⇓*iP*	**Pn**	**00 20 40.0**	**+0.2**
YOTC				*eS*	**Sn**	**00 21 04.3**	**+2.6**
YOTC				IAML		00 21 07.6	
comp=Z,8μm,0.3s							
NIZA	**Niza - Manizal**	**1.86**	**333**	*eP*	**Pn**	**00 20 42.9**	**+2.3**
NIZA				*eS*	**Sn**	**00 21 08.0**	**+4.9**
GUY2C	**Guyana, Caldas**	**1.97**	**338**	⇓*iP*	**Pn**	**00 20 43.0**	**+0.8**
GUY2C				*eS*	**Sn**	**00 21 11.2**	**+5.2**
GUY2C				IAML		00 21 13.8	
comp=Z,13μm,0.5s							
FLOC	**Florencia**	**2.06**	**210**	⇑*eP*	**Pn**	**00 20 45.7**	**+2.6**
FLOC				*eS*	**Sn**	**00 21 14.9**	**+7.2**
FLOC				IAML		00 21 17.3	
comp=Z,41μm,0.4s							
GUVC	**San Jose del G**	**2.16**	**113**	⇓*iP*	**Pn**	**00 20 47.0**	**+2.5**
comp=Z,25μm,0.4s							
GUVC				*eS*	**Sn**	**00 21 14.7**	**+4.5**
GUVC				IAML		00 21 18.9	
comp=Z,25μm,0.4s							
NORC	**Norcasia**	**2.18**	**354**	*eP*	**Pn**	**00 20 45.1**	**+0.3**
NORC				*eS*	**Sn**	**00 21 14.7**	**+4.1**
NORC				IAML		00 21 27.9	
comp=Z,6μm,0.3s							
PLMC	**San Jos del P**	**2.24**	**313**	⇓*iP*	**Pn**	**00 20 46.4**	**+0.8**
PLMC				*eS*	**Sn**	**00 21 17.4**	**+5.4**
PLMC				IAML		00 21 24.2	
comp=Z,9μm,0.6s							
SPBC	**San Pablo de B**	**2.32**	**14**	*eP*	**Pn**	**00 20 47.3**	**+0.5**
SPBC				*eS*	**Sn**	**00 21 22.6**	**+8.5**
SPBC				IAML		00 21 28.5	
comp=Z,13μm,0.4s							
PTGC	**Puerto Gaitan,**	**2.62**	**72**	⇓*iP*	**Pn**	**00 20 52.9**	**+2.2**
PTGC				*eS*	**Sn**	**00 21 28.6**	**+7.3**
PTGC				IAML		00 21 37.7	
comp=Z,35μm,0.4s							
MALC	**Bahia Malaga**	**2.77**	**283**	*eP*	**Pn**	**00 20 55.6**	**+2.7**
MALC				*eS*	**Sn**	**00 21 32.5**	**+7.3**
MALC				IAML		00 21 50.8	
comp=Z,4μm,0.5s							
CBOC	**Ciudad Bolivar**	**2.82**	**331**	*eP*	**Pn**	**00 20 54.8**	**+1.0**
CBOC				*eS*	Sn	00 21 43.1	+16
RUSC	**La Rusia**	**2.93**	**32**	*eP*	**Pn**	**00 20 58.7**	**+3.3**
RUSC				*eS*	**Sn**	**00 21 37.6**	**+7.9**
RUSC				IAML		00 21 44.1	
comp=Z,15μm,0.7s							
HELC	**Santa Helena**	**2.93**	**342**	*eP*	**Pn**	**00 20 56.0**	**+0.6**
HELC				*eS*	**Sn**	**00 21 35.6**	**+6.0**
HELC				IAML		00 21 57.0	
comp=Z,3μm,0.6s							
CRUC	**La Cruz**	**2.94**	**232**	*eP*	**Pn**	**00 20 58.4**	**+2.9**
CRUC				*eS*	Sn	00 21 45.0	+15
BBAC	**Balboa, Cauca**	**2.95**	**243**	*eP*	**Pn**	**00 20 57.5**	**+2.1**
BBAC				*eS*	Sn	00 21 45.0	+15
BBAC				IAML		00 21 50.5	
comp=Z,3μm,0.4s							
PTBC	**PUERTO BERRIO,**	**3.14**	**3**	*eP*	**Pn**	**00 20 58.5**	**+0.5**
PTBC				*eS*	Sn	00 21 46.3	+12
PTBC				IAML		00 21 53.6	
comp=Z,6μm,0.6s							
GCUF	**Volcan Galeras**	**3.46**	**232**	⇑*eP*	**Pn**	**00 21 05.8**	**+3.0**
GCUF				*eS*	Sn	00 22 02.9	+20
GCUF				IAML		00 22 17.2	
comp=Z,5μm,0.5s							
BARC	**Barichara**	**3.50**	**24**	⇑*eP*	**Pn**	**00 21 04.5**	**+1.5**
BARC				*eS*	**Sn**	**00 21 48.6**	**+5.3**
BARC				IAML		00 22 15.9	
comp=Z,7μm,0.6s							
GR1C	**Gorgona, Isla**	**3.55**	**264**	*eP*	**Pn**	**00 21 04.6**	**+1.0**
GR1C				*eS*	**Sn**	**00 21 46.6**	**+2.2**
GR1C				IAML		00 22 03.5	
comp=Z,16μm,0.7s							
BRRC	**Barranca, Sant**	**3.81**	**14**	*eP*	**Pn**	**00 21 07.7**	**+0.5**
BRRC				*eS*	**Sn**	**00 21 56.0**	**+5.3**
BRRC				IAML		00 22 23.6	
comp=Z,3μm,0.5s							
DBBC	**Dabeiba**	**3.94**	**336**	*eP*	**Pn**	**00 21 12.7**	**+3.7**
DBBC				*eS*	Sn	00 22 18.8	+25
CMBC	**Cumbal**	**4.01**	**233**	*eP*	Pn	00 21 23.8	+13
CMBC				*eS*	Sn	00 22 20.8	+24
BONI	**La Bonita**	**4.11**	**225**	*eP*	**Pn**	**00 21 13.2**	**+1.7**
BONI				*eS*	Sn	00 22 19.8	+21
BONI				IAML		00 22 25.4	
comp=Z,7μm,0.5s							
TULM	**Tulcn-Chalpat**	**4.12**	**230**	Pn	**Pn**	**00 21 14.9**	**+3.1**
TULM	**Tulcn-Chalpat**	**4.12**	**230**	*eP*	**Pn**	**00 21 14.8**	**+2.9**
TULM				*eS*	Sn	00 22 22.2	+23
TULM				IAML		00 22 28.2	
comp=Z,3μm,0.6s							
TAMC	**Tame, Arauca**	**4.14**	**43**	⇑*eP*	**Pn**	**00 21 14.2**	**+2.4**
TAMC				*eS*	**Sn**	**00 22 04.9**	**+5.9**
PAMC	**Pamplona, Colo**	**4.37**	**26**	*eP*	**Pn**	**00 21 17.6**	**+2.3**
PAMC				*eS*	**Sn**	**00 22 11.2**	**+5.9**
PAMC				IAML		00 22 21.0	
comp=Z,2μm,0.3s							
TUMC	**Tumaco**	**4.38**	**249**	*eP*	**Pn**	**00 21 17.7**	**+2.8**
TUMC				*eS*	Sn	00 22 24.9	+20
UREC	**San Jos de Ur**	**4.43**	**348**	⇓*eP*	**Pn**	**00 21 17.9**	**+2.2**
UREC				*eS*	Sn	00 22 22.4	+16
UREC				IAML		00 22 40.3	
comp=Z,1μm,0.3s							
IMBA	**Imbabura, San**	**4.72**	**229**	Pn	Pn	00 21 25.8	+5.8
CUSE	**Cuicocha Este**	**4.85**	**231**	*eP*	Pn	00 21 29.6	+7.7
CUSE				*eS*	Sn	00 22 50.2	+33
PTAC	**Punta Ardita,**	**4.90**	**320**	*eP*	**Pn**	**00 21 23.2**	**+1.0**
PTAC				*eS*	Sn	00 22 37.7	+20
PULU	**Pululahua**	**5.11**	**229**	Pn	Pn	00 21 31.2	+5.8
SLOR	**San Lorenzo -**	**5.63**	**223**	Pn	**Pn**	**00 21 36.6**	**+4.0**
PIAT	**Ana Tenorio**	**5.67**	**220**	*eP*	**Pn**	**00 21 35.7**	**+2.6**
PIAT				*eS*	Sn	00 23 07.2	+30
LCBC	**Los crdobas,**	**5.71**	**342**	*eP*	**Pn**	**00 21 35.7**	**+2.5**
LCBC				*eS*	Sn	00 23 35.3	+58
UPD2	**Meteti**	**6.14**	**327**	⇓*eP*	**Pn**	**00 21 41.6**	**+2.5**
UPD2				*eS*	**Sn**	**00 22 49.2**	**+1.1**
LL1C	**La Loma 1 Cana**	**6.21**	**10**	*eP*	**Pn**	**00 21 44.3**	**+4.2**
LL1C				*eS*	**Sn**	**00 22 57.6**	**+7.7**
PORT	**Chimborazo Vol**	**6.35**	**221**		**Pn**	**00 21 45.7**	**+3.0**
ARGC	**Ariguani, Magd**	**6.44**	**3**	*eP*	**Pn**	**00 21 48.1**	**+4.7**
ARGC				*eS*	Sn	00 23 05.8	+10
SJCC	**San Jacinto, C**	**6.49**	**355**	*eP*	**Pn**	**00 21 43.0**	**-1.1**
SJCC				*eS*	Sn	00 23 10.4	+13
SJCC				IAML		00 23 50.9	
comp=Z,461nm,0.8s							
SDV	**Santo Domingo**	**6.76**	**36**	Pn	**Pn**	**00 21 47.2**	**-0.6**
comp=Z,129nm,0.3s,baz=196,slow=10,SNR=103							
SDV				Sn	**Sn**	**00 22 59.3**	**-4.3**
comp=Z,280nm,0.3s,baz=30,slow=23,SNR=4.9							
SDV	**Santo Domingo**	**6.76**	**36**	Pn	**Pn**	**00 21 48.3**	**+0.5**
SDV	**Santo Domingo**	**6.76**	**36**	*eP*	**Pn**	**00 21 48.7**	**+0.9**
MAPC	**Malpelo**	**6.99**	**275**	*eP*	**Pn**	**00 21 50.9**	**0.0**
MAPC				*eS*	**Sn**	**00 23 08.2**	**-1.0**
MAPC				IAML		00 23 12.6	
comp=Z,245nm,0.4s							
UPA	**Univ. de Panam**	**7.40**	**319**	*eP*	**Pn**	**00 21 57.3**	**+0.9**
UPA				*eS*	Sn	00 23 28.9	+10
COHC	**Cochancay**	**7.43**	**219**		**Pn**	**00 22 00.8**	**+3.9**
COHC	**Cochancay**	**7.43**	**219**	*eP*	**Pn**	**00 22 00.6**	**+3.7**
COHC				*eS*	Sn	00 23 48.9	+29
BOSC	**San Juan Bosco**	**7.55**	**211**		**Pn**	**00 22 02.1**	**+3.3**
PNME	**Penonome**	**7.60**	**312**	*eP*	**Pn**	**00 22 00.8**	**+1.5**
BCIP	**Isla Barro Col**	**7.73**	**318**		**Pn**	**00 22 03.3**	**+2.3**
BCIP	**Isla Barro Col**	**7.73**	**318**	*eP*	**Pn**	**00 22 03.3**	**+2.3**
BCIP				*eS*	Sn	00 23 39.7	+12
BCIP	**Isla Barro Col**	**7.73**	**318**	P	**Pn**	**00 22 03.3**	**+2.3**
CRJC	**Cerrejon, Guaj**	**7.78**	**13**	*eP*	**Pn**	**00 22 02.2**	**+0.4**
CRJC				*eS*	**Sn**	**00 23 31.3**	**+2.6**
CRJC				IAML		00 23 53.6	
comp=Z,479nm,0.4s							
BAUV	**El Baul**	**8.56**	**50**	Pn	**Pn**	**00 22 11.0**	**-1.5**
BAUV	**El Baul**	**8.56**	**50**	*eP*	Pn	00 22 49.9	+37
URIC	**Uribia, Colomb**	**8.67**	**17**	*eP*	**Pn**	**00 22 12.6**	**-1.2**
URIC				*eS*	**Sn**	**00 23 46.6**	**-3.7**
ARNL	**Arenillas**	**8.77**	**218**		**Pn**	**00 22 18.1**	**+2.7**
TBTG	**Tabatinga, AM**	**8.88**	**148**	⇑*iP*	**Pn**	**00 22 16.6**	**-0.1**
TBTG				*eS*	**Sn**	**00 23 50.3**	**-5.2**
TBTG	**Tabatinga, AM**	**8.88**	**148**	*eP*	**Pn**	**00 22 16.6**	**-0.1**
BRU2	**Volcan**	**9.65**	**304**		**Pn**	**00 22 29.4**	**+1.9**
CDITO	**Canoas**	**9.69**	**303**		**Pn**	**00 22 29.9**	**+2.1**
HATO	**Hato, Curacao**	**10.39**	**32**		**Pn**	**00 22 36.3**	**-1.1**
SRBA	**San Rafael, Bu**	**10.44**	**304**		**Pn**	**00 22 40.1**	**+1.8**
PEZE	**Perez Zeledon,**	**10.79**	**304**		**Pn**	**00 22 45.3**	**+2.3**
BATAN	**Batan**	**10.95**	**308**	Pn	**Pn**	**00 22 46.8**	**+1.7**
ATAH	**Atahualpa**	**11.11**	**200**	Pn	**Pn**	**00 22 50.0**	**+2.4**
comp=Z,3.0nm,0.3s,baz=25,slow=8.9,SNR=78							
ATAH				Sn	**Sn**	**00 24 54.7**	**+3.9**
comp=Z,4.4nm,0.3s,baz=5.5,slow=15,SNR=1.3							
ATAH				LR	LR	00 28 11.1	
comp=Z,42μm,19.1s,baz=344,slow=43							
comp=Z,141nm,1.0s							
RIMA	**Rio Macho**	**11.15**	**305**		**Pn**	**00 22 50.8**	**+2.7**
CZSB	**Cruzeiro do Su**	**11.21**	**170**	*eP*	**Pn**	**00 22 48.4**	**-0.3**
HDC	**Heredia**	**11.48**	**305**	Pn	**Pn**	**00 22 55.0**	**+2.4**
JACO	**JACO, Garabito**	**11.76**	**303**	Pn	**Pn**	**00 22 59.0**	**+2.8**
PCRV	**Puerto La Cruz**	**11.99**	**55**	Pn	**Pn**	**00 22 57.1**	**-2.4**
comp=Z,8.3nm,0.3s,baz=231,slow=6.5,SNR=39							
PCRV				Sn	**Sn**	**00 25 05.6**	**-6.4**
comp=Z,31nm,0.3s,baz=241,slow=19,SNR=2.8							
PCRV				Lg	Lg	00 26 23.3	
comp=Z,17nm,0.3s,baz=101,slow=18,SNR=2.3							
PCRV				LR	LR	00 28 36.1	
comp=Z,21μm,19.2s,slow=42							
comp=Z,24nm,0.3s							
COVE	**Coope Vega, Sa**	**12.13**	**307**		**Pn**	**00 23 03.4**	**+2.1**
JTS	**Las Juntas de**	**12.33**	**304**	Pn	**Pn**	**00 23 03.1**	**-1.0**
comp=Z,0.4nm,0.3s,baz=174,slow=19,SNR=3.1							
JTS				LR	LR	00 27 50.7	
comp=Z,10μm,21.2s,baz=190,slow=37							
comp=Z,6.7nm,1.0s							
JTS	**Las Juntas de**	**12.33**	**304**		**Pn**	**00 23 06.4**	**+2.3**
JTS	**Las Juntas de**	**12.33**	**304**	P	**Pn**	**00 23 06.4**	**+2.3**
DUNO	**Dulce Nombre,**	**12.67**	**302**	Pn	**Pn**	**00 23 10.5**	**+1.8**
ORTG	**Ortega, Santa**	**12.79**	**303**	Pn	**Pn**	**00 23 12.0**	**+1.6**
ESPN	**Las Esperanzas**	**12.97**	**313**		**Pn**	**00 23 14.0**	**+1.2**

ACON Acoyapa 13.48 310 Pn 00 23 21.5 +1.7
BOAB BOACO BROADBAN 14.16 310 Pn 00 23 29.8 +0.9
PCJ Portland Cotta 14.48 350 *i* P **Pn 00 23 35.0 +1.7**
MATN Matagalpa 14.65 311 Pn 00 23 37.2 +1.4
GWJ Greenwich 14.74 352 *i* P **P 00 23 39.7 -2.7**
STH Stony Hill 14.76 352 *i* P **P 00 23 39.7 -2.7**
MCJ Malvern 14.76 348 *i* P **P 00 23 40.0 -2.5**
MCJ *i* P **Pn 00 23 41.4 +4.3**
CNGN Cerro Negro 14.99 308 Pn 00 23 41.3 +1.1
CNGN IAmb IAmb 00 23 47.7
comp=Z,329nm,1.9s
MTDJ Mount Denham 15.02 349 Pn **Pn 00 23 42.1 +1.5**
MTDJ Mount Denham 15.02 349 *eP* **Pn 00 23 42.0 +1.3**
MTDJ *eS* Sn 00 26 10.7 -15
CRIN San Cristobal 15.38 308 Pn 00 23 45.4 0.0
NNA Nana 15.43 188 Pn **Pn 00 23 46.3 +0.4**
comp=Z,2.7nm,0.3s,baz=350,slow=13,SNR=10
NNA Sn **Sn 00 26 35.1 -0.8**
comp=Z,3.7nm,0.3s,baz=189,slow=19,SNR=1.5
NNA LR LR 00 31 12.6
comp=Z,23µm,18.0s,baz=348,slow=43
comp=Z,20nm,0.8s
NNA Nana 15.43 188 Pn **Pn 00 23 47.6 +1.7**
NNA Nana 15.43 188 *eP* **Pn 00 23 47.5 +1.5**
NNA *eS* **S 00 26 44.6 -5.9**
NNA Nana 15.43 188 *deP* **P 00 23 48.2 -1.7**
NNA pmax pmax
comp=Z,172nm,1.7s
GRGR Grenville 15.51 55 Pn 00 23 45.7 -1.2
GRGR Grenville 15.51 55 *eP* Pn 00 23 38.7 -8.2
ETMB Extrema 15.56 147 *eP* **Pn 00 23 44.7 -2.9**
SDD Santo Domingo 15.68 17 Pn **Pn 00 23 48.6 -0.4**
SDDR Presa de Saban 15.84 12 Pn **Pn 00 23 51.2 0.0**
SDDR Presa de Saban 15.84 12 *eP* **Pn 00 23 50.9 -0.3**
SDDR *eS* **Sn 00 26 41.2 -4.6**
GCMP Grenada, Carri 15.89 55 *eP* **Pn 00 23 45.5 -6.3**
TOSP Speyside 16.03 60 Pn **Pn 00 23 52.9 -0.6**
TOSP Speyside 16.03 60 *eP* **P 00 23 56.6 +0.1**
PAYG Puerto Ayora 16.16 256 P 00 23 58.2 +0.1
PCDR Punta Cana, DR 16.23 22 Pn 00 23 56.8 +0.7
MLPR Magueyes Islan 16.29 27 Pn 00 23 56.9 +0.1
CRPR Cabo Rojo, PR 16.29 26 P **P 00 23 58.4 -1.0**
TGUH Tegucigalpa,Un 16.38 311 P 00 23 59.6 -0.9
TGUH Tegucigalpa,Un 16.38 311 *eP* **Pn 00 23 59.3 +1.1**
TGUH *eS* **S 00 27 08.3 -1.8**
SC01 Santiago de lo 16.39 13 Pn 00 23 58.2 0.0
GTBY Guantanamo Bay 16.45 358 P 00 24 00.1 -1.0
GTBY IAmb IAmb 00 24 06.2
comp=Z,149nm,0.8s
GTBY Guantanamo Bay 16.45 358 *eP* **P 00 24 00.7 -0.4**
GTBY *eS* S 00 27 32.7 +22
SVB Belmont 16.47 53 IAmb IAmb 00 24 03.6
comp=Z,144nm,0.4s
SVB Belmont 16.47 53 *eP* **P 00 24 03.4 +2.0**
AGPR Aguadilla, PR 16.70 26 Pn 00 24 01.0 -1.0
AOPR Arecibo Observ 16.75 27 Pn 00 24 01.9 -0.8
AOPR Arecibo Observ 16.75 27 *eP* Pn 00 23 52.6 -10
SJG San Juan 16.83 29 Pn **Pn 00 24 00.8 -2.9**
comp=Z,4.2nm,0.3s,baz=215,slow=9.4,SNR=15
SJG Sn **Sn 00 27 02.3 -7.5**
comp=Z,1.1nm,0.3s,baz=25,slow=17,SNR=2.5
SJG LR LR 00 31 13.7
comp=Z,8µm,21.0s,baz=196,slow=40
comp=Z,44nm,0.9s
SJG San Juan 16.83 29 Pn 00 24 02.2 -1.4
SJG San Juan 16.83 29 P **Pn 00 24 02.2 -1.4**
SJG pmax pmax
comp=Z,59nm,0.8s
SJG San Juan 16.83 29 *eP* **Pn 00 24 03.0 -0.7**
EMPR Esperanza - Ma 16.97 27 Pn 00 24 04.8 -0.6
MCLT Moule a Chique 16.97 52 P 00 24 07.2 +0.3
MCLT IAmb IAmb 00 24 17.5
comp=Z,482nm,1.8s
MCLT Moule a Chique 16.97 52 *eP* **Pn 00 23 58.5 -7.0**
HUMP Col San Antoni 17.00 30 Pn 00 24 05.1 -0.7
GCPR Guaynabo City 17.03 29 Pn **Pn 00 24 05.3 -0.9**
LCCY Blossom Villag 17.04 342 P **P 00 24 06.9 -0.7**
SLBI Saint Lucia, B 17.13 51 *eP* **P 00 24 09.6 +0.9**
CDVI St. Croix 17.24 33 *eP* P 00 24 17.6 +7.7
BIM Bigot 17.35 50 *eP* **Pn 00 24 10.4 +0.2**
FDF Fort de France 17.43 49 P **Pn 00 24 10.1 -1.1**
FDF Fort de France 17.43 49 *eP* **Pn 00 24 04.8 -6.4**
MPOM Morne Pois Mar 17.47 50 *eP* **Pn 00 24 10.5 -1.1**
SVN Savane Anatole 17.48 49 P **Pn 00 24 10.6 -1.3**
MDN Morne-Daniel 17.62 47 *eP* **P 00 24 14.5 +0.3**
ILAM Ilet Lapin Mar 17.66 49 Pn 00 24 13.2 -0.8
ILAM Ilet Lapin Mar 17.66 49 *eP* Pn 00 24 02.8 -11
DSLB Salisbury 17.68 47 *eP* **P 00 24 14.7 -0.1**
SNET Serv Nac Est T 17.69 306 P 00 24 16.4 +1.4
DLPL La Plaine 17.74 47 Pn 00 24 14.0 -1.0
DLPL IAmb IAmb 00 24 22.8
comp=Z,128nm,0.4s
DLPL La Plaine 17.74 47 *eP* P 00 24 24.0 +8.6
BBGH Gun Hill 17.77 56 *eP* **Pn 00 24 14.7 -0.7**
TDBA Terre de Bas, 17.80 45 Pn **Pn 00 24 13.9 -1.8**
TDBA Terre de Bas, 17.80 45 *eP* **P 00 24 19.8 +3.7**
BBSP Saint Philip 17.84 56 *eP* **P 00 24 22.9 +6.4**
CBE Ff, Capester 17.97 45 P **Pn 00 24 17.6 -0.2**
CBE Ff, Capester 17.97 45 *eP* **P 00 24 19.6 +1.6**
GDHS Morne Mazeau, 18.00 44 IAmb IAmb 00 24 28.5
comp=Z,589nm,2.0s
SEUS St. Eustatius 18.09 38 P **Pn 00 24 18.4 -0.9**
SEUS St. Eustatius 18.09 38 *eP* **P 00 24 19.8 +0.6**
MAGL Barre de l'ile 18.12 46 Pn 00 24 19.8 +0.2
MAGL Barre de l'ile 18.12 46 *eP* **Pn 00 24 20.4 +0.8**
ESQI Esquipulas 18.27 308 P **Pn 00 24 22.5 +0.8**
ABD La Joyeuse, An 18.33 44 P **Pn 00 24 22.6 +0.4**
ABD IAmb IAmb 00 24 26.3
comp=Z,620nm,2.0s
ABD La Joyeuse, An 18.33 44 *eP* **Pn 00 24 22.2 +0.1**
SMRT St. Maarten 18.45 37 P **P 00 24 23.0 -0.3**
SMRT St. Maarten 18.45 37 *eP* **P 00 24 22.4 -1.0**
GDSD La Dsirade Is 18.52 45 P **P 00 24 23.6 -0.4**
ANBD Bethesda, Anti 18.54 42 *eP* **Pn 00 24 25.1 +0.3**
ANWB Willy Bob 18.98 41 P **Pn 00 24 29.8 -0.2**
ANWB IAmb IAmb 00 24 35.8
comp=Z,468nm,1.6s
ANWB Willy Bob 18.98 41 *eP* **P 00 24 29.3 +0.3**
PETF Flores 20.12 313 IAmb IAmb 00 25 00.7
comp=Z,133nm,1.1s
RTAL Retalhuleu 20.15 304 P Pn 00 24 43.8 -0.1
ITTB Itaituba 20.39 112 *eP* Pn 00 24 45.6 -1.2
LPAZ La Paz 20.57 162 P **P 00 24 47.2 +0.1**
comp=Z,15nm,0.9s,baz=338,slow=11,SNR=28
LPAZ Lg Lg 00 30 51.0
comp=Z,1.9nm,0.3s,baz=177,slow=17,SNR=1.9
LPAZ LR LR 00 33 15.4
comp=Z,8µm,19.9s,baz=324,slow=38
comp=Z,15nm,0.9s
LPAZ La Paz 20.57 162 P **P 00 24 46.7 -0.4**
LPAZ La Paz 20.57 162 P **P 00 24 46.7 -0.4**
LPAZ pmax pmax
comp=Z,47nm,0.9s
LPAZ La Paz 20.57 162 *eP* **P 00 24 46.8 -0.3**
SOR Soroa 20.93 338 P Pn 00 24 51.8 -1.3
SOR IAmb IAmb 00 25 09.8
comp=Z,201nm,1.8s
SOR Soroa 20.93 338 P Pn 00 24 51.8 -1.3
SOR pmax pmax
comp=Z,201nm,1.8s
MALB Monte Alegre 21.01 104 *eP* **P 00 24 52.1 +0.9**
MALB *eS* **S 00 28 42.1 -1.0**
TEIG Tepich 21.39 323 P **P 00 24 56.2 +1.0**
TEIG Tepich 21.39 323 *eP* **P 00 24 57.5 +2.3**
CCIG Comitan 21.46 308 P **P 00 24 57.0 +0.7**
VILB Vilhena 21.65 139 *eS* **S 00 28 55.6 -0.2**
NPGB Novo Progresso 21.85 118 *eP* **P 00 25 00.6 +0.4**
MDP Montagnes des 21.99 85 P **P 00 25 01.6 -0.1**
comp=Z,53nm,0.7s,baz=262,slow=8.4,SNR=37
MDP S **S 00 29 00.4 -2.0**
comp=Z,76nm,0.6s,baz=162,slow=19,SNR=12
MDP Lg Lg 00 31 27.6
comp=Z,6.6nm,0.3s,baz=180,slow=19,SNR=4.4
comp=Z,53nm,0.7s
PB16 IPOC Station P 22.16 167 P **P 00 25 03.2 -1.0**
PB12 IPOC Station P 22.27 169 P **P 00 25 05.7 +1.0**
MCPB Macapa, AP 22.86 99 *eP* **P 00 25 12.4 +1.3**
061Z Ochoppi 23.15 345 P **P 00 25 13.7 -0.1**
PDRB Porto dos Gac 23.21 130 *eP* **P 00 25 15.6 +1.0**
PDRB *eS* **S 00 29 26.2 +2.4**
SIV San Ignacio 23.46 146 P **P 00 25 18.4 +1.4**
comp=Z,128nm,0.8s,baz=321,slow=9.6,SNR=639
SIV S **S 00 29 32.2 +4.4**
comp=Z,24nm,0.8s,baz=324,slow=14,SNR=2.3
SIV Lg Lg 00 32 13.3
comp=Z,0.8nm,0.3s,baz=236,slow=19,SNR=4.1
SIV LR LR 00 34 37.3
comp=Z,11µm,19.7s,baz=332,slow=37
comp=Z,128nm,0.8s
CLDB Colider 23.49 127 *eP* **P 00 25 18.0 +0.7**
GO01 Chusmiza 23.52 167 P **P 00 25 16.3 -1.8**
TA02 Huaiquique 23.92 170 P **P 00 25 21.1 -0.1**
CMIG Matias Romero 24.10 306 P **P 00 25 23.0 0.0**
comp=Z,4.7nm,0.6s,baz=106,slow=8.4,SNR=10
CMIG LR LR 00 35 53.4
comp=Z,1µm,21.6s,baz=126,slow=39
comp=Z,4.7nm,0.6s
PTLB Pontes e Lacer 24.19 141 *eP* **P 00 25 25.0 +1.2**
TA01 Diego Aracena 24.20 170 IAmb IAmb 00 25 26.0
comp=Z,149nm,1.4s
PATCX Punta Patache 24.45 170 P **P 00 25 26.3 +0.1**
PATCX IAmb IAmb 00 25 28.7
comp=Z,194nm,1.4s
BBSD Serra de San D 24.68 146 *eP* **P 00 25 29.4 +1.1**
PB01 IPOC Station P 24.79 168 P **P 00 25 29.0 -0.4**
PB01 IAmb IAmb 00 25 31.6
comp=Z,215nm,1.7s
PB02 IPOC Station P 24.98 170 P **P 00 25 30.8 -0.3**
PB02 IAmb IAmb 00 26 04.4
comp=Z,85nm,0.8s
PB07 IPOC Station P 25.38 170 P **P 00 25 35.1 +0.4**
DWPF Disney Wildern 25.43 346 P **P 00 25 32.8 -2.1**
DWPF Disney Wildern 25.43 346 P **P 00 25 36.9 +2.0**
baz=164
DWPF Disney Wildern 25.43 346 P **P 00 25 36.0 +1.1**
baz=164
PB09 IPOC Station P 25.57 168 IAmb IAmb 00 25 39.1
comp=Z,106nm,1.4s
PB03 IPOC Station P 25.72 170 P **P 00 25 37.6 -0.2**
PB04 IPOC Station P 25.93 170 P **P 00 25 39.3 -0.5**
PB04 IAmb IAmb 00 26 15.6
comp=Z,78nm,1.0s
PB06 IPOC Station P 26.40 169 P **P 00 25 43.3 -0.6**
LVC Limon Verde 26.43 168 P **P 00 25 44.8 +0.3**
comp=Z,22nm,1.1s,baz=359,slow=7.5,SNR=18
LVC LR LR 00 37 02.1
comp=Z,3µm,21.9s,baz=312,slow=38
comp=Z,22nm,1.1s
LVC Limon Verde 26.43 168 P **P 00 25 44.7 +0.3**
LVC Limon Verde 26.43 168 P **P 00 25 44.7 +0.3**
LVC pmax pmax
comp=Z,46nm,1.1s
LVC MLR MLR
comp=Z,2µm,19.0s
LVC Limon Verde 26.43 168 *eP* **P 00 25 45.3 +0.9**
PRPB Parauapebas 26.53 111 *eP* **P 00 25 46.2 +1.1**
SALV Santo Antonio 26.80 136 *eP* **P 00 25 48.5 +1.1**
PB15 IPOC Station P 26.91 169 P **P 00 25 49.0 +0.5**
PB15 **PcP 00 29 10.1 -0.2**
656A Willston 26.91 345 P **P 00 25 50.0 +1.7**
baz=162
AF01 San Pedro de A 26.92 167 P **P 00 25 49.6 +0.8**
AF01 IAmb IAmb 00 26 20.7
comp=Z,138nm,1.2s
PB10 IPOC Station P 27.03 172 P 00 25 50.0 +0.6
PB10 IAmb IAmb 00 26 02.9
comp=Z,89nm,1.3s
TLIG Tlapa 27.38 303 P **P 00 25 54.4 +1.5**
SNDB Serra Nova Dou 27.77 124 *eP* **P 00 25 57.0 +0.9**
PB14 IPOC Station P 28.14 172 P **P 00 26 00.8 +1.1**
GO02 Mina Guanaco 28.79 170 IAmb IAmb 00 26 51.7
comp=Z,86nm,1.4s
451A Vernon 29.05 340 P **P 00 26 08.5 +1.1**
451A IAmb IAmb 00 26 46.7
comp=Z,149nm,1.4s
257A Skidaway Islan 29.07 349 P **P 00 26 06.7 -0.9**
TIGA Tifton 29.16 344 P **P 00 26 08.2 -0.1**
TIGA Tifton 29.16 344 P **P 00 26 09.3 +0.9**
baz=161
255A Hazlehurst 29.34 346 P **P 00 26 11.0 +1.0**
255A IAmb IAmb 00 26 23.9
comp=Z,63nm,1.0s
255A Hazlehurst 29.34 346 P **P 00 26 10.9 +1.0**
baz=164
ARAG Araguaiana, MT 29.49 131 *eP* **P 00 26 11.7 +0.2**
SMTB Santa Maria do 29.57 114 *eP* **P 00 26 13.8 +1.5**
352A Blakely 29.58 342 P **P 00 26 12.7 +0.5**
352A IAmb IAmb 00 26 34.9
comp=Z,68nm,1.1s
352A Blakely 29.58 342 P **P 00 26 13.9 +1.8**
baz=159,SNR=7.4
AC01 Pan de Azucar 29.61 173 P **P 00 26 13.3 +0.8**
AC01 IAmb IAmb 00 26 31.1
comp=Z,81nm,1.4s
CSU Charleston Sou 29.89 351 P **P 00 26 15.5 +0.8**
CSU **pP 00 26 29.1 +2.3**
MURT Porto Murtinho 29.95 147 *eP* **P 00 26 15.8 +0.3**
BRAL Brewton 30.02 338 P **P 00 26 17.3 +1.3**
BRAL pP **pP 00 26 30.1 +2.4**
BRAL Brewton 30.02 338 P **P 00 26 17.5 +1.5**
baz=154
NHSC New Hope 30.02 351 sP 00 26 29.3 -3.8
NHSC IAMs_20 IAMs_20 00 39 01.5
comp=Z,4µm,20.0s
NHSC New Hope 30.02 351 P **P 00 26 17.3 +1.3**
baz=169,SNR=5.5
NHSC New Hope 30.02 351 P **P 00 26 16.8 +0.9**
baz=169
AQDB Aquidauana 30.12 143 P **P 00 26 17.8 +0.8**
AQDB IAmb IAmb 00 26 19.3
comp=Z,69nm,1.1s
AQDB Aquidauana 30.12 143 *eP* **P 00 26 18.1 +1.2**
154A Montrose 30.14 346 pP pP 00 26 30.5 +1.7
154A Montrose 30.14 346 P **P 00 26 18.8 +1.8**
baz=163,SNR=11
BBSR BB Station 30.31 17 P **P 00 26 17.9 -0.6**
BBSR IAmb IAmb 00 26 21.5
comp=Z,112nm,1.8s
250A Grady 30.48 340 P **P 00 26 20.6 +0.6**
250A IAmb IAmb 00 26 23.4
comp=Z,64nm,0.9s
250A Grady 30.48 340 P **P 00 26 21.5 +1.5**
baz=156,SNR=10
AC02 Maricunga 30.51 170 P **P 00 26 22.0 +1.1**
HAW Hawthorne Fire 30.53 348 P **P 00 26 21.8 +1.3**
baz=166,SNR=6.2
152A Waverly Hall 30.63 343 P **P 00 26 22.4 +1.0**
baz=160,SNR=18
Y60A Bolivia 30.65 354 P **P 00 26 22.0 +0.5**
Y60A Bolivia 30.65 354 P **P 00 26 23.1 +1.6**
baz=173
Y60A P **P 00 26 23.1 +1.6**
baz=173
Y59A Loris 30.71 353 P **P 00 26 22.8 +0.8**
Y59A IAmb IAmb 00 26 35.5
comp=Z,47nm,0.7s
Y58A Scranton 30.73 352 P **P 00 26 23.1 +0.9**
Y58A IAmb IAmb 00 26 35.8
comp=Z,65nm,1.0s
Y58A Scranton 30.73 352 P **P 00 26 23.4 +1.2**
baz=170
Y58A P **P 00 26 23.4 +1.2**
baz=170
C2SB Chapadao do Su 30.74 137 *eP* **P 00 26 24.1 +1.6**
Y57A Sumter 30.95 351 P **P 00 26 25.2 +1.0**
Y57A IAmb IAmb 00 26 37.8
comp=Z,64nm,1.1s
GOGA Godfrey 31.00 346 P **P 00 26 24.9 +0.3**
GOGA pP **pP 00 26 37.2 +1.0**
GOGA IAmb IAmb 00 26 38.3
comp=Z,33nm,0.8s
GOGA Godfrey 31.00 346 P **P 00 26 25.4 +0.9**
baz=162,SNR=14
GOGA Godfrey 31.00 346 P **P 00 26 25.6 +1.1**
baz=162,SNR=14
GO03 Copiap 31.09 172 P **P 00 26 26.3 +0.8**
ANTJ Antonio Joao (31.12 145 *eP* **P 00 26 26.2 +0.3**
ROSB Rosrio 31.12 101 *eP* **P 00 26 26.3 +0.4**
346A Big Creek Wild 31.17 335 P **P 00 26 26.8 +0.7**
X58A Rowland 31.32 353 P **P 00 26 28.1 +0.7**
X58A **pP 00 26 38.8 -0.6**
X58A IAmb IAmb 00 26 40.9
comp=Z,69nm,1.4s
X58A Rowland 31.32 353 P **P 00 26 28.5 +1.1**
baz=171
X58A P **P 00 26 28.5 +1.1**
baz=171
JSC Jenkinsville 31.36 349 P **P 00 26 28.2 +0.5**
JSC pP **pP 00 26 40.4 +1.0**
JSC IAmb IAmb 00 26 41.4
comp=Z,69nm,0.9s
JSC Jenkinsville 31.36 349 P **P 00 26 28.2 +0.5**
JSC *PP **pP 00 26 40.4 +1.0**
JSC Jenkinsville 31.36 349 P **P 00 26 28.9 +1.1**
baz=167,SNR=10
Z51A Franklin 31.37 343 P **P 00 26 28.9 +1.0**
Z51A IAmb IAmb 00 26 41.7
comp=Z,44nm,0.8s
Z51A Franklin 31.37 343 P **P 00 26 29.5 +1.6**
baz=159
RPRD Ribas do Rio P 31.37 140 *eP* **P 00 26 29.5 +1.4**
HODGE Hodges 31.50 348 P **P 00 26 29.7 +0.7**
HODGE pP **pP 00 26 41.9 +1.2**
HODGE IAmb IAmb 00 26 42.8
comp=Z,47nm,0.9s
HODGE Hodges 31.50 348 P **P 00 26 30.1 +1.0**
baz=165,SNR=14
BIRD Birdtown, Kers 31.57 351 P **P 00 26 29.7 0.0**
BIRD pP **pP 00 26 42.9 +1.2**
BIRD IAmb IAmb 00 26 43.9
comp=Z,82nm,1.2s
BIRD Birdtown, Kers 31.57 351 P **P 00 26 30.8 +1.2**
baz=169,SNR=7.4
Y52A Lilburn 31.58 345 P **P 00 26 30.6 +0.9**
Y52A pP **pP 00 26 42.4 +1.0**
Y52A IAmb IAmb 00 26 43.5
comp=Z,35nm,0.9s
Y52A Lilburn 31.58 345 P **P 00 26 31.0 +1.3**
baz=162,SNR=7.3
Y52A P **P 00 26 31.0 +1.3**
baz=162,SNR=7.3
AC04 Llanos de Chal 31.59 174 P **P 00 26 30.3 +0.5**
AC04 pP **pP 00 26 43.3 +1.7**
LRAL Lakeview Retre 31.69 340 P 00 26 30.9 +0.2
LRAL IAmb IAmb 00 26 33.9
comp=Z,36nm,0.9s
LRAL IAMs_20 IAMs_20 00 39 52.5
comp=Z,2µm,19.0s
LRAL Lakeview Retre 31.69 340 P **P 00 26 31.6 +0.9**
baz=156,SNR=23
LRAL Lakeview Retre 31.69 340 P **P 00 26 31.6 +0.9**
baz=156,SNR=23
344A Westbrook Farm 31.78 333 pP 00 26 44.6 +1.3
344A Westbrook Farm 31.78 333 P **P 00 26 32.9 +1.4**
baz=148
CNNC Cliffs of the 31.84 355 P **P 00 26 32.0 +0.1**
CNNC IAmb IAmb 00 26 36.5
comp=Z,23nm,0.3s
PAULI Pauline 31.98 349 P **P 00 26 34.2 +0.9**
PAULI **pP 00 26 45.0 +0.1**
PAULI Pauline 31.98 349 P **P 00 26 34.4 +1.1**
baz=166
W57A Gilead 32.00 352 pP pP 00 26 45.6 +0.2
146A Union 32.09 337 P **P 00 26 34.6 +0.4**
KMSC Kings Mountain 32.21 350 P **P 00 26 35.4 +0.2**
KMSC **pP 00 26 48.0 +0.7**
KMSC IAmb IAmb 00 26 48.9
comp=Z,48nm,1.0s
KMSC Kings Mountain 32.21 350 P **P 00 26 36.4 +1.1**
baz=167,SNR=6.0
KMSC Kings Mountain 32.21 350 P **P 00 26 35.9 +0.6**
baz=167,SNR=6.0
Z47A Carrollton 32.22 339 P **P 00 26 36.1 +0.8**
Z47A Carrollton 32.22 339 P **P 00 26 36.3 +1.0**
baz=154,SNR=29
Y49A Blount Mountai 32.25 341 P **P 00 26 36.3 +0.7**
Y49A IAmb IAmb 00 26 38.6
comp=Z,36nm,0.8s
Y49A Blount Mountai 32.25 341 P **P 00 26 36.5 +0.9**
baz=157,SNR=19
V61A Roper 32.30 357 P **P 00 26 36.9 +0.9**
V61A **pP 00 26 48.4 +0.5**
AC05 El Transito 32.31 173 P **P 00 26 37.9 +1.5**
AC05 pP **pP 00 26 49.0 +1.0**
AC05 IAmb IAmb 00 26 50.8
comp=Z,49nm,0.9s
VBMS Vicksburg 32.33 334 P **P 00 26 36.7 +0.4**
VBMS Vicksburg 32.33 334 P **P 00 26 36.9 +0.5**
baz=149
441A DeRidder 32.38 329 P **P 00 26 37.8 +1.0**
BG3 Lake Jocassee 32.38 347 P **P 00 26 38.2 +1.4**
BG3 IAmb IAmb 00 26 51.0
comp=Z,59nm,0.9s
CASEE Lake Jocassee 32.38 347 P **P 00 26 38.5 +1.7**
baz=164,SNR=13
BDFB Brasilia 32.42 126 P **P 00 26 37.7 +0.2**
comp=Z,35nm,0.9s,baz=295,slow=9.7,SNR=40
BDFB LR LR 00 40 30.4
comp=Z,14µm,18.9s,baz=299,slow=38
comp=Z,35nm,0.9s
BDFB Brasilia 32.42 126 P **P 00 26 38.4 +1.0**
BDFB IAmb IAmb 00 26 40.0
comp=Z,71nm,1.1s
BDFB Brasilia 32.42 126 P **P 00 26 38.4 +1.0**
BDFB pmax pmax
comp=Z,71nm,1.1s
BDFB Brasilia 32.42 126 *eP* **P 00 26 38.9 +1.4**
LCO Las Campanas 32.43 174 P **P 00 26 38.7 +1.1**
LCO IAmb IAmb 00 26 41.6
comp=Z,76nm,1.2s
LCO Las Campanas 32.43 174 IAMs_20 IAMs_20 00 38 44.3
comp=Z,2µm,18.0s
LCO Las Campanas 32.43 174 P **P 00 26 38.7 +1.1**
LCO pmax pmax
comp=Z,76nm,1.3s
LCO MLR MLR
comp=Z,2µm,18.0s
LCO Las Campanas 32.43 174 P **P 00 26 39.2 +1.7**
LCO pP **pP 00 26 50.5 +1.3**
X51A Calhoun 32.45 344 P **P 00 26 38.3 +0.9**
X51A pP **pP 00 26 49.1 0.0**
X51A IAmb IAmb 00 26 50.8
comp=Z,38nm,1.0s
X51A Calhoun 32.45 344 P **P 00 26 38.3 +0.9**
baz=160,SNR=5.2
X51A P **P 00 26 38.3 +0.9**
baz=160,SNR=5.2
342B Flagon Creek P 32.45 331 P **P 00 26 38.2 +0.8**
baz=145
V58A Windy Hill, Pi 32.52 353 P **P 00 26 38.0 +0.1**
V58A pP **pP 00 26 50.0 +0.1**
V58A IAmb IAmb 00 26 51.1
comp=Z,32nm,0.8s
V58A Windy Hill, Pi 32.52 353 P **P 00 26 38.7 +0.8**
baz=171,SNR=8.8
V58A P **P 00 26 38.7 +0.8**
baz=171,SNR=8.8
FPAL Fort Paine 32.64 343 IAmb IAmb 00 26 42.2
comp=Z,48nm,1.0s
FPAL pP pP 00 26 51.9 +1.1
W52A Murphy 32.71 346 pP **pP 00 26 52.9 +1.5**
W52A IAmb IAmb 00 26 53.6
comp=Z,57nm,0.9s
W52A Murphy 32.71 346 P **P 00 26 41.1 +1.5**
baz=162,SNR=14
KVTX Kingsville 32.73 320 P **P 00 26 40.7 +0.9**
KVTX pP **pP 00 26 49.6 -1.9**
V55A Taylorsville 32.88 350 pP **pP 00 26 54.4 +1.3**
V55A IAmb IAmb 00 26 55.2
comp=Z,76nm,1.1s
V55A Taylorsville 32.88 350 P **P 00 26 42.5 +1.4**
baz=168,SNR=9.2
V55A P **P 00 26 42.5 +1.4**
baz=168,SNR=9.2
X48A Hartselle 33.00 341 IAmb IAmb 00 26 45.0
comp=Z,35nm,0.8s
X48A Hartselle 33.00 341 P **P 00 26 43.0 +0.8**
baz=157,SNR=20
V53A Saluda 33.01 348 pP **pP 00 26 55.3 +1.3**
V53A IAmb IAmb 00 26 56.2
comp=Z,52nm,0.8s
V53A Saluda 33.01 348 P **P 00 26 43.7 +1.4**
baz=165,SNR=14
V53A P **P 00 26 43.7 +1.4**
baz=165,SNR=14
ITRB Iturama 33.09 135 *eP* **P 00 26 43.7 +0.5**
W50A Signal Mountai 33.17 344 P **P 00 26 44.6 +0.9**
W50A pP **pP 00 26 55.6 +0.1**
W50A IAmb IAmb 00 26 57.5
comp=Z,106nm,1.4s
W50A Signal Mountai 33.17 344 P **P 00 26 44.8 +1.1**
baz=160,SNR=15
HKT Hockley 33.19 325 P **P 00 26 44.1 +0.3**

HKT			IAmb	IAmb	00 26 45.2	
	comp=Z,94nm,1.7s					
HKT			pP	**pP**	**00 26 55.4**	**-0.1**
HKT	**Hockley**	**33.19 325**	P	**P**	**00 26 44.1**	**+0.3**
HKT			*PP	**pP**	**00 26 55.4**	**-0.1**
HKT			pmax	pmax		
	comp=Z,94nm,1.7s					
HKT			MLR	MLR		
	comp=Z,1µm,22.0s					
HKT	**Hockley**	**33.19 325**	P	**P**	**00 26 44.1**	**+0.3**
	baz=139					
HKT	**Hockley**	**33.19 325**	P	**P**	**00 26 43.6**	**-0.2**
HKT			pP	**pP**	**00 26 54.5**	**-1.0**
CPCT	**Cooper Cave**	**33.20 345**	P	**P**	**00 26 45.0**	**+1.1**
CPCT			pP	**pP**	**00 26 57.0**	**+1.4**
CPCT			IAmb	IAmb	00 26 57.7	
	comp=Z,32nm,0.9s					
TKL	**Tuckaleechee C**	**33.21 346**	P	**P**	**00 26 44.9**	**+0.9**
TKL			pP	**pP**	**00 26 56.6**	**+0.8**
TKL	**Tuckaleechee C**	**33.21 346**	P	**P**	**00 26 44.8**	**+0.7**
	baz=163,SNR=5.5					
ZAIG	**Zacatecas**	**33.22 308**	IAmb	IAmb	00 26 48.4	
	comp=Z,69nm,1.8s					
U56A	**King**	**33.23 352**	P	**P**	**00 26 44.9**	**+0.7**
U56A			pP	**pP**	**00 26 57.0**	**+0.8**
U56A			IAmb	IAmb	00 26 58.3	
	comp=Z,57nm,1.2s					
U56A	**King**	**33.23 352**	P	**P**	**00 26 45.7**	**+1.5**
	baz=169					
U56A			P	**P**	**00 26 45.7**	**+1.5**
	baz=169					
CO05	**La Serena**	**33.27 175**	P	**P**	**00 26 45.8**	**+1.2**
CO05			IAmb	IAmb	00 27 13.1	
	comp=Z,42nm,1.0s					
V52A	**Sevierville**	**33.35 347**	pP	**pP**	**00 26 58.5**	**+1.5**
V52A			IAmb	IAmb	00 26 59.4	
	comp=Z,42nm,0.8s					
V52A	**Sevierville**	**33.35 347**	P	**P**	**00 26 46.2**	**+1.0**
	baz=163,SNR=9.3					
SWET	**Sewanee**	**33.36 343**	IAmb	IAmb	00 26 58.8	
	comp=Z,33nm,0.9s					
Y45A	**Yeager Farm, C**	**33.37 337**	P	**P**	**00 26 46.1**	**+0.7**
	baz=152,SNR=21					
SDBA	**SAO DESIDERIO**	**33.44 118**	*e*P	**P**	**00 26 47.1**	**+0.7**
CO01	**Juntas del Tor**	**33.45 173**	P	**P**	**00 26 48.2**	**+1.7**
V51A	**Loudon**	**33.49 346**	pP	**pP**	**00 26 59.6**	**+1.4**
V51A			IAmb	IAmb	00 27 00.2	
	comp=Z,57nm,0.8s					
V51A	**Loudon**	**33.49 346**	P	**P**	**00 26 47.6**	**+1.2**
	baz=162,SNR=20					
T59A	**Double "B" Far**	**33.53 356**	pP	**pP**	**00 26 59.4**	**+0.7**
T59A			IAmb	IAmb	00 27 00.1	
	comp=Z,66nm,0.9s					
T59A	**Double "B" Far**	**33.53 356**	P	**P**	**00 26 47.5**	**+0.8**
	baz=174,SNR=13					
T59A			P	**P**	**00 26 47.5**	**+0.8**
	baz=174,SNR=13					
GO04	**Tololo Observa**	**33.57 174**	P	**P**	**00 26 48.8**	**+1.3**
GO04			IAmb	IAmb	00 27 08.2	
	comp=Z,29nm,0.8s					
735A	**Kenedy**	**33.58 321**	P	**P**	**00 26 47.3**	**+0.1**
735A			IAmb	IAmb	00 26 48.0	
	comp=Z,100nm,1.6s					
IPMB	**Ipameri, GO**	**33.60 130**	*e*P	**P**	**00 26 48.4**	**+0.7**
U54A	**Nelsons Funny**	**33.64 350**	pP	pP	00 27 01.1	+1.6
U54A	**Nelsons Funny**	**33.64 350**	P	**P**	**00 26 48.9**	**+1.1**
	baz=167,SNR=12					
U54A			P	**P**	**00 26 48.9**	**+1.1**
	baz=167,SNR=12					
T60A	**Surry**	**33.65 357**	pP	pP	00 27 00.3	+0.5
T60A	**Surry**	**33.65 357**	P	**P**	**00 26 49.1**	**+1.3**
	baz=176					
T60A			P	**P**	**00 26 49.1**	**+1.3**
	baz=176					
T57A	**Hurt**	**33.72 353**	pP	**pP**	**00 27 01.5**	**+1.1**
T57A			IAmb	IAmb	00 27 02.3	
	comp=Z,80nm,1.2s					
T57A	**Hurt**	**33.72 353**	P	**P**	**00 26 49.1**	**+0.7**
	baz=171,SNR=14					
T57A			P	**P**	**00 26 49.1**	**+0.7**
	baz=171,SNR=14					
TRCB	**Terra Rica**	**33.74 142**	P	**P**	**00 26 48.1**	**-0.7**
TRCB			pP	**pP**	**00 27 00.8**	**+0.6**
TRCB			IAmb	IAmb	00 27 08.9	
	comp=Z,36nm,0.6s					
PCMB	**Pacaembu**	**33.77 138**	*e*P	**P**	**00 26 49.6**	**+0.6**
OXF	**Oxford**	**33.89 338**	P	**P**	**00 26 50.0**	**+0.1**
OXF			IAmb	IAmb	00 27 28.6	
	comp=Z,29nm,0.8s					
OXF	**Oxford**	**33.89 338**	P	**P**	**00 26 50.0**	**+0.1**
OXF			pmax	pmax		
	comp=Z,29nm,0.9s					
OXF			MLR	MLR		
	comp=Z,900nm,20.0s					
OXF	**Oxford**	**33.89 338**	P	**P**	**00 26 49.5**	**-0.4**
	baz=153					
OXF	**Oxford**	**33.89 338**	P	**P**	**00 26 50.3**	**+0.4**
	baz=153					
NATX	**Nacogdoches**	**33.94 328**	P	**P**	**00 26 50.8**	**+0.3**
	baz=142					
CPUP	**Villa Florida**	**33.95 151**	P	**P**	**00 26 49.2**	**-1.3**
	comp=Z,6.1nm,1.0s,baz=340,slow=10,SNR=7.1					
CPUP			LR	LR	00 41 35.2	
	comp=Z,4µm,19.6s,baz=338,slow=38					
	comp=Z,6.1nm,1.0s					
CPUP	**Villa Florida**	**33.95 151**	P	**P**	**00 26 49.4**	**-1.1**
CPUP	**Villa Florida**	**33.95 151**	P	**P**	**00 26 49.4**	**-1.1**
CPUP			pmax	pmax		
	comp=Z,24nm,1.4s					
CPUP	**Villa Florida**	**33.95 151**	P	**P**	**00 26 48.9**	**-1.7**
CPUP			pP	**pP**	**00 26 58.1**	**-4.1**
CO06	**Fray Jorge**	**33.99 175**	P	**P**	**00 26 52.5**	**+1.7**
CO06			IAmb	IAmb	00 26 55.1	
	comp=Z,67nm,1.3s					
TZTN	**Tazewell**	**34.01 347**	pP	**pP**	**00 27 03.7**	**+1.0**
TZTN			IAmb	IAmb	00 27 04.7	
	comp=Z,44nm,0.8s					
TZTN	**Tazewell**	**34.01 347**	P	**P**	**00 26 52.4**	**+1.4**
	baz=164,SNR=6.3					
TZTN	**Tazewell**	**34.01 347**	P	**P**	**00 26 51.6**	**+0.7**
	baz=164,SNR=6.3					
BLA	**Blacksburg**	**34.08 352**	pP	**pP**	**00 27 04.8**	**+1.2**
BLA			IAmb	IAmb	00 27 05.7	
	comp=Z,55nm,0.9s					
BLA			IAMs_20	IAMs_20	00 40 54.9	
	comp=Z,2µm,22.0s					
BLA	**Blacksburg**	**34.08 352**	P	**P**	**00 26 53.3**	**+1.6**
	baz=169,SNR=8.4					
BLA	**Blacksburg**	**34.08 352**	P	**P**	**00 26 52.4**	**+0.8**
	baz=169,SNR=8.4					
V48A	**Smith Brothers**	**34.12 342**	P	**P**	**00 26 52.9**	**+1.0**
	baz=158,SNR=75					
MCR1	**Marechal Candi**	**34.16 145**	*e*P	**P**	**00 26 52.4**	**0.0**
833A	**Chaparral WMA,**	**34.23 319**	IAmb	IAmb	00 26 53.6	
	comp=Z,44nm,0.9s					
833A	**Chaparral WMA,**	**34.23 319**	P	**P**	**00 26 52.9**	**-0.1**
	baz=132,SNR=11					
833A	**Chaparral WMA,**	**34.23 319**	P	**P**	**00 26 52.5**	**-0.5**
	baz=132,SNR=11					
CO03	**El Pedregal**	**34.24 174**	P	**P**	**00 26 54.2**	**+1.1**
CO03			IAmb	IAmb	00 27 07.2	
	comp=Z,62nm,1.1s					
CCAR	**Cane Creek**	**34.33 334**	IAmb	IAmb	00 26 56.0	
	comp=Z,60nm,0.9s					
W45A	**Hickory Valley**	**34.38 339**	P	**P**	**00 26 54.0**	**-0.1**
	baz=154,SNR=11					
S57A	**Dark Hollow, R**	**34.44 354**	P	**P**	**00 26 55.4**	**+0.7**
S57A			pP	**pP**	**00 27 07.2**	**+0.5**
S57A			IAmb	IAmb	00 27 08.2	
	comp=Z,50nm,1.0s					
S57A	**Dark Hollow, R**	**34.44 354**	P	**P**	**00 26 55.6**	**+1.0**
	baz=172,SNR=9.0					
S57A			P	**P**	**00 26 55.6**	**+1.0**
	baz=172,SNR=9.0					
U49A	**Red Boiling Sp**	**34.53 344**	IAmb	IAmb	00 26 58.3	
	comp=Z,42nm,0.8s					
U49A			pP	pP	00 27 08.4	+1.1
U49A	**Red Boiling Sp**	**34.53 344**	P	**P**	**00 26 56.2**	**+0.7**
	baz=160,SNR=30					
R58B	**Mineral**	**34.54 355**	pP	**pP**	**00 27 08.5**	**+0.9**
R58B			IAmb	IAmb	00 27 09.1	
	comp=Z,56nm,1.4s					
CO02	**Combarbal**	**34.57 175**	P	**P**	**00 26 56.9**	**+0.9**
CO02			pP	**pP**	**00 27 09.6**	**+1.8**
CO02			IAmb	IAmb	00 27 16.4	
	comp=Z,44nm,0.9s					
MET	**Memphis--Engin**	**34.63 338**	P	**P**	**00 26 56.9**	**+0.6**
237A	**Washetta, Mont**	**34.74 327**	P	**P**	**00 26 58.0**	**+0.7**
	baz=141,SNR=7.9					
WLAR	**White Oak Lake**	**34.74 332**	IAmb	IAmb	00 26 58.5	
	comp=Z,77nm,1.5s					
CBN	**Corbin Frederi**	**34.75 356**	P	**P**	**00 26 58.0**	**+0.7**
CBN				**pP**	**00 27 10.8**	**+1.5**
CBN			IAmb	IAmb	00 27 11.6	
	comp=Z,72nm,1.1s					
CBN	**Corbin Frederi**	**34.75 356**	P	**P**	**00 26 57.8**	**+0.5**
	baz=175					
T50A	**Nancy**	**34.77 346**	IAmb	IAmb	00 26 59.9	
	comp=Z,136nm,1.9s					
T50A	**Nancy**	**34.77 346**	P	**P**	**00 26 58.5**	**+1.0**
	baz=162					
T50A			P	**P**	**00 26 58.5**	**+1.0**
	baz=162					
WVT	**Waverly**	**34.79 341**	P	**P**	**00 26 57.5**	**-0.3**
WVT			IAmb	IAmb	00 27 01.3	
	comp=Z,38nm,0.7s					
WVT	**Waverly**	**34.79 341**	IAMs_20	IAMs_20	00 41 20.4	
	comp=Z,2µm,21.0s					
WVT	**Waverly**	**34.79 341**	P	**P**	**00 26 57.5**	**-0.3**
WVT			pmax	pmax		
	comp=Z,38nm,0.7s					
WVT			MLR	MLR		
	comp=Z,2µm,21.0s					
WVT	**Waverly**	**34.79 341**	P	**P**	**00 26 57.6**	**-0.1**
	baz=156,SNR=30					
WVT	**Waverly**	**34.79 341**	P	**P**	**00 26 57.7**	**-0.1**
	baz=156					
WVT	**Waverly**	**34.79 341**	P	**P**	**00 26 57.4**	**-0.3**
WVT			pP	**pP**	**00 27 07.9**	**-1.6**
S54A	**Dingess, Beckl**	**34.80 351**	P	**P**	**00 26 58.8**	**+1.0**
S54A	**Dingess, Beckl**	**34.80 351**	P	**P**	**00 26 59.3**	**+1.5**
	baz=168,SNR=11					
S54A			P	**P**	**00 26 59.3**	**+1.5**
	baz=168,SNR=11					
435B	**Jarrell**	**34.82 324**	IAmb	IAmb	00 26 59.1	
	comp=Z,89nm,1.4s					
435B	**Jarrell**	**34.82 324**	P	**P**	**00 26 57.7**	**-0.4**
	baz=137					
S51A	**Beattyville**	**35.07 348**	IAmb	IAmb	00 27 13.8	
	comp=Z,52nm,0.9s					
S51A	**Beattyville**	**35.07 348**	P	**P**	**00 27 01.2**	**+1.1**
	baz=164,SNR=7.8					
S51A			P	**P**	**00 27 01.2**	**+1.1**
	baz=164,SNR=7.8					
R55A	**Marlinton**	**35.09 352**	P	**P**	**00 27 01.4**	**+1.0**
R55A			IAmb	IAmb	00 27 14.7	
	comp=Z,64nm,0.8s					
R55A	**Marlinton**	**35.09 352**	P	**P**	**00 27 02.2**	**+1.8**
	baz=170,SNR=11					
R55A			P	**P**	**00 27 02.2**	**+1.8**
	baz=170,SNR=11					
HALT	**Halls**	**35.11 339**	P	**P**	**00 27 00.3**	**-0.2**
JANB	**Januaria**	**35.17 122**	*e*P	**P**	**00 27 02.0**	**+0.6**
ZON	**Zonda**	**35.19 171**	P	**P**	**00 27 02.1**	**+0.8**
ZON			IAmb	IAmb	00 27 03.4	
	comp=Z,38nm,1.0s					
ZON	**Zonda**	**35.19 171**	P	**P**	**00 27 02.1**	**+0.8**
ZON			pmax	pmax		
	comp=Z,38nm,1.0s					
BB19B	**Bebedouro**	**35.28 135**	*e*P	**P**	**00 27 02.6**	**+0.4**
PMNB	**Patos De Minas**	**35.29 129**	*e*P	**P**	**00 27 02.9**	**+0.5**
UALR	**University of**	**35.30 334**		pP	00 27 13.8	-0.3
UTMT	**University of**	**35.33 340**	P	**P**	**00 27 02.6**	**+0.2**
LNXT	**Lenox**	**35.33 339**	P	**P**	**00 27 02.6**	**+0.2**
T47A	**Sharon Grove**	**35.36 343**	P	**P**	**00 27 03.0**	**+0.4**
	baz=158,SNR=65					
GNAR	**Gosnell**	**35.40 338**	P	**P**	**00 27 03.2**	**+0.2**
GLAT	**Glass**	**35.41 339**	P	**P**	**00 27 02.7**	**-0.4**
R53A	**Hurricane**	**35.42 350**	IAmb	IAmb	00 27 16.8	
	comp=Z,41nm,0.9s					
PEBM	**Pemiscott Bayo**	**35.48 338**	P	**P**	**00 27 03.8**	**+0.2**
PTGB	**Pitanga**	**35.51 143**	*e*P	**P**	**00 27 03.5**	**-0.7**
HICK	**Hickman**	**35.63 340**	P	**P**	**00 27 05.2**	**+0.2**
WHTX	**Lake Whitney,**	**35.64 326**	P	**P**	**00 27 05.0**	**0.0**
	baz=138,SNR=9.6					
WHTX	**Lake Whitney,**	**35.64 326**	P	**P**	**00 27 05.0**	**0.0**
	baz=138,SNR=9.6					
MIAR	**Mount Ida**	**35.66 333**	P	**P**	**00 27 04.5**	**-0.7**
	baz=146,SNR=7.8					
MIAR	**Mount Ida**	**35.66 333**	P	**P**	**00 27 04.5**	**-0.7**
	baz=146,SNR=7.8					
Q56A	**Snyder Ridge,**	**35.73 354**	P	**P**	**00 27 07.1**	**+1.3**
Q56A			IAmb	IAmb	00 27 20.8	
	comp=Z,71nm,1.1s					
Q56A	**Snyder Ridge,**	**35.73 354**	P	**P**	**00 27 07.5**	**+1.7**
	baz=172,SNR=6.8					
Q56A			P	**P**	**00 27 07.5**	**+1.7**
	baz=172,SNR=6.8					
R50A	**Paris**	**35.85 347**	IAmb	IAmb	00 27 20.6	
	comp=Z,48nm,0.8s					
R50A	**Paris**	**35.85 347**	P	**P**	**00 27 08.0**	**+1.2**
	baz=163,SNR=15					
R50A			P	**P**	**00 27 08.0**	**+1.2**
	baz=163,SNR=15					
T45B	**Paducah**	**35.87 341**	P	**P**	**00 27 06.5**	**-0.4**
	baz=156,SNR=10					
Q54A	**Coxs Mills**	**35.88 352**	pP	**pP**	**00 27 20.4**	**+1.2**
Q54A			IAmb	IAmb	00 27 21.0	
	comp=Z,51nm,0.9s					
Q54A	**Coxs Mills**	**35.88 352**	P	**P**	**00 27 07.5**	**+0.5**
	baz=169,SNR=5.2					
Q54A			P	**P**	**00 27 07.5**	**+0.5**
	baz=169,SNR=5.2					
VA06	**Catapilco**	**35.89 175**	P	**P**	**00 27 08.3**	**+1.1**
VA06			IAmb	IAmb	00 27 09.6	
	comp=Z,58nm,1.2s					
SDMD	**Soldier's Deli**	**35.92 357**	P	**P**	**00 27 08.2**	**+0.8**
SDMD				**pP**	**00 27 19.4**	**0.0**
LCAR	**Lake Charles**	**35.93 337**	IAmb	IAmb	00 27 08.3	
	comp=Z,114nm,1.6s					
LCAR	**Lake Charles**	**35.93 337**	P	**P**	**00 27 06.9**	**-0.6**
	baz=151,SNR=21					
JCT	**Junction City**	**35.95 321**	IAmb	IAmb	00 27 08.8	
	comp=Z,79nm,1.7s					
JCT	**Junction City**	**35.95 321**	P	**P**	**00 27 07.1**	**-0.7**
	baz=134					
R49A	**Shelbyville**	**36.05 346**	P	**P**	**00 27 09.0**	**+0.5**
	baz=162,SNR=8.0					
R49A			P	**P**	**00 27 09.0**	**+0.5**
	baz=162,SNR=8.0					
P57A	**Homestead Farm**	**36.06 356**	IAmb	IAmb	00 27 23.1	
	comp=Z,70nm,1.1s					
P57A	**Homestead Farm**	**36.06 356**	P	**P**	**00 27 10.0**	**+1.4**
	baz=174,SNR=5.8					
P57A			P	**P**	**00 27 10.0**	**+1.4**
	baz=174,SNR=5.8					
AZCA	**Azaras, Argent**	**36.07 151**	*e*P	**P**	**00 27 07.9**	**-0.9**
Q52A	**Bidwell**	**36.09 350**	P	**P**	**00 27 10.1**	**+1.3**
	baz=167					
Q52A			P	**P**	**00 27 10.1**	**+1.3**
	baz=167					
VA03	**San Esteban**	**36.16 174**	P	**P**	**00 27 11.4**	**+1.8**
FCAR	**Ozark Folk Cen**	**36.16 336**	IAmb	IAmb	00 27 10.0	
	comp=Z,89nm,1.7s					
WCI	**Wyandotte Cave**	**36.28 344**	P	**P**	**00 27 10.7**	**+0.2**
WCI			IAmb	IAmb	00 27 23.5	
	comp=Z,51nm,0.8s					
WCI	**Wyandotte Cave**	**36.28 344**	IAMs_20	IAMs_20	00 42 11.7	
	comp=Z,2µm,22.0s					
WCI	**Wyandotte Cave**	**36.28 344**	P	**P**	**00 27 10.7**	**+0.2**
WCI			pmax	pmax		
	comp=Z,51nm,0.8s					
WCI			MLR	MLR		
	comp=Z,2µm,22.0s					
WCI	**Wyandotte Cave**	**36.28 344**	P	**P**	**00 27 10.8**	**+0.2**
	baz=160,SNR=23					
WCI	**Wyandotte Cave**	**36.28 344**	P	**P**	**00 27 10.9**	**+0.4**
	baz=160					
WCI	**Wyandotte Cave**	**36.28 344**	P	**P**	**00 27 10.9**	**+0.4**
MC01	**Montes Claros**	**36.30 124**	*e*P	**P**	**00 27 11.7**	**+0.7**
ROC1	**El Roble**	**36.32 175**	P	**P**	**00 27 12.6**	**+1.4**
ROC1			IAmb	IAmb	00 27 41.0	
	comp=Z,37nm,0.6s					
Q51A	**Peebles**	**36.35 349**	pP	pP	00 27 24.2	+1.3
Q51A	**Peebles**	**36.35 349**	P	**P**	**00 27 12.3**	**+1.2**
	baz=165,SNR=13					
Q51A			P	**P**	**00 27 12.3**	**+1.2**
	baz=165,SNR=13					
WUPA	**West Chester U**	**36.39 359**	P	**P**	**00 27 12.5**	**+1.1**
WUPA				**pP**	**00 27 24.0**	**+0.5**
MCWV	**Mont Chateau**	**36.42 353**	P	**P**	**00 27 12.8**	**+1.2**
MCWV			pP	**pP**	**00 27 24.6**	**+0.9**
MCWV			IAmb	IAmb	00 27 25.9	
	comp=Z,51nm,0.9s					
MCWV			IAMs_20	IAMs_20	00 43 01.6	
	comp=Z,2µm,20.0s					
MCWV	**Mont Chateau**	**36.42 353**	P	**P**	**00 27 13.4**	**+1.8**
	baz=171					
MCWV	**Mont Chateau**	**36.42 353**	P	**P**	**00 27 12.2**	**+0.6**
	baz=171					
P53A	**Whipple**	**36.46 351**	pP	pP	00 27 25.1	+1.1
P53A	**Whipple**	**36.46 351**	P	**P**	**00 27 13.4**	**+1.4**
	baz=168,SNR=9.3					
P53A			P	**P**	**00 27 13.4**	**+1.4**
	baz=168,SNR=9.3					
MVL	**Millersville**	**36.48 358**	P	**P**	**00 27 13.2**	**+1.1**
MVL			IAmb	IAmb	00 27 26.7	
	comp=Z,56nm,1.2s					
Z35A	**Perchaven, San**	**36.53 327**	P	**P**	**00 27 13.0**	**+0.2**
	baz=140,SNR=7.7					
X37A	**Clayton**	**36.55 331**	P	**P**	**00 27 13.0**	**+0.2**
	baz=144,SNR=15					
MT02	**Curacav**	**36.59 175**	P	**P**	**00 27 14.9**	**+1.7**
S44A	**Carbondale**	**36.68 340**	IAmb	IAmb	00 27 14.3	
	comp=Z,50nm,0.9s					
S44A	**Carbondale**	**36.68 340**	P	**P**	**00 27 13.8**	**-0.1**
	baz=155,SNR=16					
SIUC	**Southern Illin**	**36.69 340**	IAmb	IAmb	00 27 14.9	
	comp=Z,69nm,0.9s					
P52A	**Corning**	**36.72 350**	IAmb	IAmb	00 27 27.9	
	comp=Z,79nm,1.0s					
P52A			IAMs_20	IAMs_20	00 43 27.8	
	comp=Z,3µm,20.0s					
P52A	**Corning**	**36.72 350**	P	**P**	**00 27 15.0**	**+0.7**
	baz=167,SNR=7.4					
PAGS	**Pennsylvania G**	**36.73 357**	P	**P**	**00 27 14.9**	**+0.7**
PAGS			IAmb	IAmb	00 27 28.1	
	comp=Z,53nm,1.0s					
P51A	**Williamsport**	**36.74 349**	P	**P**	**00 27 15.5**	**+1.1**
	baz=166,SNR=5.3					
P51A			P	**P**	**00 27 15.5**	**+1.1**
	baz=166,SNR=5.3					
T42A	**Van Buren**	**36.75 338**	P	**P**	**00 27 13.6**	**-0.9**
T42A	**Van Buren**	**36.75 338**	P	**P**	**00 27 13.2**	**-1.2**
	baz=152					
MT05	**Renca**	**36.76 175**	P	**P**	**00 27 16.4**	**+1.7**
MT05				**pP**	**00 27 28.9**	**+2.4**
RCLB	**Rio Claro- Sao**	**36.86 135**	*e*P	**P**	**00 27 16.1**	**+0.4**
MT03	**Universidad Ad**	**36.88 174**	P	**P**	**00 27 17.3**	**+1.5**
VA05	**Santo Domingo**	**36.95 176**	P	**P**	**00 27 17.5**	**+1.3**
VA05			IAmb	IAmb	00 28 04.3	
	comp=Z,64nm,1.2s					
O54A	**Avella**	**37.00 353**	IAmb	IAmb	00 27 30.4	
	comp=Z,42nm,0.9s					
O54A	**Avella**	**37.00 353**	P	**P**	**00 27 17.8**	**+1.2**
	baz=170					
O54A			P	**P**	**00 27 17.8**	**+1.2**
	baz=170					
VA04	**Juan Fernndez**	**37.04 186**	P	**P**	**00 27 17.9**	**+0.9**
LUPA	**Lehigh Univers**	**37.05 359**	P	**P**	**00 27 18.2**	**+1.2**
ITQB	**Itaqui**	**37.12 154**	P	**P**	**00 27 16.2**	**-1.5**
ITQB			IAmb	IAmb	00 27 17.5	
	comp=Z,60nm,1.1s					
MT09	**Talagante**	**37.12 175**	P	**P**	**00 27 18.9**	**+1.1**
MT09			IAmb	IAmb	00 27 21.9	
	comp=Z,104nm,1.4s					
BRNJ	**Basking Ridge**	**37.13 0**	P	**P**	**00 27 19.7**	**+2.1**
BRNJ			IAmb	IAmb	00 27 31.7	
	comp=Z,104nm,1.4s					
P49A	**Miami Univ. Ec**	**37.13 347**	IAmb	IAmb	00 27 31.1	
	comp=Z,68nm,1.1s					
P49A			IAMs_20	IAMs_20	00 43 36.9	
	comp=Z,2µm,20.0s					
P49A	**Miami Univ. Ec**	**37.13 347**	P	**P**	**00 27 18.0**	**+0.3**
	baz=163,SNR=9.4					
P49A	**Miami Univ. Ec**	**37.13 347**	P	**P**	**00 27 18.0**	**+0.3**
	baz=163,SNR=9.4					
O52A	**Adamsville**	**37.14 351**	IAmb	IAmb	00 27 31.6	
	comp=Z,108nm,1.2s					
O53A	**New Philadelph**	**37.18 352**	IAMs_20	IAMs_20	00 43 12.8	
	comp=Z,2µm,20.0s					
O53A	**New Philadelph**	**37.18 352**	P	**P**	**00 27 18.6**	**+0.5**
	baz=169,SNR=5.2					
SSPA	**Standing Stone**	**37.20 356**	P	**P**	**00 27 19.6**	**+1.3**
SSPA			pP	**pP**	**00 27 31.1**	**+0.7**
SSPA			IAmb	IAmb	00 27 32.4	
	comp=Z,47nm,0.9s					
SSPA	**Standing Stone**	**37.20 356**	IAMs_20	IAMs_20	00 43 40.1	
	comp=Z,2µm,21.0s					
SSPA	**Standing Stone**	**37.20 356**	P	**P**	**00 27 19.6**	**+1.3**
	baz=174					
SSPA	**Standing Stone**	**37.20 356**	P	**P**	**00 27 19.3**	**+1.0**
	baz=174					
SSPA	**Standing Stone**	**37.20 356**	P	**P**	**00 27 19.4**	**+1.1**
SSPA			pP	**pP**	**00 27 31.4**	**+1.0**
SSPA			sP	**sP**	**00 27 36.9**	**+1.4**
P48A	**Milroy**	**37.23 346**	pP	**pP**	**00 27 29.9**	**-0.4**
P48A			IAmb	IAmb	00 27 31.6	
	comp=Z,100nm,1.1s					
P48A	**Milroy**	**37.23 346**	P	**P**	**00 27 18.5**	**-0.1**
	baz=162,SNR=14					
P48A			P	**P**	**00 27 18.5**	**-0.1**
	baz=162,SNR=14					
CPNY	**Central Park**	**37.24 1**	P	**P**	**00 27 19.5**	**+0.9**
CPNY				**pP**	**00 27 30.9**	**+0.2**
UPAO	**U. Pittsburgh**	**37.25 353**	P	**P**	**00 27 20.2**	**+1.5**
	baz=171					
LMEL	**Las Melosas**	**37.27 174**	P	**P**	**00 27 20.7**	**+1.6**
LMEL			IAmb	IAmb	00 27 44.4	
	comp=Z,43nm,1.1s					
HHAR	**Hobbs**	**37.27 334**	IAmb	IAmb	00 27 20.0	
	comp=Z,31nm,0.9s					
HHAR			pP	pP	00 27 29.9	-1.0
HHAR	**Hobbs**	**37.27 334**	P	**P**	**00 27 17.8**	**-1.1**
	baz=147					
MGMO	**Mountain Grove**	**37.31 336**	P	**P**	**00 27 18.8**	**-0.5**
UNIS	**Unistalda (Bra**	**37.33 151**	*e*P	**P**	**00 27 18.6**	**-1.0**
N58A	**Sunbury**	**37.34 357**	P	**P**	**00 27 20.5**	**+1.1**
N58A			IAmb	IAmb	00 27 35.6	
	comp=Z,44nm,1.1s					
FVM	**French Village**	**37.35 339**	IAmb	IAmb	00 27 37.2	
	comp=Z,70nm,0.8s					
FVM	**French Village**	**37.35 339**	P	**P**	**00 27 19.6**	**0.0**
	baz=153,SNR=12					
ABTX	**Abilene, Hawle**	**37.36 324**	IAmb	IAmb	00 27 20.8	
	comp=Z,66nm,0.9s					
ABTX	**Abilene, Hawle**	**37.36 324**	P	**P**	**00 27 19.7**	**-0.1**
	baz=136,SNR=30					
ABTX	**Abilene, Hawle**	**37.36 324**	P	**P**	**00 27 19.7**	**-0.1**
	baz=136,SNR=30					
ITAB	**Concordia**	**37.39 146**	P	**P**	**00 27 19.5**	**-0.6**
ITAB			pP	**pP**	**00 27 31.6**	**-0.2**
ACSO	**Alum Creek Sta**	**37.45 349**	pP	**pP**	**00 27 33.2**	**+0.6**
ACSO			IAMs_20	IAMs_20	00 42 59.2	
	comp=Z,2µm,21.0s					
ACSO	**Alum Creek Sta**	**37.45 349**	P	**P**	**00 27 21.2**	**+0.8**
	baz=166,SNR=5.9					

CCM				pmax	pmax		
	comp=Z,32nm,0.9s						
CCM				MLR	MLR		
	comp=Z,1μm,22.0s						
CCM	**Cathedral Cave**	**37.71**	**338**	P	**P**	**00 27 21.7**	**-0.9**
	baz=152,SNR=14						
CCM	**Cathedral Cave**	**37.71**	**338**	P	**P**	**00 27 21.4**	**-1.2**
	baz=152						
CCM	**Cathedral Cave**	**37.71**	**338**	P	**P**	**00 27 21.6**	**-0.9**
CCM				pP	**pP**	**00 27 32.9**	**-1.7**
BO01	**Tunca**	**37.72**	**175**	IAmb	IAmb	00 27 26.8	
	comp=Z,80nm,1.4s						
TXAR	**Lajitas Array**	**37.75**	**316**	P	**P**	**00 27 22.8**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=138,slow=9.5,SNR=30						
TXAR				PcP	**PcP**	**00 29 40.0**	**+0.3**
	comp=Z,9.0nm,0.8s,baz=134,slow=6.4,SNR=10.0						
	comp=Z,3.6nm,0.7s						
TX31	**Lajitas Ar. Si**	**37.75**	**316**	IAmb	IAmb	00 27 24.4	
	comp=Z,50nm,1.2s						
TX31	**Lajitas Ar. Si**	**37.75**	**316**	P	**P**	**00 27 23.8**	**+0.5**
	baz=128,SNR=16						
YLE	**Yale**	**37.79**	**2**	P	**P**	**00 27 25.3**	**+2.1**
YLE				IAmb	IAmb	00 27 37.1	
	comp=Z,92nm,1.4s						
HPIG		**37.81**	**311**	IAmb	IAmb	00 27 26.4	
	comp=Z,176nm,2.0s						
X34A	**Smith Ranch, M**	**37.81**	**328**	IAmb	IAmb	00 27 24.6	
	comp=Z,40nm,0.9s						
TUL1	**Leonard**	**37.82**	**331**	IAmb	IAmb	00 27 23.9	
	comp=Z,56nm,0.9s						
TUL1	**Leonard**	**37.82**	**331**	P	**P**	**00 27 22.4**	**-1.2**
	baz=144,SNR=21						
TUL1	**Leonard**	**37.82**	**331**	P	**P**	**00 27 22.7**	**-0.9**
	baz=144,SNR=21						
P46A	**Rosedale**	**37.83**	**344**	P	**P**	**00 27 23.7**	**+0.1**
	baz=159,SNR=36						
M57A	**Sunshine Farm,**	**37.85**	**357**	P	**P**	**00 27 25.0**	**+1.2**
M57A	**Sunshine Farm,**	**37.85**	**357**	P	**P**	**00 27 25.4**	**+1.6**
	baz=176,SNR=5.9						
M57A				P	**P**	**00 27 25.4**	**+1.6**
	baz=176,SNR=5.9						
SLM	**Saint Louis**	**37.87**	**340**	P	**P**	**00 27 23.6**	**-0.4**
SLM				IAmb	IAmb	00 27 25.6	
	comp=Z,32nm,0.7s						
SLM	**Saint Louis**	**37.87**	**340**	P	**P**	**00 27 23.6**	**-0.4**
SLM				pmax	pmax		
	comp=Z,32nm,0.7s						
O48B	**Farmland**	**37.92**	**347**	P	**P**	**00 27 24.6**	**+0.2**
	baz=163,SNR=10						
O48B	**Farmland**	**37.92**	**347**	P	**P**	**00 27 24.6**	**+0.2**
	baz=163,SNR=10						
M63A	**Gales Ferry**	**37.92**	**3**	P	**P**	**00 27 25.8**	**+1.4**
M63A					**pP**	**00 27 38.0**	**+1.6**
M63A				IAmb	IAmb	00 27 38.7	
	comp=Z,61nm,0.9s						
BSCB	**Bom Sucesso**	**37.99**	**131**	*e*P	**P**	**00 27 25.5**	**+0.2**
N51A	**Ashland**	**38.01**	**350**	P	**P**	**00 27 26.3**	**+1.1**
	baz=167,SNR=6.5						
N51A				P	**P**	**00 27 26.3**	**+1.1**
	baz=167,SNR=6.5						
KSPA	**Keystone Colle**	**38.02**	**359**	IAmb	IAmb	00 27 39.0	
	comp=Z,53nm,0.9s						
KSPA	**Keystone Colle**	**38.02**	**359**	P	**P**	**00 27 26.0**	**+0.8**
	baz=178,SNR=5.5						
M55A	**Ridgway**	**38.10**	**355**	IAmb	IAmb	00 27 39.7	
	comp=Z,52nm,0.9s						
BO02	**Sierra Bellavi**	**38.15**	**175**	IAmb	IAmb	00 27 30.7	
	comp=Z,84nm,1.4s						
KSCT	**Kent School, K**	**38.19**	**1**	P	**P**	**00 27 27.6**	**+1.0**
S39A	**Bolivar**	**38.20**	**336**	P	**P**	**00 27 26.1**	**-0.7**
	baz=149,SNR=13						
NPNY	**Mohonk Preserv**	**38.20**	**1**	P	**P**	**00 27 27.6**	**+0.9**
	baz=181,SNR=5.2						
GO05	**Huala**	**38.27**	**176**	P	**P**	**00 27 28.7**	**+1.3**
GO05				IAmb	IAmb	00 28 32.7	
	comp=Z,59nm,1.4s						
M53A	**WI Miller and**	**38.27**	**353**	P	**P**	**00 27 28.1**	**+0.8**
M53A					**pP**	**00 27 39.5**	**0.0**
M53A				IAmb	IAmb	00 27 41.3	
	comp=Z,85nm,1.1s						
M53A				IAMs_20	IAMs_20	00 43 26.8	
	comp=Z,2μm,21.0s						
M53A	**WI Miller and**	**38.27**	**353**	P	**P**	**00 27 27.8**	**+0.5**
	baz=170						
R40A	**Maddies Statio**	**38.30**	**337**	P	**P**	**00 27 26.3**	**-1.3**
	baz=151,SNR=10						
OK025	**Westminster Rd**	**38.32**	**329**		**pP**	**00 27 38.5**	**-1.4**
OK025				IAmb	IAmb	00 28 04.2	
	comp=Z,36nm,0.8s						
RODS	**Rosario do Sul**	**38.34**	**152**	*e*P	**P**	**00 27 27.1**	**-0.9**
OK034	**N. Norfolk Rd.**	**38.34**	**331**	IAmb	IAmb	00 27 29.2	
	comp=Z,55nm,0.8s						
OK034				pP	pP	00 27 38.9	-1.2
N49A	**Columbus Grove**	**38.35**	**348**	pP	**pP**	**00 27 39.5**	**-0.3**
N49A				IAmb	IAmb	00 27 41.5	
	comp=Z,82nm,0.9s						
N49A	**Columbus Grove**	**38.35**	**348**	P	**P**	**00 27 28.8**	**+0.8**
	baz=164,SNR=7.7						
N49A				P	**P**	**00 27 28.8**	**+0.8**
	baz=164,SNR=7.7						
OK031	**S. Brethren Rd**	**38.36**	**330**	IAmb	IAmb	00 27 29.3	
	comp=Z,48nm,0.9s						
ALLY	**Alegheny Colle**	**38.42**	**353**	IAmb	IAmb	00 27 42.4	
	comp=Z,78nm,0.9s						
WMOK	**Wichita Mounta**	**38.43**	**327**	P	**P**	**00 27 27.7**	**-1.1**
	baz=139,SNR=34						
WMOK	**Wichita Mounta**	**38.43**	**327**	P	**P**	**00 27 27.7**	**-1.1**
	baz=139,SNR=34						
M52A	**Chesterland**	**38.47**	**352**	P	**P**	**00 27 28.9**	**-0.1**
M52A				IAmb	IAmb	00 27 42.7	
	comp=Z,66nm,0.9s						
SFIN	**Lafayette**	**38.52**	**345**	IAmb	IAmb	00 27 31.2	
	comp=Z,65nm,1.1s						
SFIN	**Lafayette**	**38.52**	**345**	P	**P**	**00 27 29.2**	**-0.2**
	baz=160,SNR=5.7						
SFIN	**Lafayette**	**38.52**	**345**	P	**P**	**00 27 28.8**	**-0.5**
	baz=160,SNR=5.7						
P43A	**Skaggs, Pawnee**	**38.54**	**341**	IAmb	IAmb	00 27 42.3	
	comp=Z,67nm,0.9s						
P43A	**Skaggs, Pawnee**	**38.54**	**341**	P	**P**	**00 27 28.5**	**-1.0**
	baz=156,SNR=8.5						
M50A	**Fremont**	**38.60**	**350**	P	**P**	**00 27 30.6**	**+0.6**
M50A				IAmb	IAmb	00 27 43.5	
	comp=Z,86nm,0.9s						
L59A	**Walton**	**38.64**	**360**	P	**P**	**00 27 29.4**	**-1.0**
N47A	**Urbana**	**38.64**	**347**	IAmb	IAmb	00 27 43.0	
	comp=Z,63nm,0.8s						
N47A	**Urbana**	**38.64**	**347**	P	**P**	**00 27 30.1**	**-0.4**
	baz=162,SNR=8.4						
N47A				P	**P**	**00 27 30.1**	**-0.4**
	baz=162,SNR=8.4						
BINY	**Binghamton**	**38.67**	**358**	P	**P**	**00 27 31.3**	**+0.6**
BINY				IAmb	IAmb	00 27 45.3	
	comp=Z,82nm,1.1s						
BINY	**Binghamton**	**38.67**	**358**	P	**P**	**00 27 31.2**	**+0.6**
	baz=178,SNR=7.0						
BINY	**Binghamton**	**38.67**	**358**	P	**P**	**00 27 31.0**	**+0.3**
	baz=178						
OK044	**Pawnee Station**	**38.67**	**331**	IAmb	IAmb	00 27 34.4	
	comp=Z,52nm,0.9s						
L56A	**Greenwood**	**38.67**	**357**	IAmb	IAmb	00 27 45.1	
	comp=Z,71nm,1.1s						
L56A	**Greenwood**	**38.67**	**357**	P	**P**	**00 27 31.9**	**+1.1**
	baz=175,SNR=5.1						
L56A				P	**P**	**00 27 31.9**	**+1.1**
	baz=175,SNR=5.1						
O44A	**Mansfield**	**38.69**	**343**	IAmb	IAmb	00 27 32.1	
	comp=Z,56nm,0.9s						
O44A	**Mansfield**	**38.69**	**343**	P	**P**	**00 27 30.1**	**-0.7**
	baz=157,SNR=7.5						
OK046	**Pawnee Station**	**38.74**	**331**	IAmb	IAmb	00 28 10.7	
	comp=Z,32nm,0.6s						
OK048	**Pawnee Station**	**38.78**	**331**	IAmb	IAmb	00 27 34.4	
	comp=Z,160nm,1.9s						
OK050	**Pawnee Station**	**38.78**	**331**	IAmb	IAmb	00 27 32.1	
	comp=Z,191nm,1.9s						
OK045	**Pawnee Station**	**38.79**	**331**	IAmb	IAmb	00 27 35.5	
	comp=Z,41nm,0.9s						
OK051	**E0350 and S346**	**38.80**	**331**	IAmb	IAmb	00 28 29.2	
	comp=Z,51nm,1.0s						
PARB	**Paraibuna**	**38.80**	**135**	*e*P	**P**	**00 27 32.2**	**+0.1**
ERPA	**Erie**	**38.86**	**354**	P	**P**	**00 27 33.6**	**+1.3**
ERPA				pP	**pP**	**00 27 45.3**	**+0.9**
ERPA				IAmb	IAmb	00 27 47.5	
	comp=Z,63nm,0.9s						
ERPA	**Erie**	**38.86**	**354**	P	**P**	**00 27 32.8**	**+0.5**
	baz=171						
BCX	**Boston College**	**38.91**	**4**	P	**P**	**00 27 33.0**	**+0.4**
BCX				IAmb	IAmb	00 27 47.0	
	comp=Z,55nm,1.2s						
L61B	**Northampton**	**38.94**	**2**	P	**P**	**00 27 33.8**	**+0.9**
L61B					**pP**	**00 27 46.0**	**+1.0**
L61B	**Northampton**	**38.94**	**2**	P	**P**	**00 27 33.2**	**+0.3**
	baz=183						
WES	**Weston**	**38.94**	**4**	P	**P**	**00 27 33.2**	**+0.3**
WES	**Weston**	**38.94**	**4**	P	**P**	**00 27 33.2**	**+0.3**
WES				pmax	pmax		
	comp=Z,48nm,1.2s						
OK049	**E0420 Rd and N**	**38.95**	**330**	IAmb	IAmb	00 27 47.7	
	comp=Z,43nm,0.8s						
T35B	**Sooner Cattle**	**38.97**	**332**	P	**P**	**00 27 32.5**	**-0.8**
	baz=144,SNR=12						
WVNY	**West Valley, N**	**39.02**	**355**	P	**P**	**00 27 34.6**	**+1.0**
WVNY				IAmb	IAmb	00 27 47.5	
	comp=Z,80nm,0.8s						
WVNY	**West Valley, N**	**39.02**	**355**	P	**P**	**00 27 35.0**	**+1.4**
	baz=174						
HRV	**Adam Dziewonsk**	**39.05**	**4**	P	**P**	**00 27 34.5**	**+0.7**
HRV				pP	**pP**	**00 27 45.4**	**-0.5**
HRV				IAmb	IAmb	00 27 47.6	
	comp=Z,83nm,1.4s						
HRV	**Adam Dziewonsk**	**39.05**	**4**	P	**P**	**00 27 33.1**	**-0.7**
	baz=185						
ML02	**Panimavida**	**39.06**	**176**	P	**P**	**00 27 35.0**	**+1.0**
ML02				IAmb	IAmb	00 28 25.6	
	comp=Z,48nm,1.0s						
K62A	**Royalston**	**39.17**	**3**	P	**P**	**00 27 36.4**	**+1.6**
K62A				IAmb	IAmb	00 27 49.2	
	comp=Z,50nm,0.9s						
TRY	**Troy**	**39.19**	**1**	P	**P**	**00 27 35.1**	**+0.2**
TRY					**pP**	**00 27 49.3**	**+2.2**
K57A	**Scipio Center**	**39.22**	**358**	P	**P**	**00 27 36.2**	**+1.0**
K57A				IAmb	IAmb	00 27 49.5	
	comp=Z,116nm,1.1s						
K57A	**Scipio Center**	**39.22**	**358**	P	**P**	**00 27 35.7**	**+0.5**
	baz=177,SNR=5.5						
MMNY	**Mt. Morris Dam**	**39.29**	**356**	P	**P**	**00 27 34.4**	**-1.4**
P40A	**Paris**	**39.30**	**339**	IAmb	IAmb	00 27 36.1	
	comp=Z,132nm,1.9s						
P40A	**Paris**	**39.30**	**339**	P	**P**	**00 27 35.3**	**-0.7**
	baz=152,SNR=11						
HDIL	**Hopedale**	**39.30**	**342**	IAMs_20	IAMs_20	00 44 49.8	
	comp=Z,2μm,20.0s						
HDIL	**Hopedale**	**39.30**	**342**	P	**P**	**00 27 35.1**	**-0.9**
	baz=156,SNR=34						
HDIL	**Hopedale**	**39.30**	**342**	P	**P**	**00 27 35.1**	**-0.9**
	baz=156,SNR=34						
L48A	**N Adams**	**39.38**	**348**	IAmb	IAmb	00 27 49.5	
	comp=Z,63nm,1.0s						
SJMB	**Sao Joao De Ma**	**39.57**	**125**	*e*P	**P**	**00 27 39.1**	**+0.6**
AAM	**Ann Arbor**	**39.58**	**349**	P	**P**	**00 27 39.4**	**+1.1**
AAM				IAMs_20	IAMs_20	00 44 03.6	
	comp=Z,3μm,22.0s						
AAM	**Ann Arbor**	**39.58**	**349**	P	**P**	**00 27 39.4**	**+1.1**
AAM				pmax	pmax		
	comp=Z,31nm,0.9s						
AAM				MLR	MLR		
	comp=Z,3μm,22.0s						
AAM	**Ann Arbor**	**39.58**	**349**	P	**P**	**00 27 37.8**	**-0.5**
	baz=166						
SLBS	**Sierra La Lagu**	**39.63**	**304**	P	**P**	**00 27 40.8**	**+1.8**
SLBS				IAmb	IAmb	00 27 42.7	
	comp=Z,50nm,1.1s						
SLBS	**Sierra La Lagu**	**39.63**	**304**	P	**P**	**00 27 40.9**	**+1.8**
SLBS				sP	**sP**	**00 27 55.2**	**-0.6**
M44A	**Midewin, Midew**	**39.71**	**344**	P	**P**	**00 27 39.3**	**-0.1**
M44A				IAmb	IAmb	00 27 50.8	
	comp=Z,51nm,0.9s						
OK038	**West end E0370**	**39.73**	**329**	IAmb	IAmb	00 27 39.1	
	comp=Z,78nm,1.6s						
CLNB	**Carlsbad**	**39.73**	**320**	P	**P**	**00 27 39.5**	**-0.3**
RCBR	**Riachuelo**	**39.74**	**103**	LR	LR	00 44 48.3	
	comp=Z,7μm,18.7s,baz=72,slow=37						
RCBR	**Riachuelo**	**39.74**	**103**	P	**P**	**00 27 40.4**	**+0.3**
RCBR	**Riachuelo**	**39.74**	**103**	P	**P**	**00 27 40.4**	**+0.3**
RCBR				pmax	pmax		
	comp=Z,26nm,1.1s						
MEDO	**Medina**	**39.76**	**356**	P	**P**	**00 27 40.6**	**+0.9**
MEDO					**pP**	**00 27 52.8**	**+1.0**
MEDO				IAmb	IAmb	00 27 53.8	
	comp=Z,79nm,0.9s						
J56A	**Wolcott**	**39.77**	**357**	P	**P**	**00 27 40.9**	**+1.1**
J56A	**Wolcott**	**39.77**	**357**	P	**P**	**00 27 40.6**	**+0.8**
	baz=176						
J56A				P	**P**	**00 27 40.6**	**+0.8**
	baz=176						
U32A	**Winter Ranch,**	**39.79**	**329**	IAmb	IAmb	00 27 42.0	
	comp=Z,67nm,0.9s						
J58A	**Remsen**	**39.81**	**359**	P	**P**	**00 27 40.9**	**+0.7**
J58A					**pP**	**00 27 53.3**	**+0.9**
J58A				IAmb	IAmb	00 27 54.5	
	comp=Z,104nm,1.4s						
J58A	**Remsen**	**39.81**	**359**	P	**P**	**00 27 41.1**	**+0.9**
	baz=179						
J58A				P	**P**	**00 27 41.1**	**+0.9**
	baz=179						
J55A	**Hilton**	**39.81**	**356**	P	**P**	**00 27 41.4**	**+1.2**
J55A				IAmb	IAmb	00 27 53.6	
	comp=Z,61nm,0.9s						
J61A	**Chester**	**39.84**	**2**	P	**P**	**00 27 41.5**	**+1.2**
J61A				IAmb	IAmb	00 27 54.4	
	comp=Z,80nm,1.2s						
L46A	**Eue Claire**	**39.85**	**346**	IAmb	IAmb	00 27 52.8	
	comp=Z,76nm,0.8s						
K50A	**Casco**	**39.87**	**351**	P	**P**	**00 27 41.8**	**+1.2**
	baz=167						
K50A				P	**P**	**00 27 41.8**	**+1.2**
	baz=167						
J57A	**Williamstown**	**39.88**	**358**	P	**P**	**00 27 41.4**	**+0.7**
J57A	**Williamstown**	**39.88**	**358**	P	**P**	**00 27 41.9**	**+1.2**
	baz=178,SNR=5.6						
J57A				P	**P**	**00 27 41.9**	**+1.2**
	baz=178,SNR=5.6						
J54A	**Appleton**	**39.88**	**355**	P	**P**	**00 27 41.9**	**+1.2**
J54A				IAmb	IAmb	00 27 55.2	
	comp=Z,203nm,1.9s						
OK035	**E0210 Rd and N**	**39.89**	**329**	P	**P**	**00 27 41.2**	**+0.2**
J59A	**Piesco**	**39.91**	**0**	P	**P**	**00 27 42.4**	**+1.3**
J59A					**pP**	**00 27 54.4**	**+1.2**
J59A	**Piesco**	**39.91**	**0**	P	**P**	**00 27 42.0**	**+1.0**
	baz=180						
J59A				P	**P**	**00 27 42.0**	**+1.0**
	baz=180						
KAN08	**Anthony NE Sta**	**39.92**	**330**	IAmb	IAmb	00 27 41.8	
	comp=Z,161nm,1.8s						
N41A	**Harden Midland**	**39.94**	**341**	IAmb	IAmb	00 27 42.1	
	comp=Z,36nm,0.8s						
N41A	**Harden Midland**	**39.94**	**341**	P	**P**	**00 27 40.5**	**-0.8**
	baz=154,SNR=14						
P38A	**Dawn**	**39.95**	**337**	P	**P**	**00 27 40.0**	**-1.3**
P38A	**Dawn**	**39.95**	**337**	P	**P**	**00 27 40.1**	**-1.3**
	baz=150,SNR=8.8						
KAN16	**Harper SW Stat**	**39.97**	**330**	P	**P**	**00 27 41.5**	**-0.1**
KAN12	**Harper NE Stat**	**39.99**	**331**	IAmb	IAmb	00 28 39.9	
	comp=Z,75nm,1.3s						
FFD	**Franklin Falls**	**40.00**	**3**	IAMs_20	IAMs_20	00 45 36.8	
	comp=Z,1μm,18.0s						
NAN01	**Guarapari, ES**	**40.03**	**123**	*e*P	**P**	**00 27 42.9**	**+0.6**
AMTX	**Amarillo**	**40.16**	**325**	P	**P**	**00 27 43.2**	**-0.1**
	baz=135,SNR=16						
AMTX	**Amarillo**	**40.16**	**325**	P	**P**	**00 27 43.3**	**0.0**
	baz=135						
MSTX	**Muleshoe**	**40.17**	**323**	IAmb	IAmb	00 27 44.4	
	comp=Z,108nm,1.1s						
MSTX	**Muleshoe**	**40.17**	**323**	P	**P**	**00 27 43.3**	**-0.2**
	baz=133,SNR=39						
MSTX	**Muleshoe**	**40.17**	**323**	P	**P**	**00 27 43.1**	**-0.4**
	baz=133,SNR=39						
HNH	**Hanover**	**40.21**	**3**	P	**P**	**00 27 44.6**	**+1.2**
HNH				IAmb	IAmb	00 28 10.9	
	comp=Z,162nm,2.0s						
PLTB	**Pedras Altas**	**40.27**	**152**	P	**P**	**00 27 42.8**	**-1.3**
L44A	**Lake County Fo**	**40.41**	**345**	P	**P**	**00 27 45.5**	**+0.3**
L44A				IAmb	IAmb	00 27 56.6	
	comp=Z,51nm,0.9s						
L44A				IAMs_20	IAMs_20	00 44 29.0	
	comp=Z,3μm,22.0s						
L44A	**Lake County Fo**	**40.41**	**345**	P	**P**	**00 27 45.0**	**-0.2**
	baz=159						
NCB	**Newcomb**	**40.42**	**0**	P	**P**	**00 27 45.7**	**+0.5**
NCB				IAmb	IAmb	00 27 58.9	
	comp=Z,54nm,1.1s						
PECO	**Prince Edward**	**40.44**	**357**	P	**P**	**00 27 46.2**	**+0.9**
RIB01	**Linhares ES**	**40.52**	**125**	*e*P	**P**	**00 27 46.9**	**+0.5**
I63A	**Otisfield**	**40.66**	**4**	P	**P**	**00 27 48.4**	**+1.3**
J47A	**Sunmer**	**40.71**	**349**	P	**P**	**00 27 47.8**	**+0.2**
	baz=164,SNR=13						
J47A				P	**P**	**00 27 47.8**	**+0.2**
	baz=164,SNR=13						
L42A	**Oliver, Polo**	**40.74**	**343**	IAmb	IAmb	00 27 59.3	
	comp=Z,48nm,1.0s						
L42A	**Oliver, Polo**	**40.74**	**343**	P	**P**	**00 27 47.1**	**-0.8**
	baz=156,SNR=6.4						
LBNH	**Lisbon**	**40.76**	**3**		**P**	**00 27 48.3**	**+0.3**
LBNH				IAMs_20	IAMs_20	00 47 28.7	
	comp=Z,2μm,20.0s						
LBNH	**Lisbon**	**40.76**	**3**	P	**P**	**00 27 48.3**	**+0.3**
LBNH				pmax	pmax		
	comp=Z,31nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,2μm,20.0s						
LBNH	**Lisbon**	**40.76**	**3**	P	**P**	**00 27 46.9**	**-1.1**
	baz=184						
KSU1	**Kansas State U**	**40.79**	**334**	P	**P**	**00 27 47.4**	**-0.9**
	baz=145,SNR=7.9						
KSU1	**Kansas State U**	**40.79**	**334**	P	**P**	**00 27 46.6**	**-1.8**
	baz=145,SNR=7.9						
VT1	**Waterbury**	**40.81**	**2**	P	**P**	**00 27 48.2**	**-0.2**
N38A	**Joes South For**	**40.85**	**338**	IAmb	IAmb	00 27 48.9	
	comp=Z,120nm,1.6s						
K43A	**Burlington**	**41.02**	**345**	IAmb	IAmb	00 27 52.7	
	comp=Z,134nm,1.6s						
I49A	**Point Hope**	**41.03**	**351**	P	**P**	**00 27 50.4**	**+0.2**
I49A				IAmb	IAmb	00 28 03.2	
	comp=Z,68nm,0.9s						
DELO	**Deloro Mine**	**41.05**	**357**	P	**P**	**00 27 51.7**	**+1.3**
DELO				pP	**pP**	**00 28 02.5**	**-0.1**
LONY	**Lake Ozonia**	**41.07**	**0**	P	**P**	**00 27 50.9**	**+0.4**
LONY				pP	**pP**	**00 28 02.4**	**-0.3**
LONY				IAmb	IAmb	00 28 04.8	
	comp=Z,65nm,1.2s						
LONY	**Lake Ozonia**	**41.07**	**0**	P	**P**	**00 27 50.9**	**+0.4**
	baz=180						
R32A	**Long Quarter,**	**41.22**	**331**		pP	00 28 03.1	-0.9
L40A	**Anamosa**	**41.28**	**341**	IAmb	IAmb	00 27 53.3	
	comp=Z,54nm,0.9s						
L40A	**Anamosa**	**41.28**	**341**	P	**P**	**00 27 51.2**	**-1.1**
	baz=154,SNR=19						
BMNY	**Brushton-Moira**	**41.29**	**0**	P	**P**	**00 27 52.9**	**+0.6**
	baz=180,SNR=6.7						
SADO	**Sadowa**	**41.41**	**355**	IAmb	IAmb	00 28 06.6	
	comp=Z,71nm,0.8s						
EMMW	**East Machias**	**41.64**	**8**	P	**P**	**00 27 54.7**	**-0.5**
EMMW				IAmb	IAmb	00 27 56.4	
	comp=Z,94nm,1.4s						
JFWS	**Jewell Farm**	**41.75**	**343**	IAmb	IAmb	00 27 56.4	
	comp=Z,111nm,1.1s						
JFWS	**Jewell Farm**	**41.75**	**343**	IAMs_20	IAMs_20	00 46 23.4	
	comp=Z,2μm,20.0s						
JFWS	**Jewell Farm**	**41.75**	**343**	P	**P**	**00 27 55.4**	**-0.7**
	baz=156,SNR=28						
JFWS	**Jewell Farm**	**41.75**	**343**	P	**P**	**00 27 54.8**	**-1.4**
	baz=156,SNR=28						
I45A	**Fountain**	**41.77**	**347**	P	**P**	**00 27 56.2**	**0.0**
I45A				IAmb	IAmb	00 28 09.0	
	comp=Z,65nm,0.9s						
SCIA	**State Center**	**41.81**	**339**	P	**P**	**00 27 55.8**	**-0.9**
	baz=151						
G62A	**West of Eustis**	**41.82**	**4**	P	**P**	**00 27 57.1**	**+0.4**
G62A				IAmb	IAmb	00 28 10.8	
	comp=Z,50nm,0.9s						
N35A	**Tabor**	**41.84**	**336**	P	**P**	**00 27 55.8**	**-1.1**
MNTQ	**Montreal, Queb**	**41.96**	**1**	P	**P**	**00 27 58.4**	**+0.6**
MNTQ				IAmb	IAmb	00 28 12.0	
	comp=Z,94nm,0.9s						
PKME	**Peaks-Kenny Pk**	**41.97**	**6**	P	**P**	**00 27 56.8**	**-1.1**
	baz=188						
CBKS	**Cedar Bluff**	**42.03**	**330**	P	**P**	**00 27 58.0**	**-0.6**
	baz=141,SNR=8.1						
CBKS	**Cedar Bluff**	**42.03**	**330**	P	**P**	**00 27 57.5**	**-1.1**
	baz=141,SNR=8.1						
G65A	**Princeton**	**42.11**	**7**	P	**P**	**00 27 59.7**	**+0.7**
G65A					**pP**	**00 28 11.0**	**-0.3**
GLMI	**Grayling**	**42.20**	**349**	IAMs_20	IAMs_20	00 47 17.8	
	comp=Z,3μm,20.0s						
GLMI	**Grayling**	**42.20**	**349**	P	**P**	**00 27 59.7**	**-0.1**
	baz=165						
I42A	**Draeger Farm,**	**42.27**	**345**	pP	**pP**	**00 28 11.7**	**-0.7**
I42A				IAmb	IAmb	00 28 12.5	
	comp=Z,69nm,0.8s						
I42A	**Draeger Farm,**	**42.27**	**345**	P	**P**	**00 27 59.9**	**-0.5**
	baz=158,SNR=13						
K38A	**Parkersburg**	**42.31**	**340**	P	**P**	**00 27 59.8**	**-1.0**
	baz=152,SNR=14						
121A	**Cookes Peak, D**	**42.49**	**317**	P	**P**	**00 28 04.0**	**+1.3**
121A	**Cookes Peak, D**	**42.49**	**317**	P	**P**	**00 28 04.3**	**+1.7**
	baz=126,SNR=31						
121A	**Cookes Peak, D**	**42.49**	**317**	P	**P**	**00 28 03.6**	**+0.9**
	baz=126,SNR=31						
N33A	**J Bar K, Exete**	**42.50**	**334**	P	**P**	**00 28 01.6**	**-0.7**
H43A	**Windswept, Lux**	**42.53**	**346**	IAmb	IAmb	00 28 14.5	
	comp=Z,43nm,0.8s						
H43A	**Windswept, Lux**	**42.53**	**346**	P	**P**	**00 28 01.4**	**-1.1**
	baz=160,SNR=7.9						
F62A	**Pittston Farm,**	**42.54**	**5**	P	**P**	**00 28 03.7**	**+1.1**
F62A				IAmb	IAmb	00 28 22.0	
	comp=Z,103nm,1.7s						
G45A	**Suttons Bay**	**42.60**	**348**	P	**P**	**00 28 03.2**	**+0.1**
	baz=163,SNR=9.9						
G45A				P	**P**	**00 28 03.2**	**+0.1**
	baz=163,SNR=9.9						
TRQ	**Mont Tremblant**	**42.67**	**0**	P	**P**	**00 28 03.2**	**-0.4**
I40A	**Norwalk**	**42.75**	**343**	IAmb	IAmb	00 28 05.6	
	comp=Z,47nm,0.9s						
I40A	**Norwalk**	**42.75**	**343**	P	**P**	**00 28 03.6**	**-0.8**
	baz=156,SNR=16		

BGNE	Belgrade	43.35	334	P	P	00 28 07.7 -1.5
	baz=144					
GBN	Guysborough	43.41	13	P	P	00 28 10.2 +0.7
PQI	Presque Isle	43.50	7	P	P	00 28 11.4 +1.1
E46A	Sault Ste Mari	43.64	350	pP	pP	00 28 23.3 -0.6
E46A				IAmb	IAmb	00 28 24.0
	comp=Z,48nm,0.9s					
E46A	Sault Ste Mari	43.64	350	P	P	00 28 11.7 +0.3
	baz=166,SNR=5.7					
KSCO	Kaye Shedlock'	43.66	328	P	P	00 28 12.3 +0.4
	baz=137					
I37B	Waseca	43.74	340	P	P	00 28 11.0 -1.2
	baz=152,SNR=18					
D62A	Allapoint, All	43.80	6	P	P	00 28 13.4 +0.8
	baz=188,SNR=6.4					
D62A				P	P	00 28 13.4 +0.8
	baz=188,SNR=6.4					
F42A	Maple Grove Fa	43.83	346	IAmb	IAmb	00 28 25.1
	comp=Z,39nm,0.9s					
F42A	Maple Grove Fa	43.83	346	P	P	00 28 12.9 -0.1
	baz=160,SNR=6.0					
LATQ	La Tuque	43.86	2	P	P	00 28 14.0 +0.8
LATQ				IAmb	IAmb	00 28 26.9
	comp=Z,68nm,0.8s					
G40A	Rib Lake	43.90	344	IAmb	IAmb	00 28 14.3
	comp=Z,76nm,1.1s					
G40A	Rib Lake	43.90	344	P	P	00 28 13.2 -0.4
	baz=157,SNR=24					
PLCA	Paso Flores	44.06	176	P	P	00 28 15.4 +0.5
	comp=Z,8.5nm,0.8s,baz=350,slow=9.0,SNR=18					
PLCA				PcP	PcP	00 29 59.7 -0.2
	comp=Z,8.8nm,0.8s,baz=346,slow=5.3,SNR=3.8					
	comp=Z,8.5nm,0.8s					
PLCA	Paso Flores	44.06	176	eP	P	00 28 16.1 +1.1
PLCA	Paso Flores	44.06	176	P	P	00 28 15.7 +0.7
E43A	Lone Tree Farm	44.16	348	IAmb	IAmb	00 28 30.3
	comp=Z,63nm,1.1s					
E43A	Lone Tree Farm	44.16	348	P	P	00 28 15.5 -0.1
	baz=162,SNR=5.8					
BATG	Bathurst New B	44.35	8	P	P	00 28 16.9 -0.2
BATG				IAmb	IAmb	00 30 01.4
	comp=Z,138nm,1.8s					
SDCO	Great Sand Dun	44.36	324	P	P	00 28 18.6 +0.9
	baz=133,SNR=31					
SDCO	Great Sand Dun	44.36	324	P	P	00 28 18.6 +0.9
	baz=133,SNR=31					
COWI	Conover	44.39	346	IAmb	IAmb	00 28 29.9
	comp=Z,61nm,1.2s					
COWI				IAMs_20	IAMs_20	00 46 40.2
	comp=Z,2µm,22.0s					
COWI	Conover	44.39	346	P	P	00 28 16.9 -0.6
	baz=159					
TUC	Tucson	44.46	314	P	P	00 28 19.4 +1.0
TUC				IAmb	IAmb	00 28 20.9
	comp=Z,156nm,1.9s					
TUC	Tucson	44.46	314	P	P	00 28 19.4 +1.0
TUC				pmax	pmax	
	comp=Z,156nm,2.0s					
TUC	Tucson	44.46	314	P	P	00 28 19.4 +1.0
	baz=123					
TUC	Tucson	44.46	314	P	P	00 28 19.3 +1.0
TUC				pP	pP	00 28 30.8 +0.4
K31A	O'Neill	44.60	335	P	P	00 28 18.1 -1.1
	baz=144					
SPMN	Marine on St.	44.62	342	P	P	00 28 18.4 -1.0
	baz=154,SNR=14					
SPMN	Marine on St.	44.62	342	P	P	00 28 17.8 -1.5
	baz=154,SNR=14					
ECSD	EROS Data Cent	44.65	337	IAmb	IAmb	00 28 19.3
	comp=Z,116nm,1.6s					
ECSD	EROS Data Cent	44.65	337	P	P	00 28 17.9 -1.7
	baz=148,SNR=24					
ECSD	EROS Data Cent	44.65	337	P	P	00 28 17.9 -1.7
	baz=148,SNR=24					
OGNE	Ogallala	44.80	330	IAmb	IAmb	00 28 22.0
	comp=Z,86nm,1.4s					
OGNE	Ogallala	44.80	330	P	P	00 28 20.8 -0.1
	baz=139,SNR=6.1					
OGNE	Ogallala	44.80	330	P	P	00 28 20.2 -0.7
	baz=139,SNR=6.1					
Q24A	Divide	45.00	326	P	P	00 28 23.1 +0.3
	baz=134,SNR=5.7					
X18A	Snowflake	45.13	318	P	P	00 28 24.4 +0.6
X18A					P	00 28 25.1 +1.3
S22A	4UR Ranch, Cre	45.14	323	IAmb	IAmb	00 28 26.5
	comp=Z,138nm,1.9s					
S22A	4UR Ranch, Cre	45.14	323	P	P	00 28 24.9 +0.9
	baz=131,SNR=27					
D41A	Chassel	45.16	347	P	P	00 28 23.7 +0.1
	baz=160,SNR=5.2					
RPN	Rapa Nui	45.19	226	LR	LR	00 44 17.7
	comp=Z,859nm,19.8s,baz=52,slow=32					
W18A	Petrified Fore	45.33	318	P	P	00 28 26.4 +1.0
W18A	Petrified Fore	45.33	318	P	P	00 28 26.4 +1.0
	baz=126,SNR=8.2					
F36A	Milaca	45.42	341	P	P	00 28 24.6 -1.1
	baz=153,SNR=33					
E38A	The Farm, Brul	45.50	344	pP	pP	00 28 37.5 -0.9
E38A	The Farm, Brul	45.50	344	P	P	00 28 25.4 -0.9
	baz=156,SNR=23					
BRIGG	Briggsdale	45.69	328	P	P	00 28 28.5 +0.4
BRIGG				IAmb	IAmb	00 28 30.1
	comp=Z,127nm,1.9s					
214A	Organ Pipe Nat	45.74	313	P	P	00 28 29.8 +1.3
	baz=120,SNR=18					
MVCO	Mesa Verde	45.81	322	P	P	00 28 29.8 +0.6
	baz=129,SNR=21					
PIX	Pinacate	46.02	312	P	P	00 28 32.0 +1.3
SUSD	Miller	46.17	336	P	P	00 28 30.4 -1.3
	baz=145					
SUSD	Miller	46.17	336	P	P	00 28 29.5 -2.2
	baz=145					
F33A	5 Mile Ranch,	46.33	339	IAmb	IAmb	00 28 32.2
	comp=Z,75nm,1.4s					
F33A	5 Mile Ranch,	46.33	339	P	P	00 28 31.1 -1.8
	baz=149,SNR=10.0					
LL02	Futaleuf	46.43	177	IAmb	IAmb	00 28 56.3
	comp=Z,28nm,0.9s					
PV15	Paradox Valley	46.52	323	IAmb	IAmb	00 28 50.8
	comp=Z,38nm,0.8s					
WUAZ	Wupatki	46.65	318	P	P	00 28 36.7 +0.9
WUAZ				IAmb	IAmb	00 28 38.1
	comp=Z,39nm,0.9s					
WUAZ	Wupatki	46.65	318	P	P	00 28 37.0 +1.2
	baz=125,SNR=22					
PV07	Paradox Valley	46.68	323	IAmb	IAmb	00 28 57.9
	comp=Z,80nm,1.9s					
EYMN	Ely	46.71	344	IAMs_20	IAMs_20	00 48 22.6
	comp=Z,2µm,21.0s					
EYMN	Ely	46.71	344	P	P	00 28 34.9 -0.9
	baz=156,SNR=30					
EYMN	Ely	46.71	344	P	P	00 28 34.7 -1.1
	baz=156,SNR=30					
PV11	David Mesa, Pa	46.73	323	IAmb	IAmb	00 28 39.7
	comp=Z,42nm,1.2s					
N23A	Red Feather La	46.78	327	IAmb	IAmb	00 28 38.8
	comp=Z,38nm,1.2s					
N23A	Red Feather La	46.78	327	P	P	00 28 37.1 +0.3
	baz=134,SNR=13					
PV20	West Nyswonger	46.81	323	P	P	00 28 37.9 +0.8
PV20				IAmb	IAmb	00 28 40.4
	comp=Z,76nm,1.8s					
PV22	Blue Mesa, Par	46.83	323	P	P	00 28 37.4 +0.3
113A	Mohawk Valley,	46.85	313	IAmb	IAmb	00 28 39.6
	comp=Z,47nm,1.5s					
PV10	Paradox Valley	46.88	323	P	P	00 28 37.9 +0.3
PV10				IAmb	IAmb	00 28 39.2
	comp=Z,41nm,1.2s					
Y14A	Wickenburg	46.91	315	IAmb	IAmb	00 28 40.2
	comp=Z,56nm,1.9s					
PV23	Carpenter Ridg	46.91	323	P	P	00 28 38.8 +0.9
PV23				IAmb	IAmb	00 29 22.7
	comp=Z,23nm,0.9s					
PV21	Cone Mtn., Par	46.96	323	P	P	00 28 39.0 +0.8
O20A	White River Ci	47.55	325	IAmb	IAmb	00 29 27.0
	comp=Z,26nm,1.0s					
O20A	White River Ci	47.55	325	P	P	00 28 43.5 +0.8
	baz=131,SNR=5.5					
D32A	Dogwood Acres,	47.70	339	P	P	00 28 43.3 -0.2
B35A	Bob, Littlefor	47.72	343	P	P	00 28 42.6 -1.0
	baz=154,SNR=20					
GLA	Glamis	47.76	313	IAmb	IAmb	00 28 46.8
	comp=Z,41nm,1.1s					
GLA	Glamis	47.76	313	P	P	00 28 45.4 +1.1
	baz=120,SNR=6.7					
CPBX	Cerro Prieto	47.81	312	P	P	00 28 46.1 +1.4
CPBX				IAmb	IAmb	00 30 37.2
	comp=Z,45nm,1.2s					
BLYC	Blythe	47.89	314	P	P	00 28 46.4 +1.2
PDMCI	Parker Dam,Lak	47.90	315	P	P	00 28 46.0 +0.8
	baz=121,SNR=7.5					
DRLN	Deer Lake	47.98	15	P	P	00 28 46.2 +0.6
RWWY	Rawlins	48.02	327	P	P	00 28 46.7 +0.3
RWWY				IAmb	IAmb	00 29 44.3
	comp=Z,35nm,0.8s					
ESJX	Sierra Juarez	48.09	311	P	P	00 28 48.1 +1.1
ESJX				IAmb	IAmb	00 28 49.8
	comp=Z,56nm,2.0s					
RSSD	Black Hills	48.16	332	P	P	00 28 48.2 +0.7
RSSD				IAmb	IAmb	00 28 48.8
	comp=Z,68nm,1.1s					
RSSD	Black Hills	48.16	332	P	P	00 28 48.2 +0.7
RSSD				pmax	pmax	
	comp=Z,68nm,1.2s					
RSSD	Black Hills	48.16	332	P	P	00 28 47.3 -0.1
	baz=139,SNR=34					
RSSD	Black Hills	48.16	332	P	P	00 28 47.4 -0.1
	baz=139					
RSSD	Black Hills	48.16	332	P	P	00 28 47.3 -0.1
RSSD				pP	pP	00 28 59.9 +0.2
AGMN	Agassiz Nation	48.32	341	IAMs_20	IAMs_20	00 50 26.4
	comp=Z,1µm,21.0s					
AGMN	Agassiz Nation	48.32	341	P	P	00 28 47.4 -0.9
	baz=151,SNR=24					
AGMN	Agassiz Nation	48.32	341	P	P	00 28 47.4 -0.9
	baz=151,SNR=24					
K22A	Casper	48.33	329	IAmb	IAmb	00 28 51.5
	comp=Z,101nm,1.9s					
K22A	Casper	48.33	329	P	P	00 28 48.7 0.0
	baz=135,SNR=7.4					
K22A	Casper	48.33	329	P	P	00 28 48.5 -0.2
	baz=135,SNR=7.4					
PKCU	Pink Cliffs	48.37	319	P	P	00 28 51.0 +1.7
PKCU				IAmb	IAmb	00 29 03.1
	comp=Z,63nm,1.2s					
P18A	Preston Nutter	48.40	323	P	P	00 28 50.7 +1.3
P18A				IAmb	IAmb	00 29 14.9
	comp=Z,28nm,0.9s					
SWSC	Sam W. Stewart	48.43	312	P	P	00 28 50.3 +0.9
	baz=118					
KNB	Kanab	48.46	319	P	P	00 28 50.9 +1.1
KNB	Kanab	48.46	319	P	P	00 28 50.9 +1.1
KNB				pmax	pmax	
	comp=Z,137nm,1.5s					
NEE2	Needles Airpor	48.48	315	P	P	00 28 50.7 +0.9
	baz=121					
BC3	Big Chuckawall	48.52	313	P	P	00 28 50.9 +0.6
	baz=119,SNR=6.7					
IKP	In-Ko-Pah, Jac	48.52	312	P	P	00 28 51.0 +0.8
	baz=118					
IRM	Iron Mountain	48.54	314	P	P	00 28 51.5 +1.2
	baz=120,SNR=13					
P17A	Butcher Ranch,	48.60	323	P	P	00 28 52.0 +1.2
P17A				IAmb	IAmb	00 29 16.2
	comp=Z,29nm,1.0s					
RDMU	Red Mountain	48.60	324	P	P	00 28 52.0 +1.1
E28A	Huff	48.62	336	P	P	00 28 50.0 -0.7
	baz=144,SNR=7.3					
MTPU	Mount Pierson	48.64	320	P	P	00 28 52.2 +0.8
MTPU				IAmb	IAmb	00 28 53.7
	comp=Z,88nm,1.8s					
TMUT	Trail Mountain	48.77	322	IAmb	IAmb	00 28 54.3
	comp=Z,95nm,2.0s					
CBX	Cerro Bola	48.78	311	P	P	00 28 53.9 +1.6
CBX				PcP	PcP	00 30 17.8 +1.0
COYC	Coyhaique	48.79	178	P	P	00 28 53.2 +1.3
COYC				IAmb	IAmb	00 28 56.1
	comp=Z,29nm,0.9s					
COYC	Coyhaique	48.79	178	P	P	00 28 52.5 +0.6
TKX	Tecate	48.85	311	P	P	00 28 53.6 +0.8
TKX				PcP	PcP	00 30 18.2 +1.3
MONP2	Monument Peak	48.86	312	P	P	00 28 54.2 +1.2
	baz=118					
MSU	Marysvale	48.91	321	P	P	00 28 54.3 +1.0
MSU	Marysvale	48.91	321	P	P	00 28 54.3 +1.0
MVU	Marysvale	48.93	321	P	P	00 28 54.4 +0.9
BAR	Barrett	48.95	312	P	P	00 28 54.2 +0.7
SZCU	Shurtz Canyon	48.96	319	IAmb	IAmb	00 29 07.5
	comp=Z,22nm,0.8s					
BELC	Belle Mtn. Jos	49.08	313	P	P	00 28 55.7 +1.1
	baz=119,SNR=11					
CCUT	Cedar City	49.12	319	IAmb	IAmb	00 28 57.6
	comp=Z,79nm,1.9s					
V12A	Nelson	49.14	316	IAmb	IAmb	00 28 57.2
	comp=Z,52nm,1.5s					
TCRU	Three Creeks R	49.14	321	P	P	00 28 56.0 +0.9
TCRU				IAmb	IAmb	00 29 11.1
	comp=Z,32nm,0.8s					
GMRC	Granite Mounta	49.22	314	P	P	00 28 56.6 +1.0
	baz=120,SNR=10.0					
TPFO	Pinon Flats	49.22	313	P	P	00 28 56.5 +0.8
	baz=118					
PFO	Pinyon Flats O	49.23	313	LR	LR	00 51 42.4
	comp=Z,719nm,21.7s,baz=102,slow=38					
PFO	Pinyon Flats O	49.23	313	P	P	00 28 57.0 +1.3
PFO	Pinyon Flats O	49.23	313	P	P	00 28 57.0 +1.3
PFO				pmax	pmax	
	comp=Z,14nm,1.0s					
PFO	Pinyon Flats O	49.23	313	P	P	00 28 56.7 +0.9
	baz=118					
MDND	Maddock	49.24	338	pP	pP	00 29 06.7 -0.9
MDND	Maddock	49.24	338	P	P	00 28 55.0 -0.4
	baz=146					
MDND	Maddock	49.24	338	P	P	00 28 54.5 -0.9
	baz=146					
109C	Camp Elliot, M	49.37	312	P	P	00 28 57.5 +0.9
109C	Camp Elliot, M	49.37	312	P	P	00 28 57.4 +0.8
	baz=117					
MPU	Maple Canyon	49.47	323	IAmb	IAmb	00 29 13.0
	comp=Z,25nm,0.8s					
NLU	North Lily Min	49.71	322	IAmb	IAmb	00 29 01.4
	comp=Z,59nm,1.7s					
JLU	Jordanelle	49.73	323	IAmb	IAmb	00 29 01.4
	comp=Z,85nm,1.9s					
HEC	Hector,Ludlow	49.73	314	P	P	00 29 00.4 +1.0
	baz=119					
TUQ	Turquoise Moun	49.74	315	P	P	00 29 00.1 +0.5
	baz=120					
SHPR	Sheep Range	49.76	317	P	P	00 29 00.7 +0.9
SHPR				IAmb	IAmb	00 29 02.3
	comp=Z,50nm,1.9s					
MURC	Murrieta	49.77	312	P	P	00 29 00.6 +0.9
	baz=118,SNR=9.5					
BBRC	Big Bear Solar	49.88	313	P	P	00 29 02.0 +1.3
	baz=118					
ELS	Elsinore Mount	49.96	312	P	P	00 29 02.1 +0.9
CTU	Camp Tracy	49.96	323	P	P	00 29 01.5 +0.3
CTU				IAmb	IAmb	00 29 03.1
	comp=Z,78nm,1.9s					
PSUT	Pine Spring	49.99	320	IAmb	IAmb	00 29 37.4
	comp=Z,30nm,1.2s					
TCUT	Toone Canyon	50.02	324	P	P	00 29 02.4 +0.6
TCUT				IAmb	IAmb	00 29 28.6
	comp=Z,43nm,0.7s					
BW06	Boulder Array	50.03	327	IAmb	IAmb	00 29 03.0
	comp=Z,44nm,1.4s					
BW06	Boulder Array	50.03	327	P	P	00 29 01.5 -0.3
	baz=132,SNR=6.3					
PD31	Pinedale Array	50.03	327	IAmb	IAmb	00 29 03.0
	comp=Z,48nm,1.6s					
PDAR	Pinedale Array	50.03	327	P	P	00 29 01.2 -0.6
	comp=Z,4.4nm,0.7s,baz=129,slow=9.3,SNR=35					
PDAR				LR	LR	00 55 18.3
	comp=Z,302nm,18.2s,baz=120,slow=42					
	comp=Z,4.4nm,0.7s					
PDAR	Pinedale Array	50.03	327	P	P	00 29 01.6 -0.2
ULM	Lac du Bonnet	50.04	342	P	P	00 28 59.0 -2.4
	comp=Z,20nm,0.7s,baz=154,slow=9.2,SNR=13					
	comp=Z,20nm,0.7s					
ULM	Lac du Bonnet	50.04	342	P	P	00 29 00.6 -0.8
ULM	Lac du Bonnet	50.04	342	P	P	00 29 00.6 -0.8
ULM				pmax	pmax	
	comp=Z,51nm,0.8s					
SHOC	Shoshone, Teco	50.22	315	P	P	00 29 03.1 +0.1
	baz=120					
RRX	Edison Barstow	50.23	314	P	P	00 29 04.0 +0.8
	baz=119					
GSC	Goldstone, Bar	50.30	314	IAmb	IAmb	00 29 06.1
	comp=Z,100nm,1.9s					
GSC	Goldstone, Bar	50.30	314	P	P	00 29 04.7 +1.0
	baz=119,SNR=14					
DUG	Dugway, Tooele	50.30	322	IAmb	IAmb	00 29 19.5
	comp=Z,25nm,0.8s					
DUG	Dugway, Tooele	50.30	322	P	P	00 29 04.6 +0.8
	baz=127,SNR=15					
BFSC	Mount Baldy Ra	50.40	313	P	P	00 29 05.4 +0.8
	baz=118					
SCI2	San Clemente I	50.49	311	P	P	00 29 06.3 +1.2
	baz=116					
CIS	Catalina Islan	50.58	311	P	P	00 29 07.1 +1.3
	baz=116,SNR=5.9					
FMP	Fort Macarthur	50.63	312	P	P	00 29 07.2 +1.0
	baz=117					
GWY	Greenwater Val	50.64	316	P	P	00 29 06.3 -0.1
GWY				IAmb	IAmb	00 30 52.1
	comp=Z,15nm,0.5s					
QSM	Queen of Sheba	50.67	315	IAmb	IAmb	00 29 08.6
	comp=Z,45nm,1.5s					
TPNV	Topopah Spring	50.73	317	P	P	00 29 08.1 +0.9
TPNV				IAmb	IAmb	00 29 09.9
	comp=Z,112nm,1.9s					
TPNV	Topopah Spring	50.73	317	P	P	00 29 08.1 +0.9
TPNV				pmax	pmax	
	comp=Z,112nm,2.0s					
TPNV	Topopah Spring	50.73	317	P	P	00 29 08.4 +1.3
	baz=121					
S11A	Rachel	50.76	318	P	P	00 29 08.8 +1.5
SPUT	South Promonto	50.76	323	P	P	00 29 07.2 0.0
SPUT				IAmb	IAmb	00 29 39.0
	comp=Z,52nm,1.2s					
PASC	Pasadena Art C	50.76	312	IAmb	IAmb	00 29 09.7
	comp=Z,70nm,1.5s					
BGU	Big Grassy Mou	50.87	323	IAmb	IAmb	00 29 22.0
	comp=Z,30nm,0.8s					
DECC	Green Verdugo	50.91	312	P	P	00 29 08.8 +0.5
	baz=117					
EDW2	Edwards Air Fo	50.95	313	P	P	00 29 09.6 +0.9
	baz=118,SNR=11					
LRMC	Laurel Mtn Rad	51.01	314	P	P	00 29 10.1 +0.9
	baz=119					
R11A	Troy Canyon, C	51.02	318	IAmb	IAmb	00 29 11.8
	comp=Z,75nm,1.9s					
R11A	Troy Canyon, C	51.02	318	P	P	00 29 10.2 +0.9
	baz=123					
CCAC	Calif City Air	51.09	314		pP	00 29 22.6 +0.7
CCAC				IAmb	IAmb	00 29 28.5
	comp=Z,23nm,0.6s					
LAO	LASA Array	51.11	332	IAmb	IAmb	00 29 21.7
	comp=Z,125nm,2.0s					
LAO	LASA Array	51.11	332	P	P	00 29 08.7 -0.9
	baz=138,SNR=8.4					
LAO	LASA Array	51.11	332	P	P	00 29 08.9 -0.7
	baz=138,SNR=8.4					
MPMC	Manual Prospec	51.15	315	P	P	00 29 10.1 -0.2
	baz=119,SNR=10					
SNOW	Snow King Moun	51.15	327	IAmb	IAmb	00 29 11.8
	comp=Z,114nm,1.9s					
SNCC	San Nicolas Is	51.35	311	P	P	00 29 12.5 +0.9
SNCC	San Nicolas Is	51.35	311	P	P	00 29 11.8 +0.2
	baz=116					
OSI	Osito Audit: C	51.36	313	P	P	00 29 12.1 +0.4
	baz=117					
FXWY	Fox Creek	51.41	327	IAMs_20	IAMs_20	00 52 36.5
	comp=Z,1µm,21.0s					
RLMT	Red Lodge	51.47	329	IAmb	IAmb	00 29 13.8
	comp=Z,88nm,1.8s					
RLMT	Red Lodge	51.47	329	P	P	00 29 12.2 -0.3
	baz=133,SNR=8.4					
FLWY	Flagg Ranch	51.53	327	IAmb	IAmb	00 29 14.7
	comp=Z,77nm,1.8s					
GRAC	Grapevine Rang	51.53	316	P	P	00 29 14.7 +1.8
GRAC				IAmb	IAmb	00 29 19.3
	comp=Z,36nm,0.6s					
GRAC	Grapevine Rang	51.53	316	P	P	00 29 13.0 0.0
	baz=120					
SACV	Santiago Islan	51.54	74	P	P	00 29 12.8 -0.5
SACV				IAmb	IAmb	00 29 31.8
	comp=Z,49nm,0.9s					
SACV				IAMs_20	IAMs_20	00 49 47.2
	comp=Z,2µm,19.0s					
DGMT	Dagmar	51.57	335	IAmb	IAmb	00 29 15.6
	comp=Z,50nm,0.8s					
DGMT	Dagmar	51.57	335	P	P	00 29 13.0 0.0
	baz=141,SNR=14					
DGMT	Dagmar	51.57	335	P	P	00 29 13.0 0.0
	baz=141,SNR=14					
GMN	Gold Mountain	51.61	316	IAmb	IAmb	00 29 16.1
	comp=Z,114nm,1.8s					
ISA	Isabella, Lake	51.66	314	P	P	00 29 14.9 +0.9
ISA				IAmb	IAmb	00 29 16.5
	comp=Z,85nm,1.9s					
ISA	Isabella, Lake	51.66	314	P	P	00 29 14.9 +0.9
ISA				pmax	pmax	
	comp=Z,85nm,1.9s					
ISA	Isabella, Lake	51.66	314	P	P	00 29 14.2 +0.2
	baz=118,SNR=8.3					
H17A	Grant Village	51.67	328	P	P	00 29 14.2 +0.1
	baz=132,SNR=5.8					
ARVC	Arvin	51.67	313	P	P	00 29 14.7 +0.7
	baz=117,SNR=7.9					
YMP	Mirror Lake Pl	51.67	328	P	P	00 29 14.2 0.0
SCHQ	Schefferville	51.68	6	P	P	00 29 13.2 -0.5
	comp=Z,25nm,0.7s,baz=193,slow=6.1,SNR=22					
	comp=Z,25nm,0.7s					
SCHQ	Schefferville	51.68	6	P	P	00 29 13.6 -0.1
SCHQ				IAmb	IAmb	00 29 16.1
	comp=Z,32nm,0.8s					
LKWY	Lake	51.69	328	P	P	00 29 15.8 +1.6
LKWY				IAmb	IAmb	00 29 22.7
	comp=Z,68nm,1.8s					
LKWY	Lake	51.69	328	P	P	00 29 15.9 +1.6
LKWY				pmax	pmax	
	comp=Z,68nm,1.8s					
CWC	Cottonwood Cre	51.75	315	P	P	00 29 15.1 +0.3
	baz=119					
SCZ2	Santa Cruz Isl	51.76	312	P	P	00 29 15.2 +0.6
	baz=116					
LCH	Last Change Ra	51.84	316	IAmb	IAmb	00 29 17.8
	comp=Z,76nm,1.6s					
YFT	Old Faithful	51.84	327	IAmb	IAmb	00 29 18.2
	comp=Z,79nm,1.9s					
YUF	Upper Falls	51.84	328	P	P	00 29 16.6 +1.2
YNR	Norris Junctio	51.94	328	P	P	00 29 16.1 +0.1
TPH	Tonopah	51.98	317	P	P	00 29 16.8 +0.3
TPH	Tonopah	51.98	317	P	P	00 29 16.8 +0.3
TPH				pmax	pmax	
	comp=Z,557nm,1.7s					
YMR	Madison River	52.06	328	P	P	00 29 17.6 +0.6
YHH	Holmes Hill	52.08	328	P	P	00 29 17.4 +0.3
ELK	Elko	52.13	321	LR	LR	00 55 34.8
	comp=Z,339nm,19.6s,baz=122,slow=41					
DSP	Deep Springs	52.13	316	P	P	00 29 18.4 +1.0
DSP				IAmb	IAmb	00 29 20.2
	comp=Z,127nm,1.8s					
TIN	Tinemaha, Big	52.16	316	P	P	00 29 18.2 +0.5
	baz=119					
VES	Vestal, Richgr	52.18	314	P	P	00 29 19.1 +1.3
	baz=118,SNR=11					
PKM	Mcpherson Peak	52.28	313	P	P	00 29 19.8 +1.0
	baz=116					
Q09A	Carvers	52.34	318	P	P	00 29 19.9 +0.8
VOG	Valley Oaks Go	52.62	314	P	P	00 29 20.5 -0.5
	baz=118					
NV11	Mina Array Sit	52.79	317	P	P	00 29 23.5 +1.1
NV11				IAmb	IAmb	00 29 24.9
	comp=Z,73nm,1.5s					
MLAC	Mammoth, Mammo	52.86	316	P	P	00 29 23.5 +0.5
	baz=119					
NVAR	Mina Array Bea	52.89	317	P	P	00 29 24.2 +1.0
	comp=Z,8.8nm,0.8s,baz=125,slow=6.8,SNR=36					
NVAR				LR	LR	00 57 23.9
	comp=Z,363nm,19.7s,baz=121,slow=42					
	comp=Z,8.8nm,0.8s					
NVAR	Mina Array Bea	52.89	317	P	P	00 29 24.5 +1.3
LHV	Little Huntoon	52.94	317	P	P	00 29 24.6 +1.3
LHV				IAmb	IAmb	00 29 53.8
	comp=Z,64nm,1.3s					

baz=127,SNR=20
DLMT Dillon 53.39 327 IAmb IAmb 00 29 28.5
comp=Z,111nm,1.8s
WAKR Walker 53.70 317 P **P** **00 29 30.3 +1.2**
WAKR IAmb IAmb 00 29 31.8
comp=Z,72nm,1.7s
EGMT Egleton 53.73 331 P **P** **00 29 28.9 -0.2**
baz=134,SNR=7.5
YERR Yerington 53.80 317 P **P** **00 29 30.9 +1.0**
YERR IAmb IAmb 00 31 20.9
comp=Z,24nm,0.7s
HRY Holter Researc 53.87 329 P **P** **00 29 30.2 0.0**
PNTR Pine Nut 54.10 317 P **P** **00 29 33.1 +1.0**
PNTR IAmb IAmb 00 30 51.4
comp=Z,60nm,1.6s
VCNR Virginia City 54.23 317 P **P** **00 29 34.2 +1.1**
PAHR Pah Rah Range 54.26 318 IAmb IAmb 00 29 35.2
comp=Z,112nm,2.0s
SAO San Andreas Ge 54.30 314 P **P** **00 29 34.5 +1.1**
SAO IAmb IAmb 00 29 38.7
comp=Z,76nm,1.9s
SAO San Andreas Ge 54.30 314 P **P** **00 29 34.5 +1.1**
SAO pmax pmax
comp=Z,76nm,1.9s
AFDM Forest Hills D 54.97 316 IAmb IAmb 00 29 39.9
comp=Z,45nm,1.8s
BEKR Beckworth 54.99 318 P **P** **00 29 38.7 +0.2**
BEKR IAmb IAmb 00 29 41.9
comp=Z,59nm,1.8s
MSO Missoula 55.04 328 IAmb IAmb 00 29 40.0
comp=Z,56nm,1.8s
MSO Missoula 55.04 328 P **P** **00 29 38.5 -0.2**
baz=129,SNR=8.4
PLID Pearl Lake 55.11 325 IAmb IAmb 00 29 40.2
comp=Z,88nm,1.8s
PLID IAMs_20 IAMs_20 00 55 21.3
comp=Z,841nm,20.0s
J08A Circle Bar Ran 55.58 322 IAmb IAmb 00 29 56.0
comp=Z,22nm,0.9s
ORV Oroville 55.61 317 IAmb IAmb 00 29 45.2
comp=Z,98nm,1.7s
FFC Flin Flon 55.80 341 P **P** **00 29 42.7 -1.1**
FFC pP **pP** **00 29 54.9 -1.3**
FFC IAmb IAmb 00 29 55.7
comp=Z,28nm,0.8s
FFC Flin Flon 55.80 341 IAMs_20 IAMs_20 00 54 54.2
comp=Z,1µm,20.0s
FFC Flin Flon 55.80 341 P **P** **00 29 42.7 -1.1**
FFC pmax pmax
comp=Z,28nm,0.9s
FFC Flin Flon 55.80 341 P **P** **00 29 42.5 -1.3**
FFC pP **pP** **00 29 54.4 -1.7**
MOD Modoc Plateau 55.96 320 P **P** **00 29 45.4 -0.1**
F10A Beach Ranch, E 56.33 325 P **P** **00 29 48.3 +0.4**
WALA Waterton Lakes 56.47 330 IAmb IAmb 00 30 51.1
comp=Z,47nm,1.9s
K05A Summer Lake 56.76 320 P **P** **00 29 52.6 +1.4**
K05A IAmb IAmb 00 30 49.0
comp=Z,94nm,1.9s
KCPM Cahto Peak 57.10 316 P **P** **00 29 54.1 +0.5**
KMRM Mail Ridge 57.43 317 P **P** **00 29 55.2 -0.6**
KMRM IAmb IAmb 00 29 57.5
comp=Z,58nm,1.1s
YBH Yreka Blue Hor 57.45 319 LR LR 00 59 21.2
comp=Z,444nm,18.9s,baz=126,slow=41
NEW Newport 57.63 328 P **P** **00 29 56.1 -0.9**
baz=127,SNR=11
E08A Dider Farm, El 57.66 325 IAmb IAmb 00 30 23.2
comp=Z,50nm,1.7s
KHMM Horse Mountain 57.74 317 P **P** **00 29 58.8 +0.8**
KMPM Mount Pierce 57.80 317 P **P** **00 29 59.1 +0.7**
F07A Phinny Hill Vi 57.84 324 IAmb IAmb 00 30 13.0
comp=Z,18nm,0.8s
HAWA Hanford 57.88 325 IAmb IAmb 00 30 00.1
comp=Z,54nm,1.6s
G06A Carlson Farm, 57.90 323 P **P** **00 30 00.2 +1.2**
KRPM Rodgers 58.06 318 P **P** **00 30 01.1 +0.9**
KBO Bosley Butte 58.67 319 P **P** **00 30 05.1 +0.6**
BUCK Buck Mountain 58.81 321 P **P** **00 30 05.6 +0.2**
B08A Colville Reser 58.88 327 IAmb IAmb 00 30 18.5
comp=Z,37nm,0.8s
EDM Edmonton 58.99 334 P **P** **00 30 05.6 -0.8**
EDM Edmonton 58.99 334 P **P** **00 30 05.6 -0.8**
EDM pmax pmax
comp=Z,47nm,0.8s
KEBM Edson Butte 59.05 319 P **P** **00 30 08.4 +1.3**
COR Corvallis 59.20 321 P **P** **00 30 09.5 +1.6**
COR Corvallis 59.20 321 P **P** **00 30 09.5 +1.6**
COR pmax pmax
comp=Z,92nm,1.2s
LON Longmire 59.40 324 IAmb IAmb 00 30 10.9
comp=Z,59nm,1.4s
B06A Marblemount 60.15 326 P **P** **00 30 14.6 +0.2**
B06A **pP** **00 30 26.2 -0.7**
B06A IAmb IAmb 00 30 30.4
comp=Z,24nm,0.7s
E03A Lebam 60.33 323 P **P** **00 30 17.3 +1.6**
FRB Frobisher Bay 60.40 3 LR LR 00 57 10.9
comp=Z,1µm,19.3s,baz=190,slow=37
MACI Morro de la Ar 60.48 59 P **P** **00 30 17.2 -0.1**
A05A Maple Falls 60.75 326 P **P** **00 30 19.1 +0.6**
PMOZ Porto Moniz, M 61.05 54 *e*LR LR 00 49 31.4
comp=Z,814nm,20.0s
BRLDA Berland Lookou 61.38 333 P **P** **00 30 22.1 -0.8**
BRLDA pP **pP** **00 30 34.1 -1.2**
LLLB Lillooet 61.52 328 pP pP 00 30 35.5 -0.8
OZB Mount Ozzard 62.66 325 pP pP 00 30 44.4 +0.5
WAPA Wapiti River 62.90 333 pP pP 00 30 43.9 -1.6
MANA Manning 63.26 335 pP pP 00 30 46.4 -1.4
HILA High Level 64.12 337 P **P** **00 30 40.0 -0.9**
HILA pP **pP** **00 30 51.6 -1.8**
SFJD Kangerlussuaq 65.65 10 LR LR 00 57 59.1
comp=Z,654nm,21.2s,baz=206,slow=35
BBB Bella Bella 65.67 327 LR LR 01 05 14.5
comp=Z,436nm,18.1s,baz=114,slow=41
BBB Bella Bella 65.67 327 IAmb IAmb 00 30 52.9
comp=Z,58nm,1.1s
YKA Yellowknife Ar 65.98 341 P **P** **00 30 51.6 -1.2**
comp=Z,8.8nm,0.9s,baz=138,slow=6.5,SNR=8.7
YKA LR LR 01 01 38.2
comp=Z,1µm,18.9s,baz=118,slow=38
comp=Z,8.8nm,0.9s
DY2G Dye2 66.03 12 *i*P **P** **00 30 51.5 -1.8**
DY2G IAmb IAmb 00 30 56.9
comp=Z,13nm,0.6s
TAOE Nuku Hiva Isla 66.43 259 *e*P **P** **00 31 00.0 +3.2**
comp=Z,259nm,26.0s
TAOE Nuku Hiva Isla 66.43 259 *e*LR LR 00 51 04.2
comp=Z,2µm,27.2s
HG4B Hotspring 67.42 326 P **P** **00 31 01.8 -0.4**
GRNB Grenville Isla 67.44 328 IAmb IAmb 00 31 15.7
comp=Z,21nm,0.8s
FLDN Fort Liard 67.76 336 P **P** **00 31 03.3 -0.9**
baz=126
RUBB Prince Rupert 67.81 329 IAmb IAmb 00 31 17.8
comp=Z,26nm,1.1s
KOTAN Kotaneelee Air 67.93 336 P **P** **00 31 04.9 -0.4**
baz=125
LIRD Liard River Hi 68.38 335 P **P** **00 31 07.4 -0.7**
baz=123,SNR=5.0
PMSA Palmer Station 68.44 175 LR LR 01 02 09.7
comp=Z,1µm,19.2s,baz=310,slow=37
DIB Dawson Inlet, 68.51 327 P **P** **00 31 09.4 +0.4**
DIB IAmb IAmb 00 31 10.5
comp=Z,39nm,1.2s
PFVI Vila Bisbo 68.76 51 *e*S **S** **00 40 14.9 +3.1**
PTEO Sao Teotonio 68.93 51 *e*P **P** **00 31 12.3 +0.3**
comp=Z,37nm,2.1s
PTEO *e*pP **pP** **00 31 25.5 +0.6**
MORF Marmelete 68.93 51 *e*P **P** **00 31 12.9 +0.8**
comp=Z,70nm,1.3s
MORF *e*pP **pP** **00 31 25.1 +0.1**
V35K Ketchikan 68.97 329 P **P** **00 31 11.6 -0.3**
baz=116
T35M Bob Quinn 69.04 331 P **P** **00 31 12.4 0.0**
baz=118,SNR=16
PNCL Nicolau / Gran 69.20 50 *e*P **P** **00 31 13.0 -0.7**
comp=Z,46nm,1.4s
PNCL *e*pP **pP** **00 31 26.9 +0.3**
PSBE So Bento 69.31 49 *e*P **P** **00 31 14.9 +0.5**
comp=Z,38nm,1.7s
PSBE *e*S S 00 40 29.5 +11
TIC Toumodi 69.37 84⇑ *i*P **P** **00 31 14.3 -0.9**
comp=Z,22nm,0.5s
LIC Lamto 69.37 85⇑ *i*P **P** **00 31 14.6 -0.6**
comp=Z,38nm,0.6s

PCVE Castro Verde 69.48 51 *e*P **P** **00 31 15.4 0.0**
comp=Z,34nm,2.2s
PCVE *e*S **S** **00 40 26.8 +6.5**
WRGLY Wrigley 69.52 339 P **P** **00 31 14.9 -0.2**
baz=126
DBIC Dimbokro 69.53 84 P **P** **00 31 15.6 -0.6**
comp=Z,20nm,1.0s,baz=249,slow=5.2,SNR=14
DBIC LR LR 00 58 16.5
comp=Z,888nm,21.4s,baz=234,slow=33
comp=Z,20nm,1.0s
DBIC Dimbokro 69.53 84 P **P** **00 31 15.6 -0.6**
DBIC pP **pP** **00 31 27.9 -1.0**
DBIC Dimbokro 69.53 84 P **P** **00 31 15.5 -0.6**
DBIC pP **pP** **00 31 27.5 -1.3**
ICESG Greenland Ices 69.61 13 *i*P **P** **00 31 14.6 -1.4**
ICESG IAmb IAmb 00 31 22.1
comp=Z,60nm,1.2s
DLBC Dease Lake 69.63 332 LR LR 01 06 03.4
comp=Z,468nm,18.1s,baz=106,slow=40
DLBC Dease Lake 69.63 332 IAmb IAmb 00 31 17.6
comp=Z,110nm,1.9s
DLBC Dease Lake 69.63 332 P **P** **00 31 16.1 +0.1**
baz=119,SNR=9.5
PMTG Montargil 69.64 50 *e*P **P** **00 31 15.9 -0.5**
comp=Z,31nm,1.7s
KIC Kosan Boka 69.66 85⇑ *i*P **P** **00 31 16.3 -0.7**
comp=Z,21nm,0.7s
PCAS Casmilo, Conde 69.66 48 *e*P **P** **00 31 16.2 -0.3**
comp=Z,34nm,2.0s
PCAS *e*pP **pP** **00 31 28.7 -0.7**
PCAS *e*S **S** **00 40 25.9 +3.6**
PVAQ Vaqueiros 69.68 51 *e*P P 00 31 09.8 -6.9
PVAQ *e*S **S** **00 40 22.3 -0.3**
PVAQ Vaqueiros 69.68 51 *e*LR LR 00 53 20.3
comp=Z,795nm,22.0s
EVO Evora 69.69 50 *e*P **P** **00 31 16.5 -0.2**
comp=Z,23nm,1.6s
COI Coimbra 69.75 48 *e*P **P** **00 31 16.9 -0.1**
comp=Z,82nm,1.2s
COI Coimbra 69.75 48 IAmb IAmb 00 31 43.6
comp=Z,55nm,1.1s
COI IAMs_20 IAMs_20 01 00 03.5
comp=Z,2µm,19.0s
CRAG Craig 69.80 329 P **P** **00 31 17.2 +0.2**
CRAG Craig 69.80 329 P **P** **00 31 16.8 -0.2**
baz=115
WRAK Wrangell Islan 69.82 330 P **P** **00 31 17.5 +0.4**
baz=116
S34M Telegraph Cree 69.90 332 P **P** **00 31 17.3 -0.3**
baz=118,SNR=11
WTLY Watson Lake, Y 69.92 334 IAmb IAmb 00 31 30.6
comp=Z,24nm,0.8s
WTLY Watson Lake, Y 69.92 334 P **P** **00 31 17.6 -0.1**
baz=120,SNR=9.9
U33K Whale Pass 70.08 329 P **P** **00 31 18.9 +0.3**
baz=115
PESTR Estremoz 70.08 50 *e*P **P** **00 31 18.6 -0.5**
comp=Z,49nm,1.3s
PESTR *e*pP **pP** **00 31 32.1 +0.1**
PESTR *e*S S 00 40 43.1 +16
PESTR Estremoz 70.08 50 P **P** **00 31 18.2 -0.9**
PVIS Viseu 70.25 48 *e*P **P** **00 31 19.5 -0.7**
comp=Z,28nm,1.4s
PVIS *e*pP **pP** **00 31 32.6 -0.5**
PGAV Gavieira, Arco 70.27 47 *e*P **P** **00 31 19.1 -1.2**
comp=Z,29nm,1.3s
PGAV *e*pP **pP** **00 31 32.8 -0.4**
PGAV *e*S **S** **00 40 32.8 +3.2**
PGAV Gavieira, Arco 70.27 47 *e*LR LR 00 53 32.4
comp=Z,2µm,22.0s
PMRV Marv??o 70.35 49 *e*P **P** **00 31 19.8 -1.0**
comp=Z,26nm,1.6s
PMRV *e*pP **pP** **00 31 33.2 -0.5**
PMRV *e*S **S** **00 40 39.1 +8.6**
PMRV Marv??o 70.35 49 *e*LR LR 00 53 41.9
comp=Z,934nm,20.0s
PBAR Barrancos 70.36 51 *e*P **P** **00 31 20.8 0.0**
comp=Z,24nm,1.9s
PBAR *e*pP **pP** **00 31 33.9 +0.1**
PBAR Barrancos 70.36 51 *e*LR LR 00 53 20.3
comp=Z,927nm,20.0s
PCBR Castelo Branco 70.37 49 *e*P **P** **00 31 20.3 -0.6**
comp=Z,25nm,1.5s
PCAB Cabril 70.38 47 *e*P **P** **00 31 20.4 -0.6**
comp=Z,30nm,1.6s
PCAB *e*pP **pP** **00 31 33.4 -0.4**
TGTN Hyland Airport 70.42 336 P **P** **00 31 20.9 +0.1**
baz=121,SNR=9.0
MTE Manteigas 70.44 48 *e*P **P** **00 31 21.5 +0.1**
comp=Z,28nm,1.4s
MTE *e*S **SKiKP** **00 40 52.0 -11**
MTE Manteigas 70.44 48 *e*LR LR 00 55 08.2
comp=Z,1µm,22.0s
MTE Manteigas 70.44 48 P **P** **00 31 21.5 +0.1**
MTE IAMs_20 IAMs_20 00 59 06.7
comp=Z,1µm,20.0s
POLO Lamas de Olo 70.48 47 *e*P **P** **00 31 21.0 -0.6**
comp=Z,18nm,1.2s
POLO *e*pP **pP** **00 31 34.3 -0.2**
PVRL Vila Real 70.51 47 *e*P **P** **00 31 21.4 -0.4**
comp=Z,44nm,1.4s
PVRL *e*pP **pP** **00 31 34.2 -0.4**
R33M Jennings River 70.52 333 P **P** **00 31 21.7 +0.2**
baz=118,SNR=13
SFS San Fernando 70.69 53 IAMs_20 IAMs_20 00 59 59.3
comp=Z,2µm,21.0s
Q32M Nakina River 70.91 332 P **P** **00 31 24.4 +0.4**
baz=117,SNR=5.5
MVO Moncorvo 70.99 48 *e*P **P** **00 31 24.3 -0.4**
comp=Z,27nm,1.2s
MVO *e*pP **pP** **00 31 37.5 -0.1**
MVO *e*S **S** **00 40 41.9 +3.9**
MVO Moncorvo 70.99 48 *e*LR LR 00 54 38.0
comp=Z,2µm,20.0s
PBRG Braganca 71.34 47 *e*P **P** **00 31 26.5 -0.3**
comp=Z,19nm,1.9s
S32K Killisnoo 71.37 330 P **P** **00 31 26.8 +0.3**
baz=114
MDT Midelt 71.41 57 P **P** **00 31 27.0 -0.4**
comp=Z,2.4nm,0.9s,baz=262,slow=7.7,SNR=6.4
MDT LR LR 01 02 52.5
comp=Z,680nm,18.5s,baz=266,slow=36
comp=Z,2.4nm,0.9s
SMAI San Martin Ant 71.55 177 IAmb IAmb 00 31 30.1
comp=Z,48nm,1.2s
SIT Sitka 71.58 330 P **P** **00 31 28.1 +0.4**
SIT Sitka 71.58 330 P **P** **00 31 28.2 +0.4**
SIT pmax pmax
comp=Z,22nm,1.1s
SIT Sitka 71.58 330 P **P** **00 31 27.7 -0.1**
baz=113
JIS Juneau Island 71.61 331 IAmb IAmb 00 31 29.5
comp=Z,36nm,1.3s
R32K Eaglecrest 71.68 331 P **P** **00 31 28.4 0.0**
baz=114,SNR=7.6
P33M Teslin, Yukon 71.73 333 IAmb IAmb 00 31 30.1
comp=Z,66nm,1.8s
P33M Teslin, Yukon 71.73 333 P **P** **00 31 28.4 -0.4**
baz=117,SNR=9.8
P32M Atlin 71.86 333 P **P** **00 31 29.5 0.0**
baz=116,SNR=5.5
BESE Bessie Mountai 71.96 331 IAmb IAmb 00 31 31.7
comp=Z,92nm,1.8s
BORG Borgarnes 72.01 21 LR LR 01 00 36.9
comp=Z,404nm,21.4s,baz=237,slow=34
MMPY Sheldon Lake, 72.19 336 P **P** **00 31 31.0 -0.4**
baz=119,SNR=9.6
RES Resolute Bay 72.22 354 LR LR 01 04 12.2
comp=Z,765nm,21.8s,baz=169,slow=37
RES Resolute Bay 72.22 354 P **P** **00 31 31.6 +0.3**
RES Resolute Bay 72.22 354 P **P** **00 31 31.6 +0.3**
RES pmax pmax
comp=Z,35nm,1.6s
N32M Quiet Lake 72.27 334 P **P** **00 31 32.0 0.0**
baz=117
S31K Pelican 72.38 331 P **P** **00 31 33.0 +0.5**
baz=113
SKAG Skagway 72.55 332 IAmb IAmb 00 31 34.9
comp=Z,57nm,1.9s
SKAG Skagway 72.55 332 P **P** **00 31 33.4 -0.1**
baz=114,SNR=5.7
SUMG Summit 72.62 11 *i*P **P** **00 31 32.4 -1.9**
SUMG IAmb IAmb 00 31 39.3
comp=Z,28nm,0.7s
PAB San Pablo 72.68 50 P **P** **00 31 34.5 -0.4**
PAB IAmb IAmb 00 31 47.7
comp=Z,39nm,1.5s

PAB San Pablo 72.68 50 IAMs_20 IAMs_20 01 02 08.0
comp=Z,939nm,20.0s
PAB San Pablo 72.68 50 P **P** **00 31 34.5 -0.4**
PAB pmax pmax
comp=Z,39nm,1.5s
WHY Whitehorse 72.84 333 P **P** **00 31 35.3 -0.2**
baz=115
FARO Faro, Yukon 72.87 335 P **P** **00 31 35.5 0.0**
baz=117,SNR=8.0
ESDC Sonseca Array 73.00 50 P **P** **00 31 35.6 -1.1**
comp=Z,2.3nm,0.9s,baz=257,slow=6.4,SNR=22
ESDC LR LR 01 02 38.0
comp=Z,617nm,18.9s,baz=235,slow=35
comp=Z,2.3nm,0.9s
ESDC Sonseca Array 73.00 50 P **P** **00 31 36.1 -0.6**
ESBB Sonseca Array 73.00 50 P **P** **00 31 36.0 -0.8**
PLBC Pleasant Camp 73.03 332 P **P** **00 31 36.7 +0.3**
baz=113
TULEG Thule 73.16 1 *i*P **P** **00 31 35.4 -1.5**
TULEG IAmb IAmb 00 31 37.9
comp=Z,26nm,0.8s
M31M Drury Creek, Y 73.29 335 P **P** **00 31 38.1 +0.1**
baz=116,SNR=9.7
O30N Mendenhall 73.43 333 P **P** **00 31 39.1 +0.3**
baz=114,SNR=15
C36M Paulatuk 73.44 344 IAMs_20 IAMs_20 01 06 30.2
comp=Z,1µm,19.0s
C36M Paulatuk 73.44 344 P **P** **00 31 38.3 -0.3**
baz=129
P30M Million Dollar 73.57 332 P **P** **00 31 40.1 +0.4**
baz=113
N31M Braeburn, Yuko 73.59 334 IAmb IAmb 00 31 40.5
comp=Z,32nm,1.1s
N31M Braeburn, Yuko 73.59 334 P **P** **00 31 39.5 -0.2**
baz=114,SNR=11
HYT Haines Junctio 74.09 333 IAmb IAmb 00 31 45.9
comp=Z,80nm,1.9s
HYT Haines Junctio 74.09 333 P **P** **00 31 43.1 +0.3**
baz=112
N30M Aishikik Lake 74.15 334 P **P** **00 31 43.6 +0.5**
baz=113,SNR=11
O29M Mount Kennedy 74.39 332 P **P** **00 31 44.6 +0.1**
baz=111
M30M Minto, Yukon 74.47 335 IAmb IAmb 00 31 45.9
comp=Z,31nm,0.9s
M30M Minto, Yukon 74.47 335 P **P** **00 31 44.3 -0.6**
baz=114,SNR=26
MAYO Mayo, Yukon 74.51 336 P **P** **00 31 45.6 +0.5**
MAYO IAmb IAmb 00 33 30.3
comp=Z,21nm,0.7s
MAYO Mayo, Yukon 74.51 336 P **P** **00 31 44.9 -0.2**
baz=115
YUK6 Outpost Mounta 74.53 333 P **P** **00 31 45.8 +0.3**
baz=112,SNR=9.5
PNL Peninsula 74.55 332 P **P** **00 31 45.6 +0.2**
baz=110
BCPM Bancas Point 74.76 332 **pP** **00 31 59.4 +0.1**
BCPM IAmb IAmb 00 33 55.7
comp=Z,57nm,0.9s
YUK4 Talbot Arm 74.80 333 P **P** **00 31 47.1 0.0**
baz=112,SNR=7.0
NEEM North Greenlan 75.08 5 *i*P **P** **00 31 47.5 -1.0**
NEEM IAmb IAmb 00 31 50.5
comp=Z,64nm,0.8s
PINM Pinnacle 75.10 332 P **P** **00 31 48.7 +0.1**
baz=110
PCA Pinnacle 75.10 332 P **P** **00 31 48.6 0.0**
M29M Somme Creek 75.13 334 P **P** **00 31 48.2 -0.6**
baz=112,SNR=5.9
L29M L29M 75.24 335 P **P** **00 31 49.1 -0.2**
baz=112,SNR=14
K29M Barlow Dome 75.28 336 P **P** **00 31 49.0 -0.6**
baz=113,SNR=20
YUK8 Steele Glacier 75.28 333 P **P** **00 31 50.0 +0.1**
baz=110,SNR=6.4
O28M Mount Upton 75.30 332 P **P** **00 31 50.0 0.0**
baz=110
A36M Sachs Harbour 75.36 346 P **P** **00 31 49.9 +0.2**
baz=127
F31M Tsiigehtchic 75.42 340 P **P** **00 31 49.5 -0.6**
baz=118,SNR=6.7
YRC Rhoscolyn 75.43 36 *e*P **P** **00 31 50.1 -0.4**
TABL Table Mountain 75.63 332 P **P** **00 31 52.1 +0.2**
TABL IAmb IAmb 00 32 05.9
comp=Z,25nm,0.9s
INK Inuvik 75.75 341 LR LR 01 07 06.8
comp=Z,1µm,20.9s,baz=112,slow=37
INK Inuvik 75.75 341 P **P** **00 31 51.4 -0.7**
baz=118,SNR=11
GAL1 Galloway 75.76 34 *e*P **P** **00 31 50.5 -1.8**
GAL1 IAmb IAmb 00 31 51.9
comp=Z,38nm,1.2s
YUK3 Moose Creek 75.77 333 P **P** **00 31 52.8 +0.2**
baz=110,SNR=14
J29M Klondike Camp 75.80 336 P **P** **00 31 52.7 +0.1**
YAH Yahtse 75.89 332 P **P** **00 31 54.0 +0.7**
TOA0 Torodi Ar. Sit 75.92 77 IAmb IAmb 00 32 06.3
comp=Z,75nm,1.6s
TORD Torodi Ar. Bea 75.92 77 P **P** **00 31 52.9 -1.2**
comp=Z,5.6nm,0.7s,baz=274,slow=5.1,SNR=23
TORD LR LR 01 03 19.9
comp=Z,1µm,21.7s,baz=220,slow=34
comp=Z,5.6nm,0.7s
TORD Torodi Ar. Bea 75.92 77 IAmb IAmb 00 32 06.8
comp=Z,61nm,1.6s
MESA MESA 75.93 332 P **P** **00 31 53.6 +0.1**
baz=108
EPYK Eagle Plains 76.00 338 pP **pP** **00 32 05.4 -1.0**
EPYK IAmb IAmb 00 32 06.3
comp=Z,31nm,1.1s
EPYK Eagle Plains 76.00 338 P **P** **00 31 53.2 -0.4**
baz=114,SNR=8.9
BARN Barnard Glacie 76.07 333 pP pP 00 32 06.8 -0.3
G30M tAoh Zraii Nji 76.07 339 P **P** **00 31 53.5 -0.5**
baz=115
NEWG New Galloway 76.09 34 *e*P **P** **00 31 52.4 -1.9**
DAWY Dawson 76.12 336 IAmb IAmb 00 31 55.1
comp=Z,66nm,1.9s
DAWY Dawson 76.12 336 P **P** **00 31 53.5 -0.9**
baz=111,SNR=7.4
KAC Achnashellach 76.14 31 *e*P **P** **00 31 53.4 -1.1**
MONM Monmouth 76.16 37 *e*P **P** **00 31 53.7 -1.1**
BVCY Beaver Creek 76.16 334 P **P** **00 31 54.3 -0.3**
baz=110,SNR=12
I29M Ogilvie Camp, 76.19 337 IAmb IAmb 00 31 55.6
comp=Z,50nm,1.5s
I29M IAMs_20 IAMs_20 01 08 24.6
comp=Z,1µm,20.0s
I29M Ogilvie Camp, 76.19 337 P **P** **00 31 53.8 -0.8**
baz=113,SNR=7.3
ISLE Juniper Island 76.24 332 P **P** **00 31 55.4 +0.2**
ISLE IAmb IAmb 00 32 08.6
comp=Z,31nm,1.1s
HLM1 Long Mynd 76.26 37 *e*P **P** **00 31 53.8 -1.5**
SNH Sunshine Point 76.35 331 P **P** **00 31 56.5 +0.7**
WAX Waxell Ridge 76.44 332 P **P** **00 31 56.7 +0.4**
WAX IAmb IAmb 00 32 19.8
comp=Z,68nm,1.6s
M27K Edge Creek, AK 76.59 334 IAmb IAmb 00 31 58.8
comp=Z,102nm,1.7s
M27K Edge Creek, AK 76.59 334 P **P** **00 31 57.1 -0.1**
baz=109,SNR=12
KESW Keswick, Cumbr 76.60 35 *e*P **P** **00 31 56.4 -0.7**
ESK Eskdalemuir 76.71 34 P **P** **00 31 57.8 0.0**
ESK Eskdalemuir 76.71 34 P **P** **00 31 57.8 0.0**
ESK pmax pmax
comp=Z,31nm,1.3s
PPT Papeete 76.72 251 LR LR 00 58 20.7
comp=Z,955nm,20.1s,baz=51,slow=30
PPT2 Papeete2 76.72 251 *e*P **P** **00 32 01.6 +2.9**
comp=Z,182nm,24.5s
PPT2 *e*S **S** **00 41 44.5 +1.2**
comp=Z,204nm,22.8s
PPT2 Papeete2 76.72 251 *e*LR LR 00 55 49.5
comp=Z,1µm,24.2s
PPT2 *e*LR LR 00 55 49.7
comp=Z,2µm,23.0s
EKA Eskdalemuir Ar 76.74 34 P **P** **00 31 56.9 -1.0**
comp=Z,2.9nm,0.7s,baz=245,slow=4.4,SNR=14
EKA LR LR 01 01 21.7
comp=Z,1µm,21.8s,baz=254,slow=32
comp=Z,2.9nm,0.7s
BCAR Beaver Creek A 76.78 334 P **P** **00 31 58.3 +0.2**
L27K Beaver Creek, 76.80 334 IAmb IAmb 00 31 59.2
comp=Z,36nm,1.0s
L27K Beaver Creek, 76.80 334 P **P** **00 31 58.5 +0.3**
baz=109,SNR=30

MCARA	McCarthy VSAT	76.80	333	IAmb	IAmb	00 32 12.7
	comp=Z,47nm,1.0s					
MCARA	McCarthy VSAT	76.80	333	P	P	00 31 58.3 +0.1
	baz=108					
EUNU	Eureka	76.84	358	IAmb	IAmb	00 31 60.0
	comp=Z,31nm,1.0s					
KAIM	Kayak Island	77.04	331	P	P	00 31 59.8 +0.2
EGAK	Eagle	77.10	336	IAmb	IAmb	00 32 00.8
	comp=Z,55nm,1.1s					
EGAK	Eagle	77.10	336	P	P	00 31 59.5 -0.3
	baz=110,SNR=24					
M26K	Nabesna, AK	77.10	334	P	P	00 31 59.8 -0.2
	baz=108,SNR=6.0					
GLB	Gilahina Butte	77.18	333	IAmb	IAmb	00 32 01.7
	comp=Z,66nm,1.5s					
K27K	Chicken	77.22	335	P	P	00 32 00.9 +0.4
K27K	Chicken	77.22	335	P	P	00 32 00.9 +0.4
	baz=109					
MCD	Coleburn Disti	77.22	32	eP	P	00 32 00.5 -0.1
CWF	Charnwood Fore	77.25	37	eP	P	00 31 59.0 -1.8
CWF				IAmb	IAmb	00 31 59.9
	comp=Z,14nm,1.0s					
BMRM	Bremner River	77.41	332	IAmb	IAmb	00 32 03.0
	comp=Z,47nm,1.2s					
BMRM	Bremner River	77.41	332	P	P	00 32 01.7 0.0
	baz=106					
L26K	Log Cabin Wild	77.44	334	IAmb	IAmb	00 32 15.3
	comp=Z,32nm,0.9s					
L26K	Log Cabin Wild	77.44	334	P	P	00 32 02.0 +0.2
	baz=108,SNR=17					
TBI	Tubuai	77.47	245	eP	P	00 32 05.7 +3.0
TBI	comp=Z,1μm,27.5s			eS	S	00 41 53.0 +1.9
	comp=Z,1μm,25.2s					
TBI	Tubuai	77.47	245	eLR	LR	00 56 10.7
TBI	comp=Z,7μm,27.0s			eLR	LR	00 56 11.1
	comp=Z,24μm,25.0s					
I27K	Kandik River	77.56	337	P	P	00 32 02.1 -0.3
	baz=110,SNR=17					
N25K	Chitina, Valde	77.59	333	IAmb	IAmb	00 32 59.8
	comp=Z,34nm,1.4s					
N25K	Chitina, Valde	77.59	333	P	P	00 32 02.4 -0.3
	baz=106					
H27K	Steamboat Moun	77.74	338	P	P	00 32 02.6 -0.8
	baz=110,SNR=9.0					
EYAK	Cordova Ski Ar	77.84	331	P	P	00 32 03.2 -0.8
	baz=105					
Q23K	Middleton Isla	77.85	330	P	P	00 32 06.0 +2.0
Q23K	Middleton Isla	77.85	330	P	P	00 32 03.7 -0.4
	baz=104					
GDLE	Glaisdale, N Y	77.86	35	eP	P	00 32 04.0 -0.2
GDLE				IAmb	IAmb	00 32 17.6
	comp=Z,25nm,0.9s					
J26L	Joseph Creek	77.99	336	P	P	00 32 04.1 -0.8
	baz=108,SNR=17					
G27K	Doyon Strip	77.99	338	P	P	00 32 03.8 -1.0
	baz=110,SNR=7.9					
DIV	Divide	78.00	332	P	P	00 32 05.1 +0.1
DIV				IAmb	IAmb	00 32 05.7
	comp=Z,50nm,1.6s					
SCRK	Sand Creek	78.00	335	P	P	00 32 04.3 -0.7
	baz=107,SNR=14					
HARP	HAARP	78.06	333	P	P	00 32 04.8 -0.5
	baz=106					
I26K	Coal Creek Min	78.07	336	IAmb	IAmb	00 32 05.7
	comp=Z,53nm,1.7s					
I26K	Coal Creek Min	78.07	336	P	P	00 32 04.7 -0.5
	baz=108,SNR=7.4					
KLU	Klutina	78.17	332	P	P	00 32 05.6 -0.3
KLU	Klutina	78.17	332	P	P	00 32 05.0 -0.9
	baz=105					
FID	Port Fidalgo	78.24	332	P	P	00 32 07.2 +0.9
RIDG	Independent Ri	78.30	335	P	P	00 32 06.7 +0.1
RIDG				IAmb	IAmb	00 32 20.4
	comp=Z,47nm,1.0s					
RIDG	Independent Ri	78.30	335	P	P	00 32 05.8 -0.7
	baz=106					
PAX	Paxson	78.36	334		pP	00 32 19.2 -0.5
PAX				IAmb	IAmb	00 32 19.7
	comp=Z,24nm,1.0s					
PAX	Paxson	78.36	334	P	P	00 32 06.3 -0.6
	baz=106,SNR=14					
WACR	West Acre	78.40	37	eP	P	00 32 06.2 -1.0
WACR				IAmb	IAmb	00 32 11.0
	comp=Z,43nm,0.9s					
E27K	Coleen River	78.44	339	P	P	00 32 06.8 -0.5
	baz=110,SNR=12					
M24K	Tolsona, Glenn	78.44	333	pP	pP	00 32 20.6 +0.4
M24K	Tolsona, Glenn	78.44	333	P	P	00 32 07.0 -0.4
	baz=105,SNR=6.2					
P23K	Montague Islan	78.51	331	P	P	00 32 07.4 -0.3
	baz=103					
GLI	Glacier Island	78.57	332	P	P	00 32 07.5 -0.6
	baz=104					
K24K	Donnelly Dome	78.72	335	P	P	00 32 07.7 -1.2
	baz=105,SNR=9.0					
CLF	Chamberlin-Foret	78.73	42	pP	pP	00 32 21.6 -0.6
J25K	Salcha River,	78.77	335	P	P	00 32 08.6 -0.5
	baz=106,SNR=15					
G26K	Porcupine Rive	78.83	338	P	P	00 32 08.4 -1.0
	baz=108,SNR=5.5					
SCM	Sheep Creek Mo	78.90	333	IAmb	IAmb	00 32 10.8
	comp=Z,40nm,1.0s					
SCM	Sheep Creek Mo	78.90	333	P	P	00 32 09.4 -0.6
	baz=104,SNR=6.1					
M23K	Glacier View	79.08	332	P	P	00 32 09.8 -1.1
	baz=103					
PRP	Porcupine Dome	79.08	336	PcP	PcP	00 32 22.1 +2.8
PRP				IAmb	IAmb	00 32 23.7
	comp=Z,28nm,1.1s					
PRP				IAMs_20	IAMs_20	01 09 17.2
	comp=Z,654nm,21.0s					
PRP	Porcupine Dome	79.08	336	P	P	00 32 09.9 -1.1
	baz=106,SNR=13					
PWL	Port Wells	79.15	331	P	P	00 32 10.8 -0.4
PWL	Port Wells	79.15	331	P	P	00 32 10.3 -1.0
	baz=102					
JMIC	Jan Mayen	79.17	18	LR	LR	01 03 08.6
	comp=Z,622nm,22.0s,baz=246,slow=33					
F26K	Sheenjek River	79.19	339	P	P	00 32 10.9 -0.5
	baz=108,SNR=7.1					
DHY	Denali Highway	79.22	334	P	P	00 32 10.9 -0.9
	baz=104					
FYU	Fort Yukon	79.26	337	IAmb	IAmb	00 32 12.8
	comp=Z,79nm,1.4s					
WAT6	Susitna Watana	79.27	333	P	P	00 32 11.2 -0.9
	baz=103,SNR=10					
BMAR	Burnt Mountain	79.27	338	pP	pP	00 32 24.0 -0.6
DAG	Danmarks Havn	79.30	11	i P	P	00 32 10.3 -1.4
DAG				IAmb	IAmb	00 32 13.3
	comp=Z,4.2nm,0.7s					
MAHO	Mahon	79.32	50	IAMs_20	IAMs_20	01 04 20.5
	comp=Z,636nm,22.0s					
KNK	Knik Glacier	79.33	332	P	P	00 32 12.5 +0.3
KNK				pP	pP	00 32 25.0 0.0
KNK	Knik Glacier	79.33	332	P	P	00 32 12.1 -0.2
	baz=102					
SML	Sawmill	79.36	332	P	P	00 32 11.8 -0.6
SML				pP	pP	00 32 24.5 -0.7
SML				IAmb	IAmb	00 32 42.6
	comp=Z,88nm,1.6s					
SML	Sawmill	79.36	332	P	P	00 32 12.3 -0.1
	baz=103					
HDA	Harding Lake	79.37	335	IAmb	IAmb	00 32 12.7
	comp=Z,38nm,1.0s					
HDA				pP	pP	00 32 24.8 -0.4
HDA	Harding Lake	79.37	335	P	P	00 32 11.5 -0.9
	baz=104,SNR=15					
H25K	Birch Creek	79.41	337	P	P	00 32 11.9 -0.5
	baz=106,SNR=17					
IL31		79.44	335	pP	pP	00 32 24.8 -0.7
ILAR	Eielson Array	79.44	335	P	P	00 32 11.7 -1.1
	comp=Z,6.8nm,0.7s,baz=113,slow=4.4,SNR=70					
ILAR				LR	LR	01 11 34.8
	comp=Z,564nm,18.4s,baz=94,slow=39					
	comp=Z,6.8nm,0.7s					
SEW	Seward	79.53	331	P	P	00 32 13.7 +0.4
	baz=101					
TAM	Tamanrasset	79.62	68	P	P	00 32 13.7 -1.1
TAM				pP	pP	00 32 28.8 +0.7
TAM				IAmb	IAmb	00 32 30.3
	comp=Z,48nm,1.6s					
TAM	Tamanrasset	79.62	68	P	P	00 32 13.7 -1.1
TAM				*PP	pP	00 32 28.8 +0.7
GHO	Glory Hole Cre	79.63	332	P	P	00 32 13.4 -0.5
GHO				pP	pP	00 32 25.2 -1.5
GHO				IAmb	IAmb	00 32 27.1
	comp=Z,29nm,0.9s					
C27K	Jago River	79.65	341	P	P	00 32 13.2 -0.6
	baz=108,SNR=5.9					
G25K	Bearman Lake	79.65	338	P	P	00 32 13.5 -0.3
	baz=106,SNR=12					
PMR	Palmer	79.69	332	P	P	00 32 13.2 -0.9
	baz=102					
WAT1	Susitna Watana	79.69	333	P	P	00 32 13.2 -1.0
	baz=103					
F25K	Christian Rive	79.71	338	P	P	00 32 13.9 -0.3
	baz=106,SNR=16					
POKR	Poker Plat Res	79.75	336		P	00 32 14.6 +0.2
POKR	Poker Plat Res	79.75	336	IAmb	IAmb	00 32 15.4
	comp=Z,88nm,1.6s					
POKR	Poker Plat Res	79.75	336	P	P	00 32 13.6 -0.8
	baz=104					
E25K	Arctic Village	79.83	339	P	P	00 32 14.7 -0.1
	baz=106,SNR=9.4					
COLA	College	79.86	335	P	P	00 32 14.6 -0.4
COLA				IAmb	IAmb	00 32 27.7
	comp=Z,34nm,1.2s					
COLA	College	79.86	335	P	P	00 32 14.6 -0.4
COLA				pmax	pmax	
	comp=Z,34nm,1.3s					
COLA	College	79.86	335	P	P	00 32 14.7 -0.4
	baz=104					
TCOL	CIGO, UAF Yank	79.86	335	IAmb	IAmb	00 32 27.7
	comp=Z,37nm,1.3s					
TCOL	CIGO, UAF Yank	79.86	335	P	P	00 32 14.3 -0.7
	baz=104					
WRH	Wood River Hil	79.86	335	P	P	00 32 15.2 +0.2
WRH				IAmb	IAmb	00 35 12.9
	comp=Z,60nm,1.9s					
RC01	Rabbit Creek A	79.87	332	P	P	00 32 14.8 -0.4
	baz=101					
RND	Reindeer	79.95	334	IAmb	IAmb	00 32 28.9
	comp=Z,34nm,1.0s					
SSB	Saint Sauveur	79.98	45	P	P	00 32 16.2 0.0
SSB				IAmb	IAmb	00 32 29.6
	comp=Z,48nm,1.6s					
SSB	Saint Sauveur	79.98	45	IAMs_20	IAMs_20	01 02 39.0
	comp=Z,1μm,20.0s					
SSB	Saint Sauveur	79.98	45	P	P	00 32 16.2 0.0
SSB				pmax	pmax	
	comp=Z,49nm,1.6s					
MDM	Murphy Dome	80.04	336	IAmb	IAmb	00 32 16.6
	comp=Z,30nm,1.1s					
MCK	McKinley	80.06	334	IAmb	IAmb	00 32 39.1
	comp=Z,24nm,0.9s					
MCK	McKinley	80.06	334	P	P	00 32 15.4 -0.8
	baz=102,SNR=8.5					
BRSE	Bradley Lake S	80.10	330	P	P	00 32 15.6 -0.9
	baz=100					
H24K	Noodor Dome	80.11	336	IAmb	IAmb	00 32 17.5
	comp=Z,99nm,2.0s					
H24K	Noodor Dome	80.11	336	P	P	00 32 16.1 -0.3
	baz=104,SNR=7.3					
G24K	Hadweenzic Riv	80.16	337	P	P	00 32 16.0 -0.6
	baz=104,SNR=13					
M22K	Willow	80.18	332	P	P	00 32 16.0 -0.8
	baz=101					
NEA2	Nenana	80.31	335	IAmb	IAmb	00 32 18.0
	comp=Z,50nm,1.1s					
NEA2	Nenana	80.31	335	P	P	00 32 16.8 -0.6
	baz=102,SNR=17					
SNF	Seneffe	80.34	39	dP	P	00 32 17.9 0.0
SNF				dpP	pP	00 32 30.2 -0.7
CUT	Chulitna	80.38	333	P	P	00 32 17.6 -0.3
	baz=101					
SUA	Susitna One	80.42	332	P	P	00 32 17.9 -0.3
	baz=100					
D25K	Kavik River	80.45	340	P	P	00 32 17.9 -0.3
	baz=106,SNR=9.6					
DOU	Dourbes	80.50	40	dP	P	00 32 17.9 -0.9
	comp=Z,14nm,1.1s					
DOU				dpP	pP	00 32 30.7 -1.1
F24K	Squaw Lake	80.52	338	P	P	00 32 17.8 -0.8
	baz=104,SNR=8.4					
HOM	Homer	80.54	330	P	P	00 32 18.3 -0.5
	baz=99					
I23K	Minto, Yukon-K	80.55	336	IAmb	IAmb	00 32 19.5
	comp=Z,36nm,1.4s					
I23K	Minto, Yukon-K	80.55	336	P	P	00 32 17.9 -0.8
	baz=102,SNR=6.3					
TRF	Thorofare Moun	80.59	334	IAmb	IAmb	00 33 06.9
	comp=Z,71nm,1.8s					
TRF	Thorofare Moun	80.59	334	P	P	00 32 18.6 -0.6
	baz=101,SNR=5.8					
BMRD	Maredsous	80.63	40	dP	P	00 32 19.0 -0.4
	comp=Z,11nm,1.1s					
BMRD				dpP	pP	00 32 32.1 -0.4
KDAK	Kodiak Island	80.73	328	LR	LR	01 13 47.9
	comp=Z,380nm,18.2s,baz=109,slow=40					
KDAK	Kodiak Island	80.73	328	P	P	00 32 19.1 -0.7
	baz=98					
Q20K	Shuyak Island	80.75	329	P	P	00 32 19.2 -0.7
	baz=99					
H23K	Yukon River	80.77	336	P	P	00 32 19.0 -0.9
	baz=102					
BGES	Gesves	80.84	40	dP	P	00 32 19.9 -0.7
	comp=Z,13nm,1.0s					
BGES				dPcP	PcP	00 32 26.5 -0.6
BGES				dpP	pP	00 32 33.3 -0.3
E24K	Your Creek	80.88	339	P	P	00 32 20.0 -0.5
	baz=104					
SKT	Skwentna	80.88	332	IAmb	IAmb	00 32 33.2
	comp=Z,34nm,1.1s					
SKT	Skwentna	80.88	332	P	P	00 32 19.7 -0.9
	baz=100,SNR=8.1					
RCHB	Rochefort	80.91	40	dP	P	00 32 20.2 -0.7
	comp=Z,21nm,1.0s					
RCHB				dpP	pP	00 32 33.5 -0.6
BCLA	Clavier	80.98	40	bP	P	00 32 20.4 -0.9
	comp=Z,7.9nm,0.9s					
SPU	Mount Spurr	80.99	331	P	P	00 32 21.1 -0.2
BPAW	Bear Paw Mtn.	81.02	334	IAmb	IAmb	00 32 21.6
	comp=Z,39nm,0.9s					
BPAW	Bear Paw Mtn.	81.02	334	P	P	00 32 20.6 -0.7
	baz=101,SNR=16					
OHAK	Old Harbor	81.03	327	P	P	00 32 20.9 -0.5
	baz=98					
N20K	Mount Spurr	81.07	331	P	P	00 32 20.9 -0.8
	baz=99					
SPCR	Spurr Chakacha	81.07	331	P	P	00 32 20.8 -0.9
	baz=99					
MLY	Manley	81.09	335	P	P	00 32 20.8 -0.9
	baz=101,SNR=7.8					
O20K	Slope Mountain	81.09	330	P	P	00 32 21.1 -0.8
	baz=99					
G23K	Bananza Creek	81.15	337	P	P	00 32 21.3 -0.7
	baz=102,SNR=7.1					
BSTI	Sart Tilman	81.17	39	dP	P	00 32 21.9 -0.4
BSTI				dpP	pP	00 32 35.4 0.0
D24K	Happy Valley	81.25	340	P	P	00 32 21.8 -0.6
	baz=104					
PPLA	Purkeypile	81.34	333	IAmb	IAmb	00 32 35.7
	comp=Z,48nm,1.1s					
CAST	Castle Rocks	81.38	334	pP	pP	00 32 34.3 -1.7
BHOU	Houvegnez	81.42	40	dP	P	00 32 23.5 -0.2
BHOU				dpP	pP	00 32 37.0 +0.2
MEM	Membach	81.45	39	dP	P	00 32 23.9 +0.1
MEM				dpP	pP	00 32 36.8 -0.1
WLF	Walferdange	81.46	40	IAmb	IAmb	00 32 37.8
	comp=Z,39nm,0.9s					
WLF				IAMs_20	IAMs_20	01 03 22.1
	comp=Z,938nm,22.0s					
WLF	Walferdange	81.46	40	dP	P	00 32 23.9 0.0
	comp=Z,30nm,1.0s					
WLF				dpP	pP	00 32 37.1 +0.1
BTNL	Ternell	81.52	40	dP	P	00 32 23.6 -0.7
	comp=Z,7.1nm,1.1s					
BTNL				dpP	pP	00 32 36.8 -0.6
M20K	Styx River	81.61	332	P	P	00 32 24.4 -0.2
SENIN	Lac Senin/Sane	81.99	44	P	P	00 32 26.7 -0.3
ECH	Echery	82.01	42	P	P	00 32 26.2 -0.7
ECH				IAmb	IAmb	00 32 41.0
	comp=Z,45nm,1.2s					
ECH	Echery	82.01	42	P	P	00 32 26.2 -0.7
ECH				pmax	pmax	
	comp=Z,45nm,1.2s					
H21K	Melozitna Rive	82.06	336	P	P	00 32 26.5 -0.3
N19K	Bonanza Creek	82.11	331	IAmb	IAmb	00 33 44.8
	comp=Z,37nm,1.4s					
NOR	Nord	82.19	7	i P	P	00 32 25.2 -1.9
NOR				IAmb	IAmb	00 32 33.4
	comp=Z,6.0nm,0.7s					
M19K	Big River Lodg	82.20	332	P	P	00 32 27.6 0.0
M19K				IAmb	IAmb	00 33 34.3
	comp=Z,79nm,1.8s					
K20K	Telida	82.25	333	P	P	00 32 26.9 -0.9
K20K				IAmb	IAmb	00 32 48.0
	comp=Z,71nm,1.9s					
O18K	Koktuh Hills	82.35	330	P	P	00 32 27.6 -0.8
J20K	Nowinta River	82.40	334	P	P	00 32 27.6 -0.9
J20K				IAmb	IAmb	00 32 28.7
	comp=Z,95nm,1.9s					
L19K	White Mountain	82.46	332	P	P	00 32 28.4 -0.5
IMAR	Indian Mountai	82.50	336	P	P	00 32 27.6 -1.4
BLS5	Blasjo	82.56	31	eP	P	00 32 29.9 +0.4
HON	Honolulu	82.61	291	P	P	00 32 30.9 +0.4
HON	Honolulu	82.61	291	P	P	00 32 30.9 +0.4
SVW2	Sparrevohn	82.67	331	IAmb	IAmb	00 34 39.9
	comp=Z,75nm,1.7s					
N18K	Kilae Creek	82.78	331	IAmb	IAmb	00 32 31.4
	comp=Z,21nm,0.8s					
BFO	Black Forest	82.80	42	P	P	00 32 28.7 -2.3
BFO				IAMs_20	IAMs_20	01 06 02.5
	comp=Z,660nm,20.0s					
BFO	Black Forest	82.80	42	P	P	00 32 28.7 -2.3
BFO				pmax	pmax	
	comp=Z,18nm,1.1s					
SNART	Snartemo	82.84	32	eP	P	00 32 30.9 -0.1
AKN	Aaknes	83.11	28	eP	P	00 32 32.7 +0.5
KEST	Kesra	83.14	55	P	P	00 32 31.1 -2.1
	comp=Z,3.9nm,0.8s,baz=297,slow=3.5,SNR=5.6					
KEST				LR	LR	01 10 33.5
	comp=Z,556nm,19.0s,baz=205,slow=36					
	comp=Z,3.9nm,0.8s					
KEST	Kesra	83.14	55	P	P	00 32 32.6 -0.6
KEST				pP	pP	00 32 45.4 -1.0
KEST				IAmb	IAmb	00 32 46.9
	comp=Z,50nm,1.5s					
STU	Stuttgart	83.39	41	P	P	00 32 33.8 -0.2
STU					pP	00 32 46.1 -1.0
STU				IAmb	IAmb	00 32 47.5
	comp=Z,23nm,0.9s					
STU				IAMs_20	IAMs_20	01 05 38.3
	comp=Z,853nm,21.0s					
TUE	Stuetta	83.41	44	P	P	00 32 34.0 -0.4
TUE				IAmb	IAmb	00 32 38.0
	comp=Z,23nm,0.9s					
TUE				IAMs_20	IAMs_20	01 05 47.7
	comp=Z,1μm,22.0s					
MUD	Monsted U'grnd	83.77	34	i P	P	00 32 33.2 -2.5
MUD				IAmb	IAmb	00 32 36.8
	comp=Z,8.9nm,0.9s					
DAVOX	Davos/Dischmat	83.78	43	LR	LR	01 06 21.0
	comp=Z,747nm,21.1s,baz=275,slow=33					
BELA	Belgrano 2	84.01	172	IAmb	IAmb	00 32 37.9
	comp=Z,33nm,1.0s					
FUORN	Ofenpass-Fuorn	84.05	44	P	P	00 32 35.1 -2.6
FUORN				IAmb	IAmb	00 32 52.0
	comp=Z,24nm,1.1s					
FUORN				IAMs_20	IAMs_20	01 06 20.5
	comp=Z,1μm,22.0s					
VLC	Villacollemand	84.08	46	P	P	00 32 36.0 -1.7
VLC				IAMs_20	IAMs_20	01 04 52.5
	comp=Z,1μm,22.0s					
GRFO	Grafenberg	84.75	41	P	P	00 32 40.7 -0.2
GRFO				IAMs_20	IAMs_20	01 06 34.1
	comp=Z,729nm,21.0s					
GRFO	Grafenberg	84.75	41	P	P	00 32 40.7 -0.2
GRFO				pmax	pmax	
	comp=Z,13nm,0.9s					
GRA1	Grafenberg Arr	84.75	41	P	P	00 32 40.7 -0.2
GRA1					pP	00 32 52.9 -1.2
GRA1				IAMs_20	IAMs_20	01 08 30.1
	comp=Z,670nm,20.0s					
NBO00	NORSAR Array S	84.83	29	pP	pP	00 32 54.7 +0.5
NAO01	NORSAR Array S	84.87	29	P	P	00 32 41.3 0.0
NB2	NORSAR Subarra	85.04	29	P	P	00 32 42.4 +0.3
	comp=Z,164nm,2.0s,baz=269,slow=5.3					
NB2	NORSAR Subarra	85.04	29	P	P	00 32 42.4 +0.3
	baz=269,slow=5.3					
NOA	NORSAR Array B	85.04	29	P	P	00 32 42.5 +0.3
	comp=Z,6.3nm,0.9s,baz=270,slow=4.9,SNR=12					
NOA				LR	LR	01 06 55.1
	comp=Z,867nm,21.8s,baz=265,slow=33					
	comp=Z,6.3nm,0.9s					
NB201	NORSAR Array S	85.08	29	P	P	00 32 43.6 +1.3
NC303	NORSAR Array S	85.12	29	IAmb	IAmb	00 32 57.4
	comp=Z,37nm,1.1s					
NC602	NORSAR Array S	85.19	29	P	P	00 32 42.8 -0.1
NC602	NORSAR Array S	85.19	29	eP	P	00 32 43.5 +0.6
VNA3	Neumayer Olymp	85.34	163	P	P	00 32 43.9 +0.5
NSS	Namsos	85.50	26	eP	P	00 32 44.7 +0.4
VNA1	Neumayer--Stat	85.52	162	P	P	00 32 45.2 +1.0
NKC	Novy Kostel	85.55	40	epP	pP	00 32 58.2 +0.1
NKC				eSKS	S	00 43 11.6 -2.2
NKC				AMS	AMS	01 05 00.0
	comp=Z,1μm,19.2s					
CLUD	Cludinico	85.85	44	P	P	00 32 45.5 -1.0
VNA2	Neumayer--Watz	85.89	162	P	P	00 32 46.6 +0.5
	baz=310,slow=5.0					
CLL	Collm	85.90	39	i P	P	00 32 46.2 -0.4
CLL				i *PP	pP	00 32 58.6 -1.2
CLL				i *SP	sP	00 33 04.8 +0.2
CLL				eS	S	00 43 13.0 -4.1
CLL				pmax	pmax	
	comp=Z,20nm,1.5s					
CLL	Collm	85.90	39	i P	P	00 32 46.2 -0.4
	comp=Z,20nm,1.5s					
CLL				i pP	pP	00 32 58.6 -1.2
	comp=Z,21nm,1.1s					
CLL				i (sP)	sP	00 33 04.8 +0.2
CLL				ex	x	00 37 24.0
CLL				ePPPP		00 39 24.0
CLL				eSKSac	SKSac	00 43 09.0 -0.2
CLL				eS	S	00 43 18.0 +0.9
CLL				esS	sS	00 43 40.0 +0.4
CLL				eSP	SPn	00 44 13.0 +0.4
CLL				ePPS	PPS	00 44 41.0
CLL				e(SS)		00 48 30.0
CLL				esSS		00 49 30.0
CLL				eSSS	SSS	00 52 36.0
CLL				Lmax		01 05 00.0
KBS	Kingsbay	86.04	11	P	P	00 32 48.5 +1.7
KBS	Kingsbay	86.04	11	P	P	00 32 48.5 +1.7
KBS				pmax	pmax	
	comp=Z,226nm,2.0s					
KBS	Kingsbay	86.04	11	eP	P	00 32 48.5 +1.7
KBS	Kingsbay	86.04	11	i P	P	00 32 47.0 +0.2
CLTB	Caltabellotta	86.25	53	P	P	00 32 49.5 +0.8
HFS	Hagfors	86.25	30	LR	LR	01 07 19.4
	comp=Z,2μm,21.8s,baz=265,slow=33					
KHC	Kasperske Hory	86.29	41	IAmb	IAmb	00 33 02.9
	comp=Z,26nm,1.1s					
KHC	Kasperske Hory	86.29	41	eP	P	00 32 48.6 0.0
KHC				e*PP	pP	00 33 02.0 +0.2
KHC				eS	S	00 43 19.7 -1.4
KHC				MLR	MLR	
	comp=Z,700nm,18.8s					
KHC	Kasperske Hory	86.29	41	eP	P	00 32 48.6 0.0
KHC				epP	pP	00 33 02.0 +0.2
KHC				eSKS	S	00 43 19.7 -1.4
KHC				AMS	AMS	01 07 20.0
	comp=Z,700nm,18.8s					
GEC2	GERESS Array S	86.37	41	P	P	00 32 48.8 -0.3
GEC2				IAmb	IAmb	00 33 02.9
	comp=Z,17nm,0.8s					
GERES	GERESS Array B	86.37	41	P	P	00 32 49.0 -0.2
	comp=Z,4.8nm,0.8s,baz=254,slow=4.9,SNR=22					
	comp=Z,4.8nm,0.8s					
GERES	GERESS Array B	86.37	41	P	P	00 32 48.0 -1.2
GERES	GERESS Array B	86.37	41	P	P	00 32 49.0 -0.2
BRG	Berggiesshubel	86.49	39	eP	P	00 32 49.4 -0.1
BRG				Amp		00 32 50.9
	comp=Z,15nm,1.1s					
BRG				ex	x	00 33 02.6
BRG				Amp		00 33 03.9
	comp=Z,17nm,1.1s					
BRG				ex	x	00 34 57.0
BRG				Amp		00 35 04.6
	comp=Z,5.5nm,1.2s					
BRG	Berggiesshubel	86.49

BRG Amp 01 05 27.0
comp=Z,1.9nm,24.1s
BRG Amp 01 05 32.0
comp=E,1.4nm,24.6s
BRG Berggiesshubel 86.49 39 *e*P **P 00 32 49.4 -0.1**
BRG *e* 00 33 02.6
BRG S **SKSac 00 43 15.0 +2.1**
BRG pmax pmax
comp=Z,15nm,1.1s
MOR8 Moi Rana 86.55 24 *e*P **P 00 32 50.2 +0.7**
MOR8 IAmb IAmb 00 32 50.8
comp=Z,38nm,1.2s
RAR Rarotonga 86.69 249 LR LR 01 04 53.8
comp=Z,532nm,18.2s,baz=91,slow=31
HSPB Hornsund (broa 86.76 13 *e*P **P 00 32 51.7 +1.4**
CKRC Cesky Krumlov 86.78 41 *ep*P **pP 00 33 04.0 -0.2**
CKRC *e*SKS **SKSac 00 43 14.7 -0.1**
CKRC AMS AMS 01 08 00.0
comp=Z,600nm,19.7s
STEI Steigen 86.84 22 *e*P **P 00 32 51.2 +0.4**
STEI IAmb IAmb 00 32 52.3
comp=Z,80nm,1.2s
FAUS Fauske 86.87 23 *e*P **P 00 32 51.9 +0.9**
FAUS IAmb IAmb 00 32 53.1
comp=Z,42nm,1.1s
PRU Pruhonice 86.90 40 *e*P **P 00 32 51.9 +0.4**
PRU *e**PP **pP 00 33 05.0 +0.3**
PRU *e*S **S 00 43 25.2 -1.7**
PRU Pruhonice 86.90 40 *e*P **P 00 32 51.9 +0.4**
PRU *ep*P **pP 00 33 05.0 +0.3**
PRU *e*S **S 00 43 25.2 -1.7**
PRU AMS AMS 01 03 40.0
comp=Z,1μm,32.7s
PVCC Panska Ves 86.90 40 *e*P **P 00 32 51.8 +0.3**
PVCC *e**PP **pP 00 33 05.1 +0.4**
PVCC MLR MLR
comp=Z,2μm,25.0s
PVCC Panska Ves 86.90 40 *e*P **P 00 32 51.8 +0.3**
PVCC *ep*P **pP 00 33 05.1 +0.4**
PVCC AMS AMS 01 05 00.0
comp=Z,2μm,25.0s
SPA0 Spitsbergen Ar 86.92 12 *e*P **P 00 32 52.1 +1.0**
SPA0 IAmb IAmb 00 32 53.6
comp=Z,160nm,1.3s
SPITS Spitsbergen Ar 86.92 12 LR LR 01 10 49.2
comp=Z,310nm,20.5s,baz=230,slow=35
SPB2 Spitsbergen Ar 86.92 12 P **P 00 32 52.1 +1.0**
GOPC GO Pecny, Ondr 87.06 40 *e*SKS **SKSac 00 43 20.9 +4.4**
GOPC AMS AMS 01 03 40.0
comp=Z,1μm,27.5s
VAE Valguarnera 87.20 53 LR LR 01 11 42.4
comp=Z,829nm,18.9s,baz=309,slow=36
SNAA Sanae 87.53 162 P **P 00 32 54.8 +0.6**
SNAA Sanae 87.53 162 LR LR 01 13 27.3
comp=Z,364nm,20.6s,baz=328,slow=36
SNAA Sanae 87.53 162 P **P 00 32 54.8 +0.6**
SNAA IAMs_20 IAMs_20 01 13 05.0
comp=Z,529nm,21.0s
SNAA Sanae 87.53 162 P **P 00 32 54.8 +0.6**
SNAA pmax pmax
comp=Z,114nm,1.1s
SNAA MLR MLR
comp=Z,500nm,21.0s
TREC Trest 87.53 41 AMS AMS 01 03 50.0
comp=Z,700nm,25.0s
UPC Upice 87.82 40 AMS AMS 01 05 30.0
comp=Z,2μm,24.3s
CHVC Chvalec 87.84 40 *e*P **P 00 32 56.9 +0.8**
CHVC *ep*P **pP 00 33 09.8 +0.4**
CHVC AMS AMS 01 05 30.0
comp=Z,2μm,23.9s
OSTC Ostas 87.95 40 *e*P **P 00 32 57.3 +0.7**
OSTC *ep*P **pP 00 33 10.7 +0.8**
OSTC *e*SKS **SKSac 00 43 21.9 0.0**
OSTC AMS AMS 01 05 30.0
comp=Z,2μm,24.6s
DPC Dobruska-Polom 88.03 40 *e*P **P 00 32 57.6 +0.6**
DPC *e**PP **pP 00 33 11.2 +0.9**
DPC *e*S **SKSac 00 43 29.2 +6.8**
DPC MLR MLR
comp=Z,1μm,21.8s
DPC Dobruska-Polom 88.03 40 *e*P **P 00 32 57.6 +0.6**
DPC *ep*P **pP 00 33 11.2 +0.9**
DPC *e*SKS **SKSac 00 43 29.2 +6.8**
DPC AMS AMS 01 05 40.0
comp=Z,1μm,21.8s
TRO Tromso 88.09 20 *e*P **P 00 32 57.4 +0.6**
TRO IAmb IAmb 00 32 58.9
comp=Z,54nm,1.0s
KRUC Moravsky 88.14 41 *e*P **P 00 32 57.2 -0.3**
KRUC *ep*P **pP 00 33 10.0 -0.8**
VRAC Vranov 88.26 41 LR LR 01 09 56.0
comp=Z,220nm,20.4s,baz=268,slow=34
VRAC Vranov 88.26 41 *e*P **P 00 32 58.1 0.0**
VRAC *ep*P **pP 00 33 10.5 -0.9**
KRLC Kraliky 88.34 40 *e*P **P 00 32 59.3 +0.8**
KRLC *e**PP **pP 00 33 12.9 +1.1**
KRLC MLR MLR
comp=Z,1μm,25.0s
KRLC Kraliky 88.34 40 *e*P **P 00 32 59.3 +0.8**
KRLC *ep*P **pP 00 33 12.9 +1.1**
KRLC *ex* x 00 43 52.8
KRLC AMS AMS 01 06 00.0
comp=Z,1μm,25.0s
CEL Celeste 88.34 52 IAMs_20 IAMs_20 01 10 48.4
comp=Z,942nm,22.0s
JETT Jettan, Norway 88.62 20 *e*P **P 00 32 59.3 -0.1**
JETT IAmb IAmb 00 33 01.8
comp=Z,67nm,1.1s
ZST Bratislava 88.66 42 *e*P **P 00 32 59.4 -0.6**
ZST *e* 00 33 11.8
ZST pmax pmax
comp=Z,124nm,2.0s
MODS Modra-Piesok 88.76 42 *e*P **P 00 33 00.4 -0.1**
MODS *e* 00 33 13.8
MODS pmax pmax
comp=Z,71nm,1.6s
MORC Moravsky Berou 88.85 40 IAmb IAmb 00 33 15.2
comp=Z,17nm,1.1s
MORC Moravsky Berou 88.85 40 *e*P **P 00 33 01.2 +0.3**
MORC *ep*P **pP 00 33 13.8 -0.4**
SMOL Smolenice 88.86 42 *e*P **P 00 33 00.6 -0.3**
SMOL pmax pmax
comp=Z,4.0nm,1.3s
JAVC Velka Javorina 88.99 41 *e*P **P 00 33 02.5 +0.9**
JAVC *ep*P **pP 00 33 15.1 +0.2**
MAUC Maruska 89.06 41 *e*P **P 00 33 03.5 +1.6**
MAUC *ep*P **pP 00 33 16.7 +1.5**
MAUC AMS AMS 01 04 40.0
comp=Z,2μm,25.3s
OKC Ostrava-Krasne 89.23 40 AMS AMS 01 06 50.0
comp=Z,800nm,23.3s
TROLL Troll, Antarti 89.24 162 P **P 00 33 03.3 +0.9**
SRO Srobarova 89.50 42 *e*P **P 00 33 04.1 +0.2**
SRO pmax pmax
comp=Z,9.0nm,1.0s
KTK1 Kautokeino 89.69 21 *e*P **P 00 33 04.4 0.0**
KTK1 IAmb IAmb 00 33 06.0
comp=Z,33nm,1.0s
VYHS Vyhne 89.79 42 *e*P **P 00 33 05.3 0.0**
VYHS *e* 00 33 18.3
VYHS pmax pmax
comp=Z,18nm,1.3s
SPIA Saint Paul Isl 90.23 327 P **P 00 33 08.4 +1.3**
OJC Ojcow 90.26 40 *e*P **P 00 33 05.9 -1.6**
ARA0 ARCESS Array S 90.39 20 *e*P **P 00 33 07.8 +0.1**
ARCES ARCESS Array B 90.39 20 P **P 00 33 06.2 -1.5**
comp=Z,10nm,1.1s,baz=279,slow=2.7,SNR=8.7
ARCES LR LR 01 09 17.7
comp=Z,343nm,21.4s,baz=280,slow=33
comp=Z,10nm,1.1s
PSZ Piszkesteto 90.55 42 P **P 00 33 08.8 -0.1**
PSZ IAMs_20 IAMs_20 01 10 49.5
comp=Z,622nm,21.0s
PSZ Piszkesteto 90.55 42 P **P 00 33 08.8 -0.1**
PSZ pmax pmax
comp=Z,11nm,1.1s
PDG Podgorica 90.61 48 IAMs_20 IAMs_20 01 09 53.5
comp=Z,994nm,21.0s
STHS Stebnicka Huta 91.28 41 *e*P **P 00 33 12.8 +0.6**
STHS *e* 00 33 22.9
STHS pmax pmax
comp=Z,5.0nm,0.9s
CRVS Cervenica-Dubn 91.48 41 *e*P **P 00 33 13.5 +0.3**
CRVS pmax pmax
comp=Z,45nm,1.7s
NVL N'lazarevskaya 92.00 161 *e*P **P 00 33 16.2 +1.2**
NVL *e*S **SKSac 00 43 44.4 -0.1**
NVL pmax pmax
comp=Z,33nm,0.8s
UZH Uzhgorod 92.06 41⇑ *i*P **P 00 33 12.7 -3.1**
UZH *e* 00 33 29.4
FINES FINESS Array B 92.16 28 P **P 00 33 15.2 -0.8**
comp=Z,2.1nm,0.7s,baz=299,slow=3.9,SNR=7.8
FINES LR LR 01 11 08.5
comp=Z,989nm,21.9s,baz=275,slow=33
comp=Z,2.1nm,0.7s
VSU Vasula 93.07 31⇑ *e*P **P 00 33 19.8 -0.4**
VSU pmax pmax
comp=Z,39nm,1.1s
TSUM Tsumeb 93.19 109 LR LR 01 11 22.7
comp=Z,2μm,21.8s,baz=310,slow=33
QSPA South Pole Qui 93.42 180 P **P 00 33 22.7 +0.9**
comp=Z,39nm,1.0s,baz=154,slow=2.0,SNR=64
QSPA South Pole Qui 93.42 180 P **P 00 33 22.9 +1.1**
QSPA South Pole Qui 93.42 180 IAMs_20 IAMs_20 01 13 58.4
comp=Z,890nm,20.0s
VTS Vitosha 93.51 47 **P 00 33 22.2 -0.7**
VTS pP **pP 00 33 34.9 -1.4**
VTS IAmb IAmb 00 33 47.0
comp=Z,9.0nm,0.4s
LVZ Lovozero 94.04 21⇓ *e*P **P 00 33 24.5 -0.1**
LVZ pmax pmax
comp=Z,39nm,1.7s
BUR08 Bucovina Ar. S 94.13 42 P **P 00 33 25.3 -0.2**
BURAR Bucovina Array 94.15 42 P **P 00 33 25.8 +0.2**
MNK Minsk 94.50 35 *i* P P 00 33 18.9 -8.0
MNK *i* *PP **PcP 00 33 31.8 +4.5**
MNK *i* *SP pP 00 33 37.2 -3.0
MNK *i* 00 37 10.1
MNK *i* S **SKSac 00 43 49.4 -10**
MNK *i* PS **PS 00 46 02.4 +5.5**
MNK pmax pmax
comp=N,20nm,0.9s
MNK pmax pmax
comp=Z,9.0nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=Z,827nm,19.0s
MNK MLR MLR
comp=N,677nm,24.0s
MNK Minsk 94.50 35 *i* P P 00 33 19.0 -8.0
comp=E,3.0nm,0.9s
MNK *i* P P 00 33 19.0 -8.0
comp=N,20nm,0.9s
MNK *i* P P 00 33 19.0 -8.0
comp=Z,9.0nm,0.8s,baz=282
MNK *i* pP **PcP 00 33 31.8 +4.5**
MNK *i* sP pP 00 33 37.2 -3.0
MNK *i* PP **PP 00 37 10.1 -4.6**
MNK *i* SKS 00 43 03.8
MNK *i* S **SKSac 00 43 49.5 -10**
MNK *i* sS **SKKSac 00 44 13.4 -7.2**
MNK *i* PS **PS 00 46 02.4 +5.5**
MNK *i* SS SS 00 50 35.0 -24
MNK *i* LQ LQ 01 01 30.4
MNK *i* LR LR 01 06 20.7
MNK *i* LRM MLR 01 13 30.8
comp=E,144nm,20.8s
MNK *i* LRM MLR 01 13 43.5
comp=Z,827nm,19.0s
MNK *i* LRM MLR 01 14 05.2
comp=N,677nm,23.5s
MLR Muntele Rosu 95.00 44 LR LR 01 14 17.3
comp=N,370nm,19.8s,baz=260,slow=34
MLR Muntele Rosu 95.00 44 P **P 00 33 29.6 0.0**
MLR IAmb IAmb 00 33 43.3
comp=Z,18nm,1.2s
MLR Muntele Rosu 95.00 44 P **P 00 33 29.6 0.0**
MLR pmax pmax
comp=Z,18nm,1.2s
IDI Anoyia 95.81 54 LR LR 01 15 34.3
comp=Z,259nm,21.4s,baz=262,slow=35
IDI Anoyia 95.81 54 IAMs_20 IAMs_20 01 21 36.5
comp=Z,444nm,19.0s
SANT Santorini 96.11 53 IAMs_20 IAMs_20 01 13 34.3
comp=Z,660nm,22.0s
AKASG Malin Array Be 96.13 38 P **P 00 33 33.0 -1.4**
comp=Z,0.2nm,0.4s,baz=189,slow=17,SNR=4.3
AKASG LR LR 01 15 28.5
comp=Z,464nm,19.6s,baz=280,slow=35
comp=Z,0.2nm,0.4s
AKASG Malin Array Be 96.13 38 *c*e*P **P 00 33 34.5 +0.1**
AKBB Malin Array Si 96.13 38⇑ *e*P **P 00 33 33.2 -1.2**
SUR Sutherland 96.39 122 LR LR 01 13 35.5
comp=Z,1μm,21.4s,baz=260,slow=33
AFI Afiamalu 97.74 256 LR LR 01 08 15.2
comp=Z,438nm,21.6s,baz=46,slow=30
KLMR Klimovskoe 98.56 27 *e*P **P 00 33 43.2 -1.9**
KLMR *e* 00 37 47.8
KLMR pmax pmax
comp=Z,37nm,1.4s
KLMR Klimovskoe 98.56 27 *e*P **P 00 33 43.3 -1.9**
KLMR AMP 00 33 59.0
comp=Z,37nm,1.4s
KLMR *e*PP **PP 00 37 47.8 +2.1**
SBA Scott Base 99.12 191 P **Pdif 00 33 47.8 +0.4**
SBA IAmb IAmb 00 34 46.9
comp=Z,27nm,1.8s
SBA Scott Base 99.12 191 P **Pdif 00 33 47.8 +0.4**
SBA pmax pmax
comp=Z,27nm,1.8s
OBN Obninsk 99.17 33 LR LR 01 16 11.4
comp=Z,396nm,21.4s,baz=298,slow=34
ISP Isparta 99.83 51 IAMs_20 IAMs_20 01 15 08.3
comp=Z,529nm,22.0s
VNDA Vanda 100.20 191 P **Pdif 00 33 53.1 +0.9**
comp=Z,0.8nm,0.8s,baz=162,slow=3.2,SNR=5.6
VNDA Vanda 100.20 191 Pdif **Pdif 00 33 54.3 +2.1**
VNDA Vanda 100.20 191 *i* P **Pdif 00 33 54.3 +2.1**
PRGR Permogore 100.88 25 *e*P **Pdif 00 33 50.2 -5.3**
PRGR pmax pmax
comp=Z,9.0nm,1.5s
ANTO Ankara 101.10 48 IAMs_20 IAMs_20 01 22 28.1
comp=Z,473nm,20.0s
BRTR Keskin Array B 101.77 48 PKKPbc PKKPbc 00 50 06.3 -0.9
comp=Z,0.6nm,0.6s,baz=145,slow=8.8,SNR=3.8
CSS Mathiatis 102.67 53 IAMs_20 IAMs_20 01 19 30.9
comp=Z,453nm,22.0s
TIXI Tiksi 103.56 353 IAMs_20 IAMs_20 01 21 54.6
comp=Z,811nm,21.0s
GHAJ Ghor Haditha 105.35 56 IAMs_20 IAMs_20 01 23 23.0
comp=Z,503nm,20.0s
BELG Belogornoye 106.27 33 PKKPbc PKKPbc 00 49 51.4 -2.6
comp=Z,15nm,1.0s,baz=225,slow=6.2,SNR=3.7
NRIK Noril'sk 106.41 6 PKKP **PKKPdf 00 50 03.0 -2.2**
comp=Z,2.0nm,0.7s,baz=99,slow=13,SNR=6.4
KIV Kislovodsk 106.87 42 IAMs_20 IAMs_20 01 19 57.5
comp=Z,532nm,22.0s
ARU Arti 109.32 25 IAMs_20 IAMs_20 01 20 48.4
comp=Z,834nm,22.0s
LODK Lodwar 109.70 85 IAMs_20 IAMs_20 01 24 39.0
comp=Z,749nm,21.0s
YAK Yakutsk 112.16 348 IAMs_20 IAMs_20 01 30 48.1
comp=Z,418nm,20.0s
RAYN Ar Rayn 115.89 62 IAMs_20 IAMs_20 01 28 55.7
comp=Z,642nm,20.0s
ATD Arta Tunnel 116.09 76 IAMs_20 IAMs_20 01 30 41.8
comp=Z,684nm,20.0s
BRVK Borovoye 116.51 23 IAMs_20 IAMs_20 01 25 36.4
comp=Z,611nm,21.0s
DZM Mont Dzumac 118.02 247 *e*LR LR 01 14 58.2
comp=Z,576nm,24.0s
DZM Mont Dzumac 118.02 247 PKPdf PKPdf 00 38 45.7 -8.7
GEYT Alibeck 119.99 42 PKP **PKPdf 00 38 55.7 -2.0**
comp=Z,1.3nm,0.5s,baz=237,slow=5.1,SNR=4.5
GEYT PKKPbc **PKKPbc 00 49 07.2 -0.2**
comp=Z,1.8nm,0.8s,baz=119,slow=1.9,SNR=5.3
KOUNC Koumac, New Ca 120.23 248 IAMs_20 IAMs_20 01 19 44.2
comp=Z,544nm,20.0s
ZALV Zalesovo Beam 120.35 14 PKP **PKPdf 00 38 56.6 -1.2**
comp=Z,5.3nm,0.8s,baz=304,slow=2.7,SNR=31
ZALV PKKPbc **PKKPbc 00 49 02.5 -4.1**
comp=Z,1.1nm,0.6s,baz=112,slow=1.6,SNR=5.4
KURK Kurchatov 121.43 20 IAMs_20 IAMs_20 01 29 36.6
comp=Z,434nm,21.0s
KURK Kurchatov 121.43 20⇓ *i*PKIKP **PKPdf 00 38 59.3 -0.7**
KURK pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 126.04 19 PKP **PKPdf 00 39 06.9 -2.1**
comp=Z,4.4nm,0.9s,baz=315,slow=2.5,SNR=16
MKAR Makanchi Array 126.04 19*c* *i*PKIKP **PKPdf 00 39 07.5 -1.5**
MKAR pmax pmax
comp=Z,4.0nm,0.9s
HIA Hailar 126.10 348 IAMs_20 IAMs_20 01 35 38.5
comp=Z,589nm,22.0s
AAK Ala-Archa 126.35 28 PKPdf **PKPdf 00 39 09.8 -0.1**
AAK Ala-Archa 126.35 28 PKIKP **PKPdf 00 39 09.8 -0.1**
USRK Ussuriysk Ar. 126.95 336 PKP **PKPdf 00 39 08.7 -2.1**
comp=Z,4.8nm,0.8s,baz=270,slow=2.7,SNR=6.2
NRN Naryn 127.99 28 pPKPdf pPKPdf 00 39 26.6 -0.5
ULN Ulaanbaatar 128.94 359 PKPdf **PKPdf 00 39 14.5 -0.2**
ULN pPKPdf **pPKPdf 00 39 27.1 -1.4**
ULN Ulaanbaatar 128.94 359 IAMs_20 IAMs_20 01 37 47.9
comp=Z,638nm,22.0s
ULN Ulaanbaatar 128.94 359⇓ *i*PKIKP **PKPdf 00 39 14.3 -0.4**
ULN pmax pmax
comp=Z,20nm,2.5s
SONM Songino Array 128.99 359 PKP **PKPdf 00 39 13.3 -1.5**
comp=Z,4.5nm,0.9s,baz=308,slow=0.9,SNR=26
SONM Songino Array 128.99 359 pPKPdf pPKPdf 00 39 26.6 -2.0
KSH Kashi 129.46 29 PKP **PKPdf 00 39 16.0 +0.1**
KSH LR LR
comp=Z,740nm,22.3s
KSH LR LR
comp=Z,550nm,20.6s
KSH LR LR
comp=Z,1μm,22.7s
MJAR Matsushiro Arr 129.85 325 PKP **PKPdf 00 39 14.7 -1.8**
comp=Z,1.0nm,0.3s,baz=331,slow=0.9,SNR=6.3
WMQ Urumqi 130.39 17 *e*PKP **PKPdf 00 39 17.3 -0.2**
WMQ PP **PP 00 41 35.0 +4.6**
WMQ AMB AMB
comp=Z,80nm,7.5s
WMQ LR LR
comp=Z,410nm,21.1s
WMQ LR LR
comp=Z,540nm,21.1s
WMQ LR LR
comp=Z,570nm,23.3s
XLT XiLinHaoTe 131.96 350⇑ *i*PKP **PKPdf 00 39 20.8 +0.4**
XLT SS SS 00 59 14.0 +0.9
XLT LR LR
comp=Z,49nm,23.7s
XLT LR LR
comp=Z,340nm,21.8s
XLT LR LR
comp=Z,560nm,24.5s
NIL Nilore 132.29 37 IAMs_20 IAMs_20 01 38 52.1
comp=Z,533nm,21.0s
KSRS Korea Array 134.28 335 PKP **PKPdf 00 39 22.9 -2.0**
comp=Z,3.6nm,0.8s,baz=53,slow=0.7,SNR=9.4
KSAR Wonju Array Be 134.31 335 pPKPdf pPKPdf 00 39 38.1 -0.7
HHC Hu-ho-hao-te 135.62 353 *e*PKP **PKPdf 00 39 28.0 +0.6**
HHC LR LR
comp=Z,590nm,20.8s
HHC LR LR
comp=Z,780nm,22.4s
STKA Stephens Creek 135.72 226 PKP **PKPdf 00 39 26.9 -0.9**
comp=Z,7.9nm,0.8s,baz=109,slow=3.4,SNR=10.0
STKA Stephens Creek 135.72 226 **PKPdf 00 39 28.1 +0.3**
STKA pPKPdf **pPKPdf 00 39 41.3 -0.1**
STKA Stephens Creek 135.72 226 PKIKP **PKPdf 00 39 28.1 +0.3**
GTA Gaotai 137.11 6 *e*PKP **PKPdf 00 39 30.5 +0.2**
GTA PP **PP 00 42 14.5 +1.4**
GTA LR LR
comp=Z,240nm,24.4s
GTA LR LR
comp=Z,250nm,21.8s
GTA LR LR
comp=Z,450nm,23.6s
HNS HongShan 138.51 349⇑PKP **PKiKP 00 39 33.8 -1.0**
HNS *e*PP **PP 00 42 28.5 +6.9**
HNS LR LR
comp=Z,330nm,19.8s
HNS LR LR
comp=Z,450nm,20.8s
HNS LR LR
comp=Z,530nm,21.2s
GOMU GeErMu 139.41 13 PKP **PKPdf 00 39 35.5 +0.6**
LZH Lanzhou 140.71 2 PKP **PKPdf 00 39 36.5 -0.5**
LZH sPKP 00 39 55.0
LZH AMB AMB
comp=Z,270nm,4.8s
LZH LR LR
comp=Z,390nm,17.2s
LZH LR LR
comp=Z,290nm,18.6s
LZH LR LR
comp=Z,650nm,17.2s
XAN Xi'an 142.63 355 PKP **PKPdf 00 39 40.0 -0.3**
XAN pPKP pPKPdf 00 39 53.3 -0.9
XAN LR LR
comp=Z,510nm,25.0s
XAN LR LR
comp=Z,410nm,25.0s
XAN LR LR
comp=Z,660nm,24.3s
LSA Lhasa 144.39 22 IAMs_20 IAMs_20 01 42 39.1
comp=Z,458nm,22.0s
LSA Lhasa 144.39 22 PKP PKPbc 00 39 42.5 0.0
FORT Forrest 145.34 216 PKPdf **PKPab 00 39 45.0 -0.1**
ASAR Alice Springs 145.85 231 PKPbc **PKPdf 00 39 46.2 0.0**
comp=Z,57nm,0.7s,baz=123,slow=3.7,SNR=290
HYBB Hyderabad (bro 146.42 51 *e*PKPab **PKPab 00 39 49.0 -0.5**
HYBB *e*PKiKP **PKiKP 00 39 51.7 +0.1**
HYBB *e*PP **PP 00 43 11.3 +0.2**
HYBB *e*SKSdf **SKSdf 00 46 53.3 -0.3**
WRAB Tennant Creek 147.30 238 **PKPbc 00 39 50.4 -0.7**
WRAB Tennant Creek 147.30 238*c*e*PKIKP **PKPdf 00 39 48.3 -0.4**
WRA Warramunga Arr 147.30 238 PKPbc **PKPbc 00 39 50.7 -0.4**
comp=Z,79nm,0.9s,baz=113,slow=2.3,SNR=113
WB0 Warramunga Arr 147.34 238 PKPbc **PKPbc 00 39 51.2 0.0**
NWAO Narrogin (SRO) 148.58 199 **PKPbc 00 39 54.1 0.0**
NWAO Narrogin (SRO) 148.58 199 PKP2 **PKPbc 00 39 54.1 0.0**
PZH PanZhiHua 150.08 7 PKPbc **PKPdf 00 39 52.3 -0.9**
PZH sPKP 00 40 09.5
PZH LR LR
comp=Z,1μm,26.7s
PZH LR LR
comp=Z,840nm,25.3s
PZH LR LR
comp=Z,420nm,21.1s
GYA Guiyang 150.31 358⇑PKPbc **PKPbc 00 39 57.5 -1.3**
GYA PKPab **PKPab 00 40 04.3 -0.6**
GYA sPKP 00 40 10.8
GYA AMB AMB
comp=Z,340nm,8.1s
GYA LR LR
comp=Z,560nm,26.6s
KMI Kunming 151.55 5⇑PKPbc **PKPdf 00 39 55.8 +0.1**
KMI pPKP pPKPdf 00 40 08.5 -0.8
KMI sPKP 00 40 14.5
KMI LR LR
comp=Z,320nm,27.3s
KMI LR LR
comp=Z,300nm,22.5s
KMI LR LR
comp=Z,610nm,24.9s
MTN Manton Dam 152.85 248 **PKPbc 00 40 04.4 -0.3**
MTN **sPKPdf 00 40 16.1 +0.1**
KNRA Kununurra 153.94 241 PKPbc **PKPbc 00 40 06.5 -0.5**
CHTO Chiang Mai 157.05 16 PKPdf **PKPdf 00 40 03.1 0.0**
CHTO PKPab **PKPab 00 40 32.7 -0.7**
CHTO Chiang Mai 157.05 16 PKIKP **PKPdf 00 40 03.2 0.0**
PSA00 Pilbara Seismi 157.09 217 PKPdf **PKPdf 00 40 02.0 -1.2**
PSA00 pPKPab **pPKPab 00 40 47.4 +0.6**
PSA00 Pilbara Seismi 157.09 217 PKPdf **PKPdf 00 40 02.7 -0.5**
QIZ Qiongzhong 157.30 349 PKP **PKPdf 00 40 04.3 +0.8**
QIZ PP **PP 00 44 10.3 -1.3**
QIZ SS SS 01 03 59.0 -4.1
QIZ LR LR
comp=Z,510nm,25.5s
QIZ LR LR
comp=Z,400nm,24.7s
QIZ LR LR
comp=Z,720nm,25.5s
CM31 Chiang Mai Arr 157.39 16 pPKPab pPKPab 00 40 48.1 -0.1
CMAR Chiang Mai Arr 157.39 16 PKP **PKPdf 00 40 03.1 -0.5**
comp=Z,0.8nm,0.3s,baz=288,slow=1.8,SNR=12
CMAR PKPab **PKPab 00 40 33.9 -0.9**
comp=Z,26nm,0.8s,baz=328,slow=5.4,SNR=49
CMAR Chiang Mai Arr 157.39 16 PKPab **PKPab 00 40 34.7 -0.1**
CMAR pPKPab **pPKPab 00 40 47.8 -0.4**

*PRU **31** 00:28:07.6±0.0, 42.°79N×14.°04E, h0km*
ROM 31 00:28:07.7±0.1, 42.°881N±0.°003×13.°081E±0.°004, h8km, ML2.7/37, 14C-17D, Error ellipse: s-maj=0.3km s-min=0.2km az=291.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**282**	⇑P	Pg	00 28 09.6	+0.1
T1216				S	Sg	00 28 10.7	0.0
T1216				AML	AML		
	comp=E,41600μm,1.1s						
T1216				AML	AML		
	comp=E,41550μm,1.1s						
T1216				AML	AML		
	comp=N,45050μm,0.8s						
T1216				AML	AML		
	comp=E,41600μm,1.1s						
T1245	**Castelsantange**	**0.08**	**107**	P	Pg	00 28 10.1	+0.1
T1245				S	Sg	00 28 11.7	0.0
FEMA	**Monte Fema**	**0.08**	**344**	⇓P	Pg	00 28 10.2	+0.1
FEMA				S	Sg	00 28 11.8	+0.1
FEMA				AML	AML		
	comp=E,25650μm,0.2s						
FEMA				AML	AML		
	comp=N,17000μm,1.1s						
FEMA				AML	AML		
	comp=E,25600μm,0.2s						
FEMA				AML	AML		
	comp=N,17050μm,1.1s						
FEMA				AML	AML		
	comp=E,25650μm,0.2s						
FEMA				AML	AML		
	comp=N,17000μm,1.1s						
T1215	**Vallo di Nera,**	**0.17**	**243**	P	Pg	00 28 12.2	+0.9
T1215				S	Sg	00 28 15.4	+1.5
T1215				AML	AML		
	comp=E,3205μm,0.4s						
T1215				AML	AML		
	comp=N,3105μm,0.4s						
T1215				AML	AML		
	comp=E,3300μm,0.4s						
T1215				AML	AML		
	comp=N,2960μm,0.4s						
T1215				AML	AML		
	comp=N,2965μm,0.4s						
T1215				AML	AML		
	comp=E,3210μm,0.4s						
T1215				AML	AML		
	comp=E,3295μm,0.4s						
MMO1	**Montemonaco**	**0.18**	**84**	P	Pg	00 28 12.0	+0.5
MMO1				S	Sg	00 28 15.2	+1.1
T1217	**Poggiodomo (PG**	**0.20**	**213**	P	Pg	00 28 12.6	+0.8
T1217				S	Sg	00 28 16.4	+1.7
AM05	**Amandola Campo**	**0.22**	**64**	P	Pg	00 28 12.9	+0.7
AM05				S	Sg	00 28 16.7	+1.4
T1241	**Roccafluvione,**	**0.26**	**95**	P	Pb	00 28 14.3	-0.3
T1241				S	Sb	00 28 18.2	-1.0
T1241				AML	AML		
T1241				AML	AML		
	comp=E,3985μm,1.6s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,3340μm,0.3s						
T1241				AML	AML		
	comp=E,3640μm,1.6s						
T1241				AML	AML		
GUMA	**Gualdo di Mace**	**0.26**	**46**	P	Pb	00 28 13.8	-0.9
GUMA				S	Sb	00 28 18.7	-0.7
GUMA				AML	AML		
	comp=E,10370μm,0.5s						
GUMA				AML	AML		
	comp=E,12450μm,0.3s						
GUMA				AML	AML		
	comp=N,15800μm,1.2s						
GUMA				AML	AML		
	comp=N,14850μm,1.2s						
T1204	**Amatrice, Fraz**	**0.27**	**140**	AML	AML		
	comp=N,4100μm,1.2s						
T1204				AML	AML		
	comp=E,6445μm,1.2s						
LNSS	**Leonessa**	**0.28**	**186**	P	Pg	00 28 14.1	+0.8
LNSS				S	Sb	00 28 18.9	-1.0
LNSS				AML	AML		
	comp=E,2045μm,0.8s						
LNSS				AML	AML		
	comp=N,3345μm,0.3s						
SEF1	**Sefro**	**0.28**	**340**	P	Pg	00 28 13.9	+0.5
SEF1				S	Sb	00 28 19.1	-0.8
SEF1				AML	AML		
	comp=N,4245μm,0.2s						
SEF1				AML	AML		
	comp=E,3750μm,0.6s						
ASSB	**Assisi San Ben**	**0.35**	**298**	⇓P	Pg	00 28 15.1	+0.5
ASSB				S	Sb	00 28 21.0	-0.9
ASSB				AML	AML		
	comp=E,1590μm,1.3s						
ASSB				AML	AML		
	comp=N,1640μm,0.2s						
ARRO	**Arrone**	**0.38**	**218**	P	Pg	00 28 15.8	+0.6
ARRO				AML	AML		
	comp=E,870μm,1.2s						
ARRO				AML	AML		
	comp=N,662μm,0.9s						
RM33	**Pellescritta (**	**0.38**	**165**	⇑P	Pg	00 28 15.8	+0.5
RM33				S	Sb	00 28 22.1	-0.8
RM33				AML	AML		
	comp=E,1366μm,0.8s						
RM33				AML	AML		
	comp=E,1292μm,0.8s						
RM33				AML	AML		
	comp=N,1180μm,0.8s						
RM33				AML	AML		
	comp=E,1296μm,0.8s						
RM33				AML	AML		
	comp=N,1185μm,0.8s						
RM33				AML	AML		
	comp=N,1190μm,0.8s						
RM33				AML	AML		
	comp=E,1366μm,0.8s						
T1211	**Morro Reatino**	**0.39**	**206**	S	Sb	00 28 23.0	+0.1
SNTG	**Esanatoglia**	**0.39**	**345**	⇓P	Pg	00 28 15.6	+0.3
SNTG				S	Sb	00 28 22.7	-0.3
SNTG				AML	AML		
	comp=E,904μm,0.6s						
SNTG				AML	AML		
	comp=E,854μm,0.6s						
SNTG				AML	AML		
	comp=E,904μm,0.5s						
SNTG				AML	AML		
	comp=N,850μm,0.2s						
SNTG				AML	AML		
	comp=N,938μm,0.2s						
CAMP	**Campotosto**	**0.42**	**145**	P	Pg	00 28 16.3	+0.3
CAMP				S	Sb	00 28 23.0	-1.0
CAMP				AML	AML		
	comp=N,1030μm,0.5s						
CAMP				AML	AML		
	comp=E,1035μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.44**	**313**	⇑P	Pg	00 28 16.8	+0.4
ATCC				S	Sb	00 28 24.7	+0.1
ATCC				AML	AML		
	comp=N,1315μm,0.9s						
ATCC				AML	AML		
	comp=E,1445μm,0.7s						
ATCC				AML	AML		
	comp=E,1450μm,0.7s						
ATCC				AML	AML		
	comp=N,1320μm,0.9s						
OFFI	**Offida**	**0.45**	**83**	⇓P	Pb	00 28 17.9	+0.1
OFFI				AML	AML		
	comp=E,1860μm,0.7s						
OFFI				AML	AML		
	comp=N,1830μm,0.8s						
EL6	**Elcito**	**0.45**	**2**	P	Pg	00 28 16.9	+0.4
EL6				S	Sb	00 28 24.4	-0.4
EL6				AML	AML		
	comp=E,1944μm,0.2s						
EL6				AML	AML		
	comp=E,1945μm,0.2s						
EL6				AML	AML		
	comp=N,3290μm,0.3s						
CESX	**Cesi**	**0.46**	**234**	⇑P	Pg	00 28 17.2	+0.6
CESX				S	Sb	00 28 24.5	-0.4
CESX				AML	AML		
	comp=E,879μm,0.4s						
CESX				AML	AML		
	comp=N,1024μm,0.6s						
TERO	**Teramo**	**0.46**	**124**	P	Pg	00 28 17.1	+0.4
TERO				S	Sb	00 28 24.3	-0.8
TERO				AML	AML		
	comp=E,1062μm,0.3s						
TERO				AML	AML		
	comp=N,1280μm,0.5s						
TERO				AML	AML		
	comp=E,1130μm,0.3s						
TERO				AML	AML		
	comp=E,1060μm,0.3s						
TERO				AML	AML		
	comp=N,1277μm,0.5s						
TERO				AML	AML		
	comp=N,1340μm,0.5s						
TERO				AML	AML		
	comp=E,1058μm,0.3s						
TERO				AML	AML		
	comp=N,1275μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.47**	**160**	P	Pg	00 28 17.2	+0.4
T1247				S	Sb	00 28 25.2	-0.1
T1247				AML	AML		
	comp=E,1580μm,0.5s						
T1247				AML	AML		
	comp=N,1157μm,0.9s						
T1247				AML	AML		
	comp=N,1158μm,0.9s						
FOSV	**Fossato di Vic**	**0.48**	**331**	⇓P	Pg	00 28 17.3	+0.4
FOSV				S	Sb	00 28 25.0	-0.5
FOSV				AML	AML		
	comp=N,838μm,1.0s						
FOSV				AML	AML		
	comp=E,603μm,0.6s						
FOSV				AML	AML		
	comp=N,11970μm,0.6s						
MURB	**Monte Urbino**	**0.56**	**313**	⇓P	Pg	00 28 19.0	+0.5
MURB				AML	AML		
	comp=N,2015μm,0.2s						
MURB				AML	AML		
	comp=E,2115μm,0.3s						
MURB				AML	AML		
	comp=N,2045μm,0.3s						
MURB				AML	AML		
	comp=N,2020μm,0.2s						
MURB				AML	AML		
	comp=N,2020μm,0.2s						
MURB				AML	AML		
	comp=E,1900μm,0.3s						
AQU	**L'Aquila**	**0.58**	**156**	P	Pg	00 28 19.1	+0.3
AQU				AML	AML		
	comp=N,644μm,1.3s						
AQU				AML	AML		
	comp=N,640μm,1.3s						
AQU				AML	AML		
	comp=E,816μm,1.3s						
AQU				AML	AML		
	comp=E,806μm,1.3s						
AQU				AML	AML		
	comp=N,640μm,1.3s						
ATFO	**Monte Foce - G**	**0.61**	**323**	P	Pg	00 28 19.9	+0.3
ATFO				AML	AML		
	comp=E,490μm,0.8s						
ATFO				AML	AML		
	comp=N,328μm,0.3s						
ATFO				AML	AML		
	comp=E,491μm,0.8s						
FIAM	**Fiamignano**	**0.61**	**178**	⇑P	Pg	00 28 19.9	+0.3
FIAM				S	Sb	00 28 29.4	-0.1
FIAM				AML	AML		
	comp=E,426μm,0.9s						
FIAM				AML	AML		
	comp=N,384μm,1.0s						
ATTE	**AVT- Monte Tez**	**0.62**	**301**	⇓P	Pg	00 28 19.9	+0.2
ATTE				AML	AML		
	comp=N,313μm,1.1s						
ATTE				AML	AML		
	comp=E,398μm,0.3s						
ARVD	**Arcevia**	**0.62**	**351**	⇓P	Pg	00 28 20.0	+0.2
ARVD				S	Sb	00 28 31.0	+1.2
ARVD				AML	AML		
	comp=N,365μm,0.2s						
ARVD				AML	AML		
	comp=E,616μm,0.2s						
PP3	**Marolino**	**0.63**	**38**	P	Pb	00 28 21.1	+0.1
PP3				AML	AML		
	comp=E,1280μm,1.5s						
PP3				AML	AML		
	comp=N,1215μm,0.7s						
PP3				AML	AML		
	comp=N,1235μm,0.7s						
PP3				AML	AML		
	comp=E,1265μm,0.3s						
FRON	**Frontone**	**0.69**	**338**	⇓P	Pg	00 28 21.0	0.0
FRON				AML	AML		
	comp=E,322μm,0.5s						
FRON				AML	AML		
	comp=N,459μm,0.2s						
ATVO	**AVT- Monte Val**	**0.70**	**316**	⇓P	Pg	00 28 21.1	-0.1
ATVO				AML	AML		
	comp=E,268μm,0.4s						
ATVO				AML	AML		
	comp=N,315μm,0.4s						
ATVO				AML	AML		
	comp=N,314μm,0.4s						
ATVO				AML	AML		
	comp=E,269μm,0.4s						
MGAB	**Montegabbione**	**0.71**	**273**	⇓P	Pg	00 28 21.9	+0.5
MGAB				AML	AML		
	comp=N,866μm,0.5s						
MGAB				AML	AML		
	comp=N,863μm,0.5s						
MGAB				AML	AML		
	comp=N,744μm,0.5s						
MGAB				AML	AML		
	comp=E,923μm,0.4s						
MGAB				AML	AML		
	comp=E,718μm,0.4s						
FAGN	**Fagnano**	**0.72**	**149**	⇓P	Pg	00 28 21.5	-0.1
FAGN				AML	AML		
	comp=E,818μm,0.4s						
FAGN				AML	AML		
	comp=N,588μm,0.4s						
FAGN				AML	AML		
	comp=N,588μm,0.4s						
VCEL	**Villa Celiera**	**0.74**	**131**	⇑P	Pg	00 28 22.2	+0.2
VCEL				S	Sn	00 28 36.0	-0.1
VCEL				AML	AML		
	comp=E,704μm,0.4s						
VCEL				AML	AML		
	comp=N,628μm,1.1s						
VCEL				AML	AML		
	comp=E,704μm,0.4s						
VCEL				AML	AML		
	comp=N,628μm,1.1s						
ATMI	**Monte Miggiano**	**0.75**	**308**	⇑P	Pb	00 28 23.2	+0.2
ATMI				AML	AML		
	comp=N,928μm,1.3s						
ATMI				AML	AML		
	comp=E,859μm,0.7s						
ATMI				AML	AML		
	comp=N,928μm,1.3s						
ATPI	**Pietralunga -**	**0.76**	**319**	⇑P	Pg	00 28 22.5	+0.2
ATPI				AML	AML		
	comp=E,338μm,0.6s						
ATPI				AML	AML		
	comp=N,208μm,0.6s						
ATPI				AML	AML		
	comp=E,339μm,0.6s						
PIEI	**Pieia**	**0.77**	**329**	⇓P	Pg	00 28 22.5	0.0
PIEI				AML	AML		
	comp=E,232μm,0.4s						
PIEI				AML	AML		
	comp=N,218μm,0.8s						
PIEI				AML	AML		
	comp=N,218μm,0.8s						
SRES	**S.Oreste - Sor**	**0.77**	**213**	⇓P	Pg	00 28 21.8	-0.7
SRES				AML	AML		
	comp=N,230μm,0.4s						
SRES				AML	AML		
	comp=E,261μm,1.4s						
MPAG	**Monte Paganucc**	**0.78**	**343**	⇓P	Pg	00 28 22.9	+0.1
MPAG				AML	AML		
	comp=E,329μm,0.3s						
MPAG				AML	AML		
	comp=N,242μm,1.2s						
MPAG				AML	AML		
	comp=N,242μm,1.2s						
MPAG				AML	AML		
	comp=E,328μm,0.3s						
APEC	**Apecchio**	**0.83**	**325**	⇑P	Pg	00 28 23.6	-0.1
T0110	**Collepietro**	**0.83**	**142**	⇓P	Pg	00 28 23.7	0.0
T0110				AML	AML		
	comp=E,564μm,0.4s						
T0110				AML	AML		
	comp=N,662μm,0.5s						
T0110				AML	AML		
	comp=E,564μm,0.4s						
FSSB	**Fossombrone**	**0.84**	**345**	⇑P	Pg	00 28 24.0	+0.1
FSSB				AML	AML		
	comp=E,932μm,0.4s						
FSSB				AML	AML		
	comp=N,1410μm,0.4s						
SACS	**San Casciano d**	**0.86**	**268**	⇑P	Pb	00 28 24.9	0.0
SACS				AML	AML		
	comp=E,182μm,0.6s						
SACS				AML	AML		
	comp=N,327μm,0.8s						
BADI	**Badiali**	**0.88**	**316**	⇑P	Pb	00 28 24.9	-0.3
PE3	**Peglio**	**0.92**	**333**	⇑P	Pg	00 28 24.6	-0.8
CPGN	**Carpegna, Ital**	**1.07**	**329**	⇓P	Pn	00 28 29.0	-0.2
RUFI	**Rufina**	**1.49**	**310**	⇑P	Pb	00 28 35.8	+0.1
PTRJ	**Pietraroja**	**1.86**	**144**	P	Pg	00 28 44.0	+0.6
MTCR	**Monte La Croce**	**1.90**	**308**	P	Pn	00 28 41.3	+0.8
PAOL	**Paolisi**	**2.15**	**149**	S	Sg	00 29 16.0	-0.9
MYKA	**Terra Mystica**	**3.77**	**6**	*e*Pn	Pn	00 29 07.5	+1.4
	comp=N,1.9nm,0.3s						
OBKA	**Obir**	**3.78**	**16**	*e*Pn	Pn	00 29 07.6	+1.4
	comp=N,0.5nm,0.3s						
ABTA	**Abfaltersbach**	**3.89**	**354**	*e*Pn	Pn	00 29 09.3	+1.5
	comp=N,5.1nm,0.5s,SNR=7.6						
SOKA	**Soboth**	**4.04**	**19**	*e*Pn	Pn	00 29 12.2	+2.3
	comp=N,0.2nm,0.2s						
WTTA	**Wattenberg**	**4.50**	**347**	*e*Pn	Pn	00 29 19.3	+3.1
	comp=N,0.8nm,0.3s						
SQTA	**Sankt Quirin**	**4.54**	**344**	*e*Pn	Pn	00 29 19.1	+2.3
	comp=N,1.3nm,0.2s						
MOTA	**Moosalm**	**4.68**	**343**	*e*Pn	Pn	00 29 20.3	+1.6
	comp=N,1.3nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.83**	**4**	*e*Pn	Pn	00 29 22.1	+1.5
	comp=N,3.4nm,0.3s,SNR=9.6						
RETA	**Reutte**	**4.89**	**341**	*e*Pn	Pn	00 29 24.1	+2.6
	comp=N,0.3nm,0.2s						
MOA	**Molln**	**5.04**	**9**	*e*Pn	Pn	00 29 24.9	+1.4
	comp=N,0.4nm,0.2s						
CONA	**Conrad Observa**	**5.41**	**20**	*e*Pn	Pn	00 29 29.6	+0.9
	comp=N,0.3nm,0.2s						
CKRC	**Cesky Krumlov**	**6.00**	**8**	*e*PN	Pn	00 29 37.2	+0.5
CKRC				*e*SN	Sn	00 30 44.3	-1.3
KHC	**Kasperske Hory**	**6.26**	**3**	*e*PN	Pn	00 29 40.5	+0.2
KHC				*e*SN	Sn	00 30 51.7	-0.3

*STR **31** 00:30:28.8±2.2, 43.°N±25.°×1.°3E±1.°4, h0km, MLv3.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=165.8, preliminary*
*PRU **31** 00:30:28.8±0.0, 42.°72N×12.°98E, h0km*
*ROM **31** 00:30:30.9±0.1, 42.°746N±0.°003×13.°128E±0.°005, h10km, ML3.4/112, Error ellipse: s-maj=0.3km s-min=0.2km az=280.0*
*BEO **31** 00:30:31.3±0.6, 42.°74N×13.°11E, h0km, ML3.6/14*
ISC 31 00:30:31.8±0.8, 42.°74N±0.°01×13.°11E±0.°01, h14km±4km, n224, σ1§23/275, 83C-48D, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.13**	**27**	⇓P	**Pg**	**00 30 34.4**	**-1.0**
T1245				S	**Sg**	**00 30 36.7**	**-1.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1217	**Poggiodomo (PG**	**0.13**	**257**	P	**Pg**	**00 30 34.8**	**-0.6**
T1217				S	**Sg**	**00 30 37.6**	**-0.2**
T1217				AML	AML		
	comp=E,26800μm,1.5s						
T1217				AML	AML		
	comp=N,32500μm,0.7s						
T1217				AML	AML		
	comp=E,25650μm,1.5s						
T1217				AML	AML		
	comp=N,32300μm,0.7s						
T1217				AML	AML		
	comp=N,32500μm,0.7s						
T1217				AML	AML		
	comp=E,25600μm,1.5s						
T1217				AML	AML		
	comp=E,25800μm,1.5s						
T1217				AML	AML		
	comp=N,32350μm,0.7s						
T1217				AML	AML		
	comp=E,26750μm,1.5s						
T1217				AML	AML		
	comp=E,25600μm,1.5s						
T1217				AML	AML		
	comp=N,32550μm,0.7s						
T1217				AML	AML		
	comp=N,32300μm,0.7s						
LNSS	**Leonessa**	**0.15**	**200**	P	**Pg**	**00 30 35.2**	**-0.5**
LNSS				S	**Sg**	**00 30 38.2**	**0.0**
T1215	**Vallo di Nera,**	**0.19**	**289**	⇓P	**Pg**	**00 30 35.6**	**-0.6**
T1215				S	**Sg**	**00 30 39.0**	**-0.1**
T1215				AML	AML		
	comp=E,13650μm,0.9s						
T1215				AML	AML		
	comp=N,18450μm,0.7s						
T1215				AML	AML		
	comp=E,12700μm,0.9s						
T1215				AML	AML		
	comp=N,18400μm,0.7s						
T1215				AML	AML		
	comp=E,13600μm,0.9s						
SMA1	**SAN MARTINO**	**0.20**	**124**	⇑P	**Pg**	**00 30 35.9**	**-0.5**
SMA1				S	**Sg**	**00 30 39.2**	**-0.3**
SMA1				AML	AML		
	comp=E,43750μm,0.6s						
SMA1				AML	AML		
	comp=N,45000μm,0.3s						
SMA1				AML	AML		
	comp=N,45050μm,0.3s						
FEMA	**Monte Fema**	**0.22**	**349**	⇓P	**Pg**	**00 30 36.1**	**-0.7**
FEMA				S	**Sg**	**00 30 39.6**	**-0.7**
FEMA				AML	AML		
	comp=E,27250μm,1.4s						
FEMA				AML	AML		
	comp=E,27200μm,1.4s						
FEMA				AML	AML		
	comp=N,23400μm,0.9s						
FEMA				AML	AML		
	comp=E,27200μm,1.3s						
MMO1	**Montemonaco**	**0.23**	**46**	⇑P	**Pg**	**00 30 35.9**	**-0.9**
MMO1				S	**Sg**	**00 30 39.6**	**-0.6**
RM33	**Pellescritta (**	**0.25**	**161**	P	**Pg**	**00 30 36.6**	**-0.6**
RM33				S	**Sg**	**00 30 40.9**	**+0.2**
RM33				AML	AML		
	comp=E,27850μm,0.3s						
RM33				AML	AML		
	comp=E,26700μm,0.3s						
RM33				AML	AML		
	comp=N,27050μm,0.3s						
RM33				AML	AML		
	comp=N,26100μm,0.3s						
T1243	**Rocca Santa Ma**	**0.26**	**100**	⇑P	**Pg**	**00 30 36.4**	**-0.8**
T1243				S	**Sg**	**00 30 40.5**	**-0.6**
T1241	**Roccafluvione,**	**0.26**	**64**	⇑P	**Pg**	**00 30 36.7**	**-0.7**
T1241				S	**Sg**	**00 30 41.0**	**-0.3**
T1241				AML	AML		
	comp=N,21300μm,1.6s						
T1241				AML	AML		
	comp=E,37200μm,0.8s						
T1241				AML	AML		
	comp=N,21250μm,1.6s						
T1211	**Morro Reatino**	**0.28**	**222**	⇑P	**Pg**	**00 30 37.3**	**-0.4**
T1211				S	**Sb**	**00 30 42.6**	**-0.6**
T1211				AML	AML		
	comp=N,51100μm,0.3s						
T1211				AML	AML		
	comp=E,28250μm,0.8s						
T1211				AML	AML		
	comp=N,50800μm,0.3s						
T1211				AML	AML		
	comp=E,28350μm,0.8s						

T1211				AML	AML		
	comp=E,28200µm,0.8s						
T1211				AML	AML		
	comp=N,51050µm,0.3s						
T1211				AML	AML		
	comp=N,50850µm,0.3s						
AM05	**Amandola Campo**	**0.30**	**37**	⇑P	**Pg**	**00 30 37.2**	**-0.8**
AM05				S	**Sg**	**00 30 41.9**	**-0.3**
AM05				AML	AML		
	comp=E,6165µm,1.3s						
AM05				AML	AML		
	comp=E,29200µm,1.3s						
AM05				AML	AML		
	comp=E,6160µm,1.3s						
AM05				AML	AML		
	comp=N,6695µm,0.4s						
AM05				AML	AML		
	comp=N,1810µm,0.6s						
AM05				AML	AML		
	comp=N,1805µm,0.6s						
AM05				AML	AML		
	comp=N,6700µm,0.4s						
ARRO	**Arrone**	**0.30**	**237**	⇑P	**Pg**	**00 30 37.5**	**-0.5**
ARRO				S	**Sb**	**00 30 43.3**	**-0.4**
ARRO				AML	AML		
	comp=E,18850µm,0.2s						
ARRO				AML	AML		
	comp=N,15100µm,1.4s						
T1247	**Pizzolo (AQ)**	**0.33**	**155**	⇑P	**Pg**	**00 30 38.0**	**-0.6**
T1247				S	**Sb**	**00 30 43.5**	**-1.2**
T1247				AML	AML		
	comp=E,21900µm,0.4s						
T1247				AML	AML		
	comp=N,24600µm,0.4s						
GUMA	**Gualdo di Mace**	**0.36**	**27**	⇑P	**Pg**	**00 30 38.6**	**-0.6**
GUMA				S	**Sb**	**00 30 44.7**	**-0.8**
GUMA				AML	AML		
	comp=E,25450µm,0.5s						
GUMA				AML	AML		
	comp=N,51000µm,0.4s						
GUMA				AML	AML		
	comp=E,40900µm,0.6s						
GUMA				AML	AML		
	comp=N,41250µm,0.4s						
GUMA				AML	AML		
	comp=N,51050µm,0.4s						
GUMA				AML	AML		
	comp=E,25500µm,0.5s						
TERO	**Teramo**	**0.39**	**108**	⇓P	**Pg**	**00 30 38.6**	**-0.9**
TERO				S	**Sg**	**00 30 44.4**	**-0.4**
TERO				AML	AML		
	comp=E,14480µm,1.0s						
TERO				AML	AML		
	comp=N,16650µm,0.3s						
TERO				AML	AML		
	comp=N,17900µm,0.3s						
TERO				AML	AML		
	comp=E,14490µm,1.0s						
TERO				AML	AML		
	comp=E,15500µm,1.1s						
TERO				AML	AML		
	comp=E,14465µm,1.0s						
TERO				AML	AML		
	comp=N,16700µm,0.3s						
CESX	**Cesi**	**0.41**	**251**	⇑P	**Pg**	**00 30 39.1**	**-0.9**
CESX				S	**Sb**	**00 30 47.3**	**+0.4**
CESX				AML	AML		
	comp=N,8200µm,0.3s						
CESX				AML	AML		
	comp=E,9275µm,0.5s						
SEF1	**Sefro**	**0.42**	**344**	⇑P	**Pg**	**00 30 39.5**	**-0.7**
SEF1				S	**Sb**	**00 30 46.8**	**-0.5**
SEF1				AML	AML		
	comp=N,10395µm,0.6s						
SEF1				AML	AML		
	comp=E,10450µm,0.2s						
SEF1				AML	AML		
	comp=N,10430µm,0.6s						
AQU	**L'Aquila**	**0.45**	**151**	⇑P	**Pg**	**00 30 39.9**	**-0.8**
AQU				S	**Sb**	**00 30 47.1**	**-0.8**
AQU				AML	AML		
	comp=E,4580µm,0.5s						
AQU				AML	AML		
	comp=N,5850µm,0.2s						
AQU				AML	AML		
	comp=N,5675µm,0.2s						
AQU				AML	AML		
	comp=E,5015µm,0.4s						
ASSB	**Assisi San Ben**	**0.45**	**312**	⇑P	**Pg**	**00 30 40.0**	**-0.7**
ASSB				AML	AML		
	comp=E,12700µm,0.6s						
ASSB				AML	AML		
	comp=N,7565µm,1.1s						
MDAR	**Monte D'Aria**	**0.45**	**3**	⇑P	**Pg**	**00 30 40.0**	**-0.8**
MDAR				AML	AML		
	comp=E,3870µm,1.2s						
MDAR				AML	AML		
	comp=N,5255µm,0.5s						
MDAR				AML	AML		
	comp=E,3865µm,1.2s						
MDAR				AML	AML		
	comp=N,5250µm,0.5s						
FIU1	**Fiuminata**	**0.47**	**344**	P	**Pg**	**00 30 40.3**	**-0.7**
OFFI	**Offida**	**0.47**	**65**	⇑P	**Pb**	**00 30 40.9**	**-0.9**
OFFI				S	**Sb**	**00 30 49.6**	**+1.0**
OFFI				AML	AML		
	comp=N,22150µm,0.5s						
OFFI				AML	AML		
	comp=E,21800µm,1.6s						
FIAM	**Fiamignano**	**0.47**	**179**	⇑P	**Pg**	**00 30 40.3**	**-0.8**
FIAM				AML	AML		
	comp=N,7580µm,0.4s						
FIAM				AML	AML		
	comp=E,7815µm,1.2s						
FIAM				AML	AML		
	comp=N,7575µm,0.4s						
MNTP	**Montappone**	**0.48**	**34**	⇓P	**Pg**	**00 30 41.0**	**-0.2**
MNTP				S	**Sb**	**00 30 49.7**	**+0.9**
MNTP				AML	AML		
	comp=N,13500µm,1.1s						
MNTP				AML	AML		
	comp=E,17600µm,0.2s						
SSM1	**San Severino M**	**0.49**	**6**	⇑P	**Pg**	**00 30 41.0**	**-0.4**
SNTG	**Esanatoglia**	**0.53**	**347**	P	**Pg**	**00 30 41.3**	**-0.9**
SNTG				AML	AML		
	comp=E,2210µm,0.8s						
SNTG				AML	AML		
	comp=N,2240µm,1.1s						
SNTG				AML	AML		
	comp=N,2245µm,1.1s						
SNTG				AML	AML		
	comp=E,2165µm,0.6s						
SNTG				AML	AML		
	comp=N,2315µm,1.1s						
SNTG				AML	AML		
	comp=E,2205µm,0.8s						
ATCC	**AVT- Casa Cast**	**0.56**	**322**	⇑P	**Pg**	**00 30 42.0**	**-0.8**
ATCC				S	**Sb**	**00 30 52.0**	**+0.7**
ATCC				AML	AML		
	comp=E,5035µm,0.5s						
ATCC				AML	AML		
	comp=N,5640µm,0.7s						
EL6	**Elcito**	**0.59**	**360**	⇑P	**Pg**	**00 30 42.2**	**-1.1**
EL6				S	**Sb**	**00 30 52.0**	**-0.1**
EL6				AML	AML		
	comp=E,5430µm,1.5s						
EL6				AML	AML		
	comp=N,5535µm,1.3s						
EL6				AML	AML		
	comp=E,5450µm,1.5s						
EL6				AML	AML		
	comp=N,5550µm,1.3s						
FAGN	**Fagnano**	**0.59**	**143**	⇑P	**Pg**	**00 30 42.3**	**-1.1**
FAGN				S	**Sb**	**00 30 53.0**	**+0.8**
FAGN				AML	AML		
	comp=E,10370µm,0.4s						
FAGN				AML	AML		
	comp=N,9585µm,0.6s						
TRTR	**Tortoreto Alta**	**0.60**	**83**	⇑P	**Pb**	**00 30 43.5**	**-0.5**
TRTR				AML	AML		
	comp=N,20200µm,0.4s						
TRTR				AML	AML		
	comp=E,22000µm,0.4s						
FOSV	**Fossato di Vic**	**0.61**	**335**	⇑P	**Pg**	**00 30 42.7**	**-1.0**
VCEL	**Villa Celiera**	**0.64**	**122**	⇑P	**Pg**	**00 30 43.5**	**-0.9**
VCEL				AML	AML		
	comp=E,10310µm,0.3s						
VCEL				AML	AML		
	comp=N,9940µm,0.7s						
VCEL				AML	AML		
	comp=N,9925µm,0.7s						
VCEL				AML	AML		
	comp=E,10315µm,0.3s						
SRES	**S.Oreste - Sor**	**0.67**	**221**	⇑P	**Pg**	**00 30 43.8**	**-1.1**
SRES				S	**Sb**	**00 30 56.0**	**+1.6**
SRES				AML	AML		
	comp=N,3255µm,0.4s						
SRES				AML	AML		
	comp=E,3535µm,1.0s						
MURB	**Monte Urbino**	**0.67**	**321**	⇑P	**Pg**	**00 30 44.1**	**-0.8**
MURB				S	**Sb**	**00 30 56.0**	**+1.4**
MURB				AML	AML		
	comp=E,11200µm,0.3s						
MURB				AML	AML		
	comp=N,9655µm,0.3s						
MURB				AML	AML		
	comp=N,9675µm,0.3s						
MURB				AML	AML		
	comp=N,10640µm,0.3s						
MURB				AML	AML		
	comp=E,12050µm,0.3s						
T0110	**Collepietro**	**0.72**	**136**	⇑P	**Pg**	**00 30 44.4**	**-1.3**
T0110				S	**Sb**	**00 30 57.0**	**+1.2**
T0110				AML	AML		
	comp=E,6505µm,1.2s						
T0110				AML	AML		
	comp=N,7965µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.72**	**310**	⇑P	**Pg**	**00 30 44.8**	**-0.9**
ATTE				AML	AML		
	comp=E,1790µm,0.7s						
ATTE				AML	AML		
	comp=N,1870µm,1.4s						
PP3	**Marolino**	**0.73**	**30**	⇑P	**Pg**	**00 30 45.6**	**-0.4**
PP3				AML	AML		
	comp=E,13950µm,0.4s						
PP3				AML	AML		
	comp=N,16350µm,0.6s						
PP3				AML	AML		
	comp=E,14650µm,0.5s						
PP3				AML	AML		
	comp=E,14000µm,0.5s						
PP3				AML	AML		
	comp=E,14700µm,0.5s						
PP3				AML	AML		
	comp=N,15250µm,0.6s						
ATFO	**Monte Foce - G**	**0.74**	**328**	⇑P	**Pg**	**00 30 45.2**	**-0.9**
ATFO				AML	AML		
	comp=N,2090µm,0.6s						
ATFO				AML	AML		
	comp=E,1765µm,0.3s						
MGAB	**Montegabbione**	**0.75**	**283**	⇑P	**Pg**	**00 30 45.5**	**-0.8**
MGAB				AML	AML		
	comp=E,4810µm,0.5s						
MGAB				AML	AML		
	comp=E,5380µm,0.5s						
MGAB				AML	AML		
	comp=N,5025µm,0.4s						
MGAB				AML	AML		
	comp=N,5035µm,0.6s						
MGAB				AML	AML		
	comp=E,4815µm,0.5s						
PTQR	**Pietraquaria**	**0.75**	**163**	⇓P	**Pg**	**00 30 45.0**	**-1.3**
PTQR				AML	AML		
	comp=E,1610µm,1.6s						
PTQR				AML	AML		
	comp=N,1125µm,0.8s						
ARVD	**Arcevia**	**0.77**	**351**	⇑P	**Pg**	**00 30 45.5**	**-1.2**
ARVD				S	**Sb**	**00 30 59.0**	**+1.8**
ARVD				AML	AML		
	comp=N,1234µm,0.8s						
ARVD				AML	AML		
	comp=E,1320µm,1.0s						
MTCE	**Montecelio**	**0.77**	**201**	⇑P	**Pg**	**00 30 45.1**	**-1.5**
MTCE				AML	AML		
	comp=N,2550µm,0.6s						
MTCE				AML	AML		
	comp=E,3895µm,0.7s						
CERT	**Cerreto**	**0.80**	**187**	⇑P	**Pg**	**00 30 45.6**	**-1.6**
CERT				AML	AML		
	comp=E,6495µm,0.7s						
CERT				AML	AML		
	comp=N,4115µm,0.4s						
ATVO	**AVT- Monte Val**	**0.82**	**321**	P	**Pg**	**00 30 46.5**	**-1.2**
FRON	**Frontone**	**0.82**	**340**	⇓P	**Pg**	**00 30 46.6**	**-1.2**
FRON				AML	AML		
	comp=N,1865µm,0.3s						
FRON				AML	AML		
	comp=E,1380µm,0.5s						
ATMI	**Monte Miggiano**	**0.85**	**314**	⇓P	**Pg**	**00 30 47.5**	**-0.8**
ATMI				S	**Sb**	**00 31 02.0**	**+2.3**
ATMI				AML	AML		
	comp=E,5885µm,0.7s						
ATMI				AML	AML		
	comp=E,5890µm,0.7s						
ATMI				AML	AML		
	comp=N,4805µm,0.5s						
ATPI	**Pietralunga -**	**0.88**	**324**	⇓P	**Pg**	**00 30 47.8**	**-1.0**
ATPI				AML	AML		
	comp=E,1950µm,0.6s						
ATPI				AML	AML		
	comp=E,1945µm,0.6s						
ATPI				AML	AML		
	comp=N,1600µm,0.6s						
AOI	**Ancona**	**0.89**	**24**	⇓P	**Pg**	**00 30 48.0**	**-0.9**
AOI				S	**Sn**	**00 31 03.0**	**+0.5**
AOI				AML	AML		
	comp=E,1990µm,0.5s						
AOI				AML	AML		
	comp=N,1705µm,0.4s						
SACS	**San Casciano d**	**0.89**	**277**	⇑P	**Pg**	**00 30 48.0**	**-0.9**
SACS				AML	AML		
	comp=N,2075µm,0.5s						
SACS				AML	AML		
	comp=E,2080µm,1.1s						
SACS				AML	AML		
	comp=E,2175µm,0.7s						
SACS				AML	AML		
	comp=N,2025µm,0.5s						
PIEI	**Pieia**	**0.90**	**332**	⇓P	**Pg**	**00 30 47.9**	**-1.3**
PIEI				S	**Sb**	**00 31 03.0**	**+2.0**
PIEI				AML	AML		
	comp=E,1235µm,0.3s						
PIEI				AML	AML		
	comp=N,926µm,0.5s						
PIEI				AML	AML		
	comp=E,1230µm,0.3s						
RCAV	**Rocca di Cave**	**0.90**	**188**	⇑P	**Pg**	**00 30 47.4**	**-1.8**
RCAV				AML	AML		
	comp=E,4060µm,0.5s						
RCAV				AML	AML		
	comp=N,4285µm,0.4s						
MPAG	**Monte Paganucc**	**0.92**	**344**	⇑P	**Pg**	**00 30 48.3**	**-1.3**
MPAG				AML	AML		
	comp=N,1435µm,1.0s						
MPAG				AML	AML		
	comp=E,1445µm,0.7s						
MPAG				AML	AML		
	comp=N,1440µm,1.0s						
NARO	**Abbazia di Nar**	**0.95**	**336**	⇓P	**Pg**	**00 30 48.8**	**-1.4**
NARO				AML	AML		
	comp=E,984µm,0.9s						
NARO				AML	AML		
	comp=N,863µm,0.9s						
VVLD	**Villa Vallelon**	**0.95**	**156**	⇓P	**Pg**	**00 30 48.9**	**-1.3**
VVLD				AML	AML		
	comp=E,1655µm,0.6s						
VVLD				AML	AML		
	comp=N,1980µm,0.5s						
APEC	**Apecchio**	**0.96**	**329**	⇑P	**Pg**	**00 30 49.4**	**-0.9**
GUAR	**Guarcino**	**0.96**	**171**	⇓P	**Pn**	**00 30 51.7**	**+0.9**
GUAR				AML	AML		
	comp=E,2880µm,0.5s						
GUAR				AML	AML		
	comp=N,3385µm,0.5s						
SENI	**Senigallia**	**0.97**	**5**	⇓P	**Pb**	**00 30 50.3**	**0.0**
SENI				AML	AML		
	comp=E,7995µm,0.6s						
SENI				AML	AML		
	comp=N,6100µm,0.3s						
LATE	**Laterza**	**0.97**	**263**	⇑P	**Pg**	**00 30 49.5**	**-1.0**
RMP	**Rome, Mte Porz**	**0.98**	**198**	⇓P	**Pg**	**00 30 49.8**	**-0.9**
RMP				AML	AML		
	comp=E,3500µm,0.6s						
RMP				AML	AML		
	comp=N,5380µm,0.5s						
FSSB	**Fossombrone**	**0.98**	**346**	⇓P	**Pg**	**00 30 49.1**	**-1.6**
FSSB				AML	AML		
	comp=E,3625µm,0.4s						
FSSB				AML	AML		
	comp=N,4100µm,0.3s						
BADI	**Badiali**	**0.99**	**321**	P	**Pg**	**00 30 50.1**	**-0.9**
CAFI	**Castiglion Fio**	**1.02**	**305**	⇑P	**Pg**	**00 30 50.5**	**-1.0**
CAFI				AML	AML		
	comp=E,1495µm,0.3s						
CAFI				AML	AML		
	comp=E,1535µm,0.3s						
CAFI				AML	AML		
	comp=N,1086µm,0.6s						
CAFI				AML	AML		
	comp=N,1120µm,0.6s						
VIVA	**Pratoni del Vi**	**1.02**	**194**	⇓P	**Pg**	**00 30 50.5**	**-1.0**
VIVA				AML	AML		
	comp=E,6935µm,0.4s						
VIVA				AML	AML		
	comp=N,10250µm,0.4s						
RDP	**Rocca di Papa**	**1.02**	**197**	⇑P	**Pb**	**00 30 51.0**	**-0.3**
RDP				AML	AML		
	comp=N,12700µm,0.4s						
RDP				AML	AML		
	comp=E,16100µm,0.5s						
MA9	**Marino**	**1.03**	**199**	⇑P	**Pg**	**00 30 50.9**	**-0.7**
MA9				AML	AML		
	comp=N,5580µm,0.5s						
MA9				AML	AML		
	comp=E,11300µm,0.5s						
SAMA	**S.Maria delle**	**1.03**	**202**	S	**Sb**	**00 31 05.0**	**+0.2**
CAFR	**Castel Frentan**	**1.05**	**119**	⇑P	**Pg**	**00 30 50.4**	**-1.6**
CAFR				AML	AML		
	comp=E,2620µm,0.5s						
CAFR				AML	AML		
	comp=N,1610µm,0.9s						
PE3	**Peglio**	**1.05**	**335**	⇓P	**Pg**	**00 30 51.3**	**-0.8**
MCIV	**Monte Civitell**	**1.05**	**272**	P	**Pg**	**00 30 51.1**	**-1.0**
MCIV				AML	AML		
	comp=E,1052µm,0.3s						
MCIV				AML	AML		
	comp=N,785µm,0.6s						
LPEL	**Lama dei Pelig**	**1.06**	**131**	⇑P	**Pg**	**00 30 50.1**	**-2.1**
LPEL				S	**Sb**	**00 31 06.0**	**+0.4**
LPEL				AML	AML		
	comp=N,2020µm,1.0s						
LPEL				AML	AML		
	comp=E,2200µm,1.5s						
TOLF	**Tolfa**	**1.06**	**231**	⇑P	**Pg**	**00 30 50.9**	**-1.4**
TOLF				AML	AML		
	comp=E,1960µm,0.5s						
TOLF				AML	AML		
	comp=N,1940µm,0.3s						
SF04	**Casetta**	**1.07**	**276**	⇑P	**Pg**	**00 30 51.8**	**-0.6**
LAV9	**Lanuvio**	**1.11**	**196**	⇓P	**Pg**	**00 30 52.0**	**-1.1**
LAV9				AML	AML		
	comp=N,7240µm,0.5s						
LAV9				AML	AML		
	comp=E,7735µm,0.4s						
LAV9				AML	AML		
	comp=N,7250µm,0.5s						
LAV9				AML	AML		
	comp=E,7420µm,0.4s						
POFI	**Posta Fibreno**	**1.12**	**156**	⇓P	**Pg**	**00 30 52.0**	**-1.3**
POFI				AML	AML		
	comp=E,930µm,0.4s						
POFI				AML	AML		
	comp=N,668µm,0.6s						
SF01	**Poggio Pratacc**	**1.14**	**274**	⇑P	**Pg**	**00 30 52.7**	**-1.0**
LRP	**Arpino**	**1.15**	**162**	⇑P	**Pb**	**00 30 53.6**	**+0.2**
LRP				AML	AML		
	comp=N,1108µm,1.3s						
LRP				AML	AML		
	comp=E,734µm,1.5s						
GIUL	**Giuliano Di Ro**	**1.19**	**175**	⇑P	**Pg**	**00 30 52.5**	**-2.2**
GIUL				AML	AML		
	comp=E,1256µm,0.5s						
GIUL				AML	AML		
	comp=N,1735µm,0.5s						
CPGN	**Carpegna, Ital**	**1.21**	**332**	⇓P	**Pg**	**00 30 54.4**	**-0.6**
CPGN				AML	AML		
	comp=E,1835µm,0.8s						
CPGN				AML	AML		
	comp=N,1665µm,0.7s						
ARCI	**Arcidosso**	**1.21**	**276**	⇑P	**Pn**	**00 30 55.2**	**+0.9**
ARCI				AML	AML		
	comp=E,416µm,0.8s						
ARCI				AML	AML		
	comp=N,316µm,0.4s						
CRE	**Caprese Michel**	**1.22**	**316**	⇓P	**Pg**	**00 30 54.0**	**-1.3**
CRE				AML	AML		
	comp=N,701µm,0.6s						
CRE				AML	AML		
	comp=E,730µm,1.2s						
LATB	**Latina**	**1.25**	**185**	⇓P	**Pg**	**00 30 53.9**	**-2.0**
LATB				AML	AML		
	comp=E,472µm,0.8s						
LATB				AML	AML		
	comp=N,345µm,0.9s						
LIK	**San Giovanni I**	**1.28**	**165**	⇑P	**Pn**	**00 30 56.0**	**+0.8**
CERA	**Filignano**	**1.33**	**149**	⇑P	**Pg**	**00 30 55.1**	**-2.2**
CERA				AML	AML		
	comp=E,1036µm,0.6s						
CERA				AML	AML		
	comp=N,1080µm,0.5s						
CERA				AML	AML		
	comp=E,1072µm,0.6s						
CERA				AML	AML		
	comp=N,1045µm,0.5s						
FRES	**Fresagrandinar**	**1.39**	**123**	P	**Pb**	**00 30 58.0**	**+0.5**
FRES				AML	AML		
	comp=E,973µm,0.6s						
FRES				AML	AML		
	comp=N,610µm,0.8s						
ASQU	**Asqua**	**1.43**	**318**	⇓P	**Pn**	**00 30 57.1**	**-0.2**
ASQU				AML	AML		
	comp=E,560µm,0.5s						
ASQU				AML	AML		
	comp=N,553µm,1.3s						
TRIV	**Trivento**	**1.45**	**132**	⇑P	**Pb**	**00 30 59.2**	**+0.7**
SFI	**Santa Sofia**	**1.48**	**322**	⇓P	**Pn**	**00 30 58.7**	**+0.6**
SFI				AML	AML		
	comp=E,408µm,1.0s						
SFI				AML	AML		
	comp=N,336µm,1.3s						
MAON	**Monte Argentar**	**1.49**	**259**	⇑P	**Pn**	**00 30 57.6**	**-0.5**
MAON				AML	AML		
	comp=N,239µm,0.5s						
MAON				AML	AML		
	comp=E,472µm,0.5s						
FROS	**Frosini**	**1.51**	**289**	⇓P	**Pn**	**00 30 58.3**	**0.0**
FROS				AML	AML		
	comp=E,532µm,0.8s						
FROS				AML	AML		
	comp=N,408µm,0.7s						
CSNT	**Castellina Chi**	**1.52**	**299**	⇑P	**Pn**	**00 30 58.6**	**+0.1**
CSNT				AML	AML		
	comp=E,228µm,0.6s						
CSNT				AML	AML		
	comp=N,242µm,0.6s						
VAGA	**Valle Agricola**	**1.57**	**147**	⇑P	**Pg**	**00 31 01.4**	**-0.5**
RUFI	**Rufina**	**1.60**	**314**	⇑P	**Pn**	**00 30 59.6**	**0.0**
BSSO	**Busso**	**1.63**	**137**	⇓P	**Pg**	**00 31 03.6**	**+0.6**
CASP	**Castiglione de**	**1.65**	**272**	⇑P	**Pn**	**00 30 59.9**	**-0.4**
CASP				AML	AML		
	comp=E,170µm,0.3s						
CASP				AML	AML		
	comp=N,150µm,1.0s						
TRIF	**Trifonti**	**1.66**	**284**	⇓P	**Pn**	**00 31 00.6**	**+0.1**
TRIF				AML	AML		
	comp=N,310µm,0.7s						
TRIF				AML	AML		
	comp=E,216µm,0.4s						
LMD	**Lutirano**	**1.68**	**323**	⇓P	**Pn**	**00 31 01.9**	**+1.2**
LMD				AML	AML		
	comp=E,312µm,1.5s						
LMD				AML	AML		
	comp=N,342µm,0.6s						
MELA	**Melanico ??? S**	**1.82**	**124**	⇑P	**Pn**	**00 31 03.9**	**+1.2**
MELA				AML	AML		
	comp=E,1645µm,0.5s						
MELA				AML	AML		
	comp=E,1575µm,0.5s						
MELA				AML	AML		

comp=N,1305µm,0.5s
MELA AML AML
comp=N,1290µm,0.5s
BRIS BRISIGHELLA 1.83 321 P Pn 00 31 04.4 +1.7
MPPT Montemurlo 1.91 310 P Pn 00 31 04.5 +0.6
MPPT AML AML
comp=N,256µm,0.9s
MPPT AML AML
comp=E,310µm,1.1s
VITU Vitulano (BN) 1.93 143 ⇑P Pn 00 31 04.9 +0.8
VITU AML AML
comp=E,340µm,0.4s
VITU AML AML
comp=N,323µm,0.5s
MTCR Monte La Croce 2.00 311 ⇓P Pn 00 31 05.2 0.0
PAOL Paolisi 2.03 147 ⇑P Pb 00 31 08.8 +0.4
APRC Apricena 2.06 118 P Pn 00 31 06.7 +0.8
APRC AML AML
comp=E,612µm,0.9s
APRC AML AML
comp=N,865µm,0.5s
PII Pisa 2.13 298 ⇑P Pn 00 31 07.2 +0.4
PII AML AML
comp=E,151µm,1.4s
PII AML AML
comp=N,138µm,0.3s
CELB S.Piero in Cam 2.13 271 ⇑P Pn 00 31 06.7 -0.3
CELB AML AML
comp=N,59µm,1.0s
CELB AML AML
comp=E,70µm,0.5s
POPM Popiglio 2.15 308 ⇑P Pn 00 31 07.4 +0.1
POPM AML AML
comp=N,156µm,0.6s
POPM AML AML
comp=E,128µm,1.0s
SGRT San Giovanni R 2.19 116 ⇓P Pn 00 31 08.9 +1.1
SGRT AML AML
comp=N,640µm,0.4s
SGRT AML AML
comp=E,494µm,0.7s
BRJN Brijuni 2.21 12 ⇓P Pn 00 31 08.0 0.0
MAIM Mastiano 2.24 302 ⇑P Pn 00 31 09.0 +0.6
MAIM AML AML
comp=E,106µm,0.5s
MAIM AML AML
comp=N,156µm,0.4s
BDI Bagni Di Lucca 2.26 307 ⇑P Pn 00 31 08.8 +0.1
BDI AML AML
comp=E,73µm,0.5s
BDI AML AML
comp=N,88µm,0.8s
CARD Cardoso 2.31 305 ⇑P Pn 00 31 09.9 +0.6
CARD AML AML
comp=E,171µm,1.5s
CARD AML AML
comp=N,194µm,0.5s
VLC Villacollemand 2.44 306 P Pn 00 31 11.0 -0.2
VLC AML AML
comp=E,71µm,0.8s
VLC AML AML
comp=N,84µm,0.9s
HVAR Hvar 2.49 79 ⇑P Pn 00 31 12.1 +0.2
EQUI Equi 2.58 304 ⇑P Pn 00 31 13.3 +0.2
EQUI AML AML
comp=N,86µm,1.1s
EQUI AML AML
comp=E,80µm,0.8s
PLMA Palmaria, Port 2.71 300 ⇓P Pn 00 31 15.2 +0.3
PLMA AML AML
comp=N,65µm,0.8s
PLMA AML AML
comp=E,44µm,0.6s
MORSI Morsiglia 2.76 276 P Pn 00 31 16.0 +0.4
MORSI S Sn 00 31 50.1 +1.4
RIY Rijeka 2.77 21 ePn Pn 00 31 15.9 +0.3
RIY eSn Sn 00 31 50.0 +1.2
GRAM Graiana 2.82 309 ⇑P Pn 00 31 17.5 +1.1
GRAM AML AML
comp=N,170µm,0.5s
GRAM AML AML
comp=E,167µm,0.8s
SMPL Sampolo 2.90 258 ⇓P Pn 00 31 18.6 +1.0
SMPL AML AML
comp=N,28µm,0.8s
SMPL AML AML
comp=E,30µm,0.6s
SMPL Sampolo 2.90 258 P Pn 00 31 18.5 +0.9
PGF Pioggiola 3.04 268 P Pn 00 31 20.4 +0.9
PGF S Sn 00 31 57.0 +1.3
CEY Cerknica 3.14 17 ePn Pn 00 31 20.6 -0.2
AMUR Altamura 3.19 124 ⇓P Pn 00 31 22.6 +1.1
AMUR AML AML
comp=E,143µm,1.3s
AMUR AML AML
comp=N,178µm,1.1s
SABO M.te Sabotino 3.26 6 ⇑P Pn 00 31 22.3 -0.1
SABO AML AML
comp=N,1136µm,0.9s
SABO AML AML
comp=E,213µm,0.9s
SABO AML AML
comp=N,291µm,0.7s
SABO AML AML
comp=E,942µm,0.9s
CGRP Cima Grappa 3.27 344 ⇓P Pn 00 31 23.9 +1.1
CGRP AML AML
comp=N,201µm,0.5s
CGRP AML AML
comp=E,224µm,0.6s
MGRS Mrkonjic Grad 3.34 59 ePn Pn 00 31 23.1 -0.4
STON Ston 3.38 86 ePn Pn 00 31 23.3 -0.8
STON Ston 3.38 86 ePn Pn 00 31 23.3 -0.8
STON eSn Sn 00 32 04.4 +0.4
STON Ston 3.38 86 ⇑P Pn 00 31 23.3 -0.8
STON AML AML
comp=E,98µm,0.4s
STON AML AML
comp=N,102µm,0.8s
SALO Salr 3.42 328 ⇑P Pn 00 31 26.2 +1.5
SALO AML AML
comp=E,139µm,1.1s
SALO AML AML
comp=N,158µm,0.6s
PRIJ Prijedor 3.43 48 ePn Pg 00 31 37.0 -0.5
LJU Ljubljana 3.45 17 P Pn 00 31 25.3 +0.2
LJU AML AML
comp=N,962µm,0.5s
LJU AML AML
comp=E,699µm,0.6s
CTI Castel Tesino 3.47 343 ⇑P Pn 00 31 26.3 +1.0
CTI AML AML
comp=E,156µm,0.3s
CTI AML AML
comp=N,167µm,0.3s
MPRI Monte Prat 3.50 359 ⇓P Pn 00 31 26.5 +0.7
MPRI AML AML
comp=E,150µm,0.4s
MPRI AML AML
comp=N,246µm,0.8s
STAL STALIGIAL 3.53 356 ⇓P Pn 00 31 26.6 +0.5
STAL AML AML
comp=N,132µm,1.5s
STAL AML AML
comp=E,186µm,0.3s
NOCI Noci 3.54 122 ⇓P Pn 00 31 27.6 +1.2
NOCI AML AML
comp=E,154µm,1.3s
NOCI AML AML
comp=N,138µm,1.1s
A051A Mrakovica 3.56 49 ePn Pn 00 31 27.1 +0.4
BLY Banja Luka 3.57 54 ePn Pn 00 31 28.5 +1.8
BLY Banja Luka 3.57 54 ePn Pn 00 31 29.5 +2.8
BLY eSn Sn 00 32 11.1 +2.5
LUSI Trento, Gardas 3.57 335 ⇑P Pn 00 31 27.6 +0.8
LUSI AML AML
comp=E,150µm,0.5s
LUSI AML AML
comp=N,142µm,0.8s
CIMO Cimolais 3.60 353 ⇓P Pn 00 31 27.6 +0.5
CIMO AML AML
comp=N,56µm,0.7s
CIMO AML AML
comp=E,40µm,1.6s
CIMO AML AML
comp=N,51µm,0.7s
CIMO AML AML
comp=E,49µm,1.6s
PTCC Patocco-Chiusa 3.67 3 ⇑P Pn 00 31 27.8 -0.2
PTCC AML AML
comp=E,61µm,1.1s
PTCC AML AML
comp=N,56µm,0.6s
GAGG Gaggia 3.68 336 ⇑P Pn 00 31 30.6 +2.2
ZONE Zone 3.71 326 P Pn 00 31 29.2 +0.6
ZONE AML AML
comp=N,152µm,0.3s
ZONE AML AML
comp=E,97µm,1.5s
SALB San Lorenzo Be 3.76 138 P Pn 00 31 31.9 +2.5
MABI Malga Bissina 3.80 332 P Pn 00 31 31.3 +1.3
MABI AML AML
comp=E,47µm,0.6s
MABI AML AML
comp=N,56µm,1.6s
ZOU Zoufplan 3.81 359 P Pn 00 31 30.6 +0.3
ZOU AML AML
comp=N,92µm,1.2s
ZOU AML AML
comp=E,92µm,1.1s
ZOU AML AML
comp=N,156µm,1.6s
ZOU AML AML
comp=E,123µm,1.3s
TAR1 Taranto 3.83 124 ⇑P Pn 00 31 31.8 +1.5
CANO Canova, Maglio 3.84 294 ⇓P Pn 00 31 31.4 +1.0
CANO AML AML
comp=E,113µm,1.2s
CANO AML AML
comp=N,47µm,1.3s
FVI Forni Avoltri 3.86 357 ⇑P Pn 00 31 32.0 +1.2
FVI AML AML
comp=N,71µm,0.5s
FVI AML AML
comp=E,85µm,0.8s
TREB Trebinje 3.86 89 ePn Pn 00 31 31.3 +0.6
TREB Trebinje 3.86 89 ePn Pn 00 31 31.4 +0.7
TREB eSn Sn 00 32 16.7 +0.8
OBKA Obir 3.90 15 ePn Pn 00 31 30.7 -0.7
OBKA Obir 3.90 15 i Pn Pn 00 31 31.3 -0.1
comp=E,1.4nm,0.2s
MYKA Terra Mystica 3.91 5 ePn Pn 00 31 32.1 +0.7
comp=E,12nm,0.7s,SNR=4.9
KOSI Kohlern 3.92 342 ⇓P Pn 00 31 33.4 +1.7
A052A Srbac 3.96 52 ePn Pn 00 31 35.4 +3.3
APPI Appiano 3.97 341 ⇑P Pn 00 31 34.1 +1.9
HCY Herceg Novi 3.99 92 ePn Pn 00 31 33.1 +0.7
BRY Bratogost 4.00 86 ePn Pn 00 31 33.3 +0.6
ABTA Abfaltersbach 4.03 354 i Pn Pn 00 31 34.1 +1.0
comp=E,20nm,0.4s,SNR=26
BRES Bressanone 4.08 347 ⇓P Pn 00 31 35.4 +1.5
SOKA Soboth 4.17 19 ePn Pn 00 31 35.5 +0.5
comp=E,1.7nm,0.3s
RISI Rein 4.27 350 ⇓P Pn 00 31 38.2 +1.8
VSL Villasalto 4.29 222 ⇓P Pn 00 31 37.7 +1.0
KOGS Kog 4.33 30 ⇓P Pn 00 31 39.3 +2.2
TURF col de Turini 4.35 288 P Pn 00 31 38.4 +0.8
ROSI Rosskopf 4.36 345 ⇓P Pn 00 31 39.4 +1.8
VARE Varese 4.41 317 ⇑P Pn 00 31 41.1 +2.8
HAPS Han Pijesak,Bl 4.46 70 ePn Pn 00 31 40.2 +1.1
DRME Dracevica, Mon 4.53 95 ePn Pn 00 31 41.3 +1.4
PDG Podgorica 4.55 92 ePn Pn 00 31 41.4 +1.3
PDG eSn Sn 00 32 33.9 +1.1
FETA Feichten 4.60 339 ePn Pn 00 31 42.9 +1.9
comp=E,1.3nm,0.2s,SNR=6.2
CALF Calern 4.63 285 P Pn 00 31 42.1 +0.8
WTTA Wattenberg 4.64 348 i Pn Pn 00 31 43.9 +2.3
comp=E,2.4nm,0.2s,SNR=7.0
WTTA Wattenberg 4.64 348 ⇑P Pn 00 31 44.2 +2.6
DAVOX Davos/Dischmat 4.65 331 ⇑P Pn 00 31 46.0 +4.3
RUDO Rudo 4.66 77 ePn Pn 00 31 42.5 +0.8
SQTA Sankt Quirin 4.68 344 ePn Pn 00 31 44.1 +2.1
comp=E,5.2nm,0.3s,SNR=9.5
WATA Walderalm 4.72 347 ePn Pn 00 31 45.1 +2.5
comp=E,2.4nm,0.2s
BBLS Lazići 4.73 74 ePn Pn 00 31 43.2 +0.5
BBLS Lazići 4.73 74 ePn Pn 00 31 44.1 +1.4
BBLS eSn Sn 00 32 38.0 +0.6
MOTA Moosalm 4.82 344 ePn Pn 00 31 45.9 +2.0
comp=E,5.0nm,0.5s,SNR=6.6
ARSA Arzberg 4.82 20 i Pn Pn 00 31 43.8 -0.2
comp=E,2.0nm,0.3s,SNR=4.4
SURF Saint Ours 4.89 293 P Pn 00 31 46.6 +1.5
JAUF Jausiers 4.92 292 P Pn 00 31 47.4 +2.0
BIOA Bad Ischl, Aus 4.96 4 ePn Pn 00 31 46.7 +0.9
comp=E,6.8nm,0.3s,SNR=14
TRIGF Trigance 5.00 284 P Pn 00 31 47.6 +1.2
RETA Reutte 5.03 342 ePn Pn 00 31 48.7 +2.0
comp=E,2.3nm,0.2s,SNR=5.8
CREF Crivoux 5.04 293 P Pn 00 31 51.3 +4.2
SJES Sjenica 5.06 82 ePn Pn 00 31 48.9 +1.6
SJES eSn Sn 00 32 46.5 +0.9
DAVA Damuels 5.09 334 ePn Pn 00 31 49.5 +1.9
comp=E,4.3nm,0.5s
MOA Molln 5.17 9 ePn Pn 00 31 49.4 +0.7
MOA eSn Sn 00 32 49.6 +1.4
MOA Molln 5.17 9 ePn Pn 00 31 49.4 +0.7
comp=E,2.5nm,0.4s,SNR=8.3
DIVS Divibare 5.19 73 ePn Pn 00 31 46.2 -2.9
DIVS Divibare 5.19 73 ePn Pn 00 31 49.6 +0.5
DIVS eSn Sn 00 32 47.9 -0.9
TIR Tirane 5.22 103 ePn Pn 00 31 50.0 +0.6
TIR eSn Sn 00 32 50.2 +0.8
TIR Tirane 5.22 103 ⇑P Pn 00 31 50.3 +1.0
FRGS Fruska Gora 5.41 61 ePn Pn 00 31 51.7 -0.3
FRGS Fruska Gora 5.41 61 ePn Pn 00 31 51.9 -0.1
FRGS eSn Sn 00 32 53.6 -0.4
ARTF Artigues 5.41 281 P Pn 00 31 53.1 +1.1
RONA Rosalia, Austr 5.45 23 i Pn Pn 00 31 52.8 +0.3
comp=E,1.1nm,0.2s
TRUS Trudelj 5.51 72 ePn Pn 00 31 53.7 +0.3
CONA Conrad Observa 5.54 20 i Pn Pn 00 31 54.0 +0.2
comp=E,6.3nm,0.5s,SNR=11
BSTF la Bastide-des 5.56 284 P Pn 00 31 55.5 +1.4
ORIF Oris-en-Rattie 5.66 295 P Pn 00 31 58.9 +3.3
GRUS Gruza 5.67 76 ePn Pn 00 31 56.5 +1.0
GRUS eSn Sn 00 32 59.2 -1.1
RUSF Rustrel 5.69 285 P Pn 00 31 57.8 +2.0
SELS Selova 5.90 83 ePn Pn 00 31 59.0 +0.3
OHR Ohrid 5.96 103 i Pn Pn 00 32 01.7 +2.0
CKRC Cesky Krumlov 6.14 7 ePN Pn 00 32 01.1 -0.9
CKRC eSN Sn 00 33 09.9 -2.0
BOVS Bovan 6.35 79 ePn Pn 00 32 04.9 +0.1
KHC Kasperske Hory 6.40 3 ePN Pn 00 32 04.8 -0.8
KHC eSN Sn 00 33 16.9 -1.5
BARS Barje 6.41 86 ePn Pn 00 32 06.3 +0.6
BARS eSn Sn 00 33 17.8 -0.8
KRUC Moravsky 6.72 19 ePN Pn 00 32 09.3 -0.7
ZAGS Zajecar 6.75 78 ePn Pn 00 32 09.7 -0.6
TREC Trest 6.76 13 ePN Pn 00 32 10.2 -0.3
TREC eSN Sn 00 33 25.1 -2.2
VRAC Vranov 7.00 19 ePN Pn 00 32 13.3 -0.5
ZAPS Zavoj 7.00 82 ePn Pn 00 32 14.6 +0.7
ZAPS eSn Sn 00 33 31.0 -2.3
VAY Valandovo 7.19 98 i Pn Pn 00 32 17.7 +1.4
PRU Pruhonice 7.32 7 eSN Sn 00 33 37.3 -3.6
KSP Ksiaz 8.39 14 eP Pb 00 32 57.1 +0.3
CLL Collm 8.57 360 ex x 00 34 05.0
CLL eSg **Sg 00 35 04.0 -2.5**

ROM 31 00:37:00.8±0.1, 42°825N±0'003×13°219E±0'005, h11km, ML2.7/39, 22C-12D, Error ellipse: s-maj=0.3km s-min=0.3km az=267.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**324**	P	Pg	00 37 03.3	+0.2
T1245				S	Sg	00 37 04.9	+0.2
T1245				AML	AML		
comp=E,71350µm,0.1s
T1245 AML AML
comp=E,65250µm,0.5s
T1245 AML AML
comp=E,71350µm,0.1s
T1245 AML AML
comp=N,96100µm,0.4s
T1245 AML AML
comp=N,98650µm,0.4s
T1245 AML AML
comp=N,96050µm,0.4s
MMO1 Montemonaco 0.11 47 P Pg 00 37 04.0 +0.3
MMO1 S Sg 00 37 06.1 +0.3
T1241 Roccafluvione, 0.16 79 ⇑P Pg 00 37 05.0 +0.6
T1241 S Sg 00 37 07.8 +0.8
T1241 AML AML
comp=E,3410µm,0.4s
T1241 AML AML
comp=N,3485µm,0.3s
T1216 Preci, Frazion 0.16 294 P Pg 00 37 04.9 +0.5
T1216 S Sg 00 37 07.8 +0.8
T1216 AML AML
comp=E,5030µm,0.4s
T1216 AML AML
comp=N,5925µm,0.3s
T1216 AML AML
comp=E,5035µm,0.4s
T1204 Amatrice, Fraz 0.17 154 P Pg 00 37 05.1 +0.5
T1204 S Sg 00 37 08.5 +1.2
T1204 AML AML
comp=E,6210µm,0.2s
T1204 AML AML
comp=N,4885µm,0.9s
T1204 AML AML
comp=E,6205µm,0.2s
T1201 Domo (RI) 0.17 172 P Pb 00 37 05.4 -0.6
AM05 Amandola Campo 0.18 33 ⇑P Pg 00 37 05.3 +0.5
AM05 S Sg 00 37 08.4 +0.9
AM05 AML AML
comp=E,2140µm,0.7s
AM05 AML AML
comp=N,2160µm,0.6s
AM05 AML AML
comp=E,8825µm,0.1s
AM05 AML AML
comp=N,772µm,0.6s
AM05 AML AML
comp=N,772µm,0.6s
AM05 AML AML
comp=N,2155µm,0.6s
FEMA Monte Fema 0.18 318 P Pg 00 37 05.3 +0.4
FEMA S Sg 00 37 08.6 +0.8
FEMA AML AML
comp=E,8310µm,1.4s
FEMA AML AML
comp=E,8315µm,1.4s
FEMA AML AML
comp=N,5710µm,1.3s
FEMA AML AML
comp=N,5705µm,1.3s
FEMA AML AML
comp=E,8310µm,1.4s
SMA1 SAN MARTINO 0.21 156 ⇑P Pg 00 37 01.3 -4.0
SMA1 AML AML
comp=E,3275µm,0.4s
SMA1 AML AML
comp=E,3270µm,0.4s
SMA1 AML AML
comp=N,4020µm,0.4s
T1243 Rocca Santa Ma 0.21 127 P Pg 00 37 04.9 -0.4
T1243 S Sg 00 37 09.1 +0.7
T1217 Poggiodomo (PG 0.24 242 ⇑P Pg 00 37 01.8 -4.0
T1217 AML AML
comp=N,2180µm,0.3s
T1217 AML AML
comp=E,1560µm,1.2s
T1217 AML AML
comp=N,2175µm,0.3s
T1217 AML AML
comp=E,1560µm,1.2s
GUMA Gualdo di Mace 0.25 20 ⇑P Pb 00 37 06.7 -0.7
GUMA S Sb 00 37 11.2 -0.6
GUMA AML AML
comp=N,22350µm,0.3s
GUMA AML AML
comp=N,16700µm,1.5s
GUMA AML AML
comp=E,11450µm,0.2s
GUMA AML AML
comp=N,22300µm,0.3s
GUMA AML AML
comp=E,20950µm,0.2s
T1215 Vallo di Nera, 0.26 265 P Pg 00 37 06.5 +0.4
T1215 S Sb 00 37 10.9 -1.0
RM33 Pellescritta (0.32 181 P Pg 00 37 07.6 +0.4
RM33 S Sb 00 37 12.9 -0.7
CAMP Campotosto 0.32 154 P Pg 00 37 07.6 +0.3
CAMP S Sg 00 37 12.7 +1.1
CAMP AML AML
comp=E,2250µm,0.2s
CAMP AML AML
comp=N,1980µm,0.5s
TERO Teramo 0.35 125 P Pg 00 37 08.0 +0.3
TERO S Sb 00 37 13.6 -0.9
TERO AML AML
comp=E,2725µm,0.1s
TERO AML AML
comp=N,4565µm,0.3s
TERO AML AML
comp=E,3065µm,0.1s
TERO AML AML
comp=N,4980µm,0.3s
TERO AML AML
comp=N,4560µm,0.3s
TERO AML AML
comp=E,2720µm,0.1s
OFFI Offida 0.36 72 P Pb 00 37 09.2 0.0
OFFI AML AML
comp=N,1500µm,0.6s
OFFI AML AML
comp=E,1075µm,0.4s
SEF1 Sefro 0.38 328 ⇓P Pg 00 37 08.6 +0.3
T1247 Pizzolo (AQ) 0.39 171 P Pg 00 37 08.8 +0.3
T1211 Morro Reatino 0.40 223 P Pg 00 37 09.0 +0.4
ARRO Arrone 0.41 234 P Pg 00 37 09.2 +0.3
GAG1 Gagliole 0.43 345 ⇑P Pg 00 37 09.7 +0.4
GIGS Gran Sasso 0.46 145 P Pg 00 37 09.6 -0.1
ASSB Assisi San Ben 0.47 298 P Pg 00 37 10.0 0.0
ASSB AML AML
comp=E,780µm,1.2s
ASSB AML AML
comp=N,852µm,0.4s
SNTG Esanatoglia 0.47 335 ⇑P Pg 00 37 10.2 +0.1
SNTG AML AML
comp=E,470µm,0.9s
SNTG AML AML
comp=N,644µm,0.2s
SNTG AML AML
comp=E,470µm,0.9s
SNTG AML AML
comp=N,644µm,0.2s
SNTG AML AML
comp=N,704µm,0.2s
SNTG AML AML
comp=E,512µm,0.4s
AQU L'Aquila 0.49 164 P Pg 00 37 10.4 0.0
EL6 Elcito 0.51 350 ⇑P Pg 00 37 10.9 +0.1
EL6 AML AML
comp=E,1332µm,0.4s
EL6 AML AML
comp=N,1552µm,1.2s
EL6 AML AML
comp=N,1555µm,1.2s
EL6 AML AML
comp=E,1329µm,0.4s
TRTR Tortoreto Alta 0.51 92 ⇑P Pb 00 37 12.2 +0.4
TRTR AML AML
comp=E,1345µm,1.4s
TRTR AML AML
comp=N,1225µm,0.5s
ATCC AVT- Casa Cast 0.56 310 ⇑P Pg 00 37 11.8 +0.1
ATCC AML AML
comp=N,898µm,0.3s
ATCC AML AML
comp=E,806µm,0.3s
ATCC AML AML
comp=N,894µm,0.3s
FIAM Fiamignano 0.56 188 P Pg 00 37 11.7 0.0
FOSV Fossato di Vic 0.58 325 ⇑P Pg 00 37 12.0 0.0
FOSV AML AML
comp=N,988µm,0.3s
FOSV AML AML
comp=N,988µm,0.3s
FOSV AML AML
comp=E,750µm,0.1s
FAGN Fagnano 0.62 154 P Pg 00 37 12.8 0.0

FAGN				AML	AML	
	comp=N,1620μm,0.3s					
FAGN				AML	AML	
	comp=E,1280μm,0.4s					
PP3	**Marolino**	**0.62**	**27**	⇑P	Pb	00 37 13.9 +0.2
PP3				AML	AML	
	comp=N,4715μm,0.4s					
PP3				AML	AML	
	comp=N,4990μm,0.4s					
PP3				AML	AML	
	comp=E,3785μm,0.4s					
PP3				AML	AML	
	comp=N,4720μm,0.4s					
PP3				AML	AML	
	comp=N,4995μm,0.4s					
PP3				AML	AML	
	comp=E,3970μm,0.3s					
VCEL	**Villa Celiera**	**0.63**	**133**	⇑P	Pg	00 37 13.2 +0.2
VCEL				AML	AML	
	comp=E,1130μm,0.5s					
VCEL				AML	AML	
	comp=N,918μm,0.9s					
MURB	**Monte Urbino**	**0.67**	**311**	⇑P	Pg	00 37 13.8 0.0
MURB				AML	AML	
	comp=N,1310μm,0.3s					
MURB				AML	AML	
	comp=E,1200μm,1.5s					
MURB				AML	AML	
	comp=E,1255μm,1.5s					
MURB				AML	AML	
	comp=N,1370μm,0.3s					
MURB				AML	AML	
	comp=N,1310μm,0.3s					
ARVD	**Arcevia**	**0.70**	**343**	P	Pg	00 37 14.2 -0.1
ARVD				S	Sb	00 37 26.0 +1.2
ARVD				AML	AML	
	comp=E,309μm,1.0s					
ARVD				AML	AML	
	comp=N,256μm,0.1s					
ATFO	**Monte Foce - G**	**0.72**	**319**	⇑P	Pg	00 37 14.6 -0.1
ATFO				AML	AML	
	comp=E,337μm,1.2s					
ATFO				AML	AML	
	comp=N,328μm,0.9s					
T0110	**Collepietro**	**0.73**	**145**	P	Pg	00 37 14.5 -0.4
T0110				AML	AML	
	comp=E,736μm,0.3s					
T0110				AML	AML	
	comp=N,914μm,0.3s					
ATTE	**AVT- Monte Tez**	**0.74**	**301**	⇓P	Pn	00 37 17.6 +0.4
ATTE				AML	AML	
	comp=N,172μm,0.3s					
ATTE				AML	AML	
	comp=E,261μm,0.4s					
AOI	**Ancona**	**0.78**	**21**	⇑P	Pb	00 37 16.2 -0.1
AOI				S	Sn	00 37 30.0 +0.6
AOI				AML	AML	
	comp=N,504μm,0.4s					
AOI				AML	AML	
	comp=E,562μm,1.2s					
FRON	**Frontone**	**0.78**	**333**	⇑P	Pg	00 37 15.6 -0.3
FRON				AML	AML	
	comp=N,372μm,1.3s					
FRON				AML	AML	
	comp=E,270μm,0.6s					
SRES	**S.Oreste - Sor**	**0.79**	**222**	P	Pb	00 37 16.4 -0.1
SRES				AML	AML	
	comp=E,130μm,0.9s					
SRES				AML	AML	
	comp=N,140μm,1.0s					
PTQR	**Pietraquaria**	**0.81**	**170**	P	Pg	00 37 15.8 -0.7
PTQR				AML	AML	
	comp=N,93μm,0.3s					
PTQR				AML	AML	
	comp=E,120μm,0.4s					
ATVO	**AVT- Monte Val**	**0.81**	**313**	⇓P	Pg	00 37 16.3 -0.2
ATVO				AML	AML	
	comp=E,251μm,0.3s					
ATVO				AML	AML	
	comp=N,224μm,0.6s					
MGAB	**Montegabbione**	**0.82**	**276**	⇓P	Pn	00 37 18.9 +0.6
MGAB				AML	AML	
	comp=N,296μm,0.6s					
MGAB				AML	AML	
	comp=N,255μm,0.4s					
MGAB				AML	AML	
	comp=E,411μm,0.4s					
MGAB				AML	AML	
	comp=E,363μm,0.4s					
ATPI	**Pietralunga -**	**0.86**	**317**	⇓P	Pg	00 37 17.2 -0.2
ATPI				AML	AML	
	comp=N,213μm,0.4s					
ATPI				AML	AML	
	comp=E,206μm,0.4s					
PIEI	**Pieia**	**0.87**	**325**	S	Sn	00 37 32.0 +0.3
MPAG	**Monte Paganucc**	**0.87**	**337**	⇑P	Pg	00 37 17.6 0.0
MPAG				AML	AML	
	comp=E,280μm,0.4s					
MPAG				AML	AML	
	comp=N,226μm,0.3s					
NARO	**Abbazia di Nar**	**0.91**	**330**	⇑P	Pg	00 37 17.9 -0.5
NARO				AML	AML	
	comp=E,194μm,0.8s					
NARO				AML	AML	
	comp=N,138μm,0.7s					
FSSB	**Fossombrone**	**0.93**	**340**	⇓P	Pg	00 37 18.6 -0.1
FSSB				AML	AML	
	comp=N,1070μm,0.4s					
FSSB				AML	AML	
	comp=E,904μm,0.5s					
INTR	**Introdacqua**	**0.96**	**148**	⇑P	Pg	00 37 14.6 -4.7
INTR				AML	AML	
	comp=E,192μm,0.5s					
INTR				AML	AML	
	comp=N,371μm,0.9s					
BADI	**Badiali**	**0.99**	**314**	⇓P	Pg	00 37 19.7 -0.1
BADI				S	Sn	00 37 36.0 +1.4
PE3	**Peglio**	**1.02**	**329**	⇓P	Pb	00 37 20.6 +0.2
CAFR	**Castel Frentan**	**1.03**	**125**	⇓P	Pg	00 37 19.9 -0.6
CAFR				AML	AML	
	comp=N,210μm,0.3s					
CAFR				AML	AML	
	comp=E,197μm,0.5s					
CPGN	**Carpegna, Ital**	**1.18**	**326**	⇑P	Pg	00 37 23.8 +0.5
CRE	**Caprese Michel**	**1.22**	**311**	⇑P	Pg	00 37 25.5 +1.2
CRE				AML	AML	
	comp=E,78μm,0.4s					
CRE				AML	AML	
	comp=N,77μm,0.6s					
LIK	**San Giovanni I**	**1.34**	**169**	⇓P	Pn	00 37 18.0 -7.5
PAOL	**Paolisi**	**2.06**	**150**	⇓P	Pn	00 37 30.2 -5.1
VENL	**Venezia Lido**	**2.66**	**347**	⇓P	Pb	00 37 47.0 -1.4
VENL				AML	AML	
	comp=N,977μm,0.9s					
VENL				AML	AML	
	comp=E,1320μm,0.6s					
OBKA	**Obir**	**3.80**	**14**	*e*Pn	Pn	00 38 00.2 +0.8
	comp=E,0.2nm,0.3s					
ABTA	**Abfaltersbach**	**3.95**	**353**	*e*Pn	Pn	00 38 02.9 +1.4
	comp=E,2.5nm,0.3s					
WTTA	**Wattenberg**	**4.58**	**346**	*e*Pn	Pn	00 38 12.8 +2.7
	comp=E,0.5nm,0.2s					
WATA	**Walderalm**	**4.66**	**346**	*e*Pn	Pn	00 38 13.5 +2.3
	comp=E,0.7nm,0.3s					
MOTA	**Moosalm**	**4.76**	**342**	*e*Pn	Pn	00 38 15.7 +3.1
	comp=E,0.9nm,0.4s					
BIOA	**Bad Ischl, Aus**	**4.88**	**3**	*e*Pn	Pn	00 38 14.6 +0.5
	comp=E,0.6nm,0.2s					

ROM 31 00:37:51.3±0.0, 42°808N±0°002×13°127E±0°004, h11km, ML2.4/17, 9C-9D, Error ellipse: s-maj=0.2km s-min=0.2km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**43**	⇑P		Pg	00 37 54.1	+0.4
T1245				S		Sg	00 37 55.8	+0.3
T1245				AML		AML		
	comp=E,12500μm,0.3s							
T1245				AML		AML		
	comp=N,13350μm,0.7s							
T1245				AML		AML		
	comp=E,12500μm,0.3s							
T1245				AML		AML		
	comp=N,12500μm,0.8s							
T1245				AML		AML		
	comp=E,13000μm,0.2s							
T1245				AML		AML		
	comp=E,22700μm,0.2s							
T1245				AML		AML		
	comp=N,32150μm,0.3s							
T1245				AML		AML		
	comp=N,32600μm,0.3s							
T1245				AML		AML		
	comp=E,24800μm,0.2s							
T1245				AML		AML		
	comp=E,22700μm,0.2s							
T1216	**Preci, Frazion**	**0.12**	**316**	P		Pg	00 37 54.8	+0.6
T1216				S		Sg	00 37 56.9	+0.5
FEMA	**Monte Fema**	**0.16**	**340**	P		Pg	00 37 55.7	+0.6
FEMA				S		Sg	00 37 58.4	+0.7
MMO1	**Montemonaco**	**0.17**	**58**	P		Pg	00 37 55.6	+0.4
MMO1				S		Sg	00 37 58.8	+1.0
T1217	**Poggiodomo (PG**	**0.17**	**236**	P		Pg	00 37 55.8	+0.6
T1217				S		Sg	00 37 59.0	+1.1
T1201	**Domo (RI)**	**0.18**	**149**	P		Pb	00 37 56.0	-0.7
T1201				S		Sg	00 37 59.3	+1.4
T1215	**Vallo di Nera,**	**0.19**	**268**	P		Pg	00 37 56.0	+0.6
T1215				S		Sg	00 37 59.4	+1.1
T1204	**Amatrice, Fraz**	**0.19**	**133**	P		Pg	00 37 56.0	+0.5
T1204				S		Sg	00 37 59.4	+1.0
LNSS	**Leonessa**	**0.21**	**197**	P		Pg	00 37 55.8	0.0
LNSS				S		Sg	00 38 00.1	+1.2
LNSS				AML		AML		
	comp=N,3635μm,1.1s							
LNSS				AML		AML		
	comp=N,3630μm,1.1s							
LNSS				AML		AML		
	comp=E,1280μm,1.0s							
T1241	**Roccafluvione,**	**0.23**	**78**	P		Pb	00 37 57.2	-0.4
T1241				AML		AML		
	comp=N,889μm,0.2s							
T1241				AML		AML		
	comp=E,702μm,0.3s							
T1241				AML		AML		
	comp=N,892μm,0.2s							
T1241				AML		AML		
	comp=E,2160μm,0.3s							
T1241				AML		AML		
	comp=N,2180μm,1.4s							
SMA1	**SAN MARTINO**	**0.23**	**139**	P		Pg	00 37 56.7	+0.5
SMA1				S		Sg	00 38 00.5	+1.0
SMA1				AML		AML		
	comp=E,894μm,0.5s							
SMA1				AML		AML		
	comp=N,856μm,0.5s							
SMA1				AML		AML		
	comp=E,1365μm,0.6s							
SMA1				AML		AML		
	comp=N,938μm,0.6s							
AM05	**Amandola Campo**	**0.24**	**44**	P		Pg	00 37 56.8	+0.6
AM05				S		Sg	00 38 00.7	+1.1
AM05				AML		AML		
	comp=E,1220μm,0.8s							
AM05				AML		AML		
	comp=N,94μm,1.1s							
AM05				AML		AML		
	comp=E,324μm,0.8s							
AM05				AML		AML		
	comp=N,290μm,0.1s							
AM05				AML		AML		
	comp=N,95μm,1.1s							
AM05				AML		AML		
	comp=E,1440μm,0.6s							
AM05				AML		AML		
	comp=N,1124μm,0.3s							
AM05				AML		AML		
	comp=N,323μm,0.1s							
AM05				AML		AML		
	comp=E,5805μm,0.4s							
T1243	**Rocca Santa Ma**	**0.26**	**115**	⇓P		Pg	00 37 57.1	+0.4
GUMA	**Gualdo di Mace**	**0.30**	**31**	⇓P		Pb	00 37 58.1	-0.6
GUMA				S		Sb	00 38 03.1	-0.6
GUMA				AML		AML		
	comp=E,2270μm,0.9s							
GUMA				AML		AML		
	comp=N,1205μm,0.3s							
GUMA				AML		AML		
	comp=E,2125μm,0.9s							
GUMA				AML		AML		
	comp=N,1395μm,0.9s							
GUMA				AML		AML		
	comp=E,7390μm,0.4s							
GUMA				AML		AML		
	comp=E,7365μm,0.4s							
GUMA				AML		AML		
	comp=N,7775μm,1.6s							
GUMA				AML		AML		
	comp=N,5015μm,1.6s							
RM33	**Pellescritta (**	**0.30**	**168**	P		Pg	00 37 57.9	+0.4
RM33				S		Sb	00 38 02.9	-1.0
T1211	**Morro Reatino**	**0.34**	**216**	P		Pg	00 37 58.6	+0.4
T1211				S		Sb	00 38 04.0	-0.9
T1211				AML		AML		
	comp=N,1184μm,0.7s							
T1211				AML		AML		
	comp=N,1181μm,0.7s							
T1211				AML		AML		
	comp=E,736μm,1.1s							
ARRO	**Arrone**	**0.35**	**230**	P		Pg	00 37 58.8	+0.5
ARRO				S		Sb	00 38 04.5	-0.6
ARRO				AML		AML		
	comp=E,289μm,1.6s							
ARRO				AML		AML		
	comp=N,274μm,0.2s							
T1247	**Pizzolo (AQ)**	**0.39**	**161**	P		Pg	00 37 59.3	+0.3
T1247				S		Sb	00 38 05.6	-0.7
TERO	**Teramo**	**0.40**	**118**	⇓P		Pg	00 37 59.6	+0.5
TERO				AML		AML		
	comp=E,447μm,0.1s							
TERO				AML		AML		
	comp=N,426μm,0.9s							
TERO				AML		AML		
	comp=N,1330μm,0.5s							
TERO				AML		AML		
	comp=N,1370μm,0.5s							
TERO				AML		AML		
	comp=E,810μm,0.4s							
TERO				AML		AML		
	comp=E,818μm,0.4s							
OFFI	**Offida**	**0.43**	**73**	⇑P		Pb	00 38 01.0	0.0
OFFI				AML		AML		
	comp=E,1174μm,0.4s							
OFFI				AML		AML		
	comp=N,974μm,0.5s							
GAG1	**Gagliole**	**0.43**	**354**	P		Pb	00 38 00.7	-0.3
CESX	**Cesi**	**0.45**	**244**	⇓P		Pb	00 38 00.7	-0.6
SNTG	**Esanatoglia**	**0.47**	**343**	⇑P		Pg	00 38 00.9	+0.4
SNTG				AML		AML		
	comp=E,344μm,0.5s							
SNTG				AML		AML		
	comp=N,387μm,0.3s							
SNTG				AML		AML		
	comp=N,423μm,1.2s							
SNTG				AML		AML		
	comp=E,404μm,1.5s							
GIGS	**Gran Sasso**	**0.48**	**137**	⇑P		Pg	00 38 00.9	+0.1
GIGS				AML		AML		
	comp=E,67μm,0.4s							
GIGS				AML		AML		
	comp=N,72μm,0.3s							
GIGS				AML		AML		
	comp=E,322μm,0.3s							
GIGS				AML		AML		
	comp=N,110μm,0.7s							
ATCC	**AVT- Casa Cast**	**0.52**	**317**	P		Pg	00 38 01.9	+0.4
ATCC				AML		AML		
	comp=E,509μm,0.3s							
ATCC				AML		AML		
	comp=N,367μm,0.6s							
EL6	**Elcito**	**0.52**	**358**	⇑P		Pg	00 38 01.5	0.0
EL6				S		Sb	00 38 11.0	+0.8
FIAM	**Fiamignano**	**0.54**	**181**	S		Sb	00 38 11.0	+0.3
FOSV	**Fossato di Vic**	**0.56**	**331**	⇓P		Pg	00 38 02.5	+0.4
FOSV				AML		AML		
	comp=E,358μm,1.1s							
FOSV				AML		AML		
	comp=N,429μm,1.5s							
VCEL	**Villa Celiera**	**0.67**	**128**	⇓P		Pg	00 38 04.5	+0.2
PP3	**Marolino**	**0.67**	**32**	⇑P		Pb	00 38 05.4	+0.3
PP3				AML		AML		
	comp=E,623μm,0.6s							
PP3				AML		AML		
	comp=N,600μm,0.5s							
ATFO	**Monte Foce - G**	**0.69**	**324**	⇓P		Pb	00 38 05.2	-0.3
ARVD	**Arcevia**	**0.70**	**349**	⇑P		Pb	00 38 05.3	-0.3
ARVD				S		Sn	00 38 17.0	-1.2
ARVD				AML		AML		
	comp=E,344μm,0.2s							
ARVD				AML		AML		
	comp=N,194μm,0.7s							
SRES	**S.Oreste - Sor**	**0.73**	**219**	⇑P		Pb	00 38 05.8	-0.3
T0110	**Collepietro**	**0.76**	**140**	⇑P		Pg	00 38 05.7	-0.2
T0110				AML		AML		
	comp=E,346μm,0.4s							
T0110				AML		AML		
	comp=N,351μm,1.1s							
CERT	**Cerreto**	**0.86**	**187**	⇓P		Pb	00 38 08.3	-0.1
NARO	**Abbazia di Nar**	**0.90**	**334**	⇓P		Pg	00 38 08.7	+0.1
PAOL	**Paolisi**	**2.08**	**148**	P		Pg	00 38 32.6	+1.6

*STR **31** 00:45:26.2±2.1, 43°N±13°×1°4E±1°4, h0km, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=131.5, preliminary*
*PRU **31** 00:45:30.4±0.0, 42°80N×13°68E, h0km*
*ROM **31** 00:45:31.6±0.0, 42°804N±0°003×13°095E±0°004, h11km, ML3.2/103, Error ellipse: s-maj=0.4km s-min=0.3km az=311.0*
*IDC **31** 00:45:32.4±1.4, 43°00N×13°35E, h0km, mb3.4/2, mbtmp3.3/8, ML3.1/6, Error ellipse: s-maj=32.1km s-min=14.4km az=98.0*

ISC 31 00:45:32.1±0.7, 42°80N±0°01×13°12E±0°02, h13km±4km, n186, σ1§35/220, 66C-40D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**41**	P		**Pg**	**00 45 34.7**	**-0.4**
T1245				S		**Sg**	**00 45 36.6**	**-0.6**
T1245				AML		AML		
T1245				AML		AML		
	comp=E,98550μm,0.7s							
T1245				AML		AML		
T1245				AML		AML		
T1216	**Preci, Frazion**	**0.12**	**322**	⇑P		**Pg**	**00 45 34.8**	**-0.6**
T1216				S		**Sg**	**00 45 36.8**	**-0.9**
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1216				AML		AML		
T1217	**Poggiodomo (PG**	**0.16**	**238**	⇑P		**Pg**	**00 45 35.8**	**-0.3**
T1217				S		**Sg**	**00 45 38.5**	**-0.3**
T1217				AML		AML		
	comp=E,15900μm,0.4s							
T1217				AML		AML		
	comp=E,15700μm,0.4s							
T1217				AML		AML		
	comp=E,15950μm,0.3s							
T1217				AML		AML		
	comp=N,17350μm,0.3s							
T1217				AML		AML		
	comp=N,17350μm,0.3s							
T1217				AML		AML		
	comp=E,15700μm,0.3s							
T1217				AML		AML		
	comp=N,17450μm,0.3s							
T1217				AML		AML		
	comp=N,17500μm,0.3s							
T1201	**Domo (RI)**	**0.17**	**145**	P		**Pg**	**00 45 36.4**	**+0.2**
T1201				S		**Sb**	**00 45 40.2**	**-0.4**
FEMA	**Monte Fema**	**0.17**	**343**	P		**Pg**	**00 45 35.8**	**-0.5**
FEMA				S		**Sg**	**00 45 38.6**	**-0.5**
FEMA				AML		AML		
	comp=E,84900μm,1.1s							
FEMA				AML		AML		
	comp=N,68750μm,0.6s							
FEMA				AML		AML		
	comp=N,68750μm,0.6s							
FEMA				AML		AML		
	comp=E,84900μm,1.1s							
FEMA				AML		AML		
	comp=N,68700μm,0.6s							
MMO1	**Montemonaco**	**0.18**	**56**	P		**Pg**	**00 45 36.2**	**-0.2**
MMO1				S		**Sg**	**00 45 39.6**	**+0.2**
T1215	**Vallo di Nera,**	**0.18**	**271**	⇑P		**Pg**	**00 45 35.9**	**-0.5**
T1215				S		**Sg**	**00 45 38.8**	**-0.5**
T1215				AML		AML		
	comp=N,13850μm,0.9s							
T1215				AML		AML		
	comp=E,14850μm,0.2s							
T1215				AML		AML		
	comp=E,14850μm,0.2s							
T1215				AML		AML		
	comp=E,14900μm,0.2s							
T1215				AML		AML		
	comp=N,14150μm,0.9s							
T1215				AML		AML		
	comp=E,14900μm,0.2s							
T1215				AML		AML		
	comp=E,14850μm,0.2s							
T1215				AML		AML		
	comp=N,13850μm,0.9s							
T1215				AML		AML		
	comp=N,14100μm,0.9s							
T1215				AML		AML		
	comp=E,14850μm,0.2s							
T1204	**Amatrice, Fraz**	**0.19**	**130**	P		**Pg**	**00 45 36.6**	**+0.1**
T1204				S		**Sb**	**00 45 40.4**	**-0.8**
T1204				AML		AML		
	comp=E,17100μm,0.6s							
T1204				AML		AML		
	comp=N,16300μm,0.5s							
T1204				AML		AML		
	comp=E,17050μm,0.6s							
LNSS	**Leonessa**	**0.20**	**196**	⇑P		**Pg**	**00 45 36.7**	**-0.1**
LNSS				S		**Sg**	**00 45 40.1**	**+0.3**
LNSS				AML		AML		
	comp=E,12800μm,0.3s							
LNSS				AML		AML		
	comp=N,23900μm,1.5s							
SMA1	**SAN MARTINO**	**0.23**	**136**	⇑P		**Pg**	**00 45 37.3**	**+0.1**
SMA1				S		**Sb**	**00 45 41.4**	**-0.9**
SMA1				AML		AML		
	comp=N,16150μm,0.6s							
SMA1				AML		AML		
	comp=N,16200μm,0.6s							
SMA1				AML		AML		
	comp=E,18900μm,0.5s							
T1241	**Roccafluvione,**	**0.24**	**76**	P		**Pg**	**00 45 37.4**	**+0.1**
T1241				S		**Sb**	**00 45 41.5**	**-1.0**
T1241				AML		AML		
	comp=N,17600μm,0.7s							
T1241				AML		AML		
	comp=E,17850μm,0.7s							
T1241				AML		AML		
	comp=E,17950μm,0.7s							
T1241				AML		AML		
	comp=N,17750μm,0.6s							
T1241				AML		AML		
	comp=N,17700μm,0.6s							
T1241				AML		AML		
	comp=E,17850μm,0.7s							
AM05	**Amandola Campo**	**0.25**	**44**	P		**Pg**	**00 45 37.5**	**0.0**
AM05				S		**Sg**	**00 45 41.6**	**+0.5**
AM05				AML		AML		
	comp=E,4290μm,0.5s							
AM05				AML		AML		
	comp=N,5825μm,1.4s							
AM05				AML		AML		
	comp=E,15350μm,0.7s							
AM05				AML		AML		
	comp=N,1220μm,0.1s							
T1243	**Rocca Santa Ma**	**0.26**	**112**	P		**Pg**	**00 45 37.6**	**-0.2**
T1243				S		**Sb**	**00 45 42.3**	**-1.0**
RM33	**Pellescritta (**	**0.30**	**166**	P		**Pg**	**00 45 38.2**	**-0.2**
RM33				S		**Sg**	**00 45 43.2**	**+0.8**
RM33				AML		AML		
	comp=E,6450μm,1.1s							
RM33				AML		AML		
	comp=N,5470μm,0.3s							
RM33				AML		AML		
	comp=E,6375μm,1.0s							
RM33				AML		AML		
	comp=E,6450μm,1.0s							

RM33				AML	AML	
	comp=N,5465μm,0.3s					
RM33				AML	AML	
	comp=N,5365μm,0.3s					
RM33				AML	AML	
	comp=E,6380μm,1.0s					
GUMA	**Gualdo di Mace**	**0.31**	**31**	P	**Pg**	**00 45 38.7 +0.1**
GUMA				S	**Sb**	**00 45 44.0 -0.6**
GUMA				AML	AML	
	comp=E,27950μm,0.4s					
GUMA				AML	AML	
	comp=N,24100μm,0.4s					
GUMA				AML	AML	
	comp=N,24700μm,0.4s					
GUMA				AML	AML	
	comp=E,30450μm,0.5s					
GUMA				AML	AML	
	comp=E,28000μm,0.4s					
T1211	**Morro Reatino**	**0.33**	**216**	P	**Pg**	**00 45 38.5 -0.3**
T1211				S	**Sg**	**00 45 44.0 +0.6**
T1211				AML	AML	
	comp=E,6275μm,0.3s					
T1211				AML	AML	
	comp=E,6360μm,1.6s					
T1211				AML	AML	
	comp=N,8120μm,0.3s					
T1211				AML	AML	
	comp=E,6345μm,1.6s					
T1211				AML	AML	
	comp=N,8120μm,0.3s					
T1211				AML	AML	
	comp=N,8195μm,0.2s					
T1211				AML	AML	
	comp=E,6355μm,1.6s					
T1211				AML	AML	
	comp=E,6270μm,0.3s					
CAMP	**Campotosto**	**0.34**	**141**	⇑P	**Pg**	**00 45 38.9 -0.1**
CAMP				AML	AML	
	comp=E,2630μm,0.6s					
CAMP				AML	AML	
	comp=N,3170μm,0.8s					
ARRO	**Arrone**	**0.34**	**230**	P	**Pg**	**00 45 38.7 -0.3**
ARRO				AML	AML	
	comp=N,4505μm,0.6s					
ARRO				AML	AML	
	comp=E,3610μm,0.4s					
SEF1	**Sefro**	**0.37**	**340**	⇑P	**Pg**	**00 45 39.1 -0.5**
SEF1				AML	AML	
	comp=E,20550μm,0.7s					
SEF1				AML	AML	
	comp=N,23850μm,0.4s					
SEF1				AML	AML	
	comp=E,20550μm,0.7s					
SEF1				AML	AML	
	comp=N,23850μm,0.4s					
T1247	**Pizzolo (AQ)**	**0.38**	**159**	⇑P	**Pg**	**00 45 39.6 -0.2**
T1247				AML	AML	
	comp=N,5185μm,1.1s					
T1247				AML	AML	
	comp=E,5080μm,0.9s					
MDAR	**Monte D'Aria**	**0.40**	**3**	P	**Pg**	**00 45 39.8 -0.3**
MDAR				AML	AML	
	comp=E,4600μm,0.5s					
MDAR				AML	AML	
	comp=N,7535μm,1.3s					
TERO	**Teramo**	**0.40**	**116**	⇑P	**Pg**	**00 45 39.9 -0.2**
TERO				AML	AML	
	comp=E,5475μm,1.1s					
TERO				AML	AML	
	comp=N,4265μm,0.4s					
TERO				AML	AML	
	comp=E,5845μm,1.1s					
TERO				AML	AML	
	comp=E,5840μm,1.1s					
TERO				AML	AML	
	comp=N,4410μm,0.4s					
TERO				AML	AML	
	comp=E,5480μm,1.1s					
FIU1	**Fiuminata**	**0.41**	**341**	⇓P	**Pg**	**00 45 40.0 -0.4**
FIU1				AML	AML	
	comp=E,10750μm,0.2s					
FIU1				AML	AML	
	comp=N,10620μm,1.0s					
FIU1				AML	AML	
	comp=N,10610μm,1.0s					
FIU1				AML	AML	
	comp=E,10765μm,0.2s					
ASSB	**Assisi San Ben**	**0.42**	**306**	⇑P	**Pg**	**00 45 39.8 -0.7**
ASSB				AML	AML	
	comp=N,8225μm,0.6s					
ASSB				AML	AML	
	comp=E,9280μm,0.9s					
MNTP	**Montappone**	**0.43**	**37**	⇓P	**Pb**	**00 45 41.1 -0.4**
MNTP				AML	AML	
	comp=E,10780μm,0.7s					
MNTP				AML	AML	
	comp=N,11050μm,0.3s					
MNTP				AML	AML	
	comp=E,10745μm,0.7s					
MNTP				AML	AML	
	comp=N,11045μm,0.2s					
SSM1	**San Severino M**	**0.43**	**6**	⇓P	**Pg**	**00 45 40.5 -0.2**
CESX	**Cesi**	**0.44**	**245**	⇑P	**Pg**	**00 45 40.3 -0.6**
CESX				AML	AML	
	comp=E,5590μm,0.5s					
CESX				AML	AML	
	comp=N,3760μm,0.3s					
OFFI	**Offida**	**0.44**	**72**	⇑P	**Pb**	**00 45 41.6 -0.2**
OFFI				AML	AML	
	comp=N,16550μm,0.6s					
OFFI				AML	AML	
	comp=E,11575μm,0.4s					
GAG1	**Gagliole**	**0.44**	**355**	P	**Pg**	**00 45 40.7 -0.2**
GAG1				AML	AML	
	comp=N,18200μm,0.5s					
GAG1				AML	AML	
	comp=E,14150μm,1.4s					
SNTG	**Esanatoglia**	**0.47**	**344**	⇓P	**Pg**	**00 45 41.4 -0.1**
SNTG				S	**Sg**	**00 45 49.0 +1.1**
SNTG				AML	AML	
	comp=E,4545μm,0.5s					
SNTG				AML	AML	
	comp=N,3840μm,1.5s					
SNTG				AML	AML	
	comp=N,4410μm,1.5s					
SNTG				AML	AML	
	comp=E,4545μm,0.5s					
SNTG				AML	AML	
	comp=N,3845μm,1.5s					
SNTG				AML	AML	
	comp=E,4370μm,0.5s					
SNTG				AML	AML	
	comp=N,3840μm,1.5s					
GIGS	**Gran Sasso**	**0.48**	**136**	⇑P	**Pg**	**00 45 41.1 -0.5**
GIGS				AML	AML	
	comp=E,812μm,0.6s					
GIGS				AML	AML	
	comp=N,646μm,1.5s					
GIGS				AML	AML	
	comp=N,645μm,1.5s					
AQU	**L'Aquila**	**0.49**	**155**	⇑P	**Pg**	**00 45 41.5 -0.4**
AQU				AML	AML	
	comp=E,2450μm,0.6s					
AQU				AML	AML	
	comp=E,2370μm,0.6s					
AQU				AML	AML	
	comp=N,2295μm,0.6s					
AQU				AML	AML	
	comp=N,2390μm,0.6s					
ATCC	**AVT- Casa Cast**	**0.52**	**318**	⇑P	**Pg**	**00 45 41.8 -0.7**
ATCC				AML	AML	
	comp=N,6120μm,1.6s					
ATCC				AML	AML	
	comp=E,7180μm,1.0s					
ATCC				AML	AML	
	comp=N,6115μm,1.6s					
FIAM	**Fiamignano**	**0.53**	**180**	⇑P	**Pg**	**00 45 42.0 -0.5**
FIAM				S	**Sb**	**00 45 51.0 +0.1**
FIAM				AML	AML	
	comp=N,1890μm,1.0s					
FIAM				AML	AML	
	comp=E,2070μm,0.6s					
EL6	**Elcito**	**0.53**	**359**	⇑P	**Pg**	**00 45 42.0 -0.6**
EL6				S	**Sb**	**00 45 52.0 +1.0**
EL6				AML	AML	
	comp=N,9035μm,0.2s					
EL6				AML	AML	
	comp=E,7910μm,1.2s					
EL6				AML	AML	
	comp=N,9050μm,0.2s					
FOSV	**Fossato di Vic**	**0.56**	**332**	⇑P	**Pg**	**00 45 42.4 -0.8**
FOSV				AML	AML	
	comp=N,4515μm,0.4s					
FOSV				AML	AML	
	comp=E,3565μm,0.7s					
FOSV				AML	AML	
	comp=N,4520μm,0.4s					
TRTR	**Tortoreto Alta**	**0.59**	**89**	⇑P	**Pb**	**00 45 44.5 +0.3**
TRTR				AML	AML	
	comp=N,8625μm,0.5s					
TRTR				AML	AML	
	comp=E,12300μm,0.7s					
FAGN	**Fagnano**	**0.63**	**147**	⇑P	**Pg**	**00 45 43.8 -0.7**
FAGN				S	**Sn**	**00 45 56.0 -0.9**
FAGN				AML	AML	
	comp=E,4565μm,0.6s					
FAGN				AML	AML	
	comp=N,2790μm,0.5s					
MURB	**Monte Urbino**	**0.64**	**317**	⇑P	**Pg**	**00 45 43.8 -0.8**
MURB				S	**Sb**	**00 45 55.0 +1.0**
MURB				AML	AML	
	comp=E,13150μm,1.1s					
MURB				AML	AML	
	comp=N,16100μm,0.3s					
MURB				AML	AML	
	comp=E,15450μm,1.1s					
MURB				AML	AML	
	comp=N,15350μm,0.3s					
MURB				AML	AML	
	comp=N,16150μm,0.3s					
MMUR	**Monte Murano**	**0.65**	**352**	S	**Sb**	**00 45 55.0 +0.6**
VCEL	**Villa Celiera**	**0.67**	**127**	⇑P	**Pg**	**00 45 44.8 -0.4**
VCEL				AML	AML	
	comp=N,3125μm,0.6s					
VCEL				AML	AML	
	comp=N,3120μm,0.6s					
VCEL				AML	AML	
	comp=E,3015μm,0.5s					
PP3	**Marolino**	**0.68**	**32**	⇓P	**Pn**	**00 45 46.5 -1.0**
PP3				AML	AML	
	comp=E,6365μm,1.0s					
PP3				AML	AML	
	comp=N,4905μm,0.5s					
PP3				AML	AML	
	comp=E,6560μm,1.0s					
PP3				AML	AML	
	comp=N,4755μm,0.3s					
ATTE	**AVT- Monte Tez**	**0.69**	**306**	⇑P	**Pg**	**00 45 44.6 -1.0**
ATTE				AML	AML	
	comp=E,3610μm,0.4s					
ATTE				AML	AML	
	comp=N,2465μm,0.3s					
ATFO	**Monte Foce - G**	**0.70**	**325**	⇑P	**Pg**	**00 45 44.7 -1.0**
ATFO				AML	AML	
	comp=E,3345μm,0.5s					
ATFO				AML	AML	
	comp=N,6425μm,0.3s					
ATFO				AML	AML	
	comp=E,3350μm,0.5s					
ARVD	**Arcevia**	**0.71**	**350**	⇑P	**Pg**	**00 45 45.1 -0.9**
ARVD				S	**Sb**	**00 45 57.0 +0.8**
ARVD				AML	AML	
	comp=E,1775μm,0.4s					
ARVD				AML	AML	
	comp=N,1425μm,0.1s					
SRES	**S.Oreste - Sor**	**0.72**	**219**	⇑P	**Pg**	**00 45 45.5 -0.6**
SRES				AML	AML	
	comp=N,978μm,0.3s					
SRES				AML	AML	
	comp=E,896μm,0.3s					
MGAB	**Montegabbione**	**0.75**	**279**	⇑P	**Pg**	**00 45 45.8 -0.9**
MGAB				AML	AML	
	comp=N,4720μm,0.5s					
MGAB				AML	AML	
	comp=E,4825μm,0.4s					
MGAB				AML	AML	
	comp=E,4385μm,0.4s					
MGAB				AML	AML	
	comp=N,4695μm,0.5s					
T0110	**Collepietro**	**0.75**	**139**	⇑P	**Pg**	**00 45 45.8 -0.9**
T0110				AML	AML	
	comp=E,2875μm,1.2s					
T0110				AML	AML	
	comp=N,2855μm,0.7s					
FRON	**Frontone**	**0.78**	**338**	⇑P	**Pg**	**00 45 45.9 -1.3**
FRON				AML	AML	
	comp=N,3165μm,1.2s					
FRON				AML	AML	
	comp=E,1995μm,1.2s					
ATVO	**AVT- Monte Val**	**0.78**	**318**	⇑P	**Pb**	**00 45 46.1 -1.5**
ATVO				AML	AML	
	comp=N,1615μm,0.3s					
ATVO				AML	AML	
	comp=E,1930μm,0.5s					
PTQR	**Pietraquaria**	**0.80**	**165**	⇑P	**Pg**	**00 45 47.0 -0.7**
PTQR				AML	AML	
	comp=N,774μm,0.6s					
PTQR				AML	AML	
	comp=E,877μm,0.6s					
ATMI	**Monte Miggiano**	**0.82**	**311**	⇓P	**Pb**	**00 45 47.4 -0.9**
ATMI				AML	AML	
	comp=E,5655μm,0.6s					
ATMI				AML	AML	
	comp=N,5755μm,0.3s					
MTCE	**Montecelio**	**0.82**	**200**	⇓P	**Pb**	**00 45 47.2 -1.1**
MTCE				AML	AML	
	comp=E,806μm,0.4s					
MTCE				AML	AML	
	comp=N,895μm,0.7s					
AOI	**Ancona**	**0.83**	**25**	⇑P	**Pb**	**00 45 48.2 -0.3**
AOI				AML	AML	
	comp=N,1910μm,0.3s					
AOI				AML	AML	
	comp=E,2095μm,0.3s					
ATPI	**Pietralunga -**	**0.84**	**321**	⇑P	**Pb**	**00 45 47.2 -1.3**
ATPI				AML	AML	
	comp=E,1475μm,0.6s					
ATPI				AML	AML	
	comp=N,1520μm,1.4s					
PIEI	**Pieia**	**0.85**	**330**	⇑P	**Pb**	**00 45 47.3 -1.5**
PIEI				S	**Sg**	**00 46 01.0 +1.1**
PIEI				AML	AML	
	comp=E,1995μm,0.3s					
PIEI				AML	AML	
	comp=N,1590μm,0.8s					
CERT	**Cerreto**	**0.85**	**187**	⇓P	**Pb**	**00 45 47.6 -1.3**
CERT				AML	AML	
	comp=E,1830μm,0.7s					
CERT				AML	AML	
	comp=N,942μm,0.6s					
MPAG	**Monte Paganucc**	**0.87**	**343**	⇑P	**Pb**	**00 45 47.9 -1.3**
MPAG				AML	AML	
	comp=N,1770μm,1.4s					
MPAG				AML	AML	
	comp=N,1775μm,1.4s					
MPAG				AML	AML	
	comp=E,1810μm,0.5s					
SACS	**San Casciano d**	**0.89**	**274**	⇑P	**Pb**	**00 45 48.5 -1.0**
SACS				AML	AML	
	comp=E,1725μm,1.5s					
SACS				AML	AML	
	comp=N,1290μm,0.9s					
SACS				AML	AML	
	comp=E,1735μm,1.5s					
SACS				AML	AML	
	comp=N,1350μm,0.9s					
NARO	**Abbazia di Nar**	**0.90**	**334**	P	**Pb**	**00 45 48.1 -1.6**
NARO				S	**Sn**	**00 46 04.0 +0.5**
NARO				AML	AML	
	comp=N,904μm,0.5s					
NARO				AML	AML	
	comp=E,1570μm,0.8s					
NARO				AML	AML	
	comp=N,904μm,0.5s					
SENI	**Senigallia**	**0.91**	**5**	⇓P	**Pg**	**00 45 50.0 +0.3**
APEC	**Apecchio**	**0.92**	**326**	P	**Pb**	**00 45 49.0 -0.9**
FSSB	**Fossombrone**	**0.93**	**345**	⇑P	**Pb**	**00 45 49.0 -1.1**
FSSB				S	**Sn**	**00 46 05.0 +0.9**
FSSB				AML	AML	
	comp=E,4425μm,0.5s					
FSSB				AML	AML	
	comp=N,6440μm,0.5s					
BADI	**Badiali**	**0.96**	**318**	⇑P	**Pb**	**00 45 49.4 -1.2**
LATE	**Laterza**	**0.99**	**260**	⇓P	**Pb**	**00 45 50.7 -0.4**
CAFI	**Castiglion Fio**	**1.00**	**303**	⇑P	**Pb**	**00 45 50.2 -1.1**
CAFI				AML	AML	
	comp=E,1216μm,0.6s					
CAFI				AML	AML	
	comp=N,908μm,1.1s					
VVLD	**Villa Vallelon**	**1.00**	**158**	⇓P	**Pb**	**00 45 50.8 -0.6**
VVLD				AML	AML	
	comp=N,950μm,0.5s					
VVLD				AML	AML	
	comp=E,622μm,0.6s					
PE3	**Peglio**	**1.01**	**333**	⇓P	**Pg**	**00 45 53.1 +1.5**
SSP9	**Sansepolcro**	**1.06**	**317**	⇑P	**Pn**	**00 45 52.9 +0.2**
MCIV	**Monte Civitell**	**1.06**	**269**	⇓P	**Pb**	**00 45 51.9 -0.6**
MCIV				AML	AML	
	comp=N,774μm,0.5s					
MCIV				AML	AML	
	comp=E,614μm,1.6s					
CAFR	**Castel Frentan**	**1.07**	**122**	⇑P	**Pb**	**00 45 52.0 -0.5**
CAFR				AML	AML	
	comp=E,924μm,0.4s					
CAFR				AML	AML	
	comp=N,928μm,0.5s					
SF04	**Casetta**	**1.07**	**273**	⇓P	**Pb**	**00 45 52.2 -0.4**
SF04				AML	AML	
	comp=E,1480μm,0.4s					
SF04				AML	AML	
	comp=N,676μm,1.0s					
MA9	**Marino**	**1.08**	**199**	P	**Pb**	**00 45 50.8 -1.9**
MA9				AML	AML	
	comp=E,1034μm,0.7s					
MA9				AML	AML	
	comp=N,1190μm,0.7s					
LPEL	**Lama dei Pelig**	**1.09**	**133**	⇓P	**Pb**	**00 45 51.7 -1.1**
LPEL				AML	AML	
	comp=E,1112μm,0.6s					
LPEL				AML	AML	
	comp=N,778μm,0.6s					
SF01	**Poggio Pratacc**	**1.14**	**271**	⇓P	**Pn**	**00 45 53.4 -0.6**
SF01				AML	AML	
	comp=E,955μm,0.6s					
SF01				AML	AML	
	comp=N,672μm,0.5s					
CPGN	**Carpegna, Ital**	**1.16**	**330**	⇓P	**Pn**	**00 45 54.1 -0.1**
LAV9	**Lanuvio**	**1.16**	**196**	⇑P	**Pg**	**00 45 54.6 +0.1**
LAV9				AML	AML	
	comp=N,1440μm,1.6s					
LAV9				AML	AML	
	comp=E,1775μm,0.4s					
LAV9				AML	AML	
	comp=N,1490μm,0.4s					
LAV9				AML	AML	
	comp=E,1790μm,0.4s					
CRE	**Caprese Michel**	**1.19**	**314**	P	**Pn**	**00 45 54.0 -0.5**
CRE				AML	AML	
	comp=E,530μm,0.5s					
CRE				AML	AML	
	comp=N,699μm,0.3s					
ARCI	**Arcidosso**	**1.21**	**273**	⇑P	**Pn**	**00 45 54.8 -0.1**
ARCI				AML	AML	
	comp=N,214μm,0.9s					
ARCI				AML	AML	
	comp=E,183μm,1.4s					
GIUL	**Giuliano Di Ro**	**1.24**	**175**	P	**Pb**	**00 45 55.7 +0.3**
GIUL				AML	AML	
	comp=E,434μm,0.7s					
GIUL				AML	AML	
	comp=N,462μm,0.6s					
CERA	**Filignano**	**1.37**	**151**	⇑P	**Pg**	**00 46 00.0 +1.5**
ASQU	**Asqua**	**1.39**	**316**	⇓P	**Pb**	**00 45 58.2 +0.1**
ASQU				AML	AML	
	comp=E,386μm,0.8s					
ASQU				AML	AML	
	comp=N,598μm,0.6s					
FRES	**Fresagrandinar**	**1.41**	**125**	⇑P	**Pg**	**00 45 59.4 +0.1**
BLLA	**Bellaria**	**1.43**	**341**	⇑P	**Pb**	**00 45 59.3 +0.8**
SFI	**Santa Sofia**	**1.44**	**320**	⇑P	**Pn**	**00 45 58.1 +0.1**
SFI				AML	AML	
	comp=E,298μm,1.1s					
SFI				AML	AML	
	comp=N,364μm,0.7s					
TRIV	**Trivento**	**1.48**	**134**	⇑P	**Pg**	**00 46 01.0 +0.4**
FROS	**Frosini**	**1.50**	**287**	⇓P	**Pn**	**00 45 59.2 +0.5**
FROS				AML	AML	
	comp=E,380μm,0.6s					
FROS				AML	AML	
	comp=N,334μm,1.0s					
CSNT	**Castellina Chi**	**1.50**	**297**	⇓P	**Pn**	**00 45 58.8 +0.1**
CSNT				AML	AML	
	comp=N,224μm,0.5s					
CSNT				AML	AML	
	comp=E,271μm,0.5s					
MAON	**Monte Argentar**	**1.51**	**257**	⇑P	**Pn**	**00 45 58.5 -0.4**
MAON				AML	AML	
	comp=E,232μm,1.1s					
MAON				AML	AML	
	comp=N,159μm,1.1s					
OSSC	**Osservatorio P**	**1.55**	**299**	P	**Pn**	**00 45 58.3 -1.1**
OSSC				AML	AML	
	comp=N,244μm,1.0s					
OSSC				AML	AML	
	comp=E,236μm,0.5s					
RUFI	**Rufina**	**1.57**	**312**	⇑P	**Pn**	**00 46 00.4 +0.7**
RUFI				AML	AML	
	comp=E,385μm,0.6s					
RUFI				AML	AML	
	comp=N,342μm,0.6s					
VAGA	**Valle Agricola**	**1.61**	**149**	⇓P	**Pb**	**00 46 02.3 +0.5**
VAGA				AML	AML	
	comp=E,180μm,0.7s					
VAGA				AML	AML	
	comp=N,312μm,1.1s					
TRIF	**Trifonti**	**1.66**	**282**	P	**Pn**	**00 46 00.7 -0.2**
TRIF				S	**Sb**	**00 46 24.0 +0.7**
TRIF				AML	AML	
	comp=N,246μm,0.5s					
TRIF				AML	AML	
	comp=E,285μm,0.7s					
CASP	**Castiglione de**	**1.66**	**271**	⇑P	**Pn**	**00 46 00.5 -0.4**
CASP				AML	AML	
	comp=E,104μm,0.6s					
CASP				AML	AML	
	comp=N,79μm,1.0s					
BSSO	**Busso**	**1.66**	**138**	⇑P	**Pg**	**00 46 04.1 0.0**
BRIS	**BRISIGHELLA**	**1.79**	**320**	⇓P	**Pb**	**00 46 05.7 +0.9**
MELA	**Melanico ??? S**	**1.85**	**126**	⇓P	**Pb**	**00 46 05.6 -0.2**
MELA				AML	AML	
	comp=E,530μm,0.6s					
MELA				AML	AML	
	comp=N,656μm,0.6s					
MELA				AML	AML	
	comp=N,754μm,0.7s					
MELA				AML	AML	
	comp=E,517μm,0.6s					
MTCR	**Monte La Croce**	**1.97**	**309**	⇑P	**Pn**	**00 46 05.8 +0.4**
APRC	**Apricena**	**2.08**	**119**	P	**Pb**	**00 46 08.8 -0.9**
APRC				AML	AML	
	comp=N,426μm,0.4s					
APRC				AML	AML	
	comp=E,239μm,0.4s					
PII	**Pisa**	**2.11**	**297**	⇓P	**Pn**	**00 46 07.8 +0.8**
PII				AML	AML	
	comp=E,192μm,0.3s					
PII				AML	AML	
	comp=N,154μm,0.3s					
POPM	**Popiglio**	**2.12**	**307**	⇑P	**Pn**	**00 46 08.8 +1.4**
POPM				AML	AML	
	comp=N,144μm,0.2s					
POPM				AML	AML	
	comp=E,135μm,0.3s					
CELB	**S.Piero in Cam**	**2.14**	**270**	⇑P	**Pn**	**00 46 07.2 -0.4**
CELB				AML	AML	
	comp=E,42μm,0.7s					
CELB				AML	AML	
	comp=N,32μm,0.4s					
BRJN	**Brijuni**	**2.16**	**12**	⇑P	**Pn**	**00 46 08.8 +1.0**
MAIM	**Mastiano**	**2.22**	**301**	⇓P	**Pn**	**00 46 09.0 +0.4**
MAIM				AML	AML	
	comp=E,110μm,0.6s					
MAIM				AML	AML	
	comp=N,119μm,0.5s					
VLC	**Villacollemand**	**2.41**	**305**	⇑P	**Pn**	**00 46 11.7 +0.4**
VLC				AML	AML	
	comp=E,69μm,1.6s					
VLC				AML	AML	
	comp=N,100μm,0.8s					

RAVA Ravarino 2.44 324 ⇑P Pb 00 46 16.3 +0.5
PLMA Palmaria, Port 2.69 299 ⇓P Pn 00 46 15.7 +0.6
PLMA AML AML
comp=E,53μm,0.6s
PLMA AML AML
comp=N,72μm,1.2s
MORSI Morsiglia 2.77 274 P **Pn 00 46 16.6 +0.5**
MORSI S **Sn 00 46 50.0 +0.7**
GRAM Graiana 2.79 308 ⇑P Pn 00 46 18.2 +1.7
SMPL Sampolo 2.92 257 P **Pn 00 46 19.5 +1.2**
SMPL S **Sn 00 46 56.1 +2.8**
PGF Pioggiola 3.05 267 ⇑P Pn 00 46 20.7 +0.6
PGF AML AML
comp=N,17μm,0.7s
PGF AML AML
comp=E,15μm,1.1s
PGF Pioggiola 3.05 267 P **Pn 00 46 20.8 +0.6**
SABO M.te Sabotino 3.20 6 ⇓P Pn 00 46 22.6 +0.5
SABO AML AML
comp=N,222μm,0.7s
SABO AML AML
comp=E,146μm,0.4s
SABO AML AML
comp=N,870μm,0.7s
SABO AML AML
comp=E,640μm,0.9s
VARN Col Varnada, M 3.28 348 ⇓P Pn 00 46 25.1 +1.8
VARN AML AML
comp=N,168μm,1.0s
VARN AML AML
comp=E,198μm,0.6s
SALO Salr 3.38 327 P **Pn 00 46 26.3 +1.7**
LJU Ljubljana 3.40 17 ⇓P Pn 00 46 25.5 +0.7
LJU AML AML
comp=E,494μm,0.8s
LJU AML AML
comp=N,816μm,1.2s
CTI Castel Tesino 3.42 343 ⇓P Pn 00 46 27.1 +1.9
MPRI Monte Prat 3.44 358 P **Pn 00 46 26.7 +1.2**
MPRI AML AML
comp=E,152μm,0.7s
MPRI AML AML
comp=N,229μm,1.3s
STAL STALIGIAL 3.47 355 ⇑P Pn 00 46 26.8 +0.9
STAL AML AML
comp=E,154μm,1.3s
STAL AML AML
comp=N,165μm,0.2s
LUSI Trento, Gardas 3.52 334 ⇑P Pn 00 46 27.8 +1.2
LUSI S **Sn 00 47 10.0 +1.8**
LUSI AML AML
comp=E,103μm,1.3s
LUSI AML AML
comp=N,197μm,0.8s
CIMO Cimolais 3.54 352 ⇓P Pn 00 46 27.8 +0.9
CIMO AML AML
comp=N,34μm,0.5s
CIMO AML AML
comp=E,39μm,0.6s
NOCI Noci 3.57 123 ⇓P Pn 00 46 28.8 +1.6
NOCI AML AML
comp=E,101μm,1.2s
NOCI AML AML
comp=N,102μm,1.5s
PTCC Patocco-Chiusa 3.61 3 ⇓P Pn 00 46 28.4 +0.6
PTCC AML AML
comp=N,53μm,1.1s
PTCC AML AML
comp=E,54μm,0.5s
GAGG Gaggia 3.63 336 ⇓P Pn 00 46 29.8 +1.6
GAGG AML AML
comp=E,133μm,1.0s
GAGG AML AML
comp=N,86μm,1.0s
ZONE Zone 3.67 325 P **Pn 00 46 29.6 +1.1**
ZONE AML AML
comp=N,108μm,1.6s
ZONE AML AML
comp=E,108μm,1.3s
MABI Malga Bissina 3.75 331 ⇓P Pn 00 46 31.4 +1.5
MABI AML AML
comp=N,42μm,1.2s
MABI AML AML
comp=E,46μm,0.2s
ZOU Zoufplan 3.76 358 ⇓P Pn 00 46 31.0 +1.0
ZOU AML AML
comp=E,85μm,0.9s
ZOU AML AML
comp=N,75μm,1.1s
ACOM Acomizza, Ital 3.76 4 ⇑P Pn 00 46 31.5 +1.5
ACOM AML AML
comp=E,115μm,0.3s
ACOM AML AML
comp=N,121μm,0.8s
FVI Forni Avoltri 3.81 356 P **Pn 00 46 31.9 +1.4**
FVI AML AML
comp=E,60μm,0.5s
FVI AML AML
comp=N,73μm,0.8s
OBKA Obir 3.85 15 *i* Pn **Pn 00 46 32.3 +1.2**
comp=N,1.8nm,0.2s
MYKA Terra Mystica 3.85 5 *i* Pn **Pn 00 46 32.3 +1.2**
comp=N,1.7nm,0.2s
KOSI Kohlern 3.87 342 ⇑P Pn 00 46 33.7 +2.3
APPI Appiano 3.92 341 ⇑P Pn 00 46 34.1 +2.1
ABTA Abfaltersbach 3.97 354 *i* Pn **Pn 00 46 34.4 +1.6**
comp=N,2.7nm,0.2s,SNR=8.0
SOKA Soboth 4.11 19 *e*Pn **Pn 00 46 34.4 -0.3**
comp=N,1.3nm,0.3s
RISI Rein 4.21 350 ⇓P Pn 00 46 38.2 +1.9
MUGIO Muggio 4.28 318 S **Sn 00 47 27.0 +0.2**
KOGS Kog 4.28 30 P **Pn 00 46 40.2 +3.2**
ROSI Rosskopf 4.30 344 ⇓P Pn 00 46 40.1 +2.7
TURF col de Turini 4.34 288 P **Pn 00 46 38.9 +1.0**
TURF S **Sn 00 47 30.6 +2.2**
VSL Villasalto 4.34 222 ⇓P Pn 00 46 39.3 +1.5
VSL AML AML
comp=E,19μm,0.6s
VSL AML AML
comp=N,19μm,0.5s
VARE Varese 4.38 316 ⇑P Pn 00 46 40.5 +2.1
FETA Feichten 4.55 339 *e*Pn **Pn 00 46 43.9 +3.1**
comp=N,2.2nm,0.3s
WTTA Wattenberg 4.59 347 *e*Pn **Pn 00 46 43.7 +2.4**
comp=N,3.2nm,0.4s
DAVOX Davos/Dischmat 4.60 331 Pn **Pn 00 46 44.1 +2.6**
comp=N,2.2nm,0.3s,baz=153,slow=16,SNR=10
DAVOX Sn **Sn 00 47 35.5 +0.6**
comp=N,2.0nm,0.3s,baz=299,slow=20,SNR=5.4
comp=N,8.9nm,0.5s
CALF Calern 4.62 284 P **Pn 00 46 43.0 +1.2**
SQTA Sankt Quirin 4.62 344 *e*Pn **Pn 00 46 44.0 +2.2**
comp=N,3.0nm,0.2s,SNR=5.7
VPL Vulcano Piano 4.64 162 ⇓P Pg 00 46 57.3 -3.6
WATA Walderalm 4.67 347 *i* Pn **Pn 00 46 45.1 +2.7**
comp=N,2.2nm,0.2s,SNR=10
MOTA Moosalm 4.77 343 *e*Pn **Pn 00 46 47.1 +3.4**
comp=N,2.0nm,0.2s
ARSA Arzberg 4.77 20 *e*Pn **Pn 00 46 44.0 +0.3**
comp=N,1.2nm,0.2s
SURF Saint Ours 4.88 292 P **Pn 00 46 46.3 +1.0**
JAUF Jausiers 4.90 292 P **Pn 00 46 47.7 +2.0**
BIOA Bad Ischl, Aus 4.91 4 *i* Pn **Pn 00 46 47.0 +1.4**
comp=N,4.6nm,0.3s,SNR=9.2
RETA Reutte 4.98 341 *e*Pn **Pn 00 46 48.9 +2.3**
comp=N,2.3nm,0.3s,SNR=11
TRIGF Trigance 4.99 283 P **Pn 00 46 48.2 +1.4**
CREF Crivoux 5.03 293 P **Pn 00 46 51.4 +4.0**
DAVA Damuels 5.04 334 *i* Pn **Pn 00 46 49.8 +2.3**
comp=N,3.1nm,0.2s,SNR=7.8
MOA Molln 5.12 9 *i* Pn **Pn 00 46 49.6 +1.1**
comp=N,1.0nm,0.2s
RONA Rosalia, Austr 5.39 23 *e*Pn **Pn 00 46 52.5 +0.3**
comp=N,1.9nm,0.2s
ARTF Artigues 5.41 281 P **Pn 00 46 53.5 +1.1**
CONA Conrad Observa 5.48 20 *e*Pn **Pn 00 46 54.0 +0.4**
comp=N,0.9nm,0.2s,SNR=13
RSL Roselend 5.49 304 P **Pn 00 46 56.5 +2.8**
BSTF la Bastide-des 5.56 284 P **Pn 00 46 56.3 +1.8**
AIGLE Aigle 5.65 311 P **Pn 00 46 58.4 +2.6**
TORNY Torny/Romont 5.92 314 P **Pn 00 47 02.0 +2.5**
BALST Balsthal 5.94 322 P **Pn 00 47 00.8 +0.9**
GERES GERESS Array B 6.06 4 Pn **Pn 00 47 00.1 -1.4**
comp=N,0.3nm,0.3s,baz=174,slow=13,SNR=11
GERES Sn **Sn 00 48 07.5 -3.3**
comp=N,1.7nm,0.3s,baz=176,slow=24,SNR=8.7
comp=N,0.4nm,0.3s
CKRC Cesky Krumlov 6.08 7 *e*PN **Pn 00 47 01.6 -0.1**
CKRC *e*SN **Sn 00 48 07.6 -3.5**
GIMEL St. Georges / 6.15 310 P **Pn 00 47 05.2 +2.5**
BRANT Les Verrieres 6.28 314 P **Pn 00 47 06.4 +1.9**
KIZ Kirchzarten 6.33 326 P **Pn 00 47 05.6 +0.6**
KHC Kasperske Hory 6.34 3 *e*PN **Pn 00 47 05.5 +0.2**
KHC *e*SN **Sn 00 48 14.9 -2.7**
CHMF Charmoille 6.39 316 P **Pn 00 47 06.6 +0.6**
VOGT Vogtsburg - To 6.53 326 P **Pn 00 47 08.6 +0.8**
BOUC Bouclans 6.59 315 P **Pn 00 47 10.0 +1.3**
TREC Trest 6.70 13 *e*PN **Pn 00 47 08.1 -2.2**
TREC *e*SN **Sn 00 48 22.6 -3.9**
RONF Ronchamp 6.71 319 P **Pn 00 47 11.4 +1.2**
ECH Echery 6.85 324 P **Pn 00 47 12.9 +0.7**
PRU Pruhonice 7.26 7 *e*SN **Sn 00 48 36.9 -3.2**
KEST Kesra 7.64 204 Pn Pn 00 47 29.2 +6.1
comp=N,0.2nm,0.3s,baz=104,slow=12,SNR=4.7
comp=N,1.3nm,0.6s
ESDC Sonseca Array 13.23 262 Pn **P 00 48 45.7 -3.9**
baz=68,slow=14,SNR=2.8
comp=N,0.2nm,0.8s
EKA Eskdalemuir Ar 16.41 325 Pn **P 00 49 23.9 -0.9**
baz=133,slow=14
comp=N,0.1nm,0.4s
FINES FINESS Array B 20.23 18 P **P 00 50 06.9 +0.3**
comp=N,0.1nm,0.3s,baz=235,slow=12,SNR=2.1
comp=N,2.4nm,0.9s
TORD Torodi Ar. Bea 31.15 202 P **P 00 51 53.6 +2.9**
comp=N,0.2nm,0.6s,baz=14,slow=9.7,SNR=2.0
comp=N,0.2nm,0.6s
MKAR Makanchi Array 47.80 60 P **P 00 54 10.5 +1.4**
comp=N,0.8nm,1.0s,baz=308,slow=7.1,SNR=2.5
comp=N,0.8nm,1.0s

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*ROM **31** 01:01:33.4±0.0,42°.794N±0°.003×13°.035E±0°.004,*
h10km,ML3.2/36,Error ellipse: s-maj=0.3km s-min=0.2km
az=313.0
*IDC **31** 01:01:34.2±1.1,42°.99N×13°.12E,h0km,mb3.5/5,*
mbtmp3.5/10,ML3.1/5,Error ellipse: s-maj=30.2km
s-min=12.1km az=96.0
*PRU **31** 01:01:34.6±0.0,42°.79N×13°.43E,h0km*
ISC 31 01:01:34.4±0.8,42°.80N±0°.02×13°.08E±0°.02,h8km±5km,
n84,σ1°46/104,mb3.8/4,15C-8D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**53**	P	**Pg**		**01 01 37.0**	**+0.2**
T1245				S	**Sg**		**01 01 39.4**	**+0.8**
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1216	**Preci, Frazion**	**0.10**	**336**	⇓P	**Pg**		**01 01 36.6**	**-0.3**
T1216				S	**Sg**		**01 01 38.4**	**-0.1**
T1216				AML	AML			
	comp=E,76200μm,1.6s							
T1216				AML	AML			
	comp=E,76250μm,1.6s							
T1216				AML	AML			
	comp=N,61650μm,1.1s							
T1216				AML	AML			
	comp=E,76250μm,1.6s							
T1216				AML	AML			
	comp=N,61650μm,1.1s							
T1216				AML	AML			
	comp=E,76200μm,1.6s							
T1217	**Poggiodomo (PG**	**0.14**	**232**	P	**Pg**		**01 01 36.8**	**-0.6**
T1217				S	**Sg**		**01 01 39.0**	**-0.4**
T1217				AML	AML			
	comp=N,47500μm,0.7s							
T1217				AML	AML			
	comp=E,31750μm,0.4s							
T1217				AML	AML			
	comp=E,32550μm,0.4s							
T1217				AML	AML			
	comp=E,31800μm,0.4s							
T1217				AML	AML			
	comp=N,47850μm,0.7s							
T1217				AML	AML			
	comp=E,32550μm,0.4s							
T1215	**Vallo di Nera,**	**0.15**	**272**	⇑P	**Pg**		**01 01 36.9**	**-0.7**
T1215				S	**Sg**		**01 01 39.1**	**-0.8**
T1215				AML	AML			
	comp=E,40250μm,0.4s							
T1215				AML	AML			
	comp=N,25800μm,1.0s							
T1215				AML	AML			
	comp=E,39050μm,0.4s							
T1215				AML	AML			
	comp=N,25850μm,1.0s							
T1215				AML	AML			
	comp=E,39050μm,0.4s							
T1215				AML	AML			
	comp=N,25850μm,1.0s							
T1215				AML	AML			
	comp=N,25800μm,1.0s							
T1215				AML	AML			
	comp=N,27250μm,1.0s							
T1215				AML	AML			
	comp=E,40300μm,0.4s							
FEMA	**Monte Fema**	**0.17**	**353**	P	**Pg**		**01 01 37.8**	**-0.2**
FEMA				S	**Sg**		**01 01 40.6**	**+0.3**
FEMA				AML	AML			
	comp=E,99450μm,0.2s							
FEMA				AML	AML			
	comp=E,99400μm,0.2s							
FEMA				AML	AML			
	comp=E,99450μm,0.2s							
FEMA				AML	AML			
	comp=N,49100μm,1.3s							
LNSS	**Leonessa**	**0.19**	**188**	P	**Pg**		**01 01 38.0**	**-0.3**
LNSS				S	**Sg**		**01 01 41.2**	**+0.1**
LNSS				AML	AML			
	comp=E,11535μm,0.2s							
LNSS				AML	AML			
	comp=N,30350μm,0.4s							
MMO1	**Montemonaco**	**0.21**	**60**	⇓P	**Pg**		**01 01 38.9**	**+0.2**
MMO1				S	**Sg**		**01 01 42.6**	**+1.1**
T1204	**Amatrice, Fraz**	**0.21**	**124**	P	**Pg**		**01 01 39.0**	**+0.2**
T1204				S	**Sg**		**01 01 43.0**	**+1.4**
T1204				AML	AML			
	comp=N,10950μm,0.6s							
T1204				AML	AML			
	comp=E,16950μm,1.1s							
T1204				AML	AML			
	comp=N,10925μm,0.6s							
T1204				AML	AML			
	comp=N,10930μm,0.6s							
T1204				AML	AML			
	comp=E,17000μm,1.1s							
SMA1	**SAN MARTINO**	**0.25**	**131**	P	**Pg**		**01 01 39.8**	**+0.4**
SMA1				AML	AML			
	comp=E,21350μm,0.6s							
SMA1				AML	AML			
	comp=N,20000μm,0.8s							
T1241	**Roccafluvione,**	**0.27**	**77**	⇑P	**Pg**		**01 01 40.4**	**+0.7**
AM05	**Amandola Campo**	**0.27**	**48**	P	**Pg**		**01 01 40.1**	**+0.3**
AM05				S	**Sb**		**01 01 44.7**	**-1.7**
AM05				AML	AML			
	comp=E,5290μm,1.0s							
AM05				AML	AML			
	comp=E,24000μm,1.2s							
AM05				AML	AML			
	comp=N,626μm,0.3s							
AM05				AML	AML			
	comp=N,5250μm,0.3s							
AM05				AML	AML			
	comp=N,625μm,0.3s							
AM05				AML	AML			
	comp=E,5295μm,1.0s							
T1243	**Rocca Santa Ma**	**0.29**	**110**	P	**Pb**		**01 01 40.5**	**-1.4**
T1243				S	**Sb**		**01 01 45.5**	**-1.5**
RM33	**Pellescritta (**	**0.30**	**160**	P	**Pg**		**01 01 40.1**	**-0.2**
RM33				S	**Sg**		**01 01 45.1**	**+0.7**
RM33				AML	AML			
	comp=N,4770μm,0.2s							
RM33				AML	AML			
	comp=N,4775μm,0.2s							
RM33				AML	AML			
	comp=E,4540μm,1.4s							
T1211	**Morro Reatino**	**0.31**	**212**	P	**Pg**		**01 01 40.2**	**-0.3**
T1211				S	**Sg**		**01 01 44.7**	**+0.1**
T1211				AML	AML			
	comp=E,6410μm,0.5s							
T1211				AML	AML			
	comp=N,11950μm,0.8s							
T1211				AML	AML			
	comp=E,6450μm,0.5s							
T1211				AML	AML			
	comp=N,12150μm,0.8s							
T1211				AML	AML			
	comp=N,11950μm,0.8s							
T1211				AML	AML			
	comp=E,6405μm,0.5s							
T1211				AML	AML			
	comp=N,12150μm,0.8s							
ARRO	**Arrone**	**0.32**	**227**	P	**Pg**		**01 01 39.8**	**-0.8**
ARRO				AML	AML			
	comp=E,7820μm,1.5s							
ARRO				AML	AML			
	comp=E,7815μm,1.5s							
ARRO				AML	AML			
	comp=N,5305μm,0.2s							
SEF1	**Sefro**	**0.36**	**345**	⇑P	**Pg**		**01 01 41.4**	**-0.1**
SEF1				AML	AML			
	comp=E,12300μm,0.3s							
SEF1				AML	AML			
	comp=N,13550μm,0.3s							
SEF1				AML	AML			
	comp=N,13600μm,0.3s							
SEF1				AML	AML			
	comp=E,12350μm,0.3s							
T1247	**Pizzolo (AQ)**	**0.39**	**155**	P	**Pg**		**01 01 42.2**	**+0.2**
T1247				AML	AML			
	comp=E,4635μm,0.7s							
T1247				AML	AML			
	comp=N,5060μm,0.7s							
CESX	**Cesi**	**0.41**	**243**	P	**Pg**		**01 01 41.3**	**-1.1**
CESX				S	**Sg**		**01 01 47.1**	**-0.6**
CESX				AML	AML			
	comp=E,13195μm,0.5s							
CESX				AML	AML			
	comp=N,7335μm,0.4s							
TERO	**Teramo**	**0.42**	**114**	P	**Pg**		**01 01 42.7**	**0.0**
TERO				AML	AML			
	comp=N,5255μm,0.5s							
TERO				AML	AML			
	comp=E,5480μm,0.5s							
TERO				AML	AML			
	comp=N,5110μm,0.5s							
TERO				AML	AML			
	comp=E,5700μm,0.5s							
GAG1	**Gagliole**	**0.44**	**359**	P	**Pg**		**01 01 42.9**	**-0.1**
GAG1				AML	AML			
	comp=N,13000μm,0.4s							
GAG1				AML	AML			
	comp=E,13500μm,0.7s							
SNTG	**Esanatoglia**	**0.47**	**348**	S	**Sg**		**01 01 51.0**	**+1.3**
GIGS	**Gran Sasso**	**0.50**	**133**	P	**Pg**		**01 01 44.0**	**-0.1**
GIGS				AML	AML			
	comp=N,560μm,0.6s							
GIGS				AML	AML			
	comp=E,672μm,1.5s							
GIGS				AML	AML			
	comp=N,560μm,0.6s							
AQU	**L'Aquila**	**0.50**	**151**	P	**Pb**		**01 01 44.9**	**-0.6**
AQU				AML	AML			
	comp=E,2420μm,0.6s							
AQU				AML	AML			
	comp=E,2385μm,0.6s							
AQU				AML	AML			
	comp=N,1960μm,1.1s							
AQU				AML	AML			
	comp=N,2025μm,1.1s							
FIAM	**Fiamignano**	**0.53**	**177**	P	**Pg**		**01 01 44.5**	**-0.1**
FIAM				AML	AML			
	comp=N,1505μm,0.6s							
FIAM				AML	AML			
	comp=E,1825μm,0.7s							
EL6	**Elcito**	**0.53**	**2**	S	**Sg**		**01 01 53.0**	**+1.2**
FOSV	**Fossato di Vic**	**0.55**	**335**	S	**Sg**		**01 01 54.0**	**+1.8**
TRTR	**Tortoreto Alta**	**0.62**	**89**	⇑P	**Pb**		**01 01 47.3**	**-0.1**
TRTR				AML	AML			
	comp=N,10025μm,1.2s							
TRTR				AML	AML			
	comp=E,14450μm,0.7s							
MURB	**Monte Urbino**	**0.62**	**319**	S	**Sg**		**01 01 56.0**	**+1.6**
ATFO	**Monte Foce - G**	**0.68**	**327**	S	**Sg**		**01 01 58.0**	**+1.6**
SRES	**S.Oreste - Sor**	**0.70**	**217**	⇑P	**Pg**		**01 01 46.8**	**-1.0**
SRES				S	**Sg**		**01 01 58.0**	**+1.1**
SRES				AML	AML			
	comp=E,1205μm,0.5s							
SRES				AML	AML			
	comp=N,1400μm,0.5s							
PP3	**Marolino**	**0.70**	**34**	⇓P	**Pb**		**01 01 48.7**	**-0.1**
PP3				AML	AML			
	comp=E,6130μm,0.3s							
PP3				AML	AML			
	comp=N,9225μm,0.3s							
PP3				AML	AML			
	comp=N,9175μm,0.3s							
PP3				AML	AML			
	comp=N,9230μm,0.3s							
PP3				AML	AML			
	comp=E,6130μm,0.6s							
PP3				AML	AML			
	comp=N,9205μm,0.3s							
PP3				AML	AML			
	comp=E,6135μm,0.3s							
PP3				AML	AML			
	comp=N,9185μm,0.3s							
PP3				AML	AML			
	comp=N,9180μm,0.3s							
ARVD	**Arcevia**	**0.71**	**352**	S	**Sb**		**01 01 59.0**	**0.0**
T0110	**Collepietro**	**0.77**	**137**	⇓P	**Pb**		**01 01 49.4**	**-0.7**
T0110				AML	AML			
	comp=E,2235μm,0.5s							
T0110				AML	AML			
	comp=N,2355μm,1.4s							
MTCE	**Montecelio**	**0.81**	**198**	⇑P	**Pb**		**01 01 50.7**	**-0.1**
MTCE				AML	AML			
	comp=E,1060μm,0.8s							
MTCE				AML	AML			
	comp=N,858μm,0.8s							
PIEI	**Pieia**	**0.84**	**332**	S	**Sb**		**01 02 03.0**	**+0.2**
CERT	**Cerreto**	**0.85**	**185**	⇑P	**Pg**		**01 01 50.0**	**-0.7**
CERT				AML	AML			
	comp=E,1340μm,0.6s							
CERT				AML	AML			
	comp=N,974μm,0.7s							
MPAG	**Monte Paganucc**	**0.86**	**345**	S	**Sb**		**01 02 05.0**	**+1.5**
FSSB	**Fossombrone**	**0.92**	**346**	S	**Sb**		**01 02 06.0**	**+0.9**
BADI	**Badiali**	**0.94**	**320**	⇑P	**Pg**		**01 01 51.6**	**-0.8**
CAFI	**Castiglion Fio**	**0.97**	**304**	⇑P	**Pg**		**01 01 52.4**	**-0.7**
CAFI				AML	AML			
	comp=E,1410μm,1.5s							
CAFI				AML	AML			
	comp=N,956μm,0.9s							
CAFI				AML	AML			
	comp=E,1350μm,1.4s							
CAFI				AML	AML			
	comp=N,919μm,0.9s							
MCIV	**Monte Civitell**	**1.03**	**270**	⇑P	**Pg**		**01 01 53.6**	**-0.6**
MCIV				AML	AML			
	comp=E,964μm,0.8s							
MCIV				AML	AML			
	comp=N,798μm,1.5s							
VIVA	**Pratoni del Vi**	**1.07**	**192**	P	**Pg**		**01 01 54.2**	**-0.7**
VIVA				AML	AML			
	comp=N,2375μm,1.4s							
VIVA				AML	AML			
	comp=E,2575μm,0.8s							
SF01	**Poggio Pratacc**	**1.11**	**271**	⇑P	**Pg**		**01 01 55.6**	**-0.1**
CRE	**Caprese Michel**	**1.17**	**315**	⇓P	**Pg**		**01 01 56.5**	**-0.2**
CRE				AML	AML			
	comp=E,616μm,0.4s							
CRE				AML	AML			
	comp=N,693μm,1.0s							
ARCI	**Arcidosso**	**1.18**	**273**	P	**Pg**		**01 01 56.6**	**-0.4**
ARCI				S	**Sn**		**01 02 15.0**	**+1.3**
ARCI				AML	AML			
	comp=E,326μm,0.8s							
ARCI				AML	AML			
	comp=N,432μm,0.5s							
CSNT	**Castellina Chi**	**1.47**	**298**	⇓P	**Pn**		**01 02 00.0**	**-1.2**
CSNT				AML	AML			

comp=N,296μm,1.3s
CSNT AML AML
comp=E,221μm,0.5s
CASP Castiglione de 1.63 271 ⇓P Pn 01 02 01.7 -1.7
CASP AML AML
comp=E,132μm,0.8s
CASP AML AML
comp=N,115μm,0.6s
TRIF Trifonti 1.63 282 P Pn 01 02 02.4 -1.0
TRIF AML AML
comp=E,323μm,0.5s
TRIF AML AML
comp=N,272μm,0.6s
BRSN Barisano 1.66 334 S Sg 01 02 30.0 +2.4
MTCR Monte La Croce 1.95 310 ⇑P Pn 01 02 07.7 -0.2
CELB S.Piero in Cam 2.11 270 ⇓P Pn 01 02 08.3 -1.8
CELB AML AML
comp=E,71μm,0.5s
CELB AML AML
comp=N,52μm,0.9s
PGF Pioggiola 3.02 267 ⇑P Pn 01 02 21.9 -0.7
PGF AML AML
comp=N,18μm,1.6s
PGF AML AML
comp=E,22μm,0.6s
CGRP Cima Grappa 3.22 344 ⇑P Pn 01 02 26.2 +0.8
LJU Ljubljana 3.41 17 ⇑P Pn 01 02 28.3 +0.4
MYKA Terra Mystica 3.85 6 *e*Pn Pn 01 02 34.3 +0.2
comp=E,5.1nm,0.4s
OBKA Obir 3.86 15 *e*Pn Pn 01 02 33.9 -0.2
comp=E,1.9nm,0.3s
ABTA Abfaltersbach 3.97 354 *e*Pn Pn 01 02 36.6 +1.0
comp=E,15nm,0.5s,SNR=7.9
SOKA Soboth 4.12 19 *e*Pn Pn 01 02 37.7 -0.1
comp=E,1.4nm,0.3s
FETA Feichten 4.54 339 *e*Pn Pn 01 02 45.3 +1.7
comp=E,2.8nm,0.7s
WTTA Wattenberg 4.58 348 *e*Pn Pn 01 02 45.4 +1.2
comp=E,5.3nm,0.4s
DAVOX Davos/Dischmat 4.59 331 Pn Pn 01 02 44.2 0.0
comp=E,1.9nm,0.3s,baz=164,slow=20,SNR=15
DAVOX Sn Sn 01 03 36.8 -1.0
comp=E,0.9nm,0.3s,baz=260,slow=19,SNR=1.5
comp=E,6.0nm,0.5s
SQTA Sankt Quirin 4.62 344 *e*Pn Pn 01 02 46.5 +1.9
comp=E,5.9nm,0.4s
WATA Walderalm 4.66 347 *e*Pn Pn 01 02 47.0 +1.8
comp=E,4.8nm,0.5s
MOTA Moosalm 4.76 344 *e*Pn Pn 01 02 48.6 +2.0
comp=E,3.1nm,0.5s,SNR=5.2
ARSA Arzberg 4.78 20 *e*Pn Pn 01 02 45.7 -1.0
comp=E,3.4nm,0.3s,SNR=6.3
BIOA Bad Ischl, Aus 4.91 4 *e*Pn Pn 01 02 49.1 +0.6
comp=E,9.6nm,0.3s,SNR=15
RETA Reutte 4.97 342 *e*Pn Pn 01 02 50.9 +1.6
comp=E,2.9nm,0.4s,SNR=6.1
DAVA Damuels 5.03 334 *e*Pn Pn 01 02 52.3 +2.0
comp=E,6.8nm,0.6s
MOA Molln 5.12 9 *e*Pn Pn 01 02 51.9 +0.5
comp=E,3.1nm,0.3s,SNR=8.0
RONA Rosalia, Austr 5.41 24 *e*Pn Pn 01 02 55.4 0.0
comp=E,3.5nm,0.5s
VAE Valguarnera 5.41 169 Pn Pn 01 02 58.8 +3.4
comp=E,0.5nm,0.3s,baz=17,slow=14,SNR=1.1
comp=E,2.8nm,0.6s
CONA Conrad Observa 5.50 20 *e*Pn Pn 01 02 56.2 -0.4
comp=E,3.3nm,0.4s,SNR=7.4
GERES GERESS Array B 6.07 4 Pn Pn 01 03 01.4 -3.0
comp=E,0.4nm,0.3s,baz=176,slow=14,SNR=11
GERES Sn Sn 01 04 11.6 -2.5
comp=E,1.3nm,0.3s,baz=173,slow=24,SNR=7.3
comp=E,0.9nm,0.5s
CKRC Cesky Krumlov 6.09 8 *e*PN Pn 01 03 04.0 -0.7
CKRC *e*SN Sn 01 04 11.5 -3.0
KHC Kasperske Hory 6.35 3 *e*PN Pn 01 03 07.1 -1.1
KHC *e*SN Sn 01 04 17.6 -3.3
VRAC Vranov 6.96 19 Pn Pn 01 03 15.6 -1.0
comp=E,0.2nm,0.3s,baz=203,slow=13,SNR=2.4
VRAC Sn Sn 01 04 32.9 -3.0
comp=E,0.1nm,0.3s,baz=120,slow=20,SNR=1.8
comp=E,0.9nm,0.4s
PRU Pruhonice 7.27 7 *e*SN Sn 01 04 40.7 -2.8
KEST Kesra 7.62 204 Pn Pn 01 03 29.4 +3.6
comp=E,0.1nm,0.3s,baz=11,slow=5.2,SNR=2.3
comp=E,2.1nm,0.8s
CLL Collm 8.52 360 *e*Pn Pn 01 03 43.0 +5.1
CLL *ex* x 01 05 10.0
CLL *e*Sg **Sg 01 06 01.0 -6.5**
comp=Z,9.0nm,1.5s
FINES FINESS Array B 20.24 18 P P 01 06 10.2 +0.5
comp=Z,2.5nm,1.0s,baz=212,slow=7.7,SNR=3.5
comp=Z,2.5nm,1.0s
TORD Torodi Ar. Bea 31.14 202 P P 01 07 56.7 +3.1
comp=Z,0.3nm,0.8s,baz=10,slow=9.3,SNR=2.1
comp=Z,0.3nm,0.8s
ZALV Zalesovo Beam 46.98 50 P P 01 10 04.8 -0.8
comp=Z,0.3nm,0.4s,baz=273,slow=8.5,SNR=1.6
comp=Z,0.3nm,0.4s
MKAR Makanchi Array 47.83 60 P P 01 10 13.1 +0.6
comp=Z,0.7nm,0.7s,baz=280,slow=7.3,SNR=4.5
comp=Z,0.7nm,0.7s
SONM Songino Array 61.87 50 P P 01 11 54.2 +0.1
comp=Z,0.4nm,0.4s,baz=287,slow=9.9,SNR=3.4
comp=Z,0.4nm,0.4s

ROM 31 01:05:55.2±0.1, 42°.858N±0°.003×13°.226E±0°.004, h8km, ML2.3/17, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=196.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**266**	P	Pg	01 05 57.1	+0.2
T1245				S	Sg	01 05 58.3	+0.1
MMO1	**Montemonaco**	**0.08**	**61**	P	Pg	01 05 57.7	+0.2
MMO1				S	Sg	01 05 59.2	+0.1
AM05	**Amandola Campo**	**0.15**	**38**	P	Pg	01 05 59.0	+0.6
AM05				S	Sg	01 06 01.4	+0.7
AM05				AML	AML		
	comp=N,1610μm,0.2s						
AM05				AML	AML		
	comp=N,506μm,0.1s						
AM05				AML	AML		
	comp=E,1295μm,0.5s						
AM05				AML	AML		
	comp=E,5725μm,0.5s						
AM05				AML	AML		
	comp=N,544μm,1.2s						
AM05				AML	AML		
	comp=E,1300μm,0.5s						
T1241	**Roccafluvione,**	**0.15**	**91**	P	Pg	01 05 59.1	+0.7
T1241				S	Sg	01 06 01.8	+1.2
T1241				AML	AML		
	comp=N,2950μm,0.9s						
T1241				AML	AML		
	comp=N,2975μm,0.9s						
T1241				AML	AML		
	comp=E,4985μm,0.4s						
T1241				AML	AML		
	comp=E,5115μm,0.4s						
T1241				AML	AML		
	comp=N,2955μm,0.9s						
T1216	**Preci, Frazion**	**0.16**	**282**	P	Pg	01 05 59.2	+0.7
T1216				AML	AML		
	comp=N,47700μm,0.3s						
T1216				AML	AML		
	comp=N,47750μm,0.3s						
T1216				AML	AML		
	comp=E,31250μm,0.3s						
T1216				AML	AML		
	comp=N,47700μm,0.3s						
T1216				AML	AML		
	comp=E,31250μm,0.3s						
FEMA	**Monte Fema**	**0.17**	**309**	⇓P	Pg	01 05 59.4	+0.6
FEMA				AML	AML		
	comp=N,16400μm,0.7s						
FEMA				AML	AML		
	comp=E,15950μm,0.2s						
FEMA				AML	AML		
	comp=N,16350μm,0.7s						
T1204	**Amatrice, Fraz**	**0.19**	**160**	AML	AML		
	comp=E,1013μm,0.9s						
T1204				AML	AML		
	comp=N,804μm,0.9s						
GUMA	**Gualdo di Mace**	**0.22**	**21**	P	Pg	01 06 00.5	+0.8
GUMA				S	Sg	01 06 04.3	+1.6
GUMA				AML	AML		
	comp=E,6335μm,0.8s						
GUMA				AML	AML		
	comp=E,4950μm,0.7s						
GUMA				AML	AML		
	comp=N,4720μm,0.5s						
GUMA				AML	AML		
	comp=E,6330μm,0.8s						
GUMA				AML	AML		
	comp=N,6185μm,0.5s						
T1243	**Rocca Santa Ma**	**0.23**	**135**	P	Pg	01 06 00.5	+0.7
T1243				S	Sg	01 06 04.5	+1.5
CSP1	**Cessapalombo**	**0.23**	**356**	P	Pg	01 06 00.5	+0.5
CSP1				S	Sg	01 06 04.2	+1.0
CSP1				AML	AML		
	comp=N,5825μm,1.3s						
CSP1				AML	AML		
	comp=E,6005μm,0.5s						
SMA1	**SAN MARTINO**	**0.24**	**161**	P	Pg	01 06 01.3	+1.3
SMA1				AML	AML		
	comp=E,674μm,0.4s						
SMA1				AML	AML		
	comp=N,873μm,0.6s						
SMA1				AML	AML		
	comp=E,844μm,0.5s						
SMA1				AML	AML		
	comp=N,874μm,0.6s						
SMA1				AML	AML		
	comp=E,844μm,0.5s						
SMA1				AML	AML		
	comp=N,875μm,0.6s						
SMA1				AML	AML		
	comp=N,876μm,0.6s						
T1217	**Poggiodomo (PG**	**0.26**	**236**	P	Pb	01 06 01.5	-0.8
T1217				S	Sb	01 06 05.8	-1.1
T1217				AML	AML		
	comp=E,1125μm,0.9s						
T1217				AML	AML		
	comp=N,1310μm,0.5s						
T1217				AML	AML		
	comp=E,1076μm,0.9s						
T1217				AML	AML		
	comp=N,1280μm,0.5s						
T1217				AML	AML		
	comp=E,1070μm,0.9s						
T1217				AML	AML		
	comp=N,1282μm,0.5s						
T1217				AML	AML		
	comp=E,1125μm,0.9s						
T1217				AML	AML		
	comp=N,1305μm,0.5s						
T1217				AML	AML		
	comp=N,1284μm,0.5s						
T1217				AML	AML		
	comp=E,1073μm,0.9s						
T1215	**Vallo di Nera,**	**0.27**	**258**	P	Pg	01 06 01.3	+0.7
T1215				S	Sb	01 06 05.8	-1.3
T1215				AML	AML		
	comp=E,1083μm,0.5s						
T1215				AML	AML		
	comp=N,1066μm,0.4s						
T1215				AML	AML		
	comp=E,1130μm,0.5s						
T1215				AML	AML		
	comp=N,1034μm,0.4s						
T1215				AML	AML		
	comp=E,1085μm,0.5s						
T1215				AML	AML		
	comp=N,1065μm,0.4s						
T1215				AML	AML		
	comp=E,1086μm,0.5s						
LNSS	**Leonessa**	**0.29**	**208**	S	Sb	01 06 08.0	+0.3
OFFI	**Offida**	**0.35**	**77**	P	Pb	01 06 03.6	-0.1
OFFI				AML	AML		
	comp=E,937μm,0.8s						
OFFI				AML	AML		
	comp=N,1310μm,0.6s						
CAMP	**Campotosto**	**0.35**	**157**	P	Pg	01 06 02.6	+0.5
CAMP				S	Sb	01 06 08.3	-1.1
CAMP				AML	AML		
	comp=E,217μm,0.8s						
CAMP				AML	AML		
	comp=E,218μm,0.8s						
CAMP				AML	AML		
	comp=N,384μm,0.5s						
SEF1	**Sefro**	**0.35**	**325**	P	Pg	01 06 02.6	+0.4
SEF1				AML	AML		
	comp=E,3825μm,0.3s						
SEF1				AML	AML		
	comp=N,3630μm,1.3s						
TERO	**Teramo**	**0.36**	**130**	P	Pg	01 06 03.1	+0.7
TERO				S	Sb	01 06 08.8	-1.0
TERO				AML	AML		
	comp=E,970μm,1.1s						
TERO				AML	AML		
	comp=N,886μm,0.5s						
TERO				AML	AML		
	comp=N,926μm,0.5s						
TERO				AML	AML		
	comp=E,972μm,1.1s						
TERO				AML	AML		
	comp=N,884μm,0.5s						
TERO				AML	AML		
	comp=E,1030μm,1.1s						
TERO				AML	AML		
	comp=E,968μm,1.1s						
TERO				AML	AML		
	comp=E,1024μm,1.1s						
TERO				AML	AML		
	comp=N,926μm,0.5s						
TERO				AML	AML		
	comp=E,1029μm,1.1s						
TERO				AML	AML		
	comp=E,969μm,1.1s						
TERO				AML	AML		
	comp=N,885μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.42**	**173**	S	Sb	01 06 12.0	+0.6
SNTG	**Esanatoglia**	**0.45**	**332**	P	Pg	01 06 04.2	+0.2
SNTG				S	Sb	01 06 11.4	-0.9
SNTG				AML	AML		
	comp=E,556μm,0.6s						
SNTG				AML	AML		
	comp=N,620μm,0.1s						
SNTG				AML	AML		
	comp=E,556μm,0.6s						
SNTG				AML	AML		
	comp=N,620μm,0.1s						
SNTG				AML	AML		
	comp=N,682μm,0.1s						
SNTG				AML	AML		
	comp=E,613μm,0.4s						
ASSB	**Assisi San Ben**	**0.46**	**294**	P	Pg	01 06 04.4	+0.3
ASSB				S	Sb	01 06 12.0	-0.5
ASSB				AML	AML		
	comp=N,1315μm,1.6s						
ASSB				AML	AML		
	comp=E,2060μm,0.2s						
EL6	**Elcito**	**0.48**	**349**	P	Pg	01 06 04.8	+0.3
EL6				S	Sb	01 06 12.8	-0.4
EL6				AML	AML		
	comp=E,1404μm,0.6s						
EL6				AML	AML		
	comp=N,1604μm,0.4s						
GIGS	**Gran Sasso**	**0.48**	**148**	P	Pg	01 06 04.7	+0.2
GIGS				S	Sb	01 06 12.7	-0.5
GIGS				AML	AML		
	comp=E,106μm,0.2s						
GIGS				AML	AML		
	comp=N,166μm,0.2s						
GIGS				AML	AML		
	comp=E,107μm,0.2s						
GIGS				AML	AML		
	comp=E,106μm,0.2s						
GIGS				AML	AML		
	comp=N,166μm,0.2s						
CING	**Cingoli**	**0.52**	**358**	P	Pg	01 06 05.5	+0.3
CING				S	Sb	01 06 14.1	-0.1
CESX	**Cesi**	**0.54**	**243**	S	Sb	01 06 15.0	+0.2
ATCC	**AVT- Casa Cast**	**0.54**	**307**	⇑P	Pg	01 06 06.0	+0.4
ATCC				S	Sb	01 06 15.0	+0.1
ATCC				AML	AML		
	comp=E,850μm,0.7s						
ATCC				AML	AML		
	comp=N,1220μm,0.2s						
ATCC				AML	AML		
	comp=E,852μm,0.7s						
ATCC				AML	AML		
	comp=N,1220μm,0.2s						
FOSV	**Fossato di Vic**	**0.55**	**322**	⇑P	Pg	01 06 06.2	+0.2
FOSV				S	Sb	01 06 15.0	-0.3
FOSV				AML	AML		
	comp=E,565μm,0.1s						
FOSV				AML	AML		
	comp=N,878μm,0.3s						
PP3	**Marolino**	**0.59**	**28**	P	Pb	01 06 08.1	+0.3
PP3				AML	AML		
	comp=E,684μm,0.4s						
PP3				AML	AML		
	comp=E,634μm,0.3s						
PP3				AML	AML		
	comp=N,1004μm,0.3s						
PP3				AML	AML		
	comp=N,972μm,0.3s						
VCEL	**Villa Celiera**	**0.65**	**135**	P	Pb	01 06 08.3	-0.5
VCEL				AML	AML		
	comp=N,263μm,1.1s						
VCEL				AML	AML		
	comp=N,262μm,1.1s						
VCEL				AML	AML		
	comp=E,300μm,0.4s						
MURB	**Monte Urbino**	**0.65**	**308**	P	Pg	01 06 08.1	+0.2
MURB				AML	AML		
	comp=E,1245μm,0.3s						
MURB				AML	AML		
	comp=N,964μm,1.4s						
MURB				AML	AML		
	comp=E,1340μm,0.3s						
MURB				AML	AML		
	comp=N,1135μm,0.2s						
ARVD	**Arcevia**	**0.67**	**342**	P	Pg	01 06 08.2	0.0
ARVD				S	Sb	01 06 19.1	+0.4
ARVD				AML	AML		
	comp=E,292μm,0.2s						
ARVD				AML	AML		
	comp=N,229μm,0.9s						
ATFO	**Monte Foce - G**	**0.70**	**317**	P	Pg	01 06 08.7	0.0
ATFO				AML	AML		
	comp=E,254μm,0.2s						
ATFO				AML	AML		
	comp=N,183μm,0.2s						
FRON	**Frontone**	**0.75**	**331**	P	Pg	01 06 09.6	-0.2
FRON				AML	AML		
	comp=N,324μm,0.3s						
FRON				AML	AML		
	comp=E,184μm,0.3s						
ATVO	**AVT- Monte Val**	**0.80**	**311**	P	Pg	01 06 10.4	-0.2
ATVO				AML	AML		
	comp=N,165μm,0.5s						
ATVO				AML	AML		
	comp=E,168μm,0.8s						
MPAG	**Monte Paganucc**	**0.84**	**336**	P	Pg	01 06 11.4	0.0
MPAG				AML	AML		
	comp=E,182μm,0.9s						
MPAG				AML	AML		
	comp=N,189μm,0.5s						
MPAG				AML	AML		
	comp=N,188μm,0.5s						
MPAG				AML	AML		
	comp=E,182μm,0.9s						
ATPI	**Pietralunga -**	**0.84**	**315**	P	Pg	01 06 11.3	-0.1
ATPI				AML	AML		
	comp=E,147μm,0.5s						
ATPI				AML	AML		
	comp=N,134μm,0.8s						
ATPI				AML	AML		
	comp=E,147μm,0.5s						
ATPI				AML	AML		
	comp=N,135μm,0.8s						
PIEI	**Pieia**	**0.84**	**324**	P	Pg	01 06 11.2	-0.3
PIEI				AML	AML		
	comp=E,182μm,0.3s						
PIEI				AML	AML		
	comp=N,127μm,0.4s						
PIEI				AML	AML		
	comp=E,182μm,0.3s						
NARO	**Abbazia di Nar**	**0.89**	**328**	P	Pg	01 06 11.9	-0.4
NARO				AML	AML		
	comp=E,120μm,0.2s						
NARO				AML	AML		
	comp=N,114μm,1.5s						
FSSB	**Fossombrone**	**0.90**	**339**	P	Pb	01 06 12.8	-0.2
FSSB				AML	AML		
	comp=N,817μm,0.2s						
FSSB				AML	AML		
	comp=E,578μm,0.3s						
FSSB				AML	AML		
	comp=N,818μm,0.2s						
APEC	**Apecchio**	**0.92**	**320**	P	Pg	01 06 11.7	-1.1
BADI	**Badiali**	**0.97**	**313**	P	Pg	01 06 13.7	-0.1
PE3	**Peglio**	**0.99**	**328**	P	Pg	01 06 14.4	+0.1
CAFI	**Castiglion Fio**	**1.04**	**297**	⇑P	Pg	01 06 15.0	-0.1
CAFI				AML	AML		
	comp=E,124μm,0.6s						
CAFI				AML	AML		
	comp=N,110μm,1.5s						
CAFI				AML	AML		
	comp=N,110μm,1.5s						

ROM 31 01:06:17.9±0.0, 42°.891N±0°.003×13°.074E±0°.003, h11km, ML3.0/16, 4C-7D, Error ellipse: s-maj=0.3km s-min=0.2km az=311.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.04**	**270**	⇓P	Pg	01 06 20.3	+0.4
T1216				S	Sg	01 06 21.7	+0.2
T1216				AML	AML		
	comp=E,31250μm,0.3s						
T1216				AML	AML		
	comp=N,47700μm,0.3s						
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.07**	**346**	P	Pg	01 06 20.7	+0.3
FEMA				S	Sg	01 06 22.5	+0.2
FEMA				AML	AML		
	comp=N,16350μm,0.7s						
FEMA				AML	AML		
	comp=E,15950μm,0.2s						
FEMA				AML	AML		
	comp=N,16400μm,0.7s						
FEMA				AML	AML		
	comp=N,20700μm,0.4s						
FEMA				AML	AML		
	comp=E,16900μm,1.1s						
T1245	**Castelsantange**	**0.09**	**112**	P	Pg	01 06 20.9	+0.3
T1245				S	Sg	01 06 22.9	+0.4
T1245				AML	AML		
	comp=E,44800μm,0.7s						
T1245				AML	AML		
	comp=E,41700μm,0.7s						
T1245				AML	AML		
	comp=N,47700μm,0.2s						
T1245				AML	AML		
	comp=N,45100μm,0.2s						
T1215	**Vallo di Nera,**	**0.17**	**240**	P	Pg	01 06 22.3	+0.6
T1215				S	Sg	01 06 25.4	+1.0
T1215				AML	AML		
	comp=N,19300μm,0.1s						
T1215				AML	AML		
	comp=E,11405μm,0.1s						
T1215				AML	AML		
	comp=E,10375μm,0.1s						
T1215				AML	AML		
	comp=N,20250μm,0.1s						
MMO1	**Montemonaco**	**0.19**	**87**	⇓P	Pg	01 06 22.4	+0.4
MMO1				S	Sg	01 06 25.5	+0.8
T1217	**Poggiodomo (PG**	**0.21**	**211**	P	Pg	01 06 22.8	+0.5
T1217				S	Sg	01 06 26.5	+1.1
T1217				AML	AML		
	comp=E,1125μm,0.9s						
T1217				AML	AML		
	comp=N,1310μm,0.5s						
T1217				AML	AML		
	comp=N,8320μm,0.2s						
T1217				AML	AML		
	comp=N,8425μm,0.2s						
T1217				AML	AML		
	comp=E,4865μm,0.2s						
T1217				AML	AML		
	comp=E,4870μm,0.1s						
AM05	**Amandola Campo**	**0.22**	**67**	P	Pg	01 06 23.1	+0.6
AM05				S	Sg	01 06 26.8	+1.1
AM05				AML	AML		
	comp=E,12350μm,0.1s						

AM05				AML	AML		
	comp=N,2470μm,0.4s						
AM05				AML	AML		
	comp=E,2485μm,0.3s						
AM05				AML	AML		
	comp=N,662μm,1.0s						
GUMA	**Gualdo di Mace**	**0.26**	**48**	⇑P	Pb	01 06 24.0	-0.7
GUMA				S	Sb	01 06 28.5	-0.6
GUMA				AML	AML		
	comp=E,6335μm,0.8s						
GUMA				AML	AML		
	comp=N,4720μm,0.5s						
GUMA				AML	AML		
	comp=E,4950μm,0.7s						
GUMA				AML	AML		
	comp=N,6185μm,0.5s						
GUMA				AML	AML		
	comp=N,9270μm,0.5s						
GUMA				AML	AML		
	comp=E,9205μm,0.3s						
GUMA				AML	AML		
	comp=N,10035μm,0.6s						
GUMA				AML	AML		
	comp=E,7560μm,0.8s						
T1241	**Roccafluvione,**	**0.27**	**97**	⇑P	Pg	01 06 23.9	+0.6
T1241				S	Sb	01 06 28.3	-1.1
T1241				AML	AML		
	comp=E,3850μm,0.3s						
T1241				AML	AML		
	comp=N,2695μm,0.3s						
T1241				AML	AML		
	comp=E,6950μm,0.3s						
T1241				AML	AML		
	comp=E,7570μm,0.3s						
T1241				AML	AML		
	comp=N,4790μm,0.3s						
T1241				AML	AML		
	comp=N,4025μm,0.3s						
SEF1	**Sefro**	**0.27**	**340**	P	Pg	01 06 24.0	+0.5
SEF1				S	Sb	01 06 28.5	-1.1
T1204	**Amatrice, Fraz**	**0.28**	**140**	P	Pb	01 06 24.5	-0.6
LNSS	**Leonessa**	**0.29**	**185**	S	Sb	01 06 29.0	-1.1
MDAR	**Monte D'Aria**	**0.31**	**9**	P	Pg	01 06 24.5	+0.4
MDAR				S	Sg	01 06 29.4	+1.1
T1243	**Rocca Santa Ma**	**0.34**	**125**	P	Pg	01 06 25.1	+0.5
T1243				S	Sb	01 06 30.4	-1.1
ASSB	**Assisi San Ben**	**0.34**	**297**	⇑P	Pg	01 06 25.1	+0.3
ASSB				AML	AML		
	comp=E,2060μm,0.2s						
ASSB				AML	AML		
	comp=N,1315μm,1.6s						
ASSB				AML	AML		
	comp=E,4800μm,0.2s						
ASSB				AML	AML		
	comp=N,3365μm,0.2s						
SNTG	**Esanatoglia**	**0.38**	**345**	⇓P	Pb	01 06 26.1	-0.6
SNTG				AML	AML		
	comp=E,556μm,0.6s						
SNTG				AML	AML		
	comp=N,620μm,0.1s						
SNTG				AML	AML		
	comp=E,613μm,0.4s						
SNTG				AML	AML		
	comp=N,682μm,0.1s						
SNTG				AML	AML		
	comp=E,714μm,0.7s						
SNTG				AML	AML		
	comp=E,716μm,0.7s						
SNTG				AML	AML		
	comp=N,808μm,1.3s						
SNTG				AML	AML		
	comp=N,785μm,0.2s						
ARRO	**Arrone**	**0.39**	**216**	⇓P	Pg	01 06 26.0	+0.5
ARRO				AML	AML		
	comp=E,444μm,0.2s						
ARRO				AML	AML		
	comp=N,286μm,0.2s						
ARRO				AML	AML		
	comp=E,1980μm,0.2s						
ARRO				AML	AML		
	comp=N,1725μm,0.2s						
T1211	**Morro Reatino**	**0.39**	**204**	S	Sb	01 06 32.2	-0.8
ATCC	**AVT- Casa Cast**	**0.43**	**313**	⇑P	Pg	01 06 26.9	+0.4
ATCC				AML	AML		
	comp=E,850μm,0.7s						
ATCC				AML	AML		
	comp=N,1220μm,0.2s						
ATCC				AML	AML		
	comp=E,1255μm,0.3s						
ATCC				AML	AML		
	comp=N,1255μm,1.4s						
EL6	**Elcito**	**0.44**	**3**	P	Pg	01 06 26.9	+0.3
EL6				AML	AML		
	comp=E,1967μm,0.3s						
EL6				AML	AML		
	comp=N,2698μm,0.3s						
CESX	**Cesi**	**0.46**	**233**	S	Sb	01 06 35.0	+0.1
FOSV	**Fossato di Vic**	**0.47**	**331**	⇓P	Pg	01 06 27.5	+0.5
TERO	**Teramo**	**0.47**	**124**	P	Pg	01 06 27.2	+0.1
TERO				S	Sb	01 06 34.4	-0.9
MMUR	**Monte Murano**	**0.55**	**354**	S	Sb	01 06 38.0	+0.3
GIGS	**Gran Sasso**	**0.57**	**140**	P	Pg	01 06 29.3	+0.2
ARVD	**Arcevia**	**0.61**	**351**	⇓P	Pb	01 06 30.4	-0.3
ARVD				S	Sb	01 06 40.0	+0.6
ARVD				AML	AML		
	comp=E,346μm,0.3s						
ARVD				AML	AML		
	comp=N,266μm,0.7s						
PP3	**Marolino**	**0.62**	**39**	⇓P	Pb	01 06 31.2	+0.4
PP3				AML	AML		
	comp=E,1080μm,0.8s						
PP3				AML	AML		
	comp=N,1205μm,0.3s						
PP3				AML	AML		
	comp=E,1056μm,0.8s						
PP3				AML	AML		
	comp=N,1350μm,0.3s						
ATVO	**AVT- Monte Val**	**0.69**	**315**	S	Sn	01 06 44.0	-0.6
MGAB	**Montegabbione**	**0.71**	**272**	S	Sn	01 06 45.0	+0.1
MPAG	**Monte Paganucc**	**0.77**	**343**	S	Sn	01 06 46.0	-0.6
PCRO	**Pietralacroce**	**0.79**	**25**	S	Sn	01 06 47.0	+0.1
NARO	**Abbazia di Nar**	**0.81**	**334**	S	Sn	01 06 47.0	-0.3
FSSB	**Fossombrone**	**0.83**	**345**	S	Sn	01 06 48.0	+0.1
TOLF	**Tolfa**	**1.15**	**224**	P	Pg	01 06 39.9	0.0
TOLF				AML	AML		
	comp=E,74μm,0.7s						
TOLF				AML	AML		
	comp=N,86μm,0.5s						
TOLF				AML	AML		
	comp=N,108μm,0.5s						
TOLF				AML	AML		
	comp=E,127μm,0.5s						
OBKA	**Obir**	**3.77**	**16**	*e*Pn	Pn	01 07 17.3	+1.3
	comp=E,0.2nm,0.2s						
ABTA	**Abfaltersbach**	**3.88**	**354**	*e*Pn	Pn	01 07 18.8	+1.2
	comp=E,0.4nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.82**	**5**	*e*Pn	Pn	01 07 31.7	+1.3
	comp=E,0.6nm,0.2s						
CONA	**Conrad Observa**	**5.41**	**20**	*e*Pn	Pn	01 07 38.8	+0.2
	comp=E,0.2nm,0.2s						

ROM 31 01:07:13.5±0.1, 42°.892N±0°.003×13°.044E±0°.005, h10km, ML2.9/8, Error ellipse: s-maj=0.3km s-min=0.2km az=281.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.02**	**267**	P	Pg	01 07 15.6	+0.4
T1216				S	Sg	01 07 16.8	+0.3
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.07**	**3**	P	Pg	01 07 16.1	+0.3
FEMA				S	Sg	01 07 17.7	+0.2
FEMA				AML	AML		
	comp=E,16900μm,1.1s						
FEMA				AML	AML		
	comp=N,20700μm,0.4s						
T1245	**Castelsantange**	**0.11**	**108**	P	Pg	01 07 16.8	+0.5
T1245				S	Sg	01 07 18.9	+0.6
T1245				AML	AML		
	comp=E,44800μm,0.7s						
T1245				AML	AML		
	comp=N,45100μm,0.1s						
T1245				AML	AML		
	comp=E,41700μm,0.7s						
T1245				AML	AML		
	comp=N,47700μm,0.2s						
T1215	**Vallo di Nera,**	**0.16**	**235**	P	Pg	01 07 17.6	+0.7
T1215				S	Sg	01 07 20.3	+1.0
T1215				AML	AML		
	comp=E,11370μm,0.1s						
T1215				AML	AML		
	comp=E,10385μm,0.1s						
T1215				AML	AML		
	comp=N,20250μm,0.1s						
T1215				AML	AML		
	comp=N,19300μm,0.1s						
T1215				AML	AML		
	comp=E,10375μm,0.1s						
T1215				AML	AML		
	comp=E,11405μm,0.1s						
T1217	**Poggiodomo (PG**	**0.20**	**205**	P	Pg	01 07 18.3	+0.7
T1217				S	Sg	01 07 21.9	+1.4
MMO1	**Montemonaco**	**0.21**	**88**	P	Pg	01 07 18.3	+0.5
MMO1				S	Sg	01 07 21.8	+1.0
AM05	**Amandola Campo**	**0.24**	**69**	P	Pg	01 07 19.0	+0.5
AM05				S	Sg	01 07 22.9	+1.1
AM05				AML	AML		
	comp=N,2465μm,0.4s						
AM05				AML	AML		
	comp=N,2470μm,0.4s						
AM05				AML	AML		
	comp=E,12350μm,0.1s						
AM05				AML	AML		
	comp=N,662μm,1.0s						
AM05				AML	AML		
	comp=E,2485μm,0.3s						
GUMA	**Gualdo di Mace**	**0.27**	**51**	P	Pg	01 07 19.6	+0.6
GUMA				S	Sb	01 07 24.8	-0.6
GUMA				AML	AML		
	comp=N,9270μm,0.6s						
GUMA				AML	AML		
	comp=N,10040μm,0.6s						
GUMA				AML	AML		
	comp=E,9205μm,0.3s						
GUMA				AML	AML		
	comp=N,9270μm,0.5s						
GUMA				AML	AML		
	comp=E,7560μm,0.8s						
GUMA				AML	AML		
	comp=N,10035μm,0.6s						
T1241	**Roccafluvione,**	**0.29**	**97**	S	Sg	01 07 16.0	-7.1
T1241				P	Pg	01 07 19.8	+0.6
LNSS	**Leonessa**	**0.29**	**181**	P	Pg	01 07 19.9	+0.6
LNSS				S	Sb	01 07 24.9	-0.9
T1204	**Amatrice, Fraz**	**0.29**	**137**	P	Pg	01 07 20.1	+0.6
T1204				S	Sb	01 07 24.9	-1.1
MDAR	**Monte D'Aria**	**0.31**	**13**	P	Pg	01 07 20.0	+0.3
ASSB	**Assisi San Ben**	**0.32**	**298**	P	Pg	01 07 20.3	+0.5
ASSB				S	Sb	01 07 25.4	-1.2
ASSB				AML	AML		
	comp=N,3365μm,0.2s						
ASSB				AML	AML		
	comp=E,4800μm,0.2s						
SMA1	**SAN MARTINO**	**0.34**	**141**	S	Sg	01 07 21.0	-3.7
GAG1	**Gagliole**	**0.35**	**3**	P	Pg	01 07 21.0	+0.6
GAG1				S	Sb	01 07 26.6	-0.8
T1243	**Rocca Santa Ma**	**0.36**	**123**	P	Pg	01 07 20.8	+0.2
T1243				S	Sg	01 07 26.4	+1.1
SNTG	**Esanatoglia**	**0.37**	**348**	P	Pg	01 07 21.4	+0.5
SNTG				AML	AML		
	comp=E,714μm,0.8s						
SNTG				AML	AML		
	comp=N,785μm,0.1s						
SNTG				AML	AML		
	comp=N,785μm,0.2s						
SNTG				AML	AML		
	comp=E,716μm,0.7s						
SNTG				AML	AML		
	comp=E,714μm,0.7s						
SNTG				AML	AML		
	comp=N,808μm,1.3s						
ARRO	**Arrone**	**0.37**	**213**	P	Pg	01 07 21.3	+0.5
ARRO				S	Sb	01 07 27.5	-0.6
T1211	**Morro Reatino**	**0.39**	**201**	P	Pg	01 07 21.7	+0.6
RM33	**Pellescritta (**	**0.40**	**162**	P	Pg	01 07 21.8	+0.4
RM33				S	Sb	01 07 28.5	-0.5
ATCC	**AVT- Casa Cast**	**0.42**	**315**	P	Pg	01 07 22.0	+0.3
ATCC				AML	AML		
	comp=N,1255μm,1.4s						
ATCC				AML	AML		
	comp=E,1255μm,0.3s						
EL6	**Elcito**	**0.44**	**5**	P	Pg	01 07 22.3	+0.2
EL6				S	Sb	01 07 29.6	-0.6
CAMP	**Campotosto**	**0.45**	**143**	P	Pg	01 07 22.5	+0.3
CAMP				S	Sb	01 07 29.3	-1.0
FOSV	**Fossato di Vic**	**0.45**	**333**	AML	AML		
	comp=E,440μm,0.3s						
FOSV				AML	AML		
	comp=N,514μm,1.4s						
OFFI	**Offida**	**0.47**	**85**	P	Pb	01 07 23.9	-0.1
T1247	**Pizzolo (AQ)**	**0.49**	**157**	P	Pb	01 07 23.7	-0.5
TERO	**Teramo**	**0.49**	**123**	S	Sg	01 07 24.0	-5.5
GIGS	**Gran Sasso**	**0.59**	**139**	P	Pg	01 07 24.9	+0.1
AQU	**L'Aquila**	**0.60**	**154**	P	Pb	01 07 26.0	-0.1
ARVD	**Arcevia**	**0.61**	**353**	P	Pg	01 07 25.4	+0.1
ARVD				S	Sb	01 07 35.1	+0.1
ARVD				AML	AML		
	comp=E,346μm,0.3s						
ARVD				AML	AML		
	comp=E,346μm,0.3s						
ARVD				AML	AML		
	comp=N,266μm,0.7s						
PP3	**Marolino**	**0.64**	**40**	P	Pb	01 07 26.9	+0.2
PP3				S	Sn	01 07 38.6	-0.3

*DJA **31** 01:08:19.9±0.2, 1°.S±.3°×12°.3E±.°, h10km, M4.7/17, mb5.0/7, mB5.0/5, MLv4.7/17, Mw(mB)4.3/5*
*NEIC **31** 01:08:19.9±2.0, 0°.64S±0°.04×123°.25E±0°.05, h10km±1km, mb4.4/18, Error ellipse: s-maj=9.6km s-min=4.8km az=306.0*
*IDC **31** 01:08:23.1±2.6, 0°.63S×123°.20E, h50km±27km, mb4.0/9, mbtmp4.3/11, ML4.2/2, MS3.3/1, Error ellipse: s-maj=21.1km s-min=14.8km az=43.0*

ISC 31 01:08:19.2±0.5, 0°.63S±0°.04×123°.25E±0°.04, h10km, n64, σ1°.37/67, mb4.4/18, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.63**	**229**		**Pg**	**01 08 32.1**	**+0.6**
LUWI				Sg	**Sg**	**01 08 40.4**	**+0.6**
LUWI	**Luwuk**	**0.63**	**229**	P	**Pg**	**01 08 32.0**	**+0.5**
LUWI				S	**Sg**	**01 08 40.7**	**+0.9**
GTOI	**Gorontalo**	**1.28**	**349**	P	**Pb**	**01 08 44.1**	**+0.7**
APSI	**Ampana**	**1.63**	**260**	P	**Pb**	**01 08 49.4**	**+0.1**
MRSI	**Marisa**	**1.71**	**310**	P	**Pn**	**01 08 47.4**	**-1.7**
TOLI2	**Tolitoli**	**3.01**	**305**	Pn	**Pn**	**01 09 06.7**	**-0.4**
SANI	**Sanana**	**3.08**	**117**	P	**Pn**	**01 09 07.6**	**-0.3**
MPSI	**Mapaga**	**3.49**	**286**	P	**Pn**	**01 09 13.6**	**+0.1**
KKSI	**Kolaka, Sulawe**	**3.87**	**204**	P	**Pn**	**01 09 20.3**	**+1.5**
LBMI	**Labuha**	**4.25**	**90**	P	**Pn**	**01 09 24.2**	**+0.2**
NLAI	**Namlea**	**4.64**	**124**	P	**Pn**	**01 09 31.3**	**+1.9**
SPSI	**Sidrap Palu**	**4.81**	**226**	P	**Pn**	**01 09 33.3**	**+1.6**
BBSI	**Bau Bau**	**4.88**	**188**	P	**Pb**	**01 09 42.9**	**-1.9**
BNSI	**Bone**	**4.89**	**220**	P	**Pn**	**01 09 34.6**	**+1.7**
GAMI	**Galela, Maluku**	**5.15**	**62**	Pn	01 09 43.5	+7.0	
PMSI	**Majene**	**5.19**	**237**	P	**Pn**	**01 09 38.0**	**+1.0**
	1.0nm2μm178nm,0.8s						
KAPI	**Kappang**	**5.59**	**219**	P	**Pn**	**01 09 44.1**	**+1.7**
	12nm,0.3s,baz=27,slow=6.2,SNR=27						
KAPI				S	**Sn**	**01 10 46.6**	**-0.1**
	24nm,0.3s,baz=86,slow=23,SNR=6.0						
	38nm,0.4s						
KAPI	**Kappang**	**5.59**	**219**	Pn	**Pn**	**01 09 43.6**	**+1.1**
KAPI	**Kappang**	**5.59**	**219**	P	**Pn**	**01 09 44.6**	**+2.2**
	0.2nm810nm62nm,0.5s						
BKSI	**Bulukumba**	**5.61**	**214**	P	**Pn**	**01 09 44.8**	**+2.0**
	0.3nm626nm47nm,0.6s						
KRAI	**Karang Ratu**	**5.79**	**118**	P	**Pn**	**01 09 47.9**	**+2.6**
	1.6nm106nm,0.9s						
KRAI				S	**Pn**	**01 09 48.1**	**+2.8**
	1.6nm106nm,0.9s						
AAI	**Ambon**	**5.80**	**122**	P	**Pn**	**01 09 47.3**	**+2.0**
	0.5nm123nm,0.7s						
BSSI	**Bau Bau, Buton**	**6.13**	**207**	P	**Pn**	**01 09 52.2**	**+2.2**
	0.6nm2μm135nm,0.8s						
MSAI	**Masohi**	**6.28**	**116**	P	**Pb**	**01 10 08.8**	**+0.1**
MYLDM	**Lahad Datu**	**7.47**	**321**	Pn	**Pn**	**01 10 10.5**	**+2.2**
MYLDM	**Lahad Datu**	**7.47**	**321**	P	**Pn**	**01 10 09.1**	**+0.8**
SIJI	**Sorong**	**8.02**	**92**	P	**Pn**	**01 10 17.6**	**+1.8**
	1.8nm,0.3s,baz=251,slow=5.8,SNR=5.7						
SIJI				LR	LR	01 14 21.4	
	comp=Z,222nm,21.6s,baz=35,slow=44						
	14nm,0.6s						
SOEI	**Soe**	**9.12**	**174**	Pn	**Pn**	**01 10 31.6**	**+0.5**
FAKI	**Fak Fak**	**9.28**	**104**	Pn	**Pn**	**01 10 33.1**	**0.0**
KKM	**Kota Kinabalu**	**9.66**	**313**	Pn	**Pn**	**01 10 38.5**	**0.0**
SMRI	**Semarang**	**14.28**	**243**		**P**	**01 11 50.2**	**+1.3**
MTN	**Manton Dam**	**14.43**	**148**		**P**	**01 11 48.7**	**-1.9**
KNRA	**Kununurra**	**15.91**	**160**	P	**P**	**01 12 08.4**	**+1.3**
KNRA				IAmb	IAmb	01 12 21.3	
	comp=Z,31nm,1.4s						
MYKOM	**Kota Tinggi**	**19.55**	**277**	P	**Pn**	**01 12 49.1**	**+0.5**
WB0	**Warramunga Arr**	**21.93**	**151**	P	**P**	**01 13 12.1**	**-0.9**
WB0				IAmb	IAmb	01 13 17.5	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**22.05**	**151**	P	**P**	**01 13 13.1**	**-1.2**
	comp=Z,7.4nm,0.9s,baz=334,slow=10,SNR=15						
	comp=Z,7.4nm,0.9s						
WB2	**Warramunga Arr**	**22.06**	**151**	P	**P**	**01 13 13.5**	**-0.9**
WR0	**Warramunga Arr**	**22.16**	**151**	P	**P**	**01 13 14.7**	**-0.9**
WR0				IAmb	IAmb	01 13 20.4	
	comp=Z,15nm,0.8s						
IPM	**Ipoh**	**22.78**	**283**	P	**P**	**01 13 21.5**	**-0.7**
IPM				IAmb	IAmb	01 13 24.6	
	comp=Z,26nm,1.0s						
KULM	**Kulim**	**23.33**	**285**	P	**P**	**01 13 27.7**	**-0.1**
KULM				IAmb	IAmb	01 13 53.5	
	comp=Z,16nm,1.2s						
COEN	**Coen**	**23.75**	**125**	P	**P**	**01 13 32.9**	**+0.9**
COEN				IAmb	IAmb	01 13 33.4	
	comp=Z,9.2nm,0.8s						
TPUB	**Ta-pu**	**23.92**	**354**	P	**P**	**01 13 34.0**	**+0.5**
RPSI	**Rantau Prapat**	**24.54**	**278**	P	**P**	**01 13 37.5**	**-1.9**
RPSI	**Rantau Prapat**	**24.54**	**278**	P	**P**	**01 13 38.1**	**-1.2**
RPSI				IAmb	IAmb	01 13 41.2	
	comp=Z,18nm,1.1s						
PSI	**Prapat**	**24.56**	**278**	P	**P**	**01 13 37.5**	**-2.2**
	comp=Z,6.6nm,0.6s,baz=126,slow=4.2,SNR=6.9						
	comp=Z,6.6nm,0.6s						
ASAR	**Alice Springs**	**25.13**	**156**	P	**P**	**01 13 43.8**	**-0.8**
	comp=Z,12nm,0.4s,baz=316,slow=6.6,SNR=8.7						
	comp=Z,12nm,0.4s						
CTA	**Charters Tower**	**29.68**	**132**	P	**P**	**01 14 25.1**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=354,slow=9.2,SNR=2.4						
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.51**	**310**	P	**P**	**01 14 32.3**	**-0.6**
	comp=Z,2.9nm,0.4s,baz=138,slow=6.9,SNR=20						
	comp=Z,2.9nm,0.4s						
CHTO	**Chiang Mai**	**30.72**	**310**	P	**P**	**01 14 35.5**	**+0.8**
STKA	**Stephens Creek**	**35.59**	**153**	P	**P**	**01 15 16.1**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=322,slow=10,SNR=4.0						
	comp=Z,3.5nm,0.8s						
STKA	**Stephens Creek**	**35.59**	**153**	P	**P**	**01 15 16.8**	**-0.2**
SHL	**Shillong**	**39.96**	**313**	P	**P**	**01 15 53.6**	**-0.8**
SHL				IAmb	IAmb	01 15 57.5	
	comp=Z,5.7nm,0.8s						
ARMA	**Armidale**	**40.05**	**140**	P	**P**	**01 15 56.3**	**+1.4**
SONM	**Songino Array**	**50.45**	**345**	P	**P**	**01 17 16.0**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=165,slow=9.5,SNR=5.8						
	comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**50.45**	**345**	P	**P**	**01 17 16.7**	**-0.6**
MK31	**Makanchi Array**	**59.28**	**328**	P	**P**	**01 18 21.0**	**-0.1**
MK31				IAmb	IAmb	01 18 39.2	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**59.28**	**328**	P	**P**	**01 18 18.6**	**-2.5**
	comp=Z,1.0nm,0.7s,baz=119,slow=8.9,SNR=8.5						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**59.28**	**328**	P	**P**	**01 18 20.8**	**-0.3**
BKZ	**Black Stump Fm**	**61.83**	**135**	P	**P**	**01 18 39.0**	**+0.3**
ZALV	**Zalesovo Beam**	**62.98**	**336**	P	**P**	**01 18 44.3**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=118,slow=8.3,SNR=1.4						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**62.98**	**336**	P	**P**	**01 18 46.4**	**+0.3**
KURK	**Kurchatov**	**63.64**	**330**	P	**P**	**01 18 48.4**	**-2.1**
KURK				IAmb	IAmb	01 19 29.4	
	comp=Z,4.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**120.81**	**285**	PKP	**PKPdf**	**01 27 09.9**	**-2.9**
	comp=Z,0.3nm,0.6s,baz=83,slow=2.1,SNR=3.0						
TXAR	**Lajitas Array**	**126.99**	**53**	PKP	**PKPdf**	**01 27 24.2**	**-0.2**
	comp=Z,0.1nm,0.6s,baz=316,slow=3.8,SNR=1.9						

VIE 31 01:22:47.4±16.0, 41°.79N×13°.62E, h10km, mb2.7/6, ml2.6/2, ms3.3/3, Error ellipse: s-maj=180.7km s-min=46.3km az=174.0 95 km E of Rome, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir**	**4.77**	**8**	*e*Pn	Pn	01 23 59.5	+0.2
	1.0nm,0.7s						
ABTA	**Abfaltersbach**	**5.02**	**351**	*i* Pn	Pn	01 24 02.6	-0.2
	3.4nm,0.4s						
WTTA	**Wattenberg**	**5.65**	**346**	*e*Pn	Pn	01 24 13.2	+1.6
	0.4nm,0.2s						
SQTA	**Sankt Quirin**	**5.70**	**343**	*e*Pn	Pn	01 24 12.1	0.0
	0.7nm,0.2s						
WATA	**Walderalm**	**5.73**	**346**	*e*Pn	Pn	01 24 14.2	+1.6
	0.5nm,0.2s						
RETA	**Reutte**	**6.05**	**341**	*e*Pn	Pn	01 24 16.1	-0.8
	0.4nm,0.3s						

ROM 31 01:23:41.0±0.1, 42°.764N±0°.003×13°.179E±0°.004, h9km, ML2.8/15, 6C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=88.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**4**	P	Pg	01 23 43.7	0.0
T1245				S	Sg	01 23 45.7	+0.2
T1245				AML	AML		
	comp=N,26200μm,0.3s						
T1245				AML	AML		
	comp=E,25450μm,0.2s						
T1245				AML	AML		
	comp=E,22550μm,0.2s						
T1245				AML	AML		
	comp=N,23100μm,0.3s						
T1245				AML	AML		
	comp=N,26150μm,0.3s						
T1204	**Amatrice, Fraz**	**0.13**	**131**	P	Pg	01 23 45.0	+0.8
T1204				S	Sg	01 23 47.6	+1.2
T1204				AML	AML		
	comp=E,10160μm,0.2s						
T1204				AML	AML		
	comp=E,10165μm,0.2s						
T1204				AML	AML		
	comp=N,6950μm,0.2s						
T1204				AML	AML		
	comp=N,6955μm,0.2s						
T1204				AML	AML		
	comp=E,10200μm,0.2s						
T1216	**Preci, Frazion**	**0.17**	**317**	AML	AML		
	comp=E,8165μm,0.7s						
T1216				AML	AML		
	comp=E,8205μm,0.7s						
T1216				AML	AML		
	comp=N,12900μm,0.3s						
T1216				AML	AML		
	comp=N,12950μm,0.3s						
T1216				AML	AML		
	comp=E,8195μm,0.7s						
T1216				AML	AML		
	comp=E,8190μm,0.7s						
MMO1	**Montemonaco**	**0.17**	**39**	P	Pg	01 23 45.3	+0.5
MMO1				S	Sg	01 23 48.3	+0.9
SMA1	**SAN MARTINO**	**0.18**	**139**	⇑P	Pg	01 23 45.6	+0.8
SMA1				AML	AML		
	comp=E,2755μm,0.5s						
SMA1				AML	AML		
	comp=N,3025μm,0.6s						
SMA1				AML	AML		
	comp=E,2760μm,0.5s						
LNSS	**Leonessa**	**0.19**	**212**	P	Pg	01 23 45.8	+0.8
LNSS				S	Sg	01 23 49.1	+1.3
LNSS				AML	AML		
	comp=N,13200μm,0.2s						
LNSS				AML	AML		
	comp=E,5705μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**254**	P	Pg	01 23 45.7	+0.6
T1217				S	Sg	01 23 49.0	+1.2

T1217				AML	AML	
	comp=E,4700μm,0.9s					
T1217				AML	AML	
	comp=N,4070μm,0.2s					
T1217				AML	AML	
	comp=E,4855μm,0.9s					
T1217				AML	AML	
	comp=E,4685μm,0.9s					
T1217				AML	AML	
	comp=N,4075μm,0.2s					
T1217				AML	AML	
	comp=E,4675μm,0.9s					
T1217				AML	AML	
	comp=E,4680μm,0.9s					
T1217				AML	AML	
	comp=N,4010μm,0.2s					
T1241	**Roccafluvione,**	**0.21**	**63**	P	Pg	01 23 46.1 +0.7
T1241				S	Sg	01 23 49.8 +1.4
T1241				AML	AML	
	comp=E,9270μm,0.2s					
T1241				AML	AML	
	comp=E,9385μm,0.2s					
T1241				AML	AML	
	comp=E,9275μm,0.2s					
T1241				AML	AML	
	comp=N,4435μm,0.4s					
T1241				AML	AML	
	comp=E,9270μm,0.2s					
T1241				AML	AML	
	comp=N,4440μm,0.4s					
T1241				AML	AML	
	comp=N,4025μm,0.4s					
T1243	**Rocca Santa Ma**	**0.21**	**109**	P	Pg	01 23 46.0 +0.5
T1243				S	Sg	01 23 49.6 +1.2
FEMA	**Monte Fema**	**0.22**	**334**	AML	AML	
	comp=N,6935μm,0.1s					
FEMA				AML	AML	
	comp=E,12700μm,0.5s					
FEMA				AML	AML	
	comp=N,6940μm,0.1s					
FEMA				AML	AML	
	comp=E,12650μm,0.5s					
FEMA				AML	AML	
	comp=N,6940μm,0.1s					
T1215	**Vallo di Nera,**	**0.23**	**280**	⇑P	Pg	01 23 41.9 -3.9
T1215				AML	AML	
	comp=E,1875μm,0.4s					
T1215				AML	AML	
	comp=N,1820μm,0.1s					
T1215				AML	AML	
	comp=E,1780μm,0.4s					
T1215				AML	AML	
	comp=N,1825μm,0.1s					
T1215				AML	AML	
	comp=E,1880μm,0.4s					
T1215				AML	AML	
	comp=E,1774μm,0.4s					
T1215				AML	AML	
	comp=N,1824μm,0.1s					
T1215				AML	AML	
	comp=E,1880μm,0.4s					
T1215				AML	AML	
	comp=N,1815μm,0.1s					
T1215				AML	AML	
	comp=E,1782μm,0.4s					
T1215				AML	AML	
	comp=N,1824μm,0.1s					
T1215				AML	AML	
	comp=E,1780μm,0.4s					
T1215				AML	AML	
	comp=E,1875μm,0.4s					
AM05	**Amandola Campo**	**0.25**	**31**	P	Pg	01 23 46.7 +0.6
AM05				S	Sg	01 23 50.9 +1.4
AM05				AML	AML	
	comp=E,1068μm,0.4s					
AM05				AML	AML	
	comp=E,4210μm,0.4s					
AM05				AML	AML	
	comp=N,427μm,1.1s					
AM05				AML	AML	
	comp=N,1185μm,1.4s					
AM05				AML	AML	
	comp=E,4215μm,0.4s					
AM05				AML	AML	
	comp=N,426μm,1.1s					
AM05				AML	AML	
	comp=E,1065μm,0.4s					
RM33	**Pellescritta (**	**0.26**	**174**	P	Pg	01 23 46.9 +0.7
RM33				S	Sb	01 23 51.2 -1.3
RM33				AML	AML	
	comp=N,2500μm,0.2s					
RM33				AML	AML	
	comp=E,2365μm,0.9s					
RM33				AML	AML	
	comp=N,2505μm,0.2s					
CAMP	**Campotosto**	**0.28**	**143**	P	Pg	01 23 47.3 +0.5
CAMP				S	Sb	01 23 52.2 -1.1
CAMP				AML	AML	
	comp=N,1026μm,0.2s					
CAMP				AML	AML	
	comp=E,989μm,0.2s					
GUMA	**Gualdo di Mace**	**0.32**	**21**	P	Pg	01 23 48.2 +0.7
GUMA				S	Sb	01 23 54.1 -0.2
GUMA				AML	AML	
	comp=N,7270μm,0.2s					
GUMA				AML	AML	
	comp=E,6845μm,0.3s					
GUMA				AML	AML	
	comp=N,8565μm,0.3s					
GUMA				AML	AML	
	comp=E,4535μm,1.1s					
T1211	**Morro Reatino**	**0.33**	**226**	AML	AML	
	comp=N,4770μm,0.2s					
T1211				AML	AML	
	comp=E,2272μm,1.4s					
T1211				AML	AML	
	comp=N,4685μm,0.3s					
T1211				AML	AML	
	comp=E,2280μm,1.4s					
T1211				AML	AML	
	comp=E,2315μm,1.4s					
T1211				AML	AML	
	comp=N,4690μm,0.3s					
T1247	**Pizzolo (AQ)**	**0.33**	**165**	⇓P	Pb	01 23 48.5 -0.7
T1247				S	Sb	01 23 55.0 +0.4
T1247				AML	AML	
	comp=E,1855μm,1.4s					
T1247				AML	AML	
	comp=E,1850μm,1.4s					
T1247				AML	AML	
	comp=N,1905μm,1.1s					
TERO	**Teramo**	**0.34**	**114**	P	Pg	01 23 48.3 +0.4
TERO				S	Sb	01 23 53.9 -1.0
TERO				AML	AML	
	comp=E,1130μm,0.6s					
TERO				AML	AML	
	comp=N,1435μm,0.6s					
TERO				AML	AML	
	comp=N,1635μm,0.6s					
TERO				AML	AML	
	comp=E,1305μm,1.4s					
ARRO	**Arrone**	**0.36**	**239**	P	Pb	01 23 48.9 -0.6
ARRO				S	Sb	01 23 54.3 -0.9
ARRO				AML	AML	
	comp=E,1355μm,0.2s					
ARRO				AML	AML	
	comp=N,894μm,0.4s					
OFFI	**Offida**	**0.41**	**65**	⇑P	Pb	01 23 50.4 -0.1
OFFI				S	Sb	01 23 58.4 +1.6
SEF1	**Sefro**	**0.42**	**336**	P	Pg	01 23 47.1 -2.2
SEF1				S	Sb	01 23 56.4 -0.7
GIGS	**Gran Sasso**	**0.43**	**137**	P	Pg	01 23 49.5 +0.1
GIGS				S	Sg	01 23 56.0 +1.0
GIGS				AML	AML	
	comp=E,212μm,1.4s					
GIGS				AML	AML	
	comp=N,175μm,0.6s					
GIGS				AML	AML	
	comp=E,212μm,1.4s					
AQU	**L'Aquila**	**0.44**	**158**	⇓P	Pb	01 23 50.4 -0.6
AQU				S	Sb	01 23 57.7 -0.1
CESX	**Cesi**	**0.47**	**251**	AML	AML	
	comp=E,933μm,0.9s					
CESX				AML	AML	
	comp=N,859μm,1.0s					
ASSB	**Assisi San Ben**	**0.47**	**306**	P	Pg	01 23 49.2 -1.1
ASSB				S	Sg	01 23 57.5 +1.0
GAG1	**Gagliole**	**0.48**	**350**	⇓P	Pg	01 23 44.6 -5.8
FIAM	**Fiamignano**	**0.50**	**185**	P	Pg	01 23 51.0 +0.3
FIAM				S	Sb	01 23 58.8 -0.6
FIAM				AML	AML	
	comp=E,464μm,0.2s					
FIAM				AML	AML	
	comp=N,390μm,1.0s					
FIAM				AML	AML	
	comp=E,464μm,0.2s					
FIAM				AML	AML	
	comp=N,390μm,1.0s					
SNTG	**Esanatoglia**	**0.52**	**340**	P	Pg	01 23 50.4 -0.8
SNTG				S	Sb	01 23 59.8 -0.3
TRTR	**Tortoreto Alta**	**0.54**	**85**	P	Pb	01 23 52.9 +0.2
EL6	**Elcito**	**0.57**	**354**	⇑P	Pg	01 23 46.0 -6.1
ATCC	**AVT- Casa Cast**	**0.58**	**317**	P	Pg	01 23 45.9 -6.4
VCEL	**Villa Celiera**	**0.61**	**127**	P	Pb	01 23 53.6 -0.3
FOSV	**Fossato di Vic**	**0.61**	**330**	P	Pg	01 23 46.4 -6.5
PP3	**Marolino**	**0.69**	**27**	⇑P	Pg	01 23 50.7 -3.7
PP3				AML	AML	
	comp=N,1245μm,0.4s					
PP3				AML	AML	
	comp=N,1185μm,0.4s					
PP3				AML	AML	
	comp=E,1860μm,0.4s					
PP3				AML	AML	
	comp=E,1830μm,0.4s					
PP3				AML	AML	
	comp=N,1190μm,0.4s					
PP3				AML	AML	
	comp=N,1245μm,0.4s					
T0110	**Collepietro**	**0.70**	**140**	⇓P	Pg	01 23 54.7 +0.2
SRES	**S.Oreste - Sor**	**0.72**	**223**	S	Sb	01 24 07.0 +1.2
ARVD	**Arcevia**	**0.75**	**347**	P	Pg	01 23 49.2 -6.4
MGAB	**Montegabbione**	**0.80**	**281**	S	Sg	01 23 60.0 -6.9
CERT	**Cerreto**	**0.83**	**190**	⇑P	Pb	01 23 58.0 +0.4
PTRJ	**Pietraroja**	**1.72**	**144**	S	Sg	01 24 41.0 +4.6

ROM 31 01:28:35.0±0.1, 42°.907N±0°.003×13°.170E±0°.004, h13km, ML2.9/46, 25C-16D, Error ellipse: s-maj=0.3km s-min=0.2km az=224.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**165**	⇓P	Pg	01 28 37.9	+0.2
T1245				S	Sg	01 28 39.7	+0.1
T1245				AML	AML		
	comp=N,59550μm,0.3s						
T1245				AML	AML		
	comp=E,33600μm,1.0s						
T1245				AML	AML		
	comp=E,33450μm,0.3s						
T1245				AML	AML		
	comp=E,33600μm,1.0s						
T1245				AML	AML		
	comp=N,60650μm,0.3s						
T1245				AML	AML		
	comp=N,59600μm,0.3s						
FEMA	**Monte Fema**	**0.10**	**302**	⇑P	Pg	01 28 38.4	+0.2
FEMA				S	Sg	01 28 40.7	+0.2
FEMA				AML	AML		
	comp=E,8820μm,0.2s						
FEMA				AML	AML		
	comp=N,8480μm,1.3s						
FEMA				AML	AML		
	comp=E,9105μm,0.5s						
FEMA				AML	AML		
	comp=N,8495μm,1.3s						
FEMA				AML	AML		
	comp=E,9125μm,0.5s						
FEMA				AML	AML		
	comp=N,8510μm,1.3s						
MMO1	**Montemonaco**	**0.12**	**94**	P	Pg	01 28 38.4	+0.2
MMO1				S	Sg	01 28 40.8	+0.3
AM05	**Amandola Campo**	**0.15**	**62**	⇑P	Pg	01 28 39.1	+0.4
AM05				S	Sg	01 28 41.9	+0.6
AM05				AML	AML		
	comp=E,2385μm,0.1s						
AM05				AML	AML		
	comp=N,1715μm,0.4s						
AM05				AML	AML		
	comp=E,8565μm,0.1s						
AM05				AML	AML		
	comp=N,984μm,0.1s						
AM05				AML	AML		
	comp=N,983μm,0.1s						
AM05				AML	AML		
	comp=N,1900μm,0.2s						
AM05				AML	AML		
	comp=E,8570μm,0.1s						
AM05				AML	AML		
	comp=E,2390μm,0.1s						
AM05				AML	AML		
	comp=N,985μm,0.1s						
AM05				AML	AML		
	comp=N,1905μm,0.2s						
CSP1	**Cessapalombo**	**0.19**	**8**	⇓P	Pg	01 28 39.5	+0.2
CSP1				S	Sg	01 28 42.9	+0.6
CSP1				AML	AML		
	comp=N,1750μm,1.2s						
CSP1				AML	AML		
	comp=E,1196μm,1.0s						
GUMA	**Gualdo di Mace**	**0.20**	**38**	⇓P	Pb	01 28 40.0	-0.5
GUMA				S	Sb	01 28 43.8	-0.4
GUMA				AML	AML		
	comp=E,13000μm,0.5s						
GUMA				AML	AML		
	comp=E,13050μm,0.5s						
GUMA				AML	AML		
	comp=N,10700μm,0.4s						
GUMA				AML	AML		
	comp=E,11850μm,0.5s						
GUMA				AML	AML		
	comp=N,15300μm,0.4s						
T1215	**Vallo di Nera,**	**0.24**	**245**	⇑P	Pg	01 28 40.5	+0.3
T1215				S	Sg	01 28 44.5	+0.8
T1215				AML	AML		
	comp=N,3410μm,1.0s						
T1215				AML	AML		
	comp=E,2845μm,0.4s						
T1215				AML	AML		
	comp=N,3355μm,1.0s						
T1215				AML	AML		
	comp=E,2875μm,0.5s						
T1215				AML	AML		
	comp=N,3415μm,1.0s						
T1215				AML	AML		
	comp=N,3415μm,1.0s						
T1204	**Amatrice, Fraz**	**0.26**	**155**	P	Pg	01 28 40.7	+0.3
T1204				S	Sb	01 28 45.4	-0.5
T1204				AML	AML		
	comp=N,8755μm,0.2s						
T1204				AML	AML		
	comp=E,16100μm,0.1s						
T1204				AML	AML		
	comp=N,8750μm,0.2s						
T1217	**Poggiodomo (PG**	**0.26**	**222**	P	Pg	01 28 40.8	+0.3
T1217				AML	AML		
	comp=E,9675μm,1.3s						
T1217				AML	AML		
	comp=N,12100μm,1.5s						
T1217				AML	AML		
	comp=E,9340μm,1.3s						
T1217				AML	AML		
	comp=E,9685μm,1.3s						
T1217				AML	AML		
	comp=E,9320μm,1.3s						
T1217				AML	AML		
	comp=N,12100μm,1.4s						
T1217				AML	AML		
	comp=E,9315μm,1.3s						
T1217				AML	AML		
	comp=N,11800μm,1.4s						
T1217				AML	AML		
	comp=N,12050μm,1.5s						
T1217				AML	AML		
	comp=N,11750μm,1.4s						
T1217				AML	AML		
	comp=E,9655μm,1.3s						
MDAR	**Monte D'Aria**	**0.29**	**356**	P	Pg	01 28 41.1	+0.1
MDAR				AML	AML		
	comp=E,2635μm,1.5s						
MDAR				AML	AML		
	comp=N,2340μm,1.5s						
MDAR				AML	AML		
	comp=N,2340μm,1.5s						
MDAR				AML	AML		
	comp=E,2635μm,1.5s						
SEF1	**Sefro**	**0.29**	**326**	⇑P	Pg	01 28 41.2	+0.2
SEF1				AML	AML		
	comp=E,2594μm,0.4s						
SEF1				AML	AML		
	comp=E,2596μm,0.4s						
SEF1				AML	AML		
	comp=N,3835μm,0.3s						
SEF1				AML	AML		
	comp=E,2594μm,0.4s						
SEF1				AML	AML		
	comp=N,3830μm,0.3s						
T1243	**Rocca Santa Ma**	**0.29**	**136**	⇑P	Pg	01 28 41.3	+0.3
T1243				S	Sg	01 28 46.1	+0.9
SMA1	**SAN MARTINO**	**0.30**	**156**	⇑P	Pg	01 28 41.5	+0.3
SMA1				S	Sb	01 28 46.5	-0.7
LNSS	**Leonessa**	**0.32**	**197**	⇑P	Pg	01 28 41.9	+0.4
LNSS				AML	AML		
	comp=N,28000μm,0.1s						
LNSS				AML	AML		
	comp=E,5835μm,0.2s						
GAG1	**Gagliole**	**0.34**	**347**	P	Pg	01 28 42.1	+0.2
OFFI	**Offida**	**0.38**	**86**	⇑P	Pb	01 28 43.7	+0.2
OFFI				AML	AML		
	comp=E,4955μm,0.8s						
OFFI				AML	AML		
	comp=N,5290μm,1.5s						
SNTG	**Esanatoglia**	**0.39**	**334**	⇓P	Pg	01 28 42.8	0.0
SNTG				AML	AML		
	comp=E,560μm,0.7s						
SNTG				AML	AML		
	comp=N,659μm,0.3s						
SNTG				AML	AML		
	comp=N,660μm,0.3s						
SNTG				AML	AML		
	comp=N,660μm,0.3s						
SNTG				AML	AML		
	comp=N,659μm,0.3s						
SNTG				AML	AML		
	comp=E,560μm,0.7s						
SNTG				AML	AML		
	comp=E,574μm,0.6s						
ASSB	**Assisi San Ben**	**0.40**	**290**	⇑P	Pg	01 28 43.0	0.0
ASSB				S	Sb	01 28 49.3	-0.7
ASSB				AML	AML		
	comp=E,1780μm,0.4s						
ASSB				AML	AML		
	comp=N,1030μm,1.0s						
RM33	**Pellescritta (**	**0.40**	**175**	P	Pg	01 28 42.1	-0.9
RM33				AML	AML		
	comp=E,6000μm,0.1s						
RM33				AML	AML		
	comp=N,4370μm,0.9s						
RM33				AML	AML		
	comp=E,6130μm,0.1s						
RM33				AML	AML		
	comp=N,4365μm,0.9s						
RM33				AML	AML		
	comp=N,4370μm,0.9s						
RM33				AML	AML		
	comp=E,5995μm,0.1s						
RM33				AML	AML		
	comp=N,4375μm,0.9s						
RM33				AML	AML		
	comp=E,6130μm,0.2s						
CAMP	**Campotosto**	**0.41**	**154**	⇓P	Pg	01 28 43.3	+0.1
CAMP				AML	AML		
	comp=N,1950μm,0.8s						
CAMP				AML	AML		
	comp=N,1955μm,0.8s						
CAMP				AML	AML		
	comp=E,1855μm,0.5s						
EL6	**Elcito**	**0.42**	**353**	⇓P	Pg	01 28 43.0	-0.4
EL6				AML	AML		
	comp=E,1406μm,0.4s						
EL6				AML	AML		
	comp=N,1950μm,0.3s						
EL6				AML	AML		
	comp=E,1705μm,1.5s						
EL6				AML	AML		
	comp=N,2075μm,0.3s						
TERO	**Teramo**	**0.43**	**131**	P	Pg	01 28 43.6	+0.1
TERO				AML	AML		
	comp=E,2645μm,0.3s						
TERO				AML	AML		
	comp=N,2140μm,1.5s						
TERO				AML	AML		
	comp=N,2410μm,1.5s						
TERO				AML	AML		
	comp=E,2830μm,0.3s						
T1211	**Morro Reatino**	**0.44**	**212**	⇑P	Pg	01 28 44.1	+0.4
T1211				AML	AML		
	comp=N,7500μm,0.2s						
T1211				AML	AML		
	comp=E,5590μm,0.2s						
T1211				AML	AML		
	comp=N,7415μm,0.2s						
T1211				AML	AML		
	comp=E,5395μm,0.2s						
T1211				AML	AML		
	comp=N,7495μm,0.2s						
T1211				AML	AML		
	comp=E,5590μm,0.2s						
T1211				AML	AML		
	comp=N,7410μm,0.2s						
T1211				AML	AML		
	comp=E,5585μm,0.2s						
T1211				AML	AML		
	comp=N,7500μm,0.2s						
T1211				AML	AML		
	comp=N,7420μm,0.2s						
T1211				AML	AML		
	comp=E,5395μm,0.2s						
ARRO	**Arrone**	**0.44**	**222**	⇓P	Pg	01 28 43.7	0.0
ARRO				AML	AML		
	comp=N,3875μm,0.7s						
ARRO				AML	AML		
	comp=E,3290μm,0.5s						
ARRO				AML	AML		
	comp=N,3880μm,0.7s						
ARRO				AML	AML		
	comp=E,3285μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.47**	**168**	⇓P	Pg	01 28 43.5	-0.9
T1247				AML	AML		
	comp=N,4035μm,0.2s						
T1247				AML	AML		
	comp=E,3940μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.48**	**306**	⇑P	Pg	01 28 44.5	+0.1
ATCC				S	Sb	01 28 52.2	0.0
ATCC				AML	AML		
	comp=E,1550μm,1.4s						
ATCC				AML	AML		
	comp=N,1205μm,0.5s						
ATCC				AML	AML		
	comp=N,1210μm,0.5s						
FOSV	**Fossato di Vic**	**0.49**	**322**	⇓P	Pg	01 28 44.6	0.0
FOSV				AML	AML		
	comp=E,479μm,1.4s						
FOSV				AML	AML		
	comp=N,834μm,0.4s						
CESX	**Cesi**	**0.53**	**236**	⇑P	Pg	01 28 45.2	-0.1
CESX				S	Sb	01 28 54.0	+0.4
CESX				AML	AML		
	comp=E,2430μm,0.4s						
CESX				AML	AML		
	comp=N,1870μm,1.1s						
GIGS	**Gran Sasso**	**0.54**	**147**	⇑P	Pg	01 28 45.3	-0.4
GIGS				AML	AML		
	comp=N,360μm,1.2s						
GIGS				AML	AML		
	comp=E,467μm,0.2s						
GIGS				AML	AML		
	comp=N,359μm,1.2s						
TRTR	**Tortoreto Alta**	**0.56**	**100**	⇑P	Pb	01 28 47.2	+0.6
TRTR				AML	AML		
	comp=E,3535μm,0.5s						
TRTR				AML	AML		
	comp=N,2985μm,1.5s						
PP3	**Marolino**	**0.57**	**34**	⇑P	Pb	01 28 47.1	+0.3
PP3				AML	AML		
	comp=E,2005μm,0.4s						
PP3				AML	AML		
	comp=N,2605μm,1.2s						
PP3				AML	AML		
	comp=E,1845μm,0.4s						

PP3			AML	AML		
	comp=E,2000μm,0.4s					
PP3			AML	AML		
	comp=E,1840μm,0.4s					
PP3			AML	AML		
	comp=N,2365μm,1.2s					
PP3			AML	AML		
	comp=N,2610μm,1.2s					
AQU	**L'Aquila**	**0.58 163**	P	Pg	01 28 46.3	0.0
AQU			S	Sb	01 28 56.0	+0.9
AQU			AML	AML		
	comp=E,1026μm,0.8s					
AQU			AML	AML		
	comp=E,1026μm,0.8s					
AQU			AML	AML		
	comp=N,726μm,1.4s					
AQU			AML	AML		
	comp=N,733μm,0.8s					
AQU			AML	AML		
	comp=E,1026μm,0.8s					
AQU			AML	AML		
	comp=E,1026μm,0.8s					
MURB	**Monte Urbino**	**0.59 307**	P	Pg	01 28 46.6	+0.1
MURB			S	Sb	01 28 57.0	+1.5
MURB			AML	AML		
	comp=E,3140μm,0.3s					
MURB			AML	AML		
	comp=E,3475μm,0.3s					
MURB			AML	AML		
	comp=E,3135μm,0.3s					
MURB			AML	AML		
	comp=N,2360μm,0.5s					
MURB			AML	AML		
	comp=N,2310μm,0.3s					
ARVD	**Arcevia**	**0.61 344**	⇓P	Pg	01 28 46.8	-0.2
ARVD			AML	AML		
	comp=E,452μm,0.9s					
ARVD			AML	AML		
	comp=E,451μm,0.9s					
ARVD			AML	AML		
	comp=N,240μm,0.8s					
ATFO	**Monte Foce - G**	**0.64 317**	P	Pg	01 28 47.3	0.0
ATFO			S	Sb	01 28 58.0	+1.2
ATFO			AML	AML		
	comp=E,632μm,0.4s					
ATFO			AML	AML		
	comp=N,750μm,0.4s					
ATFO			AML	AML		
	comp=E,632μm,0.4s					
FIAM	**Fiamignano**	**0.64 184**	⇓P	Pg	01 28 47.1	-0.3
FIAM			AML	AML		
	comp=E,1455μm,0.8s					
FIAM			AML	AML		
	comp=N,1099μm,0.8s					
FIAM			AML	AML		
	comp=N,1098μm,0.8s					
ATTE	**AVT- Monte Tez**	**0.67 296**	⇓P	Pn	01 28 50.4	+0.3
FRON	**Frontone**	**0.69 332**	⇓P	Pg	01 28 48.1	-0.3
FRON			AML	AML		
	comp=N,589μm,1.2s					
FRON			AML	AML		
	comp=E,421μm,0.5s					
FAGN	**Fagnano**	**0.71 154**	⇑P	Pg	01 28 48.3	-0.4
FAGN			AML	AML		
	comp=N,1110μm,0.5s					
FAGN			AML	AML		
	comp=E,1595μm,0.4s					
FAGN			AML	AML		
	comp=N,1109μm,0.5s					
VCEL	**Villa Celiera**	**0.71 136**	⇑P	Pg	01 28 48.8	0.0
VCEL			AML	AML		
	comp=N,1010μm,0.1s					
VCEL			AML	AML		
	comp=E,1185μm,0.7s					
VCEL			AML	AML		
	comp=N,1012μm,0.1s					
VCEL			AML	AML		
	comp=N,1012μm,0.1s					
AOI	**Ancona**	**0.72 26**	⇑P	Pb	01 28 49.3	0.0
AOI			AML	AML		
	comp=E,492μm,0.4s					
AOI			AML	AML		
	comp=N,382μm,0.3s					
AOI			AML	AML		
	comp=N,381μm,0.3s					
ATVO	**AVT- Monte Val**	**0.73 311**	P	Pg	01 28 48.7	-0.5
ATVO			S	Sn	01 29 01.0	-1.1
ATVO			AML	AML		
	comp=N,419μm,0.6s					
ATVO			AML	AML		
	comp=E,664μm,0.5s					
ATVO			AML	AML		
	comp=N,418μm,0.6s					
MGAB	**Montegabbione**	**0.78 271**	⇓P	Pg	01 28 50.0	0.0
MGAB			AML	AML		
	comp=E,1062μm,0.4s					
MGAB			AML	AML		
	comp=N,1070μm,0.6s					
MGAB			AML	AML		
	comp=E,1258μm,0.4s					
MGAB			AML	AML		
	comp=N,1075μm,0.5s					
MGAB			AML	AML		
	comp=N,1072μm,0.6s					
MGAB			AML	AML		
	comp=E,1060μm,0.4s					
ATPI	**Pietralunga -**	**0.78 314**	⇑P	Pg	01 28 50.2	+0.1
ATPI			AML	AML		
	comp=E,344μm,0.5s					
ATPI			AML	AML		
	comp=N,464μm,0.6s					
ATPI			AML	AML		
	comp=N,464μm,0.6s					
MPAG	**Monte Paganucc**	**0.78 338**	⇑P	Pg	01 28 50.0	-0.2
MPAG			AML	AML		
	comp=E,348μm,0.6s					
MPAG			AML	AML		
	comp=N,379μm,0.5s					
PIEI	**Pieia**	**0.78 324**	⇑P	Pg	01 28 49.7	-0.4
PIEI			S	Sb	01 29 02.0	+1.0
PIEI			AML	AML		
	comp=N,360μm,0.4s					
PIEI			AML	AML		
	comp=N,360μm,0.4s					
PIEI			AML	AML		
	comp=E,435μm,0.3s					
ATMI	**Monte Miggiano**	**0.79 303**	S	Sn	01 29 03.0	-0.4
T0110	**Collepietro**	**0.81 146**	P	Pg	01 28 49.6	-1.1
T0110			AML	AML		
	comp=E,768μm,0.4s					
T0110			AML	AML		
	comp=N,1085μm,0.4s					
NARO	**Abbazia di Nar**	**0.82 329**	⇑P	Pg	01 28 50.4	-0.5
NARO			AML	AML		
	comp=E,363μm,0.3s					
NARO			AML	AML		
	comp=N,378μm,0.9s					
SRES	**S.Oreste - Sor**	**0.83 216**	⇑P	Pb	01 28 51.2	+0.1
SRES			S	Sn	01 29 04.0	-0.4
SRES			AML	AML		
	comp=N,474μm,1.2s					
SRES			AML	AML		
	comp=E,458μm,1.2s					
FSSB	**Fossombrone**	**0.84 340**	⇑P	Pg	01 28 51.0	-0.2
FSSB			S	Sn	01 29 05.0	+0.4
FSSB			AML	AML		
	comp=E,1510μm,0.4s					
FSSB			AML	AML		
	comp=N,1475μm,0.4s					
APEC	**Apecchio**	**0.85 320**	P	Pg	01 28 50.5	-0.9
BADI	**Badiali**	**0.91 312**	P	Pb	01 28 52.7	+0.1
PE3	**Peglio**	**0.93 328**	⇑P	Pb	01 28 53.1	+0.2
PE3			AML	AML		
	comp=E,5μm,0.4s					
PE3			AML	AML		
	comp=N,5μm,0.7s					
CERT	**Cerreto**	**0.97 188**	P	Pn	01 28 54.7	+0.4
CERT			AML	AML		
	comp=E,1420μm,0.5s					
CERT			AML	AML		
	comp=N,592μm,1.1s					
CAFI	**Castiglion Fio**	**0.98 296**	⇓P	Pb	01 28 53.7	0.0
CAFI			AML	AML		
	comp=E,341μm,0.5s					
CAFI			AML	AML		
	comp=N,260μm,0.4s					
LATE	**Laterza**	**1.05 254**	⇓P	Pn	01 28 55.9	+0.6
LPEL	**Lama dei Pelig**	**1.14 139**	S	Sn	01 29 13.0	+0.8
CASP	**Castiglione de**	**1.70 267**	S	Sb	01 29 28.0	+0.7
PTRJ	**Pietraroja**	**1.84 146**	S	Sg	01 29 34.0	-0.3
PAOL	**Paolisi**	**2.14 150**	P	Pn	01 29 07.6	-2.9

PRU ***31*** *01:28:59.2±0.0, 42°.73N×13°.56E, h10km*
ROM 31 01:28:58.1±0.0, 42°.782N±0°.002×13°.103E±0°.003, h10km, ML2.9/35, 20C-11D, Error ellipse: s-maj=0.2km s-min=0.2km az=325.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**40**	⇓P	Pg	01 29 01.2	+0.4
T1245				S	Sg	01 29 03.1	+0.3
T1245				AML	AML		
	comp=E,33600μm,1.0s						
T1245				AML	AML		
	comp=N,59550μm,0.3s						
T1245				AML	AML		
	comp=E,33450μm,0.3s						
T1245				AML	AML		
	comp=E,33600μm,1.0s						
T1245				AML	AML		
	comp=N,60650μm,0.3s						
T1245				AML	AML		
	comp=N,59600μm,0.3s						
T1216	**Preci, Frazion**	**0.12**	**330**	⇑P	Pg	01 29 01.6	+0.5
T1216				S	Sg	01 29 03.9	+0.6
T1216				AML	AML		
	comp=E,7910μm,1.3s						
T1216				AML	AML		
	comp=E,7930μm,1.3s						
T1216				AML	AML		
	comp=N,12100μm,0.3s						
T1216				AML	AML		
	comp=N,12100μm,0.3s						
T1216				AML	AML		
	comp=E,7905μm,1.3s						
T1217	**Poggiodomo (PG**	**0.14**	**241**	⇑P	Pg	01 29 02.0	+0.6
T1217				S	Sg	01 29 04.8	+1.0
T1217				AML	AML		
	comp=E,9685μm,1.3s						
T1217				AML	AML		
	comp=N,12100μm,1.5s						
T1217				AML	AML		
	comp=E,9320μm,1.3s						
T1217				AML	AML		
	comp=N,11750μm,1.4s						
T1217				AML	AML		
	comp=N,12100μm,1.4s						
T1217				AML	AML		
	comp=N,11800μm,1.4s						
T1217				AML	AML		
	comp=N,12050μm,1.5s						
T1217				AML	AML		
	comp=E,9695μm,1.3s						
T1217				AML	AML		
	comp=E,9315μm,1.3s						
T1215	**Vallo di Nera,**	**0.17**	**277**	⇓P	Pg	01 29 02.5	+0.6
T1215				S	Sg	01 29 05.3	+0.8
T1215				AML	AML		
	comp=E,2855μm,0.5s						
T1215				AML	AML		
	comp=N,3350μm,1.0s						
T1215				AML	AML		
	comp=E,2875μm,0.5s						
T1215				AML	AML		
	comp=N,3410μm,1.0s						
T1215				AML	AML		
	comp=E,2845μm,0.5s						
T1215				AML	AML		
	comp=N,3415μm,1.0s						
T1215				AML	AML		
	comp=N,3415μm,1.0s						
LNSS	**Leonessa**	**0.18**	**194**	⇑P	Pg	01 29 02.7	+0.6
LNSS				S	Sg	01 29 06.1	+1.3
LNSS				AML	AML		
	comp=E,5835μm,0.2s						
LNSS				AML	AML		
	comp=N,28000μm,0.1s						
T1204	**Amatrice, Fraz**	**0.19**	**124**	P	Pg	01 29 02.9	+0.7
T1204				S	Sg	01 29 06.4	+1.4
MMO1	**Montemonaco**	**0.20**	**55**	P	Pg	01 29 02.9	+0.5
MMO1				S	Sg	01 29 06.3	+1.0
SMA1	**SAN MARTINO**	**0.23**	**131**	P	Pg	01 29 03.4	+0.6
SMA1				AML	AML		
	comp=E,12850μm,0.4s						
SMA1				AML	AML		
	comp=N,13250μm,0.5s						
AM05	**Amandola Campo**	**0.27**	**43**	P	Pg	01 29 04.1	+0.5
AM05				AML	AML		
	comp=E,1780μm,0.6s						
AM05				AML	AML		
	comp=E,8030μm,0.6s						
AM05				AML	AML		
	comp=E,1775μm,0.6s						
AM05				AML	AML		
	comp=N,1900μm,0.2s						
AM05				AML	AML		
	comp=N,477μm,1.1s						
AM05				AML	AML		
	comp=N,1905μm,0.2s						
T1243	**Rocca Santa Ma**	**0.27**	**108**	P	Pg	01 29 04.0	+0.4
T1243				S	Sg	01 29 08.5	+1.2
RM33	**Pellescritta (**	**0.28**	**163**	⇑P	Pg	01 29 04.3	+0.4
RM33				S	Sb	01 29 09.2	-0.9
RM33				AML	AML		
	comp=E,6130μm,0.2s						
RM33				AML	AML		
	comp=N,4370μm,0.9s						
RM33				AML	AML		
	comp=N,4365μm,0.9s						
RM33				AML	AML		
	comp=N,4375μm,0.9s						
RM33				AML	AML		
	comp=E,6130μm,0.1s						
RM33				AML	AML		
	comp=E,5995μm,0.1s						
T1211	**Morro Reatino**	**0.31**	**216**	P	Pg	01 29 04.7	+0.4
T1211				S	Sb	01 29 10.0	-0.8
T1211				AML	AML		
	comp=N,7500μm,0.2s						
T1211				AML	AML		
	comp=E,5590μm,0.2s						
T1211				AML	AML		
	comp=N,7415μm,0.2s						
T1211				AML	AML		
	comp=E,5395μm,0.2s						
T1211				AML	AML		
	comp=N,7495μm,0.2s						
T1211				AML	AML		
	comp=E,5590μm,0.2s						
T1211				AML	AML		
	comp=N,7410μm,0.2s						
T1211				AML	AML		
	comp=E,5585μm,0.2s						
T1211				AML	AML		
	comp=E,5395μm,0.2s						
T1211				AML	AML		
	comp=N,7420μm,0.2s						
ARRO	**Arrone**	**0.32**	**231**	⇑P	Pg	01 29 05.1	+0.6
ARRO				S	Sb	01 29 10.1	-1.0
ARRO				AML	AML		
	comp=N,3875μm,0.7s						
ARRO				AML	AML		
	comp=E,3290μm,0.5s						
ARRO				AML	AML		
	comp=N,3880μm,0.7s						
ARRO				AML	AML		
	comp=E,3285μm,0.5s						
GUMA	**Gualdo di Mace**	**0.33**	**31**	⇑P	Pb	01 29 05.4	-0.6
GUMA				S	Sb	01 29 11.0	-0.4
GUMA				AML	AML		
	comp=E,13000μm,0.5s						
GUMA				AML	AML		
	comp=N,10700μm,0.4s						
GUMA				AML	AML		
	comp=E,11850μm,0.5s						
GUMA				AML	AML		
	comp=N,15300μm,0.4s						
GUMA				AML	AML		
	comp=E,13050μm,0.5s						
CAMP	**Campotosto**	**0.33**	**137**	⇓P	Pg	01 29 05.2	+0.5
CAMP				S	Sb	01 29 10.6	-1.1
CAMP				AML	AML		
	comp=N,1950μm,0.8s						
CAMP				AML	AML		
	comp=N,1955μm,0.8s						
CAMP				AML	AML		
	comp=E,1855μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.37**	**157**	P	Pg	01 29 05.8	+0.4
T1247				S	Sb	01 29 11.9	-0.7
T1247				AML	AML		
	comp=E,3940μm,0.1s						
T1247				AML	AML		
	comp=N,4035μm,0.2s						
SEF1	**Sefro**	**0.38**	**343**	⇓P	Pg	01 29 06.1	+0.4
SEF1				AML	AML		
	comp=E,2595μm,0.4s						
SEF1				AML	AML		
	comp=N,3830μm,0.3s						
SEF1				AML	AML		
	comp=E,2594μm,0.4s						
SEF1				AML	AML		
	comp=E,2596μm,0.4s						
SEF1				AML	AML		
	comp=N,3835μm,0.3s						
SEF1				AML	AML		
	comp=E,2594μm,0.4s						
TERO	**Teramo**	**0.40**	**113**	P	Pg	01 29 06.3	+0.3
TERO				S	Sb	01 29 12.6	-0.9
TERO				AML	AML		
	comp=E,2830μm,0.3s						
TERO				AML	AML		
	comp=N,2410μm,1.5s						
ASSB	**Assisi San Ben**	**0.42**	**309**	⇓P	Pg	01 29 06.8	+0.5
ASSB				AML	AML		
	comp=N,1030μm,1.0s						
ASSB				AML	AML		
	comp=E,1780μm,0.4s						
CESX	**Cesi**	**0.42**	**246**	⇑P	Pg	01 29 06.7	+0.3
CESX				AML	AML		
	comp=E,2430μm,0.4s						
CESX				AML	AML		
	comp=N,1870μm,1.1s						
OFFI	**Offida**	**0.46**	**70**	⇑P	Pb	01 29 08.2	+0.1
OFFI				AML	AML		
	comp=E,4955μm,0.8s						
OFFI				AML	AML		
	comp=N,5290μm,1.5s						
GAG1	**Gagliole**	**0.46**	**357**	⇑P	Pb	01 29 07.8	-0.4
GIGS	**Gran Sasso**	**0.48**	**134**	P	Pg	01 29 07.6	+0.1
GIGS				AML	AML		
	comp=E,467μm,0.2s						
GIGS				AML	AML		
	comp=N,359μm,1.2s						
GIGS				AML	AML		
	comp=N,360μm,1.2s						
AQU	**L'Aquila**	**0.48**	**153**	⇓P	Pg	01 29 08.0	+0.5
AQU				AML	AML		
	comp=E,1026μm,0.8s						
AQU				AML	AML		
	comp=N,726μm,1.4s						
AQU				AML	AML		
	comp=E,1026μm,0.8s						
AQU				AML	AML		
	comp=N,733μm,0.8s						
AQU				AML	AML		
	comp=E,1026μm,0.8s						
SNTG	**Esanatoglia**	**0.49**	**346**	⇓P	Pg	01 29 07.9	+0.3
FIAM	**Fiamignano**	**0.51**	**179**	⇑P	Pg	01 29 08.3	+0.2
FIAM				S	Sb	01 29 17.0	+0.2
FIAM				AML	AML		
	comp=N,1099μm,0.8s						
FIAM				AML	AML		
	comp=N,1098μm,0.8s						
FIAM				AML	AML		
	comp=E,1455μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.53**	**320**	⇑P	Pg	01 29 08.7	+0.3
ATCC				S	Sn	01 29 19.0	-1.7
ATCC				AML	AML		
	comp=E,1550μm,1.4s						
ATCC				AML	AML		
	comp=N,1205μm,0.5s						
ATCC				AML	AML		
	comp=N,1210μm,0.5s						
EL6	**Elcito**	**0.55**	**360**	⇑P	Pg	01 29 08.5	-0.2
FOSV	**Fossato di Vic**	**0.57**	**334**	P	Pb	01 29 09.8	-0.4
TRTR	**Tortoreto Alta**	**0.60**	**87**	P	Pb	01 29 11.2	+0.6
TRTR				AML	AML		
	comp=N,2985μm,1.5s						
TRTR				AML	AML		
	comp=E,3535μm,0.5s						
VCEL	**Villa Celiera**	**0.67**	**125**	⇑P	Pb	01 29 11.7	-0.2
VCEL				AML	AML		
	comp=E,1185μm,0.7s						
VCEL				AML	AML		
	comp=N,1010μm,0.1s						
VCEL				AML	AML		
	comp=N,1012μm,0.1s						
VCEL				AML	AML		
	comp=N,1012μm,0.1s						
SRES	**S.Oreste - Sor**	**0.70**	**219**	⇓P	Pb	01 29 12.5	+0.2
SRES				S	Sn	01 29 24.0	-0.9
SRES				AML	AML		
	comp=E,458μm,1.2s						
SRES				AML	AML		
	comp=N,474μm,1.2s						
ATFO	**Monte Foce - G**	**0.70**	**327**	⇑P	Pb	01 29 12.3	-0.1
ATFO				AML	AML		
	comp=E,632μm,0.4s						
ATFO				AML	AML		
	comp=N,750μm,0.4s						
ATFO				AML	AML		
	comp=E,632μm,0.4s						
PP3	**Marolino**	**0.70**	**32**	⇓P	Pb	01 29 12.8	+0.4
PP3				AML	AML		
	comp=E,2005μm,0.4s						
PP3				AML	AML		
	comp=N,2365μm,1.2s						
PP3				AML	AML		
	comp=E,1845μm,0.4s						
PP3				AML	AML		
	comp=N,2605μm,1.2s						
PP3				AML	AML		
	comp=E,1840μm,0.4s						
PP3				AML	AML		
	comp=N,2360μm,1.2s						
PP3				AML	AML		
	comp=N,2610μm,1.2s						
PP3				AML	AML		
	comp=E,2000μm,0.4s						
ARVD	**Arcevia**	**0.72**	**351**	⇑P	Pg	01 29 12.3	+0.2
ARVD				S	Sb	01 29 24.0	+1.2
ARVD				AML	AML		
	comp=E,452μm,0.9s						
ARVD				AML	AML		
	comp=N,240μm,0.8s						
ARVD				AML	AML		
	comp=E,451μm,0.9s						
MGAB	**Montegabbione**	**0.74**	**280**	⇓P	Pb	01 29 13.5	+0.5
MGAB				AML	AML		
	comp=E,1060μm,0.4s						
MGAB				AML	AML		
	comp=N,1075μm,0.6s						
MGAB				AML	AML		
	comp=E,1258μm,0.4s						
MGAB				AML	AML		
	comp=N,1075μm,0.5s						
MGAB				AML	AML		
	comp=E,1062μm,0.4s						
MGAB				AML	AML		
	comp=N,1070μm,0.6s						
MGAB				AML	AML		
	comp=N,1072μm,0.6s						
MGAB				AML	AML		
	comp=E,1060μm,0.4s						
T0110	**Collepietro**	**0.75**	**138**	⇓P	Pg	01 29 12.7	+0.2
T0110				AML	AML		
	comp=E,768μm,0.4s						
T0110				AML	AML		
	comp=N,1085μm,0.4s						
FRON	**Frontone**	**0.79**	**340**	S	Sb	01 29 25.0	+0.5
MTCE	**Montecelio**	**0.81**	**200**	⇑P	Pb	01 29 14.0	-0.1
MTCE				S	Sb	01 29 26.0	+1.0
MTCE				AML	AML		
	comp=E,592μm,0.5s						
MTCE				AML	AML		
	comp=N,358μm,0.7s						
SACS	**San Casciano d**	**0.88**	**275**	⇑P	Pn	01 29 16.6	0.0
SACS				AML	AML		
	comp=E,420μm,1.0s						

SACS				AML	AML	
	comp=N,424μm,0.5s					
FSSB	**Fossombrone**	**0.94**	**345**	S	Sn	01 29 32.0 +1.1
MCIV	**Monte Civitell**	**1.05**	**270**	⇑P	Pn	01 29 19.0 +0.1
MCIV				AML	AML	
	comp=E,197μm,0.8s					
MCIV				AML	AML	
	comp=N,153μm,0.6s					
VIVA	**Pratoni del Vi**	**1.06**	**194**	P	Pg	01 29 16.6 -1.9
ARCI	**Arcidosso**	**1.20**	**274**	⇑P	Pg	01 29 22.2 +1.1
ARCI				AML	AML	
	comp=E,54μm,0.4s					
ARCI				AML	AML	
	comp=N,55μm,0.4s					
GIUL	**Giuliano Di Ro**	**1.23**	**175**	⇑P	Pg	01 29 23.1 +1.5
GIUL				AML	AML	
	comp=N,262μm,0.6s					
GIUL				AML	AML	
	comp=E,236μm,0.5s					
OBKA	**Obir**	**3.87**	**15**	*e*Pn	Pn	01 29 58.7 +1.1
	comp=E,0.6nm,0.2s					
ABTA	**Abfaltersbach**	**3.99**	**354**	*e*Pn	Pn	01 30 01.1 +1.8
	comp=E,4.9nm,0.4s					
SOKA	**Soboth**	**4.13**	**19**	*e*Pn	Pn	01 30 04.7 +3.5
	comp=E,0.2nm,0.2s					
FETA	**Feichten**	**4.56**	**339**	*e*Pn	Pn	01 30 10.8 +3.5
	comp=E,0.8nm,0.3s					
WTTA	**Wattenberg**	**4.60**	**347**	*e*Pn	Pn	01 30 10.4 +2.6
	comp=E,0.5nm,0.2s					
SQTA	**Sankt Quirin**	**4.64**	**344**	*e*Pn	Pn	01 30 11.9 +3.6
	comp=E,1.5nm,0.4s					
MOTA	**Moosalm**	**4.78**	**343**	*e*Pn	Pn	01 30 13.2 +3.0
	comp=E,0.6nm,0.3s					
BIOA	**Bad Ischl, Aus**	**4.92**	**4**	*e*Pn	Pn	01 30 13.4 +1.3
	comp=E,0.7nm,0.3s					
RETA	**Reutte**	**4.99**	**341**	*e*Pn	Pn	01 30 16.1 +3.1
	comp=E,0.7nm,0.2s					
MOA	**Molln**	**5.13**	**9**	*e*Pn	Pn	01 30 15.9 +0.9
	comp=E,0.2nm,0.1s					
CONA	**Conrad Observa**	**5.50**	**20**	*e*Pn	Pn	01 30 20.3 +0.3
	comp=E,0.8nm,0.4s					
CKRC	**Cesky Krumlov**	**6.10**	**8**	*e*SN	Sn	01 31 37.3 -0.7
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN	Pn	01 30 32.4 +0.6
KHC				*e*SN	Sn	01 31 42.6 -1.8

KRSC 31 01:31:16.3±1.8, 49°.94N×156°.73E, h107km±26km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.84**	**333**	*e*P	Pn	01 31 35.9	+0.3
PAU	**Pauzhetka**	**1.53**	**2**	*e*P	Pn	01 31 43.3	+0.1
PAU				*e*S	Sn	01 32 04.2	+0.5
KDTR	**Khodutka, Kamc**	**2.06**	**24**	*e*P	Pn	01 31 52.2	+2.4
KDTR				*e*S	Sn	01 32 18.8	+3.3
MTVR	**Mutnovka**	**2.71**	**19**	*e*P	Pn	01 32 00.8	+2.4
MTVR				*e*S	Sn	01 32 34.1	+3.3
RUS	**Russkaya**	**2.74**	**24**	*e*P	Pn	01 32 00.5	+1.9
RUS				*e*S	Sn	01 32 33.3	+2.0
GRL	**Gorelyy**	**2.75**	**17**	*e*P	Pn	01 32 01.8	+2.9
AVH	**Avacha**	**3.56**	**20**	*e*P	Pn	01 32 12.5	+2.9
KOK	**Koryaka**	**3.56**	**19**	*e*P	Pn	01 32 12.4	+2.7
SMAR	**Somma**	**3.57**	**20**	*e*P	Pn	01 32 12.5	+2.6
NLC	**Nalytchevo**	**3.63**	**26**	*e*S	Sn	01 32 52.9	+0.6
MKZ	**Mys Kozlova**	**5.55**	**32**	*e*P	Pn	01 32 38.0	+1.6
KBTR	**Krutoberegovo**	**7.27**	**28**	*e*P	Pn	01 33 01.6	+1.9

*IDC **31** 01:35:23.9±3.1, 42°.88N×13°.82E, h0km, mb3.2/1, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=148.1km s-min=15.3km az=98.0*
*PRU **31** 01:35:24.6±0.0, 42°.78N×13°.49E, h0km*
*ROM **31** 01:35:25.1±0.0, 42°.739N±0°.002×13°.180E±0°.004, h11km, ML3.1/85, Error ellipse: s-maj=0.2km s-min=0.2km az=49.0*

ISC 31 01:35:26.0±0.8, 42°.74N±0°.01×13°.20E±0°.02, h12km±5km, n139, σ1°.38/171, 64C-30D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.10**	**127**	P	**Pg**	**01 35 28.6**	**-0.3**
T1204				S	**Sg**	**01 35 30.9**	**-0.2**
T1204				AML	AML		
	comp=E,23850μm,0.4s						
T1204				AML	AML		
	comp=N,12950μm,0.4s						
T1204				AML	AML		
	comp=N,12900μm,0.4s						
T1245	**Castelsantange**	**0.12**	**354**	⇑P	**Pg**	**01 35 28.6**	**-0.7**
T1245				S	**Sg**	**01 35 30.7**	**-0.8**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
SMA1	**SAN MARTINO**	**0.14**	**138**	⇑P	**Pg**	**01 35 29.3**	**-0.2**
SMA1				AML	AML		
	comp=E,28400μm,0.4s						
SMA1				AML	AML		
	comp=N,20750μm,0.4s						
SMA1				AML	AML		
	comp=N,20800μm,0.4s						
SMA1				AML	AML		
	comp=E,28350μm,0.4s						
LNSS	**Leonessa**	**0.18**	**222**	⇑P	**Pg**	**01 35 29.6**	**-0.5**
LNSS				S	**Sg**	**01 35 32.8**	**-0.2**
LNSS				AML	AML		
	comp=E,27400μm,0.2s						
LNSS				AML	AML		
	comp=N,56900μm,0.4s						
MMO1	**Montemonaco**	**0.18**	**29**	⇑P	**Pg**	**01 35 29.8**	**-0.4**
MMO1				S	**Sg**	**01 35 33.1**	**+0.1**
T1243	**Rocca Santa Ma**	**0.18**	**103**	⇑P	**Pg**	**01 35 29.9**	**-0.3**
T1217	**Poggiodomo (PG**	**0.20**	**262**	⇑P	**Pg**	**01 35 29.8**	**-0.6**
T1217				S	**Sg**	**01 35 33.0**	**-0.4**
T1217				AML	AML		
	comp=E,19600μm,0.1s						
T1217				AML	AML		
	comp=N,23700μm,0.4s						
T1217				AML	AML		
	comp=E,18700μm,0.1s						
T1217				AML	AML		
	comp=N,23600μm,0.4s						
T1217				AML	AML		
	comp=E,19550μm,0.1s						
T1217				AML	AML		
	comp=N,23700μm,0.4s						
T1217				AML	AML		
	comp=N,23650μm,0.4s						
T1217				AML	AML		
	comp=N,23650μm,0.4s						
T1217				AML	AML		
	comp=E,18650μm,0.1s						
T1216	**Preci, Frazion**	**0.20**	**318**	⇑P	**Pg**	**01 35 29.7**	**-0.7**
T1216				S	**Sg**	**01 35 32.9**	**-0.6**
T1216				AML	AML		
	comp=E,18850μm,0.5s						
T1216				AML	AML		
	comp=N,16000μm,1.1s						
T1216				AML	AML		
	comp=E,18800μm,0.4s						
T1216				AML	AML		
	comp=N,16000μm,1.1s						
T1241	**Roccafluvione,**	**0.20**	**55**	P	**Pg**	**01 35 30.3**	**-0.2**
T1241				S	**Sg**	**01 35 33.9**	**+0.4**
T1241				AML	AML		
	comp=E,7910μm,0.5s						
T1241				AML	AML		
	comp=N,14250μm,0.3s						
T1241				AML	AML		
	comp=E,8180μm,1.5s						
T1241				AML	AML		
	comp=N,14550μm,0.3s						
T1241				AML	AML		
	comp=N,14500μm,0.3s						
RM33	**Pellescritta (**	**0.23**	**178**	⇑P	**Pg**	**01 35 30.5**	**-0.4**
RM33				S	**Sg**	**01 35 34.4**	**+0.2**
RM33				AML	AML		
	comp=N,9655μm,1.1s						
RM33				AML	AML		
	comp=N,9660μm,1.1s						
RM33				AML	AML		
	comp=E,13050μm,0.2s						
RM33				AML	AML		
	comp=N,9645μm,1.1s						
RM33				AML	AML		
	comp=N,9620μm,1.1s						
FEMA	**Monte Fema**	**0.25**	**333**	⇑P	**Pb**	**01 35 30.7**	**-1.9**
FEMA				S	**Sb**	**01 35 34.6**	**-2.4**
FEMA				AML	AML		
	comp=E,29250μm,0.5s						
FEMA				AML	AML		
	comp=N,20350μm,1.4s						
FEMA				AML	AML		
	comp=E,29250μm,0.5s						
FEMA				AML	AML		
	comp=N,20350μm,1.5s						
FEMA				AML	AML		
	comp=E,29200μm,0.5s						
FEMA				AML	AML		
	comp=N,20400μm,1.4s						
CAMP	**Campotosto**	**0.25**	**143**	P	**Pb**	**01 35 31.0**	**-1.6**
CAMP				S	**Sb**	**01 35 35.2**	**-1.8**
CAMP				AML	AML		
	comp=E,6075μm,0.2s						
CAMP				AML	AML		
	comp=N,4450μm,1.0s						
T1215	**Vallo di Nera,**	**0.26**	**284**	⇑P	**Pg**	**01 35 30.6**	**-0.7**
T1215				S	**Sg**	**01 35 34.5**	**-0.3**
T1215				AML	AML		
	comp=N,7255μm,0.1s						
T1215				AML	AML		
	comp=E,8425μm,0.3s						
T1215				AML	AML		
	comp=N,7910μm,0.1s						
T1215				AML	AML		
	comp=E,8695μm,0.3s						
T1215				AML	AML		
	comp=E,8455μm,0.3s						
T1215				AML	AML		
	comp=N,7905μm,0.1s						
T1215				AML	AML		
	comp=E,8690μm,0.3s						
T1215				AML	AML		
	comp=E,8450μm,0.3s						
T1215				AML	AML		
	comp=N,7250μm,0.1s						
T1215				AML	AML		
	comp=N,7925μm,0.1s						
AM05	**Amandola Campo**	**0.26**	**25**	⇑P	**Pg**	**01 35 31.2**	**-0.2**
AM05				S	**Sg**	**01 35 35.8**	**+0.7**
AM05				AML	AML		
	comp=E,3700μm,0.8s						
AM05				AML	AML		
	comp=N,3725μm,0.1s						
AM05				AML	AML		
	comp=E,13700μm,1.5s						
AM05				AML	AML		
	comp=N,1125μm,0.1s						
AM05				AML	AML		
	comp=E,3705μm,0.8s						
AM05				AML	AML		
	comp=N,3730μm,0.1s						
AM05				AML	AML		
	comp=N,1130μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.30**	**167**	⇑P	**Pb**	**01 35 31.9**	**-1.6**
T1247				S	**Sb**	**01 35 36.9**	**-1.5**
T1247				AML	AML		
	comp=N,8755μm,1.5s						
T1247				AML	AML		
	comp=E,7345μm,1.0s						
TERO	**Teramo**	**0.32**	**111**	⇑P	**Pb**	**01 35 32.1**	**-1.6**
TERO				S	**Sb**	**01 35 37.4**	**-1.4**
TERO				AML	AML		
	comp=N,4025μm,0.4s						
TERO				AML	AML		
	comp=E,3830μm,0.6s						
TERO				AML	AML		
	comp=N,4170μm,0.4s						
TERO				AML	AML		
	comp=E,3510μm,0.6s						
TERO				AML	AML		
	comp=N,4020μm,0.4s						
TERO				AML	AML		
	comp=E,3505μm,0.6s						
T1211	**Morro Reatino**	**0.33**	**231**	P	**Pg**	**01 35 32.0**	**-0.7**
T1211				S	**Sg**	**01 35 37.1**	**0.0**
T1211				AML	AML		
	comp=E,9675μm,0.2s						
T1211				AML	AML		
	comp=N,11400μm,1.4s						
T1211				AML	AML		
	comp=E,9790μm,0.2s						
T1211				AML	AML		
	comp=N,11400μm,1.4s						
T1211				AML	AML		
	comp=E,9670μm,0.2s						
T1211				AML	AML		
	comp=E,9760μm,0.2s						
T1211				AML	AML		
	comp=N,11400μm,1.4s						
T1211				AML	AML		
	comp=N,11400μm,1.4s						
GUMA	**Gualdo di Mace**	**0.34**	**17**	⇑P	**Pb**	**01 35 32.7**	**-1.3**
GUMA				S	**Sb**	**01 35 38.9**	**-0.5**
GUMA				AML	AML		
	comp=E,16250μm,1.1s						
GUMA				AML	AML		
	comp=N,18200μm,0.2s						
GUMA				AML	AML		
	comp=N,24500μm,0.7s						
GUMA				AML	AML		
	comp=E,16300μm,1.1s						
GUMA				AML	AML		
	comp=E,19250μm,0.8s						
ARRO	**Arrone**	**0.36**	**244**	⇑P	**Pg**	**01 35 32.5**	**-0.7**
OFFI	**Offida**	**0.41**	**61**	⇑P	**Pb**	**01 35 34.5**	**-0.7**
OFFI				AML	AML		
	comp=E,8465μm,0.3s						
OFFI				AML	AML		
	comp=N,9355μm,1.5s						
AQU	**L'Aquila**	**0.41**	**159**	⇑P	**Pb**	**01 35 33.6**	**-1.7**
AQU				AML	AML		
	comp=E,2585μm,0.3s						
AQU				AML	AML		
	comp=N,2765μm,0.3s						
AQU				AML	AML		
	comp=E,2630μm,1.6s						
AQU				AML	AML		
	comp=N,2705μm,0.4s						
AQU				AML	AML		
	comp=E,2590μm,0.3s						
MNTP	**Montappone**	**0.44**	**26**	⇓P	**Pb**	**01 35 34.9**	**-0.9**
MNTP				AML	AML		
	comp=N,5295μm,1.3s						
MNTP				AML	AML		
	comp=E,6240μm,0.3s						
SEF1	**Sefro**	**0.45**	**335**	⇓P	**Pb**	**01 35 34.1**	**-1.8**
SEF1				AML	AML		
	comp=E,16250μm,0.2s						
SEF1				AML	AML		
	comp=E,16200μm,0.2s						
SEF1				AML	AML		
	comp=N,18350μm,0.5s						
MDAR	**Monte D'Aria**	**0.46**	**354**	⇑P	**Pb**	**01 35 34.4**	**-1.7**
MDAR				AML	AML		
	comp=E,3850μm,0.3s						
MDAR				AML	AML		
	comp=N,4865μm,0.4s						
PIO1	**Pioraco**	**0.47**	**340**	⇓P	**Pg**	**01 35 34.2**	**-1.0**
PIO1				AML	AML		
	comp=E,4150μm,0.4s						
PIO1				AML	AML		
	comp=N,5780μm,1.1s						
PIO1				AML	AML		
	comp=E,4150μm,0.5s						
FIAM	**Fiamignano**	**0.47**	**188**	⇑P	**Pg**	**01 35 34.6**	**-0.7**
FIAM				AML	AML		
	comp=E,2030μm,0.4s						
FIAM				AML	AML		
	comp=N,1640μm,0.3s						
CESX	**Cesi**	**0.48**	**255**	⇑P	**Pg**	**01 35 34.4**	**-1.0**
CESX				AML	AML		
	comp=E,2910μm,0.4s						
CESX				AML	AML		
	comp=N,2835μm,1.1s						
SSM1	**San Severino M**	**0.49**	**358**	⇑P	**Pb**	**01 35 35.1**	**-1.5**
FIU1	**Fiuminata**	**0.49**	**336**	P	**Pb**	**01 35 34.9**	**-1.8**
ASSB	**Assisi San Ben**	**0.50**	**307**	⇑P	**Pg**	**01 35 34.9**	**-0.9**
ASSB				AML	AML		
	comp=E,3600μm,0.1s						
ASSB				AML	AML		
	comp=N,3190μm,0.5s						
GAG1	**Gagliole**	**0.51**	**349**	P	**Pb**	**01 35 35.4**	**-1.5**
GAG1				AML	AML		
	comp=E,10220μm,1.1s						
GAG1				AML	AML		
	comp=E,10230μm,1.1s						
GAG1				AML	AML		
	comp=N,8745μm,0.2s						
TRTR	**Tortoreto Alta**	**0.53**	**82**	P	**Pb**	**01 35 37.1**	**-0.1**
TRTR				AML	AML		
	comp=N,5025μm,1.2s						
TRTR				AML	AML		
	comp=E,4495μm,0.5s						
FAGN	**Fagnano**	**0.55**	**149**	⇑P	**Pb**	**01 35 35.9**	**-1.7**
FAGN				S	**Sb**	**01 35 46.0**	**+0.5**
FAGN				AML	AML		
	comp=E,5830μm,0.4s						
FAGN				AML	AML		
	comp=E,5825μm,0.4s						
FAGN				AML	AML		
	comp=N,3225μm,0.3s						
SNTG	**Esanatoglia**	**0.55**	**340**	⇑P	**Pg**	**01 35 35.8**	**-1.0**
SNTG				S	**Sb**	**01 35 45.0**	**-0.6**
SNTG				AML	AML		
	comp=E,2960μm,0.3s						
SNTG				AML	AML		
	comp=N,2300μm,0.2s						
SNTG				AML	AML		
	comp=E,2860μm,0.3s						
SNTG				AML	AML		
	comp=E,2965μm,0.3s						
SNTG				AML	AML		
	comp=N,2560μm,1.3s						
SNTG				AML	AML		
	comp=N,2305μm,0.2s						
TRE1	**Treia**	**0.58**	**8**	⇑P	**Pb**	**01 35 37.3**	**-0.8**
TRE1				S	**Sn**	**01 35 48.0**	**-1.6**
TRE1				AML	AML		
	comp=E,5585μm,0.4s						
TRE1				AML	AML		
	comp=N,5075μm,1.0s						
TRE1				AML	AML		
	comp=E,5580μm,0.4s						
TRE1				AML	AML		
	comp=N,5075μm,1.0s						
VCEL	**Villa Celiera**	**0.58**	**126**	⇑P	**Pb**	**01 35 37.0**	**-1.2**
VCEL				AML	AML		
	comp=N,1985μm,0.4s						
VCEL				AML	AML		
	comp=E,2225μm,1.5s						
EL6	**Elcito**	**0.59**	**353**	⇑P	**Pb**	**01 35 36.7**	**-1.7**
EL6				AML	AML		
	comp=E,4695μm,1.3s						
EL6				AML	AML		
	comp=N,4720μm,1.2s						
EL6				AML	AML		
	comp=N,4715μm,1.2s						
EL6				AML	AML		
	comp=E,4700μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.61**	**317**	⇑P	**Pg**	**01 35 36.9**	**-1.0**
ATCC				S	**Sb**	**01 35 48.0**	**+0.8**
ATCC				AML	AML		
	comp=N,2195μm,0.1s						
ATCC				AML	AML		
	comp=E,2920μm,0.6s						
ATCC				AML	AML		
	comp=N,2200μm,0.1s						
FOSV	**Fossato di Vic**	**0.64**	**330**	⇑P	**Pg**	**01 35 37.4**	**-1.1**
FOSV				S	**Sb**	**01 35 48.0**	**-0.2**
FOSV				AML	AML		
	comp=E,2170μm,0.4s						
FOSV				AML	AML		
	comp=E,2175μm,0.4s						
FOSV				AML	AML		
	comp=N,1985μm,0.3s						
T0110	**Collepietro**	**0.67**	**140**	⇑P	**Pb**	**01 35 38.0**	**-1.6**
T0110				AML	AML		
	comp=E,1905μm,0.3s						
T0110				AML	AML		
	comp=N,1555μm,0.4s						
PP3	**Marolino**	**0.70**	**25**	⇑P	**Pb**	**01 35 39.8**	**-0.5**
PP3				AML	AML		
	comp=E,5935μm,0.4s						
PP3				AML	AML		
	comp=E,5255μm,0.4s						
PP3				AML	AML		
	comp=E,5250μm,0.4s						
PP3				AML	AML		
	comp=N,7365μm,0.4s						
PP3				AML	AML		
	comp=N,7865μm,0.4s						
SRES	**S.Oreste - Sor**	**0.72**	**226**	⇑P	**Pg**	**01 35 38.7**	**-1.2**
SRES				AML	AML		
	comp=E,917μm,1.0s						
SRES				AML	AML		
	comp=N,974μm,0.4s						
MURB	**Monte Urbino**	**0.72**	**317**	⇓P	**Pg**	**01 35 39.0**	**-1.0**
MURB				S	**Sb**	**01 35 51.0**	**+0.5**
MURB				AML	AML		
	comp=E,4305μm,0.2s						
MURB				AML	AML		
	comp=N,3650μm,0.3s						
MURB				AML	AML		
	comp=E,4310μm,0.2s						
MURB				AML	AML		
	comp=N,3585μm,0.3s						
MURB				AML	AML		
	comp=N,3650μm,0.3s						
MURB				AML	AML		
	comp=E,4750μm,0.2s						
PTQR	**Pietraquaria**	**0.73**	**168**	P	**Pg**	**01 35 38.8**	**-1.4**
PTQR				AML	AML		
	comp=E,494μm,0.3s						
PTQR				AML	AML		
	comp=N,526μm,1.3s						
ATTE	**AVT- Monte Tez**	**0.77**	**307**	⇑P	**Pb**	**01 35 40.1**	**-1.4**
ATTE				AML	AML		
	comp=E,838μm,1.5s						
ATTE				AML	AML		
	comp=N,613μm,0.6s						
ATFO	**Monte Foce - G**	**0.78**	**324**	⇑P	**Pg**	**01 35 40.0**	**-1.1**
ATFO				AML	AML		
	comp=N,1560μm,0.4s						
ATFO				AML	AML		
	comp=E,1250μm,0.7s						
ARVD	**Arcevia**	**0.78**	**346**	⇑P	**Pg**	**01 35 40.0**	**-1.2**
ARVD				S	**Sn**	**01 35 53.0**	**-1.7**
ARVD				AML	AML		
	comp=E,1235μm,0.7s						
ARVD				AML	AML		
	comp=N,1075μm,1.2s						
MTCE	**Montecelio**	**0.79**	**206**	⇑P	**Pg**	**01 35 39.6**	**-1.7**
MTCE				AML	AML		
	comp=E,1410μm,0.4s						
MTCE				AML	AML		
	comp=N,901μm,0.6s						
CERT	**Cerreto**	**0.81**	**192**	⇑P	**Pg**	**01 35 39.9**	**-1.7**
CERT				AML	AML		
	comp=E,1540μm,0.3s						
CERT				AML	AML		
	comp=N,1375μm,0.3s						
MGAB	**Montegabbione**	**0.82**	**283**	⇓P	**Pg**	**01 35 40.9**	**-0.9**
MGAB				AML	AML		
	comp=N,1330μm,0.3s						
MGAB				AML	AML		
	comp=N,1280μm,0.4s						
MGAB				AML	AML		
	comp=E,1790μm,0.5s						
MGAB				AML	AML		
	comp=E,1655μm,0.5s						
FRON	**Frontone**	**0.85**	**336**	⇓P	**Pg**	**01 35 41.2**	**-1.3**
FRON				AML	AML		
	comp=N,2310μm,1.4s						
FRON				AML	AML		
	comp=E,1200μm,1.4s						
AOI	**Ancona**	**0.86**	**20**	⇓P	**Pb**	**01 35 42.1**	**-0.8**
AOI				S	**Sn**	**01 35 57.0**	**+0.4**
AOI				AML	AML		
	comp=N,2055μm,0.3s						
AOI				AML	AML		
	comp=E,1985μm,0.2s						
ATVO	**AVT- Monte Val**	**0.87**	**318**	⇓P	**Pg**	**01 35 41.5**	**-1.3**
ATVO				AML	AML		
	comp=E,714μm,1.3s						
ATVO				AML	AML		
	comp=N,708μm,0.5s						

ATMI Monte Miggiano 0.91 311 ⇓P Pn 01 35 45.3 +0.7
RCAV Rocca di Cave 0.91 192 ⇑P Pn 01 35 44.4 -0.4
RCAV AML AML
comp=E,1815μm,0.4s
RCAV AML AML
comp=N,1204μm,1.4s
VVLD Villa Vallelon 0.92 160 ⇓P Pb 01 35 42.7 -1.3
VVLD AML AML
comp=N,536μm,1.4s
VVLD AML AML
comp=E,804μm,0.4s
ATPI Pietralunga - 0.92 321 ⇓P Pg 01 35 42.5 -1.3
ATPI AML AML
comp=N,676μm,0.4s
ATPI AML AML
comp=E,954μm,0.4s
PIEI Pieia 0.94 329 ⇑P Pg 01 35 42.5 -1.5
PIEI S **Sn 01 35 58.0 -0.4**
PIEI AML AML
comp=E,942μm,0.3s
PIEI AML AML
comp=N,648μm,1.0s
MPAG Monte Paganucc 0.95 340 ⇑P Pg 01 35 42.8 -1.4
MPAG S **Sn 01 35 59.0 +0.2**
MPAG AML AML
comp=E,1635μm,0.4s
MPAG AML AML
comp=N,1012μm,0.7s
MPAG AML AML
comp=E,1630μm,0.4s
MPAG AML AML
comp=N,1009μm,0.7s
SACS San Casciano d 0.96 277 ⇑P Pg 01 35 43.5 -1.0
SACS AML AML
comp=E,574μm,0.5s
SACS AML AML
comp=N,498μm,0.4s
SENI Senigallia 0.97 1 ⇑P Pn 01 35 44.3 -1.1
SENI AML AML
comp=N,3990μm,0.3s
SENI AML AML
comp=N,710μm,0.9s
SENI AML AML
comp=E,875μm,0.8s
SENI AML AML
comp=E,3395μm,0.3s
NARO Abbazia di Nar 0.98 333 ⇑P Pg 01 35 43.3 -1.7
NARO AML AML
comp=E,592μm,0.9s
NARO AML AML
comp=N,700μm,1.2s
APEC Apecchio 1.00 325 ⇑P Pn 01 35 45.1 -0.8
FSSB Fossombrone 1.00 342 ⇑P Pg 01 35 44.0 -1.4
FSSB AML AML
comp=E,3645μm,0.4s
FSSB AML AML
comp=N,4610μm,0.3s
VIVA Pratoni del Vi 1.04 198 P Pg 01 35 43.6 -2.4
VIVA AML AML
comp=N,2030μm,0.4s
VIVA AML AML
comp=E,1665μm,0.4s
VIVA AML AML
comp=N,2025μm,0.4s
LATE Laterza 1.04 264 ⇓P Pb 01 35 45.2 -0.7
BADI Badiali 1.04 318 ⇓P Pb 01 35 44.9 -1.1
MA9 Marino 1.05 203 P Pb 01 35 45.4 -0.7
MA9 AML AML
comp=E,1088μm,0.6s
MA9 AML AML
comp=N,1420μm,0.5s
CAFI Castiglion Fio 1.08 303 ⇑P Pg 01 35 45.6 -1.2
CAFI AML AML
comp=E,364μm,0.5s
CAFI AML AML
comp=N,349μm,0.7s
CAFI AML AML
comp=N,348μm,0.7s
PE3 Peglio 1.09 332 ⇓P Pb 01 35 45.6 -1.2
PE3 AML AML
comp=E,8μm,1.4s
PE3 AML AML
comp=N,11μm,1.5s
POFI Posta Fibreno 1.09 160 ⇑P Pn 01 35 47.5 +0.3
POFI AML AML
comp=E,512μm,0.6s
POFI AML AML
comp=N,246μm,0.5s
TOLF Tolfa 1.12 233 P Pg 01 35 45.8 -1.7
TOLF AML AML
comp=N,456μm,0.6s
TOLF AML AML
comp=E,454μm,0.5s
LAV9 Lanuvio 1.12 200 ⇓P Pn 01 35 47.8 +0.2
LAV9 AML AML
comp=E,1700μm,0.3s
LAV9 AML AML
comp=N,1290μm,0.4s
LAV9 AML AML
comp=N,1300μm,0.4s
LAV9 AML AML
comp=E,1860μm,0.3s
MCIV Monte Civitell 1.12 273 ⇓P Pn 01 35 47.1 -0.6
MCIV S **Sn 01 36 05.0 +1.9**
MCIV AML AML
comp=N,244μm,0.8s
MCIV AML AML
comp=E,287μm,0.4s
SF04 Casetta 1.14 275 P Pg 01 35 46.7 -1.2
SF04 AML AML
comp=E,366μm,0.5s
SF04 AML AML
comp=N,305μm,0.3s
GIUL Giuliano Di Ro 1.18 178 ⇑P Pn 01 35 48.0 -0.4
GIUL AML AML
comp=E,254μm,0.5s
GIUL AML AML
comp=N,410μm,0.6s
SF01 Poggio Pratacc 1.21 274 ⇓P Pn 01 35 49.0 +0.2
SF01 AML AML
comp=E,596μm,0.6s
SF01 AML AML
comp=N,373μm,0.6s
CPGN Carpegna, Ital 1.24 329 ⇓P Pn 01 35 49.4 0.0
CRE Caprese Michel 1.27 314 P Pn 01 35 49.2 -0.5
CRE AML AML
comp=N,424μm,0.3s
CRE AML AML
comp=E,342μm,1.4s
ARCI Arcidosso 1.28 276 P Pb 01 35 50.5 +0.4
ARCI AML AML
comp=N,73μm,1.3s
ARCI AML AML
comp=E,79μm,0.4s
ASQU Asqua 1.48 316 ⇑P Pg 01 35 54.2 -0.2
FROS Frosini 1.57 288 ⇓P Pn 01 35 53.7 -0.1
FROS AML AML
comp=N,111μm,0.5s
FROS AML AML
comp=E,170μm,1.5s
CSNT Castellina Chi 1.58 298 ⇑P Pb 01 35 53.9 -1.3
CSNT AML AML
comp=E,91μm,0.5s
CSNT AML AML
comp=N,101μm,0.4s
RUFI Rufina 1.66 312 ⇑P Pn 01 35 54.9 -0.1
RUFI AML AML
comp=N,160μm,1.1s
RUFI AML AML
comp=E,180μm,0.9s
PTRJ Pietraroja 1.69 144 P Pg 01 35 58.1 -0.4
CASP Castiglione de 1.72 273 ⇑P Pn 01 35 55.2 -0.7
CASP AML AML
comp=N,36μm,0.4s
CASP AML AML
comp=E,46μm,0.4s
TRIF Trifonti 1.73 283 ⇑P Pn 01 35 56.2 +0.2
TRIF AML AML
comp=N,98μm,1.0s
TRIF AML AML
comp=E,92μm,1.2s
APRC Apricena 2.00 119 ⇓P Pg 01 36 04.2 0.0
APRC S **Sg 01 36 29.0 -1.1**
MTCR Monte La Croce 2.06 309 P Pn 01 36 00.2 -0.4
PII Pisa 2.19 298 ⇑P Pn 01 36 02.4 +0.2
PII AML AML
comp=E,128μm,0.4s
PII AML AML
comp=N,94μm,0.7s
BRJN Brijuni 2.20 10 ⇓P Pn 01 36 02.2 -0.1
CELB S.Piero in Cam 2.21 271 ⇑P Pn 01 36 01.9 -0.6
CELB AML AML
comp=E,22μm,0.4s
CELB AML AML
comp=N,19μm,1.6s
PLMA Palmaria, Port 2.77 299 ⇑P Pn 01 36 10.3 +0.1
PLMA AML AML
comp=E,31μm,0.8s
PLMA AML AML
comp=N,29μm,0.7s
GRAM Graiana 2.87 309 ⇑P Pn 01 36 11.5 -0.2
GRAM AML AML
comp=E,83μm,0.9s
GRAM AML AML
comp=N,72μm,0.4s
CMPR Campora 2.89 146 S Sb 01 36 54.0 +1.2
MNTV Mantova 2.97 325 P Pb 01 36 19.6 +0.7
PGF Pioggiola 3.11 268 ⇓P Pn 01 36 15.5 +0.6
SABO M.te Sabotino 3.25 5 ⇓P Pn 01 36 16.8 -0.1
SABO AML AML
comp=E,107μm,0.5s
SABO AML AML
comp=N,132μm,0.6s
ROVR Rover Verones 3.29 333 S Sn 01 36 57.0 +0.4
CGRP Cima Grappa 3.30 343 ⇑P Pn 01 36 18.6 +0.9
CGRP S **Sn 01 36 58.0 +1.1**
SALO Salr 3.46 327 ⇓P Pn 01 36 21.2 +1.4
CTI Castel Tesino 3.49 342 ⇓P Pn 01 36 21.2 +1.0
MPRI Monte Prat 3.51 358 ⇓P Pn 01 36 20.9 +0.5
MPRI AML AML
comp=E,123μm,0.4s
MPRI AML AML
comp=N,144μm,0.5s
STAL STALIGIAL 3.54 354 ⇑P Pn 01 36 21.2 +0.4
STAL AML AML
comp=E,96μm,1.3s
STAL AML AML
comp=N,90μm,0.2s
LUSI Trento, Gardas 3.60 334 P Pn 01 36 23.2 +1.4
CIMO Cimolais 3.61 352 ⇑P Pn 01 36 22.2 +0.3
CIMO AML AML
comp=N,36μm,1.6s
CIMO AML AML
comp=E,28μm,1.5s
CIMO AML AML
comp=N,23μm,0.7s
CIMO AML AML
comp=E,36μm,1.4s
ZONE Zone 3.75 325 ⇓P Pn 01 36 25.4 +1.7
ACOM Acomizza, Ital 3.81 3 ⇓P Pn 01 36 25.7 +0.9
ZOU Zoufplan 3.82 358 ⇓P Pn 01 36 25.5 +0.6
ZOU AML AML
comp=N,49μm,1.5s
ZOU AML AML
comp=E,50μm,0.8s
FVI Forni Avoltri 3.87 356 ⇑P Pn 01 36 26.2 +0.8
OBKA Obir 3.89 14 *e*Pn Pn 01 36 26.0 +0.3
comp=E,0.6nm,0.2s
MYKA Terra Mystica 3.90 4 *e*Pn Pn 01 36 26.7 +0.8
comp=E,1.2nm,0.2s
KOSI Kohlern 3.94 341 ⇑P Pn 01 36 28.2 +1.6
BOSI Bolzano 3.99 341 S Sn 01 37 18.0 +4.3
APPI Appiano 4.00 340 ⇑P Pn 01 36 28.6 +1.4
ABTA Abfaltersbach 4.04 353 *e*Pn Pn 01 36 28.6 +0.8
comp=E,3.4nm,0.2s,SNR=18
SOKA Soboth 4.15 18 *e*Pn Pn 01 36 29.9 +0.6
comp=E,0.6nm,0.3s
RISI Rein 4.28 350 P Pn 01 36 32.6 +1.4
VSL Villasalto 4.34 223 ⇓P Pn 01 36 31.2 -0.6
VSL AML AML
comp=E,17μm,1.5s
VSL AML AML
comp=N,17μm,1.1s
MUGIO Muggio 4.36 318 ⇑P Pn 01 36 33.2 +1.0
FETA Feichten 4.63 339 *e*Pn Pn 01 36 37.9 +2.0
comp=N,1.3nm,0.4s
WTTA Wattenberg 4.66 347 *i* Pn Pn 01 36 38.7 +2.3
comp=N,1.2nm,0.2s
SQTA Sankt Quirin 4.70 343 *i* Pn Pn 01 36 39.4 +2.6
comp=N,1.8nm,0.2s,SNR=11
WATA Walderalm 4.74 346 *e*Pn Pn 01 36 39.9 +2.5
comp=N,3.5nm,0.3s,SNR=10.0
ARSA Arzberg 4.80 19 *i* Pn Pn 01 36 39.4 +1.2
comp=N,0.7nm,0.2s
MOTA Moosalm 4.84 343 *e*Pn Pn 01 36 41.8 +3.0
comp=N,1.2nm,0.3s,SNR=5.0
BIOA Bad Ischl, Aus 4.96 3 *e*Pn Pn 01 36 40.4 0.0
comp=N,3.0nm,0.3s
RETA Reutte 5.05 341 *e*Pn Pn 01 36 43.8 +2.1
comp=N,0.8nm,0.2s,SNR=5.3
DAVA Damuels 5.12 334 *e*Pn Pn 01 36 45.5 +2.8
comp=N,1.3nm,0.2s
MOA Molln 5.17 8 *i* Pn Pn 01 36 44.3 +1.2
comp=N,0.8nm,0.2s
RONA Rosalia, Austr 5.42 23 *e*Pn Pn 01 36 50.1 +3.4
comp=N,1.2nm,0.2s
CONA Conrad Observa 5.52 19 *e*Pn Pn 01 36 48.8 +0.7
comp=N,0.7nm,0.2s
GERES GERESS Array B 6.12 3 Pn Pn 01 36 53.2 -3.1
comp=N,0.3nm,0.3s,baz=177,slow=13,SNR=13
GERES Sn **Sn 01 38 04.3 -1.9**
comp=N,1.0nm,0.3s,baz=163,slow=24,SNR=9.6
comp=N,0.3nm,0.3s
CKRC Cesky Krumlov 6.13 7 *e*PN Pn 01 36 55.4 -1.0
CKRC *e*SN **Sn 01 38 02.3 -4.2**
KHC Kasperske Hory 6.40 2 *e*PN Pn 01 36 59.8 -0.3
KHC *e*SN **Sn 01 38 10.9 -2.2**
PRU Pruhonice 7.31 7 *e*SN Sn 01 38 30.8 -4.6
KEST Kesra 7.61 204 Pn Pn 01 37 19.1 +2.4
baz=31,slow=12,SNR=1.9
comp=N,2.6nm,1.1s
CLL Collm 8.57 359 *e*Sn Sn 01 38 56.0 -10
CLL *e*Sg **Sg 01 40 03.0 +2.1**
TORD Torodi Ar. Bea 31.12 202 P P 01 41 48.4 +3.9
comp=N,0.4nm,1.0s,baz=30,slow=8.2,SNR=2.1
comp=N,0.4nm,1.0s

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*ROM **31** 01:48:21.6±0.0, 42°.903N±0°.003×13°.148E±0°.004, h9km, ML3.4/78, Error ellipse: s-maj=0.3km s-min=0.3km az=9.0*
*IDC **31** 01:48:23.0±1.3, 43°.11N×13°.17E, h0km, mb3.4/2, mbtmp3.4/7, ML3.0/5, MS3.6/3, Error ellipse: s-maj=33.4km s-min=13.0km az=102.0*
*PRU **31** 01:48:25.2±0.0, 43°.04N×13°.69E, h0km*
ISC 31 01:48:22.3±0.8, 42°.92N±0°.02×13°.16E±0°.02, h7km±5km, n150, σ1§48/177, 32C-36D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**161**	P	**Pg**	**01 48 23.9**	**-0.4**
T1245				S	**Sg**	**01 48 25.3**	**-0.3**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
FEMA	**Monte Fema**	**0.09**	**297**	P	**Pg**	**01 48 24.3**	**-0.2**
FEMA				S	**Sg**	**01 48 26.2**	**+0.1**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,59750μm,1.0s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,59700μm,1.0s						
T1216	**Preci, Frazion**	**0.11**	**253**	P	**Pg**	**01 48 24.5**	**-0.2**
T1216				S	**Sg**	**01 48 26.5**	**+0.1**
T1216				AML	AML		
	comp=E,64400μm,0.5s						
T1216				AML	AML		
	comp=N,92650μm,0.5s						
T1216				AML	AML		
	comp=E,64350μm,0.4s						
T1216				AML	AML		
	comp=N,92550μm,0.5s						
MMO1	**Montemonaco**	**0.13**	**100**	P	**Pg**	**01 48 25.0**	**0.0**
MMO1				S	**Sg**	**01 48 27.3**	**+0.3**
AM05	**Amandola Campo**	**0.15**	**69**	P	**Pg**	**01 48 25.8**	**+0.3**
AM05				S	**Sg**	**01 48 28.6**	**+1.0**
AM05				AML	AML		
	comp=E,14400μm,0.6s						
AM05				AML	AML		
	comp=N,12650μm,0.8s						
AM05				AML	AML		
	comp=N,2080μm,0.5s						
AM05				AML	AML		
	comp=N,12600μm,0.8s						
AM05				AML	AML		
	comp=E,55700μm,0.5s						
GUMA	**Gualdo di Mace**	**0.19**	**43**	P	**Pg**	**01 48 26.7**	**+0.5**
GUMA				S	**Sg**	**01 48 30.6**	**+1.8**
GUMA				AML	AML		
	comp=E,60450μm,0.4s						
GUMA				AML	AML		
	comp=N,69950μm,0.5s						
GUMA				AML	AML		
	comp=N,66750μm,0.7s						
GUMA				AML	AML		
	comp=N,69950μm,0.5s						
GUMA				AML	AML		
	comp=E,72000μm,0.4s						
T1241	**Roccafluvione,**	**0.21**	**108**	P	**Pg**	**01 48 26.8**	**+0.3**
T1241				S	**Sg**	**01 48 30.3**	**+1.0**
T1241				AML	AML		
	comp=E,32050μm,1.5s						
T1241				AML	AML		
	comp=N,32550μm,0.6s						
T1241				AML	AML		
	comp=E,32000μm,0.6s						
T1241				AML	AML		
	comp=N,32500μm,0.6s						
T1241				AML	AML		
	comp=E,32050μm,0.6s						
T1241				AML	AML		
	comp=N,33400μm,0.6s						
T1241				AML	AML		
	comp=N,33350μm,0.6s						
T1241				AML	AML		
	comp=E,32000μm,1.5s						
T1241				AML	AML		
	comp=N,32550μm,0.7s						
T1215	**Vallo di Nera,**	**0.24**	**241**	AML	AML		
	comp=E,8135μm,1.5s						
T1215				AML	AML		
	comp=E,7405μm,0.7s						
T1215				AML	AML		
	comp=N,9905μm,0.7s						
T1215				AML	AML		
	comp=N,9910μm,0.7s						
T1217	**Poggiodomo (PG**	**0.27**	**219**	P	**Pg**	**01 48 27.4**	**-0.2**
T1217				S	**Sg**	**01 48 31.9**	**+0.7**
T1217				AML	AML		
	comp=E,12850μm,0.4s						
T1217				AML	AML		
	comp=N,17050μm,0.9s						
T1217				AML	AML		
	comp=N,17000μm,0.9s						
T1217				AML	AML		
	comp=N,17200μm,0.9s						
T1217				AML	AML		
	comp=E,13050μm,0.7s						
T1217				AML	AML		
	comp=E,12850μm,0.4s						
MDAR	**Monte D'Aria**	**0.27**	**358**	⇑P	**Pg**	**01 48 27.9**	**+0.2**
MDAR				AML	AML		
	comp=E,7415μm,1.2s						
MDAR				AML	AML		
	comp=N,11550μm,0.5s						
T1204	**Amatrice, Fraz**	**0.27**	**155**	P	**Pg**	**01 48 27.6**	**-0.1**
T1204				S	**Sg**	**01 48 32.3**	**+1.0**
T1204				AML	AML		
	comp=N,15550μm,1.2s						
T1204				AML	AML		
	comp=E,26550μm,0.4s						
SEF1	**Sefro**	**0.27**	**326**	P	**Pg**	**01 48 28.1**	**+0.4**
SEF1				AML	AML		
	comp=N,17000μm,0.2s						
SEF1				AML	AML		
	comp=E,24350μm,0.3s						
PIO1	**Pioraco**	**0.29**	**334**	P	**Pg**	**01 48 28.4**	**+0.4**
SSM1	**San Severino M**	**0.31**	**3**	P	**Pg**	**01 48 28.5**	**+0.2**
T1243	**Rocca Santa Ma**	**0.31**	**136**	P	**Pg**	**01 48 28.1**	**-0.3**
T1243				S	**Sg**	**01 48 33.3**	**+0.8**
FIU1	**Fiuminata**	**0.31**	**328**	⇑P	**Pg**	**01 48 29.1**	**+0.7**
FIU1				AML	AML		
	comp=E,6070μm,1.3s						
FIU1				AML	AML		
	comp=N,4885μm,1.3s						
FIU1				AML	AML		
	comp=E,6070μm,1.3s						
FIU1				AML	AML		
	comp=N,4885μm,1.3s						
MNTP	**Montappone**	**0.31**	**47**	P	**Pg**	**01 48 29.4**	**+0.9**
SMA1	**SAN MARTINO**	**0.32**	**156**	P	**Pg**	**01 48 28.3**	**-0.3**
SMA1				AML	AML		
	comp=N,19500μm,0.6s						
SMA1				AML	AML		
	comp=E,17850μm,0.8s						
GAG1	**Gagliole**	**0.32**	**348**	P	**Pg**	**01 48 29.0**	**+0.3**
GAG1				AML	AML		
	comp=N,19900μm,0.5s						
GAG1				AML	AML		
	comp=E,20500μm,0.4s						
GAG1				AML	AML		
	comp=N,19850μm,0.6s						
LNSS	**Leonessa**	**0.33**	**195**	P	**Pg**	**01 48 28.3**	**-0.5**
LNSS				S	**Sg**	**01 48 34.1**	**+0.9**
LNSS				AML	AML		
	comp=N,26650μm,1.3s						
LNSS				AML	AML		
	comp=E,7950μm,0.5s						
SNTG	**Esanatoglia**	**0.37**	**335**	⇓P	**Pg**	**01 48 29.5**	**0.0**
SNTG				AML	AML		
	comp=E,3770μm,0.7s						
SNTG				AML	AML		
	comp=N,4630μm,0.8s						
SNTG				AML	AML		
	comp=N,4800μm,0.8s						
SNTG				AML	AML		
	comp=E,3575μm,0.7s						
ASSB	**Assisi San Ben**	**0.39**	**288**	P	**Pg**	**01 48 29.6**	**-0.2**
ASSB				S	**Sg**	**01 48 36.0**	**+1.1**
OFFI	**Offida**	**0.39**	**88**	P	**Pg**	**01 48 30.8**	**+1.0**
OFFI				AML	AML		
	comp=E,32350μm,0.6s						
OFFI				AML	AML		
	comp=N,26500μm,0.5s						
EL6	**Elcito**	**0.41**	**354**	⇑P	**Pb**	**01 48 30.2**	**-1.7**
EL6				AML	AML		
	comp=N,8875μm,0.6s						
EL6				AML	AML		
	comp=E,7050μm,0.4s						
EL6				AML	AML		
	comp=N,8885μm,0.6s						
RM33	**Pellescritta (**	**0.41**	**174**	P	**Pg**	**01 48 30.0**	**-0.4**
RM33				AML	AML		
	comp=E,10785μm,1.1s						
RM33				AML	AML		
	comp=E,10750μm,1.1s						
RM33				AML	AML		
	comp=N,8695μm,0.5s						
CAMP	**Campotosto**	**0.43**	**154**	⇓P	**Pg**	**01 48 30.1**	**-0.5**
CAMP				S	**Sg**	**01 48 36.9**	**+0.7**
CAMP				AML	AML		
	comp=N,7660μm,0.2s						
CAMP				AML	AML		
	comp=E,12565μm,0.2s						
TERO	**Teramo**	**0.44**	**132**	P	**Pg**	**01 48 30.4**	**-0.5**
TERO				AML	AML		
	comp=E,8205μm,0.3s						
TERO				AML	AML		
	comp=N,8760μm,0.7s						
TERO				AML	AML		
	comp=N,9145μm,0.7s						
TERO				AML	AML		
	comp=E,8210μm,0.3s						
TERO				AML	AML		
	comp=N,8735μm,0.7s						
TERO				AML	AML		
	comp=E,8550μm,0.3s						
TERO				AML	AML		
	comp=N,8740μm,0.7s						
ARRO	**Arrone**	**0.45**	**220**	⇑P	**Pg**	**01 48 30.6**	**-0.3**
ARRO				AML	AML		
	comp=E,5095μm,0.2s						
ARRO				AML	AML		
	comp=N,4780μm,0.8s						
ARRO				AML	AML		
	comp=E,5090μm,0.2s						

ARRO AML AML
comp=N,4785μm,0.8s
T1211 Morro Reatino 0.45 210 P **Pg 01 48 30.5 -0.5**
T1211 AML AML
comp=E,7630μm,1.6s
T1211 AML AML
comp=N,9715μm,1.2s
T1211 AML AML
comp=E,7835μm,1.6s
T1211 AML AML
comp=N,9765μm,1.2s
T1211 AML AML
comp=E,7635μm,1.6s
T1211 AML AML
comp=N,9740μm,1.2s
T1211 AML AML
comp=E,7830μm,1.6s
T1211 AML AML
comp=N,9750μm,1.2s
FOSV Fossato di Vic 0.47 322 ⇓P **Pg 01 48 31.4 0.0**
FOSV S **Sb 01 48 40.0 -0.1**
FOSV AML AML
comp=N,3850μm,1.4s
FOSV AML AML
comp=E,4470μm,0.8s
T1247 Pizzolo (AQ) 0.49 168 P **Pg 01 48 31.3 -0.4**
T1247 AML AML
comp=N,13900μm,0.5s
T1247 AML AML
comp=E,13200μm,0.7s
CESX Cesi 0.53 234 ⇑P **Pg 01 48 31.9 -0.6**
CESX AML AML
comp=E,5960μm,0.6s
CESX AML AML
comp=N,5840μm,0.6s
GIGS Gran Sasso 0.56 147 P **Pg 01 48 32.4 -0.7**
GIGS S **Sg 01 48 40.7 +0.3**
GIGS AML AML
comp=E,1475μm,0.7s
GIGS AML AML
comp=N,1545μm,0.4s
PP3 Marolino 0.56 36 ⇓P **Pb 01 48 34.2 -0.2**
PP3 AML AML
comp=E,9980μm,1.4s
PP3 AML AML
comp=N,11300μm,1.1s
PP3 AML AML
comp=E,10360μm,1.4s
PP3 AML AML
comp=N,11250μm,1.1s
PP3 AML AML
comp=E,9950μm,1.4s
PP3 AML AML
comp=E,10375μm,1.4s
PP3 AML AML
comp=N,11250μm,1.1s
TRTR Tortoreto Alta 0.57 101 ⇓P **Pg 01 48 34.3 +1.1**
TRTR AML AML
comp=N,18400μm,1.2s
TRTR AML AML
comp=E,20400μm,0.5s
MURB Monte Urbino 0.58 307 ⇓P **Pg 01 48 33.2 -0.1**
MURB S **Sb 01 48 44.0 +0.9**
MURB AML AML
comp=E,5490μm,1.0s
MURB AML AML
comp=N,6035μm,0.9s
MURB AML AML
comp=N,6780μm,0.3s
MURB AML AML
comp=E,5495μm,1.0s
MURB AML AML
comp=E,5435μm,1.0s
MURB AML AML
comp=N,6035μm,0.9s
AQU L'Aquila 0.60 162 ⇓P **Pg 01 48 33.0 -0.7**
AQU S **Sg 01 48 43.0 +1.5**
AQU AML AML
comp=E,5935μm,1.6s
AQU AML AML
comp=N,6105μm,1.0s
AQU AML AML
comp=N,5965μm,1.0s
AQU AML AML
comp=E,5940μm,1.6s
AQU AML AML
comp=N,6110μm,1.0s
AQU AML AML
comp=E,5755μm,1.6s
ARVD Arcevia 0.60 345 ⇑P **Pb 01 48 33.7 -1.4**
ARVD S **Sb 01 48 44.0 +0.3**
ARVD AML AML
comp=N,1570μm,1.5s
ARVD AML AML
comp=E,2595μm,1.0s
ATFO Monte Foce - G 0.62 316 ⇓P **Pg 01 48 34.0 -0.2**
ATFO AML AML
comp=N,1905μm,1.6s
ATFO AML AML
comp=E,2820μm,1.0s
ATTE AVT- Monte Tez 0.65 295 ⇑P **Pg 01 48 35.0 +0.1**
ATTE AML AML
comp=E,1930μm,1.2s
ATTE AML AML
comp=N,1585μm,0.8s
FIAM Fiamignano 0.65 183 S **Sg 01 48 44.0 +0.6**
FRON Frontone 0.67 332 ⇑P **Pb 01 48 35.1 -1.3**
FRON AML AML
comp=E,1975μm,1.5s
FRON AML AML
comp=N,2905μm,0.7s
AOI Ancona 0.71 27 ⇓P **Pb 01 48 36.2 -0.7**
AOI AML AML
comp=E,2040μm,0.6s
AOI AML AML
comp=N,2260μm,0.3s
AOI AML AML
comp=E,2045μm,0.6s
ATVO AVT- Monte Val 0.72 310 ⇑P **Pg 01 48 35.6 -0.5**
ATVO AML AML
comp=E,1365μm,1.4s
ATVO AML AML
comp=N,1600μm,0.5s
ATVO AML AML
comp=N,1605μm,0.5s
FAGN Fagnano 0.73 154 ⇓P **Pg 01 48 35.6 -0.6**
FAGN S **Sg 01 48 47.0 +1.3**
FAGN AML AML
comp=E,9880μm,0.4s
FAGN AML AML
comp=N,6680μm,0.5s
VCEL Villa Celiera 0.73 136 ⇓P **Pg 01 48 35.8 -0.5**
VCEL S **Sg 01 48 48.0 +2.2**
VCEL AML AML
comp=N,5335μm,1.3s
VCEL AML AML
comp=E,3770μm,1.2s
VCEL AML AML
comp=N,5330μm,1.3s
PIEI Pieia 0.76 324 ⇓P **Pg 01 48 36.8 -0.2**
PIEI AML AML
comp=E,1078μm,1.5s
PIEI AML AML
comp=N,898μm,1.0s
ATPI Pietralunga - 0.77 314 ⇓P **Pg 01 48 36.6 -0.4**
ATPI AML AML
comp=E,1490μm,0.7s
ATPI AML AML
comp=N,1415μm,1.4s
MGAB Montegabbione 0.77 270 ⇓P **Pg 01 48 37.2 +0.2**
MGAB AML AML
comp=N,4265μm,0.4s
MGAB AML AML
comp=E,2495μm,0.6s
MGAB AML AML
comp=E,2905μm,0.5s
MGAB AML AML
comp=N,4045μm,0.3s
MGAB AML AML
comp=N,4270μm,0.4s
ATMI Monte Miggiano 0.77 303 ⇓P **Pn 01 48 39.8 +0.2**
ATMI AML AML
comp=N,3660μm,0.6s
ATMI AML AML
comp=E,5005μm,0.6s
NARO Abbazia di Nar 0.81 329 ⇓P **Pg 01 48 37.4 -0.4**
NARO S **Sn 01 48 51.0 -1.3**
NARO AML AML
comp=E,1032μm,1.6s
NARO AML AML
comp=N,846μm,1.2s
FSSB Fossombrone 0.82 340 P **Pb 01 48 37.8 -1.1**
FSSB S **Sn 01 48 53.0 +0.4**
FSSB AML AML
comp=E,3820μm,0.5s
FSSB AML AML
comp=N,4550μm,0.4s
T0110 Collepietro 0.83 146 ⇓P **Pg 01 48 37.1 -1.1**
T0110 AML AML
comp=E,4660μm,0.6s
T0110 AML AML
comp=N,5040μm,0.6s
SRES S.Oreste - Sor 0.83 215 ⇑P **Pg 01 48 37.4 -0.9**
SRES S **Sg 01 48 52.0 +2.9**
SRES AML AML
comp=N,2225μm,0.5s
SRES AML AML
comp=E,2115μm,0.8s
BADI Badiali 0.89 312 ⇑P **Pg 01 48 38.0 -1.3**
PE3 Peglio 0.91 328 ⇓P **Pb 01 48 40.9 +0.4**
PE3 AML AML
comp=N,11μm,0.9s
PE3 AML AML
comp=E,10μm,1.0s
PTQR Pietraquaria 0.92 169 ⇓P **Pg 01 48 38.9 -0.9**
PTQR AML AML
comp=N,1061μm,0.7s
PTQR AML AML
comp=E,1120μm,0.7s
SACS San Casciano d 0.92 266 ⇑P **Pg 01 48 39.5 -0.5**
SACS AML AML
comp=E,1340μm,0.9s
SACS AML AML
comp=E,1330μm,0.9s
SACS AML AML
comp=N,1675μm,0.6s
SACS AML AML
comp=N,1605μm,0.6s
MTCE Montecelio 0.95 199 ⇑P **Pg 01 48 39.7 -0.8**
MTCE AML AML
comp=E,1525μm,1.2s
MTCE AML AML
comp=N,1250μm,0.8s
CAFI Castiglion Fio 0.96 295 ⇓P **Pg 01 48 40.6 -0.2**
CAFI AML AML
comp=N,1046μm,0.6s
CAFI AML AML
comp=E,944μm,1.6s
CERT Cerreto 0.98 188 ⇓P **Pg 01 48 40.0 -1.1**
CERT AML AML
comp=N,2365μm,0.8s
CERT AML AML
comp=E,2440μm,0.5s
LATE Laterza 1.04 253 ⇑P **Pg 01 48 41.9 -0.4**
MCIV Monte Civitell 1.10 263 ⇑P **Pg 01 48 43.0 -0.4**
MCIV AML AML
comp=E,468μm,1.2s
MCIV AML AML
comp=N,496μm,1.2s
VVLD Villa Vallelon 1.10 162 ⇑P **Pg 01 48 44.9 +1.4**
VVLD AML AML
comp=E,2105μm,0.7s
VVLD AML AML
comp=N,1530μm,1.2s
CAFR Castel Frentan 1.12 128 ⇓P **Pg 01 48 42.5 -1.3**
CAFR AML AML
comp=E,1220μm,0.6s
CAFR AML AML
comp=N,1056μm,0.8s
CRE Caprese Michel 1.12 309 ⇓P **Pb 01 48 44.5 +0.4**
CRE AML AML
comp=E,666μm,1.6s
CRE AML AML
comp=N,784μm,0.7s
LPEL Lama dei Pelig 1.16 139 ⇑P **Pg 01 48 43.3 -1.2**
LPEL S **Sg 01 49 01.0 +1.5**
LPEL AML AML
comp=E,1645μm,0.4s
LPEL AML AML
comp=N,1355μm,0.6s
RMP Rome, Mte Porz 1.16 197 ⇑P **Pg 01 48 44.5 0.0**
RMP AML AML
comp=N,1615μm,0.5s
RMP AML AML
comp=E,1390μm,1.0s
TOLF Tolfa 1.21 225 ⇓P **Pg 01 48 44.0 -1.5**
TOLF AML AML
comp=E,688μm,0.7s
TOLF AML AML
comp=N,866μm,0.5s
ARCI Arcidosso 1.24 267 P **Pg 01 48 45.0 -1.1**
ARCI AML AML
comp=E,210μm,1.2s
ARCI AML AML
comp=N,262μm,1.0s
POFI Posta Fibreno 1.27 161 ⇑P **Pg 01 48 47.4 +0.7**
POFI AML AML
comp=E,1097μm,0.8s
POFI AML AML
comp=N,614μm,0.7s
LRP Arpino 1.31 166 ⇓P **Pn 01 48 48.2 +1.2**
LRP AML AML
comp=N,875μm,1.4s
LRP AML AML
comp=E,684μm,0.8s
GIUL Giuliano Di Ro 1.36 177 ⇑P **Pn 01 48 48.1 +0.4**
GIUL AML AML
comp=E,1270μm,0.8s
GIUL AML AML
comp=N,880μm,1.1s
SFI Santa Sofia 1.37 316 ⇑P **Pn 01 48 49.6 +1.8**
SFI AML AML
comp=N,474μm,0.7s
SFI AML AML
comp=E,536μm,0.7s
FRES Fresagrandinar 1.47 130 ⇑P **Pn 01 48 50.3 +1.2**
FRES AML AML
comp=N,506μm,1.1s
FRES AML AML
comp=E,1235μm,0.7s
CERA Filignano 1.47 154 ⇑P **Pn 01 48 49.6 +0.4**
CERA AML AML
comp=N,1340μm,0.9s
CERA AML AML
comp=E,1420μm,0.9s
CERA AML AML
comp=E,1460μm,0.9s
CERA AML AML
comp=N,1295μm,0.9s
CSNT Castellina Chi 1.47 293 P **Pn 01 48 48.9 -0.3**
CSNT AML AML
comp=N,260μm,0.6s
CSNT AML AML
comp=E,274μm,0.6s
TRIV Trivento 1.55 138 ⇓P **Pn 01 48 51.1 +0.8**
TRIV AML AML
comp=E,936μm,0.9s
TRIV AML AML
comp=N,1235μm,0.9s
MAON Monte Argentar 1.57 252 ⇑P **Pn 01 48 49.7 -0.9**
MAON AML AML
comp=E,160μm,0.9s
MAON AML AML
comp=N,168μm,1.2s
BSSO Busso 1.74 142 ⇑P **Pn 01 48 55.3 +2.3**
CIGN Sant'Elia a Pi 1.81 134 ⇓P **Pn 01 48 56.5 +2.6**
MPPT Montemurlo 1.83 305 ⇑P **Pn 01 48 55.5 +1.3**
MPPT AML AML
comp=E,230μm,1.2s
MPPT AML AML
comp=N,214μm,0.9s
MELA Melanico ??? S 1.90 129 ⇓P **Pn 01 48 56.0 +1.0**
MELA AML AML
comp=E,1130μm,0.7s
MELA AML AML
comp=N,1055μm,0.7s
MELA AML AML
comp=N,1086μm,0.7s
MELA AML AML
comp=E,1115μm,0.7s
BRJN Brijuni 2.03 12 ⇓P **Pn 01 48 57.5 +0.6**
APRC Apricena 2.12 123 ⇓P **Pn 01 48 59.1 +1.0**
CEY Cerknica 2.96 17 *e*Pn Pn 01 48 58.8 -11
SABO M.te Sabotino 3.07 6 ⇑P **Pn 01 49 12.2 +0.9**
SABO AML AML
comp=E,329μm,1.5s
SABO AML AML
comp=N,308μm,0.9s
SABO AML AML
comp=N,1276μm,0.8s
SABO AML AML
comp=E,1375μm,1.5s
PGF Pioggiola 3.09 264 ⇓P **Pn 01 49 12.0 +0.5**
PGF AML AML
comp=E,17μm,0.9s
PGF AML AML
comp=N,17μm,1.6s
MGRS Mrkonjic Grad 3.22 61 *e*Pn **Pn 01 49 14.8 +1.6**
AMUR Altamura 3.27 127 ⇑P **Pn 01 49 14.2 +0.3**
AMUR AML AML
comp=N,122μm,0.7s
AMUR AML AML
comp=E,114μm,1.6s
LJU Ljubljana 3.27 17 P **Pn 01 49 14.5 +0.6**
LJU AML AML
comp=N,1075μm,0.6s
LJU AML AML
comp=E,1051μm,1.5s
PRIJ Prijedor 3.29 50 *e*Pn **Pn 01 49 13.2 -1.0**
SALO Salr 3.29 326 ⇑P **Pn 01 49 16.2 +2.0**
SALO AML AML
comp=E,140μm,1.4s
SALO AML AML
comp=N,174μm,0.8s
MPRI Monte Prat 3.32 358 ⇑P **Pn 01 49 16.1 +1.4**
MPRI AML AML
comp=N,311μm,0.8s
MPRI AML AML
comp=E,198μm,0.7s
STON Ston 3.34 89 *e*Pn **Pn 01 49 13.5 -1.3**
A051A Mrakovica 3.42 51 *e*Pn **Pb 01 49 20.1 -3.1**
BLY Banja Luka 3.44 57 *e*Pn **Pn 01 49 17.7 +1.5**
NOCI Noci 3.61 125 ⇓P **Pn 01 49 19.7 +1.1**
NOCI AML AML
comp=E,128μm,1.6s
NOCI AML AML
comp=N,150μm,1.0s
ACOM Acomizza, Ital 3.63 4 ⇓P **Pn 01 49 20.0 +0.9**
ACOM AML AML
comp=E,158μm,1.2s
ACOM AML AML
comp=N,188μm,0.7s
MABI Malga Bissina 3.66 330 ⇓P **Pn 01 49 22.4 +2.9**
OBKA Obir 3.72 15 *e*Pn **Pn 01 49 21.6 +1.4**
OBKA Obir 3.72 15 *e*Pn **Pn 01 49 20.8 +0.6**
comp=N,2.4nm,0.4s
MYKA Terra Mystica 3.72 5 *e*Pn **Pn 01 49 21.0 +0.8**
comp=N,13nm,0.5s,SNR=6.9
KOSI Kohlern 3.76 341 ⇑P **Pn 01 49 22.5 +1.7**
ORI Oriolo Calabro 3.78 138 P **Pn 01 49 22.7 +1.8**
ORI AML AML
comp=E,127μm,1.5s
ORI AML AML
comp=N,140μm,1.4s
A052A Srbac 3.82 54 *e*Pn **Pn 01 49 23.6 +2.1**
TREB Trebinje 3.83 91 *e*Pn **Pn 01 49 21.2 -0.3**
ABTA Abfaltersbach 3.85 353 *e*Pn **Pn 01 49 23.3 +1.3**
comp=N,43nm,0.5s,SNR=39
BRY Bratogost 3.95 88 *e*Pn **Pn 01 49 24.8 +1.4**
HCY Herceg Novi 3.96 95 *e*Pn **Pn 01 49 22.5 -0.9**
SOKA Soboth 3.99 19 *e*Pn **Pn 01 49 25.1 +1.3**
comp=N,1.3nm,0.2s
RISI Rein 4.10 350 ⇑P **Pn 01 49 27.8 +2.3**
ROSI Rosskopf 4.19 343 ⇓P **Pn 01 49 29.2 +2.4**
HAPS Han Pijesak,Bl 4.37 73 *e*Pn **Pn 01 49 30.8 +1.6**
FETA Feichten 4.45 338 *e*Pn **Pn 01 49 32.8 +2.6**
comp=N,3.1nm,0.5s,SNR=12
VSL Villasalto 4.45 221 ⇓P **Pn 01 49 31.2 +1.0**
VSL AML AML
comp=E,20μm,1.1s
VSL AML AML
comp=N,21μm,0.7s
WTTA Wattenberg 4.47 347 *e*Pn **Pn 01 49 32.2 +1.6**
comp=N,10.0nm,0.5s,SNR=17
DAVOX Davos/Dischmat 4.51 330 Pn **Pn 01 49 31.2 +0.1**
comp=N,1.3nm,0.3s,baz=133,slow=9.8,SNR=12
DAVOX Sn **Sn 01 50 25.9 +2.1**
baz=315,slow=19
comp=N,4.9nm,0.4s
DRME Dracevica, Mon 4.51 97 *e*Pn **Pn 01 49 32.0 +1.0**
SQTA Sankt Quirin 4.51 343 *e*Pn **Pn 01 49 32.6 +1.4**
comp=N,2.3nm,0.2s,SNR=9.8
WATA Walderalm 4.55 346 *e*Pn **Pn 01 49 34.0 +2.3**
comp=N,4.0nm,0.4s,SNR=13
RUDO Rudo 4.59 79 *e*Pn **Pn 01 49 32.3 +0.2**
ARSA Arzberg 4.64 20 *e*Pn **Pn 01 49 32.5 -0.3**
comp=N,2.5nm,0.4s
BBLS Lazići 4.65 76 *e*Pn **Pn 01 49 35.3 +2.4**
MOTA Moosalm 4.66 343 *e*Pn **Pn 01 49 35.1 +2.0**
comp=N,8.0nm,0.6s,SNR=8.2
KOVH Kovagotottos 4.75 46 P **Pn 01 49 33.4 -0.8**
BIOA Bad Ischl, Aus 4.78 4 *e*Pn **Pn 01 49 36.0 +1.3**
comp=N,15nm,0.4s,SNR=14
RETA Reutte 4.87 340 *e*Pn **Pn 01 49 38.3 +2.4**
comp=N,3.8nm,0.4s,SNR=7.8
DAVA Damuels 4.94 333 *e*Pn **Pn 01 49 39.2 +2.1**
comp=N,6.5nm,0.4s
MOA Molln 4.99 9 *e*Pn **Pn 01 49 38.7 +1.1**
comp=N,1.7nm,0.3s,SNR=12
DIVS Divibare 5.11 74 *e*Pn **Pn 01 49 37.5 -1.7**
RONA Rosalia, Austr 5.26 24 *e*Pn **Pn 01 49 42.1 +0.7**
comp=N,0.5nm,0.2s
FRGS Fruska Gora 5.29 63 *e*Pn **Pn 01 49 41.2 -0.5**
CONA Conrad Observa 5.36 20 *e*Pn **Pn 01 49 43.0 +0.4**
comp=N,0.8nm,0.2s
GERES GERESS Array B 5.94 3 Pn **Pn 01 49 49.9 -0.7**
comp=N,0.5nm,0.3s,baz=179,slow=13,SNR=14
GERES Sn **Sn 01 50 56.3 -2.6**
comp=N,1.5nm,0.3s,baz=167,slow=25,SNR=4.3
comp=N,1.1nm,0.5s
CKRC Cesky Krumlov 5.95 7 *e*PN **Pn 01 49 50.8 0.0**
CKRC *e*SN **Sn 01 50 56.2 -3.0**
KHC Kasperske Hory 6.22 3 *e*PN **Pn 01 49 54.6 +0.2**
KHC *e*SN **Sn 01 51 02.5 -3.2**
KRUC Moravsky 6.54 19 *e*PN **Pn 01 49 58.8 0.0**
TREC Trest 6.58 13 *e*PN **Pn 01 50 00.2 +0.9**
TREC *e*SN **Sn 01 51 11.1 -3.4**
VRAC Vranov 6.82 19 Pn **Pn 01 50 03.7 +1.1**
comp=N,0.1nm,0.3s,baz=210,slow=16,SNR=1.5
VRAC Sn **Sn 01 51 15.3 -5.1**
comp=N,0.3nm,0.3s,baz=279,slow=19,SNR=1.8
comp=N,0.8nm,0.6s
PRU Pruhonice 7.13 7 *e*SN **Sn 01 51 23.2 -5.0**
NKC Novy Kostel 7.33 356 *e*SN **Sn 01 51 30.5 -2.6**
KEST Kesra 7.76 204 Pn Pn 01 50 20.8 +5.1
comp=N,0.4nm,0.3s,baz=290,slow=5.8,SNR=9.7
KEST LR LR 01 53 18.2
comp=N,168nm,20.0s,baz=86,slow=37
comp=N,3.6nm,0.7s
BRG Berggiesshubel 7.97 4 *e*(P) **Pn 01 50 18.1 -0.3**
BRG Amp 01 50 19.6
comp=Z,1.1nm,0.6s
BRG *ex* x 01 51 43.9
BRG *ex* x 01 52 41.1
BRG Amp 01 53 14.4
comp=Z,18nm,1.5s
CLL Collm 8.39 359 *e*Pn **Pn 01 50 24.0 -0.2**
CLL *e*Sn **Sn 01 51 54.0 -5.1**
CLL *ex* x 01 52 09.0
CLL *e*Sg **Sg 01 52 45.0 -6.4**
comp=Z,11nm,1.3s
MLR Muntele Rosu 9.54 70 LR LR 01 55 45.3
comp=Z,190nm,18.0s,baz=102,slow=47
FINES FINESS Array B 20.10 18 P **Pn 01 52 57.8 -0.2**
baz=212,slow=13,SNR=1.5
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea 31.28 202 P **P 01 54 44.5 +1.6**
comp=Z,0.3nm,0.7s,baz=19,slow=8.6,SNR=4.8
comp=Z,0.3nm,0.7s
MKAR Makanchi Array 47.72 60 P **P 01 57 01.7 +2.2**
comp=Z,0.5nm,0.7s,baz=275,slow=7.4,SNR=2.8
comp=Z,0.5nm,0.7s
MA2 Magadan 72.06 21 LR LR 02 33 18.7
comp=Z,128nm,19.5s,baz=266,slow=38

IDC ***31*** *01:57:37.7±0.9, 57°.14S×140°.59W, h0km, mb4.0/4, mbtmp4.0/4, MS3.9/9, Error ellipse: s-maj=141.7km*

s-min=25.3km az=174.0
*NEIC **31** 01:57:38.2±1.2,58°.2S±0°.1×139°.6W±0°.4,h10km±2km, mb4.5/8,Error ellipse: s-maj=36.1km s-min=11.6km az=114.0*

ISC 31 01:57:38.6±0.8,58°.2S±0°.2×140°.2W±0°.2,h10km,n46, σ1§40/25,mb4.4/8,MS4.0/12,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**26.31**	**202**	P	**P**	**02 03 15.1**	**+1.3**
SBA				IAmb	IAmb	02 03 29.4	
	comp=Z,6.3nm,1.1s						
VNDA	**Vanda**	**27.25**	**204**	LR	LR	02 11 20.4	
	comp=Z,180nm,19.9s,baz=104,slow=29						
VNDA	**Vanda**	**27.25**	**204**	P	**P**	**02 03 22.7**	**+0.4**
QSPA	**South Pole Qui**	**31.96**	**180**	LR	LR	02 15 35.3	
	comp=Z,263nm,18.2s,baz=86,slow=33						
QSPA	**South Pole Qui**	**31.96**	**180**	P	**P**	**02 04 05.3**	**+0.9**
QSPA				IAmb	IAmb	02 04 31.0	
	comp=Z,8.7nm,1.2s						
URZ	**Urewera**	**33.96**	**287**	LR	LR	02 15 14.9	
	comp=Z,162nm,19.7s,baz=218,slow=32						
PMSA	**Palmer Station**	**34.83**	**133**	LR	LR	02 14 51.0	
	comp=Z,279nm,19.0s,baz=296,slow=29						
TBI	**Tubuai**	**35.45**	**345**	eLR	LR	02 13 27.4	
	comp=Z,1μm,27.0s						
RAO	**Raoul Island**	**38.89**	**302**	LR	LR	02 16 59.4	
	comp=Z,142nm,19.2s,baz=80,slow=30						
RAR	**Rarotonga**	**39.59**	**331**	LR	LR	02 16 20.7	
	comp=Z,197nm,20.0s,baz=164,slow=29						
PPT2	**Papeete2**	**41.14**	**346**	eLR	LR	02 16 05.5	
	comp=Z,385nm,25.2s						
PPT	**Papeete**	**41.16**	**346**	LR	LR	02 18 23.9	
	comp=Z,175nm,18.1s,baz=181,slow=31						
VNA3	**Neumayer Olymp**	**46.26**	**160**	P	**P**	**02 06 01.9**	**-1.6**
VNA2	**Neumayer--Watz**	**46.93**	**161**	P	**P**	**02 06 07.4**	**-1.2**
	baz=212,slow=8.0						
H03S2	**Juan Fernandez**	**46.98**	**86**	T	T	02 56 22.9	
	baz=217,slow=74						
H03S1	**Juan Fernandez**	**46.99**	**86**	T	T	02 56 29.7	
	baz=217,slow=74						
H03S3	**Juan Fernandez**	**47.00**	**86**	T	T	02 56 26.1	
	baz=217,slow=74						
VNA1	**Neumayer--Stat**	**47.01**	**160**	P	**P**	**02 06 07.3**	**-2.0**
SNAA	**Sanae**	**47.04**	**163**	P	**P**	**02 06 07.5**	**-2.1**
SNAA	**Sanae**	**47.04**	**163**	LR	LR	02 25 23.3	
	comp=Z,73nm,18.5s,baz=188,slow=35						
SNAA	**Sanae**	**47.04**	**163**	P	**P**	**02 06 07.7**	**-1.9**
SNAA				IAmb	IAmb	02 06 09.2	
	comp=Z,7.0nm,1.3s						
H03N3	**Juan Fernandez**	**47.28**	**86**	T	T	02 56 44.1	
	baz=220,slow=72						
H03N2	**Juan Fernandez**	**47.29**	**86**	T	T	02 56 42.3	
	baz=220,slow=72						
H03N1	**Juan Fernandez**	**47.30**	**86**	T	T	02 56 42.9	
	baz=220,slow=72						
TROLL	**Troll, Antarti**	**47.52**	**165**	P	**P**	**02 06 12.7**	**-0.7**
TAOE	**Nuku Hiva Isla**	**49.23**	**0**	eLR	LR	02 19 49.4	
	comp=Z,226nm,25.0s						
MSVF	**Nonsavu**	**50.72**	**305**	LR	LR	02 23 26.0	
	comp=Z,118nm,21.0s,baz=47,slow=31						
FORT	**Forrest**	**65.30**	**251**	P	**P**	**02 08 21.8**	**+1.4**
LPAZ	**La Paz**	**66.84**	**84**	P	**P**	**02 08 32.4**	**+1.1**
	comp=Z,1.0nm,1.1s,baz=233,slow=10,SNR=2.0						
	comp=Z,1.0nm,1.1s						
ASAR	**Alice Springs**	**68.09**	**260**	P	**P**	**02 08 38.9**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=141,slow=6.4,SNR=25						
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**68.09**	**260**	P	**P**	**02 08 39.3**	**+0.9**
H01W1	**Cape Leeuwin H**	**68.56**	**238**	T	T	03 24 10.5	
	baz=146,slow=76						
H01W2	**Cape Leeuwin H**	**68.57**	**238**	T	T	03 24 15.5	
	baz=146,slow=76						
H01W3	**Cape Leeuwin H**	**68.58**	**238**	T	T	03 24 10.8	
	baz=146,slow=76						
SIV	**San Ignacio**	**70.82**	**89**	P	**P**	**02 08 57.7**	**+2.3**
	comp=Z,0.6nm,0.7s,baz=219,slow=9.5,SNR=3.0						
	comp=Z,0.6nm,0.7s						
WB2	**Warramunga Arr**	**70.92**	**263**	P	**P**	**02 08 57.0**	**+1.1**
WRA	**Warramunga Arr**	**70.92**	**263**	P	**P**	**02 08 56.3**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=149,slow=5.6,SNR=12						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**70.92**	**263**	P	**P**	**02 08 58.1**	**+2.1**
WB0	**Warramunga Arr**	**71.04**	**263**	P	**P**	**02 08 57.4**	**+0.7**
WB0				IAmb	IAmb	02 08 58.5	
	comp=Z,6.5nm,1.1s						
ILAR	**Eielson Array**	**122.75**	**357**	PKP	**PKPdf**	**02 16 31.9**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=186,slow=1.6,SNR=11						
ILAR	**Eielson Array**	**122.75**	**357**	PKPdf	**PKiKP**	**02 16 33.3**	**+0.1**
IMAR	**Indian Mountai**	**124.28**	**353**	PKPdf	**PKiKP**	**02 16 36.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**126.69**	**131**	PKPdf	**PKPdf**	**02 16 41.3**	**-0.8**
MKAR	**Makanchi Array**	**152.22**	**264**	PKPbc	**PKiKP**	**02 17 33.6**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=151,slow=3.3,SNR=6.6						
MKAR	**Makanchi Array**	**152.22**	**264**	PKPbc	**PKPbc**	**02 17 32.1**	**-1.3**
ZALV	**Zalesovo Beam**	**154.90**	**280**	PKPab	**PKPab**	**02 17 52.5**	**-2.0**
	comp=Z,1.0nm,0.6s,baz=122,slow=2.9,SNR=5.5						

ROM 31 02:04:33.7±0.0,42°.988N±0°.003×13°.042E±0°.003, h13km,ML2.5/11,2C-2D,Error ellipse: s-maj=0.3km s-min=0.0km az=189.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.03**	**167**	⇓P	Pg	02 04 36.4	+0.2
FEMA				S	Sg	02 04 38.2	+0.3
FEMA				AML	AML		
	comp=N,9585μm,1.2s						
FEMA				AML	AML		
	comp=E,7955μm,1.6s						
T1216	**Preci, Frazion**	**0.10**	**190**	⇑P	Pg	02 04 37.0	+0.3
T1216				S	Sg	02 04 39.1	+0.3
T1216				AML	AML		
	comp=E,4150μm,0.2s						
T1216				AML	AML		
	comp=N,4095μm,0.3s						
T1216				AML	AML		
	comp=E,39050μm,0.3s						
T1216				AML	AML		
	comp=N,48150μm,0.3s						
T1245	**Castelsantange**	**0.17**	**141**	S	Sg	02 04 41.0	+0.4
SEF1	**Sefro**	**0.17**	**337**	P	Pg	02 04 38.2	+0.5
SEF1				S	Sg	02 04 41.3	+0.8
T1215	**Vallo di Nera,**	**0.23**	**214**	P	Pg	02 04 38.9	+0.3
T1215				S	Sg	02 04 42.8	+0.9
T1215				AML	AML		
	comp=N,2880μm,0.1s						
T1215				AML	AML		
	comp=N,3065μm,0.1s						
T1215				AML	AML		
	comp=E,2025μm,0.5s						
T1215				AML	AML		
	comp=E,2047μm,0.5s						
MMO1	**Montemonaco**	**0.23**	**113**	P	Pg	02 04 38.9	+0.3
MMO1				S	Sg	02 04 42.7	+0.7
AM05	**Amandola Campo**	**0.23**	**93**	P	Pg	02 04 39.0	+0.4
AM05				S	Sg	02 04 42.9	+0.9
AM05				AML	AML		
	comp=E,1895μm,0.1s						
AM05				AML	AML		
	comp=N,180μm,0.1s						
AM05				AML	AML		
	comp=E,765μm,0.8s						
AM05				AML	AML		
	comp=N,210μm,1.2s						
AM05				AML	AML		
	comp=N,819μm,1.2s						
AM05				AML	AML		
	comp=E,3470μm,0.1s						
SNTG	**Esanatoglia**	**0.28**	**345**	P	Pg	02 04 39.9	+0.4
SNTG				S	Sg	02 04 44.0	+0.6
SNTG				AML	AML		
	comp=E,290μm,0.3s						
SNTG				AML	AML		
	comp=N,391μm,0.8s						
ASSB	**Assisi San Ben**	**0.29**	**281**	⇑P	Pg	02 04 39.9	+0.3
ASSB				S	Sb	02 04 44.7	-0.8
ASSB				AML	AML		
	comp=E,438μm,1.5s						
ASSB				AML	AML		
	comp=N,642μm,0.2s						
ASSB				AML	AML		
	comp=E,1905μm,0.2s						
ASSB				AML	AML		
	comp=N,1050μm,0.7s						
T1217	**Poggiodomo (PG**	**0.29**	**196**	P	Pg	02 04 40.0	+0.4
T1217				AML	AML		
	comp=E,1590μm,0.2s						
T1217				AML	AML		
	comp=N,1980μm,0.2s						
T1217				AML	AML		
	comp=E,1575μm,0.2s						
T1217				AML	AML		
	comp=N,1965μm,0.2s						
T1241	**Roccafluvione,**	**0.32**	**115**	P	Pg	02 04 40.5	+0.3
T1241				S	Sb	02 04 45.7	-0.6
T1241				AML	AML		
	comp=E,2275μm,0.3s						
T1241				AML	AML		
	comp=E,2525μm,0.3s						
T1241				AML	AML		
	comp=N,2110μm,0.3s						
T1241				AML	AML		
	comp=N,1865μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.35**	**304**	P	Pg	02 04 41.2	+0.3
ATCC				AML	AML		
	comp=E,653μm,0.4s						
ATCC				AML	AML		
	comp=N,474μm,0.4s						
FOSV	**Fossato di Vic**	**0.37**	**326**	P	Pb	02 04 41.7	-0.5
T1204	**Amatrice, Fraz**	**0.37**	**147**	⇓P	Pb	02 04 42.0	-0.2
LNSS	**Leonessa**	**0.39**	**180**	S	Sb	02 04 48.0	-0.4
ARRO	**Arrone**	**0.46**	**207**	P	Pg	02 04 43.0	+0.3
ARRO				AML	AML		
	comp=E,627μm,0.2s						
ARRO				AML	AML		
	comp=N,627μm,0.2s						
CESX	**Cesi**	**0.51**	**222**	P	Pg	02 04 43.6	-0.1
CESX				AML	AML		
	comp=E,482μm,1.2s						
CESX				AML	AML		
	comp=N,568μm,0.4s						
ARVD	**Arcevia**	**0.52**	**352**	S	Sb	02 04 53.0	+0.9
CAMP	**Campotosto**	**0.53**	**149**	P	Pg	02 04 44.2	+0.1
TERO	**Teramo**	**0.55**	**131**	P	Pg	02 04 44.8	+0.3

ROM 31 02:05:18.7±0.1,42°.894N±0°.006×13°.039E±0°.007, h10km,ML2.5/17,4C-3D,Error ellipse: s-maj=0.7km s-min=0.5km az=161.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.01**	**258**	⇓P	Pg	02 05 20.8	+0.3
T1216				S	Sg	02 05 22.0	+0.2
T1216				AML	AML		
	comp=E,39000μm,0.3s						
T1216				AML	AML		
	comp=N,48150μm,0.3s						
T1216				AML	AML		
	comp=E,39050μm,0.3s						
T1216				AML	AML		
	comp=N,48200μm,0.3s						
FEMA	**Monte Fema**	**0.07**	**7**	P	Pg	02 05 21.3	+0.2
FEMA				S	Sg	02 05 22.9	+0.2
T1245	**Castelsantange**	**0.12**	**109**	P	Pg	02 05 22.2	+0.5
T1245				S	Sg	02 05 24.1	+0.4
T1245				AML	AML		
	comp=N,18950μm,0.8s						
T1245				AML	AML		
	comp=E,16700μm,0.7s						
T1245				AML	AML		
	comp=E,15850μm,0.7s						
T1245				AML	AML		
	comp=N,18200μm,0.8s						
T1215	**Vallo di Nera,**	**0.16**	**234**	⇑P	Pg	02 05 22.7	+0.6
T1215				S	Sg	02 05 25.4	+0.9
T1215				AML	AML		
	comp=N,2880μm,0.1s						
T1215				AML	AML		
	comp=E,2050μm,0.5s						
T1215				AML	AML		
	comp=N,3065μm,0.1s						
T1215				AML	AML		
	comp=E,2025μm,0.5s						
T1215				AML	AML		
	comp=E,2050μm,0.5s						
T1217	**Poggiodomo (PG**	**0.20**	**204**	P	Pg	02 05 23.4	+0.5
T1217				S	Sg	02 05 26.8	+1.0
T1217				AML	AML		
	comp=E,1585μm,0.2s						
T1217				AML	AML		
	comp=N,1975μm,0.2s						
T1217				AML	AML		
	comp=E,1578μm,0.2s						
T1217				AML	AML		
	comp=N,1965μm,0.2s						
T1217				AML	AML		
	comp=N,4845μm,0.2s						
T1217				AML	AML		
	comp=N,4825μm,0.3s						
T1217				AML	AML		
	comp=E,2105μm,0.2s						
T1217				AML	AML		
	comp=E,2170μm,0.2s						
AM05	**Amandola Campo**	**0.24**	**70**	⇑P	Pg	02 05 24.1	+0.4
AM05				S	Sg	02 05 28.0	+0.9
AM05				AML	AML		
	comp=N,210μm,1.2s						
AM05				AML	AML		
	comp=E,765μm,0.8s						
AM05				AML	AML		
	comp=N,819μm,1.2s						
AM05				AML	AML		
	comp=N,210μm,1.2s						
AM05				AML	AML		
	comp=E,3470μm,0.1s						
T1241	**Roccafluvione,**	**0.29**	**97**	⇑P	Pg	02 05 24.9	+0.4
T1241				S	Sg	02 05 29.6	+1.1
T1241				AML	AML		
	comp=E,2270μm,0.3s						
T1241				AML	AML		
	comp=N,2115μm,0.2s						
T1241				AML	AML		
	comp=E,2525μm,0.3s						
T1241				AML	AML		
	comp=E,2275μm,0.3s						
T1241				AML	AML		
	comp=N,1865μm,0.2s						
T1241				AML	AML		
	comp=N,2110μm,0.3s						
T1204	**Amatrice, Fraz**	**0.30**	**137**	S	Sg	02 05 28.0	-0.8
ASSB	**Assisi San Ben**	**0.32**	**298**	P	Pg	02 05 25.4	+0.3
ASSB				S	Sg	02 05 30.5	+1.2
ASSB				AML	AML		
	comp=N,1050μm,0.7s						
ASSB				AML	AML		
	comp=E,1905μm,0.2s						
ARRO	**Arrone**	**0.37**	**213**	P	Pb	02 05 27.3	-0.1
ARRO				S	Sb	02 05 32.7	-0.6
ARRO				AML	AML		
	comp=E,628μm,0.7s						
ARRO				AML	AML		
	comp=N,626μm,0.2s						
ARRO				AML	AML		
	comp=E,627μm,0.2s						
ARRO				AML	AML		
	comp=N,627μm,0.2s						
T1211	**Morro Reatino**	**0.39**	**201**	S	Sb	02 05 34.0	+0.3
ATCC	**AVT- Casa Cast**	**0.41**	**315**	P	Pg	02 05 27.1	+0.3
ATCC				AML	AML		
	comp=N,474μm,0.4s						
ATCC				AML	AML		
	comp=E,653μm,0.4s						
CESX	**Cesi**	**0.44**	**230**	P	Pg	02 05 27.5	+0.1
CESX				AML	AML		
	comp=N,568μm,0.4s						
CESX				AML	AML		
	comp=E,482μm,1.2s						
OFFI	**Offida**	**0.48**	**85**	P	Pb	02 05 29.0	-0.2
OFFI				AML	AML		
	comp=N,640μm,0.5s						
OFFI				AML	AML		
	comp=E,672μm,1.6s						
MURB	**Monte Urbino**	**0.53**	**315**	P	Pb	02 05 29.9	-0.2
MURB				AML	AML		
	comp=E,693μm,0.3s						
MURB				AML	AML		
	comp=N,1000μm,0.2s						
ARVD	**Arcevia**	**0.61**	**353**	P	Pg	02 05 30.8	+0.3
ARVD				S	Sb	02 05 41.0	+0.9
ARVD				AML	AML		
	comp=N,93μm,0.7s						
ARVD				AML	AML		
	comp=E,190μm,0.5s						
TRTR	**Tortoreto Alta**	**0.65**	**97**	P	Pb	02 05 32.2	+0.1
TRTR				AML	AML		
	comp=E,685μm,0.9s						
TRTR				AML	AML		
	comp=N,782μm,0.6s						
ATVO	**AVT- Monte Val**	**0.67**	**317**	⇓P	Pg	02 05 31.9	+0.2
ATVO				AML	AML		
	comp=N,108μm,0.9s						
ATVO				AML	AML		
	comp=E,116μm,0.6s						
SRES	**S.Oreste - Sor**	**0.76**	**211**	⇓P	Pb	02 05 33.8	-0.3
SRES				AML	AML		
	comp=E,168μm,0.6s						
SRES				AML	AML		
	comp=N,135μm,0.4s						
SACS	**San Casciano d**	**0.83**	**267**	⇑P	Pb	02 05 35.1	-0.2
SACS				AML	AML		
	comp=N,99μm,1.0s						
SACS				AML	AML		
	comp=E,91μm,0.9s						
BADI	**Badiali**	**0.85**	**317**	S	Sn	02 05 49.0	-0.2

*VAO **31** 02:05:56.2±0.2,3°.21N×74°.54W,h10km,mb5.2*
*IDC **31** 02:05:57.3±2.0,3°.43N×74°.46W,h35km±15km,mb4.0/20, mbtmp4.4/26,ML4.1/6,MS4.1/47,Error ellipse: s-maj=15.9km s-min=11.2km az=81.0*
*RSNC **31** 02:05:58.8±3.6,3°.42N×74°.62W,h0km±11km,ML4.8, Mw4.8,Fault plane solution: NP1:ϕ_s18.00000°, δ81.00000°,λ-162.00000°.*
*NEIC **31** 02:05:58.0±2.0,3°.40N±0°.05×74°.50W±0°.06,h36km±3km, mb5.0/231,Mww5.0,Mwr5.0(RSNC),Error ellipse: s-maj=9.5km s-min=6.6km az=73.0*
*NEIC **31** 02:06:01,3°.38N×74°.37W,h30km,Moment Tensor Solution. Duration:6^0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.11; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-3.21; $M_{r\theta}$-2.48; $M_{\theta\phi}$-0.37; $M_{\phi r}$-0.40; Fault plane solution: $M_0$3.80000×10^{16} NP1: ϕ_s334.00000°,δ49.00000°,λ36.00000°. NP2: ϕ_s219.00000°,δ64.00000°,λ133.00000°. Principal axes: T 4.1414, Plg51.0000°, Azm179.0000°; N -0.8100, Plg38.0000°, Azm16.0000°; P -3.3314, Plg8.0000°, Azm279.0000°;*
*GCMT **31** 02:06:03.0±0.3,3°.36N±0°.02×74°.51W±0°.02,h43km±1km, MW5.0/96,Moment Tensor Solution. s29,c37; s96,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.96±.23; $M_{\theta\theta}$2.48±.15; $M_{\phi\phi}$-4.44±.16; $M_{r\theta}$-1.74±.13; $M_{\theta\phi}$1.90±.12; $M_{\phi r}$-0.39±.15; Best double couple: $M_0$4.62200×10^{16} NP1:ϕ_s307.00000°,δ65.00000°,λ28.00000°. NP2: ϕ_s204.00000°,δ64.00000°,λ152.00000°. Principal axes: T 4.3160, Plg37.0000°, Azm166.0000°; N 0.6110, Plg53.0000°, Azm345.0000°; P -4.9280, Plg0.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 02:05:58.0±0.2,3°.39N±0°.03×74°.59W±0°.03,h38km, h38km:pP-P,n733,σ1§60/735,mb5.0/144,MS4.3/58, 16C-14D,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRAC	**Prado**	**0.44**	**318**	⇑iP	**Pn**	**02 06 07.6**	**-0.1**
PRAC				eS	**Sn**	**02 06 14.4**	**-0.3**
PRAC				i		02 06 21.7	
	comp=Z,47μm,0.7s						
ORTC	**Ortega, Tolima**	**0.83**	**309**	iP	**Pn**	**02 06 13.7**	**+0.4**
ORTC				eS	**Sn**	**02 06 25.0**	**+0.6**
ORTC				i		02 06 29.2	
	comp=Z,68μm,0.4s						
BETC	**Betania**	**1.10**	**230**	⇓iP	**Pn**	**02 06 18.4**	**+1.5**
BETC				⇓iP	**Pn**	**02 06 18.4**	**+1.5**
BETC				eS	**Sn**	**02 06 33.4**	**+2.5**
BETC				i		02 06 34.9	
	comp=Z,81μm,0.6s						
BETC				i		02 06 35.1	
	comp=Z,87μm,0.6s						
VILC	**Villavicencio,**	**1.15**	**51**	⇓iP	**Pn**	**02 06 20.5**	**+2.8**
VILC				eS	**Sn**	**02 06 37.9**	**+5.6**
ANIL	**Santa Ana**	**1.36**	**324**	⇑iP	**Pn**	**02 06 21.1**	**+0.3**
ANIL				eS	**Sn**	**02 06 38.5**	**+0.7**
ANIL				i		02 06 41.9	
	comp=Z,30μm,0.4s						
ROSC	**El Rosal**	**1.47**	**11**	Pg	**Pn**	**02 06 25.6**	**+3.2**
	comp=Z,2μm,0.3s,baz=328,slow=4.2,SNR=2571						
ROSC				Lg	Lg	02 06 46.4	
	comp=Z,6μm,0.3s,baz=81,slow=19,SNR=14						
ROSC				LR	LR	02 06 51.7	
	comp=Z,3μm,21.4s,baz=189,slow=38						
ROSC	**El Rosal**	**1.47**	**11**	Pn	**Pn**	**02 06 24.2**	**+1.9**
ROSC	**El Rosal**	**1.47**	**11**	⇑iP	**Pn**	**02 06 25.7**	**+3.4**
ROSC				eS	**Sn**	**02 06 46.0**	**+5.5**
ROSC				i		02 06 53.2	
	comp=Z,19μm,0.5s						
GARC	**Garzon, Huila**	**1.49**	**217**	⇓iP	**Pn**	**02 06 24.5**	**+2.0**
GARC				eS	**Sn**	**02 06 45.0**	**+4.2**
CHIC	**Chingaza**	**1.50**	**35**	⇓iP	**Pn**	**02 06 25.8**	**+2.9**
CHIC				eS	**Sn**	**02 06 45.9**	**+4.6**
CHIC				i		02 06 52.3	
	comp=Z,14μm,0.5s						
YOTC	**Yotoco, Valle**	**1.85**	**289**	⇓iP	**Pn**	**02 06 27.8**	**+0.5**
YOTC				eS	**Sn**	**02 06 53.2**	**+3.8**
NIZA	**Niza - Manizal**	**1.88**	**332**	iP	**Pn**	**02 06 31.0**	**+3.1**
GUY2C	**Guyana, Caldas**	**1.98**	**337**	⇑iP	**Pn**	**02 06 30.9**	**+1.5**
GUY2C				eS	**Sn**	**02 06 58.4**	**+5.2**
GUY2C				i		02 06 59.8	
	comp=Z,4μm,0.4s						
FLOC	**Florencia**	**2.08**	**211**	⇓iP	**Pn**	**02 06 32.9**	**+2.5**
FLOC				eS	**Sn**	**02 07 02.0**	**+6.8**
GUVC	**San Jose del G**	**2.13**	**113**	⇑iP	**Pn**	**02 06 34.3**	**+3.2**
GUVC				eS	**Sn**	**02 07 01.7**	**+5.4**
GUVC				i		02 07 10.5	
	comp=Z,15μm,0.3s						
NORC	**Norcasia**	**2.18**	**353**	⇑iP	**Pn**	**02 06 32.2**	**+0.4**
NORC				eS	**Sn**	**02 07 02.2**	**+4.6**
NORC				i		02 07 12.1	
	comp=Z,3μm,0.6s						
PLMC	**San Jos del P**	**2.26**	**312**	⇓iP	**Pn**	**02 06 34.3**	**+1.3**
PLMC				i		02 07 18.9	
	comp=Z,4μm,0.4s						
SPBC	**San Pablo de B**	**2.31**	**13**	eP	**Pn**	**02 06 35.3**	**+1.7**
SPBC				eS	**Sn**	**02 07 08.6**	**+7.7**
SPBC				i		02 07 18.5	
	comp=Z,5μm,0.4s						
PTGC	**Puerto Gaitan,**	**2.58**	**72**	⇓iP	**Pn**	**02 06 40.3**	**+3.0**
PTGC				eS	**Sn**	**02 07 13.1**	**+5.6**
PTGC				i		02 07 26.2	
	comp=Z,10μm,0.6s						
MALC	**Bahia Malaga**	**2.81**	**283**	eP	**Pn**	**02 06 43.3**	**+3.0**
MALC				eS	**Sn**	**02 07 18.6**	**+5.6**
MALC				i		02 07 39.3	
	comp=Z,2μm,0.6s						
CBOC	**Ciudad Bolivar**	**2.84**	**330**	eP	**Pn**	**02 06 42.9**	**+1.9**
CBOC				eS	Sn	02 07 32.0	+18
CBOC				i		02 07 48.3	
	comp=Z,1μm,0.6s						
RUSC	**La Rusia**	**2.91**	**31**	⇓iP	**Pn**	**02 06 46.2**	**+4.0**
RUSC				eS	**Sn**	**02 07 22.4**	**+6.3**
RUSC				i		02 07 36.6	
	comp=Z,4μm,0.6s						
HELC	**Santa Helena**	**2.94**	**342**	⇑eP	**Pn**	**02 06 43.2**	**+0.7**
HELC				eS	Sn	02 07 27.6	+11
HELC				i		02 07 32.5	
	comp=Z,1μm,0.4s						
BBAC	**Balboa, Cauca**	**2.98**	**243**	⇓iP	**Pn**	**02 06 45.0**	**+2.0**
BBAC				eS	Sn	02 07 34.6	+17
BBAC				i		02 07 43.4	
	comp=Z,2μm,0.5s						
PTBC	**PUERTO BERRIO,**	**3.13**	**2**	⇑iP	**Pn**	**02 06 46.0**	**+1.0**
BARC	**Barichara**	**3.48**	**24**	eP	**Pn**	**02 06 52.4**	**+2.5**
GCUF	**Volcan Galeras**	**3.49**	**232**	⇓iP	**Pn**	**02 06 53.1**	**+2.9**
GCUF				eS	Sn	02 07 48.9	+18
GCUF				i		02 08 01.9	
	comp=Z,3μm,0.4s						
GR1C	**Gorgona, Isla**	**3.59**	**264**	eP	**Pn**	**02 06 51.9**	**+0.8**
GR1C				eS	**Sn**	**02 07 36.6**	**+4.3**
GR1C				i		02 07 56.0	
	comp=Z,9μm,0.6s						
BRRC	**Barranca, Sant**	**3.80**	**13**	eS	Sn	02 07 54.2	+17

BRRC *i* 02 08 11.8
comp=Z,988nm,0.4s
DBBC Dabeiba 3.95 336 *eP* **Pn 02 06 59.1 +2.9**
CMBC Cumbal 4.04 233 *eP* Pn 02 07 13.6 +16
TAMC Tame, Arauca 4.12 43 *iP* **Pn 02 07 01.9 +3.4**
TAMC *eS* Sn 02 08 11.5 +26
TAMC *i* 02 08 17.6
comp=Z,2μm,0.5s
BONI La Bonita 4.14 225 *eP* **Pn 02 07 00.6 +1.7**
BONI *eS* Sn 02 08 06.9 +21
BONI *i* 02 08 12.5
comp=Z,3μm,0.7s
TULM Tulcn-Chalpat 4.15 230 Pn 02 07 01.7 +2.4
TULM Tulcn-Chalpat 4.15 230 *eP* **Pn 02 07 01.8 +2.5**
TULM *eS* Sn 02 08 09.6 +23
TULM *i* 02 08 15.3
comp=Z,1μm,0.6s
PAMC Pamplona, Colo 4.36 26 *eP* **Pn 02 07 04.8 +2.7**
PAMC *eS* Sn 02 08 14.2 +22
PAMC *i* 02 08 36.2
comp=Z,930nm,0.6s
TUMC Tumaco 4.41 250 *eP* **Pn 02 07 05.1 +2.7**
TUMC *i* 02 08 34.7
comp=Z,875nm,0.6s
UREC San Jos de Ur 4.44 348 *eP* **Pn 02 07 03.8 +1.0**
UREC *eS* Sn 02 08 12.5 +19
IMBA Imbabura, San 4.75 229 Pn 02 07 09.7 +2.3
CUSE Cuicocha Este 4.88 231 *eP* Pn 02 07 15.2 +5.9
CUSE *eS* Sn 02 08 33.3 +28
CUSE *i* 02 08 41.2
comp=Z,619nm,0.4s
PTAC Punta Ardita, 4.92 320 *eP* **Pn 02 07 12.1 +2.7**
PTAC *eS* Sn 02 08 21.9 +17
PULU Pululahua 5.14 230 Pn 02 07 18.0 +5.2
SLOR San Lorenzo - 5.65 224 Pn 02 07 23.2 +3.3
PIAT Ana Tenorio 5.69 220 *eP* **Pn 02 07 22.6 +2.1**
PIAT *eS* Sn 02 08 54.1 +29
LCBC Los crdobas, 5.71 342 *eP* Pn 02 07 30.2 +10
LL1C La Loma 1 Cana 6.20 10 *eP* Pn 02 07 39.5 +12
LL1C *eS* Sn 02 08 55.3 +19
LL1C *i* 02 09 39.6
comp=Z,1μm,0.7s
PORT Chimborazo Vol 6.38 221 Pn **Pn 02 07 33.4 +3.4**
ARGC Ariguani, Magd 6.44 3 *eP* Pn 02 07 35.4 +5.1
ARGC *eS* Sn 02 09 13.4 +31
LL6C La Loma 6 Bece 6.44 12 *iP* Pn 02 07 12.3 -18
SJCC San Jacinto, C 6.49 355 *eP* **Pn 02 07 30.8 -0.4**
SJCC *eS* Sn 02 09 16.8 +33
SJCC *i* 02 09 30.3
comp=Z,182nm,0.7s
SDV Santo Domingo 6.73 36 Pn **Pn 02 07 34.1 -0.4**
comp=Z,23nm,0.3s,baz=212,slow=14,SNR=70
SDV Sn **Sn 02 08 50.8 +0.7**
comp=Z,79nm,0.3s,baz=270,slow=21,SNR=7.8
SDV Lg Lg 02 09 24.7
comp=Z,54nm,0.3s,baz=311,slow=18,SNR=1.0
comp=Z,56nm,0.3s
SDV Santo Domingo 6.73 36 Pn **Pn 02 07 36.2 +1.7**
SDV Santo Domingo 6.73 36 *eP* **Pn 02 07 36.5 +1.9**
MAPC Malpelo 7.03 275 *eP* **Pn 02 07 39.2 +0.8**
UPA Univ. de Panam 7.42 319 *eP* Pn 02 07 53.7 +10
UPA *eS* Sn 02 09 22.0 +15
COHC Cochancay 7.45 219 Pn 02 07 46.6 +2.4
COHC Cochancay 7.45 219 *eP* Pn 02 07 49.1 +4.9
BOSC San Juan Bosco 7.58 211 Pn 02 07 47.5 +1.4
BCIP Isla Barro Col 7.75 318 Pn **Pn 02 07 49.0 +0.6**
BCIP Isla Barro Col 7.75 318 *eP* **Pn 02 07 50.5 +2.1**
BCIP *eS* Sn 02 09 31.6 +17
CRJC Cerrejon, Guaj 7.77 13 *eP* **Pn 02 07 49.8 +1.1**
CRJC *eS* Sn 02 09 28.3 +13
CRJC *i* 02 09 48.1
comp=Z,180nm,0.4s
SGCB São Gabriel d 8.32 115 *eP* **Pn 02 07 57.0 +0.8**
BAUV El Baul 8.54 49 Pn **Pn 02 07 58.5 -0.6**
URIC Uribia, Colomb 8.65 17 *eP* **Pn 02 08 00.6 -0.1**
URIC *eS* Sn 02 09 51.1 +14
ARNL Arenillas 8.80 219 Pn **Pn 02 08 03.7 +1.0**
TBTG Tabatinga, AM 8.86 148 *eP* **Pn 02 08 03.7 +0.1**
TBTG Tabatinga, AM 8.86 148 *eP* **Pn 02 08 03.5 -0.1**
BRU2 Volcan 9.68 304 Pn **Pn 02 08 14.8 -0.1**
HATO Hato, Curacao 10.37 32 Pn **Pn 02 08 22.8 -1.4**
SRBA San Rafael, Bu 10.47 304 Pn 02 08 26.5 +0.7
ATAH Atahualpa 11.12 200 Pn **Pn 02 08 37.4 +2.5**
comp=Z,1.7nm,0.3s,baz=22,slow=9.8,SNR=37
ATAH Sn **Sn 02 10 42.1 +3.9**
comp=Z,3.5nm,0.3s,baz=66,slow=17,SNR=1.4
ATAH Lg Lg 02 11 50.0
comp=Z,4.9nm,0.3s,baz=78,slow=15,SNR=1.8
ATAH LR LR 02 13 57.6
comp=Z,5μm,18.9s,baz=27,slow=43
comp=Z,57nm,0.8s
RIMA Rio Macho 11.18 305 Pn **Pn 02 08 37.9 +2.4**
CZSB Cruzeiro do Su 11.20 170 *eP* **Pn 02 08 34.2 -1.5**
HDC Heredia 11.51 305 *eP* **Pn 02 08 43.5 +3.4**
PCRV Puerto La Cruz 11.96 55 Pn **Pn 02 08 43.5 -2.6**
comp=Z,3.3nm,0.3s,baz=227,slow=11,SNR=21
PCRV Sn **Sn 02 10 55.0 -3.4**
comp=Z,7.3nm,0.3s,baz=180,slow=20,SNR=1.7
PCRV Lg Lg 02 12 08.2
comp=Z,6.6nm,0.3s,baz=4.7,slow=21,SNR=3.8
PCRV LR LR 02 14 23.2
comp=Z,3μm,18.2s,slow=43
comp=Z,10nm,0.4s
JTS Las Juntas de 12.36 304 Pn **Pn 02 08 50.7 -0.8**
comp=Z,0.4nm,0.3s,baz=191,slow=5.2,SNR=1.3
JTS LR LR 02 14 22.8
comp=Z,323nm,19.8s,baz=188,slow=41
comp=Z,1.2nm,0.4s
JTS Las Juntas de 12.36 304 Pn **Pn 02 08 53.9 +2.4**
ESPN Las Esperanzas 13.00 313 Pn **Pn 02 09 02.5 +2.2**
ACON Acoyapa 13.51 310 Pn **Pn 02 09 08.9 +1.7**
BOAV Boa Vista 14.09 94 *eP* **Pn 02 09 11.9 -3.2**
BOAB BOACO BROADBAN 14.18 310 Pn **Pn 02 09 17.4 +1.0**
MATN Matagalpa 14.68 311 P **P 02 09 30.6 +1.7**
MTDJ Mount Denham 15.03 349 Pn **Pn 02 09 29.5 +1.7**
MACA Manacapuru-AM 15.35 115 *eP* **Pn 02 09 28.9 -3.1**
NNA Nana 15.44 188 Pn **Pn 02 09 34.9 +1.7**
comp=Z,0.6nm,0.3s,baz=25,slow=14,SNR=6.4
NNA Sn **Sn 02 12 22.0 -1.2**
baz=246,slow=18
NNA LR LR 02 16 59.5
comp=Z,2μm,18.2s,baz=350,slow=43
comp=Z,21nm,0.9s
NNA Nana 15.44 188 Pn **Pn 02 09 33.3 +0.1**
NNA IAmb IAmb 02 09 36.0
comp=Z,159nm,1.9s
NNA Nana 15.44 188 *eP* **Pn 02 09 34.6 +1.5**
NNA *eS* **S 02 12 32.0 -6.0**
GRGR Grenville 15.48 55 *eP* **Pn 02 09 29.9 -3.8**
BANI BANI 15.48 15 Pn **Pn 02 09 29.0 -4.8**
ETMB Extrema 15.55 148 *eP* **Pn 02 09 31.7 -2.8**
SDDR Presa de Saban 15.83 12 Pn **Pn 02 09 37.8 -0.5**
SDDR Presa de Saban 15.83 12 *eP* **P 02 09 40.1 -1.5**
SDDR *eS* **S 02 12 43.1 -3.0**
GCMP Grenada, Carri 15.86 55 *eP* **P 02 09 42.9 +1.0**
TOSP Speyside 16.00 60 Pn **Pn 02 09 38.4 -1.9**
MLPR Magueyes Islan 16.27 27 Pn **Pn 02 09 43.3 -0.5**
CRPR Cabo Rojo, PR 16.27 26 Pn **Pn 02 09 42.2 -1.6**
PRSN Puerto Rico Se 16.45 26 Pn 02 09 46.1 +0.1
GTBY Guantanamo Bay 16.45 358 Pn **Pn 02 09 46.2 +0.2**
GTBY IAmb IAmb 02 09 54.7
comp=Z,171nm,1.9s
SJG San Juan 16.81 29 Pn **Pn 02 09 48.5 -2.1**
comp=Z,0.9nm,0.3s,baz=211,slow=9.6,SNR=21
SJG Sn **Sn 02 12 46.3 -10**
comp=Z,0.5nm,0.3s,baz=6.0,slow=19,SNR=1.6
SJG LR LR 02 18 01.4
comp=Z,835nm,18.7s,baz=204,slow=43
comp=Z,33nm,0.9s
SJG San Juan 16.81 29 Pn 02 09 48.8 -1.8
CBYP Canovanas 17.09 29 Pn **Pn 02 09 52.7 -1.5**
SLBI Saint Lucia, B 17.10 51 *eP* **Pn 02 09 50.7 -3.5**
BIM Bigot 17.32 49 Pn 02 09 56.3 -0.8
BIM Bigot 17.32 49 *eP* **Pn 02 09 55.4 -1.8**
FDF Fort de France 17.40 49 *eP* **Pn 02 09 56.5 -1.5**
MPOM Morne Pois Mar 17.44 50 *eP* **P 02 10 05.0 +5.6**
CBE Ff, Capester 17.94 45 *eP* P 02 10 18.3 +13
MAGL Barre de l'ile 18.09 45 *eP* **Pn 02 10 01.1 -5.4**
ABD La Joyeuse, An 18.30 44 *eP* **Pn 02 10 11.8 +2.7**
SMRT St. Maarten 18.43 37 *eP* P 02 10 00.0 -10
ANBD Bethesda, Anti 18.52 42 *eP* **Pn 02 10 12.9 +1.2**
ANWB Willy Bob 18.95 41 *eP* **P 02 10 15.2 -0.8**
PETF Flores 20.14 313 P **P 02 10 29.1 0.0**

ITTB Itaituba 20.36 112 *eP* Pn 02 10 33.2 -0.4
LPAZ La Paz 20.57 162 P **P 02 10 34.0 -0.3**
comp=Z,10nm,0.8s,baz=338,slow=15,SNR=21
LPAZ Lg Lg 02 16 45.6
comp=Z,0.8nm,0.3s,baz=163,slow=17,SNR=3.6
LPAZ LR LR 02 19 03.3
comp=Z,1μm,19.3s,baz=318,slow=38
comp=Z,10nm,0.8s
LPAZ La Paz 20.57 162 P **P 02 10 33.2 -1.0**
LPAZ La Paz 20.57 162 *eP* **P 02 10 33.3 -1.0**
MALB Monte Alegre 20.97 104 *eP* **P 02 10 39.3 +1.2**
VILB Vilhena 21.63 139 *eP* **P 02 10 46.0 +0.9**
NPGB Novo Progresso 21.82 118 *eP* **P 02 10 48.1 +0.9**
MDP Montagnes des 21.96 85 P **P 02 10 50.1 +1.4**
comp=Z,31nm,0.8s,baz=259,slow=8.4,SNR=9.3
MDP S **S 02 14 44.8 -4.4**
comp=Z,57nm,1.0s,baz=153,slow=18,SNR=5.7
MDP Lg Lg 02 17 26.7
comp=Z,2.3nm,0.3s,baz=355,slow=23,SNR=7.2
MDP LR LR 02 19 23.1
comp=Z,2μm,20.7s,baz=263,slow=37
PB16 IPOC Station P 22.16 167 P **P 02 10 49.4 -1.9**
PB12 IPOC Station P 22.26 169 P **P 02 10 49.7 -2.3**
MCPB Macapa, AP 22.83 99 *eP* **P 02 10 59.0 +1.0**
PDRB Porto dos Gac 23.19 130 *eP* **P 02 11 02.8 +1.2**
SIV San Ignacio 23.44 146 P **P 02 11 05.7 +1.6**
comp=Z,106nm,0.8s,baz=320,slow=10.0,SNR=346
SIV S **S 02 15 14.6 -0.5**
comp=Z,4.9nm,0.7s,baz=270,slow=17,SNR=1.3
SIV Lg Lg 02 18 15.4
comp=Z,0.7nm,0.3s,baz=250,slow=20,SNR=7.2
SIV LR LR 02 20 15.4
comp=Z,1μm,18.8s,baz=309,slow=37
CLDB Colider 23.46 127 *eP* **P 02 11 05.0 +0.7**
TA02 Huaiquique 23.91 170 IAmb IAmb 02 11 38.4
comp=Z,37nm,1.0s
CMIG Matias Romero 24.13 306 P **P 02 11 11.7 +1.1**
comp=Z,1.2nm,0.5s,baz=125,slow=12,SNR=2.1
comp=Z,1.2nm,0.5s
PTLB Pontes e Lacer 24.17 141 *eP* **P 02 11 12.4 +1.5**
PATCX Punta Patache 24.45 170 IAmb IAmb 02 11 15.7
comp=Z,60nm,1.2s
PB02 IPOC Station P 24.98 170 IAmb IAmb 02 11 51.5
comp=Z,41nm,0.9s
PB07 IPOC Station P 25.38 170 IAmb IAmb 02 11 44.0
comp=Z,54nm,1.3s
DWPF Disney Wildern 25.44 346 P **P 02 11 24.0 +1.6**
baz=164
DWPF Disney Wildern 25.44 346 P **P 02 11 23.9 +1.6**
baz=164
PB03 IPOC Station P 25.72 170 IAmb IAmb 02 11 27.1
comp=Z,32nm,1.0s
PB04 IPOC Station P 25.93 171 P **P 02 11 25.4 -1.6**
PB04 IAmb IAmb 02 11 57.0
comp=Z,48nm,1.0s
BBRB Robore, Bolivi 25.99 146 *eP* **P 02 11 28.4 +0.9**
LVC Limon Verde 26.43 168 P **P 02 11 32.3 +0.6**
comp=Z,9.8nm,0.9s,baz=4.3,slow=5.9,SNR=8.6
LVC LR LR 02 22 48.8
comp=Z,397nm,21.1s,baz=308,slow=38
comp=Z,9.8nm,0.9s
LVC Limon Verde 26.43 168 P **P 02 11 30.4 -1.3**
LVC IAmb IAmb 02 12 04.8
comp=Z,95nm,2.0s
LVC Limon Verde 26.43 168 *eP* **P 02 11 31.9 +0.1**
PRPB Parauapebas 26.50 111 *eP* **P 02 11 33.7 +1.5**
SALV Santo Antonio 26.77 136 *eP* **P 02 11 35.5 +1.0**
TMAB Tom-Au,PA,Br 27.09 102 *eP* **P 02 11 39.3 +1.8**
SNDB Serra Nova Dou 27.74 124 *eP* **P 02 11 44.3 +1.0**
TIGA Tifton 29.16 344 P **P 02 11 57.3 +1.6**
baz=161
ARAG Araguaiana, MT 29.46 131 *eP* **P 02 11 59.1 +0.6**
SMTB Santa Maria do 29.54 114 *eP* **P 02 12 00.8 +1.5**
352A Blakely 29.59 342 P **P 02 12 01.4 +1.9**
baz=159
MURT Porto Murtinho 29.93 147 *eP* **P 02 12 02.9 +0.2**
NHSC New Hope 30.03 351 P **P 02 12 04.6 +1.3**
baz=169
BRAL Brewton 30.03 338 P **P 02 12 05.1 +1.7**
baz=154
AQDB Aquidauana 30.10 143 P **P 02 12 04.5 +0.4**
AQDB IAmb IAmb 02 12 06.5
comp=Z,36nm,0.9s
AQDB Aquidauana 30.10 143 *eP* **P 02 12 05.3 +1.1**
154A Montrose 30.15 346 P **P 02 12 06.8 +2.4**
baz=163,SNR=7.4
HAW Hawthorne Fire 30.53 348 P **P 02 12 09.4 +1.6**
baz=166,SNR=7.1
152A Waverly Hall 30.64 343 P 02 12 08.0 -0.8
152A IAmb IAmb 02 12 22.1
comp=Z,63nm,1.5s
152A Waverly Hall 30.64 343 P **P 02 12 10.7 +2.0**
baz=160,SNR=6.0
C2SB Chapadao do Su 30.71 137 *eP* **P 02 12 11.1 +1.5**
Y57A Sumter 30.95 351 P **P 02 12 10.8 -0.7**
Y57A pP **pP 02 12 23.1 +0.2**
Y57A IAmb IAmb 02 12 24.9
comp=Z,49nm,1.1s
GOGA Godfrey 31.00 345 P **P 02 12 13.8 +1.8**
baz=162,SNR=6.2
GOGA Godfrey 31.00 345 P **P 02 12 13.3 +1.4**
baz=162,SNR=6.2
ROSB Rosrio 31.09 101 *eP* **P 02 12 13.9 +1.0**
ANTJ Antonio Joao (31.10 145 *eP* **P 02 12 13.3 +0.3**
RPRD Ribas do Rio P 31.35 140 *eP* **P 02 12 16.3 +1.1**
JSC Jenkinsville 31.36 349 P **P 02 12 17.6 +2.5**
baz=167,SNR=12
Z51A Franklin 31.38 343 P **P 02 12 15.6 +0.3**
Z51A pP **pP 02 12 27.3 +0.8**
Z51A IAmb IAmb 02 12 33.5
comp=Z,19nm,0.8s
Z51A Franklin 31.38 343 P **P 02 12 17.6 +2.3**
baz=159
HODGE Hodges 31.51 348 P **P 02 12 18.7 +2.2**
baz=165,SNR=9.4
BIRD Birdtown, Kers 31.58 351 P **P 02 12 16.2 -0.8**
BIRD pP **pP 02 12 28.8 +0.3**
BIRD IAmb IAmb 02 12 30.3
comp=Z,42nm,1.1s
BIRD Birdtown, Kers 31.58 351 P **P 02 12 18.1 +1.1**
baz=169,SNR=8.5
Y52A Lilburn 31.58 345 P **P 02 12 18.5 +1.4**
baz=162,SNR=5.6
Y52A P **P 02 12 18.5 +1.4**
baz=162,SNR=5.6
LRAL Lakeview Retre 31.70 340 P **P 02 12 18.2 +0.1**
LRAL IAmb IAmb 02 12 36.6
comp=Z,14nm,0.8s
LRAL Lakeview Retre 31.70 340 P **P 02 12 19.9 +1.8**
baz=156,SNR=5.5
LRAL Lakeview Retre 31.70 340 P **P 02 12 19.4 +1.3**
baz=156,SNR=5.5
KMSC Kings Mountain 32.21 350 P **P 02 12 24.0 +1.4**
baz=167,SNR=8.1
Z47A Carrollton 32.23 339 P **P 02 12 24.5 +1.8**
baz=154,SNR=6.6
Y49A Blount Mountai 32.26 341 P **P 02 12 24.9 +1.9**
baz=157
AC05 El Transito 32.30 173 P **P 02 12 23.6 -0.1**
AC05 IAmb IAmb 02 13 02.3
comp=Z,23nm,1.1s
CASEE Lake Jocassee 32.39 347 P **P 02 12 25.8 +1.6**
baz=164,SNR=10.0
BDFB Brasilia 32.39 126 P **P 02 12 26.1 +1.5**
comp=Z,31nm,0.9s,baz=292,slow=10,SNR=35
BDFB LR LR 02 26 08.5
comp=Z,2μm,19.3s,baz=305,slow=38
BDFB Brasilia 32.39 126 P **P 02 12 25.7 +1.2**
BDFB Brasilia 32.39 126 *eP* **P 02 12 26.0 +1.5**
LCO Las Campanas 32.43 174 P **P 02 12 24.7 -0.2**
LCO Las Campanas 32.43 174 P **P 02 12 26.4 +1.5**
V58A Windy Hill, Pi 32.52 353 P **P 02 12 26.4 +1.1**
baz=171,SNR=6.2
V58A P **P 02 12 26.4 +1.1**
baz=171,SNR=6.2
W52A Murphy 32.72 346 P **P 02 12 28.2 +1.1**
baz=162,SNR=7.2
V55A Taylorsville 32.88 350 P **P 02 12 30.5 +2.1**
baz=168,SNR=10
V55A P **P 02 12 30.5 +2.1**
baz=168,SNR=10
X48A Hartselle 33.01 341 P **P 02 12 29.8 +0.2**
X48A pP **pP 02 12 41.4 +0.6**
X48A IAmb IAmb 02 12 49.0
comp=Z,22nm,1.1s
X48A Hartselle 33.01 341 P **P 02 12 30.8 +1.2**
baz=157
V53A Saluda 33.01 348 IAmb IAmb 02 12 43.2
comp=Z,28nm,0.9s
V53A Saluda 33.01 348 P **P 02 12 31.4 +1.7**
baz=165,SNR=9.1
V53A P **P 02 12 31.4 +1.7**
baz=165,SNR=9.1
ITRB Iturama 33.07 135 *eP* **P 02 12 31.7 +1.3**
W50A Signal Mountai 33.18 344 P **P 02 12 32.8 +1.6**
baz=160,SNR=6.3
TKL Tuckaleechee C 33.22 346 P **P 02 12 33.4 +1.9**
baz=163,SNR=5.5
U56A King 33.23 351 P **P 02 12 34.7 +3.2**
baz=169,SNR=6.1
U56A P **P 02 12 34.7 +3.2**
baz=169,SNR=6.1
V52A Sevierville 33.35 347 P **P 02 12 33.6 +1.0**
V52A IAmb IAmb 02 12 45.9
comp=Z,33nm,1.0s
V52A Sevierville 33.35 347 P **P 02 12 34.1 +1.5**
baz=163,SNR=7.9
SWET Sewanee 33.37 343 P **P 02 12 33.2 +0.4**
SWET pP **pP 02 12 44.0 -0.1**
SWET IAmb IAmb 02 12 46.7
comp=Z,33nm,1.2s
Y45A Yeager Farm, C 33.38 337 P **P 02 12 34.3 +1.5**
baz=152
SDBA SAO DESIDERIO 33.41 119 *eP* **P 02 12 34.5 +1.1**
V51A Loudon 33.50 346 P **P 02 12 34.4 +0.6**
V51A Loudon 33.50 346 P **P 02 12 36.2 +2.4**
baz=162,SNR=7.6
T59A Double "B" Far 33.53 356 P **P 02 12 35.7 +1.6**
baz=174,SNR=8.6
T59A P **P 02 12 35.7 +1.6**
baz=174,SNR=8.6
IPMB Ipameri, GO 33.58 130 *eP* **P 02 12 35.7 +0.9**
U54A Nelsons Funny 33.64 349 P **P 02 12 37.5 +2.4**
baz=167,SNR=13
U54A P **P 02 12 37.5 +2.4**
baz=167,SNR=13
TRCB Terra Rica 33.72 142 *eP* **P 02 12 37.2 +1.2**
T57A Hurt 33.72 353 P **P 02 12 35.4 -0.4**
T57A IAmb IAmb 02 12 48.7
comp=Z,35nm,1.1s
T57A Hurt 33.72 353 P **P 02 12 36.5 +0.7**
baz=172,SNR=8.9
T57A P **P 02 12 36.5 +0.7**
baz=172,SNR=8.9
PCMB Pacaembu 33.74 138 *eP* **P 02 12 36.8 +0.7**
PLAL Pickwick Lake 33.84 340 IAmb IAmb 02 12 55.8
comp=Z,20nm,1.1s
CPUP Villa Florida 33.94 152 P **P 02 12 36.4 -1.4**
comp=Z,2.7nm,0.9s,baz=321,slow=11,SNR=4.2
CPUP LR LR 02 27 40.8
comp=Z,569nm,18.0s,baz=340,slow=38
comp=Z,2.7nm,0.9s
CPUP Villa Florida 33.94 152 *eP* **P 02 12 36.4 -1.4**
TZTN Tazewell 34.01 347 P **P 02 12 40.4 +2.1**
baz=164,SNR=6.2
TZTN Tazewell 34.01 347 P **P 02 12 40.0 +1.6**
baz=164,SNR=6.2
BLA Blacksburg 34.09 352 P **P 02 12 41.1 +2.1**
baz=170,SNR=8.6
BLA Blacksburg 34.09 352 P **P 02 12 40.5 +1.5**
baz=170,SNR=8.6
V48A Smith Brothers 34.12 342 P **P 02 12 40.8 +1.5**
baz=158,SNR=18
MCR1 Marechal Candi 34.14 145 *eP* **P 02 12 39.6 0.0**
833A Chaparral WMA, 34.25 319 P **P 02 12 41.1 +0.6**
baz=132
W45A Hickory Valley 34.39 339 P **P 02 12 42.3 +0.7**
baz=154
S57A Dark Hollow, R 34.44 354 P **P 02 12 43.5 +1.5**
S57A pP **pP 02 12 53.6 +0.1**
S57A IAmb IAmb 02 12 55.2
comp=Z,26nm,0.9s
S57A Dark Hollow, R 34.44 354 P **P 02 12 44.0 +2.0**
baz=172,SNR=7.4
S57A P **P 02 12 44.0 +2.0**
baz=172,SNR=7.4
U49A Red Boiling Sp 34.54 344 P **P 02 12 43.6 +0.7**
baz=160,SNR=6.3
T50A Nancy 34.77 346 P **P 02 12 46.6 +1.7**
baz=162
T50A P **P 02 12 46.6 +1.7**
baz=162
S54A Dingess, Beckl 34.80 351 P **P 02 12 46.9 +1.8**
baz=168,SNR=9.7
S54A P **P 02 12 46.9 +1.8**
baz=168,SNR=9.7
WVT Waverly 34.80 341 P **P 02 12 44.4 -0.8**
WVT pP **pP 02 12 55.3 -1.1**
WVT IAmb IAmb 02 13 04.2
comp=Z,21nm,0.8s
WVT Waverly 34.80 341 P **P 02 12 45.8 +0.7**
baz=156,SNR=8.5
WVT Waverly 34.80 341 P **P 02 12 46.6 +1.4**
baz=156
WVT Waverly 34.80 341 P **P 02 12 45.0 -0.2**
WVT pP **pP 02 12 56.2 -0.1**
435B Jarrell 34.84 324 P **P 02 12 45.9 +0.4**
baz=137
S51A Beattyville 35.08 348 P **P 02 12 49.4 +1.9**
baz=164,SNR=7.6
S51A P **P 02 12 49.4 +1.9**
baz=164,SNR=7.6
R55A Marlinton 35.10 352 P **P 02 12 48.8 +1.1**
baz=170,SNR=8.7
R55A P **P 02 12 48.8 +1.1**
baz=170,SNR=8.7
JANB Januaria 35.15 122 *eP* **P 02 12 49.3 +0.9**
ZON Zonda 35.19 171 P **P 02 12 48.5 -0.2**
ZON IAmb IAmb 02 13 12.3
comp=Z,20nm,0.9s
BB19B Bebedouro 35.26 135 *eP* **P 02 12 50.1 +0.8**
PMNB Patos De Minas 35.26 129 *eP* **P 02 12 50.2 +0.8**
T47A Sharon Grove 35.37 343 P **P 02 12 51.0 +1.0**
baz=158,SNR=5.3
R53A Hurricane 35.42 350 P **P 02 12 51.7 +1.2**
baz=167
R53A P **P 02 12 51.7 +1.2**
baz=167
PTGB Pitanga 35.49 143 *eP* **P 02 12 51.0 -0.3**
WHTX Lake Whitney, 35.66 326 P **P 02 12 53.8 +1.3**
baz=138
MIAR Mount Ida 35.68 333 P **P 02 12 53.7 +1.0**
baz=146
Q56A Snyder Ridge, 35.73 354 P **P 02 12 55.9 +2.7**
baz=172,SNR=8.6
Q56A P **P 02 12 55.9 +2.7**
baz=172,SNR=8.6
R50A Paris 35.85 347 P **P 02 12 56.3 +2.1**
baz=163,SNR=8.5
R50A P **P 02 12 56.3 +2.1**
baz=163,SNR=8.5
FRBT Francisco Belt 35.87 146 *eP* **P 02 12 54.1 -0.4**
T45A Paducah 35.88 341 P **P 02 12 54.2 -0.2**
T45A pP **pP 02 13 05.1 -0.6**
Q54A Coxs Mills 35.88 352 P **P 02 12 56.4 +2.0**
baz=169,SNR=7.5
Q54A P **P 02 12 56.4 +2.0**
baz=169,SNR=7.5
JCT Junction City 35.97 321 P **P 02 12 56.7 +1.4**
baz=134
AZCA Azaras, Argent 36.05 151 *eP* **P 02 12 55.1 -0.9**
R49A Shelbyville 36.06 346 P **P 02 12 57.0 +1.1**
baz=162,SNR=6.2
R49A P **P 02 12 57.0 +1.1**
baz=162,SNR=6.2
P57A Homestead Farm 36.06 356 P **P 02 12 58.1 +2.2**
baz=174,SNR=7.5
P57A P **P 02 12 58.1 +2.2**
baz=174,SNR=7.5
FRTB Fartura 36.08 139 *eP* **P 02 12 56.6 +0.3**
Q52A Bidwell 36.09 350 P **P 02 12 58.4 +2.1**
baz=167,SNR=7.3
Q52A P **P 02 12 58.4 +2.1**
baz=167,SNR=7.3
MC01 Montes Claros 36.27 124 *eP* **P 02 12 59.6 +1.5**
WCI Wyandotte Cave 36.29 344 P **P 02 12 58.8 +0.9**
WCI pP **pP 02 13 08.3 -1.2**
WCI Wyandotte Cave 36.29 344 P **P 02 12 59.2 +1.3**
baz=160,SNR=5.5
WCI Wyandotte Cave 36.29 344 P **P 02 12 59.2 +1.3**
baz=160
WCI Wyandotte Cave 36.29 344 P **P 02 12 59.1 +1.2**
WCI pP **pP 02 13 09.4 -0.1**

WCI			sP	sP	02 13 13.7 +0.3
Q51A	Peebles	36.36 348	P	P	02 12 59.5 +1.0
	baz=165,SNR=8.3				
Q51A			P	P	02 12 59.5 +1.0
	baz=165,SNR=8.3				
MCWV	Mont Chateau	36.42 353	P	P	02 13 00.1 +1.2
	baz=171				
P53A	Whipple	36.46 351	P	P	02 13 01.6 +2.3
	baz=188,SNR=11				
P53A			P	P	02 13 01.6 +2.3
	baz=168,SNR=11				
CRSM	Crissiumal (Br	36.54 148	eP	P	02 12 59.4 -0.8
X37A	Clayton	36.56 331	IAmb	IAmb	02 13 11.9
	comp=Z,12nm,0.8s				
S44A	Carbondale	36.69 340	IAmb	IAmb	02 13 19.9
	comp=Z,32nm,0.9s				
P52A	Corning	36.73 350	P	P	02 13 02.9 +1.3
	baz=167,SNR=8.9				
P51A	Williamsport	36.74 349	P	P	02 13 03.9 +2.2
	baz=166,SNR=9.2				
P51A			P	P	02 13 03.9 +2.2
	baz=166,SNR=9.2				
T42A	Van Buren	36.76 338	P	P	02 13 01.8 -0.1
	baz=152				
RCLB	Rio Claro- Sao	36.84 135	eP	P	02 13 03.5 +0.7
O54A	Avella	37.00 353	P	P	02 13 05.1 +1.2
	baz=170,SNR=5.1				
O54A			P	P	02 13 05.1 +1.2
	baz=170,SNR=5.1				
ITQB	Itaqui	37.10 154	IAmb	IAmb	02 13 05.2
	comp=Z,20nm,1.0s				
ITQB	Itaqui	37.10 154	eP	P	02 13 04.2 -0.7
MT09	Talagante	37.12 175	IAmb	IAmb	02 13 30.7
	comp=Z,29nm,1.0s				
P49A	Miami Univ. Ec	37.14 347	P	P	02 13 05.3 +0.2
	baz=163,SNR=6.1				
P49A	Miami Univ. Ec	37.14 347	P	P	02 13 06.0 +0.9
	baz=163,SNR=6.1				
O53A	New Philadelph	37.18 352	P	P	02 13 06.6 +1.2
	baz=169,SNR=8.0				
SSPA	Standing Stone	37.20 356	P	P	02 13 07.8 +2.2
	baz=174,SNR=8.6				
SSPA	Standing Stone	37.20 356	P	P	02 13 07.0 +1.4
	baz=174				
SSPA	Standing Stone	37.20 356	P	P	02 13 07.3 +1.7
SSPA			pP	pP	02 13 18.5 +1.4
SSPA			sP	sP	02 13 22.8 +1.3
P48A	Milroy	37.23 346	P	P	02 13 05.9 0.0
	baz=162,SNR=7.7				
P48A			P	P	02 13 05.9 0.0
	baz=162,SNR=7.7				
UPAO	U. Pittsburgh	37.25 353	P	P	02 13 05.5 -0.5
	baz=171				
HHAR	Hobbs	37.28 334	IAmb	IAmb	02 13 22.4
	comp=Z,16nm,0.9s				
HHAR	Hobbs	37.28 334	P	P	02 13 05.9 -0.5
	baz=147				
UNIS	Unistalda (Bra	37.31 151	eP	P	02 13 05.7 -1.0
FVM	French Village	37.36 339	P	P	02 13 07.5 +0.5
	baz=153,SNR=6.2				
ITAB	Concordia	37.37 146	eP	P	02 13 06.8 -0.5
ABTX	Abilene, Hawle	37.38 324	P	P	02 13 07.4 +0.1
ABTX			pP	pP	02 13 17.9 -0.9
ABTX			IAmb	IAmb	02 13 19.0
	comp=Z,25nm,0.8s				
ABTX	Abilene, Hawle	37.38 324	P	P	02 13 07.7 +0.4
	baz=136,SNR=5.6				
ABTX	Abilene, Hawle	37.38 324	P	P	02 13 07.7 +0.4
	baz=136,SNR=5.6				
ACSO	Alum Creek Sta	37.46 349	P	P	02 13 09.7 +1.9
	baz=166,SNR=7.9				
ACSO	Alum Creek Sta	37.46 349	P	P	02 13 09.2 +1.4
	baz=166,SNR=7.9				
VAO	Valinhos	37.61 136	eP	P	02 13 10.1 +0.7
U38A	Gravette	37.61 333	IAmb	IAmb	02 13 19.9
	comp=Z,14nm,0.8s				
U38A	Gravette	37.61 333	P	P	02 13 08.5 -0.7
	baz=146,SNR=5.8				
O49A	Covington	37.68 348	P	P	02 13 11.3 +1.6
	baz=164,SNR=6.6				
O49A			P	P	02 13 11.3 +1.6
	baz=164,SNR=6.6				
Q44A	Meyer Farm, Va	37.72 341	P	P	02 13 10.6 +0.6
	baz=156				
CCM	Cathedral Cave	37.72 338	P	P	02 13 09.1 -1.0
CCM			pP	pP	02 13 19.6 -1.8
CCM			IAmb	IAmb	02 13 22.2
	comp=Z,26nm,1.1s				
CCM	Cathedral Cave	37.72 338	P	P	02 13 09.9 -0.1
	baz=152,SNR=6.4				
CCM	Cathedral Cave	37.72 338	P	P	02 13 10.2 +0.2
	baz=152				
CCM	Cathedral Cave	37.72 338	P	P	02 13 09.3 -0.7
CCM			pP	pP	02 13 20.6 -0.8
CCM			sP	sP	02 13 26.0 +0.4
TXAR	Lajitas Array	37.77 316	P	P	02 13 10.8 +0.1
	comp=Z,1.4nm,0.8s,baz=133,slow=10.0,SNR=16				
	comp=Z,1.4nm,0.8s				
TX31	Lajitas Ar. Si	37.77 316	P	P	02 13 10.8 0.0
TX31			IAmb	IAmb	02 13 26.4
	comp=Z,19nm,1.1s				
TX31	Lajitas Ar. Si	37.77 316	P	P	02 13 11.7 +0.9
	baz=128				
TIJ01	Guaruva-PR	37.83 140	eP	P	02 13 11.9 +0.7
X34A	Smith Ranch, M	37.83 328	P	P	02 13 10.7 -0.3
X34A			pP	pP	02 13 21.1 -1.4
X34A			IAmb	IAmb	02 13 27.9
	comp=Z,24nm,0.9s				
TUL1	Leonard	37.83 331	P	P	02 13 10.6 -0.4
	baz=144				
TUL1	Leonard	37.83 331	P	P	02 13 11.1 +0.1
	baz=144				
P46A	Rosedale	37.84 344	P	P	02 13 10.9 -0.1
M57A	Sunshine Farm,	37.85 357	P	P	02 13 13.3 +2.2
	baz=176,SNR=9.2				
M57A			P	P	02 13 13.3 +2.2
	baz=176,SNR=9.2				
O48B	Farmland	37.93 347	P	P	02 13 13.0 +1.2
	baz=163,SNR=5.2				
O48B	Farmland	37.93 347	P	P	02 13 12.7 +1.0
	baz=163,SNR=5.2				
BSCB	Bom Sucesso	37.97 131	eP	P	02 13 11.5 -0.9
N51A	Ashland	38.02 350	P	P	02 13 14.4 +1.9
	baz=167,SNR=5.3				
N51A			P	P	02 13 14.4 +1.9
	baz=167,SNR=5.3				
ALGR	Alto Alegre (B	38.12 148	eP	P	02 13 11.9 -1.7
S39A	Bolivar	38.21 336	IAmb	IAmb	02 13 26.3
	comp=Z,20nm,1.0s				
R40A	Maddies Statio	38.31 337	P	P	02 13 14.8 -0.2
	baz=151				
RODS	Rosario do Sul	38.33 152	eP	P	02 13 14.8 -0.4
OK034	N. Norfolk Rd.	38.36 331	IAmb	IAmb	02 13 26.5
	comp=Z,23nm,0.7s				
OK031	S. Brethren Rd	38.37 330	IAmb	IAmb	02 13 31.6
	comp=Z,18nm,0.7s				
WMOK	Wichita Mounta	38.44 327	P	P	02 13 15.3 -1.0
WMOK			pP	pP	02 13 26.1 -1.5
WMOK	Wichita Mounta	38.44 327	P	P	02 13 15.8 -0.4
	baz=139,SNR=6.5				
WMOK	Wichita Mounta	38.44 327	P	P	02 13 16.1 -0.1
	baz=139,SNR=6.5				
SFIN	Lafayette	38.52 345	P	P	02 13 15.9 -0.9
	baz=160				
SFIN	Lafayette	38.52 345	P	P	02 13 16.3 -0.5
	baz=160				
P43A	Skaggs, Pawnee	38.55 341	P	P	02 13 17.5 +0.5
	baz=156,SNR=5.3				
N47A	Urbana	38.65 346	P	P	02 13 17.5 -0.3
	baz=162,SNR=5.5				
N47A			P	P	02 13 17.5 -0.3
	baz=162,SNR=5.5				
BINY	Binghamton	38.66 358	P	P	02 13 21.3 +3.3
	baz=178,SNR=6.2				
BINY	Binghamton	38.66 358	P	P	02 13 19.8 +1.8
	baz=178,SNR=6.2				
GDU01	Guandu, BA	38.67 117	eP	P	02 13 19.5 +1.1
OK044	Pawnee Station	38.69 331	IAmb	IAmb	02 13 34.5
	comp=Z,22nm,0.8s				
O44A	Mansfield	38.69 343	P	P	02 13 18.1 -0.1
	baz=157				
OK046	Pawnee Station	38.76 331	IAmb	IAmb	02 13 35.2
	comp=Z,23nm,1.0s				
OK048	Pawnee Station	38.79 331	IAmb	IAmb	02 13 35.5
	comp=Z,28nm,1.2s				
OK050	Pawnee Station	38.79 331	IAmb	IAmb	02 13 35.5
	comp=Z,24nm,1.1s				
OK045	Pawnee Station	38.81 331	IAmb	IAmb	02 13 38.7
	comp=Z,23nm,1.0s				
OK051	E0350 and S346	38.81 331	IAmb	IAmb	02 13 39.9
	comp=Z,26nm,0.9s				
OK049	E0420 Rd and N	38.96 330	IAmb	IAmb	02 13 31.7
	comp=Z,24nm,0.7s				
T35A	Sooner Cattle	38.98 332	IAmb	IAmb	02 13 36.9
	comp=Z,19nm,0.9s				
CPSB	Cacapava Do Su	39.21 150	eP	P	02 13 21.0 -1.7
HDIL	Hopedale	39.31 342	P	P	02 13 23.3 -0.1
	baz=156				
HDIL	Hopedale	39.31 342	P	P	02 13 23.6 +0.2
	baz=156				
P40A	Paris	39.31 339	IAmb	IAmb	02 13 35.8
	comp=Z,22nm,1.1s				
P40A	Paris	39.31 339	P	P	02 13 23.2 -0.2
	baz=152				
CMC01	Camacan, BA	39.40 119	eP	P	02 13 25.6 +1.2
SJMB	Sao Joao De Ma	39.54 125	eP	P	02 13 26.6 +0.9
SLBS	Sierra La Lagu	39.66 304	P	P	02 13 27.2 +0.5
SLBS	Sierra La Lagu	39.66 304	P	P	02 13 28.2 +1.5
SLBS			pP	sP	02 13 40.1 -2.1
MAN01	Angra dos Reis	39.68 133	eP	P	02 13 28.0 +1.3
GUA01	Guaratinga, BA	39.69 121	eP	P	02 13 28.3 +1.4
RCBR	Riachuelo	39.71 103	LR	LR	02 30 35.6
	comp=Z,748nm,19.4s,baz=76,slow=37				
RCBR	Riachuelo	39.71 103	eP	P	02 13 28.4 +1.2
VAS01	Vassouras-RJ	39.72 131	eP	P	02 13 27.5 +0.5
U32A	Winter Ranch,	39.80 329	P	P	02 13 26.5 -1.1
U32A			pP	pP	02 13 37.5 -1.6
U32A			IAmb	IAmb	02 13 40.3
	comp=Z,29nm,0.8s				
K50A	Casco	39.87 351	P	P	02 13 30.2 +2.2
	baz=167,SNR=5.6				
K50A			P	P	02 13 30.2 +2.2
	baz=167,SNR=5.6				
J57A	Williamstown	39.87 358	P	P	02 13 28.4 +0.4
	baz=178,SNR=6.7				
J57A			P	P	02 13 28.4 +0.4
	baz=178,SNR=6.7				
P38A	Dawn	39.96 337	P	P	02 13 28.3 -0.4
	baz=150				
LPIG	La Paz	40.14 304	LR	LR	02 30 28.4
	comp=Z,98nm,19.7s,baz=123,slow=37				
AMTX	Amarillo	40.18 325	IAmb	IAmb	02 13 42.5
	comp=Z,18nm,0.8s				
AMTX	Amarillo	40.18 325	P	P	02 13 31.5 +0.7
	baz=135				
AMTX	Amarillo	40.18 325	P	P	02 13 31.0 +0.2
	baz=135				
MSTX	Muleshoe	40.19 323	IAmb	IAmb	02 13 43.1
	comp=Z,39nm,1.0s				
MSTX	Muleshoe	40.19 323	P	P	02 13 31.7 +0.7
	baz=133				
MSTX	Muleshoe	40.19 323	P	P	02 13 31.9 +0.9
	baz=133				
NCB	Newcomb	40.42 0	P	P	02 13 34.9 +2.3
	baz=180,SNR=5.2				
RIB01	Linhares ES	40.49 125	eP	P	02 13 34.2 +0.7
J47A	Sunmer	40.71 349	P	P	02 13 36.0 +1.1
	baz=164,SNR=6.3				
J47A			P	P	02 13 36.0 +1.1
	baz=164,SNR=6.3				
KSU1	Kansas State U	40.80 333	P	P	02 13 36.1 +0.3
	baz=145				
CAM01	Campos-RJ	40.82 129	eP	P	02 13 36.9 +0.8
ALF01	Guarapari-ES	40.89 127	eP	P	02 13 37.4 +0.6
LONY	Lake Ozonia	41.06 0	P	P	02 13 38.4 +0.6
	baz=180,SNR=5.0				
BMNY	Brushton-Moira	41.28 0	P	P	02 13 41.2 +1.6
	baz=180,SNR=6.7				
L40A	Anamosa	41.28 341	IAmb	IAmb	02 13 50.8
	comp=Z,24nm,0.9s				
SADO	Sadowa	41.41 355	LR	LR	02 32 39.0
	comp=Z,178nm,21.5s,baz=184,slow=39				
JFWS	Jewell Farm	41.76 343	P	P	02 13 42.7 -0.8
JFWS			pP	pP	02 13 53.2 -2.1
JFWS			IAmb	IAmb	02 13 54.8
	comp=Z,39nm,0.8s				
JFWS	Jewell Farm	41.76 343	P	P	02 13 43.5 -0.1
	baz=156,SNR=6.7				
JFWS	Jewell Farm	41.76 343	P	P	02 13 43.5 -0.1
	baz=156,SNR=6.7				
PKME	Peaks-Kenny Pk	41.97 6	P	P	02 13 46.3 +1.0
	baz=188				
I42A	Draeger Farm,	42.28 345	IAmb	IAmb	02 13 59.5
	comp=Z,34nm,0.9s				
I42A	Draeger Farm,	42.28 345	P	P	02 13 47.5 -0.3
	baz=158,SNR=5.4				
K38A	Parkersburg	42.32 340	IAmb	IAmb	02 13 59.4
	comp=Z,48nm,1.0s				
K38A	Parkersburg	42.32 340	P	P	02 13 47.8 -0.4
	baz=152				
121A	Cookes Peak, D	42.52 317	IAmb	IAmb	02 14 04.0
	comp=Z,28nm,0.9s				
121A	Cookes Peak, D	42.52 317	P	P	02 13 52.5 +2.4
	baz=126,SNR=8.7				
121A	Cookes Peak, D	42.52 317	P	P	02 13 52.5 +2.4
	baz=126,SNR=8.7				
BNM	Barren Site	42.73 320	P	P	02 13 51.6 -0.4
BNM			pP	pP	02 14 03.4 -0.1
I40A	Norwalk	42.76 343	IAmb	IAmb	02 14 03.0
	comp=Z,20nm,0.8s				
I40A	Norwalk	42.76 343	P	P	02 13 51.3 -0.4
	baz=156				
Y22A	Socorro	42.81 319	P	P	02 13 52.7 +0.2
	baz=128				
319A	Douglas	42.91 314	P	P	02 13 52.6 -0.7
319A			IAmb	IAmb	02 14 12.5
	comp=Z,29nm,1.1s				
SBM	South Baldy	42.98 319	P	P	02 13 53.0 -1.1
SBM			pP	pP	02 14 04.1 -1.7
ANMO	Albuquerque	43.12 321	LR	LR	02 33 31.6
	comp=Z,46nm,21.9s,baz=148,slow=38				
ANMO	Albuquerque	43.12 321	P	P	02 13 55.3 +0.3
ANMO			pP	pP	02 14 06.2 -0.5
ANMO	Albuquerque	43.12 321	P	P	02 13 56.4 +1.4
	baz=130,SNR=14				
ANMO	Albuquerque	43.12 321	P	P	02 13 56.4 +1.4
	baz=130				
ANMO	Albuquerque	43.12 321	P	P	02 13 56.0 +0.9
ANMO			pP	pP	02 14 07.2 +0.5
ANMO			sP	sP	02 14 13.5 +2.8
T25A	Trinidad	43.33 325	P	P	02 13 58.2 +1.5
	baz=134				
LATQ	La Tuque	43.86 2	P	P	02 14 01.2 +0.8
LATQ			IAmb	IAmb	02 14 13.9
	comp=Z,40nm,0.9s				
G40A	Rib Lake	43.90 344	P	P	02 14 01.4 +0.4
	baz=157,SNR=5.5				
PLCA	Paso Flores	44.06 176	P	P	02 14 02.8 +0.5
	comp=Z,6.1nm,1.0s,baz=345,slow=9.0,SNR=8.2				
	comp=Z,6.1nm,1.0s				
PLCA	Paso Flores	44.06 176	P	P	02 14 01.2 -1.1
PLCA	Paso Flores	44.06 176	eP	P	02 14 02.6 +0.3
PLCA	Paso Flores	44.06 176	P	P	02 14 03.0 +0.7
PLCA			pP	pP	02 14 12.4 -1.2
LL04	Puerto Octay	44.13 178	P	P	02 14 02.6 -0.1
LL04			IAmb	IAmb	02 14 21.9
	comp=Z,20nm,1.1s				
SDCO	Great Sand Dun	44.38 324	P	P	02 14 06.1 +0.9
	baz=133,SNR=6.0				
SDCO	Great Sand Dun	44.38 324	P	P	02 14 06.3 +1.0
	baz=133,SNR=6.0				
COWI	Conover	44.40 346	P	P	02 14 04.9 0.0
	baz=159				
TUC	Tucson	44.49 314	P	P	02 14 06.0 0.0
TUC			pP	pP	02 14 17.6 0.0
TUC	Tucson	44.49 314	P	P	02 14 07.2 +1.3
	baz=123				
TUC	Tucson	44.49 314	P	P	02 14 06.9 +0.9
TUC			pP	pP	02 14 18.0 +0.4
TUC			sP	sP	02 14 23.0 +1.4
SPMN	Marine on St.	44.63 342	P	P	02 14 06.1 -0.7
	baz=154				
SPMN	Marine on St.	44.63 342	P	P	02 14 05.9 -0.9
	baz=154				
ECSD	EROS Data Cent	44.66 337	P	P	02 14 05.7 -1.4
ECSD			pP	pP	02 14 16.4 -2.1
ECSD			IAmb	IAmb	02 14 43.7
	comp=Z,23nm,1.1s				
ECSD	EROS Data Cent	44.66 337	P	P	02 14 06.0 -1.1
	baz=148				
ECSD	EROS Data Cent	44.66 337	P	P	02 14 06.5 -0.6
	baz=148				
Q24A	Divide	45.02 326	P	P	02 14 11.4 +1.0
	baz=134				
S22A	4UR Ranch, Cre	45.16 323	P	P	02 14 12.8 +1.3
	baz=131,SNR=5.6				
RPN	Rapa Nui	45.21 226	LR	LR	02 30 04.4
	comp=Z,154nm,18.8s,baz=50,slow=32				
W18A	Petrified Fore	45.35 318	P	P	02 14 14.6 +1.7
	baz=126				
F36A	Milaca	45.43 341	P	P	02 14 12.5 -0.5
	baz=153				
E38A	The Farm, Brul	45.51 344	P	P	02 14 13.8 +0.1
	baz=156				
214A	Organ Pipe Nat	45.77 313	IAmb	IAmb	02 14 29.4
	comp=Z,15nm,0.9s				
214A	Organ Pipe Nat	45.77 313	P	P	02 14 17.3 +1.2
	baz=120,SNR=5.7				
MVCO	Mesa Verde	45.83 322	IAmb	IAmb	02 14 36.1
	comp=Z,40nm,1.6s				
MVCO	Mesa Verde	45.83 322	P	P	02 14 18.0 +1.3
	baz=129				
F33A	5 Mile Ranch,	46.34 339	P	P	02 14 18.8 -1.5
	baz=149				
PV15	Paradox Valley	46.54 323	IAmb	IAmb	02 14 35.4
	comp=Z,21nm,0.8s				
WUAZ	Wupatki	46.67 318	P	P	02 14 24.3 +1.1
WUAZ			pP	pP	02 14 35.0 0.0
WUAZ			IAmb	IAmb	02 14 37.0
	comp=Z,26nm,0.9s				
WUAZ	Wupatki	46.67 318	P	P	02 14 24.6 +1.4
	baz=125,SNR=6.1				
EYMN	Ely	46.72 344	P	P	02 14 22.4 -0.9
	baz=156,SNR=7.1				
EYMN	Ely	46.72 344	P	P	02 14 22.9 -0.3
	baz=156,SNR=7.1				
N23A	Red Feather La	46.80 327	P	P	02 14 25.3 +1.0
	baz=135				
O20A	White River Ci	47.56 325	P	P	02 14 31.5 +1.4
	baz=131				
B35A	Bob, Littlefor	47.72 343	P	P	02 14 30.2 -0.9
	baz=154,SNR=5.8				
GLA	Glamis	47.79 313	P	P	02 14 33.5 +1.6
	baz=120				
U15A	North Rim	47.80 318	IAmb	IAmb	02 14 45.6
	comp=Z,23nm,1.3s				
BLYC	Blythe	47.91 314	P	P	02 14 32.2 -0.5
BLYC			IAmb	IAmb	02 14 46.0
	comp=Z,16nm,0.9s				
PDMCI	Parker Dam,Lak	47.92 315	P	P	02 14 33.5 +0.7
	baz=121				
RSSD	Black Hills	48.18 332	P	P	02 14 34.8 -0.1
RSSD			IAmb	IAmb	02 14 56.6
	comp=Z,24nm,1.0s				
RSSD	Black Hills	48.18 332	P	P	02 14 35.8 +0.9
	baz=139,SNR=5.8				
RSSD	Black Hills	48.18 332	P	P	02 14 35.3 +0.4
	baz=139				
RSSD	Black Hills	48.18 332	P	P	02 14 35.5 +0.6
RSSD			pP	pP	02 14 46.6 +0.1
RSSD			sP	sP	02 14 51.6 +0.9
SRU	San Rafael Swe	48.26 322	IAmb	IAmb	02 14 48.2
	comp=Z,16nm,1.0s				
AGMN	Agassiz Nation	48.33 341	P	P	02 14 35.4 -0.3
	baz=151,SNR=6.7				
AGMN	Agassiz Nation	48.33 341	P	P	02 14 35.2 -0.5
	baz=151,SNR=6.7				
K22A	Casper	48.34 329	P	P	02 14 36.2 +0.1
	baz=135				
KNB	Kanab	48.48 319	IAmb	IAmb	02 14 51.5
	comp=Z,19nm,1.0s				
BC3	Big Chuckawall	48.54 313	P	P	02 14 38.4 +0.6
	baz=119				
IRM	Iron Mountain	48.56 314	P	P	02 14 38.9 +1.1
	baz=120				
RDMU	Red Mountain	48.62 324	IAmb	IAmb	02 14 50.7
	comp=Z,13nm,0.9s				
LCMT	Little Creek M	48.76 318	P	P	02 14 39.7 +0.3
LCMT			pP	pP	02 14 51.3 +0.2
LCMT			IAmb	IAmb	02 14 52.7
	comp=Z,12nm,0.9s				
TMUT	Trail Mountain	48.80 322	IAmb	IAmb	02 14 51.9
	comp=Z,16nm,1.4s				
BELC	Belle Mtn. Jos	49.10 313	P	P	02 14 43.2 +1.0
	baz=119				
V12A	Nelson	49.16 316	P	P	02 14 42.1 -0.4
V12A			IAmb	IAmb	02 14 55.5
	comp=Z,13nm,1.2s				
GMRC	Granite Mounta	49.25 314	P	P	02 14 44.4 +1.2
	baz=120,SNR=5.6				
TPFO	Pinon Flats	49.25 313	P	P	02 14 44.1 +0.9
	baz=118				
MPU	Maple Canyon	49.49 323	IAmb	IAmb	02 14 57.6
	comp=Z,14nm,0.9s				
HEC	Hector,Ludlow	49.75 314	P	P	02 14 48.2 +1.2
	baz=120				
TUQ	Turquoise Moun	49.76 315	P	P	02 14 48.3 +1.2
	baz=120				
MURC	Murrieta	49.79 312	P	P	02 14 48.1 +0.9
	baz=118				
ULM	Lac du Bonnet	50.05 342	P	P	02 14 47.6 -1.3
	comp=Z,7.5nm,0.8s,baz=161,slow=7.4,SNR=5.6				
ULM			LR	LR	02 37 38.2
	comp=Z,177nm,19.7s,baz=144,slow=38				
	comp=Z,7.5nm,0.8s				
PD31	Pinedale Array	50.05 327	P	P	02 14 48.5 -0.7
PD31			pP	pP	02 15 00.2 -0.8
PD31			IAmb	IAmb	02 15 01.3
	comp=Z,29nm,1.7s				
PDAR	Pinedale Array	50.05 327	P	P	02 14 49.0 -0.3
	comp=Z,0.6nm,0.6s,baz=112,slow=9.0,SNR=7.7				
PDAR			LR	LR	02 39 16.5
	comp=Z,65nm,19.9s,baz=121,slow=40				
	comp=Z,0.6nm,0.6s				
PDAR	Pinedale Array	50.05 327	P	P	02 14 48.5 -0.7
PDAR			pP	pP	02 14 59.6 -1.4
GSC	Goldstone, Bar	50.32 314	IAmb	IAmb	02 15 04.5
	comp=Z,12nm,0.9s				
GSC	Goldstone, Bar	50.32 314	P	P	02 14 52.6 +1.3
	baz=119,SNR=5.2				
DUG	Dugway, Tooele	50.32 322	IAmb	IAmb	02 15 04.2
	comp=Z,14nm,0.8s				
DUG	Dugway, Tooele	50.32 322	P	P	02 14 52.5 +1.2
	baz=127				
BGU	Big Grassy Mou	50.89 323	IAmb	IAmb	02 15 08.6
	comp=Z,14nm,0.9s				
EDW2	Edwards Air Fo	50.97 313	P	P	02 14 57.4 +1.2
	baz=118				
R11A	Troy Canyon, C	51.05 318	P	P	02 14 57.5 +0.6
	baz=123				
LAO	LASA Array	51.12 332	P	P	02 14 56.9 -0.2
	baz=138				
REDW	Red Top Meadow	51.16 326	P	P	02 14 56.1 -1.6
REDW			IAmb	IAmb	02 15 09.8
	comp=Z,20nm,0.9s				
MPMC	Manual Prospec	51.17 315	P	P	02 14 58.9 +1.1
	baz=119				
FXWY	Fox Creek	51.43 327	P	P	02 14 59.4 -0.3
RLMT	Red Lodge	51.49 329	P	P	02 15 00.5 +0.4
	baz=133				
DGMT	Dagmar	51.58 335	P	P	02 15 01.1 +0.7
	baz=141				
DGMT	Dagmar	51.58 335	P	P	02 15 01.0 +0.5
	baz=141				
SCHQ	Schefferville	51.67 6	P	P	02 15 00.2 -0.8
	comp=Z,5.6nm,0.8s,baz=145,slow=7.4,SNR=4.3				
SCHQ			LR	LR	02 36 07.7
	comp=Z,132nm,21.2s,baz=168,slow=35				
	comp=Z,5.6nm,0.8s				
ISA	Isabella, Lake	51.69 314	P	P	02 15 02.8 +1.2
	baz=118				
ARVC	Arvin	51.69 313	P	P	02 15 03.0 +1.5
	baz=118				
CWC	Cottonwood Cre	51.78 315	P	P	02 15 03.1 +0.8
	baz=119				
ELK	Elko	52.15 321	LR	LR	02 41 10.9
	comp=Z,57nm,19.5s,baz=223,slow=40				
TIN	Tinemaha, Big	52.18 316	P	P	02 15 07.1 +1.9
	baz=119				
VES	Vestal, Richgr	52.21 314	P	P	02 15 07.2 +1.9
	baz=118				
YHL	Hebgen Lake	52.31 328	IAmb	IAmb	02 15 27.9
	comp=Z,20nm,0.9s				
NV11	Mina Array Sit	52.81 317	IAmb	IAmb	02 15 23.2
	comp=Z,18nm,1.1s				
NVAR	Mina Array Bea	52.91 317	P	P	02 15 11.7 +0.9
	comp=Z,4.2nm,1.0s,baz=127,slow=7.0,SNR=15				
	comp=Z,4.2nm,1.0s				
NVAR	Mina Array Bea	52.91 317	P	P	02 15 10.8 0.0
BOZ	Bozeman (W)	53.04 328	IAmb	IAmb	02 15 23.9
	comp=Z,10nm,0.8s				

BOZ	Bozeman (W)	53.04	328	P	P	02 15 12.4	+1.0
	baz=131,SNR=5.7						
KVN	Kaiserville	53.09	318	P	P	02 15 12.7	+0.6
BMN	Battle Mountai	53.23	320	IAmb	IAmb	02 15 25.7	
	comp=Z,19nm,1.0s						
HLID	Hailey	53.30	325	P	P	02 15 13.8	+0.3
	baz=127,SNR=5.5						
LRM	Limekiln Ridge	53.62	328	P	P	02 15 15.8	0.0
LRM				pP	pP	02 15 27.3	-0.3
PLID	Pearl Lake	55.12	325	P	P	02 15 25.9	-0.9
PLID				IAmb	IAmb	02 15 38.7	
	comp=Z,13nm,1.0s						
J08A	Circle Bar Ran	55.60	322	IAmb	IAmb	02 15 43.0	
	comp=Z,17nm,0.9s						
E09A	Wood Farm, Sta	57.17	326	IAmb	IAmb	02 15 53.5	
	comp=Z,22nm,0.9s						
PINE	Pine Mountain	57.35	322	P	P	02 15 41.4	-1.3
YBH	Yreka Blue Hor	57.47	319	LR	LR	02 44 35.7	
	comp=Z,69nm,18.5s,baz=130,slow=40						
NEW	Newport	57.64	328	P	P	02 15 44.9	+0.4
	baz=127						
D08A	Wollman Farm,	57.92	326	IAmb	IAmb	02 15 59.0	
	comp=Z,14nm,0.9s						
C09A	Chrisman Ranch	57.99	327	IAmb	IAmb	02 15 59.5	
	comp=Z,9.0nm,0.8s						
BBTS	Babate	58.27	75	LR	LR	02 39 07.8	
	comp=Z,284nm,20.0s,baz=244,slow=34						
HOOD	Mount Hood Mea	58.58	323	P	P	02 15 52.0	+0.8
LON	Longmire	59.41	324	IAmb	IAmb	02 16 09.5	
	comp=Z,12nm,0.9s						
B06A	Marblemount	60.17	326	P	P	02 16 00.4	-1.5
FRB	Frobisher Bay	60.39	3	LR	LR	02 42 48.1	
	comp=Z,197nm,19.6s,baz=204,slow=37						
LLLB	Lillooet	61.53	328	P	P	02 16 10.7	-0.5
LLLB				pP	pP	02 16 22.0	-1.1
YKA	Yellowknife Ar	65.99	341	LR	LR	02 47 13.3	
	comp=Z,113nm,19.6s,baz=219,slow=38						
TAOE	Nuku Hiva Isla	66.47	259	eLR	LR	02 36 48.8	
	comp=Z,187nm,33.0s						
KOTAN	Kotaneelee Air	67.94	336	P	P	02 16 52.7	0.0
	baz=125						
LIRD	Liard River Hi	68.39	334	P	P	02 16 55.8	+0.2
	baz=123						
PMSA	Palmer Station	68.44	175	eP	P	02 16 57.0	+1.4
T35M	Bob Quinn	69.06	331	P	P	02 17 00.6	+0.8
	baz=118,SNR=5.3						
PNCL	Nicolau / Gran	69.17	50	eP	P	02 17 01.4	+0.5
	comp=Z,17nm,1.5s						
TIC	Toumodi	69.34	84⇑	eP	P	02 17 09.2	+6.8
	comp=Z,3.6nm,0.3s						
LIC	Lamto	69.34	85⇑	eP	P	02 17 13.9	+12
	comp=Z,21nm,0.7s						
DBIC	Dimbokro	69.50	84	P	P	02 17 01.5	-1.9
	comp=Z,5.8nm,1.0s,baz=222,slow=7.2,SNR=3.9						
DBIC				LR	LR	02 43 53.0	
	comp=Z,149nm,21.7s,baz=223,slow=33						
	comp=Z,5.8nm,1.0s						
DBIC	Dimbokro	69.50	84	P	P	02 17 02.9	-0.4
DBIC				pP	pP	02 17 15.0	-0.4
DBIC				sP	sP	02 17 19.6	-0.3
ICESG	Greenland Ices	69.60	13	i P	P	02 17 05.3	+2.0
ICESG				IAmb	IAmb	02 17 18.6	
	comp=Z,20nm,0.9s						
KIC	Kosan Boka	69.62	85⇑	eP	P	02 17 10.1	+6.0
	comp=Z,9.1nm,0.8s						
PCAS	Casmilo, Conde	69.63	48	eP	P	02 17 06.7	+3.0
	comp=Z,18nm,1.4s						
DLBC	Dease Lake	69.65	332	LR	LR	02 51 00.9	
	comp=Z,92nm,20.4s,baz=93,slow=39						
DLBC	Dease Lake	69.65	332	P	P	02 17 03.3	-0.2
DLBC				pP	pP	02 17 15.0	-0.7
DLBC				IAmb	IAmb	02 17 16.6	
	comp=Z,27nm,1.4s						
DLBC	Dease Lake	69.65	332	P	P	02 17 04.5	+1.0
	baz=119						
S34M	Telegraph Cree	69.92	332	P	P	02 17 05.5	+0.5
	baz=118						
WTLY	Watson Lake, Y	69.93	334	P	P	02 17 05.0	-0.2
WTLY				pP	pP	02 17 16.3	-1.1
WTLY				IAmb	IAmb	02 17 17.2	
	comp=Z,13nm,0.9s						
WTLY	Watson Lake, Y	69.93	334	P	P	02 17 05.9	+0.8
	baz=120						
PESTR	Estremoz	70.05	50	eP	P	02 17 07.4	+1.1
	comp=Z,17nm,1.3s						
MTE	Manteigas	70.42	48	eP	P	02 17 16.5	+7.9
	comp=Z,16nm,1.8s						
TGTN	Hyland Airport	70.44	336	P	P	02 17 08.4	+0.1
	baz=121						
POLO	Lamas de Olo	70.45	47	eP	P	02 17 09.3	+0.5
	comp=Z,9.0nm,1.4s						
PVRL	Vila Real	70.48	47	eP	P	02 17 18.7	+10
	comp=Z,20nm,1.4s						
R33M	Jennings River	70.53	333	P	P	02 17 09.6	+0.6
	baz=118						
Q32M	Nakina River	70.93	332	P	P	02 17 11.0	-0.5
	baz=117						
MVO	Moncorvo	70.97	48	eP	P	02 17 17.6	+5.7
	comp=Z,15nm,1.5s						
PBRG	Braganca	71.32	47	eP	P	02 17 19.4	+5.4
	comp=Z,11nm,1.7s						
MDT	Midelt	71.38	57	LR	LR	02 48 57.1	
	comp=Z,62nm,18.0s,baz=288,slow=36						
S32K	Killisnoo	71.39	330	P	P	02 17 14.2	+0.2
	baz=114						
SIT	Sitka	71.59	330	P	P	02 17 15.7	+0.5
	baz=113						
R32K	Eaglecrest	71.69	331	P	P	02 17 16.5	+0.6
	baz=114						
P33M	Teslin, Yukon	71.74	333	P	P	02 17 16.6	+0.3
	baz=117						
P32M	Atlin	71.87	333	P	P	02 17 17.2	+0.3
	baz=116						
BORG	Borgarnes	71.99	21	LR	LR	02 45 05.2	
	comp=Z,56nm,21.6s,baz=230,slow=33						
MMPY	Sheldon Lake,	72.20	336	P	P	02 17 19.3	+0.4
	baz=119						
RES	Resolute Bay	72.22	354	LR	LR	02 51 51.3	
	comp=Z,70nm,19.8s,baz=186,slow=38						
N32M	Quiet Lake	72.28	334	P	P	02 17 19.9	+0.5
	baz=117						
S31K	Pelican	72.40	331	P	P	02 17 20.9	+0.9
	baz=113						
SKAG	Skagway	72.56	332	P	P	02 17 21.1	+0.1
	baz=114						
SUMG	Summit	72.61	11	i P	P	02 17 21.7	+0.1
SUMG				IAmb	IAmb	02 17 33.4	
	comp=Z,8.6nm,0.8s						
PAB	San Pablo	72.66	50	P	P	02 17 21.6	-0.5
PAB				IAmb	IAmb	02 18 18.2	
	comp=Z,19nm,1.6s						
FARO	Faro, Yukon	72.88	335	P	P	02 17 22.9	-0.1
	baz=117						
ESDC	Sonseca Array	72.97	50	P	P	02 17 21.2	-2.8
	comp=Z,0.7nm,0.8s,baz=252,slow=5.7,SNR=6.2						
ESDC				LR	LR	02 48 06.8	
	comp=Z,91nm,18.7s,baz=245,slow=35						
	comp=Z,0.7nm,0.8s						
M31M	Drury Creek, Y	73.31	335	P	P	02 17 25.8	+0.4
	baz=116						
O30N	Mendenhall	73.45	333	P	P	02 17 26.5	+0.2
	baz=114						
P30M	Million Dollar	73.58	332	P	P	02 17 27.9	+0.8
	baz=113						
N31M	Braeburn, Yuko	73.60	334	IAmb	IAmb	02 17 40.2	
	comp=Z,14nm,1.0s						
N31M	Braeburn, Yuko	73.60	334	P	P	02 17 28.0	+0.8
	baz=114						
N30M	Aishikik Lake	74.17	334	P	P	02 17 31.9	+1.3
	baz=113						
O29M	Mount Kennedy	74.40	332	P	P	02 17 32.3	+0.3
	baz=111						
M30M	Minto, Yukon	74.48	335	IAmb	IAmb	02 17 45.0	
	comp=Z,18nm,1.0s						
M30M	Minto, Yukon	74.48	335	P	P	02 17 32.9	+0.6
	baz=114						
YUK6	Outpost Mounta	74.54	333	P	P	02 17 34.7	+1.8
	baz=112						
PNL	Peninsula	74.56	332	P	P	02 17 33.6	+0.8
	baz=110						
YUK4	Talbot Arm	74.81	333	P	P	02 17 35.0	+0.5
	baz=112						
NEEM	North Greenlan	75.08	5	i P	P	02 17 37.0	+1.1
M29M	Somme Creek	75.14	334	P	P	02 17 36.8	+0.6
	baz=112						
L29M	L29M	75.25	335	P	P	02 17 37.0	+0.2
	baz=112						
K29M	Barlow Dome	75.29	336	P	P	02 17 36.9	-0.1
	baz=113						
YUK8	Steele Glacier	75.30	333	P	P	02 17 37.2	-0.1
	baz=110						
F31M	Tsiigehtchic	75.42	340	P	P	02 17 36.8	-0.8
	baz=118						
INK	Inuvik	75.76	341	P	P	02 17 38.2	-1.3
INK	Inuvik	75.76	341	P	P	02 17 39.2	-0.3
	baz=118						
YUK3	Moose Creek	75.78	333	P	P	02 17 40.0	-0.1
	baz=110						
TOA0	Torodi Ar. Sit	75.89	77	P	P	02 17 39.5	-1.8
TOA0				pP	pP	02 17 52.5	-1.0
TOA0				IAmb	IAmb	02 17 59.5	
	comp=Z,25nm,1.6s						
TORD	Torodi Ar. Bea	75.89	77	P	P	02 17 40.1	-1.2
	comp=Z,1.6nm,0.9s,baz=298,slow=6.1,SNR=8.0						
TORD				LR	LR	02 49 07.5	
	comp=Z,158nm,21.4s,baz=223,slow=34						
	comp=Z,1.6nm,0.9s						
TORD	Torodi Ar. Bea	75.89	77	IAmb	IAmb	02 18 00.0	
	comp=Z,18nm,1.6s						
EPYK	Eagle Plains	76.01	338	P	P	02 17 40.1	-0.9
	baz=114						
DAWY	Dawson	76.14	336	P	P	02 17 41.8	-0.1
	baz=111						
BVCY	Beaver Creek	76.17	334	P	P	02 17 42.7	+0.6
	baz=110						
I29M	Ogilvie Camp,	76.20	337	P	P	02 17 42.3	+0.2
	baz=113						
M27K	Edge Creek, AK	76.60	334	P	P	02 17 44.4	-0.3
M27K				pP	PcP	02 17 55.1	-0.9
M27K				IAmb	IAmb	02 17 58.0	
	comp=Z,26nm,1.2s						
M27K	Edge Creek, AK	76.60	334	P	P	02 17 45.1	+0.4
	baz=109						
EKA	Eskdalemuir Ar	76.72	34	P	P	02 17 44.3	-0.9
	comp=Z,1.7nm,0.9s,baz=220,slow=4.3,SNR=4.2						
EKA				LR	LR	02 46 46.0	
	comp=Z,162nm,21.1s,baz=258,slow=32						
	comp=Z,1.7nm,0.9s						
PPT2	Papeete2	76.76	251	eLR	LR	02 41 35.2	
	comp=Z,186nm,23.2s						
BCAR	Beaver Creek A	76.79	334	P	P	02 17 46.2	+0.7
BCAR				pP	PcP	02 17 56.6	-0.1
L27K	Beaver Creek,	76.81	334	IAmb	IAmb	02 17 58.9	
	comp=Z,23nm,1.1s						
L27K	Beaver Creek,	76.81	334	P	P	02 17 46.2	+0.6
	baz=109						
MCARA	McCarthy VSAT	76.81	333	P	P	02 17 46.4	+0.7
	baz=108						
EGAK	Eagle	77.11	336	IAmb	IAmb	02 17 60.0	
	comp=Z,23nm,1.2s						
EGAK	Eagle	77.11	336	P	P	02 17 47.8	+0.6
	baz=110						
M26K	Nabesna, AK	77.11	334	P	P	02 17 47.7	+0.3
	baz=108						
K27K	Chicken	77.23	335	P	P	02 17 48.5	+0.5
	baz=109						
L26K	Log Cabin Wild	77.46	334	IAmb	IAmb	02 18 02.3	
	comp=Z,18nm,1.0s						
L26K	Log Cabin Wild	77.46	334	P	P	02 17 49.8	+0.6
	baz=108						
TBI	Tubuai	77.50	245	eLR	LR	02 41 55.0	
	comp=Z,905nm,27.5s						
I27K	Kandik River	77.57	337	P	P	02 17 49.6	-0.3
	baz=110						
N25K	Chitina, Valde	77.60	333	P	P	02 17 50.3	+0.2
	baz=106						
H27K	Steamboat Moun	77.75	338	P	P	02 17 50.5	-0.3
	baz=110						
G27K	Doyon Strip	78.00	338	P	P	02 17 51.5	-0.8
	baz=110						
J26L	Joseph Creek	78.00	336	P	P	02 17 52.5	+0.2
	baz=108						
SCRK	Sand Creek	78.02	335	IAmb	IAmb	02 18 05.4	
	comp=Z,18nm,1.2s						
SCRK	Sand Creek	78.02	335	P	P	02 17 53.0	+0.5
	baz=107						
I26K	Coal Creek Min	78.08	336	P	P	02 17 52.4	-0.3
	baz=108						
KLU	Klutina	78.18	332	P	P	02 17 53.5	+0.1
	baz=105						
PAX	Paxson	78.37	334	IAmb	IAmb	02 18 06.8	
	comp=Z,18nm,1.1s						
PAX	Paxson	78.37	334	P	P	02 17 54.3	-0.1
	baz=106						
E27K	Coleen River	78.45	339	P	P	02 17 54.6	-0.1
	baz=110						
M24K	Tolsona, Glenn	78.46	333	P	P	02 17 54.9	+0.1
	baz=105						
K24K	Donnelly Dome	78.73	335	P	P	02 17 56.1	-0.2
	baz=106						
J25K	Salcha River,	78.78	335	IAmb	IAmb	02 18 09.1	
	comp=Z,26nm,1.5s						
J25K	Salcha River,	78.78	335	P	P	02 17 56.0	-0.6
	baz=106						
G26K	Porcupine Rive	78.84	338	P	P	02 17 56.6	-0.1
	baz=108						
SCM	Sheep Creek Mo	78.92	333	P	P	02 17 56.6	-0.8
	baz=104						
PRP	Porcupine Dome	79.09	336	P	P	02 17 58.2	-0.1
	baz=106						
JMIC	Jan Mayen	79.16	18	LR	LR	02 48 43.6	
	comp=Z,88nm,21.8s,baz=232,slow=32						
F26K	Sheenjek River	79.20	339	P	P	02 17 58.9	+0.1
	baz=108						
DHY	Denali Highway	79.24	334	P	P	02 17 59.1	-0.2
	baz=104						
BMAR	Burnt Mountain	79.28	338	P	P	02 17 59.3	+0.1
WAT6	Susitna Watana	79.28	333	P	P	02 17 59.4	-0.1
	baz=103						
DAG	Danmarks Havn	79.29	11	i P	P	02 17 58.9	-0.2
DAG				IAmb	IAmb	02 18 02.9	
	comp=Z,1.4nm,0.9s						
SML	Sawmill	79.38	332	P	P	02 17 58.9	-1.0
	baz=103						
HDA	Harding Lake	79.38	335	IAmb	IAmb	02 18 11.9	
	comp=Z,20nm,1.0s						
HDA	Harding Lake	79.38	335	P	P	02 17 59.6	-0.2
	baz=104						
H25K	Birch Creek	79.42	337	P	P	02 18 00.8	+0.9
	baz=106						
ILAR	Eielson Array	79.45	335	P	P	02 17 59.1	-1.1
	comp=Z,2.4nm,0.8s,baz=109,slow=4.4,SNR=17						
ILAR				LR	LR	02 57 29.7	
	comp=Z,135nm,18.6s,baz=210,slow=39						
	comp=Z,2.4nm,0.8s						
ILAR	Eielson Array	79.45	335	P	P	02 17 59.7	-0.5
ILAR				pP	pP	02 18 10.9	-1.8
G25K	Bearman Lake	79.66	338	P	P	02 18 01.9	+0.6
	baz=106						
PMR	Palmer	79.70	332	P	P	02 18 02.5	+0.9
	baz=102						
WAT1	Susitna Watana	79.70	333	P	P	02 18 01.4	-0.2
	baz=103						
F25K	Christian Rive	79.72	338	P	P	02 18 02.0	+0.3
	baz=106						
E25K	Arctic Village	79.84	339	P	P	02 18 01.8	-0.5
	baz=106						
RND	Reindeer	79.96	334	IAmb	IAmb	02 18 16.0	
	comp=Z,24nm,1.1s						
MDM	Murphy Dome	80.05	336	IAmb	IAmb	02 18 15.8	
	comp=Z,23nm,1.2s						
MCK	McKinley	80.07	334	P	P	02 18 03.0	-0.7
MCK				pP	pP	02 18 14.2	-2.0
MCK				IAmb	IAmb	02 18 16.1	
	comp=Z,21nm,1.1s						
MCK	McKinley	80.07	334	P	P	02 18 03.9	+0.3
	baz=102						
H24K	Noodor Dome	80.12	336	P	P	02 18 04.0	+0.2
	baz=104						
G24K	Hadweenzic Riv	80.17	337	P	P	02 18 04.4	+0.3
	baz=104						
NEA2	Nenana	80.32	335	P	P	02 18 05.0	+0.1
	baz=103						
D25K	Kavik River	80.46	340	P	P	02 18 05.8	+0.2
	baz=106						
F24K	Squaw Lake	80.53	338	P	P	02 18 06.1	+0.1
	baz=104						
I23K	Minto, Yukon-K	80.56	336	P	P	02 18 06.3	+0.2
	baz=102						
TRF	Thorofare Moun	80.61	334	P	P	02 18 06.3	-0.4
	baz=101						
KDAK	Kodiak Island	80.75	328	P	P	02 18 07.3	0.0
	baz=98						
H23K	Yukon River	80.78	336	P	P	02 18 07.7	+0.3
	baz=102						
E24K	Your Creek	80.89	339	P	P	02 18 07.0	-1.0
	baz=104						
SKT	Skwentna	80.89	332	P	P	02 18 07.6	-0.4
	baz=100						
BPAW	Bear Paw Mtn.	81.03	334	P	P	02 18 08.2	-0.5
BPAW				pP	pP	02 18 19.9	-1.4
BPAW				IAmb	IAmb	02 18 21.0	
	comp=Z,24nm,1.1s						
BPAW	Bear Paw Mtn.	81.03	334	P	P	02 18 08.0	-0.8
	baz=101						
N20K	Mount Spurr	81.08	331	P	P	02 18 08.0	-1.1
	baz=99						
SPCR	Spurr Chakacha	81.08	331	P	P	02 18 08.1	-1.1
	baz=99						
MLY	Manley	81.11	335	P	P	02 18 08.9	-0.3
	baz=101						
G23K	Bananza Creek	81.16	337	P	P	02 18 08.9	-0.6
	baz=102						
E23K	Chandalar	81.30	338	P	P	02 18 10.6	+0.4
	baz=103						
P19K	Oil Pt	81.35	330	P	P	02 18 08.4	-2.1
	baz=98						
PPLA	Purkeypile	81.35	333	P	P	02 18 10.1	-0.5
	baz=100						
C24K	Franklin Bluff	81.36	340	P	P	02 18 10.7	+0.4
	baz=104						
CAST	Castle Rocks	81.39	334	IAmb	IAmb	02 18 21.9	
	comp=Z,24nm,1.4s						
CAST	Castle Rocks	81.39	334	P	P	02 18 09.7	-1.0
	baz=100						
CHUM	Lake Minchumin	81.57	334	P	P	02 18 10.4	-1.2
	baz=100						
ECH	Echery	81.99	42	P	P	02 18 13.2	-0.9
ECH				pP	pP	02 18 25.1	-1.6
ECH				IAmb	IAmb	02 18 26.9	
	comp=Z,15nm,1.2s						
C23K	Itkillik River	82.03	340	P	P	02 18 14.4	+0.6
	baz=102						
L20K	Farewell, AK	82.06	333	P	P	02 18 14.1	-0.2
	baz=98						
NOR	Nord	82.18	7	i P	P	02 18 16.8	+2.3
P18K	Big Mountain,	82.33	329	P	P	02 18 15.6	-0.1
	baz=96						
J20K	Nowinta River	82.41	334	P	P	02 18 14.6	-1.3
	baz=98						
G21K	Allakaket	82.49	337	P	P	02 18 16.3	-0.1
	baz=99						
Q17K	Contact Creek	82.55	328	P	P	02 18 16.8	-0.2
	baz=96						
F21K	Alatna River	82.59	337	P	P	02 18 16.9	0.0
	baz=99						
N18K	Kilae Creek	82.80	331	P	P	02 18 17.5	-0.5
	baz=96						
KEST	Kesra	83.11	55	LR	LR	02 51 55.7	
	comp=Z,94nm,21.2s,baz=202,slow=33						
DAVOX	Davos/Dischmat	83.76	43	P	P	02 18 23.9	+0.3
	comp=Z,4.0nm,0.8s,baz=315,slow=4.3,SNR=3.0						
DAVOX				LR	LR	02 52 07.1	
	comp=Z,122nm,21.1s,baz=285,slow=33						
	comp=Z,4.0nm,0.8s						
BELA	Belgrano 2	84.01	172	P	P	02 18 23.8	-0.1
NB2	NORSAR Subarra	85.02	29	P	P	02 18 30.3	+0.8
	comp=Z,24nm,1.2s,baz=268,slow=5.3						
NB2	NORSAR Subarra	85.02	29	P	P	02 18 30.3	+0.8
	baz=268,slow=5.3						
NOA	NORSAR Array B	85.02	29	P	P	02 18 29.0	-0.4
	comp=Z,1.4nm,0.8s,baz=269,slow=4.6,SNR=3.8						
NOA				LR	LR	02 52 41.8	
	comp=Z,98nm,21.9s,baz=285,slow=33						
	comp=Z,1.4nm,0.8s						
VNA3	Neumayer Olymp	85.33	163	P	P	02 18 31.1	+0.4
VNA1	Neumayer--Stat	85.51	162	P	P	02 18 32.4	+0.8
NKC	Novy Kostel	85.52	40	AMS	AMS	02 50 40.0	
	comp=Z,300nm,16.8s						
CLL	Collm	85.87	39	i P	P	02 18 34.4	+0.6
	comp=Z,13nm,1.5s						
CLL				ep P	pP	02 18 46.0	-0.5
CLL				e(sP)	sP	02 18 52.0	+0.4
VNA2	Neumayer--Watz	85.88	162	P	P	02 18 34.0	+0.5
	baz=314,slow=5.0						
HFS	Hagfors	86.23	30	P	P	02 18 35.0	-0.5
	comp=Z,1.4nm,0.8s,baz=212,slow=4.6,SNR=4.8						
HFS				LR	LR	02 53 05.6	
	comp=Z,194nm,21.4s,baz=257,slow=33						
	comp=Z,1.4nm,0.8s						
KHC	Kasperske Hory	86.26	41	eP	P	02 18 36.5	+0.6
KHC				ep P	pP	02 18 48.2	-0.4
KHC				AMS	AMS	02 53 40.0	
	comp=Z,200nm,18.1s						
GERES	GERESS Array B	86.35	41	P	P	02 18 34.6	-1.8
	comp=Z,1.5nm,0.9s,baz=251,slow=4.1,SNR=10						
	comp=Z,1.5nm,0.9s						
GERES	GERESS Array B	86.35	41	P	P	02 18 35.6	-0.8
GERES				pP	pP	02 18 47.7	-1.3
BRG	Berggiesshubel	86.47	39	eP	P	02 18 49.5	+13
BRG				Amp		02 18 53.7	
	comp=Z,5.3nm,0.9s						
BRG				Amp		02 50 42.0	
	comp=E,0.2nm,15.2s						
BRG				Amp		02 50 43.0	
	comp=N,0.1nm,10.7s						
BRG				Amp		02 50 49.0	
	comp=Z,0.2nm,15.8s						
PRU	Pruhonice	86.87	40	AMS	AMS	02 54 10.0	
	comp=Z,200nm,20.5s						
PVCC	Panska Ves	86.88	40	AMS	AMS	02 50 40.0	
	comp=Z,300nm,18.5s						
GOPC	GO Pecny, Ondr	87.03	40	AMS	AMS	02 51 40.0	
	comp=Z,200nm,20.2s						
TREC	Trest	87.51	41	AMS	AMS	02 48 40.0	
	comp=Z,200nm,19.1s						
SNAA	Sanae	87.52	162	P	P	02 18 42.0	+0.4
SNAA	Sanae	87.52	162	P	P	02 18 41.7	+0.1
	comp=Z,29nm,1.0s,baz=267,slow=7.9,SNR=9.6						
SNAA				LR	LR	02 59 34.5	
	comp=Z,35nm,20.1s,baz=22,slow=37						
SNAA	Sanae	87.52	162	P	P	02 18 41.4	-0.2
UPC	Upice	87.80	40	AMS	AMS	02 51 40.0	
	comp=Z,400nm,25.0s						
CHVC	Chvalec	87.82	40	eP	P	02 18 44.6	+1.2
CHVC				ep P	pP	02 18 56.8	+0.7
CHVC				AMS	AMS	02 52 20.0	
	comp=Z,400nm,19.9s						
OSTC	Ostas	87.92	40	eP	P	02 18 45.2	+1.3
OSTC				ep P	pP	02 18 56.7	+0.1
OSTC				AMS	AMS	02 51 40.0	
	comp=Z,400nm,25.1s						
DPC	Dobruska-Polom	88.00	40	eP	P	02 18 45.6	+1.3
DPC				ep P	pP	02 18 57.3	+0.3
DPC				AMS	AMS	02 51 50.0	
	comp=Z,300nm,22.0s						
KRUC	Moravsky	88.12	41	eP	P	02 18 45.5	+0.7
KRUC				e		02 18 57.4	
VRAC	Vranov	88.23	41	P	P	02 18 45.0	-0.3
	comp=Z,2.0nm,0.7s,baz=267,slow=9.6,SNR=3.1						
VRAC				LR	LR	02 54 23.8	
	comp=Z,69nm,21.8s,baz=296,slow=33						
	comp=Z,2.0nm,0.7s						
VRAC	Vranov	88.23	41	eP	P	02 18 46.6	+1.2
VRAC				e		02 18 57.8	
KRLC	Kraliky	88.31	40	eP	P	02 18 47.3	+1.5
KRLC				ep P	pP	02 18 59.3	+0.8
KRLC				AMS	AMS	02 51 40.0	
	comp=Z,200nm,24.5s						
TNA	Tin City	88.33	335	P	P	02 18 45.4	0.0
	baz=86						
MORC	Moravsky Berou	88.82	40	P	P	02 18 48.1	-0.1
MORC				IAmb	IAmb	02 19 05.6	
	comp=Z,12nm,1.6s						
MORC	Moravsky Berou	88.82	40	eP	P	02 18 48.6	+0.4
MORC				e		02 19 00.9	
OKC	Ostrava-Krasne	89.21	40	AMS	AMS	02 53 20.0	
TROLL	Troll, Antarti	89.23	162	P

VNDA	**Vanda**	**100.21**	**191**	Pdif	**Pdif**	**02 19 39.8**	**+0.1**
DZM	**Mont Dzumac**	**118.06**	**247**	*e*LR	LR	03 00 42.8	
	comp=Z,79nm,23.9s						
ZALV	**Zalesovo Beam**	**120.34**	**14**	PKP	**PKPdf**	**02 24 43.7**	**-1.5**
	comp=Z,2.7nm,0.9s,baz=300,slow=2.9,SNR=7.8						
ZALV	**Zalesovo Beam**	**120.34**	**14**	PKPdf	**PKPdf**	**02 24 44.0**	**-1.2**
MKAR	**Makanchi Array**	**126.03**	**19**	PKP	**PKPdf**	**02 24 55.4**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=256,slow=3.1,SNR=5.2						
NRN	**Naryn**	**127.97**	**28**	PKPdf	**PKPdf**	**02 25 00.4**	**-0.3**
SONM	**Songino Array**	**128.99**	**359**	PKP	**PKPdf**	**02 24 60.0**	**-2.2**
	comp=Z,1.8nm,0.9s,baz=322,slow=0.0,SNR=8.1						
WMQ	**Urumqi**	**130.38**	**17**	*e*PKP	**PKiKP**	**02 25 06.0**	**+0.3**
WMQ				LR	LR		
	comp=Z,110nm,23.3s						
KSRS	**Korea Array**	**134.29**	**335**	PKP	**PKPdf**	**02 25 11.9**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=355,slow=1.6,SNR=5.0						
HHC	**Hu-ho-hao-te**	**135.62**	**353**	*e*PKP	**PKPdf**	**02 25 13.0**	**-1.9**
STKA	**Stephens Creek**	**135.75**	**226**	PKP	**PKPdf**	**02 25 13.8**	**-1.4**
	comp=Z,3.7nm,1.0s,baz=109,slow=6.4,SNR=5.6						
GTA	**Gaotai**	**137.10**	**6**	*e*PKP	**PKPdf**	**02 25 18.0**	**+0.3**
GTA				sPKP		02 25 30.3	
AS31	**Alice Springs**	**145.88**	**231**		**PKPbc**	**02 25 33.9**	**-0.4**
ASAR	**Alice Springs**	**145.88**	**231**	PKPbc	**PKPbc**	**02 25 33.9**	**-0.4**
	comp=Z,25nm,0.7s,baz=122,slow=3.7,SNR=151						
ASAR	**Alice Springs**	**145.88**	**231**		**PKPdf**	**02 25 33.3**	**-0.4**
HYBB	**Hyderabad (bro**	**146.39**	**51**	*e*PKPbc	**PKPdf**	**02 25 33.8**	**-0.9**
HYBB				*e*PKiKP	**PKiKP**	**02 25 39.6**	**+0.6**
HYBB				*e*PP	**PP**	**02 28 57.3**	**-0.9**
WRA	**Warramunga Arr**	**147.33**	**237**	PKPbc	**PKPdf**	**02 25 36.4**	**+0.2**
	comp=Z,34nm,0.9s,baz=113,slow=3.0,SNR=101						
SHL	**Shillong**	**148.37**	**24**	PKPdf	**PKPdf**	**02 25 36.3**	**-1.7**
SHL				PKPbc	**PKPbc**	**02 25 40.0**	**-1.4**
GYA	**Guiyang**	**150.31**	**358**	⇑PKPbc	**PKPbc**	**02 25 45.8**	**-0.4**
KMI	**Kunming**	**151.54**	**5**	⇑PKPbc	**PKPdf**	**02 25 45.3**	**+2.2**
KMI				pPKP	pPKPdf	02 25 53.5	-2.6
CMAR	**Chiang Mai Arr**	**157.38**	**16**	PKPab	**PKPab**	**02 26 21.8**	**-0.4**
	comp=Z,5.8nm,0.6s,baz=328,slow=5.6,SNR=19						

ISC 31 02:06:24.1±1.6, 59.59N±0.07×138.89W±0.04, h8km±12km, n9, g0°82/15, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**0.27**	**288**	P	**Pg**	**02 06 30.2**	**+0.6**
	baz=111,SNR=178						
O29M	**Mount Kennedy**	**0.73**	**12**	P	**Pg**	**02 06 38.3**	**0.0**
	baz=195,SNR=23						
O29M				S	**Sg**	**02 06 48.8**	**+0.9**
	baz=195						
PINM	**Pinnacle**	**0.86**	**307**	S	**Sg**	**02 06 52.0**	**+0.2**
	baz=128						
P30M	**Million Dollar**	**1.11**	**60**	P	**Pg**	**02 06 44.9**	**-0.5**
	baz=242						
P30M				S	**Sg**	**02 07 00.3**	**+0.5**
	baz=242						
PLBC	**Pleasant Camp**	**1.29**	**95**	S	**Sg**	**02 07 04.6**	**-1.0**
	baz=276						
O28M	**Mount Upton**	**1.36**	**332**	Pb	**Pn**	**02 06 48.8**	**-0.8**
	baz=152,SNR=11						
O28M				S	**Sg**	**02 07 06.1**	**-1.7**
	baz=152						
YUK6	**Outpost Mounta**	**1.39**	**11**	Pb	**Pn**	**02 06 49.8**	**-0.2**
	baz=192,SNR=17						
YUK6				Sb	**Sg**	**02 07 08.4**	**-0.3**
	baz=192						
HYT	**Haines Junctio**	**1.42**	**28**	Pb	**Pn**	**02 06 50.4**	**+0.1**
	baz=211,SNR=16						
HYT				Sb	**Sb**	**02 07 09.3**	**+0.1**
	baz=211						
O30N	**Mendenhall**	**1.83**	**48**	Pb	**Pn**	**02 06 56.5**	**+0.6**
	baz=231,SNR=5.7						
O30N				Sb	**Sn**	**02 07 20.1**	**+0.8**
	baz=231						

PRU ***31*** *02:15:38.5±0.0, 43.31N×13.80E, h0km*

ROM 31 02:15:08.5±0.0, 42.847N±0.002×13.099E±0.003, h12km, ML2.8/52, 25C-23D, Error ellipse: s-maj=0.2km s-min=0.1km az=269.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**82**	⇓P	Pg	02 15 11.4	+0.3
T1245				S	Sg	02 15 13.1	+0.2
T1245				AML	AML		
	comp=E,70750μm,0.2s						
T1245				AML	AML		
	comp=N,80600μm,0.2s						
T1245				AML	AML		
	comp=E,65450μm,0.3s						
T1245				AML	AML		
	comp=E,70750μm,0.2s						
T1245				AML	AML		
	comp=N,80650μm,0.2s						
T1245				AML	AML		
	comp=N,86500μm,0.2s						
T1216	**Preci, Frazion**	**0.07**	**307**	⇓P	Pg	02 15 11.3	+0.3
T1216				S	Sg	02 15 13.1	+0.2
T1216				AML	AML		
	comp=E,35900μm,0.3s						
T1216				AML	AML		
	comp=N,50650μm,0.2s						
T1216				AML	AML		
	comp=N,50700μm,0.2s						
T1216				AML	AML		
	comp=E,35900μm,0.3s						
FEMA	**Monte Fema**	**0.12**	**343**	⇓P	Pg	02 15 12.0	+0.3
FEMA				AML	AML		
	comp=E,21800μm,0.6s						
FEMA				AML	AML		
	comp=N,24150μm,0.6s						
FEMA				AML	AML		
	comp=N,24200μm,0.6s						
MMO1	**Montemonaco**	**0.17**	**73**	⇑P	Pg	02 15 12.8	+0.4
MMO1				S	Sg	02 15 15.8	+0.5
T1215	**Vallo di Nera,**	**0.18**	**255**	⇑P	Pg	02 15 12.9	+0.5
T1215				S	Sg	02 15 16.0	+0.8
T1215				AML	AML		
	comp=E,3040μm,0.2s						
T1215				AML	AML		
	comp=N,4735μm,1.1s						
T1215				AML	AML		
	comp=E,3410μm,0.2s						
T1215				AML	AML		
	comp=N,4765μm,1.1s						
T1215				AML	AML		
	comp=E,3040μm,0.2s						
T1215				AML	AML		
	comp=N,4740μm,1.1s						
T1215				AML	AML		
	comp=E,3405μm,0.2s						
T1215				AML	AML		
	comp=N,4755μm,1.1s						
T1215				AML	AML		
	comp=E,3405μm,0.2s						
T1215				AML	AML		
	comp=N,4745μm,1.1s						
T1217	**Poggiodomo (PG**	**0.18**	**223**	⇑P	Pg	02 15 13.1	+0.5
T1217				S	Sg	02 15 16.3	+0.9
T1217				AML	AML		
	comp=E,3320μm,0.8s						
T1217				AML	AML		
	comp=E,3335μm,0.7s						
T1217				AML	AML		
	comp=N,4955μm,1.2s						
T1217				AML	AML		
	comp=E,3315μm,0.8s						
T1217				AML	AML		
	comp=N,4885μm,1.2s						
T1217				AML	AML		
	comp=E,3360μm,0.7s						
T1217				AML	AML		
	comp=N,4950μm,1.2s						
T1217				AML	AML		
	comp=E,3365μm,0.7s						
T1217				AML	AML		
	comp=N,4940μm,1.2s						
T1217				AML	AML		
	comp=E,3320μm,0.8s						
AM05	**Amandola Campo**	**0.23**	**55**	⇑P	Pg	02 15 13.8	+0.5
AM05				S	Sg	02 15 17.6	+1.0
AM05				AML	AML		
	comp=N,1580μm,0.2s						
AM05				AML	AML		
	comp=N,376μm,1.3s						
AM05				AML	AML		
	comp=E,1395μm,0.5s						
AM05				AML	AML		
	comp=N,376μm,1.3s						
AM05				AML	AML		
	comp=N,375μm,1.3s						
AM05				AML	AML		
	comp=E,5800μm,1.0s						
T1204	**Amatrice, Fraz**	**0.23**	**137**	⇓P	Pg	02 15 14.0	+0.5
T1204				S	Sg	02 15 18.0	+1.1
T1204				AML	AML		
	comp=E,3610μm,0.3s						
T1204				AML	AML		
	comp=N,2155μm,0.5s						
T1204				AML	AML		
	comp=N,2185μm,0.3s						
T1204				AML	AML		
	comp=E,3620μm,0.3s						
T1241	**Roccafluvione,**	**0.24**	**88**	⇑P	Pg	02 15 14.1	+0.5
T1241				S	Sg	02 15 18.2	+1.2
T1241				AML	AML		
	comp=E,6210μm,0.7s						
T1241				AML	AML		
	comp=E,6210μm,0.7s						
T1241				AML	AML		
	comp=N,9845μm,0.2s						
T1241				AML	AML		
	comp=E,7270μm,0.7s						
T1241				AML	AML		
	comp=N,59200μm,0.6s						
T1241				AML	AML		
	comp=N,9820μm,0.2s						
T1241				AML	AML		
	comp=N,59150μm,0.6s						
T1241				AML	AML		
	comp=E,6205μm,0.7s						
T1241				AML	AML		
	comp=N,9815μm,0.2s						
LNSS	**Leonessa**	**0.25**	**190**	⇓P	Pg	02 15 14.2	+0.5
LNSS				S	Sg	02 15 18.3	+1.1
LNSS				AML	AML		
	comp=E,2685μm,0.3s						
LNSS				AML	AML		
	comp=N,8160μm,0.4s						
LNSS				AML	AML		
	comp=E,8440μm,0.4s						
LNSS				AML	AML		
	comp=N,24100μm,0.2s						
CSP1	**Cessapalombo**	**0.26**	**18**	⇓P	Pg	02 15 14.2	+0.3
CSP1				S	Sg	02 15 18.5	+0.9
CSP1				AML	AML		
	comp=E,6410μm,1.3s						
CSP1				AML	AML		
	comp=N,7865μm,0.3s						
CSP1				AML	AML		
	comp=E,6415μm,1.3s						
GUMA	**Gualdo di Mace**	**0.28**	**39**	⇓P	Pb	02 15 14.9	-0.6
GUMA				S	Sb	02 15 19.6	-0.6
GUMA				AML	AML		
	comp=E,7300μm,1.3s						
GUMA				AML	AML		
	comp=N,10400μm,0.5s						
GUMA				AML	AML		
	comp=E,9995μm,0.6s						
GUMA				AML	AML		
	comp=N,8630μm,0.7s						
GUMA				AML	AML		
	comp=N,10350μm,0.5s						
GUMA				AML	AML		
	comp=E,7305μm,1.3s						
SMA1	**SAN MARTINO**	**0.28**	**141**	⇑P	Pg	02 15 14.7	+0.4
SMA1				S	Sg	02 15 19.1	+1.0
SMA1				AML	AML		
	comp=E,2980μm,0.4s						
SMA1				AML	AML		
	comp=N,3295μm,0.6s						
T1243	**Rocca Santa Ma**	**0.30**	**120**	⇓P	Pg	02 15 14.9	+0.3
T1243				S	Sg	02 15 19.3	+0.6
SEF1	**Sefro**	**0.32**	**340**	P	Pg	02 15 15.2	+0.2
SEF1				S	Sb	02 15 20.4	-1.0
SEF1				AML	AML		
	comp=N,4225μm,0.2s						
SEF1				AML	AML		
	comp=E,4675μm,0.7s						
RM33	**Pellescritta (**	**0.35**	**166**	P	Pg	02 15 15.9	+0.3
RM33				S	Sb	02 15 21.5	-0.8
RM33				AML	AML		
	comp=E,1645μm,0.6s						
RM33				AML	AML		
	comp=N,1370μm,1.4s						
RM33				AML	AML		
	comp=E,1635μm,0.6s						
RM33				AML	AML		
	comp=N,1365μm,1.4s						
RM33				AML	AML		
	comp=N,3340μm,0.5s						
RM33				AML	AML		
	comp=E,3605μm,0.6s						
RM33				AML	AML		
	comp=E,3610μm,0.6s						
RM33				AML	AML		
	comp=N,3315μm,0.5s						
T1211	**Morro Reatino**	**0.36**	**210**	P	Pg	02 15 16.0	+0.3
T1211				S	Sb	02 15 21.9	-0.8
T1211				AML	AML		
	comp=N,5245μm,1.3s						
T1211				AML	AML		
	comp=N,5130μm,1.3s						
T1211				AML	AML		
	comp=E,1885μm,0.3s						
T1211				AML	AML		
	comp=E,1965μm,0.3s						
T1211				AML	AML		
	comp=N,5135μm,1.3s						
ARRO	**Arrone**	**0.36**	**223**	⇑P	Pg	02 15 16.2	+0.4
ARRO				S	Sb	02 15 22.0	-0.6
ARRO				AML	AML		
	comp=N,1065μm,1.3s						
ARRO				AML	AML		
	comp=N,1060μm,1.3s						
ARRO				AML	AML		
	comp=E,1064μm,0.3s						
ASSB	**Assisi San Ben**	**0.38**	**301**	⇑P	Pg	02 15 14.6	-1.5
CAMP	**Campotosto**	**0.39**	**144**	⇓P	Pg	02 15 16.3	+0.1
CAMP				S	Sg	02 15 22.3	+0.9
CAMP				AML	AML		
	comp=E,764μm,0.2s						
CAMP				AML	AML		
	comp=N,541μm,0.5s						
GAG1	**Gagliole**	**0.39**	**357**	⇓P	Pg	02 15 16.7	+0.4
GAG1				S	Sb	02 15 23.0	-0.4
GAG1				AML	AML		
	comp=E,4260μm,1.4s						
GAG1				AML	AML		
	comp=E,4265μm,1.4s						
GAG1				AML	AML		
	comp=N,3940μm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**344**	⇓P	Pg	02 15 17.0	+0.1
SNTG				AML	AML		
	comp=E,684μm,0.9s						
SNTG				AML	AML		
	comp=N,730μm,0.2s						
SNTG				AML	AML		
	comp=E,684μm,0.9s						
SNTG				AML	AML		
	comp=N,730μm,0.2s						
SNTG				AML	AML		
	comp=E,714μm,0.9s						
SNTG				AML	AML		
	comp=N,863μm,0.2s						
SNTG				AML	AML		
	comp=E,684μm,0.9s						
SNTG				AML	AML		
	comp=E,714μm,0.9s						
T1247	**Pizzolo (AQ)**	**0.43**	**160**	P	Pg	02 15 17.3	+0.3
T1247				S	Sb	02 15 24.2	-0.4
T1247				AML	AML		
	comp=N,1750μm,0.5s						
T1247				AML	AML		
	comp=E,1505μm,0.4s						
T1247				AML	AML		
	comp=N,1755μm,0.5s						
TERO	**Teramo**	**0.43**	**121**	⇑P	Pg	02 15 17.2	+0.1
TERO				S	Sb	02 15 24.0	-0.7
TERO				AML	AML		
	comp=N,1535μm,0.4s						
TERO				AML	AML		
	comp=E,1645μm,0.4s						
OFFI	**Offida**	**0.44**	**78**	⇑P	Pb	02 15 18.2	0.0
OFFI				AML	AML		
	comp=E,2585μm,0.4s						
OFFI				AML	AML		
	comp=N,2030μm,0.6s						
CESX	**Cesi**	**0.45**	**238**	⇑P	Pg	02 15 17.2	-0.1
CESX				AML	AML		
	comp=N,1095μm,0.3s						
CESX				AML	AML		
	comp=E,1245μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.48**	**315**	⇓P	Pg	02 15 18.1	+0.2
ATCC				AML	AML		
	comp=E,1365μm,0.7s						
ATCC				AML	AML		
	comp=N,1760μm,0.4s						
ATCC				AML	AML		
	comp=E,1370μm,0.7s						
EL6	**Elcito**	**0.48**	**0**	⇓P	Pg	02 15 18.1	+0.1
EL6				AML	AML		
	comp=E,1865μm,1.4s						
EL6				AML	AML		
	comp=N,1975μm,0.3s						
EL6				AML	AML		
	comp=E,1860μm,1.4s						
EL6				AML	AML		
	comp=N,1974μm,0.3s						
FOSV	**Fossato di Vic**	**0.51**	**331**	P	Pg	02 15 18.4	-0.1
FOSV				AML	AML		
	comp=N,759μm,0.4s						
FOSV				AML	AML		
	comp=E,554μm,0.4s						
FOSV				AML	AML		
	comp=N,760μm,0.4s						
GIGS	**Gran Sasso**	**0.53**	**139**	P	Pg	02 15 18.7	-0.1
GIGS				S	Sg	02 15 26.4	+0.6
GIGS				AML	AML		
	comp=N,218μm,0.4s						
GIGS				AML	AML		
	comp=N,217μm,0.4s						
GIGS				AML	AML		
	comp=E,217μm,0.4s						
AQU	**L'Aquila**	**0.54**	**155**	⇑P	Pg	02 15 19.1	+0.1
AQU				AML	AML		
	comp=N,502μm,0.7s						
AQU				AML	AML		
	comp=N,521μm,0.6s						
AQU				AML	AML		
	comp=E,590μm,1.1s						
AQU				AML	AML		
	comp=N,502μm,0.7s						
AQU				AML	AML		
	comp=E,559μm,0.7s						
FIAM	**Fiamignano**	**0.58**	**179**	⇑P	Pg	02 15 19.8	0.0
FIAM				S	Sb	02 15 29.0	+0.1
FIAM				AML	AML		
	comp=E,922μm,1.0s						
FIAM				AML	AML		
	comp=E,923μm,1.0s						
FIAM				AML	AML		
	comp=N,572μm,0.4s						
MURB	**Monte Urbino**	**0.59**	**315**	⇑P	Pg	02 15 20.1	0.0
MURB				AML	AML		
	comp=E,2175μm,0.2s						
MURB				AML	AML		
	comp=N,1605μm,0.5s						
MURB				AML	AML		
	comp=N,1680μm,0.5s						
MURB				AML	AML		
	comp=E,2455μm,0.2s						
TRTR	**Tortoreto Alta**	**0.60**	**93**	⇓P	Pb	02 15 21.5	+0.5
TRTR				AML	AML		
	comp=E,2775μm,0.5s						
TRTR				AML	AML		
	comp=N,2025μm,1.4s						
ATFO	**Monte Foce - G**	**0.65**	**324**	P	Pg	02 15 21.1	0.0
ATFO				AML	AML		
	comp=E,402μm,0.5s						
ATFO				AML	AML		
	comp=N,456μm,0.4s						
PP3	**Marolino**	**0.65**	**35**	⇓P	Pb	02 15 22.1	+0.3
PP3				AML	AML		
	comp=E,1350μm,0.9s						
PP3				AML	AML		
	comp=N,2140μm,0.3s						
PP3				AML	AML		
	comp=N,2190μm,0.3s						
PP3				AML	AML		
	comp=E,1240μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.65**	**303**	P	Pg	02 15 21.4	+0.3
ATTE				AML	AML		
	comp=N,398μm,1.6s						
ATTE				AML	AML		
	comp=E,530μm,0.4s						
ARVD	**Arcevia**	**0.66**	**350**	⇓P	Pg	02 15 21.1	-0.2
ARVD				S	Sb	02 15 32.0	+0.8
ARVD				AML	AML		
	comp=E,473μm,0.6s						
ARVD				AML	AML		
	comp=N,348μm,0.9s						
FAGN	**Fagnano**	**0.68**	**148**	⇓P	Pb	02 15 22.1	-0.3
FAGN				S	Sb	02 15 33.0	+1.2
FAGN				AML	AML		
	comp=N,916μm,0.4s						
FAGN				AML	AML		
	comp=N,916μm,0.4s						
FAGN				AML	AML		
	comp=E,1465μm,0.5s						
VCEL	**Villa Celiera**	**0.71**	**129**	⇑P	Pg	02 15 22.5	+0.2
VCEL				AML	AML		
	comp=E,714μm,0.5s						
VCEL				AML	AML		
	comp=N,736μm,1.5s						
VCEL				AML	AML		
	comp=E,716μm,0.5s						
VCEL				AML	AML		
	comp=N,737μm,1.5s						
FRON	**Frontone**	**0.72**	**338**	P	Pg	02 15 22.2	-0.4
FRON				AML	AML		
	comp=E,324μm,0.5s						
FRON				AML	AML		
	comp=E,324μm,0.5s						
FRON				AML	AML		
	comp=N,473μm,0.3s						
MGAB	**Montegabbione**	**0.73**	**276**	⇓P	Pg	02 15 22.8	+0.2
MGAB				AML	AML		
	comp=E,948μm,0.6s						
MGAB				AML	AML		
	comp=E,1050μm,0.6s						
MGAB				AML	AML		
	comp=E,950μm,0.6s						
MGAB				AML	AML		
	comp=N,1310μm,0.3s						
MGAB				AML	AML		
	comp=N,1355μm,1.2s						
ATVO	**AVT- Monte Val**	**0.74**	**317**	⇓P	Pg	02 15 22.7	-0.1
ATVO				AML	AML		
	comp=E,310μm,1.3s						
ATVO				AML	AML		
	comp=N,388μm,0.9s						
SRES	**S.Oreste - Sor**	**0.75**	**216**	⇑P	Pg	02 15 23.2	+0.3
SRES				S	Sn	02 15 36.0	-0.3
SRES				AML	AML		
	comp=E,566μm,0.8s						
SRES				AML	AML		
	comp=N,644μm,0.4s						
ATMI	**Monte Miggiano**	**0.78**	**309**	⇑P	Pn	02 15 25.6	+0.2
ATPI	**Pietralunga -**	**0.79**	**320**	⇑P	Pg	02 15 23.9	+0.1
ATPI				AML	AML		
	comp=N,300μm,0.5s						
ATPI				AML	AML		
	comp=E,349μm,0.5s						
T0110	**Collepietro**	**0.80**	**141**	⇑P	Pg	02 15 23.6	-0.3
T0110				AML	AML		
	comp=E,894μm,1.4s						
T0110				AML	AML		
	comp=E,895μm,1.4s						
T0110				AML	AML		
	comp=N,991μm,0.4s						
PIEI	**Pieia**	**0.80**	**329**	⇓P	Pg	02 15 23.9	-0.1
PIEI				AML	AML		
	comp=E,226μm,1.3s						
PIEI				AML	AML		
	comp=N,225μm,0.3s						
MPAG	**Monte Paganucc**	**0.82**	**342**	⇑P	Pg	02 15 24.1	-0.3
MPAG				S	Sn	02 15 38.0	-0.2
MPAG				AML	AML		
	comp=N,286μm,1.4s						

MPAG				AML	AML		
	comp=E,316μm,0.7s						
MPAG				AML	AML		
	comp=N,286μm,1.4s						
SACS	**San Casciano d**	**0.88**	**271**	⇓P	Pg	02 15 25.5	+0.1
SACS				AML	AML		
	comp=N,378μm,0.7s						
SACS				AML	AML		
	comp=E,356μm,1.1s						
FSSB	**Fossombrone**	**0.88**	**345**	P	Pg	02 15 25.2	-0.3
FSSB				S	Sn	02 15 40.0	+0.5
FSSB				AML	AML		
	comp=E,888μm,1.2s						
FSSB				AML	AML		
	comp=N,1034μm,0.5s						
CERT	**Cerreto**	**0.90**	**186**	⇑P	Pg	02 15 26.0	+0.1
CERT				S	Sn	02 15 40.0	-0.1
CERT				AML	AML		
	comp=E,740μm,0.4s						
CERT				AML	AML		
	comp=N,480μm,1.6s						
BADI	**Badiali**	**0.91**	**317**	P	Pg	02 15 25.9	-0.1
PE3	**Peglio**	**0.96**	**333**	⇓P	Pb	02 15 27.2	+0.1
PE3				AML	AML		
	comp=N,4μm,1.2s						
PE3				AML	AML		
	comp=E,4μm,1.5s						
CAFI	**Castiglion Fio**	**0.96**	**301**	⇓P	Pb	02 15 27.4	+0.2
CAFI				AML	AML		
	comp=E,382μm,0.6s						
CAFI				AML	AML		
	comp=N,372μm,0.9s						
LATE	**Laterza**	**0.98**	**257**	P	Pg	02 15 27.3	-0.2
SF04	**Casetta**	**1.06**	**270**	⇑P	Pn	02 15 29.7	+0.4
TOLF	**Tolfa**	**1.13**	**226**	S	Sn	02 15 47.0	+1.3
LPEL	**Lama dei Pelig**	**1.13**	**135**	P	Pb	02 15 29.1	-1.0
LPEL				AML	AML		
	comp=E,312μm,0.8s						
LPEL				AML	AML		
	comp=N,288μm,0.5s						
CRE	**Caprese Michel**	**1.14**	**313**	⇑P	Pn	02 15 31.5	+1.1
GIUL	**Giuliano Di Ro**	**1.29**	**175**	⇑P	Pg	02 15 33.4	+0.1
LATB	**Latina**	**1.36**	**184**	⇑P	Pn	02 15 33.0	-0.2
LATB				AML	AML		
	comp=N,47μm,1.6s						
LATB				AML	AML		
	comp=E,58μm,0.9s						
CAVE	**Cavezzo**	**2.52**	**324**	S	Sb	02 16 25.0	+0.2
OBKA	**Obir**	**3.81**	**15**	*e*Pn	Pn	02 16 08.2	+1.1
	comp=E,0.2nm,0.2s						
ABTA	**Abfaltersbach**	**3.92**	**354**	*e*Pn	Pn	02 16 09.9	+1.2
	comp=E,0.7nm,0.2s						
FETA	**Feichten**	**4.50**	**339**	*e*Pn	Pn	02 16 19.2	+2.5
	comp=E,0.3nm,0.3s						
WTTA	**Wattenberg**	**4.54**	**347**	*e*Pn	Pn	02 16 18.5	+1.3
	comp=E,0.3nm,0.2s						
SQTA	**Sankt Quirin**	**4.57**	**344**	*e*Pn	Pn	02 16 19.2	+1.5
	comp=E,0.4nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.86**	**4**	*e*Pn	Pn	02 16 23.2	+1.7
	comp=E,0.5nm,0.3s						
MOA	**Molln**	**5.07**	**9**	*e*Pn	Pn	02 16 25.8	+1.4
	comp=E,0.1nm,0.1s						
CONA	**Conrad Observa**	**5.44**	**20**	*e*Pn	Pn	02 16 30.7	+1.1
	comp=E,0.5nm,0.2s						
KHC	**Kasperske Hory**	**6.29**	**3**	*e*PN	Pg	02 17 06.7	-2.3
KHC				*e*SN	Sb	02 18 11.7	-1.6

GUC ***31*** *02:15:11.5±0.8, 31°.84S×71°.58W, h41km±2km, ML4.0*
NEIC ***31*** *02:15:11.1±1.0, 31°.83S±0°.02×71°.69W±0°.08, h19km±6km, mb4.3/1, ML4.0(GUC), Error ellipse: s-maj=10.8km s-min=1.9km az=103.0*

ISC 31 02:15:09.5±1.3, 31°.84S±0°.02×71°.66W±0°.07, h10km±10km, n45, ₙ0 ₑ71/62, 1C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.78**	**157**		**Pb**	**02 15 26.0**	**+0.8**
VA06				Sg	**Sb**	**02 15 36.5**	**+0.7**
VA06	**Catapilco**	**0.78**	**157**	⇓*i*P	**Pn**	**02 15 26.2**	**-0.3**
VA06				*i* S	**Sb**	**02 15 36.6**	**+0.9**
VA06				IAML		02 15 37.4	
	comp=N,16μm,0.3s						
CO02	**Combarbal**	**0.85**	**41**		**Pn**	**02 15 26.8**	**-0.8**
CO02				Sg	**Sb**	**02 15 37.7**	**-0.2**
CO02	**Combarbal**	**0.85**	**41**	⇓*i*P	**Pn**	**02 15 26.8**	**-0.8**
CO02				*i* S	**Sb**	**02 15 37.9**	**0.0**
CO02				IAML		02 15 40.3	
	comp=E,17μm,0.2s						
CO06	**Fray Jorge**	**1.17**	**1**		**Pg**	**02 15 31.8**	**-0.1**
CO06					**Sg**	**02 15 47.4**	**+0.3**
CO06	**Fray Jorge**	**1.17**	**1**	⇓*i*P	**Pg**	**02 15 31.9**	**-0.1**
CO06				*i* S	**Sg**	**02 15 47.4**	**+0.3**
CO06				IAML		02 15 49.4	
	comp=N,3μm,0.5s						
ROCH	**El Roble**	**1.25**	**154**	⇓*i*P	**Pb**	**02 15 33.3**	**-0.1**
ROCH				⇓*i*P	**Pb**	**02 15 33.3**	**-0.1**
ROCH				*i* S	**Sn**	**02 15 49.9**	**-0.4**
ROCH				*i* S	**Sb**	**02 15 50.2**	**+0.6**
ROCH				IAML		02 15 53.8	
	comp=N,5μm,0.6s						
ROCH				IAML		02 15 54.1	
	comp=N,7μm,0.4s						
ROC1	**El Roble**	**1.25**	**155**	Pn	**Pg**	**02 15 33.1**	**-0.5**
CO03	**El Pedregal**	**1.30**	**40**	Pn	**Pn**	**02 15 34.1**	**+0.3**
VA03	**San Esteban**	**1.31**	**135**	Pn	**Pn**	**02 15 34.3**	**+0.2**
VA03	**San Esteban**	**1.31**	**135**	⇓*i*P	**Pn**	**02 15 34.2**	**+0.2**
VA03				*i* S	**Sn**	**02 15 50.9**	**-0.7**
VA03				IAML		02 15 55.5	
	comp=E,7μm,0.1s						
MT02	**Curacav**	**1.48**	**163**	Pn	**Pn**	**02 15 36.5**	**+0.3**
MT02	**Curacav**	**1.48**	**163**	*e*P	**Pn**	**02 15 36.6**	**+0.3**
MT02				*i* S	**Sb**	**02 15 56.0**	**0.0**
MT02				IAML		02 16 05.5	
	comp=E,951nm,0.3s						
MT05	**Renca**	**1.73**	**154**	Pn	**Pn**	**02 15 40.5**	**+0.8**
MT05	**Renca**	**1.73**	**154**	*e*P	**Pb**	**02 15 40.9**	**-0.5**
MT05				*i* S	**Sb**	**02 16 02.5**	**-0.7**
MT05				IAML		02 16 13.1	
	comp=E,4μm,0.1s						
VA05	**Santo Domingo**	**1.81**	**179**	Pn	**Pn**	**02 15 40.8**	**+0.1**
VA05	**Santo Domingo**	**1.81**	**179**	*e*P	**Pn**	**02 15 41.0**	**+0.2**
VA05				IAML		02 16 14.0	
	comp=E,3μm,0.4s						
GO04	**Tololo Observa**	**1.82**	**24**	Pn	**Pn**	**02 15 41.6**	**+0.5**
GO04	**Tololo Observa**	**1.82**	**24**	⇑*i*P	**Pn**	**02 15 41.5**	**+0.5**
GO04				*i* S	**Sn**	**02 16 04.8**	**+0.4**
FCH	**Farellones**	**1.88**	**142**	⇓*i*P	**Pb**	**02 15 43.0**	**-1.1**
FCH				*i* S	**Sb**	**02 16 06.4**	**-1.3**
FCH				IAML		02 16 12.7	
	comp=N,826nm,0.1s						
MT03	**Universidad Ad**	**1.91**	**150**	Pn	**Pb**	**02 15 43.4**	**-1.1**
CO05	**La Serena**	**1.95**	**11**	Pn	**Pn**	**02 15 42.7**	**0.0**
CO05	**La Serena**	**1.95**	**11**	*e*P	**Pn**	**02 15 42.9**	**+0.2**
CO05				*i* S	**Sn**	**02 16 07.8**	**+0.6**
CO05				IAML		02 16 13.1	
	comp=N,2μm,0.2s						
MT09	**Talagante**	**2.01**	**164**	Pn	**Pn**	**02 15 44.6**	**+0.9**
MT09	**Talagante**	**2.01**	**164**	⇓*i*P	**Pn**	**02 15 45.2**	**+1.5**
MT09				*i* S	**Sn**	**02 16 09.8**	**+1.0**
MT09				IAML		02 16 20.7	
	comp=E,2μm,0.2s						
MT01	**Popeta**	**2.04**	**171**	Pn	**Pn**	**02 15 44.4**	**+0.4**
MT01	**Popeta**	**2.04**	**171**	⇓*i*P	**Pn**	**02 15 44.7**	**+0.7**
MT01				*i* S	**Sn**	**02 16 10.0**	**+0.5**
MT01				IAML		02 16 18.2	
	comp=E,908nm,0.4s						
CO01	**Juntas del Tor**	**2.29**	**36**		**Pn**	**02 15 49.0**	**+1.4**
LMEL	**Las Melosas**	**2.34**	**149**	Pn	**Pn**	**02 15 49.9**	**+1.6**
ZON	**Zonda**	**2.55**	**84**	Pn	**Pb**	**02 15 54.5**	**-0.9**
BO01	**Tunca**	**2.59**	**170**	Pn	**Pn**	**02 15 52.0**	**+0.6**
LCO	**Las Campanas**	**2.94**	**17**	Pn	**Pn**	**02 15 56.9**	**+0.3**
BO02	**Sierra Bellavi**	**3.03**	**166**	Pn	**Pn**	**02 15 58.7**	**+1.1**
GO05	**Huala**	**3.17**	**184**	Pn	**Pn**	**02 15 58.9**	**-0.6**
AC05	**El Transito**	**3.23**	**22**	Pn	**Pn**	**02 16 01.1**	**+0.8**
AC04	**Llanos de Chal**	**3.66**	**8**	Pn	**Pn**	**02 16 05.9**	**-0.3**
GO03	**Copiap**	**4.41**	**17**	Pn	**Pn**	**02 16 16.9**	**+0.3**
AC02	**Maricunga**	**5.45**	**24**	Pn	**Pn**	**02 16 31.6**	**+0.3**
GO06	**Curarrehue**	**7.73**	**179**	Pn	**Pn**	**02 17 02.8**	**+0.6**
PLCA	**Paso Flores**	**8.92**	**175**	Pn	**Pn**	**02 17 19.2**	**+0.7**
TRQA	**Tornquist**	**10.07**	**131**	Pn	**Pn**	**02 17 34.8**	**+0.6**
ITQB	**Itaqui**	**13.11**	**84**	Pn	**Pn**	**02 18 16.4**	**+0.6**
CPUP	**Villa Florida**	**13.67**	**70**	Pn	**Pn**	**02 18 24.6**	**+1.1**
SNAA	**Sanae**	**53.46**	**158**	P	**P**	**02 24 28.5**	**-1.0**
SNAA				IAmb	IAmb	02 24 44.6	
	comp=Z,4.3nm,1.2s						
TXAR	**Lajitas Array**	**68.02**	**330**	P	**P**	**02 26 08.7**	**-0.4**

ROM 31 02:15:29.6±0.0, 42°.832N±0°.003×13°.119E±0°.004, h10km, ML3.1/21, 7C-8D, Error ellipse: s-maj=0.3km s-min=0.3km az=36.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**64**	P	Pg	02 15 32.2	+0.4
T1245				S	Sg	02 15 34.0	+0.5
T1245				AML	AML		
	comp=E,70750μm,0.2s						
T1245				AML	AML		
	comp=N,80600μm,0.2s						
T1245				AML	AML		
	comp=N,80650μm,0.2s						
T1245				AML	AML		
	comp=E,65450μm,0.3s						
T1245				AML	AML		
	comp=N,86500μm,0.2s						
T1245				AML	AML		
	comp=E,70750μm,0.2s						
T1216	**Preci, Frazion**	**0.09**	**309**	P	Pg	02 15 32.6	+0.4
T1216				S	Sg	02 15 34.5	+0.4
FEMA	**Monte Fema**	**0.14**	**339**	⇓P	Pg	02 15 33.4	+0.5
FEMA				S	Sg	02 15 35.8	+0.6
FEMA				AML	AML		
	comp=N,24150μm,0.6s						
FEMA				AML	AML		
	comp=N,24200μm,0.6s						
FEMA				AML	AML		
	comp=E,21750μm,0.6s						
MMO1	**Montemonaco**	**0.17**	**66**	⇓P	Pg	02 15 33.8	+0.5
MMO1				S	Sg	02 15 36.6	+0.8
T1217	**Poggiodomo (PG**	**0.18**	**229**	P	Pg	02 15 34.0	+0.5
T1215	**Vallo di Nera,**	**0.19**	**261**	P	Pg	02 15 34.1	+0.5
T1215				S	Sg	02 15 37.3	+1.0
T1215				AML	AML		
	comp=E,3410μm,0.2s						
T1215				AML	AML		
	comp=N,4765μm,1.1s						
T1215				AML	AML		
	comp=N,7745μm,0.3s						
T1215				AML	AML		
	comp=E,6160μm,0.3s						
T1215				AML	AML		
	comp=N,8195μm,0.3s						
T1215				AML	AML		
	comp=N,7750μm,0.3s						
T1215				AML	AML		
	comp=N,8200μm,0.3s						
T1215				AML	AML		
	comp=E,6755μm,0.3s						
T1204	**Amatrice, Fraz**	**0.21**	**137**	⇓P	Pg	02 15 34.8	+0.7
T1204				S	Sg	02 15 38.8	+1.6
T1204				AML	AML		
	comp=E,3610μm,0.3s						
T1204				AML	AML		
	comp=N,2175μm,0.3s						
T1204				AML	AML		
	comp=E,10035μm,0.1s						
T1204				AML	AML		
	comp=N,4945μm,0.1s						
T1204				AML	AML		
	comp=E,10030μm,0.1s						
AM05	**Amandola Campo**	**0.23**	**50**	P	Pg	02 15 34.8	+0.6
AM05				S	Sg	02 15 38.5	+1.1
T1241	**Roccafluvione,**	**0.23**	**84**	⇑P	Pg	02 15 35.0	+0.7
T1241				S	Sg	02 15 39.0	+1.4
T1241				AML	AML		
	comp=E,6210μm,0.7s						
T1241				AML	AML		
	comp=N,59200μm,0.6s						
T1241				AML	AML		
	comp=E,6205μm,0.7s						
T1241				AML	AML		
	comp=N,9845μm,0.2s						
T1241				AML	AML		
	comp=E,6210μm,0.7s						
T1241				AML	AML		
	comp=N,9820μm,0.2s						
T1241				AML	AML		
	comp=E,7270μm,0.7s						
T1241				AML	AML		
	comp=N,59150μm,0.6s						
T1241				AML	AML		
	comp=E,6205μm,0.7s						
T1241				AML	AML		
	comp=N,9815μm,0.2s						
LNSS	**Leonessa**	**0.24**	**194**	⇑P	Pg	02 15 35.1	+0.6
LNSS				AML	AML		
	comp=E,8440μm,0.4s						
LNSS				AML	AML		
	comp=N,24100μm,0.2s						
LNSS				AML	AML		
	comp=N,27050μm,0.8s						
SMA1	**SAN MARTINO**	**0.26**	**142**	P	Pg	02 15 35.6	+0.7
SMA1				AML	AML		
	comp=E,2980μm,0.4s						
SMA1				AML	AML		
	comp=N,3295μm,0.6s						
SMA1				AML	AML		
	comp=E,11900μm,0.4s						
SMA1				AML	AML		
	comp=N,10070μm,0.3s						
CSP1	**Cessapalombo**	**0.27**	**14**	⇑P	Pg	02 15 35.5	+0.4
CSP1				S	Sg	02 15 39.9	+1.1
T1243	**Rocca Santa Ma**	**0.28**	**119**	P	Pg	02 15 35.7	+0.5
T1243				S	Sg	02 15 40.0	+0.9
GUMA	**Gualdo di Mace**	**0.28**	**35**	⇑P	Pb	02 15 36.0	-0.7
GUMA				S	Sb	02 15 40.9	-0.5
GUMA				AML	AML		
	comp=E,7300μm,1.3s						
GUMA				AML	AML		
	comp=N,10400μm,0.5s						
GUMA				AML	AML		
	comp=N,10350μm,0.5s						
GUMA				AML	AML		
	comp=E,7305μm,1.3s						
RM33	**Pellescritta (**	**0.33**	**168**	⇓P	Pg	02 15 36.7	+0.5
RM33				S	Sb	02 15 42.2	-0.7
RM33				AML	AML		
	comp=E,3450μm,0.5s						
RM33				AML	AML		
	comp=N,3250μm,0.5s						
RM33				AML	AML		
	comp=E,3035μm,0.5s						
RM33				AML	AML		
	comp=N,2700μm,0.4s						
RM33				AML	AML		
	comp=N,3655μm,0.5s						
RM33				AML	AML		
	comp=N,3675μm,0.6s						
RM33				AML	AML		
	comp=N,3650μm,0.5s						
RM33				AML	AML		
	comp=E,3605μm,0.6s						
RM33				AML	AML		
	comp=E,3640μm,0.6s						
SEF1	**Sefro**	**0.34**	**338**	P	Pg	02 15 36.9	+0.6
SEF1				S	Sg	02 15 42.0	+1.1
SEF1				AML	AML		
	comp=E,4670μm,0.7s						
SEF1				AML	AML		
	comp=N,4225μm,0.2s						
T1211	**Morro Reatino**	**0.36**	**213**	P	Pg	02 15 37.1	+0.5
T1211				AML	AML		
	comp=E,5020μm,0.3s						
T1211				AML	AML		
	comp=E,5070μm,0.3s						
T1211				AML	AML		
	comp=N,6490μm,0.3s						
T1211				AML	AML		
	comp=N,6420μm,0.3s						
T1211				AML	AML		
	comp=E,5075μm,0.3s						
T1211				AML	AML		
	comp=E,5020μm,0.3s						
MDAR	**Monte D'Aria**	**0.36**	**3**	P	Pg	02 15 37.4	+0.6
MDAR				AML	AML		
	comp=E,2525μm,0.4s						
MDAR				AML	AML		
	comp=N,2835μm,0.5s						
ARRO	**Arrone**	**0.36**	**226**	⇑P	Pg	02 15 37.2	+0.4
ARRO				S	Sb	02 15 43.6	-0.1
ARRO				AML	AML		
	comp=N,3145μm,0.2s						
ARRO				AML	AML		
	comp=E,3635μm,1.5s						
CAMP	**Campotosto**	**0.36**	**144**	P	Pg	02 15 37.1	+0.2
CAMP				S	Sb	02 15 43.0	-1.0
CAMP				AML	AML		
	comp=E,1625μm,0.5s						
CAMP				AML	AML		
	comp=N,1525μm,0.9s						
ASSB	**Assisi San Ben**	**0.40**	**302**	⇓P	Pg	02 15 37.8	+0.4
MNTP	**Montappone**	**0.40**	**40**	P	Pb	02 15 38.4	-0.4
MNTP				AML	AML		
	comp=N,3475μm,0.3s						
MNTP				AML	AML		
	comp=E,3580μm,0.2s						
GAG1	**Gagliole**	**0.41**	**355**	P	Pb	02 15 38.2	-0.6
T1247	**Pizzolo (AQ)**	**0.41**	**161**	⇓P	Pg	02 15 38.1	+0.4
T1247				AML	AML		
	comp=E,3420μm,0.7s						
T1247				AML	AML		
	comp=N,3545μm,1.0s						
TERO	**Teramo**	**0.41**	**120**	P	Pg	02 15 38.0	+0.3
TERO				S	Sb	02 15 44.4	-1.0
TERO				AML	AML		
	comp=E,1645μm,0.4s						
TERO				AML	AML		
	comp=N,1535μm,0.4s						
TERO				AML	AML		
	comp=N,2975μm,0.9s						
TERO				AML	AML		
	comp=E,4620μm,1.3s						
OFFI	**Offida**	**0.43**	**76**	⇑P	Pb	02 15 39.2	0.0
OFFI				AML	AML		
	comp=N,7895μm,0.4s						
OFFI				AML	AML		
	comp=E,6790μm,0.5s						
SNTG	**Esanatoglia**	**0.44**	**343**	⇓P	Pg	02 15 38.7	+0.5
SNTG				AML	AML		
	comp=E,714μm,0.9s						
SNTG				AML	AML		
	comp=N,863μm,0.2s						
SNTG				AML	AML		
	comp=E,714μm,0.9s						
CESX	**Cesi**	**0.46**	**241**	⇑P	Pg	02 15 38.6	+0.2
CESX				AML	AML		
	comp=E,2510μm,0.2s						
CESX				AML	AML		
	comp=N,2095μm,0.5s						
EL6	**Elcito**	**0.50**	**359**	S	Sb	02 15 48.0	+0.2
ATCC	**AVT- Casa Cast**	**0.50**	**315**	⇓P	Pg	02 15 39.8	+0.5
ATCC				AML	AML		
	comp=N,1760μm,0.4s						
ATCC				AML	AML		
	comp=E,1365μm,0.7s						
ATCC				AML	AML		
	comp=E,1370μm,0.7s						
GIGS	**Gran Sasso**	**0.51**	**139**	P	Pg	02 15 39.5	+0.1
GIGS				S	Sb	02 15 47.3	-0.7
GIGS				AML	AML		
	comp=N,774μm,0.8s						
GIGS				AML	AML		
	comp=E,442μm,0.2s						
FOSV	**Fossato di Vic**	**0.53**	**331**	P	Pb	02 15 41.3	+0.3
FOSV				AML	AML		
	comp=N,759μm,0.4s						
FOSV				AML	AML		
	comp=N,760μm,0.4s						
FOSV				AML	AML		
	comp=E,554μm,0.4s						
FIAM	**Fiamignano**	**0.56**	**180**	S	Sb	02 15 50.0	+0.3
ARVD	**Arcevia**	**0.68**	**349**	S	Sb	02 15 54.0	+1.1

ROM 31 02:16:19.0±0.1, 42°.704N±0°.003×13°.115E±0°.004, h13km±1km, ML2.9/36, 21C-22D, Error ellipse: s-maj=0.3km s-min=0.1km az=191.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.12**	**209**	⇑P	Pg	02 16 22.6	+0.3
LNSS				S	Sg	02 16 25.1	+0.5
LNSS				AML	AML		
	comp=E,8440μm,0.4s						
LNSS				AML	AML		
	comp=N,27050μm,0.8s						
T1217	**Poggiodomo (PG**	**0.14**	**274**	⇑P	Pg	02 16 22.8	+0.3
T1217				S	Sg	02 16 25.5	+0.5
T1217				AML	AML		
	comp=E,7420μm,0.6s						
T1217				AML	AML		
	comp=N,6305μm,0.4s						
T1217				AML	AML		
	comp=E,7155μm,0.6s						
T1217				AML	AML		
	comp=N,6200μm,0.4s						
T1217				AML	AML		
	comp=N,6305μm,0.5s						
T1217				AML	AML		
	comp=E,7155μm,0.5s						
T1217				AML	AML		
	comp=N,6200μm,0.5s						
T1217				AML	AML		
	comp=E,7425μm,0.6s						
T1217				AML	AML		
	comp=N,6195μm,0.4s						
T1217				AML	AML		
	comp=E,7160μm,0.6s						
T1204	**Amatrice, Fraz**	**0.15**	**100**	⇓P	Pg	02 16 23.1	+0.3
T1204				S	Sb	02 16 26.2	-0.7
T1204				AML	AML		
	comp=N,4950μm,0.1s						
T1204				AML	AML		
	comp=E,10045μm,0.1s						
T1204				AML	AML		
	comp=E,10035μm,0.1s						
T1204				AML	AML		
	comp=N,4945μm,0.1s						
T1204				AML	AML		
	comp=E,10030μm,0.1s						
T1245	**Castelsantange**	**0.16**	**19**	P	Pg	02 16 23.2	+0.2
T1245				S	Sg	02 16 26.1	+0.3
T1245				AML	AML		
	comp=E,13150μm,0.7s						
T1245				AML	AML		
	comp=E,13550μm,0.7s						
T1245				AML	AML		
	comp=E,13100μm,0.7s						
T1245				AML	AML		
	comp=N,14550μm,0.3s						
T1245				AML	AML		
	comp=N,15000μm,0.3s						
SMA1	**SAN MARTINO**	**0.18**	**114**	P	Pg	02 16 23.4	+0.3
SMA1				S	Sb	02 16 27.1	-0.6
T1216	**Preci, Frazion**	**0.20**	**339**	⇓P	Pg	02 16 23.9	+0.4
T1216				S	Sg	02 16 27.1	+0.6
T1216				AML	AML		
	comp=E,5015μm,0.3s						
T1216				AML	AML		
	comp=N,8835μm,1.6s						
T1216				AML	AML		
	comp=E,5010μm,0.3s						
T1216				AML	AML		
	comp=N,8825μm,1.6s						
T1216				AML	AML		
	comp=E,5335μm,0.3s						
T1216				AML	AML		
	comp=N,8850μm,1.6s						
T1215	**Vallo di Nera,**	**0.21**	**298**	⇑P	Pg	02 16 23.9	+0.3
T1215				S	Sg	02 16 27.4	+0.7
T1215				AML	AML		
	comp=N,7745μm,0.3s						
T1215				AML	AML		
	comp=E,6160μm,0.3s						
T1215				AML	AML		
	comp=N,8200μm,0.3s						
T1215				AML	AML		
	comp=N,8195μm,0.3s						
T1215				AML	AML		
	comp=N,7750μm,0.3s						
T1215				AML	AML		
	comp=N,8200μm,0.3s						
T1215				AML	AML		
	comp=E,6755μm,0.3s						

RM33	**Pellescritta (**	**0.21 159**	⇓P	Pg	02 16 23.9	+0.3
RM33			S	Sb	02 16 27.7	-0.9
RM33			AML	AML		
	comp=N,3675μm,0.5s					
RM33			AML	AML		
	comp=E,3035μm,0.5s					
RM33			AML	AML		
	comp=N,3655μm,0.5s					
RM33			AML	AML		
	comp=N,3650μm,0.5s					
RM33			AML	AML		
	comp=E,3605μm,0.6s					
RM33			AML	AML		
	comp=E,3640μm,0.6s					
T1243	**Rocca Santa Ma**	**0.25 91**	⇓P	Pg	02 16 24.4	+0.1
T1243			S	Sg	02 16 28.6	+0.8
MMO1	**Montemonaco**	**0.25 38**	P	Pg	02 16 24.5	+0.2
MMO1			S	Sg	02 16 28.8	+0.8
T1211	**Morro Reatino**	**0.26 228**	⇑P	Pg	02 16 24.9	+0.4
T1211			S	Sb	02 16 29.1	-0.8
T1211			AML	AML		
	comp=E,5015μm,0.3s					
T1211			AML	AML		
	comp=N,6420μm,0.3s					
T1211			AML	AML		
	comp=E,5075μm,0.3s					
T1211			AML	AML		
	comp=N,6490μm,0.3s					
T1211			AML	AML		
	comp=E,5020μm,0.3s					
T1211			AML	AML		
	comp=E,5070μm,0.3s					
T1211			AML	AML		
	comp=E,5020μm,0.3s					
T1211			AML	AML		
	comp=N,6495μm,0.3s					
FEMA	**Monte Fema**	**0.26 349**	⇓P	Pg	02 16 23.0	-1.6
CAMP	**Campotosto**	**0.27 128**	⇓P	Pg	02 16 25.0	+0.2
CAMP			S	Sg	02 16 29.4	+0.7
CAMP			AML	AML		
	comp=N,1525μm,0.9s					
CAMP			AML	AML		
	comp=E,1625μm,0.5s					
T1241	**Roccafluvione,**	**0.28 57**	P	Pg	02 16 25.2	+0.4
T1241			S	Sg	02 16 29.6	+0.8
T1241			AML	AML		
	comp=E,4485μm,0.3s					
T1241			AML	AML		
	comp=E,4420μm,0.3s					
T1241			AML	AML		
	comp=N,3240μm,1.4s					
T1241			AML	AML		
	comp=N,3320μm,1.4s					
T1241			AML	AML		
	comp=E,4480μm,0.3s					
ARRO	**Arrone**	**0.29 244**	⇑P	Pg	02 16 25.4	+0.4
ARRO			S	Sb	02 16 30.2	-0.5
ARRO			AML	AML		
	comp=E,3640μm,1.5s					
ARRO			AML	AML		
	comp=N,3150μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.29 153**	⇓P	Pg	02 16 25.4	+0.3
T1247			AML	AML		
	comp=E,3415μm,0.7s					
T1247			AML	AML		
	comp=N,3545μm,1.0s					
T1247			AML	AML		
	comp=E,3420μm,0.7s					
AM05	**Amandola Campo**	**0.33 32**	P	Pg	02 16 26.1	+0.4
AM05			AML	AML		
	comp=N,978μm,0.6s					
AM05			AML	AML		
	comp=N,264μm,0.6s					
AM05			AML	AML		
	comp=N,980μm,0.6s					
AM05			AML	AML		
	comp=E,850μm,1.2s					
AM05			AML	AML		
	comp=E,3565μm,0.7s					
TERO	**Teramo**	**0.37 102**	P	Pg	02 16 26.4	-0.1
TERO			S	Sg	02 16 32.1	+0.7
TERO			AML	AML		
	comp=E,4620μm,1.3s					
TERO			AML	AML		
	comp=N,2975μm,0.9s					
GUMA	**Gualdo di Mace**	**0.39 24**	P	Pb	02 16 27.5	-0.4
GUMA			AML	AML		
	comp=N,6550μm,0.3s					
GUMA			AML	AML		
	comp=E,5605μm,1.6s					
GUMA			AML	AML		
	comp=N,7025μm,0.7s					
GUMA			AML	AML		
	comp=E,7515μm,0.5s					
GUMA			AML	AML		
	comp=N,6555μm,0.3s					
CESX	**Cesi**	**0.41 257**	⇑P	Pg	02 16 27.2	+0.1
CESX			AML	AML		
	comp=E,2510μm,0.2s					
CESX			AML	AML		
	comp=N,2095μm,0.5s					
AQU	**L'Aquila**	**0.41 149**	P	Pg	02 16 27.4	+0.2
AQU			AML	AML		
	comp=E,1221μm,0.2s					
AQU			AML	AML		
	comp=N,1130μm,1.2s					
AQU			AML	AML		
	comp=E,1216μm,0.2s					
AQU			AML	AML		
	comp=N,1145μm,1.2s					
AQU			AML	AML		
	comp=E,1250μm,0.2s					
GIGS	**Gran Sasso**	**0.42 127**	P	Pg	02 16 27.2	-0.2
GIGS			AML	AML		
	comp=N,774μm,0.8s					
GIGS			AML	AML		
	comp=E,442μm,0.2s					
FIAM	**Fiamignano**	**0.43 180**	P	Pg	02 16 27.9	+0.2
ASSB	**Assisi San Ben**	**0.48 315**	⇑P	Pg	02 16 28.6	+0.2
ASSB			AML	AML		
	comp=E,2440μm,0.2s					
ASSB			AML	AML		
	comp=N,2420μm,0.6s					
OFFI	**Offida**	**0.48 61**	⇓P	Pb	02 16 29.5	+0.2
OFFI			AML	AML		
	comp=E,6790μm,0.5s					
OFFI			AML	AML		
	comp=N,7895μm,0.4s					
FAGN	**Fagnano**	**0.56 141**	P	Pb	02 16 30.6	-0.1
SNTG	**Esanatoglia**	**0.57 347**	⇑P	Pg	02 16 27.5	-2.6
SNTG			S	Sb	02 16 40.0	+1.2
ATCC	**AVT- Casa Cast**	**0.59 324**	⇓P	Pg	02 16 30.7	+0.1
ATCC			AML	AML		
	comp=N,1064μm,0.4s					
ATCC			AML	AML		
	comp=N,1065μm,0.4s					
ATCC			AML	AML		
	comp=E,1125μm,0.3s					
TRTR	**Tortoreto Alta**	**0.60 80**	⇑P	Pb	02 16 31.7	+0.4
TRTR			AML	AML		
	comp=E,4905μm,0.5s					
TRTR			AML	AML		
	comp=N,3365μm,1.3s					
VCEL	**Villa Celiera**	**0.62 120**	P	Pg	02 16 31.2	+0.1
VCEL			AML	AML		
	comp=N,2590μm,0.9s					
VCEL			AML	AML		
	comp=E,2590μm,0.2s					
EL6	**Elcito**	**0.63 359**	⇑P	Pg	02 16 31.2	0.0
FOSV	**Fossato di Vic**	**0.65 336**	⇓P	Pg	02 16 31.5	-0.1
FOSV			AML	AML		
	comp=N,589μm,0.5s					
FOSV			AML	AML		
	comp=E,348μm,1.2s					
SRES	**S.Oreste - Sor**	**0.65 224**	⇑P	Pb	02 16 32.1	0.0
SRES			AML	AML		
	comp=E,502μm,0.4s					
SRES			AML	AML		
	comp=N,468μm,0.4s					
SRES			AML	AML		
	comp=E,502μm,0.4s					
T0110	**Collepietro**	**0.69 134**	P	Pg	02 16 32.0	-0.3
T0110			AML	AML		
	comp=N,1156μm,0.3s					
T0110			AML	AML		
	comp=E,1625μm,0.3s					
T0110			AML	AML		
	comp=N,1156μm,0.3s					
MURB	**Monte Urbino**	**0.71 322**	⇑P	Pg	02 16 33.0	+0.2
MURB			S	Sn	02 16 45.0	-0.6
MURB			AML	AML		
	comp=E,2955μm,0.2s					
MURB			AML	AML		
	comp=N,2750μm,0.9s					
MURB			AML	AML		
	comp=E,3205μm,0.3s					
MURB			AML	AML		
	comp=N,2775μm,0.9s					
ATTE	**AVT- Monte Tez**	**0.75 312**	⇑P	Pg	02 16 33.6	+0.1
ATTE			AML	AML		
	comp=N,511μm,0.3s					
ATTE			AML	AML		
	comp=E,431μm,0.4s					
ATTE			AML	AML		
	comp=N,512μm,0.3s					
CERT	**Cerreto**	**0.76 188**	⇑P	Pg	02 16 33.8	0.0
PP3	**Marolino**	**0.77 28**	⇓P	Pb	02 16 34.7	+0.6
PP3			AML	AML		
	comp=E,2785μm,0.5s					
PP3			AML	AML		
	comp=N,2685μm,0.4s					
PP3			AML	AML		
	comp=E,2790μm,0.5s					
PP3			AML	AML		
	comp=E,2925μm,0.4s					
PP3			AML	AML		
	comp=N,2815μm,0.4s					
MGAB	**Montegabbione**	**0.77 286**	⇓P	Pg	02 16 33.9	0.0
MGAB			AML	AML		
	comp=E,1310μm,1.0s					
MGAB			AML	AML		
	comp=E,1305μm,1.0s					
MGAB			AML	AML		
	comp=N,1179μm,1.2s					
MGAB			AML	AML		
	comp=N,1120μm,1.2s					
MGAB			AML	AML		
	comp=E,1475μm,1.0s					
ATFO	**Monte Foce - G**	**0.77 329**	⇑P	Pg	02 16 33.9	-0.2
ATFO			AML	AML		
	comp=E,532μm,1.2s					
ATFO			AML	AML		
	comp=E,531μm,1.2s					
ATFO			AML	AML		
	comp=N,641μm,0.4s					
ARVD	**Arcevia**	**0.80 351**	⇓P	Pb	02 16 34.7	-0.1
ARVD			S	Sn	02 16 48.0	0.0
ARVD			AML	AML		
	comp=E,318μm,0.7s					
ARVD			AML	AML		
	comp=N,250μm,0.5s					
ATVO	**AVT- Monte Val**	**0.85 323**	⇓P	Pg	02 16 35.3	-0.3
ATVO			AML	AML		
	comp=N,347μm,1.2s					
ATVO			AML	AML		
	comp=E,432μm,0.4s					
FRON	**Frontone**	**0.86 341**	⇓P	Pg	02 16 35.3	-0.4
FRON			AML	AML		
	comp=N,362μm,0.4s					
FRON			AML	AML		
	comp=E,305μm,0.6s					
ATMI	**Monte Miggiano**	**0.89 316**	⇑P	Pn	02 16 36.8	-0.4
ATMI			AML	AML		
	comp=N,1390μm,1.1s					
ATMI			AML	AML		
	comp=E,1165μm,0.7s					
SACS	**San Casciano d**	**0.90 280**	⇓P	Pb	02 16 36.5	0.0
ATPI	**Pietralunga -**	**0.91 325**	⇓P	Pg	02 16 36.6	-0.1
ATPI			AML	AML		
	comp=N,315μm,0.7s					
ATPI			AML	AML		
	comp=E,345μm,1.3s					
LATE	**Laterza**	**0.97 265**	⇓P	Pg	02 16 38.0	+0.3
APEC	**Apecchio**	**0.99 329**	S	Sn	02 16 54.0	+1.3
FSSB	**Fossombrone**	**1.02 346**	⇓P	Pg	02 16 38.6	-0.1
FSSB			AML	AML		
	comp=N,916μm,0.3s					
FSSB			AML	AML		
	comp=E,846μm,0.3s					
FSSB			AML	AML		
	comp=N,916μm,0.3s					
LPEL	**Lama dei Pelig**	**1.03 129**	⇑P	Pb	02 16 37.7	-1.0
LPEL			S	Sn	02 16 54.0	+0.5
TOLF	**Tolfa**	**1.04 233**	⇑P	Pb	02 16 38.3	-0.7
CAFI	**Castiglion Fio**	**1.05 307**	⇑P	Pb	02 16 38.9	-0.1
MCIV	**Monte Civitell**	**1.06 275**	⇓P	Pg	02 16 39.5	+0.1
MCIV			AML	AML		
	comp=N,154μm,1.1s					
MCIV			AML	AML		
	comp=E,232μm,0.9s					
CRE	**Caprese Michel**	**1.25 317**	⇑P	Pb	02 16 42.6	0.0
CSNT	**Castellina Chi**	**1.54 301**	⇓P	Pb	02 16 47.2	-0.2
TRIF	**Trifonti**	**1.68 285**	⇑P	Pn	02 16 48.8	+0.7
PTRJ	**Pietraroja**	**1.70 141**	P	Pg	02 16 52.1	+0.4
MCRV	**Calabrutti - M**	**2.46 141**	S	Sb	02 17 34.0	+0.6
CAVE	**Cavezzo**	**2.65 325**	⇓P	Pn	02 17 00.6	-0.8

*IDC **31** 02:17:59.1±1.5, 34°.64N×141°.52E, h0km, mb3.6/5, mbtmp3.6/6, ML2.6/1, MS3.6/4, Error ellipse: s-maj=38.8km s-min=28.3km az=48.0*

*JMA **31** 02:18:00.1±0.8, 35°.N×2°.×14°.2E±°, h32km, MV3.2/26, FAR SE OFF BOSO PEN*

ISC 31 02:18:03.0±1.1, 34°.59N±0°.08×141°.47E±0°.10, h27km, n22, σ1§18/15, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.41**	**280**	P	**Pb**	**02 18 10.8**	**-0.7**
BSO1				*e*X		02 18 17.3	
BSO3	**Boso 3**	**0.82**	**285**	P	**Pb**	**02 18 17.6**	**-0.9**
BSO4	**Boso 4**	**1.02**	**294**	*e*P	**Pn**	**02 18 20.6**	**-0.7**
JKUC	**kamogawauchiur**	**1.19**	**299**	P	**Pn**	**02 18 22.7**	**-1.2**
CHOJ	**Chosi**	**1.22**	**336**	*e*P	**Pn**	**02 18 23.0**	**-1.3**
JMKN	**Mikurajimanish**	**1.71**	**247**	*e*P	**Pn**	**02 18 30.2**	**-0.8**
JMKN				*e*S	**Sn**	**02 18 52.3**	**+0.5**
MJAR	**Matsushiro Arr**	**3.30**	**307**	Pn	**Pn**	**02 18 52.9**	**0.0**
	0.7nm,0.3s,baz=154,slow=11,SNR=4.7						
MJAR				Sn	**Sn**	**02 19 34.1**	**+2.9**
	0.7nm,0.3s,baz=145,slow=16,SNR=7.7						
MJAR				LR	LR	02 20 33.6	
	comp=Z,410nm,20.1s,baz=79,slow=47						
	3.2nm,0.3s						
KSRS	**Korea Array**	**11.34**	**289**	LR	LR	02 25 39.9	
	comp=Z,140nm,18.1s,baz=220,slow=40						
H11N2	**WAKE ISLAND Hy**	**26.93**	**117**	T	T	02 51 47.5	
	baz=308,slow=75						
H11N1	**WAKE ISLAND Hy**	**26.94**	**117**	T	T	02 51 53.4	
	baz=308,slow=75						
H11N3	**WAKE ISLAND Hy**	**26.95**	**117**	T	T	02 51 53.7	
	baz=308,slow=75						
H11S1	**WAKE ISLAND Hy**	**27.56**	**119**	T	T	02 52 44.2	
	baz=311,slow=74						
H11S3	**WAKE ISLAND Hy**	**27.56**	**119**	T	T	02 52 43.1	
	baz=311,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.58**	**119**	T	T	02 52 46.2	
	baz=311						
SONM	**Songino Array**	**29.25**	**308**	P	**P**	**02 24 02.5**	**-0.3**
	0.3nm,0.6s,baz=101,slow=9.6,SNR=1.6						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**43.63**	**314**	PcP	**PcP**	**02 27 52.8**	**+1.0**
	0.8nm,0.5s,baz=91,slow=5.8,SNR=2.0						
MKAR	**Makanchi Array**	**45.49**	**304**	P	**P**	**02 26 19.7**	**-0.3**
	0.6nm,0.8s,baz=83,slow=12,SNR=1.5						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**51.55**	**31**	P	**P**	**02 27 06.2**	**+0.1**
	0.4nm,0.8s,baz=263,slow=6.7,SNR=4.5						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**54.65**	**188**	P	**P**	**02 27 30.6**	**+1.1**
	1.7nm,1.0s,baz=3.1,slow=7.6,SNR=1.7						
	1.7nm,1.0s						
KBZ	**Khabaz**	**72.54**	**311**	LR	LR	03 02 51.0	
	comp=Z,83nm,21.1s,baz=323,slow=37						
URZ	**Urewera**	**79.66**	**152**	LR	LR	03 01 36.9	
	comp=Z,52nm,19.1s,baz=340,slow=33						
BRTR	**Keskin Array B**	**80.51**	**312**	P	**P**	**02 30 12.5**	**-0.4**
	0.6nm,0.8s,baz=43,slow=11,SNR=2.4						
	0.6nm,0.8s						

*BUL **31** 02:19:41.6±0.3, 19°.17S×29°.12E, h10km, MD3.7*

PRE 31 02:19:55.0±2.0, 20°.54S×28°.71E, h5km, ML1.6, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUSN	**Musina, Limpop**	**2.04**	**149**	*e*P	Pn	02 20 30.0	-0.2
MUSN				*e*S	Sb	02 20 57.6	-0.8
MUSN				IAML		02 21 22.3	
	comp=Z,6.2nm,0.2s						
MUSN	**Musina, Limpop**	**2.04**	**149**	*e*P	Pn	02 20 31.3	+1.2
MUSN				*e*S	Sg	02 21 07.5	+6.7
MUSN	**Musina, Limpop**	**2.04**	**149**	*e*P	Pn	02 20 31.3	+1.2
MUSN				*e*S	Sg	02 21 07.5	+6.7
LEPH	**Lephalale, Lim**	**3.41**	**194**	*e*P	Pn	02 20 51.5	+2.5
LEPH				*e*S	Sn	02 21 28.6	-1.2
LEPH				IAML		02 21 54.0	
	comp=Z,8.3nm,0.6s						
MOPA	**Mopani**	**3.88**	**140**	*e*P	Pn	02 20 55.2	-0.1
MOPA				*e*S	Sn	02 21 40.8	-0.4
MOPA				IAML		02 22 20.6	
	comp=Z,0.8nm,0.3s						
MOPA	**Mopani**	**3.88**	**140**	*e*P	Pn	02 20 59.4	+4.1
MOPA				*e*S	Sg	02 21 56.1	-3.4
MOPA	**Mopani**	**3.88**	**140**	*e*P	Pn	02 20 59.4	+4.1
MOPA				*e*S	Sg	02 21 56.1	-3.4
LBTB	**Lobatse**	**5.30**	**212**	*e*P	Pn	02 21 18.8	+3.8
LBTB				*e*S	Sb	02 22 30.0	-2.2
LBTB	**Lobatse**	**5.30**	**212**	*e*P	Pn	02 21 18.8	+3.8
LBTB				*e*S	Sb	02 22 30.0	-2.2
BOSA	**Boshof**	**8.63**	**201**	*e*P	Pn	02 22 03.6	+2.9
BOSA				*e*S	Sn	02 23 47.3	+8.7

ROM 31 02:42:40.5±0.0, 42°.849N±0°.002×13°.114E±0°.003, h12km, ML2.7/24, 11C-9D, Error ellipse: s-maj=0.2km s-min=0.1km az=79.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**82**	P	Pg	02 42 43.2	+0.1
T1245				S	Sg	02 42 45.2	+0.3
T1245				AML	AML		
	comp=E,13800μm,1.4s						
T1245				AML	AML		
	comp=E,13850μm,1.4s						
T1245				AML	AML		
	comp=N,13400μm,0.6s						
T1245				AML	AML		
	comp=N,13500μm,0.6s						
T1216	**Preci, Frazion**	**0.08**	**301**	P	Pg	02 42 43.4	+0.2
T1216				S	Sg	02 42 45.5	+0.3
FEMA	**Monte Fema**	**0.12**	**337**	P	Pg	02 42 44.1	+0.3
FEMA				S	Sg	02 42 46.5	+0.3
MMO1	**Montemonaco**	**0.16**	**72**	P	Pg	02 42 44.6	+0.2
T1215	**Vallo di Nera,**	**0.19**	**256**	P	Pg	02 42 45.0	+0.3
T1215				S	Sg	02 42 48.3	+0.7
T1215				AML	AML		
	comp=E,866μm,1.2s						
T1215				AML	AML		
	comp=E,858μm,0.4s						
T1215				AML	AML		
	comp=N,1410μm,0.4s						
T1215				AML	AML		
	comp=N,1315μm,0.4s						
T1215				AML	AML		
	comp=E,865μm,1.2s						
T1215				AML	AML		
	comp=N,1320μm,0.4s						
AM05	**Amandola Campo**	**0.22**	**54**	⇓P	Pg	02 42 45.6	+0.4
AM05				AML	AML		
	comp=E,321μm,1.1s						
AM05				AML	AML		
	comp=N,352μm,0.6s						
AM05				AML	AML		
	comp=E,1350μm,0.9s						
AM05				AML	AML		
	comp=N,122μm,0.7s						
AM05				AML	AML		
	comp=E,484μm,0.3s						
AM05				AML	AML		
	comp=N,606μm,0.2s						
AM05				AML	AML		
	comp=E,1940μm,0.1s						
AM05				AML	AML		
	comp=N,158μm,0.1s						
T1204	**Amatrice, Fraz**	**0.23**	**139**	P	Pg	02 42 45.6	+0.2
T1204				AML	AML		
	comp=E,16450μm,1.0s						
T1204				AML	AML		
	comp=E,16400μm,1.0s						
T1204				AML	AML		
	comp=N,8880μm,1.0s						
T1204				AML	AML		
	comp=N,8890μm,1.0s						
T1241	**Roccafluvione,**	**0.23**	**88**	⇑P	Pg	02 42 45.8	+0.3
T1241				S	Sg	02 42 49.8	+1.0
T1241				AML	AML		
	comp=E,1620μm,0.2s						
T1241				AML	AML		
	comp=N,1100μm,0.5s						
T1241				AML	AML		
	comp=E,1625μm,0.2s						
T1241				AML	AML		
	comp=N,1098μm,0.5s						
T1241				AML	AML		
	comp=N,1098μm,0.5s						
LNSS	**Leonessa**	**0.25**	**192**	⇓P	Pg	02 42 46.1	+0.3
LNSS				S	Sb	02 42 50.6	-0.8
LNSS				AML	AML		
	comp=N,5840μm,0.4s						
LNSS				AML	AML		
	comp=E,2565μm,0.4s						
GUMA	**Gualdo di Mace**	**0.27**	**37**	⇑P	Pg	02 42 46.6	+0.5
GUMA				S	Sb	02 42 51.3	-0.6
GUMA				AML	AML		
	comp=E,2795μm,0.3s						
GUMA				AML	AML		
	comp=E,4410μm,0.3s						
GUMA				AML	AML		
	comp=N,3915μm,0.5s						
GUMA				AML	AML		
	comp=N,3820μm,0.5s						
SMA1	**SAN MARTINO**	**0.27**	**143**	P	Pb	02 42 46.8	-0.6
SMA1				S	Sb	02 42 51.0	-1.0
SMA1				AML	AML		
	comp=E,4350μm,0.3s						
SMA1				AML	AML		
	comp=N,5465μm,0.3s						
SMA1				AML	AML		
	comp=N,5470μm,0.3s						
SMA1				AML	AML		
	comp=E,4345μm,0.3s						
T1243	**Rocca Santa Ma**	**0.29**	**122**	⇑P	Pg	02 42 46.6	+0.1
RM33	**Pellescritta (**	**0.35**	**168**	P	Pg	02 42 47.7	+0.2
RM33				AML	AML		
	comp=E,7030μm,1.0s						
RM33				AML	AML		
	comp=E,7255μm,1.0s						
RM33				AML	AML		
	comp=E,7030μm,1.0s						
RM33				AML	AML		
	comp=N,7095μm,0.2s						
RM33				AML	AML		
	comp=N,6820μm,0.2s						
RM33				AML	AML		
	comp=E,7250μm,1.0s						
RM33				AML	AML		
	comp=N,6825μm,0.2s						
T1211	**Morro Reatino**	**0.37**	**211**	⇓P	Pg	02 42 48.1	+0.2
T1211				S	Sb	02 42 54.2	-0.5
T1211				AML	AML		
	comp=E,1585μm,0.1s						
T1211				AML	AML		
	comp=N,2320μm,1.0s						
T1211				AML	AML		
	comp=E,1555μm,0.1s						
T1211				AML	AML		
	comp=N,2275μm,1.0s						
T1211				AML	AML		
	comp=E,1590μm,0.1s						
T1211				AML	AML		
	comp=N,2330μm,1.0s						
T1211				AML	AML		
	comp=E,1560μm,0.1s						
T1211				AML	AML		
	comp=N,2270μm,1.0s						

ARRO	**Arrone**	**0.37 224**	⇓P	Pg	02 42 48.2	+0.3
ARRO			S	Sb	02 42 54.1	-0.6
ARRO			AML	AML		
	comp=E,559μm,0.2s					
ARRO			AML	AML		
	comp=N,682μm,0.2s					
CAMP	**Campotosto**	**0.38 145**	P	Pg	02 42 48.2	+0.1
CAMP			S	Sg	02 42 54.1	+0.9
CAMP			AML	AML		
	comp=N,2015μm,0.3s					
CAMP			AML	AML		
	comp=E,1980μm,0.3s					
ASSB	**Assisi San Ben**	**0.39 300**	⇓P	Pg	02 42 48.2	0.0
SNTG	**Esanatoglia**	**0.42 343**	⇑P	Pg	02 42 49.2	+0.2
SNTG			AML	AML		
	comp=E,230μm,1.6s					
SNTG			AML	AML		
	comp=N,253μm,0.6s					
TERO	**Teramo**	**0.43 122**	P	Pg	02 42 49.0	0.0
TERO			AML	AML		
	comp=E,1685μm,1.6s					
TERO			AML	AML		
	comp=N,1995μm,0.6s					
TERO			AML	AML		
	comp=E,1810μm,0.2s					
TERO			AML	AML		
	comp=N,2110μm,0.6s					
TERO			AML	AML		
	comp=N,2105μm,0.6s					
OFFI	**Offida**	**0.43 78**	⇑P	Pb	02 42 50.0	0.0
OFFI			AML	AML		
	comp=N,990μm,1.1s					
OFFI			AML	AML		
	comp=E,1100μm,0.6s					
OFFI			AML	AML		
	comp=N,990μm,1.1s					
T1247	**Pizzolo (AQ)**	**0.43 161**	⇑P	Pb	02 42 49.6	-0.4
T1247			AML	AML		
	comp=E,4450μm,1.1s					
T1247			AML	AML		
	comp=N,4420μm,0.1s					
T1247			AML	AML		
	comp=E,4455μm,1.1s					
CESX	**Cesi**	**0.46 239**	⇓P	Pg	02 42 50.0	+0.5
CESX			AML	AML		
	comp=N,344μm,1.1s					
CESX			AML	AML		
	comp=E,384μm,0.6s					
EL6	**Elcito**	**0.48 359**	⇓P	Pg	02 42 50.1	+0.2
GIGS	**Gran Sasso**	**0.52 140**	P	Pg	02 42 50.6	-0.1
GIGS			S	Sb	02 42 58.4	-0.7
GIGS			AML	AML		
	comp=N,237μm,0.8s					
GIGS			AML	AML		
	comp=E,464μm,0.2s					
GIGS			AML	AML		
	comp=N,236μm,0.8s					
AQU	**L'Aquila**	**0.54 157**	⇑P	Pg	02 42 51.1	+0.1
AQU			S	Sb	02 42 60.0	+0.4
AQU			AML	AML		
	comp=N,772μm,0.2s					
AQU			AML	AML		
	comp=N,803μm,0.2s					
AQU			AML	AML		
	comp=E,682μm,0.4s					
AQU			AML	AML		
	comp=E,724μm,0.4s					
FIAM	**Fiamignano**	**0.58 180**	S	Sb	02 43 01.0	+0.2
MURB	**Monte Urbino**	**0.60 314**	S	Sb	02 43 02.0	+0.6
PP3	**Marolino**	**0.64 34**	⇑P	Pb	02 42 53.8	+0.2
PP3			AML	AML		
	comp=E,910μm,0.6s					
PP3			AML	AML		
	comp=N,641μm,0.8s					
PP3			AML	AML		
	comp=E,933μm,0.6s					
PP3			AML	AML		
	comp=N,624μm,0.9s					
PP3			AML	AML		
	comp=E,935μm,0.6s					
PP3			AML	AML		
	comp=N,623μm,0.9s					
ARVD	**Arcevia**	**0.66 349**	⇓P	Pg	02 42 52.0	-1.4
MGAB	**Montegabbione**	**0.74 275**	⇑P	Pb	02 42 55.2	-0.1
MGAB			AML	AML		
	comp=E,245μm,0.5s					
MGAB			AML	AML		
	comp=N,270μm,0.4s					
MGAB			AML	AML		
	comp=E,218μm,0.7s					
MGAB			AML	AML		
	comp=E,234μm,0.9s					
MGAB			AML	AML		
	comp=N,276μm,0.4s					
T0110	**Collepietro**	**0.79 141**	⇓P	Pb	02 42 56.0	-0.2
T0110			AML	AML		
	comp=E,920μm,0.5s					
T0110			AML	AML		
	comp=E,920μm,0.5s					
T0110			AML	AML		
	comp=N,813μm,0.4s					
T0110			AML	AML		
	comp=N,812μm,0.4s					
MPAG	**Monte Paganucc**	**0.82 342**	S	Sn	02 43 10.0	-0.1
NARO	**Abbazia di Nar**	**0.86 333**	P	Pg	02 42 57.1	+0.1
CERT	**Cerreto**	**0.91 186**	⇑P	Pg	02 42 57.8	-0.2
CERT			AML	AML		
	comp=N,332μm,0.4s					
CERT			AML	AML		
	comp=E,487μm,0.4s					
CAFI	**Castiglion Fio**	**0.97 300**	⇑P	Pb	02 42 59.4	+0.2
CAFI			AML	AML		
	comp=N,65μm,1.3s					
CAFI			AML	AML		
	comp=E,87μm,0.5s					
LPEL	**Lama dei Pelig**	**1.13 135**	S	Sg	02 43 17.0	+0.2
PTRJ	**Pietraroja**	**1.82 144**	P	Pg	02 43 17.0	+1.6
PTRJ			S	Sb	02 43 36.0	-0.5
PAOL	**Paolisi**	**2.12 149**	P	Pn	02 43 17.2	+1.5

ROM 31 02:43:12.3±0.1, 42°.695N±0°.004×13°.231E±0°.004, h10km, ML2.6/15, 4C-1D, Error ellipse: s-maj=0.5km s-min=0.1km az=190.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.07**	**107**	AML	AML		
	comp=E,16450μm,1.0s						
T1204				AML	AML		
	comp=N,8885μm,1.0s						
T1204				AML	AML		
	comp=N,8880μm,1.0s						
T1204				AML	AML		
	comp=E,16400μm,1.0s						
T1204				AML	AML		
	comp=N,8890μm,1.0s						
SMA1	**SAN MARTINO**	**0.10**	**130**	AML	AML		
	comp=N,5465μm,0.3s						
SMA1				AML	AML		
	comp=E,4350μm,0.3s						
SMA1				AML	AML		
	comp=N,5470μm,0.3s						
SMA1				AML	AML		
	comp=E,4345μm,0.3s						
T1243	**Rocca Santa Ma**	**0.16**	**89**	P	Pg	02 43 16.4	+0.5
T1243				S	Sg	02 43 19.2	+0.8
T1245	**Castelsantange**	**0.17**	**349**	AML	AML		
	comp=N,13400μm,0.6s						
T1245				AML	AML		
	comp=E,13650μm,0.1s						
T1245				AML	AML		
	comp=N,13400μm,0.6s						
T1245				AML	AML		
	comp=E,11725μm,0.1s						
T1245				AML	AML		
	comp=N,13500μm,0.6s						
LNSS	**Leonessa**	**0.17**	**237**	P	Pg	02 43 16.7	+0.7
LNSS				S	Sg	02 43 19.6	+1.1
RM33	**Pellescritta (**	**0.19**	**184**	P	Pg	02 43 17.1	+0.8
RM33				S	Sg	02 43 20.3	+1.3
RM33				AML	AML		
	comp=E,7255μm,1.0s						
RM33				AML	AML		
	comp=N,6825μm,0.2s						
RM33				AML	AML		
	comp=E,7030μm,1.0s						
RM33				AML	AML		
	comp=N,7095μm,0.2s						
RM33				AML	AML		
	comp=N,6820μm,0.2s						
RM33				AML	AML		
	comp=E,7030μm,1.0s						
RM33				AML	AML		
	comp=E,7250μm,1.0s						
CAMP	**Campotosto**	**0.21**	**140**	P	Pg	02 43 17.2	+0.5
CAMP				S	Sg	02 43 20.7	+1.1
CAMP				AML	AML		
	comp=N,2015μm,0.3s						
CAMP				AML	AML		
	comp=E,1980μm,0.3s						
T1217	**Poggiodomo (PG**	**0.22**	**275**	P	Pg	02 43 17.4	+0.5
T1217				S	Sg	02 43 21.3	+1.2
T1216	**Preci, Frazion**	**0.25**	**322**	P	Pg	02 43 18.2	+0.7
T1247	**Pizzolo (AQ)**	**0.26**	**169**	P	Pg	02 43 18.2	+0.7
T1247				S	Sb	02 43 23.1	-0.5
TERO	**Teramo**	**0.28**	**105**	P	Pg	02 43 18.5	+0.5
TERO				S	Sg	02 43 22.9	+1.0
TERO				AML	AML		
	comp=E,1685μm,1.6s						
TERO				AML	AML		
	comp=N,1995μm,0.6s						
TERO				AML	AML		
	comp=E,1810μm,0.2s						
TERO				AML	AML		
	comp=N,2110μm,0.6s						
TERO				AML	AML		
	comp=E,1690μm,1.6s						
TERO				AML	AML		
	comp=N,2000μm,0.6s						
TERO				AML	AML		
	comp=N,2105μm,0.6s						
T1215	**Vallo di Nera,**	**0.29**	**292**	P	Pg	02 43 18.6	+0.5
T1211	**Morro Reatino**	**0.32**	**240**	P	Pg	02 43 19.3	+0.5
T1211				S	Sb	02 43 24.4	-1.1
T1211				AML	AML		
	comp=E,1555μm,0.1s						
T1211				AML	AML		
	comp=N,2270μm,1.0s						
T1211				AML	AML		
	comp=N,2275μm,1.0s						
T1211				AML	AML		
	comp=E,1560μm,0.1s						
GIGS	**Gran Sasso**	**0.35**	**134**	P	Pg	02 43 19.5	+0.2
GIGS				S	Sg	02 43 24.9	+1.0
ARRO	**Arrone**	**0.36**	**252**	P	Pg	02 43 19.9	+0.5
ARRO				AML	AML		
	comp=E,396μm,1.0s						
ARRO				AML	AML		
	comp=N,682μm,0.2s						
AQU	**L'Aquila**	**0.36**	**160**	P	Pg	02 43 19.9	+0.4
AQU				S	Sb	02 43 25.8	-0.8
OFFI	**Offida**	**0.41**	**54**	P	Pb	02 43 21.7	0.0
OFFI				S	Sb	02 43 29.7	+1.7
FIAM	**Fiamignano**	**0.43**	**191**	⇑P	Pg	02 43 21.2	+0.3
FIAM				S	Sb	02 43 28.0	-0.8
FIAM				AML	AML		
	comp=N,901μm,0.8s						
FIAM				AML	AML		
	comp=E,1780μm,0.4s						
CESX	**Cesi**	**0.49**	**260**	P	Pg	02 43 22.0	+0.2
CESX				S	Sb	02 43 29.5	-0.7
FAGN	**Fagnano**	**0.50**	**149**	P	Pb	02 43 22.7	-0.6
TRTR	**Tortoreto Alta**	**0.52**	**77**	P	Pb	02 43 23.8	+0.4
VCEL	**Villa Celiera**	**0.54**	**123**	P	Pb	02 43 23.7	-0.3
VCEL				S	Sb	02 43 32.8	+1.0
ASSB	**Assisi San Ben**	**0.55**	**310**	AML	AML		
	comp=N,328μm,0.3s						
ASSB				AML	AML		
	comp=E,345μm,0.5s						
T0110	**Collepietro**	**0.62**	**139**	⇑P	Pg	02 43 24.4	+0.1
T0110				AML	AML		
	comp=E,920μm,0.5s						
T0110				AML	AML		
	comp=N,812μm,0.4s						
T0110				AML	AML		
	comp=E,920μm,0.5s						
T0110				AML	AML		
	comp=N,813μm,0.4s						
SRES	**S.Oreste - Sor**	**0.70**	**230**	⇓P	Pg	02 43 26.2	+0.3
SRES				AML	AML		
	comp=E,173μm,0.3s						
SRES				AML	AML		
	comp=N,138μm,0.4s						
CERT	**Cerreto**	**0.77**	**194**	⇑P	Pg	02 43 26.9	-0.2
CERT				AML	AML		
	comp=E,487μm,0.4s						
CERT				AML	AML		
	comp=N,332μm,0.4s						
INTR	**Introdacqua**	**0.85**	**144**	P	Pg	02 43 28.2	-0.4
INTR				AML	AML		
	comp=E,144μm,0.9s						
INTR				AML	AML		
	comp=N,208μm,0.5s						
LPEL	**Lama dei Pelig**	**0.96**	**132**	⇑P	Pg	02 43 30.8	+0.1
LPEL				AML	AML		
	comp=E,204μm,0.2s						
LPEL				AML	AML		
	comp=N,141μm,0.5s						

*IDC **31** 02:46:11.5±1.4, 36°.98N×138°.72E, h0km, mb3.5/3, mbtmp3.5/3, MS4.0/2, Error ellipse: s-maj=11.3km s-min=10.7km az=175.0*
*JMA **31** 02:46:13.9±0.1, 37°.0N±0°.2×138°.6E±0°.3, h7km±1km, MV3.7/20, MID NIIGATA PREF*
JMA Felt III J1 at MID NIIGATA PREF .
*NIED **31** 02:46:13.9, 36°.96N×138°.63E, h7km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.00; $M_{\theta\theta}$0.51; $M_{\phi\phi}$-0.51; $M_{r\theta}$-1.95; $M_{\theta\phi}$-2.03; $M_{\phi r}$-0.80; Fault plane solution: $M_0$2.94000×10^{14} NP1: ϕ_s349.00000°, δ46.00000°, λ-3.00000°. NP2:ϕ_s81.00000°, δ88.00000°, λ-136.00000°.*

ISC 31 02:46:12.9±1.2, 36°.96N±0°.03×138°.69E±0°.04, h7km±11km, n21, σ0°.79/30, mb3.6/3, 8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUON	**Uonuma**	**0.39**	**49**	*i* P	**Pb**	**02 46 21.9**	**-0.3**
JUON				S	**Sb**	**02 46 27.7**	**-0.6**
JGK	**Kuni**	**0.40**	**186**	P	**Pb**	**02 46 21.9**	**-0.4**
JGK				S	**Sb**	**02 46 27.6**	**-0.9**
JJN	**Nakama**	**0.45**	**289**	⇓*i*P	**Pg**	**02 46 21.7**	**+0.1**
JJN				⇓S	**Sg**	**02 46 27.9**	**+0.5**
JKT	**Katashina**	**0.49**	**113**	⇓P	**Pb**	**02 46 23.8**	**0.0**
JKT				⇓S	**Sb**	**02 46 31.3**	**0.0**
MAJO	**Matsushiro**	**0.56**	**223**	P	**Pg**	**02 46 23.8**	**0.0**
MAT	**Matsushiro**	**0.56**	**223**	*i* P	**Pg**	**02 46 23.7**	**-0.1**
MAT				S	**Sg**	**02 46 30.6**	**-0.6**
MJAR	**Matsushiro Arr**	**0.56**	**223**	Pg	**Pg**	**02 46 23.7**	**-0.1**
	71nm,0.3s,baz=34,slow=18,SNR=937						
MJAR				LR	LR	02 46 24.8	
	comp=Z,59nm,20.8s,baz=194,slow=22						
MJAR				Lg	Lg	02 46 30.4	
	187nm,0.3s,baz=42,slow=29,SNR=94						
JIZZ	**Izumozaki**	**0.57**	**2**	*i* P	**Pb**	**02 46 25.8**	**+0.5**
JIZZ				S	**Sb**	**02 46 35.0**	**+1.3**
JNG	**Nsakai**	**0.72**	**221**	*i* P	**Pg**	**02 46 26.7**	**-0.2**
JNG				S	**Sg**	**02 46 35.8**	**-0.5**
JAG	**Ashikaga**	**0.81**	**131**	⇓*i*P	**Pb**	**02 46 30.0**	**+0.7**
JAG				⇓S	**Sb**	**02 46 41.1**	**+0.6**
JFY	**Yanaizu**	**0.93**	**61**	*i* P	**Pb**	**02 46 31.9**	**+0.5**
JFY				S	**Sb**	**02 46 45.0**	**+1.1**
JRY	**Ryogami san**	**0.95**	**170**	⇓*i*P	**Pb**	**02 46 31.9**	**+0.1**
JRY				⇓S	**Sb**	**02 46 44.8**	**+0.3**
JSD	**Sado**	**1.13**	**343**	P	**Pg**	**02 46 33.6**	**-1.0**
JYT	**Yasato**	**1.41**	**121**	P	**Pb**	**02 46 40.4**	**+0.8**
JGF	**Kuroka**	**1.73**	**219**	P	**Pb**	**02 46 44.9**	**-0.1**
JMM	**Marumori**	**1.91**	**61**	P	**Pb**	**02 46 47.6**	**-0.4**
INU	**Inuyama**	**2.10**	**221**	P	**Pn**	**02 46 50.0**	**+1.6**
ILAR	**Eielson Array**	**50.73**	**32**	P	**P**	**02 55 11.3**	**-1.6**
	0.3nm,0.7s,baz=277,slow=6.3,SNR=2.3						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**56.74**	**185**	P	**P**	**02 55 56.5**	**-1.0**
	0.4nm,0.4s,baz=0.1,slow=7.4,SNR=7.0						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**60.47**	**185**	P	**P**	**02 56 24.5**	**+1.2**
	0.2nm,0.4s,baz=357,slow=4.9,SNR=4.7						
ASAR				LR	LR	03 22 45.8	
	comp=Z,45nm,20.5s,baz=158,slow=36						
	0.2nm,0.4s						
MLR	**Muntele Rosu**	**78.02**	**318**	LR	LR	03 34 30.5	
	comp=Z,210nm,19.4s,baz=262,slow=37						

*IDC **31** 02:49:40.4±1.6, 43°.09N×13°.59E, h0km, mb3.3/1, mbtmp3.4/7, ML3.3/6, MS3.5/2, Error ellipse: s-maj=35.8km s-min=13.7km az=104.0*
*LDG **31** 02:49:41.4±0.1, 43°.05N×13°.05E, h9km, Ml2.9/26, Error ellipse: s-maj=2.4km s-min=1.7km az=53.0*
*ROM **31** 02:49:41.5±0.0, 43°.067N±0°.002×13°.060E±0°.003, h8km, ML3.6/68, Error ellipse: s-maj=0.2km s-min=0.1km az=58.0*
*PRU **31** 02:49:43.4±0.0, 43°.11N×13°.58E, h0km*
*STR **31** 02:49:44.6±1.8, 43°.N±8°.×1°.3E±1°.5, h10km, MLv3.5/29, Error ellipse: s-maj=0.0km s-min=0.0km az=102.2, preliminary*

ISC 31 02:49:41.8±0.7, 43°.06N±0°.01×13°.08E±0°.02, h13km±4km, n251, σ2°.25/312, 23C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.10**	**192**	⇑P	**Pg**	**02 49 44.7**	**-0.3**
FEMA				S	**Sg**	**02 49 46.9**	**-0.3**
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,92050μm,1.0s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,92150μm,1.0s						
FEMA				AML	AML		
	comp=N,92100μm,1.0s						
T1256	**Bolognola (MC)**	**0.12**	**118**	⇑P	**Pg**	**02 49 45.0**	**-0.3**
T1256				S	**Sg**	**02 49 47.5**	**-0.2**
SEF1	**Sefro**	**0.13**	**311**	⇓P	**Pg**	**02 49 44.8**	**-0.4**
SEF1				S	**Sg**	**02 49 46.9**	**-0.7**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
PIO1	**Pioraco**	**0.13**	**329**	P	**Pg**	**02 49 44.8**	**-0.5**
PIO1				S	**Sg**	**02 49 47.1**	**-0.7**
PIO1				AML	AML		
	comp=E,29050μm,1.6s						
PIO1				AML	AML		
	comp=E,29100μm,1.6s						
PIO1				AML	AML		
	comp=N,43500μm,1.2s						
MDAR	**Monte D'Aria**	**0.14**	**20**	⇑P	**Pg**	**02 49 45.0**	**-0.5**
MDAR				S	**Sg**	**02 49 47.4**	**-0.6**
MDAR				AML	AML		
	comp=N,54750μm,1.6s						
MDAR				AML	AML		
	comp=E,53400μm,0.3s						
MDAR				AML	AML		
	comp=N,54800μm,1.6s						
MDAR				AML	AML		
	comp=N,54750μm,1.6s						
MDAR				AML	AML		
	comp=E,53450μm,0.3s						
FIU1	**Fiuminata**	**0.17**	**320**	P	**Pg**	**02 49 45.4**	**-0.4**
FIU1				S	**Sg**	**02 49 48.1**	**-0.4**
FIU1				AML	AML		
	comp=E,23900μm,0.3s						
FIU1				AML	AML		
	comp=N,32050μm,0.3s						
FIU1				AML	AML		
	comp=E,23850μm,0.3s						
FIU1				AML	AML		
	comp=N,32100μm,0.3s						
FIU1				AML	AML		
	comp=N,32050μm,0.2s						
FIU1				AML	AML		
	comp=E,23850μm,0.3s						
GAG1	**Gagliole**	**0.17**	**357**	P	**Pg**	**02 49 45.8**	**-0.1**
GAG1				S	**Sg**	**02 49 48.9**	**+0.1**
GAG1				AML	AML		
	comp=E,70100μm,1.4s						
GAG1				AML	AML		
	comp=E,70100μm,1.4s						
GAG1				AML	AML		
	comp=N,84700μm,0.4s						
T1216	**Preci, Frazion**	**0.18**	**194**	P	**Pg**	**02 49 46.0**	**0.0**
T1216				S	**Sg**	**02 49 49.5**	**+0.7**
T1216				AML	AML		
	comp=E,84750μm,0.5s						
T1216				AML	AML		
	comp=N,59800μm,0.2s						
SSM1	**San Severino M**	**0.18**	**24**	⇑P	**Pg**	**02 49 45.8**	**-0.2**
SSM1				S	**Sg**	**02 49 49.0**	**+0.1**
GUMA	**Gualdo di Mace**	**0.19**	**90**	⇑P	**Pg**	**02 49 46.5**	**+0.3**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SNTG	**Esanatoglia**	**0.22**	**332**	⇓P	**Pg**	**02 49 46.3**	**-0.3**
SNTG				S	**Sg**	**02 49 49.9**	**0.0**
SNTG				AML	AML		
	comp=E,15100μm,0.3s						
SNTG				AML	AML		
	comp=N,17100μm,0.1s						
SNTG				AML	AML		
	comp=E,15250μm,0.6s						
SNTG				AML	AML		
	comp=N,19400μm,0.1s						
AM05	**Amandola Campo**	**0.22**	**113**	P	**Pg**	**02 49 46.9**	**+0.2**
AM05				S	**Sg**	**02 49 50.8**	**+0.9**
AM05				AML	AML		
	comp=E,9750μm,0.4s						
AM05				AML	AML		
	comp=N,9865μm,0.5s						
AM05				AML	AML		
	comp=E,37800μm,0.5s						
AM05				AML	AML		
	comp=N,2045μm,0.1s						
AM05				AML	AML		
	comp=N,2050μm,0.1s						
AM05				AML	AML		
	comp=N,9875μm,0.5s						
T1245	**Castelsantange**	**0.22**	**159**	⇓P	**Pg**	**02 49 46.8**	**+0.1**
T1245				S	**Sg**	**02 49 50.9**	**+0.8**
T1245				AML	AML		
	comp=E,48900μm,0.2s						
T1245				AML	AML		
	comp=N,59700μm,0.7s						
T1245				AML	AML		
	comp=E,49750μm,0.2s						
T1245				AML	AML		
	comp=N,57850μm,0.7s						
T1245				AML	AML		
	comp=E,48900μm,0.2s						
T1245				AML	AML		
	comp=N,59700μm,0.6s						
T1245				AML	AML		
	comp=E,48950μm,0.2s						
MMO1	**Montemonaco**	**0.24**	**132**	P	**Pg**	**02 49 47.3**	**+0.2**
MMO1				S	**Sg**	**02 49 51.4**	**+0.8**
EL6	**Elcito**	**0.27**	**4**	⇑P	**Pg**	**02 49 47.3**	**-0.2**
EL6				S	**Sg**	**02 49 51.8**	**+0.5**
EL6				AML	AML		
	comp=N,39600μm,0.4s						
EL6				AML	AML		
	comp=E,31050μm,1.3s						
MNTP	**Montappone**	**0.30**	**75**	P	**Pg**	**02 49 48.7**	**+0.7**
MNTP				AML	AML		
	comp=E,38200μm,1.1s						
MNTP				AML	AML		
	comp=N,30850μm,0.6s						
MNTP				AML	AML		
	comp=E,38250μm,1.1s						
TRE1	**Treia**	**0.30**	**35**	P	**Pg**	**02 49 48.4**	**+0.3**
TRE1				S	**Sg**	**02 49 54.3**	**+2.0**
TRE1				AML	AML		
	comp=E,31800μm,0.5s						
TRE1				AML	AML		
	comp=N,26050μm,1.3s						
TRE1				AML	AML		
	comp=N,26000μm,1.3s						
T1215	**Vallo di Nera,**	**0.30**	**211**	P	**Pg**	**02 49 48.2**	**+0.1**
T1215				S	**Sg**	**02 49 53.3**	**+1.0**
T1215				AML	AML		
	comp=E,8545μm,0.3s						
T1215				AML	AML		
	comp=N,8485μm,0.2s						

T1215 AML AML
comp=N,8665µm,1.1s
T1215 AML AML
comp=E,8510µm,0.3s
T1215 AML AML
comp=E,8520µm,0.4s
T1215 AML AML
comp=N,8660µm,1.1s
T1215 AML AML
comp=N,8480µm,0.2s
T1215 AML AML
comp=E,8505µm,0.3s
T1215 AML AML
comp=E,8540µm,0.4s
ASSB Assisi San Ben 0.31 266 ⇑P **Pg 02 49 48.1 -0.1**
ASSB S **Sg 02 49 53.4 +0.9**
ASSB AML AML
comp=N,39600µm,0.2s
ASSB AML AML
comp=E,16400µm,1.0s
CING Cingoli 0.32 15 ⇑P **Pb 02 49 48.4 -1.1**
FOSV Fossato di Vic 0.33 315 ⇑P **Pg 02 49 48.4 -0.1**
FOSV S **Sg 02 49 53.7 +0.6**
FOSV AML AML
comp=N,49350µm,0.3s
FOSV AML AML
comp=E,16750µm,0.2s
ATCC AVT- Casa Cast 0.34 291 ⇑P **Pg 02 49 48.8 0.0**
ATCC S **Sg 02 49 54.7 +1.2**
ATCC AML AML
comp=N,33250µm,0.3s
ATCC AML AML
comp=E,36500µm,1.4s
ATCC AML AML
comp=N,33300µm,0.3s
T1244 Arquata del Tr 0.35 152 P **Pb 02 49 49.3 -0.6**
T1244 S **Sb 02 49 55.4 +0.2**
T1217 Poggiodomo (PG 0.37 197 P **Pg 02 49 49.5 +0.3**
T1217 S **Sg 02 49 55.6 +1.4**
T1217 AML AML
comp=E,14300µm,0.4s
T1217 AML AML
comp=N,19450µm,0.6s
T1217 AML AML
comp=E,14300µm,0.4s
T1217 AML AML
comp=N,18850µm,0.6s
T1217 AML AML
comp=E,14350µm,0.4s
T1217 AML AML
comp=N,18850µm,0.5s
T1217 AML AML
comp=N,19450µm,0.5s
T1217 AML AML
comp=E,14350µm,0.4s
MMUR Monte Murano 0.38 351 P **Pg 02 49 49.4 -0.2**
MMUR S **Sb 02 49 55.7 -0.6**
MMUR AML AML
comp=E,30700µm,0.6s
MMUR AML AML
comp=N,20300µm,1.4s
T1201 Domo (RI) 0.42 163 P **Pg 02 49 50.7 +0.4**
T1204 Amatrice, Fraz 0.42 156 ⇓P **Pg 02 49 50.4 +0.1**
T1204 S **Sb 02 49 57.6 0.0**
T1204 AML AML
comp=E,21050µm,0.3s
T1204 AML AML
comp=N,14000µm,1.1s
ARVD Arcevia 0.45 347 P **Pg 02 49 50.5 -0.2**
MURB Monte Urbino 0.45 296 P **Pg 02 49 50.8 0.0**
MURB S **Sg 02 49 58.0 +1.2**
MURB AML AML
comp=N,18800µm,1.5s
MURB AML AML
comp=N,18000µm,1.5s
MURB AML AML
comp=E,22900µm,1.5s
MURB AML AML
comp=E,21300µm,1.5s
T1243 Rocca Santa Ma 0.46 143 P **Pg 02 49 50.9 +0.1**
ATSC Scheggia e Pas 0.46 322 P **Pg 02 49 50.6 -0.3**
LNSS Leonessa 0.46 183 P **Pg 02 49 51.1 +0.1**
LNSS S **Sg 02 49 58.6 +1.5**
LNSS AML AML
comp=E,6630µm,0.9s
LNSS AML AML
comp=N,16250µm,0.1s
LNSS AML AML
comp=E,6635µm,0.9s
OFFI Offida 0.46 106 P **Pb 02 49 52.2 +0.4**
OFFI AML AML
comp=N,32450µm,0.5s
OFFI AML AML
comp=E,17050µm,0.8s
SMA1 SAN MARTINO 0.47 156 P **Pg 02 49 51.1 0.0**
SMA1 S **Sb 02 49 58.8 -0.1**
SMA1 AML AML
comp=N,18300µm,0.4s
SMA1 AML AML
comp=E,16300µm,0.7s
ATFO Monte Foce - G 0.48 310 ⇑P **Pg 02 49 51.1 -0.1**
ATFO AML AML
comp=E,5010µm,0.7s
ATFO AML AML
comp=N,6315µm,1.5s
CIMA Civitanova Mar 0.50 61 P **Pb 02 49 52.7 +0.3**
PP3 Marolino 0.50 51 ⇑P **Pb 02 49 52.6 +0.2**
PP3 AML AML
comp=N,20300µm,0.3s
PP3 AML AML
comp=E,21650µm,0.2s
PP3 AML AML
comp=E,21400µm,0.3s
PP3 AML AML
comp=N,20250µm,0.3s
PP3 AML AML
comp=N,20600µm,0.3s
CADA Capodarco di F 0.52 75 P **Pn 02 49 53.5 -1.3**
CADA AML AML
comp=N,19950µm,0.8s
CADA AML AML
comp=E,21750µm,0.7s
FRON Frontone 0.52 331 P **Pg 02 49 51.7 -0.4**
FRON S **Sb 02 50 00.2 -0.1**
FRON AML AML
comp=E,6785µm,1.4s
FRON AML AML
comp=E,6780µm,1.4s
FRON AML AML
comp=N,7415µm,0.2s
ARRO Arrone 0.54 206 P **Pg 02 49 52.3 0.0**
ARRO S **Sg 02 50 00.8 +1.4**
ARRO AML AML
comp=E,5850µm,1.0s
ARRO AML AML
comp=N,4725µm,0.2s
ARRO AML AML
comp=N,4730µm,0.2s
ATTE AVT- Monte Tez 0.55 285 ⇑P **Pg 02 49 52.3 -0.3**
ATTE AML AML
comp=E,4340µm,0.4s
ATTE AML AML
comp=N,3280µm,0.5s
ATLO AVT- Montelove 0.55 297 ⇑P **Pg 02 49 52.3 -0.3**
ATLO S **Sg 02 50 01.1 +1.1**
T1211 Morro Reatino 0.56 197 P **Pg 02 49 52.9 +0.2**
T1211 AML AML
comp=E,6210µm,0.8s
T1211 AML AML
comp=N,11400µm,0.7s
T1211 AML AML
comp=E,6090µm,0.5s
T1211 AML AML
comp=N,11400µm,0.7s
T1211 AML AML
comp=E,6210µm,0.8s
T1211 AML AML
comp=N,11350µm,0.7s
T1211 AML AML
comp=E,6075µm,0.4s
T1211 AML AML
comp=N,11400µm,0.7s
T1211 AML AML
comp=N,11400µm,0.7s
T1211 AML AML
comp=E,6095µm,0.4s

RM33 Pellescritta (0.56 170 P **Pg 02 49 52.8 -0.1**
RM33 AML AML
comp=E,5605µm,0.7s
RM33 AML AML
comp=E,5600µm,0.7s
RM33 AML AML
comp=N,4985µm,0.5s
RM33 AML AML
comp=E,5525µm,0.7s
RM33 AML AML
comp=N,4980µm,0.5s
RM33 AML AML
comp=N,5020µm,0.5s
ATBU Serra di Buran 0.56 317 ⇑P **Pg 02 49 52.8 -0.2**
TB01 Gubbio 0.57 304 ⇑P **Pg 02 49 52.6 -0.4**
TB01 S **Sg 02 50 01.6 +1.1**
T1246 Crognaleto (TE 0.57 147 P **Pg 02 49 52.8 -0.2**
T1246 S **Sb 02 50 01.9 +0.2**
TB02 Pietralunga 0.58 302 ⇑P **Pg 02 49 52.8 -0.4**
TB02 S **Sg 02 50 01.9 +1.1**
CAMP Campotosto 0.58 155 ⇓P **Pg 02 49 52.9 -0.3**
CAMP S **Sb 02 50 02.2 +0.1**
CAMP AML AML
comp=E,4935µm,0.2s
CAMP AML AML
comp=N,3635µm,0.7s
CAMP AML AML
comp=E,4930µm,0.2s
CESX Cesi 0.58 219 ⇑P **Pg 02 49 53.0 -0.2**
CESX S **Sg 02 50 02.1 +1.2**
CESX AML AML
comp=N,7490µm,1.6s
CESX AML AML
comp=E,8090µm,0.3s
ATVO AVT- Monte Val 0.58 303 ⇑P **Pg 02 49 52.9 -0.3**
ATVO S **Sg 02 50 01.9 +0.9**
ATVO AML AML
comp=N,3060µm,0.5s
ATVO AML AML
comp=E,3155µm,0.3s
ATVO AML AML
comp=N,3065µm,0.5s
TERO Teramo 0.59 139 P **Pg 02 49 53.2 -0.1**
TERO S **Sb 02 50 02.7 +0.6**
TERO AML AML
comp=N,5105µm,1.2s
TERO AML AML
comp=N,5350µm,1.1s
TERO AML AML
comp=E,6405µm,0.6s
TERO AML AML
comp=E,6145µm,0.6s
TB03 Pietralunga 0.59 305 ⇑P **Pg 02 49 53.0 -0.5**
TB03 S **Sg 02 50 02.4 +1.0**
MPAG Monte Paganucc 0.61 338 ⇑P **Pg 02 49 53.7 -0.1**
MPAG AML AML
comp=E,4235µm,0.6s
MPAG AML AML
comp=N,3260µm,0.2s
MPAG AML AML
comp=E,4230µm,0.6s
MPAG AML AML
comp=E,4165µm,1.6s
MPAG AML AML
comp=N,3475µm,1.2s
ATPC Poggio Castell 0.62 313 P **Pg 02 49 53.4 -0.4**
PIEI Pieia 0.62 320 P **Pg 02 49 53.3 -0.6**
PIEI AML AML
comp=N,4295µm,0.4s
PIEI AML AML
comp=E,3130µm,0.1s
AOI Ancona 0.62 38 P **Pb 02 49 53.9 -0.6**
AOI AML AML
comp=N,3215µm,0.3s
AOI AML AML
comp=E,3815µm,0.2s
ATVA AVT- Monte Val 0.62 291 P **Pg 02 49 53.5 -0.4**
ATPI Pietralunga - 0.63 308 ⇑P **Pg 02 49 53.8 -0.3**
ATPI AML AML
comp=E,2590µm,0.6s
ATPI AML AML
comp=N,2375µm,0.3s
ATPI AML AML
comp=E,2585µm,0.6s
PCRO Pietralacroce 0.64 31 P **Pb 02 49 54.6 -0.1**
T1247 Pizzolo (AQ) 0.64 165 P **Pg 02 49 54.3 -0.1**
T1247 AML AML
comp=N,6870µm,0.9s
T1247 AML AML
comp=E,6675µm,1.5s
ATMI Monte Miggiano 0.65 295 P **Pg 02 49 54.7 +0.2**
ATMI AML AML
comp=N,5435µm,1.5s
ATMI AML AML
comp=E,5730µm,0.7s
SENI Senigallia 0.65 10 P **Pb 02 49 55.3 +0.3**
SENI AML AML
comp=E,17700µm,0.4s
SENI AML AML
comp=N,16450µm,0.4s
SENI AML AML
comp=E,17650µm,0.4s
SENI AML AML
comp=N,16400µm,0.4s
NARO Abbazia di Nar 0.66 327 P **Pg 02 49 54.0 -0.6**
NARO AML AML
comp=N,2125µm,0.4s
NARO AML AML
comp=E,2135µm,0.2s
TRTR Tortoreto Alta 0.67 112 P **Pn 02 49 56.0 -0.9**
TRTR AML AML
comp=N,17850µm,0.5s
TRTR AML AML
comp=E,22850µm,0.5s
FSSB Fossombrone 0.67 341 P **Pg 02 49 54.7 -0.1**
FSSB AML AML
comp=E,14450µm,0.4s
FSSB AML AML
comp=N,18450µm,1.1s
APEC Apecchio 0.69 316 P **Pg 02 49 55.0 -0.2**
APEC S **Sb 02 50 05.8 +0.7**
GIGS Gran Sasso 0.71 149 P **Pg 02 49 55.3 -0.4**
GIGS S **Sb 02 50 06.0 +0.3**
GIGS AML AML
comp=E,1840µm,0.5s
GIGS AML AML
comp=N,1210µm,0.8s
MGAB Montegabbione 0.72 258 P **Pg 02 49 55.6 -0.3**
MGAB AML AML
comp=E,3850µm,0.5s
MGAB AML AML
comp=N,4880µm,1.2s
MGAB AML AML
comp=E,4405µm,0.5s
MGAB AML AML
comp=N,4985µm,1.2s
MGAB AML AML
comp=E,3845µm,0.5s
AQU L'Aquila 0.75 161 P **Pg 02 49 56.1 -0.2**
AQU AML AML
comp=E,4270µm,1.6s
AQU AML AML
comp=N,3060µm,0.6s
AQU AML AML
comp=E,4115µm,1.6s
AQU AML AML
comp=N,2920µm,0.6s
BADI Badiali 0.76 307 AML AML
comp=E,150µm,1.0s
BADI AML AML
comp=E,150µm,1.6s
BADI AML AML
comp=N,1392µm,0.4s
BADI AML AML
comp=N,1393µm,0.4s
PE3 Peglio 0.76 326 P **Pb 02 49 57.0 +0.1**
PE3 AML AML
comp=E,47µm,0.6s
PE3 AML AML
comp=N,58µm,1.5s
PE3 AML AML
comp=N,58µm,1.5s
FIAM Fiamignano 0.80 178 P **Pg 02 49 56.8 -0.5**
FIAM AML AML
comp=E,2810µm,0.9s
FIAM AML AML
comp=N,3100µm,0.7s
CAFI Castiglion Fio 0.85 288 ⇑P **Pg 02 49 57.9 -0.5**
CAFI AML AML
comp=N,1925µm,0.4s
CAFI AML AML
comp=N,2005µm,0.4s
CAFI AML AML
comp=E,2055µm,0.5s
CAFI AML AML
comp=E,2060µm,0.5s
SSP9 Sansepolcro 0.86 307 P **Pg 02 49 58.0 -0.4**
SSP9 AML AML
comp=E,1525µm,1.6s
SSP9 AML AML
comp=N,1515µm,1.5s
SSP9 AML AML
comp=E,1542µm,1.6s
VCEL Villa Celiera 0.87 140 P **Pg 02 49 58.3 -0.4**
VCEL AML AML
comp=E,5295µm,1.0s
VCEL AML AML
comp=N,5105µm,0.8s
FAGN Fagnano 0.88 155 P **Pg 02 49 58.3 -0.5**
FAGN AML AML
comp=E,5740µm,0.5s
FAGN AML AML
comp=N,6710µm,0.4s
SACS San Casciano d 0.88 256 P **Pg 02 49 58.5 -0.4**
SACS AML AML
comp=N,1930µm,0.7s
SACS AML AML
comp=E,1480µm,0.7s
CPGN Carpegna, Ital 0.92 323 P **Pg 02 49 59.7 0.0**
SRES S.Oreste - Sor 0.93 207 P **Pg 02 49 59.1 -0.6**
SRES AML AML
comp=E,3310µm,1.6s
SRES AML AML
comp=N,1980µm,0.9s
T0110 Collepietro 0.98 148 P **Pg 02 49 59.8 -1.0**
T0110 AML AML
comp=E,5195µm,0.7s
T0110 AML AML
comp=N,4130µm,0.6s
CRE Caprese Michel 0.99 304 P **Pg 02 50 00.8 -0.2**
CRE AML AML
comp=N,1600µm,0.3s
CRE AML AML
comp=E,1510µm,0.4s
LATE Laterza 1.04 245 P **Pg 02 50 01.6 -0.3**
MCIV Monte Civitell 1.07 255 P **Pg 02 50 01.9 -0.5**
MCIV AML AML
comp=N,645µm,1.1s
MCIV AML AML
comp=E,858µm,0.6s
PTQR Pietraquaria 1.07 167 P **Pg 02 50 01.9 -0.5**
MTCE Montecelio 1.07 194 P **Pg 02 50 01.2 -1.2**
MTCE AML AML
comp=E,1695µm,0.7s
MTCE AML AML
comp=N,1230µm,0.7s
CERT Cerreto 1.12 184 P **Pg 02 50 02.8 -0.5**
CERT AML AML
comp=E,2815µm,0.5s
CERT AML AML
comp=N,1700µm,0.6s
SF01 Poggio Pratacc 1.14 258 AML AML
comp=N,872µm,0.8s
SF01 AML AML
comp=E,698µm,0.9s
ASQU Asqua 1.19 308 P **Pb 02 50 04.2 0.0**
ASQU AML AML
comp=E,766µm,1.0s
ASQU AML AML
comp=N,720µm,1.3s
ARCI Arcidosso 1.20 260 P **Pn 02 50 04.1 -0.2**
ARCI AML AML
comp=N,244µm,0.6s
ARCI AML AML
comp=E,334µm,1.4s
INTR Introdacqua 1.22 150 P **Pb 02 50 00.1 -4.5**
CAFR Castel Frentan 1.25 131 P **Pn 02 50 05.0 0.0**
CAFR AML AML
comp=N,1990µm,0.9s
CAFR AML AML
comp=E,2835µm,0.6s
VVLD Villa Vallelon 1.26 161 P **Pn 02 50 05.0 -0.1**
GUAR Guarcino 1.28 172 P **Pg 02 50 07.2 +0.8**
LPEL Lama dei Pelig 1.30 141 P **Pn 02 50 05.6 -0.1**
LPEL AML AML
comp=N,2315µm,0.9s
LPEL AML AML
comp=E,2200µm,1.0s
VIVA Pratoni del Vi 1.33 190 P **Pb 02 50 07.3 +0.7**
VIVA AML AML
comp=E,2905µm,0.8s
VIVA AML AML
comp=N,2790µm,0.5s
CSNT Castellina Chi 1.37 288 P **Pn 02 50 06.8 +0.2**
CSNT AML AML
comp=E,404µm,0.7s
CSNT AML AML
comp=N,387µm,0.7s
RUFI Rufina 1.38 305 P **Pn 02 50 07.2 +0.5**
LAV9 Lanuvio 1.41 192 P **Pn 02 50 08.2 +1.1**
LAV9 AML AML
comp=E,2215µm,0.5s
LAV9 AML AML
comp=N,3470µm,1.3s
LAV9 AML AML
comp=E,2300µm,1.4s
LAV9 AML AML
comp=N,3440µm,1.3s
LMD Lutirano 1.42 316 P **Pb 02 50 08.4 +0.3**
POFI Posta Fibreno 1.43 161 P **Pg 02 50 09.5 +0.4**
GIUL Giuliano Di Ro 1.51 175 P **Pb 02 50 10.2 +0.6**
BRIS BRISIGHELLA 1.57 314 P **Pg 02 50 11.8 -0.2**
TRIF Trifonti 1.59 273 P **Pn 02 50 09.8 +0.1**
TRIF AML AML
comp=E,302µm,1.2s
TRIF AML AML
comp=N,286µm,0.7s
CASP Castiglione de 1.65 261 P **Pn 02 50 10.0 -0.4**
CASP AML AML
comp=E,130µm,1.0s
CASP AML AML
comp=N,141µm,1.0s
TRIV Trivento 1.69 139 P **Pg 02 50 14.5 +0.2**
MTCR Monte La Croce 1.79 303 P **Pn 02 50 13.3 +0.8**
CIGN Sant'Elia a Pi 1.95 135 P **Pb 02 50 17.3 +0.1**
MELA Melanico ??? S 2.04 131 P **Pb 02 50 17.7 -0.9**
MAIM Mastiano 2.07 295 P **Pn 02 50 17.0 +0.9**
MORSI Morsiglia 2.73 269 P **Pn 02 50 27.0 +1.8**
CEY Cerknica 2.84 19 *e*Pn **Pn 02 50 27.7 +0.8**
SABO M.te Sabotino 2.94 7 P **Pn 02 50 29.0 +0.8**
SABO AML AML
comp=E,1575µm,1.2s
SABO AML AML
comp=N,1900µm,0.8s
SABO AML AML
comp=E,396µm,1.4s
SABO AML AML
comp=N,514µm,0.8s
ROVR Rover Verones 2.96 332 P **Pn 02 50 29.7 +1.2**
SMPL Sampolo 2.96 252 P **Pn 02 50 30.1 +1.6**
VARN Col Varnada, M 3.01 347 P **Pn 02 50 30.4 +1.2**
PGF Pioggiola 3.04 262 *e*P **Pn 02 50 30.6 +0.9**
PGF *e*Sn **Sn 02 51 01.9 -4.1**
comp=N,4.7nm,0.4s
PGF Pioggiola 3.04 262 P **Pn 02 50 30.5 +0.9**
SALO Salr 3.14 325 P **Pn 02 50 33.1 +2.1**
CTI Castel Tesino 3.15 342 P **Pn 02 50 32.9 +1.7**
LJU Ljubljana 3.15 19 P **Pn 02 50 32.6 +1.5**
LJU AML AML
comp=E,1270µm,0.6s
LJU AML AML
comp=N,2520µm,0.6s
MPRI Monte Prat 3.18 359 P **Pn 02 50 32.7 +1.2**
MPRI AML AML
comp=E,287µm,0.6s
MPRI AML AML
comp=N,390µm,1.5s
MGRS Mrkonjic Grad 3.20 64 *e*Pn **Pn 02 50 34.2 +2.4**
STAL STALIGIAL 3.21 355 P **Pn 02 50 32.7 +0.8**
STAL AML AML
comp=E,295µm,0.6s
STAL AML AML

comp=N,273µm,0.8s
PRIJ Prijedor 3.25 53 *e*Pn **Pb 02 50 39.2 0.0**
LUSI Trento, Gardas 3.27 333 P **Pn 02 50 34.5 +1.7**
CIMO Cimolais 3.28 352 P **Pn 02 50 33.6 +0.8**
CIMO AML AML
comp=E,97µm,0.7s
CIMO AML AML
comp=N,92µm,0.7s
CIMO AML AML
comp=E,91µm,1.1s
CIMO AML AML
comp=N,85µm,0.6s
A051A Mrakovica 3.38 53 *e*Pn **Pb 02 50 40.1 -1.4**
STON Ston 3.40 92 *e*Pn **Pn 02 50 35.4 +1.0**
BLY Banja Luka 3.41 59 *e*Pn **Pb 02 50 42.9 +0.8**
ZONE Zone 3.43 323 P **Pn 02 50 36.8 +1.8**
ZOU Zoufplan 3.49 359 P **Pn 02 50 37.2 +1.2**
ACOM Acomizza, Ital 3.50 5 P **Pn 02 50 38.0 +2.0**
MABI Malga Bissina 3.51 329 P **Pn 02 50 38.0 +1.8**
MABI AML AML
comp=E,60µm,1.5s
MABI AML AML
comp=N,54µm,1.0s
MYKA Terra Mystica 3.59 6 *i* Pn **Pn 02 50 38.9 +1.8**
comp=N,1.8nm,0.2s
OBKA Obir 3.60 16 *e*Pn **Pn 02 50 38.5 +1.2**
OBKA Obir 3.60 16 *e*Pn **Pn 02 50 38.6 +1.3**
comp=N,1.9nm,0.2s
KOSI Kohlern 3.61 341 P **Pn 02 50 39.8 +2.3**
ABTA Abfaltersbach 3.71 354 *i* Pn **Pn 02 50 40.6 +1.9**
comp=N,18nm,0.5s,SNR=12
A052A Srbac 3.79 56 *e*Pn **Pb 02 50 44.6 -3.9**
SOKA Soboth 3.87 20 *e*Pn **Pn 02 50 42.2 +1.1**
comp=N,1.2nm,0.3s
TREB Trebinje 3.89 93 *e*Pn **Pn 02 50 43.2 +2.0**
RISI Rein 3.95 350 P **Pn 02 50 44.3 +2.1**
BRY Bratogost 4.01 90 *e*Pn **Pn 02 50 44.3 +1.3**
HCY Herceg Novi 4.04 97 *e*Pn **Pn 02 50 45.6 +2.4**
ROSI Rosskopf 4.04 344 P **Pn 02 50 46.0 +2.5**
MUGIO Muggio 4.06 316 P **Pn 02 50 44.9 +1.2**
SAOF Saorge 4.12 285 P **Pn 02 50 48.1 +3.7**
SBF Sospel 4.18 283 *e*P **Pn 02 50 46.8 +1.5**
SBF *e*Sn **Sn 02 51 29.0 -5.1**
comp=N,11nm,0.4s
TURF col de Turini 4.24 284 P **Pn 02 50 48.8 +2.7**
FETA Feichten 4.29 338 *e*Pn **Pn 02 50 50.4 +3.5**
comp=N,14nm,0.8s,SNR=14
WTTA Wattenberg 4.32 347 *i* Pn **Pn 02 50 50.4 +3.1**
comp=N,2.2nm,0.2s
WTTA Wattenberg 4.32 347 P **Pn 02 50 50.4 +3.1**
DAVOX Davos/Dischmat 4.36 330 Pn **Pn 02 50 51.0 +3.2**
comp=N,4.8nm,0.3s,baz=149,slow=16,SNR=38
DAVOX Sn **Sn 02 51 42.9 +4.4**
comp=N,2.4nm,0.3s,baz=307,slow=20,SNR=2.1
comp=N,25nm,0.7s
SQTA Sankt Quirin 4.36 343 *i* Pn **Pn 02 50 51.1 +3.3**
comp=N,7.4nm,0.3s,SNR=9.1
HAPS Han Pijesak,BI 4.39 75 *e*Pn **Pn 02 50 49.4 +1.2**
WATA Walderalm 4.40 347 *i* Pn **Pn 02 50 51.9 +3.5**
comp=N,5.1nm,0.2s,SNR=12
MOTA Moosalm 4.50 343 *i* Pn **Pn 02 50 53.2 +3.4**
comp=N,1.2nm,0.2s,SNR=9.3
ISO Isola 4.52 286 P **Pn 02 50 52.4 +2.5**
VSL Villasalto 4.52 219 P **Pn 02 50 52.6 +2.7**
ARSA Arzberg 4.53 22 *i* Pn **Pn 02 50 50.7 +0.7**
comp=N,1.8nm,0.4s
CALF Calern 4.54 281 P **Pn 02 50 51.6 +1.4**
DRME Dracevica, Mon 4.59 99 *e*Pn **Pn 02 50 53.3 +2.5**
RUDO Rudo 4.62 81 *e*Pn **Pn 02 50 52.5 +1.2**
FUSIO Fusio 4.62 319 P **Pn 02 50 53.6 +2.2**
BIOA Bad Ischl, Aus 4.64 5 *e*Pn **Pn 02 50 53.7 +2.1**
comp=N,7.3nm,0.3s,SNR=12
BBLS Lazići 4.67 78 *e*Pn **Pn 02 50 53.9 +1.8**
KOVH Kovagotottos 4.69 48 P Pn 02 50 56.8 +4.6
RETA Reutte 4.72 341 *e*Pn **Pn 02 50 55.2 +2.6**
comp=N,2.3nm,0.3s
SURF Saint Ours 4.75 289 P **Pn 02 50 55.8 +2.6**
JAUF Jausiers 4.78 289 P **Pn 02 50 56.1 +2.4**
DAVA Damuels 4.79 333 *e*Pn **Pn 02 50 56.5 +2.8**
comp=N,4.6nm,0.5s,SNR=8.5
LMR La Mourre 4.81 275 *e*P **Pn 02 50 54.3 +0.5**
LMR *e*Sn **Sn 02 51 43.9 -5.5**
comp=N,1.4nm,0.3s
MBDF Montbardon 4.85 292 *e*P **Pn 02 50 56.4 +1.8**
MBDF *e*Sn **Sn 02 51 45.4 -5.2**
comp=N,2.5nm,0.4s
MOA Molln 4.86 9 *e*Pn **Pn 02 50 55.8 +1.3**
comp=N,1.4nm,0.2s
CREF Crivoux 4.90 290 P **Pn 02 50 58.0 +2.7**
TRIGF Trigance 4.91 280 P **Pn 02 50 58.5 +3.2**
DIX Grande Dixence 5.05 309 P **Pn 02 51 00.5 +3.2**
OGMO Fort Saint-Gob 5.08 297 P **Pn 02 51 00.8 +3.2**
DIVS Divibare 5.13 76 *e*Pn **Pn 02 50 59.4 +1.1**
LPG La Plagne 5.15 300 *e*P **Pn 02 51 00.7 +1.9**
LPG *e*Sn **Sn 02 51 52.5 -5.8**
comp=N,3.3nm,0.4s
RONA Rosalia, Austr 5.16 25 *i* Pn **Pn 02 51 00.3 +1.6**
comp=N,1.0nm,0.2s
LPL La Plagne 5.17 300 *e*P **Pn 02 51 01.3 +2.3**
LPL *e*Sn **Sn 02 51 52.9 -5.8**
comp=N,4.2nm,0.3s
MPLH Magyarpolny 5.18 36 P **Pn 02 51 03.0 +4.1**
BLAF les Blancs 5.19 282 P Pn 02 51 03.6 +4.5
SOP Sopron 5.23 27 P **Pn 02 51 02.3 +2.7**
CONA Conrad Observa 5.24 21 *e*Pn **Pn 02 51 00.9 +1.0**
comp=N,1.9nm,0.3s
RSL Roselend 5.32 302 P **Pn 02 51 04.4 +3.5**
ARTF Artigues 5.33 278 P **Pn 02 51 02.9 +1.8**
OGSI Sixt 5.42 306 P **Pn 02 51 05.5 +3.1**
AIGLE Aigle 5.46 309 P **Pn 02 51 05.9 +3.0**
BSTF la Bastide-des 5.47 281 P **Pn 02 51 05.5 +2.5**
ORIF Oris-en-Rattie 5.51 292 *e*P **Pn 02 51 05.9 +2.3**
ORIF *e*Sn **Sn 02 52 00.9 -6.0**
comp=N,2.3nm,0.4s
ORIF Oris-en-Rattie 5.51 292 P **Pn 02 51 07.4 +3.7**
SMRF Simiane la Rot 5.53 282 *e*P **Pn 02 51 05.8 +2.0**
SMRF *e*Sn **Sn 02 51 01.3 -5.9**
comp=N,1.2nm,0.4s
RUSF Rustrel 5.59 282 P **Pn 02 51 08.7 +4.1**
SLE Schleitheim 5.70 327 P **Pn 02 51 07.5 +1.4**
TORNY Torny/Romont 5.71 313 P **Pn 02 51 08.6 +2.4**
BALST Balsthal 5.72 320 P **Pn 02 51 08.2 +1.8**
BALST Balsthal 5.72 320 S **Sn 02 52 13.9 +2.0**
GERES GERESS Array B 5.80 4 Pn **Pn 02 51 07.2 -0.4**
comp=N,0.7nm,0.3s,baz=175,slow=13,SNR=17
GERES Sn **Sn 02 52 13.4 -0.5**
comp=N,3.2nm,0.3s,baz=177,slow=25,SNR=11
comp=N,0.9nm,0.3s
CKRC Cesky Krumlov 5.82 8 *e*PN **Pn 02 51 08.3 +0.5**
CKRC *e*SN **Sn 02 52 12.0 -2.3**
OGSM Saint Maurice 5.87 298 P **Pn 02 51 12.1 +3.6**
GIMEL St. Georges / 5.96 308 P **Pn 02 51 12.0 +2.3**
BOURR Bourrignon 5.98 318 P **Pn 02 51 12.0 +2.0**
FELD Feldberg im Sc 5.99 325 P **Pn 02 51 11.7 +1.5**
BRANT Les Verrieres 6.08 312 P **Pn 02 51 13.6 +2.3**
KHC Kasperske Hory 6.08 3 *e*PN **Pn 02 51 12.2 +0.9**
KHC *e*SN **Sn 02 52 19.8 -0.9**
KIZ Kirchzarten 6.09 325 P **Pn 02 51 12.9 +1.5**
CABF La Chapelle 6.11 308 *e*P **Pn 02 51 14.1 +2.4**
CABF *e*Sn **Sn 02 52 15.5 -5.9**
comp=N,2.0nm,0.3s
OG35 Corcelles 6.13 302 P **Pn 02 51 14.9 +2.8**
CHMF Charmoille 6.18 315 P **Pn 02 51 14.4 +1.7**
RIVEL MONT RIVEL 6.28 308 P **Pn 02 51 16.8 +2.7**
VOGT Vogtsburg - To 6.29 325 P **Pn 02 51 15.6 +1.4**
VIVF Saint-Julien-l 6.33 289 *e*P **Pn 02 51 17.2 +2.5**
VIVF *e*Sn **Sn 02 52 20.1 -6.7**
comp=N,1.5nm,0.5s
MOF Molkenrain 6.36 321 P **Pn 02 51 16.7 +1.5**
BOUC Bouclans 6.38 313 P **Pn 02 51 17.4 +2.0**
KRUC Moravsky 6.43 20 *e*PN **Pn 02 51 15.2 -0.9**
KRUC *e*SN **Sn 02 52 27.9 -1.3**
TREC Trest 6.45 14 *e*PN **Pn 02 51 17.4 +1.0**
TREC *e*SN **Sn 02 52 27.2 -2.7**
HINF Hinteralfeld 6.46 320 *e*P **Pn 02 51 17.7 +1.1**
HINF *e*Sn **Sn 02 52 23.5 -6.6**
comp=N,5.6nm,0.3s
RONF Ronchamp 6.49 318 P **Pn 02 51 18.1 +1.2**
ECH Echery 6.61 323 P **Pn 02 51 19.9 +1.3**
ECH S **Sn 02 52 31.7 -2.2**
WLS Welschbruch 6.68 325 P **Pn 02 51 21.3 +1.7**
WLS S **Sn 02 52 36.9 +1.3**
VRAC Vranov 6.71 20 Pn **Pn 02 51 19.3 -0.6**
comp=N,0.2nm,0.3s,baz=211,slow=18,SNR=1.8
VRAC Sn **Sn 02 52 34.2 -1.9**
comp=N,0.4nm,0.3s,baz=120,slow=20,SNR=1.9
comp=N,0.6nm,0.3s
VRAC Vranov 6.71 20 *e*PN **Pn 02 51 19.9 0.0**
CDF Champ du Feu 6.71 325 *e*P **Pn 02 51 21.9 +1.8**
CDF *e*Sn **Sn 02 52 29.9 -6.5**
comp=N,2.7nm,0.3s
LASF Ste Croix 6.78 282 *e*P **Pn 02 51 23.3 +2.4**
LASF *e*Sn Sn 02 52 30.8 -7.0
comp=N,1.0nm,0.5s
HAU Haudompre 6.84 319 *e*P **Pn 02 51 24.4 +2.7**
HAU *e*Sn **Sn 02 52 32.7 -6.6**
comp=N,12nm,0.3s
PRU Pruhonice 7.00 8 *e*SN **Sn 02 52 41.4 -1.9**
NKC Novy Kostel 7.19 357 *e*SN **Sn 02 52 47.5 -0.4**
SMF Signal de Mont 7.48 302 *e*P **Pn 02 51 32.8 +2.3**
SMF *e*Sn Sn 02 52 47.6 -7.5
comp=N,4.7nm,0.5s
PAGF Fort de Pagny 7.52 319 *e*P **Pn 02 51 33.7 +2.7**
PAGF *e*Sn **Sn 02 52 49.1 -7.0**
comp=N,3.2nm,0.4s
DPC Dobruska-Polom 7.62 16 *e*SN **Sn 02 52 55.1 -3.6**
SFTF Sexfontaines 7.63 315 *e*P **Pn 02 51 34.9 +2.4**
SFTF *e*Sn **Sn 02 52 51.5 -7.2**
comp=N,3.0nm,0.4s
LOR Lormes 7.75 306 *e*P **Pn 02 51 36.8 +2.5**
baz=123
LOR *e*Sn **Sn 02 52 54.8 -7.0**
comp=N,2.2nm,0.3s
CHVC Chvalec 7.80 14 *e*SN **Sn 02 52 58.3 -4.7**
MEZF Maizieres J'vi 7.81 317 *e*P **Pn 02 51 37.8 +2.8**
MEZF *e*Sn **Sn 02 52 56.0 -7.2**
comp=N,2.9nm,0.4s
BRG Berggiesshubel 7.84 4 *e*(P) Pb 02 51 46.7 -11
BRG Amp 02 51 52.6
comp=Z,1.5nm,0.4s
BRG *ex* x 02 53 00.7
BRG *ex* x 02 54 01.4
BRG Amp 02 54 36.1
comp=Z,15nm,1.6s
AVF Avril sur Loir 7.84 302 *e*P **Pn 02 51 38.4 +2.9**
AVF *e*Sn **Sn 02 52 56.7 -7.3**
comp=Z,0.7nm,0.4s
SSF Saint Saulge 7.87 304 *e*P **Pn 02 51 37.1 +1.3**
SSF *e*Sn **Sn 02 52 57.5 -7.1**
comp=Z,2.5nm,0.5s
KEST Kesra 7.87 203 Pn **Pn 02 51 40.0 +4.0**
comp=Z,0.1nm,0.3s,baz=336,slow=12,SNR=2.0
comp=Z,2.8nm,0.8s
MTLF Montolieu 7.94 276 *e*P **Pn 02 51 39.7 +2.9**
MTLF *e*Sn Sn 02 52 58.7 -7.8
comp=Z,0.5nm,0.3s
BGF Bois d'Agland 8.07 299 *e*P **Pn 02 51 41.2 +2.6**
CAF Calviac 8.16 287 *e*P **Pn 02 51 42.6 +2.8**
CLL Collm 8.25 360 *e*Pn **Pn 02 51 42.0 +1.0**
CLL *ex* x 02 51 49.0
CLL *ex* x 02 51 57.0
CLL *e*Sn **Sn 02 53 09.0 -5.0**
CLL *ex* x 02 53 20.0
CLL *ex* x 02 53 46.0
CLL *e*Sg Sg 02 54 01.0 -5.3
comp=Z,14nm,1.1s
TCF Toulx Ste Croi 8.39 296 *e*P **Pn 02 51 45.6 +2.6**
EKA Eskdalemuir Ar 16.18 325 Pn **P 02 53 30.8 -1.0**
baz=128,slow=14
comp=Z,0.2nm,0.4s
HFS Hagfors 17.10 1 P **Pn 02 53 41.1 +0.9**
comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=2.0
comp=Z,2.2nm,0.9s
TORD Torodi Ar. Bea 31.39 202 P **P 02 56 04.0 +1.6**
comp=Z,0.2nm,0.5s,baz=20,slow=9.8,SNR=3.2
comp=Z,0.2nm,0.5s
GEYT Alibeck 34.31 83 LR LR 03 15 12.3
comp=Z,112nm,21.3s,baz=342,slow=45
CMAR Chiang Mai Arr 74.68 79 LR LR 03 41 53.6
comp=Z,28nm,20.1s,baz=30,slow=42

TUL ***31*** *02:53:27.7±0.7,36°.43N±0°.01×96°.91W±0°.01,h5km±2km, ML3.0,mb_Lg3.1/86(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=79.0*
ANF ***31*** *02:53:28.2±0.6,36°.45N×96°.88W,h5km±3km,ML3.7/16, Error ellipse: s-maj=3.3km s-min=2.9km az=129.0*
NEIC ***31*** *02:53:28.3±0.7,36°.44N±0°.01×96°.90W±0°.02,h4km±2km, Error ellipse: s-maj=2.0km s-min=1.5km az=73.0*
ISC 31 02:53:28.0±0.8,36°.44N±0°.02×96°.92W±0°.02,h6km±4km, n106,σ0°68/101,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK045	**Pawnee Station**	**0.01**	**333**		**Pg**	**02 53 28.9**	**-0.2**
OK045				Sg	**Sg**	02 53 29.5	-0.4
OK048	**Pawnee Station**	**0.03**	**227**	Pg	**Pg**	02 53 29.0	-0.1
OK048				Sg	**Sg**	02 53 29.8	-0.2
OK046	**Pawnee Station**	**0.04**	**168**		**Pg**	02 53 29.1	-0.2
OK046				Sg	**Sg**	02 53 29.9	-0.3
OK050	**Pawnee Station**	**0.07**	**231**		**Pg**	02 53 29.7	+0.1
OK050				Sg	**Sg**	02 53 31.0	+0.2
OK051	**E0350 and S346**	**0.10**	**44**	Pg	**Pg**	02 53 30.0	-0.1
OK051				Sg	**Sg**	02 53 31.5	-0.1
OK044	**Pawnee Station**	**0.12**	**123**	Pg	**Pg**	02 53 30.4	-0.1
OK044				Sg	**Sg**	02 53 32.1	0.0
OK049	**E0420 Rd and N**	**0.31**	**265**	Pg	**Pg**	02 53 34.3	+0.2
OK049				Sg	**Sg**	02 53 38.7	+0.5
OK033	**Mehan**	**0.39**	**182**	Pg	**Pg**	02 53 35.6	+0.1
OK034	**N. Norfolk Rd.**	**0.46**	**159**	Pg	**Pg**	02 53 36.7	-0.1
OK034				Sg	**Sg**	02 53 42.8	0.0
OK031	**S. Brethren Rd**	**0.49**	**172**	Pg	**Pg**	02 53 37.4	0.0
OK031				Sg	**Sg**	02 53 43.6	-0.1
T35A	**Sooner Cattle**	**0.58**	**34**	Pg	**Pg**	02 53 39.0	-0.2
T35A				Sg	**Sg**	02 53 46.4	-0.3
T35B	**Sooner Cattle**	**0.58**	**34**	P	**Pg**	02 53 38.8	-0.4
	baz=214,SNR=158						
T35B				S	**Sg**	02 53 46.7	0.0
	baz=214						
KAN13	**South Haven SW**	**0.73**	**322**	Pg	**Pg**	02 53 41.9	-0.1
KAN13				Sg	**Sg**	02 53 51.7	+0.1
OK029	**Liberty Lake**	**0.77**	**214**	Pg	**Pg**	02 53 42.8	-0.1
OK029				Sg	**Sg**	02 53 52.9	0.0
KAN09	**Caldwell North**	**0.90**	**321**		**Pg**	02 53 45.0	-0.3
KAN17	**Caldwell West**	**0.91**	**312**	Pg	**Pg**	02 53 45.2	-0.3
KAN17				Sg	**Sg**	02 53 57.4	0.0
OK025	**Westminster Rd**	**0.92**	**202**	Pg	**Pg**	02 53 45.1	-0.5
OK025				Sg	**Sg**	02 53 57.7	+0.2
KS20	**Mayfield South**	**0.94**	**327**	Pg	**Pg**	02 53 45.8	-0.3
KS20				Sg	**Sg**	02 53 58.0	-0.4
KAN01	**Argonia South**	**0.98**	**317**	Pg	**Pg**	02 53 46.4	-0.5
KAN01				Sg	**Sg**	02 53 59.6	-0.1
KAN14	**Manchester OK**	**0.99**	**302**		**Pg**	02 53 46.5	-0.4
TUL1	**Leonard**	**1.05**	**120**		**Pg**	02 53 47.4	-0.8
TUL1				Sg	**Sg**	02 54 00.6	-1.2
TUL1	**Leonard**	**1.05**	**120**	P	**Pg**	02 53 47.3	-0.8
	baz=300						
TUL1				S	**Sg**	02 54 02.0	+0.2
	baz=300						
OK032	**Salt Plains WL**	**1.10**	**290**	Pg	**Pg**	02 53 48.6	-0.5
KAN06	**Argonia West S**	**1.11**	**317**	Pg	**Pg**	02 53 48.6	-0.7
OKCSW	**OKLAHOMA CITY**	**1.11**	**202**	Pg	**Pg**	02 53 48.2	-1.1
OKCSW				Sg	**Sg**	02 54 04.0	+0.3
KAN08	**Anthony NE Sta**	**1.16**	**313**	Pg	**Pg**	02 53 49.1	-1.1
KAN16	**Harper SW Stat**	**1.21**	**311**	Pg	**Pg**	02 53 50.6	-0.7
KAN12	**Harper NE Stat**	**1.22**	**315**	Pg	**Pg**	02 53 50.4	-1.0
FNO	**Franklin**	**1.24**	**199**	Pg	**Pg**	02 53 50.4	-1.3
OK035	**E0210 Rd and N**	**1.47**	**281**		**Pn**	02 53 55.0	-0.1
OK038	**West end E0370**	**1.47**	**272**		**Pn**	02 53 54.0	-1.1
U32A	**Winter Ranch,**	**1.68**	**269**	Pn	**Pn**	02 53 58.5	+0.5
U32A	**Winter Ranch,**	**1.68**	**269**	P	**Pn**	02 53 58.6	+0.6
	baz=88,SNR=36						
U32A				S	**Sb**	02 54 21.7	+0.9
	baz=88						
X34A	**Smith Ranch, M**	**1.98**	**202**	Pn	**Pn**	02 54 03.1	+1.0
U38A	**Gravette**	**2.04**	**89**	Pn	**Pn**	02 54 03.7	+0.8
U38A				IAmb_Lg		02 54 35.2	
	comp=Z,90nm,0.8s						
U38A	**Gravette**	**2.04**	**89**	P	**Pn**	02 54 03.9	+0.9
	baz=271,SNR=70						
X37A	**Clayton**	**2.23**	**145**	Pn	**Pn**	02 54 05.8	+0.3
X37A				IAmb_Lg		02 54 44.1	
	comp=Z,83nm,0.9s						
X37A	**Clayton**	**2.23**	**145**	S	**Sb**	02 54 37.7	+1.0
	baz=326						
WMOK	**Wichita Mounta**	**2.27**	**222**	Pn	**Pn**	02 54 06.5	+0.3
WMOK	**Wichita Mounta**	**2.27**	**222**	P	**Pn**	02 54 06.7	+0.6
	baz=41,SNR=70						
WMOK				S	**Sb**	02 54 37.0	-0.9
	baz=41						
HHAR	**Hobbs**	**2.41**	**93**	Pn	**Pn**	02 54 08.6	+0.6
HHAR				IAmb_Lg		02 54 42.4	
	comp=Z,84nm,0.7s						
R32A	**Long Quarter,**	**2.44**	**325**	Pn	**Pn**	02 54 09.2	+0.7
R32A	**Long Quarter,**	**2.44**	**325**	S	**Sn**	02 54 40.0	+1.3
	baz=144						
KSU1	**Kansas State U**	**2.67**	**5**	Pn	**Pn**	02 54 12.0	+0.4
Z35A	**Perchaven, San**	**3.11**	**185**	Pn	**Pn**	02 54 18.3	+0.7
Z35A	**Perchaven, San**	**3.11**	**185**	P	**Pn**	02 54 18.6	+0.9
	baz=5.1,SNR=10.0						
Z35A				S	**Sn**	02 54 56.7	+1.6
	baz=5.1						
S39A	**Bolivar**	**3.14**	**65**	Pn	**Pn**	02 54 19.2	+1.2
S39A				IAmb_Lg		02 55 09.8	
	comp=Z,58nm,1.0s						
CBKS	**Cedar Bluff**	**3.26**	**318**	Pn	**Pn**	02 54 20.3	+0.5
CBKS	**Cedar Bluff**	**3.26**	**318**	S	**Sn**	02 54 59.4	+0.4
	baz=136						
MIAR	**Mount Ida**	**3.31**	**124**	Pn	**Pn**	02 54 21.0	+0.5
MIAR				IAmb_Lg		02 55 19.6	
	comp=Z,31nm,0.8s						
MIAR	**Mount Ida**	**3.31**	**124**	P	**Pn**	02 54 21.2	+0.7
	baz=306,SNR=18						
Z38A	**Mt. Pleasant**	**3.54**	**153**	IAmb_Lg		02 55 30.0	
	comp=Z,38nm,0.8s						
MGMO	**Mountain Grove**	**3.80**	**78**	Pn	**Pn**	02 54 27.7	+0.6
FCAR	**Ozark Folk Cen**	**3.92**	**97**	Pn	**Pn**	02 54 29.1	+0.4
FCAR				IAmb_Lg		02 55 33.4	
	comp=Z,27nm,0.7s						
WHAR	**Wooly Hollow**	**3.93**	**106**	Pn	**Pn**	02 54 29.4	+0.5
WHAR				IAmb_Lg		02 55 34.5	
	comp=Z,68nm,1.1s						
UALR	**University of**	**4.08**	**113**	IAmb_Lg		02 55 40.6	
	comp=Z,26nm,0.8s						
R40A	**Maddies Statio**	**4.14**	**62**	Pn	**Pn**	02 54 32.7	+0.9
R40A				IAmb_Lg		02 55 41.0	
	comp=Z,49nm,0.8s						
R40A	**Maddies Statio**	**4.14**	**62**	S	**Sn**	02 55 22.1	+1.5
	baz=245						
WLAR	**White Oak Lake**	**4.15**	**130**	IAmb_Lg		02 55 43.7	
	comp=Z,28nm,0.8s						
P38A	**Dawn**	**4.16**	**39**	Pn	**Pn**	02 54 33.1	+1.1
P38A				IAmb_Lg		02 55 45.3	
	comp=Z,32nm,0.9s						
P38A	**Dawn**	**4.16**	**39**	S	**Sn**	02 55 22.3	+1.4
	baz=221						
AMTX	**Amarillo**	**4.18**	**250**	Pn	**Pn**	02 54 33.7	+1.3
AMTX				IAmb_Lg		02 55 39.9	
	comp=Z,28nm,0.9s						
N33B	**J Bar K, Exete**	**4.32**	**355**	S	**Sn**	02 55 24.5	-0.4
	baz=174						
N33A	**J Bar K, Exete**	**4.32**	**355**	IAmb_Lg		02 55 47.6	
	comp=Z,49nm,1.1s						
237A	**Washetta, Mont**	**4.52**	**168**	Pn	**Pn**	02 54 37.4	+0.4
N35A	**Tabor**	**4.53**	**12**	Pn	**Pn**	02 54 37.0	-0.2
N35A				IAmb_Lg		02 55 53.6	
	comp=Z,25nm,0.8s						
LCAR	**Lake Charles**	**4.67**	**93**	Pn	**Pn**	02 54 39.4	+0.3
CCM	**Cathedral Cave**	**4.81**	**69**	S	**Sn**	02 55 37.5	+0.6
	baz=252						
P40A	**Paris**	**4.93**	**50**	IAmb_Lg		02 56 01.3	
	comp=Z,60nm,0.8s						
NATX	**Nacogdoches**	**5.03**	**157**	S	**Sn**	02 55 41.6	-0.8
	baz=339						
BGNE	**Belgrade**	**5.06**	**349**	IAmb_Lg		02 56 13.5	
	comp=Z,38nm,0.8s						
HBAR	**Harrisburg**	**5.15**	**98**	IAmb_Lg		02 56 14.6	
	comp=Z,50nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.21**	**301**	IAmb_Lg		02 56 24.5	
	comp=Z,22nm,0.7s						
N38A	**Joes South For**	**5.22**	**32**	Pn	**Pn**	02 54 47.1	+0.5
N38A				IAmb_Lg		02 56 24.1	
	comp=Z,50nm,0.8s						
FVM	**French Village**	**5.41**	**71**	S	**Sn**	02 55 50.6	-1.1
	baz=255						
L34A	**Svendsen Farm,**	**5.54**	**4**	IAmb_Lg		02 56 28.6	
	comp=Z,47nm,0.8s						
GNAR	**Gosnell**	**5.60**	**93**	IAmb_Lg		02 56 34.1	
	comp=Z,46nm,0.8s						
435B	**Jarrell**	**5.67**	**186**	IAmb_Lg		02 56 42.6	
	comp=Z,24nm,0.9s						
PEBM	**Pemiscott Bayo**	**5.71**	**91**	IAmb_Lg		02 56 31.8	
	comp=Z,46nm,0.7s						
143A	**Socs Landing,**	**5.88**	**128**	IAmb_Lg		02 56 44.7	
	comp=Z,32nm,1.0s						
OGNE	**Ogallala**	**6.02**	**320**	IAmb_Lg		02 56 53.9	
	comp=Z,26nm,0.7s						
T25A	**Trinidad**	**6.05**	**279**	Pn	**Pn**	02 54 58.2	-0.1
T25A				IAmb_Lg		02 56 49.4	
	comp=Z,23nm,0.8s						
SCIA	**State Center**	**6.17**	**27**	IAmb_Lg		02 56 45.0	
	comp=Z,34nm,0.7s						
S44A	**Carbondale**	**6.25**	**76**	S	**Sn**	02 56 11.4	-1.2
	baz=261						
K31A	**O'Neill**	**6.34**	**348**	IAmb_Lg		02 57 06.7	
	comp=Z,47nm,0.9s						
JCT	**Junction City**	**6.41**	**203**	IAmb_Lg		02 57 01.9	
	comp=Z,20nm,0.8s						
W45A	**Hickory Valley**	**6.41**	**99**	IAmb_Lg		02 56 59.0	
	comp=Z,30nm,0.7s						
OXF	**Oxford**	**6.42**	**105**	IAmb_Lg		02 56 52.2	
	comp=Z,33nm,1.1s						
Y45A	**Yeager Farm, C**	**6.56**	**111**	IAmb_Lg		02 57 14.9	
	comp=Z,23nm,1.1s						
K38A	**Parkersburg**	**6.98**	**26**	IAmb_Lg		02 57 21.2	
	comp=Z,33nm,1.1s						
SDCO	**Great Sand Dun**	**6.98**	**283**	Pn	**Pn**	02 55 11.6	+0.4
BRIGG	**Briggsdale**	**7.13**	**308**	IAmb_Lg		02 57 17.2	
	comp=Z,23nm,0.8s						
L40A	**Anamosa**	**7.15**	**36**	Pn	**Pn**	02 55 13.0	-0.1
L40A				IAmb_Lg		02 57 19.0	
	comp=Z,22nm,0.7s						
ECSD	**EROS Data Cent**	**7.29**	**2**	Pn	**Pn**	02 55 14.4	-0.7
ECSD	**EROS Data Cent**	**7.29**	**2**	P	**Pn**	02 55 15.3	+0.3
	baz=182						
PLAL	**Pickwick Lake**	**7.34**	**99**	Pn	**Pn**	02 55 15.0	-0.7
WVT	**Waverly**	**7.35**	**90**	Pn	**Pn**	02 55 15.0	-0.8
L42A	**Oliver, Polo**	**7.91**	**43**	IAmb_Lg		02 57 39.0	
	comp=Z,34nm,0.9s						
JFWS	**Jewell Farm**	**8.26**	**36**	IAmb_Lg		02 58 04.2	
	comp=Z,18nm,0.8s						
N23A	**Red Feather La**	**8.35**	**305**	IAmb_Lg		02 58 03.2	
	comp=Z,21nm,0.8s						
WCI	**Wyandotte Cave**	**8.65**	**75**	S	**Sn**	02 57 10.5	-1.1
	baz=261						
I40A	**Norwalk**	**8.87**	**31**	IAmb_Lg		02 58 11.8	
	comp=Z,17nm,1.1s						
RSSD	**Black Hills**	**9.40**	**327**	IAmb_Lg		02 58 32.1	
	comp=Z,15nm,1.1s						
I42A	**Draeger Farm,**	**9.64**	**37**	IAmb_Lg		02 58 34.8	
	comp=Z,14nm,1.0s						
K22A	**Casper**	**9.67**	**313**	IAmb_Lg		02 58 56.2	
	comp=Z,15nm,1.1s						
Y58A	**Scranton**	**14.34**	**95**	P	**Pn**	02 56 51.2	-0.3
	baz=285		

CAMP	**Campotosto**	**0.14**	**147**	P	**Pg**	**02 59 18.2**	**-0.5**
CAMP				S	**Sg**	**02 59 20.1**	**-1.0**
CAMP				AML	AML		
	comp=E,31500μm,0.2s						
CAMP				AML	AML		
	comp=N,30300μm,1.2s						
T1246	**Crognaleto (TE**	**0.16**	**117**	P	**Pg**	**02 59 18.7**	**-0.2**
T1246				S	**Sg**	**02 59 21.1**	**-0.4**
RM33	**Pellescritta (**	**0.16**	**205**	P	**Pg**	**02 59 18.5**	**-0.4**
RM33				S	**Sg**	**02 59 20.8**	**-0.7**
RM33				AML	AML		
	comp=E,51550μm,0.8s						
RM33				AML	AML		
	comp=E,50000μm,0.8s						
RM33				AML	AML		
	comp=N,41800μm,0.6s						
RM33				AML	AML		
	comp=E,50050μm,0.8s						
RM33				AML	AML		
	comp=N,43300μm,0.7s						
RM33				AML	AML		
	comp=N,41850μm,0.6s						
RM33				AML	AML		
	comp=E,51500μm,0.8s						
LNSS	**Leonessa**	**0.20**	**255**	P	**Pg**	**02 59 19.6**	**0.0**
LNSS				S	**Sg**	**02 59 23.0**	**+0.3**
LNSS				AML	AML		
	comp=N,32000μm,0.4s						
LNSS				AML	AML		
	comp=E,13850μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.21**	**181**	⇑P	**Pg**	**02 59 19.3**	**-0.4**
T1247				S	**Sg**	**02 59 22.4**	**-0.4**
T1247				AML	AML		
	comp=N,22300μm,0.2s						
T1247				AML	AML		
	comp=E,22650μm,0.5s						
T1245	**Castelsantange**	**0.22**	**337**	P	**Pg**	**02 59 20.7**	**+0.7**
T1245				AML	AML		
	comp=E,27000μm,0.5s						
T1245				AML	AML		
	comp=N,34250μm,0.6s						
T1245				AML	AML		
	comp=E,27000μm,0.6s						
T1245				AML	AML		
	comp=N,34250μm,0.6s						
T1245				AML	AML		
	comp=E,27650μm,0.5s						
T1245				AML	AML		
	comp=N,32000μm,0.6s						
T1245				AML	AML		
	comp=E,27050μm,0.6s						
T1241	**Roccafluvione,**	**0.22**	**25**	P	**Pg**	**02 59 20.7**	**+0.8**
T1241				S	**Sg**	**02 59 24.7**	**+1.5**
T1241				AML	AML		
	comp=N,20800μm,0.3s						
T1241				AML	AML		
	comp=N,20750μm,0.3s						
T1241				AML	AML		
	comp=E,21100μm,1.1s						
T1241				AML	AML		
	comp=N,22150μm,0.3s						
T1241				AML	AML		
	comp=E,21850μm,1.1s						
T1241				AML	AML		
	comp=N,20800μm,0.3s						
T1241				AML	AML		
	comp=N,22200μm,0.3s						
T1241				AML	AML		
	comp=E,21900μm,1.1s						
T1241				AML	AML		
	comp=E,21050μm,1.1s						
TERO	**Teramo**	**0.22**	**98**	P	**Pg**	**02 59 19.9**	**0.0**
TERO				S	**Sg**	**02 59 23.4**	**+0.2**
TERO				AML	AML		
	comp=E,32050μm,0.8s						
TERO				AML	AML		
	comp=E,33600μm,0.8s						
TERO				AML	AML		
	comp=N,23750μm,1.5s						
TERO				AML	AML		
	comp=E,32000μm,0.8s						
TERO				AML	AML		
	comp=N,22500μm,0.7s						
TERO				AML	AML		
	comp=N,22450μm,0.7s						
MMO1	**Montemonaco**	**0.25**	**4**	⇓P	**Pg**	**02 59 21.2**	**+0.9**
T1217	**Poggiodomo (PG**	**0.28**	**282**	⇑P	**Pg**	**02 59 21.2**	**+0.2**
T1217				S	**Sb**	**02 59 25.8**	**-1.1**
T1217				AML	AML		
	comp=E,11460μm,0.4s						
T1217				AML	AML		
	comp=N,19600μm,0.3s						
T1217				AML	AML		
	comp=E,11495μm,0.4s						
T1217				AML	AML		
	comp=E,11170μm,0.4s						
T1217				AML	AML		
	comp=N,19600μm,0.3s						
T1217				AML	AML		
	comp=E,11475μm,0.4s						
T1217				AML	AML		
	comp=N,20100μm,0.3s						
T1217				AML	AML		
	comp=E,11195μm,0.4s						
T1217				AML	AML		
	comp=E,11160μm,0.4s						
T1217				AML	AML		
	comp=E,11490μm,0.4s						
GIGS	**Gran Sasso**	**0.28**	**136**	P	**Pg**	**02 59 20.5**	**-0.5**
GIGS				S	**Sg**	**02 59 24.3**	**-0.7**
GIGS				AML	AML		
	comp=E,3175μm,1.4s						
GIGS				AML	AML		
	comp=N,3880μm,0.5s						
GIGS				AML	AML		
	comp=E,3170μm,1.4s						
AQU	**L'Aquila**	**0.31**	**166**	⇑P	**Pg**	**02 59 21.0**	**-0.4**
AQU				S	**Sg**	**02 59 25.3**	**-0.4**
AQU				AML	AML		
	comp=E,8950μm,0.9s						
AQU				AML	AML		
	comp=N,8240μm,0.3s						
AQU				AML	AML		
	comp=N,8285μm,0.3s						
AQU				AML	AML		
	comp=N,8235μm,0.3s						
AQU				AML	AML		
	comp=E,8825μm,0.8s						
AQU				AML	AML		
	comp=E,8945μm,0.9s						
T1216	**Preci, Frazion**	**0.32**	**319**	⇓P	**Pg**	**02 59 20.5**	**-1.2**
T1216				AML	AML		
	comp=E,22050μm,0.4s						
T1216				AML	AML		
	comp=N,28650μm,0.4s						
AM05	**Amandola Campo**	**0.33**	**6**	⇑P	**Pb**	**02 59 22.7**	**-0.3**
AM05				AML	AML		
	comp=E,4190μm,1.1s						
AM05				AML	AML		
	comp=N,5055μm,0.1s						
AM05				AML	AML		
	comp=N,5050μm,0.1s						
AM05				AML	AML		
	comp=E,18950μm,1.5s						
AM05				AML	AML		
	comp=N,1495μm,0.1s						
T1211	**Morro Reatino**	**0.35**	**250**	P	**Pg**	**02 59 22.0**	**-0.3**
T1211				S	**Sg**	**02 59 27.5**	**+0.4**
T1211				AML	AML		
	comp=E,7715μm,1.5s						
T1211				AML	AML		
	comp=N,15400μm,0.5s						
T1211				AML	AML		
	comp=E,7640μm,1.5s						
T1211				AML	AML		
	comp=N,15500μm,0.5s						
T1211				AML	AML		
	comp=E,7720μm,1.5s						
T1211				AML	AML		
	comp=E,7685μm,1.5s						
T1211				AML	AML		
	comp=N,15550μm,0.5s						
T1211				AML	AML		
	comp=E,7650μm,1.5s						
T1211				AML	AML		
	comp=N,15450μm,0.5s						
T1215	**Vallo di Nera,**	**0.35**	**295**	⇑P	**Pb**	**02 59 22.5**	**-0.9**
T1215				S	**Sb**	**02 59 28.2**	**-0.8**
T1215				AML	AML		
	comp=N,8455μm,0.3s						
T1215				AML	AML		
	comp=N,8565μm,0.3s						
T1215				AML	AML		
	comp=N,8450μm,0.3s						
T1215				AML	AML		
	comp=E,6310μm,0.2s						
T1215				AML	AML		
	comp=N,8560μm,0.3s						
T1215				AML	AML		
	comp=E,6315μm,0.2s						
T1215				AML	AML		
	comp=N,8565μm,0.3s						
T1215				AML	AML		
	comp=E,6365μm,0.2s						
FEMA	**Monte Fema**	**0.36**	**329**	⇑P	**Pb**	**02 59 23.3**	**-0.3**
FEMA				AML	AML		
	comp=N,12900μm,0.2s						
FEMA				AML	AML		
	comp=E,19800μm,0.3s						
FEMA				AML	AML		
	comp=N,12870μm,0.2s						
FEMA				AML	AML		
	comp=N,12850μm,0.2s						
FEMA				AML	AML		
	comp=E,19850μm,0.3s						
OFFI	**Offida**	**0.40**	**45**	⇑P	**Pb**	**02 59 24.5**	**+0.3**
OFFI				AML	AML		
	comp=N,33500μm,0.4s						
OFFI				AML	AML		
	comp=E,44200μm,0.4s						
ARRO	**Arrone**	**0.41**	**260**	⇑P	**Pg**	**02 59 23.1**	**-0.1**
ARRO				AML	AML		
	comp=E,3260μm,0.7s						
ARRO				AML	AML		
	comp=N,4435μm,0.6s						
ARRO				AML	AML		
	comp=E,3255μm,0.7s						
ARRO				AML	AML		
	comp=N,4430μm,0.6s						
GUMA	**Gualdo di Mace**	**0.41**	**3**	⇑P	**Pb**	**02 59 24.4**	**0.0**
GUMA				AML	AML		
	comp=E,25450μm,0.4s						
GUMA				AML	AML		
	comp=N,22650μm,0.4s						
GUMA				AML	AML		
	comp=E,28150μm,0.3s						
GUMA				AML	AML		
	comp=E,25400μm,0.4s						
GUMA				AML	AML		
	comp=N,22700μm,0.4s						
GUMA				AML	AML		
	comp=N,23700μm,0.4s						
FIAM	**Fiamignano**	**0.41**	**200**	P	**Pg**	**02 59 23.2**	**-0.1**
FAGN	**Fagnano**	**0.44**	**152**	P	**Pg**	**02 59 23.9**	**0.0**
FAGN				AML	AML		
	comp=E,14150μm,0.4s						
FAGN				AML	AML		
	comp=N,11300μm,0.3s						
VCEL	**Villa Celiera**	**0.47**	**123**	P	**Pg**	**02 59 24.6**	**+0.1**
VCEL				S	**Sb**	**02 59 32.1**	**-0.3**
VCEL				AML	AML		
	comp=N,24700μm,0.7s						
VCEL				AML	AML		
	comp=E,15800μm,1.5s						
TRTR	**Tortoreto Alta**	**0.47**	**71**	⇑P	**Pb**	**02 59 26.0**	**+0.6**
TRTR				AML	AML		
	comp=E,30900μm,0.6s						
TRTR				AML	AML		
	comp=N,18750μm,0.4s						
MNTP	**Montappone**	**0.50**	**14**	⇓P	**Pb**	**02 59 26.2**	**+0.4**
MNTP				AML	AML		
	comp=E,45850μm,0.2s						
MNTP				AML	AML		
	comp=N,32300μm,1.1s						
CESX	**Cesi**	**0.54**	**266**	⇑P	**Pg**	**02 59 25.2**	**-0.4**
CESX				AML	AML		
	comp=E,3640μm,0.4s						
CESX				AML	AML		
	comp=N,4100μm,0.3s						
T0110	**Collepietro**	**0.55**	**140**	⇓P	**Pg**	**02 59 25.4**	**-0.6**
T0110				AML	AML		
	comp=E,9100μm,0.7s						
T0110				AML	AML		
	comp=N,8025μm,0.5s						
SEF1	**Sefro**	**0.56**	**332**	P	**Pb**	**02 59 26.6**	**-0.3**
SEF1				S	**Sn**	**02 59 37.0**	**-1.2**
SEF1				AML	AML		
	comp=E,8780μm,0.9s						
SEF1				AML	AML		
	comp=N,7175μm,0.3s						
SEF1				AML	AML		
	comp=E,8770μm,0.9s						
SEF1				AML	AML		
	comp=N,7175μm,0.3s						
PIO1	**Pioraco**	**0.57**	**336**	S	**Sb**	**02 59 36.0**	**+0.6**
FIU1	**Fiuminata**	**0.60**	**333**	P	**Pb**	**02 59 27.5**	**-0.1**
FIU1				AML	AML		
	comp=E,3824μm,1.2s						
FIU1				AML	AML		
	comp=N,4055μm,1.0s						
FIU1				AML	AML		
	comp=E,3828μm,1.2s						
GAG1	**Gagliole**	**0.61**	**343**	⇓P	**Pb**	**02 59 27.9**	**+0.1**
GAG1				AML	AML		
	comp=E,8820μm,0.3s						
GAG1				AML	AML		
	comp=N,9315μm,0.4s						
GAG1				AML	AML		
	comp=E,8850μm,0.4s						
GAG1				AML	AML		
	comp=N,9320μm,0.4s						
ASSB	**Assisi San Ben**	**0.61**	**310**	⇑P	**Pb**	**02 59 27.3**	**-0.6**
ASSB				AML	AML		
	comp=E,6740μm,0.3s						
ASSB				AML	AML		
	comp=N,7540μm,0.4s						
PTQR	**Pietraquaria**	**0.64**	**174**	⇑P	**Pg**	**02 59 26.3**	**-1.3**
PTQR				AML	AML		
	comp=N,1020μm,0.5s						
PTQR				AML	AML		
	comp=E,973μm,0.7s						
CADA	**Capodarco di F**	**0.64**	**32**	⇑P	**Pn**	**02 59 29.8**	**-0.2**
CADA				AML	AML		
	comp=E,15700μm,0.5s						
CADA				AML	AML		
	comp=N,16000μm,0.5s						
CADA				AML	AML		
	comp=N,16050μm,0.5s						
CADA				AML	AML		
	comp=E,15650μm,0.4s						
TRE1	**Treia**	**0.66**	**1**	S	**Sn**	**02 59 42.0**	**+1.4**
SNTG	**Esanatoglia**	**0.66**	**336**	⇑P	**Pb**	**02 59 28.4**	**-0.2**
SNTG				AML	AML		
	comp=E,2145μm,0.4s						
SNTG				AML	AML		
	comp=E,2070μm,0.5s						
SNTG				AML	AML		
	comp=N,2295μm,0.6s						
SNTG				AML	AML		
	comp=N,2125μm,0.6s						
EL6	**Elcito**	**0.69**	**348**	⇑P	**Pb**	**02 59 29.2**	**0.0**
EL6				AML	AML		
	comp=E,6690μm,1.3s						
EL6				AML	AML		
	comp=N,5950μm,0.9s						
SRES	**S.Oreste - Sor**	**0.72**	**235**	⇑P	**Pg**	**02 59 28.0**	**-1.1**
SRES				S	**Sn**	**02 59 41.0**	**-1.2**
SRES				AML	AML		
	comp=N,1330μm,0.4s						
SRES				AML	AML		
	comp=E,1280μm,1.1s						
CERT	**Cerreto**	**0.74**	**199**	⇑P	**Pg**	**02 59 28.2**	**-1.4**
CERT				AML	AML		
	comp=N,1890μm,0.6s						
CERT				AML	AML		
	comp=E,3970μm,0.6s						
FOSV	**Fossato di Vic**	**0.76**	**328**	⇑P	**Pb**	**02 59 29.9**	**-0.3**
FOSV				AML	AML		
	comp=E,2515μm,0.4s						
FOSV				AML	AML		
	comp=N,2435μm,0.3s						
MTCE	**Montecelio**	**0.76**	**214**	⇑P	**Pg**	**02 59 28.3**	**-1.5**
MTCE				AML	AML		
	comp=N,1615μm,1.6s						
MTCE				AML	AML		
	comp=E,3775μm,0.5s						
PP3	**Marolino**	**0.76**	**17**	⇓P	**Pn**	**02 59 31.3**	**-0.4**
PP3				AML	AML		
	comp=E,11100μm,0.7s						
PP3				AML	AML		
	comp=N,9555μm,0.4s						
PP3				AML	AML		
	comp=E,10370μm,0.7s						
PP3				AML	AML		
	comp=N,10640μm,0.4s						
PP3				AML	AML		
	comp=N,10645μm,0.4s						
PP3				AML	AML		
	comp=E,10390μm,0.7s						
PP3				AML	AML		
	comp=N,9585μm,0.4s						
VVLD	**Villa Vallelon**	**0.82**	**163**	⇑P	**Pg**	**02 59 29.8**	**-1.1**
VVLD				AML	AML		
	comp=N,1985μm,1.0s						
VVLD				AML	AML		
	comp=E,1590μm,0.7s						
MURB	**Monte Urbino**	**0.84**	**317**	⇓P	**Pb**	**02 59 31.6**	**0.0**
MURB				S	**Sn**	**02 59 46.0**	**+0.9**
MURB				AML	AML		
	comp=E,10050μm,0.3s						
MURB				AML	AML		
	comp=N,11585μm,0.9s						
MURB				AML	AML		
	comp=E,10020μm,0.3s						
MURB				AML	AML		
	comp=E,11100μm,0.3s						
MURB				AML	AML		
	comp=N,11620μm,0.9s						
MURB				AML	AML		
	comp=N,11600μm,0.9s						
RCAV	**Rocca di Cave**	**0.85**	**198**	P	**Pg**	**02 59 29.5**	**-2.0**
RCAV				AML	AML		
	comp=E,3450μm,0.7s						
RCAV				AML	AML		
	comp=N,2235μm,0.9s						
CAFR	**Castel Frentan**	**0.88**	**119**	⇓P	**Pg**	**02 59 31.8**	**-0.3**
CAFR				S	**Sn**	**02 59 46.0**	**-0.1**
CAFR				AML	AML		
	comp=E,1230μm,0.6s						
CAFR				AML	AML		
	comp=N,1505μm,0.8s						
ARVD	**Arcevia**	**0.89**	**343**	⇑P	**Pb**	**02 59 32.2**	**-0.3**
ARVD				S	**Sn**	**02 59 48.0**	**+1.7**
ARVD				AML	AML		
	comp=N,1755μm,1.0s						
ARVD				AML	AML		
	comp=E,2055μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.89**	**308**	⇓P	**Pb**	**02 59 32.4**	**-0.1**
ATTE				S	**Sn**	**02 59 47.0**	**+0.6**
ATTE				AML	AML		
	comp=E,2570μm,0.5s						
ATTE				AML	AML		
	comp=N,2320μm,0.5s						
LPEL	**Lama dei Pelig**	**0.89**	**133**	⇑P	**Pg**	**02 59 31.0**	**-1.4**
LPEL				AML	AML		
	comp=N,1825μm,1.1s						
LPEL				AML	AML		
	comp=E,2880μm,0.3s						
ATFO	**Monte Foce - G**	**0.89**	**323**	⇑P	**Pb**	**02 59 32.5**	**-0.1**
ATFO				AML	AML		
	comp=E,2375μm,1.6s						
ATFO				AML	AML		
	comp=N,2675μm,0.6s						
MGAB	**Montegabbione**	**0.92**	**287**	⇑P	**Pg**	**02 59 32.5**	**-0.3**
MGAB				AML	AML		
	comp=E,6640μm,0.4s						
MGAB				AML	AML		
	comp=N,3700μm,0.4s						
MGAB				AML	AML		
	comp=E,7120μm,0.4s						
MGAB				AML	AML		
	comp=N,3795μm,0.4s						
AOI	**Ancona**	**0.92**	**14**	⇑P	**Pn**	**02 59 33.7**	**-0.3**
AOI				S	**Sn**	**02 59 50.0**	**+2.8**
AOI				AML	AML		
	comp=E,2710μm,0.4s						
AOI				AML	AML		
	comp=N,3090μm,0.3s						
RMP	**Rome, Mte Porz**	**0.95**	**208**	⇓P	**Pn**	**02 59 34.9**	**+0.5**
RMP				AML	AML		
	comp=N,2185μm,0.5s						
RMP				AML	AML		
	comp=E,2600μm,0.6s						
FRON	**Frontone**	**0.96**	**334**	⇓P	**Pb**	**02 59 33.9**	**+0.1**
FRON				AML	AML		
	comp=E,2100μm,1.1s						
FRON				AML	AML		
	comp=N,3705μm,0.6s						
ATVO	**AVT- Monte Val**	**0.98**	**318**	⇓P	**Pb**	**02 59 34.0**	**-0.1**
ATVO				AML	AML		
	comp=E,1750μm,0.5s						
ATVO				AML	AML		
	comp=N,1605μm,0.4s						
POFI	**Posta Fibreno**	**0.98**	**162**	⇑P	**Pg**	**02 59 32.8**	**-1.3**
POFI				AML	AML		
	comp=E,1905μm,0.7s						
POFI				AML	AML		
	comp=N,1020μm,0.9s						
VIVA	**Pratoni del Vi**	**0.99**	**204**	⇓P	**Pn**	**02 59 35.1**	**+0.2**
VIVA				AML	AML		
	comp=E,4345μm,0.5s						
VIVA				AML	AML		
	comp=N,5075μm,0.7s						
MA9	**Marino**	**1.00**	**209**	⇓P	**Pn**	**02 59 35.5**	**+0.4**
MA9				AML	AML		
	comp=E,3920μm,0.6s						
MA9				AML	AML		
	comp=N,2245μm,0.6s						
ATMI	**Monte Miggiano**	**1.02**	**312**	⇑P	**Pn**	**02 59 35.3**	**-0.1**
ATMI				S	**Sn**	**02 59 52.0**	**+2.4**
ATMI				AML	AML		
	comp=N,4520μm,0.4s						
ATMI				AML	AML		
	comp=E,5395μm,0.5s						
LRP	**Arpino**	**1.03**	**168**	⇓P	**Pb**	**02 59 35.1**	**+0.2**
LRP				AML	AML		
	comp=E,638μm,1.2s						
LRP				AML	AML		
	comp=N,470μm,1.4s						
ATPI	**Pietralunga -**	**1.03**	**321**	⇑P	**Pb**	**02 59 34.9**	**-0.2**
ATPI				AML	AML		
	comp=E,2000μm,0.5s						
ATPI				AML	AML		
	comp=N,1575μm,0.5s						
SACS	**San Casciano d**	**1.05**	**281**	⇑P	**Pg**	**02 59 34.8**	**-0.5**
PIEI	**Pieia**	**1.05**	**328**	⇑P	**Pn**	**02 59 35.3**	**-0.4**
PIEI				AML	AML		
	comp=E,1350μm,0.5s						
PIEI				AML	AML		
	comp=N,1275μm,0.6s						
MPAG	**Monte Paganucc**	**1.05**	**338**	⇓P	**Pn**	**02 59 35.5**	**-0.3**
MPAG				AML	AML		
	comp=E,2230μm,0.7s						
MPAG				AML	AML		
	comp=N,1680μm,1.0s						
LAV9	**Lanuvio**	**1.07**	**205**	⇓P	**Pn**	**02 59 36.9**	**+0.9**
NARO	**Abbazia di Nar**	**1.09**	**331**	⇑P	**Pn**	**02 59 36.1**	**-0.2**
NARO				S	**Sn**	**02 59 55.0**	**+3.6**
NARO				AML	AML		
	comp=E,1114μm,0.8s						
NARO				AML	AML		
	comp=N,939μm,0.6s						
GIUL	**Giuliano Di Ro**	**1.09**	**182**	⇓P	**Pg**	**02 59 35.4**	**-0.8**
GIUL				AML	AML		
	comp=E,766μm,0.6s						
GIUL				AML	AML		
	comp=N,746μm,0.6s						
FSSB	**Fossombrone**	**1.11**	**340**	⇑P	**Pn**	**02 59 36.4**	**-0.2**
FSSB				AML	AML		
	comp=E,5360μm,0.3s						
FSSB				AML	AML		
	comp=N,5140μm,1.6s						
LATE	**Laterza**	**1.11**	**268**	⇓P	**Pn**	**02 59 36.8**	**+0.3**
APEC	**Apecchio**	**1.11**	**325**	⇓P	**Pn**	**02 59 37.0**	**+0.4**
TOLF	**Tolfa**	**1.13**	**239**	⇑P	**Pb**	**02 59 35.5**	**-1.2**
TOLF				AML	AML		
	comp=E,993μm,0.7s						
TOLF				AML	AML		
	comp=N,1335μm,0.7s						
BADI	**Badiali**	**1.16**	**318**	P	**Pn**	**02 59 37.5**	**+0.4**

CERA	Filignano	1.18 153	⇓P	Pb	02 59 36.0	-1.5
LATB	Latina	1.19 193	⇑P	Pg	02 59 38.0	0.0
LATB			AML	AML		
	comp=E,394μm,0.9s					
LATB			AML	AML		
	comp=N,328μm,0.8s					
CAFI	Castiglion Fio	1.19 305	P	Pg	02 59 37.9	-0.2
CAFI			S	Sn	02 59 57.0	+3.1
CAFI			AML	AML		
	comp=E,1024μm,1.2s					
CAFI			AML	AML		
	comp=N,1176μm,0.6s					
PE3	Peglio	1.20 331	⇓P	Pg	02 59 38.5	+0.3
PE3			AML	AML		
	comp=E,11μm,0.4s					
PE3			AML	AML		
	comp=N,11μm,0.4s					
MCIV	Monte Civitell	1.21 276	⇓P	Pg	02 59 38.0	-0.4
MCIV			AML	AML		
	comp=E,614μm,1.0s					
MCIV			AML	AML		
	comp=N,512μm,1.0s					
SF04	Casetta	1.23 279	P	Pg	02 59 38.9	+0.1
SF04			S	Sn	02 59 58.0	+3.3
SSP9	Sansepolcro	1.26 317	⇓P	Pg	02 59 40.3	+1.0
SSP9			AML	AML		
	comp=N,1334μm,0.7s					
SSP9			AML	AML		
	comp=E,1026μm,1.6s					
TRIV	Trivento	1.28 133	⇑P	Pg	02 59 41.3	+1.5
TRIV			AML	AML		
TRIV			AML	AML		
CRE	Caprese Michel	1.38 315	⇑P	Pg	02 59 41.5	-0.2
CRE			AML	AML		
	comp=E,757μm,1.2s					
CRE			AML	AML		
	comp=N,904μm,0.3s					
VAGA	Valle Agricola	1.42 150	⇑P	Pg	02 59 43.6	+1.2
MAON	Monte Argentar	1.62 263	⇑P	Pn	02 59 43.6	0.0
MAON			AML	AML		
	comp=E,274μm,0.8s					
MAON			AML	AML		
	comp=N,156μm,1.3s					
MELA	Melanico ??? S	1.65 124	⇓P	Pg	02 59 46.3	-0.6
MELA			AML	AML		
	comp=N,1120μm,0.8s					
MELA			AML	AML		
	comp=E,726μm,1.5s					
MELA			AML	AML		
	comp=N,1095μm,0.8s					
MELA			AML	AML		
	comp=E,728μm,0.6s					
CSNT	Castellina Chi	1.69 300	⇓P	Pb	02 59 45.9	-0.3
CSNT			AML	AML		
	comp=N,258μm,0.7s					
CSNT			AML	AML		
	comp=E,288μm,0.7s					
OSSC	Osservatorio P	1.74 301	P	Pn	02 59 45.4	+0.1
OSSC			AML	AML		
	comp=E,234μm,1.1s					
OSSC			AML	AML		
	comp=N,344μm,0.7s					
RUFI	Rufina	1.77 313	S	Sg	03 00 11.0	-1.0
CASP	Castiglione de	1.80 275	⇑P	Pn	02 59 46.4	+0.3
CASP			AML	AML		
	comp=E,80μm,1.5s					
CASP			AML	AML		
	comp=N,89μm,0.9s					
TRIF	Trifonti	1.82 285	⇑P	Pn	02 59 47.2	+0.8
TRIF			AML	AML		
	comp=E,302μm,0.7s					
TRIF			AML	AML		
	comp=N,338μm,0.8s					
BRIS	BRISIGHELLA	1.99 319	P	Pg	02 59 52.0	-1.2
MTCR	Monte La Croce	2.17 310	⇑P	Pb	02 59 53.1	-1.4
BRJN	Brijuni	2.27 8	⇓P	Pn	02 59 54.0	+1.5
PII	Pisa	2.30 299	⇑P	Pn	02 59 54.3	+1.5
PII			AML	AML		
	comp=N,243μm,0.8s					
PII			AML	AML		
	comp=E,214μm,0.5s					
POPM	Popiglio	2.32 308	⇓P	Pb	02 59 54.9	-2.0
POPM			AML	AML		
	comp=E,203μm,0.4s					
POPM			AML	AML		
	comp=N,177μm,1.0s					
MCRV	Calabrutti - M	2.33 143	P	Pg	02 59 58.6	-1.2
HVAR	Hvar	2.37 76	⇑P	Pn	02 59 55.3	+1.5
MAIM	Mastiano	2.41 302	⇓P	Pn	02 59 56.2	+1.8
MAIM			AML	AML		
	comp=E,170μm,0.5s					
MAIM			AML	AML		
	comp=N,178μm,0.5s					
BDI	Bagni Di Lucca	2.42 306	⇓P	Pn	02 59 55.9	+1.2
BDI			AML	AML		
	comp=E,101μm,0.5s					
BDI			AML	AML		
	comp=N,95μm,0.4s					
EQUI	Equi	2.75 304	S	Sb	03 00 35.0	-2.9
MORSI	Morsiglia	2.92 277	P	Pn	03 00 02.3	+0.9
MORSI			S	Sn	03 00 38.5	+2.3
GRAM	Graiana	2.98 309	⇑P	Pn	03 00 04.9	+2.5
GRAM			AML	AML		
	comp=N,235μm,0.8s					
GRAM			AML	AML		
	comp=E,216μm,0.8s					
SMPL	Sampolo	3.03 261	P	Pn	03 00 03.0	+0.1
OPPE	Oppeano	3.07 331	S	Sg	03 00 54.0	+0.3
CORF	Corte	3.09 265	P	Pn	03 00 04.7	+0.9
PGF	Pioggiola	3.18 270	⇓P	Pn	03 00 06.6	+1.5
PGF			AML	AML		
	comp=N,29μm,0.4s					
PGF			AML	AML		
	comp=E,31μm,1.6s					
PGF	Pioggiola	3.18 270	P	Pn	03 00 06.7	+1.6
STON	Ston	3.24 85	P	Pn	03 00 06.3	+0.5
STON			AML	AML		
	comp=E,72μm,1.4s					
STON			AML	AML		
	comp=N,76μm,0.7s					
SABO	M.te Sabotino	3.33 4	⇑P	Pn	03 00 08.2	+1.0
SABO			AML	AML		
	comp=E,1400μm,0.6s					
SABO			AML	AML		
	comp=N,1044μm,0.6s					
SABO			AML	AML		
	comp=E,345μm,0.6s					
SABO			AML	AML		
	comp=N,290μm,0.6s					
CGRP	Cima Grappa	3.40 342	⇓P	Pn	03 00 10.3	+2.1
CGRP			AML	AML		
	comp=E,252μm,0.6s					
CGRP			AML	AML		
	comp=N,272μm,0.5s					
AJAC	Base Areonaval	3.45 259	P	Pn	03 00 09.9	+1.3
VARN	Col Varnada, M	3.45 346	P	Pn	03 00 10.1	+1.4
VARN			AML	AML		
	comp=N,232μm,0.5s					
VARN			AML	AML		
	comp=E,266μm,1.2s					
LJU	Ljubljana	3.50 14	⇓P	Pb	03 00 13.4	-3.7
SALO	Salr	3.58 327	⇓P	Pn	03 00 13.0	+2.5
SALO			AML	AML		
	comp=E,178μm,0.6s					
SALO			AML	AML		
	comp=N,217μm,0.6s					
CTI	Castel Tesino	3.59 341	⇑P	Pn	03 00 12.8	+2.0
CTI			AML	AML		
	comp=N,197μm,0.7s					
CTI			AML	AML		
	comp=E,185μm,0.3s					
MPRI	Monte Prat	3.59 356	⇓P	Pn	03 00 12.2	+1.4
MPRI			AML	AML		
	comp=E,311μm,0.4s					
MPRI			AML	AML		
	comp=N,300μm,0.4s					
STAL	STALIGIAL	3.63 353	⇓P	Pn	03 00 12.8	+1.6
STAL			AML	AML		
	comp=E,240μm,0.6s					
STAL			AML	AML		
	comp=N,156μm,0.5s					
CIMO	Cimolais	3.71 351	⇑P	Pn	03 00 13.5	+1.2
CIMO			AML	AML		
	comp=E,59μm,0.6s					
CIMO			AML	AML		
	comp=N,50μm,0.4s					
CIMO			AML	AML		
	comp=N,51μm,0.4s					
CIMO			AML	AML		
	comp=E,66μm,0.7s					
LUSI	Trento, Gardas	3.71 334	S	Sn	03 00 59.0	+2.9
GAGG	Gaggia	3.82 335	⇑P	Pn	03 00 16.5	+2.5
GAGG			AML	AML		
	comp=N,131μm,0.9s					
GAGG			AML	AML		
	comp=E,146μm,0.4s					
ZONE	Zone	3.86 325	⇑P	Pn	03 00 16.5	+2.1
ZONE			AML	AML		
	comp=N,173μm,0.6s					
ZONE			AML	AML		
	comp=E,116μm,0.3s					
ACOM	Acomizza, Ital	3.90 2	⇓P	Pn	03 00 17.2	+2.1
ACOM			S	Sn	03 01 04.0	+3.2
ACOM			AML	AML		
	comp=E,135μm,0.4s					
ACOM			AML	AML		
	comp=N,150μm,0.6s					
ZOU	Zoufplan	3.91 357	⇓P	Pn	03 00 16.4	+1.2
ZOU			AML	AML		
	comp=N,110μm,1.1s					
ZOU			AML	AML		
	comp=E,121μm,0.9s					
EUCT	Pavia	3.94 312	S	Sb	03 01 10.0	-2.3
MABI	Malga Bissina	3.94 330	⇑P	Pn	03 00 17.7	+2.0
MABI			AML	AML		
	comp=N,69μm,1.3s					
MABI			AML	AML		
	comp=E,64μm,0.5s					
OBKA	Obir	3.96 13	*e*Pn	Pn	03 00 17.6	+1.9
	comp=E,2.4nm,0.2s,SNR=5.8					
MYKA	Terra Mystica	3.98 3	*e*Pn	Pn	03 00 17.9	+1.8
	comp=E,4.9nm,0.4s					
KOSI	Kohlern	4.05 341	P	Pn	03 00 19.8	+2.7
KOSI			AML	AML		
	comp=E,174μm,0.7s					
KOSI			AML	AML		
	comp=N,116μm,0.5s					
BOSI	Bolzano	4.09 340	S	Sb	03 01 11.0	-5.6
APPI	Appiano	4.10 340	P	Pn	03 00 20.1	+2.4
ABTA	Abfaltersbach	4.13 352	*e*Pn	Pn	03 00 20.2	+2.0
	comp=N,4.7nm,0.3s,SNR=32					
BRES	Bressanone	4.20 345	P	Pn	03 00 21.6	+2.4
SOKA	Soboth	4.21 16	*e*Pn	Pn	03 00 22.8	+3.6
	comp=N,1.0nm,0.2s,SNR=7.0					
VSL	Villasalto	4.33 225	S	Sn	03 01 11.0	-0.3
KOGS	Kog	4.34 28	P	Pn	03 00 24.5	+3.6
RISI	Rein	4.38 349	⇓P	Pn	03 00 24.7	+3.1
RISI			S	Sn	03 01 16.0	+3.3
SAOF	Saorge	4.40 290	P	Pn	03 00 23.5	+1.6
ROSI	Rosskopf	4.48 343	⇑P	Pn	03 00 25.7	+2.7
TURF	col de Turini	4.51 289	P	Pn	03 00 25.0	+1.6
SPIF	crte de Spivo	4.64 290	P	Pn	03 00 27.2	+2.0
MVIF	Mont Vial	4.66 288	P	Pn	03 00 26.7	+1.2
FETA	Feichten	4.74 338	*e*Pn	Pn	03 00 29.0	+2.5
	comp=N,2.2nm,0.7s,SNR=5.5					
WTTA	Wattenberg	4.76 346	*i* Pn	Pn	03 00 29.8	+2.9
	comp=N,2.1nm,0.2s,SNR=4.8					
CALF	Calern	4.79 285	P	Pn	03 00 28.6	+1.4
DAVOX	Davos/Dischmat	4.79 331	Pn	Pn	03 00 30.0	+2.7
	comp=N,2.2nm,0.3s,baz=154,slow=18,SNR=22					
DAVOX			Sn	Sn	03 01 27.5	+4.6
	comp=N,2.9nm,0.3s,baz=113,slow=22,SNR=6.2					
	comp=N,4.7nm,0.3s					
DAVOX	Davos/Dischmat	4.79 331	⇓P	Pn	03 00 31.2	+3.9
SQTA	Sankt Quirin	4.80 343	*e*Pn	Pn	03 00 30.4	+3.0
	comp=N,3.7nm,0.3s,SNR=16					
ISO	Isola	4.80 291	P	Pn	03 00 30.5	+3.1
WATA	Walderalm	4.84 346	*i* Pn	Pn	03 00 31.1	+3.2
	comp=N,4.4nm,0.3s,SNR=10.0					
ARSA	Arzberg	4.86 18	*i* Pn	Pn	03 00 29.0	+0.9
	comp=N,0.9nm,0.3s					
TRAV	Traversella	4.92 307	P	Pn	03 00 30.8	+1.9
MOTA	Moosalm	4.94 342	*e*Pn	Pn	03 00 32.1	+2.7
	comp=N,0.3nm,0.2s,SNR=6.4					
RESU	Resuttano	5.03 173	P	Pb	03 00 45.5	+2.3
BIOA	Bad Ischl, Aus	5.04 3	*i* Pn	Pn	03 00 32.6	+1.9
	comp=N,3.3nm,0.3s,SNR=8.1					
SURF	Saint Ours	5.06 293	P	Pn	03 00 33.6	+2.6
JAUF	Jausiers	5.08 293	P	Pn	03 00 34.7	+3.4
RETA	Reutte	5.16 340	*e*Pn	Pn	03 00 35.1	+2.8
	comp=N,1.7nm,0.2s,SNR=12					
TRIGF	Trigance	5.16 285	P	Pn	03 00 34.3	+2.0
CREF	Crivoux	5.21 294	P	Pn	03 00 36.9	+3.9
FLAF	Flassans-sur-I	5.22 280	P	Pn	03 00 34.7	+1.7
DAVA	Damuels	5.23 334	*e*Pn	Pn	03 00 36.5	+3.2
	comp=N,3.7nm,0.4s,SNR=15					
OGAG	Argentiere	5.23 292	P	Pn	03 00 39.8	+6.5
MOA	Molln	5.24 7	*e*Pn	Pn	03 00 35.2	+1.9
	comp=N,2.1nm,0.2s,SNR=8.4					
OGDI	Digne	5.31 288	P	Pn	03 00 38.1	+3.8
DIX	Grande Dixence	5.44 311	P	Pn	03 00 40.4	+4.1
RONA	Rosalia, Austr	5.47 22	*i* Pn	Pn	03 00 38.3	+1.8
	comp=N,1.4nm,0.2s					
CONA	Conrad Observa	5.57 18	*i* Pn	Pn	03 00 39.2	+1.2
	comp=N,0.8nm,0.2s					
BSTF	la Bastide-des	5.72 285	P	Pn	03 00 41.8	+1.9
ORIF	Oris-en-Rattie	5.83 295	P	Pn	03 00 46.2	+4.7
RUSF	Rustrel	5.85 285	P	Pn	03 00 44.5	+2.8
ARBF	Arbois	5.90 281	P	Pn	03 00 44.5	+2.2
TORNY	Torny/Romont	6.12 315	P	Pn	03 00 48.3	+3.0
SLE	Schleitheim	6.14 328	P	Pn	03 00 49.1	+3.5
BALST	Balsthal	6.14 322	P	Pn	03 00 47.2	+1.5
GERES	GERESS Array B	6.20 2	Pn	Pn	03 00 46.3	-0.2
	comp=N,0.4nm,0.3s,baz=178,slow=13,SNR=10					
GERES			Sn	Sn	03 01 56.3	-1.1
	comp=N,2.3nm,0.3s,baz=173,slow=24,SNR=11					
	comp=N,1.3nm,0.5s					
CKRC	Cesky Krumlov	6.21 6	*e*PN	Pn	03 00 47.0	+0.4
CKRC			*e*SN	Sn	03 01 55.9	-1.6
OGSM	Saint Maurice	6.22 301	P	Pn	03 00 51.0	+4.3
BOURR	Bourrignon	6.40 320	P	Pn	03 00 52.1	+2.8
BRANT	Les Verrieres	6.48 314	P	Pn	03 00 53.7	+3.4
KHC	Kasperske Hory	6.48 2	*e*PN	Pn	03 00 52.1	+1.7
KHC			*e*SN	Sn	03 02 03.2	-1.0
OG35	Corcelles	6.50 304	P	Pn	03 00 53.1	+2.4
KIZ	Kirchzarten	6.52 326	P	Pn	03 00 52.4	+1.5
CHMF	Charmoille	6.58 317	P	Pn	03 00 54.1	+2.3
VOGT	Vogtsburg - To	6.72 326	P	Pn	03 00 55.2	+1.6
KRUC	Moravsky	6.76 18	*e*PN	Pn	03 00 54.4	+0.2
MOF	Molkenrain	6.78 322	P	Pn	03 00 56.0	+1.5
BOUC	Bouclans	6.79 315	P	Pn	03 00 57.2	+2.7
TREC	Trest	6.81 12	*e*PN	Pn	03 00 57.1	+2.2
TREC			*e*SN	Sn	03 02 09.3	-3.1
SSB	Saint Sauveur	6.84 296	P	Pn	03 00 58.3	+2.9
RONF	Ronchamp	6.90 319	P	Pn	03 00 57.9	+1.8
VRAC	Vranov	7.04 18	Pn	Pn	03 00 56.7	-1.3
	comp=N,0.2nm,0.3s,baz=208,slow=17,SNR=1.5					
VRAC			Sn	Sn	03 02 14.8	-3.0
	comp=N,0.2nm,0.3s,baz=335,slow=14,SNR=2.6					
	comp=N,0.5nm,0.3s					
ECH	Echery	7.04 324	P	Pn	03 00 59.7	+1.6
WLS	Welschbruch	7.11 326	P	Pn	03 01 00.8	+1.7
PRU	Pruhonice	7.39 6	*e*SN	Sn	03 02 25.5	-0.9
KEST	Kesra	7.56 205	Pn	Pn	03 01 08.8	+3.5
	comp=N,0.2nm,0.3s,baz=343,slow=6.4,SNR=5.9					
	comp=N,1.0nm,0.5s					
NKC	Novy Kostel	7.61 356	*e*SN	Sn	03 02 30.4	-1.4
FILF	Fillols	7.93 273	P	Pn	03 01 12.1	+1.9
DPC	Dobruska-Polom	7.97 14	*e*PN	Pn	03 01 12.8	+1.9
DPC			*e*SN	Sn	03 02 39.2	-1.8
BRG	Berggiesshubel	8.23 3	*e*(P)	Pn	03 01 24.6	+10
BRG			Amp		03 01 26.1	
	comp=Z,0.9nm,0.5s					
BRG			*ex*	x	03 02 42.8	
BRG			*ex*	x	03 03 56.5	
BRG			Amp		03 04 04.5	
	comp=Z,5.5nm,1.1s					
CLL	Collm	8.66 359	*e*Sn	Sn	03 02 54.0	-3.7
CLL			*ex*	x	03 03 01.0	
CLL			*ex*	x	03 03 30.0	
CLL			*e*Sg	Sg	03 03 49.0	-3.8
	comp=Z,7.0nm,1.0s					
ESDC	Sonseca Array	13.35 263	Pn	Pn	03 02 23.7	-0.7
	baz=65,slow=13,SNR=2.9					
BRTR	Keskin Array B	15.58 94	LR	LR	03 08 46.6	
	comp=Z,58nm,20.4s,baz=296,slow=38					
EKA	Eskdalemuir Ar	16.61 325	Pn	P	03 03 11.1	+1.1
	baz=139,slow=13					
	comp=Z,0.3nm,0.5s					
NOA	NORSAR Array B	18.46 357	P	Pn	03 03 31.0	+0.4
	baz=176,slow=12,SNR=2.6					
	comp=Z,0.7nm,0.9s					
FINES	FINESS Array B	20.32 18	P	P	03 03 49.7	-1.1
	comp=Z,2.2nm,1.0s,baz=187,slow=9.8,SNR=1.8					
	comp=Z,2.2nm,1.0s					
KIRV	Kirov	27.47 42	LR	LR	03 16 43.5	
	comp=Z,53nm,18.1s,baz=340,slow=39					
TORD	Torodi Ar. Bea	31.07 202	P	P	03 05 33.8	+0.6
	comp=Z,0.2nm,0.5s,baz=18,slow=9.3,SNR=4.3					
	comp=Z,0.2nm,0.5s					

ROM ***31*** *03:05:45.2±0.0, 42°.842N±0°.002×13°.055E±0°.003, h10km, ML3.3/80, Error ellipse: s-maj=0.2km s-min=0.2km az=316.0*
PRU ***31*** *03:05:45.4±0.0, 42°.75N×13°.68E, h0km*
IDC ***31*** *03:05:47.1±2.1, 43°.01N×13°.55E, h0km, mb3.0/1, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=68.4km s-min=15.4km az=99.0*
STR ***31*** *03:05:58.1±4.9, 43°N±14°×1°2E±4°0, h10km, MLv2.8/6, Error ellipse: s-maj=0.1km s-min=0.0km az=101.8, preliminary*

ISC 31 03:05:45.6±0.8, 42°.84N±0°.01×13°.07E±0°.02, h13km±4km, n139, σ1°.27/171, 42C-43D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.06	325	⇓P	Pg	Pg	03 05 47.5	-0.8
T1216				S	Sg	Sg	03 05 48.8	-1.4
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1216				AML	AML			
T1245	Castelsantange	0.09	79	⇓P	Pg	Pg	03 05 48.3	-0.4
T1245				S	Sg	Sg	03 05 50.2	-0.6
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
T1245				AML	AML			
FEMA	Monte Fema	0.12	354	⇑P	Pg	Pg	03 05 48.7	-0.4
FEMA				S	Sg	Sg	03 05 51.0	-0.4
FEMA				AML	AML			
FEMA				AML	AML			
	comp=N,71500μm,0.5s							
FEMA				AML	AML			
	comp=N,71450μm,0.5s							
FEMA				AML	AML			
	comp=N,71500μm,0.5s							
FEMA				AML	AML			
FEMA				AML	AML			
	comp=N,71500μm,1.5s							
FEMA				AML	AML			
	comp=N,71481μm,0.5s							
T1215	Vallo di Nera,	0.15	256	⇑P	Pg	Pg	03 05 49.1	-0.2
T1215				S	Sg	Sg	03 05 51.6	-0.3
T1215				AML	AML			
	comp=E,20850μm,1.3s							
T1215				AML	AML			
	comp=N,54650μm,0.8s							
T1215				AML	AML			
	comp=E,20850μm,1.3s							
T1215				AML	AML			
	comp=N,52250μm,0.8s							
T1215				AML	AML			
	comp=E,19050μm,1.3s							
T1215				AML	AML			
	comp=E,20900μm,1.3s							
T1215				AML	AML			
	comp=E,19100μm,1.3s							
T1215				AML	AML			
	comp=E,17715μm,0.2s							
T1215				AML	AML			
	comp=N,54650μm,1.2s							
T1215				AML	AML			
	comp=N,52250μm,1.2s							
T1217	Poggiodomo (PG	0.16	218	⇑P	Pg	Pg	03 05 49.5	0.0
T1217				S	Sg	Sg	03 05 52.4	+0.1
T1217				AML	AML			
	comp=E,22850μm,0.3s							
T1217				AML	AML			
	comp=E,22550μm,0.3s							
T1217				AML	AML			
	comp=N,16650μm,0.3s							
T1217				AML	AML			
	comp=E,22900μm,0.3s							
T1217				AML	AML			
	comp=N,16950μm,0.3s							
T1217				AML	AML			
	comp=E,22550μm,0.3s							
T1217				AML	AML			
	comp=N,16700μm,0.3s							
T1217				AML	AML			
	comp=E,22850μm,0.3s							
T1217				AML	AML			
	comp=N,17000μm,0.3s							
T1217				AML	AML			
	comp=N,16650μm,0.3s							
T1217				AML	AML			
	comp=N,16950μm,0.3s							
T1217				AML	AML			
	comp=E,16948μm,0.3s							
T1217				AML	AML			
	comp=E,22600μm,0.3s							
MMO1	Montemonaco	0.20	73	⇓P	Pg	Pg	03 05 50.2	+0.1
MMO1				S	Sg	Sg	03 05 53.7	+0.5
T1201	Domo (RI)	0.23	143	P	Pg	Pg	03 05 50.9	+0.4
T1201				S	Sg	Sg	03 05 55.2	+1.3
LNSS	Leonessa	0.24	185	P	Pg	Pg	03 05 50.8	+0.1
LNSS				S	Sg	Sg	03 05 54.9	+0.7
LNSS				AML	AML			
	comp=E,23450μm,0.2s							
LNSS				AML	AML			
	comp=N,58000μm,0.1s							
T1204	Amatrice, Fraz	0.25	132	⇓P	Pg	Pg	03 05 51.2	+0.3
T1204				S	Sb	Sb	03 05 55.5	-0.8
T1204				AML	AML			
	comp=N,14750μm,0.2s							
T1204				AML	AML			
	comp=E,26600μm,0.7s							
T1204				AML	AML			
	comp=N,14750μm,1.8s							
AM05	Amandola Campo	0.25	57	⇑P	Pg	Pg	03 05 51.2	+0.3
AM05				S	Sb	Sb	03 05 55.5	-0.8
AM05				AML	AML			
	comp=E,7410μm,1.0s							
AM05				AML	AML			
	comp=N,922μm,0.4s							
AM05				AML	AML			
	comp=N,3370μm,0.2s							
AM05				AML	AML			
	comp=E,24150μm,1.0s							
AM05				AML	AML			
	comp=E,7415μm,1.0s							
AM05				AML	AML			
	comp=E,24200μm,1.0s							
AM05				AML	AML			
	comp=N,3375μm,0.2s							
AM05				AML	AML			
	comp=E,24150μm,1.0s							
AM05				AML	AML			
	comp=E,7415μm,1.0s							
AM05				AML	AML			
	comp=N,924μm,0.4s							
T1241	Roccafluvione,	0.27	86	P	Pg	Pg	03 05 51.6	+0.3
T1241				S	Sb	Sb	03 05 56.2	-0.6
T1241				AML	AML			
	comp=N,21250μm,0.3s							
T1241				AML	AML			
	comp=N,22050μm,0.3s							
T1241				AML	AML			
	comp=E,21350μm,0.4s							
T1241				AML	AML			
	comp=E,21050μm,0.4s							
SMA1	SAN MARTINO	0.29	136	⇓P	Pg	Pg	03 05 51.8	+0.2
SMA1				S	Sb	Sb	03 05 57.0	-0.4
SMA1				AML	AML			
	comp=N,22150μm,0.5s							
SMA1				AML	AML			
	comp=E,25000μm,0.6s							
SMA1				AML	AML			

comp=N,22200µm,0.5s
SMA1 AML AML
comp=E,24950µm,0.6s
GUMA Gualdo di Mace 0.30 41 P Pb 03 05 52.2 -0.6
GUMA S **Sb 03 05 57.5 -0.2**
GUMA AML AML
comp=E,25300µm,1.3s
GUMA AML AML
comp=N,44550µm,0.4s
GUMA AML AML
comp=E,36650µm,0.5s
GUMA AML AML
comp=N,31000µm,0.4s
GUMA AML AML
comp=N,44500µm,0.4s
GUMA AML AML
comp=E,25300µm,0.7s
T1243 Rocca Santa Ma 0.32 117 ⇓P Pg 03 05 52.2 +0.1
T1243 S **Sb 03 05 57.4 -0.8**
SEF1 Sefro 0.32 344 ⇑P Pg 03 05 52.2 +0.1
SEF1 AML AML
comp=N,20750µm,0.3s
SEF1 AML AML
comp=E,37800µm,0.3s
SEF1 AML AML
comp=N,20700µm,0.3s
ARRO Arrone 0.34 221 ⇑P Pg 03 05 52.6 +0.1
ARRO AML AML
comp=N,5125µm,0.2s
ARRO AML AML
comp=E,5775µm,1.2s
ARRO AML AML
comp=N,5130µm,0.2s
ARRO AML AML
comp=E,5780µm,1.2s
ARRO AML AML
comp=E,5775µm,0.8s
T1211 Morro Reatino 0.34 207 ⇑P Pg 03 05 52.6 0.0
T1211 AML AML
comp=E,5795µm,0.2s
T1211 AML AML
comp=N,8140µm,1.2s
T1211 AML AML
comp=E,5830µm,0.2s
T1211 AML AML
comp=N,8135µm,1.2s
T1211 AML AML
comp=E,5830µm,0.2s
T1211 AML AML
comp=N,8180µm,0.3s
T1211 AML AML
comp=E,5795µm,0.2s
T1211 AML AML
comp=N,7801µm,2.8s
T1211 AML AML
comp=N,7610µm,0.4s
RM33 Pellescritta (0.35 162 ⇑P Pg 03 05 52.7 +0.1
RM33 S **Sb 03 05 58.4 -0.7**
RM33 AML AML
comp=E,17500µm,0.6s
RM33 AML AML
comp=N,10040µm,0.3s
RM33 AML AML
comp=N,10075µm,0.2s
RM33 AML AML
comp=N,10015µm,0.2s
RM33 AML AML
comp=N,10055µm,0.2s
RM33 AML AML
comp=E,17450µm,0.6s
RM33 AML AML
comp=N,10045µm,0.2s
RM33 AML AML
comp=N,10085µm,0.2s
RM33 AML AML
comp=N,10055µm,1.8s
RM33 AML AML
comp=E,17150µm,0.6s
RM33 AML AML
comp=N,10015µm,1.8s
MDAR Monte D'Aria 0.36 9 ⇑P Pg 03 05 53.0 +0.1
MDAR AML AML
comp=N,9125µm,0.3s
MDAR AML AML
comp=E,8490µm,1.6s
MDAR AML AML
comp=N,9165µm,0.3s
MDAR AML AML
comp=E,8490µm,0.4s
ASSB Assisi San Ben 0.36 304 ⇓P Pg 03 05 52.7 -0.2
ASSB AML AML
comp=N,6070µm,1.1s
ASSB AML AML
comp=E,7055µm,0.4s
ASSB AML AML
comp=N,6070µm,0.9s
FIU1 Fiuminata 0.36 344 ⇓P Pb 03 05 53.1 -0.8
FIU1 AML AML
comp=N,10190µm,0.3s
FIU1 AML AML
comp=E,13750µm,0.5s
FIU1 AML AML
comp=N,10210µm,0.3s
CAMP Campotosto 0.40 140 ⇓P Pg 03 05 53.6 0.0
CAMP S **Sb 03 05 59.9 -0.6**
CAMP AML AML
comp=E,4365µm,0.3s
CAMP AML AML
comp=N,4535µm,0.4s
SSM1 San Severino M 0.40 12 ⇑P Pb 03 05 53.8 -0.7
GAG1 Gagliole 0.40 0 P Pb 03 05 53.8 -0.7
GAG1 AML AML
comp=E,19900µm,0.4s
GAG1 AML AML
comp=N,28450µm,0.4s
GAG1 AML AML
comp=N,28500µm,0.4s
GAG1 AML AML
comp=E,19850µm,0.4s
T1246 Crognaleto (TE 0.41 129 P Pg 03 05 53.7 0.0
T1246 S **Sb 03 06 00.2 -0.6**
MNTP Montappone 0.42 45 ⇑P Pb 03 05 54.9 0.0
MNTP AML AML
comp=E,8295µm,0.6s
MNTP AML AML
comp=E,8300µm,0.6s
MNTP AML AML
comp=N,6930µm,0.3s
MNTP AML AML
comp=N,6930µm,1.7s
MNTP AML AML
comp=E,8300µm,1.4s
MNTP AML AML
comp=N,6929µm,0.3s
SNTG Esanatoglia 0.42 347 ⇑P Pg 03 05 54.2 +0.1
SNTG AML AML
comp=E,6870µm,0.6s
SNTG AML AML
comp=N,7875µm,0.3s
SNTG AML AML
comp=E,6885µm,0.6s
SNTG AML AML
comp=N,7960µm,0.3s
SNTG AML AML
comp=N,7875µm,0.3s
CESX Cesi 0.43 238 ⇑P Pg 03 05 53.9 -0.2
CESX S **Sb 03 06 00.4 -0.9**
CESX AML AML
comp=E,10650µm,0.5s
CESX AML AML
comp=N,11010µm,0.3s
CESX AML AML
comp=E,10650µm,1.5s
T1247 Pizzolo (AQ) 0.43 157 ⇓P Pg 03 05 54.2 0.0
T1247 AML AML
comp=E,14700µm,1.1s
T1247 AML AML
comp=N,11550µm,1.1s
T1247 AML AML
comp=N,11550µm,0.9s
T1247 AML AML
comp=E,14700µm,0.9s
TERO Teramo 0.45 119 ⇓P Pg 03 05 54.4 -0.1
TERO AML AML
comp=E,4795µm,0.3s
TERO AML AML
comp=N,4640µm,0.3s
TERO AML AML
comp=E,4615µm,0.3s
TERO AML AML
comp=N,4470µm,0.3s
OFFI Offida 0.47 78 ⇓P Pb 03 05 55.8 +0.1
OFFI AML AML
comp=E,10005µm,0.7s
OFFI AML AML
comp=N,15450µm,0.5s
OFFI AML AML
comp=E,10005µm,1.3s
OFFI AML AML
comp=E,10015µm,0.7s
ATCC AVT- Casa Cast 0.47 318 ⇓P Pg 03 05 54.7 -0.1
ATCC AML AML
comp=E,8600µm,0.3s
ATCC AML AML
comp=N,5935µm,0.4s
ATCC AML AML
comp=N,5930µm,0.4s
ATCC AML AML
comp=E,8595µm,0.3s
ATCC AML AML
comp=N,5930µm,1.6s
ATCC AML AML
comp=N,5933µm,0.4s
EL6 Elcito 0.49 3 ⇑P Pg 03 05 55.2 -0.1
EL6 S **Sb 03 06 04.0 +0.7**
EL6 AML AML
comp=E,10615µm,0.3s
EL6 AML AML
comp=N,12200µm,0.5s
EL6 AML AML
comp=N,12195µm,0.5s
EL6 AML AML
comp=E,10600µm,0.3s
TRE1 Treia 0.51 21 ⇓P Pb 03 05 56.5 +0.2
TRE1 AML AML
comp=E,8045µm,0.4s
TRE1 AML AML
comp=N,6270µm,0.5s
TRE1 AML AML
comp=E,8045µm,0.4s
TRE1 AML AML
comp=E,8045µm,1.6s
FOSV Fossato di Vic 0.51 334 ⇓P Pg 03 05 55.4 -0.2
FOSV S **Sb 03 06 04.0 +0.3**
FOSV AML AML
comp=N,9275µm,0.4s
FOSV AML AML
comp=E,4880µm,0.4s
FOSV AML AML
comp=N,9280µm,0.4s
FOSV AML AML
comp=E,4881µm,0.4s
FOSV AML AML
comp=E,4880µm,1.6s
GIGS Gran Sasso 0.54 136 ⇓P Pg 03 05 55.8 -0.4
GIGS AML AML
comp=E,1098µm,1.2s
GIGS AML AML
comp=N,1055µm,0.6s
GIGS AML AML
comp=N,1055µm,1.4s
AQU L'Aquila 0.55 153 ⇑P Pg 03 05 56.4 +0.1
AQU AML AML
comp=E,3800µm,0.3s
AQU AML AML
comp=N,3475µm,0.2s
AQU AML AML
comp=N,3840µm,0.2s
AQU AML AML
comp=E,4065µm,0.3s
AQU AML AML
comp=E,3805µm,0.3s
FIAM Fiamignano 0.57 176 ⇑P Pg 03 05 56.4 -0.4
FIAM S **Sb 03 06 06.0 +0.4**
FIAM AML AML
comp=E,3620µm,0.3s
FIAM AML AML
comp=N,2305µm,0.9s
FIAM AML AML
comp=N,2305µm,1.1s
FIAM AML AML
comp=N,2304µm,0.9s
MURB Monte Urbino 0.58 317 ⇓P Pg 03 05 56.8 -0.2
MURB S **Sb 03 06 07.0 +1.1**
MURB AML AML
comp=E,7355µm,0.3s
MURB AML AML
comp=N,7380µm,0.3s
MURB AML AML
comp=E,8525µm,0.3s
MURB AML AML
comp=E,7360µm,0.3s
MURB AML AML
comp=N,8040µm,0.3s
MMUR Monte Murano 0.60 355 S Sb 03 06 08.0 +1.5
TRTR Tortoreto Alta 0.62 93 ⇓P Pb 03 05 59.0 +0.6
TRTR AML AML
comp=E,7080µm,0.4s
TRTR AML AML
comp=N,7150µm,0.5s
ATTE AVT- Monte Tez 0.63 305 ⇓P Pg 03 05 57.6 -0.4
ATTE AML AML
comp=E,1290µm,0.3s
ATTE AML AML
comp=N,1510µm,0.4s
ATFO Monte Foce - G 0.64 326 ⇓P Pg 03 05 57.8 -0.3
ATFO AML AML
comp=E,3060µm,1.3s
ATFO AML AML
comp=N,3355µm,0.4s
ATFO AML AML
comp=E,3060µm,0.7s
ARVD Arcevia 0.66 352 ⇑P Pg 03 05 58.2 -0.3
ARVD S **Sb 03 06 09.0 +0.8**
ARVD AML AML
comp=N,1775µm,0.9s
ARVD AML AML
comp=E,2510µm,0.7s
PP3 Marolino 0.67 36 ⇑P Pb 03 05 59.4 +0.3
PP3 AML AML
comp=N,4005µm,0.4s
PP3 AML AML
comp=N,4175µm,0.4s
PP3 AML AML
comp=N,4010µm,0.4s
PP3 AML AML
comp=E,5465µm,0.4s
PP3 AML AML
comp=N,4170µm,0.4s
PP3 AML AML
comp=E,5340µm,0.4s
PP3 AML AML
comp=E,5340µm,1.6s
PP3 AML AML
comp=E,5465µm,1.6s
FAGN Fagnano 0.69 146 ⇑P Pg 03 05 58.2 -0.8
FAGN AML AML
comp=N,3605µm,0.4s
FAGN AML AML
comp=E,4485µm,1.1s
FAGN AML AML
comp=N,3610µm,0.4s
FAGN AML AML
comp=E,4485µm,0.9s
FAGN AML AML
comp=N,3427µm,0.4s
MGAB Montegabbione 0.71 276 ⇓P Pg 03 05 59.0 -0.3
MGAB AML AML
comp=N,5230µm,0.4s
MGAB AML AML
comp=E,4285µm,0.7s
MGAB AML AML
comp=N,5455µm,1.1s
MGAB AML AML
comp=E,3865µm,0.8s
MGAB AML AML
comp=N,5455µm,0.9s
MGAB AML AML
comp=E,4285µm,1.3s
MGAB AML AML
comp=E,3865µm,1.2s
FRON Frontone 0.72 340 P Pg 03 05 59.0 -0.6
FRON AML AML
comp=E,2125µm,1.2s
FRON AML AML
comp=N,3975µm,0.3s
FRON AML AML
comp=E,2125µm,0.8s
VCEL Villa Celiera 0.72 128 ⇓P Pg 03 05 59.5 -0.2
VCEL AML AML
comp=E,3725µm,0.3s
VCEL AML AML
comp=E,3725µm,1.7s
VCEL AML AML
comp=N,3065µm,1.2s
ATVO AVT- Monte Val 0.73 318 ⇓P Pg 03 05 59.1 -0.6
ATVO S **Sb 03 06 11.0 +1.0**
ATVO AML AML
comp=N,1265µm,0.8s
ATVO AML AML
comp=E,1320µm,0.3s
SRES S.Oreste - Sor 0.73 215 ⇑P Pg 03 05 59.4 -0.4
SRES AML AML
comp=E,882µm,0.7s
SRES AML AML
comp=N,926µm,0.5s
ATMI Monte Miggiano 0.77 310 ⇑P Pb 03 06 00.2 -0.6
ATMI AML AML
comp=N,3940µm,0.4s
ATMI AML AML
comp=E,2460µm,0.3s
ATMI AML AML
comp=N,3935µm,0.4s
ATPI Pietralunga - 0.78 322 ⇓P Pg 03 06 00.2 -0.5
ATPI AML AML
comp=E,1435µm,0.5s
ATPI AML AML
comp=N,1270µm,0.3s
ATPI AML AML
comp=E,1394µm,1.9s
PIEI Pieia 0.80 331 ⇓P Pg 03 06 00.3 -0.7
PIEI S **Sb 03 06 13.0 +0.9**
PIEI AML AML
comp=N,1980µm,0.3s
PIEI AML AML
comp=E,2200µm,0.2s
PIEI AML AML
comp=N,1985µm,0.3s
T0110 Collepietro 0.81 139 ⇓P Pg 03 06 00.6 -0.7
T0110 AML AML
comp=N,2495µm,0.5s
T0110 AML AML
comp=E,3985µm,0.5s
T0110 AML AML
comp=E,3980µm,0.5s
T0110 AML AML
comp=N,2408µm,1.9s
AOI Ancona 0.81 29 P Pb 03 06 01.5 0.0
AOI AML AML
comp=E,1061µm,0.4s
AOI AML AML
comp=E,1062µm,0.4s
AOI AML AML
comp=N,1016µm,0.3s
AOI AML AML
comp=E,1062µm,1.6s
NARO Abbazia di Nar 0.85 335 ⇓P Pg 03 06 01.2 -0.8
NARO S **Sn 03 06 15.0 -0.6**
NARO AML AML
comp=N,818µm,0.7s
NARO AML AML
comp=E,1028µm,1.1s
MTCE Montecelio 0.85 197 ⇑P Pg 03 06 01.0 -1.0
MTCE S **Sn 03 06 16.0 +0.4**
MTCE AML AML
comp=E,2005µm,0.5s
MTCE AML AML
comp=N,867µm,0.5s
MTCE AML AML
comp=N,866µm,0.5s
MTCE AML AML
comp=N,859µm,0.6s
MTCE AML AML
comp=N,866µm,1.5s
SACS San Casciano d 0.85 271 ⇓P Pg 03 06 01.7 -0.4
SACS AML AML
comp=E,1430µm,0.4s
SACS AML AML
comp=N,2300µm,0.7s
SACS AML AML
comp=N,2295µm,0.6s
SACS AML AML
comp=E,1425µm,0.4s
SACS AML AML
comp=E,1355µm,0.4s
PTQR Pietraquaria 0.85 163 P Pg 03 06 01.6 -0.6
PTQR AML AML
comp=E,911µm,0.7s
PTQR AML AML
comp=E,910µm,0.7s
PTQR AML AML
comp=N,655µm,0.7s
APEC Apecchio 0.86 327 ⇓P Pg 03 06 01.9 -0.3
APEC S **Sn 03 06 16.0 +0.1**
SENI Senigallia 0.87 8 ⇑P Pn 03 06 03.1 -0.5
SENI AML AML
comp=E,6360µm,0.3s
SENI AML AML
comp=E,1552µm,0.9s
SENI AML AML
comp=N,1425µm,0.7s
SENI AML AML
comp=N,5205µm,0.3s
FSSB Fossombrone 0.88 346 P Pg 03 06 02.1 -0.5
FSSB S **Sn 03 06 17.0 +0.7**
FSSB AML AML
comp=N,12000µm,1.5s
FSSB AML AML
comp=E,7625µm,0.3s
FSSB AML AML
comp=N,12000µm,0.5s
CERT Cerreto 0.89 184 ⇑P Pg 03 06 01.6 -1.2
CERT AML AML
comp=N,1325µm,0.8s
CERT AML AML
comp=E,2250µm,0.5s
CERT AML AML
comp=E,2250µm,1.5s
BADI Badiali 0.90 318 ⇓P Pg 03 06 02.4 -0.6
BADI AML AML
comp=E,186µm,1.5s
BADI AML AML
comp=N,1114µm,1.2s
CAFI Castiglion Fio 0.94 302 ⇓P Pg 03 06 03.2 -0.6
CAFI AML AML
comp=N,818µm,0.4s
CAFI AML AML
comp=E,732µm,1.1s
CAFI AML AML
comp=N,818µm,0.4s
PE3 Peglio 0.95 334 ⇑P Pb 03 06 03.7 -0.3
PE3 AML AML
comp=N,15µm,0.3s
PE3 AML AML
comp=E,14µm,0.3s
LATE Laterza 0.96 257 ⇑P Pn 03 06 04.3 -0.4
SSP9 Sansepolcro 1.00 317 ⇓P Pb 03 06 05.0 +0.1
MCIV Monte Civitell 1.02 267 ⇑P Pn 03 06 05.7 0.0
MCIV AML AML
comp=E,788µm,0.4s
MCIV AML AML
comp=N,712µm,0.8s
MCIV AML AML
comp=E,788µm,1.6s
RMP Rome, Mte Porz 1.06 195 ⇑P Pg 03 06 05.3 -0.7
RMP AML AML
comp=E,1330µm,0.4s
RMP AML AML
comp=N,1740µm,0.4s
SF01 Poggio Pratacc 1.11 269 ⇑P Pn 03 06 07.3 +0.5
TOLF Tolfa 1.11 226 ⇑P Pb 03 06 06.0 -0.6
TOLF AML AML
comp=N,568µm,0.8s
TOLF AML AML
comp=E,794µm,0.4s
TOLF AML AML
comp=E,794µm,1.6s
MA9 Marino 1.11 196 ⇓P Pn 03 06 07.6 +0.7
MA9 AML AML
comp=E,1160µm,0.5s
MA9 AML AML

comp=N,1735μm,0.5s
MA9 AML AML
RDP Rocca di Papa 1.11 194 ⇓P **Pn 03 06 07.8 +0.9**
RDP AML AML
comp=N,2325μm,0.6s
RDP AML AML
comp=E,2705μm,0.6s
VIVA Pratoni del Vi 1.11 192 ⇑P **Pb 03 06 06.6 -0.1**
VIVA AML AML
comp=N,2350μm,0.4s
VIVA AML AML
comp=E,2200μm,0.4s
CRE Caprese Michel 1.13 314 ⇓P **Pg 03 06 06.7 -0.6**
CRE AML AML
comp=E,402μm,1.2s
CRE AML AML
comp=N,479μm,0.3s
CRE AML AML
comp=E,402μm,0.8s
LPEL Lama dei Pelig 1.15 133 P **Pb 03 06 06.1 -1.1**
LPEL S **Sn 03 06 24.0 +1.1**
LPEL AML AML
comp=N,946μm,1.1s
LPEL AML AML
comp=E,1135μm,0.5s
LPEL AML AML
comp=N,946μm,0.9s
ARCI Arcidosso 1.17 271 ⇑P **Pn 03 06 07.9 +0.1**
ARCI AML AML
comp=N,277μm,0.9s
ARCI AML AML
comp=E,244μm,0.5s
LAV9 Lanuvio 1.19 193 ⇓P **Pg 03 06 08.2 -0.3**
LAV9 AML AML
comp=E,1885μm,0.4s
LAV9 AML AML
comp=N,2105μm,0.4s
LAV9 AML AML
comp=N,1955μm,0.4s
LAV9 AML AML
comp=E,1985μm,0.4s
POFI Posta Fibreno 1.22 157 ⇑P **Pg 03 06 10.7 +1.6**
GIUL Giuliano Di Ro 1.29 174 ⇓P **Pg 03 06 10.4 0.0**
GIUL AML AML
comp=N,800μm,0.6s
GIUL AML AML
comp=E,442μm,0.8s
ASQU Asqua 1.34 316 ⇑P **Pb 03 06 10.2 -0.3**
ASQU AML AML
comp=N,402μm,0.7s
ASQU AML AML
comp=E,252μm,0.7s
ASQU AML AML
comp=E,238μm,2.4s
SFI Santa Sofia 1.39 321 ⇓P **Pb 03 06 11.2 -0.1**
SFI AML AML
comp=N,298μm,0.5s
SFI AML AML
comp=E,398μm,0.8s
SFI AML AML
comp=E,398μm,1.2s
CSNT Castellina Chi 1.45 297 ⇓P **Pb 03 06 11.8 -0.6**
CSNT AML AML
comp=N,154μm,0.6s
CSNT AML AML
comp=E,154μm,0.6s
CSNT AML AML
comp=N,154μm,1.4s
CSNT AML AML
comp=E,154μm,1.4s
FROS Frosini 1.45 285 P **Pb 03 06 12.0 -0.5**
FROS AML AML
comp=E,240μm,0.8s
FROS AML AML
comp=N,226μm,0.7s
OSSC Osservatorio P 1.50 298 ⇑P **Pn 03 06 11.7 -0.5**
OSSC AML AML
comp=N,163μm,1.0s
OSSC AML AML
comp=E,151μm,1.0s
OSSC AML AML
comp=N,163μm,1.0s
RUFI Rufina 1.51 312 ⇑P **Pb 03 06 13.5 0.0**
TRIV Trivento 1.54 134 ⇑P **Pg 03 06 14.8 -0.3**
LMD Lutirano 1.58 322 ⇑P **Pb 03 06 14.3 -0.4**
LMD AML AML
comp=N,242μm,0.4s
LMD AML AML
comp=E,252μm,0.4s
LMD AML AML
comp=N,242μm,1.6s
TRIF Trifonti 1.61 281 ⇑P **Pb 03 06 14.7 -0.6**
TRIF AML AML
comp=E,195μm,0.8s
TRIF AML AML
comp=N,279μm,0.7s
TRIF AML AML
comp=E,195μm,1.2s
PII Pisa 2.06 296 ⇓P **Pn 03 06 20.9 +1.1**
PII AML AML
comp=E,99μm,1.6s
PII AML AML
comp=N,131μm,0.8s
PII AML AML
comp=E,99μm,0.4s
BRJN Brijuni 2.12 13 ⇑P **Pb 03 06 22.3 -1.6**
SGRT San Giovanni R 2.26 118 ⇓P **Pb 03 06 24.8 -1.6**
EQUI Equi 2.50 303 ⇓P **Pn 03 06 26.8 +0.9**
MORSI Morsiglia 2.72 274 P **Pn 03 06 30.3 +1.3**
SMPL Sampolo 2.90 256 P **Pn 03 06 33.1 +1.7**
CORF Corte 2.94 261 P **Pn 03 06 32.8 +0.8**
PGF Pioggiola 3.01 266 ⇑P **Pn 03 06 34.9 +1.8**
PGF Pioggiola 3.01 266 P **Pn 03 06 33.9 +0.8**
SABO M.te Sabotino 3.16 7 ⇑P **Pn 03 06 36.0 +0.9**
SABO AML AML
comp=E,183μm,0.6s
SABO AML AML
comp=N,318μm,0.6s
SABO AML AML
comp=E,844μm,0.6s
SABO AML AML
comp=N,1245μm,0.6s
CTI Castel Tesino 3.37 343 P **Pn 03 06 39.9 +2.0**
STAL STALIGIAL 3.43 356 ⇓P **Pn 03 06 40.4 +1.6**
MYKA Terra Mystica 3.81 6 *e*Pn **Pn 03 06 45.4 +1.3**
comp=N,6.5nm,0.4s
OBKA Obir 3.82 16 *e*Pn **Pn 03 06 45.5 +1.4**
comp=N,0.7nm,0.2s
ABTA Abfaltersbach 3.93 354 *e*Pn **Pn 03 06 47.3 +1.6**
comp=N,20nm,0.4s,SNR=11
SOKA Soboth 4.08 19 *e*Pn **Pn 03 06 49.3 +1.5**
comp=N,0.9nm,0.3s
SAOF Saorge 4.18 288 P **Pn 03 06 50.4 +1.4**
ESCA l'Escarene 4.27 285 P **Pn 03 06 51.2 +0.9**
TURF col de Turini 4.29 287 P **Pn 03 06 51.8 +1.1**
SPIF crte de Spivo 4.42 288 P **Pn 03 06 54.3 +1.9**
FETA Feichten 4.50 339 *e*Pn **Pn 03 06 57.1 +3.5**
comp=N,1.9nm,0.4s,SNR=9.4
WTTA Wattenberg 4.54 348 *e*Pn **Pn 03 06 57.6 +3.5**
comp=N,2.0nm,0.2s
DAVOX Davos/Dischmat 4.55 331 Pn **Pn 03 06 57.2 +3.0**
baz=140,slow=16
SQTA Sankt Quirin 4.57 344 *e*Pn **Pn 03 06 58.0 +3.4**
comp=N,2.4nm,0.3s,SNR=10
CALF Calern 4.58 284 P **Pn 03 06 55.8 +1.2**
WATA Walderalm 4.62 347 *e*Pn **Pn 03 06 59.3 +4.1**
comp=N,4.0nm,0.4s
MOTA Moosalm 4.71 344 *e*Pn **Pn 03 07 00.4 +3.9**
comp=N,1.4nm,0.3s
ARSA Arzberg 4.74 21 *e*Pn **Pn 03 06 56.5 -0.3**
comp=N,1.3nm,0.3s
SURF Saint Ours 4.83 292 P **Pn 03 07 00.1 +2.0**
JAUF Jausiers 4.85 291 P **Pn 03 07 00.8 +2.3**
BIOA Bad Ischl, Aus 4.87 5 *e*Pn **Pn 03 07 00.3 +1.8**
comp=N,9.5nm,0.5s
RETA Reutte 4.92 341 *e*Pn **Pn 03 07 02.8 +3.5**
comp=N,1.3nm,0.3s,SNR=7.5
TRIGF Trigance 4.95 283 P **Pn 03 07 01.4 +1.8**
CREF Crivoux 4.97 292 P **Pn 03 07 02.8 +2.7**
DAVA Damuels 4.99 334 *e*Pn **Pn 03 07 04.0 +3.7**
comp=N,2.0nm,0.3s,SNR=10
MOA Molln 5.08 9 *e*Pn **Pn 03 07 02.6 +1.2**
comp=N,1.8nm,0.3s
DIX Grande Dixence 5.19 311 P **Pn 03 07 07.2 +4.1**
ARTF Artigues 5.36 280 P **Pn 03 07 06.8 +1.6**

RSL Roselend 5.43 304 P **Pn 03 07 09.6 +3.2**
CONA Conrad Observa 5.46 20 *e*Pn **Pn 03 07 07.5 +0.8**
comp=N,1.4nm,0.3s
RUSF Rustrel 5.63 284 P **Pn 03 07 10.7 +1.6**
GERES GERESS Array B 6.02 4 Pn **Pn 03 07 15.6 +1.2**
comp=N,0.5nm,0.3s,baz=170,slow=13,SNR=13
GERES Sn **Sn 03 08 21.6 -1.6**
comp=N,0.8nm,0.3s,baz=177,slow=25,SNR=4.6
comp=N,0.7nm,0.3s
CKRC Cesky Krumlov 6.04 8 *e*PN **Pn 03 07 15.3 +0.7**
CKRC *e*SN **Sn 03 08 22.9 -0.8**
KHC Kasperske Hory 6.30 3 *e*PN **Pn 03 07 18.9 +0.7**
KHC *e*SN **Sn 03 08 30.8 +0.7**
PRU Pruhonice 7.22 8 *e*SN **Sn 03 08 50.6 -2.0**
KEST Kesra 7.66 203 Pn Pn 03 07 43.5 +6.5
comp=N,0.2nm,0.3s,baz=30,slow=8.1,SNR=5.0
comp=N,1.0nm,0.6s
CLL Collm 8.47 360 *e*Pn **Pn 03 07 49.0 +1.1**
CLL *e*Sn Sn 03 09 06.0 -17
CLL *e*x x 03 09 31.0
CLL *e*Sg **Sg 03 10 13.0 -4.2**
comp=Z,8.0nm,1.3s
TORD Torodi Ar. Bea 31.18 202 P P 03 12 10.7 +6.4
comp=Z,0.1nm,0.4s,baz=29,slow=10,SNR=1.6
comp=Z,0.1nm,0.4s

*DDA **31** 03:06:40.2±0.0, 36°.34N×28°.70E, h7km±1km, ML2.7*
*ATH **31** 03:06:40.7, 36°.34N×28°.76E, h47km±5km, ML2.8/4, Error ellipse: s-maj=6.3km s-min=1.3km az=178.0*
*ISK **31** 03:06:40.8, 36°.38N×28°.77E, h16km, ML3.0/20*
*THE **31** 03:06:41.5, 36°.43N×28°.77E, h6km±1km, ML2.8/6, Error ellipse: s-maj=1.6km s-min=0.6km az=96.0*
ISC 31 03:06:40.9±1.0, 36°.37N±0°.03×28°.76E±0°.02, h16km±8km, n58, σ0s71/90, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.38**	**45**	PG	**Pg**	**03 06 48.3**	**-0.4**
FETY				SG	**Sb**	**03 06 54.4**	**-0.5**
DALY	**Dalyan (Mula)**	**0.46**	**350**	PG	**Pb**	**03 06 50.4**	**-0.2**
DALY				SG	**Sb**	**03 06 57.1**	**0.0**
ARG	**Arkhangelos**	**0.53**	**254**	PG	**Pb**	**03 06 52.3**	**+0.4**
ARG	**Arkhangelos**	**0.53**	**254**	P	**Pb**	**03 06 52.6**	**+0.7**
ARG				S	**Sn**	**03 07 01.3**	**-1.2**
	558nm,0.4s						
ARG	**Arkhangelos**	**0.53**	**254**	P	**Pb**	**03 06 52.5**	**+0.7**
ARG				S	**Sn**	**03 07 01.1**	**-1.4**
ARG				AML	AML	03 07 01.7	
	comp=N,902μm,0.4s						
ARG				AML	AML	03 07 05.3	
	comp=E,1324μm,0.3s						
TURN	**Turunc**	**0.58**	**315**	PG	**Pb**	**03 06 52.9**	**+0.2**
TURN				SG	**Sb**	**03 07 01.5**	**+0.8**
TURN	**Turunc**	**0.58**	**315**	P	**Pb**	**03 06 53.0**	**+0.2**
TURN				S	**Sb**	**03 07 01.9**	**+1.2**
TURN	**Turunc**	**0.58**	**315**	P	**Pb**	**03 06 53.0**	**+0.2**
TURN				S	**Sb**	**03 07 01.9**	**+1.2**
AKAS	**Kas**	**0.70**	**101**	PG	**Pb**	**03 06 54.6**	**-0.3**
AKAS	**Kas**	**0.70**	**101**	P	**Pb**	**03 06 54.6**	**-0.3**
AKAS				S	**Sn**	**03 07 05.7**	**-1.2**
AKAS				*i* AML	AML	03 07 06.0	
	comp=E,617nm,0.6s						
AKAS	**Kas**	**0.70**	**101**	P	**Pb**	**03 06 54.6**	**-0.3**
AKAS				S	**Sn**	**03 07 05.7**	**-1.2**
AKAS				*i* AML	AML	03 07 06.0	
	comp=E,617nm,0.6s						
KSL	**Kastellorizon**	**0.70**	**108**	P	**Pn**	**03 06 55.5**	**-0.7**
KSL				S	**Sn**	**03 07 06.4**	**-0.3**
	comp=E,662nm,0.5s						
KSL	**Kastellorizon**	**0.70**	**108**	P	**Pb**	**03 06 55.2**	**+0.4**
KSL				S	**Sn**	**03 07 05.3**	**-1.4**
KSL				AML	AML	03 07 07.4	
	comp=E,1730μm,0.5s						
KSL				AML	AML	03 07 09.8	
	comp=N,938μm,0.6s						
CAME	**Cameli-Denizli**	**0.72**	**37**	PG	**Pb**	**03 06 55.0**	**-0.3**
CAME				SG	**Sb**	**03 07 05.4**	**+0.4**
YER	**Yerkesik**	**0.85**	**334**	PG	**Pg**	**03 06 57.5**	**-0.1**
YER	**Yerkesik**	**0.85**	**334**	P	**Pg**	**03 06 57.4**	**-0.1**
YER				S	**Sg**	**03 07 09.0**	**+0.1**
CAEL	**Denizli, Camel**	**0.88**	**31**	P	**Pb**	**03 06 57.7**	**-0.2**
CAEL				S	**Sn**	**03 07 11.1**	**-0.2**
CAEL				*i* AML	AML	03 07 12.0	
	comp=N,322nm,0.7s						
CAEL				*i* AML	AML	03 07 12.0	
	comp=N,206nm,0.3s						
CAEL	**Denizli, Camel**	**0.88**	**31**	P	**Pb**	**03 06 57.7**	**-0.2**
CAEL				S	**Sn**	**03 07 11.1**	**-0.2**
CAEL				*i* AML	AML	03 07 12.0	
	comp=N,322nm,0.7s						
CAEL				*i* AML	AML	03 07 12.0	
	comp=N,206nm,0.3s						
MULA	**Mugla, Merkez-**	**0.95**	**339**	P	**Pg**	**03 06 59.1**	**-0.3**
MULA				S	**Sn**	**03 07 12.6**	**-0.5**
MULA				*i* AML	AML	03 07 16.0	
	comp=N,199nm,0.4s						
MULA	**Mugla, Merkez-**	**0.95**	**339**	P	**Pg**	**03 06 59.1**	**-0.3**
MULA				S	**Sn**	**03 07 12.6**	**-0.5**
MULA				*i* AML	AML	03 07 16.0	
	comp=N,199nm,0.4s						
ELL	**Elmali**	**1.00**	**67**	PG	**Pn**	**03 07 00.4**	**-0.1**
GOLH	**Golhisar**	**1.08**	**36**	P	**Pg**	**03 07 01.6**	**-0.3**
GOLH				S	**Sn**	**03 07 17.8**	**+1.6**
GOLH				*i* AML	AML	03 07 19.0	
	comp=N,305nm,0.4s						
GOLH				*i* AML	AML	03 07 19.0	
	comp=N,381nm,0.3s						
GOLH	**Golhisar**	**1.08**	**36**	P	**Pg**	**03 07 01.6**	**-0.3**
GOLH				S	**Sn**	**03 07 17.8**	**+1.6**
GOLH				*i* AML	AML	03 07 19.0	
	comp=N,305nm,0.4s						
GOLH				*i* AML	AML	03 07 19.0	
	comp=N,381nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.10**	**7**	P	**Pn**	**03 07 01.5**	**-0.3**
TAVA				S	**Sg**	**03 07 16.4**	**-0.3**
TAVA				*i* AML	AML	03 07 17.0	
	comp=N,188nm,0.3s						
TAVA				*i* AML	AML	03 07 17.0	
	comp=N,334nm,0.5s						
TAVA	**DENIZLI_Tavas**	**1.10**	**7**	P	**Pn**	**03 07 01.5**	**-0.3**
TAVA				S	**Sg**	**03 07 16.4**	**-0.3**
TAVA				*i* AML	AML	03 07 17.0	
	comp=N,188nm,0.3s						
TAVA				*i* AML	AML	03 07 17.0	
	comp=N,334nm,0.5s						
APMY	**Acipayam-Deniz**	**1.19**	**21**	PN	**Pg**	**03 07 03.2**	**-0.7**
AKUM	**Antalya-Kumluc**	**1.28**	**92**	P	**Pg**	**03 07 05.9**	**+0.2**
AKUM				S	**Sg**	**03 07 22.3**	**-0.1**
AKUM				*i* AML	AML	03 07 26.0	
	comp=N,162nm,0.3s						
AKUM				*i* AML	AML	03 07 26.0	
	comp=N,93nm,0.4s						
AKUM	**Antalya-Kumluc**	**1.28**	**92**	P	**Pg**	**03 07 05.9**	**+0.2**
AKUM				S	**Sg**	**03 07 22.3**	**-0.1**
AKUM				*i* AML	AML	03 07 26.0	
	comp=N,162nm,0.3s						
AKUM				*i* AML	AML	03 07 26.0	
	comp=N,93nm,0.4s						
NIS1	**Nisyros Isl.**	**1.29**	**281**	PN	**Pb**	**03 07 04.8**	**-0.1**
NIS1	**Nisyros Isl.**	**1.29**	**281**	P	**Pn**	**03 07 04.3**	**-0.1**
NIS1				S	**Sg**	**03 07 22.4**	**-0.3**
	comp=N,1μm,0.6s						
NIS1	**Nisyros Isl.**	**1.29**	**281**	P	**Pb**	**03 07 04.9**	**0.0**
NIS1				AML	AML	03 07 25.6	
	comp=E,2188μm,0.6s						
NIS1				AML	AML	03 07 26.5	
	comp=N,2202μm,0.5s						
NISR	**Nisiros**	**1.33**	**281**	P	**Pb**	**03 07 05.5**	**-0.1**
BODT	**Bodrum**	**1.35**	**301**	PN	**Pn**	**03 07 03.9**	**-1.3**
KORT	**Korkueli**	**1.43**	**63**	PN	**Pb**	**03 07 06.9**	**-0.4**
KORT	**Korkueli**	**1.43**	**63**	P	**Pg**	**03 07 08.2**	**-0.3**
KORT				S	**Sg**	**03 07 29.2**	**+2.1**
KORT				*i* AML	AML	03 07 30.0	
	comp=N,80nm,0.5s						
KORT				*i* AML	AML	03 07 31.0	
	comp=N,151nm,0.5s						
KORT	**Korkueli**	**1.43**	**63**	P	**Pg**	**03 07 08.2**	**-0.3**
KORT				S	**Sg**	**03 07 29.2**	**+2.1**
KORT				*i* AML	AML	03 07 30.0	
	comp=N,80nm,0.5s						
KORT				*i* AML	AML	03 07 31.0	
	comp=N,151nm,0.5s						
KOSK	**Kos Island**	**1.48**	**285**	PN	**Pn**	**03 07 07.4**	**+0.5**

KOSK Kos Island 1.48 285 P **Pn 03 07 06.8 -0.1**
KOSK S **Sn 03 07 25.6 -0.3**
comp=N,138nm,0.6s
KOSK Kos Island 1.48 285 P **Pn 03 07 07.3 +0.4**
KARP Karpathos 1.53 238 PN **Pn 03 07 07.9 +0.2**
KARP Karpathos 1.53 238 P **Pn 03 07 07.7 +0.1**
KARP S **Sg 03 07 29.8 -0.6**
comp=N,148nm,0.5s
KARP Karpathos 1.53 238 P **Pn 03 07 07.7 +0.1**
KARP AML AML 03 07 33.9
comp=N,303μm,0.5s
KARP AML AML 03 07 33.9
comp=E,182μm,0.2s
ANTB Antalya 1.62 70 PN **Pb 03 07 09.6 -0.8**
UZP Denizli 1.69 11 P **Pb 03 07 11.3 -0.5**
AYDB Zeytinkoy-Aydi 1.72 337 PN **Pn 03 07 10.1 -0.3**
BUCA Burdur, Bucak- 1.73 56 P **Pb 03 07 12.4 0.0**
BUCA S **Sg 03 07 36.8 -0.1**
BUCA Burdur, Bucak- 1.73 56 P **Pb 03 07 12.4 0.0**
BUCA S **Sg 03 07 36.8 -0.1**
GCAM G?zelcaml? 1.80 318 PN **Pn 03 07 11.9 +0.6**
BCK Bucak 1.83 53 PN **Pb 03 07 12.8 -1.3**
BASM Basmaki-Afyon 1.86 33 PN **Pn 03 07 12.9 +0.7**
ISP Isparta 2.02 44 PN **Pn 03 07 15.3 +0.8**
ISP Isparta 2.02 44 P **Pb 03 07 16.6 -0.9**
SMG Samos 2.04 312 P **Pn 03 07 13.8 -0.8**
SMG S **Sn 03 07 39.3 -0.4**
comp=E,365nm,0.2s
ZKR Zakros 2.42 240 P **Pn 03 07 20.7 +0.9**
BLCB Balcova 2.43 326 PN **Pn 03 07 20.4 +0.4**
BLCB Balcova 2.43 326 P **Pn 03 07 19.9 -0.1**
BLCB S **Sn 03 07 48.7 -0.7**
SHUT Suhut-Afyon 2.61 33 PN **Pn 03 07 23.6 +1.1**
SEYD Seydisehir-KON 2.68 66 PN **Pn 03 07 24.8 +1.3**

IDC 31 03:06:47.6±4.4, 25°.72N×95°.50E, h134km±47km, mb3.1/3, mbtmp3.5/4, Error ellipse: s-maj=153.6km s-min=25.2km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.90**	**155**	P	Pn	03 08 39.8	0.0
	1.2nm,0.3s,baz=333,slow=13,SNR=4.9						
MKAR	**Makanchi Array**	**23.51**	**337**	P	P	03 11 45.3	-0.1
	0.2nm,0.5s,baz=153,slow=9.7,SNR=2.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**59.03**	**137**	P	P	03 16 33.5	-0.1
	0.6nm,0.6s,baz=322,slow=7.5,SNR=18						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**61.59**	**140**	P	P	03 16 51.1	+0.1
	0.3nm,0.4s,baz=322,slow=6.4,SNR=7.0						
	0.3nm,0.4s						

*IDC **31** 03:22:54.6±1.4, 5°.79S×146°.41E, h0km, mb3.8/2, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=57.3km s-min=24.8km az=109.0*
ISC 31 03:22:56.7±2.5, 5°.9S±0°.2×146°.8E±0°.2, h35km, n13, σ2s26/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.50**	**175**	Pn	**Pn**	**03 23 52.5**	**+3.8**
	104nm,0.5s,baz=345,slow=12,SNR=25						
PMG				Sn	**Sn**	**03 24 26.0**	**-3.0**
	18nm,0.3s,baz=358,slow=21,SNR=13						
PMG	**Port Moresby**	**3.50**	**175**	P	**Pn**	**03 23 52.4**	**+3.7**
COEN	**Coen**	**8.78**	**204**	P	Pn	03 25 04.8	+3.5
CTA	**Charters Tower**	**14.12**	**182**	Pn	**P**	**03 26 19.0**	**-2.5**
	0.8nm,0.3s,baz=360,slow=14,SNR=5.7						
	1.8nm,0.3s						
KDU	**Kakadu**	**15.68**	**244**	P	**P**	**03 26 39.0**	**+0.1**
QIS	**Mount Isa**	**16.17**	**205**	P	**P**	**03 26 43.9**	**-0.4**
WRAB	**Tennant Creek**	**18.49**	**220**	P	**Pn**	**03 27 10.4**	**+0.1**
WRA	**Warramunga Arr**	**18.50**	**220**	P	**Pn**	**03 27 10.6**	**+0.1**
	0.6nm,0.3s,baz=44,slow=12,SNR=25						
	2.1nm,0.6s						
KNRA	**Kununurra**	**20.21**	**240**	P	**Pn**	**03 27 31.1**	**+0.2**
ASAR	**Alice Springs**	**21.61**	**214**	P	**P**	**03 27 44.2**	**+0.4**
	0.9nm,0.3s,baz=36,slow=11,SNR=24						
	0.9nm,0.3s						
INKA	**Innaminka**	**22.48**	**194**	P	**P**	**03 27 53.4**	**+0.3**
ILAR	**Eielson Array**	**85.46**	**23**	P	P	03 35 34.4	+3.8
	0.8nm,0.6s,baz=254,slow=5.3,SNR=12						
	0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**144.90**	**284**	PKP	**PKiKP**	**03 42 33.5**	**-1.6**
	1.9nm,0.6s,baz=73,slow=1.0,SNR=20						

*IDC **31** 03:27:02.7±2.2, 36°.31N×97°.27W, h0km, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=31.1km s-min=12.6km az=103.0*
*TUL **31** 03:27:03.9±0.7, 36°.286N±0°.010×97°.51W±0°.01, h8km±2km, ML3.6, mb_Lg3.5/100(NEIC), Mwr3.4/12(NEIC), Error ellipse: s-maj=1.4km s-min=1.3km az=218.0*
*NEIC **31** 03:27:03.9, 36°.29N×97°.51W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.13; $M_{\theta\theta}$1.31; $M_{\phi\phi}$-1.44; $M_{r\theta}$-0.44; $M_{\theta\phi}$-0.06; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.49000×10^{14} NP1:φs225.44000°, δ68.16000°, λ174.66000°. NP2:φs317.43000°, δ85.05000°, λ21.92000°. Principal axes: T 1.4645, Plg19.0000°, Azm184.0000°; N 0.0403, Plg68.0000°, Azm330.0000°; P -1.5049, Plg12.0000°, Azm89.0000°;*
*ANF **31** 03:27:04.2±0.5, 36°.27N×97°.48W, h8km, ML4.2/17 Error ellipse: s-maj=5.7km s-min=4.6km az=143.0*
*NEIC **31** 03:27:04.5±0.5, 36°.284N±0°.010×97°.51W±0°.01, h5km±3km, Error ellipse: s-maj=1.4km s-min=1.4km az=68.0*
ISC 31 03:27:03.9±0.9, 36°.28N±0°.02×97°.53W±0°.02, h10km±8km, n129, σ0s72/137, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK049	**E0420 Rd and N**	**0.22**	**55**	Pg	**Pg**	**03 27 08.5**	**+0.1**
OK049				Sg	**Sg**	**03 27 11.6**	**+0.1**
OK050	**Pawnee Station**	**0.45**	**75**		**Pg**	**03 27 12.6**	**-0.2**
OK050				Sg	**Sg**	**03 27 18.5**	**-0.2**
OK029	**Liberty Lake**	**0.49**	**173**	Pg	**Pg**	**03 27 13.4**	**0.0**
OK029				Sg	**Sg**	**03 27 20.2**	**+0.3**
OK048	**Pawnee Station**	**0.49**	**74**	Pg	**Pg**	**03 27 13.3**	**-0.1**
OK048				Sg	**Sg**	**03 27 19.5**	**-0.4**
OK045	**Pawnee Station**	**0.51**	**71**		**Pg**	**03 27 13.7**	**-0.1**
OK045				Sg	**Sg**	**03 27 20.5**	**-0.1**
OK046	**Pawnee Station**	**0.51**	**77**		**Pg**	**03 27 13.7**	**-0.2**
OK046				Sg	**Sg**	**03 27 20.3**	**-0.4**
OK033	**Mehan**	**0.53**	**116**	Pg	**Pg**	**03 27 14.2**	**-0.1**
OK033				Sg	**Sg**	**03 27 21.2**	**0.0**
OK044	**Pawnee Station**	**0.60**	**81**	Pg	**Pg**	**03 27 15.1**	**-0.3**
OK044				Sg	**Sg**	**03 27 22.8**	**-0.5**
OK051	**E0350 and S346**	**0.60**	**68**	Pg	**Pg**	**03 27 15.3**	**-0.3**
OK051				Sg	**Sg**	**03 27 23.2**	**-0.3**
OK031	**S. Brethren Rd**	**0.65**	**120**	Pg	**Pg**	**03 27 16.2**	**-0.2**
OK031				Sg	**Sg**	**03 27 24.8**	**-0.1**
OK005	**Luther M Schoo**	**0.68**	**156**	Pg	**Pg**	**03 27 17.0**	**-0.1**
OK034	**N. Norfolk Rd.**	**0.71**	**112**	Pg	**Pg**	**03 27 17.4**	**-0.2**
OK034				Sg	**Sg**	**03 27 26.7**	**-0.2**
OK025	**Westminster Rd**	**0.71**	**168**	Pg	**Pg**	**03 27 17.6**	**-0.1**
OK025				Sg	**Sg**	**03 27 27.2**	**+0.2**
KAN13	**South Haven SW**	**0.73**	**3**	Pg	**Pg**	**03 27 17.9**	**-0.2**
KAN13				Sg	**Sg**	**03 27 27.6**	**0.0**
OK032	**Salt Plains WL**	**0.76**	**314**	Pg	**Pg**	**03 27 18.3**	**-0.2**
OK032				Sg	**Sg**	**03 27 28.6**	**+0.1**
KAN14	**Manchester OK**	**0.76**	**333**		**Pg**	**03 27 18.4**	**-0.2**
KAN14				Sg	**Sg**	**03 27 28.6**	**+0.1**
KAN17	**Caldwell West**	**0.79**	**346**	Pg	**Pg**	**03 27 18.8**	**-0.3**
KAN17				Sg	**Sg**	**03 27 28.9**	**-0.5**
KAN09	**Caldwell North**	**0.86**	**355**		**Pg**	**03 27 20.1**	**-0.4**
KAN09				Sg	**Sg**	**03 27 31.2**	**-0.4**
OKCSW	**OKLAHOMA CITY**	**0.88**	**175**	Pg	**Pg**	**03 27 20.5**	**-0.3**
OKCSW				Sg	**Sg**	**03 27 32.1**	**-0.1**
KAN01	**Argonia South**	**0.89**	**348**	Pg	**Pg**	**03 27 20.7**	**-0.4**
KAN01				Sg	**Sg**	**03 27 32.6**	**0.0**
KS20	**Mayfield South**	**0.95**	**359**		**Pg**	**03 27 21.7**	**-0.4**
KS20				Sg	**Sg**	**03 27 34.2**	**-0.3**
KAN06	**Argonia West S**	**1.00**	**345**		**Pg**	**03 27 22.7**	**-0.5**
KAN06				Sg	**Sg**	**03 27 36.1**	**-0.1**
OK038	**West end E0370**	**1.00**	**282**		**Pg**	**03 27 21.7**	**-1.5**
KAN08	**Anthony NE Sta**	**1.01**	**339**		**Pg**	**03 27 22.9**	**-0.5**
KAN08				Sg	**Sg**	**03 27 36.4**	**0.0**
KS21	**Milan North St**	**1.01**	**354**	Pg	**Pg**	**03 27 22.8**	**-0.5**
FNO	**Franklin**	**1.03**	**174**	Pg	**Pg**	**03 27 23.1**	**-0.5**

FNO					Sg	Sg	03 27 36.9	-0.1
T35A	**Sooner Cattle**	**1.03**	**52**		Pg	Pg	03 27 23.1	-0.7
T35A					Sg	Sg	03 27 36.5	-0.7
T35B	**Sooner Cattle**	**1.03**	**52**		P	Pg	03 27 23.1	-0.6
	baz=232,SNR=294							
T35B					S	Sg	03 27 36.6	-0.7
	baz=232							
KAN16	**Harper SW Stat**	**1.04**	**335**		Pg	Pg	03 27 23.4	-0.4
KAN16					Sg	Sg	03 27 37.3	-0.1
OK035	**E0210 Rd and N**	**1.04**	**294**		Pg	Pg	03 27 23.4	-0.6
OK035					Sg	Sg	03 27 37.3	-0.3
OK011	**Prague**	**1.05**	**139**		Pg	Pg	03 27 22.9	-1.1
OK011					Sg	Sg	03 27 37.1	-0.6
KAN12	**Harper NE Stat**	**1.08**	**340**		Pg	Pg	03 27 24.2	-0.5
U32A	**Winter Ranch,**	**1.20**	**275**		Pg	Pb	03 27 26.2	-0.6
U32A	**Winter Ranch,**	**1.20**	**275**		P	Pb	03 27 26.1	-0.6
	baz=94,SNR=100							
U32A					S	Sb	03 27 43.1	+0.8
	baz=94							
TUL1	**Leonard**	**1.45**	**104**			Pn	03 27 29.8	-0.4
TUL1					IAmb_Lg		03 27 51.8	
	comp=Z,293nm,1.0s							
TUL1	**Leonard**	**1.45**	**104**		P	Pn	03 27 29.9	-0.4
	baz=286,SNR=371							
TUL1					S	Sg	03 27 49.5	-1.1
	baz=286							
X34A	**Smith Ranch, M**	**1.69**	**189**		Pn	Pb	03 27 35.1	-0.2
WMOK	**Wichita Mounta**	**1.85**	**214**		Pn	Pn	03 27 36.6	+0.8
WMOK	**Wichita Mounta**	**1.85**	**214**		P	Pn	03 27 36.6	+0.8
	baz=33,SNR=204							
WMOK					S	Sb	03 28 01.6	+0.5
	baz=33							
R32A	**Long Quarter,**	**2.34**	**337**		Pn	Pn	03 27 43.6	+1.1
R32A	**Long Quarter,**	**2.34**	**337**		P	Pn	03 27 44.8	+2.3
	baz=156							
R32A					S	Sn	03 28 12.5	+1.2
	baz=156							
X37A	**Clayton**	**2.44**	**133**		Pn	Pn	03 27 44.9	+1.1
X37A					IAmb_Lg		03 28 22.9	
	comp=Z,210nm,0.7s							
X37A	**Clayton**	**2.44**	**133**		P	Pn	03 27 44.9	+1.1
	baz=315,SNR=122							
U38A	**Gravette**	**2.54**	**86**		Pn	Pn	03 27 45.8	+0.5
U38A	**Gravette**	**2.54**	**86**		P	Pn	03 27 47.0	+1.7
	baz=267,SNR=86							
HHAR	**Hobbs**	**2.90**	**89**		Pn	Pn	03 27 50.5	+0.4
KSU1	**Kansas State U**	**2.91**	**14**		Pn	Pn	03 27 51.1	+0.8
Z35A	**Perchaven, San**	**2.95**	**176**		Pn	Pn	03 27 52.0	+1.1
Z35A	**Perchaven, San**	**2.95**	**176**		P	Pn	03 27 52.0	+1.1
	baz=356,SNR=12							
CBKS	**Cedar Bluff**	**3.08**	**326**		Pn	Pn	03 27 54.1	+1.4
CBKS					IAmb_Lg		03 28 46.1	
	comp=Z,88nm,0.7s							
CBKS	**Cedar Bluff**	**3.08**	**326**		S	Sg	03 28 41.5	-1.3
	baz=144							
S39A	**Bolivar**	**3.65**	**66**		Pn	Pn	03 28 01.1	+0.6
S39A					IAmb_Lg		03 29 07.5	
	comp=Z,123nm,0.8s							
S39A	**Bolivar**	**3.65**	**66**		P	Pn	03 28 01.4	+0.9
	baz=248							
MIAR	**Mount Ida**	**3.66**	**117**		Pn	Pn	03 28 01.5	+0.8
MIAR					IAmb_Lg		03 29 06.9	
	comp=Z,96nm,0.7s							
MIAR	**Mount Ida**	**3.66**	**117**		P	Pn	03 28 01.5	+0.8
	baz=300,SNR=60							
AMTX	**Amarillo**	**3.66**	**249**		Pn	Pn	03 28 01.5	+0.7
AMTX					IAmb_Lg		03 29 04.0	
	comp=Z,94nm,0.8s							
Z38A	**Mt. Pleasant**	**3.67**	**145**		Pn	Pn	03 28 01.4	+0.7
Z38A					IAmb_Lg		03 29 07.3	
	comp=Z,170nm,0.8s							
Z38A	**Mt. Pleasant**	**3.67**	**145**		P	Pn	03 28 01.7	+1.0
	baz=326							
WHTX	**Lake Whitney,**	**4.28**	**179**		Pn	Pn	03 28 09.4	+0.3
WHTX	**Lake Whitney,**	**4.28**	**179**		P	Pn	03 28 09.4	+0.3
	baz=359,SNR=9.8							
MGMO	**Mountain Grove**	**4.31**	**77**		Pn	Pn	03 28 10.1	+0.4
MGMO					IAmb_Lg		03 29 27.4	
	comp=Z,75nm,0.7s							
WHAR	**Wooly Hollow**	**4.37**	**102**		Pn	Pn	03 28 10.1	-0.3
WHAR					IAmb_Lg		03 29 23.5	
	comp=Z,85nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.39**	**94**		IAmb_Lg		03 29 26.8	
	comp=Z,76nm,0.8s							
N33A	**J Bar K, Exete**	**4.45**	**1**		Pn	Pn	03 28 11.1	-0.4
N33A					IAmb_Lg		03 29 28.8	
	comp=Z,59nm,1.0s							
WLAR	**White Oak Lake**	**4.45**	**124**		Pn	Pn	03 28 11.2	-0.3
WLAR					IAmb_Lg		03 29 36.2	
	comp=Z,119nm,0.8s							
UALR	**University of**	**4.49**	**108**		Pn	Pn	03 28 12.7	+0.7
UALR					IAmb_Lg		03 29 29.8	
	comp=Z,88nm,0.7s							
237A	**Washetta, Mont**	**4.50**	**161**		Pn	Pn	03 28 12.1	-0.1
237A	**Washetta, Mont**	**4.50**	**161**		P	Pn	03 28 12.0	-0.1
	baz=342,SNR=12							
237A					S	Sn	03 29 04.1	-0.5
	baz=342							
P38A	**Dawn**	**4.59**	**42**		Pn	Pn	03 28 14.1	+0.7
P38A					IAmb_Lg		03 29 30.8	
	comp=Z,122nm,0.8s							
R40A	**Maddies Statio**	**4.65**	**63**		Pn	Pn	03 28 14.4	+0.3
R40A	**Maddies Statio**	**4.65**	**63**		P	Pn	03 28 14.6	+0.4
	baz=246,SNR=31							
R40A					S	Sn	03 29 07.3	-0.9
	baz=246							
N35A	**Tabor**	**4.80**	**17**		Pn	Pn	03 28 16.6	+0.3
MSTX	**Muleshoe**	**4.88**	**243**		Pn	Pn	03 28 17.6	+0.1
KSCO	**Kaye Shedlock'**	**4.88**	**305**		Pn	Pn	03 28 18.3	+0.8
KSCO					IAmb_Lg		03 29 51.5	
	comp=Z,67nm,0.7s							
NATX	**Nacogdoches**	**5.10**	**151**		Pn	Pn	03 28 20.7	+0.3
NATX					IAmb_Lg		03 29 56.8	
	comp=Z,64nm,0.8s							
BGNE	**Belgrade**	**5.14**	**355**		Pn	Pn	03 28 20.8	-0.2
BGNE					IAmb_Lg		03 30 01.2	
	comp=Z,111nm,0.7s							
BGNE	**Belgrade**	**5.14**	**355**		P	Pn	03 28 21.2	+0.2
	baz=174							
LCAR	**Lake Charles**	**5.16**	**90**		Pn	Pn	03 28 21.0	-0.2
CCAR	**Cane Creek**	**5.27**	**115**		Pn	Pn	03 28 23.3	+0.5
CCAR					IAmb_Lg		03 29 57.4	
	comp=Z,110nm,0.8s							
CCM	**Cathedral Cave**	**5.32**	**69**		Pn	Pn	03 28 23.6	+0.2
CCM					IAmb_Lg		03 29 51.7	
	comp=Z,107nm,0.8s							
CCM	**Cathedral Cave**	**5.32**	**69**		P	Pn	03 28 23.2	-0.2
	baz=252							
P40A	**Paris**	**5.41**	**52**		Pn	Pn	03 28 24.8	+0.1
435B	**Jarrell**	**5.49**	**181**		Pn	Pn	03 28 25.8	+0.1
435B					IAmb_Lg		03 30 01.5	
	comp=Z,50nm,0.9s							
435B	**Jarrell**	**5.49**	**181**		P	Pn	03 28 26.1	+0.4
	baz=0.7,SNR=5.6							
435B					S	Sn	03 29 28.3	-0.6
	baz=0.7							
T25A	**Trinidad**	**5.60**	**281**		Pn	Pn	03 28 28.3	+0.8
T25A					IAmb_Lg		03 30 07.9	
	comp=Z,56nm,0.8s							
HBAR	**Harrisburg**	**5.62**	**95**		Pn	Pn	03 28 28.6	+1.0
N38A	**Joes South For**	**5.62**	**35**		Pn	Pn	03 28 26.9	-0.7
N38A					IAmb_Lg		03 30 09.9	
	comp=Z,120nm,0.8s							
N38A	**Joes South For**	**5.62**	**35**		S	Sn	03 29 31.8	-0.4
	baz=218							
PBMO	**Poplar Bluff**	**5.74**	**83**		IAmb_Lg		03 30 14.5	
	comp=Z,112nm,0.7s							
OGNE	**Ogallala**	**5.84**	**324**		IAmb_Lg		03 30 18.2	
	comp=Z,84nm,0.8s							
FVM	**French Village**	**5.92**	**71**		Pn	Pn	03 28 31.2	-0.5
GNAR	**Gosnell**	**6.08**	**91**		IAmb_Lg		03 30 26.2	
	comp=Z,91nm,0.8s							
JCT	**Junction City**	**6.09**	**199**		Pn	Pn	03 28 33.5	-0.6
143A	**Socs Landing,**	**6.19**	**123**		IAmb_Lg		03 30 27.9	
	comp=Z,79nm,0.8s							
PEBM	**Pemiscott Bayo**	**6.20**	**89**		Pn	Pn	03 28 35.7	+0.2
PARMO	**Parma**	**6.28**	**84**		IAmb_Lg		03 30 29.8	
	comp=Z,104nm,0.7s							
HTMS	**Hat Mesa**	**6.32**	**235**		Pn	Pn	03 28 37.6	+0.3
LNXT	**Lenox**	**6.50**	**89**		IAmb_Lg		03 30 42.3	
	comp=Z,96nm,1.0s							
SCIA	**State Center**	**6.54**	**30**		IAmb_Lg		03 30 35.1	
	comp=Z,88nm,0.7s							
SDCO	**Great Sand Dun**	**6.55**	**285**		Pn	Pn	03 28 41.8	+1.2
Q24A	**Divide**	**6.62**	**296**		IAmb_Lg		03 30 42.5	
	comp=Z,71nm,1.0s							
HALT	**Halls**	**6.64**	**91**		IAmb_Lg		03 30 51.0	
	comp=Z,66nm,0.9s							
GLAT	**Glass**	**6.66**	**88**		IAmb_Lg		03 30 48.2	
	comp=Z,80nm,0.9s							
S44A	**Carbondale**	**6.77**	**76**		IAmb_Lg		03 30 37.8	
	comp=Z,61nm,0.7s							
BRIGG	**Briggsdale**	**6.84**	**311**		IAmb_Lg		03 30 51.4	
	comp=Z,69nm,0.9s							
OXF	**Oxford**	**6.86**	**103**		IAmb_Lg		03 30 49.0	
	comp=Z,45nm,0.8s							
W45A	**Hickory Valley**	**6.88**	**97**		IAmb_Lg		03 30 47.0	
	comp=Z,72nm,0.8s							
UTMT	**University of**	**6.99**	**87**		IAmb_Lg		03 30 50.2	
	comp=Z,74nm,0.7s							
P43A	**Skaggs, Pawnee**	**7.16**	**60**		Pn	**Pn**	**03 28 48.7**	**0.0**
T45A	**Paducah**	**7.18**	**81**		IAmb_Lg		03 31 11.9	
	comp=Z,81nm,0.7s							
Q44A	**Meyer Farm, Va**	**7.24**	**66**		Pn	**Pn**	**03 28 50.7**	**+0.9**
ECSD	**EROS Data Cent**	**7.48**	**5**		Pn	**Pn**	**03 28 52.3**	**-0.8**
L40A	**Anamosa**	**7.57**	**38**		Pn	**Pn**	**03 28 52.8**	**-1.5**
L40A					IAmb_Lg		03 31 09.1	
	comp=Z,67nm,0.8s							
146A	**Union**	**7.88**	**115**		IAmb_Lg		03 31 28.5	
	comp=Z,36nm,1.1s							
PHWY	**Pilot Hill**	**7.97**	**311**		Pn	**Pn**	**03 29 00.1**	**0.0**
Y22D	**IRIS PASSCAL I**	**8.00**	**257**		IAmb_Lg		03 31 18.8	
	comp=Z,75nm,0.7s							
N23A	**Red Feather La**	**8.04**	**307**		IAmb_Lg		03 31 38.2	
	comp=Z,55nm,0.9s							
833A	**Chaparral WMA,**	**8.09**	**192**		IAmb_Lg		03 31 36.3	
	comp=Z,36nm,1.0s							
SUSD	**Miller**	**8.22**	**353**		IAmb_Lg		03 31 32.2	
	comp=Z,31nm,0.8s							
I37A	**Lemond, Waseca**	**8.34**	**21**		IAmb_Lg		03 31 34.7	
	comp=Z,50nm,0.9s							
TXAR	**Lajitas Array**	**8.64**	**218**		Pn	**Pn**	**03 29 09.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=42,slow=12,SNR=7.6							
TXAR					Pg	Pg	03 29 35.6	-14
	comp=Z,0.3nm,0.3s,baz=46,slow=16,SNR=4.5							
TXAR					Sn	**Sn**	**03 30 45.8**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=49,slow=16,SNR=1.3							
TXAR					Lg	Lg	03 31 33.2	
	comp=Z,2.5nm,0.3s,baz=39,slow=24,SNR=6.0							
	comp=Z,0.2nm,0.6s							
JFWS	**Jewell Farm**	**8.68**	**38**		Pn	**Pn**	**03 29 08.5**	**-1.0**
JFWS					IAmb_Lg		03 32 00.6	
	comp=Z,60nm,0.8s							
P46A	**Rosedale**	**8.80**	**65**		Pn	**Pn**	**03 29 12.1**	**+0.8**
M44A	**Midewin, Midew**	**8.98**	**53**		IAmb_Lg		03 31 45.4	
	comp=Z,45nm,0.8s							
K22A	**Casper**	**9.42**	**315**		IAmb_Lg		03 32 12.0	
	comp=Z,31nm,0.9s							
K43A	**Burlington**	**9.57**	**45**		IAmb_Lg		03 32 08.2	
	comp=Z,54nm,0.9s							
SPMN	**Marine on St.**	**9.62**	**20**		IAmb_Lg		03 32 13.7	
	comp=Z,32nm,1.1s							
PDAR	**Pinedale Array**	**11.32**	**309**		Pn	**Pn**	**03 29 49.6**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=120,slow=16,SNR=1.8							
PDAR					Lg	Lg	03 32 58.1	
	comp=Z,0.4nm,0.3s,baz=113,slow=36,SNR=8.5							
	comp=Z,0.1nm,0.4s							
ULM	**Lac du Bonnet**	**14.01**	**4**		Pn	Pn	03 30 16.2	-6.3
	comp=Z,0.3nm,0.3s,baz=187,slow=8.1,SNR=2.2							
ULM					Lg	Lg	03 34 14.3	
	comp=Z,0.3nm,0.3s,baz=240,slow=20,SNR=1.6							
	comp=Z,3.6nm,0.6s							

STR ***31*** *03:27:38.4±1.7, 43°N±19°×1°3E±1°9, h10km, mb4.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=45.3, preliminary*

PDG ***31*** *03:27:40.7±1.0, 42°.78N×13°.10E, h11km, ML4.5/12, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

MOS ***31*** *03:27:40.2±1.2, 42°.83N×13°.08E, h11km, mb4.6/17, Error ellipse: s-maj=5.7km s-min=3.2km az=77.2*

IDC ***31*** *03:27:41.0±0.6, 42°.85N×13°.12E, h0km, mb4.1/20, mbtmp4.0/34, ML3.7/12, MS3.3/8, Error ellipse: s-maj=11.5km s-min=9.0km az=91.0*

LDG ***31*** *03:27:40.3±0.1, 42°.78N×13°.03E, h11km, Ml3.5/40, Error ellipse: s-maj=2.6km s-min=1.5km az=42.0*

MED_RC ***31*** *03:27:40.0±0.4, 42°.77N×13°.09E, h12km±2km, MW4.1/13, Moment Tensor Solution. Mantle waves: s13,c14; Duration: 1ꝑ0 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.47±.36; $M_{\theta\theta}$=0.53±.26; $M_{\phi\phi}$=0.94±.19; $M_{r\theta}$=-0.40±.33; $M_{\theta\phi}$=0.28±.12; $M_{\phi r}$=1.27±.41; Best double couple: M_0=1.84000×10^{15} NP1:ϕ_s=20.00000°, δ=68.00000°, λ=-93.00000°. NP2:ϕ_s=209.00000°, δ=22.00000°, λ=-82.00000°. Principal axes: T 1.6400, Plg=23.0000°, Azm=113.0000°; N 0.4000, Plg=3.0000°, Azm=22.0000°; P -2.0400, Plg=67.0000°, Azm=285.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ROM ***31*** *03:27:40.3±0.0, 42°.761N±0°.001×13°.086E±0°.001, h11km, ML4.2/104, Mw4.0 Error ellipse: s-maj=0.1km s-min=0.1km az=234.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.45; $M_{\theta\theta}$=0.11; $M_{\phi\phi}$=0.34; $M_{r\theta}$=0.17; $M_{\theta\phi}$=0.36; $M_{\phi r}$=-1.05; Fault plane solution: M_0=1.18777×10^{15} NP1:ϕ_s=241.00000°, δ=22.00000°, λ=-29.00000°. NP2:ϕ_s=359.00000°, δ=80.00000°, λ=-109.00000°.*

NEIC ***31*** *03:27:41.1±1.6, 42°.76N±0°.05×13°.01E±0°.02, h10km±1km, mb4.3/26, ML4.2(ROM), ML4.2(VIE) Error ellipse: s-maj=9.3km s-min=2.9km az=177.0*

PRU ***31*** *03:27:42.4±0.0, 42°.85N×13°.22E, h0km, M4.3*

BEO ***31*** *03:27:43.9±0.6, 42°.85N×13°.22E, h13km±2km, ML4.3/19*

ISC 31 03:27:41.3±0.6, 42°.76N±0°.01×13°.07E±0°.01, h13km±3km, n721, σ1ꝑ97/835, mb4.4/40, MS3.3/7, 111C-49D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.12**	**244**	⇑P	**Pg**	**03 27 43.9**	**-0.8**
T1217				S	**Sg**	**03 27 46.3**	**-0.6**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1245	**Castelsantange**	**0.13**	**42**	⇓P	**Pg**	**03 27 43.7**	**-1.2**
T1245				S	**Sg**	**03 27 45.9**	**-1.4**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.13**	**343**	⇑P	**Pg**	**03 27 44.0**	**-0.9**
T1216				S	**Sg**	**03 27 46.4**	**-0.8**
T1215	**Vallo di Nera,**	**0.15**	**284**	⇑P	**Pg**	**03 27 44.5**	**-0.6**
T1215				S	**Sg**	**03 27 47.4**	**-0.3**
T1215				AML	AML		
	comp=E,93050μm,1.0s						
T1215				AML	AML		
	comp=N,55500μm,0.7s						
T1215				AML	AML		
	comp=E,93550μm,1.0s						
T1215				AML	AML		
	comp=N,56200μm,0.6s						
T1215				AML	AML		
	comp=E,93000μm,1.0s						
T1215				AML	AML		
	comp=N,55500μm,0.8s						
T1215				AML	AML		
	comp=E,93800μm,1.0s						
T1215				AML	AML		
	comp=E,92950μm,1.0s						
T1215				AML	AML		
	comp=E,93500μm,1.0s						
T1215				AML	AML		
	comp=N,56150μm,0.7s						
LNSS	**Leonessa**	**0.16**	**188**	⇑P	**Pg**	**03 27 44.6**	**-0.7**
LNSS				S	**Sg**	**03 27 47.5**	**-0.5**
T1244	**Arquata del Tr**	**0.17**	**92**	⇑P	**Pg**	**03 27 44.6**	**-0.7**
T1244				S	**Sg**	**03 27 47.6**	**-0.5**
T1201	**Domo (RI)**	**0.17**	**129**	⇑P	**Pg**	**03 27 44.7**	**-0.7**
T1201				S	**Sg**	**03 27 47.8**	**-0.4**
FEMA	**Monte Fema**	**0.20**	**355**	P	**Pg**	**03 27 45.0**	**-0.8**
FEMA				S	**Sg**	**03 27 48.5**	**-0.5**
FEMA				AML	AML		
T1204	**Amatrice, Fraz**	**0.20**	**116**	⇑P	**Pg**	**03 27 45.0**	**-0.8**
T1204				S	**Sg**	**03 27 48.4**	**-0.6**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
MMO1	**Montemonaco**	**0.23**	**54**	⇓P	**Pg**	**03 27 45.4**	**-1.0**
MMO1				S	**Sg**	**03 27 49.0**	**-0.7**
SMA1	**SAN MARTINO**	**0.23**	**124**	⇑P	**Pg**	**03 27 45.6**	**-0.8**
SMA1				S	**Sg**	**03 27 49.7**	**-0.2**
SMA1				AML	AML		
SMA1				AML	AML		
T1256	**Bolognola (MC)**	**0.27**	**25**	⇓P	**Pg**	**03 27 46.1**	**-1.0**
T1256				S	**Sg**	**03 27 50.3**	**-0.7**
RM33	**Pellescritta (**	**0.28**	**158**	⇑P	**Pg**	**03 27 46.3**	**-0.8**
RM33				S	**Sg**	**03 27 50.8**	**-0.2**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1241	**Roccafluvione,**	**0.28**	**70**	P	**Pg**	**03 27 46.3**	**-0.8**
T1241				S	**Sb**	**03 27 50.9**	**-1.9**
T1241				AML	AML		
T1241				AML	AML		
T1211	**Morro Reatino**	**0.28**	**215**	⇑P	**Pg**	**03 27 46.7**	**-0.5**
T1211				S	**Sg**	**03 27 51.5**	**+0.4**
T1211				AML	AML		
	comp=E,94950μm,0.1s						
T1211				AML	AML		
T1211				AML	AML		
	comp=E,94600μm,0.1s						
T1211				AML	AML		
T1211				AML	AML		
T1211				AML	AML		
	comp=E,94150μm,0.1s						
T1211				AML	AML		
	comp=E,95450μm,0.1s						
T1243	**Rocca Santa Ma**	**0.28**	**103**	⇑P	**Pg**	**03 27 46.2**	**-1.0**
T1243				S	**Sg**	**03 27 50.7**	**-0.6**
ARRO	**Arrone**	**0.29**	**231**	P	**Pg**	**03 27 46.9**	**-0.5**
ARRO				S	**Sg**	**03 27 51.7**	**+0.3**
ARRO				AML	AML		
	comp=N,55150μm,0.2s						
ARRO				AML	AML		
	comp=E,51850μm,1.0s						
ARRO				AML	AML		
	comp=N,55100μm,0.2s						
AM05	**Amandola Campo**	**0.30**	**44**	⇓P	**Pg**	**03 27 46.7**	**-0.8**
AM05				S	**Sb**	**03 27 51.5**	**-1.8**
AM05				AML	AML		
	comp=N,9830μm,0.5s						
AM05				AML	AML		
	comp=N,38550μm,0.7s						
AM05				AML	AML		
	comp=E,40100μm,0.9s						
AM05				AML	AML		
AM05				AML	AML		
	comp=N,9840μm,0.5s						
CAMP	**Campotosto**	**0.34**	**132**	Pg	**Pg**	**03 27 47.2**	**-1.0**
CAMP				Sg	**Sg**	**03 27 52.7**	**-0.2**
CAMP	**Campotosto**	**0.34**	**132**	⇑P	**Pg**	**03 27 47.2**	**-1.0**
CAMP				S	**Sg**	**03 27 52.2**	**-0.6**
CAMP				AML	AML		
	comp=E,89700μm,0.7s						
CAMP				AML	AML		
	comp=N,63000μm,0.5s						
GUMA	**Gualdo di Mace**	**0.36**	**33**	⇓P	**Pg**	**03 27 48.0**	**-0.5**
GUMA				S	**Sb**	**03 27 54.0**	**-1.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1246	**Crognaleto (TE**	**0.36**	**120**	P	**Pg**	**03 27 47.6**	**-1.0**
T1246				S	**Sg**	**03 27 53.2**	**-0.3**
T1247	**Pizzolo (AQ)**	**0.36**	**153**	⇑P	**Pg**	**03 27 47.8**	**-0.8**
T1247				S	**Sg**	**03 27 53.5**	**-0.1**
T1247				AML	AML		
T1247				AML	AML		
CESX	**Cesi**	**0.39**	**247**	Pg	**Pg**	**03 27 48.5**	**-0.7**
CESX				Sg	**Sg**	**03 27 53.8**	**-0.7**
CESX	**Cesi**	**0.39**	**247**	⇑P	**Pg**	**03 27 48.5**	**-0.7**
CESX				S	**Sg**	**03 27 54.9**	**+0.4**
CESX				AML	AML		
	comp=N,38800μm,0.4s						
CESX				AML	AML		
	comp=E,70600μm,0.6s						
SEF1	**Sefro**	**0.39**	**347**	⇑P	**Pg**	**03 27 48.4**	**-0.8**
SEF1				S	**Sb**	**03 27 54.8**	**-1.4**
SEF1				AML	AML		
	comp=E,80250μm,0.7s						
SEF1				AML	AML		
SEF1				AML	AML		
	comp=E,80300μm,0.7s						
ASSB	**Assisi San Ben**	**0.41**	**313**	⇑P	**Pg**	**03 27 48.8**	**-0.8**
ASSB				S	**Sg**	**03 27 55.3**	**+0.2**
TERO	**Teramo**	**0.42**	**110**	⇑P	**Pg**	**03 27 48.4**	**-1.2**
TERO				S	**Sg**	**03 27 54.7**	**-0.5**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
PIO1	**Pioraco**	**0.42**	**351**	P	**Pg**	**03 27 48.9**	**-0.8**
MDAR	**Monte D'Aria**	**0.43**	**7**	P	**Pg**	**03 27 49.1**	**-0.8**
MDAR				S	**Sb**	**03 27 55.7**	**-1.6**
MDAR				AML	AML		
	comp=E,52900μm,1.5s						
MDAR				AML	AML		
	comp=E,52850μm,1.5s						
MDAR				AML	AML		
	comp=N,73250μm,0.4s						
FIU1	**Fiuminata**	**0.44**	**346**	P	**Pg**	**03 27 49.1**	**-0.9**
FIU1				S	**Sb**	**03 27 56.0**	**-1.4**
FIU1				AML	AML		
	comp=N,38350μm,0.5s						
FIU1				AML	AML		
	comp=E,42700μm,1.4s						
FIU1				AML	AML		
	comp=N,38350μm,0.5s						
SSM1	**San Severino M**	**0.47**	**9**	P	**Pg**	**03 27 49.8**	**-0.8**
MNTP	**Montappone**	**0.47**	**38**	⇑P	**Pb**	**03 27 50.4**	**-1.1**
MNTP				AML	AML		
	comp=E,95850μm,0.6s						
MNTP				AML	AML		
	comp=N,73000μm,0.8s						
MNTP				AML	AML		
	comp=E,95850μm,0.6s						
MNTP				AML	AML		
	comp=N,73000μm,0.8s						
GAG1	**Gagliole**	**0.47**	**360**	P	**Pg**	**03 27 50.0**	**-0.7**
GAG1				S	**Sb**	**03 27 57.3**	**-1.2**
GAG1				AML	AML		
GAG1				AML	AML		
	comp=N,98250μm,0.5s						
GAG1				AML	AML		
	comp=N,97850μm,0.5s						
GAG1				AML	AML		
AQU	**

SNTG	**Esanatoglia**	**0.50**	**349**	⇑P	**Pg**	**03 27 50.2**	**-1.0**
SNTG				S	**Sb**	**03 27 58.2**	**-1.1**
SNTG				AML	AML		
	comp=E,24600µm,0.4s						
SNTG				AML	AML		
	comp=N,24650µm,0.5s						
SNTG				AML	AML		
	comp=E,24550µm,0.4s						
SNTG				AML	AML		
	comp=E,23250µm,0.4s						
SNTG				AML	AML		
	comp=N,24650µm,0.5s						
SNTG				AML	AML		
	comp=N,25150µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.53**	**323**	⇑P	**Pg**	**03 27 50.9**	**-0.8**
ATCC				AML	AML		
	comp=N,46800µm,1.0s						
ATCC				AML	AML		
	comp=E,41100µm,0.7s						
ATCC				AML	AML		
	comp=N,46850µm,1.0s						
EL6	**Elcito**	**0.57**	**2**	P	**Pg**	**03 27 51.4**	**-1.1**
TRE1	**Treia**	**0.57**	**18**	⇑P	**Pb**	**03 27 52.1**	**-1.2**
TRE1				AML	AML		
	comp=E,56200µm,0.4s						
TRE1				AML	AML		
	comp=N,55200µm,0.6s						
FOSV	**Fossato di Vic**	**0.58**	**337**	⇑P	**Pg**	**03 27 51.6**	**-1.1**
FOSV				S	**Sb**	**03 28 00.4**	**-1.0**
FOSV				AML	AML		
	comp=N,29700µm,1.1s						
FOSV				AML	AML		
	comp=E,23700µm,0.8s						
FOSV				AML	AML		
	comp=N,29750µm,1.1s						
FOSV				AML	AML		
	comp=E,23650µm,0.8s						
CING	**Cingoli**	**0.62**	**8**	⇑P	**Pg**	**03 27 52.3**	**-1.1**
TRTR	**Tortoreto Alta**	**0.62**	**86**	⇑P	**Pb**	**03 27 53.4**	**-0.6**
TRTR				AML	AML		
TRTR				AML	AML		
FAGN	**Fagnano**	**0.62**	**143**	⇑P	**Pg**	**03 27 52.0**	**-1.5**
FAGN				AML	AML		
	comp=E,86750µm,0.3s						
FAGN				AML	AML		
	comp=N,75000µm,0.4s						
MURB	**Monte Urbino**	**0.64**	**321**		**Pg**	**03 27 52.9**	**-0.9**
MURB				Sg	**Sb**	**03 28 03.3**	**0.0**
MURB	**Monte Urbino**	**0.64**	**321**	⇑P	**Pg**	**03 27 53.0**	**-0.9**
MURB				S	**Sb**	**03 28 03.4**	**0.0**
MURB				AML	AML		
	comp=E,81550µm,0.3s						
MURB				AML	AML		
	comp=N,74150µm,0.4s						
MURB				AML	AML		
	comp=N,74150µm,0.4s						
MURB				AML	AML		
	comp=E,81550µm,0.3s						
MURB				AML	AML		
	comp=N,75800µm,0.4s						
MURB				AML	AML		
	comp=E,89100µm,0.3s						
CADA	**Capodarco di F**	**0.66**	**49**	P	**Pb**	**03 27 54.3**	**-0.4**
CADA				AML	AML		
	comp=E,97650µm,0.9s						
CADA				AML	AML		
SRES	**S.Oreste - Sor**	**0.67**	**219**	⇓P	**Pg**	**03 27 53.6**	**-0.8**
SRES				AML	AML		
	comp=E,9815µm,0.6s						
SRES				AML	AML		
	comp=N,9255µm,0.6s						
VCEL	**Villa Celiera**	**0.68**	**123**	⇑P	**Pg**	**03 27 53.0**	**-1.5**
VCEL				AML	AML		
	comp=E,60300µm,0.8s						
VCEL				AML	AML		
	comp=N,73150µm,0.8s						
MMUR	**Monte Murano**	**0.68**	**355**	P	**Pg**	**03 27 53.5**	**-1.1**
MMUR				S	**Sb**	**03 28 04.1**	**-0.3**
MMUR				AML	AML		
	comp=E,38200µm,0.4s						
MMUR				AML	AML		
	comp=E,38250µm,0.4s						
MMUR				AML	AML		
	comp=N,42500µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.68**	**310**	⇑P	**Pg**	**03 27 53.6**	**-1.0**
ATTE				AML	AML		
	comp=E,15200µm,0.8s						
ATTE				AML	AML		
	comp=N,16600µm,0.7s						
CIMA	**Civitanova Mar**	**0.70**	**39**	P	**Pb**	**03 27 54.7**	**-0.6**
ATFO	**Monte Foce - G**	**0.71**	**329**	⇑P	**Pg**	**03 27 54.0**	**-1.1**
ATFO				AML	AML		
	comp=E,17900µm,1.2s						
ATFO				AML	AML		
	comp=N,22250µm,0.6s						
ATSC	**Scheggia e Pas**	**0.72**	**337**	P	**Pg**	**03 27 54.0**	**-1.4**
MGAB	**Montegabbione**	**0.72**	**282**	P	**Pg**	**03 27 54.5**	**-0.8**
MGAB				AML	AML		
	comp=N,44550µm,0.6s						
MGAB				AML	AML		
	comp=E,86900µm,0.6s						
MGAB				AML	AML		
	comp=N,45850µm,0.6s						
MGAB				AML	AML		
	comp=E,86900µm,0.7s						
PP3	**Marolino**	**0.73**	**32**	⇑P	**Pb**	**03 27 55.2**	**-0.6**
PP3				AML	AML		
	comp=E,39150µm,1.6s						
PP3				AML	AML		
	comp=N,66500µm,0.4s						
PP3				AML	AML		
	comp=E,40500µm,1.6s						
PP3				AML	AML		
	comp=N,68450µm,0.4s						
PP3				AML	AML		
	comp=N,66550µm,0.4s						
PP3				AML	AML		
	comp=E,39200µm,1.6s						
ATLO	**AVT- Montelove**	**0.74**	**319**	⇑P	**Pg**	**03 27 54.5**	**-1.2**
ATLO				S	**Sb**	**03 28 05.7**	**-0.3**
ARVD	**Arcevia**	**0.74**	**353**	⇑P	**Pg**	**03 27 54.5**	**-1.2**
ARVD				AML	AML		
	comp=E,18450µm,0.6s						
ARVD				AML	AML		
	comp=N,13700µm,0.7s						
T0110	**Collepietro**	**0.75**	**136**	⇑P	**Pg**	**03 27 54.0**	**-1.8**
T0110				AML	AML		
	comp=N,48500µm,0.6s						
T0110				AML	AML		
	comp=E,57950µm,0.5s						
ATVA	**AVT- Monte Val**	**0.77**	**312**	⇑P	**Pg**	**03 27 55.2**	**-1.1**
ATVA				S	**Sb**	**03 28 07.0**	**0.0**
TB01	**Gubbio**	**0.77**	**323**	⇑P	**Pg**	**03 27 55.1**	**-1.2**
TB02	**Pietralunga**	**0.78**	**322**	P	**Pg**	**03 27 55.2**	**-1.2**
MTCE	**Montecelio**	**0.78**	**198**	P	**Pg**	**03 27 54.8**	**-1.6**
MTCE				AML	AML		
	comp=N,8390µm,1.6s						
MTCE				AML	AML		
	comp=E,14200µm,0.6s						
PTQR	**Pietraquaria**	**0.78**	**162**	P	**Pg**	**03 27 54.5**	**-1.9**
PTQR				AML	AML		
	comp=N,17600µm,0.7s						
PTQR				AML	AML		
	comp=E,16600µm,1.0s						
ATVO	**AVT- Monte Val**	**0.79**	**322**	P	**Pg**	**03 27 55.2**	**-1.4**
ATVO				AML	AML		
	comp=E,16550µm,0.6s						
ATVO				AML	AML		
	comp=N,19250µm,0.7s						
FRON	**Frontone**	**0.80**	**342**	⇑P	**Pg**	**03 27 55.3**	**-1.5**
FRON				AML	AML		
	comp=E,15550µm,0.7s						
FRON				AML	AML		
	comp=N,22100µm,0.7s						
TB03	**Pietralunga**	**0.80**	**323**	⇑P	**Pg**	**03 27 55.5**	**-1.4**
ATBU	**Serra di Buran**	**0.81**	**332**	⇑P	**Pg**	**03 27 56.0**	**-1.0**
CERT	**Cerreto**	**0.82**	**185**	P	**Pg**	**03 27 55.3**	**-1.8**
CERT				AML	AML		
	comp=E,37600µm,0.4s						
CERT				AML	AML		
	comp=N,29600µm,1.4s						
ATMI	**Monte Miggiano**	**0.82**	**314**	P	**Pg**	**03 27 56.2**	**-1.0**
ATMI				AML	AML		
	comp=E,51600µm,0.9s						
ATMI				AML	AML		
	comp=N,49000µm,0.8s						
ATPI	**Pietralunga -**	**0.84**	**325**	⇑P	**Pg**	**03 27 56.4**	**-1.3**
ATPI				AML	AML		
	comp=N,13690µm,0.7s						
ATPI				AML	AML		
	comp=N,13710µm,0.7s						
ATPI				AML	AML		
	comp=E,14750µm,0.7s						
ATPC	**Poggio Castell**	**0.85**	**328**	⇑P	**Pg**	**03 27 56.5**	**-1.2**
SACS	**San Casciano d**	**0.86**	**276**	⇑P	**Pg**	**03 27 57.0**	**-0.9**
SACS				AML	AML		
	comp=E,16200µm,0.7s						
SACS				AML	AML		
	comp=E,15100µm,0.7s						
SACS				AML	AML		
	comp=N,15900µm,0.7s						
SACS				AML	AML		
	comp=N,15000µm,0.7s						
PIEI	**Pieia**	**0.87**	**333**	⇑P	**Pg**	**03 27 56.5**	**-1.6**
PIEI				AML	AML		
	comp=N,9400µm,0.4s						
PIEI				AML	AML		
	comp=E,9800µm,0.3s						
AOI	**Ancona**	**0.88**	**26**	⇑P	**Pg**	**03 27 57.2**	**-1.1**
AOI				AML	AML		
	comp=N,12100µm,1.4s						
AOI				AML	AML		
	comp=E,11800µm,1.4s						
MPAG	**Monte Paganucc**	**0.90**	**345**	⇑P	**Pg**	**03 27 57.2**	**-1.5**
MPAG				AML	AML		
	comp=N,15350µm,0.7s						
MPAG				AML	AML		
	comp=N,15400µm,0.7s						
MPAG				AML	AML		
	comp=E,15000µm,0.7s						
MPAG				AML	AML		
	comp=N,15900µm,0.7s						
MPAG				AML	AML		
	comp=E,14750µm,0.7s						
PCRO	**Pietralacroce**	**0.91**	**22**	P	**Pb**	**03 27 58.2**	**-0.8**
RCAV	**Rocca di Cave**	**0.92**	**186**	P	**Pg**	**03 27 57.4**	**-1.7**
RCAV				AML	AML		
	comp=N,25750µm,1.5s						
RCAV				AML	AML		
	comp=E,23600µm,1.1s						
APEC	**Apecchio**	**0.93**	**329**	P	**Pg**	**03 27 58.1**	**-1.1**
APEC				AML	AML		
	comp=N,3390µm,0.7s						
APEC				AML	AML		
	comp=N,3395µm,0.7s						
APEC				AML	AML		
	comp=E,2765µm,1.6s						
CDCA	**Citt' di Caste**	**0.93**	**319**	P	**Pg**	**03 27 58.2**	**-1.0**
ATMC	**Monte Cedrone**	**0.94**	**317**	P	**Pg**	**03 27 58.2**	**-1.2**
LATE	**Laterza**	**0.95**	**261**		**Pg**	**03 27 58.7**	**-0.9**
LATE	**Laterza**	**0.95**	**261**	P	**Pg**	**03 27 58.5**	**-1.1**
SENI	**Senigallia**	**0.95**	**7**	⇓P	**Pn**	**03 27 59.5**	**-0.8**
FSSB	**Fossombrone**	**0.95**	**347**	⇑P	**Pg**	**03 27 58.3**	**-1.4**
FSSB				AML	AML		
	comp=N,62050µm,1.5s						
FSSB				AML	AML		
	comp=E,33300µm,0.4s						
VVLD	**Villa Vallelon**	**0.98**	**155**	P	**Pg**	**03 27 58.1**	**-2.1**
VVLD				AML	AML		
	comp=E,17700µm,0.5s						
VVLD				AML	AML		
	comp=N,11290µm,0.7s						
GUAR	**Guarcino**	**0.98**	**170**	P	**Pg**	**03 27 58.9**	**-1.5**
GUAR				AML	AML		
	comp=E,19600µm,0.5s						
GUAR				AML	AML		
	comp=N,26250µm,0.5s						
CAFI	**Castiglion Fio**	**0.99**	**305**	⇑P	**Pg**	**03 27 59.2**	**-1.2**
CAFI				AML	AML		
	comp=E,8080µm,0.7s						
CAFI				AML	AML		
	comp=E,8185µm,0.6s						
CAFI				AML	AML		
	comp=N,9935µm,0.8s						
CAFI				AML	AML		
	comp=N,9490µm,0.8s						
RMP	**Rome, Mte Porz**	**0.99**	**196**	P	**Pg**	**03 27 58.6**	**-1.9**
RMP				AML	AML		
	comp=N,18600µm,0.7s						
RMP				AML	AML		
	comp=E,20300µm,0.5s						
PE3	**Peglio**	**1.02**	**336**	P	**Pg**	**03 27 59.8**	**-1.3**
PE3				AML	AML		
	comp=E,55µm,0.3s						
PE3				AML	AML		
	comp=N,52µm,0.4s						
MCIV	**Monte Civitell**	**1.03**	**271**	P	**Pg**	**03 27 59.9**	**-1.3**
MCIV				AML	AML		
	comp=N,7235µm,0.5s						
MCIV				AML	AML		
	comp=E,7125µm,0.7s						
SF11	**Podere del Sol**	**1.03**	**276**	P	**Pg**	**03 28 00.0**	**-1.2**
VIVA	**Pratoni del Vi**	**1.04**	**193**	P	**Pb**	**03 28 00.0**	**-1.1**
VIVA				AML	AML		
	comp=N,35700µm,0.4s						
VIVA				AML	AML		
	comp=E,28700µm,0.4s						
MA9	**Marino**	**1.04**	**197**	P	**Pb**	**03 27 59.9**	**-1.2**
MA9				AML	AML		
	comp=N,18500µm,0.5s						
MA9				AML	AML		
	comp=E,27350µm,0.8s						
RDP	**Rocca di Papa**	**1.04**	**195**	P	**Pb**	**03 27 59.6**	**-1.5**
RDP				AML	AML		
	comp=E,50350µm,0.5s						
RDP				AML	AML		
	comp=N,39800µm,0.5s						
SF04	**Casetta**	**1.04**	**274**	AML	AML		
	comp=N,8240µm,0.6s						
SF04				AML	AML		
	comp=E,7195µm,0.4s						
SAMA	**S.Maria delle**	**1.04**	**200**	P	**Pb**	**03 27 59.9**	**-1.4**
TOLF	**Tolfa**	**1.06**	**229**	P	**Pb**	**03 28 00.5**	**-1.0**
TOLF				AML	AML		
	comp=E,9095µm,0.6s						
TOLF				AML	AML		
	comp=N,8050µm,0.4s						
SSP9	**Sansepolcro**	**1.06**	**320**	P	**Pb**	**03 28 00.7**	**-0.9**
SSP9				AML	AML		
	comp=E,9975µm,0.6s						
SSP9				AML	AML		
	comp=N,14000µm,1.6s						
SF13	**Bagnolo**	**1.07**	**273**	⇑P	**Pb**	**03 28 00.6**	**-1.1**
SF14	**Selvena**	**1.07**	**270**	P	**Pb**	**03 28 00.7**	**-1.0**
CAFR	**Castel Frentan**	**1.08**	**119**	P	**Pb**	**03 28 00.1**	**-1.8**
CAFR				AML	AML		
	comp=E,15400µm,0.5s						
CAFR				AML	AML		
	comp=N,12600µm,0.3s						
LPEL	**Lama dei Pelig**	**1.09**	**131**	⇑P	**Pb**	**03 27 59.4**	**-2.7**
LPEL				AML	AML		
	comp=N,13400µm,0.5s						
LPEL				AML	AML		
	comp=E,14700µm,0.6s						
SF01	**Poggio Pratacc**	**1.11**	**273**	AML	AML		
	comp=N,9830µm,0.5s						
SF01				AML	AML		
	comp=E,14650µm,0.6s						
LAV9	**Lanuvio**	**1.12**	**194**	P	**Pb**	**03 28 01.3**	**-1.2**
LAV9				AML	AML		
	comp=E,26250µm,0.6s						
LAV9				AML	AML		
	comp=N,23150µm,0.6s						
POFI	**Posta Fibreno**	**1.15**	**155**	P	**Pb**	**03 28 01.2**	**-1.8**
POFI				AML	AML		
	comp=E,8455µm,1.4s						
POFI				AML	AML		
	comp=N,4960µm,0.5s						
POFI				AML	AML		
	comp=E,7885µm,1.3s						
POFI				AML	AML		
	comp=N,5205µm,0.5s						
CPGN	**Carpegna, Ital**	**1.17**	**332**	P	**Pb**	**03 28 03.0**	**-0.5**
ARCI	**Arcidosso**	**1.18**	**275**	P	**Pb**	**03 28 02.6**	**-0.9**
ARCI				AML	AML		
	comp=E,3920µm,0.7s						
ARCI				AML	AML		
	comp=N,2720µm,0.6s						
LRP	**Arpino**	**1.18**	**161**	P	**Pb**	**03 28 02.5**	**-1.0**
LRP				AML	AML		
	comp=N,4920µm,0.9s						
LRP				AML	AML		
	comp=E,5090µm,0.6s						
CRE	**Caprese Michel**	**1.19**	**317**	P	**Pb**	**03 28 02.4**	**-1.3**
CRE				AML	AML		
	comp=E,5040µm,1.1s						
CRE				AML	AML		
	comp=N,6540µm,0.8s						
GIUL	**Giuliano Di Ro**	**1.21**	**174**	P	**Pn**	**03 28 02.1**	**-1.8**
RSM	**Repubblica di**	**1.25**	**339**	P	**Pg**	**03 28 04.5**	**-0.9**
LATB	**Latina**	**1.27**	**184**	P	**Pn**	**03 28 02.9**	**-1.9**
LATB				AML	AML		
	comp=E,2785µm,1.2s						
LATB				AML	AML		
	comp=N,2735µm,0.7s						
LIK	**San Giovanni I**	**1.31**	**164**	P	**Pn**	**03 28 04.9**	**-0.3**
LIK				AML	AML		
	comp=N,14700µm,0.7s						
LIK				AML	AML		
	comp=E,17350µm,0.7s						
RNI2	**Rionero Sannit**	**1.33**	**143**	P	**Pn**	**03 28 04.5**	**-1.1**
RNI2				AML	AML		
	comp=E,11350µm,0.7s						
RNI2				AML	AML		
	comp=N,8175µm,1.1s						
CERA	**Filignano**	**1.36**	**149**	P	**Pn**	**03 28 04.1**	**-1.9**
ASQU	**Asqua**	**1.40**	**318**	P	**Pn**	**03 28 05.1**	**-1.5**
FRES	**Fresagrandinar**	**1.42**	**123**	P	**Pn**	**03 28 05.9**	**-1.0**
MIDA	**Miranda**	**1.42**	**142**	P	**Pn**	**03 28 05.0**	**-1.9**
BLLA	**Bellaria**	**1.45**	**343**	P	**Pg**	**03 28 08.4**	**-0.7**
BLLA				AML	AML		
	comp=E,11795µm,1.3s						
BLLA				AML	AML		
	comp=N,11570µm,1.6s						
SFI	**Santa Sofia**	**1.45**	**322**	P	**Pn**	**03 28 06.6**	**-0.7**
SFI				AML	AML		
	comp=E,4250µm,0.6s						
SFI				AML	AML		
	comp=N,3765µm,0.8s						
SFI				AML	AML		
	comp=E,4250µm,0.6s						
SFI				AML	AML		
	comp=N,3705µm,0.8s						
MAON	**Monte Argentar**	**1.47**	**258**	⇓P	**Pn**	**03 28 06.9**	**-0.7**
MAON				AML	AML		
	comp=E,1790µm,0.6s						
MAON				AML	AML		
	comp=N,1350µm,1.5s						
FROS	**Frosini**	**1.48**	**288**	⇓P	**Pn**	**03 28 07.3**	**-0.3**
FROS				AML	AML		
	comp=N,3530µm,1.4s						
FROS				AML	AML		
	comp=E,7025µm,0.7s						
TRIV	**Trivento**	**1.48**	**132**	P	**Pb**	**03 28 08.1**	**-0.6**
TRIV				AML	AML		
TRIV				AML	AML		
TRIV				AML	AML		
	comp=E,5450µm,1.3s						
TRIV				AML	AML		
	comp=N,6790µm,1.2s						
CSNT	**Castellina Chi**	**1.48**	**299**	⇓P	**Pn**	**03 28 07.4**	**-0.3**
CSNT				AML	AML		
	comp=E,1930µm,0.6s						
CSNT				AML	AML		
	comp=N,2120µm,0.6s						
A309A	**Martorano (FC)**	**1.53**	**337**	P	**Pg**	**03 28 09.8**	**-0.9**
OSSC	**Osservatorio P**	**1.54**	**300**	Pn	**Pn**	**03 28 06.8**	**-1.6**
OSSC	**Osservatorio P**	**1.54**	**300**	⇓P	**Pn**	**03 28 06.9**	**-1.6**
OSSC				AML	AML		
	comp=E,2465µm,0.7s						
OSSC				AML	AML		
	comp=N,2485µm,0.7s						
OSSC				AML	AML		
	comp=E,2475µm,0.7s						
OSSC				AML	AML		
	comp=N,2480µm,0.7s						
RUFI	**Rufina**	**1.57**	**314**	P	**Pn**	**03 28 08.2**	**-0.6**
VAGA	**Valle Agricola**	**1.60**	**147**	P	**Pn**	**03 28 09.1**	**-0.3**
VAGA				AML	AML		
	comp=N,5500µm,0.9s						
VAGA				AML	AML		
	comp=N,5665µm,0.9s						
VAGA				AML	AML		
	comp=E,3050µm,0.7s						
VAGA				AML	AML		
	comp=E,3125µm,0.7s						
CASP	**Castiglione de**	**1.63**	**272**	Pn	**Pn**	**03 28 08.0**	**-1.7**
CASP	**Castiglione de**	**1.63**	**272**	P	**Pn**	**03 28 09.0**	**-0.6**
CASP				AML	AML		
	comp=E,1060µm,1.0s						
CASP				AML	AML		
	comp=N,854µm,1.2s						
TRIF	**Trifonti**	**1.63**	**283**	⇓P	**Pn**	**03 28 09.6**	**-0.2**
LMD	**Lutirano**	**1.65**	**323**	⇑P	**Pn**	**03 28 10.0**	**+0.1**
LMD				AML	AML		
	comp=E,3245µm,0.8s						
LMD				AML	AML		
	comp=N,3535µm,0.8s						
BSSO	**Busso**	**1.66**	**137**	P	**Pn**	**03 28 10.3**	**+0.1**
BSSO				AML	AML		
	comp=E,3255µm,0.9s						
BSSO				AML	AML		
	comp=N,4085µm,1.6s						
BSSO				AML	AML		
	comp=E,1215µm,0.8s						
BSSO				AML	AML		
	comp=N,1635µm,1.5s						
MODR	**Mondragone**	**1.72**	**159**	P	**Pn**	**03 28 10.9**	**-0.1**
CIGN	**Sant'Elia a Pi**	**1.75**	**129**	P	**Pb**	**03 28 12.5**	**-0.9**
CIGN				AML	AML		
	comp=E,2320µm,1.2s						
CIGN				AML	AML		
	comp=N,3130µm,0.6s						
PIGN	**Pignataro Magg**	**1.77**	**152**	P	**Pn**	**03 28 11.5**	**-0.1**
PIGN				AML	AML		
	comp=E,1695µm,1.2s						
PIGN				AML	AML		
	comp=E,1715µm,1.2s						
PIGN				AML	AML		
	comp=N,2220µm,1.0s						
PIGN				AML	AML		
	comp=N,2150µm,1.0s						
PTRJ	**Pietraroja**	**1.77**	**142**	AML	AML		
	comp=N,4665µm,0.5s						
PTRJ				AML	AML		
	comp=E,5505µm,0.6s						
PTRJ				AML	AML		
	comp=E,6175µm,0.6s						
PTRJ				AML	AML		
	comp=N,5180µm,0.5s						
BRIS	**BRISIGHELLA**	**1.79**	**321**	P	**Pn**	**03 28 12.5**	**+0.6**
BRIS				AML	AML		
	comp=N,4940µm,0.7s						
BRIS				AML	AML		
	comp=E,4350µm,0.8s						
BRIS				AML	AML		
	comp=N,4580µm,1.2s						
BRIS				AML	AML		
	comp=E,4865µm,0.5s						
SEI	**Scarperia**	**1.80**	**316**	P	**Pn**	**03 28 12.3**	**+0.3**
SACR	**S. Croce Del S**	**1.83**	**138**	P	**Pb**	**03 28 14.4**	**-0.2**
CRMI	**Carmignano**	**1.85**	**304**	P	**Pn**	**03 28 12.7**	**0.0**
GATE	**Gambatesa**	**1.85**	**132**	P	**Pb**	**03 28 14.7**	**-0.3**
GATE				AML	AML		
	comp=E,2235µm,0.7s						
GATE				AML	AML		
	comp=E,1805µm,1.6s						
GATE				AML	AML		
	comp=N,2690µm,0.7s						
GATE				AML	AML		
	comp=N,2590µm,0.7s						
MELA	**Melanico ??? S**	**1.86**	**124**	⇑P	**Pb**	**03 28 13.8**	**-1.3**
MELA				AML	AML		
	comp=N,9530µm,0.5s						
MELA				AML	AML		
	comp=E,10085µm,0.7s						
MELA				AML	AML		
	comp=N,9125µm,0.5s						
MELA				AML	AML		
	comp=E,9720µm,0.7s						
IMOL	**Imola, Italy**	**1.87**	**329**	P	**Pg**	**03 28 15.8**	**-1.3**
A318A	**Donoratico (LI**	**1.87**	**282**	P	**Pn**	**03 28 12.7**	**-0.2**
MPPT	**Montemurlo**	**1.88**	**310**	P	**Pn**	**03 28 13.1**	**0.0**
MPPT				AML	AML		
	comp=N,2790µm,1.0s						
MPPT				AML	AML		
	comp=E,2060µm,0.8s						
TREM	**Isole Tremiti**	**1.91**	**109**	P	**Pn**	**03 28 13.3**	**-0.2**

TREM				AML	AML	
	comp=N,11850µm,0.7s					
TREM				AML	AML	
	comp=E,9200µm,0.7s					
A319A	**Santa Luce (PI**	**1.96 292**	P	**Pn**	**03 28 13.9**	**-0.3**
VITU	**Vitulano (BN)**	**1.96 143**	P	**Pn**	**03 28 15.0**	**+0.7**
VITU				AML	AML	
	comp=E,1395µm,0.7s					
VITU				AML	AML	
	comp=N,3895µm,0.6s					
VITU				AML	AML	
	comp=N,3990µm,0.6s					
VITU				AML	AML	
	comp=E,2990µm,0.5s					
MTCR	**Monte La Croce**	**1.97 311**	P	**Pn**	**03 28 13.8**	**-0.7**
MTRZ	**Monterenzio**	**1.99 325**	P	**Pb**	**03 28 16.3**	**-1.1**
FNVD	**Fontana Vidola**	**2.00 315**	P	**Pn**	**03 28 14.8**	**0.0**
FNVD				AML	AML	
	comp=N,2370µm,0.9s					
FNVD				AML	AML	
	comp=E,2600µm,0.6s					
PSB1	**Pescosannita**	**2.01 139**	P	**Pb**	**03 28 17.1**	**-0.6**
PAOL	**Paolisi**	**2.06 147**		**Pn**	**03 28 14.8**	**-0.8**
MOCO	**Biccari - m.te**	**2.08 131**	⇑P	**Pb**	**03 28 17.6**	**-1.4**
MOCO				AML	AML	
	comp=E,1775µm,0.6s					
MOCO				AML	AML	
	comp=N,1285µm,0.9s					
APRC	**Apricena**	**2.09 118**	⇑P	**Pn**	**03 28 16.5**	**+0.4**
APRC				AML	AML	
	comp=E,3630µm,1.4s					
APRC				AML	AML	
	comp=N,4540µm,0.3s					
PII	**Pisa**	**2.09 298**	⇓P	**Pn**	**03 28 15.7**	**-0.3**
PII				AML	AML	
	comp=N,1260µm,0.3s					
PII				AML	AML	
	comp=E,1130µm,1.0s					
CELB	**S.Piero in Cam**	**2.11 271**	P	**Pn**	**03 28 15.7**	**-0.6**
CELB				AML	AML	
	comp=N,396µm,0.9s					
CELB				AML	AML	
	comp=E,516µm,0.6s					
POPM	**Popiglio**	**2.12 308**	P	**Pn**	**03 28 16.2**	**-0.2**
POPM				AML	AML	
	comp=N,1305µm,1.1s					
POPM				AML	AML	
	comp=E,1125µm,0.9s					
MRB1	**Monte Rocchett**	**2.16 138**	P	**Pb**	**03 28 19.4**	**-1.0**
MRB1				AML	AML	
	comp=E,3475µm,0.6s					
MRB1				AML	AML	
	comp=N,3455µm,0.7s					
MRB1				AML	AML	
	comp=E,3575µm,0.6s					
MRB1				AML	AML	
	comp=N,3705µm,0.6s					
ZCCA	**Zocca**	**2.20 317**	Pn	**Pn**	**03 28 17.5**	**-0.1**
ZCCA	**Zocca**	**2.20 317**	P	**Pb**	**03 28 20.1**	**-0.8**
MAIM	**Mastiano**	**2.21 302**	P	**Pn**	**03 28 17.2**	**-0.4**
MAIM				AML	AML	
	comp=E,1076µm,0.5s					
MAIM				AML	AML	
	comp=N,1365µm,0.7s					
BDI	**Bagni Di Lucca**	**2.22 307**	P	**Pn**	**03 28 17.6**	**-0.3**
BDI				AML	AML	
	comp=E,1515µm,0.7s					
BDI				AML	AML	
	comp=N,1305µm,1.0s					
BDI				AML	AML	
	comp=E,547µm,0.7s					
BDI				AML	AML	
	comp=N,570µm,1.6s					
SGRT	**San Giovanni R**	**2.22 116**	Pn	**Pn**	**03 28 17.8**	**-0.1**
SGRT	**San Giovanni R**	**2.22 116**	⇑P	**Pn**	**03 28 18.4**	**+0.5**
SGRT				AML	AML	
	comp=E,3275µm,0.5s					
SGRT				AML	AML	
	comp=N,3755µm,0.5s					
CARD	**Cardoso**	**2.27 305**	P	**Pn**	**03 28 18.1**	**-0.4**
CARD				AML	AML	
	comp=E,1205µm,0.5s					
CARD				AML	AML	
	comp=N,1350µm,0.6s					
SGTA	**Sant Agata di**	**2.36 133**	P	**Pn**	**03 28 21.3**	**+1.5**
SGTA				AML	AML	
	comp=E,1820µm,0.8s					
SGTA				AML	AML	
	comp=N,1345µm,0.5s					
SGTA				AML	AML	
	comp=E,1855µm,0.7s					
SGTA				AML	AML	
	comp=N,1390µm,0.5s					
VLC	**Villacollemand**	**2.40 306**	Pn	**Pn**	**03 28 19.8**	**-0.5**
VLC	**Villacollemand**	**2.40 306**	P	**Pn**	**03 28 19.9**	**-0.4**
VLC				AML	AML	
	comp=E,724µm,1.6s					
VLC				AML	AML	
	comp=N,1004µm,0.8s					
VLC				AML	AML	
	comp=E,719µm,1.6s					
VLC				AML	AML	
	comp=N,956µm,0.8s					
GSCL	**Gusciola**	**2.40 312**	P	**Pn**	**03 28 20.7**	**+0.4**
GSCL				AML	AML	
	comp=E,1270µm,0.7s					
GSCL				AML	AML	
	comp=N,1310µm,1.2s					
SNAL	**S. Angelo Dei**	**2.43 138**	P	**Pb**	**03 28 22.6**	**-2.4**
SNAL				AML	AML	
	comp=E,2055µm,1.2s					
SNAL				AML	AML	
	comp=N,2190µm,1.6s					
SNAL				AML	AML	
	comp=E,2085µm,1.4s					
SNAL				AML	AML	
	comp=N,2275µm,1.6s					
EQUI	**Equi**	**2.55 304**	P	**Pn**	**03 28 21.9**	**-0.4**
CAVE	**Cavezzo**	**2.58 325**	AML	AML		
	comp=E,2275µm,0.9s					
CAVE				AML	AML	
	comp=N,2170µm,1.4s					
SERM	**Sermide**	**2.59 331**	P	**Pb**	**03 28 24.8**	**-2.7**
SERM				AML	AML	
	comp=E,2504µm,0.7s					
SERM				AML	AML	
	comp=N,1880µm,0.9s					
CAPA	**Cerignola FG**	**2.60 127**	P	**Pn**	**03 28 23.8**	**+0.8**
CAPA				AML	AML	
	comp=E,3555µm,1.0s					
CAPA				AML	AML	
	comp=N,3435µm,0.8s					
FIVI	**Fivizzano**	**2.60 306**	P	**Pn**	**03 28 23.3**	**+0.2**
PLMA	**Palmaria, Port**	**2.68 300**	P	**Pn**	**03 28 24.0**	**0.0**
PLMA				AML	AML	
	comp=E,377µm,0.8s					
PLMA				AML	AML	
	comp=N,526µm,0.4s					
MRLC	**Muro Lucano**	**2.70 137**	P	**Pn**	**03 28 26.3**	**+1.8**
MRLC				AML	AML	
	comp=E,812µm,1.4s					
MRLC				AML	AML	
	comp=N,977µm,1.3s					
RIY	**Rijeka**	**2.75 21**	*e*Pn	**Pn**	**03 28 25.1**	**-0.1**
RIY			*e*Sn	**Sn**	**03 28 59.5**	**+1.2**
GRAM	**Graiana**	**2.78 309**	P	**Pn**	**03 28 26.2**	**+0.6**
GRAM				AML	AML	
	comp=E,1685µm,0.9s					
GRAM				AML	AML	
	comp=N,1710µm,0.6s					
TEOL	**Teolo**	**2.79 339**	Pn	**Pn**	**03 28 25.7**	**+0.1**
CDRU	**Civita di Ruta**	**2.82 143**	P	**Pn**	**03 28 27.0**	**+0.8**
PALZ	**Palazzo San Ge**	**2.82 129**	P	**Pn**	**03 28 26.9**	**+0.8**
PALZ				AML	AML	
	comp=E,2630µm,0.9s					
PALZ				AML	AML	
	comp=N,2630µm,0.8s					
PRMA	**PARMA**	**2.83 316**		**Pb**	**03 28 28.7**	**-2.9**
SKDS	**Skadanscina**	**2.86 13**	*i* Pn	**Pn**	**03 28 26.4**	**-0.3**
SKDS			*i* Sn	**Sn**	**03 29 00.9**	**-0.2**
SKDS			IAML		03 29 05.0	
	comp=Z,332nm,0.4s					
SMPL	**Sampolo**	**2.88 258**	P	**Pn**	**03 28 26.7**	**-0.2**
SMPL				AML	AML	
	comp=E,120µm,0.6s					
SMPL				AML	AML	
	comp=N,108µm,1.6s					
MRVN	**Minervino Murg**	**2.88 125**	P	**Pn**	**03 28 27.5**	**+0.5**
MRVN				AML	AML	
	comp=E,673µm,0.8s					
MRVN				AML	AML	
	comp=N,926µm,0.7s					
OPPE	**Oppeano**	**2.89 332**	P	**Pn**	**03 28 28.4**	**+1.4**
OPPE				AML	AML	
	comp=E,2335µm,0.7s					
OPPE				AML	AML	
	comp=N,2905µm,0.6s					
ACER	**Acerenza**	**2.92 132**	P	**Pn**	**03 28 28.9**	**+1.4**
PGF	**Pioggiola**	**3.01 267**	*e*P	**Pn**	**03 28 29.2**	**+0.4**
PGF			*e*Sn	**Sn**	**03 29 00.1**	**-4.7**
	comp=N,33nm,0.4s					
MSSA	**Maissana**	**3.02 302**	Pn	**Pn**	**03 28 28.4**	**-0.4**
CEY	**Cerknica**	**3.13 18**	⇑*i*Pn	**Pn**	**03 28 30.2**	**-0.1**
PTRP	**Pietrapertosa**	**3.17 134**	P	**Pn**	**03 28 32.9**	**+2.0**
PTRP				AML	AML	
	comp=E,1016µm,0.9s					
PTRP				AML	AML	
	comp=N,1089µm,0.9s					
MCEL	**Monticello**	**3.18 139**	P	**Pn**	**03 28 33.2**	**+2.1**
MCEL				AML	AML	
	comp=E,433µm,1.2s					
MCEL				AML	AML	
	comp=N,554µm,1.0s					
MTSN	**Montesano sull**	**3.21 140**	P	**Pn**	**03 28 33.6**	**+2.2**
MTSN				AML	AML	
	comp=E,360µm,0.8s					
MTSN				AML	AML	
	comp=N,466µm,0.5s					
MGR	**Morigerati**	**3.22 144**	P	**Pn**	**03 28 33.5**	**+2.0**
AMUR	**Altamura**	**3.23 124**	P	**Pn**	**03 28 32.4**	**+0.8**
AMUR				AML	AML	
	comp=E,1012µm,0.8s					
AMUR				AML	AML	
	comp=N,1110µm,0.7s					
SABO	**M.te Sabotino**	**3.24 7**	P	**Pn**	**03 28 31.8**	**0.0**
SABO				AML	AML	
	comp=E,7935µm,1.6s					
SABO				AML	AML	
	comp=N,10600µm,0.6s					
SABO				AML	AML	
	comp=E,1890µm,0.7s					
SABO				AML	AML	
	comp=N,2705µm,0.6s					
CGRP	**Cima Grappa**	**3.25 344**	P	**Pn**	**03 28 32.5**	**+0.4**
CGRP				AML	AML	
	comp=E,2565µm,0.5s					
CGRP				AML	AML	
	comp=N,2185µm,0.5s					
CGRP				AML	AML	
	comp=E,2580µm,0.5s					
CGRP				AML	AML	
	comp=N,2195µm,0.5s					
AJAC	**Base Areonaval**	**3.30 257**	P	**Pn**	**03 28 33.4**	**+0.8**
AJAC				AML	AML	
	comp=E,376µm,0.3s					
AJAC				AML	AML	
	comp=N,256µm,0.5s					
GORR	**Gorreto**	**3.30 305**	P	**Pn**	**03 28 33.9**	**+1.2**
GORR				AML	AML	
	comp=E,668µm,0.7s					
GORR				AML	AML	
	comp=N,529µm,0.7s					
VARN	**Col Varnada, M**	**3.30 348**	P	**Pn**	**03 28 33.2**	**+0.5**
VARN				AML	AML	
	comp=E,2240µm,0.7s					
VARN				AML	AML	
	comp=N,1490µm,0.7s					
VARN				AML	AML	
	comp=E,2230µm,0.7s					
VARN				AML	AML	
	comp=N,1490µm,0.7s					
SIRI	**Monte Sirino -**	**3.33 140**	P	**Pn**	**03 28 35.1**	**+2.0**
SIRI				AML	AML	
	comp=E,362µm,0.4s					
SIRI				AML	AML	
	comp=N,371µm,0.6s					
MGRS	**Mrkonjic Grad**	**3.35 59**	⇑*i*Pn	**Pn**	**03 28 34.8**	**+1.4**
SALO	**Salr**	**3.39 328**	Pn	**Pn**	**03 28 35.0**	**+1.1**
SALO	**Salr**	**3.39 328**	P	**Pn**	**03 28 34.7**	**+0.8**
SALO				AML	AML	
	comp=E,1505µm,0.8s					
SALO				AML	AML	
	comp=N,1600µm,1.0s					
SALO				AML	AML	
	comp=E,1530µm,0.8s					
SALO				AML	AML	
	comp=N,1540µm,1.0s					
STON	**Ston**	**3.41 87**	⇑*i*Pn	**Pn**	**03 28 33.1**	**-1.0**
STON	**Ston**	**3.41 87**	*e*Pn	**Pn**	**03 28 33.4**	**-0.7**
STON			*e*Sn	**Sn**	**03 29 13.0**	**-1.3**
STON	**Ston**	**3.41 87**	AML	AML		
	comp=N,548µm,0.4s					
STON				AML	AML	
	comp=E,468µm,0.6s					
SCHR	**S. Chirico Rap**	**3.41 138**	P	**Pn**	**03 28 36.3**	**+2.0**
SCHR				AML	AML	
	comp=E,258µm,0.8s					
SCHR				AML	AML	
	comp=N,281µm,0.6s					
CTI	**Castel Tesino**	**3.44 343**	Pn	**Pn**	**03 28 34.9**	**+0.2**
CTI	**Castel Tesino**	**3.44 343**	P	**Pn**	**03 28 34.9**	**+0.2**
CTI	**Castel Tesino**	**3.44 343**	P	**Pn**	**03 28 35.2**	**+0.6**
CTI				AML	AML	
	comp=E,952µm,1.6s					
CTI				AML	AML	
	comp=N,825µm,1.6s					
PRIJ	**Prijedor**	**3.44 49**	*e*Pn	**Pn**	**03 28 35.3**	**+0.8**
LJU	**Ljubljana**	**3.44 17**	*i* Pn	**Pn**	**03 28 35.2**	**+0.7**
LJU			*i* Sn	**Sn**	**03 29 15.8**	**+0.5**
LJU			IAML		03 29 28.7	
	comp=Z,213nm,0.4s					
MATE	**Matera**	**3.44 127**	⇑P	**Pn**	**03 28 35.8**	**+1.3**
MATE	**Matera**	**3.44 127**	P	**Pn**	**03 28 35.6**	**+1.1**
MATE				AML	AML	
	comp=E,826µm,0.8s					
MATE				AML	AML	
	comp=N,834µm,0.4s					
RNCA	**Ronca, Sant'Ol**	**3.44 301**	P	**Pn**	**03 28 34.3**	**-0.4**
RNCA				AML	AML	
	comp=E,130µm,1.1s					
RNCA				AML	AML	
	comp=N,118µm,0.8s					
CUC	**Castrocucco**	**3.45 142**	Pn	**Pn**	**03 28 36.5**	**+1.7**
MPRI	**Monte Prat**	**3.48 359**	P	**Pn**	**03 28 35.6**	**+0.5**
MPRI				AML	AML	
	comp=E,1254µm,0.8s					
MPRI				AML	AML	
	comp=N,1718µm,0.8s					
MPRI				AML	AML	
	comp=E,1655µm,0.7s					
MPRI				AML	AML	
	comp=N,2245µm,0.8s					
CRAC	**Craco**	**3.48 132**	P	**Pn**	**03 28 36.5**	**+1.4**
CRAC				AML	AML	
	comp=E,1290µm,1.4s					
CRAC				AML	AML	
	comp=N,1204µm,1.1s					
STAL	**STALIGIAL**	**3.51 356**	Pn	**Pn**	**03 28 35.7**	**+0.2**
STAL	**STALIGIAL**	**3.51 356**	P	**Pn**	**03 28 35.9**	**+0.4**
STAL				AML	AML	
	comp=E,1028µm,0.6s					
STAL				AML	AML	
	comp=N,1122µm,0.9s					
STAL				AML	AML	
	comp=E,1280µm,0.9s					
STAL				AML	AML	
	comp=N,1200µm,0.9s					
LTRZ	**Laterza**	**3.54 126**	AML	AML		
	comp=N,20000µm,1.6s					
LTRZ				AML	AML	
	comp=E,20000µm,1.6s					
LUSI	**Trento, Gardas**	**3.54 335**	P	**Pn**	**03 28 36.5**	**+0.5**
LUSI				AML	AML	
	comp=E,1018µm,1.2s					
LUSI				AML	AML	
	comp=N,1295µm,0.6s					
A051A	**Mrakovica**	**3.57 50**	⇑*i*Pn	**Pn**	**03 28 36.8**	**+0.4**
DGI	**Dorgali Grotta**	**3.57 228**	P	**Pn**	**03 28 36.5**	**+0.1**
CIMO	**Cimolais**	**3.58 353**	P	**Pn**	**03 28 36.7**	**+0.3**
CIMO				AML	AML	
	comp=E,400µm,0.7s					
CIMO				AML	AML	
	comp=N,318µm,1.6s					
CIMO				AML	AML	
	comp=E,390µm,0.7s					
CIMO				AML	AML	
	comp=N,318µm,1.6s					
NOCI	**Noci**	**3.58 122**	P	**Pn**	**03 28 37.3**	**+0.8**
NOCI				AML	AML	
	comp=E,672µm,0.5s					
NOCI				AML	AML	
	comp=N,901µm,0.7s					
BLY	**Banja Luka**	**3.58 55**	⇑*i*Pn	**Pn**	**03 28 37.1**	**+0.6**
BLY	**Banja Luka**	**3.58 55**	*e*Pn	**Pn**	**03 28 38.0**	**+1.5**
BLY	**Banja Luka**	**3.58 55**	P	**Pn**	**03 28 37.2**	**+0.8**
PTCC	**Patocco-Chiusa**	**3.65 3**	P	**Pn**	**03 28 37.4**	**-0.1**
PTCC				AML	AML	
	comp=E,574µm,0.7s					
PTCC				AML	AML	
	comp=N,556µm,0.6s					
GAGG	**Gaggia**	**3.65 336**	P	**Pn**	**03 28 38.1**	**+0.5**
GAGG				AML	AML	
	comp=E,1035µm,0.7s					
GAGG				AML	AML	
	comp=N,1197µm,0.9s					
GAGG				AML	AML	
	comp=E,1235µm,0.9s					
GAGG				AML	AML	
	comp=N,1061µm,1.0s					
ZONE	**Zone**	**3.67 326**	P	**Pn**	**03 28 38.2**	**+0.3**
ZONE				AML	AML	
	comp=E,765µm,1.5s					
ZONE				AML	AML	
	comp=N,974µm,0.6s					
CLUD	**Cludinico**	**3.70 358**	Pn	**Pn**	**03 28 38.3**	**+0.2**
CLUD	**Cludinico**	**3.70 358**	P	**Pn**	**03 28 38.3**	**+0.2**
CLUD				AML	AML	
	comp=E,762µm,1.2s					
CLUD				AML	AML	
	comp=N,1270µm,1.0s					
CLUD				AML	AML	
	comp=E,770µm,1.2s					
CLUD				AML	AML	
	comp=N,1280µm,1.0s					
PRED	**Cave del Predi**	**3.70 5**	Pn	**Pn**	**03 28 38.0**	**-0.2**
PCP	**Piancastagn**	**3.73 300**	P	**Pn**	**03 28 38.4**	**-0.3**
PCP				AML	AML	
	comp=E,147µm,0.7s					
PCP				AML	AML	
	comp=N,140µm,1.2s					
MABI	**Malga Bissina**	**3.77 332**	P	**Pn**	**03 28 39.8**	**+0.5**
SALB	**San Lorenzo Be**	**3.79 138**	AML	AML		
	comp=E,295µm,0.7s					
SALB				AML	AML	
	comp=N,204µm,0.7s					
SALB				AML	AML	
	comp=E,303µm,0.7s					
SALB				AML	AML	
	comp=N,211µm,0.7s					
ZOU	**Zoufplan**	**3.79 359**	P	**Pn**	**03 28 40.1**	**+0.5**
ZOU				AML	AML	
	comp=E,1190µm,0.9s					
ZOU				AML	AML	
	comp=N,866µm,1.4s					
ZOU				AML	AML	
	comp=E,1151µm,0.9s					
ZOU				AML	AML	
	comp=N,873µm,1.4s					
ACOM	**Acomizza, Ital**	**3.80 5**	P	**Pn**	**03 28 40.1**	**+0.4**
ACOM				AML	AML	
	comp=E,1110µm,1.0s					
ACOM				AML	AML	
	comp=N,1165µm,0.7s					
ACOM				AML	AML	
	comp=E,1085µm,1.0s					
ACOM				AML	AML	
	comp=N,1140µm,0.4s					
CANO	**Canova, Maglio**	**3.80 294**	P	**Pn**	**03 28 39.4**	**-0.2**
CANO				AML	AML	
	comp=E,690µm,1.0s					
CANO				AML	AML	
	comp=N,263µm,0.4s					
FVI	**Forni Avoltri**	**3.84 357**	P	**Pn**	**03 28 41.0**	**+0.9**
FVI				AML	AML	
	comp=E,645µm,0.7s					
FVI				AML	AML	
	comp=N,782µm,1.0s					
TAR1	**Taranto**	**3.87 124**	AML	AML		
	comp=E,598µm,0.6s					
TAR1				AML	AML	
	comp=N,1002µm,0.7s					
MYKA	**Terra Mystica**	**3.89 6**	*i* Pn	**Pn**	**03 28 41.4**	**+0.6**
	comp=N,31nm,0.4s,SNR=23					
TREB	**Trebinje**	**3.89 89**	⇑*i*Pn	**Pn**	**03 28 41.4**	**+0.7**
TREB	**Trebinje**	**3.89 89**	*e*Pn	**Pn**	**03 28 41.6**	**+0.9**
TREB			*e*Sn	**Sn**	**03 29 25.2**	**-1.0**
OBKA	**Obir**	**3.89 15**	⇑*i*Pn	**Pn**	**03 28 40.7**	**-0.2**
OBKA	**Obir**	**3.89 15**	*e*Pn	**Pn**	**03 28 41.0**	**+0.1**
	comp=N,2.9nm,0.2s					
OBKA	**Obir**	**3.89 15**	*e*Pn	**Pn**	**03 28 41.3**	**+0.5**
KOSI	**Kohlern**	**3.89 342**	P	**Pn**	**03 28 42.2**	**+1.3**
KOSI				AML	AML	
	comp=E,1212µm,1.2s					
KOSI				AML	AML	
	comp=N,1086µm,1.0s					
BOSI	**Bolzano**	**3.94 342**	AML	AML		
	comp=E,3040µm,0.8s					
BOSI				AML	AML	
	comp=N,3120µm,1.1s					
A052A	**Srbac**	**3.97 52**	⇑*i*Pn	**Pn**	**03 28 41.8**	**0.0**
ABTA	**Abfaltersbach**	**4.00 354**	*i* Pn	**Pn**	**03 28 43.6**	**+1.2**
	comp=N,114nm,0.5s,SNR=76					
HCY	**Herceg Novi**	**4.01 93**	⇑*i*Pn	**Pn**	**03 28 43.1**	**+0.6**
HCY	**Herceg Novi**	**4.01 93**	⇑*i*Pn	**Pn**	**03 28 43.1**	**+0.6**
HCY			*i* Sn	**Sn**	**03 29 30.9**	**+1.6**
BRY	**Bratogost**	**4.02 86**	⇑*i*Pn	**Pn**	**03 28 43.3**	**+0.5**
BRY	**Bratogost**	**4.02 86**	⇓*i*Pn	**Pn**	**03 28 43.2**	**+0.5**
BRY			*i* Sn	**Sn**	**03 29 31.1**	**+1.3**
SOKA	**Soboth**	**4.16 19**	*i* Pn	**Pn**	**03 28 44.9**	**+0.4**
	comp=N,2.5nm,0.3s,SNR=10.0					
BRMO	**Bormio**	**4.18 333**	AML	AML		
	comp=N,330µm,0.9s					
BRMO				AML	AML	
	comp=E,258µm,1.0s					
SAOF	**Saorge**	**4.20 289**	AML	AML		
	comp=N,164µm,0.6s					
SAOF				AML	AML	
	comp=E,145µm,0.8s					
BERNI	**Berninapass**	**4.25 330**	AML	AML		
	comp=E,284µm,0.6s					
BERNI				AML	AML	
	comp=N,424µm,0.6s					
MOSI	**Grossmontoni**	**4.25 336**	AML	AML		
	comp=N,1890µm,0.8s					
MOSI				AML	AML	
	comp=E,1265µm,1.0s					
SBF	**Sospel**	**4.26 287**	*e*P	**Pn**	**03 28 46.1**	**+0.2**
SBF			*e*Sn	**Sn**	**03 29 30.0**	**-5.5**
	comp=E,52nm,0.5s					
ISTR	**Stromboli Gino**	**4.29 157**	AML	AML		
	comp=E,1795µm,0.5s					
ISTR				AML	AML	
	comp=N,2050µm,0.7s					
VSL	**Villasalto**	**4.29 222**	P	**Pn**	**03 28 46.8**	**+0.5**
VSL				AML	AML	
	comp=E,232µm,0.5s					
VSL				AML	AML	
	comp=N,176µm,0.7s					
UPM	**Unac-Piva**	**4.30 82**	⇑*i*Pn	**Pn**	**03 28 48.7**	**+2.1**
UPM	**Unac-Piva**	**4.30 82**	*e*Pn	**Pn**	**03 28 47.1**	**+0.5**
UPM			*i* Sn	**Sn**	**03 29 37.8**	**+1.1**
CEME	**Cevo**	**4.32 91**	⇑*i*Pn	**Pn**	**03 28 47.3**	**+0.6**
CEME			*i* Sn	**Sn**	**03 29 38.2**	**+1.3**
BUM	**Brajici-Budva**	**4.33 94**	⇓*i*Pn	**Pn**	**03 28 47.5**	**+0.7**
BUM			*i* Sn	**Sn**	**03 29 38.6**	**+1.5**
KOGS	**Kog**	**4.33 31**	AML	AML		
	comp=N,3975µm,1.2s					
KOGS				AML	AML	
	comp=E,4245µm,0.9s					
NKME	**Niksic**	**4.33 88**	⇓*i*Pn	**Pn**	**03 28 47.4**	**+0.6**
NKME			*i* Sn	**Sn**	**03 29 38.6**	**+1.4**
FUORN	**Ofenpass-Fuorn**	**4.34 334**	Pn	**Pn**	**03 28 48.4**	**+1.2**
HAPS	**Han Pijesak,BI**	**4.48 71**	⇑*i*Pn	**Pn**	**03 28 49.7**	**+0.7**
TIP	**Timpagrande**	**4.54 141**	⇑P	**Pn**	**03 28 52.2**	**+2.4**
TIP	**Timpagrande**	**4.54 141**	Pn	**Pn**	**03 28 51.6**	**+1.8**
BEHE	**Becsehely**	**4.55 34**	P	**Pn**	**03 28 51.1**	**+1.3**
DRME	**Dracevica, Mon**	**4.56 95**	⇑*i*Pn	**Pn**	**03 28 51.1**	**+1.2**
DRME	**Dracevica, Mon**	**4.56 95**	⇑*i*Pn	**Pn**	**03 28 50.7**	**+0.8**

DRME *i* Sn **Sn** **03 29 44.2 +1.5**
TUE Stuetta 4.56 326 Pn **Pn** **03 28 51.0 +0.8**
FETA Feichten 4.57 339 *i* Pn **Pn** **03 28 51.5 +1.2**
comp=E,14nm,0.4s,SNR=21
PDG Podgorica 4.58 92 ⇑P **Pn** **03 28 51.3 +1.1**
PDG Podgorica 4.58 92 Pn **Pn** **03 28 51.5 +1.3**
PDG Podgorica 4.58 92 *e*Pn **Pn** **03 28 51.3 +1.1**
PDG *e*Sn **Sn** **03 29 40.9 -2.3**
PDG Podgorica 4.58 92 AML AML
comp=E,637µm,0.4s
PDG AML AML
comp=E,788µm,0.4s
PDG AML AML
comp=N,1300µm,0.4s
PDG AML AML
comp=N,1018µm,0.4s
TTG Podgorica 4.58 92 ⇓*i*Pn **Pn** **03 28 51.0 +0.8**
TTG *i* Sn **Sn** **03 29 44.6 +1.4**
WTTA Wattenberg 4.61 348 *i* Pn **Pn** **03 28 52.7 +1.8**
comp=N,17nm,0.3s,SNR=24
WTTA Wattenberg 4.61 348 *e*Pn **Pn** **03 28 52.8 +2.0**
WTTA *e*Sn **Sn** **03 29 49.2 +4.8**
DAVOX Davos/Dischmat 4.62 332 Pn **Pn** **03 28 53.0 +2.2**
comp=N,27nm,0.3s,baz=151,slow=19,SNR=271
DAVOX Sn **Sn** **03 29 46.8 +2.4**
comp=N,9.4nm,0.3s,baz=113,slow=21,SNR=8.1
DAVOX LR LR 03 31 09.7
comp=N,315nm,21.1s,baz=124,slow=46
comp=N,67nm,0.4s
ULC Ulcinj 4.64 98 ⇑*i*Pn **Pn** **03 28 51.7 +0.6**
ULC *i* Sn **Sn** **03 29 46.2 +1.3**
SQTA Sankt Quirin 4.65 344 **Pn** **03 28 53.5 +2.2**
SQTA Sankt Quirin 4.65 344 P **Pn** **03 28 53.5 +2.2**
SQTA Sankt Quirin 4.65 344 *e*Pn **Pn** **03 28 53.5 +2.2**
comp=N,6.9nm,0.1s,SNR=47
PLE Pljevlja 4.66 81 ⇓*i*Pn **Pn** **03 28 52.1 +0.6**
PLE *i* Sn **Sn** **03 29 46.7 +1.2**
RUDO Rudo 4.68 77 *e*Pn **Pn** **03 28 52.2 +0.5**
WATA Walderalm 4.69 347 **Pn** **03 28 54.2 +2.3**
WATA Walderalm 4.69 347 P **Pn** **03 28 54.2 +2.3**
WATA Walderalm 4.69 347 *i* Pn **Pn** **03 28 54.2 +2.3**
comp=N,20nm,0.3s,SNR=44
TRAV Traversella 4.72 307 AML AML
comp=N,157µm,0.6s
TRAV AML AML
comp=E,146µm,0.6s
KOME Kolasin 4.74 87 ⇑*i*Pn **Pn** **03 28 53.2 +0.7**
KOME *i* Sn **Sn** **03 29 48.5 +1.1**
BBLS Lazići 4.75 74 ⇑*i*Pn **Pn** **03 28 53.6 +1.0**
BBLS Lazići 4.75 74 *e*Pn **Pn** **03 28 54.1 +1.5**
BBLS *e*Sn **Sn** **03 29 45.3 -2.3**
MOTA Moosalm 4.79 344 **Pn** **03 28 55.4 +2.1**
MOTA Moosalm 4.79 344 P **Pn** **03 28 55.4 +2.1**
MOTA Moosalm 4.79 344 *i* Pn **Pn** **03 28 55.4 +2.1**
comp=E,10.0nm,0.4s,SNR=39
ARSA Arzberg 4.81 20 *e*Pn **Pn** **03 28 53.1 -0.3**
comp=E,15nm,0.4s,SNR=14
ARSA Arzberg 4.81 20 *e*Pn **Pn** **03 28 53.8 +0.3**
LMR La Mourre 4.84 279 *e*P **Pn** **03 28 53.6 -0.2**
LMR *e*Sn **Sn** **03 29 44.1 -5.7**
comp=E,7.3nm,0.3s
SCTE Santa Cesarea 4.87 122 Pn **Pn** **03 28 55.3 +1.2**
ZUGS Zugspitze, Sch 4.88 343 *e*Pn **Pn** **03 28 57.4 +2.8**
ZUGS *e*Sn **Sn** **03 29 54.1 +2.9**
KOVH Kovagotottos 4.90 46 P **Pn** **03 28 54.2 -0.4**
KOVH S **Sn** **03 29 49.4 -1.7**
BLJ Bijeljina 4.92 64 ⇑*i*Pn **Pn** **03 28 53.3 -1.6**
PART Garmisch-Parte 4.93 344 *e*Pn **Pn** **03 28 57.2 +2.0**
BIOA Bad Ischl, Aus 4.94 4 **Pn** **03 28 56.1 +0.8**
BIOA Bad Ischl, Aus 4.94 4 *i* Pn **Pn** **03 28 56.1 +0.8**
comp=E,7.8nm,0.3s,SNR=60
MBDF Montbardon 4.97 295 *e*P **Pn** **03 28 56.8 +1.1**
MBDF *e*Sn **Sn** **03 29 47.3 -5.8**
comp=E,11nm,0.3s
RJOB Jochberg 4.98 358 *e*Pn **Pn** **03 28 57.1 +1.3**
RETA Reutte 5.00 342 *i* Pn **Pn** **03 28 58.1 +2.1**
comp=E,6.0nm,0.2s,SNR=21
IVA Berane 5.02 86 *e*Pn **Pn** **03 28 57.1 +0.8**
IVA *i* Sn **Sn** **03 29 55.2 +1.0**
OBER Oberstdorf 5.04 338 *e*Pn **Pn** **03 28 58.8 +2.1**
OBER *e*Sn **Sn** **03 29 57.5 +2.7**
DAVA Damuels 5.06 335 *i* Pn **Pn** **03 28 59.0 +2.1**
comp=E,23nm,0.3s,SNR=30
DAVA Damuels 5.06 335 *e*Pn **Pn** **03 28 59.0 +2.1**
PVY Plav 5.08 90 *e*Pn **Pn** **03 28 57.9 +0.7**
PVY *i* Sn **Sn** **03 29 56.7 +0.9**
SJES Sjenica 5.08 82 *e*Pn **Pn** **03 28 58.9 +1.6**
SJES *e*Sn **Sn** **03 29 53.5 -2.4**
EMBD Embd, Matterta 5.10 314 P **Pn** **03 28 58.0 +0.6**
MOA Molln 5.16 9 *e*Pn **Pn** **03 28 59.0 +0.8**
MOA *e*Sn **Sn** **03 29 54.6 -2.9**
MOA Molln 5.16 9 *i* Pn **Pn** **03 28 58.7 +0.5**
comp=E,5.6nm,0.2s,SNR=24
MOA Molln 5.16 9 *e*Pn **Pn** **03 28 58.6 +0.5**
MOA *e*Sn **Sn** **03 29 57.1 -0.4**
DIVS Divibare 5.21 73 Pn **Pn** **03 28 58.6 -0.4**
DIVS Divibare 5.21 73 ⇑*i*Pn **Pn** **03 28 59.0 0.0**
DIVS Divibare 5.21 73 *e*Pn **Pn** **03 28 59.5 +0.5**
DIVS *e*Sn **Sn** **03 29 56.0 -3.0**
IVAS Ivanjica 5.24 79 *e*Pn **Pn** **03 28 59.8 +0.4**
IVAS *e*Sn **Sn** **03 29 56.2 -3.5**
TIR Tirane 5.25 103 ⇑P **Pn** **03 29 00.4 +1.0**
TIR Tirane 5.25 103 Pn **Pn** **03 28 59.9 +0.4**
TIR Tirane 5.25 103 P **Pn** **03 29 00.3 +0.8**
TIR Tirane 5.25 103 *e*Pn **Pn** **03 29 00.4 +1.0**
TIR *e*Sn **Sn** **03 29 58.2 -1.6**
TIR Tirane 5.25 103 P **Pn** **03 28 59.9 +0.4**
MORH Mrgy, Hungar 5.27 47 ⇑P **Pn** **03 29 00.5 +0.9**
MORH Mrgy, Hungar 5.27 47 P **Pn** **03 29 01.1 +1.4**
LPG La Plagne 5.31 303 *e*P **Pn** **03 29 01.7 +1.2**
LPG *e*Sn **Sn** **03 29 54.5 -7.1**
comp=E,18nm,0.4s
LPL La Plagne 5.33 303 *e*P **Pn** **03 29 01.8 +1.1**
LPL *e*Sn **Sn** **03 29 55.4 -6.6**
comp=E,19nm,0.3s
VLO Vlora 5.33 113 Pn **Pn** **03 29 02.0 +1.4**
VLO Vlora 5.33 113 P **Pn** **03 29 02.0 +1.4**
VLO Vlora 5.33 113 P **Pn** **03 29 02.0 +1.4**
UBR Ueberruh 5.34 338 *e*Pn **Pn** **03 29 02.4 +1.6**
VAE Valguarnera 5.38 169 Pn **Pn** **03 29 05.4 +4.1**
comp=E,5.4nm,0.6s,baz=192,slow=11,SNR=1.7
FRGS Fruska Gora 5.42 61 ⇑P **Pn** **03 29 02.4 +0.6**
FRGS Fruska Gora 5.42 61 ⇑*i*Pn **Pn** **03 29 01.4 -0.3**
FRGS Fruska Gora 5.42 61 *e*Pn **Pn** **03 29 01.5 -0.3**
FRGS *e*Sn **Sn** **03 30 00.5 -3.5**
MPLH Magyarpolny 5.43 34 P **Pn** **03 29 01.9 +0.1**
RONA Rosalia, Austr 5.43 24 **Pn** **03 29 02.3 +0.3**
RONA Rosalia, Austr 5.43 24 *i* Pn **Pn** **03 29 02.3 +0.3**
comp=E,14nm,0.2s,SNR=19
SENIN Lac Senin/Sane 5.47 313 Pn **Pn** **03 29 03.6 +0.9**
SOP Sopron 5.50 25 P **Pn** **03 29 02.9 0.0**
CONA Conrad Observa 5.53 20 *e*Pn **Pn** **03 29 03.4 +0.1**
comp=E,11nm,0.2s,SNR=32
TRUS Trudelj 5.53 72 *e*Pn **Pn** **03 29 03.6 +0.3**
TRUS *e*Sn **Sn** **03 30 03.0 -3.7**
EGYH Egyhazaskeszo 5.54 31 P **Pn** **03 29 04.8 +1.3**
FUR Furstenfeldbru 5.55 347 *e*Pn **Pn** **03 29 05.9 +2.4**
PHP Peshkopia 5.58 99 P **Pn** **03 29 05.3 +1.3**
SMRF Simiane la Rot 5.60 285 *e*P **Pn** **03 29 05.8 +1.5**
SMRF *e*Sn **Sn** **03 30 01.3 -7.1**
comp=E,6.0nm,0.5s
OGSI Sixt 5.60 308 P **Pn** **03 29 06.0 +1.7**
OGSI S **Sn** **03 30 06.3 -2.3**
ORIF Oris-en-Rattie 5.63 295 *e*P **Pn** **03 29 07.5 +2.7**
ORIF *e*Sn **Sn** **03 30 03.0 -6.3**
comp=E,11nm,0.4s
GRUS Gruza 5.69 76 *e*Pn **Pn** **03 29 06.0 +0.6**
GRUS *e*Sn **Sn** **03 30 06.8 -3.8**
CSKK Cskako 5.89 37 P **Pn** **03 29 11.2 +3.1**
KEK Kerkira 5.92 119 Pn **Pn** **03 29 09.6 +1.0**
KEK Kerkira 5.92 119 P **Pn** **03 29 09.9 +1.3**
SULZ Cheisacher 5.92 325 S **Sn** **03 30 13.6 -2.6**
SULZ Cheisacher 5.92 325 P **Pn** **03 29 09.5 +0.9**
TORNY Torny/Romont 5.92 315 P **Pn** **03 29 09.8 +1.1**
SELS Selova 5.92 83 *e*Pn **Pn** **03 29 08.8 +0.1**
SELS *e*Sn **Sn** **03 30 14.3 -2.0**
BALST Balsthal 5.95 322 P **Pn** **03 29 09.5 +0.4**
BALST Balsthal 5.95 322 S **Sn** **03 30 13.6 -3.5**
SLE Schleitheim 5.95 329 P **Pn** **03 29 09.1 0.0**
SRN Sarande 5.96 117 P **Pn** **03 29 10.3 +1.2**
OHR Ohrid 5.99 103 *i* Pn **Pn** **03 29 11.4 +1.7**
GEC2 GERESS Array S 6.10 4 Pn **Pn** **03 29 11.3 +0.1**
GEC2 GERESS Array S 6.10 4 *e*Pn **Pn** **03 29 10.9 -0.3**
GEC2 *e*Sn **Sn** **03 30 18.5 -2.3**
GERES GERESS Array B 6.10 4 Pn **Pn** **03 29 11.1 0.0**
comp=E,4.0nm,0.3s,baz=185,slow=14,SNR=57
GERES Sn **Sn** **03 30 20.0 -0.8**
comp=E,7.9nm,0.3s,baz=180,slow=24,SNR=7.0
comp=E,5.7nm,0.3s
GERES GERESS Array B 6.10 4 Pn **Pn** **03 29 10.9 -0.3**
CKRC Cesky Krumlov 6.12 8 *e*PN **Pn** **03 29 10.8 -0.6**
CKRC *e*SN **Sn** **03 30 17.6 -3.6**
GIMEL St. Georges / 6.15 310 P **Pn** **03 29 13.2 +1.4**
KBN Korca 6.16 108 Pn **Pn** **03 29 13.0 +1.0**
KBN Korca 6.16 108 P **Pn** **03 29 13.5 +1.5**
KBN Korca 6.16 108 P **Pn** **03 29 13.0 +1.0**
NORI Noerdlinger Ri 6.20 345 *e*Pn **Pn** **03 29 14.1 +1.6**
BOURR Bourrignon 6.21 320 P **Pn** **03 29 13.0 +0.3**
LSK Leskovik 6.23 112 P **Pn** **03 29 14.3 +1.3**
SKO Skopje 6.25 94 *i* Pn **Pn** **03 29 14.5 +1.3**
SRO Srobarova 6.26 34 *e*P **Pn** **03 29 16.3 +3.1**
SRO *e* 03 30 26.3
BRANT Les Verrieres 6.28 314 P **Pn** **03 29 14.4 +0.8**
CABF La Chapelle 6.29 310 *e*P **Pn** **03 29 14.8 +1.0**
CABF *e*Sn **Sn** **03 30 18.7 -6.9**
comp=E,8.7nm,0.4s
KIZ Kirchzarten 6.33 327 P **Pn** **03 29 14.4 +0.1**
MODS Modra-Piesok 6.34 26 *e*P **Pn** **03 29 14.0 -0.4**
IGT Igoumenitsa 6.36 118 P **Pn** **03 29 16.2 +1.5**
BOVS Bovan 6.37 79 ⇑P **Pn** **03 29 15.0 +0.2**
BOVS Bovan 6.37 79 *e*Pn **Pn** **03 29 14.9 +0.1**
BOVS *e*Sn **Sn** **03 30 23.5 -3.9**
KHC Kasperske Hory 6.38 3 Pn **Pn** **03 29 14.9 -0.1**
KHC Kasperske Hory 6.38 3 *e*P **Pn** **03 29 15.2 +0.2**
KHC *e* 03 30 26.4
KHC Kasperske Hory 6.38 3 *e*PN **Pn** **03 29 15.2 +0.2**
KHC *e*SN **Sn** **03 30 26.4 -1.2**
WET Wettzell 6.38 359 *e*Pn **Pn** **03 29 14.6 -0.4**
CHMF Charmoille 6.39 317 P **Pn** **03 29 15.5 +0.4**
NEST Nestorio 6.42 109 P **Pn** **03 29 18.0 +2.3**
VIVF Saint-Julien-l 6.43 292 *e*P **Pn** **03 29 17.0 +1.4**
VIVF *e*Sn **Sn** **03 30 21.8 -7.0**
comp=E,4.1nm,0.4s
BARS Barje 6.43 87 *e*Pn **Pn** **03 29 16.2 +0.5**
BFO Black Forest 6.49 331 Pn **Pn** **03 29 16.2 -0.2**
BFO Black Forest 6.49 331 P **Pn** **03 29 16.2 -0.2**
BFO Black Forest 6.49 331 *e*Pn **Pn** **03 29 16.7 +0.3**
SMOL Smolenice 6.51 26 *e*P **Pn** **03 29 17.8 +1.1**
SMOL *e* 03 30 32.9
FNA Florina 6.51 105 P **Pn** **03 29 17.4 +0.5**
MDVR Moldovita 6.57 69 ⇑P **Pn** **03 29 18.3 +0.7**
PENT Pentalofos 6.58 110 P **Pn** **03 29 20.1 +2.3**
MOF Molkenrain 6.59 323 P **Pn** **03 29 18.5 +0.6**
BOUC Bouclans 6.59 315 P **Pn** **03 29 18.2 +0.4**
JAN Janina 6.63 115 P **Pn** **03 29 18.9 +0.4**
SSB Saint Sauveur 6.64 295 Pn **Pn** **03 29 17.2 -1.4**
SSB Saint Sauveur 6.64 295 P **Pn** **03 29 17.2 -1.4**
HINF Hinteralfeld 6.69 321 *e*P **Pn** **03 29 19.1 -0.1**
HINF *e*Sn **Sn** **03 30 27.9 -7.4**
comp=E,33nm,0.3s
KRUC Moravsky 6.71 19 *e*PN **Pn** **03 29 19.3 -0.2**
KRUC *e*SN **Sn** **03 30 33.4 -2.4**
TREC Trest 6.75 14 *e*P **Pn** **03 29 20.0 0.0**
TREC *e* 03 30 34.3
TREC Trest 6.75 14 *e*PN **Pn** **03 29 20.0 0.0**
TREC *e*SN **Sn** **03 30 34.3 -2.3**
ZAGS Zajecar 6.77 78 *e*Pn **Pn** **03 29 20.4 +0.1**
ZAGS *e*Sn **Sn** **03 30 32.8 -4.3**
BZS Buzias 6.77 62 ⇑P **Pn** **03 29 20.6 +0.3**
LASF Ste Croix 6.84 284 *e*P **Pn** **03 29 22.3 +1.0**
LASF *e*Sn **Sn** **03 30 31.7 -7.2**
comp=E,2.2nm,0.4s
ECH Echery 6.85 325 Pn **Pn** **03 29 20.4 -1.1**
ECH Echery 6.85 325 P **Pn** **03 29 20.4 -1.1**
ECH Echery 6.85 325 P **Pn** **03 29 21.0 -0.5**
JAVC Velka Javorina 6.89 26 *e*PN **Pn** **03 29 22.8 +0.8**
CDF Champ du Feu 6.96 326 *e*P **Pn** **03 29 22.8 -0.2**
CDF *e*Sn **Sn** **03 30 34.2 -7.8**
comp=E,19nm,0.3s
TSLK Tsoukalades, L 6.97 122 P **Pn** **03 29 25.0 +2.0**
KZN Kozani 6.97 108 P **Pn** **03 29 24.5 +1.3**
VRAC Vranov 6.99 19 ⇑P **Pn** **03 29 23.2 -0.1**
VRAC Vranov 6.99 19 Pn **Pn** **03 29 23.2 -0.1**
comp=E,0.4nm,0.3s,baz=229,slow=10,SNR=6.0
VRAC Sn **Sn** **03 30 39.6 -3.0**
comp=E,1.6nm,0.3s,baz=295,slow=19,SNR=4.3
VRAC Lg Lg 03 31 21.4
comp=E,0.6nm,0.3s,baz=138,slow=21,SNR=1.1
VRAC LR LR 03 32 47.6
comp=E,143nm,18.7s,baz=192,slow=44
comp=E,3.3nm,0.6s
VRAC Vranov 6.99 19 *e*PN **Pn** **03 29 23.1 -0.2**
DRAG Dragano-Lefkad 7.00 123 P **Pn** **03 29 25.0 +1.5**
VYHS Vyhne 7.01 33 *e*P **Pn** **03 29 25.2 +1.6**
VYHS *e* 03 30 42.2
ZAPS Zavoj 7.03 83 *e*Pn **Pn** **03 29 24.7 +0.8**
ZAPS *e*Sn **Sn** **03 30 40.9 -2.7**
PSZ Piszkesteto 7.05 41 ⇑P **Pn** **03 29 25.3 +1.2**
PSZ Piszkesteto 7.05 41 Pn **Pn** **03 29 24.5 +0.3**
PSZ Piszkesteto 7.05 41 P **Pn** **03 29 24.5 +0.3**
PSZ Piszkesteto 7.05 41 P **Pn** **03 29 26.6 +2.5**
GRFO Grafenberg 7.05 350 Pn **Pn** **03 29 23.7 -0.4**
GRFO Grafenberg 7.05 350 P **Pn** **03 29 23.7 -0.4**
GRA1 Grafenberg Arr 7.05 350 Pn **Pn** **03 29 24.0 -0.1**
GRF Grafenberg Arr 7.05 350 P **Pn** **03 29 24.0 -0.1**
GRF Grafenberg Arr 7.05 350 *e*Pn **Pn** **03 29 24.2 +0.1**
HAU Haudompre 7.06 320 *e*P **Pn** **03 29 24.4 +0.1**
HAU *e*Sn **Sn** **03 30 36.7 -7.7**
comp=E,52nm,0.4s
NYDR Nydri-Lefkada 7.06 122 P **Pn** **03 29 25.6 +1.3**
SIRR Siria 7.07 57 ⇑P **Pn** **03 29 25.3 +0.9**
BLKB Belogradchik 7.07 80 ⇑P **Pn** **03 29 25.5 +1.0**
HERR Herculane 7.08 69 ⇓P **Pn** **03 29 25.4 +0.9**
EVGI Lefkada island 7.09 123 P **Pn** **03 29 26.2 +1.4**
DJES Djerdap 7.11 71 ⇑P **Pn** **03 29 25.8 +0.9**
DMLN Damoulianata-K 7.17 127 P **Pn** **03 29 27.8 +2.0**
KEF3 Kipouria, Keph 7.17 127 P **Pn** **03 29 27.9 +2.0**
KTI Kastanea 7.18 106 P **Pn** **03 29 26.3 +0.2**
GRG Griva 7.19 101 P **Pn** **03 29 26.3 +0.1**
VAY Valandovo 7.22 98 *i* Pn **Pn** **03 29 26.8 +0.4**
MAHO Mahon 7.22 250 Pn **Pn** **03 29 27.0 +0.5**
GOPC GO Pecny, Ondr 7.25 9 *e*P **Pn** **03 29 25.6 -1.3**
GOPC *e* 03 30 46.0
GOPC GO Pecny, Ondr 7.25 9 *e*PN **Pn** **03 29 25.6 -1.3**
GOPC *e*SN **Sn** **03 30 46.0 -3.0**
CIEL Dossenheim-sur 7.26 329 P **Pn** **03 29 27.7 +0.7**
PRU Pruhonice 7.30 7 *e*P **Pn** **03 29 26.8 -0.7**
PRU *e* 03 30 46.8
PRU Pruhonice 7.30 7 *e*PN **Pn** **03 29 26.8 -0.7**
PRU *e*SN **Sn** **03 30 46.8 -3.4**
PUNG Punghina 7.33 75 ⇑P **Pn** **03 29 29.2 +1.3**
VLS Valsamata 7.33 126 P **Pn** **03 29 29.8 +1.7**
MAUC Maruska 7.38 25 *e*PN **Pn** **03 29 29.2 +0.5**
THL Klokotos Trika 7.46 112 P **Pn** **03 29 31.4 +1.6**
GZR Gura Zlata 7.47 66 ⇑P **Pn** **03 29 30.5 +0.6**
KKB Krupnik 7.47 94 P **Pn** **03 29 30.7 +0.7**
NKC Novy Kostel 7.49 357 *e*P **Pn** **03 29 30.2 +0.1**
NKC *e* 03 30 52.5
NKC Novy Kostel 7.49 357 *e*PN **Pn** **03 29 30.2 +0.1**
NKC *e*SN **Sn** **03 30 52.5 -2.3**
VTS Vitosha 7.49 88 ⇑P **Pn** **03 29 31.2 +0.9**
VTS Vitosha 7.49 88 Pn **Pn** **03 29 30.6 +0.3**
VTS Vitosha 7.49 88 P **Pn** **03 29 30.6 +0.3**
VTS Vitosha 7.49 88 P **Pn** **03 29 30.9 +0.6**
KNT Kendrikon 7.50 99 P **Pn** **03 29 30.5 +0.2**
KEST Kesra 7.59 204 Pn **Pn** **03 29 35.0 +3.2**
comp=E,1.7nm,0.3s,baz=313,slow=4.3,SNR=36
KEST Sn **Sn** **03 31 03.5 +5.9**
baz=337,slow=20
comp=E,7.0nm,0.5s
SMF Signal de Mont 7.63 304 *e*P **Pn** **03 29 32.5 +0.3**
SMF *e*Sn **Sn** **03 30 50.5 -8.0**
comp=E,12nm,0.4s
EVR Evrytania 7.66 117 P **Pn** **03 29 34.6 +2.0**
MORC Moravsky Berou 7.67 22 ⇑P **Pn** **03 29 34.0 +1.3**
MORC Moravsky Berou 7.67 22 Pn **Pn** **03 29 32.9 +0.3**
MORC Moravsky Berou 7.67 22 P **Pn** **03 29 32.9 +0.3**
MORC Moravsky Berou 7.67 22 *e*PN **Pn** **03 29 33.4 +0.8**
DEV Deva 7.71 63 ⇑P **Pn** **03 29 33.9 +0.7**
KECS Kecovo 7.72 40 *e*P **Pn** **03 29 36.7 +3.3**
PAGF Fort de Pagny 7.75 321 *e*P **Pn** **03 29 34.7 +1.0**
baz=141
PAGF *e*Sn **Sn** **03 30 53.2 -8.0**
comp=E,12nm,0.4s
KRLC Kraliky 7.75 18 *e*P **Pn** **03 29 34.0 +0.2**
KRLC *e* 03 30 59.0
KRLC Kraliky 7.75 18 *e*PN **Pn** **03 29 34.0 +0.2**
KRLC *e*SN **Sn** **03 30 59.0 -2.3**
MAKR Makrakomi, Fth 7.82 116 P **Pn** **03 29 36.7 +2.0**
PVCC Panska Ves 7.83 7 *e*P **Pn** **03 29 36.1 +1.2**
PVCC Panska Ves 7.83 7 *e*PN **Pn** **03 29 36.1 +1.2**
SFTF Sexfontaines 7.84 317 *e*P **Pn** **03 29 36.2 +1.2**
baz=137
SFTF *e*Sn **Sn** **03 30 55.5 -8.0**
comp=E,13nm,0.3s
DPC Dobruska-Polom 7.91 15 *e*P **Pn** **03 29 36.3 +0.3**
DPC *e* 03 31 01.5
DPC Dobruska-Polom 7.91 15 *e*PN **Pn** **03 29 36.3 +0.3**
DPC *e*SN **Sn** **03 31 01.5 -3.8**
LOR Lormes 7.93 308 *e*P **Pn** **03 29 36.5 +0.3**
baz=123
LOR *e*Sn **Sn** **03 30 57.6 -8.2**
comp=E,11nm,0.3s
RLS Riolos of Patr 7.94 123 P **Pn** **03 29 38.6 +2.2**
MOX Moxa 7.95 353 P **Pn** **03 29 37.2 +0.7**
MOX Moxa 7.95 353 *e*Pn **Pn** **03 29 36.8 +0.4**
ABAH Abaujker 7.96 43 P **Pn** **03 29 37.9 +1.2**
ABAH S **Sn** **03 31 05.7 -0.8**
MTLF Montolieu 7.97 278 *e*P **Pn** **03 29 37.1 +0.3**
MTLF *e*Sn **Sn** **03 30 58.9 -7.9**
comp=E,1.7nm,0.4s
AVF Avril sur Loir 8.00 304 *e*P **Pn** **03 29 37.5 +0.3**
AVF *e*Sn **Sn** **03 30 59.4 -8.1**
comp=E,3.3nm,0.4s
MMB Musomiste 8.00 95 P **Pn** **03 29 38.5 +1.3**
SRS Serrai 8.01 98 P **Pn** **03 29 37.9 +0.5**
MEZF Maizieres J'vi 8.03 318 *e*P **Pn** **03 29 39.8 +2.2**
MEZF *e*Sn **Sn** **03 30 59.9 -8.3**
comp=E,9.7nm,0.4s
SSF Saint Saulge 8.03 306 *e*P **Pn** **03 29 37.7 +0.1**
SSF *e*Sn **Sn** **03 31 00.2 -8.1**
comp=E,3.6nm,0.3s
SAVF Savonnieres en 8.07 319 *e*P **Pn** **03 29 40.2 +2.1**
SAVF *e*Sn **Sn** **03 31 01.0 -8.2**
comp=E,8.6nm,0.4s
OSTC Ostas 8.09 14 *e*PN **Pn** **03 29 38.8 +0.4**
CHVC Chvalec 8.09 14 *e*PN **Pn** **03 29 37.6 -0.8**
BRG Berggiesshubel 8.13 4 *e*P **Pn** **03 29 40.2 +1.2**
BRG Amp 03 29 50.0
comp=Z,6.7nm,0.6s
BRG *ex* x 03 30 49.1
BRG *ex* x 03 31 01.3
BRG *ex* x 03 32 08.4
BRG Amp 03 32 40.1
comp=Z,48nm,1.3s
BRG Amp 03 33 15.0
comp=Z,0.5nm,6.6s
BRG Amp 03 33 18.0
comp=E,0.3nm,6.2s
BRG Amp 03 33 24.0
comp=N,0.3nm,5.6s
BRG Berggiesshubel 8.13 4 *e*P **Pn** **03 29 40.2 +1.2**
BRG pmax pmax
comp=Z,7.0nm,0.6s
BRG MLR MLR
comp=Z,461nm,6.6s
BRG MLR MLR
comp=E,334nm,6.2s
BRG MLR MLR
comp=N,277nm,5.6s
LOT Lotru 8.15 67 ⇑P **Pn** **03 29 40.1 +0.7**
NVR Nevrokopi 8.15 96 P **Pn** **03 29 40.1 +0.8**
PGB Panagyurishte 8.18 88 P **Pn** **03 29 41.0 +1.3**
BGF Bois d'Agland 8.22 301 *e*P **Pn** **03 29 40.9 +0.8**
BGF *e*Sn **Sn** **03 31 04.6 -8.2**
comp=N,6.8nm,0.4s
CAF Calviac 8.25 289 *e*P **Pn** **03 29 42.2 +1.6**
CAF *e*Sn **Sn** **03 31 05.1 -8.5**
comp=N,5.5nm,0.7s
MESR Meseseni 8.26 55 ⇑P **Pn** **03 29 40.7 -0.1**
AXAR Agios Charalam 8.30 116 P **Pn** **03 29 42.8 +1.5**
WLF Walferdange 8.40 328 Pn **Pn** **03 29 43.9 +1.2**
WLF Walferdange 8.40 328 P **Pn** **03 29 43.9 +1.2**
WLF Walferdange 8.40 328 *dp*P **Pn** **03 29 44.1 +1.4**
WLF *dS* **Sn** **03 31 12.7 -4.6**
WLF Walferdange 8.40 328 *e*Pn **Pn** **03 29 44.6 +1.9**
PLVB Pleven 8.48 82 ⇑P **Pn** **03 29 44.6 +0.9**
CRVS Cervenica-Dubn 8.48 41 *e*P **Pn** **03 29 47.7 +3.9**
TCF Toulx Ste Croi 8.52 298 *e*P **Pn** **03 29 46.4 +2.0**
TCF *e*Sn **Sn** **03 31 12.0 -8.4**
comp=N,3.0nm,0.4s
TRPA Tarpa 8.55 48 P **Pn** **03 29 48.0 +3.4**
CLL Collm 8.55 360 Pn **Pn** **03 29 43.4 -1.2**
CLL Collm 8.55 360 *e*P **Pn** **03 29 44.0 -0.7**
CLL Collm 8.55 360 *e*Pn **Pn** **03 29 44.0 -0.7**
CLL *ex* x 03 30 05.0
CLL *e*Sn Sn 03 31 01.0 -20
CLL *ex* x 03 31 13.0
CLL *ex* x 03 31 41.0
CLL *e*Sg **Sg** **03 32 19.0 +3.6**
comp=Z,62nm,1.2s
HYF Humbligny 8.65 305 *e*P **Pn** **03 29 48.6 +2.5**
HYF *e*Sn **Sn** **03 31 14.7 -8.8**
RJF Les Rejaudoux 8.71 291 *e*P **Pn** **03 29 48.8 +1.9**
RJF *e*Sn **Sn** **03 31 16.0 -8.8**
comp=Z,6.8nm,0.8s
RZN Rozhen 8.71 93 P **Pn** **03 29 47.9 +0.8**
UZH Uzhgorod 8.72 45 *e*P **Pn** **03 29 50.2 +3.2**
ARR Arges 8.72 69 ⇑P **Pn** **03 29 47.7 +0.6**
STHS Stebnicka Huta 8.74 38 *e*P **Pn** **03 29 48.9 +1.5**
ITM Ithomi 8.79 126 Pn **Pn** **03 29 48.9 +0.9**
ITM Ithomi 8.79 126 P **Pn** **03 29 49.8 +1.8**
PVL Pavlikeni 9.00 83 P **Pn** **03 29 50.3 -0.6**
BHOU Houvegnez 9.02 330 *dp*P **Pn** **03 29 52.6 +1.5**
VOIR 9.02 60 ⇑P **Pn** **03 29 52.0 +0.7**
VOIR 9.02 69 P **Pn** **03 29 54.2 +2.9**
VILL Villia 9.05 117 P **Pn** **03 29 52.8 +1.1**
RCHB Rochefort 9.16 327 *dp*P **Pn** **03 29 54.4 +1.4**
RCHB *dS* **Sn** **03 31 33.7 -2.2**
BTNL Ternell 9.16 331 *dP* **Pn** **03 29 52.0 -1.1**
BTNL *dp*P 03 29 54.4
LFF La Frestale 9.17 288 *e*P **Pn** **03 29 55.1 +1.8**
LFF *e*Sn Sn 03 31 27.1 -9.2
comp=Z,10.0nm,0.9s
MEM Membach 9.22 331 *dp*P **Pn** **03 29 55.7 +1.7**
DIM Dimitrovgrad 9.25 90 P **Pn** **03 29 55.0 +0.7**
GIVF Givet 9.29 325 *e*P **Pn** **03 29 56.7 +1.9**
GIVF *e*Sn Sn 03 31 30.0 -9.0
comp=Z,4.2nm,0.3s
BCLA Clavier 9.34 328 *dP* **Pn** **03 29 54.4 -1.0**
BCLA *dp*P 03 29 56.9
BCLA *dS* **Sn** **03 31 35.7 -4.5**
EPF Esparros 9.35 276 *e*P **Pn** **03 29 58.0 +2.2**
BSTI Sart Tilman 9.37 329 *dPP* Pn 03 30 02.2 +6.4
DOU Dourbes 9.38 324 *dp*P **Pn** **03 29 57.6 +1.5**
DOU *dS* **Sn** **03 31 40.1 -1.2**
DOPR Dopca 9.38 66 ⇑P **Pn** **03 29 56.2 0.0**
BGES Gesves 9.39 327 *dp*P **Pn** **03 29 57.8 +1.6**
BGES *dx* x 03 30 12.1
RDO Rodhopi 9.43 96 Pn **Pn** **03 29 57.3 +0.6**
RDO Rodhopi 9.43 96 P **Pn** **03 29 57.6 +0.9**
SZH Strazhica 9.44 83 P **Pn** **03 29 57.6 +0.7**
BMRD Maredsous 9.46 326 *dp*P **Pn** **03 29 59.0 +1.8**
BAIF Baives 9.52 323 *e*P **Pn** **03 30 00.1 +2.1**
BAIF *e*Sn Sn 03 31 35.6 -9.1
comp=Z,2.6nm,0.4s
VLY Voula,Athens 9.54 117 P **Pn** **03 29 59.4 +1.0**
MLR Muntele Rosu 9.65 69 ⇓P **Pn** **03 30 00.5 +0.7**
MLR Muntele Rosu 9.65 69 Pn **Pn** **03 30 00.6 +0.7**
comp=Z,0.3nm,0.3s,baz=175,slow=9.5,SNR=15
comp=Z,11nm,0.8s
MLR Muntele Rosu 9.65 69 Pn **Pn** **03 30 00.9 +1.0**
MLR Muntele Rosu 9.65 69 P **Pn** **03 30 00.9 +1.0**
SNF Seneffe 9.82 325 *dp*P **Pn** **03 30 03.5 +1.5**
SNF *dPP* **PbPb** **03 30 32.5 -1.4**
SNF *dS* **Sn** **03 31 51.3 -0.8**
BURAR Bucovina Array 9.85 56 ⇑P **Pn** **03 30 03.2 +0.6**
BURAR Bucovina Array 9.85 56 P **Pn** **03 30 03.2 +0.6**
BUR08 Bucovina Ar. S 9.85 56 Pn **Pn** **03 30 02.6 0.0**
RAZG Razgrad 9.85 81 ⇑P **Pn**

comp=Z,1.9nm,0.5s
PLOR Plostina 10.21 68 ⇑P **Pn 03 30 07.9 +0.4**
PLOR Plostina 10.21 68 P **Pn 03 30 07.9 +0.4**
VRI Vrincioaia 10.27 68 ⇓P **Pn 03 30 08.4 +0.1**
LVV L'vov 10.35 43 *e*P **Pn 03 30 13.0 +3.6**
LVV MLR MLR
comp=Z,400nm,10.0s
SJPF Ste Jean 10.49 277 *e*P **Pn 03 30 14.3 +2.9**
PRD Provadia 10.51 83 P **Pn 03 30 11.8 +0.2**
LDF La Druitiere 10.91 307 *e*P **Pn 03 30 19.5 +2.4**
LDF *e*Sn Sn 03 32 08.9 -10
comp=Z,1.7nm,0.4s
APE Apeiranthos 11.12 117 P **Pn 03 30 20.1 0.0**
APE Apeiranthos 11.12 117 *de*P **Pn 03 30 19.3 -0.8**
FLN La Foliniere 11.20 307 *e*P **Pn 03 30 21.5 +0.5**
FLN *e*Sn Sn 03 32 15.8 -10
comp=Z,1.2nm,0.2s
GRR Gorron 11.26 305 *e*P **Pn 03 30 24.3 +2.5**
GRR *e*Sn Sn 03 32 17.1 -10
comp=Z,5.2nm,0.6s
IDI Anoyia 11.83 125 Pn **Pn 03 30 30.2 +0.4**
comp=Z,0.7nm,0.3s,baz=309,slow=8.9,SNR=12
IDI Sn **Sn 03 32 36.5 -5.1**
comp=Z,1.0nm,0.3s,baz=42,slow=21,SNR=3.0
comp=Z,7.9nm,0.9s
IDI Anoyia 11.83 125 Pn **Pn 03 30 28.8 -1.0**
QUIF Quistinic 12.53 300 *e*P **Pn 03 30 41.3 +2.2**
QUIF *e*Sn Sn 03 32 47.2 -11
comp=Z,1.8nm,0.3s
KLNR Kaliningrad 12.74 19⇑*e*P **Pn 03 30 43.5 +1.5**
KLNR pmax pmax
comp=Z,193nm,1.3s
KARP Karpathos 13.08 119 Pn **Pn 03 30 47.3 +0.4**
ESBB Sonseca Array 13.19 262 Pn **Pn 03 30 46.8 -1.5**
ESDC Sonseca Array 13.19 262 Pn **Pn 03 30 47.4 -1.0**
baz=68,slow=13,SNR=19
ESDC LR LR 03 35 54.7
comp=Z,123nm,18.8s,baz=64,slow=37
ESDC Sonseca Array 13.19 262 Pn **Pn 03 30 48.5 +0.2**
ARG Arkhangelos 13.33 114 Pn **Pn 03 30 50.6 +0.5**
ARG Arkhangelos 13.33 114 P **Pn 03 30 50.6 +0.5**
PAB San Pablo 13.52 262 Pn **Pn 03 30 53.2 +0.5**
PAB San Pablo 13.52 262 P **Pn 03 30 53.2 +0.5**
AKASG Malin Array Be 13.61 49 Pn **Pn 03 30 54.9 +1.0**
comp=Z,0.1nm,0.3s,baz=242,slow=12,SNR=4.1
comp=Z,0.3nm,0.5s
AKASG Malin Array Be 13.61 49 *i* P **Pn 03 30 56.7 +2.9**
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKBB Malin Array Si 13.61 49⇑*e*P **Pn 03 30 53.5 -0.3**
MDUB Mudurnu 13.75 93 Pn **Pn 03 30 56.5 +0.5**
PBRG Braganca 14.70 273 *e*P **P 03 31 16.5 +1.4**
comp=Z,13nm,2.1s
MVO Moncorvo 15.04 271 *e*P **P 03 31 21.4 +2.5**
comp=Z,18nm,2.0s
NACGM Naroch 15.10 32 *e*P **Pn 03 31 12.0 -2.1**
comp=Z,9.0nm,0.8s
MNK Minsk 15.25 35 *i* P **Pn 03 31 12.5 -3.6**
MNK *i* S **Sn 03 34 02.9 -1.9**
MNK pmax pmax
comp=E,1.0nm,1.3s
MNK pmax pmax
comp=Z,4.0nm,1.1s
MNK pmax pmax
comp=N,32nm,1.0s
MNK MLR MLR
comp=E,19nm,18.0s
MNK MLR MLR
comp=Z,132nm,18.0s
MNK MLR MLR
comp=N,653nm,18.0s
MNK Minsk 15.25 35 *i* P **Pn 03 31 12.6 -3.6**
comp=E,1.0nm,1.3s
MNK *i* P **Pn 03 31 12.6 -3.6**
comp=N,32nm,1.0s
MNK *i* P **Pn 03 31 12.6 -3.6**
comp=Z,4.0nm,1.1s,baz=226
MNK *i* PP **P 03 31 19.4 -1.6**
MNK *i* S **Sn 03 34 02.9 -1.9**
MNK *i* SS **SnSn 03 34 17.2 -0.2**
MNK *i* LR LR 03 36 05.9
MNK *i* LRM MLR 03 38 08.2
comp=E,19nm,17.6s
MNK *i* LRM MLR 03 38 10.8
comp=Z,132nm,17.6s
MNK *i* LRM MLR 03 38 28.8
comp=N,653nm,18.1s
PVRL Vila Real 15.52 272 *e*P **P 03 31 22.6 -1.6**
POLO Lamas de Olo 15.56 272 *e*P **P 03 31 25.8 +1.1**
comp=N,6.3nm,1.6s
MTE Manteigas 15.61 268 *e*P **P 03 31 26.5 +1.3**
comp=N,18nm,1.8s
MTE Manteigas 15.61 268 P **P 03 31 26.3 +1.2**
PCBR Castelo Branco 15.71 266 *e*P **P 03 31 27.3 +1.0**
comp=N,11nm,1.7s
BR131 Keskin Array S 15.76 94 P **P 03 31 26.0 -1.0**
BR131 Keskin Array S 15.76 94 P **P 03 31 26.0 -1.0**
BR131 pmax pmax
comp=Z,13nm,1.3s
BRTR Keskin Array B 15.76 94 Pn **P 03 31 25.6 -1.4**
comp=Z,0.1nm,0.3s,baz=286,slow=8.4,SNR=10
BRTR LR LR 03 38 22.1
comp=Z,126nm,19.0s,baz=300,slow=41
comp=Z,2.7nm,0.9s
PVIS Viseu 15.78 270 *e*P **P 03 31 26.9 -0.2**
comp=Z,16nm,2.0s
PBAR Barrancos 15.97 260 *e*P **Pn 03 31 26.9 +1.3**
comp=Z,19nm,1.7s
PESTR Estremoz 16.11 263 *e*P **P 03 31 32.5 +1.8**
comp=Z,20nm,1.6s
PESTR Estremoz 16.11 263 P **P 03 31 29.5 -1.3**
COI Coimbra 16.30 268 P **P 03 31 32.1 -0.6**
COI IAmb IAmb 03 31 35.4
comp=Z,33nm,1.2s
COI Coimbra 16.30 268 P **P 03 31 32.1 -0.6**
COI pmax pmax
comp=Z,33nm,1.2s
EKA Eskdalemuir Ar 16.42 326 Pn **Pn 03 31 31.8 +0.5**
baz=138,slow=14
comp=Z,1.0nm,0.5s
PMTG Montargil 16.51 264 *e*P **P 03 31 35.5 +0.4**
comp=Z,23nm,1.7s
EVO Evora 16.54 262 *e*P **P 03 31 36.2 +0.7**
DSB Dublin 16.66 316 P **P 03 31 35.5 -1.1**
DSB IAmb IAmb 03 32 17.8
comp=Z,24nm,1.2s
MDT Midelt 17.11 240 P **P 03 31 42.5 +0.5**
comp=Z,0.1nm,0.3s,baz=77,slow=8.1,SNR=5.2
comp=Z,1.4nm,0.8s
HFS Hagfors 17.40 1 P **P 03 31 44.0 -0.8**
comp=Z,1.9nm,0.9s,baz=163,slow=11,SNR=2.0
TOKA Tokat 17.68 90 P **P 03 31 47.8 -0.3**
VSU Vasula 17.89 24⇓*e*P **Pn 03 31 49.1 -0.5**
VSU pmax pmax
comp=Z,67nm,0.9s
NC602 NORSAR Array S 18.02 358 P **P 03 31 51.9 +0.2**
NB2 NORSAR Subarra 18.34 357 P **P 03 31 55.5 +0.3**
comp=Z,5.5nm,1.0s,baz=174,slow=11
NOA NORSAR Array B 18.34 357 P **P 03 31 55.4 +0.3**
baz=170,slow=13,SNR=5.7
comp=Z,1.2nm,0.8s
NB201 NORSAR Array S 18.35 357 P **Pn 03 31 54.6 -0.6**
NB201 IAmb IAmb 03 32 04.5
comp=Z,20nm,1.2s
SOC Sochi 19.43 78 *e*P **Pn 03 32 09.3 +0.9**
SOC *e* 03 35 50.3
SOC MLR MLR
comp=Z,98nm,17.0s
VSR Storozhevoye 19.62 55 *e*P **P 03 32 08.8 -0.5**
VSR pmax pmax
comp=Z,8.0nm,0.4s
OBN Obninsk 19.66 43 P **Pn 03 32 10.3 -0.6**
comp=Z,0.4nm,0.3s,baz=73,slow=19,SNR=4.4
comp=Z,3.5nm,0.6s
OBN Obninsk 19.66 43⇑*e*P **P 03 32 09.3 -0.3**
OBN pmax pmax
comp=Z,52nm,2.5s
OBN MLR MLR
comp=Z,57nm,11.0s
VORR Voronezh 19.77 54 *e*P **Pn 03 32 11.1 -1.4**
VORR pmax pmax
comp=Z,70nm,0.4s
LPSR Galich'ya Gora 19.90 51 *e*P **P 03 32 11.4 -0.8**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MMAI Mount Meron Ar 20.08 112 P Pn 03 32 16.5 +0.1
comp=Z,8.1nm,0.8s,baz=316,slow=9.6,SNR=6.5
comp=Z,8.1nm,0.8s
FINES FINESS Array B 20.27 18 P Pn 03 32 16.8 -1.4
comp=Z,8.7nm,0.8s,baz=188,slow=12,SNR=12
comp=Z,8.7nm,0.8s
FINES FINESS Array B 20.27 18 P **P 03 32 16.3 +0.1**
FIA1 FINESS Array S 20.27 18 P Pn 03 32 16.9 -1.3
FIA1 IAmb IAmb 03 32 21.0
comp=Z,13nm,0.9s
MOS Moscow 20.49 42 *e*P **P 03 32 17.8 -0.8**
MOS pmax pmax
comp=Z,46nm,1.3s
VRH Novokhopyorsk 21.18 57 *e*P **P 03 32 25.1 -1.1**
VRH pmax pmax
comp=Z,30nm,1.4s
VALR Valaam 21.47 24 *de*P **P 03 32 30.3 +1.1**
VALR pmax pmax
comp=Z,27nm,1.0s
KIV Kislovodsk 21.52 77 P **P 03 32 30.1 +0.1**
KIV IAmb IAmb 03 32 32.2
comp=Z,16nm,1.0s
KIV Kislovodsk 21.52 77 *e*P **P 03 32 31.4 +1.4**
KIV pmax pmax
comp=Z,18nm,1.0s
KIV MLR MLR
comp=Z,42nm,14.0s
KVAR Kislovodsk Arr 21.52 77 P **P 03 32 32.3 +2.2**
comp=Z,7.8nm,1.0s,baz=298,slow=17,SNR=2.8
comp=Z,7.8nm,1.0s
ASF Jabal al Asfar 21.60 111 P **P 03 32 34.0 +3.1**
comp=Z,2.5nm,0.5s,baz=310,slow=12,SNR=3.2
comp=Z,2.5nm,0.5s
NEY Neytrino 21.64 79⇓*e*P **P 03 32 31.8 +0.4**
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 21.70 77 P **P 03 32 33.2 +1.4**
comp=Z,13nm,0.9s,baz=299,slow=7.5,SNR=16
comp=Z,13nm,0.9s
KBZ Khabaz 21.70 77⇓*e*P **P 03 32 34.0 +2.2**
KBZ pmax pmax
comp=Z,19nm,1.0s
MARD Mardin 21.85 95 P **P 03 32 35.1 +1.5**
MARD IAmb IAmb 03 32 37.1
comp=Z,7.7nm,0.8s
EIL Elat 21.88 120 P **P 03 32 36.6 +2.7**
comp=Z,2.7nm,0.7s,baz=236,slow=14,SNR=1.8
comp=Z,2.7nm,0.7s
ONI Oni 22.28 80 P **P 03 32 40.5 +2.3**
ONI IAmb IAmb 03 32 45.6
comp=Z,9.2nm,1.0s
ONI Oni 22.28 80 P **P 03 32 40.5 +2.3**
ONI pmax pmax
comp=Z,9.0nm,1.0s
GURO Guroymak-BITLI 22.32 91 P **P 03 32 40.1 +1.5**
GURO IAmb IAmb 03 32 55.5
comp=Z,12nm,1.2s
KLMR Klimovskoe 24.12 32 *e*P **P 03 32 55.2 -1.3**
KLMR pmax pmax
comp=Z,22nm,1.6s
KLMR Klimovskoe 24.12 32 *e*P **P 03 32 55.2 -1.3**
KLMR AMP 03 33 02.9
comp=Z,22nm,1.6s
BELG Belogornoye 25.00 55 P **P 03 33 06.8 +2.3**
comp=Z,29nm,0.8s,baz=81,slow=0.8,SNR=7.3
comp=Z,29nm,0.8s
BELG Belogornoye 25.00 55 *de*P **P 03 33 06.3 +1.7**
BELG pmax pmax
comp=Z,4.0nm,0.8s
MAK Makhachkala 25.14 78 *e*P **P 03 33 01.4 -4.5**
MAK *e*S **S 03 37 24.9 -5.4**
MAK MLR MLR
comp=Z,157nm,13.0s
PRGR Permogore 27.02 34 *e*P **P 03 33 18.5 -4.3**
PRGR pmax pmax
comp=Z,5.0nm,0.8s
KIRV Kirov 27.50 42 LR LR 03 45 47.1
comp=Z,62nm,18.1s,baz=249,slow=40
KIRV Kirov 27.50 42⇓*e*P **P 03 33 27.3 +0.2**
ARCES ARCESS Array B 27.60 9 P **P 03 33 29.1 +1.2**
comp=Z,1.9nm,1.0s,baz=193,slow=6.9,SNR=4.4
comp=Z,1.9nm,1.0s
BORG Borgarnes 29.34 330 LR LR 03 46 12.7
comp=Z,74nm,18.3s,baz=131,slow=38
TOA0 Torodi Ar. Sit 31.11 202 P **P 03 33 59.4 -0.1**
TOA0 IAmb IAmb 03 34 00.5
comp=Z,3.5nm,0.8s
TORD Torodi Ar. Bea 31.11 202 P **P 03 34 00.3 +0.9**
comp=Z,3.3nm,0.8s,baz=14,slow=9.5,SNR=33
TORD PcP **PcP 03 36 55.6 +0.8**
comp=Z,0.2nm,0.8s,baz=29,slow=3.3,SNR=1.9
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 31.11 202 P **P 03 34 00.0 +0.6**
ARU Arti 31.86 49 P **P 03 34 05.5 -0.3**
ARU Arti 31.86 49 *d* *i*P **P 03 34 05.8 +0.1**
ARU 03 35 06.5
ARU S **S 03 39 17.9 +2.1**
ARU SS **SnSn 03 41 03.2 -0.4**
ARU pmax pmax
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 32.76 62 P **P 03 34 13.1 -0.7**
GEYT Alibeck 34.35 83 P **P 03 34 28.4 +0.6**
comp=Z,1.1nm,0.3s,baz=280,slow=8.6,SNR=4.0
comp=Z,1.1nm,0.3s
SPITS Spitsbergen Ar 35.55 1 P **P 03 34 38.2 +0.6**
SPITS pmax pmax
comp=Z,38nm,1.5s
DAG Danmarks Havn 36.62 348 *i* P P 03 34 35.0 -12
BRVK Borovoye 38.73 54 P **P 03 35 05.6 +0.7**
BRVK Borovoye 38.73 54 P **P 03 35 05.6 +0.7**
BRVK pmax pmax
comp=Z,16nm,0.7s
BVAR Borovoye Array 38.80 54 LR LR 03 50 59.4
comp=Z,35nm,19.4s,baz=323,slow=36
DBIC Dimbokro 39.28 209 P **P 03 35 11.8 +2.0**
comp=Z,1.2nm,0.7s,baz=358,slow=8.9,SNR=1.2
comp=Z,1.2nm,0.7s
KKAR Karatay Array 41.33 69 P **P 03 35 27.0 +0.4**
KKAR Karatay Array 41.33 69 P **P 03 35 27.0 +0.4**
KURK Kurchatov 44.27 56 P **P 03 35 49.9 -0.4**
KURK IAmb IAmb 03 35 54.8
comp=Z,4.5nm,0.8s
KURK Kurchatov 44.27 56 P **P 03 35 49.9 -0.4**
KURK pmax pmax
comp=Z,4.0nm,0.8s
NRIK Noril'sk 45.38 29 P **P 03 35 59.9 +1.0**
comp=Z,1.7nm,0.4s,baz=262,slow=7.1,SNR=1.9
comp=Z,1.7nm,0.4s
KSH Kashi 46.51 72 P **P 03 36 10.5 +2.1**
KSH pmax pmax
comp=Z,10.0nm,0.7s
ZAA0 Zalesovo Array 47.00 50 P **P 03 36 12.1 +0.3**
ZAA0 IAmb IAmb 03 36 13.9
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 47.00 50 P **P 03 36 12.6 +0.8**
comp=Z,3.0nm,0.7s,baz=277,slow=8.9,SNR=9.9
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 47.00 50 P **P 03 36 12.0 +0.1**
ZALV Zalesovo Beam 47.00 50 *i* P **P 03 36 13.1 +1.3**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 47.85 60 P **P 03 36 19.5 +0.9**
MK31 IAmb IAmb 03 36 21.2
comp=Z,3.9nm,0.9s
MK31 Makanchi Array 47.85 60 P **P 03 36 19.5 +0.9**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 47.85 60 P **P 03 36 19.7 +1.1**
comp=Z,4.7nm,0.8s,baz=285,slow=5.6,SNR=25
comp=Z,4.7nm,0.8s
MKAR Makanchi Array 47.85 60 P **P 03 36 17.5 -1.1**
EUNU Eureka 49.83 347 P **P 03 36 33.2 -0.2**
EUNU IAmb IAmb 03 36 56.0
comp=Z,11nm,1.5s
DGZ Jazzator, Alta 49.95 55 *d* *i*P **P 03 36 36.4 +1.5**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
WMQ Urumqi 52.55 62 *e*P **P 03 36 57.3 +3.0**
WMQ LR LR
comp=Z,110nm,21.3s
PQI Presque Isle 55.31 304 P **P 03 37 13.6 -0.8**
SONM Songino Array 61.89 50 P **P 03 38 01.8 +1.4**
comp=Z,2.5nm,0.8s,baz=285,slow=8.5,SNR=14
comp=Z,2.5nm,0.8s
YAK Yakutsk 63.83 28 *ce*P **P 03 38 14.5 +1.7**
YAK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 66.46 347 P **P 03 38 31.2 +1.5**
comp=Z,1.8nm,0.9s,baz=349,slow=3.0,SNR=6.1
comp=Z,1.8nm,0.9s
INK Inuvik 66.46 347 P **P 03 38 29.4 -0.4**
INK Inuvik 66.46 347 P **P 03 38 29.4 -0.4**
INK pmax pmax
comp=Z,10.0nm,1.5s
HHC Hu-ho-hao-te 69.00 53 *e*P **P 03 38 47.3 +0.8**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,120nm,4.7s
SJG San Juan 70.12 277 LR LR 04 06 25.6
comp=Z,18nm,18.8s,baz=63,slow=33
IMAR Indian Mountai 71.11 354 P **P 03 38 59.8 +1.0**
H21K Melozitna Rive 71.36 354 P **P 03 39 01.7 +1.4**
H21K IAmb IAmb 03 39 17.3
comp=Z,7.3nm,1.2s
PZH PanZhiHua 71.60 71 P **P 03 39 04.0 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
ILAR Eielson Array 71.66 351 P **P 03 39 04.0 +1.8**
comp=Z,0.4nm,0.9s,baz=354,slow=5.4,SNR=2.9
comp=Z,0.4nm,0.9s
ILAR Eielson Array 71.66 351 P **P 03 39 04.0 +1.8**
PPLA Purkeypile 74.03 353 P **P 03 39 16.8 +0.4**
CMAR Chiang Mai Arr 74.74 79 P **P 03 39 21.8 +0.6**
comp=Z,1.1nm,0.3s,baz=307,slow=6.9,SNR=4.5
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 74.74 79 *i* P **P 03 39 22.7 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PDAR Pinedale Array 80.49 321 P **P 03 39 56.1 +2.9**
comp=Z,0.1nm,0.4s,baz=64,slow=6.1,SNR=2.5
comp=Z,0.1nm,0.4s
TXAR Lajitas Array 87.69 309 P **P 03 40 32.4 +2.5**
comp=Z,0.2nm,0.5s,baz=59,slow=6.0,SNR=3.8
comp=Z,0.2nm,0.5s

PRU ***31*** *03:32:36.4±0.0, 42°.91N×13°.40E, h0km*
ROM ***31*** *03:32:37.3±0.0, 42°.945N±0°.002×13°.191E±0°.004, h7km, ML3.7/43, Error ellipse: s-maj=0.2km s-min=0.2km az=69.0*
IDC ***31*** *03:32:38.5±1.0, 43°.03N×13°.47E, h0km, mb3.6/3, mbtmp3.4/14, ML3.0/10, MS3.2/1, Error ellipse: s-maj=19.6km s-min=11.9km az=97.0*
ISC 31 03:32:38.2±0.7, 42°.95N±0°.01×13°.24E±0°.02, h7km±4km, n122, σ1$34/161, mb3.6/3, 2C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.06**	**353**	⇑P		**Pg**	**03 32 39.1**	**-0.9**
T1256				S		**Sg**	**03 32 40.5**	**-0.9**
MMO1	**Montemonaco**	**0.09**	**127**	P		**Pg**	**03 32 40.0**	**-0.3**
MMO1				S		**Sg**	**03 32 42.2**	**+0.4**
AM05	**Amandola Campo**	**0.09**	**73**	P		**Pg**	**03 32 40.3**	**0.0**
AM05				S		**Sg**	**03 32 42.7**	**+0.9**
AM05				AML		AML		
comp=E,29950μm,1.3s								
AM05				AML		AML		
AM05				AML		AML		
comp=E,28100μm,1.2s								
AM05				AML		AML		
AM05				AML		AML		
comp=N,18000μm,1.2s								
AM05				AML		AML		
comp=N,2335μm,1.3s								
AM05				AML		AML		
comp=E,29900μm,1.3s								
AM05				AML		AML		
T1245	**Castelsantange**	**0.10**	**200**	⇑P		**Pg**	**03 32 39.9**	**-0.7**
T1245				S		**Sg**	**03 32 41.9**	**-0.4**
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
T1245				AML		AML		
GUMA	**Gualdo di Mace**	**0.13**	**33**	P		**Pg**	**03 32 41.3**	**+0.2**
GUMA				S		**Sg**	**03 32 44.2**	**+1.2**
GUMA				AML		AML		
comp=N,84700μm,0.5s								
GUMA				AML		AML		
comp=E,91000μm,0.6s								
GUMA				AML		AML		
comp=N,84800μm,0.5s								
GUMA				AML		AML		
comp=N,92300μm,0.5s								
GUMA				AML		AML		
comp=E,90500μm,1.1s								
GUMA				AML		AML		
comp=N,84600μm,0.5s								
GUMA				AML		AML		
comp=E,90950μm,0.6s								
FEMA	**Monte Fema**	**0.14**	**275**	P		**Pg**	**03 32 40.3**	**-0.8**
FEMA				S		**Sg**	**03 32 42.6**	**-0.6**
FEMA				AML		AML		
comp=N,78450μm,1.6s								
FEMA				AML		AML		
T1216	**Preci, Frazion**	**0.17**	**249**	P		**Pg**	**03 32 40.9**	**-0.8**
T1216				S		**Sg**	**03 32 43.5**	**-0.5**
T1216				AML		AML		
comp=E,62200μm,0.3s								
T1216				AML		AML		
comp=N,90250μm,1.6s								
T1216				AML		AML		
comp=E,62150μm,0.3s								
T1216				AML		AML		
comp=N,90300μm,1.6s								
T1216				AML		AML		
comp=E,62250μm,0.3s								
T1216				AML		AML		
comp=N,90500μm,1.6s								
T1241	**Roccafluvione,**	**0.17**	**123**	P		**Pg**	**03 32 42.0**	**+0.3**
T1241				S		**Sg**	**03 32 45.6**	**+1.5**
T1241				AML		AML		
comp=E,58100μm,1.6s								
T1241				AML		AML		
comp=N,41050μm,1.4s								
T1241				AML		AML		
comp=E,57200μm,1.6s								
T1241				AML		AML		
comp=N,41800μm,1.4s								
T1241				AML		AML		
comp=N,41000μm,1.4s								
T1241				AML		AML		
comp=E,73700μm,0.6s								
T1241				AML		AML		
comp=E,58050μm,1.6s								
T1241				AML		AML		
comp=E,58100μm,1.6s								
T1241				AML		AML		
comp=E,73950μm,0.6s								
T1241				AML		AML		
comp=N,41050μm,1.4s								
T1244	**Arquata del Tr**	**0.20**	**167**	P		**Pg**	**03 32 42.1**	**-0.1**
T1244				S		**Sg**	**03 32 46.2**	**+1.3**
MDAR	**Monte D'Aria**	**0.25**	**344**	P		**Pg**	**03 32 42.8**	**-0.5**
MDAR				S		**Sg**	**03 32 47.4**	**+0.8**
MDAR				AML		AML		
comp=E,11600μm,0.9s								
MDAR				AML		AML		
comp=N,16150μm,1.4s								
MDAR				AML		AML		
comp=E,11600μm,0.9s								
MDAR				AML		AML		
comp=N,16100μm,1.4s								
MDAR				AML		AML		
comp=E,11650μm,0.9s								
MDAR				AML		AML		
comp=N,16150μm,1.4s								
MNTP	**Montappone**	**0.25**	**42**	P		**Pg**	**03 32 43.8**	**+0.6**
MNTP				AML		AML		
comp=E,52750μm,1.6s								
MNTP				AML		AML		
comp=E,52750μm,1.6s								
MNTP				AML		AML		
comp=N,55950μm,1.2s								
SSM1	**San Severino M**	**0.28**	**351**	P		**Pg**	**03 32 43.3**	**-0.4**
SSM1				S		**Sg**	**03 32 48.7**	**+1.2**
T1204	**Amatrice, Fraz**	**0.28**	**168**	P		**Pg**	**03 32 43.6**	**-0.2**
T1204				S		**Sb**	**03 32 48.6**	**-2.1**
T1204				AML		AML		
comp=E,30000μm,1.0s								

T1204 AML AML
comp=N,26350μm,0.7s
T1204 AML AML
comp=E,29950μm,1.0s
T1204 AML AML
comp=E,30050μm,1.0s
T1204 AML AML
comp=N,26400μm,0.7s
SEF1 Sefro 0.29 313 P **Pg 03 32 43.2 -0.7**
SEF1 S **Sg 03 32 48.3 +0.6**
SEF1 AML AML
comp=E,30900μm,0.2s
SEF1 AML AML
comp=N,21500μm,0.8s
SEF1 AML AML
comp=E,30950μm,0.2s
SEF1 AML AML
comp=N,21450μm,0.8s
PIO1 Pioraco 0.29 321 P **Pg 03 32 43.4 -0.6**
T1201 Domo (RI) 0.29 178 P **Pg 03 32 44.0 0.0**
T1243 Rocca Santa Ma 0.30 148 P **Pb 03 32 43.8 -2.1**
T1243 S **Sb 03 32 49.4 -1.8**
T1215 Vallo di Nera, 0.31 241 P **Pg 03 32 43.5 -0.7**
T1215 S **Sg 03 32 48.3 -0.1**
T1215 AML AML
comp=E,10400μm,1.5s
T1215 AML AML
comp=E,11350μm,1.5s
T1215 AML AML
comp=N,15850μm,1.6s
T1215 AML AML
comp=N,15700μm,1.4s
T1215 AML AML
comp=E,11450μm,1.5s
T1215 AML AML
comp=N,15685μm,1.6s
T1215 AML AML
comp=N,15650μm,1.6s
T1215 AML AML
comp=E,10400μm,1.1s
T1215 AML AML
comp=E,11400μm,1.5s
GAG1 Gagliole 0.31 337 P **Pg 03 32 44.0 -0.4**
GAG1 S **Sg 03 32 49.5 +1.0**
GAG1 AML AML
comp=E,33850μm,1.4s
GAG1 AML AML
comp=N,31700μm,1.2s
GAG1 AML AML
comp=N,31700μm,1.2s
GAG1 AML AML
comp=E,33900μm,1.4s
FIU1 Fiuminata 0.33 317 P **Pg 03 32 43.7 -0.9**
FIU1 S **Sg 03 32 49.5 +0.6**
FIU1 AML AML
comp=N,7915μm,0.4s
FIU1 AML AML
comp=E,6600μm,0.4s
T1217 Poggiodomo (PG 0.33 223 P **Pg 03 32 43.9 -0.8**
T1217 S **Sg 03 32 49.2 +0.2**
T1217 AML AML
comp=E,17650μm,0.9s
T1217 AML AML
comp=E,18350μm,0.9s
T1217 AML AML
comp=N,21700μm,1.0s
T1217 AML AML
comp=E,18300μm,0.9s
T1217 AML AML
comp=N,21750μm,1.0s
T1217 AML AML
comp=N,21700μm,1.0s
T1217 AML AML
comp=E,17600μm,0.9s
SMA1 SAN MARTINO 0.33 167 P **Pg 03 32 44.4 -0.3**
SMA1 S **Sb 03 32 49.9 -2.1**
SMA1 AML AML
comp=E,31750μm,0.7s
SMA1 AML AML
comp=E,33150μm,1.5s
SMA1 AML AML
comp=N,46050μm,0.8s
OFFI Offida 0.33 9 P **Pg 03 32 46.0 +1.3**
OFFI AML AML
comp=N,32750μm,0.7s
OFFI AML AML
comp=E,25100μm,0.8s
TRE1 Treia 0.36 9 P **Pb 03 32 46.2 -0.8**
SNTG Esanatoglia 0.37 325 ⇓P **Pg 03 32 44.6 -0.9**
SNTG S **Sg 03 32 50.8 +0.4**
SNTG AML AML
comp=E,8125μm,1.3s
SNTG AML AML
comp=N,6185μm,0.5s
SNTG AML AML
comp=N,6370μm,0.5s
SNTG AML AML
comp=N,6180μm,0.5s
SNTG AML AML
comp=N,6185μm,0.5s
SNTG AML AML
comp=E,7875μm,1.3s
SNTG AML AML
comp=E,8130μm,1.3s
LNSS Leonessa 0.38 203 P **Pg 03 32 45.2 -0.3**
LNSS S **Sg 03 32 51.0 +0.5**
LNSS AML AML
comp=N,25550μm,0.7s
LNSS AML AML
comp=E,9400μm,0.9s
EL6 Elcito 0.39 346 P **Pg 03 32 45.4 -0.5**
EL6 AML AML
comp=E,13900μm,1.2s
EL6 AML AML
comp=N,14500μm,0.8s
EL6 AML AML
comp=E,13910μm,1.2s
EL6 AML AML
comp=N,14550μm,0.8s
EL6 AML AML
comp=E,14000μm,1.2s
T1246 Crognaleto (TE 0.41 153 P **Pb 03 32 46.0 -1.9**
T1246 S **Sb 03 32 53.0 -1.4**
TERO Teramo 0.42 140 P **Pb 03 32 46.1 -2.0**
TERO S **Sb 03 32 53.7 -1.0**
TERO AML AML
comp=E,9105μm,1.3s
TERO AML AML
comp=N,16200μm,0.6s
TERO AML AML
comp=E,9085μm,1.3s
TERO AML AML
comp=E,9360μm,0.3s
TERO AML AML
comp=E,9065μm,1.3s
TERO AML AML
comp=N,16650μm,0.6s
CING Cingoli 0.43 356 P **Pg 03 32 46.3 -0.2**
ASSB Assisi San Ben 0.43 282 P **Pg 03 32 45.5 -1.1**
ASSB S **Sg 03 32 52.5 +0.2**
ASSB AML AML
comp=E,9470μm,0.6s
ASSB AML AML
comp=N,9755μm,0.5s
CAMP Campotosto 0.43 163 P **Pg 03 32 46.1 -0.6**
CAMP S **Sb 03 32 52.9 -2.1**
CAMP AML AML
comp=N,9110μm,1.4s
CAMP AML AML
comp=E,12020μm,0.7s
RM33 Pellescritta (0.44 182 P **Pg 03 32 46.4 -0.4**
RM33 S **Sg 03 32 53.4 +0.9**
RM33 AML AML
comp=E,15550μm,1.0s
RM33 AML AML
comp=N,12000μm,1.3s
RM33 AML AML
comp=E,15300μm,1.0s
RM33 AML AML
comp=N,11850μm,1.3s
RM33 AML AML
comp=N,11950μm,1.3s
RM33 AML AML
comp=E,15500μm,1.0s
CADA Capodarco di F 0.46 58 P **Pn 03 32 48.7 -2.5**
CADA AML AML
comp=E,24350μm,1.3s
CADA AML AML
comp=N,23850μm,1.6s
CIMA Civitanova Mar 0.48 42 P **Pn 03 32 49.2 -2.3**
FOSV Fossato di Vic 0.49 315 P **Pg 03 32 46.6 -1.0**
FOSV S **Sg 03 32 54.5 +0.5**
FOSV AML AML
comp=N,7985μm,1.0s
FOSV AML AML
comp=E,7570μm,0.6s
FOSV AML AML
comp=N,7990μm,1.0s
ATCC AVT- Casa Cast 0.49 298 P **Pg 03 32 46.8 -1.0**
ATCC S **Sg 03 32 55.1 +0.8**
ATCC AML AML
comp=N,17700μm,1.3s
ATCC AML AML
comp=E,12100μm,0.8s
T1211 Morro Reatino 0.50 214 P **Pg 03 32 47.8 -0.1**
T1211 S **Sg 03 32 55.1 +0.7**
PP3 Marolino 0.51 33 P **Pb 03 32 49.0 -0.4**
PP3 AML AML
comp=N,13350μm,1.2s
PP3 AML AML
comp=E,19800μm,1.3s
PP3 AML AML
comp=N,12650μm,1.3s
PP3 AML AML
comp=E,18500μm,1.3s
PP3 AML AML
comp=N,12600μm,1.3s
ARRO Arrone 0.51 223 P **Pg 03 32 47.2 -0.8**
ARRO S **Sg 03 32 55.1 +0.5**
ARRO AML AML
comp=E,10550μm,1.1s
ARRO AML AML
comp=N,7820μm,1.6s
ARRO AML AML
comp=E,10595μm,1.1s
T1247 Pizzolo (AQ) 0.51 175 P **Pg 03 32 47.6 -0.5**
T1247 S **Sb 03 32 56.1 -1.1**
T1247 AML AML
comp=E,16550μm,1.6s
T1247 AML AML
comp=N,16600μm,0.8s
T1247 AML AML
comp=N,16650μm,0.8s
TRTR Tortoreto Alta 0.52 106 P **Pn 03 32 49.7 -2.4**
TRTR AML AML
comp=N,33150μm,1.6s
TRTR AML AML
comp=E,24450μm,0.8s
GIGS Gran Sasso 0.56 154 P **Pb 03 32 48.4 -1.9**
GIGS S **Sb 03 32 57.6 -1.0**
GIGS AML AML
comp=N,2110μm,1.6s
GIGS AML AML
comp=E,2635μm,1.2s
ARVD Arcevia 0.59 339 P **Pg 03 32 48.8 -0.7**
ARVD AML AML
comp=N,2430μm,1.3s
ARVD AML AML
comp=E,3160μm,0.5s
CESX Cesi 0.59 235 P **Pg 03 32 48.4 -1.2**
CESX S **Sg 03 32 57.3 0.0**
CESX AML AML
comp=E,9570μm,0.9s
CESX AML AML
comp=N,7215μm,0.5s
MURB Monte Urbino 0.61 301 P **Pg 03 32 49.0 -1.0**
MURB S **Sg 03 32 59.1 +1.3**
MURB AML AML
comp=N,10800μm,1.3s
MURB AML AML
comp=N,10800μm,1.3s
MURB AML AML
comp=E,14800μm,0.3s
MURB AML AML
comp=N,10950μm,1.3s
MURB AML AML
comp=E,13550μm,0.3s
MURB AML AML
comp=N,10750μm,1.3s
AQU L'Aquila 0.61 168 P **Pg 03 32 49.4 -0.6**
AQU AML AML
comp=E,9470μm,1.2s
AQU AML AML
comp=N,7845μm,1.6s
AQU AML AML
comp=E,9490μm,1.2s
AQU AML AML
comp=E,9735μm,1.2s
AQU AML AML
comp=N,8665μm,1.6s
ATSC Scheggia e Pas 0.62 320 P **Pg 03 32 49.8 -0.4**
ATFO Monte Foce - G 0.64 311 P **Pg 03 32 49.3 -1.2**
ATFO AML AML
comp=E,5035μm,0.8s
ATFO AML AML
comp=N,6855μm,1.2s
AOI Ancona 0.66 24 P **Pb 03 32 51.4 -0.7**
FRON Frontone 0.68 327 P **Pg 03 32 50.1 -1.1**
FRON S **Sg 03 33 01.1 +1.0**
FRON AML AML
comp=N,5235μm,1.3s
FRON AML AML
comp=E,3800μm,1.4s
FIAM Fiamignano 0.69 187 P **Pg 03 32 51.0 -0.4**
ATTE AVT- Monte Tez 0.69 291 P **Pg 03 32 52.1 +0.6**
PCRO Pietralacroce 0.69 18 P **Pb 03 32 52.9 +0.3**
ATLO AVT- Montelove 0.71 301 P **Pg 03 32 50.6 -1.2**
VCEL Villa Celiera 0.71 141 P **Pb 03 32 52.2 -0.8**
ATBU Serra di Buran 0.73 316 P **Pg 03 32 51.5 -0.7**
ATVO AVT- Monte Val 0.74 306 P **Pg 03 32 51.2 -1.3**
ATVO AML AML
comp=E,3165μm,1.1s
ATVO AML AML
comp=N,3355μm,1.5s
MPAG Monte Paganucc 0.76 333 P **Pg 03 32 52.1 -0.8**
MPAG AML AML
comp=E,3335μm,1.6s
MPAG AML AML
comp=N,4075μm,1.1s
MPAG AML AML
comp=E,3330μm,1.6s
MPAG AML AML
comp=N,4070μm,1.1s
MPAG AML AML
comp=E,3620μm,1.2s
MPAG AML AML
comp=N,4425μm,0.9s
ATVA AVT- Monte Val 0.77 296 P **Pg 03 32 52.1 -0.8**
PIEI Pieia 0.78 319 P **Pg 03 32 51.9 -1.3**
PIEI AML AML
comp=E,1865μm,0.4s
PIEI AML AML
comp=N,2695μm,1.4s
ATPI Pietralunga - 0.79 310 P **Pg 03 32 52.2 -1.1**
FSSB Fossombrone 0.81 336 P **Pg 03 32 52.9 -0.9**
MGAB Montegabbione 0.83 268 P **Pg 03 32 53.6 -0.4**
T0110 Collepietro 0.83 151 P **Pb 03 32 53.5 -1.5**
T0110 AML AML
comp=N,5190μm,0.5s
T0110 AML AML
comp=E,9680μm,0.5s
SRES S.Oreste - Sor 0.89 217 P **Pg 03 32 54.1 -1.2**
PTQR Pietraquaria 0.94 172 P **Pn 03 32 57.7 -0.2**
SACS San Casciano d 0.98 264 P **Pg 03 32 56.6 -0.4**
SACS AML AML
comp=E,2315μm,1.3s
SACS AML AML
comp=N,3395μm,1.1s
SACS AML AML
comp=E,2340μm,1.3s
SACS AML AML
comp=N,3395μm,1.1s
MTCE Montecelio 1.00 202 P **Pb 03 32 58.0 +0.2**
CAFI Castiglion Fio 1.00 293 P **Pg 03 32 57.0 -0.4**
CERT Cerreto 1.02 191 P **Pb 03 32 58.6 +0.4**
VVLD Villa Vallelon 1.12 165 P **Pn 03 33 01.3 +0.9**
LPEL Lama dei Pelig 1.14 142 P **Pn 03 33 01.2 +0.5**
MCIV Monte Civitell 1.16 262 P **Pg 03 32 59.8 -0.7**
SF13 Bagnolo 1.20 264 P **Pg 03 33 00.4 -0.7**
TOLF Tolfa 1.27 226 P **Pg 03 33 01.6 -1.0**
POFI Posta Fibreno 1.28 164 P **Pn 03 33 03.7 +1.1**
LRP Arpino 1.33 169 P **Pn 03 33 04.2 +1.0**
ASQU Asqua 1.35 309 P **Pn 03 33 04.1 +0.5**
SFI Santa Sofia 1.39 314 P **Pn 03 33 04.3 +0.3**
GIUL Giuliano Di Ro 1.39 179 P **Pg 03 33 02.8 -2.1**
CERA Filignano 1.47 156 P **Pb 03 33 05.2 -0.7**
MIDA Miranda 1.51 150 P **Pb 03 33 07.1 +0.5**
CSNT Castellina Chi 1.51 291 P **Pn 03 33 05.1 -0.7**
TRIV Trivento 1.53 140 P **Pb 03 33 07.4 +0.5**
FROS Frosini 1.54 280 P **Pn 03 33 06.2 0.0**
OSSC Osservatorio P 1.56 292 P **Pn 03 33 04.4 -2.1**
MAON Monte Argentar 1.64 252 P **Pn 03 33 05.7 -1.7**
BRIS BRISIGHELLA 1.73 314 P **Pn 03 33 09.0 +0.2**
CASP Castiglione de 1.75 266 P **Pn 03 33 07.4 -1.6**
CASP AML AML
comp=E,185μm,1.6s
CASP AML AML
comp=N,180μm,1.6s
MYKA Terra Mystica 3.69 4 *e*Pn **Pn 03 33 35.5 -0.2**
comp=N,2.3nm,0.2s
ABTA Abfaltersbach 3.83 353 *e*Pn **Pn 03 33 38.6 +0.9**
comp=N,27nm,0.5s
FETA Feichten 4.44 337 *e*Pn **Pn 03 33 47.1 +1.0**
comp=N,7.9nm,0.4s
WTTA Wattenberg 4.46 346 *e*Pn **Pn 03 33 47.6 +1.2**
comp=N,12nm,0.4s
SQTA Sankt Quirin 4.50 342 *e*Pn **Pn 03 33 48.5 +1.6**
comp=N,12nm,0.3s
DAVOX Davos/Dischmat 4.51 329 Pn **Pn 03 33 49.6 +2.5**
comp=N,4.0nm,0.3s,baz=305,slow=7.9,SNR=8.5
DAVOX Sn **Sn 03 34 41.6 +1.7**
comp=N,0.7nm,0.3s,baz=116,slow=23,SNR=1.3
comp=N,20nm,0.4s
WATA Walderalm 4.54 346 *e*Pn **Pn 03 33 49.0 +1.5**
comp=N,3.2nm,0.2s
MOTA Moosalm 4.64 342 *e*Pn **Pn 03 33 50.8 +1.9**
comp=N,22nm,0.6s
BIOA Bad Ischl, Aus 4.75 3 *e*Pn **Pn 03 33 51.5 +1.3**
comp=N,6.1nm,0.3s
RETA Reutte 4.86 340 *e*Pn **Pn 03 33 53.7 +1.9**
comp=N,8.9nm,0.4s
DAVA Damuels 4.94 332 *e*Pn **Pn 03 33 52.6 -0.4**
comp=N,8.5nm,0.4s
MOA Molln 4.95 8 *e*Pn **Pn 03 33 53.1 +0.1**
comp=N,0.7nm,0.1s
CONA Conrad Observa 5.31 19 *e*Pn **Pn 03 33 58.0 0.0**
comp=N,2.4nm,0.4s
VAE Valguarnera 5.54 170 Pn **Pn 03 34 04.3 +3.2**
comp=N,0.4nm,0.3s,baz=199,slow=20,SNR=1.0
comp=N,9.0nm,1.0s
GERES GERESS Array B 5.90 3 Pn **Pn 03 34 06.0 -0.2**
comp=N,0.5nm,0.3s,baz=175,slow=13,SNR=3.7
GERES Sn **Sn 03 35 12.9 -1.2**
comp=N,1.1nm,0.3s,baz=180,slow=23,SNR=2.6
comp=N,1.8nm,0.6s
CKRC Cesky Krumlov 5.92 7 *e*PN **Pn 03 34 05.9 -0.4**
CKRC *e*SN **Sn 03 35 11.8 -2.5**
KHC Kasperske Hory 6.19 2 *e*PN **Pn 03 34 09.5 -0.5**
KHC *e*SN **Sn 03 35 18.5 -2.5**
VRAC Vranov 6.77 19 Pn **Pn 03 34 19.4 +1.4**
comp=N,0.2nm,0.3s,baz=194,slow=18,SNR=0.9
VRAC Sn **Sn 03 35 32.4 -2.9**
comp=N,0.3nm,0.3s,baz=314,slow=18,SNR=1.3
comp=N,2.1nm,0.8s
NKC Novy Kostel 7.30 356 *e*SN **Sn 03 35 46.1 -2.4**
KEST Kesra 7.81 204 Pn **Pn 03 34 35.0 +2.7**
comp=N,0.1nm,0.3s,baz=5.0,slow=4.3,SNR=2.1
comp=N,2.9nm,1.0s
BRG Berggiesshubel 7.94 3 *e*(P) Pn 03 34 41.5 +7.5
BRG Amp 03 34 44.1
comp=Z,2.6nm,0.7s
BRG *ex* x 03 35 58.4
BRG *ex* x 03 36 36.4
BRG Amp 03 37 22.2
comp=Z,14nm,1.1s
CLL Collm 8.36 359 *e*Pn **Pn 03 34 40.0 +0.2**
CLL *e*Sn Sn 03 36 00.0 -14
CLL *ex* x 03 36 16.0
CLL *ex* x 03 36 41.0
CLL *e*Sg **Sg 03 36 59.0 -7.4**
comp=Z,25nm,1.3s
ESDC Sonseca Array 13.34 262 Pn **Pn 03 35 50.4 +2.4**
comp=Z,0.3nm,0.9s,baz=72,slow=12,SNR=1.8
AKASG Malin Array Be 13.39 49 Pn **Pn 03 35 45.8 -2.7**
comp=Z,0.3nm,0.3s,baz=297,slow=21,SNR=1.7
comp=Z,0.1nm,0.3s
BRTR Keskin Array B 15.66 95 Pn **Pn 03 36 19.7 +0.4**
baz=310,slow=11,SNR=1.3
comp=Z,0.5nm,1.0s
EKA Eskdalemuir Ar 16.33 325 Pn **Pn 03 36 29.5 +1.6**
baz=131,slow=14
comp=Z,0.3nm,0.5s
HFS Hagfors 17.21 1 LR LR 03 43 33.0
comp=Z,72nm,19.6s,baz=223,slow=38
NOA NORSAR Array B 18.16 357 P **P 03 36 53.0 +2.0**
baz=176,slow=11,SNR=2.1
comp=Z,0.6nm,0.8s
FINES FINESS Array B 20.05 18 P **P 03 37 11.8 +0.2**
comp=Z,0.1nm,0.3s,baz=198,slow=13,SNR=1.5
comp=Z,2.0nm,0.9s
TORD Torodi Ar. Bea 31.33 202 P **P 03 39 00.3 +1.1**
comp=Z,0.7nm,1.0s,baz=14,slow=8.9,SNR=3.7
comp=Z,0.7nm,1.0s
MKAR Makanchi Array 47.65 60 P **P 03 41 15.1 +0.1**
comp=Z,1.0nm,0.7s,baz=299,slow=6.4,SNR=6.1
comp=Z,1.0nm,0.7s
ILAR Eielson Array 71.49 351 P **P 03 44 00.9 +1.8**
comp=Z,0.5nm,0.9s,baz=18,slow=3.1,SNR=4.4
comp=Z,0.5nm,0.9s

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*ROM **31** 03:37:46.2±0.0, 42°.720N±0°.003×13°.190E±0°.004, h10km, ML3.0/46, Error ellipse: s-maj=0.3km s-min=0.2km az=55.0*
*IDC **31** 03:37:47.0±2.2, 42°.81N×13°.66E, h0km, mb3.2/1, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=59.5km s-min=15.5km az=97.0*
*PRU **31** 03:37:48.7±0.0, 42°.65N×13°.53E, h10km*
ISC 31 03:37:47.4±0.8, **42°.72N**±0°.01×**13°.21E**±0°.02, **h8**km±5km, **n85**, σ1.9**02**/121, **15C-15D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.07**	**152**	P	**Pg**	**03 37 49.1**	**-0.3**
T1201				S	**Sg**	**03 37 51.1**	**+0.3**
T1204	**Amatrice, Fraz**	**0.09**	**118**	⇑P	**Pg**	**03 37 49.5**	**-0.3**
T1204				S	**Sg**	**03 37 51.6**	**+0.2**
T1204				AML	AML		
	comp=E,22300μm,0.9s						
T1204				AML	AML		
	comp=N,12850μm,1.2s						
T1204				AML	AML		
	comp=E,22250μm,0.9s						
T1204				AML	AML		
	comp=N,12850μm,0.8s						
SMA1	**SAN MARTINO**	**0.13**	**133**	P	**Pg**	**03 37 50.1**	**-0.2**
SMA1				S	**Sg**	**03 37 52.8**	**+0.5**
T1245	**Castelsantange**	**0.14**	**355**	P	**Pg**	**03 37 49.8**	**-0.6**
T1245				S	**Sg**	**03 37 52.6**	**+0.1**
T1245				AML	AML		
	comp=N,35500μm,1.6s						
T1245				AML	AML		
	comp=E,36250μm,0.3s						
T1245				AML	AML		
	comp=N,37250μm,1.6s						
T1245				AML	AML		
	comp=E,36300μm,0.3s						
T1245				AML	AML		
	comp=N,37250μm,1.6s						
T1245				AML	AML		
	comp=N,37200μm,1.6s						
T1245				AML	AML		
	comp=N,37250μm,0.4s						
T1245				AML	AML		
	comp=E,36400μm,0.4s						
T1245				AML	AML		
	comp=N,35500μm,0.4s						
LNSS	**Leonessa**	**0.17**	**226**	P	**Pg**	**03 37 50.5**	**-0.4**
LNSS				S	**Sg**	**03 37 53.5**	**+0.2**
T1243	**Rocca Santa Ma**	**0.18**	**98**	P	**Pg**	**03 37 50.7**	**-0.4**
T1243				S	**Sg**	**03 37 54.0**	**+0.3**
MMO1	**Montemonaco**	**0.20**	**27**	P	**Pg**	**03 37 51.1**	**-0.3**
MMO1				S	**Sg**	**03 37 54.5**	**+0.2**
T1217	**Poggiodomo (PG**	**0.20**	**268**	P	**Pg**	**03 37 50.8**	**-0.6**
T1217				S	**Sg**	**03 37 54.3**	**0.0**
T1217				AML	AML		
	comp=E,7190μm,0.5s						

T1217 AML AML
comp=N,7750µm,0.3s
T1217 AML AML
comp=E,7230µm,0.5s
T1217 AML AML
comp=N,7740µm,0.3s
T1217 AML AML
comp=E,7235µm,0.5s
T1217 AML AML
comp=N,7290µm,0.2s
T1217 AML AML
comp=N,7710µm,0.3s
T1217 AML AML
comp=E,7190µm,0.5s
T1217 AML AML
comp=E,7230µm,0.5s
RM33 Pellescritta (0.21 178 P Pg 03 37 51.3 -0.4
RM33 S **Sg 03 37 54.8 +0.2**
RM33 AML AML
comp=N,6735µm,0.4s
RM33 AML AML
comp=N,6935µm,0.4s
RM33 AML AML
comp=E,6450µm,0.4s
RM33 AML AML
comp=N,6940µm,0.4s
RM33 AML AML
comp=E,6035µm,0.4s
RM33 AML AML
comp=N,6940µm,1.6s
RM33 AML AML
comp=N,6735µm,1.6s
T1241 Roccafluvione, 0.21 51 P Pg 03 37 51.4 -0.3
T1241 S **Sg 03 37 55.2 +0.5**
T1241 AML AML
comp=E,11415µm,0.6s
T1241 AML AML
comp=N,12500µm,0.7s
T1241 AML AML
comp=E,11100µm,1.0s
T1241 AML AML
comp=N,12700µm,0.5s
T1241 AML AML
comp=E,11400µm,0.7s
T1241 AML AML
comp=N,12500µm,0.7s
T1241 AML AML
comp=E,11400µm,0.6s
T1241 AML AML
comp=N,12450µm,0.7s
T1241 AML AML
comp=E,11400µm,1.4s
T1216 Preci, Frazion 0.22 321 P Pg 03 37 51.0 -0.7
T1216 S **Sg 03 37 54.7 0.0**
T1216 AML AML
comp=N,12832µm,1.5s
CAMP Campotosto 0.24 141 P Pg 03 37 51.8 -0.3
CAMP S **Sg 03 37 55.8 +0.4**
T1246 Crognaleto (TE 0.25 123 P Pg 03 37 52.1 -0.4
T1246 S **Sg 03 37 56.4 +0.6**
T1215 Vallo di Nera, 0.26 288 P Pg 03 37 51.9 -0.7
T1215 S **Sg 03 37 56.0 0.0**
T1215 AML AML
comp=E,3770µm,0.3s
T1215 AML AML
comp=E,3770µm,1.1s
T1215 AML AML
comp=N,3230µm,0.2s
T1215 AML AML
comp=E,3780µm,1.1s
T1215 AML AML
comp=N,3235µm,0.2s
T1215 AML AML
comp=N,3175µm,0.8s
T1215 AML AML
comp=N,3175µm,0.7s
T1215 AML AML
comp=E,3775µm,0.3s
T1215 AML AML
comp=E,3790µm,1.1s
T1215 AML AML
comp=E,3795µm,1.1s
FEMA Monte Fema 0.27 335 P Pg 03 37 52.2 -0.5
FEMA S **Sg 03 37 56.3 0.0**
FEMA AML AML
comp=E,9560µm,1.0s
FEMA AML AML
comp=N,5990µm,1.1s
FEMA AML AML
comp=E,9551µm,0.9s
AM05 Amandola Campo 0.28 23 P Pg 03 37 53.0 +0.1
AM05 S **Sg 03 37 57.7 +1.0**
AM05 AML AML
comp=E,3185µm,0.2s
AM05 AML AML
comp=E,10555µm,0.8s
AM05 AML AML
comp=N,570µm,1.1s
AM05 AML AML
comp=E,10550µm,0.8s
AM05 AML AML
comp=N,569µm,1.1s
AM05 AML AML
comp=E,3180µm,0.2s
AM05 AML AML
comp=E,10560µm,0.8s
AM05 AML AML
comp=N,2405µm,0.3s
AM05 AML AML
comp=E,10550µm,1.2s
AM05 AML AML
comp=N,2405µm,1.7s
AM05 AML AML
comp=N,569µm,0.9s
T1247 Pizzolo (AQ) 0.29 166 P Pg 03 37 53.0 -0.1
T1247 S **Sg 03 37 57.6 +0.8**
T1247 AML AML
comp=N,5660µm,0.4s
T1247 AML AML
comp=N,5660µm,1.6s
T1247 AML AML
comp=E,4255µm,0.5s
TERO Teramo 0.31 108 P Pg 03 37 53.0 -0.5
TERO S **Sb 03 37 58.0 -2.4**
TERO AML AML
comp=N,5350µm,0.4s
TERO AML AML
comp=E,4680µm,0.6s
TERO AML AML
comp=N,5585µm,0.4s
TERO AML AML
comp=E,4440µm,0.7s
TERO AML AML
comp=E,4440µm,1.3s
T1211 Morro Reatino 0.32 234 P Pg 03 37 52.9 -0.8
T1211 S **Sg 03 37 58.2 +0.3**
ARRO Arrone 0.35 247 P Pg 03 37 53.7 -0.6
ARRO AML AML
comp=E,2695µm,0.3s
ARRO AML AML
comp=N,2575µm,0.5s
ARRO AML AML
comp=N,2580µm,0.5s
ARRO AML AML
comp=E,2690µm,0.3s
GUMA Gualdo di Mace 0.35 16 P Pg 03 37 54.2 -0.1
GUMA S **Sb 03 38 00.8 -1.0**
GUMA AML AML
comp=E,36600µm,0.4s
GUMA AML AML
comp=N,35400µm,1.5s
GUMA AML AML
comp=E,53050µm,0.4s
GUMA AML AML
comp=N,33050µm,0.5s
GUMA AML AML
comp=E,36650µm,0.4s
CSP1 Cessapalombo 0.37 360 ⇓P Pg 03 37 54.1 -0.5
CSP1 AML AML
comp=N,5135µm,0.9s
CSP1 AML AML
comp=E,3765µm,0.9s
CSP1 AML AML
comp=N,5130µm,0.9s
CSP1 AML AML
comp=E,3765µm,1.1s
CSP1 AML AML
comp=N,5135µm,1.1s
GIGS Gran Sasso 0.38 135 P Pg 03 37 54.2 -0.7
GIGS S **Sg 03 37 59.9 0.0**
GIGS AML AML
comp=N,628µm,0.8s
GIGS AML AML
comp=N,629µm,0.8s
GIGS AML AML
comp=E,720µm,0.8s
GIGS AML AML
comp=E,720µm,1.2s
AQU L'Aquila 0.39 158 P Pg 03 37 54.7 -0.4
AQU AML AML
comp=E,1980µm,1.1s
AQU AML AML
comp=E,1975µm,1.1s
AQU AML AML
comp=N,1870µm,1.0s
AQU AML AML
comp=E,1940µm,1.1s
AQU AML AML
comp=N,2035µm,0.9s
OFFI Offida 0.41 59 P Pb 03 37 55.8 -1.2
OFFI AML AML
comp=E,6005µm,0.6s
OFFI AML AML
comp=N,7175µm,0.6s
FIAM Fiamignano 0.46 188 P Pg 03 37 55.5 -0.8
FIAM AML AML
comp=E,1165µm,0.7s
FIAM AML AML
comp=N,1375µm,1.0s
FIAM AML AML
comp=N,1375µm,1.0s
FIAM AML AML
comp=E,1165µm,1.3s
MNTP Montappone 0.46 25 ⇓P Pb 03 37 57.2 -0.6
MNTP AML AML
comp=E,7865µm,1.2s
MNTP AML AML
comp=E,7865µm,0.8s
MNTP AML AML
comp=N,5060µm,0.2s
SEF1 Sefro 0.47 336 S Sg 03 38 04.0 +1.4
CESX Cesi 0.47 257 P Pg 03 37 55.5 -1.0
CESX AML AML
comp=N,2595µm,0.3s
CESX AML AML
comp=E,2775µm,0.4s
CESX AML AML
comp=E,2775µm,1.6s
ASSB Assisi San Ben 0.52 309 P Pg 03 37 56.3 -1.0
ASSB S **Sg 03 38 04.2 +0.1**
ASSB AML AML
comp=E,2720µm,1.0s
ASSB AML AML
comp=N,3145µm,0.4s
ASSB AML AML
comp=N,3145µm,1.6s
ASSB AML AML
comp=E,2720µm,1.0s
TRTR Tortoreto Alta 0.53 80 ⇑P Pb 03 37 58.2 -0.7
TRTR AML AML
comp=N,4975µm,0.6s
TRTR AML AML
comp=E,6130µm,0.4s
TRTR AML AML
comp=E,6130µm,1.6s
TRTR AML AML
comp=N,4975µm,1.4s
FAGN Fagnano 0.53 148 P Pg 03 37 57.0 -0.7
FAGN AML AML
comp=E,3355µm,0.6s
FAGN AML AML
comp=N,3685µm,1.6s
FAGN AML AML
comp=N,3685µm,0.4s
SNTG Esanatoglia 0.57 340 ⇓P Pg 03 37 57.8 -0.6
SNTG S **Sg 03 38 07.0 +1.2**
SNTG AML AML
comp=E,744µm,0.3s
SNTG AML AML
comp=N,1166µm,1.2s
SNTG AML AML
comp=N,1164µm,1.2s
SNTG AML AML
comp=N,1150µm,1.2s
SNTG AML AML
comp=E,732µm,0.6s
SNTG AML AML
comp=N,1162µm,1.2s
SNTG AML AML
comp=E,732µm,1.4s
SNTG AML AML
comp=E,744µm,0.3s
VCEL Villa Celiera 0.57 125 P Pg 03 37 57.9 -0.6
VCEL AML AML
comp=N,3655µm,0.9s
VCEL AML AML
comp=N,3650µm,0.9s
VCEL AML AML
comp=E,2710µm,0.4s
VCEL AML AML
comp=N,3650µm,1.1s
EL6 Elcito 0.61 353 S Sb 03 38 09.0 -0.3
ATCC AVT- Casa Cast 0.62 318 ⇑P Pg 03 37 58.4 -1.0
ATCC S **Sb 03 38 09.0 -0.5**
ATCC AML AML
comp=E,1970µm,0.3s
ATCC AML AML
comp=N,8300µm,0.7s
ATCC AML AML
comp=N,8290µm,0.7s
T0110 Collepietro 0.65 139 P Pg 03 37 59.0 -0.9
T0110 AML AML
comp=E,2380µm,0.5s
T0110 AML AML
comp=N,2505µm,0.6s
T0110 AML AML
comp=N,2505µm,1.4s
FOSV Fossato di Vic 0.66 331 ⇓P Pg 03 37 59.0 -1.1
FOSV S **Sb 03 38 10.0 -0.6**
FOSV AML AML
comp=E,714µm,0.5s
FOSV AML AML
comp=N,1029µm,1.3s
FOSV AML AML
comp=N,1028µm,1.3s
SRES S.Oreste - Sor 0.71 227 ⇑P Pg 03 38 00.7 -0.3
SRES S **Sb 03 38 12.0 +0.2**
SRES AML AML
comp=E,722µm,0.4s
SRES AML AML
comp=N,640µm,0.4s
PP3 Marolino 0.72 24 ⇓P Pb 03 38 01.6 -0.6
PP3 AML AML
comp=N,6670µm,0.4s
PP3 AML AML
comp=N,6665µm,0.4s
PP3 AML AML
comp=N,6395µm,0.4s
PP3 AML AML
comp=E,6795µm,0.5s
PP3 AML AML
comp=E,6450µm,0.5s
MURB Monte Urbino 0.74 318 ⇓P Pg 03 38 01.0 -0.5
MURB S **Sb 03 38 13.0 +0.2**
MURB AML AML
comp=E,2770µm,1.1s
MURB AML AML
comp=N,2940µm,0.3s
MURB AML AML
comp=E,2770µm,1.2s
MURB AML AML
comp=E,3080µm,0.3s
MURB AML AML
comp=N,2780µm,0.3s
MURB AML AML
comp=E,2770µm,0.8s
ATTE AVT- Monte Tez 0.79 308 S Sg 03 38 14.0 +1.3
ATFO Monte Foce - G 0.80 324 ⇑P Pg 03 38 01.7 -1.0
ATFO AML AML
comp=N,757µm,0.4s
ATFO AML AML
comp=N,758µm,0.4s
ATFO AML AML
comp=E,867µm,0.2s
ATFO AML AML
comp=N,758µm,1.6s
ARVD Arcevia 0.80 346 ⇑P Pg 03 37 59.5 -3.3
ARVD S **Sb 03 38 15.0 +0.4**
MGAB Montegabbione 0.83 284 P Pg 03 38 03.1 -0.1
MGAB AML AML
comp=E,2285µm,0.7s
MGAB AML AML
comp=N,1720µm,1.1s
MGAB AML AML
comp=N,1820µm,1.1s
MGAB AML AML
comp=E,2270µm,0.7s
MGAB AML AML
comp=E,2285µm,1.3s
MGAB AML AML
comp=E,2270µm,1.3s
FRON Frontone 0.87 336 ⇓P Pg 03 38 02.7 -1.4
FRON AML AML
comp=E,450µm,0.4s
FRON AML AML
comp=N,666µm,0.4s
FRON AML AML
comp=N,666µm,1.6s
FRON AML AML
comp=E,450µm,1.6s
ATVO AVT- Monte Val 0.88 319 ⇓P Pg 03 38 02.9 -1.5
ATVO S **Sg 03 38 16.0 +0.2**
ATVO AML AML
comp=N,581µm,0.7s
ATVO AML AML
comp=E,598µm,1.0s
ATVO AML AML
comp=N,582µm,0.7s
ATPI Pietralunga - 0.94 321 ⇓P Pg 03 38 04.0 -1.4
ATPI AML AML
comp=E,522µm,0.7s
ATPI AML AML
comp=E,521µm,0.7s
ATPI AML AML
comp=N,410µm,0.5s
ATPI AML AML
comp=E,521µm,1.3s
PIEI Pieia 0.95 329 ⇓P Pg 03 38 04.7 -0.9
PIEI S **Sb 03 38 19.0 0.0**
PIEI AML AML
comp=E,490µm,0.4s
PIEI AML AML
comp=N,360µm,0.3s
PIEI AML AML
comp=E,490µm,1.6s
SACS San Casciano d 0.96 278 ⇑P Pg 03 38 04.8 -1.1
SACS AML AML
comp=N,478µm,0.5s
SACS AML AML
comp=E,586µm,0.4s
SACS AML AML
comp=N,482µm,0.7s
SACS AML AML
comp=N,482µm,1.3s
SACS AML AML
comp=E,592µm,0.4s
MPAG Monte Paganucc 0.96 340 ⇓P Pg 03 38 04.5 -1.4
MPAG S **Sn 03 38 21.0 -0.3**
MPAG AML AML
comp=N,517µm,0.4s
MPAG AML AML
comp=E,631µm,0.6s
CAFR Castel Frentan 0.98 120 ⇑P Pg 03 38 05.2 -1.0
CAFR AML AML
comp=E,492µm,1.6s
CAFR AML AML
comp=N,477µm,0.6s
CAFR AML AML
comp=E,492µm,0.4s
LPEL Lama dei Pelig 0.99 133 ⇑P Pg 03 38 04.8 -1.6
LPEL S **Sn 03 38 21.0 -0.9**
LPEL AML AML
comp=E,692µm,0.7s
LPEL AML AML
comp=N,448µm,1.0s
FSSB Fossombrone 1.02 342 ⇑P Pb 03 38 05.7 -1.7
FSSB AML AML
comp=N,2180µm,0.3s
FSSB AML AML
comp=E,1740µm,0.3s
LATE Laterza 1.04 265 ⇑P Pb 03 38 06.8 -0.8
BADI Badiali 1.06 319 ⇑P Pb 03 38 06.5 -1.5
CAFI Castiglion Fio 1.09 304 ⇓P Pb 03 38 07.3 -1.2
CAFI S **Sn 03 38 24.0 -0.4**
CAFI AML AML
comp=N,486µm,0.5s
CAFI AML AML
comp=E,397µm,0.5s
TOLF Tolfa 1.11 234 ⇑P Pb 03 38 07.2 -1.6
TOLF AML AML
comp=E,278µm,0.7s
TOLF AML AML
comp=N,339µm,0.4s
TOLF AML AML
comp=E,278µm,1.3s
MCIV Monte Civitell 1.13 273 ⇓P Pb 03 38 08.4 -0.8
MCIV AML AML
comp=E,302µm,0.4s
MCIV AML AML
comp=N,264µm,0.7s
MCIV AML AML
comp=E,302µm,1.6s
MCIV AML AML
comp=N,264µm,1.3s
SF04 Casetta 1.14 276 P Pb 03 38 08.8 -0.6
GIUL Giuliano Di Ro 1.16 178 ⇓P Pg 03 38 10.8 +1.1
ARCI Arcidosso 1.28 276 ⇑P Pn 03 38 11.5 -0.2
ARCI AML AML
comp=N,90µm,0.3s
ARCI AML AML
comp=E,106µm,0.6s
PTRJ Pietraroja 1.68 144 P Pb 03 38 17.1 -1.4
PTRJ S **Sn 03 38 37.0 -1.9**
PTRJ AML AML
comp=E,1530µm,1.5s
PTRJ AML AML
comp=N,2390µm,0.8s
TRIF Trifonti 1.74 284 ⇓P Pn 03 38 18.0 +0.1
TRIF AML AML
comp=N,77µm,0.7s
TRIF AML AML
comp=E,87µm,0.8s
CGRP Cima Grappa 3.32 343 ⇑P Pn 03 38 40.3 +0.5
OBKA Obir 3.91 14 *e*Pn Pn 03 38 48.3 +0.5
comp=E,0.6nm,0.2s
ABTA Abfaltersbach 4.06 353 *e*Pn Pn 03 38 50.2 +0.3
comp=E,2.0nm,0.3s,SNR=19
SOKA Soboth 4.17 18 *e*Pn Pn 03 38 52.9 +1.6
comp=E,1.1nm,0.4s
FETA Feichten 4.65 339 *i* Pn Pn 03 38 60.0 +2.0
comp=E,2.0nm,0.5s
WTTA Wattenberg 4.68 347 *e*Pn Pn 03 38 59.5 +1.1
comp=E,0.4nm,0.2s
DAVOX Davos/Dischmat 4.70 331 Pn Pn 03 38 59.4 +0.7
comp=E,0.8nm,0.3s,baz=161,slow=18,SNR=9.1
DAVOX Sn **Sn 03 39 56.6 +3.0**
comp=E,0.7nm,0.3s,baz=150,slow=20,SNR=2.0
comp=E,6.4nm,0.7s
SQTA Sankt Quirin 4.72 343 *e*Pn Pn 03 39 00.9 +1.9
comp=E,2.6nm,0.3s
WATA Walderalm 4.76 347 *e*Pn Pn 03 39 01.4 +1.9
comp=E,2.3nm,0.4s
MOTA Moosalm 4.86 343 *e*Pn Pn 03 39 01.8 +0.9
comp=E,1.9nm,0.4s
BIOA Bad Ischl, Aus 4.98 3 *e*Pn Pn 03 39 04.1 +1.6
comp=E,1.3nm,0.3s
RETA Reutte 5.07 341 *e*Pn Pn 03 39 05.7 +1.9
comp=E,0.5nm,0.3s
DAVA Damuels 5.14 334 *e*Pn Pn 03 39 06.4 +1.6
comp=E,0.7nm,0.3s
MOA Molln 5.18 8 *e*Pn Pn 03 39 05.9 +0.7
comp=E,0.7nm,0.3s
RONA Rosalia, Austr 5.44 23 *e*Pn Pn 03 39 09.4 +0.7
comp=E,0.4nm,0.2s
CONA Conrad Observa 5.53 19 *e*Pn Pn 03 39 11.1 +1.0
comp=E,1.2nm,0.3s
GERES GERESS Array B 6.13 3 Pn Pn 03 39 18.2 -0.2
comp=E,0.2nm,0.3s,baz=180,slow=14,SNR=3.3
GERES Sn **Sn 03 40 27.8 -1.0**
comp=E,0.8nm,0.3s,baz=176,slow=25,SNR=7.6
comp=E,0.3nm,0.3s

CKRC	**Cesky Krumlov**	**6.15**	**7**	*e*SN	**Sn**	**03 40 28.8 -0.2**
KHC	**Kasperske Hory**	**6.42**	**2**	*e*PN	**Pn**	**03 39 23.7 +1.5**
KHC				*e*SN	**Sn**	**03 40 34.1 -1.5**
KEST	**Kesra**	**7.59**	**204**	Pn	Pn	03 39 43.8 +5.4
	comp=E,0.1nm,0.3s,baz=23,slow=6.0,SNR=1.1					
	comp=E,2.8nm,1.0s					
TORD	**Torodi Ar. Bea**	**31.11**	**202**	P	**P**	**03 44 08.5 +2.2**
	comp=E,0.3nm,0.8s,baz=12,slow=9.1,SNR=2.5					
	comp=E,0.3nm,0.8s					

ROM 31 03:46:59.2±0.1, 42°.795N±0°.004×13°.076E±0°.005,
h10km, ML2.7/19, 7C-5D, Error ellipse: s-maj=0.4km
s-min=0.2km az=310.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.10**	**53**	P	Pg	03 47 02.5	+0.5
T1245				S	Sg	03 47 04.5	+0.5
T1245				AML	AML		
	comp=N,16850μm,0.8s						
T1245				AML	AML		
	comp=E,13400μm,0.3s						
T1245				AML	AML		
	comp=N,16800μm,0.8s						
T1245				AML	AML		
	comp=N,16800μm,0.8s						
T1245				AML	AML		
	comp=E,13250μm,1.4s						
T1245				AML	AML		
	comp=N,17750μm,0.8s						
T1245				AML	AML		
	comp=N,16850μm,0.8s						
T1245				AML	AML		
	comp=E,13250μm,0.6s						
T1245				AML	AML		
	comp=E,13176μm,0.2s						
T1245				AML	AML		
	comp=E,13400μm,0.3s						
T1245				AML	AML		
	comp=E,13400μm,0.3s						
T1245				AML	AML		
	comp=N,16777μm,0.2s						
T1216	**Preci, Frazion**	**0.10**	**336**	P	Pg	03 47 02.4	+0.5
T1216				S	Sg	03 47 04.3	+0.5
T1216				AML	AML		
	comp=E,4950μm,0.1s						
T1216				AML	AML		
	comp=N,7310μm,1.6s						
T1216				AML	AML		
	comp=E,4945μm,0.1s						
T1216				AML	AML		
	comp=N,7325μm,1.6s						
T1216				AML	AML		
	comp=N,7335μm,1.6s						
T1216				AML	AML		
	comp=E,4949μm,0.1s						
T1216				AML	AML		
	comp=N,6375μm,0.2s						
T1216				AML	AML		
	comp=N,7335μm,0.4s						
T1217	**Poggiodomo (PG**	**0.14**	**232**	P	Pg	03 47 02.8	+0.5
T1217				S	Sg	03 47 05.4	+0.8
T1217				AML	AML		
	comp=E,2420μm,0.2s						
T1217				AML	AML		
	comp=N,3590μm,1.5s						
T1217				AML	AML		
	comp=E,2385μm,0.2s						
T1217				AML	AML		
	comp=N,3350μm,0.3s						
T1217				AML	AML		
	comp=E,2420μm,0.2s						
T1217				AML	AML		
	comp=N,3585μm,1.5s						
T1217				AML	AML		
	comp=E,2380μm,0.2s						
T1217				AML	AML		
	comp=N,3350μm,0.3s						
T1217				AML	AML		
	comp=E,3723μm,0.2s						
T1217				AML	AML		
	comp=N,6380μm,0.2s						
T1217				AML	AML		
	comp=E,3735μm,0.2s						
T1217				AML	AML		
	comp=E,2421μm,0.2s						
T1217				AML	AML		
	comp=N,3434μm,0.3s						
T1217				AML	AML		
	comp=N,3351μm,0.3s						
T1217				AML	AML		
	comp=N,6365μm,0.3s						
T1217				AML	AML		
	comp=E,2381μm,0.2s						
T1215	**Vallo di Nera,**	**0.15**	**273**	P	Pg	03 47 03.1	+0.5
T1215				S	Sg	03 47 05.8	+0.7
T1215				AML	AML		
	comp=E,2160μm,0.8s						
T1215				AML	AML		
	comp=E,2185μm,0.8s						
T1215				AML	AML		
	comp=E,2165μm,0.8s						
T1215				AML	AML		
	comp=N,1960μm,0.4s						
T1215				AML	AML		
	comp=E,2185μm,0.8s						
T1215				AML	AML		
	comp=N,2005μm,0.4s						
T1215				AML	AML		
	comp=E,2180μm,0.8s						
T1215				AML	AML		
	comp=N,2006μm,0.4s						
T1215				AML	AML		
	comp=N,1965μm,0.4s						
T1215				AML	AML		
	comp=N,1902μm,0.1s						
T1215				AML	AML		
	comp=N,1965μm,1.6s						
T1215				AML	AML		
	comp=N,2006μm,1.6s						
T1215				AML	AML		
	comp=E,2051μm,0.2s						
T1215				AML	AML		
	comp=E,2032μm,0.2s						
T1215				AML	AML		
	comp=E,2160μm,0.8s						
T1215				AML	AML		
	comp=N,1942μm,0.1s						
FEMA	**Monte Fema**	**0.17**	**353**	P	Pg	03 47 03.5	+0.5
FEMA				S	Sg	03 47 06.4	+0.9
FEMA				AML	AML		
	comp=E,3445μm,1.0s						
FEMA				AML	AML		
	comp=E,4320μm,1.2s						
FEMA				AML	AML		
	comp=N,2316μm,0.2s						
FEMA				AML	AML		
	comp=N,3350μm,0.7s						
FEMA				AML	AML		
	comp=E,2970μm,0.2s						
FEMA				AML	AML		
	comp=E,4320μm,0.8s						
LNSS	**Leonessa**	**0.19**	**188**	P	Pg	03 47 03.9	+0.6
LNSS				S	Sg	03 47 07.3	+1.2
MMO1	**Montemonaco**	**0.21**	**60**	P	Pg	03 47 04.1	+0.5
MMO1				S	Sg	03 47 07.8	+1.1
T1204	**Amatrice, Fraz**	**0.21**	**124**	AML	AML		
	comp=N,9970μm,0.1s						
T1204				AML	AML		
	comp=E,14800μm,0.5s						
SMA1	**SAN MARTINO**	**0.25**	**131**	AML	AML		
	comp=E,982μm,0.3s						
SMA1				AML	AML		
	comp=E,982μm,0.3s						
SMA1				AML	AML		
	comp=N,1190μm,1.1s						
SMA1				AML	AML		
	comp=N,1185μm,1.1s						
SMA1				AML	AML		
	comp=E,5620μm,0.6s						
SMA1				AML	AML		
	comp=N,4340μm,1.2s						
T1241	**Roccafluvione,**	**0.27**	**77**	P	Pg	03 47 05.2	+0.6
T1241				S	Sg	03 47 09.5	+1.2
AM05	**Amandola Campo**	**0.27**	**48**	⇑P	Pg	03 47 05.4	+0.6
AM05				S	Sb	03 47 09.7	-1.2
AM05				AML	AML		
	comp=E,1225μm,1.0s						
AM05				AML	AML		
	comp=N,426μm,0.1s						
AM05				AML	AML		
	comp=N,1245μm,1.6s						
AM05				AML	AML		
	comp=N,102μm,0.1s						
AM05				AML	AML		
	comp=E,339μm,0.1s						
AM05				AML	AML		
	comp=N,356μm,0.2s						
AM05				AML	AML		
	comp=E,1312μm,0.1s						
AM05				AML	AML		
	comp=E,1225μm,1.0s						
AM05				AML	AML		
	comp=E,4095μm,0.3s						
AM05				AML	AML		
	comp=N,1245μm,0.4s						
RM33	**Pellescritta (**	**0.30**	**160**	P	Pg	03 47 05.8	+0.5
RM33				S	Sb	03 47 10.7	-1.1
T1211	**Morro Reatino**	**0.31**	**212**	⇑P	Pb	03 47 06.1	-0.7
T1211				S	Sb	03 47 11.0	-1.0
T1211				AML	AML		
	comp=E,858μm,1.6s						
T1211				AML	AML		
	comp=N,1645μm,0.3s						
T1211				AML	AML		
	comp=E,872μm,1.6s						
T1211				AML	AML		
	comp=N,1626μm,0.3s						
T1211				AML	AML		
	comp=E,1245μm,0.1s						
T1211				AML	AML		
	comp=E,679μm,0.2s						
T1211				AML	AML		
	comp=N,1622μm,0.3s						
T1211				AML	AML		
	comp=N,1640μm,0.3s						
T1211				AML	AML		
	comp=E,708μm,0.2s						
T1211				AML	AML		
	comp=N,2354μm,0.7s						
T1211				AML	AML		
	comp=E,1285μm,0.1s						
T1211				AML	AML		
	comp=N,2355μm,0.2s						
ARRO	**Arrone**	**0.31**	**227**	⇑P	Pg	03 47 05.9	+0.5
ARRO				S	Sb	03 47 11.4	-0.7
ARRO				AML	AML		
	comp=E,572μm,0.2s						
ARRO				AML	AML		
	comp=N,684μm,0.2s						
ARRO				AML	AML		
	comp=E,573μm,0.2s						
ARRO				AML	AML		
	comp=N,684μm,0.2s						
ARRO				AML	AML		
	comp=N,1300μm,1.2s						
ARRO				AML	AML		
	comp=E,1140μm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**35**	⇑P	Pb	03 47 06.5	-0.7
GUMA				AML	AML		
	comp=E,8115μm,0.3s						
GUMA				AML	AML		
	comp=E,9800μm,0.3s						
GUMA				AML	AML		
	comp=N,6370μm,1.5s						
GUMA				AML	AML		
	comp=N,6730μm,1.5s						
GUMA				AML	AML		
	comp=E,1812μm,0.5s						
GUMA				AML	AML		
	comp=N,1619μm,0.4s						
GUMA				AML	AML		
	comp=E,8115μm,1.7s						
GUMA				AML	AML		
	comp=N,6730μm,0.5s						
GUMA				AML	AML		
	comp=N,6370μm,0.5s						
GUMA				AML	AML		
	comp=N,1811μm,0.4s						
GUMA				AML	AML		
	comp=E,1804μm,0.5s						
SEF1	**Sefro**	**0.36**	**345**	⇑P	Pg	03 47 06.8	+0.3
SEF1				AML	AML		
	comp=E,1170μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.39**	**155**	P	Pb	03 47 08.1	-0.1
ASSB	**Assisi San Ben**	**0.39**	**309**	⇓P	Pg	03 47 07.3	+0.4
ASSB				AML	AML		
	comp=E,348μm,0.5s						
ASSB				AML	AML		
	comp=N,477μm,0.1s						
ASSB				AML	AML		
	comp=N,558μm,0.5s						
ASSB				AML	AML		
	comp=E,529μm,0.3s						
ASSB				AML	AML		
	comp=E,323μm,0.1s						
ASSB				AML	AML		
	comp=N,477μm,0.1s						
CESX	**Cesi**	**0.41**	**243**	⇓P	Pg	03 47 07.2	-0.1
CESX				AML	AML		
	comp=E,428μm,0.3s						
CESX				AML	AML		
	comp=N,606μm,0.2s						
CESX				AML	AML		
	comp=N,799μm,0.2s						
CESX				AML	AML		
	comp=E,728μm,0.2s						
CESX				AML	AML		
	comp=N,606μm,0.2s						
CESX				AML	AML		
	comp=E,428μm,0.3s						
TERO	**Teramo**	**0.42**	**114**	P	Pg	03 47 08.0	+0.5
OFFI	**Offida**	**0.47**	**72**	P	Pb	03 47 09.6	0.0
OFFI				AML	AML		
	comp=E,1565μm,0.4s						
OFFI				AML	AML		
	comp=N,3665μm,0.5s						
OFFI				AML	AML		
	comp=N,3665μm,1.5s						
SNTG	**Esanatoglia**	**0.47**	**348**	⇑P	Pg	03 47 08.6	+0.1
SNTG				AML	AML		
	comp=E,244μm,0.6s						
SNTG				AML	AML		
	comp=N,244μm,0.3s						
SNTG				AML	AML		
	comp=N,364μm,1.4s						
SNTG				AML	AML		
	comp=E,300μm,0.5s						
SNTG				AML	AML		
	comp=N,362μm,1.2s						
SNTG				AML	AML		
	comp=E,244μm,0.2s						
SNTG				AML	AML		
	comp=E,222μm,0.1s						
SNTG				AML	AML		
	comp=N,218μm,0.1s						
SNTG				AML	AML		
	comp=N,210μm,0.1s						
SNTG				AML	AML		
	comp=E,324μm,0.5s						
SNTG				AML	AML		
	comp=N,364μm,0.6s						
GIGS	**Gran Sasso**	**0.50**	**133**	S	Sg	03 47 10.0	-5.6
ATCC	**AVT- Casa Cast**	**0.51**	**321**	⇓P	Pg	03 47 09.3	+0.3
FIAM	**Fiamignano**	**0.53**	**177**	P	Pg	03 47 09.7	+0.2
FIAM				AML	AML		
	comp=N,772μm,0.5s						
FIAM				AML	AML		
	comp=E,140μm,0.8s						
FIAM				AML	AML		
	comp=N,154μm,0.2s						
FIAM				AML	AML		
	comp=E,1310μm,0.6s						
EL6	**Elcito**	**0.54**	**2**	P	Pg	03 47 09.7	+0.1
EL6				S	Sb	03 47 19.0	+0.4
FOSV	**Fossato di Vic**	**0.55**	**335**	⇓P	Pg	03 47 10.2	+0.3
FOSV				AML	AML		
	comp=E,174μm,0.5s						
FOSV				AML	AML		
	comp=N,198μm,0.4s						
FOSV				AML	AML		
	comp=N,345μm,0.3s						
FOSV				AML	AML		
	comp=E,210μm,1.5s						
FOSV				AML	AML		
	comp=N,345μm,1.7s						
FOSV				AML	AML		
	comp=E,210μm,0.5s						
FOSV				AML	AML		
	comp=N,199μm,0.4s						
FOSV				AML	AML		
	comp=E,161μm,0.5s						
VCEL	**Villa Celiera**	**0.69**	**125**	⇑P	Pb	03 47 13.2	-0.2
VCEL				AML	AML		
	comp=N,582μm,0.5s						
VCEL				AML	AML		
	comp=E,680μm,1.4s						
VCEL				AML	AML		
	comp=E,189μm,0.2s						
VCEL				AML	AML		
	comp=E,680μm,0.6s						
VCEL				AML	AML		
	comp=N,192μm,0.2s						
PP3	**Marolino**	**0.70**	**34**	⇓P	Pb	03 47 14.0	+0.5
PP3				AML	AML		
	comp=N,944μm,0.2s						
PP3				AML	AML		
	comp=E,1950μm,0.5s						
PP3				AML	AML		
	comp=E,1875μm,0.5s						
PP3				AML	AML		
	comp=N,904μm,0.2s						
ARVD	**Arcevia**	**0.71**	**352**	S	Sn	03 47 25.0	-1.4
MPAG	**Monte Paganucc**	**0.87**	**345**	S	Sn	03 47 30.0	-0.3
PTRJ	**Pietraroja**	**1.79**	**142**	P	Pn	03 47 28.7	-1.6

ROM 31 03:47:49.0±0.1, 42°.726N±0°.003×13°.234E±0°.004,
h11km±1km, ML2.6/45, 22C-26D, Error ellipse:
s-maj=0.3km s-min=0.1km az=262.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.08**	**129**	⇓P	Pg	03 47 52.1	+0.5
T1204				S	Sg	03 47 54.0	+0.4
T1204				AML	AML		
	comp=N,10010μm,0.1s						
T1204				AML	AML		
	comp=E,14850μm,0.5s						
T1204				AML	AML		
	comp=N,10005μm,0.1s						
T1204				AML	AML		
	comp=N,9970μm,0.1s						
T1204				AML	AML		
	comp=E,14800μm,0.5s						
SMA1	**SAN MARTINO**	**0.12**	**142**	⇓P	Pg	03 47 52.6	+0.5
SMA1				S	Sg	03 47 55.1	+0.7
SMA1				AML	AML		
	comp=E,5620μm,0.6s						
SMA1				AML	AML		
	comp=N,4335μm,1.2s						
SMA1				AML	AML		
	comp=N,4340μm,1.2s						
SMA1				AML	AML		
	comp=N,4340μm,0.8s						
T1245	**Castelsantange**	**0.14**	**345**	⇑P	Pg	03 47 52.1	-0.3
T1245				S	Sg	03 47 55.5	+0.6
T1245				AML	AML		
	comp=E,8465μm,0.2s						
T1245				AML	AML		
	comp=N,13250μm,1.1s						
T1245				AML	AML		
	comp=E,9965μm,0.3s						
T1245				AML	AML		
	comp=N,12200μm,1.1s						
T1245				AML	AML		
	comp=E,8470μm,0.2s						
T1245				AML	AML		
	comp=N,12200μm,0.9s						
T1245				AML	AML		
	comp=N,13250μm,0.9s						
T1243	**Rocca Santa Ma**	**0.16**	**100**	⇓P	Pg	03 47 53.2	+0.5
T1243				S	Sg	03 47 55.9	+0.6
MMO1	**Montemonaco**	**0.19**	**21**	⇓P	Pg	03 47 53.7	+0.5
MMO1				S	Sg	03 47 56.9	+0.9
LNSS	**Leonessa**	**0.19**	**229**	⇑P	Pg	03 47 53.7	+0.5
LNSS				S	Sg	03 47 56.9	+0.9
LNSS				AML	AML		
	comp=N,6720μm,1.5s						
LNSS				AML	AML		
	comp=E,2175μm,0.3s						
T1241	**Roccafluvione,**	**0.20**	**48**	⇑P	Pg	03 47 53.9	+0.6
T1241				S	Sg	03 47 57.1	+0.9
T1241				AML	AML		
	comp=N,2260μm,0.3s						
T1241				AML	AML		
	comp=E,2125μm,1.1s						
T1241				AML	AML		
	comp=E,2130μm,1.1s						
T1241				AML	AML		
	comp=N,2265μm,0.3s						
T1241				AML	AML		
	comp=E,2120μm,1.1s						
T1241				AML	AML		
	comp=N,2235μm,0.3s						
T1241				AML	AML		
	comp=N,2240μm,0.3s						
T1241				AML	AML		
	comp=E,2125μm,1.1s						
RM33	**Pellescritta (**	**0.22**	**184**	⇑P	Pg	03 47 54.2	+0.5
RM33				S	Sg	03 47 57.9	+1.1
RM33				AML	AML		
	comp=E,7800μm,0.2s						
RM33				AML	AML		
	comp=E,7560μm,0.2s						
RM33				AML	AML		
	comp=N,5060μm,0.9s						
RM33				AML	AML		
	comp=N,5290μm,0.9s						
RM33				AML	AML		
	comp=E,7800μm,0.2s						
RM33				AML	AML		
	comp=E,7565μm,0.2s						
T1217	**Poggiodomo (PG**	**0.22**	**267**	⇑P	Pg	03 47 54.2	+0.5
T1217				S	Sg	03 47 57.9	+0.9
T1217				AML	AML		
	comp=E,3720μm,0.2s						
T1217				AML	AML		
	comp=E,3720μm,0.2s						
T1217				AML	AML		
	comp=N,6380μm,0.2s						
T1217				AML	AML		
	comp=E,3735μm,0.2s						
T1217				AML	AML		
	comp=N,6365μm,0.3s						
CAMP	**Campotosto**	**0.23**	**146**	⇓P	Pg	03 47 54.3	+0.4
CAMP				S	Sg	03 47 58.0	+0.9
CAMP				AML	AML		
	comp=N,1580μm,0.2s						
CAMP				AML	AML		
	comp=E,2215μm,0.2s						
T1216	**Preci, Frazion**	**0.23**	**316**	⇓P	Pg	03 47 54.3	+0.4
T1216				AML	AML		
	comp=E,2784μm,1.1s						
T1216				AML	AML		
	comp=N,4255μm,1.2s						
T1216				AML	AML		
	comp=E,2784μm,0.9s						
AM05	**Amandola Campo**	**0.27**	**19**	⇑P	Pb	03 47 55.2	-0.7
AM05				S	Sg	03 47 58.6	+0.4
AM05				AML	AML		
	comp=N,1245μm,1.6s						
AM05				AML	AML		
	comp=E,4090μm,0.3s						
AM05				AML	AML		
	comp=N,426μm,0.1s						
AM05				AML	AML		
	comp=N,1250μm,1.6s						
AM05				AML	AML		
	comp=E,4095μm,0.3s						
AM05				AML	AML		
	comp=E,1220μm,1.0s						
AM05				AML	AML		
	comp=E,1220μm,1.0s						
AM05				AML	AML		
	comp=N,1250μm,0.4s						
FEMA	**Monte Fema**	**0.27**	**330**	P	Pg	03 47 55.1	+0.4
FEMA				S	Sg	03 47 59.5	+1.1
FEMA				AML	AML		
	comp=E,4315μm,1.2s						

FEMA				AML	AML		
	comp=N,2375μm,1.3s						
FEMA				AML	AML		
	comp=E,4320μm,1.2s						
FEMA				AML	AML		
	comp=N,2370μm,1.3s						
FEMA				AML	AML		
	comp=N,2370μm,0.7s						
FEMA				AML	AML		
	comp=E,4320μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.29 171**	⇓P	Pg	03 47 55.3	+0.5	
T1247			S	Sb	03 48 00.1	-1.0	
T1247			AML	AML			
	comp=E,4740μm,0.4s						
T1247			AML	AML			
	comp=E,4745μm,0.4s						
T1247			AML	AML			
	comp=N,4415μm,0.1s						
TERO	**Teramo**	**0.29 111**	⇓P	Pg	03 47 55.2	+0.3	
TERO			S	Sg	03 47 59.9	+1.0	
TERO			AML	AML			
	comp=E,2650μm,0.1s						
TERO			AML	AML			
	comp=N,4625μm,0.1s						
TERO			AML	AML			
	comp=E,2970μm,0.1s						
TERO			AML	AML			
	comp=N,5215μm,0.1s						
T1211	**Morro Reatino**	**0.34 236**	⇑P	Pg	03 47 56.2	+0.3	
T1211			S	Sb	03 48 01.5	-1.1	
T1211			AML	AML			
	comp=N,2360μm,0.2s						
T1211			AML	AML			
	comp=E,1282μm,0.1s						
T1211			AML	AML			
	comp=N,2360μm,0.7s						
T1211			AML	AML			
	comp=E,1245μm,0.1s						
T1211			AML	AML			
	comp=N,2355μm,0.2s						
T1211			AML	AML			
	comp=E,1285μm,0.1s						
T1211			AML	AML			
	comp=N,2354μm,0.7s						
GUMA	**Gualdo di Mace**	**0.34 12**	⇑P	Pb	03 47 56.8	-0.4	
GUMA			S	Sg	03 48 01.0	+0.4	
GUMA			AML	AML			
	comp=E,8115μm,0.3s						
GUMA			AML	AML			
	comp=N,6730μm,1.5s						
GUMA			AML	AML			
	comp=E,9800μm,0.3s						
GUMA			AML	AML			
	comp=N,6370μm,1.5s						
GUMA			AML	AML			
	comp=N,6370μm,0.5s						
GUMA			AML	AML			
	comp=N,6730μm,0.5s						
GUMA			AML	AML			
	comp=E,8115μm,1.7s						
GIGS	**Gran Sasso**	**0.37 138**	⇓P	Pg	03 47 56.4	0.0	
GIGS			S	Sg	03 48 02.0	+0.6	
GIGS			AML	AML			
	comp=N,242μm,0.2s						
GIGS			AML	AML			
	comp=E,244μm,0.3s						
ARRO	**Arrone**	**0.38 247**	P	Pg	03 47 56.7	+0.3	
ARRO			S	Sb	03 48 02.5	-1.0	
AQU	**L'Aquila**	**0.39 161**	⇓P	Pg	03 47 57.0	+0.2	
AQU			S	Sb	03 48 03.3	-0.7	
AQU			AML	AML			
	comp=E,894μm,1.1s						
AQU			AML	AML			
	comp=N,1200μm,0.6s						
AQU			AML	AML			
	comp=E,932μm,1.1s						
AQU			AML	AML			
	comp=E,892μm,1.1s						
AQU			AML	AML			
	comp=N,1175μm,0.6s						
AQU			AML	AML			
	comp=E,932μm,1.1s						
OFFI	**Offida**	**0.39 58**	P	Pb	03 47 58.0	+0.1	
OFFI			AML	AML			
	comp=E,1570μm,0.4s						
OFFI			AML	AML			
	comp=N,3660μm,0.5s						
OFFI			AML	AML			
	comp=E,1565μm,0.4s						
OFFI			AML	AML			
	comp=N,3665μm,0.5s						
OFFI			AML	AML			
	comp=N,3665μm,1.5s						
MNTP	**Montappone**	**0.45 23**	⇓P	Pb	03 47 58.8	-0.1	
MNTP			AML	AML			
	comp=N,1355μm,0.2s						
MNTP			AML	AML			
	comp=E,1685μm,0.7s						
MNTP			AML	AML			
	comp=E,1685μm,1.3s						
FIAM	**Fiamignano**	**0.47 191**	⇑P	Pg	03 47 58.3	+0.1	
FIAM			AML	AML			
	comp=E,1310μm,0.6s						
FIAM			AML	AML			
	comp=N,772μm,0.5s						
SEF1	**Sefro**	**0.47 334**	⇓P	Pg	03 47 58.5	+0.3	
CESX	**Cesi**	**0.50 257**	⇓P	Pg	03 47 59.0	+0.3	
CESX			AML	AML			
	comp=N,799μm,0.2s						
CESX			AML	AML			
	comp=E,728μm,0.2s						
TRTR	**Tortoreto Alta**	**0.51 80**	⇓P	Pb	03 48 00.4	+0.5	
TRTR			AML	AML			
	comp=E,2315μm,0.4s						
TRTR			AML	AML			
	comp=N,2875μm,1.2s						
TRTR			AML	AML			
	comp=E,2315μm,1.6s						
FAGN	**Fagnano**	**0.53 150**	⇑P	Pb	03 47 59.9	-0.4	
FAGN			AML	AML			
	comp=E,1190μm,0.4s						
FAGN			AML	AML			
	comp=E,1190μm,1.6s						
FAGN			AML	AML			
	comp=N,1003μm,0.3s						
ASSB	**Assisi San Ben**	**0.53 307**	P	Pg	03 47 59.4	0.0	
ASSB			AML	AML			
	comp=E,529μm,0.3s						
ASSB			AML	AML			
	comp=N,558μm,0.5s						
VCEL	**Villa Celiera**	**0.56 126**	⇑P	Pg	03 48 00.2	+0.4	
VCEL			AML	AML			
	comp=E,680μm,1.4s						
VCEL			AML	AML			
	comp=N,582μm,0.5s						
VCEL			AML	AML			
	comp=N,582μm,0.5s						
VCEL			AML	AML			
	comp=E,680μm,0.6s						
SNTG	**Esanatoglia**	**0.57 338**	⇑P	Pg	03 48 00.3	+0.2	
SNTG			AML	AML			
	comp=E,324μm,0.5s						
SNTG			AML	AML			
	comp=N,364μm,1.4s						
SNTG			AML	AML			
	comp=E,301μm,0.5s						
SNTG			AML	AML			
	comp=N,364μm,1.4s						
SNTG			AML	AML			
	comp=N,362μm,1.2s						
SNTG			AML	AML			
	comp=E,300μm,0.5s						
EL6	**Elcito**	**0.61 351**	P	Pb	03 48 01.9	+0.1	
EL6			S	Sb	03 48 11.0	+0.6	
ATCC	**AVT- Casa Cast**	**0.63 317**	⇓P	Pg	03 48 01.4	0.0	
ATCC			AML	AML			
	comp=E,452μm,1.4s						
ATCC			AML	AML			
	comp=N,444μm,1.4s						
T0110	**Collepietro**	**0.64 141**	⇓P	Pg	03 48 01.2	-0.2	
T0110			AML	AML			
	comp=N,561μm,0.4s						
T0110			AML	AML			
	comp=E,632μm,0.4s						
T0110			AML	AML			
	comp=E,632μm,1.6s						
FOSV	**Fossato di Vic**	**0.67 329**	P	Pg	03 48 01.9	0.0	
FOSV			AML	AML			
	comp=E,210μm,1.5s						
FOSV			AML	AML			
	comp=N,345μm,0.3s						
FOSV			AML	AML			
	comp=E,210μm,1.5s						
FOSV			AML	AML			
	comp=E,210μm,0.5s						
FOSV			AML	AML			
	comp=N,345μm,1.7s						
PP3	**Marolino**	**0.71 23**	⇑P	Pb	03 48 03.8	+0.5	
PP3			AML	AML			
	comp=N,902μm,0.2s						
PP3			AML	AML			
	comp=E,1880μm,0.5s						
PP3			AML	AML			
	comp=E,1950μm,0.5s						
PP3			AML	AML			
	comp=N,944μm,0.2s						
PP3			AML	AML			
	comp=N,904μm,0.2s						
SRES	**S.Oreste - Sor**	**0.72 228**	⇑P	Pg	03 48 02.7	-0.3	
SRES			AML	AML			
	comp=E,106μm,1.6s						
SRES			AML	AML			
	comp=N,97μm,1.1s						
SRES			AML	AML			
	comp=E,106μm,0.4s						
MURB	**Monte Urbino**	**0.75 316**	⇓P	Pg	03 48 03.4	0.0	
MURB			S	Sn	03 48 16.0	-0.9	
MURB			AML	AML			
	comp=N,679μm,1.0s						
MURB			AML	AML			
	comp=E,929μm,0.2s						
MTCE	**Montecelio**	**0.79 208**	⇑P	Pg	03 48 03.5	-0.7	
MTCE			AML	AML			
	comp=N,94μm,1.4s						
MTCE			AML	AML			
	comp=E,148μm,0.4s						
MTCE			AML	AML			
	comp=N,94μm,1.4s						
MTCE			AML	AML			
	comp=N,94μm,0.6s						
CERT	**Cerreto**	**0.80 194**	P	Pg	03 48 03.8	-0.6	
CERT			AML	AML			
	comp=N,206μm,0.4s						
CERT			AML	AML			
	comp=E,302μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.80 306**	⇑P	Pg	03 48 04.5	+0.1	
ATTE			AML	AML			
	comp=E,118μm,0.7s						
ATTE			AML	AML			
	comp=N,104μm,0.8s						
ATTE			AML	AML			
	comp=N,104μm,0.8s						
ATTE			AML	AML			
	comp=E,119μm,0.7s						
ARVD	**Arcevia**	**0.80 345**	⇓P	Pg	03 48 04.2	-0.3	
ARVD			S	Sb	03 48 16.0	+0.2	
ARVD			AML	AML			
	comp=E,181μm,0.3s						
ARVD			AML	AML			
	comp=N,109μm,0.6s						
MGAB	**Montegabbione**	**0.85 283**	⇓P	Pb	03 48 05.9	+0.2	
MGAB			AML	AML			
	comp=E,432μm,1.5s						
MGAB			AML	AML			
	comp=N,629μm,0.3s						
MGAB			AML	AML			
	comp=N,628μm,0.3s						
MGAB			AML	AML			
	comp=N,712μm,0.3s						
MGAB			AML	AML			
	comp=E,451μm,0.5s						
MGAB			AML	AML			
	comp=E,451μm,1.5s						
MGAB			AML	AML			
	comp=E,432μm,0.5s						
INTR	**Introdacqua**	**0.87 145**	S	Sg	03 48 15.0	-2.1	
FRON	**Frontone**	**0.88 335**	⇑P	Pg	03 48 05.5	-0.4	
FRON			AML	AML			
	comp=N,255μm,0.3s						
FRON			AML	AML			
	comp=E,153μm,0.3s						
ATVO	**AVT- Monte Val**	**0.89 318**	⇓P	Pg	03 48 05.8	-0.4	
ATVO			AML	AML			
	comp=E,128μm,0.6s						
ATVO			AML	AML			
	comp=N,133μm,0.5s						
ATVO			AML	AML			
	comp=E,128μm,0.6s						
ATVO			AML	AML			
	comp=N,134μm,0.5s						
ATPI	**Pietralunga -**	**0.95 320**	⇓P	Pg	03 48 07.2	-0.1	
ATPI			AML	AML			
	comp=N,115μm,0.5s						
ATPI			AML	AML			
	comp=N,116μm,0.5s						
ATPI			AML	AML			
	comp=N,116μm,1.5s						
ATPI			AML	AML			
	comp=E,141μm,0.7s						
PIEI	**Pieia**	**0.96 328**	⇓P	Pg	03 48 07.1	-0.3	
PIEI			AML	AML			
	comp=E,128μm,0.2s						
PIEI			AML	AML			
	comp=N,95μm,0.3s						
PIEI			AML	AML			
	comp=N,95μm,1.7s						
MPAG	**Monte Paganucc**	**0.97 339**	⇑P	Pg	03 48 07.3	-0.3	
MPAG			AML	AML			
	comp=N,139μm,0.7s						
MPAG			AML	AML			
	comp=E,172μm,0.4s						
MPAG			AML	AML			
	comp=N,139μm,1.3s						
LPEL	**Lama dei Pelig**	**0.98 134**	⇓P	Pg	03 48 06.8	-1.0	
LPEL			S	Sn	03 48 22.0	-0.5	
LPEL			AML	AML			
	comp=N,120μm,0.4s						
LPEL			AML	AML			
	comp=N,120μm,1.6s						
LPEL			AML	AML			
	comp=E,154μm,0.4s						
SACS	**San Casciano d**	**0.98 278**	⇑P	Pg	03 48 07.9	0.0	
SACS			AML	AML			
	comp=N,176μm,0.8s						
SACS			AML	AML			
	comp=E,122μm,0.6s						
FSSB	**Fossombrone**	**1.02 341**	⇑P	Pg	03 48 08.6	-0.1	
FSSB			AML	AML			
	comp=N,552μm,0.3s						
FSSB			AML	AML			
	comp=E,607μm,0.4s						
FSSB			AML	AML			
	comp=N,552μm,0.3s						
FSSB			AML	AML			
	comp=E,607μm,1.6s						
BADI	**Badiali**	**1.07 318**	⇓P	Pg	03 48 09.5	0.0	
CAFI	**Castiglion Fio**	**1.11 303**	⇑P	Pn	03 48 10.5	0.0	
CAFI			AML	AML			
	comp=N,68μm,0.5s						
CAFI			AML	AML			
	comp=E,55μm,1.1s						
PE3	**Peglio**	**1.11 331**	⇓P	Pn	03 48 10.6	+0.1	
CRE	**Caprese Michel**	**1.30 314**	⇓P	Pg	03 48 13.8	-0.1	
CAVE	**Cavezzo**	**2.68 324**	⇑P	Pn	03 48 33.2	+1.1	

BJI ***31*** *03:57:24.3±0.0, 17°.85S×174°.64W, h222km, mb4.8/20, mB5.1/10*
NEIC ***31*** *03:57:24.8±1.5, 17°.77S±0°.10×175°.1W±0°.1, h211km±8km, mb4.8/35, Error ellipse: s-maj=15.5km s-min=14.1km az=101.0*
IDC ***31*** *03:57:28.9±0.7, 17°.89S×175°.23W, h240km±7km, mb4.1/11, mbtmp4.7/13, Error ellipse: s-maj=15.7km s-min=10.6km az=129.0*
NOU ***31*** *03:57:55.0, 18°.65S×176°.16W, h445km, mb4.9/44, Fiji Islands Region*
ISC 31 03:57:27.0±0.5, 17°.98S±0°.05×175°.05W±0°.05, h231km±5km, h231km; pP-P, n209, σ1s50/227, mb4.8/55, 1C-4D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**		**4.98 104**	P	**Pn**	**03 58 40.9**	**-1.1**
	baz=5.0						
NIUE				S	**S**	**03 59 39.7**	**-1.7**
	baz=5.0						
NIUE	**Niue**		**4.98 104**		**Pn**	**03 58 41.0**	**-1.1**
AFI	**Afiamalu**		**5.12 38**	P	**Pn**	**03 58 39.6**	**-4.2**
	139nm,0.7s,baz=119,slow=1.7,SNR=17						
AFI				S	S	03 59 32.7	-12
	226nm,0.4s,baz=20,slow=22,SNR=12						
AFI	**Afiamalu**		**5.12 38**		Pn	03 58 38.8	-5.1
AFI	**Afiamalu**		**5.12 38**	P	S	03 59 33.4	-11
MSVF	**Nonsavu**		**6.58 271**	P	**Pn**	**03 59 05.2**	**+3.0**
	137nm,0.6s,baz=105,slow=13,SNR=146						
GLKZ	**Green Lake**		**11.54 193**	S	**S**	**04 02 06.2**	**-6.8**
RAR	**Rarotonga**		**14.75 105**	P	**P**	**04 00 46.7**	**+1.4**
	24nm,0.9s,baz=269,slow=11,SNR=4.1						
RAR	**Rarotonga**		**14.75 105**		**Pn**	**04 00 43.4**	**-1.6**
MARNC	**Mare, Loyalty**		**16.31 255**	P	**P**	**04 01 00.5**	**-2.0**
MARNC	**Mare, Loyalty**		**16.31 255**	P	**Pn**	**04 01 09.2**	**+5.5**
	1.8nm,0.8s						
DZM	**Mont Dzumac**		**17.86 254**	*e*P	**P**	**04 01 20.4**	**+0.9**
	94nm,0.9s						
DZM				*e*LR	LR	04 05 43.2	
	comp=Z,69nm,27.9s						
DZM	**Mont Dzumac**		**17.86 254**	P	**P**	**04 01 18.8**	**-0.7**
	33nm,0.8s,baz=79,slow=17,SNR=20						
DZM	**Mont Dzumac**		**17.86 254**	P	**P**	**04 01 17.9**	**-1.6**
DZM				IAmb	IAmb	04 01 23.0	
	comp=Z,38nm,0.8s						
DZM	**Mont Dzumac**		**17.86 254**	P	**Pn**	**04 01 22.0**	**0.0**
NOUC	**Port Laguerre**		**17.99 254**	P	**Pn**	**04 01 23.6**	**+0.1**
MXZ	**Matakaoa Point**		**20.37 195**	P	**P**	**04 01 48.6**	**+2.4**
KUZ	**Kuaotunu**		**20.39 202**	P	**P**	**04 01 49.0**	**+2.5**
KUZ	**Kuaotunu**		**20.39 202**	P	**P**	**04 01 48.7**	**+2.2**
WMGZ	**Waiomatatini S**		**20.58 195**	P	Pn	04 01 51.7	-2.5
WMGZ				S	**S**	**04 05 21.5**	**-3.4**
WIAZ	**Waiheke Island**		**20.65 203**	P	Pn	04 01 52.5	-2.4
HAZ	**Te Kaha**		**20.69 196**	P	**P**	**04 01 51.5**	**+1.9**
HAZ				S	**S**	**04 05 24.1**	**-2.6**
PKGZ	**Pakihiroa**		**20.73 196**	P	**P**	**04 01 51.4**	**+1.2**
PKGZ				S	**S**	**04 05 28.3**	**+0.5**
PUZ	**Puketiti**		**20.86 195**	P	**P**	**04 01 54.2**	**+2.8**
RUGZ	**Raukumara Rang**		**20.91 196**	P	**P**	**04 01 53.8**	**+1.7**
RUGZ				S	**S**	**04 05 29.6**	**-1.3**
TWGZ	**Tauwhareparae**		**21.03 195**	P	**P**	**04 01 55.7**	**+2.5**
TWGZ				S	**S**	**04 05 32.6**	**-0.2**
MWZ	**Matawai**		**21.30 196**	P	**P**	**04 01 58.6**	**+2.7**
MWZ				S	**S**	**04 05 36.5**	**-0.7**
TKGZ	**Te Karaka**		**21.31 195**	P	**P**	**04 01 58.5**	**+2.5**
TKGZ				S	**S**	**04 05 38.5**	**+1.2**
URZ	**Urewera**		**21.34 197**	P	**P**	**04 01 57.0**	**+0.7**
	comp=Z,31nm,0.4s,baz=60,slow=2.2,SNR=72						
URZ				S	**S**	**04 05 35.2**	**-2.6**
	comp=Z,15nm,1.0s,baz=246,slow=6.7,SNR=3.3						
	comp=Z,31nm,0.4s						
URZ	**Urewera**		**21.34 197**	P	**P**	**04 01 55.9**	**-0.4**
URZ	**Urewera**		**21.34 197**	P	**P**	**04 01 58.4**	**+2.1**
URZ	**Urewera**		**21.34 197**	P	**P**	**04 01 56.7**	**+0.4**
URZ	**Urewera**		**21.34 197**	P	**P**	**04 01 56.8**	**+0.6**
URZ				S	**S**	**04 05 37.3**	**-0.5**
RAGZ	**Rawiri**		**21.48 196**	P	**P**	**04 02 00.7**	**+3.0**
TARZ	**Mount Tarawera**		**21.50 198**	P	**P**	**04 02 02.0**	**+4.1**
RIGZ	**Rimuhau**		**21.59 195**	P	**P**	**04 02 00.4**	**+1.7**
RIGZ				S	**S**	**04 05 44.1**	**+2.2**
RTZ	**Ruatahuna**		**21.71 197**	P	**P**	**04 02 02.4**	**+2.4**
RTZ				S	**S**	**04 05 45.0**	**+1.0**
BKZ	**Black Stump Fm**		**22.36 197**		**P**	**04 02 05.0**	**-1.0**
BKZ				IAmb	IAmb	04 02 15.1	
	comp=Z,12nm,0.7s						
BKZ	**Black Stump Fm**		**22.36 197**	P	**P**	**04 02 06.1**	**+0.1**
BFZ	**Birch Farm**		**23.84 197**	P	**P**	**04 02 20.0**	**+0.7**
TBI	**Tubuai**		**24.52 107**	*e*T	T	04 27 10.3	
	comp=Z,9.2nm,0.4s						
QRZ	**Quartz Range**		**25.16 203**	P	**P**	**04 02 31.6**	**+0.3**
QRZ				IAmb	IAmb	04 02 44.6	
	comp=Z,30nm,0.9s						
QRZ	**Quartz Range**		**25.16 203**	P	**P**	**04 02 32.5**	**+1.3**
QRZ	**Quartz Range**		**25.16 203**	P	**P**	**04 02 32.6**	**+1.3**
KHZ	**Kahutara**		**26.23 199**	P	**P**	**04 02 43.8**	**+3.0**
GC1S	**Gold Coast 1 S**		**30.57 245**	P	**P**	**04 03 20.7**	**+1.3**
MLZ	**Mavora Lakes**		**30.71 204**	P	**P**	**04 03 20.0**	**-0.5**
MLZ				IAmb	IAmb	04 03 34.3	
	comp=Z,47nm,1.5s						
EIDS	**Eidsvold**		**32.26 251**	P	**P**	**04 03 33.5**	**-0.8**
	baz=32						
EIDS	**Eidsvold**		**32.26 251**	P	**P**	**04 03 32.9**	**-1.3**
ARMA	**Armidale**		**32.70 241**	P	**P**	**04 03 38.7**	**+0.6**
	baz=33,SNR=7.7						
ARMA	**Armidale**		**32.70 241**	P	**P**	**04 03 36.0**	**-2.1**
ARMA				IAmb	IAmb	04 03 39.4	
	comp=Z,25nm,0.8s						
RMQ	**Roma**		**34.46 249**	P	**P**	**04 03 53.3**	**+0.1**
	baz=35,SNR=4.8						
RMQ	**Roma**		**34.46 249**	P	**P**	**04 03 54.4**	**+1.1**
	comp=Z,14nm,0.7s						
CTA	**Charters Tower**		**36.59 260**	P	**P**	**04 04 12.0**	**+0.6**
CTAO	**Charters Tower**		**36.59 260**	P	**P**	**04 04 09.1**	**-2.3**
CTAO	**Charters Tower**		**36.59 260**	P	**P**	**04 04 12.5**	**+1.1**
CTAO	**Charters Tower**		**36.59 260**	P	**P**	**04 04 10.4**	**-1.0**
CMSA	**Cobar Meteorol**		**37.92 242**	P	**P**	**04 04 22.3**	**-0.1**
	baz=38,SNR=32						
CMSA	**Cobar Meteorol**		**37.92 242**	P	**P**	**04 04 22.5**	**+0.1**
QLP	**Quilpie**		**38.51 250**	P	**P**	**04 04 29.0**	**+1.6**
MTSU	**Mount Surprise**		**38.58 263**	P	**P**	**04 04 27.1**	**-1.0**
	baz=39,SNR=9.0						
MTSU	**Mount Surprise**		**38.58 263**	P	**P**	**04 04 30.4**	**+2.3**
	comp=Z,3.9nm,0.7s						
TOO	**Toolangi**		**39.63 232**	P	**P**	**04 04 35.5**	**-1.1**
TOO				IAmb	IAmb	04 04 48.6	
	comp=Z,36nm,1.4s						
COEN	**Coen**		**40.30 269**	P	**P**	**04 04 41.5**	**-0.8**
	baz=40,SNR=6.0						
COEN	**Coen**		**40.30 269**		**P**	**04 04 40.6**	**-1.8**
COEN				IAmb	IAmb	04 04 42.7	
	comp=Z,16nm,0.8s						
COEN	**Coen**		**40.30 269**	P	**P**	**04 04 42.8**	**+0.5**
	comp=Z,24nm,0.8s						
STKA	**Stephens Creek**		**41.41 242**	P	**P**	**04 04 50.9**	**-0.3**
	comp=Z,34nm,0.9s,baz=89,slow=9.7,SNR=39						
	comp=Z,34nm,0.9s						
STKA	**Stephens Creek**		**41.41 242**	P	**P**	**04 04 51.5**	**+0.3**
	baz=42,SNR=19						
STKA	**Stephens Creek**		**41.41 242**	P	**P**	**04 04 50.9**	**-0.3**
STKA	**Stephens Creek**		**41.41 242**	P	**P**	**04 04 51.6**	**+0.4**
INKA	**Innaminka**		**41.69 248**	P	**P**	**04 04 54.8**	**+1.4**
ARPS	**Mount Arapiles**		**42.21 235**	P	**P**	**04 04 57.7**	**+0.2**
	baz=42,SNR=5.7						
ARPS	**Mount Arapiles**		**42.21 235**	P	**P**	**04 04 58.0**	**+0.5**
	comp=Z,39nm,0.8s						
QIS	**Mount Isa**		**42.78 259**	P	**P**	**04 05 02.6**	**+0.2**
HTT	**Hallett**		**43.88 240**	P	**P**	**04 05 10.9**	**-0.1**
	baz=44,SNR=19						
HTT	**Hallett**		**43.88 240**	P	**P**	**04 05 11.8**	**+0.8**
LCRK	**Leigh Creek**		**44.11 245**	P	**P**	**04 05 13.2**	**+0.4**
WHYH	**Whyalla**		**44.94 241**	P	**P**	**04 05 19.3**	**0.0**
	comp=Z,100nm,0.8s						
OOD	**Oodnadatta**		**46.17 249**	P	**P**	**04 05 30.5**	**+1.5**
BBOO	**Buckleboo**		**46.18 242**	P	**P**	**04 05 28.8**	**-0.2**
	baz=46,SNR=55						
BBOO	**Buckleboo**		**46.18 242**	P	**P**	**04 05 28.6**	**-0.5**
BBOO	**Buckleboo**		**46.18 242**	P	**P**	**04 05 28.9**	**-0.2**
WR0	**Warramunga Arr**		**47.57 259**	P	**P**	**04 05 38.4**	**-1.6**
MULG	**Mulgathing**		**47.68 245**	P	**P**	**04 05 40.6**	**-0.1**
WB0	**Warramunga Arr**		**47.73 259**	P	**P**	**04 05 40.0**	**-1.3**
WB0				IAmb	IAmb	04 05 41.6	
	comp=Z,30nm,0.8s						
WB2	**Warramunga Arr**		**47.75 259**	P	**P**	**04 05 39.9**	**-1.4**
WB2				IAmb	IAmb	04 05 41.8	
	comp=Z,28nm,0.8s						
WB1	**Warramunga Ar.**		**47.75 259**	P	**P**	**04 05 40.3**	**-1.1**
WRAB	**Tennant Creek**		**47.75 259**	P	**P**	**04 05 40.2**	**-1.2**
WRAB				IAmb	IAmb	04 05 41.7	
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**		**47.75 259**	P	**P**	**04 05 40.7**	**-0.7**
WRAB	**Tennant Creek**		**47.75 259**	P	**P**	**04 05 39.8**	**-1.6**
WRAB				pP	**pP**	**04 06 26.8**	**-3.5**
WRA	**Warramunga Arr**		**47.76 259**	P	**P**	**04 05 40.4**	**-1.0**
	comp=Z,16nm,0.4s,baz=99,slow=6.5,SNR=353						
WRA				PcP	**PcP**	**04 07 07.5**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=95,slow=3.3,SNR=2.4						
WRA				S	**S**	**04 12 17.4**	**-2.9**
	comp=Z,0.5nm,0.9s,baz=96,slow=17,SNR=3.3						
	comp=Z,16nm,0.4s						
WRA	**Warramunga Arr**		**47.76 259**	P	**P**	**04 05 39.6**	**-1.9**

AS01	**Alice Springs**	**47.81 254**	P	**P**	**04 05 41.0**	**-0.8**
	comp=Z,244nm,0.8s					
AS31	**Alice Springs**	**47.85 254**	P	**P**	**04 05 41.2**	**-0.9**
AS31			IAmb	IAmb	04 05 42.8	
	comp=Z,42nm,0.9s					
ASAR	**Alice Springs**	**47.85 254**	P	**P**	**04 05 41.6**	**-0.5**
	comp=Z,133nm,0.7s,baz=87,slow=8.5,SNR=940					
ASAR			PcP	**PcP**	**04 07 07.4**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=91,slow=7.4,SNR=1.7					
ASAR			S	**S**	**04 12 17.4**	**-4.1**
	comp=Z,1.9nm,0.8s,baz=93,slow=15,SNR=10					
ASAR	**Alice Springs**	**47.85 254**	P	**P**	**04 05 41.4**	**-0.7**
KDU	**Kakadu**	**50.75 268**	P	**P**	**04 06 03.0**	**-1.0**
	baz=51,SNR=10.0					
KDU	**Kakadu**	**50.75 268**	P	**P**	**04 06 03.7**	**-0.4**
MTN	**Manton Dam**	**51.99 268**	P	**P**	**04 06 12.0**	**-1.3**
MTN	**Manton Dam**	**51.99 268**	P	**P**	**04 06 12.7**	**-0.6**
WRKA	**Warakurna**	**52.87 252**	P	**P**	**04 06 19.1**	**-0.5**
	baz=53,SNR=57					
WRKA	**Warakurna**	**52.87 252**	P	**P**	**04 06 19.5**	**-0.1**
FORT	**Forrest**	**52.87 245**	P	**P**	**04 06 18.5**	**-1.0**
FORT			IAmb	IAmb	04 06 19.9	
	comp=Z,32nm,0.8s					
FORT	**Forrest**	**52.87 245**	P	**P**	**04 06 20.9**	**+1.4**
KNRA	**Kununurra**	**53.66 264**	P	**P**	**04 06 24.6**	**-0.9**
	baz=54,SNR=11					
KNRA	**Kununurra**	**53.66 264**	P	**P**	**04 06 24.3**	**-1.1**
KNRA	**Kununurra**	**53.66 264**	P	**P**	**04 06 25.2**	**-0.2**
SIJI	**Sorong**	**55.37 282**	P	**P**	**04 06 37.5**	**-0.3**
	comp=Z,43nm,0.8s					
SWI	**Sorong**	**55.38 282**	P	**P**	**04 06 37.9**	**+0.1**
	comp=Z,62nm,0.7s					
SOEI	**Soe**	**59.27 269**	P	**P**	**04 07 04.4**	**-0.7**
SOEI	**Soe**	**59.27 269**	P	**P**	**04 07 05.0**	**-0.1**
	comp=Z,102nm,1.0s					
SOEI	**Soe**	**59.27 269**	P	**P**	**04 07 06.3**	**+1.2**
	comp=Z,103nm,1.0s					
SBA	**Scott Base**	**60.57 184**	P	**P**	**04 07 14.8**	**+2.0**
SBA			IAmb	IAmb	04 07 17.1	
	comp=Z,9.7nm,0.8s					
SBA	**Scott Base**	**60.57 184**	P	**P**	**04 07 15.8**	**+3.1**
VNDA	**Vanda**	**60.67 186**	P	**P**	**04 07 15.6**	**+2.2**
	comp=Z,5.0nm,0.8s,baz=9.7,slow=6.3,SNR=40					
	comp=Z,5.0nm,0.8s					
VNDA	**Vanda**	**60.67 186**	P	**P**	**04 07 15.6**	**+2.2**
VNDA	**Vanda**	**60.67 186**	P	**P**	**04 07 15.8**	**+2.3**
VNDA			pP	**pP**	**04 08 02.6**	**-2.3**
PSA00	**Pilbara Seismi**	**60.98 255**	P	**P**	**04 07 15.6**	**-0.9**
PSA00	**Pilbara Seismi**	**60.98 255**	P	**P**	**04 07 16.0**	**-0.5**
MBWA	**Marble Bar**	**61.16 255**	P	**P**	**04 07 16.6**	**-1.0**
MBWA			IAmb	IAmb	04 07 19.1	
	comp=Z,20nm,1.0s					
MBWA	**Marble Bar**	**61.16 255**	P	**P**	**04 07 17.1**	**-0.6**
MBWA	**Marble Bar**	**61.16 255**	P	**P**	**04 07 16.7**	**-1.0**
KLBR	**Kellerberrin**	**61.66 243**	P	**P**	**04 07 20.2**	**-0.7**
	baz=62,SNR=9.5					
KLBR	**Kellerberrin**	**61.66 243**	P	**P**	**04 07 20.7**	**-0.2**
	comp=Z,55nm,0.8s					
BLDU	**Ballidu**	**62.64 244**	P	**P**	**04 07 26.9**	**-0.5**
	baz=63,SNR=7.4					
BNSI	**Bone**	**64.74 274**	P	**P**	**04 07 41.8**	**+0.5**
	comp=Z,15nm,1.3s					
CCD	**Concordia, Ant**	**65.59 194**	P	**P**	**04 07 47.5**	**+1.2**
PLAI	**Plampang**	**65.69 268**	P	**P**	**04 07 47.0**	**-0.4**
	comp=Z,64nm,1.0s					
PLAI	**Plampang**	**65.69 268**	P	**P**	**04 07 47.0**	**-0.4**
	comp=Z,64nm,1.0s					
GIRL	**Giralia**	**65.93 253**	P	**P**	**04 07 49.4**	**+0.5**
	baz=66,SNR=3.5					
MPSI	**Mapaga**	**66.44 278**	P	**P**	**04 07 52.7**	**+0.5**
	comp=Z,15nm,0.8s					
TWSI	**Taliwang, Sumb**	**66.56 268**	P	**P**	**04 07 52.6**	**-0.4**
	comp=Z,69nm,0.9s					
KLNI	**Mataram**	**67.40 268**	P	**P**	**04 08 00.5**	**+2.3**
JAGI	**Jajag, Banyuwa**	**69.23 268**	P	**P**	**04 08 07.7**	**-1.9**
JAGI	**Jajag, Banyuwa**	**69.23 268**	P	**P**	**04 08 08.8**	**-0.9**
	comp=Z,1μmcomp=Z,62nm,0.8s					
JAGI	**Jajag, Banyuwa**	**69.23 268**	P	**P**	**04 08 08.7**	**-0.9**
	comp=Z,63nm,0.9s					
GSTR	**Great Sitkin T**	**69.78 359**	P	**P**	**04 08 09.6**	**-2.5**
MJAR	**Matsushiro Arr**	**69.91 321**	P	**P**	**04 08 12.8**	**-0.5**
	comp=Z,5.4nm,0.8s,baz=153,slow=6.7,SNR=12					
	comp=Z,5.4nm,0.8s					
JHS	**Saijyo**	**72.08 317**	P	**P**	**04 08 25.3**	**-1.0**
JHS			IAmb	IAmb	04 08 28.1	
	comp=Z,18nm,0.9s					
QSPA	**South Pole Qui**	**72.08 180**	P	**P**	**04 08 26.9**	**+0.9**
QSPA			IAmb	IAmb	04 08 28.7	
	comp=Z,14nm,1.0s					
PCJI	**Pacitan**	**72.14 267**	P	**P**	**04 08 27.4**	**+0.3**
	comp=Z,201nm,0.8s					
JNU	**Nakatsue**	**72.43 315**	P	**P**	**04 08 27.6**	**-0.8**
JNU			IAmb	IAmb	04 08 29.5	
	comp=Z,26nm,0.9s					
PETK	**Petropavlovsk-**	**74.61 343**	P	**P**	**04 08 40.1**	**-0.5**
	comp=Z,7.9nm,0.9s,baz=194,slow=12,SNR=4.9					
	comp=Z,7.9nm,0.9s					
TPUB	**Ta-pu**	**75.02 301**	P	**P**	**04 08 41.4**	**-2.3**
BBJI	**Bungbulang**	**75.70 267**	P	**P**	**04 08 49.0**	**+1.2**
KSRS	**Korea Array**	**76.91 317**	P	**P**	**04 08 54.8**	**+0.9**
	comp=Z,8.6nm,0.9s,baz=135,slow=6.5,SNR=17					
	comp=Z,8.6nm,0.9s					
KSAR	**Wonju Array Be**	**76.93 317**	P	**P**	**04 08 52.3**	**-1.8**
NVAR	**Mina Array Bea**	**77.29 42**	P	**P**	**04 08 56.0**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=229,slow=10,SNR=5.6					
NVAR			pP	**pwP**	**04 09 55.5**	**+2.7**
	comp=Z,1.4nm,1.0s,baz=147,slow=3.0,SNR=2.5					
	comp=Z,1.1nm,0.8s					
BELA	**Belgrano 2**	**81.68 172**	P	**P**	**04 09 19.8**	**+0.7**
CN2	**Changchun**	**82.06 321**	*e*P	**P**	**04 09 22.5**	**+0.9**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.8s					
F10A	**Beach Ranch, E**	**82.32 37**	P	**P**	**04 09 22.9**	**-0.1**
TXAR	**Lajitas Array**	**83.35 56**	P	**P**	**04 09 29.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=155,slow=33,SNR=2.0					
TXAR			pP	**pP**	**04 10 27.6**	**+3.9**
	comp=Z,1.2nm,1.1s,baz=212,slow=4.4,SNR=5.0					
MAW	**Mawson**	**84.86 199**	P	**P**	**04 09 36.9**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=134,slow=3.6,SNR=4.2					
	comp=Z,1.4nm,0.6s					
TCOL	**CIGO, UAF Yank**	**85.17 11**	P	**P**	**04 09 34.3**	**-2.6**
TCOL			IAmb	IAmb	04 09 37.7	
	comp=Z,9.3nm,0.8s					
COLA	**College**	**85.18 11**	P	**P**	**04 09 35.8**	**-1.0**
COLA			IAmb	IAmb	04 09 37.3	
	comp=Z,8.5nm,0.7s					
PDAR	**Pinedale Array**	**85.22 42**	P	**P**	**04 09 38.4**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=235,slow=3.2,SNR=3.0					
PDAR			pP	**pwP**	**04 10 36.6**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=232,slow=4.9,SNR=3.7					
ILAR	**Eielson Array**	**85.27 12**	P	**P**	**04 09 36.9**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=216,slow=5.9,SNR=8.1					
ILAR			pP	**pwP**	**04 10 35.8**	**+0.6**
	comp=Z,1.5nm,1.1s,baz=214,slow=5.3,SNR=3.2					
	comp=Z,1.3nm,0.9s					
IPM	**Ipoh**	**85.61 276**	P	**P**	**04 09 41.6**	**+1.4**
IPM	**Ipoh**	**85.61 276**	P	**P**	**04 09 41.8**	**+1.6**
HNS	**HongShan**	**85.94 311**	⇑P	**P**	**04 09 43.0**	**+1.7**
HNS			pmax	pmax		
	comp=Z,18nm,1.0s					
LYN	**LuoYang**	**86.37 308**	⇓*i*P	**P**	**04 09 44.5**	**+1.0**
LYN			pmax	pmax		
	comp=Z,10.0nm,0.9s					
ENH	**Enshi**	**86.97 303**	P	**P**	**04 09 48.1**	**+1.6**
	comp=Z,23nm,1.4s					
PSI	**Prapat**	**87.08 274**	P	**P**	**04 09 48.3**	**+0.8**
	comp=Z,36nm,1.0s					
XLT	**XiLinHaoTe**	**87.93 318**	*e*P	**P**	**04 09 51.5**	**+0.7**
XLT			pP	pP	04 10 47.0	+0.8
XLT			sP	sP	04 11 09.0	-1.1
XLT			pmax	pmax		
	comp=Z,12nm,1.2s					
XLT			pmax	pmax		
	comp=Z,130nm,3.6s					
HHC	**Hu-ho-hao-te**	**89.62 313**	*e*P	**P**	**04 10 00.8**	**+2.0**
HHC			pmax	pmax		
	comp=Z,41nm,0.8s					
HHC			pmax	pmax		
	comp=Z,190nm,6.5s					
TROLL	**Troll, Antarti**	**90.23 179**	PcP	**PcP**	**04 10 01.9**	**-0.4**
SNAA	**Sanae**	**90.42 178**	PcP	**P**	**04 10 01.7**	**-0.3**
VNA3	**Neumayer Olymp**	**90.44 175**	PcP	**PcP**	**04 10 02.7**	**-0.4**
VNA2	**Neumayer--Watz**	**90.92 176**	PcP	**PcP**	**04 10 05.4**	**+0.2**
	baz=185,slow=4.0					
CMAR	**Chiang Mai Arr**	**91.93 289**	P	**P**	**04 10 11.3**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=98,slow=2.6,SNR=12					
	comp=Z,2.5nm,0.7s					
PZH	**PanZhiHua**	**92.02 297**	P	**P**	**04 10 11.3**	**+1.0**
PZH			pmax	pmax		
	comp=Z,10.0nm,0.7s					
PZH			pmax	pmax		
	comp=Z,70nm,3.6s					
BVAR	**Borovoye Array**	**118.91 321**	PKP	**PKPdf**	**04 15 47.7**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=109,slow=2.7,SNR=4.1					
OJC	**Ojcow**	**145.70 343**	*e*PKP	**PKPdf**	**04 16 36.9**	**-1.0**
KSP	**Ksiaz**	**145.98 347**	*e*PKP	**PKPab**	**04 16 40.1**	**-0.3**
CLL	**Collm**	**146.13 351**	⇓*i*PKPbc	**PKPbc**	**04 16 39.9**	**0.0**
	comp=Z,14nm,1.1s					
CLL			*i* x	x	04 16 47.0	
CLL			*ex*	x	04 17 43.0	
CLL			*e*PP	**PP**	**04 20 04.0**	**+1.0**
OSTC	**Ostas**	**146.27 347**	*e*PKP	**PKPab**	**04 16 41.4**	**-0.2**
CHVC	**Chvalec**	**146.27 347**	*e*PKP	**PKPdf**	**04 16 39.6**	**+0.8**
BRG	**Berggiesshubel**	**146.40 350**	*e*PKP	**PKPab**	**04 16 41.5**	**-0.6**
BRG			Amp		04 16 44.0	
	comp=Z,2.7nm,0.8s					
BRG			*ex*	x	04 25 08.8	
BRG			Amp		04 25 23.2	
	comp=Z,2.8nm,1.0s					
DPC	**Dobruska-Polom**	**146.44 347**	*e*PKP	**PKPab**	**04 16 41.8**	**-0.5**
KRLC	**Kraliky**	**146.60 346**	*e*PKP	**PKPbc**	**04 16 42.1**	**+0.8**
PVCC	**Panska Ves**	**146.62 349**	*e*PKP	**PKPab**	**04 16 42.2**	**-0.7**
MORC	**Moravsky Berou**	**146.69 345**	*e*PKP	**PKPbc**	**04 16 41.8**	**+0.2**
MAUC	**Maruska**	**147.00 344**	*e*PKP	**PKPbc**	**04 16 42.9**	**+0.4**
BRTR	**Keskin Array B**	**147.06 317**	PKPbc	**PKPbc**	**04 16 43.5**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=139,slow=2.9,SNR=13					
PRU	**Pruhonice**	**147.15 349**	*e*PKP	**PKPbc**	**04 16 43.6**	**+0.8**
NKC	**Novy Kostel**	**147.26 351**	*e*PKP	**PKPbc**	**04 16 43.9**	**+0.7**
VRAC	**Vranov**	**147.36 346**	PKPbc	**PKPbc**	**04 16 44.4**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=90,slow=5.1,SNR=4.1					
VRAC	**Vranov**	**147.36 346**	*e*PKP	**PKPbc**	**04 16 44.2**	**+0.8**
MLR	**Muntele Rosu**	**147.47 332**	PKPbc	**PKPbc**	**04 16 44.7**	**+0.7**
	comp=Z,5.0nm,1.0s,baz=107,slow=6.8,SNR=3.2					
JAVC	**Velka Javorina**	**147.51 344**	*e*PKP	**PKiKP**	**04 16 45.7**	**-0.2**
BCLA	**Clavier**	**147.63 360**	*d*PKP	**PKPab**	**04 16 46.5**	**-0.4**
KRUC	**Moravsky**	**147.63 346**	*e*PKP	**PKPbc**	**04 16 44.8**	**+0.6**
KHC	**Kasperske Hory**	**148.15 349**	*e*PKP	**PKPdf**	**04 16 42.7**	**+0.7**
KHC			*ex*	x	04 16 46.4	
CKRC	**Cesky Krumlov**	**148.31 348**	*e*PKP	**PKPbc**	**04 16 46.7**	**+0.7**
WLF	**Walferdange**	**148.37 359**	*d*PKP	**PKiKP**	**04 16 47.3**	**-0.2**
GERES	**GERESS Array B**	**148.40 349**	PKPbc	**PKPbc**	**04 16 45.9**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=29,slow=3.0,SNR=16					
CONA	**Conrad Observa**	**148.82 346**	*e*P	**PKiKP**	**04 16 48.4**	**-0.2**
	comp=Z,3.5nm,0.9s					
RONA	**Rosalia, Austr**	**148.93 345**	*e*P	**PKiKP**	**04 16 48.5**	**-0.3**
	comp=Z,3.5nm,0.8s					
BIOA	**Bad Ischl, Aus**	**149.52 348**	*i* P	**PKPbc**	**04 16 49.4**	**+0.4**
	comp=Z,5.2nm,1.1s					
RETA	**Reutte**	**150.18 352**	*e*P	**PKiKP**	**04 16 51.1**	**-0.3**
	comp=Z,5.5nm,1.1s					
WATA	**Walderalm**	**150.22 351**	*e*P	**PKPbc**	**04 16 51.0**	**+0.2**
	comp=Z,1.5nm,0.5s					
MOTA	**Moosalm**	**150.28 352**	*e*P	**PKPbc**	**04 16 51.3**	**+0.2**
	comp=Z,6.1nm,1.1s					
WTTA	**Wattenberg**	**150.28 351**	*e*P	**PKiKP**	**04 16 51.5**	**-0.3**
	comp=Z,1.6nm,0.4s					
SQTA	**Sankt Quirin**	**150.38 351**	*e*P	**PKPbc**	**04 16 51.5**	**+0.2**
	comp=Z,4.4nm,0.6s					
DAVA	**Damuels**	**150.49 353**	*e*P	**PKPbc**	**04 16 51.2**	**-0.4**
	comp=Z,4.3nm,0.8s					
ABTA	**Abfaltersbach**	**150.63 349**	*e*P	**PKPbc**	**04 16 51.8**	**-0.1**
	comp=Z,3.3nm,0.6s					
FETA	**Feichten**	**150.64 352**	*e*P	**PKiKP**	**04 16 52.6**	**+0.1**
	comp=Z,4.3nm,0.8s					
DAVOX	**Davos/Dischmat**	**150.99 353**	PKPbc	**PKiKP**	**04 16 53.6**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=100,slow=1.0,SNR=14					
ESDC	**Sonseca Array**	**157.04 18**	PKPab	**PKPab**	**04 17 26.0**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=332,slow=5.0,SNR=6.6					

IDC ***31*** *04:02:00.3±1.2, 40°.00S×16°.65W, h0km, mb3.8/4, mbtmp3.8/4, MS4.1/42, Error ellipse: s-maj=48.9km s-min=30.4km az=102.0*

NEIC ***31*** *04:02:02.2±2.3, 40°.2S±0°.1×16°.6W±0°.2, h10km±1km, mb4.5/14, Error ellipse: s-maj=23.7km s-min=21.9km az=111.0*

GCMT ***31*** *04:02:06.2±0.3, 40°.30S±0°.03×16°.39W±0°.02, h14km±1km, MW4.9/97, Moment Tensor Solution. s26,c28; s97,c135; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.81±.17; Mθθ0.31±.10; Mφφ2.51±.12; Mrθ0.36±.30; Mθφ-0.12±.07; Mφr0.54±.25; Best double couple: M0=2.73600×10^16 NP1:φs=184.00000°, δ51.00000°, λ-81.00000°. NP2: φs=350.00000°, δ40.00000°, λ-101.00000°. Principal axes: T 2.5660, Plg6.0000°, Azm268.0000°; N 0.3490, Plg7.0000°, Azm359.0000°; P -2.9060, Plg81.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 04:02:01.7±0.6, 40°.1S±0°.1×16°.6W±0°.2, h10km, n69, σ0=92/22, mb4.3/9, MS4.1/42, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**30.94**	**87**	LR	LR	04 17 38.7	
	comp=Z,698nm,21.0s,baz=234,slow=30						
H10S2	**ASCENSION HYDR**	**31.06**	**4**	T	T	04 41 02.3	
	baz=182,slow=74,SNR=8.0						
H10S3	**ASCENSION HYDR**	**31.07**	**4**	T	T	04 41 04.9	
	baz=38,slow=74,SNR=23						
VNA2	**Neumayer--Watz**	**31.25**	**174**	P	**P**	**04 08 20.4**	**-0.6**
	baz=346,slow=11						
VNA3	**Neumayer Olymp**	**31.41**	**176**	P	**P**	**04 08 21.0**	**-1.5**
H10N1	**ASCENSION HYDR**	**32.18**	**4**	T	T	04 42 26.1	
	baz=181,slow=72,SNR=3.8						
H10N3	**ASCENSION HYDR**	**32.18**	**4**	T	T	04 42 26.4	
	baz=181,slow=72,SNR=30						
H10N2	**ASCENSION HYDR**	**32.19**	**4**	T	T	04 42 27.0	
	baz=181,slow=72,SNR=8.6						
SNAA	**Sanae**	**32.39**	**172**	LR	LR	04 18 14.0	
	comp=Z,173nm,21.6s,baz=9.5,slow=30						
SNAA	**Sanae**	**32.39**	**172**	P	**P**	**04 08 29.3**	**-1.8**
TROLL	**Troll, Antarti**	**33.37**	**169**	P	**P**	**04 08 39.8**	**0.0**
TRQA	**Tornquist**	**35.03**	**258**	P	**P**	**04 08 55.0**	**+0.5**
TRQA				IAmb	IAmb	04 08 59.6	
	comp=Z,6.0nm,1.1s						
TSUM	**Tsumeb**	**35.94**	**65**	LR	LR	04 21 01.7	
	comp=Z,742nm,18.6s,baz=218,slow=32						
BOSA	**Boshof**	**36.07**	**85**	LR	LR	04 20 56.3	
	comp=Z,412nm,19.6s,baz=220,slow=31						
CPUP	**Villa Florida**	**36.45**	**279**	LR	LR	04 22 22.3	
	comp=Z,590nm,18.9s,baz=127,slow=34						
BDFB	**Brasilia**	**36.65**	**303**	LR	LR	04 21 03.5	
	comp=Z,258nm,21.5s,baz=148,slow=31						
PMSA	**Palmer Station**	**36.69**	**212**	LR	LR	04 21 33.1	
	comp=Z,160nm,19.5s,baz=140,slow=32						
LBTB	**Lobatse**	**38.22**	**80**	LR	LR	04 22 15.8	
	comp=Z,550nm,19.8s,baz=234,slow=32						
RCBR	**Riachuelo**	**38.30**	**328**	LR	LR	04 21 33.3	
	comp=Z,200nm,19.5s,baz=304,slow=31						
PLCA	**Paso Flores**	**40.56**	**251**	LR	LR	04 24 10.6	
	comp=Z,496nm,20.9s,baz=114,slow=33						
SIV	**San Ignacio**	**45.44**	**289**	LR	LR	04 28 11.0	
	comp=Z,217nm,18.2s,baz=102,slow=35						
LSZ	**Lusaka**	**46.08**	**71**	LR	LR	04 27 08.9	
	comp=Z,230nm,20.1s,baz=218,slow=33						
LVC	**Limon Verde**	**47.30**	**275**	LR	LR	04 28 58.9	
	comp=Z,300nm,21.7s,baz=126,slow=34						
DBIC	**Dimbokro**	**47.78**	**16**	LR	LR	04 27 14.0	
	comp=Z,64nm,19.3s,baz=148,slow=32						
GO01	**Chusmiza**	**49.21**	**278**	P	**P**	**04 10 50.6**	**-0.2**
GO01				IAmb	IAmb	04 10 53.1	
	comp=Z,7.6nm,0.8s						
MAW	**Mawson**	**49.71**	**150**	LR	LR	04 27 23.1	
	comp=Z,183nm,21.4s,baz=263,slow=31						
QSPA	**South Pole Qui**	**50.15**	**180**	LR	LR	04 29 39.9	
	comp=Z,70nm,19.6s,baz=193,slow=33						
QSPA	**South Pole Qui**	**50.15**	**180**	P	**P**	**04 10 57.7**	**+0.7**
QSPA				IAmb	IAmb	04 10 57.7	
	comp=Z,8.1nm,1.1s						
PB16	**IPOC Station P**	**50.24**	**280**	P	**P**	**04 10 59.1**	**+0.4**
PB16				IAmb	IAmb	04 11 02.2	
	comp=Z,2.9nm,0.8s						
LPAZ	**La Paz**	**50.45**	**283**	P	**P**	**04 10 59.5**	**-0.9**
	comp=Z,1.8nm,1.1s,baz=143,slow=6.9,SNR=4.2						
LPAZ				LR	LR	04 31 57.9	
	comp=Z,230nm,20.2s,baz=120,slow=36						
	comp=Z,1.8nm,1.1s						
LPAZ	**La Paz**	**50.45**	**283**	P	**P**	**04 10 59.7**	**-0.8**
LPAZ				IAmb	IAmb	04 11 19.9	
	comp=Z,7.6nm,1.5s						
BBTS	**Babate**	**54.48**	**0**	LR	LR	04 30 31.9	
	comp=Z,180nm,18.7s,baz=180,slow=32						
TORD	**Torodi Ar. Bea**	**55.63**	**22**	P	**P**	**04 11 36.0**	**-1.8**
	comp=Z,0.5nm,0.9s,baz=198,slow=6.1,SNR=4.9						
TORD				LR	LR	04 30 10.5	
	comp=Z,126nm,21.5s,baz=220,slow=30						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**55.63**	**22**	P	**P**	**04 11 37.4**	**-0.4**
MDP	**Montagnes des**	**55.89**	**315**	LR	LR	04 33 26.3	
	comp=Z,293nm,19.3s,baz=159,slow=34						
MBAR	**Mbarara**	**58.21**	**60**	LR	LR	04 33 27.0	
	comp=Z,265nm,21.2s,baz=214,slow=32						
MBAR	**Mbarara**	**58.21**	**60**	P	**P**	**04 11 56.9**	**+0.4**
NNA	**Nana**	**59.70**	**280**	LR	LR	04 37 25.2	
	comp=Z,257nm,20.9s,baz=136,slow=36						
KMBO	**Kilima Mbogo**	**62.27**	**66**	LR	LR	04 36 54.9	
	comp=Z,14nm,19.6s,baz=254,slow=34						
VNDA	**Vanda**	**62.64**	**180**	P	**P**	**04 12 26.5**	**+0.8**
	comp=Z,2.6nm,1.3s,baz=189,slow=5.9,SNR=6.6						
VNDA				LR	LR	04 37 29.2	
	comp=Z,50nm,19.6s,baz=162,slow=34						
	comp=Z,2.6nm,1.3s						
VNDA	**Vanda**	**62.64**	**180**	P	**P**	**04 12 25.7**	**0.0**
VNDA				IAmb	IAmb	04 12 43.9	
	comp=Z,3.5nm,1.2s						
ATAH	**Atahualpa**	**64.00**	**283**	LR	LR	04 41 38.1	
	comp=Z,149nm,18.4s,baz=153,slow=37						
LODK	**Lodwar**	**64.27**	**61**	P	**P**	**04 12 38.3**	**+0.9**
TAM	**Tamanrasset**	**65.88**	**22**	P	**P**	**04 12 47.4**	**-0.3**
TAM				IAmb	IAmb	04 12 59.4	
	comp=Z,5.1nm,1.4s						
PCRV	**Puerto La Cruz**	**66.93**	**307**	LR	LR	04 41 08.3	
	comp=Z,194nm,18.0s,slow=35						
SDV	**Santo Domingo**	**69.74**	**301**	LR	LR	04 42 16.5	
	comp=Z,96nm,18.3s,baz=99,slow=35						
MDT	**Midelt**	**73.39**	**10**	LR	LR	04 42 22.3	
	comp=Z,95nm,18.3s,baz=200,slow=33						
SJG	**San Juan**	**74.06**	**311**	LR	LR	04 44 15.7	
	comp=Z,68nm,20.6s,baz=146,slow=34						
RPN	**Rapa Nui**	**75.05**	**247**	LR	LR	04 40 01.5	
	comp=Z,152nm,19.2s,baz=129,slow=30						
ATD	**Arta Tunnel**	**75.22**	**61**	LR	LR	04 45 10.1	
	comp=Z,151nm,18.9s,baz=159,slow=34						
KEST	**Kesra**	**79.15**	**21**	LR	LR	04 46 08.4	
	comp=Z,124nm,19.2s,baz=348,slow=34						
ESDC	**Sonseca Array**	**80.23**	**10**	P	**P**	**04 14 13.4**	**+1.3**
	comp=Z,0.8nm,1.0s,baz=186,slow=6.1,SNR=5.3						
ESDC				LR	LR	04 45 13.2	
	comp=Z,42nm,20.2s,baz=173,slow=32						
	comp=Z,0.8nm,1.0s						
ESDC	**Sonseca Array**	**80.23**	**10**	P	**P**	**04 14 12.2**	**0.0**
JTS	**Las Juntas de**	**80.56**	**292**	LR	LR	04 51 06.0	
	comp=Z,78nm,19.1s,baz=194,slow=37						
EIL	**Elat**	**84.30**	**43**	LR	LR	04 48 53.9	
	comp=Z,220nm,20.5s,baz=244,slow=33						
MMAI	**Mount Meron Ar**	**87.19**	**41**	LR	LR	04 53 26.9	
	comp=Z,77nm,18.8s,baz=94,slow=35						
DAVOX	**Davos/Dischmat**	**89.67**	**18**	LR	LR	04 52 17.5	
	comp=Z,64nm,19.4s,baz=163,slow=34						
BRTR	**Keskin Array B**	**91.71**	**36**	LR	LR	04 55 13.2	
	comp=Z,48nm,19.7s,baz=232,slow=35						
CMIG	**Matias Romero**	**92.23**	**290**	LR	LR	04 55 24.3	
	comp=Z,48nm,20.2s,baz=110,slow=35						
H01W2	**Cape Leeuwin H**	**92.61**	**141**	T	T	05 58 56.7	
	baz=216,slow=75,SNR=8.1						
H01W1	**Cape Leeuwin H**	**92.63**	**141**	T	T	05 58 56.0	
	baz=216,slow=75,SNR=7.0						
H01W3	**Cape Leeuwin H**	**92.63**	**141**	T	T	05 59 02.1	
	baz=216,slow=75,SNR=7.2						
VRAC	**Vranov**	**93.72**	**21**	LR	LR	04 55 39.0	
	comp=Z,17nm,18.1s,baz=208,slow=34						
WSAR	**Wadi Sarin**	**94.10**	**63**	LR	LR	04 56 05.6	
	comp=Z,104nm,20.9s,baz=245,slow=34						
GNI	**Garni**	**97.46**	**43**	LR	LR	04 58 12.4	
	comp=Z,103nm,19.9s,baz=224,slow=35						
BCAR	**Beaver Creek A**	**140.60**	**324**	PKPpre	PKPpre	04 21 26.1	
SKT	**Skwentna**	**145.25**	**324**		**PKPbc**	**04 21 38.6**	**+0.3**

```
      comp=E,1265µm,0.1s
LNSS                        AML   AML
      comp=N,4675µm,0.4s
LNSS                        AML   AML
      comp=E,7115µm,0.7s
LNSS                        AML   AML
      comp=N,17100µm,0.2s
LNSS                        AML   AML
      comp=E,1266µm,0.1s
LNSS                        AML   AML
      comp=N,4205µm,0.2s
T1241 Roccafluvione,  0.20  56  P     Pg    04 02 50.5 +0.6
T1241                           S     Sg    04 02 53.8 +1.0
T1241                           AML   AML
      comp=E,4455µm,0.2s
T1241                           AML   AML
      comp=N,2835µm,1.4s
T1241                           AML   AML
      comp=E,9670µm,0.3s
T1241                           AML   AML
      comp=N,4000µm,1.2s
T1216 Preci, Frazion  0.20 316  P     Pg    04 02 50.4 +0.5
T1216                           S     Sg    04 02 53.5 +0.7
T1216                           AML   AML
      comp=E,4140µm,0.3s
T1216                           AML   AML
      comp=N,4175µm,0.5s
T1216                           AML   AML
      comp=N,4165µm,0.5s
T1216                           AML   AML
      comp=N,4170µm,0.4s
T1216                           AML   AML
      comp=E,4145µm,0.3s
T1216                           AML   AML
      comp=E,4145µm,1.7s
T1216                           AML   AML
      comp=E,1881µm,0.3s
T1216                           AML   AML
      comp=N,1982µm,0.1s
T1217 Poggiodomo (PG  0.21 261  P     Pg    04 02 50.5 +0.5
T1217                           AML   AML
      comp=E,753µm,0.7s
T1217                           AML   AML
      comp=N,1049µm,0.8s
T1217                           AML   AML
      comp=E,3740µm,0.5s
T1217                           AML   AML
      comp=N,6760µm,0.4s
T1217                           AML   AML
      comp=E,3710µm,0.5s
T1217                           AML   AML
      comp=N,6605µm,0.4s
T1217                           AML   AML
      comp=N,6755µm,0.4s
T1217                           AML   AML
      comp=N,6620µm,0.4s
T1217                           AML   AML
      comp=E,3705µm,0.5s
T1217                           AML   AML
      comp=N,6755µm,0.4s
T1217                           AML   AML
      comp=N,6620µm,0.4s
T1217                           AML   AML
      comp=E,3740µm,0.5s
T1217                           AML   AML
      comp=E,728µm,0.2s
T1217                           AML   AML
      comp=N,766µm,0.2s
T1217                           AML   AML
      comp=E,740µm,0.1s
T1217                           AML   AML
      comp=N,793µm,0.2s
T1217                           AML   AML
      comp=E,3740µm,1.5s
T1217                           AML   AML
      comp=N,6620µm,1.6s
T1217                           AML   AML
      comp=N,6755µm,1.6s
T1217                           AML   AML
      comp=E,3705µm,1.5s
RM33  Pellescritta (  0.24 179  P     Pg    04 02 50.8 +0.3
RM33                            S     Sg    04 02 55.2 +1.3
RM33                            AML   AML
      comp=E,5410µm,0.5s
RM33                            AML   AML
      comp=N,4750µm,0.8s
RM33                            AML   AML
      comp=E,5295µm,0.5s
RM33                            AML   AML
      comp=N,4700µm,0.8s
RM33                            AML   AML
      comp=E,5290µm,0.5s
RM33                            AML   AML
      comp=E,5405µm,0.5s
RM33                            AML   AML
      comp=N,793µm,0.2s
RM33                            AML   AML
      comp=E,1108µm,0.1s
RM33                            AML   AML
      comp=N,774µm,0.2s
RM33                            AML   AML
      comp=E,1089µm,0.1s
FEMA  Monte Fema      0.25 332  P     Pg    04 02 51.4 +0.6
FEMA                            S     Sg    04 02 55.2 +1.0
AM05  Amandola Campo  0.26  25  P     Pg    04 02 51.6 +0.7
AM05                            S     Sb    04 02 56.0 -0.9
AM05                            AML   AML
      comp=E,4875µm,0.1s
AM05                            AML   AML
      comp=E,1305µm,1.6s
AM05                            AML   AML
      comp=E,5460µm,1.2s
AM05                            AML   AML
      comp=N,640µm,0.1s
AM05                            AML   AML
      comp=E,1300µm,1.6s
AM05                            AML   AML
      comp=N,1990µm,0.6s
AM05                            AML   AML
      comp=E,5455µm,1.2s
AM05                            AML   AML
      comp=E,1300µm,0.4s
AM05                            AML   AML
      comp=N,640µm,0.1s
AM05                            AML   AML
      comp=E,5455µm,0.8s
AM05                            AML   AML
      comp=E,2060µm,0.1s
AM05                            AML   AML
      comp=N,673µm,0.1s
AM05                            AML   AML
      comp=N,245µm,0.1s
AM05                            AML   AML
      comp=E,561µm,0.1s
T1215 Vallo di Nera,  0.26 283  ⇑P    Pg    04 02 51.4 +0.5
T1215                           AML   AML
      comp=E,1387µm,0.3s
T1215                           AML   AML
      comp=N,1840µm,0.2s
T1215                           AML   AML
      comp=E,1314µm,0.9s
T1215                           AML   AML
      comp=N,1800µm,0.3s
T1215                           AML   AML
      comp=N,1835µm,0.2s
T1215                           AML   AML
      comp=E,1389µm,0.3s
T1215                           AML   AML
      comp=N,1840µm,0.2s
T1215                           AML   AML
      comp=N,524µm,0.2s
T1215                           AML   AML
      comp=E,612µm,0.1s
T1215                           AML   AML
      comp=E,596µm,0.1s
T1215                           AML   AML
      comp=N,577µm,0.2s
CAMP  Campotosto      0.26 145  P     Pg    04 02 51.5 +0.6
CAMP                            S     Sg    04 02 55.6 +1.1
CAMP                            AML   AML
      comp=E,2580µm,0.4s
CAMP                            AML   AML
      comp=N,1950µm,0.5s
CAMP                            AML   AML
      comp=E,2585µm,0.4s
CAMP                            AML   AML
      comp=E,306µm,0.2s
CAMP                            AML   AML
      comp=N,244µm,0.4s
T1246 Crognaleto (TE  0.27 127  P     Pg    04 02 51.6 +0.5
T1246                           S     Sg    04 02 55.8 +1.1
T1247 Pizzolo (AQ)    0.31 167  P     Pg    04 02 52.6 +0.7
T1247                           S     Sb    04 02 57.6 -0.9
T1247                           AML   AML
      comp=E,5540µm,0.2s
T1247                           AML   AML
      comp=N,4240µm,1.3s
T1247                           AML   AML
      comp=E,5545µm,0.2s
T1247                           AML   AML
      comp=N,4245µm,1.3s
T1247                           AML   AML
      comp=E,781µm,0.1s
T1247                           AML   AML
      comp=N,847µm,0.2s
T1247                           AML   AML
      comp=N,4245µm,0.7s
TERO  Teramo          0.32 113  ⇑P    Pg    04 02 51.1 -0.9
TERO                            AML   AML
      comp=E,2200µm,1.2s
TERO                            AML   AML
      comp=N,3165µm,0.1s
TERO                            AML   AML
      comp=E,2520µm,1.2s
TERO                            AML   AML
      comp=E,2205µm,1.2s
TERO                            AML   AML
      comp=N,3740µm,0.1s
TERO                            AML   AML
      comp=E,973µm,0.1s
TERO                            AML   AML
      comp=E,1109µm,0.1s
TERO                            AML   AML
      comp=N,935µm,0.2s
TERO                            AML   AML
      comp=N,1044µm,0.2s
TERO                            AML   AML
      comp=N,3170µm,0.1s
TERO                            AML   AML
      comp=E,2520µm,0.8s
TERO                            AML   AML
      comp=E,2205µm,0.8s
GUMA  Gualdo di Mace  0.33  16  P     Pb    04 02 53.2 -0.5
GUMA                            S     Sb    04 02 59.0 -0.1
GUMA                            AML   AML
      comp=E,5590µm,0.3s
GUMA                            AML   AML
      comp=N,4295µm,0.3s
GUMA                            AML   AML
      comp=E,7280µm,0.4s
GUMA                            AML   AML
      comp=N,4230µm,0.4s
GUMA                            AML   AML
      comp=N,12100µm,0.3s
GUMA                            AML   AML
      comp=E,11150µm,0.7s
GUMA                            AML   AML
      comp=N,14000µm,0.6s
GUMA                            AML   AML
      comp=E,11900µm,0.6s
GUMA                            AML   AML
      comp=N,3171µm,0.3s
GUMA                            AML   AML
      comp=E,5593µm,0.3s
GUMA                            AML   AML
      comp=N,4296µm,0.3s
GUMA                            AML   AML
      comp=E,7281µm,0.4s
GUMA                            AML   AML
      comp=N,12100µm,1.7s
T1211 Morro Reatino   0.34 231  ⇓P    Pg    04 02 51.6 -0.7
T1211                           AML   AML
      comp=E,1510µm,0.6s
T1211                           AML   AML
      comp=N,3260µm,0.3s
T1211                           AML   AML
      comp=E,1576µm,0.6s
T1211                           AML   AML
      comp=N,3240µm,0.3s
T1211                           AML   AML
      comp=N,3265µm,0.3s
T1211                           AML   AML
      comp=E,1880µm,0.4s
T1211                           AML   AML
      comp=N,3245µm,0.3s
T1211                           AML   AML
      comp=E,1800µm,0.4s
T1211                           AML   AML
      comp=N,3265µm,1.7s
T1211                           AML   AML
      comp=N,3245µm,1.7s
T1211                           AML   AML
      comp=N,1142µm,0.3s
T1211                           AML   AML
      comp=E,695µm,0.2s
T1211                           AML   AML
      comp=E,695µm,0.2s
T1211                           AML   AML
      comp=N,1100µm,0.3s
T1211                           AML   AML
      comp=E,1880µm,1.6s
T1211                           AML   AML
      comp=E,1800µm,1.6s
ARRO  Arrone          0.37 243  ⇓P    Pg    04 02 53.4 +0.5
ARRO                            AML   AML
      comp=E,418µm,0.5s
ARRO                            AML   AML
      comp=N,294µm,1.3s
ARRO                            AML   AML
      comp=E,1145µm,0.3s
ARRO                            AML   AML
      comp=E,1150µm,0.3s
ARRO                            AML   AML
      comp=E,1150µm,1.7s
ARRO                            AML   AML
      comp=N,870µm,0.6s
ARRO                            AML   AML
      comp=N,372µm,0.3s
ARRO                            AML   AML
      comp=E,317µm,0.2s
GIGS  Gran Sasso      0.40 138  P     Pg    04 02 54.0 +0.4
GIGS                            AML   AML
      comp=N,91µm,0.2s
GIGS                            AML   AML
      comp=E,114µm,0.2s
GIGS                            AML   AML
      comp=E,1000µm,0.4s
GIGS                            AML   AML
      comp=N,466µm,0.1s
OFFI  Offida          0.40  62  ⇑P    Pb    04 02 54.9 +0.1
OFFI                            AML   AML
      comp=E,1143µm,0.7s
OFFI                            AML   AML
      comp=N,1074µm,0.4s
OFFI                            AML   AML
      comp=E,5090µm,0.3s
OFFI                            AML   AML
      comp=N,4900µm,0.4s
OFFI                            AML   AML
      comp=N,1074µm,0.4s
OFFI                            AML   AML
      comp=E,1099µm,0.4s
SEF1  Sefro           0.44 335  P     Pg    04 02 54.9 +0.5
SEF1                            S     Sb    04 03 01.7 -0.6
CESX  Cesi            0.48 254  ⇓P    Pg    04 02 55.4 +0.4
CESX                            AML   AML
      comp=E,294µm,1.6s
CESX                            AML   AML
      comp=N,236µm,0.5s
CESX                            AML   AML
      comp=E,704µm,0.4s
CESX                            AML   AML
      comp=N,219µm,0.5s
CESX                            AML   AML
      comp=E,260µm,0.4s
CESX                            AML   AML
      comp=N,622µm,0.4s
FIAM  Fiamignano      0.48 188  ⇓P    Pg    04 02 55.3 +0.3
FIAM                            AML   AML
      comp=E,488µm,0.5s
FIAM                            AML   AML
      comp=N,1445µm,0.2s
FIAM                            AML   AML
      comp=E,1420µm,0.4s
FIAM                            AML   AML
      comp=N,193µm,0.5s
FIAM                            AML   AML
      comp=E,277µm,0.5s
FIAM                            AML   AML
      comp=N,1450µm,0.2s
ASSB  Assisi San Ben  0.50 307  S     Sb    04 03 04.0  0.0
TRTR  Tortoreto Alta  0.52  83  ⇑P    Pb    04 02 57.3 +0.3
TRTR                            AML   AML
      comp=E,3080µm,1.3s
TRTR                            AML   AML
      comp=N,3270µm,0.5s
TRTR                            AML   AML
      comp=E,3080µm,0.7s
TRTR                            AML   AML
      comp=E,976µm,0.3s
TRTR                            AML   AML
      comp=N,816µm,0.3s
SNTG  Esanatoglia     0.55 339  ⇑P    Pg    04 02 56.8 +0.5
SNTG                            AML   AML
      comp=E,410µm,0.6s
SNTG                            AML   AML
      comp=N,436µm,0.5s
SNTG                            AML   AML
      comp=E,163µm,0.1s
SNTG                            AML   AML
      comp=E,156µm,0.1s
SNTG                            AML   AML
      comp=N,220µm,0.2s
SNTG                            AML   AML
      comp=N,233µm,0.2s
VCEL  Villa Celiera   0.58 127  ⇓P    Pb    04 02 57.8 -0.2
VCEL                            AML   AML
      comp=E,382µm,1.3s
VCEL                            AML   AML
      comp=N,434µm,0.9s
VCEL                            AML   AML
      comp=E,1130µm,0.4s
VCEL                            AML   AML
      comp=N,1200µm,0.4s
VCEL                            AML   AML
      comp=N,1205µm,0.4s
VCEL                            AML   AML
      comp=E,375µm,0.3s
VCEL                            AML   AML
      comp=N,367µm,0.3s
VCEL                            AML   AML
      comp=E,1130µm,0.4s
EL6   Elcito          0.59 352  ⇓P    Pb    04 02 57.9 -0.2
EL6                             S     Sb    04 03 08.0 +1.5
ATCC  AVT- Casa Cast  0.61 317  ⇓P    Pg    04 02 57.7 +0.3
ATCC                            AML   AML
      comp=E,594µm,1.6s
ATCC                            AML   AML
      comp=N,510µm,1.4s
ATCC                            AML   AML
      comp=E,594µm,1.6s
ATCC                            AML   AML
      comp=N,511µm,1.4s
ATCC                            AML   AML
      comp=E,594µm,0.4s
ATCC                            AML   AML
      comp=N,297µm,0.1s
ATCC                            AML   AML
      comp=E,308µm,0.3s
T0110 Collepietro     0.67 141  ⇑P    Pb    04 02 59.2 -0.3
T0110                           AML   AML
      comp=E,246µm,1.6s
T0110                           AML   AML
      comp=N,287µm,0.3s
T0110                           AML   AML
      comp=E,1260µm,0.7s
T0110                           AML   AML
      comp=N,1600µm,0.3s
T0110                           AML   AML
      comp=E,1260µm,1.3s
T0110                           AML   AML
      comp=N,1600µm,1.7s
T0110                           AML   AML
      comp=N,287µm,0.3s
T0110                           AML   AML
      comp=E,227µm,0.3s
PP3   Marolino        0.70  25  ⇑P    Pb    04 03 00.4 +0.5
PP3                             AML   AML
      comp=E,1270µm,0.5s
PP3                             AML   AML
      comp=N,1000µm,0.4s
PP3                             AML   AML
      comp=E,1180µm,0.5s
PP3                             AML   AML
      comp=N,1095µm,0.4s
PP3                             AML   AML
      comp=E,3135µm,0.5s
PP3                             AML   AML
      comp=N,3130µm,0.5s
PP3                             AML   AML
      comp=E,3045µm,0.5s
PP3                             AML   AML
      comp=N,3235µm,0.5s
PP3                             AML   AML
      comp=N,3125µm,0.5s
PP3                             AML   AML
      comp=E,1272µm,0.5s
PP3                             AML   AML
      comp=N,1002µm,0.4s
PP3                             AML   AML
      comp=E,1183µm,0.5s
PP3                             AML   AML
      comp=N,1096µm,0.4s
SRES  S.Oreste - Sor  0.72 226  S     Sn    04 03 13.0 -0.1
ARVD  Arcevia         0.78 346  S     Sn    04 03 14.0 -0.4
ATMI  Monte Miggiano  0.91 311  S     Sn    04 03 18.0 +0.4
PIEI  Pieia           0.93 328  S     Sn    04 03 19.0 +0.7
FSSB  Fossombrone     1.00 342  S     Sn    04 03 21.0 +1.1
RDP   Rocca di Papa   1.05 200  S     Sg    04 03 18.0 -1.5
GIUL  Giuliano Di Ro  1.19 178  ⇑P    Pg    04 03 09.9 +1.5
GIUL                            AML   AML
      comp=E,90µm,1.6s
GIUL                            AML   AML
      comp=N,134µm,0.6s
VITU  Vitulano (BN)   1.89 145  P     Pg    04 03 22.2 +0.4
PAOL  Paolisi         1.99 149  S     Sb    04 03 46.0 -0.8
```

PRU ***31*** *04:03:29.3±0.0,42°.57N×13°.84E,h10km*
ROM 31 04:03:31.0±0.1,42°.725N±0°.003×13°.220E±0°.004,
h10km,ML2.7/34,19C-16D,Error ellipse: s-maj=0.3km
s-min=0.3km az=49.0,Central Italy

```
Code  Station Name    Δ°   AZ°   Phase ID        Time      Res
                                  Op    ISC     h m s     ISC
T1204 Amatrice, Fraz        0.09 124  ⇑P    Pg    04 03 34.2 +0.6
T1204                                 S     Sg    04 03 36.0 +0.5
T1204                                 AML   AML
      comp=E,8755µm,0.3s
T1204                                 AML   AML
      comp=N,8590µm,0.2s
T1204                                 AML   AML
      comp=E,8735µm,0.3s
T1204                                 AML   AML
      comp=N,8610µm,0.2s
T1204                                 AML   AML
      comp=E,8740µm,0.3s
T1204                                 AML   AML
      comp=N,8580µm,0.2s
T1204                                 AML   AML
      comp=N,8585µm,0.2s
SMA1  SAN MARTINO           0.13 138  ⇑P    Pg    04 03 34.8 +0.6
SMA1                                  S     Sg    04 03 37.1 +0.8
SMA1                                  AML   AML
      comp=E,6570µm,0.4s
SMA1                                  AML   AML
      comp=N,5340µm,0.4s
SMA1                                  AML   AML
      comp=E,6575µm,0.4s
SMA1                                  AML   AML
      comp=N,5335µm,0.4s
SMA1                                  AML   AML
      comp=N,5337µm,0.4s
SMA1                                  AML   AML
      comp=N,5340µm,1.6s
SMA1                                  AML   AML
      comp=E,6570µm,1.6s
SMA1                                  AML   AML
      comp=E,5193µm,0.1s
T1245 Castelsantange        0.13 350  ⇓P    Pg    04 03 34.7 +0.4
T1245                                 S     Sg    04 03 37.0 +0.4
T1245                                 AML   AML
      comp=N,32100µm,0.3s
```

T1245				AML	AML	
	comp=E,22200µm,0.2s					
T1245				AML	AML	
	comp=E,23200µm,0.2s					
T1245				AML	AML	
	comp=E,22150µm,0.2s					
T1245				AML	AML	
	comp=N,31750µm,0.3s					
T1245				AML	AML	
	comp=N,32100µm,0.3s					
T1243	**Rocca Santa Ma**	**0.17**	**99**	⇑P	Pg	04 03 35.3 +0.5
T1243				S	Sg	04 03 38.1 +0.7
LNSS	**Leonessa**	**0.18**	**227**	⇓P	Pb	04 03 35.7 -0.8
LNSS				S	Sg	04 03 38.8 +1.1
LNSS				AML	AML	
	comp=E,7115µm,0.7s					
LNSS				AML	AML	
	comp=N,17100µm,0.2s					
MMO1	**Montemonaco**	**0.19**	**24**	P	Pg	04 03 35.6 +0.4
MMO1				S	Sg	04 03 38.7 +0.7
T1217	**Poggiodomo (PG**	**0.21**	**267**	P	Pg	04 03 36.1 +0.6
T1217				S	Sg	04 03 39.6 +1.0
T1217				AML	AML	
	comp=E,3740µm,0.5s					
T1217				AML	AML	
	comp=N,6760µm,0.4s					
T1217				AML	AML	
	comp=E,3720µm,0.5s					
T1217				AML	AML	
	comp=N,6605µm,0.4s					
T1217				AML	AML	
	comp=E,3740µm,0.5s					
T1217				AML	AML	
	comp=N,6755µm,0.4s					
T1217				AML	AML	
	comp=N,6620µm,0.4s					
T1217				AML	AML	
	comp=E,3720µm,0.5s					
T1217				AML	AML	
	comp=N,6620µm,0.4s					
T1217				AML	AML	
	comp=N,6755µm,0.4s					
T1217				AML	AML	
	comp=E,3740µm,1.5s					
T1217				AML	AML	
	comp=N,6755µm,1.6s					
T1217				AML	AML	
	comp=N,6620µm,1.6s					
T1217				AML	AML	
	comp=N,6757µm,0.4s					
T1217				AML	AML	
	comp=N,6601µm,0.4s					
T1217				AML	AML	
	comp=E,3720µm,1.5s					
RM33	**Pellescritta (**	**0.22**	**181**	⇓P	Pb	04 03 36.4 -0.8
RM33				S	Sg	04 03 40.0 +1.4
RM33				AML	AML	
	comp=N,4750µm,0.8s					
RM33				AML	AML	
	comp=E,5410µm,0.5s					
RM33				AML	AML	
	comp=E,5295µm,0.5s					
RM33				AML	AML	
	comp=E,5290µm,0.5s					
RM33				AML	AML	
	comp=E,5405µm,0.5s					
RM33				AML	AML	
	comp=N,4700µm,0.8s					
T1216	**Preci, Frazion**	**0.22**	**318**	⇑P	Pg	04 03 36.3 +0.6
T1216				S	Sg	04 03 40.0 +1.2
T1216				AML	AML	
	comp=E,3210µm,0.4s					
T1216				AML	AML	
	comp=N,3658µm,0.2s					
CAMP	**Campotosto**	**0.23**	**143**	⇓P	Pg	04 03 36.5 +0.6
CAMP				S	Sg	04 03 40.3 +1.1
CAMP				AML	AML	
	comp=N,1950µm,0.5s					
CAMP				AML	AML	
	comp=E,2580µm,0.4s					
CAMP				AML	AML	
	comp=E,2585µm,0.4s					
T1215	**Vallo di Nera,**	**0.27**	**287**	⇑P	Pg	04 03 37.1 +0.6
T1215				S	Sg	04 03 41.3 +1.1
T1215				AML	AML	
	comp=E,1389µm,0.3s					
T1215				AML	AML	
	comp=E,1297µm,0.3s					
T1215				AML	AML	
	comp=N,1840µm,0.2s					
AM05	**Amandola Campo**	**0.27**	**21**	⇓P	Pg	04 03 37.2 +0.7
AM05				S	Sg	04 03 41.3 +1.1
AM05				AML	AML	
	comp=E,1305µm,1.6s					
AM05				AML	AML	
	comp=E,5460µm,1.2s					
AM05				AML	AML	
	comp=N,640µm,0.1s					
AM05				AML	AML	
	comp=E,1300µm,1.6s					
AM05				AML	AML	
	comp=N,1990µm,0.6s					
AM05				AML	AML	
	comp=E,5455µm,1.2s					
AM05				AML	AML	
	comp=E,1300µm,0.4s					
AM05				AML	AML	
	comp=N,640µm,0.1s					
AM05				AML	AML	
	comp=E,5455µm,0.8s					
T1247	**Pizzolo (AQ)**	**0.29**	**168**	⇓P	Pg	04 03 37.6 +0.7
T1247				S	Sb	04 03 42.2 -1.0
T1247				AML	AML	
	comp=E,5540µm,0.2s					
T1247				AML	AML	
	comp=N,4240µm,1.3s					
T1247				AML	AML	
	comp=E,5545µm,0.2s					
T1247				AML	AML	
	comp=N,4245µm,1.3s					
T1247				AML	AML	
	comp=N,4245µm,0.7s					
TERO	**Teramo**	**0.30**	**110**	⇑P	Pg	04 03 37.5 +0.4
TERO				S	Sg	04 03 42.3 +1.1
TERO				AML	AML	
	comp=E,2205µm,1.2s					
TERO				AML	AML	
	comp=N,3165µm,0.1s					
TERO				AML	AML	
	comp=N,3740µm,0.1s					
TERO				AML	AML	
	comp=E,2200µm,1.2s					
TERO				AML	AML	
	comp=E,2520µm,1.2s					
TERO				AML	AML	
	comp=N,3170µm,0.1s					
TERO				AML	AML	
	comp=E,2520µm,0.8s					
TERO				AML	AML	
	comp=E,2205µm,0.8s					
T1211	**Morro Reatino**	**0.33**	**235**	P	Pg	04 03 38.2 +0.5
T1211				S	Sb	04 03 43.6 -0.8
T1211				AML	AML	
	comp=E,1800µm,0.4s					
T1211				AML	AML	
	comp=N,3265µm,0.3s					
T1211				AML	AML	
	comp=E,1880µm,0.4s					
T1211				AML	AML	
	comp=N,3250µm,0.3s					
T1211				AML	AML	
	comp=E,1805µm,0.4s					
T1211				AML	AML	
	comp=N,3260µm,0.3s					
T1211				AML	AML	
	comp=E,1442µm,0.5s					
T1211				AML	AML	
	comp=E,1805µm,1.6s					
T1211				AML	AML	
	comp=N,3248µm,0.3s					
T1211				AML	AML	
	comp=N,3260µm,1.7s					
T1211				AML	AML	
	comp=E,1533µm,0.3s					
GUMA	**Gualdo di Mace**	**0.35**	**14**	⇓P	Pb	04 03 38.8 -0.6
GUMA				S	Sb	04 03 44.6 -0.4
GUMA				AML	AML	
	comp=E,11900µm,0.6s					
GUMA				AML	AML	
	comp=N,12100µm,0.3s					
GUMA				AML	AML	
	comp=E,11900µm,0.5s					
GUMA				AML	AML	
	comp=N,12050µm,0.3s					
GUMA				AML	AML	
	comp=N,14000µm,0.6s					
GUMA				AML	AML	
	comp=E,11150µm,0.7s					
GUMA				AML	AML	
	comp=N,12050µm,1.7s					
ARRO	**Arrone**	**0.36**	**247**	⇑P	Pb	04 03 39.2 -0.4
ARRO				AML	AML	
	comp=E,1150µm,0.3s					
ARRO				AML	AML	
	comp=E,1145µm,0.3s					
ARRO				AML	AML	
	comp=N,870µm,0.6s					
ARRO				AML	AML	
	comp=E,1150µm,1.7s					
GIGS	**Gran Sasso**	**0.38**	**137**	⇑P	Pg	04 03 38.8 +0.2
GIGS				S	Sg	04 03 44.4 +0.9
GIGS				AML	AML	
	comp=E,1000µm,0.4s					
GIGS				AML	AML	
	comp=N,466µm,0.1s					
AQU	**L'Aquila**	**0.39**	**160**	⇓P	Pg	04 03 39.3 +0.5
AQU				S	Sb	04 03 45.4 -0.9
AQU				AML	AML	
	comp=N,1060µm,0.3s					
AQU				AML	AML	
	comp=E,1178µm,1.5s					
AQU				AML	AML	
	comp=N,961µm,0.3s					
AQU				AML	AML	
	comp=E,1130µm,1.5s					
AQU				AML	AML	
	comp=E,1130µm,0.5s					
AQU				AML	AML	
	comp=E,1178µm,0.5s					
OFFI	**Offida**	**0.40**	**58**	⇑P	Pb	04 03 40.2 0.0
OFFI				S	Sb	04 03 48.0 +1.5
OFFI				AML	AML	
	comp=N,4900µm,0.4s					
OFFI				AML	AML	
	comp=E,5090µm,0.3s					
FIAM	**Fiamignano**	**0.46**	**189**	P	Pg	04 03 40.4 +0.3
FIAM				S	Sb	04 03 47.5 -0.8
FIAM				AML	AML	
	comp=N,1445µm,0.2s					
FIAM				AML	AML	
	comp=N,1450µm,0.2s					
FIAM				AML	AML	
	comp=E,1420µm,0.4s					
CESX	**Cesi**	**0.49**	**257**	S	Sb	04 03 50.0 +1.1
TRTR	**Tortoreto Alta**	**0.52**	**81**	⇑P	Pb	04 03 42.6 +0.4
TRTR				AML	AML	
	comp=E,3080µm,1.3s					
TRTR				AML	AML	
	comp=N,3270µm,0.5s					
TRTR				AML	AML	
	comp=E,3080µm,0.7s					
ASSB	**Assisi San Ben**	**0.52**	**308**	⇑P	Pg	04 03 41.6 +0.4
ASSB				AML	AML	
	comp=N,604µm,0.2s					
ASSB				AML	AML	
	comp=E,600µm,1.1s					
FAGN	**Fagnano**	**0.53**	**149**	P	Pg	04 03 41.6 +0.2
FAGN				AML	AML	
	comp=E,1915µm,0.3s					
FAGN				AML	AML	
	comp=N,1825µm,0.2s					
VCEL	**Villa Celiera**	**0.56**	**126**	⇑P	Pg	04 03 42.5 +0.5
VCEL				AML	AML	
	comp=E,1130µm,0.4s					
VCEL				AML	AML	
	comp=N,1200µm,0.4s					
VCEL				AML	AML	
	comp=E,1130µm,0.4s					
VCEL				AML	AML	
	comp=N,1205µm,0.4s					
SNTG	**Esanatoglia**	**0.57**	**339**	⇑P	Pb	04 03 42.6 -0.5
SNTG				S	Sb	04 03 52.0 +0.7
SNTG				AML	AML	
	comp=N,418µm,0.3s					
SNTG				AML	AML	
	comp=N,436µm,0.5s					
SNTG				AML	AML	
	comp=N,419µm,0.3s					
SNTG				AML	AML	
	comp=E,410µm,0.6s					
SNTG				AML	AML	
	comp=E,397µm,0.6s					
EL6	**Elcito**	**0.61**	**352**	S	Sb	04 03 54.0 +1.4
ATCC	**AVT- Casa Cast**	**0.63**	**317**	⇓P	Pg	04 03 43.4 +0.2
ATCC				S	Sb	04 03 54.0 +1.0
ATCC				AML	AML	
	comp=E,594µm,1.6s					
ATCC				AML	AML	
	comp=N,511µm,1.4s					
ATCC				AML	AML	
	comp=E,594µm,1.6s					
ATCC				AML	AML	
	comp=N,510µm,1.4s					
ATCC				AML	AML	
	comp=E,594µm,0.4s					
T0110	**Collepietro**	**0.65**	**140**	⇓P	Pg	04 03 43.6 +0.1
T0110				AML	AML	
	comp=N,1600µm,0.3s					
T0110				AML	AML	
	comp=E,1260µm,0.7s					
T0110				AML	AML	
	comp=E,1260µm,1.3s					
T0110				AML	AML	
	comp=N,1600µm,1.7s					
FOSV	**Fossato di Vic**	**0.66**	**330**	⇓P	Pg	04 03 43.9 +0.1
FOSV				S	Sb	04 03 54.0 0.0
FOSV				AML	AML	
	comp=E,455µm,0.7s					
FOSV				AML	AML	
	comp=E,455µm,1.3s					
FOSV				AML	AML	
	comp=N,544µm,0.3s					
PP3	**Marolino**	**0.71**	**24**	P	Pb	04 03 45.9 +0.4
PP3				S	Sn	04 03 58.0 -0.2
PP3				AML	AML	
	comp=N,3130µm,0.5s					
PP3				AML	AML	
	comp=N,3130µm,0.5s					
PP3				AML	AML	
	comp=N,3235µm,0.5s					
PP3				AML	AML	
	comp=N,3125µm,0.5s					
PP3				AML	AML	
	comp=E,3135µm,0.5s					
PP3				AML	AML	
	comp=E,3045µm,0.5s					
SRES	**S.Oreste - Sor**	**0.72**	**227**	⇓P	Pg	04 03 44.8 -0.1
SRES				AML	AML	
	comp=E,212µm,0.5s					
SRES				AML	AML	
	comp=N,210µm,0.4s					
MURB	**Monte Urbino**	**0.74**	**317**	S	Sn	04 03 58.0 -1.0
CERT	**Cerreto**	**0.80**	**193**	⇑P	Pg	04 03 46.0 -0.4
CERT				AML	AML	
	comp=E,378µm,0.5s					
CERT				AML	AML	
	comp=N,326µm,0.6s					
ARVD	**Arcevia**	**0.80**	**345**	⇓P	Pg	04 03 45.0 -1.4
MGAB	**Montegabbione**	**0.84**	**283**	⇓P	Pn	04 03 49.9 +1.0
FRON	**Frontone**	**0.87**	**336**	P	Pg	04 03 47.7 -0.1
FRON				AML	AML	
	comp=E,258µm,0.2s					
FRON				AML	AML	
	comp=N,376µm,0.6s					
ATPI	**Pietralunga -**	**0.94**	**321**	P	Pg	04 03 49.2 +0.1
PIEI	**Pieia**	**0.95**	**329**	S	Sn	04 04 05.0 +0.8
CAFR	**Castel Frentan**	**0.97**	**120**	S	Sn	04 04 05.0 +0.5
SACS	**San Casciano d**	**0.97**	**278**	⇑P	Pg	04 03 49.7 0.0
SACS				AML	AML	
	comp=N,208µm,0.6s					
SACS				AML	AML	
	comp=E,164µm,0.5s					
SENI	**Senigallia**	**0.98**	**1**	⇑P	Pg	04 03 49.8 -0.1
LPEL	**Lama dei Pelig**	**0.98**	**133**	⇓P	Pg	04 03 49.4 -0.6
LPEL				S	Sn	04 04 05.0 0.0
LPEL				AML	AML	
	comp=E,296µm,0.4s					
LPEL				AML	AML	
	comp=N,263µm,0.5s					
RMP	**Rome, Mte Porz**	**0.99**	**203**	⇑P	Pg	04 03 50.0 -0.1
RMP				AML	AML	
	comp=E,212µm,1.4s					
RMP				AML	AML	
	comp=N,275µm,0.5s					
RMP				AML	AML	
	comp=E,212µm,0.6s					
FSSB	**Fossombrone**	**1.02**	**342**	⇓P	Pg	04 03 50.7 0.0
FSSB				S	Sn	04 04 08.0 +2.2
FSSB				AML	AML	
	comp=N,974µm,0.3s					
FSSB				AML	AML	
	comp=E,604µm,0.4s					
FSSB				AML	AML	
	comp=N,973µm,0.3s					
SAMA	**S.Maria delle**	**1.05**	**206**	⇑P	Pn	04 03 52.2 +0.4
CAFI	**Castiglion Fio**	**1.10**	**304**	⇑P	Pn	04 03 52.4 -0.2
CAFI				AML	AML	
	comp=E,88µm,0.6s					
CAFI				AML	AML	
	comp=N,107µm,0.9s					
TOLF	**Tolfa**	**1.12**	**234**	P	Pb	04 03 52.2 -0.3
TOLF				AML	AML	
	comp=E,78µm,0.5s					
TOLF				AML	AML	
	comp=N,102µm,0.4s					
TOLF				AML	AML	
	comp=E,78µm,1.5s					
TOLF				AML	AML	
	comp=N,102µm,1.6s					
CPGN	**Carpegna, Ital**	**1.26**	**329**	P	Pn	04 03 54.8 0.0
OBKA	**Obir**	**3.90**	**14**	*e*Pn	Pn	04 04 31.8 +0.7
	comp=N,0.6nm,0.3s					
ABTA	**Abfaltersbach**	**4.05**	**353**	*e*Pn	Pn	04 04 34.4 +1.2
	comp=N,3.9nm,0.5s					
FETA	**Feichten**	**4.65**	**338**	*e*Pn	Pn	04 04 43.6 +2.3
	comp=N,0.8nm,0.4s					
WTTA	**Wattenberg**	**4.68**	**347**	*e*Pn	Pn	04 04 44.6 +2.8
	comp=N,0.4nm,0.2s					
SQTA	**Sankt Quirin**	**4.72**	**343**	*e*Pn	Pn	04 04 44.9 +2.6
	comp=N,0.7nm,0.2s					
RETA	**Reutte**	**5.07**	**341**	*e*Pn	Pn	04 04 49.6 +2.5
	comp=N,0.9nm,0.4s					
DAVA	**Damuels**	**5.14**	**334**	*e*Pn	Pn	04 04 50.2 +2.0
	comp=N,0.7nm,0.2s					
CONA	**Conrad Observa**	**5.53**	**19**	*e*Pn	Pn	04 04 54.6 +1.2
	comp=N,0.3nm,0.3s					
KHC	**Kasperske Hory**	**6.41**	**2**	*e*SN	Sn	04 06 16.5 -2.2

GII ***31*** *04:16:54.3±0.0,28°.51N×34°.77E,h1km,mb4.2/4,MD4.1/4, Mm3.6/3*
SGS ***31*** *04:16:57.0,28°.54N×34°.70E,h10km,Ml3.6*
HLW ***31*** *04:16:56.9,28°.53N×34°.65E,h12km±1km,Md3.3*
ISC 31 04:16:56.2±1.0,**28°.52N**±0°.02×**34°.69E**±0°.02,**h15**km±9km, **n78**,σ0s**60**/87,**Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDHB	**Dhahab**	**0.21**	**343**	P	**Pb**	**04 17 01.5**	**-0.3**
	baz=352						
RSHS		**0.24**	**156**	P	**Pb**	**04 17 02.0**	**-0.2**
RSHS		**0.24**	**156**	S	**Sg**	**04 17 05.9**	**+0.9**
BDAS	**Al Bad'**	**0.37**	**103**	P	**Pb**	**04 17 04.1**	**-0.5**
NUB	**Nuweibaa**	**0.51**	**356**	P	**Pg**	**04 17 05.8**	**-0.5**
	baz=359						
HAQS	**Haql**	**0.57**	**21**	S	**Sb**	**04 17 15.4**	**-0.4**
HAQS	**Haql**	**0.57**	**21**	P	**Pg**	**04 17 07.5**	**0.0**
AYUS	**'Aynunah**	**0.61**	**122**	P	**Pb**	**04 17 08.4**	**-0.1**
HKAT	**Jabal Katrina**	**0.61**	**271**	P	**Pg**	**04 17 08.2**	**-0.1**
	baz=270						
HKAT				S	**Sg**	**04 17 16.5**	**0.0**
	baz=270						
KRABS	**KRABS**	**0.65**	**130**	P	**Pb**	**04 17 09.1**	**-0.2**
HBST	**Basata**	**0.70**	**3**	P	**Pb**	**04 17 10.2**	**0.0**
	baz=5.0						
JLOS		**0.74**	**73**	P	**Pg**	**04 17 10.3**	**-0.3**
JMOS	**Jabal al Moall**	**0.75**	**30**	S	**Sb**	**04 17 21.0**	**0.0**
JMOS	**Jabal al Moall**	**0.75**	**30**	P	**Pg**	**04 17 10.5**	**-0.3**
TR1	**Tor 1**	**0.82**	**232**	P	**Pb**	**04 17 12.5**	**+0.2**
	baz=231						
HQLS		**0.85**	**23**	P	**Pg**	**04 17 12.3**	**-0.4**
TR2	**Tor 2**	**0.86**	**261**	P	**Pg**	**04 17 12.7**	**-0.2**
	baz=261						
MWLHS	**Almuwaylih**	**1.06**	**136**	P	**Pb**	**04 17 15.4**	**-0.9**
WTBKS	**WTBKS**	**1.16**	**111**	P	**Pb**	**04 17 17.6**	**-0.5**
EIL	**Elat**	**1.17**	**11**	Pg	**Pb**	**04 17 16.9**	**-1.3**
EIL				Sg	**Sn**	**04 17 34.3**	**+0.5**
HRDS	**Abu Rudays**	**1.24**	**279**	P	**Pn**	**04 17 19.1**	**+0.1**
	baz=280						
MBRI	**Mt Berech**	**1.29**	**9**	Pg	**Pn**	**04 17 19.2**	**-0.6**
MBRI				Sg	**Sg**	**04 17 38.2**	**+0.3**
NDEBA	**Dheba**	**1.35**	**141**	P	**Pn**	**04 17 19.4**	**-1.2**
SHQRE	**Shigry**	**1.45**	**115**	P	**Pn**	**04 17 21.9**	**0.0**
HRFI	**Mount Harif**	**1.54**	**11**	Pn	**Pn**	**04 17 22.8**	**-0.4**
HRFI				Sn	**Sg**	**04 17 45.3**	**-0.7**
KRMI	**Paran Flat**	**1.59**	**1**	Pn	**Pn**	**04 17 23.9**	**-0.1**
KRMI				Sn	**Sb**	**04 17 46.4**	**+1.0**
HHRG	**Al Ghardaqah**	**1.63**	**218**	P	**Pn**	**04 17 24.6**	**+0.2**
	baz=213						
DESA	**DESA**	**1.65**	**127**	P	**Pn**	**04 17 24.3**	**-0.4**
TBKS	**Tabuk**	**1.66**	**100**	P	**Pn**	**04 17 25.0**	**+0.2**
GRB	**Gharib**	**1.69**	**262**	P	**Pn**	**04 17 24.6**	**-0.7**
	baz=262						
ZNM	**Zenema**	**1.81**	**299**	P	**Pn**	**04 17 27.7**	**+0.9**
	baz=299						
ZNM				S	**Sb**	**04 17 51.2**	**-0.3**
	baz=299						
PRNI	**Paran**	**1.85**	**8**	Pn	**Pn**	**04 17 27.5**	**+0.1**
PRNI				Sn	**Sb**	**04 17 53.3**	**+0.6**
ZAF	**Zafarana**	**2.02**	**293**	P	**Pn**	**04 17 30.1**	**+0.3**
	baz=293						
ZFRI	**Zfri**	**2.07**	**12**	Pn	**Pn**	**04 17 30.9**	**+0.4**
ZFRI				Sn	**Sb**	**04 17 59.0**	**-0.1**
SUZ	**Suez**	**2.09**	**310**	P	**Pn**	**04 17 31.6**	**+0.8**
	baz=310						
URD06	**Shuwaq**	**2.12**	**120**	P	**Pn**	**04 17 31.5**	**+0.2**
URD10	**Hayder**	**2.15**	**99**	P	**Pn**	**04 17 31.8**	**+0.2**
URD12	**Shuwaq**	**2.22**	**109**	P	**Pn**	**04 17 33.0**	**+0.3**
KZIT	**Kziot**	**2.40**	**354**	Pn	**Pn**	**04 17 35.8**	**+0.9**
KZIT				Sn	**Sb**	**04 18 06.7**	**-1.7**
URD11	**Tayma**	**2.51**	**103**	P	**Pn**	**04 17 36.9**	**+0.3**
BIDS	**Bi'r al Bayda'**	**2.60**	**129**	P	**Pn**	**04 17 37.9**	**+0.2**
URD13	**Abu Rakah**	**2.65**	**111**	P	**Pn**	**04 17 38.9**	**+0.3**
URD04	**Abu Rakah**	**2.69**	**122**	P	**Pn**	**04 17 39.6**	**+0.5**
URD15	**Abu Rakah**	**2.75**	**117**	P	**Pn**	**04 17 40.7**	**+0.7**
YTIR	**Yattir**	**2.86**	**7**	Pn	**Pn**	**04 17 41.9**	**+0.5**
KOT	**Kottamia**	**2.87**	**300**	P	**Pn**	**04 17 42.0**	**+0.6**
	baz=301						
URD14	**Abu Rakah**	**2.90**	**111**	P	**Pn**	**04 17 42.7**	**+0.7**
EWJHS	**Al Wajh**	**2.93**	**143**	P	**Pn**	**04 17 41.5**	**-0.8**
QLABS	**Al Qalibar**	**2.93**	**102**	P	**Pn**	**04 17 43.0**	**+0.5**
ASUT		**2.98**	**249**	P	**Pn**	**04 17 43.2**	**+0.2**
	baz=249						
AMAZ	**Amatzia**	**3.01**	**4**	Pn	**Pn**	**04 17 44.2**	**+0.8**
URD01	**URD01**	**3.06**	**120**	P	**Pn**	**04 17 45.2**	**+0.9**
URD03	**Al Ula**	**3.06**	**126**	P	**Pn**	**04 17 44.8**	**+0.6**
DSI	**Dead Sea**	**3.10**	**11**	Pn	**Pn**	**04 17 44.8**	**+0.2**
URD02	**Al Ula**	**3.39**	**123**	P	**Pn**	**04 17 49.6**	**+0.9**
OLAS	**OLAS**	**3.46**	**130**	P	**Pn**	**04 17 50.3**	**+0.7**
JOFS	**JOFS**	**3.55**	**74**	P	**Pb**	**04 17 59.8**	**+1.0**
NUMJS	**Khuff**	**3.69**	**141**	P	**Pn**	**04 17 51.9**	**-0.7**
HMDT	**Nahal Hemdat**	**3.79**	**11**	Pn	**Pn**	**04 17 54.5**	**+0.4**
MMLI	**Mount Malkishu**	**3.96**	**9**	Pn	**Pn**	**04 17 56.5**	**0.0**
UMJS	**Umm Lajj**	**4.02**	**144**	P	**Pn**	**04 17 56.4**	**-1.0**
LNY09	**LNY09**	**4.08**	**139**	P	**Pn**	**04 17 57.5**	**-0.7**
LNY16	**LNY16**	**4.08**	**140**	P	**Pn**	**04 17 58.6**	**+0.4**
LNY04	**LNY04**	**4.17**	**140**	P	**Pn**	**04 18 00.1**	**+0.7**
LNY11	**LNY11**	**4.21**	**138**	P	**Pn**	**04 17 59.4**	**-0.6**
LNY07	**LNY07**	**4.24**	**142**	P	**Pn**	**04 18 00.3**	**-0.1**
LNY13	**LNY13**	**4.24**	**141**	P	**Pn**	**04 18 00.8**	**+0.4**
LNY12	**LNY12**	**4.25**	**139**	P	**Pn**	**04 18 01.3**	**+0.8**
LNY14	**LNY14**	**4.26**	**139**	P	**Pn**	**04 18 00.0**	**-0.6**
LNY15	**LNY15**	**4.27**	**139**	P	**Pn**	**04 18 00.9**	**+0.1**
LNY17	**LNY17**	**4.29**	**139**	P	**Pn**	**04 18 00.9**	**-0.2**
LNY10	**LNY10**	**4.30**	**138**	P	**Pn**	**04 18 00.8**	**-0.4**
MURBA	**Al Muraba'a**	**4.44**	**133**	P	**Pn**	**04 18 04.0**	**+1.0**

LNY08	LNY08	4.47	140	P	Pn	04 18 03.8 +0.1
LNYS	LNYS	4.49	139	P	Pn	04 18 04.4 +0.5
GEM	Giv'at Ha'Em	4.75	10	Pn	Pn	04 18 07.9 +0.6
TRAS	Al Qrash	4.89	134	P	Pn	04 18 10.4 +1.2
YNBS	Yanbu` al Bahr	5.11	144	P	Pn	04 18 12.6 +0.4

*IDC **31** 04:20:28.6±2.0, 42°.98N×13°.61E, h0km, mb3.3/1, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=54.4km s-min=15.4km az=97.0*
*ROM **31** 04:20:28.2±0.1, 42°.893N±0°.004×13°.186E±0°.005, h8km, ML3.2/40, Error ellipse: s-maj=0.4km s-min=0.3km az=236.0*
*PRU **31** 04:20:29.1±0.0, 42°.80N×13°.66E, h10km*
ISC 31 04:20:28.7±0.8, **42°.91N**±0°.02×**13°.19E**±0°.02, **h9**km±5km, **n71**, σ1§**63**/92, **8C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**179**	P	**Pg**	**04 20 30.0**	**-0.8**
T1245				S	**Sg**	**04 20 31.2**	**-1.1**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
MMO1	**Montemonaco**	**0.10**	**96**	P	**Pg**	**04 20 30.8**	**-0.5**
MMO1				S	**Sg**	**04 20 32.7**	**-0.5**
FEMA	**Monte Fema**	**0.11**	**297**	P	**Pg**	**04 20 31.5**	**0.0**
FEMA				S	**Sg**	**04 20 33.8**	**+0.3**
FEMA				AML	AML		
	comp=E,28050μm,1.6s						
FEMA				AML	AML		
	comp=N,23150μm,0.4s						
FEMA				AML	AML		
	comp=E,28050μm,0.4s						
FEMA				AML	AML		
	comp=N,18497μm,0.4s						
FEMA				AML	AML		
	comp=N,23100μm,0.4s						
FEMA				AML	AML		
	comp=E,24612μm,0.2s						
T1216	**Preci, Frazion**	**0.12**	**261**	P	**Pg**	**04 20 31.7**	**+0.1**
T1216				S	**Sg**	**04 20 34.0**	**+0.4**
T1216				AML	AML		
	comp=E,34100μm,0.8s						
T1216				AML	AML		
	comp=N,28100μm,0.5s						
T1216				AML	AML		
	comp=E,34050μm,0.8s						
T1216				AML	AML		
	comp=E,34050μm,0.8s						
T1216				AML	AML		
	comp=N,28150μm,0.5s						
T1216				AML	AML		
	comp=E,31501μm,0.6s						
T1216				AML	AML		
	comp=N,28128μm,0.5s						
AM05	**Amandola Campo**	**0.14**	**61**	P	**Pg**	**04 20 31.8**	**0.0**
AM05				S	**Sg**	**04 20 34.7**	**+0.7**
AM05				AML	AML		
	comp=N,1650μm,0.2s						
AM05				AML	AML		
	comp=N,5995μm,1.2s						
AM05				AML	AML		
	comp=E,21750μm,0.1s						
AM05				AML	AML		
	comp=E,5910μm,0.1s						
AM05				AML	AML		
	comp=E,5911μm,0.1s						
AM05				AML	AML		
	comp=E,21775μm,0.1s						
AM05				AML	AML		
	comp=N,1488μm,0.1s						
AM05				AML	AML		
	comp=N,4744μm,0.1s						
T1241	**Roccafluvione,**	**0.19**	**107**	P	**Pg**	**04 20 32.6**	**-0.1**
T1241				S	**Sg**	**04 20 36.2**	**+0.9**
T1241				AML	AML		
	comp=N,21300μm,0.6s						
T1241				AML	AML		
	comp=E,27300μm,1.0s						
T1241				AML	AML		
	comp=E,27400μm,1.0s						
T1241				AML	AML		
	comp=E,27250μm,1.0s						
T1241				AML	AML		
	comp=N,18192μm,0.6s						
T1241				AML	AML		
	comp=N,17119μm,0.6s						
T1241				AML	AML		
	comp=E,25828μm,0.6s						
T1241				AML	AML		
	comp=E,24967μm,0.4s						
T1241				AML	AML		
	comp=N,22650μm,0.6s						
GUMA	**Gualdo di Mace**	**0.19**	**35**	⇑P	**Pg**	**04 20 33.0**	**+0.4**
GUMA				S	**Sg**	**04 20 36.7**	**+1.3**
GUMA				AML	AML		
	comp=N,31350μm,0.5s						
GUMA				AML	AML		
	comp=N,31350μm,0.5s						
GUMA				AML	AML		
	comp=N,31250μm,0.5s						
GUMA				AML	AML		
	comp=N,31245μm,0.5s						
GUMA				AML	AML		
	comp=E,30000μm,0.7s						
GUMA				AML	AML		
	comp=E,44050μm,0.7s						
GUMA				AML	AML		
	comp=E,40838μm,0.3s						
GUMA				AML	AML		
	comp=N,31353μm,0.5s						
GUMA				AML	AML		
	comp=E,28463μm,0.6s						
T1204	**Amatrice, Fraz**	**0.25**	**158**	P	**Pg**	**04 20 33.8**	**-0.1**
T1204				S	**Sg**	**04 20 38.2**	**+0.9**
T1204				AML	AML		
	comp=E,9920μm,0.7s						
T1204				AML	AML		
	comp=E,9940μm,0.7s						
T1204				AML	AML		
	comp=E,9915μm,0.7s						
T1204				AML	AML		
	comp=N,7915μm,1.5s						
T1204				AML	AML		
	comp=N,7905μm,1.5s						
T1204				AML	AML		
	comp=E,9652μm,0.5s						
T1204				AML	AML		
	comp=N,6875μm,0.7s						
T1215	**Vallo di Nera,**	**0.26**	**245**	P	**Pg**	**04 20 34.1**	**+0.2**
T1215				AML	AML		
	comp=E,6805μm,1.3s						
T1215				AML	AML		
	comp=N,5525μm,1.3s						
T1215				AML	AML		
	comp=N,5140μm,1.3s						
T1215				AML	AML		
	comp=N,5125μm,1.3s						
T1215				AML	AML		
	comp=N,5525μm,1.3s						
T1215				AML	AML		
	comp=N,5130μm,1.3s						
T1215				AML	AML		
	comp=E,6810μm,1.3s						
T1215				AML	AML		
	comp=E,6885μm,1.2s						
T1215				AML	AML		
	comp=E,6595μm,1.1s						
T1215				AML	AML		
	comp=N,5125μm,0.7s						
T1215				AML	AML		
	comp=N,3883μm,0.5s						
T1215				AML	AML		
	comp=N,5525μm,0.7s						
T1215				AML	AML		
	comp=N,3636μm,0.6s						
T1215				AML	AML		
	comp=E,6880μm,1.2s						
T1215				AML	AML		
	comp=E,6805μm,0.7s						
T1215				AML	AML		
	comp=E,6740μm,1.3s						
T1217	**Poggiodomo (PG**	**0.27**	**224**	P	**Pg**	**04 20 34.2**	**0.0**
T1217				S	**Sb**	**04 20 39.2**	**-1.3**
T1217				AML	AML		
	comp=E,6680μm,0.7s						
T1217				AML	AML		
	comp=N,6970μm,0.8s						
T1217				AML	AML		
	comp=E,6825μm,0.7s						
T1217				AML	AML		
	comp=E,6820μm,0.7s						
T1217				AML	AML		
	comp=N,6975μm,0.8s						
T1217				AML	AML		
	comp=N,6975μm,0.8s						
T1217				AML	AML		
	comp=N,6975μm,0.8s						
T1217				AML	AML		
	comp=N,6014μm,0.4s						
T1217				AML	AML		
	comp=N,6101μm,0.4s						
T1217				AML	AML		
	comp=N,6970μm,0.8s						
T1217				AML	AML		
	comp=E,6675μm,0.7s						
T1217				AML	AML		
	comp=E,6814μm,0.7s						
T1217				AML	AML		
	comp=E,6795μm,0.7s						
T1243	**Rocca Santa Ma**	**0.29**	**138**	P	**Pg**	**04 20 34.3**	**-0.1**
T1243				S	**Sb**	**04 20 39.0**	**-1.9**
SEF1	**Sefro**	**0.29**	**324**	P	**Pg**	**04 20 34.7**	**+0.1**
SEF1				AML	AML		
	comp=E,7925μm,1.3s						
SEF1				AML	AML		
	comp=N,10210μm,1.4s						
SEF1				AML	AML		
	comp=E,7930μm,1.3s						
SEF1				AML	AML		
	comp=N,10210μm,1.4s						
SEF1				AML	AML		
	comp=N,10200μm,1.4s						
SEF1				AML	AML		
	comp=E,7930μm,0.7s						
SEF1				AML	AML		
	comp=N,10215μm,1.4s						
SEF1				AML	AML		
	comp=N,10096μm,0.3s						
SEF1				AML	AML		
	comp=E,7715μm,0.2s						
SMA1	**SAN MARTINO**	**0.30**	**159**	P	**Pg**	**04 20 34.5**	**-0.2**
SMA1				AML	AML		
	comp=N,9565μm,0.7s						
SMA1				AML	AML		
	comp=E,11430μm,0.6s						
SMA1				AML	AML		
	comp=N,9560μm,0.7s						
SMA1				AML	AML		
	comp=N,9563μm,0.7s						
SMA1				AML	AML		
	comp=E,11430μm,1.4s						
SMA1				AML	AML		
	comp=E,11449μm,0.6s						
LNSS	**Leonessa**	**0.33**	**199**	P	**Pb**	**04 20 35.8**	**-0.9**
LNSS				S	**Sb**	**04 20 41.1**	**-1.0**
LNSS				AML	AML		
	comp=E,3135μm,0.7s						
LNSS				AML	AML		
	comp=N,12050μm,0.7s						
LNSS				AML	AML		
	comp=N,12050μm,1.3s						
LNSS				AML	AML		
	comp=N,9846μm,0.3s						
LNSS				AML	AML		
	comp=E,3135μm,1.3s						
LNSS				AML	AML		
	comp=E,3133μm,0.7s						
GAG1	**Gagliole**	**0.34**	**345**	P	**Pb**	**04 20 36.0**	**-0.8**
GAG1				AML	AML		
	comp=E,9995μm,0.4s						
GAG1				AML	AML		
	comp=E,9970μm,0.4s						
GAG1				AML	AML		
	comp=N,10100μm,0.6s						
GAG1				AML	AML		
	comp=E,9990μm,0.4s						
GAG1				AML	AML		
	comp=E,10000μm,0.4s						
GAG1				AML	AML		
	comp=N,10110μm,0.6s						
GAG1				AML	AML		
	comp=N,10075μm,0.6s						
GAG1				AML	AML		
	comp=N,10095μm,0.6s						
GAG1				AML	AML		
	comp=E,9994μm,0.4s						
OFFI	**Offida**	**0.37**	**86**	P	**Pb**	**04 20 36.8**	**-0.5**
OFFI				AML	AML		
	comp=N,10950μm,0.9s						
OFFI				AML	AML		
	comp=E,10500μm,1.1s						
OFFI				AML	AML		
	comp=N,10925μm,0.9s						
OFFI				AML	AML		
	comp=E,10498μm,1.1s						
SNTG	**Esanatoglia**	**0.39**	**332**	P	**Pg**	**04 20 36.4**	**+0.1**
SNTG				AML	AML		
	comp=E,2080μm,0.8s						
SNTG				AML	AML		
	comp=E,2085μm,0.8s						
SNTG				AML	AML		
	comp=N,3065μm,1.3s						
SNTG				AML	AML		
	comp=E,1890μm,0.9s						
SNTG				AML	AML		
	comp=N,2995μm,1.3s						
SNTG				AML	AML		
	comp=E,2085μm,0.9s						
SNTG				AML	AML		
	comp=N,2262μm,0.7s						
SNTG				AML	AML		
	comp=E,1755μm,0.5s						
SNTG				AML	AML		
	comp=E,1438μm,0.1s						
SNTG				AML	AML		
	comp=N,1992μm,0.1s						
SNTG				AML	AML		
	comp=N,3000μm,1.3s						
RM33	**Pellescritta (**	**0.40**	**177**	P	**Pg**	**04 20 36.3**	**-0.2**
RM33				S	**Sb**	**04 20 42.8**	**-1.4**
RM33				AML	AML		
	comp=E,5660μm,0.4s						
RM33				AML	AML		
	comp=E,5590μm,0.4s						
RM33				AML	AML		
	comp=N,4190μm,0.6s						
RM33				AML	AML		
	comp=N,4230μm,0.6s						
RM33				AML	AML		
	comp=N,4225μm,0.6s						
RM33				AML	AML		
	comp=N,4195μm,0.6s						
RM33				AML	AML		
	comp=N,4228μm,0.6s						
RM33				AML	AML		
	comp=N,4193μm,0.6s						
RM33				AML	AML		
	comp=E,5589μm,0.4s						
RM33				AML	AML		
	comp=E,5663μm,0.4s						
CAMP	**Campotosto**	**0.41**	**156**	P	**Pg**	**04 20 36.2**	**-0.5**
CAMP				S	**Sb**	**04 20 42.8**	**-1.6**
CAMP				AML	AML		
	comp=E,2895μm,0.8s						
CAMP				AML	AML		
	comp=N,3600μm,0.7s						
CAMP				AML	AML		
	comp=N,3600μm,0.7s						
CAMP				AML	AML		
	comp=E,2895μm,1.2s						
CAMP				AML	AML		
	comp=E,2895μm,0.8s						
ASSB	**Assisi San Ben**	**0.41**	**289**	P	**Pg**	**04 20 37.0**	**+0.3**
ASSB				AML	AML		
	comp=E,2835μm,0.7s						
ASSB				AML	AML		
	comp=N,2840μm,0.8s						
ASSB				AML	AML		
	comp=E,2222μm,0.2s						
ASSB				AML	AML		
	comp=N,2630μm,0.3s						
TERO	**Teramo**	**0.42**	**133**	P	**Pg**	**04 20 36.7**	**-0.2**
TERO				S	**Sb**	**04 20 43.2**	**-1.5**
TERO				AML	AML		
	comp=E,8585μm,0.6s						
TERO				AML	AML		
	comp=N,13800μm,0.5s						
TERO				AML	AML		
	comp=N,14300μm,0.5s						
TERO				AML	AML		
	comp=N,13750μm,0.5s						
TERO				AML	AML		
	comp=E,8580μm,0.6s						
TERO				AML	AML		
	comp=E,8875μm,0.6s						
TERO				AML	AML		
	comp=E,7655μm,0.4s						
TERO				AML	AML		
	comp=N,12845μm,0.6s						
TERO				AML	AML		
	comp=N,12400μm,0.6s						
TERO				AML	AML		
	comp=E,7887μm,0.4s						
EL6	**Elcito**	**0.42**	**352**	⇓P	**Pg**	**04 20 37.2**	**+0.2**
EL6				AML	AML		
	comp=E,3915μm,0.3s						
EL6				AML	AML		
	comp=N,5535μm,0.3s						
EL6				AML	AML		
	comp=E,3910μm,0.3s						
EL6				AML	AML		
	comp=E,3912μm,0.3s						
EL6				AML	AML		
	comp=N,5532μm,0.3s						
EL6				AML	AML		
	comp=N,5530μm,0.3s						
ARRO	**Arrone**	**0.45**	**223**	P	**Pg**	**04 20 36.7**	**-0.8**
ARRO				AML	AML		
	comp=N,2035μm,1.4s						
ARRO				AML	AML		
	comp=E,2300μm,1.1s						
ARRO				AML	AML		
	comp=N,2030μm,1.4s						
ARRO				AML	AML		
	comp=E,2300μm,0.9s						
ARRO				AML	AML		
	comp=E,2099μm,0.6s						
ARRO				AML	AML		
	comp=N,2035μm,0.6s						
ARRO				AML	AML		
	comp=N,1910μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.47**	**170**	P	**Pg**	**04 20 37.8**	**-0.1**
T1247				AML	AML		
	comp=E,4180μm,0.5s						
T1247				AML	AML		
	comp=N,3960μm,1.5s						
T1247				AML	AML		
	comp=E,4185μm,0.5s						
T1247				AML	AML		
	comp=N,3955μm,1.5s						
T1247				AML	AML		
	comp=E,4184μm,0.5s						
T1247				AML	AML		
	comp=N,3835μm,0.6s						
T1247				AML	AML		
	comp=N,3955μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.49**	**305**	P	**Pg**	**04 20 38.3**	**+0.2**
ATCC				AML	AML		
	comp=N,4125μm,0.8s						
ATCC				AML	AML		
	comp=E,3795μm,1.1s						
ATCC				AML	AML		
	comp=N,4130μm,0.8s						
ATCC				AML	AML		
	comp=N,4125μm,1.2s						
ATCC				AML	AML		
	comp=N,4125μm,0.8s						
ATCC				AML	AML		
	comp=E,3795μm,0.9s						
ATCC				AML	AML		
	comp=E,3797μm,1.1s						
FOSV	**Fossato di Vic**	**0.49**	**321**	⇑P	**Pg**	**04 20 38.4**	**+0.1**
FOSV				S	**Sb**	**04 20 47.0**	**+0.1**
FOSV				AML	AML		
	comp=E,2615μm,0.5s						
FOSV				AML	AML		
	comp=N,2999μm,0.6s						
FOSV				AML	AML		
	comp=N,3000μm,0.6s						
FOSV				AML	AML		
	comp=E,2610μm,0.5s						
FOSV				AML	AML		
	comp=E,2610μm,0.5s						
CADA	**Capodarco di F**	**0.51**	**56**	P	**Pb**	**04 20 40.3**	**+0.6**
CESX	**Cesi**	**0.54**	**236**	P	**Pg**	**04 20 38.8**	**-0.3**
CESX				AML	AML		
	comp=N,2665μm,0.4s						
CESX				AML	AML		
	comp=E,2755μm,1.4s						
CESX				AML	AML		
	comp=N,2666μm,0.4s						
CESX				AML	AML		
	comp=E,2649μm,0.5s						
GIGS	**Gran Sasso**	**0.54**	**148**	P	**Pg**	**04 20 38.9**	**-0.2**
GIGS				AML	AML		
	comp=E,925μm,0.4s						
GIGS				AML	AML		
	comp=N,740μm,0.8s						
GIGS				AML	AML		
	comp=E,926μm,0.4s						
GIGS				AML	AML		
	comp=N,741μm,0.8s						
GIGS				AML	AML		
	comp=N,740μm,1.2s						
GIGS				AML	AML		
	comp=N,741μm,0.8s						
GIGS				AML	AML		
	comp=E,926μm,1.6s						
GIGS				AML	AML		
	comp=E,925μm,0.4s						
TRTR	**Tortoreto Alta**	**0.54**	**101**	P	**Pb**	**04 20 40.3**	**0.0**
TRTR				AML	AML		
	comp=N,11050μm,0.3s						
TRTR				AML	AML		
	comp=E,10900μm,0.9s						
TRTR				AML	AML		
	comp=E,9707μm,0.3s						
TRTR				AML	AML		
	comp=N,11082μm,0.3s						
PP3	**Marolino**	**0.56**	**33**	⇓P	**Pb**	**04 20 40.6**	**-0.1**
PP3				AML	AML		
	comp=E,4040μm,0.9s						
PP3				AML	AML		
	comp=N,3530μm,1.6s						
PP3				AML	AML		
	comp=E,3965μm,0.8s						
PP3				AML	AML		
	comp=E,4045μm,0.8s						
PP3				AML	AML		
	comp=N,3525μm,1.6s						
PP3				AML	AML		
	comp=N,3500μm,1.6s						
PP3				AML	AML		
	comp=N,3500μm,0.4s						
PP3				AML	AML		
	comp=N,3525μm,0.4s						
PP3				AML	AML		
	comp=N,3405μm,1.2s						
PP3				AML	AML		
	comp=E,4045μm,0.8s						
PP3				AML	AML		
	comp=E,4045μm,1.2s						
PP3				AML	AML		
	comp=E,3967μm,0.8s						
PP3				AML	AML		
	comp=E,3965μm,1.2s						
PP3				AML	AML		
	comp=N,3171μm,0.7s						
AQU	**L'Aquila**	**0.58**	**164**	P	**Pg**	**04 20 39.6**	**-0.3**
AQU				AML	AML		
	comp=E,2665μm,0.9s						
AQU				AML	AML		
	comp=N,2410μm,1.1s						
AQU				AML	AML		
	comp=E,2670μm,0.9s						

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AQU                                  AML   AML
     comp=N,2570µm,1.1s
AQU                                  AML   AML
     comp=E,2630µm,1.4s
AQU                                  AML   AML
     comp=N,2415µm,1.1s
AQU                                  AML   AML
     comp=N,2411µm,1.1s
AQU                                  AML   AML
     comp=N,2569µm,1.1s
AQU                                  AML   AML
     comp=E,2670µm,1.1s
AQU                                  AML   AML
     comp=E,2667µm,0.9s
AQU                                  AML   AML
     comp=E,2630µm,0.6s
MURB Monte Urbino        0.60 306 ⇑P        Pg    04 20 40.3  0.0
MURB                                 AML   AML
     comp=E,3200µm,1.2s
MURB                                 AML   AML
     comp=N,2720µm,1.3s
MURB                                 AML   AML
     comp=E,3220µm,1.2s
MURB                                 AML   AML
     comp=N,2915µm,1.4s
MURB                                 AML   AML
     comp=E,3225µm,1.2s
MURB                                 AML   AML
     comp=N,2920µm,1.4s
MURB                                 AML   AML
     comp=E,2786µm,1.1s
MURB                                 AML   AML
     comp=N,2915µm,0.6s
MURB                                 AML   AML
     comp=E,3225µm,0.8s
MURB                                 AML   AML
     comp=E,2791µm,0.7s
MURB                                 AML   AML
     comp=N,2343µm,0.3s
MURB                                 AML   AML
     comp=N,2398µm,0.6s
ARVD Arcevia             0.61 343 S         Sb    04 20 52.0 +1.7
ATFO Monte Foce - G      0.64 316 ⇑P        Pg    04 20 41.1  0.0
ATFO                                 AML   AML
     comp=E,1195µm,0.7s
ATFO                                 AML   AML
     comp=N,1838µm,1.1s
ATFO                                 AML   AML
     comp=N,1840µm,1.1s
ATFO                                 AML   AML
     comp=E,1174µm,0.5s
FIAM Fiamignano          0.64 185 S         Sb    04 20 51.0 -0.2
VCEL Villa Celiera       0.71 137 P         Pb    04 20 42.3 -0.8
VCEL                                 AML   AML
     comp=N,3965µm,0.6s
VCEL                                 AML   AML
     comp=N,3960µm,0.6s
VCEL                                 AML   AML
     comp=N,3965µm,1.4s
VCEL                                 AML   AML
     comp=N,3962µm,0.6s
VCEL                                 AML   AML
     comp=E,3380µm,0.6s
AOI  Ancona              0.71  25 ⇓P        Pb    04 20 42.8 -0.4
AOI                                  AML   AML
     comp=E,936µm,0.7s
AOI                                  AML   AML
     comp=N,918µm,1.1s
AOI                                  AML   AML
     comp=E,835µm,0.4s
AOI                                  AML   AML
     comp=N,784µm,0.7s
ATVO AVT- Monte Val      0.74 310 ⇑P        Pb    04 20 43.2 -0.5
ATVO                                 S     Sn    04 20 56.0 -0.7
ATVO                                 AML   AML
     comp=E,858µm,1.0s
ATVO                                 AML   AML
     comp=N,908µm,1.2s
ATVO                                 AML   AML
     comp=N,908µm,0.8s
ATVO                                 AML   AML
     comp=N,907µm,1.2s
ATVO                                 AML   AML
     comp=E,852µm,1.3s
MPAG Monte Paganucc      0.78 337 P         Pg    04 20 43.9 +0.1
MPAG                                 S     Sn    04 20 57.0 -0.8
MPAG                                 AML   AML
     comp=E,830µm,0.6s
MPAG                                 AML   AML
     comp=N,984µm,1.6s
MPAG                                 AML   AML
     comp=E,830µm,0.6s
MPAG                                 AML   AML
     comp=N,988µm,1.6s
MPAG                                 AML   AML
     comp=N,984µm,1.6s
MPAG                                 AML   AML
     comp=E,829µm,0.6s
MPAG                                 AML   AML
     comp=N,985µm,0.7s
MPAG                                 AML   AML
     comp=E,831µm,0.6s
MPAG                                 AML   AML
     comp=N,1344µm,0.6s
MPAG                                 AML   AML
     comp=N,988µm,0.4s
ATPI Pietralunga -       0.79 314 ⇓P        Pg    04 20 43.5 -0.4
ATPI                                 AML   AML
     comp=E,1002µm,0.9s
ATPI                                 AML   AML
     comp=N,688µm,1.6s
ATPI                                 AML   AML
     comp=N,687µm,1.6s
ATPI                                 AML   AML
     comp=E,1004µm,0.9s
ATPI                                 AML   AML
     comp=N,656µm,1.0s
T0110 Collepietro        0.81 147 ⇓P        Pg    04 20 43.8 -0.5
T0110                                AML   AML
     comp=E,2830µm,0.5s
T0110                                AML   AML
     comp=N,2615µm,0.5s
T0110                                AML   AML
     comp=N,2615µm,0.5s
T0110                                AML   AML
     comp=E,2832µm,0.5s
FSSB Fossombrone         0.84 339 ⇑P        Pg    04 20 44.7 -0.1
FSSB                                 AML   AML
     comp=N,2695µm,0.3s
FSSB                                 AML   AML
     comp=N,2697µm,0.3s
FSSB                                 AML   AML
     comp=E,2363µm,0.4s
FSSB                                 AML   AML
     comp=E,2365µm,0.4s
BADI Badiali             0.91 311 ⇑P        Pb    04 20 46.3 -0.3
BADI                                 AML   AML
     comp=E,101µm,0.3s
BADI                                 AML   AML
     comp=N,501µm,1.5s
PE3  Peglio              0.93 328 ⇓P        Pn    04 20 47.6 -0.3
SACS San Casciano d      0.94 267 ⇓P        Pn    04 20 48.0 -0.1
SACS                                 AML   AML
     comp=N,656µm,1.6s
SACS                                 AML   AML
     comp=N,632µm,0.9s
SACS                                 AML   AML
     comp=E,778µm,0.9s
SACS                                 AML   AML
     comp=E,793µm,0.9s
SACS                                 AML   AML
     comp=E,778µm,0.9s
SACS                                 AML   AML
     comp=E,793µm,0.9s
SACS                                 AML   AML
     comp=N,645µm,0.9s
SACS                                 AML   AML
     comp=N,632µm,0.9s
CAFI Castiglion Fio      0.99 296 ⇑P        Pn    04 20 48.7  0.0
CAFI                                 AML   AML
     comp=E,552µm,1.4s
CAFI                                 AML   AML
     comp=N,440µm,1.4s
CAFI                                 AML   AML
     comp=E,400µm,0.5s
CAFI                                 AML   AML
     comp=N,366µm,1.0s
CAFI                                 AML   AML
     comp=N,362µm,1.0s
CAFI                                 AML   AML
     comp=E,417µm,0.5s
LPEL Lama dei Pelig      1.14 139 P         Pn    04 20 51.3 +0.6
LPEL                                 AML   AML
     comp=E,839µm,1.6s
LPEL                                 AML   AML
     comp=N,874µm,0.6s
LPEL                                 AML   AML
     comp=N,874µm,0.6s
LPEL                                 AML   AML
     comp=E,839µm,0.4s
LPEL                                 AML   AML
     comp=E,836µm,1.0s
RUFI Rufina              1.54 308 ⇓P        Pg    04 20 58.3 +0.2
VITU Vitulano (BN)       2.03 148 P         Pb    04 21 05.7  -0.1
OBKA Obir                3.73  15 ePn       Pn    04 21 27.8 +1.4
     comp=E,0.4nm,0.2s
MYKA Terra Mystica       3.73   5 ePn       Pn    04 21 27.8 +1.4
     comp=E,1.3nm,0.3s
ABTA Abfaltersbach       3.87 353 i Pn      Pn    04 21 30.0 +1.7
     comp=E,4.3nm,0.4s
SOKA Soboth              3.99  19 ePn       Pn    04 21 33.3 +3.3
     comp=E,0.6nm,0.3s
FETA Feichten            4.46 338 ePn       Pn    04 21 39.4 +2.8
     comp=E,4.2nm,0.7s,SNR=8.8
WTTA Wattenberg          4.49 346 ePn       Pn    04 21 37.9 +1.0
     comp=E,1.5nm,0.2s,SNR=5.7
DAVOX Davos/Dischmat     4.53 330 Pn        Pn    04 21 39.9 +2.4
     comp=E,1.5nm,0.3s,baz=152,slow=13,SNR=16
DAVOX                                Sn    Sb    04 22 37.6  -5.5
     comp=E,0.5nm,0.3s,baz=280,slow=23,SNR=1.4
     comp=E,5.9nm,0.4s
SQTA Sankt Quirin        4.53 343 ePn       Pn    04 21 40.0 +2.5
     comp=E,9.2nm,0.4s,SNR=10
WATA Walderalm           4.57 346 i Pn      Pn    04 21 40.4 +2.4
     comp=E,3.5nm,0.3s
MOTA Moosalm             4.67 342 ePn       Pn    04 21 42.3 +2.8
     comp=E,6.0nm,0.5s,SNR=7.6
BIOA Bad Ischl, Aus      4.79   4 ePn       Pn    04 21 42.7 +1.8
     comp=E,2.5nm,0.2s
RETA Reutte              4.89 340 ePn       Pn    04 21 44.4 +2.1
     comp=E,3.0nm,0.4s,SNR=10
DAVA Damuels             4.96 333 ePn       Pn    04 21 45.8 +2.4
     comp=E,2.6nm,0.4s,SNR=6.2
MOA  Molln               5.00   8 i Pn      Pn    04 21 45.3 +1.5
     comp=E,0.4nm,0.2s
CONA Conrad Observa      5.36  20 i Pn      Pn    04 21 49.8 +1.0
     comp=E,0.5nm,0.3s
GERES GERESS Array B     5.95   3 Pn        Pn    04 21 56.9  0.0
     comp=E,0.2nm,0.3s,baz=178,slow=13,SNR=6.7
GERES                                Sn    Sn    04 23 04.8  -0.3
     comp=E,0.8nm,0.3s,baz=180,slow=23,SNR=6.2
     comp=E,0.4nm,0.3s
CKRC Cesky Krumlov       5.96   7 eSN       Sn    04 23 04.9  -0.5
KHC  Kasperske Hory      6.23   2 ePN       Pn    04 21 59.7  -1.0
KHC                                  eSN   Sn    04 23 09.5  -2.5
KEST Kesra               7.76 204 Pn        Pn    04 22 25.4 +3.6
     comp=E,0.1nm,0.3s,baz=5.7,slow=10,SNR=2.2
     comp=E,2.2nm,0.7s
CLL  Collm               8.40 359 ex        x     04 22 37.0
CLL                                  eSn   Sn    04 23 57.0  -8.3
CLL                                  ex    x     04 24 07.0
CLL                                  ex    x     04 24 23.0
CLL                                  eSg   Sg    04 24 56.0  -2.1
     comp=Z,16nm,1.5s
TORD Torodi Ar. Bea     31.28 202 P         P     04 26 52.1 +3.3
     comp=Z,0.3nm,0.7s,baz=12,slow=7.4,SNR=2.6
     comp=Z,0.3nm,0.7s
```

*IDC **31** 04:22:17.0±1.9, 42°.80N×13°.87E, h0km, mb3.3/2, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=51.3km s-min=15.4km az=97.0*

*ROM **31** 04:22:18.5±0.0, 42°.842N±0°.003×13°.057E±0°.004, h11km, ML3.4/57, Error ellipse: s-maj=0.3km s-min=0.2km az=321.0*

*PRU **31** 04:22:23.3±0.0, 42°.90N×13°.42E, h10km*

ISC 31 04:22:19.0±0.8, **42°.81N**±0°.02×**13°.08E**±0°.02, **h11**km±4km, **n86**, σ1=**50**/107, **35C-20D, Central Italy**

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Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
T1245 Castelsantange     0.09  60   P     Pg          04 22 21.8 +0.1
T1245                               S     Sg          04 22 23.8  0.0
T1245                               AML   AML
T1245                               AML   AML
T1245                               AML   AML
T1245                               AML   AML
T1245                               AML   AML
T1216 Preci, Frazion     0.09 329 ⇓P        Pg          04 22 21.1  -0.5
T1216                               S     Sg          04 22 22.5  -1.1
T1216                               AML   AML
T1216                               AML   AML
     comp=N,95150µm,0.2s
T1216                               AML   AML
T1216                               AML   AML
     comp=N,95200µm,0.2s
T1216                               AML   AML
T1216                               AML   AML
     comp=N,95250µm,0.2s
T1216                               AML   AML
     comp=N,95150µm,0.2s
T1217 Poggiodomo (PG     0.15 228 ⇑P        Pg          04 22 22.8 +0.3
T1217                               S     Sg          04 22 25.5 +0.5
T1217                               AML   AML
     comp=E,28300µm,0.8s
T1217                               AML   AML
     comp=N,41050µm,0.5s
T1217                               AML   AML
     comp=E,28800µm,0.2s
T1217                               AML   AML
     comp=N,41000µm,0.5s
T1217                               AML   AML
     comp=E,28350µm,0.8s
T1217                               AML   AML
     comp=E,28350µm,1.2s
T1217                               AML   AML
     comp=N,41600µm,0.5s
T1217                               AML   AML
     comp=E,28750µm,0.2s
FEMA Monte Fema          0.15 350 P         Pg          04 22 22.1  -0.4
FEMA                                S     Sg          04 22 24.5  -0.6
FEMA                                AML   AML
     comp=E,52050µm,0.5s
FEMA                                AML   AML
     comp=E,52000µm,0.5s
FEMA                                AML   AML
     comp=N,37750µm,0.7s
T1215 Vallo di Nera,     0.16 266 ⇑P        Pg          04 22 22.5  -0.1
T1215                               S     Sg          04 22 25.0  -0.1
T1215                               AML   AML
     comp=N,13000µm,0.8s
T1215                               AML   AML
     comp=N,13250µm,0.7s
T1215                               AML   AML
     comp=E,12750µm,1.1s
T1215                               AML   AML
     comp=N,13050µm,0.8s
T1215                               AML   AML
     comp=E,13250µm,1.1s
T1215                               AML   AML
     comp=N,13250µm,0.7s
T1215                               AML   AML
     comp=E,12800µm,1.1s
T1215                               AML   AML
     comp=N,13250µm,1.3s
T1215                               AML   AML
     comp=N,13000µm,1.2s
MMO1 Montemonaco         0.20  64   P     Pg          04 22 23.4 +0.2
MMO1                                S     Sg          04 22 26.9 +0.6
LNSS Leonessa            0.21 189 ⇑P        Pg          04 22 24.1 +0.6
LNSS                                S     Sg          04 22 27.9 +1.3
LNSS                                AML   AML
     comp=E,26350µm,0.4s
LNSS                                AML   AML
     comp=N,55050µm,0.6s
T1204 Amatrice, Fraz     0.22 128 ⇑P        Pg          04 22 24.4 +0.8
T1204                               S     Sg          04 22 28.7 +1.9
T1204                               AML   AML
     comp=N,25300µm,1.4s
T1204                               AML   AML
     comp=E,47050µm,0.3s
T1204                               AML   AML
     comp=N,25400µm,1.4s
T1204                               AML   AML
     comp=N,25400µm,0.6s
AM05 Amandola Campo      0.26  50   P     Pb          04 22 24.4  -1.2
AM05                                S     Sg          04 22 28.7 +0.8
AM05                                AML   AML
     comp=E,3440µm,1.1s
AM05                                AML   AML
     comp=E,14050µm,0.4s
AM05                                AML   AML
     comp=N,4180µm,1.6s
AM05                                AML   AML
     comp=N,894µm,0.1s
AM05                                AML   AML
     comp=N,4255µm,0.4s
AM05                                AML   AML
     comp=E,3440µm,0.9s
AM05                                AML   AML
     comp=E,14050µm,1.6s
T1241 Roccafluvione,     0.26  80   P     Pb          04 22 24.8  -0.9
T1241                               S     Sb          04 22 29.3  -0.9
T1241                               AML   AML
     comp=E,22650µm,0.6s
T1241                               AML   AML
     comp=N,18200µm,0.7s
T1241                               AML   AML
     comp=E,22850µm,0.6s
T1241                               AML   AML
     comp=N,16650µm,0.7s
T1241                               AML   AML
     comp=E,22800µm,0.6s
T1241                               AML   AML
     comp=E,22800µm,1.4s
T1241                               AML   AML
     comp=N,16650µm,1.3s
T1243 Rocca Santa Ma     0.29 113   P     Pb          04 22 25.2  -1.1
T1243                               S     Sb          04 22 30.6  -0.6
RM33 Pellescritta (      0.32 162 ⇓P        Pg          04 22 26.1 +0.7
RM33                                S     Sg          04 22 31.6 +1.9
RM33                                AML   AML
     comp=N,8580µm,0.8s
RM33                                AML   AML
     comp=N,8400µm,0.7s
RM33                                AML   AML
     comp=E,10350µm,1.3s
RM33                                AML   AML
     comp=N,8395µm,0.7s
RM33                                AML   AML
     comp=E,10350µm,0.7s
RM33                                AML   AML
     comp=N,8545µm,0.7s
RM33                                AML   AML
     comp=E,10300µm,0.2s
T1211 Morro Reatino      0.33 211   P     Pb          04 22 25.8  -1.0
T1211                               S     Sb          04 22 31.5  -0.7
T1211                               AML   AML
     comp=E,13550µm,0.8s
T1211                               AML   AML
     comp=N,24450µm,0.9s
T1211                               AML   AML
     comp=E,13550µm,0.8s
T1211                               AML   AML
     comp=E,13300µm,0.8s
T1211                               AML   AML
     comp=N,24450µm,0.8s
ARRO Arrone              0.33 225 ⇑P        Pb          04 22 25.8  -1.0
ARRO                                AML   AML
     comp=E,10550µm,0.2s
ARRO                                AML   AML
     comp=N,9090µm,0.2s
SEF1 Sefro               0.35 343 ⇓P        Pg          04 22 25.6  -0.4
SEF1                                AML   AML
     comp=E,7320µm,0.7s
SEF1                                AML   AML
     comp=N,7535µm,0.7s
SEF1                                AML   AML
     comp=N,7530µm,0.7s
SEF1                                AML   AML
     comp=N,7505µm,0.7s
SEF1                                AML   AML
     comp=N,7505µm,1.3s
SEF1                                AML   AML
     comp=E,7320µm,1.3s
CAMP Campotosto          0.37 139 ⇑P        Pb          04 22 26.7  -0.8
CAMP                                AML   AML
     comp=E,4745µm,0.6s
CAMP                                AML   AML
     comp=N,4845µm,0.4s
CAMP                                AML   AML
     comp=N,4845µm,1.6s
CAMP                                AML   AML
     comp=E,4745µm,1.4s
ASSB Assisi San Ben      0.39 307 ⇑P        Pg          04 22 26.0  -0.7
ASSB                                AML   AML
     comp=E,5600µm,1.1s
ASSB                                AML   AML
     comp=N,5285µm,0.7s
ASSB                                AML   AML
     comp=E,5600µm,0.9s
CESX Cesi                0.42 242   P     Pb          04 22 27.0  -1.5
CESX                                AML   AML
     comp=E,7980µm,1.4s
CESX                                AML   AML
     comp=N,6755µm,0.4s
CESX                                AML   AML
     comp=E,7980µm,0.6s
GAG1 Gagliole            0.43 358 ⇑P        Pg          04 22 27.1  -0.2
GAG1                                AML   AML
     comp=E,8460µm,1.3s
GAG1                                AML   AML
     comp=N,12050µm,0.7s
GAG1                                AML   AML
     comp=N,12000µm,0.7s
TERO Teramo              0.43 116   P     Pb          04 22 27.5  -1.0
TERO                                AML   AML
     comp=E,8335µm,0.5s
TERO                                AML   AML
     comp=N,9735µm,0.5s
TERO                                AML   AML
     comp=E,8750µm,0.5s
TERO                                AML   AML
     comp=N,10205µm,0.5s
MNTP Montappone          0.43  41 ⇓P        Pb          04 22 28.0  -0.6
MNTP                                AML   AML
     comp=E,11300µm,1.0s
MNTP                                AML   AML
     comp=N,7590µm,1.0s
SNTG Esanatoglia         0.46 347 ⇑P        Pg          04 22 27.4  -0.6
SNTG                                AML   AML
     comp=E,1875µm,1.2s
SNTG                                AML   AML
     comp=N,1650µm,0.7s
SNTG                                AML   AML
     comp=E,1835µm,1.5s
SNTG                                AML   AML
     comp=N,1650µm,0.7s
SNTG                                AML   AML
     comp=N,1735µm,0.7s
SNTG                                AML   AML
     comp=E,1875µm,1.2s
SNTG                                AML   AML
     comp=N,1735µm,1.3s
SNTG                                AML   AML
     comp=N,1650µm,1.3s
OFFI Offida              0.46  74 ⇑P        Pb          04 22 28.9  -0.2
OFFI                                AML   AML
     comp=N,11300µm,0.6s
OFFI                                AML   AML
     comp=N,11300µm,1.4s
OFFI                                AML   AML
     comp=E,12800µm,0.6s
ATCC AVT- Casa Cast      0.49 319 ⇑P        Pg          04 22 27.9  -0.7
ATCC                                AML   AML
     comp=E,4410µm,0.5s
ATCC                                AML   AML
     comp=N,4100µm,0.5s
AQU  L'Aquila            0.52 153   P     Pn          04 22 29.4  -2.9
AQU                                 AML   AML
     comp=E,3085µm,0.3s
AQU                                 AML   AML
     comp=N,2450µm,1.4s
AQU                                 AML   AML
     comp=E,3090µm,0.3s
AQU                                 AML   AML
     comp=E,3210µm,0.3s
AQU                                 AML   AML
     comp=N,2595µm,1.4s
EL6  Elcito              0.52   1 ⇑P        Pg          04 22 28.3  -0.8
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Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EL6				AML	AML		
	comp=E,3975μm,0.7s						
EL6				AML	AML		
	comp=N,4570μm,0.4s						
EL6				AML	AML		
	comp=N,4570μm,1.1s						
EL6				AML	AML		
	comp=E,3980μm,0.7s						
EL6				AML	AML		
	comp=N,4570μm,0.9s						
FOSV	**Fossato di Vic**	**0.54**	**334**	⇑P	**Pg**	**04 22 28.6**	**-0.8**
FOSV				AML	AML		
	comp=E,1680μm,1.1s						
FOSV				AML	AML		
	comp=N,2315μm,0.5s						
FOSV				AML	AML		
	comp=E,1675μm,1.1s						
FOSV				AML	AML		
	comp=E,1675μm,0.9s						
FIAM	**Fiamignano**	**0.54**	**177**	P	**Pb**	**04 22 29.4**	**-1.2**
FIAM				S	**Sb**	**04 22 39.0**	**+0.5**
FIAM				AML	AML		
	comp=E,4080μm,0.8s						
FIAM				AML	AML		
	comp=E,4085μm,0.8s						
FIAM				AML	AML		
	comp=N,3195μm,0.5s						
MURB	**Monte Urbino**	**0.61**	**318**	⇓P	**Pg**	**04 22 30.2**	**-0.7**
MURB				S	**Sg**	**04 22 40.0**	**+1.1**
MURB				AML	AML		
	comp=N,6965μm,1.6s						
MURB				AML	AML		
	comp=E,6610μm,0.3s						
MURB				AML	AML		
	comp=N,7225μm,1.6s						
MURB				AML	AML		
	comp=E,6020μm,0.5s						
MURB				AML	AML		
	comp=E,6020μm,1.5s						
MURB				AML	AML		
	comp=N,6960μm,1.6s						
TRTR	**Tortoreto Alta**	**0.61**	**90**	⇑P	**Pn**	**04 22 32.1**	**-1.5**
TRTR				AML	AML		
	comp=E,14850μm,1.6s						
TRTR				AML	AML		
	comp=N,11550μm,0.5s						
TRTR				AML	AML		
	comp=E,14850μm,0.4s						
FAGN	**Fagnano**	**0.66**	**146**	⇑P	**Pn**	**04 22 31.9**	**-2.4**
FAGN				S	**Sn**	**04 22 43.0**	**-1.7**
FAGN				AML	AML		
	comp=N,5705μm,0.6s						
FAGN				AML	AML		
	comp=E,7280μm,0.5s						
FAGN				AML	AML		
	comp=E,7280μm,1.5s						
FAGN				AML	AML		
	comp=N,5705μm,1.4s						
ATTE	**AVT- Monte Tez**	**0.66**	**306**	⇓P	**Pg**	**04 22 31.0**	**-0.8**
ATTE				AML	AML		
	comp=N,1225μm,0.8s						
ATTE				AML	AML		
	comp=E,1450μm,0.8s						
ATFO	**Monte Foce - G**	**0.67**	**326**	⇑P	**Pg**	**04 22 31.3**	**-0.7**
ATFO				AML	AML		
	comp=E,1365μm,1.0s						
ATFO				AML	AML		
	comp=N,1390μm,1.0s						
ATFO				AML	AML		
	comp=E,1365μm,1.0s						
PP3	**Marolino**	**0.68**	**34**	⇑P	**Pb**	**04 22 32.6**	**-0.4**
PP3				AML	AML		
	comp=E,4840μm,1.2s						
PP3				AML	AML		
	comp=N,5245μm,0.8s						
PP3				AML	AML		
	comp=E,4825μm,0.5s						
PP3				AML	AML		
	comp=N,5250μm,0.8s						
PP3				AML	AML		
	comp=E,4840μm,1.1s						
PP3				AML	AML		
	comp=N,5180μm,0.8s						
ARVD	**Arcevia**	**0.69**	**351**	S	**Sb**	**04 22 44.0**	**+1.3**
VCEL	**Villa Celiera**	**0.70**	**127**	⇑P	**Pn**	**04 22 32.7**	**-2.2**
VCEL				AML	AML		
	comp=E,5215μm,1.4s						
VCEL				AML	AML		
	comp=N,6345μm,0.5s						
VCEL				AML	AML		
	comp=E,5220μm,1.4s						
VCEL				AML	AML		
	comp=N,6350μm,0.5s						
VCEL				AML	AML		
	comp=E,5220μm,0.6s						
VCEL				AML	AML		
	comp=N,6350μm,1.5s						
SRES	**S.Oreste - Sor**	**0.71**	**217**	⇑P	**Pb**	**04 22 32.5**	**-1.0**
SRES				S	**Sn**	**04 22 44.0**	**-2.0**
SRES				AML	AML		
	comp=E,3770μm,1.4s						
SRES				AML	AML		
	comp=N,4060μm,0.7s						
SRES				AML	AML		
	comp=E,3770μm,0.6s						
MGAB	**Montegabbione**	**0.72**	**278**	⇑P	**Pg**	**04 22 32.3**	**-0.7**
MGAB				AML	AML		
	comp=E,3810μm,0.8s						
MGAB				AML	AML		
	comp=N,3960μm,0.5s						
MGAB				AML	AML		
	comp=E,4175μm,0.7s						
MGAB				AML	AML		
	comp=N,4125μm,0.9s						
FRON	**Frontone**	**0.75**	**340**	P	**Pg**	**04 22 32.7**	**-0.8**
FRON				AML	AML		
	comp=E,1180μm,1.0s						
FRON				AML	AML		
	comp=E,1185μm,1.0s						
FRON				AML	AML		
	comp=N,1450μm,0.7s						
ATVO	**AVT- Monte Val**	**0.76**	**319**	⇑P	**Pg**	**04 22 32.5**	**-1.1**
ATVO				AML	AML		
	comp=N,1320μm,0.9s						
ATVO				AML	AML		
	comp=E,1355μm,1.6s						
T0110	**Collepietro**	**0.78**	**138**	⇑P	**Pn**	**04 22 33.7**	**-2.2**
T0110				AML	AML		
	comp=E,5235μm,0.4s						
T0110				AML	AML		
	comp=N,5020μm,0.5s						
T0110				AML	AML		
	comp=N,5020μm,1.5s						
ATMI	**Monte Miggiano**	**0.79**	**311**	⇑P	**Pb**	**04 22 34.9**	**+0.1**
ATMI				AML	AML		
	comp=E,4095μm,0.6s						
ATMI				AML	AML		
	comp=E,4095μm,1.4s						
ATMI				AML	AML		
	comp=N,4335μm,0.7s						
ATPI	**Pietralunga -**	**0.81**	**322**	⇓P	**Pg**	**04 22 33.6**	**-1.0**
ATPI				AML	AML		
	comp=E,904μm,1.0s						
ATPI				AML	AML		
	comp=N,1026μm,1.0s						
ATPI				AML	AML		
	comp=N,1026μm,1.0s						
ATPI				AML	AML		
	comp=E,902μm,1.0s						
PTQR	**Pietraquaria**	**0.82**	**163**	⇓P	**Pn**	**04 22 35.8**	**-0.8**
PTQR				AML	AML		
	comp=E,1800μm,1.6s						
PTQR				AML	AML		
	comp=N,1580μm,0.5s						
PTQR				AML	AML		
	comp=E,1800μm,0.4s						
MTCE	**Montecelio**	**0.83**	**198**	⇑P	**Pn**	**04 22 34.1**	**-2.5**
MTCE				AML	AML		
	comp=E,2515μm,0.7s						
MTCE				AML	AML		
	comp=N,2170μm,0.6s						
MTCE				AML	AML		
	comp=N,2170μm,1.4s						
MTCE				AML	AML		
	comp=E,2515μm,1.3s						
MPAG	**Monte Paganucc**	**0.85**	**344**	P	**Pg**	**04 22 34.8**	**-0.6**
SACS	**San Casciano d**	**0.86**	**273**	⇑P	**Pb**	**04 22 34.9**	**-1.1**
SACS				AML	AML		
	comp=E,1645μm,0.9s						
SACS				AML	AML		
	comp=N,1585μm,0.9s						
SACS				AML	AML		
	comp=N,1670μm,0.9s						
SACS				AML	AML		
	comp=E,1645μm,0.7s						
CERT	**Cerreto**	**0.87**	**185**	⇑P	**Pn**	**04 22 35.6**	**-1.6**
CERT				AML	AML		
	comp=N,2385μm,1.3s						
CERT				AML	AML		
	comp=E,4320μm,0.4s						
CERT				AML	AML		
	comp=N,2385μm,0.7s						
NARO	**Abbazia di Nar**	**0.88**	**335**	⇓P	**Pg**	**04 22 34.6**	**-1.3**
NARO				AML	AML		
	comp=E,728μm,0.9s						
NARO				AML	AML		
	comp=N,590μm,1.4s						
FSSB	**Fossombrone**	**0.91**	**346**	P	**Pg**	**04 22 35.9**	**-0.6**
FSSB				S	**Sb**	**04 22 51.0**	**+2.1**
FSSB				AML	AML		
	comp=N,2910μm,0.4s						
FSSB				AML	AML		
	comp=E,2415μm,1.1s						
FSSB				AML	AML		
	comp=E,2415μm,0.9s						
LATE	**Laterza**	**0.96**	**259**	⇑P	**Pn**	**04 22 37.7**	**-0.8**
CAFI	**Castiglion Fio**	**0.97**	**303**	⇑P	**Pg**	**04 22 36.5**	**-1.1**
CAFI				AML	AML		
	comp=E,1054μm,0.7s						
CAFI				AML	AML		
	comp=N,1230μm,0.9s						
CAFI				AML	AML		
	comp=E,1070μm,0.7s						
CAFI				AML	AML		
	comp=N,1170μm,0.9s						
RCAV	**Rocca di Cave**	**0.97**	**186**	P	**Pn**	**04 22 37.4**	**-1.2**
RCAV				S	**Sn**	**04 22 54.0**	**+1.6**
RCAV				AML	AML		
	comp=E,3155μm,0.4s						
RCAV				AML	AML		
	comp=N,3330μm,1.4s						
PE3	**Peglio**	**0.98**	**334**	⇑P	**Pg**	**04 22 37.3**	**-0.6**
PE3				AML	AML		
	comp=N,8μm,1.2s						
PE3				AML	AML		
	comp=E,7μm,1.2s						
PE3				AML	AML		
	comp=N,8μm,0.8s						
PE3				AML	AML		
	comp=E,7μm,0.8s						
VVLD	**Villa Vallelon**	**1.02**	**157**	⇓P	**Pn**	**04 22 41.0**	**+1.7**
VVLD				AML	AML		
	comp=N,1665μm,0.7s						
VVLD				AML	AML		
	comp=E,1620μm,0.6s						
VVLD				AML	AML		
	comp=E,1620μm,1.4s						
VVLD				AML	AML		
	comp=N,1665μm,1.3s						
MCIV	**Monte Civitell**	**1.04**	**269**	⇓P	**Pb**	**04 22 38.3**	**-0.7**
MCIV				AML	AML		
	comp=E,596μm,0.6s						
MCIV				AML	AML		
	comp=N,761μm,0.7s						
MCIV				AML	AML		
	comp=E,596μm,1.4s						
RMP	**Rome, Mte Porz**	**1.04**	**196**	⇑P	**Pn**	**04 22 39.2**	**-0.3**
RMP				AML	AML		
	comp=E,3125μm,0.4s						
RMP				AML	AML		
	comp=N,4520μm,0.4s						
SF04	**Casetta**	**1.05**	**272**	P	**Pn**	**04 22 39.0**	**-0.6**
SF04				AML	AML		
	comp=E,831μm,1.1s						
SF04				AML	AML		
	comp=N,676μm,0.5s						
SF04				AML	AML		
	comp=E,831μm,0.9s						
VIVA	**Pratoni del Vi**	**1.09**	**192**	⇓P	**Pn**	**04 22 41.2**	**+1.1**
VIVA				AML	AML		
	comp=E,5370μm,0.4s						
VIVA				AML	AML		
	comp=E,5370μm,1.6s						
VIVA				AML	AML		
	comp=N,7875μm,0.5s						
RDP	**Rocca di Papa**	**1.09**	**195**	⇓P	**Pn**	**04 22 40.3**	**+0.1**
RDP				AML	AML		
	comp=N,8700μm,0.5s						
RDP				AML	AML		
	comp=E,9245μm,0.4s						
RDP				AML	AML		
	comp=N,8700μm,1.5s						
SAMA	**S.Maria delle**	**1.09**	**200**	⇓P	**Pb**	**04 22 37.9**	**-2.0**
SAMA				AML	AML		
	comp=N,1855μm,1.3s						
SAMA				AML	AML		
	comp=E,1680μm,0.5s						
SAMA				AML	AML		
	comp=N,1855μm,0.7s						
LPEL	**Lama dei Pelig**	**1.12**	**133**	⇑P	**Pn**	**04 22 40.4**	**-0.2**
LPEL				AML	AML		
	comp=E,1820μm,1.2s						
LPEL				AML	AML		
	comp=N,1705μm,0.6s						
LPEL				AML	AML		
	comp=E,1820μm,0.8s						
SF01	**Poggio Pratacc**	**1.12**	**270**	⇓P	**Pn**	**04 22 40.9**	**+0.2**
SF01				AML	AML		
	comp=N,1172μm,0.7s						
SF01				AML	AML		
	comp=E,1116μm,0.8s						
CRE	**Caprese Michel**	**1.16**	**315**	⇓P	**Pg**	**04 22 40.7**	**-0.5**
CRE				AML	AML		
	comp=E,377μm,0.5s						
CRE				AML	AML		
	comp=N,463μm,0.8s						
CRE				AML	AML		
	comp=N,463μm,1.2s						
POFI	**Posta Fibreno**	**1.19**	**157**	⇓P	**Pn**	**04 22 43.5**	**+1.9**
LRP	**Arpino**	**1.22**	**162**	⇓P	**Pn**	**04 22 44.6**	**+2.6**
GIUL	**Giuliano Di Ro**	**1.26**	**174**	⇑P	**Pn**	**04 22 44.3**	**+1.7**
GIUL				AML	AML		
	comp=E,975μm,0.4s						
GIUL				AML	AML		
	comp=N,929μm,0.6s						
LATB	**Latina**	**1.32**	**184**	S	**Sn**	**04 23 04.0**	**+3.1**
TRIV	**Trivento**	**1.51**	**133**	⇓P	**Pg**	**04 22 49.0**	**+1.1**
VAGA	**Valle Agricola**	**1.64**	**148**	⇓P	**Pg**	**04 22 50.5**	**+0.1**
HVAR	**Hvar**	**2.50**	**80**	⇑P	**Pb**	**04 23 02.9**	**-0.9**
MNTV	**Mantova**	**2.86**	**325**	⇑P	**Pn**	**04 23 05.3**	**+0.8**
SALO	**Salr**	**3.35**	**328**	⇑P	**Pn**	**04 23 13.3**	**+1.9**
CTI	**Castel Tesino**	**3.40**	**343**	P	**Pn**	**04 23 13.3**	**+1.3**
ABTA	**Abfaltersbach**	**3.96**	**354**	*e*Pn	**Pn**	**04 23 21.0**	**+1.3**
	comp=N,12nm,0.5s						
DAVOX	**Davos/Dischmat**	**4.58**	**331**	Pn	**Pn**	**04 23 31.3**	**+3.1**
	comp=N,5.9nm,0.4s,baz=158,slow=19						
DAVOX				Sn	**Sn**	**04 24 29.0**	**+7.5**
	comp=N,0.9nm,0.3s,baz=314,slow=21,SNR=1.9						
BIOA	**Bad Ischl, Aus**	**4.89**	**4**	*e*Pn	**Pn**	**04 23 33.6**	**+1.1**
	comp=N,4.9nm,0.3s						
RETA	**Reutte**	**4.96**	**341**	*e*Pn	**Pn**	**04 23 34.8**	**+1.4**
	comp=N,2.5nm,0.6s						
MOA	**Molln**	**5.11**	**9**	*e*Pn	**Pn**	**04 23 36.4**	**+1.0**
	comp=N,7.8nm,0.9s						
CONA	**Conrad Observa**	**5.48**	**20**	*e*Pn	**Pn**	**04 23 39.7**	**-0.9**
	comp=N,1.1nm,0.2s						
GERES	**GERESS Array B**	**6.05**	**4**	Pn	**Pn**	**04 23 48.9**	**+0.4**
	comp=N,0.5nm,0.3s,baz=170,slow=12,SNR=7.6						
GERES				Sn	**Sn**	**04 24 56.7**	**-1.0**
	comp=N,0.8nm,0.3s,baz=173,slow=25,SNR=5.3						
	comp=N,1.4nm,0.6s						
CKRC	**Cesky Krumlov**	**6.07**	**8**	*e*SN	**Sn**	**04 24 56.0**	**-2.1**
KHC	**Kasperske Hory**	**6.33**	**3**	*e*PN	**Pn**	**04 23 55.1**	**+2.9**
KHC				*e*SN	**Sn**	**04 25 02.5**	**-2.0**
KEST	**Kesra**	**7.64**	**204**	Pn	Pn	04 24 14.8	+4.5
	comp=N,0.2nm,0.3s,baz=232,slow=6.8,SNR=4.1						
	comp=N,4.5nm,1.0s						
FINES	**FINESS Array B**	**20.22**	**18**	P	**P**	**04 26 51.4**	**-2.2**
	comp=N,1.7nm,0.9s,baz=191,slow=18,SNR=2.0						
	comp=N,1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.16**	**202**	P	**P**	**04 28 38.4**	**+0.5**
	comp=N,0.4nm,0.8s,baz=21,slow=9.1,SNR=2.9						
	comp=N,0.4nm,0.8s						

PRU ***31*** *04:30:03.9±0.0,42°.56N×13°.89E,h10km*
ROM 31 04:30:04.8±0.0,42°.800N±0°.003×13°.203E±0°.004,
h10km,ML2.8/53,21C-29D,Error ellipse: s-maj=0.2km
s-min=0.2km az=85.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.06**	**349**	⇓P	Pg	04 30 06.9	-0.1
T1245				AML	AML		
	comp=N,68750μm,0.3s						
T1245				AML	AML		
	comp=N,68200μm,0.3s						
T1245				AML	AML		
	comp=E,45850μm,0.5s						
T1245				AML	AML		
	comp=N,68250μm,0.3s						
T1245				AML	AML		
	comp=E,46650μm,0.5s						
MMO1	**Montemonaco**	**0.14**	**43**	⇓P	Pg	04 30 08.3	+0.4
MMO1				S	Sg	04 30 10.8	+0.7
T1204	**Amatrice, Fraz**	**0.15**	**146**	⇑P	Pg	04 30 08.8	+0.6
T1204				S	Sg	04 30 12.2	+1.7
T1204				AML	AML		
	comp=N,12700μm,0.8s						
T1204				AML	AML		
	comp=E,17750μm,0.3s						
T1216	**Preci, Frazion**	**0.16**	**304**	⇓P	Pg	04 30 08.8	+0.5
T1216				AML	AML		
	comp=E,12380μm,0.4s						
T1216				AML	AML		
	comp=N,17450μm,1.1s						
T1216				AML	AML		
	comp=E,12375μm,0.4s						
T1216				AML	AML		
	comp=N,17450μm,1.1s						
T1216				AML	AML		
	comp=E,12360μm,0.4s						
T1216				AML	AML		
	comp=N,17450μm,0.9s						
T1241	**Roccafluvione,**	**0.18**	**72**	⇑P	Pg	04 30 09.3	+0.7
T1241				S	Sg	04 30 12.5	+1.4
T1241				AML	AML		
	comp=N,9420μm,0.7s						
T1241				AML	AML		
	comp=E,7205μm,0.5s						
T1241				AML	AML		
	comp=N,9435μm,0.5s						
T1241				AML	AML		
	comp=E,7640μm,0.5s						
T1241				AML	AML		
	comp=N,9400μm,0.7s						
T1241				AML	AML		
	comp=N,9450μm,0.5s						
T1241				AML	AML		
	comp=N,9430μm,0.7s						
T1241				AML	AML		
	comp=E,7645μm,0.5s						
T1241				AML	AML		
	comp=N,9430μm,1.3s						
SMA1	**SAN MARTINO**	**0.20**	**150**	⇓P	Pg	04 30 09.6	+0.7
SMA1				AML	AML		
	comp=E,11850μm,0.5s						
SMA1				AML	AML		
	comp=N,9680μm,0.5s						
SMA1				AML	AML		
	comp=E,11900μm,0.5s						
SMA1				AML	AML		
	comp=N,9675μm,0.5s						
FEMA	**Monte Fema**	**0.20**	**325**	⇑P	Pg	04 30 09.6	+0.6
FEMA				S	Sg	04 30 13.1	+1.3
FEMA				AML	AML		
	comp=N,5750μm,0.4s						
FEMA				AML	AML		
	comp=N,5745μm,0.4s						
FEMA				AML	AML		
	comp=E,8955μm,0.2s						
FEMA				AML	AML		
	comp=N,5750μm,0.4s						
T1243	**Rocca Santa Ma**	**0.21**	**120**	⇑P	Pg	04 30 09.6	+0.5
T1243				S	Sg	04 30 13.3	+1.2
AM05	**Amandola Campo**	**0.21**	**32**	⇓P	Pg	04 30 09.8	+0.7
AM05				S	Sg	04 30 13.3	+1.3
AM05				AML	AML		
	comp=N,2075μm,0.6s						
AM05				AML	AML		
	comp=N,539μm,0.6s						
AM05				AML	AML		
	comp=E,1775μm,1.1s						
AM05				AML	AML		
	comp=N,2080μm,0.6s						
AM05				AML	AML		
	comp=E,8075μm,0.4s						
AM05				AML	AML		
	comp=N,538μm,0.6s						
AM05				AML	AML		
	comp=N,538μm,1.4s						
AM05				AML	AML		
	comp=N,2080μm,1.4s						
AM05				AML	AML		
	comp=E,1780μm,1.1s						
T1217	**Poggiodomo (PG**	**0.22**	**246**	⇑P	Pg	04 30 09.9	+0.7
T1217				S	Sg	04 30 13.7	+1.3
T1217				AML	AML		
	comp=E,2735μm,0.6s						
T1217				AML	AML		
	comp=N,5145μm,0.5s						
T1217				AML	AML		
	comp=E,2755μm,1.4s						
T1217				AML	AML		
	comp=N,5045μm,0.4s						
T1217				AML	AML		
	comp=E,2730μm,0.6s						
T1217				AML	AML		
	comp=N,5140μm,0.5s						
T1217				AML	AML		
	comp=E,2755μm,1.4s						
T1217				AML	AML		
	comp=N,5040μm,0.4s						
T1217				AML	AML		
	comp=N,5140μm,0.5s						
T1217				AML	AML		
	comp=E,2730μm,1.4s						
LNSS	**Leonessa**	**0.23**	**211**	⇓P	Pg	04 30 10.2	+0.7
LNSS				S	Sg	04 30 14.4	+1.7
LNSS				AML	AML		
	comp=N,5395μm,0.2s						
LNSS				AML	AML		
	comp=E,3165μm,0.3s						
LNSS				AML	AML		
	comp=E,3165μm,1.7s						
T1215	**Vallo di Nera,**	**0.25**	**270**	P	Pg	04 30 10.4	+0.7
T1215				S	Sg	04 30 14.5	+1.4
T1215				AML	AML		
	comp=E,2180μm,0.4s						
T1215				AML	AML		
	comp=E,2160μm,0.4s						
T1215				AML	AML		
	comp=N,2405μm,0.8s						
T1215				AML	AML		
	comp=N,2410μm,0.8s						
T1215				AML	AML		
	comp=N,2401μm,0.8s						
T1215				AML	AML		
	comp=E,2175μm,0.4s						
T1215				AML	AML		
	comp=N,2400μm,0.8s						
T1215				AML	AML		
	comp=E,2162μm,0.4s						
T1215				AML	AML		
	comp=N,2415μm,0.8s						
T1215				AML	AML		
	comp=N,2415μm,1.2s						
T1215				AML	AML		
	comp=N,2400μm,1.2s						
T1215				AML	AML		
	comp=E,2162μm,1.6s						
T1215				AML	AML		
	comp=E,2175μm,1.6s						
GUMA	**Gualdo di Mace**	**0.28**	**20**	⇓P	Pb	04 30 11.3	-0.6
GUMA				S	Sb	04 30 16.5	-0.3
GUMA				AML	AML		
	comp=E,10765μm,0.7s						
GUMA				AML	AML		
	comp=E,10735μm,0.7s						
GUMA				AML	AML		
	comp=N,13350μm,0.5s						

GUMA				AML	AML	
	comp=N,13400μm,0.6s					
GUMA				AML	AML	
	comp=E,10735μm,1.3s					
GUMA				AML	AML	
	comp=E,9485μm,0.5s					
RM33	**Pellescritta (**	**0.29 178**	⇑P	Pg	04 30 11.3	+0.6
RM33			S	Sb	04 30 16.4	-0.7
RM33			AML	AML		
	comp=E,3315μm,1.1s					
RM33			AML	AML		
	comp=E,3315μm,1.0s					
RM33			AML	AML		
	comp=E,3255μm,0.6s					
RM33			AML	AML		
	comp=N,3575μm,0.2s					
RM33			AML	AML		
	comp=E,3320μm,1.0s					
RM33			AML	AML		
	comp=E,3250μm,0.6s					
RM33			AML	AML		
	comp=N,3580μm,0.2s					
RM33			AML	AML		
	comp=N,3670μm,0.2s					
CAMP	**Campotosto**	**0.30 150**	P	Pg	04 30 11.3	+0.4
CAMP			S	Sg	04 30 16.1	+1.2
CAMP			AML	AML		
	comp=N,1450μm,0.9s					
CAMP			AML	AML		
	comp=E,1770μm,0.7s					
CAMP			AML	AML		
	comp=E,1770μm,1.3s					
TERO	**Teramo**	**0.34 121**	⇑P	Pg	04 30 12.0	+0.4
TERO			S	Sb	04 30 17.6	-1.1
TERO			AML	AML		
	comp=E,3055μm,0.8s					
TERO			AML	AML		
	comp=N,4410μm,0.5s					
TERO			AML	AML		
	comp=E,3195μm,0.8s					
TERO			AML	AML		
	comp=N,4670μm,0.5s					
TERO			AML	AML		
	comp=N,4415μm,0.5s					
TERO			AML	AML		
	comp=E,3060μm,0.8s					
TERO			AML	AML		
	comp=N,4414μm,0.5s					
TERO			AML	AML		
	comp=N,4671μm,0.5s					
TERO			AML	AML		
	comp=N,4670μm,1.5s					
TERO			AML	AML		
	comp=N,4415μm,1.5s					
T1247	**Pizzolo (AQ)**	**0.36 169**	⇑P	Pg	04 30 12.6	+0.6
T1247			S	Sb	04 30 18.8	-0.5
T1247			AML	AML		
	comp=E,2755μm,0.6s					
T1247			AML	AML		
	comp=E,2755μm,1.4s					
T1247			AML	AML		
	comp=N,2965μm,0.9s					
T1211	**Morro Reatino**	**0.37 224**	⇓P	Pg	04 30 12.7	+0.6
T1211			S	Sb	04 30 18.8	-0.6
T1211			AML	AML		
	comp=E,1265μm,0.8s					
T1211			AML	AML		
	comp=N,2630μm,0.4s					
T1211			AML	AML		
	comp=E,1300μm,1.5s					
T1211			AML	AML		
	comp=N,2625μm,0.4s					
T1211			AML	AML		
	comp=E,1305μm,1.5s					
T1211			AML	AML		
	comp=N,2575μm,0.4s					
T1211			AML	AML		
	comp=E,1260μm,0.8s					
T1211			AML	AML		
	comp=E,1305μm,0.5s					
OFFI	**Offida**	**0.38 69**	⇑P	Pb	04 30 13.7	+0.1
OFFI			AML	AML		
	comp=E,3830μm,0.7s					
OFFI			AML	AML		
	comp=N,6970μm,0.5s					
OFFI			AML	AML		
	comp=N,6970μm,1.5s					
ARRO	**Arrone**	**0.39 236**	P	Pg	04 30 13.0	+0.5
ARRO			S	Sb	04 30 19.5	-0.4
ARRO			AML	AML		
	comp=E,1060μm,0.2s					
ARRO			AML	AML		
	comp=E,1059μm,0.2s					
ARRO			AML	AML		
	comp=N,1220μm,0.7s					
ARRO			AML	AML		
	comp=N,1220μm,1.3s					
SEF1	**Sefro**	**0.39 332**	P	Pg	04 30 13.0	+0.5
SEF1			AML	AML		
	comp=E,3990μm,0.2s					
SEF1			AML	AML		
	comp=N,2645μm,1.2s					
SEF1			AML	AML		
	comp=N,2645μm,0.8s					
GIGS	**Gran Sasso**	**0.44 142**	⇑P	Pg	04 30 14.0	+0.6
GIGS			S	Sb	04 30 20.4	-1.0
GIGS			AML	AML		
	comp=E,470μm,1.3s					
GIGS			AML	AML		
	comp=N,364μm,1.3s					
GIGS			AML	AML		
	comp=N,364μm,0.7s					
GIGS			AML	AML		
	comp=E,470μm,0.7s					
ASSB	**Assisi San Ben**	**0.47 301**	⇓P	Pg	04 30 14.2	+0.4
ASSB			AML	AML		
	comp=E,3235μm,0.2s					
ASSB			AML	AML		
	comp=N,1845μm,0.2s					
AQU	**L'Aquila**	**0.47 162**	P	Pg	04 30 14.3	+0.4
AQU			AML	AML		
	comp=E,1091μm,1.3s					
AQU			AML	AML		
	comp=N,1189μm,1.1s					
AQU			AML	AML		
	comp=E,1024μm,1.3s					
AQU			AML	AML		
	comp=N,1198μm,1.1s					
AQU			AML	AML		
	comp=N,1190μm,1.1s					
AQU			AML	AML		
	comp=N,1198μm,1.1s					
AQU			AML	AML		
	comp=E,1096μm,1.3s					
AQU			AML	AML		
	comp=E,1024μm,0.7s					
AQU			AML	AML		
	comp=E,1096μm,0.7s					
AQU			AML	AML		
	comp=N,1190μm,0.9s					
AQU			AML	AML		
	comp=N,1198μm,0.9s					
SNTG	**Esanatoglia**	**0.49 337**	⇓P	Pg	04 30 14.7	+0.3
SNTG			S	Sb	04 30 24.0	+1.1
SNTG			AML	AML		
	comp=N,826μm,0.8s					
SNTG			AML	AML		
	comp=E,589μm,0.8s					
SNTG			AML	AML		
	comp=N,870μm,0.8s					
SNTG			AML	AML		
	comp=N,871μm,0.8s					
SNTG			AML	AML		
	comp=E,594μm,0.8s					
SNTG			AML	AML		
	comp=N,826μm,0.8s					
SNTG			AML	AML		
	comp=E,589μm,1.2s					
SNTG			AML	AML		
	comp=E,594μm,1.2s					
CESX	**Cesi**	**0.50 248**	⇑P	Pg	04 30 14.7	+0.2
CESX			S	Sb	04 30 24.0	+1.0
CESX			AML	AML		
	comp=N,878μm,0.4s					
CESX			AML	AML		
	comp=E,992μm,0.4s					
CESX			AML	AML		
	comp=N,878μm,1.6s					
CESX			AML	AML		
	comp=E,992μm,1.6s					
TRTR	**Tortoreto Alta**	**0.52 89**	⇑P	Pb	04 30 16.6	+0.6
TRTR			AML	AML		
	comp=E,2500μm,1.2s					
TRTR			AML	AML		
	comp=N,2435μm,0.4s					
EL6	**Elcito**	**0.53 352**	⇓P	Pg	04 30 15.5	+0.3
EL6			AML	AML		
	comp=E,1366μm,0.4s					
EL6			AML	AML		
	comp=N,1706μm,1.0s					
EL6			AML	AML		
	comp=N,1710μm,1.0s					
EL6			AML	AML		
	comp=N,1710μm,1.0s					
EL6			AML	AML		
	comp=E,1367μm,0.4s					
FIAM	**Fiamignano**	**0.54 187**	⇓P	Pg	04 30 15.4	+0.2
FIAM			S	Sb	04 30 25.0	+0.8
FIAM			AML	AML		
	comp=E,826μm,0.6s					
FIAM			AML	AML		
	comp=N,620μm,1.4s					
FIAM			AML	AML		
	comp=E,827μm,0.6s					
FIAM			AML	AML		
	comp=N,620μm,1.4s					
ATCC	**AVT- Casa Cast**	**0.56 313**	⇓P	Pg	04 30 16.1	+0.4
ATCC			S	Sb	04 30 26.0	+1.0
ATCC			AML	AML		
	comp=E,1615μm,0.4s					
ATCC			AML	AML		
	comp=E,1620μm,0.4s					
ATCC			AML	AML		
	comp=N,1840μm,0.4s					
FOSV	**Fossato di Vic**	**0.59 327**	P	Pg	04 30 16.5	+0.2
FOSV			S	Sb	04 30 27.0	+1.3
FOSV			AML	AML		
	comp=N,1240μm,0.4s					
FOSV			AML	AML		
	comp=E,586μm,0.5s					
FOSV			AML	AML		
	comp=N,1240μm,1.6s					
FAGN	**Fagnano**	**0.60 152**	⇑P	Pb	04 30 17.5	0.0
FAGN			AML	AML		
	comp=E,1830μm,0.6s					
FAGN			AML	AML		
	comp=N,1285μm,0.3s					
VCEL	**Villa Celiera**	**0.62 131**	⇑P	Pg	04 30 17.2	+0.5
VCEL			AML	AML		
	comp=E,1330μm,0.4s					
VCEL			AML	AML		
	comp=N,1150μm,0.9s					
PP3	**Marolino**	**0.65 27**	⇓P	Pb	04 30 18.5	+0.3
PP3			AML	AML		
	comp=E,2190μm,0.4s					
PP3			AML	AML		
	comp=N,1815μm,0.4s					
PP3			AML	AML		
	comp=E,2185μm,0.4s					
PP3			AML	AML		
	comp=N,1810μm,0.5s					
PP3			AML	AML		
	comp=E,2025μm,0.4s					
PP3			AML	AML		
	comp=N,1920μm,0.3s					
PP3			AML	AML		
	comp=N,1920μm,1.7s					
PP3			AML	AML		
	comp=E,2025μm,1.6s					
PP3			AML	AML		
	comp=E,2185μm,1.6s					
MURB	**Monte Urbino**	**0.68 313**	⇑P	Pg	04 30 18.2	+0.3
MURB			S	Sn	04 30 30.0	-1.3
MURB			AML	AML		
	comp=E,1790μm,1.4s					
MURB			AML	AML		
	comp=N,2520μm,0.3s					
MURB			AML	AML		
	comp=N,2540μm,0.3s					
MURB			AML	AML		
	comp=E,1795μm,1.5s					
MURB			AML	AML		
	comp=N,2515μm,0.3s					
MURB			AML	AML		
	comp=E,1795μm,0.5s					
MURB			AML	AML		
	comp=E,2010μm,0.2s					
T0110	**Collepietro**	**0.71 143**	⇓P	Pg	04 30 18.6	0.0
T0110			AML	AML		
	comp=E,1700μm,0.4s					
T0110			AML	AML		
	comp=N,1545μm,0.4s					
T0110			AML	AML		
	comp=N,1545μm,1.6s					
T0110			AML	AML		
	comp=E,1700μm,1.6s					
ARVD	**Arcevia**	**0.72 345**	⇓P	Pg	04 30 18.8	+0.1
ARVD			S	Sn	04 30 31.0	-1.3
ARVD			AML	AML		
	comp=E,344μm,0.4s					
ARVD			AML	AML		
	comp=N,290μm,0.6s					
ARVD			AML	AML		
	comp=E,344μm,1.6s					
ATFO	**Monte Foce - G**	**0.73 321**	⇑P	Pg	04 30 19.1	+0.2
ATFO			AML	AML		
	comp=E,580μm,1.1s					
ATFO			AML	AML		
	comp=N,448μm,1.0s					
ATTE	**AVT- Monte Tez**	**0.74 303**	⇑P	Pg	04 30 19.2	+0.2
ATTE			AML	AML		
	comp=E,442μm,0.8s					
ATTE			AML	AML		
	comp=N,408μm,1.0s					
ATTE			AML	AML		
	comp=E,442μm,1.2s					
ATTE			AML	AML		
	comp=N,408μm,1.0s					
SRES	**S.Oreste - Sor**	**0.76 223**	⇓P	Pg	04 30 19.1	-0.3
SRES			AML	AML		
	comp=E,230μm,1.2s					
SRES			AML	AML		
	comp=N,240μm,0.5s					
FRON	**Frontone**	**0.80 334**	⇓P	Pg	04 30 20.0	-0.1
FRON			AML	AML		
	comp=N,517μm,1.6s					
FRON			AML	AML		
	comp=N,517μm,0.4s					
FRON			AML	AML		
	comp=E,335μm,0.5s					
AOI	**Ancona**	**0.80 21**	⇓P	Pb	04 30 20.9	0.0
AOI			AML	AML		
	comp=E,422μm,0.4s					
AOI			AML	AML		
	comp=N,372μm,0.7s					
AOI			AML	AML		
	comp=E,422μm,1.6s					
MGAB	**Montegabbione**	**0.81 278**	⇓P	Pb	04 30 20.9	0.0
MGAB			AML	AML		
	comp=E,828μm,1.2s					
MGAB			AML	AML		
	comp=N,1068μm,0.8s					
MGAB			AML	AML		
	comp=N,1105μm,0.8s					
MGAB			AML	AML		
	comp=E,828μm,0.8s					
MGAB			AML	AML		
	comp=N,1105μm,1.2s					
MGAB			AML	AML		
	comp=E,964μm,0.6s					
MGAB			AML	AML		
	comp=N,1068μm,1.2s					
ATVO	**AVT- Monte Val**	**0.82 315**	⇓P	Pg	04 30 20.5	-0.1
ATVO			AML	AML		
	comp=E,313μm,0.9s					
ATVO			AML	AML		
	comp=E,314μm,0.9s					
ATVO			AML	AML		
	comp=N,311μm,0.4s					
ATMI	**Monte Miggiano**	**0.87 308**	⇓P	Pb	04 30 22.1	+0.1
ATMI			AML	AML		
	comp=E,1310μm,0.5s					
ATMI			AML	AML		
	comp=N,1340μm,1.0s					
ATMI			AML	AML		
	comp=N,1340μm,1.0s					
ATPI	**Pietralunga -**	**0.88 318**	⇓P	Pg	04 30 21.5	-0.1
ATPI			AML	AML		
	comp=E,252μm,0.5s					
ATPI			AML	AML		
	comp=N,337μm,0.4s					
ATPI			AML	AML		
	comp=E,252μm,1.5s					
PIEI	**Pieia**	**0.88 327**	⇑P	Pg	04 30 21.6	-0.1
PIEI			S	Sn	04 30 37.0	+0.7
PIEI			AML	AML		
	comp=E,310μm,0.9s					
PIEI			AML	AML		
	comp=N,248μm,1.0s					
PIEI			AML	AML		
	comp=E,310μm,1.1s					
MPAG	**Monte Paganucc**	**0.89 339**	⇓P	Pg	04 30 21.9	0.0
MPAG			AML	AML		
	comp=E,317μm,1.6s					
MPAG			AML	AML		
	comp=N,324μm,0.6s					
MPAG			AML	AML		
	comp=E,316μm,1.6s					
MPAG			AML	AML		
	comp=N,325μm,0.6s					
MPAG			AML	AML		
	comp=E,316μm,0.4s					
NARO	**Abbazia di Nar**	**0.93 331**	⇓P	Pg	04 30 22.2	-0.4
NARO			AML	AML		
	comp=E,206μm,0.6s					
NARO			AML	AML		
	comp=N,193μm,0.5s					
FSSB	**Fossombrone**	**0.94 341**	⇑P	Pg	04 30 23.1	+0.2
FSSB			AML	AML		
	comp=E,916μm,0.4s					
FSSB			AML	AML		
	comp=N,1150μm,0.4s					
SACS	**San Casciano d**	**0.95 273**	⇓P	Pb	04 30 23.6	+0.2
SACS			AML	AML		
	comp=E,246μm,1.2s					
SACS			AML	AML		
	comp=N,376μm,0.7s					
SACS			AML	AML		
	comp=E,246μm,0.8s					
BADI	**Badiali**	**1.00 316**	P	Pb	04 30 24.1	-0.1
LPEL	**Lama dei Pelig**	**1.05 136**	⇓P	Pg	04 30 24.7	-0.1
LPEL			AML	AML		
	comp=N,252μm,1.6s					
LPEL			AML	AML		
	comp=N,252μm,0.4s					
LPEL			AML	AML		
	comp=E,268μm,0.5s					
CAFI	**Castiglion Fio**	**1.05 301**	⇑P	Pg	04 30 24.9	0.0
CAFI			S	Sn	04 30 42.0	+1.6
CAFI			AML	AML		
	comp=N,252μm,0.7s					
CAFI			AML	AML		
	comp=N,252μm,1.3s					
CAFI			AML	AML		
	comp=E,252μm,0.8s					
MA9	**Marino**	**1.11 202**	⇓P	Pn	04 30 27.8	+1.5
CPGN	**Carpegna, Ital**	**1.19 328**	P	Pn	04 30 28.3	+0.7
CPGN			AML	AML		
	comp=E,323μm,0.9s					
CPGN			AML	AML		
	comp=N,290μm,0.7s					
CPGN			AML	AML		
	comp=E,323μm,1.1s					
CRE	**Caprese Michel**	**1.23 312**	P	Pg	04 30 28.4	0.0
CRE			AML	AML		
	comp=N,115μm,1.2s					
CRE			AML	AML		
	comp=E,102μm,0.4s					
CRE			AML	AML		
	comp=N,115μm,0.8s					
GIUL	**Giuliano Di Ro**	**1.24 178**	P	Pg	04 30 29.7	+1.1
RUFI	**Rufina**	**1.61 311**	⇓P	Pb	04 30 34.9	+0.2
VITU	**Vitulano (BN)**	**1.94 146**	S	Sn	04 31 02.0	-0.3
CMPR	**Campora**	**2.94 147**	P	Pg	04 31 00.1	-1.0
CMPR			S	Sn	04 31 29.0	+2.0
CGRP	**Cima Grappa**	**3.24 342**	⇑P	Pn	04 30 57.8	+1.9
ABTA	**Abfaltersbach**	**3.98 353**	*e*Pn	Pn	04 31 07.9	+2.0
	comp=N,8.0nm,0.5s					
FETA	**Feichten**	**4.57 338**	*e*Pn	Pn	04 31 17.3	+3.1
	comp=N,0.5nm,0.3s					
SQTA	**Sankt Quirin**	**4.64 343**	*e*Pn	Pn	04 31 17.2	+2.1
	comp=N,2.8nm,0.5s					
MOTA	**Moosalm**	**4.78 343**	*e*Pn	Pn	04 31 19.7	+2.7
	comp=N,0.6nm,0.4s					
BIOA	**Bad Ischl, Aus**	**4.90 3**	*i* Pn	Pn	04 31 20.2	+1.6
	comp=N,1.4nm,0.2s					
RETA	**Reutte**	**4.99 341**	*i* Pn	Pn	04 31 23.3	+3.4
	comp=N,1.2nm,0.4s					
MOA	**Molln**	**5.11 8**	*i* Pn	Pn	04 31 22.3	+0.9
	comp=N,0.8nm,0.2s					
CONA	**Conrad Observa**	**5.46 19**	*e*Pn	Pn	04 31 27.7	+1.4
	comp=N,1.4nm,0.4s					
KHC	**Kasperske Hory**	**6.34 2**	*e*PN	Pn	04 31 39.4	+1.1
KHC			*e*SN	Sn	04 32 50.8	+0.1

GII ***31*** *04:37:12.3±0.0, 28°.52N×34°.74E, h1km, MD3.0/3, Mm3.0/4*
HLW ***31*** *04:37:14.0, 28°.53N×34°.66E, h12km±1km, Md2.5*
SGS ***31*** *04:37:14.2, 28°.49N×34°.61E, h19km, Ml3.1*

ISC 31 04:37:13.8±0.9, 28°.51N±0°.02×34°.69E±0°.03, h16km±7km, n50, σ0s67/59, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDHB	**Dhahab**		**0.22 344**	P	**Pg**	**04 37 18.7**	**-0.1**
	baz=350						
RSHS			**0.23 156**	P	**Pg**	**04 37 19.2**	**+0.1**
RSHS			**0.23 156**	S	**Sg**	**04 37 23.4**	**+0.7**
BDAS	**Al Bad`**		**0.37 103**	P	**Pg**	**04 37 21.4**	**-0.1**
NUB	**Nuweibaa**		**0.51 356**	P	**Pg**	**04 37 23.1**	**-1.0**
	baz=358						
HAQS	**Haql**		**0.57 21**	S	**Sg**	**04 37 33.0**	**+0.2**
HAQS				P	**Pg**	**04 37 24.7**	**-0.5**
AYUS	**`Aynunah**		**0.61 122**	P	**Pg**	**04 37 25.5**	**-0.3**
HKAT	**Jabal Katrina**		**0.61 271**	P	**Pg**	**04 37 25.4**	**-0.6**
	baz=270						
HKAT				S	**Sg**	**04 37 33.9**	**-0.3**
	baz=270						
KRABS	**KRABS**		**0.65 129**	P	**Pg**	**04 37 26.2**	**-0.3**
HBST	**Basata**		**0.70 3**	P	**Pg**	**04 37 27.4**	**-0.2**
	baz=5.0						
JLOS			**0.74 73**	P	**Pg**	**04 37 27.6**	**-0.7**
JMOS	**Jabal al Moall**		**0.75 29**	P	**Pg**	**04 37 27.8**	**-0.7**
TR1	**Tor 1**		**0.82 232**	P	**Pg**	**04 37 29.6**	**-0.3**
	baz=231						
HQLS			**0.85 23**	P	**Pg**	**04 37 29.7**	**-0.7**
TR2	**Tor 2**		**0.86 262**	P	**Pg**	**04 37 29.8**	**-0.7**
	baz=261						
WTBKS	**WTBKS**		**1.16 111**	P	**Pb**	**04 37 34.7**	**-0.9**
EIL	**Elat**		**1.18 11**	Pg	**Pb**	**04 37 35.2**	**-0.6**
EIL				Sg	**Sg**	**04 37 51.8**	**-0.1**
HRDS	**Abu Rudays**		**1.24 279**	P	**Pn**	**04 37 36.5**	**0.0**
	baz=280						
MBRI	**Mt Berech**		**1.29 9**	Pg	**Pn**	**04 37 36.9**	**-0.4**
MBRI				Sg	**Sg**	**04 37 56.2**	**+0.6**
HRFI	**Mount Harif**		**1.55 11**	Pn	**Pn**	**04 37 40.3**	**-0.5**
HRFI				Sn	**Sb**	**04 38 02.5**	**+1.0**
KRMI	**Paran Flat**		**1.60 1**	Pn	**Pn**	**04 37 41.3**	**-0.2**
KRMI				Sn	**Sb**	**04 38 03.5**	**+0.5**
HHRG	**Al Ghardaqah**		**1.63 218**	P	**Pn**	**04 37 41.8**	**-0.1**
	baz=213						
TBKS	**Tabuk**		**1.66 100**	P	**Pn**	**04 37 42.4**	**+0.2**
GRB	**Gharib**		**1.69 262**	P	**Pn**	**04 37 41.9**	**-0.9**
	baz=262						
ZNM	**Zenema**		**1.81 299**	P	**Pn**	**04 37 45.0**	**+0.8**
	baz=299						
PRNI	**Paran**		**1.85 9**	Pn	**Pn**	**04 37 44.7**	**-0.3**
PRNI				Sn	**Sn**	**04 38 09.4**	**+1.3**
URD07	**Al Anba**		**1.88 115**	P	**Pn**	**04 37 46.0**	**+0.5**
ZFRI	**Zfri**		**2.08 12**	Pn	**Pn**	**04 37 48.6**	**+0.6**
ZFRI				Sn	**Sn**	**04 38 14.5**	**+1.0**
SUZ	**Suez**		**2.09 310**	P	**Pn**	**04 37 48.8**	**+0.6**
	baz=310						
URD06	**Shuwaq**		**2.12 120**	P	**Pn**	**04 37 48.7**	**0.0**
URD10	**Hayder**		**2.15 99**	P	**Pn**	**04 37 49.3**	**+0.2**
URD12	**Shuwaq**		**2.22 109**	P	**Pn**	**04 37 50.2**	**+0.1**
KZIT	**Kziot**		**2.40 354**	Pn	**Pn**	**04 37 53.6**	**+1.2**
KZIT				Sn	**Sn**	**04 38 22.8**	**+1.3**
URD11	**Tayma**		**2.51 103**	P	**Pn**	**04 37 54.3**	**+0.2**

BIDS	**Bi'r al Bayda'**	**2.60 129**	P	**Pn**	**04 37 55.1**	**-0.1**
URD13	**Abu Rakah**	**2.65 111**	P	**Pn**	**04 37 56.2**	**+0.1**
URD04	**Abu Rakah**	**2.69 121**	P	**Pn**	**04 37 56.8**	**+0.2**
URD15	**Abu Rakah**	**2.75 117**	P	**Pn**	**04 37 58.1**	**+0.6**
YTIR	**Yattir**	**2.86 7**	Pn	**Pn**	**04 37 58.9**	**0.0**
KOT	**Kottamia**	**2.87 300**	P	**Pn**	**04 37 59.2**	**+0.2**
	baz=301					
URD14	**Abu Rakah**	**2.90 111**	P	**Pn**	**04 37 59.6**	**+0.1**
EWJHS	**Al Wajh**	**2.93 143**	P	**Pn**	**04 37 58.9**	**-0.9**
URD01	**URD01**	**3.06 120**	P	**Pn**	**04 38 02.3**	**+0.6**
URD03	**Al Ula**	**3.06 126**	P	**Pn**	**04 38 02.1**	**+0.4**
DSI	**Dead Sea**	**3.10 11**	Pn	**Pn**	**04 38 02.5**	**+0.3**
URD02	**Al Ula**	**3.39 123**	P	**Pn**	**04 38 07.0**	**+0.8**
OLAS	**OLAS**	**3.46 130**	P	**Pn**	**04 38 07.5**	**+0.5**
NUMJS	**Khuff**	**3.68 141**	P	**Pn**	**04 38 09.1**	**-1.0**
NTAIM	**NTAIM**	**3.70 94**	P	**Pn**	**04 38 10.8**	**+0.4**
HANO	**Al Hamad**	**4.27 47**	P	**Pg**	**04 38 33.4**	**-2.2**

ROM 31 04:38:05.6±0.0, 42°.880N±0'.002×13°.048E±0'.003,
h11km, ML2.8/26, 21C-13D, Error ellipse: s-maj=0.2km
s-min=0.2km az=133.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.02**	**297**	P	Pg	04 38 07.9	+0.3
T1216				S	Sg	04 38 09.4	+0.3
T1216				AML	AML		
	comp=E,5260μm,0.2s						
T1216				AML	AML		
	comp=N,4920μm,0.6s						
FEMA	**Monte Fema**	**0.08**	**1**	⇑P	Pg	04 38 08.7	+0.4
FEMA				S	Sg	04 38 10.4	+0.3
FEMA				AML	AML		
	comp=E,6555μm,0.3s						
FEMA				AML	AML		
	comp=N,6635μm,0.5s						
FEMA				AML	AML		
	comp=N,6640μm,0.4s						
FEMA				AML	AML		
	comp=N,6640μm,0.5s						
T1245	**Castelsantange**	**0.11**	**103**	P	Pg	04 38 08.9	+0.4
T1245				S	Sg	04 38 11.2	+0.6
T1245				AML	AML		
	comp=E,12165μm,0.2s						
T1245				AML	AML		
	comp=N,12550μm,0.3s						
T1245				AML	AML		
	comp=E,11920μm,0.2s						
T1245				AML	AML		
	comp=E,12170μm,0.2s						
T1245				AML	AML		
	comp=N,12600μm,0.3s						
T1245				AML	AML		
	comp=N,12375μm,0.3s						
T1245				AML	AML		
	comp=E,12160μm,0.2s						
T1245				AML	AML		
	comp=N,12550μm,0.3s						
T1215	**Vallo di Nera,**	**0.15**	**240**	⇑P	Pg	04 38 09.7	+0.5
T1215				S	Sg	04 38 12.3	+0.7
T1215				AML	AML		
	comp=N,5650μm,0.8s						
T1215				AML	AML		
	comp=E,2680μm,0.2s						
T1215				AML	AML		
	comp=E,2995μm,0.2s						
T1215				AML	AML		
	comp=N,5655μm,0.8s						
T1215				AML	AML		
	comp=E,2685μm,0.2s						
T1215				AML	AML		
	comp=E,2680μm,0.2s						
T1215				AML	AML		
	comp=N,5670μm,0.8s						
T1217	**Poggiodomo (PG**	**0.19**	**207**	⇑P	Pg	04 38 10.2	+0.5
T1217				S	Sg	04 38 13.5	+0.9
T1217				AML	AML		
	comp=E,2170μm,0.4s						
T1217				AML	AML		
	comp=E,2165μm,0.4s						
T1217				AML	AML		
	comp=N,3455μm,0.2s						
MMO1	**Montemonaco**	**0.21**	**84**	⇑P	Pg	04 38 10.5	+0.5
MMO1				S	Sg	04 38 13.9	+0.8
CSP1	**Cessapalombo**	**0.24**	**28**	⇑P	Pg	04 38 11.2	+0.6
CSP1				AML	AML		
	comp=E,1830μm,0.4s						
CSP1				AML	AML		
	comp=N,2005μm,1.5s						
AM05	**Amandola Campo**	**0.24**	**66**	P	Pb	04 38 11.3	-0.7
AM05				S	Sg	04 38 15.2	+1.1
AM05				AML	AML		
	comp=E,1037μm,0.1s						
AM05				AML	AML		
	comp=E,3775μm,0.4s						
AM05				AML	AML		
	comp=N,232μm,0.2s						
AM05				AML	AML		
	comp=E,1039μm,0.1s						
AM05				AML	AML		
	comp=N,835μm,0.3s						
AM05				AML	AML		
	comp=E,1040μm,0.1s						
AM05				AML	AML		
	comp=E,3770μm,0.4s						
AM05				AML	AML		
	comp=N,836μm,0.3s						
LNSS	**Leonessa**	**0.28**	**181**	⇑P	Pg	04 38 11.6	+0.3
LNSS				S	Sg	04 38 16.0	+1.0
LNSS				AML	AML		
	comp=E,1284μm,0.8s						
LNSS				AML	AML		
	comp=N,4785μm,0.4s						
LNSS				AML	AML		
	comp=E,1480μm,0.3s						
LNSS				AML	AML		
	comp=E,1485μm,0.3s						
LNSS				AML	AML		
	comp=N,6935μm,0.1s						
SEF1	**Sefro**	**0.28**	**345**	⇓P	Pb	04 38 11.9	-0.7
GUMA	**Gualdo di Mace**	**0.28**	**49**	⇑P	Pb	04 38 12.1	-0.5
GUMA				AML	AML		
	comp=E,4495μm,0.4s						
GUMA				AML	AML		
	comp=N,4590μm,0.3s						
GUMA				AML	AML		
	comp=N,4795μm,0.5s						
GUMA				AML	AML		
	comp=E,4965μm,0.4s						
GUMA				AML	AML		
	comp=N,4590μm,0.3s						
T1241	**Roccafluvione,**	**0.28**	**95**	P	Pg	04 38 11.8	+0.5
T1241				S	Sb	04 38 16.5	-1.0
T1241				AML	AML		
	comp=E,2665μm,0.3s						
T1241				AML	AML		
	comp=N,3425μm,0.3s						
T1241				AML	AML		
	comp=E,3140μm,0.3s						
T1204	**Amatrice, Fraz**	**0.28**	**136**	⇑P	Pg	04 38 11.7	+0.3
T1204				S	Sb	04 38 16.5	-1.1
T1204				AML	AML		
	comp=E,32450μm,0.8s						
T1204				AML	AML		
	comp=N,16450μm,1.1s						
T1204				AML	AML		
	comp=E,32400μm,0.8s						
T1204				AML	AML		
	comp=N,16500μm,1.1s						
SMA1	**SAN MARTINO**	**0.33**	**140**	P	Pg	04 38 12.5	+0.3
SMA1				AML	AML		
	comp=E,15500μm,0.3s						
SMA1				AML	AML		
	comp=N,11950μm,0.6s						
ASSB	**Assisi San Ben**	**0.33**	**300**	⇓P	Pg	04 38 12.6	+0.4
ASSB				S	Sb	04 38 17.8	-1.0
T1243	**Rocca Santa Ma**	**0.35**	**122**	⇓P	Pg	04 38 12.8	+0.2
T1243				S	Sg	04 38 18.2	+1.0
ARRO	**Arrone**	**0.36**	**215**	⇑P	Pg	04 38 13.2	+0.4
ARRO				S	Sb	04 38 18.8	-1.0
ARRO				AML	AML		
	comp=E,1335μm,0.2s						
ARRO				AML	AML		
	comp=N,900μm,1.5s						
ARRO				AML	AML		
	comp=E,1340μm,0.2s						
T1211	**Morro Reatino**	**0.38**	**202**	⇑P	Pg	04 38 13.3	+0.2
T1211				S	Sb	04 38 19.3	-0.8
T1211				AML	AML		
	comp=E,1670μm,1.5s						
T1211				AML	AML		
	comp=N,3660μm,1.2s						
T1211				AML	AML		
	comp=E,1742μm,0.5s						
T1211				AML	AML		
	comp=N,3605μm,1.2s						
T1211				AML	AML		
	comp=E,1508μm,0.9s						
T1211				AML	AML		
	comp=N,3660μm,1.2s						
T1211				AML	AML		
	comp=E,1740μm,0.4s						
T1211				AML	AML		
	comp=N,3665μm,1.2s						
T1211				AML	AML		
	comp=N,3615μm,1.2s						
T1211				AML	AML		
	comp=E,1670μm,1.5s						
SNTG	**Esanatoglia**	**0.38**	**348**	P	Pg	04 38 13.6	+0.4
RM33	**Pellescritta (**	**0.39**	**162**	⇑P	Pg	04 38 13.5	+0.1
RM33				S	Sb	04 38 19.6	-1.0
RM33				AML	AML		
	comp=E,2815μm,1.6s						
RM33				AML	AML		
	comp=N,3360μm,0.2s						
RM33				AML	AML		
	comp=N,3430μm,0.2s						
RM33				AML	AML		
	comp=E,2810μm,1.6s						
RM33				AML	AML		
	comp=E,2850μm,1.6s						
RM33				AML	AML		
	comp=N,3355μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.43**	**316**	⇓P	Pg	04 38 14.5	+0.5
CAMP	**Campotosto**	**0.43**	**142**	⇓P	Pg	04 38 14.2	0.0
CAMP				S	Sb	04 38 21.1	-0.8
CAMP				AML	AML		
	comp=E,1835μm,0.3s						
CAMP				AML	AML		
	comp=N,1980μm,0.2s						
CESX	**Cesi**	**0.44**	**232**	⇑P	Pg	04 38 14.3	+0.2
CESX				AML	AML		
	comp=E,950μm,1.3s						
CESX				AML	AML		
	comp=N,1175μm,0.7s						
EL6	**Elcito**	**0.45**	**5**	⇑P	Pg	04 38 14.9	+0.4
FOSV	**Fossato di Vic**	**0.47**	**333**	⇓P	Pg	04 38 15.2	+0.5
OFFI	**Offida**	**0.47**	**83**	⇑P	Pb	04 38 16.1	+0.2
OFFI				AML	AML		
	comp=N,4195μm,0.6s						
OFFI				AML	AML		
	comp=E,3645μm,0.6s						
T1247	**Pizzolo (AQ)**	**0.47**	**157**	⇓P	Pg	04 38 15.0	+0.2
T1247				AML	AML		
	comp=E,3050μm,0.2s						
T1247				AML	AML		
	comp=N,3485μm,0.2s						
TERO	**Teramo**	**0.48**	**122**	⇓P	Pg	04 38 15.0	0.0
TERO				S	Sb	04 38 22.4	-0.9
TERO				AML	AML		
	comp=E,2195μm,1.3s						
TERO				AML	AML		
	comp=N,2160μm,0.5s						
TERO				AML	AML		
	comp=E,2580μm,1.3s						
TERO				AML	AML		
	comp=N,2285μm,0.5s						
MURB	**Monte Urbino**	**0.54**	**315**	⇑P	Pb	04 38 16.7	-0.5
GIGS	**Gran Sasso**	**0.58**	**138**	⇑P	Pg	04 38 16.6	-0.2
GIGS				AML	AML		
	comp=E,442μm,0.9s						
GIGS				AML	AML		
	comp=N,374μm,0.2s						
AQU	**L'Aquila**	**0.59**	**153**	⇓P	Pb	04 38 17.6	-0.3
AQU				S	Sb	04 38 26.4	+0.2
AQU				AML	AML		
	comp=N,493μm,1.1s						
AQU				AML	AML		
	comp=N,492μm,1.1s						
AQU				AML	AML		
	comp=E,462μm,1.0s						
ATFO	**Monte Foce - G**	**0.60**	**325**	P	Pb	04 38 18.0	-0.1
FIAM	**Fiamignano**	**0.61**	**175**	⇓P	Pg	04 38 17.5	0.0
FIAM				S	Sb	04 38 27.0	0.0
FIAM				AML	AML		
	comp=N,438μm,1.2s						
FIAM				AML	AML		
	comp=N,438μm,1.2s						
FIAM				AML	AML		
	comp=E,618μm,0.6s						
ARVD	**Arcevia**	**0.62**	**353**	⇑P	Pg	04 38 18.1	+0.4
ARVD				S	Sn	04 38 29.0	-1.4
FRON	**Frontone**	**0.68**	**340**	P	Pb	04 38 19.2	-0.3
MGAB	**Montegabbione**	**0.69**	**273**	⇓P	Pb	04 38 20.0	+0.4
MGAB				AML	AML		
	comp=E,330μm,0.4s						
MGAB				AML	AML		
	comp=N,318μm,0.7s						
PIEI	**Pieia**	**0.76**	**330**	S	Sn	04 38 33.0	-0.7
VCEL	**Villa Celiera**	**0.76**	**129**	⇑P	Pg	04 38 20.4	+0.2
VCEL				AML	AML		
	comp=E,647μm,0.3s						
VCEL				AML	AML		
	comp=N,772μm,1.3s						
VCEL				AML	AML		
	comp=N,775μm,1.3s						
MPAG	**Monte Paganucc**	**0.78**	**344**	S	Sn	04 38 34.0	-0.3
NARO	**Abbazia di Nar**	**0.81**	**335**	S	Sn	04 38 35.0	+0.1
SACS	**San Casciano d**	**0.84**	**268**	⇑P	Pn	04 38 23.7	+0.3
T0110	**Collepietro**	**0.85**	**140**	⇓P	Pg	04 38 21.9	0.0
T0110				AML	AML		
	comp=E,652μm,0.4s						
T0110				AML	AML		
	comp=N,780μm,0.3s						
MTCE	**Montecelio**	**0.89**	**195**	⇓P	Pg	04 38 22.2	-0.5
MTCE				AML	AML		
	comp=E,294μm,0.5s						
MTCE				AML	AML		
	comp=N,194μm,0.2s						
MTCE				AML	AML		
	comp=E,293μm,0.5s						
CERT	**Cerreto**	**0.93**	**183**	⇑P	Pg	04 38 23.0	-0.5
CERT				AML	AML		
	comp=N,209μm,0.8s						
CERT				AML	AML		
	comp=E,361μm,0.3s						
LPEL	**Lama dei Pelig**	**1.18**	**134**	S	Sn	04 38 46.0	+1.8
LATB	**Latina**	**1.39**	**183**	P	Pn	04 38 30.8	0.0
FROS	**Frosini**	**1.43**	**284**	⇑P	Pn	04 38 30.2	-1.2
PAOL	**Paolisi**	**2.17**	**148**	S	Sg	04 39 16.0	+0.8
GSCL	**Gusciola**	**2.31**	**310**	P	Pg	04 38 49.8	-0.1

ROM 31 04:38:32.1±0.1, 42°.720N±0'.003×13°.278E±0'.005,
h19km, Md1.8/12, 1-2D, Error ellipse: s-maj=0.3km
s-min=0.1km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.05**	**147**	P	Pg	04 38 35.8	0.0
T1204				S	Sg	04 38 38.4	+0.2
T1204				AML	AML		
	comp=E,32400μm,0.8s						
T1204				AML	AML		
	comp=E,32450μm,0.8s						
T1204				AML	AML		
	comp=N,16450μm,1.1s						
T1204				AML	AML		
	comp=N,16500μm,1.1s						
T1204				END			
T1201	**Domo (RI)**	**0.07**	**198**	P	Pg	04 38 36.0	+0.2
T1201				S	Sg	04 38 38.8	+0.6
SMA1	**SAN MARTINO**	**0.10**	**155**	P	Pg	04 38 36.1	+0.1
SMA1				S	Sg	04 38 38.5	-0.2
SMA1				AML	AML		
	comp=E,15500μm,0.3s						
SMA1				AML	AML		
	comp=N,11950μm,0.6s						
SMA1				END			
T1243	**Rocca Santa Ma**	**0.13**	**101**	P	Pg	04 38 36.4	0.0
T1243				S	Sg	04 38 39.5	+0.3
T1243				END			
T1245	**Castelsantange**	**0.15**	**334**	P	Pg	04 38 36.7	0.0
T1245				S	Sg	04 38 40.0	+0.2
T1245				AML	AML		
	comp=E,12185μm,0.2s						
T1245				AML	AML		
	comp=E,12165μm,0.2s						
T1245				AML	AML		
	comp=N,12550μm,0.3s						
T1245				AML	AML		
	comp=E,11920μm,0.2s						
T1245				AML	AML		
	comp=N,12375μm,0.3s						
T1245				AML	AML		
	comp=E,12170μm,0.2s						
T1245				AML	AML		
	comp=N,12600μm,0.3s						
T1245				END			
T1241	**Roccafluvione,**	**0.18**	**40**	P	Pg	04 38 37.0	+0.1
T1241				S	Sg	04 38 40.4	+0.3
T1241				END			
MMO1	**Montemonaco**	**0.18**	**11**	P	Pg	04 38 37.0	-0.1
MMO1				S	Sg	04 38 40.6	+0.2
MMO1				END			
CAMP	**Campotosto**	**0.21**	**152**	P	Pg	04 38 37.4	0.0
CAMP				S	Sg	04 38 41.2	+0.3
CAMP				AML	AML		
	comp=E,1835μm,0.3s						
CAMP				AML	AML		
	comp=N,1980μm,0.2s						
CAMP				END			
T1246	**Crognaleto (TE**	**0.21**	**131**	P	Pg	04 38 37.4	0.0
T1246				S	Sg	04 38 41.3	+0.3
LNSS	**Leonessa**	**0.21**	**236**	P	Pg	04 38 37.5	+0.1
LNSS				END			
RM33	**Pellescritta (**	**0.22**	**193**	P	Pg	04 38 37.6	+0.1
RM33				S	Sg	04 38 41.7	+0.6
RM33				AML	AML		
	comp=E,2850μm,1.6s						
RM33				AML	AML		
	comp=N,3430μm,0.2s						
RM33				AML	AML		
	comp=E,2815μm,1.6s						
RM33				AML	AML		
	comp=N,3355μm,0.2s						
RM33				AML	AML		
	comp=N,3360μm,0.2s						
RM33				AML	AML		
	comp=E,2850μm,1.6s						
RM33				AML	AML		
	comp=N,3430μm,0.2s						
RM33				AML	AML		
	comp=E,2810μm,1.6s						
RM33				END			
T1216	**Preci, Frazion**	**0.26**	**312**	S	Sb	04 38 42.0	+0.1
T1217	**Poggiodomo (PG**	**0.26**	**268**	P	Pg	04 38 38.1	0.0
T1217				S	Sg	04 38 42.9	+0.7
T1217				AML	AML		
	comp=E,1305μm,0.3s						
T1217				AML	AML		
	comp=N,2011μm,1.4s						
T1217				END			
TERO	**Teramo**	**0.26**	**112**	P	Pb	04 38 37.9	-0.1
TERO				S	Sg	04 38 42.6	+0.5
TERO				AML	AML		
	comp=E,2195μm,1.3s						
TERO				AML	AML		
	comp=N,2160μm,0.5s						
TERO				AML	AML		
	comp=E,2580μm,1.3s						
TERO				AML	AML		
	comp=N,2285μm,0.5s						
TERO				END			
AM05	**Amandola Campo**	**0.26**	**12**	P	Pg	04 38 38.2	+0.1
AM05				S	Sg	04 38 42.9	+0.6
AM05				END			
T1247	**Pizzolo (AQ)**	**0.28**	**177**	P	Pb	04 38 38.5	0.0
T1247				S	Sg	04 38 43.4	+0.7
T1247				AML	AML		
	comp=E,3050μm,0.2s						
T1247				AML	AML		
	comp=N,3485μm,0.2s						
T1215	**Vallo di Nera,**	**0.31**	**285**	P	Pg	04 38 38.9	-0.1
T1215				S	Sg	04 38 43.7	0.0
GIGS	**Gran Sasso**	**0.34**	**141**	P	Pg	04 38 39.3	-0.2
GIGS				S	Sb	04 38 44.9	0.0
GIGS				AML	AML		
	comp=E,442μm,0.9s						
GIGS				AML	AML		
	comp=N,374μm,0.2s						
GUMA	**Gualdo di Mace**	**0.34**	**7**	P	Pg	04 38 39.6	+0.1
GUMA				S	Sb	04 38 45.8	+0.9
T1211	**Morro Reatino**	**0.36**	**239**	P	Pg	04 38 39.8	0.0
T1211				S	Sb	04 38 46.0	+0.5
T1211				AML	AML		
	comp=E,1675μm,1.5s						
T1211				AML	AML		
	comp=N,3665μm,1.2s						
T1211				AML	AML		
	comp=E,1508μm,0.9s						
T1211				AML	AML		
	comp=N,3660μm,1.2s						
OFFI	**Offida**	**0.37**	**54**	P	Pb	04 38 40.7	+0.5
OFFI				AML	AML		
	comp=E,3645μm,0.6s						
OFFI				AML	AML		
	comp=N,4195μm,0.6s						
AQU	**L'Aquila**	**0.38**	**166**	⇓P	Pb	04 38 40.4	+0.1
ARRO	**Arrone**	**0.40**	**250**	⇑P	Pg	04 38 40.5	0.0
FIAM	**Fiamignano**	**0.47**	**195**	P	Pg	04 38 41.4	-0.3
FIAM				S	Sb	04 38 48.9	+0.5
TRTR	**Tortoreto Alta**	**0.48**	**79**	P	Pb	04 38 42.6	+0.7
TRTR				AML	AML		
	comp=E,2015μm,1.1s						
TRTR				AML	AML		
	comp=N,3015μm,0.4s						
CESX	**Cesi**	**0.53**	**258**	⇓P	Pb	04 38 42.6	-0.1
SNTG	**Esanatoglia**	**0.59**	**335**	S	Sg	04 38 53.0	+1.1
EL6	**Elcito**	**0.62**	**348**	S	Sn	04 38 55.0	-0.6
SRES	**S.Oreste - Sor**	**0.75**	**230**	S	Sn	04 38 60.0	+1.5
ARVD	**Arcevia**	**0.82**	**343**	S	Sn	04 39 02.0	+1.7
VIVA	**Pratoni del Vi**	**1.04**	**201**	S	Sg	04 39 06.0	0.0

*IDC **31** 04:42:17.5±1.2, 51°.63N×173°.42W, h0km, mb3.8/10,*
mbtmp3.8/11, ML4.1/1, MS3.4/2, Error ellipse:
s-maj=34.9km s-min=20.5km az=175.0
*NEIC **31** 04:42:21.8±1.8, 51°.5N±0°.3×173°.3W±0°.1, h39km±23km,*
Error ellipse: s-maj=37.4km s-min=9.1km az=175.0
*AEIC **31** 04:42:22±2.0, 51°.6N±0°.1×173°.46W±0°.06, h33km±7km,*
ML3.1, Error ellipse: s-maj=18.1km s-min=3.7km az=194.0
ISC 31 04:42:22.7±1.0, 51°.7N±0°.2×173°.32W±0°.06, h37km, n24,
σ1§55/18, mb3.8/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.76**	**286**	Pn	**Pn**	**04 42 49.9**	**-0.8**
GSTR					**Sn**	**04 43 14.8**	**+3.0**
ADK	**Adak**	**2.11**	**278**	Pn	**Pn**	**04 42 54.6**	**-0.8**
ADK				Sn	**Sn**	**04 43 16.9**	**-3.4**
KIWB	**Kanaga Island**	**2.39**	**276**	Pn	**Pn**	**04 42 58.3**	**-1.0**
UNV	**Unalaska Valle**	**4.69**	**59**	Pn	**Pn**	**04 43 29.7**	**-1.1**
KDAK	**Kodiak Island**	**13.44**	**55**	Pn	**Pn**	**04 45 28.5**	**-2.1**
	0.4nm,0.3s,baz=312,slow=3.8,SNR=12						
ILAR	**Eielson Array**	**18.95**	**36**	P	**Pn**	**04 46 39.8**	**-1.4**
	0.5nm,0.3s,baz=233,slow=9.0,SNR=36						
	0.8nm,0.3s						
INK	**Inuvik**	**25.30**	**34**	P	**P**	**04 47 45.5**	**+0.2**
	1.6nm,0.4s,baz=241,slow=5.7,SNR=20						
	1.6nm,0.4s						
DLBC	**Dease Lake**	**25.34**	**57**	P	**P**	**04 47 47.3**	**+1.4**
	1.5nm,0.8s,baz=292,slow=13,SNR=5.0						
	1.5nm,0.8s						
KLR	**Kul'dur**	**34.38**	**288**	LR	LR	05 04 39.4	
	comp=Z,27nm,18.4s,baz=306,slow=39						
H11N2	**WAKE ISLAND Hy**	**35.43**	**213**	T	T	05 27 16.2	
	baz=21,slow=76,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**35.44**	**213**	T	T	05 27 12.6	
	baz=21,slow=76,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**35.45**	**213**	T	T	05 27 11.0	
	baz=21,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**36.63**	**213**	T	T	05 28 41.4	

baz=20,slow=76,SNR=8.0
H11S2 WAKE ISLAND Hy 36.65 213 T T 05 28 40.2
baz=20,slow=76,SNR=4.6
H11S3 WAKE ISLAND Hy 36.65 213 T T 05 28 34.7
baz=20,slow=76,SNR=2.8
PDAR Pinedale Array 42.94 76 P **P 04 50 19.0 +1.0**
0.5nm,0.6s,baz=300,slow=5.4,SNR=5.3
0.5nm,0.6s
SONM Songino Array 49.55 299 P **P 04 51 11.0 +1.3**
0.6nm,0.4s,baz=50,slow=7.5,SNR=5.2
0.6nm,0.4s
TXAR Lajitas Array 55.22 85 P **P 04 51 52.5 +0.6**
0.2nm,0.4s,baz=312,slow=7.4,SNR=5.6
0.2nm,0.4s
ZALV Zalesovo Beam 56.28 316 LR LR 05 18 26.6
comp=Z,5nm,20.3s,baz=246,slow=39
MKAR Makanchi Array 62.49 311 P **P 04 52 42.2 +0.1**
0.2nm,0.3s,baz=48,slow=6.4,SNR=2.2
0.2nm,0.3s
HFS Hagfors 68.43 356 P **P 04 53 20.0 -0.2**
2.2nm,0.9s,baz=64,slow=13,SNR=5.0
2.2nm,0.9s
AKTO Aktyubinsk 69.37 328 P **P 04 53 26.6 +0.4**
1.4nm,0.5s,baz=36,slow=7.6,SNR=4.9
1.4nm,0.5s
AKASG Malin Array Be 76.25 345 P **P 04 54 06.4 -0.6**
0.3nm,0.4s,baz=21,slow=7.4,SNR=2.5
0.3nm,0.4s
ASAR Alice Springs 88.09 227 P **P 04 55 08.6 -0.6**
0.6nm,0.8s,baz=25,slow=6.3,SNR=4.6
0.6nm,0.8s

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*WEL **31** 04:48:07.0±0.5,34°S±6°×18°0W±1°3,h33km,M4.1/18, mB4.7/10,ML4.6/27,MLv4.3/18,Mw(mB)3.9/10,Error ellipse: s-maj=0.0km s-min=0.0km az=112.3*
*IDC **31** 04:48:08.8±6.3,33.56S×179.88E,h142km±52km,mb3.5/3, mbtmp3.9/4,Error ellipse: s-maj=53.2km s-min=29.8km az=37.0*
ISC 31 04:48:09.7±1.1,33.76S±0.08×180.0W±0.1,h150km,n51, σ2.9 06/81,mb3.7/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.05**	**200**	P		**Pn**		**04 49 12.1**	**+1.5**
MXZ				S		**Sn**		**04 49 59.9**	**+1.9**
WMGZ	**Waiomatatini S**	**4.26**	**198**	P		**Pn**		**04 49 15.3**	**+2.0**
WMGZ				S		**Sn**		**04 50 05.5**	**+2.6**
HAZ	**Te Kaha**	**4.39**	**204**	P		**Pn**		**04 49 15.2**	**+0.2**
HAZ				S		**Sn**		**04 50 08.7**	**+2.7**
PKGZ	**Pakihiroa**	**4.42**	**201**	P		**Pn**		**04 49 15.0**	**-0.5**
PKGZ				S		**Sn**		**04 50 08.2**	**+1.5**
PUZ	**Puketiti**	**4.54**	**198**	P		**Pn**		**04 49 16.5**	**-0.6**
PUZ				S		**Sn**		**04 50 10.8**	**+1.2**
RUGZ	**Raukumara Rang**	**4.62**	**204**	P		**Pn**		**04 49 18.7**	**+0.5**
RUGZ				S		**Sn**		**04 50 13.0**	**+1.5**
KUZ	**Kuaotunu**	**4.63**	**229**	P		**Pn**		**04 49 21.5**	**+3.3**
TWGZ	**Tauwhareparae**	**4.72**	**200**	P		**Pn**		**04 49 21.7**	**+2.3**
TWGZ				S		**Sn**		**04 50 16.2**	**+2.5**
GLKZ	**Green Lake**	**4.81**	**22**	P		Pn		04 49 07.7	-13
GLKZ				S		Sn		04 50 01.7	-14
CNGZ	**Carnagh Statio**	**4.94**	**197**	P		**Pn**		**04 49 23.4**	**+1.1**
TKGZ	**Te Karaka**	**5.00**	**200**	P		**Pn**		**04 49 25.5**	**+2.4**
TKGZ				S		**Sn**		**04 50 19.2**	**-1.1**
MWZ	**Matawai**	**5.00**	**203**	P		**Pn**		**04 49 23.5**	**+0.3**
MWZ				S		**Sn**		**04 50 21.2**	**+0.8**
URZ	**Urewera**	**5.08**	**207**	P		**Pn**		**04 49 25.0**	**+0.8**
	5.7nm,0.2s,baz=332,slow=4.2,SNR=26								
URZ				S		**Sn**		**04 50 24.4**	**+2.1**
	18nm,0.4s,baz=312,slow=11,SNR=10								
URZ	**Urewera**	**5.08**	**207**	P		**Pn**		**04 49 23.7**	**-0.5**
URZ				S		**Sn**		**04 50 22.8**	**+0.5**
RAGZ	**Rawiri**	**5.18**	**204**	P		**Pn**		**04 49 27.3**	**+1.7**
RAGZ				S		**Sn**		**04 50 26.6**	**+1.7**
RIGZ	**Rimuhau**	**5.27**	**200**	P		**Pn**		**04 49 29.3**	**+2.5**
RIGZ				S		**Sn**		**04 50 26.1**	**-0.8**
MUGZ	**Murupara**	**5.40**	**208**	P		**Pn**		**04 49 30.2**	**+1.7**
MUGZ				S		**Sn**		**04 50 31.2**	**+1.2**
RTZ	**Ruatahuna**	**5.44**	**206**	P		**Pn**		**04 49 26.7**	**-2.3**
RTZ				S		**Sn**		**04 50 31.0**	**0.0**
SNGZ	**Shannon Statio**	**5.47**	**203**	P		**Pn**		**04 49 31.2**	**+1.8**
SNGZ				S		**Sn**		**04 50 32.2**	**+0.6**
KNZ	**Kokohu**	**5.59**	**199**	P		**Pn**		**04 49 31.6**	**+0.7**
KNZ				S		**Sn**		**04 50 33.4**	**-1.0**
MHGZ	**Mahia Peninsul**	**5.65**	**197**	P		**Pn**		**04 49 33.6**	**+1.9**
MHGZ				S		**Sn**		**04 50 33.6**	**-2.3**
MTHZ	**Maungataniwha**	**5.70**	**206**	P		**Pn**		**04 49 34.1**	**+1.6**
MTHZ				S		**Sn**		**04 50 37.9**	**+0.8**
BKZ	**Black Stump Fm**	**6.11**	**207**	P		**Pn**		**04 49 39.0**	**+1.1**
BKZ				S		**Sn**		**04 50 46.6**	**-0.3**
MCHZ	**McNeill Hill**	**6.28**	**204**	P		**Pn**		**04 49 38.0**	**-2.1**
MCHZ				S		**Sn**		**04 50 52.5**	**+1.6**
HIZ	**Hauiti**	**6.34**	**220**	P		**Pn**		**04 49 45.2**	**+4.4**
KWHZ	**Kaweka Forest**	**6.36**	**206**	P		**Pn**		**04 49 38.7**	**-2.5**
KWHZ				S		**Sn**		**04 50 54.7**	**+1.8**
NTVZ	**North Tongarir**	**6.39**	**212**	P		**Pn**		**04 49 43.4**	**+1.8**
NTVZ				S		**Sn**		**04 50 56.8**	**+3.2**
TMVZ	**Te Maari**	**6.39**	**212**	P		**Pn**		**04 49 42.8**	**+1.2**
TMVZ				S		**Sn**		**04 50 53.1**	**-0.6**
ETVZ	**East Tongariro**	**6.40**	**212**	P		**Pn**		**04 49 43.1**	**+1.2**
OTVZ	**Oturere**	**6.45**	**212**	P		**Pn**		**04 49 43.6**	**+1.1**
SNVZ	**South Ngauruho**	**6.48**	**212**	P		**Pn**		**04 49 43.9**	**+1.0**
KAHZ	**Kahuranaki**	**6.54**	**202**	P		**Pn**		**04 49 43.9**	**+0.3**
KAHZ				S		**Sn**		**04 50 54.1**	**-3.0**
BHHZ	**Black Hill Sta**	**6.55**	**208**	P		**Pn**		**04 49 44.7**	**+0.9**
BHHZ				S		**Sn**		**04 50 56.3**	**-1.3**
PNHZ	**Pukenui**	**6.87**	**206**	P		**Pn**		**04 49 47.3**	**-0.8**
PNHZ				S		**Sn**		**04 51 02.8**	**-2.4**
BFZ	**Birch Farm**	**7.54**	**203**	P		**Pn**		**04 49 55.9**	**-1.1**
BFZ				S		**Sn**		**04 51 17.9**	**-3.3**
MRZ	**Mangatainoka R**	**7.76**	**206**	P		**Pn**		**04 49 57.7**	**-2.1**
MRZ				S		**Sn**		**04 51 19.5**	**-6.8**
OGWZ	**Otaki Gorge**	**8.04**	**207**	P		**Pn**		**04 50 01.2**	**-2.4**
OGWZ				S		**Sn**		**04 51 29.2**	**-4.0**
KIW	**Kapiti Island**	**8.18**	**209**	P		**Pn**		**04 50 03.1**	**-2.4**
KIW				S		**Sn**		**04 51 33.0**	**-3.6**
CTA	**Charters Tower**	**32.91**	**286**	P		**P**		**04 54 28.8**	**-1.0**
	1.1nm,0.7s,baz=90,slow=7.1,SNR=1.2								
	1.1nm,0.7s								
ASAR	**Alice Springs**	**41.41**	**272**	P		**P**		**04 55 39.5**	**-2.1**
	0.7nm,0.6s,baz=108,slow=7.2,SNR=6.5								
	0.7nm,0.6s								
WRA	**Warramunga Arr**	**42.71**	**277**	P		**P**		**04 55 50.4**	**-1.7**
	0.6nm,0.2s,baz=116,slow=8.2,SNR=27								
	0.6nm,0.2s								
TROLL	**Troll, Antarti**	**74.51**	**181**	P		**P**		**04 59 33.5**	**+2.1**
SNAA	**Sanae**	**74.84**	**179**	P		**P**		**04 59 35.6**	**+2.3**
VNA3	**Neumayer Olymp**	**75.06**	**177**	P		**P**		**04 59 37.0**	**+2.5**
VNA2	**Neumayer--Watz**	**75.47**	**177**	P		**P**		**04 59 39.6**	**+2.8**
	baz=168,slow=5.0								
VNA1	**Neumayer--Stat**	**75.72**	**177**	P		**P**		**04 59 41.1**	**+3.0**
FINES	**FINESS Array B**	**147.65**	**337**	PKPbc		**PKPbc**		**05 07 34.4**	**-1.3**
	1.0nm,0.4s,baz=33,slow=3.9,SNR=15								
NB2	**NORSAR Subarra**	**151.76**	**349**	PKP		**PKPbc**		**05 07 44.2**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=16,slow=2.6								
NOA	**NORSAR Array B**	**151.76**	**349**	PKPbc		**PKPbc**		**05 07 44.1**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=17,slow=4.2,SNR=4.4								
BRTR	**Keskin Array B**	**152.54**	**292**	PKPbc		**PKiKP**		**05 07 49.4**	**+0.8**
	comp=Z,1.8nm,1.1s,baz=5.7,slow=4.3,SNR=2.9								
TORD	**Torodi Ar. Bea**	**159.43**	**185**	PKPab		**PKPab**		**05 08 29.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=174,slow=1.4,SNR=5.0								

ROM 31 05:06:12.6±0.0,42.721N±0.002×13.222E±0.004, h11km,ML2.7/30,12C-10D,Error ellipse: s-maj=0.2km s-min=0.2km az=207.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.08**	**123**	⇑P			Pg	05 06 15.7	+0.4
T1204				S			Sg	05 06 17.5	+0.2
T1204				AML			AML		
	comp=N,5520μm,0.3s								
T1204				AML			AML		
	comp=E,7145μm,0.2s								
T1204				AML			AML		
	comp=E,7140μm,0.2s								
T1204				AML			AML		
	comp=N,5515μm,0.3s								
SMA1	**SAN MARTINO**	**0.12**	**137**	⇑P			Pg	05 06 16.2	+0.5
SMA1				S			Sg	05 06 18.6	+0.5
T1245	**Castelsantange**	**0.14**	**349**	P			Pg	05 06 16.4	+0.4
T1245				S			Sg	05 06 19.1	+0.6
T1245				AML			AML		
	comp=E,8315μm,0.2s								
T1245				AML			AML		
	comp=N,9615μm,0.2s								
T1245				AML			AML		
	comp=E,8365μm,0.7s								
T1245				AML			AML		
	comp=N,9670μm,0.2s								
T1245				AML			AML		
	comp=E,8320μm,0.2s								
T1245				AML			AML		
	comp=N,9605μm,0.2s								
T1245				AML			AML		
	comp=E,40050μm,0.1s								
T1245				AML			AML		
	comp=N,24600μm,1.5s								
T1245				AML			AML		
	comp=N,24350μm,0.5s								
T1245				AML			AML		
	comp=N,24550μm,1.5s								
T1245				AML			AML		
	comp=E,36750μm,0.1s								
T1243	**Rocca Santa Ma**	**0.17**	**98**	P			Pg	05 06 16.8	+0.4
T1243				S			Sg	05 06 19.7	+0.6
LNSS	**Leonessa**	**0.18**	**229**	P			Pg	05 06 17.2	+0.6
LNSS				S			Sg	05 06 20.4	+1.0
LNSS				AML			AML		
	comp=E,4835μm,0.4s								
LNSS				AML			AML		
	comp=N,14350μm,0.2s								
LNSS				AML			AML		
	comp=E,5515μm,0.2s								
MMO1	**Montemonaco**	**0.19**	**23**	P			Pg	05 06 17.4	+0.5
MMO1				S			Sg	05 06 20.7	+0.8
T1241	**Roccafluvione,**	**0.20**	**49**	⇑P			Pg	05 06 17.6	+0.6
T1241				S			Sg	05 06 21.0	+1.0
T1241				AML			AML		
	comp=N,2320μm,1.1s								
T1241				AML			AML		
	comp=E,3800μm,0.3s								
RM33	**Pellescritta (**	**0.21**	**182**	P			Pg	05 06 17.8	+0.6
RM33				S			Sg	05 06 21.3	+1.1
RM33				AML			AML		
	comp=E,1290μm,0.3s								
RM33				AML			AML		
	comp=N,1180μm,0.6s								
RM33				AML			AML		
	comp=E,1295μm,0.3s								
RM33				AML			AML		
	comp=N,1260μm,0.8s								
RM33				AML			AML		
	comp=E,1270μm,0.3s								
RM33				AML			AML		
	comp=E,1725μm,1.5s								
RM33				AML			AML		
	comp=N,1830μm,0.8s								
RM33				AML			AML		
	comp=N,1825μm,0.8s								
RM33				AML			AML		
	comp=E,1665μm,1.4s								
RM33				AML			AML		
	comp=E,1730μm,1.4s								
RM33				AML			AML		
	comp=N,1735μm,0.8s								
T1217	**Poggiodomo (PG**	**0.21**	**268**	⇓P			Pg	05 06 17.7	+0.5
T1217				S			Sg	05 06 21.2	+0.8
T1217				AML			AML		
	comp=E,2170μm,1.0s								
T1217				AML			AML		
	comp=N,3095μm,0.2s								
T1217				AML			AML		
	comp=E,2215μm,1.0s								
T1217				AML			AML		
	comp=N,3070μm,0.2s								
T1217				AML			AML		
	comp=E,2165μm,1.0s								
T1217				AML			AML		
	comp=N,3100μm,0.2s								
T1217				AML			AML		
	comp=E,3415μm,0.8s								
T1217				AML			AML		
	comp=N,5215μm,0.8s								
T1217				AML			AML		
	comp=E,3425μm,0.8s								
T1217				AML			AML		
	comp=N,5055μm,0.8s								
T1217				AML			AML		
	comp=E,3410μm,0.8s								
T1216	**Preci, Frazion**	**0.23**	**319**	P			Pg	05 06 17.5	+0.1
T1216				S			Sg	05 06 21.6	+1.0
T1216				AML			AML		
	comp=E,11160μm,1.0s								
T1216				AML			AML		
	comp=N,18600μm,0.5s								
T1216				AML			AML		
	comp=E,11150μm,1.0s								
T1216				AML			AML		
	comp=N,18550μm,0.5s								
CAMP	**Campotosto**	**0.23**	**143**	⇑P			Pg	05 06 18.0	+0.5
CAMP				S			Sg	05 06 21.8	+1.0
CAMP				AML			AML		
	comp=N,626μm,0.8s								
CAMP				AML			AML		
	comp=E,1450μm,0.2s								
FEMA	**Monte Fema**	**0.27**	**332**	P			Pg	05 06 18.1	-0.2
FEMA				S			Sb	05 06 23.3	-1.0
FEMA				AML			AML		
	comp=E,3800μm,0.6s								
FEMA				AML			AML		
	comp=N,2595μm,0.1s								
FEMA				AML			AML		
	comp=E,28900μm,0.2s								
FEMA				AML			AML		
	comp=N,14250μm,1.1s								
T1215	**Vallo di Nera,**	**0.27**	**287**	⇑P			Pg	05 06 18.7	+0.4
T1215				S			Sb	05 06 23.1	-1.1
T1215				AML			AML		
	comp=E,3020μm,0.1s								
T1215				AML			AML		
	comp=N,3315μm,0.2s								
T1215				AML			AML		
	comp=E,2840μm,0.1s								
T1215				AML			AML		
	comp=N,3600μm,0.2s								
T1215				AML			AML		
	comp=E,3020μm,0.1s								
T1215				AML			AML		
	comp=E,3080μm,0.5s								
T1215				AML			AML		
	comp=N,3995μm,0.4s								
T1215				AML			AML		
	comp=E,3080μm,0.5s								
AM05	**Amandola Campo**	**0.27**	**20**	P			Pg	05 06 18.8	+0.6
AM05				S			Sb	05 06 23.6	-0.7
AM05				AML			AML		
	comp=N,702μm,1.6s								
AM05				AML			AML		
	comp=E,2600μm,1.5s								
AM05				AML			AML		
	comp=N,268μm,0.1s								
AM05				AML			AML		
	comp=N,1130μm,0.3s								
AM05				AML			AML		
	comp=E,3775μm,0.1s								
AM05				AML			AML		
	comp=E,824μm,0.1s								
AM05				AML			AML		
	comp=N,1125μm,0.3s								
AM05				AML			AML		
	comp=E,3780μm,0.1s								
AM05				AML			AML		
	comp=N,406μm,0.1s								
T1247	**Pizzolo (AQ)**	**0.28**	**169**	P			Pg	05 06 19.1	+0.6
T1247				AML			AML		
	comp=E,1250μm,0.2s								
T1247				AML			AML		
	comp=E,1380μm,0.4s								
T1247				AML			AML		
	comp=N,1265μm,0.3s								
TERO	**Teramo**	**0.30**	**109**	⇑P			Pg	05 06 19.0	+0.3
TERO				S			Sg	05 06 23.8	+1.1
T1211	**Morro Reatino**	**0.33**	**235**	P			Pg	05 06 19.7	+0.4
T1211				AML			AML		
	comp=E,1295μm,1.6s								
T1211				AML			AML		
	comp=N,1950μm,0.4s								
T1211				AML			AML		
	comp=E,2080μm,0.5s								
T1211				AML			AML		
	comp=N,3015μm,0.2s								
T1211				AML			AML		
	comp=N,3010μm,0.2s								
T1211				AML			AML		
	comp=E,2015μm,0.8s								
T1211				AML			AML		
	comp=N,3035μm,0.2s								
T1211				AML			AML		
	comp=E,2075μm,0.5s								
GUMA	**Gualdo di Mace**	**0.35**	**14**	P			Pb	05 06 20.5	-0.4
GUMA				AML			AML		
	comp=E,2730μm,0.7s								
GUMA				AML			AML		
	comp=N,3605μm,0.4s								
GUMA				AML			AML		
	comp=E,3045μm,0.4s								
GUMA				AML			AML		
	comp=N,3500μm,0.2s								
GUMA				AML			AML		
	comp=E,4635μm,0.3s								
GUMA				AML			AML		
	comp=N,4325μm,0.6s								
GUMA				AML			AML		
	comp=E,6010μm,0.5s								
GUMA				AML			AML		
	comp=N,4320μm,0.6s								
GUMA				AML			AML		
	comp=N,4685μm,0.7s								
GUMA				AML			AML		
	comp=E,4630μm,0.3s								
ARRO	**Arrone**	**0.37**	**247**	P			Pg	05 06 20.3	+0.4
ARRO				AML			AML		
	comp=E,954μm,1.1s								
ARRO				AML			AML		
	comp=N,800μm,0.7s								
ARRO				AML			AML		
	comp=E,1855μm,0.6s								
ARRO				AML			AML		
	comp=N,1600μm,0.7s								
ARRO				AML			AML		
	comp=E,1850μm,0.6s								
CSP1	**Cessapalombo**	**0.37**	**358**	⇑P			Pg	05 06 20.6	+0.5
GIGS	**Gran Sasso**	**0.37**	**136**	P			Pg	05 06 20.1	+0.1
GIGS				AML			AML		
	comp=N,194μm,0.3s								
GIGS				AML			AML		
	comp=E,315μm,0.1s								
GIGS				AML			AML		
	comp=N,194μm,0.3s								
AQU	**L'Aquila**	**0.39**	**160**	P			Pg	05 06 20.8	+0.4
AQU				AML			AML		
	comp=E,622μm,0.3s								
AQU				AML			AML		
	comp=E,622μm,0.3s								
AQU				AML			AML		
	comp=N,391μm,1.4s								
OFFI	**Offida**	**0.40**	**58**	⇑P			Pb	05 06 21.9	+0.2
OFFI				AML			AML		
	comp=N,2865μm,0.3s								
OFFI				AML			AML		
	comp=E,2730μm,1.6s								
FIAM	**Fiamignano**	**0.46**	**190**	⇓P			Pg	05 06 21.9	+0.2
FIAM				AML			AML		
	comp=N,416μm,0.3s								
FIAM				AML			AML		
	comp=E,522μm,0.4s								
FIAM				AML			AML		
	comp=N,469μm,0.3s								
CESX	**Cesi**	**0.49**	**257**	⇓P			Pg	05 06 22.5	+0.4
CESX				S			Sb	05 06 31.0	+0.7
CESX				AML			AML		
	comp=E,535μm,0.6s								
CESX				AML			AML		
	comp=N,425μm,0.3s								
CESX				AML			AML		
	comp=N,962μm,0.3s								
CESX				AML			AML		
	comp=E,922μm,1.2s								
TRTR	**Tortoreto Alta**	**0.52**	**80**	⇑P			Pb	05 06 24.2	+0.6
TRTR				AML			AML		
	comp=N,1805μm,1.5s								
TRTR				AML			AML		
	comp=E,1540μm,0.7s								
ASSB	**Assisi San Ben**	**0.52**	**308**	⇑P			Pg	05 06 23.0	+0.1
ASSB				S			Sb	05 06 32.0	+0.5
ASSB				AML			AML		
	comp=E,576μm,0.3s								
ASSB				AML			AML		
	comp=N,709μm,0.8s								
ASSB				AML			AML		
	comp=N,733μm,0.4s								
ASSB				AML			AML		
	comp=E,756μm,0.5s								
VCEL	**Villa Celiera**	**0.56**	**125**	⇓P			Pb	05 06 24.1	-0.4
VCEL				AML			AML		
	comp=E,606μm,0.3s								
VCEL				AML			AML		
	comp=E,779μm,0.2s								
VCEL				AML			AML		
	comp=N,591μm,0.9s								
SNTG	**Esanatoglia**	**0.57**	**339**	⇓P			Pg	05 06 23.9	+0.1
SNTG				AML			AML		
	comp=E,283μm,1.3s								
SNTG				AML			AML		
	comp=N,332μm,1.3s								
SNTG				AML			AML		
	comp=E,262μm,0.9s								
SNTG				AML			AML		
	comp=N,277μm,0.2s								
SNTG				AML			AML		
	comp=E,692μm,0.6s								
SNTG				AML			AML		
	comp=E,688μm,0.6s								
SNTG				AML			AML		
	comp=N,488μm,0.5s								
SNTG				AML			AML		
	comp=N,528μm,0.5s								
SNTG				AML			AML		
	comp=E,691μm,0.6s								
EL6	**Elcito**	**0.61**	**352**	⇓P			Pb	05 06 25.2	-0.3
ATCC	**AVT- Casa Cast**	**0.63**	**318**	P			Pg	05 06 25.0	+0.2
ATCC				AML			AML		
	comp=E,464μm,0.3s								
ATCC				AML			AML		
	comp=N,388μm,0.3s								
ATCC				AML			AML		
	comp=E,590μm,1.2s								
ATCC				AML			AML		
	comp=N,576μm,0.7s								
ATCC				AML			AML		
	comp=N,577μm,0.7s								
T0110	**Collepietro**	**0.64**	**140**	⇓P			Pg	05 06 25.1	0.0
T0110				AML			AML		
	comp=E,463μm,0.4s								
T0110				AML			AML		
	comp=N,464μm,0.3s								
T0110				AML			AML		
	comp=E,462μm,0.4s								
T0110				AML			AML		
	comp=N,463μm,0.3s								
FOSV	**Fossato di Vic**	**0.67**	**330**	P			Pg	05 06 25.7	+0.1
FOSV				AML			AML		
	comp=E,198μm,1.1s								
FOSV				AML			AML		
	comp=N,232μm,0.3s								
FOSV				AML			AML		
	comp=N,367μm,0.6s								
FOSV				AML			AML		
	comp=E,293μm,1.6s								
PP3	**Marolino**	**0.71**	**23**	⇓P			Pb	05 06 27.7	+0.7
PP3				AML			AML		
	comp=N,904μm,0.4s								
PP3				AML			AML		
	comp=E,830μm,1.4s								
PP3				AML			AML		
	comp=E,840μm,0.4s								
PP3				AML			AML		
	comp=N,866μm,0.4s								
PP3				AML			AML		
	comp=N,905μm,0.4s								
SRES	**S.Oreste - Sor**	**0.71**	**228**	S			Sn	05 06 39.0	-0.6
MURB	**Monte Urbino**	**0.74**	**317**	S			Sn	05 06 40.0	-0.5
ARVD	**Arcevia**	**0.80**	**345**	P			Pb	05 06 28.4	-0.2
ARVD				S			Sn	05 06 42.0	+0.2
ARVD				AML			AML		
	comp=E,149μm,0.5s								

ARVD				AML	AML	
	comp=N,81μm,0.7s					
ARVD				AML	AML	
	comp=N,214μm,1.5s					
ARVD				AML	AML	
	comp=E,266μm,0.5s					
ARVD				AML	AML	
	comp=N,214μm,1.5s					
MGAB	**Montegabbione**	**0.84**	**284**	⇑P	Pn	05 06 31.4 +1.0
AOI	**Ancona**	**0.87**	**18**	P	Pb	05 06 30.1 +0.3
AOI				AML	AML	
	comp=N,161μm,1.1s					
AOI				AML	AML	
	comp=E,238μm,1.0s					
AOI				AML	AML	
	comp=N,202μm,0.5s					
ATVO	**AVT- Monte Val**	**0.89**	**318**	⇑P	Pn	05 06 30.9 -0.2
SACS	**San Casciano d**	**0.97**	**278**	⇓P	Pn	05 06 33.2 +0.9
PE3	**Peglio**	**1.11**	**332**	⇓P	Pn	05 06 34.9 +0.8
MODR	**Mondragone**	**1.65**	**163**	S	Sn	05 07 02.0 -0.6

ROM 31 05:07:07.4±0.1, 42°.788N±0°.004×13°.036E±0°.010, h10km, ML2.6/36, 20C-14D, Error ellipse: s-maj=0.8km s-min=0.5km az=289.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.10**	**353**	⇓P		Pg	05 07 10.5	+0.4
T1216				S		Sg	05 07 12.4	+0.2
T1216				AML		AML		
	comp=E,11150μm,1.0s							
T1216				AML		AML		
	comp=N,18600μm,0.5s							
T1216				AML		AML		
	comp=E,11160μm,1.0s							
T1216				AML		AML		
	comp=N,18550μm,0.5s							
T1217	**Poggiodomo (PG**	**0.11**	**225**	⇑P		Pg	05 07 10.8	+0.6
T1217				S		Sg	05 07 13.0	+0.7
T1217				AML		AML		
	comp=E,3415μm,0.8s							
T1217				AML		AML		
	comp=E,3420μm,0.8s							
T1217				AML		AML		
	comp=N,5055μm,0.8s							
T1217				AML		AML		
	comp=E,3410μm,0.8s							
T1217				AML		AML		
	comp=N,5215μm,0.8s							
T1217				AML		AML		
	comp=E,3415μm,0.8s							
T1217				AML		AML		
	comp=N,5060μm,0.8s							
T1217				AML		AML		
	comp=E,3425μm,0.8s							
T1217				AML		AML		
	comp=N,5060μm,0.8s							
T1217				AML		AML		
	comp=N,5215μm,0.8s							
T1217				AML		AML		
	comp=E,3410μm,0.8s							
T1215	**Vallo di Nera,**	**0.12**	**277**	P		Pg	05 07 10.8	+0.4
T1215				S		Sg	05 07 13.1	+0.5
T1215				AML		AML		
	comp=E,3080μm,0.5s							
T1215				AML		AML		
	comp=E,3175μm,1.1s							
T1215				AML		AML		
	comp=N,4190μm,1.1s							
T1215				AML		AML		
	comp=N,3990μm,0.4s							
T1215				AML		AML		
	comp=E,3192μm,1.1s							
T1215				AML		AML		
	comp=N,4190μm,1.0s							
T1215				AML		AML		
	comp=E,3196μm,1.1s							
T1215				AML		AML		
	comp=N,4180μm,1.1s							
T1215				AML		AML		
	comp=E,3190μm,1.1s							
T1215				AML		AML		
	comp=E,3080μm,0.5s							
T1215				AML		AML		
	comp=N,3995μm,0.4s							
T1215				AML		AML		
	comp=N,4195μm,1.0s							
T1245	**Castelsantange**	**0.13**	**58**	⇑P		Pg	05 07 11.3	+0.6
T1245				S		Sg	05 07 13.8	+0.8
T1245				AML		AML		
	comp=E,40100μm,0.1s							
T1245				AML		AML		
	comp=E,36750μm,0.1s							
T1245				AML		AML		
	comp=N,24600μm,1.5s							
T1245				AML		AML		
	comp=N,24350μm,0.5s							
T1245				AML		AML		
	comp=N,24550μm,1.5s							
T1245				AML		AML		
	comp=E,40050μm,0.1s							
LNSS	**Leonessa**	**0.18**	**179**	⇑P		Pb	05 07 12.3	-0.7
LNSS				S		Sg	05 07 15.6	+1.3
LNSS				AML		AML		
	comp=N,8625μm,0.4s							
LNSS				AML		AML		
	comp=E,5515μm,0.2s							
T1204	**Amatrice, Fraz**	**0.23**	**118**	⇓P		Pg	05 07 12.4	0.0
T1204				S		Sg	05 07 17.6	+2.0
T1204				AML		AML		
	comp=E,5490μm,0.2s							
T1204				AML		AML		
	comp=N,3840μm,1.0s							
T1204				AML		AML		
	comp=E,5485μm,0.2s							
T1204				AML		AML		
	comp=N,3835μm,1.0s							
MMO1	**Montemonaco**	**0.24**	**62**	⇓P		Pg	05 07 13.1	+0.6
MMO1				S		Sg	05 07 16.9	+1.1
SMA1	**SAN MARTINO**	**0.27**	**125**	P		Pg	05 07 13.1	+0.1
SMA1				AML		AML		
	comp=N,2785μm,0.3s							
SMA1				AML		AML		
	comp=E,2535μm,0.3s							
T1211	**Morro Reatino**	**0.29**	**208**	⇑P		Pg	05 07 13.9	+0.7
T1211				S		Sb	05 07 18.9	-0.7
T1211				AML		AML		
	comp=N,3035μm,0.2s							
T1211				AML		AML		
	comp=N,3012μm,0.2s							
T1211				AML		AML		
	comp=E,2080μm,0.5s							
T1211				AML		AML		
	comp=N,3015μm,0.2s							
T1211				AML		AML		
	comp=E,2075μm,0.5s							
T1211				AML		AML		
	comp=N,3035μm,0.2s							
T1211				AML		AML		
	comp=E,2015μm,0.8s							
T1211				AML		AML		
	comp=N,3010μm,0.2s							
ARRO	**Arrone**	**0.29**	**224**	⇑P		Pg	05 07 13.9	+0.6
ARRO				AML		AML		
	comp=E,1855μm,0.6s							
ARRO				AML		AML		
	comp=N,1600μm,0.7s							
ARRO				AML		AML		
	comp=E,1850μm,0.6s							
T1241	**Roccafluvione,**	**0.30**	**77**	⇓P		Pb	05 07 14.3	-0.6
T1241				S		Sb	05 07 19.2	-0.7
T1241				AML		AML		
	comp=E,3670μm,0.8s							
T1241				AML		AML		
	comp=N,1515μm,0.1s							
T1241				AML		AML		
	comp=E,3585μm,0.8s							
T1241				AML		AML		
	comp=N,1640μm,0.1s							
T1241				AML		AML		
	comp=N,1655μm,1.4s							
T1241				AML		AML		
	comp=N,1660μm,1.4s							
T1241				AML		AML		
	comp=E,3675μm,0.8s							
AM05	**Amandola Campo**	**0.30**	**51**	⇑P		Pg	05 07 14.2	+0.7
AM05				S		Sb	05 07 18.9	-1.0
AM05				AML		AML		
	comp=N,1125μm,0.3s							
AM05				AML		AML		
	comp=N,406μm,0.1s							
AM05				AML		AML		
	comp=E,786μm,1.1s							
AM05				AML		AML		
	comp=N,1130μm,0.3s							
AM05				AML		AML		
	comp=E,3775μm,0.1s							
AM05				AML		AML		
	comp=E,3780μm,0.1s							
AM05				AML		AML		
	comp=E,786μm,1.1s							
RM33	**Pellescritta (**	**0.31**	**155**	P		Pg	05 07 14.3	+0.7
RM33				S		Sb	05 07 19.6	-0.6
RM33				AML		AML		
	comp=E,1725μm,1.4s							
RM33				AML		AML		
	comp=N,1830μm,0.8s							
RM33				AML		AML		
	comp=E,1725μm,1.5s							
RM33				AML		AML		
	comp=N,1830μm,0.8s							
RM33				AML		AML		
	comp=E,1665μm,1.4s							
RM33				AML		AML		
	comp=N,1735μm,0.8s							
RM33				AML		AML		
	comp=E,1730μm,1.4s							
RM33				AML		AML		
	comp=N,1825μm,0.8s							
T1243	**Rocca Santa Ma**	**0.32**	**107**	P		Pg	05 07 13.8	-0.1
T1243				S		Sb	05 07 19.9	-0.6
CSP1	**Cessapalombo**	**0.33**	**22**	⇑P		Pg	05 07 14.4	+0.4
CSP1				S		Sb	05 07 19.9	-0.9
CSP1				AML		AML		
	comp=E,2395μm,1.3s							
CSP1				AML		AML		
	comp=N,2355μm,0.5s							
CSP1				AML		AML		
	comp=E,2405μm,1.3s							
GUMA	**Gualdo di Mace**	**0.35**	**39**	⇑P		Pb	05 07 15.2	-0.6
GUMA				S		Sb	05 07 21.1	-0.3
GUMA				AML		AML		
	comp=E,4635μm,0.3s							
GUMA				AML		AML		
	comp=N,4325μm,0.5s							
GUMA				AML		AML		
	comp=N,4325μm,0.6s							
GUMA				AML		AML		
	comp=E,6010μm,0.5s							
GUMA				AML		AML		
	comp=N,4685μm,0.7s							
GUMA				AML		AML		
	comp=N,4320μm,0.6s							
GUMA				AML		AML		
	comp=E,4630μm,0.3s							
SEF1	**Sefro**	**0.36**	**350**	⇑P		Pg	05 07 15.1	+0.4
CAMP	**Campotosto**	**0.37**	**132**	P		Pg	05 07 14.3	-0.5
CAMP				AML		AML		
	comp=E,613μm,0.6s							
CAMP				AML		AML		
	comp=N,342μm,0.4s							
ASSB	**Assisi San Ben**	**0.38**	**313**	⇓P		Pg	05 07 15.2	+0.3
ASSB				AML		AML		
	comp=E,756μm,0.5s							
ASSB				AML		AML		
	comp=N,733μm,0.4s							
CESX	**Cesi**	**0.38**	**242**	⇑P		Pg	05 07 15.2	+0.3
CESX				AML		AML		
	comp=N,962μm,0.3s							
CESX				AML		AML		
	comp=E,922μm,1.2s							
T1247	**Pizzolo (AQ)**	**0.40**	**151**	⇓P		Pg	05 07 15.6	+0.3
T1247				AML		AML		
	comp=E,1380μm,0.4s							
T1247				AML		AML		
	comp=N,1215μm,0.7s							
TERO	**Teramo**	**0.45**	**111**	P		Pg	05 07 15.7	-0.5
TERO				AML		AML		
	comp=N,1182μm,1.5s							
TERO				AML		AML		
	comp=E,978μm,0.8s							
TERO				AML		AML		
	comp=E,869μm,0.8s							
TERO				AML		AML		
	comp=N,1180μm,1.5s							
TERO				AML		AML		
	comp=N,1320μm,1.2s							
TERO				AML		AML		
	comp=E,870μm,0.8s							
TERO				AML		AML		
	comp=N,1182μm,1.5s							
SNTG	**Esanatoglia**	**0.47**	**352**	⇑P		Pg	05 07 16.9	+0.2
SNTG				AML		AML		
	comp=N,528μm,0.5s							
SNTG				AML		AML		
	comp=N,528μm,0.5s							
SNTG				AML		AML		
	comp=E,692μm,0.6s							
SNTG				AML		AML		
	comp=N,488μm,0.5s							
SNTG				AML		AML		
	comp=E,688μm,0.6s							
SNTG				AML		AML		
	comp=E,691μm,0.6s							
ATCC	**AVT- Casa Cast**	**0.49**	**324**	⇓P		Pg	05 07 17.3	+0.2
ATCC				AML		AML		
	comp=E,590μm,1.2s							
ATCC				AML		AML		
	comp=N,577μm,0.7s							
ATCC				AML		AML		
	comp=N,576μm,0.7s							
ATCC				AML		AML		
	comp=E,590μm,1.2s							
OFFI	**Offida**	**0.50**	**73**	⇑P		Pb	05 07 18.4	+0.1
OFFI				AML		AML		
	comp=N,1655μm,0.5s							
OFFI				AML		AML		
	comp=E,1166μm,0.3s							
AQU	**L'Aquila**	**0.51**	**148**	P		Pb	05 07 18.1	-0.4
AQU				AML		AML		
	comp=N,321μm,1.0s							
AQU				AML		AML		
	comp=E,360μm,1.0s							
GIGS	**Gran Sasso**	**0.52**	**130**	P		Pg	05 07 16.8	-0.8
GIGS				AML		AML		
	comp=E,153μm,0.5s							
GIGS				AML		AML		
	comp=N,145μm,0.4s							
FIAM	**Fiamignano**	**0.52**	**173**	P		Pg	05 07 17.9	+0.3
FIAM				AML		AML		
	comp=E,439μm,0.6s							
FIAM				AML		AML		
	comp=N,469μm,0.3s							
EL6	**Elcito**	**0.54**	**5**	⇓P		Pg	05 07 18.2	+0.2
FOSV	**Fossato di Vic**	**0.55**	**338**	⇑P		Pg	05 07 18.5	+0.4
FOSV				AML		AML		
	comp=E,294μm,1.6s							
FOSV				AML		AML		
	comp=N,366μm,0.6s							
MURB	**Monte Urbino**	**0.60**	**322**	P		Pg	05 07 19.5	+0.3
MURB				AML		AML		
	comp=N,974μm,0.3s							
MURB				AML		AML		
	comp=E,908μm,1.1s							
TRTR	**Tortoreto Alta**	**0.65**	**88**	⇑P		Pb	05 07 21.4	+0.6
TRTR				AML		AML		
	comp=N,1515μm,1.6s							
TRTR				AML		AML		
	comp=E,1405μm,1.2s							
ATFO	**Monte Foce - G**	**0.67**	**330**	P		Pb	05 07 20.9	-0.4
ATFO				AML		AML		
	comp=E,240μm,0.4s							
ATFO				AML		AML		
	comp=N,207μm,0.7s							
ATFO				AML		AML		
	comp=E,239μm,0.4s							
MGAB	**Montegabbione**	**0.69**	**281**	⇓P		Pb	05 07 21.6	0.0
MGAB				AML		AML		
	comp=E,419μm,0.9s							
MGAB				AML		AML		
	comp=N,654μm,0.5s							
MGAB				AML		AML		
	comp=N,752μm,0.5s							
MGAB				AML		AML		
	comp=E,456μm,1.3s							
VCEL	**Villa Celiera**	**0.71**	**123**	⇑P		Pg	05 07 20.6	-0.6
VCEL				S		Sn	05 07 35.0	+0.3
VCEL				AML		AML		
	comp=E,779μm,0.2s							
VCEL				AML		AML		
	comp=N,464μm,1.6s							
ARVD	**Arcevia**	**0.71**	**354**	⇑P		Pg	05 07 21.5	+0.2
ARVD				S		Sb	05 07 33.0	+1.2
ARVD				AML		AML		
	comp=N,214μm,1.5s							
ARVD				AML		AML		
	comp=N,214μm,1.5s							
ARVD				AML		AML		
	comp=E,266μm,0.5s							
PP3	**Marolino**	**0.72**	**35**	⇓P		Pb	05 07 22.8	+0.7
PP3				AML		AML		
	comp=E,834μm,1.5s							
PP3				AML		AML		
	comp=N,748μm,0.4s							
PP3				AML		AML		
	comp=E,836μm,1.5s							
ATVO	**AVT- Monte Val**	**0.75**	**322**	⇑P		Pg	05 07 22.0	0.0
FRON	**Frontone**	**0.76**	**343**	⇓P		Pg	05 07 22.2	0.0
FRON				AML		AML		
	comp=E,182μm,0.8s							
FRON				AML		AML		
	comp=N,236μm,1.4s							
T0110	**Collepietro**	**0.79**	**135**	⇓P		Pb	05 07 23.1	-0.1
T0110				AML		AML		
	comp=E,414μm,0.3s							
T0110				AML		AML		
	comp=E,414μm,0.3s							
T0110				AML		AML		
	comp=N,400μm,0.4s							
MTCE	**Montecelio**	**0.80**	**196**	P		Pg	05 07 22.3	-0.4
MTCE				AML		AML		
	comp=E,260μm,0.5s							
MTCE				AML		AML		
	comp=N,228μm,0.5s							
CERT	**Cerreto**	**0.84**	**183**	⇑P		Pb	05 07 23.9	-0.2
CERT				AML		AML		
	comp=E,391μm,0.5s							
CERT				AML		AML		
	comp=N,266μm,0.9s							
MPAG	**Monte Paganucc**	**0.86**	**347**	⇑P		Pg	05 07 24.1	-0.1
MPAG				AML		AML		
	comp=E,176μm,1.0s							
MPAG				AML		AML		
	comp=N,178μm,0.7s							
FSSB	**Fossombrone**	**0.92**	**348**	P		Pg	05 07 25.1	-0.1
FSSB				AML		AML		
	comp=N,664μm,0.4s							
FSSB				AML		AML		
	comp=E,761μm,0.4s							
BADI	**Badiali**	**0.93**	**322**	⇑P		Pb	05 07 25.9	+0.4
GIUL	**Giuliano Di Ro**	**1.24**	**172**	⇓P		Pg	05 07 32.9	+1.7
LATB	**Latina**	**1.29**	**182**	⇓P		Pn	05 07 29.9	-1.6
RUFI	**Rufina**	**1.53**	**314**	P		Pg	05 07 36.5	-0.3
MODR	**Mondragone**	**1.76**	**159**	S		Sb	05 08 02.0	+0.2

ROM 31 05:10:14.9±0.1, 42°.854N±0°.004×13°.241E±0°.006, h9km, ML2.6/36, 9C-16D, Error ellipse: s-maj=0.5km s-min=0.4km az=33.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**273**	P		Pg	05 10 17.1	+0.2
T1245				S		Sg	05 10 18.5	+0.2
T1245				AML		AML		
	comp=N,38000μm,0.3s							
T1245				AML		AML		
	comp=E,58650μm,0.2s							
T1245				AML		AML		
	comp=N,34300μm,0.4s							
T1245				AML		AML		
	comp=E,60350μm,0.2s							
T1245				AML		AML		
	comp=N,38450μm,1.5s							
T1245				AML		AML		
	comp=N,35600μm,1.5s							
T1245				AML		AML		
	comp=E,60300μm,0.2s							
T1245				AML		AML		
	comp=E,58700μm,0.2s							
MMO1	**Montemonaco**	**0.08**	**54**	P		Pg	05 10 17.4	+0.2
MMO1				S		Sg	05 10 19.0	+0.1
T1241	**Roccafluvione,**	**0.14**	**89**	P		Pg	05 10 18.7	+0.7
T1241				S		Sg	05 10 21.3	+1.1
AM05	**Amandola Campo**	**0.15**	**34**	P		Pg	05 10 18.7	+0.6
AM05				S		Sg	05 10 21.2	+0.7
T1216	**Preci, Frazion**	**0.17**	**283**	P		Pg	05 10 19.1	+0.6
T1216				S		Sg	05 10 21.9	+1.0
T1216				AML		AML		
	comp=E,13150μm,1.3s							
T1216				AML		AML		
	comp=N,21700μm,0.3s							
FEMA	**Monte Fema**	**0.18**	**308**	P		Pg	05 10 19.3	+0.6
FEMA				S		Sg	05 10 22.2	+0.9
FEMA				AML		AML		
	comp=E,21850μm,1.0s							
FEMA				AML		AML		
	comp=N,20900μm,0.9s							
FEMA				AML		AML		
	comp=N,20850μm,0.9s							
T1204	**Amatrice, Fraz**	**0.19**	**163**	P		Pg	05 10 19.6	+0.7
T1204				S		Sg	05 10 23.0	+1.4
T1243	**Rocca Santa Ma**	**0.22**	**136**	P		Pg	05 10 20.0	+0.6
T1243				S		Sg	05 10 23.8	+1.3
GUMA	**Gualdo di Mace**	**0.22**	**18**	⇓P		Pg	05 10 20.3	+0.9
GUMA				AML		AML		
	comp=E,10850μm,0.3s							
GUMA				AML		AML		
	comp=N,10350μm,0.4s							
GUMA				AML		AML		
	comp=E,10540μm,0.3s							
GUMA				AML		AML		
	comp=N,10300μm,0.4s							
GUMA				AML		AML		
	comp=E,10860μm,0.3s							
GUMA				AML		AML		
	comp=N,12300μm,0.4s							
SMA1	**SAN MARTINO**	**0.23**	**163**	P		Pg	05 10 20.3	+0.6
SMA1				S		Sg	05 10 24.3	+1.3
T1217	**Poggiodomo (PG**	**0.27**	**238**	AML		AML		
	comp=E,2165μm,0.7s							
T1217				AML		AML		
	comp=E,742μm,0.2s							
T1217				AML		AML		
	comp=N,1210μm,0.5s							
T1217				AML		AML		
	comp=E,760μm,1.2s							
T1217				AML		AML		
	comp=N,1244μm,1.3s							
T1217				AML		AML		
	comp=E,2245μm,0.7s							
T1217				AML		AML		
	comp=N,2675μm,0.8s							
T1217				AML		AML		
	comp=N,2850μm,0.8s							
T1215	**Vallo di Nera,**	**0.28**	**259**	⇑P		Pg	05 10 21.1	+0.6
T1215				S		Sb	05 10 25.7	-1.2
T1215				AML		AML		
	comp=E,1350μm,0.3s							
T1215				AML		AML		
	comp=N,1925μm,1.1s							
T1215				AML		AML		
	comp=E,1328μm,1.5s							
T1215				AML		AML		
	comp=N,1961μm,1.1s							
T1215				AML		AML		
	comp=E,1345μm,0.3s							
LNSS	**Leonessa**	**0.29**	**211**	P		Pg	05 10 21.4	+0.6
LNSS				S		Sb	05 10 26.5	-0.8
OFFI	**Offida**	**0.34**	**76**	P		Pb	05 10 23.1	+0.1
CAMP	**Campotosto**	**0.34**	**159**	P		Pg	05 10 22.1	+0.4
CAMP				S		Sg	05 10 27.5	+1.3
RM33	**Pellescritta (**	**0.35**	**183**	P		Pg	05 10 21.0	-0.7
RM33				S		Sb	05 10 28.2	-0.7
RM33				AML		AML		
	comp=E,1325μm,1.5s							
RM33				AML		AML		
	comp=N,1350μm,0.2s							
RM33				AML		AML		

	comp=N,1335μm,0.3s					
RM33			AML	AML		
	comp=E,1410μm,1.5s					
TERO	**Teramo**	**0.35 131**	P	Pg	05 10 22.2	+0.3
TERO			S	Sb	05 10 28.2	-0.8
TERO			AML	AML		
	comp=E,2165μm,0.1s					
TERO			AML	AML		
	comp=N,1600μm,0.2s					
TERO			AML	AML		
	comp=E,2435μm,0.1s					
TERO			AML	AML		
	comp=E,2430μm,0.1s					
TERO			AML	AML		
	comp=N,1780μm,0.2s					
SEF1	**Sefro**	**0.36 324**	P	Pg	05 10 22.6	+0.5
SEF1			AML	AML		
	comp=N,4315μm,0.3s					
SEF1			AML	AML		
	comp=E,4335μm,0.3s					
SEF1			AML	AML		
	comp=N,4310μm,0.3s					
GAG1	**Gagliole**	**0.40 342**	P	Pg	05 10 19.9	-3.0
GAG1			AML	AML		
	comp=E,4720μm,0.4s					
GAG1			AML	AML		
	comp=N,3715μm,0.5s					
T1247	**Pizzolo (AQ)**	**0.41 174**	P	Pg	05 10 23.5	+0.5
T1247			S	Sb	05 10 30.1	-0.7
T1211	**Morro Reatino**	**0.43 222**	P	Pb	05 10 25.1	+0.4
T1211			S	Sb	05 10 30.9	-0.3
T1211			AML	AML		
	comp=E,1015μm,0.7s					
T1211			AML	AML		
	comp=N,1263μm,0.2s					
T1211			AML	AML		
	comp=E,1008μm,1.5s					
T1211			AML	AML		
	comp=N,1275μm,0.2s					
ARRO	**Arrone**	**0.45 232**	⇓P	Pg	05 10 21.4	-2.2
ARRO			AML	AML		
	comp=E,696μm,0.2s					
ARRO			AML	AML		
	comp=N,635μm,1.2s					
SNTG	**Esanatoglia**	**0.46 331**	⇓P	Pg	05 10 24.1	+0.3
SNTG			AML	AML		
	comp=E,569μm,0.9s					
SNTG			AML	AML		
	comp=N,1002μm,1.1s					
SNTG			AML	AML		
	comp=E,554μm,0.7s					
SNTG			AML	AML		
	comp=N,990μm,1.1s					
SNTG			AML	AML		
	comp=N,1002μm,1.1s					
SNTG			AML	AML		
	comp=N,990μm,1.1s					
SNTG			AML	AML		
	comp=E,568μm,0.9s					
ASSB	**Assisi San Ben**	**0.47 294**	P	Pg	05 10 23.9	-0.1
ASSB			S	Sb	05 10 31.7	-0.6
ASSB			AML	AML		
	comp=E,1640μm,0.6s					
ASSB			AML	AML		
	comp=N,1360μm,0.6s					
GIGS	**Gran Sasso**	**0.47 149**	P	Pg	05 10 24.1	0.0
GIGS			S	Sb	05 10 31.8	-0.7
EL6	**Elcito**	**0.49 348**	⇓P	Pg	05 10 24.7	+0.4
EL6			AML	AML		
	comp=E,1480μm,1.0s					
EL6			AML	AML		
	comp=N,1648μm,0.4s					
EL6			AML	AML		
	comp=E,1476μm,1.0s					
EL6			AML	AML		
	comp=E,1475μm,1.0s					
EL6			AML	AML		
	comp=N,1644μm,0.4s					
TRTR	**Tortoreto Alta**	**0.50 95**	S	Sg	05 10 27.0	-4.1
AQU	**L'Aquila**	**0.51 167**	P	Pg	05 10 25.1	+0.3
AQU			S	Sb	05 10 33.4	-0.2
AQU			AML	AML		
	comp=E,444μm,0.7s					
AQU			AML	AML		
	comp=N,522μm,1.4s					
AQU			AML	AML		
	comp=E,418μm,0.8s					
AQU			AML	AML		
	comp=N,532μm,1.4s					
CING	**Cingoli**	**0.52 356**	⇓P	Pg	05 10 25.5	+0.4
ATCC	**AVT- Casa Cast**	**0.55 307**	⇑P	Pg	05 10 25.9	+0.3
ATCC			AML	AML		
	comp=N,1335μm,0.7s					
ATCC			AML	AML		
	comp=E,1275μm,1.0s					
ATCC			AML	AML		
	comp=N,1330μm,0.7s					
PP3	**Marolino**	**0.59 27**	⇑P	Pb	05 10 28.0	+0.7
PP3			AML	AML		
	comp=E,1135μm,1.2s					
PP3			AML	AML		
	comp=N,1615μm,1.3s					
PP3			AML	AML		
	comp=N,1575μm,1.3s					
PP3			AML	AML		
	comp=E,1184μm,1.2s					
FIAM	**Fiamignano**	**0.59 189**	⇓P	Pg	05 10 26.7	+0.4
FIAM			AML	AML		
	comp=E,484μm,0.2s					
FIAM			AML	AML		
	comp=N,338μm,1.5s					
FAGN	**Fagnano**	**0.64 157**	⇓P	Pg	05 10 27.4	+0.2
FAGN			AML	AML		
	comp=N,508μm,0.5s					
FAGN			AML	AML		
	comp=E,761μm,0.3s					
MURB	**Monte Urbino**	**0.67 308**	P	Pg	05 10 27.9	+0.2
MURB			AML	AML		
	comp=E,1192μm,0.3s					
MURB			AML	AML		
	comp=N,2080μm,0.3s					
MURB			AML	AML		
	comp=E,1192μm,0.3s					
MURB			AML	AML		
	comp=N,2010μm,1.5s					
MURB			AML	AML		
	comp=E,1380μm,0.3s					
ARVD	**Arcevia**	**0.68 341**	P	Pg	05 10 28.2	+0.1
ARVD			S	Sn	05 10 40.0	-1.4
ARVD			AML	AML		
	comp=N,248μm,0.7s					
ARVD			AML	AML		
	comp=E,452μm,0.6s					
ATFO	**Monte Foce - G**	**0.71 316**	P	Pg	05 10 28.6	0.0
ATFO			AML	AML		
	comp=E,388μm,0.6s					
ATFO			AML	AML		
	comp=N,375μm,0.6s					
ATTE	**AVT- Monte Tez**	**0.74 298**	P	Pg	05 10 29.1	0.0
ATTE			AML	AML		
	comp=E,276μm,1.1s					
ATTE			AML	AML		
	comp=N,275μm,0.9s					
ATTE			AML	AML		
	comp=E,276μm,1.1s					
T0110	**Collepietro**	**0.74 147**	⇓P	Pg	05 10 29.1	-0.1
T0110			AML	AML		
	comp=N,504μm,0.4s					
T0110			AML	AML		
	comp=E,503μm,0.8s					
FRON	**Frontone**	**0.76 331**	⇓P	Pg	05 10 29.5	-0.1
FRON			AML	AML		
	comp=E,264μm,0.3s					
FRON			AML	AML		
	comp=N,526μm,0.4s					
ATVO	**AVT- Monte Val**	**0.81 311**	⇑P	Pg	05 10 30.3	-0.2
SRES	**S.Oreste - Sor**	**0.82 221**	P	Pg	05 10 28.9	-1.7
SRES			S	Sn	05 10 45.0	+0.2
SRES			AML	AML		
	comp=E,224μm,1.2s					
SRES			AML	AML		
	comp=N,213μm,1.0s					
MGAB	**Montegabbione**	**0.83 274**	⇑P	Pb	05 10 32.0	+0.5
MGAB			AML	AML		
	comp=N,526μm,1.1s					
MGAB			AML	AML		
	comp=E,319μm,0.3s					
MGAB			AML	AML		
	comp=E,372μm,1.2s					
MGAB			AML	AML		
	comp=N,494μm,1.1s					
MPAG	**Monte Paganucc**	**0.85 336**	⇓P	Pg	05 10 31.4	+0.1
MPAG			AML	AML		
	comp=E,272μm,1.2s					
MPAG			AML	AML		
	comp=N,391μm,0.7s					
MPAG			AML	AML		
	comp=N,392μm,0.7s					
PIEI	**Pieia**	**0.85 323**	⇓P	Pg	05 10 31.0	-0.3
PIEI			AML	AML		
	comp=E,243μm,0.3s					
PIEI			AML	AML		
	comp=N,215μm,1.4s					
ATPI	**Pietralunga -**	**0.86 314**	⇓P	Pg	05 10 31.3	-0.1
ATPI			AML	AML		
	comp=E,294μm,0.5s					
ATPI			AML	AML		
	comp=N,208μm,0.5s					
NARO	**Abbazia di Nar**	**0.90 328**	P	Pg	05 10 31.8	-0.3
NARO			S	Sn	05 10 47.0	+0.3
NARO			AML	AML		
	comp=N,142μm,1.3s					
NARO			AML	AML		
	comp=E,188μm,0.6s					
FSSB	**Fossombrone**	**0.90 338**	⇓P	Pg	05 10 32.4	+0.1
FSSB			S	Sn	05 10 48.0	+1.1
FSSB			AML	AML		
	comp=E,638μm,0.3s					
FSSB			AML	AML		
	comp=N,793μm,0.3s					
APEC	**Apecchio**	**0.93 320**	P	Pg	05 10 32.8	+0.2
INTR	**Introdacqua**	**0.97 150**	⇑P	Pg	05 10 29.2	-4.4
INTR			AML	AML		
	comp=E,155μm,0.9s					
INTR			AML	AML		
	comp=N,343μm,1.6s					
SACS	**San Casciano d**	**0.98 270**	⇓P	Pn	05 10 35.5	+0.7
SACS			AML	AML		
	comp=E,222μm,0.5s					
SACS			AML	AML		
	comp=E,221μm,0.5s					
SACS			AML	AML		
	comp=N,235μm,0.4s					
BADI	**Badiali**	**0.98 312**	⇑P	Pg	05 10 33.7	-0.1
BADI			AML	AML		
	comp=E,132μm,1.5s					
BADI			AML	AML		
	comp=N,171μm,0.6s					
PE3	**Peglio**	**1.00 327**	⇓P	Pn	05 10 35.1	0.0
PE3			S	Sn	05 10 52.0	+2.6
CAFI	**Castiglion Fio**	**1.05 297**	⇑P	Pg	05 10 34.8	-0.2
CAFI			AML	AML		
	comp=E,162μm,0.6s					
CAFI			AML	AML		
	comp=N,168μm,0.7s					
CRE	**Caprese Michel**	**1.21 310**	⇓P	Pg	05 10 38.3	+0.1
CRE			AML	AML		
	comp=E,82μm,1.0s					
CRE			AML	AML		
	comp=N,108μm,0.4s					
LIK	**San Giovanni I**	**1.37 170**	S	Sb	05 10 52.0	-6.2
CIGN	**Sant'Elia a Pi**	**1.72 134**	S	Sn	05 11 03.0	-4.1
PAOL	**Paolisi**	**2.07 151**	P	Pn	05 10 47.6	-2.2
POPM	**Popiglio**	**2.17 304**	⇑P	Pg	05 10 58.3	+1.9

VIE 31 05:10:47.5±1.1, 43°.05N×13°.50E, h8km, mb2.6/4, ml2.3/6, Error ellipse: s-maj=28.7km s-min=9.3km az=88.0 128 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**3.76**	**350**	*e*Pn	Pn	05 11 45.5	-0.4
	3.4nm,0.4s						
FETA	**Feichten**	**4.43**	**335**	*e*Pn	Pn	05 11 56.0	+0.9
	0.7nm,0.3s						
MOTA	**Moosalm**	**4.62**	**339**	*e*Pn	Pn	05 11 58.9	+1.2
	0.3nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.64**	**1**	*e*Pn	Pn	05 11 58.4	+0.5
	2.6nm,0.3s						
MOA	**Molln**	**4.83**	**6**	*e*Pn	Pn	05 12 01.2	+0.7
	0.2nm,0.1s						
RETA	**Reutte**	**4.84**	**337**	*e*Pn	Pn	05 12 01.9	+1.2
	1.1nm,0.3s						

ROM 31 05:11:32.2±0.0, 42°.900N±0°.004×13°.052E±0°.004, h11km, ML2.3/8, 3C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=354.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.03**	**249**	⇓P	Pg	05 11 34.5	+0.3
T1216				S	Sg	05 11 35.9	+0.2
T1216				AML	AML		
	comp=N,3980μm,0.3s						
T1216				AML	AML		
	comp=E,3265μm,0.8s						
T1216				AML	AML		
	comp=N,3985μm,0.3s						
FEMA	**Monte Fema**	**0.06**	**359**	⇓P	Pg	05 11 34.9	+0.2
FEMA				S	Sg	05 11 36.6	+0.2
FEMA				AML	AML		
	comp=N,3060μm,0.1s						
FEMA				AML	AML		
	comp=N,3060μm,0.1s						
FEMA				AML	AML		
	comp=E,4605μm,1.2s						
T1245	**Castelsantange**	**0.11**	**113**	P	Pg	05 11 35.5	+0.3
T1245				S	Sg	05 11 37.8	+0.5
T1245				AML	AML		
	comp=N,8330μm,1.3s						
T1245				AML	AML		
	comp=N,7930μm,1.3s						
T1245				AML	AML		
	comp=N,9425μm,0.4s						
T1245				AML	AML		
	comp=N,9535μm,0.4s						
T1245				AML	AML		
	comp=E,6745μm,0.2s						
T1245				AML	AML		
	comp=E,7045μm,0.2s						
T1215	**Vallo di Nera,**	**0.17**	**234**	⇑P	Pg	05 11 36.5	+0.5
T1215				S	Sg	05 11 39.3	+0.8
T1215				AML	AML		
	comp=E,901μm,0.5s						
T1215				AML	AML		
	comp=E,901μm,0.5s						
T1215				AML	AML		
	comp=N,1015μm,0.1s						
T1215				AML	AML		
	comp=E,902μm,0.5s						
T1215				AML	AML		
	comp=N,906μm,0.1s						
MMO1	**Montemonaco**	**0.20**	**90**	⇑P	Pg	05 11 37.0	+0.4
MMO1				S	Sg	05 11 40.3	+0.8
T1217	**Poggiodomo (PG**	**0.21**	**205**	P	Pg	05 11 37.1	+0.5
T1217				S	Sg	05 11 40.7	+1.0
T1217				AML	AML		
	comp=E,1990μm,0.1s						
T1217				AML	AML		
	comp=E,1940μm,0.1s						
T1217				AML	AML		
	comp=N,1755μm,0.2s						
T1217				AML	AML		
	comp=E,1990μm,0.1s						
T1217				AML	AML		
	comp=N,1675μm,0.2s						
T1217				AML	AML		
	comp=E,1940μm,0.1s						
T1217				AML	AML		
	comp=N,1762μm,0.2s						
AM05	**Amandola Campo**	**0.23**	**71**	P	Pg	05 11 37.6	+0.5
AM05				S	Sg	05 11 41.4	+1.0
AM05				AML	AML		
	comp=E,294μm,0.1s						
AM05				AML	AML		
	comp=E,1355μm,0.1s						
AM05				AML	AML		
	comp=N,105μm,0.8s						
AM05				AML	AML		
	comp=N,294μm,0.1s						
T1241	**Roccafluvione,**	**0.28**	**99**	⇑P	Pg	05 11 38.4	+0.5
T1241				S	Sb	05 11 43.0	-1.0
T1241				AML	AML		
	comp=E,656μm,0.3s						
T1241				AML	AML		
	comp=N,498μm,0.2s						
T1241				AML	AML		
	comp=N,533μm,0.7s						
T1241				AML	AML		
	comp=E,954μm,0.2s						
ASSB	**Assisi San Ben**	**0.32**	**296**	P	Pg	05 11 39.1	+0.4
ASSB				S	Sb	05 11 44.1	-1.1
T1243	**Rocca Santa Ma**	**0.36**	**125**	P	Pb	05 11 40.6	+0.1
SNTG	**Esanatoglia**	**0.36**	**347**	P	Pg	05 11 39.9	+0.4
TERO	**Teramo**	**0.49**	**124**	P	Pb	05 11 42.4	-0.5
TERO				AML	AML		
	comp=E,394μm,1.1s						
TERO				AML	AML		
	comp=N,358μm,1.1s						

IDC 31 05:19:04.4±17.0, 7°.18S×121°.37E, h496km±234km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=249.4km s-min=50.7km az=66.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.86**	**137**	P	P	05 22 44.2	+0.4
	1.2nm,0.7s,baz=318,slow=11,SNR=26						
ASAR	**Alice Springs**	**20.33**	**145**	P	P	05 23 06.2	-0.2
	0.5nm,0.4s,baz=321,slow=8.1,SNR=6.8						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**30.97**	**145**	P	P	05 24 40.3	-0.2
	7.3nm,1.2s,baz=314,slow=10.0,SNR=4.0						
	7.3nm,1.2s						
MKAR	**Makanchi Array**	**63.96**	**331**	P	P	05 28 48.4	0.0
	0.4nm,0.5s,baz=152,slow=8.1,SNR=3.3						
	0.4nm,0.5s						

*PRU **31** 05:19:38.1±0.0, 43°.52N×13°.61E, h10km*

ROM 31 05:19:22.8±0.1, 43°.024N±0°.003×13°.096E±0°.005, h9km, ML2.9/25, 6C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**209**	P	Pg	05 19 25.0	0.0
FEMA				S	Sg	05 19 26.9	+0.3
CSP1	**Cessapalombo**	**0.10**	**50**	P	Pg	05 19 25.6	+0.2
CSP1				S	Sg	05 19 27.8	+0.5
CSP1				AML	AML		
	comp=E,24750μm,1.1s						
CSP1				AML	AML		
	comp=N,34650μm,0.3s						
T1216	**Preci, Frazion**	**0.14**	**203**	P	Pg	05 19 26.6	+0.6
T1216				S	Sg	05 19 29.3	+1.2
SEF1	**Sefro**	**0.16**	**319**	P	Pg	05 19 26.8	+0.5
SEF1				S	Sg	05 19 30.4	+1.7
MDAR	**Monte D'Aria**	**0.17**	**11**	P	Pg	05 19 26.9	+0.5
MDAR				S	Sg	05 19 30.0	+0.9
GUMA	**Gualdo di Mace**	**0.18**	**77**	P	Pg	05 19 27.5	+0.9
GUMA				S	Sg	05 19 31.0	+1.8
GUMA				AML	AML		
	comp=E,18750μm,0.3s						
GUMA				AML	AML		
	comp=N,20050μm,0.6s						
GUMA				AML	AML		
	comp=E,25800μm,0.4s						
GUMA				AML	AML		
	comp=N,15350μm,0.4s						
GUMA				AML	AML		
	comp=E,18750μm,0.3s						
GUMA				AML	AML		
	comp=N,20100μm,0.6s						
T1245	**Castelsantange**	**0.18**	**158**	P	Pg	05 19 27.4	+0.8
T1245				S	Sg	05 19 30.8	+1.6
T1245				AML	AML		
	comp=E,23900μm,0.8s						
T1245				AML	AML		
	comp=N,25300μm,1.5s						
T1245				AML	AML		
	comp=N,25250μm,1.5s						
T1245				AML	AML		
	comp=E,24000μm,0.7s						
T1245				AML	AML		
	comp=N,24850μm,1.5s						
AM05	**Amandola Campo**	**0.19**	**104**	P	Pg	05 19 27.4	+0.6
AM05				S	Sg	05 19 30.8	+1.3
AM05				AML	AML		
	comp=N,4025μm,0.9s						
AM05				AML	AML		
	comp=E,9785μm,1.6s						
AM05				AML	AML		
	comp=N,1018μm,0.1s						
AM05				AML	AML		
	comp=N,4020μm,0.9s						
AM05				AML	AML		
	comp=E,9795μm,1.6s						
AM05				AML	AML		
	comp=N,1020μm,0.1s						
AM05				AML	AML		
	comp=E,9800μm,1.6s						
AM05				AML	AML		
	comp=N,1022μm,0.1s						
AM05				AML	AML		
	comp=E,2300μm,0.3s						
FIU1	**Fiuminata**	**0.20**	**324**	P	Pg	05 19 27.5	+0.5
FIU1				S	Sg	05 19 31.4	+1.5
MMO1	**Montemonaco**	**0.21**	**126**	P	Pg	05 19 27.7	+0.6
MMO1				S	Sg	05 19 31.1	+1.0
GAG1	**Gagliole**	**0.21**	**354**	P	Pg	05 19 27.9	+0.7
GAG1				S	Sg	05 19 32.1	+1.9
SNTG	**Esanatoglia**	**0.26**	**334**	P	Pg	05 19 28.4	+0.4
SNTG				S	Sb	05 19 33.2	-1.0
SNTG				AML	AML		
	comp=E,2260μm,0.7s						
SNTG				AML	AML		
	comp=N,2415μm,0.7s						
SNTG				AML	AML		
	comp=N,2415μm,0.7s						
T1215	**Vallo di Nera,**	**0.28**	**217**	P	Pg	05 19 28.9	+0.5
T1215				S	Sb	05 19 33.9	-0.9
T1215				AML	AML		
	comp=N,1660μm,1.1s						
T1215				AML	AML		
	comp=E,1570μm,0.4s						
T1215				AML	AML		
	comp=N,1665μm,1.1s						
EL6	**Elcito**	**0.30**	**1**	P	Pg	05 19 29.2	+0.3
EL6				S	Sb	05 19 35.0	-0.7
ASSB	**Assisi San Ben**	**0.32**	**273**	P	Pg	05 19 29.8	+0.6
ASSB				S	Sb	05 19 35.2	-0.9
ASSB				AML	AML		
	comp=N,4985μm,0.8s						
ASSB				AML	AML		
	comp=E,3790μm,0.5s						
T1217	**Poggiodomo (PG**	**0.34**	**201**	P	Pg	05 19 30.0	+0.5
T1217				S	Sb	05 19 35.6	-0.9
T1217				AML	AML		
	comp=E,3335μm,1.1s						
T1217				AML	AML		
	comp=N,3770μm,1.0s						
T1217				AML	AML		
	comp=E,3235μm,1.1s						
T1217				AML	AML		
	comp=N,3600μm,0.2s						
T1217				AML	AML		
	comp=E,3220μm,1.2s						
T1217				AML	AML		
	comp=N,3605μm,1.0s						
T1217				AML	AML		
	comp=E,3210μm,1.2s						
T1217				AML	AML		
	comp=E,3340μm,1.2s						
T1217				AML	AML		
	comp=N,3610μm,1.0s						
FOSV	**Fossato di Vic**	**0.36**	**318**	P	Pg	05 19 30.4	+0.4
FOSV				S	Sb	05 19 36.8	-0.5
FOSV				AML	AML		
	comp=E,2640μm,0.5s						
FOSV				AML	AML		
	comp=N,7080μm,0.3s						
FOSV				AML	AML		
	comp=N,7085μm,0.3s						
FOSV				AML	AML		
	comp=E,2635μm,0.5s						

ATCC	**AVT- Casa Cast**	**0.37 296**	P	Pg	05 19 30.6	+0.5
ATCC			S	Sb	05 19 37.3	-0.2
ATCC			AML	AML		
	comp=E,4620μm,0.3s					
ATCC			AML	AML		
	comp=E,4615μm,0.3s					
ATCC			AML	AML		
	comp=N,4860μm,0.3s					
T1204	**Amatrice, Fraz**	**0.38 155**	⇑P	Pg	05 19 22.0	-8.3
T1204			AML	AML		
	comp=E,5060μm,1.0s					
T1204			AML	AML		
	comp=N,2180μm,0.8s					
T1204			AML	AML		
	comp=E,5055μm,1.0s					
T1204			AML	AML		
	comp=N,2195μm,0.8s					
T1204			AML	AML		
	comp=E,7695μm,0.9s					
T1204			AML	AML		
	comp=N,4920μm,0.3s					
T1243	**Rocca Santa Ma**	**0.42 141**	P	Pg	05 19 23.1	-7.8
LNSS	**Leonessa**	**0.42 186**	P	Pg	05 19 31.4	+0.4
LNSS			S	Sb	05 19 38.7	-0.3
LNSS			AML	AML		
	comp=N,3570μm,0.8s					
LNSS			AML	AML		
	comp=E,1955μm,0.6s					
LNSS			AML	AML		
	comp=N,3565μm,0.8s					
OFFI	**Offida**	**0.44 101**	S	Sg	05 19 33.0	-4.2
MURB	**Monte Urbino**	**0.48 300**	P	Pb	05 19 32.9	-0.6
MURB			AML	AML		
	comp=E,3700μm,0.3s					
MURB			AML	AML		
	comp=N,3170μm,1.1s					
MURB			AML	AML		
	comp=E,3875μm,0.3s					
MURB			AML	AML		
	comp=N,3400μm,0.4s					
MURB			AML	AML		
	comp=E,3705μm,0.3s					
ARVD	**Arcevia**	**0.49 347**	⇑P	Pg	05 19 27.8	-4.5
ARVD			AML	AML		
	comp=E,1420μm,0.6s					
ARVD			AML	AML		
	comp=N,1046μm,0.2s					
ATFO	**Monte Foce - G**	**0.51 312**	⇑P	Pg	05 19 28.2	-4.5
ATFO			AML	AML		
	comp=E,1036μm,0.7s					
ATFO			AML	AML		
	comp=E,1037μm,0.7s					
ATFO			AML	AML		
	comp=N,842μm,1.1s					
PP3	**Marolino**	**0.52 47**	S	Sg	05 19 35.0	-4.6
CAMP	**Campotosto**	**0.54 155**	⇑P	Pg	05 19 24.8	-8.4
CAMP			AML	AML		
	comp=E,896μm,0.2s					
CAMP			AML	AML		
	comp=N,960μm,0.7s					
CAMP			AML	AML		
	comp=E,1220μm,0.3s					
TERO	**Teramo**	**0.55 137**	⇓P	Pg	05 19 25.2	-8.2
TERO			AML	AML		
	comp=E,1605μm,0.7s					
TERO			AML	AML		
	comp=N,1885μm,0.3s					
TERO			AML	AML		
	comp=E,1695μm,0.7s					
TERO			AML	AML		
	comp=N,1960μm,0.3s					
CESX	**Cesi**	**0.56 223**	P	Pg	05 19 33.8	+0.1
CESX			S	Sb	05 19 42.9	0.0
CESX			AML	AML		
	comp=N,2125μm,0.3s					
CESX			AML	AML		
	comp=E,2250μm,0.3s					
FRON	**Frontone**	**0.56 331**	⇑P	Pg	05 19 29.1	-4.6
FRON			AML	AML		
	comp=E,1006μm,0.3s					
FRON			AML	AML		
	comp=N,1255μm,0.8s					
FRON			AML	AML		
	comp=N,1260μm,0.8s					
FRON			AML	AML		
	comp=E,1005μm,0.3s					
ATTE	**AVT- Monte Tez**	**0.57 288**	S	Sg	05 19 37.0	-4.4
T1247	**Pizzolo (AQ)**	**0.60 166**	P	Pg	05 19 26.1	-8.3
T1247			AML	AML		
	comp=E,1550μm,0.4s					
T1247			AML	AML		
	comp=N,1265μm,1.2s					
ATVO	**AVT- Monte Val**	**0.62 306**	⇓P	Pg	05 19 29.8	-4.9
ATVO			AML	AML		
	comp=E,835μm,0.6s					
ATVO			AML	AML		
	comp=N,703μm,0.5s					
MPAG	**Monte Paganucc**	**0.65 338**	⇓P	Pg	05 19 31.1	-4.3
MPAG			AML	AML		
	comp=N,1100μm,0.3s					
MPAG			AML	AML		
	comp=E,868μm,1.6s					
PIEI	**Pieia**	**0.66 322**	⇓P	Pg	05 19 30.8	-4.6
PIEI			AML	AML		
	comp=E,777μm,0.4s					
PIEI			AML	AML		
	comp=N,564μm,0.5s					
GIGS	**Gran Sasso**	**0.67 149**	P	Pg	05 19 35.6	-0.2
GIGS			S	Sb	05 19 46.2	0.0
GIGS			AML	AML		
	comp=E,330μm,0.8s					
GIGS			AML	AML		
	comp=N,287μm,0.7s					
GIGS			AML	AML		
	comp=N,286μm,0.7s					
NARO	**Abbazia di Nar**	**0.70 328**	⇑P	Pg	05 19 31.3	-4.9
NARO			AML	AML		
	comp=N,294μm,0.9s					
NARO			AML	AML		
	comp=E,449μm,0.3s					
VCEL	**Villa Celiera**	**0.83 139**	S	Sg	05 19 39.0	-11
CPGN	**Carpegna, Ital**	**0.96 324**	S	Sg	05 19 54.0	+0.2
PAOL	**Paolisi**	**2.27 151**	S	Sn	05 20 22.0	-6.7
KHC	**Kasperske Hory**	**6.12 3**	*e*SN	Sn	05 22 03.4	0.0

ROM 31 05:20:13.5±0.1, 42°.710N±0°.004×13°.271E±0°.005, h13km, ML2.1/9, 3D, Error ellipse: s-maj=0.5km s-min=0.2km az=34.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.05 135**		⇓P	Pg	05 20 16.3	+0.2
T1204				S	Sg	05 20 17.9	-0.1
T1204				AML	AML		
	comp=E,7700μm,0.9s						
T1204				AML	AML		
	comp=N,4925μm,0.3s						
T1204				AML	AML		
	comp=N,4920μm,0.3s						
T1204				AML	AML		
	comp=E,7695μm,0.9s						
T1201	**Domo (RI)**	**0.06 196**		P	Pg	05 20 16.5	+0.4
T1201				S	Sg	05 20 18.2	+0.4
SMA1	**SAN MARTINO**	**0.09 149**		⇓P	Pg	05 20 16.8	+0.3
SMA1				S	Sg	05 20 18.7	+0.1
SMA1				AML	AML		
	comp=E,3805μm,0.2s						
SMA1				AML	AML		
	comp=N,3590μm,1.3s						
SMA1				AML	AML		
	comp=N,3595μm,1.3s						
T1243	**Rocca Santa Ma**	**0.13 96**		P	Pg	05 20 17.2	+0.2
T1243				S	Sg	05 20 19.8	+0.4
T1245	**Castelsantange**	**0.16 337**		P	Pg	05 20 17.6	+0.2
T1245				S	Sg	05 20 20.6	+0.4
T1245				AML	AML		
	comp=N,36600μm,0.2s						
T1245				AML	AML		
	comp=E,40450μm,0.2s						
T1245				AML	AML		
	comp=E,37550μm,0.2s						
T1245				AML	AML		
	comp=N,33750μm,0.2s						
MMO1	**Montemonaco**	**0.19 12**		P	Pg	05 20 18.2	+0.3
MMO1				S	Sg	05 20 21.5	+0.6

RM33	**Pellescritta (**	**0.20 192**	P	Pg	05 20 18.5	+0.5
RM33			S	Sb	05 20 22.1	-0.9
RM33			AML	AML		
	comp=N,444μm,0.5s					
T1217	**Poggiodomo (PG**	**0.25 271**	P	Pg	05 20 19.1	+0.3
T1217			S	Sg	05 20 23.1	+0.7
T1217			AML	AML		
	comp=N,621μm,0.2s					
T1216	**Preci, Frazion**	**0.26 314**	P	Pg	05 20 19.3	+0.3
T1216			AML	AML		
	comp=E,6435μm,1.2s					
T1216			AML	AML		
	comp=N,8340μm,0.3s					
T1216			AML	AML		
	comp=E,6425μm,1.2s					
T1216			AML	AML		
	comp=N,8335μm,0.3s					
T1216			AML	AML		
	comp=E,423μm,0.3s					
T1216			AML	AML		
	comp=N,554μm,0.7s					
TERO	**Teramo**	**0.26 109**	⇓P	Pg	05 20 19.3	+0.3
TERO			S	Sg	05 20 23.5	+0.8
TERO			AML	AML		
	comp=E,427μm,0.1s					
T1215	**Vallo di Nera,**	**0.31 287**	P	Pg	05 20 20.1	+0.2
T1215			AML	AML		
	comp=E,229μm,0.4s					
GIGS	**Gran Sasso**	**0.34 140**	P	Pg	05 20 20.5	+0.1
GIGS			S	Sg	05 20 25.8	+0.7
GIGS			AML	AML		
	comp=N,56μm,0.1s					
GIGS			AML	AML		
	comp=E,128μm,0.2s					
T1211	**Morro Reatino**	**0.35 240**	S	Sg	05 20 26.0	+0.5
OFFI	**Offida**	**0.38 53**	P	Pb	05 20 22.4	+0.3
OFFI			AML	AML		
	comp=N,1510μm,0.5s					
CSP1	**Cessapalombo**	**0.38 353**	S	Sb	05 20 28.0	-0.2
EL6	**Elcito**	**0.63 349**	S	Sb	05 20 36.0	+0.7
ARVD	**Arcevia**	**0.82 343**	S	Sn	05 20 43.0	0.0

VAO ***31*** *05:44:28.3±0.7, 22°.28S×68°.46W, h62km±6km, mb5.7*
MOS ***31*** *05:44:29.9±1.5, 22°.42S×68°.47W, h97km, mb5.2/9, Error ellipse: s-maj=11.7km s-min=6.5km az=106.3*
NEIC ***31*** *05:44:30.6±2.6, 22°.39S±0°.05×68°.49W±0°.07, h92km±4km, mb5.2/211, Mww5.1, Mwr5.1(GUC), Error ellipse: s-maj=9.2km s-min=6.6km az=83.0*
SJA ***31*** *05:44:30.5±0.7, 22°.47S×68°.66W, h122km±4km, ML5.1, MW4.9*
IDC ***31*** *05:44:31.7±0.3, 22°.48S×68°.52W, h100km±3km, mb4.7/22, mbtmp4.9/27, MS3.7/29, Error ellipse: s-maj=10.8km s-min=9.6km az=100.0*
BJI ***31*** *05:44:32.0±0.0, 22°.50S×68°.50W, h100km, mB5.3/5*
GUC ***31*** *05:44:33.1±0.8, 22°.43S×68°.64W, h105km±4km, ML5.1*
NEIC ***31*** *05:44:33, 22°.47S×68°.61W, h110km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^16 Nm; Mrr 1.21; Mθθ -1.64; Mφφ 0.43; Mrθ 1.22; Mθφ 1.01; Mφr -4.38; Fault plane solution: M0 4.89000×10^16 NP1: φs 266.00000°, δ 19.00000°, λ 18.00000°. NP2: φs 158.00000°, δ 84.00000°, λ 108.00000°. Principal axes: T 5.2219, Plg48.0000°, Azm87.0000°; N -0.7634, Plg18.0000°, Azm336.0000°; P -4.4585, Plg37.0000°, Azm233.0000°;*
GCMT ***31*** *05:44:37.6±0.2, 22°.45S±0°.01×68°.68W±0°.02, h136km±2km, MW5.1/110, Moment Tensor Solution. s44, c48; s110, c170; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr -0.77±.14; Mθθ -0.60±.15; Mφφ 1.37±.18; Mrθ 1.83±.08; Mθφ 1.06±.13; Mφr -4.26±.11; Best double couple: M0 4.89300×10^16 NP1: φs 340.00000°, δ 86.00000°, λ -107.00000°. NP2: φs 238.00000°, δ 18.00000°, λ -13.00000°. Principal axes: T 4.7110, Plg39.0000°, Azm86.0000°; N 0.3620, Plg17.0000°, Azm341.0000°; P -5.0750, Plg46.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=50s. Triangular moment-rate function*

ISC 31 05:44:31.8±0.3, 22°.42S±0°.02×68°.66W±0°.03, h108km±2km, h107km: pP-P, n672, σ1s49/711, mb5.1/171, 28C-8D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.30 230**		P	**Pn**	**05 44 48.4**	**+0.7**
	66μm,0.5s,baz=51,slow=4.5						
LVC				S	**Sn**	**05 45 00.3**	**+0.6**
	55μm,0.4s,baz=170,slow=23,SNR=22						
LVC	**Limon Verde**	**0.30 230**		*e*P	**Pn**	**05 44 48.1**	**+0.3**
LVC				*i* S	**Sn**	**05 45 00.4**	**+0.7**
LVC	**Limon Verde**	**0.30 230**		*e*P	**Pn**	**05 44 48.5**	**+0.7**
LVC				*e*S	**Sn**	**05 45 01.6**	**+1.8**
LVC				IAML		05 45 03.3	
	comp=Z,32μm,0.7s						
AF01	**San Pedro de A**	**0.69 140**			**Pn**	**05 44 51.2**	**+0.9**
AF01	**San Pedro de A**	**0.69 140**		⇓*i*P	**Pn**	**05 44 51.4**	**+1.1**
AF01				*i* S	**Sn**	**05 45 05.9**	**+1.8**
PB09	**IPOC Station P**	**0.82 319**			**Pn**	**05 44 52.1**	**+0.8**
PB09	**IPOC Station P**	**0.82 319**		⇑*i*P	**Pn**	**05 44 52.8**	**+1.5**
PB09				*i* S	**Sn**	**05 45 07.6**	**+1.7**
PB09				IAML		05 45 10.2	
	comp=N,69μm,0.5s						
PB09	**IPOC Station P**	**0.82 319**		*e*P	**Pn**	**05 44 52.8**	**+1.5**
PB09				IAML		05 45 13.3	
	comp=Z,33μm,0.4s						
PB06	**IPOC Station P**	**0.89 251**		Pn	**Pn**	**05 44 52.7**	**+0.8**
PB06	**IPOC Station P**	**0.89 251**		⇑*i*P	**Pn**	**05 44 52.8**	**+0.9**
PB06				*i* S	**Sn**	**05 45 08.1**	**+1.1**
PB06				IAML		05 45 11.8	
	comp=E,32μm,0.8s						
PB03	**IPOC Station P**	**1.08 290**		Pn	**Pn**	**05 44 54.8**	**+0.9**
PB03	**IPOC Station P**	**1.08 290**		⇑*i*P	**Pn**	**05 44 54.8**	**+0.9**
PB03				*i* S	**Sn**	**05 45 11.4**	**+1.0**
PB03				IAML		05 45 12.7	
	comp=E,54μm,0.3s						
PB15	**IPOC Station P**	**1.08 223**		Pn	**Pn**	**05 44 55.1**	**+1.1**
PB15	**IPOC Station P**	**1.08 223**		⇑*i*P	**Pn**	**05 44 55.2**	**+1.1**
PB15				*i* S	**Sn**	**05 45 12.5**	**+1.9**
PB15	**IPOC Station P**	**1.08 223**		*e*P	**Pn**	**05 44 55.0**	**+1.1**
PB15				IAML		05 45 16.1	
	comp=Z,100μm,0.2s						
PB07	**IPOC Station P**	**1.33 301**			**Pn**	**05 44 57.7**	**+1.0**
PB04	**IPOC Station P**	**1.38 273**		Pn	**Pn**	**05 44 58.2**	**+0.9**
PB04	**IPOC Station P**	**1.38 273**		⇑*i*P	**Pn**	**05 44 58.1**	**+0.9**
PB04				*i* S	**Sn**	**05 45 17.8**	**+1.3**
PB04				IAML		05 45 19.8	
	comp=N,30μm,0.4s						
PB01	**IPOC Station P**	**1.57 331**		Pn	**Pn**	**05 45 00.3**	**+0.9**
PB01	**IPOC Station P**	**1.57 331**		⇑*i*P	**Pn**	**05 45 00.4**	**+0.9**
PB01				*i* S	**Sn**	**05 45 21.1**	**+0.7**
PB01				IAML		05 45 22.2	
	comp=E,47μm,0.3s						
PB01	**IPOC Station P**	**1.57 331**		*e*P	**Pn**	**05 45 00.0**	**+0.5**
PB01				*e*S	**Sn**	**05 45 22.3**	**+1.9**
PB01				IAML		05 45 25.9	
	comp=Z,10μm,0.2s						
PB02	**IPOC Station P**	**1.58 313**			**Pn**	**05 45 00.5**	**+0.8**
PB10	**IPOC Station P**	**2.06 238**		Pn	**Pn**	**05 45 05.6**	**+0.1**
PB10	**IPOC Station P**	**2.06 238**		⇑*i*P	**Pn**	**05 45 05.4**	**0.0**
PB10				*i* S	**Sn**	**05 45 30.0**	**-1.1**
PB10				IAML		05 45 35.1	
	comp=N,6μm,0.4s						
PB10	**IPOC Station P**	**2.06 238**		*e*P	**Pn**	**05 45 05.0**	**-0.4**
PB10				*e*S	**Sn**	**05 45 31.6**	**+0.4**
PB10				IAML		05 45 38.7	
	comp=Z,6μm,0.6s						
PATCX	**Punta Patache**	**2.11 319**			**Pn**	**05 45 06.4**	**+0.1**
PATCX	**Punta Patache**	**2.11 319**		⇑*i*P	**Pn**	**05 45 06.3**	**+0.1**
PATCX				*i* S	**Sn**	**05 45 30.6**	**-1.9**
PATCX				IAML		05 45 41.1	
	comp=N,24μm,0.7s						
PATCX	**Punta Patache**	**2.11 319**		*e*P	**Pn**	**05 45 06.0**	**-0.3**
PATCX				*e*P	**Pn**	**05 45 06.7**	**+0.4**
PATCX				IAML		05 45 38.0	
	comp=Z,15μm,0.5s						
PB08	**IPOC Station P**	**2.31 348**		Pn	**Pn**	**05 45 10.6**	**+1.4**
PB08	**IPOC Station P**	**2.31 348**		⇓*i*P	**Pn**	**05 45 10.4**	**+1.3**
PB08				*i* S	**Sn**	**05 45 39.2**	**+1.5**
PB08				IAML		05 45 42.1	
	comp=E,7μm,0.3s						
PB08	**IPOC Station P**	**2.31 348**		*e*P	**Pn**	**05 45 10.0**	**+0.8**
PB08				*e*S	**Sn**	**05 45 40.0**	**+2.4**
PB08				IAML		05 45 42.4	
	comp=Z,5μm,0.3s						
TA01	**Diego Aracena**	**2.32 322**			**Pn**	**05 45 08.6**	**-0.3**
TA01	**Diego Aracena**	**2.32 322**		⇑*i*P	**Pn**	**05 45 08.6**	**-0.3**
TA01				*i* S	**Sn**	**05 45 37.5**	**+0.1**
TA01				IAML		05 45 42.9	
	comp=E,14μm,0.3s						
TA01	**Diego Aracena**	**2.32 322**		*e*P	**Pn**	**05 45 08.8**	**-0.1**
TA01				*e*S	**Sn**	**05 45 40.0**	**+2.7**
TA01				IAML		05 45 49.6	
	comp=Z,8μm,0.6s						
HMBC	**Humberstone**	**2.42 332**		⇑*i*P	**Pn**	**05 45 10.1**	**-0.2**
HMBC				*i* S	**Sn**	**05 45 38.6**	**-1.1**
HMBC				IAML		05 45 41.5	
	comp=E,21μm,0.4s						
TA02	**Huaiquique**	**2.54 327**		Pn	**Pn**	**05 45 11.2**	**-0.5**
TA02	**Huaiquique**	**2.54 327**		*e*P	**Pn**	**05 45 11.2**	**-0.5**
TA02				*i* S	**Sn**	**05 45 38.9**	**-3.4**
TA02	**Huaiquique**	**2.54 327**		*e*P	**Pn**	**05 45 11.3**	**-0.4**
TA02				*e*S	**Sn**	**05 45 43.6**	**+1.3**
TA02				IAML		05 46 12.5	
	comp=Z,6μm,0.8s						
PB14	**IPOC Station P**	**2.72 216**		Pn	**Pn**	**05 45 14.5**	**+0.2**
PB14	**IPOC Station P**	**2.72 216**		⇓*i*P	**Pn**	**05 45 14.5**	**+0.2**
PB14				*i* S	**Sn**	**05 45 44.5**	**-2.4**
PB14				IAML		05 45 53.6	
	comp=N,3μm,0.7s						
PB14	**IPOC Station P**	**2.72 216**		*e*P	**Pn**	**05 45 14.0**	**-0.3**
PB14				*e*S	**Sn**	**05 45 46.5**	**-0.5**
PB14				IAML		05 45 52.6	
	comp=Z,5μm,1.0s						
GO01	**Chusmiza**	**2.78 350**		Pn	**Pn**	**05 45 16.3**	**+0.8**
GO01	**Chusmiza**	**2.78 350**		⇓*i*P	**Pn**	**05 45 16.2**	**+0.8**
GO01				*e*S	**Sn**	**05 45 50.1**	**+1.3**
GO01				IAML		05 45 52.3	
	comp=N,16μm,0.5s						
GO01	**Chusmiza**	**2.78 350**		*e*P	**Pn**	**05 45 16.0**	**+0.6**
GO01				*e*S	**Sn**	**05 45 53.0**	**+4.2**
GO02	**Mina Guanaco**	**2.86 197**		Pn	**Pn**	**05 45 16.4**	**+0.2**
GO02	**Mina Guanaco**	**2.86 197**		⇓*i*P	**Pn**	**05 45 16.4**	**+0.2**
GO02	**Mina Guanaco**	**2.86 197**		*e*P	**Pn**	**05 45 16.0**	**-0.2**
GO02				*e*S	**Sn**	**05 45 52.0**	**+1.7**
YJA	**Yavi**	**2.92 86**		*e*P	**Pn**	**05 45 19.3**	**+2.1**
YJA				*e*S	**Sn**	**05 45 56.8**	**+4.7**
HJA	**Humahuaca**	**3.10 105**		*e*P	**Pn**	**05 45 21.0**	**+1.5**
SLA	**San Lorenzo**	**3.69 129**		*e*P	**Pn**	**05 45 29.9**	**+2.7**
SLA				*e*S	Sn	05 45 55.1	-15
AZAP	**Zapla**	**3.76 119**		*e*P	**Pn**	**05 45 29.3**	**+1.1**
PB12	**IPOC Station P**	**4.10 337**		Pn	**Pn**	**05 45 31.4**	**-1.2**
PB12	**IPOC Station P**	**4.10 337**		*e*S	**Sn**	**05 46 17.8**	**-1.8**
PB12				IAML		05 46 44.0	
	comp=Z,3μm,0.7s						
AC01	**Pan de Azucar**	**4.11 205**		Pn	**Pn**	**05 45 31.2**	**-1.4**
AC01	**Pan de Azucar**	**4.11 205**		⇓*i*P	**Pn**	**05 45 31.1**	**-1.5**
AC01				*i* S	**Sn**	**05 46 15.8**	**-4.0**
AC01	**Pan de Azucar**	**4.11 205**		*e*P	**Pn**	**05 45 31.2**	**-1.4**
AC01				*e*S	**Sn**	**05 46 17.0**	**-2.8**
AC01				IAML		05 46 55.3	
	comp=Z,2μm,0.7s						
PB16	**IPOC Station P**	**4.14 349**		Pn	**Pn**	**05 45 33.5**	**-0.2**
PB16	**IPOC Station P**	**4.14 349**		⇓*i*P	**Pn**	**05 45 33.9**	**+0.3**
PB16	**IPOC Station P**	**4.14 349**		*e*P	**Pn**	**05 45 31.6**	**-2.1**
PB16				*e*P	**Pn**	**05 45 33.9**	**+0.3**
PB16				*e*P	**Pn**	**05 45 34.4**	**+0.8**
PB16				*e*S	Sn	05 46 07.5	-14
PB16				IAML		05 46 54.1	
	comp=Z,2μm,0.7s						
ASTB	**Santa Barbara**	**4.16 112**		*e*P	**Pn**	**05 45 34.7**	**+1.2**
AC02	**Maricunga**	**4.42 185**		Pn	**Pn**	**05 45 37.4**	**+0.2**
AC02	**Maricunga**	**4.42 185**		⇓*i*P	**Pn**	**05 45 37.4**	**+0.2**
AC02	**Maricunga**	**4.42 185**		*e*P	**Pn**	**05 45 37.0**	**-0.2**
AC02				*e*S	**Sn**	**05 46 34.0**	**+6.2**
AC02				IAML		05 47 04.3	
	comp=Z,3μm,0.6s						
ALOL	**LOMAS DE OLMED**	**4.53 109**		*e*P	**Pn**	**05 45 38.0**	**-0.3**
GO03	**Copiap**	**5.34 195**		Pn	**Pn**	**05 45 47.2**	**-2.2**
GO03	**Copiap**	**5.34 195**		*e*P	**Pn**	**05 45 47.5**	**-1.9**
GO03				*e*S	**Sn**	**05 46 48.0**	**-1.7**
LPAZ	**La Paz**	**6.12 5**		P	**Pn**	**05 46 02.0**	**+1.6**
	comp=Z,64nm,0.4s,baz=173,slow=7.0,SNR=531						
LPAZ	**La Paz**	**6.12 5**		Pn	**Pn**	**05 46 01.5**	**+1.1**
LPAZ	**La Paz**	**6.12 5**		P	**Pn**	**05 46 02.0**	**+1.6**
AC04	**Llanos de Chal**	**6.16 200**		Pn	**Pn**	**05 45 56.8**	**-3.5**
AC05	**El Transito**	**6.55 192**		Pn	**Pn**	**05 46 03.3**	**-2.5**
CO01	**Juntas del Tor**	**7.64 189**			**Pn**	**05 46 18.4**	**-2.2**
ZON	**Zonda**	**9.09 180**		Pn	**Pn**	**05 46 37.5**	**-2.7**
ZON	**Zonda**	**9.09 180**		P	**Pn**	**05 46 37.5**	**-2.7**
SIV	**San Ignacio**	**9.61 50**		P	**Pn**	**05 46 43.8**	**-3.4**
	comp=Z,55nm,0.4s,baz=225,slow=9.7,SNR=183						
SIV				S	Sn	05 48 22.5	-11
	comp=Z,100nm,0.8s,baz=301,slow=21,SNR=6.9						
VA06	**Catapilco**	**10.37 192**		Pn	**Pn**	**05 46 54.1**	**-3.3**
ROC1	**El Roble**	**10.72 191**		Pn	**Pn**	**05 47 01.1**	**-1.4**
MT02	**Curacav**	**11.02 191**		Pn	**Pn**	**05 47 04.2**	**-2.0**
CPUP	**Villa Florida**	**11.04 113**		P	**Pn**	**05 47 03.6**	**-2.9**
	comp=Z,41nm,0.7s,baz=292,slow=12,SNR=94						
CPUP				LR	LR	05 51 50.7	
	comp=Z,314nm,19.6s,baz=310,slow=40						
CPUP	**Villa Florida**	**11.04 113**			**Pn**	**05 47 03.8**	**-2.8**
CPUP	**Villa Florida**	**11.04 113**		P	**Pn**	**05 47 03.8**	**-2.8**
MT05	**Renca**	**11.08 189**		Pn	**Pn**	**05 47 07.3**	**+0.1**
MT03	**Universidad Ad**	**11.15 188**		Pn	**Pn**	**05 47 04.9**	**-3.3**
LMEL	**Las Melosas**	**11.47 186**		Pn	**Pn**	**05 47 09.0**	**-3.4**
VA05	**Santo Domingo**	**11.49 192**		Pn	**Pn**	**05 47 10.2**	**-2.4**
MT09	**Talagante**	**11.50 190**		Pn	**Pn**	**05 47 10.7**	**-2.1**
MT01	**Popeta**	**11.63 191**		Pn	**Pn**	**05 47 10.8**	**-3.6**
BO01	**Tunca**	**12.12 190**		Pn	**Pn**	**05 47 18.5**	**-2.3**
AQDB	**Aquidauana**	**12.22 83**			**Pn**	**05 47 18.8**	**-3.6**
BO02	**Sierra Bellavi**	**12.47 188**		Pn	**Pn**	**05 47 24.1**	**-1.5**
ETMB	**Extrema**	**12.75 11**		*e*P	Pn	05 47 23.2	-6.1
AZCA	**Azaras, Argent**	**12.78 119**		*e*P	**Pn**	**05 47 26.2**	**-3.4**
GO05	**Huala**	**12.87 192**		Pn	**Pn**	**05 47 27.4**	**-3.3**
NNA	**Nana**	**12.98 322**		P	**Pn**	**05 47 33.9**	**+1.5**
	comp=Z,2.5nm,0.3s,baz=86,slow=15,SNR=2.1						
NNA				S	**Sn**	**05 49 53.4**	**-2.0**
	comp=Z,8.0nm,0.4s,baz=302,slow=5.1,SNR=3.8						
ITQB	**Itaqui**	**13.00 126**		Pn	**Pn**	**05 47 29.8**	**-2.7**
ITQB	**Itaqui**	**13.00 126**		*e*P	**Pn**	**05 47 29.2**	**-3.3**
ML02	**Panimavida**	**13.51 190**		Pn	**Pn**	**05 47 37.0**	**-2.1**
MCR1	**Marechal Candi**	**13.58 101**		*e*P	**Pn**	**05 47 35.4**	**-4.7**
SALV	**Santo Antonio**	**13.86 64**		*e*P	Pn	05 47 38.7	-5.1
UNIS	**Unistalda (Bra**	**13.92 121**		*e*P	**Pn**	**05 47 42.1**	**-2.3**
RPRD	**Ribas do Rio P**	**14.06 85**		*e*P	Pn	05 47 41.6	-4.8
CRSM	**Crissiumal (Br**	**14.19 114**		*e*P	**Pn**	**05 47 44.7**	**-3.2**
VA04	**Juan Fernndez**	**14.33 217**		Pn	**Pn**	**05 47 47.5**	**-2.1**
RODS	**Rosario do Sul**	**14.41 126**		*e*P	**Pn**	**05 47 48.6**	**-2.1**
FRBT	**Francisco Belt**	**14.67 107**		*e*P	**Pn**	**05 47 50.8**	**-3.3**
BI05	**Punta Hualpn**	**14.81 194**		Pn	**Pn**	**05 47 54.5**	**-1.2**
TRCB	**Terra Rica**	**14.81 95**		Pn	**Pn**	**05 47 52.0**	**-3.9**
TRCB	**Terra Rica**	**14.81 95**		*e*P	**Pn**	**05 47 51.8**	**-4.1**
CZSB	**Cruzeiro do Su**	**15.12 344**		*e*P	**Pn**	**05 47 56.5**	**-3.3**
C2SB	**Chapadao do Su**	**15.26 79**		*e*P	**Pn**	**05 47

LL04	Puerto Octay	18.70	189	P	P	05 48 40.3	-1.5
BB19B	Bebedouro	18.75	90	eP	P	05 48 40.9	-1.7
LL03	Petrohue	18.93	189	P	P	05 48 43.3	-0.9
LL05	Los Muermos	19.36	191	P	P	05 48 48.6	-0.3
RCLB	Rio Claro- Sao	19.54	94	eP	P	05 48 48.8	-2.3
SNDB	Serra Nova Dou	19.55	61	eP	P	05 48 49.0	-2.3
IPMB	Ipameri, GO	19.69	81	eP	P	05 48 50.8	-2.0
PET01	Itanhaem-SP	19.72	100	eP	P	05 48 51.1	-1.9
NPGB	Novo Progresso	19.95	42	eP	P	05 48 52.6	-3.0
VAO	Valinhos	20.02	96	eP	P	05 48 54.5	-1.9
LL01	San Ignacio de	20.15	188	P	P	05 48 57.6	+0.2
BDFB	Brasília	20.64	75	P	P	05 49 00.8	-2.3
	comp=Z,143nm,0.7s,baz=258,slow=12,SNR=194						
BDFB				LR	LR	05 58 40.6	
	comp=Z,395nm,19.0s,baz=280,slow=41						
	comp=Z,143nm,0.7s						
BDFB	Brasilia	20.64	75	P	P	05 49 00.9	-2.2
BDFB	Brasilia	20.64	75	eP	P	05 49 00.8	-2.3
MACA	Manacapuru-AM	20.65	23	eP	P	05 49 00.9	-2.2
LL02	Futaleuf	20.88	187	P	P	05 49 04.8	-0.5
GO07	Milladeo Hill,	21.05	190	P	P	05 49 06.8	-0.3
PMNB	Patos De Minas	21.17	84	eP	P	05 49 05.9	-2.9
PARB	Paraibuna	21.25	97	eP	P	05 49 06.9	-2.6
BOSC	San Juan Bosco	21.40	332	P	P	05 49 12.5	+1.3
ITTB	Itaituba	21.88	37	eP	P	05 49 12.9	-3.3
AY01	Puyuhuapi	22.19	188	P	P	05 49 17.9	-1.3
SGCB	SCo Gabriel d	22.22	4	eP	P	05 49 18.4	-1.4
BSCB	Bom Sucesso	22.24	91	eP	P	05 49 17.8	-2.2
COHC	Cochancay	22.34	331	P	P	05 49 22.2	+1.1
COYC	Coyhaique	23.26	186	P	P	05 49 29.0	-0.8
PULU	Pululahua	24.28	335	P	P	05 49 42.9	+3.2
TULM	Tulcn-Chalpat	24.66	338	P	P	05 49 45.8	+2.5
MALB	Monte Alegre	24.77	36	eP	P	05 49 41.5	-2.2
BOAV	Boa Vista	25.91	19	eP	P	05 49 54.2	+0.1
SJMB	Sao Joao De Ma	25.98	87	eP	P	05 49 53.1	-1.6
TUMC	Tumaco	26.02	337	P	P	05 49 54.6	-0.4
ALF01	Guarapari-ES	26.04	91	eP	P	05 49 53.5	-1.7
MCPB	Macapa, AP	27.24	39	eP	P	05 50 04.5	-1.5
ROSC	El Rosal	27.65	348	P	P	05 50 11.7	+1.6
	comp=Z,4.7nm,0.6s,baz=79,slow=16,SNR=4.0						
ROSC				LR	LR	06 03 43.1	
	comp=Z,201nm,19.1s,baz=196,slow=42						
	comp=Z,4.7nm,0.6s						
ROSC	El Rosal	27.65	348	P	P	05 50 08.9	-1.1
ROSC				IAmb	IAmb	05 50 55.3	
	comp=Z,42nm,1.2s						
ROSC	El Rosal	27.65	348	P	P	05 50 09.0	-1.1
ROSC				pmax	pmax		
	comp=Z,42nm,1.2s						
GUA01	Guaratinga, BA	27.79	83	eP	P	05 50 09.2	-1.7
TMAB	Tom-Au,PA,Br	28.21	48	eP	P	05 50 13.5	-1.2
RUSC	La Rusia	28.47	351	P	P	05 50 17.3	-0.2
RUSC				IAmb	IAmb	05 51 06.6	
	comp=Z,74nm,0.9s						
MG05	Puerto Natales	29.36	185	P	P	05 50 24.1	-0.3
MG05				IAmb	IAmb	05 50 25.7	
	comp=Z,54nm,0.8s						
MG02	Cerro Sombrero	30.31	181	P	P	05 50 32.8	0.0
EFI	East Falkland	30.34	167	eP	P	05 50 31.3	-1.8
EFI				pmax	pmax		
	comp=Z,13nm,0.8s						
ROSB	Rosrio	30.71	54	eP	P	05 50 35.4	-1.5
GO10	Punta Arenas	30.74	183	P	P	05 50 36.5	-0.2
SDV	Santo Domingo	31.17	356	LR	LR	06 05 33.1	
	comp=Z,129nm,20.6s,baz=232,slow=40						
SDV	Santo Domingo	31.17	356	eP	P	05 50 41.8	+0.7
BAUV	El Baul	31.18	1	P	P	05 50 38.2	-2.6
BAUV				IAmb	IAmb	05 51 21.9	
	comp=Z,35nm,0.8s						
MDP	Montagnes des	31.53	32	LR	LR	06 04 21.8	
	comp=Z,318nm,19.9s,baz=209,slow=38						
MPGF	Montagnes des	31.53	32	P	P	05 50 42.6	-1.4
MPGF				pP	pP	05 51 06.4	-2.9
TOSP	Speyside	34.44	14	P	P	05 51 09.2	-0.1
GRGR	Grenville	35.02	12	P	P	05 51 13.5	-0.8
RCBR	Riachuelo	35.67	67	P	P	05 51 18.8	-1.2
	comp=Z,166nm,0.7s,baz=37,slow=13,SNR=82						
RCBR				LR	LR	06 05 18.4	
	comp=Z,170nm,20.6s,baz=20,slow=35						
RCBR	Riachuelo	35.67	67	P	P	05 51 19.1	-0.9
RCBR	Riachuelo	35.67	67	P	P	05 51 19.1	-0.9
RCBR				pmax	pmax		
	comp=Z,164nm,0.8s						
RCBR	Riachuelo	35.67	67	eP	P	05 51 19.2	-0.8
RCBR	Riachuelo	35.67	67	P	P	05 51 18.7	-1.3
SVB	Belmont	36.21	12	P	P	05 51 22.6	-1.8
MCLT	Moule a Chique	36.70	13	P	P	05 51 26.8	-1.8
RPN	Rapa Nui	37.11	254	LR	LR	06 03 40.0	
	comp=Z,107nm,20.3s,baz=120,slow=31						
MPOM	Morne Pois Mar	37.43	12	P	P	05 51 33.2	-1.5
BIM	Bigot	37.45	12	P	P	05 51 33.7	-1.4
FDF	Fort de France	37.65	12	P	P	05 51 34.6	-2.0
FDF	Fort de France	37.65	12	P	P	05 51 34.7	-2.0
FDF				pmax	pmax		
	comp=Z,101nm,0.5s						
FDF	Fort de France	37.65	12	P	P	05 51 34.3	-2.4
ILAM	Ilet Lapin Mar	37.74	12	P	P	05 51 36.8	-0.6
BOAB	BOACO BROADBAN	38.45	333	P	P	05 51 43.6	+0.2
BOAB				IAmb	IAmb	05 52 15.6	
	comp=Z,37nm,1.0s						
MAGL	Barre de l'ile	38.81	11	P	P	05 51 45.5	-0.8
CBE	Ff, Capester	38.87	11	P	P	05 51 46.9	0.0
CBE				IAmb	IAmb	05 51 55.4	
	comp=Z,22nm,0.6s						
GDHS	Morne Mazeau,	39.04	11	P	P	05 51 45.6	-2.7
GDHS				IAmb	IAmb	05 51 53.2	
	comp=Z,21nm,0.8s						
HOPE	Hope Point	39.97	151	P	P	05 51 55.6	+0.1
HOPE	Hope Point	39.97	151	P	P	05 51 55.6	+0.1
HOPE				pmax	pmax		
	comp=Z,100nm,1.2s						
HOPE	Hope Point	39.97	151	P	P	05 51 57.3	+1.8
HOPE				pP	pP	05 52 24.5	+3.6
HOPE				sP	sP	05 52 35.5	+2.1
CDVI	St. Croix	40.11	6	P	P	05 51 57.0	-0.1
CDVI				IAmb	IAmb	05 52 00.8	
	comp=Z,20nm,0.7s						
MLPR	Magueyes Islan	40.17	2	P	P	05 51 55.7	-1.9
MLPR				IAmb	IAmb	05 52 36.8	
	comp=Z,40nm,1.2s						
CRPR	Cabo Rojo, PR	40.21	2	P	P	05 51 56.0	-1.9
CELP	Cerrillos	40.30	3	P	P	05 51 56.5	-2.2
CELP				IAmb	IAmb	05 52 05.2	
	comp=Z,30nm,0.7s						
SJG	San Juan	40.36	4	P	P	05 51 57.0	-2.1
SJG				IAmb	IAmb	05 52 41.2	
	comp=Z,34nm,0.7s						
SJG	San Juan	40.36	4	P	P	05 51 57.0	-2.1
SJG				pmax	pmax		
	comp=Z,34nm,0.7s						
SJG	San Juan	40.36	4	P	P	05 51 56.5	-2.6
SJG				sP	sP	05 52 34.9	-2.6
MTP	Monte Pirata	40.38	5	P	P	05 51 56.0	-3.4
ANWB	Willy Bob	40.41	10	P	P	05 51 59.7	+0.1
HUMP	Col San Antoni	40.41	4	P	P	05 51 57.5	-2.0
HUMP				IAmb	IAmb	05 52 39.1	
	comp=Z,33nm,1.4s						
PRSN	Puerto Rico Se	40.41	2	P	P	05 51 58.2	-1.4
PRSN				IAmb	IAmb	05 52 41.9	
	comp=Z,30nm,0.8s						
CBYP	Canovanas	40.53	4	P	P	05 51 58.1	-2.5
CBYP				IAmb	IAmb	05 52 39.4	
	comp=Z,33nm,1.1s						
GCPR	Guaynabo City	40.56	4	P	P	05 51 58.4	-2.4
GCPR				IAmb	IAmb	05 52 28.5	
	comp=Z,14nm,0.7s						
AOPR	Arecibo Observ	40.56	3	P	P	05 51 59.1	-1.8
AOPR				IAmb	IAmb	05 52 06.6	
	comp=Z,91nm,1.5s						
BANI	BANI	40.60	358	P	P	05 51 58.3	-3.0
SJVI	Gifft Hill Sch	40.68	6	P	P	05 51 59.8	-2.0
STVI	Saint Thomas	40.68	5	P	P	05 51 59.5	-2.3
STVI				IAmb	IAmb	05 52 07.0	
	comp=Z,42nm,1.6s						
PCDR	Punta Cana, DR	40.68	0	P	P	05 52 01.0	-0.8
MTDJ	Mount Denham	41.32	347	P	P	05 52 07.1	0.0
MTDJ				IAmb	IAmb	05 52 46.9	
	comp=Z,66nm,1.4s						
PMSA	Palmer Station	42.45	177	P	P	05 52 16.5	+0.8
	comp=Z,32nm,0.8s,baz=6.9,slow=4.7,SNR=4.5						
PMSA				LR	LR	06 11 14.3	
	comp=Z,89nm,18.6s,baz=328,slow=38						
	comp=Z,32nm,0.8s						
PMSA	Palmer Station	42.45	177	P	P	05 52 17.5	+1.8
SMAI	San Martin Ant	45.72	179	P	P	05 52 43.1	+1.3
SMAI				IAmb	IAmb	05 52 44.1	
	comp=Z,89nm,1.6s						
TEIG	Tepich	46.51	334	P	P	05 52 48.7	+0.1
TEIG	Tepich	46.51	334	P	P	05 52 48.3	-0.3
TEIG				pP	pP	05 53 15.7	+0.9
TEIG				sP	sP	05 53 28.2	+0.9
TLIG	Tlapa	49.35	321	P	P	05 53 11.0	+0.3
TLIG				IAmb	IAmb	05 53 40.3	
	comp=Z,24nm,1.0s						
060A	Indiantown	50.45	346	P	P	05 53 20.4	+1.8
656A	Williston	53.19	345	P	P	05 53 39.1	+0.2
456A	Hilliard	54.38	346	P	P	05 53 48.2	+0.6
BBSR	BB Station	54.61	4	P	P	05 53 48.7	-0.5
BBSR	BB Station	54.61	4	P	P	05 53 47.1	-2.2
BBSR				pP	pP	05 54 14.1	-2.2
BBSR				sP	sP	05 54 29.1	+0.6
ZAIG	Zacatecas	55.74	321	P	P	05 53 58.8	+0.8
352A	Blakely	55.81	343	P	P	05 53 57.8	-0.1
352A				IAmb	IAmb	05 54 27.7	
	comp=Z,23nm,1.0s						
BRAL	Brewton	56.13	341	P	P	05 54 00.6	+0.5
	baz=160						
CSU	Charleston Sou	56.16	348	P	P	05 54 00.7	+0.3
NHSC	New Hope	56.30	348	P	P	05 54 02.1	+0.8
	baz=167						
250A	Grady	56.65	342	P	P	05 54 04.5	+0.7
250A				IAmb	IAmb	05 54 34.7	
	comp=Z,34nm,1.2s						
Y58A	Scranton	56.98	349	P	P	05 54 05.0	-1.2
Y57A	Sumter	57.22	348	P	P	05 54 07.5	-0.3
Y57A				IAmb	IAmb	05 54 38.9	
	comp=Z,40nm,1.2s						
X58A	Rowland	57.56	350	P	P	05 54 10.7	+0.5
X58A				IAmb	IAmb	05 54 41.2	
	comp=Z,22nm,0.7s						
X58A	Rowland	57.56	350	P	P	05 54 10.4	+0.2
	baz=168,SNR=5.1						
X58A				P	P	05 54 10.4	+0.2
	baz=168,SNR=5.1						
JSC	Jenkinsville	57.65	348	P	P	05 54 10.9	+0.1
JSC				IAmb	IAmb	05 54 41.0	
	comp=Z,35nm,1.6s						
JSC	Jenkinsville	57.65	348	P	P	05 54 10.9	+0.1
JSC				pmax	pmax		
	comp=Z,35nm,1.6s						
BELA	Belgrano 2	57.81	172	P	P	05 54 12.4	+0.9
BELA				IAmb	IAmb	05 54 13.5	
	comp=Z,17nm,1.0s						
BIRD	Birdtown, Kers	57.85	349	P	P	05 54 12.3	+0.1
BIRD				IAmb	IAmb	05 54 42.0	
	comp=Z,25nm,0.8s						
BIRD	Birdtown, Kers	57.85	349	P	P	05 54 12.8	+0.6
	baz=167,SNR=6.7						
LRAL	Lakeview Retre	57.85	342	P	P	05 54 12.4	+0.1
LRAL				IAmb	IAmb	05 54 42.4	
	comp=Z,33nm,1.8s						
LRAL	Lakeview Retre	57.85	342	P	P	05 54 12.7	+0.4
	baz=160						
342B	Flagon Creek P	58.10	336	P	P	05 54 14.4	+0.4
	baz=154,SNR=5.5						
W57A	Gilead	58.26	349	P	P	05 54 15.6	+0.6
W57A				IAmb	IAmb	05 54 44.7	
	comp=Z,18nm,0.9s						
W57A	Gilead	58.26	349	P	P	05 54 15.6	+0.6
	baz=168,SNR=6.2						
W57A				P	P	05 54 15.6	+0.6
	baz=168,SNR=6.2						
HKT	Hockley	58.26	332	eP	P	05 54 15.4	+0.3
HKT				pmax	pmax		
	comp=Z,8.0nm,1.8s						
PAULI	Pauline	58.28	347	P	P	05 54 15.5	+0.3
PAULI				IAmb	IAmb	05 54 55.5	
	comp=Z,22nm,1.3s						
KMSC	Kings Mountain	58.49	348	P	P	05 54 17.2	+0.5
KMSC				IAmb	IAmb	05 55 02.3	
	comp=Z,15nm,1.1s						
KMSC	Kings Mountain	58.49	348	P	P	05 54 17.0	+0.3
	baz=166						
KMSC	Kings Mountain	58.49	348	P	P	05 54 17.6	+0.9
	baz=166						
833A	Chaparral WMA,	58.52	328	P	P	05 54 17.4	+0.4
833A	Chaparral WMA,	58.52	328	P	P	05 54 17.7	+0.7
	baz=146,SNR=11						
X51A	Calhoun	58.73	344	P	P	05 54 18.4	+0.1
	baz=162						
X51A				P	P	05 54 18.4	+0.1
	baz=162						
V58A	Windy Hill, Pi	58.74	350	P	P	05 54 18.1	-0.3
V58A				IAmb	IAmb	05 54 19.5	
	comp=Z,15nm,0.8s						
V58A	Windy Hill, Pi	58.74	350	P	P	05 54 18.3	0.0
	baz=169,SNR=5.7						
V58A				P	P	05 54 18.3	0.0
	baz=169,SNR=5.7						
VNA3	Neumayer Olymp	59.13	161	P	P	05 54 21.3	+0.5
V55A	Taylorsville	59.16	348	IAmb	IAmb	05 54 52.6	
	comp=Z,27nm,1.0s						
V55A	Taylorsville	59.16	348	P	P	05 54 22.1	+0.8
	baz=166,SNR=5.9						
V55A				P	P	05 54 22.1	+0.8
	baz=166,SNR=5.9						
X48A	Hartselle	59.20	342	P	P	05 54 21.6	-0.1
X48A				IAmb	IAmb	05 54 52.5	
	comp=Z,30nm,1.1s						
X48A	Hartselle	59.20	342	P	P	05 54 21.5	-0.1
	baz=160						
VNA1	Neumayer--Stat	59.34	160	P	P	05 54 23.1	+0.9
Y45A	Yeager Farm, C	59.40	340	P	P	05 54 23.2	+0.2
	baz=158						
SHEL	Horse Pasture	59.41	96	P	P	05 54 24.0	+0.4
SHEL	Horse Pasture	59.41	96	P	P	05 54 24.0	+0.4
SHEL				pmax	pmax		
	comp=Z,157nm,0.8s						
SHEL	Horse Pasture	59.41	96	P	P	05 54 23.7	+0.1
SHEL				pP	pP	05 54 50.5	-0.6
W50A	Signal Mountai	59.44	344	IAmb	IAmb	05 55 04.2	
	comp=Z,18nm,1.0s						
W50A	Signal Mountai	59.44	344	P	P	05 54 23.1	-0.3
	baz=162						
CPCT	Cooper Cave	59.48	345	P	P	05 54 23.2	-0.4
CPCT				IAmb	IAmb	05 54 52.2	
	comp=Z,11nm,0.9s						
U56A	King	59.49	349	P	P	05 54 24.5	+0.9
	baz=167						
U56A				P	P	05 54 24.5	+0.9
	baz=167						
TKL	Tuckaleechee C	59.51	346	LR	LR	06 23 13.1	
	comp=Z,48nm,18.6s,baz=176,slow=39						
TKL	Tuckaleechee C	59.51	346	P	P	05 54 23.1	-0.7
TKL				IAmb	IAmb	05 54 53.9	
	comp=Z,18nm,1.0s						
TKL	Tuckaleechee C	59.51	346	P	P	05 54 23.1	-0.7
TKL				pmax	pmax		
	comp=Z,18nm,1.0s						
TKL	Tuckaleechee C	59.51	346	P	P	05 54 23.4	-0.3
	baz=164						
SWET	Sewanee	59.62	344	P	P	05 54 24.1	-0.4
SWET				IAmb	IAmb	05 54 54.5	
	comp=Z,18nm,0.9s						
V52A	Sevierville	59.65	346	P	P	05 54 24.2	-0.4
V52A				IAmb	IAmb	05 54 55.0	
	comp=Z,34nm,1.1s						
V52A	Sevierville	59.65	346	P	P	05 54 24.4	-0.3
	baz=164						
T59A	Double "B" Far	59.66	352	P	P	05 54 24.6	-0.2
T59A				IAmb	IAmb	05 54 25.9	
	comp=Z,20nm,0.8s						
T59A	Double "B" Far	59.66	352	P	P	05 54 24.9	+0.1
	baz=170,SNR=6.1						
T59A				P	P	05 54 24.9	+0.1
	baz=170,SNR=6.1						
VNA2	Neumayer--Watz	59.71	160	P	P	05 54 25.1	+0.3
	baz=285,slow=8.0						
435B	Jarrell	59.74	331	P	P	05 54 26.2	+0.8
	baz=149						
U54A	Nelsons Funny	59.93	348	P	P	05 54 26.2	-0.5
U54A	Nelsons Funny	59.93	348	P	P	05 54 26.7	+0.1
	baz=166,SNR=5.3						
U54A				P	P	05 54 26.7	+0.1
	baz=166,SNR=5.3						
T57A	Hurt	59.94	350	P	P	05 54 25.5	-1.1
T57A				pP	pP	05 54 49.9	-4.3
T57A				IAmb	IAmb	05 54 58.8	
	comp=Z,30nm,1.2s						
T57A	Hurt	59.94	350	P	P	05 54 27.2	+0.5
	baz=169,SNR=6.1						
T57A				P	P	05 54 27.2	+0.5
	baz=169,SNR=6.1						
OXF	Oxford	59.95	340	P	P	05 54 25.7	-1.1
OXF				pP	pP	05 54 49.6	-4.5
OXF	Oxford	59.95	340	P	P	05 54 25.7	-1.1
OXF				*PP	pP	05 54 49.7	-4.5
OXF	Oxford	59.95	340	P	P	05 54 26.8	0.0
	baz=158						
PLAL	Pickwick Lake	59.99	342	P	P	05 54 25.9	-1.1
PLAL				IAmb	IAmb	05 54 57.5	
	comp=Z,15nm,1.0s						
TZTN	Tazewell	60.31	346	P	P	05 54 29.3	+0.1
	baz=164						
BLA	Blacksburg	60.34	349	P	P	05 54 29.9	+0.4
	baz=168						
V48A	Smith Brothers	60.35	343	IAmb	IAmb	05 54 59.5	
	comp=Z,24nm,1.1s						
V48A	Smith Brothers	60.35	343	P	P	05 54 29.3	-0.2
	baz=161,SNR=7.0						
WLAR	White Oak Lake	60.46	337	P	P	05 54 31.3	+1.0
W45A	Hickory Valley	60.48	341	P	P	05 54 29.6	-0.7
JCT	Junction City	60.51	329	P	P	05 54 30.9	+0.2
JCT				IAmb	IAmb	05 55 02.0	
	comp=Z,22nm,0.9s						
JCT	Junction City	60.51	329	P	P	05 54 30.9	+0.2
JCT				pmax	pmax		
	comp=Z,22nm,1.0s						
JCT	Junction City	60.51	329	P	P	05 54 31.4	+0.7
	baz=147,SNR=8.5						
JCT	Junction City	60.51	329	P	P	05 54 31.6	+0.9
	baz=147,SNR=8.5						
CLTN	Cedars of Leba	60.55	344	IAmb	IAmb	05 55 00.9	
	comp=Z,17nm,0.9s						
S57A	Dark Hollow, R	60.64	351	P	P	05 54 31.9	+0.5
	baz=169,SNR=6.6						
S57A				P	P	05 54 31.9	+0.5
	baz=169,SNR=6.6						
R58B	Mineral	60.68	352	IAmb	IAmb	05 54 33.1	
	comp=Z,19nm,0.9s						
R58B	Mineral	60.68	352	P	P	05 54 32.2	+0.5
	baz=170,SNR=7.8						
R58B				P	P	05 54 32.2	+0.5
	baz=170,SNR=7.8						
WHTX	Lake Whitney,	60.72	332	P	P	05 54 32.8	+0.7
	baz=149						
HPIG		60.73	322	IAmb	IAmb	05 55 02.5	
	comp=Z,25nm,1.2s						
U49A	Red Boiling Sp	60.80	344	IAmb	IAmb	05 55 02.6	
	comp=Z,17nm,1.1s						
SLBS	Sierra La Lagu	60.92	316	P	P	05 54 35.4	+1.7
SLBS				pP	pP	05 55 03.1	+2.1
SLBS				sP	PcP	05 55 15.7	-0.5
WVT	Waverly	60.99	342	P	P	05 54 33.3	-0.5
WVT				IAmb	IAmb	05 55 04.4	
	comp=Z,42nm,1.1s						
WVT	Waverly	60.99	342	P	P	05 54 33.3	-0.5
WVT				pmax	pmax		
	comp=Z,42nm,1.1s						
WVT	Waverly	60.99	342	P	P	05 54 33.3	-0.5
	baz=160,SNR=10						
WVT	Waverly	60.99	342	P	P	05 54 33.1	-0.7
	baz=160						
WVT	Waverly	60.99	342	P	P	05 54 32.8	-1.0
WVT				pP	pP	05 55 00.8	-0.6
WVT				sP	PcP	05 55 15.2	-0.9
T50A	Nancy	61.06	345	P	P	05 54 33.9	-0.4
S54A	Dingess, Beckl	61.07	349	IAmb	IAmb	05 55 06.1	
	comp=Z,26nm,0.8s						
R55A	Marlinton	61.33	350	P	P	05 54 37.5	+1.3
R55A	Marlinton	61.33	350	P	P	05 54 37.2	+1.0
	baz=168						
R55A				P	P	05 54 37.2	+1.0
	baz=168						
SNAA	Sanae	61.34	161	P	P	05 54 36.0	+0.1
SNAA	Sanae	61.34	161	P	P	05 54 36.2	+0.4
	comp=Z,7.8nm,0.7s,baz=279,slow=7.3,SNR=59						
SNAA				LR	LR	06 21 18.5	
	comp=Z,20nm,18.6s,baz=326,slow=36						
	comp=Z,7.8nm,0.7s						
SNAA	Sanae	61.34	161	P	P	05 54 36.3	+0.4
SNAA				IAmb	IAmb	05 55 08.7	
	comp=Z,18nm,0.9s						
SNAA	Sanae	61.34	161	eP	P	05 54 35.8	0.0
SNAA	Sanae	61.34	161	P	P	05 54 36.3	+0.4
SNAA				pmax	pmax		
	comp=Z,18nm,0.9s						
MIAR	Mount Ida	61.40	337	P	P	05 54 37.1	+0.5
MIAR				IAmb	IAmb	05 55 07.6	
	comp=Z,21nm,1.0s						
MIAR	Mount Ida	61.40	337	P	P	05 54 37.2	+0.5
MIAR				pmax	pmax		
	comp=Z,21nm,1.0s						
MIAR	Mount Ida	61.40	337	P	P	05 54 36.9	+0.3
	baz=154,SNR=5.6						
MIAR	Mount Ida	61.40	337	P	P	05 54 37.0	+0.3
	baz=154						
TXAR	Lajitas Array	61.51	325	P	P	05 54 38.4	+0.7
	comp=Z,1.1nm,0.6s,baz=151,slow=8.8,SNR=20						
TXAR				pP	pP	05 55 05.5	+0.4
	comp=Z,6.1nm,0.9s,baz=151,slow=9.0,SNR=19						
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	61.51	325	P	P	05 54 37.8	+0.2
TX31	Lajitas Ar. Si	61.51	325	P	P	05 54 38.2	+0.6
TX31				IAmb	IAmb	05 55 07.8	
	comp=Z,32nm,1.1s						
TX31	Lajitas Ar. Si	61.51	325	P	P	05 54 38.6	+1.0
	baz=143,SNR=6.5						
TX32	Lajitas Array	61.51	325	P	P	05 54 38.1	+0.5
T47A	Sharon Grove	61.60	343	P	P	05 54 36.9	-1.0
T47A	Sharon Grove	61.60	343	P	P	05 54 37.4	-0.5
	baz=161,SNR=5.2						
Q56A	Snyder Ridge,	61.93	351	IAmb	IAmb	05 55 23.1	
	comp=Z,28nm,0.8s						
Q56A	Snyder Ridge,	61.93	351	P	P	05 54 41.5	+1.4
	baz=169,SNR=5.5						
Q56A				P	P	05 54 41.5	+1.4
	baz=169,SNR=5.5						
FCAR	Ozark Folk Cen	62.10	339	P	P	05 54 40.5	-0.8
FCAR				IAmb	IAmb	05 55 11.6	
	comp=Z,19nm,1.2s						
X37A	Clayton	62.12	335	P	P	05 54 41.6	+0.1
X37A				IAmb	IAmb	05 55 12.0	
	comp=Z,22nm,0.8s						
X37A	Clayton	62.12	335	P	P	05 54 42.7	+1.2
	baz=152,SNR=6.2						
P57A	Homestead Farm	62.20	352	P	P	05 54 43.1	+1.2
P57A				IAmb	IAmb	05 54 43.7	
	comp=Z,14nm,0.8s						
ABTX	Abilene, Hawle	62.23	331	P	P	05 54 42.9	+0.7
	baz=148,SNR=8.6						
ABTX	Abilene, Hawle	62.23	331	P	P	05 54 42.9	+0.7
	baz=148,SNR=8

comp=Z,18nm,0.8s
CCM Cathedral Cave 63.79 340 P P 05 54 52.5 0.0
CCM pmax pmax
comp=Z,18nm,0.8s
CCM Cathedral Cave 63.79 340 P P 05 54 52.4 0.0
baz=157
CCM Cathedral Cave 63.79 340 P P 05 54 52.1 -0.3
CCM pP **pP** **05 55 20.1 -0.1**
CCM sP **sP** **05 55 32.7 +0.4**
OK031 S. Brethren Rd 63.89 335 IAmb IAmb 05 55 23.0
comp=Z,26nm,0.9s
OK034 N. Norfolk Rd. 63.89 335 IAmb IAmb 05 55 23.7
comp=Z,24nm,1.0s
OK029 Liberty Lake 64.00 334 IAmb IAmb 05 55 23.5
comp=Z,35nm,1.1s
S39A Bolivar 64.14 338 IAmb IAmb 05 55 24.0
comp=Z,19nm,0.7s
S39A Bolivar 64.14 338 P P 05 54 55.2 +0.5
baz=155,SNR=5.7
O48B Farmland 64.22 346 P P 05 54 54.8 -0.4
baz=163
OK044 Pawnee Station 64.24 335 IAmb IAmb 05 55 37.8
comp=Z,25nm,0.9s
R40A Maddies Statio 64.33 340 P P 05 54 55.7 -0.2
R40A IAmb IAmb 05 55 25.0
comp=Z,12nm,0.7s
OK048 Pawnee Station 64.33 335 P P 05 54 56.6 +0.6
OK048 IAmb IAmb 05 55 25.9
comp=Z,20nm,0.7s
OK045 Pawnee Station 64.35 335 P P 05 54 56.4 +0.2
OK045 pP **pP** **05 55 18.7 -5.3**
OK045 IAmb IAmb 05 55 27.0
comp=Z,47nm,1.1s
OK051 E0350 and S346 64.37 335 P 05 54 56.3 0.0
OK051 pP **pP** **05 55 19.8 -4.3**
OK051 IAmb IAmb 05 55 27.2
comp=Z,43nm,1.0s
OK049 E0420 Rd and N 64.47 335 P P 05 54 56.8 -0.2
OK049 pP **pP** **05 55 21.1 -3.7**
OK049 IAmb IAmb 05 55 27.1
comp=Z,24nm,0.9s
M53A WI Miller and 64.50 350 P P 05 54 57.3 +0.3
baz=168
BINY Binghamton 64.65 354 P P 05 54 58.6 +0.6
baz=172
L61B Northampton 64.65 357 P P 05 54 58.7 +0.8
baz=176
HRV Adam Dziewonsk 64.65 358 P P 05 54 58.1 +0.1
baz=177
SFIN Lafayette 64.79 345 P P 05 55 00.1 +1.2
baz=161
MSTX Muleshoe 64.80 329 IAmb IAmb 05 55 29.9
comp=Z,29nm,0.9s
MSTX Muleshoe 64.80 329 P P 05 54 59.8 +0.5
baz=145,SNR=9.4
MSTX Muleshoe 64.80 329 P P 05 54 59.5 +0.2
baz=145,SNR=6.2
ERPA Erie 65.06 351 P P 05 55 01.6 +0.9
baz=168
P40A Paris 65.39 340 P P 05 55 02.5 -0.3
baz=156,SNR=6.5
J59A Piesco 65.78 355 IAmb IAmb 05 55 07.0
comp=Z,17nm,0.8s
J59A Piesco 65.78 355 P P 05 55 05.7 +0.5
baz=174
J59A P **P** **05 55 05.7 +0.5**
baz=174
AAM Ann Arbor 65.87 348 P P 05 55 07.8 +2.0
baz=165
NVL N'lazarevskaya 65.89 159 *e*P P 05 55 15.9 +10
NVL *e**PP **PcP** **05 55 36.2 +0.5**
NVL *e*S S 06 04 00.4 +16
NVL pmax pmax
comp=Z,14nm,0.7s
121A Cookes Peak, D 66.21 324 IAmb IAmb 05 55 40.1
comp=Z,18nm,0.9s
121A Cookes Peak, D 66.21 324 P P 05 55 09.8 +1.4
baz=140,SNR=7.0
121A Cookes Peak, D 66.21 324 P P 05 55 09.0 +0.6
baz=140
LBNH Lisbon 66.40 357 P P 05 55 11.0 +1.8
baz=177
Y22A Socorro 66.86 326 P P 05 55 14.5 +1.9
baz=142,SNR=7.4
LONY Lake Ozonia 66.93 355 P P 05 55 12.5 0.0
baz=174
Y22D IRIS PASSCAL I 66.94 326 P P 05 55 13.2 +0.1
baz=142
Y22F Passcal Instru 66.94 326 P P 05 55 12.6 -0.5
baz=142
BMNY Brushton-Moira 67.14 355 P P 05 55 14.5 +0.6
baz=174
G62A West of Eustis 67.33 359 P P 05 55 16.3 +1.2
baz=178
G62A P **P** **05 55 16.3 +1.2**
baz=178
PKME Peaks-Kenny Pk 67.36 360 P P 05 55 15.8 +0.6
baz=179
PKME Peaks-Kenny Pk 67.36 360 P P 05 55 15.8 +0.6
baz=179
ANMO Albuquerque 67.39 327 P P 05 55 17.5 +1.5
ANMO Albuquerque 67.39 327 P P 05 55 17.5 +1.5
ANMO pmax pmax
comp=Z,12nm,1.0s
ANMO Albuquerque 67.39 327 P P 05 55 17.4 +1.5
baz=142,SNR=7.5
ANMO Albuquerque 67.39 327 P P 05 55 16.8 +0.9
baz=142
ANMO Albuquerque 67.39 327 P P 05 55 17.3 +1.3
ANMO pP **pP** **05 55 45.4 +1.7**
ANMO sP **sP** **05 55 58.1 +2.3**
TUC Tucson 67.70 322 P P 05 55 18.0 +0.2
TUC Tucson 67.70 322 P P 05 55 18.0 +0.2
TUC pmax pmax
comp=Z,10.0nm,1.1s
TUC Tucson 67.70 322 P P 05 55 18.7 +0.9
baz=138
TUC Tucson 67.70 322 P P 05 55 19.3 +1.5
TUC pP **pP** **05 55 48.4 +2.7**
TUC sP **sP** **05 56 00.3 +2.5**
MNTQ Montreal, Queb 67.74 356 IAmb IAmb 05 55 19.2
comp=Z,32nm,0.8s
QSPA South Pole Qui 67.78 180 LR LR 06 26 07.5
comp=Z,50nm,18.0s,baz=138,slow=37
QSPA South Pole Qui 67.78 180 P P 05 55 19.1 +1.2
QSPA South Pole Qui 67.78 180 P P 05 55 18.9 +1.0
QSPA pP **pP** **05 55 46.7 +1.0**
QSPA sP **sP** **05 55 59.5 +1.7**
F64A Sherman 67.96 0 P P 05 55 19.8 +0.9
F64A Sherman 67.96 0 P P 05 55 19.8 +0.9
baz=180
F64A P **P** **05 55 19.8 +0.9**
baz=180
JFWS Jewell Farm 67.99 343 P P 05 55 19.1 -0.1
baz=158
F62A Pittston Farm, 68.00 359 P P 05 55 20.1 +0.8
baz=179
F62A P **P** **05 55 20.1 +0.8**
baz=179
T25A Trinidad 68.15 330 P P 05 55 19.8 -0.9
baz=144
LIC Lamto 68.43 73⇑ *i*P **P 05 55 21.5 -1.1**
comp=Z,25nm,0.3s
E63A Oxbow 68.51 0 P P 05 55 23.4 +0.9
baz=180
E63A P **P** **05 55 23.4 +0.9**
baz=180
TRQ Mont Tremblant 68.52 356 P P 05 55 22.5 -0.1
TRQ IAmb IAmb 05 55 23.7
comp=Z,26nm,0.8s
I42A Draeger Farm, 68.55 344 P P 05 55 22.5 -0.2
I42A IAmb IAmb 05 55 53.5
comp=Z,51nm,1.6s
214A Organ Pipe Nat 68.61 321 P P 05 55 22.9 -0.6
baz=136
TIC Toumodi 68.62 73⇑ *i*P **P 05 55 22.8 -1.1**
comp=Z,8.3nm,0.2s
E62A Clayton Lake 68.72 359 IAmb IAmb 05 55 25.5
comp=Z,28nm,0.8s
E62A Clayton Lake 68.72 359 P P 05 55 24.6 +0.9
baz=179
E62A P **P** **05 55 24.6 +0.9**
baz=179
KIC Kosan Boka 68.74 73⇑ *e*P **P 05 55 23.7 -0.9**
comp=Z,44nm,0.5s
PQI Presque Isle 68.77 0 P P 05 55 24.9 +0.9
PQI IAmb IAmb 05 55 25.5
comp=Z,19nm,0.9s
DBIC Dimbokro 68.78 73 P P 05 55 24.0 -0.8
comp=Z,72nm,0.9s,baz=218,slow=5.8,SNR=68
comp=Z,72nm,0.9s
DBIC Dimbokro 68.78 73 P P 05 55 24.1 -0.8
DBIC Dimbokro 68.78 73⇑ *i*P **P 05 55 23.9 -0.8**
DBIC Dimbokro 68.78 73 P P 05 55 24.1 -0.8
DBIC pmax pmax
comp=Z,96nm,1.1s
DBIC Dimbokro 68.78 73 P P 05 55 23.9 -1.0
DBIC pP **pP** **05 55 54.3 +1.5**
KSCO Kaye Shedlock' 68.89 332 P P 05 55 26.0 +0.9
baz=146
BGNE Belgrade 69.14 337 P P 05 55 27.2 +0.6
baz=151
SDCO Great Sand Dun 69.15 329 P P 05 55 28.7 +1.7
baz=144,SNR=8.1
SDCO Great Sand Dun 69.15 329 P P 05 55 27.7 +0.7
baz=144,SNR=7.3
D62A Allapoint, All 69.17 360 IAmb IAmb 05 55 28.1
comp=Z,36nm,0.9s
D62A Allapoint, All 69.17 360 P P 05 55 27.4 +0.9
baz=180
D62A P **P** **05 55 27.4 +0.9**
baz=180
W18A Petrified Fore 69.23 325 P P 05 55 27.6 +0.2
baz=140
BATG Bathurst New B 69.41 2 P P 05 55 28.9 +0.9
BATG IAmb IAmb 05 55 29.4
comp=Z,22nm,0.8s
TAOE Nuku Hiva Isla 69.61 269 *e*LR LR 06 16 48.4
comp=Z,116nm,41.7s
S22A 4UR Ranch, Cre 69.78 329 P P 05 55 31.7 +0.8
baz=143
Q24A Divide 69.97 330 P P 05 55 32.9 +0.9
baz=144
MVCO Mesa Verde 70.19 327 P P 05 55 34.4 +1.1
baz=141
OGNE Ogallala 70.26 334 P P 05 55 34.8 +1.3
baz=147
WUAZ Wupatki 70.41 324 IAmb IAmb 05 56 06.9
comp=Z,20nm,1.0s
WUAZ Wupatki 70.41 324 P P 05 55 36.2 +1.6
baz=138
GLA Glamis 70.59 320 P P 05 55 37.6 +2.0
baz=135
BLYC Blythe 70.90 321 P P 05 55 39.1 +1.7
BLYC IAmb IAmb 05 56 10.5
comp=Z,34nm,1.7s
PV01 Paradox Valley 70.94 328 P P 05 55 36.8 -1.0
PV15 Paradox Valley 71.06 328 IAmb IAmb 05 56 11.5
comp=Z,19nm,1.0s
IKP In-Ko-Pah, Jac 71.08 319 P P 05 55 39.7 +1.1
baz=134
BC3 Big Chuckawall 71.38 320 P P 05 55 41.0 +0.6
baz=135
MONP2 Monument Peak 71.43 319 P P 05 55 42.2 +1.3
baz=134
IRM Iron Mountain 71.55 321 P P 05 55 42.5 +1.1
baz=135
PFO Pinyon Flats O 71.95 319⇑ *e*P **P 05 55 44.1 +0.2**
PFO pmax pmax
comp=Z,26nm,3.2s
GMRC Granite Mounta 72.30 321 P P 05 55 47.4 +1.5
baz=135
KNB Kanab 72.30 324 IAmb IAmb 05 56 18.9
comp=Z,25nm,1.1s
O20A White River Ci 72.34 329 P P 05 55 48.0 +1.8
baz=142,SNR=6.5
LCMT Little Creek M 72.53 324 P P 05 55 49.0 +1.7
SRU San Rafael Swe 72.67 327 P P 05 55 48.8 +0.7
SRU San Rafael Swe 72.67 327 P P 05 55 48.8 +0.7
SRU pmax pmax
comp=Z,11nm,0.7s
BFSC Mount Baldy Ra 73.11 319 P P 05 55 52.2 +1.4
baz=133
GSC Goldstone, Bar 73.33 321 P P 05 55 52.7 +0.7
baz=134
TBI Tubuai 73.42 251 *e*LR LR 06 18 33.4
comp=Z,346nm,30.0s
RSSD Black Hills 73.72 334 P P 05 55 55.1 +0.9
baz=146
EDW2 Edwards Air Fo 73.75 319 P P 05 55 55.0 +0.6
baz=133
TPNV Topopah Spring 74.16 322 P P 05 55 58.7 +1.8
baz=135
FURC Furnace Creek, 74.17 321 P P 05 55 59.0 +2.3
baz=134
MPMC Manual Prospec 74.25 321 P P 05 55 58.9 +1.4
baz=134
WCT Wildcat Mounta 74.26 322 P P 05 55 58.7 +1.3
ISA Isabella, Lake 74.57 320 P P 05 56 00.7 +1.5
ISA Isabella, Lake 74.57 320 P P 05 56 00.7 +1.5
ISA pmax pmax
comp=Z,14nm,1.4s
ISA Isabella, Lake 74.57 320 P P 05 56 00.6 +1.5
baz=133
DUG Dugway, Tooele 74.65 326 P P 05 56 00.9 +1.3
baz=138
R11A Troy Canyon, C 74.78 323 P P 05 56 01.9 +1.5
baz=136
PKM Mcpherson Peak 74.86 318 P P 05 56 02.3 +1.3
baz=132
CWC Cottonwood Cre 74.86 321 P P 05 56 02.4 +1.4
baz=133
SBA Scott Base 74.97 190 P P 05 56 02.5 +1.7
SBA Scott Base 74.97 190 P P 05 56 02.5 +1.7
SBA pmax pmax
comp=Z,23nm,1.3s
PDAR Pinedale Array 75.02 330 P P 05 56 02.5 +0.8
comp=Z,0.6nm,0.5s,baz=142,slow=7.7,SNR=7.3
PDAR pP **pP** **05 56 30.1 -0.3**
comp=Z,1.3nm,0.5s,baz=135,slow=7.3,SNR=5.6
VES Vestal, Richgr 75.05 320 P P 05 56 03.3 +1.5
baz=132
HWUT Hardware Ranch 75.08 328 P P 05 56 03.1 +1.0
SMMC Simmler 75.25 319 P P 05 56 04.6 +1.5
baz=132
PPT2 Papeete2 75.33 257 *e*LR LR 06 19 27.2
comp=Z,266nm,35.5s
PPT Papeete 75.34 257 P P 05 56 05.6 +1.6
comp=Z,32nm,0.9s,baz=247,slow=21,SNR=3.7
PPT LR LR 06 18 41.3
comp=Z,27nm,21.8s,baz=124,slow=27
comp=Z,32nm,0.9s
TPH Tonopah 75.50 322 IAmb IAmb 05 56 38.0
comp=Z,39nm,1.0s
VNDA Vanda 75.99 190 P P 05 56 07.5 +0.9
comp=Z,6.5nm,0.9s,baz=134,slow=5.1,SNR=31
VNDA LR LR 06 27 38.0
comp=Z,14nm,20.1s,baz=156,slow=34
comp=Z,6.5nm,0.9s
VNDA Vanda 75.99 190 P P 05 56 08.7 +2.1
VNDA Vanda 75.99 190 P P 05 56 08.7 +2.1
VNDA pmax pmax
comp=Z,10.0nm,1.1s
SNOW Snow King Moun 76.11 330 P P 05 56 09.1 +1.1
LOHW Long Hollow 76.16 330 P P 05 56 09.7 +1.5
OMMB Old Mammoth Mi 76.20 321 P P 05 56 07.6 -1.2
ULM Lac du Bonnet 76.26 342 P P 05 56 10.2 +1.8
comp=Z,3.0nm,0.6s,baz=177,slow=12,SNR=3.0
ULM LR LR 06 34 12.9
comp=Z,44nm,18.3s,baz=24,slow=39
comp=Z,3.0nm,0.6s
ELK Elko 76.31 325 P P 05 56 09.0 -0.2
ELK Elko 76.31 325 P P 05 56 09.0 -0.2
ELK pmax pmax
comp=Z,4.0nm,1.0s
MOOW Moose Ponds 76.33 330 P P 05 56 09.8 +0.6
NVAR Mina Array Bea 76.36 322 P P 05 56 11.1 +1.6
comp=Z,1.3nm,0.8s,baz=156,slow=7.7,SNR=7.7
NVAR pP **pP** **05 56 38.2 +0.4**
comp=Z,3.0nm,0.8s,baz=152,slow=6.5,SNR=5.7
comp=Z,1.3nm,0.8s
CER Ceres 76.40 121 *e*P **P 05 56 09.8 +0.1**
CER IAmb IAmb 05 56 10.7
comp=Z,27nm,0.9s
LAO LASA Array 76.71 334 P P 05 56 11.8 +0.7
baz=145
RLMT Red Lodge 76.73 332 P P 05 56 11.8 +0.3
RLMT Red Lodge 76.73 332 P P 05 56 12.5 +1.0
baz=142
H17A Grant Village 76.75 331 P P 05 56 11.4 -0.2
SCHQ Schefferville 76.95 1 P P 05 56 12.5 +0.3
comp=Z,6.2nm,0.7s,baz=126,slow=5.4,SNR=6.6
SCHQ LR LR 06 32 58.4
comp=Z,21nm,18.4s,baz=232,slow=38
comp=Z,6.2nm,0.7s
CVNA Calvinia 77.36 119⇑ *i*P **P 05 56 16.4 +1.0**
CVNA IAmb IAmb 05 56 17.4
comp=Z,35nm,1.2s
TOA0 Torodi Ar. Sit 77.45 70 P P 05 56 14.4 -1.4
TORD Torodi Ar. Bea 77.45 70 P P 05 56 14.9 -1.0
comp=Z,40nm,0.6s,baz=262,slow=5.2,SNR=300
comp=Z,40nm,0.6s
TORD Torodi Ar. Bea 77.45 70 P P 05 56 14.5 -1.4
SUR Sutherland 77.92 120 P P 05 56 18.7 +0.2
comp=Z,18nm,0.9s,baz=235,slow=6.6,SNR=12
SUR LR LR 06 28 48.0
comp=Z,23nm,19.6s,baz=233,slow=34
comp=Z,18nm,0.9s
HLID Hailey 77.94 328 P P 05 56 19.8 +1.6
baz=137,SNR=9.9
MCMT McKenzie Canyo 78.13 330 P P 05 56 21.6 +2.3
BOZ Bozeman (W) 78.15 331 P P 05 56 20.4 +1.2
baz=140
MERW Merweville 78.39 121 *e*P **P 05 56 21.3 +0.2**
MERW IAmb IAmb 05 56 22.0
comp=Z,26nm,0.7s
BEKR Beckworth 78.50 322 P P 05 56 23.0 +1.6
FRAZ Fraserburg 78.54 120⇑ *i*P **P 05 56 22.9 +1.0**
FRAZ IAmb IAmb 05 56 23.6
comp=Z,60nm,1.0s
GRAN Grantham 79.03 120 *e*P **P 05 56 25.2 +0.7**
GRAN IAmb IAmb 05 56 25.6
comp=Z,27nm,0.7s
KEIM Keimoes 79.25 117 *e*P **P 05 56 26.5 +0.7**
KEIM IAmb IAmb 05 56 26.8
comp=Z,27nm,0.6s
TSUM Tsumeb 79.56 106 P P 05 56 27.6 0.0
comp=Z,52nm,0.8s
TSUM LR LR 06 29 02.3
comp=Z,42nm,20.0s,baz=319,slow=34
comp=Z,52nm,0.8s
TSUM Tsumeb 79.56 106 P P 05 56 28.0 +0.3
TSUM Tsumeb 79.56 106⇑ *i*P **P 05 56 28.0 +0.3**
TSUM IAmb IAmb 05 56 28.8
comp=Z,63nm,0.9s
BRAK Brakfontein 79.78 120 *e*P **P 05 56 28.4 -0.2**
BRAK IAmb IAmb 05 56 32.9
comp=Z,352nm,2.7s
PLID Pearl Lake 79.83 328 P P 05 56 30.1 +1.5
J08A Circle Bar Ran 79.86 326 P P 05 56 29.2 +0.6
ROOI Rooidraai Farm 80.06 121 *e*P **P 05 56 30.3 +0.2**
ROOI IAmb IAmb 05 56 31.5
comp=Z,20nm,0.8s
ROSN Rosenhof 80.28 123 IAmb IAmb 05 56 29.1
comp=Z,893nm,2.9s
BFON Badsfontein, M 80.41 120 *e*P **P 05 56 32.3 +0.3**
BFON IAmb IAmb 05 56 33.2
comp=Z,27nm,1.2s
AVE Averroes 80.47 48 P P 05 56 32.0 0.0
K05A Summer Lake 80.72 324 IAmb IAmb 05 57 07.4
comp=Z,30nm,1.2s
GRAF Camdeboo Natio 80.88 121 *e*P **P 05 56 34.6 +0.1**
GRAF IAmb IAmb 05 56 36.0
comp=Z,37nm,1.0s
F10A Beach Ranch, E 81.07 328 P P 05 56 36.0 +1.0
SOE Somerset East 81.58 122 P P 05 56 38.2 0.0
SOE IAmb IAmb 05 56 39.5
comp=Z,67nm,1.2s
SOE Somerset East 81.58 122 *e*P **P 05 56 38.1 0.0**
SOE IAmb IAmb 05 56 39.5
comp=Z,14nm,0.6s
MORF Marmelete 81.95 44 *e*P **P 05 56 39.6 -0.2**
MORF IAmb IAmb 05 56 41.2
comp=Z,26nm,0.9s
MORF Marmelete 81.95 44 *e*P **P 05 56 39.9 +0.1**
comp=Z,40nm,1.3s
MORF Marmelete 81.95 44 *e*P **P 05 56 39.6 -0.2**
GRHM Grahamstown, E 82.01 123 *e*P **P 05 56 40.5 +0.2**
GRHM IAmb IAmb 05 56 41.0
comp=Z,43nm,1.1s
PTEO Sao Teotonio 82.05 44 *e*P **P 05 56 41.3 +1.1**
comp=Z,68nm,1.2s
MDT Midelt 82.16 50 LR LR 06 32 29.3
comp=Z,42nm,20.6s,baz=238,slow=35
HVD Gariep Dam 82.28 120 *e*P **P 05 56 42.0 0.0**
HVD IAmb IAmb 05 56 43.1
comp=Z,45nm,1.0s
HAWA Hanford 82.50 327 P P 05 56 43.7 +1.3
HAWA IAmb IAmb 05 57 15.7
comp=Z,43nm,1.8s
PNCL Nicolau / Gran 82.51 44 *e*P **P 05 56 43.2 +0.6**
comp=Z,18nm,0.9s
PMAFR Mafra 82.53 43 *e*P **P 05 56 43.3 +0.6**
PCVE Castro Verde 82.54 44 *e*P **P 05 56 43.3 +0.5**
comp=Z,33nm,0.9s
PVAQ Vaqueiros 82.62 45 *e*P **P 05 56 44.0 +0.8**
comp=Z,37nm,1.8s
NEW Newport 82.65 330 P P 05 56 44.2 +1.0
baz=136
BOSA Boshof 82.81 118 P P 05 56 44.5 -0.2
comp=Z,23nm,0.8s,baz=258,slow=4.5,SNR=24
comp=Z,23nm,0.8s
BOSA Boshof 82.81 118 P P 05 56 44.5 -0.2
BOSA IAmb IAmb 05 56 45.5
comp=Z,26nm,0.9s
BOSA Boshof 82.81 118⇑ *i*P **P 05 56 44.5 -0.2**
BOSA IAmb IAmb 05 56 45.2
comp=Z,27nm,0.9s
BOSA Boshof 82.81 118 P P 05 56 44.5 -0.2
BOSA pmax pmax
comp=Z,26nm,0.9s
C09A Chrisman Ranch 82.87 329 P P 05 56 45.9 +1.6
C09A IAmb IAmb 05 56 46.3
comp=Z,12nm,0.7s
PBEJ Beja 82.88 44 *e*P **P 05 56 44.9 +0.4**
comp=Z,24nm,1.1s
EVO Evora 83.08 44 *e*P **P 05 56 45.7 +0.1**
comp=Z,14nm,1.5s
PSBE So Bento 83.16 42 *e*P **P 05 56 46.7 +0.7**
comp=Z,38nm,1.2s
PMTG Montargil 83.26 43 *e*P **P 05 56 46.7 +0.2**
comp=Z,36nm,0.9s
MAW Mawson 83.39 163 P P 05 56 47.4 +0.7
comp=Z,2.9nm,0.7s,baz=221,slow=6.7,SNR=12
MAW LR LR 06 36 04.5
comp=Z,18nm,18.4s,baz=234,slow=37
comp=Z,2.9nm,0.7s
SWZ Schweizer 83.40 117 *e*P **P 05 56 46.8 -1.0**
SWZ IAmb IAmb 05 56 48.1
comp=Z,17nm,0.6s
PBAR Barrancos 83.50 44 *e*P **P 05 56 48.2 +0.5**
comp=Z,20nm,1.0s
PESTR Estremoz 83.55 43 *e*P **P 05 56 48.3 +0.3**
comp=Z,26nm,1.3s
PESTR Estremoz 83.55 43 P P 05 56 48.4 +0.5
PCAS Casmilo, Conde 83.67 42 *e*P **P 05 56 49.1 +0.6**
comp=Z,20nm,1.1s
COI Coimbra 83.81 42 IAmb IAmb 05 56 50.8
comp=Z,28nm,0.9s
PMRV Marv??o 84.00 43 *e*P **P 05 56 50.2 0.0**
comp=Z,14nm,1.4s
PCBR Castelo Branco 84.18 43 *e*P **P 05 56 51.2 +0.1**
comp=Z,19nm,1.3s
LBTB Lobatse 84.43 115 P P 05 56 53.0 0.0
comp=Z,24nm,0.8s,baz=248,slow=5.5,SNR=29
LBTB LR LR 06 33 04.3
comp=Z,24nm,18.2s,baz=229,slow=35
comp=Z,24nm,0.8s
PVIS Viseu 84.43 42 *e*P **P 05 56 52.4 -0.1**
comp=Z,22nm,1.5s
MTE Manteigas 84.46 42 *e*P **P 05 56 52.7 +0.1**
comp=Z,25nm,1.4s
MTE Manteigas 84.46 42 IAmb IAmb 05 56 53.7
comp=Z,17nm,0.9s
PVRL Vila Real 84.86 41 *e*P **P 05 56 54.9 +0.3**
comp=Z,31nm,1.5s
POLO Lamas de Olo 84.88 41 *e*P **P 05 56 54.9 +0.2**
comp=Z,13nm,1.6s
PCAB Cabril 84.93 41 *e*P **P 05 56 55.0 +0.1**
comp=Z,29nm,1.6s
PGAV Gavieira, Arco 84.93 41 *e*P **P 05 56 55.1 +0.1**
comp=Z,35nm,2.3s
SNKL Senekal, Frees 85.00 118 *e*P **P 05 56 55.4 -0.5**
SNKL IAmb IAmb 05 57 05.4
comp=Z,22nm,0.8s
TAM Tamanrasset 85.03 63 P P 05 56 56.1 +0.1
TAM IAmb IAmb 05 56 57.1
comp=Z,22nm,1.0s
TAM Tamanrasset 85.03 63 P P 05 56 56.1 +0.1
TAM pmax pmax
comp=Z,22nm,1.0s

PRYS	**Parys**	**85.17**	**117**	*e*P	**P**	**05 56 55.6**	**-1.2**
PRYS				IAmb	IAmb	05 56 56.9	
	comp=Z,12nm,0.8s						
MVO	**Moncorvo**	**85.22**	**42**	*e*P	**P**	**05 56 56.6**	**+0.2**
	comp=Z,29nm,1.7s						
PBRG	**Braganca**	**85.77**	**41**	*e*P	**P**	**05 56 59.1**	**0.0**
	comp=Z,17nm,1.7s						
PAB	**San Pablo**	**86.01**	**44**	P	**P**	**05 57 00.6**	**+0.2**
PAB				IAmb	IAmb	05 57 01.7	
	comp=Z,42nm,1.2s						
PAB	**San Pablo**	**86.01**	**44**	P	**P**	**05 57 00.6**	**+0.2**
PAB				pmax	pmax		
	comp=Z,42nm,1.2s						
ESDC	**Sonseca Array**	**86.33**	**44**	P	**P**	**05 57 02.0**	**+0.1**
	comp=Z,10nm,1.1s,baz=234,slow=5.2,SNR=43						
ESDC				LR	LR	06 34 00.7	
	comp=Z,36nm,18.7s,baz=231,slow=34						
	comp=Z,10nm,1.1s						
ESDC	**Sonseca Array**	**86.33**	**44**	IAmb	IAmb	05 57 03.4	
	comp=Z,26nm,1.4s						
ESBB	**Sonseca Array**	**86.33**	**44**	IAmb	IAmb	05 57 04.1	
	comp=Z,26nm,1.4s						
LEPH	**Lephalale, Lim**	**86.72**	**114**	*e*P	**P**	**05 57 04.2**	**-0.2**
NWCL	**Newcastle**	**86.93**	**119**	*e*P	**P**	**05 57 04.6**	**-0.8**
NWCL				IAmb	IAmb	05 57 05.7	
	comp=Z,6.6nm,0.6s						
WAPA	**Wapiti River**	**88.49**	**334**	IAmb	IAmb	05 57 55.0	
	comp=Z,20nm,0.6s						
MUSN	**Musina, Limpop**	**89.08**	**114**	*e*P	**P**	**05 57 16.2**	**+0.6**
MUSN				IAmb	IAmb	05 57 17.2	
	comp=Z,9.9nm,0.8s						
MOPA	**Mopani**	**89.88**	**115**	*e*P	**P**	**05 57 19.8**	**+0.6**
MOPA				IAmb	IAmb	05 57 20.9	
	comp=Z,1.5nm,0.8s						
SFJD	**Kangerlussuaq**	**90.17**	**7**	LR	LR	06 37 01.0	
	comp=Z,23nm,21.4s,baz=195,slow=35						
LSZ	**Lusaka**	**90.41**	**107**	P	**P**	**05 57 22.1**	**+0.1**
	comp=Z,4.7nm,0.7s,baz=248,slow=2.8,SNR=12						
	comp=Z,4.7nm,0.7s						
LSZ	**Lusaka**	**90.41**	**107**	P	**P**	**05 57 21.9**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,15nm,1.3s						
CASY	**Casey**	**91.58**	**180**	P	**P**	**05 57 27.8**	**+1.6**
MAHO	**Mahon**	**91.91**	**47**	P	**P**	**05 57 27.4**	**-0.7**
YKA	**Yellowknife Ar**	**92.13**	**340**	P	**P**	**05 57 30.6**	**+2.1**
	comp=Z,3.3nm,0.8s,baz=139,slow=3.8,SNR=3.9						
YKA				pP	**pP**	**05 57 56.8**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=141,slow=4.9,SNR=5.0						
	comp=Z,3.3nm,0.8s						
KEST	**Kesra**	**93.67**	**53**	P	**P**	**05 57 36.9**	**+0.4**
	comp=Z,7.6nm,0.8s,baz=256,slow=5.8,SNR=7.5						
	comp=Z,7.6nm,0.8s						
KEST	**Kesra**	**93.67**	**53**	IAmb	IAmb	05 57 37.9	
	comp=Z,11nm,0.9s						
URZ	**Urewera**	**93.73**	**226**	LR	LR	06 31 07.0	
	comp=Z,44nm,20.1s,baz=248,slow=30						
RPZ	**Rata Peaks**	**94.43**	**219**	LR	LR	06 33 20.4	
	comp=Z,50nm,18.1s,baz=290,slow=31						
DLBC	**Dease Lake**	**95.12**	**332**	LR	LR	06 43 55.8	
	comp=Z,42nm,20.9s,baz=264,slow=37						
EKA	**Eskdalemuir Ar**	**95.28**	**31**	LR	LR	06 37 46.4	
	comp=Z,80nm,18.1s,baz=273,slow=34						
P33M	**Teslin, Yukon**	**97.30**	**333**	P	Pdif	05 57 52.8	+0.3
	baz=123						
MBAR	**Mbarara**	**98.46**	**94**	LR	LR	06 41 06.8	
	comp=Z,26nm,18.9s,baz=243,slow=34						
MBAR	**Mbarara**	**98.46**	**94**	⇑*e*P	**P**	**05 57 57.9**	**-1.0**
MBAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DAVOX	**Davos/Dischmat**	**98.58**	**43**	P	**P**	**05 57 58.5**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=187,slow=9.8,SNR=5.2						
	comp=Z,3.9nm,0.8s						
L29M	**L29M**	**100.96**	**334**	P	**Pdif**	**05 58 09.4**	**+0.7**
	baz=118						
CLL	**Collm**	**102.18**	**39**	*e*P	**Pdif**	**05 58 18.0**	**+3.7**
CLL	**Collm**	**102.18**	**39**	*e*PP	**PP**	**06 02 28.0**	**+0.1**
CLL	**Collm**	**102.18**	**39**	*e*Pdif	**Pdif**	**05 58 18.0**	**+3.7**
DZM	**Mont Dzumac**	**110.45**	**234**	*e*LR	LR	06 35 43.3	
	comp=Z,64nm,28.1s						
AKASG	**Malin Array Be**	**111.92**	**43**	PP	**PP**	**06 03 41.1**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=265,slow=4.8,SNR=4.4						
ARCES	**ARCESS Array B**	**112.25**	**22**	PKKPbc	PKKPbc	06 13 46.5	-1.1
	comp=Z,4.9nm,1.1s,baz=44,slow=5.4,SNR=4.0						
BRTR	**Keskin Array B**	**113.17**	**55**	PP	**PP**	**06 03 52.5**	**+3.9**
	comp=Z,1.5nm,0.7s,baz=228,slow=5.9,SNR=5.4						
KIV	**Kislovodsk**	**120.37**	**51**	*e*PKIKP	**PKPdf**	**06 03 10.5**	**-0.1**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KBZ	**Khabaz**	**120.51**	**51**	PKP	**PKiKP**	**06 03 11.4**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=284,slow=5.6,SNR=4.6						
KBZ	**Khabaz**	**120.51**	**51**	⇑*i*PKIKP	**PKPdf**	**06 03 09.3**	**-1.4**
CTA	**Charters Tower**	**125.71**	**221**	PKP	**PKiKP**	**06 03 22.0**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=181,slow=2.9,SNR=3.8						
H11S2	**WAKE ISLAND Hyl**	**128.21**	**276**	T	T	08 23 46.6	
	baz=115,slow=76,SNR=96						
H11S1	**WAKE ISLAND Hyl**	**128.22**	**276**	T	T	08 23 50.0	
	baz=115,slow=76,SNR=63						
H11S3	**WAKE ISLAND Hyl**	**128.23**	**276**	T	T	08 23 48.0	
	baz=115,slow=76,SNR=69						
H11N3	**WAKE ISLAND Hyl**	**128.32**	**278**	T	T	08 23 54.9	
	baz=103,slow=75,SNR=64						
H11N2	**WAKE ISLAND Hyl**	**128.33**	**278**	T	T	08 23 53.2	
	baz=103,slow=75,SNR=80						
H11N1	**WAKE ISLAND Hyl**	**128.33**	**278**	T	T	08 23 59.2	
	baz=103,slow=75,SNR=50						
ARU	**Arti**	**128.78**	**35**	*i* PKIKP	**PKiKP**	**06 03 26.8**	**-0.1**
ARU						06 05 38.9	
ARU				SS	SS	06 22 49.1	+5.7
ASAR	**Alice Springs**	**129.20**	**207**	PKP	**PKPdf**	**06 03 28.4**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=144,slow=2.0,SNR=34						
ASAR				pPKP	**pPKPdf**	**06 03 57.1**	**-1.3**
	comp=Z,4.7nm,0.8s,baz=137,slow=2.0,SNR=5.9						
ASAR	**Alice Springs**	**129.20**	**207**	PKPdf	**PKPdf**	**06 03 28.2**	**0.0**
AS31	**Alice Springs**	**129.21**	**207**	PKPdf	**PKPdf**	**06 03 28.5**	**+0.2**
ABKAR	**Akbulak array**	**131.66**	**43**	PKPdf	**PKiKP**	**06 03 33.1**	**+0.2**
WR0	**Warramunga Arr**	**132.17**	**210**		**PKPdf**	**06 03 33.9**	**0.0**
WB2	**Warramunga Arr**	**132.27**	**210**		**PKPdf**	**06 03 34.0**	**0.0**
WRA	**Warramunga Arr**	**132.28**	**210**	PKP	**PKPdf**	**06 03 34.1**	**+0.1**
	comp=Z,3.8nm,0.6s,baz=157,slow=1.8,SNR=34						
WRA				pPKP	**pPKPdf**	**06 04 02.8**	**-1.5**
	comp=Z,2.5nm,0.6s,baz=151,slow=1.7,SNR=6.1						
WRA				SKPbc	**SKPab**	**06 06 51.9**	**-0.3**
	comp=Z,3.3nm,1.2s,baz=162,slow=3.3,SNR=7.0						
WRAB	**Tennant Creek**	**132.28**	**210**	*c i* PKIKP	**PKiKP**	**06 03 36.1**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.7s						
WB0	**Warramunga Arr**	**132.41**	**210**		**PKPdf**	**06 03 34.6**	**+0.3**
BRVK	**Borovoye**	**136.34**	**35**	*c i* PKIKP	**PKiKP**	**06 03 42.9**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ZALV	**Zalesovo Beam**	**142.68**	**26**	PKhKP	PKPpre	06 03 47.8	
	comp=Z,2.9nm,0.6s,baz=331,slow=4.8,SNR=14						
ZALV				PKP	**PKPdf**	**06 03 53.1**	**+1.1**
	comp=Z,5.5nm,0.7s,baz=301,slow=3.0,SNR=12						
ZALV				SKPbc	**SKiKP**	**06 07 21.9**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=306,slow=3.5,SNR=4.6						
AAK	**Ala-Archa**	**143.35**	**48**	⇑*i* PKIKP	**PKiKP**	**06 03 55.6**	**-1.6**
BOOM	**Boomskoye usch**	**144.40**	**47**		**PKPdf**	**06 03 55.2**	**-0.5**
BOOM	**Boomskoye usch**	**144.40**	**47**	PKIKP	**PKPdf**	**06 03 55.2**	**-0.5**
BOD	**Bodaibo**	**144.59**	**358**	*e*PKIKP	**PKPab**	**06 03 53.6**	**-0.5**
BOD				pmax	pmax		
	comp=Z,19nm,1.4s						
NIL	**Nilore**	**144.75**	**63**	PKPdf	**PKPab**	**06 03 55.1**	**-0.5**
NIL	**Nilore**	**144.75**	**63**	PKIKP	**PKPab**	**06 03 55.1**	**-0.5**
YSS	**Yuzh-Sakhalins**	**144.81**	**322**	*ce*PKIKP	**PKPdf**	**06 03 56.4**	**+0.4**
YSS				pmax	pmax		
	comp=Z,70nm,2.5s						
KSH	**Kashi**	**145.49**	**52**	PKPbc	**PKPab**	**06 03 58.3**	**+0.1**
KSH				pPKP	pPKPdf	06 04 29.3	+1.4
KSH				PP	**PP**	**06 07 16.3**	**-2.7**
KSH				AMB	AMB		
	comp=Z,130nm,5.0s						
MAKZ	**Makanchi**	**146.05**	**37**	PKPbc	**PKPbc**	**06 03 59.2**	**0.0**
MAKZ	**Makanchi**	**146.05**	**37**	PKP2	**PKPbc**	**06 03 59.3**	**0.0**
MK31	**Makanchi Array**	**146.23**	**37**		**PKPbc**	**06 03 59.5**	**-0.2**
MK31	**Makanchi Array**	**146.23**	**37**	*c i* PKP2	**PKPbc**	**06 03 59.6**	**-0.2**
MKAR	**Makanchi Array**	**146.23**	**37**	PKPbc	**PKPbc**	**06 03 59.4**	**-0.4**
	comp=Z,25nm,0.8s,baz=308,slow=3.0,SNR=90						
MKAR				pPKPbc	**pPKPdf**	**06 04 28.6**	**-0.2**
	comp=Z,12nm,0.9s,baz=304,slow=2.8,SNR=3.6						
FAKI	**Fak Fak**	**147.57**	**222**	PKPab	**PKiKP**	**06 04 05.7**	**-0.9**
MOY	**Mondy**	**149.72**	**13**	*e*PKP2	**PKiKP**	**06 04 10.4**	**+0.4**
MOY				pmax	pmax		
	comp=Z,11nm,1.2s						
SIJI	**Sorong**	**149.78**	**223**	PKPbc	**PKiKP**	**06 04 11.3**	**+0.2**
	comp=Z,24nm,0.6s,baz=37,slow=5.0,SNR=7.8						
LEM	**Lembang**	**150.71**	**172**	PKPbc	**PKiKP**	**06 04 13.6**	**+0.4**
	comp=Z,41nm,0.8s,baz=312,slow=22,SNR=5.4						
WMQ	**Urumqi**	**151.07**	**37**	*e*PKPbc	**PKPdf**	**06 04 06.0**	**-0.5**
ZAK	**Zakamensk**	**151.38**	**11**	*e*PKIKP	**PKiKP**	**06 04 13.4**	**0.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KAPI	**Kappang**	**151.52**	**198**	PKPbc	**PKiKP**	**06 04 15.2**	**+0.5**
	comp=Z,13nm,0.8s,baz=223,slow=4.2,SNR=8.3						
USRK	**Ussuriysk Ar.**	**152.40**	**327**	PKPbc	**PKiKP**	**06 04 15.9**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=46,slow=2.9,SNR=4.4						
USRK				pPKPbc	**pPKPbc**	**06 04 45.2**	**-0.3**
	comp=Z,7.1nm,0.8s,baz=48,slow=1.7,SNR=5.5						
MJAR	**Matsushiro Arr**	**152.81**	**307**	PKPbc	**PKPbc**	**06 04 16.2**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=88,slow=2.4,SNR=4.8						
SONM	**Songino Array**	**154.33**	**8**	PKP	**PKPdf**	**06 04 13.6**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=302,slow=2.6,SNR=5.0						
SONM				PKPbc	**PKiKP**	**06 04 20.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=322,slow=1.4,SNR=8.8						
SONM				PKPab	**PKPab**	**06 04 35.3**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=325,slow=2.8,SNR=7.9						
ULN	**Ulaanbaatar**	**154.38**	**7**	PKPdf	**PKPdf**	**06 04 11.4**	**0.0**
ULN				PKPab	**PKPab**	**06 04 35.4**	**+1.2**
ULN	**Ulaanbaatar**	**154.38**	**7**	PKIKP	**PKPdf**	**06 04 11.4**	**0.0**
ULN						06 04 35.4	
XLT	**XiLinHaoTe**	**158.22**	**351**	*e*PKP	**PKPdf**	**06 04 19.3**	**+2.9**
XLT				PP	**PP**	**06 08 36.0**	**+5.9**
GTA	**Gaotai**	**160.42**	**28**	*e*PKPbc	**PKPab**	**06 05 00.8**	**+0.3**
GTA				pPKP	pPKPab	06 05 33.8	+3.9
HHC	**Hu-ho-hao-te**	**161.62**	**359**	*e*PKP	**PKPdf**	**06 04 19.3**	**-1.1**
CMAR	**Chiang Mai Arr**	**167.73**	**107**	PKPab	**PKPab**	**06 05 32.8**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=258,slow=5.3,SNR=9.6						
PZH	**PanZhiHua**	**170.36**	**63**	PKP	**PKPdf**	**06 04 26.5**	**-1.3**

*ROM **31** 05:55:52.1±0.0, 42°.839N±0°.003×13°.061E±0°.004, h9km, ML2.9/36, Error ellipse: s-maj=0.3km s-min=0.2km az=321.0*

ISC 31 05:55:52.1±0.8, **42°.85N**±0°.02×**13°.07E**±0°.02, **h13**km±4km, **n55**, σ0=**89**/84, **19C-18D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**320**	⇑P	**Pg**	**05 55 54.3**	**-0.3**
T1216				S	**Sg**	**05 55 55.6**	**-0.8**
T1216				AML	AML		
	comp=N,24500μm,0.5s						
T1216				AML	AML		
	comp=E,34250μm,0.5s						
T1216				AML	AML		
	comp=N,24450μm,0.5s						
T1245	**Castelsantange**	**0.09**	**85**	⇓P	**Pg**	**05 55 55.1**	**+0.1**
T1245				S	**Sg**	**05 55 56.9**	**-0.3**
T1245				AML	AML		
	comp=E,28050μm,0.6s						
T1245				AML	AML		
	comp=N,36100μm,0.4s						
T1245				AML	AML		
	comp=E,28050μm,0.6s						
T1245				AML	AML		
	comp=N,36100μm,0.4s						
T1245				AML	AML		
	comp=N,33950μm,0.4s						
T1245				AML	AML		
	comp=E,27200μm,0.5s						
FEMA	**Monte Fema**	**0.11**	**354**	⇑P	**Pg**	**05 55 55.5**	**+0.2**
FEMA				S	**Sg**	**05 55 57.9**	**+0.2**
FEMA				AML	AML		
	comp=E,37150μm,1.5s						
FEMA				AML	AML		
	comp=N,21250μm,0.6s						
FEMA				AML	AML		
	comp=E,37150μm,1.5s						
FEMA				AML	AML		
	comp=N,21250μm,0.6s						
T1215	**Vallo di Nera,**	**0.15**	**252**	⇑P	**Pg**	**05 55 56.1**	**+0.3**
T1215				S	**Sg**	**05 55 58.4**	**+0.1**
T1215				AML	AML		
	comp=E,4665μm,1.2s						
T1215				AML	AML		
	comp=N,10425μm,0.4s						
T1215				AML	AML		
	comp=E,4670μm,1.2s						
T1215				AML	AML		
	comp=N,10450μm,0.4s						
T1215				AML	AML		
	comp=E,4800μm,1.2s						
T1215				AML	AML		
	comp=N,10550μm,0.4s						
T1215				AML	AML		
	comp=N,10445μm,0.4s						
T1215				AML	AML		
	comp=E,4810μm,1.2s						
T1215				AML	AML		
	comp=N,10525μm,0.4s						
T1215				AML	AML		
	comp=N,10550μm,0.4s						
T1215				AML	AML		
	comp=N,10425μm,0.4s						
T1215				AML	AML		
	comp=E,4670μm,1.2s						
T1215				AML	AML		
	comp=E,4805μm,1.2s						
T1217	**Poggiodomo (PG**	**0.17**	**216**	⇑P	**Pg**	**05 55 56.3**	**+0.3**
T1217				S	**Sg**	**05 55 59.2**	**+0.4**
T1217				AML	AML		
	comp=E,5000μm,0.4s						
T1217				AML	AML		
	comp=N,4270μm,0.5s						
T1217				AML	AML		
	comp=E,5005μm,0.4s						
T1217				AML	AML		
	comp=N,4375μm,0.5s						
T1217				AML	AML		
	comp=E,4980μm,0.4s						
T1217				AML	AML		
	comp=E,5005μm,0.4s						
T1217				AML	AML		
	comp=E,4985μm,0.4s						
T1217				AML	AML		
	comp=N,4265μm,0.5s						
T1217				AML	AML		
	comp=N,4260μm,0.5s						
T1217				AML	AML		
	comp=N,4370μm,0.5s						
T1217				AML	AML		
	comp=E,5000μm,0.4s						
MMO1	**Montemonaco**	**0.20**	**75**	P	**Pg**	**05 55 57.1**	**+0.6**
MMO1				S	**Sg**	**05 56 00.5**	**+1.0**
AM05	**Amandola Campo**	**0.25**	**58**	P	**Pg**	**05 55 58.0**	**+0.7**
AM05				S	**Sb**	**05 56 02.4**	**-0.4**
LNSS	**Leonessa**	**0.25**	**185**	⇑P	**Pg**	**05 55 57.7**	**+0.3**
LNSS				S	**Sg**	**05 56 01.6**	**+0.7**
LNSS				AML	AML		
	comp=E,4460μm,0.9s						
LNSS				AML	AML		
	comp=N,7620μm,0.4s						
T1204	**Amatrice, Fraz**	**0.25**	**133**	⇓P	**Pg**	**05 55 58.0**	**+0.6**
T1204				S	**Sg**	**05 56 02.4**	**+1.3**
T1204				AML	AML		
	comp=E,7915μm,0.3s						
T1204				AML	AML		
	comp=N,3795μm,0.2s						
T1204				AML	AML		
	comp=E,7910μm,0.3s						
T1204				AML	AML		
	comp=N,3790μm,0.2s						
T1241	**Roccafluvione,**	**0.27**	**88**	⇓P	**Pg**	**05 55 58.4**	**+0.7**
T1241				S	**Sb**	**05 56 02.9**	**-0.5**
T1241				AML	AML		
	comp=N,6005μm,0.3s						
T1241				AML	AML		
	comp=E,5095μm,0.4s						
T1241				AML	AML		
	comp=N,5785μm,0.3s						
T1241				AML	AML		
	comp=N,5780μm,0.3s						
T1241				AML	AML		
	comp=E,5170μm,0.4s						
T1241				AML	AML		
	comp=N,6000μm,0.3s						
GUMA	**Gualdo di Mace**	**0.29**	**43**	⇑P	**Pb**	**05 55 59.1**	**-0.1**
GUMA				S	**Sb**	**05 56 04.4**	**+0.4**
GUMA				AML	AML		
	comp=E,6335μm,0.4s						
GUMA				AML	AML		
	comp=N,10195μm,0.5s						
GUMA				AML	AML		
	comp=E,6340μm,0.4s						
GUMA				AML	AML		
	comp=E,9400μm,0.5s						
GUMA				AML	AML		
	comp=N,7925μm,0.5s						
GUMA				AML	AML		
	comp=N,10225μm,0.5s						
SEF1	**Sefro**	**0.31**	**344**	P	**Pb**	**05 55 59.2**	**-0.3**
SEF1				AML	AML		
	comp=E,14250μm,0.2s						
SEF1				AML	AML		
	comp=E,14300μm,0.2s						
SEF1				AML	AML		
	comp=N,11300μm,0.2s						
T1243	**Rocca Santa Ma**	**0.32**	**118**	P	**Pg**	**05 55 58.9**	**+0.3**
T1243				S	**Sb**	**05 56 04.2**	**-0.6**
ARRO	**Arrone**	**0.35**	**220**	⇑P	**Pg**	**05 55 59.4**	**+0.3**
ARRO				S	**Sb**	**05 56 05.6**	**0.0**
ARRO				AML	AML		
	comp=N,1190μm,1.2s						
ARRO				AML	AML		
	comp=E,1410μm,1.3s						
T1211	**Morro Reatino**	**0.35**	**206**	⇑P	**Pg**	**05 55 59.5**	**+0.3**
T1211				AML	AML		
	comp=E,1310μm,0.2s						
T1211				AML	AML		
	comp=N,2025μm,0.4s						
T1211				AML	AML		
	comp=E,1305μm,0.2s						
T1211				AML	AML		
	comp=N,2030μm,0.4s						
ASSB	**Assisi San Ben**	**0.36**	**303**	⇓P	**Pg**	**05 55 59.6**	**+0.3**
ASSB				AML	AML		
	comp=E,1625μm,0.4s						
ASSB				AML	AML		
	comp=N,2050μm,0.8s						
RM33	**Pellescritta (**	**0.36**	**162**	⇓P	**Pg**	**05 55 59.6**	**+0.3**
RM33				S	**Sb**	**05 56 05.2**	**-0.7**
RM33				AML	AML		
	comp=E,3785μm,0.6s						
RM33				AML	AML		
	comp=N,3105μm,0.3s						
RM33				AML	AML		
	comp=E,3785μm,0.7s						
RM33				AML	AML		
	comp=N,3060μm,0.3s						
RM33				AML	AML		
	comp=E,3740μm,0.6s						
RM33				AML	AML		
	comp=E,3790μm,0.6s						
GAG1	**Gagliole**	**0.39**	**0**	⇑P	**Pb**	**05 56 00.8**	**-0.1**
GAG1				AML	AML		
	comp=E,6250μm,0.8s						
GAG1				AML	AML		
	comp=N,6240μm,0.3s						
GAG1				AML	AML		
	comp=N,7060μm,0.3s						
GAG1				AML	AML		
	comp=E,6255μm,0.8s						
GAG1				AML	AML		
	comp=N,7055μm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**347**	⇓P	**Pg**	**05 56 00.9**	**+0.5**
SNTG				AML	AML		
	comp=N,2835μm,0.9s						
SNTG				AML	AML		
	comp=E,2535μm,0.2s						
SNTG				AML	AML		
	comp=E,2455μm,0.2s						
SNTG				AML	AML		
	comp=N,3040μm,0.9s						
CESX	**Cesi**	**0.43**	**237**	⇑P	**Pg**	**05 56 00.7**	**+0.1**
CESX				AML	AML		
	comp=E,2415μm,0.6s						
CESX				AML	AML		
	comp=N,2595μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.44**	**157**	P	**Pg**	**05 56 00.9**	**+0.1**
T1247				S	**Sb**	**05 56 08.0**	**-0.4**
TERO	**Teramo**	**0.46**	**120**	P	**Pg**	**05 56 01.4**	**+0.3**
TERO				S	**Sb**	**05 56 08.8**	**0.0**
TERO				AML	AML		
	comp=N,1290μm,0.3s						
TERO				AML	AML		
	comp=E,1340μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.46**	**317**	⇓P	**Pg**	**05 56 01.6**	**+0.4**
ATCC				AML	AML		
	comp=E,2500μm,0.2s						
ATCC				AML	AML		
	comp=N,1750μm,1.2s						
ATCC				AML	AML		
	comp=E,2505μm,0.2s						
OFFI	**Offida**	**0.46**	**79**	⇓P	**Pb**	**05 56 02.8**	**+0.6**
OFFI				AML	AML		
	comp=E,2640μm,0.7s						
OFFI				AML	AML		
	comp=N,4000μm,0.5s						
EL6	**Elcito**	**0.48**	**3**	⇓P	**Pg**	**05 56 01.5**	**-0.1**
EL6				S	**Sb**	**05 56 11.0**	**+1.5**
EL6				AML	AML		
	comp=E,3545μm,0.3s						
EL6				AML	AML		
	comp=E,3540μm,0.3s						
EL6				AML	AML		
	comp=N,3515μm,1.0s						
GIGS	**Gran Sasso**	**0.54**	**137**	P	**Pg**	**05 56 02.6**	**-0.1**
GIGS				S	**Sb**	**05 56 10.8**	**-0.5**
GIGS				AML	AML		
	comp=N,252μm,1.1s						
GIGS				AML	AML		
	comp=E,310μm,0.2s						
MURB	**Monte Urbino**	**0.57**	**316**	⇓P	**Pg**	**05 56 03.6**	**+0.3**
MURB				S	**Sb**	**05 56 14.0**	**+1.8**
MURB				AML	AML		
	comp=E,2195μm,1.6s						
MURB				AML	AML		
	comp=N,1805μm,1.6s						
MURB				AML	AML		
	comp=E,2460μm,0.5s						
MURB				AML	AML		
	comp=N,2105μm,0.2s						
MURB				AML	AML		
	comp=N,1805μm,1.6s						
FIAM	**Fiamignano**	**0.58**	**176**	⇑P	**Pg**	**05 56 03.6**	**+0.2**
FIAM				S	**Sb**	**05 56 13.0**	**+0.6**
FIAM				AML	AML		
	comp=E,988μm,0.3s						
FIAM				AML	AML		
	comp=N,592μm,0.9s						
FIAM				AML	AML		
	comp=E,988μm,0.3s						
FIAM				AML	AML		
	comp=N,592μm,0.9s						
TRTR	**Tortoreto Alta**	**0.62**	**93**	⇑P	**Pb**	**05 56 05.7**	**+0.9**
TRTR				AML	AML		
	comp=E,2085μm,0.4s						
TRTR				AML	AML		
	comp=N,2120μm,1.6s						
ATTE	**AVT- Monte Tez**	**0.63**	**304**	⇓P	**Pg**	**05 56 04.5**	**+0.1**
ATTE				AML	AML		
	comp=E,320μm,0.3s						
ATTE				AML	AML		
	comp=N,368μm,0.4s						
ATTE				AML	AML		
	comp=N,368μm,0.4s						
ATTE				AML	AML		
	comp=E,320μm,0.3s						
ATFO	**Monte Foce - G**	**0.63**	**325**	⇓P	**Pg**	**05 56 04.9**	**+0.5**
ATFO				S	**Sb**	**05 56 15.0**	**+1.1**
ATFO				AML	AML		
	comp=N,734μm,1.1s						
ATFO				AML	AML		
	comp=E,869μm,1.4s						
ARVD	**Arc

MGAB				AML	AML	
	comp=E,1054μm,0.7s					
FRON	**Frontone**	**0.71**	**340**	⇑P	**Pg**	**05 56 06.2 +0.3**
FRON				AML	AML	
	comp=E,584μm,1.3s					
FRON				AML	AML	
	comp=N,1155μm,0.9s					
ATVO	**AVT- Monte Val**	**0.72**	**318**	⇓P	**Pg**	**05 56 06.0 0.0**
ATVO				S	**Sb**	**05 56 18.0 +1.6**
ATVO				AML	AML	
	comp=E,388μm,1.4s					
ATVO				AML	AML	
	comp=N,322μm,0.8s					
VCEL	**Villa Celiera**	**0.73**	**128**	⇓P	**Pb**	**05 56 06.8 0.0**
VCEL				S	**Sn**	**05 56 20.0 +0.7**
VCEL				AML	AML	
	comp=E,972μm,0.4s					
VCEL				AML	AML	
	comp=E,975μm,0.4s					
VCEL				AML	AML	
	comp=N,790μm,0.4s					
VCEL				AML	AML	
	comp=E,974μm,0.4s					
ATPI	**Pietralunga -**	**0.77**	**321**	⇓P	**Pg**	**05 56 07.1 +0.1**
ATPI				S	**Sn**	**05 56 20.0 -0.4**
ATPI				AML	AML	
	comp=E,315μm,0.9s					
ATPI				AML	AML	
	comp=N,295μm,0.4s					
PIEI	**Pieia**	**0.79**	**331**	⇑P	**Pg**	**05 56 07.3 -0.1**
PIEI				S	**Sb**	**05 56 20.0 +1.6**
PIEI				AML	AML	
	comp=E,662μm,0.2s					
PIEI				AML	AML	
	comp=N,521μm,1.2s					
MPAG	**Monte Paganucc**	**0.81**	**344**	⇑P	**Pg**	**05 56 08.0 +0.2**
MPAG				S	**Sn**	**05 56 22.0 +0.7**
MPAG				AML	AML	
	comp=E,816μm,0.2s					
MPAG				AML	AML	
	comp=E,816μm,0.2s					
MPAG				AML	AML	
	comp=N,531μm,0.3s					
T0110	**Collepietro**	**0.81**	**140**	⇓P	**Pg**	**05 56 07.4 -0.4**
T0110				AML	AML	
	comp=E,1075μm,0.4s					
T0110				AML	AML	
	comp=N,758μm,0.4s					
T0110				AML	AML	
	comp=E,1080μm,0.4s					
T0110				AML	AML	
	comp=N,758μm,0.4s					
APEC	**Apecchio**	**0.85**	**327**	S	**Sn**	**05 56 23.0 +0.7**
FSSB	**Fossombrone**	**0.87**	**346**	S	**Sn**	**05 56 23.0 +0.3**
BADI	**Badiali**	**0.89**	**318**	⇓P	**Pb**	**05 56 10.2 +0.7**
CAFI	**Castiglion Fio**	**0.94**	**301**	⇑P	**Pg**	**05 56 10.2 0.0**
CAFI				S	**Sn**	**05 56 25.0 +0.6**
CAFI				AML	AML	
	comp=N,176μm,0.4s					
CAFI				AML	AML	
	comp=E,176μm,1.5s					
PE3	**Peglio**	**0.94**	**334**	P	**Pg**	**05 56 10.0 -0.3**
PE3				S	**Sn**	**05 56 26.0 +1.5**
SF04	**Casetta**	**1.03**	**270**	S	**Sn**	**05 56 29.0 +2.2**
LPEL	**Lama dei Pelig**	**1.15**	**134**	S	**Sn**	**05 56 31.0 +1.3**
LATB	**Latina**	**1.36**	**183**	⇑P	**Pn**	**05 56 14.9 -1.8**
VAGA	**Valle Agricola**	**1.68**	**148**	P	**Pg**	**05 56 24.4 +0.2**
APRC	**Apricena**	**2.14**	**120**	S	**Sn**	**05 56 56.0 +2.0**
MCRV	**Calabrutti - M**	**2.59**	**142**	S	**Sb**	**05 57 12.0 +1.6**
OBKA	**Obir**	**3.81**	**16**	*e*Pn	**Pg**	**05 57 04.5 -0.5**
	comp=E,3.8nm,0.7s					
ABTA	**Abfaltersbach**	**3.92**	**354**	*e*Pn	**Pg**	**05 57 06.2 -0.9**
	comp=E,2.7nm,0.3s					
FETA	**Feichten**	**4.49**	**339**	*e*Pn	**Pb**	**05 57 07.5 -3.3**
	comp=E,1.0nm,0.4s					

PRE ***31*** *05:59:19.7±1.8, 26.°92S×26.°74E, h2km, ML3.4*
IDC ***31*** *05:59:20.2±1.8, 26.°90S×26.°70E, h0km, mb3.7/2, mbtmp4.1/7, ML4.0/3, Error ellipse: s-maj=27.0km s-min=11.0km az=98.0*
NEIC ***31*** *05:59:20.6±1.6, 26.°92S±0.°07×26.°82E±0.°08, h5km±1km, mb4.5/4, Error ellipse: s-maj=12.8km s-min=9.6km az=47.0*
BUL ***31*** *05:59:21.6±1.3, 26.°89S×26.°66E, h0km±14km, MD4.0*
EAF ***31*** *05:59:22.2±1.2, 26.°90S×26.°66E, h4km±14km, MD3.8*
ISC 31 05:59:20.7±1.1, 26.°89S±0.°03×26.°72E±0.°03, h13km±7km, n65, σ1.968/114, mb4.2/4, 2C-21D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.57**	**93**	⇑*i*P	**Pg**	**05 59 31.6**	**-0.4**
PRYS				AMPG		05 59 31.7	
	comp=Z,3μm,0.2s						
PRYS				*e*S	**Sg**	**05 59 38.0**	**-1.7**
PRYS				AMSG		05 59 38.2	
	comp=Z,16μm,0.2s						
PRYS				AMSG		05 59 38.4	
	comp=Z,31μm,0.2s						
PRYS				IAML		05 59 43.5	
	comp=Z,2μm,0.8s						
WDLM	**Western Deep L**	**0.79**	**54**	⇑*i*P	**Pg**	**05 59 35.9**	**-0.1**
WDLM				AMPG		05 59 36.2	
	comp=Z,6μm,0.3s						
WDLM				*e*S	**Sg**	**05 59 44.8**	**-1.5**
WDLM				IAML		05 59 46.0	
	comp=Z,2μm,0.2s						
KSR	**Koster**	**1.05**	**9**	⇓*i*P	**Pb**	**05 59 40.9**	**+0.1**
KSR				*e*S	**Sb**	**05 59 54.5**	**0.0**
KSR				AMSG		05 59 55.4	
	comp=Z,135μm,0.2s						
SWZ	**Schweizer**	**1.27**	**257**	*e*P	**Pg**	**05 59 45.4**	**+0.2**
SWZ				*e*S	**Sb**	**06 00 01.4**	**+0.6**
SWZ				IAML		06 00 05.6	
	comp=Z,2μm,0.4s						
HRAO	**HartRAO**	**1.32**	**41**	⇓*i*P	**Pb**	**05 59 45.9**	**+0.4**
SNKL	**Senekal, Frees**	**1.66**	**146**	⇓*i*P	**Pb**	**05 59 51.2**	**-0.1**
SNKL				*e*S	**Sb**	**06 00 12.8**	**+0.6**
SNKL				IAML		06 00 14.2	
	comp=Z,840nm,0.2s						
SLR	**Silverton**	**1.82**	**51**	⇓*i*P	**Pb**	**05 59 53.5**	**-0.4**
SLR				*e*S	**Sb**	**06 00 16.6**	**0.0**
SLR				IAML		06 00 18.8	
	comp=Z,2μm,0.4s						
LBTB	**Lobatse**	**2.13**	**331**	Pn	**Pb**	**05 59 58.1**	**-1.0**
	comp=Z,56nm,0.3s,baz=154,slow=18,SNR=169						
LBTB				Pg	**Pg**	**06 00 00.6**	**-1.0**
	comp=Z,56nm,0.3s,baz=153,slow=11,SNR=470						
LBTB				Lg	Lg	06 00 27.3	
	comp=Z,467nm,0.3s,baz=55,slow=20,SNR=68						
	comp=Z,207nm,0.4s						
LBTB	**Lobatse**	**2.13**	**331**	Pn	**Pn**	**05 59 57.7**	**+1.7**
LBTB	**Lobatse**	**2.13**	**331**	*e*P	**Pn**	**05 59 58.0**	**+2.0**
LBTB				*e*S	**Sn**	**06 00 23.9**	**+1.6**
LBTB	**Lobatse**	**2.13**	**331**	*e*P	**Pn**	**05 59 58.0**	**+2.0**
LBTB				*e*S	**Sn**	**06 00 23.9**	**+1.6**
BOSA	**Boshof**	**2.15**	**217**	Pn	**Pn**	**05 59 57.7**	**+1.4**
	comp=Z,38nm,0.3s,baz=40,slow=13,SNR=224						
BOSA				Pg	**Pb**	**06 00 00.0**	**+0.5**
	comp=Z,38nm,0.3s,baz=42,slow=17,SNR=54						
BOSA				Lg	Lg	06 00 27.2	
	comp=Z,77nm,0.3s,baz=303,slow=21,SNR=18						
	comp=Z,92nm,0.4s						
BOSA	**Boshof**	**2.15**	**217**	Pn	**Pn**	**05 59 57.5**	**+1.2**
BOSA	**Boshof**	**2.15**	**217**	⇓*i*P	**Pn**	**05 59 57.8**	**+1.4**
BOSA				*e*S	**Sn**	**06 00 24.0**	**+1.1**
BOSA				IAML		06 00 37.1	
	comp=Z,161nm,0.2s						
BOSA	**Boshof**	**2.15**	**217**	*e*P	**Pb**	**05 59 58.8**	**-0.8**
BOSA				*e*S	**Sn**	**06 00 23.9**	**+1.1**
BOSA	**Boshof**	**2.15**	**217**	*e*P	**Pb**	**05 59 58.8**	**-0.8**
BOSA				*e*S	**Sn**	**06 00 23.9**	**+1.1**
NWCL	**Newcastle**	**2.94**	**107**	⇓*i*P	**Pn**	**06 00 07.9**	**+0.6**
NWCL				*e*S	**Sn**	**06 00 43.2**	**+0.7**
NWCL				IAML		06 00 57.1	
	comp=Z,416nm,0.3s						
CRLN	**Carolina, Mapu**	**3.10**	**74**	⇓*i*P	**Pn**	**06 00 10.2**	**+0.8**
CRLN				*e*S	**Sn**	**06 00 45.5**	**-0.8**
CRLN				IAML		06 01 00.8	
	comp=Z,125nm,0.4s						
LEPH	**Lephalale, Lim**	**3.18**	**18**	⇓*i*P	**Pn**	**06 00 12.3**	**+1.8**
LEPH				*e*S	**Sn**	**06 00 50.9**	**+2.7**
LEPH				IAML		06 01 07.7	
	comp=Z,193nm,0.3s						
HVD	**Gariep Dam**	**3.85**	**196**	*e*P	**Pn**	**06 00 20.5**	**+0.8**
HVD				*e*S	**Sn**	**06 01 05.5**	**+0.6**
HVD				IAML		06 01 24.8	
	comp=Z,75nm,0.4s						
KSTD	**Kokstad**	**4.35**	**149**	⇓*i*P	**Pn**	**06 00 29.3**	**+2.6**
KSTD				*e*S	**Sn**	**06 01 17.1**	**-0.2**
KSTD				IAML		06 01 36.4	
	comp=Z,80nm,0.3s						
PKA	**Prieska**	**4.46**	**231**	⇓*i*P	**Pn**	**06 00 28.1**	**+0.1**
PKA				*e*S	**Sn**	**06 01 18.7**	**-1.1**
PKA				IAML		06 01 39.9	
	comp=Z,193nm,0.4s						
POGA	**Pongola**	**4.47**	**97**	Pn	**Pn**	**06 00 28.2**	**0.0**
POGA	**Pongola**	**4.47**	**97**	⇓*i*P	**Pn**	**06 00 28.6**	**+0.5**
POGA				*e*S	**Sn**	**06 01 18.1**	**-1.8**
POGA				IAML		06 01 39.4	
	comp=Z,160nm,0.5s						
UPI	**Upington**	**5.07**	**252**	*e*P	**Pn**	**06 00 38.1**	**+1.7**
UPI				*e*S	**Sn**	**06 01 35.1**	**+0.3**
UPI				IAML		06 02 02.0	
	comp=Z,49nm,0.9s						
MUSN	**Musina, Limpop**	**5.40**	**33**	⇓*i*P	**Pn**	**06 00 41.7**	**+0.7**
MUSN				*e*S	**Sn**	**06 01 42.9**	**-0.2**
MUSN				IAML		06 02 16.5	
	comp=Z,63nm,0.3s						
MUSN	**Musina, Limpop**	**5.40**	**33**	*e*P	**Pn**	**06 00 42.2**	**+1.2**
MUSN				*e*S	**Sn**	**06 01 42.6**	**-0.6**
MUSN	**Musina, Limpop**	**5.40**	**33**	*e*P	**Pn**	**06 00 42.2**	**+1.2**
MUSN				*e*S	**Sn**	**06 01 42.6**	**-0.6**
MOPA	**Mopani**	**5.41**	**53**	⇓*i*P	**Pn**	**06 00 41.6**	**+0.6**
MOPA				*e*S	**Sn**	**06 01 42.7**	**-0.6**
MOPA				IAML		06 02 13.4	
	comp=Z,15nm,0.4s						
MOPA	**Mopani**	**5.41**	**53**	*e*P	**Pn**	**06 00 42.5**	**+1.4**
MOPA				*e*S	**Sn**	**06 01 43.4**	**+0.1**
MOPA	**Mopani**	**5.41**	**53**	*e*P	**Pn**	**06 00 42.5**	**+1.4**
MOPA				*e*S	**Sn**	**06 01 43.4**	**+0.1**
BFON	**Badsfontein, M**	**5.56**	**208**	⇓*i*P	**Pn**	**06 00 44.9**	**+1.7**
BFON				*e*S	**Sn**	**06 01 46.7**	**-0.2**
BFON				IAML		06 02 13.8	
	comp=Z,76nm,0.5s						
GRAF	**Camdeboo Natio**	**5.71**	**199**	⇓*i*P	**Pn**	**06 00 47.2**	**+2.1**
GRAF				*e*S	**Sn**	**06 01 49.7**	**-0.9**
GRAF				IAML		06 02 21.0	
	comp=Z,52nm,0.5s						
SOE	**Somerset East**	**5.88**	**190**	Pn	**Pn**	**06 00 48.0**	**+0.4**
SOE	**Somerset East**	**5.88**	**190**	*e*P	**Pn**	**06 00 48.8**	**+1.2**
SOE				*e*S	**Sn**	**06 01 54.3**	**-0.7**
SOE				IAML		06 02 36.9	
	comp=Z,44nm,0.4s						
AUGR	**Augrabies**	**5.90**	**252**	*e*P	**Pn**	**06 00 47.7**	**-0.2**
AUGR				*e*S	**Sn**	**06 01 55.0**	**-0.4**
AUGR				IAML		06 02 23.8	
	comp=Z,117nm,0.4s						
BRAK	**Brakfontein**	**5.90**	**214**	⇓*i*P	**Pn**	**06 00 49.8**	**+1.9**
BRAK				*e*S	**Sn**	**06 01 55.1**	**-0.3**
BRAK				IAML		06 02 33.6	
	comp=Z,47nm,0.4s						
ROOI	**Rooidraai Farm**	**6.22**	**206**	⇓*i*P	**Pn**	**06 00 53.5**	**+1.2**
ROOI				*e*S	**Sn**	**06 02 00.5**	**-2.8**
ROOI				IAML		06 02 38.9	
	comp=Z,59nm,0.5s						
GRHM	**Grahamstown, E**	**6.37**	**183**	⇓*i*P	**Pn**	**06 00 54.4**	**+0.1**
GRHM				*e*S	**Sn**	**06 02 03.6**	**-3.3**
GRHM				IAML		06 02 43.5	
	comp=Z,25nm,0.6s						
GRAN	**Grantham**	**6.69**	**215**	⇓*i*P	**Pn**	**06 01 00.2**	**+1.5**
GRAN				*e*S	**Sn**	**06 02 14.8**	**+0.1**
GRAN				IAML		06 02 52.8	
	comp=Z,46nm,0.4s						
FRAZ	**Fraserburg**	**6.83**	**221**	⇓*i*P	**Pn**	**06 01 02.2**	**+1.6**
FRAZ				*e*S	**Sn**	**06 02 16.3**	**-2.0**
FRAZ				IAML		06 02 57.5	
	comp=Z,28nm,0.4s						
MERW	**Merweville**	**7.32**	**217**	⇓*i*P	**Pn**	**06 01 08.8**	**+1.5**
MERW				*e*S	**Sn**	**06 02 27.9**	**-2.4**
MERW				IAML		06 02 46.3	
	comp=Z,36nm,0.4s						
ROSN	**Rosenhof**	**7.43**	**194**	*e*P	**Pn**	**06 01 09.3**	**+0.6**
ROSN				*e*S	**Sn**	**06 02 28.9**	**-4.0**
ROSN				IAML		06 03 14.1	
	comp=Z,19nm,0.4s						
BUFB	**Buffelsbos**	**7.43**	**193**	*e*P	**Pn**	**06 01 10.2**	**+1.4**
BUFB				*e*S	**Sn**	**06 02 32.1**	**-0.8**
BUFB				IAML		06 03 14.2	
	comp=Z,17nm,0.5s						
KROM	**Kromhout**	**7.45**	**194**	*e*P	**Pn**	**06 01 09.5**	**+0.4**
KROM				*e*S	**Sn**	**06 02 31.7**	**-1.6**
KROM				IAML		06 03 20.2	
	comp=Z,22nm,0.5s						
SUR	**Sutherland**	**7.50**	**222**	Pn	**Pn**	**06 01 11.2**	**+1.2**
	comp=Z,2.4nm,0.3s,baz=54,slow=16,SNR=41						
SUR				Sn	**Sn**	**06 02 31.7**	**-3.3**
	comp=Z,3.1nm,0.3s,baz=16,slow=15,SNR=3.7						
SUR				Lg	Lg	06 03 10.9	
	comp=Z,7.8nm,0.3s,baz=329,slow=22,SNR=10						
	comp=Z,5.4nm,0.3s						
SUR	**Sutherland**	**7.50**	**222**	Pn	**Pn**	**06 01 11.4**	**+1.4**
CVNA	**Calvinia**	**7.61**	**231**	*e*P	**Pn**	**06 01 12.5**	**+1.2**
CVNA				*e*S	**Sn**	**06 02 34.9**	**-2.5**
CVNA				IAML		06 03 23.0	
	comp=Z,76nm,0.4s						
MATJ	**Matjiesfontein**	**8.28**	**218**	*e*P	**Pn**	**06 01 22.5**	**+2.0**
MATJ				*e*S	**Sn**	**06 02 51.4**	**-2.6**
MATJ				IAML		06 03 43.5	
	comp=Z,31nm,0.5s						
KOMG	**Komaggas**	**8.63**	**248**	*e*P	**Pn**	**06 01 26.6**	**+1.2**
KOMG				*e*S	**Sn**	**06 02 59.5**	**-3.1**
KOMG				IAML		06 03 59.6	
	comp=Z,52nm,0.4s						
CER	**Ceres**	**9.10**	**223**	*e*P	**Pn**	**06 01 32.1**	**+0.3**
CER				*e*S	**Sn**	**06 03 09.9**	**-4.2**
CER				IAML		06 04 10.7	
	comp=Z,29nm,0.5s						
ELIM	**Elim**	**9.74**	**216**	*e*P	**Pn**	**06 01 42.0**	**+1.5**
ELIM				*e*S	**Sn**	**06 03 23.7**	**-6.1**
ELIM				IAML		06 04 32.1	
	comp=Z,11nm,0.8s						
TSUM	**Tsumeb**	**11.37**	**310**	Pn	**Pn**	**06 02 04.0**	**+1.1**
	comp=Z,3.7nm,0.4s,baz=136,slow=11,SNR=11						
TSUM				Sn	**Sn**	**06 04 06.6**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=264,slow=18,SNR=5.5						
TSUM				Lg	Lg	06 05 17.1	
	comp=Z,1.5nm,0.3s,baz=79,slow=20,SNR=4.7						
TSUM	**Tsumeb**	**11.37**	**310**	Pn	**Pn**	**06 02 05.1**	**+2.2**
TSUM	**Tsumeb**	**11.37**	**310**	*e*P	**Pn**	**06 02 04.1**	**+1.1**
TSUM				*e*S	**Sn**	**06 04 07.2**	**-2.7**
TSUM				IAML		06 05 30.6	
	comp=Z,7.7nm,0.6s						
LSZ	**Lusaka**	**11.64**	**7**	Pn	**Pn**	**06 02 06.8**	**+0.1**
	comp=Z,5.8nm,0.4s,baz=185,slow=13,SNR=12						
LSZ				Sn	**Sn**	**06 04 11.5**	**-5.1**
	comp=Z,0.9nm,0.3s,baz=190,slow=3.8,SNR=3.2						
LSZ				Lg	Lg	06 05 24.9	
	comp=Z,1.3nm,0.3s,baz=290,slow=23,SNR=5.7						
LSZ	**Lusaka**	**11.64**	**7**		**Pn**	**06 02 06.6**	**-0.1**
TOA0	**Torodi Ar. Sit**	**46.64**	**325**	P	**P**	**06 07 49.8**	**+0.9**
TOA0				IAmb	IAmb	06 08 12.9	
	comp=Z,6.2nm,1.5s						
TORD	**Torodi Ar. Bea**	**46.64**	**325**	P	**P**	**06 07 49.7**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=140,slow=6.3,SNR=9.6						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**46.64**	**325**	P	**P**	**06 07 50.3**	**+1.4**
SNAA	**Sanae**	**47.73**	**192**	P	**P**	**06 07 56.5**	**-0.4**
SNAA				IAmb	IAmb	06 08 18.1	
	comp=Z,7.1nm,1.5s						
QSPA	**South Pole Qui**	**63.30**	**180**	P	**P**	**06 09 48.8**	**-0.2**
ESDC	**Sonseca Array**	**72.14**	**336**	P	**P**	**06 10 46.6**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=144,slow=5.8,SNR=5.3						
	comp=Z,0.4nm,0.7s						
WMQ	**Urumqi**	**89.82**	**39**	*e*P	**P**	**06 12 22.0**	**+3.0**
LZH	**Lanzhou**	**95.89**	**53**	*e*P	**P**	**06 12 47.5**	**+0.1**
LZH				pP	pP	06 12 53.0	+0.7

ROM 31 06:07:48.1±0.0, 42.°886N±0.°002×13.°097E±0.°003, h10km, ML2.6/32, 11C-5D, Error ellipse: s-maj=0.2km s-min=0.2km az=337.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**274**	⇑P	Pg	06 07 50.5	+0.3
T1216				S	Sg	06 07 51.9	+0.1
T1216				AML	AML		
	comp=E,17800μm,0.3s						
T1216				AML	AML		
	comp=N,28150μm,0.2s						
T1216				AML	AML		
	comp=N,28150μm,0.2s						
T1216				AML	AML		
	comp=E,30250μm,0.4s						
T1216				AML	AML		
	comp=N,28158μm,0.2s						
T1216				AML	AML		
	comp=E,17789μm,0.3s						
T1245	**Castelsantange**	**0.07**	**114**	P	Pg	06 07 50.9	+0.4
T1245				S	Sg	06 07 52.6	+0.3
T1245				AML	AML		
	comp=N,22550μm,1.2s						
T1245				AML	AML		
	comp=E,24800μm,0.2s						
T1245				AML	AML		
	comp=N,22600μm,1.2s						
T1245				AML	AML		
	comp=E,21350μm,0.2s						
T1245				AML	AML		
	comp=E,24750μm,0.2s						
T1245				AML	AML		
	comp=N,23900μm,0.2s						
T1245				AML	AML		
	comp=N,22600μm,1.2s						
T1245				AML	AML		
	comp=E,21329μm,0.2s						
T1245				AML	AML		
	comp=N,23878μm,0.2s						
T1245				AML	AML		
	comp=E,24773μm,0.2s						
T1245				AML	AML		
	comp=N,21600μm,0.2s						
FEMA	**Monte Fema**	**0.08**	**336**	P	Pg	06 07 50.9	+0.3
FEMA				S	Sg	06 07 52.7	+0.3
FEMA				AML	AML		
	comp=E,7145μm,0.2s						
FEMA				AML	AML		
	comp=N,5900μm,1.1s						
FEMA				AML	AML		
	comp=E,7140μm,0.2s						
FEMA				AML	AML		
	comp=N,5895μm,1.1s						
FEMA				AML	AML		
	comp=N,7535μm,0.6s						
FEMA				AML	AML		
	comp=E,7143μm,0.2s						
FEMA				AML	AML		
	comp=N,5453μm,0.5s						
MMO1	**Montemonaco**	**0.17**	**86**	P	Pg	06 07 52.4	+0.6
MMO1				S	Sg	06 07 55.3	+0.9
T1215	**Vallo di Nera,**	**0.19**	**243**	⇑P	Pg	06 07 52.8	+0.7
T1215				S	Sg	06 07 56.1	+1.3
T1215				AML	AML		
	comp=E,1505μm,1.4s						
T1215				AML	AML		
	comp=N,1385μm,1.3s						
T1215				AML	AML		
	comp=E,1480μm,1.5s						
T1215				AML	AML		
	comp=N,1380μm,0.6s						
T1215				AML	AML		
	comp=E,1503μm,1.4s						
T1215				AML	AML		
	comp=N,1390μm,1.3s						
T1215				AML	AML		
	comp=E,3055μm,1.0s						
T1215				AML	AML		
	comp=N,3695μm,0.2s						
T1215				AML	AML		
	comp=N,3758μm,0.2s						
T1215				AML	AML		
	comp=E,3020μm,0.9s						
T1215				AML	AML		
	comp=E,1233μm,0.1s						
T1215				AML	AML		
	comp=N,1198μm,0.1s						
T1215				AML	AML		
	comp=E,1192μm,0.1s						
T1215				AML	AML		
	comp=N,1188μm,0.1s						
AM05	**Amandola Campo**	**0.21**	**64**	⇑P	Pg	06 07 53.2	+0.7
AM05				S	Sg	06 07 56.7	+1.3
AM05				AML	AML		
	comp=E,2475μm,0.9s						
AM05				AML	AML		
	comp=E,564μm,0.8s						
AM05				AML	AML		
	comp=N,662μm,0.2s						
AM05				AML	AML		
	comp=N,214μm,0.1s						
AM05				AML	AML		
	comp=N,663μm,0.2s						
AM05				AML	AML		
	comp=N,214μm,0.1s						
AM05				AML	AML		
	comp=E,492μm,0.1s						
AM05				AML	AML		
	comp=N,554μm,0.1s						
AM05				AML	AML		
	comp=N,214μm,0.1s						
AM05				AML	AML		
	comp=E,2217μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**215**	P	Pg	06 07 53.2	+0.7
T1217				S	Sg	06 07 56.9	+1.3
T1217				AML	AML		
	comp=E,3755μm,0.2s						
T1217				AML	AML		
	comp=E,3690μm,0.2s						
T1217				AML	AML		
	comp=E,3755μm,0.2s						
T1217				AML	AML		
	comp=N,6000μm,0.7s						
T1217				AML	AML		
	comp=E,3695μm,0.2s						
T1217				AML	AML		
	comp=N,5665μm,0.8s						
T1217				AML	AML		
	comp=E,4105μm,0.2s						
T1217				AML	AML		
	comp=N,5660μm,0.7s						
T1217				AML	AML		
	comp=E,4055μm,0.2s						
T1217				AML	AML		
	comp=N,6000μm,0.7s						
T1217				AML	AML		
	comp=N,5547μm,0.2s						
T1217				AML	AML		
	comp=N,5728μm,0.2s						
T1217				AML	AML		
	comp=E,3755μm,0.2s						
T1217				AML	AML		
	comp=E,3692μm,0.2s						
CSP1	**Cessapalombo**	**0.22**	**21**	P	Pg	06 07 53.2	+0.5
CSP1				S	Sg	06 07 57.0	+1.2
CSP1				AML	AML		
	comp=E,2717μm,0.3s						
CSP1				AML	AML		
	comp=N,2710μm,0.8s						
CSP1				AML	AML		
	comp=E,2720μm,0.3s						
CSP1				AML	AML		
	comp=N,2700μm,0.8s						
CSP1				AML	AML		
	comp=E,2719μm,0.3s						
CSP1				AML	AML		
	comp=N,2663μm,0.2s						
GUMA	**Gualdo di Mace**	**0.25**	**45**	⇑P	Pb	06 07 54.1	-0.6
GUMA				S	Sg	06 07 58.5	+1.9
GUMA				AML	AML		
	comp=E,3555μm,0.8s						
GUMA				AML	AML		
	comp=N,4800μm,0.4s						
GUMA				AML	AML		
	comp=N,3740μm,0.5s						
GUMA				AML	AML		
	comp=E,3610μm,0.8s						
GUMA				AML	AML		
	comp=E,3980μm,0.3s						
GUMA				AML	AML		
	comp=N,4225μm,0.4s						
GUMA				AML	AML		
	comp=N,4805μm,0.4s						
GUMA				AML	AML		
	comp=E,3980μm,0.3s						
GUMA				AML	AML		

	comp=N,4802µm,0.4s					
GUMA				AML	AML	
	comp=N,3736µm,0.5s					
GUMA				AML	AML	
	comp=E,3455µm,0.4s					
T1241	**Roccafluvione,**	**0.25**	**97**	⇑P	Pg	06 07 53.8 +0.7
T1241				S	Sg	06 07 57.9 +1.3
T1204	**Amatrice, Fraz**	**0.27**	**142**	P	Pg	06 07 54.2 +0.7
T1204				AML	AML	
	comp=N,1595µm,0.9s					
T1204				AML	AML	
	comp=E,2455µm,0.8s					
T1204				AML	AML	
	comp=N,704µm,0.2s					
T1204				AML	AML	
	comp=E,1391µm,0.2s					
LNSS	**Leonessa**	**0.29**	**188**	P	Pg	06 07 54.5 +0.7
LNSS				S	Sb	06 07 59.1 -1.1
LNSS				AML	AML	
	comp=E,1165µm,0.2s					
LNSS				AML	AML	
	comp=N,3100µm,1.1s					
LNSS				AML	AML	
	comp=N,3425µm,0.4s					
LNSS				AML	AML	
	comp=E,1340µm,0.1s					
LNSS				AML	AML	
	comp=N,2262µm,0.1s					
LNSS				AML	AML	
	comp=E,1169µm,0.2s					
SMA1	**SAN MARTINO**	**0.31**	**145**	P	Pg	06 07 55.0 +0.7
SMA1				S	Sb	06 08 00.1 -0.8
SMA1				AML	AML	
	comp=E,885µm,0.3s					
SMA1				AML	AML	
	comp=N,828µm,0.3s					
SMA1				AML	AML	
	comp=E,1945µm,1.5s					
SMA1				AML	AML	
	comp=N,1260µm,0.4s					
SMA1				AML	AML	
	comp=N,829µm,0.3s					
SMA1				AML	AML	
	comp=E,842µm,0.3s					
T1243	**Rocca Santa Ma**	**0.32**	**126**	P	Pg	06 07 54.9 +0.4
T1243				S	Sg	06 07 60.0 +1.2
ASSB	**Assisi San Ben**	**0.36**	**296**	⇑P	Pg	06 07 55.6 +0.4
ASSB				S	Sb	06 08 01.3 -1.0
ASSB				AML	AML	
	comp=N,1054µm,0.2s					
ASSB				AML	AML	
	comp=E,2140µm,0.2s					
ASSB				AML	AML	
	comp=N,1052µm,0.2s					
ASSB				AML	AML	
	comp=E,2141µm,0.2s					
SNTG	**Esanatoglia**	**0.39**	**343**	P	Pg	06 07 56.1 +0.4
SNTG				AML	AML	
	comp=E,260µm,0.5s					
SNTG				AML	AML	
	comp=N,231µm,1.3s					
SNTG				AML	AML	
	comp=E,260µm,0.7s					
SNTG				AML	AML	
	comp=N,243µm,1.3s					
SNTG				AML	AML	
	comp=N,247µm,0.3s					
SNTG				AML	AML	
	comp=E,261µm,0.4s					
SNTG				AML	AML	
	comp=E,253µm,0.3s					
SNTG				AML	AML	
	comp=N,230µm,0.3s					
RM33	**Pellescritta (**	**0.39**	**167**	P	Pg	06 07 56.1 +0.4
RM33				S	Sb	06 08 02.3 -0.8
RM33				AML	AML	
	comp=E,756µm,1.2s					
RM33				AML	AML	
	comp=N,711µm,0.5s					
RM33				AML	AML	
	comp=E,586µm,0.7s					
RM33				AML	AML	
	comp=N,737µm,0.5s					
RM33				AML	AML	
	comp=E,767µm,0.3s					
RM33				AML	AML	
	comp=E,813µm,1.0s					
RM33				AML	AML	
	comp=N,738µm,0.5s					
RM33				AML	AML	
	comp=N,714µm,0.5s					
RM33				AML	AML	
	comp=N,567µm,0.1s					
RM33				AML	AML	
	comp=E,582µm,0.1s					
RM33				AML	AML	
	comp=N,578µm,0.1s					
RM33				AML	AML	
	comp=E,602µm,0.1s					
ARRO	**Arrone**	**0.39**	**219**	P	Pg	06 07 56.3 +0.5
ARRO				AML	AML	
	comp=E,950µm,0.2s					
ARRO				AML	AML	
	comp=N,644µm,0.2s					
ARRO				AML	AML	
	comp=E,1340µm,0.2s					
ARRO				AML	AML	
	comp=N,1485µm,1.3s					
ARRO				AML	AML	
	comp=E,948µm,0.2s					
ARRO				AML	AML	
	comp=N,644µm,0.2s					
T1211	**Morro Reatino**	**0.40**	**207**	P	Pg	06 07 56.5 +0.6
T1211				AML	AML	
	comp=E,1275µm,0.8s					
T1211				AML	AML	
	comp=N,2060µm,0.1s					
T1211				AML	AML	
	comp=E,1430µm,0.1s					
T1211				AML	AML	
	comp=N,2055µm,0.1s					
T1211				AML	AML	
	comp=N,2058µm,0.1s					
T1211				AML	AML	
	comp=N,2028µm,0.1s					
T1211				AML	AML	
	comp=E,1145µm,0.1s					
T1211				AML	AML	
	comp=E,1146µm,0.1s					
OFFI	**Offida**	**0.43**	**83**	⇑P	Pb	06 07 58.1 +0.2
OFFI				AML	AML	
	comp=E,729µm,0.9s					
OFFI				AML	AML	
	comp=N,920µm,0.7s					
OFFI				AML	AML	
	comp=N,1152µm,0.7s					
OFFI				AML	AML	
	comp=E,1305µm,0.7s					
OFFI				AML	AML	
	comp=N,920µm,0.7s					
OFFI				AML	AML	
	comp=E,707µm,0.3s					
EL6	**Elcito**	**0.44**	**0**	⇑P	Pg	06 07 57.2 +0.4
EL6				AML	AML	
	comp=E,677µm,1.4s					
EL6				AML	AML	
	comp=N,1019µm,0.3s					
EL6				AML	AML	
	comp=N,1018µm,0.3s					
EL6				AML	AML	
	comp=E,676µm,1.4s					
EL6				AML	AML	
	comp=E,640µm,0.3s					
ATCC	**AVT- Casa Cast**	**0.45**	**312**	P	Pg	06 07 57.3 +0.4
ATCC				AML	AML	
	comp=E,644µm,0.3s					
ATCC				AML	AML	
	comp=N,531µm,0.4s					
ATCC				AML	AML	
	comp=E,648µm,0.6s					
ATCC				AML	AML	
	comp=N,654µm,0.4s					
ATCC				AML	AML	
	comp=N,531µm,0.4s					
ATCC				AML	AML	
	comp=E,645µm,0.3s					
TERO	**Teramo**	**0.46**	**125**	⇓P	Pg	06 07 57.3 +0.3
TERO				AML	AML	
	comp=E,726µm,0.3s					
TERO				AML	AML	
	comp=E,880µm,0.5s					
TERO				AML	AML	
	comp=N,994µm,0.4s					
TERO				AML	AML	
	comp=N,587µm,0.2s					
TERO				AML	AML	
	comp=E,689µm,0.3s					
TERO				AML	AML	
	comp=N,671µm,0.1s					
TERO				AML	AML	
	comp=E,686µm,0.2s					
T1247	**Pizzolo (AQ)**	**0.47**	**161**	S	Sb	06 08 06.0 +0.6
CESX	**Cesi**	**0.47**	**234**	P	Pg	06 07 57.5 +0.3
CESX				AML	AML	
	comp=E,580µm,0.8s					
CESX				AML	AML	
	comp=N,759µm,0.3s					
CESX				AML	AML	
	comp=E,1335µm,0.3s					
CESX				AML	AML	
	comp=N,1590µm,0.6s					
CESX				AML	AML	
	comp=N,759µm,0.3s					
CESX				AML	AML	
	comp=E,474µm,0.3s					
GIGS	**Gran Sasso**	**0.56**	**141**	P	Pg	06 07 58.8 -0.1
GIGS				AML	AML	
	comp=E,97µm,1.4s					
GIGS				AML	AML	
	comp=N,80µm,1.4s					
GIGS				AML	AML	
	comp=N,134µm,0.5s					
GIGS				AML	AML	
	comp=E,150µm,0.6s					
GIGS				AML	AML	
	comp=E,91µm,0.1s					
GIGS				AML	AML	
	comp=N,69µm,0.1s					
MURB	**Monte Urbino**	**0.56**	**312**	S	Sb	06 08 09.0 +0.8
FIAM	**Fiamignano**	**0.62**	**179**	⇑P	Pg	06 08 00.2 +0.2
FIAM				S	Sb	06 08 11.0 +1.2
FIAM				AML	AML	
	comp=E,196µm,0.8s					
FIAM				AML	AML	
	comp=N,210µm,1.3s					
FIAM				AML	AML	
	comp=E,272µm,0.5s					
FIAM				AML	AML	
	comp=N,220µm,0.5s					
FIAM				AML	AML	
	comp=N,202µm,0.3s					
FIAM				AML	AML	
	comp=E,183µm,0.5s					
ARVD	**Arcevia**	**0.62**	**350**	P	Pg	06 08 00.4 +0.3
ARVD				AML	AML	
	comp=E,107µm,0.9s					
ARVD				AML	AML	
	comp=E,126µm,0.8s					
ARVD				AML	AML	
	comp=N,105µm,0.9s					
ARVD				AML	AML	
	comp=N,74µm,0.3s					
ARVD				AML	AML	
	comp=E,102µm,0.3s					
ATVO	**AVT- Monte Val**	**0.71**	**315**	⇑P	Pg	06 08 01.9 +0.2
ATVO				S	Sb	06 08 13.0 +0.7
ATVO				AML	AML	
	comp=E,98µm,0.7s					
ATVO				AML	AML	
	comp=N,80µm,0.9s					
ATVO				AML	AML	
	comp=E,144µm,0.7s					
ATVO				AML	AML	
	comp=N,148µm,0.9s					
ATVO				AML	AML	
	comp=N,74µm,0.4s					
ATVO				AML	AML	
	comp=E,96µm,0.3s					
FAGN	**Fagnano**	**0.72**	**150**	⇓P	Pb	06 08 02.8 +0.2
FAGN				AML	AML	
	comp=E,344µm,0.4s					
FAGN				AML	AML	
	comp=N,270µm,0.4s					
FAGN				AML	AML	
	comp=N,370µm,0.2s					
FAGN				AML	AML	
	comp=E,546µm,0.6s					
FAGN				AML	AML	
	comp=E,345µm,0.4s					
FAGN				AML	AML	
	comp=N,269µm,0.4s					
MGAB	**Montegabbione**	**0.72**	**272**	⇓P	Pg	06 08 02.4 +0.3
MGAB				AML	AML	
	comp=E,250µm,0.5s					
MGAB				AML	AML	
	comp=N,450µm,1.3s					
MGAB				AML	AML	
	comp=E,269µm,0.5s					
MGAB				AML	AML	
	comp=N,439µm,1.3s					
MGAB				AML	AML	
	comp=E,452µm,0.7s					
MGAB				AML	AML	
	comp=N,728µm,0.4s					
MGAB				AML	AML	
	comp=E,392µm,0.7s					
MGAB				AML	AML	
	comp=N,708µm,0.4s					
MGAB				AML	AML	
	comp=N,407µm,0.5s					
MGAB				AML	AML	
	comp=E,231µm,0.4s					
MGAB				AML	AML	
	comp=N,437µm,0.5s					
MGAB				AML	AML	
	comp=E,236µm,0.2s					
VCEL	**Villa Celiera**	**0.74**	**132**	⇓P	Pb	06 08 02.7 -0.4
VCEL				S	Sn	06 08 15.0 -1.0
VCEL				AML	AML	
	comp=E,383µm,0.2s					
VCEL				AML	AML	
	comp=N,408µm,0.3s					
VCEL				AML	AML	
	comp=N,442µm,1.4s					
VCEL				AML	AML	
	comp=E,440µm,0.3s					
VCEL				AML	AML	
	comp=N,408µm,0.3s					
VCEL				AML	AML	
	comp=E,383µm,0.2s					
MPAG	**Monte Paganucc**	**0.78**	**342**	⇑P	Pb	06 08 04.2 +0.4
MPAG				S	Sn	06 08 17.0 -0.1
MPAG				AML	AML	
	comp=N,156µm,0.3s					
MPAG				AML	AML	
	comp=E,186µm,0.3s					
MPAG				AML	AML	
	comp=E,186µm,0.3s					
MPAG				AML	AML	
	comp=N,156µm,0.3s					
MPAG				AML	AML	
	comp=E,965µm,0.8s					
MPAG				AML	AML	
	comp=N,1156µm,0.8s					
T0110	**Collepietro**	**0.83**	**142**	⇓P	Pg	06 08 04.0 0.0
T0110				AML	AML	
	comp=E,218µm,0.5s					
T0110				AML	AML	
	comp=N,219µm,0.5s					
T0110				AML	AML	
	comp=E,256µm,0.2s					
T0110				AML	AML	
	comp=N,332µm,0.4s					
T0110				AML	AML	
	comp=N,219µm,0.5s					
T0110				AML	AML	
	comp=E,218µm,0.5s					
APEC	**Apecchio**	**0.83**	**324**	S	Sg	06 08 15.0 -0.1
VVLD	**Villa Vallelon**	**1.09**	**159**	P	Pb	06 08 09.0 0.0
VVLD				AML	AML	
	comp=E,89µm,0.7s					
VVLD				AML	AML	
	comp=N,100µm,0.6s					
VVLD				AML	AML	
	comp=N,100µm,0.6s					
VVLD				AML	AML	
	comp=E,58µm,0.6s					
TOLF	**Tolfa**	**1.16**	**225**	P	Pb	06 08 08.0 -2.1
MA9	**Marino**	**1.16**	**196**	P	Pb	06 08 09.5 -0.7
MA9				AML	AML	
	comp=N,228µm,0.5s					
MA9				AML	AML	
	comp=E,236µm,0.8s					
MA9				AML	AML	
	comp=E,195µm,0.5s					
MA9				AML	AML	
	comp=N,183µm,0.4s					
LATB	**Latina**	**1.40**	**184**	S	Sn	06 08 30.0 -2.0
BDI	**Bagni Di Lucca**	**2.17**	**304**	S	Sg	06 08 58.0 +0.3

ROM 31 06:08:40.8±0.1, 42°.875N±0°.004×13°.017E±0°.005, h10km, ML2.2/16, 11C-6D, Error ellipse: s-maj=0.4km s-min=0.4km az=11.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.01**	**5**	P	Pg	06 08 43.0	+0.3
T1216				S	Sg	06 08 44.2	+0.3
T1216				AML	AML		
	comp=E,30200µm,0.4s						
T1216				AML	AML		
	comp=E,30250µm,0.4s						
T1216				AML	AML		
	comp=N,17000µm,0.9s						
T1216				AML	AML		
	comp=E,30250µm,0.4s						
FEMA	**Monte Fema**	**0.09**	**16**	P	Pg	06 08 43.7	+0.4
FEMA				S	Sg	06 08 45.8	+0.6
FEMA				AML	AML		
	comp=E,7140µm,1.0s						
FEMA				AML	AML		
	comp=N,7535µm,0.6s						
FEMA				AML	AML		
	comp=N,7535µm,0.5s						
FEMA				AML	AML		
	comp=E,7145µm,1.0s						
T1245	**Castelsantange**	**0.13**	**98**	P	Pg	06 08 44.3	+0.5
T1245				S	Sg	06 08 46.7	+0.6
T1245				AML	AML		
	comp=E,13310µm,0.3s						
T1245				AML	AML		
	comp=N,18550µm,0.3s						
T1245				AML	AML		
	comp=N,18200µm,0.3s						
T1245				AML	AML		
	comp=E,13350µm,0.3s						
T1245				AML	AML		
	comp=N,18550µm,0.3s						
T1245				AML	AML		
	comp=E,13340µm,0.3s						
T1245				AML	AML		
	comp=E,13660µm,0.6s						
T1215	**Vallo di Nera,**	**0.13**	**236**	P	Pg	06 08 44.4	+0.6
T1215				S	Sg	06 08 46.8	+0.8
T1215				AML	AML		
	comp=E,3050µm,1.0s						
T1215				AML	AML		
	comp=E,3025µm,1.0s						
T1215				AML	AML		
	comp=N,3760µm,0.2s						
T1215				AML	AML		
	comp=N,3695µm,0.2s						
T1215				AML	AML		
	comp=E,3020µm,0.9s						
T1215				AML	AML		
	comp=E,3055µm,1.0s						
T1215				AML	AML		
	comp=N,3758µm,0.2s						
T1215				AML	AML		
	comp=E,3020µm,1.1s						
T1215				AML	AML		
	comp=E,3055µm,1.0s						
T1217	**Poggiodomo (PG**	**0.17**	**201**	P	Pg	06 08 45.2	+0.6
T1217				S	Sg	06 08 48.2	+1.1
T1217				AML	AML		
	comp=E,4110µm,0.2s						
T1217				AML	AML		
	comp=N,4695µm,0.2s						
T1217				AML	AML		
	comp=E,4050µm,0.2s						
T1217				AML	AML		
	comp=N,4550µm,0.2s						
T1217				AML	AML		
	comp=E,4105µm,0.2s						
T1217				AML	AML		
	comp=E,4055µm,0.2s						
T1217				AML	AML		
	comp=N,4550µm,0.2s						
T1217				AML	AML		
	comp=N,4695µm,0.2s						
T1217				AML	AML		
	comp=E,4110µm,0.2s						
MMO1	**Montemonaco**	**0.23**	**84**	P	Pg	06 08 46.1	+0.6
MMO1				S	Sg	06 08 49.5	+0.7
AM05	**Amandola Campo**	**0.27**	**67**	P	Pg	06 08 46.6	+0.4
AM05				AML	AML		
	comp=E,407µm,0.4s						
AM05				AML	AML		
	comp=N,128µm,0.7s						
AM05				AML	AML		
	comp=E,503µm,0.1s						
AM05				AML	AML		
	comp=N,506µm,0.4s						
AM05				AML	AML		
	comp=N,147µm,1.4s						
AM05				AML	AML		
	comp=E,1875µm,0.2s						
AM05				AML	AML		
	comp=N,506µm,1.6s						
AM05				AML	AML		
	comp=N,147µm,0.6s						
LNSS	**Leonessa**	**0.27**	**176**	P	Pb	06 08 47.1	-0.7
LNSS				AML	AML		
	comp=E,1340µm,0.1s						
LNSS				AML	AML		
	comp=E,1450µm,0.3s						
LNSS				AML	AML		
	comp=N,3425µm,0.4s						
LNSS				AML	AML		
	comp=E,1450µm,1.7s						
SEF1	**Sefro**	**0.28**	**349**	P	Pb	06 08 47.2	-0.7
T1201	**Domo (RI)**	**0.28**	**142**	P	Pg	06 08 47.1	+0.7
T1201				S	Sb	06 08 52.0	-0.7
T1204	**Amatrice, Fraz**	**0.30**	**132**	P	Pg	06 08 47.3	+0.5
T1204				S	Sb	06 08 52.4	-0.9
T1204				AML	AML		
	comp=E,2445µm,0.8s						
T1204				AML	AML		
	comp=N,1595µm,0.9s						
T1204				AML	AML		
	comp=N,3090µm,1.0s						
T1204				AML	AML		
	comp=N,3090µm,1.0s						
T1204				AML	AML		
	comp=E,6000µm,0.6s						
GUMA	**Gualdo di Mace**	**0.30**	**51**	⇑P	Pg	06 08 47.5	+0.7
GUMA				AML	AML		
	comp=E,3610µm,0.8s						
GUMA				AML	AML		
	comp=N,2945µm,1.5s						
GUMA				AML	AML		
	comp=N,2950µm,1.5s						
GUMA				AML	AML		
	comp=E,3105µm,0.7s						
GUMA				AML	AML		
	comp=N,4225µm,0.4s						
GUMA				AML	AML		
	comp=N,2950µm,0.5s						
GUMA				AML	AML		
	comp=N,4225µm,1.6s						
ASSB	**Assisi San Ben**	**0.31**	**303**	P	Pg	06 08 47.4	+0.3
ASSB				S	Sg	06 08 52.3	+1.0
ASSB				AML	AML		
	comp=N,782µm,0.9s						
ASSB				AML	AML		
	comp=N,782µm,1.1s						
ASSB				AML	AML		
	comp=E,711µm,0.6s						
SMA1	**SAN MARTINO**	**0.34**	**136**	⇑P	Pb	06 08 48.6	-0.4
SMA1				AML	AML		

comp=N,1260μm,0.4s
SMA1 AML AML
comp=N,1655μm,1.4s
SMA1 AML AML
comp=E,1945μm,1.5s
ARRO Arrone 0.35 212 ⇑P Pg 06 08 48.3 +0.6
ARRO AML AML
comp=N,1485μm,1.3s
ARRO AML AML
comp=E,1340μm,0.2s
ARRO AML AML
comp=N,1485μm,0.7s
T1211 Morro Reatino 0.36 199 ⇓P Pg 06 08 48.2 +0.3
T1211 AML AML
comp=E,1430μm,0.1s
T1211 AML AML
comp=E,1441μm,0.1s
T1211 AML AML
comp=E,1435μm,0.1s
T1211 AML AML
comp=N,1660μm,0.3s
T1211 AML AML
comp=E,1425μm,0.1s
T1211 AML AML
comp=N,1655μm,0.3s
T1243 Rocca Santa Ma 0.36 119 P Pg 06 08 48.3 +0.3
GAG1 Gagliole 0.36 6 P Pg 06 08 48.7 +0.7
GAG1 S Sb 06 08 54.7 -0.4
SNTG Esanatoglia 0.38 352 ⇑P Pg 06 08 48.7 +0.3
SNTG AML AML
comp=N,244μm,1.3s
SNTG AML AML
comp=E,260μm,0.7s
SNTG AML AML
comp=E,260μm,0.7s
SNTG AML AML
comp=N,243μm,1.3s
SNTG AML AML
comp=N,243μm,0.7s
RM33 Pellescritta (0.39 158 ⇓P Pg 06 08 49.1 +0.6
RM33 AML AML
comp=E,767μm,0.2s
RM33 AML AML
comp=N,714μm,0.5s
RM33 AML AML
comp=E,813μm,1.0s
RM33 AML AML
comp=N,738μm,0.5s
RM33 AML AML
comp=E,1254μm,0.3s
RM33 AML AML
comp=N,840μm,0.3s
RM33 AML AML
comp=E,1268μm,0.3s
RM33 AML AML
comp=N,792μm,0.3s
RM33 AML AML
comp=N,840μm,1.7s
RM33 AML AML
comp=N,792μm,1.7s
ATCC AVT- Casa Cast 0.41 318 ⇓P Pg 06 08 49.3 +0.3
CESX Cesi 0.42 231 ⇑P Pg 06 08 49.2 +0.2
CESX AML AML
comp=N,1590μm,0.6s
CESX AML AML
comp=E,1335μm,0.3s
EL6 Elcito 0.46 8 ⇑P Pg 06 08 49.9 +0.2
FOSV Fossato di Vic 0.46 336 ⇑P Pb 06 08 50.5 -0.5
FOSV AML AML
comp=E,196μm,1.2s
FOSV AML AML
comp=E,196μm,1.2s
FOSV AML AML
comp=N,184μm,0.4s
FOSV AML AML
comp=E,196μm,0.8s
T1247 Pizzolo (AQ) 0.48 154 S Sb 06 08 60.0 +1.5
TERO Teramo 0.50 120 P Pg 06 08 50.6 +0.1
TERO AML AML
comp=N,732μm,0.6s
TERO AML AML
comp=N,965μm,0.3s
TERO AML AML
comp=E,880μm,0.5s
ATTE AVT- Monte Tez 0.58 304 ⇑P Pb 06 08 53.4 +0.3
ATTE AML AML
comp=N,168μm,1.0s
ATTE AML AML
comp=E,204μm,0.8s
ATTE AML AML
comp=E,204μm,1.2s
GIGS Gran Sasso 0.59 136 P Pb 06 08 52.9 -0.3
GIGS AML AML
comp=E,150μm,0.6s
GIGS AML AML
comp=N,133μm,0.5s
GIGS AML AML
comp=N,134μm,0.5s
FIAM Fiamignano 0.61 173 ⇑P Pg 06 08 52.8 +0.2
FIAM S Sb 06 09 03.0 +0.7
FIAM AML AML
comp=N,220μm,0.5s
FIAM AML AML
comp=E,272μm,0.5s
FIAM AML AML
comp=E,272μm,1.5s
FIAM AML AML
comp=N,220μm,0.5s
ARVD Arcevia 0.62 355 S Sb 06 09 04.0 +1.3
ATVO AVT- Monte Val 0.68 319 P Pb 06 08 55.0 +0.3
ATVO AML AML
comp=E,144μm,0.7s
ATVO AML AML
comp=N,148μm,0.9s
ATVO AML AML
comp=E,144μm,0.7s
SRES S.Oreste - Sor 0.74 211 ⇑P Pg 06 08 55.1 +0.1
SRES S Sn 06 09 08.0 -0.6
SRES AML AML
comp=E,214μm,1.2s
SRES AML AML
comp=N,232μm,0.6s
SRES AML AML
comp=E,214μm,0.8s
VCEL Villa Celiera 0.78 128 ⇓P Pg 06 08 55.9 +0.2
VCEL AML AML
comp=N,442μm,1.4s
VCEL AML AML
comp=N,442μm,1.4s
VCEL AML AML
comp=E,440μm,0.3s
T0110 Collepietro 0.86 139 ⇓P Pg 06 08 57.5 +0.2
T0110 S Sn 06 09 11.0 -0.7
T0110 AML AML
comp=E,390μm,0.4s
T0110 AML AML
comp=N,376μm,1.2s
T0110 AML AML
comp=N,520μm,0.4s
T0110 AML AML
comp=E,432μm,0.6s
T0110 AML AML
comp=E,432μm,1.4s
CAFI Castiglion Fio 0.89 301 ⇓P Pb 06 08 58.8 +0.4
CAFI AML AML
comp=E,146μm,0.7s
CAFI AML AML
comp=N,111μm,0.8s
CERT Cerreto 0.93 182 ⇑P Pb 06 08 58.8 -0.2
CERT AML AML
comp=N,125μm,0.5s
CERT AML AML
comp=E,196μm,0.4s
TOLF Tolfa 1.11 223 S Sg 06 09 16.0 -0.4

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*BJI **31** 06:13:09.7±0.0,3.03S×152.43E,h338km,mb4.5/42, mB4.5/20*
*MOS **31** 06:13:10.9±1.0,3.44S×151.95E,h355km,mb4.8/36,Error ellipse: s-maj=9.8km s-min=6.8km az=97.0*
*DJA **31** 06:13:11.1±0.6,3.5±5.5×15.2E±.4,h349km±4km,M4.7/17, mb4.7/17,mB4.6/1,MLv4.7/2,Mw(mB)3.8/1,MwMwp5.2/1, Mwp5.4/1*
*NEIC **31** 06:13:11.4±1.3,3.44S±0.08×152.02E±0.09,h344km±2km, mb4.9/219,Error ellipse: s-maj=13.1km s-min=10.3km*

az=59.0
*IDC **31** 06:13:11.7±1.4,3.48S×152.01E,h353km±14km,mb4.2/24, mbtmp4.9/27,Error ellipse: s-maj=11.2km s-min=8.1km az=65.0*
ISC 31 06:13:11.3±0.2,3.48S±0.04×152.02E±0.05,h350km,n714, σ0.88/680,mb4.9/163,14C-16D,New Ireland region

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	ISC	Res ISC
RABL	**Rabaul**	**0.72**	**169**			**Pn**	**06 13 55.9**		**-0.3**
MANU	**Manus Island**	**4.87**	**287**			**Pn**	**06 14 30.4**		**+0.9**
PMG	**Port Moresby**	**7.62**	**219**	P		**Pn**	**06 15 01.7**		**+0.8**
35nm,0.7s,baz=351,slow=4.2,SNR=4.5									
PMG				S		**S**	**06 16 30.9**		**+0.7**
30nm,0.9s,baz=81,slow=18,SNR=4.2									
PMG	**Port Moresby**	**7.62**	**219**			**Pn**	**06 15 01.6**		**+0.6**
HNR	**Honiara**	**9.84**	**127**	P		**P**	**06 15 28.9**		**-0.1**
912nm,0.3s,baz=245,slow=4.5,SNR=1.9									
HNR	**Honiara**	**9.84**	**127**			**P**	**06 15 29.0**		**-0.1**
HNR	**Honiara**	**9.84**	**127**	P		**P**	**06 15 29.0**		**-0.1**
PATS	**Pohnpei**	**12.02**	**31**	P		**P**	**06 15 52.1**		**-1.1**
COEN	**Coen**	**13.59**	**219**	P		**Pn**	**06 16 12.1**		**+0.2**
COEN	**Coen**	**13.59**	**219**	P		**Pn**	**06 16 14.8**		**+2.9**
CTA	**Charters Tower**	**17.44**	**198**	P		**P**	**06 16 53.2**		**+0.8**
20nm,0.9s,baz=22,slow=12,SNR=12									
CTA	**Charters Tower**	**17.44**	**198**	P		**P**	**06 16 55.3**		**+2.9**
CTAO	**Charters Tower**	**17.44**	**198**	P		**P**	**06 16 53.6**		**+1.2**
CTAO	**Charters Tower**	**17.44**	**198**	P		**P**	**06 16 53.6**		**+1.2**
CTAO	**Charters Tower**	**17.44**	**198**	P		**P**	**06 16 55.4**		**+3.0**
FAKI	**Fak Fak**	**19.75**	**271**	P		**P**	**06 17 16.9**		**-0.1**
FAKI	**Fak Fak**	**19.75**	**271**	P		**P**	**06 17 17.0**		**-0.1**
37nm,1.0s									
FAKI	**Fak Fak**	**19.75**	**271**	P		**P**	**06 17 16.9**		**-0.1**
QIS	**Mount Isa**	**20.84**	**214**	P		**P**	**06 17 27.8**		**+0.6**
SIJI	**Sorong**	**20.90**	**277**	P		**P**	**06 17 28.5**		**+0.7**
16nm,0.4s,baz=176,slow=4.9,SNR=6.0									
16nm,0.4s									
KDU	**Kakadu**	**21.39**	**244**	P		**P**	**06 17 31.4**		**-0.7**
MTN	**Manton Dam**	**22.66**	**245**	P		**P**	**06 17 42.4**		**-1.3**
LIFNC	**LIFOU**	**22.70**	**140**	P		**P**	**06 17 44.5**		**+0.5**
LIFNC	**LIFOU**	**22.70**	**140**	P		**P**	**06 17 44.6**		**+0.7**
DZM	**Mont Dzumac**	**23.18**	**144**	P		**P**	**06 17 49.1**		**+0.7**
32nm,0.5s,baz=269,slow=6.8,SNR=64									
32nm,0.5s									
DZM	**Mont Dzumac**	**23.18**	**144**	P		**P**	**06 17 49.3**		**+0.8**
DZM				IAmb		IAmb	06 17 50.0		
comp=Z,34nm,0.7s									
DZM	**Mont Dzumac**	**23.18**	**144**	P		**P**	**06 17 49.2**		**+0.7**
WB0	**Warramunga Arr**	**23.62**	**225**	P		**P**	**06 17 52.3**		**-0.2**
WB0				IAmb		IAmb	06 17 53.1		
comp=Z,38nm,0.9s									
WR0	**Warramunga Arr**	**23.65**	**225**	P		**P**	**06 17 52.6**		**0.0**
WR0				IAmb		IAmb	06 17 53.8		
comp=Z,37nm,0.8s									
MARNC	**Mare, Loyalty**	**23.71**	**140**	P		**P**	**06 17 53.7**		**+0.6**
WRAB	**Tennant Creek**	**23.76**	**225**	P		**P**	**06 17 51.7**		**-2.0**
WRAB	**Tennant Creek**	**23.76**	**225**	*i* P		**P**	**06 17 53.6**		**-0.1**
WRAB				pmax		pmax			
comp=Z,72nm,1.7s									
WB2	**Warramunga Arr**	**23.77**	**225**	P		**P**	**06 17 53.6**		**-0.1**
WRA	**Warramunga Arr**	**23.78**	**225**	P		**P**	**06 17 53.4**		**-0.4**
comp=Z,30nm,0.8s,baz=47,slow=9.5,SNR=36									
comp=Z,30nm,0.8s									
WRA	**Warramunga Arr**	**23.78**	**225**	P		**P**	**06 17 52.8**		**-1.0**
WRA	**Warramunga Arr**	**23.78**	**225**	P		**P**	**06 17 52.8**		**-1.0**
WRA				pmax		pmax			
comp=Z,216nm,1.4s									
QLP	**Quilpie**	**24.15**	**197**	P		**P**	**06 17 57.0**		**-0.1**
INKA	**Innaminka**	**26.42**	**203**	P		**P**	**06 18 17.4**		**+0.1**
AS31	**Alice Springs**	**26.63**	**220**	P		**P**	**06 18 18.9**		**-0.4**
ASAR	**Alice Springs**	**26.63**	**220**	P		**P**	**06 18 18.6**		**-0.7**
comp=Z,6.3nm,0.5s,baz=50,slow=7.9,SNR=69									
ASAR				PcP		**PcP**	**06 21 33.0**		**-0.1**
comp=Z,2.2nm,0.7s,baz=41,slow=3.4,SNR=5.3									
ASAR				S		**S**	**06 22 24.4**		**-3.8**
comp=Z,7.7nm,0.8s,baz=49,slow=13,SNR=15									
comp=Z,6.3nm,0.5s									
ARMA	**Armidale**	**26.80**	**181**	P		**P**	**06 18 19.9**		**-0.8**
ARMA				IAmb		IAmb	06 18 32.5		
comp=Z,130nm,1.9s									
WAKE	**Wake Island**	**26.81**	**32**	P		**P**	**06 18 20.0**		**-0.9**
CMSA	**Cobar Meteorol**	**28.54**	**191**	P		**P**	**06 18 36.3**		**+0.3**
MSVF	**Nonsavu**	**29.18**	**121**	P		**P**	**06 18 42.6**		**+0.7**
comp=Z,18nm,0.7s,baz=279,slow=11,SNR=17									
comp=Z,18nm,0.7s									
MSVF	**Nonsavu**	**29.18**	**121**	P		**P**	**06 18 42.8**		**+0.9**
MSVF	**Nonsavu**	**29.18**	**121**	P		**P**	**06 18 42.8**		**+0.9**
MSVF				pmax		pmax			
comp=Z,32nm,0.9s									
STKA	**Stephens Creek**	**29.90**	**198**	P		**P**	**06 18 47.7**		**-0.3**
comp=Z,12nm,0.5s,baz=3.6,slow=9.0,SNR=32									
comp=Z,12nm,0.5s									
STKA	**Stephens Creek**	**29.90**	**198**	P		**P**	**06 18 47.6**		**-0.4**
STKA	**Stephens Creek**	**29.90**	**198**	P		**P**	**06 18 47.6**		**-0.4**
STKA				pmax		pmax			
comp=Z,3.0nm,0.8s									
CAN	**Canberra**	**31.81**	**185**	P		**P**	**06 19 05.1**		**+0.5**
CAN				IAmb		IAmb	06 20 18.0		
comp=Z,77nm,1.9s									
CAN	**Canberra**	**31.81**	**185**	P		**P**	**06 19 05.1**		**+0.5**
CAN				pmax		pmax			
comp=Z,77nm,1.9s									
BNSI	**Bone**	**31.85**	**267**	P		**P**	**06 19 06.6**		**+1.4**
BNSI				pP		pP	06 19 55.5		-15
comp=Z,22nm,0.9s									
KAPI	**Kappang**	**32.22**	**266**	P		**P**	**06 19 08.1**		**-0.3**
comp=Z,12nm,0.7s,baz=95,slow=6.5,SNR=7.6									
comp=Z,12nm,0.7s									
KAPI	**Kappang**	**32.22**	**266**	P		**P**	**06 19 08.4**		**0.0**
KAPI	**Kappang**	**32.22**	**266**	P		**P**	**06 19 08.4**		**0.0**
KAPI				pmax		pmax			
comp=Z,15nm,0.9s									
KAPI	**Kappang**	**32.22**	**266**	P		**P**	**06 19 08.3**		**-0.1**
comp=Z,18nm,1.0s									
KAPI	**Kappang**	**32.22**	**266**	P		**P**	**06 19 08.5**		**+0.1**
BBOO	**Buckleboo**	**32.79**	**205**	P		**P**	**06 19 12.7**		**-0.4**
FORT	**Forrest**	**35.34**	**217**	P		**P**	**06 19 34.1**		**-0.7**
FORT				IAmb		IAmb	06 19 35.4		
comp=Z,68nm,0.7s									
MBWA	**Marble Bar**	**35.98**	**238**	P		**P**	**06 19 39.7**		**-0.7**
PSA00	**Pilbara Seismi**	**36.06**	**237**	P		**P**	**06 19 40.1**		**-0.9**
OUZ	**Omahuta**	**37.38**	**150**	P		**P**	**06 19 52.9**		**+1.1**
JGF	**Kuroka**	**41.23**	**342**	P		**P**	**06 20 23.5**		**+0.1**
URZ	**Urewera**	**41.51**	**150**	P		**P**	**06 20 26.2**		**+0.7**
comp=Z,7.6nm,0.5s,baz=352,slow=4.4,SNR=11									
comp=Z,7.6nm,0.5s									
URZ	**Urewera**	**41.51**	**150**	P		**P**	**06 20 26.5**		**+0.9**
OTVZ	**Oturere**	**41.51**	**152**	P		**P**	**06 20 28.6**		**+2.8**
QRZ	**Quartz Range**	**41.52**	**156**	P		**P**	**06 20 27.0**		**+1.4**
QRZ				IAmb		IAmb	06 20 54.2		
comp=Z,90nm,1.8s									
RUGZ	**Raukumara Rang**	**41.57**	**149**	P		**P**	**06 20 26.7**		**+0.5**
RTZ	**Ruatahuna**	**41.72**	**150**	P		**P**	**06 20 28.1**		**+0.8**
MTHZ	**Maungataniwha**	**41.83**	**151**	P		**P**	**06 20 29.1**		**+0.8**
WMGZ	**Waiomatatini S**	**41.85**	**148**	P		**P**	**06 20 28.8**		**+0.5**
MJAR	**Matsushiro Arr**	**41.85**	**343**	P		**P**	**06 20 26.7**		**-1.7**
comp=Z,1.2nm,0.3s,baz=108,slow=13,SNR=4.1									
MJAR				PcP		**PcP**	**06 22 16.4**		**-0.5**
comp=Z,1.7nm,0.4s,baz=163,slow=3.8,SNR=4.4									
comp=Z,1.2nm,0.3s									
TWGZ	**Tauwhareparae**	**41.89**	**149**	P		**P**	**06 20 30.0**		**+1.3**
BKZ	**Black Stump Fm**	**41.91**	**151**	P		**P**	**06 20 29.3**		**+0.5**
PUZ	**Puketiti**	**41.95**	**149**	P		**P**	**06 20 29.5**		**+0.4**
BHHZ	**Black Hill Sta**	**41.96**	**152**	P		**P**	**06 20 29.9**		**+0.6**
SNGZ	**Shannon Statio**	**42.02**	**150**	P		**P**	**06 20 30.5**		**+0.8**
KWHZ	**Kaweka Forest**	**42.08**	**151**	P		**P**	**06 20 31.2**		**+1.0**
JHS	**Saijyo**	**42.20**	**337**	P		**P**	**06 20 30.8**		**-0.4**
PNHZ	**Pukenui**	**42.36**	**152**	P		**P**	**06 20 32.5**		**+0.1**
THZ	**Tophouse**	**42.46**	**157**	P		**P**	**06 20 33.3**		**+0.1**
TUWZ	**Tuamarina**	**42.60**	**155**	P		**P**	**06 20 34.9**		**+0.7**
SNZO	**South Karori**	**42.82**	**155**	P		**P**	**06 20 36.6**		**+0.6**
SNZO				IAmb		IAmb	06 22 16.2		
comp=Z,206nm,1.9s									
BFZ	**Birch Farm**	**42.99**	**153**	P		**P**	**06 20 37.5**		**+0.1**
MSWZ	**Moikau Station**	**43.14**	**154**	P		**P**	**06 20 38.3**		**-0.3**
KHZ	**Kahutara**	**43.27**	**157**	P		**P**	**06 20 38.7**		**-0.8**
KHZ				IAmb		IAmb	06 20 43.8		
comp=Z,142nm,1.8s									
RPZ	**Rata Peaks**	**43.47**	**160**	P		**P**	**06 20 40.9**		**-0.2**
comp=Z,22nm,1.0s,baz=158,slow=3.4,SNR=4.4									
comp=Z,22nm,1.0s									
JTM	**Tenmabayashi**	**45.18**	**348**	P		**P**	**06 20 54.4**		**-0.1**
JTM				IAmb		IAmb	06 21 25.6		
comp=Z,135nm,1.4s									
KSRS	**Korea Array**	**46.48**	**333**	P		**P**	**06 21 04.8**		**+0.2**
comp=Z,3.2nm,0.8s,baz=158,slow=8.8,SNR=7.3									
comp=Z,3.2nm,0.8s									
NJ2	**Nanjing**	**47.34**	**321**	*e* P		**P**	**06 21 10.0**		**-1.3**
NJ2				pmax		pmax			
comp=Z,5.0nm,0.6s									
SDSI	**Sungai Dareh**	**50.62**	**272**	P		**P**	**06 21 36.0**		**-0.3**
comp=Z,24nm,0.9s									
USRK	**Ussuriysk Ar.**	**50.76**	**341**	P		**P**	**06 21 37.2**		**+0.4**
comp=Z,4.9nm,0.7s,baz=183,slow=10.0,SNR=7.4									
comp=Z,4.9nm,0.7s									
KULM	**Kulim**	**52.05**	**279**	P		**P**	**06 21 46.6**		**-0.3**
LYN	**LuoYang**	**53.05**	**319**	⇑*i* P		**P**	**06 21 52.5**		**-1.2**
HNS	**HongShan**	**53.43**	**323**	⇓P		**P**	**06 21 57.3**		**+0.9**
HNS				pmax		pmax			
comp=Z,17nm,0.9s									
XAN	**Xi'an**	**55.14**	**316**	P		P	06 21 59.5		-9.3
KLR	**Kul'dur**	**55.37**	**344**	*e* P		**P**	**06 22 09.6**		**-0.4**
KLR				pmax		pmax			
comp=Z,14nm,0.9s									
PEA0B	**Petropavlovsk-**	**56.58**	**4**	P		**P**	**06 22 19.2**		**+0.7**
PEA0B	**Petropavlovsk-**	**56.58**	**4**	P		**P**	**06 22 19.2**		**+0.7**
PEA0B				pmax		pmax			
comp=Z,218nm,1.7s									
PETK	**Petropavlovsk-**	**56.58**	**4**	P		**P**	**06 22 18.8**		**+0.3**
comp=Z,9.8nm,0.8s,baz=161,slow=6.1,SNR=7.9									
comp=Z,9.8nm,0.8s									
PETK	**Petropavlovsk-**	**56.58**	**4**	P		**P**	**06 22 18.3**		**-0.2**
CMAR	**Chiang Mai Arr**	**56.62**	**295**	P		**P**	**06 22 20.3**		**+0.9**
comp=Z,2.0nm,0.3s,baz=118,slow=5.2,SNR=8.1									
CMAR				PcP		**PcP**	**06 23 11.8**		**+0.5**
comp=Z,1.5nm,0.3s,baz=103,slow=1.9,SNR=5.5									
comp=Z,2.0nm,0.3s									
CMAR	**Chiang Mai Arr**	**56.62**	**295**	*i* P		**P**	**06 22 21.2**		**+1.8**
CMAR				pmax		pmax			
comp=Z,2.0nm,0.3s									
PZH	**PanZhiHua**	**56.99**	**305**	P		**P**	**06 22 24.3**		**+2.3**
PZH				pmax		pmax			
comp=Z,10.0nm,0.5s									
PZH				pmax		pmax			
comp=Z,60nm,5.5s									
XLT	**XiLinHaoTe**	**57.15**	**330**	*e* P		**P**	**06 22 23.5**		**+0.8**
XLT				pP		pwP	06 23 41.3		+1.7
XLT				sP		sP	06 24 17.3		+2.7
XLT				S		**S**	**06 29 53.3**		**+3.2**
XLT				pmax		pmax			
comp=Z,22nm,0.6s									
HHC	**Hu-ho-hao-te**	**57.53**	**324**	*e* P		**P**	**06 22 28.3**		**+2.9**
HHC				pmax		pmax			
comp=Z,26nm,0.8s									
HHC				pmax		pmax			
comp=Z,190nm,4.5s									
LZH	**Lanzhou**	**59.75**	**316**	⇑P		**P**	**06 22 42.5**		**+1.7**
LZH				pmax		pmax			
comp=Z,22nm,1.4s									
ZEA	**Zeya**	**60.66**	**343**	*e* P		**P**	**06 22 47.4**		**+1.1**
ADK	**Adak**	**61.22**	**22**	P		**P**	**06 22 50.8**		**+0.7**
ADK	**Adak**	**61.22**	**22**	P		**P**	**06 22 50.8**		**+0.7**
ADK				pmax		pmax			
comp=Z,122nm,1.2s									
MA2	**Magadan**	**62.87**	**359**	⇑*e* P		**P**	**06 22 59.3**		**-1.5**
MA2				pmax		pmax			
comp=Z,36nm,1.3s									
DRV	**Dumont d'Urvil**	**63.63**	**185**	P		**P**	**06 23 05.3**		**-0.3**
DRV				pP		**pP**	**06 24 20.9**		**-1.2**
GTA	**Gaotai**	**64.17**	**317**	⇓P		**P**	**06 23 11.3**		**+1.5**
GTA				pP		pP	06 24 28.3		+2.6
GTA				pmax		pmax			
comp=Z,15nm,1.0s									
ULN	**Ulaanbaatar**	**64.47**	**328**	P		**P**	**06 23 12.2**		**+0.6**
ULN	**Ulaanbaatar**	**64.47**	**328**	*de* P		**P**	**06 23 12.4**		**+0.8**
ULN				*i* *PP		**pwP**	**06 24 29.6**		**-0.2**
ULN				pmax		pmax			
comp=Z,10.0nm,1.1s									
ULN	**Ulaanbaatar**	**64.47**	**328**	P		**P**	**06 23 13.0**		**+1.4**
ULN	**Ulaanbaatar**	**64.47**	**328**	P		**P**	**06 23 12.3**		**+0.6**
SONM	**Songino Array**	**64.80**	**328**	P		**P**	**06 23 14.7**		**+1.0**
comp=Z,3.3nm,0.6s,baz=147,slow=5.9,SNR=23									
SONM				PcP		**PcP**	**06 23 44.2**		**+0.2**
comp=Z,1.9nm,0.5s,baz=153,slow=3.9,SNR=6.9									
comp=Z,3.3nm,0.6s									
SONM	**Songino Array**	**64.80**	**328**	P		**P**	**06 23 13.6**		**-0.1**
SONM	**Songino Array**	**64.80**	**328**	P		**P**	**06 23 13.6**		**-0.1**
SONM				pmax		pmax			
comp=Z,15nm,1.5s									
SHL	**Shillong**	**64.98**	**300**	P		**P**	**06 23 15.8**		**+0.5**
SHL				IAmb		IAmb	06 23 16.5		
comp=Z,43nm,1.6s									
SHL	**Shillong**	**64.98**	**300**	P		**P**	**06 23 15.8**		**+0.5**
SHL				pmax		pmax			
comp=Z,43nm,1.6s									
SEY	**Seymchan**	**66.23**	**0**	⇑*e* P		**P**	**06 23 22.7**		**+0.4**
SEY				pmax		pmax			
comp=Z,18nm,1.9s									
SPIA	**Saint Paul Isl**	**67.70**	**21**	P		**P**	**06 23 31.8**		**+0.3**
baz=221									
ZAK	**Zakamensk**	**67.97**	**329**	*e* P		**P**	**06 23 33.5**		**0.0**
ZAK				pmax		pmax			
comp=Z,10.0nm,1.1s									
CASY	**Casey**	**69.05**	**197**	P		**P**	**06 23 38.8**		**-0.9**
RAMN	**Ramite**	**69.92**	**300**	*e* P		**P**	**06 23 46.6**		**+0.5**
comp=Z,7.9nm,0.4s									
JIRN	**Jiri**	**70.45**	**301**	*e* P		**P**	**06 23 50.0**		**+0.6**
GUN	**Gumba**	**70.78**	**301**	*e* P		**P**	**06 23 51.9**		**+0.5**
comp=Z,34nm,0.7s									
PKI	**Pulchoki**	**71.10**	**301**	*e* P		**P**	**06 23 53.4**		**+0.1**
DMN	**Daman**	**71.37**	**301**	*e* P		**P**	**06 23 55.4**		**+0.6**
GKN	**Gorkha**	**71.87**	**301**	*e* P		**P**	**06 23 57.9**		**+0.3**
BILL	**Bilibino**	**72.06**	**6**	⇓*e* P		**P**	**06 23 57.7**		**0.0**
BILL							06 24 14.0		
BILL				*PP		**pwP**	**06 25 20.0**		**-0.8**
BILL				SSS		SSS	06 40 58.0		
BILL				pmax		pmax			
comp=Z,35nm,2.5s									
GAMB	**Gambell**	**72.33**	**16**	P		**P**	**06 24 00.4**		**+1.1**
baz=218									
DANN	**Dangsing**	**72.70**	**301**	*e* P		**P**	**06 24 02.6**		**-0.1**
comp=Z,14nm,0.6s									
R16K	**Pilot Point**	**73.02**	**26**	P		**P**	**06 24 04.2**		**+0.8**
baz=234									
O16K	**Kokwok River B**	**74.02**	**24**	P		**P**	**06 24 09.8**		**+0.6**
baz=232									
Q16K	**King Salmon**	**74.07**	**25**	P		**P**	**06 24 09.8**		**+0.3**
baz=234									
Q17K	**Contact Creek**	**74.16**	**26**	P		**P**	**06 24 10.4**		**+0.3**
baz=235									
VNDA	**Vanda**	**74.17**	**178**	P		**P**	**06 24 09.9**		**+0.2**
comp=Z,8.6nm,0.8s,baz=334,slow=6.7,SNR=76									
comp=Z,8.6nm,0.8s									
VNDA	**Vanda**	**74.17**	**178**	P		**P**	**06 24 10.0**		**+0.2**
VNDA	**Vanda**	**74.17**	**178**	P		**P**	**06 24 10.0**		**+0.2**
VNDA				pmax		pmax			
comp=Z,7.0nm,0.7s									
WMQ	**Urumqi**	**74.25**	**317**	*e* P		**P**	**06 24 13.0**		**+2.0**
WMQ				pmax		pmax			
comp=Z,17nm,0.7s									
N16K	**Nishlik Lake**	**74.30**	**23**	P		**P**	**06 24 11.7**		**+0.9**
baz=232									
O17K	**Koliganek Bris**	**74.54**	**24**	P		**P**	**06 24 12.8**		**+0.6**
baz=233									
SBA	**Scott Base**	**74.73**	**177**	P		**P**	**06 24 14.2**		**+1.2**
SBA	**Scott Base**	**74.73**	**177**	P		**P**	**06 24 14.2**		**+1.2**
SBA				pmax		pmax			
comp=Z,16nm,1.3s									
OHAK	**Old Harbor**	**74.74**	**27**	P		**P**	**06 24 14.0**		**+0.7**
baz=238									
Q18K	**Katmai Hardscr**	**74.76**	**26**	P		**P**	**06 24 13.5**		**-0.1**
baz=236,SNR=5.0									
KDAK	**Kodiak Island**	**75.36**	**27**	P		**P**	**06 24 17.1**		**+0.3**
baz=238									
Q19K	**Cape Douglas,**	**75.50**	**26**	P		**P**	**06 24 18.1**		**+0.4**
Q19K	**Cape Douglas,**	**75.50**	**26**	P		**P**	**06 24 17.6**		**-0.1**
baz=237,SNR=6.8									
N18K	**Kilae Creek**	**75.56**	**24**	P		**P**	**06 24 19.4**		**+1.4**
N18K				IAmb		IAmb	06 24 20.4		
comp=Z,32nm,1.0s									
N18K	**Kilae Creek**	**75.56**	**24**	P		**P**	**06 24 19.2**		**+1.2**
baz=234									
Q20K	**Shuyak Island**	**75.88**	**26**	P		**P**	**06 24 19.6**		**-0.2**
baz=238									
O19K	**Port Alsworth**	**75.92**	**

SVW2 IAmb IAmb 06 24 23.2
comp=Z,22nm,0.7s
P19K Oil Pt 76.08 25 P **P 06 24 21.3 +0.4**
P19K Oil Pt 76.08 25 P **P 06 24 20.8 -0.1**
baz=237
N19K Bonanza Creek 76.20 24 P **P 06 24 22.2 +0.5**
N19K IAmb IAmb 06 24 24.0
comp=Z,54nm,1.6s
N19K Bonanza Creek 76.20 24 P **P 06 24 22.0 +0.4**
baz=236
TIXI Tiksi 76.50 353 P **P 06 24 22.5 -0.5**
TIXI Tiksi 76.50 353 *eP* **P 06 24 22.4 -0.5**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
O20K Slope Mountain 76.57 25 P **P 06 24 23.6 -0.1**
baz=238
DGZ Jazzator, Alta 76.57 323 *d iP* **P 06 24 24.4 +0.3**
DGZ *i* *PP **pP 06 25 43.6 +0.7**
DGZ pmax pmax
comp=Z,14nm,1.1s
RSO Redoubt South 76.72 25 P **P 06 24 24.5 -0.2**
HOM Homer 76.76 26 P **P 06 24 25.5 +0.8**
HOM Homer 76.76 26 P **P 06 24 25.3 +0.6**
baz=238
L19K White Mountain 76.83 23 P **P 06 24 25.9 +0.8**
L19K White Mountain 76.83 23 P **P 06 24 26.2 +1.1**
baz=235,SNR=16
TTA Tatalina 76.83 22 P **P 06 24 26.1 +1.0**
TTA IAmb IAmb 06 24 26.6
comp=Z,21nm,0.6s
TTA Tatalina 76.83 22 P **P 06 24 26.1 +1.0**
TTA pmax pmax
comp=Z,21nm,0.6s
TTA Tatalina 76.83 22 P **P 06 24 26.0 +0.9**
baz=234
M19K Big River Lodg 76.85 23 P **P 06 24 26.7 +1.6**
M19K Big River Lodg 76.85 23 P **P 06 24 26.5 +1.3**
baz=236
CNPM China Poot 76.87 26 P **P 06 24 26.1 +0.8**
BRLK Bradley Lake 77.15 26 P **P 06 24 27.1 +0.3**
BRSE Bradley Lake S 77.20 26 P **P 06 24 27.3 +0.2**
baz=239,SNR=5.4
M20K Styx River 77.34 23 P **P 06 24 29.2 +1.3**
M20K IAmb IAmb 06 24 29.8
comp=Z,24nm,0.8s
M20K Styx River 77.34 23 P **P 06 24 28.7 +0.8**
baz=237,SNR=6.5
N20K Mount Spurr 77.34 24 P **P 06 24 28.3 +0.4**
baz=238
L20K Farewell, AK 77.38 23 P **P 06 24 29.2 +1.2**
baz=236,SNR=8.5
SPU Mount Spurr 77.39 24 P **P 06 24 28.5 +0.3**
GCSA Galena City Sc 77.62 20 P **P 06 24 29.9 +0.7**
baz=233
K20K Telida 77.80 22 P **P 06 24 31.5 +1.1**
K20K Telida 77.80 22 P **P 06 24 31.7 +1.4**
baz=236,SNR=10
SEW Seward 77.94 26 P **P 06 24 31.4 +0.3**
SEW Seward 77.94 26 P **P 06 24 31.3 +0.3**
baz=240
O22K Cooper Landing 78.01 26 P **P 06 24 32.2 +0.7**
O22K Cooper Landing 78.01 26 P **P 06 24 31.8 +0.3**
baz=240
SKT Skwentna 78.03 24 P **P 06 24 31.0 -0.7**
baz=238
SUA Susitna One 78.08 24 P **P 06 24 31.9 -0.1**
SUA Susitna One 78.08 24 P **P 06 24 31.7 -0.4**
baz=239,SNR=6.6
J20K Nowinta River 78.24 21 P **P 06 24 33.9 +1.2**
J20K Nowinta River 78.24 21 P **P 06 24 34.1 +1.4**
baz=235,SNR=20
PPLA Purkeypile 78.26 23 P **P 06 24 33.3 +0.2**
baz=237
RC01 Rabbit Creek A 78.31 25 P **P 06 24 33.7 +0.5**
RC01 Rabbit Creek A 78.31 25 P **P 06 24 32.7 -0.5**
baz=240,SNR=8.5
M22K Willow 78.48 24 P **P 06 24 34.0 -0.1**
M22K Willow 78.48 24 P **P 06 24 33.5 -0.6**
baz=240
CAST Castle Rocks 78.58 22 P **P 06 24 34.8 +0.2**
CAST Castle Rocks 78.58 22 P **P 06 24 34.5 -0.1**
baz=237,SNR=19
CHUM Lake Minchumin 78.75 22 P **P 06 24 36.4 +0.9**
baz=237,SNR=19
CUT Chulitna 78.76 24 P **P 06 24 34.4 -1.1**
baz=239
PWL Port Wells 78.79 26 P **P 06 24 35.9 +0.1**
PWL Port Wells 78.79 26 P **P 06 24 36.2 +0.4**
baz=241,SNR=5.9
PMR Palmer 78.81 25 P **P 06 24 36.1 +0.3**
PMR Palmer 78.81 25 P **P 06 24 36.1 +0.3**
PMR pmax pmax
comp=Z,49nm,1.4s
PMR Palmer 78.81 25 P **P 06 24 35.7 -0.1**
baz=240,SNR=8.4
MK31 Makanchi Array 78.83 319 P **P 06 24 36.8 +0.5**
MK31 Makanchi Array 78.83 319 P **P 06 24 36.8 +0.5**
MK31 pmax pmax
comp=Z,10.0nm,1.0s
MKAR Makanchi Array 78.83 319 P **P 06 24 36.5 +0.2**
comp=Z,7.6nm,0.7s,baz=99,slow=6.8,SNR=52
comp=Z,7.6nm,0.7s
MKAR Makanchi Array 78.83 319 P **P 06 24 35.5 -0.8**
MKAR Makanchi Array 78.83 319 *i P* **P 06 24 36.9 +0.6**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
GHO Glory Hole Cre 78.99 25 P **P 06 24 37.3 +0.4**
GHO IAmb IAmb 06 24 37.9
comp=Z,20nm,0.8s
KNK Knik Glacier 79.01 25 P **P 06 24 37.5 +0.5**
KNK IAmb IAmb 06 24 38.9
comp=Z,36nm,1.2s
KNK Knik Glacier 79.01 25 P **P 06 24 37.3 +0.3**
baz=241,SNR=5.9
MAKZ Makanchi 79.04 319 P **P 06 24 37.7 +0.3**
MAKZ IAmb IAmb 06 24 38.9
comp=Z,18nm,0.7s
MAKZ Makanchi 79.04 319 P **P 06 24 37.7 +0.3**
MAKZ pmax pmax
comp=Z,17nm,0.7s
KTH Kantishna Hill 79.10 22 P **P 06 24 37.3 -0.2**
SML Sawmill 79.25 25 P **P 06 24 38.1 -0.2**
SML Sawmill 79.25 25 P **P 06 24 38.6 +0.3**
baz=241,SNR=14
TRF Thorofare Moun 79.28 23 P **P 06 24 38.3 -0.3**
TRF IAmb IAmb 06 24 39.2
comp=Z,21nm,0.9s
TRF Thorofare Moun 79.28 23 P **P 06 24 37.9 -0.7**
baz=239,SNR=9.5
GLI Glacier Island 79.34 26 P **P 06 24 38.7 0.0**
baz=242
BPAW Bear Paw Mtn. 79.36 22 P **P 06 24 38.6 -0.2**
BPAW IAmb IAmb 06 24 39.4
comp=Z,19nm,1.1s
BPAW Bear Paw Mtn. 79.36 22 P **P 06 24 38.3 -0.5**
baz=238,SNR=5.2
IMAR Indian Mountai 79.41 20 P **P 06 24 39.5 +0.5**
M23K Glacier View 79.50 25 P **P 06 24 39.6 +0.1**
baz=242
H21K Melozitna Rive 79.55 20 P **P 06 24 40.5 +0.7**
H21K IAmb IAmb 06 24 41.6
comp=Z,20nm,1.1s
H21K Melozitna Rive 79.55 20 P **P 06 24 40.5 +0.7**
baz=236
I21K Tanana 79.57 21 IAmb IAmb 06 24 42.4
comp=Z,26nm,1.0s
I21K Tanana 79.57 21 P **P 06 24 40.7 +0.8**
baz=237,SNR=12
ZAA0 Zalesovo Array 79.63 326 P **P 06 24 40.1 -0.3**
ZAA0 IAmb IAmb 06 24 40.7
comp=Z,8.3nm,0.7s
ZALV Zalesovo Beam 79.63 326 P **P 06 24 39.4 -1.0**
comp=Z,7.5nm,0.6s,baz=111,slow=5.7,SNR=24
comp=Z,7.5nm,0.6s
ZALV Zalesovo Beam 79.63 326 P **P 06 24 39.6 -0.8**
ZALV Zalesovo Beam 79.63 326 *i P* **P 06 24 40.0 -0.4**
ZALV pmax pmax
comp=Z,8.0nm,0.6s
WAT1 Susitna Watana 79.66 24 P **P 06 24 40.3 -0.1**
baz=241
SCM Sheep Creek Mo 79.68 25 P **P 06 24 41.4 +0.8**
SCM Sheep Creek Mo 79.68 25 P **P 06 24 41.4 +0.8**
SCM pmax pmax
comp=Z,30nm,0.9s
SCM Sheep Creek Mo 79.68 25 P **P 06 24 41.1 +0.5**
baz=242

EYAK Cordova Ski Ar 79.78 26 P **P 06 24 41.6 +0.6**
baz=244
G21K Allakaket 79.79 19 P **P 06 24 41.6 +0.5**
baz=236
RND Reindeer 79.82 23 P **P 06 24 40.8 -0.5**
RND Reindeer 79.82 23 P **P 06 24 40.8 -0.5**
RND pmax pmax
comp=Z,26nm,0.8s
WAT6 Susitna Watana 79.86 24 P **P 06 24 41.4 -0.3**
baz=242,SNR=7.6
MLY Manley 79.94 21 P **P 06 24 42.3 +0.4**
baz=238,SNR=18
MCK McKinley 79.95 23 P **P 06 24 41.5 -0.4**
baz=240,SNR=23
BWN Browne 79.97 22 P **P 06 24 41.5 -0.5**
KLU Klutina 80.12 25 P **P 06 24 43.8 +0.7**
KLU Klutina 80.12 25 P **P 06 24 43.7 +0.7**
baz=244,SNR=13
H22K Ishtalitna Cre 80.17 20 P **P 06 24 44.5 +1.5**
baz=238,SNR=5.9
F21K Alatna River 80.20 19 P **P 06 24 43.5 +0.3**
baz=236,SNR=5.4
DHY Denali Highway 80.25 24 IAmb IAmb 06 24 44.9
comp=Z,20nm,0.8s
DHY Denali Highway 80.25 24 P **P 06 24 43.8 +0.1**
baz=242,SNR=8.0
M24K Tolsona, Glenn 80.29 25 P **P 06 24 44.4 +0.6**
baz=243,SNR=8.3
NEA2 Nenana 80.33 22 P **P 06 24 43.4 -0.5**
baz=240,SNR=13
BMRM Bremner River 80.47 26 P **P 06 24 45.5 +0.8**
BMRM IAmb IAmb 06 24 55.0
comp=Z,45nm,1.4s
BMRM Bremner River 80.47 26 P **P 06 24 45.1 +0.3**
baz=245
I23K Minto, Yukon-K 80.50 21 IAmb IAmb 06 24 45.8
comp=Z,13nm,0.5s
I23K Minto, Yukon-K 80.50 21 P **P 06 24 44.7 -0.1**
baz=240,SNR=12
WRH Wood River Hil 80.64 22 IAmb IAmb 06 24 45.8
comp=Z,25nm,1.0s
G22K Bettles 80.68 19 P **P 06 24 46.2 +0.5**
baz=238
N25K Chitina, Valde 80.74 26 P **P 06 24 46.5 +0.2**
N25K IAmb IAmb 06 24 47.9
comp=Z,16nm,1.0s
N25K Chitina, Valde 80.74 26 P **P 06 24 46.7 +0.4**
baz=245
H23K Yukon River 80.78 21 IAmb IAmb 06 24 47.4
comp=Z,12nm,0.8s
H23K Yukon River 80.78 21 P **P 06 24 46.9 +0.6**
baz=240,SNR=6.9
F22K John River 80.78 19 P **P 06 24 46.9 +0.7**
baz=237
HARP HAARP 80.85 25 P **P 06 24 47.3 +0.6**
baz=244,SNR=5.1
TCOL CIGO, UAF Yank 80.92 22 P **P 06 24 46.1 -0.9**
baz=241,SNR=14
COLA College 80.92 22 P **P 06 24 46.5 -0.5**
COLA College 80.92 22 P **P 06 24 46.5 -0.5**
COLA pmax pmax
comp=Z,45nm,0.7s
COLA College 80.92 22 P **P 06 24 46.1 -0.8**
baz=241
PAX Paxson 80.97 24 P **P 06 24 47.7 +0.3**
PAX IAmb IAmb 06 24 50.5
comp=Z,52nm,2.0s
PAX Paxson 80.97 24 P **P 06 24 47.7 +0.3**
PAX pmax pmax
comp=Z,52nm,2.0s
PAX Paxson 80.97 24 P **P 06 24 47.8 +0.3**
baz=244,SNR=5.6
GLB Gilahina Butte 81.02 26 IAmb IAmb 06 24 49.1
comp=Z,23nm,0.8s
WAX Waxell Ridge 81.04 27 P **P 06 24 48.5 +0.7**
WAX IAmb IAmb 06 24 49.5
comp=Z,30nm,1.0s
HDA Harding Lake 81.04 23 P **P 06 24 47.0 -0.7**
HDA IAmb IAmb 06 24 48.3
comp=Z,14nm,0.5s
HDA Harding Lake 81.04 23 P **P 06 24 47.0 -0.7**
baz=242,SNR=11
G23K Bananza Creek 81.07 20 P **P 06 24 48.5 +0.7**
baz=239,SNR=7.6
VRDI Verde Repeater 81.08 26 IAmb IAmb 06 24 49.6
comp=Z,20nm,0.9s
POKR Poker Plat Res 81.19 22 P **P 06 24 47.8 -0.6**
baz=242
K24K Donnelly Dome 81.22 23 P **P 06 24 48.7 +0.1**
baz=243,SNR=6.0
IL31 81.24 22 P **P 06 24 47.5 -1.1**
ILAR Eielson Array 81.24 22 P **P 06 24 47.5 -1.1**
comp=Z,25nm,0.6s,baz=248,slow=5.3,SNR=311
comp=Z,25nm,0.6s
ISLE Juniper Island 81.33 27 P **P 06 24 49.5 +0.1**
ISLE IAmb IAmb 06 24 50.8
comp=Z,24nm,1.0s
MCARA McCarthy VSAT 81.34 26 P **P 06 24 49.8 +0.5**
MCARA IAmb IAmb 06 24 50.9
comp=Z,16nm,0.8s
MCARA McCarthy VSAT 81.34 26 P **P 06 24 49.8 +0.5**
baz=246
MESA MESA 81.34 28 P **P 06 24 50.4 +0.9**
baz=247
H24K Noodor Dome 81.38 21 IAmb IAmb 06 24 50.9
comp=Z,14nm,0.6s
H24K Noodor Dome 81.38 21 P **P 06 24 49.7 +0.3**
baz=241,SNR=12
KSH Kashi 81.49 311 P **P 06 24 53.5 +2.8**
KSH pP pP 06 26 14.5 +3.5
KSH pmax pmax
comp=Z,6.0nm,0.7s
YAH Yahtse 81.51 27 IAmb IAmb 06 24 52.1
comp=Z,23nm,1.0s
MENT Mentasta 81.68 25 P **P 06 24 51.8 +0.7**
MENT IAmb IAmb 06 24 52.5
comp=Z,15nm,0.8s
J25K Salcha River, 81.75 23 P **P 06 24 51.3 -0.1**
J25K Salcha River, 81.75 23 P **P 06 24 51.4 0.0**
baz=244,SNR=61
M26K Nabesna, AK 81.76 25 P **P 06 24 52.0 +0.5**
M26K IAmb IAmb 06 25 19.7
comp=Z,53nm,2.0s
M26K Nabesna, AK 81.76 25 P **P 06 24 51.8 +0.3**
baz=246,SNR=6.4
BARN Barnard Glacie 81.82 27 P **P 06 24 52.5 +0.5**
TABL Table Mountain 81.82 27 P **P 06 24 52.5 +0.5**
TABL IAmb IAmb 06 24 53.5
comp=Z,21nm,0.7s
DOT Dot Lake 81.84 24 P **P 06 24 52.1 +0.2**
ULHL Ulahol 81.86 313 P **P 06 24 53.7 +1.1**
SNR=7.5
L26K Log Cabin Wild 81.87 25 P **P 06 24 52.4 +0.4**
L26K IAmb IAmb 06 24 53.4
comp=Z,18nm,0.8s
L26K Log Cabin Wild 81.87 25 P **P 06 24 52.6 +0.6**
baz=246,SNR=19
E23K Chandalar 81.90 19 P **P 06 24 53.1 +0.9**
baz=239,SNR=8.0
G24K Hadweenzic Riv 81.94 20 P **P 06 24 53.0 +0.7**
baz=241,SNR=12
SCRK Sand Creek 82.01 24 P **P 06 24 53.0 +0.2**
baz=245,SNR=8.6
D23K Nanushuk River 82.04 18 P **P 06 24 54.1 +1.3**
baz=238,SNR=10
PRP Porcupine Dome 82.09 22 P **P 06 24 53.3 0.0**
baz=243
PCA Pinnacle 82.10 28 IAmb IAmb 06 24 54.8
comp=Z,21nm,0.6s
PINM Pinnacle 82.10 28 P **P 06 24 53.9 +0.6**
baz=249
BOOM Boomskoye usch 82.13 314 P **P 06 24 54.7 +0.7**
BOOM Boomskoye usch 82.13 314 P **P 06 24 54.7 +0.7**
BOOM pmax pmax
comp=Z,7.0nm,0.6s
F24K Squaw Lake 82.20 20 P **P 06 24 54.7 +1.1**
baz=241,SNR=20
TOLK Toolik Lake Re 82.21 18 P **P 06 24 54.7 +1.0**
TOLK IAmb IAmb 06 24 55.3
comp=Z,22nm,0.7s
TOLK Toolik Lake Re 82.21 18 P **P 06 24 54.3 +0.6**
baz=239,SNR=6.5
M27K Edge Creek, AK 82.22 25 P **P 06 24 54.8 +0.7**
M27K Edge Creek, AK 82.22 25 P **P 06 24 54.7 +0.7**
baz=247,SNR=28
KURK Kurchatov 82.26 322 P **P 06 24 54.1 -0.1**
KURK Kurchatov 82.26 322 P **P 06 24 54.1 -0.1**

KURK pmax pmax
comp=Z,10.0nm,1.0s
E24K Your Creek 82.27 19 P **P 06 24 54.3 +0.3**
baz=240
H25K Birch Creek 82.32 21 P **P 06 24 54.9 +0.7**
baz=243
BCPM Bancas Point 82.34 28 P **P 06 24 55.5 +1.1**
BCPM IAmb IAmb 06 24 56.3
comp=Z,24nm,0.8s
PNL Peninsula 82.35 28 P **P 06 24 55.4 +0.8**
baz=250
O28M Mount Upton 82.38 27 P **P 06 24 55.7 +0.8**
baz=249,SNR=7.6
J26L Joseph Creek 82.40 23 P **P 06 24 55.1 +0.3**
J26L IAmb IAmb 06 24 56.1
comp=Z,13nm,0.8s
J26L Joseph Creek 82.40 23 P **P 06 24 55.1 +0.3**
baz=245,SNR=13
G25K Bearman Lake 82.45 21 P **P 06 24 55.7 +0.9**
baz=243,SNR=7.0
TKM2 Tokmak 2 82.46 314 P **P 06 24 56.0 +0.3**
SNR=6.0
TKM2 Tokmak 2 82.46 314 P **P 06 24 56.1 +0.3**
L27K Beaver Creek, 82.52 25 P **P 06 24 56.1 +0.7**
L27K IAmb IAmb 06 24 57.1
comp=Z,26nm,1.1s
L27K Beaver Creek, 82.52 25 P **P 06 24 56.1 +0.7**
baz=247,SNR=16
C23K Itkillik River 82.52 17 P **P 06 24 56.1 +0.9**
baz=238
BCAR Beaver Creek A 82.54 25 P **P 06 24 56.2 +0.7**
NIL Nilore 82.60 304 P **P 06 24 56.5 +0.1**
NIL Nilore 82.60 304 P **P 06 24 56.5 +0.1**
NIL pmax pmax
comp=Z,20nm,0.6s
YUK3 Moose Creek 82.62 26 P **P 06 24 56.7 +0.5**
baz=248,SNR=8.8
FYU Fort Yukon 82.67 21 P **P 06 24 56.6 +0.7**
FYU IAmb IAmb 06 24 57.5
comp=Z,24nm,0.8s
BVCY Beaver Creek 82.68 26 P **P 06 24 57.0 +0.8**
baz=248,SNR=8.3
D24K Happy Valley 82.71 18 P **P 06 24 57.0 +0.9**
baz=240
YUK8 Steele Glacier 82.75 27 P **P 06 24 57.8 +0.9**
baz=249,SNR=11
K27K Chicken 82.80 24 P **P 06 24 57.3 +0.6**
K27K IAmb IAmb 06 24 58.9
comp=Z,16nm,0.8s
K27K Chicken 82.80 24 P **P 06 24 57.8 +1.1**
baz=247
I26K Coal Creek Min 82.89 23 P **P 06 24 56.7 -0.4**
I26K IAmb IAmb 06 24 58.1
comp=Z,12nm,0.7s
I26K Coal Creek Min 82.89 23 P **P 06 24 57.1 -0.1**
baz=246,SNR=7.9
O29M Mount Kennedy 82.96 28 P **P 06 24 58.9 +1.1**
baz=250,SNR=8.0
F25K Christian Rive 82.99 20 P **P 06 24 58.5 +0.8**
baz=243,SNR=7.5
C24K Franklin Bluff 83.03 18 P **P 06 24 58.6 +0.8**
baz=240
CHMS Chumysh 83.09 314 P **P 06 24 59.8 +1.1**
SNR=5.0
UCH Uchtor 83.11 313 P **P 06 25 00.8 +1.4**
SNR=11
P29M Windy Craggy 83.13 29 P **P 06 24 59.0 +0.5**
P29M IAmb IAmb 06 25 00.1
comp=Z,12nm,0.7s
P29M Windy Craggy 83.13 29 P **P 06 24 59.5 +1.0**
baz=251
AAK Ala-Archa 83.20 313 P **P 06 25 00.4 +0.9**
SNR=14
AAK Ala-Archa 83.20 313 P **P 06 24 59.5 0.0**
AAK IAmb IAmb 06 25 01.3
comp=Z,13nm,0.7s
AAK Ala-Archa 83.20 313 *d iP* **P 06 25 00.0 +0.5**
AAK pmax pmax
comp=Z,13nm,0.7s
E25K Arctic Village 83.26 20 P **P 06 24 59.7 +0.7**
baz=243,SNR=5.3
YUK6 Outpost Mounta 83.27 27 P **P 06 25 00.2 +0.7**
baz=250
YUK4 Talbot Arm 83.28 27 P **P 06 25 00.9 +1.4**
baz=250,SNR=14
BMAR Burnt Mountain 83.28 20 P **P 06 24 59.6 +0.4**
USP Ospenovka 83.32 314 P **P 06 25 00.7 +0.8**
SNR=13
G26K Porcupine Rive 83.36 21 P **P 06 25 00.6 +1.1**
baz=245,SNR=19
S31K Pelican 83.36 31 P **P 06 25 00.4 +0.8**
baz=253
EGAK Eagle 83.46 23 P **P 06 25 00.7 +0.7**
EGAK IAmb IAmb 06 25 01.7
comp=Z,28nm,1.0s
EGAK Eagle 83.46 23 P **P 06 25 00.5 +0.4**
baz=247,SNR=11
F26K Sheenjek River 83.55 20 P **P 06 25 01.5 +1.0**
baz=244,SNR=5.2
D25K Kavik River 83.55 18 P **P 06 25 00.9 +0.4**
baz=242,SNR=6.2
SIT Sitka 83.56 32 P **P 06 25 01.6 +0.9**
baz=254
I27K Kandik River 83.60 23 P **P 06 25 01.6 +0.7**
baz=247,SNR=13
HYT Haines Junctio 83.63 28 P **P 06 25 02.3 +1.1**
baz=251,SNR=26
P30M Million Dollar 83.66 28 P **P 06 25 02.5 +1.2**
baz=252
AML Almayashu 83.69 313 P **P 06 25 03.6 +1.4**
SNR=27
EKS2 Erkin-Say 83.73 313 P **P 06 25 03.3 +1.2**
SNR=12
M29M Somme Creek 83.74 26 P **P 06 25 02.5 +0.8**
baz=250,SNR=17
PLBC Pleasant Camp 83.74 29 P **P 06 25 02.4 +0.8**
baz=252
H27K Steamboat Moun 83.88 22 P **P 06 25 03.2 +1.0**
baz=247,SNR=18
DAWY Dawson 83.91 24 IAmb IAmb 06 25 04.2
comp=Z,53nm,1.6s
DAWY Dawson 83.91 24 P **P 06 25 03.2 +0.8**
baz=249,SNR=11
N30M Aishikik Lake 84.03 27 P **P 06 25 03.6 +0.6**
baz=252
G27K Doyon Strip 84.06 21 P **P 06 25 04.0 +0.9**
baz=247,SNR=10
S32K Killisnoo 84.07 31 P **P 06 25 04.2 +1.0**
baz=254,SNR=5.2
L29M L29M 84.11 25 P **P 06 25 04.3 +0.9**
baz=250,SNR=25
BESE Bessie Mountai 84.23 30 IAmb IAmb 06 25 06.1
comp=Z,25nm,1.2s
SKAG Skagway 84.25 29 IAmb IAmb 06 25 07.0
comp=Z,21nm,1.4s
SKAG Skagway 84.25 29 P **P 06 25 05.1 +1.0**
baz=253,SNR=5.3
O30N Mendenhall 84.27 28 P **P 06 25 04.9 +0.6**
baz=252,SNR=9.3
C26K Camden Bay 84.28 18 P **P 06 25 04.6 +0.6**
baz=243
R32K Eaglecrest 84.32 31 P **P 06 25 05.4 +0.9**
baz=254
CRAG Craig 84.32 34 P **P 06 25 05.1 +0.6**
baz=256
NRIK Noril'sk 84.47 341 P **P 06 25 05.0 0.0**
comp=Z,7.8nm,0.5s,baz=107,slow=3.7,SNR=20
comp=Z,7.8nm,0.5s
NRIK Noril'sk 84.47 341 P **P 06 25 05.3 +0.3**
NRIK IAmb IAmb 06 25 05.9
comp=Z,8.5nm,0.6s
NRIK Noril'sk 84.47 341 P **P 06 25 05.3 +0.3**
NRIK pmax pmax
comp=Z,8.0nm,0.6s
U33K Whale Pass 84.48 33 P **P 06 25 06.2 +0.9**
baz=255
M30M Minto, Yukon 84.51 26 P **P 06 25 06.4 +1.0**
M30M IAmb IAmb 06 25 07.2
comp=Z,15nm,0.9s
M30M Minto, Yukon 84.51 26 P **P 06 25 06.3 +0.9**
baz=252,SNR=13
C27K Jago River 84.53 18 P **P 06 25 06.1 +0.8**
baz=245
K29M Barlow Dome 84.61 25 P **P 06 25 07.0 +1.1**
baz=251,SNR=33
E27K Coleen River 84.63 20 P **P 06 25 06.8 +0.9**
baz=247,SNR=17

N31M	Braeburn, Yuko	84.63	27	P	P	06 25 07.1	+1.1
N31M				IAmb	IAmb	06 25 08.1	
	comp=Z,18nm,0.7s						
N31M	Braeburn, Yuko	84.63	27	P	P	06 25 07.1	+1.1
	baz=253,SNR=11						
DRK	Karamyk	84.66	310	P	P	06 25 07.2	+0.2
I29M	Ogilvie Camp,	84.80	23	P	P	06 25 06.6	-0.1
I29M				IAmb	IAmb	06 25 08.1	
	comp=Z,24nm,0.8s						
I29M	Ogilvie Camp,	84.80	23	P	P	06 25 07.1	+0.4
	baz=250,SNR=20						
WHY	Whitehorse	84.81	28	P	P	06 25 07.0	0.0
WHY	Whitehorse	84.81	28	P	P	06 25 07.8	+0.8
	baz=254,SNR=7.3						
WRAK	Wrangell Islan	84.98	33	P	P	06 25 08.5	+0.8
WRAK				IAmb	IAmb	06 25 09.8	
	comp=Z,23nm,1.0s						
WRAK	Wrangell Islan	84.98	33	P	P	06 25 08.9	+1.1
	baz=256,SNR=6.4						
P32M	Atlin	85.08	29	P	P	06 25 09.2	+0.9
	baz=255						
V35K	Ketchikan	85.12	34	P	P	06 25 09.2	+0.8
	baz=257,SNR=5.4						
MAYO	Mayo, Yukon	85.22	25	P	P	06 25 09.9	+1.0
	baz=252,SNR=7.1						
M31M	Drury Creek, Y	85.47	27	P	P	06 25 10.1	-0.1
M31M				IAmb	IAmb	06 25 11.5	
	comp=Z,14nm,0.8s						
M31M	Drury Creek, Y	85.47	27	P	P	06 25 10.6	+0.4
	baz=254,SNR=12						
BTK	Batken	85.50	310	P	P	06 25 11.0	+0.1
BTK	Batken	85.50	310	P	P	06 25 11.0	+0.1
BTK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
Q32M	Nakina River	85.63	30	P	P	06 25 12.3	+1.1
	baz=256,SNR=5.9						
P33M	Teslin, Yukon	85.67	29	P	P	06 25 11.5	+0.3
P33M	Teslin, Yukon	85.67	29	P	P	06 25 11.7	+0.5
	baz=255,SNR=7.4						
OTUK	Ortayu	85.72	319	P	P	06 25 11.2	-0.5
GAR	Garm	85.73	309	IAmb	IAmb	06 25 13.6	
	comp=Z,34nm,1.3s						
GRNB	Grenville Isla	85.74	36	IAmb	IAmb	06 25 13.7	
	comp=Z,16nm,0.8s						
EPYK	Eagle Plains	85.75	23	P	P	06 25 11.4	0.0
EPYK	Eagle Plains	85.75	23	P	P	06 25 11.8	+0.3
	baz=251,SNR=19						
N32M	Quiet Lake	85.79	28	P	P	06 25 12.6	+0.9
	baz=255						
FARO	Faro, Yukon	85.95	27	P	P	06 25 12.6	+0.1
FARO				IAmb	IAmb	06 25 14.4	
	comp=Z,19nm,0.8s						
FARO	Faro, Yukon	85.95	27	P	P	06 25 12.8	+0.3
	baz=255,SNR=20						
S34M	Telegraph Cree	85.97	31	P	P	06 25 13.9	+1.2
	baz=257,SNR=17						
G30M	tAoh Zraii Nji	86.13	22	P	P	06 25 13.3	0.0
	baz=252						
KK31	Karatay Array	86.17	313	P	P	06 25 13.6	-0.4
KK31	Karatay Array	86.17	313	P	P	06 25 13.6	-0.4
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	86.17	313	P	P	06 25 13.1	-0.9
KKAR	Karatay Array	86.17	313	IAmb	IAmb	06 25 14.8	
	comp=Z,4.4nm,0.7s						
KKAR	Karatay Array	86.17	313	P	P	06 25 13.1	-0.9
T35M	Bob Quinn	86.23	32	P	P	06 25 15.7	+1.7
	baz=258,SNR=7.5						
R33M	Jennings River	86.39	30	P	P	06 25 16.1	+1.3
	baz=257,SNR=18						
QSPA	South Pole Qui	86.47	180	P	P	06 25 14.7	-0.4
QSPA				IAmb	IAmb	06 25 15.6	
	comp=Z,15nm,0.7s						
MAW	Mawson	86.48	203	P	P	06 25 14.1	-0.8
	comp=Z,3.3nm,0.8s,baz=95,slow=8.8,SNR=8.1						
	comp=Z,3.3nm,0.8s						
CHGR	Chuyangaron	86.59	309	IAmb	IAmb	06 25 17.3	
	comp=Z,18nm,0.7s						
DLBC	Dease Lake	86.66	31	P	P	06 25 16.2	+0.2
DLBC				IAmb	IAmb	06 25 18.1	
	comp=Z,27nm,1.2s						
DLBC	Dease Lake	86.66	31	P	P	06 25 17.2	+1.2
	baz=258,SNR=14						
MMPY	Sheldon Lake,	86.98	27	P	P	06 25 18.1	+0.6
	baz=257,SNR=11						
F31M	Tsiigehtchic	87.19	22	P	P	06 25 18.2	0.0
	baz=254						
INK	Inuvik	87.51	21	P	P	06 25 19.1	-0.6
INK				IAmb	IAmb	06 25 21.0	
	comp=Z,12nm,0.9s						
INK	Inuvik	87.51	21	P	P	06 25 19.1	-0.6
INK				pmax	pmax		
	comp=Z,12nm,0.9s						
INK	Inuvik	87.51	21	P	P	06 25 19.6	-0.1
	baz=254,SNR=8.5						
WTLY	Watson Lake, Y	87.61	29	IAmb	IAmb	06 25 22.5	
	comp=Z,22nm,0.9s						
WTLY	Watson Lake, Y	87.61	29	P	P	06 25 21.5	+1.0
	baz=259,SNR=10						
BVA0	Borovoye Array	87.73	323	*i* P	P	06 25 19.9	-1.2
BRVK	Borovoye	87.80	323	P	P	06 25 20.7	-0.7
BRVK				IAmb	IAmb	06 25 21.5	
	comp=Z,14nm,0.9s						
BRVK	Borovoye	87.80	323	P	P	06 25 20.7	-0.7
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s						
TGTN	Hyland Airport	88.13	28	P	P	06 25 23.7	+0.8
	baz=259,SNR=7.4						
HUMO	Hull Mountain	88.66	47	IAmb	IAmb	06 25 28.1	
	comp=Z,27nm,1.1s						
LIRD	Liard River Hi	88.83	30	P	P	06 25 26.8	+0.7
	baz=261						
KOTAN	Kotaneelee Air	89.96	30	P	P	06 25 31.8	+0.4
	baz=263						
K05A	Summer Lake	90.19	47	P	P	06 25 33.2	+0.1
K05A				IAmb	IAmb	06 25 34.8	
	comp=Z,17nm,0.8s						
CMB	Columbia Colle	90.22	52	P	P	06 25 33.1	0.0
CMB	Columbia Colle	90.22	52	P	P	06 25 33.2	0.0
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FLDN	Fort Liard	90.26	30	P	P	06 25 34.1	+1.4
	baz=264						
BEKR	Beckworth	90.38	50	IAmb	IAmb	06 25 35.2	
	comp=Z,17nm,1.5s						
PKM	Mcpherson Peak	90.46	55	P	P	06 25 35.3	+0.8
	baz=266						
MOD	Modoc Plateau	90.56	48	IAmb	IAmb	06 25 36.2	
	comp=Z,14nm,0.8s						
WRGLY	Wrigley	90.61	27	P	P	06 25 34.9	+0.6
	baz=264						
LTY	Liberty	90.70	43	P	P	06 25 35.2	0.0
LTY				IAmb	IAmb	06 25 36.0	
	comp=Z,8.0nm,0.7s						
BCW	Bitter Crk WRg	90.79	55	IAmb	IAmb	06 25 38.2	
	comp=Z,15nm,0.8s						
VES	Vestal, Richgr	91.11	54	P	P	06 25 38.0	+0.7
	baz=267						
ARVC	Arvin	91.28	55	P	P	06 25 38.5	+0.4
	baz=267						
I07A	Izee	91.30	46	IAmb	IAmb	06 25 39.5	
	comp=Z,17nm,1.4s						
CIS	Catalina Islan	91.53	57	P	P	06 25 39.6	+0.4
	baz=267						
ISA	Isabella, Lake	91.60	55	P	P	06 25 38.2	-1.4
ISA	Isabella, Lake	91.60	55	P	P	06 25 38.2	-1.4
ISA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISA	Isabella, Lake	91.60	55	P	P	06 25 39.8	+0.1
	baz=267						
B08A	Colville Reser	91.67	42	P	P	06 25 38.6	-1.0
LHV	Little Huntoon	91.72	52	IAmb	IAmb	06 25 42.0	
	comp=Z,13nm,1.1s						
RYN	Ryan	91.72	52	P	P	06 25 39.8	-0.4
PASC	Pasadena Art C	91.76	56	IAmb	IAmb	06 25 41.8	
	comp=Z,20nm,1.0s						
WVOR	Wild Horse Val	91.83	48	IAmb	IAmb	06 25 41.5	
	comp=Z,10nm,1.1s						
TIN	Tinemaha, Big	91.87	53	P	P	06 25 41.6	+0.7
	baz=267						
D08A	Wollman Farm,	91.88	43	P	P	06 25 39.7	-0.9
NVAR	Mina Array Bea	91.88	52	P	P	06 25 41.3	+0.2
	comp=Z,5.3nm,0.8s,baz=255,slow=6.4,SNR=28						
	comp=Z,5.3nm,0.8s						
NVAR	Mina Array Bea	91.88	52	P	P	06 25 40.4	-0.7
EDW2	Edwards Air Fo	91.95	55	P	P	06 25 41.9	+0.7
	baz=267,SNR=7.2						
CWC	Cottonwood Cre	91.96	54	P	P	06 25 41.8	+0.4
	baz=267						
NV11	Mina Array Sit	92.00	52	P	P	06 25 40.8	-0.7
NV11				IAmb	IAmb	06 25 43.0	
	comp=Z,12nm,1.1s						
J08A	Circle Bar Ran	92.00	47	P	P	06 25 41.1	-0.3
J08A				IAmb	IAmb	06 25 42.7	
	comp=Z,8.0nm,0.9s						
KVN	Kaiserville	92.07	51	IAmb	IAmb	06 25 43.2	
	comp=Z,12nm,1.3s						
DSP	Deep Springs	92.09	53	P	P	06 25 41.7	-0.1
DSP				IAmb	IAmb	06 25 43.7	
	comp=Z,11nm,1.0s						
WAPA	Wapiti River	92.10	35	P	P	06 25 41.4	0.0
BFSC	Mount Baldy Ra	92.20	56	P	P	06 25 42.7	+0.2
	baz=267						
LRMC	Laurel Mtn Rad	92.24	55	P	P	06 25 43.5	+0.8
	baz=267						
C09A	Chrisman Ranch	92.35	42	P	P	06 25 42.3	-0.5
ELS	Elsinore Mount	92.36	57	P	P	06 25 41.7	-1.5
MPMC	Manual Prospec	92.42	54	P	P	06 25 44.2	+0.6
	baz=268,SNR=13						
MURC	Murrieta	92.55	57	P	P	06 25 44.5	+0.5
	baz=268						
GRAC	Grapevine Rang	92.56	53	P	P	06 25 44.5	+0.5
	baz=268						
109C	Camp Elliot, M	92.60	57	IAmb	IAmb	06 25 46.2	
	comp=Z,16nm,0.8s						
109C	Camp Elliot, M	92.60	57	P	P	06 25 45.0	+0.9
	baz=268						
BMO	Blue Mountains	92.91	45	P	P	06 25 44.7	-0.8
BMO				IAmb	IAmb	06 25 47.4	
	comp=Z,20nm,1.8s						
BMO	Blue Mountains	92.91	45	P	P	06 25 44.7	-0.8
BMO				pmax	pmax		
	comp=Z,20nm,1.8s						
CCX	Cicese	92.93	58	P	P	06 25 44.9	-0.9
CCX				IAmb	IAmb	06 26 38.5	
	comp=Z,19nm,1.0s						
FURC	Furnace Creek,	92.94	54	P	P	06 25 46.2	+0.5
	baz=268,SNR=6.3						
GSC	Goldstone, Bar	92.94	55	P	P	06 25 45.9	0.0
GSC	Goldstone, Bar	92.94	55	P	P	06 25 45.9	0.0
GSC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GSC	Goldstone, Bar	92.94	55	P	P	06 25 46.9	+1.0
	baz=268,SNR=6.2						
BAR	Barrett	92.95	58	IAmb	IAmb	06 25 47.9	
	comp=Z,8.4nm,0.9s						
MANA	Manning	93.07	33	P	P	06 25 46.3	+0.4
GWY	Greenwater Val	93.09	54	P	P	06 25 46.5	-0.1
BRLDA	Berland Lookou	93.13	36	P	P	06 25 47.5	+1.2
NEW	Newport	93.14	42	P	P	06 25 46.8	+0.4
	baz=268,SNR=5.5						
WCT	Wildcat Mounta	93.14	53	IAmb	IAmb	06 25 48.2	
	comp=Z,14nm,0.9s						
PFO	Pinyon Flats O	93.17	57	P	P	06 25 47.0	0.0
PFO				IAmb	IAmb	06 25 48.6	
	comp=Z,13nm,0.8s						
PFO	Pinyon Flats O	93.17	57	*c i* P	P	06 25 47.8	+0.8
PFO				pmax	pmax		
	comp=Z,21nm,0.9s						
PFO	Pinyon Flats O	93.17	57	P	P	06 25 47.7	+0.7
	baz=268,SNR=6.6						
TPFO	Pinon Flats	93.17	57	P	P	06 25 47.6	+0.6
	baz=268,SNR=9.8						
MONP2	Monument Peak	93.17	57	P	P	06 25 48.2	+1.1
	baz=268,SNR=11						
HEC	Hector,Ludlow	93.31	55	P	P	06 25 47.9	+0.3
	baz=268						
SHOC	Shoshone, Teco	93.40	54	P	P	06 25 48.2	+0.4
	baz=268						
IKP	In-Ko-Pah, Jac	93.43	58	P	P	06 25 49.1	+1.0
	baz=268						
TPNV	Topopah Spring	93.45	53	IAmb	IAmb	06 25 49.7	
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	93.45	53	P	P	06 25 48.6	+0.4
	baz=268,SNR=9.0						
ESJX	Sierra Juarez	93.54	58	P	P	06 25 49.8	+1.0
ESJX				IAmb	IAmb	06 25 51.6	
	comp=Z,9.5nm,1.2s						
BELC	Belle Mtn. Jos	93.56	56	P	P	06 25 49.4	+0.5
	baz=268,SNR=6.1						
YUH	Yuha Desert	93.58	58	P	P	06 25 46.4	-2.4
YUH				IAmb	IAmb	06 25 51.5	
	comp=Z,12nm,1.1s						
SWSC	Sam W. Stewart	93.70	57	P	P	06 25 50.2	+1.0
	baz=268						
PLID	Pearl Lake	93.84	45	P	P	06 25 47.9	-2.0
GMRC	Granite Mounta	93.87	56	P	P	06 25 50.8	+0.6
	baz=268,SNR=9.1						
AB31	Akbulak array	93.97	319	*i* P	P	06 25 48.0	-2.1
ABKAR	Akbulak array	93.97	319	P	P	06 25 48.0	-2.1
ABKAR	Akbulak array	93.97	319	IAmb	IAmb	06 25 49.2	
	comp=Z,3.2nm,1.1s						
BC3	Big Chuckawall	94.01	57	P	P	06 25 51.6	+0.8
	baz=268,SNR=5.4						
R11A	Troy Canyon, C	94.01	52	P	P	06 25 50.1	-0.7
R11A	Troy Canyon, C	94.01	52	P	P	06 25 51.5	+0.7
	baz=269						
IRM	Iron Mountain	94.28	56	P	P	06 25 52.8	+0.9
	baz=269,SNR=8.6						
SHPR	Sheep Range	94.31	54	P	P	06 25 52.3	+0.1
PRN	Pahroc Range	94.42	53	IAmb	IAmb	06 25 55.6	
	comp=Z,8.3nm,0.9s						
GLA	Glamis	94.52	57	IAmb	IAmb	06 25 55.5	
	comp=Z,12nm,0.9s						
GLA	Glamis	94.52	57	P	P	06 25 54.4	+1.3
	baz=269						
V12A	Nelson	94.55	55	IAmb	IAmb	06 25 54.9	
	comp=Z,12nm,1.2s						
YKA	Yellowknife Ar	94.63	28	P	P	06 25 52.9	+0.1
	comp=Z,4.2nm,0.6s,baz=270,slow=4.9,SNR=13						
	comp=Z,4.2nm,0.6s						
NEE2	Needles Airpor	94.72	56	P	P	06 25 54.8	+0.9
	baz=269						
BLYC	Blythe	94.78	57	IAmb	IAmb	06 25 56.6	
	comp=Z,9.8nm,0.8s						
ARU	Arti	94.80	326	*c i* P	P	06 25 51.5	-2.2
ARU						06 29 43.9	
ARU				S	SKSac	06 35 51.8	-2.9
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HLID	Hailey	94.96	47	P	P	06 25 53.6	-1.5
HLID				IAmb	IAmb	06 28 05.2	
	comp=Z,15nm,1.9s						
HLID	Hailey	94.96	47	P	P	06 25 55.4	+0.4
	baz=270						
PDMCI	Parker Dam,Lak	95.11	56	P	P	06 25 56.8	+1.1
	baz=269						
AKTO	Aktyubinsk	95.22	320	P	P	06 25 53.3	-2.5
WALA	Waterton Lakes	95.28	41	IAmb	IAmb	06 25 58.6	
	comp=Z,8.5nm,0.9s						
W13A	Hualapai Mount	95.33	55	IAmb	IAmb	06 25 58.7	
	comp=Z,6.3nm,1.0s						
LCMT	Little Creek M	95.86	53	IAmb	IAmb	06 26 02.3	
	comp=Z,7.1nm,1.3s						
U15A	North Rim	96.63	54	IAmb	IAmb	06 26 04.8	
	comp=Z,4.7nm,0.7s						
BOZ	Bozeman (W)	96.92	45	P	P	06 26 02.7	-1.1
BOZ				IAmb	IAmb	06 28 02.4	
	comp=Z,14nm,1.9s						
BOZ	Bozeman (W)	96.92	45	P	P	06 26 02.7	-1.1
BOZ				pmax	pmax		
	comp=Z,14nm,1.9s						
BOZ	Bozeman (W)	96.92	45	P	P	06 26 03.6	-0.2
	baz=272						
WUAZ	Wupatki	97.38	55	P	Pdif	06 26 06.9	+0.8
	baz=271						
PDAR	Pinedale Array	98.53	47	P	Pdif	06 26 10.5	-0.7
	comp=Z,2.4nm,0.7s,baz=221,slow=2.7,SNR=20						
	comp=Z,2.4nm,0.7s						
MVCO	Mesa Verde	99.64	53	P	Pdif	06 26 16.8	+0.6
	baz=273						
O20A	White River Ci	99.68	50	P	Pdif	06 26 16.1	-0.2
	baz=274						
LAO	LASA Array	100.58	43	P	Pdif	06 26 20.7	+0.7
	baz=276						
S22A	4UR Ranch, Cre	100.94	52	P	Pdif	06 26 22.8	+0.7
	baz=274						
ANMO	Albuquerque	101.43	55⇑	*eP*	Pdif	06 26 25.3	+1.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ANMO	Albuquerque	101.43	55	P	Pdif	06 26 25.4	+1.2
	baz=274						
SDCO	Great Sand Dun	101.99	52	P	Pdif	06 26 26.7	0.0
	baz=275						
RSSD	Black Hills	102.42	46	P	Pdif	06 26 27.6	-0.8
	baz=277						
TXAR	Lajitas Array	104.17	61	Pdiff	Pdif	06 26 42.2	+5.8
	comp=Z,0.6nm,1.1s,baz=274,slow=5.1,SNR=3.5						
ARCES	ARCESS Array B	105.39	343	PKiKP	PKiKP	06 30 52.4	-0.1
	comp=Z,2.9nm,0.7s,baz=28,slow=1.6,SNR=7.8						
FINES	FINESS Array B	109.54	336	Pdiff	Pdif	06 26 57.5	-1.9
	comp=Z,0.4nm,0.4s,baz=69,slow=6.3,SNR=7.2						
FINES				PKiKP	PKiKP	06 30 59.8	-0.5
	comp=Z,1.9nm,0.5s,baz=123,slow=5.1,SNR=6.3						
MNK	Minsk	112.07	329	*i* P	Pdif	06 27 29.7	+19
MNK				*i*		06 31 53.6	
MNK				*i* PPP	PPP	06 34 18.9	
MNK				*i* PS	PKKPab	06 42 13.0	+4.6
MNK				*i* SS	SS	06 47 00.8	-4.2
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,21nm,0.9s						
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				MLR	MLR		
	comp=Z,127nm,18.0s						
MNK				MLR	MLR		
	comp=N,2μm,20.0s						
MNK				MLR	MLR		
	comp=E,20nm,16.0s						
AKASG	Malin Array Be	112.98	325	PKiKP	PKiKP	06 31 06.7	-0.5
	comp=E,1.8nm,0.5s,baz=60,slow=2.3,SNR=11						
AKBB	Malin Array Si	112.98	325⇑	*i*PKiKP	PKiKP	06 31 06.4	-0.8
CCM	Cathedral Cave	113.05	50	P	PKiKP	06 31 07.4	-0.4
	baz=284						
BRTR	Keskin Array B	113.85	312	PKiKP	PKiKP	06 31 08.8	-0.7
	comp=E,1.1nm,0.5s,baz=136,slow=1.9,SNR=5.6						
HFS	Hagfors	115.17	338	PKP	PKiKP	06 31 10.2	-0.9
	comp=E,1.8nm,0.6s,baz=315,slow=0.4,SNR=6.7						
NB2	NORSAR Subarra	115.42	340	PKPdf	PKPdf	06 31 10.9	-0.8
	comp=Z,1.3nm,0.6s,baz=42,slow=1.8						
NOA	NORSAR Array B	115.42	340	PKP	PKPdf	06 31 11.2	-0.4
	comp=Z,1.9nm,0.6s,baz=45,slow=1.9,SNR=13						
WVT	Waverly	116.18	51	P	PKPdf	06 31 13.5	-0.3
	baz=286						
WCI	Wyandotte Cave	116.75	49		PKPdf	06 31 14.0	-0.8
WCI	Wyandotte Cave	116.75	49	PKiKP	PKPdf	06 31 14.0	-0.8
WCI	Wyandotte Cave	116.75	49	P	PKPdf	06 31 14.8	-0.1
	baz=288						
L48A	N Adams	116.85	44	PKPdf	PKPdf	06 31 12.1	-2.8
O48B	Farmland	116.93	46	P	PKPdf	06 31 15.1	-0.1
	baz=290						
V48A	Smith Brothers	117.08	51	PKPdf	PKPdf	06 31 13.8	-1.8
MLR	Muntele Rosu	117.15	320	PKPdf	PKPdf	06 31 13.2	-2.4
MLR	Muntele Rosu	117.15	320	PKiKP	PKPdf	06 31 13.2	-2.4
CLTN	Cedars of Leba	117.36	51	PKPdf	PKPdf	06 31 14.9	-1.2
P49A	Miami Univ. Ec	117.49	47	P	PKPdf	06 31 15.8	-0.4
	baz=290						
O49A	Covington	117.54	46	PKPdf	PKPdf	06 31 15.9	-0.4
LRAL	Lakeview Retre	117.66	54	P	PKPdf	06 31 16.7	-0.1
	baz=285						
KOLS	Kolonicke sedl	117.79	325	*e*PKiKP	PKiKP	06 31 17.4	+0.8
BRAL	Brewton	118.08	56	P	PKPdf	06 31 17.5	-0.1
	baz=284						
W50A	Signal Mountai	118.41	52	PKPdf	PKPdf	06 31 17.6	-0.6
ACSO	Alum Creek Sta	118.49	46	P	PKPdf	06 31 18.1	-0.1
	baz=292						
250A	Grady	118.53	55	PKPdf	PKPdf	06 31 17.0	-1.4
S51A	Beattyville	118.96	48	PKPdf	PKPdf	06 31 18.5	-0.6
Z51A	Franklin	119.06	54		PKPdf	06 31 18.7	-0.7
P52A	Corning	119.32	46	P	PKPdf	06 31 19.8	0.0
	baz=292						
TZTN	Tazewell	119.35	50	P	PKiKP	06 31 20.2	+0.2
	baz=289						
W52A	Murphy	119.52	51		PKPdf	06 31 19.9	-0.5
152A	Waverly Hall	119.61	54	PKPdf	PKPdf	06 31 19.8	-0.8
M53A	Wi Miller and	119.64	43	P	PKPdf	06 31 20.0	-0.3
	baz=294						
BOSA	Boshof	119.78	234	PKP	PKPdf	06 31 20.4	-0.7
	comp=Z,2.7nm,1.0s,baz=77,slow=3.0,SNR=3.6						
P53A	Whipple	119.91	46	PKPdf	PKPdf	06 31 20.1	-0.8
MORC	Moravsky Berou	119.95	328	PKPdf	PKPdf	06 31 19.8	-0.9
MORC	Moravsky Berou	119.95	328	PKiKP	PKPdf	06 31 19.8	-0.9
MORC	Moravsky Berou	119.95	328	*e*PKP	PKiKP	06 31 21.0	+0.2
VYHS	Vyhne	119.96	326	*e*PKiKP	PKPdf	06 31 20.7	-0.1
MAUC	Maruska	120.03	327	*e*PKPDF	PKiKP	06 31 21.8	+0.8
VTS	Vitosha	120.15	318		PKPdf	06 31 20.6	-0.9
VTS	Vitosha	120.15	318	PKiKP	PKPdf	06 31 20.6	-0.9
KRLC	Kraliky	120.19	328	*e*PKiKP	PKiKP	06 31 21.5	+0.2
KRLC	Kraliky	120.19	328	*e*PKPDF	PKiKP	06 31 21.5	+0.2
BG3	Lake Jocassee	120.33	51	PKPdf	PKPdf	06 31 21.3	-0.6
GOGA	Godfrey	120.40	53	P	PKPdf	06 31 21.9	-0.1
	baz=288						
JAVC	Velka Javorina	120.41	327	*e*PKP	PKiKP	06 31 22.9	+1.1
Q54A	Coxs Mills	120.50	46	PKPdf	PKPdf	06 31 21.2	-0.9
S54A	Dingess, Beckl	120.59	48	PKPdf	PKPdf	06 31 21.5	-0.8
VRAC	Vranov	120.73	328	*e*PKP	PKiKP	06 31 22.4	+0.1
MODS	Modra-Piesok	120.89	327	*e*PKiKP	PKiKP	06 31 22.8	+0.1
KRUC	Moravsky	120.98	328	*e*PKP	PKiKP	06 31 22.8	0.0
BRG	Berggiesshubel	121.15	330	*i* PKP	PKiKP	06 31 23.4	+0.3
BRG				Amp		06 31 24.5	
	comp=Z,7.8nm,1.0s						
BRG	Berggiesshubel	121.15	330	*i* PKiKP	PKiKP	06 31 23.3	+0.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
R55A	Marlinton	121.28	47	PKPdf	PKPdf	06 31 23.4	-0.3
PLCA	Paso Flores	121.29	143	PKiKP	PKiKP	06 31 24.0	+0.2
	comp=Z,1.6nm,0.5s,baz=252,slow=3.5,SNR=13						
PLCA	Paso Flores	121.29	143	PKiKP	PKiKP	06 31 24.0	+0.2
GOPC	GO Pecny, Ondr	121.31	329	*e*PKiKP	PKPdf	06 31 23.4	+0.1
GOPC	GO Pecny, Ondr	121.31	329	*e*PKPDF	PKPdf	06 31 23.4	+0.1
CLL	Collm	121.33	331	PKPdf	PKPdf	06 31 23.0	-0.2
CLL	Collm	121.33	331	*i* PKiKP	PKPdf	06 31 23.1	-0.2
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL	Collm	121.33	331	*i* PKPdf	PKPdf	06 31 23.1	-0.2
	comp=Z,8.0nm,0.9s						
PRU	Pruhonice	121.39	329

comp=Z,9.9nm,0.8s
BGES Gesves 125.58 335 *d*PKiKP **PKPdf 06 31 31.4 -0.1**
WLF Walferdange 125.64 333 *d*PKiKP **PKiKP 06 31 32.6 +0.6**
RCHB Rochefort 125.69 334 *d*PKiKP **PKiKP 06 31 32.6 +0.5**
BMRD Maredsous 125.78 335 *d*PKiKP **PKPdf 06 31 31.8 0.0**
SNF Seneffe 125.83 335 *d*PKiKP **PKiKP 06 31 32.5 +0.2**
DOU Dourbes 126.01 335 *d*PKiKP **PKPdf 06 31 32.5 +0.2**
AC05 El Transito 128.23 131 PKPdf 06 31 37.7 +0.3
LPL La Plagne 128.30 329 *e*PKIKP **PKiKP 06 31 38.3 +0.5**
LPL pmax pmax
comp=Z,7.0nm,1.0s
ROSC El Rosal 133.76 87 PKP **PKPdf 06 31 48.0 -0.6**
comp=Z,3.9nm,0.4s,baz=73,slow=17,SNR=6.2
ROSC El Rosal 133.76 87 PKPdf 06 31 47.2 -1.3
ROSC El Rosal 133.76 87 PKIKP **PKPdf 06 31 48.0 -0.6**
LPAZ La Paz 135.72 118 PKhKP PKPpre 06 31 43.5
comp=Z,0.5nm,0.5s,baz=272,slow=3.4,SNR=4.9
LPAZ PKP **PKPdf 06 31 52.9 +0.5**
comp=Z,2.4nm,0.6s,baz=239,slow=3.1,SNR=11
SDV Santo Domingo 137.28 81 PKPdf **PKPdf 06 31 54.4 -0.4**
PBRG Braganca 137.36 336 *e*PKPdf **PKPdf 06 31 53.5 -0.5**
PGAV Gavieira, Arco 137.81 338 *e*PKPdf **PKPdf 06 31 55.1 +0.2**
ESDC Sonseca Array 137.91 332 PKP **PKPdf 06 31 55.6 +0.5**
comp=Z,1.1nm,0.7s,baz=11,slow=3.3,SNR=8.5
ESDC SKPbc **SKPbc 06 34 56.2 +0.7**
comp=Z,0.9nm,1.1s,baz=5.7,slow=1.5,SNR=4.8
MVO Moncorvo 138.02 336 *e*PKPdf **PKPdf 06 31 55.7 +0.4**
POLO Lamas de Olo 138.14 337 *e*PKPdf **PKPdf 06 31 55.9 +0.4**
PVRL Vila Real 138.20 337 *e*PKPdf **PKPdf 06 31 56.0 +0.4**
PVIS Viseu 138.75 337 *e*PKPdf **PKPdf 06 31 56.2 -0.4**
MTE Manteigas 138.87 336 *e*PKPdf **PKPdf 06 31 56.0 -0.9**
CPUP Villa Florida 138.96 138 PKhKP PKPpre 06 31 48.5
comp=Z,1.0nm,0.7s,baz=220,slow=4.9,SNR=4.3
CPUP PKP **PKPdf 06 31 57.6 +0.3**
comp=Z,1.9nm,0.8s,baz=214,slow=2.8,SNR=4.9
MLPR Magueyes Islan 139.12 66 PKPdf 06 31 57.1 -0.7
PCBR Castelo Branco 139.32 336 *e*PKPdf **PKPdf 06 31 58.3 +0.7**
PCAS Casmilo, Conde 139.55 337 *e*PKPdf **PKPdf 06 31 58.7 +0.7**
PMRV Marv??o 139.63 335 *e*PKPdf **PKPdf 06 31 59.1 +0.9**
SJG San Juan 139.90 66 PKPdf 06 31 59.0 -0.2
SJG San Juan 139.90 66 PKIKP **PKPdf 06 31 59.0 -0.2**
PSBE So Bento 140.13 337 *e*PKPdf **PKPdf 06 32 00.1 +1.0**
HUMP Col San Antoni 140.17 66 PKPdf **PKPdf 06 31 59.4 -0.3**
PMTG Montargil 140.28 336 *e*PKPdf **PKPdf 06 31 59.6 +0.3**
PBAR Barrancos 140.52 334 *e*PKPdf **PKPdf 06 32 00.2 +0.4**
EVO Evora 140.65 335 *e*PKPdf **PKPdf 06 32 00.5 +0.5**
PBEJ Beja 141.01 334 *e*PKPdf **PKPdf 06 32 01.5 +0.8**
PCVE Castro Verde 141.41 334 *e*PKPdf **PKPdf 06 32 02.1 +0.7**
MDT Midelt 143.53 326 PKP PKPbc 06 32 03.9 +0.1
comp=Z,2.4nm,0.6s,baz=23,slow=1.9,SNR=13
AQDB Aquidauana 143.85 132 PKPdf PKPab 06 32 04.2 -0.1
GDHS Morne Mazeau, 144.44 67 PKPab 06 32 05.9 -0.9
CBE Ff, Capester 144.65 67 PKPbc 06 32 05.4 -2.0
AVE Averroes 144.65 329 PKPbc 06 32 05.9 -1.0
TDBA Terre de Bas, 144.69 67 PKPbc 06 32 05.1 -2.4
GDSD La Dsirade Is 145.07 66 PKPdf 06 32 07.1 -1.3
BIM Bigot 145.58 69 PKPdf **PKPdf 06 32 08.1 -1.2**
SVB Belmont 145.72 72 PKPbc **PKPdf 06 32 08.9 -0.7**
TOSP Speyside 146.82 75 PKPbc **PKPbc 06 32 13.8 -0.1**
TOA0 Torodi Ar. Sit 149.15 290 PKPbc 06 32 18.5 -1.4
TORD Torodi Ar. Bea 149.15 290 PKP **PKPdf 06 32 14.4 -0.8**
comp=Z,7.9nm,0.7s,baz=39,slow=2.5,SNR=11
TORD PKPbc **PKPbc 06 32 19.6 -0.2**
comp=Z,20nm,0.4s,baz=60,slow=2.9,SNR=136
TORD Torodi Ar. Bea 149.15 290 PKPbc **PKPbc 06 32 19.3 -0.5**
BDFB Brasilia 152.54 134 PKPbc **PKPbc 06 32 27.5 -0.3**
comp=Z,12nm,0.7s,baz=195,slow=4.0,SNR=19
BDFB PKPab **PKPab 06 32 38.7 -0.9**
comp=Z,4.3nm,0.6s,baz=238,slow=7.9,SNR=5.6
BDFB Brasilia 152.54 134 PKPbc **PKPbc 06 32 27.7 -0.1**
BDFB PKPab **PKPab 06 32 39.5 -0.1**
KIC Kosan Boka 156.68 278⇑*i*PKIKP PKPbc 06 32 36.3
comp=Z,14nm,0.6s
DBIC Dimbokro 156.76 279 PKPbc PKPbc 06 32 36.4
comp=Z,3.9nm,0.8s,baz=79,slow=7.0,SNR=4.6
DBIC PKPab **PKPab 06 32 56.9 -0.9**
comp=Z,9.9nm,0.7s,baz=74,slow=4.5,SNR=9.5
TIC Toumodi 156.92 279⇑*i*PKIKP PKPbc 06 32 36.7
comp=Z,5.8nm,0.3s
LIC Lamto 156.97 278⇑*i*PKIKP PKPbc 06 32 36.9
comp=Z,25nm,0.7s

LDG ***31*** *06:17:19.9±0.1, 42°.76N×13°.14E, h10km, Ml3.4/28, Error ellipse: s-maj=2.9km s-min=2.0km az=45.0*
ROM ***31*** *06:17:19.9±0.0, 42°.766N±0°.002×13°.209E±0°.003, h9km, ML3.9/48, Error ellipse: s-maj=0.2km s-min=0.1km az=76.0*
PDG ***31*** *06:17:20.6±1.1, 42°.78N×13°.24E, h9km±1km, ML3.9/12, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
IDC ***31*** *06:17:21.0±1.0, 42°.85N×13°.29E, h0km, mb3.7/6, mbtmp3.7/14, ML3.4/8, MS3.1/6, Error ellipse: s-maj=21.8km s-min=12.6km az=92.0*
NEIC ***31*** *06:17:21.3±1.6, 42°.79N±0°.06×13°.11E±0°.07, h10km±2km, mb4.0/2, ML3.9(ROM), Error ellipse: s-maj=10.1km s-min=7.4km az=210.0*
BEO ***31*** *06:17:21.0±0.7, 42°.66N×13°.05E, h18km±6km, ML4.0/14*
PRU ***31*** *06:17:22.6±0.0, 42°.76N×13°.57E, h10km, M4.0*
ISC 31 06:17:20.9±0.7, 42.77N±0.01×13.19E±0.01, h9km±4km, n351, σ1.86/399, mb3.9/6, 30C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1244	**Arquata del Tr**	**0.08**	**97**	⇑P	**Pg**	**06 17 22.4**	**-0.8**
T1244				S	**Sg**	**06 17 24.0**	**-0.8**
T1245	**Castelsantange**	**0.09**	**1**	P	**Pg**	**06 17 22.6**	**-0.7**
T1245				S	**Sg**	**06 17 24.3**	**-0.8**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1201	**Domo (RI)**	**0.12**	**157**	P	**Pg**	**06 17 23.5**	**-0.2**
T1204	**Amatrice, Fraz**	**0.13**	**133**	⇓P	**Pg**	**06 17 23.4**	**-0.5**
T1204				S	**Sg**	**06 17 25.7**	**-0.4**
T1204				AML	AML		
comp=N,99300μm,0.9s							
T1204				AML	AML		
T1204				AML	AML		
comp=N,99600μm,0.9s							
T1204				AML	AML		
comp=N,99400μm,0.9s							
T1204				AML	AML		
MMO1	**Montemonaco**	**0.17**	**38**	⇑P	**Pg**	**06 17 23.7**	**-0.8**
MMO1				S	**Sg**	**06 17 26.4**	**-0.6**
T1216	**Preci, Frazion**	**0.17**	**315**	P	**Pg**	**06 17 24.4**	**-0.2**
T1216				S	**Sg**	**06 17 27.7**	**+0.6**
T1216				AML	AML		
comp=E,68700μm,0.5s							
T1216				AML	AML		
comp=N,83050μm,0.6s							
T1216				AML	AML		
comp=N,83000μm,0.6s							
T1216				AML	AML		
comp=E,68750μm,0.5s							
T1216				AML	AML		
comp=N,83050μm,0.6s							
SMA1	**SAN MARTINO**	**0.17**	**141**	⇓P	**Pg**	**06 17 24.1**	**-0.5**
SMA1				S	**Sg**	**06 17 27.1**	**-0.1**
SMA1				AML	AML		
SMA1				AML	AML		
LNSS	**Leonessa**	**0.20**	**213**	⇑P	**Pg**	**06 17 24.9**	**-0.1**
LNSS				S	**Sg**	**06 17 28.7**	**+0.9**
LNSS				AML	AML		
comp=E,66850μm,0.5s							
LNSS				AML	AML		
comp=N,92050μm,1.3s							
T1217	**Poggiodomo (PG**	**0.20**	**254**	⇑P	**Pg**	**06 17 24.8**	**-0.1**
T1217				S	**Sg**	**06 17 28.7**	**+1.0**
T1217				AML	AML		
comp=E,37750μm,0.7s							
T1217				AML	AML		
comp=N,41100μm,1.5s							
T1217				AML	AML		
comp=E,37500μm,0.7s							
T1217				AML	AML		
comp=N,41750μm,1.5s							
T1241	**Roccafluvione,**	**0.20**	**64**	⇑P	**Pg**	**06 17 24.5**	**-0.6**
T1241				S	**Sg**	**06 17 27.6**	**-0.3**
T1241				AML	AML		
T1241				AML	AML		
comp=N,74150μm,0.7s							
T1241				AML	AML		
comp=N,72800μm,0.7s							
T1241				AML	AML		
comp=N,72750μm,0.7s							
T1241				AML	AML		
T1241				AML	AML		
comp=N,74100μm,0.7s							
T1241				AML	AML		
T1243	**Rocca Santa Ma**	**0.21**	**110**	⇑P	**Pg**	**06 17 24.4**	**-0.7**
T1243				S	**Sg**	**06 17 27.6**	**-0.4**
FEMA	**Monte Fema**	**0.22**	**333**	P	**Pg**	**06 17 25.2**	**-0.2**
FEMA				S	**Sg**	**06 17 29.2**	**+0.7**
T1215	**Vallo di Nera,**	**0.24**	**279**	⇑P	**Pg**	**06 17 25.6**	**-0.1**
T1215				S	**Sg**	**06 17 29.7**	**+0.8**
T1215				AML	AML		
comp=N,22150μm,0.9s							
T1215				AML	AML		
comp=N,21750μm,0.9s							
T1215				AML	AML		
comp=E,22000μm,0.9s							
T1215				AML	AML		
comp=E,22650μm,0.9s							
T1256	**Bolognola (MC)**	**0.24**	**7**	⇑P	**Pg**	**06 17 25.2**	**-0.6**
T1256				S	**Sg**	**06 17 29.3**	**+0.1**
AM05	**Amandola Campo**	**0.24**	**30**	⇑P	**Pg**	**06 17 25.3**	**-0.5**
AM05				S	**Sg**	**06 17 29.3**	**+0.2**
AM05				AML	AML		
comp=N,2180μm,0.3s							
AM05				AML	AML		
comp=E,80650μm,0.4s							
AM05				AML	AML		
comp=N,2185μm,0.3s							
AM05				AML	AML		
comp=E,17850μm,0.5s							
AM05				AML	AML		
comp=N,16050μm,0.5s							
RM33	**Pellescritta (**	**0.26**	**175**	P	**Pg**	**06 17 25.8**	**-0.3**
RM33				S	**Sg**	**06 17 30.2**	**+0.6**
RM33				AML	AML		
comp=E,46700μm,0.9s							
RM33				AML	AML		
comp=N,41800μm,1.6s							
RM33				AML	AML		
comp=N,41450μm,1.6s							
RM33				AML	AML		
comp=E,46650μm,0.9s							
RM33				AML	AML		
comp=E,46950μm,0.9s							
RM33				AML	AML		
comp=N,41850μm,1.6s							
T1246	**Crognaleto (TE**	**0.29**	**129**	⇓P	**Pg**	**06 17 26.0**	**-0.7**
T1246				S	**Sg**	**06 17 30.5**	**-0.1**
GUMA	**Gualdo di Mace**	**0.32**	**20**	⇑P	**Pg**	**06 17 26.9**	**-0.2**
GUMA				S	**Sg**	**06 17 32.4**	**+1.0**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1247	**Pizzolo (AQ)**	**0.34**	**166**	⇓P	**Pg**	**06 17 27.1**	**-0.4**
T1247				S	**Sg**	**06 17 32.6**	**+0.6**
T1247				AML	AML		
comp=E,43300μm,0.7s							
T1247				AML	AML		
comp=N,45450μm,0.6s							
T1211	**Morro Reatino**	**0.34**	**226**	⇑P	**Pg**	**06 17 27.3**	**-0.3**
T1211				S	**Sg**	**06 17 33.2**	**+1.1**
T1211				AML	AML		
comp=E,28900μm,0.4s							
T1211				AML	AML		
comp=N,48100μm,0.4s							
T1211				AML	AML		
comp=N,48150μm,0.4s							
T1211				AML	AML		
comp=N,48050μm,0.4s							
T1211				AML	AML		
comp=E,28850μm,0.4s							
T1211				AML	AML		
comp=E,28650μm,0.4s							
T1211				AML	AML		
comp=N,48200μm,0.4s							
TERO	**Teramo**	**0.34**	**115**	P	**Pg**	**06 17 26.7**	**-0.9**
TERO				S	**Sg**	**06 17 31.9**	**-0.2**
TERO				AML	AML		
comp=N,42400μm,0.3s							
TERO				AML	AML		
comp=E,28550μm,0.8s							
TERO				AML	AML		
comp=N,40500μm,0.3s							
TERO				AML	AML		
comp=E,29400μm,0.8s							
ARRO	**Arrone**	**0.36**	**239**	⇑P	**Pg**	**06 17 27.8**	**-0.2**
ARRO				S	**Sg**	**06 17 34.0**	**+1.2**
ARRO				AML	AML		
comp=E,16550μm,1.2s							
ARRO				AML	AML		
comp=N,18050μm,0.6s							
OFFI	**Offida**	**0.40**	**65**	P	**Pg**	**06 17 28.8**	**0.0**
OFFI				AML	AML		
comp=E,49600μm,0.7s							
OFFI				AML	AML		
comp=N,58800μm,0.5s							
SEF1	**Sefro**	**0.42**	**335**	P	**Pg**	**06 17 28.5**	**-0.6**
SEF1				S	**Sg**	**06 17 35.0**	**+0.4**
SEF1				AML	AML		
comp=N,18450μm,1.6s							
SEF1				AML	AML		
comp=E,25400μm,0.5s							
SEF1				AML	AML		
comp=N,18400μm,1.6s							
MNTP	**Montappone**	**0.42**	**29**	P	**Pg**	**06 17 29.1**	**-0.1**
GIGS	**Gran Sasso**	**0.42**	**138**	⇓P	**Pg**	**06 17 28.2**	**-1.0**
GIGS				S	**Sg**	**06 17 34.6**	**-0.2**
GIGS				AML	AML		
comp=N,3990μm,0.3s							
GIGS				AML	AML		
comp=E,5055μm,0.7s							
MDAR	**Monte D'Aria**	**0.43**	**356**	P	**Pg**	**06 17 28.7**	**-0.6**
MDAR				S	**Sg**	**06 17 35.5**	**+0.6**
PIO1	**Pioraco**	**0.44**	**340**	P	**Pg**	**06 17 29.0**	**-0.4**
PIO1				S	**Sg**	**06 17 36.2**	**+1.0**
AQU	**L'Aquila**	**0.44**	**159**	Pg	**Pg**	**06 17 28.9**	**-0.6**
AQU	**L'Aquila**	**0.44**	**159**	⇓P	**Pg**	**06 17 28.9**	**-0.6**
AQU				S	**Sg**	**06 17 35.5**	**+0.2**
AQU				AML	AML		
comp=E,13450μm,0.7s							
AQU				AML	AML		
comp=N,19800μm,0.6s							
AQU				AML	AML		
comp=E,13500μm,0.7s							
AQU				AML	AML		
comp=N,19750μm,0.6s							
AQU				AML	AML		
comp=E,13800μm,0.7s							
AQU				AML	AML		
comp=N,18850μm,0.6s							
FIU1	**Fiuminata**	**0.46**	**336**	P	**Pg**	**06 17 29.4**	**-0.4**
FIU1				S	**Sg**	**06 17 36.6**	**+0.7**
FIU1				AML	AML		
comp=E,9830μm,0.3s							
FIU1				AML	AML		
comp=E,9855μm,0.3s							
FIU1				AML	AML		
comp=N,7135μm,0.7s							
SSM1	**San Severino M**	**0.46**	**359**	P	**Pg**	**06 17 29.3**	**-0.6**
SSM1				S	**Sg**	**06 17 36.9**	**+0.9**
CESX	**Cesi**	**0.47**	**251**	P	**Pg**	**06 17 29.6**	**-0.5**
CESX	**Cesi**	**0.47**	**251**	⇑P	**Pg**	**06 17 29.6**	**-0.5**
CESX				S	**Sg**	**06 17 37.3**	**+1.0**
CESX				AML	AML		
comp=N,14000μm,0.3s							
CESX				AML	AML		
comp=E,10750μm,0.6s							
ASSB	**Assisi San Ben**	**0.47**	**306**	P	**Pg**	**06 17 29.7**	**-0.4**
GAG1	**Gagliole**	**0.48**	**350**	P	**Pg**	**06 17 29.7**	**-0.5**
GAG1				S	**Sg**	**06 17 37.2**	**+0.7**
GAG1				AML	AML		
comp=E,34700μm,0.6s							
GAG1				AML	AML		
comp=E,34650μm,0.6s							
GAG1				AML	AML		
comp=N,41450μm,0.8s							
FIAM	**Fiamignano**	**0.50**	**186**	P	**Pg**	**06 17 30.0**	**-0.6**
FIAM				S	**Sg**	**06 17 37.8**	**+0.6**
FIAM				AML	AML		
comp=N,12600μm,0.7s							
FIAM				AML	AML		
comp=N,12550μm,0.7s							
FIAM				AML	AML		
comp=E,16400μm,0.8s							
SNTG	**Esanatoglia**	**0.52**	**340**	⇑P	**Pg**	**06 17 30.3**	**-0.7**
SNTG				S	**Sg**	**06 17 38.6**	**+0.8**
TRTR	**Tortoreto Alta**	**0.54**	**85**	⇑P	**Pg**	**06 17 31.6**	**+0.3**
TRTR				AML	AML		
comp=E,39700μm,0.7s							
TRTR				AML	AML		
comp=N,44400μm,0.5s							
TRE1	**Treia**	**0.55**	**10**	P	**Pg**	**06 17 31.3**	**-0.3**
TRE1				AML	AML		
comp=E,34850μm,1.0s							
TRE1				AML	AML		
comp=N,28050μm,0.6s							
EL6	**Elcito**	**0.56**	**354**	⇑P	**Pg**	**06 17 31.2**	**-0.7**
EL6				AML	AML		
comp=E,16350μm,0.3s							
EL6				AML	AML		
comp=N,21450μm,0.8s							
ATCC	**AVT- Casa Cast**	**0.58**	**316**	⇑P	**Pg**	**06 17 31.6**	**-0.5**
ATCC				S	**Sg**	**06 17 40.1**	**+0.4**
ATCC				AML	AML		
comp=E,13150μm,0.6s							
ATCC				AML	AML		
comp=N,12750μm,1.2s							
ATCC				AML	AML		
comp=E,13200μm,0.6s							
ATCC				AML	AML		
comp=N,12800μm,1.2s							
FAGN	**Fagnano**	**0.58**	**149**	⇓P	**Pg**	**06 17 30.9**	**-1.2**
FAGN				AML	AML		
comp=E,21900μm,0.5s							
FAGN				AML	AML		
comp=N,12900μm,0.4s							
CADA	**Capodarco di F**	**0.60**	**44**	AML	AML		
comp=E,41600μm,0.5s							
CADA				AML	AML		
comp=N,43900μm,0.7s							
CING	**Cingoli**	**0.61**	**1**	⇑P	**Pg**	**06 17 31.8**	**-0.9**
VCEL	**Villa Celiera**	**0.61**	**127**	⇓P	**Pg**	**06 17 31.8**	**-0.9**
VCEL				AML	AML		
comp=E,14950μm,0.9s							
VCEL				AML	AML		
comp=N,20400μm,1.0s							
VCEL				AML	AML		
comp=E,15000μm,0.9s							
FOSV	**Fossato di Vic**	**0.61**	**330**	P	**Pg**	**06 17 32.1**	**-0.7**
FOSV				S	**Sg**	**06 17 41.1**	**+0.3**
FOSV				AML	AML		
comp=E,6320μm,0.5s							
FOSV				AML	AML		
comp=N,7770μm,0.3s							
PP3	**Marolino**	**0.69**	**27**	⇑P	**Pg**	**06 17 34.1**	**0.0**
PP3				AML	AML		
comp=E,42550μm,0.5s							
PP3				AML	AML		
comp=N,30150μm,0.7s							
PP3				AML	AML		
comp=E,43150μm,0.5s							
PP3				AML	AML		
comp=E,42550μm,0.5s							
PP3				AML	AML		
comp=N,29250μm,0.7s							
PP3				AML	AML		
comp=E,43100μm,0.5s							
PP3				AML	AML		
comp=N,30200μm,0.7s							
MMUR	**Monte Murano**	**0.69**	**348**	P	**Pg**	**06 17 33.4**	**-0.8**
MURB	**Monte Urbino**	**0.69**	**316**		**Pg**	**06 17 33.6**	**-0.6**
MURB	**Monte Urbino**	**0.69**	**316**	P	**Pg**	**06 17 33.5**	**-0.7**
MURB				AML	AML		
comp=N,17100μm,0.3s							
MURB				AML	AML		
comp=N,17250μm,0.3s							
MURB				AML	AML		
comp=E,21350μm,0.4s							
MURB				AML	AML		
comp=E,23000μm,0.4s							
T0110	**Collepietro**	**0.70**	**141**	⇓P	**Pg**	**06 17 33.0**	**-1.3**
T0110				AML	AML		
comp=E,12665μm,0.5s							
T0110				AML	AML		
comp=N,12110μm,0.4s							
SRES	**S.Oreste - Sor**	**0.73**	**224**	⇑P	**Pg**	**06 17 33.9**	**-1.0**
SRES				AML	AML		
comp=E,5385μm,0.6s							
SRES				AML	AML		
comp=N,4800μm,0.5s							
ATTE	**AVT- Monte Tez**	**0.75**	**305**	P	**Pg**	**06 17 34.5**	**-0.7**
ATTE				AML	AML		
comp=N,4045μm,0.4s							
ATTE				AML	AML		
comp=E,3255μm,0.8s							
ATFO	**Monte Foce - G**	**0.75**	**323**	P	**Pg**	**06 17 34.7**	**-0.7**
ATFO				AML	AML		
comp=N,5520μm,0.8s							
ATFO				AML	AML		
comp=E,6580μm,0.6s							
ARVD	**Arcevia**	**0.75**	**346**	P	**Pg**	**06 17 34.4**	**-1.0**
ARVD				AML	AML		
comp=E,3940μm,0.5s							
ARVD				AML	AML		
comp=N,5385μm,0.6s							
ATSC	**Scheggia e Pas**	**0.75**	**331**	P	**Pg**	**06 17 34.5**	**-0.9**
PTQR	**Pietraquaria**	**0.76**	**168**	P	**Pg**	**06 17 34.1**	**-1.4**
PTQR				AML	AML		
comp=E,3175μm,0.5s							
PTQR				AML	AML		
comp=N,2830μm,1.0s							
PTQR				AML	AML		
comp=E,3180μm,0.5s							
ATLO	**AVT- Montelove**	**0.79**	**314**	P	**Pg**	**06 17 35.0**	**-1.1**
MGAB	**Montegabbione**	**0.80**	**281**	P	**Pg**	**06 17 35.7**	**-0.6**
MGAB				AML	AML		
comp=N,9940μm,0.4s							
MGAB				AML	AML		
comp=E,7950μm,1.4s							
MGAB				AML	AML		
comp=N,9935μm,0.4s							
MGAB				AML	AML		
comp=N,9890μm,0.4s							
MGAB				AML	AML		
comp=E,8580μm,0.8s							
MTCE	**Montecelio**	**0.81**	**204**	⇑P	**Pg**	**06 17 35.1**	**-1.4**
MTCE				AML	AML		
comp=E,5140μm,1.2s							
MTCE				AML	AML		
comp=N,3760μm,0.7s							
FRON	**Frontone**	**0.82**	**336**	⇑P	**Pg**	**06 17 35.6**	**-1.1**
FRON				AML	AML		
comp=N,5725μm,0.6s							
FRON				AML	AML		
comp=E,3920μm,1.1s							
TB01	**Gubbio**	**0.82**	**318**	P	**Pg**	**06 17 35.8**	**-1.0**
TB02	**Pietralunga**	**0.83**	**317**	P	**Pg**	**06 17 35.9**	**-1.0**
CERT	**Cerreto**	**0.83**	**191**	P	**Pg**	**06 17 35.7**	**-1.1**
CERT				AML	AML		
comp=E,10350μm,0.5s							
CERT				AML	AML		
comp=N,7385μm,0.5s							
ATVA	**AVT- Monte Val**	**0.83**	**308**	P	**Pg**	**06 17 36.4**	**-0.6**
ATVO	**AVT- Monte Val**	**0.84**	**317**	P	**Pg**	**06 17 36.0**	**-1.0**
ATVO				AML	AML		
comp=E,3450μm,1.1s							
ATVO				AML	AML		
comp=N,3405μm,0.8s							
AOI	**Ancona**	**0.84**	**21**	P	**Pg**	**06 17 36.1**	**-0.9**
AOI				AML	AML		
comp=E,5495μm,0.5s							
AOI				AML	AML		
comp=N,8060μm,0.4s							
ATBU	**Serra di Buran**	**0.85**	**327**	P	**Pg**	**06 17 36.1**	**-1.1**
TB03	**Pietralunga**	**0.85**	**318**	P	**Pg**	**06 17 36.3**	**-1.0**
PCRO	**Pietralacroce**	**0.88**	**17**	P	**Pg**	**06 17 37.2**	**-0.5**
ATMI	**Monte Miggiano**	**0.88**	**310**	P	**Pg**	**06 17 37.6**	**-0.2**
ATMI				AML	AML		
comp=E,10515μm,0.7s							
ATMI				AML	AML		
comp=N,11050μm,0.6s							
ATPC	**Poggio Castell**	**0.89**	**323**	P	**Pg**	**06 17 36.9**	**-1.1**
ATPI	**Pietralunga -**	**0.89**	**320**	P	**Pg**	**06 17 37.3**	**-0.8**
PIEI	**Pieia**	**0.90**	**328**	P	**Pg**	**06 17 37.0**	**-1.3**
PIEI				AML	AML		

PIEI AML AML
comp=N,2575µm,0.9s
MPAG Monte Paganucc 0.92 340 P Pg 06 17 37.4 -1.1
MPAG AML AML
comp=E,3045µm,0.9s
MPAG AML AML
comp=E,4700µm,0.6s
MPAG AML AML
comp=N,5270µm,0.5s
MPAG AML AML
comp=E,4460µm,0.6s
MPAG AML AML
comp=N,5255µm,0.5s
MPAG AML AML
comp=E,4705µm,0.6s
RCAV Rocca di Cave 0.94 191 P Pg 06 17 37.5 -1.4
SENI Senigallia 0.94 2 P Pg 06 17 37.1 -1.8
SENI AML AML
comp=E,8155µm,0.9s
SENI AML AML
comp=N,6765µm,0.6s
SACS San Casciano d 0.94 275 P Pg 06 17 38.3 -0.7
SACS AML AML
comp=E,3550µm,0.5s
SACS AML AML
comp=N,5815µm,0.8s
SACS AML AML
comp=E,3380µm,0.5s
SACS AML AML
comp=N,6030µm,0.8s
VVLD Villa Vallelon 0.95 160 P Pg 06 17 37.5 -1.7
NARO Abbazia di Nar 0.95 332 P Pg 06 17 37.8 -1.4
NARO AML AML
comp=E,2160µm,0.6s
NARO AML AML
comp=N,2855µm,0.9s
APEC Apecchio 0.97 325 P Pg 06 17 38.8 -0.7
APEC AML AML
comp=E,1115µm,0.5s
APEC AML AML
comp=N,1041µm,0.6s
FSSB Fossombrone 0.97 342 P Pg 06 17 38.5 -1.1
FSSB AML AML
comp=E,9645µm,1.0s
FSSB AML AML
comp=N,14100µm,0.4s
GUAR Guarcino 0.98 174 P Pg 06 17 38.5 -1.2
GUAR AML AML
comp=E,5160µm,0.7s
GUAR AML AML
comp=N,7630µm,0.6s
ATMC Monte Cedrone 0.99 313 P Pg 06 17 39.1 -1.0
RMP Rome, Mte Porz 1.02 201 P Pg 06 17 39.5 -0.9
RMP AML AML
comp=E,6095µm,0.5s
RMP AML AML
comp=N,7440µm,0.8s
LATE Laterza 1.03 262 Pg 06 17 40.0 -0.7
LATE Laterza 1.03 262 P Pg 06 17 39.6 -1.0
LPEL Lama dei Pelig 1.03 134 P Pg 06 17 38.5 -2.1
LPEL AML AML
comp=E,4450µm,0.8s
LPEL AML AML
comp=N,2890µm,0.5s
CAFI Castiglion Fio 1.06 303 P Pg 06 17 40.3 -0.9
CAFI AML AML
comp=E,2360µm,1.6s
CAFI AML AML
comp=N,2375µm,1.1s
CAFI AML AML
comp=E,2440µm,1.6s
CAFI AML AML
comp=N,2450µm,1.1s
PE3 Peglio 1.06 332 P Pg 06 17 40.2 -1.0
PE3 AML AML
comp=E,21µm,0.4s
PE3 AML AML
comp=N,20µm,0.3s
VIVA Pratoni del Vi 1.06 197 P Pg 06 17 39.7 -1.6
RDP Rocca di Papa 1.07 199 P Pg 06 17 40.4 -1.0
MA9 Marino 1.07 202 P Pg 06 17 39.9 -1.5
SAMA S.Maria delle 1.08 204 P Pg 06 17 39.8 -1.8
MCIV Monte Civitell 1.11 271 P Pg 06 17 41.2 -1.1
MCIV AML AML
comp=E,2170µm,0.8s
MCIV AML AML
comp=N,1670µm,1.0s
SF11 Podere del Sol 1.11 276 P Pg 06 17 40.6 -1.7
SSP9 Sansepolcro 1.12 317 ⇑P Pg 06 17 41.5 -0.8
POFI Posta Fibreno 1.12 159 P Pg 06 17 40.5 -1.8
POFI AML AML
comp=E,2795µm,0.7s
POFI AML AML
comp=N,1775µm,0.7s
POFI AML AML
comp=E,2830µm,0.7s
POFI AML AML
comp=N,1860µm,0.7s
SF04 Casetta 1.12 274 AML AML
SF04 AML AML
comp=E,2430µm,1.2s
SF04 AML AML
comp=N,2300µm,0.3s
TOLF Tolfa 1.12 232 P Pg 06 17 41.3 -1.1
TOLF AML AML
comp=E,2000µm,0.8s
TOLF AML AML
comp=N,2855µm,0.8s
LAV9 Lanuvio 1.15 199 P Pg 06 17 41.1 -1.8
SF13 Bagnolo 1.15 273 P Pg 06 17 42.1 -0.9
LRP Arpino 1.16 165 P Pg 06 17 41.4 -1.7
SF14 Selvena 1.16 270 P Pg 06 17 41.5 -1.6
SF01 Poggio Pratacc 1.20 273 AML AML
comp=E,2965µm,0.6s
SF01 AML AML
comp=N,2430µm,0.7s
GIUL Giuliano Di Ro 1.21 178 P Pb 06 17 42.3 -1.7
GIUL AML AML
comp=E,2315µm,0.6s
GIUL AML AML
comp=N,3590µm,0.7s
CPGN Carpegna, Ital 1.21 329 P Pb 06 17 43.3 -0.8
CRE Caprese Michel 1.24 314 ⇑P Pn 06 17 43.9 -0.7
CRE AML AML
comp=E,1670µm,0.6s
CRE AML AML
comp=N,1845µm,0.7s
ARCI Arcidosso 1.26 274 ⇑P Pn 06 17 44.2 -0.6
ARCI AML AML
comp=E,759µm,0.6s
ARCI AML AML
comp=N,623µm,0.7s
RSM Repubblica di 1.28 335 P Pn 06 17 43.9 -1.1
LATB Latina 1.28 188 P Pn 06 17 43.4 -1.6
RNI2 Rionero Sannit 1.28 146 ⇑P Pn 06 17 43.8 -1.3
RNI2 AML AML
comp=E,3220µm,1.4s
RNI2 AML AML
comp=N,2875µm,0.7s
RNI2 AML AML
comp=E,3280µm,1.4s
RNI2 AML AML
comp=N,2895µm,0.7s
LIK San Giovanni I 1.29 168 P Pn 06 17 43.3 -1.8
CERA Filignano 1.32 152 P Pn 06 17 43.8 -1.8
CERA AML AML
comp=E,3255µm,0.7s
CERA AML AML
comp=N,2250µm,0.7s
CERA AML AML
comp=E,3360µm,0.7s
CERA AML AML
comp=N,2305µm,0.7s
MIDA Miranda 1.38 144 P Pn 06 17 44.7 -1.7
TRIV Trivento 1.42 134 P Pn 06 17 45.8 -1.2
TRIV AML AML
comp=E,2635µm,0.8s
TRIV AML AML
comp=N,3215µm,0.7s
ASQU Asqua 1.45 316 P Pn 06 17 46.4 -0.9
ASQU AML AML
comp=E,1210µm,0.8s
ASQU AML AML
comp=N,1450µm,0.9s
SFI Santa Sofia 1.50 320 P Pn 06 17 47.6 -0.5
MAON Monte Argentar 1.56 258 P Pn 06 17 48.1 -0.6
MAON AML AML
comp=E,838µm,1.0s
MAON AML AML
comp=N,536µm,0.8s
CSNT Castellina Chi 1.56 298 P Pn 06 17 48.7 -0.1
CSNT AML AML
comp=E,578µm,1.2s
CSNT AML AML
comp=N,636µm,0.6s
VAGA Valle Agricola 1.56 150 P Pn 06 17 48.1 -0.7
VAGA AML AML
comp=E,876µm,0.6s
VAGA AML AML
comp=N,1475µm,0.9s
VAGA AML AML
comp=E,904µm,0.6s
VAGA AML AML
comp=N,1530µm,0.9s
BSSO Busso 1.61 139 P Pn 06 17 48.3 -1.2
BSSO AML AML
comp=E,1086µm,1.4s
BSSO AML AML
comp=N,1420µm,1.6s
BSSO AML AML
comp=E,396µm,1.4s
BSSO AML AML
comp=N,583µm,1.5s
OSSC Osservatorio P 1.61 299 Pn 06 17 48.2 -1.3
OSSC Osservatorio P 1.61 299 ⇑P Pn 06 17 48.5 -1.0
RUFI Rufina 1.63 312 P Pn 06 17 49.8 +0.1
LMD Lutirano 1.70 321 P Pn 06 17 50.7 0.0
LMD AML AML
comp=E,1115µm,0.9s
LMD AML AML
comp=N,1060µm,0.8s
MODR Mondragone 1.70 162 P Pn 06 17 50.4 -0.3
MODR AML AML
comp=E,770µm,1.5s
MODR AML AML
comp=N,807µm,0.8s
CASP Castiglione de 1.71 272 Pn 06 17 50.4 -0.5
CASP Castiglione de 1.71 272 P Pn 06 17 50.4 -0.5
CASP AML AML
comp=E,387µm,0.6s
CASP AML AML
comp=N,300µm,0.8s
TRIF Trifonti 1.71 282 P Pn 06 17 50.9 -0.1
TRIF AML AML
comp=E,551µm,0.8s
TRIF AML AML
comp=N,648µm,0.8s
PIGN Pignataro Magg 1.73 154 P Pn 06 17 50.5 -0.7
SACR S. Croce Del S 1.78 140 P Pn 06 17 51.4 -0.5
MELA Melanico ??? S 1.79 126 P Pn 06 17 51.1 -0.8
MELA AML AML
comp=E,3255µm,0.7s
MELA AML AML
comp=N,2760µm,0.6s
MELA AML AML
comp=E,3405µm,0.7s
MELA AML AML
comp=N,2815µm,0.9s
GATE Gambatesa 1.79 134 P Pn 06 17 51.5 -0.5
TREM Isole Tremiti 1.84 110 P Pn 06 17 52.3 -0.3
SEI Scarperia 1.85 315 ⇑P Pn 06 17 53.2 +0.4
VITU Vitulano (BN) 1.91 145 P Pn 06 17 53.6 -0.2
VITU AML AML
comp=E,352µm,1.5s
VITU AML AML
comp=N,948µm,0.7s
VITU AML AML
comp=E,776µm,0.6s
VITU AML AML
comp=N,964µm,0.7s
MPPT Montemurlo 1.94 309 P Pn 06 17 54.1 +0.1
PSB1 Pescosannita 1.96 141 P Pn 06 17 54.1 -0.3
VENT Ventotene 1.98 175 P Pn 06 17 53.5 -1.0
PAOL Paolisi 2.02 149 Pn 06 17 55.9 +0.7
PAOL Paolisi 2.02 149 P Pn 06 17 54.4 -0.8
APRC Apricena 2.02 119 P Pn 06 17 55.4 +0.2
MOCO Biccari - m.te 2.03 133 P Pn 06 17 55.5 +0.2
A319A Santa Luce (PI 2.04 291 P Pn 06 17 54.7 -0.6
FNVD Fontana Vidola 2.05 314 P Pn 06 17 55.9 +0.2
SGRT San Giovanni R 2.15 117 Pn 06 17 57.5 +0.5
SGRT San Giovanni R 2.15 117 ⇑P Pn 06 17 57.1 +0.1
SGRT AML AML
comp=E,1115µm,1.2s
SGRT AML AML
comp=N,1825µm,0.5s
BRJN Brijuni 2.18 11 P Pn 06 17 56.8 -0.4
CELB S.Piero in Cam 2.19 270 AML AML
comp=E,146µm,0.6s
CELB AML AML
comp=N,112µm,1.5s
ZCCA Zocca 2.25 315 Pn 06 17 58.3 -0.1
MAIM Mastiano 2.28 301 AML AML
comp=N,352µm,0.9s
MAIM AML AML
comp=E,318µm,0.6s
SGTA Sant Agata di 2.30 134 P Pn 06 17 58.8 -0.3
CAFE Carife 2.32 138 P Pn 06 17 59.2 -0.1
GSCL Gusciola 2.46 311 AML AML
comp=E,530µm,0.8s
GSCL AML AML
comp=N,524µm,0.8s
VLC Villacollemand 2.47 305 Pn 06 18 00.9 -0.5
VLC Villacollemand 2.47 305 AML AML
comp=E,196µm,0.9s
VLC AML AML
comp=E,199µm,0.9s
VLC AML AML
comp=N,284µm,1.1s
VLC AML AML
comp=N,276µm,0.9s
RIY Rijeka 2.72 20 *e*Pn Pn 06 18 05.2 +0.4
RIY *e*Sn **Sn 06 18 40.1 +2.3**
PALZ Palazzo San Ge 2.76 130 AML AML
comp=N,1115µm,1.0s
PALZ AML AML
comp=E,957µm,0.9s
TEOL Teolo 2.81 338 Pn 06 18 05.8 -0.2
MRVN Minervino Murg 2.82 126 AML AML
comp=N,242µm,0.5s
MRVN AML AML
comp=E,263µm,0.8s
SKDS Skadanscina 2.84 12 *i* Pn Pn 06 18 05.7 -0.8
SKDS *i* Sn **Sn 06 18 42.3 +1.4**
SKDS IAML 06 18 53.5
comp=Z,186nm,0.6s
SMPL Sampolo 2.96 258 AML AML
comp=N,49µm,0.7s
SMPL AML AML
comp=E,48µm,0.7s
MSSA Maissana 3.08 301 Pn 06 18 10.1 +0.2
MSSA Maissana 3.08 301 AML AML
comp=N,202µm,0.8s
MSSA AML AML
comp=E,129µm,0.7s
PGF Pioggiola 3.10 267 *e*P Pn 06 18 10.0 0.0
PGF *e*Sn **Sn 06 18 41.9 -5.3**
comp=E,32nm,0.6s
PGF Pioggiola 3.10 267 AML AML
comp=N,55µm,0.8s
PGF AML AML
comp=E,63µm,1.1s
CEY Cerknica 3.10 16 ⇑*i*Pn Pn 06 18 09.3 -0.8
MTSN Montesano sull 3.15 142 AML AML
comp=N,116µm,0.8s
MTSN AML AML
comp=E,142µm,0.9s
AMUR Altamura 3.16 125 AML AML
comp=E,340µm,0.8s
AMUR AML AML
comp=N,436µm,1.5s
ROVR Rover Verones 3.26 333 AML AML
comp=N,167µm,0.9s
ROVR AML AML
comp=E,466µm,1.0s
ROVR AML AML
comp=N,428µm,0.9s
ROVR AML AML
comp=E,114µm,0.8s
MGRS Mrkonjic Grad 3.28 58 *e*Pn Pn 06 18 13.9 +1.4
STON Ston 3.32 87 *e*Pn Pn 06 18 11.8 -1.2
STON Ston 3.32 87 *e*Pn Pn 06 18 12.2 -0.8
STON *e*Sn **Sn 06 18 55.2 +2.6**
STON Ston 3.32 87 AML AML
comp=N,208µm,1.0s
STON AML AML
comp=E,188µm,0.4s
CUC Castrocucco 3.41 144 Pn 06 18 17.6 +3.4
LJU Ljubljana 3.41 16 *i* Pn Pn 06 18 14.6 +0.3
LJU *e*Sn **Sn 06 18 55.1 +0.2**
LJU IAML 06 19 19.8
comp=Z,184nm,0.7s
SALO Salr 3.43 327 Pn 06 18 15.7 +1.1
SALO Salr 3.43 327 AML AML
comp=N,441µm,0.6s
SALO AML AML
comp=E,390µm,0.6s
SALO AML AML
comp=N,437µm,0.6s
SALO AML AML
comp=E,348µm,0.6s
CTI Castel Tesino 3.46 342 Pn 06 18 15.6 +0.5
CTI Castel Tesino 3.46 342 AML AML
comp=N,351µm,0.4s
CTI AML AML
comp=E,386µm,0.6s
MPRI Monte Prat 3.48 358 AML AML
comp=E,501µm,1.5s
MPRI AML AML
comp=N,769µm,1.0s
A051A Mrakovica 3.50 49 *e*Pn Pn 06 18 15.9 +0.3
BLY Banja Luka 3.51 54 *e*Pn Pb 06 18 19.6 -3.5
BLY Banja Luka 3.51 54 *e*Pn Pn 06 18 17.5 +1.9
BLY *e*Sn **Sn 06 18 59.3 +2.1**
STAL STALIGIAL 3.51 355 Pn 06 18 15.4 -0.2
STAL STALIGIAL 3.51 355 AML AML
comp=E,503µm,0.9s
STAL AML AML
comp=N,410µm,0.8s
LUSI Trento, Gardas 3.57 334 AML AML
comp=E,295µm,0.5s
LUSI AML AML
comp=N,356µm,0.6s
CIMO Cimolais 3.58 352 AML AML
comp=N,152µm,0.8s
CIMO AML AML
comp=E,125µm,0.8s
CIMO AML AML
comp=E,126µm,0.8s
CIMO AML AML
comp=N,144µm,0.8s
PTCC Patocco-Chiusa 3.64 2 AML AML
comp=E,198µm,1.6s
PTCC AML AML
comp=N,250µm,0.5s
PRED Cave del Predi 3.69 4 Pn 06 18 17.0 -1.1
CLUD Cludinico 3.70 357 Pn 06 18 18.0 -0.2
CLUD Cludinico 3.70 357 AML AML
comp=N,346µm,1.0s
CLUD AML AML
comp=E,330µm,1.6s
ACOM Acomizza, Ital 3.79 3 AML AML
comp=N,610µm,0.7s
ACOM AML AML
comp=E,648µm,1.4s
ACOM AML AML
comp=E,643µm,1.4s
ACOM AML AML
comp=N,620µm,0.7s
ZOU Zoufplan 3.79 358 AML AML
comp=N,426µm,1.3s
ZOU AML AML
comp=E,538µm,1.3s
ZOU AML AML
comp=E,521µm,1.2s
ZOU AML AML
comp=N,430µm,1.4s
MABI Malga Bissina 3.80 331 AML AML
comp=E,102µm,0.5s
MABI AML AML
comp=N,124µm,0.7s
TREB Trebinje 3.80 89 *e*Pn Pn 06 18 20.2 +0.5
TREB Trebinje 3.80 89 *e*Pn Pn 06 18 20.4 +0.7
TREB *e*Sn **Sn 06 19 03.9 -0.6**
FVI Forni Avoltri 3.84 356 AML AML
comp=E,208µm,0.9s
FVI AML AML
comp=N,270µm,0.6s
OBKA Obir 3.87 14 *e*Pn Pn 06 18 20.0 -0.6
OBKA Obir 3.87 14 *e*Pn Pn 06 18 21.5 +0.9
comp=N,3.5nm,0.2s
MYKA Terra Mystica 3.88 5 *e*Pn Pn 06 18 21.3 +0.6
comp=N,6.0nm,0.2s
KOSI Kohlern 3.91 341 AML AML
comp=E,567µm,0.9s
KOSI AML AML
comp=N,310µm,1.1s
HCY Herceg Novi 3.93 93 *e*Pn Pn 06 18 21.5 +0.1
HCY Herceg Novi 3.93 93 *e*Pn Pn 06 18 22.1 +0.7
HCY *i* Sn **Sn 06 19 07.8 +0.1**
BRY Bratogost 3.94 86 *e*Pn Pn 06 18 22.4 +0.7
BRY Bratogost 3.94 86 *e*Pn Pn 06 18 22.1 +0.4
BRY *i* Sn **Sn 06 19 08.0 -0.1**
APPI Appiano 3.97 340 AML AML
comp=N,211µm,1.5s
APPI AML AML
comp=E,236µm,0.9s
ABTA Abfaltersbach 4.01 353 *i* Pn Pn 06 18 23.4 +0.8
comp=E,71nm,0.5s,SNR=56
BRES Bressanone 4.07 346 AML AML
comp=N,238µm,1.6s
BRES AML AML
comp=E,272µm,1.2s
SOKA Soboth 4.13 18 *e*Pn Pn 06 18 24.5 +0.4
comp=E,3.0nm,0.3s
UPM Unac-Piva 4.22 82 *e*Pn Pn 06 18 26.1 +0.6
UPM *i* Sn **Sn 06 19 14.8 -0.2**
CEME Cevo 4.23 91 ⇓*i*Pn Pn 06 18 26.2 +0.6
CEME *i* Sn **Sn 06 19 15.1 -0.1**
BUM Brajici-Budva 4.24 94 ⇓*i*Pn Pn 06 18 26.4 +0.6
BUM *i* Sn **Sn 06 19 15.4 -0.1**
NKME Niksic 4.25 88 *e*Pn Pn 06 18 26.4 +0.6
NKME *i* Sn **Sn 06 19 15.5 0.0**
RISI Rein 4.25 350 AML AML
comp=N,446µm,0.8s
RISI AML AML
comp=E,448µm,0.5s
SBF Sospel 4.34 287 *e*P Pn 06 18 27.0 -0.1
SBF *e*Sn **Sn 06 19 11.0 -6.8**
comp=E,21nm,0.5s
ROSI Rosskopf 4.35 344 AML AML
comp=N,390µm,1.0s
ROSI AML AML
comp=E,399µm,0.9s
VSL Villasalto 4.35 223 AML AML
comp=E,73µm,0.6s
VSL AML AML
comp=N,62µm,0.7s
FUORN Ofenpass-Fuorn 4.38 333 Pn Pn 06 18 29.2 +1.4
HAPS Han Pijesak,Bl 4.40 71 *e*Pn Pn 06 18 29.3 +1.3
DRME Dracevica, Mon 4.47 95 *e*Pn Pn 06 18 30.0 +1.1
DRME Dracevica, Mon 4.47 95 ⇓*i*Pn Pn 06 18 29.5 +0.6
DRME *i* Sn **Sn 06 19 21.1 0.0**
TIP Timpagrande 4.49 142 Pn Pn 06 18 28.2 -1.0
PDG Podgorica 4.49 92 Pn 06 18 30.4 +1.3
PDG Podgorica 4.49 92 *e*Pn Pn 06 18 29.8 +0.7
PDG *e*Sn **Sn 06 19 20.4 -1.1**
TTG Podgorica 4.49 92 *e*Pn Pn 06 18 29.9 +0.8
TTG *i* Sn **Sn 06 19 21.4 -0.1**
BEHE Becsehely 4.50 33 P Pn 06 18 30.0 +0.7
ULC Ulcinj 4.56 98 *e*Pn Pn 06 18 30.7 +0.6
ULC *i* Sn **Sn 06 19 23.2 0.0**
PLE Pljevlja 4.58 81 *e*Pn Pn 06 18 31.1 +0.7
PLE *i* Sn **Sn 06 19 23.6 -0.2**
FETA Feichten 4.60 339 *i* Pn Pn 06 18 33.0 +2.3
comp=N,7.8nm,0.4s,SNR=12
FETA *e*Sn **Sn 06 19 23.5 -0.9**
comp=N,11nm,0.6s
RUDO Rudo 4.60 77 *e*Pn Pn 06 18 31.2 +0.6
TUE Stuetta 4.61 325 Pn Pn 06 18 30.3 -0.6
WTTA Wattenberg 4.63 347 *i* Pn Pn 06 18 34.1 +2.9
comp=N,8.3nm,0.2s,SNR=12
DAVOX Davos/Dischmat 4.65 331 Pn Pn 06 18 34.1 +2.6
comp=N,6.8nm,0.3s,baz=152,slow=18,SNR=46
DAVOX Sn **Sn 06 19 29.8 +4.0**
comp=N,4.2nm,0.3s,baz=287,slow=22,SNR=5.9
comp=N,18nm,0.4s
KOME Kolasin 4.66 87 *e*Pn Pn 06 18 32.1 +0.6
KOME *i* Sn **Sn 06 19 25.5 -0.2**
BBLS Lazići 4.67 74 *e*Pn Pn 06 18 32.9 +1.3

BBLS Lazići 4.67 74 *e*Pn **Pn 06 18 32.5 +0.9**
BBLS *e*Sn **Sn 06 19 25.5 -0.5**
SQTA Sankt Quirin 4.67 343 *i* Pn **Pn 06 18 34.5 +2.8**
comp=N,28nm,0.4s,SNR=15
WATA Walderalm 4.71 347 *i* Pn **Pn 06 18 35.3 +3.1**
comp=N,13nm,0.3s,SNR=9.4
ARSA Arzberg 4.78 19 *e*Pn **Pn 06 18 36.0 +2.9**
comp=N,7.2nm,0.3s
SCTE Santa Cesarea 4.80 122 Pn **Pn 06 18 34.8 +1.5**
MOTA Moosalm 4.81 343 *i* Pn **Pn 06 18 36.4 +2.8**
comp=N,23nm,0.6s,SNR=14
KOVH Kovagotottos 4.84 45 P **Pn 06 18 32.9 -1.0**
KOVH S **Sn 06 19 27.2 -2.8**
LMR La Mourre 4.93 279 *e*P **Pn 06 18 35.2 +0.1**
LMR *e*Sn **Sn 06 19 25.1 -7.1**
comp=N,6.1nm,0.5s
IVA Berane 4.93 87 *e*Pn **Pn 06 18 35.9 +0.6**
IVA *i* Sn **Sn 06 19 32.3 -0.2**
BIOA Bad Ischl, Aus 4.94 4 *i* Pn **Pn 06 18 35.7 +0.5**
comp=N,13nm,0.4s,SNR=9.7
BIOA *e*Sn **Sn 06 19 33.8 +1.3**
comp=N,84nm,0.6s
PVY Plav 5.00 90 *e*Pn **Pn 06 18 36.9 +0.7**
PVY *i* Sn **Sn 06 19 33.8 -0.3**
SJES Sjenica 5.00 82 *e*Pn **Pn 06 18 37.3 +1.1**
SJES *e*Sn **Sn 06 19 33.3 -0.9**
RETA Reutte 5.02 341 *i* Pn **Pn 06 18 38.8 +2.4**
comp=N,3.1nm,0.2s,SNR=7.2
DAVA Damuels 5.09 334 *i* Pn **Pn 06 18 40.4 +2.9**
comp=N,8.1nm,0.3s,SNR=9.4
DIVS Divibare 5.13 73 **Pn 06 18 40.3 +2.3**
DIVS Divibare 5.13 73 *e*Pn **Pn 06 18 38.8 +0.8**
DIVS Divibare 5.13 73 *e*Pn **Pn 06 18 38.4 +0.4**
DIVS *e*Sn **Sn 06 19 36.7 -0.7**
MOA Molln 5.14 8 *e*Pn **Pn 06 18 38.0 0.0**
MOA *e*Sn **Sn 06 19 37.1 -0.4**
MOA Molln 5.14 8 *i* Pn **Pn 06 18 38.2 +0.2**
comp=N,5.8nm,0.2s,SNR=6.9
MOA *e*Sn **Sn 06 19 37.9 +0.4**
comp=N,18nm,0.4s
TIR Tirane 5.17 104 **Pn 06 18 39.3 +0.9**
TIR Tirane 5.17 104 *e*Pn **Pn 06 18 37.6 -0.8**
TIR *e*Sn **Sn 06 19 36.8 -1.4**
CLTB Caltabellotta 5.18 180 Pn **Pn 06 18 38.8 +0.1**
MORH Mrgy, Hungar 5.21 47 P **Pn 06 18 42.1 +3.2**
VLO Vlora 5.26 114 Pn **Pn 06 18 38.8 -0.8**
FRGS Fruska Gora 5.34 61 *e*Pn **Pn 06 18 37.9 -3.0**
LPG La Plagne 5.38 303 *e*P **Pn 06 18 42.7 +1.2**
LPG *e*Sn **Sn 06 19 35.9 -7.8**
comp=N,22nm,0.6s
MPLH Magyarpolny 5.38 34 P **Pn 06 18 41.1 -0.1**
LPL La Plagne 5.40 303 *e*P **Pn 06 18 42.5 +0.8**
LPL *e*Sn **Sn 06 19 36.5 -7.6**
comp=N,19nm,0.8s
RONA Rosalia, Austr 5.40 23 *e*Pn **Pn 06 18 41.7 0.0**
comp=N,6.1nm,0.4s
TRUS Trudelj 5.45 72 *e*Pn **Pn 06 18 42.6 +0.3**
SOP Sopron 5.46 25 P **Pn 06 18 42.7 +0.3**
CONA Conrad Observa 5.50 19 *i* Pn **Pn 06 18 43.1 +0.1**
comp=N,5.8nm,0.3s,SNR=9.8
SENIN Lac Senin/Sane 5.53 313 Pn **Pn 06 18 41.4 -2.3**
GRUS Gruza 5.61 76 *e*Pn **Pn 06 18 45.2 +0.8**
GRUS *e*Sn **Sn 06 19 48.2 -0.7**
SMRF Simiane la Rot 5.68 285 *e*P **Pn 06 18 45.9 +0.4**
SMRF *e*Sn **Sn 06 19 43.0 -7.8**
comp=N,5.3nm,0.7s
ORIF Oris-en-Rattie 5.71 295 *e*P **Pn 06 18 46.4 +0.5**
ORIF *e*Sn **Sn 06 19 43.9 -7.6**
comp=N,18nm,0.7s
SELS Selova 5.84 83 *e*Pn **Pn 06 18 47.7 +0.1**
SELS *e*Sn **Sn 06 19 53.3 -1.4**
KEK Kerkira 5.84 119 Pn **Pn 06 18 48.3 +0.6**
KBN Korca 6.08 108 **Pn 06 18 52.1 +1.1**
GEC2 GERESS Array S 6.09 3 **Pn 06 18 49.4 -1.7**
GERES GERESS Array B 6.09 3 Pn **Pn 06 18 50.5 -0.6**
comp=N,1.5nm,0.3s,baz=185,slow=13,SNR=18
GERES Sn **Sn 06 20 00.4 -0.5**
comp=N,4.1nm,0.3s,baz=162,slow=22,SNR=9.1
comp=N,2.2nm,0.3s
GERES GERESS Array B 6.09 3 **Pn 06 18 49.7 -1.5**
CKRC Cesky Krumlov 6.10 7 *e*PN **Pn 06 18 51.5 +0.2**
CKRC *e*SN **Sn 06 19 59.1 -2.1**
BOVS Bovan 6.29 79 *e*Pn **Pn 06 18 54.0 +0.2**
BOVS *e*Sn **Sn 06 20 02.8 -2.9**
BARS Barje 6.35 87 *e*Pn **Pn 06 18 54.8 +0.2**
CABF La Chapelle 6.35 310 *e*P **Pn 06 18 55.4 +0.6**
CABF *e*Sn **Sn 06 19 59.1 -8.4**
comp=N,8.9nm,0.6s
KHC Kasperske Hory 6.37 2 Pn **Pn 06 18 54.0 -1.0**
KHC Kasperske Hory 6.37 2 *e*PN **Pn 06 18 54.7 -0.3**
KHC *e*SN **Sn 06 20 05.4 -2.4**
VIVF Saint-Julien-l 6.50 292 *e*P **Pn 06 18 57.7 +0.9**
VIVF *e*Sn **Sn 06 20 02.7 -8.4**
comp=N,1.5nm,0.4s
BFO Black Forest 6.52 330 Pn **Pn 06 18 56.7 -0.4**
KRUC Moravsky 6.68 18 *e*PN **Pn 06 18 55.8 -3.4**
KRUC *e*SN **Sn 06 20 11.5 -3.9**
ZAGS Zajecar 6.68 78 *e*Pn **Pn 06 18 59.6 +0.4**
ZAGS *e*Sn **Sn 06 20 12.3 -3.2**
SSB Saint Sauveur 6.72 295 Pn **Pn 06 19 00.4 +0.6**
TREC Trest 6.72 13 *e*SN **Sn 06 20 13.3 -3.1**
HINF Hinteralfeld 6.74 321 *e*Pn **Pn 06 18 55.9 -4.1**
HINF Hinteralfeld 6.74 321 *e*P **Pn 06 19 00.7 +0.7**
HINF *e*Sn **Sn 06 20 08.2 -8.7**
comp=N,17nm,0.4s
JAVC Velka Javorina 6.85 26 *e*PN **Pn 06 18 57.0 -4.5**
ECH Echery 6.90 324 **Pn 06 19 00.8 -1.4**
LASF Ste Croix 6.92 284 *e*P **Pn 06 19 02.9 +0.4**
ZAPS Zavoj 6.94 83 *e*Sn **Pn 06 19 02.9 +0.1**
ZAPS Zavoj 6.94 83 *e*Pn **Sn 06 20 19.6 -2.3**
VRAC Vranov 6.96 19 LR LR 06 22 00.0
comp=N,63nm,19.1s,baz=210,slow=41
CDF Champ du Feu 7.00 326 *e*P **Pn 06 19 04.0 +0.3**
CDF *e*Sn **Sn 06 20 14.6 -8.8**
comp=N,20nm,0.7s
GRFO Grafenberg 7.06 350 Pn **Pn 06 19 03.0 -1.4**
GRA1 Grafenberg Arr 7.06 350 Pn **Pn 06 19 03.0 -1.4**
HAU Haudompre 7.11 320 *e*P **Pn 06 19 06.0 +0.9**
HAU *e*Sn **Sn 06 20 17.2 -8.9**
comp=N,37nm,0.5s
GOPC GO Pecny, Ondr 7.23 8 *e*PN **Pn 06 19 07.8 +1.0**
GOPC *e*SN **Sn 06 20 26.0 -3.0**
PRU Pruhonice 7.28 7 *e*SN **Sn 06 20 26.8 -3.4**
MAHO Mahon 7.30 250 Pn **Pn 06 19 08.9 +1.3**
VTS Vitosha 7.41 88 Pn **Pn 06 19 10.5 +1.2**
NKC Novy Kostel 7.49 356 *e*SN **Sn 06 20 34.0 -1.2**
KEST Kesra 7.63 204 Pn **Pn 06 19 16.9 +4.6**
comp=N,0.7nm,0.3s,baz=293,slow=7.3,SNR=6.6
KEST LR LR 06 22 22.4
comp=N,114nm,18.1s,baz=345,slow=39
comp=N,5.8nm,0.9s
KEST Kesra 7.63 204 Pn **Pn 06 19 10.9 -1.4**
MORC Moravsky Berou 7.63 22 Pn **Pn 06 19 11.9 -0.4**
SMF Signal de Mont 7.70 303 *e*P **Pn 06 19 14.2 +1.0**
SMF *e*Sn Sn 06 20 31.4 -9.2
comp=N,6.3nm,0.4s
PAGF Fort de Pagny 7.80 321 *e*P **Pn 06 19 15.4 +0.9**
PAGF *e*Sn Sn 06 20 33.4 -9.4
comp=N,13nm,0.5s
SFTF Sexfontaines 7.89 316 *e*P **Pn 06 19 16.9 +1.1**
SFTF *e*Sn Sn 06 20 35.8 -9.4
comp=N,4.6nm,0.4s
LOR Lormes 7.99 307 *e*P **Pn 06 19 18.6 +1.4**
baz=122
LOR *e*Sn Sn 06 20 38.3 -9.4
comp=N,9.2nm,0.5s
MTLF Montolieu 8.05 278 *e*P **Pn 06 19 19.2 +1.2**
MTLF *e*Sn Sn 06 20 39.8 -9.4
comp=N,1.2nm,0.4s
MEZF Maizieres J'vi 8.08 318 *e*P **Pn 06 19 19.6 +1.2**
MEZF *e*Sn Sn 06 20 40.2 -10
comp=N,13nm,0.6s
SSF Saint Saulge 8.10 305 *e*P **Pn 06 19 19.6 +1.0**
SSF *e*Sn Sn 06 20 40.8 -10
comp=N,3.1nm,0.4s
SAVF Savonnieres en 8.12 319 *e*P **Pn 06 19 20.5 +1.5**
SAVF *e*Sn Sn 06 20 41.4 -9.5
comp=N,5.6nm,0.4s
BRG Berggiesshubel 8.13 3 *e*P **Pn 06 19 23.2 +4.3**
BRG Amp 06 19 27.3
comp=Z,1.7nm,0.6s
BRG *ex* x 06 20 46.0
BRG *ex* x 06 21 48.4
BRG Amp 06 22 08.8
comp=Z,20nm,1.3s
BGF Bois d'Agland 8.29 301 *e*P **Pn 06 19 22.5 +1.3**
BGF *e*Sn Sn 06 20 45.3 -10
comp=Z,9.1nm,0.4s
CAF Calviac 8.32 289 *e*P **Pn 06 19 23.0 +1.2**
CAF *e*Sn Sn 06 20 46.4 -9.5
comp=Z,2.1nm,0.5s
WLF Walferdange 8.45 327 Pn **Pn 06 19 22.6 -0.8**
CLL Collm 8.54 359 Pn **Pn 06 19 24.5 -0.3**
CLL Collm 8.54 359 *e*Pn **Pn 06 19 24.0 -0.7**
CLL *ex* x 06 19 32.0
CLL *ex* x 06 19 38.0
CLL *e*(Pg) Pg 06 19 57.0 -7.4
CLL *e*Sn Sn 06 20 46.0 -15
CLL *ex* x 06 20 57.0
CLL *ex* x 06 21 15.0
CLL *ex* x 06 21 34.0
CLL *e*Sg **Sg 06 21 50.0 -4.9**
comp=Z,23nm,1.3s
TCF Toulx Ste Croi 8.59 298 *e*P **Pn 06 19 26.8 +1.3**
TCF *e*Sn Sn 06 20 52.6 -10
comp=Z,3.2nm,0.5s
ITM Ithomi 8.72 127 Pn **Pn 06 19 28.7 +1.4**
RJF Les Rejaudoux 8.78 291 *e*P **Pn 06 19 29.2 +1.2**
BAIF Baives 9.57 323 *e*P **Pn 06 19 39.9 +1.2**
MLR Muntele Rosu 9.57 69 LR LR 06 24 35.5
comp=Z,132nm,19.8s,baz=236,slow=46
ETSF Etsaut 10.10 275 *e*P **Pn 06 19 47.9 +1.7**
MFF Saint Martin d 10.24 297 *e*P **Pn 06 19 49.5 +1.6**
MFF *e*Sn Sn 06 21 31.9 -11
comp=Z,0.7nm,0.4s
IDI Anoyia 11.77 126 Pn **Pn 06 20 11.8 +2.8**
comp=Z,0.7nm,0.3s,baz=231,slow=7.6,SNR=3.1
comp=Z,5.1nm,0.7s
ESDC Sonseca Array 13.28 262 Pn **Pn 06 20 31.3 +1.8**
baz=70,slow=14,SNR=5.8
comp=Z,0.5nm,0.8s
AKASG Malin Array Be 13.54 49 LR LR 06 26 18.6
comp=Z,66nm,18.2s,baz=240,slow=40
EKA Eskdalemuir Ar 16.46 325 Pn **Pn 06 21 13.2 +1.3**
baz=135,slow=14
comp=Z,0.2nm,0.4s
HFS Hagfors 17.39 1 Pn **Pn 06 21 24.2 +0.6**
comp=Z,0.1nm,0.3s,baz=170,slow=18,SNR=1.4
comp=Z,1.5nm,0.9s
NB2 NORSAR Subarra 18.34 357 P **P 06 21 35.8 +0.4**
comp=Z,6.3nm,1.4s,baz=172,slow=12
NOA NORSAR Array B 18.34 357 P **P 06 21 36.7 +1.3**
baz=176,slow=12,SNR=3.3
NOA LR LR 06 29 02.6
comp=Z,34nm,19.2s,baz=275,slow=38
comp=Z,0.3nm,0.4s
FINES FINESS Array B 20.24 18 P **P 06 21 57.0 +0.9**
comp=Z,2.2nm,0.7s,baz=193,slow=7.8,SNR=5.6
comp=Z,2.2nm,0.7s
FINES FINESS Array B 20.24 18 P **P 06 21 56.5 +0.4**
KBZ Khabaz 21.61 77 P **P 06 22 13.3 +2.2**
comp=Z,3.3nm,0.9s,baz=317,slow=6.9,SNR=3.7
comp=Z,3.3nm,0.9s
TOA0 Torodi Ar. Sit 31.14 202 P **P 06 23 40.0 0.0**
TOA0 IAmb IAmb 06 24 07.0
comp=Z,6.0nm,1.4s
TORD Torodi Ar. Bea 31.14 202 P **P 06 23 40.8 +0.7**
comp=Z,1.3nm,0.8s,baz=16,slow=8.3,SNR=7.5
comp=Z,1.3nm,0.8s
TORD Torodi Ar. Bea 31.14 202 P **P 06 23 40.0 0.0**
TORD IAmb IAmb 06 23 45.0
comp=Z,1.0nm,0.8s
ABKAR Akbulak array 32.69 62 P **P 06 23 52.0 -1.3**
MKAR Makanchi Array 47.77 60 P **P 06 25 57.4 -0.9**
comp=Z,1.0nm,0.7s,baz=270,slow=1.2,SNR=3.6
comp=Z,1.0nm,0.7s
SONM Songino Array 61.82 50 P **P 06 27 41.1 +0.9**
comp=Z,1.4nm,0.9s,baz=292,slow=7.8,SNR=6.0
comp=Z,1.4nm,0.9s
PETK Petropavlovsk- 79.73 21 LR LR 07 10 37.1
comp=Z,28nm,18.3s,baz=94,slow=40
TXAR Lajitas Array 87.75 309 P **P 06 30 13.3 +2.8**
comp=Z,0.1nm,0.5s,baz=38,slow=6.0,SNR=2.2
comp=Z,0.1nm,0.5s

ROM 31 06:26:13.1±0.1, 42°.875N±0°.004×13°.202E±0°.007,
h8km, ML2.2/6, 4C-1D, Error ellipse: s-maj=0.6km
s-min=0.2km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.02**	**210**	⇑P	Pg	06 26 14.4	-0.4
T1245				AML	AML		
	comp=E,59004μm,0.2s						
T1245				AML	AML		
	comp=N,48926μm,0.2s						
T1245				AML	AML		
	comp=E,57718μm,0.2s						
T1245				AML	AML		
	comp=N,46465μm,0.2s						
T1216	**Preci, Frazion**	**0.14**	**277**	P	Pg	06 26 16.9	+0.8
T1216				S	Sg	06 26 19.6	+1.4
AM05	**Amandola Campo**	**0.15**	**47**	P	Pg	06 26 16.8	+0.4
AM05				AML	AML		
	comp=E,410μm,0.1s						
AM05				AML	AML		
	comp=N,372μm,0.7s						
AM05				AML	AML		
	comp=E,1635μm,0.4s						
AM05				AML	AML		
	comp=N,90μm,0.9s						
AM05				AML	AML		
	comp=E,855μm,0.3s						
AM05				AML	AML		
	comp=N,2005μm,0.2s						
AM05				AML	AML		
	comp=E,3805μm,0.3s						
AM05				AML	AML		
	comp=N,292μm,1.3s						
AM05				AML	AML		
	comp=E,856μm,0.3s						
AM05				AML	AML		
	comp=N,364μm,0.1s						
AM05				AML	AML		
	comp=N,80μm,0.1s						
AM05				AML	AML		
	comp=E,1426μm,0.1s						
AM05				AML	AML		
	comp=E,409μm,0.1s						
T1241	**Roccafluvione,**	**0.17**	**96**	P	Pg	06 26 17.2	+0.6
T1241				AML	AML		
	comp=E,1370μm,0.6s						
T1241				AML	AML		
	comp=N,1165μm,0.8s						
T1241				AML	AML		
	comp=E,1380μm,0.6s						
T1241				AML	AML		
	comp=N,1230μm,0.8s						
T1241				AML	AML		
	comp=E,3580μm,0.6s						
T1241				AML	AML		
	comp=E,3580μm,0.5s						
T1241				AML	AML		
	comp=N,6590μm,0.6s						
T1241				AML	AML		
	comp=N,6595μm,0.6s						
T1241				AML	AML		
	comp=E,3585μm,0.5s						
T1241				AML	AML		
	comp=N,6475μm,0.6s						
T1241				AML	AML		
	comp=N,961μm,0.3s						
T1241				AML	AML		
	comp=E,1237μm,0.5s						
T1241				AML	AML		
	comp=N,1082μm,0.3s						
T1241				AML	AML		
	comp=E,1168μm,0.5s						
GUMA	**Gualdo di Mace**	**0.21**	**27**	P	Pg	06 26 18.2	+0.7
GUMA				S	Sg	06 26 22.1	+1.8
GUMA				AML	AML		
	comp=E,4365μm,1.0s						
GUMA				AML	AML		
	comp=E,4615μm,0.5s						
GUMA				AML	AML		
	comp=E,4365μm,1.0s						
GUMA				AML	AML		
	comp=N,4115μm,0.7s						
GUMA				AML	AML		
	comp=N,4180μm,0.3s						
GUMA				AML	AML		
	comp=N,2739μm,0.5s						
GUMA				AML	AML		
	comp=E,1659μm,0.7s						
GUMA				AML	AML		
	comp=E,2128μm,0.6s						
GUMA				AML	AML		
	comp=N,1727μm,0.5s						
T1204	**Amatrice, Fraz**	**0.22**	**157**	P	Pg	06 26 18.2	+0.7
T1204				S	Sg	06 26 22.2	+1.7
T1204				AML	AML		
	comp=E,1155μm,1.3s						
T1204				AML	AML		
	comp=N,632μm,0.1s						
T1204				AML	AML		
	comp=N,631μm,0.1s						
T1204				AML	AML		
	comp=E,964μm,0.2s						
CSP1	**Cessapalombo**	**0.22**	**1**	P	Pg	06 26 18.1	+0.6
CSP1				S	Sg	06 26 22.2	+1.6
T1201	**Domo (RI)**	**0.22**	**171**	P	Pg	06 26 18.4	+0.9
T1243	**Rocca Santa Ma**	**0.25**	**134**	P	Pg	06 26 18.7	+0.5
T1243				S	Sg	06 26 23.1	+1.4
SMA1	**SAN MARTINO**	**0.26**	**158**	P	Pg	06 26 18.9	+0.5
SMA1				S	Sb	06 26 23.6	-1.2
SMA1				AML	AML		
	comp=E,672μm,1.5s						
SMA1				AML	AML		
	comp=N,724μm,0.5s						
SMA1				AML	AML		
	comp=E,1320μm,0.4s						
SMA1				AML	AML		
	comp=N,1140μm,0.4s						
SMA1				AML	AML		
	comp=N,681μm,0.3s						
SMA1				AML	AML		
	comp=E,664μm,0.5s						
LNSS	**Leonessa**	**0.30**	**204**	S	Sb	06 26 26.0	+0.2
SNTG	**Esanatoglia**	**0.43**	**333**	P	Pg	06 26 21.7	+0.3
SNTG				S	Sb	06 26 28.7	-0.8
SNTG				AML	AML		
	comp=E,270μm,1.4s						
SNTG				AML	AML		
	comp=N,282μm,0.5s						
SNTG				AML	AML		
	comp=E,270μm,1.4s						
SNTG				AML	AML		
	comp=N,302μm,0.3s						
SNTG				AML	AML		
	comp=E,263μm,0.2s						
SNTG				AML	AML		
	comp=N,231μm,0.4s						
SNTG				AML	AML		
	comp=E,323μm,0.2s						
SNTG				AML	AML		
	comp=N,234μm,0.3s						
T1211	**Morro Reatino**	**0.43**	**217**	S	Sb	06 26 30.0	+0.5
ASSB	**Assisi San Ben**	**0.43**	**293**	P	Pg	06 26 21.9	+0.4
ASSB				AML	AML		
	comp=E,444μm,1.0s						
ASSB				AML	AML		
	comp=N,390μm,1.1s						
ASSB				AML	AML		
	comp=N,253μm,0.2s						
ASSB				AML	AML		
	comp=E,270μm,0.3s						
EL6	**Elcito**	**0.46**	**351**	P	Pg	06 26 22.4	+0.4
EL6				S	Sb	06 26 30.4	-0.2
EL6				AML	AML		
	comp=N,517μm,0.2s						
EL6				AML	AML		
	comp=E,429μm,0.3s						
GIGS	**Gran Sasso**	**0.50**	**147**	P	Pg	06 26 23.2	+0.3
GIGS				S	Sb	06 26 31.5	-0.2
GIGS				AML	AML		
	comp=E,93μm,0.3s						
GIGS				AML	AML		
	comp=N,78μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.52**	**307**	P	Pg	06 26 23.5	+0.4
FOSV	**Fossato di Vic**	**0.53**	**323**	P	Pg	06 26 23.6	+0.2
FOSV				S	Sb	06 26 32.5	0.0
FOSV				AML	AML		
	comp=E,416μm,0.5s						
FOSV				AML	AML		
	comp=N,384μm,0.3s						
FOSV				AML	AML		
	comp=N,384μm,0.3s						
FOSV				AML	AML		
	comp=E,415μm,0.5s						
FOSV				AML	AML		
	comp=E,141μm,0.3s						
FOSV				AML	AML		
	comp=N,262μm,0.4s						
FIAM	**Fiamignano**	**0.61**	**186**	S	Sb	06 26 35.0	+0.2
ARVD	**Arcevia**	**0.65**	**343**	S	Sn	06 26 38.0	-1.2
VCEL	**Villa Celiera**	**0.67**	**135**	⇓P	Pb	06 26 27.0	-0.2
VCEL				AML	AML		
	comp=N,426μm,1.3s						
VCEL				AML	AML		
	comp=E,304μm,0.7s						
VCEL				AML	AML		
	comp=E,177μm,0.3s						
ATFO	**Monte Foce - G**	**0.68**	**317**	P	Pg	06 26 26.3	+0.2
ATVO	**AVT- Monte Val**	**0.77**	**311**	⇑P	Pg	06 26 27.9	0.0
ATVO				AML	AML		
	comp=N,104μm,0.6s						
ATVO				AML	AML		
	comp=E,92μm,0.6s						
ATPI	**Pietralunga -**	**0.82**	**315**	⇑P	Pg	06 26 28.9	0.0
MPAG	**Monte Paganucc**	**0.82**	**337**	P	Pb	06 26 29.4	-0.3
GIUL	**Giuliano Di Ro**	**1.32**	**178**	S	Sn	06 26 56.0	+0.5
PTRJ	**Pietraroja**	**1.80**	**146**	S	Sb	06 27 09.0	-0.2
VBKN	**Vesuvio Bunker**	**2.24**	**155**	⇑P	Pb	06 26 54.0	+0.1

ROM 31 06:26:42.1±0.1, 42°.870N±0°.004×13°.193E±0°.006,
h8km, ML2.5/13, 10C-6D, Error ellipse: s-maj=0.5km
s-min=0.4km az=231.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.01**	**194**	⇓P	Pg	06 26 43.4	-0.3
T1245				S	Sg	06 26 44.0	-0.8
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.13**	**279**	P	Pg	06 26 45.7	+0.8
T1216				S	Sg	06 26 48.3	+1.4
T1216				AML	AML		
	comp=E,9045μm,0.5s						
T1216				AML	AML		
	comp=E,9040μm,0.4s						
T1216				AML	AML		
	comp=N,12900μm,0.3s						
T1216				AML	AML		
	comp=E,9040μm,0.5s						
T1216				AML	AML		
	comp=N,12904μm,0.3s						
T1216				AML	AML		
	comp=E,8018μm,0.4s						
FEMA	**Monte Fema**	**0.14**	**311**	⇓P	Pg	06 26 44.5	-0.6
FEMA				AML	AML		
	comp=E,3685μm,0.9s						
FEMA				AML	AML		
	comp=N,2415μm,1.3s						
FEMA				AML	AML		
	comp=E,3685μm,0.9s						
FEMA				AML	AML		
	comp=N,2415μm,1.3s						
FEMA				AML	AML		
	comp=E,1927μm,0.3s						
FEMA				AML	AML		
	comp=N,1998μm,0.3s						
AM05	**Amandola Campo**	**0.16**	**48**	⇑P	Pg	06 26 46.0	+0.6
AM05				S	Sg	06 26 48.8	+1.1
AM05				AML	AML		
	comp=E,855μm,0.3s						
AM05				AML	AML		
	comp=N,2005μm,0.2s						
AM05				AML	AML		

	comp=N,292μm,1.3s					
AM05				AML	AML	
	comp=E,3805μm,0.3s					
AM05				AML	AML	
	comp=E,856μm,0.3s					
AM05				AML	AML	
	comp=E,3545μm,0.1s					
AM05				AML	AML	
	comp=N,279μm,0.2s					
AM05				AML	AML	
	comp=E,817μm,0.2s					
AM05				AML	AML	
	comp=N,2005μm,0.2s					
T1241	**Roccafluvione,**	**0.18 94**	⇑P	Pg	06 26 46.5 +0.8	
T1241			S	Sg	06 26 49.6 +1.4	
T1241			AML	AML		
	comp=E,3585μm,0.5s					
T1241			AML	AML		
	comp=N,6590μm,0.6s					
T1241			AML	AML		
	comp=E,3580μm,0.5s					
T1241			AML	AML		
	comp=N,6475μm,0.6s					
T1241			AML	AML		
	comp=E,3580μm,0.5s					
T1241			AML	AML		
	comp=E,3585μm,0.5s					
T1241			AML	AML		
	comp=N,6595μm,0.6s					
T1241			AML	AML		
	comp=E,3274μm,0.3s					
T1241			AML	AML		
	comp=N,5487μm,0.2s					
T1204	**Amatrice, Fraz**	**0.21 155**	P	Pg	06 26 47.2 +0.8	
T1204			S	Sg	06 26 51.1 +1.7	
T1204			AML	AML		
	comp=E,1761μm,0.1s					
T1204			AML	AML		
	comp=N,1260μm,0.2s					
GUMA	**Gualdo di Mace**	**0.22 28**	⇑P	Pg	06 26 47.3 +0.8	
GUMA			S	Sg	06 26 51.4 +1.9	
GUMA			AML	AML		
	comp=E,4365μm,1.0s					
GUMA			AML	AML		
	comp=N,4185μm,0.3s					
GUMA			AML	AML		
	comp=N,4115μm,0.7s					
GUMA			AML	AML		
	comp=E,4615μm,0.5s					
GUMA			AML	AML		
	comp=N,4180μm,0.3s					
GUMA			AML	AML		
	comp=E,4365μm,1.0s					
GUMA			AML	AML		
	comp=N,4008μm,0.5s					
GUMA			AML	AML		
	comp=E,4617μm,0.5s					
GUMA			AML	AML		
	comp=E,3384μm,0.4s					
GUMA			AML	AML		
	comp=N,4182μm,0.3s					
T1215	**Vallo di Nera,**	**0.25 254**	⇓P	Pg	06 26 47.8 +0.8	
T1215			S	Sg	06 26 52.0 +1.6	
T1215			AML	AML		
	comp=N,1065μm,0.5s					
T1215			AML	AML		
	comp=E,1285μm,0.3s					
T1215			AML	AML		
	comp=N,984μm,0.5s					
T1215			AML	AML		
	comp=E,1230μm,0.3s					
T1215			AML	AML		
	comp=N,1066μm,0.4s					
T1215			AML	AML		
	comp=E,1281μm,0.3s					
T1215			AML	AML		
	comp=N,987μm,0.5s					
T1215			AML	AML		
	comp=E,1230μm,0.3s					
T1215			AML	AML		
	comp=N,1064μm,0.5s					
T1215			AML	AML		
	comp=N,986μm,0.5s					
T1215			AML	AML		
	comp=E,1282μm,0.3s					
T1215			AML	AML		
	comp=E,1281μm,0.3s					
T1215			AML	AML		
	comp=N,575μm,0.2s					
T1215			AML	AML		
	comp=N,533μm,0.3s					
T1215			AML	AML		
	comp=E,1233μm,0.3s					
T1243	**Rocca Santa Ma**	**0.26 133**	⇑P	Pg	06 26 47.8 +0.6	
T1243			S	Sb	06 26 52.2 -1.5	
SMA1	**SAN MARTINO**	**0.26 156**	⇑P	Pg	06 26 48.0 +0.7	
SMA1			S	Sb	06 26 52.4 -1.4	
SMA1			AML	AML		
	comp=N,1140μm,0.4s					
SMA1			AML	AML		
	comp=E,1320μm,0.4s					
SMA1			AML	AML		
	comp=N,1141μm,0.4s					
SMA1			AML	AML		
	comp=E,1321μm,0.4s					
LNSS	**Leonessa**	**0.29 203**	P	Pb	06 26 48.9 -0.7	
LNSS			S	Sb	06 26 53.9 -0.7	
RM33	**Pellescritta (**	**0.36 177**	⇑P	Pb	06 26 50.1 -0.7	
RM33			S	Sb	06 26 55.6 -1.1	
RM33			AML	AML		
	comp=E,806μm,0.9s					
RM33			AML	AML		
	comp=N,1008μm,0.3s					
RM33			AML	AML		
	comp=E,774μm,0.9s					
RM33			AML	AML		
	comp=N,997μm,0.3s					
RM33			AML	AML		
	comp=N,996μm,0.3s					
RM33			AML	AML		
	comp=E,774μm,0.9s					
RM33			AML	AML		
	comp=N,1000μm,0.3s					
RM33			AML	AML		
	comp=N,999μm,0.3s					
RM33			AML	AML		
	comp=N,1008μm,0.3s					
RM33			AML	AML		
	comp=E,761μm,0.2s					
RM33			AML	AML		
	comp=E,720μm,0.2s					
OFFI	**Offida**	**0.37 80**	⇑P	Pb	06 26 51.0 +0.1	
OFFI			AML	AML		
	comp=E,1550μm,0.6s					
OFFI			AML	AML		
	comp=N,1425μm,0.6s					
OFFI			AML	AML		
	comp=E,1214μm,0.5s					
OFFI			AML	AML		
	comp=N,1425μm,0.6s					
TERO	**Teramo**	**0.39 129**	P	Pg	06 26 50.1 +0.4	
TERO			S	Sb	06 26 56.5 -1.0	
TERO			AML	AML		
	comp=E,999μm,0.3s					
TERO			AML	AML		
	comp=N,1605μm,0.5s					
TERO			AML	AML		
	comp=E,879μm,0.2s					
TERO			AML	AML		
	comp=E,801μm,0.2s					
TERO			AML	AML		
	comp=N,1320μm,0.2s					
TERO			AML	AML		
	comp=N,1255μm,0.2s					
T1211	**Morro Reatino**	**0.42 217**	S	Sb	06 26 59.0 +0.7	
SNTG	**Esanatoglia**	**0.43 334**	P	Pg	06 26 50.8 +0.4	
SNTG			AML	AML		
	comp=E,180μm,0.2s					
SNTG			AML	AML		
	comp=N,218μm,0.2s					
SNTG			AML	AML		
	comp=N,269μm,0.4s					
SNTG			AML	AML		
	comp=E,203μm,0.2s					
ASSB	**Assisi San Ben**	**0.43 294**	⇓P	Pg	06 26 50.9 +0.4	
ASSB			AML	AML		
	comp=E,444μm,1.0s					
ASSB			AML	AML		
	comp=N,389μm,1.1s					
ASSB			AML	AML		
	comp=E,318μm,0.2s					
ASSB			AML	AML		
	comp=N,328μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.43 170**	S	Sb	06 26 60.0 +1.2	
EL6	**Elcito**	**0.46 352**	⇓P	Pg	06 26 51.5 +0.4	
EL6			S	Sb	06 26 60.0 +0.3	
EL6			AML	AML		
	comp=E,461μm,0.2s					
EL6			AML	AML		
	comp=N,659μm,0.4s					
GIGS	**Gran Sasso**	**0.50 146**	⇑P	Pg	06 26 52.3 +0.5	
GIGS			S	Sb	06 27 00.3 -0.4	
ATCC	**AVT- Casa Cast**	**0.51 308**	⇑P	Pg	06 26 52.5 +0.5	
FOSV	**Fossato di Vic**	**0.53 323**	⇓P	Pg	06 26 52.8 +0.4	
FOSV			AML	AML		
	comp=E,415μm,0.5s					
FOSV			AML	AML		
	comp=N,384μm,0.3s					
FOSV			AML	AML		
	comp=E,416μm,0.5s					
FOSV			AML	AML		
	comp=N,384μm,0.3s					
FOSV			AML	AML		
	comp=E,402μm,0.3s					
FOSV			AML	AML		
	comp=N,384μm,0.3s					
AQU	**L'Aquila**	**0.54 163**	S	Sb	06 27 02.0 +0.3	
PP3	**Marolino**	**0.59 31**	S	Sn	06 27 06.0 -0.6	
FIAM	**Fiamignano**	**0.60 185**	S	Sb	06 27 04.0 +0.3	
MURB	**Monte Urbino**	**0.63 309**	⇑P	Pg	06 26 54.7 +0.5	
MURB			AML	AML		
	comp=E,512μm,0.3s					
MURB			AML	AML		
	comp=N,420μm,0.3s					
MURB			AML	AML		
	comp=E,512μm,0.3s					
MURB			AML	AML		
	comp=E,444μm,0.3s					
MURB			AML	AML		
	comp=N,380μm,0.3s					
MURB			AML	AML		
	comp=E,512μm,0.3s					
MURB			AML	AML		
	comp=N,420μm,0.3s					
ARVD	**Arcevia**	**0.65 344**	S	Sb	06 27 06.0 +0.9	
FAGN	**Fagnano**	**0.67 154**	S	Sb	06 27 07.0 +1.5	
ATFO	**Monte Foce - G**	**0.67 318**	P	Pg	06 26 55.2 +0.1	
ATFO			AML	AML		
	comp=N,107μm,0.5s					
ATFO			AML	AML		
	comp=E,151μm,0.6s					
MPAG	**Monte Paganucc**	**0.82 337**	S	Sn	06 27 12.0 -0.5	
CERT	**Cerreto**	**0.93 190**	S	Sn	06 27 15.0 -0.2	
PE3	**Peglio**	**0.97 329**	S	Sn	06 27 16.0 0.0	
RMP	**Rome, Mte Porz**	**1.12 199**	S	Sn	06 27 21.0 +1.3	

*AUST **31** 06:32:42.7±1.6, 33°.24S×137°.09E, h0km, Error ellipse: s-maj=21.2km s-min=9.1km az=7.0*
*NOU **31** 06:32:43.5, 33°.24S×137°.10E, h0km, MLv3.5/7, Near Coast of South Australia*
*IDC **31** 06:32:48.6±8.1, 32°.56S×137°.30E, h0km, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=111.1km s-min=23.4km az=18.0.*

ISC 31 06:32:43.3±1.1, 33°.3S±0°.1×137°.06E±0°.04, h10km, n14, σ1.9 50/17, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHYH	**Whyalla**	**0.49**	**62**	P	**Pg**	**06 32 51.6**	**-1.2**
BBOO	**Buckleboo**	**0.96**	**298**	P	**Pg**	**06 33 01.3**	**-0.4**
	baz=1.0						
BBOO				S	**Sg**	**06 33 14.3**	**+0.1**
	baz=1.0						
BBOO	**Buckleboo**	**0.96**	**298**	P	**Pg**	**06 33 01.5**	**-0.2**
HTT	**Hallett**	**1.56**	**97**	P	**Pn**	**06 33 11.1**	**-0.1**
LCRK	**Leigh Creek**	**2.98**	**20**	P	**Pn**	**06 33 31.9**	**+1.3**
	baz=2.9						
LCRK	**Leigh Creek**	**2.98**	**20**	P	**Pn**	**06 33 32.1**	**+1.5**
MULG	**Mulgathing**	**3.92**	**319**	P	**Pn**	**06 33 44.9**	**+1.3**
	baz=3.9						
MULG	**Mulgathing**	**3.92**	**319**	P	**Pn**	**06 33 45.7**	**+2.1**
STKA	**Stephens Creek**	**4.07**	**71**	Pn	**Pn**	**06 33 46.8**	**+1.2**
	0.1nm,0.3s,baz=243,slow=13,SNR=1.1						
STKA				Pg	**Pb**	**06 33 56.4**	**+1.3**
	0.2nm,0.3s,baz=254,slow=17,SNR=3.3						
STKA				Sn	**Sn**	**06 34 34.1**	**+0.8**
	0.4nm,0.3s,baz=335,slow=12,SNR=5.3						
STKA				Lg	Lg	06 34 45.6	
	0.6nm,0.3s,baz=144,slow=24,SNR=5.6						
	0.9nm,0.7s						
ARPS	**Mount Arapiles**	**5.25**	**133**	P	**Pn**	**06 34 03.3**	**+1.5**
	14nm,1.4s						
OOD	**Oodnadatta**	**5.58**	**347**	P	**Pn**	**06 34 05.7**	**-0.7**
	baz=5.6						
OOD	**Oodnadatta**	**5.58**	**347**	P	**Pn**	**06 34 06.9**	**+0.5**
ASAR	**Alice Springs**	**9.96**	**343**	Pn	**Pn**	**06 35 05.7**	**-0.8**
	0.1nm,0.3s,baz=178,slow=8.8,SNR=2.0						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**13.49**	**349**	Pn	**Pn**	**06 35 51.3**	**-3.6**
	0.1nm,0.3s,baz=171,slow=12,SNR=10						
	0.2nm,0.5s						

*OSPL **31** 06:43:00.5±0.3, 18°.89N×67°.22W, h65km±4km, ML1.9*
*RSPR **31** 06:43:01.7, 18°.80N×67°.33W, h59km±2km, MD3.1/8*
*NEIC **31** 06:43:01.2±1.3, 18°.79N±0°.08×67°.30W±0°.04, h60km±13km, Error ellipse: s-maj=11.1km s-min=5.8km az=170.0*

ISC 31 06:43:01.2±1.4, 18°.78N±0°.08×67°.32W±0°.04, h60km±10km, n49, σ0.9 47/60, 11C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.37**	**148**	⇑*e*P	**Pn**	**06 43 11.6**	**-0.3**
AGPR	**Aguadilla, PR**	**0.37**	**148**	*e*S	**Sn**	**06 43 19.6**	**0.0**
AGPR	**Aguadilla, PR**	**0.37**	**148**		**Pn**	**06 43 11.6**	**-0.3**
AGPR					**Sn**	**06 43 19.6**	**0.0**
AGPR	**Aguadilla, PR**	**0.37**	**148**	IAML		06 43 19.9	
	comp=E,120nm,0.3s						
AGPR				IAML		06 43 20.0	
	comp=N,112nm,0.4s						
AGPR	**Aguadilla, PR**	**0.37**	**148**	*i* P	**Pn**	**06 43 11.6**	**-0.3**
AGPR				*e*S	**Sn**	**06 43 19.6**	**0.0**
AGPR				IAML		06 43 20.3	
	comp=Z,50nm,0.3s						
IDE	**Isla Desecheo**	**0.42**	**201**	⇓*e*P	**Pn**	**06 43 12.3**	**-0.1**
IDE	**Isla Desecheo**	**0.42**	**201**	*e*S	**Sn**	**06 43 20.9**	**+0.4**
PRSN	**Puerto Rico Se**	**0.58**	**164**	*e*S	**Sn**	**06 43 24.2**	**+0.7**
PRSN	**Puerto Rico Se**	**0.58**	**164**		**Pn**	**06 43 13.9**	**-0.2**
PRSN					**Sn**	**06 43 24.2**	**+0.7**
PRSN				IAML		06 43 27.0	
	comp=N,114nm,0.2s						
LSP	**Las Mesas**	**0.64**	**160**	⇑*e*P	**Pn**	**06 43 14.8**	**0.0**
LSP	**Las Mesas**	**0.64**	**160**	*e*S	**Sn**	**06 43 25.2**	**+0.5**
AOPR	**Arecibo Observ**	**0.69**	**129**	⇑*e*P	**Pn**	**06 43 14.7**	**-0.7**
AOPR	**Arecibo Observ**	**0.69**	**129**	*e*S	**Sn**	**06 43 25.2**	**-0.4**
AOPR	**Arecibo Observ**	**0.69**	**129**		**Sn**	**06 43 25.2**	**-0.4**
AOPR	**Arecibo Observ**	**0.69**	**129**		**Pn**	**06 43 14.6**	**-0.7**
AOPR				IAML		06 43 26.2	
	comp=N,53nm,0.2s						
AOPR				IAML		06 43 28.2	
	comp=E,91nm,0.3s						
UUPR	**Utuado, UPR, P**	**0.77**	**133**	⇑*e*P	**Pn**	**06 43 16.2**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.77**	**133**	*e*S	**Sn**	**06 43 27.1**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.77**	**133**		**Sn**	**06 43 27.1**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.77**	**133**	Pn	**Pn**	**06 43 16.2**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.80**	**166**	⇑*e*P	**Pn**	**06 43 16.3**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.80**	**166**		**Pn**	**06 43 16.5**	**-0.2**
CRPR					**Sn**	**06 43 28.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.80**	**166**	*i* P	**Pn**	**06 43 16.5**	**-0.2**
CRPR				*e*S	**Sn**	**06 43 28.2**	**+0.3**
CRPR				IAML		06 43 30.8	
	comp=Z,8.2nm,0.1s						
EMPR	**Esperanza - Ma**	**0.81**	**112**	⇑*e*P	**Pn**	**06 43 17.4**	**+0.6**
EMPR	**Esperanza - Ma**	**0.81**	**112**	*e*S	**Sn**	**06 43 28.9**	**+0.7**
EMPR	**Esperanza - Ma**	**0.81**	**112**		**Pn**	**06 43 17.1**	**+0.4**
EMPR					**Sn**	**06 43 28.9**	**+0.7**
EMPR				IAML		06 43 31.0	
	comp=E,65nm,0.5s						
EMPR				IAML		06 43 43.0	
	comp=N,57nm,1.4s						
MLPR	**Magueyes Islan**	**0.85**	**162**	⇑*e*P	**Pn**	**06 43 17.1**	**-0.2**
MLPR	**Magueyes Islan**	**0.85**	**162**	*e*S	**Sn**	**06 43 29.4**	**+0.3**
MLPR	**Magueyes Islan**	**0.85**	**162**		**Pn**	**06 43 17.2**	**-0.2**
MLPR					**Sn**	**06 43 29.5**	**+0.3**
CELP	**Cerrillos**	**0.99**	**135**	⇑*e*P	**Pn**	**06 43 19.0**	**-0.2**
CELP	**Cerrillos**	**0.99**	**135**	*e*S	**Sn**	**06 43 32.5**	**+0.1**
CELP	**Cerrillos**	**0.99**	**135**		**Pn**	**06 43 18.5**	**-0.7**
CELP					**Sn**	**06 43 32.7**	**+0.3**
CELP				IAML		06 43 33.0	
	comp=N,34nm,0.2s						
CELP				IAML		06 43 33.3	
	comp=E,33nm,0.4s						
PCDR	**Punta Cana, DR**	**1.04**	**255**	Pn	**Pn**	**06 43 19.8**	**0.0**
PCDR				IAML		06 43 35.3	
	comp=E,55nm,2.2s						
PCDR	**Punta Cana, DR**	**1.04**	**255**	*i* P	**Pn**	**06 43 19.8**	**0.0**
PCDR				*e*S	**Sn**	**06 43 33.6**	**0.0**
PCDR				IAML		06 43 37.1	
	comp=Z,27nm,1.4s						
GCPR	**Guaynabo City**	**1.26**	**112**	*e*S	**Sn**	**06 43 39.1**	**+0.4**
GCPR	**Guaynabo City**	**1.26**	**112**	Pn	**Pn**	**06 43 23.2**	**+0.4**
GCPR					**Sn**	**06 43 37.7**	**-1.1**
GCPR				IAML		06 43 41.9	
	comp=N,11nm,2.8s						
IGPR	**InterUniversit**	**1.41**	**125**	*e*S	**Sn**	**06 43 41.9**	**-0.4**
CBYP	**Canovanas**	**1.48**	**110**	⇑*e*P	**Pn**	**06 43 25.7**	**0.0**
CBYP	**Canovanas**	**1.48**	**110**	*e*S	**Sn**	**06 43 44.0**	**0.0**
CBYP	**Canovanas**	**1.48**	**110**		**Pn**	**06 43 25.6**	**-0.1**
CBYP					**Sn**	**06 43 44.1**	**+0.1**
HUMP	**Col San Antoni**	**1.53**	**114**	*e*S	**Sn**	**06 43 45.2**	**0.0**
MTP	**Monte Pirata**	**1.81**	**112**	⇑*e*P	**Pn**	**06 43 30.0**	**-0.1**
MTP	**Monte Pirata**	**1.81**	**112**	*e*S	**Sn**	**06 43 52.7**	**+0.7**
MTP	**Monte Pirata**	**1.81**	**112**		**Pn**	**06 43 30.0**	**-0.1**
MTP	**Monte Pirata**	**1.81**	**112**		**Sn**	**06 43 52.1**	**+0.1**
MTP				IAML		06 43 54.0	
	comp=N,12nm,2.5s						
MTP				IAML		06 44 03.1	
	comp=E,6.7nm,2.5s						
DR12	**Loma Pena Alta**	**1.96**	**270**	Pn	**Pn**	**06 43 31.7**	**-0.5**
CUPR	**Culebra, Puert**	**1.99**	**103**	Pn	**Pn**	**06 43 30.9**	**-1.6**
CUPR				IAML		06 43 57.0	
	comp=E,5.4nm,0.8s						
SJVI	**Gifft Hill Sch**	**2.46**	**100**	⇑*e*P	**Pn**	**06 43 39.4**	**+0.5**
SJVI	**Gifft Hill Sch**	**2.46**	**100**	*e*S	**Sn**	**06 44 08.1**	**+0.3**
SJVI	**Gifft Hill Sch**	**2.46**	**100**		**Pn**	**06 43 39.4**	**+0.5**
SJVI					**Sn**	**06 44 08.1**	**+0.3**

*INET **31** 06:46:27.4±0.7, 12°.56N×88°.25W, h23km±22km, MW3.1*
*SNET **31** 06:46:28.0±0.8, 12°.62N×88°.29W, h11km±17km, ML3.0*

ISC 31 06:46:24.8±2.2, 12°.5N±0°.1×88°.23W±0°.08, h10km, n12, σ0.9 68/16, 1C-3D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.87**	**23**	⇓*i* P	**Pg**	**06 46 42.3**	**+0.7**
LCND				IAML		06 46 57.8	
	comp=Z,1μm,0.3s						
ALJI	**Alcalda de J**	**0.89**	**338**	⇓*e*P	**Pb**	**06 46 43.2**	**+0.9**
ALJI				*e*S	**Sb**	**06 46 54.4**	**+0.1**
ALJI				IAML		06 46 59.7	
	comp=Z,506nm,0.2s						
COEB	**Comit de Eme**	**1.03**	**344**	*e*P	**Pg**	**06 46 45.0**	**+0.3**
COEB				*e*S	**Sb**	**06 46 57.6**	**-1.0**
COEB				IAML		06 47 04.2	
	comp=Z,356nm,0.4s						
PQSS	**Presa 15 de Se**	**1.16**	**344**	⇑*e*P	**Pg**	**06 46 47.1**	**-0.1**
PQSS				*e*S	**Sb**	**06 47 01.4**	**-0.8**
CRIN	**San Cristobal**	**1.17**	**80**	*e*P	**Pn**	**06 46 48.1**	**+0.7**
COEG	**Centro de Oper**	**1.28**	**331**	*e*P	**Pb**	**06 46 48.6**	**-0.5**
COEG				IAML		06 47 07.7	
	comp=Z,334nm,0.3s						
SCLA	**Alcaldia de Sa**	**1.29**	**338**	*e*P	**Pb**	**06 46 49.1**	**-0.1**
SJTE	**Alcalda de S**	**1.34**	**326**	⇓*i* P	**Pb**	**06 46 49.6**	**-0.5**
PAVA	**Las Pavas**	**1.39**	**330**	*e*P	**Pn**	**06 46 50.6**	**+0.2**
PAVA				*e*S	**Sb**	**06 47 07.8**	**-1.0**
CNGN	**Cerro Negro**	**1.50**	**90**	*e*P	**Pn**	**06 46 51.5**	**-0.3**
NUBE	**Las Nubes**	**2.05**	**313**	*e*P	**Pn**	**06 47 00.5**	**+0.9**
MATN	**Matagalpa**	**2.29**	**79**	*e*P	**Pn**	**06 47 02.6**	**-0.3**

*IDC **31** 06:50:34.2±1.1, 26°.66S×178°.43W, h276km±10km, mb3.4/5, mbtmp4.4/8, Error ellipse: s-maj=20.2km s-min=16.7km az=82.0*

ISC 31 06:50:34.6±0.6, 26°.89S±0°.06×178°.3W±0°.1, h300km, n55, σ2.9 11/60, mb3.6/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**2.38**	**172**	P	**Pn**	**06 51 24.6**	**+0.2**
RIZ				S	**S**	**06 52 03.5**	**-0.7**
RAO	**Raoul Island**	**2.38**	**171**	P	**Pn**	**06 51 25.2**	**+0.6**
	2μm,0.3s,baz=337,slow=2.7,SNR=20						
RAO				S	**S**	**06 52 04.4**	**+0.1**
	1μm,0.4s,baz=90,slow=23,SNR=9.9						
GLKZ	**Green Lake**	**2.39**	**171**	P	**Pn**	**06 51 24.7**	**+0.1**
GLKZ				S	**S**	**06 52 04.6**	**+0.2**
MSVF	**Nonsavu**	**9.71**	**339**	P	**Pn**	**06 52 47.1**	**-2.3**
	68nm,0.8s,baz=161,slow=9.6,SNR=36						
OUZ	**Omahuta**	**10.81**	**218**	P	**P**	**06 53 07.3**	**+2.1**
WCZ	**Waipu Caves**	**10.98**	**213**	P	**P**	**06 53 08.8**	**+1.7**
MXZ	**Matakaoa Point**	**11.02**	**194**	P	**Pn**	**06 53 02.2**	**-2.8**
MXZ				S	S	06 54 57.2	-11
WMGZ	**Waiomatatini S**	**11.24**	**193**	P	**Pn**	**06 53 07.6**	**-0.2**
WMGZ				S	S	06 55 02.6	-11
HAZ	**Te Kaha**	**11.32**	**196**	P	Pn	06 53 05.1	-3.7
HAZ				S	S	06 55 09.8	-5.4
PKGZ	**Pakihiroa**	**11.38**	**195**	P	**Pn**	**06 53 09.2**	**-0.3**
PKGZ				S	S	06 55 07.5	-9.2
PUZ	**Puketiti**	**11.52**	**194**	P	**Pn**	**06 53 08.8**	**-2.4**
PUZ				S	S	06 55 12.5	-7.2
RUGZ	**Raukumara Rang**	**11.55**	**196**	P	**Pn**	**06 53 08.9**	**-2.8**
RUGZ				S	S	06 55 11.4	-9.1
HBAZ	**Herne Bay Bore**	**11.55**	**209**	P	**P**	**06 53 15.5**	**+2.1**
EPAZ	**Eden Park BICE**	**11.56**	**209**	P	**P**	**06 53 16.2**	**+2.6**
TWGZ	**Tauwhareparae**	**11.68**	**195**	S	S	06 55 17.1	-6.2
MWZ	**Matawai**	**11.94**	**196**	P	**Pn**	**06 53 14.2**	**-2.1**
MWZ				S	S	06 55 20.6	-8.6
TKGZ	**Te Karaka**	**11.96**	**195**	P	**Pn**	**06 53 15.3**	**-1.3**
TKGZ				S	S	06 55 20.0	-10
URZ	**Urewera**	**11.97**	**198**	P	**Pn**	**06 53 16.1**	**-0.5**
	3.1nm,0.3s,baz=349,slow=4.5,SNR=30						
URZ				S	S	06 55 24.4	-5.5
	13nm,0.3s,baz=336,slow=21,SNR=14						
URZ	**Urewera**	**11.97**	**198**	P	**Pn**	**06 53 14.4**	**-2.3**
URZ				S	S	06 55 22.9	-7.0
RIGZ	**Rimuhau**	**12.23**	**195**	P	**Pn**	**06 53 19.2**	**-0.7**
RIGZ				S	S	06 55 26.7	-9.2
MUGZ	**Murupara**	**12.27**	**198**	P	**Pn**	**06 53 18.1**	**-2.2**
MUGZ				S	S	06 55 27.1	-9.5
RTZ	**Ruatahuna**	**12.34**	**197**	P	Pn	06 53 17.2	-4.1
RTZ				S	S	06 55 28.9	-9.4
TLZ	**Tolley Road**	**12.52**	**203**	P	**P**	**06 53 25.8**	**+1.6**
RAHZ	**Arahi**	**12.60**	**197**	P	**Pn**	**06 53 23.5**	**-0.8**
RAHZ				S	S	06 55 36.4	-7.6
MTHZ	**Maungataniwha**	**12.60**	**198**	P	**Pn**	**06 53 22.7**	**-1.7**
MTHZ				S	S	06 55 37.7	-6.4
BKZ	**Black Stump Fm**	**12.99**	**198**	P	**Pn**	**06 53 27.3**	**-1.7**
BKZ				S	S	06 55 43.4	-9.4
NTVZ	**North Tongarir**	**13.17**	**201**	P	**Pn**	**06 53 30.9**	**-0.4**
NTVZ				S	**S**	**06 55 53.5**	**-3.6**
TMVZ	**Te Maari**	**13.18**	**201**	P	**Pn**	**06 53 30.7**	**-0.7**
TMVZ				S	**S**	**06 55 55.4**	**-1.8**
ETVZ	**East Tongariro**	**13.20**	**201**	P	**Pn**	**06 53 30.9**	**-0.7**
ETVZ				S	**S**	**06 55 54.5**	**-3.0**
MCHZ	**McNeill Hill**	**13.20**	**197**	P	**Pn**	**06 53 30.8**	**-0.6**
MCHZ				S	S	06 55 51.2	-6.1
OTVZ	**Oturere**	**13.23**	**201**	P	**Pn**	**06 53 30.7**	**-1.4**
OTVZ				S	**S**	**06 55 56.4**	**-2.0**
KWHZ	**Kaweka Forest**	**13.25**	**198**	P	**P**	**06 53 29.7**	**-2.7**
KWHZ				S	S	06 55 51.7	-7.0
SNVZ	**South Ngauruho**	**13.26**	**201**	P	**P**	**06 53 31.8**	**-0.8**
SNVZ				S	**S**	**06 55 53.8**	**-5.3**
BHHZ	**Black Hill Sta**	**13.41**	**199**	P	**P**	**06 53 31.8**	**-2.4**
BHHZ				S	S	06 55 54.3	-8.0
MOVZ	**Moawhango**	**13.43**	**200**	P	**P**	**06 53 32.1**	**-2.2**
MOVZ				S	S	06 55 55.2	-7.4
KAHZ	**Kahuranaki**	**13.48**	**196**	P	**P**	**06 53 32.8**	**-2.0**
KAHZ				S	S	06 55 55.9

PNHZ				S	S	06 55 60.0	-10
PRHZ	**Porangahau**	**13.99**	**196**	P	**P**	**06 53 37.8**	**-2.6**
PRHZ				S	S	06 56 08.4	-6.1
ANWZ	**Angora Road**	**14.21**	**196**	P	**P**	**06 53 41.5**	**-1.3**
ANWZ				S	S	06 56 10.0	-9.1
AFI	**Afiamalu**	**14.29**	**27**	P	**P**	**06 53 41.3**	**-2.8**
	24nm,0.5s,baz=166,slow=1.5,SNR=6.9						
BFZ	**Birch Farm**	**14.48**	**197**	P	**P**	**06 53 44.0**	**-1.8**
BFZ				S	S	06 56 14.6	-10
DZM	**Mont Dzumac**	**14.67**	**286**	P	**Pn**	**06 53 48.7**	**-0.6**
	10nm,0.7s,baz=194,slow=17,SNR=12						
ASAR	**Alice Springs**	**43.12**	**263**	P	**P**	**06 58 07.2**	**+0.9**
	2.5nm,0.6s,baz=97,slow=7.3,SNR=47						
	2.5nm,0.6s						
WRA	**Warramunga Arr**	**43.78**	**269**	P	**P**	**06 58 12.1**	**+0.5**
	2.5nm,0.7s,baz=106,slow=7.3,SNR=32						
	2.5nm,0.7s						
QSPA	**South Pole Qui**	**63.21**	**180**	P	**P**	**07 00 35.1**	**+3.9**
	1.0nm,0.8s,baz=175,slow=0.5,SNR=2.3						
	1.0nm,0.8s						
MAW	**Mawson**	**75.49**	**200**	P	**P**	**07 01 49.1**	**+3.4**
	1.3nm,0.6s,baz=150,slow=6.3,SNR=8.0						
	1.3nm,0.6s						
TROLL	**Troll, Antarti**	**81.37**	**180**	P	**P**	**07 02 20.8**	**+2.9**
VNA3	**Neumayer Olymp**	**81.82**	**176**	P	**P**	**07 02 22.7**	**+2.7**
VNA2	**Neumayer--Watz**	**82.25**	**177**	P	**P**	**07 02 25.3**	**+3.0**
	baz=183,slow=4.0						
VNA1	**Neumayer--Stat**	**82.48**	**177**	P	**P**	**07 02 26.4**	**+3.0**
NVAR	**Mina Array Bea**	**85.87**	**43**	P	**P**	**07 02 42.9**	**+1.8**
	0.4nm,0.5s,baz=216,slow=9.2,SNR=4.3						
	0.4nm,0.5s						
NOA	**NORSAR Array B**	**145.25**	**352**	PKPbc	**PKiKP**	**07 09 38.0**	**-2.1**
	1.2nm,0.8s,baz=13,slow=3.0,SNR=3.5						
HFS	**Hagfors**	**145.75**	**349**	PKPbc	**PKPab**	**07 09 38.2**	**-0.7**
	1.1nm,0.4s,baz=72,slow=4.7,SNR=7.5						
AKASG	**Malin Array Be**	**148.29**	**326**	PKPbc	**PKiKP**	**07 09 45.5**	**-1.1**
	0.7nm,0.3s,baz=43,slow=4.1,SNR=4.3						

NEIC ***31*** *06:52:14.3±1.6,23°.0S±0°.2×175°.8W±0°.2,h109km±11km, mb4.5/17, Error ellipse: s-maj=31.4km s-min=7.1km az=219.0*

IDC ***31*** *06:52:19.9±6.6,22°.86S×176°.41W,h138km±50km,mb4.0/6, mbtmp4.4/7,MS3.1/4, Error ellipse: s-maj=61.8km s-min=23.0km az=142.0*

ISC 31 06:52:14.4±0.9,23°.1S±0°.1×176°.0W±0°.1,h100km,n36, σ1§14/29,mb4.4/15,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.68**	**313**	P	**Pn**	**06 54 03.8**	**+0.1**
	18nm,0.7s,baz=138,slow=14,SNR=7.5						
MSVF				LR	LR	06 56 48.3	
	comp=Z,125nm,21.8s,baz=105,slow=37						
MSVF	**Nonsavu**	**7.68**	**313**		**Pn**	**06 54 04.3**	**+0.6**
RAR	**Rarotonga**	**15.19**	**86**	LR	LR	07 00 12.1	
	comp=Z,80nm,21.6s,baz=132,slow=30						
DZM	**Mont Dzumac**	**16.21**	**270**	P	**P**	**06 56 00.6**	**+2.9**
	4.2nm,0.6s,baz=75,slow=16,SNR=5.0						
TBI	**Tubuai**	**24.42**	**96**	*e*LR	LR	07 03 15.2	
	comp=Z,447nm,32.5s						
TBI	**Tubuai**	**24.42**	**96**	*e*T	T	07 22 30.2	
	1.4nm,0.2s						
PPT2	**Papeete2**	**25.39**	**82**	*e*LR	LR	07 03 35.0	
	comp=Z,87nm,26.8s						
PPT2	**Papeete2**	**25.39**	**82**	*e*T	T	07 23 07.6	
	1.3nm,0.2s						
PPT	**Papeete**	**25.40**	**82**	LR	LR	07 06 16.4	
	comp=Z,12nm,21.1s,baz=308,slow=33						
EIDS	**Eidsvold**	**30.03**	**259**	P	**P**	**06 58 15.1**	**+1.2**
EIDS				IAmb	IAmb	06 58 16.1	
	comp=Z,4.2nm,0.7s						
CTAO	**Charters Tower**	**35.12**	**268**	P	**P**	**06 58 58.7**	**+0.3**
CTAO				IAmb	IAmb	06 58 59.8	
	comp=Z,11nm,0.7s						
PMG	**Port Moresby**	**37.73**	**285**	P	**P**	**06 59 19.3**	**-1.4**
	comp=Z,15nm,0.6s,baz=176,slow=8.8,SNR=3.7						
	comp=Z,15nm,0.6s						
STKA	**Stephens Creek**	**38.39**	**247**	P	**P**	**06 59 25.9**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=92,slow=10,SNR=9.3						
	comp=Z,2.0nm,0.4s						
STKA	**Stephens Creek**	**38.39**	**247**	P	**P**	**06 59 27.3**	**+1.2**
PATS	**Pohnpei**	**38.90**	**317**	P	**P**	**06 59 29.0**	**-1.5**
COEN	**Coen**	**39.61**	**276**	P	**P**	**06 59 37.6**	**+1.1**
COEN				IAmb	IAmb	06 59 48.4	
	comp=Z,7.6nm,1.0s						
BBOO	**Buckleboo**	**43.10**	**246**	P	**P**	**07 00 04.6**	**-0.2**
BBOO				IAmb	IAmb	07 00 14.0	
	comp=Z,16nm,1.3s						
AS31	**Alice Springs**	**45.75**	**259**	P	**P**	**07 00 26.0**	**-0.1**
ASAR	**Alice Springs**	**45.75**	**259**	P	**P**	**07 00 25.7**	**-0.4**
	comp=Z,3.8nm,0.4s,baz=98,slow=7.3,SNR=45						
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**45.75**	**259**	P	**P**	**07 00 25.5**	**-0.6**
WR0	**Warramunga Arr**	**45.91**	**264**	P	**P**	**07 00 26.2**	**-1.0**
WR0				IAmb	IAmb	07 00 48.5	
	comp=Z,7.5nm,1.4s						
WB2	**Warramunga Arr**	**46.08**	**264**	P	**P**	**07 00 27.6**	**-1.1**
WB2				IAmb	IAmb	07 00 53.0	
	comp=Z,6.9nm,1.4s						
WB0	**Warramunga Arr**	**46.09**	**264**	P	**P**	**07 00 27.5**	**-1.2**
WB0				IAmb	IAmb	07 00 50.0	
	comp=Z,7.8nm,1.3s						
WRA	**Warramunga Arr**	**46.09**	**264**	P	**P**	**07 00 27.7**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=90,slow=5.9,SNR=31						
	comp=Z,1.4nm,0.4s						
WRA	**Warramunga Arr**	**46.09**	**264**	P	**P**	**07 00 27.8**	**-1.0**
FORT	**Forrest**	**49.99**	**248**	P	**P**	**07 00 59.0**	**+0.4**
KNRA	**Kununurra**	**52.34**	**268**	P	**P**	**07 01 15.8**	**-0.6**
MBWA	**Marble Bar**	**59.09**	**258**	P	**P**	**07 02 02.2**	**-2.4**
MORW	**Morawa**	**60.56**	**249**	P	**P**	**07 02 14.7**	**+0.1**
MORW				IAmb	IAmb	07 02 16.6	
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**67.00**	**180**	P	**P**	**07 02 56.0**	**-0.4**
QSPA				IAmb	IAmb	07 03 11.0	
	comp=Z,7.0nm,1.5s						
SNAA	**Sanae**	**85.38**	**178**	P	**P**	**07 04 39.6**	**-0.6**
PLCA	**Paso Flores**	**86.19**	**133**	LR	LR	07 35 08.9	
	comp=Z,37nm,20.6s,baz=196,slow=30						
TXAR	**Lajitas Array**	**86.94**	**56**	P	**P**	**07 04 50.4**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=216,slow=7.8,SNR=6.2						
	comp=Z,0.6nm,0.8s						
SEY	**Seymchan**	**89.30**	**346**	P	**P**	**07 04 58.2**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=184,slow=5.8,SNR=6.7						
	comp=Z,3.0nm,0.6s						
ARCES	**ARCESS Array B**	**131.78**	**350**	PKP	**PKPdf**	**07 11 15.1**	**+0.1**
	comp=Z,4.3nm,1.1s,baz=18,slow=1.5,SNR=6.1						
AKASG	**Malin Array Be**	**146.15**	**331**	PKPbc	**PKPdf**	**07 11 42.0**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=42,slow=4.5,SNR=15						

MOS ***31*** *07:05:43.8±1.6,42°.86N×13°.17E,h9km,mb4.7/17, Error ellipse: s-maj=5.9km s-min=3.5km az=81.7*

IDC ***31*** *07:05:45.0±0.7,42°.84N×13°.07E,h0km,mb4.2/19, mbtmp4.1/30,ML3.8/11,MS3.2/20, Error ellipse: s-maj=13.2km s-min=12.1km az=72.0*

LDG ***31*** *07:05:44.4±0.1,42°.83N×13°.10E,h10km,Ml3.8/39, Error ellipse: s-maj=2.4km s-min=1.7km az=30.0*

ROM ***31*** *07:05:44.9±0.0,42°.839N±0°.001×13°.126E±0°.003, h10km,ML4.1/96,Mw4.0, Error ellipse: s-maj=0.1km s-min=0.1km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.75; Mθθ0.01; Mφφ0.73; Mrθ0.03; Mθφ-0.10; Mφr-0.84; Fault plane solution: M0 1.12349×10¹⁵ NP1:φs168.00000°,δ21.00000°, λ-98.00000°. NP2:φs356.00000°,δ69.00000°, λ-87.00000°.*

NEIC ***31*** *07:05:45.8,42°.85N×13°.06E,h3km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-9.92; Mθθ1.76; Mφφ8.16; Mrθ0.30; Mθφ-0.60; Mφr2.32; Fault plane solution: M0 9.48000×10¹⁴ NP1:φs177.40000°, δ52.11000°, λ-87.02000°. NP2:φs352.55000°, δ37.99000°, λ-93.83000°. Principal axes: T 8.5015, Plg7.0000°, Azm265.0000°; N 1.7219, Plg2.0000°, Azm356.0000°; P -10.2234, Plg83.0000°, Azm104.0000°;*

PDG ***31*** *07:05:45.4±0.7,42°.84N×13°.14E,h12km,MD4.4/1, ML4.4/13 Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

MED_RC ***31*** *07:05:45.0±0.4,42°.83N×13°.17E,h10km,MW4.2/14, Moment Tensor Solution.Mantle waves: s14,c16; Duration: 1§0 Moment tensor: Scale 10¹⁵Nm; Mrr-1.51±.13; Mθθ0.42±.16; Mφφ1.09±.10; Mrθ-0.17±.34; Mθφ0.03±.11; Mφr-1.64±.25; Best double couple: M0 2.10000×10¹⁵ NP1:φs-5.00000°,δ71.00000°, λ-89.00000°. NP2:φs183.00000°,δ19.00000°, λ-93.00000°. Principal axes: T 1.8900, Plg26.0000°, Azm95.0000°; N 0.4200, Plg1.0000°, Azm185.0000°; P -2.3100, Plg64.0000°, Azm277.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***31*** *07:05:45.0±2.5,42°.85N±0°.05×13°.09E±0°.07,h17km±2km, mb4.3/9,Mwr3.9/31,ML4.0(ROM),ML4.2(VIE) Error ellipse: s-maj=8.0km s-min=7.2km az=193.0*

BEO ***31*** *07:05:46.1±0.7,42°.86N×13°.11E,h6km±2km,ML4.2/15*

STR ***31*** *07:05:47.3±0.3,43°N±5°×1°3E±°,h10km,MLv4.2/45, Error ellipse: s-maj=0.0km s-min=0.0km az=23.1, preliminary*

PRU ***31*** *07:05:48.1±0.0,42°.88N×13°.33E,h10km,M4.3*

ISC 31 07:05:45.4±0.6,42°.84N±0°.01×13°.10E±0°.01,h11km±4km, n652,σ2§13/740,mb4.4/32,MS3.2/11,85C-20D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**72**	⇓P	**Pg**	**07 05 47.1**	**-0.8**
T1245				S	**Sg**	**07 05 48.5**	**-1.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.08**	**313**	⇑P	**Pg**	**07 05 47.8**	**-0.1**
T1216				S	**Sg**	**07 05 49.6**	**-0.1**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.13**	**344**	⇑P	**Pg**	**07 05 48.5**	**-0.1**
FEMA				S	**Sg**	**07 05 50.8**	**-0.2**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1244	**Arquata del Tr**	**0.17**	**118**	⇑P	**Pg**	**07 05 49.0**	**-0.1**
T1244				S	**Sg**	**07 05 51.8**	**+0.1**
T1215	**Vallo di Nera,**	**0.17**	**259**	⇑P	**Pg**	**07 05 49.7**	**+0.5**
T1215				S	**Sg**	**07 05 52.9**	**+1.0**
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1215				AML	AML		
T1217	**Poggiodomo (PG**	**0.17**	**225**	⇑P	**Pg**	**07 05 49.7**	**+0.5**
T1217				S	**Sg**	**07 05 53.1**	**+1.1**
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
T1217				AML	AML		
MMO1	**Montemonaco**	**0.18**	**69**	⇑P	**Pg**	**07 05 48.9**	**-0.4**
MMO1				S	**Sg**	**07 05 51.6**	**-0.5**
T1256	**Bolognola (MC)**	**0.19**	**29**	⇑P	**Pg**	**07 05 49.2**	**-0.4**
T1256				S	**Sg**	**07 05 52.2**	**-0.4**
T1201	**Domo (RI)**	**0.21**	**148**	⇑P	**Pg**	**07 05 50.2**	**+0.3**
T1201				S	**Sg**	**07 05 53.8**	**+0.9**
T1204	**Amatrice, Fraz**	**0.23**	**135**	⇑P	**Pg**	**07 05 50.2**	**0.0**
T1204				S	**Sg**	**07 05 54.0**	**+0.6**
T1204				AML	AML		
T1204				AML	AML		
T1204				AML	AML		
AM05	**Amandola Campo**	**0.23**	**53**	⇑P	**Pg**	**07 05 50.0**	**-0.3**
AM05				S	**Sg**	**07 05 53.4**	**-0.2**
AM05				AML	AML		
	comp=N,63150μm,0.4s						
AM05				AML	AML		
	comp=N,63100μm,0.4s						
AM05				AML	AML		
	comp=N,11900μm,0.3s						
AM05				AML	AML		
	comp=E,68150μm,0.6s						
AM05				AML	AML		
LNSS	**Leonessa**	**0.24**	**191**	P	**Pg**	**07 05 50.6**	**+0.3**
LNSS				S	**Sg**	**07 05 54.6**	**+0.9**
T1241	**Roccafluvione,**	**0.24**	**85**	⇑P	**Pg**	**07 05 50.2**	**-0.3**
T1241				S	**Sg**	**07 05 54.1**	**+0.2**
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
SMA1	**SAN MARTINO**	**0.27**	**140**	⇑P	**Pg**	**07 05 50.8**	**-0.2**
SMA1				S	**Sg**	**07 05 55.1**	**+0.5**
SMA1				AML	AML		
SMA1				AML	AML		
GUMA	**Gualdo di Mace**	**0.28**	**37**	⇑P	**Pb**	**07 05 51.2**	**-1.4**
GUMA				S	**Sb**	**07 05 56.0**	**-1.4**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.29**	**118**	⇑P	**Pg**	**07 05 51.0**	**-0.4**
T1243				S	**Sg**	**07 05 55.5**	**+0.2**
SEF1	**Sefro**	**0.33**	**340**	⇑P	**Pg**	**07 05 52.0**	**-0.1**
SEF1				S	**Sb**	**07 05 57.3**	**-1.4**
SEF1				AML	AML		
	comp=E,78950μm,0.7s						
SEF1				AML	AML		
	comp=N,63800μm,1.4s						
SEF1				AML	AML		
	comp=E,78950μm,0.7s						
SEF1				AML	AML		
	comp=N,63800μm,1.3s						
RM33	**Pellescritta (**	**0.34**	**165**	⇑P	**Pg**	**07 05 52.2**	**0.0**
RM33				S	**Sb**	**07 05 57.7**	**-1.2**
T1211	**Morro Reatino**	**0.35**	**211**	P	**Pg**	**07 05 52.7**	**+0.3**
T1211				S	**Sb**	**07 05 58.8**	**-0.5**
PIO1	**Pioraco**	**0.35**	**346**	P	**Pg**	**07 05 52.4**	**0.0**
PIO1				S	**Sb**	**07 05 58.2**	**-1.1**
PIO1				AML	AML		
	comp=E,29550μm,0.8s						
PIO1				AML	AML		
	comp=N,54800μm,0.6s						
ARRO	**Arrone**	**0.35**	**224**	⇑P	**Pg**	**07 05 52.8**	**+0.4**
ARRO				S	**Sb**	**07 05 58.7**	**-0.6**
MDAR	**Monte D'Aria**	**0.36**	**5**	P	**Pg**	**07 05 52.3**	**-0.3**
MDAR				S	**Sb**	**07 05 58.1**	**-1.4**
MDAR				AML	AML		
	comp=E,30900μm,0.7s						
MDAR				AML	AML		
	comp=N,32650μm,0.6s						
FIU1	**Fiuminata**	**0.37**	**341**	P	**Pg**	**07 05 52.7**	**-0.1**
FIU1				S	**Sb**	**07 05 58.8**	**-1.1**
FIU1				AML	AML		
	comp=E,32800μm,0.2s						
FIU1				AML	AML		
	comp=N,32400μm,0.1s						
FIU1				AML	AML		
	comp=N,32450μm,0.1s						
FIU1				AML	AML		
	comp=E,32750μm,0.2s						
ASSB	**Assisi San Ben**	**0.38**	**303**	⇑P	**Pg**	**07 05 53.1**	**+0.1**
ASSB				S	**Sb**	**07 05 59.2**	**-1.0**
T1246	**Crognaleto (TE**	**0.39**	**131**	⇑P	**Pg**	**07 05 52.7**	**-0.4**
T1246				S	**Sg**	**07 05 58.3**	**+0.2**
SSM1	**San Severino M**	**0.40**	**8**	P	**Pg**	**07 05 53.0**	**-0.3**
SSM1				S	**Sb**	**07 05 59.4**	**-1.2**
GAG1	**Gagliole**	**0.40**	**357**	P	**Pg**	**07 05 53.3**	**-0.1**
GAG1				AML	AML		
GAG1				AML	AML		
	comp=N,93650μm,0.7s						
GAG1				AML	AML		
	comp=N,93600μm,0.7s						
GAG1				AML	AML		
MNTP	**Montappone**	**0.41**	**42**	P	**Pb**	**07 05 53.6**	**-1.0**
T1247	**Pizzolo (AQ)**	**0.42**	**159**	⇑P	**Pg**	**07 05 53.5**	**-0.1**
T1247				S	**Sb**	**07 06 00.4**	**-0.9**
TERO	**Teramo**	**0.43**	**120**	⇑P	**Pg**	**07 05 53.3**	**-0.5**
TERO				S	**Sg**	**07 05 59.6**	**+0.1**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
SNTG	**Esanatoglia**	**0.43**	**345**	P	**Pg**	**07 05 53.7**	**-0.2**
SNTG				S	**Sb**	**07 06 00.8**	**-0.9**
SNTG				AML	AML		
	comp=E,24700μm,0.7s						
SNTG				AML	AML		
	comp=N,25550μm,0.5s						
SNTG				AML	AML		
	comp=E,25250μm,0.7s						
SNTG				AML	AML		
	comp=N,26550μm,0.5s						
OFFI	**Offida**	**0.44**	**77**	⇑P	**Pb**	**07 05 54.4**	**-0.8**
OFFI				AML	AML		
	comp=N,99850μm,0.7s						
OFFI				AML	AML		
CESX	**Cesi**	**0.44**	**240**		**Pg**	**07 05 53.9**	**-0.2**
CESX	**Cesi**	**0.44**	**240**	⇑P	**Pg**	**07 05 54.2**	**+0.1**
CESX				S	**Sb**	**07 06 01.7**	**-0.2**
CESX				AML	AML		
	comp=E,77450μm,0.7s						
CESX				AML	AML		
	comp=N,56050μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.48**	**316**	⇑P	**Pg**	**07 05 55.0**	**+0.1**
ATCC				S	**Sb**	**07 06 02.9**	**-0.2**
ATCC				AML	AML		
	comp=E,93350μm,0.9s						
ATCC				AML	AML		
	comp=N,48850μm,0.8s						
EL6	**Elcito**	**0.49**	**0**	P	**Pg**	**07 05 54.7**	**-0.4**
EL6				S	**Sb**	**07 06 02.4**	**-1.0**
TRE1	**Treia**	**0.50**	**18**	P	**Pb**	**07 05 55.2**	**-1.0**
TRE1				AML	AML		
	comp=N,41050μm,0.4s						
TRE1				AML	AML		
	comp=E,69200μm,0.7s						
GIGS	**Gran Sasso**	**0.52**	**138**	⇑P	**Pg**	**07 05 54.8**	**-0.8**
GIGS				S	**Sg**	**07 06 02.3**	**-0.1**
FOSV	**Fossato di Vic**	**0.52**	**332**	⇑P	**Pg**	**07 05 55.4**	**-0.1**
FOSV				S	**Sb**	**07 06 03.7**	**-0.5**
FOSV				AML	AML		
	comp=E,45300μm,0.2s						
FOSV				AML	AML		
	comp=N,28600μm,0.3s						
AQU	**L'Aquila**	**0.53**	**155**		**Pg**	**07 05 55.3**	**-0.4**
AQU	**L'Aquila**	**0.53**	**155**	P	**Pg**	**07 05 55.2**	**-0.5**
AQU				S	**Sb**	**07 06 03.4**	**-1.0**
AQU	**L'Aquila**	**0.53**	**155**	⇑P	**Pg**	**07 05 55.4**	**-0.4**
FIAM	**Fiamignano**	**0.57**	**179**	P	**Pg**	**07 05 56.0**	**-0.4**
FIAM				S	**Sg**	**07 06 04.7**	**+0.8**
MURB	**Monte Urbino**	**0.60**	**316**		**Pg**	**07 05 57.0**	**-0.1**
MURB	**Monte Urbino**	**0.60**	**316**	P	**Pg**	**07 05 57.0**	**-0.1**
MURB				AML	AML		
	comp=N,59900μm,0.8s						
MURB				AML	AML		
	comp=E,76150μm,0.8s						
MURB				AML	AML		
	comp=E,71500μm,0.8s						
MURB				AML	AML		
	comp=N,61450μm,1.4s						
TRTR	**Tortoreto Alta**	**0.60**	**92**	⇑P	**Pb**	**07 05 57.6**	**-0.3**
CADA	**Capodarco di F**	**0.60**	**53**	P	**Pb**	**07 05 57.8**	**-0.2**
CADA				AML	AML		
CADA				AML	AML		
MMUR	**Monte Murano**	**0.61**	**353**	P	**Pg**	**07 05 57.0**	**-0.2**
MMUR				S	**Sb**	**07 06 06.3**	**-0.5**
CIMA	**Civitanova Mar**	**0.63**	**41**	P	**Pb**	**07 05 58.0**	**-0.5**
ATFO	**Monte Foce - G**	**0.66**	**324**	P	**Pg**	**07 05 58.0**	**-0.2**
ATFO				S	**Sb**	**07 06 07.8**	**-0.3**
ATFO				AML	AML		
	comp=E,21300μm,1.5s						
ATFO				AML	AML		
	comp=N,16100μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.66**	**304**	⇑P	**Pg**	**07 05 57.9**	**-0.2**
ATTE				AML	AML		
	comp=E,15650μm,0.4s						
ATTE				AML	AML		
	comp=N,15250μm,0.8s						
PP3	**Marolino**	**0.66**	**34**	⇑P	**Pb**	**07 05 58.4**	**-0.5**
PP3				AML	AML		
	comp=N,47900μm,0.5s						
PP3				AML	AML		
	comp=E,56150μm,0.4s						
PP3				AML	AML		
	comp=N,48800μm,0.5s						
PP3				AML	AML		
	comp=E,55750μm,0.4s						
ATSC	**Scheggia e Pas**	**0.66**	**333**	P	**Pg**	**07 05 57.8**	**-0.4**
ATSC				S	**Sb**	**07 06 08.0**	**-0.3**
ARVD	**Arcevia**	**0.67**	**350**	P	**Pg**	**07 05 57.9**	**-0.5**
ARVD				S	**Sb**	**07 06 08.0**	**-0.5**
ARVD				AML	AML		
	comp=N,8040μm,0.8s						
ARVD				AML	AML		
	comp=E,12850μm,0.4s						
FAGN	**Fagnano**	**0.67**	**148**	P	**Pg**	**07 05 57.6**	**-0.8**
ATLO	**AVT- Montelove**	**0.70**	**314**	P	**Pg**	**07 05 58.6**	**-0.3**
VCEL	**Villa Celiera**	**0.70**	**129**	⇑P	**Pg**	**07 05 58.3**	**-0.7**
MGAB	**Montegabbione**	**0.73**	**276**	⇑P	**Pg**	**07 05 59.5**	**0.0**
MGAB				AML	AML		
	comp=E,41750μm,0.5s						
MGAB				AML	AML		
	comp=N,34350μm,0.5s						
MGAB				AML	AML		
	comp=N,35350μm,0.5s						
MGAB				AML	AML		
	comp=E,46200μm,0.5s						
FRON	**Frontone**	**0.73**	**338**	P	**Pg**	**07 05 59.0**	**-0.6**
FRON				S	**Sb**	**07 06 10.3**	**0.0**
FRON				AML	AML		
	comp=N,15850μm,0.5s						
FRON				AML	AML		
	comp=E,11650μm,1.0s						
TB02	**Pietralunga**	**0.73**	**317**	P	**Pg**	**07 05 59.2**	**-0.4**
TB02				S	**Sb**	**07 06 10.4**	**0.0**
SRES	**S.Oreste - Sor**	**0.74**	**216**	P	**Pg**	**07 05 59.3**	**-0.4**
ATVA	**AVT- Monte Val**	**0.74**	**307**	P	**Pg**	**07 05 59.5**	**-0.2**
ATVO	**AVT- Monte Val**	**0.74**	**317**	⇑P	**Pg**	**07 05 59.4**	**-0.4**
ATVO				AML	AML		
	comp=N,15600μm,0.8s						
ATVO				AML	AML		
	comp=E,14900μm,0.8s						
ATBU	**Serra di Buran**	**0.76**	**328**	P	**Pg**	**07 05 59.8**	**-0.2**
TB03	**Pietralunga**	**0.76**	**318**	P	**Pg**	**07 05 59.5**	**-0.5**
ATMI	**Monte Miggiano**	**0.79**	**310**	P	**Pg**	**07 06 00.4**	**-0.2**
ATMI				AML	AML		
	comp=E,42100μm,0.7s						
ATMI				AML	AML		
	comp=N,43850μm,0.9s						
T0110	**Collepietro**	**0.79**	**140**	⇑P	**Pg**	**07 05 59.4**	**-1.2**
ATPC	**Poggio Castell**	**0.80**	**324**	P	**Pg**	**07 06 00.4**	**-0.4**
ATPI	**Pietralunga -**	**0.80**	**321**	P	**Pg**	**07 06 00.4**	**-0.4**
ATPI				AML	AML		
	comp=E,12500μm,0.7s						
ATPI				AML	AML		
	comp=N,11750μm,0.7s						
AOI	**Ancona**	**0.80**	**27**	⇑P	**Pg**	**07 06 00.3**	**-0.5**
AOI				AML	AML		
	comp=E,17950μm,1.0s						
AOI				AML	AML		
	comp=N,10525μm,0.4s						
PIEI	**Pieia**	**0.81**	**330**	P	**Pg**	**07 06 00.4**	**-0.7**
PIEI				AML	AML		
	comp=N,7135μm,1.6s						
PIEI				AML	AML		
	comp=E,10330μm,0.3s						
MPAG	**Monte Paganucc**	**0.83**	**343**	P	**Pg**	**07 06 00.8**	**-0.6**
MPAG				AML	AML		
	comp=N,11300μm,1.4s						
MPAG				AML	AML		
	comp=N,10890μm,1.4s						
MPAG				AML	AML		
	comp=E,9595μm,0.4s						
MPAG				AML	AML		
	comp=E,9820μm,0.4s						
PCRO	**Pietralacroce**	**0.83**	**22**	P	**Pb**	**07 06 01.2**	**-0.6**
PTQR	**Pietraquaria**	**0.84**	**165**	P	**Pg**	**07 06 00.5**	**-1.2**
MTCE	**Montecelio**	**0.85**	**198**	P	**Pg**	**07 06 00.7**	**-1.2**
SACS	**San Casciano d**	**0.88

SENI				AML	AML	
	comp=E,14445µm,0.8s					
APEC	**Apecchio**	**0.88 326**		P	**Pg**	**07 06 02.0 -0.3**
APEC				AML	AML	
	comp=N,2625µm,0.7s					
APEC				AML	AML	
	comp=E,3055µm,1.6s					
CDCA	**Citt' di Caste**	**0.89 315**		P	**Pg**	**07 06 02.4 -0.1**
FSSB	**Fossombrone**	**0.89 345**		P	**Pg**	**07 06 02.0 -0.5**
FSSB				AML	AML	
	comp=E,19350µm,0.4s					
FSSB				AML	AML	
	comp=N,27800µm,0.3s					
CERT	**Cerreto**	**0.89 186**		P	**Pg**	**07 06 01.5 -1.0**
ATMC	**Monte Cedrone**	**0.90 313**		P	**Pg**	**07 06 02.4 -0.4**
CAFI	**Castiglion Fio**	**0.97 301**		P	**Pg**	**07 06 03.5 -0.4**
CAFI				AML	AML	
	comp=E,9645µm,0.7s					
CAFI				AML	AML	
	comp=N,10400µm,0.7s					
CAFI				AML	AML	
	comp=E,9600µm,0.7s					
CAFI				AML	AML	
	comp=N,10950µm,0.7s					
PE3	**Peglio**	**0.97 333**		P	**Pg**	**07 06 03.7 -0.3**
PE3				AML	AML	
	comp=N,93µm,1.0s					
PE3				AML	AML	
	comp=E,84µm,1.0s					
LATE	**Laterza**	**0.98 257**			**Pg**	**07 06 03.8 -0.4**
LATE	**Laterza**	**0.98 257**	⇑P		**Pg**	**07 06 03.9 -0.3**
RCAV	**Rocca di Cave**	**0.99 187**		P	**Pg**	**07 06 04.3 -0.2**
SSP9	**Sansepolcro**	**1.02 317**		P	**Pg**	**07 06 04.7 -0.3**
SSP9				AML	AML	
	comp=N,8480µm,1.3s					
SSP9				AML	AML	
	comp=E,8465µm,0.8s					
VVLD	**Villa Vallelon**	**1.04 158**		P	**Pg**	**07 06 04.1 -1.2**
VVLD				AML	AML	
	comp=E,4430µm,0.5s					
VVLD				AML	AML	
	comp=N,3705µm,0.8s					
VVLD				AML	AML	
	comp=E,9705µm,1.2s					
VVLD				AML	AML	
	comp=N,9375µm,0.5s					
SF11	**Podere del Sol**	**1.04 272**		P	**Pg**	**07 06 05.4 -0.1**
MCIV	**Monte Civitell**	**1.05 267**		P	**Pg**	**07 06 05.0 -0.5**
MCIV				AML	AML	
	comp=E,5475µm,0.8s					
MCIV				AML	AML	
	comp=N,5770µm,1.0s					
GUAR	**Guarcino**	**1.05 171**		P	**Pg**	**07 06 05.3 -0.3**
SF04	**Casetta**	**1.06 270**		AML	AML	
	comp=E,8100µm,0.4s					
SF04				AML	AML	
	comp=N,9210µm,0.9s					
RMP	**Rome, Mte Porz**	**1.06 196**		P	**Pg**	**07 06 05.7 -0.2**
SF13	**Bagnolo**	**1.09 270**		P	**Pb**	**07 06 06.2 0.0**
SF14	**Selvena**	**1.10 266**		P	**Pb**	**07 06 05.8 -0.6**
CAFR	**Castel Frentan**	**1.10 123**		AML	AML	
	comp=N,11280µm,1.5s					
CAFR				AML	AML	
	comp=E,10820µm,0.5s					
MA9	**Marino**	**1.11 197**		P	**Pb**	**07 06 06.4 -0.2**
RDP	**Rocca di Papa**	**1.11 195**		P	**Pb**	**07 06 06.4 -0.3**
SAMA	**S.Maria delle**	**1.12 200**		P	**Pb**	**07 06 06.2 -0.5**
TOLF	**Tolfa**	**1.12 227**		P	**Pb**	**07 06 06.2 -0.6**
TOLF				AML	AML	
	comp=E,9315µm,0.5s					
TOLF				AML	AML	
	comp=N,7985µm,0.3s					
LPEL	**Lama dei Pelig**	**1.12 134**		P	**Pb**	**07 06 04.9 -1.9**
SF01	**Poggio Pratacc**	**1.13 269**		AML	AML	
	comp=N,8575µm,0.9s					
SF01				AML	AML	
	comp=E,10670µm,1.3s					
CRE	**Caprese Michel**	**1.15 313**		P	**Pb**	**07 06 06.9 -0.5**
CRE				AML	AML	
	comp=N,6325µm,1.3s					
CRE				AML	AML	
	comp=E,4740µm,1.5s					
RSM	**Repubblica di**	**1.19 337**		P	**Pg**	**07 06 07.9 -0.4**
ARCI	**Arcidosso**	**1.19 271**		P	**Pb**	**07 06 07.7 -0.4**
ARCI				AML	AML	
	comp=N,3150µm,1.0s					
ARCI				AML	AML	
	comp=E,2400µm,0.8s					
LAV9	**Lanuvio**	**1.20 195**		P	**Pn**	**07 06 07.8 -0.3**
POFI	**Posta Fibreno**	**1.21 158**		P	**Pb**	**07 06 06.6 -1.7**
LRP	**Arpino**	**1.24 163**		P	**Pn**	**07 06 08.4 -0.3**
GIUL	**Giuliano Di Ro**	**1.28 175**		P	**Pn**	**07 06 09.1 -0.2**
LATB	**Latina**	**1.34 184**		P	**Pn**	**07 06 09.7 -0.4**
ASQU	**Asqua**	**1.35 316**		P	**Pn**	**07 06 09.9 -0.5**
ASQU				AML	AML	
	comp=N,5835µm,0.9s					
ASQU				AML	AML	
	comp=E,3545µm,1.3s					
RNI2	**Rionero Sannit**	**1.38 145**		P	**Pn**	**07 06 09.9 -0.7**
SFI	**Santa Sofia**	**1.41 320**		P	**Pn**	**07 06 10.9 -0.1**
CERA	**Filignano**	**1.41 151**		P	**Pn**	**07 06 09.9 -1.2**
CSNT	**Castellina Chi**	**1.47 296**		P	**Pn**	**07 06 12.1 +0.2**
CSNT				AML	AML	
	comp=E,1880µm,0.8s					
CSNT				AML	AML	
	comp=N,2005µm,0.7s					
MIDA	**Miranda**	**1.47 144**		P	**Pn**	**07 06 10.8 -1.1**
FROS	**Frosini**	**1.47 285**		P	**Pn**	**07 06 12.0 +0.1**
FROS				AML	AML	
	comp=N,2535µm,1.4s					
FROS				AML	AML	
	comp=E,4070µm,1.5s					
MAON	**Monte Argentar**	**1.51 255**		P	**Pn**	**07 06 12.4 +0.1**
MAON				AML	AML	
	comp=N,1765µm,1.0s					
MAON				AML	AML	
	comp=E,2060µm,1.3s					
TRIV	**Trivento**	**1.52 134**		P	**Pb**	**07 06 12.9 -0.6**
OSSC	**Osservatorio P**	**1.52 298**			**Pn**	**07 06 11.8 -0.7**
OSSC	**Osservatorio P**	**1.52 298**		P	**Pn**	**07 06 12.2 -0.3**
OSSC				AML	AML	
	comp=N,1885µm,1.0s					
OSSC				AML	AML	
	comp=E,1955µm,1.0s					
OSSC				AML	AML	
	comp=N,2985µm,0.8s					
OSSC				AML	AML	
	comp=E,2990µm,0.8s					
RUFI	**Rufina**	**1.53 311**		P	**Pn**	**07 06 13.0 +0.3**
RUFI				AML	AML	
	comp=N,3920µm,1.0s					
RUFI				AML	AML	
	comp=E,2515µm,0.6s					
LMD	**Lutirano**	**1.60 321**		P	**Pb**	**07 06 14.3 -0.8**
LMD				AML	AML	
	comp=E,2325µm,0.9s					
LMD				AML	AML	
	comp=N,3445µm,1.2s					
TRIF	**Trifonti**	**1.64 281**		P	**Pn**	**07 06 14.5 +0.3**
TRIF				AML	AML	
	comp=N,1665µm,0.8s					
TRIF				AML	AML	
	comp=E,1705µm,0.3s					
CASP	**Castiglione de**	**1.64 269**			**Pn**	**07 06 13.7 -0.5**
CASP	**Castiglione de**	**1.64 269**		P	**Pn**	**07 06 14.2 -0.1**
CASP				AML	AML	
	comp=E,914µm,0.9s					
CASP				AML	AML	
	comp=N,750µm,0.8s					
VAGA	**Valle Agricola**	**1.65 149**		P	**Pn**	**07 06 14.7 +0.3**
BSSO	**Busso**	**1.70 139**		P	**Pn**	**07 06 15.0 -0.1**
BRIS	**BRISIGHELLA**	**1.75 319**		AML	AML	
	comp=N,3500µm,0.7s					
BRIS				AML	AML	
	comp=N,3285µm,0.5s					
BRIS				AML	AML	
	comp=E,4825µm,1.6s					
BRIS				AML	AML	
	comp=E,4910µm,1.6s					
MODR	**Mondragone**	**1.79 161**		P	**Pb**	**07 06 17.2 -1.0**
CIGN	**Sant'Elia a Pi**	**1.79 131**		P	**Pn**	**07 06 16.6 +0.4**
PIGN	**Pignataro Magg**	**1.82 153**		P	**Pn**	**07 06 17.1 +0.4**
MPPT	**Montemurlo**	**1.84 308**		P	**Pn**	**07 06 17.2 +0.2**
MPPT				AML	AML	
	comp=E,2110µm,1.0s					
MPPT				AML	AML	
	comp=N,1720µm,0.7s					
MELA	**Melanico ??? S**	**1.88 126**		P	**Pn**	**07 06 17.5 +0.1**
MTCR	**Monte La Croce**	**1.94 309**		P	**Pn**	**07 06 18.2 -0.2**
MTCR				AML	AML	
	comp=N,3170µm,0.9s					
MTCR				AML	AML	
	comp=E,1505µm,0.7s					
MTRZ	**Monterenzio**	**1.94 323**		AML	AML	
	comp=N,5035µm,0.6s					
MTRZ				AML	AML	
	comp=E,7300µm,0.9s					
MTRZ				AML	AML	
	comp=E,7495µm,0.9s					
MTRZ				AML	AML	
	comp=N,5130µm,0.6s					
PSB1	**Pescosannita**	**2.06 141**		P	**Pn**	**07 06 20.3 +0.4**
PII	**Pisa**	**2.08 296**		P	**Pn**	**07 06 20.8 +0.6**
PII				AML	AML	
	comp=E,1144µm,0.6s					
PII				AML	AML	
	comp=N,1115µm,1.4s					
POPM	**Popiglio**	**2.09 306**		P	**Pn**	**07 06 20.5 +0.1**
POPM				AML	AML	
	comp=N,1240µm,1.1s					
POPM				AML	AML	
	comp=E,1130µm,0.9s					
BRJN	**Brijuni**	**2.12 13**		P	**Pn**	**07 06 20.9 +0.1**
CELB	**S.Piero in Cam**	**2.13 269**		P	**Pn**	**07 06 20.9 -0.1**
CELB				AML	AML	
	comp=N,330µm,1.1s					
CELB				AML	AML	
	comp=E,425µm,0.7s					
ZCCA	**Zocca**	**2.16 315**		Pn	**Pn**	**07 06 19.5 -1.9**
MAIM	**Mastiano**	**2.19 300**		P	**Pn**	**07 06 21.9 +0.2**
MAIM				AML	AML	
	comp=E,1295µm,0.7s					
MAIM				AML	AML	
	comp=N,900µm,1.6s					
BDI	**Bagni Di Lucca**	**2.20 305**		P	**Pn**	**07 06 22.0 +0.1**
BDI				AML	AML	
	comp=E,1550µm,1.0s					
BDI				AML	AML	
	comp=N,431µm,0.9s					
BDI				AML	AML	
	comp=N,1165µm,0.8s					
BDI				AML	AML	
	comp=E,536µm,1.0s					
SGRT	**San Giovanni R**	**2.24 118**			**Pn**	**07 06 20.6 -1.9**
CARD	**Cardoso**	**2.25 303**		P	**Pn**	**07 06 22.6 +0.1**
CARD				AML	AML	
	comp=E,946µm,1.0s					
CARD				AML	AML	
	comp=N,1015µm,0.8s					
GSCL	**Gusciola**	**2.37 311**		P	**Pn**	**07 06 24.8 +0.5**
GSCL				AML	AML	
	comp=E,1440µm,0.7s					
GSCL				AML	AML	
	comp=N,1850µm,0.9s					
VLC	**Villacollemand**	**2.38 305**			**Pn**	**07 06 22.1 -2.2**
VLC	**Villacollemand**	**2.38 305**		P	**Pn**	**07 06 24.1 -0.2**
VLC				AML	AML	
	comp=N,900µm,1.3s					
VLC				AML	AML	
	comp=N,902µm,1.3s					
VLC				AML	AML	
	comp=E,642µm,1.0s					
VLC				AML	AML	
	comp=E,662µm,1.0s					
CAFE	**Carife**	**2.41 138**		AML	AML	
	comp=E,1625µm,0.5s					
CAFE				AML	AML	
	comp=N,1521µm,1.4s					
CAFE				AML	AML	
	comp=N,1540µm,1.4s					
CAFE				AML	AML	
	comp=E,1665µm,0.5s					
EQUI	**Equi**	**2.52 303**		P	**Pn**	**07 06 26.6 +0.3**
EQUI				AML	AML	
	comp=E,520µm,1.3s					
EQUI				AML	AML	
	comp=N,792µm,0.7s					
VENL	**Venezia Lido**	**2.63 349**		AML	AML	
	comp=N,4355µm,1.0s					
VENL				AML	AML	
	comp=E,2915µm,1.0s					
PLMA	**Palmaria, Port**	**2.66 298**		P	**Pn**	**07 06 28.6 +0.5**
PLMA				AML	AML	
	comp=E,340µm,0.5s					
PLMA				AML	AML	
	comp=N,428µm,0.5s					
RIY	**Rijeka**	**2.68 21**		*e*Pn	**Pn**	**07 06 28.7 +0.2**
RIY				*e*Sn	**Sn**	**07 07 02.3 +1.4**
TEOL	**Teolo**	**2.73 338**			**Pn**	**07 06 27.1 -2.0**
MORSI	**Morsiglia**	**2.75 274**		P	**Pn**	**07 06 30.5 +1.1**
GRAM	**Graiana**	**2.75 308**		P	**Pn**	**07 06 30.1 +0.5**
GRAM				AML	AML	
	comp=E,1360µm,0.7s					
GRAM				AML	AML	
	comp=N,1240µm,1.1s					
SKDS	**Skadanscina**	**2.79 13**		*i* Pn	**Pn**	**07 06 29.7 -0.3**
SKDS				*i* Sn	**Sn**	**07 07 04.3 +0.7**
SKDS				IAML		07 07 29.8
	comp=Z,548nm,0.6s					
PRMA	**PARMA**	**2.79 315**		Pn	**Pn**	**07 06 26.6 -3.3**
SMPL	**Sampolo**	**2.92 257**		AML	AML	
	comp=N,128µm,1.0s					
SMPL				AML	AML	
	comp=E,114µm,0.7s					
SMPL	**Sampolo**	**2.92 257**		P	**Pn**	**07 06 31.6 -0.1**
SMPL				S	**Sn**	**07 07 10.0 +3.2**
CORF	**Corte**	**2.96 261**		P	**Pn**	**07 06 32.9 +0.5**
MSSA	**Maissana**	**2.99 301**			**Pn**	**07 06 32.2 -0.6**
MSSA	**Maissana**	**2.99 301**		P	**Pn**	**07 06 33.2 +0.4**
MSSA				AML	AML	
	comp=E,398µm,0.7s					
MSSA				AML	AML	
	comp=N,470µm,1.0s					
CMPR	**Campora**	**3.01 146**		AML	AML	
	comp=E,416µm,0.4s					
CMPR				AML	AML	
	comp=N,262µm,0.6s					
PGF	**Pioggiola**	**3.04 266**		*e*P	**Pn**	**07 06 33.7 +0.2**
PGF				*e*Sn	**Sn**	**07 07 04.9 -5.0**
	comp=N,48nm,0.5s					
PGF	**Pioggiola**	**3.04 266**		AML	AML	
	comp=E,136µm,1.3s					
PGF				AML	AML	
	comp=N,124µm,0.4s					
PGF	**Pioggiola**	**3.04 266**		P	**Pn**	**07 06 34.8 +1.3**
CEY	**Cerknica**	**3.06 18**	⇑	*i*Pn	**Pn**	**07 06 33.4 -0.3**
SABO	**M.te Sabotino**	**3.16 6**		P	**Pn**	**07 06 35.4 +0.3**
SABO				AML	AML	
	comp=N,2085µm,0.8s					
SABO				AML	AML	
	comp=E,2130µm,0.7s					
SABO				AML	AML	
	comp=N,7930µm,0.7s					
SABO				AML	AML	
	comp=E,8615µm,0.6s					
ROVR	**Rover Verones**	**3.17 333**		P	**Pn**	**07 06 35.8 +0.5**
ROVR				AML	AML	
	comp=N,1295µm,0.7s					
ROVR				AML	AML	
	comp=E,370µm,0.6s					
ROVR				AML	AML	
	comp=E,965µm,0.6s					
ROVR				AML	AML	
	comp=N,518µm,0.7s					
CGRP	**Cima Grappa**	**3.18 343**		P	**Pn**	**07 06 36.2 +0.6**
CGRP				AML	AML	
	comp=E,1785µm,1.1s					
CGRP				AML	AML	
	comp=N,1690µm,0.5s					
CGRP				AML	AML	
	comp=E,1760µm,1.1s					
CGRP				AML	AML	
	comp=N,1710µm,0.5s					
SRKY	**Kupres RS**	**3.21 66**	⇑	*i*Pn	**Pn**	**07 06 37.5 +1.7**
VARN	**Col Varnada, M**	**3.24 348**		P	**Pn**	**07 06 37.0 +0.8**
VARN				AML	AML	
	comp=E,1740µm,0.6s					
VARN				AML	AML	
	comp=E,1735µm,0.6s					
VARN				AML	AML	
	comp=N,1200µm,0.6s					
VARN				AML	AML	
	comp=N,1200µm,1.0s					
GORR	**Gorreto**	**3.28 304**		P	**Pn**	**07 06 38.0 +1.3**
GORR				AML	AML	
	comp=E,549µm,0.5s					
GORR				AML	AML	
	comp=N,650µm,0.6s					
MGRS	**Mrkonjic Grad**	**3.30 60**	⇑	*i*Pn	**Pn**	**07 06 38.6 +1.6**
AJAC	**Base Areonaval**	**3.34 256**		AML	AML	
	comp=N,334µm,0.8s					
AJAC				AML	AML	
	comp=E,388µm,0.7s					
AJAC	**Base Areonaval**	**3.34 256**		P	**Pn**	**07 06 39.0 +1.6**
AJAC				S	**Sn**	**07 07 20.0 +2.9**
SALO	**Salr**	**3.34 327**			**Pn**	**07 06 37.0 -0.6**
SALO	**Salr**	**3.34 327**		AML	AML	
	comp=N,1530µm,1.1s					
SALO				AML	AML	
	comp=E,1185µm,0.5s					
MIGL	**Miglionico**	**3.35 131**		P	**Pn**	**07 06 37.7 0.0**
LJU	**Ljubljana**	**3.37 17**		*i* Pn	**Pn**	**07 06 38.6 +0.7**
LJU				*i* Sn	**Sn**	**07 07 18.6 +0.7**
LJU				IAML		07 07 43.9
	comp=Z,534nm,0.9s					
VOBA	**Vobarno**	**3.37 327**		AML	AML	
	comp=E,632µm,0.4s					
VOBA				AML	AML	
	comp=N,671µm,1.2s					
CTI	**Castel Tesino**	**3.38 343**			**Pn**	**07 06 37.0 -1.1**
CTI	**Castel Tesino**	**3.38 343**		P	**Pn**	**07 06 37.0 -1.1**
CTI	**Castel Tesino**	**3.38 343**		P	**Pn**	**07 06 39.1 +1.0**
CTI				AML	AML	
	comp=N,1009µm,0.6s					
CTI				AML	AML	
	comp=E,1175µm,1.1s					
PRIJ	**Prijedor**	**3.38 49**	⇑	*i*Pn	**Pb**	**07 06 43.5 -1.7**
STON	**Ston**	**3.38 88**	⇑	*i*Pn	**Pn**	**07 06 37.3 -0.8**
STON	**Ston**	**3.38 88**		*e*Pn	**Pn**	**07 06 37.6 -0.5**
STON				*e*Sn	**Sn**	**07 07 17.5 -0.7**
STON	**Ston**	**3.38 88**		AML	AML	
	comp=E,412µm,0.4s					
STON				AML	AML	
	comp=N,421µm,1.2s					
MPRI	**Monte Prat**	**3.41 359**		P	**Pn**	**07 06 39.2 +0.7**
MPRI				AML	AML	
	comp=E,1110µm,0.6s					
MPRI				AML	AML	
	comp=E,1440µm,0.7s					
MPRI				AML	AML	
	comp=N,1655µm,0.8s					
MPRI				AML	AML	
	comp=N,1285µm,0.8s					
STAL	**STALIGIAL**	**3.44 355**			**Pn**	**07 06 39.6 +0.7**
STAL	**STALIGIAL**	**3.44 355**		P	**Pn**	**07 06 39.3 +0.5**
STAL				AML	AML	
	comp=E,1365µm,0.5s					
STAL				AML	AML	
	comp=N,1156µm,1.0s					
MATE	**Matera**	**3.47 128**	⇑	P	**Pn**	**07 06 41.3 +2.0**
MATE	**Matera**	**3.47 128**		P	**Pn**	**07 06 39.0 -0.3**
LUSI	**Trento, Gardas**	**3.48 334**		P	**Pn**	**07 06 40.6 +1.0**
LUSI				AML	AML	
	comp=E,841µm,0.8s					
LUSI				AML	AML	
	comp=N,1042µm,0.9s					
CUC	**Castrocucco**	**3.50 143**			**Pn**	**07 06 41.3 +1.5**
CIMO	**Cimolais**	**3.51 353**		P	**Pn**	**07 06 40.1 +0.2**
CIMO				AML	AML	
	comp=E,335µm,0.6s					
CIMO				AML	AML	
	comp=N,374µm,0.8s					
CIMO				AML	AML	
	comp=E,335µm,0.7s					
CIMO				AML	AML	
	comp=N,370µm,0.8s					
A051A	**Mrakovica**	**3.51 50**	⇑	*i*Pn	**Pn**	**07 06 40.5 +0.6**
BLY	**Banja Luka**	**3.52 56**	⇑	*i*Pn	**Pn**	**07 06 41.1 +1.1**
BLY	**Banja Luka**	**3.52 56**		*e*Pn	**Pn**	**07 06 41.3 +1.3**
BLY				*e*Sn	**Sn**	**07 07 21.7 0.0**
AGOR	**Agordo**	**3.53 348**		AML	AML	
	comp=E,638µm,1.1s					
AGOR				AML	AML	
	comp=E,520µm,1.6s					
AGOR				AML	AML	
	comp=N,646µm,1.2s					
AGOR				AML	AML	
	comp=N,513µm,0.9s					
LTRZ	**Laterza**	**3.57 127**		P	**Pn**	**07 06 41.3 +0.6**
PTCC	**Patocco-Chiusa**	**3.57 3**		P	**Pn**	**07 06 40.8 0.0**
PTCC				AML	AML	
	comp=E,536µm,0.7s					
PTCC				AML	AML	
	comp=N,465µm,0.6s					
GAGG	**Gaggia**	**3.59 335**		P	**Pn**	**07 06 41.5 +0.4**
GAGG				AML	AML	
	comp=N,963µm,0.8s					
GAGG				AML	AML	
	comp=N,802µm,0.8s					
GAGG				AML	AML	
	comp=E,1012µm,0.8s					
GAGG				AML	AML	
	comp=E,768µm,0.8s					
NOCI	**Noci**	**3.60 123**		P	**Pn**	**07 06 42.1 +1.0**
PRED	**Cave del Predi**	**3.62 5**			**Pn**	**07 06 40.6 -0.8**
CLUD	**Cludinico**	**3.62 358**			**Pn**	**07 06 41.3 -0.2**
CLUD	**Cludinico**	**3.62 358**		P	**Pn**	**07 06 41.7 +0.2**
CLUD				AML	AML	
	comp=E,700µm,0.8s					
CLUD				AML	AML	
	comp=N,712µm,1.2s					
CLUD				AML	AML	
	comp=E,720µm,0.8s					
CLUD				AML	AML	
	comp=N,713µm,0.9s					
ZONE	**Zone**	**3.63 325**		P	**Pn**	**07 06 42.7 +1.2**
ZONE				AML	AML	
	comp=E,496µm,0.5s					
ZONE				AML	AML	
	comp=N,770µm,0.7s					
DGI	**Dorgali Grotta**	**3.63 227**		P	**Pn**	**07 06 42.1 +0.5**
SARZ	**Sarezzano**	**3.65 305**		AML	AML	
	comp=N,918µm,1.3s					
SARZ				AML	AML	
	comp=E,829µm,0.8s					
MABI	**Malga Bissina**	**3.71 331**		P	**Pn**	**07 06 43.9 +1.1**
MABI				AML	AML	
	comp=N,310µm,1.0s					
MABI				AML	AML	
	comp=E,421µm,0.6s					
ZOU	**Zoufplan**	**3.72 359**		P	**Pn**	**07 06 43.4 +0.4**
ZOU				AML	AML	
	comp=E,1220µm,0.8s					
ZOU				AML	AML	
	comp=N,733µm,1.0s					
ZOU				AML	AML	
	comp=N,715µm,0.9s					
ZOU				AML	AML	
	comp=E,1265µm,0.8s					
ACOM	**Acomizza, Ital**	**3.72 4**		P	**Pn**	**07 06 44.0 +1.0**
QLNO	**Quiliano**	**3.76 295**		P	**Pn**	**07 06 43.9 +0.6**
FVI	**Forni Avoltri**	**3.77 357**		P	**Pn**	**07 06 44.0 +0.5**
FVI				AML	AML	
	comp=E,472µm,0.6s					
FVI				AML	AML	
	comp=N,573µm,1.0s					
CANO	**Canova, Maglio**	**3.79 293**		P	**Pn**	**07 06 44.4 +0.6**
CANO				AML	AML	
	comp=E,625µm,1.3s					
CANO				AML	AML	
	comp=N,246µm,0.3s					
MYKA	**Terra Mystica**	**3.81 6**		*i* Pn	**Pn**	**07 06 45.4 +1.3**
	comp=N,85nm,0.4s,SNR=27					
OBKA	**Obir**	**3.82 15**		*e*Pn	**Pn**	**07 06 44.5 +0.3**
OBKA	**Obir**	**3.82 15**		*i* Pn	**Pn**	**07 06 44.9 +0.8**
	comp=N,6.7nm,0.2s,SNR=6.3					
OBKA	**Obir**	**3.82 15**		*e*Pn	**Pn**	**07 06 45.2 +1.0**
KOSI	**Kohlern**	**3.83 342**		P	**Pn**	**07 06 45.2 +0.8**
KOSI				AML	AML	
	comp=E,1024µm,0.9s					
KOSI				AML	AML	
	comp=N,870µm,0.8s					
TREB	**Trebinje**	**3.87 90**	⇑	*i*Pn	**Pn**	**07 06 45.9 +1.1**
TREB	**Trebinje**	**3.87 90**		*e*Pn	**Pn**	**07 06 45.8 +1.0**
TREB				*e*Sn	**Sn**	**07 07 30.3 +0.1**
APPI	**Appiano**	**3.88 341**		P	**Pn**	**07 06 46.2 +1.2**
APPI				AML	AML	

comp=N,563µm,0.5s
APPI AML AML
comp=E,507µm,0.4s
RORO Rocca Rossa 3.88 291 P Pn 07 06 45.7 +0.8
RORO AML AML
comp=N,65µm,1.2s
RORO AML AML
comp=E,69µm,0.6s
A052A Srbac 3.91 53 *e*Pn **Pn 07 06 44.9 -0.5**
ABTA Abfaltersbach 3.93 354 *i* Pn **Pn 07 06 47.4 +1.7**
comp=E,161nm,0.5s,SNR=121
BRY Bratogost 4.00 87⇑*i*Pn **Pn 07 06 47.5 +0.8**
BRY Bratogost 4.00 87⇑*i*Pn **Pn 07 06 47.6 +0.8**
BRY *i* Sn **Sn 07 07 34.0 +0.3**
HCY Herceg Novi 4.00 94⇑*i*Pn **Pn 07 06 47.3 +0.7**
HCY Herceg Novi 4.00 94⇑*i*Pn **Pn 07 06 47.4 +0.8**
HCY *i* Sn **Sn 07 07 34.0 +0.5**
MGRO Montegrosso 4.04 289 P **Pn 07 06 47.7 +0.4**
SOKA Soboth 4.08 19 *i* Pn **Pn 07 06 48.2 +0.4**
comp=E,4.7nm,0.3s,SNR=8.6
BRMO Bormio 4.13 333 P **Pn 07 06 49.5 +1.0**
RISI Rein 4.17 350 P **Pn 07 06 50.0 +0.8**
RISI AML AML
comp=E,1520µm,0.7s
RISI AML AML
comp=N,1275µm,0.6s
SAOF Saorge 4.20 288 AML AML
comp=E,160µm,0.7s
SAOF AML AML
comp=N,184µm,0.7s
SAOF Saorge 4.20 288 P **Pn 07 06 50.2 +0.8**
MUGIO Muggio 4.24 318 P **Pn 07 06 50.5 +0.5**
MUGIO AML AML
comp=E,246µm,0.5s
MUGIO AML AML
comp=N,236µm,1.4s
SBF Sospel 4.26 286 *e*P **Pn 07 06 51.0 +0.8**
SBF *e*Sn **Sn 07 07 34.3 -5.6**
comp=N,54nm,0.5s
ROSI Rosskopf 4.26 344 P **Pn 07 06 51.3 +0.8**
ROSI AML AML
comp=E,840µm,0.8s
ROSI AML AML
comp=N,1106µm,0.6s
UPM Unac-Piva 4.27 83⇑*i*Pn **Pn 07 06 52.8 +2.3**
UPM Unac-Piva 4.27 83 *e*Pn **Pn 07 06 51.4 +0.9**
UPM *i* Sn **Sn 07 07 40.7 +0.2**
FUORN Ofenpass-Fuorn 4.29 333 Pn 07 06 49.4 -1.5
ESCA l'Escarene 4.29 285 P **Pn 07 06 51.3 +0.6**
CEME Cevo 4.30 92⇓*i*Pn **Pn 07 06 51.7 +0.9**
CEME *i* Sn **Sn 07 07 41.3 +0.4**
SPS2 Spezzano della 4.30 144 AML AML
comp=E,54µm,0.7s
SPS2 AML AML
comp=N,52µm,0.6s
NKME Niksic 4.31 89⇓*i*Pn **Pn 07 06 51.8 +0.9**
NKME *i* Sn **Sn 07 07 41.5 +0.3**
TURF col de Turini 4.31 287 P **Pn 07 06 52.0 +1.0**
BUM Brajici-Budva 4.31 95⇓*i*Pn **Pn 07 06 51.9 +0.9**
BUM *i* Sn **Sn 07 07 41.7 +0.4**
VSL Villasalto 4.36 221 P **Pn 07 06 52.8 +1.2**
HAPS Han Pijesak,BI 4.44 72⇑*i*Pn **Pn 07 06 53.9 +1.1**
SPIF crte de Spivo 4.44 288 P **Pn 07 06 53.9 +1.1**
MVIF Mont Vial 4.46 286 P **Pn 07 06 56.6 +3.4**
BEHE Becsehely 4.48 35 P Pn 07 06 57.7 +4.5
FETA Feichten 4.51 339 *i* Pn **Pn 07 06 56.3 +2.6**
comp=N,29nm,0.5s,SNR=47
TUE Stuetta 4.51 325 Pn 07 06 52.5 -1.4
DRME Dracevica, Mon 4.54 96⇑*i*Pn **Pn 07 06 55.3 +1.1**
DRME Dracevica, Mon 4.54 96⇑*i*Pn **Pn 07 06 55.2 +1.1**
DRME *i* Sn **Sn 07 07 47.4 +0.5**
WTTA Wattenberg 4.55 347 *i* Pn **Pn 07 06 57.0 +2.7**
comp=N,16nm,0.2s,SNR=27
WTTA Wattenberg 4.55 347 *e*Pn **Pn 07 06 56.7 +2.4**
PDG Podgorica 4.56 93⇑P **Pn 07 06 55.5 +1.2**
PDG Podgorica 4.56 93 Pn **Pn 07 06 53.4 -0.9**
PDG Podgorica 4.56 93 *e*Pn **Pn 07 06 55.5 +1.2**
PDG *e*Sn **Sn 07 07 47.5 +0.2**
TTG Podgorica 4.56 93⇓*i*Pn **Pn 07 06 55.3 +1.0**
TTG *i* Sn **Sn 07 07 47.7 +0.4**
DAVOX Davos/Dischmat 4.56 331 Pn **Pn 07 06 57.2 +2.7**
comp=N,19nm,0.3s,baz=152,slow=16,SNR=96
DAVOX Sn **Sn 07 07 52.3 +4.7**
comp=N,10nm,0.3s,baz=131,slow=23,SNR=9.4
DAVOX LR LR 07 09 13.0
comp=N,314nm,18.4s,baz=140,slow=46
comp=N,120nm,0.6s
TIP Timpagrande 4.58 142⇑P Pn 07 06 59.3 +4.6
TIP Timpagrande 4.58 142 Pn **Pn 07 06 53.1 -1.6**
SQTA Sankt Quirin 4.58 344 Pn 07 06 57.4 +2.6
SQTA Sankt Quirin 4.58 344 P **Pn 07 06 57.4 +2.6**
SQTA Sankt Quirin 4.58 344 *i* Pn **Pn 07 06 57.4 +2.6**
comp=N,39nm,0.3s,SNR=22
CALF Calern 4.60 284 P **Pn 07 06 56.0 +1.0**
ISO Isola 4.60 289 P **Pn 07 06 56.9 +1.9**
WATA Walderalm 4.63 347 Pn 07 06 58.4 +3.0
WATA Walderalm 4.63 347 P **Pn 07 06 58.4 +3.0**
WATA Walderalm 4.63 347 *i* Pn **Pn 07 06 58.3 +3.0**
comp=N,24nm,0.2s,SNR=24
PLE Pljevlja 4.63 82⇑*i*Pn **Pn 07 06 56.4 +1.0**
PLE *i* Sn **Sn 07 07 49.5 +0.2**
ULC Ulcinj 4.63 99⇑*i*Pn **Pn 07 06 56.4 +1.1**
ULC *i* Sn **Sn 07 07 49.5 +0.4**
RUDO Rudo 4.65 78⇑*i*Pn **Pn 07 06 56.6 +1.1**
TRAV Traversella 4.69 307 P **Pn 07 06 55.9 -0.3**
BBLS Lazići 4.71 75 *e*Pn **Pn 07 06 58.2 +1.7**
BBLS Lazići 4.71 75 *e*Pn **Pn 07 06 57.9 +1.4**
KOME Kolasin 4.72 88⇑*i*Pn **Pn 07 06 57.5 +0.9**
KOME *i* Sn **Sn 07 07 51.5 +0.2**
MOTA Moosalm 4.72 343 Pn 07 07 00.5 +3.8
MOTA Moosalm 4.72 343 P **Pn 07 07 00.5 +3.8**
MOTA Moosalm 4.72 343 *i* Pn **Pn 07 07 00.5 +3.8**
comp=N,33nm,0.4s,SNR=25
ARSA Arzberg 4.74 20 *i* Pn **Pn 07 06 57.1 +0.3**
comp=N,8.7nm,0.3s,SNR=16
ARSA Arzberg 4.74 20 *e*Pn **Pn 07 06 57.0 +0.3**
FUSIO Fusio 4.81 320 P **Pn 07 06 59.0 +1.2**
ZUGS Zugspitze, Sch 4.82 343 *e*Pn **Pn 07 07 01.7 +3.6**
KOVH Kovagotottos 4.83 46 P **Pn 07 06 57.6 -0.5**
KOVH S **Sn 07 07 52.3 -1.8**
SURF Saint Ours 4.85 292 P **Pn 07 06 59.9 +1.5**
LMR La Mourre 4.85 278 *e*P **Pn 07 06 58.8 +0.5**
LMR *e*Sn **Sn 07 07 48.4 -6.1**
comp=N,25nm,0.7s
PART Garmisch-Parte 4.87 344 *e*Pn **Pn 07 07 01.6 +3.0**
BIOA Bad Ischl, Aus 4.87 4 Pn 07 06 59.8 +1.2
BIOA Bad Ischl, Aus 4.87 4 *i* Pn **Pn 07 06 59.8 +1.2**
comp=N,94nm,0.5s,SNR=45
JAUF Jausiers 4.88 291 P **Pn 07 07 00.4 +1.6**
SCTE Santa Cesarea 4.89 123 Pn 07 06 56.0 -2.8
RJOB Jochberg 4.91 358 *e*Pn **Pn 07 07 00.9 +1.7**
RETA Reutte 4.94 341 *i* Pn **Pn 07 07 02.4 +2.8**
comp=N,19nm,0.3s,SNR=20
MBDF Montbardon 4.96 295 *e*P **Pn 07 07 00.9 +1.0**
MBDF *e*Sn **Sn 07 07 51.0 -6.3**
comp=N,77nm,0.7s
TEKS Tekeris 4.97 68⇑*i*Pn **Pn 07 06 59.9 0.0**
TRIGF Trigance 4.97 283 P **Pn 07 07 01.3 +1.3**
OBER Oberstdorf 4.98 337 *e*Pn **Pn 07 07 03.5 +3.3**
IVA Berane 5.00 87⇑*i*Pn **Pn 07 07 01.4 +1.0**
IVA *i* Sn **Sn 07 07 58.3 +0.2**
CREF Crivoux 5.00 292 P **Pn 07 07 02.1 +1.6**
DAVA Damuels 5.00 334 *i* Pn **Pn 07 07 03.6 +3.0**
comp=N,46nm,0.5s,SNR=32
DAVA Damuels 5.00 334 *e*Pn **Pn 07 07 02.9 +2.4**
OGAG Argentiere 5.03 291 P **Pn 07 07 03.9 +3.1**
FLAF Flassans-sur-I 5.04 279 P **Pn 07 07 02.3 +1.4**
SJES Sjenica 5.06 83 *e*Pn **Pn 07 07 03.1 +1.9**
SJES *e*Sn **Sn 07 07 58.1 -1.6**
EMBD Embd, Matterta 5.06 314 P **Pn 07 07 04.7 +3.4**
PVY Plav 5.06 90 *e*Pn **Pn 07 07 02.3 +1.0**
PVY *i* Sn **Sn 07 07 59.8 0.0**
MOA Molln 5.08 9 *e*Pn **Pn 07 07 02.3 +0.8**
MOA *e*Sn **Sn 07 07 59.1 -1.1**
MOA Molln 5.08 9 *i* Pn **Pn 07 07 02.6 +1.2**
comp=N,34nm,0.5s,SNR=20
MOA Molln 5.08 9 *e*Pn **Pn 07 07 02.3 +0.8**
MOA *e*Sn **Sn 08 07 02.3 +2.2**
ASEAF Site Antares, 5.10 272 P **Pn 07 07 02.6 +1.2**
OGDI Digne 5.11 287 P **Pn 07 07 04.8 +2.9**
DIVS Divibare 5.17 74 Pn **Pn 07 07 01.9 -0.9**
DIVS Divibare 5.17 74 *e*Pn **Pn 07 07 03.9 +1.1**
DIVS Divibare 5.17 74 *e*Pn **Pn 07 07 03.4 +0.6**

DIVS *e*Sn **Sn 07 08 01.2 -1.3**
DIX Grande Dixence 5.21 310 P **Pn 07 07 04.8 +1.4**
MORH Mrgy, Hungar 5.21 48⇓P **Pn 07 07 04.4 +1.3**
MORH Mrgy, Hungar 5.21 48 P **Pn 07 07 05.4 +2.2**
TIR Tirane 5.25 104⇑P **Pn 07 07 04.8 +1.0**
TIR Tirane 5.25 104 Pn **Pn 07 07 01.9 -1.9**
TIR Tirane 5.25 104 *e*Pn **Pn 07 07 04.6 +0.8**
TIR *e*Sn **Sn 07 08 03.3 -1.0**
TIR Tirane 5.25 104 P **Pn 07 07 01.9 -1.9**
TIR Tirane 5.25 104 P **Pn 07 07 03.5 -0.3**
CLTB Caltabellotta 5.25 179 Pn **Pn 07 07 02.4 -1.5**
LPG La Plagne 5.29 302 *e*P **Pn 07 07 05.9 +1.4**
LPG *e*Sn **Sn 07 07 59.0 -6.6**
comp=N,62nm,0.8s
LPG La Plagne 5.29 302 P **Pn 07 07 04.7 +0.2**
UBR Ueberruh 5.29 337 *e*Pn **Pn 07 07 07.0 +2.7**
LPL La Plagne 5.30 303 *e*P **Pn 07 07 05.9 +1.1**
LPL *e*Sn **Sn 07 07 59.4 -6.6**
comp=N,31nm,0.6s
MPLH Magyarpolny 5.36 34 P **Pn 07 07 08.7 +3.4**
RONA Rosalia, Austr 5.36 24 Pn 07 07 05.9 +0.6
RONA Rosalia, Austr 5.36 24 *i* Pn **Pn 07 07 05.9 +0.6**
comp=N,13nm,0.2s,SNR=25
FRGS Fruska Gora 5.37 62⇑P **Pn 07 07 06.0 +0.6**
FRGS Fruska Gora 5.37 62⇑*i*Pn **Pn 07 07 05.2 -0.2**
FRGS Fruska Gora 5.37 62 *e*Pn **Pn 07 07 05.4 0.0**
FRGS *e*Sn **Sn 07 08 06.0 -1.2**
ARTF Artigues 5.38 280 P **Pn 07 07 06.6 +0.9**
SOP Sopron 5.43 26 P **Pn 07 07 09.0 +2.8**
SENIN Lac Senin/Sane 5.44 312 Pn **Pn 07 07 07.2 +0.6**
CONA Conrad Observa 5.45 20 *i* Pn **Pn 07 07 06.7 +0.1**
comp=N,9.7nm,0.2s,SNR=20
RSL Roselend 5.45 304 P **Pn 07 07 09.0 +2.3**
MLYF Mely 5.46 285 P **Pn 07 07 09.2 +2.5**
TRUS Trudelj 5.49 73 *e*Pn **Pn 07 07 07.7 +0.6**
TRUS *e*Sn **Sn 07 08 09.2 -1.0**
BSTF la Bastide-des 5.53 283 P **Pn 07 07 09.4 +1.7**
GDM Grand'Maison 5.56 298 P **Pn 07 07 11.6 +3.4**
SMRF Simiane la Rot 5.60 284 *e*P **Pn 07 07 10.2 +1.6**
SMRF *e*Sn **Sn 07 08 06.1 -6.9**
comp=N,31nm,0.9s
AIGLE Aigle 5.62 311 P **Pn 07 07 11.7 +2.8**
ORIF Oris-en-Rattie 5.62 294 *e*P **Pn 07 07 10.7 +1.8**
ORIF *e*Sn **Sn 07 08 06.7 -6.8**
comp=N,51nm,0.8s
ORIF Oris-en-Rattie 5.62 294 P **Pn 07 07 11.7 +2.8**
GRUS Gruza 5.65 77 *e*Pn **Pn 07 07 10.2 +0.9**
GRUS *e*Sn **Sn 07 08 12.9 -1.3**
RUSF Rustrel 5.66 284 P **Pn 07 07 11.2 +1.8**
SULZ Cheisacher 5.87 325 P **Pn 07 07 14.1 +1.8**
TORNY Torny/Romont 5.88 314 P **Pn 07 07 15.4 +2.9**
SELS Selova 5.89 84 *e*Pn **Pn 07 07 12.9 +0.3**
SELS *e*Sn **Sn 07 08 19.1 -1.0**
SLE Schleitheim 5.90 328 P **Pn 07 07 14.2 +1.4**
BALST Balsthal 5.91 321 P **Pn 07 07 14.3 +1.4**
KEK Kerkira 5.93 119 Pn **Pn 07 07 10.2 -2.9**
KEK Kerkira 5.93 119 P **Pn 07 07 14.7 +1.5**
OHR Ohrid 5.99 104 *i* Pn **Pn 07 07 16.0 +2.0**
OGSM Saint Maurice 6.00 300 P **Pn 07 07 16.2 +2.2**
GEC2 GERESS Array S 6.03 4 Pn 07 07 13.6 -0.9
GEC2 GERESS Array S 6.03 4 *e*Pn **Pn 07 07 14.6 +0.1**
GEC2 *e*Sn **Sn 07 08 22.3 -1.2**
GERES GERESS Array B 6.03 4 Pn **Pn 07 07 14.6 +0.1**
comp=N,4.9nm,0.3s,baz=168,slow=12,SNR=55
GERES Sn **Sn 07 08 22.7 -0.8**
comp=N,9.1nm,0.3s,baz=28,slow=12,SNR=7.1
GERES LR LR 07 09 59.6
comp=N,76nm,18.1s,baz=210,slow=42
comp=N,7.3nm,0.3s
GERES GERESS Array B 6.03 4 Pn 07 07 13.5 -1.0
CKRC Cesky Krumlov 6.04 8 *e*PN **Pn 07 07 14.9 +0.2**
CKRC *e*SN **Sn 07 08 20.8 -3.1**
ZST Bratislava 6.05 26 *e*P **Pn 07 07 16.8 +2.0**
ZST *e* 07 08 21.6
GIMEL St. Georges / 6.12 310 P **Pn 07 07 18.3 +2.5**
KBN Korca 6.16 108 Pn 07 07 17.0 +0.6
KBN Korca 6.16 108 P **Pn 07 07 17.0 +0.6**
BOURR Bourrignon 6.17 320 P **Pn 07 07 17.8 +1.4**
FELD Feldberg im Sc 6.19 326 P **Pn 07 07 17.8 +1.0**
SKO Skopje 6.24 95 *i* Pn **Pn 07 07 18.8 +1.5**
BRANT Les Verrieres 6.24 313 P **Pn 07 07 19.9 +2.4**
CABF La Chapelle 6.26 309 *e*P **Pn 07 07 18.6 +0.9**
CABF *e*Sn **Sn 07 08 22.0 -7.3**
comp=N,19nm,0.7s
MODS Modra-Piesok 6.26 26 *e*P **Pn 07 07 18.0 +0.3**
MODS *e* 07 08 25.3
OG35 Corcelles 6.27 303 P **Pn 07 07 20.1 +2.2**
KIZ Kirchzarten 6.29 326 S **Sn 07 08 29.3 -0.5**
KIZ Kirchzarten 6.29 326 P **Pn 07 07 19.1 +1.1**
KHC Kasperske Hory 6.30 3 Pn Pn 07 07 18.4 +0.1
KHC Kasperske Hory 6.30 3 *e*P **Pn 07 07 18.2 -0.1**
KHC *e* 07 08 29.3
KHC Kasperske Hory 6.30 3 *e*PN **Pn 07 07 18.2 -0.1**
KHC *e*SN **Sn 07 08 29.3 -1.0**
WET Wettzell 6.31 359 *e*Pn **Pn 07 07 18.1 -0.3**
WET *e*Sn **Sn 07 08 26.9 -3.6**
BOVS Bovan 6.34 80⇑P **Pn 07 07 18.7 0.0**
BOVS Bovan 6.34 80 *e*Pn **Pn 07 07 19.0 +0.3**
BOVS *e*Sn **Sn 07 08 29.7 -1.4**
CHMF Charmoille 6.35 316 P **Pn 07 07 20.9 +2.0**
IGT Igoumenitsa 6.38 119 P **Pn 07 07 20.5 +1.2**
BARS Barje 6.41 87 *e*Pn **Pn 07 07 20.4 +0.7**
VIVF Saint-Julien-I 6.42 291 *e*P **Pn 07 07 21.5 +1.6**
VIVF *e*Sn **Sn 07 08 25.8 -7.3**
comp=N,6.6nm,0.5s
VIVF Saint-Julien-I 6.42 291 Pn 07 07 21.4 +1.6
BFO Black Forest 6.43 330 Pn **Pn 07 07 19.5 -0.5**
BFO Black Forest 6.43 330 P **Pn 07 07 19.5 -0.5**
BFO Black Forest 6.43 330 *e*Pn **Pn 07 07 21.9 +1.8**
RIVEL MONT RIVEL 6.44 310 P **Pn 07 07 22.1 +1.9**
SMOL Smolenice 6.44 27 *e*P **Pn 07 07 22.8 +2.7**
SMOL *e* 07 08 35.2
VOGT Vogtsburg - To 6.49 326 P **Pn 07 07 21.7 +1.0**
FNA Florina 6.51 106 P **Pn 07 07 22.4 +1.2**
MDVR Moldovita 6.53 70⇑P **Pn 07 07 21.5 +0.1**
STU Stuttgart 6.53 337 Pn **Pn 07 07 21.9 +0.5**
STU Stuttgart 6.53 337 P **Pn 07 07 21.9 +0.5**
MOF Molkenrain 6.54 322 P **Pn 07 07 22.7 +1.1**
BOUC Bouclans 6.55 315 P **Pn 07 07 23.1 +1.4**
PENT Pentalofos 6.58 111 P **Pn 07 07 23.9 +1.7**
SSB Saint Sauveur 6.63 295 Pn **Pn 07 07 23.6 +0.8**
SSB Saint Sauveur 6.63 295 P **Pn 07 07 23.6 +0.8**
SSB Saint Sauveur 6.63 295 P **Pn 07 07 23.7 +0.9**
KRUC Moravsky 6.64 19 *e*PN **Pn 07 07 21.9 -0.9**
HINF Hinteralfeld 6.65 321 *e*P **Pn 07 07 24.2 +1.2**
HINF *e*Sn **Sn 07 08 30.7 -8.0**
comp=N,70nm,0.6s
JAN Janina 6.65 116 P **Pn 07 07 24.1 +1.1**
RONF Ronchamp 6.67 319 P **Pn 07 07 24.2 +1.0**
BZS Buzias 6.72 63⇑P **Pn 07 07 24.3 +0.4**
ZAGS Zajecar 6.73 79 *e*Pn **Pn 07 07 24.5 +0.4**
ECH Echery 6.81 324 Pn 07 07 23.5 -1.7
ECH Echery 6.81 324 Pn 07 07 23.5 -1.7
ECH Echery 6.81 324 P **Pn 07 07 25.9 +0.7**
JAVC Velka Javorina 6.82 26 *e*PN **Pn 07 07 25.6 +0.3**
LASF Ste Croix 6.84 284 *e*P **Pn 07 07 26.5 +0.9**
LASF *e*Sn **Sn 07 08 35.4 -8.1**
comp=N,8.4nm,0.6s
KPRO Kipourio 6.85 112 P **Pn 07 07 28.3 +2.5**
WLS Welschbruch 6.88 326 P **Pn 07 07 26.5 +0.3**
CDF Champ du Feu 6.91 326 *e*P **Pn 07 07 27.3 +0.7**
CDF *e*Sn **Sn 07 08 37.4 -7.9**
comp=N,67nm,0.6s
VRAC Vranov 6.91 19⇑P **Pn 07 07 29.6 +2.9**
VRAC Vranov 6.91 19 Pn **Pn 07 07 27.8 +1.2**
comp=N,1.0nm,0.3s,baz=185,slow=14,SNR=3.8
VRAC LR LR 07 10 37.4
comp=N,52nm,18.9s,baz=210,slow=42
comp=N,2.7nm,0.3s
VRAC Vranov 6.91 19 *e*PN **Pn 07 07 26.2 -0.4**
VYHS Vyhne 6.94 33 *e*P **Pn 07 07 30.7 +3.7**
VYHS *e* 07 08 45.0
GRFO Grafenberg 6.98 350 Pn **Pn 07 07 24.1 -3.4**
GRFO Grafenberg 6.98 350 P **Pn 07 07 24.1 -3.4**
PSZ Piszkesteto 6.98 41 Pn **Pn 07 07 25.0 -2.6**
PSZ Piszkesteto 6.98 41 P **Pn 07 07 25.0 -2.6**
GRA1 Grafenberg Arr 6.98 350 Pn **Pn 07 07 24.0 -3.5**
GRF Grafenberg Arr 6.98 350 P **Pn 07 07 24.0 -3.5**
TSLK Tsoukalades, L 6.99 122 P **Pn 07 07 29.5 +1.8**
ZAPS Zavoj 7.00 83 *e*Pn **Pn 07 07 28.7 +0.9**
ZAPS *e*Sn **Sn 07 08 46.8 -0.6**

SIRR Siria 7.01 58⇑P **Pn 07 07 29.5 +1.5**
LKD2 Lefkada island 7.01 123 P **Pn 07 07 29.6 +1.6**
HAU Haudompre 7.02 320 *e*P **Pn 07 07 28.3 +0.2**
HAU *e*Sn **Sn 07 08 40.0 -7.9**
comp=N,198nm,0.7s
DRAG Dragano-Lefkad 7.03 124 P **Pn 07 07 29.7 +1.5**
HERR Herculane 7.04 70⇑P **Pn 07 07 29.2 +0.9**
BLKB Belogradchik 7.04 80⇑P **Pn 07 07 29.2 +0.8**
NYDR Nydri-Lefkada 7.08 123 P **Pn 07 07 30.5 +1.5**
EVGI Lefkada island 7.12 124 P **Pn 07 07 30.5 +1.1**
GOPC GO Pecny, Ondr 7.18 9 *e*P **Pn 07 07 31.5 +1.3**
GOPC GO Pecny, Ondr 7.18 9 *e*PN **Pn 07 07 31.5 +1.3**
MANZ Manzenberg 7.18 355 *e*Pn **Pn 07 07 31.6 +1.2**
MANZ *e*Sn **Sn 07 08 46.0 -5.9**
DMLN Damoulianata-K 7.19 127 P **Pn 07 07 32.1 +1.6**
VAY Valandovo 7.21 99 *i* Pn **Pn 07 07 31.7 +1.1**
CIEL Dossenheim-sur 7.21 328 P **Pn 07 07 31.9 +1.3**
PRU Pruhonice 7.22 7 *e*P **Pn 07 07 31.8 +0.9**
PRU *e* 07 08 51.2
PRU Pruhonice 7.22 7 *e*PN **Pn 07 07 31.8 +0.9**
PRU *e*SN **Sn 07 08 51.2 -1.6**
MAHO Mahon 7.26 249 Pn 07 07 29.4 -2.0
MAUC Maruska 7.31 25 *e*PN **Pn 07 07 34.0 +1.9**
PSDA Pessada-Kefalo 7.40 127 P **Pn 07 07 35.2 +1.9**
NKC Novy Kostel 7.41 357 *e*P **Pn 07 07 34.7 +1.2**
NKC Novy Kostel 7.41 357 *e*PN **Pn 07 07 34.7 +1.2**
GZR Gura Zlata 7.42 67⇑P **Pn 07 07 34.4 +0.8**
KKB Krupnik 7.46 94 P **Pn 07 07 35.5 +1.4**
VTS Vitosha 7.47 88⇑P **Pn 07 07 35.6 +1.2**
VTS Vitosha 7.47 88 Pn **Pn 07 07 35.1 +0.7**
VTS Vitosha 7.47 88 P **Pn 07 07 35.1 +0.7**
VTS Vitosha 7.47 88 P **Pn 07 07 35.5 +1.2**
THL Klokotos Trika 7.47 113 P **Pn 07 07 35.8 +1.5**
SJAF Saint Jean de 7.54 271 P **Pn 07 07 35.6 +0.3**
MORC Moravsky Berou 7.59 22 Pn **Pn 07 07 32.4 -3.6**
MORC Moravsky Berou 7.59 22 P **Pn 07 07 32.4 -3.6**
MORC Moravsky Berou 7.59 22 *e*PN **Pn 07 07 35.7 -0.3**
SMF Signal de Mont 7.61 303 *e*P **Pn 07 07 37.0 +0.8**
SMF *e*Sn **Sn 07 08 54.2 -8.2**
comp=N,21nm,0.5s
DEV Deva 7.66 63⇑P **Pn 07 07 37.8 +1.0**
KECS Kecovo 7.66 40 *e*P Pn 07 07 41.7 +4.9
KEST Kesra 7.67 204 LR LR 07 10 46.1
comp=N,125nm,19.3s,baz=342,slow=39
KEST Kesra 7.67 204 Pn **Pn 07 07 34.0 -3.1**
EVR Evrytania 7.67 118 P **Pn 07 07 39.5 +2.4**
KRLC Kraliky 7.67 18 *e*P **Pn 07 07 37.7 +0.6**
KRLC Kraliky 7.67 18 *e*PN **Pn 07 07 37.7 +0.6**
PAGF Fort de Pagny 7.70 320 *e*P **Pn 07 07 39.1 +1.7**
PAGF *e*Sn **Sn 07 08 56.1 -8.5**
comp=N,76nm,0.7s
FILF Fillols 7.77 272 P **Pn 07 07 39.0 +0.6**
SFTF Sexfontaines 7.80 316 *e*P **Pn 07 07 40.3 +1.5**
baz=134
SFTF *e*Sn **Sn 07 08 58.6 -8.4**
comp=N,30nm,0.7s
MAKR Makrakomi, Fth 7.83 116 P **Pn 07 07 41.1 +1.8**
DPC Dobruska-Polom 7.84 15 *e*P **Pn 07 07 40.3 +1.0**
DPC Dobruska-Polom 7.84 15 *e*PN **Pn 07 07 40.3 +1.0**
MOX Moxa 7.88 353 P **Pn 07 07 41.4 +1.6**
DRGR 7.89 57⇑P **Pn 07 07 41.5 +1.4**
DRGR 7.89 57 P **Pn 07 07 41.9 +1.8**
LOR Lormes 7.90 307 *e*P **Pn 07 07 41.9 +1.7**
baz=122
LOR *e*Sn **Sn 07 09 01.2 -8.4**
comp=N,39nm,0.7s
LOR Lormes 7.90 307 P **Pn 07 07 41.8 +1.7**
AVF Avril sur Loir 7.98 303 *e*P **Pn 07 07 42.9 +1.7**
AVF *e*Sn **Sn 07 09 02.9 -8.5**
comp=N,16nm,0.7s
MTLF Montolieu 7.98 277 *e*P **Pn 07 07 43.3 +2.0**
MTLF *e*Sn **Sn 07 09 03.3 -8.3**
comp=N,6.8nm,0.7s
MTLF Montolieu 7.98 277 P **Pn 07 07 43.0 +1.7**
MMB Musomiste 7.99 95 P **Pn 07 07 42.8 +1.4**
MEZF Maizieres J'vi 7.99 318 *e*P **Pn 07 07 43.0 +1.6**
MEZF *e*Sn **Sn 07 09 03.0 -8.7**
comp=N,27nm,0.5s
SSF Saint Saulge 8.01 305 *e*P **Pn 07 07 41.9 +0.3**
SSF *e*Sn **Sn 07 09 03.6 -8.6**
comp=N,14nm,0.6s
OSTC Ostas 8.01 14 *e*PN **Pn 07 07 44.2 +2.5**
CHVC Chvalec 8.02 14 *e*PN **Pn 07 07 43.0 +1.2**
ABH Alteburg 8.02 333 P **Pn 07 07 44.6 +2.8**
SAVF Savonnieres en 8.03 319 *e*P **Pn 07 07 43.7 +1.8**
SAVF *e*Sn **Sn 07 09 04.0 -8.7**
comp=N,37nm,0.7s
TNS Taunus Mts 8.05 338 *e*Pn **Pn 07 07 44.9 +2.6**
BRG Berggiesshubel 8.06 4 *e*P **Pn 07 07 43.8 +1.5**
BRG Amp 07 07 50.8
comp=Z,5.0nm,0.6s
BRG *ex* x 07 09 00.9
BRG *ex* x 07 09 09.4
BRG *ex* x 07 10 11.6
BRG Amp 07 10 37.3
comp=Z,34nm,1.1s
BRG *ex* x 07 13 45.4
BRG *ex* x 07 14 46.9
BRG Amp 07 15 19.2
comp=Z,6.1nm,1.3s
BRG Berggiesshubel 8.06 4 *e*P **Pn 07 07 43.8 +1.5**
BRG *e* 07 09 09.3
BRG pmax pmax
comp=Z,5.0nm,0.6s
LOT Lotru 8.11 68⇑P **Pn 07 07 44.7 +1.6**
NVR Nevrokopi 8.14 97 P **Pn 07 07 44.5 +1.0**
PGB Panagyurishte 8.16 88 P **Pn 07 07 45.0 +1.2**
BGF Bois d'Agland 8.20 301 *e*P **Pn 07 07 45.4 +1.2**
BGF *e*Sn **Sn 07 09 08.2 -8.6**
comp=Z,26nm,0.6s
CAF Calviac 8.24 288 *e*P **Pn 07 07 46.7 +1.8**
CAF *e*Sn **Sn 07 09 09.4 -8.6**
comp=Z,7.0nm,0.8s
WLF Walferdange 8.35 327 Pn **Pn 07 07 44.3 -2.0**
WLF Walferdange 8.35 327 P **Pn 07 07 44.3 -2.0**
WLF Walferdange 8.35 327 *d*pP **Pn 07 07 48.3 +1.9**
WLF Walferdange 8.35 327 P **Pn 07 07 49.1 +2.7**
CLL Collm 8.48 360 Pn **Pn 07 07 45.4 -2.6**
CLL Collm 8.48 360 *e*P **Pn 07 07 48.0 0.0**
CLL Collm 8.48 360 *e*Pn **Pn 07 07 48.0 0.0**
CLL *ex* x 07 08 01.0
CLL *e*Pg **Pg 07 08 25.0 -2.5**
CLL *e*Sn Sn 07 09 05.0 -19
CLL *ex* x 07 09 13.0
CLL *ex* x 07 09 29.0
CLL *ex* x 07 09 50.0
CLL *ex* x 07 10 11.0
CLL *e*Sg **Sg 07 10 22.0 +4.8**
comp=Z,80nm,1.4s
CLL Lm MLR 07 11 00.0
comp=Z,100nm,20.1s
CLL Lmax 07 11 00.0
TCF Toulx Ste Croi 8.51 298 *e*P **Pn 07 07 50.7 +2.2**
TCF *e*Sn Sn 07 09 15.5 -9.0
comp=Z,7.8nm,0.6s
PAND Andorre 8.52 272 P **Pn 07 07 50.7 +1.9**
HYF Humbligny 8.63 304 *e*P **Pn 07 07 52.0 +1.9**
HYF *e*Sn **Sn 07 09 18.5 -8.9**
comp=Z,68nm,0.6s
STHS Stebnicka Huta 8.67 38 *e*P **Pn 07 07 53.2 +2.4**
RZN Rozhen 8.69 94 P **Pn 07 07 52.8 +1.6**
RJF Les Rejaudoux 8.70 290 *e*P **Pn 07 07 53.3 +2.2**
RJF *e*Sn **Sn 07 09 20.3 -8.8**
comp=Z,4.1nm,0.6s
MLS Moulis 8.81 275 P **Pn 07 07 54.2 +1.4**
ITM Ithomi 8.82 127 Pn **Pn 07 07 50.5 -2.3**
BHOU Houvegnez 8.96 329 *d*pP **Pn 07 07 58.0 +3.3**
VOIR 8.98 69⇑P **Pn 07 07 55.8 +0.8**
VOIR 8.98 69 P **Pn 07 07 58.1 +3.1**
BTNL Ternell 9.11 331 *d*pP **Pn 07 07 58.1 +1.4**
RCHB Rochefort 9.11 326 *d*pP **Pn 07 07 59.2 +2.5**
LFF La Frestale 9.17 287 *e*P **Pn 07 07 59.5 +1.9**
LFF *e*Sn Sn 07 09 31.6 -9.1
comp=Z,3.7nm,0.3s
MEM Membach 9.17 330 *d*pP **Pn 07 08 01.1 +3.5**
GIVF Givet 9.24 325 *e*P **Pn 07 08 00.5 +2.0**
GIVF *e*Sn Sn 07 09 32.9 -9.4
comp=Z,10.0nm,0.5s
BCLA Clavier 9.29 327 *d*pP **Pn 07 08 02.2 +3.1**
BSTI Sart Tilman 9.31 329 *d*S **Sn 07 09 42.5 -1.7**
DOU Dourbes 9.33 324 *d*pP **Pn 07 08 02.5 +2.8**
DOU *dx* x 07 08 10.8

BGES Gesves 9.34 327 *dp*P **Pn 07 08 02.6 +2.7**
EPF Esparros 9.36 276 *e*P **Pn 07 08 02.2 +1.9**
EPF *e*Sn Sn 07 09 36.2 -9.4
comp=Z,1.4nm,0.4s
SZH Strazhica 9.41 83 P **Pn 07 08 01.6 +0.8**
BMRD Maredsous 9.41 325 *dp*P **Pn 07 08 03.4 +2.5**
RDO Rodhopi 9.42 96 Pn **Pn 07 08 01.6 +0.7**
BAIF Baives 9.47 323 *e*P **Pn 07 08 04.1 +2.4**
BAIF *e*Sn Sn 07 09 38.9 -9.2
comp=Z,7.6nm,0.7s
MLR Muntele Rosu 9.61 70 ⇑P **Pn 07 08 03.6 0.0**
MLR Muntele Rosu 9.61 70 Pn **Pn 07 08 05.4 +1.7**
comp=Z,0.9nm,0.3s,baz=119,slow=19,SNR=6.1
MLR LR LR 07 12 38.8
comp=Z,276nm,19.5s,baz=268,slow=43
comp=Z,6.2nm,0.5s
MLR Muntele Rosu 9.61 70 Pn **Pn 07 08 00.7 -3.0**
SNF Seneffe 9.77 325 *dp*P **Pn 07 08 07.9 +2.1**
BURAR Bucovina Array 9.79 57 ⇑P **Pn 07 08 07.7 +1.5**
BURAR Bucovina Array 9.79 57 P **Pn 07 08 07.6 +1.5**
BUR08 Bucovina Ar. S 9.79 56 Pn **Pn 07 08 03.1 -3.1**
ETSF Etsaut 10.03 275 *e*P **Pn 07 08 12.4 +3.0**
ETSF *e*Sn Sn 07 09 52.3 -10
comp=Z,1.9nm,0.5s
MFF Saint Martin d 10.15 296 *e*P **Pn 07 08 13.1 +2.1**
PLOR Plostina 10.16 68 ⇑P **Pn 07 08 11.9 +0.7**
VRI Vrincioaia 10.22 68 ⇑P **Pn 07 08 13.1 +1.1**
LVV L'vov 10.29 43 *e*P Pn 07 08 18.2 +5.4
SJPF Ste Jean 10.50 276 *e*P **Pn 07 08 18.3 +2.4**
LDF La Druitiere 10.88 306 *e*P **Pn 07 08 23.2 +2.2**
LDF *e*Sn Sn 07 10 12.2 -11
comp=Z,1.8nm,0.5s
APE Apeiranthos 11.14 117 *i* P **Pn 07 08 24.2 -0.4**
FLN La Foliniere 11.17 307 *e*P **Pn 07 08 27.2 +2.2**
FLN *e*Sn Sn 07 10 19.5 -10
comp=Z,1.7nm,0.4s
GRR Gorron 11.24 304 *e*P **Pn 07 08 28.0 +2.2**
GRR *e*Sn Sn 07 10 20.8 -11
comp=Z,4.7nm,0.5s
IDI Anoyia 11.86 126 Pn **Pn 07 08 35.1 +0.6**
comp=Z,1.7nm,0.3s,baz=307,slow=22,SNR=8.2
IDI Sn **Sn 07 10 43.0 -3.7**
comp=Z,1.1nm,0.3s,baz=120,slow=23,SNR=2.0
comp=Z,4.4nm,0.4s
ESDC Sonseca Array 13.22 262 Pn **Pn 07 08 53.2 +0.1**
baz=68,slow=14,SNR=6.7
ESDC LR LR 07 14 01.3
comp=Z,114nm,18.1s,baz=68,slow=38
comp=Z,0.9nm,0.8s
AKASG Malin Array Be 13.55 49 Pn **Pn 07 08 57.5 +0.1**
comp=Z,0.2nm,0.3s,baz=242,slow=12,SNR=4.3
AKASG LR LR 07 14 35.3
comp=Z,77nm,20.1s,baz=248,slow=39
comp=Z,1.2nm,0.9s
AKBB Malin Array Si 13.55 49 *i* P **Pn 07 08 56.4 -0.9**
ELL Elmali 14.27 110 Pn **Pn 07 09 03.6 -3.9**
ELL Elmali 14.27 110 P **Pn 07 09 03.6 -3.9**
NACGM Naroch 15.03 32 *e*P **P 07 09 21.3 -1.6**
comp=Z,12nm,1.1s,baz=220
MVO Moncorvo 15.06 270 *e*P **P 07 09 26.5 +3.0**
MTE Manteigas 15.63 268 *e*P **P 07 09 31.6 +1.8**
MTE Manteigas 15.63 268 Pn **Pn 07 09 24.8 -0.8**
PCBR Castelo Branco 15.74 266 *e*P **P 07 09 32.5 +1.6**
comp=Z,13nm,1.8s
BR131 Keskin Array S 15.75 94 *i* P **Pn 07 09 25.7 -1.5**
BRTR Keskin Array B 15.75 94 Pn **P 07 09 30.4 -0.9**
comp=Z,0.1nm,0.3s,baz=266,slow=13,SNR=3.6
BRTR LR LR 07 16 48.4
comp=Z,113nm,20.3s,baz=302,slow=42
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 15.75 94 Pn **Pn 07 09 24.3 -2.9**
BRTR Keskin Array B 15.75 94 P **Pn 07 09 24.3 -2.9**
PVIS Viseu 15.80 269 *e*P **P 07 09 33.4 +1.7**
PMRV Marv??o 15.81 264 *e*P **P 07 09 30.0 -1.7**
comp=Z,9.5nm,2.0s
EKA Eskdalemuir Ar 16.37 325 Pn **P 07 09 36.3 -1.5**
baz=139,slow=14
comp=Z,0.8nm,0.4s
PCAS Casmilo, Conde 16.43 268 *e*P **P 07 09 41.5 +2.9**
PMTG Montargil 16.54 264 *e*P **P 07 09 41.3 +1.5**
comp=Z,18nm,1.8s
HFS Hagfors 17.33 1 P **P 07 09 48.7 +0.3**
comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=1.5
comp=Z,1.5nm,0.7s
ANN Anapa 17.66 75 *e*P **Pn 07 09 48.8 -2.4**
ANN pmax pmax
comp=Z,54nm,0.7s
NB2 NORSAR Subarra 18.27 357 P **P 07 10 02.0 +3.2**
comp=Z,6.0nm,1.0s,baz=173,slow=12
NOA NORSAR Array B 18.27 357 P **P 07 10 00.3 +1.5**
baz=174,slow=12,SNR=9.3
NOA LR LR 07 17 57.4
comp=Z,33nm,18.4s,baz=325,slow=40
comp=Z,1.5nm,0.7s
VSR Storozhevoye 19.57 56 *e*P **P 07 10 06.4 -6.7**
VSR pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 19.59 43 LR LR 07 19 34.9
comp=Z,9.6nm,21.7s,baz=212,slow=42
OBN Obninsk 19.59 43⇓*e*P **P 07 10 10.8 -2.4**
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR
comp=Z,45nm,15.0s
VSLR Vesyoloye 19.64 79 *i* P **P 07 10 09.9 -4.0**
VORR Voronezh 19.72 54 *e*P **P 07 10 11.7 -3.0**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 19.84 52 *e*P **P 07 10 15.6 -0.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
FINES FINESS Array B 20.19 18 P Pn 07 10 21.2 -0.5
comp=Z,7.6nm,0.6s,baz=194,slow=6.4,SNR=14
comp=Z,7.6nm,0.6s
FINES FINESS Array B 20.19 18 P **P 07 10 17.8 -2.0**
FIA1 FINESS Array S 20.20 18 P **P 07 10 18.5 -1.3**
FIA1 IAmb IAmb 07 10 28.1
comp=Z,11nm,0.9s
MOS Moscow 20.42 42 *e*P **P 07 10 22.4 +0.1**
MOS *e* 07 10 55.3
MOS pmax pmax
comp=Z,31nm,0.7s
VRH Novokhopyorsk 21.12 57 *e*P **P 07 10 29.6 -0.4**
VRH pmax pmax
comp=Z,20nm,0.8s
KIV Kislovodsk 21.48 77 *e*P **P 07 10 32.2 -1.8**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,30nm,14.0s
SHA1 Shidzhatmaz 21.49 77 *i* P **P 07 10 33.6 -0.6**
ASF Jabal al Asfar 21.60 112 P **P 07 10 38.6 +3.2**
comp=Z,5.1nm,0.6s,baz=303,slow=6.3,SNR=6.9
comp=Z,5.1nm,0.6s
KBZ Khabaz 21.66 77 P **P 07 10 38.1 +2.3**
comp=Z,9.4nm,0.8s,baz=295,slow=9.6,SNR=12
KBZ LR LR 07 21 06.4
comp=Z,44nm,19.4s,baz=296,slow=42
comp=Z,9.4nm,0.8s
KBZ Khabaz 21.66 77 *i* P **P 07 10 36.0 +0.2**
KBZ pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 24.05 32 *e*P **P 07 11 00.8 +0.6**
KLMR pmax pmax
comp=Z,19nm,1.6s
KLMR Klimovskoe 24.05 32 *e*P **P 07 11 00.8 +0.6**
KLMR AMP 07 11 13.5
comp=Z,19nm,1.6s
BELG Belogornoye 24.95 55 P **P 07 11 11.1 +2.6**
comp=Z,20nm,0.8s,baz=186,slow=0.9,SNR=8.7
BELG LR LR 07 22 05.1
comp=Z,46nm,18.1s,baz=97,slow=39
comp=Z,20nm,0.8s
BELG Belogornoye 24.95 55 *i* P **P 07 11 09.1 +0.6**
BELG pmax pmax
comp=Z,3.0nm,0.6s
PRGR Permogore 26.95 35 *e*P **P 07 11 24.5 -2.0**
PRGR pmax pmax
comp=Z,10.0nm,0.3s
KIRV Kirov 27.44 42 LR LR 07 23 16.9
comp=Z,58nm,19.5s,baz=230,slow=38
KIRV Kirov 27.44 42*ce*P **P 07 11 29.3 -1.6**
ARCES ARCESS Array B 27.52 9 P **P 07 11 34.6 +3.0**
comp=Z,2.3nm,0.9s,baz=198,slow=3.6,SNR=3.5
comp=Z,2.3nm,0.9s
TOA0 Torodi Ar. Sit 31.18 202 P **P 07 12 02.9 -1.7**
TOA0 IAmb IAmb 07 12 05.8
comp=Z,4.1nm,0.8s
TORD Torodi Ar. Bea 31.18 202 P **P 07 12 05.2 +0.6**
comp=Z,2.4nm,0.5s,baz=16,slow=8.6,SNR=19
comp=Z,2.4nm,0.5s
TORD Torodi Ar. Bea 31.18 202 P **P 07 12 03.0 -1.6**
ROSA Rosais 31.35 277 P **P 07 12 03.1 -2.7**
ARU Arti 31.80 49 P **P 07 12 10.1 +0.5**
comp=Z,8.6nm,0.6s,baz=263,slow=7.2,SNR=9.5
ARU LR LR 07 25 35.2
comp=Z,51nm,20.8s,baz=284,slow=37
comp=Z,8.6nm,0.6s
ARU Arti 31.80 49 P **P 07 12 07.4 -2.2**
ARU Arti 31.80 49*d i*P **P 07 12 10.0 +0.4**
ARU 07 13 17.7
ARU 07 15 02.7
ARU S **S 07 17 21.7 +2.2**
ARU SS **SnSn 07 19 06.6 0.0**
ARU pmax pmax
comp=Z,11nm,0.8s
ABKAR Akbulak array 32.71 62 P **P 07 12 15.2 -2.5**
GEYT Alibeck 34.33 83 P **P 07 12 34.0 +2.0**
comp=Z,1.8nm,0.4s,baz=310,slow=6.9,SNR=3.6
comp=Z,1.8nm,0.4s
KBS Kingsbay 36.21 360 *i* P **P 07 12 49.1 +1.4**
KBS pmax pmax
comp=Z,27nm,1.3s
BRVK Borovoye 38.67 54*ce*P **P 07 13 10.3 +1.5**
BRVK pmax pmax
comp=Z,8.0nm,0.7s
BVAR Borovoye Array 38.74 54 P **P 07 13 11.5 +2.1**
comp=Z,3.5nm,0.8s,baz=270,slow=7.4,SNR=16
BVAR LR LR 07 31 35.2
comp=Z,50nm,18.5s,baz=321,slow=40
comp=Z,3.5nm,0.8s
KK31 Karatay Array 41.29 69 P **P 07 13 30.9 +0.2**
KK31 IAmb IAmb 07 13 37.5
comp=Z,4.3nm,0.8s
KK31 Karatay Array 41.29 69 P **P 07 13 30.9 +0.2**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.29 69 P **P 07 13 29.8 -0.9**
KKAR IAmb IAmb 07 13 37.5
comp=Z,4.3nm,0.8s
KKAR Karatay Array 41.29 69 P **P 07 13 29.8 -0.9**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
WSAR Wadi Sarin 42.29 103 LR LR 07 38 05.9
comp=Z,32nm,18.1s,baz=300,slow=46
GAR Garm 42.70 75 P **P 07 13 38.5 -3.9**
GAR IAmb IAmb 07 13 49.8
comp=Z,7.7nm,0.7s
AAK Ala-Archa 44.19 68 P **P 07 13 57.2 +2.8**
comp=Z,0.5nm,0.3s,baz=289,slow=11,SNR=4.0
AAK LR LR 07 33 31.6
comp=Z,27nm,20.3s,baz=330,slow=38
comp=Z,0.5nm,0.3s
AAK Ala-Archa 44.19 68 *i* P **P 07 13 52.9 -1.5**
KURK Kurchatov 44.22 56 *i* P **P 07 13 51.6 -2.7**
KURK pmax pmax
comp=Z,13nm,1.0s
NRIK Noril'sk 45.31 29 P **P 07 14 05.0 +2.2**
comp=Z,3.8nm,0.9s,baz=256,slow=6.9,SNR=3.9
comp=Z,3.8nm,0.9s
NRIK Noril'sk 45.31 29 *i* P **P 07 14 03.9 +1.1**
NRIK pmax pmax
comp=Z,5.0nm,1.1s
KSH Kashi 46.47 72 P **P 07 14 13.3 +0.8**
KSH PcS **PcS 07 19 48.0 +6.2**
ZALV Zalesovo Beam 46.94 50 P **P 07 14 16.2 +0.4**
comp=Z,0.8nm,0.3s,baz=237,slow=7.9,SNR=4.3
comp=Z,0.8nm,0.3s
MK31 Makanchi Array 47.80 60 *i* P **P 07 14 23.2 +0.6**
MKAR Makanchi Array 47.80 60 P **P 07 14 23.4 +0.8**
comp=Z,5.0nm,0.8s,baz=274,slow=7.2,SNR=8.8
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 47.80 60 *i* P **P 07 14 25.1 +2.5**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
DGZ Jazzator, Alta 49.90 55 *i* P **P 07 14 36.8 -2.1**
DGZ pmax pmax
comp=Z,4.0nm,0.9s
DANN Dangsing 57.67 80 *e*P **P 07 15 35.7 -0.6**
GKN Gorkha 58.51 80 *e*P **P 07 15 40.9 -1.1**
DMN Daman 59.07 80 *e*P **P 07 15 46.8 +0.8**
PKIN Phulchoki 59.30 80 *e*P **P 07 15 47.6 0.0**
PKI Pulchoki 59.31 80 *e*P **P 07 15 48.1 +0.3**
GUN Gumba 59.46 79 *e*P **P 07 15 49.6 +0.8**
JIRN Jiri 59.83 79 *e*P **P 07 15 51.6 +0.2**
RAMN Ramite 60.54 79 *e*P **P 07 15 56.4 +0.3**
SONM Songino Array 61.83 50 P **P 07 16 06.2 +1.8**
comp=Z,3.6nm,0.8s,baz=274,slow=7.6,SNR=18
comp=Z,3.6nm,0.8s
ULN Ulaanbaatar 62.18 49 *i* P **P 07 16 07.6 +0.8**
ULN pmax pmax
comp=Z,1.0nm,0.3s
SADO Sadowa 62.94 307 LR LR 07 41 33.6
comp=Z,26nm,20.8s,baz=1.5,slow=34
TKL Tuckaleechee C 71.25 301 LR LR 07 47 55.3
comp=Z,31nm,18.0s,baz=0.5,slow=36
ILAR Eielson Array 71.59 351 P **P 07 17 08.6 +2.4**
comp=Z,1.2nm,0.8s,baz=15,slow=5.4,SNR=10
comp=Z,1.2nm,0.8s
BOSA Boshof 71.97 169 P **P 07 17 08.7 -0.2**
comp=Z,1.9nm,0.7s,baz=321,slow=4.5,SNR=4.3
BOSA LR LR 07 50 35.5
comp=Z,21nm,19.4s,baz=195,slow=37
comp=Z,1.9nm,0.7s
CMAR Chiang Mai Arr 74.70 79 P **P 07 17 26.1 +0.7**
comp=Z,1.4nm,0.3s,baz=307,slow=7.0,SNR=10
comp=Z,1.4nm,0.3s
CMAR Chiang Mai Arr 74.70 79 *i* P **P 07 17 26.1 +0.7**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
YSS Yuzh-Sakhalins 80.10 32*ce*P **P 07 17 58.2 +3.1**
YSS pmax pmax
comp=Z,21nm,0.7s
PDAR Pinedale Array 80.44 321 P **P 07 17 58.5 +1.1**
comp=Z,0.4nm,0.6s,baz=72,slow=4.8,SNR=5.0
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 87.65 309 P **P 07 18 36.3 +2.1**
comp=Z,0.2nm,0.6s,baz=66,slow=4.4,SNR=5.4
comp=Z,0.2nm,0.6s
ASAR Alice Springs 128.01 88 PKP **PKiKP 07 24 52.4 +0.3**
comp=Z,0.2nm,0.5s,baz=320,slow=1.5,SNR=2.3

IDC 31 07:17:43.3±6.8, 19°.60S×179°.40E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=291.1km s-min=41.6km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.30**	**262**	P	P	07 25 39.0	-0.2
	0.3nm,0.3s,baz=97,slow=7.6,SNR=24						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**42.35**	**256**	P	P	07 25 39.4	-0.1
	0.4nm,0.6s,baz=97,slow=7.6,SNR=6.1						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**88.01**	**14**	P	P	07 30 34.9	0.0
	0.4nm,0.7s,baz=220,slow=7.8,SNR=2.8						
	0.4nm,0.7s						

ROM 31 07:21:56.1±0.1, 42°.898N±0°.003×13°.127E±0°.004, h12km, ML2.5/29, 12C-11D, Error ellipse: s-maj=0.3km s-min=0.1km az=151.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**133**	P	Pg	07 21 58.9	+0.3
T1245				S	Sg	07 22 00.7	+0.3
T1245				AML	AML		
	comp=E,10750μm,0.7s						
T1245				AML	AML		
	comp=E,10800μm,0.7s						
T1245				AML	AML		
	comp=N,19050μm,0.2s						
T1245				AML	AML		
	comp=E,10090μm,0.7s						
T1245				AML	AML		
	comp=N,18950μm,0.2s						
T1245				AML	AML		
	comp=N,23700μm,0.8s						
T1245				AML	AML		
	comp=N,22750μm,0.8s						
T1245				AML	AML		
	comp=E,17650μm,0.5s						
T1245				AML	AML		
	comp=E,18450μm,0.5s						
T1216	**Preci, Frazion**	**0.08**	**265**	⇑P	Pg	07 21 59.0	+0.3
T1216				S	Sg	07 22 01.0	+0.5
T1216				AML	AML		
	comp=E,3705μm,1.5s						
T1216				AML	AML		
	comp=N,7300μm,0.2s						
T1216				AML	AML		
	comp=E,6520μm,0.4s						
T1216				AML	AML		
	comp=N,7920μm,0.2s						
FEMA	**Monte Fema**	**0.09**	**319**	⇓P	Pg	07 21 59.2	+0.3
FEMA				S	Sg	07 22 01.3	+0.4
FEMA				AML	AML		
	comp=E,8595μm,0.2s						
FEMA				AML	AML		
	comp=N,4270μm,1.1s						
FEMA				AML	AML		
	comp=N,4710μm,0.8s						
FEMA				AML	AML		
	comp=E,8595μm,0.2s						
T1256	**Bolognola (MC)**	**0.13**	**34**	⇓P	Pg	07 21 59.7	+0.3
T1256				S	Sg	07 22 02.3	+0.5
T1256				AML	AML		
	comp=E,2955μm,0.6s						
T1256				AML	AML		
	comp=E,2950μm,0.6s						
T1256				AML	AML		
	comp=N,2760μm,0.3s						
T1256				AML	AML		
	comp=N,2990μm,0.8s						
T1256				AML	AML		
	comp=E,4730μm,0.2s						
MMO1	**Montemonaco**	**0.15**	**90**	P	Pg	07 21 59.9	+0.3
MMO1				S	Sg	07 22 02.6	+0.5
AM05	**Amandola Campo**	**0.18**	**64**	P	Pg	07 22 00.7	+0.5
AM05				S	Sg	07 22 03.9	+0.9
AM05				AML	AML		
	comp=N,842μm,1.5s						
AM05				AML	AML		
	comp=E,2975μm,1.3s						
AM05				AML	AML		
	comp=N,378μm,0.1s						
AM05				AML	AML		
	comp=N,378μm,0.1s						
AM05				AML	AML		
	comp=N,842μm,1.5s						
AM05				AML	AML		
	comp=E,2980μm,1.3s						
AM05				AML	AML		
	comp=E,675μm,0.6s						
T1215	**Vallo di Nera,**	**0.21**	**243**	⇑P	Pg	07 22 01.1	+0.4
T1215				S	Sg	07 22 04.7	+0.9
T1215				AML	AML		
	comp=E,616μm,1.2s						
T1215				AML	AML		
	comp=N,588μm,0.6s						
T1215				AML	AML		
	comp=E,1041μm,1.0s						
T1215				AML	AML		
	comp=N,1082μm,0.0s						
GUMA	**Gualdo di Mace**	**0.23**	**43**	⇓P	Pg	07 22 01.5	+0.7
GUMA				AML	AML		
	comp=E,2425μm,0.5s						
GUMA				AML	AML		
	comp=N,2960μm,0.6s						
GUMA				AML	AML		
	comp=E,2700μm,0.5s						
GUMA				AML	AML		
	comp=N,3290μm,0.6s						
GUMA				AML	AML		
	comp=E,3255μm,1.1s						
GUMA				AML	AML		
	comp=N,3225μm,0.3s						
GUMA				AML	AML		
	comp=E,3020μm,0.4s						
T1241	**Roccafluvione,**	**0.23**	**101**	⇑P	Pg	07 22 01.2	+0.3
T1241				S	Sg	07 22 05.0	+0.8
T1241				AML	AML		
	comp=E,1460μm,0.1s						
T1241				AML	AML		
	comp=N,1428μm,0.2s						
T1241				AML	AML		
	comp=N,1300μm,0.1s						
T1241				AML	AML		
	comp=E,1454μm,0.1s						
T1241				AML	AML		
	comp=N,1428μm,0.2s						
T1241				AML	AML		
	comp=E,1580μm,0.1s						
T1241				AML	AML		
	comp=N,1295μm,0.1s						
T1241				AML	AML		
	comp=N,2725μm,0.5s						
T1241				AML	AML		
	comp=E,2730μm,0.4s						
T1241				AML	AML		
	comp=E,2785μm,0.4s						
T1241				AML	AML		
	comp=N,2615μm,0.5s						
T1217	**Poggiodomo (PG**	**0.23**	**218**	⇓P	Pg	07 22 01.4	+0.3
T1217				S	Sg	07 22 05.4	+1.0
T1217				AML	AML		
	comp=E,1043μm,0.2s						
T1217				AML	AML		
	comp=N,883μm,0.4s						
T1217				AML	AML		
	comp=E,1043μm,0.2s						
T1217				AML	AML		
	comp=N,883μm,0.4s						
T1217				AML	AML		
	comp=E,1335μm,0.4s						
T1217				AML	AML		
	comp=N,2405μm,0.5s						
T1217				AML	AML		
	comp=E,1352μm,0.4s						
T1217				AML	AML		
	comp=N,2380μm,0.5s						
T1204	**Amatrice, Fraz**	**0.26**	**148**	P	Pg	07 22 02.0	+0.4
T1204				AML	AML		
	comp=E,4265μm,0.3s						
T1204				AML	AML		
	comp=N,2545μm,0.2s						
LNSS	**Leonessa**	**0.30**	**192**	P	Pg	07 22 02.8	+0.5
LNSS				S	Sb	07 22 07.8	-0.8
LNSS				AML	AML		
	comp=E,541μm,1.0s						
LNSS				AML	AML		
	comp=N,1725μm,1.0s						
LNSS				AML	AML		
	comp=E,1120μm,1.1s						
LNSS				AML	AML		
	comp=N,3380μm,1.0s						
SMA1	**SAN MARTINO**	**0.31**	**150**	P	Pg	07 22 02.6	+0.2
SMA1				AML	AML		
	comp=E,411μm,0.3s						
SMA1				AML	AML		
	comp=N,367μm,1.0s						
SMA1				AML	AML		
	comp=E,1640μm,0.6s						
SMA1				AML	AML		
	comp=N,1985μm,1.6s						
T1243	**Rocca Santa Ma**	**0.31**	**130**	P	Pg	07 22 02.7	+0.2
T1243				S	Sb	07 22 07.8	-1.0
ASSB	**Assisi San Ben**	**0.37**	**293**	⇑P	Pg	07 22 03.7	+0.1
ASSB				AML	AML		
	comp=N,382μm,0.2s						
ASSB				AML	AML		
	comp=N,528μm,0.9s						
ASSB				AML	AML		
	comp=E,476μm,0.6s						
SNTG	**Esanatoglia**	**0.38**	**339**	⇑P	Pg	07 22 04.1	+0.3
SNTG				AML	AML		
	comp=E,323μm,0.3s						
SNTG				AML	AML		
	comp=N,274μm,1.0s						
RM33	**Pellescritta (**	**0.39**	**171**	P	Pg	07 22 04.2	+0.2
RM33				AML	AML		
	comp=E,346μm,0.9s						
RM33				AML	AML		
	comp=N,384μm,0.8s						
RM33				AML	AML		
	comp=E,758μm,1.5s						
RM33				AML	AML		
	comp=N,708μm,1.2s						

OFFI	**Offida**	**0.41**	**85**	⇓P	Pb	07 22 05.4	0.0
OFFI				AML	AML		
	comp=E,660μm,0.8s						
OFFI				AML	AML		
	comp=N,806μm,1.2s						
ARRO	**Arrone**	**0.41**	**220**	⇑P	Pg	07 22 04.5	+0.2
ARRO				AML	AML		
	comp=E,289μm,0.2s						
ARRO				AML	AML		
	comp=N,252μm,0.2s						
ARRO				AML	AML		
	comp=E,553μm,0.7s						
ARRO				AML	AML		
	comp=N,870μm,0.6s						
T1211	**Morro Reatino**	**0.42**	**209**	⇑P	Pg	07 22 04.9	+0.5
T1211				AML	AML		
	comp=E,489μm,0.3s						
T1211				AML	AML		
	comp=N,568μm,1.2s						
T1211				AML	AML		
	comp=E,1140μm,0.3s						
T1211				AML	AML		
	comp=N,2600μm,0.3s						
T1211				AML	AML		
	comp=E,1187μm,0.3s						
T1211				AML	AML		
	comp=N,2570μm,0.2s						
TERO	**Teramo**	**0.45**	**128**	⇑P	Pg	07 22 05.0	+0.2
TERO				S	Sb	07 22 11.8	-0.8
TERO				AML	AML		
	comp=E,308μm,0.1s						
TERO				AML	AML		
	comp=N,378μm,0.1s						
TERO				AML	AML		
	comp=E,654μm,0.3s						
TERO				AML	AML		
	comp=N,854μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.46**	**309**	⇓P	Pb	07 22 05.8	-0.4
ATCC				AML	AML		
	comp=E,232μm,0.7s						
ATCC				AML	AML		
	comp=N,188μm,1.1s						
ATCC				AML	AML		
	comp=E,507μm,0.2s						
ATCC				AML	AML		
	comp=N,270μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.47**	**164**	⇓P	Pg	07 22 05.5	+0.1
T1247				AML	AML		
	comp=E,394μm,1.1s						
T1247				AML	AML		
	comp=N,419μm,0.1s						
T1247				AML	AML		
	comp=E,677μm,1.5s						
T1247				AML	AML		
	comp=N,945μm,0.8s						
CESX	**Cesi**	**0.49**	**235**	⇓P	Pg	07 22 05.9	+0.1
CESX				AML	AML		
	comp=E,238μm,0.4s						
CESX				AML	AML		
	comp=N,262μm,0.4s						
CESX				AML	AML		
	comp=N,488μm,1.2s						
CESX				AML	AML		
	comp=E,724μm,0.4s						
GIGS	**Gran Sasso**	**0.55**	**144**	P	Pg	07 22 06.8	-0.1
GIGS				AML	AML		
	comp=E,104μm,0.6s						
GIGS				AML	AML		
	comp=N,144μm,0.3s						
ARVD	**Arcevia**	**0.61**	**347**	S	Sb	07 22 19.0	+1.5
FIAM	**Fiamignano**	**0.63**	**181**	⇑P	Pg	07 22 08.2	-0.2
FIAM				S	Sb	07 22 18.0	0.0
FIAM				AML	AML		
	comp=E,162μm,0.2s						
FIAM				AML	AML		
	comp=N,146μm,1.2s						
FIAM				AML	AML		
	comp=E,250μm,0.7s						
FIAM				AML	AML		
	comp=N,301μm,0.4s						
ATVO	**AVT- Monte Val**	**0.71**	**313**	⇑P	Pg	07 22 09.8	-0.1
ATVO				AML	AML		
	comp=E,62μm,0.8s						
ATVO				AML	AML		
	comp=N,60μm,1.6s						
VCEL	**Villa Celiera**	**0.73**	**133**	⇓P	Pg	07 22 10.4	+0.2
VCEL				AML	AML		
	comp=E,307μm,0.3s						
VCEL				AML	AML		
	comp=N,394μm,0.3s						
PIEI	**Pieia**	**0.77**	**326**	⇓P	Pg	07 22 11.1	+0.1
PIEI				S	Sn	07 22 25.0	+0.5
PIEI				AML	AML		
	comp=E,71μm,1.4s						
PIEI				AML	AML		
	comp=N,55μm,0.4s						
NARO	**Abbazia di Nar**	**0.82**	**331**	⇓P	Pg	07 22 12.0	+0.2
NARO				AML	AML		
	comp=N,45μm,1.3s						
NARO				AML	AML		
	comp=E,51μm,0.3s						
NARO				AML	AML		
	comp=N,45μm,1.3s						
T0110	**Collepietro**	**0.83**	**144**	⇑P	Pg	07 22 11.9	-0.2
T0110				AML	AML		
	comp=E,260μm,0.7s						
T0110				AML	AML		
	comp=N,228μm,0.5s						
CERT	**Cerreto**	**0.95**	**186**	⇑P	Pn	07 22 16.1	+0.6

ROM 31 07:22:55.8±0.1, 42°.806N±0°.004×13°.119E±0°.004, h10km, ML2.4/24, 9C-5D, Error ellipse: s-maj=0.4km s-min=0.2km az=355.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**45**	P	Pg	07 22 58.7	+0.4
T1245				S	Sg	07 23 00.3	+0.2
T1245				AML	AML		
	comp=E,18400μm,0.5s						
T1245				AML	AML		
	comp=N,22750μm,0.8s						
T1245				AML	AML		
	comp=E,17650μm,0.5s						
T1245				AML	AML		
	comp=N,23700μm,0.8s						
T1245				AML	AML		
	comp=E,18450μm,0.5s						
FEMA	**Monte Fema**	**0.16**	**342**	⇑P	Pg	07 23 00.2	+0.7
FEMA				S	Sg	07 23 03.3	+1.2
FEMA				AML	AML		
	comp=E,3625μm,0.3s						
FEMA				AML	AML		
	comp=E,3630μm,0.3s						
FEMA				AML	AML		
	comp=N,4710μm,0.8s						
T1217	**Poggiodomo (PG**	**0.17**	**236**	⇓P	Pg	07 23 00.0	+0.5
T1217				S	Sg	07 23 03.1	+1.0
T1217				AML	AML		
	comp=N,2400μm,0.5s						
T1217				AML	AML		
	comp=N,2405μm,0.5s						
T1217				AML	AML		
	comp=E,1335μm,0.4s						
MMO1	**Montemonaco**	**0.18**	**59**	P	Pg	07 23 00.3	+0.6
MMO1				S	Sg	07 23 03.0	+0.5
T1215	**Vallo di Nera,**	**0.18**	**269**	⇑P	Pg	07 23 00.4	+0.6
T1215				S	Sg	07 23 03.5	+1.0
T1215				AML	AML		
	comp=E,1037μm,1.0s						
T1215				AML	AML		
	comp=N,1085μm,0.1s						
T1215				AML	AML		
	comp=E,1034μm,1.1s						
T1215				AML	AML		
	comp=N,1112μm,0.1s						
T1215				AML	AML		
	comp=E,1041μm,1.0s						
T1215				AML	AML		
	comp=N,1084μm,0.0s						
T1204	**Amatrice, Fraz**	**0.20**	**132**	P	Pg	07 23 00.5	+0.5
T1204				S	Sg	07 23 04.4	+1.5
T1204				AML	AML		
	comp=E,4270μm,0.3s						
T1204				AML	AML		
	comp=N,2550μm,0.2s						
T1204				AML	AML		
	comp=E,4265μm,0.3s						
T1204				AML	AML		
	comp=N,2545μm,0.2s						
LNSS	**Leonessa**	**0.21**	**196**	⇑P	Pg	07 23 00.9	+0.6
LNSS				AML	AML		
	comp=E,1120μm,1.1s						
LNSS				AML	AML		
	comp=N,3380μm,1.0s						
T1256	**Bolognola (MC)**	**0.21**	**21**	AML	AML		
	comp=E,4730μm,0.2s						
T1256				AML	AML		
	comp=E,4725μm,0.2s						
T1256				AML	AML		
	comp=N,2990μm,0.8s						
T1241	**Roccafluvione,**	**0.23**	**78**	P	Pg	07 23 00.9	+0.2
T1241				S	Sg	07 23 05.4	+1.4
T1241				AML	AML		
	comp=N,2615μm,0.5s						
T1241				AML	AML		
	comp=E,2780μm,0.4s						
T1241				AML	AML		
	comp=N,2615μm,0.6s						
T1241				AML	AML		
	comp=N,2720μm,0.5s						
T1241				AML	AML		
	comp=N,2725μm,0.5s						
T1241				AML	AML		
	comp=E,2785μm,0.4s						
T1241				AML	AML		
	comp=E,2730μm,0.4s						
SMA1	**SAN MARTINO**	**0.24**	**138**	P	Pg	07 22 60.0	-0.8
SMA1				AML	AML		
	comp=E,1635μm,0.6s						
SMA1				AML	AML		
	comp=E,1640μm,0.6s						
SMA1				AML	AML		
	comp=N,1985μm,1.6s						
T1243	**Rocca Santa Ma**	**0.27**	**114**	P	Pg	07 23 01.9	+0.7
T1243				S	Sb	07 23 06.5	-0.9
GUMA	**Gualdo di Mace**	**0.30**	**32**	P	Pb	07 23 02.8	-0.6
RM33	**Pellescritta (**	**0.30**	**167**	⇑P	Pg	07 23 02.2	+0.2
RM33				AML	AML		
	comp=E,756μm,1.5s						
RM33				AML	AML		
	comp=E,757μm,1.5s						
RM33				AML	AML		
	comp=N,708μm,1.2s						
RM33				AML	AML		
	comp=E,758μm,1.5s						
T1211	**Morro Reatino**	**0.34**	**216**	⇑P	Pg	07 23 02.9	+0.4
T1211				AML	AML		
	comp=E,1138μm,0.3s						
T1211				AML	AML		
	comp=N,2600μm,0.3s						
T1211				AML	AML		
	comp=E,1140μm,0.3s						
ARRO	**Arrone**	**0.34**	**229**	⇑P	Pg	07 23 03.2	+0.5
ARRO				AML	AML		
	comp=E,553μm,0.7s						
ARRO				AML	AML		
	comp=N,870μm,0.6s						
SEF1	**Sefro**	**0.36**	**340**	P	Pg	07 23 03.6	+0.5
T1247	**Pizzolo (AQ)**	**0.39**	**160**	P	Pb	07 23 04.5	-0.3
T1247				AML	AML		
	comp=E,678μm,1.5s						
T1247				AML	AML		
	comp=N,946μm,0.8s						
T1247				AML	AML		
	comp=E,677μm,1.5s						
T1247				AML	AML		
	comp=N,945μm,0.8s						
TERO	**Teramo**	**0.40**	**117**	P	Pg	07 23 04.0	+0.2
TERO				AML	AML		
	comp=E,654μm,0.3s						
TERO				AML	AML		
	comp=N,854μm,0.5s						
ASSB	**Assisi San Ben**	**0.41**	**305**	P	Pg	07 23 04.2	+0.2
ASSB				AML	AML		
	comp=E,442μm,1.5s						
ASSB				AML	AML		
	comp=N,528μm,0.9s						
OFFI	**Offida**	**0.44**	**73**	S	Sg	07 23 06.0	-4.2
CESX	**Cesi**	**0.44**	**244**	⇑P	Pg	07 23 04.7	+0.2
CESX				AML	AML		
	comp=N,488μm,1.2s						
CESX				AML	AML		
	comp=E,724μm,0.4s						
SNTG	**Esanatoglia**	**0.47**	**344**	S	Sg	07 23 06.0	-5.2
GIGS	**Gran Sasso**	**0.49**	**137**	P	Pg	07 23 05.2	-0.1
GIGS				AML	AML		
	comp=E,104μm,0.6s						
GIGS				AML	AML		
	comp=N,144μm,0.3s						
GIGS				AML	AML		
	comp=N,144μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.52**	**317**	P	Pg	07 23 06.3	+0.4
ATCC				AML	AML		
	comp=E,508μm,0.2s						
ATCC				AML	AML		
	comp=N,270μm,0.5s						
ATCC				AML	AML		
	comp=E,507μm,0.2s						
EL6	**Elcito**	**0.52**	**359**	S	Sg	07 23 07.0	-6.0
FIAM	**Fiamignano**	**0.54**	**180**	⇑P	Pg	07 23 06.4	+0.1
FIAM				S	Sb	07 23 15.0	-0.2
FIAM				AML	AML		
	comp=N,301μm,0.4s						
FIAM				AML	AML		
	comp=E,250μm,0.7s						
FOSV	**Fossato di Vic**	**0.56**	**332**	S	Sg	07 23 07.0	-7.0
TRTR	**Tortoreto Alta**	**0.58**	**90**	S	Sg	07 23 09.0	-5.9
MURB	**Monte Urbino**	**0.63**	**317**	⇑P	Pb	07 23 08.5	-0.4
MURB				AML	AML		
	comp=N,562μm,0.3s						
MURB				AML	AML		
	comp=E,698μm,1.1s						
VCEL	**Villa Celiera**	**0.67**	**127**	⇓P	Pb	07 23 09.3	-0.4
VCEL				AML	AML		
	comp=E,307μm,0.3s						
VCEL				AML	AML		
	comp=N,394μm,0.3s						
VCEL				AML	AML		
	comp=N,394μm,0.3s						
PP3	**Marolino**	**0.68**	**32**	S	Sg	07 23 11.0	-6.8
ARVD	**Arcevia**	**0.70**	**349**	S	Sg	07 23 10.0	-8.7
T0110	**Collepietro**	**0.76**	**140**	⇓P	Pg	07 23 10.4	-0.1
T0110				AML	AML		
	comp=E,282μm,0.4s						
T0110				AML	AML		
	comp=N,242μm,0.3s						
ATVO	**AVT- Monte Val**	**0.78**	**318**	⇓P	Pg	07 23 10.9	+0.1
ATVO				AML	AML		
	comp=E,108μm,0.5s						
ATVO				AML	AML		
	comp=N,106μm,0.4s						
ATPI	**Pietralunga -**	**0.83**	**321**	P	Pg	07 23 12.1	+0.2
ATPI				AML	AML		
	comp=E,76μm,1.3s						
ATPI				AML	AML		
	comp=N,72μm,0.5s						
CAFI	**Castiglion Fio**	**0.99**	**302**	⇓P	Pb	07 23 15.3	+0.2
CAFI				AML	AML		
	comp=N,65μm,1.1s						
CAFI				AML	AML		
	comp=E,56μm,0.6s						

*NOU **31** 07:27:44.8, 37°.18S×179°.90E, h0km, MLv3.7/6, Off E. Coast of N. Island, N.Z.*
*WEL **31** 07:27:56.5±1.0, 37°.S±4°.×17°.9E±°, h20km, M3.0/13, ML3.3/18, MLv3.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=98.1*

ISC 31 07:27:53.6±2.5, 37°.21S±0°.08×179°.2E±0°.1, h20km±5km, n54, σ0°.87/66, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.77**	**243**	P	**Pn**	**07 28 09.1**	**-0.3**
MXZ	**Matakaoa Point**	**0.77**	**243**	P	**Pg**	**07 28 08.8**	**+0.1**
MXZ				S	**Sb**	**07 28 17.8**	**-0.6**
WMGZ	**Waiomatatini S**	**0.85**	**224**	P	**Pn**	**07 28 11.9**	**+1.4**
WMGZ				S	**Sn**	**07 28 23.8**	**+1.4**
PKGZ	**Pakihiroa**	**1.10**	**232**	P	**Pg**	**07 28 14.9**	**-0.1**
PKGZ				S	**Sb**	**07 28 28.8**	**+0.9**
PUZ	**Puketiti**	**1.12**	**220**	P	**Pg**	**07 28 15.3**	**-0.1**
PUZ				S	**Sg**	**07 28 30.5**	**+0.4**
HAZ	**Te Kaha**	**1.23**	**243**	P	**Pn**	**07 28 15.7**	**0.0**
HAZ				S	**Sn**	**07 28 32.3**	**+0.6**
TWGZ	**Tauwhareparae**	**1.35**	**224**	P	**Pb**	**07 28 18.7**	**+0.4**
TWGZ				S	**Sb**	**07 28 36.0**	**+0.9**
RUGZ	**Raukumara Rang**	**1.40**	**237**	P	**Pb**	**07 28 19.5**	**+0.2**
RUGZ				S	**Sn**	**07 28 36.5**	**+0.3**
TKGZ	**Te Karaka**	**1.61**	**220**	P	**Pb**	**07 28 22.1**	**-0.5**
TKGZ				S	**Sn**	**07 28 41.8**	**+0.6**
MWZ	**Matawai**	**1.71**	**229**	P	**Pb**	**07 28 23.5**	**-1.0**
MWZ				S	**Sn**	**07 28 44.0**	**+0.1**
RIGZ	**Rimuhau**	**1.86**	**216**	P	**Pb**	**07 28 25.4**	**-1.6**
RIGZ				S	**Sn**	**07 28 48.0**	**+0.6**
RAGZ	**Rawiri**	**1.89**	**227**	P	**Pb**	**07 28 26.0**	**-1.5**
RAGZ				S	**Sn**	**07 28 47.3**	**-0.9**
URZ	**Urewera**	**1.94**	**237**	P	**Pn**	**07 28 26.5**	**+1.1**
URZ	**Urewera**	**1.94**	**237**	P	**Pn**	**07 28 26.3**	**+0.8**
URZ				S	**Sn**	**07 28 48.0**	**-1.2**
SNGZ	**Shannon Statio**	**2.13**	**222**	P	**Pn**	**07 28 28.9**	**+0.8**
SNGZ				S	**Sn**	**07 28 53.5**	**-0.5**
OPRZ	**Ohinepanea**	**2.17**	**252**	P	**Pn**	**07 28 28.8**	**+0.1**
MHGZ	**Mahia Peninsul**	**2.18**	**207**	P	**Pn**	**07 28 29.6**	**+0.8**
RTZ	**Ruatahuna**	**2.23**	**230**	P	**Pn**	**07 28 30.3**	**+0.8**
MUGZ	**Murupara**	**2.28**	**236**	P	**Pn**	**07 28 30.8**	**+0.6**
TARZ	**Mount Tarawera**	**2.34**	**243**	P	**Pb**	**07 28 33.1**	**-2.1**
RAHZ	**Arahi**	**2.36**	**223**	P	**Pn**	**07 28 32.2**	**+0.8**
MTHZ	**Maungataniwha**	**2.46**	**228**	P	**Pn**	**07 28 33.6**	**+0.9**
NMHZ	**Naumai**	**2.65**	**224**	P	**Pn**	**07 28 36.2**	**+0.9**
ARHZ	**Aropaoanui**	**2.67**	**219**	P	**Pn**	**07 28 36.0**	**+0.5**
MRHZ	**Matea Rd**	**2.71**	**232**	P	**Pn**	**07 28 36.7**	**+0.6**
KUZ	**Kuaotunu**	**2.80**	**279**	P	**Pn**	**07 28 37.6**	**+0.3**
KUZ	**Kuaotunu**	**2.80**	**279**	P	**Pn**	**07 28 36.6**	**-0.7**
BKZ	**Black Stump Fm**	**2.87**	**226**	P	**Pn**	**07 28 38.6**	**+0.2**
BKZ	**Black Stump Fm**	**2.87**	**226**	P	**Pn**	**07 28 38.6**	**+0.2**
MCHZ	**McNeill Hill**	**2.96**	**220**	P	**Pn**	**07 28 39.6**	**+0.1**
TOZ	**Tahuroa Road**	**2.96**	**259**	P	**Pn**	**07 28 39.6**	**+0.1**
KWHZ	**Kaweka Forest**	**3.09**	**224**	P	**Pn**	**07 28 41.0**	**-0.4**
GRZ	**Great Barrier**	**3.13**	**287**	P	**Pn**	**07 28 42.8**	**+0.9**
KAHZ	**Kahuranaki**	**3.14**	**214**	P	**Pn**	**07 28 41.4**	**-0.7**
MKAZ	**Moumakai**	**3.20**	**271**	P	**Pn**	**07 28 42.6**	**-0.2**
WIAZ	**Waiheke Island**	**3.25**	**276**	P	**Pn**	**07 28 43.5**	**-0.1**
TMVZ	**Te Maari**	**3.33**	**234**	P	**Pn**	**07 28 44.9**	**+0.2**
ETVZ	**East Tongariro**	**3.33**	**234**	P	**Pn**	**07 28 45.0**	**+0.2**
NTVZ	**North Tongarir**	**3.33**	**235**	P	**Pn**	**07 28 45.2**	**+0.4**
BHHZ	**Black Hill Sta**	**3.33**	**226**	P	**Pn**	**07 28 44.7**	**-0.1**
KRVZ	**Karewarewa**	**3.35**	**235**	P	**Pn**	**07 28 45.4**	**+0.3**
OTVZ	**Oturere**	**3.38**	**234**	P	**Pn**	**07 28 45.6**	**+0.2**
NNVZ	**North Ngauruho**	**3.39**	**235**	P	**Pn**	**07 28 46.0**	**+0.4**
ETAZ	**East Tamaki Re**	**3.40**	**273**	P	**Pn**	**07 28 46.4**	**+0.9**
SNVZ	**South Ngauruho**	**3.41**	**234**	P	**Pn**	**07 28 45.8**	**0.0**
MOVZ	**Moawhango**	**3.47**	**230**	P	**Pn**	**07 28 46.4**	**-0.2**
ABAZ	**Army Bay**	**3.53**	**279**	P	**Pn**	**07 28 48.5**	**+1.2**
RVAZ	**Riverhead Bore**	**3.70**	**275**	P	**Pn**	**07 28 50.2**	**+0.6**
WCZ	**Waipu Caves**	**4.08**	**287**	P	**Pn**	**07 28 56.3**	**+1.3**
BFZ	**Birch Farm**	**4.14**	**212**	P	**Pn**	**07 28 53.6**	**-2.2**
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	**07 29 07.7**	**+1.2**
OUZ	**Omahuta**	**4.92**	**292**	P	**Pn**	**07 29 07.7**	**+1.2**
MRNZ	**Matariki Terra**	**6.49**	**228**	P	Pn	07 29 34.6	+6.6
CTZ	**Chatham Island**	**7.26**	**155**	P	**Pn**	**07 29 40.8**	**+2.2**

IDC 31 07:35:34.6±2.6, 54°.15N×86°.53E, h0km, mbtmp3.0/2, ML2.8/2, 1C-2D, Error ellipse: s-maj=21.4km s-min=13.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**259**	I		07 43 12.6	
	baz=80,slow=333,SNR=2.7						
ZAA0	**Zalesovo Array**	**1.03**	**259**	P	Pg	07 35 53.5	-0.8
ZAA0				S	Sg	07 36 07.1	-0.5
ZALV	**Zalesovo Beam**	**1.03**	**259**	Pg	Pg	07 35 52.9	-1.4
	1.3nm,0.3s,baz=79,slow=18,SNR=6.1						
ZALV				Lg	Lg	07 36 08.4	
	2.7nm,0.3s,baz=76,slow=29,SNR=11						
ZALV				Rg	Rg	07 36 13.5	
	80nm,1.2s,baz=73,slow=25,SNR=39						
KURBB	**Kurchatov Arra**	**6.04**	**237**	Pn	Pn	07 37 06.3	+1.2
	0.2nm,0.3s,baz=54,slow=13,SNR=11						
KURBB				Lg	Lg	07 38 48.5	
	baz=58,slow=32						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**6.04**	**237**	⇓Pn	Pn	07 37 02.4	-2.7
	1.5nm,0.5s,baz=57,slow=12						
KURBB				⇑Sn	Sn	07 38 12.9	-1.9
	2.0nm,0.6s,baz=54,slow=33						
KURBB				⇓Lg	Lg	07 38 42.0	
	11nm,1.4s						
MKAR	**Makanchi Array**	**7.85**	**202**	Pn	Pn	07 37 30.6	+0.7
	0.2nm,0.3s,baz=24,slow=13,SNR=7.1						
MKAR				Lg	Lg	07 39 43.6	
	baz=24,slow=22,SNR=5.5						
	0.3nm,0.3s						

*NEIC **31** 07:38:34.0±1.9, 22°.62S±0°.07×66°.21W±0°.07, h267km±8km, mb4.3/23, Md3.1(SJA), ML4.4(GUC), Error ellipse: s-maj=10.3km s-min=9.3km az=184.0*
*IDC **31** 07:38:33.8±0.9, 22°.54S×66°.16W, h244km±12km, mb3.5/5, mbtmp4.1/12, Error ellipse: s-maj=16.8km s-min=14.3km az=104.0*
*VAO **31** 07:38:35.4±0.4, 22°.38S×66°.11W, h253km±5km, mb4.0*
*GUC **31** 07:38:35.1±0.6, 22°.57S×66°.48W, h280km±11km, ML4.4*

ISC 31 07:38:33.3±0.5, 22°.59S±0°.04×66°.22W±0°.05, h251km, n115, σ1°30/133, mb4.1/14, 10C-6D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.84**	**258**		**Pn**	**07 39 17.7**	**+2.8**
LVC	**Limon Verde**	**2.48**	**269**	P	**Pn**	**07 39 22.7**	**+1.8**
	37nm,0.3s,baz=101,slow=5.7,SNR=122						
LVC				S	**S**	**07 39 58.5**	**+0.1**
	45nm,0.3s,baz=199,slow=23,SNR=6.9						
LVC	**Limon Verde**	**2.48**	**269**	⇓*i*P	**Pn**	**07 39 22.7**	**+1.8**
LVC				*i* S	**S**	**07 39 58.5**	**+0.1**
LVC	**Limon Verde**	**2.48**	**269**	*e*P	**Pn**	**07 39 22.5**	**+1.6**
PB09	**IPOC Station P**	**2.91**	**285**	Pn	**Pn**	**07 39 27.6**	**+2.4**
PB09	**IPOC Station P**	**2.91**	**285**	⇑*i*P	**Pn**	**07 39 27.2**	**+2.1**
PB09				*i* S	**S**	**07 40 06.3**	**+0.3**
PB15	**IPOC Station P**	**3.06**	**258**		**Pn**	**07 39 28.2**	**+1.5**
PB15	**IPOC Station P**	**3.06**	**258**	⇓*i*P	**Pn**	**07 39 28.3**	**+1.5**
PB15				*i* S	**S**	**07 40 09.2**	**+0.3**
PB06	**IPOC Station P**	**3.10**	**267**		**Pn**	**07 39 28.5**	**+1.4**
PB06	**IPOC Station P**	**3.10**	**267**	⇑*i*P	**Pn**	**07 39 28.9**	**+1.7**
PB06				*i* S	**S**	**07 40 09.5**	**-0.1**
PB06				IAML		07 40 11.5	
	comp=E,356nm,0.2s						
PB03	**IPOC Station P**	**3.31**	**279**		**Pn**	**07 39 30.6**	**+1.1**
PB03	**IPOC Station P**	**3.31**	**279**	⇓*i*P	**Pn**	**07 39 31.1**	**+1.6**
PB03				*i* S	**S**	**07 40 13.0**	**-1.0**
PB01	**IPOC Station P**	**3.40**	**296**		**Pn**	**07 39 31.8**	**+1.4**
PB01	**IPOC Station P**	**3.40**	**296**	⇑*i*P	**Pn**	**07 39 31.8**	**+1.4**
PB01				*i* S	**S**	**07 40 15.2**	**-0.4**
PB07	**IPOC Station P**	**3.50**	**283**	Pn	**Pn**	**07 39 33.1**	**+1.4**
PB02	**IPOC Station P**	**3.64**	**290**	Pn	**Pn**	**07 39 34.3**	**+1.2**
PB04	**IPOC Station P**	**3.64**	**273**	Pn	**Pn**	**07 39 34.3**	**+1.0**
PB04	**IPOC Station P**	**3.64**	**273**	⇓*i*P	**Pn**	**07 39 34.6**	**+1.4**
PB04				*i* S	**S**	**07 40 19.1**	**-1.6**
PB08	**IPOC Station P**	**3.66**	**311**		**Pn**	**07 39 35.8**	**+2.1**
PB08	**IPOC Station P**	**3.66**	**311**	⇑*i*P	**Pn**	**07 39 35.9**	**+2.1**
PB08				*i* S	**S**	**07 40 21.7**	**+0.2**
GO02	**Mina Guanaco**	**4.01**	**230**	Pn	**Pn**	**07 39 39.1**	**+1.5**
GO02	**Mina Guanaco**	**4.01**	**230**	⇓*i*P	**Pn**	**07 39 39.1**	**+1.5**
GO02				*e*S	**S**	**07 40 28.9**	**+0.2**
GO01	**Chusmiza**	**4.02**	**316**	Pn	**Pn**	**07 39 39.6**	**+1.6**
GO01	**Chusmiza**	**4.02**	**316**	⇑*i*P	**Pn**	**07 39 39.5**	**+1.6**
GO01				*i* S	**S**	**07 40 29.3**	**+0.2**
PATCX	**Punta Patache**	**4.05**	**295**		**Pn**	**07 39 39.2**	**+1.2**
PATCX	**Punta Patache**	**4.05**	**295**	⇑*i*P	**Pn**	**07 39 38.9**	**+1.0**
PATCX				*i* S	**S**	**07 40 27.0**	**-2.3**
PB10	**IPOC Station P**	**4.09**	**256**		**Pn**	**07 39 39.3**	**+1.0**
PB10	**IPOC Station P**	**4.09**	**256**	⇓*i*P	**Pn**	**07 39 39.3**	**+1.0**
PB10				*i* S	**S**	**07 40 27.2**	**-2.7**
HMBC	**Humberstone**	**4.12**	**303**	⇑*i*P	**Pn**	**07 39 39.2**	**+0.5**
HMBC				*i* S	**S**	**07 40 28.1**	**-2.5**
TA01	**Diego Aracena**	**4.20**	**298**		**Pn**	**07 39 40.0**	**+0.4**
TA01	**Diego Aracena**	**4.20**	**298**	⇑*i*P	**Pn**	**07 39 40.0**	**+0.4**
TA01				*i* S	**S**	**07 40 29.4**	**-2.7**
TA02	**Huaiquique**	**4.31**	**302**		**Pn**	**07 39 41.0**	**+0.2**
PB14	**IPOC Station P**	**4.34**	**241**		**Pn**

PB14	IPOC Station P	4.34	241	eP	Pn	07 39 42.8	+1.2
PB14				i S	S	07 40 34.1	-1.6
AC02	Maricunga	4.99	211	Pn	Pn	07 39 50.8	+1.3
PB16	IPOC Station P	5.23	323		Pn	07 39 54.3	+1.7
PB16	IPOC Station P	5.23	323	⇑iP	Pn	07 39 54.4	+1.7
PB16				i S	S	07 40 56.1	+0.3
AC01	Pan de Azucar	5.34	228	Pn	Pn	07 39 53.5	+0.2
PB12	IPOC Station P	5.51	315	Pn	Pn	07 39 54.9	-0.7
PB12	IPOC Station P	5.51	315	⇑iP	Pn	07 39 54.7	-0.9
GO03	Copiap	6.17	215		Pn	07 40 03.4	-0.2
LPAZ	La Paz	6.52	344	P	Pn	07 40 10.1	+1.4
	comp=E,14nm,0.3s,baz=133,slow=6.1,SNR=136						
LPAZ				S	S	07 41 23.9	-1.0
	comp=E,8.2nm,0.7s,baz=321,slow=22,SNR=6.2						
LPAZ	La Paz	6.52	344	Pn	Pn	07 40 10.0	+1.2
LPAZ	La Paz	6.52	344	eP	Pn	07 40 09.9	+1.2
AC04	Llanos de Chal	7.11	217	Pn	Pn	07 40 14.4	-1.0
AC05	El Transito	7.22	210	Pn	Pn	07 40 16.9	+0.1
BBRB	Robore, Bolivi	7.38	56	eP	Pn	07 40 16.8	-2.2
BBSD	Serra de San D	7.53	46	eP	Pn	07 40 20.6	-0.2
LCO	Las Campanas	7.56	211		Pn	07 40 21.4	0.0
CO01	Juntas del Tor	8.14	204	Pn	Pn	07 40 30.5	+1.9
SIV	San Ignacio	8.16	37	P	Pn	07 40 28.5	-0.3
	comp=E,12nm,0.5s,baz=217,slow=8.8,SNR=107						
CO05	La Serena	8.58	211	Pn	Pn	07 40 33.5	-0.3
GO04	Tololo Observa	8.60	208	Pn	Pn	07 40 35.3	+0.9
CPUP	Villa Florida	8.92	116	P	Pn	07 40 39.4	+1.2
	comp=E,1.9nm,0.9s,baz=324,slow=8.2,SNR=3.5						
CO03	El Pedregal	9.14	205	Pn	Pn	07 40 41.6	+0.5
CO02	Combarbal	9.58	205	Pn	Pn	07 40 46.9	+0.2
PTLB	Pontes e Lacer	9.76	45	eP	Pn	07 40 48.6	-0.3
VILB	Vilhena	11.16	32	eP	Pn	07 41 06.5	-0.1
SALV	Santo Antonio	11.96	58	eP	Pn	07 41 14.6	-2.0
VA05	Santo Domingo	12.01	202	Pn	Pn	07 41 15.2	-1.7
CRSM	Crissiumal (Br	12.07	116	eP	P	07 41 21.2	+0.5
MT01	Popeta	12.07	200	Pn	Pn	07 41 18.0	+0.2
RODS	Rosario do Sul	12.53	130	eP	P	07 41 28.0	+2.2
ETMB	Extrema	12.70	0	eP	Pn	07 41 25.8	+0.2
BO02	Sierra Bellavi	12.80	197	Pn	Pn	07 41 25.4	-1.4
ITAB	Concordia	13.60	113	Pn	Pn	07 41 34.8	-1.8
CPSB	Cacapava Do Su	13.84	127	eP	P	07 41 41.6	+1.4
PDRB	Porto dos Gac	14.18	41	eP	Pn	07 41 43.5	-0.4
PLTB	Pedras Altas	14.47	132		Pn	07 41 46.0	-1.1
PLTB	Pedras Altas	14.47	132	eP	P	07 41 48.9	+1.7
NNA	Nana	14.62	314	P	Pn	07 41 50.5	+1.4
	comp=E,4.7nm,0.7s,baz=160,slow=11,SNR=3.5						
CLDB	Colider	15.33	42	eP	Pn	07 41 57.0	-0.6
TRQA	Tornquist	15.85	168	P	P	07 42 02.3	0.0
TRQA				IAmb	IAmb	07 42 05.6	
	comp=Z,4.2nm,0.7s						
IPMB	Ipameri, GO	17.50	78	eP	Pn	07 42 21.9	-1.3
SNDB	Serra Nova Dou	17.72	56	eP	P	07 42 22.7	-0.3
PLCA	Paso Flores	18.46	190	P	P	07 42 32.2	+1.4
	comp=Z,1.3nm,0.5s,baz=352,slow=7.4,SNR=9.3						
BDFB	Brasília	18.53	71	P	P	07 42 32.7	+0.8
	comp=Z,5.5nm,0.8s,baz=231,slow=14,SNR=6.8						
NPGB	Novo Progresso	18.66	36	eP	P	07 42 32.0	-1.3
ITTB	Itaituba	20.76	31	eP	P	07 42 54.0	-1.5
JANB	Januaria	22.03	74	eP	P	07 43 06.8	-1.0
SGCB	SÃo Gabriel d	22.34	358	eP	P	07 43 11.1	+0.6
SMTB	Santa Maria do	22.50	56	eP	P	07 43 12.4	+0.4
SDBA	SAO DESIDERIO	22.68	67	eP	P	07 43 13.7	-0.1
PRPB	Parauapebas	22.74	47	eP	P	07 43 13.6	-0.6
MALB	Monte Alegre	23.66	31	eP	P	07 43 21.9	-0.6
BOAV	Boa Vista	25.45	13	eP	P	07 43 38.9	+0.3
MCPB	Macapa, AP	26.04	34	eP	P	07 43 43.8	-0.2
MDP	Montagnes des	30.56	27	P	P	07 44 23.6	-0.3
	comp=Z,2.8nm,0.6s,baz=198,slow=11,SNR=7.7						
	comp=Z,2.8nm,0.6s						
BAUV	El Baul	31.39	357	P	P	07 44 29.6	-1.6
BAUV				IAmb	IAmb	07 44 45.8	
	comp=Z,9.4nm,1.3s						
PCRV	Puerto La Cruz	32.60	3	P	P	07 44 42.5	+0.8
	comp=Z,5.2nm,0.8s,baz=278,slow=7.1,SNR=1.8						
	comp=Z,5.2nm,0.8s						
TOSP	Speyside	34.13	10	P	P	07 44 53.4	-1.5
TOSP				IAmb	IAmb	07 45 17.5	
	comp=Z,18nm,1.2s						
GRGR	Grenville	34.79	8	P	P	07 44 58.4	-2.2
BIM	Bigot	37.22	8	P	P	07 45 20.8	-0.3
FDF	Fort de France	37.42	8	P	P	07 45 23.3	+0.4
FDF				IAmb	IAmb	07 45 36.6	
	comp=Z,25nm,1.0s						
FDF	Fort de France	37.42	8	eP	P	07 45 23.2	+0.4
PCM	Pelee Case Pet	37.49	8	eP	P	07 45 23.6	+0.2
CXM	Morne La Croix	37.49	8	eP	P	07 45 23.6	+0.1
BAMF	Morne Balai	37.50	8	eP	P	07 45 24.2	+0.7
SVN	Savane Anatole	37.52	8	P	P	07 45 23.6	-0.1
GDHS	Morne Mazeau,	38.87	7	P	P	07 45 34.5	-0.3
GDHS				IAmb	IAmb	07 46 09.8	
	comp=Z,17nm,1.0s						
ANWB	Willy Bob	40.24	7	P	P	07 45 44.9	-1.2
MLPR	Magueyes Islan	40.31	359	P	P	07 45 47.6	+0.9
MLPR				IAmb	IAmb	07 46 05.5	
	comp=Z,30nm,1.5s						
CELP	Cerrillos	40.41	359	P	P	07 45 46.7	-0.8
CELP				IAmb	IAmb	07 45 50.2	
	comp=Z,4.6nm,0.7s						
MTP	Monte Pirata	40.44	1	P	P	07 45 45.7	-2.0
MTP				IAmb	IAmb	07 46 11.4	
	comp=Z,7.4nm,1.1s						
SMRT	St. Maarten	40.51	5	P	P	07 45 46.8	-1.4
SMRT				IAmb	IAmb	07 46 21.4	
	comp=Z,35nm,1.4s						
CBYP	Canovanas	40.61	1	P	P	07 45 47.1	-2.0
CBYP				IAmb	IAmb	07 46 01.6	
	comp=Z,10nm,1.3s						
CUPR	Culebra, Puert	40.65	1	P	P	07 45 48.9	-0.5
SNAA	Sanae	60.45	161	P	P	07 48 16.8	+0.5
TXAR	Lajitas Array	62.96	323	P	P	07 48 35.3	+1.6
	comp=Z,0.2nm,0.7s,baz=154,slow=7.0,SNR=2.1						
	comp=Z,0.2nm,0.7s						
QSPA	South Pole Qui	67.61	180	P	P	07 49 00.2	-2.8
TOA0	Torodi Ar. Sit	75.39	69	P	P	07 49 48.9	-1.1
TORD	Torodi Ar. Bea	75.39	69	P	P	07 49 49.9	-0.1
	comp=Z,1.6nm,0.5s,baz=255,slow=6.3,SNR=22						
	comp=Z,1.6nm,0.5s						
TORD	Torodi Ar. Bea	75.39	69	P	P	07 49 49.4	-0.6
ESDC	Sonseca Array	84.88	43	P	P	07 50 42.0	+1.9
	comp=Z,1.1nm,0.9s,baz=258,slow=4.5,SNR=6.1						
	comp=Z,1.1nm,0.9s						
MKAR	Makanchi Array	144.98	39	PKP	PKPab	07 57 42.6	+1.9
	comp=Z,1.5nm,0.7s,baz=320,slow=3.6,SNR=9.4						

ROM 31 07:48:17.9±0.0, 42°.824N±0°.002×13°.050E±0°.004,
h10km, ML2.8/45, 10C-9D, Error ellipse: s-maj=0.2km
s-min=0.2km az=301.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.07	341	P	Pg	07 48 20.6	+0.3
T1216				S	Sg	07 48 22.2	+0.2
T1216				AML	AML		
	comp=E,20800µm,0.7s						
T1216				AML	AML		
	comp=N,33700µm,0.5s						
T1245	Castelsantange	0.11	72	P	Pg	07 48 21.2	+0.4
T1245				S	Sg	07 48 23.3	+0.4
T1245				AML	AML		
	comp=E,50600µm,0.3s						
T1245				AML	AML		
	comp=E,49350µm,0.6s						
T1245				AML	AML		
	comp=N,60800µm,0.3s						
T1245				AML	AML		
	comp=E,50600µm,0.4s						
T1245				AML	AML		
	comp=N,60800µm,0.3s						
T1245				AML	AML		
	comp=N,63800µm,0.3s						
T1215	Vallo di Nera,	0.14	261	P	Pg	07 48 21.6	+0.5
T1215				S	Sg	07 48 24.1	+0.8
FEMA	Monte Fema	0.14	0	P	Pg	07 48 21.7	+0.5
FEMA				S	Sg	07 48 24.1	+0.5
FEMA				AML	AML		
	comp=E,18700µm,0.2s						
FEMA				AML	AML		
	comp=E,18750µm,0.2s						
FEMA				AML	AML		
	comp=N,18900µm,0.6s						
T1217	Poggiodomo (PG	0.14	218	P	Pg	07 48 21.8	+0.6
T1217				S	Sg	07 48 24.4	+0.8
MMO1	Montemonaco	0.22	70	P	Pg	07 48 22.9	+0.5
MMO1				S	Sg	07 48 26.4	+0.9
LNSS	Leonessa	0.22	182	P	Pg	07 48 23.1	+0.6
LNSS				S	Sg	07 48 26.8	+1.1
LNSS				AML	AML		
	comp=E,7480µm,0.8s						
LNSS				AML	AML		
	comp=N,15100µm,0.4s						
T1201	Domo (RI)	0.22	138	P	Pb	07 48 23.4	-0.7
T1201				S	Sg	07 48 27.4	+1.6
T1256	Bolognola (MC)	0.22	35	P	Pg	07 48 23.0	+0.4
T1256				S	Sg	07 48 26.8	+1.0
T1256				AML	AML		
	comp=E,8270µm,1.0s						
T1256				AML	AML		
	comp=E,8310µm,1.0s						
T1256				AML	AML		
	comp=E,8300µm,1.0s						
T1256				AML	AML		
	comp=N,6050µm,0.4s						
T1256				AML	AML		
	comp=E,8305µm,1.0s						
T1256				AML	AML		
	comp=N,5725µm,0.4s						
T1256				AML	AML		
	comp=E,8260µm,1.0s						
T1204	Amatrice, Fraz	0.25	127	P	Pg	07 48 23.6	+0.6
T1204				AML	AML		
	comp=E,11550µm,0.6s						
T1204				AML	AML		
	comp=N,5760µm,0.2s						
AM05	Amandola Campo	0.27	55	P	Pg	07 48 24.0	+0.6
AM05				S	Sb	07 48 28.3	-1.2
AM05				AML	AML		
	comp=N,2555µm,0.1s						
AM05				AML	AML		
	comp=E,9780µm,0.9s						
AM05				AML	AML		
	comp=N,712µm,0.1s						
AM05				AML	AML		
	comp=E,2615µm,0.4s						
AM05				AML	AML		
	comp=E,9775µm,0.9s						
T1241	Roccafluvione,	0.28	83	P	Pg	07 48 24.0	+0.4
T1241				S	Sg	07 48 28.6	+1.1
T1241				AML	AML		
	comp=N,9340µm,0.7s						
T1241				AML	AML		
	comp=E,8560µm,0.6s						
T1241				AML	AML		
	comp=N,8355µm,0.7s						
T1241				AML	AML		
	comp=N,8370µm,0.7s						
T1241				AML	AML		
	comp=E,7455µm,0.3s						
T1241				AML	AML		
	comp=E,8565µm,0.6s						
T1241				AML	AML		
	comp=N,9305µm,0.7s						
CSP1	Cessapalombo	0.29	23	⇑P	Pg	07 48 22.3	-1.5
CSP1				AML	AML		
	comp=E,5505µm,0.4s						
CSP1				AML	AML		
	comp=N,6965µm,0.4s						
GUMA	Gualdo di Mace	0.32	41	P	Pb	07 48 25.0	-0.7
GUMA				S	Sb	07 48 30.2	-0.6
T1243	Rocca Santa Ma	0.32	113	P	Pg	07 48 24.6	+0.3
ARRO	Arrone	0.32	221	P	Pg	07 48 24.8	+0.4
ARRO				S	Sg	07 48 29.7	+1.1
ARRO				AML	AML		
	comp=E,3220µm,0.2s						
ARRO				AML	AML		
	comp=N,3335µm,0.2s						
T1211	Morro Reatino	0.32	206	P	Pg	07 48 24.8	+0.4
T1211				S	Sb	07 48 30.1	-1.0
T1211				AML	AML		
	comp=E,4165µm,0.5s						
T1211				AML	AML		
	comp=E,4085µm,0.5s						
T1211				AML	AML		
	comp=N,5820µm,1.4s						
T1211				AML	AML		
	comp=E,4165µm,0.5s						
T1211				AML	AML		
	comp=N,5900µm,1.4s						
T1211				AML	AML		
	comp=N,5810µm,1.4s						
T1211				AML	AML		
	comp=E,4088µm,0.5s						
SEF1	Sefro	0.33	347	P	Pg	07 48 24.9	+0.3
SEF1				AML	AML		
	comp=E,3240µm,1.4s						
SEF1				AML	AML		
	comp=N,3290µm,1.6s						
SEF1				AML	AML		
	comp=E,3235µm,1.5s						
RM33	Pellescritta (	0.34	159	P	Pg	07 48 25.1	+0.5
RM33				AML	AML		
	comp=E,3035µm,0.1s						
RM33				AML	AML		
	comp=N,2650µm,0.3s						
RM33				AML	AML		
	comp=N,2625µm,0.3s						
RM33				AML	AML		
	comp=E,3040µm,0.1s						
RM33				AML	AML		
	comp=E,3050µm,0.1s						
RM33				AML	AML		
	comp=N,2630µm,0.3s						
RM33				AML	AML		
	comp=N,2655µm,0.3s						
ASSB	Assisi San Ben	0.36	307	P	Pg	07 48 25.3	+0.2
ASSB				AML	AML		
	comp=E,1750µm,0.5s						
ASSB				AML	AML		
	comp=N,1270µm,0.4s						
FIU1	Fiuminata	0.38	347	P	Pg	07 48 25.8	+0.5
MDAR	Monte D'Aria	0.38	10	P	Pg	07 48 25.7	+0.3
T1246	Crognaleto (TE	0.41	126	P	Pg	07 48 26.2	+0.3
CESX	Cesi	0.41	238	P	Pg	07 48 26.0	+0.1
CESX				S	Sb	07 48 32.8	-0.6
CESX				AML	AML		
	comp=N,2640µm,1.6s						
CESX				AML	AML		
	comp=E,2440µm,0.4s						
T1247	Pizzolo (AQ)	0.42	154	P	Pb	07 48 27.0	-0.4
T1247				AML	AML		
	comp=E,2500µm,0.6s						
T1247				AML	AML		
	comp=N,2120µm,0.7s						
T1247				AML	AML		
	comp=N,2115µm,0.7s						
SNTG	Esanatoglia	0.44	350	P	Pg	07 48 26.7	+0.2
SNTG				AML	AML		
	comp=N,979µm,1.1s						
SNTG				AML	AML		
	comp=E,878µm,0.8s						
SNTG				AML	AML		
	comp=N,970µm,1.1s						
SNTG				AML	AML		
	comp=N,979µm,1.2s						
SNTG				AML	AML		
	comp=E,904µm,0.8s						
MNTP	Montappone	0.44	44	P	Pg	07 48 27.1	+0.6
TERO	Teramo	0.46	116	P	Pg	07 48 26.9	+0.1
ATCC	AVT- Casa Cast	0.47	320	P	Pg	07 48 27.4	+0.3
ATCC				AML	AML		
	comp=E,1465µm,0.6s						
ATCC				AML	AML		
	comp=N,1370µm,0.5s						
OFFI	Offida	0.48	76	P	Pb	07 48 28.0	-0.4
OFFI				AML	AML		
	comp=E,2685µm,0.2s						
OFFI				AML	AML		
	comp=N,2795µm,0.7s						
EL6	Elcito	0.51	4	⇑P	Pg	07 48 28.0	+0.2
EL6				S	Sb	07 48 37.0	+0.6
EL6				AML	AML		
	comp=E,2410µm,1.3s						
EL6				AML	AML		
	comp=N,1990µm,1.5s						
EL6				AML	AML		
	comp=N,1995µm,1.5s						
EL6				AML	AML		
	comp=E,2412µm,1.3s						
FOSV	Fossato di Vic	0.52	336	P	Pg	07 48 28.4	+0.4
FOSV				AML	AML		
	comp=E,598µm,0.4s						
FOSV				AML	AML		
	comp=N,714µm,0.6s						
FOSV				AML	AML		
	comp=N,714µm,0.6s						
GIGS	Gran Sasso	0.54	134	P	Pg	07 48 28.1	-0.2
GIGS				AML	AML		
	comp=E,388µm,1.4s						
GIGS				AML	AML		
	comp=N,287µm,1.5s						
AQU	L'Aquila	0.54	151	P	Pg	07 48 28.7	+0.4
AQU				AML	AML		
	comp=E,504µm,1.3s						
AQU				AML	AML		
	comp=N,552µm,0.3s						
AQU				AML	AML		
	comp=N,533µm,1.0s						
AQU				AML	AML		
	comp=E,516µm,0.3s						
FIAM	Fiamignano	0.56	175	P	Pg	07 48 28.6	-0.2
FIAM				AML	AML		
	comp=E,1086µm,0.9s						
FIAM				AML	AML		
	comp=N,776µm,1.3s						
FIAM				AML	AML		
	comp=N,777µm,1.3s						
CING	Cingoli	0.56	11	⇑P	Pg	07 48 29.0	+0.1
MURB	Monte Urbino	0.58	319	P	Pg	07 48 29.6	+0.4
MURB				AML	AML		
	comp=E,2440µm,0.4s						
MURB				AML	AML		
	comp=N,2310µm,0.3s						
MURB				AML	AML		
	comp=E,2670µm,0.4s						
MURB				AML	AML		
	comp=E,2435µm,0.4s						
MURB				AML	AML		
	comp=N,2315µm,0.3s						
MURB				AML	AML		
	comp=N,2205µm,0.3s						
MMUR	Monte Murano	0.62	356	P	Pg	07 48 28.9	-1.0
MMUR				AML	AML		
	comp=E,1317µm,0.5s						
MMUR				AML	AML		
	comp=N,1144µm,1.5s						
MMUR				AML	AML		
	comp=N,1144µm,1.5s						
MMUR				AML	AML		
	comp=E,1315µm,0.5s						
ATTE	AVT- Monte Tez	0.63	306	P	Pg	07 48 30.5	+0.3
ATTE				AML	AML		
	comp=E,362µm,0.3s						
ATTE				AML	AML		
	comp=N,380µm,0.4s						
TRTR	Tortoreto Alta	0.64	91	⇑P	Pb	07 48 31.5	+0.5
TRTR				AML	AML		
	comp=N,3625µm,0.5s						
TRTR				AML	AML		
	comp=E,3065µm,1.6s						
ATFO	Monte Foce - G	0.65	327	P	Pb	07 48 31.0	-0.3
ATFO				AML	AML		
	comp=N,564µm,1.1s						
ATFO				AML	AML		
	comp=E,568µm,0.3s						
ATFO				AML	AML		
	comp=N,565µm,1.1s						
ARVD	Arcevia	0.68	353	P	Pg	07 48 31.0	0.0
ARVD				S	Sb	07 48 42.0	+0.8
ARVD				AML	AML		
	comp=N,376µm,0.5s						
ARVD				AML	AML		
	comp=E,522µm,1.0s						
FAGN	Fagnano	0.68	145	P	Pg	07 48 31.3	+0.2
FAGN				AML	AML		
	comp=N,1042µm,0.4s						
FAGN				AML	AML		
	comp=E,1120µm,0.4s						
FAGN				AML	AML		
	comp=N,1041µm,0.4s						
PP3	Marolino	0.69	36	⇓P	Pb	07 48 32.4	+0.4
PP3				AML	AML		
	comp=E,1680µm,0.7s						
PP3				AML	AML		
	comp=N,1805µm,1.3s						
PP3				AML	AML		
	comp=E,1675µm,0.7s						
PP3				AML	AML		
	comp=N,1715µm,1.3s						
PP3				AML	AML		
	comp=E,1680µm,0.7s						
MGAB	Montegabbione	0.69	278	P	Pg	07 48 30.4	-0.9
MGAB				AML	AML		
	comp=E,1012µm,1.5s						
MGAB				AML	AML		
	comp=N,1258µm,1.2s						
MGAB				AML	AML		
	comp=E,1010µm,1.5s						
MGAB				AML	AML		
	comp=N,1261µm,1.2s						
MGAB				AML	AML		
	comp=E,1070µm,1.6s						
MGAB				AML	AML		
	comp=N,1230µm,1.3s						
SRES	S.Oreste - Sor	0.71	214	P	Pg	07 48 31.6	0.0
SRES				AML	AML		
	comp=E,832µm,1.4s						
SRES				AML	AML		
	comp=N,719µm,0.4s						
VCEL	Villa Celiera	0.72	126	⇓P	Pg	07 48 32.2	+0.3
VCEL				AML	AML		
	comp=E,1078µm,1.0s						
VCEL				AML	AML		
	comp=N,932µm,0.4s						
VCEL				AML	AML		
	comp=N,930µm,0.4s						
VCEL				AML	AML		
	comp=E,1075µm,1.0s						
ATVO	AVT- Monte Val	0.73	320	P	Pg	07 48 32.2	+0.2
ATVO				AML	AML		
	comp=E,381µm,0.5s						
ATVO				AML	AML		
	comp=N,331µm,0.4s						
ATVO				AML	AML		
	comp=E,380µm,0.5s						
FRON	Frontone	0.73	341	⇓P	Pb	07 48 32.6	-0.1
FRON				AML	AML		
	comp=N,499µm,0.3s						
FRON				AML	AML		
	comp=E,320µm,1.3s						
PIEI	Pieia	0.81	332	⇑P	Pn	07 48 34.7	-0.6
PIEI				AML	AML		
	comp=E,328µm,0.3s						
PIEI				AML	AML		
	comp=E,234µm,0.3s						
T0110	Collepietro	0.81	138	⇓P	Pg	07 48 33.3	-0.1
T0110				AML	AML		
	comp=N,775µm,0.7s						
T0110				AML	AML		
	comp=E,1045µm,0.4s						
MPAG	Monte Paganucc	0.83	345	⇓P	Pb	07 48 34.4	0.0
MPAG				AML	AML		
	comp=N,378µm,0.5s						
MPAG				AML	AML		
	comp=E,482µm,0.8s						
SACS	San Casciano d	0.84	272	⇓P	Pb	07 48 34.3	-0.2
SACS				AML	AML		
	comp=N,435µm,1.3s						
SACS				AML	AML		
	comp=E,350µm,1.0s						
NARO	Abbazia di Nar	0.86	337	⇓P	Pg	07 48 34.5	0.0
NARO				AML	AML		
	comp=E,222µm,1.1s						
NARO				AML	AML		
	comp=N,246µm,1.1s						
NARO				AML	AML		
	comp=E,221µm,1.1s						
NARO				AML	AML		
	comp=N,246µm,1.1s						
CERT	Cerreto	0.88	183	⇑P	Pg	07 48 34.6	-0.2
CERT				S	Sn	07 48 49.0	0.0
CERT				AML	AML		
	comp=N,564µm,0.4s						
CERT				AML	AML		
	comp=E,582µm,1.5s						
FSSB	Fossombrone	0.89	347	P	Pg	07 48 34.9	-0.1
FSSB				AML	AML		
	comp=N,1495µm,0.4s						

FSSB				AML	AML		
	comp=E,2150μm,0.4s						
BADI	**Badiali**	**0.90**	**320**	⇑P	Pn	07 48 36.7	+0.1
CAFI	**Castiglion Fio**	**0.94**	**303**	⇓P	Pb	07 48 36.5	+0.2
CAFI				AML	AML		
	comp=E,416μm,0.6s						
CAFI				AML	AML		
	comp=N,290μm,0.8s						
VVLD	**Villa Vallelon**	**1.04**	**156**	⇓P	Pn	07 48 38.3	-0.2
VVLD				AML	AML		
	comp=E,302μm,1.0s						
VVLD				AML	AML		
	comp=N,312μm,0.4s						
VIVA	**Pratoni del Vi**	**1.09**	**191**	AML	AML		
	comp=N,597μm,1.2s						
VIVA				AML	AML		
	comp=E,741μm,1.2s						
CRE	**Caprese Michel**	**1.13**	**315**	⇑P	Pn	07 48 41.3	+1.5
CRE				AML	AML		
	comp=N,140μm,1.6s						
CRE				AML	AML		
	comp=E,111μm,0.7s						
POFI	**Posta Fibreno**	**1.21**	**156**	⇑P	Pg	07 48 43.0	+1.9
ASQU	**Asqua**	**1.34**	**317**	⇑P	Pg	07 48 43.7	+0.1
ASQU				AML	AML		
	comp=E,90μm,0.4s						
ASQU				AML	AML		
	comp=N,114μm,1.0s						
VAGA	**Valle Agricola**	**1.66**	**148**	P	Pb	07 48 48.2	-0.3
KHC	**Kasperske Hory**	**6.32**	**3**	*e*PN	Pn	07 49 52.0	+1.0
KHC				*e*SN	Sn	07 51 02.5	-0.7

*KNET **31** 07:48:45.2±0.4, 42°.56N×75°.33E, h0km, ml2.0, Error ellipse: s-maj=3.0km s-min=2.0km az=130.0*
*NNC **31** 07:48:45.8±0.3, 42°.63N×75°.33E, h4km±1km, mb3.3, mpv3.2, Error ellipse: s-maj=2.7km s-min=0.8km az=178.0*
*SOME **31** 07:48:45.5, 42°.58N×75°.32E, h10km*
*KRNET **31** 07:48:45.7±0.1, 42°.60N×75°.34E, h16km, mb2.8*
ISC 31 07:48:45.8±0.9, 42°.59N±0°.02×75°.33E±0°.01, h14km±7km, n65, σ0°83/123, 29C-13D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.29**	**283**	⇑P	**Pb**	**07 48 52.4**	**-0.4**
KBK	29nm,0.1s,SNR=21			⇑S	**Sb**	**07 48 57.2**	**-0.4**
KBK	**Karagaybulak**	**0.29**	**283**	⇓*i*P	**Pg**	**07 48 52.0**	**+0.1**
KBK	baz=81			⇓*i*S	**Sg**	**07 48 56.7**	**+0.6**
TKM2	**Tokmak 2**	**0.38**	**31**	⇑P	**Pg**	**07 48 53.4**	**-0.3**
TKM2	7.5nm,0.1s,SNR=98			⇑S	**Sg**	**07 48 58.5**	**-0.5**
TKM2	**Tokmak 2**	**0.38**	**31**	⇑*i*P	**Pg**	**07 48 52.9**	**-0.8**
TKM2	99nm,0.1s baz=30			⇑*i*S	**Sg**	**07 48 58.2**	**-0.8**
TKM2	**Tokmak 2**	**0.38**	**31**	⇑P	**Pg**	**07 48 53.2**	**-0.4**
TKM2	2.4nm,0.3s			⇑S	**Sg**	**07 48 58.6**	**-0.4**
BOOM	**Boomskoye usch**	**0.47**	**103**	⇓*i*P	**Pg**	**07 48 54.4**	**-0.7**
BOOM	44nm,0.3s baz=3.0			⇓*i*S	**Sg**	**07 49 00.7**	**-0.7**
CHMS	**Chumysh**	**0.59**	**314**	⇓P	**Pg**	**07 48 57.2**	**-0.1**
CHMS	8.8nm,0.1s,SNR=39			⇑S	**Sg**	**07 49 05.4**	**+0.2**
CHMS	**Chumysh**	**0.59**	**314**	⇑*i*P	**Pg**	**07 48 56.7**	**-0.7**
CHMS	68nm,0.1s baz=13			⇑*i*S	**Sg**	**07 49 05.0**	**-0.2**
CHMS	**Chumysh**	**0.59**	**314**	⇑P	**Pg**	**07 48 56.9**	**-0.4**
CHMS	2.1nm,0.3s			⇑S	**Sg**	**07 49 05.3**	**+0.1**
AAK	**Ala-Archa**	**0.62**	**274**	⇑P	**Pg**	**07 48 57.9**	**-0.1**
AAK	18nm,0.2s,SNR=11			⇑S	**Sg**	**07 49 06.5**	**+0.3**
AAK	**Ala-Archa**	**0.62**	**274**	⇑*i*P	**Pg**	**07 48 57.6**	**-0.3**
AAK	121nm,0.4s baz=74			⇑*i*S	**Sg**	**07 49 06.4**	**+0.3**
KST	**Kastek**	**0.65**	**46**	*e*P	**Pg**	**07 48 58.2**	**-0.4**
KST	baz=46			*e*S	**Sg**	**07 49 07.0**	**-0.2**
KST	**Kastek**	**0.65**	**46**	*e*P	**Pg**	**07 48 58.2**	**-0.4**
KST	30nm,0.1s			*e*S	**Sg**	**07 49 07.0**	**-0.2**
KST	**Kastek**	**0.65**	**46**	P	**Pg**	**07 48 58.2**	**-0.4**
KST	30nm,0.1s			S	**Sg**	**07 49 07.0**	**-0.2**
UCH	**Uchtor**	**0.70**	**239**	⇑P	**Pg**	**07 48 59.5**	**-0.1**
UCH	8.2nm,0.2s,SNR=28			⇑S	**Sg**	**07 49 09.2**	**+0.2**
DGS	**Degeres**	**0.73**	**27**	*e*P	**Pg**	**07 48 59.7**	**-0.3**
DGS	baz=26			*e*S	**Sg**	**07 49 09.4**	**-0.2**
DGS	**Degeres**	**0.73**	**27**	*e*P	**Pg**	**07 48 59.7**	**-0.3**
DGS	6.5nm,0.1s			*e*S	**Sg**	**07 49 09.4**	**-0.2**
DGS	**Degeres**	**0.73**	**27**	P	**Pg**	**07 48 59.7**	**-0.3**
DGS	6.5nm,0.1s			S	**Sg**	**07 49 09.4**	**-0.2**
ULHL	**Ulahol**	**0.76**	**117**	⇓P	**Pg**	**07 48 59.8**	**-0.8**
ULHL	6.7nm,0.1s,SNR=9.3			⇓S	**Sg**	**07 49 09.8**	**-0.9**
ULHL	**Ulahol**	**0.76**	**117**	⇓*i*P	**Pg**	**07 49 00.0**	**-0.6**
ULHL	31nm,0.1s baz=18			⇓*i*S	**Sb**	**07 49 11.1**	**-0.1**
USP	**Ospenovka**	**0.91**	**318**	⇓P	**Pg**	**07 49 02.9**	**-0.6**
USP	15nm,0.1s,SNR=8.6			⇑S	**Sb**	**07 49 15.6**	**+0.2**
USP	**Ospenovka**	**0.91**	**318**	⇑*i*P	**Pg**	**07 49 02.8**	**-0.6**
USP	20nm,0.1s baz=18			⇑*i*S	**Sb**	**07 49 15.8**	**+0.5**
MTBS	**Maitube**	**0.97**	**56**	*e*P	**Pg**	**07 49 03.8**	**-0.9**
MTBS	baz=56			*e*S	**Sg**	**07 49 16.9**	**-0.5**
MTBS	**Maitube**	**0.97**	**56**	*e*P	**Pg**	**07 49 03.8**	**-0.9**
MTBS	14nm,0.1s 113nm,0.2s			*e*S	**Sg**	**07 49 16.9**	**-0.5**
MTBS	**Maitube**	**0.97**	**56**	P	**Pg**	**07 49 03.8**	**-0.9**
MTBS	14nm,0.1s 113nm,0.2s			S	**Sg**	**07 49 16.9**	**-0.5**
SGDS	**Sogindy**	**1.00**	**329**	*e*P	**Pg**	**07 49 04.7**	**-0.5**
SGDS	14nm,0.1s 25nm,0.1s			*e*S	**Sb**	**07 49 18.1**	**+0.1**
SGDS	**Sogindy**	**1.00**	**329**	P	**Pg**	**07 49 04.7**	**-0.5**
SGDS	14nm,0.1s 25nm,0.1s			S	**Sb**	**07 49 18.1**	**+0.1**
ARLS	**Aral**	**1.04**	**226**	⇑*i*P	**Pg**	**07 49 05.3**	**-0.7**
ARLS	baz=26			⇑*i*S	**Sg**	**07 49 19.7**	**+0.1**
KRBS	**Karabastau**	**1.13**	**13**	*e*P	**Pb**	**07 49 06.8**	**-0.4**
KRBS	baz=13			*e*S	**Sg**	**07 49 21.6**	**-0.8**
KRBS	**Karabastau**	**1.13**	**13**	*e*P	**Pb**	**07 49 06.8**	**-0.4**
KRBS	2.5nm,0.1s 12nm,0.2s			*e*S	**Sg**	**07 49 21.6**	**-0.8**
KRBS	**Karabastau**	**1.13**	**13**	P	**Pb**	**07 49 06.8**	**-0.4**
KRBS	2.5nm,0.1s			S	**Sg**	**07 49 21.6**	**-0.8**
EKS2	**Erkin-Say**	**1.15**	**274**	⇑P	**Pn**	**07 49 08.1**	**+0.5**
EKS2	4.7nm,0.1s,SNR=40 16nm,0.1s			⇓S	**Sn**	**07 49 23.7**	**+0.6**
EKS2	**Erkin-Say**	**1.15**	**274**	⇑*i*P	**Pb**	**07 49 06.9**	**-0.6**
EKS2	baz=74			⇑*i*S	**Sg**	**07 49 22.6**	**-0.3**
TNSS	**Tian-Shan**	**1.27**	**69**	*e*P	**Pn**	**07 49 09.5**	**0.0**
TNSS	baz=69			*e*S	**Sb**	**07 49 26.4**	**+0.2**
TNSS	**Tian-Shan**	**1.27**	**69**	*e*P	**Pn**	**07 49 09.5**	**0.0**
TNSS	3.0nm,0.1s 7.9nm,0.2s			*e*S	**Sb**	**07 49 26.4**	**+0.2**
TNSS	**Tian-Shan**	**1.27**	**69**	P	**Pn**	**07 49 09.5**	**0.0**
TNSS	3.0nm,0.1s 7.9nm,0.2s			S	**Sb**	**07 49 26.4**	**+0.2**
AML	**Almayashu**	**1.29**	**250**	⇑P	**Pb**	**07 49 10.4**	**+0.2**
AML	7.8nm,0.2s,SNR=25 16nm,0.2s			⇑S	**Sg**	**07 49 27.7**	**0.0**
MDOK	**Medeo**	**1.39**	**65**	*e*P	**Pn**	**07 49 11.4**	**+0.5**
MDOK	baz=65			*e*S	**Sn**	**07 49 29.7**	**+0.6**
MDOK	**Medeo**	**1.39**	**65**	*e*P	**Pn**	**07 49 11.4**	**+0.5**
MDOK	4.2nm,0.2s 13nm,0.2s			*e*S	**Sn**	**07 49 29.7**	**+0.6**
MDOK	**Medeo**	**1.39**	**65**	P	**Pn**	**07 49 11.2**	**+0.3**
MDOK	1.3nm,0.2s 4.2nm,0.2s			Pg	**Pn**	**07 49 11.4**	**+0.5**
MDOK	13nm,0.2s			Lg	Lg	07 49 29.7	
MDOK	6.7nm,0.5s			⇓S	**Sg**	**07 49 29.9**	**-0.7**
KOTS	**Kotyrbulak**	**1.46**	**63**	*e*P	**Pb**	**07 49 13.0**	**+0.2**
KOTS	6.2nm,0.1s 19nm,0.2s			*e*S	**Sg**	**07 49 32.9**	**0.0**
KOTS	**Kotyrbulak**	**1.46**	**63**	P	**Pb**	**07 49 13.0**	**+0.2**
KOTS	6.2nm,0.1s 19nm,0.2s			S	**Sg**	**07 49 32.9**	**0.0**
KUU	**Kurty**	**1.50**	**29**	*e*P	**Pb**	**07 49 13.1**	**-0.3**
KUU	baz=29			*e*S	**Sb**	**07 49 32.5**	**+0.3**
KUU	**Kurty**	**1.50**	**29**	*e*P	**Pb**	**07 49 13.1**	**-0.3**
KUU	2.1nm,0.2s 26nm,0.2s			*e*S	**Sb**	**07 49 32.5**	**+0.3**
KUU	**Kurty**	**1.50**	**29**	P	**Pb**	**07 49 13.1**	**-0.3**
KUU	2.1nm,0.2s 26nm,0.2s			S	**Sb**	**07 49 32.5**	**+0.3**
MRKS	**Merke**	**1.56**	**276**	*e*P	**Pb**	**07 49 14.7**	**+0.2**
MRKS	baz=76			*e*S	**Sg**	**07 49 35.6**	**-0.4**
MRKS	**Merke**	**1.56**	**276**	*e*P	**Pb**	**07 49 14.7**	**+0.2**
MRKS	7.9nm,0.1s 74nm,0.2s			*e*S	**Sg**	**07 49 35.6**	**-0.4**
MRKS	**Merke**	**1.56**	**276**	P	**Pb**	**07 49 14.7**	**+0.2**
MRKS	7.9nm,0.1s 74nm,0.2s			S	**Sg**	**07 49 35.6**	**-0.4**
CHKK	**Chushkaly**	**1.75**	**43**	*e*P	**Pb**	**07 49 18.0**	**+0.3**
CHKK	baz=43			*e*S	**Sg**	**07 49 40.8**	**-1.4**
CHKK	**Chushkaly**	**1.75**	**43**	*e*P	**Pb**	**07 49 18.0**	**+0.3**
CHKK	3.5nm,0.1s 27nm,0.2s			*e*S	**Sg**	**07 49 40.8**	**-1.4**
SATY	**Saty**	**2.31**	**77**	*e*P	**Pg**	**07 49 28.9**	**-1.3**
SATY	7.5nm,0.2s 17nm,0.4s			*e*S	**Sg**	**07 49 59.3**	**-0.8**
SATY	**Saty**	**2.31**	**77**	Pg	**Pg**	**07 49 28.9**	**-1.3**
SATY	7.5nm,0.2s 17nm,0.4s			Lg	Lg	07 49 59.3	
ARXS	**Arharly**	**2.44**	**48**	*e*P	**Pb**	**07 49 29.3**	**-0.1**
ARXS	1.5nm,0.2s 19nm,0.4s			*e*S	**Sb**	**07 50 00.4**	**+1.0**
ARXS	**Arharly**	**2.44**	**48**	Pg	**Pb**	**07 49 29.3**	**-0.1**
ARXS	1.5nm,0.2s 19nm,0.4s			Lg	Lg	07 50 00.4	
KPKS	**Kokpek**	**2.61**	**69**	*e*P	**Pb**	**07 49 33.2**	**+0.8**
KPKS	5.9nm,0.1s 13nm,0.3s			*e*S	**Sb**	**07 50 06.9**	**+2.5**
KPKS	**Kokpek**	**2.61**	**69**	Pg	**Pb**	**07 49 33.2**	**+0.8**
KPKS	5.9nm,0.1s 13nm,0.3s			Lg	Lg	07 50 06.9	
BTLS	**Baital**	**2.62**	**340**	*e*P	**Pb**	**07 49 33.6**	**+1.2**
BTLS	2.4nm,0.1s 8.0nm,0.3s			*e*S	**Sg**	**07 50 07.7**	**-2.2**
BTLS	**Baital**	**2.62**	**340**	Pg	**Pb**	**07 49 34.1**	**+1.6**
BTLS	2.4nm,0.1s 8.0nm,0.3s			Lg	Lg	07 50 07.7	
BLB	**Baldybastay**	**2.75**	**56**	*e*P	**Pb**	**07 49 34.9**	**+0.2**
BLB	2.9nm,0.1s 7.2nm,0.2s			*e*S	**Sb**	**07 50 10.0**	**+1.6**
BLB	**Baldybastay**	**2.75**	**56**	Pg	**Pb**	**07 49 34.9**	**+0.2**
BLB	2.9nm,0.1s 7.2nm,0.2s			Lg	Lg	07 50 10.0	
UZB	**Uzynbulak**	**2.77**	**77**	*e*P	**Pb**	**07 49 35.9**	**+0.7**
UZB	2.0nm,0.1s 9.7nm,0.3s			*e*S	**Sb**	**07 50 11.5**	**+2.4**
UZB	**Uzynbulak**	**2.77**	**77**	Pg	**Pb**	**07 49 35.9**	**+0.7**
UZB	2.0nm,0.1s 9.7nm,0.3s			Lg	Lg	07 50 11.5	
KK31	**Karatay Array**	**3.58**	**280**	⇓Pg	**Pb**	**07 49 50.8**	**+2.0**
KK31	0.3nm,0.3s,baz=96,slow=17,SNR=15 3.1nm,0.4s,baz=86,slow=16,SNR=28			Lg	Lg	07 50 37.8	
IUG	**Iuzhnay**	**3.95**	**265**	*e*P	**Pg**	**07 49 58.5**	**-3.0**
IUG	17nm,0.2s 6.5nm,0.4s			*e*S	**Sg**	**07 50 50.2**	**-2.3**
IUG	**Iuzhnay**	**3.95**	**265**	Pg	**Pg**	**07 49 58.5**	**-3.0**
IUG	17nm,0.2s 6.5nm,0.4s			Lg	Lg	07 50 50.3	

ROM 31 07:49:12.0±0.1, 42°.752N±0°.006×13°.217E±0°.005, h10km, Md1.7/7, Error ellipse: s-maj=0.6km s-min=0.3km az=175.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.11**	**136**	P	Pg	07 49 15.2	+0.5
T1204				S	Sg	07 49 17.7	+0.9
T1204				AML	AML		
	comp=E,3060μm,1.0s						
T1204				AML	AML		
	comp=N,2250μm,0.6s						
T1204				END			
T1245	**Castelsantange**	**0.11**	**349**	AML	AML		
	comp=N,12120μm,0.3s						
T1245				AML	AML		
	comp=E,7010μm,0.2s						
T1245				AML	AML		
	comp=E,7440μm,0.2s						
T1245				AML	AML		
	comp=E,7005μm,0.2s						
T1245				AML	AML		
	comp=N,12120μm,0.2s						
T1245				AML	AML		
	comp=N,11645μm,0.2s						
T1243	**Rocca Santa Ma**	**0.18**	**108**	P	Pg	07 49 16.2	+0.3
T1243				S	Sg	07 49 19.5	+0.9
T1243				END			
T1241	**Roccafluvione,**	**0.19**	**56**	AML	AML		
	comp=E,6705μm,1.6s						
T1241				AML	AML		
	comp=E,1375μm,0.6s						
T1241				AML	AML		
	comp=N,2398μm,1.0s						
T1241				AML	AML		
	comp=E,2670μm,0.9s						
T1241				AML	AML		
	comp=N,6145μm,0.7s						
T1241				AML	AML		
	comp=E,1380μm,0.6s						
T1241				AML	AML		
	comp=N,6142μm,0.7s						
LNSS	**Leonessa**	**0.20**	**221**	P	Pg	07 49 17.0	+0.8
LNSS				S	Sg	07 49 20.3	+1.3
LNSS				END			
T1217	**Poggiodomo (PG**	**0.21**	**259**	P	Pg	07 49 16.8	+0.3
T1217				S	Sg	07 49 20.9	+1.4
T1217				END			
RM33	**Pellescritta (**	**0.24**	**180**	P	Pg	07 49 17.6	+0.7
RM33				S	Sg	07 49 22.2	+1.9
RM33				END			
TERO	**Teramo**	**0.31**	**114**	P	Pg	07 49 18.5	+0.2
TERO				S	Sb	07 49 23.7	-1.2
TERO				END			
T1211	**Morro Reatino**	**0.34**	**231**	P	Pg	07 49 19.1	+0.3
T1211				S	Sb	07 49 25.3	-0.6
T1211				END			
ARRO	**Arrone**	**0.38**	**243**	P	Pg	07 49 19.8	+0.5
ARRO				S	Sg	07 49 25.1	+0.8
OFFI	**Offida**	**0.39**	**62**	P	Pb	07 49 20.7	-0.3
OFFI				S	Sb	07 49 28.5	+1.4
CESX	**Cesi**	**0.49**	**253**	P	Pg	07 49 21.8	+0.3
CESX				S	Sb	07 49 29.5	-0.5
ASSB	**Assisi San Ben**	**0.50**	**306**	P	Pg	07 49 21.0	-0.8
ASSB				S	Sg	07 49 29.3	+0.8
EL6	**Elcito**	**0.58**	**352**	P	Pg	07 49 23.4	0.0
EL6				S	Sb	07 49 32.8	0.0

IDC 31 07:53:40.0±3.2, 53°.61N×87°.90E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=29.4km s-min=18.9km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**282**	I		08 06 58.3	
	baz=95,slow=340,SNR=6.9						
ZALV	**Zalesovo Beam**	**1.86**	**282**	Pn	Pn	07 54 13.7	+0.6
	0.8nm,0.3s,baz=101,slow=10,SNR=8.7						
ZALV				Lg	Lg	07 54 38.5	
	2.0nm,0.3s,baz=103,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn	Pn	07 55 17.4	+0.6
	baz=62,slow=14,SNR=3.8						
KURBB				Lg	Lg	07 57 04.8	
	baz=64,slow=33,SNR=5.3 0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	07 55 34.4	+1.0
	0.1nm,0.3s,baz=27,slow=12,SNR=2.2 0.2nm,0.3s						

*IDC **31** 07:55:41.5±2.7, 37°.43N×69°.91E, h0km, mb3.9/4, mbtmp3.9/10, ML3.4/6, Error ellipse: s-maj=48.3km s-min=16.6km az=154.0*
*SOME **31** 07:55:44.5, 38°.12N×72°.27E, h0km*
*NNC **31** 07:55:47.0±1.9, 37°.93N×69°.42E, h5km±9km, mb4.1, mpv3.8, Error ellipse: s-maj=15.3km s-min=11.3km az=44.0*
ISC 31 07:55:46.2±1.2, 37°.82N±0°.08×69°.64E±0°.08, h12km, n28, σ1°88/36, mb3.9/4, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.33**	**4**	*e*P	**Pg**	**07 57 06.7**	**-2.6**
IUG	349nm,0.6s			*e*S	**Sg**	**07 58 06.0**	**+0.6**
	183nm,0.4s						
AML	**Almayashu**	**5.31**	**35**	P	**Pn**	**07 57 08.6**	**+2.9**
	SNR=24						
KK31	**Karatay Array**	**5.32**	**7**	Pn	**Pn**	**07 57 06.8**	**+1.3**
	1.0nm,0.3s,baz=199,slow=16,SNR=30						
KK31				⇑Pg	**Pb**	**07 57 22.2**	**+3.1**
	3.3nm,0.4s,baz=190,slow=17,SNR=7.0						
KK31				⇑Sn	**Sn**	**07 58 07.9**	**+1.2**
	8.5nm,0.6s,baz=206,slow=25,SNR=3.7						
KK31				⇑Lg	Lg	07 58 33.6	
	18nm,0.5s,baz=191,slow=31,SNR=8.2						
MRKS	**Merke**	**5.63**	**28**	*e*P	**Pn**	**07 57 12.1**	**+2.2**
	3.4nm,0.3s						
MRKS				*e*S	**Sn**	**07 58 15.1**	**+0.5**
	12nm,0.5s						
UCH	**Uchtor**	**5.78**	**39**	P	**Pn**	**07 57 13.9**	**+1.7**
	SNR=24						
AAK	**Ala-Archa**	**6.08**	**36**	P	**Pn**	**07 57 19.0**	**+3.0**
	SNR=13						
AAK	**Ala-Archa**	**6.08**	**36**	Pn	**Pn**	**07 57 17.1**	**+1.1**
	6.4nm,0.3s,baz=207,slow=5.4,SNR=43 16nm,0.4s						
CHMS	**Chumysh**	**6.48**	**35**	P	**Pn**	**07 57 24.1**	**+2.7**
	SNR=11						
CHMS	**Chumysh**	**6.48**	**35**	⇑Pn	**Pn**	**07 57 23.7**	**+2.3**
	12nm,0.5s						
USP	**Ospenovka**	**6.58**	**33**	P	**Pn**	**07 57 25.0**	**+2.1**
	SNR=6.7						
TKM2	**Tokmak 2**	**6.83**	**40**	P	**Pn**	**07 57 28.6**	**+2.2**
	SNR=11						
TKM2	**Tokmak 2**	**6.83**	**40**	⇑Pn	**Pn**	**07 57 28.5**	**+2.1**
	3.5nm,0.4s						
KST	**Kastek**	**7.10**	**41**	*e*P	**Pn**	**07 57 32.0**	**+1.9**
	2.2nm,0.2s						
KST				*e*S	**Sn**	**07 58 49.1**	**-1.7**
	6.2nm,0.7s						
TNSS	**Tian-Shan**	**7.63**	**45**	*e*P	**Pn**	**07 57 39.9**	**+2.4**
	3.8nm,0.5s						
TNSS				*e*S	**Sn**	**07 59 02.6**	**-1.5**
	3.2nm,0.7s						
MDOK	**Medeo**	**7.77**	**44**	*e*P	**Pn**	**07 57 40.9**	**+1.7**
	4.6nm,0.3s						
MDOK				*e*S	**Sn**	**07 59 04.4**	**-2.8**
	3.7nm,0.5s						
MDOK	**Medeo**	**7.77**	**44**	Pn	**Pn**	**07 57 41.5**	**+2.3**
	6.0nm,0.4s						
GEYT	**Alibeck**	**9.11**	**274**	Pn	**Pn**	**07 57 57.7**	**+0.1**
	0.7nm,0.3s,baz=96,slow=10,SNR=3.3 1.3nm,0.3s						
MK31	**Makanchi Array**	**12.95**	**42**	Pn	**Pn**	**07 58 50.0**	**0.0**
	1.3nm,0.6s,baz=230,slow=16,SNR=6.2						
MKAR	**Makanchi Array**	**12.95**	**42**	Pn	**Pn**	**07 58 50.1**	**+0.1**
	0.1nm,0.3s,baz=231,slow=15,SNR=8.7 1.7nm,0.7s						
AB31	**Akbulak array**	**13.41**	**332**	Pn	**Pn**	**07 58 55.2**	**-1.0**
	0.8nm,0.3s,baz=163,slow=13,SNR=74						
AB31				⇑Sn	**Sn**	**08 01 22.5**	**-2.6**
	0.6nm,0.5s,baz=149,slow=24,SNR=2.8						
KURBB	**Kurchatov Arra**	**14.28**	**24**	Pn	**Pn**	**07 59 06.7**	**-1.5**
	0.1nm,0.3s,baz=212,slow=9.7,SNR=2.3 0.4nm,0.7s						
AKTO	**Aktyubinsk**	**15.10**	**330**	Pn	**Pn**	**07 59 20.4**	**+1.2**
	0.2nm,0.3s,baz=110,slow=13,SNR=3.9 0.6nm,0.3s						
AKTO	**Aktyubinsk**	**15.10**	**330**	⇓Pn	**Pn**	**07 59 19.3**	**0.0**
	4.8nm,1.0s						
ZALV	**Zalesovo Beam**	**19.21**	**28**	P	**P**	**08 00 08.4**	**-1.5**
	0.2nm,0.3s,baz=224,slow=11,SNR=7.3 2.1nm,0.6s						
BELG	**Belogornoye**	**21.18**	**321**	P	**P**	**08 00 31.8**	**+0.5**
	5.8nm,0.4s,baz=174,slow=2.8,SNR=5.5 5.8nm,0.4s						
AKASG	**Malin Array Be**	**31.28**	**307**	P	**P**	**08 02 06.2**	**+0.4**
	0.6nm,0.6s,baz=81,slow=7.7,SNR=5.6 0.6nm,0.6s						
ARCES	**ARCESS Array B**	**39.51**	**337**	P	**P**	**08 03 16.2**	**-0.2**
	4.5nm,1.1s,baz=98,slow=10,SNR=2.2 4.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**64.68**	**267**	P	**P**	**08 06 23.6**	**-0.7**
	0.3nm,0.6s,baz=51,slow=6.4,SNR=1.6 0.3nm,0.6s						

ROM 31 08:05:31.1±0.1, 42°.732N±0°.003×13°.276E±0°.004,

h14km, ML2.2/16, 10C-7D, Error ellipse: s-maj=0.2km s-min=0.2km az=124.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.06**	**152**	P	Pg	08 05 34.3	+0.2
T1204				S	Sg	08 05 36.4	+0.2
T1204				AML	AML		
	comp=E,3745μm,0.3s						
T1204				AML	AML		
	comp=N,1815μm,0.3s						
T1204				AML	AML		
	comp=N,1818μm,0.3s						
SMA1	**SAN MARTINO**	**0.11**	**157**	⇑P	Pg	08 05 34.8	+0.2
SMA1				S	Sg	08 05 37.1	+0.3
SMA1				AML	AML		
	comp=E,4750μm,0.3s						
SMA1				AML	AML		
	comp=N,2855μm,0.3s						
SMA1				AML	AML		
	comp=N,2860μm,0.3s						
T1243	**Rocca Santa Ma**	**0.13**	**106**	⇑P	Pg	08 05 35.0	+0.2
T1243				S	Sg	08 05 37.8	+0.5
T1245	**Castelsantange**	**0.14**	**332**	P	Pg	08 05 35.2	+0.1
T1241	**Roccafluvione,**	**0.17**	**43**	P	Pg	08 05 35.7	+0.4
T1241				S	Sb	08 05 38.8	-0.6
MMO1	**Montemonaco**	**0.17**	**13**	⇓P	Pg	08 05 35.6	+0.2
MMO1				S	Sg	08 05 38.8	+0.6
LNSS	**Leonessa**	**0.22**	**233**	⇑P	Pg	08 05 36.3	+0.2
LNSS				S	Sb	08 05 40.2	-0.6
LNSS				AML	AML		
	comp=E,495μm,0.2s						
LNSS				AML	AML		
	comp=N,970μm,1.1s						
LNSS				AML	AML		
	comp=N,970μm,1.1s						
LNSS				AML	AML		
	comp=E,494μm,0.2s						
RM33	**Pellescritta (**	**0.23**	**192**	⇑P	Pg	08 05 36.5	+0.2
RM33				AML	AML		
	comp=E,577μm,0.6s						
RM33				AML	AML		
	comp=E,576μm,0.6s						
RM33				AML	AML		
	comp=N,626μm,0.3s						
T1216	**Preci, Frazion**	**0.25**	**310**	P	Pg	08 05 36.7	+0.1
AM05	**Amandola Campo**	**0.25**	**13**	⇓P	Pg	08 05 37.0	+0.4
AM05				S	Sb	08 05 41.2	-0.5
AM05				AML	AML		
	comp=N,219μm,0.1s						
AM05				AML	AML		
	comp=E,2515μm,0.1s						
T1217	**Poggiodomo (PG**	**0.26**	**266**	P	Pg	08 05 36.9	+0.3
T1217				S	Sg	08 05 41.1	+0.6
TERO	**Teramo**	**0.27**	**114**	P	Pg	08 05 36.6	-0.2
TERO				AML	AML		
	comp=N,367μm,0.5s						
TERO				AML	AML		
	comp=E,404μm,0.3s						
T1256	**Bolognola (MC)**	**0.28**	**352**	⇓P	Pg	08 05 36.9	-0.2
T1256				AML	AML		
	comp=E,967μm,0.8s						
T1256				AML	AML		
	comp=N,914μm,0.1s						
T1256				AML	AML		
	comp=E,968μm,0.8s						
T1256				AML	AML		
	comp=N,915μm,0.1s						
T1256				AML	AML		
	comp=N,916μm,0.1s						
T1256				AML	AML		
	comp=E,964μm,0.8s						
T1215	**Vallo di Nera,**	**0.31**	**283**	⇓P	Pg	08 05 37.8	+0.2
T1215				S	Sb	08 05 43.0	-0.4
T1215				AML	AML		
	comp=E,337μm,0.2s						
T1215				AML	AML		
	comp=N,609μm,0.3s						
T1215				AML	AML		
	comp=E,680μm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**7**	⇑P	Pb	08 05 38.7	-0.2
GUMA				AML	AML		
	comp=E,2300μm,0.3s						
GUMA				AML	AML		
	comp=N,2565μm,0.6s						
GIGS	**Gran Sasso**	**0.35**	**142**	P	Pg	08 05 38.3	-0.1
GIGS				AML	AML		
	comp=N,103μm,1.1s						
GIGS				AML	AML		
	comp=N,103μm,1.1s						
GIGS				AML	AML		
	comp=E,67μm,0.8s						
OFFI	**Offida**	**0.36**	**56**	⇑P	Pb	08 05 39.7	+0.4
OFFI				AML	AML		
	comp=N,1170μm,0.3s						
OFFI				AML	AML		
	comp=E,781μm,1.5s						
T1211	**Morro Reatino**	**0.37**	**237**	⇓P	Pg	08 05 38.7	+0.1
T1211				S	Sb	08 05 44.8	-0.4
T1211				AML	AML		
	comp=E,320μm,0.7s						
T1211				AML	AML		
	comp=N,586μm,1.3s						
FIAM	**Fiamignano**	**0.48**	**194**	S	Sb	08 05 49.0	+0.7
FAGN	**Fagnano**	**0.52**	**154**	S	Sb	08 05 51.0	+1.6
CESX	**Cesi**	**0.53**	**257**	S	Sb	08 05 50.0	+0.3
VCEL	**Villa Celiera**	**0.54**	**129**	⇑P	Pg	08 05 41.9	+0.2
VCEL				AML	AML		
	comp=N,250μm,0.8s						
VCEL				AML	AML		
	comp=N,250μm,0.8s						
VCEL				AML	AML		
	comp=E,363μm,1.5s						
ASSB	**Assisi San Ben**	**0.55**	**305**	⇑P	Pg	08 05 41.7	-0.3
SNTG	**Esanatoglia**	**0.58**	**335**	⇓P	Pg	08 05 42.2	-0.3
SNTG				AML	AML		
	comp=N,112μm,1.0s						
SNTG				AML	AML		
	comp=E,108μm,1.2s						
SNTG				AML	AML		
	comp=N,112μm,1.0s						
EL6	**Elcito**	**0.61**	**348**	⇓P	Pg	08 05 43.1	-0.1
T0110	**Collepietro**	**0.63**	**143**	⇑P	Pg	08 05 43.1	-0.4
T0110				AML	AML		
	comp=E,182μm,1.6s						
T0110				AML	AML		
	comp=N,202μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.65**	**314**	S	Sn	08 05 55.0	-1.1
PP3	**Marolino**	**0.69**	**21**	P	Pg	08 05 44.0	-0.6
ARVD	**Arcevia**	**0.80**	**342**	S	Sn	08 05 60.0	+0.2
VAGA	**Valle Agricola**	**1.50**	**151**	⇑P	Pn	08 05 57.6	0.0
PTRJ	**Pietraroja**	**1.66**	**145**	P	Pn	08 05 58.8	-1.0
PTRJ				AML	AML		
	comp=E,7380μm,1.6s						
PTRJ				AML	AML		
	comp=N,1300μm,1.2s						
PTRJ				AML	AML		
	comp=E,512μm,0.6s						
PTRJ				AML	AML		
	comp=N,1240μm,1.1s						
PTRJ				AML	AML		
	comp=N,1745μm,0.8s						
PTRJ				AML	AML		
	comp=E,860μm,1.0s						
PTRJ				AML	AML		
	comp=E,7385μm,1.6s						
PTRJ				AML	AML		
	comp=N,1910μm,0.8s						
MOCO	**Biccari - m.te**	**1.95**	**134**	S	Sn	08 06 29.0	+0.7

ROM 31 08:06:22.0±0.1, 42°.843N±0°.005×13°.104E±0°.006, h11km, ML2.5/8, 9C-2D, Error ellipse: s-maj=0.6km s-min=0.5km az=332.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**77**	P	Pg	08 06 25.0	+0.6
T1245				S	Sg	08 06 26.9	+0.8
T1245				AML	AML		
	comp=E,12000μm,0.6s						
T1245				AML	AML		
	comp=N,10995μm,0.4s						
T1245				AML	AML		
	comp=E,11500μm,0.7s						
T1245				AML	AML		
	comp=N,10730μm,0.4s						
T1216	**Preci, Frazion**	**0.08**	**308**	⇑P	Pg	08 06 24.8	+0.4
T1216				S	Sg	08 06 26.9	+0.6
FEMA	**Monte Fema**	**0.13**	**342**	P	Pg	08 06 25.0	-0.1
FEMA				S	Sg	08 06 28.4	+1.0
MMO1	**Montemonaco**	**0.17**	**71**	⇓P	Pg	08 06 26.3	+0.5
MMO1				S	Sg	08 06 29.1	+0.6
T1215	**Vallo di Nera,**	**0.18**	**257**	⇑P	Pg	08 06 26.4	+0.5
T1215				S	Sg	08 06 29.3	+0.7
T1215				AML	AML		
	comp=E,1370μm,0.4s						
T1215				AML	AML		
	comp=N,1350μm,0.1s						
T1215				AML	AML		
	comp=E,1190μm,0.3s						
T1215				AML	AML		
	comp=N,1234μm,0.2s						
T1217	**Poggiodomo (PG**	**0.18**	**224**	P	Pg	08 06 26.4	+0.4
T1217				AML	AML		
	comp=N,3515μm,0.5s						
T1217				AML	AML		
	comp=E,2885μm,0.4s						
T1256	**Bolognola (MC)**	**0.19**	**29**	P	Pg	08 06 26.5	+0.4
T1256				S	Sg	08 06 30.5	+1.5
AM05	**Amandola Campo**	**0.23**	**53**	⇑P	Pg	08 06 26.4	-0.3
T1204	**Amatrice, Fraz**	**0.23**	**137**	⇓P	Pg	08 06 27.5	+0.7
LNSS	**Leonessa**	**0.24**	**191**	⇑P	Pg	08 06 27.5	+0.4
LNSS				S	Sg	08 06 31.4	+1.0
LNSS				AML	AML		
	comp=E,350μm,0.2s						
LNSS				AML	AML		
	comp=N,790μm,1.3s						
LNSS				AML	AML		
	comp=N,3440μm,1.1s						
LNSS				AML	AML		
	comp=E,1290μm,0.2s						
SMA1	**SAN MARTINO**	**0.27**	**141**	⇑P	Pg	08 06 28.1	+0.5
SMA1				AML	AML		
	comp=E,1440μm,0.7s						
SMA1				AML	AML		
	comp=N,1095μm,0.5s						
GUMA	**Gualdo di Mace**	**0.28**	**38**	⇑P	Pg	08 06 26.8	-0.9
T1243	**Rocca Santa Ma**	**0.29**	**120**	⇑P	Pg	08 06 28.4	+0.5
RM33	**Pellescritta (**	**0.34**	**166**	P	Pg	08 06 29.2	+0.4
RM33				S	Sb	08 06 34.8	-0.9
RM33				AML	AML		
	comp=E,272μm,0.8s						
RM33				AML	AML		
	comp=N,195μm,0.2s						
RM33				AML	AML		
	comp=N,898μm,0.9s						
RM33				AML	AML		
	comp=E,1250μm,0.3s						
RM33				AML	AML		
	comp=N,872μm,0.9s						
RM33				AML	AML		
	comp=N,873μm,0.9s						
RM33				AML	AML		
	comp=E,1250μm,0.3s						
RM33				AML	AML		
	comp=E,1245μm,0.3s						
T1211	**Morro Reatino**	**0.36**	**211**	⇑P	Pb	08 06 29.8	-0.6
T1211				S	Sb	08 06 35.6	-0.6
T1211				AML	AML		
	comp=E,470μm,0.4s						
T1211				AML	AML		
	comp=N,639μm,0.3s						
ARRO	**Arrone**	**0.36**	**224**	P	Pg	08 06 29.5	+0.3
ARRO				S	Sb	08 06 35.3	-0.8
ARRO				AML	AML		
	comp=N,228μm,0.3s						
ARRO				AML	AML		
	comp=E,458μm,0.7s						
TERO	**Teramo**	**0.43**	**121**	P	Pg	08 06 30.7	+0.3
GIGS	**Gran Sasso**	**0.52**	**139**	⇑P	Pg	08 06 32.4	+0.2

*OSPL **31** 08:06:54.4±2.2, 19°.00N×66°.21W, h45km±61km, ML3.6*
*NEIC **31** 08:06:54.9±0.9, 18°.95N±0°.03×66°.31W±0°.03, h35km±56km, Error ellipse: s-maj=5.4km s-min=3.7km az=204.0*
*RSPR **31** 08:06:55.5, 18°.99N×66°.31W, h31km±6km, MD3.6/17*

ISC 31 08:06:53.9±1.1, 18°.99N±0°.05×66°.31W±0°.02, h31km±10km, n112, σ1°.28/125, 13C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.55**	**203**	⇓*e*P	**Pb**	**08 07 06.0**	**+0.7**
EMPR	**Esperanza - Ma**	**0.55**	**203**	*e*S	**Sb**	**08 07 13.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.55**	**203**		**Pb**	**08 07 06.0**	**+0.7**
EMPR					**Sb**	**08 07 13.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.55**	**203**	IAML		08 07 14.7	
	comp=N,20μm,0.3s						
EMPR				IAML		08 07 14.7	
	comp=E,28μm,0.5s						
GCPR	**Guaynabo City**	**0.71**	**163**	⇑*e*P	**Pb**	**08 07 07.8**	**0.0**
GCPR	**Guaynabo City**	**0.71**	**163**	*e*S	**Sb**	**08 07 17.2**	**-0.1**
GCPR	**Guaynabo City**	**0.71**	**163**		**Pb**	**08 07 07.8**	**0.0**
GCPR					**Sb**	**08 07 17.2**	**-0.1**
GCPR	**Guaynabo City**	**0.71**	**163**	IAML		08 07 17.6	
	comp=N,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.77**	**214**	⇓*e*P	**Pb**	**08 07 08.5**	**-0.3**
AOPR	**Arecibo Observ**	**0.77**	**214**		**Pb**	**08 07 08.5**	**-0.3**
AOPR					**Sb**	**08 07 18.2**	**-0.8**
AOPR	**Arecibo Observ**	**0.77**	**214**	*e*P	**Pb**	**08 07 08.5**	**-0.3**
AOPR				*e*S	**Sb**	**08 07 18.4**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.83**	**208**	⇓*e*P	**Pb**	**08 07 09.3**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.83**	**208**	*e*S	**Sb**	**08 07 19.6**	**-1.2**
UUPR	**Utuado, UPR, P**	**0.83**	**208**		**Pb**	**08 07 09.3**	**-0.6**
UUPR					**Sb**	**08 07 19.6**	**-1.2**
UUPR	**Utuado, UPR, P**	**0.83**	**208**	Pn	**Pb**	**08 07 09.3**	**-0.6**
UUPR				IAML		08 07 20.4	
	comp=N,20μm,0.3s						
UUPR				IAML		08 07 21.2	
	comp=E,16μm,0.2s						
CBYP	**Canovanas**	**0.83**	**149**	⇑*e*P	**Pb**	**08 07 09.5**	**-0.5**
CBYP	**Canovanas**	**0.83**	**149**	*e*S	**Sb**	**08 07 20.3**	**-0.6**
CBYP	**Canovanas**	**0.83**	**149**		**Pb**	**08 07 09.5**	**-0.5**
CBYP					**Sb**	**08 07 20.3**	**-0.6**
SJG	**San Juan**	**0.88**	**170**		**Pb**	**08 07 10.3**	**-0.5**
SJG				IAML		08 07 22.0	
	comp=E,2μm,0.4s						
SJG				IAML		08 07 22.3	
	comp=E,2μm,0.2s						
SJG	**San Juan**	**0.88**	**170**	*e*P	**Pb**	**08 07 09.7**	**-1.1**
SJG				*e*S	**Sb**	**08 07 21.1**	**-1.2**
AGPR	**Aguadilla, PR**	**0.92**	**236**	⇓*e*P	**Pb**	**08 07 10.2**	**-1.2**
AGPR	**Aguadilla, PR**	**0.92**	**236**	*e*S	**Sb**	**08 07 22.3**	**-1.0**
AGPR	**Aguadilla, PR**	**0.92**	**236**		**Pb**	**08 07 10.2**	**-1.2**
AGPR					**Sb**	**08 07 22.3**	**-1.0**
AGPR	**Aguadilla, PR**	**0.92**	**236**	IAML		08 07 29.6	
	comp=N,2μm,0.4s						
AGPR	**Aguadilla, PR**	**0.92**	**236**	*i* P	**Pb**	**08 07 10.3**	**-1.2**
AGPR				*e*S	**Sb**	**08 07 23.7**	**+0.3**
AGPR				IAML		08 07 27.3	
	comp=Z,1μm,0.3s						
CELP	**Cerrillos**	**0.94**	**196**	⇓*e*P	**Pb**	**08 07 11.0**	**-0.8**
CELP	**Cerrillos**	**0.94**	**196**	*e*S	**Sb**	**08 07 23.0**	**-1.0**
CELP	**Cerrillos**	**0.94**	**196**		**Pb**	**08 07 11.0**	**-0.8**
CELP					**Sb**	**08 07 23.0**	**-1.0**
CELP	**Cerrillos**	**0.94**	**196**	IAML		08 07 23.3	
	comp=N,2μm,0.2s						
HUMP	**Col San Antoni**	**0.95**	**153**	⇓*e*P	**Pb**	**08 07 11.1**	**-0.8**
HUMP	**Col San Antoni**	**0.95**	**153**	*e*S	**Sb**	**08 07 23.0**	**-1.1**
HUMP	**Col San Antoni**	**0.95**	**153**		**Pb**	**08 07 11.1**	**-0.8**
HUMP					**Sb**	**08 07 23.0**	**-1.1**
HUMP	**Col San Antoni**	**0.95**	**153**	IAML		08 07 23.7	
	comp=E,3μm,0.2s						
HUMP				IAML		08 07 23.9	
	comp=N,3μm,0.2s						
IGPR	**InterUniversit**	**1.03**	**169**	⇓*e*P	**Pn**	**08 07 12.4**	**+0.1**
IGPR	**InterUniversit**	**1.03**	**169**	*e*S	**Sb**	**08 07 25.1**	**-1.4**
LSP	**Las Mesas**	**1.09**	**223**	⇑*e*P	**Pn**	**08 07 13.2**	**0.0**
LSP	**Las Mesas**	**1.09**	**223**	*e*S	**Sb**	**08 07 27.7**	**-0.6**
PRSN	**Puerto Rico Se**	**1.10**	**226**	⇓*e*P	**Pn**	**08 07 13.2**	**-0.1**
PRSN	**Puerto Rico Se**	**1.10**	**226**	*e*S	**Sb**	**08 07 27.0**	**-1.5**
PRSN	**Puerto Rico Se**	**1.10**	**226**		**Pn**	**08 07 13.2**	**-0.1**
PRSN					**Sb**	**08 07 27.0**	**-1.5**
GBPR	**Guanica, Bosqu**	**1.15**	**208**	⇑*e*P	**Pn**	**08 07 14.0**	**+0.2**
CUPR	**Culebra, Puert**	**1.18**	**125**	⇑*e*P	**Pn**	**08 07 13.9**	**-0.5**
CUPR	**Culebra, Puert**	**1.18**	**125**	*e*S	**Sn**	**08 07 28.4**	**-1.0**
CUPR	**Culebra, Puert**	**1.18**	**125**		**Pn**	**08 07 13.9**	**-0.5**
CUPR					**Sn**	**08 07 28.4**	**-1.0**
MLPR	**Magueyes Islan**	**1.23**	**215**	⇓*e*P	**Pn**	**08 07 15.1**	**+0.1**
MLPR	**Magueyes Islan**	**1.23**	**215**		**Sn**	**08 07 30.0**	**-0.6**
MLPR	**Magueyes Islan**	**1.23**	**215**		**Pn**	**08 07 15.1**	**+0.1**
MLPR					**Sn**	**08 07 30.0**	**-0.6**
MLPR	**Magueyes Islan**	**1.23**	**215**	IAML		08 07 30.2	
	comp=E,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.24**	**218**	⇓*e*P	**Pn**	**08 07 15.2**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.24**	**218**	*e*S	**Sn**	**08 07 30.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.24**	**218**		**Pn**	**08 07 15.2**	**0.0**
CRPR					**Sn**	**08 07 30.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.24**	**218**	*i* P	**Pn**	**08 07 15.3**	**+0.2**
CRPR				*e*S	**Sn**	**08 07 30.1**	**-0.7**
CRPR				IAML		08 07 32.9	
	comp=Z,1μm,0.5s						
IDE	**Isla Desecheo**	**1.26**	**242**	⇑*e*P	**Pn**	**08 07 15.1**	**-0.3**
STVI	**Saint Thomas**	**1.43**	**116**	⇑*e*P	**Pn**	**08 07 17.8**	**0.0**
STVI	**Saint Thomas**	**1.43**	**116**	*e*S	**Sn**	**08 07 35.3**	**-0.2**
STVI	**Saint Thomas**	**1.43**	**116**		**Pn**	**08 07 17.8**	**0.0**
STVI					**Sn**	**08 07 35.3**	**-0.2**
STVI				IAML		08 07 39.6	
	comp=N,1μm,0.3s						
SJVI	**Gifft Hill Sch**	**1.59**	**114**	⇑*e*P	**Pn**	**08 07 20.2**	**+0.1**
SJVI	**Gifft Hill Sch**	**1.59**	**114**	*e*S	**Sn**	**08 07 39.5**	**-0.1**
SJVI	**Gifft Hill Sch**	**1.59**	**114**		**Pn**	**08 07 20.2**	**+0.1**
SJVI					**Sn**	**08 07 39.5**	**-0.1**
SJVI	**Gifft Hill Sch**	**1.59**	**114**	Pn	**Pn**	**08 07 20.2**	**+0.1**
SJVI				IAML		08 07 40.7	
	comp=N,651nm,0.2s						
SJVI				IAML		08 07 44.4	
	comp=E,431nm,0.5s						
TBVI	**Tortola**	**1.70**	**109**	⇑*e*P	**Pn**	**08 07 21.7**	**+0.2**
TBVI	**Tortola**	**1.70**	**109**	*e*S	**Sn**	**08 07 42.7**	**+0.6**
TBVI	**Tortola**	**1.70**	**109**		**Pn**	**08 07 21.7**	**+0.2**
TBVI					**Sn**	**08 07 42.7**	**+0.6**
CDVI	**St. Croix**	**1.91**	**130**	⇑*e*P	**Pn**	**08 07 26.5**	**+2.1**
CDVI	**St. Croix**	**1.91**	**130**		**Pn**	**08 07 26.0**	**+1.7**
CDVI				IAML		08 07 56.6	
	comp=E,1μm,0.7s						
CDVI				IAML		08 08 03.2	
	comp=N,1μm,0.5s						
CDVI	**St. Croix**	**1.91**	**130**	*e*P	**Pn**	**08 07 26.1**	**+1.7**
CDVI				*e*S	**Sb**	**08 07 50.8**	**-0.9**
PCDR	**Punta Cana, DR**	**2.02**	**257**	⇑*e*P	**Pn**	**08 07 27.9**	**+2.0**
PCDR	**Punta Cana, DR**	**2.02**	**257**		**Pn**	**08 07 27.6**	**+1.8**
PCDR				IAML		08 08 09.0	
	comp=N,493nm,0.6s						
PCDR	**Punta Cana, DR**	**2.02**	**257**	*i* P	**Pn**	**08 07 27.8**	**+1.9**
PCDR				*e*S	**Sn**	**08 07 51.2**	**+1.1**
PCDR				IAML		08 07 57.5	
	comp=Z,177nm,0.6s						
DR12	**Loma Pena Alta**	**2.92**	**267**	⇑*e*P	Pn	08 07 28.9	-9.4
SMRT	**St. Maarten**	**3.21**	**106**	Pn	**Pn**	**08 07 42.9**	**+0.7**
SMRT				IAML		08 08 35.7	
	comp=E,238nm,0.3s						
SMRT				IAML		08 08 35.8	
	comp=N,208nm,0.3s						
SMRT	**St. Maarten**	**3.21**	**106**	*e*P	**Pn**	**08 07 42.4**	**+0.2**
SDD	**Santo Domingo**	**3.46**	**262**	Pn	**Pn**	**08 07 47.2**	**+1.6**
SDD				IAML		08 08 53.7	
	comp=N,116nm,1.1s						
SDD				IAML		08 08 54.0	
	comp=E,160nm,1.0s						
SDD	**Santo Domingo**	**3.46**	**262**	*i* P	**Pb**	**08 07 51.2**	**-3.3**
SDD				*e*S	**Sn**	**08 08 28.2**	**+2.7**
SEUS	**St. Eustatius**	**3.49**	**115**	*e*P	**Pn**	**08 07 49.0**	**+2.9**
SEUS	**St. Eustatius**	**3.49**	**115**	*e*S	**Sb**	**08 08 38.5**	**+1.4**
SC01	**Santiago de lo**	**4.20**	**277**		**Pn**	**08 07 58.2**	**+2.3**
SC01				IAML		08 09 16.4	
	comp=N,201nm,1.2s						
SC01				IAML		08 09 19.7	
	comp=E,187nm,0.9s						
ANWB	**Willy Bob**	**4.49**	**106**	Pn	**Pn**	**08 08 00.4**	**+0.6**
ANWB				IAML		08 09 11.0	
	comp=E,52nm,1.6s						
ANWB				IAML		08 09 11.1	
	comp=E,55nm,0.8s						
ANWB	**Willy Bob**	**4.49**	**106**	*e*P	**Pn**	**08 08 00.0**	**+0.1**
ANWB	**Willy Bob**	**4.49**	**106**	*e*S	**Sb**	**08 09 00.9**	**-4.9**
MBFL	**Flemmings, Mon**	**4.49**	**119**	*e*P	**Pn**	**08 08 00.9**	**+1.1**
ANDO	**Antigua, Disas**	**4.65**	**113**	*e*P	Pn	08 08 08.8	+6.8
ANDO	**Antigua, Disas**	**4.65**	**113**	*e*S	**Sn**	**08 08 58.6**	**+3.6**
SDDR	**Presa de Saban**	**4.71**	**271**	Pn	**Pn**	**08 08 05.5**	**+2.5**
SDDR				IAML		08 09 24.8	
	comp=E,108nm,0.8s						
SDDR				IAML		08 09 27.1	
	comp=E,74nm,0.9s						
SDDR	**Presa de Saban**	**4.71**	**271**	*e*P	**Pn**	**08 08 05.5**	**+2.5**
SDDR	**Presa de Saban**	**4.71**	**271**	*e*S	**Sn**	**08 08 59.3**	**+2.7**
ANBD	**Bethesda, Anti**	**4.73**	**113**	*e*P	**Pn**	**08 08 05.6**	**+2.4**
ANBD	**Bethesda, Anti**	**4.73**	**113**	*e*S	**Sn**	**08 08 56.3**	**-0.8**
GDHS	**Morne Mazeau,**	**5.10**	**121**	Pn	**Pn**	**08 08 09.8**	**+1.5**
GDHS				IAML		08 09 13.7	
	comp=E,80nm,0.5s						
GRTK	**Grand Turk**	**5.18**	**300**	Pn	**Pn**	**08 08 08.6**	**-0.7**
GRTK				IAML		08 08 53.4	
	comp=E,74nm,0.1s						
GRTK	**Grand Turk**	**5.18**	**300**	*i* P	**Pn**	**08 08 09.0**	**-0.4**
GRTK				*e*S	Sn	08 09 02.9	-5.1
GRTK				IAML		08 09 11.6	
	comp=Z,42nm,1.1s						
CBE	**Ff, Capester**	**5.34**	**122**	Pn	**Pn**	**08 08 11.5**	**-0.1**
CBE				IAML		08 09 37.5	
	comp=E,94nm,0.5s						
CBE	**Ff, Capester**	**5.34**	**122**	*e*P	**Pn**	**08 08 12.1**	**+0.5**
TDBA	**Terre de Bas,**	**5.44**	**124**	Pn	**Pn**	**08 08 14.4**	**+1.4**
TDBA	**Terre de Bas,**	**5.44**	**124**	*e*P	**Pn**	**08 08 15.1**	**+2.1**
GDSD	**La Dsirade Is**	**5.66**	**117**	Pn	**Pn**	**08 08 17.0**	**+1.0**
MAGL	**Barre de l'ile**	**5.67**	**121**	Pn	**Pn**	**08 08 17.0**	**+0.9**
MAGL	**Barre de l'ile**	**5.67**	**121**	*e*P	**Pn**	**08 08 18.5**	**+2.4**
PAPH	**Port-au-Prince**	**5.70**	**266**	Pn	**Pn**	**08 08 16.6**	**+0.2**
DSLB	**Salisbury**	**5.85**	**126**	*e*P	**Pn**	**08 08 20.9**	**+2.3**
SVN	**Savane Anatole**	**6.42**	**129**	Pn	**Pn**	**08 08 26.2**	**-0.2**
FDF	**Fort de France**	**6.50**	**130**	Pn	**Pn**	**08 08 27.2**	**-0.3**
MPOM	**Morne Pois Mar**	**6.90**	**130**	Pn	**Pn**	**08 08 32.8**	**-0.2**
MPOM	**Morne Pois Mar**	**6.90**	**130**	*e*P	Pn	08 08 31.3	-1.7
SVB	**Belmont**	**7.47**	**139**	Pn	**Pn**	**08 08 42.0**	**+1.0**
GRGR	**Grenville**	**8.16**	**146**	Pn	**Pn**	**08 08 50.7**	**+0.4**
URIC	**Uribia, Colomb**	**9.08**	**218**	Pn	**Pn**	**08 09 01.7**	**-1.3**
BAUV	**El Baul**	**10.13**	**190**	Pn	**Pn**	**08 09 18.7**	**+1.4**
BAUV	**El Baul**	**10.13**	**190**	*e*P	**Pn**	**08 09 20.0**	**+2.7**
BAUV	**El Baul**	**10.13**	**190**	*e*S	**Sn**	**08 11 08.4**	**-1.5**
BBSR	**BB Station**	**13.41**	**6**	Pn	**Pn**	**08 10 01.6**	**-0.5**
RUSC	**La Rusia**	**14.60**	**208**	Pn	**Pn**	**08 10 18.9**	**0.0**

IDC 31 08:25:52.6±1.6, 22°.19N×117°.56E, h0km, mb3.6/4, mbtmp3.6/4, MS3.2/1, Error ellipse: s-maj=143.1km s-min=28.7km az=65.0, Taiwan region

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

ZALV			Lg	Lg	08 29 29.1	
	3.4nm,0.3s,baz=82,slow=20,SNR=9.8					
I46RU	**ZALESOVO INFRA**	**1.43 311**	I		08 40 50.0	
	baz=78,slow=332,SNR=1.2					
KURBB	**Kurchatov Arra**	**5.57 248**	Pn	**Pb**	**08 30 16.4**	**-2.4**
	0.1nm,0.3s,baz=53,slow=13,SNR=4.1					
KURBB			Lg	Lg	08 32 09.8	
	0.1nm,0.3s,baz=56,slow=35,SNR=4.0					
	0.3nm,0.3s					
KURBB	**Kurchatov Arra**	**5.57 248**	⇑Pn	**Pb**	**08 30 17.0**	**-1.8**
	2.6nm,0.9s					
KURBB			⇓Sn	**Sb**	**08 31 29.2**	**+3.1**
	2.2nm,0.8s					
KURBB			⇑Lg	Lg	08 32 02.5	
	3.2nm,0.7s					
MK31	**Makanchi Array**	**6.84 206**	⇑Pn	**Pb**	**08 30 40.9**	**+0.5**
	0.5nm,0.7s,baz=26,slow=14,SNR=5.1					
MKAR	**Makanchi Array**	**6.84 206**	Pn	**Pb**	**08 30 39.5**	**-0.9**
	0.1nm,0.3s,baz=25,slow=14,SNR=1.7					
MKAR			Lg	Lg	08 32 57.9	
	baz=35,slow=33,SNR=4.0					
	0.1nm,0.2s					

ROM 31 08:31:03.5±0.1, 42°.821N±0°.004×13°.025E±0°.007, h10km, ML2.6/17, 12C-6D, Error ellipse: s-maj=0.7km s-min=0.4km az=305.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**356**	⇑P	Pg	08 31 06.4	+0.5
T1216				S	Sg	08 31 08.1	+0.6
T1216				AML	AML		
	comp=E,4865μm,0.3s						
T1216				AML	AML		
	comp=N,5425μm,0.4s						
T1216				AML	AML		
	comp=N,11085μm,0.4s						
T1216				AML	AML		
	comp=E,7375μm,1.1s						
T1215	**Vallo di Nera,**	**0.12**	**261**	P	Pg	08 31 06.8	+0.4
T1215				S	Sg	08 31 08.9	+0.4
T1215				AML	AML		
	comp=E,2915μm,0.1s						
T1215				AML	AML		
	comp=N,2135μm,0.1s						
T1215				AML	AML		
	comp=E,2995μm,0.1s						
T1215				AML	AML		
	comp=N,2325μm,0.1s						
T1215				AML	AML		
	comp=E,4960μm,0.5s						
T1215				AML	AML		
	comp=N,5035μm,0.5s						
T1215				AML	AML		
	comp=E,5210μm,0.2s						
T1215				AML	AML		
	comp=N,5050μm,0.5s						
T1215				AML	AML		
	comp=E,5205μm,0.3s						
T1215				AML	AML		
	comp=E,4960μm,0.5s						
T1215				AML	AML		
	comp=N,5060μm,0.5s						
T1215				AML	AML		
	comp=N,5035μm,0.5s						
T1245	**Castelsantange**	**0.12**	**73**	P	Pg	08 31 06.1	-0.6
T1245				S	Sg	08 31 09.5	+0.6
T1245				AML	AML		
	comp=E,18950μm,0.2s						
T1245				AML	AML		
	comp=N,21850μm,0.9s						
T1217	**Poggiodomo (PG**	**0.13**	**213**	P	Pg	08 31 07.0	+0.3
T1217				S	Sg	08 31 09.7	+0.8
FEMA	**Monte Fema**	**0.14**	**7**	⇓P	Pg	08 31 07.6	+0.7
FEMA				S	Sg	08 31 10.7	+1.4
FEMA				AML	AML		
	comp=E,6130μm,0.1s						
FEMA				AML	AML		
	comp=N,4010μm,0.3s						
FDMO	**Fiordimonte**	**0.22**	**12**	⇓P	Pg	08 31 08.8	+0.6
FDMO				S	Sg	08 31 12.7	+1.4
FDMO				AML	AML		
	comp=E,981μm,0.1s						
FDMO				AML	AML		
	comp=N,842μm,0.5s						
FDMO				AML	AML		
	comp=E,1500μm,1.2s						
FDMO				AML	AML		
	comp=N,1480μm,1.0s						
T1256	**Bolognola (MC)**	**0.24**	**38**	⇑P	Pg	08 31 08.3	-0.1
T1256				S	Sg	08 31 13.0	+1.2
T1256				AML	AML		
	comp=N,2535μm,0.5s						
T1256				AML	AML		
	comp=E,2885μm,0.5s						
T1204	**Amatrice, Fraz**	**0.26**	**124**	P	Pg	08 31 09.4	+0.6
T1204				AML	AML		
	comp=N,2152μm,0.4s						
T1204				AML	AML		
	comp=E,5295μm,0.3s						
SMA1	**SAN MARTINO**	**0.30**	**130**	⇑P	Pb	08 31 10.2	-0.7
SMA1				S	Sb	08 31 15.8	-0.2
SMA1				AML	AML		
	comp=E,2730μm,0.5s						
SMA1				AML	AML		
	comp=N,2275μm,0.5s						
SMA1				AML	AML		
	comp=E,2735μm,0.5s						
T1241	**Roccafluvione,**	**0.30**	**83**	⇑P	Pb	08 31 10.7	-0.3
T1241				S	Sg	08 31 14.3	+0.7
T1241				AML	AML		
	comp=N,1895μm,0.7s						
T1241				AML	AML		
	comp=E,2640μm,0.6s						
T1241				AML	AML		
	comp=N,1890μm,0.7s						
T1241				AML	AML		
	comp=E,2630μm,0.6s						
ARRO	**Arrone**	**0.31**	**219**	⇑P	Pg	08 31 10.1	+0.4
ARRO				S	Sb	08 31 15.4	-0.7
ARRO				AML	AML		
	comp=E,498μm,0.2s						
ARRO				AML	AML		
	comp=N,366μm,0.2s						
ARRO				AML	AML		
	comp=E,960μm,0.2s						
ARRO				AML	AML		
	comp=N,1490μm,0.3s						
ARRO				AML	AML		
	comp=E,959μm,0.2s						
T1211	**Morro Reatino**	**0.31**	**204**	⇓P	Pg	08 31 10.2	+0.4
T1211				S	Sb	08 31 15.4	-0.9
T1211				AML	AML		
	comp=E,2430μm,0.3s						
T1211				AML	AML		
	comp=N,4040μm,0.2s						
T1211				AML	AML		
	comp=N,4000μm,0.2s						
T1211				AML	AML		
	comp=E,2560μm,0.3s						
T1243	**Rocca Santa Ma**	**0.34**	**112**	⇑P	Pg	08 31 10.6	+0.3
RM33	**Pellescritta (**	**0.34**	**156**	⇓P	Pg	08 31 10.6	+0.3
RM33				S	Sg	08 31 15.8	+1.0
RM33				AML	AML		
	comp=N,1138μm,0.7s						
RM33				AML	AML		
	comp=E,1370μm,0.9s						
RM33				AML	AML		
	comp=N,1067μm,0.7s						
RM33				AML	AML		
	comp=N,1138μm,0.7s						
RM33				AML	AML		
	comp=N,1068μm,0.7s						
RM33				AML	AML		
	comp=E,1365μm,0.9s						
RM33				AML	AML		
	comp=E,1375μm,0.9s						
ASSB	**Assisi San Ben**	**0.35**	**310**	⇑P	Pg	08 31 11.0	+0.5
ASSB				AML	AML		
	comp=N,1235μm,0.2s						
ASSB				AML	AML		
	comp=E,1060μm,0.5s						
CESX	**Cesi**	**0.39**	**237**	S	Sg	08 31 16.0	-0.4
CAMP	**Campotosto**	**0.40**	**135**	⇑P	Pg	08 31 11.7	+0.3
CAMP				S	Sb	08 31 18.4	-0.5
CAMP				AML	AML		
	comp=E,742μm,0.2s						
CAMP				AML	AML		
	comp=N,466μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.46**	**322**	⇑P	Pb	08 31 13.2	-0.5
ATCC				AML	AML		
	comp=E,861μm,0.4s						
ATCC				AML	AML		
	comp=N,680μm,0.2s						
TERO	**Teramo**	**0.47**	**115**	P	Pg	08 31 12.8	+0.1
TERO				AML	AML		
	comp=N,1540μm,0.1s						
TERO				AML	AML		
	comp=E,1400μm,1.1s						
OFFI	**Offida**	**0.50**	**77**	⇓P	Pb	08 31 15.0	+0.7
OFFI				AML	AML		
	comp=E,1615μm,0.3s						
OFFI				AML	AML		
	comp=N,2070μm,0.2s						
EL6	**Elcito**	**0.51**	**6**	⇓P	Pg	08 31 14.0	+0.5
AQU	**L'Aquila**	**0.54**	**149**	⇑P	Pn	08 31 17.1	-0.2
GIGS	**Gran Sasso**	**0.55**	**133**	P	Pg	08 31 14.2	+0.1
GIGS				AML	AML		
	comp=N,192μm,1.3s						
GIGS				AML	AML		
	comp=E,156μm,1.3s						
FIAM	**Fiamignano**	**0.56**	**173**	⇑P	Pg	08 31 14.5	+0.1
FIAM				AML	AML		
	comp=E,335μm,0.7s						
FIAM				AML	AML		
	comp=N,289μm,0.3s						
ARVD	**Arcevia**	**0.68**	**355**	⇑P	Pb	08 31 17.1	-0.3
ARVD				S	Sb	08 31 28.0	+1.1
ARVD				AML	AML		
	comp=E,199μm,1.1s						
ARVD				AML	AML		
	comp=N,139μm,0.8s						
FAGN	**Fagnano**	**0.69**	**143**	S	Sn	08 31 30.0	-0.1
IMOL	**Imola, Italy**	**1.80**	**329**	S	Sn	08 31 57.0	-0.3

*NEIC **31** 08:31:29.3±0.8, 19°.55N±0°.09×64°.42W±0°.05, h39km±56km, Error ellipse: s-maj=13.9km s-min=4.5km az=201.0*
*RSPR **31** 08:31:29.5, 19°.47N×64°.30W, h71km±19km, MD2.9/5*

ISC 31 08:31:29.0±2.2, 19°.5N±0°.1×64°.38W±0°.04, h27km, n32, σ0s78/37, 8C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.10**	**192**	⇑*e*P	**Pn**	**08 31 48.9**	**+0.3**
TBVI	**Tortola**	**1.10**	**192**	*e*S	**Sb**	**08 32 03.5**	**+0.2**
TBVI	**Tortola**	**1.10**	**192**		**Pn**	**08 31 48.9**	**+0.3**
TBVI					**Sb**	**08 32 03.5**	**+0.2**
SJVI	**Gifft Hill Sch**	**1.22**	**198**	⇑*e*P	**Pn**	**08 31 49.9**	**-0.4**
SJVI	**Gifft Hill Sch**	**1.22**	**198**	*e*S	**Sn**	**08 32 06.0**	**+0.1**
SJVI	**Gifft Hill Sch**	**1.22**	**198**		**Sn**	**08 32 06.0**	**+0.1**
SJVI	**Gifft Hill Sch**	**1.22**	**198**	Pn	**Pn**	**08 31 50.1**	**-0.1**
STVI	**Saint Thomas**	**1.26**	**205**	⇑*e*P	**Pn**	**08 31 51.0**	**+0.1**
STVI	**Saint Thomas**	**1.26**	**205**	*e*S	**Sn**	**08 32 07.1**	**+0.2**
STVI	**Saint Thomas**	**1.26**	**205**		**Sn**	**08 32 07.1**	**+0.2**
STVI	**Saint Thomas**	**1.26**	**205**		**Pn**	**08 31 50.6**	**-0.3**
STVI				IAML		08 32 10.5	
	comp=N,26nm,0.7s						
CUPR	**Culebra, Puert**	**1.46**	**216**	⇑*e*P	**Pn**	**08 31 53.6**	**0.0**
CUPR	**Culebra, Puert**	**1.46**	**216**	*e*S	**Sn**	**08 32 12.2**	**+0.4**
CUPR	**Culebra, Puert**	**1.46**	**216**		**Pn**	**08 31 53.4**	**-0.2**
CUPR					**Sn**	**08 32 12.2**	**+0.4**
CDVI	**St. Croix**	**1.78**	**192**	Pn	**Pn**	**08 31 59.3**	**+1.4**
CDVI	**St. Croix**	**1.78**	**192**	*e*P	**Pn**	**08 31 55.1**	**-2.8**
CDVI				*e*S	**Sb**	**08 32 22.7**	**0.0**
CBYP	**Canovanas**	**1.85**	**229**	⇑*e*P	**Pn**	**08 31 58.8**	**-0.3**
CBYP	**Canovanas**	**1.85**	**229**	*e*S	**Sn**	**08 32 22.5**	**+0.8**
CBYP	**Canovanas**	**1.85**	**229**		**Pn**	**08 31 57.6**	**-1.5**
CBYP	**Canovanas**	**1.85**	**229**		**Sn**	**08 32 22.5**	**+0.8**
SMRT	**St. Maarten**	**1.90**	**139**	Pn	**Pn**	**08 32 00.0**	**+0.4**
SMRT				IAML		08 32 37.3	
	comp=E,31nm,1.4s						
SMRT				IAML		08 32 49.5	
	comp=N,25nm,2.0s						
SMRT	**St. Maarten**	**1.90**	**139**	*e*P	**Pn**	**08 31 59.7**	**0.0**
SMRT				*e*S	**Sn**	**08 32 22.2**	**-0.5**
HUMP	**Col San Antoni**	**1.94**	**226**	⇑*e*P	**Pn**	**08 32 00.2**	**0.0**
HUMP	**Col San Antoni**	**1.94**	**226**	*e*S	**Sn**	**08 32 24.4**	**+0.8**
HUMP	**Col San Antoni**	**1.94**	**226**		**Pn**	**08 31 58.2**	**-1.9**
HUMP					**Sn**	**08 32 22.9**	**-0.8**
HUMP				IAML		08 32 33.0	
	comp=E,18nm,0.2s						
HUMP				IAML		08 32 34.2	
	comp=N,13nm,0.2s						
MLPR	**Magueyes Islan**	**2.95**	**239**	⇑*e*P	**Pn**	**08 32 14.8**	**+0.7**
MLPR	**Magueyes Islan**	**2.95**	**239**		**Pn**	**08 32 14.1**	**+0.1**
MLPR				IAML		08 32 54.1	
	comp=E,14nm,2.9s						
MLPR				IAML		08 32 57.2	
	comp=N,11nm,2.2s						
CRPR	**Cabo Rojo, PR**	**2.98**	**241**	⇑*e*P	**Pn**	**08 32 14.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.98**	**241**		**Pn**	**08 32 14.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.98**	**241**	IAML		08 32 37.5	
	comp=N,9.4nm,2.5s						
CRPR				IAML		08 33 04.7	
	comp=E,12nm,2.7s						
ANWB	**Willy Bob**	**3.06**	**126**	*e*P	**Pn**	**08 32 16.0**	**+0.3**
ANBD	**Bethesda, Anti**	**3.48**	**134**	*e*P	**Pn**	**08 32 21.1**	**-0.3**
ANBD				*e*S	**Sn**	**08 33 01.4**	**-0.4**

ROM 31 08:31:42.1±0.0, 42°.801N±0°.002×13°.107E±0°.003, h11km, ML2.5/38, 12C-13D, Error ellipse: s-maj=0.2km s-min=0.2km az=10.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.08**	**47**	P	Pg	08 31 45.1	+0.3
T1245				S	Sg	08 31 47.0	+0.3
T1216	**Preci, Frazion**	**0.11**	**324**	P	Pg	08 31 45.4	+0.5
T1216				S	Sg	08 31 47.6	+0.6
T1216				AML	AML		
	comp=E,7385μm,1.1s						
T1216				AML	AML		
	comp=E,7380μm,1.1s						
T1216				AML	AML		
	comp=N,11085μm,0.4s						
T1216				AML	AML		
	comp=E,7375μm,1.1s						
T1217	**Poggiodomo (PG**	**0.16**	**236**	P	Pg	08 31 46.2	+0.5
T1217				S	Sg	08 31 49.1	+0.9
T1217				AML	AML		
	comp=E,3360μm,0.2s						
T1217				AML	AML		
	comp=N,4610μm,0.2s						
T1217				AML	AML		
	comp=N,4625μm,0.1s						
T1217				AML	AML		
	comp=N,4615μm,0.1s						
T1217				AML	AML		
	comp=N,4625μm,0.1s						
T1217				AML	AML		
	comp=N,4630μm,0.1s						
T1217				AML	AML		
	comp=E,3265μm,0.2s						
FEMA	**Monte Fema**	**0.17**	**346**	P	Pg	08 31 46.6	+0.7
FEMA				S	Sg	08 31 49.5	+0.9
T1215	**Vallo di Nera,**	**0.17**	**270**	P	Pg	08 31 46.5	+0.5
T1215				S	Sg	08 31 49.5	+0.9
T1215				AML	AML		
	comp=E,5205μm,0.3s						
T1215				AML	AML		
	comp=N,5060μm,0.5s						
T1215				AML	AML		
	comp=E,4960μm,0.5s						
T1215				AML	AML		
	comp=N,5035μm,0.5s						
T1215				AML	AML		
	comp=E,5210μm,0.2s						
T1215				AML	AML		
	comp=N,5050μm,0.5s						
T1215				AML	AML		
	comp=E,4960μm,0.5s						
T1215				AML	AML		
	comp=N,5035μm,0.5s						
T1201	**Domo (RI)**	**0.18**	**143**	P	Pb	08 31 46.9	-0.6
MMO1	**Montemonaco**	**0.19**	**59**	⇓P	Pg	08 31 46.7	+0.5
MMO1				S	Sg	08 31 50.0	+0.9
T1204	**Amatrice, Fraz**	**0.20**	**129**	⇓P	Pg	08 31 47.0	+0.6
T1204				S	Sg	08 31 50.9	+1.5
T1204				AML	AML		
	comp=E,5295μm,0.3s						
T1204				AML	AML		
	comp=N,2150μm,0.4s						
T1204				AML	AML		
	comp=N,2152μm,0.4s						
T1256	**Bolognola (MC)**	**0.22**	**23**	⇑P	Pg	08 31 47.4	+0.5
T1256				S	Sg	08 31 51.2	+1.1
T1256				AML	AML		
	comp=N,2530μm,0.5s						
T1256				AML	AML		
	comp=E,2890μm,0.5s						
T1256				AML	AML		
	comp=E,2885μm,0.5s						
T1256				AML	AML		
	comp=N,2535μm,0.5s						
FDMO	**Fiordimonte**	**0.24**	**357**	⇓P	Pg	08 31 47.6	+0.5
FDMO				S	Sg	08 31 51.5	+1.1
FDMO				AML	AML		
	comp=E,1500μm,1.2s						
FDMO				AML	AML		
	comp=N,1475μm,1.0s						
FDMO				AML	AML		
	comp=N,1480μm,1.0s						
SMA1	**SAN MARTINO**	**0.24**	**135**	P	Pg	08 31 47.6	+0.5
SMA1				AML	AML		
	comp=E,2730μm,0.5s						
SMA1				AML	AML		
	comp=N,2275μm,0.5s						
SMA1				AML	AML		
	comp=E,2735μm,0.5s						
T1241	**Roccafluvione,**	**0.24**	**77**	P	Pg	08 31 47.6	+0.5
T1241				S	Sg	08 31 51.9	+1.3
T1241				AML	AML		
	comp=E,2630μm,0.6s						
T1241				AML	AML		
	comp=N,1895μm,0.7s						
T1241				AML	AML		
	comp=E,2635μm,0.6s						
T1241				AML	AML		
	comp=N,1890μm,0.7s						
T1241				AML	AML		
	comp=E,2640μm,0.6s						
AM05	**Amandola Campo**	**0.25**	**46**	P	Pg	08 31 47.9	+0.6
AM05				S	Sg	08 31 52.0	+1.2
AM05				AML	AML		
	comp=E,2810μm,0.1s						
AM05				AML	AML		
	comp=E,9780μm,0.6s						
AM05				AML	AML		
	comp=N,3610μm,0.1s						
AM05				AML	AML		
	comp=N,1430μm,0.1s						
AM05				AML	AML		
	comp=E,9815μm,0.6s						
T1243	**Rocca Santa Ma**	**0.27**	**112**	P	Pg	08 31 48.0	+0.3
T1243				S	Sg	08 31 52.6	+1.2
RM33	**Pellescritta (**	**0.30**	**165**	P	Pg	08 31 48.7	+0.5
RM33				AML	AML		
	comp=N,1135μm,0.7s						
RM33				AML	AML		
	comp=N,1070μm,0.7s						
RM33				AML	AML		
	comp=E,1365μm,0.9s						
RM33				AML	AML		
	comp=N,1140μm,0.7s						
RM33				AML	AML		
	comp=E,1370μm,0.9s						
RM33				AML	AML		
	comp=N,1067μm,0.7s						
RM33				AML	AML		
	comp=N,1068μm,0.7s						
RM33				AML	AML		
	comp=E,1375μm,0.9s						
GUMA	**Gualdo di Mace**	**0.31**	**33**	P	Pb	08 31 49.1	-0.6
GUMA				S	Sb	08 31 54.5	-0.4
GUMA				AML	AML		
	comp=E,3965μm,0.6s						
GUMA				AML	AML		
	comp=N,4055μm,0.5s						
GUMA				AML	AML		
	comp=E,4520μm,0.6s						
GUMA				AML	AML		
	comp=N,3660μm,0.5s						
GUMA				AML	AML		
	comp=E,3970μm,0.6s						
T1211	**Morro Reatino**	**0.33**	**215**	P	Pg	08 31 48.9	+0.2
T1211				S	Sb	08 31 54.6	-0.7
T1211				AML	AML		
	comp=E,2435μm,0.3s						
T1211				AML	AML		
	comp=N,4040μm,0.2s						
T1211				AML	AML		
	comp=E,2565μm,0.3s						
T1211				AML	AML		
	comp=N,4000μm,0.2s						
T1211				AML	AML		
	comp=E,2430μm,0.3s						
T1211				AML	AML		
	comp=E,2560μm,0.3s						
T1211				AML	AML		
	comp=N,3995μm,0.2s						
ARRO	**Arrone**	**0.34**	**229**	P	Pg	08 31 49.4	+0.6
ARRO				AML	AML		
	comp=E,960μm,0.2s						
ARRO				AML	AML		
	comp=N,1490μm,0.3s						
ARRO				AML	AML		
	comp=E,959μm,0.2s						
CAMP	**Campotosto**	**0.35**	**140**	P	Pg	08 31 49.3	+0.3
CAMP				S	Sb	08 31 55.0	-1.0
CAMP				AML	AML		
	comp=N,466μm,0.6s						
CAMP				AML	AML		
	comp=E,742μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.39**	**158**	⇓P	Pb	08 31 51.2	+0.1
T1247				AML	AML		
	comp=E,894μm,0.2s						
T1247				AML	AML		
	comp=E,895μm,0.2s						
T1247				AML	AML		
	comp=N,1190μm,0.2s						
TERO	**Teramo**	**0.41**	**116**	⇑P	Pg	08 31 50.4	+0.2
TERO				S	Sb	08 31 56.8	-0.9
TERO				AML	AML		
	comp=E,1306μm,1.0s						
TERO				AML	AML		
	comp=N,1360μm,0.1s						
TERO				AML	AML		
	comp=N,1540μm,0.1s						
TERO				AML	AML		
	comp=E,1400μm,1.1s						
ASSB	**Assisi San Ben**	**0.41**	**306**	P	Pg	08 31 50.4	+0.2
ASSB				AML	AML		
	comp=E,1060μm,0.5s						
ASSB				AML	AML		
	comp=N,1235μm,0.2s						
CESX	**Cesi**	**0.43**	**244**	⇓P	Pg	08 31 51.0	+0.4
CESX				AML	AML		
	comp=N,916μm,0.2s						
CESX				AML	AML		
	comp=E,981μm,0.4s						
GAG1	**Gagliole**	**0.44**	**356**	P	Pb	08 31 51.5	-0.4
OFFI	**Offida**	**0.45**	**72**	P	Pb	08 31 52.1	+0.1
OFFI				AML	AML		
	comp=N,2070μm,0.2s						
OFFI				AML	AML		
	comp=E,1615μm,0.3s						
SNTG	**Esanatoglia**	**0.47**	**345**	P	Pg	08 31 51.7	+0.4
SNTG				AML	AML		
	comp=E,352μm,1.5s						
SNTG				AML	AML		
	comp=N,409μm,0.2s						
SNTG				AML	AML		
	comp=N,410μm,0.2s						
SNTG				AML	AML		
	comp=E,361μm,1.5s						
SNTG				AML	AML		
	comp=N,465μm,1.2s						
GIGS	**Gran Sasso**	**0.49**	**136**	⇑P	Pg	08 31 51.8	+0.1
GIGS				AML	AML		
	comp=N,192μm,1.3s						
GIGS				AML	AML		
	comp=E,156μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.52**	**318**	⇑P	Pg	08 31 52.4	+0.3
ATCC				AML	AML		
	comp=N,680μm,0.2s						

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ATCC                                AML   AML
     comp=E,861µm,0.4s
EL6  Elcito          0.53 360 ⇑P          Pg    08 31 52.6 +0.2
EL6                              S         Sb    08 32 02.0 +0.8
FIAM Fiamignano      0.53 179 ⇓P          Pg    08 31 52.6 +0.1
FIAM                             S         Sb    08 32 02.0 +0.7
FIAM                                AML   AML
     comp=N,288µm,0.3s
FIAM                                AML   AML
     comp=N,289µm,0.3s
FIAM                                AML   AML
     comp=E,335µm,0.7s
FOSV Fossato di Vic  0.56 333 P           Pg    08 31 53.2 +0.3
FOSV                                AML   AML
     comp=E,268µm,1.0s
FOSV                                AML   AML
     comp=N,334µm,1.3s
TRTR Tortoreto Alta  0.59  89 ⇑P          Pb    08 31 55.1 +0.6
MURB Monte Urbino    0.63 317 P           Pg    08 31 54.6 +0.3
MURB                                AML   AML
     comp=E,1305µm,0.4s
MURB                                AML   AML
     comp=N,1215µm,0.2s
FAGN Fagnano         0.64 146 ⇓P          Pb    08 31 55.4  0.0
FAGN                                AML   AML
     comp=E,460µm,0.6s
FAGN                                AML   AML
     comp=N,432µm,0.3s
VCEL Villa Celiera   0.68 127 ⇓P          Pg    08 31 55.6 +0.4
VCEL                                AML   AML
     comp=E,562µm,1.4s
VCEL                                AML   AML
     comp=N,594µm,0.4s
PP3  Marolino        0.68  32 ⇑P          Pb    08 31 56.9 +0.8
ATFO Monte Foce - G  0.69 325 ⇓P          Pb    08 31 56.1 -0.1
ATFO                                AML   AML
     comp=N,242µm,0.3s
ATFO                                AML   AML
     comp=E,241µm,0.2s
ARVD Arcevia         0.71 350 S           Sn    08 32 08.0 -1.1
MGAB Montegabbione   0.74 279 ⇓P          Pb    08 31 57.4 +0.4
MGAB                                AML   AML
     comp=E,398µm,0.3s
MGAB                                AML   AML
     comp=N,352µm,0.3s
MGAB                                AML   AML
     comp=E,417µm,0.3s
MGAB                                AML   AML
     comp=N,396µm,0.3s
MGAB                                AML   AML
     comp=N,352µm,0.3s
T0110 Collepietro    0.76 139 ⇑P          Pg    08 31 56.8  0.0
T0110                               AML   AML
     comp=E,329µm,0.5s
T0110                               AML   AML
     comp=N,362µm,0.5s
FRON Frontone        0.77 339 P           Pb    08 31 57.3 -0.3
FRON                                AML   AML
     comp=E,162µm,0.4s
FRON                                AML   AML
     comp=N,227µm,0.3s
ATVO AVT- Monte Val  0.78 319 P           Pg    08 31 57.1  0.0
ATVO                                AML   AML
     comp=E,183µm,0.4s
ATVO                                AML   AML
     comp=N,192µm,0.4s
ATVO                                AML   AML
     comp=E,184µm,0.4s
ATMI Monte Miggiano  0.81 311 S           Sn    08 32 13.0 +1.3
PIEI Pieia           0.84 331 ⇑P          Pg    08 31 58.5  0.0
PIEI                                AML   AML
     comp=N,124µm,1.5s
PIEI                                AML   AML
     comp=E,151µm,1.1s
CERT Cerreto         0.86 186 ⇑P          Pg    08 31 58.5 -0.1
CERT                                AML   AML
     comp=E,205µm,0.4s
CERT                                AML   AML
     comp=N,138µm,1.4s
MPAG Monte Paganucc  0.87 343 P           Pb    08 31 59.7 +0.5
MPAG                                AML   AML
     comp=E,144µm,0.8s
MPAG                                AML   AML
     comp=E,144µm,0.8s
MPAG                                AML   AML
     comp=N,120µm,1.0s
SACS San Casciano d  0.88 274 ⇑P          Pb    08 31 59.4 -0.1
SACS                                AML   AML
     comp=N,148µm,0.7s
SACS                                AML   AML
     comp=E,150µm,0.4s
FSSB Fossombrone     0.92 345 ⇓P          Pg    08 32 00.0 +0.1
FSSB                                AML   AML
     comp=N,590µm,0.4s
FSSB                                AML   AML
     comp=E,471µm,1.1s
BADI Badiali         0.95 319 ⇓P          Pn    08 32 01.3 -0.2
BADI                                AML   AML
     comp=E,147µm,0.7s
BADI                                AML   AML
     comp=N,157µm,0.4s
CAFI Castiglion Fio  0.99 303 ⇑P          Pb    08 32 01.2 -0.1
CAFI                                AML   AML
     comp=N,82µm,1.2s
CAFI                                AML   AML
     comp=E,80µm,0.5s
VIVA Pratoni del Vi  1.08 193 P           Pn    08 32 04.6 +1.4
VIVA                             S         Sb    08 32 17.0  0.0
CRE  Caprese Michel  1.18 314 ⇓P          Pg    08 32 05.9 +1.2
SACR S. Croce Del S  1.84 139 P           Pg    08 32 17.6 +0.2
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ROM 31 08:34:41.6±0.1, 42°.859N±0°.004×13°.154E±0°.005, h10km, ML2.6/17, 11C-12D, Error ellipse: s-maj=0.5km s-min=0.3km az=20.0, Central Italy

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Code Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC       h m s    ISC
T1245 Castelsantange 0.03  96 ⇓P    Pg    08 34 44.0 +0.3
T1245                         S     Sg    08 34 45.4 +0.4
T1245                         AML   AML
     comp=E,17100µm,0.9s
T1245                         AML   AML
     comp=N,32300µm,0.3s
T1245                         AML   AML
     comp=E,17950µm,0.9s
T1245                         AML   AML
     comp=E,18250µm,0.7s
T1245                         AML   AML
     comp=E,20150µm,1.5s
T1245                         AML   AML
     comp=N,30900µm,0.3s
T1216 Preci, Frazion 0.10 288 ⇑P    Pg    08 34 44.8 +0.5
T1216                         S     Sg    08 34 46.8 +0.5
T1216                         AML   AML
     comp=N,7765µm,1.2s
T1216                         AML   AML
     comp=N,7745µm,1.2s
T1216                         AML   AML
     comp=E,9680µm,0.5s
T1216                         AML   AML
     comp=E,9685µm,0.5s
T1216                         AML   AML
     comp=N,7750µm,1.2s
MMO1 Montemonaco     0.13  72 ⇑P    Pg    08 34 45.3 +0.5
MMO1                          S     Sg    08 34 47.7 +0.8
T1256 Bolognola (MC) 0.16  20 P     Pg    08 34 44.7 -0.5
T1256                         S     Sg    08 34 48.6 +0.9
FDMO Fiordimonte     0.18 345 ⇓P    Pg    08 34 47.1 +1.5
FDMO                          S     Sg    08 34 49.3 +1.0
FDMO                                AML   AML
     comp=E,1880µm,0.2s
FDMO                                AML   AML
     comp=N,2300µm,1.1s
FDMO                                AML   AML
     comp=E,2845µm,0.2s
FDMO                                AML   AML
     comp=N,2345µm,0.8s
AM05 Amandola Campo  0.19  51 ⇑P    Pg    08 34 46.3 +0.7
AM05                          S     Sg    08 34 49.5 +1.2
AM05                                AML   AML
     comp=E,1155µm,0.8s
AM05                                AML   AML
     comp=E,5490µm,0.1s
AM05                                AML   AML
     comp=N,458µm,0.1s
AM05                                AML   AML
     comp=N,1420µm,0.1s
T1241 Roccafluvione, 0.20  91 ⇑P    Pg    08 34 46.5 +0.6
T1241                         S     Sg    08 34 50.1 +1.2
T1241                               AML   AML
     comp=N,4505µm,0.4s
T1241                               AML   AML
     comp=E,4935µm,0.4s
T1215 Vallo di Nera, 0.22 255 ⇑P    Pg    08 34 46.7 +0.5
T1215                               AML   AML
     comp=E,2595µm,0.3s
T1215                               AML   AML
     comp=E,2585µm,0.3s
T1215                               AML   AML
     comp=N,2825µm,0.1s
T1215                               AML   AML
     comp=E,2600µm,0.3s
T1215                               AML   AML
     comp=E,2585µm,0.3s
T1215                               AML   AML
     comp=N,2790µm,0.1s
T1215                               AML   AML
     comp=E,2595µm,0.3s
T1204 Amatrice, Fraz 0.22 147 P     Pg    08 34 47.0 +0.7
T1204                               AML   AML
     comp=N,3565µm,0.4s
T1204                               AML   AML
     comp=E,6260µm,0.1s
T1204                               AML   AML
     comp=E,6265µm,0.1s
T1217 Poggiodomo (PG 0.22 228 ⇓P    Pg    08 34 46.8 +0.6
T1217                               AML   AML
     comp=E,5635µm,0.5s
T1217                               AML   AML
     comp=N,6220µm,1.2s
T1217                               AML   AML
     comp=E,5530µm,0.5s
T1217                               AML   AML
     comp=N,6190µm,1.2s
T1217                               AML   AML
     comp=N,6215µm,1.2s
T1217                               AML   AML
     comp=N,6185µm,1.2s
T1217                               AML   AML
     comp=E,5545µm,0.5s
T1217                               AML   AML
     comp=N,6180µm,1.2s
T1217                               AML   AML
     comp=N,6220µm,1.2s
T1217                               AML   AML
     comp=E,5635µm,0.5s
T1217                               AML   AML
     comp=N,6185µm,1.2s
GUMA Gualdo di Mace  0.24  33 ⇓P    Pg    08 34 47.5 +0.9
GUMA                          S     Sg    08 34 51.9 +1.9
GUMA                                AML   AML
     comp=E,5400µm,1.6s
GUMA                                AML   AML
     comp=N,7365µm,0.2s
GUMA                                AML   AML
     comp=E,5405µm,1.6s
GUMA                                AML   AML
     comp=N,6110µm,0.5s
GUMA                                AML   AML
     comp=E,7985µm,0.2s
T1243 Rocca Santa Ma 0.27 127 ⇓P    Pg    08 34 47.6 +0.4
T1243                         S     Sb    08 34 52.3 -1.1
SEF1 Sefro           0.33 332 ⇑P    Pg    08 34 48.5 +0.4
SEF1                          S     Sb    08 34 53.8 -1.1
CAMP Campotosto      0.37 150 ⇓P    Pg    08 34 49.4 +0.4
CAMP                                AML   AML
     comp=E,860µm,1.0s
CAMP                                AML   AML
     comp=N,746µm,0.9s
CAMP                                AML   AML
     comp=N,746µm,0.9s
OFFI Offida          0.40  79 ⇓P    Pb    08 34 50.9 +0.1
OFFI                                AML   AML
     comp=N,2325µm,0.6s
OFFI                                AML   AML
     comp=E,1730µm,0.5s
ASSB Assisi San Ben  0.41 297 AML   AML
     comp=E,1170µm,0.7s
ASSB                                AML   AML
     comp=N,1048µm,0.3s
T1247 Pizzolo (AQ)   0.43 166 S     Sb    08 34 58.0  0.0
EL6  Elcito          0.47 355 ⇑P    Pg    08 34 48.7 -2.2
EL6                           S     Sb    08 34 59.0 -0.2
ATCC AVT- Casa Cast  0.50 311 ⇓P    Pg    08 34 51.6 +0.3
ATCC                          S     Sb    08 34 59.5 -0.4
ATCC                                AML   AML
     comp=E,956µm,0.3s
ATCC                                AML   AML
     comp=N,720µm,0.6s
ATCC                                AML   AML
     comp=N,719µm,0.6s
ATCC                                AML   AML
     comp=E,960µm,0.3s
GIGS Gran Sasso      0.51 143 S     Sb    08 35 01.0 +0.7
FOSV Fossato di Vic  0.52 327 ⇑P    Pg    08 34 51.9 +0.1
FOSV                          S     Sb    08 35 01.0 +0.4
FOSV                                AML   AML
     comp=E,448µm,1.4s
FOSV                                AML   AML
     comp=N,594µm,0.3s
FOSV                                AML   AML
     comp=N,595µm,0.3s
FIAM Fiamignano      0.59 183 S     Sb    08 35 04.0 +1.4
ARVD Arcevia         0.66 346 P     Pg    08 34 52.8 -1.5
ARVD                          S     Sb    08 35 05.0 +0.5
ARVD                                AML   AML
     comp=E,258µm,0.3s
ARVD                                AML   AML
     comp=N,150µm,0.2s
ATFO Monte Foce - G  0.66 320 ⇓P    Pg    08 34 54.6 +0.1
ATFO                                AML   AML
     comp=N,426µm,0.3s
ATFO                                AML   AML
     comp=E,284µm,1.2s
VCEL Villa Celiera   0.69 132 S     Sn    08 35 08.0 -0.4
ATVO AVT- Monte Val  0.76 314 ⇓P    Pg    08 34 56.1 -0.1
ATVO                                AML   AML
     comp=E,334µm,0.3s
ATVO                                AML   AML
     comp=N,217µm,1.1s
ATVO                                AML   AML
     comp=E,334µm,0.3s
AOI  Ancona          0.76  25 S     Sn    08 35 11.0 +0.8
T0110 Collepietro    0.78 144 S     Sb    08 35 09.0 +0.9
ATPI Pietralunga -   0.81 317 S     Sn    08 35 11.0 -0.3
PIEI Pieia           0.81 326 S     Sb    08 35 10.0 +1.0
MPAG Monte Paganucc  0.82 340 ⇑P    Pb    08 34 57.9 -0.2
MPAG                          S     Sn    08 35 11.0 -0.7
FSSB Fossombrone     0.88 342 S     Sn    08 35 13.0 +0.1
CERT Cerreto         0.92 188 S     Sg    08 35 10.0 -1.3
CAFI Castiglion Fio  0.99 299 ⇑P    Pb    08 35 00.8 -0.1
CAFI                          S     Sb    08 35 14.0  0.0
CAFI                                AML   AML
     comp=N,116µm,0.4s
CAFI                                AML   AML
     comp=E,164µm,0.3s
CPGN Carpegna, Ital  1.12 327 S     Sn    08 35 20.0 +0.9
LIK  San Giovanni I  1.39 167 ⇓P    Pn    08 35 05.8 -1.3
MODR Mondragone      1.79 162 S     Sg    08 35 41.0 +1.7
CMPO Campotto Po     1.98 331 S     Sg    08 35 46.0 +0.8
PAOL Paolisi         2.11 150 S     Sn    08 35 42.0 -1.4
GSCL Gusciola        2.39 310 ⇑P    Pn    08 35 20.1 -0.8
PZUN Potenza         2.97 137 S     Sn    08 36 06.0 +1.5
CMPR Campora         3.01 147 S     Sg    08 36 16.0 -2.2
LEOD Capriano del C  3.39 321 S     Sg    08 36 30.0 -0.5
RNCA Ronca, Sant'Ol  3.45 299 S     Sg    08 36 31.0 -1.4
ZAG  Zagreb          3.60  33 ⇓P    Pb    08 35 47.2 +1.9
ZONE Zone            3.63 324 P     Pg    08 35 51.8 +0.6
```

ROM 31 08:35:19.3±0.0, 42°.911N±0°.003×13°.197E±0°.004, h9km, ML2.8/3, Error ellipse: s-maj=0.3km s-min=0.1km az=54.0, Central Italy

```
Code Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC       h m s    ISC
T1245 Castelsantange 0.06 187 P     Pg    08 35 21.6 +0.2
T1245                         S     Sg    08 35 23.0 +0.1
T1245                               AML   AML
     comp=E,20150µm,1.5s
T1245                               AML   AML
     comp=N,22800µm,1.6s
T1245                               AML   AML
     comp=N,22500µm,1.6s
T1245                               AML   AML
     comp=E,18250µm,0.7s
T1245                               AML   AML
     comp=E,10854µm,0.1s
T1245                               AML   AML
     comp=N,14858µm,0.2s
T1245                               AML   AML
     comp=N,15923µm,0.2s
T1245                               AML   AML
     comp=E,12251µm,0.1s
MMO1 Montemonaco     0.10  97 P     Pg    08 35 22.1 +0.3
MMO1                          S     Sg    08 35 23.9 +0.2
T1256 Bolognola (MC) 0.10  13 P     Pg    08 35 22.1 +0.1
T1256                         S     Sg    08 35 23.7 -0.1
FEMA Monte Fema      0.12 295 P     Pg    08 35 22.6 +0.4
FEMA                          S     Sg    08 35 25.0 +0.7
AM05 Amandola Campo  0.13  60 P     Pg    08 35 22.9 +0.5
T1216 Preci, Frazion 0.13 261 P     Pg    08 35 22.9 +0.6
T1216                         S     Sg    08 35 25.4 +1.0
T1216                               AML   AML
     comp=E,7435µm,0.3s
T1216                               AML   AML
     comp=N,6845µm,0.3s
T1216                               AML   AML
     comp=N,6855µm,0.3s
T1216                               AML   AML
     comp=E,7440µm,0.3s
FDMO Fiordimonte     0.15 327 P     Pg    08 35 23.0 +0.4
FDMO                          S     Sg    08 35 25.5 +0.6
FDMO                                AML   AML
     comp=E,2850µm,0.2s
FDMO                                AML   AML
     comp=N,2347µm,0.8s
T1241 Roccafluvione, 0.18 108 P     Pg    08 35 23.8 +0.7
GUMA Gualdo di Mace  0.18  34 P     Pg    08 35 24.0 +0.8
GUMA                          S     Sg    08 35 27.3 +1.5
T1204 Amatrice, Fraz 0.25 159 P     Pg    08 35 25.2 +0.8
T1201 Domo (RI)      0.26 171 P     Pb    08 35 25.9 -0.3
T1215 Vallo di Nera, 0.27 246 P     Pg    08 35 25.3 +0.6
T1217 Poggiodomo (PG 0.28 225 P     Pb    08 35 25.8 -0.8
T1243 Rocca Santa Ma 0.28 139 P     Pg    08 35 25.7 +0.7
T1243                         S     Sb    08 35 30.5 -1.0
SEF1 Sefro           0.30 322 P     Pg    08 35 25.8 +0.5
SMA1 SAN MARTINO     0.30 160 P     Pg    08 35 25.9 +0.6
MNTP Montappone      0.30  41 P     Pb    08 35 26.6 -0.3
PIO1 Pioraco         0.31 330 P     Pg    08 35 26.1 +0.6
FIU1 Fiuminata       0.34 325 P     Pb    08 35 27.2 -0.4
SNTG Esanatoglia     0.39 331 P     Pg    08 35 27.5 +0.4
SNTG                          S     Sb    08 35 33.8 -0.8
RM33 Pellescritta (  0.40 178 P     Pg    08 35 27.7 +0.4
CAMP Campotosto      0.41 157 P     Pg    08 35 27.8 +0.4
CAMP                          S     Sb    08 35 34.4 -0.7
ASSB Assisi San Ben  0.42 289 P     Pg    08 35 27.9 +0.4
ASSB                          S     Sb    08 35 34.8 -0.6
TERO Teramo          0.42 134 P     Pg    08 35 28.2 +0.7
EL6  Elcito          0.42 351 S     Sb    08 35 36.0 +0.4
T1211 Morro Reatino  0.45 214 S     Sb    08 35 37.0 +0.6
ATCC AVT- Casa Cast  0.49 304 P     Pg    08 35 29.5 +0.6
ATCC                          S     Sb    08 35 37.1 -0.3
FOSV Fossato di Vic  0.50 320 P     Pg    08 35 29.4 +0.4
FOSV                          S     Sb    08 35 37.4 -0.3
ARVD Arcevia         0.62 342 P     Pg    08 35 31.1 -0.1
```

ROM 31 08:36:18.5±0.1, 42°.728N±0°.002×13°.257E±0°.005, h13km, ML2.4/11, 4C-6D, Error ellipse: s-maj=0.4km s-min=0.1km az=274.0, Central Italy

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Code Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC       h m s    ISC
T1204 Amatrice, Fraz 0.07 140 P     Pg    08 36 21.5 +0.2
T1204                         S     Sg    08 36 23.5 +0.2
T1204                               AML   AML
     comp=E,2670µm,0.3s
T1204                               AML   AML
     comp=E,2675µm,0.3s
T1204                               AML   AML
     comp=N,2825µm,0.2s
T1201 Domo (RI)      0.07 184 P     Pg    08 36 21.6 +0.4
SMA1 SAN MARTINO     0.11 149 ⇓P    Pg    08 36 22.1 +0.3
SMA1                          S     Sg    08 36 24.4 +0.4
SMA1                                AML   AML
     comp=E,2340µm,0.2s
SMA1                                AML   AML
     comp=N,1465µm,0.5s
SMA1                                AML   AML
     comp=E,16900µm,0.4s
SMA1                                AML   AML
     comp=N,8515µm,0.2s
T1245 Castelsantange 0.14 339 P     Pg    08 36 21.9 -0.2
T1245                               AML   AML
     comp=N,51350µm,0.9s
T1245                               AML   AML
     comp=E,39850µm,0.2s
T1243 Rocca Santa Ma 0.14 102 P     Pg    08 36 22.5 +0.4
T1243                         S     Sg    08 36 25.3 +0.6
MMO1 Montemonaco     0.18  17 ⇓P    Pg    08 36 22.2 -0.4
T1241 Roccafluvione, 0.18  45 P     Pg    08 36 23.0 +0.3
T1241                         S     Sg    08 36 26.3 +0.8
T1241                               AML   AML
     comp=E,2195µm,0.3s
T1241                               AML   AML
     comp=E,2195µm,0.3s
T1241                               AML   AML
     comp=N,2240µm,0.4s
T1241                               AML   AML
     comp=E,2190µm,0.3s
T1241                               AML   AML
     comp=N,2240µm,0.5s
T1241                               AML   AML
     comp=E,2185µm,0.3s
T1241                               AML   AML
     comp=N,2200µm,0.4s
LNSS Leonessa        0.20 232 P     Pg    08 36 23.3 +0.3
LNSS                          S     Sg    08 36 26.7 +0.6
LNSS                                AML   AML
     comp=E,656µm,1.4s
LNSS                                AML   AML
     comp=E,655µm,1.4s
LNSS                                AML   AML
     comp=N,1630µm,0.1s
LNSS                                AML   AML
     comp=N,4005µm,0.1s
LNSS                                AML   AML
     comp=E,1100µm,0.2s
RM33 Pellescritta (  0.22 188 P     Pg    08 36 23.8 +0.4
RM33                          S     Sb    08 36 27.5 -0.9
CAMP Campotosto      0.22 150 ⇓P    Pg    08 36 23.7 +0.4
CAMP                          S     Sg    08 36 27.4 +0.7
CAMP                                AML   AML
     comp=E,1295µm,0.2s
CAMP                                AML   AML
     comp=N,572µm,0.2s
CAMP                                AML   AML
     comp=N,1255µm,1.2s
T1246 Crognaleto (TE 0.23 130 P     Pg    08 36 23.8 +0.4
T1246                         S     Sg    08 36 27.6 +0.9
T1216 Preci, Frazion 0.24 313 P     Pg    08 36 23.9 +0.3
T1216                               AML   AML
     comp=E,14000µm,0.8s
T1216                               AML   AML
     comp=E,13950µm,0.8s
T1216                               AML   AML
     comp=N,11300µm,0.3s
AM05 Amandola Campo  0.26  16 P     Pb    08 36 24.6 -0.5
TERO Teramo          0.28 112 ⇓P    Pg    08 36 24.6 +0.3
TERO                                AML   AML
     comp=E,926µm,0.3s
TERO                                AML   AML
     comp=N,1104µm,0.5s
TERO                                AML   AML
     comp=E,976µm,0.3s
TERO                                AML   AML
     comp=N,1135µm,0.5s
TERO                                AML   AML
     comp=E,977µm,0.3s
T1256 Bolognola (MC) 0.28 355 P     Pb    08 36 25.0 -0.4
T1256                               AML   AML
     comp=E,3415µm,0.5s
T1256                               AML   AML
     comp=N,3405µm,1.3s
```

T1247	**Pizzolo (AQ)**	**0.29 174**	P	Pg	08 36 24.8	+0.4
T1247			S	Sb	08 36 29.6	-0.7
T1247			AML	AML		
	comp=E,951μm,0.7s					
T1247			AML	AML		
	comp=N,927μm,0.3s					
T1247			AML	AML		
	comp=N,2825μm,0.5s					
T1247			AML	AML		
	comp=E,1790μm,0.3s					
T1215	**Vallo di Nera,**	**0.29 285**	⇑P	Pg	08 36 24.8	+0.2
T1215			AML	AML		
	comp=E,474μm,0.3s					
T1215			AML	AML		
	comp=N,622μm,1.3s					
T1215			AML	AML		
	comp=N,622μm,1.3s					
FDMO	**Fiordimonte**	**0.33 338**	S	Sb	08 36 32.0	+0.4
GUMA	**Gualdo di Mace**	**0.34 10**	P	Pb	08 36 26.0	-0.4
T1211	**Morro Reatino**	**0.35 237**	P	Pg	08 36 24.3	-1.3
GIGS	**Gran Sasso**	**0.36 140**	P	Pg	08 36 25.9	+0.1
GIGS			S	Sg	08 36 31.4	+0.7
GIGS			AML	AML		
	comp=E,113μm,1.5s					
GIGS			AML	AML		
	comp=N,82μm,1.6s					
GIGS			AML	AML		
	comp=E,119μm,1.1s					
GIGS			AML	AML		
	comp=N,82μm,1.6s					
GIGS			AML	AML		
	comp=E,150μm,1.4s					
GIGS			AML	AML		
	comp=N,144μm,0.4s					
OFFI	**Offida**	**0.38 57**	⇓P	Pb	08 36 27.3	+0.2
OFFI			AML	AML		
	comp=E,690μm,0.6s					
OFFI			AML	AML		
	comp=N,990μm,0.7s					
FIAM	**Fiamignano**	**0.47 193**	⇑P	Pg	08 36 27.8	0.0
FIAM			S	Sb	08 36 35.0	-0.6
FIAM			AML	AML		
	comp=E,220μm,0.3s					
FIAM			AML	AML		
	comp=N,100μm,0.7s					
FIAM			AML	AML		
	comp=E,684μm,0.3s					
FIAM			AML	AML		
	comp=N,287μm,0.4s					
FAGN	**Fagnano**	**0.52 152**	S	Sb	08 36 38.0	+1.0
ASSB	**Assisi San Ben**	**0.54 306**	⇑P	Pg	08 36 29.0	-0.1
VCEL	**Villa Celiera**	**0.55 127**	P	Pb	08 36 29.8	-0.2
VCEL			AML	AML		
	comp=N,346μm,1.6s					
VCEL			AML	AML		
	comp=E,336μm,1.5s					
EL6	**Elcito**	**0.61 349**	⇑P	Pg	08 36 30.7	+0.2
EL6			AML	AML		
	comp=E,690μm,0.3s					
EL6			AML	AML		
	comp=N,976μm,0.4s					
T0110	**Collepietro**	**0.63 142**	P	Pg	08 36 30.7	-0.1
T0110			AML	AML		
	comp=E,212μm,0.5s					
T0110			AML	AML		
	comp=N,218μm,0.9s					
T0110			AML	AML		
	comp=N,219μm,0.9s					
T0110			AML	AML		
	comp=E,212μm,0.5s					
PIEI	**Pieia**	**0.96 327**	S	Sn	08 36 52.0	+0.6
PTRJ	**Pietraroja**	**1.66 145**	P	Pg	08 36 51.4	+1.1
BRSN	**Barisano**	**1.78 332**	⇓P	Pb	08 36 50.7	-0.2
VARP	**Vesuvio Array**	**2.10 155**	P	Pn	08 36 51.7	-1.6

*LDG **31** 08:37:33.1±0.1, 43°.01N×13°.07E, h8km, Ml3.2/23, Error ellipse: s-maj=2.4km s-min=1.8km az=51.0*
*ROM **31** 08:37:33.6±0.0, 43°.025N±0°.002×13°.081E±0°.003, h8km, ML3.5/64, Error ellipse: s-maj=0.2km s-min=0.1km az=63.0*
*IDC **31** 08:37:34.5±1.4, 43°.11N×13°.33E, h0km, mb3.4/2, mbtmp3.6/6, ML3.2/4, MS2.7/3, Error ellipse: s-maj=35.6km s-min=14.7km az=95.0*
*PRU **31** 08:37:35.8±0.0, 42°.99N×13°.47E, h10km*
ISC 31 08:37:33.5±0.7, 43°.02N±0°.01×13°.03E±0°.02, h14km±4km, n162, σ2s19/217, 5C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.04**	**66**	P	**Pg**	**08 37 35.0**	**-1.1**
FDMO				S	**Sg**	**08 37 35.6**	**-2.2**
FEMA	**Monte Fema**	**0.06**	**168**	P	**Pg**	**08 37 36.2**	**-0.1**
FEMA				S	**Sg**	**08 37 37.8**	**-0.5**
FEMA				AML	AML		
FEMA				AML	AML		
T1216	**Preci, Frazion**	**0.13**	**185**	P	**Pb**	**08 37 37.4**	**-0.4**
T1216				S	**Sg**	**08 37 40.1**	**+0.8**
T1256	**Bolognola (MC)**	**0.14**	**95**	⇑P	**Pg**	**08 37 36.7**	**-0.6**
T1256				S	**Sg**	**08 37 38.7**	**-1.1**
SEF1	**Sefro**	**0.14**	**334**	P	**Pb**	**08 37 37.6**	**-0.5**
SEF1				S	**Sg**	**08 37 40.3**	**+0.6**
SEF1				AML	AML		
	comp=E,60650μm,0.3s						
SEF1				AML	AML		
	comp=E,60700μm,0.3s						
SEF1				AML	AML		
	comp=N,76800μm,0.2s						
PIO1	**Pioraco**	**0.16**	**347**	P	**Pb**	**08 37 37.7**	**-0.7**
PIO1				S	**Sg**	**08 37 40.9**	**+0.7**
PIO1				AML	AML		
	comp=E,20900μm,0.3s						
PIO1				AML	AML		
	comp=N,25050μm,0.5s						
PIO1				AML	AML		
	comp=E,20850μm,0.3s						
PIO1				AML	AML		
	comp=N,25100μm,0.5s						
FIU1	**Fiuminata**	**0.18**	**336**	P	**Pb**	**08 37 38.2**	**-0.6**
FIU1				S	**Sg**	**08 37 41.7**	**+1.0**
FIU1				AML	AML		
	comp=E,12650μm,0.5s						
FIU1				AML	AML		
	comp=N,13100μm,0.3s						
FIU1				AML	AML		
	comp=N,13100μm,0.3s						
FIU1				AML	AML		
	comp=E,12635μm,0.5s						
MDAR	**Monte D'Aria**	**0.19**	**25**	P	**Pg**	**08 37 37.7**	**-0.3**
MDAR				S	**Sg**	**08 37 40.8**	**-0.2**
MDAR				AML	AML		
	comp=N,38150μm,1.4s						
MDAR				AML	AML		
	comp=E,18850μm,1.0s						
MDAR				AML	AML		
	comp=N,38150μm,1.4s						
T1245	**Castelsantange**	**0.20**	**145**	P	**Pb**	**08 37 38.3**	**-0.8**
T1245				S	**Sg**	**08 37 41.5**	**+0.3**
T1245				AML	AML		
	comp=N,83400μm,0.3s						
T1245				AML	AML		
	comp=N,81050μm,0.3s						
T1245				AML	AML		
	comp=E,39950μm,0.7s						
T1245				AML	AML		
	comp=N,83350μm,0.3s						
T1245				AML	AML		
	comp=E,39100μm,0.7s						
GAG1	**Gagliole**	**0.22**	**6**	P	**Pb**	**08 37 38.6**	**-0.8**
GAG1				S	**Sg**	**08 37 42.6**	**+1.0**
GAG1				AML	AML		
	comp=E,56300μm,0.6s						
GAG1				AML	AML		
	comp=N,53500μm,0.4s						
GUMA	**Gualdo di Mace**	**0.23**	**79**	P	**Pg**	**08 37 38.4**	**0.0**
GUMA				S	**Sg**	**08 37 42.1**	**+0.3**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
SSM1	**San Severino M**	**0.23**	**27**	P	**Pg**	**08 37 38.6**	**0.0**
SSM1				S	**Sg**	**08 37 42.3**	**+0.3**
AM05	**Amandola Campo**	**0.24**	**100**	P	**Pg**	**08 37 38.5**	**-0.2**
AM05				S	**Sg**	**08 37 42.0**	**-0.1**
MMO1	**Montemonaco**	**0.25**	**119**	P	**Pg**	**08 37 38.7**	**-0.1**
MMO1				S	**Sg**	**08 37 42.5**	**+0.1**
SNTG	**Esanatoglia**	**0.25**	**344**	P	**Pb**	**08 37 39.2**	**-0.6**
SNTG				S	**Sb**	**08 37 43.4**	**-0.6**
SNTG				AML	AML		
	comp=E,9310μm,0.3s						
SNTG				AML	AML		
	comp=N,11600μm,0.9s						
SNTG				AML	AML		
	comp=E,9330μm,0.4s						
SNTG				AML	AML		
	comp=N,11650μm,0.9s						
SNTG				AML	AML		
	comp=E,9485μm,0.4s						
SNTG				AML	AML		
	comp=N,12800μm,0.9s						
T1215	**Vallo di Nera,**	**0.25**	**209**	P	**Pb**	**08 37 39.7**	**-0.1**
T1215				S	**Sg**	**08 37 44.3**	**+1.8**
T1215				AML	AML		
	comp=E,13050μm,0.5s						
T1215				AML	AML		
	comp=N,15950μm,0.2s						
T1215				AML	AML		
	comp=E,13100μm,0.7s						
T1215				AML	AML		
	comp=N,16450μm,1.1s						
T1215				AML	AML		
	comp=E,13050μm,0.8s						
T1215				AML	AML		
	comp=N,16400μm,1.1s						
T1215				AML	AML		
	comp=E,13050μm,0.7s						
T1215				AML	AML		
	comp=E,13100μm,0.5s						
T1215				AML	AML		
	comp=N,16000μm,0.2s						
T1215				AML	AML		
	comp=N,16400μm,1.1s						
ASSB	**Assisi San Ben**	**0.28**	**275**	⇑P	**Pb**	**08 37 40.3**	**0.0**
ASSB				S	**Sb**	**08 37 45.5**	**+0.6**
ASSB				AML	AML		
	comp=N,72150μm,0.2s						
ASSB				AML	AML		
	comp=E,47950μm,0.3s						
EL6	**Elcito**	**0.31**	**9**	P	**Pg**	**08 37 40.1**	**0.0**
EL6				S	**Sb**	**08 37 45.4**	**-0.7**
EL6				AML	AML		
	comp=E,29550μm,0.4s						
EL6				AML	AML		
	comp=N,24900μm,0.4s						
T1217	**Poggiodomo (PG**	**0.32**	**194**	P	**Pb**	**08 37 40.9**	**-0.2**
T1217				S	**Sb**	**08 37 46.4**	**+0.3**
T1217				AML	AML		
	comp=E,21050μm,0.4s						
T1217				AML	AML		
	comp=E,21350μm,0.2s						
T1217				AML	AML		
	comp=N,38750μm,1.4s						
T1217				AML	AML		
	comp=E,21000μm,0.4s						
T1217				AML	AML		
	comp=N,38900μm,1.4s						
T1217				AML	AML		
	comp=E,21300μm,0.2s						
T1217				AML	AML		
	comp=N,38800μm,1.4s						
T1217				AML	AML		
	comp=N,38800μm,1.4s						
T1217				AML	AML		
	comp=E,21350μm,0.2s						
T1217				AML	AML		
	comp=N,38900μm,1.4s						
T1217				AML	AML		
	comp=E,21050μm,0.4s						
T1244	**Arquata del Tr**	**0.33**	**143**	P	**Pb**	**08 37 40.5**	**-0.7**
T1244				S	**Sb**	**08 37 46.0**	**-0.4**
ATCC	**AVT- Casa Cast**	**0.33**	**300**	P	**Pb**	**08 37 41.3**	**0.0**
ATCC				S	**Sb**	**08 37 47.6**	**+1.0**
ATCC				AML	AML		
	comp=E,46350μm,0.2s						
ATCC				AML	AML		
	comp=N,42650μm,0.2s						
ATCC				AML	AML		
	comp=E,46400μm,0.2s						
T1241	**Roccafluvione,**	**0.33**	**119**	P	**Pg**	**08 37 40.1**	**-0.2**
T1241				S	**Sg**	**08 37 45.5**	**+0.5**
T1241				AML	AML		
	comp=E,14950μm,0.7s						
T1241				AML	AML		
	comp=N,14350μm,0.3s						
T1241				AML	AML		
	comp=E,13650μm,0.7s						
T1241				AML	AML		
	comp=N,14150μm,0.3s						
T1241				AML	AML		
	comp=E,15000μm,0.7s						
T1241				AML	AML		
	comp=E,13700μm,0.7s						
T1241				AML	AML		
	comp=E,15000μm,0.7s						
T1241				AML	AML		
	comp=N,14300μm,0.3s						
FOSV	**Fossato di Vic**	**0.34**	**324**	P	**Pb**	**08 37 41.2**	**-0.3**
FOSV				S	**Sb**	**08 37 47.2**	**+0.4**
FOSV				AML	AML		
	comp=E,7400μm,1.0s						
FOSV				AML	AML		
	comp=N,8830μm,0.3s						
FOSV				AML	AML		
	comp=E,7395μm,1.0s						
MNTP	**Montappone**	**0.34**	**69**	P	**Pg**	**08 37 40.7**	**+0.2**
TRE1	**Treia**	**0.36**	**35**	P	**Pb**	**08 37 41.1**	**-0.6**
TRE1				S	**Sb**	**08 37 46.9**	**-0.3**
TRE1				AML	AML		
	comp=E,27800μm,0.5s						
TRE1				AML	AML		
	comp=N,17050μm,1.6s						
TRE1				AML	AML		
	comp=E,27750μm,0.5s						
TRE1				AML	AML		
	comp=N,17050μm,1.6s						
CING	**Cingoli**	**0.38**	**18**	P	**Pg**	**08 37 41.1**	**0.0**
CING				S	**Sb**	**08 37 47.1**	**-0.7**
T1201	**Domo (RI)**	**0.40**	**156**	P	**Pb**	**08 37 42.1**	**-0.3**
T1201				S	**Sb**	**08 37 48.8**	**+0.5**
T1204	**Amatrice, Fraz**	**0.40**	**149**	P	**Pb**	**08 37 41.8**	**-0.7**
T1204				S	**Sb**	**08 37 48.1**	**-0.5**
T1204				AML	AML		
	comp=N,10410μm,1.0s						
T1204				AML	AML		
	comp=N,10385μm,1.0s						
T1204				AML	AML		
	comp=E,18500μm,0.3s						
LNSS	**Leonessa**	**0.42**	**179**	P	**Pb**	**08 37 42.5**	**-0.3**
LNSS				S	**Sb**	**08 37 48.9**	**0.0**
LNSS				AML	AML		
	comp=E,8645μm,1.2s						
LNSS				AML	AML		
	comp=N,21450μm,0.6s						
MMUR	**Monte Murano**	**0.42**	**356**	P	**Pb**	**08 37 42.3**	**-0.5**
MMUR				S	**Sb**	**08 37 49.3**	**+0.1**
MMUR				AML	AML		
	comp=N,11070μm,1.0s						
MMUR				AML	AML		
	comp=E,15250μm,0.4s						
MMUR				AML	AML		
	comp=N,11065μm,1.0s						
T1243	**Rocca Santa Ma**	**0.44**	**136**	P	**Pg**	**08 37 42.3**	**-0.1**
T1243				S	**Sb**	**08 37 49.3**	**-0.4**
MURB	**Monte Urbino**	**0.45**	**303**	P	**Pb**	**08 37 43.3**	**+0.1**
MURB				S	**Sb**	**08 37 51.1**	**+1.3**
MURB				AML	AML		
	comp=E,23350μm,0.2s						
MURB				AML	AML		
	comp=N,22150μm,0.3s						
MURB				AML	AML		
	comp=N,20450μm,0.3s						
MURB				AML	AML		
	comp=E,23400μm,0.2s						
MURB				AML	AML		
	comp=E,25250μm,0.2s						
SMA1	**SAN MARTINO**	**0.45**	**150**	P	**Pb**	**08 37 42.5**	**-0.8**
SMA1				S	**Sb**	**08 37 49.5**	**-0.4**
ATSC	**Scheggia e Pas**	**0.48**	**328**	P	**Pb**	**08 37 43.7**	**-0.1**
ATSC				S	**Sb**	**08 37 51.3**	**+0.5**
ARRO	**Arrone**	**0.48**	**204**	P	**Pb**	**08 37 43.8**	**0.0**
ARRO				S	**Sb**	**08 37 52.0**	**+1.3**
ARRO				AML	AML		
	comp=E,8020μm,1.5s						
ARRO				AML	AML		
	comp=N,6440μm,1.1s						
ARVD	**Arcevia**	**0.48**	**352**	P	**Pb**	**08 37 43.4**	**-0.5**
ARVD				S	**Sb**	**08 37 51.1**	**+0.2**
ARVD				AML	AML		
	comp=E,4660μm,1.4s						
ARVD				AML	AML		
	comp=N,2645μm,1.0s						
ATFO	**Monte Foce - G**	**0.48**	**316**	P	**Pb**	**08 37 43.9**	**0.0**
ATFO				S	**Sb**	**08 37 51.8**	**+0.8**
ATFO				AML	AML		
	comp=N,4435μm,0.5s						
ATFO				AML	AML		
	comp=E,5250μm,0.8s						
OFFI	**Offida**	**0.49**	**100**	P	**Pb**	**08 37 44.0**	**+0.1**
OFFI				AML	AML		
	comp=E,19350μm,1.6s						
OFFI				AML	AML		
	comp=N,18550μm,0.6s						
T1211	**Morro Reatino**	**0.50**	**195**	P	**Pb**	**08 37 44.2**	**0.0**
T1211				S	**Sb**	**08 37 52.8**	**+1.4**
T1211				AML	AML		
	comp=E,10495μm,0.3s						
T1211				AML	AML		
	comp=N,14200μm,1.4s						
T1211				AML	AML		
	comp=E,10620μm,0.5s						
T1211				AML	AML		
	comp=N,14150μm,1.4s						
T1211				AML	AML		
	comp=E,10610μm,0.5s						
T1211				AML	AML		
	comp=E,10480μm,0.3s						
T1211				AML	AML		
	comp=N,14200μm,1.4s						
CESX	**Cesi**	**0.53**	**219**	⇑P	**Pb**	**08 37 44.6**	**0.0**
CESX				S	**Sn**	**08 37 53.3**	**-2.1**
CESX				AML	AML		
	comp=E,11750μm,0.3s						
CESX				AML	AML		
	comp=N,9505μm,0.8s						
RM33	**Pellescritta (**	**0.53**	**165**	P	**Pb**	**08 37 44.0**	**-0.6**
RM33				S	**Sb**	**08 37 52.7**	**+0.5**
RM33				AML	AML		
	comp=E,6305μm,0.6s						
RM33				AML	AML		
	comp=E,6210μm,0.6s						
RM33				AML	AML		
	comp=N,4415μm,0.3s						
RM33				AML	AML		
	comp=N,4410μm,0.3s						
RM33				AML	AML		
	comp=N,4495μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.53**	**290**	P	**Pb**	**08 37 44.6**	**-0.1**
ATTE				AML	AML		
	comp=E,5135μm,1.6s						
ATTE				AML	AML		
	comp=N,3190μm,1.2s						
ATLO	**AVT- Montelove**	**0.55**	**303**	⇑P	**Pb**	**08 37 45.0**	**0.0**
ATLO				S	**Sn**	**08 37 54.0**	**-2.0**
CIMA	**Civitanova Mar**	**0.55**	**58**	P	**Pb**	**08 37 45.0**	**+0.1**
FRON	**Frontone**	**0.55**	**336**	P	**Pb**	**08 37 44.6**	**-0.3**
FRON				AML	AML		
	comp=E,4805μm,0.7s						
FRON				AML	AML		
	comp=N,6180μm,1.3s						
T1246	**Crognaleto (TE**	**0.55**	**142**	P	**Pg**	**08 37 44.1**	**-0.2**
T1246				S	**Sb**	**08 37 52.6**	**-0.2**
PP3	**Marolino**	**0.55**	**49**	P	**Pb**	**08 37 45.1**	**0.0**
PP3				AML	AML		
	comp=E,9215μm,0.6s						
PP3				AML	AML		
	comp=N,12050μm,0.4s						
PP3				AML	AML		
	comp=N,12500μm,0.4s						
PP3				AML	AML		
	comp=E,9360μm,0.6s						
CAMP	**Campotosto**	**0.56**	**150**	P	**Pb**	**08 37 44.2**	**-0.9**
CAMP				S	**Sb**	**08 37 53.1**	**+0.1**
CAMP				AML	AML		
	comp=N,3020μm,0.4s						
CAMP				AML	AML		
	comp=E,4565μm,0.6s						
TB01	**Gubbio**	**0.57**	**310**	P	**Pb**	**08 37 45.3**	**0.0**
TB01				S	**Sn**	**08 37 54.7**	**-1.9**
TB02	**Pietralunga**	**0.58**	**308**	P	**Pb**	**08 37 45.5**	**+0.1**
TERO	**Teramo**	**0.58**	**133**	P	**Pg**	**08 37 44.6**	**-0.2**
TERO				S	**Sb**	**08 37 53.3**	**-0.2**
TERO				AML	AML		
	comp=N,5460μm,0.7s						
TERO				AML	AML		
	comp=N,5455μm,0.7s						
TERO				AML	AML		
	comp=N,5705μm,0.7s						
TERO				AML	AML		
	comp=E,6730μm,0.5s						
TERO				AML	AML		
	comp=E,6445μm,0.6s						
ATBU	**Serra di Buran**	**0.58**	**322**	P	**Pb**	**08 37 45.7**	**+0.2**
ATBU				S	**Sb**	**08 37 54.7**	**+1.0**
ATVO	**AVT- Monte Val**	**0.58**	**309**	P	**Pb**	**08 37 45.5**	**-0.1**
ATVO				S	**Sn**	**08 37 55.2**	**-1.7**
ATVO				AML	AML		
	comp=E,3015μm,1.3s						
ATVO				AML	AML		
	comp=E,3010μm,1.3s						
ATVO				AML	AML		
	comp=N,3555μm,0.4s						
TB03	**Pietralunga**	**0.59**	**310**	⇑P	**Pb**	**08 37 45.7**	**0.0**
TB03				S	**Sn**	**08 37 55.5**	**-1.6**
T1247	**Pizzolo (AQ)**	**0.61**	**161**	P	**Pb**	**08 37 45.5**	**-0.5**
T1247				S	**Sb**	**08 37 54.6**	**+0.1**
T1247				AML	AML		
	comp=N,6590μm,0.4s						
T1247				AML	AML		
	comp=E,5815μm,1.6s						
T1247				AML	AML		
	comp=N,6595μm,0.4s						
ATPI	**Pietralunga -**	**0.63**	**313**	P	**Pb**	**08 37 46.4**	**0.0**
ATPI				S	**Sn**	**08 37 57.0**	**-1.2**
ATPI				AML	AML		
	comp=N,2865μm,0.4s						
ATPI				AML	AML		
	comp=E,3695μm,0.5s						
PIEI	**Pieia**	**0.63**	**325**	P	**Pb**	**08 37 46.3**	**-0.1**
PIEI				AML	AML		
	comp=N,1865μm,0.4s						
PIEI				AML	AML		
	comp=E,2660μm,0.4s						
MPAG	**Monte Paganucc**	**0.64**	**342**	P	**Pb**	**08 37 46.4**	**-0.2**
MPAG				AML	AML		
	comp=E,4450μm,1.5s						
MPAG				AML	AML		
	comp=N,3965μm,1.6s						
MPAG				AML	AML		
	comp=N,2980μm,0.7s						
MPAG				AML	AML		
	comp=N,2975μm,0.7s						
MPAG				AML	AML		
	comp=E,3700μm,0.4s						
ATMI	**Monte Miggiano**	**0.64**	**300**	P	**Pn**	**08 37 47.0**	**-1.3**
ATMI				AML	AML		
	comp=E,6805μm,1.4s						
ATMI				AML	AML		
	comp=N,9025μm,0.7s						
AOI	**Ancona**	**0.67**	**38**	P	**Pg**	**08 37 46.6**	**0.0**
AOI				AML	AML		
	comp=N,2780μm,0.4s						
AOI				AML	AML		
	comp=E,2685μm,0.3s						
AOI				AML	AML		
	comp=N,2785μm,0.4s						
NARO	**Abbazia di Nar**	**0.68**	**331**	P	**Pb**	**08 37 47.0**	**-0.2**
NARO				AML	AML		
	comp=N,1660μm,0.3s						
NARO				AML	AML		
	comp=E,1350μm,1.1s						
TRTR	**Tortoreto Alta**	**0.68**	**108**	P	**Pg**	**08 37 46.3**	**-0.5**
TRTR				AML	AML		
	comp=E,17300μm,0.5s						
TRTR				AML	AML		

comp=N,13850μm,0.9s
MGAB Montegabbione 0.68 261 P Pn 08 37 47.6 -1.3
MGAB AML AML
comp=E,5060μm,0.4s
MGAB AML AML
comp=N,8325μm,1.3s
MGAB AML AML
comp=N,8480μm,0.6s
MGAB AML AML
comp=E,5595μm,0.5s
MGAB AML AML
comp=N,8330μm,1.3s
GIGS Gran Sasso 0.69 145 P Pg 08 37 46.5 -0.5
FSSB Fossombrone 0.70 345 P Pb 08 37 47.4 -0.2
FSSB AML AML
comp=N,26750μm,0.3s
FSSB AML AML
comp=E,12150μm,0.3s
APEC Apecchio 0.70 321 P Pn 08 37 48.3 -0.8
APEC AML AML
comp=N,842μm,1.1s
APEC AML AML
comp=E,538μm,1.0s
SENI Senigallia 0.70 12 P Pb 08 37 47.5 0.0
SENI AML AML
comp=E,15900μm,0.6s
SENI AML AML
comp=N,10710μm,0.4s
SENI AML AML
comp=E,15850μm,0.6s
SENI AML AML
comp=E,4745μm,0.8s
SENI AML AML
comp=N,10700μm,0.4s
SENI AML AML
comp=N,2892μm,0.8s
AQU L'Aquila 0.72 158 P Pb 08 37 47.1 -0.7
AQU AML AML
comp=E,4145μm,0.5s
AQU AML AML
comp=N,3035μm,0.4s
AQU AML AML
comp=E,4115μm,0.4s
AQU AML AML
comp=N,2955μm,0.8s
AQU AML AML
comp=N,3030μm,0.4s
FIAM Fiamignano 0.75 175 P Pb 08 37 47.9 -0.6
FIAM AML AML
comp=E,3370μm,0.7s
FIAM AML AML
comp=N,2890μm,0.4s
FIAM AML AML
comp=N,2885μm,0.4s
PE3 Peglio 0.78 330 P Pn 08 37 49.8 -0.4
PE3 AML AML
comp=E,25μm,0.9s
PE3 AML AML
comp=N,35μm,0.9s
PE3 AML AML
comp=E,25μm,0.9s
PE3 AML AML
comp=N,35μm,0.9s
CAFI Castiglion Fio 0.84 292 P Pn 08 37 50.4 -0.6
CAFI AML AML
comp=E,2820μm,0.7s
CAFI AML AML
comp=N,2155μm,0.9s
SACS San Casciano d 0.84 259 P Pn 08 37 51.0 -0.1
SACS AML AML
comp=N,2410μm,0.5s
SACS AML AML
comp=E,2250μm,1.2s
SACS AML AML
comp=N,2415μm,0.5s
SACS AML AML
comp=E,2055μm,1.2s
SACS AML AML
comp=N,2480μm,0.8s
FAGN Fagnano 0.85 151 P Pb 08 37 50.3 +0.1
FAGN AML AML
comp=E,7115μm,0.5s
FAGN AML AML
comp=N,5780μm,1.4s
SSP9 Sansepolcro 0.86 310 P Pn 08 37 50.9 -0.4
SSP9 AML AML
comp=N,2034μm,0.7s
SSP9 AML AML
comp=E,1342μm,1.6s
VCEL Villa Celiera 0.86 136 P Pb 08 37 49.9 -0.5
VCEL AML AML
comp=N,4385μm,1.2s
VCEL AML AML
comp=E,5630μm,0.8s
VCEL AML AML
comp=N,4390μm,1.2s
SRES S.Oreste - Sor 0.87 206 P Pn 08 37 50.9 -0.6
SRES AML AML
comp=E,2795μm,0.5s
SRES AML AML
comp=N,3855μm,1.1s
T0110 Collepietro 0.96 145 P Pg 08 37 51.3 -0.8
T0110 AML AML
comp=N,5220μm,0.5s
T0110 AML AML
comp=E,4020μm,0.4s
LATE Laterza 0.99 246 P Pn 08 37 53.4 +0.3
CRE Caprese Michel 0.99 308 P Pn 08 37 53.3 +0.1
CRE AML AML
comp=E,1300μm,0.6s
CRE AML AML
comp=N,1285μm,0.7s
MTCE Montecelio 1.02 192 P Pn 08 37 52.9 -0.6
MTCE AML AML
comp=N,1835μm,0.8s
MTCE AML AML
comp=E,2755μm,0.6s
MCIV Monte Civitell 1.02 257 P Pn 08 37 54.2 +0.6
MCIV AML AML
comp=E,1076μm,0.4s
MCIV AML AML
comp=N,1140μm,0.6s
CERT Cerreto 1.07 182 P Pn 08 37 54.3 +0.1
CERT AML AML
comp=E,3335μm,0.5s
CERT AML AML
comp=N,1875μm,0.7s
ARCI Arcidosso 1.16 262 P Pn 08 37 56.3 +0.8
ARCI AML AML
comp=N,386μm,1.0s
ARCI AML AML
comp=E,355μm,0.8s
TOLF Tolfa 1.22 219 P Pg 08 37 57.3 +0.3
TOLF AML AML
comp=E,1094μm,0.5s
TOLF AML AML
comp=N,902μm,0.9s
LPEL Lama dei Pelig 1.29 138 P Pn 08 37 57.0 -0.3
LPEL AML AML
comp=E,1645μm,0.8s
LPEL AML AML
comp=N,1490μm,0.9s
CSNT Castellina Chi 1.35 290 P Pg 08 37 59.7 +0.2
FROS Frosini 1.39 279 P Pg 08 37 59.9 -0.3
POFI Posta Fibreno 1.39 159 P Pg 08 37 59.5 -0.9
GIUL Giuliano Di Ro 1.47 174 P Pg 08 38 00.7 -1.0
GIUL AML AML
comp=N,854μm,0.7s
GIUL AML AML
comp=E,796μm,0.6s
LATB Latina 1.52 182 P Pg 08 38 01.7 -1.1
LATB AML AML
comp=E,368μm,0.9s
LATB AML AML
comp=N,261μm,1.2s
TRIF Trifonti 1.56 274 P Pg 08 38 02.1 -1.4
TRIF AML AML
comp=E,338μm,0.7s
TRIF AML AML
comp=N,310μm,1.0s
CASP Castiglione de 1.61 263 P Pb 08 38 02.9 -0.2
CASP AML AML
comp=N,148μm,1.4s
CASP AML AML
comp=E,98μm,1.0s
MIDA Miranda 1.65 146 P Pb 08 38 03.0 -0.7
TRIV Trivento 1.68 138 P Pb 08 38 04.1 -0.2

MTCR Monte La Croce 1.79 305 P Pb 08 38 05.5 -0.7
BRJN Brijuni 1.96 15 P Pb 08 38 07.8 -1.1
PTRJ Pietraroja 1.99 146 AML AML
comp=E,906μm,1.4s
PTRJ AML AML
comp=N,1460μm,1.5s
APRC Apricena 2.25 123 P Pb 08 38 12.2 -1.7
APRC AML AML
comp=E,420μm,1.0s
APRC AML AML
comp=N,603μm,0.5s
CGRP Cima Grappa 2.99 343 AML AML
comp=N,392μm,0.5s
CGRP AML AML
comp=E,400μm,0.7s
PGF Pioggiola 3.01 262 *e*P **Pn 08 38 22.6 +1.7**
PGF *e*Sn **Sn 08 38 54.1 -2.7**
comp=E,25nm,0.8s
PGF Pioggiola 3.01 262 AML AML
comp=N,20μm,0.7s
PGF AML AML
comp=E,27μm,1.3s
SALO Salr 3.16 326 AML AML
comp=N,260μm,1.2s
SALO AML AML
comp=E,224μm,1.0s
MPRI Monte Prat 3.22 359 AML AML
comp=E,369μm,1.3s
MPRI AML AML
comp=N,411μm,0.8s
STAL STALIGIAL 3.25 356 AML AML
comp=E,303μm,0.6s
STAL AML AML
comp=N,250μm,0.7s
CIMO Cimolais 3.32 353 AML AML
comp=E,130μm,0.7s
CIMO AML AML
comp=N,84μm,0.9s
CIMO AML AML
comp=N,77μm,0.9s
CIMO AML AML
comp=E,123μm,0.7s
PTCC Patocco-Chiusa 3.39 4 AML AML
comp=N,102μm,0.6s
PTCC AML AML
comp=E,130μm,0.9s
ZOU Zoufplan 3.54 359 AML AML
comp=E,156μm,1.3s
ZOU AML AML
comp=E,153μm,1.2s
ZOU AML AML
comp=N,172μm,1.5s
ZOU AML AML
comp=N,162μm,1.5s
ACOM Acomizza, Ital 3.55 5 AML AML
comp=E,287μm,1.1s
ACOM AML AML
comp=N,270μm,0.7s
ACOM AML AML
comp=N,292μm,0.8s
ACOM AML AML
comp=E,282μm,0.8s
MYKA Terra Mystica 3.64 7 *i* Pn **Pn 08 38 32.3 +2.8**
comp=E,6.8nm,0.3s,SNR=7.3
OBKA Obir 3.65 17 *e*Pn **Pn 08 38 32.6 +2.9**
comp=E,5.2nm,0.2s
ABTA Abfaltersbach 3.75 355 *e*Pn **Pn 08 38 33.4 +2.4**
comp=E,13nm,0.4s
SOKA Soboth 3.92 21 *e*Pn **Pn 08 38 35.5 +2.0**
comp=E,2.1nm,0.3s
SBF Sospel 4.16 284 *e*P **Pn 08 38 39.0 +2.3**
SBF *e*Sn **Sn 08 39 21.6 -3.6**
comp=E,12nm,0.4s
FETA Feichten 4.32 339 *e*Pn **Pn 08 38 42.9 +3.9**
comp=E,3.8nm,0.3s,SNR=6.5
WTTA Wattenberg 4.36 347 *e*Pn **Pn 08 38 43.5 +4.0**
comp=E,2.8nm,0.2s
DAVOX Davos/Dischmat 4.38 330 Pn **Pn 08 38 42.9 +3.1**
comp=E,3.3nm,0.3s,baz=150,slow=16,SNR=26
DAVOX Sn **Sb 08 39 37.2 -5.8**
comp=E,2.1nm,0.3s,baz=133,slow=21,SNR=2.4
comp=E,12nm,0.5s
SQTA Sankt Quirin 4.40 344 *i* Pn Pn 08 38 44.8 +4.8
comp=E,5.8nm,0.3s,SNR=5.9
WATA Walderalm 4.44 347 *e*Pn **Pn 08 38 44.8 +4.2**
comp=E,8.3nm,0.3s,SNR=7.3
MOTA Moosalm 4.54 343 *e*Pn **Pn 08 38 46.3 +4.4**
comp=E,4.9nm,0.4s
ARSA Arzberg 4.58 22 *i* Pn **Pn 08 38 43.5 +1.1**
comp=E,2.0nm,0.5s
BIOA Bad Ischl, Aus 4.69 5 *e*Pn **Pn 08 38 47.5 +3.5**
comp=E,13nm,0.4s
RETA Reutte 4.75 341 *e*Pn Pb 08 38 50.5 -6.1
comp=E,3.2nm,0.3s
LMR La Mourre 4.78 276 *e*P **Pn 08 38 46.5 +1.4**
LMR *e*Sn **Sn 08 39 36.4 -4.0**
comp=E,2.9nm,0.4s
DAVA Damuels 4.81 334 *e*Pn **Pn 08 38 49.9 +4.1**
comp=E,7.4nm,0.4s
MBDF Montbardon 4.84 293 *e*P **Pn 08 38 48.5 +2.4**
MBDF *e*Sn **Sn 08 39 37.6 -4.4**
comp=E,5.7nm,0.5s
MOA Molln 4.91 10 *e*Pn **Pn 08 38 49.0 +2.1**
comp=E,4.5nm,0.3s,SNR=7.7
LPG La Plagne 5.15 301 *e*P **Pn 08 38 53.2 +2.8**
LPG *e*Sn **Sn 08 39 45.2 -4.6**
comp=E,6.6nm,0.6s
LPL La Plagne 5.17 301 *e*P **Pn 08 38 53.3 +2.6**
LPL *e*Sn **Sn 08 39 45.6 -4.6**
comp=E,12nm,0.4s
RONA Rosalia, Austr 5.21 25 *e*Pn **Pn 08 38 54.1 +2.9**
comp=E,1.1nm,0.2s
CONA Conrad Observa 5.30 21 *e*Pn **Pn 08 38 53.7 +1.4**
comp=E,0.7nm,0.2s
ORIF Oris-en-Rattie 5.50 293 *e*P **Pn 08 38 58.0 +2.9**
ORIF *e*Sn **Sn 08 39 53.5 -4.7**
comp=E,8.5nm,0.5s
SMRF Simiane la Rot 5.51 283 *e*P **Pn 08 38 58.5 +3.3**
SMRF *e*Sn **Sn 08 39 53.7 -4.7**
comp=E,3.2nm,0.6s
VAE Valguarnera 5.63 169 LR LR 08 40 56.6
comp=E,87nm,18.3s,baz=344,slow=36
GERES GERESS Array B 5.85 4 Pn **Pn 08 39 01.5 +1.6**
comp=E,1.0nm,0.3s,baz=179,slow=12,SNR=12
GERES Sn **Sn 08 40 07.2 +0.5**
comp=E,3.2nm,0.3s,baz=185,slow=26,SNR=11
comp=E,1.9nm,0.4s
CKRC Cesky Krumlov 5.87 8 *e*SN **Sn 08 40 06.2 -1.0**
CABF La Chapelle 6.11 308 *e*P **Pn 08 39 06.7 +3.3**
CABF *e*Sn **Sn 08 40 07.8 -5.4**
comp=E,4.9nm,0.6s
KHC Kasperske Hory 6.12 3 *e*PN **Pn 08 39 06.0 +2.4**
KHC *e*SN **Sn 08 40 12.2 -1.3**
VIVF Saint-Julien-l 6.31 290 *e*P **Pn 08 39 09.1 +2.9**
VIVF *e*Sn **Sn 08 40 12.8 -5.3**
comp=E,3.3nm,0.5s
HINF Hinteralfeld 6.47 320 *e*P **Pn 08 39 10.4 +2.0**
HINF *e*Sn **Sn 08 40 16.4 -5.7**
comp=E,16nm,0.4s
CDF Champ du Feu 6.73 325 *e*P **Pn 08 39 14.0 +2.0**
CDF *e*Sn **Sn 08 40 22.5 -6.0**
comp=E,7.4nm,0.4s
LASF Ste Croix 6.75 282 *e*P **Pn 08 39 15.3 +3.1**
LASF *e*Sn **Sn 08 40 23.4 -5.5**
comp=E,1.4nm,0.4s
VRAC Vranov 6.76 20 LR LR 08 42 15.6
comp=E,49nm,20.9s,baz=192,slow=43
HAU Haudompre 6.85 319 *e*P **Pn 08 39 15.7 +2.2**
HAU *e*Sn **Sn 08 40 25.3 -6.0**
comp=E,16nm,0.3s
GOPC GO Pecny, Ondr 7.00 9 *e*SN **Sn 08 40 34.2 -0.9**
NKC Novy Kostel 7.23 357 *e*SN **Sn 08 40 40.9 +0.3**
SMF Signal de Mont 7.47 302 *e*P **Pn 08 39 25.3 +3.2**
SMF *e*Sn **Sn 08 40 40.5 -6.1**
comp=E,6.4nm,0.4s
KRLC Kralicky 7.52 19 *e*SN **Sn 08 40 45.9 -1.8**
PAGF Fort de Pagny 7.53 320 *e*P **Pn 08 39 26.1 +3.2**
SFTF Sexfontaines 7.63 316 *e*P **Pn 08 39 27.7 +3.4**
DPC Dobruska-Polom 7.67 16 *e*SN **Sn 08 40 49.1 -2.5**
LOR Lormes 7.75 306 *e*P **Pn 08 39 29.5 +3.6**
baz=123
LOR *e*Sn **Sn 08 40 47.3 -6.2**
comp=E,4.5nm,0.4s
KEST Kesra 7.82 203 Pn Pn 08 39 33.8 +6.9
comp=E,1.0nm,0.3s,baz=63,slow=4.5,SNR=6.0
comp=E,6.4nm,0.6s
MEZF Maizieres J'vi 7.82 317 *e*P Pn 08 39 31.5 +4.7

AVF Avril sur Loir 7.84 302 *e*P **Pn 08 39 30.5 +3.4**
AVF *e*Sn **Sn 08 40 49.4 -6.2**
comp=E,1.8nm,0.5s
SSF Saint Saulge 7.86 304 *e*P **Pn 08 39 31.2 +3.7**
SSF *e*Sn **Sn 08 40 49.7 -6.5**
comp=E,2.9nm,0.5s
BRG Berggiesshubel 7.88 4 *e*(P) Pn 08 39 37.7 +10
BRG Amp 08 39 39.2
comp=Z,1.6nm,0.5s
BRG *ex* x 08 40 52.3
BRG *ex* x 08 41 53.4
BRG Amp 08 42 04.3
comp=Z,10nm,1.2s
MTLF Montolieu 7.91 276 *e*P **Pn 08 39 31.8 +3.7**
MTLF *e*Sn **Sn 08 40 51.1 -6.4**
comp=Z,2.0nm,0.5s
CLL Collm 8.29 360 *e*Pn **Pn 08 39 35.0 +1.7**
CLL *ex* x 08 40 43.0
CLL *e*(Sn) **Sn 08 41 03.0 -3.7**
CLL *ex* x 08 41 27.0
CLL *ex* x 08 41 43.0
CLL *e*Sg **Sg 08 41 58.0 -1.4**
comp=Z,15nm,1.1s
NOA NORSAR Array B 18.08 357 LR LR 08 49 11.4
comp=Z,25nm,18.2s,baz=325,slow=39
FINES FINESS Array B 20.04 18 P **P 08 42 05.9 0.0**
baz=195,slow=8.6,SNR=1.7
comp=Z,2.1nm,0.9s
TORD Torodi Ar. Bea 31.34 202 P **P 08 43 57.1 +3.5**
comp=Z,0.4nm,1.0s,baz=14,slow=6.4,SNR=2.1
comp=Z,0.4nm,1.0s
MKAR Makanchi Array 47.75 60 P **P 08 46 11.4 +1.5**
comp=Z,0.5nm,0.7s,baz=277,slow=12,SNR=3.7
comp=Z,0.5nm,0.7s

IDC 31 08:45:55.5±5.6, 53°.58N×90°.69E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=55.5km s-min=29.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.51**	**278**	I		09 11 00.0	
	baz=90,slow=334,SNR=1.9						
ZALV	**Zalesovo Beam**	**3.51**	**278**	Pn	Pn	08 46 53.3	+2.1
	0.6nm,0.3s,baz=96,slow=17,SNR=9.1						
ZALV				Lg	Lg	08 47 45.5	
	1.4nm,0.3s,baz=95,slow=26,SNR=8.2						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**8.66**	**222**	Pn	Pn	08 48 02.4	+0.3
	0.1nm,0.3s,baz=35,slow=16,SNR=1.5						
	0.1nm,0.3s						
SONM	**Songino Array**	**11.48**	**114**	Lg	Lg	08 51 48.9	
	baz=303,slow=29						
I34MN	**SONGINO INFRAS**	**11.51**	**114**	I		09 53 10.0	
	baz=310,slow=325,SNR=0.8						

VIE 31 09:09:21.2±0.9, 43°.09N×13°.08E, h10km, mb2.6/2, ml2.3/2, Error ellipse: s-maj=17.8km s-min=6.3km az=97.0 104 km SSE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**3.68**	**354**	*e*Pn	Pn	09 10 19.1	+0.9
	3.4nm,0.5s						
FETA	**Feichten**	**4.27**	**338**	*e*Pn	Pn	09 10 27.3	+0.9

ROM 31 09:10:06.9±0.0, 42°.738N±0°.002×13°.141E±0°.002, h11km, ML2.7/18, 12C-8D, Error ellipse: s-maj=0.2km s-min=0.2km az=303.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.14**	**115**	P	Pg	09 10 10.8	+0.4
T1204				S	Sg	09 10 13.6	+0.8
T1204				AML	AML		
	comp=E,3035μm,0.3s						
T1204				AML	AML		
	comp=N,1860μm,1.3s						
T1204				AML	AML		
	comp=E,3030μm,0.3s						
T1204				AML	AML		
	comp=N,1834μm,1.3s						
T1204				AML	AML		
	comp=E,8585μm,1.3s						
T1204				AML	AML		
	comp=N,6095μm,0.1s						
T1204				AML	AML		
	comp=N,931μm,0.2s						
T1204				AML	AML		
	comp=E,1686μm,0.3s						
LNSS	**Leonessa**	**0.15**	**209**	⇓P	Pg	09 10 11.0	+0.6
LNSS				S	Sg	09 10 14.0	+1.0
LNSS				AML	AML		
	comp=E,2425μm,0.2s						
LNSS				AML	AML		
	comp=N,4665μm,0.4s						
LNSS				AML	AML		
	comp=N,11350μm,0.1s						
LNSS				AML	AML		
	comp=E,5500μm,0.4s						
LNSS				AML	AML		
	comp=E,2426μm,0.2s						
LNSS				AML	AML		
	comp=N,4663μm,0.2s						
T1217	**Poggiodomo (PG**	**0.16**	**261**	⇑P	Pg	09 10 11.0	+0.5
T1217				S	Sg	09 10 13.9	+0.8
T1217				AML	AML		
	comp=E,2625μm,0.3s						
T1217				AML	AML		
	comp=N,3535μm,0.7s						
T1217				AML	AML		
	comp=E,2630μm,0.3s						
T1217				AML	AML		
	comp=N,3530μm,0.7s						
T1217				AML	AML		
	comp=E,2698μm,0.1s						
T1217				AML	AML		
	comp=N,3835μm,0.2s						
T1217				AML	AML		
	comp=E,2640μm,0.1s						
T1217				AML	AML		
	comp=N,3810μm,0.2s						
T1217				AML	AML		
	comp=E,2617μm,0.1s						
T1217				AML	AML		
	comp=N,3340μm,0.2s						
T1217				AML	AML		
	comp=E,2532μm,0.1s						
T1217				AML	AML		
	comp=N,3244μm,0.2s						
T1216	**Preci, Frazion**	**0.18**	**330**	P	Pg	09 10 11.3	+0.5
T1216				S	Sg	09 10 14.4	+0.8
T1216				AML	AML		
	comp=E,5330μm,0.5s						
T1216				AML	AML		
	comp=N,4490μm,1.0s						
T1216				AML	AML		
	comp=E,5325μm,0.4s						
T1216				AML	AML		
	comp=N,6980μm,0.2s						
T1216				AML	AML		
	comp=N,2697μm,0.2s						
T1216				AML	AML		
	comp=E,2261μm,0.2s						
SMA1	**SAN MARTINO**	**0.18**	**127**	⇓P	Pg	09 10 11.4	+0.5
SMA1				S	Sg	09 10 14.9	+1.3
MMO1	**Montemonaco**	**0.21**	**40**	⇓P	Pg	09 10 12.1	+0.6
MMO1				S	Sg	09 10 15.7	+1.1
T1215	**Vallo di Nera,**	**0.21**	**288**	P	Pg	09 10 11.9	+0.5
T1215				S	Sg	09 10 15.5	+1.0
T1215				AML	AML		
	comp=E,1014μm,1.1s						
T1215				AML	AML		
	comp=N,864μm,0.8s						
T1215				AML	AML		
	comp=E,1014μm,1.1s						
T1215				AML	AML		
	comp=N,778μm,0.8s						
T1243	**Rocca Santa Ma**	**0.23**	**100**	⇓P	Pg	09 10 12.1	+0.3
T1243				S	Sg	09 10 16.0	+0.9
FEMA	**Monte Fema**	**0.23**	**343**	S	Sg	09 10 17.0	+1.8
RM33	**Pellescritta (**	**0.23**	**167**	⇑P	Pg	09 10 12.4	+0.5
RM33				S	Sg	09 10 16.3	+1.1
RM33				AML	AML		

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     comp=E,1300µm,0.3s
RM33                    AML   AML
     comp=N,1178µm,0.5s
RM33                    AML   AML
     comp=N,1139µm,0.4s
RM33                    AML   AML
     comp=E,1275µm,0.3s
RM33                    AML   AML
     comp=N,1142µm,0.4s
RM33                    AML   AML
     comp=E,4020µm,1.0s
RM33                    AML   AML
     comp=N,3090µm,0.1s
RM33                    AML   AML
     comp=E,3885µm,1.0s
RM33                    AML   AML
     comp=N,3090µm,0.7s
RM33                    AML   AML
     comp=E,1139µm,0.2s
RM33                    AML   AML
     comp=N,1139µm,0.1s
RM33                    AML   AML
     comp=E,1124µm,0.1s
RM33                    AML   AML
     comp=N,1155µm,0.1s
T1241 Roccafluviore,  0.24  61 ⇑P    Pg    09 10 12.4 +0.5
T1241                   S     Sg    09 10 16.5 +1.1
T1256 Bolognola (MC)  0.28  13 P     Pg    09 10 13.1 +0.5
T1256                   S     Sb    09 10 17.7 -1.1
CAMP Campotosto       0.28 136 ⇑P    Pg    09 10 13.0 +0.3
CAMP                    S     Sg    09 10 17.6 +1.0
CAMP                    AML   AML
     comp=N,1057µm,0.6s
CAMP                    AML   AML
     comp=E,1390µm,0.8s
CAMP                    AML   AML
     comp=E,236µm,0.3s
CAMP                    AML   AML
     comp=N,283µm,0.3s
AM05 Amandola Campo   0.29  33 P     Pg    09 10 13.4 +0.6
AM05                    AML   AML
     comp=E,1024µm,0.4s
AM05                    AML   AML
     comp=N,758µm,0.1s
AM05                    AML   AML
     comp=E,3685µm,0.4s
AM05                    AML   AML
     comp=N,291µm,0.6s
AM05                    AML   AML
     comp=E,1600µm,0.1s
AM05                    AML   AML
     comp=N,1705µm,0.1s
AM05                    AML   AML
     comp=E,5585µm,0.1s
AM05                    AML   AML
     comp=N,590µm,0.1s
AM05                    AML   AML
     comp=E,1105µm,0.1s
AM05                    AML   AML
     comp=N,314µm,0.1s
AM05                    AML   AML
     comp=N,107µm,0.1s
AM05                    AML   AML
     comp=E,241µm,0.1s
T1211 Morro Reatino   0.29 226 ⇑P    Pg    09 10 13.3 +0.4
T1211                   S     Sb    09 10 18.3 -0.8
T1211                   AML   AML
     comp=E,2461µm,0.1s
T1211                   AML   AML
     comp=N,3803µm,0.2s
T1211                   AML   AML
     comp=N,3765µm,0.2s
T1211                   AML   AML
     comp=E,2470µm,0.1s
T1211                   AML   AML
     comp=N,1040µm,0.2s
T1211                   AML   AML
     comp=E,839µm,0.2s
T1211                   AML   AML
     comp=E,828µm,0.2s
T1211                   AML   AML
     comp=N,1012µm,0.3s
FDMO Fiordimonte      0.30 352 ⇑P    Pg    09 10 13.5 +0.5
FDMO                    AML   AML
     comp=E,1310µm,0.2s
FDMO                    AML   AML
     comp=N,1210µm,0.1s
FDMO                    AML   AML
     comp=N,2775µm,0.2s
FDMO                    AML   AML
     comp=E,2670µm,0.3s
FDMO                    AML   AML
     comp=N,1068µm,0.3s
FDMO                    AML   AML
     comp=E,1061µm,0.2s
T1247 Pizzolo (AQ)    0.32 159 ⇑P    Pg    09 10 13.8 +0.5
T1247                   AML   AML
     comp=E,2970µm,1.1s
T1247                   AML   AML
     comp=N,3485µm,1.3s
T1247                   AML   AML
     comp=N,1106µm,0.1s
T1247                   AML   AML
     comp=E,769µm,0.2s
ARRO Arrone           0.32 240 ⇓P    Pg    09 10 13.4 +0.1
ARRO                    AML   AML
     comp=E,1260µm,0.2s
ARRO                    AML   AML
     comp=N,1650µm,0.2s
ARRO                    AML   AML
     comp=N,621µm,0.2s
ARRO                    AML   AML
     comp=E,427µm,0.2s
GUMA Gualdo di Mace   0.35  24 ⇑P    Pb    09 10 14.8 -0.4
GUMA                    AML   AML
     comp=E,3000µm,0.2s
GUMA                    AML   AML
     comp=N,2220µm,0.3s
GUMA                    AML   AML
     comp=N,6075µm,0.5s
GUMA                    AML   AML
     comp=E,11050µm,0.3s
GUMA                    AML   AML
     comp=N,6595µm,1.3s
GUMA                    AML   AML
     comp=E,9460µm,0.3s
TERO Teramo           0.36 108 ⇑P    Pg    09 10 14.2 +0.1
TERO                    AML   AML
     comp=E,1310µm,0.8s
TERO                    AML   AML
     comp=N,883µm,0.6s
TERO                    AML   AML
     comp=E,1605µm,0.3s
TERO                    AML   AML
     comp=E,1470µm,0.3s
TERO                    AML   AML
     comp=N,1540µm,0.4s
TERO                    AML   AML
     comp=N,1464µm,0.3s
TERO                    AML   AML
     comp=N,416µm,0.1s
TERO                    AML   AML
     comp=E,364µm,0.2s
TERO                    AML   AML
     comp=N,469µm,0.1s
TERO                    AML   AML
     comp=E,406µm,0.2s
GIGS Gran Sasso       0.43 132 P     Pg    09 10 15.3  0.0
GIGS                    AML   AML
     comp=N,360µm,1.5s
GIGS                    AML   AML
     comp=E,367µm,0.1s
GIGS                    AML   AML
     comp=E,84µm,0.2s
GIGS                    AML   AML
     comp=N,62µm,0.1s
CESX Cesi             0.43 253 ⇓P    Pg    09 10 16.0 +0.6
CESX                    AML   AML
     comp=N,720µm,0.5s
CESX                    AML   AML
     comp=E,736µm,1.0s
CESX                    AML   AML
     comp=N,286µm,0.4s
CESX                    AML   AML
     comp=E,297µm,0.4s
ASSB Assisi San Ben   0.47 311 ⇑P    Pg    09 10 16.3 +0.2
ASSB                    AML   AML
     comp=E,650µm,0.2s
ASSB                    AML   AML
     comp=N,655µm,0.3s
ASSB                    AML   AML
     comp=N,850µm,0.9s
ASSB                    AML   AML
     comp=E,710µm,0.2s
FIAM Fiamignano       0.47 182 ⇑P    Pg    09 10 15.7 -0.4
FIAM                    AML   AML
     comp=N,726µm,1.3s
FIAM                    AML   AML
     comp=E,624µm,0.2s
FIAM                    AML   AML
     comp=E,350µm,0.3s
FIAM                    AML   AML
     comp=N,222µm,0.6s
SNTG Esanatoglia      0.54 344 ⇓P    Pg    09 10 17.6 +0.2
SNTG                    AML   AML
     comp=E,634µm,0.7s
SNTG                    AML   AML
     comp=N,685µm,0.2s
SNTG                    AML   AML
     comp=E,598µm,0.7s
SNTG                    AML   AML
     comp=N,724µm,0.2s
ATCC AVT- Casa Cast   0.58 321 ⇓P    Pg    09 10 18.5 +0.3
EL6  Elcito           0.59 357 P     Pb    09 10 18.9 -0.4
EL6                     S     Sb    09 10 29.0 +1.2
T0110 Collepietro     0.70 137 ⇑P    Pg    09 10 20.4  0.0
ARVD Arcevia          0.77 349 S     Sn    09 10 35.0 -0.4
```

ROM 31 09:11:06.6±0.1, 42°.747N±0°.004×13°.195E±0°.005,
h10km, ML2.6/33, 10C-14D, Error ellipse: s-maj=0.3km
s-min=0.3km az=285.0, Central Italy

```
Code Station Name     Δ°   AZ°  Phase ID      Time      Res
                                Op    ISC     h m s     ISC
T1245 Castelsantange  0.11 357 P     Pg    09 11 09.8 +0.3
T1245                   S     Sg    09 11 11.7 +0.2
T1245                   AML   AML
     comp=E,28500µm,0.2s
T1245                   AML   AML
     comp=E,26700µm,1.2s
T1245                   AML   AML
     comp=N,34800µm,0.5s
T1245                   AML   AML
     comp=N,33300µm,0.5s
T1245                   AML   AML
     comp=E,28450µm,0.2s
T1204 Amatrice, Fraz  0.12 128 P     Pg    09 11 10.0 +0.5
T1204                   S     Sg    09 11 12.4 +0.8
T1204                   AML   AML
     comp=E,8580µm,1.3s
T1204                   AML   AML
     comp=N,6090µm,0.1s
T1204                   AML   AML
     comp=E,8585µm,1.3s
T1204                   AML   AML
     comp=N,6095µm,0.1s
T1204                   AML   AML
     comp=N,6095µm,1.9s
T1204                   AML   AML
     comp=E,8585µm,0.7s
SMA1 SAN MARTINO      0.16 138 P     Pg    09 11 11.1 +1.0
SMA1                    S     Sg    09 11 13.9 +1.4
MMO1 Montemonaco      0.18  33 P     Pg    09 11 10.8 +0.3
MMO1                    S     Sg    09 11 13.9 +0.7
LNSS Leonessa         0.18 218 P     Pg    09 11 11.2 +0.6
LNSS                    S     Sg    09 11 14.7 +1.4
LNSS                    AML   AML
     comp=E,5495µm,0.4s
LNSS                    AML   AML
     comp=N,11350µm,0.1s
LNSS                    AML   AML
     comp=E,5500µm,0.4s
T1216 Preci, Frazion  0.19 318 P     Pg    09 11 11.8 +1.1
T1216                   S     Sg    09 11 14.4 +0.9
T1243 Rocca Santa Ma  0.19 105 P     Pg    09 11 11.3 +0.5
T1243                   S     Sg    09 11 14.4 +0.8
T1217 Poggiodomo (PG  0.20 260 P     Pg    09 11 11.4 +0.6
T1217                   S     Sg    09 11 14.9 +1.2
T1217                   AML   AML
     comp=E,2640µm,0.1s
T1217                   AML   AML
     comp=N,3810µm,0.2s
T1241 Roccafluviore,  0.21  58 P     Pg    09 11 11.4 +0.5
T1241                   S     Sg    09 11 14.8 +0.9
RM33 Pellescritta (   0.24 176 P     Pg    09 11 12.1 +0.6
RM33                    S     Sg    09 11 16.2 +1.4
RM33                    AML   AML
     comp=E,4025µm,1.0s
RM33                    AML   AML
     comp=N,3090µm,0.1s
RM33                    AML   AML
     comp=N,3090µm,0.7s
RM33                    AML   AML
     comp=E,3885µm,1.0s
RM33                    AML   AML
     comp=E,4020µm,1.0s
RM33                    AML   AML
     comp=N,3090µm,1.3s
RM33                    AML   AML
     comp=E,4020µm,1.0s
T1215 Vallo di Nera,  0.25 283 P     Pg    09 11 13.3 +1.6
T1215                   S     Sg    09 11 16.4 +1.4
AM05 Amandola Campo   0.26  27 AML   AML
     comp=E,1600µm,0.1s
AM05                    AML   AML
     comp=N,1710µm,0.1s
AM05                    AML   AML
     comp=E,5580µm,0.1s
AM05                    AML   AML
     comp=N,590µm,0.1s
T1256 Bolognola (MC)  0.26   5 P     Pb    09 11 13.0 -0.5
T1256                   S     Sb    09 11 16.9 -1.2
T1256                   AML   AML
     comp=E,2735µm,0.4s
T1256                   AML   AML
     comp=N,2960µm,0.3s
CAMP Campotosto       0.26 143 ⇑P    Pg    09 11 12.5 +0.5
CAMP                    S     Sg    09 11 16.6 +1.0
CAMP                    AML   AML
     comp=N,1056µm,0.6s
CAMP                    AML   AML
     comp=E,1390µm,0.8s
CAMP                    AML   AML
     comp=N,1057µm,0.6s
CAMP                    AML   AML
     comp=N,1057µm,1.4s
FDMO Fiordimonte      0.30 345 P     Pg    09 11 12.9 +0.3
FDMO                    S     Sg    09 11 17.8 +1.1
FDMO                    AML   AML
     comp=E,2670µm,0.3s
FDMO                    AML   AML
     comp=N,2775µm,0.2s
T1247 Pizzolo (AQ)    0.32 166 P     Pg    09 11 13.4 +0.5
T1247                   S     Sb    09 11 18.5 -1.0
T1247                   AML   AML
     comp=E,2975µm,1.1s
T1247                   AML   AML
     comp=N,3480µm,1.3s
T1247                   AML   AML
     comp=N,3485µm,1.3s
T1247                   AML   AML
     comp=E,2970µm,1.1s
T1247                   AML   AML
     comp=N,3485µm,0.7s
T1247                   AML   AML
     comp=E,2970µm,0.9s
TERO Teramo           0.33 112 P     Pg    09 11 13.5 +0.3
TERO                    S     Sb    09 11 18.8 -1.1
TERO                    AML   AML
     comp=N,1465µm,0.3s
TERO                    AML   AML
     comp=E,1470µm,0.3s
TERO                    AML   AML
     comp=N,1540µm,0.4s
TERO                    AML   AML
     comp=E,1605µm,0.3s
TERO                    AML   AML
     comp=N,1464µm,0.3s
T1211 Morro Reatino   0.33 230 P     Pg    09 11 13.6 +0.4
T1211                   S     Sb    09 11 19.0 -1.0
T1211                   AML   AML
     comp=E,2475µm,0.1s
T1211                   AML   AML
     comp=N,3765µm,0.2s
T1211                   AML   AML
     comp=E,2460µm,0.1s
T1211                   AML   AML
     comp=N,3800µm,0.2s
T1211                   AML   AML
     comp=E,2475µm,0.1s
T1211                   AML   AML
     comp=N,3765µm,0.2s
T1211                   AML   AML
     comp=E,2462µm,0.1s
T1211                   AML   AML
     comp=N,3795µm,0.2s
GUMA Gualdo di Mace   0.33  18 P     Pg    09 11 13.9 +0.7
GUMA                    S     Sb    09 11 19.7 -0.3
GUMA                    AML   AML
     comp=N,6075µm,0.5s
GUMA                    AML   AML
     comp=E,11050µm,0.3s
GUMA                    AML   AML
     comp=N,6595µm,1.3s
GUMA                    AML   AML
     comp=N,6595µm,0.7s
GUMA                    AML   AML
     comp=N,6075µm,1.5s
GUMA                    AML   AML
     comp=E,9460µm,0.3s
ARRO Arrone           0.36 242 ⇑P    Pg    09 11 14.2 +0.5
ARRO                    S     Sg    09 11 19.4 +0.9
ARRO                    AML   AML
     comp=E,1260µm,0.2s
ARRO                    AML   AML
     comp=N,1650µm,0.2s
GIGS Gran Sasso       0.41 137 P     Pg    09 11 14.7 +0.1
GIGS                    S     Sg    09 11 21.0 +1.0
GIGS                    AML   AML
     comp=N,361µm,1.5s
GIGS                    AML   AML
     comp=N,360µm,1.5s
GIGS                    AML   AML
     comp=E,367µm,0.1s
OFFI Offida           0.41  62 P     Pb    09 11 15.7 -0.2
OFFI                    AML   AML
     comp=N,2615µm,0.5s
OFFI                    AML   AML
     comp=E,1560µm,1.5s
OFFI                    AML   AML
     comp=E,1560µm,0.5s
OFFI                    AML   AML
     comp=N,2615µm,1.5s
AQU  L'Aquila         0.42 159 P     Pg    09 11 15.2 +0.3
AQU                     S     Sb    09 11 21.6 -1.0
AQU                     AML   AML
     comp=E,770µm,0.4s
AQU                     AML   AML
     comp=N,1035µm,0.7s
AQU                     AML   AML
     comp=N,1025µm,0.7s
AQU                     AML   AML
     comp=N,1037µm,0.7s
AQU                     AML   AML
     comp=E,776µm,1.1s
AQU                     AML   AML
     comp=E,776µm,0.9s
AQU                     AML   AML
     comp=E,770µm,0.4s
SEF1 Sefro            0.44 336 ⇓P    Pg    09 11 15.5 +0.3
CESX Cesi             0.47 253 P     Pg    09 11 15.9 +0.1
CESX                    AML   AML
     comp=E,736µm,1.0s
CESX                    AML   AML
     comp=N,720µm,0.5s
CESX                    AML   AML
     comp=E,736µm,1.0s
FIAM Fiamignano       0.48 187 ⇑P    Pg    09 11 16.2 +0.2
FIAM                    AML   AML
     comp=E,624µm,0.2s
FIAM                    AML   AML
     comp=N,726µm,1.3s
FIAM                    AML   AML
     comp=N,726µm,0.7s
ASSB Assisi San Ben   0.49 307 P     Pg    09 11 16.2  0.0
ASSB                    S     Sb    09 11 24.1 -0.6
ASSB                    AML   AML
     comp=N,850µm,0.9s
ASSB                    AML   AML
     comp=N,850µm,1.1s
ASSB                    AML   AML
     comp=E,710µm,0.2s
TRTR Tortoreto Alta   0.53  83 P     Pb    09 11 18.2 +0.2
SNTG Esanatoglia      0.54 340 ⇓P    Pg    09 11 17.2 +0.1
SNTG                    S     Sb    09 11 26.0 -0.1
SNTG                    AML   AML
     comp=N,685µm,0.2s
SNTG                    AML   AML
     comp=E,598µm,0.7s
SNTG                    AML   AML
     comp=E,634µm,0.7s
SNTG                    AML   AML
     comp=N,724µm,0.2s
FAGN Fagnano          0.56 149 ⇓P    Pg    09 11 16.8 -0.7
FAGN                    AML   AML
     comp=E,1155µm,0.3s
FAGN                    AML   AML
     comp=N,1510µm,0.4s
EL6  Elcito           0.59 353 ⇑P    Pg    09 11 17.9 -0.1
EL6                     S     Sb    09 11 29.0 +1.6
EL6                     AML   AML
     comp=E,1565µm,0.1s
EL6                     AML   AML
     comp=N,1270µm,0.4s
VCEL Villa Celiera    0.59 126 P     Pb    09 11 18.8 -0.3
VCEL                    AML   AML
     comp=E,1048µm,0.3s
VCEL                    AML   AML
     comp=N,898µm,1.3s
VCEL                    AML   AML
     comp=N,894µm,1.3s
VCEL                    AML   AML
     comp=N,894µm,0.7s
VCEL                    AML   AML
     comp=E,1044µm,0.3s
ATCC AVT- Casa Cast   0.60 317 ⇓P    Pg    09 11 18.3 +0.1
ATCC                    S     Sb    09 11 28.0 +0.3
ATCC                    AML   AML
     comp=E,556µm,1.6s
ATCC                    AML   AML
     comp=N,674µm,0.3s
ATCC                    AML   AML
     comp=E,556µm,0.4s
FOSV Fossato di Vic   0.63 330 P     Pg    09 11 17.6 -1.3
FOSV                    AML   AML
     comp=N,564µm,0.4s
FOSV                    AML   AML
     comp=E,436µm,0.5s
T0110 Collepietro     0.68 140 ⇓P    Pg    09 11 19.7  0.0
T0110                   AML   AML
     comp=E,696µm,0.3s
T0110                   AML   AML
     comp=N,771µm,1.1s
T0110                   AML   AML
     comp=E,695µm,0.3s
T0110                   AML   AML
     comp=N,771µm,0.9s
PP3  Marolino         0.70  26 P     Pb    09 11 21.0 +0.1
PP3                     AML   AML
     comp=N,2855µm,0.4s
PP3                     AML   AML
     comp=N,2770µm,0.4s
PP3                     AML   AML
     comp=E,2325µm,0.4s
PP3                     AML   AML
     comp=E,2215µm,0.4s
MMUR Monte Murano     0.71 348 ⇓P    Pn    09 11 23.4 +0.6
MURB Monte Urbino     0.71 317 P     Pg    09 11 20.5 +0.1
MURB                    S     Sn    09 11 33.0 -0.9
MURB                    AML   AML
     comp=N,1445µm,1.0s
MURB                    AML   AML
     comp=E,1035µm,0.3s
MURB                    AML   AML
     comp=N,1445µm,1.0s
MURB                    AML   AML
     comp=E,1035µm,1.7s
SRES S.Oreste - Sor   0.72 225 ⇓P    Pb    09 11 21.0 -0.2
SRES                    AML   AML
     comp=E,277µm,0.2s
```

SRES				AML	AML	
	comp=N,332μm,0.5s					
ATTE	**AVT- Monte Tez**	**0.76 306**	⇑P		Pn	09 11 23.7 +0.2
ATTE				AML	AML	
	comp=N,162μm,0.3s					
ATTE				AML	AML	
	comp=E,160μm,1.0s					
ATTE				AML	AML	
	comp=E,160μm,1.0s					
ATTE				AML	AML	
	comp=N,162μm,1.7s					
ARVD	**Arcevia**	**0.77 346**	⇓P		Pg	09 11 21.4 -0.1
ARVD				S	Sb	09 11 34.0 +1.3
ARVD				AML	AML	
	comp=E,338μm,0.2s					
ARVD				AML	AML	
	comp=N,240μm,0.7s					
CERT	**Cerreto**	**0.81 191**	⇑P		Pb	09 11 22.6 -0.2
CERT				AML	AML	
	comp=E,432μm,0.4s					
CERT				AML	AML	
	comp=N,459μm,0.3s					
MGAB	**Montegabbione**	**0.81 282**	⇓P		Pb	09 11 23.5 +0.7
MGAB				AML	AML	
	comp=E,363μm,1.3s					
MGAB				AML	AML	
	comp=N,568μm,0.3s					
MGAB				AML	AML	
	comp=E,347μm,1.3s					
MGAB				AML	AML	
	comp=N,559μm,0.3s					
MGAB				AML	AML	
	comp=E,347μm,0.7s					
MGAB				AML	AML	
	comp=E,363μm,0.7s					
FRON	**Frontone**	**0.84 336**	⇓P		Pg	09 11 22.6 -0.3
FRON				AML	AML	
	comp=E,276μm,1.0s					
FRON				AML	AML	
	comp=N,319μm,0.8s					
FRON				AML	AML	
	comp=N,319μm,1.2s					
AOI	**Ancona**	**0.86 20**	⇓P		Pb	09 11 23.4 -0.1
AOI				AML	AML	
	comp=E,340μm,1.2s					
AOI				AML	AML	
	comp=N,279μm,1.1s					
AOI				AML	AML	
	comp=E,340μm,0.8s					
ATVO	**AVT- Monte Val**	**0.86 318**	⇑P		Pg	09 11 23.1 0.0
ATVO				AML	AML	
	comp=E,191μm,0.6s					
ATVO				AML	AML	
	comp=N,146μm,1.1s					
ATVO				AML	AML	
	comp=N,146μm,0.9s					
INTR	**Introdacqua**	**0.90 144**	AML		AML	
	comp=N,411μm,1.5s					
INTR				AML	AML	
	comp=E,196μm,0.9s					
PIEI	**Pieia**	**0.92 329**	⇑P		Pg	09 11 24.2 -0.2
PIEI				AML	AML	
	comp=N,157μm,0.3s					
PIEI				AML	AML	
	comp=E,212μm,1.5s					
PIEI				AML	AML	
	comp=E,212μm,0.5s					
MPAG	**Monte Paganucc**	**0.94 340**	⇑P		Pg	09 11 24.5 -0.2
MPAG				S	Sn	09 11 40.0 +0.6
MPAG				AML	AML	
	comp=N,250μm,0.5s					
MPAG				AML	AML	
	comp=E,396μm,0.2s					
MPAG				AML	AML	
	comp=N,250μm,1.5s					
MPAG				AML	AML	
	comp=E,396μm,1.8s					
SACS	**San Casciano d**	**0.95 277**	⇑P		Pn	09 11 26.8 +0.8
SACS				AML	AML	
	comp=N,146μm,1.4s					
SACS				AML	AML	
	comp=E,144μm,0.7s					
SACS				AML	AML	
	comp=N,146μm,0.6s					
SACS				AML	AML	
	comp=E,144μm,1.3s					
FSSB	**Fossombrone**	**0.99 342**	P		Pg	09 11 25.6 -0.1
FSSB				S	Sn	09 11 42.0 +1.3
FSSB				AML	AML	
	comp=N,1185μm,0.4s					
FSSB				AML	AML	
	comp=E,738μm,0.5s					
BADI	**Badiali**	**1.03 318**	⇓P		Pb	09 11 26.7 +0.2
CAFI	**Castiglion Fio**	**1.07 303**	⇓P		Pn	09 11 28.0 +0.3
PE3	**Peglio**	**1.08 332**	P		Pg	09 11 24.8 -2.5
PE3				AML	AML	
	comp=N,8μm,1.4s					
PE3				AML	AML	
	comp=E,7μm,1.0s					
GIUL	**Giuliano Di Ro**	**1.19 178**	⇓P		Pg	09 11 30.9 +1.5
GIUL				AML	AML	
	comp=E,83μm,1.2s					
GIUL				AML	AML	
	comp=N,114μm,0.5s					
GIUL				AML	AML	
	comp=E,83μm,0.8s					
VITU	**Vitulano (BN)**	**1.89 145**	P		Pb	09 11 41.0 -0.3
VITU				S	Sg	09 12 07.0 -0.5
VITU				AML	AML	
	comp=E,414μm,1.6s					
VITU				AML	AML	
	comp=N,450μm,1.6s					
IMOL	**Imola, Italy**	**1.93 327**	S		Sg	09 12 10.0 +1.5
NDIM	**Novi di Modena**	**2.71 323**	S		Sn	09 12 22.0 -1.0

*IDC **31** 09:13:44.5±1.1, 28°.82N×139°.66E, h388km±24km, mb3.1/5, mbtmp3.9/8, Error ellipse: s-maj=66.5km s-min=13.1km az=76.0*

ISC 31 09:13:44.9±0.9, **28°.9N**±0°.1×**139°.8E**±0°.2, **h400**km, **n8,** σ**0**67/9, **mb3.4**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.71 129**		P	**Pn**	**09 14 46.0**	**0.0**
	38nm,0.3s,baz=5.3,slow=13,SNR=45						
JCJ				S	**S**	**09 15 34.6**	**-0.6**
	122nm,0.3s,baz=301,slow=21,SNR=17						
MJAR	**Matsushiro Arr**	**7.79 350**		P	**P**	**09 15 37.8**	**-0.1**
	0.7nm,0.3s,baz=155,slow=9.2,SNR=2.4						
USRK	**Ussuriysk Ar.**	**16.55 340**		P	**P**	**09 17 14.1**	**+0.1**
	7.3nm,0.5s,baz=142,slow=9.6,SNR=15						
MKAR	**Makanchi Array**	**47.76 308**		P	**P**	**09 21 42.9**	**-0.8**
	0.3nm,0.3s,baz=80,slow=11,SNR=7.8						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**48.79 187**		P	**P**	**09 21 51.9**	**+0.3**
	0.6nm,0.3s,baz=1.8,slow=7.7,SNR=39						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**52.52 187**		P	**P**	**09 22 19.4**	**+0.3**
	0.3nm,0.4s,baz=15,slow=13,SNR=15						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**71.20 340**		P	**P**	**09 24 22.5**	**+1.2**
	3.2nm,1.1s,baz=57,slow=4.5,SNR=3.6						
	3.2nm,1.1s						
FINES	**FINESS Array B**	**75.46 333**		P	**P**	**09 24 45.7**	**-0.2**
	0.8nm,0.4s,baz=91,slow=7.6,SNR=6.1						
	0.8nm,0.4s						

*IDC **31** 09:22:45.5±1.8, 29°.69N×42°.75W, h0km, mb3.8/7, mbtmp3.8/7, MS3.3/15, Error ellipse: s-maj=53.4km s-min=25.3km az=4.0*

ISC 31 09:22:47.6±1.5, **29°.7N**±0°.3×**42°.8W**±0°.2, **h14**km, **n25,** σ**0**56/7, **mb3.8**/7, **MS3.3**/15, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**24.24 247**		LR	LR	09 38 13.6	
	comp=Z,14nm,18.9s,baz=88,slow=38						
BBTS	**Babate**	**28.42 116**		LR	LR	09 39 18.8	
	comp=Z,78nm,18.2s,baz=326,slow=35						
SCHQ	**Schefferville**	**30.52 332**		LR	LR	09 39 42.2	
	comp=Z,36nm,21.7s,baz=190,slow=33						
SADO	**Sadowa**	**32.35 308**		LR	LR	09 40 02.3	
	comp=Z,51nm,21.5s,baz=58,slow=32						
MDT	**Midelt**	**32.65 75**		LR	LR	09 39 35.1	
	comp=Z,45nm,18.8s,baz=310,slow=31						
TKL	**Tuckaleechee C**	**34.86 291**		LR	LR	09 40 56.5	
	comp=Z,26nm,21.3s,baz=22,slow=31						
DBIC	**Dimbokro**	**42.35 115**		LR	LR	09 45 37.6	
	comp=Z,41nm,21.5s,baz=265,slow=32						
TORD	**Torodi Ar. Bea**	**44.23 102**		P	**P**	**09 30 56.9**	**+0.1**
	0.6nm,0.7s,baz=293,slow=7.8,SNR=3.6						
	0.6nm,0.7s						
H10N2	**ASCENSION HYDR**	**46.15 139**		T	T	10 20 17.6	
	baz=325,slow=75,SNR=529						
H10N3	**ASCENSION HYDR**	**46.15 139**		T	T	10 20 19.8	
	baz=325,slow=75,SNR=420						
H10N1	**ASCENSION HYDR**	**46.16 139**		T	T	10 20 23.6	
	baz=325,slow=75,SNR=599						
H10S3	**ASCENSION HYDR**	**46.97 140**		T	T	10 21 17.8	
	baz=255,slow=74,SNR=198						
H10S2	**ASCENSION HYDR**	**46.98 140**		T	T	10 21 16.5	
	baz=325,slow=74,SNR=83						
TXAR	**Lajitas Array**	**52.45 286**		P	**P**	**09 31 59.9**	**-0.2**
	0.3nm,1.0s,baz=82,slow=6.6,SNR=2.5						
TXAR				LR	LR	09 52 11.6	
	comp=Z,27nm,18.7s,baz=314,slow=34						
	0.3nm,1.0s						
PDAR	**Pinedale Array**	**54.15 303**		P	**P**	**09 32 12.4**	**-0.2**
	1.3nm,0.9s,baz=64,slow=6.8,SNR=7.4						
PDAR				LR	LR	09 54 03.9	
	comp=Z,54nm,19.2s,baz=70,slow=35						
	1.3nm,0.9s						
FINES	**FINESS Array B**	**54.34 33**		P	**P**	**09 32 13.5**	**+0.1**
	4.1nm,1.0s,baz=264,slow=5.7,SNR=4.8						
	4.1nm,1.0s						
ARCES	**ARCESS Array B**	**54.94 24**		P	**P**	**09 32 17.2**	**-0.5**
	3.3nm,0.9s,baz=318,slow=3.4,SNR=4.4						
	3.3nm,0.9s						
AKASG	**Malin Array Be**	**56.54 46**		P	**P**	**09 32 29.2**	**-0.2**
	0.3nm,0.3s,baz=272,slow=7.4,SNR=4.0						
	0.3nm,0.3s						
NEW	**Newport**	**58.46 311**		LR	LR	09 56 04.0	
	comp=Z,24nm,20.6s,baz=89,slow=34						
ELK	**Elko**	**58.72 302**		LR	LR	09 56 43.9	
	comp=Z,43nm,19.3s,baz=240,slow=35						
PFO	**Pinyon Flats O**	**61.63 294**		LR	LR	09 57 46.1	
	comp=Z,36nm,18.8s,baz=153,slow=34						
INK	**Inuvik**	**63.07 335**		LR	LR	09 58 27.0	
	comp=Z,63nm,19.1s,baz=252,slow=34						
DLBC	**Dease Lake**	**63.85 324**		LR	LR	10 01 00.6	
	comp=Z,83nm,18.2s,baz=331,slow=36						
YBH	**Yreka Blue Hor**	**63.88 305**		LR	LR	10 00 30.2	
	comp=Z,20nm,18.6s,baz=346,slow=36						
ILAR	**Eielson Array**	**69.27 334**		P	**P**	**09 33 54.9**	**+0.9**
	0.6nm,1.0s,baz=89,slow=2.5,SNR=4.1						
	0.6nm,1.0s						

*IDC **31** 09:34:16.3±1.9, 42°.84N×13°.62E, h0km, mb3.6/1, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=53.5km s-min=15.1km az=98.0*

*ROM **31** 09:34:17.9±0.0, 42°.819N±0°.002×13°.156E±0°.003, h10km, ML3.6/51, Error ellipse: s-maj=0.2km s-min=0.1km az=62.0*

*LDG **31** 09:34:17.9±0.1, 42°.85N×13°.11E, h9km, Ml3.2/23, Error ellipse: s-maj=2.8km s-min=1.9km az=45.0*

*PRU **31** 09:34:19.5±0.0, 42°.81N×13°.43E, h10km*

ISC 31 09:34:18.0±0.7, **42°.81N**±0°.02×**13°.14E**±0°.02, **h15**km±4km, **n172,** σ**1**9**75**/182, **2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**38**	P	**Pg**	**09 34 20.1**	**-0.8**
T1245				S	**Sg**	**09 34 21.3**	**-1.7**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.12**	**312**	P	**Pg**	**09 34 21.2**	**-0.2**
T1216				S	**Sg**	**09 34 23.4**	**-0.4**
T1216				AML	AML		
	comp=E,76350μm,0.4s						
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
	comp=E,76400μm,0.4s						
T1216				AML	AML		
T1244	**Arquata del Tr**	**0.13**	**115**	P	**Pg**	**09 34 21.5**	**-0.1**
T1244				S	**Sg**	**09 34 24.0**	**0.0**
MMO1	**Montemonaco**	**0.16**	**57**	P	**Pg**	**09 34 21.8**	**-0.3**
MMO1				S	**Sg**	**09 34 24.3**	**-0.6**
T1201	**Domo (RI)**	**0.17**	**152**	⇓P	**Pg**	**09 34 22.7**	**+0.4**
T1201				S	**Sg**	**09 34 25.8**	**+0.7**
T1217	**Poggiodomo (PG**	**0.18**	**237**	P	**Pg**	**09 34 22.7**	**+0.3**
T1217				S	**Sg**	**09 34 26.0**	**+0.7**
T1217				AML	AML		
	comp=E,51300μm,1.0s						
T1217				AML	AML		
	comp=E,48600μm,1.0s						
T1217				AML	AML		
	comp=N,45900μm,1.1s						
T1217				AML	AML		
	comp=N,46850μm,1.1s						
T1217				AML	AML		
	comp=E,48650μm,1.1s						
T1217				AML	AML		
	comp=N,46900μm,1.1s						
T1217				AML	AML		
	comp=E,48600μm,1.1s						
T1217				AML	AML		
	comp=N,45850μm,1.1s						
T1217				AML	AML		
	comp=E,51350μm,1.1s						
T1204	**Amatrice, Fraz**	**0.19**	**136**	P	**Pg**	**09 34 22.5**	**0.0**
T1204				S	**Sg**	**09 34 25.6**	**+0.1**
T1204				AML	AML		
	comp=E,93300μm,0.8s						
T1204				AML	AML		
	comp=N,73950μm,0.7s						
T1204				AML	AML		
	comp=E,93650μm,0.8s						
T1204				AML	AML		
	comp=N,73900μm,0.7s						
T1204				AML	AML		
	comp=E,93400μm,0.8s						
T1215	**Vallo di Nera,**	**0.20**	**267**	P	**Pg**	**09 34 22.9**	**+0.3**
T1215				S	**Sg**	**09 34 26.3**	**+0.6**
T1215				AML	AML		
	comp=N,20400μm,0.3s						
T1215				AML	AML		
	comp=E,14350μm,0.2s						
T1215				AML	AML		
	comp=N,20450μm,0.3s						
T1215				AML	AML		
	comp=E,14500μm,0.2s						
T1215				AML	AML		
	comp=N,20400μm,0.3s						
T1215				AML	AML		
	comp=N,20400μm,0.3s						
T1215				AML	AML		
	comp=E,14450μm,0.2s						
T1215				AML	AML		
	comp=N,20450μm,0.3s						
T1215				AML	AML		
	comp=E,14350μm,0.2s						
T1256	**Bolognola (MC)**	**0.20**	**18**	P	**Pg**	**09 34 22.5**	**-0.2**
T1256				S	**Sg**	**09 34 25.8**	**-0.2**
T1256				AML	AML		
	comp=N,55150μm,1.5s						
T1256				AML	AML		
	comp=E,81300μm,0.7s						
T1256				AML	AML		
	comp=E,81350μm,0.7s						
T1256				AML	AML		
	comp=E,81250μm,0.7s						
T1256				AML	AML		
	comp=N,56800μm,1.5s						
T1241	**Roccafluvione,**	**0.22**	**78**	P	**Pg**	**09 34 22.8**	**-0.1**
T1241				S	**Sg**	**09 34 26.4**	**+0.2**
T1241				AML	AML		
	comp=N,43650μm,0.5s						
T1241				AML	AML		
	comp=E,56650μm,0.4s						
T1241				AML	AML		
	comp=N,43600μm,0.5s						
T1241				AML	AML		
	comp=E,56600μm,0.4s						
LNSS	**Leonessa**	**0.22**	**200**	P	**Pg**	**09 34 23.0**	**0.0**
LNSS				S	**Sg**	**09 34 27.2**	**+0.9**
AM05	**Amandola Campo**	**0.23**	**43**	P	**Pg**	**09 34 23.0**	**-0.1**
AM05				S	**Sg**	**09 34 26.3**	**-0.2**
AM05				AML	AML		
	comp=N,15250μm,0.4s						
AM05				AML	AML		
	comp=E,65400μm,0.7s						
AM05				AML	AML		
	comp=N,5705μm,1.2s						
AM05				AML	AML		
	comp=E,65450μm,0.7s						
AM05				AML	AML		
	comp=N,15300μm,0.4s						
AM05				AML	AML		
	comp=E,18650μm,0.4s						
AM05				AML	AML		
	comp=N,5700μm,1.2s						
FDMO	**Fiordimonte**	**0.23**	**350**	P	**Pg**	**09 34 23.0**	**-0.1**
FDMO				S	**Sg**	**09 34 26.6**	**+0.1**
FDMO				AML	AML		
	comp=N,21800μm,0.3s						
FDMO				AML	AML		
	comp=E,24400μm,1.3s						
SMA1	**SAN MARTINO**	**0.23**	**141**	P	**Pg**	**09 34 23.3**	**+0.2**
T1243	**Rocca Santa Ma**	**0.25**	**117**	P	**Pg**	**09 34 23.4**	**-0.1**
T1243				S	**Sg**	**09 34 27.5**	**+0.2**
RM33	**Pellescritta (**	**0.31**	**170**	⇓P	**Pg**	**09 34 24.7**	**+0.3**
RM33				S	**Sg**	**09 34 29.8**	**+1.0**
RM33				AML	AML		
	comp=N,30600μm,1.0s						
RM33				AML	AML		
	comp=E,27100μm,1.4s						
RM33				AML	AML		
	comp=N,29550μm,0.9s						
RM33				AML	AML		
	comp=E,26850μm,1.4s						
RM33				AML	AML		
	comp=E,26800μm,1.4s						
RM33				AML	AML		
	comp=E,27050μm,1.4s						
CAMP	**Campotosto**	**0.34**	**144**	P	**Pg**	**09 34 25.1**	**+0.1**
CAMP				S	**Sb**	**09 34 30.6**	**-0.5**
T1246	**Crognaleto (TE**	**0.35**	**131**	P	**Pg**	**09 34 25.1**	**0.0**
T1246				S	**Sb**	**09 34 30.5**	**-0.8**
T1211	**Morro Reatino**	**0.35**	**217**	P	**Pg**	**09 34 25.6**	**+0.5**
T1211				S	**Sb**	**09 34 31.4**	**+0.1**
T1211				AML	AML		
	comp=E,17800μm,0.4s						
T1211				AML	AML		
	comp=N,36400μm,1.4s						
T1211				AML	AML		
	comp=E,18350μm,0.4s						
T1211				AML	AML		
	comp=N,35450μm,1.4s						
T1211				AML	AML		
	comp=E,17750μm,0.4s						
T1211				AML	AML		
	comp=N,35400μm,1.4s						
ARRO	**Arrone**	**0.36**	**230**	P	**Pg**	**09 34 25.8**	**+0.5**
ARRO				S	**Sb**	**09 34 31.6**	**0.0**
ARRO				AML	AML		
	comp=E,15050μm,0.3s						
ARRO				AML	AML		
	comp=N,14900μm,0.8s						
ARRO				AML	AML		
	comp=E,15100μm,0.3s						
T1247	**Pizzolo (AQ)**	**0.39**	**162**	P	**Pb**	**09 34 26.1**	**-0.5**
T1247				S	**Sb**	**09 34 32.4**	**0.0**
T1247				AML	AML		
	comp=E,25150μm,0.2s						
T1247				AML	AML		
	comp=N,32800μm,0.3s						
TERO	**Teramo**	**0.39**	**119**	P	**Pg**	**09 34 25.7**	**-0.1**
TERO				S	**Sg**	**09 34 31.6**	**+0.4**
TERO				AML	AML		
	comp=E,24100μm,0.6s						
TERO				AML	AML		
	comp=N,34350μm,0.5s						
TERO				AML	AML		
	comp=N,35850μm,0.5s						
TERO				AML	AML		
	comp=N,34400μm,0.5s						
TERO				AML	AML		
	comp=E,26050μm,0.6s						
MNTP	**Montappone**	**0.41**	**36**	P	**Pg**	**09 34 26.9**	**+0.8**
MNTP				AML	AML		
	comp=N,17550μm,0.3s						
MNTP				AML	AML		
	comp=N,17600μm,0.3s						
MNTP				AML	AML		
	comp=E,23550μm,1.6s						
OFFI	**Offida**	**0.42**	**73**	P	**Pg**	**09 34 27.2**	**+0.8**
OFFI				AML	AML		
	comp=E,29250μm,0.5s						
OFFI				AML	AML		
	comp=N,33750μm,0.6s						
ASSB	**Assisi San Ben**	**0.42**	**303**	P	**Pg**	**09 34 26.6**	**+0.1**
ASSB				S	**Sg**	**09 34 33.0**	**+0.8**
ASSB				AML	AML		
	comp=E,19250μm,0.2s						
ASSB				AML	AML		
	comp=N,15450μm,0.3s						
CESX	**Cesi**	**0.46**	**244**	P	**Pg**	**09 34 27.4**	**+0.3**
CESX				S	**Sg**	**09 34 34.2**	**+0.9**
CESX				AML	AML		
	comp=E,8075μm,0.7s						
CESX				AML	AML		
	comp=N,11800μm,0.6s						
GIGS	**Gran Sasso**	**0.48**	**139**	P	**Pg**	**09 34 27.2**	**-0.3**
GIGS				S	**Sb**	**09 34 34.3**	**-0.8**
AQU	**L'Aquila**	**0.50**	**157**	P	**Pg**	**09 34 28.0**	**+0.2**
AQU				S	**Sb**	**09 34 35.7**	**+0.2**
AQU				AML	AML		
	comp=N,9595μm,1.2s						
AQU				AML	AML		
	comp=N,10320μm,1.2s						
AQU				AML	AML		
	comp=E,9155μm,0.5s						
AQU				AML	AML		
	comp=E,8775μm,0.5s						
EL6	**Elcito**	**0.52**	**357**	P	**Pg**	**09 34 28.1**	**-0.2**
EL6				S	**Sg**	**09 34 35.7**	**+0.5**
FIAM	**Fiamignano**	**0.54**	**182**	P	**Pg**	**09 34 28.7**	**0.0**
FIAM				S	**Sb**	**09 34 37.1**	**+0.2**
FOSV	**Fossato di Vic**	**0.56**	**330**	P	**Pg**	**09 34 28.9**	**-0.1**
FOSV				S	**Sg**	**09 34 36.8**	**+0.4**
FOSV				AML	AML		
	comp=E,8255μm,1.3s						
FOSV				AML	AML		
	comp=N,9800μm,0.3s						
FOSV				AML	AML		
	comp=N,9795μm,0.3s						
CING	**Cingoli**	**0.57**	**4**	P	**Pg**	**09 34 28.9**	**-0.3**
TRTR	**Tortoreto Alta**	**0.57**	**90**	P	**Pg**	**09 34 28.9**	**-0.2**
TRTR				AML	AML		
	comp=E,24550μm,0.4s						
TRTR				AML	AML		
	comp=N,22150μm,0.5s						
FAGN	**Fagnano**	**0.64**	**149**	P	**Pg**	**09 34 30.0**	**-0.4**
FAGN				S	**Sb**	**09 34 39.9**	**+0.3**
FAGN				AML	AML		
	comp=E,15950μm,0.4s						
FAGN				AML	AML		
	comp=N,13800μm,0.3s						
PP3	**Marolino**	**0.66**	**31**	P	**Pg**	**09 34 30.9**	**0.0**
PP3				AML	AML		
	comp=N,16700μm,0.5s						
PP3				AML	AML		
	comp=N,18300μm,1.4s						
PP3				AML	AML		
	comp=E,53350μm,0.4s						
PP3				AML	AML		
	comp=E,53700μm,0.4s						
VCEL	**Villa Celiera**	**0.66**	**129**	P	**Pg**	**09 34 30.9**	**-0.1**
VCEL				S	**Sb**	**09 34 40.7**	**+0.3**
VCEL				AML	AML		
	comp=E,9305μm,1.3s						
VCEL				AML	AML		
	comp=N,9860μm,1.4s						
VCEL				AML	AML		
	comp=N,9900μm,1.4s						
VCEL				AML	AML		
	comp=E,9280μm,1.3s						
ATSC	**Scheggia e Pas**	**0.70**	**332**	P	**Pg**	**09 34 31.4**	**-0.2**
ARVD	**Arcevia**	**0.70**	**348**	P	**Pg**	**09 34 31.4**	**-0.3**
ARVD				S	**Sg**	**09 34 42.1**	**+1.1**
SRES	**S.Oreste - Sor**	**0.74**	**219**	P	**Pg**	**09 34 32.7**	**+0.3**
SRES				S	**Sb**	**09 34 42.9**	**+0.4**

SRES			AML	AML		
	comp=E,2855µm,1.6s					
SRES			AML	AML		
	comp=N,3440µm,0.4s					
T0110	**Collepietro**	**0.75 141**	P	**Pg**	**09 34 32.0**	**-0.6**
T0110			S	**Sb**	**09 34 42.6**	**-0.3**
T0110			AML	AML		
	comp=E,9035µm,0.4s					
T0110			AML	AML		
	comp=N,10060µm,0.4s					
MGAB	**Montegabbione**	**0.76 278**	P	**Pg**	**09 34 33.1**	**+0.3**
MGAB			AML	AML		
	comp=E,6520µm,0.5s					
MGAB			AML	AML		
	comp=N,10430µm,0.5s					
MGAB			AML	AML		
	comp=N,10235µm,0.5s					
MGAB			AML	AML		
	comp=E,7290µm,0.5s					
FRON	**Frontone**	**0.77 337**	P	**Pg**	**09 34 32.5**	**-0.4**
FRON			S	**Sg**	**09 34 43.3**	**+0.2**
FRON			AML	AML		
	comp=N,4500µm,0.6s					
FRON			AML	AML		
	comp=E,4355µm,0.8s					
FRON			AML	AML		
	comp=N,4495µm,0.6s					
PTQR	**Pietraquaria**	**0.81 166**	P	**Pg**	**09 34 33.5**	**-0.3**
PTQR			AML	AML		
	comp=E,1405µm,0.3s					
PTQR			AML	AML		
	comp=N,1315µm,0.6s					
MTCE	**Montecelio**	**0.84 201**	P	**Pg**	**09 34 34.4**	**+0.1**
MTCE			S	**Sb**	**09 34 45.5**	**+0.1**
MTCE			AML	AML		
	comp=N,2230µm,1.0s					
MTCE			AML	AML		
	comp=E,3770µm,0.6s					
PIEI	**Pieia**	**0.85 329**	P	**Pg**	**09 34 34.1**	**-0.3**
PIEI			S	**Sg**	**09 34 46.2**	**+0.6**
PIEI			AML	AML		
	comp=E,2770µm,1.0s					
PIEI			AML	AML		
	comp=N,1730µm,0.3s					
CERT	**Cerreto**	**0.87 188**	P	**Pg**	**09 34 34.5**	**-0.3**
CERT			AML	AML		
	comp=E,4855µm,0.4s					
CERT			AML	AML		
	comp=N,3350µm,0.9s					
SENI	**Senigallia**	**0.90 4**	P	**Pg**	**09 34 35.5**	**+0.2**
SACS	**San Casciano d**	**0.91 273**	P	**Pg**	**09 34 35.3**	**-0.2**
SACS			AML	AML		
	comp=N,3620µm,0.6s					
SACS			AML	AML		
	comp=E,2530µm,1.4s					
SACS			AML	AML		
	comp=N,3455µm,0.6s					
SACS			AML	AML		
	comp=E,2370µm,1.6s					
APEC	**Apecchio**	**0.91 325**	P	**Pg**	**09 34 35.3**	**-0.4**
FSSB	**Fossombrone**	**0.92 343**	P	**Pg**	**09 34 35.2**	**-0.5**
FSSB			AML	AML		
	comp=E,8125µm,0.5s					
FSSB			AML	AML		
	comp=N,10600µm,0.3s					
CAFI	**Castiglion Fio**	**1.00 301**	P	**Pg**	**09 34 37.0**	**-0.3**
CAFI			AML	AML		
	comp=E,3330µm,0.5s					
CAFI			AML	AML		
	comp=N,3475µm,0.7s					
CAFI			AML	AML		
	comp=E,3375µm,0.5s					
CAFI			AML	AML		
	comp=N,3480µm,0.7s					
CAFI			AML	AML		
	comp=N,3595µm,0.7s					
LATE	**Laterza**	**1.00 259**	P	**Pg**	**09 34 37.4**	**0.0**
VVLD	**Villa Vallelon**	**1.00 159**	P	**Pg**	**09 34 36.7**	**-0.7**
VVLD			AML	AML		
	comp=E,1715µm,1.3s					
VVLD			AML	AML		
	comp=N,2200µm,0.4s					
GUAR	**Guarcino**	**1.02 173**	AML	AML		
	comp=E,2145µm,1.4s					
GUAR			AML	AML		
	comp=N,3540µm,0.6s					
RMP	**Rome, Mte Porz**	**1.05 198**	P	**Pg**	**09 34 37.0**	**-1.2**
RMP			AML	AML		
	comp=E,4270µm,0.4s					
RMP			AML	AML		
	comp=N,3755µm,0.7s					
SSP9	**Sansepolcro**	**1.06 316**	P	**Pg**	**09 34 37.1**	**-1.4**
CAFR	**Castel Frentan**	**1.07 123**	P	**Pg**	**09 34 37.6**	**-1.0**
CAFR			AML	AML		
	comp=E,2345µm,0.4s					
CAFR			AML	AML		
	comp=N,2020µm,0.3s					
SF11	**Podere del Sol**	**1.08 274**	P	**Pg**	**09 34 38.9**	**+0.1**
MCIV	**Monte Civitell**	**1.08 269**	P	**Pg**	**09 34 38.6**	**-0.2**
MCIV			AML	AML		
	comp=E,1160µm,0.7s					
MCIV			AML	AML		
	comp=N,1020µm,0.7s					
RDP	**Rocca di Papa**	**1.10 197**	P	**Pg**	**09 34 38.8**	**-0.4**
SAMA	**S.Maria delle**	**1.11 202**	P	**Pg**	**09 34 39.0**	**-0.3**
SF13	**Bagnolo**	**1.12 271**	P	**Pg**	**09 34 39.4**	**-0.1**
SF14	**Selvena**	**1.12 268**	P	**Pg**	**09 34 39.4**	**-0.3**
TOLF	**Tolfa**	**1.13 229**	P	**Pg**	**09 34 39.2**	**-0.4**
TOLF			AML	AML		
	comp=E,1840µm,0.4s					
TOLF			AML	AML		
	comp=N,1795µm,0.5s					
POFI	**Posta Fibreno**	**1.17 159**	P	**Pg**	**09 34 39.4**	**-1.2**
POFI			AML	AML		
	comp=E,1515µm,1.3s					
POFI			AML	AML		
	comp=N,1036µm,1.4s					
LRP	**Arpino**	**1.21 164**	P	**Pn**	**09 34 41.2**	**+0.9**
LRP			AML	AML		
	comp=E,748µm,1.2s					
LRP			AML	AML		
	comp=N,332µm,0.8s					
ARCI	**Arcidosso**	**1.23 272**	P	**Pn**	**09 34 40.7**	**0.0**
ARCI			AML	AML		
	comp=E,514µm,0.6s					
ARCI			AML	AML		
	comp=N,281µm,0.8s					
RSM	**Repubblica di**	**1.23 336**	P	**Pn**	**09 34 41.1**	**+0.4**
GIUL	**Giuliano Di Ro**	**1.25 176**	AML	AML		
	comp=N,1890µm,0.6s					
GIUL			AML	AML		
	comp=E,1325µm,0.5s					
LATB	**Latina**	**1.32 186**	P	**Pn**	**09 34 42.1**	**+0.2**
LATB			AML	AML		
	comp=E,678µm,0.9s					
LATB			AML	AML		
	comp=N,385µm,1.0s					
CERA	**Filignano**	**1.38 151**	P	**Pn**	**09 34 42.6**	**-0.1**
CERA			AML	AML		
	comp=E,1410µm,0.8s					
CERA			AML	AML		
	comp=N,1555µm,0.6s					
CERA			AML	AML		
	comp=E,1385µm,0.8s					
CERA			AML	AML		
	comp=N,1610µm,0.5s					
ASQU	**Asqua**	**1.39 315**	P	**Pn**	**09 34 43.6**	**+0.7**
ASQU			AML	AML		
	comp=N,1100µm,0.6s					
ASQU			AML	AML		
	comp=E,1176µm,0.7s					
FRES	**Fresagrandinar**	**1.41 126**	P	**Pn**	**09 34 42.8**	**-0.3**
MIDA	**Miranda**	**1.43 144**	P	**Pn**	**09 34 43.6**	**+0.1**
MIDA			AML	AML		
	comp=N,1330µm,0.7s					
MIDA			AML	AML		
	comp=N,1340µm,0.7s					
MIDA			AML	AML		
	comp=E,1110µm,1.4s					
MIDA			AML	AML		
	comp=E,1120µm,1.2s					
SFI	**Santa Sofia**	**1.44 320**	P	**Pn**	**09 34 43.9**	**+0.3**
TRIV	**Trivento**	**1.48 134**	AML	AML		
	comp=N,1335µm,0.7s					
TRIV			AML	AML		
	comp=E,1875µm,0.8s					
CSNT	**Castellina Chi**	**1.51 297**	P	**Pn**	**09 34 45.6**	**+1.1**
CSNT			AML	AML		
	comp=E,439µm,0.8s					
CSNT			AML	AML		
	comp=N,532µm,0.7s					
FROS	**Frosini**	**1.51 286**	P	**Pn**	**09 34 45.1**	**+0.6**
MAON	**Monte Argentar**	**1.53 256**	P	**Pn**	**09 34 45.6**	**+0.8**
MAON			AML	AML		
	comp=E,401µm,1.3s					
MAON			AML	AML		
	comp=N,357µm,1.1s					
OSSC	**Osservatorio P**	**1.56 298**	P	**Pn**	**09 34 45.3**	**+0.1**
OSSC			AML	AML		
	comp=E,531µm,0.9s					
OSSC			AML	AML		
	comp=N,540µm,0.7s					
RUFI	**Rufina**	**1.57 311**	P	**Pn**	**09 34 46.3**	**+0.9**
VAGA	**Valle Agricola**	**1.61 149**	P	**Pn**	**09 34 47.0**	**+1.0**
VAGA			AML	AML		
	comp=N,706µm,0.5s					
VAGA			AML	AML		
	comp=E,473µm,0.6s					
LMD	**Lutirano**	**1.64 321**	P	**Pn**	**09 34 47.4**	**+1.1**
BSSO	**Busso**	**1.66 139**	P	**Pb**	**09 34 48.5**	**+0.1**
BSSO			AML	AML		
	comp=E,267µm,0.7s					
BSSO			AML	AML		
	comp=N,200µm,1.6s					
TRIF	**Trifonti**	**1.67 281**	P	**Pn**	**09 34 47.8**	**+1.0**
TRIF			AML	AML		
	comp=N,376µm,0.5s					
TRIF			AML	AML		
	comp=E,455µm,0.4s					
CASP	**Castiglione de**	**1.67 270**	P	**Pn**	**09 34 47.6**	**+0.9**
CASP			AML	AML		
	comp=N,219µm,0.9s					
CASP			AML	AML		
	comp=E,180µm,0.9s					
CIGN	**Sant'Elia a Pi**	**1.75 131**	P	**Pn**	**09 34 49.0**	**+1.2**
CIGN			AML	AML		
	comp=E,558µm,1.4s					
CIGN			AML	AML		
	comp=N,518µm,0.7s					
MODR	**Mondragone**	**1.75 161**	P	**Pn**	**09 34 48.9**	**+1.0**
PTRJ	**Pietraroja**	**1.78 144**	AML	AML		
	comp=E,1315µm,0.8s					
PTRJ			AML	AML		
	comp=N,1450µm,0.5s					
MELA	**Melanico ??? S**	**1.84 126**	AML	AML		
	comp=E,1495µm,0.9s					
MELA			AML	AML		
	comp=N,1670µm,1.1s					
MELA			AML	AML		
	comp=E,1380µm,0.9s					
MELA			AML	AML		
	comp=N,1780µm,1.1s					
MPPT	**Montemurlo**	**1.88 308**	P	**Pn**	**09 34 50.9**	**+1.2**
MTCR	**Monte La Croce**	**1.98 309**	P	**Pn**	**09 34 51.6**	**+0.6**
FNVD	**Fontana Vidola**	**2.00 313**	P	**Pn**	**09 34 52.8**	**+1.5**
APRC	**Apricena**	**2.07 120**	AML	AML		
	comp=N,962µm,0.5s					
APRC			AML	AML		
	comp=E,682µm,0.5s					
BRJN	**Brijuni**	**2.14 12**	P	**Pn**	**09 34 53.9**	**+0.8**
MAIM	**Mastiano**	**2.22 301**	AML	AML		
	comp=N,234µm,0.4s					
MAIM			AML	AML		
	comp=E,216µm,1.1s					
VLC	**Villacollemand**	**2.42 305**	AML	AML		
	comp=N,132µm,1.6s					
VLC			AML	AML		
	comp=E,146µm,1.2s					
VLC			AML	AML		
	comp=N,166µm,1.6s					
VLC			AML	AML		
	comp=E,138µm,1.2s					
MRVN	**Minervino Murg**	**2.87 126**	AML	AML		
	comp=E,159µm,1.6s					
MRVN			AML	AML		
	comp=N,174µm,1.3s					
SMPL	**Sampolo**	**2.94 257**	AML	AML		
	comp=N,20µm,0.8s					
SMPL			AML	AML		
	comp=E,22µm,1.2s					
MSSA	**Maissana**	**3.03 301**	AML	AML		
	comp=E,88µm,0.7s					
MSSA			AML	AML		
	comp=N,112µm,0.7s					
PGF	**Pioggiola**	**3.06 266**	*e*P	**Pn**	**09 35 07.6**	**+1.6**
PGF			*e*Sn	**Sn**	**09 35 38.6**	**-3.8**
	comp=N,18nm,0.7s					
PGF	**Pioggiola**	**3.06 266**	AML	AML		
	comp=E,32µm,1.2s					
PGF			AML	AML		
	comp=N,27µm,1.1s					
SABO	**M.te Sabotino**	**3.19 6**	AML	AML		
	comp=N,2150µm,0.7s					
SABO			AML	AML		
	comp=E,1435µm,0.9s					
SABO			AML	AML		
	comp=N,564µm,0.6s					
SABO			AML	AML		
	comp=E,340µm,0.6s					
ROVR	**Rover Verones**	**3.20 333**	AML	AML		
	comp=N,99µm,1.1s					
ROVR			AML	AML		
	comp=E,79µm,0.4s					
CGRP	**Cima Grappa**	**3.21 343**	AML	AML		
	comp=E,396µm,0.5s					
CGRP			AML	AML		
	comp=N,370µm,0.8s					
STON	**Ston**	**3.35 87**	AML	AML		
	comp=E,99µm,0.7s					
STON			AML	AML		
	comp=N,93µm,1.3s					
SALO	**Salr**	**3.38 327**	AML	AML		
	comp=E,250µm,0.5s					
SALO			AML	AML		
	comp=N,328µm,1.1s					
CTI	**Castel Tesino**	**3.41 342**	AML	AML		
	comp=E,195µm,0.9s					
CTI			AML	AML		
	comp=N,176µm,0.4s					
MPRI	**Monte Prat**	**3.43 358**	AML	AML		
	comp=N,480µm,0.7s					
MPRI			AML	AML		
	comp=E,284µm,1.5s					
STAL	**STALIGIAL**	**3.46 355**	AML	AML		
	comp=E,296µm,1.0s					
STAL			AML	AML		
	comp=N,280µm,1.3s					
STAL			AML	AML		
	comp=E,291µm,1.0s					
STAL			AML	AML		
	comp=N,231µm,0.7s					
LUSI	**Trento, Gardas**	**3.52 334**	AML	AML		
	comp=E,153µm,1.2s					
LUSI			AML	AML		
	comp=N,200µm,1.5s					
CIMO	**Cimolais**	**3.53 352**	AML	AML		
	comp=E,69µm,0.9s					
CIMO			AML	AML		
	comp=E,81µm,0.9s					
CIMO			AML	AML		
	comp=N,74µm,1.2s					
CIMO			AML	AML		
	comp=N,66µm,0.9s					
NOCI	**Noci**	**3.56 123**	AML	AML		
	comp=E,178µm,1.4s					
NOCI			AML	AML		
	comp=N,249µm,0.6s					
PTCC	**Patocco-Chiusa**	**3.60 2**	AML	AML		
	comp=E,121µm,0.8s					
PTCC			AML	AML		
	comp=N,95µm,0.5s					
GAGG	**Gaggia**	**3.63 335**	AML	AML		
	comp=E,231µm,0.9s					
GAGG			AML	AML		
	comp=N,151µm,1.2s					
CLUD	**Cludinico**	**3.65 357**	AML	AML		
	comp=N,159µm,0.7s					
CLUD			AML	AML		
	comp=E,170µm,0.8s					
ACOM	**Acomizza, Ital**	**3.75 4**	AML	AML		
	comp=N,314µm,0.7s					
ACOM			AML	AML		
	comp=E,320µm,0.7s					
ACOM			AML	AML		
	comp=N,324µm,0.7s					
ACOM			AML	AML		
	comp=E,321µm,0.8s					
ZOU	**Zoufplan**	**3.75 358**	AML	AML		
	comp=N,186µm,1.0s					
ZOU			AML	AML		
	comp=E,174µm,1.3s					
MABI	**Malga Bissina**	**3.75 331**	AML	AML		
	comp=N,66µm,1.0s					
MABI			AML	AML		
	comp=E,78µm,0.6s					
FVI	**Forni Avoltri**	**3.79 356**	AML	AML		
	comp=N,116µm,0.6s					
FVI			AML	AML		
	comp=E,113µm,1.5s					
MYKA	**Terra Mystica**	**3.83 5**	*e*Pn	**Pn**	**09 35 17.8**	**+1.3**
	comp=E,4.0nm,0.2s,SNR=5.9					
KOSI	**Kohlern**	**3.86 342**	AML	AML		
	comp=N,173µm,1.6s					
KOSI			AML	AML		
	comp=E,214µm,0.8s					
APPI	**Appiano**	**3.91 340**	AML	AML		
	comp=E,130µm,0.4s					
APPI			AML	AML		
	comp=N,137µm,0.4s					
ABTA	**Abfaltersbach**	**3.96 354**	*i* Pn	**Pn**	**09 35 20.3**	**+2.0**
	comp=N,48nm,0.4s,SNR=32					
SOKA	**Soboth**	**4.09 19**	*i* Pn	**Pn**	**09 35 21.4**	**+1.3**
	comp=N,2.6nm,0.5s					
RISI	**Rein**	**4.21 350**	AML	AML		
	comp=N,298µm,0.5s					
RISI			AML	AML		
	comp=E,470µm,0.6s					
MUGIO	**Muggio**	**4.28 318**	AML	AML		
	comp=E,53µm,0.6s					
MUGIO			AML	AML		
	comp=N,51µm,0.5s					
SBF	**Sospel**	**4.29 286**	*e*P	**Pn**	**09 35 24.3**	**+1.5**
SBF			*e*Sn	**Sn**	**09 36 08.0**	**-4.7**
	comp=N,28nm,0.5s					
ROSI	**Rosskopf**	**4.30 344**	AML	AML		
	comp=N,256µm,0.5s					
ROSI			AML	AML		
	comp=E,198µm,0.7s					
VSL	**Villasalto**	**4.36 222**	AML	AML		
	comp=N,37µm,0.9s					
VSL			AML	AML		
	comp=E,37µm,0.5s					
VARE	**Varese**	**4.38 316**	AML	AML		
	comp=E,68µm,0.7s					
VARE			AML	AML		
	comp=N,93µm,0.5s					
FETA	**Feichten**	**4.54 339**	*i* Pn	**Pn**	**09 35 29.4**	**+3.0**
	comp=N,5.8nm,0.7s,SNR=8.8					
WTTA	**Wattenberg**	**4.58 347**	*i* Pn	**Pn**	**09 35 29.8**	**+2.9**
	comp=N,4.3nm,0.2s,SNR=6.2					
DAVOX	**Davos/Dischmat**	**4.60 331**	Pn	**Pn**	**09 35 31.1**	**+4.0**
	comp=N,2.5nm,0.3s,baz=150,slow=16,SNR=27					
DAVOX			Sn	**Sn**	**09 36 25.4**	**+5.1**
	comp=N,2.1nm,0.3s,baz=186,slow=23,SNR=5.0					
	comp=N,17nm,0.5s					
SQTA	**Sankt Quirin**	**4.62 343**	*e*Pn	**Pn**	**09 35 30.7**	**+3.3**
	comp=N,7.5nm,0.2s,SNR=11					
WATA	**Walderalm**	**4.66 347**	*e*Pn	**Pn**	**09 35 31.4**	**+3.5**
	comp=N,9.1nm,0.4s,SNR=6.2					
ARSA	**Arzberg**	**4.75 20**	*i* Pn	**Pn**	**09 35 29.4**	**+0.4**
	comp=N,3.9nm,0.4s					
MOTA	**Moosalm**	**4.76 343**	*e*Pn	**Pn**	**09 35 32.8**	**+3.5**
	comp=N,9.5nm,0.5s,SNR=6.2					
LMR	**La Mourre**	**4.89 278**	*e*P	**Pn**	**09 35 32.0**	**+1.1**
LMR			*e*Sn	**Sn**	**09 36 22.1**	**-5.1**
	comp=N,7.8nm,0.6s					
BIOA	**Bad Ischl, Aus**	**4.89 4**	*e*Pn	**Pn**	**09 35 32.7**	**+1.7**
	comp=N,5.6nm,0.2s,SNR=12					
MBDF	**Montbardon**	**4.99 295**	*e*P	**Pn**	**09 35 34.4**	**+1.9**
MBDF			*e*Sn	**Sn**	**09 36 24.7**	**-5.4**
	comp=N,8.4nm,0.7s					
DAVA	**Damuels**	**5.04 334**	*e*Pn	**Pn**	**09 35 36.7**	**+3.6**
	comp=N,7.8nm,0.5s,SNR=8.0					
MOA	**Molln**	**5.10 9**	*e*Pn	**Pn**	**09 35 35.9**	**+2.0**
	comp=N,1.5nm,0.1s					
LPG	**La Plagne**	**5.32 302**	*e*P	**Pn**	**09 35 39.2**	**+2.0**
LPG			*e*Sn	**Sn**	**09 36 32.7**	**-5.7**
	comp=N,9.1nm,0.5s					
LPL	**La Plagne**	**5.34 303**	*e*P	**Pn**	**09 35 39.2**	**+1.8**
LPL			*e*Sn	**Sn**	**09 36 33.1**	**-5.7**
	comp=N,4.3nm,0.3s					
RONA	**Rosalia, Austr**	**5.37 23**	*i* Pn	**Pn**	**09 35 38.8**	**+1.1**
	comp=N,3.4nm,0.4s					
CONA	**Conrad Observa**	**5.46 20**	*i* Pn	**Pn**	**09 35 39.9**	**+1.0**
	comp=N,3.2nm,0.4s,SNR=6.0					
SMRF	**Simiane la Rot**	**5.63 284**	*e*P	**Pn**	**09 35 44.0**	**+2.8**
SMRF			*e*Sn	**Sn**	**09 36 39.7**	**-6.0**
	comp=N,2.7nm,0.5s					
ORIF	**Oris-en-Rattie**	**5.66 294**	*e*P	**Pn**	**09 35 44.7**	**+3.1**
ORIF			*e*Sn	**Sn**	**09 36 40.4**	**-5.9**
	comp=N,8.2nm,0.5s					
GERES	**GERESS Array B**	**6.05 4**	Pn	**Pn**	**09 35 46.5**	**-0.4**
	comp=N,0.9nm,0.3s,baz=178,slow=13,SNR=11					
GERES			Sn	**Sn**	**09 36 56.1**	**+0.1**
	comp=N,2.4nm,0.3s,baz=179,slow=23,SNR=6.9					
	comp=N,1.4nm,0.4s					
CKRC	**Cesky Krumlov**	**6.07 7**	*e*PN	**Pn**	**09 35 47.3**	**+0.2**
CKRC			*e*SN	**Sn**	**09 36 53.1**	**-3.2**
CABF	**La Chapelle**	**6.30 310**	*e*P	**Pn**	**09 35 52.8**	**+2.4**
KHC	**Kasperske Hory**	**6.33 3**	*e*PN	**Pn**	**09 35 51.3**	**+0.6**
KHC			*e*SN	**Sn**	**09 37 01.8**	**-1.0**
VIVF	**Saint-Julien-l**	**6.46 291**	*e*P	**Pn**	**09 35 54.9**	**+2.4**
VIVF			*e*Sn	Sn	09 36 59.5	-6.4
	comp=N,3.8nm,0.7s					
HINF	**Hinteralfeld**	**6.68 321**	*e*P	**Pn**	**09 35 57.3**	**+1.7**
HINF			*e*Sn	Sn	09 37 05.0	-6.5
	comp=N,16nm,0.6s					
LASF	**Ste Croix**	**6.88 284**	*e*P	**Pn**	**09 36 00.4**	**+2.2**
LASF			*e*Sn	Sn	09 37 09.4	-6.8
	comp=N,1.1nm,0.5s					
CDF	**Champ du Feu**	**6.95 326**	*e*P	**Pn**	**09 36 00.9**	**+1.6**
CDF			*e*Sn	Sn	09 37 11.3	-6.8
	comp=N,10nm,0.5s					
HAU	**Haudompre**	**7.06 320**	*e*P	**Pn**	**09 36 02.8**	**+2.1**
HAU			*e*Sn	Sn	09 37 13.9	-6.8
	comp=N,19nm,0.5s					
SMF	**Signal de Mont**	**7.65 303**	*e*P	**Pn**	**09 36 11.4**	**+2.5**
SMF			*e*Sn	Sn	09 37 27.9	-7.4
	comp=N,6.4nm,0.7s					
KEST	**Kesra**	**7.66 204**	Pn	**Pn**	**09 36 11.7**	**+2.6**
	comp=N,0.5nm,0.3s,baz=350,slow=18,SNR=2.5					
	comp=N,2.2nm,0.4s					
PAGF	**Fort de Pagny**	**7.74 320**	*e*P	**Pn**	**09 36 12.9**	**+2.8**
	baz=136					
PAGF			*e*Sn	Sn	09 37 30.2	-7.2
	comp=N,18nm,0.6s					
SFTF	**Sexfontaines**	**7.84 316**	*e*P	**Pn**	**09 36 14.2**	**+2.8**
	baz=131					
LOR	**Lormes**	**7.94 307**	*e*P	**Pn**	**09 36 15.7**	**+2.9**
	baz=124					
LOR			*e*Sn	Sn	09 37 34.7	-7.7
	comp=N,2.1nm,0.2s					
MTLF	**Montolieu**	**8.02 277**	*e*P	**Pn**	**09 36 17.1**	**+3.2**
MTLF			*e*Sn	Sn	09 37 37.5	-6.7
	comp=N,2.9nm,0.6s					
AVF	**Avril sur Loir**	**8.02 303**	*e*P	**Pn**	**09 36 16.3**	**+2.5**
SSF	**Saint Saulge**	**8.05 305**	*e*P	**Pn**	**09 36 16.7**	**+2.4**
SSF			*e*Sn	Sn	09 37 37.4	-7.6
	comp=N,3.3nm,0.4s					
BRG	**Berggiesshubel**	**8.08 4**	*e*P	**Pn**	**09 36 14.7**	**0.0**
BRG			Amp		09 36 20.5	
	comp=Z,1.3nm,0.7s					
BRG			*ex*	x	09 37 42.2	
BRG			*ex*	x	09 38 46.8	
BRG			Amp		09 39 08.4	
	comp=Z,17nm,1.3s					
BGF	**Bois d'Agland**	**8.23 301**	*e*Sn	Sn	09 37 42.1	-7.5
	comp=Z,4.9nm,0.4s					
CAF	**Calviac**	**8.28 289**	*e*P	**Pn**	**09 36 20.2**	**+2.7**
CAF			*e*Sn	Sn	09 37 43.2	-7.5
	comp=Z,1.8nm,0.3s					
CLL	**Collm**	**8.50 359**	*e*Pn	**Pn**	**09 36 21.0**	**+0.5**
CLL			*ex*	x	09 36 37.0	
CLL			*ex*	x	09 36 47.0	
CLL			*e*Sn	Sn	09 37 48.0	-8.1
CLL			*e*Sg	Sg	09 38 46.0	-4.5
	comp=Z,14nm,1.3s					
TCF	**Toulx Ste Croi**	**8.54 298**	*e*P	**Pn**	**09 36 24.1**	**+3.0**
TORD	**Torodi Ar. Bea**	**31.17 202**	P	**P**	**09 40 38.4**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=18,slow=9.4,SNR=3.3					

comp=Z,0.3nm,0.3s

ROM 31 09:37:06.9±0.0, 42°.908N±0°.003×13°.114E±0°.004, h9km, ML3.0/26, 7C-8D, Error ellipse: s-maj=0.3km s-min=0.2km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**256**	P	Pg	09 37 09.7	+0.6
T1216				S	Sg	09 37 11.5	+0.8
T1216				AML	AML		
	comp=N,76950μm,0.4s						
T1216				AML	AML		
	comp=E,79450μm,0.3s						
T1216				AML	AML		
	comp=N,76900μm,0.4s						
T1245	**Castelsantange**	**0.07**	**133**	P	Pg	09 37 09.7	+0.4
T1245				S	Sg	09 37 11.6	+0.6
T1245				AML	AML		
	comp=E,31950μm,0.5s						
T1245				AML	AML		
	comp=N,52850μm,0.5s						
T1245				AML	AML		
	comp=E,29800μm,0.5s						
T1245				AML	AML		
	comp=N,51850μm,0.5s						
T1256	**Bolognola (MC)**	**0.13**	**40**	P	Pg	09 37 10.4	+0.4
T1256				S	Sg	09 37 12.8	+0.7
T1256				AML	AML		
	comp=E,45300μm,0.2s						
T1256				AML	AML		
	comp=E,44800μm,0.2s						
T1256				AML	AML		
	comp=N,37000μm,0.6s						
T1256				AML	AML		
	comp=N,36950μm,0.6s						
T1256				AML	AML		
	comp=E,44850μm,0.2s						
T1256				AML	AML		
	comp=N,35250μm,0.6s						
FDMO	**Fiordimonte**	**0.13**	**351**	P	Pg	09 37 10.3	+0.4
FDMO				S	Sg	09 37 12.5	+0.5
FDMO				AML	AML		
	comp=N,22800μm,0.1s						
FDMO				AML	AML		
	comp=E,33150μm,0.8s						
FDMO				AML	AML		
	comp=E,33150μm,1.2s						
AM05	**Amandola Campo**	**0.19**	**68**	P	Pg	09 37 11.4	+0.6
AM05				S	Sg	09 37 14.7	+1.1
AM05				AML	AML		
	comp=E,6120μm,0.5s						
AM05				AML	AML		
	comp=N,11085μm,0.7s						
AM05				AML	AML		
	comp=N,4575μm,0.7s						
AM05				AML	AML		
	comp=E,6125μm,0.5s						
AM05				AML	AML		
	comp=E,29350μm,0.7s						
AM05				AML	AML		
	comp=N,4570μm,0.7s						
AM05				AML	AML		
	comp=N,11115μm,0.7s						
AM05				AML	AML		
	comp=E,6125μm,1.5s						
AM05				AML	AML		
	comp=N,4570μm,1.3s						
AM05				AML	AML		
	comp=N,11115μm,1.3s						
AM05				AML	AML		
	comp=E,29350μm,1.3s						
T1215	**Vallo di Nera,**	**0.21**	**240**	P	Pg	09 37 11.9	+0.7
T1215				S	Sg	09 37 15.5	+1.3
T1215				AML	AML		
	comp=E,4285μm,1.4s						
T1215				AML	AML		
	comp=N,4825μm,0.4s						
T1215				AML	AML		
	comp=E,4315μm,1.4s						
T1215				AML	AML		
	comp=N,4725μm,0.4s						
T1215				AML	AML		
	comp=E,4285μm,1.4s						
T1215				AML	AML		
	comp=E,4315μm,1.4s						
T1215				AML	AML		
	comp=E,4290μm,1.4s						
T1215				AML	AML		
	comp=N,4730μm,0.4s						
T1215				AML	AML		
	comp=E,4320μm,1.4s						
T1215				AML	AML		
	comp=N,4830μm,0.4s						
T1215				AML	AML		
	comp=N,4725μm,0.4s						
T1215				AML	AML		
	comp=E,4320μm,0.6s						
T1215				AML	AML		
	comp=E,4290μm,0.6s						
T1217	**Poggiodomo (PG**	**0.24**	**215**	P	Pg	09 37 12.0	+0.3
T1217				S	Sg	09 37 16.7	+1.6
T1217				AML	AML		
	comp=E,5785μm,1.2s						
T1217				AML	AML		
	comp=N,7265μm,0.3s						
T1217				AML	AML		
	comp=E,5730μm,1.2s						
T1217				AML	AML		
	comp=E,5785μm,1.1s						
T1217				AML	AML		
	comp=E,5745μm,1.1s						
T1217				AML	AML		
	comp=N,7265μm,0.3s						
T1217				AML	AML		
	comp=E,5755μm,1.1s						
T1217				AML	AML		
	comp=N,7110μm,0.3s						
T1241	**Roccafluvione,**	**0.24**	**102**	P	Pg	09 37 12.2	+0.5
T1241				S	Sg	09 37 16.4	+1.3
T1241				AML	AML		
	comp=E,23550μm,0.2s						
T1241				AML	AML		
	comp=N,17750μm,0.8s						
T1241				AML	AML		
	comp=E,23550μm,0.2s						
T1241				AML	AML		
	comp=E,25350μm,0.2s						
T1241				AML	AML		
	comp=N,17700μm,0.8s						
T1241				AML	AML		
	comp=N,17750μm,0.8s						
T1241				AML	AML		
	comp=N,16300μm,0.8s						
T1241				AML	AML		
	comp=N,17750μm,1.2s						
T1241				AML	AML		
	comp=N,16300μm,1.2s						
T1241				AML	AML		
	comp=E,23600μm,0.2s						
T1204	**Amatrice, Fraz**	**0.28**	**147**	P	Pg	09 37 13.2	+0.7
T1204				AML	AML		
	comp=N,3370μm,1.2s						
T1204				AML	AML		
	comp=E,4475μm,0.3s						
T1204				AML	AML		
	comp=N,3365μm,1.2s						
LNSS	**Leonessa**	**0.31**	**190**	P	Pg	09 37 13.5	+0.4
LNSS				S	Sb	09 37 18.9	-0.9
LNSS				AML	AML		
	comp=E,2915μm,0.8s						
LNSS				AML	AML		
	comp=N,6870μm,0.3s						
LNSS				AML	AML		
	comp=N,6875μm,0.3s						
LNSS				AML	AML		
	comp=E,2915μm,1.2s						
SMA1	**SAN MARTINO**	**0.32**	**150**	P	Pg	09 37 13.9	+0.6
SMA1				S	Sb	09 37 19.2	-1.0
SMA1				AML	AML		
	comp=E,3120μm,1.6s						
SMA1				AML	AML		
	comp=N,4170μm,0.4s						
SMA1				AML	AML		
	comp=E,3125μm,1.6s						
SMA1				AML	AML		
	comp=N,4165μm,0.4s						
SMA1				AML	AML		
	comp=E,3125μm,0.4s						
T1243	**Rocca Santa Ma**	**0.32**	**131**	P	Pg	09 37 13.9	+0.5
T1243				S	Sb	09 37 19.2	-1.1
MNTP	**Mappone**	**0.35**	**48**	P	Pb	09 37 14.7	-0.5
MNTP				AML	AML		
	comp=E,12750μm,0.3s						
MNTP				AML	AML		
	comp=E,12800μm,0.3s						
MNTP				AML	AML		
	comp=N,14100μm,0.2s						
ASSB	**Assisi San Ben**	**0.36**	**292**	⇑P	Pg	09 37 14.3	+0.3
ASSB				S	Sg	09 37 20.0	+1.1
ASSB				AML	AML		
	comp=E,10170μm,0.3s						
ASSB				AML	AML		
	comp=N,8405μm,0.2s						
RM33	**Pellescritta (**	**0.41**	**169**	P	Pg	09 37 15.5	+0.6
RM33				S	Sb	09 37 22.1	-0.5
RM33				AML	AML		
	comp=E,3065μm,0.3s						
RM33				AML	AML		
	comp=N,2205μm,0.6s						
RM33				AML	AML		
	comp=N,2210μm,0.6s						
RM33				AML	AML		
	comp=E,3060μm,0.3s						
RM33				AML	AML		
	comp=E,3010μm,0.3s						
RM33				AML	AML		
	comp=N,2210μm,0.6s						
ARRO	**Arrone**	**0.42**	**218**	P	Pg	09 37 15.6	+0.5
ARRO				S	Sb	09 37 22.6	-0.2
ARRO				AML	AML		
	comp=N,2130μm,0.3s						
ARRO				AML	AML		
	comp=E,1980μm,0.2s						
ARRO				AML	AML		
	comp=N,2130μm,1.7s						
OFFI	**Offida**	**0.42**	**86**	P	Pb	09 37 16.2	-0.3
OFFI				AML	AML		
	comp=E,5450μm,0.5s						
OFFI				AML	AML		
	comp=N,5405μm,0.4s						
T1211	**Morro Reatino**	**0.42**	**207**	P	Pg	09 37 15.8	+0.7
T1211				S	Sb	09 37 22.5	-0.5
T1211				AML	AML		
	comp=E,2280μm,0.6s						
T1211				AML	AML		
	comp=N,4295μm,0.3s						
T1211				AML	AML		
	comp=E,2330μm,0.6s						
T1211				AML	AML		
	comp=N,4320μm,0.3s						
T1211				AML	AML		
	comp=N,4290μm,0.3s						
T1211				AML	AML		
	comp=E,2331μm,0.6s						
T1211				AML	AML		
	comp=N,4320μm,1.7s						
T1211				AML	AML		
	comp=E,2285μm,0.6s						
T1211				AML	AML		
	comp=N,4290μm,1.7s						
CAMP	**Campotosto**	**0.43**	**150**	P	Pg	09 37 15.6	+0.2
CAMP				S	Sb	09 37 22.4	-1.0
CAMP				AML	AML		
	comp=N,1325μm,0.9s						
CAMP				AML	AML		
	comp=E,1125μm,0.2s						
CAMP				AML	AML		
	comp=N,1325μm,1.1s						
TERO	**Teramo**	**0.46**	**128**	P	Pg	09 37 16.2	+0.3
TERO				S	Sb	09 37 23.5	-0.6
TERO				AML	AML		
	comp=E,2585μm,0.4s						
TERO				AML	AML		
	comp=E,2885μm,0.4s						
TERO				AML	AML		
	comp=N,3175μm,0.5s						
TERO				AML	AML		
	comp=N,3390μm,0.5s						
TERO				AML	AML		
	comp=E,2585μm,1.6s						
TERO				AML	AML		
	comp=E,2885μm,1.6s						
FOSV	**Fossato di Vic**	**0.47**	**326**	⇓P	Pg	09 37 16.2	+0.2
FOSV				AML	AML		
	comp=N,5800μm,0.3s						
FOSV				AML	AML		
	comp=E,2780μm,0.2s						
FOSV				AML	AML		
	comp=N,5805μm,0.3s						
FOSV				AML	AML		
	comp=N,5805μm,1.7s						
T1247	**Pizzolo (AQ)**	**0.48**	**164**	P	Pg	09 37 16.5	+0.1
CESX	**Cesi**	**0.49**	**233**	P	Pg	09 37 16.6	+0.1
CESX				S	Sb	09 37 24.7	-0.3
CESX				AML	AML		
	comp=E,2355μm,0.4s						
CESX				AML	AML		
	comp=E,2355μm,1.6s						
CESX				AML	AML		
	comp=N,2060μm,0.4s						
GIGS	**Gran Sasso**	**0.57**	**144**	P	Pg	09 37 17.8	-0.1
GIGS				S	Sb	09 37 26.7	-0.6
GIGS				AML	AML		
	comp=E,378μm,0.5s						
GIGS				AML	AML		
	comp=N,354μm,1.4s						
GIGS				AML	AML		
	comp=N,354μm,0.6s						
PP3	**Marolino**	**0.59**	**37**	P	Pb	09 37 19.0	-0.4
PP3				AML	AML		
	comp=E,5005μm,0.4s						
PP3				AML	AML		
	comp=E,5170μm,0.3s						
PP3				AML	AML		
	comp=N,5225μm,0.3s						
PP3				AML	AML		
	comp=E,5175μm,0.3s						
PP3				AML	AML		
	comp=N,5205μm,0.3s						
PP3				AML	AML		
	comp=E,5175μm,1.7s						
TRTR	**Tortoreto Alta**	**0.60**	**99**	P	Pb	09 37 19.1	-0.4
TRTR				AML	AML		
	comp=E,4730μm,1.2s						
TRTR				AML	AML		
	comp=N,4580μm,0.4s						
TRTR				AML	AML		
	comp=E,4730μm,0.8s						
ARVD	**Arcevia**	**0.60**	**348**	⇑P	Pg	09 37 18.6	0.0
ARVD				S	Sb	09 37 27.9	-0.3
ARVD				AML	AML		
	comp=E,1430μm,0.9s						
ARVD				AML	AML		
	comp=N,809μm,1.4s						
ARVD				AML	AML		
	comp=E,1430μm,1.1s						
FIAM	**Fiamignano**	**0.64**	**180**	P	Pg	09 37 19.6	+0.3
FIAM				AML	AML		
	comp=N,1104μm,1.2s						
FIAM				AML	AML		
	comp=E,1190μm,0.4s						
FIAM				AML	AML		
	comp=N,1104μm,0.8s						
FRON	**Frontone**	**0.67**	**335**	P	Pg	09 37 19.8	-0.2
FRON				AML	AML		
	comp=E,1880μm,0.2s						
FRON				AML	AML		
	comp=N,1900μm,0.3s						
FAGN	**Fagnano**	**0.73**	**151**	P	Pb	09 37 21.4	-0.3
FAGN				AML	AML		
	comp=E,2295μm,0.4s						
FAGN				AML	AML		
	comp=N,1280μm,0.5s						
MGAB	**Montegabbione**	**0.74**	**271**	P	Pg	09 37 21.4	+0.3
MGAB				AML	AML		
	comp=E,1495μm,1.2s						
MGAB				AML	AML		
	comp=N,2285μm,1.2s						
MGAB				AML	AML		
	comp=N,2620μm,1.2s						
MGAB				AML	AML		
	comp=E,2150μm,1.2s						
MGAB				AML	AML		
	comp=N,2620μm,0.8s						
MGAB				AML	AML		
	comp=E,2150μm,0.8s						
MGAB				AML	AML		
	comp=E,1495μm,0.8s						
MGAB				AML	AML		
	comp=N,2285μm,0.8s						
VCEL	**Villa Celiera**	**0.74**	**134**	⇑P	Pg	09 37 21.4	+0.2
VCEL				AML	AML		
	comp=E,1735μm,0.4s						
VCEL				AML	AML		
	comp=N,1590μm,0.6s						
PIEI	**Pieia**	**0.76**	**326**	P	Pg	09 37 21.3	-0.3
PIEI				AML	AML		
	comp=E,728μm,0.1s						
PIEI				AML	AML		
	comp=N,680μm,0.5s						
FSSB	**Fossombrone**	**0.82**	**343**	⇓P	Pg	09 37 22.7	-0.1
FSSB				AML	AML		
	comp=N,3765μm,0.4s						
FSSB				AML	AML		
	comp=N,3760μm,0.4s						
FSSB				AML	AML		
	comp=E,2260μm,0.4s						
APEC	**Apecchio**	**0.82**	**322**	P	Pg	09 37 23.0	+0.2
T0110	**Collepietro**	**0.84**	**144**	P	Pg	09 37 22.6	-0.4
T0110				AML	AML		
	comp=E,1220μm,0.5s						
T0110				AML	AML		
	comp=N,1499μm,0.5s						
T0110				AML	AML		
	comp=E,1220μm,1.5s						
T0110				AML	AML		
	comp=N,1499μm,1.5s						
BADI	**Badiali**	**0.88**	**314**	⇓P	Pg	09 37 23.8	0.0
SACS	**San Casciano d**	**0.89**	**267**	P	Pg	09 37 24.2	+0.2
SACS				AML	AML		
	comp=E,547μm,1.2s						
SACS				AML	AML		
	comp=N,486μm,0.5s						
SACS				AML	AML		
	comp=E,547μm,0.8s						
PE3	**Peglio**	**0.91**	**330**	⇑P	Pg	09 37 23.7	-0.7
PE3				AML	AML		
	comp=E,11μm,1.0s						
PE3				AML	AML		
	comp=E,11μm,1.0s						
PE3				AML	AML		
	comp=N,16μm,1.2s						
CAFI	**Castiglion Fio**	**0.94**	**297**	⇓P	Pg	09 37 24.9	-0.1
CAFI				AML	AML		
	comp=E,490μm,0.8s						
CAFI				AML	AML		
	comp=N,539μm,0.9s						
CAFI				AML	AML		
	comp=E,490μm,0.8s						
MCIV	**Monte Civitell**	**1.06**	**264**	⇓P	Pn	09 37 28.1	+0.1
MCIV				AML	AML		
	comp=E,292μm,0.4s						
MCIV				AML	AML		
	comp=N,239μm,0.7s						
INTR	**Introdacqua**	**1.07**	**147**	P	Pg	09 37 26.7	-0.8
INTR				AML	AML		
	comp=E,654μm,0.8s						
INTR				AML	AML		
	comp=N,1420μm,1.0s						
INTR				AML	AML		
	comp=E,654μm,1.2s						
INTR				AML	AML		
	comp=N,1420μm,1.0s						
VVLD	**Villa Vallelon**	**1.10**	**160**	P	Pg	09 37 27.9	-0.2
VVLD				AML	AML		
	comp=E,446μm,0.5s						
VVLD				AML	AML		
	comp=N,687μm,0.6s						
CRE	**Caprese Michel**	**1.11**	**310**	⇓P	Pb	09 37 28.3	0.0
CRE				AML	AML		
	comp=E,310μm,0.5s						
CRE				AML	AML		
	comp=N,346μm,0.3s						
LPEL	**Lama dei Pelig**	**1.17**	**137**	⇑P	Pb	09 37 29.1	-0.2
LPEL				AML	AML		
	comp=N,498μm,1.3s						
LPEL				AML	AML		
	comp=N,498μm,0.7s						
LPEL				AML	AML		
	comp=E,588μm,1.3s						
RUFI	**Rufina**	**1.50**	**309**	⇓P	Pg	09 37 37.7	+2.1
PTRJ	**Pietraroja**	**1.87**	**145**	P	Pn	09 37 38.5	-0.6
PTRJ				S	Sn	09 38 01.0	-1.8
PTRJ				AML	AML		
	comp=E,807μm,0.8s						
PTRJ				AML	AML		
	comp=N,2220μm,0.6s						
BRJN	**Brijuni**	**2.05**	**13**	⇓P	Pn	09 37 41.6	+0.2
GRAM	**Graiana**	**2.72**	**307**	⇑P	Pb	09 37 54.7	-1.0
SABO	**M.te Sabotino**	**3.09**	**6**	⇑P	Pn	09 37 56.0	+0.1
SABO				AML	AML		
	comp=N,2065μm,0.6s						
SABO				AML	AML		
	comp=N,519μm,0.6s						
SABO				AML	AML		
	comp=E,2505μm,0.5s						
SABO				AML	AML		
	comp=E,613μm,0.5s						

*MOS **31** 09:38:12.4±0.9, 43°.26N×17°.86E, h10km, mb4.5/4, Error ellipse: s-maj=6.1km s-min=3.5km az=98.7*
*IDC **31** 09:38:13.9±0.9, 43°.41N×17°.82E, h0km, mb3.8/8, mbtmp3.7/20, ML3.6/12, MS3.4/7, Error ellipse: s-maj=13.0km s-min=10.5km az=43.0*
*PDG **31** 09:38:13.5±0.9, 43°.26N×17°.91E, h12km±1km, MD4.1/10, ML4.2/9, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
*NEIC **31** 09:38:13.4±1.6, 43°.23N±0°.06×17°.92E±0°.05, h7km±8km, mb4.3/4, ML4.2(VIE), Error ellipse: s-maj=8.2km s-min=4.9km az=193.0*
*BEO **31** 09:38:13.1±0.3, 43°.28N×17°.79E, h9km±2km, ML4.1/16*
*PRU **31** 09:38:14.9±0.0, 43°.38N×17°.94E, h0km, M4.3*
*RHSSO **31** 09:38:14.2±0.2, 43°.25N×17°.88E, h6km±1km, ML4.2/15*
*BGR **31** 09:38:15.4±0.7, 43°.26N×18°.06E, h10km, ML4.5/7, Error ellipse: s-maj=14.5km s-min=10.0km az=47.0*
*TIR **31** 09:38:17.5, 42°.95N×17°.92E, h13km±3km, Ml4.6*

ISC 31 09:38:13.4±1.0, 43°.27N±0°.02×17°.90E±0°.01, h7km±7km, n362, σ1ŝ43/465, mb4.0/10, MS3.3/5, 30C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.42**	**201**	⇓*i*Pg	**Pg**	**09 38 20.8**	**-0.7**
STON				*e*Sg	**Sg**	**09 38 27.7**	**+0.7**
STON	**Ston**	**0.42**	**201**	*i* Pg	**Pg**	**09 38 20.8**	**-0.7**
STON				Sg	**Sg**	**09 38 27.5**	**+0.5**
STON	**Ston**	**0.42**	**201**	*e*Pg	**Pg**	**09 38 20.9**	**-0.6**
STON				*e*Sg	**Sg**	**09 38 27.7**	**+0.7**
BRY	**Bratogost**	**0.59**	**128**	⇑*i*Pg	**Pg**	**09 38 25.0**	**+0.2**
BRY				*e*Sg	**Sb**	**09 38 34.1**	**-0.8**
BRY	**Bratogost**	**0.59**	**128**	*e*Pg	**Pg**	**09 38 24.4**	**-0.4**
BRY				*i* Sg	**Sb**	**09 38 34.0**	**-0.8**
RICI	**Ricice**	**0.60**	**292**	*i* Pg	**Pg**	**09 38 25.1**	**0.0**
RICI				Sg	**Sb**	**09 38 34.6**	**-0.5**
DBRK	**Dubrovnik**	**0.62**	**163**	*e*Pg	**Pg**	**09 38 24.3**	**-1.1**
DBRK				Sg	**Sb**	**09 38 34.7**	**-0.9**
TREB	**Trebinje**	**0.64**	**149**	⇑*i*Pg	**Pg**	**09 38 25.6**	**-0.1**
TREB				*e*Sg	**Sb**	**09 38 35.8**	**-0.3**
TREB	**Trebinje**	**0.64**	**149**	*e*Pg	**Pg**	**09 38 25.7**	**0.0**
TREB				*e*Sg	**Sb**	**09 38 35.7**	**-0.3**
MAKA	**Makarska**	**0.64**	**272**	*i* Pg	**Pg**	**09 38 25.5**	**-0.3**
MAKA				Sg	**Sb**	**09 38 35.7**	**-0.4**
UPM	**Unac-Piva**	**0.74**	**95**	⇑*i*Pg	**Pg**	**09 38 28.0**	**+0.4**
UPM				*e*Sg	**Sb**	**09 38 39.0**	**-0.1**
UPM	**Unac-Piva**	**0.74**	**95**	*e*Pg	**Pg**	**09 38 27.2**	**-0.4**
UPM				*i* Sg	**Sb**	**09 38 39.2**	**+0.1**
LSTV	**Lastovo**	**0.89**	**236**	*i* Pg	**Pg**	**09 38 29.6**	**-0.9**
LSTV				Sg	**Sg**	**09 38 42.2**	**+0.2**
NKME	**Niksic**	**0.92**	**123**	⇑*i*Pg	**Pg**	**09 38 30.4**	**-0.6**
NKME				*i* Sg	**Sb**	**09 38 45.1**	**+1.0**
HCY	**Herceg Novi**	**0.93**	**152**	⇑*i*Pg	**Pg**	**09 38 30.5**	**-0.7**
HCY				*e*Sg	**Sb**	**09 38 44.0**	**-0.3**
HCY	**Herceg Novi**	**0.93**	**152**	⇑*i*Pg	**Pg**	**09 38 30.5**	**-0.7**
HCY				*i* Sg	**Sb**	**09 38 45.3**	**+1.0**
HCY	**Herceg Novi**	**0.93**	**152**	*e*P	**Pg**	**09 38 30.0**	**-1.2**

HCY S Sn 09 38 46.0 -0.4
SRKY Kupres RS 0.96 327 *e*Pg Pg 09 38 31.5 -0.4
SRKY *e*Sg Sg 09 38 44.6 +0.2
CEME Cevo 1.04 134 ⇓*i*Pg Pg 09 38 32.6 -0.7
CEME *i* Sg Sn 09 38 49.2 0.0
HVAR Hvar 1.06 266 *e*Pg Pg 09 38 33.0 -0.8
HVAR Sg Sb 09 38 48.2 -0.1
PLE Pljevlja 1.09 86 *e*Pg Pg 09 38 33.5 -0.8
PLE *i* Sg Sn 09 38 51.1 +0.5
PLE Pljevlja 1.09 86 P Pb 09 38 34.7 +0.1
PLE S Sn 09 38 51.0 +0.5
HAPS Han Pijesak,BI 1.12 43 ⇓*i*Pg Pb 09 38 35.3 +0.1
HAPS *e*Sg Sb 09 38 50.3 +0.3
RUDO Rudo 1.13 71 ⇑*i*Pg Pg 09 38 34.2 -0.8
RUDO *e*Sg Sb 09 38 50.5 -0.4
RUDO Rudo 1.13 71 *e*Pg Pg 09 38 34.3 -0.8
RUDO *e*Sg Sn 09 38 50.9 -0.5
BUM Brajici-Budva 1.21 143 ⇑*i*Pg Pg 09 38 35.7 -0.9
BUM *i* Sg Sn 09 38 54.9 +1.4
BBLS Lazići 1.25 61 ⇓*i*Pg Pn 09 38 37.3 0.0
BBLS *e*Sg Sn 09 38 55.3 +0.8
BBLS Lazići 1.25 61 *e*Pg Pg 09 38 37.6 +0.3
BBLS *e*Sg Sn 09 38 55.2 +0.8
KOME Kolasin 1.25 109 ⇑*i*Pg Pn 09 38 36.6 -0.9
KOME *i* Sg Sn 09 38 56.6 +2.0
MGRS Mrkonjic Grad 1.29 333 ⇑*i*Pg Pn 09 38 38.1 +0.2
MGRS *e*Sg Sg 09 38 55.2 +0.2
PDG Podgorica 1.30 130 ⇓P Pg 09 38 39.0 +0.7
PDG ⇑S Sn 09 38 59.3 +3.7
PDG Podgorica 1.30 130 Pn 09 38 37.1 -0.8
TTG Podgorica 1.30 130 ⇓*i*Pg Pn 09 38 37.4 -0.5
TTG *i* Sg Sn 09 38 58.0 +2.4
TTG Podgorica 1.30 130 P Pn 09 38 37.5 -0.5
TTG S Sn 09 38 57.0 +1.4
DRME Dracevica, Mon 1.44 138 ⇓*i*Pg Pn 09 38 40.1 +0.3
DRME *e*Sg Sg 09 39 00.0 +0.5
DRME Dracevica, Mon 1.44 138 ⇓*i*Pg Pn 09 38 39.9 +0.1
DRME *i* Sg Sg 09 39 01.8 +2.3
DOB Doboj 1.47 6 *e*Pg Pn 09 38 40.7 +0.3
DOB *e*Sg Sg 09 39 01.4 +0.6
IVA Berane 1.51 104 *e*Pg Pn 09 38 41.3 +0.3
IVA *i* Sg Sg 09 39 03.8 +1.8
SJES Sjenica 1.51 89 ⇓*i*Pn Pg 09 38 42.3 -0.1
SJES *e*Sn Sg 09 39 02.2 +0.1
SJES Sjenica 1.51 89 *e*Pg Pg 09 38 42.8 +0.4
SJES *e*Sg Sg 09 39 03.1 +1.0
BLY Banja Luka 1.57 341 ⇑*i*Pn Pb 09 38 42.7 -0.1
BLY *e*Sn Sg 09 39 03.9 +0.1
BLY Banja Luka 1.57 341 *e*Pg Pb 09 38 43.1 +0.3
BLY *e*Sg Sb 09 39 03.3 +0.5
ULC Ulcinj 1.64 142 ⇓*i*Pn Sn 09 38 43.0 +0.4
ULC *i* Sn Sg 09 39 06.6 +0.6
ULC Ulcinj 1.64 142 P Pb 09 38 43.3 -0.6
ULC S Sg 09 39 06.0 0.0
PVY Plav 1.65 113 *e*Pn Pn 09 38 43.3 +0.3
PVY *i* Sn Sg 09 39 07.1 +0.6
ZIRJ Zirje 1.69 284 *i* Pn Pn 09 38 43.9 +0.6
ZIRJ Sn Sb 09 39 06.3 +0.1
MORI Morici 1.70 291 *i* Pn Pb 09 38 44.5 -0.5
MORI Sn Sb 09 39 07.6 +0.9
DIVS Divibare 1.73 61 Pn Pn 09 38 44.2 +0.1
DIVS Divibare 1.73 61 ⇓*i*Pn Pn 09 38 44.1 +0.1
DIVS *e*Sn Sb 09 39 07.6 +0.1
DIVS Divibare 1.73 61 *e*Pg Pn 09 38 44.3 +0.3
DIVS *e*Sg Sg 09 39 09.7 +0.7
TEKS Tekeris 1.74 42 *e*Sn Sb 09 39 07.9 +0.1
TEKS Tekeris 1.74 42 *e*Pn Pn 09 38 43.2 -0.9
TEKS *e*Sg Sg 09 39 10.6 +1.3
BLJ Bijeljina 1.81 33 *e*Pn Pn 09 38 44.9 -0.1
BLJ *e*Sn Sn 09 39 08.4 +0.2
BCI Bajram Curri 1.83 119 P Pb 09 38 47.2 -0.1
baz=109
BCI S Sn 09 39 08.8 +0.1
baz=109
BCI AMP
comp=N,34nm,0.6s,baz=109
A052A Srbac 1.86 352 *e*Pn Pn 09 38 46.4 +0.8
A052A *e*Sn Sb 09 39 10.9 -0.2
A051A Mrakovica 1.89 338 ⇑*i*Pn Pn 09 38 46.8 +0.7
A051A *e*Sn Sn 09 39 11.1 +0.9
PRIJ Prijedor 1.91 334 *e*Pn Pn 09 38 47.4 +1.0
PRIJ *e*Sn Sb 09 39 12.0 -0.7
TRUS Trudelj 2.05 61 *e*Pn Pn 09 38 48.5 +0.1
TRUS *e*Sn Sb 09 39 15.5 -1.2
GRUS Gruza 2.14 72 *e*Pn Pn 09 38 50.0 +0.5
GRUS *e*Sn Sb 09 39 18.7 -0.5
A252A Venje 2.17 359 *i* Pn Pn 09 38 50.1 +0.2
A252A Sn Sn 09 39 17.2 +0.1
DUGI Dugi Otok 2.19 290 *i* Pn Pn 09 38 51.0 +0.8
SGRT San Giovanni R 2.20 227 Pn Pn 09 38 50.8 +0.4
SGRT San Giovanni R 2.20 227 P Pn 09 38 51.3 +0.9
baz=234
SGRT S Sn 09 39 16.8 -1.1
baz=234
PLIT Plitvice 2.30 315 *e*Pn Pn 09 38 53.5 +1.7
VIRC Vir 2.30 297 *i* Pn Pn 09 38 53.0 +1.2
FRGS Fruska Gora 2.34 35 ⇑P Pn 09 38 52.0 -0.3
FRGS Fruska Gora 2.34 35 *e*Sn Sn 09 39 22.5 +1.2
FRGS Fruska Gora 2.34 35 *e*Pn Pn 09 38 51.4 -0.9
FRGS *e*Sn Sn 09 39 20.0 -1.3
SELS Selova 2.35 90 *e*Pn Pn 09 38 52.8 +0.3
SELS *e*Sn Sb 09 39 23.6 -1.8
TIR Tirane 2.41 142 ⇓P Pn 09 38 54.3 +1.1
TIR ⇓S Sb 09 39 26.4 -0.5
TIR Tirane 2.41 142 Pn Pn 09 38 53.8 +0.6
TIR Tirane 2.41 142 P Pn 09 38 54.1 +0.9
TIR S Sn 09 39 24.5 +1.5
TIR Tirane 2.41 142 P Pn 09 38 53.8 +0.6
TIR Tirane 2.41 142 P Pn 09 38 54.4 +1.1
baz=137
BEO Beograd 2.41 49 *e*Pn Pn 09 38 51.9 -1.4
PHP Peshkopia 2.46 129 P Pb 09 38 56.0 -1.9
PHP Peshkopia 2.46 129 P Pn 09 38 55.8 +1.9
baz=123
PHP S Sn 09 39 22.7 -1.5
baz=123
MOSL Moslavina 2.49 341 *e*Pn Pn 09 38 54.6 +0.2
MOSL Sn Sn 09 39 24.9 0.0
A254A Petrova Gora 2.54 324 *i* Pn Pn 09 38 56.5 +1.4
NVLJ Novalja 2.54 302 *e*Pn Pn 09 38 56.1 +1.1
NVLJ Sn Sn 09 39 27.6 +1.3
NOCI Noci 2.55 194 P Pn 09 38 53.7 -1.5
baz=197
NOCI S Sn 09 39 23.6 -2.9
baz=197
NOCI AMP
comp=N,6.4nm,0.4s,baz=197
A255A Hotnja, Vukome 2.60 330 *e*Pn Pn 09 38 57.4 +1.4
A255A Sn Sn 09 39 29.4 +1.6
RABC Rab 2.69 304 *e*Pn Pn 09 38 58.6 +1.4
RABC Sn Sn 09 39 32.3 +2.3
MATE Matera 2.76 199 ⇑P Pn 09 38 57.6 -0.5
BOVS Bovan 2.79 81 ⇑P Pn 09 38 58.9 +0.3
BOVS Bovan 2.79 81 *e*Pn Pn 09 38 58.5 0.0
BOVS *e*Sn Sn 09 39 33.8 +1.3
KOVH Kovagotottos 2.83 3 P Pn 09 38 59.2 +0.2
KOVH S Sn 09 39 31.6 -1.6
BARS Barje 2.91 98 *e*Pn Pn 09 39 01.1 +1.0
SKO Skopje 2.92 115 *i* Pn Pn 09 39 02.4 +2.2
BOJS Bojanci 2.93 321 *e*Pn Pn 09 39 02.4 +1.9
BOJS *i* Sn Sn 09 39 38.3 +2.4
BOJS IAML 09 39 40.0
comp=Z,339nm,0.4s
PTJ Puntijarka 2.98 333 *e*Pn Pn 09 39 02.0 +0.8
PTJ Sn Sn 09 39 37.4 +0.2
MORH Mrgy, Hungar 3.00 10 ⇓P Pn 09 39 00.9 -0.4
MORH Mrgy, Hungar 3.00 10 *e*Sn Sn 09 39 38.6 +1.2
MORH Mrgy, Hungar 3.00 10 P Pn 09 39 01.2 -0.1
MORH S Sn 09 39 35.0 -2.5
VLO Vlora 3.04 156 Pn Pn 09 39 01.3 -0.6
VLO Vlora 3.04 156 P Pn 09 39 01.3 -0.6
VLO Vlora 3.04 156 P Pn 09 39 01.3 -0.6
baz=154
KALN Kalnik 3.04 341 *e*Pn Pn 09 39 02.5 +0.5
KALN Sn Sn 09 39 39.3 +0.6
OHR Ohrid 3.04 134 *i* Pn Pn 09 39 04.7 +2.7
MDVR Moldovita 3.14 60 ⇓P Pn 09 39 03.6 +0.3
LOBO Lobor 3.17 336 *i* Pn Pn 09 39 04.5 +0.7
LOBO Sn Sn 09 39 42.4 +0.6
GOLS Golise 3.19 330 *i* Pn Pn 09 39 04.9 +0.9
ZAGS Zajecar 3.20 79 *e*Pn Pn 09 39 04.1 0.0

SCTE Santa Cesarea 3.22 172 Pn Pn 09 39 02.5 -1.9
SCTE Santa Cesarea 3.22 172 P Pn 09 39 02.9 -1.4
baz=171
SMRN Sveta Marina 3.23 305 *e*Pn Pn 09 39 06.1 +1.6
PAOL Paolisi 3.34 229 Pn Pn 09 39 06.2 +0.1
VISS Visnje 3.35 320 *i* Pn Pn 09 39 07.9 +1.7
VISS *e*Sn Sn 09 39 48.7 +2.5
VISS IAML 09 40 11.4
comp=Z,505nm,0.9s
CAMP Campotosto 3.38 259 Pn Pn 09 39 05.0 -1.7
KBN Korca 3.41 140 P Pn 09 39 04.3 -2.7
KBN Korca 3.41 140 P Pn 09 39 08.6 +1.5
baz=136
AQU L'Aquila 3.43 256 P Pn 09 39 08.9 +1.5
ZAPS Zavoj 3.46 88 *e*Pn Pn 09 39 09.1 +1.4
ZAPS *e*Sn Sn 09 39 49.4 +0.5
BLKB Belogradchik 3.50 83 ⇑P Pn 09 39 09.5 +1.2
CEY Cerknica 3.50 316 *e*Pn Pn 09 39 09.4 +1.1
CEY *e*Sn Sn 09 39 50.5 +0.4
BZS Buzias 3.55 47 ⇑P Pn 09 39 08.7 -0.2
FNA Florina 3.58 133 Pn Pn 09 39 10.6 +1.1
FNA Florina 3.58 133 P Pn 09 39 11.0 +1.5
FNA Florina 3.58 133 P Pn 09 39 10.6 +1.1
DJES Djerdap 3.62 66 ⇑P Pn 09 39 10.5 +0.7
CUC Castrocucco 3.62 206 Pn Pn 09 39 09.5 -0.5
HERR Herculane 3.63 62 ⇓P Pn 09 39 10.0 -0.1
TIH Tihany 3.63 360 P Pn 09 39 10.5 +0.4
NEST Nestorio 3.69 139 P Pn 09 39 12.4 +1.4
LSK Leskovik 3.71 146 P Pn 09 39 11.4 +0.2
LSK Leskovik 3.71 146 P Pn 09 39 11.8 +0.6
baz=143
SRN Sarande 3.73 154 P Pn 09 39 10.7 -0.7
SRN Sarande 3.73 154 P Pn 09 39 11.0 -0.4
baz=152
KEK Kerkira 3.83 157 Pn Pn 09 39 11.4 -1.3
KEK Kerkira 3.83 157 P Pn 09 39 11.6 -1.1
PENT Pentalofos 3.91 141 P Pn 09 39 15.1 +1.1
MPLH Magyarpolny 3.91 356 P Pn 09 39 14.8 +0.9
MPLH S Sn 09 40 00.6 +0.6
VTS Vitosha 3.97 98 ⇑P Pn 09 39 16.2 +1.4
VTS Vitosha 3.97 98 Pn Pn 09 39 15.4 +0.5
VTS Vitosha 3.97 98 P Pn 09 39 15.2 +0.4
VTS S Sn 09 40 01.0 -0.7
SOKA Soboth 3.97 330 *i* Pn Pn 09 39 15.8 +1.0
comp=Z,115nm,0.5s,SNR=47
VAY Valandovo 3.97 118 *i* Pn Pn 09 39 16.1 +1.4
SIRR Siria 4.02 40 ⇑P Pn 09 39 14.7 -0.8
OBKA Obir 4.02 325 *e*Pn Pn 09 39 16.5 +1.0
OBKA *e*Sn Sn 09 40 02.2 -0.8
OBKA Obir 4.02 325 *e*Pn Pn 09 39 17.4 +1.9
comp=Z,15nm,0.5s
OBKA Obir 4.02 325 *e*Pn Pn 09 39 17.7 +2.2
SRE Strehaia 4.08 68 ⇓P Pn 09 39 17.3 +1.1
GZR Gura Zlata 4.09 57 ⇑P Pn 09 39 16.7 +0.3
CSKK Cskako 4.11 3 P Pn 09 39 17.4 +0.9
KZN Kozani 4.14 134 P Pn 09 39 18.1 +1.0
IGT Igoumenitsa 4.15 153 P Pn 09 39 16.5 -0.7
IGT Igoumenitsa 4.15 153 P Pn 09 39 16.8 -0.5
baz=151
EGYH Egyhazaskeszo 4.17 355 P Pn 09 39 18.2 +0.7
EGYH S Sn 09 40 08.0 +1.6
TIP Timpagrande 4.17 192 ⇓P Pn 09 39 17.3 -0.3
TIP Timpagrande 4.17 192 Pn Pn 09 39 16.3 -1.3
KPRO Kipourio 4.21 141 P Pn 09 39 19.2 +1.2
JAN Janina 4.23 147 P Pn 09 39 17.7 -0.7
KNT Kendrikon 4.27 118 P Pn 09 39 19.8 +1.0
BUD Budapest 4.29 10 P Pn 09 39 19.0 -0.1
BUD S Sn 09 40 07.9 -1.5
ARSA Arzberg 4.32 338 ⇓*i*Pn Pn 09 39 20.4 +0.8
ARSA *e*Sn Sn 09 40 10.2 -0.1
ARSA Arzberg 4.32 338 *e*Pn Pn 09 39 20.3 +0.8
comp=Z,70nm,0.4s,SNR=56
ARSA Arzberg 4.32 338 *e*Pn Pn 09 39 20.9 +1.3
PRED Cave del Predi 4.43 317 Pn Pn 09 39 21.7 +0.7
DEV Deva 4.43 52 ⇓P Pn 09 39 21.4 +0.4
SOP Sopron 4.52 348 P Pn 09 39 23.8 +1.6
SOP S Sn 09 40 14.1 -0.9
MYKA Terra Mystica 4.52 320 *e*Pn Pn 09 39 22.1 -0.3
comp=Z,5.6nm,0.3s
LATE Laterza 4.52 264 Pn Pn 09 39 22.2 -0.1
SRO Srobarova 4.56 4 *e*P Pn 09 39 25.2 +2.5
SRO *e* 09 40 19.7
RONA Rosalia, Austr 4.58 346 Pn 09 39 23.7 +0.6
RONA Rosalia, Austr 4.58 346 *i* Pn Pn 09 39 23.7 +0.6
comp=Z,7.0nm,0.3s,SNR=12
THE Thessaloniki 4.60 123 P Pn 09 39 24.4 +1.0
HORT Hortiatis 4.71 123 P Pn 09 39 25.6 +0.7
SRS Serrai 4.74 115 P Pn 09 39 27.1 +1.8
STAL STALIGIAL 4.76 311 Pn Pn 09 39 26.4 +0.9
CLUD Cludinico 4.79 314 Pn Pn 09 39 26.8 +0.8
NVR Nevrokopi 4.82 111 P Pn 09 39 28.3 +1.9
THL Klokotos Trika 4.82 139 P Pn 09 39 26.2 -0.2
OSSC Osservatorio P 4.86 275 Pn Pn 09 39 26.4 -0.5
PSZ Piszkesteto 4.86 16 ⇓P Pn 09 39 26.3 -0.7
PSZ Piszkesteto 4.86 16 Pn Pn 09 39 26.6 -0.4
PSZ Piszkesteto 4.86 16 P Pn 09 39 26.6 -0.4
PSZ Piszkesteto 4.86 16 P Pn 09 39 26.9 -0.1
PSZ S Sn 09 40 20.4 -3.1
CONA Conrad Observa 4.88 344 *e*Pn Pn 09 39 28.5 +1.2
comp=Z,7.7nm,0.4s,SNR=9.1
TSLK Tsoukalades, L 4.90 154 P Pn 09 39 26.4 -1.1
DRGR 4.90 42 P Pn 09 39 26.8 -0.8
DRGR SN Sn 09 40 22.2 -2.4
LKD2 Lefkada island 4.94 154 P Pn 09 39 26.7 -1.3
LKD2 Lefkada island 4.94 154 P Pn 09 39 27.1 -0.9
baz=152
TEOL Teolo 4.94 297 Pn Pn 09 39 27.9 -0.1
ZST Bratislava 4.96 354 *e*P Pn 09 39 29.2 +0.9
ZST *e* 09 40 22.3
DRAG Dragano-Lefkad 5.00 155 P Pn 09 39 27.4 -1.5
NYDR Nydri-Lefkada 5.02 154 P Pn 09 39 27.8 -1.3
EVGI Lefkada island 5.09 155 P Pn 09 39 28.6 -1.5
MODS Modra-Piesok 5.13 355 *e*P Pn 09 39 31.0 +0.4
MODS *e* 09 40 27.2
ABTA Abfaltersbach 5.17 314 *e*Pn Pn 09 39 32.0 +0.8
comp=Z,22nm,0.3s,SNR=6.3
MOA Molln 5.25 332 *e*Pn Pn 09 39 33.9 +1.6
comp=Z,21nm,0.3s,SNR=19
MOA Molln 5.25 332 *e*Pn Pn 09 39 35.0 +2.8
MOA *e*Sn Sn 09 40 33.0 +0.1
EVR Evrytania 5.25 144 P Pn 09 39 33.0 +0.6
CTI Castel Tesino 5.25 304 Pn Pn 09 39 32.7 +0.2
CTI Castel Tesino 5.25 304 P Pn 09 39 32.7 +0.2
SMOL Smolenice 5.26 357 *e*P Pn 09 39 33.8 +1.4
SMOL *e* 09 40 30.6
ARR Arges 5.27 64 ⇑P Pn 09 39 34.0 +1.4
VYHS Vyhne 5.27 7 *e*P Pn 09 39 32.9 +0.3
VYHS *e* 09 40 30.4
MAKR Makrakomi, Fth 5.32 142 P Pn 09 39 33.6 +0.4
BIOA Bad Ischl, Aus 5.34 327 Pn Pn 09 39 35.1 +1.5
BIOA Bad Ischl, Aus 5.34 327 *e*Pn Pn 09 39 35.1 +1.5
comp=Z,27nm,0.4s,SNR=12
KEF4 Livadi, Kephal 5.36 158 P Pn 09 39 31.7 -2.0
DMLN Damoulianata-K 5.36 159 P Pn 09 39 32.1 -1.7
KEF3 Kipouria, Keph 5.39 159 P Pn 09 39 31.8 -2.4
KAVA Kavala 5.42 113 P Pn 09 39 36.5 +2.0
VLS Valsamata 5.48 157 P Pn 09 39 33.4 -2.0
VLC Villacollemand 5.52 282 Pn Pn 09 39 36.4 +0.3
KECS Kecovo 5.52 18 *e*P Pn 09 39 36.4 +0.4
KECS *e* 09 40 37.0
PSDA Pessada-Kefalo 5.54 157 P Pn 09 39 34.1 -2.1
ABAH Abaujker 5.55 24 P Pn 09 39 38.5 +2.2
VOIR 5.57 65 ⇑P Pn 09 39 38.1 +1.4
VOIR 5.57 65 P Pn 09 39 38.7 +2.0
JAVC Velka Javorina 5.60 358 *e*PN Pn 09 39 38.2 +1.1
RJOB Jochberg 5.73 323 *e*Pn Pn 09 39 40.9 +1.9
AXAR Agios Charalam 5.76 140 P Pn 09 39 39.6 +0.3
SALO Salr 5.78 297 Pn Pn 09 39 39.3 -0.3
TRPA Tarpa 5.85 32 P Pn 09 39 41.3 +0.9
RLS Riolos of Patr 5.87 151 P Pn 09 39 39.7 -1.0
KRUC Moravsky 5.89 350 *e*PN Pn 09 39 39.8 -1.3
KRUC *e*SN Sn 09 40 47.2 -1.6
LAKA Lakka 5.90 147 P Pn 09 39 40.8 -0.4
WTTA Wattenberg 5.96 314 *e*Pn Pn 09 39 44.4 +2.2
comp=Z,55nm,0.4s,SNR=16
WTTA Wattenberg 5.96 314 *e*Pn Pn 09 39 44.6 +2.4
WTTA *e*Sn Sn 09 40 52.2 +1.4
DOPR Dopca 5.99 61 ⇑P Pn 09 39 42.9 +0.5
LKR Lokris 6.01 138 P Pn 09 39 41.5 -1.3
WATA Walderalm 6.04 315 Pn Pn 09 39 45.1 +1.9
WATA Walderalm 6.04 315 P Pn 09 39 45.1 +1.9

WATA Walderalm 6.04 315 *e*Pn Pn 09 39 45.1 +1.9
comp=Z,42nm,0.3s,SNR=21
RDO Rodhopi 6.05 108 P Pn 09 39 45.9 +2.6
CKRC Cesky Krumlov 6.09 337 *e*PN Pn 09 39 46.2 +2.4
CKRC *e*SN Sn 09 40 50.6 -3.2
MAUC Maruska 6.10 360 *e*PN Pn 09 39 43.8 -0.2
MAUC *e*SN Sn 09 40 51.4 -2.7
VRAC Vranov 6.11 352 Pn Pn 09 39 43.8 -0.3
comp=Z,0.4nm,0.3s,baz=146,slow=15,SNR=1.6
VRAC Sn Sn 09 40 53.4 -0.8
comp=Z,2.4nm,0.3s,baz=103,slow=14,SNR=7.9
comp=Z,2.4nm,0.4s
VRAC Vranov 6.11 352 *e*PN Pn 09 39 43.9 -0.2
VRAC *e*SN Sn 09 40 53.6 -0.7
CRVS Cervenica-Dubn 6.16 22 *e*P Pn 09 39 45.0 +0.3
MSSA Maissana 6.16 283 Pn Pn 09 39 44.7 -0.2
SQTA Sankt Quirin 6.16 312 Pn 09 39 47.0 +2.1
SQTA Sankt Quirin 6.16 312 P Pn 09 39 47.0 +2.1
SQTA Sankt Quirin 6.16 312 *e*Pn Pn 09 39 47.0 +2.1
comp=Z,33nm,0.3s,SNR=11
UZH Uzhgorod 6.18 28 *e*P Pn 09 39 46.0 +1.0
UZH *e*S Sn 09 40 57.0 +1.2
UZH MLR MLR
comp=N,90nm,11.0s
UZH MLR MLR
comp=E,50nm,11.0s
UZH MLR MLR
comp=Z,40nm,11.0s
MLR Muntele Rosu 6.18 66 ⇑P Pn 09 39 46.0 +0.8
MLR Muntele Rosu 6.18 66 Pn Pn 09 39 48.2 +3.1
comp=Z,1.1nm,0.3s,baz=303,slow=1.0,SNR=4.5
comp=Z,3.6nm,0.4s
MOTA Moosalm 6.29 313 Pn 09 39 48.2 +1.5
MOTA Moosalm 6.29 313 P Pn 09 39 48.2 +1.5
MOTA Moosalm 6.29 313 *e*Pn Pn 09 39 48.2 +1.5
comp=Z,49nm,0.5s,SNR=21
GEC2 GERESS Array S 6.30 334 *e*Pn Pn 09 39 48.8 +2.0
GEC2 *e*Sn Sn 09 40 57.9 -1.1
GERES GERESS Array B 6.30 334 Pn Pn 09 39 47.5 +0.7
comp=Z,5.2nm,0.3s,baz=157,slow=14,SNR=35
GERES Sn Sn 09 40 55.8 -3.2
comp=Z,6.8nm,0.3s,baz=146,slow=23,SNR=8.4
comp=Z,8.0nm,0.3s
FETA Feichten 6.31 309 *e*Pn Pn 09 39 48.2 +1.2
comp=Z,9.9nm,0.4s,SNR=7.6
FUORN Ofenpass-Fuorn 6.37 304 Pn Pn 09 39 49.5 +1.5
PART Garmisch-Parte 6.38 314 *e*Pn Pn 09 39 51.1 +3.2
KOLS Kolonicke sedl 6.43 27 *e*P Pn 09 39 49.7 +1.2
MORC Moravsky Berou 6.52 358 Pn Pn 09 39 50.0 +0.3
MORC Moravsky Berou 6.52 358 P Pn 09 39 50.0 +0.3
MORC Moravsky Berou 6.52 358 *e*PN Pn 09 39 50.6 +0.9
MORC *e*SN Sn 09 41 01.8 -2.5
RETA Reutte 6.56 312 *e*Pn Pn 09 39 52.6 +2.2
comp=Z,9.0nm,0.3s,SNR=7.1
STHS Stebnicka Huta 6.57 19 *e*P Pn 09 39 51.3 +0.9
STHS *e* 09 41 02.0
KHC Kasperske Hory 6.59 334 Pn Pn 09 39 50.5 -0.2
KHC Kasperske Hory 6.59 334 *e*P Pn 09 39 51.2 +0.5
KHC *e* 09 41 01.8
KHC Kasperske Hory 6.59 334 *e*PN Pn 09 39 51.2 +0.5
KHC *e*SN Sn 09 41 01.8 -4.2
DAVOX Davos/Dischmat 6.68 304 Pn Pn 09 39 53.1 +1.0
comp=Z,5.4nm,0.3s,baz=100,slow=9.9,SNR=14
DAVOX Sn Sn 09 41 11.5 +2.9
comp=Z,2.5nm,0.3s,baz=125,slow=23,SNR=3.8
DAVOX LR LR 09 42 56.5
comp=Z,119nm,18.2s,baz=112,slow=43
comp=Z,23nm,0.5s
BUR01 Bucovina Ar. S 6.74 47 ⇑P Pn 09 39 52.6 -0.2
BURAR Bucovina Array 6.74 47 Pn Pn 09 39 53.1 +0.3
BUR08 Bucovina Ar. S 6.75 47 Pn Pn 09 39 53.8 +0.8
PLOR Plostina 6.76 65 ⇑P Pn 09 39 53.4 +0.3
ITM Ithomi 6.81 152 Pn Pn 09 39 52.5 -1.3
ITM Ithomi 6.81 152 P Pn 09 39 52.8 -1.0
VRI Vrincioaia 6.82 65 ⇑P Pn 09 39 54.9 +1.0
WET Wettzell 6.83 331 *e*Pn Pn 09 39 55.5 +1.5
KRLC Kraliky 6.86 354 *e*P Pn 09 39 56.6 +2.2
KRLC *e* 09 41 07.0
KRLC Kraliky 6.86 354 *e*PN Pn 09 39 56.6 +2.2
KRLC *e*SN Sn 09 41 07.0 -5.6
TUE Stuetta 6.87 301 Pn Pn 09 39 56.0 +1.3
DION Dionisos Attik 6.92 136 P Pn 09 39 54.8 -0.4
DAVA Damuels 6.94 308 *e*Pn Pn 09 39 55.8 +0.2
comp=Z,5.3nm,0.3s
DAVA Damuels 6.94 308 *e*Pn Pn 09 39 58.8 +3.2
DAVA *e*Sn Sn 09 41 16.3 +1.4
GOPC GO Pecny, Ondr 6.99 343 *e*SN Sn 09 41 11.2 -4.6
VLY Voula,Athens 7.03 138 P Pn 09 39 55.6 -1.1
UBR Ueberruh 7.03 312 *e*Pn Pn 09 39 58.6 +1.8
PRU Pruhonice 7.11 342 *e*SN Sn 09 41 15.4 -3.4
PLONS Plons/SG 7.11 305 *e*Pn Pn 09 40 00.3 +2.3
KRND KRANIDI 7.11 144 P Pn 09 39 56.2 -1.7
ROTZ Rotzenmuhle 7.59 331 *e*Pn Pn 09 40 05.2 +0.7
WALHA Wallhausen, DE 7.62 309 *e*Pn Pn 09 40 05.8 +1.0
MANZ Manzenberg 7.81 331 *e*Pn Pn 09 40 08.1 +0.6
MANZ *e*Sn Sn 09 41 32.9 -3.2
GRF Grafenberg Arr 7.91 327 *e*Pn Pn 09 40 09.8 +1.1
NKC Novy Kostel 7.91 334 *e*P Pn 09 40 10.8 +2.0
NKC *e* 09 41 35.3
NKC Novy Kostel 7.91 334 *e*PN Pn 09 40 10.8 +2.0
NKC *e*SN Sn 09 41 35.3 -3.2
SLE Schleitheim 7.99 308 *e*Pn Pn 09 40 10.4 +0.5
BRG Berggiesshubel 8.07 342 *e*P Pn 09 40 13.6 +2.5
BRG Amp 09 40 14.9
comp=Z,3.0nm,0.6s
BRG *ex* x 09 40 55.2
BRG *ex* x 09 41 37.7
BRG *ex* x 09 42 01.8
BRG Amp 09 42 04.5
comp=Z,17nm,0.7s
BRG Amp 09 43 36.0
comp=Z,0.2nm,12.3s
BRG Amp 09 43 39.0
comp=E,0.1nm,9.3s
BRG Amp 09 43 41.0
comp=N,0.2nm,9.0s
BRG Berggiesshubel 8.07 342 *e*P Pn 09 40 13.5 +2.5
BRG *e* 09 41 37.7
BRG pmax pmax
comp=Z,3.0nm,0.6s
BRG MLR MLR
comp=Z,168nm,12.3s
BRG MLR MLR
comp=E,86nm,9.3s
BRG MLR MLR
comp=N,160nm,9.0s
SULZ Cheisacher 8.10 305 *e*Pn Pn 09 40 14.0 +2.6
METMA Mettma DE 8.10 307 *e*Pn Pn 09 40 13.4 +1.9
SENIN Lac Senin/Sane 8.15 296 Pn Pn 09 40 12.3 0.0
STU Stuttgart 8.18 315 Pn Pn 09 40 13.4 +0.8
STU Stuttgart 8.18 315 P Pn 09 40 13.4 +0.8
BERGE Lenzkirch (DE) 8.23 307 *e*Pn Pn 09 40 13.6 +0.4
LPL La Plagne 8.31 290 P Pn 09 40 14.8 +0.3
BFO Black Forest 8.38 310 Pn Pn 09 40 15.7 +0.4
BFO Black Forest 8.38 310 P Pn 09 40 15.7 +0.4
BFO Black Forest 8.38 310 *e*Pn Pn 09 40 16.9 +1.6
BFO *e*Sn Sn 09 41 47.5 -2.8
APE Apeiranthos 8.51 134 *i* P Pn 09 40 15.9 -1.2
MOX Moxa 8.54 332 P Pn 09 40 18.5 +1.1
MOX Moxa 8.54 332 *e*Pn Pn 09 40 18.3 +0.9
CLL Collm 8.70 339 *e*P Pn 09 40 22.0 +2.4
CLL Collm 8.70 339 *e*Pn Pn 09 40 22.0 +2.4
CLL *ex* x 09 40 31.0
CLL *e*Pg Pg 09 40 58.0 -1.9
CLL *e*Sn Sn 09 41 44.0 -14
CLL *ex* x 09 41 52.0
CLL *ex* x 09 42 01.0
CLL *ex* x 09 42 20.0
CLL *e*Sb Sg 09 42 25.0 -28
CLL *e*Sg Sg 09 42 51.0 -1.6
comp=Z,43nm,1.3s
CLL *e*Sglp 09 42 53.0
comp=N,200nm,20.0s
CLL *e*Sglp 09 42 53.0
comp=E,300nm,21.0s
CLL *e*Sglp 09 42 53.0
comp=Z,100nm,19.0s
CLL Lm MLR 12 21 00.0
comp=Z,200nm,18.5s
CLL Collm 8.70 339 *e*Pn Pn 09 40 22.9 +3.2
MILB Miltenberg 8.84 321 *e*Pn Pn 09 40 22.8 +1.2
ECH Echery 8.99 307 Pn Pn 09 40 24.3 +0.7
ECH Echery 8.99 307 P Pn 09 40 24.3 +0.7

ECH Echery 8.99 307 *e*Pn **Pn 09 40 23.5 -0.1**
ECH *e*Sn **Sn 09 42 02.1 -3.1**
TNS Taunus Mts 9.51 320 *e*Pn **Pn 09 40 32.2 +1.4**
TNS *e*Sn **Sn 09 42 17.3 -0.5**
IDI Anoyia 9.63 143 Pn **Pn 09 40 29.5 -3.0**
comp=Z,2.1nm,0.3s,baz=317,slow=15,SNR=12
IDI Anoyia 9.63 143 Pn **Pn 09 40 28.3 -4.2**
VIVF Saint-Julien-l 9.66 284 P **Pn 09 40 31.7 -1.1**
SSB Saint Sauveur 9.79 286 Pn **Pn 09 40 31.8 -2.9**
SSB Saint Sauveur 9.79 286 P **Pn 09 40 31.8 -2.9**
KEST Kesra 10.01 224 Pn **Pn 09 40 40.5 +2.9**
comp=Z,0.7nm,0.3s,baz=274,slow=6.7,SNR=4.1
comp=Z,2.4nm,0.5s
KASTN Kahler Asten 10.22 324 *e*Pn **Pn 09 40 42.8 +2.3**
KARP Karpathos 10.52 134 Pn **Pn 09 40 43.4 -1.2**
AKASG Malin Array Be 10.72 42 Pn **Pn 09 40 48.5 +1.2**
comp=Z,0.4nm,0.3s,baz=234,slow=12,SNR=5.7
comp=Z,1.7nm,0.7s
AKBB Malin Array Si 10.72 42 *i*P **Pn 09 40 48.3 +1.0**
BTNL Ternell 10.87 316 *d*P **Pn 09 40 49.0 -0.4**
BTNL dpP 09 40 51.3
MEM Membach 10.95 316 *d*pP **Pn 09 40 52.5 +2.1**
RCHB Rochefort 11.09 313 *d*pP **Pn 09 40 54.5 +2.2**
BMRD Maredsous 11.42 313 *d*pP **Pn 09 40 59.2 +2.4**
BR131 Keskin Array S 12.32 101 *i*P **Pn 09 41 11.3 +2.0**
BRTR Keskin Array B 12.32 101 Pn **Pn 09 41 13.1 +3.8**
comp=Z,0.1nm,0.3s,baz=287,slow=13,SNR=2.9
comp=Z,1.1nm,0.8s
NACGM Naroch 13.01 23 *e*P **P 09 41 31.1 +2.0**
comp=Z,9.0nm,0.7s,baz=213
MFF Saint Martin d 13.21 291 P **Pn 09 41 22.5 +1.2**
VSU Vasula 16.18 17 *i*P **Pn 09 42 02.6 +1.6**
VSR Storozhevoye 16.44 54 *e*P **Pn 09 42 05.1 +0.6**
VSR pmax pmax
comp=Z,6.0nm,0.5s
VORR Voronezh 16.63 52 *e*P **Pn 09 42 00.3 -6.6**
VORR pmax pmax
comp=Z,80nm,0.4s
ESDC Sonseca Array 16.77 265 Pn **P 09 42 10.9 -0.1**
comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=4.2
comp=Z,0.6nm,0.8s
OBN Obninsk 16.95 39 **Pn 09 42 11.6 +0.8**
OBN Obninsk 16.95 39*c* *i*P **P 09 42 12.7 -0.1**
OBN pmax pmax
comp=Z,29nm,0.6s
OBN MLR MLR
comp=Z,72nm,16.0s
HFS Hagfors 17.09 353 Pn **Pn 09 42 11.8 -0.7**
comp=Z,0.1nm,0.3s,baz=156,slow=14,SNR=2.3
comp=Z,1.4nm,0.7s
MOS Moscow 17.80 39 *e*P **P 09 42 22.1 -0.1**
MOS pmax pmax
comp=Z,71nm,1.0s
NAO01 NORSAR Array S 18.11 349 **P 09 42 26.5 +0.9**
EKA Eskdalemuir Ar 18.20 319 P **Pn 09 42 26.4 +0.1**
baz=112,slow=11
EKA LR LR 09 50 56.3
comp=Z,133nm,18.4s,baz=104,slow=42
comp=Z,1.0nm,0.7s
NB2 NORSAR Subarra 18.25 350 P P 09 42 35.2 +8.0
comp=Z,1.3nm,0.7s,baz=164,slow=11
NOA NORSAR Array B 18.25 350 P **P 09 42 27.4 +0.2**
baz=162,slow=9.7,SNR=2.3
comp=Z,0.2nm,0.4s
FINES FINESS Array B 18.85 12 P **P 09 42 33.2 -0.5**
comp=Z,0.4nm,0.3s,baz=194,slow=11,SNR=13
comp=Z,2.4nm,0.6s
FINES FINESS Array B 18.85 12 P **P 09 42 32.7 -1.0**
FINES FINESS Array B 18.85 12 P **P 09 42 32.7 -1.0**
FIA1 FINESS Array S 18.85 12 P **P 09 42 33.5 -0.2**
FIA1 IAmb IAmb 09 42 51.0
comp=Z,19nm,1.2s
MDT Midelt 20.51 247 P Pn 09 42 53.5 -0.8
comp=Z,3.3nm,0.8s,baz=82,slow=12,SNR=10
comp=Z,3.3nm,0.8s
BELG Belogornoye 21.81 55 P **P 09 43 06.2 +0.3**
comp=Z,22nm,1.0s,baz=239,slow=3.1,SNR=4.3
comp=Z,22nm,1.0s
BELG Belogornoye 21.81 55 *i*P **P 09 43 05.6 -0.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
KLMR Klimovskoe 21.88 29 *e*P **P 09 43 03.3 -3.3**
KLMR pmax pmax
comp=Z,30nm,1.6s
KLMR Klimovskoe 21.88 29 *e*P **P 09 43 03.4 -3.2**
KLMR AMP 09 43 08.4
comp=Z,30nm,1.6s
PRGR Permogore 24.66 32 *e*P **P 09 43 33.9 -0.5**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 26.62 6 P **P 09 43 51.2 -0.9**
comp=Z,2.5nm,1.0s,baz=190,slow=9.8,SNR=2.3
ARCES LR LR 09 55 10.5
comp=Z,53nm,21.1s,baz=144,slow=38
comp=Z,2.5nm,1.0s
BORG Borgarnes 30.72 328 LR LR 09 59 06.6
comp=Z,70nm,19.1s,baz=143,slow=41
TORD Torodi Ar. Bea 33.11 210 P **P 09 44 52.8 +2.7**
comp=Z,0.7nm,0.8s,baz=18,slow=7.6,SNR=5.4
comp=Z,0.7nm,0.8s
BRVK Borovoye 35.55 55 P **P 09 45 10.4 -0.5**
BRVK IAmb IAmb 09 45 11.7
comp=Z,6.5nm,1.2s
BRVK Borovoye 35.55 55 P **P 09 45 10.4 -0.5**
BRVK pmax pmax
comp=Z,7.0nm,1.2s
ZALV Zalesovo Beam 43.93 52 P **P 09 46 21.9 +1.3**
comp=Z,1.0nm,0.2s,baz=311,slow=5.3,SNR=3.7
ZALV LR LR 10 04 48.6
comp=Z,38nm,18.2s,baz=72,slow=36
comp=Z,1.0nm,0.2s
MKAR Makanchi Array 44.51 62 P **P 09 46 24.8 -0.6**
comp=Z,0.5nm,0.6s,baz=288,slow=6.0,SNR=4.9
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 44.51 62 P **P 09 46 23.4 -2.0**
WMQ Urumqi 49.17 64 *e*P **P 09 47 03.5 +1.5**
SCHQ Schefferville 53.43 314 LR LR 10 07 13.2
comp=Z,34nm,20.4s,baz=271,slow=33
SONM Songino Array 58.83 52 P **P 09 48 12.9 +0.4**
comp=Z,0.3nm,0.5s,baz=319,slow=5.7,SNR=2.7
comp=Z,0.3nm,0.5s
HHC Hu-ho-hao-te 65.82 56 *e*P **P 09 48 59.5 0.0**
PZH PanZhiHua 68.08 74 P **P 09 49 14.0 0.0**
ILAR Eielson Array 71.64 353 P **P 09 49 35.2 0.0**
comp=Z,0.2nm,0.6s,baz=10,slow=5.5,SNR=2.0
comp=Z,0.2nm,0.6s
TKL Tuckaleechee C 73.98 304 LR LR 10 22 17.7
comp=Z,36nm,18.2s,baz=346,slow=36

IDC ***31*** *09:43:23.0±1.5, 33°.14N×115°.64W, h0km, mbtmp2.9/4, ML3.1/4, Error ellipse: s-maj=25.4km s-min=8.2km az=23.0*
PAS ***31*** *09:43:23.5±2.0, 33°.186N±0°.009×115°.57W±0°.01, h3km±6km, ML3.4/106, ML3.3/38(NEIC), Error ellipse: s-maj=2.0km s-min=0.5km az=48.0*
ANF ***31*** *09:43:23.1±0.2, 33°.17N×115°.58W, h15km, ML3.4/32, ML3.4/32, Error ellipse: s-maj=2.0km s-min=1.6km az=129.0*
NEIC ***31*** *09:43:23.7±2.7, 33°.18N±0°.01×115°.58W±0°.01, h17km±2km, Error ellipse: s-maj=2.6km s-min=0.8km az=218.0*
ISC 31 09:43:23.8±0.8, 33°.17N±0°.01×115°.58W±0°.02, h15km±7km**, n101, σ1$25**/133**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.14**	**182**		**Pg**	**09 43 27.2**	**-0.2**
WEMD					**Sb**	**09 43 31.0**	**0.0**
ERRC	**Elmore Ranch**	**0.21**	**255**		**Pb**	**09 43 33.2**	**+3.8**
SWSC	**Sam W. Stewart**	**0.30**	**220**	P	**Pg**	**09 43 29.8**	**-0.2**
	baz=39						
SWSC				S	**Sg**	**09 43 33.7**	**-0.5**
	baz=39						
SUP	**Superstition M**	**0.30**	**224**		**Pg**	**09 43 30.0**	**-0.1**
SUP					**Sg**	**09 43 34.8**	**+0.4**
SNR	**Schaffner Ranc**	**0.33**	**160**		**Pg**	**09 43 30.7**	**+0.1**
SNR					**Sb**	**09 43 36.4**	**-0.2**
SALN	**Salton City**	**0.36**	**287**		**Pg**	**09 43 31.0**	**-0.1**
SALN					**Sb**	**09 43 37.6**	**+0.2**
DREC	**Desert Rsrch C**	**0.38**	**164**		**Pb**	**09 43 31.9**	**-0.4**
DREC					**Sb**	**09 43 37.5**	**-0.6**
WESC	**Westside Schoo**	**0.43**	**198**		**Pb**	**09 43 32.6**	**-0.5**
CRR	**Carrizo Plain**	**0.44**	**229**		**Sb**	**09 43 39.1**	**-0.5**
BC3	**Big Chuckawall**	**0.49**	**12**		**Pg**	**09 43 32.9**	**-0.7**
BC3					**Sg**	**09 43 39.9**	**-0.3**
BC3	**Big Chuckawall**	**0.49**	**12**	P	**Pg**	**09 43 32.9**	**-0.7**
	baz=191,SNR=109						
BC3				S	**Sg**	**09 43 39.8**	**-0.4**
	baz=191						
COA	**Coachella**	**0.49**	**129**		**Pg**	**09 43 33.4**	**-0.1**
COA					**Sb**	**09 43 41.4**	**+0.3**
HAY	**Hayfield**	**0.54**	**350**		**Pg**	**09 43 33.7**	**-0.8**
SGL	**Mount Signal**	**0.54**	**194**		**Pg**	**09 43 33.9**	**-0.5**
RUN	**Ruthven**	**0.54**	**112**		**Pg**	**09 43 33.9**	**-0.6**
RUN					**Sg**	**09 43 41.5**	**-0.2**
UABX	**UABC, Campus M**	**0.55**	**168**		**Pg**	**09 43 34.7**	**+0.1**
UABX					**Sb**	**09 43 43.7**	**+0.8**
UABX	**UABC, Campus M**	**0.55**	**168**	IAML		09 43 48.7	
	comp=N,2μm,1.1s						
UABX				IAML		09 43 54.3	
	comp=E,2μm,0.4s						
CTW	**Cottonwood Mou**	**0.56**	**334**		**Pg**	**09 43 34.2**	**-0.6**
CTW					**Sb**	**09 43 42.4**	**-0.9**
SLH	**Sleepy Hollow**	**0.57**	**272**		**Pg**	**09 43 34.6**	**-0.4**
SLH					**Sb**	**09 43 44.0**	**+0.5**
CTCC	**Cactus City**	**0.59**	**324**		**Pg**	**09 43 35.0**	**-0.5**
CTCC					**Sb**	**09 43 43.8**	**-0.3**
YUH	**Yuha Desert**	**0.60**	**209**		**Pg**	**09 43 35.1**	**-0.5**
YUH					**Sg**	**09 43 43.4**	**-0.1**
YUH	**Yuha Desert**	**0.60**	**209**	IAML		09 43 44.8	
	comp=E,648nm,0.8s						
YUH				IAML		09 43 54.4	
	comp=N,496nm,0.8s						
GLA	**Glamis**	**0.64**	**101**		**Pg**	**09 43 35.4**	**-0.9**
GLA					**Sg**	**09 43 44.1**	**-0.8**
GLA	**Glamis**	**0.64**	**101**	P	**Pg**	**09 43 35.4**	**-0.9**
	baz=282,SNR=99						
GLA				S	**Sb**	**09 43 45.1**	**-0.4**
	baz=282						
EMSC	**East Mesa**	**0.66**	**131**		**Pg**	**09 43 36.3**	**-0.4**
EMSC					**Sb**	**09 43 46.3**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.69**	**221**		**Pg**	**09 43 36.6**	**-0.7**
IKP					**Sb**	**09 43 46.9**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.69**	**221**	P	**Pg**	**09 43 36.6**	**-0.7**
	baz=40,SNR=58						
IKP				S	**Sg**	**09 43 46.1**	**-0.3**
	baz=40						
RMX	**La Rumorosa**	**0.71**	**217**		**Pg**	**09 43 37.5**	**-0.2**
RMX					**Sb**	**09 43 47.5**	**-0.2**
RMX	**La Rumorosa**	**0.71**	**217**	IAML		09 43 48.5	
	comp=E,1μm,0.8s						
BORC	**Borrego Spring**	**0.71**	**278**		**Pg**	**09 43 36.8**	**-0.9**
BORC					**Sb**	**09 43 47.1**	**-0.5**
MONP2	**Monument Peak**	**0.77**	**249**		**Pg**	**09 43 38.1**	**-0.7**
MONP2					**Sg**	**09 43 48.1**	**-0.7**
MONP2	**Monument Peak**	**0.77**	**249**	P	**Pg**	**09 43 38.0**	**-0.8**
	baz=68,SNR=42						
MONP2				S	**Sg**	**09 43 48.5**	**-0.3**
	baz=68						
CPBX	**Cerro Prieto**	**0.79**	**163**		**Pg**	**09 43 37.7**	**-1.4**
CPBX					**Sb**	**09 43 50.1**	**+0.5**
CPBX	**Cerro Prieto**	**0.79**	**163**	IAML		09 44 07.0	
	comp=N,3μm,0.5s						
XPFO	**Pion Flat**	**0.85**	**301**		**Pg**	**09 43 39.1**	**-1.4**
PFO	**Pinyon Flats O**	**0.86**	**301**	Pg	**Pg**	**09 43 39.1**	**-1.4**
	comp=N,57nm,0.3s,baz=128,slow=12,SNR=65						
PFO				Lg	Lg	09 43 50.8	
	comp=N,133nm,0.3s,baz=120,slow=14,SNR=17						
PFO	**Pinyon Flats O**	**0.86**	**301**		**Pg**	**09 43 39.2**	**-1.2**
PFO					Pn	09 43 51.3	+10
PFO	**Pinyon Flats O**	**0.86**	**301**	P	**Pg**	**09 43 39.1**	**-1.4**
	baz=120,SNR=58						
PFO				S	**Sb**	**09 43 51.5**	**-0.4**
	baz=120						
BELC	**Belle Mtn. Jos**	**0.90**	**337**		**Pb**	**09 43 40.1**	**-1.2**
BELC					**Sb**	**09 43 52.2**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.90**	**337**	P	**Pb**	**09 43 40.0**	**-1.2**
	baz=156,SNR=38						
BELC				S	**Sg**	**09 43 53.3**	**+0.3**
	baz=156						
MATG	**Mataguay Scout**	**0.90**	**272**		**Pb**	**09 43 39.9**	**-1.3**
MATG					**Sb**	**09 43 52.5**	**-0.6**
SNDA	**J Saunders Pla**	**0.95**	**294**		**Pb**	**09 43 41.0**	**-1.0**
GUVIX	**Guadalupe Vict**	**0.96**	**154**		**Pb**	**09 43 40.4**	**-1.9**
IRM	**Iron Mountain**	**1.04**	**20**		**Pb**	**09 43 43.0**	**-0.7**
IRM	**Iron Mountain**	**1.04**	**20**	P	**Pb**	**09 43 42.8**	**-0.9**
	baz=200,SNR=143						
IRM				S	**Sn**	**09 43 58.0**	**-0.4**
	baz=200						
BAR	**Barrett**	**1.05**	**242**	IAML		09 43 58.1	
	comp=E,607nm,0.7s						
BAR				IAML		09 43 58.2	
	comp=N,563nm,0.8s						
BLYC	**Blythe**	**1.05**	**57**	Pg	**Pn**	**09 43 43.6**	**-0.5**
TKX	**Tecate**	**1.06**	**235**		**Pb**	**09 43 42.5**	**-1.3**
TKX				IAML		09 43 56.7	
	comp=N,458nm,0.6s						
TKX				IAML		09 43 57.0	
	comp=E,409nm,0.2s						
ESJX	**Sierra Juarez**	**1.21**	**195**		**Pn**	**09 43 44.7**	**-1.7**
SDRC	**San Diego Road**	**1.23**	**250**		**Pn**	**09 43 45.1**	**-1.4**
109C	**Camp Elliot, M**	**1.32**	**258**		**Pn**	**09 43 46.3**	**-1.4**
109C				IAML		09 44 05.4	
	comp=N,618nm,0.7s						
109C				IAML		09 44 06.1	
	comp=E,469nm,0.4s						
109C	**Camp Elliot, M**	**1.32**	**258**	P	**Pn**	**09 43 46.1**	**-1.6**
	baz=77,SNR=63						
109C				S	**Sb**	**09 44 03.2**	**-1.7**
	baz=77						
TJX	**Tijuana**	**1.41**	**242**	Pn	**Pn**	**09 43 48.7**	**-0.3**
MURC	**Murrieta**	**1.42**	**288**	P	**Pn**	**09 43 48.0**	**-1.2**
	baz=106,SNR=49						
MURC				Sb	**Sg**	**09 44 08.8**	**-0.8**
	baz=106						
DANC	**Danby, Needles**	**1.47**	**6**		**Pg**	**09 43 51.4**	**-0.6**
BBRC	**Big Bear Solar**	**1.56**	**314**	P	**Pn**	**09 43 51.1**	**-0.2**
	baz=133						
BBRC				Sb	**Sg**	**09 44 12.8**	**-1.3**
	baz=133						
113A	**Mohawk Valley,**	**1.57**	**104**		**Pb**	**09 43 51.7**	**-0.9**
CCX	**Cicese**	**1.59**	**216**		**Pn**	**09 43 51.3**	**-0.2**
GMRC	**Granite Mounta**	**1.61**	**358**	Pg	**Pg**	**09 43 54.5**	**-0.2**
	baz=177,SNR=40						
ELS	**Elsinore Mount**	**1.62**	**287**		**Pn**	**09 43 50.4**	**-1.6**
PDMCI	**Parker Dam,Lak**	**1.64**	**46**		**Pb**	**09 43 54.2**	**+0.4**
PDMCI	**Parker Dam,Lak**	**1.64**	**46**	P	**Pb**	**09 43 52.6**	**-1.2**
	baz=227,SNR=27						
HEC	**Hector,Ludlow**	**1.77**	**339**	Pg	**Pg**	**09 43 57.3**	**-0.5**
	baz=159,SNR=67						
NEE2	**Needles Airpor**	**1.78**	**26**	P	**Pn**	**09 43 54.7**	**+0.6**
	baz=207						
BFSC	**Mount Baldy Ra**	**2.04**	**302**	P	**Pn**	**09 43 57.5**	**-0.2**
	baz=121						
BFSC				Sb	**Sb**	**09 44 27.0**	**+1.2**
	baz=121						
RRX	**Edison Barstow**	**2.07**	**326**	Pg	**Pg**	**09 44 03.4**	**0.0**
	baz=145						
TUQ	**Turquoise Moun**	**2.27**	**353**	Pg	**Pg**	**09 44 06.9**	**-0.5**
	baz=172,SNR=43						
FMP	**Fort Macarthur**	**2.34**	**284**	Pg	**Pg**	**09 44 08.4**	**-0.2**
	baz=102,SNR=6.5						
FMP				Sb	**Sb**	**09 44 35.7**	**+1.4**
	baz=102						
GSC	**Goldstone, Bar**	**2.35**	**335**	Pg	**Pg**	**09 44 08.1**	**-0.9**
	baz=154,SNR=31						
W13A	**Hualapai Mount**	**2.38**	**36**		**Pn**	**09 44 03.9**	**+1.4**
CIS	**Catalina Islan**	**2.39**	**276**	Pb	**Pb**	**09 44 06.6**	**0.0**
	baz=94,SNR=12						
CIS				Sb	**Sb**	**09 44 37.7**	**+1.8**
	baz=94						
PASC	**Pasadena Art C**	**2.39**	**295**	Pn	**Pn**	**09 44 03.6**	**+1.1**
PASC				IAML		09 44 42.9	
	comp=N,76nm,0.7s						
PIX	**Pinacate**	**2.41**	**131**	Pn	**Pn**	**09 44 00.6**	**-2.0**
SCI2	**San Clemente I**	**2.50**	**266**	Pg	**Pg**	**09 44 10.9**	**-0.9**
	baz=84						
DECC	**Green Verdugo**	**2.54**	**296**	Pb	**Pb**	**09 44 09.6**	**+0.5**
	baz=114,SNR=6.9						
DECC				Sb	**Sg**	**09 44 42.7**	**-2.7**
	baz=114						
214A	**Organ Pipe Nat**	**2.63**	**117**	Pn	**Pn**	**09 44 06.5**	**+0.7**
214A				IAML		09 44 57.1	
	comp=N,254nm,0.8s						
214A				IAML		09 44 59.8	
	comp=E,279nm,0.5s						
214A	**Organ Pipe Nat**	**2.63**	**117**	P	**Pn**	**09 44 04.8**	**-1.0**
	baz=299,SNR=12						
EDW2	**Edwards Air Fo**	**2.63**	**311**	Pb	**Pb**	**09 44 11.4**	**+0.7**
	baz=129,SNR=28						
SHOC	**Shoshone, Teco**	**2.78**	**348**	Pg	**Pg**	**09 44 16.6**	**-0.5**
	baz=168,SNR=29						
MPMC	**Manual Prospec**	**3.28**	**332**	P	**Pn**	**09 44 15.9**	**+1.0**
	baz=151,SNR=7.0						
ARVC	**Arvin**	**3.33**	**307**	Pg	**Pg**	**09 44 26.9**	**-0.7**
	baz=125						
SHPR	**Sheep Range**	**3.34**	**6**		**Pn**	**09 44 18.6**	**+2.9**
ISA	**Isabella, Lake**	**3.45**	**317**	Pg	**Pg**	**09 44 29.6**	**-0.3**
	baz=135						
TPNV	**Topopah Spring**	**3.81**	**352**	Pg	**Pg**	**09 44 35.9**	**-0.9**
	baz=171						
TUC	**Tucson**	**4.13**	**101**	IAML		09 45 44.6	
	comp=E,27nm,0.8s						
TUC				IAML		09 45 50.8	
	comp=E,34nm,1.1s						
TUC	**Tucson**	**4.13**	**101**	Pn	**Pn**	**09 44 26.3**	**-0.2**
TUC	**Tucson**	**4.13**	**101**	P	**Pn**	**09 44 26.1**	**-0.4**
	baz=284						
WUAZ	**Wupatki**	**4.19**	**55**	Pn	**Pn**	**09 44 30.5**	**+3.2**
LCMT	**Little Creek M**	**4.28**	**26**		**Pn**	**09 44 29.2**	**+0.6**
LCH	**Last Change Ra**	**4.39**	**338**		**Pn**	**09 44 31.6**	**+1.5**
KNB	**Kanab**	**4.45**	**30**	Pn	**Pn**	**09 44 31.5**	**+0.6**
CCUT	**Cedar City**	**4.73**	**22**	Pn	**Pn**	**09 44 36.4**	**+1.6**
X18A	**Snowflake**	**4.87**	**72**		**Pn**	**09 44 37.2**	**+0.5**
R11A	**Troy Canyon, C**	**5.16**	**360**	Pg	**Pg**	**09 45 01.8**	**-0.9**
	baz=180						
319A	**Douglas**	**5.62**	**107**	Pn	**Pn**	**09 44 51.5**	**+4.4**
NVAR	**Mina Array Bea**	**5.69**	**338**	Pn	**Pn**	**09 44 51.3**	**+3.2**
	comp=E,0.1nm,0.3s,baz=157,slow=17,SNR=2.2						
NVAR				Pg	**Pg**	**09 45 09.5**	**-3.3**
	comp=E,0.3nm,0.3s,baz=161,slow=17,SNR=15						
	comp=E,0.4nm,0.7s						
121A	**Cookes Peak, D**	**6.59**	**93**	P	**Pn**	**09 45 00.1**	**-0.2**
	baz=278						
SBM	**South Baldy**	**7.05**	**81**		**Pn**	**09 45 08.8**	**+1.9**
ANMO	**Albuquerque**	**7.77**	**74**	Pn	**Pn**	**09 45 18.6**	**+2.0**
	comp=E,0.1nm,0.3s,baz=253,slow=8.4,SNR=1.8						
ANMO				Lg	Lg	09 47 30.7	
	comp=E,0.3nm,0.3s,baz=132,slow=13,SNR=5.0						
	comp=E,0.3nm,0.4s						
PDAR	**Pinedale Array**	**10.69**	**25**	Pn	**Pn**	**09 46 00.8**	**+4.3**
	baz=219,slow=13,SNR=4.4						
	comp=E,0.8nm,0.9s						
TXAR	**Lajitas Array**	**10.88**	**107**	Pn	**Pn**	**09 46 01.9**	**+2.7**
	comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=8.5						
TXAR				Lg	Lg	09 49 11.0	
	comp=E,0.1nm,0.3s,baz=283,slow=29,SNR=4.2						
	comp=E,0.2nm,0.4s						

ROM 31 09:59:11.2±0.0, 42°.807N±0°.002×13°.116E±0°.003, h11km, ML2.5/18, 7C-6D, Error ellipse: s-maj=0.2km s-min=0.2km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.11**	**319**	⇓P	Pg	09 59 14.5	+0.5
T1216				S	Sg	09 59 16.8	+0.8
T1216				AML	AML		
	comp=E,2705μm,0.5s						
T1216				AML	AML		
	comp=N,3835μm,0.4s						
T1216				AML	AML		
	comp=N,8210μm,0.5s						
T1216				AML	AML		
	comp=E,6500μm,1.4s						
T1216				AML	AML		
	comp=N,8220μm,0.4s						
T1216				AML	AML		
	comp=E,6475μm,1.4s						
T1216				AML	AML		
	comp=N,2690μm,0.1s						
T1216				AML	AML		
	comp=E,2263μm,0.2s						
T1217	**Poggiodomo (PG**	**0.17**	**235**	⇓P	Pg	09 59 15.5	+0.6
T1217				S	Sg	09 59 18.4	+0.9
T1217				AML	AML		
	comp=E,1040μm,0.9s						
T1217				AML	AML		
	comp=N,1288μm,0.2s						
T1217				AML	AML		
	comp=E,2110μm,0.3s						
T1217				AML	AML		
	comp=E,2130μm,0.3s						
T1217				AML	AML		
	comp=E,2135μm,0.3s						
T1217				AML	AML		
	comp=N,2540μm,0.6s						
T1217				AML	AML		
	comp=N,2486μm,0.2s						
T1217				AML	AML		
	comp=N,1285μm,0.2s						
T1217				AML	AML		
	comp=E,950μm,0.2s						
T1217				AML	AML		
	comp=N,1316μm,0.2s						
T1217				AML	AML		
	comp=E,972μm,0.1s						
T1215	**Vallo di Nera,**	**0.18**	**268**	⇓P	Pg	09 59 15.7	+0.6
T1215				S	Sg	09 59 19.0	+1.1
T1215				AML	AML		
	comp=E,614μm,0.3s						
T1215				AML	AML		
	comp=N,866μm,0.2s						
T1215				AML	AML		
	comp=E,1250μm,1.1s						
T1215				AML	AML		
	comp=N,1535μm,0.2s						
T1215				AML	AML		
	comp=E,1260μm,1.1s						
T1215				AML	AML		
	comp=E,1250μm,1.2s						
T1215				AML	AML		
	comp=N,1530μm,0.2s						
T1215				AML	AML		
	comp=N,1504μm,0.3s						
T1215				AML	AML		
	comp=N,867μm,0.2s						
T1215				AML	AML		
	comp=E,614μm,0.3s						
T1215				AML	AML		
	comp=E,615μm,0.3s						
T1215				AML	AML		
	comp=N,880μm,0.2s						
T1204	**Amatrice, Fraz**	**0.20**	**132**	⇑P	Pg	09 59 16.0	+0.6
T1204				S	Sg	09 59 19.7	+1.3
T1204				AML	AML		
	comp=E,1680μm,0.2s						
T1204				AML	AML		
	comp=N,1006μm,0.1s						
T1204				AML	AML		
	comp=E,5370μm,0.3s						
T1204				AML	AML		
	comp=N,2480μm,1.2s						
T1204				AML	AML		
	comp=N,2485μm,1.2s						
T1204				AML	AML		
	comp=E,5375μm,0.3s						
T1204				AML	AML		
	comp=E,1682μm,0.2s						
T1204				AML	AML		
	comp=N,1007μm,0.1s						
LNSS	**Leonessa**	**0.21**	**195**	⇑P	Pg	09 59 16.2	+0.5
LNSS				S	Sg	09 59 20.2	+1.5
LNSS				AML	AML		
	comp=E,1155μm,0.2s						
LNSS				AML	AML		
	comp=N,3445μm,0.1s						
LNSS				AML	AML		
	comp=E,3870μm,0.7s						
LNSS				AML	AML		
	comp=N,9430μm,0.1s						
LNSS				AML	AML		
	comp=E,1153μm,0.2s						
LNSS				AML	AML		
	comp=N,3446μm,0.1s						
FDMO	**Fiordimonte**	**0.23**	**355**	⇑P	Pg	09 59 16.6	+0.6
FDMO				S	Sg	09 59 20.6	+1.4
FDMO				AML	AML		
	comp=E,980μm,0.1s						
FDMO				AML	AML		
	comp=N,1058μm,0.2s						
FDMO				AML	AML		
	comp=E,3270μm,0.2s						
FDMO				AML	AML		
	comp=N,3355μm,0.6s						
FDMO				AML	AML		

	comp=E,701μm,0.1s						
FDMO				AML	AML		
	comp=N,993μm,0.2s						
T1241	**Roccafluvione,**	**0.24**	**78**	⇑P	Pg	09 59 16.6	+0.5
T1241				S	Sg	09 59 20.5	+1.1
T1241				AML	AML		
	comp=N,2910μm,0.2s						
T1241				AML	AML		
	comp=N,2905μm,0.4s						
T1241				AML	AML		
	comp=E,6015μm,0.3s						
T1241				AML	AML		
	comp=N,2905μm,0.2s						
T1241				AML	AML		
	comp=E,6080μm,0.2s						
T1241				AML	AML		
	comp=N,2910μm,0.4s						
T1241				AML	AML		
	comp=E,6010μm,0.3s						
T1241				AML	AML		
	comp=E,6075μm,0.2s						
T1241				AML	AML		
	comp=E,565μm,0.3s						
T1241				AML	AML		
	comp=N,388μm,0.2s						
T1241				AML	AML		
	comp=E,627μm,0.3s						
T1241				AML	AML		
	comp=N,417μm,0.2s						
SMA1	**SAN MARTINO**	**0.24**	**137**	P	Pg	09 59 16.7	+0.6
SMA1				AML	AML		
	comp=E,2335μm,0.6s						
SMA1				AML	AML		
	comp=E,2330μm,0.6s						
SMA1				AML	AML		
	comp=N,2325μm,0.8s						
SMA1				AML	AML		
	comp=N,2675μm,0.3s						
SMA1				AML	AML		
	comp=N,747μm,0.2s						
SMA1				AML	AML		
	comp=E,584μm,0.2s						
AM05	**Amandola Campo**	**0.24**	**46**	P	Pg	09 59 16.9	+0.7
AM05				AML	AML		
	comp=E,1445μm,0.1s						
AM05				AML	AML		
	comp=N,194μm,0.1s						
AM05				AML	AML		
	comp=N,1535μm,1.2s						
AM05				AML	AML		
	comp=E,4660μm,0.4s						
AM05				AML	AML		
	comp=E,1155μm,0.4s						
AM05				AML	AML		
	comp=E,4665μm,0.4s						
AM05				AML	AML		
	comp=N,389μm,1.1s						
AM05				AML	AML		
	comp=E,1152μm,0.4s						
AM05				AML	AML		
	comp=N,390μm,1.1s						
AM05				AML	AML		
	comp=E,329μm,0.1s						
AM05				AML	AML		
	comp=N,329μm,0.1s						
AM05				AML	AML		
	comp=E,1443μm,0.1s						
AM05				AML	AML		
	comp=N,98μm,0.1s						
RM33	**Pellescritta (**	**0.31**	**166**	P	Pg	09 59 17.7	+0.3
RM33				S	Sb	09 59 22.9	-0.9
RM33				AML	AML		
	comp=E,559μm,1.4s						
RM33				AML	AML		
	comp=N,360μm,0.4s						
RM33				AML	AML		
	comp=E,1390μm,0.2s						
RM33				AML	AML		
	comp=E,1400μm,0.2s						
RM33				AML	AML		
	comp=N,1009μm,0.4s						
RM33				AML	AML		
	comp=N,1010μm,0.4s						
RM33				AML	AML		
	comp=N,1013μm,0.4s						
RM33				AML	AML		
	comp=E,1405μm,0.2s						
RM33				AML	AML		
	comp=N,302μm,0.2s						
RM33				AML	AML		
	comp=E,502μm,0.2s						
RM33				AML	AML		
	comp=N,297μm,0.2s						
RM33				AML	AML		
	comp=E,518μm,0.2s						
T1211	**Morro Reatino**	**0.34**	**215**	⇓P	Pg	09 59 18.3	+0.4
T1211				S	Sb	09 59 23.8	-0.9
T1211				AML	AML		
	comp=E,1092μm,1.2s						
T1211				AML	AML		
	comp=N,1930μm,0.3s						
T1211				AML	AML		
	comp=E,564μm,0.1s						
T1211				AML	AML		
	comp=E,565μm,0.1s						
T1211				AML	AML		
	comp=N,1066μm,0.3s						
T1211				AML	AML		
	comp=N,1038μm,0.2s						
CAMP	**Campotosto**	**0.35**	**141**	⇓P	Pg	09 59 18.4	+0.3
CAMP				AML	AML		
	comp=N,696μm,0.9s						
CAMP				AML	AML		
	comp=E,632μm,1.2s						
CAMP				AML	AML		
	comp=E,632μm,1.2s						
CAMP				AML	AML		
	comp=E,120μm,0.3s						
CAMP				AML	AML		
	comp=N,110μm,0.2s						
TERO	**Teramo**	**0.40**	**117**	P	Pg	09 59 19.3	+0.2
TERO				S	Sb	09 59 25.9	-0.7
TERO				AML	AML		
	comp=E,1325μm,0.8s						
TERO				AML	AML		
	comp=N,1730μm,0.1s						
TERO				AML	AML		
	comp=E,1230μm,0.8s						
TERO				AML	AML		
	comp=N,1619μm,0.2s						
TERO				AML	AML		
	comp=N,348μm,0.1s						
TERO				AML	AML		
	comp=E,340μm,0.1s						
TERO				AML	AML		
	comp=N,435μm,0.1s						
TERO				AML	AML		
	comp=E,398μm,0.1s						
OFFI	**Offida**	**0.44**	**73**	⇓P	Pb	09 59 21.1	+0.1
OFFI				AML	AML		
	comp=E,1008μm,1.0s						
OFFI				AML	AML		
	comp=E,1735μm,0.5s						
OFFI				AML	AML		
	comp=N,1400μm,0.5s						
OFFI				AML	AML		
	comp=N,538μm,0.4s						
OFFI				AML	AML		
	comp=E,404μm,0.3s						
GIGS	**Gran Sasso**	**0.49**	**137**	P	Pg	09 59 20.9	+0.2
GIGS				AML	AML		
	comp=N,138μm,0.5s						
GIGS				AML	AML		
	comp=E,180μm,0.7s						
GIGS				AML	AML		
	comp=N,48μm,0.1s						
GIGS				AML	AML		
	comp=E,48μm,0.1s						
FIAM	**Fiamignano**	**0.54**	**180**	⇑P	Pg	09 59 21.7	0.0
FIAM				AML	AML		
	comp=E,258μm,0.9s						
FIAM				AML	AML		
	comp=N,255μm,1.3s						
FIAM				AML	AML		
	comp=E,343μm,1.1s						
FIAM				AML	AML		
	comp=N,296μm,1.0s						
FIAM				AML	AML		
	comp=N,89μm,0.2s						
FIAM				AML	AML		
	comp=E,119μm,0.2s						
ARVD	**Arcevia**	**0.70**	**350**	⇑P	Pb	09 59 25.3	-0.1
ARVD				S	Sn	09 59 37.0	-1.0
ARVD				AML	AML		
	comp=E,135μm,0.6s						
ARVD				AML	AML		
	comp=N,90μm,0.7s						
ARVD				AML	AML		
	comp=E,175μm,0.5s						
ARVD				AML	AML		
	comp=N,168μm,1.1s						
ARVD				AML	AML		
	comp=E,48μm,0.1s						
ARVD				AML	AML		
	comp=N,42μm,0.1s						
T0110	**Collepietro**	**0.76**	**140**	⇑P	Pb	09 59 26.4	-0.1
T0110				AML	AML		
	comp=E,380μm,0.5s						
T0110				AML	AML		
	comp=N,422μm,1.1s						
T0110				AML	AML		
	comp=E,385μm,0.6s						
T0110				AML	AML		
	comp=N,422μm,1.1s						
T0110				AML	AML		
	comp=N,102μm,0.3s						
T0110				AML	AML		
	comp=E,111μm,0.5s						
PIEI	**Pieia**	**0.84**	**330**	S	Sn	09 59 41.0	-0.5
CAFI	**Castiglion Fio**	**0.99**	**302**	S	Sn	09 59 47.0	+1.9
VIVA	**Pratoni del Vi**	**1.09**	**194**	P	Pb	09 59 31.6	-0.4
IMOL	**Imola, Italy**	**1.84**	**328**	P	Pg	09 59 47.1	+0.6
IMOL				S	Sn	10 00 05.0	-1.1
NDIM	**Novi di Modena**	**2.63**	**323**	P	Pn	09 59 55.2	+1.7
SBPO	**S.Benedetto Po**	**2.75**	**325**	P	Pg	10 00 04.2	+0.5
CDRU	**Civita di Ruta**	**2.84**	**144**	S	Sb	10 00 38.0	+1.3
CMPR	**Campora**	**2.98**	**146**	P	Pb	10 00 04.7	+0.4
PGF	**Pioggiola**	**3.05**	**267**	S	Sb	10 00 43.0	+0.3
ZONE	**Zone**	**3.66**	**325**	P	Pn	10 00 06.0	-1.7
ZONE				AML	AML		
	comp=E,73μm,0.4s						
ZONE				AML	AML		
	comp=N,81μm,0.1s						

ROM 31 09:59:54.7±0.1, 42°.790N±0°.004×13°.193E±0°.005,
h12km±1km, ML2.5/19, 6C-7D, Error ellipse: s-maj=0.4km
s-min=0.2km az=139.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.14**	**162**	P	Pg	09 59 58.6	+0.5
T1201				S	Sg	10 00 01.6	+1.1
T1204	**Amatrice, Fraz**	**0.15**	**141**	P	Pg	09 59 58.5	+0.3
T1204				S	Sg	10 00 01.3	+0.5
T1216	**Preci, Frazion**	**0.16**	**308**	P	Pg	09 59 58.7	+0.3
T1241	**Roccafluvione,**	**0.19**	**69**	⇓P	Pg	09 59 59.2	+0.4
T1241				S	Sg	10 00 02.5	+0.8
T1241				AML	AML		
	comp=E,6080μm,0.2s						
T1241				AML	AML		
	comp=N,2910μm,0.4s						
T1241				AML	AML		
	comp=N,2905μm,0.4s						
T1241				AML	AML		
	comp=E,6075μm,0.2s						
SMA1	**SAN MARTINO**	**0.19**	**147**	P	Pg	09 59 59.1	+0.2
SMA1				AML	AML		
	comp=E,2335μm,0.6s						
SMA1				AML	AML		
	comp=N,2680μm,0.3s						
SMA1				AML	AML		
	comp=E,2330μm,0.6s						
SMA1				AML	AML		
	comp=N,2325μm,0.8s						
SMA1				AML	AML		
	comp=N,2675μm,0.3s						
SMA1				AML	AML		
	comp=N,2675μm,1.7s						
T1217	**Poggiodomo (PG**	**0.21**	**248**	⇑P	Pg	09 59 59.5	+0.3
T1217				AML	AML		
	comp=E,2135μm,0.3s						
T1217				AML	AML		
	comp=N,2540μm,0.6s						
LNSS	**Leonessa**	**0.22**	**211**	P	Pg	09 59 59.7	+0.3
LNSS				S	Sg	10 00 03.6	+1.0
T1215	**Vallo di Nera,**	**0.24**	**273**	⇑P	Pg	09 59 59.3	-0.4
T1215				AML	AML		
	comp=E,1245μm,1.2s						
T1215				AML	AML		
	comp=N,1530μm,0.2s						
T1215				AML	AML		
	comp=E,1270μm,1.2s						
T1215				AML	AML		
	comp=N,1500μm,0.3s						
T1215				AML	AML		
	comp=N,1535μm,0.2s						
T1215				AML	AML		
	comp=E,1250μm,1.2s						
T1215				AML	AML		
	comp=N,1535μm,1.8s						
T1215				AML	AML		
	comp=E,1250μm,0.8s						
RM33	**Pellescritta (**	**0.28**	**177**	P	Pg	10 00 00.9	+0.4
RM33				S	Sg	10 00 05.3	+1.0
RM33				AML	AML		
	comp=E,1405μm,0.2s						
RM33				AML	AML		
	comp=N,1011μm,0.4s						
RM33				AML	AML		
	comp=E,1390μm,0.2s						
RM33				AML	AML		
	comp=N,1010μm,0.4s						
RM33				AML	AML		
	comp=N,1010μm,0.4s						
RM33				AML	AML		
	comp=E,1400μm,0.2s						
RM33				AML	AML		
	comp=N,1009μm,0.4s						
CAMP	**Campotosto**	**0.30**	**148**	⇓P	Pg	10 00 01.0	+0.2
CAMP				S	Sg	10 00 05.8	+0.8
CAMP				AML	AML		
	comp=E,632μm,1.2s						
CAMP				AML	AML		
	comp=E,632μm,1.2s						
CAMP				AML	AML		
	comp=N,696μm,0.9s						
CAMP				AML	AML		
	comp=E,632μm,0.8s						
T1246	**Crognaleto (TE**	**0.30**	**133**	P	Pg	10 00 01.1	+0.2
T1246				S	Sg	10 00 05.9	+0.9
TERO	**Teramo**	**0.35**	**119**	⇑P	Pg	10 00 01.7	+0.1
TERO				S	Sg	10 00 07.2	+0.9
TERO				AML	AML		
	comp=E,1325μm,0.8s						
TERO				AML	AML		
	comp=N,1730μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.36**	**167**	⇑P	Pb	10 00 03.6	+0.6
T1211	**Morro Reatino**	**0.36**	**224**	⇓P	Pg	10 00 02.1	+0.2
T1211				AML	AML		
	comp=E,1123μm,0.4s						
T1211				AML	AML		
	comp=N,1925μm,0.3s						
T1211				AML	AML		
	comp=E,1170μm,0.4s						
T1211				AML	AML		
	comp=N,1940μm,0.3s						
T1211				AML	AML		
	comp=N,1930μm,0.3s						
T1211				AML	AML		
	comp=E,1126μm,0.4s						
OFFI	**Offida**	**0.39**	**68**	P	Pb	10 00 03.6	+0.1
OFFI				AML	AML		
	comp=E,1735μm,0.5s						
OFFI				AML	AML		
	comp=N,1400μm,0.5s						
OFFI				AML	AML		
	comp=E,1735μm,1.5s						
GIGS	**Gran Sasso**	**0.44**	**141**	P	Pg	10 00 03.6	+0.3
CESX	**Cesi**	**0.49**	**249**	⇓P	Pg	10 00 04.2	0.0
CESX				AML	AML		
	comp=E,632μm,0.3s						
CESX				AML	AML		
	comp=N,648μm,0.4s						
CESX				AML	AML		
	comp=E,632μm,1.7s						
FIAM	**Fiamignano**	**0.53**	**186**	P	Pg	10 00 04.9	0.0
FIAM				S	Sb	10 00 12.9	-0.6
FIAM				AML	AML		
	comp=E,343μm,1.1s						
FIAM				AML	AML		
	comp=N,296μm,1.0s						
FIAM				AML	AML		
	comp=E,343μm,0.9s						
TRTR	**Tortoreto Alta**	**0.53**	**88**	P	Pb	10 00 05.6	-0.3
TRTR				AML	AML		
	comp=N,1505μm,0.7s						
TRTR				AML	AML		
	comp=N,1505μm,1.3s						
TRTR				AML	AML		
	comp=E,1955μm,0.6s						
VCEL	**Villa Celiera**	**0.62**	**129**	P	Pg	10 00 07.0	+0.3
VCEL				AML	AML		
	comp=N,669μm,1.3s						
VCEL				AML	AML		
	comp=E,680μm,0.4s						
VCEL				AML	AML		
	comp=N,669μm,0.7s						
VCEL				AML	AML		
	comp=E,680μm,1.6s						
T0110	**Collepietro**	**0.71**	**142**	P	Pg	10 00 08.3	-0.2
T0110				AML	AML		
	comp=N,422μm,1.1s						
T0110				AML	AML		
	comp=E,385μm,0.6s						
T0110				AML	AML		
	comp=N,422μm,1.1s						
T0110				AML	AML		
	comp=E,385μm,1.4s						
T0110				AML	AML		
	comp=N,422μm,0.9s						
ARVD	**Arcevia**	**0.73**	**346**	⇓P	Pg	10 00 08.7	-0.2
ARVD				S	Sn	10 00 21.0	-1.0
ARVD				AML	AML		
	comp=E,175μm,0.5s						
ARVD				AML	AML		
	comp=N,168μm,1.1s						
MGAB	**Montegabbione**	**0.80**	**279**	⇓P	Pg	10 00 10.4	+0.2
MGAB				AML	AML		
	comp=N,706μm,0.4s						
MGAB				AML	AML		
	comp=N,710μm,0.3s						
MGAB				AML	AML		
	comp=E,461μm,1.2s						
MGAB				AML	AML		
	comp=E,444μm,1.2s						
MGAB				AML	AML		
	comp=N,710μm,1.7s						
MGAB				AML	AML		
	comp=E,461μm,0.8s						
MGAB				AML	AML		
	comp=E,444μm,0.8s						
MGAB				AML	AML		
	comp=N,706μm,1.6s						
SACS	**San Casciano d**	**0.95**	**274**	⇑P	Pg	10 00 12.9	0.0
SACS				AML	AML		
	comp=E,144μm,1.6s						
SACS				AML	AML		
	comp=N,135μm,1.3s						
SACS				AML	AML		
	comp=E,144μm,0.4s						
SACS				AML	AML		
	comp=N,135μm,0.7s						
FSSB	**Fossombrone**	**0.95**	**342**	⇑P	Pb	10 00 13.1	0.0
FSSB				AML	AML		
	comp=E,660μm,0.4s						
FSSB				AML	AML		
	comp=N,556μm,0.3s						
FSSB				AML	AML		
	comp=E,660μm,1.6s						
VVLD	**Villa Vallelon**	**0.97**	**161**	P	Pn	10 00 14.3	0.0
VVLD				AML	AML		
	comp=N,95μm,0.4s						
VVLD				AML	AML		
	comp=E,118μm,1.6s						
VVLD				AML	AML		
	comp=E,118μm,0.4s						
CAFI	**Castiglion Fio**	**1.05**	**301**	⇓P	Pg	10 00 14.9	+0.1
CAFI				AML	AML		
	comp=E,110μm,1.2s						
CAFI				AML	AML		
	comp=N,162μm,0.5s						

ROM 31 10:00:52.5±0.0, 42°.808N±0°.003×13°.143E±0°.004,
h10km, ML2.3/16, 9C-9D, Error ellipse: s-maj=0.3km
s-min=0.2km az=316.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**35**	⇑P	Pg	10 00 55.2	+0.3
T1245				S	Sg	10 00 56.9	+0.3
T1216	**Preci, Frazion**	**0.12**	**312**	⇑P	Pg	10 00 56.1	+0.5
T1216				S	Sg	10 00 58.6	+0.9
T1216				AML	AML		
	comp=E,3000μm,0.6s						
T1216				AML	AML		
	comp=N,4760μm,0.7s						
T1216				AML	AML		
	comp=N,4745μm,0.7s						
T1216				AML	AML		
	comp=E,2999μm,0.6s						
T1216				AML	AML		
	comp=E,852μm,0.3s						
T1216				AML	AML		
	comp=N,1357μm,0.1s						
T1217	**Poggiodomo (PG**	**0.18**	**238**	P	Pg	10 00 57.0	+0.5
T1217				S	Sg	10 01 00.2	+1.0
T1217				AML	AML		
	comp=N,1930μm,1.4s						
T1217				AML	AML		
	comp=E,1685μm,0.4s						
T1217				AML	AML		
	comp=E,530μm,0.2s						
T1217				AML	AML		
	comp=N,654μm,0.2s						
T1217				AML	AML		
	comp=N,674μm,0.2s						
T1217				AML	AML		
	comp=E,536μm,0.2s						
T1204	**Amatrice, Fraz**	**0.18**	**136**	⇓P	Pg	10 00 57.1	+0.5
T1204				AML	AML		
	comp=E,1030μm,0.9s						
T1204				AML	AML		
	comp=N,580μm,0.9s						
T1204				AML	AML		
	comp=E,609μm,0.2s						
T1204				AML	AML		
	comp=N,503μm,0.2s						
T1215	**Vallo di Nera,**	**0.20**	**268**	⇑P	Pg	10 00 57.4	+0.6
T1215				S	Sg	10 01 00.7	+1.0
T1215				AML	AML		
	comp=E,626μm,0.5s						
T1215				AML	AML		
	comp=N,632μm,0.2s						
T1215				AML	AML		
	comp=N,690μm,1.0s						
T1215				AML	AML		
	comp=E,789μm,0.3s						
T1215				AML	AML		
	comp=E,310μm,0.2s						
T1215				AML	AML		
	comp=E,334μm,0.2s						
T1215				AML	AML		
	comp=N,639μm,0.3s						
T1215				AML	AML		
	comp=N,632μm,0.2s						
T1256	**Bolognola (MC)**	**0.21**	**17**	⇑P	Pg	10 00 57.5	+0.6
T1256				S	Sg	10 01 01.4	+1.4
T1256				AML	AML		
	comp=E,1675μm,0.4s						
T1256				AML	AML		
	comp=E,1635μm,0.4s						
T1256				AML	AML		
	comp=N,1425μm,0.3s						
T1256				AML	AML		
	comp=N,1551μm,1.1s						
T1256				AML	AML		
	comp=E,986μm,0.2s						
T1256				AML	AML		
	comp=N,1058μm,0.3s						

T1256				AML	AML	
	comp=E,1060μm,0.2s					
T1256				AML	AML	
	comp=N,939μm,0.2s					
T1241	**Roccafluvione,**	**0.22**	**77**	⇑P	Pg	10 00 57.6 +0.5
T1241				S	Sg	10 01 01.5 +1.3
T1241				AML	AML	
	comp=E,1395μm,0.3s					
T1241				AML	AML	
	comp=N,1530μm,0.2s					
T1241				AML	AML	
	comp=N,513μm,0.1s					
T1241				AML	AML	
	comp=N,522μm,0.3s					
T1241				AML	AML	
	comp=E,1003μm,0.2s					
T1241				AML	AML	
	comp=E,979μm,0.2s					
LNSS	**Leonessa**	**0.22**	**200**	⇑P	Pg	10 00 57.7 +0.6
LNSS				S	Sg	10 01 01.8 +1.6
LNSS				AML	AML	
	comp=E,2060μm,0.2s					
LNSS				AML	AML	
	comp=N,4020μm,0.3s					
LNSS				AML	AML	
	comp=E,2055μm,0.2s					
LNSS				AML	AML	
	comp=N,5230μm,0.1s					
LNSS				AML	AML	
	comp=E,2057μm,0.2s					
LNSS				AML	AML	
	comp=N,3610μm,0.1s					
SMA1	**SAN MARTINO**	**0.23**	**141**	⇑P	Pb	10 00 58.1 -0.7
SMA1				AML	AML	
	comp=N,1123μm,0.8s					
SMA1				AML	AML	
	comp=E,1755μm,0.3s					
SMA1				AML	AML	
	comp=N,552μm,0.4s					
SMA1				AML	AML	
	comp=E,449μm,0.6s					
AM05	**Amandola Campo**	**0.23**	**42**	⇑P	Pg	10 00 57.9 +0.7
AM05				AML	AML	
	comp=E,1400μm,0.1s					
AM05				AML	AML	
	comp=N,116μm,0.1s					
AM05				AML	AML	
	comp=N,468μm,0.5s					
AM05				AML	AML	
	comp=E,2545μm,0.1s					
AM05				AML	AML	
	comp=E,612μm,0.1s					
AM05				AML	AML	
	comp=N,154μm,0.5s					
AM05				AML	AML	
	comp=E,287μm,0.1s					
AM05				AML	AML	
	comp=N,307μm,0.1s					
AM05				AML	AML	
	comp=E,1400μm,0.1s					
AM05				AML	AML	
	comp=N,115μm,0.1s					
FDMO	**Fiordimonte**	**0.23**	**350**	⇓P	Pg	10 00 58.0 +0.7
FDMO				S	Sg	10 01 02.0 +1.4
FDMO				AML	AML	
	comp=E,1055μm,0.7s					
FDMO				AML	AML	
	comp=N,744μm,1.1s					
FDMO				AML	AML	
	comp=N,9295μm,0.4s					
FDMO				AML	AML	
	comp=E,13450μm,0.2s					
FDMO				AML	AML	
	comp=E,405μm,0.2s					
FDMO				AML	AML	
	comp=N,554μm,0.2s					
T1243	**Rocca Santa Ma**	**0.25**	**116**	⇓P	Pg	10 00 58.1 +0.4
T1243				S	Sg	10 01 02.3 +1.1
RM33	**Pellescritta (**	**0.30**	**170**	P	Pg	10 00 59.1 +0.4
RM33				S	Sb	10 01 04.4 -0.8
RM33				AML	AML	
	comp=E,369μm,0.2s					
RM33				AML	AML	
	comp=N,414μm,0.2s					
RM33				AML	AML	
	comp=E,992μm,1.4s					
RM33				AML	AML	
	comp=N,817μm,0.2s					
RM33				AML	AML	
	comp=N,801μm,0.2s					
RM33				AML	AML	
	comp=E,989μm,0.6s					
RM33				AML	AML	
	comp=E,366μm,0.2s					
RM33				AML	AML	
	comp=N,425μm,0.2s					
RM33				AML	AML	
	comp=E,369μm,0.2s					
RM33				AML	AML	
	comp=N,391μm,0.2s					
CAMP	**Campotosto**	**0.34**	**144**	P	Pg	10 00 59.6 +0.4
CAMP				S	Sb	10 01 05.2 -0.9
CAMP				AML	AML	
	comp=N,208μm,0.8s					
CAMP				AML	AML	
	comp=E,220μm,0.9s					
CAMP				AML	AML	
	comp=E,111μm,0.2s					
CAMP				AML	AML	
	comp=N,98μm,0.6s					
T1211	**Morro Reatino**	**0.35**	**218**	⇓P	Pg	10 00 59.9 +0.4
T1211				S	Sb	10 01 05.7 -0.7
T1211				AML	AML	
	comp=N,1102μm,0.3s					
T1211				AML	AML	
	comp=E,1020μm,0.1s					
T1211				AML	AML	
	comp=E,557μm,0.1s					
T1211				AML	AML	
	comp=N,595μm,0.3s					
T1211				AML	AML	
	comp=N,617μm,0.3s					
T1211				AML	AML	
	comp=E,519μm,0.1s					
ARRO	**Arrone**	**0.36**	**231**	⇓P	Pg	10 01 00.1 +0.5
ARRO				AML	AML	
	comp=N,472μm,0.2s					
ARRO				AML	AML	
	comp=E,382μm,0.2s					
ARRO				AML	AML	
	comp=N,189μm,0.2s					
ARRO				AML	AML	
	comp=E,206μm,0.2s					
T1247	**Pizzolo (AQ)**	**0.38**	**163**	⇓P	Pb	10 01 01.4 0.0
T1247				AML	AML	
	comp=E,546μm,0.9s					
T1247				AML	AML	
	comp=N,482μm,1.1s					
T1247				AML	AML	
	comp=N,304μm,0.3s					
T1247				AML	AML	
	comp=E,266μm,0.1s					
TERO	**Teramo**	**0.39**	**118**	⇓P	Pg	10 01 00.3 +0.1
TERO				AML	AML	
	comp=E,448μm,0.6s					
TERO				AML	AML	
	comp=N,558μm,0.4s					
TERO				AML	AML	
	comp=N,230μm,0.1s					
TERO				AML	AML	
	comp=E,161μm,0.1s					
TERO				AML	AML	
	comp=E,195μm,0.1s					
TERO				AML	AML	
	comp=N,195μm,0.1s					
OFFI	**Offida**	**0.42**	**72**	⇓P	Pb	10 01 02.1 +0.1
OFFI				AML	AML	
	comp=N,452μm,0.3s					
CESX	**Cesi**	**0.46**	**245**	P	Pg	10 01 01.8 +0.3
CESX				AML	AML	
	comp=E,303μm,0.5s					
CESX				AML	AML	
	comp=N,342μm,0.7s					
CESX				AML	AML	
	comp=N,158μm,0.3s					
CESX				AML	AML	
	comp=E,155μm,0.4s					

GIGS	**Gran Sasso**	**0.48**	**139**	⇓P	Pg	10 01 01.7 -0.1
GIGS				AML	AML	
	comp=E,39μm,0.1s					
GIGS				AML	AML	
	comp=N,27μm,0.2s					
FIAM	**Fiamignano**	**0.54**	**182**	S	Sb	10 01 12.0 0.0
VCEL	**Villa Celiera**	**0.66**	**129**	⇑P	Pb	10 01 05.8 -0.4
ARVD	**Arcevia**	**0.70**	**348**	S	Sb	10 01 18.0 +1.3

*ANF **31** 10:00:53.5±0.2, 33.°20N×115.°60W, h15km, ML3.1/24,*
Error ellipse: s-maj=1.8km s-min=1.3km az=129.0
*NEIC **31** 10:00:54±1.6, 33.°18N±0.°02×115.°57W±0.°03, h19km±1km,*
Error ellipse: s-maj=3.6km s-min=2.1km az=68.0
*PAS **31** 10:00:54.1±1.9, 33.°19N±0.°01×115.°57W±0.°02, h3km±6km,*
ML3.1/123, ML3.0/42(NEIC), Error ellipse: s-maj=2.1km
s-min=1.5km az=75.0

ISC 31 10:00:54.2±0.8, 33.°17N±0.°01×115.°59W±0.°02, h17km±7km, n85, σ1.9°02/116, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.13**	**179**		**Pb**	**10 01 01.4**	**+3.2**
ERRC	**Elmore Ranch**	**0.21**	**255**		**Pb**	**10 01 03.9**	**+4.4**
SWSC	**Sam W. Stewart**	**0.29**	**219**		**Pg**	**10 01 00.4**	**-0.1**
SWSC	**Sam W. Stewart**	**0.29**	**219**	P	**Pg**	**10 01 00.4**	**-0.1**
	baz=38,SNR=350						
SWSC				S	**Sg**	**10 01 04.0**	**-0.8**
	baz=38						
SNR	**Schaffner Ranc**	**0.33**	**158**		**Pg**	**10 01 01.3**	**+0.1**
COK2	**Cook Ranch 2**	**0.34**	**201**		**Pb**	**10 01 01.9**	**+0.2**
COK2					**Sb**	**10 01 07.7**	**+0.9**
SALN	**Salton City**	**0.35**	**288**		**Pg**	**10 01 01.7**	**+0.1**
SALN					**Sb**	**10 01 07.9**	**+0.7**
DREC	**Desert Rsrch C**	**0.38**	**162**		**Pb**	**10 01 02.5**	**0.0**
CRR	**Carrizo Plain**	**0.43**	**229**		**Pg**	**10 01 03.0**	**+0.1**
CRR					**Sb**	**10 01 09.5**	**+0.1**
WESC	**Westside Schoo**	**0.43**	**197**		**Pb**	**10 01 03.2**	**0.0**
WESC					**Sb**	**10 01 10.7**	**+1.3**
COA	**Coachella**	**0.49**	**128**		**Pg**	**10 01 04.0**	**-0.1**
COA					**Sb**	**10 01 11.9**	**+0.6**
BC3	**Big Chuckawall**	**0.50**	**13**		**Sg**	**10 01 10.4**	**-0.6**
BC3	**Big Chuckawall**	**0.50**	**13**	P	**Pg**	**10 01 03.5**	**-0.7**
	baz=192,SNR=301						
BC3				S	**Sg**	**10 01 09.8**	**-1.2**
	baz=192						
SGL	**Mount Signal**	**0.53**	**193**		**Pg**	**10 01 04.5**	**-0.4**
SGL					**Sb**	**10 01 12.7**	**+0.2**
HAY	**Hayfield**	**0.54**	**351**		**Pg**	**10 01 04.4**	**-0.7**
HAY					**Sg**	**10 01 11.9**	**-0.5**
RUN	**Ruthven**	**0.55**	**111**		**Pg**	**10 01 04.4**	**-0.7**
RUN					**Sg**	**10 01 12.0**	**-0.5**
UABX	**UABC, Campus M**	**0.55**	**167**	Pg	**Pg**	**10 01 05.1**	**0.0**
UABX	**UABC, Campus M**	**0.55**	**167**		**Sn**	**10 01 15.0**	**-0.9**
UABX	**UABC, Campus M**	**0.55**	**167**	IAML		10 01 19.7	
	comp=N,935nm,1.1s						
UABX				IAML		10 01 23.7	
	comp=E,858nm,0.5s						
CTW	**Cottonwood Mou**	**0.56**	**335**		**Pg**	**10 01 05.0**	**-0.4**
CTW					**Sg**	**10 01 12.9**	**-0.1**
SLH	**Sleepy Hollow**	**0.56**	**273**		**Pg**	**10 01 05.3**	**-0.1**
SLH					**Sb**	**10 01 14.1**	**+0.9**
CTCC	**Cactus City**	**0.59**	**325**		**Pg**	**10 01 05.9**	**-0.1**
CTCC					**Sg**	**10 01 14.6**	**+0.7**
YUH	**Yuha Desert**	**0.59**	**209**		**Pg**	**10 01 05.6**	**-0.4**
GLA	**Glamis**	**0.65**	**100**		**Pg**	**10 01 06.0**	**-1.0**
GLA	**Glamis**	**0.65**	**100**		Sg	10 01 06.4	-9.2
GLA				IAML		10 01 16.9	
	comp=E,4μm,0.7s						
GLA				IAML		10 01 17.0	
	comp=N,2μm,0.6s						
GLA	**Glamis**	**0.65**	**100**	P	**Pg**	**10 01 06.0**	**-1.0**
	baz=283,SNR=109						
GLA				S	**Sg**	**10 01 15.6**	**-0.1**
	baz=283						
EMSC	**East Mesa**	**0.66**	**130**		**Pg**	**10 01 06.8**	**-0.4**
EMSC					**Sb**	**10 01 17.2**	**+1.1**
IKP	**In-Ko-Pah, Jac**	**0.68**	**220**		**Pg**	**10 01 07.2**	**-0.4**
IKP					**Sb**	**10 01 17.3**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**0.68**	**220**	P	**Pg**	**10 01 07.2**	**-0.4**
	baz=40,SNR=50						
IKP				S	**Sb**	**10 01 17.3**	**+0.5**
	baz=40						
RMX	**La Rumorosa**	**0.70**	**216**		**Pg**	**10 01 08.2**	**+0.1**
RMX					**Sb**	**10 01 18.0**	**+0.5**
RMX	**La Rumorosa**	**0.70**	**216**	IAML		10 01 19.0	
	comp=E,458nm,0.8s						
BORC	**Borrego Spring**	**0.70**	**278**		**Sg**	**10 01 17.4**	**0.0**
MONP2	**Monument Peak**	**0.76**	**249**		**Pg**	**10 01 08.8**	**-0.3**
MONP2					**Sg**	**10 01 18.8**	**-0.3**
MONP2	**Monument Peak**	**0.76**	**249**	P	**Pg**	**10 01 08.5**	**-0.6**
	baz=67,SNR=101						
MONP2				S	**Sg**	**10 01 19.3**	**+0.2**
	baz=67						
CPBX	**Cerro Prieto**	**0.79**	**162**		**Pg**	**10 01 08.5**	**-1.0**
CPBX					**Sn**	**10 01 20.9**	**-0.8**
XPFO	**Pion Flat**	**0.85**	**301**		**Pb**	**10 01 09.6**	**-0.9**
XPFO					**Sb**	**10 01 21.8**	**+0.1**
PFO	**Pinyon Flats O**	**0.85**	**301**	Pg	**Pb**	**10 01 09.6**	**-1.1**
PFO				IAML		10 01 23.5	
	comp=E,485nm,0.8s						
PFO				IAML		10 01 25.3	
	comp=E,325nm,0.9s						
PFO	**Pinyon Flats O**	**0.85**	**301**		**Pb**	**10 01 09.8**	**-0.9**
PFO					**Sb**	**10 01 21.8**	**0.0**
PFO	**Pinyon Flats O**	**0.85**	**301**	P	**Pb**	**10 01 09.7**	**-0.9**
	baz=120,SNR=53						
PFO				S	**Sb**	**10 01 21.4**	**-0.5**
	baz=120						
MATG	**Mataguay Scout**	**0.89**	**272**		**Pb**	**10 01 10.5**	**-0.8**
MATG					**Sb**	**10 01 23.3**	**+0.5**
BELC	**Belle Mtn. Jos**	**0.90**	**338**		**Pb**	**10 01 10.7**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.90**	**338**	P	**Pb**	**10 01 10.6**	**-0.8**
	baz=156,SNR=72						
BELC				S	**Sb**	**10 01 23.1**	**0.0**
	baz=156						
FRD	**Ford Ranch, An**	**0.91**	**291**		**Pb**	**10 01 10.9**	**-0.7**
FRD					**Sb**	**10 01 23.9**	**+0.5**
GUVIX	**Guadalupe Vict**	**0.96**	**153**		**Pb**	**10 01 11.1**	**-1.3**
BAR	**Barrett**	**1.04**	**242**		**Pb**	**10 01 12.9**	**-0.8**
BAR				IAML		10 01 28.1	
	comp=N,276nm,0.8s						
BAR				IAML		10 01 28.7	
	comp=E,308nm,0.8s						
IRM	**Iron Mountain**	**1.05**	**20**	P	**Pb**	**10 01 13.4**	**-0.5**
	baz=200,SNR=122						
IRM				S	**Sb**	**10 01 27.7**	**+0.2**
	baz=200						
BLYC	**Blythe**	**1.06**	**57**	Pg	**Pb**	**10 01 13.9**	**-0.1**
ESJX	**Sierra Juarez**	**1.20**	**195**		**Pn**	**10 01 15.3**	**-1.0**
CBX	**Cerro Bola**	**1.25**	**227**		**Pn**	**10 01 16.6**	**-0.4**
CBX				IAML		10 01 35.8	
	comp=E,185nm,0.6s						
109C	**Camp Elliot, M**	**1.31**	**258**		**Pn**	**10 01 16.8**	**-0.8**
109C				IAML		10 01 36.0	
	comp=N,255nm,0.7s						
109C				IAML		10 01 36.4	
	comp=E,237nm,0.5s						
109C	**Camp Elliot, M**	**1.31**	**258**	P	**Pn**	**10 01 16.6**	**-1.0**
	baz=76,SNR=35						
109C				S	**Sb**	**10 01 33.9**	**-0.9**
	baz=76						
GORC	**Green Oak Ranc**	**1.38**	**270**		**Pn**	**10 01 17.8**	**-0.8**
TJX	**Tijuana**	**1.40**	**242**		**Pb**	**10 01 20.1**	**+0.2**
MURC	**Murrieta**	**1.41**	**288**	P	**Pn**	**10 01 17.9**	**-1.2**
	baz=106,SNR=33						
MURC				S	**Sn**	**10 01 37.0**	**-0.4**
	baz=106						
DANC	**Danby, Needles**	**1.47**	**7**		**Pn**	**10 01 20.7**	**+0.7**
BBRC	**Big Bear Solar**	**1.56**	**315**	Pg	**Pn**	**10 01 22.5**	**+1.2**
	baz=133						
113A	**Mohawk Valley,**	**1.58**	**104**		**Pb**	**10 01 22.8**	**-0.1**
CCX	**Cicese**	**1.59**	**215**		**Pn**	**10 01 21.8**	**+0.4**
ELS	**Elsinore Mount**	**1.61**	**288**		**Pn**	**10 01 20.9**	**-1.0**
GMRC	**Granite Mounta**	**1.61**	**358**	Pg	**Pb**	**10 01 23.9**	**+0.4**
	baz=177						
GMRC				Sg	**Sb**	**10 01 45.3**	**+1.7**
	baz=177						
PDMCI	**Parker Dam,Lak**	**1.65**	**46**	Pb	**Pb**	**10 01 23.7**	**-0.4**
	baz=227						
PDMCI				S	**Sn**	**10 01 42.5**	**-0.7**
	baz=227						
HEC	**Hector,Ludlow**	**1.77**	**340**	Pg	**Pb**	**10 01 27.5**	**+1.3**
	baz=159						
HEC				Sg	**Sg**	**10 01 50.6**	**-0.7**
	baz=159						
NEE2	**Needles Airpor**	**1.79**	**26**		**Pn**	**10 01 24.8**	**+0.6**
NEE2	**Needles Airpor**	**1.79**	**26**	P	**Pn**	**10 01 24.2**	**0.0**
	baz=207,SNR=19						
NEE2				Sg	**Sg**	**10 01 51.9**	**+0.1**
	baz=207						
BFSC	**Mount Baldy Ra**	**2.03**	**302**	P	**Pn**	**10 01 27.3**	**-0.4**
	baz=121						
RRX	**Edison Barstow**	**2.07**	**326**	Sg	**Sg**	**10 02 00.2**	**-0.6**
	baz=145						
TUQ	**Turquoise Moun**	**2.28**	**353**	Pg	**Pb**	**10 01 36.6**	**+1.7**
	baz=172						
Y14A	**Wickenburg**	**2.29**	**70**		**Pn**	**10 01 32.9**	**+1.7**
MWC	**Mount Wilson**	**2.31**	**298**		**Pn**	**10 01 31.2**	**-0.5**
GSC	**Goldstone, Bar**	**2.35**	**335**		**Pb**	**10 01 36.2**	**0.0**
GSC				IAML		10 02 16.7	
	comp=N,56nm,1.4s						
GSC				IAML		10 02 20.7	
	comp=E,89nm,0.9s						
GSC	**Goldstone, Bar**	**2.35**	**335**	Pg	**Pb**	**10 01 38.1**	**+1.9**
	baz=154						
CIS	**Catalina Islan**	**2.38**	**276**	Pg	**Pg**	**10 01 39.0**	**-0.9**
	baz=94						
CIS				Sb	**Sb**	**10 02 07.8**	**+2.1**
	baz=94						
PASC	**Pasadena Art C**	**2.39**	**295**	Pn	**Pb**	**10 01 36.2**	**-0.5**
EDW2	**Edwards Air Fo**	**2.63**	**311**	Pg	**Pb**	**10 01 43.3**	**+2.4**
	baz=129						
214A	**Organ Pipe Nat**	**2.64**	**117**	Pn	**Pn**	**10 01 35.4**	**-0.5**
214A				IAML		10 02 23.7	
	comp=N,76nm,0.6s						
214A				IAML		10 02 30.1	
	comp=E,90nm,0.5s						
214A	**Organ Pipe Nat**	**2.64**	**117**	P	**Pn**	**10 01 34.6**	**-1.4**
	baz=299						
QSM	**Queen of Sheba**	**2.98**	**340**		**Pn**	**10 01 42.8**	**+2.1**
MPMC	**Manual Prospec**	**3.28**	**332**	Pg	**Pg**	**10 01 55.7**	**-1.4**
	baz=151						
TPNV	**Topopah Spring**	**3.81**	**352**	Pg	**Pg**	**10 02 06.4**	**-0.8**
	baz=171						
TUC	**Tucson**	**4.14**	**101**	IAML		10 03 14.7	
TUC				IAML		10 03 15.2	
	comp=E,17nm,1.4s						
	comp=E,12nm,0.9s						
TUC	**Tucson**	**4.14**	**101**	Pn	**Pn**	**10 01 57.9**	**+1.2**
U15A	**North Rim**	**4.23**	**39**		**Pn**	**10 01 59.4**	**+1.3**
KNB	**Kanab**	**4.46**	**30**	Pn	**Pn**	**10 02 02.5**	**+1.4**
CCUT	**Cedar City**	**4.73**	**22**	Pn	**Pn**	**10 02 06.1**	**+1.1**
X18A	**Snowflake**	**4.88**	**72**		**Pn**	**10 02 09.8**	**+2.8**

*TAP **31** 10:14:19.5, 24.°70N×122.°10E, h5km, ML3.0, C*
*JMA **31** 10:14:20.6±0.1, 25.°7N±5.°×12.°2E±.°, h36km, MV2.8/9,*
TAIWAN REGION

ISC 31 10:14:19.3±1.1, 24.°75N±0.°02×122.°14E±0.°02, h9km±8km, n97, σ0.°89/154, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.21**	**298**	*i* P	**Pg**	**10 14 24.4**	**+0.8**
	baz=315						
TWB1	**Santiao Chiao**	**0.29**	**333**	*i* P	**Pb**	**10 14 26.8**	**-0.1**
	baz=343						
TWC	**Suao**	**0.29**	**243**	*i* P	**Pg**	**10 14 24.9**	**-0.3**
	baz=248						
TWC				*i* S	**Sg**	**10 14 28.0**	**-1.1**
	baz=248						
NTC	**Toucheng**	**0.30**	**291**	S	**Sb**	**10 14 31.8**	**-0.1**
	baz=302						
ILA	**Ilan**	**0.35**	**273**	*e*P	**Pb**	**10 14 27.5**	**-0.3**
	baz=282						
TIPB	**Shuangxi**	**0.36**	**309**	*i* P	**Pb**	**10 14 27.6**	**-0.3**
	baz=303						
TIPB				S	**Sb**	**10 14 32.5**	**-1.3**
	baz=303						
SXI1	**Grass Mountain**	**0.42**	**326**	P	**Pb**	**10 14 29.2**	**+0.2**
	baz=344						
TWE	**Neicheng**	**0.43**	**267**	*i* P	**Pg**	**10 14 27.7**	**0.0**
	baz=273						
TWE				*i* S	**Sg**	**10 14 34.0**	**+0.7**
	baz=273						
NWF	**Wu-fen Shan**	**0.46**	**315**	*i* P	**Pb**	**10 14 29.8**	**+0.1**
	baz=322						
WFSB	**Wu-fen Shan**	**0.46**	**315**	P	**Pb**	**10 14 29.9**	**+0.3**
	baz=310						
ENA	**Nanau**	**0.48**	**229**	*i* P	**Pg**	**10 14 28.1**	**-0.6**
	baz=229						
ENA				S	**Sg**	**10 14 35.1**	**+0.1**
	baz=229						
FUSB	**Fushanzhiwuyua**	**0.50**	**272**	P	**Pg**	**10 14 29.2**	**+0.2**
	baz=278						
FUSB				S	**Sb**	**10 14 37.3**	**-0.5**
	baz=278						
TNOU	**National Taiwa**	**0.52**	**321**	P	**Pb**	**10 14 31.1**	**+0.4**
	baz=316						
TNOU				S	**Sn**	**10 14 40.6**	**-1.4**
	baz=316						
ENTT	**Nioudou**	**0.53**	**259**	*i* P	**Pg**	**10 14 29.0**	**-0.6**
	baz=263						
TWA	**Mucha**	**0.55**	**295**	*i* P	**Pb**	**10 14 31.2**	**0.0**
	baz=302						
TWA				*i* S	**Sb**	**10 14 38.6**	**-0.7**
	baz=302						
NDT	**Datong Townshi**	**0.58**	**256**	P	**Pg**	**10 14 29.3**	**-1.4**
	baz=271						
NDT				S	**Sg**	**10 14 37.3**	**-1.0**
	baz=271						
LATG	**Datong**	**0.59**	**249**	P	**Pg**	**10 14 30.7**	**-0.2**
	baz=263						
NHDH	**Xindian Distri**	**0.60**	**291**	*i* P	**Pb**	**10 14 32.2**	**+0.3**
	baz=297						
NHDH				*i* S	**Sb**	**10 14 39.7**	**-0.8**
	baz=297						
TATO	**Taipei**	**0.63**	**291**	P	**Pb**	**10 14 32.6**	**+0.1**
	baz=284						
TAP	**Taipei**	**0.64**	**297**	*i* S	**Sb**	**10 14 41.3**	**-0.6**
	baz=293						
YM01	**YM01**	**0.65**	**308**	P	**Pb**	**10 14 33.4**	**+0.5**
	baz=313						
YM01				S	**Sn**	**10 14 44.3**	**-1.0**
	baz=313						
YM08	**YM08**	**0.66**	**312**	P	**Pb**	**10 14 33.5**	**+0.3**
	baz=316						
YHNB	**Yeheng**	**0.70**	**264**	P	**Pg**	**10 14 32.8**	**0.0**
	baz=279						
ANP	**Anpu**	**0.71**	**308**	*i* P	**Pb**	**10 14 34.5**	**+0.5**
	baz=313						
NSK	**Sanguang**	**0.71**	**265**	*i* P	**Pg**	**10 14 32.0**	**-1.1**
	baz=280						
TWY	**Chenhua**	**0.72**	**317**	*i* P	**Pn**	**10 14 35.5**	**-0.2**
	baz=311						
TWY				S	**Sn**	**10 14 45.8**	**-1.1**
	baz=311						
TWS1	**Kuangyinshan**	**0.74**	**299**	*i* P	**Pn**	**10 14 35.6**	**-0.4**
	baz=291						
TWS1				S	**Sn**	**10 14 46.6**	**-0.8**
	baz=291						
ETL	**Fush Village**	**0.75**	**219**	P	**Pg**	**10 14 33.1**	**-0.7**
	baz=218						
ETL				S	**Sg**	**10 14 43.1**	**-0.4**
	baz=218						
NTST	**Danshui**	**0.75**	**304**	*i* P	**Pn**	**10 14 36.6**	**+0.5**
	baz=309						
NTST				*i* S	**Sn**	**10 14 46.9**	**-0.8**
	baz=309						
NACB	**Ninganchiao**	**0.75**	**221**	P	**Pg**	**10 14 33.0**	**-0.8**
	baz=221						
NACB				S	**Sg**	**10 14 42.3**	**-1.3**
	baz=221						
NNSB	**Datong**	**0.76**	**245**	P	**Pg**	**10 14 33.3**	**-0.6**
	baz=248						
NNS	**Nan Shan**	**0.76**	**247**	*i* P	**Pg**	**10 14 32.6**	**-1.4**
	baz=248						
NNS				*i* S	**Sb**	**10 14 44.8**	**-0.5**
	baz=248						
JYNG	**Yonagunijimaku**	**0.79**	**112**	P	**Pb**	**10 14 35.9**	**+0.6**
JYNG				S	**Sb**	**10 14 46.9**	**+0.7**
ETLH	**Xiulin Townshi**	**0.80**	**228**	P	**Pg**	**10 14 34.2**	**-0.6**
	baz=228						
ETLH				S	**Sg**	**10 14 44.8**	**-0.4**
	baz=228						
TWD	**Chiawan**	**0.82**	**217**	*i* P	**Pg**	**10 14 34.2**	**-1.0**
	baz=216						
YOJ	**Yonaguni jima**	**0.84**	**109**	P	**Pb**	**10 14 36.7**	**+0.5**
	baz=106						

YOJ			S		Sn	10 14 49.2	-0.7
	baz=106						
YOJ	**Yonaguni jima**	**0.84 109**	P		**Pb**	**10 14 36.9**	**+0.7**
YOJ			*e*S		**Sb**	**10 14 48.5**	**+0.8**
PCYT	**Pengchaiyu**	**0.88 356**	*i* P		**Pn**	**10 14 37.9**	**-0.1**
	baz=358						
NCU	**National Centr**	**0.89 285**	S		**Sn**	**10 14 51.9**	**+0.7**
	baz=288						
NCUH	**Zhongli**	**0.89 285**	*i* P		**Pn**	**10 14 38.5**	**+0.4**
	baz=301						
NCUH			*i* S		**Sn**	**10 14 51.4**	**+0.2**
	baz=301						
NFF	**Wufeng Townshi**	**0.93 263**	P		**Pb**	**10 14 37.7**	**-0.1**
	baz=265						
NFF			S		**Sb**	**10 14 50.4**	**+0.1**
	baz=265						
FUSS	**Fushou**	**0.95 239**	*i* P		**Pg**	**10 14 37.7**	**0.0**
	baz=240						
FUSS			*i* S		**Sb**	**10 14 51.0**	**-0.1**
	baz=240						
WHF	**Hehuan Shan**	**0.99 233**	*i* P		**Pg**	**10 14 38.0**	**-0.5**
	baz=233						
WHF			S		**Sg**	**10 14 51.6**	**+0.1**
	baz=233						
TDCB	**Techi**	**1.02 241**	P		**Pg**	**10 14 38.7**	**-0.2**
	baz=232						
TDCB			S		**Sg**	**10 14 51.9**	**-0.2**
	baz=232						
LIOB	**Emei**	**1.02 265**	*i* P		**Pn**	**10 14 40.8**	**+0.8**
	baz=252						
LIOB			S		**Sn**	**10 14 55.0**	**+0.5**
	baz=252						
NSTT	**Nanjuang**	**1.04 264**	*i* P		**Pn**	**10 14 41.0**	**+0.9**
	baz=267						
NSTT			*i* S		**Sn**	**10 14 54.6**	**-0.2**
	baz=267						
SBCB	**Hsinchu**	**1.05 273**	*e*P		**Pn**	**10 14 42.3**	**+2.0**
	baz=298						
SBCB			S		**Sn**	**10 14 56.9**	**+1.9**
	baz=298						
HSN	**Hsinchu**	**1.06 273**	*i* S		**Sn**	**10 14 55.3**	**-0.1**
	baz=299						
CHGB	**Renai**	**1.11 232**	P		**Pb**	**10 14 40.2**	**-0.7**
	baz=233						
CHGB			S		**Sb**	**10 14 55.2**	**-0.4**
	baz=233						
ESL	**Shilin**	**1.13 215**	*i* P		**Pb**	**10 14 39.9**	**-1.2**
	baz=224						
ESL			*e*S		**Sb**	**10 14 55.1**	**-0.7**
	baz=224						
OWD	**Renai**	**1.18 228**	*i* P		**Pb**	**10 14 41.4**	**-0.6**
	baz=221						
WHP	**Taichung City**	**1.18 247**	*i* P		**Pn**	**10 14 42.0**	**-0.1**
	baz=240						
WUSB	**Renai**	**1.19 231**	P		**Pb**	**10 14 41.9**	**-0.4**
	baz=231						
WUSB			S		**Sb**	**10 14 56.9**	**-1.0**
	baz=231						
NMLH	**Miaoli**	**1.24 261**	P		**Pg**	**10 14 44.4**	**+1.2**
	baz=253						
NMLH			*i* S		**Sg**	**10 15 02.3**	**+3.0**
	baz=253						
EGFH	**Guangfu**	**1.25 211**	P		**Pg**	**10 14 43.8**	**+0.5**
	baz=229						
EGFH			S		**Sn**	**10 14 59.8**	**-0.3**
	baz=229						
TWQ1	**Liyutan**	**1.30 253**	*i* P		**Pg**	**10 14 45.7**	**+1.4**
	baz=254						
TWQ1			S		**Sg**	**10 15 01.8**	**+0.5**
	baz=254						
WCS	**Beigang Elemen**	**1.31 239**	*i* P		**Pn**	**10 14 43.3**	**-0.6**
	baz=240						
VWDT	**VWDT**	**1.34 223**	P		**Pn**	**10 14 43.8**	**-0.4**
	baz=232						
VWDT			S		**Sn**	**10 15 02.1**	**-0.1**
	baz=232						
HGSD	**Ruisui**	**1.41 208**	P		**Pn**	**10 14 45.4**	**+0.2**
	baz=186						
HGSD			S		**Sg**	**10 15 06.5**	**+1.9**
	baz=186						
SMLT	**Sun Moon Lake**	**1.42 233**	*i* P		**Pb**	**10 14 46.3**	**+0.2**
	baz=223						
SMLT			*e*S		**Sb**	**10 15 04.6**	**+0.3**
	baz=223						
TYC	**Yuchr**	**1.44 235**	*i* P		**Pb**	**10 14 46.6**	**+0.3**
	baz=225						
TYC			S		**Sb**	**10 15 04.7**	**0.0**
	baz=225						
SSLB	**Suanglung**	**1.44 229**	P		**Pb**	**10 14 46.1**	**-0.3**
	baz=228						
SSLB			S		**Sn**	**10 15 04.1**	**-0.6**
	baz=228						
EHY	**Hungye**	**1.44 211**	*i* P		**Pn**	**10 14 45.1**	**-0.6**
	baz=229						
EHY			*e*S		**Sb**	**10 15 04.8**	**-0.1**
	baz=229						
IRIF	**Iriomote-Funau**	**1.51 105**	P		**Pn**	**10 14 46.1**	**-0.5**
IRIF			S		**Sn**	**10 15 04.9**	**-1.5**
YULB	**Yu-li**	**1.55 210**	P		**Pn**	**10 14 47.0**	**-0.2**
	baz=207						
WHYT	**Xinyi Township**	**1.57 229**	*i* P		**Pb**	**10 14 49.0**	**+0.4**
	baz=228						
EYUL	**Yuli**	**1.58 208**	*i* P		**Pb**	**10 14 48.8**	**+0.1**
	baz=222						
WJS	**Zhushan**	**1.58 235**	P		**Pg**	**10 14 51.7**	**+2.1**
	baz=237						
WJS			S		**Sg**	**10 15 12.1**	**+2.0**
	baz=237						
HATJ	**Hateruma jima**	**1.67 114**	*e*S		**Sn**	**10 15 09.3**	**-1.0**
FULB	**Fuli**	**1.72 207**	*i* P		**Pn**	**10 14 49.9**	**+0.3**
	baz=221						
ALS	**Alishan**	**1.73 225**	*i* P		**Pb**	**10 14 51.5**	**0.0**
	baz=207						
ALS			S		**Sg**	**10 15 15.5**	**+0.5**
	baz=207						
JKRS	**Kuro-shima**	**1.78 106**	P		**Pn**	**10 14 50.6**	**+0.3**
JKRS			S		**Sn**	**10 15 12.2**	**-0.8**
WDLH	**Douliu**	**1.80 235**	P		**Pb**	**10 14 53.3**	**+0.8**
	baz=237						
WDLH			S		**Sg**	**10 15 19.6**	**+2.4**
	baz=237						
EHD	**Haiduan**	**1.80 208**	P		**Pn**	**10 14 49.9**	**-0.8**
	baz=207						
EHD			S		**Sb**	**10 15 15.1**	**-0.2**
	baz=207						
WRL	**Guolierlin Hig**	**1.81 243**	S		**Sb**	**10 15 16.2**	**+0.7**
	baz=245						
ELDTW	**Lidau**	**1.86 214**	P		**Pn**	**10 14 52.3**	**+0.8**
	baz=195						
JIJ	**Ishigaki jima**	**1.87 101**	P		**Pn**	**10 14 51.7**	**+0.2**
JIJ			*e*S		**Sn**	**10 15 13.5**	**-1.7**
WCKO	**Fanlu**	**1.91 227**	P		**Pb**	**10 14 53.5**	**-0.9**
	baz=211						
WCKO			S		**Sg**	**10 15 22.0**	**+1.2**
	baz=211						
EDH	**Donghe**	**1.92 204**	S		**Sn**	**10 15 16.2**	**-0.4**
	baz=185						
CHN4	**Tsaushan**	**1.98 226**	*i* P		**Pb**	**10 14 55.4**	**-0.1**
	baz=227						
CHN4			*i* S		**Sg**	**10 15 22.8**	**-0.2**
	baz=227						
JISG	**Ishigakijimahi**	**1.98 94**	P		**Pn**	**10 14 54.5**	**+1.4**
TPUB	**Ta-pu**	**1.99 224**	P		**Pb**	**10 14 56.7**	**+0.9**
	baz=225						
TPUB			S		**Sg**	**10 15 23.5**	**+0.1**
	baz=225						
STYH	**Taoyuan**	**2.00 219**	*i* P		**Pn**	**10 14 54.6**	**+1.2**
	baz=218						
STYH			S		**Sb**	**10 15 20.8**	**-0.1**
	baz=218						
WTP	**Ta-pu**	**2.04 223**	*i* P		**Pb**	**10 14 56.7**	**+0.1**
	baz=224						
WTP			*i* S		**Sg**	**10 15 24.9**	**-0.1**
	baz=224						
LONT	**Longtian**	**2.05 207**	*e*P		**Pn**	**10 14 55.4**	**+1.4**
	baz=203						
TWK	**Hsinying**	**2.11 226**	*i* P		**Pb**	**10 14 58.7**	**+0.9**
	baz=227						
TWK			S		**Sg**	**10 15 26.3**	**-0.8**
	baz=227						
WSL	**Shuilin Townsh**	**2.13 235**	P		**Pn**	**10 14 56.5**	**+1.4**
	baz=256						
WSL			S		**Sg**	**10 15 26.5**	**-1.2**
	baz=256						
CHN1	**Nanshi**	**2.14 224**	*i* P		**Pb**	**10 14 57.6**	**-0.7**
	baz=225						
CHN1			S		**Sg**	**10 15 26.9**	**-1.2**
	baz=225						
TWGBT	**Beinan**	**2.15 207**	*e*P		**Pn**	**10 14 55.7**	**+0.3**
	baz=188						
TWG	**Pinlang**	**2.15 207**	P		**Pb**	**10 14 57.2**	**-1.2**
	baz=188						
ECL	**Taimali**	**2.40 207**	*e*P		**Pn**	**10 14 59.4**	**+0.5**
	baz=191						
SSD	**Sandimen**	**2.42 215**	P		**Pb**	**10 15 01.9**	**-1.2**
	baz=215						
SSD			S		**Sb**	**10 15 34.8**	**+1.7**
	baz=215						
MATB	**Ma-tsu**	**2.42 306**	*e*S		**Sb**	**10 15 30.9**	**-2.2**
	baz=309						
TSMG	**Majia**	**2.45 214**	P		**Pn**	**10 15 00.6**	**+1.1**
	baz=215						
TSMG			S		**Sb**	**10 15 33.5**	**-0.3**
	baz=215						
VWUC	**VWUC**	**2.45 276**	*e*P		**Pb**	**10 15 02.2**	**-1.4**
	baz=277						
EAST	**Anshuo**	**2.63 207**	P		**Pn**	**10 15 03.4**	**+1.3**
	baz=190						
SLIU	**Shizi**	**2.80 206**	P		**Pn**	**10 15 05.8**	**+1.5**
	baz=201						

ANF ***31*** *10:15:18.9±0.2,33°.18N×115°.58W,h15km,ML3.0/26, ML3.0/26,Error ellipse: s-maj=1.7km s-min=1.3km az=129.0*
NEIC ***31*** *10:15:19.9±1.9,33°.14N±0°.02×115°.62W±0°.03,h25km±4km, Error ellipse: s-maj=3.4km s-min=3.3km az=204.0*
PAS ***31*** *10:15:19.5±2.4,33°.19N±0°.01×115°.57W±0°.02,h3km±6km, ML3.0/89,ML3.0/44(NEIC),Error ellipse: s-maj=2.1km s-min=1.7km az=221.0*

ISC 31 10:15:19.6±0.9,33°.16N±0°.02×115°.58W±0°.02,h19km±2km, n83,σ0=95/107,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.12**	**183**		**Pg**	**10 15 23.2**	**-0.5**
WEMD					**Sg**	**10 15 27.0**	**+0.6**
ERRC	**Elmore Ranch**	**0.21**	**258**		**Pg**	**10 15 29.3**	**+4.5**
SWSC	**Sam W. Stewart**	**0.29**	**221**		**Pg**	**10 15 25.8**	**-0.3**
SWSC	**Sam W. Stewart**	**0.29**	**221**	P	**Pg**	**10 15 25.8**	**-0.3**
	baz=39,SNR=270						
SWSC				S	**Sg**	**10 15 29.8**	**-0.6**
	baz=39						
SNR	**Schaffner Ranc**	**0.32**	**159**		**Pg**	**10 15 26.7**	**+0.1**
SNR					**Sb**	**10 15 32.3**	**+0.7**
COK2	**Cook Ranch 2**	**0.34**	**203**		**Pb**	**10 15 27.4**	**+0.2**
SALN	**Salton City**	**0.36**	**289**		**Pg**	**10 15 27.1**	**-0.2**
SALN					**Sb**	**10 15 33.2**	**+0.3**
DREC	**Desert Rsrch C**	**0.37**	**163**		**Pb**	**10 15 27.9**	**+0.2**
WESC	**Westside Schoo**	**0.42**	**198**		**Pb**	**10 15 28.7**	**+0.1**
CRR	**Carrizo Plain**	**0.43**	**230**		**Pg**	**10 15 28.4**	**-0.1**
CRR					**Sb**	**10 15 35.3**	**+0.5**
COA	**Coachella**	**0.48**	**128**		**Sb**	**10 15 37.4**	**+1.2**
BC3	**Big Chuckawall**	**0.50**	**12**	P	**Pg**	**10 15 28.9**	**-1.0**
	baz=191,SNR=223						
BC3				S	**Sg**	**10 15 35.6**	**-1.1**
	baz=191						
SGL	**Mount Signal**	**0.53**	**194**		**Pg**	**10 15 29.9**	**-0.4**
RUN	**Ruthven**	**0.54**	**111**		**Sg**	**10 15 37.4**	**-0.3**
UABX	**UABC, Campus M**	**0.54**	**168**		**Pb**	**10 15 30.7**	**+0.3**
UABX	**UABC, Campus M**	**0.54**	**168**	IAML		10 15 45.2	
	comp=N,1μm,1.1s						
UABX				IAML		10 15 45.9	
	comp=E,843nm,0.4s						
HAY	**Hayfield**	**0.55**	**351**		**Pb**	**10 15 29.8**	**-0.9**
HAY					**Sg**	**10 15 38.0**	**-0.2**
SLH	**Sleepy Hollow**	**0.57**	**273**		**Pb**	**10 15 30.8**	**-0.2**
SLH					**Sb**	**10 15 40.0**	**+1.4**
CTW	**Cottonwood Mou**	**0.57**	**334**		**Pb**	**10 15 30.3**	**-0.7**
CTW					**Sb**	**10 15 38.3**	**-0.5**
YUH	**Yuha Desert**	**0.59**	**210**	Pg	**Pb**	**10 15 31.1**	**-0.2**
YUH	**Yuha Desert**	**0.59**	**210**		**Sg**	**10 15 39.5**	**+0.1**
CTCC	**Cactus City**	**0.60**	**325**		**Pb**	**10 15 31.2**	**-0.3**
CTCC					**Sb**	**10 15 39.8**	**+0.2**
GLA	**Glamis**	**0.64**	**100**		**Pb**	**10 15 31.5**	**-0.7**
GLA					**Sb**	**10 15 40.0**	**-0.7**
GLA	**Glamis**	**0.64**	**100**	P	**Pb**	**10 15 31.4**	**-0.7**
	baz=283,SNR=82						
GLA				S	**Sb**	**10 15 40.4**	**-0.3**
	baz=283						
EMSC	**East Mesa**	**0.65**	**130**		**Pb**	**10 15 32.2**	**-0.1**
EMSC					**Sn**	**10 15 43.5**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.68**	**222**		**Pb**	**10 15 32.6**	**-0.3**
IKP					**Sg**	**10 15 42.0**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.68**	**222**	P	**Pb**	**10 15 32.6**	**-0.3**
	baz=40,SNR=83						
IKP				S	**Sg**	**10 15 42.4**	**+0.2**
	baz=40						
RMX	**La Rumorosa**	**0.70**	**217**		**Pg**	**10 15 33.4**	**-0.1**
RMX					**Sg**	**10 15 43.6**	**+0.7**
RMX	**La Rumorosa**	**0.70**	**217**	IAML		10 15 44.5	
	comp=E,460nm,0.7s						
BORC	**Borrego Spring**	**0.71**	**279**		**Pb**	**10 15 32.9**	**-0.6**
BORC					**Sb**	**10 15 42.9**	**0.0**
MONP2	**Monument Peak**	**0.76**	**249**		**Pb**	**10 15 34.2**	**-0.3**
MONP2					**Sg**	**10 15 44.6**	**-0.2**
MONP2	**Monument Peak**	**0.76**	**249**	P	**Pb**	**10 15 33.8**	**-0.6**
	baz=68,SNR=60						
MONP2				S	**Sg**	**10 15 44.8**	**0.0**
	baz=68						
CPBX	**Cerro Prieto**	**0.78**	**163**		**Pb**	**10 15 33.7**	**-0.8**
PFO	**Pinyon Flats O**	**0.86**	**301**		**Pb**	**10 15 35.2**	**-0.9**
PFO				IAML		10 15 49.6	
	comp=E,290nm,0.9s						
PFO				IAML		10 15 51.8	
	comp=E,279nm,0.8s						
PFO	**Pinyon Flats O**	**0.86**	**301**		**Pb**	**10 15 35.3**	**-0.9**
PFO					**Sb**	**10 15 47.3**	**-0.1**
PFO	**Pinyon Flats O**	**0.86**	**301**	P	**Pb**	**10 15 35.2**	**-0.9**
	baz=119,SNR=65						
PFO				S	**Sb**	**10 15 47.5**	**+0.1**
	baz=119						
MATG	**Mataguay Scout**	**0.90**	**273**		**Pb**	**10 15 36.0**	**-0.7**
BELC	**Belle Mtn. Jos**	**0.91**	**337**		**Pb**	**10 15 36.1**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.91**	**337**	P	**Pb**	**10 15 36.1**	**-0.8**
	baz=156,SNR=77						
BELC				S	**Sb**	**10 15 48.5**	**-0.2**
	baz=156						
FRD	**Ford Ranch, An**	**0.92**	**291**		**Pb**	**10 15 36.4**	**-0.7**
FRD					**Sg**	**10 15 49.6**	**-0.3**
GUVIX	**Guadalupe Vict**	**0.95**	**154**		**Pb**	**10 15 36.5**	**-1.1**
BAR	**Barrett**	**1.04**	**243**		**Pb**	**10 15 38.2**	**-0.9**
BAR				IAML		10 15 54.0	
	comp=E,306nm,0.7s						
BAR				IAML		10 15 54.4	
	comp=N,310nm,0.3s						
TKX	**Tecate**	**1.05**	**236**		**Pb**	**10 15 38.7**	**-0.6**
TKX				IAML		10 15 52.9	
	comp=N,580nm,0.2s						
TKX				IAML		10 15 53.9	
	comp=E,455nm,0.2s						
IRM	**Iron Mountain**	**1.05**	**20**		**Pb**	**10 15 38.9**	**-0.5**
IRM	**Iron Mountain**	**1.05**	**20**	P	**Pb**	**10 15 38.8**	**-0.5**
	baz=200,SNR=138						
IRM				Sb	**Sb**	**10 15 53.7**	**+0.9**
	baz=200						
BLYC	**Blythe**	**1.06**	**56**	Pg	**Pb**	**10 15 39.2**	**-0.1**
ESJX	**Sierra Juarez**	**1.20**	**195**		**Pn**	**10 15 40.7**	**-0.9**
SDRC	**San Diego Road**	**1.23**	**250**		**Pb**	**10 15 42.1**	**-0.1**
CBX	**Cerro Bola**	**1.25**	**228**		**Pn**	**10 15 41.7**	**-0.5**
CBX				IAML		10 16 00.9	
	comp=N,154nm,0.4s						
CBX				IAML		10 16 01.2	
	comp=E,237nm,0.6s						
109C	**Camp Elliot, M**	**1.31**	**258**		**Pn**	**10 15 42.3**	**-0.7**
109C				IAML		10 16 01.1	
	comp=N,316nm,0.4s						
109C				IAML		10 16 02.1	
	comp=E,338nm,0.3s						
109C	**Camp Elliot, M**	**1.31**	**258**	P	**Pn**	**10 15 42.2**	**-0.8**
	baz=77,SNR=37						
TJX	**Tijuana**	**1.41**	**243**		**Pn**	**10 15 44.7**	**+0.5**
MURC	**Murrieta**	**1.43**	**288**	S	**Sb**	**10 16 03.3**	**-0.1**
	baz=106						
DANC	**Danby, Needles**	**1.48**	**6**		**Pb**	**10 15 47.4**	**+0.8**
BBRC	**Big Bear Solar**	**1.57**	**315**	Sb	**Sb**	**10 16 08.7**	**+0.9**
	baz=133						
113A	**Mohawk Valley,**	**1.57**	**104**		**Pb**	**10 15 48.1**	**0.0**
GMRC	**Granite Mounta**	**1.62**	**358**	P	**Pn**	**10 15 47.4**	**0.0**
	baz=177,SNR=18						
ELS	**Elsinore Mount**	**1.62**	**288**		**Pn**	**10 15 46.6**	**-0.8**
PDMCI	**Parker Dam,Lak**	**1.65**	**46**		**Pb**	**10 15 50.0**	**+0.5**
	baz=227						
PDMCI				Sb	**Sb**	**10 16 10.8**	**+0.9**
	baz=227						
HEC	**Hector,Ludlow**	**1.78**	**339**	Pg	**Pb**	**10 15 52.9**	**+1.2**
	baz=158						
NEE2	**Needles Airpor**	**1.79**	**26**	P	**Pn**	**10 15 50.0**	**+0.5**
	baz=207						
BFSC	**Mount Baldy Ra**	**2.04**	**302**	P	**Pn**	**10 15 52.8**	**-0.3**
	baz=120						
BFSC				Sb	**Sb**	**10 16 22.1**	**+0.8**
	baz=120						
RRX	**Edison Barstow**	**2.08**	**326**	Pg	**Pb**	**10 15 57.9**	**+1.1**
	baz=144						
Y14A	**Wickenburg**	**2.28**	**69**		**Pn**	**10 15 58.4**	**+2.1**
TUQ	**Turquoise Moun**	**2.29**	**353**	Pg	**Pg**	**10 16 02.5**	**-1.1**
	baz=172						
GSC	**Goldstone, Bar**	**2.37**	**335**	Pg	**Pb**	**10 16 03.7**	**+1.9**
	baz=154						
CIS	**Catalina Islan**	**2.39**	**277**	Pg	**Pg**	**10 16 04.5**	**-1.0**
	baz=94						
CIS				Sb	**Sb**	**10 16 32.9**	**+1.6**
	baz=94						
PASC	**Pasadena Art C**	**2.40**	**296**	Pn	**Pb**	**10 16 00.3**	**-1.9**
214A	**Organ Pipe Nat**	**2.62**	**117**		**Pn**	**10 16 00.1**	**-0.9**
214A				IAML		10 16 53.0	
	comp=N,104nm,0.8s						
214A				IAML		10 16 55.7	
	comp=E,118nm,0.5s						
214A	**Organ Pipe Nat**	**2.62**	**117**	P	**Pn**	**10 16 00.2**	**-0.9**
	baz=299						
EDW2	**Edwards Air Fo**	**2.64**	**311**	Pg	**Pg**	**10 16 09.0**	**-1.3**
	baz=129						
SHOC	**Shoshone, Teco**	**2.79**	**348**	Pg	**Pg**	**10 16 12.0**	**-1.2**
	baz=168						
MPMC	**Manual Prospec**	**3.29**	**332**	P	**Pn**	**10 16 10.6**	**+0.2**
	baz=151						
BCW	**Bitter Crk WRg**	**3.65**	**300**	Pn	**Pn**	**10 16 17.5**	**+2.3**
BCW				IAML		10 17 35.8	
	comp=E,51nm,1.9s						
TPNV	**Topopah Spring**	**3.82**	**352**	Pg	**Pg**	**10 16 32.0**	**-0.8**
	baz=171						
TUC	**Tucson**	**4.12**	**101**	IAML		10 17 49.4	
	comp=E,15nm,1.1s						
TUC				IAML		10 18 07.8	
	comp=E,9.9nm,1.0s						
TUC	**Tucson**	**4.12**	**101**	Pn	**Pn**	**10 16 22.0**	**+0.2**
TUC	**Tucson**	**4.12**	**101**	Pg	**Pg**	**10 16 37.1**	**-1.6**
	baz=284						
U15A	**North Rim**	**4.23**	**39**		**Pn**	**10 16 25.1**	**+1.7**
LCH	**Last Change Ra**	**4.40**	**338**	Pn	**Pn**	**10 16 25.9**	**+0.3**
KNB	**Kanab**	**4.46**	**30**		**Pn**	**10 16 28.2**	**+1.8**
X18A	**Snowflake**	**4.88**	**72**		**Pn**	**10 16 34.2**	**+2.0**

NNC 31 10:15:36.5±1.6,51°.23N×75°.66E,h0km,mb3.6,mpv3.2, 3C-2D,Error ellipse: s-maj=22.5km s-min=11.5km az=4.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.92**	**107**	⇑Pn	Pn	10 16 10.1	-0.2
	11nm,0.5s						
KURBB				⇓Lg	Lg	10 16 38.1	
	12nm,0.3s						
OTUK	**Ortayu**	**3.68**	**217**	⇓Lg	Lg	10 17 34.0	
	2.2nm,0.6s						
BVA0	**Borovoye Array**	**3.71**	**301**	⇑Lg	Lg	10 17 35.9	
	12nm,1.1s						
MK31	**Makanchi Array**	**6.22**	**133**	⇑Lg	Lg	10 18 53.2	
	4.3nm,1.0s,baz=315,slow=26,SNR=2.6						

ROM 31 10:16:36.8±0.0,42°.886N±0°.003×13°.133E±0°.004, h9km,Md1.5/7,6C-8D,Error ellipse: s-maj=0.3km s-min=0.3km az=246.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.08**	**273**	⇑P	Pg	10 16 39.5	+0.4
T1216				S	Sg	10 16 41.1	+0.4
T1216				AML	AML		
	comp=E,15450μm,0.3s						
T1216				AML	AML		
	comp=N,9040μm,0.3s						
T1216				AML	AML		
	comp=E,15500μm,0.3s						
T1216				AML	AML		
	comp=N,9055μm,0.3s						
T1216				AML	AML		
	comp=E,12680μm,0.4s						
T1216				AML	AML		
	comp=N,6930μm,0.2s						
T1216				END			
T1256	**Bolognola (MC)**	**0.14**	**30**	P	Pg	10 16 40.0	0.0
T1256				S	Sg	10 16 42.8	+0.6
T1256				AML	AML		
	comp=E,3550μm,0.4s						
T1256				AML	AML		
	comp=N,2620μm,0.7s						
T1256				AML	AML		
	comp=E,3630μm,0.4s						
T1256				AML	AML		
	comp=N,2475μm,0.7s						
T1256				AML	AML		
	comp=E,16200μm,0.5s						
T1256				AML	AML		
	comp=N,21750μm,0.4s						
T1256				AML	AML		
	comp=E,15700μm,0.5s						
T1256				AML	AML		
	comp=E,16200μm,0.5s						
T1256				AML	AML		
	comp=N,21800μm,0.4s						
T1256				AML	AML		
	comp=N,21650μm,0.7s						
T1256				AML	AML		
	comp=N,2194μm,0.2s						
T1256				AML	AML		
	comp=N,2342μm,0.2s						
T1256				AML	AML		
	comp=E,2910μm,0.3s						
T1256				AML	AML		
	comp=E,2949μm,0.3s						
T1256				END			
FDMO	**Fiordimonte**	**0.15**	**347**	P	Pg	10 16 40.5	+0.3
FDMO				S	Sg	10 16 43.4	+0.9
FDMO				AML	AML		
	comp=E,857μm,0.3s						
FDMO				AML	AML		
	comp=N,999μm,1.2s						
FDMO				AML	AML		
	comp=E,3755μm,0.6s						
FDMO				AML	AML		
	comp=N,4245μm,1.2s						
FDMO				AML	AML		
	comp=N,883μm,0.2s						
FDMO				AML	AML		
	comp=E,857μm,0.3s						
FDMO				END			
AM05	**Amandola Campo**	**0.18**	**60**	P	Pg	10 16 41.3	+0.7
AM05				S	Sg	10 16 44.5	+1.2
AM05				AML	AML		
	comp=E,560μm,0.2s						
AM05				AML	AML		
	comp=N,882μm,0.2s						
AM05				AML	AML		
	comp=E,3195μm,0.2s						
AM05				AML	AML		
	comp=N,152μm,0.1s						
AM05				AML	AML		
	comp=E,3845μm,0.8s						
AM05				AML	AML		
	comp=N,5250μm,0.1s						
AM05				AML	AML		
	comp=E,15050μm,0.3s						
AM05				AML	AML		
	comp=N,1810μm,0.1s						
AM05				AML	AML		
	comp=E,3195μm,0.2s						
AM05				AML	AML		
	comp=N,152μm,0.1s						
AM05				AML	AML		
	comp=E,560μm,0.2s						
AM05				AML	AML		
	comp=N,884μm,0.2s						

T1215	**Vallo di Nera,**	**0.21**	**247**	⇓P	Pg	10 16 41.9 +0.8
T1215				S	Sg	10 16 45.6 +1.5
T1215				AML	AML	
	comp=E,1036μm,0.3s					
T1215				AML	AML	
	comp=N,702μm,0.7s					
T1215				AML	AML	
	comp=E,1040μm,0.3s					
T1215				AML	AML	
	comp=N,852μm,1.4s					
T1215				AML	AML	
	comp=E,1038μm,0.3s					
T1215				AML	AML	
	comp=N,852μm,1.4s					
T1215				AML	AML	
	comp=N,686μm,0.1s					
T1215				AML	AML	
	comp=N,732μm,0.1s					
T1215				AML	AML	
	comp=E,923μm,0.1s					
T1215				AML	AML	
	comp=E,952μm,0.1s					
T1241	**Roccafluvione,**	**0.22**	**98**	⇓P	Pg	10 16 42.0 +0.7
T1241				S	Sg	10 16 45.9 +1.5
T1241				AML	AML	
	comp=E,908μm,0.8s					
T1241				AML	AML	
	comp=N,656μm,0.6s					
T1241				AML	AML	
	comp=E,10200μm,0.5s					
T1241				AML	AML	
	comp=N,5070μm,0.8s					
T1241				AML	AML	
	comp=E,10205μm,0.5s					
T1241				AML	AML	
	comp=E,841μm,0.3s					
T1241				AML	AML	
	comp=N,627μm,0.2s					
T1241				AML	AML	
	comp=N,602μm,0.4s					
T1241				AML	AML	
	comp=E,834μm,0.3s					
T1217	**Poggiodomo (PG**	**0.23**	**221**	⇓P	Pg	10 16 42.3 +0.8
T1217				S	Sg	10 16 46.4 +1.8
T1217				AML	AML	
	comp=E,1011μm,0.6s					
T1217				AML	AML	
	comp=N,1384μm,0.6s					
T1217				AML	AML	
	comp=E,991μm,0.2s					
T1217				AML	AML	
	comp=N,890μm,0.3s					
T1217				AML	AML	
	comp=E,946μm,0.2s					
T1217				AML	AML	
	comp=N,769μm,0.3s					
T1217				END		
GUMA	**Gualdo di Mace**	**0.23**	**40**	⇑P	Pg	10 16 42.4 +0.9
GUMA				S	Sg	10 16 46.6 +1.9
GUMA				AML	AML	
	comp=E,15200μm,0.6s					
GUMA				AML	AML	
	comp=E,15150μm,0.6s					
GUMA				AML	AML	
	comp=N,15750μm,0.7s					
GUMA				AML	AML	
	comp=E,19600μm,0.6s					
GUMA				AML	AML	
	comp=N,15700μm,0.7s					
GUMA				AML	AML	
	comp=N,3727μm,0.4s					
GUMA				AML	AML	
	comp=E,3189μm,0.3s					
GUMA				AML	AML	
	comp=E,3716μm,0.3s					
GUMA				AML	AML	
	comp=N,5061μm,0.2s					
GUMA				END		
T1201	**Domo (RI)**	**0.24**	**159**	P	Pg	10 16 42.9 +1.1
T1204	**Amatrice, Fraz**	**0.25**	**147**	P	Pg	10 16 44.6 +2.8
LNSS	**Leonessa**	**0.29**	**194**	P	Pg	10 16 43.4 +0.8
SMA1	**SAN MARTINO**	**0.30**	**150**	P	Pg	10 16 43.5 +0.7
T1243	**Rocca Santa Ma**	**0.30**	**129**	P	Pg	10 16 43.4 +0.6
T1243				S	Sb	10 16 48.4 -1.1
ASSB	**Assisi San Ben**	**0.38**	**294**	P	Pg	10 16 44.7 +0.4
ASSB				S	Sb	10 16 51.2 -0.6
ASSB				AML	AML	
	comp=E,925μm,0.8s					
ASSB				AML	AML	
	comp=N,1132μm,0.6s					
ASSB				AML	AML	
	comp=E,415μm,0.1s					
ASSB				AML	AML	
	comp=N,393μm,0.1s					
ASSB				END		
RM33	**Pellescritta (**	**0.38**	**171**	P	Pg	10 16 44.9 +0.6
T1246	**Crognaleto (TE**	**0.40**	**139**	P	Pg	10 16 45.1 +0.4
T1246				S	Sb	10 16 51.6 -0.8
CAMP	**Campotosto**	**0.41**	**150**	⇓P	Pg	10 16 45.3 +0.6
CAMP				S	Sb	10 16 51.7 -0.8
CAMP				AML	AML	
	comp=E,1820μm,0.3s					
CAMP				AML	AML	
	comp=N,1395μm,0.3s					
CAMP				AML	AML	
	comp=E,179μm,0.3s					
CAMP				AML	AML	
	comp=N,161μm,0.6s					
T1211	**Morro Reatino**	**0.41**	**210**	P	Pg	10 16 45.0 +0.2
OFFI	**Offida**	**0.41**	**83**	P	Pb	10 16 46.4 +0.1
OFFI				AML	AML	
	comp=E,1965μm,0.7s					
OFFI				AML	AML	
	comp=N,3990μm,0.6s					
OFFI				AML	AML	
	comp=N,460μm,0.6s					
TERO	**Teramo**	**0.43**	**127**	⇑P	Pg	10 16 45.6 +0.3
TERO				S	Sb	10 16 52.8 -0.5
TERO				AML	AML	
	comp=E,1160μm,1.3s					
TERO				AML	AML	
	comp=N,1555μm,0.3s					
TERO				AML	AML	
	comp=E,364μm,0.2s					
TERO				AML	AML	
	comp=N,419μm,0.3s					
TERO				AML	AML	
	comp=N,358μm,0.2s					
TERO				AML	AML	
	comp=E,380μm,0.2s					
TERO				END		
EL6	**Elcito**	**0.44**	**357**	⇓P	Pg	10 16 45.9 +0.4
EL6				AML	AML	
	comp=E,280μm,0.2s					
EL6				AML	AML	
	comp=N,370μm,0.3s					
ATCC	**AVT- Casa Cast**	**0.47**	**310**	⇑P	Pg	10 16 46.4 +0.5
ATCC				S	Sb	10 16 54.3 0.0
ATCC				AML	AML	
	comp=E,293μm,0.4s					
ATCC				AML	AML	
	comp=N,366μm,0.7s					
ATCC				AML	AML	
	comp=E,1075μm,0.7s					
ATCC				AML	AML	
	comp=N,976μm,0.4s					
ATCC				AML	AML	
	comp=N,978μm,0.4s					
ATCC				AML	AML	
	comp=N,266μm,0.3s					
ATCC				AML	AML	
	comp=E,215μm,0.3s					
FOSV	**Fossato di Vic**	**0.49**	**326**	P	Pg	10 16 46.8 +0.4
FOSV				AML	AML	
	comp=E,806μm,0.7s					
FOSV				AML	AML	
	comp=N,1334μm,0.3s					
FOSV				AML	AML	
	comp=N,1336μm,0.3s					
FOSV				AML	AML	
	comp=E,184μm,0.2s					
FOSV				AML	AML	
	comp=N,277μm,0.3s					
CESX	**Cesi**	**0.49**	**236**	⇓P	Pg	10 16 46.7 +0.3
CESX				AML	AML	
	comp=N,612μm,1.6s					
CESX				AML	AML	
	comp=E,672μm,0.5s					
CESX				AML	AML	
	comp=N,181μm,0.3s					
CESX				AML	AML	
	comp=E,208μm,0.3s					
GIGS	**Gran Sasso**	**0.54**	**143**	P	Pg	10 16 47.5 +0.2
GIGS				AML	AML	
	comp=N,452μm,0.2s					
GIGS				AML	AML	
	comp=E,434μm,1.3s					
GIGS				AML	AML	
	comp=N,452μm,0.2s					
GIGS				AML	AML	
	comp=E,50μm,0.4s					
GIGS				AML	AML	
	comp=N,35μm,0.4s					
MURB	**Monte Urbino**	**0.58**	**310**	P	Pg	10 16 48.6 +0.5
MURB				S	Sb	10 16 59.0 +1.3
MURB				AML	AML	
	comp=E,1510μm,0.5s					
MURB				AML	AML	
	comp=N,1126μm,0.3s					
MURB				AML	AML	
	comp=E,1510μm,0.5s					
MURB				AML	AML	
	comp=N,1200μm,0.9s					
MURB				AML	AML	
	comp=N,366μm,0.2s					
MURB				AML	AML	
	comp=E,358μm,0.2s					
MURB				AML	AML	
	comp=N,337μm,0.2s					
MURB				AML	AML	
	comp=E,321μm,0.3s					
ARVD	**Arcevia**	**0.63**	**347**	⇑P	Pb	10 16 49.5 -0.5
ARVD				S	Sb	10 16 60.0 +1.1
ARVD				AML	AML	
	comp=E,506μm,0.4s					
ARVD				AML	AML	
	comp=N,257μm,0.5s					
ARVD				AML	AML	
	comp=E,96μm,0.1s					
ARVD				AML	AML	
	comp=N,74μm,0.2s					
ATFO	**Monte Foce - G**	**0.63**	**320**	P	Pg	10 16 49.4 +0.4
ATFO				AML	AML	
	comp=E,723μm,1.2s					
ATFO				AML	AML	
	comp=E,724μm,1.2s					
ATFO				AML	AML	
	comp=N,420μm,0.6s					
ATFO				AML	AML	
	comp=E,75μm,0.4s					
ATFO				AML	AML	
	comp=N,55μm,0.1s					
ATVO	**AVT- Monte Val**	**0.73**	**313**	⇓P	Pg	10 16 51.0 +0.2
ATVO				AML	AML	
	comp=E,228μm,1.6s					
ATVO				AML	AML	
	comp=N,354μm,0.5s					
ATVO				AML	AML	
	comp=N,354μm,0.5s					
ATVO				AML	AML	
	comp=N,53μm,0.4s					
ATVO				AML	AML	
	comp=E,65μm,0.3s					
PIEI	**Pieia**	**0.78**	**326**	S	Sn	10 17 05.0 -1.0
MPAG	**Monte Paganucc**	**0.79**	**340**	P	Pb	10 16 52.7 -0.1
MPAG				S	Sn	10 17 06.0 -0.2
MPAG				AML	AML	
	comp=E,418μm,0.4s					
MPAG				AML	AML	
	comp=N,292μm,0.9s					
MPAG				AML	AML	
	comp=E,418μm,0.4s					
MPAG				AML	AML	
	comp=N,292μm,0.9s					
MPAG				AML	AML	
	comp=E,75μm,0.2s					
MPAG				AML	AML	
	comp=N,57μm,0.4s					
SACS	**San Casciano d**	**0.90**	**268**	⇓P	Pb	10 16 54.9 +0.3
SACS				AML	AML	
	comp=E,137μm,0.6s					
SACS				AML	AML	
	comp=E,166μm,0.6s					
SACS				AML	AML	
	comp=N,217μm,0.7s					
CAFI	**Castiglion Fio**	**0.96**	**298**	⇑P	Pn	10 16 56.9 +0.4
CAFI				AML	AML	
	comp=N,132μm,0.7s					
CAFI				AML	AML	
	comp=E,180μm,0.8s					
LAV9	**Lanuvio**	**1.25**	**195**	S	Sn	10 17 20.0 +2.6
IMOL	**Imola, Italy**	**1.79**	**326**	S	Sg	10 17 36.0 +1.8
TREM	**Isole Tremiti**	**1.92**	**113**	S	Sg	10 17 38.0 -0.3
APRC	**Apricena**	**2.11**	**121**	S	Sb	10 17 42.0 +0.3

ROM 31 10:17:07.4±0.1, 42°.943N±0°.007×13°.220E±0°.006,
h9km, ML2.7/30, 21C-10D, Error ellipse: s-maj=0.8km
s-min=0.5km az=16.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.06**	**4**	⇑P	Pg	10 17 09.5	-0.1
T1256				S	Sg	10 17 10.8	-0.3
T1256				AML	AML		
	comp=E,16200μm,0.5s						
T1256				AML	AML		
	comp=E,16200μm,0.5s						
T1256				AML	AML		
	comp=N,21750μm,0.4s						
T1256				AML	AML		
	comp=N,21650μm,0.7s						
T1256				AML	AML		
	comp=N,21800μm,0.4s						
T1256				AML	AML		
	comp=E,16250μm,0.5s						
T1256				AML	AML		
	comp=E,15700μm,0.5s						
T1256				AML	AML		
	comp=N,21800μm,1.6s						
MMO1	**Montemonaco**	**0.09**	**119**	⇓P	Pg	10 17 10.0	+0.2
MMO1				S	Sg	10 17 11.8	+0.3
AM05	**Amandola Campo**	**0.10**	**71**	P	Pg	10 17 10.5	+0.6
AM05				S	Sg	10 17 12.6	+0.8
AM05				AML	AML		
	comp=E,3840μm,0.8s						
AM05				AML	AML		
	comp=E,3845μm,0.8s						
AM05				AML	AML		
	comp=N,5250μm,0.1s						
AM05				AML	AML		
	comp=E,15050μm,0.3s						
AM05				AML	AML		
	comp=N,1810μm,0.1s						
AM05				AML	AML		
	comp=N,1815μm,0.1s						
AM05				AML	AML		
	comp=E,15000μm,0.3s						
AM05				AML	AML		
	comp=N,5255μm,0.1s						
FDMO	**Fiordimonte**	**0.14**	**314**	⇑P	Pg	10 17 10.7	+0.3
FDMO				S	Sg	10 17 13.2	+0.7
FDMO				AML	AML		
	comp=E,3755μm,0.6s						
FDMO				AML	AML		
	comp=N,4245μm,1.2s						
FDMO				AML	AML		
	comp=N,4250μm,1.2s						
GUMA	**Gualdo di Mace**	**0.15**	**35**	⇑P	Pg	10 17 11.6	+0.9
GUMA				S	Sg	10 17 14.7	+1.9
GUMA				AML	AML		
	comp=E,15200μm,0.6s						
GUMA				AML	AML		
	comp=N,15750μm,0.7s						
GUMA				AML	AML		
	comp=N,15700μm,0.7s						
GUMA				AML	AML		
	comp=E,19600μm,0.6s						
T1216	**Preci, Frazion**	**0.16**	**250**	⇑P	Pg	10 17 11.2	+0.4
T1216				S	Sg	10 17 15.0	+1.9
T1216				AML	AML		
	comp=E,5855μm,0.3s						
T1216				AML	AML		
	comp=N,5985μm,1.1s						
T1216				AML	AML		
	comp=E,5860μm,0.3s						
T1216				AML	AML		
	comp=N,5995μm,1.1s						
T1216				AML	AML		
	comp=N,5980μm,1.1s						
T1216				AML	AML		
	comp=E,5850μm,0.3s						
T1216				AML	AML		
	comp=N,5980μm,0.9s						
T1216				AML	AML		
	comp=E,5850μm,1.7s						
T1241	**Roccafluvione,**	**0.18**	**119**	⇓P	Pg	10 17 11.8	+0.6
T1241				S	Sg	10 17 14.9	+1.2
T1241				AML	AML		
	comp=E,10095μm,0.5s						
T1241				AML	AML		
	comp=N,5585μm,0.8s						
T1241				AML	AML		
	comp=E,10235μm,0.5s						
T1241				AML	AML		
	comp=N,5075μm,0.8s						
T1241				AML	AML		
	comp=E,10080μm,0.6s						
T1241				AML	AML		
	comp=N,5580μm,0.8s						
T1241				AML	AML		
	comp=E,10200μm,0.5s						
T1241				AML	AML		
	comp=N,5070μm,0.8s						
T1241				AML	AML		
	comp=E,10085μm,0.6s						
T1241				AML	AML		
	comp=E,10205μm,0.5s						
T1241				AML	AML		
	comp=N,5585μm,0.8s						
T1241				AML	AML		
	comp=N,5585μm,1.2s						
T1241				AML	AML		
	comp=N,5070μm,1.2s						
T1241				AML	AML		
	comp=E,10240μm,0.5s						
T1215	**Vallo di Nera,**	**0.29**	**241**	⇑P	Pg	10 17 13.7	+0.5
T1215				AML	AML		
	comp=E,830μm,1.2s						
T1215				AML	AML		
	comp=N,852μm,1.4s						
T1215				AML	AML		
	comp=N,852μm,1.4s						
T1215				AML	AML		
	comp=E,828μm,1.2s						
T1215				AML	AML		
	comp=N,852μm,0.6s						
T1243	**Rocca Santa Ma**	**0.30**	**146**	P	Pg	10 17 13.8	+0.4
T1243				S	Sb	10 17 19.1	-1.0
T1217	**Poggiodomo (PG**	**0.31**	**223**	⇑P	Pg	10 17 14.1	+0.5
T1217				S	Sb	10 17 19.7	-0.8
OFFI	**Offida**	**0.34**	**91**	⇑P	Pb	10 17 16.0	+0.3
OFFI				AML	AML		
	comp=E,1965μm,0.7s						
OFFI				AML	AML		
	comp=N,3990μm,0.6s						
OFFI				AML	AML		
	comp=N,3990μm,1.4s						
LNSS	**Leonessa**	**0.36**	**201**	⇓P	Pg	10 17 15.0	+0.4
LNSS				S	Sb	10 17 21.4	-0.5
LNSS				AML	AML		
	comp=N,3510μm,0.4s						
LNSS				AML	AML		
	comp=E,2060μm,0.2s						
LNSS				AML	AML		
	comp=N,3515μm,0.4s						
EL6	**Elcito**	**0.40**	**347**	P	Pg	10 17 15.9	+0.7
ASSB	**Assisi San Ben**	**0.42**	**284**	⇑P	Pg	10 17 16.0	+0.3
ASSB				AML	AML		
	comp=N,1132μm,0.6s						
ASSB				AML	AML		
	comp=E,925μm,0.8s						
ASSB				AML	AML		
	comp=N,1132μm,1.4s						
TERO	**Teramo**	**0.43**	**138**	P	Pg	10 17 16.0	+0.2
TERO				S	Sb	10 17 23.3	-0.4
TERO				AML	AML		
	comp=E,1160μm,1.3s						
TERO				AML	AML		
	comp=N,1555μm,0.3s						
TERO				AML	AML		
	comp=E,1160μm,0.7s						
TERO				AML	AML		
	comp=N,1555μm,1.7s						
CAMP	**Campotosto**	**0.43**	**161**	⇑P	Pg	10 17 16.1	+0.3
CAMP				S	Sb	10 17 22.9	-0.9
CAMP				AML	AML		
	comp=E,1820μm,0.3s						
CAMP				AML	AML		
	comp=N,1395μm,0.3s						
RM33	**Pellescritta (**	**0.43**	**181**	⇑P	Pg	10 17 16.2	+0.3
RM33				S	Sb	10 17 23.6	-0.3
RM33				AML	AML		
	comp=E,1320μm,0.3s						
RM33				AML	AML		
	comp=E,1315μm,0.3s						
RM33				AML	AML		
	comp=N,1510μm,0.3s						
RM33				AML	AML		
	comp=E,1270μm,1.1s						
RM33				AML	AML		
	comp=E,1275μm,1.1s						
RM33				AML	AML		
	comp=N,1510μm,0.3s						
RM33				AML	AML		
	comp=N,1455μm,0.3s						
RM33				AML	AML		
	comp=E,1275μm,0.9s						
RM33				AML	AML		
	comp=N,1510μm,1.7s						
RM33				AML	AML		
	comp=N,1455μm,1.7s						
FOSV	**Fossato di Vic**	**0.49**	**316**	⇑P	Pg	10 17 17.2	+0.3
FOSV				S	Sb	10 17 26.0	+0.6
FOSV				AML	AML		
	comp=N,1334μm,0.3s						
FOSV				AML	AML		
	comp=E,806μm,0.7s						
FOSV				AML	AML		
	comp=N,1336μm,0.3s						
FOSV				AML	AML		
	comp=N,1335μm,0.3s						
FOSV				AML	AML		
	comp=E,806μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.49**	**300**	⇑P	Pg	10 17 17.3	+0.4
ATCC				AML	AML		
	comp=N,976μm,0.4s						
ATCC				AML	AML		
	comp=E,1075μm,0.7s						
ATCC				AML	AML		
	comp=N,978μm,0.4s						
ATCC				AML	AML		
	comp=E,1075μm,1.3s						
ATCC				AML	AML		
	comp=N,977μm,0.4s						
T1211	**Morro Reatino**	**0.49**	**213**	⇓P	Pg	10 17 17.2	+0.3
T1211				S	Sb	10 17 25.5	-0.1
T1211				AML	AML		
	comp=E,859μm,0.2s						
T1211				AML	AML		
	comp=N,1502μm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**105**	⇓P	Pb	10 17 19.5	+0.6
TRTR				AML	AML		
	comp=N,2870μm,0.4s						
TRTR				AML	AML		
	comp=E,4365μm,0.3s						
GIGS	**Gran Sasso**	**0.56**	**152**	⇑P	Pg	10 17 18.2	0.0
GIGS				AML	AML		
	comp=N,452μm,0.2s						
GIGS				AML	AML		
	comp=E,434μm,1.3s						
GIGS				AML	AML		
	comp=N,452μm,0.2s						
GIGS				AML	AML		
	comp=E,434μm,0.7s						
CESX	**Cesi**	**0.58**	**235**	⇑P	Pg	10 17 18.5	0.0
CESX				AML	AML		
	comp=N,612μm,1.6s						
CESX				AML	AML		
	comp=N,612μm,0.4s						

CESX				AML	AML	
	comp=E,672μm,0.5s					
ARVD	**Arcevia**	**0.59 340**	⇑P		Pg	10 17 19.3 +0.4
ARVD			S		Sb	10 17 30.0 +1.5
ARVD				AML	AML	
	comp=E,506μm,0.4s					
ARVD				AML	AML	
	comp=N,257μm,0.5s					
ARVD				AML	AML	
	comp=E,506μm,1.6s					
ARVD				AML	AML	
	comp=N,257μm,1.5s					
MURB	**Monte Urbino**	**0.60 302**	⇓P		Pg	10 17 19.6 +0.5
MURB			S		Sn	10 17 31.0 -1.2
MURB				AML	AML	
	comp=E,1510μm,0.5s					
MURB				AML	AML	
	comp=N,1200μm,0.9s					
ATFO	**Monte Foce - G**	**0.64 312**	P		Pb	10 17 20.4 -0.4
ATFO				AML	AML	
	comp=E,723μm,1.2s					
ATFO				AML	AML	
	comp=N,420μm,0.6s					
ATFO				AML	AML	
	comp=E,724μm,1.2s					
ATFO				AML	AML	
	comp=E,724μm,0.8s					
ATFO				AML	AML	
	comp=N,420μm,0.6s					
FIAM	**Fiamignano**	**0.68 186**	S		Sb	10 17 31.0 0.0
ATTE	**AVT- Monte Tez**	**0.68 292**	⇑P		Pn	10 17 23.5 +0.2
FAGN	**Fagnano**	**0.73 158**	⇑P		Pb	10 17 22.4 +0.1
FAGN				AML	AML	
	comp=E,963μm,1.3s					
FAGN				AML	AML	
	comp=E,964μm,1.3s					
FAGN				AML	AML	
	comp=N,850μm,0.4s					
FAGN				AML	AML	
	comp=E,964μm,0.7s					
ATVO	**AVT- Monte Val**	**0.74 307**	⇑P		Pg	10 17 21.6 0.0
ATVO				AML	AML	
	comp=N,354μm,0.5s					
ATVO				AML	AML	
	comp=E,228μm,1.6s					
ATVO				AML	AML	
	comp=N,354μm,0.5s					
ATVO				AML	AML	
	comp=E,228μm,0.4s					
MPAG	**Monte Paganucc**	**0.76 334**	P		Pb	10 17 22.6 -0.3
MPAG			S		Sn	10 17 36.0 -0.2
MPAG				AML	AML	
	comp=N,292μm,0.9s					
MPAG				AML	AML	
	comp=E,418μm,0.4s					
MPAG				AML	AML	
	comp=N,292μm,0.9s					
MPAG				AML	AML	
	comp=E,418μm,0.4s					
MPAG				AML	AML	
	comp=E,418μm,1.6s					
PIEI	**Pieia**	**0.78 320**	⇓P		Pg	10 17 22.4 0.0
PIEI			S		Sn	10 17 36.0 -0.4
PIEI				AML	AML	
	comp=N,279μm,1.5s					
PIEI				AML	AML	
	comp=E,264μm,0.8s					
PIEI				AML	AML	
	comp=E,264μm,1.2s					
FSSB	**Fossombrone**	**0.81 337**	⇓P		Pb	10 17 23.5 -0.3
FSSB			S		Sn	10 17 38.0 +0.6
FSSB				AML	AML	
	comp=N,1500μm,0.4s					
FSSB				AML	AML	
	comp=E,850μm,0.3s					
T0110	**Collepietro**	**0.83 150**	⇑P		Pg	10 17 23.1 -0.2
T0110				AML	AML	
	comp=N,680μm,0.5s					
T0110				AML	AML	
	comp=E,645μm,0.5s					
T0110				AML	AML	
	comp=N,679μm,0.5s					
SACS	**San Casciano d**	**0.97 265**	⇓P		Pn	10 17 27.8 +0.6
SACS				AML	AML	
	comp=E,166μm,0.6s					
SACS				AML	AML	
	comp=N,217μm,0.7s					
SACS				AML	AML	
	comp=E,166μm,1.4s					
CAFI	**Castiglion Fio**	**0.99 293**	⇓P		Pn	10 17 28.1 +0.5
CAFI				AML	AML	
	comp=E,180μm,0.8s					
CAFI				AML	AML	
	comp=N,132μm,0.7s					
VIVA	**Pratoni del Vi**	**1.24 196**	⇑P		Pn	10 17 29.9 -1.0
VIVA				AML	AML	
	comp=E,462μm,1.5s					
VIVA				AML	AML	
	comp=N,526μm,0.4s					
VIVA				AML	AML	
	comp=E,462μm,0.5s					
MIDA	**Miranda**	**1.51 149**	⇑P		Pg	10 17 36.9 +0.6

*IDC **31** 10:18:10.8±0.9, 5°.11S×119°.16E, h0km, mb3.7/7, mbtmp3.7/7, MS3.2/8, Error ellipse: s-maj=19.0km s-min=9.4km az=174.0*
*DJA **31** 10:18:13.6±0.2, 5°S±1°×12°0E±°, h10km, M4.4/19, mb4.7/12, mB4.7/6, MLv4.5/19, Mw(mB)3.9/6*
ISC 31 10:18:13.9±1.2, 4.69S±0°.03×120.01E±0°.05, h14km±8km, n37, σ1s52/38, mb3.8/7, MS3.1/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNSI	**Bone**	**0.30**	**18**	**P**	**Pg**	**10 18 20.3**	**+0.1**
KAPI	**Kappang**	**0.41**	**219**	**Pg**	**Pb**	**10 18 23.2**	**+0.2**
	1μm,0.3s,baz=48,slow=7.4,SNR=892						
KAPI				Lg	Lg	10 18 29.8	
	2μm,0.3s,baz=350,slow=24,SNR=27						
KAPI				LR	LR	10 18 29.8	
	comp=Z,206nm,18.5s,baz=166,slow=32						
KAPI	**Kappang**	**0.41**	**219**	**P**	**Pb**	**10 18 23.1**	**+0.1**
KAPI				S	**Sb**	**10 18 30.0**	**+0.9**
BKSI	**Bulukumba**	**0.64**	**170**	**P**	**Pg**	**10 18 25.8**	**-0.6**
BKSI				S	**Sg**	**10 18 35.2**	**+0.4**
SPSI	**Sidrap Palu**	**0.76**	**342**	**P**	**Pg**	**10 18 27.7**	**-1.0**
SPSI				S	**Sb**	**10 18 39.1**	**-0.1**
BSSI	**Bau Bau, Buton**	**1.52**	**162**	**P**	**Pn**	**10 18 39.3**	**-1.4**
PMSI	**Majene**	**1.61**	**317**	**P**	**Pn**	**10 18 41.5**	**-0.5**
KKSI	**Kolaka, Sulawe**	**1.71**	**73**	**P**	**Pn**	**10 18 43.1**	**-0.3**
KKSI				S	**Sn**	**10 19 05.8**	**+0.7**
BBSI	**Bau Bau**	**2.67**	**107**	**P**	**Pn**	**10 18 56.4**	**-0.1**
BBSI				S	**Sn**	**10 19 28.2**	**-0.5**
APSI	**Ampana**	**4.10**	**24**	**P**	**Pn**	**10 19 15.8**	**-0.4**
MMRI	**Maumere**	**4.50**	**151**	**P**	**Pn**	**10 19 20.6**	**-1.1**
LUWI	**Luwuk**	**4.55**	**37**	**P**	**Pn**	**10 19 21.9**	**-0.6**
LUWI				S	**Sn**	**10 20 13.5**	**-1.7**
PLAI	**Plampang**	**4.67**	**208**	**P**	**Pn**	**10 19 24.5**	**+0.4**
MPSI	**Mapaga**	**5.00**	**359**	**P**	**Pn**	**10 19 29.1**	**+0.6**
	0.1nm636nm22nm,0.5s						
TWSI	**Taliwang, Sumb**	**5.08**	**218**	**P**	**Pn**	**10 19 30.3**	**+0.6**
	0.5nm1μm46nm,0.6s						
BBKI	**Banjar Baru**	**5.30**	**283**	**P**	**Pn**	**10 19 34.7**	**+2.0**
	1.0nm65nm,0.5s						
MRSI	**Marisa**	**5.48**	**21**	**P**	**Pn**	**10 19 34.9**	**-0.4**
	0.4nm807nm71nm,0.6s						
SRBI	**Singaraja**	**5.84**	**234**	**P**	**Pn**	**10 19 40.6**	**+0.5**
	0.3nm58nm,0.5s						
GTOI	**Gorontalo**	**6.08**	**30**	**P**	**Pn**	**10 19 43.0**	**-0.5**
	0.1nm282nm32nm,0.6s						
RTBI	**Rangdo, Negare**	**6.27**	**233**	**P**	**Pn**	**10 19 44.8**	**-1.4**
	0.5nm112nm,0.8s						
KMMI	**Kalianget**	**6.45**	**248**	**P**	**Pn**	**10 19 50.9**	**+2.3**
	0.2nm28nm,0.7s						
SANI	**Sanana**	**6.52**	**66**	**P**	**Pn**	**10 19 50.3**	**+0.8**
	0.1nm488nm16nm,0.9s						
BATI	**Baumata**	**6.57**	**147**	LR	LR	10 22 39.7	
	comp=Z,372nm,18.9s,baz=290,slow=40						
BATI	**Baumata**	**6.57**	**147**	P	**Pn**	**10 19 53.5**	**+3.3**
	0.2nm45nm,0.6s						
SOEI	**Soe**	**6.57**	**140**	P	**Pn**	**10 19 54.1**	**+3.8**
	0.3nm95nm,0.8s						
LEM	**Lembang**	**12.51**	**260**	LR	LR	10 25 38.7	
	comp=Z,90nm,21.2s,baz=100,slow=39						
WRA	**Warramunga Arr**	**20.61**	**139**	P	**P**	**10 22 50.4**	**-2.6**
	3.1nm,0.8s,baz=316,slow=12,SNR=20						
WRA				LR	LR	10 31 47.7	
	comp=Z,58nm,19.5s,baz=84,slow=39						
ASAR	**Alice Springs**	**23.14**	**146**	P	**P**	**10 23 18.8**	**-1.3**
	1.2nm,0.7s,baz=338,slow=12,SNR=27						
ASAR				LR	LR	10 32 33.0	
	comp=Z,95nm,19.2s,baz=334,slow=37						
	1.2nm,0.7s						
PMG	**Port Moresby**	**27.34**	**101**	LR	LR	10 36 36.7	
	comp=Z,32nm,18.7s,baz=64,slow=39						
CTA	**Charters Tower**	**29.78**	**123**	LR	LR	10 38 02.7	
	comp=Z,25nm,18.9s,baz=270,slow=39						
CMAR	**Chiang Mai Arr**	**30.99**	**318**	LR	LR	10 37 50.9	
	comp=Z,46nm,18.9s,baz=140,slow=38						
STKA	**Stephens Creek**	**33.78**	**146**	P	**P**	**10 24 56.5**	**+0.9**
	1.3nm,0.6s,baz=329,slow=15,SNR=4.6						
STKA				LR	LR	10 39 31.4	
	comp=Z,63nm,19.9s,baz=22,slow=38						
	1.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**49.85**	**11**	P	**P**	**10 27 09.6**	**+3.0**
	0.8nm,0.5s,baz=193,slow=7.4,SNR=4.6						
	0.8nm,0.5s						
SONM	**Songino Array**	**53.66**	**349**	P	**P**	**10 27 37.1**	**+1.9**
	0.7nm,0.8s,baz=174,slow=7.4,SNR=4.0						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**61.14**	**331**	P	**P**	**10 28 26.4**	**-1.6**
	0.5nm,0.8s,baz=141,slow=7.4,SNR=2.3						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**65.42**	**338**	P	**P**	**10 28 54.8**	**-1.3**
	0.3nm,0.4s,baz=101,slow=7.5,SNR=2.4						
	0.3nm,0.4s						
VNDA	**Vanda**	**76.06**	**171**	P	**P**	**10 29 58.5**	**-2.0**
	0.8nm,0.6s,baz=319,slow=6.8,SNR=14						
	0.8nm,0.6s						

ROM 31 10:18:38.4±0.1, 42°.903N±0°.004×13°.210E±0°.005, h7km, ML3.0/31, 16C-19D, Error ellipse: s-maj=0.4km s-min=0.3km az=282.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMO1	**Montemonaco**	**0.09**	**93**	⇑P	Pg	10 18 40.7	+0.2
T1256	**Bolognola (MC)**	**0.10**	**7**	⇑P	Pg	10 18 40.9	0.0
T1256				AML	AML		
	comp=N,28350μm,0.5s						
T1256				AML	AML		
	comp=E,34100μm,0.4s						
T1256				AML	AML		
	comp=E,33800μm,0.5s						
T1256				AML	AML		
	comp=N,27100μm,0.5s						
T1256				AML	AML		
	comp=E,33750μm,0.4s						
AM05	**Amandola Campo**	**0.13**	**55**	⇑P	Pg	10 18 41.6	+0.4
AM05				S	Sg	10 18 43.9	+0.8
AM05				AML	AML		
	comp=E,5920μm,1.6s						
AM05				AML	AML		
	comp=N,7420μm,0.1s						
AM05				AML	AML		
	comp=N,1475μm,1.0s						
AM05				AML	AML		
	comp=N,1470μm,1.0s						
AM05				AML	AML		
	comp=E,26600μm,0.2s						
AM05				AML	AML		
	comp=E,5915μm,1.6s						
AM05				AML	AML		
	comp=E,26600μm,1.8s						
AM05				AML	AML		
	comp=E,5915μm,0.4s						
T1216	**Preci, Frazion**	**0.14**	**265**	⇓P	Pg	10 18 42.2	+0.9
T1216				AML	AML		
	comp=E,46350μm,0.3s						
T1216				AML	AML		
	comp=N,23800μm,0.3s						
T1216				AML	AML		
	comp=E,46350μm,0.3s						
T1216				AML	AML		
	comp=N,23850μm,0.3s						
FDMO	**Fiordimonte**	**0.16**	**326**	P	Pg	10 18 40.6	-1.1
FDMO				S	Sg	10 18 44.8	+0.8
T1241	**Roccafluvione,**	**0.17**	**106**	⇑P	Pg	10 18 42.5	+0.6
T1241				S	Sg	10 18 45.5	+1.2
T1241				AML	AML		
	comp=N,9000μm,0.8s						
T1241				AML	AML		
	comp=N,8960μm,0.8s						
T1241				AML	AML		
	comp=N,8990μm,0.8s						
T1241				AML	AML		
	comp=E,12700μm,0.5s						
GUMA	**Gualdo di Mace**	**0.18**	**30**	⇑P	Pg	10 18 42.8	+0.7
GUMA				S	Sg	10 18 46.2	+1.5
GUMA				AML	AML		
	comp=N,27400μm,0.6s						
GUMA				AML	AML		
	comp=E,26150μm,0.8s						
GUMA				AML	AML		
	comp=N,27350μm,0.6s						
GUMA				AML	AML		
	comp=N,29550μm,0.7s						
GUMA				AML	AML		
	comp=E,32750μm,0.7s						
GUMA				AML	AML		
	comp=E,26200μm,0.8s						
GUMA				AML	AML		
	comp=N,27400μm,1.4s						
GUMA				AML	AML		
	comp=N,29550μm,1.3s						
T1215	**Vallo di Nera,**	**0.27**	**248**	⇓P	Pg	10 18 44.6	+0.9
T1215				S	Sb	10 18 49.5	-0.9
T1215				AML	AML		
	comp=E,3105μm,0.4s						
T1215				AML	AML		
	comp=N,2170μm,0.9s						
T1215				AML	AML		
	comp=E,3210μm,0.4s						
T1215				AML	AML		
	comp=E,3100μm,0.4s						
T1215				AML	AML		
	comp=E,3215μm,0.4s						
T1215				AML	AML		
	comp=N,2060μm,0.8s						
T1215				AML	AML		
	comp=E,3105μm,0.4s						
T1215				AML	AML		
	comp=N,2170μm,0.9s						
T1215				AML	AML		
	comp=E,3210μm,0.4s						
T1215				AML	AML		
	comp=N,2055μm,0.8s						
T1215				AML	AML		
	comp=N,2175μm,0.9s						
T1215				AML	AML		
	comp=N,2175μm,1.1s						
T1243	**Rocca Santa Ma**	**0.27**	**140**	⇓P	Pg	10 18 44.5	+0.7
T1243				S	Sb	10 18 49.0	-1.4
T1217	**Poggiodomo (PG**	**0.28**	**227**	⇓P	Pg	10 18 44.6	+0.7
T1217				S	Sb	10 18 50.0	-0.7
T1217				AML	AML		
	comp=E,2930μm,1.3s						
T1217				AML	AML		
	comp=N,3430μm,1.2s						
T1217				AML	AML		
	comp=N,3590μm,1.1s						
T1217				AML	AML		
	comp=E,2930μm,1.4s						
T1217				AML	AML		
	comp=E,2815μm,1.4s						
T1217				AML	AML		
	comp=N,3580μm,1.1s						
T1217				AML	AML		
	comp=E,2820μm,1.3s						
T1217				AML	AML		
	comp=N,3590μm,0.9s						
T1217				AML	AML		
	comp=N,3430μm,0.8s						
SMA1	**SAN MARTINO**	**0.29**	**161**	⇑P	Pg	10 18 44.1	0.0
SMA1				S	Sb	10 18 49.8	-1.1
SMA1				AML	AML		
	comp=N,4890μm,0.8s						
SMA1				AML	AML		
	comp=E,5270μm,0.4s						
SMA1				AML	AML		
	comp=N,4895μm,0.8s						
MNTP	**Montappone**	**0.30**	**39**	⇓P	Pb	10 18 45.4	-0.7
MNTP				S	Sb	10 18 51.1	-0.1
MNTP				AML	AML		
	comp=E,8210μm,1.6s						
MNTP				AML	AML		
	comp=N,7250μm,0.3s						
MNTP				AML	AML		
	comp=E,8210μm,0.4s						
LNSS	**Leonessa**	**0.33**	**203**	⇓P	Pg	10 18 44.8	+0.1
LNSS				S	Sb	10 18 51.7	-0.3
LNSS				AML	AML		
	comp=N,14250μm,0.2s						
LNSS				AML	AML		
	comp=E,4190μm,0.5s						
OFFI	**Offida**	**0.35**	**85**	⇑P	Pb	10 18 46.6	-0.4
OFFI				AML	AML		
	comp=E,5670μm,0.3s						
OFFI				AML	AML		
	comp=N,6205μm,0.7s						
RM33	**Pellescritta (**	**0.39**	**179**	⇓P	Pg	10 18 46.8	+0.7
RM33				S	Sb	10 18 53.6	-0.4
RM33				AML	AML		
	comp=E,2245μm,0.4s						
RM33				AML	AML		
	comp=N,2370μm,0.2s						
RM33				AML	AML		
	comp=N,2420μm,0.2s						
RM33				AML	AML		
	comp=N,2425μm,0.2s						
RM33				AML	AML		
	comp=E,2250μm,0.4s						
RM33				AML	AML		
	comp=E,2100μm,0.4s						
RM33				AML	AML		
	comp=N,2375μm,0.2s						
CAMP	**Campotosto**	**0.40**	**158**	⇓P	Pg	10 18 46.5	+0.4
CAMP				S	Sb	10 18 53.4	-0.6
CAMP				AML	AML		
	comp=E,3540μm,0.3s						
CAMP				AML	AML		
	comp=N,2250μm,0.3s						
TERO	**Teramo**	**0.40**	**134**	⇓P	Pg	10 18 46.8	+0.5
TERO				S	Sb	10 18 53.4	-0.8
TERO				AML	AML		
	comp=N,5875μm,0.4s						
TERO				AML	AML		
	comp=E,5440μm,0.3s						
TERO				AML	AML		
	comp=E,5185μm,0.3s						
TERO				AML	AML		
	comp=N,5870μm,0.4s						
TERO				AML	AML		
	comp=N,6055μm,0.4s						
ASSB	**Assisi San Ben**	**0.43**	**289**	⇑P	Pg	10 18 47.1	+0.4
ASSB				S	Sb	10 18 54.6	-0.3
ASSB				AML	AML		
	comp=N,2860μm,0.6s						
ASSB				AML	AML		
	comp=E,3650μm,0.4s						
EL6	**Elcito**	**0.43**	**350**	⇓P	Pg	10 18 47.1	+0.3
EL6				S	Sb	10 18 54.8	-0.3
T1211	**Morro Reatino**	**0.45**	**215**	⇑P	Pg	10 18 47.5	+0.4
T1211				S	Sb	10 18 56.1	+0.4
T1211				AML	AML		
	comp=E,1495μm,0.7s						
T1211				AML	AML		
	comp=E,1500μm,0.7s						
T1211				AML	AML		
	comp=N,3770μm,0.2s						
T1211				AML	AML		
	comp=E,1530μm,0.9s						
T1211				AML	AML		
	comp=N,3770μm,0.2s						
T1211				AML	AML		
	comp=N,3765μm,0.2s						
T1211				AML	AML		
	comp=E,1536μm,0.9s						
T1211				AML	AML		
	comp=N,3765μm,0.2s						
T1211				AML	AML		
	comp=E,1495μm,1.3s						
ARRO	**Arrone**	**0.46**	**225**	P	Pb	10 18 48.0	-0.7
ARRO				AML	AML		
	comp=E,1050μm,0.6s						
ARRO				AML	AML		
	comp=N,1061μm,1.2s						
ARRO				AML	AML		
	comp=N,1060μm,1.2s						
ARRO				AML	AML		
	comp=N,1061μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.47**	**172**	⇓P	Pg	10 18 48.0	+0.6
T1247				S	Sb	10 18 56.0	0.0
T1247				AML	AML		
	comp=E,2425μm,1.3s						
T1247				AML	AML		
	comp=N,2625μm,0.4s						
T1247				AML	AML		
	comp=E,2425μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.50**	**304**	⇑P	Pg	10 18 48.5	+0.4
FOSV	**Fossato di Vic**	**0.51**	**320**	⇑P	Pg	10 18 48.5	+0.3
FOSV				S	Sb	10 18 57.0	-0.3
FOSV				AML	AML		
	comp=E,1540μm,0.5s						
FOSV				AML	AML		
	comp=E,1535μm,0.5s						
FOSV				AML	AML		
	comp=N,3385μm,0.4s						
GIGS	**Gran Sasso**	**0.53**	**150**	⇑P	Pg	10 18 49.0	+0.5
GIGS				AML	AML		
	comp=N,848μm,0.2s						
GIGS				AML	AML		
	comp=E,1655μm,0.2s						
TRTR	**Tortoreto Alta**	**0.53**	**100**	⇓P	Pb	10 18 50.3	+0.4
TRTR				AML	AML		
	comp=E,6730μm,0.4s						
TRTR				AML	AML		
	comp=N,9385μm,0.3s						
CESX	**Cesi**	**0.55**	**238**	⇑P	Pg	10 18 49.4	+0.5
CESX				AML	AML		
	comp=E,1200μm,1.3s						
CESX				AML	AML		
	comp=N,1500μm,0.3s						
MURB	**Monte Urbino**	**0.62**	**306**	⇓P	Pg	10 18 50.6	+0.3
MURB				AML	AML		
	comp=E,4110μm,0.3s						
MURB				AML	AML		
	comp=E,4105μm,0.3s						
MURB				AML	AML		
	comp=E,4625μm,0.3s						
MURB				AML	AML		
	comp=N,3795μm,1.6s						
MURB				AML	AML		
	comp=N,3715μm,0.9s						
MURB				AML	AML		
	comp=N,3795μm,0.4s						
FIAM	**Fiamignano**	**0.64**	**186**	⇓P	Pg	10 18 50.8	+0.2
FIAM				AML	AML		
	comp=N,634μm,0.8s						
FIAM				AML	AML		
	comp=E,791μm,1.6s						
FIAM				AML	AML		
	comp=N,634μm,1.2s						
FIAM				AML	AML		
	comp=E,791μm,0.4s						
VCEL	**Villa Celiera**	**0.69**	**137**	⇓P	Pb	10 18 52.2	-0.5
VCEL				AML	AML		
	comp=E,1720μm,0.9s						
VCEL				AML	AML		
	comp=N,1905μm,0.4s						
FAGN	**Fagnano**	**0.69**	**156**	⇑P	Pg	10 18 52.2	+0.4
FAGN				AML	AML		
	comp=N,2365μm,0.4s						
FAGN				AML	AML		
	comp=E,2360μm,0.4s						
ATVO	**AVT- Monte Val**	**0.76**	**309**	P	Pg	10 18 52.8	-0.2
ATVO				AML	AML		
	comp=E,733μm,1.4s						
ATVO				AML	AML		
	comp=N,889μm,0.4s						
ATVO				AML	AML		
	comp=N,888μm,0.4s						
ATVO				AML	AML		
	comp=E,732μm,1.4s						
ATVO				AML	AML		
	comp=N,888μm,1.6s						
ATVO				AML	AML		
	comp=E,732μm,0.6s						
MPAG	**Monte Paganucc**	**0.80**	**336**	⇓P	Pb	10 18 54.2	-0.3
MPAG				AML	AML		

	comp=E,822μm,0.4s					
MPAG				AML	AML	
	comp=N,635μm,1.0s					
MPAG				AML	AML	
	comp=E,823μm,0.4s					
MPAG				AML	AML	
	comp=N,634μm,1.0s					
T0110	**Collepietro**	**0.80**	**148**	⇓P	Pg	10 18 53.5 -0.1
PIEI	**Pieia**	**0.80**	**322**	P	Pg	10 18 53.9 +0.1
PIEI				AML	AML	
	comp=E,764μm,0.7s					
PIEI				AML	AML	
	comp=N,569μm,1.4s					
PIEI				AML	AML	
	comp=E,764μm,1.3s					
PIEI				AML	AML	
	comp=N,569μm,0.6s					
ATPI	**Pietralunga -**	**0.81**	**313**	⇓P	Pg	10 18 54.1 +0.2
ATPI				AML	AML	
	comp=N,603μm,0.3s					
ATPI				AML	AML	
	comp=N,602μm,0.3s					
ATPI				AML	AML	
	comp=E,662μm,0.6s					
MGAB	**Montegabbione**	**0.81**	**271**	⇑P	Pb	10 18 54.5 -0.2
MGAB				AML	AML	
	comp=E,1275μm,0.7s					
MGAB				AML	AML	
	comp=E,994μm,1.4s					
MGAB				AML	AML	
	comp=N,1505μm,1.1s					
MGAB				AML	AML	
	comp=N,1430μm,1.1s					
MGAB				AML	AML	
	comp=E,992μm,1.4s					
MGAB				AML	AML	
	comp=N,1430μm,0.9s					
MGAB				AML	AML	
	comp=N,1505μm,0.9s					
FSSB	**Fossombrone**	**0.85**	**338**	⇓P	Pg	10 18 53.6 -1.1
FSSB				AML	AML	
	comp=E,2605μm,0.3s					
FSSB				AML	AML	
	comp=N,3200μm,0.4s					
BADI	**Badiali**	**0.93**	**311**	⇑P	Pg	10 18 56.4 +0.1
CAFI	**Castiglion Fio**	**1.00**	**295**	AML	AML	
	comp=N,288μm,1.3s					
CAFI				AML	AML	
	comp=E,334μm,1.4s					
MCIV	**Monte Civitell**	**1.13**	**264**	AML	AML	
	comp=E,191μm,0.5s					
MCIV				AML	AML	
	comp=N,198μm,0.7s					
VIVA	**Pratoni del Vi**	**1.20**	**196**	AML	AML	
	comp=E,812μm,1.3s					
VIVA				AML	AML	
	comp=N,978μm,0.4s					
PTRJ	**Pietraroja**	**1.82**	**147**	AML	AML	
	comp=N,1452μm,0.2s					
PTRJ				AML	AML	
	comp=E,11850μm,1.6s					
ABTA	**Abfaltersbach**	**3.88**	**353**	*i* Pn	Pn	10 19 40.0 +1.7
	comp=E,6.3nm,0.4s					
CONA	**Conrad Observa**	**5.36**	**19**	*i* Pn	Pn	10 20 00.3 +1.5
	comp=E,0.3nm,0.2s					

ROM 31 10:19:24.1±0.0, 42°.825N±0°.002×13°.164E±0°.004, h11km, ML2.7/6, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=275.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.12**	**302**	P	Pg	10 19 27.5	+0.3
T1216				S	Sg	10 19 29.8	+0.4
T1216				AML	AML		
	comp=E,4305μm,0.3s						
T1216				AML	AML		
	comp=N,5800μm,0.5s						
T1216				AML	AML		
	comp=E,4300μm,0.3s						
T1216				AML	AML		
	comp=N,5805μm,0.5s						
T1216				AML	AML		
	comp=N,5194μm,0.4s						
T1216				AML	AML		
	comp=E,4296μm,0.3s						
MMO1	**Montemonaco**	**0.14**	**58**	P	Pg	10 19 27.9	+0.5
MMO1				S	Sg	10 19 30.5	+0.7
T1201	**Domo (RI)**	**0.18**	**159**	P	Pb	10 19 28.9	-0.6
T1201				S	Sg	10 19 32.4	+1.6
T1204	**Amatrice, Fraz**	**0.19**	**143**	P	Pg	10 19 28.7	+0.5
T1204				S	Sg	10 19 31.9	+0.9
T1204				AML	AML		
	comp=N,2295μm,1.0s						
T1204				AML	AML		
	comp=E,4855μm,1.2s						
T1204				AML	AML		
	comp=N,2300μm,1.0s						
T1204				AML	AML		
	comp=E,4835μm,1.2s						
T1204				AML	AML		
	comp=N,2305μm,1.0s						
T1204				AML	AML		
	comp=N,2170μm,0.2s						
T1204				AML	AML		
	comp=E,4325μm,0.2s						
T1256	**Bolognola (MC)**	**0.19**	**14**	P	Pg	10 19 28.6	+0.4
T1256				S	Sg	10 19 32.1	+1.0
T1256				AML	AML		
	comp=E,4840μm,0.4s						
T1256				AML	AML		
	comp=E,4905μm,0.4s						
T1256				AML	AML		
	comp=N,4690μm,0.3s						
T1256				AML	AML		
	comp=E,4900μm,0.4s						
T1256				AML	AML		
	comp=N,4935μm,0.3s						
T1256				AML	AML		
	comp=E,4904μm,0.4s						
T1256				AML	AML		
	comp=N,4693μm,0.3s						
T1256				AML	AML		
	comp=N,4934μm,0.3s						
T1256				AML	AML		
	comp=E,4840μm,0.4s						
T1241	**Roccafluvione,**	**0.20**	**81**	P	Pg	10 19 29.0	+0.6
T1241				S	Sg	10 19 32.5	+1.2
T1241				AML	AML		
	comp=E,7190μm,0.7s						
T1241				AML	AML		
	comp=N,4210μm,0.4s						
T1241				AML	AML		
	comp=N,4215μm,0.4s						
T1241				AML	AML		
	comp=E,7195μm,0.7s						
T1241				AML	AML		
	comp=E,7118μm,0.2s						
T1241				AML	AML		
	comp=N,3874μm,0.1s						
T1217	**Poggiodomo (PG**	**0.20**	**237**	P	Pg	10 19 29.2	+0.7
T1217				S	Sg	10 19 32.4	+1.0
T1217				AML	AML		
	comp=E,1870μm,0.5s						
T1217				AML	AML		
	comp=N,2365μm,1.4s						
T1217				AML	AML		
	comp=E,1867μm,0.5s						
T1217				AML	AML		
	comp=N,2370μm,1.4s						
T1217				AML	AML		
	comp=E,1621μm,0.3s						
T1217				AML	AML		
	comp=N,2199μm,0.4s						
T1217				AML	AML		
	comp=N,2262μm,0.4s						
T1217				AML	AML		
	comp=E,1645μm,0.3s						
AM05	**Amandola Campo**	**0.21**	**42**	P	Pg	10 19 29.1	+0.7
AM05				S	Sg	10 19 32.8	+1.3
AM05				AML	AML		
	comp=E,908μm,0.6s						
AM05				AML	AML		
	comp=N,1220μm,1.0s						
AM05				AML	AML		
	comp=E,907μm,0.6s						
AM05				AML	AML		
	comp=N,328μm,0.6s						
AM05				AML	AML		
	comp=E,4175μm,1.0s						
AM05				AML	AML		
	comp=E,3633μm,0.1s						
AM05				AML	AML		
	comp=E,900μm,0.1s						
AM05				AML	AML		
	comp=N,1170μm,0.1s						
AM05				AML	AML		
	comp=N,302μm,0.1s						
FDMO	**Fiordimonte**	**0.22**	**345**	P	Pg	10 19 29.2	+0.4
FDMO				AML	AML		
	comp=E,1805μm,0.3s						
FDMO				AML	AML		
	comp=N,2555μm,0.2s						
FDMO				AML	AML		
	comp=N,2559μm,0.2s						
FDMO				AML	AML		
	comp=E,1806μm,0.3s						
T1215	**Vallo di Nera,**	**0.22**	**264**	P	Pb	10 19 29.6	-0.5
T1215				S	Sg	10 19 32.8	+1.0
T1215				AML	AML		
	comp=E,982μm,0.4s						
T1215				AML	AML		
	comp=N,756μm,1.0s						
T1215				AML	AML		
	comp=E,975μm,0.4s						
T1215				AML	AML		
	comp=N,752μm,1.0s						
T1215				AML	AML		
	comp=E,981μm,0.5s						
T1215				AML	AML		
	comp=E,978μm,0.5s						
T1215				AML	AML		
	comp=N,662μm,0.2s						
T1215				AML	AML		
	comp=E,685μm,0.2s						
T1215				AML	AML		
	comp=N,664μm,0.2s						
T1215				AML	AML		
	comp=E,695μm,0.2s						
SMA1	**SAN MARTINO**	**0.23**	**147**	P	Pg	10 19 29.5	+0.6
SMA1				AML	AML		
	comp=E,5360μm,0.3s						
SMA1				AML	AML		
	comp=N,2495μm,1.5s						
SMA1				AML	AML		
	comp=E,3495μm,0.3s						
SMA1				AML	AML		
	comp=N,2482μm,0.5s						
LNSS	**Leonessa**	**0.24**	**202**	P	Pg	10 19 29.6	+0.6
LNSS				S	Sg	10 19 33.7	+1.3
LNSS				AML	AML		
	comp=N,14250μm,0.2s						
LNSS				AML	AML		
	comp=E,4190μm,0.5s						
LNSS				AML	AML		
	comp=E,4160μm,0.2s						
LNSS				AML	AML		
	comp=N,14245μm,0.2s						
T1243	**Rocca Santa Ma**	**0.24**	**121**	P	Pg	10 19 29.6	+0.4
T1243				S	Sg	10 19 33.8	+1.1
GUMA	**Gualdo di Mace**	**0.27**	**28**	P	Pb	10 19 30.5	-0.6
GUMA				S	Sb	10 19 34.9	-0.8
GUMA				AML	AML		
	comp=N,8040μm,0.6s						
GUMA				AML	AML		
	comp=E,6510μm,0.5s						
GUMA				AML	AML		
	comp=E,8427μm,0.5s						
GUMA				AML	AML		
	comp=E,6511μm,0.5s						
GUMA				AML	AML		
	comp=N,7093μm,0.3s						
GUMA				AML	AML		
	comp=N,5584μm,0.3s						
RM33	**Pellescritta (**	**0.32**	**173**	P	Pg	10 19 30.8	+0.3
RM33				S	Sb	10 19 36.1	-1.0
RM33				AML	AML		
	comp=E,1058μm,0.2s						
RM33				AML	AML		
	comp=E,1052μm,0.2s						
RM33				AML	AML		
	comp=N,942μm,0.1s						
RM33				AML	AML		
	comp=N,973μm,0.1s						
CAMP	**Campotosto**	**0.34**	**148**	P	Pg	10 19 31.2	+0.3
CAMP				S	Sg	10 19 36.4	+0.9
CAMP				AML	AML		
	comp=E,954μm,0.2s						
CAMP				AML	AML		
	comp=N,562μm,0.5s						
T1246	**Crognaleto (TE**	**0.34**	**135**	P	Pg	10 19 31.3	+0.3
T1246				S	Sg	10 19 36.6	+1.0
T1211	**Morro Reatino**	**0.37**	**218**	P	Pb	10 19 32.2	-0.6
T1211				S	Sb	10 19 37.8	-0.7
TERO	**Teramo**	**0.38**	**122**	P	Pg	10 19 31.9	+0.2
TERO				S	Sb	10 19 37.8	-1.0
TERO				AML	AML		
	comp=E,2495μm,0.3s						
TERO				AML	AML		
	comp=N,2470μm,0.6s						
TERO				AML	AML		
	comp=E,1984μm,0.1s						
TERO				AML	AML		
	comp=E,2370μm,0.1s						
TERO				AML	AML		
	comp=N,1872μm,0.1s						
TERO				AML	AML		
	comp=N,2071μm,0.1s						
ARRO	**Arrone**	**0.38**	**230**	P	Pg	10 19 32.0	+0.3
ARRO				AML	AML		
	comp=N,484μm,0.4s						
ARRO				AML	AML		
	comp=E,482μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.40**	**165**	P	Pg	10 19 32.2	+0.3
T1247				S	Sb	10 19 38.4	-0.9
T1247				AML	AML		
	comp=N,1912μm,0.2s						
T1247				AML	AML		
	comp=E,1548μm,0.2s						
OFFI	**Offida**	**0.40**	**74**	P	Pb	10 19 32.8	-0.4
OFFI				AML	AML		
	comp=N,1783μm,0.7s						
OFFI				AML	AML		
	comp=E,1566μm,0.6s						
ASSB	**Assisi San Ben**	**0.43**	**301**	P	Pg	10 19 32.9	+0.3
ASSB				AML	AML		
	comp=N,407μm,0.2s						
ASSB				AML	AML		
	comp=E,439μm,0.3s						
GIGS	**Gran Sasso**	**0.48**	**141**	P	Pg	10 19 33.4	0.0
GIGS				AML	AML		
	comp=N,140μm,0.2s						
GIGS				AML	AML		
	comp=E,251μm,0.2s						
CESX	**Cesi**	**0.48**	**244**	S	Sb	10 19 42.0	+0.3
AQU	**L'Aquila**	**0.50**	**159**	P	Pb	10 19 34.6	-0.4
ELC	**Elcito**	**0.51**	**355**	P	Pg	10 19 34.4	+0.4
EL6				AML	AML		
	comp=N,745μm,0.2s						
EL6				AML	AML		
	comp=E,889μm,0.2s						
FOSV	**Fossato di Vic**	**0.56**	**328**	P	Pg	10 19 35.2	+0.3
FOSV				AML	AML		
	comp=E,411μm,0.4s						
FOSV				AML	AML		
	comp=N,491μm,0.3s						
VCEL	**Villa Celiera**	**0.66**	**130**	S	Sn	10 19 49.0	-1.0
ARVD	**Arcevia**	**0.69**	**346**	⇑P	Pg	10 19 37.8	+0.3
ARVD				S	Sb	10 19 49.0	+1.1
ARVD				AML	AML		
	comp=N,162μm,0.2s						
ARVD				AML	AML		
	comp=E,135μm,0.3s						
PIEI	**Pieia**	**0.85**	**327**	S	Sn	10 19 54.0	-0.6
MPAG	**Monte Paganucc**	**0.86**	**340**	S	Sn	10 19 55.0	+0.1
MODR	**Mondragone**	**1.76**	**162**	⇓P	Pb	10 19 56.2	-0.2
PTRJ	**Pietraroja**	**1.78**	**145**	S	Sg	10 20 23.0	+1.7
IMOL	**Imola, Italy**	**1.85**	**327**	S	Sg	10 20 26.0	+2.5

ANF 31 10:40:11.8±0.2, 33°.19N×115°.59W, h15km, Error ellipse: s-maj=2.2km s-min=1.7km az=135.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	**Sam W. Stewart**	**0.30**	**216**	S	Sg	10 40 23.0	+0.5
	baz=37						
SWSC	**Sam W. Stewart**	**0.30**	**216**	P	Pb	10 40 18.7	-0.3
	baz=37,SNR=114						
BC3	**Big Chuckawall**	**0.48**	**14**	S	Sg	10 40 28.3	+0.4
	baz=192						
BC3	**Big Chuckawall**	**0.48**	**14**	P	Pg	10 40 21.7	+0.3
	baz=192,SNR=58						
GLA	**Glamis**	**0.65**	**102**	S	Sb	10 40 33.8	-0.2
GLA	**Glamis**	**0.65**	**102**	P	Pg	10 40 24.5	-0.2
	baz=283,SNR=27						
IKP	**In-Ko-Pah, Jac**	**0.69**	**219**	S	Sb	10 40 35.0	-0.1
	baz=40						
IKP	**In-Ko-Pah, Jac**	**0.69**	**219**	P	Pb	10 40 25.7	0.0
	baz=40,SNR=12						
MONP2	**Monument Peak**	**0.76**	**247**	S	Sb	10 40 37.5	+0.4
	baz=67						
MONP2	**Monument Peak**	**0.76**	**247**	P	Pb	10 40 26.8	-0.1
	baz=67,SNR=23						
PFO	**Pinyon Flats O**	**0.84**	**300**	S	Sb	10 40 40.1	+0.7
	baz=119						
PFO	**Pinyon Flats O**	**0.84**	**300**	P	Pg	10 40 28.1	-0.2
	baz=119,SNR=12						
BELC	**Belle Mtn. Jos**	**0.88**	**337**	S	Sb	10 40 41.3	+0.8
	baz=156						
BELC	**Belle Mtn. Jos**	**0.88**	**337**	P	Pb	10 40 28.9	-0.1
	baz=156,SNR=19						
IRM	**Iron Mountain**	**1.03**	**21**	Sb	Sn	10 40 46.8	+0.7
	baz=200						
IRM	**Iron Mountain**	**1.03**	**21**	P	Pb	10 40 31.6	+0.1
	baz=200,SNR=15						
109C	**Camp Elliot, M**	**1.31**	**257**	P	Pn	10 40 35.0	-0.6
	baz=76						
PDMCI	**Parker Dam,Lak**	**1.64**	**47**	Sb	Sg	10 41 03.8	-0.9
	baz=227						

*IDC **31** 10:41:06.4±1.2, 33°.24N×115°.77W, h0km, mb3.1/1, mbtmp2.8/5, ML3.1/4, MS2.9/4, Error ellipse: s-maj=21.5km s-min=9.0km az=15.0*

*PAS **31** 10:41:07.7±2.1, 33°.19N±0°.01×115°.57W±0°.01, h3km±5km, ML3.5/133, ML3.3/54(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=55.0*

*ANF **31** 10:41:07.1±0.2, 33°.19N×115°.59W, h15km, ML2.3/10, ML3.5/28, ML3.5/28, Error ellipse: s-maj=1.8km s-min=1.3km az=131.0*

*NEIC **31** 10:41:08.6±2.5, 33°.175N±0°.010×115°.62W±0°.01, h5km±4km, Error ellipse: s-maj=2.0km s-min=1.4km az=68.0*

ISC 31 10:41:08.3±0.8, 33°.18N±0°.01×115°.58W±0°.01, h14km±6km, n113, σ1$28/140, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.14**	**179**		**Pg**	**10 41 11.4**	**-0.7**
WEMD					**Sg**	**10 41 15.0**	**+0.4**
ERRC	**Elmore Ranch**	**0.21**	**252**		**Pb**	**10 41 17.5**	**+3.5**
SWSC	**Sam W. Stewart**	**0.30**	**217**		**Pg**	**10 41 13.9**	**-0.7**
SWSC					**Sg**	**10 41 18.2**	**-0.7**
SWSC	**Sam W. Stewart**	**0.30**	**217**	P	**Pg**	**10 41 13.9**	**-0.7**
	baz=39						
SWSC				S	**Sg**	**10 41 17.5**	**-1.3**
	baz=39						
SUP	**Superstition M**	**0.30**	**222**		**Pg**	**10 41 14.1**	**-0.6**
SUP					**Sg**	**10 41 18.8**	**-0.2**
SNR	**Schaffner Ranc**	**0.34**	**159**		**Pg**	**10 41 15.0**	**-0.4**
SNR					**Sb**	**10 41 20.8**	**-0.6**
SALN	**Salton City**	**0.35**	**286**		**Pg**	**10 41 15.2**	**-0.3**
SALN					**Sb**	**10 41 21.2**	**-0.5**
COK2	**Cook Ranch 2**	**0.35**	**200**		**Pg**	**10 41 15.5**	**-0.1**
COK2					**Sb**	**10 41 21.4**	**-0.4**
DREC	**Desert Rsrch C**	**0.39**	**163**		**Pg**	**10 41 16.2**	**-0.1**
DREC					**Sb**	**10 41 23.4**	**+0.4**
CRR	**Carrizo Plain**	**0.44**	**228**		**Pg**	**10 41 16.6**	**-0.5**
CRR					**Sg**	**10 41 23.3**	**+0.3**
WESC	**Westside Schoo**	**0.44**	**196**		**Pg**	**10 41 16.9**	**-0.3**
WESC					**Sb**	**10 41 24.1**	**-0.1**
BC3	**Big Chuckawall**	**0.48**	**13**		**Pg**	**10 41 17.1**	**-0.9**
BC3					**Sg**	**10 41 24.0**	**-0.5**
BC3	**Big Chuckawall**	**0.48**	**13**	P	**Pg**	**10 41 17.0**	**-0.9**
	baz=192						
BC3				S	**Sg**	**10 41 24.0**	**-0.5**
	baz=192						
COA	**Coachella**	**0.50**	**129**		**Pg**	**10 41 17.7**	**-0.6**
COA					**Sb**	**10 41 25.7**	**-0.4**
HAY	**Hayfield**	**0.53**	**351**		**Pg**	**10 41 18.0**	**-0.9**
HAY					**Sg**	**10 41 25.4**	**-0.5**
SGL	**Mount Signal**	**0.55**	**193**		**Pg**	**10 41 18.2**	**-0.9**
SGL					**Sg**	**10 41 25.9**	**-0.4**
CTW	**Cottonwood Mou**	**0.55**	**334**		**Pg**	**10 41 18.4**	**-0.8**
CTW					**Sg**	**10 41 26.2**	**-0.3**
RUN	**Ruthven**	**0.55**	**112**		**Pg**	**10 41 18.0**	**-1.2**
RUN					**Sg**	**10 41 25.8**	**-0.8**
SLH	**Sleepy Hollow**	**0.56**	**271**		**Pg**	**10 41 18.8**	**-0.6**
SLH					**Sb**	**10 41 27.4**	**-0.4**
UABX	**UABC, Campus M**	**0.56**	**168**		**Pg**	**10 41 19.0**	**-0.5**
UABX					**Sb**	**10 41 28.2**	**+0.4**
UABX	**UABC, Campus M**	**0.56**	**168**	IAML		10 41 28.6	
	comp=N,3μm,0.8s						
CTCC	**Cactus City**	**0.58**	**324**		**Pg**	**10 41 19.0**	**-0.8**
CTCC					**Sg**	**10 41 27.9**	**+0.3**
YUH	**Yuha Desert**	**0.61**	**208**		**Sg**	**10 41 27.7**	**-0.6**
YUH	**Yuha Desert**	**0.61**	**208**	Pg	**Pg**	**10 41 19.3**	**-0.9**
YUH	**Yuha Desert**	**0.61**	**208**	IAML		10 41 28.0	
	comp=E,543nm,0.3s						
YUH				IAML		10 41 28.5	
	comp=N,502nm,0.6s						
GLA	**Glamis**	**0.65**	**101**	IAML		10 41 30.6	
	comp=N,3μm,0.6s						
GLA	**Glamis**	**0.65**	**101**		**Pg**	**10 41 20.0**	**-1.1**
GLA					**Sg**	**10 41 28.3**	**-1.4**
GLA	**Glamis**	**0.65**	**101**	P	**Pg**	**10 41 20.1**	**-0.9**
	baz=283						
GLA				S	**Sg**	**10 41 28.2**	**-1.4**
	baz=283						
EMSC	**East Mesa**	**0.67**	**131**		**Pg**	**10 41 20.4**	**-1.0**
EMSC					**Sb**	**10 41 30.7**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.69**	**220**		**Pg**	**10 41 21.0**	**-0.8**
IKP					**Sg**	**10 41 30.9**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.69**	**220**	P	**Pg**	**10 41 21.0**	**-0.8**
	baz=40						
IKP				S	**Sg**	**10 41 30.3**	**-0.7**
	baz=40						
BORC	**Borrego Spring**	**0.70**	**277**		**Pg**	**10 41 20.9**	**-1.1**
BORC					**Sg**	**10 41 31.2**	**-0.1**
RMX	**La Rumorosa**	**0.71**	**216**		**Pg**	**10 41 21.8**	**-0.5**
RMX	**La Rumorosa**	**0.71**	**216**	IAML		10 41 32.5	
	comp=E,958nm,0.6s						
MONP2	**Monument Peak**	**0.76**	**248**		**Pg**	**10 41 22.0**	**-1.2**
MONP2					**Sg**	**10 41 32.9**	**-0.3**
MONP2	**Monument Peak**	**0.76**	**248**	P	**Pg**	**10 41 22.2**	**-1.0**
	baz=67						
MONP2				S	**Sg**	**10 41 32.6**	**-0.6**
	baz=67						
CPBX	**Cerro Prieto**	**0.80**	**163**		**Pg**	**10 41 21.9**	**-1.9**
CPBX	**Cerro Prieto**	**0.80**	**163**		**Sg**	**10 41 33.4**	**-0.9**
XPFO	**Pion Flat**	**0.84**	**301**		Pn	10 41 35.4	+10
PFO	**Pinyon Flats O**	**0.85**	**300**	Pn	**Pg**	**10 41 22.2**	**-2.6**
	comp=E,46nm,0.3s,baz=116,slow=14,SNR=46						
PFO				Sn	**Sg**	**10 41 34.9**	**-1.1**
	comp=E,270nm,0.3s,baz=97,slow=11,SNR=20						
PFO				LR	LR	10 41 48.9	
	comp=E,166nm,20.3s,baz=55,slow=62						
PFO	**Pinyon Flats O**	**0.85**	**300**	Pg	**Pg**	**10 41 22.4**	**-2.5**
PFO				IAML		10 41 36.2	
	comp=E,675nm,0.6s						
PFO				IAML		10 41 37.0	
	comp=E,1μm,0.6s						
PFO	**Pinyon Flats O**	**0.85**	**300**		**Pg**	**10 41 23.4**	**-1.4**
PFO						10 41 35.4	
PFO	**Pinyon Flats O**	**0.85**	**300**	P	**Pg**	**10 41 23.3**	**-1.5**
	baz=119,SNR=18						
PFO				S	**Sg**	**10 41 35.2**	**-0.8**
	baz=119						
BELC	**Belle Mtn. Jos**	**0.89**	**337**		**Sg**	**10 41 36.5**	**-0.6**
BELC	**Belle Mtn. Jos**	**0.89**	**337**	P	**Pg**	**10 41 23.8**	**-1.7**
	baz=156						
BELC				S	**Sg**	**10 41 36.6**	**-0.6**
	baz=156						

MATG	Mataguay Scout	0.89	271		Sg	10 41 36.9	-0.5
FRD	Ford Ranch, An	0.91	290		Sg	10 41 37.3	-0.6
SNDA	J Saunders Pla	0.94	293		Sb	10 41 38.7	0.0
DNR	Dunn Ranch,Anz	0.96	294		Sg	10 41 39.4	0.0
BZNA	Buzz No.'s Pla	0.96	289		Sb	10 41 39.2	-0.2
CRY	Cary Ranch	1.04	292		Sb	10 41 41.2	-0.4
IRM	Iron Mountain	1.04	21	P	Pb	10 41 26.9	-1.2
	baz=200,SNR=46						
IRM				S	Sg	10 41 41.9	-0.1
	baz=200						
BAR	Barrett	1.04	242	Pg	Pb	10 41 26.5	-1.7
BAR				IAML		10 41 40.8	
	comp=N,568nm,0.4s						
BAR				IAML		10 41 43.2	
	comp=E,444nm,0.5s						
BLYC	Blythe	1.05	57	Pg	Pb	10 41 28.1	-0.2
TKX	Tecate	1.06	235		Pb	10 41 26.9	-1.5
TKX				IAML		10 41 40.9	
	comp=N,950nm,0.2s						
TKX				IAML		10 41 41.9	
	comp=E,906nm,0.2s						
EML	El Monte Cty P	1.10	255		Pb	10 41 27.0	-2.1
ESJX	Sierra Juarez	1.22	195	Pg	Pn	10 41 28.8	-2.2
CBX	Cerro Bola	1.26	227	Pn	Pn	10 41 31.1	-0.5
CBX				IAML		10 41 57.8	
	comp=N,404nm,0.6s						
CBX				IAML		10 42 04.9	
	comp=E,314nm,0.8s						
GTM	Goat Mountain	1.28	330		Pg	10 41 33.7	+0.6
109C	Camp Elliot, M	1.31	257	P	Pn	10 41 30.3	-1.9
	baz=76						
109C				S	Sb	10 41 48.0	-1.4
	baz=76						
TJX	Tijuana	1.41	242		Pn	10 41 32.8	-0.7
MURC	Murrieta	1.41	288	P	Pn	10 41 31.6	-2.0
	baz=106						
DANC	Danby, Needles	1.46	7		Pb	10 41 35.2	-0.1
BBRC	Big Bear Solar	1.55	314	P	Pn	10 41 33.9	-1.8
	baz=133						
113A	Mohawk Valley,	1.58	105	Pn	Pn	10 41 35.5	-0.4
CCX	Cicese	1.60	215		Pn	10 41 36.2	+0.1
CCX				IAML		10 41 56.7	
	comp=N,232nm,0.6s						
CCX				IAML		10 42 01.3	
	comp=E,325nm,1.0s						
GMRC	Granite Mounta	1.60	358		Pb	10 41 37.9	+0.1
GMRC	Granite Mounta	1.60	358	Pg	Pb	10 41 37.6	-0.1
	baz=177						
PDMCI	Parker Dam,Lak	1.64	47		Pb	10 41 38.4	+0.1
PDMCI	Parker Dam,Lak	1.64	47	Pg	Pb	10 41 38.4	+0.1
	baz=227,SNR=10						
PDMCI				Sb	Sb	10 41 58.5	-0.4
	baz=227						
HEC	Hector,Ludlow	1.76	339	Pg	Pb	10 41 41.1	+0.7
	baz=159						
NEE2	Needles Airpor	1.77	27		Pb	10 41 41.0	+0.4
NEE2	Needles Airpor	1.77	27	P	Pn	10 41 38.0	-0.5
	baz=207						
BFSC	Mount Baldy Ra	2.02	302	P	Pn	10 41 40.8	-1.4
	baz=121						
RRX	Edison Barstow	2.06	326	P	Pn	10 41 40.7	-1.8
	baz=144						
SFX	San Felipe	2.23	164		Pn	10 41 46.2	+1.4
TUQ	Turquoise Moun	2.26	353		Pb	10 41 49.9	+0.8
TUQ	Turquoise Moun	2.26	353	Pg	Pb	10 41 50.2	+1.1
	baz=172						
Y14A	Wickenburg	2.28	70	Pn	Pb	10 41 48.7	-0.6
FMP	Fort Macarthur	2.33	284	Pg	Pb	10 41 51.4	+1.3
	baz=102						
GSC	Goldstone, Bar	2.34	335	Pg	Pb	10 41 51.6	+1.2
	baz=154						
CIS	Catalina Islan	2.38	276	Pg	Pg	10 41 52.7	-1.4
	baz=94						
CIS				Sb	Sb	10 42 21.3	+1.1
	baz=94						
PASC	Pasadena Art C	2.38	295	Pn	Pb	10 41 49.0	-2.0
PASC				IAML		10 42 28.6	
	comp=E,80nm,0.8s						
PASC				IAML		10 42 29.6	
	comp=N,100nm,1.0s						
SHOC	Shoshone, Teco	2.77	348	Pg	Pg	10 41 59.6	-1.8
	baz=168						
MPMC	Manual Prospec	3.27	332	P	Pn	10 41 57.3	-2.0
	baz=151						
SHPR	Sheep Range	3.33	6		Pn	10 42 01.4	+1.3
SHPR				IAML		10 42 58.4	
	comp=E,34nm,0.4s						
ISA	Isabella, Lake	3.44	317	Pg	Pg	10 42 12.9	-1.3
	baz=135						
FURC	Furnace Creek,	3.44	343	Pg	Pg	10 42 13.1	-1.2
	baz=162						
BCW	Bitter Crk WRg	3.63	300	Pn	Pn	10 42 05.8	+1.6
TPNV	Topopah Spring	3.80	352	Pg	Pg	10 42 19.8	-1.3
	baz=171						
GRAC	Grapevine Rang	4.08	339	Pg	Pg	10 42 25.0	-1.4
	baz=158						
TUC	Tucson	4.14	101	IAML		10 43 28.8	
	comp=E,26nm,0.9s						
TUC				IAML		10 43 28.8	
	comp=E,32nm,0.9s						
TUC	Tucson	4.14	101	Pn	Pn	10 42 10.9	-0.2
TUC	Tucson	4.14	101	Pg	Pg	10 42 25.9	-1.7
	baz=284						
LCMT	Little Creek M	4.27	26		Pn	10 42 12.7	-0.4
LCMT				IAML		10 43 28.2	
	comp=E,42nm,0.9s						
LCMT				IAML		10 43 31.1	
	comp=N,28nm,0.9s						
LCH	Last Change Ra	4.38	338		Pn	10 42 13.7	-0.8
KNB	Kanab	4.44	30	Pn	Pn	10 42 15.3	-0.2
KNB				IAML		10 43 36.4	
	comp=E,45nm,1.3s						
DSP	Deep Springs	4.61	336	Pn	Pn	10 42 17.5	-0.1
R11A	Troy Canyon, C	5.15	360	Pn	Pn	10 42 27.3	+2.1
PSUT	Pine Spring	5.52	14		Pn	10 42 31.9	+1.6
NVAR	Mina Array Bea	5.68	338	Pn	Pn	10 42 32.9	+0.4
	comp=E,0.1nm,0.3s,baz=163,slow=16,SNR=2.8						
NVAR				Pg	Pb	10 42 51.6	+4.3
	comp=E,0.6nm,0.3s,baz=161,slow=18,SNR=19						
	comp=E,0.2nm,0.5s						
MSU	Marysvale	5.99	27	Pn	Pn	10 42 39.1	+2.3
121A	Cookes Peak, D	6.59	94	Pn	Pn	10 42 44.3	-0.7
121A	Cookes Peak, D	6.59	94	P	Pn	10 42 42.7	-2.3
	baz=278						
SBM	South Baldy	7.06	81		Pn	10 42 53.1	+1.5
PV14	Lion Creek, Pa	7.43	44	Pn	Pn	10 42 59.3	+2.8
ELK	Elko	7.55	2	LR	LR	10 46 18.1	
	comp=E,54nm,20.3s,baz=179,slow=42						
ANMO	Albuquerque	7.78	74	Pn	Pn	10 43 04.1	+2.9
	comp=E,0.1nm,0.3s,baz=280,slow=18,SNR=2.6						
ANMO				Lg	Lg	10 45 13.7	
	comp=E,0.3nm,0.3s,baz=162,slow=21,SNR=3.1						
ANMO				LR	LR	10 46 23.7	
	comp=E,48nm,18.4s,baz=290,slow=40						
	comp=E,0.6nm,0.7s						
PDAR	Pinedale Array	10.68	25	Pn	Pn	10 43 44.1	+3.0
	comp=E,0.1nm,0.3s,baz=220,slow=15,SNR=4.1						
	comp=E,0.5nm,0.8s						
TXAR	Lajitas Array	10.89	107	Pn	Pn	10 43 47.7	+3.8
	baz=285,slow=13,SNR=2.4						
TXAR				Lg	Lg	10 46 55.1	
	baz=290,slow=30,SNR=2.8						
	comp=E,0.1nm,0.4s						
NEW	Newport	15.11	356	LR	LR	10 50 02.4	
	comp=E,61nm,18.4s,baz=298,slow=36						
TKL	Tuckaleechee C	26.30	76	LR	LR	10 57 03.2	
	comp=E,35nm,20.8s,baz=353,slow=36						
ILAR	Eielson Array	36.94	338	P	P	10 48 15.8	-0.8
	comp=E,0.3nm,0.9s,baz=148,slow=8.6,SNR=2.0						
	comp=E,0.3nm,0.9s						

*PAS **31** 10:41:51.2±1.5,33°.189N±0°.010×115°.563W±0°.007, h3km±8km, ML3.0/9, Error ellipse: s-maj=1.5km s-min=1.0km az=174.0*

NEIC 31 10:41:50.9±0.8, 33°.21N±0°.01×115°.56W±0°.01, h17km±2km, Error ellipse: s-maj=1.7km s-min=1.6km az=205.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	Westmorland, C	0.18	185		Pg	10 41 54.9	-0.4
WEMD					Sg	10 41 58.4	+0.1
ERRC	Elmore Ranch	0.24	246		Pb	10 41 56.6	-0.2
ERRC					Sb	10 42 00.8	+0.1
COK2	Cook Ranch 2	0.39	201		Pg	10 41 59.1	+0.2
BC3	Big Chuckawall	0.45	12		Pb	10 42 00.5	0.0
CRR	Carrizo Plain	0.47	226		Pg	10 42 00.2	-0.2
HAY	Hayfield	0.50	349		Pb	10 42 01.4	0.0
COA	Coachella	0.51	133		Pg	10 42 01.2	+0.1
RUN	Ruthven	0.55	116		Pg	10 42 01.6	-0.2
CTCC	Cactus City	0.57	321		Pg	10 41 59.0	-3.2
GLA	Glamis	0.64	104		Sb	10 42 12.7	+0.3
GLA	Glamis	0.64	104	Pg	Pg	10 42 03.3	-0.3
YUH	Yuha Desert	0.64	208	Pg	Pg	10 42 02.9	-0.6
YUH	Yuha Desert	0.64	208		Sg	10 42 11.7	-0.4
EMSC	East Mesa	0.68	134		Pg	10 42 04.1	-0.2
BORC	Borrego Spring	0.72	275		Pg	10 42 04.8	-0.2
PFO	Pinyon Flats O	0.85	298	Pg	Pb	10 42 07.2	-0.1
BLYC	Blythe	1.02	58	Pg	Pg	10 42 11.6	+0.9
BLYC				Sg	Sn	10 42 24.6	+0.1

*IDC **31** 10:54:24.9±7.9, 4°.99S×152°.02E, h84km±51km, mb3.8/3, mbtmp4.1/5, ML3.0/2, MS3.1/4, Error ellipse: s-maj=82.1km s-min=54.4km az=155.0*

*NEIC **31** 10:54:53.4±1.3, 6°.3S±0°.2×150°.2E±0°.1, h142km±13km, mb4.2/11, Error ellipse: s-maj=29.1km s-min=12.9km az=163.0*

ISC 31 10:54:53.3±0.9, 6°.4S±0°.1×150°.22E±0°.10, h150km, n24, σ0s87/21, mb4.2/5, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.27	225	P	Pn	10 55 58.5	+1.3
	6.0nm,0.3s,baz=29,slow=10,SNR=13						
PMG				S	Sn	10 57 12.3	+25
	28nm,0.6s,baz=50,slow=13,SNR=2.5						
PMG				LR	LR	10 58 26.5	
	comp=Z,95nm,18.7s,baz=324,slow=37						
	22nm,0.5s						
PMG	Port Moresby	4.27	225	Pn	Pn	10 55 58.0	+0.7
HNR	Honiara	10.10	108	LR	LR	11 00 12.1	
	comp=Z,731nm,20.3s,baz=154,slow=38						
HNR	Honiara	10.10	108	Pn	Pn	10 57 14.6	-0.2
CTA	Charters Tower	14.17	195	P	Pn	10 58 06.4	-1.0
	0.1nm,0.3s,baz=28,slow=17,SNR=3.9						
CTA				LR	LR	11 03 37.3	
	comp=Z,26nm,18.1s,baz=81,slow=34						
	2.6nm,0.9s						
MTN	Manton Dam	19.88	250	P	P	10 59 13.9	+0.8
MTN				IAmb	IAmb	10 59 50.5	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	20.34	228	P	P	10 59 18.6	+0.5
WB0				IAmb	IAmb	10 59 38.1	
	comp=Z,6.4nm,1.0s						
WR0	Warramunga Arr	20.35	227	P	P	10 59 18.5	+0.2
WR0				IAmb	IAmb	10 59 32.6	
	comp=Z,6.9nm,1.1s						
WB2	Warramunga Arr	20.48	227	P	P	10 59 19.8	+0.2
WB2				IAmb	IAmb	10 59 22.0	
	comp=Z,6.9nm,0.7s						
WRA	Warramunga Arr	20.49	227	P	P	10 59 19.8	+0.1
	comp=Z,5.0nm,0.7s,baz=52,slow=9.9,SNR=45						
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	20.49	227	P	P	10 59 19.2	-0.5
KNRA	Kununurra	22.98	245	P	P	10 59 43.7	-1.4
AS31	Alice Springs	23.27	221	P	P	10 59 48.5	+0.8
ASAR	Alice Springs	23.28	221	P	P	10 59 46.1	-1.7
	comp=Z,2.9nm,0.7s,baz=56,slow=8.4,SNR=30						
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	23.28	221	P	P	10 59 48.6	+0.8
STKA	Stephens Creek	26.62	197	P	P	11 00 11.7	-6.2
	comp=Z,1.7nm,0.7s,baz=31,slow=9.6,SNR=3.9						
	comp=Z,1.7nm,0.7s						
DAV	Davao City (W)	27.98	298	LR	LR	11 11 18.3	
	comp=Z,21nm,18.3s,baz=20,slow=35						
FUNA	Funafuti	28.81	96	P	P	11 00 38.5	+0.9
KAPI	Kappang	30.35	271	P	P	11 00 51.1	-0.1
KAPI				IAmb	IAmb	11 01 06.2	
	comp=Z,8.3nm,1.1s						
MK31	Makanchi Array	79.84	320	P	P	11 06 45.4	+0.2
MK31	Makanchi Array	79.84	320	⇑Pn	P	11 06 45.5	+0.2
	comp=Z,2.4nm,0.2s,baz=183,slow=13,SNR=75						
MKAR	Makanchi Array	79.84	320	P	P	11 06 45.6	+0.4
MAKZ	Makanchi	80.04	320	P	P	11 06 45.6	-0.7
MAKZ				IAmb	IAmb	11 06 46.5	
	comp=Z,5.1nm,1.0s						
MAKZ	Makanchi	80.04	320	⇓Pn	P	11 06 45.1	-1.2
	comp=Z,2.6nm,0.5s						

ROM 31 10:57:34.0±0.1, 42°.623N±0°.003×13°.303E±0°.005, h10km, ML2.6/17, 5C-4D, Error ellipse: s-maj=0.3km s-min=0.3km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.03	72	P	Pg	10 57 36.3	+0.3
SMA1				S	Sg	10 57 37.4	0.0
SMA1				AML	AML		
SMA1				AML	AML		
	comp=N,52300μm,0.5s						
T1204	Amatrice, Fraz	0.05	11	P	Pg	10 57 36.6	+0.3
T1204				S	Sg	10 57 38.0	0.0
CAMP	Campotosto	0.12	138	P	Pg	10 57 37.4	+0.4
CAMP				S	Sg	10 57 39.5	+0.4
CAMP				AML	AML		
	comp=N,4295μm,0.3s						
CAMP				AML	AML		
	comp=E,4760μm,0.2s						
T1243	Rocca Santa Ma	0.13	55	P	Pg	10 57 36.6	-0.6
RM33	Pellescritta (	0.13	210	⇑P	Pg	10 57 37.7	+0.6
RM33				S	Sg	10 57 40.1	+0.7
RM33				AML	AML		
	comp=E,5510μm,0.3s						
RM33				AML	AML		
	comp=N,4700μm,0.7s						
RM33				AML	AML		
	comp=N,4780μm,0.7s						
RM33				AML	AML		
	comp=E,5505μm,0.3s						
RM33				AML	AML		
	comp=E,5680μm,0.3s						
T1247	Pizzolo (AQ)	0.18	181	⇑P	Pg	10 57 38.6	+0.7
T1247				S	Sg	10 57 41.9	+1.2
T1247				AML	AML		
	comp=E,3170μm,0.4s						
T1247				AML	AML		
	comp=N,3110μm,0.8s						
LNSS	Leonessa	0.20	264	P	Pg	10 57 38.9	+0.7
LNSS				S	Sg	10 57 42.3	+1.2
TERO	Teramo	0.22	90	⇓P	Pg	10 57 39.2	+0.6
TERO				AML	AML		
	comp=E,4270μm,0.1s						
TERO				AML	AML		
	comp=N,4890μm,0.8s						
TERO				AML	AML		
	comp=N,4235μm,0.8s						
TERO				AML	AML		
	comp=E,5295μm,0.1s						
T1241	Roccafluvione,	0.25	22	AML	AML		
	comp=N,1030μm,0.9s						
T1241				AML	AML		
	comp=E,942μm,0.3s						
T1241				AML	AML		
	comp=N,993μm,0.3s						
T1241				AML	AML		
	comp=E,943μm,0.3s						
T1241				AML	AML		
	comp=N,992μm,0.3s						
T1241				AML	AML		
	comp=E,1870μm,0.2s						
T1241				AML	AML		
	comp=N,992μm,0.3s						
T1241				AML	AML		
	comp=E,1730μm,0.2s						
GIGS	Gran Sasso	0.26	131	⇑P	Pg	10 57 39.6	+0.3
GIGS				AML	AML		
	comp=E,680μm,0.8s						
GIGS				AML	AML		
	comp=E,680μm,0.8s						
GIGS				AML	AML		
	comp=N,701μm,0.2s						
GIGS				AML	AML		
	comp=N,702μm,0.2s						
T1217	Poggiodomo (PG	0.29	288	S	Sg	10 57 41.0	-2.8
T1216	Preci, Frazion	0.34	322	AML	AML		
	comp=N,2210μm,0.3s						
T1216				AML	AML		
	comp=E,1520μm,0.6s						
T1216				AML	AML		
	comp=E,20100μm,0.4s						
T1216				AML	AML		
	comp=N,22600μm,0.2s						
T1211	Morro Reatino	0.34	255	P	Pg	10 57 41.3	+0.4
T1211				S	Sb	10 57 46.8	-1.0
T1211				AML	AML		
	comp=E,1430μm,0.6s						
T1211				AML	AML		
	comp=N,1255μm,1.3s						
T1211				AML	AML		
	comp=E,1429μm,0.6s						
T1211				AML	AML		
	comp=N,1205μm,0.2s						
T1215	Vallo di Nera,	0.37	299	AML	AML		
	comp=N,986μm,1.2s						
T1215				AML	AML		
	comp=E,549μm,1.5s						
T1215				AML	AML		
	comp=N,682μm,0.2s						
T1215				AML	AML		
	comp=N,682μm,0.2s						
T1215				AML	AML		
	comp=E,952μm,1.2s						
FIAM	Fiamignano	0.38	201	⇑P	Pg	10 57 41.9	+0.3
FIAM				AML	AML		
	comp=N,319μm,0.6s						
FIAM				AML	AML		
	comp=E,405μm,0.5s						
T1256	Bolognola (MC)	0.39	352	AML	AML		
	comp=E,402μm,0.4s						
T1256				AML	AML		
	comp=N,426μm,0.2s						
T1256				AML	AML		
	comp=N,1155μm,0.9s						
T1256				AML	AML		
	comp=E,1740μm,0.3s						
FAGN	Fagnano	0.41	150	⇓P	Pg	10 57 42.6	+0.4
FAGN				AML	AML		
	comp=E,1760μm,0.7s						
FAGN				AML	AML		
	comp=N,1495μm,0.3s						
FAGN				AML	AML		
	comp=N,1490μm,0.3s						
VCEL	Villa Celiera	0.46	120	⇓P	Pb	10 57 43.8	-0.5
VCEL				AML	AML		
	comp=E,1965μm,0.9s						
VCEL				AML	AML		
	comp=N,2555μm,0.3s						
VCEL				AML	AML		
	comp=E,1970μm,0.9s						
VCEL				AML	AML		
	comp=N,2550μm,0.3s						
CSP1	Cessapalombo	0.47	351	AML	AML		
	comp=N,880μm,0.3s						
CSP1				AML	AML		
	comp=E,1056μm,1.3s						
TRTR	Tortoreto Alta	0.49	67	⇑P	Pb	10 57 45.4	+0.7
T0110	Collepietro	0.53	138	⇓P	Pg	10 57 44.7	+0.3
T0110				AML	AML		
	comp=N,1380μm,0.5s						
T0110				AML	AML		
	comp=E,1215μm,0.3s						

ROM 31 10:58:27.6±0.0, 42°.872N±0°.002×13°.062E±0°.003, h10km, ML2.3/14, 6C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=311.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	Preci, Frazion	0.04	300	P	Pg	10 58 29.9	+0.3
T1216				S	Sg	10 58 31.4	+0.4
FEMA	Monte Fema	0.09	354	P	Pg	10 58 30.7	+0.4
FEMA				S	Sg	10 58 32.6	+0.5
FEMA				AML	AML		
	comp=N,5550μm,0.4s						
FEMA				AML	AML		
	comp=E,4345μm,0.2s						
FEMA				AML	AML		
	comp=N,5550μm,0.4s						
FEMA				AML	AML		
	comp=E,4340μm,0.2s						
FEMA				AML	AML		
	comp=N,5555μm,0.4s						
T1215	Vallo di Nera,	0.16	244	P	Pg	10 58 31.8	+0.6
T1215				S	Sg	10 58 34.5	+0.9
T1215				AML	AML		
	comp=E,953μm,1.2s						
T1215				AML	AML		
	comp=N,982μm,1.2s						
T1215				AML	AML		
	comp=E,950μm,1.2s						
T1215				AML	AML		
	comp=N,986μm,1.2s						
T1215				AML	AML		
	comp=E,948μm,1.2s						
FDMO	Fiordimonte	0.17	6	P	Pg	10 58 31.9	+0.6
FDMO				S	Sg	10 58 34.8	+1.0
FDMO				AML	AML		
	comp=E,1215μm,0.3s						
FDMO				AML	AML		
	comp=N,1860μm,0.3s						
FDMO				AML	AML		
	comp=N,1865μm,0.6s						
T1256	Bolognola (MC)	0.18	42	⇑P	Pg	10 58 32.1	+0.5
T1256				S	Sg	10 58 35.4	+1.1
T1256				AML	AML		
	comp=E,2252μm,0.4s						
T1256				AML	AML		
	comp=N,3075μm,0.5s						
T1256				AML	AML		
	comp=E,2310μm,0.4s						
T1256				AML	AML		
	comp=N,2930μm,0.4s						
T1256				AML	AML		
	comp=E,2305μm,0.4s						
T1217	Poggiodomo (PG	0.19	211	⇑P	Pg	10 58 32.3	+0.6
T1217				S	Sg	10 58 35.6	+1.2
T1217				AML	AML		
	comp=E,2030μm,0.8s						
T1217				AML	AML		
	comp=N,3010μm,0.2s						
T1217				AML	AML		
	comp=E,2014μm,0.7s						
T1217				AML	AML		
	comp=N,2910μm,0.2s						
T1217				AML	AML		
	comp=E,2015μm,0.7s						
MMO1	Montemonaco	0.20	82	P	Pg	10 58 32.4	+0.6
MMO1				S	Sg	10 58 35.9	+1.2
AM05	Amandola Campo	0.24	64	⇑P	Pg	10 58 33.2	+0.7
AM05				AML	AML		
	comp=E,772μm,0.1s						
AM05				AML	AML		
	comp=N,1435μm,0.2s						
AM05				AML	AML		
	comp=N,254μm,0.1s						
AM05				AML	AML		
	comp=E,3210μm,0.2s						
CSP1	Cessapalombo	0.24	25	P	Pg	10 58 33.2	+0.5
CSP1				S	Sg	10 58 37.4	+1.3
CSP1				AML	AML		
	comp=E,1038μm,1.3s						
CSP1				AML	AML		
	comp=N,1070μm,0.3s						
CSP1				AML	AML		
	comp=N,1072μm,0.3s						
CSP1				AML	AML		
	comp=E,1056μm,1.3s						
T1201	Domo (RI)	0.26	147	P	Pb	10 58 33.7	-0.7
LNSS	Leonessa	0.27	183	P	Pg	10 58 33.6	+0.5
LNSS				S	Sb	10 58 38.3	-1.0
LNSS				AML	AML		
	comp=E,1087μm,0.2s						
LNSS				AML	AML		
	comp=N,1820μm,0.3s						
LNSS				AML	AML		
	comp=E,1088μm,0.2s						
T1204	Amatrice, Fraz	0.27	136	P	Pg	10 58 33.9	+0.7
T1204				S	Sb	10 58 38.5	-0.9
T1241	Roccafluvione,	0.27	93	⇑P	Pg	10 58 33.7	+0.6
T1241				S	Sb	10 58 38.3	-1.0
T1241				AML	AML		
	comp=E,3560μm,0.2s						
T1241				AML	AML		
	comp=N,3085μm,0.5s						

T1241				AML	AML		
	comp=N,3125μm,0.2s						
T1241				AML	AML		
	comp=E,3755μm,0.2s						
T1241				AML	AML		
	comp=N,3080μm,0.5s						
GUMA	**Gualdo di Mace**	**0.28**	**46**	⇑P	Pb	10 58 34.1	-0.7
GUMA				S	Sb	10 58 39.1	-0.4
GUMA				AML	AML		
	comp=E,2570μm,0.4s						
GUMA				AML	AML		
	comp=E,3215μm,0.7s						
GUMA				AML	AML		
	comp=E,2575μm,0.4s						
GUMA				AML	AML		
	comp=N,2920μm,0.5s						
GUMA				AML	AML		
	comp=N,3360μm,0.6s						
SMA1	**SAN MARTINO**	**0.31**	**140**	P	Pg	10 58 34.5	+0.5
T1243	**Rocca Santa Ma**	**0.33**	**122**	P	Pg	10 58 34.7	+0.3
T1243				S	Sb	10 58 40.2	-1.0
ASSB	**Assisi San Ben**	**0.34**	**300**	P	Pg	10 58 34.7	+0.3
ASSB				S	Sb	10 58 40.2	-1.2
ARRO	**Arrone**	**0.36**	**217**	P	Pg	10 58 35.5	+0.7
ARRO				AML	AML		
	comp=E,518μm,0.2s						
ARRO				AML	AML		
	comp=N,406μm,1.2s						
ARRO				AML	AML		
	comp=E,517μm,0.2s						
T1211	**Morro Reatino**	**0.37**	**204**	P	Pg	10 58 35.6	+0.6
T1211				S	Sb	10 58 41.7	-0.6
RM33	**Pellescritta (**	**0.38**	**163**	P	Pg	10 58 35.7	+0.5
RM33				AML	AML		
	comp=E,539μm,1.0s						
RM33				AML	AML		
	comp=N,598μm,0.9s						
RM33				AML	AML		
	comp=E,480μm,0.9s						
RM33				AML	AML		
	comp=N,553μm,0.9s						
SNTG	**Esanatoglia**	**0.39**	**347**	P	Pg	10 58 35.8	+0.4
SNTG				AML	AML		
	comp=E,293μm,0.5s						
SNTG				AML	AML		
	comp=N,350μm,0.4s						
SNTG				AML	AML		
	comp=N,349μm,0.4s						
CAMP	**Campotosto**	**0.42**	**143**	P	Pg	10 58 36.2	+0.2
T1246	**Crognaleto (TE**	**0.43**	**132**	P	Pg	10 58 36.3	+0.2
ATCC	**AVT- Casa Cast**	**0.44**	**315**	P	Pg	10 58 36.6	+0.3
ATCC				AML	AML		
	comp=E,306μm,0.4s						
ATCC				AML	AML		
	comp=E,306μm,0.4s						
ATCC				AML	AML		
	comp=N,344μm,0.9s						
CESX	**Cesi**	**0.44**	**234**	P	Pg	10 58 36.5	+0.2
CESX				S	Sb	10 58 43.8	-0.4
CESX				AML	AML		
	comp=E,330μm,1.3s						
CESX				AML	AML		
	comp=N,538μm,0.3s						
EL6	**Elcito**	**0.46**	**4**	⇓P	Pg	10 58 37.0	+0.3
T1247	**Pizzolo (AQ)**	**0.46**	**158**	S	Sb	10 58 45.0	+0.1
TERO	**Teramo**	**0.47**	**122**	P	Pg	10 58 37.0	+0.2
TERO				AML	AML		
	comp=E,726μm,1.1s						
TERO				AML	AML		
	comp=N,916μm,0.4s						
TERO				AML	AML		
	comp=N,952μm,0.4s						
TERO				AML	AML		
	comp=N,953μm,0.4s						
TERO				AML	AML		
	comp=E,739μm,1.1s						
FOSV	**Fossato di Vic**	**0.48**	**333**	S	Sg	10 58 44.0	+0.7
GIGS	**Gran Sasso**	**0.56**	**138**	⇓P	Pg	10 58 39.0	+0.4
GIGS				AML	AML		
	comp=E,85μm,1.1s						
GIGS				AML	AML		
	comp=E,84μm,1.1s						
GIGS				AML	AML		
	comp=N,83μm,0.4s						
FIAM	**Fiamignano**	**0.60**	**176**	S	Sb	10 58 49.0	0.0
ARVD	**Arcevia**	**0.63**	**352**	S	Sb	10 58 49.0	-0.7
PP3	**Marolino**	**0.65**	**38**	S	Sb	10 58 51.0	+1.0
FRON	**Frontone**	**0.69**	**339**	S	Sb	10 58 52.0	+0.6
VCEL	**Villa Celiera**	**0.75**	**129**	⇑P	Pg	10 58 42.3	+0.2

*IDC **31** 11:03:03.8±6.7, 16°.96S×70°.22W, h143km±36km, mb3.8/2, mbtmp4.1/3, Error ellipse: s-maj=154.8km s-min=69.4km az=163.0*

ISC 31 11:02:59.4±1.6, 17°.42S±0°.09×70°.5W±0°.1, h123km±10km, n12, σ1°.21/20, 2C-1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**0.95**	**173**	⇑*i*P	**Pn**	**11 03 22.0**	**+0.8**
AP01				*e*S	**Sn**	**11 03 37.8**	**+0.1**
AP01				IAML		11 03 38.6	
	comp=N,7μm,0.3s						
PB12	**IPOC Station P**	**1.19**	**174**	⇑*i*P	**Pn**	**11 03 24.3**	**+0.6**
PB12				*e*S	**Sn**	**11 03 42.0**	**-0.2**
PB12				IAML		11 03 42.5	
	comp=E,784nm,0.3s						
PB16	**IPOC Station P**	**1.29**	**135**	⇓*e*P	**Pn**	**11 03 25.5**	**+0.3**
PB16				*e*S	**Sn**	**11 03 43.6**	**-1.1**
PB16				IAML		11 03 46.6	
	comp=N,413nm,0.6s						
LPAZ	**La Paz**	**2.50**	**64**	P	**Pn**	**11 03 40.5**	**+0.6**
	comp=N,34nm,0.5s,baz=251,slow=8.5,SNR=137						
LPAZ				S	**Sn**	**11 04 09.0**	**-1.8**
	comp=N,40nm,0.6s,baz=158,slow=25,SNR=20						
LPAZ	**La Paz**	**2.50**	**64**	*e*P	**Pn**	**11 03 40.4**	**+0.6**
GO01	**Chusmiza**	**2.54**	**152**	*e*P	**Pn**	**11 03 41.9**	**+1.7**
GO01				*e*S	**Sn**	**11 04 12.1**	**+0.5**
GO01				IAML		11 04 16.0	
	comp=E,411nm,0.1s						
TA02	**Huaiquique**	**2.85**	**174**	*e*P	**Pn**	**11 03 44.1**	**+0.3**
TA02				*e*S	**Sn**	**11 04 16.2**	**-1.9**
PB08	**IPOC Station P**	**2.98**	**156**	*e*P	**Pn**	**11 03 47.2**	**+1.4**
PB08				*e*S	**Sn**	**11 04 20.7**	**-0.9**
TA01	**Diego Aracena**	**3.14**	**175**	*e*P	**Pn**	**11 03 48.0**	**+0.4**
TA01				*e*S	**Sn**	**11 04 22.1**	**-2.7**
PATCX	**Punta Patache**	**3.40**	**175**	*e*P	**Pn**	**11 03 51.3**	**+0.3**
DBIC	**Dimbokro**	**69.06**	**76**	P	**P**	**11 13 52.6**	**+0.1**
	comp=E,1.3nm,0.5s,baz=247,slow=5.0,SNR=4.2						
	comp=E,1.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.42**	**72**	P	**P**	**11 14 41.8**	**+0.2**
	comp=E,1.1nm,0.4s,baz=255,slow=5.8,SNR=9.8						
	comp=E,1.1nm,0.4s						

*PRU **31** 11:03:05.2±0.0, 42°.65N×13°.73E, h10km*
*ROM **31** 11:03:06.0±0.0, 42°.773N±0°.002×13°.077E±0°.004, h10km, ML3.3/8, Error ellipse: s-maj=0.2km s-min=0.1km az=254.0*

ISC 31 11:03:06.3±0.8, 42°.78N±0°.02×13°.08E±0°.02, h16km±5km, n66, σ1°.20/84, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.12**	**339**	P	**Pg**	**11 03 09.5**	**-0.5**
T1216				S	**Sg**	**11 03 11.8**	**-0.5**
T1216				AML	AML		
	comp=E,25450μm,0.7s						
T1216				AML	AML		
	comp=E,25400μm,0.7s						
T1216				AML	AML		
	comp=N,40500μm,0.7s						
T1216				AML	AML		
	comp=E,25350μm,0.7s						
T1217	**Poggiodomo (PG**	**0.13**	**239**	P	**Pg**	**11 03 09.6**	**-0.5**
T1217				AML	AML		
	comp=E,17450μm,1.4s						
T1217				AML	AML		
	comp=N,20450μm,0.7s						
T1217				AML	AML		
	comp=E,17500μm,1.4s						
T1217				AML	AML		
	comp=N,20450μm,0.7s						
T1217				AML	AML		
	comp=N,19900μm,0.7s						
T1217				AML	AML		
	comp=E,17550μm,0.7s						
T1215	**Vallo di Nera,**	**0.16**	**279**	P	**Pg**	**11 03 10.0**	**-0.4**
T1215				S	**Sg**	**11 03 12.8**	**-0.3**
T1215				AML	AML		
	comp=E,11650μm,1.5s						
T1215				AML	AML		
	comp=E,12000μm,1.6s						
T1215				AML	AML		
	comp=N,19600μm,0.3s						
T1215				AML	AML		
	comp=E,11950μm,1.6s						
T1215				AML	AML		
	comp=E,11650μm,1.5s						
T1215				AML	AML		
	comp=E,11990μm,1.6s						
T1215				AML	AML		
	comp=N,19650μm,0.3s						
T1215				AML	AML		
	comp=N,19750μm,0.3s						
T1201	**Domo (RI)**	**0.17**	**133**	P	**Pg**	**11 03 10.7**	**0.0**
LNSS	**Leonessa**	**0.18**	**189**	P	**Pg**	**11 03 10.4**	**-0.3**
LNSS				S	**Sg**	**11 03 13.5**	**-0.1**
LNSS				AML	AML		
	comp=E,39000μm,0.2s						
LNSS				AML	AML		
	comp=N,60900μm,0.5s						
FEMA	**Monte Fema**	**0.19**	**354**	P	**Pg**	**11 03 10.6**	**-0.3**
FEMA				S	**Sg**	**11 03 14.0**	**0.0**
T1204	**Amatrice, Fraz**	**0.20**	**120**	P	**Pg**	**11 03 11.0**	**-0.1**
T1204				S	**Sb**	**11 03 14.9**	**-0.5**
MMO1	**Montemonaco**	**0.22**	**56**	P	**Pg**	**11 03 11.2**	**-0.1**
MMO1				S	**Sg**	**11 03 15.0**	**+0.2**
SMA1	**SAN MARTINO**	**0.24**	**128**	P	**Pg**	**11 03 11.7**	**0.0**
T1256	**Bolognola (MC)**	**0.25**	**25**	P	**Pg**	**11 03 11.8**	**-0.2**
T1256				S	**Sg**	**11 03 16.2**	**+0.4**
FDMO	**Fiordimonte**	**0.26**	**1**	P	**Pg**	**11 03 11.8**	**-0.2**
FDMO				S	**Sg**	**11 03 16.1**	**+0.3**
AM05	**Amandola Campo**	**0.28**	**45**	P	**Pg**	**11 03 12.4**	**0.0**
T1243	**Rocca Santa Ma**	**0.28**	**106**	P	**Pg**	**11 03 12.1**	**-0.3**
T1243				S	**Sg**	**11 03 16.9**	**+0.3**
RM33	**Pellescritta (**	**0.29**	**159**	P	**Pg**	**11 03 12.2**	**-0.2**
RM33				S	**Sg**	**11 03 16.9**	**+0.3**
T1211	**Morro Reatino**	**0.29**	**214**	P	**Pg**	**11 03 12.3**	**-0.2**
T1211				S	**Sb**	**11 03 17.5**	**-0.5**
ARRO	**Arrone**	**0.30**	**229**	P	**Pg**	**11 03 12.5**	**-0.2**
CSP1	**Cessapalombo**	**0.33**	**16**	P	**Pg**	**11 03 13.0**	**-0.1**
GUMA	**Gualdo di Mace**	**0.34**	**33**	P	**Pg**	**11 03 13.6**	**+0.2**
GUMA				S	**Sb**	**11 03 19.6**	**+0.3**
CAMP	**Campotosto**	**0.34**	**135**	P	**Pg**	**11 03 13.2**	**-0.2**
T1246	**Crognaleto (TE**	**0.36**	**122**	P	**Pg**	**11 03 13.6**	**-0.2**
T1246				S	**Sb**	**11 03 19.4**	**-0.5**
T1247	**Pizzolo (AQ)**	**0.37**	**154**	P	**Pg**	**11 03 13.8**	**-0.1**
SEF1	**Sefro**	**0.38**	**345**	P	**Pg**	**11 03 14.0**	**-0.1**
CESX	**Cesi**	**0.40**	**246**	P	**Pg**	**11 03 14.0**	**-0.4**
CESX				S	**Sb**	**11 03 21.0**	**0.0**
ASSB	**Assisi San Ben**	**0.41**	**311**	P	**Pg**	**11 03 14.5**	**-0.1**
PIO1	**Pioraco**	**0.41**	**350**	P	**Pg**	**11 03 14.5**	**-0.1**
TERO	**Teramo**	**0.42**	**112**	P	**Pg**	**11 03 14.5**	**-0.2**
TERO				S	**Sb**	**11 03 21.1**	**-0.3**
MDAR	**Monte D'Aria**	**0.42**	**6**	P	**Pg**	**11 03 14.7**	**0.0**
FIU1	**Fiuminata**	**0.42**	**345**	P	**Pg**	**11 03 14.9**	**0.0**
MNTP	**Montappone**	**0.46**	**38**	S	**Sg**	**11 03 16.0**	**-5.8**
GAG1	**Gagliole**	**0.46**	**359**	P	**Pg**	**11 03 15.8**	**+0.2**
OFFI	**Offida**	**0.47**	**70**	P	**Pb**	**11 03 16.5**	**+0.3**
AQU	**L'Aquila**	**0.49**	**150**	P	**Pg**	**11 03 15.9**	**0.0**
GIGS	**Gran Sasso**	**0.49**	**132**	P	**Pg**	**11 03 15.5**	**-0.5**
SNTG	**Esanatoglia**	**0.49**	**348**	P	**Pg**	**11 03 15.8**	**-0.2**
SNTG				S	**Sb**	**11 03 23.6**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.52**	**322**	P	**Pg**	**11 03 16.3**	**-0.3**
EL6	**Elcito**	**0.55**	**2**	P	**Pg**	**11 03 17.1**	**-0.1**
TRE1	**Treia**	**0.56**	**18**	P	**Pb**	**11 03 17.8**	**0.0**
FOSV	**Fossato di Vic**	**0.57**	**336**	P	**Pg**	**11 03 17.4**	**-0.1**
MMUR	**Monte Murano**	**0.67**	**355**	P	**Pg**	**11 03 19.5**	**+0.1**
ATTE	**AVT- Monte Tez**	**0.68**	**309**	P	**Pg**	**11 03 19.0**	**-0.6**
ATFO	**Monte Foce - G**	**0.70**	**328**	P	**Pg**	**11 03 19.9**	**0.0**
ARVD	**Arcevia**	**0.73**	**352**	P	**Pg**	**11 03 20.5**	**0.0**
ATVO	**AVT- Monte Val**	**0.78**	**321**	P	**Pb**	**11 03 21.0**	**-0.5**
ATVO				AML	AML		
	comp=E,1080μm,0.6s						
ATVO				AML	AML		
	comp=N,924μm,0.7s						
MPAG	**Monte Paganucc**	**0.88**	**345**	P	**Pb**	**11 03 22.8**	**-0.5**
RUFI	**Rufina**	**1.56**	**313**	P	**Pb**	**11 03 34.6**	**-0.2**
LMD	**Lutirano**	**1.64**	**323**	P	**Pb**	**11 03 36.2**	**+0.1**
MTCR	**Monte La Croce**	**1.96**	**310**	P	**Pn**	**11 03 39.6**	**+0.5**
MAIM	**Mastiano**	**2.20**	**302**	P	**Pn**	**11 03 43.2**	**+1.0**
SARO	**Sassorosso**	**2.40**	**307**	P	**Pn**	**11 03 44.9**	**-0.2**
PLMA	**Palmaria, Port**	**2.67**	**300**	P	**Pn**	**11 03 49.5**	**+0.8**
MYKA	**Terra Mystica**	**3.87**	**6**	*e*Pn	**Pn**	**11 04 06.6**	**+1.3**
	comp=N,3.2nm,0.2s						
OBKA	**Obir**	**3.88**	**15**	*e*Pn	**Pn**	**11 04 06.2**	**+0.9**
	comp=N,2.1nm,0.3s						
ABTA	**Abfaltersbach**	**3.99**	**354**	*e*Pn	**Pn**	**11 04 09.2**	**+2.3**
	comp=N,4.9nm,0.3s,SNR=14						
FETA	**Feichten**	**4.56**	**339**	*e*Pn	**Pn**	**11 04 17.9**	**+3.2**
	comp=N,3.6nm,0.5s						
WTTA	**Wattenberg**	**4.60**	**348**	*i* Pn	**Pn**	**11 04 18.5**	**+3.2**
	comp=N,1.9nm,0.2s						
SQTA	**Sankt Quirin**	**4.64**	**344**	*e*Pn	**Pn**	**11 04 19.7**	**+3.9**
	comp=N,2.8nm,0.2s						
WATA	**Walderalm**	**4.68**	**347**	*i* Pn	**Pn**	**11 04 19.6**	**+3.2**
	comp=N,2.4nm,0.3s						
MOTA	**Moosalm**	**4.78**	**344**	*e*Pn	**Pn**	**11 04 20.4**	**+2.7**
	comp=N,0.7nm,0.1s						
ARSA	**Arzberg**	**4.80**	**20**	*e*Pn	**Pn**	**11 04 18.9**	**+1.0**
	comp=N,0.5nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.93**	**4**	*e*Pn	**Pn**	**11 04 21.4**	**+1.6**
	comp=N,3.0nm,0.3s						
DAVA	**Damuels**	**5.05**	**334**	*e*Pn	**Pn**	**11 04 23.3**	**+1.9**
	comp=N,1.6nm,0.2s						
MOA	**Molln**	**5.14**	**9**	*e*Pn	**Pn**	**11 04 23.4**	**+0.8**
	comp=N,2.0nm,0.2s						
RONA	**Rosalia, Austr**	**5.42**	**24**	*e*Pn	**Pn**	**11 04 27.7**	**+1.2**
	comp=N,0.4nm,0.1s						
CONA	**Conrad Observa**	**5.51**	**20**	*i* Pn	**Pn**	**11 04 29.1**	**+1.3**
	comp=N,1.4nm,0.2s						
CKRC	**Cesky Krumlov**	**6.10**	**8**	*e*PN	**Pn**	**11 04 35.8**	**0.0**
CKRC				*e*SN	**Sn**	**11 05 45.0**	**-0.3**
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN	**Pn**	**11 04 39.7**	**+0.3**
KHC				*e*SN	**Sn**	**11 05 49.8**	**-2.0**

ROM 31 11:15:13.6±0.1, 42°.731N±0°.004×13°.160E±0°.004, h14km±1km, ML2.3/12, 5C-7D, Error ellipse: s-maj=0.4km s-min=0.1km az=6.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.13**	**115**	P	Pb	11 15 17.6	-0.3
T1204				S	Sg	11 15 20.2	+0.4
LNSS	**Leonessa**	**0.15**	**215**	⇓P	Pg	11 15 17.9	+0.3
LNSS				S	Sg	11 15 20.8	+0.5
LNSS				AML	AML		
	comp=E,464μm,0.3s						
LNSS				AML	AML		
	comp=N,1285μm,1.5s						
SMA1	**SAN MARTINO**	**0.16**	**128**	P	Pb	11 15 18.2	-0.3
SMA1				S	Sg	11 15 21.1	+0.6
SMA1				AML	AML		
	comp=E,2160μm,0.3s						
SMA1				AML	AML		
	comp=N,1250μm,0.4s						
T1217	**Poggiodomo (PG**	**0.17**	**264**	P	Pg	11 15 18.1	+0.2
T1217				S	Sg	11 15 21.0	+0.4
T1217				AML	AML		
	comp=E,1098μm,0.2s						
T1217				AML	AML		
	comp=N,1835μm,0.5s						
T1216	**Preci, Frazion**	**0.19**	**327**	⇑P	Pg	11 15 18.2	+0.1
T1216				AML	AML		
	comp=E,1598μm,0.4s						
T1216				AML	AML		
	comp=N,1760μm,0.3s						
T1216				AML	AML		
	comp=N,9020μm,0.6s						
T1216				AML	AML		
	comp=E,14350μm,0.4s						
MMO1	**Montemonaco**	**0.21**	**36**	⇓P	Pb	11 15 19.1	-0.2
T1243	**Rocca Santa Ma**	**0.21**	**99**	⇓P	Pg	11 15 18.9	+0.4
RM33	**Pellescritta (**	**0.23**	**170**	P	Pg	11 15 19.0	+0.3
RM33				S	Sg	11 15 22.6	+0.5
RM33				AML	AML		
	comp=E,281μm,0.3s						
RM33				AML	AML		
	comp=E,657μm,0.9s						
RM33				AML	AML		
	comp=N,586μm,1.1s						
T1215	**Vallo di Nera,**	**0.23**	**288**	⇓P	Pb	11 15 19.1	-0.4
T1215				S	Sb	11 15 23.0	-0.5
T1215				AML	AML		
	comp=E,1155μm,0.2s						
T1215				AML	AML		
	comp=E,1192μm,0.3s						
T1215				AML	AML		
	comp=N,976μm,0.7s						
T1215				AML	AML		
	comp=N,978μm,0.7s						
T1241	**Roccafluvione,**	**0.24**	**58**	⇑P	Pb	11 15 19.5	-0.2
T1241				AML	AML		
	comp=E,1048μm,0.3s						
T1241				AML	AML		
	comp=N,1030μm,0.3s						
T1241				AML	AML		
	comp=E,3100μm,0.4s						
T1241				AML	AML		
	comp=E,3260μm,0.4s						
T1241				AML	AML		
	comp=N,2960μm,0.8s						
T1241				AML	AML		
	comp=N,2935μm,0.8s						
FEMA	**Monte Fema**	**0.24**	**341**	⇓P	Pg	11 15 18.8	-0.2
FEMA				AML	AML		
	comp=E,1600μm,1.6s						
FEMA				AML	AML		
	comp=N,1560μm,0.9s						
FEMA				AML	AML		
	comp=E,7445μm,0.4s						
FEMA				AML	AML		
	comp=N,6315μm,0.5s						
CAMP	**Campotosto**	**0.27**	**137**	⇑P	Pg	11 15 19.7	+0.3
CAMP				S	Sg	11 15 24.0	+0.7
CAMP				AML	AML		
	comp=E,302μm,0.9s						
CAMP				AML	AML		
	comp=N,348μm,0.9s						
T1211	**Morro Reatino**	**0.30**	**229**	P	Pg	11 15 20.3	+0.4
T1211				S	Sb	11 15 25.3	-0.3
T1211				AML	AML		
	comp=E,416μm,0.1s						
T1211				AML	AML		
	comp=N,344μm,0.1s						
FDMO	**Fiordimonte**	**0.31**	**350**	⇑P	Pg	11 15 20.0	-0.1
FDMO				AML	AML		
	comp=E,2560μm,1.5s						
FDMO				AML	AML		
	comp=N,3295μm,0.1s						
TERO	**Teramo**	**0.34**	**108**	⇓P	Pg	11 15 21.0	+0.3
TERO				S	Sg	11 15 26.2	+0.7
TERO				AML	AML		
	comp=E,1012μm,0.3s						
TERO				AML	AML		
	comp=N,1830μm,0.4s						
GIGS	**Gran Sasso**	**0.41**	**133**	P	Pg	11 15 22.1	+0.2
GIGS				S	Sb	11 15 28.3	-0.6
GIGS				AML	AML		
	comp=E,112μm,1.4s						
GIGS				AML	AML		
	comp=N,98μm,1.5s						
FIAM	**Fiamignano**	**0.46**	**184**	⇓P	Pg	11 15 23.0	+0.1
FIAM				AML	AML		
	comp=N,151μm,0.4s						
FIAM				AML	AML		
	comp=E,192μm,1.6s						
FAGN	**Fagnano**	**0.56**	**146**	S	Sb	11 15 34.0	+0.9
LPEL	**Lama dei Pelig**	**1.02**	**132**	S	Sn	11 15 48.0	+0.3
VIVA	**Pratoni del Vi**	**1.02**	**197**	⇑P	Pn	11 15 35.3	+1.8

*SJA **31** 11:15:44.6±0.7, 33°.72S×72°.59W, h22km±2km, ML4.9, MW5.0*

*MOS **31** 11:15:45.8±1.0, 33°.79S×72°.29W, h10km, mb5.2/10, Error ellipse: s-maj=13.4km s-min=8.7km az=88.7*

*NEIC **31** 11:15:45.9, 33°.76S×72°.58W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.56; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-1.81; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.06; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.75000×10^{16} NP1:ϕ_s172.80000°, δ51.46000°, λ78.53000°. NP2:ϕ_s10.83000°, δ39.95000°, λ104.01000°. Principal axes: T 1.6330, Plg79.0000°, Azm34.0000°; N 0.2091, Plg9.0000°, Azm180.0000°; P -1.8420, Plg6.0000°, Azm271.0000°;*

*GUC **31** 11:15:46.9±0.7, 33°.72S×72°.53W, h35km±3km, ML4.8*

*GCMT **31** 11:15:47.9±0.4, 33°.74S±0°.03×72°.68W±0°.03, h30km±1km, MW5.0/70, Moment Tensor Solution. s24,c27; s70,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.49±.27; $M_{\theta\theta}$-0.41±.15; $M_{\phi\phi}$-4.08±.19; $M_{r\theta}$-0.58±.20; $M_{\theta\phi}$-0.75±.09; $M_{\phi r}$-1.48±.25; Best double couple: $M_0$4.63800×10^{16} NP1:ϕ_s194.00000°, δ55.00000°, λ94.00000°. NP2: ϕ_s8.00000°, δ35.00000°, λ85.00000°. Principal axes: T 4.7770, Plg80.0000°, Azm119.0000°; N -0.2840, Plg3.0000°, Azm12.0000°; P -4.4980, Plg10.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 11:15:47.2±2.2, 33°.76S±0°.04×72°.51W±0°.04, h9km±3km, mb5.1/58, Mwr4.8/54, Mww4.9, Mwr4.9(GUC) Error ellipse: s-maj=6.4km s-min=5.2km az=162.0*

*IDC **31** 11:15:50.7±4.9, 33°.76S×72°.23W, h33km±36km, mb4.4/13, mbtmp4.6/16, ML4.7/3, MS4.2/37, Error ellipse: s-maj=22.1km s-min=14.6km az=81.0*

*NEIC **31** 11:15:51, 33°.76S×72°.61W, h26km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.03; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-2.16; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.09; $M_{\phi r}$-2.11; Fault plane solution: $M_0$2.98000×10^{16} NP1:ϕ_s4.00000°, δ22.00000°, λ92.00000°. NP2:ϕ_s181.00000°, δ68.00000°, λ89.00000°. Principal axes: T 2.9049, Plg67.0000°, Azm89.0000°; N 0.1377, Plg1.0000°, Azm181.0000°; P -3.0426, Plg23.0000°, Azm272.0000°;*

ISC 31 11:15:45.8±1.2, 33°.72S±0°.03×72°.54W±0°.04, h8km±6km, n275, σ1°.32/280, mb5.1/47, MS4.2/40, 29C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.77**	**86**		**Pb**	**11 16 02.0**	**+0.5**
VA05				Sg	**Sn**	**11 16 13.2**	**-1.6**
VA05	**Santo Domingo**	**0.77**	**86**	⇓*i*P	**Pb**	**11 16 02.0**	**+0.5**
VA05				*e*S	**Sn**	**11 16 13.3**	**-1.5**
VA05				IAML		11 16 14.9	
	comp=E,127μm,0.4s						
BO03	**Pichilemu**	**0.91**	**148**	⇑*i*P	**Pb**	**11 16 03.6**	**-0.3**
BO03				*i* S	**Sg**	**11 16 15.7**	**+0.5**
BO03				IAML		11 16 17.9	
	comp=E,45μm,0.7s						
MT01	**Popeta**	**1.08**	**98**		**Pb**	**11 16 06.4**	**-0.5**
MT01	**Popeta**	**1.08**	**98**	⇑*i*P	**Pb**	**11 16 06.3**	**-0.5**
MT01				*i* S	**Sg**	**11 16 21.4**	**+0.8**
MT01	**Popeta**	**1.08**	**98**	*e*P	**Pb**	**11 16 06.0**	**-0.8**
MT01				*e*P	**Pb**	**11 16 06.3**	**-0.5**
MT01				*e*S	**Sn**	**11 16 22.0**	**-0.5**
MT01				IAML		11 16 23.4	
	comp=Z,20μm,0.6s						
MT02	**Curacav**	**1.26**	**69**	⇑*i*P	**Pn**	**11 16 09.0**	**-0.6**
MT02				*e*S	**Sn**	**11 16 26.3**	**-0.5**
MT02	**Curacav**	**1.26**	**69**	*e*P	**Pn**	**11 16 09.1**	**-0.6**
MT02				IAML		11 16 31.4	
	comp=Z,14μm,1.0s						
MT09	**Talagante**	**1.29**	**93**	⇑*i*P	**Pn**	**11 16 09.3**	**-1.0**
MT09				*e*S	**Sb**	**11 16 26.3**	**-0.9**
BO01	**Tunca**	**1.38**	**120**	Pn	**Pn**	**11 16 10.4**	**-1.0**
BO01	**Tunca**	**1.38**	**120**	⇑*i*P	**Pn**	**11 16 10.2**	**-1.2**
BO01	**Tunca**	**1.38**	**120**	*e*P	**Pn**	**11

ROC1 **El Roble** 1.47 60 *eP* Pn 11 16 13.0 +0.1
ROCH **El Roble** 1.48 60⇑ *iP* Pn 11 16 12.7 -0.2
ROCH *eS* Sb 11 16 32.5 -0.2
ROCH IAML 11 16 45.0
comp=N,22µm,0.5s
MT05 **Renca** 1.54 78⇑ *iP* Pn 11 16 13.3 -0.3
MT05 *eS* Sb 11 16 34.7 +0.4
MT05 IAML 11 16 47.6
comp=E,16µm,0.4s
MT05 **Renca** 1.54 78 *eP* Pn 11 16 13.8 +0.2
MT05 IAML 11 16 41.5
comp=Z,11µm,0.9s
VA06 **Catapilco** 1.55 42⇑ *iP* Pn 11 16 13.3 -0.4
VA06 *i* S Sn 11 16 33.3 -0.8
VA06 IAML 11 16 46.3
comp=N,43µm,0.4s
PEL **Peldehue** 1.65 70 P Pn 11 16 15.0 -0.2
PEL **Peldehue** 1.65 70⇑ *iP* Pn 11 16 15.5 +0.4
PEL *eS* Sb 11 16 36.7 -0.9
PEL IAML 11 16 52.4
comp=E,16µm,0.5s
PEL **Peldehue** 1.65 70 *eP* Pn 11 16 15.0 -0.2
PEL *eS* Sb 11 16 36.8 -0.8
MT03 **Universidad Ad** 1.71 83⇑ *iP* Pn 11 16 15.9 0.0
MT03 *eS* Sn 11 16 37.8 -0.3
MT03 IAML 11 16 51.8
comp=E,17µm,0.5s
MT03 **Universidad Ad** 1.71 83 *eP* Pn 11 16 16.0 0.0
MT03 *eS* Sb 11 16 38.8 -0.4
MT03 IAML 11 16 45.6
comp=Z,13µm,1.1s
BO02 **Sierra Bellavi** 1.81 127⇑ *iP* Pn 11 16 17.1 -0.2
BO02 **Sierra Bellavi** 1.81 127 *eP* Pn 11 16 17.5 +0.1
BO02 *eS* Sg 11 16 48.2 +4.3
BO02 IAML 11 16 50.8
comp=Z,18µm,0.6s
FCH **Farellones** 1.92 79⇑ *iP* Pn 11 16 19.4 +0.4
FCH *eS* Sb 11 16 44.1 -1.3
VA03 **San Esteban** 1.92 61⇑ *iP* Pn 11 16 19.1 +0.3
VA03 *eS* Sb 11 16 44.0 -1.2
VA03 IAML 11 17 03.0
comp=N,13µm,0.6s
VA03 **San Esteban** 1.92 61 *eP* Pn 11 16 13.8 -5.1
VA03 *eP* Pb 11 16 19.0 -2.1
VA03 *eS* Sb 11 16 44.3 -1.0
VA03 IAML 11 17 00.2
comp=Z,13µm,0.6s
LMEL **Las Melosas** 1.95 94⇑ *iP* Pn 11 16 19.4 +0.1
ML02 **Panimavida** 2.24 156⇑ *iP* Pn 11 16 23.2 0.0
CO02 **Combarbal** 2.82 28⇑ *iP* Pn 11 16 31.5 +0.8
CO02 **Combarbal** 2.82 28 *eP* Pn 11 16 31.0 -0.3
CO02 *eS* Sn 11 17 06.2 +0.6
CO02 IAML 11 17 24.1
comp=Z,9µm,0.8s
BI05 **Punta Hualpn** 3.07 190 Pn Pn 11 16 33.5 -1.1
BI05 **Punta Hualpn** 3.07 190⇓ *iP* Pn 11 16 33.2 -1.4
CO06 **Fray Jorge** 3.13 14 Pn Pn 11 16 34.8 -0.6
CO06 **Fray Jorge** 3.13 14⇑ *iP* Pn 11 16 34.7 -0.7
CO03 **El Pedregal** 3.27 29 Pn 11 16 37.4 -0.1
CO03 **El Pedregal** 3.27 29⇑ *iP* Pn 11 16 37.9 +0.5
CO03 **El Pedregal** 3.27 29 *eP* Pn 11 16 38.0 +0.5
CO03 *eS* Sg 11 17 28.8 -2.0
CO03 IAML 11 17 44.0
comp=Z,3µm,0.8s
RTLS **Leoncito** 3.33 56 *eP* Pn 11 16 41.0 +2.5
RTLS IAML 11 17 40.8
comp=Z,3µm,1.2s
RFA **San Rafael** 3.53 108 *eP* Pn 11 16 42.0 +0.9
GO04 **Tololo Observa** 3.83 23 Pn Pn 11 16 45.2 -0.1
GO04 **Tololo Observa** 3.83 23 *eP* Pn 11 16 45.0 -0.3
GO04 *eS* Sn 11 17 29.5 -1.1
CO05 **La Serena** 3.95 17⇑ *iP* Pn 11 16 46.2 -0.4
RTLL **Cerro Villicun** 4.18 56 *eP* Pn 11 16 52.0 +2.1
RTLL *eS* Sn 11 17 29.4 -10
CO01 **Juntas del Tor** 4.27 30 *eP* Pn 11 16 52.0 +0.7
CO01 *eS* Sb 11 17 53.3 +0.2
LCO **Las Campanas** 4.95 19 Pn 11 17 00.3 -0.4
LCO **Las Campanas** 4.95 19 P Pn 11 17 00.3 -0.4
LCO **Las Campanas** 4.95 19 *eP* Pn 11 17 00.6 -0.1
LCO *eS* Sn 11 17 58.0 -0.2
LC02 **Puerto Saavedr** 5.11 187 Pn 11 17 01.9 -0.7
AC05 **El Transito** 5.24 22 Pn Pn 11 17 05.0 +0.5
AC05 **El Transito** 5.24 22 *eP* Pn 11 17 04.3 -0.3
AC05 *eS* Sb 11 18 17.3 -3.5
AVFE **Valle Fertil** 5.28 56 *eP* Pn 11 17 06.0 +0.9
AVFE *eS* Sb 11 18 19.8 -2.2
H03S1 **Juan Fernandez** 5.30 267 T T 11 22 31.4
baz=83,slow=74,SNR=1133
H03S3 **Juan Fernandez** 5.31 267 T T 11 22 33.0
baz=83,SNR=1368
H03S2 **Juan Fernandez** 5.32 267 T T 11 22 32.0
baz=83,slow=74,SNR=815
AC04 **Llanos de Chal** 5.54 13 Pn 11 17 08.6 -1.3
LR03 **Panguipulli** 5.91 179 Pn 11 17 13.1 -0.5
GO06 **Curarrehue** 5.92 172 Pn 11 17 13.8 0.0
LR04 **Corral** 6.19 186 Pn 11 17 16.7 -0.8
PLCA **Paso Flores** 7.18 168 Pn Pn 11 17 31.8 +0.7
comp=Z,5.4nm,0.3s,baz=336,slow=11,SNR=129
PLCA LR LR 11 20 22.2
comp=Z,1µm,21.8s,baz=348,slow=38
comp=Z,14nm,0.4s
AC02 **Maricunga** 7.46 24 Pn Pn 11 17 34.8 -0.6
GO02 **Mina Guanaco** 8.90 18 Pn 11 17 52.8 -2.3
TRQA **Tornquist** 9.60 120 Pn Pn 11 18 04.8 +0.5
TRQA **Tornquist** 9.60 120 P Pn 11 18 04.8 +0.5
LVC **Limon Verde** 11.52 17 Pn Pn 11 18 27.2 -3.7
comp=Z,0.9nm,0.3s,baz=254,slow=8.6,SNR=4.8
LVC LR LR 11 23 14.5
comp=Z,1µm,21.4s,baz=216,slow=39
LVC **Limon Verde** 11.52 17 Pn 11 18 26.9 -4.0
LVC **Limon Verde** 11.52 17 P Pn 11 18 26.9 -4.0
CPUP **Villa Florida** 15.08 65 Pn Pn 11 19 17.5 -1.7
comp=Z,0.2nm,0.3s,baz=193,slow=18,SNR=1.9
CPUP LR LR 11 24 52.5
comp=Z,415nm,21.7s,baz=242,slow=36
comp=Z,1.2nm,0.5s
PLTB **Pedras Altas** 16.05 88 Pn 11 19 30.5 -1.4
LPAZ **La Paz** 17.80 14 P P 11 19 55.8 +0.3
comp=Z,1.5nm,0.3s,baz=174,slow=6.8,SNR=64
comp=Z,14nm,0.6s
LPAZ **La Paz** 17.80 14 P P 11 19 55.0 -0.4
ITAB **Concordia** 18.73 75 Pn 11 20 06.1 +0.8
ITAB IAmb IAmb 11 20 08.8
comp=Z,107nm,1.4s
AQDB **Aquidauana** 19.93 53 P 11 20 18.1 0.0
TRCB **Terra Rica** 20.60 63 P P 11 20 25.4 -0.1
EFI **East Falkland** 20.80 154 P P 11 20 26.3 -1.0
EFI IAmb IAmb 11 20 38.5
comp=Z,58nm,0.8s
EFI **East Falkland** 20.80 154 *i* P P 11 20 26.0 -1.3
EFI pmax pmax
comp=Z,28nm,0.7s
NNA **Nana** 21.98 349 P P 11 20 43.7 +3.3
comp=Z,16nm,0.7s,baz=179,slow=9.5,SNR=7.2
NNA LR LR 11 27 32.2
comp=Z,515nm,19.5s,baz=171,slow=32
comp=Z,16nm,0.7s
NNA **Nana** 21.98 349 *ceP* P 11 20 43.3 +2.9
NNA pmax pmax
comp=Z,23nm,0.6s
ATAH **Atahualpa** 27.00 347 LR LR 11 30 56.3
comp=Z,312nm,20.0s,baz=193,slow=33
BDFB **Brasilia** 28.52 57 P P 11 21 41.1 -0.9
comp=Z,22nm,0.5s,baz=237,slow=6.9,SNR=25
BDFB LR LR 11 34 34.5
comp=Z,689nm,21.0s,baz=238,slow=40
comp=Z,22nm,0.5s
MCRA **Macar, Loja** 30.00 345 P P 11 21 56.6 +1.5
MCRA IAmb IAmb 11 22 15.3
comp=Z,28nm,1.7s
PMSA **Palmer Station** 31.52 173 P P 11 22 08.2 +0.3
comp=Z,26nm,0.9s,baz=70,slow=3.1,SNR=3.7
PMSA LR LR 11 35 15.0
comp=Z,520nm,18.1s,baz=321,slow=37
comp=Z,26nm,0.9s
RPN **Rapa Nui** 32.28 272 LR LR 11 32 13.4
comp=Z,435nm,18.3s,baz=137,slow=30
HOPE **Hope Point** 32.57 140 P P 11 22 14.8 -2.5
HOPE **Hope Point** 32.57 140 P P 11 22 14.8 -2.5
HOPE pmax pmax
comp=Z,106nm,1.3s
BBAC **Balboa, Cauca** 35.82 352 *eP* P 11 22 45.9 -0.2
PRAC **Prado** 37.30 356 *eP* P 11 22 59.4 +0.9
YOTC **Yotoco, Valle** 37.67 354 *eP* P 11 23 03.2 +1.4

CHIC **Chingaza** 38.16 358 *eP* P 11 23 12.8 +6.6
GUY2C **Guyana, Caldas** 38.82 356 *eP* P 11 23 16.6 +4.8
RUSC **La Rusia** 39.40 359 *eP* P 11 23 19.5 +2.8
CBOC **Ciudad Bolivar** 39.50 355 *eP* P 11 23 19.5 +2.3
PTBC **PUERTO BERRIO,** 40.08 357 *eP* P 11 23 22.4 +0.6
SDV **Santo Domingo** 42.41 3 LR LR 11 42 22.6
comp=Z,276nm,20.1s,baz=250,slow=38
BAUV **El Baul** 42.64 7 P P 11 23 43.2 +0.4
BAUV IAmb IAmb 11 23 45.2
comp=Z,43nm,1.2s
MDP **Montagnes des** 42.96 30 LR LR 11 42 53.2
comp=Z,622nm,18.8s,baz=184,slow=38
RCBR **Riachuelo** 43.85 59 LR LR 11 42 57.0
comp=Z,439nm,19.2s,baz=9.0,slow=37
BELA **Belgrano 2** 47.23 170 P P 11 24 19.8 +1.1
BELA IAmb IAmb 11 24 33.7
comp=Z,10nm,0.8s
VNA3 **Neumayer Olymp** 49.78 158 P P 11 24 39.5 +1.0
VNA2 **Neumayer--Watz** 50.43 157 P P 11 24 44.3 +0.9
baz=270,slow=8.0
MLPR **Magueyes Islan** 51.66 7 P P 11 24 53.6 +0.5
CELP **Cerrillos** 51.81 7 P P 11 24 55.0 +0.7
CELP IAmb IAmb 11 25 06.9
comp=Z,34nm,0.8s
SNAA **Sanae** 52.00 158 P P 11 24 56.1 +0.8
SNAA **Sanae** 52.00 158 LR LR 11 47 20.3
comp=Z,190nm,18.2s,baz=8.0,slow=36
SNAA **Sanae** 52.00 158 P P 11 24 56.0 +0.7
SNAA IAmb IAmb 11 25 05.0
comp=Z,17nm,0.8s
SNAA **Sanae** 52.00 158⇓ *iP* P 11 24 56.0 +0.8
SNAA **Sanae** 52.00 158 *ceP* P 11 24 56.2 +0.9
SNAA pmax pmax
comp=Z,25nm,0.9s
CBYP **Canovanas** 52.09 8 P P 11 24 56.1 -0.3
CBYP IAmb IAmb 11 25 07.7
comp=Z,31nm,1.2s
ANWB **Willy Bob** 52.12 13 P P 11 24 55.9 -0.7
TROLL **Troll, Antarti** 53.71 158 P P 11 25 08.7 +0.8
CMIG **Matias Romero** 54.84 334 LR LR 11 43 57.5
comp=Z,100nm,19.0s,baz=146,slow=31
QSPA **South Pole Qui** 56.52 180 LR LR 11 48 22.4
comp=Z,163nm,19.7s,baz=160,slow=35
QSPA **South Pole Qui** 56.52 180 P P 11 25 29.2 +0.8
QSPA IAmb IAmb 11 25 40.1
comp=Z,21nm,0.9s
NVL **N'lazarevskaya** 56.74 157 *eP* P 11 25 39.3 +10
NVL *eS* S 11 33 27.6 +5.3
NVL pmax pmax
comp=Z,17nm,0.7s
VNDA **Vanda** 64.30 191 P P 11 26 22.9 +1.7
comp=Z,0.8nm,0.9s,baz=148,slow=2.5,SNR=4.1
comp=Z,0.8nm,0.9s
VNDA **Vanda** 64.30 191 P P 11 26 22.3 +1.2
VNDA IAmb IAmb 11 26 42.1
comp=Z,22nm,1.9s
VNDA **Vanda** 64.30 191 P P 11 26 22.3 +1.2
VNDA pmax pmax
comp=Z,22nm,2.0s
TAOE **Nuku Hiva Isla** 66.53 275 *eS* S 11 35 28.0 -0.1
comp=Z,97nm,23.0s
TAOE **Nuku Hiva Isla** 66.53 275 *e*LR LR 11 46 37.7
comp=Z,145nm,22.6s
TBI **Tubuai** 66.98 257 *eS* S 11 35 33.6 +0.5
comp=Z,326nm,25.0s
TBI **Tubuai** 66.98 257 *e*LR LR 11 46 49.5
comp=Z,4µm,24.5s
TBI *e*LR LR 11 46 49.9
comp=Z,1µm,27.2s
HKT **Hockley** 67.05 338 *i* P P 11 26 44.1 +4.8
LPIG **La Paz** 67.81 323 LR LR 11 49 18.2
comp=Z,50nm,20.2s,baz=180,slow=30
TXAR **Lajitas Array** 69.28 331 P P 11 26 55.5 +1.9
comp=Z,0.9nm,0.5s,baz=158,slow=8.6,SNR=18
TXAR LR LR 11 52 49.2
comp=Z,183nm,19.0s,baz=148,slow=32
comp=Z,0.9nm,0.5s
TX31 **Lajitas Ar. Si** 69.29 331 P P 11 26 55.1 +1.5
TX31 IAmb IAmb 11 27 15.9
comp=Z,18nm,0.9s
TX32 **Lajitas Array** 69.29 331 P P 11 26 55.8 +2.2
CPCT **Cooper Cave** 69.72 350 P P 11 26 57.5 +1.5
CPCT IAmb IAmb 11 27 03.4
comp=Z,10nm,1.0s
PPT2 **Papeete2** 69.86 262 *eS* S 11 36 07.4 -0.4
comp=Z,121nm,22.5s
PPT2 **Papeete2** 69.86 262 *e*LR LR 11 48 09.6
comp=Z,171nm,26.0s
PPT2 *e*LR LR 11 48 09.8
comp=Z,221nm,26.5s
PLAL **Pickwick Lake** 69.88 346 P P 11 26 57.7 +0.7
PLAL IAmb IAmb 11 27 15.4
comp=Z,7.6nm,0.8s
WVT **Waverly** 70.94 347 P P 11 27 04.5 +1.0
WVT **Waverly** 70.94 347 P P 11 27 04.5 +1.0
WVT pmax pmax
comp=Z,30nm,1.0s
LCAR **Lake Charles** 71.57 344 P P 11 27 08.0 +0.7
LCAR IAmb IAmb 11 27 20.0
comp=Z,15nm,1.0s
FCAR **Ozark Folk Cen** 71.63 343 P P 11 27 07.3 -0.4
FCAR IAmb IAmb 11 27 20.3
comp=Z,9.3nm,0.9s
R55A **Marlinton** 71.98 354 P P 11 27 11.3 +1.5
CCM **Cathedral Cave** 73.50 345 P P 11 27 20.0 +1.3
CCM IAmb IAmb 11 27 31.8
comp=Z,18nm,0.8s
CCM **Cathedral Cave** 73.50 345 P P 11 27 20.0 +1.3
CCM pmax pmax
comp=Z,18nm,0.9s
MAW **Mawson** 73.57 164 P P 11 27 19.7 +0.8
comp=Z,5.7nm,0.7s,baz=235,slow=7.7,SNR=14
MAW LR LR 12 01 13.8
comp=Z,314nm,18.4s,baz=231,slow=37
comp=Z,5.7nm,0.7s
MAW **Mawson** 73.57 164 P P 11 27 20.1 +1.2
MAW **Mawson** 73.57 164 P P 11 27 20.1 +1.2
MAW pmax pmax
comp=Z,3.0nm,0.9s
ACSO **Alum Creek Sta** 74.21 352 P P 11 27 23.5 +0.6
CVNA **Calvinia** 75.02 118 *eP* P 11 27 26.9 -1.2
CVNA IAmb IAmb 11 27 54.1
comp=Z,114nm,1.9s
LIC **Lamto** 75.08 72⇑ *iP* P 11 27 28.5 -0.1
comp=Z,16nm,0.5s
P40A **Paris** 75.09 344 P P 11 27 29.2 +1.2
P40A IAmb IAmb 11 27 41.5
comp=Z,32nm,1.1s
SUR **Sutherland** 75.33 119 LR LR 11 59 09.8
comp=Z,86nm,18.4s,baz=226,slow=35
ANMO **Albuquerque** 75.34 332 LR LR 11 56 36.5
comp=Z,164nm,18.4s,baz=148,slow=32
ANMO **Albuquerque** 75.34 332 *ceP* P 11 27 32.6 +2.8
ANMO pmax pmax
comp=Z,7.0nm,1.3s
TIC **Toumodi** 75.34 72⇑ *iP* P 11 27 30.2 +0.1
comp=Z,4.3nm,0.3s
KIC **Kosan Boka** 75.39 72⇑ *iP* P 11 27 30.5 +0.1
comp=Z,13nm,0.5s
DBIC **Dimbokro** 75.48 72 P P 11 27 31.1 +0.2
comp=Z,9.6nm,0.6s,baz=213,slow=4.9,SNR=19
DBIC LR LR 11 59 13.4
comp=Z,103nm,18.2s,baz=198,slow=35
comp=Z,9.6nm,0.6s
DBIC **Dimbokro** 75.48 72 P P 11 27 31.1 +0.2
DBIC **Dimbokro** 75.48 72⇑ *iP* P 11 27 31.1 +0.2
DBIC **Dimbokro** 75.48 72 P P 11 27 31.1 +0.2
DBIC pmax pmax
comp=Z,69nm,1.8s
FRAZ **Fraserburg** 76.00 119 *eP* P 11 27 34.3 +0.5
FRAZ IAmb IAmb 11 27 36.5
comp=Z,49nm,1.4s
KEIM **Keimoes** 77.34 116 *eP* P 11 27 39.8 -1.6
KEIM IAmb IAmb 11 27 54.4
comp=Z,129nm,2.3s
EMMW **East Machias** 78.19 4 P P 11 27 47.0 +1.6
SADO **Sadowa** 78.35 355 LR LR 12 06 47.8
comp=Z,58nm,18.6s,baz=146,slow=39
G62A **West of Eustis** 78.59 1 P P 11 27 49.2 +1.6
G62A IAmb IAmb 11 27 51.5
comp=Z,19nm,0.9s
PFO **Pinyon Flats O** 78.66 324 LR LR 11 55 35.5
comp=Z,102nm,20.0s,baz=156,slow=30
PV13 **Radium Mtn., P** 79.06 332 P P 11 27 51.3 +0.6
F62A **Pittston Farm,** 79.28 2 P P 11 27 52.5 +1.1
TSUM **Tsumeb** 79.69 106 LR LR 11 58 48.3

comp=Z,194nm,19.3s,baz=229,slow=32
LCMT **Little Creek M** 79.94 328 P P 11 27 56.0 +0.6
LCMT IAmb IAmb 11 28 05.4
comp=Z,20nm,1.8s
ECSD **EROS Data Cent** 80.15 343 P P 11 27 57.2 +1.0
ECSD IAmb IAmb 11 28 06.8
comp=Z,12nm,0.8s
CCUT **Cedar City** 80.44 328 P P 11 28 01.1 +2.9
BOSA **Boshof** 80.57 118 P P 11 27 59.0 -0.2
comp=Z,4.8nm,0.6s,baz=250,slow=4.8,SNR=16
BOSA LR LR 12 02 36.5
comp=Z,76nm,18.1s,baz=196,slow=35
comp=Z,4.8nm,0.6s
BOSA **Boshof** 80.57 118 P P 11 27 59.3 +0.1
BOSA IAmb IAmb 11 28 48.4
comp=Z,34nm,1.6s
BOSA **Boshof** 80.57 118 *eP* P 11 27 58.0 -1.2
BOSA IAmb IAmb 11 28 05.0
comp=Z,122nm,2.4s
BOSA **Boshof** 80.57 118 P P 11 27 59.3 +0.1
BOSA pmax pmax
comp=Z,34nm,1.6s
QSM **Queen of Sheba** 80.76 325 P P 11 28 00.7 +1.1
PRN **Pahroc Range** 81.08 327 P P 11 28 02.6 +1.1
PRN IAmb IAmb 11 28 12.0
comp=Z,57nm,2.0s
WCT **Wildcat Mounta** 81.31 326 P P 11 28 02.2 -0.5
D41A **Chassel** 81.69 349 P P 11 28 05.8 +1.4
R11A **Troy Canyon, C** 82.09 327 P P 11 28 09.1 +2.2
LCH **Last Change Ra** 82.15 325 P P 11 28 06.3 -0.9
MZP **Montezuma Peak** 82.40 326 P P 11 28 09.3 +0.7
LBTB **Lobatse** 82.80 115 LR LR 12 01 32.2
comp=Z,110nm,18.4s,baz=224,slow=33
PRYS **Parys** 83.06 118 *eP* P 11 28 12.1 -0.3
PRYS IAmb IAmb 11 28 24.3
comp=Z,72nm,2.3s
HWUT **Hardware Ranch** 83.10 332 P P 11 28 13.8 +1.7
HWUT IAmb IAmb 11 28 22.2
comp=Z,32nm,1.6s
PDAR **Pinedale Array** 83.32 333 P P 11 28 15.1 +1.8
comp=Z,1.5nm,0.8s,baz=151,slow=5.4,SNR=12
PDAR LR LR 12 01 47.9
comp=Z,129nm,18.1s,baz=144,slow=33
comp=Z,1.5nm,0.8s
PDAR **Pinedale Array** 83.32 333 P P 11 28 14.7 +1.5
NVAR **Mina Array Bea** 83.42 325 P P 11 28 16.2 +2.4
comp=Z,1.5nm,0.7s,baz=154,slow=6.0,SNR=16
comp=Z,1.5nm,0.7s
URZ **Urewera** 83.54 228 LR LR 11 56 50.8
comp=Z,127nm,18.9s,baz=220,slow=29
RPZ **Rata Peaks** 83.59 221 LR LR 11 57 22.7
comp=Z,128nm,20.1s,baz=108,slow=30
ELK **Elko** 83.91 329 LR LR 12 02 26.4
comp=Z,76nm,20.5s,baz=130,slow=33
NWCL **Newcastle** 84.45 120 *eP* P 11 28 18.8 -0.7
NWCL IAmb IAmb 11 28 29.1
comp=Z,72nm,2.2s
TOA0 **Torodi Ar. Sit** 84.51 70 P P 11 28 19.3 -0.4
TOA0 IAmb IAmb 11 28 30.6
comp=Z,14nm,0.9s
TORD **Torodi Ar. Bea** 84.51 70 P P 11 28 19.7 +0.1
comp=Z,7.2nm,0.7s,baz=265,slow=4.7,SNR=45
TORD LR LR 12 06 04.9
comp=Z,79nm,18.6s,baz=219,slow=36
comp=Z,7.2nm,0.7s
TORD **Torodi Ar. Bea** 84.51 70 P P 11 28 19.9 +0.2
TORD IAmb IAmb 11 28 31.2
comp=Z,11nm,0.9s
LEPH **Lephalale, Lim** 85.11 115 *eP* P 11 28 22.2 -0.6
LEPH IAmb IAmb 11 28 23.1
comp=Z,9.5nm,0.7s
RAO **Raoul Island** 85.67 238 LR LR 11 56 50.6
comp=Z,50nm,21.1s,baz=120,slow=29
ULM **Lac du Bonnet** 86.12 345 P P 11 28 28.1 +1.2
comp=Z,9.6nm,0.8s,baz=147,slow=5.2,SNR=5.5
comp=Z,9.6nm,0.8s
ULM **Lac du Bonnet** 86.12 345 *i* P P 11 28 29.0 +2.2
MUSN **Musina, Limpop** 87.56 115 *eP* P 11 28 33.8 -1.0
MUSN IAmb IAmb 11 28 39.6
comp=Z,290nm,3.6s
PLID **Pearl Lake** 87.79 331 P P 11 28 37.0 +1.6
PLID IAmb IAmb 11 28 50.3
comp=Z,9.1nm,1.1s
MOPA **Mopani** 88.00 117 *eP* P 11 28 41.1 +4.3
MOPA IAmb IAmb 11 28 52.1
comp=Z,0.3nm,0.7s
AFI **Afiamalu** 89.88 253 LR LR 12 00 42.9
comp=Z,87nm,18.5s,baz=3.0,slow=30
LSZ **Lusaka** 90.29 109 LR LR 12 05 28.7
comp=Z,206nm,19.6s,baz=224,slow=33
NEW **Newport** 90.83 332 LR LR 12 06 54.5
comp=Z,77nm,18.0s,baz=136,slow=34
FFC **Flin Flon** 91.66 343 *ceP* P 11 28 53.1 +0.1
MDT **Midelt** 91.97 51 LR LR 12 10 00.6
comp=Z,217nm,20.2s,baz=224,slow=35
ESDC **Sonseca Array** 96.68 46 P P 11 29 16.4 -0.2
comp=Z,0.5nm,0.6s,baz=219,slow=6.7,SNR=5.0
ESDC LR LR 12 12 47.9
comp=Z,193nm,18.1s,baz=252,slow=35
comp=Z,0.5nm,0.6s
FRB **Frobisher Bay** 97.19 2 LR LR 12 13 52.9
comp=Z,94nm,20.4s,baz=206,slow=36
KIP **Kipapa** 98.01 290 *ceP* Pdif 11 29 24.0 +1.1
DZM **Mont Dzumac** 101.07 234 *e*LR LR 12 02 36.9
comp=Z,95nm,22.0s
ASAR **Alice Springs** 117.63 207 PKP **PKPdf** 11 34 32.5 -0.5
comp=Z,0.3nm,0.5s,baz=137,slow=1.6,SNR=7.4
WRA **Warramunga Arr** 120.80 210 PKP **PKPdf** 11 34 38.9 -0.3
comp=Z,0.7nm,0.5s,baz=158,slow=1.7,SNR=27
BRTR **Keskin Array B** 122.06 61 PKP **PKPdf** 11 34 40.9 -0.2
comp=Z,0.9nm,0.7s,baz=246,slow=2.2,SNR=3.9
AKASG **Malin Array Be** 122.31 47 PKP **PKPdf** 11 34 39.8 -1.2
comp=Z,0.8nm,0.5s,baz=263,slow=2.5,SNR=7.3
ARCES **ARCESS Array B** 123.93 25 PKP **PKiKP** 11 34 43.8 0.0
comp=Z,1.8nm,0.7s,baz=302,slow=2.3,SNR=8.1
H11S2 **WAKE ISLAND Hyl** 25.36 270 T T 13 53 46.1
baz=118,slow=74,SNR=11
H11S1 **WAKE ISLAND Hyl** 25.37 270 T T 13 53 51.5
baz=118,slow=74,SNR=3.7
H11S3 **WAKE ISLAND Hyl** 25.37 270 T T 13 53 51.5
baz=118,slow=74,SNR=4.7
RAYN **Ar Rayn** 125.38 83 **PKiKP** 11 34 48.4 +0.3
RAYN **Ar Rayn** 125.38 83 PKIKP **PKiKP** 11 34 48.4 +0.3
KLMR **Klimovskoe** 129.42 36 *e*PKIKP **PKPdf** 11 34 53.8 -0.4
KLMR pmax pmax
comp=Z,20nm,1.5s
KLMR **Klimovskoe** 129.42 36 *e*PKPdf **PKPdf** 11 34 53.8 -0.4
KLMR AMP 11 34 56.4
comp=Z,20nm,1.5s
KIV **Kislovodsk** 129.70 58 *i* PKIKP **PKPdf** 11 34 54.0 -1.4
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,56nm,23.0s
SEY **Seymchan** 139.58 330 PKP **PKiKP** 11 35 14.6 -0.9
comp=Z,1.8nm,0.6s,baz=154,slow=3.1,SNR=4.1
SEY **Seymchan** 139.58 330 *i* PKIKP **PKiKP** 11 35 15.1 -0.4
ARU **Arti** 139.80 40 *i* PKIKP **PKPdf** 11 35 14.1 +0.4
ARU SS SS 11 56 27.8 -3.3
ARU MLR MLR
comp=Z,155nm,20.0s
GEYT **Alibeck** 140.14 69 PKP **PKiKP** 11 35 16.6 -0.9
comp=Z,1.3nm,0.4s,baz=276,slow=31,SNR=2.1
TIXI **Tiksi** 140.34 350 PKP **PKiKP** 11 35 16.9 +0.1
comp=Z,2.2nm,0.6s,baz=270,slow=5.2,SNR=5.1
ABKAR **Akbulak array** 141.83 51 **PKiKP** 11 35 19.7 -0.9
ABKAR **Akbulak array** 141.83 51 PKPdf **PKiKP** 11 35 20.1 -0.4
TOLI2 **Tolitoli** 145.24 204 **PKPbc** 11 35 23.3 -1.1
POO **Poona** 146.42 108 *eP* **PKPdf** 11 35 22.0 -4.7
BRVK **Borovoye** 147.28 42 **PKPbc** 11 35 29.6 +0.3
BRVK **Borovoye** 147.28 42 PKP2 **PKPbc** 11 35 29.6 +0.3
RPSI **Rantau Prapat** 148.12 164 PKPdf **PKPdf** 11 35 26.1 -3.5
RPSI **PKPbc** 11 35 32.8 0.0
PSI **Prapat** 148.22 164 PKHKP PKPpre 11 35 26.1
PSI 11 35 32.8
SBUM **Sibu** 148.58 189 PKPdf **PKPdf** 11 35 26.0 -4.3
SBUM **pPKPdf** 11 35 34.4 +2.2
KK31 **Karatay Array** 149.78 61 **PKiKP** 11 35 36.6 -0.6
KK31 **Karatay Array** 149.78 61 PKP2 **PKiKP** 11 35 36.6 -0.6
KKAR **Karatay Array** 149.78 61 **PKiKP** 11 35 36.6 -0.6
KKAR **Karatay Array** 149.78 61 **PKPbc** 11 35 36.2 0.0
KKAR **Karatay Array** 149.78 61 PKP2 **PKPbc** 11 35 36.2 0.0
BTK **Batken** 150.17 67 **PKiKP** 11 35 37.8 -0.3
BTK **Batken** 150.17 67 PKP2 **PKiKP** 11 35 37.8 -0.3
IPM **Ipoh** 150.30 167 **PKPbc** 11 35 37.1 -1.2
KULM **Kulim** 151.01 166 **PKPbc** 11 35 39.5 -0.4

NIL	**Nilore**	**151.61**	**80**		**PKiKP**	**11 35 40.9**	**-0.3**
NIL				PKPab	**PKPab**	**11 35 49.3**	**-0.2**
NIL	**Nilore**	**151.61**	**80**	PKIKP	**PKiKP**	**11 35 40.9**	**-0.3**
NIL						11 35 49.3	
EKS2	**Erkin-Say**	**152.21**	**61**	P	**PKiKP**	**11 35 43.2**	**+0.9**
	SNR=8.5						
AML	**Almayashu**	**152.21**	**62**	P	**PKiKP**	**11 35 43.1**	**+0.4**
	SNR=7.8						
USP	**Ospenovka**	**152.65**	**60**	P	**PKiKP**	**11 35 43.7**	**+0.6**
	SNR=6.6						
AAK	**Ala-Archa**	**152.74**	**61**	P	**PKiKP**	**11 35 44.6**	**+1.1**
	SNR=8.1						
AAK	**Ala-Archa**	**152.74**	**61**		**PKiKP**	**11 35 44.6**	**+1.1**
AAK					**PKPab**	**11 35 55.5**	**+1.3**
AAK	**Ala-Archa**	**152.74**	**61**	*i* PKIKP	**PKPdf**	**11 35 36.4**	**+0.3**
UCH	**Uchtor**	**152.81**	**62**	P	**PKiKP**	**11 35 44.8**	**+0.8**
	SNR=9.7						
KURK	**Kurchatov**	**152.96**	**42**		**PKPbc**	**11 35 42.7**	**-0.5**
KURK				PKPab	**PKPab**	**11 35 56.0**	**+1.5**
KURK	**Kurchatov**	**152.96**	**42**	PKIKP	**PKPbc**	**11 35 42.7**	**-0.5**
KSH	**Kashi**	**154.15**	**68**	PKPbc	**PKiKP**	**11 35 47.5**	**+1.1**
ZAA0	**Zalesovo Array**	**154.21**	**32**	PKPdf	**PKPdf**	**11 35 37.2**	**-0.4**
ZAA0				PKPbc	**PKiKP**	**11 35 46.7**	**+0.8**
ZAA0				PKPab	**PKPab**	**11 36 00.6**	**+0.9**
ZALV	**Zalesovo Beam**	**154.21**	**32**	PKP	**PKPdf**	**11 35 37.9**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=318,slow=2.0,SNR=6.2						
ZALV				PKPbc	**PKiKP**	**11 35 46.4**	**+0.5**
	comp=Z,12nm,0.5s,baz=294,slow=3.8,SNR=38						
ZALV	**Zalesovo Beam**	**154.21**	**32**	PKPdf	**PKPdf**	**11 35 37.7**	**+0.1**
ZALV				PKPbc	**PKiKP**	**11 35 46.5**	**+0.5**
ZALV				PKPab	**PKPab**	**11 36 00.2**	**+0.5**
ZALV	**Zalesovo Beam**	**154.21**	**32**	PKIKP	**PKPdf**	**11 35 37.7**	**+0.1**
ZALV						11 36 00.2	
MK31	**Makanchi Array**	**156.89**	**48**	PKPdf	**PKPdf**	**11 35 40.8**	**-0.7**
MK31				PKPab	**PKPab**	**11 36 12.0**	**+0.5**
MK31	**Makanchi Array**	**156.89**	**48**	PKIKP	**PKPdf**	**11 35 40.8**	**-0.7**
MKAR	**Makanchi Array**	**156.89**	**48**	PKP	**PKPdf**	**11 35 40.8**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=95,slow=9.9,SNR=3.7						
MKAR				PKPab	**PKPab**	**11 36 11.9**	**+0.5**
	comp=Z,5.9nm,0.6s,baz=287,slow=2.9,SNR=23						
MKAR	**Makanchi Array**	**156.89**	**48**	PKPdf	**PKPdf**	**11 35 41.1**	**-0.5**
MKAR				PKPab	**PKPab**	**11 36 12.0**	**+0.5**
MKAR	**Makanchi Array**	**156.89**	**48**	PKIKP	**PKPdf**	**11 35 41.1**	**-0.5**
WMQ	**Urumqi**	**161.62**	**51**	*e*P	**PKPdf**	**11 35 48.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**163.00**	**151**	PKP	**PKPdf**	**11 35 49.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=155,slow=3.0,SNR=1.8						
ZAK	**Zakamensk**	**163.06**	**9**	*e*PKP2	**PKPab**	**11 36 38.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SONM	**Songino Array**	**165.87**	**3**	PKPab	**PKPab**	**11 36 51.9**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=343,slow=3.6,SNR=5.8						
GOMU	**GeErMu**	**169.33**	**73**	PKP	**PKPdf**	**11 35 51.5**	**-2.7**
GOMU				pPKP	sPKPdf	11 36 06.0	+9.3
GOMU				sPKP		11 36 12.3	
NJ2	**Nanjing**	**170.28**	**263**	*e*P	**PKPdf**	**11 35 51.8**	**-2.6**
PZH	**PanZhiHua**	**171.27**	**144**	PKP	**PKPdf**	**11 35 54.8**	**-0.5**
GTA	**Gaotai**	**171.63**	**45**	*e*PKPbc	**PKPdf**	**11 35 52.5**	**-2.6**
GTA				sPKP		11 36 00.0	
GTA				PKPab	**PKPab**	**11 37 17.5**	**+1.0**
GTA				PP	**PP**	**11 41 09.0**	**+1.6**
HHC	**Hu-ho-hao-te**	**172.17**	**337**	*e*P	**PKPdf**	**11 35 56.0**	**+0.8**

ROM 31 11:15:53.0±0.1, 42°828N±0'004×13°067E±0'006,
h10km, ML2.8/14, 2C-3D, Error ellipse: s-maj=0.3km
s-min=0.3km az=267.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.07**	**331**	P	Pg	11 15 55.4	0.0
T1217	**Poggiodomo (PG**	**0.15**	**221**	P	Pg	11 15 57.0	+0.5
T1217				S	Sg	11 15 60.0	+1.1
T1217				AML	AML		
	comp=E,1098μm,0.2s						
T1217				AML	AML		
	comp=E,1097μm,0.2s						
T1217				AML	AML		
	comp=N,1835μm,0.5s						
T1217				AML	AML		
	comp=E,7230μm,1.6s						
T1217				AML	AML		
	comp=N,8210μm,0.3s						
T1217				AML	AML		
	comp=N,8200μm,0.3s						
T1217				AML	AML		
	comp=E,6990μm,1.6s						
MMO1	**Montemonaco**	**0.20**	**69**	⇑P	Pb	11 15 58.4	-0.5
MMO1				S	Sg	11 16 01.0	+0.7
FDMO	**Fiordimonte**	**0.21**	**4**	P	Pg	11 15 58.0	+0.6
FDMO				AML	AML		
	comp=E,2560μm,1.5s						
FDMO				AML	AML		
	comp=N,3295μm,0.1s						
FDMO				AML	AML		
	comp=N,11200μm,0.3s						
FDMO				AML	AML		
	comp=E,15700μm,0.2s						
T1256	**Bolognola (MC)**	**0.21**	**33**	P	Pb	11 15 58.8	-0.3
T1256				AML	AML		
	comp=N,4580μm,0.7s						
T1256				AML	AML		
	comp=N,4460μm,0.7s						
T1256				AML	AML		
	comp=E,5720μm,0.6s						
T1256				AML	AML		
	comp=N,4585μm,0.7s						
T1256				AML	AML		
	comp=E,5750μm,0.6s						
T1256				AML	AML		
	comp=E,6265μm,1.4s						
T1256				AML	AML		
	comp=N,5875μm,0.7s						
T1256				AML	AML		
	comp=E,6360μm,1.4s						
T1256				AML	AML		
	comp=N,5785μm,0.7s						
T1201	**Domo (RI)**	**0.22**	**141**	P	Pg	11 15 58.2	+0.7
LNSS	**Leonessa**	**0.23**	**185**	P	Pg	11 15 58.3	+0.5
LNSS				AML	AML		
	comp=N,1290μm,1.5s						
LNSS				AML	AML		
	comp=E,454μm,0.4s						
LNSS				AML	AML		
	comp=N,4445μm,0.1s						
LNSS				AML	AML		
	comp=E,1565μm,0.2s						
T1204	**Amatrice, Fraz**	**0.24**	**129**	AML	AML		
	comp=N,1036μm,1.2s						
T1204				AML	AML		
	comp=E,1492μm,0.7s						
T1204				AML	AML		
	comp=E,1500μm,0.7s						
T1204				AML	AML		
	comp=N,1405μm,0.3s						
AM05	**Amandola Campo**	**0.26**	**54**	P	Pb	11 15 59.4	-0.4
AM05				AML	AML		
	comp=E,2435μm,0.1s						
AM05				AML	AML		
	comp=N,2490μm,0.1s						
AM05				AML	AML		
	comp=E,10425μm,1.3s						
AM05				AML	AML		
	comp=N,700μm,0.1s						
AM05				AML	AML		
	comp=E,2905μm,0.6s						
AM05				AML	AML		
	comp=E,13100μm,0.6s						
AM05				AML	AML		
	comp=N,2545μm,0.1s						
AM05				AML	AML		
	comp=N,816μm,0.3s						
T1241	**Roccafluvione,**	**0.27**	**84**	P	Pg	11 15 58.7	+0.2
T1241				S	Sg	11 16 03.3	+1.1
T1241				AML	AML		
	comp=E,3100μm,0.4s						
T1241				AML	AML		
	comp=N,2960μm,0.8s						
T1241				AML	AML		
	comp=E,3260μm,0.4s						
T1241				AML	AML		
	comp=N,2935μm,0.8s						
T1241				AML	AML		
	comp=E,3805μm,0.4s						
T1241				AML	AML		
	comp=N,3730μm,0.2s						
T1241				AML	AML		
	comp=N,3420μm,0.2s						
T1241				AML	AML		
	comp=E,4085μm,0.4s						
SMA1	**SAN MARTINO**	**0.28**	**135**	P	Pb	11 15 59.5	-0.7
SMA1				S	Sb	11 16 04.0	-1.0
SMA1				AML	AML		
	comp=E,2160μm,0.3s						
SMA1				AML	AML		
	comp=N,1250μm,0.4s						
SEF1	**Sefro**	**0.33**	**345**	P	Pg	11 16 00.0	+0.4
SEF1				AML	AML		
	comp=E,3305μm,1.2s						
SEF1				AML	AML		
	comp=N,3055μm,0.7s						
SEF1				AML	AML		
	comp=N,6390μm,0.2s						
SEF1				AML	AML		
	comp=E,7145μm,0.2s						
ARRO	**Arrone**	**0.33**	**222**	P	Pg	11 16 00.2	+0.5
T1211	**Morro Reatino**	**0.33**	**208**	P	Pg	11 16 00.4	+0.7
T1211				AML	AML		
	comp=E,778μm,1.6s						
T1211				AML	AML		
	comp=N,938μm,0.3s						
RM33	**Pellescritta (**	**0.34**	**161**	P	Pg	11 16 00.0	+0.2
RM33				AML	AML		
	comp=E,738μm,0.8s						
RM33				AML	AML		
	comp=N,598μm,1.1s						
RM33				AML	AML		
	comp=E,656μm,0.9s						
RM33				AML	AML		
	comp=E,738μm,0.9s						
RM33				AML	AML		
	comp=N,598μm,1.1s						
RM33				AML	AML		
	comp=N,587μm,1.1s						
RM33				AML	AML		
	comp=N,586μm,1.1s						
RM33				AML	AML		
	comp=E,657μm,0.9s						
ASSB	**Assisi San Ben**	**0.37**	**306**	P	Pg	11 16 00.8	+0.4
ASSB				AML	AML		
	comp=E,832μm,0.3s						
ASSB				AML	AML		
	comp=N,830μm,0.7s						
ASSB				AML	AML		
	comp=E,3005μm,0.2s						
ASSB				AML	AML		
	comp=N,3355μm,0.3s						
MDAR	**Monte D'Aria**	**0.37**	**9**	P	Pg	11 16 00.7	+0.3
FIU1	**Fiuminata**	**0.37**	**345**	P	Pg	11 16 01.0	+0.5
SSM1	**San Severino M**	**0.41**	**11**	P	Pg	11 16 01.4	+0.3
GAG1	**Gagliole**	**0.41**	**0**	P	Pg	11 16 01.8	+0.6
GAG1				AML	AML		
	comp=E,4825μm,1.2s						
GAG1				AML	AML		
	comp=N,5415μm,1.1s						
CESX	**Cesi**	**0.42**	**239**	S	Sb	11 16 08.0	-0.9
SNTG	**Esanatoglia**	**0.44**	**348**	P	Pg	11 16 01.9	+0.3
SNTG				AML	AML		
	comp=E,520μm,0.3s						
SNTG				AML	AML		
	comp=N,758μm,0.2s						
SNTG				AML	AML		
	comp=E,572μm,0.4s						
SNTG				AML	AML		
	comp=N,830μm,0.2s						
SNTG				AML	AML		
	comp=E,1435μm,0.4s						
SNTG				AML	AML		
	comp=N,1785μm,0.6s						
SNTG				AML	AML		
	comp=N,1660μm,0.6s						
SNTG				AML	AML		
	comp=E,1465μm,0.4s						
TERO	**Teramo**	**0.45**	**117**	P	Pg	11 16 02.3	+0.5
TERO				AML	AML		
	comp=E,1012μm,0.3s						
TERO				AML	AML		
	comp=N,1830μm,0.4s						
TERO				AML	AML		
	comp=E,1012μm,0.3s						
OFFI	**Offida**	**0.47**	**77**	P	Pb	11 16 03.3	0.0
OFFI				AML	AML		
	comp=E,1125μm,0.3s						
OFFI				AML	AML		
	comp=N,1370μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.47**	**319**	P	Pg	11 16 02.7	+0.4
ATCC				AML	AML		
	comp=E,708μm,0.3s						
ATCC				AML	AML		
	comp=N,638μm,1.0s						
ATCC				AML	AML		
	comp=N,1405μm,0.3s						
ATCC				AML	AML		
	comp=E,1810μm,0.4s						
FOSV	**Fossato di Vic**	**0.52**	**334**	⇓P	Pg	11 16 03.3	+0.2
FIAM	**Fiamignano**	**0.56**	**176**	P	Pg	11 16 04.2	+0.2
FIAM				AML	AML		
	comp=E,193μm,1.6s						
FIAM				AML	AML		
	comp=N,152μm,0.4s						
FIAM				AML	AML		
	comp=N,151μm,0.4s						
FIAM				AML	AML		
	comp=E,192μm,1.6s						
MURB	**Monte Urbino**	**0.59**	**318**	P	Pg	11 16 04.8	+0.3
MURB				AML	AML		
	comp=N,841μm,0.2s						
MURB				AML	AML		
	comp=E,996μm,1.4s						
MURB				AML	AML		
	comp=N,872μm,0.2s						
MURB				AML	AML		
	comp=E,920μm,0.2s						
ATFO	**Monte Foce - G**	**0.65**	**326**	⇑P	Pg	11 16 05.9	+0.3
ATFO				AML	AML		
	comp=E,266μm,0.5s						
ATFO				AML	AML		
	comp=E,266μm,0.5s						
ATFO				AML	AML		
	comp=N,286μm,0.8s						
ARVD	**Arcevia**	**0.68**	**352**	P	Pg	11 16 06.2	+0.1
ARVD				S	Sn	11 16 18.0	-1.3
ARVD				AML	AML		
	comp=E,276μm,0.3s						
ARVD				AML	AML		
	comp=N,188μm,0.8s						
PIEI	**Pieia**	**0.81**	**331**	S	Sn	11 16 23.0	+0.4
MPAG	**Monte Paganucc**	**0.83**	**344**	⇓P	Pg	11 16 09.3	+0.2
MPAG				AML	AML		
	comp=E,186μm,0.8s						
MPAG				AML	AML		
	comp=N,188μm,0.3s						
MPAG				AML	AML		
	comp=E,186μm,0.8s						
MPAG				AML	AML		
	comp=N,188μm,0.3s						
CERT	**Cerreto**	**0.88**	**184**	⇓P	Pb	11 16 10.2	-0.2
CERT				AML	AML		
	comp=E,140μm,0.4s						
CERT				AML	AML		
	comp=N,112μm,1.2s						
CERT				AML	AML		
	comp=N,138μm,0.4s						
VIVA	**Pratoni del Vi**	**1.10**	**192**	P	Pn	11 16 14.9	+0.4
LAV9	**Lanuvio**	**1.18**	**194**	S	Sb	11 16 30.0	-0.8
LRP	**Arpino**	**1.24**	**162**	S	Sg	11 16 33.0	0.0
CSNT	**Castellina Chi**	**1.45**	**297**	S	Sg	11 16 41.0	+1.3
PTRJ	**Pietraroja**	**1.82**	**143**	P	Pn	11 16 23.5	-0.9
PTRJ				AML	AML		
	comp=N,5860μm,0.2s						
PTRJ				AML	AML		
	comp=E,2405μm,1.5s						
ABTA	**Abfaltersbach**	**3.94**	**354**	*e*Pn	Pn	11 16 57.4	+3.8
	comp=E,2.5nm,0.3s						
FETA	**Feichten**	**4.51**	**339**	*e*Pn	Pb	11 17 08.5	-3.8
	comp=E,0.4nm,0.2s						

*WEL **31** 11:16:51.4±0.5, 33°S±5°×17°9W±1°2, h268km±8km,*
M3.8/33, mB4.4/18, ML4.8/36, MLv4.7/33, Mw(mB)3.6/18,
Error ellipse: s-maj=0.0km s-min=0.0km az=113.1
*IDC **31** 11:16:51.5±6.4, 32°87S×179°94E, h212km±51km, mb3.3/3,*
mbtmp3.9/4, Error ellipse: s-maj=61.2km s-min=29.7km

az=41.0
*NOU **31** 11:17:39.9, 36°69S×178°75E, h199km, MLv4.0/8, Off E.*
Coast of N. Island, N.Z.
ISC 31 11:16:53.1±1.4, 33°29S±0°08×179°6W±0°1, h250km, n71,
σ2°27/111, mb3.3/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.27**	**20**	P	Pn	11 17 52.3	-7.9
GLKZ				S	S	11 18 40.4	-13
MXZ	**Matakaoa Point**	**4.59**	**201**	P	**Pn**	**11 18 05.4**	**+1.6**
MXZ				S	**S**	**11 19 01.5**	**+1.4**
WMGZ	**Waiomatatini S**	**4.79**	**199**	P	**Pn**	**11 18 09.2**	**+2.9**
WMGZ				S	**S**	**11 19 08.4**	**+3.7**
HAZ	**Te Kaha**	**4.93**	**205**	P	**Pn**	**11 18 09.7**	**+1.7**
HAZ				S	**S**	**11 19 11.4**	**+3.7**
PKGZ	**Pakihiroa**	**4.96**	**202**	P	**Pn**	**11 18 10.6**	**+2.2**
PKGZ				S	**S**	**11 19 11.9**	**+3.5**
PUZ	**Puketiti**	**5.08**	**199**	P	**Pn**	**11 18 11.4**	**+1.7**
PUZ				S	**S**	**11 19 13.8**	**+2.9**
RUGZ	**Raukumara Rang**	**5.16**	**204**	P	**Pn**	**11 18 12.8**	**+1.9**
RUGZ				S	**S**	**11 19 14.9**	**+2.0**
TWGZ	**Tauwhareparae**	**5.25**	**201**	P	**Pn**	**11 18 13.9**	**+1.9**
TWGZ				S	**S**	**11 19 19.4**	**+4.5**
CNGZ	**Carnagh Statio**	**5.47**	**198**	P	**Pn**	**11 18 16.9**	**+2.3**
CNGZ				S	**S**	**11 19 15.6**	**-4.2**
TKGZ	**Te Karaka**	**5.53**	**201**	P	**Pn**	**11 18 16.5**	**+1.1**
TKGZ				S	**S**	**11 19 23.0**	**+1.9**
MWZ	**Matawai**	**5.54**	**204**	P	**Pn**	**11 18 16.8**	**+1.3**
MWZ				S	**S**	**11 19 23.6**	**+2.3**
URZ	**Urewera**	**5.62**	**207**	P	**Pn**	**11 18 17.4**	**+0.9**
	4.3nm,0.3s,baz=353,slow=4.5,SNR=33						
URZ				S	**S**	**11 19 24.4**	**+1.3**
	26nm,0.3s,baz=159,slow=22,SNR=16						
URZ	**Urewera**	**5.62**	**207**	P	**Pn**	**11 18 18.7**	**+2.2**
URZ	**Urewera**	**5.62**	**207**	P	**Pn**	**11 18 17.2**	**+0.8**
URZ				S	**S**	**11 19 24.4**	**+1.3**
WCZ	**Waipu Caves**	**5.63**	**240**	P	**Pn**	**11 18 18.5**	**+1.9**
MKAZ	**Moumakai**	**5.72**	**227**	P	**Pn**	**11 18 21.3**	**+3.7**
RAGZ	**Rawiri**	**5.72**	**204**	P	**Pn**	**11 18 19.2**	**+1.4**
RIGZ	**Rimuhau**	**5.81**	**201**	P	**Pn**	**11 18 20.1**	**+1.3**
RIGZ				S	**S**	**11 19 30.3**	**+3.0**
RVAZ	**Riverhead Bore**	**5.89**	**232**	P	**Pn**	**11 18 23.6**	**+3.9**
MUGZ	**Murupara**	**5.95**	**208**	P	**Pn**	**11 18 21.2**	**+0.7**
MUGZ				S	**S**	**11 19 33.3**	**+2.9**
SNGZ	**Shannon Statio**	**6.01**	**203**	P	**Pn**	**11 18 22.3**	**+1.1**
SNGZ				S	**S**	**11 19 34.2**	**+2.3**
RAHZ	**Arahi**	**6.21**	**204**	P	**Pn**	**11 18 25.2**	**+1.3**
RAHZ				S	**S**	**11 19 38.0**	**+1.4**
MTHZ	**Maungataniwha**	**6.25**	**206**	P	**Pn**	**11 18 25.0**	**+0.8**
MTHZ				S	**S**	**11 19 39.0**	**+1.8**
TLZ	**Tolley Road**	**6.38**	**217**	P	**Pn**	**11 18 28.5**	**+2.5**
MRHZ	**Matea Rd**	**6.39**	**209**	P	**Pn**	**11 18 28.3**	**+2.2**
MRHZ				S	**S**	**11 19 44.5**	**+3.8**
NMHZ	**Naumai**	**6.47**	**205**	P	**Pn**	**11 18 28.0**	**+0.8**
NMHZ				S	**S**	**11 19 45.1**	**+2.6**
BKZ	**Black Stump Fm**	**6.65**	**207**	P	**Pn**	**11 18 29.3**	**-0.1**
BKZ	**Black Stump Fm**	**6.65**	**207**	P	**Pn**	**11 18 29.3**	**-0.1**
BKZ				S	**S**	**11 19 47.2**	**+0.7**
MCHZ	**McNeill Hill**	**6.82**	**205**	P	**Pn**	**11 18 34.4**	**+3.0**
MCHZ				S	**S**	**11 19 51.4**	**+1.1**
HIZ	**Hauiti**	**6.87**	**219**	P	Pn	11 18 36.9	+4.8
HIZ	**Hauiti**	**6.87**	**219**	P	**Pn**	**11 18 35.1**	**+3.0**
KWHZ	**Kaweka Forest**	**6.90**	**206**	P	**Pn**	**11 18 32.4**	**-0.2**
KWHZ				S	**S**	**11 19 53.4**	**+1.1**
NTVZ	**North Tongarir**	**6.93**	**212**	P	**Pn**	**11 18 33.2**	**+0.3**
NTVZ				S	**S**	**11 19 56.4**	**+3.4**
TMVZ	**Te Maari**	**6.93**	**212**	P	**Pn**	**11 18 33.4**	**+0.4**
ETVZ	**East Tongariro**	**6.95**	**212**	P	**Pn**	**11 18 33.4**	**+0.3**
ETVZ				S	**S**	**11 19 56.1**	**+2.7**
OTVZ	**Oturere**	**6.99**	**212**	P	**Pn**	**11 18 33.4**	**-0.3**
OTVZ				S	**S**	**11 19 56.7**	**+2.3**
SNVZ	**South Ngauruho**	**7.02**	**212**	P	**Pn**	**11 18 34.1**	**0.0**
KAHZ	**Kahuranaki**	**7.08**	**202**	P	**Pn**	**11 18 34.8**	**+0.1**
KAHZ				S	**S**	**11 19 57.3**	**+1.0**
BHHZ	**Black Hill Sta**	**7.10**	**208**	P	**Pn**	**11 18 35.3**	**+0.3**
BHHZ				S	**S**	**11 19 55.6**	**-1.2**
PXZ	**Pawanui**	**7.30**	**202**	P	**Pn**	**11 18 39.6**	**+2.2**
PXZ				S	**S**	**11 20 00.3**	**-0.9**
PNHZ	**Pukenui**	**7.41**	**206**	P	**Pn**	**11 18 38.1**	**-0.8**
PNHZ				S	**S**	**11 20 01.2**	**-2.9**
WPHZ	**Waipukurau**	**7.46**	**204**	P	**Pn**	**11 18 41.9**	**+2.4**
WPHZ				S	**S**	**11 20 05.5**	**+0.4**
PRHZ	**Porangahau**	**7.58**	**202**	P	**Pn**	**11 18 40.9**	**-0.1**
PRHZ				S	**S**	**11 20 07.6**	**-0.3**
TSZ	**Takapari Road**	**7.63**	**206**	P	**Pn**	**11 18 41.1**	**-0.5**
TSZ				S	**S**	**11 20 07.6**	**-1.4**
DVHZ	**Dannevirke**	**7.77**	**205**	P	**Pn**	**11 18 43.0**	**-0.4**
DVHZ				S	**S**	**11 20 11.7**	**-0.5**
NEZ	**North Egmont**	**7.83**	**219**	P	**Pn**	**11 18 46.4**	**+2.1**
POWZ	**Post Office Ro**	**7.99**	**206**	P	**Pn**	**11 18 48.1**	**+1.9**
POWZ				S	**S**	**11 20 16.5**	**-0.8**
PRWZ	**Pori Road**	**8.06**	**205**	P	**Pn**	**11 18 48.2**	**+1.1**
PRWZ				S	**S**	**11 20 18.9**	**0.0**
BFZ	**Birch Farm**	**8.08**	**203**	P	**Pn**	**11 18 48.2**	**+0.8**
BFZ	**Birch Farm**	**8.08**	**203**	P	**Pn**	**11 18 46.2**	**-1.1**
BFZ				S	**S**	**11 20 17.3**	**-2.1**
TIWZ	**Tintock**	**8.29**	**204**	P	**Pn**	**11 18 49.9**	**-0.1**
TIWZ				S	**S**	**11 20 23.9**	**-0.3**
MRZ	**Mangatainoka R**	**8.30**	**206**	P	**Pn**	**11 18 48.3**	**-1.8**
MRZ				S	**S**	**11 20 19.0**	**-5.4**
HOWZ	**Holdsworth Sta**	**8.53**	**206**	P	**Pn**	**11 18 52.0**	**-1.0**
HOWZ				S	**S**	**11 20 24.9**	**-4.9**
OGWZ	**Otaki Gorge**	**8.59**	**207**	P	**Pn**	**11 18 51.9**	**-1.9**
OGWZ				S	**S**	**11 20 26.9**	**-4.1**
KIW	**Kapiti Island**	**8.73**	**208**	P	**Pn**	**11 18 53.8**	**-1.7**
KIW				S	**S**	**11 20 30.2**	**-4.1**
MTW	**Mount Morrison**	**8.76**	**205**	P	**Pn**	**11 18 56.4**	**+0.5**
MTW				S	**S**	**11 20 29.9**	**-5.3**
CAW	**Cannon Point**	**8.88**	**207**	P	**Pn**	**11 18 55.2**	**-2.2**
CAW				S	**S**	**11 20 35.1**	**-2.7**
MSWZ	**Moikau Station**	**9.08**	**205**	P	**Pn**	**11 18 59.4**	**-0.6**
MSWZ				S	**S**	**11 20 36.9**	**-5.6**
DUWZ	**D'Urville Isla**	**9.10**	**213**	P	**Pn**	**11 18 59.6**	**-0.6**
DUWZ				S	**S**	**11 20 40.3**	**-2.7**
SNZO	**South Karori**	**9.19**	**208**	P	**Pn**	**11 19 01.5**	**+0.2**
QRZ	**Quartz Range**	**9.79**	**218**	P	**P**	**11 19 12.3**	**-2.7**
KHZ	**Kahutara**	**10.59**	**209**	P	**Pn**	**11 19 20.0**	**+1.1**
ODZ	**Otahua Downs**	**13.94**	**210**	P	**P**	**11 20 03.2**	**+2.1**
CTA	**Charters Tower**	**33.04**	**285**	P	**P**	**11 23 04.0**	**-1.4**
	1.3nm,0.4s,baz=97,slow=5.8,SNR=2.2						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**41.67**	**271**	P	**P**	**11 24 16.4**	**-1.2**
	0.6nm,0.5s,baz=110,slow=7.8,SNR=12						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**42.92**	**276**	P	**P**	**11 24 25.9**	**-1.8**
	0.9nm,0.5s,baz=116,slow=7.7,SNR=12						
	0.9nm,0.5s						
SNAA	**Sanae**	**75.31**	**179**	P	P	11 28 14.0	+5.6
VNA3	**Neumayer Olymp**	**75.52**	**177**	P	P	11 28 15.2	+5.6
VNA2	**Neumayer--Watz**	**75.94**	**177**	P	P	11 28 18.2	+6.3
	baz=173,slow=6.0						
FINES	**FINESS Array B**	**147.32**	**337**	PKPbc	**PKiKP**	**11 36 06.5**	**-1.9**
	1.0nm,0.6s,baz=15,slow=5.8,SNR=1.6						
TORD	**Torodi Ar. Bea**	**159.92**	**184**	PKPab	**PKPab**	**11 37 07.5**	**+4.2**
	0.4nm,0.4s,baz=172,slow=3.9,SNR=5.2						

ROM 31 11:23:33.3±0.0, 42°692N±0'001×13°271E±0'002, h11km,
ML3.1/53, 27C-21D, Error ellipse: s-maj=0.7km
s-min=0.2km az=326.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.04**	**115**	P	Pg	11 23 36.0	+0.4
T1204				S	Sg	11 23 37.4	+0.2
T1204				AML	AML		
T1204				AML	AML		

```
CAMP                                AML   AML
      comp=N,17400µm,0.2s
CAMP                                AML   AML
      comp=E,19550µm,0.2s
RM33  Pellescritta (        0.19 193 ⇑P    Pg    11 23 38.1 +0.6
RM33                                S     Sg    11 23 41.4 +1.1
RM33                                AML   AML
      comp=N,19300µm,1.4s
RM33                                AML   AML
      comp=N,19300µm,1.4s
RM33                                AML   AML
      comp=E,19050µm,0.6s
RM33                                AML   AML
      comp=N,19350µm,1.4s
RM33                                AML   AML
      comp=E,18650µm,0.6s
RM33                                AML   AML
      comp=N,19350µm,1.4s
LNSS  Leonessa              0.19 242 ⇓P    Pg    11 23 38.0 +0.4
LNSS                                S     Sg    11 23 41.6 +1.2
LNSS                                AML   AML
      comp=N,54400µm,0.4s
LNSS                                AML   AML
      comp=E,22050µm,0.3s
T1241 Roccafluvione,        0.20  36 ⇓P    Pg    11 23 38.1 +0.4
T1241                               S     Sg    11 23 41.7 +1.0
T1241                               AML   AML
      comp=E,18335µm,0.4s
T1241                               AML   AML
      comp=N,12550µm,0.5s
T1241                               AML   AML
      comp=N,12950µm,0.5s
T1241                               AML   AML
      comp=E,18310µm,0.4s
T1241                               AML   AML
      comp=E,18340µm,0.4s
T1241                               AML   AML
      comp=N,12550µm,0.5s
T1241                               AML   AML
      comp=E,19250µm,0.4s
MMO1  Montemonaco           0.21  11 ⇑P    Pg    11 23 38.3 +0.4
MMO1                                S     Sg    11 23 41.8 +0.8
T1217 Poggiodomo (PG        0.25 275 ⇑P    Pg    11 23 38.9 +0.3
T1217                               S     Sg    11 23 43.1 +1.0
T1217                               AML   AML
      comp=E,6955µm,0.4s
T1217                               AML   AML
      comp=E,7085µm,0.3s
T1217                               AML   AML
      comp=N,9155µm,0.9s
T1217                               AML   AML
      comp=N,9230µm,0.9s
T1217                               AML   AML
      comp=E,7085µm,0.3s
T1217                               AML   AML
      comp=N,9160µm,0.9s
T1217                               AML   AML
      comp=N,9215µm,0.9s
T1217                               AML   AML
      comp=E,7070µm,0.3s
T1217                               AML   AML
      comp=N,9165µm,0.9s
T1217                               AML   AML
      comp=N,9235µm,0.9s
T1217                               AML   AML
      comp=E,6955µm,0.3s
T1217                               AML   AML
      comp=N,9120µm,0.9s
T1247 Pizzolo (AQ)          0.25 175 ⇑P    Pg    11 23 39.1 +0.6
T1247                               S     Sb    11 23 43.5 -0.8
T1247                               AML   AML
      comp=N,10325µm,0.4s
T1247                               AML   AML
      comp=E,11000µm,1.0s
TERO  Teramo                0.26 106 P     Pg    11 23 38.9 +0.3
TERO                                S     Sg    11 23 43.0 +0.8
TERO                                AML   AML
      comp=N,17400µm,0.5s
TERO                                AML   AML
      comp=N,18250µm,0.3s
TERO                                AML   AML
      comp=E,16550µm,0.3s
TERO                                AML   AML
      comp=E,18350µm,0.1s
TERO                                AML   AML
      comp=N,17450µm,0.5s
T1216 Preci, Frazion        0.27 317 ⇑P    Pg    11 23 39.2 +0.3
T1216                               S     Sg    11 23 43.6 +0.9
T1216                               AML   AML
      comp=E,7785µm,0.5s
T1216                               AML   AML
      comp=N,8705µm,0.6s
T1216                               AML   AML
      comp=N,8680µm,0.6s
AM05  Amandola Campo        0.29  12 ⇑P    Pg    11 23 39.8 +0.5
AM05                                S     Sb    11 23 44.5 -0.9
AM05                                AML   AML
      comp=E,1222µm,0.7s
AM05                                AML   AML
      comp=N,1180µm,0.5s
AM05                                AML   AML
      comp=E,5135µm,0.3s
AM05                                AML   AML
      comp=N,298µm,0.1s
AM05                                AML   AML
      comp=E,1220µm,0.7s
AM05                                AML   AML
      comp=N,1175µm,0.5s
AM05                                AML   AML
      comp=E,1222µm,0.7s
AM05                                AML   AML
      comp=N,340µm,0.1s
FEMA  Monte Fema            0.32 329 ⇓P    Pg    11 23 39.9 +0.1
FEMA                                AML   AML
      comp=N,3480µm,0.2s
FEMA                                AML   AML
      comp=E,4345µm,0.7s
T1215 Vallo di Nera,        0.32 291 ⇑P    Pg    11 23 39.9 +0.2
T1215                               S     Sg    11 23 44.9 +0.9
T1215                               AML   AML
      comp=E,1835µm,1.6s
T1215                               AML   AML
      comp=N,2780µm,1.6s
T1215                               AML   AML
      comp=E,1995µm,1.6s
T1215                               AML   AML
      comp=N,2775µm,1.6s
T1215                               AML   AML
      comp=E,1835µm,1.6s
T1215                               AML   AML
      comp=N,2780µm,1.6s
T1215                               AML   AML
      comp=E,1995µm,1.6s
T1215                               AML   AML
      comp=N,2780µm,1.6s
T1256 Bolognola (MC)        0.32 354 ⇓P    Pg    11 23 40.0 +0.2
T1256                               S     Sg    11 23 45.1 +1.0
T1256                               AML   AML
      comp=E,3060µm,0.5s
T1256                               AML   AML
      comp=E,3280µm,0.5s
T1256                               AML   AML
      comp=E,3055µm,0.5s
T1256                               AML   AML
      comp=N,3305µm,0.6s
T1256                               AML   AML
      comp=N,3310µm,0.6s
T1256                               AML   AML
      comp=N,3025µm,0.6s
T1256                               AML   AML
      comp=E,3275µm,0.5s
GIGS  Gran Sasso            0.33 138 ⇑P    Pg    11 23 40.0 +0.1
GIGS                                S     Sg    11 23 45.0 +0.6
GIGS                                AML   AML
      comp=N,2920µm,0.4s
GIGS                                AML   AML
      comp=E,2540µm,0.1s
GIGS                                AML   AML
      comp=N,2915µm,0.4s
T1211 Morro Reatino         0.34 243 ⇑P    Pg    11 23 40.5 +0.3
T1211                               AML   AML
      comp=E,14700µm,0.6s
T1211                               AML   AML
      comp=N,19400µm,0.3s
T1211                               AML   AML
      comp=E,15000µm,0.6s
T1211                               AML   AML
      comp=N,19000µm,0.3s
T1211                               AML   AML
      comp=E,15050µm,0.6s
AQU   L'Aquila              0.35 164 ⇑P    Pg    11 23 40.8 +0.4
AQU                                 AML   AML
      comp=E,2230µm,0.3s
AQU                                 AML   AML
      comp=N,2390µm,0.9s
AQU                                 AML   AML
      comp=E,2320µm,0.3s
AQU                                 AML   AML
      comp=N,2535µm,0.6s
AQU                                 AML   AML
      comp=E,2235µm,0.3s
FDMO  Fiordimonte           0.37 339 P     Pg    11 23 40.8 +0.1
FDMO                                AML   AML
      comp=E,1800µm,0.8s
FDMO                                AML   AML
      comp=E,1805µm,0.8s
FDMO                                AML   AML
      comp=N,2620µm,0.2s
GUMA  Gualdo di Mace        0.37   7 ⇓P    Pb    11 23 41.5 -0.5
GUMA                                AML   AML
      comp=N,15450µm,0.3s
GUMA                                AML   AML
      comp=N,15400µm,0.3s
GUMA                                AML   AML
      comp=E,17050µm,0.3s
GUMA                                AML   AML
      comp=E,16000µm,0.3s
ARRO  Arrone                0.39 253 P     Pg    11 23 41.3 +0.3
ARRO                                S     Sb    11 23 47.8 -0.4
ARRO                                AML   AML
      comp=N,6540µm,0.2s
ARRO                                AML   AML
      comp=E,4260µm,0.3s
OFFI  Offida                0.39  51 ⇑P    Pb    11 23 42.2  0.0
OFFI                                AML   AML
      comp=N,16700µm,0.4s
OFFI                                AML   AML
      comp=E,23700µm,0.5s
FIAM  Fiamignano            0.44 195 ⇑P    Pg    11 23 42.2 +0.2
FIAM                                AML   AML
      comp=E,2080µm,0.5s
FIAM                                AML   AML
      comp=N,2630µm,1.1s
FAGN  Fagnano               0.48 151 ⇓P    Pg    11 23 42.9 +0.1
FAGN                                S     Sb    11 23 52.0 +1.0
FAGN                                AML   AML
      comp=N,3910µm,0.4s
FAGN                                AML   AML
      comp=E,6175µm,0.4s
TRTR  Tortoreto Alta        0.49  76 ⇓P    Pb    11 23 43.9  0.0
TRTR                                AML   AML
      comp=E,9155µm,0.7s
TRTR                                AML   AML
      comp=N,8570µm,0.5s
VCEL  Villa Celiera         0.52 125 ⇑P    Pg    11 23 43.7 +0.3
VCEL                                S     Sn    11 23 54.0 -1.6
VCEL                                AML   AML
      comp=E,5700µm,0.4s
VCEL                                AML   AML
      comp=N,8560µm,0.4s
VCEL                                AML   AML
      comp=E,5705µm,0.4s
CESX  Cesi                  0.52 261 ⇑P    Pg    11 23 43.3 -0.1
CESX                                S     Sb    11 23 52.0 +0.1
CESX                                AML   AML
      comp=N,2765µm,0.3s
CESX                                AML   AML
      comp=E,2285µm,0.4s
ASSB  Assisi San Ben        0.57 308 ⇑P    Pg    11 23 44.1 -0.3
ASSB                                AML   AML
      comp=N,1595µm,0.5s
ASSB                                AML   AML
      comp=E,1830µm,1.5s
T0110 Collepietro           0.60 141 ⇑P    Pg    11 23 44.9 -0.1
T0110                               S     Sb    11 23 55.0 +0.7
T0110                               AML   AML
      comp=N,6275µm,0.3s
T0110                               AML   AML
      comp=E,4445µm,0.3s
SNTG  Esanatoglia           0.61 337 P     Pg    11 23 44.9 -0.4
SNTG                                AML   AML
      comp=E,718µm,0.3s
SNTG                                AML   AML
      comp=E,652µm,0.3s
SNTG                                AML   AML
      comp=N,620µm,0.6s
SNTG                                AML   AML
      comp=N,557µm,0.6s
SNTG                                AML   AML
      comp=N,620µm,0.6s
SNTG                                AML   AML
      comp=E,718µm,0.3s
SNTG                                AML   AML
      comp=E,651µm,0.3s
EL6   Elcito                0.65 349 P     Pg    11 23 45.7 -0.3
ATCC  AVT- Casa Cast        0.68 317 ⇑P    Pg    11 23 46.3 -0.2
ATCC                                AML   AML
      comp=E,1650µm,0.4s
ATCC                                AML   AML
      comp=N,1165µm,0.3s
ATCC                                AML   AML
      comp=E,1645µm,0.4s
ATCC                                AML   AML
      comp=N,1170µm,0.3s
FOSV  Fossato di Vic        0.71 328 ⇑P    Pg    11 23 47.1 +0.1
FOSV                                AML   AML
      comp=N,733µm,0.7s
FOSV                                AML   AML
      comp=E,606µm,0.6s
SRES  S.Oreste - Sor        0.72 231 ⇓P    Pg    11 23 47.4  0.0
SRES                                AML   AML
      comp=E,984µm,0.5s
SRES                                AML   AML
      comp=N,844µm,0.3s
PP3   Marolino              0.73  20 P     Pb    11 23 48.3 +0.2
PP3                                 AML   AML
      comp=E,2675µm,0.5s
PP3                                 AML   AML
      comp=N,6125µm,0.5s
PP3                                 AML   AML
      comp=E,2875µm,0.5s
PP3                                 AML   AML
      comp=N,6190µm,0.5s
PP3                                 AML   AML
      comp=E,2670µm,0.5s
PP3                                 AML   AML
      comp=E,2880µm,0.5s
PP3                                 AML   AML
      comp=N,6185µm,0.5s
PP3                                 AML   AML
      comp=N,6125µm,0.4s
CERT  Cerreto               0.77 196 ⇑P    Pg    11 23 47.3 -0.9
CERT                                AML   AML
      comp=E,2890µm,0.5s
CERT                                AML   AML
      comp=N,1465µm,0.5s
MTCE  Montecelio            0.78 211 ⇓P    Pn    11 23 50.0 -0.2
MTCE                                AML   AML
      comp=E,1550µm,0.5s
MTCE                                AML   AML
      comp=N,880µm,1.0s
INTR  Introdacqua           0.83 145 S     Sg    11 23 59.0 -1.1
ARVD  Arcevia               0.84 343 ⇓P    Pg    11 23 49.6 +0.1
ARVD                                AML   AML
      comp=N,335µm,0.5s
ARVD                                AML   AML
      comp=E,532µm,1.6s
ATTE  AVT- Monte Tez        0.84 307 ⇓P    Pn    11 23 51.7 +0.5
ATTE                                AML   AML
      comp=E,664µm,0.6s
ATTE                                AML   AML
      comp=N,522µm,1.1s
ATFO  Monte Foce - G        0.85 323 P     Pg    11 23 49.7  0.0
ATFO                                AML   AML
      comp=E,792µm,0.6s
ATFO                                AML   AML
      comp=N,490µm,1.0s
MGAB  Montegabbione         0.88 285 P     Pb    11 23 50.6  0.0
MGAB                                AML   AML
      comp=E,3615µm,0.4s
MGAB                                AML   AML
      comp=N,2390µm,0.4s
MGAB                                AML   AML
      comp=E,4015µm,0.4s
MGAB                                AML   AML
      comp=N,2065µm,0.4s
CAFR  Castel Frentan        0.92 120 ⇑P    Pg    11 23 51.1  0.0
CAFR                                AML   AML
      comp=E,794µm,0.3s
CAFR                                AML   AML
      comp=N,1024µm,0.5s
LPEL  Lama dei Pelig        0.93 133 ⇑P    Pg    11 23 50.8 -0.5
LPEL                                S     Sn    11 24 05.0 -0.8
LPEL                                AML   AML
      comp=E,1310µm,1.0s
LPEL                                AML   AML
      comp=N,1200µm,0.2s
ATVO  AVT- Monte Val        0.94 318 ⇓P    Pg    11 23 51.0 -0.3
ATVO                                AML   AML
      comp=E,536µm,1.5s
ATVO                                AML   AML
      comp=N,568µm,0.5s
PIEI  Pieia                 1.00 328 ⇑P    Pn    11 23 53.9 +0.5
PIEI                                AML   AML
      comp=N,536µm,0.5s
PIEI                                AML   AML
      comp=E,375µm,0.9s
MPAG  Monte Paganucc        1.01 338 P     Pg    11 23 52.5 -0.3
MPAG                                AML   AML
      comp=E,458µm,0.6s
MPAG                                AML   AML
      comp=N,469µm,0.4s
SACS  San Casciano d        1.01 279 ⇓P    Pg    11 23 52.7 -0.1
SACS                                AML   AML
      comp=E,632µm,1.4s
SACS                                AML   AML
      comp=N,740µm,1.4s
FSSB  Fossombrone           1.06 340 ⇓P    Pn    11 23 55.1 +1.0
FSSB                                AML   AML
      comp=E,1515µm,0.4s
FSSB                                AML   AML
      comp=N,1465µm,0.5s
LATE  Laterza               1.08 266 ⇓P    Pb    11 23 54.1  0.0
BADI  Badiali               1.11 318 ⇑P    Pn    11 23 56.1 +1.3
TOLF  Tolfa                 1.13 237 ⇑P    Pn    11 23 55.3 +0.2
TOLF                                AML   AML
      comp=E,486µm,1.5s
TOLF                                AML   AML
      comp=N,458µm,0.8s
GIUL  Giuliano Di Ro        1.13 181 ⇑P    Pn    11 23 55.9 +0.8
GIUL                                AML   AML
      comp=E,322µm,0.5s
GIUL                                AML   AML
      comp=N,506µm,0.5s
CAFI  Castiglion Fio        1.15 304 P     Pn    11 23 55.4  0.0
CAFI                                AML   AML
      comp=N,365µm,0.5s
CAFI                                AML   AML
      comp=E,421µm,0.4s
SF04  Casetta               1.19 277 S     Sn    11 24 16.0 +3.7
CERA  Filignano             1.23 153 ⇓P    Pg    11 23 58.5 +1.7
MIDA  Miranda               1.28 145 ⇓P    Pg    11 23 59.3 +1.4
CRE   Caprese Michel        1.34 314 P     Pb    11 23 58.7 +0.2
CRE                                 AML   AML
      comp=E,199µm,1.6s
CRE                                 AML   AML
      comp=N,288µm,0.6s
MAON  Monte Argentar        1.60 261 ⇑P    Pn    11 24 02.0 +0.4
MAON                                AML   AML
      comp=E,117µm,1.2s
MAON                                AML   AML
      comp=N,116µm,0.7s
TRIF  Trifonti              1.79 284 ⇑P    Pn    11 24 04.9 +0.7
TRIF                                AML   AML
      comp=N,89µm,0.7s
TRIF                                AML   AML
      comp=E,80µm,1.6s
APRC  Apricena              1.93 118 ⇓P    Pb    11 24 09.2 +0.7
SGRT  San Giovanni R        2.06 116 ⇓P    Pb    11 24 09.6 -1.2
SGRT                                AML   AML
      comp=E,298µm,1.6s
SGRT                                AML   AML
      comp=N,226µm,1.3s
OBKA  Obir                  3.92  13 ePn   Pn    11 24 33.2 -0.4
      comp=N,0.4nm,0.3s
ABTA  Abfaltersbach         4.09 353 ePn   Pn    11 24 37.2 +1.3
      comp=N,7.1nm,0.4s
FETA  Feichten              4.69 338 ePn   Pn    11 24 47.6 +3.5
      comp=N,1.0nm,0.6s
WTTA  Wattenberg            4.72 346 ePn   Pn    11 24 47.3 +2.7
      comp=N,1.7nm,0.4s
MOTA  Moosalm               4.90 342 ePn   Pb    11 24 54.8 -4.4
      comp=N,1.8nm,0.4s
CONA  Conrad Observa        5.55  18 ePn   Pn    11 24 59.2 +3.4
      comp=N,1.0nm,0.3s
```

ROM 31 11:24:30.8±0.1, 42°.866N±0°.004×13°.241E±0°.005, h9km, ML2.4/11, 4C-5D, Error ellipse: s-maj=0.5km s-min=0.3km az=25.0, Central Italy

```
Code  Station Name          Δ°   AZ°  Phase ID          Time      Res
                                      Op    ISC         h m s     ISC
T1245 Castelsantange        0.04 256 P     Pg    11 24 33.1 +0.4
T1245                               AML   AML
      comp=E,16350µm,0.2s
T1245                               AML   AML
      comp=N,54400µm,0.4s
T1245                               AML   AML
      comp=N,8495µm,0.9s
T1245                               AML   AML
      comp=E,16350µm,0.2s
T1245                               AML   AML
      comp=N,54450µm,0.4s
T1245                               AML   AML
      comp=E,24950µm,0.1s
T1245                               AML   AML
      comp=N,8490µm,0.9s
T1245                               AML   AML
      comp=E,17300µm,0.5s
T1245                               AML   AML
      comp=E,32100µm,0.5s
T1245                               AML   AML
      comp=N,28900µm,0.3s
T1245                               AML   AML
      comp=E,16322µm,0.2s
T1245                               AML   AML
      comp=E,24957µm,0.1s
T1245                               AML   AML
      comp=N,8558µm,0.9s
MMO1  Montemonaco           0.07  62 ⇑P    Pg    11 24 33.2 +0.2
MMO1                                S     Sg    11 24 34.8 +0.2
AM05  Amandola Campo        0.14  36 ⇑P    Pg    11 24 34.4 +0.5
AM05                                S     Sg    11 24 36.7 +0.7
AM05                                AML   AML
      comp=E,759µm,0.1s
AM05                                AML   AML
      comp=N,878µm,0.3s
AM05                                AML   AML
      comp=E,3955µm,0.1s
AM05                                AML   AML
      comp=N,340µm,0.1s
AM05                                AML   AML
      comp=E,986µm,0.4s
AM05                                AML   AML
      comp=N,1405µm,0.4s
AM05                                AML   AML
      comp=E,5105µm,0.3s
AM05                                AML   AML
      comp=N,474µm,0.1s
AM05                                AML   AML
      comp=E,759µm,0.1s
AM05                                AML   AML
      comp=N,341µm,0.1s
AM05                                AML   AML
      comp=E,3956µm,0.1s
AM05                                AML   AML
      comp=N,878µm,0.3s
T1241 Roccafluvione,        0.14  94 P     Pg    11 24 34.5 +0.6
T1241                               S     Sg    11 24 37.0 +0.9
T1241                               AML   AML
      comp=E,6330µm,0.2s
T1241                               AML   AML
      comp=N,2820µm,0.3s
T1241                               AML   AML
      comp=E,6190µm,0.2s
T1241                               AML   AML
      comp=N,2825µm,0.3s
T1241                               AML   AML
      comp=N,3320µm,0.3s
T1241                               AML   AML
```

comp=E,6185μm,0.2s
T1256 Bolognola (MC) 0.14 356 P Pg 11 24 34.4 +0.3
T1256 S Sg 11 24 36.8 +0.5
T1256 AML AML
comp=E,2045μm,0.6s
T1256 AML AML
comp=N,1885μm,0.3s
T1256 AML AML
comp=E,2080μm,0.6s
T1256 AML AML
comp=E,2045μm,0.6s
T1256 AML AML
comp=N,1880μm,0.3s
T1256 AML AML
comp=E,2085μm,0.6s
T1256 AML AML
comp=N,1760μm,0.3s
T1256 AML AML
comp=E,5005μm,0.9s
T1256 AML AML
comp=N,3760μm,1.3s
T1256 AML AML
comp=E,5080μm,0.9s
T1256 AML AML
comp=N,3710μm,1.3s
T1256 AML AML
comp=N,1762μm,0.3s
T1256 AML AML
comp=N,1882μm,0.3s
T1256 AML AML
comp=E,2083μm,0.6s
T1256 AML AML
comp=E,2045μm,0.6s
T1216 Preci, Frazion 0.17 279 P Pg 11 24 35.0 +0.7
T1216 S Sg 11 24 38.0 +1.3
T1216 AML AML
comp=E,4115μm,0.5s
T1216 AML AML
comp=N,3885μm,0.1s
T1216 AML AML
comp=E,4115μm,0.5s
T1216 AML AML
comp=N,4800μm,0.2s
T1216 AML AML
comp=E,16850μm,1.1s
T1216 AML AML
comp=N,20400μm,0.3s
T1216 AML AML
comp=N,4086μm,1.7s
T1216 AML AML
comp=E,4108μm,0.5s
FEMA Monte Fema 0.17 304 P Pg 11 24 35.1 +0.6
FEMA S Sg 11 24 38.2 +1.2
FEMA AML AML
comp=E,3635μm,0.6s
FEMA AML AML
comp=N,2395μm,1.4s
FEMA AML AML
comp=E,3635μm,0.6s
FEMA AML AML
comp=N,2395μm,1.4s
FEMA AML AML
comp=E,12195μm,0.5s
FEMA AML AML
comp=N,5790μm,0.3s
FEMA AML AML
comp=N,2472μm,2.1s
FEMA AML AML
comp=E,3636μm,0.6s
T1204 Amatrice, Fraz 0.20 164 AML AML
comp=E,2855μm,1.1s
T1204 AML AML
comp=E,2852μm,0.2s
T1204 AML AML
comp=N,2400μm,0.1s
FDMO Fiordimonte 0.20 327 ⇓P Pg 11 24 35.5 +0.5
FDMO S Sg 11 24 39.0 +1.1
FDMO AML AML
comp=E,1285μm,0.1s
FDMO AML AML
comp=N,2625μm,0.2s
FDMO AML AML
comp=E,2890μm,0.3s
FDMO AML AML
comp=N,3720μm,0.4s
FDMO AML AML
comp=N,2623μm,0.2s
FDMO AML AML
comp=E,1287μm,0.1s
GUMA Gualdo di Mace 0.21 19 ⇑P Pg 11 24 35.9 +0.8
GUMA S Sg 11 24 39.7 +1.6
GUMA AML AML
comp=E,2530μm,0.5s
GUMA AML AML
comp=N,2125μm,0.5s
GUMA AML AML
comp=E,4190μm,0.4s
GUMA AML AML
comp=N,4830μm,0.5s
GUMA AML AML
comp=E,4065μm,0.3s
GUMA AML AML
comp=N,5360μm,0.9s
GUMA AML AML
comp=N,2801μm,0.6s
GUMA AML AML
comp=N,2447μm,4.1s
GUMA AML AML
comp=E,1806μm,3.5s
GUMA AML AML
comp=E,2533μm,0.5s
CSP1 Cessapalombo 0.23 353 P Pg 11 24 35.9 +0.4
T1217 Poggiodomo (PG 0.28 236 P Pg 11 24 29.6 -6.8
T1215 Vallo di Nera, 0.28 257 AML AML
comp=N,1255μm,0.1s
T1215 AML AML
comp=E,4000μm,0.5s
T1215 AML AML
comp=N,3110μm,1.2s
T1215 AML AML
comp=E,4175μm,0.5s
T1215 AML AML
comp=N,3214μm,1.3s
T1215 AML AML
comp=E,534μm,0.5s
T1215 AML AML
comp=E,546μm,4.5s
T1215 AML AML
comp=N,1310μm,0.1s
MNTP Montappone 0.32 32 ⇓P Pb 11 24 38.2 -0.5
MDAR Monte D'Aria 0.33 348 P Pg 11 24 38.1 +0.7
OFFI Offida 0.33 78 P Pb 11 24 38.8 -0.1
SEF1 Sefro 0.35 323 P Pg 11 24 38.4 +0.6
TERO Teramo 0.36 132 P Pg 11 24 38.6 +0.6
SSM1 San Severino M 0.36 353 P Pg 11 24 38.2 +0.2
GAG1 Gagliole 0.39 341 P Pg 11 24 39.1 +0.6
T1247 Pizzolo (AQ) 0.43 174 P Pg 11 24 39.0 -0.1
SNTG Esanatoglia 0.45 331 ⇓P Pg 11 24 39.9 +0.3
TRE1 Treia 0.45 7 P Pb 11 24 40.8 -0.2
ARRO Arrone 0.45 231 S Sg 11 24 38.0 -7.6
ASSB Assisi San Ben 0.46 293 ⇑P Pg 11 24 40.2 +0.4
ASSB AML AML
comp=E,792μm,0.7s
ASSB AML AML
comp=N,670μm,0.5s
ASSB AML AML
comp=E,486μm,0.3s
ASSB AML AML
comp=N,507μm,0.3s
EL6 Elcito 0.47 348 P Pg 11 24 40.4 +0.3
EL6 S Sb 11 24 48.5 0.0
EL6 AML AML
comp=E,545μm,0.7s
EL6 AML AML
comp=N,540μm,0.4s
EL6 AML AML
comp=N,535μm,1.2s
EL6 AML AML
comp=E,435μm,2.7s
GIGS Gran Sasso 0.48 150 P Pg 11 24 40.5 +0.3
GIGS S Sb 11 24 48.1 -0.6
ATCC AVT- Casa Cast 0.54 306 P Pg 11 24 41.9 +0.5
CESX Cesi 0.55 242 S Sg 11 24 41.0 -7.7
FOSV Fossato di Vic 0.55 321 P Pg 11 24 42.1 +0.5
ARVD Arcevia 0.67 341 ⇓P Pg 11 24 43.7 0.0
ARVD S Sb 11 24 55.0 +0.9
PIEI Pieia 0.84 323 S Sn 11 25 01.0 -0.5

NARO Abbazia di Nar 0.89 327 ⇓P Pg 11 24 47.5 -0.3
BRSN Barisano 1.65 330 S Sg 11 25 24.0 +0.1

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*NEIC **31** 11:35:06.0±1.2, 36°.24N±0°.02×120°.85W±0°.02, h15km±2km, Error ellipse: s-maj=2.9km s-min=1.5km az=224.0*
*ANF **31** 11:35:05.5±1.1, 36°.27N×120°.77W, h7km±5km, ML3.2/12, Error ellipse: s-maj=9.0km s-min=3.7km az=115.0*
*NCEDC **31** 11:35:05.8±1.7, 36°.25N±0°.01×120°.82W±0°.02, h8km±4km, ML3.2/24, ML3.0/75(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=48.0*

ISC 31 11:35:05.8±0.9, 36°.25N±0°.02×120°.85W±0°.02, h11km±7km, n178, σ0°81/186, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPB	**Monarch Peak**	**0.05**	**128**		**Pg**	**11 35 07.3**	**-0.8**
PPTM	**Peach Tree Val**	**0.17**	**143**		**Pg**	**11 35 09.6**	**0.0**
PJUM	**Juniper Ridge**	**0.21**	**95**		**Pg**	**11 35 10.6**	**+0.3**
PSAM	**San Ardo**	**0.22**	**188**		**Pg**	**11 35 10.7**	**+0.2**
LRV	**Little Rabbit**	**0.23**	**323**		**Pg**	**11 35 11.3**	**+0.7**
PSMM	**Smith Mountain**	**0.27**	**131**		**Pg**	**11 35 11.7**	**+0.3**
PCCM	**Crazy Canyon**	**0.30**	**239**		**Pb**	**11 35 12.6**	**-0.6**
BBNM	**San Benito**	**0.32**	**325**		**Pb**	**11 35 13.1**	**-0.5**
PHPM	**Hope Ranch**	**0.33**	**143**		**Pg**	**11 35 12.4**	**-0.1**
BPIM	**Pinnacles**	**0.35**	**313**		**Pg**	**11 35 13.0**	**+0.1**
BBGB	**Big Mountain B**	**0.37**	**335**	Pg	**Pb**	**11 35 14.0**	**-0.4**
BSGM	**Shirttail Gulc**	**0.37**	**297**		**Pg**	**11 35 13.2**	**+0.1**
PDRM	**Domengine Ranc**	**0.40**	**77**		**Pb**	**11 35 14.7**	**-0.2**
PVCM	**Vineyard Canyo**	**0.41**	**142**		**Pg**	**11 35 14.0**	**0.0**
BMSM	**Mercy Hot Spri**	**0.41**	**6**		**Pb**	**11 35 15.1**	**-0.1**
PSTM	**Stockdale Moun**	**0.42**	**139**		**Pg**	**11 35 13.9**	**-0.2**
PPO	**Portuguese Can**	**0.42**	**153**		**Pg**	**11 35 14.6**	**+0.4**
BAVM	**Antelope Valle**	**0.43**	**340**		**Pb**	**11 35 15.0**	**-0.4**
BVL	**Bear Valley**	**0.43**	**320**		**Pg**	**11 35 14.6**	**+0.3**
PHSB	**Hesperia Broad**	**0.45**	**202**		**Pg**	**11 35 15.1**	**+0.4**
PANM	**San Antonio Re**	**0.47**	**186**		**Pg**	**11 35 15.5**	**+0.5**
BSMM	**Soledad Missio**	**0.49**	**287**		**Pg**	**11 35 15.7**	**+0.3**
PWKM	**Work Ranch**	**0.51**	**147**		**Pg**	**11 35 16.1**	**+0.3**
PHFM	**Heflinger Ranc**	**0.51**	**135**		**Pg**	**11 35 15.9**	**+0.1**
CTM	**Castle Mountai**	**0.52**	**127**		**Pb**	**11 35 17.1**	**+0.1**
BJCM	**Johnson Can.**	**0.53**	**305**		**Pg**	**11 35 16.2**	**0.0**
PAPM	**Alder Peak**	**0.53**	**232**		**Pb**	**11 35 16.8**	**-0.5**
BJOM	**Mount Johnson**	**0.54**	**316**		**Pg**	**11 35 16.0**	**-0.2**
PWMM	**Westland Maint**	**0.55**	**70**		**Pb**	**11 35 17.8**	**+0.4**
PHAM	**Harlan Ranch**	**0.55**	**138**		**Pg**	**11 35 16.5**	**0.0**
PCMM	**Cholame Hills**	**0.56**	**141**		**Pg**	**11 35 17.0**	**+0.1**
SCZ	**Santa Cruz**	**0.57**	**308**		**Pg**	**11 35 16.8**	**-0.1**
HAST	**Hastings Reser**	**0.59**	**284**		**Pg**	**11 35 17.3**	**0.0**
PSRM	**Scobie Ranch**	**0.60**	**130**		**Pg**	**11 35 17.6**	**+0.1**
RAMR	**Ramage Ranch**	**0.61**	**182**		**Pg**	**11 35 17.8**	**+0.1**
PHCM	**Hearst Castle**	**0.61**	**204**		**Pg**	**11 35 18.1**	**+0.3**
PKLM	**Kerr Lake**	**0.63**	**139**		**Pg**	**11 35 18.0**	**0.0**
PSNM	**Stone Corral**	**0.64**	**135**		**Pg**	**11 35 18.1**	**-0.2**
BAPM	**Anderson Peak**	**0.65**	**264**		**Pb**	**11 35 18.8**	**-0.4**
TCHL	**Shandon**	**0.66**	**147**		**Pg**	**11 35 18.9**	**+0.2**
BSLM	**Silva Ranch**	**0.67**	**323**		**Pb**	**11 35 19.7**	**+0.3**
PMRM	**Maxey Ranch**	**0.68**	**133**		**Pg**	**11 35 18.9**	**-0.1**
BSRM	**Salinas Radio**	**0.69**	**308**		**Pg**	**11 35 19.0**	**-0.1**
PAGB	**Antelope Grade**	**0.71**	**136**		**Pg**	**11 35 19.4**	**-0.1**
PAGB				IAML		11 35 36.1	
	comp=N,879nm,0.8s						
SAO	**San Andreas Ge**	**0.71**	**317**		**Pg**	**11 35 19.3**	**-0.2**
SAO	**San Andreas Ge**	**0.71**	**317**		**Pg**	**11 35 19.6**	**0.0**
BLDC	**Black Mountain**	**0.71**	**184**		**Pg**	**11 35 19.8**	**+0.1**
BLDC	**Black Mountain**	**0.71**	**184**		**Pg**	**11 35 19.7**	**+0.1**
FRP	**Fremont Peak**	**0.72**	**315**		**Pg**	**11 35 19.5**	**-0.4**
TRAM	**Private Proper**	**0.74**	**140**		**Pg**	**11 35 19.9**	**-0.1**
BPOM	**Post Ranch**	**0.74**	**269**		**Pg**	**11 35 20.1**	**-0.1**
PCBM	**Cambria**	**0.75**	**193**		**Pb**	**11 35 20.6**	**-0.2**
HSFM	**Saint Francis**	**0.77**	**317**		**Pg**	**11 35 20.8**	**0.0**
ARDC	**Alexander Ranc**	**0.79**	**188**		**Pg**	**11 35 21.2**	**+0.1**
HJGM	**San Juan Grade**	**0.80**	**314**		**Pb**	**11 35 21.2**	**-0.6**
TSCN	**Private Proper**	**0.81**	**150**		**Pb**	**11 35 21.2**	**-0.7**
HBTM	**San Juan Bauti**	**0.83**	**317**		**Pb**	**11 35 21.6**	**-0.6**
PACP	**Pacheco Peak**	**0.84**	**335**		**Pg**	**11 35 22.7**	**+0.7**
PTAM	**Tassajara Cree**	**0.86**	**172**		**Pb**	**11 35 22.1**	**-0.6**
HFEM	**San Felipe**	**0.86**	**329**		**Pg**	**11 35 22.9**	**+0.4**
HTUM	**Tustin Road**	**0.86**	**312**		**Pb**	**11 35 22.1**	**-0.8**
ANZ	**Anzar Road**	**0.87**	**317**		**Pb**	**11 35 22.4**	**-0.6**
SLD	**San Luis Dam**	**0.88**	**340**		**Pg**	**11 35 23.2**	**+0.3**
EFD	**Emergency Oper**	**0.93**	**174**		**Pb**	**11 35 23.6**	**-0.3**
HMOM	**Monterey**	**0.93**	**293**		**Pb**	**11 35 23.4**	**-0.6**
LSDC	**Los Osos Digit**	**0.95**	**180**		**Pn**	**11 35 24.5**	**-0.5**
SCKWR	**San Luis Creek**	**0.95**	**349**		**Pn**	**11 35 25.6**	**+0.5**
VPDC	**Valencia Peak**	**1.00**	**181**		**Pg**	**11 35 25.2**	**+0.1**
DPD	**Davis Peak**	**1.01**	**177**		**Pg**	**11 35 25.4**	**+0.1**
DCD	**Diablo Creek**	**1.03**	**180**		**Pb**	**11 35 25.2**	**-0.5**
JELB	**Ellicott, Sant**	**1.04**	**311**		**Pb**	**11 35 25.7**	**-0.2**
YEG	**Yeguas Mountai**	**1.08**	**138**		**Pn**	**11 35 26.6**	**-0.4**
CADM	**Anderson Res.**	**1.11**	**326**		**Pn**	**11 35 27.0**	**-0.3**
JTGM	**Trout Gulch Ro**	**1.14**	**314**		**Pg**	**11 35 27.7**	**0.0**
JLAB	**Laurel Hill**	**1.15**	**322**		**Pn**	**11 35 27.3**	**-0.6**
SMMC	**Simmler**	**1.16**	**143**		**Pn**	**11 35 27.3**	**-0.7**
SMMC	**Simmler**	**1.16**	**143**	P	**Pn**	**11 35 27.3**	**-0.7**
	baz=325,SNR=84						
SMMC				S	**Sg**	**11 35 43.6**	**+0.4**
	baz=325						
CMPM	**Mikes Peak**	**1.17**	**341**		**Pg**	**11 35 28.4**	**0.0**
MYLM	**Yosemite Lake**	**1.19**	**17**		**Pn**	**11 35 27.2**	**-1.1**
VOG	**Valley Oaks Go**	**1.19**	**86**		**Pn**	**11 35 26.9**	**-1.4**
VOG	**Valley Oaks Go**	**1.19**	**86**	P	**Pn**	**11 35 27.0**	**-1.4**
	baz=267,SNR=11						
VOG				S	**Sb**	**11 35 42.4**	**-1.3**
	baz=267						
JRGM	**Rodeo Gulch Ro**	**1.20**	**312**		**Pn**	**11 35 27.3**	**-1.2**
CCOB	**Coe Ranch Numb**	**1.21**	**327**		**Pb**	**11 35 28.7**	**0.0**
AMC	**Almaden**	**1.21**	**319**		**Pn**	**11 35 28.1**	**-0.7**
BCH	**Branch Mountai**	**1.23**	**149**		**Pn**	**11 35 28.1**	**-0.9**
ARN	**Arnold Ranch**	**1.23**	**334**		**Pn**	**11 35 28.7**	**-0.3**
CARC	**Carrizo Plain**	**1.24**	**139**		**Pn**	**11 35 28.9**	**-0.2**
MHC	**Mount Hamilton**	**1.27**	**330**		**Pn**	**11 35 29.1**	**-0.5**
CMMM	**Mount Mocho**	**1.31**	**337**		**Pn**	**11 35 30.0**	**-0.2**
JJOM	**Saint Joseph's**	**1.32**	**317**		**Pn**	**11 35 29.5**	**-0.7**
COSM	**Mount Oso**	**1.33**	**342**		**Pb**	**11 35 30.8**	**0.0**
CRGC	**Crocker Grade**	**1.36**	**137**		**Pn**	**11 35 30.5**	**-0.3**
CMLM	**Mount Lewis**	**1.39**	**333**		**Pn**	**11 35 31.0**	**-0.2**
JSGM	**Saratoga Golf**	**1.42**	**317**		**Pn**	**11 35 31.3**	**-0.2**
MRHM	**Rocky Hill**	**1.42**	**88**		**Pn**	**11 35 30.1**	**-1.5**
CALM	**Calaveras Res.**	**1.43**	**328**		**Pn**	**11 35 31.5**	**-0.1**
MBUM	**Mount Bullion**	**1.45**	**25**		**Pn**	**11 35 31.5**	**-0.6**
JSJM	**St Joseph**	**1.48**	**318**		**Pb**	**11 35 32.6**	**-0.6**
VES	**Vestal, Richgr**	**1.48**	**105**	P	**Pn**	**11 35 31.9**	**-0.5**
	baz=287,SNR=30						
VES				S	**Sn**	**11 35 51.4**	**-0.4**
	baz=287						
JFP	**Foothills Park**	**1.55**	**316**		**Pn**	**11 35 33.5**	**+0.2**
JSFB	**Stanford Teles**	**1.57**	**318**		**Pb**	**11 35 34.0**	**-0.9**
CVLM	**Vallecito**	**1.59**	**330**		**Pn**	**11 35 33.9**	**0.0**
PKM	**Mcpherson Peak**	**1.59**	**148**	P	**Pn**	**11 35 33.6**	**-0.6**
	baz=329,SNR=39						
JRSC	**Jasper Ridge**	**1.61**	**316**		**Pn**	**11 35 33.4**	**-0.7**
BGH	**Bear Gulch**	**1.62**	**313**		**Pn**	**11 35 33.4**	**-1.0**
KCC	**Kaiser Creek**	**1.63**	**48**		**Pn**	**11 35 35.1**	**+0.5**
FIGC	**Figueroa Mtn.**	**1.67**	**155**		**Pn**	**11 35 34.6**	**-0.4**
SPG2	**Springville 2**	**1.68**	**91**		**Pn**	**11 35 34.3**	**-1.0**
MCUB	**Copperopolis B**	**1.74**	**6**		**Pn**	**11 35 35.3**	**-0.7**
BCW	**Bitter Crk WRg**	**1.75**	**138**	Pn	**Pn**	**11 35 36.4**	**+0.2**
CMB	**Columbia Colle**	**1.82**	**12**	Pn	**Pn**	**11 35 37.2**	**0.0**
CMB					**Pb**	**11 35 37.4**	**-1.8**
WOFM	**Oak Flat**	**1.87**	**112**		**Pn**	**11 35 37.5**	**-0.4**
WASM	**Alta Sierra Ca**	**1.93**	**105**		**Pn**	**11 35 38.7**	**0.0**
MRDM	**Red Cones**	**1.97**	**46**		**Pb**	**11 35 41.0**	**-0.9**
BKS	**Berkeley--Byer**	**1.97**	**326**		**Pn**	**11 35 39.3**	**+0.1**
ARVC	**Arvin**	**1.99**	**124**		**Pn**	**11 35 39.1**	**-0.2**
ARVC	**Arvin**	**1.99**	**124**	P	**Pn**	**11 35 38.8**	**-0.5**
	baz=305,SNR=12						
MINS	**Minaret Summit**	**2.01**	**45**		**Pb**	**11 35 41.1**	**-1.4**
ISA	**Isabella, Lake**	**2.01**	**106**	Pn	**Pn**	**11 35 39.9**	**+0.2**
ISA				IAML		11 36 10.5	
	comp=E,136nm,0.7s						
ISA				IAML		11 36 15.0	
	comp=N,99nm,0.9s						
ISA	**Isabella, Lake**	**2.01**	**106**	P	**Pn**	**11 35 39.8**	**+0.1**
	baz=288,SNR=33						
ISA				S	**Sn**	**11 36 04.9**	**-0.1**
	baz=288						
OMMB	**Old Mammoth Mi**	**2.01**	**47**		**Pb**	**11 35 41.2**	**-1.4**
OMMB				IAML		11 36 17.0	
	comp=E,151nm,0.9s						
SBC	**Santa Barbara**	**2.02**	**152**	P	**Pn**	**11 35 39.7**	**-0.1**
	baz=334						
SBC				Sg	**Sg**	**11 36 14.1**	**+3.2**
	baz=334						
TEJ	**El Tejon**	**2.03**	**119**		**Pn**	**11 35 39.8**	**-0.1**
WLHM	**Little Horse**	**2.05**	**92**		**Pn**	**11 35 40.7**	**+0.2**
MDCM	**Deadman Creek**	**2.06**	**44**		**Pb**	**11 35 41.9**	**-1.4**
MLCM	**Laurel Creek C**	**2.06**	**48**		**Pb**	**11 35 42.7**	**-0.7**
MEMM	**East Mammoth H**	**2.08**	**47**		**Pb**	**11 35 42.4**	**-1.4**
MCBM	**Casa Benchmark**	**2.10**	**48**		**Pb**	**11 35 43.5**	**-0.5**
MCSM	**Casa Diablo Ho**	**2.10**	**47**		**Pb**	**11 35 43.5**	**-0.5**
MCVM	**Convict Lake**	**2.10**	**50**		**Pb**	**11 35 43.0**	**-1.1**
RCCR	**Rock Creek Can**	**2.11**	**53**		**Pb**	**11 35 43.0**	**-1.3**
LMCR	**Lookout Mounta**	**2.12**	**45**		**Pb**	**11 35 44.1**	**-0.4**
MLAC	**Mammoth, Mammo**	**2.12**	**49**	Pb	**Pb**	**11 35 43.7**	**-0.7**
	baz=230,SNR=28						
MLAC				Sb	**Sb**	**11 36 10.9**	**0.0**
	baz=230						
MDRNC	**Doe Ridge**	**2.13**	**49**		**Pb**	**11 35 44.0**	**-0.5**
ORC	**Owens River**	**2.24**	**51**		**Pb**	**11 35 45.4**	**-1.0**
LUL	**Lundy Lake**	**2.24**	**36**		**Pb**	**11 35 44.6**	**-1.8**
CWC	**Cottonwood Cre**	**2.24**	**84**	Pb	**Pb**	**11 35 45.0**	**-1.5**
	baz=266						
CWC				Sb	**Sb**	**11 36 14.1**	**-0.2**
	baz=266						
TIN	**Tinemaha, Big**	**2.25**	**68**		**Pb**	**11 35 45.6**	**-1.0**
TIN	**Tinemaha, Big**	**2.25**	**68**	Pb	**Pb**	**11 35 45.5**	**-1.1**
	baz=250,SNR=40						
TIN				Sb	**Sb**	**11 36 14.5**	**-0.1**
	baz=250						
SNT	**Sears Point**	**2.32**	**327**		**Pn**	**11 35 44.0**	**+0.1**
MCDM	**Chidago Canyon**	**2.33**	**55**		**Pb**	**11 35 46.6**	**-1.3**
BENR	**Benton**	**2.34**	**50**		**Pb**	**11 35 47.0**	**-1.2**
MLNR	**Milner Canyon**	**2.42**	**55**		**Pb**	**11 35 48.3**	**-1.1**
CVS	**Carmenet Viney**	**2.46**	**329**		**Pn**	**11 35 45.9**	**0.0**
NAPC	**Atlas Peak**	**2.46**	**333**		**Pn**	**11 35 45.5**	**-0.4**
CGO	**Cerro Gordo**	**2.48**	**82**		**Pn**	**11 35 48.1**	**+1.7**
MCCM	**Marconi Confer**	**2.50**	**320**	Pn	**Pn**	**11 35 45.8**	**-0.5**
CCAC	**Calif City Air**	**2.55**	**114**	Pn	**Pn**	**11 35 48.3**	**+1.1**
CCAC				IAML		11 36 38.4	
	comp=E,91nm,1.1s						
CCAC				IAML		11 36 41.2	
	comp=N,92nm,1.3s						
DSP	**Deep Springs**	**2.57**	**63**	Pn	**Pn**	**11 35 48.5**	**+1.2**
DSP				IAML		11 36 34.0	
	comp=E,59nm,0.9s						
DSP				IAML		11 36 36.8	
	comp=N,56nm,1.0s						
EDW2	**Edwards Air Fo**	**2.70**	**119**	P	**Pn**	**11 35 49.0**	**-0.2**
	baz=302,SNR=11						
AFDM	**Forest Hills D**	**2.70**	**358**	Pn	**Pn**	**11 35 49.4**	**+0.2**
MPMC	**Manual Prospec**	**2.73**	**93**	Pb	**Pb**	**11 35 53.8**	**-0.9**
	baz=275						
LCH	**Last Change Ra**	**2.75**	**68**	Pn	**Pn**	**11 35 51.8**	**+1.7**
LCH				IAML		11 36 42.4	
	comp=E,50nm,0.7s						
LCH				IAML		11 36 45.3	
	comp=N,49nm,0.8s						
EMB	**Emerald Bay**	**2.79**	**12**	Pn	**Pn**	**11 35 49.9**	**-0.7**
EMB				IAML		11 36 38.5	
	comp=N,76nm,0.8s						
EMB				IAML		11 36 41.5	
	comp=E,67nm,0.6s						
CCCA	**Chr Cany lake**	**2.92**	**103**		**Pb**	**11 35 56.1**	**-1.8**
GDXM	**Geysers**	**2.99**	**329**	Pn	**Pn**	**11 35 53.0**	**-0.2**
GDXM				IAML		11 36 59.2	
	comp=N,36nm,2.9s						
GDXM				IAML		11 37 09.6	
	comp=E,42nm,2.9s						
PNTR	**Pine Nut**	**3.01**	**19**	Pn	**Pn**	**11 35 55.4**	**+1.8**
PNTR				IAML		11 37 17.7	
	comp=E,64nm,1.2s						
RYN	**Ryan**	**3.01**	**37**	Pn	**Pn**	**11 35 53.4**	**-0.2**
RYN				IAML		11 36 46.9	
	comp=E,44nm,0.7s						
RYN				IAML		11 36 51.2	
	comp=N,35nm,1.4s						
YERR	**Yerington**	**3.02**	**25**	Pn	**Pn**	**11 35 55.5**	**+1.7**
YERR				IAML		11 36 48.9	
	comp=N,51nm,0.7s						
GMN	**Gold Mountain**	**3.07**	**69**		**Pn**	**11 35 56.6**	**+2.2**
GMN				IAML		11 36 53.7	
	comp=N,44nm,0.9s						
MPK	**Martis Peak**	**3.11**	**12**	Pn	**Pn**	**11 35 53.9**	**-1.2**
MZP	**Montezuma Peak**	**3.13**	**61**	Pn	**Pn**	**11 35 56.3**	**+0.9**
VCNR	**Virginia City**	**3.19**	**17**	Pn	**Pn**	**11 35 57.0**	**+0.9**
VCNR				IAML		11 36 49.8	
	comp=N,47nm,0.7s						
VCNR				IAML		11 37 00.2	
	comp=E,49nm,0.8s						
QSM	**Queen of Sheba**	**3.23**	**94**	Pn	**Pn**	**11 35 57.0**	**+0.5**
QSM				IAML		11 37 00.5	
	comp=E,28nm,1.0s						
QSM				IAML		11 37 01.6	
	comp=N,36nm,0.9s						
HOPS	**Hopland Field**	**3.26**	**328**	Pn	**Pn**	**11 35 56.8**	**-0.1**
ORV	**Oroville**	**3.34**	**351**	Pn	**Pn**	**11 35 58.6**	**+0.6**
ORV				IAML		11 36 55.0	
	comp=E,19nm,0.7s						
GWY	**Greenwater Val**	**3.38**	**90**	Pn	**Pn**	**11 35 59.6**	**+1.0**
GWY				IAML		11 37 06.1	
	comp=E,23nm,0.9s						
GWY				IAML		11 37 20.7	
	comp=N,20nm,2.0s						
GSC	**Goldstone, Bar**	**3.42**	**105**		**Pn**	**11 35 59.8**	**+0.7**
GSC				IAML		11 36 57.6	
	comp=N,29nm,1.1s						
GSC				IAML		11 37 01.0	
	comp=E,35nm,0.6s						
WCT	**Wildcat Mounta**	**3.44**	**80**	Pn	**Pn**	**11 36 00.8**	**+1.3**
BEKR	**Beckworth**	**3.64**	**6**	Pn	**Pn**	**11 36 03.9**	**+1.7**
BEKR				IAML		11 37 07.9	
	comp=E,32nm,0.8s						
BEKR				IAML		11 37 08.3	
	comp=N,15nm,0.9s						
TPNV	**Topopah Spring**	**3.77**	**78**		**Pn**	**11 36 05.3**	**+1.3**
TPNV				IAML		11 37 26.5	
	comp=N,22nm,1.1s						
TPNV				IAML		11 37 33.9	
	comp=N,21nm,1.8s						
ELS	**Elsinore Mount**	**3.82**	**132**		**Pn**	**11 36 05.5**	**+0.9**
DPP	**Dos Picos Cty**	**4.57**	**134**		**Pb**	**11 36 24.4**	**-1.6**
SHPR	**Sheep Range**	**4.60**	**85**	Pn	**Pn**	**11 36 17.5**	**+2.1**
R11A	**Troy Canyon, C**	**4.69**	**62**		**Pn**	**11 36 15.4**	**-1.3**
R11A				IAML		11 38 11.9	
	comp=E,7.7nm,4.8s						
PRN	**Pahroc Range**	**4.79**	**74**	Pn	**Pn**	**11 36 19.9**	**+1.9**
PRN				IAML		11 37 46.0	
	comp=N,15nm,0.7s						
BAR	**Barrett**	**4.95**	**135**		**Pn**	**11 36 21.2**	**+1.0**
BAR	**Barrett**	**4.95**	**135**	IAML		11 36 56.9	
	comp=N,9.7nm,2.8s						

IDC 31 11:42:19.1±7.5, 19°.10S×177°.80W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=328.8km s-min=38.8km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.00**	**261**	P	P	11 50 36.5	-0.1
	0.3nm,0.4s,baz=97,slow=7.5,SNR=9.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.04**	**255**	P	P	11 50 36.9	-0.1
	0.3nm,0.4s,baz=92,slow=7.6,SNR=11						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**86.91**	**13**	P	P	11 55 05.4	0.0
	0.2nm,0.5s,baz=226,slow=5.8,SNR=4.7						
	0.2nm,0.5s						

TRN 31 11:44:34.4, 16°.34N×60°.92W, h38km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	**0.52**	**222**	*eP*	Pn	11 44 47.0	+1.6
MAGL				*eS*	Sn	11 44 55.4	+2.3
ABD	**La Joyeuse, An**	**0.56**	**284**	*i P*	Pn	11 44 47.3	+1.3
ABD				*eS*	Sn	11 44 56.0	+1.9
CBE	**Ff, Capester**	**0.71**	**248**	*eP*	Pn	11 44 50.1	+2.1
CBE				*eS*	Sn	11 45 01.0	+3.2
TDBA	**Terre de Bas,**	**0.85**	**235**	*eP*	Pn	11 44 51.9	+2.1
TD

TBG			*e*S	Sn	11 45 04.8	+3.6
MDVC	**Dominica, Viel**	**0.86 213**	*e*P	Pn	11 44 51.4	+1.4
MDVC			*e*S	Sn	11 45 03.1	+1.7
MDCT	**Cottage Hill,**	**0.89 216**	*e*P	Pn	11 44 51.8	+1.4
MDCT			*e*S	Sn	11 45 04.8	+2.7
DSLB	**Salisbury**	**1.02 208**	*e*P	Pn	11 44 53.9	+1.7
DSLB			*e*S	Sn	11 45 07.6	+2.4
DLPL	**La Plaine**	**1.05 198**	*e*P	Pn	11 44 55.2	+2.6
DLPL			*e*S	Sn	11 45 07.0	+1.0
ANBD	**Bethesda, Anti**	**1.07 311**	*e*P	Pn	11 44 54.4	+1.6
ANBD			*e*S	Sn	11 45 08.2	+1.7
MDN	**Morne-Daniel**	**1.11 204**	*e*P	Pn	11 44 55.1	+1.6
MDN			*e*S	Sn	11 45 09.5	+2.0
ANDO	**Antigua, Disas**	**1.16 311**	*e*P	Pn	11 44 55.2	+1.1
ANDO			*e*S	Sn	11 45 10.6	+1.9
MBFL	**Flemmings, Mon**	**1.31 288**	*e*P	Pn	11 44 58.6	+2.5
MBFL			*e*S	Sn	11 45 15.5	+3.2
SVN	**Savane Anatole**	**1.51 189**	*e*P	Pn	11 45 00.7	+1.8
BAMF	**Morne Balai**	**1.53 188**	*e*P	Pn	11 45 01.2	+2.0
CXM	**Morne La Croix**	**1.54 189**	*e*P	Pn	11 45 00.3	+0.9
PCM	**Pelee Case Pet**	**1.54 191**	*e*P	Pn	11 45 02.0	+2.6
GBMF	**Grand Be**	**1.55 189**	*e*P	Pn	11 45 01.8	+2.3
ILAM	**Ilet Lapin Mar**	**1.56 178**	*e*P	Pn	11 45 00.7	+1.2
ILAM			*e*S	Sn	11 45 20.1	+1.6
ANWB	**Willy Bob**	**1.56 328**	*e*P	Pn	11 45 00.3	+0.8
ANWB			*e*S	Sn	11 45 21.1	+2.5
PML	**Morne Lenard**	**1.57 189**	*e*P	Pn	11 45 01.5	+1.7
FDF	**Fort de France**	**1.61 188**	*e*P	Pn	11 45 00.9	+0.5
FDF			*e*S	Sn	11 45 21.0	+1.1
LPMF	**Morne Lapointe**	**1.76 182**	*e*P	Pn	11 45 03.7	+1.4
ZAM	**Aeronautique**	**1.76 184**	*e*P	Pn	11 45 03.9	+1.6
MVM	**Montagne Vaucl**	**1.77 179**	*e*P	Pn	11 45 04.5	+1.9
BIM	**Bigot**	**1.82 185**	*e*P	Pn	11 45 05.2	+2.0
BIM			*e*S	Sn	11 45 27.2	+2.2
MPOM	**Morne Pois Mar**	**1.89 178**	*e*P	Pn	11 45 06.0	+2.0
MPOM			*e*S	Sn	11 45 28.4	+1.8
SLBI	**Saint Lucia, B**	**2.30 181**	*e*P	Pn	11 45 12.0	+2.2
SLBI			*e*S	Sn	11 45 39.3	+2.4
SLB	**Belfond**	**2.50 183**	*e*P	Pn	11 45 14.7	+2.1
SLB			*e*S	Sn	11 45 43.0	+1.2
MCLT	**Moule a Chique**	**2.62 181**	*e*P	Pn	11 45 16.7	+2.6
MCLT			*e*S	Sn	11 45 47.2	+2.6
SMRT	**St. Maarten**	**2.67 310**	*e*P	Pn	11 45 16.2	+1.3

IDC 31 11:49:58.7±999.0, 30°.81N×39°.84E, h0km, Error ellipse: s-maj=1076.0km s-min=267.4km az=17.0, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**23.84**	**30**	I		14 14 20.0	
baz=222,slow=312,SNR=1.4							
I43RU	**DUBNA INFRASON**	**25.97**	**357**	I		14 30 10.0	
baz=176,slow=337,SNR=1.4							
I46RU	**ZALESOVO INFRA**	**39.57**	**41**	I		15 52 20.0	
baz=254,slow=327,SNR=2.6							

*SOF **31** 11:59:45.2, 46°.05N×26°.72E, h22km, MD4.3*
*BEO **31** 11:59:46.9±1.6, 45°.73N×27°.21E, h76km±9km, ML4.2/9*
*MOS **31** 11:59:48.5±1.2, 45°.81N×26°.67E, h88km, mb4.2/5, Error ellipse: s-maj=8.1km s-min=5.8km az=93.3*
*IDC **31** 11:59:49.7±0.5, 45°.88N×26°.60E, h86km±6km, mb3.6/8, mbtmp3.9/15, Error ellipse: s-maj=17.6km s-min=10.1km az=136.0*
*BUC **31** 11:59:49.8±0.2, 45°.84N×26°.78E, h91km±2km, ml4.3/46, Error ellipse: s-maj=1.6km s-min=1.3km az=169.0*
*MCSM **31** 11:59:49.7±0.6, 46°.N±6°.×2°.7E±°, h86km±5km, ML4.2*
*SIGU **31** 11:59:49.4, 45°.90N×26°.75E, h94km*
*NEIC **31** 11:59:50.2±3.0, 45°.84N±0°.06×26°.79E±0°.09, h89km±8km, Error ellipse: s-maj=9.4km s-min=8.1km az=68.0*
*CFUSG **31** 11:59:51.7, 45°.73N×27°.06E, h64km, mb3.4/4, Romania Magtype MSH 3.4 from 4 stations*
*THE **31** 11:59:55.1, 45°.17N×26°.74E, h1km±31km, ML3.7/6, Error ellipse: s-maj=31.6km s-min=2.7km az=0.0*
ISC 31 11:59:50.2±0.5, 45°.85N±0°.02×26°.78E±0°.02, h96km±3km, n286, σ1§53/422, mb4.0/11, 138C-77D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRI	**Vrincioaia**	**0.04 299**		⇓P	**Pn**	**12 00 02.7**	**-0.9**
VRI				⇓S	**Sn**	**12 00 11.9**	**-1.6**
VRI	**Vrincioaia**	**0.04 299**		⇓P	**Pn**	**12 00 02.7**	**-0.9**
VRI				⇓S	**Sn**	**12 00 11.9**	**-1.6**
VRI	**Vrincioaia**	**0.04 299**		*e*P	**Pn**	**12 00 02.6**	**-0.9**
VRI				*e*S	**Sn**	**12 00 11.9**	**-1.6**
VRI	**Vrincioaia**	**0.04 299**		P	**Pn**	**12 00 02.6**	**-0.9**
PLOR	**Plostina**	**0.09 273**		⇑P	**Pn**	**12 00 02.6**	**-1.1**
PLOR				⇓S	**Sn**	**12 00 11.9**	**-1.8**
PLOR	**Plostina**	**0.09 273**		⇑P	**Pn**	**12 00 02.6**	**-1.1**
PLOR				⇓S	**Sn**	**12 00 11.9**	**-1.8**
PLOR	**Plostina**	**0.09 273**		P	**Pn**	**12 00 02.6**	**-1.1**
PLOR				S	**Sn**	**12 00 11.9**	**-1.8**
PLOR	**Plostina**	**0.09 273**		P	**Pn**	**12 00 02.5**	**-1.1**
PANC	**Panciu**	**0.26 84**		⇑P	**Pn**	**12 00 03.5**	**-0.5**
PANC				⇑S	**Sn**	**12 00 13.6**	**-0.8**
PANC	**Panciu**	**0.26 84**		⇑P	**Pn**	**12 00 03.5**	**-0.5**
PANC				⇑S	**Sn**	**12 00 13.6**	**-0.8**
BISRR	**Bisoca**	**0.30 189**		⇑P	**Pn**	**12 00 04.1**	**-0.4**
BISRR	**Bisoca**	**0.30 189**		⇑P	**Pn**	**12 00 04.1**	**-0.4**
GRER		**0.49 163**		⇑S	**Sn**	**12 00 15.7**	**-1.1**
GRER		**0.49 163**		⇑S	**Sn**	**12 00 15.7**	**-1.1**
GHRR		**0.49 64**		⇑P	**Pn**	**12 00 05.1**	**-0.4**
GHRR				⇑S	**Sn**	**12 00 16.3**	**-0.5**
GHRR		**0.49 64**		⇑P	**Pn**	**12 00 05.1**	**-0.4**
GHRR				⇑S	**Sn**	**12 00 16.3**	**-0.5**
NEHR	**Nehoiu**	**0.54 219**		⇑P	**Pn**	**12 00 05.9**	**0.0**
NEHR				⇓S	**Sn**	**12 00 17.2**	**-0.3**
NEHR	**Nehoiu**	**0.54 219**		⇑P	**Pn**	**12 00 05.9**	**0.0**
NEHR				⇓S	**Sn**	**12 00 17.2**	**-0.3**
TESR	**Tescani**	**0.67 352**		⇑P	**Pn**	**12 00 06.0**	**-1.0**
TESR				⇑S	**Sn**	**12 00 17.6**	**-1.9**
TESR	**Tescani**	**0.67 352**		⇑P	**Pn**	**12 00 06.0**	**-1.0**
TESR				⇑S	**Sn**	**12 00 17.6**	**-1.9**
TESR	**Tescani**	**0.67 352**		P	**Pn**	**12 00 05.9**	**-1.0**
MLR	**Muntele Rosu**	**0.68 239**		⇓P	**Pn**	**12 00 06.8**	**-0.4**
MLR				⇑S	**Sn**	**12 00 18.7**	**-1.3**
MLR	**Muntele Rosu**	**0.68 239**		⇓P	**Pn**	**12 00 06.8**	**-0.4**
MLR				⇑S	**Sn**	**12 00 18.7**	**-1.3**
MLR	**Muntele Rosu**	**0.68 239**		P	**Pn**	**12 00 06.2**	**-1.0**
660nm,0.3s,baz=326,slow=4.4,SNR=869							
MLR				LR	LR	12 00 14.8	
comp=Z,48nm,18.6s,baz=245,slow=42							
MLR				S	**Sn**	**12 00 18.2**	**-1.7**
1μm,0.3s,baz=206,slow=22,SNR=24							
MLR	**Muntele Rosu**	**0.68 239**			**Pn**	**12 00 06.6**	**-0.5**
MLR	**Muntele Rosu**	**0.68 239**		*e*Pg	**Pn**	**12 00 06.7**	**-0.5**
MLR				*e*Sg	**Sn**	**12 00 18.7**	**-1.3**
MLR	**Muntele Rosu**	**0.68 239**		P	**Pn**	**12 00 06.7**	**-0.5**
BIR	**Birlad**	**0.72 54**		⇑P	**Pn**	**12 00 07.2**	**-0.2**
BIR				⇑S	**Sn**	**12 00 19.3**	**-1.0**
BIR	**Birlad**	**0.72 54**		⇑P	**Pn**	**12 00 07.2**	**-0.2**
BIR				⇑S	**Sn**	**12 00 19.3**	**-1.0**
ISR	**Istrita**	**0.75 193**		⇓P	**Pn**	**12 00 07.7**	**0.0**
ISR				⇑S	**Sn**	**12 00 20.8**	**0.0**
ISR	**Istrita**	**0.75 193**		⇓P	**Pn**	**12 00 07.7**	**0.0**
ISR				⇑S	**Sn**	**12 00 20.8**	**0.0**
VARL	**Varlezi**	**0.75 86**		⇑P	**Pn**	**12 00 07.2**	**-0.4**
VARL				⇑S	**Sn**	**12 00 20.1**	**-0.6**
VARL	**Varlezi**	**0.75 86**		⇑P	**Pn**	**12 00 07.2**	**-0.4**
VARL				⇑S	**Sn**	**12 00 20.1**	**-0.6**
IZVR	**Izvoarele**	**0.76 113**		⇑P	**Pn**	**12 00 07.3**	**-0.5**
IZVR				⇑S	**Sn**	**12 00 19.3**	**-1.5**
IZVR	**Izvoarele**	**0.76 113**		⇑P	**Pn**	**12 00 07.3**	**-0.5**
IZVR				⇑S	**Sn**	**12 00 19.3**	**-1.5**
SCHL	**Schela**	**0.81 115**		⇑P	**Pn**	**12 00 07.5**	**-0.8**
SCHL				⇓S	**Sn**	**12 00 20.5**	**-1.3**
SCHL	**Schela**	**0.81 115**		⇑P	**Pn**	**12 00 07.5**	**-0.8**
SCHL				⇓S	**Sn**	**12 00 20.5**	**-1.3**
SCTR	**Scanteiesti**	**0.87 101**		⇑P	**Pn**	**12 00 08.6**	**-0.2**
SCTR				⇑S	**Sn**	**12 00 22.2**	**-0.7**
SCTR	**Scanteiesti**	**0.87 101**		⇑P	**Pn**	**12 00 08.6**	**-0.2**
SCTR				⇑S	**Sn**	**12 00 22.2**	**-0.7**
TATR	**Tatarca**	**0.93 105**		⇑P	**Pn**	**12 00 09.3**	**-0.2**
TATR				⇓S	**Sn**	**12 00 23.1**	**-0.8**
TATR	**Tatarca**	**0.93 105**		⇑P	**Pn**	**12 00 09.3**	**-0.2**
TATR				⇓S	**Sn**	**12 00 23.1**	**-0.8**
DOPR	**Dopca**	**0.98 278**		⇑P	**Pn**	**12 00 09.5**	**-0.6**
DOPR				⇓S	**Sn**	**12 00 24.6**	**-0.4**
DOPR	**Dopca**	**0.98 278**		⇑P	**Pn**	**12 00 09.5**	**-0.6**
DOPR				⇓S	**Sn**	**12 00 24.6**	**-0.4**
GISR	**Galati**	**0.98 114**		⇑P	**Pn**	**12 00 09.9**	**-0.1**
GISR				⇓S	**Sn**	**12 00 24.4**	**-0.6**
GISR	**Galati**	**0.98 114**		⇑P	**Pn**	**12 00 09.9**	**-0.1**
GISR				⇓S	**Sn**	**12 00 24.4**	**-0.6**
VASR	**Vaslui**	**1.06 41**		⇑P	**Pn**	**12 00 10.6**	**-0.4**
VASR				⇑S	**Sn**	**12 00 25.7**	**-0.9**
VASR	**Vaslui**	**1.06 41**		⇑P	**Pn**	**12 00 10.6**	**-0.4**
VASR				⇑S	**Sn**	**12 00 25.7**	**-0.9**
GIUM	**Giurgiulesti**	**1.07 109**		⇓P	**Pn**	**12 00 11.1**	**+0.1**
GIUM				⇓S	**Sn**	**12 00 26.3**	**-0.3**
GIUM	**Giurgiulesti**	**1.07 109**		⇓P	**Pn**	**12 00 11.1**	**+0.1**
GIUM				⇓S	**Sn**	**12 00 26.3**	**-0.3**
PLAR	**PLOIESTI**	**1.07 210**		⇑P	**Pn**	**12 00 11.3**	**+0.2**
PLAR				⇑S	**Sn**	**12 00 27.8**	**+1.0**
PLAR	**PLOIESTI**	**1.07 210**		⇑P	**Pn**	**12 00 11.3**	**+0.2**
PLAR				⇑S	**Sn**	**12 00 27.8**	**+1.0**
CFR	**Carcaliu**	**1.17 124**		⇓P	**Pn**	**12 00 11.4**	**-0.8**
CFR				⇓S	**Sn**	**12 00 28.2**	**-0.5**
CFR	**Carcaliu**	**1.17 124**		⇓P	**Pn**	**12 00 11.4**	**-0.8**
CFR				⇓S	**Sn**	**12 00 28.2**	**-0.5**
BIZ	**Bicaz**	**1.19 337**		⇓S	**Sn**	**12 00 28.8**	**-0.5**
BIZ	**Bicaz**	**1.19 337**		⇓S	**Sn**	**12 00 28.8**	**-0.5**
LEOM	**Leova**	**1.20 58**		⇑P	**Pn**	**12 00 12.4**	**-0.1**
LEOM				⇓S	**Sn**	**12 00 28.6**	**-0.7**
LEOM	**Leova**	**1.20 58**		⇑P	**Pn**	**12 00 12.4**	**-0.1**
LEOM				⇓S	**Sn**	**12 00 28.6**	**-0.7**
LEOM	**Leova**	**1.20 58**		P	**Pn**	**12 00 11.9**	**-0.6**
LEOM	**Leova**	**1.20 58**		P	**Pn**	**12 00 11.9**	**-0.6**
SULR		**1.23 198**		⇓P	**Pn**	**12 00 13.0**	**+0.1**
SULR				⇑S	**Sn**	**12 00 30.2**	**+0.3**
SULR		**1.23 198**		⇓P	**Pn**	**12 00 13.0**	**+0.1**
SULR				⇑S	**Sn**	**12 00 30.2**	**+0.3**
JOSR	**Joseni**	**1.23 315**		⇑S	**Sn**	**12 00 29.1**	**-1.0**
JOSR	**Joseni**	**1.23 315**		⇑S	**Sn**	**12 00 29.1**	**-1.0**
VOIR		**1.28 252**		⇑P	**Pn**	**12 00 13.0**	**-0.7**
VOIR				⇑S	**Sn**	**12 00 30.1**	**-1.2**
VOIR		**1.28 252**		⇑P	**Pn**	**12 00 13.0**	**-0.7**
VOIR				⇑S	**Sn**	**12 00 30.1**	**-1.2**
VOIR		**1.28 252**		P	**Pn**	**12 00 12.9**	**-0.7**
VOIR				S	**Sn**	**12 00 30.0**	**-1.2**
VOIR		**1.28 252**		P	**Pn**	**12 00 12.9**	**-0.7**
AMRR	**Amara**	**1.30 162**		⇓P	**Pn**	**12 00 13.5**	**-0.3**
AMRR				⇓S	**Sn**	**12 00 31.6**	**+0.1**
AMRR	**Amara**	**1.30 162**		⇓P	**Pn**	**12 00 13.5**	**-0.3**
AMRR				⇓S	**Sn**	**12 00 31.6**	**+0.1**
LEHL	**Lehliu**	**1.37 179**		⇓P	**Pn**	**12 00 14.5**	**-0.1**
LEHL				⇑S	**Sn**	**12 00 33.0**	**-0.1**
LEHL	**Lehliu**	**1.37 179**		⇓P	**Pn**	**12 00 14.5**	**-0.1**
LEHL				⇑S	**Sn**	**12 00 33.0**	**-0.1**
HARR	**Harsova**	**1.41 144**		⇓P	**Pn**	**12 00 14.6**	**-0.6**
HARR	**Harsova**	**1.41 144**		⇓P	**Pn**	**12 00 14.6**	**-0.6**
IAS	**Iasi**	**1.45 21**		⇑P	**Pn**	**12 00 15.2**	**-0.3**
IAS				⇑S	**Sn**	**12 00 33.3**	**-1.5**
IAS	**Iasi**	**1.45 21**		⇑P	**Pn**	**12 00 15.2**	**-0.3**
IAS				⇑S	**Sn**	**12 00 33.3**	**-1.5**
IAS	**Iasi**	**1.45 21**		P	**Pn**	**12 00 14.8**	**-0.8**
INCR	**INCERC-Sediu C**	**1.47 197**		⇓P	**Pn**	**12 00 15.5**	**-0.3**
INCR				⇑S	**Sn**	**12 00 34.5**	**-0.8**
INCR	**INCERC-Sediu C**	**1.47 197**		⇓P	**Pn**	**12 00 15.5**	**-0.3**
INCR				⇑S	**Sn**	**12 00 34.5**	**-0.8**
TPGR	**Topolog**	**1.52 130**		⇑P	**Pn**	**12 00 15.7**	**-0.8**
TPGR				⇑S	**Sn**	**12 00 35.7**	**-0.7**
TPGR	**Topolog**	**1.52 130**		⇑P	**Pn**	**12 00 15.7**	**-0.8**
TPGR				⇑S	**Sn**	**12 00 35.7**	**-0.7**
ARR	**Arges**	**1.58 253**		⇑P	**Pn**	**12 00 17.0**	**-0.3**
ARR				⇓S	**Sn**	**12 00 37.3**	**-0.5**
ARR	**Arges**	**1.58 253**		⇑P	**Pn**	**12 00 17.0**	**-0.3**
ARR				⇓S	**Sn**	**12 00 37.3**	**-0.5**
TLBR	**Topalu**	**1.58 145**		⇓P	**Pn**	**12 00 16.7**	**-0.5**
TLBR				⇑S	**Sn**	**12 00 36.5**	**-1.2**
TLBR	**Topalu**	**1.58 145**		⇓P	**Pn**	**12 00 16.7**	**-0.5**
TLBR				⇑S	**Sn**	**12 00 36.5**	**-1.2**
BUC1	**Bucharest**	**1.59 200**		⇓P	**Pn**	**12 00 17.0**	**-0.3**
BUC1				⇑S	**Sn**	**12 00 36.9**	**-1.0**
BUC1	**Bucharest**	**1.59 200**		⇓P	**Pn**	**12 00 17.0**	**-0.3**
BUC1				⇑S	**Sn**	**12 00 36.9**	**-1.0**
STFAR	**Stefanesti-Arg**	**1.61 233**		⇑P	**Pn**	**12 00 17.2**	**-0.5**
STFAR				⇑S	**Sn**	**12 00 39.6**	**+1.0**
STFAR	**Stefanesti-Arg**	**1.61 233**		⇑P	**Pn**	**12 00 17.2**	**-0.5**
STFAR				⇑S	**Sn**	**12 00 39.6**	**+1.0**
SGRR	**Singureni**	**1.72 200**		⇑P	**Pn**	**12 00 18.4**	**-0.6**
SGRR				⇑S	**Sn**	**12 00 39.7**	**-1.1**
SGRR	**Singureni**	**1.72 200**		⇑P	**Pn**	**12 00 18.4**	**-0.6**
SGRR				⇑S	**Sn**	**12 00 39.7**	**-1.1**
CVDA	**Cernavoda**	**1.76 149**		⇑P	**Pn**	**12 00 19.1**	**-0.3**
CVDA				⇓S	**Sn**	**12 00 39.9**	**-1.7**
CVDA	**Cernavoda**	**1.76 149**		⇑P	**Pn**	**12 00 19.1**	**-0.3**
CVDA				⇓S	**Sn**	**12 00 39.9**	**-1.7**
MILM	**Milestii Mici**	**1.77 52**		⇑P	**Pn**	**12 00 19.4**	**-0.2**
MILM				⇑S	**Sn**	**12 00 40.5**	**-1.5**
MILM	**Milestii Mici**	**1.77 52**		⇑P	**Pn**	**12 00 19.4**	**-0.2**
MILM				⇑S	**Sn**	**12 00 40.5**	**-1.5**
MILM	**Milestii Mici**	**1.77 52**		P	**Pn**	**12 00 19.0**	**-0.6**
MILM	**Milestii Mici**	**1.77 52**		P	**Pn**	**12 00 19.0**	**-0.6**
MILM	**Milestii Mici**	**1.77 52**		P	**Pn**	**12 00 18.6**	**-1.0**
MILM				S	**Sn**	**12 00 40.6**	**-1.4**
TIRR	**Tirgusor**	**1.81 140**		⇓P	**Pn**	**12 00 19.7**	**-0.4**
TIRR	**Tirgusor**	**1.81 140**		Pn	**Pn**	**12 00 19.5**	**-0.6**
TIRR	**Tirgusor**	**1.81 140**		P	**Pn**	**12 00 19.5**	**-0.6**
KIS	**Kishinev**	**1.82 50**		⇑P	**Pn**	**12 00 20.2**	**0.0**
KIS				⇑S	**Sn**	**12 00 41.8**	**-1.4**
KIS	**Kishinev**	**1.82 50**		⇑P	**Pn**	**12 00 20.2**	**0.0**
KIS				⇑S	**Sn**	**12 00 41.8**	**-1.4**
HUMR	**Humele**	**1.83 225**		⇑P	**Pn**	**12 00 19.8**	**-0.6**
HUMR				⇓S	**Sn**	**12 00 41.8**	**-1.6**
HUMR	**Humele**	**1.83 225**		⇑P	**Pn**	**12 00 19.8**	**-0.6**
HUMR				⇓S	**Sn**	**12 00 41.8**	**-1.6**
ICOR	**Ion Corvin**	**1.88 157**		⇓P	**Pn**	**12 00 20.8**	**-0.2**
ICOR				⇓S	**Sn**	**12 00 42.8**	**-1.6**
ICOR	**Ion Corvin**	**1.88 157**		⇓P	**Pn**	**12 00 20.8**	**-0.2**
ICOR				⇓S	**Sn**	**12 00 42.8**	**-1.6**
COPA	**Copaceanca**	**2.04 213**		⇑P	**Pn**	**12 00 22.2**	**-0.8**
COPA				⇑S	**Sn**	**12 00 46.0**	**-2.2**
COPA	**Copaceanca**	**2.04 213**		⇑P	**Pn**	**12 00 22.2**	**-0.8**
COPA				⇑S	**Sn**	**12 00 46.0**	**-2.2**
BURAR	**Bucovina Array**	**2.07 329**			**Pn**	**12 00 23.9**	**+0.3**
BUR08	**Bucovina Ar. S**	**2.10 329**		Pn	**Pn**	**12 00 24.8**	**+0.8**
LOT	**Lotru**	**2.15 260**		⇑P	**Pn**	**12 00 24.0**	**-0.6**
LOT				⇓S	**Sn**	**12 00 49.3**	**-1.6**
LOT	**Lotru**	**2.15 260**		⇑P	**Pn**	**12 00 24.0**	**-0.6**
LOT				⇓S	**Sn**	**12 00 49.3**	**-1.6**
TSCT	**Constanta Port**	**2.15 141**		⇓P	**Pn**	**12 00 24.3**	**-0.2**
TSCT				⇓S	**Sn**	**12 00 48.9**	**-1.8**
TSCT	**Constanta Port**	**2.15 141**		⇓P	**Pn**	**12 00 24.3**	**-0.2**
TSCT				⇓S	**Sn**	**12 00 48.9**	**-1.8**
TSSL	**Sulina**	**2.18 107**		⇑S	**Sn**	**12 00 51.0**	**-0.6**
TSSL	**Sulina**	**2.18 107**		⇑S	**Sn**	**12 00 51.0**	**-0.6**
EFOR	**EFORIE**	**2.20 143**		⇓P	**Pn**	**12 00 24.8**	**-0.5**
EFOR				⇑S	**Sn**	**12 00 51.1**	**-0.9**
EFOR	**EFORIE**	**2.20 143**		⇓P	**Pn**	**12 00 24.8**	**-0.5**
EFOR				⇑S	**Sn**	**12 00 51.1**	**-0.9**
PSN	**Preselentsi**	**2.38 155**		P	**Pn**	**12 00 27.6**	**0.0**
MANR	**Mangalia**	**2.40 147**		⇓P	**Pn**	**12 00 27.6**	**-0.2**
MANR				⇓S	**Sn**	**12 00 55.7**	**-1.0**
MANR	**Mangalia**	**2.40 147**		⇓P	**Pn**	**12 00 27.6**	**-0.2**
MANR				⇓S	**Sn**	**12 00 55.7**	**-1.0**
VLAD	**Vladila**	**2.50 223**		⇓P	**Pn**	**12 00 28.3**	**-0.9**
VLAD	**Vladila**	**2.50 223**		⇓P	**Pn**	**12 00 28.3**	**-0.9**
CHRU	**Chernivtsi**	**2.52 347**		*e*P	**Pn**	**12 00 28.7**	**-0.7**
CHRU				Pm		12 00 29.9	
CHRU				*e*S	**Sn**	**12 00 57.8**	**-1.7**
CHRU				Sm		12 00 58.7	
SZH	**Strazhica**	**2.65 193**		P	**Pn**	**12 00 30.2**	**-1.0**
PRD	**Provadia**	**2.68 170**		P	**Pn**	**12 00 32.0**	**+0.4**
DEV	**Deva**	**2.71 272**		⇑P	**Pn**	**12 00 31.8**	**-0.1**
DEV				⇑S	**Sn**	**12 01 04.4**	**+0.5**
DEV	**Deva**	**2.71 272**		⇑P	**Pn**	**12 00 31.8**	**-0.1**
DEV				⇑S	**Sn**	**12 01 04.4**	**+0.5**
DEV	**Deva**	**2.71 272**		P	**Pn**	**12 00 31.5**	**-0.4**
DEV				S	**Sn**	**12 01 04.3**	**+0.3**
KMPD	**K-Podol'skiy**	**2.73 356**		*e*P	**Pn**	**12 00 31.6**	**-0.5**
KMPD				*i* S	**Sn**	**12 01 00.8**	**-3.6**
KMPD	**K-Podol'skiy**	**2.73 356**		P	**Pn**	**12 00 30.3**	**-1.8**
KSV	**Kosov**	**2.73 335**		*i* P	**Pn**	**12 00 31.7**	**-0.6**
KSV				Pm		12 00 32.4	
KSV				*i* S	**Sn**	**12 01 03.2**	**-1.4**
KSV				Sm		12 01 07.6	
NDNU	**Novodnistrovsk**	**2.78 8**		*i* P	**Pn**	**12 00 32.1**	**-0.7**
NDNU				*i* S	**Sn**	**12 01 04.1**	**-1.5**
ROIA	**ROIAK**	**2.79 171**		P	**Pn**	**12 00 33.0**	**0.0**
SRE	**Strehaia**	**2.79 246**		⇑P	**Pn**	**12 00 32.5**	**-0.5**
SRE				⇑S	**Sn**	**12 01 04.6**	**-1.2**
SRE	**Strehaia**	**2.79 246**		⇑P	**Pn**	**12 00 32.5**	**-0.5**
SRE				⇑S	**Sn**	**12 01 04.6**	**-1.2**
RAKU	**Rahkiv**	**2.82 322**		*e*P	**Pn**	**12 00 33.1**	**-0.3**
RAKU				*i* S	**Sn**	**12 01 05.3**	**-1.4**
PVL	**Pavlikeni**	**2.83 202**		P	**Pn**	**12 00 34.4**	**+0.9**
NSLU	**Nyzhne Selyshc**	**2.84 327**		*i* P	Pn	12 00 39.1	+5.5
NSLU				Pm		12 00 46.5	
NSLU				*i* S	Sn	12 01 16.4	+9.4
NSLU				Sm		12 01 21.0	
GZR	**Gura Zlata**	**2.84 262**		⇑P	**Pn**	**12 00 34.1**	**+0.3**
GZR	**Gura Zlata**	**2.84 262**		⇑P	**Pn**	**12 00 34.1**	**+0.3**
GZR	**Gura Zlata**	**2.84 262**		*e*Pn	**Pn**	**12 00 33.5**	**-0.3**
GZR				*e*Sn	**Sn**	**12 01 04.2**	**-3.1**
PLVB	**Pleven**	**2.90 213**		⇑P	**Pn**	**12 00 33.6**	**-0.9**
PLVB	**Pleven**	**2.90 213**		⇑P	**Pn**	**12 00 33.6**	**-0.9**
DRGR		**2.97 290**		*e*Pn	**Pn**	**12 00 34.4**	**-1.1**
PUNG	**Punghina**	**3.14 241**		⇑P	**Pn**	**12 00 36.2**	**-1.6**
PUNG	**Punghina**	**3.14 241**		⇑P	**Pn**	**12 00 36.2**	**-1.6**
PUNG	**Punghina**	**3.14 241**		*e*Pn	**Pn**	**12 00 36.2**	**-1.6**
PUNG				*e*Sn	**Sn**	**12 01 09.8**	**-4.6**
HERR	**Herculane**	**3.22 254**		⇑P	**Pn**	**12 00 38.5**	**-0.3**
HERR				⇑S	**Sn**	**12 01 14.5**	**-1.8**
HERR	**Herculane**	**3.22 254**		⇑P	**Pn**	**12 00 38.5**	**-0.3**
HERR				⇑S	**Sn**	**12 01 14.5**	**-1.8**
STNU	**Starunia**	**3.26 332**		*e*P	**Pn**	**12 00 38.9**	**-0.4**
STNU				*i* S	**Sn**	**12 01 16.2**	**-0.9**
HORU	**Horodok**	**3.38 356**		*e*P	**Pn**	**12 00 40.7**	**-0.2**
HORU				Pm		12 00 41.6	
HORU				*i* S	**Sn**	**12 01 19.2**	**-0.8**
HORU				Sm		12 01 20.0	
MEZ	**Mezhgor'ye**	**3.48 321**		*i* P	**Pn**	**12 00 42.2**	**0.0**
MEZ				⇑*i* S	**Sn**	**12 01 21.6**	**-0.8**
SIRR	**Siria**	**3.59 279**		*e*Pn	**Pn**	**12 00 43.5**	**-0.2**
SIRR	**Siria**	**3.59 279**		P	**Pn**	**12 00 43.6**	**-0.2**
BZS

YAL				*e*S	Sn	12 02 05.4	-3.4
KOKK	Kokkinochori,	5.42	203	P	Pn	12 01 08.5	0.0
SMTH	Samothraki Isl	5.45	190	P	Pn	12 01 08.6	-0.4
SMTH				S	Sn	12 02 05.8	-4.5
comp=E,65nm,0.3s							
VAY	Valandovo	5.46	216	*i* Pn	Pn	12 01 09.5	+0.5
SJES	Sjenica	5.51	244	*e*Pn	Pn	12 01 08.5	-1.3
ALU	Alushta	5.51	99	*e*S	Sn	12 02 07.4	-4.2
ALU				Sm		12 02 13.0	
comp=N,325nm,0.5s							
ALU				Sm		12 02 13.0	
comp=E,115nm,0.5s							
ALU	Alushta	5.51	99	*e*S	Sn	12 02 07.4	-4.2
ALU				Sm		12 02 13.0	
ALU				Pm		12 02 13.0	
BBLS	Lazići	5.60	252	*e*Pn	Pn	12 01 09.7	-1.4
FEO	Feodosiya	6.12	95	*e*S	Sn	12 02 24.8	-1.7
FEO				Sm		12 02 29.6	
comp=N,76nm,0.3s							
FEO				Sm		12 02 29.6	
comp=E,30nm,0.3s							
FEO	Feodosiya	6.12	95	*e*S	Sn	12 02 24.8	-1.7
FEO				Sm		12 02 29.6	
FEO				Pm		12 02 29.6	
MDUB	Mudurnu	6.27	147	Pn	Pn	12 01 20.8	+0.6
FNA	Florina	6.41	220	Pn	Pn	12 01 20.5	-1.6
FNA	Florina	6.41	220	P	Pn	12 01 20.5	-1.6
BZK	Bozkurt	6.50	124	Pn	Pn	12 01 19.5	-3.7
VRAC	Vranov	7.71	300	P	Pn	12 01 36.3	-3.4
comp=E,2.4nm,0.5s,baz=207,slow=9.0,SNR=1.9							
BR131	Keskin Array S	7.93	138	*i* P	Pn	12 01 41.3	-1.5
BRTR	Keskin Array B	7.93	138	P	Pn	12 01 41.8	-1.1
comp=E,0.7nm,0.3s,baz=324,slow=11,SNR=2.7							
NACGM	Naroch	9.07	0	*e*P	Pn	12 01 59.8	+1.7
comp=Z,4.0nm,0.8s,baz=181							
PABE	Paberze	9.83	351	Pn	Pn	12 02 06.5	-2.0
VORR	Voronezh	10.06	50	*e*P	Pn	12 02 01.4	-10
VORR				pmax	pmax		
comp=Z,70nm,0.4s							
KBZ	Khabaz	11.65	95	P	Pn	12 02 35.2	+2.0
comp=Z,0.8nm,0.2s,baz=292,slow=11,SNR=7.0							
KBZ	Khabaz	11.65	95	*e*P	Pn	12 02 36.4	+3.2
KBZ				pmax	pmax		
comp=Z,1.0nm,0.2s							
NEY	Neytrino	11.67	97	*i* P	Pn	12 02 35.1	+1.5
BELG	Belogornoye	15.11	57	*i* P	P	12 03 22.1	+0.9
FINES	FINESS Array B	15.63	359	P	P	12 03 26.2	-0.7
comp=Z,2.1nm,0.5s,baz=190,slow=9.7,SNR=6.4							
FINES				S	Sn	12 06 03.4	-14
comp=Z,1.9nm,0.5s,baz=179,slow=25,SNR=2.2							
FINES	FINESS Array B	15.63	359	P	P	12 03 26.0	-1.0
FIA1	FINESS Array S	15.63	359	P	Pn	12 03 25.4	+0.6
FIA1				IAmb	IAmb	12 03 25.6	
comp=Z,13nm,0.9s							
HFS	Hagfors	16.29	336	P	Pn	12 03 33.6	+0.7
comp=Z,1.3nm,0.4s,baz=140,slow=12,SNR=9.0							
KLMR	Klimovskoe	16.80	22	*e*P	Pn	12 03 37.5	-1.6
KLMR				pmax	pmax		
comp=Z,14nm,1.1s							
KLMR	Klimovskoe	16.80	22	*e*Pn	Pn	12 03 37.6	-1.6
KLMR				*e*Pn	Pn	12 03 37.6	-1.6
KLMR				*e*Pn	Pn	12 03 37.6	-1.6
KLMR				AMP		12 03 41.3	
comp=Z,14nm,1.1s							
KLMR				*e*Sn	Sn	12 06 30.0	-15
KLMR				*e*Sn	Sn	12 06 30.0	-15
NC602	NORSAR Array S	17.40	334	P	P	12 03 47.1	+0.6
NC602				IAmb	IAmb	12 04 18.4	
comp=Z,26nm,1.5s							
NB2	NORSAR Subarra	17.74	335	P	P	12 03 50.4	+0.2
comp=Z,0.7nm,0.4s,baz=142,slow=11							
NOA	NORSAR Array B	17.74	335	P	P	12 03 50.5	+0.2
comp=Z,1.0nm,0.6s,baz=139,slow=11,SNR=6.1							
AKTO	Aktyubinsk	21.25	66	P	P	12 04 29.4	+1.0
comp=Z,1.3nm,0.6s,baz=239,slow=9.8,SNR=4.3							
comp=Z,1.3nm,0.6s							
ARU	Arti	22.38	50	P	P	12 04 39.8	-0.5
comp=Z,3.7nm,0.4s,baz=222,slow=14,SNR=5.2							
ARU				pP	pP	12 04 57.2	-1.9
comp=Z,2.7nm,0.4s,baz=264,slow=11,SNR=2.9							
comp=Z,3.7nm,0.4s							
ARU	Arti	22.38	50	P	P	12 04 39.5	-0.7
ARU				IAmb	IAmb	12 04 58.1	
comp=Z,5.8nm,0.9s							
ARU	Arti	22.38	50*d*	*i* P	P	12 04 40.1	-0.2
ARU				*PP	pP	12 04 56.8	-2.3
ARU						12 05 06.9	
ARU				S	S	12 08 43.6	+4.2
ARU				SS	SnSn	12 09 14.2	-2.5
ARU				pmax	pmax		
comp=Z,4.0nm,0.6s							
ABKAR	Abkulak array	22.54	69	P	P	12 04 44.1	+2.1
ABKAR	Abkulak array	22.54	69	P	P	12 04 43.2	+1.2
ARCES	ARCESS Array B	23.76	359	P	P	12 04 52.6	-0.9
comp=Z,1.1nm,0.6s,baz=174,slow=10.0,SNR=7.9							
ARCES				pP	pP	12 05 11.8	-2.0
comp=Z,0.9nm,0.6s,baz=173,slow=11,SNR=1.5							
comp=Z,1.1nm,0.6s							
ARCES	ARCESS Array B	23.76	359	P	P	12 04 53.3	-0.2
ARCES				IAmb	IAmb	12 05 22.9	
comp=Z,12nm,1.4s							
ARCES	ARCESS Array B	23.76	359	P	P	12 04 53.3	-0.2
ARCES				pmax	pmax		
comp=Z,12nm,1.4s							
BRVK	Borovoye	28.82	60	P	P	12 05 40.5	+1.5
BRVK	Borovoye	28.82	60	P	P	12 05 40.5	+1.5
BRVK				pmax	pmax		
comp=Z,2.0nm,0.8s							
KKAR	Karatay Array	31.04	79	P	P	12 06 00.5	+1.7
KKAR	Karatay Array	31.04	79	P	P	12 06 00.5	+1.7
AAK	Ala-Archa	33.94	78	P	P	12 06 26.3	+2.0
comp=Z,0.9nm,0.3s,baz=242,slow=5.5,SNR=4.8							
comp=Z,0.9nm,0.3s							
ZALV	Zalesovo Beam	37.30	56	P	P	12 06 54.4	+1.8
comp=Z,2.0nm,0.6s,baz=280,slow=9.1,SNR=7.8							
ZALV				pP	pP	12 07 13.8	-0.8
comp=Z,1.8nm,0.7s,baz=280,slow=8.9,SNR=4.0							
comp=Z,2.0nm,0.6s							
ZALV	Zalesovo Beam	37.30	56	P	P	12 06 53.3	+0.7
MK31	Makanchi Array	37.67	68	P	P	12 06 57.6	+1.6
MK31				IAmb	IAmb	12 07 12.7	
comp=Z,4.3nm,1.2s							
MK31	Makanchi Array	37.67	68	P	P	12 06 57.6	+1.6
MK31				pmax	pmax		
comp=Z,4.0nm,1.3s							
MKAR	Makanchi Array	37.67	68	P	P	12 06 57.9	+1.9
comp=Z,0.8nm,0.4s,baz=268,slow=8.9,SNR=13							
comp=Z,0.8nm,0.4s							
MKAR	Makanchi Array	37.67	68	P	P	12 06 58.0	+2.0
TOA0	Torodi Ar. Sit	38.89	221	P	P	12 07 05.6	-0.8
TOA0				IAmb	IAmb	12 07 27.8	
comp=Z,2.9nm,1.2s							
TORD	Torodi Ar. Bea	38.89	221	P	P	12 07 06.0	-0.5
comp=Z,0.5nm,0.3s,baz=30,slow=8.4,SNR=11							
comp=Z,0.5nm,0.3s							
TORD	Torodi Ar. Bea	38.89	221	P	P	12 07 06.9	+0.5
TORD				IAmb	IAmb	12 07 29.6	
comp=Z,1.4nm,1.2s							
DBIC	Dimbokro	47.65	225	P	P	12 08 16.2	-0.6
comp=Z,1.2nm,0.4s,baz=8.3,slow=8.7,SNR=4.3							
comp=Z,1.2nm,0.4s							
DBIC	Dimbokro	47.65	225	P	P	12 08 16.3	-0.6
DBIC	Dimbokro	47.65	225	P	P	12 08 16.3	-0.6
DBIC				pmax	pmax		
comp=Z,13nm,1.5s							
INK	Inuvik	65.22	352	P	P	12 10 22.3	+1.5
INK	Inuvik	65.22	352	P	P	12 10 22.3	+1.5
INK				pmax	pmax		
comp=Z,6.0nm,1.0s							
FFC	Flin Flon	70.81	331	*i* P	P	12 10 57.6	+1.6

LVSN ***31*** *12:02:40.5±6.2, 59°.28N×24°.27E, h0km±119km, ML1.5*
HEL 31 12:02:46.3±0.2, 60°.45N×25°.33E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	Pernaja	0.28	70	PG	Pg	12 02 51.2	-0.5
baz=247							
PVF				SG	Sg	12 02 55.1	-0.2
NUR	Nurmijrvi	0.34	280	PG	Pg	12 02 51.6	-1.2
MEF	Metsahovi	0.52	244	*e*P	Pg	12 02 55.4	-0.8
MEF				AML	AML	12 03 04.4	
comp=N,25nm,0.6s							
MEF				AML	AML	12 03 04.7	
comp=E,21nm,0.6s							
MEF				AML	AML	12 03 06.6	
comp=Z,24nm,0.8s							
MEF	Metsahovi	0.52	244	PG	Pg	12 02 55.7	-0.5
MEF				SG	Sg	12 03 03.6	+0.7
FIA0	FINESS Array S	1.06	20	PN	Pn	12 03 08.4	0.0
baz=192							
FIA0				SN	Sb	12 03 22.3	+0.3
ARBE	Arbavere	1.07	162	PG	Pg	12 03 05.3	-1.4
KAF	Kangasniemi	1.73	15	PG	Pn	12 03 17.6	-0.1
baz=204							
KAF				MSG		12 03 38.1	
comp=Z,0.9nm,0.2s							
KEF	Keuruu	1.74	353	PG	Pn	12 03 17.4	-0.3
KEF				SG	Sn	12 03 36.0	-4.6
KEF				MSG		12 03 38.1	
comp=Z,1.8nm,0.2s							
RAF	Rauma	1.84	290	*e*P	Pn	12 03 18.8	-0.3
RAF				*e*S	Sn	12 03 43.1	0.0
RAF				AML	AML	12 03 47.6	
comp=N,5.3nm,0.8s							
RAF				AML	AML	12 03 50.7	
comp=E,3.3nm,0.9s							
RAF				AML	AML	12 03 53.0	
comp=Z,3.7nm,0.8s							
RAF	Rauma	1.84	290	PG	Pn	12 03 19.0	-0.1
baz=105							
RAF				MSG		12 03 41.2	
comp=Z,1.1nm,0.2s							
RMF	Romuvaara	4.35	28	PB	Pn	12 03 58.5	+4.9
PBUR	Paburge	4.79	203	*e*S	Pb	12 04 13.0	+2.0
PABE	Paberze	5.01	189	*e*S	Pg	12 04 23.6	+1.4

IDC ***31*** *12:09:55.0±1.0, 9°.41S×113°.84E, h0km, mb3.9/8, mbtmp4.0/10, ML4.0/2, MS3.1/2, Error ellipse: s-maj=36.1km s-min=16.8km az=54.0*
NEIC ***31*** *12:10:00.5±1.5, 9°.61S±0°.06×114°.03E±0°.07, h46km±8km, mb4.1/19, Error ellipse: s-maj=10.4km s-min=8.7km az=124.0*
DJA ***31*** *12:10:01.8±0.5, 9°S±3°×11°4E±°, h22km±5km, M4.5/10, mb4.3/6, MLv4.5/10*
ISC 31 12:10:01.9±1.1, 9°.45S±0°.07×113°.99E±0°.04, h58km±11km, n69, σ2s10/72, mb4.1/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	0.98	9		Pn	12 10 19.8	+0.2
JAGI				Sn	Sn	12 10 33.7	+0.9
JAGI	Jajag, Banyuwa	0.98	9	P	Pn	12 10 19.9	+0.2
JAGI	Jajag, Banyuwa	0.98	9	P	Pn	12 10 20.1	+0.4
IGBI	Denpasar	1.30	61	P	Pn	12 10 27.4	+3.6
RTBI	Rangdo, Negare	1.36	44	P	Pn	12 10 26.0	+1.4
RTBI				S	Sn	12 10 41.5	-0.2
DNP	Denpasar	1.43	58	P	Pn	12 10 27.2	+1.7
SRBI	Singaraja	1.81	42	P	Pn	12 10 32.9	+2.1
SRBI				S	Sn	12 10 54.7	+2.0
KRKI	Karangkates	1.99	310	P	Pn	12 10 34.8	+1.6
KRKI				S	Sn	12 10 58.6	+1.6
KLNI	Mataram	2.31	64	P	Pn	12 10 38.9	+1.3
KMMI	Kalianget	2.38	359	P	Pn	12 10 41.0	+2.5
TWSI	Taliwang, Sumb	2.94	76	P	Pn	12 10 47.6	+1.5
TWSI				S	Sn	12 11 19.0	-1.3
PCJI	Pacitan	3.05	294	P	Pn	12 10 48.3	+0.7
PCJI				S	Sn	12 11 21.6	-1.3
UGM	Wanagama	3.75	294	Pn	Pn	12 10 56.9	-0.4
UGM				Sn	Sn	12 11 41.1	+0.8
UGM	Wanagama	3.75	294	P	Pn	12 10 59.5	+2.2
PLAI	Plampang	3.79	81	P	Pn	12 11 00.1	+2.3
PLAI	Plampang	3.79	81	P	Pn	12 11 00.2	+2.4
BBJI	Bungbulang	6.58	287	P	Pn	12 11 37.5	+1.4
KAPI	Kappang	7.21	53	Pn	Pn	12 11 43.9	-0.9
3.0nm,0.3s,baz=213,slow=7.1,SNR=1.8							
KAPI				Sn	Sn	12 13 03.9	-1.4
2.6nm,0.3s,baz=64,slow=22,SNR=5.8							
KAPI				LR	LR	12 15 01.3	
comp=Z,91nm,18.8s,baz=243,slow=42							
12nm,0.4s							
KAPI	Kappang	7.21	53	Pn	Pn	12 11 44.1	-0.6
KAPI				Sn	Sn	12 13 04.5	-0.9
BSSI	Bau Bau, Buton	7.23	63	P	Pn	12 11 45.5	+0.6
0.2nm39nm,0.4s							
BNSI	Bone	7.87	51	P	Pn	12 11 58.3	+4.5
0.1nm12nm,0.9s							
MBWA	Marble Bar	12.89	155	Pn	Pn	12 12 57.6	-4.8
GIRL	Giralia	13.12	179	Pn	Pn	12 13 02.8	-2.7
PSA00	Pilbara Seismi	13.30	156	Pn	Pn	12 13 02.7	-5.3
BTDF	Bukit Timah Da	14.80	316	P	Pn	12 13 24.5	-3.4
10nm,0.9s							
BTDF				pP	P	12 13 33.4	+0.9
10nm,0.9s							
KNRA	Kununurra	15.69	115		Pn	12 13 37.2	-2.1
KNRA				IAmb	IAmb	12 14 03.3	
comp=Z,30nm,1.4s							
KNRA	Kununurra	15.69	115	P	P	12 13 42.1	-0.3
MTN	Manton Dam	17.15	103	P	Pn	12 13 55.9	-1.9
MTN				IAmb	IAmb	12 14 27.4	
comp=Z,6.3nm,0.8s							
SIJI	Sorong	19.18	65	P	P	12 14 22.1	+1.0
comp=Z,0.5nm,0.3s,baz=241,slow=6.5,SNR=4.2							
comp=Z,7.4nm,0.8s							
FAKI	Fak Fak	19.27	71	P	P	12 14 22.3	+0.4
FAKI				IAmb	IAmb	12 14 30.8	
comp=Z,16nm,1.2s							
FAKI	Fak Fak	19.27	71	P	P	12 14 19.5	-2.4
MORW	Morawa	19.61	175	P	P	12 14 21.9	-3.7
MORW				IAmb	IAmb	12 14 38.3	
comp=Z,21nm,1.1s							
BLDU	Ballidu	21.21	174	P	P	12 14 49.5	+6.7
WB0	Warramunga Arr	22.22	120	P	P	12 14 51.2	-2.6
WB0				IAmb	IAmb	12 15 21.4	
comp=Z,6.1nm,1.2s							
WRA	Warramunga Arr	22.25	120	P	P	12 14 54.6	+0.5
comp=Z,0.8nm,0.6s,baz=293,slow=12,SNR=10							
comp=Z,0.8nm,0.6s							
WRA	Warramunga Arr	22.25	120	P	P	12 14 51.9	-2.2
WRAB	Tennant Creek	22.25	120	P	P	12 14 56.4	+2.2
WB2	Warramunga Arr	22.26	120	P	P	12 14 51.5	-2.7
WB2				IAmb	IAmb	12 15 12.8	
comp=Z,3.7nm,0.8s							
KLBR	Kellerberrin	22.31	172	P	P	12 15 01.4	+6.8
WR0	Warramunga Arr	22.43	120	P	P	12 14 53.8	-2.3
WR0				IAmb	IAmb	12 15 17.4	
comp=Z,6.2nm,0.9s							
AS31	Alice Springs	23.70	129	P	P	12 15 07.1	-1.7
ASAR	Alice Springs	23.70	129	P	P	12 15 10.4	+1.7
comp=Z,12nm,0.4s,baz=304,slow=9.1,SNR=30							
comp=Z,12nm,0.4s							
AS01	Alice Springs	23.74	129	P	P	12 15 10.6	+1.6
FORT	Forrest	24.95	150	P	P	12 15 17.7	-2.2
FORT	Forrest	24.95	150	P	P	12 15 21.9	+2.0
OOD	Oodnadatta	27.40	135	P	P	12 15 44.1	+2.0
MULG	Mulgathing	27.94	141	P	P	12 15 48.7	+1.8
BBOO	Buckleboo	30.91	142	P	P	12 16 11.3	-1.9
CMAR	Chiang Mai Arr	31.46	332	P	P	12 16 18.3	+0.2
comp=Z,0.4nm,0.3s,baz=162,slow=9.2,SNR=1.6							
comp=Z,0.4nm,0.3s							
STKA	Stephens Creek	33.95	135	P	P	12 16 41.6	+1.8
comp=Z,1.7nm,0.5s,baz=316,slow=10,SNR=6.1							
comp=Z,1.7nm,0.5s							
STKA	Stephens Creek	33.95	135	P	P	12 16 37.9	-1.9
STKA	Stephens Creek	33.95	135	P	P	12 16 42.0	+2.2
JOW	Kunigami	38.64	21	LR	LR	12 36 20.5	
comp=Z,39nm,19.7s,baz=54,slow=41							
H08S2	Diego Garcia H	41.06	269	T	T	13 01 43.9	
baz=95,slow=74,SNR=4.4							
H08S3	Diego Garcia H	41.07	269	T	T	13 01 48.6	
baz=95,slow=74,SNR=4.3							
H08S1	Diego Carcia H	41.08	269	T	T	13 01 47.0	
baz=95							
SONM	Songino Array	57.43	354	P	P	12 19 45.1	+0.4
comp=Z,0.8nm,0.4s,baz=175,slow=8.9,SNR=6.9							
comp=Z,0.8nm,0.4s							
SONM	Songino Array	57.43	354	P	P	12 19 45.8	+1.1
MK31	Makanchi Array	62.73	336	P	P	12 20 20.9	-0.1
MK31				IAmb	IAmb	12 20 57.2	
comp=Z,3.0nm,1.1s							
MKAR	Makanchi Array	62.73	336	P	P	12 20 21.5	+0.6
comp=Z,1.0nm,0.5s,baz=155,slow=7.3,SNR=11							
comp=Z,1.0nm,0.5s							
MKAR	Makanchi Array	62.73	336	P	P	12 20 20.6	-0.3
ZALV	Zalesovo Beam	67.81	342	P	P	12 20 53.1	-0.5
comp=Z,0.7nm,0.4s,baz=151,slow=6.3,SNR=1.4							
comp=Z,0.7nm,0.4s							
YAK	Yakutsk	72.30	8	P	P	12 21 21.2	+0.2
VNDA	Vanda	72.35	170	P	P	12 21 22.8	+1.7
comp=Z,0.3nm,0.8s,baz=316,slow=8.8,SNR=2.0							
comp=Z,0.3nm,0.8s							
VNDA	Vanda	72.35	170	P	P	12 21 20.0	-1.1
VNDA				IAmb	IAmb	12 21 29.7	
comp=Z,2.0nm,1.5s							
ABKAR	Abkulak array	75.15	327	P	P	12 21 38.8	+0.9
ABKAR	Abkulak array	75.15	327	P	P	12 21 38.6	+0.7
ABKAR				IAmb	IAmb	12 21 39.4	
comp=Z,1.9nm,0.6s							
QSPA	South Pole Qui	80.55	180	P	P	12 22 06.9	-0.9
QSPA				IAmb	IAmb	12 22 26.4	
comp=Z,6.7nm,1.5s							
SNAA	Sanae	89.21	196	P	P	12 22 51.1	0.0

DJA 31 12:16:11.5±0.4, 0°S±3°×12°4E±°, h10km, M4.2/11, mb4.5/3, mB4.7/1, MLv4.0/11, Mw(mB)4.0/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.09	239	P	Pn	12 16 32.7	-0.2
LUWI				S	Sg	12 16 46.1	-0.6
MRSI	Marisa	2.01	298	P	Pn	12 16 45.3	-0.2
MRSI				S	Sn	12 17 09.1	-1.6
APSI	Ampana	2.10	258	P	Pn	12 16 47.6	+0.8
SANI	Sanana	2.76	124	P	Pn	12 16 54.1	-1.7
LBMI	Labuha	3.79	92	P	Pn	12 17 10.2	+0.1
MPSI	Mapaga	3.90	282	P	Pn	12 17 13.8	+2.3
SPSI	Sidrap Palu	5.24	229	P	Pn	12 17 30.5	+0.5
BKSI	Bulukumba	6.00	217	P	Pn	12 17 40.9	+0.5
0.0nm9.6nm,0.6s							
SGKI	Sangatta, Kali	6.11	270	P	Pn	12 17 42.0	+0.1
0.3nm70nm,0.8s							
BSSI	Bau Bau, Buton	6.48	210	P	Pn	12 17 45.9	-1.1

IDC ***31*** *12:26:17.5±1.2, 32°.49N×47°.78E, h0km, mb4.0/11, mbtmp4.0/16, ML3.8/5, MS3.1/1, Error ellipse: s-maj=27.1km s-min=16.1km az=170.0*
ISN ***31*** *12:26:18.6±1.0, 32°.45N×47°.92E, h5km±19km, ML3.7*
TEH ***31*** *12:26:19.7, 32°.48N×47°.93E, h9km, ML3.9*
NEIC ***31*** *12:26:19.4±2.7, 32°.37N±0°.08×47°.76E±0°.09, h10km±2km, mb4.2/18, mb_Lg3.9(TEH), Error ellipse: s-maj=14.0km s-min=12.1km az=144.0*
SGS ***31*** *12:26:20.2, 32°.71N×47°.97E, h13km, Ml4.8*
ISC 31 12:26:21.2±1.2, 32°.48N±0°.03×47°.83E±0°.03, h23km±9km, n119, σ1s49/128, mb4.1/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	Dehloran	0.51	294	*e*Pg	Pb	12 26 31.4	-0.2
DHL1				*e*Sg	Sn	12 26 40.7	-0.4
IKFM	Kafar-mosalman	1.05	1	*e*Pg	Pn	12 26 39.8	-0.7
IKFM				*e*Sg	Sb	12 26 54.2	+0.3
IKFM				*e*		12 27 01.4	
comp=Z,54μm,0.4s							
IKMR	Kamar-syah	1.14	24	*e*Pg	Pn	12 26 40.9	-0.8
IKMR				*e*Sg	Sn	12 26 57.9	+1.3
IKMR				*e*		12 27 02.6	
comp=Z,43μm,0.3s							
AHWZ	Ahwaz	1.33	149	*e*Pg	Pn	12 26 44.9	+0.5
AHWZ				*e*Sg	Sb	12 27 03.2	+1.0
IDOB	Doab	1.34	12	*e*Pg	Pn	12 26 45.2	+0.5
IDOB				*e*		12 27 11.9	
comp=Z,11μm,0.8s							
AMIS	Naft Sefid	1.47	123	*e*Pg	Pn	12 26 46.7	+0.3
AMIS				*e*Sg	Sb	12 27 06.6	+0.3
RAFI	Al-Rafai	1.64	243	*e*Pn	Pb	12 26 51.0	+0.2
RAFI				*e*Sn	Sb	12 27 14.0	+3.0
RAFI				AML	AML	12 27 27.4	
comp=E,1μm,0.8s							
IKOM	Komasi	1.72	351	*e*Pg	Pb	12 26 51.8	-0.4
IKOM				*e*		12 27 25.4	
comp=Z,14μm,0.9s							
IBDR	Badra	1.72	292	*e*Pn	Pb	12 26 52.0	-0.2
IBDR				*e*Sn	Sb	12 27 16.0	+2.6
IBDR				AML	AML	12 27 31.9	
comp=N,679nm,0.7s							
IBDR				AML	AML	12 27 41.5	
comp=E,779nm,0.5s							
HSAM	Samen	1.85	20	*e*Pn	Pn	12 26 53.2	+1.5
HSAM				*e*		12 26 57.7	
comp=Z,7μm,0.4s							
KCHF	Cheshme Sefid,	1.91	340	*e*Pn	Pb	12 26 54.6	-1.0
KCHF				*e*		12 27 27.7	
comp=Z,8μm,0.5s							
IBZA	Bozab	1.99	1	*e*Pn	Pb	12 26 55.7	-1.2
IBZA				*e*		12 27 31.8	
comp=Z,10μm,0.5s							
KER	Kermanshah	1.99	343	*e*Pn	Pb	12 26 55.3	-1.6
IGHG	Ghaleghazi	2.13	331	*e*Pn	Pb	12 26 58.1	-1.2
IGHG				*e*		12 27 49.7	
comp=Z,16μm,1.0s							
KHMZ	Khomeyn	2.18	54	*e*Pn	Pn	12 26 57.9	+1.6
IDHR	Dehrash	2.53	332	*e*Pn	Pn	12 27 02.7	+1.7
IDHR				*e*		12 27 49.1	
comp=Z,8μm,0.6s							
ILIN	Lien	2.54	344	*e*Pn	Pb	12 27 04.5	-1.8
ILIN				*e*		12 27 54.7	
comp=Z,7μm,1.0s							
HAGD	Aghdareh	2.58	25	*e*Pn	Pn	12 27 03.4	+1.6
HAGD				*e*		12 27 49.8	
comp=Z,5μm,0.5s							
SHK1	Shahrekord	2.58	92	*e*Pn	Pn	12 27 02.8	+0.9
SHK1				*e*		12 27 50.6	
comp=Z,4μm,1.0s							
IPIR	Pirpir	2.59	85	*e*Pn	Pn	12 27 03.3	+1.3
IPIR				*e*		12 27 44.4	
comp=Z,4μm,0.4s							
SNGE	Sanandaj	2.64	351	*e*Pn	Pn	12 27 04.8	+2.2
ASAO	Ashtian	2.76	41	*e*Pn	Pn	12 27 06.3	+2.0
IBRJ	Brojen	2.96	100	*e*Pn	Pn	12 27 07.6	+0.6
IBRJ				*e*		12 28 10.8	
comp=Z,2μm,0.9s							
BHD	Baghdad	3.

QALM e 12 28 55.5
comp=Z,1μm,1.0s
DAMV Damavand 4.66 46 *e*Pn **Pn 12 27 31.7 +1.3**
IDMV Damavand 4.66 47 *e*Pn **Pn 12 27 31.3 +0.9**
AHBU AHRAM 4.67 139 *e*Pn **Pn 12 27 30.9 +0.5**
QYSM Um Kedad 4.68 190 P **Pn 12 27 31.9 +1.4**
GIDE GILAN DEYLAMAN 4.75 21 *e*Pn **Pn 12 27 34.0 +2.3**
ISAD Sadrabad 4.99 95 *e*Pn **Pn 12 27 35.4 +0.4**
ISAD *e* 12 29 12.2
comp=Z,545nm,0.8s
ANAR Anarak 5.01 80 *e*Pn **Pn 12 27 35.5 +0.3**
ILAS Lasjerd 5.15 54 *e*Pn **Pn 12 27 38.0 +0.8**
IFIR Firoozkooh 5.16 51 *e*Pn **Pn 12 27 38.6 +1.3**
IPRN Peran 5.29 44 *e*Pn **Pn 12 27 39.7 +0.7**
SARAR Arar 5.46 249 P **Pn 12 27 42.7 +1.6**
SARAR Arar 5.46 249 S **Sn 12 28 42.7 -0.6**
ISHM Shahmirzad 5.61 52 *e*Pn **Pn 12 27 44.1 +0.6**
YZKH Yazd 5.71 89 *e*Pn **Pn 12 27 45.7 +0.9**
IANJ Anjilo 5.87 58 *e*Pn **Pn 12 27 47.5 +0.5**
SMAN Sihmah 6.28 178 P **Pn 12 27 52.3 -0.2**
SMAN Sihmah 6.28 178 S **Sn 12 29 04.0 +0.5**
IGLO Ghaloghah 6.38 49 *e*Pn **Pn 12 27 55.1 +1.2**
TPRV Parvadeh(Tabas 7.48 83 *e*Pn **Pn 12 28 09.5 +0.5**
TNSJ Nastanj 7.50 76 *e*Pn **Pn 12 28 09.5 +0.2**
MARD Mardin 7.54 312 Pn **Pn 12 28 08.7 -1.1**
SHRO Shahrood 7.62 60 *e*Pn **Pn 12 28 12.3 +1.3**
TKDS Koohdasht(Taba 7.88 79 *e*Pn **Pn 12 28 14.5 0.0**
TABS Tabas 7.88 79 *e*Pn **Pn 12 28 15.9 +1.4**
RAYN Ar Rayn 9.15 194 Pn **Pn 12 28 30.1 -1.9**
RAYN Ar Rayn 9.15 194 Pn **Pn 12 28 30.1 -1.9**
ASF Jabal al Asfar 9.26 271 Pn **Pn 12 28 32.0 -1.4**
comp=Z,0.6nm,0.3s,baz=108,slow=12,SNR=2.9
ASF Sn **Sn 12 30 12.6 -4.4**
comp=Z,0.3nm,0.3s,baz=240,slow=19,SNR=1.6
ASF Lg Lg 12 31 12.8
comp=Z,0.4nm,0.3s,baz=243,slow=22,SNR=1.6
comp=Z,3.6nm,0.7s
SHME Shamm 9.67 129 Pn **Pn 12 28 36.7 -2.3**
BANOM Banah 9.86 129 Pn **Pn 12 28 38.1 -3.5**
MSFE Esma-Masafi 10.17 132 Pn **Pn 12 28 42.8 -3.0**
ASUD Al Ashush, Dub 10.22 138 Pn **Pn 12 28 43.8 -2.8**
MMAI Mount Meron Ar 10.48 276 LR LR 12 34 00.0
comp=Z,97nm,18.6s,baz=232,slow=44
HATD Hatta, Dubai 10.54 134 Pn **Pn 12 28 48.4 -2.5**
ASHO Ashiyiah 10.60 135 Pn **Pn 12 28 49.0 -2.8**
MZR Muzera 10.68 151 Pn **Pn 12 28 50.5 -2.3**
EIL Elat 11.39 259 Lg Lg 12 32 25.8
comp=Z,0.7nm,0.3s,baz=12,slow=21,SNR=2.4
WSAR Wadi Sarin 13.25 131 Pn **Pn 12 29 27.1 -1.0**
comp=Z,1.2nm,0.3s,baz=333,slow=9.6,SNR=3.0
WSAR Sn Sn 12 31 44.5 -10
comp=Z,0.3nm,0.3s,baz=325,slow=24,SNR=1.6
comp=Z,5.2nm,0.5s
BRTR Keskin Array B 13.56 306 Pn **Pn 12 29 34.0 +1.8**
comp=Z,0.1nm,0.3s,baz=118,slow=15,SNR=3.3
comp=Z,0.7nm,0.6s
ABKAR Akbulak array 19.06 25 P **P 12 30 41.1 -0.6**
ABKAR Akbulak array 19.06 25 P **P 12 30 41.5 -0.3**
AKTO Aktyubinsk 19.46 20 P **P 12 30 45.6 -0.6**
comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=4.8
comp=Z,0.6nm,0.4s
BELG Belogornoye 19.91 360 P **P 12 30 50.9 -0.1**
comp=Z,0.9nm,0.3s,baz=121,slow=1.8,SNR=4.0
comp=Z,36nm,1.1s
KK31 Karatay Array 20.77 53 Pn 12 31 02.5 -0.4
KKAR Karatay Array 20.77 53 P **P 12 31 02.3 +1.8**
KKAR Karatay Array 20.77 53 P Pn 12 31 03.0 0.0
KKAR IAmb IAmb 12 31 04.1
comp=Z,7.7nm,1.1s
MLR Muntele Rosu 21.33 314 P **P 12 31 08.1 +1.5**
MLR IAmb IAmb 12 31 14.2
comp=Z,9.1nm,0.8s
AKASG Malin Array Be 22.81 328 P **P 12 31 19.7 -2.5**
comp=Z,1.2nm,0.6s,baz=138,slow=8.9,SNR=8.6
comp=Z,1.2nm,0.6s
AKBB Malin Array Si 22.81 328 P **P 12 31 23.1 +0.9**
AKBB IAmb IAmb 12 31 27.0
comp=Z,6.0nm,0.9s
BURAR Bucovina Array 22.87 318 P **P 12 31 22.9 -0.1**
BUR08 Bucovina Ar. S 22.89 318 P **P 12 31 23.6 +0.3**
ARU Arti 25.08 14 P **P 12 31 44.3 +0.5**
comp=Z,1.6nm,0.2s,baz=201,slow=10,SNR=7.2
comp=Z,1.6nm,0.2s
ARU Arti 25.08 14 P **P 12 31 44.4 +0.5**
ARU IAmb IAmb 12 31 46.4
comp=Z,9.9nm,1.2s
PSZ Piszkesteto 26.14 314 P **P 12 31 54.0 +0.4**
PSZ IAmb IAmb 12 31 57.9
comp=Z,10nm,0.9s
BRVK Borovoye 26.16 32 P **P 12 31 53.9 +0.3**
BRVK IAmb IAmb 12 31 54.5
comp=Z,4.6nm,0.9s
BVAR Borovoye Array 26.18 32 P **P 12 31 53.2 -0.6**
comp=Z,2.5nm,0.9s,baz=212,slow=8.0,SNR=14
BVAR PcP **PcP 12 35 19.4 -0.9**
comp=Z,0.5nm,0.6s,baz=321,slow=1.8,SNR=3.7
comp=Z,2.5nm,0.9s
KURBB Kurchatov Arra 28.97 42 P **P 12 32 19.3 +0.5**
comp=Z,1.2nm,0.6s,baz=246,slow=9.3,SNR=5.5
KURBB PcP **PcP 12 35 26.4 -0.7**
comp=Z,0.3nm,0.5s,baz=225,slow=5.0,SNR=2.4
comp=Z,1.2nm,0.6s
MK31 Makanchi Array 29.87 51 P **P 12 32 26.6 -0.4**
MK31 IAmb IAmb 12 32 36.8
comp=Z,2.7nm,1.0s
MKAR Makanchi Array 29.87 51 P **P 12 32 26.4 -0.5**
comp=Z,1.3nm,0.7s,baz=251,slow=8.2,SNR=9.2
comp=Z,1.3nm,0.7s
MKAR Makanchi Array 29.87 51 P **P 12 32 27.6 +0.7**
VLC Villacollemand 31.35 303 P **P 12 32 40.4 +0.3**
FIA1 FINESS Array S 32.24 340 P **P 12 32 47.1 -0.3**
FINES FINESS Array B 32.24 340 P **P 12 32 47.1 -0.4**
comp=Z,0.7nm,0.3s,baz=146,slow=8.4,SNR=12
comp=Z,0.7nm,0.3s
FINES FINESS Array B 32.24 340 P **P 12 32 46.9 -0.6**
ZAA0 Zalesovo Array 33.89 40 P **P 12 33 01.8 -0.2**
ZAA0 IAmb IAmb 12 33 02.3
comp=Z,4.1nm,1.2s
ZALV Zalesovo Beam 33.89 40 P **P 12 33 01.5 -0.5**
comp=Z,2.0nm,0.5s,baz=240,slow=8.4,SNR=13
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 33.89 40 P **P 12 33 01.8 -0.2**
NC405 NORSAR Array S 36.99 332 P **P 12 33 29.2 +0.6**
NC405 IAmb IAmb 12 34 10.0
comp=Z,12nm,1.2s
ARCES ARCESS Array B 39.17 348 P **P 12 33 46.4 -0.6**
comp=Z,0.9nm,0.8s,baz=160,slow=11,SNR=1.0
comp=Z,0.9nm,0.8s
ARCES ARCESS Array B 39.17 348 P **P 12 33 46.2 -0.7**
ARCES IAmb IAmb 12 34 26.0
comp=Z,9.4nm,1.3s
ESDC Sonseca Array 41.99 295 P **P 12 34 09.6 -1.0**
comp=Z,0.6nm,0.6s,baz=72,slow=8.2,SNR=5.7
comp=Z,0.6nm,0.6s
TORD Torodi Ar. Bea 46.27 256 P **P 12 34 44.7 -0.4**
comp=Z,0.3nm,0.5s,baz=57,slow=9.2,SNR=2.7
comp=Z,0.3nm,0.5s
TORD Torodi Ar. Bea 46.27 256 P **P 12 34 42.9 -2.2**
TORD IAmb IAmb 12 35 22.6
comp=Z,2.5nm,1.4s
SPB2 Spitsbergen Ar 47.81 352 P **P 12 34 57.3 +0.9**
PETK Petropavlovsk- 75.33 36 P **P 12 38 04.3 +1.9**
comp=Z,8.3nm,0.9s,baz=333,slow=8.4,SNR=3.9
comp=Z,8.3nm,0.9s

ROM 31 12:45:26.2±0.1, 42°.686N±0°.004×13°.209E±0°.004,
h13km, ML2.3/3, 7C-4D, Error ellipse: s-maj=0.4km
s-min=0.1km az=342.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.08**	**97**	⇓P	Pg		12 45 29.4	+0.2
T1204				S	Sg		12 45 31.3	+0.1
T1204				AML	AML			
	comp=E,2035μm,1.0s							
T1204				AML	AML			
	comp=N,1815μm,0.1s							
T1204				AML	AML			
	comp=E,9410μm,0.8s							
T1204				AML	AML			
	comp=N,5555μm,0.9s							
T1204				AML	AML			
	comp=N,1008μm,0.8s							
T1204				AML	AML			
	comp=E,1820μm,2.3s							
T1204				AML	AML			
	comp=N,931μm,0.1s							
T1204				AML	AML			
	comp=E,1217μm,0.1s							
SMA1	**SAN MARTINO**	**0.11**	**121**	⇑P	Pb		12 45 29.9	-0.3
SMA1				AML	AML			
	comp=E,13200μm,0.2s							
SMA1				AML	AML			
	comp=N,22700μm,0.5s							
SMA1				AML	AML			
	comp=E,13250μm,0.2s							
SMA1				AML	AML			
	comp=N,858μm,0.1s							
SMA1				AML	AML			
	comp=E,1036μm,0.2s							
LNSS	**Leonessa**	**0.15**	**236**	⇑P	Pg		12 45 30.3	+0.3
LNSS				AML	AML			
	comp=E,585μm,0.4s							
LNSS				AML	AML			
	comp=N,1370μm,0.9s							
LNSS				AML	AML			
	comp=E,7160μm,0.2s							
LNSS				AML	AML			
	comp=N,15050μm,0.4s							
LNSS				AML	AML			
	comp=E,446μm,1.1s							
LNSS				AML	AML			
	comp=N,1369μm,0.9s							
LNSS				AML	AML			
	comp=E,435μm,0.1s							
LNSS				AML	AML			
	comp=N,1147μm,0.1s							
T1245	**Castelsantange**	**0.17**	**355**	P	Pb		12 45 30.9	-0.4
T1245				AML	AML			
	comp=E,8225μm,0.5s							
T1245				AML	AML			
	comp=E,8075μm,0.5s							
T1245				AML	AML			
	comp=E,8230μm,0.5s							
T1245				AML	AML			
	comp=E,8070μm,0.5s							
T1245				AML	AML			
	comp=N,8875μm,0.4s							
T1245				AML	AML			
	comp=N,8835μm,0.3s							
T1245				AML	AML			
	comp=E,1530μm,0.3s							
T1245				AML	AML			
	comp=N,2735μm,0.3s							
T1245				AML	AML			
	comp=E,1319μm,0.2s							
T1245				AML	AML			
	comp=N,2896μm,0.3s							
RM33	**Pellescritta (**	**0.18**	**179**	⇑P	Pg		12 45 30.7	+0.4
RM33				AML	AML			
	comp=E,1104μm,0.1s							
RM33				AML	AML			
	comp=N,1530μm,0.2s							
RM33				AML	AML			
	comp=E,1053μm,0.1s							
RM33				AML	AML			
	comp=N,1500μm,0.2s							
RM33				AML	AML			
	comp=E,2080μm,0.2s							
RM33				AML	AML			
	comp=N,2685μm,1.1s							
RM33				AML	AML			
	comp=E,2055μm,0.2s							
RM33				AML	AML			
	comp=N,2730μm,1.1s							
RM33				AML	AML			
	comp=E,2050μm,0.2s							
RM33				AML	AML			
	comp=E,2080μm,0.2s							
RM33				AML	AML			
	comp=E,1105μm,0.1s							
RM33				AML	AML			
	comp=E,1053μm,0.1s							
RM33				AML	AML			
	comp=N,1497μm,0.2s							
RM33				AML	AML			
	comp=N,1528μm,0.2s							
T1243	**Rocca Santa Ma**	**0.18**	**86**	P	Pg		12 45 30.8	+0.4
T1243				S	Sg		12 45 33.4	+0.2
T1217	**Poggiodomo (PG**	**0.21**	**277**	P	Pg		12 45 31.1	+0.3
T1217				S	Sg		12 45 34.5	+0.5
T1217				AML	AML			
	comp=E,2160μm,1.1s							
T1217				AML	AML			
	comp=N,2580μm,0.8s							
T1217				AML	AML			
	comp=E,2085μm,1.1s							
T1217				AML	AML			
	comp=N,2575μm,0.6s							
T1217				AML	AML			
	comp=E,2070μm,1.1s							
T1217				AML	AML			
	comp=N,2567μm,0.6s							
T1217				AML	AML			
	comp=E,362μm,0.2s							
T1217				AML	AML			
	comp=N,613μm,0.2s							
T1217				AML	AML			
	comp=E,362μm,0.1s							
T1217				AML	AML			
	comp=N,640μm,0.2s							
CAMP	**Campotosto**	**0.21**	**135**	⇓P	Pg		12 45 31.2	+0.4
CAMP				AML	AML			
	comp=E,1885μm,0.6s							
CAMP				AML	AML			
	comp=N,1290μm,0.3s							
CAMP				AML	AML			
	comp=E,68μm,0.5s							
CAMP				AML	AML			
	comp=N,61μm,0.4s							
T1241	**Roccafluvione,**	**0.24**	**44**	P	Pg		12 45 31.6	+0.3
T1241				S	Sg		12 45 35.5	+0.8
T1247	**Pizzolo (AQ)**	**0.25**	**165**	⇑P	Pg		12 45 32.0	+0.4
T1247				AML	AML			
	comp=E,1580μm,1.1s							
T1247				AML	AML			
	comp=N,1690μm,0.3s							
T1247				AML	AML			
	comp=N,367μm,0.1s							
T1247				AML	AML			
	comp=E,338μm,0.1s							
TERO	**Teramo**	**0.30**	**102**	⇑P	Pg		12 45 32.5	+0.2
TERO				AML	AML			
	comp=E,1048μm,0.2s							
TERO				AML	AML			
	comp=N,1130μm,0.5s							
TERO				AML	AML			
	comp=E,1044μm,0.2s							
TERO				AML	AML			
	comp=N,197μm,0.1s							
TERO				AML	AML			
	comp=N,230μm,0.1s							
TERO				AML	AML			
	comp=E,184μm,0.1s							
TERO				AML	AML			
	comp=E,210μm,0.1s							
T1211	**Morro Reatino**	**0.30**	**240**	⇓P	Pg		12 45 32.7	+0.3
T1211				S	Sb		12 45 37.6	-0.9
T1211				AML	AML			
	comp=E,2375μm,0.3s							
T1211				AML	AML			
	comp=N,2960μm,0.4s							
T1211				AML	AML			
	comp=E,2476μm,1.5s							
T1211				AML	AML			
	comp=N,2855μm,0.4s							
T1211				AML	AML			
	comp=N,485μm,3.5s							
T1211				AML	AML			
	comp=N,582μm,1.3s							
T1211				AML	AML			
	comp=E,372μm,1.7s							
T1211				AML	AML			
	comp=E,529μm,1.7s							
T1211				AML	AML			
	comp=E,357μm,0.1s							
T1211				AML	AML			
	comp=N,358μm,0.2s							
T1211				AML	AML			
	comp=N,353μm,0.2s							
T1211				AML	AML			
	comp=E,321μm,0.1s							
ARRO	**Arrone**	**0.34**	**252**	⇑P	Pg		12 45 33.4	+0.2
GIGS	**Gran Sasso**	**0.35**	**131**	P	Pg		12 45 33.7	+0.3
GIGS				S	Sb		12 45 39.1	-0.8
GIGS				AML	AML			
	comp=E,330μm,0.2s							
GIGS				AML	AML			
	comp=N,172μm,1.5s							
GIGS				AML	AML			
	comp=E,329μm,0.2s							
FIAM	**Fiamignano**	**0.42**	**189**	⇓P	Pg		12 45 34.8	+0.1
FIAM				S	Sb		12 45 41.1	-0.7
FIAM				AML	AML			
	comp=E,400μm,0.7s							
FIAM				AML	AML			
	comp=N,463μm,1.0s							
FIAM				AML	AML			
	comp=N,68μm,0.2s							
FIAM				AML	AML			
	comp=E,106μm,0.2s							
RMP	**Rome, Mte Porz**	**0.95**	**203**	⇑P	Pn		12 45 45.5	+0.2

ROM 31 12:45:58.8±0.1, 42°.913N±0°.006×13°.142E±0°.006,
h10km, ML2.7/29, 16C-3D, Error ellipse: s-maj=0.6km
s-min=0.5km az=353.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**149**	P	Pg		12 46 01.6	+0.4
T1245				S	Sg		12 46 03.3	+0.4
T1245				AML	AML			
	comp=E,8230μm,0.5s							
T1245				AML	AML			
	comp=E,8070μm,0.5s							
T1245				AML	AML			
	comp=E,8225μm,0.5s							
T1245				AML	AML			
	comp=E,8075μm,0.5s							
T1245				AML	AML			
	comp=N,8835μm,0.3s							
T1245				AML	AML			
	comp=N,8875μm,0.4s							
T1245				AML	AML			
	comp=N,5312μm,0.1s							
T1245				AML	AML			
	comp=E,4900μm,0.2s							
T1245				AML	AML			
	comp=N,5384μm,0.1s							
T1245				AML	AML			
	comp=E,4598μm,0.2s							
FEMA	**Monte Fema**	**0.08**	**306**	P	Pg		12 46 01.5	+0.2
FEMA				S	Sg		12 46 03.1	-0.1
FEMA				AML	AML			
	comp=N,6820μm,0.4s							
FEMA				AML	AML			
	comp=E,7965μm,0.2s							
FEMA				AML	AML			
	comp=N,6815μm,0.4s							
FEMA				AML	AML			
	comp=E,7960μm,0.2s							
FEMA				AML	AML			
	comp=E,7964μm,0.2s							
FEMA				AML	AML			
	comp=N,6818μm,0.4s							
T1216	**Preci, Frazion**	**0.09**	**256**	⇑P	Pg		12 46 01.8	+0.4
T1216				S	Sg		12 46 03.8	+0.5
T1216				AML	AML			
	comp=E,5105μm,0.3s							
T1216				AML	AML			
	comp=N,4000μm,1.1s							
T1216				AML	AML			
	comp=E,5110μm,0.3s							
T1216				AML	AML			
	comp=N,3990μm,1.1s							
T1216				AML	AML			
	comp=N,3903μm,0.3s							
T1216				AML	AML			
	comp=E,5104μm,0.3s							
T1216				AML	AML			
	comp=E,5100μm,0.3s							
T1216				AML	AML			
	comp=N,3990μm,0.9s							
T1256	**Bolognola (MC)**	**0.11**	**33**	⇑P	Pg		12 46 01.9	+0.2
T1256				S	Sg		12 46 04.0	+0.1
T1256				AML	AML			
	comp=N,1735μm,0.1s							
T1256				AML	AML			
	comp=E,1770μm,0.7s							
T1256				AML	AML			
	comp=E,1459μm,0.2s							
T1256				AML	AML			
	comp=N,1734μm,0.1s							
T1256				AML	AML			
	comp=N,1730μm,0.1s							
FDMO	**Fiordimonte**	**0.13**	**342**	P	Pg		12 46 02.3	+0.4
FDMO				S	Sg		12 46 04.9	+0.8
FDMO				AML	AML			
	comp=N,1190μm,0.2s							
FDMO				AML	AML			
	comp=E,1260μm,0.5s							
FDMO				AML	AML			
	comp=N,1195μm,0.2s							
FDMO				AML	AML			
	comp=N,2855μm,0.4s							
FDMO				AML	AML			
	comp=E,1185μm,0.3s							
FDMO				AML	AML			
	comp=N,1194μm,0.2s							
FDMO				AML	AML			
	comp=E,3310μm,0.2s							
MMO1	**Montemonaco**	**0.14**	**96**	P	Pg		12 46 02.5	+0.5
MMO1				S	Sg		12 46 05.0	+0.7
GUMA	**Gualdo di Mace**	**0.21**	**43**	P	Pb		12 46 04.1	-0.6
GUMA				S	Sg		12 46 07.9	+1.8
GUMA				AML	AML			
	comp=N,15500μm,0.3s							
GUMA				AML	AML			
	comp=N,16750μm,0.3s							
GUMA				AML	AML			
	comp=E,9390μm,0.2s							
GUMA				AML	AML			
	comp=N,15450μm,0.3s							
GUMA				AML	AML			
	comp=E,7570μm,0.4s							
GUMA				AML	AML			
	comp=E,7570μm,1.6s							
GUMA				AML	AML			
	comp=N,2454μm,0.4s							
GUMA				AML	AML			
	comp=E,3060μm,0.4s							
GUMA				AML	AML			
	comp=E,3349μm,0.3s							
GUMA				AML	AML			
	comp=N,2493μm,0.3s							
T1241	**Roccafluvione,**	**0.22**	**105**	P	Pb		12 46 04.2	-0.7
T1241				S	Sg		12 46 08.0	+1.5
T1241				AML	AML			
	comp=E,2740μm,0.8s							
T1241				AML	AML			
	comp=N,2290μm,0.6s							
T1241				AML	AML			
	comp=E,2750μm,0.8s							
T1241				AML	AML			
	comp=N,2315μm,0.6s							
T1241				AML	AML			
	comp=N,2285μm,0.6s							
T1241				AML	AML			
	comp=N,2320μm,0.6s							
T1241				AML	AML			
	comp=N,2285μm,0.6s							
T1241				AML	AML			
	comp=N,1941μm,0.5s							
T1241				AML	AML			
	comp=E,2564μm,0.2s							
T1241				AML	AML			
	comp=E,2604μm,0.3s							
T1241				AML	AML			
	comp=E,2745μm,0.8s							
T1241				AML	AML			
	comp=E,2755μm,0.8s							
T1215	**Vallo di Nera,**	**0.23**	**241**	⇓P	Pb		12 46 04.5	-0.6
T1215				AML	AML			
	comp=E,1140μm,0.4s							
T1215				AML	AML			
	comp=N,984μm,0.5s							
T1215				AML	AML			
	comp=E,1140μm,0.4s							
T1215				AML	AML			

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     comp=N,982µm,0.5s
T1215                          AML   AML
     comp=E,1140µm,1.6s
T1215                          AML   AML
     comp=N,980µm,0.5s
T1217 Poggiodomo (PG   0.25 218  P     Pn     12 46 07.6 -1.1
T1217                          S     Sb     12 46 09.6 -0.4
T1217                          AML   AML
     comp=E,2155µm,1.1s
T1217                          AML   AML
     comp=E,2080µm,1.1s
T1217                          AML   AML
     comp=N,2575µm,0.6s
T1217                          AML   AML
     comp=N,2575µm,0.8s
T1217                          AML   AML
     comp=E,2075µm,1.1s
T1217                          AML   AML
     comp=N,2565µm,0.6s
T1217                          AML   AML
     comp=E,2160µm,1.1s
T1217                          AML   AML
     comp=N,2580µm,0.8s
T1217                          AML   AML
     comp=E,1622µm,0.2s
T1217                          AML   AML
     comp=N,2062µm,0.2s
T1217                          AML   AML
     comp=E,1716µm,0.2s
T1217                          AML   AML
     comp=N,2083µm,0.2s
T1204 Amatrice, Fraz    0.27 152  P     Pb     12 46 05.3 -0.5
T1204                          S     Sg     12 46 08.4 +0.4
T1204                          AML   AML
     comp=E,9385µm,0.8s
T1204                          AML   AML
     comp=N,5550µm,0.9s
T1204                          AML   AML
     comp=E,9410µm,0.8s
T1204                          AML   AML
     comp=N,5555µm,0.9s
T1204                          AML   AML
     comp=N,5545µm,0.3s
T1204                          AML   AML
     comp=E,9420µm,0.8s
T1204                          AML   AML
     comp=N,5489µm,0.2s
T1204                          AML   AML
     comp=E,8607µm,0.4s
T1204                          AML   AML
     comp=N,5545µm,1.7s
T1204                          AML   AML
     comp=E,9420µm,1.2s
T1243 Rocca Santa Ma    0.31 134  P     Pb     12 46 05.8 -0.7
T1243                          S     Sg     12 46 10.0 +0.7
SMA1 SAN MARTINO        0.32 153  AML   AML
     comp=N,22700µm,0.5s
SMA1                           AML   AML
     comp=E,13250µm,0.2s
SMA1                           AML   AML
     comp=E,13200µm,0.2s
LNSS Leonessa           0.32 194 ⇑P    Pb     12 46 07.9 +1.3
LNSS                           AML   AML
     comp=E,7165µm,0.2s
LNSS                           AML   AML
     comp=E,7160µm,0.2s
LNSS                           AML   AML
     comp=N,15050µm,0.4s
LNSS                           AML   AML
     comp=N,14997µm,0.2s
MNTP Montappone         0.33  47  S     Sb     12 46 16.0 +3.9
SNTG Esanatoglia        0.37 337  S     Sb     12 46 14.0 +0.6
ASSB Assisi San Ben     0.38 290 ⇑P    Pb     12 46 07.1 -0.5
OFFI Offida             0.40  87 ⇓P    Pb     12 46 08.5 +0.6
OFFI                           AML   AML
     comp=N,1079µm,1.3s
OFFI                           AML   AML
     comp=N,1080µm,1.3s
OFFI                           AML   AML
     comp=E,1080µm,0.5s
OFFI                           AML   AML
     comp=N,1080µm,0.7s
RM33 Pellescritta (     0.41 172  AML   AML
     comp=N,2730µm,0.9s
RM33                           AML   AML
     comp=E,2050µm,0.2s
RM33                           AML   AML
     comp=N,2725µm,1.1s
RM33                           AML   AML
     comp=E,2080µm,0.2s
RM33                           AML   AML
     comp=N,2685µm,1.1s
RM33                           AML   AML
     comp=E,2055µm,0.2s
RM33                           AML   AML
     comp=E,2080µm,0.2s
RM33                           AML   AML
     comp=N,2730µm,1.1s
RM33                           AML   AML
     comp=N,2685µm,0.9s
EL6  Elcito             0.42 356  S     Sb     12 46 16.0 +1.3
CAMP Campotosto         0.42 152 ⇑P    Pg     12 46 07.8 +0.6
CAMP                           S     Sg     12 46 10.7 -2.1
CAMP                           AML   AML
     comp=E,1885µm,0.6s
CAMP                           AML   AML
     comp=N,1290µm,0.3s
CAMP                           AML   AML
     comp=E,1885µm,1.4s
CAMP                           AML   AML
     comp=N,1293µm,0.3s
CAMP                           AML   AML
     comp=E,1625µm,0.2s
ARRO Arrone             0.43 220  S     Sb     12 46 19.0 +3.9
T1211 Morro Reatino     0.43 209 ⇑P    Pn     12 46 12.2 +1.0
T1211                          AML   AML
     comp=E,2370µm,0.3s
T1211                          AML   AML
     comp=N,2955µm,0.4s
T1211                          AML   AML
     comp=E,2495µm,1.5s
T1211                          AML   AML
     comp=N,2855µm,0.4s
T1211                          AML   AML
     comp=E,2375µm,0.3s
T1211                          AML   AML
     comp=N,2960µm,0.4s
T1211                          AML   AML
     comp=E,2476µm,1.5s
T1211                          AML   AML
     comp=N,2855µm,0.4s
T1211                          AML   AML
     comp=N,2850µm,0.4s
T1211                          AML   AML
     comp=N,2955µm,0.4s
T1211                          AML   AML
     comp=N,2853µm,0.4s
T1211                          AML   AML
     comp=E,1874µm,0.1s
T1211                          AML   AML
     comp=E,1908µm,0.1s
T1211                          AML   AML
     comp=N,2956µm,0.4s
T1211                          AML   AML
     comp=E,2485µm,1.5s
TERO Teramo             0.45 130 ⇑P    Pn     12 46 11.9 +0.6
TERO                           AML   AML
     comp=E,1048µm,0.2s
TERO                           AML   AML
     comp=N,1130µm,0.5s
TERO                           AML   AML
     comp=E,1044µm,0.2s
TERO                           AML   AML
     comp=E,1045µm,0.2s
TERO                           AML   AML
     comp=N,870µm,0.2s
TERO                           AML   AML
     comp=E,935µm,0.2s
TERO                           AML   AML
     comp=N,911µm,0.1s
ATCC AVT- Casa Cast     0.46 307 ⇑P    Pb     12 46 08.8 -0.2
ATCC                           AML   AML
     comp=E,472µm,0.7s
ATCC                           AML   AML
     comp=N,521µm,0.2s
ATCC                           AML   AML
     comp=N,520µm,0.2s
FOSV Fossato di Vic     0.47 324 ⇑P    Pb     12 46 08.8 -0.4
FOSV                           AML   AML
     comp=N,268µm,0.4s
FOSV                           AML   AML
     comp=E,204µm,1.4s
FOSV                           AML   AML
     comp=N,268µm,0.4s
FOSV                           AML   AML
     comp=E,202µm,0.3s
FOSV                           AML   AML
     comp=N,235µm,0.2s
T1247 Pizzolo (AQ)      0.48 166  AML   AML
     comp=N,1690µm,0.3s
T1247                          AML   AML
     comp=E,1580µm,1.1s
T1247                          AML   AML
     comp=E,1580µm,0.9s
CESX Cesi               0.51 234  P     Pn     12 46 15.1 +2.9
CESX                           AML   AML
     comp=E,678µm,1.2s
CESX                           AML   AML
     comp=N,590µm,1.3s
CESX                           AML   AML
     comp=N,537µm,0.3s
CESX                           AML   AML
     comp=E,621µm,0.3s
GIGS Gran Sasso         0.56 146  P     Pg     12 46 10.1 +0.4
GIGS                           AML   AML
     comp=E,329µm,0.2s
GIGS                           AML   AML
     comp=E,330µm,0.2s
GIGS                           AML   AML
     comp=N,172µm,1.5s
GIGS                           AML   AML
     comp=E,329µm,1.8s
GIGS                           AML   AML
     comp=N,172µm,0.5s
GIGS                           AML   AML
     comp=E,329µm,0.2s
GIGS                           AML   AML
     comp=N,156µm,0.2s
MURB Monte Urbino       0.57 308  S     Sn     12 46 21.0 -1.6
PP3  Marolino           0.58  36  S     Sn     12 46 22.0 -0.5
SSFR Montelago di S     0.58 333  S     Sb     12 46 21.0 +1.5
ARVD Arcevia            0.60 346  S     Sb     12 46 21.0 +1.0
AOI  Ancona             0.72  28  S     Sb     12 46 24.0 +0.6
FAGN Fagnano            0.72 153 ⇑P    Pn     12 46 15.7 +0.6
FAGN                           AML   AML
     comp=N,1004µm,0.3s
FAGN                           AML   AML
     comp=E,1138µm,0.3s
FAGN                           AML   AML
     comp=E,1140µm,0.3s
VCEL Villa Celiera      0.73 135 ⇑P    Pn     12 46 16.9 +1.7
VCEL                           AML   AML
     comp=E,642µm,0.2s
VCEL                           AML   AML
     comp=E,698µm,1.1s
VCEL                           AML   AML
     comp=E,640µm,0.3s
VCEL                           AML   AML
     comp=N,642µm,0.2s
MGAB Montegabbione      0.76 270 ⇑P    Pn     12 46 19.4 +3.8
MGAB                           AML   AML
     comp=E,506µm,0.5s
MGAB                           AML   AML
     comp=N,412µm,0.3s
MGAB                           AML   AML
     comp=N,411µm,0.3s
MGAB                           AML   AML
     comp=N,377µm,0.3s
MGAB                           AML   AML
     comp=E,506µm,0.5s
MGAB                           AML   AML
     comp=E,399µm,0.5s
ATMI Monte Miggiano     0.77 304  S     Sg     12 46 24.0 +0.4
MPAG Monte Paganucc     0.77 339  S     Sb     12 46 25.0 +0.2
FSSB Fossombrone        0.82 341  S     Sb     12 46 26.0 -0.3
T0110 Collepietro       0.83 145 ⇓P    Pn     12 46 17.7 +1.1
T0110                          S     Sn     12 46 29.0  0.0
T0110                          AML   AML
     comp=N,764µm,0.3s
T0110                          AML   AML
     comp=E,830µm,0.6s
T0110                          AML   AML
     comp=N,764µm,0.3s
T0110                          AML   AML
     comp=E,767µm,0.3s
PE3  Peglio             0.91 329 ⇑P    Pn     12 46 18.7 +1.0
CERT Cerreto            0.97 187 ⇑P    Pn     12 46 19.8 +1.3
CERT                           AML   AML
     comp=E,192µm,0.4s
CERT                           AML   AML
     comp=N,133µm,0.5s
INTR Introdacqua        1.06 148 ⇑P    Pg     12 46 17.6 -1.6
INTR                           AML   AML
     comp=E,146µm,1.0s
INTR                           AML   AML
     comp=N,246µm,0.9s
INTR                           AML   AML
     comp=E,143µm,0.9s
INTR                           AML   AML
     comp=N,234µm,0.6s
INTR                           AML   AML
     comp=N,192nm,0.9s
INTR                           AML   AML
     comp=E,131nm,0.8s
SAMA S.Maria delle      1.20 200  S     Sn     12 46 38.0  0.0
LAV9 Lanuvio            1.28 195  P     Pn     12 46 22.7  0.0
LAV9                           AML   AML
     comp=N,558µm,0.8s
LAV9                           AML   AML
     comp=E,620µm,1.0s
IMOL Imola, Italy       1.77 325  P     Pg     12 46 35.4 +2.8
RAVA Ravarino           2.35 322 ⇑P    Pg     12 46 46.6 +2.8
```

*FUNV **31** 12:57:06.5, 10°.57N×72°.67W, h1km, MW3.7*
*RSNC **31** 12:57:07.7±0.6, 10°.50N×72°.69W, h10km±5km, ML3.2, Mw3.4*

ISC 31 12:57:07.6±1.5, **10°.55N**±0°.04×**72°.66W**±0°.03, **h19**km±5km, **n21**, σ1§**79**/39, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRJC	**Cerrejon, Guaj**	**0.51**	**335**	*eP*	**Pg**	**12 57 17.9**	**-0.2**
CRJC				*eS*	**Sb**	**12 57 25.8**	**+0.6**
CRJC				*i*		12 57 27.6	
	comp=Z,1µm,0.2s						
URIC	**Uribia, Colomb**	**1.32**	**30**	*eP*	**Pn**	**12 57 30.8**	**-0.2**
URIC				*eS*	**Sg**	**12 57 50.1**	**-0.4**
URIC				*i*		12 57 50.8	
	comp=Z,372nm,0.3s						
LL1C	**La Loma 1 Cana**	**1.33**	**221**	*eP*	**Pn**	**12 57 29.8**	**-1.4**
LL1C				*eS*	**Sn**	**12 57 46.4**	**-2.0**
LL1C				*i*		12 57 50.2	
	comp=Z,2µm,0.5s						
ARGC	**Ariguani, Magd**	**1.70**	**246**	*eP*	**Pn**	**12 57 35.4**	**-0.9**
ARGC				*eS*	**Sn**	**12 57 56.9**	**-0.7**
ARGC				*i*		12 57 59.1	
	comp=Z,92nm,0.1s						
DABV	**Dabajuro**	**2.02**	**79**	*eP*	**Pn**	**12 57 41.6**	**+0.9**
DABV				*eS*	**Sn**	**12 58 06.0**	**+0.6**
SJCC	**San Jacinto, C**	**2.56**	**256**	*eP*	**Pn**	**12 57 47.6**	**-0.5**
SJCC				*eS*	**Sn**	**12 58 18.6**	**-0.2**
SJCC				*i*		12 58 33.1	
	comp=Z,36nm,0.6s						
CURV	**Curarigua**	**2.71**	**101**	*eP*	**Pn**	**12 57 53.0**	**+2.7**
CURV				*eS*	**Sn**	**12 58 23.7**	**+1.1**
SIQV	**Siquisique**	**2.81**	**88**	*eP*	**Pn**	**12 57 52.0**	**+0.4**
SIQV				*eS*	**Sn**	**12 58 25.1**	**+0.2**
SOCV	**Socops**	**2.87**	**142**	*eP*	**Pn**	**12 57 52.3**	**-0.1**
SOCV				*eS*	**Sn**	**12 58 26.8**	**+0.3**
PAMC	**Pamplona, Colo**	**3.19**	**181**	*eP*	**Pn**	**12 57 57.6**	**+0.4**
PAMC				*eS*	**Sn**	**12 58 35.0**	**+0.1**
PAMC				*i*		12 58 49.4	
	comp=Z,68nm,0.2s						
BRRC	**Barranca, Sant**	**3.58**	**197**	*eP*	**Pn**	**12 58 00.7**	**-1.3**
BARC	**Barichara**	**3.97**	**187**	*eP*	**Pn**	**12 58 07.5**	**-0.1**
BARC				*eS*	**Sn**	**12 58 58.4**	**+4.6**
UREC	**San Jos de Ur**	**3.97**	**226**	*eS*	**Sn**	**12 58 54.5**	**+0.9**
TAMC	**Tame, Arauca**	**4.18**	**168**	*eP*	**Pn**	**12 58 10.0**	**-0.4**
TAMC				*eS*	**Sn**	**12 58 55.0**	**-3.7**
PTBC	**PUERTO BERRIO,**	**4.36**	**204**	*eP*	**Pn**	**12 58 12.3**	**-0.7**
PTBC				*eS*	**Sn**	**12 59 01.4**	**-1.8**
PTBC				*i*		12 59 08.2	
	comp=Z,26nm,0.5s						
RUSC	**La Rusia**	**4.65**	**185**	*eP*	Pn	12 58 12.2	-5.1
RUSC				*eS*	**Sb**	**12 59 22.6**	**-2.1**
RUSC				*i*		12 59 37.5	
	comp=Z,18nm,0.5s						
BAUV	**El Baul**	**4.83**	**109**	*eP*	**Pn**	**12 58 18.4**	**-0.8**
BAUV				*eS*	**Sn**	**12 59 12.4**	**-2.3**
BENV	**Beln**	**5.02**	**96**	*eP*	**Pn**	**12 58 21.7**	**-0.3**
BENV				*eS*	**Sn**	**12 59 17.8**	**-1.7**
SPBC	**San Pablo de B**	**5.06**	**196**	*eP*	**Pn**	**12 58 25.2**	**+2.5**
SPBC				*eS*	**Sn**	**12 59 24.6**	**+3.9**
HELC	**Santa Helena**	**5.18**	**213**	*eP*	**Pn**	**12 58 26.8**	**+2.3**
HELC				*eS*	**Sn**	**12 59 26.1**	**+2.2**
NORC	**Norcasia**	**5.42**	**204**	*eP*	**Pn**	**12 58 29.3**	**+1.9**
NORC				*eS*	**Sn**	**12 59 31.0**	**+1.7**

*IDC **31** 13:01:36.5±2.0, 39°.72N×95°.52E, h0km, mb3.1/2, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=31.4km s-min=23.7km az=54.0*

ISC 31 13:01:40.4±1.4, **39°.8N**±0°.1×**95°.3E**±0°.1, **h35**km, **n5**, σ1§**08**/6, **Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**11.31**	**41**	Pn	**Pn**	**13 04 19.4**	**-0.1**
	0.1nm,0.3s,baz=227,slow=14,SNR=2.2						
SONM				Lg	Lg	13 07 36.1	
	0.2nm,0.3s,baz=222,slow=43,SNR=2.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**11.76**	**311**	Pn	**Pn**	**13 04 25.7**	**+0.1**
	0.3nm,0.3s,baz=120,slow=14,SNR=10						
MKAR				Sn	**Sn**	**13 06 34.6**	**-0.8**
	0.3nm,0.3s,baz=121,slow=25,SNR=6.8						
MKAR				Lg	Lg	13 07 56.0	
	0.1nm,0.3s,baz=123,slow=22,SNR=1.4						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**15.97**	**318**	Pn	**Pn**	**13 05 21.4**	**-0.8**
	baz=122,slow=12,SNR=4.0						
	1.0nm,0.7s						
BVAR	**Borovoye Array**	**21.52**	**316**	P	**P**	**13 06 27.6**	**+1.4**
	0.3nm,0.6s,baz=121,slow=14,SNR=2.4						
	0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**21.53**	**171**	P	**P**	**13 06 26.1**	**-0.4**
	0.7nm,0.3s,baz=351,slow=11,SNR=1.8						
	0.7nm,0.3s						

IDC 31 13:11:22.8±1.4, **29°.59S**×**61°.07E**, **h0**km, **mb3.5**/4, **mbtmp3.5**/4, **MS3.2**/1, **Error ellipse: s-maj=58.9km s-min=35.0km az=25.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**24.32**	**28**	T	T	13 41 22.4	
	baz=204,slow=76,SNR=6.7						
H08S2	**Diego Garcia H**	**24.32**	**28**	T	T	13 41 22.9	
	baz=204,slow=76,SNR=5.7						
H08S3	**Diego Garcia H**	**24.34**	**28**	T	T	13 41 23.4	
	baz=204,slow=76,SNR=7.0						
MAW	**Mawson**	**38.06**	**179**	LR	LR	13 32 45.4	
	comp=Z,31nm,18.1s,baz=316,slow=34						
H01W2	**Cape Leeuwin H**	**44.76**	**111**	T	T	14 07 17.2	
	baz=261,slow=75,SNR=8.7						
H01W3	**Cape Leeuwin H**	**44.77**	**111**	T	T	14 07 17.2	
	baz=261,slow=75,SNR=10						
H01W1	**Cape Leeuwin H**	**44.78**	**111**	T	T	14 07 18.1	
	baz=261,slow=75,SNR=10						
VNDA	**Vanda**	**63.64**	**166**	P	P	13 21 55.2	0.0
	0.3nm,0.4s,baz=249,slow=7.3,SNR=6.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**64.42**	**104**	P	P	13 22 01.2	0.0
	0.4nm,0.8s,baz=244,slow=6.6,SNR=5.3						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**66.27**	**100**	P	P	13 22 13.2	0.0
	0.3nm,0.8s,baz=242,slow=5.8,SNR=1.5						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.27**	**298**	P	P	13 22 44.3	0.0
	0.3nm,0.7s,baz=134,slow=6.2,SNR=2.2						
	0.3nm,0.7s						

ROM 31 13:19:11.1±0.2, **43°.034N**±0°.006×**13°.10E**±0°.01, **h2**km±1km, **ML2.6**/32, **14C-16D, Error ellipse: s-maj=0.8km s-min=0.7km az=291.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**284**	P	Pg	13 19 11.6	-0.1
FDMO				S	Sg	13 19 12.0	-0.1
FEMA	**Monte Fema**	**0.08**	**208**	P	Pg	13 19 12.9	+0.1
FEMA				S	Sg	13 19 14.8	+0.9
FEMA				AML	AML		
	comp=N,10015µm,0.3s						
FEMA				AML	AML		
	comp=E,16400µm,0.4s						
FEMA				AML	AML		
	comp=N,9995µm,0.3s						
FEMA				AML	AML		
	comp=E,16350µm,0.4s						
FEMA				AML	AML		
	comp=N,10035µm,0.3s						
FEMA				AML	AML		
	comp=E,16364µm,0.4s						
FEMA				AML	AML		
	comp=N,10009µm,0.3s						
T1256	**Bolognola (MC)**	**0.10**	**107**	P	Pg	13 19 13.5	+0.5
T1256				AML	AML		
	comp=E,4475µm,0.7s						
T1256				AML	AML		
	comp=N,2515µm,0.4s						
T1256				AML	AML		
	comp=E,4570µm,0.7s						
T1256				AML	AML		
	comp=N,2315µm,0.4s						
T1256				AML	AML		
	comp=E,4475µm,0.7s						
T1256				AML	AML		
	comp=N,2915µm,0.2s						
T1256				AML	AML		
	comp=N,2880µm,0.2s						
T1256				AML	AML		
	comp=N,2915µm,0.2s						
T1256				AML	AML		
	comp=E,4112µm,0.6s						
T1256				AML	AML		
	comp=E,4210µm,0.6s						
T1256				AML	AML		
	comp=N,1844µm,0.8s						
T1256				AML	AML		
	comp=N,2515µm,0.4s						
T1216	**Preci, Frazion**	**0.16**	**203**	⇑P	Pg	13 19 14.3	+0.1
T1216				S	Sg	13 19 17.5	+1.3
T1216				AML	AML		
	comp=E,4200µm,0.2s						
T1216				AML	AML		
	comp=N,3465µm,1.1s						
T1216				AML	AML		
	comp=E,15850µm,0.4s						
T1216				AML	AML		
	comp=N,19650µm,0.2s						
T1216				AML	AML		
	comp=E,15850µm,0.4s						
T1216				AML	AML		
	comp=N,19650µm,0.2s						
T1216				AML	AML		
	comp=E,4199µm,0.2s						
T1216				AML	AML		
	comp=N,3280µm,0.3s						
MDAR	**Monte D'Aria**	**0.16**	**10**	P	Pg	13 19 14.7	+0.4
MDAR				S	Sg	13 19 17.4	+1.0
MDAR				AML	AML		
	comp=E,1645µm,0.2s						
MDAR				AML	AML		
	comp=N,4127µm,0.3s						
GUMA	**Gualdo di Mace**	**0.17**	**80**	⇓P	Pg	13 19 15.5	+1.0
GUMA				AML	AML		
	comp=E,5770µm,0.3s						
GUMA				AML	AML		
	comp=N,5630µm,0.4s						
GUMA				AML	AML		
	comp=N,5625µm,0.4s						
GUMA				AML	AML		
	comp=E,6775µm,0.3s						
GUMA				AML	AML		
	comp=N,6215µm,0.4s						

GUMA				AML	AML	
	comp=E,5765μm,0.3s					
GUMA				AML	AML	
	comp=N,6217μm,0.4s					
GUMA				AML	AML	
	comp=E,5768μm,0.3s					
GUMA				AML	AML	
	comp=E,6777μm,0.3s					
GUMA				AML	AML	
	comp=N,5626μm,0.4s					
T1245	**Castelsantange**	**0.19 160**	⇑P	Pg	13 19 15.3	+0.5
T1245			S	Sg	13 19 17.2	-0.1
T1245			AML	AML		
	comp=E,19750μm,0.3s					
T1245			AML	AML		
	comp=N,23300μm,0.3s					
T1245			AML	AML		
	comp=E,19650μm,0.7s					
T1245			AML	AML		
	comp=N,23350μm,0.3s					
T1245			AML	AML		
	comp=N,21750μm,0.3s					
T1245			AML	AML		
	comp=E,5896μm,0.5s					
T1245			AML	AML		
	comp=N,6965μm,0.3s					
T1245			AML	AML		
	comp=E,6206μm,0.5s					
T1245			AML	AML		
	comp=N,6652μm,0.3s					
AM05	**Amandola Campo**	**0.19 107**	P	Pg	13 19 15.8	+0.9
AM05			AML	AML		
	comp=E,605μm,1.1s					
AM05			AML	AML		
	comp=N,941μm,0.5s					
AM05			AML	AML		
	comp=E,3245μm,0.1s					
AM05			AML	AML		
	comp=N,260μm,0.1s					
AM05			AML	AML		
	comp=E,1188μm,0.2s					
AM05			AML	AML		
	comp=N,95μm,0.1s					
AM05			AML	AML		
	comp=E,345μm,0.2s					
AM05			AML	AML		
	comp=N,330μm,0.1s					
GAG1	**Gagliole**	**0.21 353**	⇓P	Pg	13 19 15.7	+0.6
GAG1			AML	AML		
	comp=E,4930μm,1.0s					
GAG1			AML	AML		
	comp=N,6735μm,1.6s					
GAG1			AML	AML		
	comp=N,6730μm,1.6s					
GAG1			AML	AML		
	comp=N,6735μm,1.6s					
GAG1			AML	AML		
	comp=E,4925μm,1.1s					
GAG1			AML	AML		
	comp=E,4463μm,0.4s					
GAG1			AML	AML		
	comp=N,6585μm,0.6s					
MMO1	**Montemonaco**	**0.21 129**	P	Pg	13 19 15.9	+0.7
MMO1			S	Sg	13 19 19.7	+1.7
SNTG	**Esanatoglia**	**0.25 332**	⇓P	Pg	13 19 15.9	0.0
SNTG			AML	AML		
	comp=E,1210μm,0.6s					
SNTG			AML	AML		
	comp=N,980μm,0.6s					
SNTG			AML	AML		
	comp=N,981μm,0.6s					
SNTG			AML	AML		
	comp=N,980μm,0.6s					
SNTG			AML	AML		
	comp=N,1095μm,0.6s					
SNTG			AML	AML		
	comp=E,1115μm,0.6s					
SNTG			AML	AML		
	comp=N,954μm,0.2s					
SNTG			AML	AML		
	comp=E,975μm,0.2s					
SNTG			AML	AML		
	comp=N,818μm,0.2s					
SNTG			AML	AML		
	comp=E,1028μm,0.2s					
T1215	**Vallo di Nera,**	**0.29 217**	⇑P	Pg	13 19 16.8	+0.1
T1215			AML	AML		
	comp=E,1885μm,0.6s					
T1215			AML	AML		
	comp=N,1603μm,0.5s					
T1215			AML	AML		
	comp=N,1571μm,0.5s					
T1215			AML	AML		
	comp=E,1880μm,0.6s					
T1215			AML	AML		
	comp=N,1562μm,0.6s					
T1215			AML	AML		
	comp=N,1605μm,0.6s					
T1215			AML	AML		
	comp=E,1940μm,0.6s					
T1215			AML	AML		
	comp=N,405μm,0.3s					
T1215			AML	AML		
	comp=E,488μm,0.2s					
T1215			AML	AML		
	comp=N,535μm,0.4s					
T1215			AML	AML		
	comp=E,496μm,0.2s					
EL6	**Elcito**	**0.29 360**	⇓P	Pg	13 19 16.9	+0.1
EL6			AML	AML		
	comp=E,3310μm,1.4s					
EL6			AML	AML		
	comp=N,5045μm,0.3s					
EL6			AML	AML		
	comp=E,3330μm,1.4s					
EL6			AML	AML		
	comp=N,5050μm,0.3s					
EL6			AML	AML		
	comp=N,5048μm,0.3s					
EL6			AML	AML		
	comp=E,3109μm,0.3s					
T1241	**Roccafluvione,**	**0.30 126**	P	Pg	13 19 17.3	+0.4
T1241			AML	AML		
	comp=E,1950μm,0.3s					
T1241			AML	AML		
	comp=N,1236μm,0.9s					
T1241			AML	AML		
	comp=E,1985μm,0.3s					
T1241			AML	AML		
	comp=N,1210μm,0.2s					
T1241			AML	AML		
	comp=N,700μm,0.6s					
T1241			AML	AML		
	comp=N,767μm,0.5s					
T1241			AML	AML		
	comp=E,802μm,0.5s					
T1241			AML	AML		
	comp=E,796μm,0.5s					
ASSB	**Assisi San Ben**	**0.33 272**	P	Pg	13 19 17.2	-0.1
ASSB			AML	AML		
	comp=E,1460μm,0.3s					
ASSB			AML	AML		
	comp=N,2010μm,0.3s					
ASSB			AML	AML		
	comp=N,2013μm,0.3s					
ASSB			AML	AML		
	comp=E,1464μm,0.3s					
T1217	**Poggiodomo (PG**	**0.34 201**	⇑P	Pg	13 19 17.9	+0.1
T1217			AML	AML		
	comp=E,2745μm,0.2s					
T1217			AML	AML		
	comp=N,5760μm,0.2s					
T1217			AML	AML		
	comp=E,2612μm,0.2s					
T1217			AML	AML		
	comp=E,2608μm,0.2s					
T1217			AML	AML		
	comp=N,5765μm,0.2s					
T1217			AML	AML		
	comp=N,5610μm,0.2s					
T1217			AML	AML		
	comp=E,2745μm,0.2s					
T1217			AML	AML		
	comp=N,1355μm,0.4s					
T1217			AML	AML		
	comp=E,888μm,0.2s					
T1217			AML	AML		
	comp=N,1292μm,0.3s					
T1217			AML	AML		
	comp=E,870μm,0.2s					
FOSV	**Fossato di Vic**	**0.36 316**	⇓P	Pg	13 19 17.9	-0.1
FOSV			AML	AML		
	comp=E,1064μm,0.9s					
FOSV			AML	AML		
	comp=N,1550μm,0.2s					
FOSV			AML	AML		
	comp=N,1545μm,0.2s					
FOSV			AML	AML		
	comp=E,1066μm,0.9s					
FOSV			AML	AML		
	comp=E,1060μm,0.3s					
FOSV			AML	AML		
	comp=N,1546μm,0.2s					
ATCC	**AVT- Casa Cast**	**0.37 294**	⇓P	Pg	13 19 18.2	0.0
ATCC			AML	AML		
	comp=N,1540μm,1.3s					
ATCC			AML	AML		
	comp=E,1805μm,0.3s					
ATCC			AML	AML		
	comp=N,1545μm,1.3s					
ATCC			AML	AML		
	comp=E,1807μm,0.3s					
ATCC			AML	AML		
	comp=N,1543μm,0.3s					
T1204	**Amatrice, Fraz**	**0.39 156**	P	Pg	13 19 18.1	-0.6
T1204			AML	AML		
	comp=N,695μm,0.5s					
T1204			AML	AML		
	comp=E,1049μm,0.2s					
T1243	**Rocca Santa Ma**	**0.42 143**	⇓P	Pg	13 19 18.7	-0.5
LNSS	**Leonessa**	**0.43 186**	P	Pg	13 19 19.1	-0.4
LNSS			AML	AML		
	comp=N,2210μm,0.2s					
LNSS			AML	AML		
	comp=E,828μm,0.1s					
LNSS			AML	AML		
	comp=N,851μm,0.3s					
LNSS			AML	AML		
	comp=E,511μm,0.2s					
SMA1	**SAN MARTINO**	**0.44 157**	⇓P	Pg	13 19 18.8	-0.7
SMA1			AML	AML		
	comp=E,1040μm,0.4s					
SMA1			AML	AML		
	comp=N,1123μm,0.6s					
SMA1			AML	AML		
	comp=E,1040μm,0.4s					
SMA1			AML	AML		
	comp=N,1120μm,0.6s					
SMA1			AML	AML		
	comp=E,1039μm,0.4s					
SMA1			AML	AML		
	comp=N,855μm,0.6s					
SSFR	**Montelago di S**	**0.47 330**	⇑P	Pg	13 19 19.9	-0.2
SSFR			AML	AML		
	comp=E,1999μm,0.2s					
SSFR			AML	AML		
	comp=N,2122μm,0.2s					
ARVD	**Arcevia**	**0.48 346**	P	Pg	13 19 20.2	-0.1
ARVD			S	Sb	13 19 29.0	-0.8
ARVD			AML	AML		
	comp=E,734μm,0.7s					
ARVD			AML	AML		
	comp=N,608μm,0.6s					
ARVD			AML	AML		
	comp=N,502μm,0.2s					
ARVD			AML	AML		
	comp=E,694μm,0.2s					
MURB	**Monte Urbino**	**0.48 299**	⇑P	Pg	13 19 20.3	-0.1
MURB			AML	AML		
	comp=E,2255μm,0.3s					
MURB			AML	AML		
	comp=N,1365μm,0.2s					
MURB			AML	AML		
	comp=E,2005μm,0.3s					
MURB			AML	AML		
	comp=N,1364μm,0.2s					
MURB			AML	AML		
	comp=E,2252μm,0.3s					
MURB			AML	AML		
	comp=N,1246μm,0.3s					
PP3	**Marolino**	**0.51 47**	⇓P	Pb	13 19 22.2	-0.5
PP3			AML	AML		
	comp=E,775μm,0.3s					
PP3			AML	AML		
	comp=E,737μm,0.3s					
PP3			AML	AML		
	comp=N,878μm,0.3s					
PP3			AML	AML		
	comp=N,928μm,0.3s					
ATFO	**Monte Foce - G**	**0.51 311**	⇓P	Pg	13 19 20.7	-0.2
ATFO			S	Sb	13 19 30.0	-0.7
ATFO			AML	AML		
	comp=N,324μm,0.6s					
ATFO			AML	AML		
	comp=E,439μm,1.5s					
ATFO			AML	AML		
	comp=N,325μm,0.6s					
ATFO			AML	AML		
	comp=N,325μm,0.6s					
ATFO			AML	AML		
	comp=E,370μm,0.2s					
ARRO	**Arrone**	**0.52 209**	⇑P	Pg	13 19 20.8	-0.2
ARRO			S	Sb	13 19 30.0	-0.8
RM33	**Pellescritta (**	**0.53 171**	⇑P	Pg	13 19 20.7	-0.6
RM33			AML	AML		
	comp=E,656μm,1.5s					
RM33			AML	AML		
	comp=N,589μm,0.3s					
RM33			AML	AML		
	comp=N,618μm,0.4s					
RM33			AML	AML		
	comp=E,688μm,1.5s					
RM33			AML	AML		
	comp=E,656μm,1.5s					
RM33			AML	AML		
	comp=N,599μm,0.3s					
RM33			AML	AML		
	comp=E,311μm,0.3s					
RM33			AML	AML		
	comp=E,352μm,0.4s					
RM33			AML	AML		
	comp=N,589μm,0.3s					
T1211	**Morro Reatino**	**0.53 200**	⇓P	Pg	13 19 21.2	-0.1
T1211			AML	AML		
	comp=E,1085μm,0.1s					
T1211			AML	AML		
	comp=N,1525μm,0.3s					
T1211			AML	AML		
	comp=E,1141μm,0.1s					
T1211			AML	AML		
	comp=N,1515μm,0.2s					
T1211			AML	AML		
	comp=E,1090μm,0.1s					
T1211			AML	AML		
	comp=E,1140μm,0.1s					
T1211			AML	AML		
	comp=N,1525μm,0.3s					
T1211			AML	AML		
	comp=E,398μm,0.2s					
T1211			AML	AML		
	comp=E,434μm,0.2s					
T1211			AML	AML		
	comp=N,936μm,0.3s					
T1211			AML	AML		
	comp=N,940μm,0.3s					
CAMP	**Campotosto**	**0.55 156**	⇓P	Pg	13 19 20.4	-1.1
CAMP			AML	AML		
	comp=E,330μm,0.3s					
CAMP			AML	AML		
	comp=N,312μm,0.7s					
CAMP			AML	AML		
	comp=E,330μm,0.3s					
CAMP			AML	AML		
	comp=N,306μm,0.7s					
TERO	**Teramo**	**0.55 138**	P	Pg	13 19 21.0	-0.7
TERO			AML	AML		
	comp=E,744μm,0.3s					
TERO			AML	AML		
	comp=N,1130μm,0.3s					
TERO			AML	AML		
	comp=N,1240μm,0.3s					
TERO			AML	AML		
	comp=E,842μm,0.3s					
TERO			AML	AML		
	comp=N,412μm,0.2s					
TERO			AML	AML		
	comp=N,425μm,0.2s					
TERO			AML	AML		
	comp=E,222μm,0.4s					
TERO			AML	AML		
	comp=E,228μm,0.3s					
TERO			AML	AML		
	comp=N,1240μm,1.7s					
FRON	**Frontone**	**0.56 330**	⇑P	Pg	13 19 21.4	-0.3
FRON			AML	AML		
	comp=N,655μm,0.4s					
FRON			AML	AML		
	comp=E,434μm,0.2s					
FRON			AML	AML		
	comp=N,656μm,0.4s					
FRON			AML	AML		
	comp=N,651μm,0.3s					
FRON			AML	AML		
	comp=E,434μm,0.2s					
ATTE	**AVT- Monte Tez**	**0.57 287**	⇓P	Pb	13 19 24.8	+0.9
CESX	**Cesi**	**0.57 222**	⇑P	Pg	13 19 21.6	-0.5
CESX			S	Sb	13 19 31.0	-1.4
CESX			AML	AML		
	comp=N,703μm,0.3s					
CESX			AML	AML		
	comp=E,522μm,0.9s					
CESX			AML	AML		
	comp=E,480μm,0.2s					
CESX			AML	AML		
	comp=N,526μm,0.3s					
ATVO	**AVT- Monte Val**	**0.62 305**	⇓P	Pg	13 19 22.5	-0.5
ATVO			AML	AML		
	comp=E,254μm,0.2s					
ATVO			AML	AML		
	comp=N,297μm,1.3s					
ATVO			AML	AML		
	comp=N,290μm,0.3s					
ATVO			AML	AML		
	comp=E,254μm,0.2s					
MPAG	**Monte Paganucc**	**0.65 337**	⇑P	Pg	13 19 23.3	-0.2
MPAG			S	Sb	13 19 35.0	+0.4
MPAG			AML	AML		
	comp=E,450μm,0.3s					
MPAG			AML	AML		
	comp=N,300μm,0.8s					
MPAG			AML	AML		
	comp=N,300μm,0.8s					
PIEI	**Pieia**	**0.65 321**	⇓P	Pg	13 19 22.9	-0.7
PIEI			S	Sb	13 19 34.0	-0.7
PIEI			AML	AML		
	comp=N,347μm,0.7s					
PIEI			AML	AML		
	comp=N,341μm,0.2s					
PIEI			AML	AML		
	comp=E,306μm,0.2s					
PIEI			AML	AML		
	comp=E,306μm,0.2s					
ATPI	**Pietralunga -**	**0.66 309**	S	Sb	13 19 34.0	-1.0
GIGS	**Gran Sasso**	**0.68 149**	⇑P	Pg	13 19 23.0	-1.1
GIGS			AML	AML		
	comp=N,86μm,1.5s					
GIGS			AML	AML		
	comp=E,109μm,0.7s					
GIGS			AML	AML		
	comp=N,68μm,0.4s					
GIGS			AML	AML		
	comp=E,58μm,0.3s					
FSSB	**Fossombrone**	**0.70 340**	⇑P	Pg	13 19 24.4	-0.2
FSSB			S	Sb	13 19 36.0	-0.1
FSSB			AML	AML		
	comp=E,998μm,0.4s					
FSSB			AML	AML		
	comp=N,2630μm,0.3s					
FSSB			AML	AML		
	comp=E,1002μm,0.4s					
FSSB			AML	AML		
	comp=E,1000μm,0.4s					
FSSB			AML	AML		
	comp=N,2627μm,0.3s					
FSSB			AML	AML		
	comp=N,2630μm,1.7s					
MGAB	**Montegabbione**	**0.74 261**	P	Pb	13 19 26.7	+0.1
FIAM	**Fiamignano**	**0.77 179**	⇓P	Pg	13 19 24.3	-1.5
FIAM			S	Sb	13 19 38.0	0.0
FIAM			AML	AML		
	comp=E,186μm,0.8s					
FIAM			AML	AML		
	comp=N,183μm,1.0s					
FIAM			AML	AML		
	comp=E,187μm,0.8s					
FIAM			AML	AML		
	comp=N,183μm,1.0s					
FIAM			AML	AML		
	comp=E,173μm,0.6s					
CAFI	**Castiglion Fio**	**0.88 290**	⇑P	Pb	13 19 29.1	-0.1
CAFI			AML	AML		
	comp=N,90μm,0.5s					
CAFI			AML	AML		
	comp=E,100μm,0.4s					
CAFI			AML	AML		
	comp=N,83μm,0.5s					
CAFI			AML	AML		
	comp=N,90μm,0.5s					
CAFI			AML	AML		
	comp=E,100μm,0.4s					
CAFI			AML	AML		
	comp=E,98μm,0.4s					
PTRJ	**Pietraroja**	**1.98 147**	P	Pn	13 19 46.0	+0.4

IDC 31 13:19:27.2±5.3, 34°.90N×86°.55E, h0km, mbtmp3.5/4, ML2.7/3, Error ellipse: s-maj=261.5km s-min=28.8km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.31**	**346**	Pn	Pn	13 22 22.8	-0.9
	0.1nm,0.3s,baz=162,slow=14,SNR=8.8						
	2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**16.76**	**342**	Pn	Pn	13 23 21.9	-1.4
	baz=158,slow=11,SNR=8.6						
	1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**19.09**	**357**	P	P	13 23 50.8	-0.3
	0.1nm,0.3s,baz=187,slow=11,SNR=1.7						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**19.74**	**143**	P	P	13 23 58.6	0.0
	0.2nm,0.3s,baz=320,slow=9.1,SNR=1.1						

ROM 31 13:19:51.0±0.1, 42°.901N±0°.004×13°.101E±0°.006, h10km, ML2.8/6, 1C, Error ellipse: s-maj=0.6km s-min=0.4km az=329.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.06**	**260**	P	Pg	13 19 53.7	+0.5
T1216				S	Sg	13 19 55.1	+0.4
T1216				AML	AML		
	comp=E,15850μm,0.4s						
T1216				AML	AML		
	comp=N,19650μm,0.2s						
T1216				AML	AML		
	comp=N,19650μm,0.2s						
T1216				AML	AML		
	comp=E,11584μm,0.3s						
T1216				AML	AML		
	comp=N,19638μm,0.2s						
FEMA	**Monte Fema**	**0.07**	**328**	P	Pg	13 19 53.9	+0.5
FEMA				S	Sg	13 19 55.5	+0.4
FEMA				AML	AML		
	comp=N,8215μm,0.1s						
FEMA				AML	AML		
	comp=E,12400μm,0.3s						
FEMA				AML	AML		
	comp=N,8220μm,0.1s						
FEMA				AML	AML		
	comp=E,10899μm,0.2s						
FEMA				AML	AML		
	comp=N,8216μm,0.1s						
T1245	**Castelsantange**	**0.08**	**125**	P	Pg	13 19 54.0	+0.5
T1245				S	Sg	13 19 55.9	+0.6
T1245				AML	AML		
	comp=N,23300μm,0.3s						
T1245				AML	AML		
	comp=N,23350μm,0.3s						
T1245				AML	AML		
	comp=N,21750μm,0.3s						

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T1245                                   AML     AML
        comp=E,19650µm,0.7s
T1245                                   AML     AML
        comp=E,19750µm,0.3s
T1245                                   AML     AML
        comp=E,14848µm,0.3s
T1245                                   AML     AML
        comp=N,21726µm,0.3s
T1245                                   AML     AML
        comp=E,14970µm,0.3s
T1245                                   AML     AML
        comp=N,23307µm,0.3s
FDMO Fiordimonte          0.14 356      P       Pg      13 19 53.8  -0.4
FDMO                                    S       Sg      13 19 57.1 +0.7
FDMO                                    AML     AML
        comp=E,1765µm,0.3s
FDMO                                    AML     AML
        comp=N,2445µm,0.2s
FDMO                                    AML     AML
        comp=E,3645µm,0.5s
FDMO                                    AML     AML
        comp=N,4470µm,0.3s
FDMO                                    AML     AML
        comp=E,1764µm,0.3s
FDMO                                    AML     AML
        comp=N,2446µm,0.2s
T1256 Bolognola (MC)      0.14  41      P       Pg      13 19 54.5 +0.1
T1256                                   S       Sg      13 19 57.6 +0.9
MMO1 Montemonaco          0.17  91      P       Pg      13 19 54.2  -0.5
MMO1                                    S       Sg      13 19 58.3 +1.1
T1215 Vallo di Nera,      0.20 240      ⇑P      Pg      13 19 50.1  -5.1
T1215                                   S       Sg      13 19 57.0  -1.1
T1215                                   AML     AML
        comp=E,1880µm,0.6s
T1215                                   AML     AML
        comp=N,1605µm,0.5s
T1215                                   AML     AML
        comp=E,1940µm,0.6s
T1215                                   AML     AML
        comp=N,1570µm,0.5s
T1215                                   AML     AML
        comp=E,1885µm,0.6s
T1215                                   AML     AML
        comp=N,1603µm,0.5s
T1215                                   AML     AML
        comp=E,1940µm,0.6s
T1215                                   AML     AML
        comp=N,1571µm,0.5s
T1215                                   AML     AML
        comp=E,1880µm,0.6s
T1215                                   AML     AML
        comp=N,1560µm,0.5s
T1215                                   AML     AML
        comp=N,1600µm,0.5s
T1215                                   AML     AML
        comp=N,1517µm,0.1s
T1215                                   AML     AML
        comp=E,1458µm,0.2s
T1215                                   AML     AML
        comp=E,1232µm,0.1s
T1215                                   AML     AML
        comp=N,1487µm,0.1s
AM05 Amandola Campo       0.20  68      P       Pg      13 19 55.5 +0.2
AM05                                    S       Sg      13 19 59.5 +1.4
T1217 Poggiodomo (PG      0.23 213      P       Pg      13 19 56.6 +0.8
T1217                                   S       Sg      13 20 00.4 +1.5
T1217                                   AML     AML
        comp=E,2745µm,0.2s
T1217                                   AML     AML
        comp=E,2608µm,0.2s
T1217                                   AML     AML
        comp=E,2745µm,0.2s
T1217                                   AML     AML
        comp=N,5760µm,0.2s
T1217                                   AML     AML
        comp=E,2609µm,0.2s
T1217                                   AML     AML
        comp=N,5610µm,0.2s
T1217                                   AML     AML
        comp=N,5765µm,0.2s
T1217                                   AML     AML
        comp=E,2608µm,0.2s
T1217                                   AML     AML
        comp=N,5763µm,0.2s
T1217                                   AML     AML
        comp=E,2464µm,0.1s
T1217                                   AML     AML
        comp=E,2434µm,0.1s
T1217                                   AML     AML
        comp=N,5607µm,0.2s
GUMA Gualdo di Mace       0.24  47      P       Pg      13 19 57.0 +1.1
GUMA                                    S       Sg      13 20 01.3 +2.1
T1241 Roccafluvione,      0.25 100      P       Pg      13 19 56.7 +0.6
T1241                                   S       Sg      13 20 01.0 +1.5
T1204 Amatrice, Fraz      0.28 145      P       Pb      13 19 57.6  -0.6
T1204                                   AML     AML
        comp=E,1358µm,0.2s
T1204                                   AML     AML
        comp=N,842µm,0.7s
LNSS Leonessa             0.30 189      P       Pg      13 19 57.7 +0.6
LNSS                                    S       Sb      13 20 02.6  -1.1
SMA1 SAN MARTINO          0.32 147      P       Pb      13 19 58.3  -0.6
SMA1                                    S       Sb      13 20 03.4  -0.9
T1243 Rocca Santa Ma      0.33 129      P       Pg      13 19 58.2 +0.5
T1243                                   S       Sb      13 20 03.5  -1.0
ASSB Assisi San Ben       0.35 294      S       Sg      13 19 59.0  -3.8
MNTP Montappone           0.36  49      S       Sg      13 19 60.0  -2.9
SNTG Esanatoglia          0.37 342      S       Sg      13 19 60.0  -3.4
RM33 Pellescritta (       0.40 168      P       Pg      13 19 59.6 +0.6
RM33                                    S       Sb      13 20 05.9  -0.7
EL6 Elcito                0.43   0      S       Sg      13 20 01.0  -4.2
CAMP Campotosto           0.43 148      P       Pg      13 19 60.0 +0.5
CAMP                                    S       Sb      13 20 06.6  -0.8
T1247 Pizzolo (AQ)        0.48 162      P       Pg      13 20 01.0 +0.5
```

*ISK **31** 13:23:30.7, 38°.83N×37°.79E, h5km, ML3.5/28*
*DDA **31** 13:23:31.3±0.0, 38°.83N×37°.84E, h10km±1km, ML3.4*
ISC 31 13:23:32.3±1.1, 38°.81N±0°.02×37°.84E±0°.02, h7km±10km, n57, σ1§02/87, Turkey

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Code Station Name         Δ°   AZ°   Phase ID                Time      Res
                                     Op      ISC             h m s     ISC
DARE Darende-Malaty       0.37 229    PG      Pg              13 23 38.9  -0.6
DARE                                  SG      Sg              13 23 44.6 +0.2
CUGUR Gurin_SVAS          0.45 259    P       Pg              13 23 40.7  -0.4
CUGUR                                 S       Sg              13 23 47.5 +0.5
CUGUR                                 i AML   AML             13 23 48.0
        comp=E,1µm,0.4s
CUGUR Gurin_SVAS          0.45 259    P       Pg              13 23 40.7  -0.4
CUGUR                                 S       Sg              13 23 47.5 +0.5
CUGUR                                 i AML   AML             13 23 48.0
        comp=E,1µm,0.4s
ARPR Arapgir-MALATY       0.48  54    PG      Pg              13 23 41.3  -0.3
ARPR                                  SG      Sg              13 23 49.4 +1.6
ELBS KAHRAMANMARAS        0.74 229    P       Pg              13 23 46.1  -0.5
ELBS                                  i AML   AML             13 23 57.0
        comp=N,4µm,0.5s
ELBS                                  i AML   AML             13 23 57.0
        comp=E,5µm,0.4s
ELBS                                  S       Sb              13 23 57.4  -0.6
ELBS KAHRAMANMARAS        0.74 229    P       Pg              13 23 46.1  -0.5
ELBS                                  i AML   AML             13 23 57.0
        comp=N,4µm,0.5s
ELBS                                  i AML   AML             13 23 57.0
        comp=E,5µm,0.4s
SARI SarD1z-Kayseri       1.19 250    PN      Pg              13 23 53.2  -1.9
PTK Pertek                1.21  86    PN      Pg              13 23 53.5  -2.1
SVSK Karacayir            1.28 330    PN      Pn              13 23 55.2  -1.5
REFA Refahiye_ERZN        1.31  33    P       Pn              13 23 56.0  -1.2
REFA                                  S       Sb              13 24 14.6 +0.2
REFA Refahiye_ERZN        1.31  33    P       Pn              13 23 56.0  -1.2
REFA                                  S       Sb              13 24 14.6 +0.2
GZT Gaziantep             1.47 189    P       Pg              13 24 00.4  -0.2
GZT                                   S       Sg              13 24 21.8 +2.1
GZT                                   i AML   AML             13 24 23.0
        comp=E,1µm,0.7s
GZT                                   i AML   AML             13 24 25.0
        comp=N,1µm,0.3s
GZT Gaziantep             1.47 189    P       Pg              13 24 00.4  -0.2
GZT                                   S       Sg              13 24 21.8 +2.1
GZT                                   i AML   AML             13 24 23.0
        comp=E,1µm,0.7s
GZT                                   i AML   AML             13 24 25.0
        comp=N,1µm,0.3s
KMRS Kahramanmaras        1.50 210    PN      Pn              13 23 59.8  0.0
KOVA Elazig, Kovanc       1.55  93    P       Pn              13 23 59.8  -0.6
KOVA                                  S       Sb              13 24 21.9 +0.7
KOVA                                  i AML   AML             13 24 28.0
        comp=E,253nm,1.2s
KOVA                                  i AML   AML             13 24 34.0
        comp=N,196nm,0.8s
KOVA Elazig, Kovanc       1.55  93    P       Pn              13 23 59.8  -0.6
KOVA                                  S       Sb              13 24 21.9 +0.7
KOVA                                  i AML   AML             13 24 28.0
        comp=E,253nm,1.2s
KOVA                                  i AML   AML             13 24 34.0
        comp=N,196nm,0.8s
BNN Bunyan                1.56 272    PN      Pn              13 23 59.7  -0.9
URFA Urfa                 1.57 150    PN      Pn              13 23 56.3  -4.5
SAIM ADANA                1.61 239    P       Pn              13 24 00.8  -0.5
SAIM                                  S       Sn              13 24 22.5  0.0
SAIM                                  i AML   AML             13 24 25.0
        comp=N,658nm,0.2s
SAIM                                  i AML   AML             13 24 26.0
        comp=E,541nm,0.3s
SAIM ADANA                1.61 239    P       Pn              13 24 00.8  -0.5
SAIM                                  S       Sn              13 24 22.5  0.0
SAIM                                  i AML   AML             13 24 25.0
        comp=N,658nm,0.2s
SAIM                                  i AML   AML             13 24 26.0
        comp=E,541nm,0.3s
RSDY Resadiye-TOKAT       1.63 346    PN      Pn              13 24 01.4  -0.1
HCB Kahramanmara          1.64 207    P       Pg              13 24 03.6  -0.2
HCB                                   S       Sg              13 24 26.2 +1.2
HCB                                   i AML   AML             13 24 28.0
        comp=E,237nm,0.3s
HCB                                   i AML   AML             13 24 29.0
        comp=N,247nm,0.5s
HCB Kahramanmara          1.64 207    P       Pg              13 24 03.6  -0.2
HCB                                   S       Sg              13 24 26.2 +1.2
HCB                                   i AML   AML             13 24 28.0
        comp=E,237nm,0.3s
HCB                                   i AML   AML             13 24 29.0
        comp=N,247nm,0.5s
GAZ Gaziantep             1.71 197    PN      Pn              13 24 03.1 +0.4
GUNE Kayseri              1.73 274    P       Pb              13 24 04.0  -0.6
GUNE                                  S       Sg              13 24 30.0 +2.0
GUNE                                  i AML   AML             13 24 38.0
        comp=N,606nm,0.8s
GUNE                                  i AML   AML             13 24 47.0
        comp=E,678nm,0.7s
GUNE Kayseri              1.73 274    P       Pb              13 24 04.0  -0.6
GUNE                                  S       Sg              13 24 30.0 +2.0
GUNE                                  i AML   AML             13 24 38.0
        comp=N,606nm,0.8s
GUNE                                  i AML   AML             13 24 47.0
        comp=E,678nm,0.7s
TOKT Tokat                1.81 327    PN      Pn              13 24 03.9  -0.1
KAMA Osmaniye             1.87 210    P       Pb              13 24 07.1 +0.2
KAMA                                  S       Sg              13 24 31.7  -0.7
KAMA                                  i AML   AML             13 24 35.0
        comp=E,150nm,0.4s
KAMA Osmaniye             1.87 210    P       Pb              13 24 07.1 +0.2
KAMA                                  S       Sg              13 24 31.7  -0.7
KAMA                                  i AML   AML             13 24 35.0
        comp=E,150nm,0.4s
SANL SANLIURFA_Merk       1.87 151    P       Pn              13 24 03.9  -1.0
SANL                                  S       Sg              13 24 33.0 +0.4
SANL                                  i AML   AML             13 24 35.0
        comp=N,398nm,0.5s
SANL                                  i AML   AML             13 24 44.0
        comp=E,322nm,1.0s
SANL SANLIURFA_Merk       1.87 151    P       Pn              13 24 03.9  -1.0
SANL                                  S       Sg              13 24 33.0 +0.4
SANL                                  i AML   AML             13 24 35.0
        comp=N,398nm,0.5s
SANL                                  i AML   AML             13 24 44.0
        comp=E,322nm,1.0s
DYBB Diyarbakir           2.00 115    PN      Pn              13 24 07.6 +1.0
SURC SANLIURFA_SURC       2.02 162    P       Pn              13 24 07.1 +0.1
SURC                                  S       Sg              13 24 38.3 +0.9
SURC                                  i AML   AML             13 24 43.0
        comp=E,388nm,0.5s
SURC                                  i AML   AML             13 24 44.0
        comp=N,374nm,0.3s
SURC SANLIURFA_SURC       2.02 162    P       Pn              13 24 07.1 +0.1
SURC                                  S       Sg              13 24 38.3 +0.9
SURC                                  i AML   AML             13 24 43.0
        comp=E,388nm,0.5s
SURC                                  i AML   AML             13 24 44.0
        comp=N,374nm,0.3s
KOZT Kozan                2.07 231    PN      Pn              13 24 07.8 +0.2
YOZ Yozgat                2.12 294    PN      Pn              13 24 07.9  -0.5
SIRC Yozgat               2.16 285    P       Pn              13 24 08.7  -0.2
SIRC                                  S       Sb              13 24 40.1 +1.3
SIRC Yozgat               2.16 285    P       Pn              13 24 08.7  -0.2
SIRC                                  S       Sb              13 24 40.1 +1.3
CKRK Yozgat, Cekere       2.21 306    P       Pn              13 24 10.0 +0.5
CKRK                                  S       Sb              13 24 40.4 +0.2
CKRK Yozgat, Cekere       2.21 306    P       Pn              13 24 10.0 +0.5
CKRK                                  S       Sb              13 24 40.4 +0.2
ESPY Espiye-Giresun       2.21  18    PN      Pn              13 24 09.8 +0.3
BNGB Bingl                2.22  85    PN      Pn              13 24 10.7 +1.0
AKO Adana                 2.32 235    P       Pb              13 24 13.0  -1.6
AKO                                   S       Sg              13 24 46.5  -0.4
AKO                                   i AML   AML             13 25 31.0
        comp=N,345nm,0.2s
AKO Adana                 2.32 235    P       Pb              13 24 13.0  -1.6
AKO                                   S       Sg              13 24 46.5  -0.4
AKO                                   i AML   AML             13 25 31.0
        comp=N,345nm,0.2s
BAYT Aydıntepe-Bayb       2.38  48    PN      Pn              13 24 12.6 +0.7
MAZI Mazidag              2.46 123    PN      Pn              13 24 14.1 +1.1
KVT Kavak                 2.65 329    PN      Pn              13 24 15.9 +0.3
SVAN Silvan-Diyarba       2.72 103    PN      Pn              13 24 17.7 +1.2
TAHT Tahtakopru-Hat       2.77 209    PN      Pn              13 24 18.1 +1.0
CORM Corum                2.83 300    PN      Pn              13 24 18.4 +0.2
YAYL Yayladag             3.10 207    PN      Pn              13 24 22.7 +0.9
YAYX Yaylak               3.15 274    PN      Pn              13 24 22.8 +0.4
KAMT Kaman                3.26 281    PN      Pn              13 24 24.7 +0.7
MERS Mersin               3.27 235    PN      Pn              13 24 24.8 +0.7
SERE Serefilikochisa      3.34 274    PN      Pn              13 24 25.9 +0.8
YESY Yesilyurt            3.38 254    PN      Pn              13 24 26.4 +0.7
SULT Sultanhani-AKS       3.45 261    PN      Pn              13 24 27.2 +0.6
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*IDC **31** 13:25:49.3±0.8, 34°.71N×85°.76E, h0km, mb3.8/12, mbtmp3.9/17, ML3.5/5, MS3.2/14, Error ellipse: s-maj=25.9km s-min=15.6km az=53.0*
*BJI **31** 13:25:51.5±0.0, 34°.88N×86°.09E, h7km, mb4.1/17, mB4.5/9, ML3.5/3, Ms3.9/20, Ms7 3.6/20*
*NEIC **31** 13:25:53.3±1.9, 34°.89N±0°.06×86°.0E±0°.2, h17km±5km, mb4.2/12, Error ellipse: s-maj=20.7km s-min=2.2km az=65.0*
ISC 31 13:25:52.0±0.4, 34°.96N±0°.05×86°.00E±0°.05, h10km, n70, σ1§88/64, mb4.0/14, MS3.2/11, 1D, Xizang

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Code Station Name         Δ°   AZ°   Phase ID                Time      Res
                                     Op      ISC             h m s     ISC
LSA Lhasa                 6.82 139    Pg      Pb              13 27 52.8 +1.9
LSA                                   Sg      Sg              13 29 29.5  -1.4
LSA                                   LR      LR
        comp=N,850nm,8.9s
LSA                                   LR      LR
        comp=E,650nm,9.6s
LSA                                   LR      LR
        comp=Z,790nm,10.3s
DANN Dangsing             6.86 197    eP      Pn              13 27 34.5 +1.5
        24nm,0.3s
GUN Gumba                 7.03 181    eP      Pn              13 27 37.0 +1.7
        44nm,0.6s
KKN Kakani                7.17 185    eP      Pn              13 27 38.7 +1.5
        1.4nm,0.4s
JIRN Jiri                 7.28 179    eP      Pn              13 27 40.4 +1.6
        46nm,0.5s
GOMU GeErMu               7.29  78    Pn      Pn              13 27 39.8 +0.9
GOMU                                  Sn      Sn              13 28 55.0  -6.9
GOMU                                  LR      LR
        comp=N,430nm,5.8s
GOMU                                  LR      LR
        comp=E,380nm,5.5s
GOMU                                  LR      LR
        comp=Z,240nm,6.9s
DMN Daman                 7.37 186    eP      Pn              13 27 41.7 +1.8
        25nm,0.4s
PKIN Phulchoki            7.38 184    eP      Pn              13 27 41.4 +1.4
        47nm,0.5s
PKI Pulchoki              7.38 184    eP      Pn              13 27 41.5 +1.3
        26nm,0.6s
TAPN Taplejung            7.72 169    eP      Pn              13 27 45.9 +1.1
        31nm,0.5s
GTK Tadong                7.94 163    eP      Pn              13 27 49.5 +1.9
GTK                                   i x     x               13 30 28.2
RAMN Ramite               8.00 176    eP      Pn              13 27 49.1 +0.5
        38nm,0.5s
SMLA Simla                8.34 245    eP      Pn              13 27 53.3 +0.3
WMQ Urumqi                8.95   8    eP      Pn              13 28 05.5 +4.1
WMQ                                   smax    smax
        comp=N,20nm,0.9s
WMQ                                   smax    smax
        comp=E,18nm,0.7s
WMQ                                   LR      LR
        comp=N,280nm,10.7s
WMQ                                   LR      LR
        comp=E,240nm,8.9s
WMQ                                   LR      LR
        comp=Z,320nm,17.1s
KSH Kashi                 9.20 303    P       Pn              13 28 15.0  +10
KSH                                   LR      LR
        comp=N,380nm,13.4s
KSH                                   LR      LR
        comp=E,430nm,14.8s
KSH                                   LR      LR
        comp=Z,510nm,16.7s
BOOM Boomskoye usch       10.87 317               Pn          13 28 28.5 +0.7
BOK Bokaro                11.12 181   eP      Pn              13 28 29.9  -1.4
CEP Cherat                11.70 268   P       Pn              13 28 40.9 +1.8
AAK Ala-Archa             11.80 314   Pn      Pn              13 28 40.5  0.0
        0.1nm,0.3s,baz=136,slow=5.3,SNR=1.7
AAK                                   LR      LR              13 33 48.9
        comp=Z,115nm,21.1s,baz=126,slow=40
        0.4nm,0.3s
GTA Gaotai                11.88  64   eP      Pn              13 28 40.8  -0.8
GTA                                   pP                      13 28 45.0
GTA                                   sP                      13 28 47.8
GTA                                   pmax    pmax
        comp=Z,2.0nm,1.2s
GTA                                   pmax    pmax
        comp=Z,65nm,5.9s
GTA                                   LR      LR
        comp=N,980nm,14.9s
GTA                                   LR      LR
        comp=E,550nm,14.5s
GTA                                   LR      LR
        comp=Z,500nm,12.0s
THW Thamme Wali           12.04 264   P       Pn              13 28 43.9 +0.1
MK31 Makanchi Array       12.15 348   Pn      Pn              13 28 46.7 +1.6
MKAR Makanchi Array       12.15 348   Pn      Pn              13 28 45.5 +0.4
        0.4nm,0.3s,baz=160,slow=13,SNR=39
MKAR                                  LR      LR              13 34 21.7
        comp=Z,40nm,20.1s,baz=82,slow=42
        11nm,0.9s
MAKZ Makanchi             12.22 347               Pn          13 28 45.5  -0.6
BHPL Bhopal               13.87 215   eP      Pn              13 29 03.8  -4.9
KBL Kabul                 13.95 273   Pn      Pn              13 29 09.6  -0.4
LZH Lanzhou               14.58  80   eP      Pn              13 29 14.5  -4.0
LZH                                   sP      P               13 29 22.0  -3.1
PZH PanZhiHua             15.93 118   P       P               13 29 39.5  -0.6
PZH                                   S       Sn              13 32 38.0 +4.8
PZH                                   pmax    pmax
        comp=Z,10.0nm,0.7s
PZH                                   pmax    pmax
        comp=Z,70nm,3.5s
PZH                                   LR      LR
        comp=N,260nm,12.7s
PZH                                   LR      LR
        comp=E,240nm,11.0s
PZH                                   LR      LR
        comp=Z,250nm,9.8s
KURBB Kurchatov Arra      16.57 343   Pn      Pn              13 29 45.3 +1.0
        0.1nm,0.3s,baz=159,slow=11,SNR=28
        12nm,0.9s
KMI Kunming               17.48 120   ⇓P      Pn              13 29 55.5  -0.6
KMI                                   sP      sP              13 30 04.3 +0.8
KMI                                   pmax    pmax
        comp=Z,9.0nm,1.8s
KMI                                   LR      LR
        comp=N,200nm,5.4s
KMI                                   LR      LR
        comp=E,170nm,9.8s
KMI                                   LR      LR
        comp=Z,150nm,12.3s
HYBB Hyderabad (bro       18.69 203   eP      P               13 30 10.1  -0.5
HYBB                                  eS      S               13 33 41.7  -1.8
ZAA0 Zalesovo Array       19.00 358   P       P               13 30 15.5 +1.8
ZAA0                                  IAmb    IAmb            13 30 17.6
        comp=Z,8.1nm,1.1s
ZALV Zalesovo Beam        19.00 358   Pn      P               13 30 16.0 +2.3
        comp=Z,0.4nm,0.3s,baz=181,slow=11,SNR=18
ZALV                                  LR      LR              13 37 54.4
        comp=Z,71nm,19.2s,baz=229,slow=38
        comp=Z,2.6nm,0.6s
ZALV Zalesovo Beam        19.00 358   P       P               13 30 15.3 +1.6
HRA Herat                 19.54 275   P       P               13 30 20.8 +0.8
CHTO Chiang Mai           19.76 141   P       Pn              13 30 25.6 +1.8
SONM Songino Array        19.91  44   P       Pn              13 30 27.5 +2.0
        comp=Z,0.9nm,0.8s,baz=247,slow=10,SNR=5.8
SONM                                  LR      LR              13 38 26.9
        comp=Z,110nm,19.7s,baz=208,slow=37
        comp=Z,0.9nm,0.8s
CMAR Chiang Mai Arr       20.06 142   Pn      P               13 30 25.2  -0.3
        comp=Z,0.1nm,0.3s,baz=315,slow=9.4,SNR=14
        comp=Z,3.5nm,0.6s
CMAR Chiang Mai Arr       20.06 142   P       P               13 30 25.0  -0.5
HHC Hu-ho-hao-te          20.98  66   eP      P               13 30 38.3 +2.9
HHC                                   S       S               13 34 25.0  -4.1
HHC                                   pmax    pmax
        comp=Z,16nm,1.0s
HHC                                   pmax    pmax
        comp=Z,170nm,6.6s
HHC                                   LR      LR
        comp=Z,1µm,16.1s
HHC                                   LR      LR
        comp=Z,530nm,12.8s
HHC                                   LR      LR
        comp=Z,650nm,13.3s
BVAR Borovoye Array       21.18 333   P       P               13 30 37.5  0.0
        comp=Z,1.4nm,0.8s,baz=134,slow=10,SNR=9.7
BVAR                                  LR      LR              13 39 28.7
        comp=Z,50nm,21.1s,baz=143,slow=38
        comp=Z,1.4nm,0.8s
BRVK Borovoye             21.25 333   P       P               13 30 40.8 +2.6
BRVK                                  IAmb    IAmb            13 30 48.6
        comp=Z,5.4nm,0.9s
ABKAR Akbulak array       23.88 315   P       P               13 31 07.0 +1.4
AKTO Aktyubinsk           25.53 316   LR      LR              13 42 58.6
        comp=Z,39nm,19.0s,baz=270,slow=40
PALK Pallekele            27.98 191   LR      LR              13 43 37.2
        comp=Z,59nm,19.5s,baz=127,slow=39
ARU Arti                  28.45 327   LR      LR              13 43 38.1
        comp=Z,38nm,18.1s,baz=160,slow=37
KSRS Korea Array          33.72  73   LR      LR              13 46 23.0
        comp=Z,19nm,18.7s,baz=300,slow=36
KIRV Kirov                33.76 326   LR      LR              13 47 51.8
        comp=Z,73nm,18.7s,baz=125,slow=39
NRIK Noril'sk             34.45   1   P       P               13 32 40.6 +1.3
        comp=Z,1.8nm,0.6s,baz=171,slow=11,SNR=4.2
        comp=Z,1.8nm,0.6s
KLR Kul'dur               36.25  53   LR      LR              13 47 42.0
        comp=Z,37nm,20.1s,baz=250,slow=36
BRTR Keskin Array B       41.41 293   P       P               13 33 35.7  -3.1
        comp=Z,1.1nm,0.9s,baz=92,slow=6.2,SNR=3.5
        comp=Z,1.1nm,0.9s
FIA1 FINESS Array S       45.73 325   P       P               13 34 13.3 +0.3
FINES FINESS Array B      45.73 325   P       P               13 34 12.2  -0.8
        comp=Z,1.7nm,0.8s,baz=106,slow=4.6,SNR=2.0
        comp=Z,1.7nm,0.8s
FINES FINESS Array B      45.73 325   P       P               13 34 13.3 +0.2
PETK Petropavlovsk-       52.37  46   LR      LR              13 59 01.8
        comp=Z,58nm,20.1s,baz=45,slow=38
NOA NORSAR Array B        52.90 324   P       P               13 35 07.0  -0.9
        comp=Z,0.3nm,0.5s,baz=84,slow=7.6,SNR=2.5
NOA                                   LR      LR              13 59 09.5
        comp=Z,39nm,18.0s,baz=340,slow=38
        comp=Z,0.3nm,0.5s
GERES GERESS Array B      53.62 309   P       P               13 35 13.4  0.0
        comp=Z,0.8nm,0.6s,baz=68,slow=8.2,SNR=3.3
        comp=Z,0.8nm,0.6s
WB0 Warramunga Arr        71.22 132   P       P               13 37 10.0  -1.5
WRA Warramunga Arr        71.32 132   P       P               13 37 10.8  -1.2
        comp=Z,0.9nm,0.6s,baz=325,slow=6.4,SNR=11
        comp=Z,0.9nm,0.6s
WRA Warramunga Arr        71.32 132   P       P               13 37 10.9  -1.2
```

WB2	**Warramunga Arr**	**71.33 132**	P	**P**	**13 37 10.8**	**-1.3**
WB2			IAmb	IAmb	13 37 30.4	
	comp=Z,4.4nm,1.1s					
ILAR	**Eielson Array**	**72.36 21**	P	**P**	**13 37 17.0**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=327,slow=6.5,SNR=2.0					
	comp=Z,0.2nm,0.6s					
SFJD	**Kangerlussuaq**	**73.15 344**	LR	LR	14 13 34.1	
	comp=Z,15nm,18.6s,baz=358,slow=39					
ASAR	**Alice Springs**	**73.91 135**	P	**P**	**13 37 26.2**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=319,slow=6.1,SNR=11					
	comp=Z,0.6nm,0.7s					
ASAR	**Alice Springs**	**73.91 135**	P	**P**	**13 37 27.5**	**0.0**
TOA0	**Torodi Ar. Sit**	**77.98 278**	P	**P**	**13 37 49.4**	**-1.5**
TOA0			IAmb	IAmb	13 37 49.5	
	comp=Z,3.6nm,1.1s					
TORD	**Torodi Ar. Bea**	**77.98 278**	P	**P**	**13 37 49.2**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=56,slow=4.6,SNR=8.5					
	comp=Z,1.3nm,0.7s					
TORD	**Torodi Ar. Bea**	**77.98 278**	P	**P**	**13 37 49.5**	**-1.5**
TORD			IAmb	IAmb	13 37 53.3	
	comp=Z,6.1nm,1.4s					
DBIC	**Dimbokro**	**86.93 276**	P	**P**	**13 38 36.7**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=35,slow=4.8,SNR=4.6					
	comp=Z,3.9nm,0.8s					
DBIC	**Dimbokro**	**86.93 276**	P	**P**	**13 38 36.7**	**-0.9**

WEL 31 13:28:11.2±0.3, 41°S±2°×17°4E±°, h7km±2km, M3.2/19, ML3.5/19, MLv3.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=158.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.30**	**213**	P	Pb	13 28 18.4	-0.5
CMWZ				S	Sb	13 28 23.1	-1.0
TCW	**Tory Channel**	**0.31**	**337**	P	Pb	13 28 18.6	-0.4
TCW				S	Sb	13 28 23.4	-0.8
WEL	**Wellington**	**0.33**	**50**	P	Pb	13 28 19.0	-0.4
WEL				S	Sb	13 28 25.2	+0.3
TUWZ	**Tuamarina**	**0.37**	**280**	P	Pg	13 28 19.3	+0.8
BSWZ	**Blackbirch Sta**	**0.47**	**242**	P	Pb	13 28 21.1	-0.7
BSWZ				S	Sb	13 28 28.3	-0.7
CAW	**Cannon Point**	**0.61**	**51**	P	Pb	13 28 23.7	-0.5
MSWZ	**Moikau Station**	**0.62**	**83**	P	Pb	13 28 24.1	-0.3
PLWZ	**Palliser**	**0.62**	**97**	P	Pb	13 28 24.0	-0.4
KIW	**Kapiti Island**	**0.73**	**30**	P	Pb	13 28 25.8	-0.4
KIW				S	Sb	13 28 36.2	-0.2
PAWZ	**Paruwai Farm**	**0.76**	**82**	P	Pb	13 28 26.4	-0.2
DUWZ	**D'Urville Isla**	**0.79**	**331**	P	Pb	13 28 27.3	0.0
DUWZ				S	Sb	13 28 37.8	-0.5
NNZ	**Nelson**	**0.84**	**289**	P	Pg	13 28 27.6	+0.2
MTW	**Mount Morrison**	**0.87**	**68**	P	Pb	13 28 28.6	0.0
OGWZ	**Otaki Gorge**	**0.88**	**40**	P	Pg	13 28 28.3	+0.2
TRWZ	**Traveller**	**0.95**	**84**	P	Pg	13 28 29.2	-0.2
HOWZ	**Holdsworth Sta**	**1.01**	**54**	P	Pg	13 28 30.7	+0.1
KHZ	**Kahutara**	**1.14**	**216**	P	Pg	13 28 31.9	-1.0
TMWZ	**Te Maipa**	**1.17**	**71**	P	Pg	13 28 32.3	-1.2
THZ	**Tophouse**	**1.18**	**256**	P	Pg	13 28 32.9	-0.8
MRZ	**Mangatainoka R**	**1.20**	**46**	P	Pg	13 28 33.7	-0.6
MRZ				S	Sn	13 28 51.0	+0.1
TKNZ	**Takaka Hill**	**1.20**	**292**	P	Pg	13 28 33.7	-0.6
TKNZ				S	Sb	13 28 50.1	0.0
MRNZ	**Matariki Terra**	**1.26**	**274**	P	Pn	13 28 34.5	-0.7
MRNZ				S	Sn	13 28 52.7	+0.2
TIWZ	**Tintock**	**1.31**	**57**	P	Pn	13 28 34.5	-1.5
OHWZ	**Ohakea**	**1.45**	**28**	P	Pg	13 28 39.0	0.0
PRWZ	**Pori Road**	**1.50**	**52**	P	Pn	13 28 37.3	-1.2
POWZ	**Post Office Ro**	**1.50**	**43**	P	Pn	13 28 37.6	-0.9
QRZ	**Quartz Range**	**1.59**	**294**	P	Pn	13 28 39.9	+0.2
QRZ				S	Sg	13 29 02.5	+0.4
BFZ	**Birch Farm**	**1.59**	**60**	P	Pn	13 28 37.8	-2.0
DVHZ	**Dannevirke**	**1.78**	**48**	P	Pn	13 28 40.6	-1.7
WAZ	**Wanganui**	**1.79**	**14**	P	Pb	13 28 44.5	+0.2
GVZ	**Greta Valley S**	**1.80**	**215**	P	Pn	13 28 40.7	-2.0
TSZ	**Takapari Road**	**1.85**	**39**	P	Pn	13 28 42.3	-1.0
ANWZ	**Angora Road**	**1.86**	**57**	P	Pn	13 28 41.3	-2.1
DSZ	**Denniston Nort**	**1.99**	**262**	P	Pn	13 28 45.1	-0.1
LTZ	**Lake Taylor**	**2.06**	**231**	P	Pn	13 28 44.6	-1.6
PRHZ	**Porangahau**	**2.07**	**54**	P	Pn	13 28 44.4	-2.0
PNHZ	**Pukenui**	**2.07**	**41**	P	Pn	13 28 45.1	-1.3
KHEZ	**Kahui Hut**	**2.22**	**352**	P	Pb	13 28 51.7	0.0
NEZ	**North Egmont**	**2.24**	**353**	P	Pg	13 28 53.8	-0.2
MTVZ	**Mangateitei**	**2.25**	**21**	P	Pb	13 28 52.9	+0.7
NBEZ	**Newall Road No**	**2.27**	**349**	P	Pb	13 28 52.7	+0.2
DREZ	**Durham Road**	**2.31**	**356**	P	Pg	13 28 55.7	+0.2
PKVZ	**Pokaka**	**2.31**	**18**	P	Pb	13 28 53.1	-0.1
MOVZ	**Moawhango**	**2.32**	**26**	P	Pb	13 28 52.4	-0.9
PKE	**Pukeiti**	**2.33**	**351**	P	Pb	13 28 53.4	0.0
WNVZ	**Wahianoa**	**2.34**	**23**	P	Pb	13 28 54.4	+0.6
PXZ	**Pawanui**	**2.35**	**52**	P	Pn	13 28 47.7	-2.5
BHHZ	**Black Hill Sta**	**2.36**	**32**	P	Pn	13 28 50.0	-0.3
VRZ	**Vera Road**	**2.38**	**6**	P	Pb	13 28 52.5	-1.9
NGZ	**Ngauruhoe**	**2.48**	**21**	P	Pb	13 28 56.6	+0.3
SNVZ	**South Ngauruho**	**2.48**	**22**	P	Pn	13 28 54.1	+1.9
OTVZ	**Oturere**	**2.51**	**22**	P	Pn	13 28 53.1	+0.5
KAHZ	**Kahuranaki**	**2.52**	**48**	P	Pn	13 28 50.3	-2.3
NNVZ	**North Ngauruho**	**2.53**	**21**	P	Pn	13 28 53.6	+0.8
WTVZ	**West Tongariro**	**2.54**	**21**	P	Pb	13 28 56.3	-0.8
INZ	**Inchbonnie**	**2.54**	**240**	P	Pn	13 28 51.5	-1.3
TWVZ	**Taurewa**	**2.54**	**18**	P	Pb	13 28 57.8	+0.6
OXZ	**Oxford**	**2.55**	**223**	P	Pn	13 28 50.2	-2.7
ETVZ	**East Tongariro**	**2.55**	**23**	P	Pn	13 28 53.7	+0.6
KWHZ	**Kaweka Forest**	**2.57**	**37**	P	Pn	13 28 51.7	-1.5
TMVZ	**Te Maari**	**2.57**	**23**	P	Pn	13 28 53.6	+0.3
MQZ	**McQueen's Vall**	**2.57**	**210**	P	Pn	13 28 49.6	-3.6
KRVZ	**Karewarewa**	**2.57**	**21**	P	Pb	13 28 57.8	+0.2
NTVZ	**North Tongarir**	**2.58**	**22**	P	Pn	13 28 54.3	+0.8
MCHZ	**McNeill Hill**	**2.68**	**41**	P	Pn	13 28 52.9	-1.9
KATZ	**Kakaramea**	**2.70**	**21**	P	Pb	13 29 00.4	+0.6
BKZ	**Black Stump Fm**	**2.81**	**35**	P	Pn	13 28 54.9	-1.7
HIZ	**Hauiti**	**3.00**	**6**	P	Pb	13 29 02.2	-2.6
MRHZ	**Matea Rd**	**3.06**	**30**	P	Pb	13 29 04.2	-1.8
WACZ	**Wakanui South**	**3.10**	**217**	P	Pn	13 28 57.5	-3.1
WVZ	**Waitaha Valley**	**3.16**	**239**	P	Pn	13 29 01.9	+0.5
TLZ	**Tolley Road**	**3.27**	**15**	P	Pb	13 29 07.3	-2.4
RPZ	**Rata Peaks**	**3.34**	**227**	P	Pn	13 29 01.5	-2.3
RPZ				P	Pb	13 29 02.6	-8.1
GCSZ	**Gaunt Creek Bo**	**3.54**	**238**	P	Pn	13 29 09.0	+2.4
KARZ	**Kaharoa**	**3.74**	**22**	P	Pn	13 29 11.5	+2.1
TMZ	**Timaru**	**3.83**	**220**	P	Pn	13 29 08.1	-2.5
FOZ	**Fox Glacier**	**3.97**	**238**	P	Pn	13 29 11.7	-0.7
JCZ	**Jackson Bay**	**4.89**	**236**	P	Pn	13 29 27.7	+2.5
CTZ	**Chatham Island**	**6.97**	**112**	P	Pn	13 29 51.0	-2.7

ROM 31 13:31:36.8±0.1, 42°.915N±0°.004×13°.120E±0°.004, h11km, Md1.4/4, ML2.2/1, 6C-7D, Error ellipse: s-maj=0.5km s-min=0.3km az=341.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**312**	⇓P	Pg	13 31 39.5	+0.3
FEMA				S	Sg	13 31 41.3	+0.2
FEMA				AML	AML		
	comp=E,3492μm,0.2s						
FEMA				AML	AML		
	comp=N,1981μm,0.1s						
FEMA				END			
T1245	**Castelsantange**	**0.08**	**139**	⇑P	Pg	13 31 39.5	+0.2
T1216	**Preci, Frazion**	**0.08**	**252**	⇑P	Pg	13 31 39.6	+0.4
T1216				S	Sg	13 31 41.4	+0.3
T1216				AML	AML		
	comp=E,3475μm,0.2s						
T1216				AML	AML		
	comp=N,2580μm,0.3s						
T1216				AML	AML		
	comp=E,5280μm,1.2s						
T1216				AML	AML		
	comp=N,4020μm,0.3s						
T1216				AML	AML		
	comp=E,5295μm,1.2s						
T1216				AML	AML		
	comp=N,4015μm,0.3s						
T1216				AML	AML		
	comp=E,3478μm,0.2s						
T1216				AML	AML		
	comp=N,2420μm,0.2s						
T1216				END			
T1256	**Bolognola (MC)**	**0.12**	**41**	⇓P	Pg	13 31 40.2	+0.4
T1256				S	Sg	13 31 42.7	+0.5
T1256				AML	AML		
	comp=E,772μm,0.4s						
T1256				AML	AML		
	comp=N,646μm,0.6s						
T1256				AML	AML		
	comp=E,2120μm,0.2s						
T1256				AML	AML		
	comp=N,2045μm,1.3s						
T1256				AML	AML		
	comp=E,2115μm,0.2s						
T1256				AML	AML		
	comp=N,1955μm,0.2s						
T1256				AML	AML		
	comp=E,2120μm,0.2s						
T1256				AML	AML		
	comp=N,1960μm,0.2s						
T1256				AML	AML		
	comp=N,610μm,0.2s						
T1256				AML	AML		
	comp=E,738μm,0.2s						
T1256				AML	AML		
	comp=N,712μm,0.2s						
T1256				AML	AML		
	comp=E,787μm,0.2s						
FDMO	**Fiordimonte**	**0.12**	**349**	⇓P	Pg	13 31 40.2	+0.3
FDMO				AML	AML		
	comp=E,2305μm,0.2s						
FDMO				AML	AML		
	comp=N,2325μm,0.9s						
FDMO				AML	AML		
	comp=N,2330μm,0.9s						
FDMO				AML	AML		
	comp=E,625μm,0.2s						
FDMO				AML	AML		
	comp=N,575μm,0.3s						
MMO1	**Montemonaco**	**0.15**	**96**	P	Pg	13 31 40.8	+0.5
MMO1				S	Sg	13 31 43.8	+1.0
MMO1				END			
AM05	**Amandola Campo**	**0.18**	**70**	⇑P	Pg	13 31 41.4	+0.6
AM05				S	Sg	13 31 44.5	+1.0
AM05				AML	AML		
	comp=N,486μm,0.4s						
AM05				AML	AML		
	comp=E,1890μm,0.5s						
AM05				AML	AML		
	comp=E,515μm,0.1s						
AM05				AML	AML		
	comp=N,564μm,0.2s						
AM05				AML	AML		
	comp=N,564μm,0.2s						
AM05				AML	AML		
	comp=E,1945μm,0.1s						
AM05				AML	AML		
	comp=E,516μm,0.1s						
AM05				AML	AML		
	comp=N,180μm,0.8s						
AM05				AML	AML		
	comp=E,306μm,0.1s						
AM05				AML	AML		
	comp=N,334μm,0.1s						
AM05				END			
T1241	**Roccafluvione,**	**0.24**	**104**	⇑P	Pg	13 31 42.3	+0.6
T1241				S	Sg	13 31 46.4	+1.4
T1241				AML	AML		
	comp=N,698μm,0.6s						
T1241				AML	AML		
	comp=E,1150μm,0.1s						
T1241				AML	AML		
	comp=N,1325μm,0.7s						
T1241				AML	AML		
	comp=N,479μm,0.2s						
T1241				AML	AML		
	comp=E,1101μm,0.1s						
T1241				AML	AML		
	comp=E,1150μm,0.1s						
T1241				AML	AML		
	comp=N,356μm,0.1s						
T1204	**Amatrice, Fraz**	**0.28**	**149**	P	Pg	13 31 42.2	-0.3
T1204				AML	AML		
	comp=E,9735μm,1.0s						
T1204				AML	AML		
	comp=E,9750μm,1.0s						
T1204				AML	AML		
	comp=N,5430μm,0.3s						
T1204				AML	AML		
	comp=E,9740μm,1.0s						
T1243	**Rocca Santa Ma**	**0.33**	**132**	⇓P	Pg	13 31 43.8	+0.5
ASSB	**Assisi San Ben**	**0.36**	**291**	⇓P	Pg	13 31 44.2	+0.2
ASSB				AML	AML		
	comp=N,108μm,0.1s						
SNTG	**Esanatoglia**	**0.36**	**339**	⇑P	Pg	13 31 44.5	+0.5
SNTG				AML	AML		
	comp=N,412μm,1.1s						
SNTG				AML	AML		
	comp=E,360μm,0.2s						
SNTG				AML	AML		
	comp=N,364μm,0.1s						
SNTG				AML	AML		
	comp=E,404μm,0.8s						
SNTG				AML	AML		
	comp=N,76μm,0.1s						
SNTG				AML	AML		
	comp=E,113μm,0.5s						
SNTG				AML	AML		
	comp=E,78μm,0.1s						
EL6	**Elcito**	**0.41**	**358**	⇓P	Pb	13 31 45.9	-0.3
T1211	**Morro Reatino**	**0.43**	**207**	S	Sb	13 31 53.0	0.0
CAMP	**Campotosto**	**0.43**	**151**	⇑P	Pg	13 31 45.8	+0.4
CAMP				AML	AML		
	comp=E,398μm,1.1s						
CAMP				AML	AML		
	comp=N,374μm,0.3s						
CAMP				AML	AML		
	comp=E,55μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.44**	**308**	⇓P	Pg	13 31 45.8	+0.2
ATCC				AML	AML		
	comp=E,394μm,1.2s						
ATCC				AML	AML		
	comp=N,342μm,0.4s						
ATCC				AML	AML		
	comp=N,342μm,0.4s						
ATCC				AML	AML		
	comp=N,51μm,0.2s						
ATCC				AML	AML		
	comp=E,100μm,0.2s						
TERO	**Teramo**	**0.46**	**129**	P	Pg	13 31 46.2	+0.3
TERO				S	Sb	13 31 55.0	+1.1
TERO				AML	AML		
	comp=E,1325μm,0.3s						
TERO				AML	AML		
	comp=N,1315μm,0.6s						
TERO				AML	AML		
	comp=E,1495μm,0.3s						
TERO				AML	AML		
	comp=N,1450μm,0.6s						
TERO				AML	AML		
	comp=N,1310μm,0.6s						
TERO				AML	AML		
	comp=N,85μm,0.1s						
T1247	**Pizzolo (AQ)**	**0.49**	**164**	S	Sb	13 31 55.0	+0.3
GIGS	**Gran Sasso**	**0.57**	**144**	S	Sg	13 31 56.0	+0.5
TRTR	**Tortoreto Alta**	**0.59**	**100**	S	Sn	13 32 01.0	+0.1
ARVD	**Arcevia**	**0.60**	**347**	S	Sb	13 31 58.0	+0.2
FIAM	**Fiamignano**	**0.65**	**180**	S	Sg	13 31 58.0	+0.1
VCEL	**Villa Celiera**	**0.74**	**134**	S	Sg	13 32 01.0	+0.1
MPAG	**Monte Paganucc**	**0.76**	**340**	S	Sn	13 32 04.0	-1.1
SRES	**S.Oreste - Sor**	**0.81**	**214**	S	Sg	13 32 02.0	-1.1
FSSB	**Fossombrone**	**0.82**	**342**	S	Sn	13 32 07.0	+0.6

ROM 31 13:31:48.6±0.1, 42°.679N±0°.004×13°.211E±0°.005, h12km, ML2.5/8, 4C-4D, Error ellipse: s-maj=0.5km s-min=0.2km az=353.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.04**	**127**	P	Pg	13 31 51.4	+0.3
T1201				S	Sg	13 31 53.1	+0.4
T1204	**Amatrice, Fraz**	**0.08**	**92**	P	Pg	13 31 51.7	+0.2
T1204				S	Sg	13 31 53.6	+0.1
T1204				AML	AML		
	comp=E,9735μm,1.0s						
T1204				AML	AML		
	comp=E,9740μm,1.0s						
T1204				AML	AML		
	comp=N,5430μm,0.3s						
T1204				AML	AML		
	comp=E,9715μm,1.0s						
T1204				AML	AML		
	comp=N,4626μm,0.1s						
T1204				AML	AML		
	comp=E,8253μm,0.2s						
T1204				AML	AML		
	comp=E,9740μm,1.0s						
SMA1	**SAN MARTINO**	**0.10**	**118**	P	Pg	13 31 52.1	+0.4
SMA1				S	Sg	13 31 54.3	+0.5
LNSS	**Leonessa**	**0.15**	**239**	P	Pg	13 31 52.7	+0.4
LNSS				S	Sg	13 31 55.5	+0.7
RM33	**Pellescritta (**	**0.17**	**179**	P	Pg	13 31 53.1	+0.5
RM33				S	Sg	13 31 56.3	+0.9
T1243	**Rocca Santa Ma**	**0.18**	**84**	P	Pg	13 31 52.9	+0.2
T1243				S	Sg	13 31 56.3	+0.8
T1245	**Castelsantange**	**0.18**	**355**	⇑P	Pg	13 31 53.0	+0.2
CAMP	**Campotosto**	**0.20**	**134**	P	Pg	13 31 52.7	-0.5
CAMP				S	Sg	13 31 57.0	+0.7
T1217	**Poggiodomo (PG**	**0.21**	**279**	P	Pg	13 31 53.5	+0.2
T1217				S	Sg	13 31 56.9	+0.5
T1217				AML	AML		
	comp=E,1660μm,0.5s						
T1217				AML	AML		
	comp=N,3470μm,0.2s						
T1217				AML	AML		
	comp=N,3415μm,0.3s						
T1217				AML	AML		
	comp=E,1705μm,0.5s						
T1217				AML	AML		
	comp=N,3410μm,0.3s						
T1217				AML	AML		
	comp=E,1665μm,0.5s						
T1217				AML	AML		
	comp=N,3470μm,0.3s						
T1217				AML	AML		
	comp=E,1351μm,0.1s						
T1217				AML	AML		
	comp=E,1665μm,1.5s						
T1217				AML	AML		
	comp=E,1705μm,1.5s						
T1217				AML	AML		
	comp=N,3413μm,0.3s						
T1217				AML	AML		
	comp=N,3467μm,0.3s						
T1217				AML	AML		
	comp=E,1276μm,0.1s						
MMO1	**Montemonaco**	**0.24**	**21**	P	Pg	13 31 53.9	+0.2
MMO1				S	Sg	13 31 57.8	+0.6
T1241	**Roccafluvione,**	**0.24**	**42**	⇑P	Pg	13 31 54.0	+0.2
T1241				AML	AML		
	comp=E,1012μm,0.1s						
T1241				AML	AML		
	comp=N,424μm,0.0s						
T1241				AML	AML		
	comp=E,1078μm,0.1s						
T1241				AML	AML		
	comp=N,394μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.25**	**165**	P	Pg	13 31 54.3	+0.5
T1247				S	Sg	13 31 58.7	+1.3
T1216	**Preci, Frazion**	**0.26**	**326**	P	Pb	13 31 55.4	+0.2
T1216				AML	AML		
	comp=N,1018μm,0.3s						
T1215	**Vallo di Nera,**	**0.28**	**296**	⇓P	Pg	13 31 54.6	+0.1
T1215				AML	AML		
	comp=E,513μm,0.1s						
T1215				AML	AML		
	comp=E,529μm,0.1s						
T1215				AML	AML		
	comp=N,553μm,0.2s						
T1215				AML	AML		
	comp=N,495μm,0.2s						
AM05	**Amandola Campo**	**0.32**	**19**	⇑P	Pg	13 31 55.4	+0.3
AM05				AML	AML		
	comp=N,564μm,0.2s						
AM05				AML	AML		
	comp=E,516μm,0.1s						
AM05				AML	AML		
	comp=N,564μm,0.2s						
AM05				AML	AML		
	comp=E,1799μm,0.1s						
AM05				AML	AML		
	comp=N,168μm,0.1s						
AM05				AML	AML		
	comp=E,515μm,0.1s						
AM05				AML	AML		
	comp=N,466μm,0.1s						
T1256	**Bolognola (MC)**	**0.33**	**2**	⇑P	Pg	13 31 55.4	0.0
T1256				AML	AML		
	comp=N,2045μm,1.3s						
T1256				AML	AML		
	comp=E,2115μm,0.2s						
T1256				AML	AML		
	comp=N,2050μm,1.3s						
T1256				AML	AML		
	comp=E,2120μm,0.2s						
T1256				AML	AML		
	comp=N,1960μm,0.2s						
T1256				AML	AML		
	comp=E,2120μm,0.2s						
T1256				AML	AML		
	comp=N,1955μm,0.2s						
T1256				AML	AML		
	comp=E,522μm,0.3s						
ARRO	**Arrone**	**0.34**	**253**	P	Pg	13 31 55.8	+0.2
ARRO				S	Sb	13 32 01.4	-0.6
ARRO				AML	AML		
	comp=N,667μm,0.2s						
ARRO				AML	AML		
	comp=E,534μm,1.1s						
ARRO				AML	AML		
	comp=N,668μm,0.2s						
ARRO				AML	AML		
	comp=E,534μm,1.1s						
ARRO				AML	AML		
	comp=E,499μm,0.2s						
ARRO				AML	AML		
	comp=N,667μm,0.2s						
GIGS	**Gran Sasso**	**0.35**	**131**	AML	AML		
	comp=N,108μm,0.4s						
GIGS				AML	AML		
	comp=E,106μm,1.0s						
FDMO	**Fiordimonte**	**0.37**	**346**	⇓P	Pg	13 31 56.2	+0.1
FDMO				AML	AML		
	comp=N,2325μm,0.9s						
FDMO				AML	AML		
	comp=N,2330μm,0.9s						
FDMO				AML	AML		
	comp=E,2305μm,0.2s						
GUMA	**Gualdo di Mace**	**0.39**	**13**	P	Pg	13 31 57.0	+0.5
GUMA				AML	AML		
	comp=E,3585μm,0.8s						
GUMA				AML	AML		
	comp=E,5515μm,0.2s						
GUMA				AML	AML		
	comp=N,4620μm,0.7s						
GUMA				AML	AML		
	comp=N,4185μm,0.4s						
OFFI	**Offida**	**0.43**	**54**	P	Pb	13 31 58.1	-0.1
OFFI				AML	AML		
	comp=E,2225μm,0.3s						
OFFI				AML	AML		
	comp=N,3860μm,0.5s						
OFFI				AML	AML		
	comp=E,1188μm,0.3s						
OFFI				AML	AML		
	comp=N,1159μm,0.4s						
T0110	**Collepietro**	**0.62**	**137**	⇓P	Pg	13 32 00.8	+0.1
T0110				AML	AML		
	comp=E,248μm,0.2s						
T0110				AML	AML		
	comp=N,277μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.66**	**321**	S	Sn	13 32 13.0	-1.1
CERT	**Cerreto**	**0.75**	**193**	⇓P	Pg	13 32 02.6	-0.5
CERT				AML	AML		
	comp=N,124μm,1.5s						
CERT				AML	AML		
	comp=E,282μm,1.3s						
SF04	**Casetta**	**1.15**	**278**	S	Sn	13 32 28.0	+1.6

*TAP **31** 13:31:50.0, 24°.75N×122°.81E, h108km, ML2.7, D*
*JMA **31** 13:31:51.0±0.3, 25°N±3°×12°3E±°, h96km±3km, MV1.8/9,*
NW OFF ISHIGAKIJIMA IS
ISC 31 13:31:52.1±1.8, 24°.65N±0°.06×122°.79E±0°.03, h92km±13km, n59, σ0s.71/101, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.24**	**143**	P	**Pn**	**13 32 05.8**	**+0.3**

YOJ	Yonaguni jima	0.28 132	eP	Pn	13 32 06.0	+0.3
	baz=155					
TWB1	Santiao Chiao	0.81 296	eP	Pn	13 32 09.9	0.0
	baz=285					
TWB1			S	Sn	13 32 22.1	-1.1
	baz=285					
TWC	Suao	0.85 268	P	Pn	13 32 09.7	-0.6
	baz=259					
TWC			i S	Sn	13 32 24.4	+0.3
	baz=259					
IRIF	Iriomote-Funau	0.92 110	P	Pn	13 32 10.4	-0.6
TIPB	Shuangxi	0.93 290	P	Pn	13 32 11.1	-0.1
	baz=278					
TIPB			S	Sn	13 32 25.3	-0.3
	baz=278					
ENA	Nanau	0.98 257	eS	Sn	13 32 26.5	+0.1
	baz=247					
TWE	Neicheng	1.02 274	eP	Pn	13 32 12.0	-0.2
	baz=268					
TWE			S	Sn	13 32 27.7	+0.4
	baz=268					
FUSB	Fushanzhiwuyua	1.09 276	eP	Pn	13 32 12.7	-0.4
	baz=270					
FUSB			eS	Sn	13 32 29.0	0.0
	baz=270					
HATJ	Hateruma jima	1.10 122	P	Pn	13 32 13.3	+0.2
HATJ			eS	Sn	13 32 30.7	+1.8
ENTT	Nioudou	1.11 270	i P	Pn	13 32 12.6	-0.7
	baz=261					
LATG	Datong	1.15 265	P	Pn	13 32 13.8	0.0
	baz=255					
LATG			S	Sn	13 32 31.2	+1.0
	baz=255					
NDT	Datong Townshi	1.16 268	eP	Pn	13 32 12.6	-1.3
	baz=260					
NDT			S	Sn	13 32 29.8	-0.4
	baz=260					
ETL	Fush Village	1.17 246	eS	Sn	13 32 31.3	+0.9
	baz=235					
NACB	Ninganchiao	1.18 247	eP	Pn	13 32 13.3	-0.8
	baz=236					
NACB			eS	Sn	13 32 30.5	-0.2
	baz=236					
JKRS	Kuro-shima	1.19 110	P	Pn	13 32 13.9	-0.2
JKRS			eS	Sn	13 32 31.5	+0.8
TWD	Chiawan	1.22 243	i P	Pn	13 32 14.0	-0.5
	baz=233					
TWD			eS	Sn	13 32 31.8	+0.3
	baz=233					
ETLH	Xiulin Townshi	1.27 250	eP	Pn	13 32 14.3	-0.9
	baz=246					
ETLH			eS	Sn	13 32 32.6	0.0
	baz=246					
JIJ	Ishigaki jima	1.27 103	P	Pn	13 32 14.5	-0.6
JIJ			S	Sn	13 32 32.2	-0.2
YHNB	Yeheng	1.28 271	P	Pn	13 32 15.4	0.0
	baz=272					
YHNB			S	Sn	13 32 33.2	+0.3
	baz=272					
NNSB	Datong	1.30 261	P	Pn	13 32 15.5	-0.1
	baz=250					
NNSB			S	Sn	13 32 33.9	+0.7
	baz=250					
NSK	Sanguang	1.30 272	i P	Pn	13 32 15.4	-0.2
	baz=272					
NSK			i S	Sn	13 32 32.6	-0.7
	baz=272					
NNS	Nan Shan	1.30 261	P	Pn	13 32 15.7	+0.1
	baz=250					
NNS			S	Sn	13 32 33.0	-0.4
	baz=250					
JISG	Ishigakijimahi	1.39 92	P	Pn	13 32 15.7	-0.9
FUSS	Fushou	1.46 254	eP	Pn	13 32 17.5	-0.2
	baz=245					
FUSS			eS	Sn	13 32 37.9	+0.8
	baz=245					
WHF	Hehuan Shan	1.47 250	i P	Pn	13 32 18.1	0.0
	baz=247					
WHF			i S	Sn	13 32 37.3	-0.3
	baz=247					
ESL	Shilin	1.49 236	P	Pn	13 32 16.8	-1.0
	baz=233					
ESL			S	Sn	13 32 37.3	0.0
	baz=233					
TDCB	Techi	1.53 255	P	Pn	13 32 19.1	+0.6
	baz=247					
TDCB			S	Sn	13 32 39.3	+0.7
	baz=247					
EGFH	Guangfu	1.58 232	eP	Pn	13 32 18.5	-0.4
	baz=230					
EGFH			eS	Sn	13 32 38.9	-0.4
	baz=230					
CHGB	Renai	1.58 249	P	Pn	13 32 19.3	+0.1
	baz=239					
CHGB			S	Sn	13 32 39.9	+0.1
	baz=239					
LIOB	Emei	1.61 270	eS	Sn	13 32 40.5	+0.4
	baz=266					
OWD	Renai	1.62 245	P	Pn	13 32 19.5	-0.2
	baz=237					
OWD			eS	Sn	13 32 40.1	-0.5
	baz=237					
NSTT	Nanjuang	1.62 270	S	Sn	13 32 40.2	-0.2
	baz=266					
WUSB	Renai	1.66 247	P	Pn	13 32 20.2	+0.1
	baz=240					
WUSB			S	Sn	13 32 41.5	+0.2
	baz=240					
HGSD	Ruisui	1.69 228	eP	Pn	13 32 19.6	-0.8
	baz=224					
HGSD			eS	Sn	13 32 42.5	+0.5
	baz=224					
WHP	Taichung City	1.72 258	eP	Pn	13 32 21.1	+0.3
	baz=252					
WHP			eS	Sn	13 32 44.6	+2.0
	baz=252					
JTJ	Tarama	1.74 90	P	Pn	13 32 20.7	-0.4
VWDT	VWDT	1.75 240	P	Pn	13 32 21.2	+0.1
	baz=232					
VWDT			S	Sn	13 32 43.2	+0.1
	baz=232					
EHY	Hungye	1.76 230	eP	Pn	13 32 20.6	-0.7
	baz=227					
EHY			eS	Sn	13 32 42.2	-1.2
	baz=227					
WCS	Beigang Elemen	1.81 251	eP	Pn	13 32 21.5	-0.4
	baz=248					
WCS			eS	Sn	13 32 44.9	+0.3
	baz=248					
YULB	Yu-li	1.85 228	P	Pn	13 32 21.8	-0.7
	baz=233					
YULB			eS	Sn	13 32 44.7	-0.8
	baz=233					
EYUL	Yuli	1.86 226	eP	Pn	13 32 22.7	+0.1
	baz=232					
EYUL			eS	Sn	13 32 46.5	+0.6
	baz=232					
SSLB	Suanglung	1.88 243	eP	Pn	13 32 22.5	-0.4
	baz=236					
SMLT	Sun Moon Lake	1.88 247	P	Pn	13 32 23.9	+1.0
	baz=238					
SMLT			S	Sn	13 32 46.2	-0.2
	baz=238					
TYC	Yuchr	1.91 248	P	Pn	13 32 24.4	+1.2
	baz=239					
TYC			i S	Sn	13 32 47.1	+0.2
	baz=239					
FULB	Fuli	1.99 224	P	Pn	13 32 25.6	+1.3
	baz=216					
FULB			S	Sn	13 32 48.9	+0.1
	baz=216					
WHYT	Xinyi Township	2.00 242	P	Pn	13 32 25.9	+1.4
	baz=238					
WHYT			eS	Sn	13 32 51.5	+2.3
	baz=238					
YUS	Yu-Shan	2.04 236	i P	Pn	13 32 25.5	+0.1
	baz=229					
YUS			S	Sn	13 32 49.8	-0.8
	baz=229					
EHD	Haiduan	2.08 224	eP	Pn	13 32 23.8	-1.7
	baz=230					
EHD			S	Sn	13 32 51.0	+0.1
	baz=230					
ALS	Alishan	2.14 238	P	Pn	13 32 27.5	+1.1
	baz=236					
ALS			eS	Sn	13 32 52.7	+0.1
	baz=236					
EDH	Donghe	2.15 219	eP	Pn	13 32 25.5	-0.9
	baz=213					
EDH			eS	Sn	13 32 51.8	-0.8
	baz=213					
ELDTW	Lidau	2.17 228	P	Pn	13 32 26.8	-0.1
	baz=226					
WCKO	Fanlu	2.33 239	eP	Pn	13 32 28.1	-0.6
	baz=237					
WCKO			eS	Sn	13 32 56.8	-0.1
	baz=237					
STYH	Taoyuan	2.36 232	eP	Pn	13 32 29.3	+0.2
	baz=228					
STYH			eS	Sn	13 32 57.3	-0.1
	baz=228					
CHN4	Tsaushan	2.38 238	P	Pn	13 32 29.3	-0.2
	baz=235					
TPUB	Ta-pu	2.38 236	eP	Pn	13 32 30.7	+1.2
	baz=234					
TWGBT	Beinan	2.40 221	eP	Pn	13 32 29.2	-0.5
	baz=219					
TWG	Pinlang	2.40 221	eP	Pn	13 32 29.3	-0.4
	baz=219					
WTP	Ta-pu	2.43 235	eP	Pn	13 32 31.4	+1.4
	baz=233					

TEH ***31*** *13:43:59.6, 30°.80N±56°.55E, h8km, ML4.5*
NEIC ***31*** *13:44:01.9±1.5, 30°.73N±0°.08×56°.51E±0°.06, h10km±1km, mb4.3/23, mb_Lg4.6(TEH), Error ellipse: s-maj=13.0km s-min=9.3km az=192.0*
DSN ***31*** *13:44:04.7±1.5, 30°.61N×55°.93E, h2km, ML4.2/10, Error ellipse: s-maj=21.9km s-min=10.7km az=61.0*
OMAN ***31*** *13:44:05.9±0.1, 30°.58N×56°.40E, h10km, mb5.5/18, ml4.3/4, ms2.7/7, Error ellipse: s-maj=1.7km s-min=1.3km az=42.0*
IDC ***31*** *13:44:05.8±2.0, 30°.70N×56°.53E, h47km±22km, mb3.9/17, mbtmp4.1/22, ML3.9/5, MS3.4/26, Error ellipse: s-maj=14.1km s-min=12.7km az=170.0*
ISC 31 13:44:01.4±0.4, 30°.79N±0°.03×56°.53E±0°.03, h10km, n209, σ1§67/211, mb4.2/23, MS3.3/21, 1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRDN	Zarand Kerman	0.17	2	ePg	Pg	13 44 03.6	-1.7
ZRDN				eSg	Sg	13 44 06.0	-2.0
KHGB	Koh Gabri	0.42	186	eSg	Sg	13 44 14.7	-0.5
KHGB				ePg	Pg	13 44 08.6	-1.1
TVBK	TV Kerman	0.83	166	ePg	Pb	13 44 16.4	-1.7
TVBK				e		13 44 30.6	
	comp=Z,71μm,0.2s						
IBAF	Bafgh	1.15	314	ePg	Pb	13 44 21.1	-2.3
IBAF				e		13 44 39.1	
	comp=Z,75μm,0.2s						
NGRK	Negar Kerman	1.16	171	ePg	Pn	13 44 22.6	-1.4
NGRK				eSg	Sn	13 44 38.7	-1.4
CHMN	Cheshme madani	1.27	137	ePg	Pg	13 44 24.1	-1.8
CHMN				e		13 44 51.9	
	comp=Z,66μm,0.4s						
IMEH	Mehriz	1.75	290	ePn	Pb	13 44 32.3	-1.4
IMEH				e		13 45 04.1	
	comp=Z,61μm,0.4s						
TPRV	Parvadeh(Tabas	2.23	3	ePn	Pb	13 44 39.3	-2.6
YZKH	Yazd	2.30	314	ePn	Pb	13 44 40.3	-2.7
ICHK	Chekchek	2.32	309	ePn	Pb	13 44 40.7	-2.7
ICHK				e		13 45 18.9	
	comp=Z,26μm,0.3s						
KBAM	BAM	2.35	134	ePn	Pb	13 44 41.0	-2.8
IKOO	Kooshah	2.66	52	ePn	Pb	13 44 44.9	-4.4
ISAD	Sadrabad	2.68	295	ePn	Pb	13 44 45.7	-3.9
ISAD				e		13 45 29.5	
	comp=Z,27μm,0.5s						
ITEG	Tejag	2.82	41	ePn	Pn	13 44 47.1	+0.4
ITEG				e		13 45 42.7	
	comp=Z,18μm,0.6s						
TKDS	Koohdasht(Taba	2.86	10	ePn	Pn	13 44 47.6	+0.5
TABS	Tabas	2.89	10	ePn	Pn	13 44 48.4	+0.8
KHNJ	Kahnooj	3.02	160	ePn	Pn	13 44 50.3	+1.1
BAGH	Bagheran - Bir	3.02	48	e		13 45 43.0	
	comp=Z,11μm,0.4s						
NHDN	Nehbandan	3.08	78	ePn	Pn	13 44 50.9	+0.7
TNSJ	Nastanj	3.16	1	ePn	Pn	13 44 52.0	+0.7
IBND	Bandar-abas	3.33	180	ePn	Pn	13 44 55.4	+1.9
IBND				e		13 45 11.6	
	comp=Z,14μm,0.5s						
AFRZ	Afriz	3.37	38	ePn	Pn	13 44 54.4	+0.2
AFRZ				e		13 45 53.8	
	comp=Z,15μm,0.8s						
ANAR	Anarak	3.37	316	ePn	Pn	13 44 55.2	+1.0
ANAR				e		13 45 54.2	
	comp=Z,8μm,0.7s						
JHRM	Jahrom	3.44	229	ePn	Pb	13 44 57.7	-4.7
IDAH	Dahanechah	3.44	55	ePn	Pn	13 44 55.7	+0.4
IDAH				e		13 46 00.5	
	comp=Z,8μm,0.6s						
IMON	Monand	3.58	47	e		13 46 05.1	
	comp=Z,7μm,0.4s						
LAR1	LAR	3.64	212	ePn	Pn	13 44 58.5	+0.7
SHI	Shiraz	3.66	253	ePn	Pn	13 44 59.4	+1.2
SHI				e		13 46 08.4	
	comp=Z,5μm,0.8s						
IRAM	Ramesheh	3.69	287	ePn	Pn	13 44 59.9	+1.2
IRAM				e		13 45 59.3	
	comp=Z,6μm,0.6s						
NASN	Na'in	3.75	303	ePn	Pn	13 45 00.7	+1.1
QIR1	Qir	3.81	234	ePn	Pn	13 45 01.4	+1.2
ZHSF	Zahedan	3.86	107	ePn	Pn	13 45 01.6	+0.6
ZHDN	Zahedan	3.96	109	ePn	Pn	13 45 03.0	+0.6
IZEF	Zefreh	4.14	301	ePn	Pn	13 45 06.5	+1.5
IGAR	Gharneh	4.15	294	ePn	Pn	13 45 06.4	+1.4
IGAR				e		13 46 16.6	
	comp=Z,4μm,0.7s						
KLNJ	Kolanjah	4.25	274	ePn	Pn	13 45 08.3	+1.8
SHRT	Shahrakht	4.27	47	ePn	Pn	13 45 07.4	+0.9
KAZ1	Kazerun	4.39	256	ePn	Pn	13 45 09.3	+1.1
LMD1	Lamerd	4.53	221	ePn	Pn	13 45 11.2	+1.1
IBRJ	Brojen	4.64	285	ePn	Pn	13 45 15.3	+3.5
SHME	Shamm	4.74	184	P	Pn	13 45 14.4	+1.5
	SNR=7.2						
SHME	Shamm	4.74	184	P	Pn	13 45 14.1	+1.2
BANOM	Banah	4.86	182	P	Pn	13 45 15.8	+1.2
	SNR=23						
BANOM	Banah	4.86	182	i P	Pn	13 45 15.8	+1.2
	SNR=24						
KRSH	Karshahi	4.88	312	ePn	Pn	13 45 16.4	+1.4
KRSH				e		13 46 42.2	
	comp=Z,5μm,0.8s						
IKLH	Kolahrood	4.90	302	ePn	Pn	13 45 17.3	+2.0
IKLH				e		13 46 40.6	
	comp=Z,4μm,0.8s						
AHBU	AHRAM	4.94	248	ePn	Pn	13 45 16.8	+1.2
JASK	Jask - Hormozg	5.05	166	ePn	Pn	13 45 18.8	+1.6
JASK	Jask - Hormozg	5.05	166	P	Pn	13 45 19.7	+2.6
	SNR=11						
SHK1	Shahrekord	5.05	289	ePn	Pn	13 45 13.6	-3.9
ISFB	Sefidab	5.07	316	ePn	Pn	13 45 18.7	+1.2
TBHD	Torbat heydari	5.14	26	ePn	Pn	13 45 17.9	-0.6
IANJ	Anjilo	5.15	335	ePn	Pn	13 45 19.7	+0.9
IPIR	Pirpir	5.16	293	ePn	Pn	13 45 20.5	+1.5
QAMS	Qamsar	5.25	305	ePn	Pn	13 45 21.9	+1.8
UMQ	Umm Al-Quwin	5.30	189	P	Pn	13 45 22.2	+1.5
MASF	Masafi	5.41	184	P	Pn	13 45 24.2	+2.0
	SNR=16						
MASF				S	Sn	13 46 26.6	+2.0
MSFE	Esma-Masafi	5.42	184	i P	Pn	13 45 24.8	+2.4
	SNR=16						
MSFE				S	Sn	13 46 26.6	+1.7
ILAS	Lasjerd	5.47	328	ePn	Pn	13 45 24.2	+1.0
TBJM	Torbat-e-JAM	5.49	35	ePn	Pn	13 45 24.3	+1.0
ISHM	Shahmirzad	5.69	332	ePn	Pn	13 45 26.5	+0.3
GHVR	GHOM	5.75	311	ePn	Pn	13 45 28.4	+1.6
IFIR	Firoozkooh	5.78	328	ePn	Pn	13 45 28.6	+1.2
IVRN	Varamin	5.82	317	ePn	Pn	13 45 29.7	+1.9
NAZ	Nazwa, Dubai	5.83	188	i P	Pn	13 45 29.5	+1.5
	SNR=22						
HATD	Hatta, Dubai	5.96	183	P	Pn	13 45 32.5	+2.9
HRA	Herat	6.01	52	Pn	Pn	13 45 31.1	+0.6
JRKH	Jarkhoshk	6.02	31	ePn	Pn	13 45 31.2	+0.6
IDMV	Damavand	6.08	323	ePn	Pn	13 45 33.3	+1.7
FAQ	Al Faqa, Dubai	6.08	188	i P	Pn	13 45 32.7	+1.3
	SNR=16						
IAKL	Akhelmad	6.08	17	ePn	Pn	13 45 33.7	+2.1
ASHO	Ashiyiah	6.10	184	P	Pn	13 45 33.4	+1.7
	SNR=18						
ASHO				S	Sn	13 46 45.3	+3.7
ASHO	Ashiyiah	6.10	184	i P	Pn	13 45 33.3	+1.7
	SNR=18						
IQOM	Qom	6.12	313	ePn	Pn	13 45 33.2	+1.1
IGLO	Ghaloghah	6.12	339	ePn	Pn	13 45 33.1	+1.0
SRVN	Saravan	6.14	122	ePn	Pn	13 45 34.9	+2.5
DAMV	Damavand	6.15	323	ePn	Pn	13 45 34.0	+1.4
ASUD	Al Ashush, Dub	6.24	190	i P	Pn	13 45 35.6	+2.1
	SNR=15						
CHBR	Chabahar	6.24	145	ePn	Pn	13 45 33.2	-0.4
AMIS	Naft Sefid	6.26	280	ePn	Pn	13 45 34.7	+0.8
IMYA	Miami	6.29	27	ePn	Pn	13 45 35.6	+1.3
KHMZ	Khomeyn	6.29	300	ePn	Pn	13 45 36.3	+1.9
AJN	Ajban	6.36	193	P	Pn	13 45 38.2	+3.1
AJN				S	Sn	13 46 47.3	-0.5
AJN	Ajban	6.36	193	i P	Pn	13 45 37.3	+2.2
	SNR=11						
IHSB	Hasanabad	6.39	318	ePn	Pn	13 45 36.8	+1.1
IKRD	Kardeh	6.46	22	ePn	Pn	13 45 37.9	+1.1
IPRN	Peran	6.46	328	ePn	Pn	13 45 38.6	+1.9
IMND	Minoodasht	6.51	352	ePn	Pn	13 45 38.6	+1.3
ASAO	Ashtian	6.64	306	ePn	Pn	13 45 40.5	+1.3
ALNE	Al Ain	6.75	186	P	Pn	13 45 42.3	+1.8
ALNE				S	Sn	13 46 59.9	+2.4
NGCH	Negor - Chabah	6.77	142	ePn	Pn	13 45 42.4	+1.6
IEMG	Emamgholi	6.84	14	ePn	Pn	13 45 42.8	+0.8
MRVT	Maraveh tapeh	6.86	357	ePn	Pn	13 45 43.6	+1.5
BJRD	Bojnurd	6.93	6	ePn	Pn	13 45 44.4	+1.3
SHMA	Al-Shehemyia	6.95	226	P	Pn	13 45 46.5	+3.3
SHMA				S	Sn	13 47 02.1	-0.2
IRAZ	Razeghan	7.20	311	ePn	Pn	13 45 49.2	+2.3
HOQ	Hoqain	7.22	174	P	Pn	13 45 48.4	+1.5
HOQ				P	Pn	13 45 48.4	+1.5
GEYT	Alibeck	7.24	10	P	Pn	13 45 49.1	+1.9
	comp=Z,2.3nm,0.3s,baz=192,slow=14,SNR=36						
GEYT				S	Sb	13 47 21.2	-12
	comp=Z,21nm,1.0s,baz=171,slow=19,SNR=2.1						
GEYT				Lg	Lg	13 47 55.2	
	comp=Z,0.7nm,0.3s,baz=194,slow=24,SNR=2.4						
GEYT				LR	LR	13 49 14.5	
	comp=Z,238nm,19.2s,baz=202,slow=42						
	comp=Z,30nm,0.6s						
GEYT	Alibeck	7.24	10	Pn	Pn	13 45 48.7	+1.5
GYA0B	ALIBECK ARRAY	7.24	10		Pn	13 45 48.8	+1.6
BIDO	Bidbid	7.38	169	P	Pn	13 45 50.9	+1.7
MZWR	Madinat Zayed	7.39	199	P	Pn	13 45 50.2	+0.9
MZWR				S	Sn	13 47 13.7	+0.4
ARQ	Araqi	7.43	180	P	Pn	13 45 51.9	+2.0
	SNR=5.3						
ARQ				P	Pn	13 45 51.9	+2.0
	SNR=5.3						
QALM	Alamut, Qazvin	7.46	320	ePn	Pn	13 45 52.6	+2.1
HSAM	Samen	7.51	299	ePn	Pn	13 45 53.2	+2.0
QABG	Abgarm-Qazvin	7.61	312	ePn	Pn	13 45 53.8	+1.3
IDOB	Doab	7.67	295	ePn	Pn	13 45 55.7	+2.3
WSAR	Wadi Sarin	7.75	166	P	Pn	13 45 55.0	+0.7
	comp=Z,4.8nm,0.3s,baz=5.1,slow=12,SNR=20						
WSAR				S	Sn	13 47 21.5	-0.7
	comp=Z,21nm,0.8s,baz=53,slow=20,SNR=1.9						
WSAR				LR	LR	13 49 36.2	
	comp=Z,131nm,20.1s,baz=22,slow=43						
	comp=Z,21nm,0.4s						
WSAR	Wadi Sarin	7.75	166	P	Pn	13 45 55.7	+1.3
	SNR=18						
WSAR				S	Sn	13 47 24.3	+2.0
SMDO	Samad	7.82	170	P	Pn	13 45 56.4	+1.0
	SNR=5.4						
SMDO				P	Pn	13 45 56.4	+1.0
	SNR=5.4						
SMDO				S	Sn	13 47 24.8	+0.7
SMDO				S	Sn	13 47 24.8	+0.7
SLWR	Sila	7.96	214	P	Pn	13 45 58.8	+1.7
SLWR				S	Sn	13 47 24.9	-2.3
BSY	Bisya	8.04	176	P	Pn	13 46 01.7	+3.4
JIR1	Jirandeh	8.13	318	ePn	Pn	13 46 01.2	+1.5
GIDE	GILAN DEYLAMAN	8.22	320	ePn	Pn	13 46 02.1	+1.2
WBK	Wadi Bani Khal	8.44	164	P	Pn	13 46 05.1	+1.3
	SNR=6.9						
WBK				S	Sn	13 47 38.6	-0.5
JMDO	Jabal Madar	8.51	170	P	Pn	13 46 07.7	+3.0
JMDO				P	Pn	13 46 07.7	+3.0
ZNJK	Zanjan	8.77	314	ePn	Pn	13 46 10.5	+2.0
SNGE	Sanandaj	8.83	301	ePn	Pn	13 46 11.7	+2.5
MHTO	MHTO	9.85	172	P	Pn	13 46 24.2	+1.1
	SNR=15						
MHTO				P	Pn	13 46 24.2	+1.1
	SNR=15						
RAYN	Ar Rayn	12.19	236		Pn	13 46 51.1	-4.1
RAYN	Ar Rayn	12.19	236	P	Pn	13 46 54.1	-1.2
RAYN				S	Sn	13 49 06.7	-4.6
RAYN	Ar Rayn	12.19	236	i P	Pn	13 46 52.1	-3.1
	SNR=13						
DOK	Doka	12.32	191	P	Pn	13 46 55.4	-1.5
	SNR=5.4						
DOK				P	Pn	13 46 55.4	-1.5
	SNR=5.4						
WHFO	Wadi Hawf	13.06	192	P	Pn	13 47 04.5	-2.6
	SNR=9.3						
WHFO				P	Pn	13 47 04.5	-2.6
	SNR=9.3						
CEP	Cherat	13.36	73	⇓P	P	13 47 15.0	-5.8
ABTO	Aybut	13.70	193	P	P	13 47 19.3	-5.3
	SNR=18						
GAR	Garm	13.95	50		Pn	13 47 18.2	-1.1
GURO	Guroymak-BITLI	14.21	307		P	13 47 30.8	+0.6
NIL	Nilore	14.44	74	Pn	P	13 47 27.9	-4.9
BTK	Batken	14.85	48	P	P	13 47 37.7	+0.3
KOPT	Kop Dagi	15.97	310		P	13 47 52.0	+2.1
KOPT				IAmb	IAmb	13 47 59.6	
	comp=Z,24nm,1.1s						
KK31	Karatay Array	16.58	38	Pn	P	13 47 54.2	-2.3
KKAR	Karatay Array	16.58	38	Pn	P	13 47 54.2	-2.3
ASF	Jabal al Asfar	16.81	280	P	P	13 47 56.6	-2.5
	comp=Z,0.7nm,0.3s,baz=117,slow=18,SNR=3.2						
	comp=Z,2.3nm,0.4s						
KBZ	Khabaz	16.84	324	LR	LR	13 56 28.6	
	comp=Z,44nm,19.3s,baz=154,slow=44						
KIV	Kislovodsk	17.10	324		P	13 48 04.9	+2.6
KIV				IAmb	IAmb	13 48 08.8	
	comp=Z,13nm,0.6s						
KSH	Kashi	18.10	56	P	P	13 48 11.3	-2.1
KSH				sP	sP	13 48 19.0	+0.8
AAK	Ala-Archa	18.59	46	P	Pn	13 48 19.2	+0.2
	comp=Z,0.1nm,0.3s,baz=234,slow=9.2,SNR=5.8						
AAK				LR	LR	13 56 28.6	
	comp=Z,71nm,22.0s,baz=256,slow=40						
	comp=Z,1.9nm,0.8s						
AAK	Ala-Archa	18.59	46		Pn	13 48 17.7	-1.3
ABKAR	Akbulak array	18.62	7	P	Pn	13 48 18.8	-0.3
ABKAR	Akbulak array	18.62	7		Pn	13 48 19.0	-0.1
EIL	Elat	18.68	272	P	Pn	13 48 21.0	+1.0
	comp=Z,0.5nm,0.3s,baz=29,slow=4.8,SNR=3.1						
EIL				LR	LR	13 55 54.7	
	comp=Z,72nm,20.8s,baz=86,slow=38						
	comp=Z,5.6nm,0.7s						
NRN	Naryn	18.94	51	P	Pn	13 48 24.0	+0.6
NRN				IAmb	IAmb	13 48 27.3	
	comp=Z,4.8nm,0.7s						
BOOM	Boomskoye usch	19.41	48	Pn	Pn	13 48 29.8	+0.8
BOOM				IAmb	IAmb	13 48 31.4	
	comp=Z,4.8nm,0.7s						
BR131	Keskin Array S	20.66	302	P	Pn	13 48 41.7	-2.1
BR131				IAmb	IAmb	13 48 45.4	
	comp=Z,24nm,0.9s						
BRTR	Keskin Array B	20.66	302	P	Pn	13 48 42.6	-1.2
	comp=Z,8.7nm,0.8s,baz=119,slow=13,SNR=24						
BRTR				LR	LR	13 57 47.7	
	comp=Z,90nm,18.9s,baz=101,slow=40						
	comp=Z,8.7nm,0.8s						
BRTR	Keskin Array B	20.66	302	Pn	Pn	13 48 43.8	0.0
BELG	Belogornoye	22.55	346	P	P	13 49 02.5	+1.0
	comp=Z,12nm,1.0s,baz=135,slow=2.

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     comp=Z,6.7nm,0.6s
MAKZ Makanchi        25.32  44  P      P      13 49 28.9 +0.8
PKIN Phulchoki       25.38  90  eP     P      13 49 29.5 +0.3
     comp=Z,32nm,1.2s
PKI  Pulchoki        25.39  90  eP     P      13 49 30.2 +0.9
     comp=Z,31nm,1.2s
MK31 Makanchi Array  25.50  44  P      P      13 49 30.6 +0.8
MK31                            IAmb   IAmb   13 49 32.5
     comp=Z,6.7nm,1.0s
MKAR Makanchi Array  25.50  44  P      P      13 49 30.8 +1.0
     comp=Z,3.8nm,0.7s,baz=231,slow=9.6,SNR=27
MKAR                            LR     LR     14 00 28.7
     comp=Z,54nm,19.4s,baz=288,slow=38
     comp=Z,3.8nm,0.7s
MKAR Makanchi Array  25.50  44  P      P      13 49 30.4 +0.6
ARU  Arti            25.67   3  P      P      13 49 33.4 +2.2
     comp=Z,1.6nm,0.2s,baz=143,slow=20,SNR=4.3
ARU                             LR     LR     14 00 27.1
     comp=Z,63nm,20.9s,baz=253,slow=38
     comp=Z,1.6nm,0.2s
GUN  Gumba           25.71  89  eP     P      13 49 34.7 +2.4
     comp=Z,28nm,1.0s
KURBB Kurchatov Arra 25.72  33  P      P      13 49 32.5 +0.7
     comp=Z,7.1nm,0.8s,baz=233,slow=9.5,SNR=33
     comp=Z,7.1nm,0.8s
JIRN Jiri            26.04  89  eP     P      13 49 36.6 +1.3
     comp=Z,15nm,0.8s
RAMN Ramite          26.57  91  eP     P      13 49 39.0 -1.0
     comp=Z,7.9nm,0.7s
IDI  Anoyia          26.84 288  LR     LR     14 02 43.7
     comp=Z,51nm,21.4s,baz=102,slow=42
WMQ  Urumqi          27.82  53  eP     P      13 49 54.3 +3.5
KIRV Kirov           28.21 352  LR     LR     14 04 09.0
     comp=Z,58nm,19.2s,baz=167,slow=42
AKASG Malin Array Be 28.43 322  P      P      13 49 56.8 +0.7
     comp=Z,0.7nm,0.3s,baz=120,slow=8.7,SNR=4.6
     comp=Z,0.1nm,0.3s
ZAA0 Zalesovo Array  30.82  33  P      P      13 50 17.4 +0.2
ZAA0                            IAmb   IAmb   13 50 18.5
     comp=Z,6.0nm,0.6s
ZALV Zalesovo Beam   30.82  33  P      P      13 50 17.6 +0.4
     comp=Z,5.8nm,0.6s,baz=240,slow=9.2,SNR=30
ZALV                            LR     LR     14 02 53.0
     comp=Z,47nm,18.9s,baz=240,slow=36
     comp=Z,5.8nm,0.6s
ZALV Zalesovo Beam   30.82  33  P      P      13 50 17.3 +0.1
AQU  L'Aquila        36.15 301  P      P      13 51 03.4 -0.5
GTA  Gaotai          36.16  64  eP     P      13 51 05.8 +1.7
GTA                             pP     sP     13 51 10.0 +0.9
GTA                             sP     pP     13 51 12.8 +5.1
FINES FINESS Array B 36.56 336  P      P      13 51 07.2 +0.1
     comp=Z,1.2nm,0.7s,baz=134,slow=10.0,SNR=6.6
FINES                           LR     LR     14 10 47.3
     comp=Z,39nm,18.4s,baz=106,slow=44
     comp=Z,1.2nm,0.7s
FINES FINESS Array B 36.56 336  P      P      13 51 07.6 +0.6
GERES GERESS Array B 36.93 312  P      P      13 51 09.4 -1.2
     comp=Z,0.7nm,0.7s,baz=102,slow=9.2,SNR=2.5
KHC  Kasperske Hory  37.08 312  eP     P      13 51 12.3 +0.6
CLL  Collm           37.98 315  eP     P      13 51 21.0 +1.7
CLL                             ePP    PnPn   13 52 46.0 -1.2
MBAR Mbarara         39.70 223  LR     LR     14 07 18.5
     comp=Z,55nm,19.9s,baz=36,slow=35
PZH  PanZhiHua       39.71  85  P      P      13 51 36.0 +1.8
CHTO Chiang Mai      40.09  97  P      P      13 51 36.8 -0.5
CMAR Chiang Mai Arr  40.24  98  P      P      13 51 37.5 -1.1
     comp=Z,1.0nm,0.5s,baz=292,slow=7.9,SNR=13
CMAR                            LR     LR     14 12 29.5
     comp=Z,25nm,18.5s,baz=290,slow=42
     comp=Z,1.0nm,0.5s
SONM Songino Array   41.40  51  P      P      13 51 48.1 +0.2
     comp=Z,1.2nm,0.8s,baz=267,slow=11,SNR=8.7
SONM                            LR     LR     14 11 52.3
     comp=Z,46nm,19.0s,baz=291,slow=40
     comp=Z,1.2nm,0.8s
SONM Songino Array   41.40  51  P      P      13 51 48.9 +0.9
SONM                            IAmb   IAmb   13 51 50.8
     comp=Z,6.1nm,1.4s
NOA  NORSAR Array B  42.31 329  P      P      13 51 54.9 -0.2
     comp=Z,1.2nm,0.8s,baz=120,slow=8.9,SNR=4.4
     comp=Z,1.2nm,0.8s
ARCES ARCESS Array B 42.59 344  LR     LR     14 11 37.6
     comp=Z,53nm,18.1s,baz=248,slow=39
HHC  Hu-ho-hao-te    45.09  61  eP     P      13 52 17.5 -0.3
ESDC Sonseca Array   49.38 298  P      P      13 52 51.2 -0.1
     comp=Z,0.7nm,0.8s,baz=68,slow=7.1,SNR=5.4
ESDC                            PcP    PcP    13 54 11.2 -2.5
     comp=Z,0.9nm,0.9s,baz=53,slow=4.2,SNR=2.7
     comp=Z,0.7nm,0.8s
OPO  Ambohidratompo  49.90 192  LR     LR     14 13 29.4
     comp=Z,30nm,21.8s,baz=254,slow=35
TOA0 Torodi Ar. Sit  53.28 263  P      P      13 53 20.8 +0.1
TOA0 Torodi Ar. Sit  53.28 263  P      P      13 53 22.2 +1.5
     SNR=6.9
TORD Torodi Ar. Bea  53.28 263  P      P      13 53 19.9 -0.8
     comp=Z,6.0nm,0.8s,baz=61,slow=5.6,SNR=33
     comp=Z,6.0nm,0.8s
TORD Torodi Ar. Bea  53.28 263  P      P      13 53 20.7  0.0
TORD                            IAmb   IAmb   13 53 23.6
     comp=Z,5.4nm,0.9s
KLR  Kul'dur         58.09  48  LR     LR     14 21 24.8
     comp=Z,44nm,18.9s,baz=272,slow=38
KSRS Korea Array     58.20  63  LR     LR     14 21 43.8
     comp=Z,40nm,18.8s,baz=130,slow=39
JOW  Kunigami        61.99  74  LR     LR     14 25 53.7
     comp=Z,81nm,19.4s,baz=222,slow=40
DBIC Dimbokro        62.09 261  P      P      13 54 23.0 +0.3
     comp=Z,6.6nm,1.1s,baz=49,slow=11,SNR=3.7
     comp=Z,6.6nm,1.1s
LBTB Lobatse         62.90 212  LR     LR     14 25 40.8
     comp=Z,44nm,18.1s,baz=41,slow=40
BBTS Babate          68.24 274  LR     LR     14 27 14.1
     comp=Z,62nm,18.7s,baz=34,slow=38
SUR  Sutherland      71.36 211  LR     LR     14 30 21.6
     comp=Z,68nm,18.9s,baz=349,slow=39
TOLK Toolik Lake Re  79.00   9  P      P      13 56 06.4 +1.3
IMAR Indian Mountai  80.76  12  P      P      13 56 15.0 +0.4
BMAR Burnt Mountain  80.79   8  P      P      13 56 16.4 +1.5
H21K Melozitna Rive  81.22  12  P      P      13 56 18.1 +1.0
H21K                            IAmb   IAmb   13 56 22.2
     comp=Z,10nm,1.4s
H23K Yukon River     81.61  11  P      P      13 56 20.2 +1.0
H23K                            IAmb   IAmb   13 57 02.8
     comp=Z,2.5nm,1.1s
ILAR Eielson Array   83.00  10  P      P      13 56 25.8 -0.7
     comp=Z,0.5nm,0.8s,baz=337,slow=4.3,SNR=5.0
     comp=Z,0.5nm,0.8s
CAST Castle Rocks    83.39  13  P      P      13 56 28.7 +0.1
J26L Joseph Creek    83.72   9  P      P      13 56 30.0 -0.3
J26L                            IAmb   IAmb   13 56 41.9
     comp=Z,3.0nm,1.1s
KDAK Kodiak Island   88.43  15  LR     LR     14 43 58.0
     comp=Z,140nm,20.1s,baz=234,slow=41
ASAR Alice Springs   91.77 116  P      P      13 57 08.6 -1.1
     comp=Z,0.6nm,0.8s,baz=299,slow=3.8,SNR=6.0
     comp=Z,0.6nm,0.8s
```

ROM 31 13:50:36.5±0.1, 43°.028N±0°.004×13°.122E±0°.007, h6km, ML2.9/9, 2C-4D, Error ellipse: s-maj=0.5km s-min=0.5km az=217.0, Central Italy

```
Code Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC       h m s    ISC
FDMO Fiordimonte     0.03 288  P     Pg        13 50 37.6 -0.2
FDMO                           S     Sg        13 50 38.2 -0.6
FDMO                           AML   AML
FDMO                           AML   AML
     comp=E,56450µm,0.3s
FDMO                           AML   AML
     comp=E,56456µm,0.3s
T1256 Bolognola (MC) 0.08 106  P     Pg        13 50 38.8 +0.2
T1256                          S     Sg        13 50 40.7 +0.7
T1256                          AML   AML
     comp=E,8310µm,0.7s
T1256                          AML   AML
     comp=E,8470µm,0.7s
T1256                          AML   AML
     comp=N,6720µm,0.7s
T1256                          AML   AML
     comp=E,8575µm,0.3s
T1256                          AML   AML
     comp=N,7010µm,0.7s
T1256                          AML   AML
     comp=E,8570µm,0.3s
T1256                          AML   AML
     comp=E,8560µm,0.3s
T1256                          AML   AML
     comp=N,6715µm,0.7s
T1256                          AML   AML
     comp=E,8595µm,0.3s
T1256                          AML   AML
     comp=N,6539µm,0.5s
T1256                          AML   AML
     comp=E,8314µm,0.7s
T1256                          AML   AML
     comp=N,6076µm,0.6s
T1256                          AML   AML
     comp=E,8466µm,0.7s
FEMA Monte Fema      0.09 219  P     Pg        13 50 39.1 +0.5
FEMA                           S     Sg        13 50 41.0 +1.0
FEMA                           AML   AML
     comp=N,12300µm,1.5s
FEMA                           AML   AML
     comp=E,11650µm,0.8s
FEMA                           AML   AML
     comp=N,12350µm,1.5s
FEMA                           AML   AML
     comp=N,11259µm,0.4s
FEMA                           AML   AML
     comp=E,10330µm,0.3s
T1216 Preci, Frazion 0.16 209  P     Pg        13 50 40.4 +0.7
T1216                          S     Sg        13 50 43.3 +1.5
T1216                          AML   AML
     comp=E,7470µm,0.7s
T1216                          AML   AML
     comp=N,5140µm,0.4s
T1216                          AML   AML
     comp=E,9295µm,0.4s
T1216                          AML   AML
     comp=N,8725µm,0.2s
T1216                          AML   AML
     comp=E,9280µm,0.4s
T1216                          AML   AML
     comp=N,8730µm,0.2s
T1216                          AML   AML
     comp=E,7469µm,0.7s
T1216                          AML   AML
     comp=N,5139µm,0.3s
T1216                          AML   AML
     comp=E,6719µm,0.3s
GUMA Gualdo di Mace  0.16  78  P     Pg        13 50 40.8 +1.0
GUMA                           AML   AML
     comp=N,13200µm,0.5s
GUMA                           AML   AML
     comp=E,11450µm,0.3s
GUMA                           AML   AML
     comp=N,13200µm,0.5s
GUMA                           AML   AML
     comp=N,13250µm,0.4s
GUMA                           AML   AML
     comp=E,15700µm,0.3s
GUMA                           AML   AML
     comp=E,7784µm,0.4s
GUMA                           AML   AML
     comp=N,6468µm,0.5s
GUMA                           AML   AML
     comp=N,8485µm,0.8s
GUMA                           AML   AML
     comp=E,7496µm,0.4s
MDAR Monte D'Aria    0.17   5  P     Pg        13 50 40.3 +0.4
MDAR                           S     Sg        13 50 43.5 +1.3
SEF1 Sefro           0.17 313  P     Pg        13 50 40.6 +0.6
SEF1                           S     Sg        13 50 44.2 +1.8
AM05 Amandola Campo  0.18 107  P     Pg        13 50 40.7 +0.7
AM05                           AML   AML
     comp=E,8640µm,1.2s
AM05                           AML   AML
     comp=N,456µm,1.5s
AM05                           AML   AML
     comp=E,2110µm,1.2s
AM05                           AML   AML
     comp=N,1735µm,1.5s
AM05                           AML   AML
     comp=N,456µm,1.5s
AM05                           AML   AML
     comp=E,8635µm,1.2s
AM05                           AML   AML
     comp=N,135µm,0.1s
PIO1 Pioraco         0.18 326  P     Pg        13 50 40.6 +0.5
MMO1 Montemonaco     0.20 130  P     Pg        13 50 41.2 +0.8
SSM1 San Severino M  0.20  11  P     Pg        13 50 41.0 +0.4
SSM1                           S     Sg        13 50 44.9 +1.6
FIU1 Fiuminata       0.21 319  P     Pg        13 50 41.1 +0.4
FIU1                           S     Sg        13 50 45.2 +1.7
GAG1 Gagliole        0.21 349  S     Sg        13 50 42.0 -1.6
SNTG Esanatoglia     0.26 330  P     Pg        13 50 42.0 +0.3
SNTG                           S     Sb        13 50 47.5 -0.9
T1215 Vallo di Nera, 0.29 220  ⇓P    Pg        13 50 40.2 -2.0
T1215                          AML   AML
     comp=N,2415µm,0.9s
T1215                          AML   AML
     comp=N,2410µm,0.9s
T1215                          AML   AML
     comp=E,2335µm,0.3s
T1215                          AML   AML
     comp=E,618µm,0.6s
T1215                          AML   AML
     comp=N,606µm,0.3s
T1215                          AML   AML
     comp=E,639µm,0.5s
T1215                          AML   AML
     comp=N,601µm,0.3s
EL6  Elcito          0.30 357  P     Pg        13 50 42.9 +0.4
EL6                            S     Sb        13 50 48.6 -1.0
ASSB Assisi San Ben  0.34 273  P     Pg        13 50 43.6 +0.4
ASSB                           S     Sb        13 50 49.5 -1.2
FOSV Fossato di Vic  0.38 315  P     Pg        13 50 44.1 +0.4
FOSV                           S     Sb        13 50 50.9 -0.7
ATCC AVT- Casa Cast  0.39 294  P     Pg        13 50 44.6 +0.6
ATCC                           S     Sb        13 50 51.5 -0.4
T1243 Rocca Santa Ma 0.41 144  ⇓P    Pb        13 50 45.5 -0.6
MMUR Monte Murano    0.42 348  P     Pg        13 50 45.0 +0.2
MMUR                           S     Sb        13 50 52.7 -0.4
LNSS Leonessa        0.43 188  S     Sb        13 50 53.0 -0.2
SSFR Montelago di S  0.48 329  P     Pg        13 50 46.0 +0.3
ARVD Arcevia         0.49 344  P     Pg        13 50 46.1 +0.2
ARVD                           S     Sb        13 50 54.7 -0.1
MURB Monte Urbino    0.50 298  P     Pg        13 50 46.6 +0.6
MURB                           S     Sb        13 50 55.1  0.0
PP3  Marolino        0.50  45  ⇓P    Pg        13 50 45.8 -0.3
PP3                            AML   AML
     comp=E,6380µm,0.4s
PP3                            AML   AML
     comp=E,6135µm,0.4s
PP3                            AML   AML
     comp=N,5765µm,0.3s
PP3                            AML   AML
     comp=N,5770µm,0.3s
PP3                            AML   AML
     comp=N,5550µm,0.3s
PP3                            AML   AML
     comp=E,6385µm,0.4s
PP3                            AML   AML
     comp=E,6140µm,0.4s
PP3                            AML   AML
     comp=N,1384µm,0.3s
PP3                            AML   AML
     comp=N,1301µm,0.3s
PP3                            AML   AML
     comp=E,1254µm,0.3s
PP3                            AML   AML
     comp=E,1237µm,0.3s
ATFO Monte Foce - G  0.53 310  P     Pg        13 50 47.0 +0.3
ATFO                           S     Sb        13 50 56.0  0.0
T1211 Morro Reatino  0.53 202  P     Pg        13 50 47.2 +0.4
T1211                          AML   AML
     comp=E,2675µm,1.3s
T1211                          AML   AML
     comp=N,4250µm,0.2s
T1211                          AML   AML
     comp=E,2655µm,1.3s
T1211                          AML   AML
     comp=E,2670µm,1.3s
T1211                          AML   AML
     comp=E,2670µm,1.3s
T1211                          AML   AML
     comp=N,4280µm,0.2s
T1211                          AML   AML
     comp=N,4245µm,0.2s
T1211                          AML   AML
     comp=E,2660µm,1.3s
T1211                          AML   AML
     comp=N,729µm,0.4s
T1211                          AML   AML
     comp=E,254µm,0.2s
T1211                          AML   AML
     comp=E,241µm,0.5s
T1211                          AML   AML
     comp=N,698µm,0.3s
CESX Cesi            0.58 224  ⇓P    Pg        13 50 47.8 +0.2
CESX                           S     Sb        13 50 57.0 -0.4
ATVO AVT- Monte Val  0.63 304  P     Pg        13 50 48.8 +0.2
ATVO                           S     Sb        13 50 59.2 +0.2
GIGS Gran Sasso      0.67 150  ⇑P    Pg        13 50 49.5 +0.3
GIGS                           AML   AML
     comp=E,350µm,1.4s
GIGS                           AML   AML
     comp=N,382µm,1.0s
GIGS                           AML   AML
     comp=E,350µm,1.4s
ATPI Pietralunga -   0.67 309  P     Pg        13 50 49.6 +0.1
ATPI                           S     Sb        13 51 00.8 +0.5
ATMI Monte Miggiano  0.69 296  P     Pn        13 50 53.5 +0.7
NARO Abbazia di Nar  0.70 326  P     Pg        13 50 49.9 -0.1
NARO                           S     Sb        13 51 01.8 +0.7
APEC Apecchio        0.74 316  P     Pg        13 50 51.2 +0.5
BADI Badiali         0.80 307  P     Pg        13 50 52.0 +0.1
FAGN Fagnano         0.83 156  S     Sn        13 51 07.0 -0.4
T0110 Collepietro    0.94 149  ⇑P    Pg        13 50 54.2 -0.3
T0110                          AML   AML
     comp=N,1066µm,0.4s
T0110                          AML   AML
     comp=N,1066µm,0.4s
T0110                          AML   AML
     comp=E,990µm,0.5s
T0110                          AML   AML
     comp=E,402µm,0.6s
T0110                          AML   AML
     comp=N,370µm,0.5s
CRE  Caprese Michel  1.04 305  P     Pg        13 50 56.6 +0.2
```

ROM 31 13:51:15.7±0.1, 42°.796N±0°.005×13°.151E±0°.005, h11km, ML2.8/45, 31C-15D, Error ellipse: s-maj=0.6km s-min=0.3km az=337.0, Central Italy

```
Code Station Name    Δ°   AZ°  Phase ID          Time     Res
                                Op    ISC       h m s    ISC
T1245 Castelsantange 0.07  24  P     Pg        13 51 18.5 +0.3
T1245                          S     Sg        13 51 20.1 +0.1
T1245                          AML   AML
     comp=E,64500µm,0.7s
T1245                          AML   AML
     comp=E,62200µm,0.7s
T1245                          AML   AML
     comp=E,64450µm,0.7s
T1245                          AML   AML
     comp=N,79550µm,0.3s
T1245                          AML   AML
     comp=N,79100µm,0.3s
T1245                          AML   AML
     comp=N,79093µm,0.3s
T1245                          AML   AML
     comp=E,54286µm,0.2s
T1245                          AML   AML
     comp=E,57859µm,0.2s
T1245                          AML   AML
     comp=N,79532µm,0.3s
T1216 Preci, Frazion 0.14 314  ⇓P    Pg        13 51 19.5 +0.5
T1216                          S     Sg        13 51 21.9 +0.6
T1216                          AML   AML
     comp=E,9270µm,0.4s
T1216                          AML   AML
     comp=N,8730µm,0.2s
T1216                          AML   AML
     comp=E,9295µm,0.4s
T1216                          AML   AML
     comp=N,8725µm,0.2s
T1216                          AML   AML
     comp=E,9280µm,0.4s
T1216                          AML   AML
     comp=N,8730µm,0.2s
T1216                          AML   AML
     comp=E,9275µm,0.4s
T1216                          AML   AML
     comp=N,8728µm,0.2s
T1216                          AML   AML
     comp=E,9272µm,0.4s
MMO1 Montemonaco     0.17  51  ⇑P    Pg        13 51 20.0 +0.5
MMO1                           S     Sg        13 51 23.2 +1.1
T1204 Amatrice, Fraz 0.17 134  ⇑P    Pg        13 51 20.2 +0.6
T1204                          S     Sg        13 51 23.2 +1.0
T1204                          AML   AML
     comp=E,19250µm,0.3s
T1204                          AML   AML
     comp=N,11300µm,0.7s
T1204                          AML   AML
     comp=N,11350µm,0.7s
T1204                          AML   AML
     comp=N,11315µm,0.7s
T1204                          AML   AML
     comp=N,11335µm,0.7s
T1204                          AML   AML
     comp=E,19300µm,0.3s
T1204                          AML   AML
     comp=E,19270µm,0.3s
T1204                          AML   AML
     comp=N,11290µm,0.2s
FEMA Monte Fema      0.18 336  ⇑P    Pg        13 51 20.5 +0.7
FEMA                           AML   AML
     comp=E,6155µm,0.2s
FEMA                           AML   AML
     comp=N,5660µm,1.5s
FEMA                           AML   AML
     comp=E,6160µm,0.2s
FEMA                           AML   AML
     comp=N,5655µm,1.5s
FEMA                           AML   AML
     comp=N,4232µm,0.1s
FEMA                           AML   AML
     comp=E,6159µm,0.2s
T1217 Poggiodomo (PG 0.18 243  ⇑P    Pg        13 51 20.2 +0.5
T1217                          AML   AML
     comp=N,4085µm,0.6s
T1217                          AML   AML
     comp=N,3960µm,0.6s
T1217                          AML   AML
     comp=E,4700µm,0.7s
T1217                          AML   AML
     comp=E,4675µm,0.7s
T1217                          AML   AML
     comp=N,2868µm,0.3s
T1217                          AML   AML
     comp=E,3892µm,0.3s
T1217                          AML   AML
     comp=E,3804µm,0.3s
T1217                          AML   AML
     comp=N,2854µm,0.3s
T1215 Vallo di Nera, 0.21 272  ⇑P    Pg        13 51 20.7 +0.6
T1215                          AML   AML
     comp=E,2340µm,0.3s
T1215                          AML   AML
     comp=N,2415µm,0.9s
T1215                          AML   AML
     comp=E,2340µm,0.3s
T1215                          AML   AML
     comp=N,2410µm,0.9s
T1215                          AML   AML
     comp=N,1893µm,0.1s
T1215                          AML   AML
     comp=E,1352µm,0.1s
T1215                          AML   AML
     comp=E,2017µm,0.2s
T1215                          AML   AML
     comp=N,1867µm,0.1s
LNSS Leonessa        0.21 203  ⇑P    Pg        13 51 20.7 +0.5
LNSS                           S     Sg        13 51 24.5 +1.3
LNSS                           AML   AML
     comp=N,28500µm,0.3s
LNSS                           AML   AML
     comp=E,20500µm,0.2s
LNSS                           AML   AML
     comp=N,28491µm,0.3s
LNSS                           AML   AML
     comp=E,20483µm,0.2s
SMA1 SAN MARTINO     0.21 140  ⇑P    Pg        13 51 20.8 +0.6
SMA1                           S     Sg        13 51 24.4 +1.0
SMA1                           AML   AML
     comp=E,7680µm,0.2s
```

SMA1				AML	AML	
	comp=N,5575µm,0.4s					
SMA1				AML	AML	
	comp=N,5573µm,0.4s					
T1241	**Roccafluvione,**	**0.21**	**74**	⇑P	Pg	13 51 20.9 +0.7
T1241				S	Sg	13 51 24.7 +1.4
T1241				AML	AML	
	comp=E,13800µm,0.2s					
T1241				AML	AML	
	comp=N,7320µm,0.4s					
T1241				AML	AML	
	comp=E,13800µm,0.3s					
T1241				AML	AML	
	comp=N,7325µm,0.4s					
T1241				AML	AML	
	comp=N,7170µm,0.4s					
T1241				AML	AML	
	comp=N,7320µm,0.3s					
T1241				AML	AML	
	comp=E,13801µm,0.3s					
T1241				AML	AML	
	comp=E,13795µm,0.2s					
T1241				AML	AML	
	comp=N,6766µm,0.2s					
T1241				AML	AML	
	comp=N,5719µm,0.1s					
T1256	**Bolognola (MC)**	**0.22**	**15**	⇓P	Pg	13 51 21.1 +0.7
T1256				AML	AML	
	comp=E,8560µm,0.3s					
T1256				AML	AML	
	comp=N,4895µm,0.5s					
T1256				AML	AML	
	comp=E,8575µm,0.3s					
T1256				AML	AML	
	comp=N,5100µm,0.5s					
T1256				AML	AML	
	comp=E,8570µm,0.3s					
T1256				AML	AML	
	comp=E,8580µm,0.3s					
T1256				AML	AML	
	comp=E,8595µm,0.3s					
T1256				AML	AML	
	comp=N,5100µm,0.5s					
T1256				AML	AML	
	comp=N,4890µm,0.5s					
T1256				AML	AML	
	comp=N,5018µm,0.2s					
T1256				AML	AML	
	comp=E,8575µm,0.3s					
T1256				AML	AML	
	comp=E,8576µm,0.3s					
T1256				AML	AML	
	comp=N,4567µm,0.2s					
AM05	**Amandola Campo**	**0.23**	**39**	⇑P	Pb	13 51 21.4 -0.7
AM05				AML	AML	
	comp=E,2110µm,1.2s					
AM05				AML	AML	
	comp=E,8640µm,1.2s					
AM05				AML	AML	
	comp=N,456µm,1.5s					
AM05				AML	AML	
	comp=N,456µm,1.5s					
AM05				AML	AML	
	comp=N,1735µm,1.5s					
AM05				AML	AML	
	comp=E,8635µm,1.2s					
AM05				AML	AML	
	comp=N,418µm,0.1s					
AM05				AML	AML	
	comp=N,1426µm,0.3s					
AM05				AML	AML	
	comp=E,1733µm,0.2s					
AM05				AML	AML	
	comp=E,6989µm,0.2s					
T1243	**Rocca Santa Ma**	**0.24**	**114**	P	Pg	13 51 21.1 +0.4
T1243				S	Sg	13 51 25.1 +0.9
FDMO	**Fiordimonte**	**0.24**	**349**	⇑P	Pg	13 51 21.5 +0.7
FDMO				AML	AML	
	comp=E,4790µm,0.2s					
FDMO				AML	AML	
	comp=N,6210µm,0.1s					
FDMO				AML	AML	
	comp=N,6211µm,0.1s					
FDMO				AML	AML	
	comp=E,3508µm,0.1s					
RM33	**Pellescritta (**	**0.29**	**171**	P	Pg	13 51 22.0 +0.3
RM33				S	Sb	13 51 26.9 -1.0
RM33				AML	AML	
	comp=N,3070µm,0.2s					
RM33				AML	AML	
	comp=N,3065µm,0.2s					
RM33				AML	AML	
	comp=N,3000µm,0.2s					
RM33				AML	AML	
	comp=N,3070µm,0.2s					
RM33				AML	AML	
	comp=N,3005µm,0.2s					
RM33				AML	AML	
	comp=E,2775µm,0.9s					
RM33				AML	AML	
	comp=E,2840µm,0.9s					
RM33				AML	AML	
	comp=N,3069µm,0.2s					
RM33				AML	AML	
	comp=N,3002µm,0.2s					
RM33				AML	AML	
	comp=E,2633µm,0.4s					
RM33				AML	AML	
	comp=E,2734µm,0.3s					
GUMA	**Gualdo di Mace**	**0.30**	**27**	⇑P	Pb	13 51 22.7 -0.4
GUMA				AML	AML	
	comp=N,13200µm,0.5s					
GUMA				AML	AML	
	comp=N,13250µm,0.4s					
GUMA				AML	AML	
	comp=E,15700µm,0.3s					
GUMA				AML	AML	
	comp=N,13200µm,0.5s					
GUMA				AML	AML	
	comp=E,11450µm,0.3s					
GUMA				AML	AML	
	comp=E,11446µm,0.3s					
GUMA				AML	AML	
	comp=E,15730µm,0.3s					
GUMA				AML	AML	
	comp=N,13217µm,0.5s					
GUMA				AML	AML	
	comp=N,13259µm,0.4s					
CAMP	**Campotosto**	**0.32**	**144**	⇓P	Pg	13 51 22.6 +0.3
CAMP				S	Sg	13 51 27.6 +1.1
CAMP				AML	AML	
	comp=E,1590µm,0.2s					
CAMP				AML	AML	
	comp=N,2255µm,0.3s					
CAMP				AML	AML	
	comp=E,1594µm,0.2s					
CAMP				AML	AML	
	comp=N,2253µm,0.3s					
T1211	**Morro Reatino**	**0.34**	**220**	⇑P	Pg	13 51 23.0 +0.4
T1211				AML	AML	
	comp=E,2675µm,1.3s					
T1211				AML	AML	
	comp=E,2655µm,1.3s					
T1211				AML	AML	
	comp=N,4280µm,0.2s					
T1211				AML	AML	
	comp=E,2670µm,1.3s					
T1211				AML	AML	
	comp=N,4250µm,0.2s					
T1211				AML	AML	
	comp=E,2670µm,1.3s					
T1211				AML	AML	
	comp=N,4245µm,0.2s					
T1211				AML	AML	
	comp=E,2660µm,1.3s					
T1211				AML	AML	
	comp=N,4279µm,0.2s					
T1211				AML	AML	
	comp=N,4247µm,0.2s					
T1211				AML	AML	
	comp=E,2437µm,0.2s					
T1211				AML	AML	
	comp=E,2455µm,0.2s					
ARRO	**Arrone**	**0.36**	**233**	⇑P	Pg	13 51 23.2 +0.4
T1247	**Pizzolo (AQ)**	**0.37**	**163**	P	Pb	13 51 23.9 -0.4
T1247				S	Sb	13 51 29.7 -0.4
TERO	**Teramo**	**0.38**	**117**	⇑P	Pg	13 51 23.4 +0.2
TERO				AML	AML	
	comp=E,2040µm,0.4s					
TERO				AML	AML	
	comp=E,2210µm,0.4s					
TERO				AML	AML	
	comp=N,2360µm,1.2s					
TERO				AML	AML	
	comp=N,2180µm,0.5s					
TERO				AML	AML	
	comp=E,2035µm,0.4s					
TERO				AML	AML	
	comp=N,2054µm,0.2s					
TERO				AML	AML	
	comp=N,1912µm,0.2s					
TERO				AML	AML	
	comp=E,1567µm,0.2s					
TERO				AML	AML	
	comp=E,1400µm,0.2s					
SEF1	**Sefro**	**0.38**	**337**	⇓P	Pb	13 51 23.9 -0.6
SEF1				AML	AML	
	comp=N,3026µm,0.2s					
SEF1				AML	AML	
	comp=E,4650µm,0.2s					
MNTP	**Montappone**	**0.41**	**34**	⇓P	Pb	13 51 25.3 +0.2
MNTP				AML	AML	
	comp=E,4300µm,0.6s					
MNTP				AML	AML	
	comp=N,4245µm,1.1s					
MNTP				AML	AML	
	comp=E,4305µm,0.6s					
MNTP				AML	AML	
	comp=N,4240µm,1.1s					
MNTP				AML	AML	
	comp=N,4088µm,0.3s					
MNTP				AML	AML	
	comp=E,3523µm,0.2s					
OFFI	**Offida**	**0.42**	**70**	⇓P	Pg	13 51 23.4 -0.5
OFFI				AML	AML	
	comp=E,3360µm,0.4s					
OFFI				AML	AML	
	comp=N,3255µm,0.3s					
OFFI				AML	AML	
	comp=E,3360µm,0.4s					
OFFI				AML	AML	
	comp=N,3258µm,0.3s					
ASSB	**Assisi San Ben**	**0.44**	**304**	⇑P	Pg	13 51 24.7 +0.3
ASSB				AML	AML	
	comp=N,1515µm,0.9s					
ASSB				AML	AML	
	comp=E,1200µm,0.8s					
ASSB				AML	AML	
	comp=E,1120µm,0.3s					
ASSB				AML	AML	
	comp=N,1440µm,0.2s					
CESX	**Cesi**	**0.46**	**246**	⇑P	Pg	13 51 24.9 +0.2
CESX				AML	AML	
	comp=E,1004µm,0.3s					
CESX				AML	AML	
	comp=N,1275µm,1.0s					
CESX				AML	AML	
	comp=N,1137µm,0.3s					
CESX				AML	AML	
	comp=E,1003µm,0.3s					
GIGS	**Gran Sasso**	**0.46**	**138**	⇑P	Pg	13 51 24.8 -0.1
GIGS				AML	AML	
	comp=E,350µm,1.4s					
GIGS				AML	AML	
	comp=N,382µm,1.0s					
GIGS				AML	AML	
	comp=E,350µm,1.4s					
GIGS				AML	AML	
	comp=E,311µm,0.3s					
GIGS				AML	AML	
	comp=N,382µm,1.0s					
SNTG	**Esanatoglia**	**0.48**	**342**	⇑P	Pg	13 51 25.7 +0.5
SNTG				AML	AML	
	comp=E,604µm,0.2s					
SNTG				AML	AML	
	comp=N,537µm,1.5s					
SNTG				AML	AML	
	comp=N,514µm,0.1s					
SNTG				AML	AML	
	comp=E,585µm,0.2s					
SNTG				AML	AML	
	comp=E,604µm,0.2s					
SNTG				AML	AML	
	comp=N,435µm,0.2s					
FIAM	**Fiamignano**	**0.53**	**183**	⇑P	Pg	13 51 26.0 0.0
FIAM				S	Sb	13 51 35.0 +0.3
FIAM				AML	AML	
	comp=E,983µm,1.4s					
FIAM				AML	AML	
	comp=N,680µm,0.6s					
FIAM				AML	AML	
	comp=N,670µm,0.3s					
FIAM				AML	AML	
	comp=E,878µm,0.3s					
EL6	**Elcito**	**0.53**	**356**	P	Pb	13 51 26.8 -0.4
EL6				S	Sb	13 51 36.0 +1.0
EL6				AML	AML	
	comp=E,1400µm,1.6s					
EL6				AML	AML	
	comp=N,1500µm,0.2s					
EL6				AML	AML	
	comp=N,1491µm,0.2s					
EL6				AML	AML	
	comp=E,1363µm,0.3s					
ATCC	**AVT- Casa Cast**	**0.54**	**316**	⇓P	Pg	13 51 26.7 +0.5
ATCC				AML	AML	
	comp=E,1062µm,0.3s					
ATCC				AML	AML	
	comp=E,1062µm,0.3s					
ATCC				AML	AML	
	comp=N,1100µm,0.8s					
ATCC				AML	AML	
	comp=N,946µm,0.3s					
ATCC				AML	AML	
	comp=E,1061µm,0.3s					
TRTR	**Tortoreto Alta**	**0.56**	**89**	⇓P	Pb	13 51 28.3 +0.7
TRTR				AML	AML	
	comp=N,2695µm,0.3s					
TRTR				AML	AML	
	comp=E,3455µm,0.5s					
TRTR				AML	AML	
	comp=N,2696µm,0.3s					
TRTR				AML	AML	
	comp=E,3454µm,0.5s					
FAGN	**Fagnano**	**0.62**	**149**	⇑P	Pb	13 51 28.7 +0.1
FAGN				S	Sb	13 51 38.0 +0.7
FAGN				AML	AML	
	comp=N,1052µm,0.3s					
FAGN				AML	AML	
	comp=E,1145µm,0.6s					
FAGN				AML	AML	
	comp=E,1147µm,0.6s					
VCEL	**Villa Celiera**	**0.65**	**128**	⇑P	Pg	13 51 28.6 +0.3
VCEL				AML	AML	
	comp=E,1114µm,1.3s					
VCEL				AML	AML	
	comp=N,1320µm,0.5s					
VCEL				AML	AML	
	comp=E,1110µm,1.3s					
VCEL				AML	AML	
	comp=E,1092µm,0.4s					
VCEL				AML	AML	
	comp=N,1320µm,0.5s					
MURB	**Monte Urbino**	**0.66**	**316**	P	Pb	13 51 28.9 -0.3
MURB				AML	AML	
	comp=E,2255µm,0.3s					
MURB				AML	AML	
	comp=N,1740µm,0.3s					
MURB				AML	AML	
	comp=E,2520µm,0.3s					
MURB				AML	AML	
	comp=N,1570µm,0.3s					
MURB				AML	AML	
	comp=E,2250µm,0.3s					
MURB				AML	AML	
	comp=N,1740µm,0.3s					
MURB				AML	AML	
	comp=N,1572µm,0.3s					
MURB				AML	AML	
	comp=N,1738µm,0.3s					
MURB				AML	AML	
	comp=E,2522µm,0.3s					
MURB				AML	AML	
	comp=E,2250µm,0.3s					
PP3	**Marolino**	**0.67**	**30**	⇑P	Pg	13 51 28.5 -0.2
PP3				AML	AML	
	comp=E,6385µm,0.4s					
PP3				AML	AML	
	comp=E,6380µm,0.4s					
PP3				AML	AML	
	comp=E,6135µm,0.4s					
PP3				AML	AML	
	comp=N,5765µm,0.3s					
PP3				AML	AML	
	comp=E,6140µm,0.4s					
PP3				AML	AML	
	comp=N,5550µm,0.3s					
PP3				AML	AML	
	comp=N,5770µm,0.3s					
PP3				AML	AML	
	comp=E,6385µm,0.4s					
PP3				AML	AML	
	comp=N,5766µm,0.3s					
PP3				AML	AML	
	comp=E,6382µm,0.4s					
PP3				AML	AML	
	comp=E,6138µm,0.4s					
PP3				AML	AML	
	comp=N,5548µm,0.3s					
SSFR	**Montelago di S**	**0.69**	**337**	⇑P	Pg	13 51 29.5 +0.3
ATFO	**Monte Foce - G**	**0.71**	**324**	⇑P	Pg	13 51 29.8 +0.3
ATFO				AML	AML	
	comp=E,348µm,0.3s					
ATFO				AML	AML	
	comp=N,443µm,0.7s					
ARVD	**Arcevia**	**0.72**	**348**	⇓P	Pg	13 51 29.9 +0.3
ARVD				S	Sn	13 51 42.0 -0.9
ARVD				AML	AML	
	comp=E,332µm,1.0s					
ARVD				AML	AML	
	comp=N,203µm,0.6s					
ARVD				AML	AML	
	comp=E,313µm,0.5s					
ARVD				AML	AML	
	comp=N,203µm,0.6s					
SRES	**S.Oreste - Sor**	**0.73**	**221**	S	Sn	13 51 43.0 -0.2
T0110	**Collepietro**	**0.73**	**141**	⇓P	Pg	13 51 30.0 +0.1
T0110				AML	AML	
	comp=E,990µm,0.5s					
T0110				AML	AML	
	comp=N,1066µm,0.4s					
T0110				AML	AML	
	comp=N,1066µm,0.4s					
T0110				AML	AML	
	comp=E,991µm,0.5s					
T0110				AML	AML	
	comp=N,1064µm,0.4s					
MGAB	**Montegabbione**	**0.77**	**279**	⇓P	Pb	13 51 31.3 +0.1
MGAB				AML	AML	
	comp=E,847µm,1.4s					
MGAB				AML	AML	
	comp=N,885µm,0.3s					
MGAB				AML	AML	
	comp=N,880µm,1.6s					
MGAB				AML	AML	
	comp=E,876µm,0.5s					
MGAB				AML	AML	
	comp=N,885µm,0.3s					
MGAB				AML	AML	
	comp=E,875µm,0.5s					
MGAB				AML	AML	
	comp=E,815µm,0.6s					
MGAB				AML	AML	
	comp=N,867µm,0.3s					
FRON	**Frontone**	**0.79**	**337**	⇑P	Pg	13 51 31.0 +0.1
FRON				AML	AML	
	comp=N,330µm,0.7s					
FRON				AML	AML	
	comp=E,324µm,0.4s					
FRON				AML	AML	
	comp=E,324µm,0.4s					
FRON				AML	AML	
	comp=N,330µm,0.4s					
ATVO	**AVT- Monte Val**	**0.80**	**317**	P	Pb	13 51 31.5 -0.2
ATVO				AML	AML	
	comp=E,331µm,0.9s					
ATVO				AML	AML	
	comp=N,315µm,0.8s					
ATVO				AML	AML	
	comp=N,311µm,0.5s					
ATVO				AML	AML	
	comp=E,312µm,0.3s					
PIEI	**Pieia**	**0.87**	**329**	⇑P	Pg	13 51 32.5 +0.1
PIEI				AML	AML	
	comp=E,267µm,0.4s					
PIEI				AML	AML	
	comp=N,178µm,0.4s					
PIEI				AML	AML	
	comp=N,178µm,0.4s					
PIEI				AML	AML	
	comp=E,267µm,0.4s					
MPAG	**Monte Paganucc**	**0.88**	**341**	⇑P	Pb	13 51 32.9 -0.1
MPAG				S	Sn	13 51 47.0 0.0
MPAG				AML	AML	
	comp=E,275µm,1.5s					
MPAG				AML	AML	
	comp=N,300µm,1.3s					
MPAG				AML	AML	
	comp=N,300µm,1.3s					
MPAG				AML	AML	
	comp=E,274µm,0.8s					
MPAG				AML	AML	
	comp=N,1171µm,1.0s					
MPAG				AML	AML	
	comp=N,290µm,0.5s					
MPAG				AML	AML	
	comp=E,1134µm,0.8s					
MPAG				AML	AML	
	comp=E,275µm,0.8s					
NARO	**Abbazia di Nar**	**0.92**	**333**	⇓P	Pg	13 51 33.2 -0.1
NARO				AML	AML	
	comp=E,172µm,0.8s					
NARO				AML	AML	
	comp=N,176µm,1.0s					
NARO				AML	AML	
	comp=N,161µm,0.5s					
NARO				AML	AML	
	comp=E,166µm,0.3s					
SACS	**San Casciano d**	**0.92**	**274**	⇓P	Pb	13 51 33.8 +0.2
SACS				AML	AML	
	comp=E,262µm,1.4s					
SACS				AML	AML	
	comp=N,306µm,0.9s					
SACS				AML	AML	
	comp=E,256µm,0.6s					
SACS				AML	AML	
	comp=E,287µm,0.6s					
SACS				AML	AML	
	comp=N,286µm,0.7s					
SACS				AML	AML	
	comp=N,323µm,0.7s					
FSSB	**Fossombrone**	**0.94**	**343**	⇓P	Pg	13 51 33.9 +0.1
FSSB				AML	AML	
	comp=N,1140µm,0.4s					
FSSB				AML	AML	
	comp=E,808µm,0.4s					
FSSB				AML	AML	
	comp=E,807µm,0.4s					
FSSB				AML	AML	
	comp=N,1138µm,0.4s					
CAFI	**Castiglion Fio**	**1.02**	**302**	⇑P	Pn	13 51 36.3 +0.3
CAFI				AML	AML	
	comp=E,225µm,0.4s					
CAFI				AML	AML	
	comp=N,248µm,0.8s					
CAFI				AML	AML	
	comp=E,219µm,0.5s					
CAFI				AML	AML	
	comp=E,225µm,0.4s					
CAFI				AML	AML	
	comp=N,248µm,0.8s					
CAFI				AML	AML	
	comp=N,233µm,0.8s					
LPEL	**Lama dei Pelig**	**1.07**	**134**	⇑P	Pg	13 51 36.3 0.0
LPEL				S	Sn	13 51 52.0 +0.4
LPEL				AML	AML	
	comp=N,236µm,0.2s					
LPEL				AML	AML	
	comp=E,269µm,0.9s					
LPEL				AML	AML	
	comp=E,265µm,0.3s					

LPEL AML AML
comp=N,236μm,0.2s
TOLF Tolfa 1.12 230 P Pb 13 51 37.2 0.0
TOLF AML AML
comp=E,209μm,1.2s
TOLF AML AML
comp=N,136μm,0.7s
TOLF AML AML
comp=E,156μm,0.6s
CPGN Carpegna, Ital 1.17 329 P Pg 13 51 39.9 +1.6
ARCI Arcidosso 1.23 273 ⇓P Pg 13 51 40.5 +1.1
LIK San Giovanni I 1.32 167 S Sb 13 51 56.0 -1.6
MIDA Miranda 1.42 144 ⇑P Pb 13 51 42.1 -0.1
MIDA AML AML
comp=N,109μm,0.6s
MIDA AML AML
comp=E,128μm,0.4s
SACR S. Croce Del S 1.81 140 S Sb 13 52 12.0 +0.3
NDIM Novi di Modena 2.65 323 S Sn 13 52 33.0 +2.5
SBPO S.Benedetto Po 2.77 325 ⇑P Pn 13 52 00.7 +0.7
SBPO S Sn 13 52 36.0 +2.5
PZUN Potenza 2.93 136 S Sn 13 52 39.0 +1.7

OTT 31 13:51:58.3±0.3, 42°56N×55°45W, h18km, ML3.5/5, 505km south from Grand Bank, NI, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**5.22**	**305**	PN	Pn	13 53 15.0	-0.4
GBN				SN	Sn	13 54 11.5	-3.6
GBN				Trac		13 54 17.1	
comp=Z,3.6nm,0.1s							
CHEG	**Cheticamp, Nov**	**5.65**	**320**	PN	Pn	13 53 20.8	-0.6
CHEG				SN	Sn	13 54 21.9	-3.8
CHEG				Trac		13 54 31.4	
comp=Z,5.4nm,0.2s							
DRLN	**Deer Lake**	**6.84**	**349**	PN	Pn	13 53 37.1	-0.6
DRLN				SN	Sn	13 54 49.9	-5.3
DRLN				Trac		13 54 54.1	
comp=N,218nm,2.0s							
LMN	**Caledonia Moun**	**7.49**	**299**	PN	Pn	13 53 45.2	-1.3
LMN				SN	Sn	13 55 05.4	-5.5
WCNB	**Wards Creek**	**7.87**	**296**	PN	Pn	13 53 50.8	-1.0
WCNB				SN	Sn	13 55 13.4	-7.0
WCNB				Trac		13 55 20.2	
comp=Z,13nm,0.3s							
SRNB	**Snider Mountai**	**8.02**	**298**	PN	Pn	13 53 51.5	-2.4
SRNB				SN	Sn	13 55 17.4	-6.6
SRNB				Trac		13 55 21.8	
comp=Z,1.4nm,0.1s							
GGN	**Saint George**	**8.62**	**291**	PN	Pn	13 53 59.2	-3.0
GGN				SN	Sn	13 55 28.9	-10

*MAN **31** 13:59:38.3, 4°81N×127°14E, h1km, mb5.0, ML4.0, MS4.0*
*DJA **31** 13:59:40.2±5.0, 5°N±41°×12°7E±1°6, h10km, M4.2/5, mb4.5/1, MLv4.1/5*
*NEIC **31** 13:59:44.8±1.7, 4°97N±0°08×127°18E±0°06, h66km±10km, mb4.3/19, Error ellipse: s-maj=13.0km s-min=4.5km az=213.0*
*IDC **31** 13:59:47.5±1.5, 4°80N×126°98E, h106km±13km, mb3.8/10, mbtmp4.2/12, MS2.7/1, Error ellipse: s-maj=61.4km s-min=10.3km az=64.0*
ISC 31 13:59:44.7±0.6, 4°90N±0°05×127°15E±0°08, h76km, n52, σ1ⓢ64/57, mb4.2/18, 2C-4D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.02**	**233**	P	**Pn**	**14 00 15.7**	**-1.1**
GSPH	**General Santos**	**2.49**	**298**	⇓*eP*	Pn	14 00 19.2	-4.1
GSPH				*eS*	**Sn**	**14 00 52.0**	**-0.8**
DAV	**Davao City (W)**	**2.67**	**324**	P	**Pn**	**14 00 27.1**	**+1.5**
155nm,0.4s,baz=209,slow=2.6,SNR=2.6							
DAV				S	**Sn**	**14 01 01.8**	**+4.9**
243nm,0.4s,baz=72,slow=20,SNR=5.8							
DAV	**Davao City (W)**	**2.67**	**324**	Pn	**Pn**	**14 00 23.6**	**-2.0**
KCP	**Kidapawan**	**2.94**	**316**	⇓*eP*	**Pn**	**14 00 27.5**	**-1.7**
KCP				*i* S	**Sn**	**14 00 59.6**	**-3.9**
CDOP	**Cateel, Davao**	**2.96**	**346**	⇓*iP*	**Pn**	**14 00 27.9**	**-1.6**
CDOP				*i* S	**Sn**	**14 01 00.1**	**-3.8**
GAMI	**Galela, Maluku**	**3.10**	**168**	P	**Pn**	**14 00 29.7**	**-1.8**
BIPH	**Bislig**	**3.36**	**347**	⇑*eP*	**Pn**	**14 00 39.3**	**+4.3**
CTBH	**Cotabato--PC H**	**3.70**	**309**	⇑*eP*	**Pn**	**14 00 39.8**	**+0.3**
TNTI	**Ternate**	**4.10**	**177**		**Pn**	**14 00 46.1**	**+1.1**
TNTI	**Ternate**	**4.10**	**177**	P	**Pn**	**14 00 46.7**	**+1.6**
CGP	**Cagayan de Oro**	**4.30**	**326**	⇓*eP*	**Pn**	**14 00 48.7**	**+1.0**
CGP				*e*S	**Sn**	**14 01 38.8**	**+2.1**
LBMI	**Labuha**	**5.51**	**176**	P	**Pn**	**14 01 04.7**	**+0.4**
SIJI	**Sorong**	**7.05**	**144**	P	**Pn**	**14 01 26.8**	**+1.4**
5.8nm,0.3s,baz=323,slow=20,SNR=5.6							
SIJI				S	**Sn**	**14 02 41.8**	**-2.3**
2.5nm,0.3s,baz=217,slow=20,SNR=1.6							
LUWI	**Luwuk**	**7.34**	**217**	Pn	**Pn**	**14 01 30.2**	**+0.9**
TOLI2	**Tolitoli**	**7.39**	**240**	Pn	**Pn**	**14 01 27.8**	**-2.2**
MYLDM	**Lahad Datu**	**8.62**	**272**	Pn	**Pn**	**14 01 49.5**	**+2.7**
FAKI	**Fak Fak**	**9.28**	**147**	Pn	**Pn**	**14 01 56.4**	**+0.5**
SBUM	**Sibu**	**15.10**	**261**	P	**P**	**14 03 17.6**	**+0.2**
TPUB	**Ta-pu**	**19.35**	**342**	P	**P**	**14 04 03.9**	**-0.4**
TPUB				IAmb	IAmb	14 04 43.4	
comp=Z,59nm,1.3s							
GUMO	**Guam**	**19.49**	**62**	LR	LR	14 10 18.4	
comp=Z,22nm,21.3s,baz=152,slow=32							
YHNB	**Yeheng**	**20.43**	**345**	P	**P**	**14 04 16.8**	**+0.7**
KNRA	**Kununurra**	**20.50**	**176**	P	**P**	**14 04 18.4**	**+1.6**
KNRA				IAmb	IAmb	14 04 55.6	
comp=Z,32nm,1.3s							
QIZ	**Qiongzhong**	**21.97**	**311**	P	**P**	**14 04 33.1**	**+0.6**
WB0	**Warramunga Arr**	**25.52**	**164**	P	**P**	**14 05 06.8**	**+0.3**
WB0				IAmb	IAmb	14 05 10.2	
comp=Z,7.8nm,0.7s							
WRA	**Warramunga Arr**	**25.67**	**164**	P	**P**	**14 05 07.0**	**-0.8**
comp=Z,3.0nm,0.6s,baz=344,slow=10,SNR=24							
comp=Z,3.0nm,0.6s							
WRA	**Warramunga Arr**	**25.67**	**164**	P	**P**	**14 05 07.8**	**0.0**
WB2	**Warramunga Arr**	**25.68**	**164**	P	**P**	**14 05 07.9**	**+0.1**
WB2				IAmb	IAmb	14 05 13.6	
comp=Z,5.8nm,0.8s							
AS31	**Alice Springs**	**29.14**	**167**	P	**P**	**14 05 39.9**	**+1.1**
ASAR	**Alice Springs**	**29.14**	**167**	P	**P**	**14 05 38.9**	**0.0**
comp=Z,0.4nm,0.4s,baz=352,slow=7.8,SNR=20							
ASAR				PcP	**PcP**	**14 08 45.0**	**-0.1**
comp=Z,0.3nm,0.3s,baz=342,slow=2.3,SNR=5.3							
comp=Z,0.4nm,0.4s							
ASAR	**Alice Springs**	**29.14**	**167**	P	**P**	**14 05 40.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**30.67**	**298**	P	**P**	**14 05 49.9**	**-2.5**
comp=Z,0.9nm,0.3s,baz=116,slow=6.1,SNR=1.8							
comp=Z,0.9nm,0.3s							
BBOO	**Buckleboo**	**38.44**	**168**	P	**P**	**14 07 00.6**	**+1.4**
STKA	**Stephens Creek**	**39.07**	**160**	P	**P**	**14 07 04.7**	**+0.2**
comp=Z,2.3nm,0.5s,baz=344,slow=9.0,SNR=9.7							
comp=Z,2.3nm,0.5s							
STKA	**Stephens Creek**	**39.07**	**160**	P	**P**	**14 07 05.1**	**+0.6**
ULN	**Ulaanbaatar**	**46.15**	**341**	P	**P**	**14 08 02.7**	**+0.9**
ULN				IAmb	IAmb	14 08 03.1	
comp=Z,2.6nm,0.6s							
SONM	**Songino Array**	**46.34**	**341**	P	**P**	**14 08 03.3**	**0.0**
comp=Z,0.9nm,0.4s,baz=158,slow=7.9,SNR=7.8							
comp=Z,0.9nm,0.4s							
SONM	**Songino Array**	**46.34**	**341**	P	**P**	**14 08 03.9**	**+0.6**
SONM				IAmb	IAmb	14 08 40.2	
comp=Z,4.4nm,1.5s							
MK31	**Makanchi Array**	**56.85**	**325**	P	**P**	**14 09 21.3**	**-0.3**
MK31				IAmb	IAmb	14 09 27.7	
comp=Z,4.5nm,1.2s							
MKAR	**Makanchi Array**	**56.85**	**325**	P	**P**	**14 09 21.1**	**-0.5**
comp=Z,1.0nm,0.4s,baz=121,slow=7.2,SNR=11							
comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**56.85**	**325**	P	**P**	**14 09 21.2**	**-0.4**
ZAA0	**Zalesovo Array**	**59.75**	**333**	P	**P**	**14 09 41.8**	**+0.2**
ZAA0				IAmb	IAmb	14 09 47.0	
comp=Z,3.1nm,1.3s							
ZALV	**Zalesovo Beam**	**59.75**	**333**	P	**P**	**14 09 39.8**	**-1.8**
comp=Z,0.6nm,0.3s,baz=123,slow=7.2,SNR=4.5							
comp=Z,0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**59.75**	**333**	P	**P**	**14 09 41.9**	**+0.3**
AAK	**Ala-Archa**	**59.79**	**317**	P	**P**	**14 09 42.1**	**-0.2**
AAK				IAmb	IAmb	14 10 17.8	
comp=Z,1.6nm,1.1s							
KURK	**Kurchatov**	**60.99**	**327**	P	**P**	**14 09 50.8**	**+0.6**
KURK				IAmb	IAmb	14 09 55.8	
comp=Z,2.6nm,0.7s							
KURBB	**Kurchatov Arra**	**60.99**	**327**	P	**P**	**14 09 49.7**	**-0.5**
comp=Z,0.8nm,0.4s,baz=124,slow=6.2,SNR=7.1							
comp=Z,0.8nm,0.4s							
KBL Kabul 61.16 307 P **P 14 09 50.8 -1.1**							
BRVK Borovoye 66.65 327 P **P 14 10 28.5 +1.2**							
BRVK				IAmb	IAmb	14 10 33.4	
comp=Z,3.8nm,1.3s							
ABKAR Abkulak array 71.52 320 P **P 14 10 56.5 -1.0**							
ARCES ARCESS Array B 89.51 340 P **P 14 12 32.5 -0.8**							
comp=Z,3.8nm,1.1s,baz=72,slow=5.8,SNR=4.2							
comp=Z,3.8nm,1.1s							
FINES FINESS Array B 91.01 332 P **P 14 12 39.3 -1.0**							
comp=Z,1.6nm,0.8s,baz=64,slow=6.3,SNR=5.6							
comp=Z,1.6nm,0.8s							

*INET **31** 14:03:01.1±0.8, 12°11N×87°71W, h5km±3km, MW3.9*
*IDC **31** 14:03:02.9±1.6, 12°31N×87°53W, h46km±19km, mb3.8/11, mbtmp4.0/13, ML3.8/2, MS3.6/28, Error ellipse: s-maj=31.7km s-min=11.2km az=44.0*
*UCR **31** 14:03:02.5±2.0, 12°08N×87°77W, h36km±900km, ML4.5, MW4.5, mb4.4(NEIC)*
*SNET **31** 14:03:02.9±2.2, 12°17N×87°87W, h16km±10km, ML4.5*
*NEIC **31** 14:03:02.9±1.8, 12°13N±0°06×87°70W±0°06, h35km±2km, mb4.4/62, Md4.5(SNET), Error ellipse: s-maj=10.3km s-min=8.1km az=221.0*
ISC 31 14:03:03.5±1.0, 12°15N±0°05×87°70W±0°04, h53km±10km, n198, σ1ⓢ00/200, mb4.4/39, MS3.7/25, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.84**	**49**		**Pn**	**14 03 18.7**	**-0.6**
CRIN	**San Cristobal**	**0.84**	**49**	*eP*	**Pn**	**14 03 18.7**	**-0.6**
CRIN	**San Cristobal**	**0.84**	**49**	*eP*	**Pn**	**14 03 18.8**	**-0.5**
CRIN				*e*S	**Sn**	**14 03 33.7**	**+2.9**
TELN	**Telica**	**0.96**	**62**	*eP*	**Pn**	**14 03 19.8**	**-1.1**
TELN				*eP*		14 03 19.9	
CNGN	**Cerro Negro**	**1.04**	**70**		**Pn**	**14 03 19.8**	**-2.1**
CNGN	**Cerro Negro**	**1.04**	**70**	*eP*	**Pn**	**14 03 20.1**	**-1.8**
COPN	**Copaltepe**	**1.08**	**88**	*eP*	**Pn**	**14 03 21.2**	**-1.2**
CNCH	**Conchagua**	**1.13**	**353**	*eP*	**Pn**	**14 03 22.4**	**-0.8**
CNCH				*e*S	**Sn**	**14 03 38.8**	**+1.0**
CNCH				IAML		14 03 44.1	
comp=Z,43μm,0.3s							
CNCH	**Conchagua**	**1.13**	**353**	*eP*	**Pn**	**14 03 22.4**	**-0.8**
CNCH				*e*S	**Sn**	**14 03 38.8**	**+1.0**
CNCH				IAML		14 03 44.1	
comp=Z,43μm,0.3s							
MOMN	**Momotombo**	**1.16**	**77**	*eP*	**Pn**	**14 03 22.3**	**-1.2**
LCND	**La Caada**	**1.17**	**351**	*i P*	**Pn**	**14 03 22.8**	**-0.9**
LCND				*e*S	**Sn**	**14 03 40.8**	**+2.2**
LCND				IAML		14 03 41.8	
comp=Z,17μm,0.3s							
LCND	**La Caada**	**1.17**	**351**	*i P*	**Pn**	**14 03 22.8**	**-0.9**
LCND				*e*S	**Sn**	**14 03 40.8**	**+2.2**
LCND				IAML		14 03 41.8	
comp=Z,17μm,0.3s							
MGAN	**Managua**	**1.42**	**90**	*eP*	**Pn**	**14 03 26.1**	**-0.9**
MGAN				*eP*		14 03 26.5	
BRAN	**Las Pilas**	**1.44**	**66**	*eP*	**Pn**	**14 03 25.0**	**-2.2**
ALJI	**Alcalda de J**	**1.45**	**324**	*eP*	**Pn**	**14 03 25.4**	**-2.0**
ALJI				*e*S	**Sn**	**14 03 44.2**	**-1.1**
ALJI				IAML		14 03 50.1	
comp=Z,4μm,0.4s							
ALJI	**Alcalda de J**	**1.45**	**324**	*eP*	**Pn**	**14 03 25.4**	**-2.0**
ALJI				*e*S	**Sn**	**14 03 44.2**	**-1.1**
ALJI				IAML		14 03 50.1	
comp=Z,4μm,0.4s							
PACA	**Pacayal**	**1.45**	**335**	*eP*	**Pn**	**14 03 27.5**	**0.0**
PACA				*e*S	**Sn**	**14 03 45.7**	**+0.2**
PACA				IAML		14 03 49.9	
comp=Z,43μm,0.4s							
PACA	**Pacayal**	**1.45**	**335**	*eP*	**Pn**	**14 03 27.5**	**0.0**
PACA				*e*S	**Sn**	**14 03 45.7**	**+0.2**
PACA				IAML		14 03 49.9	
comp=Z,43μm,0.4s							
HUEN		**1.51**	**83**	*eP*	**Pn**	**14 03 27.5**	**-0.7**
MASN	**Masaya**	**1.52**	**96**	*eP*	**Pn**	**14 03 28.7**	**+0.2**
COEB	**Comit de Eme**	**1.57**	**329**	*eP*	**Pn**	**14 03 28.4**	**-0.7**
COEB				*e*S	**Sn**	**14 03 48.8**	**+0.3**
COEB				IAML		14 03 49.8	
comp=Z,2μm,0.5s							
COEB	**Comit de Eme**	**1.57**	**329**	*eP*	**Pn**	**14 03 28.4**	**-0.7**
COEB				*e*S	**Sn**	**14 03 48.8**	**+0.3**
COEB				IAML		14 03 49.8	
comp=Z,2μm,0.5s							
CAHU	**Cacacuatique**	**1.69**	**343**	*eP*	**Pn**	**14 03 31.3**	**+0.4**
CAHU	**Cacacuatique**	**1.69**	**343**	*eP*	**Pn**	**14 03 31.3**	**+0.4**
PQSS	**Presa 15 de Se**	**1.69**	**330**	*eP*	**Pn**	**14 03 30.2**	**-0.5**
PQSS				*e*S	**Sn**	**14 03 52.0**	**+0.8**
PQSS	**Presa 15 de Se**	**1.69**	**330**	*eP*	**Pn**	**14 03 30.2**	**-0.5**
PQSS				*e*S	**Sn**	**14 03 52.0**	**+0.8**
COEG	**Centro de Oper**	**1.86**	**322**	*eP*	**Pn**	**14 03 33.7**	**+0.6**
COEG				*e*S	**Sn**	**14 03 55.4**	**-0.2**
COEG				IAML		14 04 00.1	
comp=Z,5μm,0.3s							
COEG	**Centro de Oper**	**1.86**	**322**	*eP*	**Pn**	**14 03 33.7**	**+0.6**
COEG				*e*S	**Sn**	**14 03 55.4**	**-0.2**
COEG				IAML		14 04 00.1	
comp=Z,5μm,0.3s							
MATN	**Matagalpa**	**1.90**	**66**		**Pn**	**14 03 33.0**	**-0.7**
MATN	**Matagalpa**	**1.90**	**66**	*eP*	**Pn**	**14 03 33.1**	**-0.5**
SJTE	**Alcalda de S**	**1.94**	**319**	*eP*	**Pn**	**14 03 33.2**	**-0.9**
SJTE				*e*S	**Sn**	**14 03 56.5**	**-0.9**
SJTE				IAML		14 04 01.8	
comp=Z,1μm,0.3s							
SJTE	**Alcalda de S**	**1.94**	**319**	*eP*	**Pn**	**14 03 33.2**	**-0.9**
SJTE				*e*S	**Sn**	**14 03 56.5**	**-0.9**
SJTE				IAML		14 04 01.8	
comp=Z,1μm,0.3s							
TGUH	**Tegucigalpa,Un**	**1.94**	**12**		**Pn**	**14 03 34.1**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.94**	**12**	*eP*	**Pn**	**14 03 34.3**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.94**	**12**	*eP*	**Pn**	**14 03 34.3**	**0.0**
PAVA	**Las Pavas**	**1.97**	**322**	*eP*	**Pn**	**14 03 34.2**	**-0.4**
PAVA				*e*S	**Sn**	**14 03 56.9**	**-1.4**
PAVA	**Las Pavas**	**1.97**	**322**	*eP*	**Pn**	**14 03 34.2**	**-0.4**
PAVA				*e*S	**Sn**	**14 03 56.9**	**-1.4**
LFRS	**El Faro**	**1.98**	**318**	*eP*	**Pn**	**14 03 33.8**	**-0.9**
LFRS	**El Faro**	**1.98**	**318**	*eP*	**Pn**	**14 03 33.8**	**-0.9**
BOAB	**BOACO BROADBAN**	**2.01**	**81**		**Pn**	**14 03 33.7**	**-1.3**
BOAB	**BOACO BROADBAN**	**2.01**	**81**	*eP*	**Pn**	**14 03 34.6**	**-0.4**
LBRS	**Las Brisas**	**2.06**	**321**	*eP*	**Pn**	**14 03 35.8**	**0.0**
LBRS	**Las Brisas**	**2.06**	**321**	*eP*	**Pn**	**14 03 35.8**	**0.0**
CONN	**Concepcion**	**2.11**	**106**	*eP*	**Pn**	**14 03 35.0**	**-1.4**
SNET	**Serv Nac Est T**	**2.14**	**316**	Pn	**Pn**	**14 03 37.0**	**+0.1**
BOQS	**Boqueron**	**2.21**	**316**	*eP*	**Pn**	**14 03 38.6**	**+0.6**
BOQS	**Boqueron**	**2.21**	**316**	*eP*	**Pn**	**14 03 38.6**	**+0.6**
ACON	**Acoyapa**	**2.48**	**94**		**Pn**	**14 03 39.3**	**-2.1**
CEVE	**Cerro Verde**	**2.51**	**312**	*eP*	**Pn**	**14 03 42.5**	**+0.3**
CEVE				*e*S	**Sn**	**14 04 14.2**	**+2.4**
CEVE				IAML		14 04 27.6	
comp=Z,2μm,0.3s							
CEVE	**Cerro Verde**	**2.51**	**312**	*eP*	**Pn**	**14 03 42.5**	**+0.3**
CEVE				*e*S	**Sn**	**14 04 14.2**	**+2.4**
CEVE				IAML		14 04 27.6	
comp=Z,2μm,0.3s							
SBLS	**San Blas**	**2.52**	**312**	*eP*	**Pn**	**14 03 42.3**	**0.0**
SBLS	**San Blas**	**2.52**	**312**	*eP*	**Pn**	**14 03 42.3**	**0.0**
GBS3	**Finca Las Img**	**2.58**	**121**	*eP*	**Pn**	**14 03 43.1**	**+0.1**
LAPC	**Finca la Perla**	**2.61**	**121**	*eP*	**Pn**	**14 03 43.3**	**0.0**
GB1A	**Borinquen Arri**	**2.61**	**120**	*eP*	**Pn**	**14 03 43.4**	**0.0**
BUEV	**Buena Vista**	**2.62**	**121**	*eP*	**Pn**	**14 03 43.3**	**-0.2**
BUAI	**Buenos Aires**	**2.64**	**118**	*eP*	**Pn**	**14 03 44.1**	**+0.3**
GPS2	**Hotel Rincn d**	**2.69**	**121**	*eP*	**Pn**	**14 03 45.6**	**+1.2**
MTO3	**Montecristo**	**2.76**	**324**	Pn	**Pn**	**14 03 44.5**	**-1.0**
LIM1	**Limonal**	**2.80**	**121**	*eP*	**Pn**	**14 03 46.1**	**+0.2**
ORTG	**Ortega, Santa**	**2.82**	**129**		**Pn**	**14 03 44.8**	**-1.5**
ORTG	**Ortega, Santa**	**2.82**	**129**	*eP*	**Pn**	**14 03 46.6**	**+0.4**
ORTG	**Ortega, Santa**	**2.82**	**129**	*eP*	**Pn**	**14 03 45.7**	**-0.6**
MESS	**Mesas**	**2.83**	**119**	*eP*	**Pn**	**14 03 45.9**	**-0.4**
SAJU	**San Juanillo,**	**2.84**	**136**	*eP*	**Pn**	**14 03 44.2**	**-2.3**
HORNC	**Hornillas**	**2.85**	**120**	*eP*	**Pn**	**14 03 46.5**	**-0.2**
COLC	**Colonia**	**2.86**	**121**	*eP*	**Pn**	**14 03 46.8**	**+0.1**
ESQI	**Esquipulas**	**2.88**	**327**	Pn	**Pn**	**14 03 46.9**	**-0.2**
CUI	**Cuipilapa**	**2.89**	**120**	*eP*	**Pn**	**14 03 46.5**	**-0.7**
DUNO	**Dulce Nombre,**	**2.98**	**133**	Pn	**Pn**	**14 03 46.5**	**-1.9**
DUNO	**Dulce Nombre,**	**2.98**	**133**	*eP*	**Pn**	**14 03 46.5**	**-1.9**
PTEN	**Parque Tenorio**	**3.02**	**118**	*eP*	**Pn**	**14 03 48.3**	**-0.6**
INDI	**Punta Indio, G**	**3.13**	**136**	*eP*	**Pn**	**14 03 48.8**	**-1.6**
POPE	**POPE, Guanacas**	**3.16**	**131**	*eP*	**Pn**	**14 03 49.5**	**-1.3**
JTS	**Las Juntas de**	**3.27**	**124**	P	**Pn**	**14 03 51.9**	**-0.4**
comp=Z,9.0nm,0.3s,baz=8.8,slow=5.2,SNR=19							
JTS				S	**Sn**	**14 04 28.7**	**-1.2**
comp=Z,64nm,0.4s,baz=202,slow=19,SNR=3.6							
JTS				LR	LR	14 05 28.9	
comp=Z,517nm,20.1s,baz=346,slow=45							
comp=Z,28nm,0.4s							
JTS	**Las Juntas de**	**3.27**	**124**	*eP*	**Pn**	**14 03 53.3**	**+1.0**
ESPN	**Las Esperanzas**	**3.33**	**89**	Pn	**Pn**	**14 03 52.1**	**-0.9**
ESPN	**Las Esperanzas**	**3.33**	**89**	*eP*	**Pn**	**14 03 53.3**	**+0.2**
CEDE	**Laguna Cedeo**	**3.37**	**119**	*eP*	**Pn**	**14 03 54.2**	**+0.5**
COVE	**Coope Vega, Sa**	**3.53**	**113**		**Pn**	**14 03 55.6**	**-0.3**
JACO	**JACO, Garabito**	**3.87**	**129**		**Pn**	**14 04 00.7**	**+0.1**
JACO	**JACO, Garabito**	**3.87**	**129**	*eP*	**Pn**	**14 04 01.4**	**+0.8**
LCR2	**La Lucha 2**	**4.34**	**123**	*eP*	**Pn**	**14 04 09.0**	**+1.7**
CVTR	**Volcan Turrial**	**4.41**	**118**	Pn	**Pn**	**14 04 07.7**	**-0.6**
RIMA	**Rio Macho**	**4.45**	**122**		**Pn**	**14 04 08.5**	**-0.2**
CDM	**Cerro de Muert**	**4.65**	**123**	*eP*	**Pn**	**14 04 12.4**	**+0.8**
PEZE	**Perez Zeledon,**	**4.81**	**124**		**Pn**	**14 04 12.9**	**-0.7**
SRBA	**San Rafael, Bu**	**5.16**	**124**		**Pn**	**14 04 18.3**	**0.0**
PETF	**Flores**	**5.19**	**336**	Pn	**Pn**	**14 04 19.2**	**+0.6**
BRU2	**Volcan**	**5.95**	**124**		**Pn**	**14 04 29.5**	**+0.3**
BCIP	**Isla Barro Col**	**8.28**	**110**	Pn	**Pn**	**14 05 00.5**	**-0.5**
CMIG	**Matias Romero**	**8.52**	**306**	P	**Pn**	**14 05 03.8**	**-0.5**
comp=Z,1.1nm,0.3s,baz=137,slow=12,SNR=7.7							
CMIG				S	**Sn**	**14 06 41.1**	**+2.1**
comp=Z,1.8nm,0.4s,baz=80,slow=20,SNR=1.6							
comp=Z,2.6nm,0.3s							
ROSC	**El Rosal**	**15.09**	**118**	LR	LR	14 12 59.8	
comp=Z,144nm,21.0s,baz=333,slow=40							
PORT	**Chimborazo Vol**	**16.17**	**146**	P	**P**	**14 06 52.0**	**+1.6**
SDV	**Santo Domingo**	**17.09**	**99**	LR	LR	14 14 27.7	
comp=Z,59nm,19.3s,baz=302,slow=40							
833A	**Chaparral WMA,**	**19.46**	**328**	P	**Pn**	**14 07 27.1**	**-0.4**
833A				IAmb	IAmb	14 07 28.3	
comp=Z,16nm,0.9s							
BAUV	**El Baul**	**19.59**	**97**	P	**P**	**14 07 26.2**	**-1.2**
152A	**Waverly Hall**	**20.61**	**7**	P	**P**	**14 07 38.8**	**+0.4**
152A				IAmb	IAmb	14 07 44.7	
comp=Z,20nm,1.0s							
ATAH	**Atahualpa**	**21.27**	**154**	P	**P**	**14 07 47.8**	**+1.7**
comp=Z,2.1nm,0.5s,baz=298,slow=19,SNR=1.9							
ATAH				LR	LR	14 15 35.2	
comp=Z,124nm,18.5s,baz=338,slow=35							
comp=Z,2.1nm,0.5s							
JCT	**Junction City**	**21.41**	**330**	P	**P**	**14 07 49.3**	**+2.1**
GOGA	**Godfrey**	**21.52**	**10**	P	**P**	**14 07 49.5**	**+1.3**
GOGA				IAmb	IAmb	14 07 52.6	
comp=Z,11nm,0.8s							
SJG	**San Juan**	**21.62**	**71**	LR	LR	14 16 16.4	
comp=Z,157nm,20.6s,baz=252,slow=37							
Y49A	**Blount Mountai**	**21.65**	**3**	P	**P**	**14 07 50.5**	**+1.0**
Y49A				IAmb	IAmb	14 07 58.6	
comp=Z,8.7nm,0.7s							
Y52A	**Lilburn**	**21.87**	**8**	P	**P**	**14 07 52.9**	**+0.9**
Y52A				IAmb	IAmb	14 07 56.5	
comp=Z,11nm,0.6s							
FPAL	**Fort Paine**	**22.38**	**5**	P	**P**	**14 07 58.1**	**+0.7**
FPAL				IAmb	IAmb	14 07 59.6	
comp=Z,12nm,1.0s							
CUPR	**Culebra, Puert**	**22.47**	**71**	P	**P**	**14 07 57.8**	**-0.8**
TXAR	**Lajitas Array**	**22.66**	**321**	P	**P**	**14 08 00.8**	**+0.3**
comp=Z,3.4nm,0.4s,baz=137,slow=9.4,SNR=60							
TXAR				PcP	**PcP**	**14 11 53.1**	**+1.3**
comp=Z,0.2nm,0.7s,baz=98,slow=3.1,SNR=2.0							
comp=Z,3.4nm,0.4s							
TXAR	**Lajitas Array**	**22.66**	**321**	P	**P**	**14 08 01.0**	**+0.5**
TX31	**Lajitas Ar. Si**	**22.66**	**321**	P	**P**	**14 08 00.8**	**+0.3**
TX31				IAmb	IAmb	14 08 05.7	
comp=Z,22nm,0.9s							
TX32	**Lajitas Array**	**22.66**	**321**	P	**P**	**14 08 01.0**	**+0.5**
PCRV	**Puerto La Cruz**	**22.71**	**93**	LR	LR	14 19 46.9	
comp=Z,142nm,19.0s,slow=44							
MIAR	**Mount Ida**	**22.93**	**347**	P	**P**	**14 08 03.2**	**0.0**
MIAR				IAmb	IAmb	14 08 07.1	
comp=Z,8.0nm,0.7s							
W50A	**Signal Mountai**	**23.05**	**5**	P	**P

comp=Z,0.4nm,0.7s,baz=121,slow=8.7,SNR=2.4
NVAR PcP **PcP** **14 12 32.8 +1.9**
comp=Z,1.0nm,0.8s,baz=132,slow=4.0,SNR=5.2
NVAR LR LR 14 28 15.2
comp=Z,130nm,18.3s,baz=141,slow=40
comp=Z,0.4nm,0.7s
GCMT Greycliff 38.38 335 P **P** **14 10 20.1 +0.2**
ULM Lac du Bonnet 38.58 352 P **P** **14 10 19.8 -1.4**
comp=Z,3.7nm,0.6s,baz=170,slow=9.7,SNR=3.6
ULM LR LR 14 28 09.9
comp=Z,42nm,19.2s,baz=112,slow=39
comp=Z,3.7nm,0.6s
ULM Lac du Bonnet 38.58 352 P **P** **14 10 19.9 -1.4**
ULM IAmb IAmb 14 10 21.2
comp=Z,5.5nm,0.8s
DGMT Dagmar 38.74 342 P **P** **14 10 22.9 +0.3**
BCYI Bear Canyon 38.91 330 P **P** **14 10 24.4 0.0**
MCMT McKenzie Canyo 39.03 331 P **P** **14 10 26.6 +1.2**
BOZ Bozeman (W) 39.07 333 P **P** **14 10 26.8 +1.2**
LVC Limon Verde 39.14 152 LR LR 14 25 23.3
comp=Z,68nm,19.3s,baz=318,slow=34
LRM Limekiln Ridge 39.60 333 P **P** **14 10 30.6 +0.4**
HRY Holter Researc 40.02 334 P **P** **14 10 34.8 +1.3**
YBH Yreka Blue Hor 42.43 320 LR LR 14 30 41.2
comp=Z,89nm,18.1s,baz=157,slow=39
RPN Rapa Nui 44.33 208 LR LR 14 24 45.6
comp=Z,153nm,20.1s,baz=50,slow=29
SCHQ Schefferville 45.64 17 P **P** **14 11 17.4 -1.3**
comp=Z,2.8nm,0.4s,baz=244,slow=8.8,SNR=6.7
comp=Z,2.8nm,0.4s
LLLB Lillooet 47.42 331 P **P** **14 11 34.2 +1.4**
LLLB IAmb IAmb 14 11 35.4
comp=Z,3.7nm,0.8s
BDFB Brasilia 48.01 124 LR LR 14 32 05.7
comp=Z,100nm,19.6s,baz=227,slow=36
CPUP Villa Florida 48.32 143 P **P** **14 11 38.6 -1.3**
comp=Z,2.0nm,0.8s,baz=345,slow=14,SNR=3.4
comp=Z,2.0nm,0.8s
FRB Frobisher Bay 53.27 10 LR LR 14 37 23.7
comp=Z,70nm,18.1s,baz=180,slow=39
DLBC Dease Lake 56.08 335 P **P** **14 12 36.3 -0.9**
comp=Z,1.6nm,0.5s,baz=150,slow=5.6,SNR=4.8
comp=Z,1.6nm,0.5s
SFJD Kangerlussuaq 60.08 16 LR LR 14 38 26.4
comp=Z,32nm,19.4s,baz=209,slow=36
DAWY Dawson 62.98 337 P **P** **14 13 24.6 0.0**
DAWY IAmb IAmb 14 13 35.1
comp=Z,7.0nm,1.4s
BCAR Beaver Creek A 63.43 336 P **P** **14 13 28.2 +0.7**
L27K Beaver Creek, 63.44 336 P **P** **14 13 27.9 +0.2**
RIM Rim 65.09 286 P **P** **14 13 39.2 -0.1**
J25K Salcha River, 65.54 336 P **P** **14 13 41.6 +0.2**
J25K IAmb IAmb 14 13 46.6
comp=Z,3.2nm,1.1s
ILAR Eielson Array 66.20 336 P **P** **14 13 43.4 -2.2**
comp=Z,0.6nm,0.8s,baz=143,slow=5.1,SNR=7.3
comp=Z,0.6nm,0.8s
BMAR Burnt Mountain 66.48 339 P **P** **14 13 47.9 +0.6**
H24K Noodor Dome 67.00 337 P **P** **14 13 50.9 +0.2**
H24K IAmb IAmb 14 14 28.3
comp=Z,8.9nm,1.5s
BWN Browne 67.01 335 P **P** **14 13 51.9 +1.2**
I23K Minto, Yukon-K 67.32 336 P **P** **14 13 52.9 +0.2**
PPT Papeete 67.85 245 LR LR 14 35 18.2
comp=Z,102nm,18.2s,baz=127,slow=28
TNA Tin City 74.98 335 P **P** **14 14 40.0 +1.1**
JMIC Jan Mayen 75.07 19 LR LR 14 47 24.7
comp=Z,32nm,18.3s,baz=80,slow=36
ESDC Sonseca Array 77.57 52 P **P** **14 14 53.8 -0.5**
comp=Z,0.3nm,0.6s,baz=248,slow=5.4,SNR=2.4
ESDC LR LR 14 41 59.2
comp=Z,33nm,21.1s,baz=310,slow=30
comp=Z,0.3nm,0.6s
MDT Midelt 77.77 59 LR LR 14 44 24.1
comp=Z,31nm,19.0s,baz=350,slow=32
RAR Rarotonga 78.13 245 LR LR 14 41 23.5
comp=Z,97nm,19.4s,baz=112,slow=29
HFS Hagfors 85.17 29 LR LR 14 51 54.8
comp=Z,16nm,19.2s,baz=288,slow=34
DAVOX Davos/Dischmat 86.38 43 LR LR 14 48 44.3
comp=Z,40nm,19.0s,baz=263,slow=32
TORD Torodi Ar. Bea 86.72 77 LR LR 14 52 28.7
comp=Z,20nm,18.4s,baz=218,slow=34
VRAC Vranov 90.00 39 LR LR 14 52 08.0
comp=Z,51nm,20.4s,baz=282,slow=33
MSVF Nonsavu 97.61 254 LR LR 14 53 16.8
comp=Z,44nm,18.3s,baz=73,slow=31
SNAA Sanae 99.82 161 LR LR 14 59 13.2
comp=Z,36nm,18.8s,baz=214,slow=34

IDC 31 14:09:07.9±1.7, 30.56S×60.31E, h0km, mb3.6/4, mbtmp3.7/5, ML3.9/1, MS3.3/2, Error ellipse: s-maj=71.2km s-min=29.5km az=24.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.86**	**312**	Pn	Pn	14 13 04.5	-1.1
	baz=122,slow=13,SNR=2.8						
OPO				Sn	Sn	14 15 55.7	-18
	0.1nm,0.3s,baz=81,slow=16,SNR=1.8						
	2.7nm,0.6s						
MBAR	**Mbarara**	**40.94**	**311**	LR	LR	14 31 15.4	
	comp=Z,23nm,22.0s,baz=120,slow=32						
CMAR	**Chiang Mai Arr**	**61.29**	**43**	P	P	14 19 25.4	+0.1
	0.4nm,0.3s,baz=237,slow=6.2,SNR=4.9						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**64.83**	**104**	P	P	14 19 48.9	-0.1
	0.6nm,0.8s,baz=239,slow=6.7,SNR=5.5						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**66.75**	**100**	P	P	14 20 01.4	0.0
	0.3nm,0.5s,baz=246,slow=6.0,SNR=2.3						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**71.14**	**299**	P	P	14 20 29.0	+0.3
	0.1nm,0.3s,baz=134,slow=4.2,SNR=3.1						
	0.1nm,0.3s						
AKASG	**Malin Array Be**	**85.45**	**341**	LR	LR	14 57 40.2	
	comp=Z,28nm,20.4s,baz=300,slow=34						

ROM 31 14:10:06.1±0.1, 42.773N±0.003×13.207E±0.005, h10km, ML2.9/41, 18C-14D, Error ellipse: s-maj=0.4km s-min=0.1km az=259.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.09**	**351**	P	Pg	14 10 08.8	+0.1
T1245				S	Sg	14 10 10.5	-0.1
T1245				AML	AML		
	comp=E,46500μm,0.5s						
T1245				AML	AML		
	comp=N,90850μm,0.3s						
T1245				AML	AML		
	comp=E,46550μm,0.5s						
T1245				AML	AML		
	comp=N,90900μm,0.3s						
T1245				AML	AML		
	comp=E,48450μm,0.5s						
T1245				AML	AML		
	comp=N,87600μm,0.3s						
T1245				AML	AML		
	comp=E,44253μm,0.4s						
T1245				AML	AML		
	comp=N,87587μm,0.3s						
T1245				AML	AML		
	comp=N,90884μm,0.3s						
T1204	**Amatrice, Fraz**	**0.13**	**140**	P	Pg	14 10 09.8	+0.6
T1204				S	Sg	14 10 12.4	+1.0
T1204				AML	AML		
	comp=E,7755μm,1.1s						
T1204				AML	AML		
	comp=N,5805μm,0.4s						
T1204				AML	AML		
	comp=E,7735μm,1.1s						
T1204				AML	AML		
	comp=E,7740μm,1.1s						
T1204				AML	AML		
	comp=N,5815μm,0.4s						
T1204				AML	AML		
	comp=N,5800μm,0.4s						
T1204				AML	AML		
	comp=E,7690μm,1.1s						
T1204				AML	AML		
	comp=N,5804μm,0.4s						
T1204				AML	AML		
	comp=E,6566μm,0.3s						
MMO1	**Montemonaco**	**0.15**	**35**	P	Pg	14 10 10.0	+0.4
MMO1				S	Sg	14 10 12.9	+0.8
SMA1	**SAN MARTINO**	**0.17**	**146**	P	Pg	14 10 10.4	+0.5
SMA1				AML	AML		
	comp=E,7985μm,0.8s						
SMA1				AML	AML		
	comp=N,4495μm,0.4s						
SMA1				AML	AML		
	comp=E,10530μm,0.2s						
SMA1				AML	AML		
	comp=E,10545μm,0.2s						
SMA1				AML	AML		
	comp=N,6100μm,0.2s						
SMA1				AML	AML		
	comp=E,7988μm,0.8s						
SMA1				AML	AML		
	comp=N,4492μm,0.4s						
T1216	**Preci, Frazion**	**0.18**	**311**	P	Pb	14 10 10.8	-0.7
T1216				S	Sg	14 10 14.0	+1.2
T1216				AML	AML		
	comp=E,7595μm,0.3s						
T1216				AML	AML		
	comp=N,8795μm,0.4s						
T1216				AML	AML		
	comp=E,7595μm,0.3s						
T1216				AML	AML		
	comp=N,8810μm,0.3s						
T1216				AML	AML		
	comp=N,8835μm,0.3s						
T1216				AML	AML		
	comp=N,8800μm,0.4s						
T1216				AML	AML		
	comp=E,7600μm,0.3s						
T1216				AML	AML		
	comp=N,8816μm,0.3s						
T1216				AML	AML		
	comp=E,7597μm,0.3s						
T1241	**Roccafluvione,**	**0.18**	**63**	⇑P	Pg	14 10 10.3	+0.3
T1241				AML	AML		
	comp=E,6615μm,0.7s						
T1241				AML	AML		
T1241				AML	AML		
	comp=N,7305μm,0.6s						
T1241				AML	AML		
	comp=N,7307μm,0.6s						
T1241				AML	AML		
	comp=E,5878μm,0.3s						
T1243	**Rocca Santa Ma**	**0.19**	**113**	⇓P	Pg	14 10 10.8	+0.5
LNSS	**Leonessa**	**0.21**	**216**	P	Pg	14 10 11.2	+0.7
LNSS				S	Sg	14 10 14.8	+1.2
LNSS				AML	AML		
	comp=N,11180μm,0.2s						
LNSS				AML	AML		
	comp=E,7100μm,1.4s						
LNSS				AML	AML		
	comp=E,6504μm,0.4s						
LNSS				AML	AML		
	comp=N,11171μm,0.2s						
T1217	**Poggiodomo (PG**	**0.21**	**253**	⇑P	Pg	14 10 11.2	+0.7
T1217				AML	AML		
	comp=N,5500μm,0.3s						
T1217				AML	AML		
	comp=E,4340μm,0.4s						
T1217				AML	AML		
	comp=N,5615μm,0.3s						
T1217				AML	AML		
	comp=E,4230μm,0.4s						
T1217				AML	AML		
	comp=N,5505μm,0.3s						
T1217				AML	AML		
	comp=N,5495μm,0.3s						
T1217				AML	AML		
	comp=E,4220μm,0.4s						
T1217				AML	AML		
	comp=N,5610μm,0.3s						
T1217				AML	AML		
	comp=E,4103μm,0.1s						
T1217				AML	AML		
	comp=E,4107μm,0.1s						
T1217				AML	AML		
	comp=N,5497μm,0.3s						
T1217				AML	AML		
	comp=N,5613μm,0.3s						
FEMA	**Monte Fema**	**0.22**	**329**	P	Pb	14 10 11.6	-0.7
FEMA				S	Sg	14 10 15.2	+1.3
FEMA				AML	AML		
	comp=E,7375μm,0.5s						
FEMA				AML	AML		
	comp=N,6200μm,0.3s						
FEMA				AML	AML		
	comp=E,7370μm,0.5s						
FEMA				AML	AML		
	comp=N,6199μm,0.3s						
FEMA				AML	AML		
	comp=E,7174μm,0.1s						
AM05	**Amandola Campo**	**0.23**	**28**	P	Pg	14 10 11.5	+0.7
AM05				S	Sg	14 10 15.8	+1.7
AM05				AML	AML		
	comp=E,1960μm,0.2s						
AM05				AML	AML		
	comp=N,1965μm,0.3s						
AM05				AML	AML		
	comp=E,9960μm,0.3s						
AM05				AML	AML		
	comp=N,1960μm,0.3s						
AM05				AML	AML		
	comp=E,9985μm,0.3s						
AM05				AML	AML		
	comp=N,476μm,0.7s						
AM05				AML	AML		
	comp=E,1955μm,0.2s						
AM05				AML	AML		
	comp=N,454μm,0.1s						
AM05				AML	AML		
	comp=N,1689μm,0.1s						
AM05				AML	AML		
	comp=E,1959μm,0.2s						
AM05				AML	AML		
	comp=E,9979μm,0.3s						
T1256	**Bolognola (MC)**	**0.23**	**3**	⇑P	Pg	14 10 11.4	+0.4
T1256				AML	AML		
	comp=N,4585μm,1.4s						
T1256				AML	AML		
	comp=E,5130μm,1.0s						
T1256				AML	AML		
	comp=E,5075μm,1.0s						
T1256				AML	AML		
	comp=E,5125μm,1.0s						
T1256				AML	AML		
	comp=N,4420μm,0.9s						
T1256				AML	AML		
	comp=N,4580μm,1.4s						
T1256				AML	AML		
	comp=N,3074μm,0.5s						
T1256				AML	AML		
	comp=N,3823μm,0.5s						
T1256				AML	AML		
	comp=E,4819μm,0.3s						
T1256				AML	AML		
	comp=E,4839μm,0.3s						
T1215	**Vallo di Nera,**	**0.25**	**277**	P	Pg	14 10 11.8	+0.6
T1215				AML	AML		
	comp=E,2140μm,0.1s						
T1215				AML	AML		
	comp=N,2165μm,1.1s						
T1215				AML	AML		
	comp=E,2100μm,0.1s						
T1215				AML	AML		
	comp=N,2170μm,1.1s						
T1215				AML	AML		
	comp=E,2098μm,0.1s						
T1215				AML	AML		
	comp=N,1924μm,0.1s						
T1215				AML	AML		
	comp=E,2144μm,0.1s						
T1215				AML	AML		
	comp=N,1980μm,0.1s						
RM33	**Pellescritta (**	**0.26**	**179**	P	Pg	14 10 12.1	+0.6
RM33				AML	AML		
	comp=E,4100μm,0.3s						
RM33				AML	AML		
	comp=N,4850μm,0.2s						
RM33				AML	AML		
	comp=N,4845μm,0.2s						
RM33				AML	AML		
	comp=E,4030μm,0.3s						
RM33				AML	AML		
	comp=E,4025μm,0.3s						
RM33				AML	AML		
	comp=N,4700μm,0.2s						
RM33				AML	AML		
	comp=N,4850μm,0.2s						
RM33				AML	AML		
	comp=N,4705μm,0.2s						
RM33				AML	AML		
	comp=E,4100μm,0.3s						
RM33				AML	AML		
	comp=E,4027μm,0.3s						
RM33				AML	AML		
	comp=E,4098μm,0.3s						
RM33				AML	AML		
	comp=N,4847μm,0.2s						
RM33				AML	AML		
	comp=N,4704μm,0.2s						
FDMO	**Fiordimonte**	**0.28**	**342**	P	Pg	14 10 10.7	-1.0
FDMO				AML	AML		
	comp=E,3635μm,0.8s						
FDMO				AML	AML		
	comp=N,5175μm,0.2s						
FDMO				AML	AML		
	comp=N,5174μm,0.2s						
FDMO				AML	AML		
	comp=E,3466μm,0.2s						
CAMP	**Campotosto**	**0.28**	**148**	P	Pg	14 10 12.2	+0.4
CAMP				S	Sg	14 10 16.7	+1.1
CAMP				AML	AML		
	comp=E,1245μm,0.7s						
CAMP				AML	AML		
	comp=N,1575μm,0.6s						
CAMP				AML	AML		
	comp=N,1574μm,0.6s						
CAMP				AML	AML		
	comp=E,1244μm,0.7s						
GUMA	**Gualdo di Mace**	**0.30**	**18**	⇑P	Pb	14 10 13.1	-0.5
GUMA				AML	AML		
	comp=E,15150μm,0.5s						
GUMA				AML	AML		
	comp=N,15950μm,0.5s						
GUMA				AML	AML		
	comp=E,13000μm,0.4s						
GUMA				AML	AML		
	comp=E,15150μm,0.5s						
GUMA				AML	AML		
	comp=N,15950μm,0.5s						
GUMA				AML	AML		
	comp=N,15700μm,0.5s						
GUMA				AML	AML		
	comp=N,15943μm,0.5s						
GUMA				AML	AML		
	comp=N,15696μm,0.5s						
GUMA				AML	AML		
	comp=E,13013μm,0.4s						
GUMA				AML	AML		
	comp=E,14834μm,0.6s						
TERO	**Teramo**	**0.33**	**117**	P	Pg	14 10 13.1	+0.4
TERO				AML	AML		
	comp=E,2045μm,0.5s						
TERO				AML	AML		
	comp=N,2120μm,0.4s						
TERO				AML	AML		
	comp=E,2040μm,0.5s						
TERO				AML	AML		
	comp=N,2050μm,0.4s						
TERO				AML	AML		
	comp=E,2135μm,0.5s						
TERO				AML	AML		
	comp=N,2045μm,0.4s						
TERO				AML	AML		
	comp=N,2120μm,0.4s						
TERO				AML	AML		
	comp=E,2042μm,0.5s						
TERO				AML	AML		
	comp=E,2133μm,0.5s						
TERO				AML	AML		
	comp=N,2048μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.34**	**168**	⇑P	Pg	14 10 13.3	+0.5
T1247				AML	AML		
	comp=E,3080μm,1.0s						
T1247				AML	AML		
	comp=N,3000μm,0.5s						
T1247				AML	AML		
	comp=N,2950μm,0.4s						
T1247				AML	AML		
	comp=E,2996μm,0.4s						
T1211	**Morro Reatino**	**0.35**	**227**	⇑P	Pg	14 10 13.7	+0.6
T1211				S	Sb	14 10 20.0	-0.1
T1211				AML	AML		
	comp=N,5340μm,1.3s						
T1211				AML	AML		
	comp=N,5210μm,1.3s						
T1211				AML	AML		
	comp=E,4965μm,0.4s						
T1211				AML	AML		
	comp=N,5205μm,1.3s						
T1211				AML	AML		
	comp=E,5100μm,0.4s						
T1211				AML	AML		
	comp=E,4960μm,0.4s						
T1211				AML	AML		
	comp=N,5340μm,1.3s						
T1211				AML	AML		
	comp=N,5092μm,0.5s						
T1211				AML	AML		
	comp=E,4964μm,0.4s						
T1211				AML	AML		
	comp=E,5100μm,0.4s						
T1211				AML	AML		
	comp=N,4973μm,0.5s						
ARRO	**Arrone**	**0.38**	**239**	⇑P	Pg	14 10 14.1	+0.6
ARRO				AML	AML		
	comp=N,3770μm,0.2s						
ARRO				AML	AML		
	comp=E,3200μm,0.2s						
ARRO				AML	AML		
	comp=E,3200μm,0.2s						
ARRO				AML	AML		
	comp=N,3770μm,0.2s						
OFFI	**Offida**	**0.39**	**65**	⇑P	Pb	14 10 15.2	+0.1
OFFI				AML	AML		
	comp=E,3115μm,0.7s						
OFFI				AML	AML		
	comp=N,4235μm,0.7s						
OFFI				AML	AML		
	comp=E,3110μm,0.7s						
OFFI				AML	AML		
	comp=N,4239μm,0.7s						
OFFI				AML	AML		
	comp=E,3104μm,0.5s						
GIGS	**Gran Sasso**	**0.42**	**140**	⇓P	Pg	14 10 14.7	+0.4
GIGS				AML	AML		
	comp=E,232μm,0.6s						
GIGS				AML	AML		
	comp=N,251μm,1.3s						
GIGS				AML	AML		
	comp=N,214μm,0.5s						
GIGS				AML	AML		
	comp=E,205μm,0.5s						
SEF1	**Sefro**	**0.42**	**333**	⇑P	Pb	14 10 15.1	-0.5
SEF1				AML	AML		
	comp=E,3135μm,0.3s						
SEF1				AML	AML		
	comp=N,3170μm,0.2s						
SEF1				AML	AML		
	comp=N,3169μm,0.2s						
SEF1				AML	AML		
	comp=E,3137μm,0.3s						
GAG1	**Gagliole**	**0.48**	**348**	⇓P	Pb	14 10 16.6	0.0
ASSB	**Assisi San Ben**	**0.48**	**304**	S	Sb	14 10 24.0	+0.1
CESX	**Cesi**	**0.49**	**251**	⇓P	Pb	14 10 16.2	-0.6
CESX				AML	AML		
	comp=N,1325μm,1.2s						
CESX				AML	AML		
	comp=E,1082μm,1.3s						
CESX				AML	AML		
	comp=N,1320μm,1.2s						
CESX				AML	AML		
	comp=E,1018μm,0.3s						
CESX				AML	AML		
	comp=N,1260μm,0.2s						
FIAM	**Fiamignano**	**0.51**	**188**	⇑P	Pg	14 10 16.4	+0.4
FIAM				AML	AML		
	comp=N,767μm,1.3s						
FIAM				AML	AML		
	comp=E,886μm,1.4s						
FIAM				AML	AML		
	comp=N,766μm,1.3s						

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FIAM                                AML   AML
     comp=E,887µm,1.4s
FIAM                                AML   AML
     comp=E,873µm,0.4s
FIAM                                AML   AML
     comp=N,731µm,0.4s
SNTG Esanatoglia        0.52 338 ⇓P        Pg    14 10 16.6 +0.4
SNTG                                S     Sb    14 10 26.0 +1.1
SNTG                                AML   AML
     comp=E,1115µm,0.2s
SNTG                                AML   AML
     comp=E,1155µm,0.1s
SNTG                                AML   AML
     comp=N,1490µm,1.0s
SNTG                                AML   AML
     comp=E,1110µm,0.2s
SNTG                                AML   AML
     comp=N,1490µm,1.3s
SNTG                                AML   AML
     comp=N,1304µm,0.2s
SNTG                                AML   AML
     comp=N,1379µm,0.2s
SNTG                                AML   AML
     comp=E,1112µm,0.1s
SNTG                                AML   AML
     comp=E,1157µm,0.1s
EL6  Elcito             0.56 352 ⇑P        Pg    14 10 17.3 +0.3
EL6                                 S     Sb    14 10 27.0 +0.8
FAGN Fagnano            0.58 151 ⇓P        Pb    14 10 18.5 +0.2
FAGN                                AML   AML
     comp=N,1170µm,0.4s
FAGN                                AML   AML
     comp=E,1650µm,1.2s
FAGN                                AML   AML
     comp=N,1170µm,0.4s
FAGN                                AML   AML
     comp=E,1608µm,0.4s
ATCC AVT- Casa Cast     0.59 315 ⇑P        Pg    14 10 17.8 +0.3
ATCC                                AML   AML
     comp=E,1335µm,0.7s
ATCC                                AML   AML
     comp=N,1130µm,0.4s
ATCC                                AML   AML
     comp=E,1203µm,0.3s
ATCC                                AML   AML
     comp=N,1129µm,0.4s
FOSV Fossato di Vic     0.62 328 ⇓P        Pg    14 10 18.4 +0.3
FOSV                                S     Sb    14 10 29.0 +1.3
FOSV                                AML   AML
     comp=E,926µm,0.3s
FOSV                                AML   AML
     comp=N,999µm,0.4s
FOSV                                AML   AML
     comp=N,998µm,0.4s
FOSV                                AML   AML
     comp=N,998µm,0.4s
PP3  Marolino           0.67  26 P         Pb    14 10 20.4 +0.5
PP3                                 AML   AML
     comp=N,2985µm,0.3s
PP3                                 AML   AML
     comp=E,3620µm,0.6s
PP3                                 AML   AML
     comp=N,3055µm,0.4s
PP3                                 AML   AML
     comp=E,3675µm,0.6s
PP3                                 AML   AML
     comp=E,3625µm,0.6s
PP3                                 AML   AML
     comp=N,3050µm,0.4s
PP3                                 AML   AML
     comp=N,2987µm,0.3s
PP3                                 AML   AML
     comp=E,3675µm,1.4s
PP3                                 AML   AML
     comp=N,3051µm,0.4s
PP3                                 AML   AML
     comp=E,3624µm,0.6s
T0110 Collepietro       0.69 142 ⇓P        Pg    14 10 19.8 +0.4
T0110                               AML   AML
     comp=N,890µm,1.2s
T0110                               AML   AML
     comp=E,1006µm,0.5s
T0110                               AML   AML
     comp=E,1006µm,0.5s
T0110                               AML   AML
     comp=N,890µm,0.4s
MURB Monte Urbino       0.70 315 S         Sn    14 10 32.0 -1.0
ARVD Arcevia            0.75 345 P         Pg    14 10 20.7 +0.2
ARVD                                S     Sn    14 10 34.0 -0.2
ARVD                                AML   AML
     comp=E,572µm,1.0s
ARVD                                AML   AML
     comp=N,416µm,0.8s
ARVD                                AML   AML
     comp=N,388µm,0.2s
ARVD                                AML   AML
     comp=E,495µm,0.2s
ATFO Monte Foce - G     0.75 322 ⇓P        Pb    14 10 21.3  0.0
ATFO                                AML   AML
     comp=E,450µm,0.5s
ATFO                                AML   AML
     comp=N,462µm,0.7s
ATFO                                AML   AML
     comp=E,450µm,0.5s
ATFO                                AML   AML
     comp=N,363µm,0.3s
ATTE AVT- Monte Tez     0.76 304 ⇑P        Pn    14 10 23.5 +0.7
ATTE                                AML   AML
     comp=E,254µm,1.5s
ATTE                                AML   AML
     comp=N,298µm,0.5s
ATTE                                AML   AML
     comp=N,297µm,0.5s
ATTE                                AML   AML
     comp=E,252µm,0.5s
MGAB Montegabbione      0.82 280 ⇓P        Pn    14 10 23.6  0.0
MGAB                                AML   AML
     comp=E,674µm,0.4s
MGAB                                AML   AML
     comp=N,957µm,0.5s
MGAB                                AML   AML
     comp=E,684µm,0.5s
MGAB                                AML   AML
     comp=N,958µm,0.3s
MGAB                                AML   AML
     comp=N,960µm,0.3s
MGAB                                AML   AML
     comp=E,684µm,0.5s
MGAB                                AML   AML
     comp=N,955µm,0.5s
MGAB                                AML   AML
     comp=E,674µm,0.4s
FRON Frontone           0.82 335 ⇑P        Pg    14 10 22.0  0.0
FRON                                AML   AML
     comp=E,700µm,0.2s
FRON                                AML   AML
     comp=N,993µm,0.3s
FRON                                AML   AML
     comp=N,808µm,0.1s
FRON                                AML   AML
     comp=E,700µm,0.2s
AOI  Ancona             0.83  20 S         Sn    14 10 38.0 +1.9
ATVO AVT- Monte Val     0.84 316 P         Pb    14 10 22.8 -0.1
ATVO                                AML   AML
     comp=E,330µm,0.5s
ATVO                                AML   AML
     comp=N,310µm,0.4s
ATVO                                AML   AML
     comp=E,329µm,0.5s
ATVO                                AML   AML
     comp=E,329µm,0.5s
ATVO                                AML   AML
     comp=N,309µm,0.4s
ATPI Pietralunga -      0.90 319 ⇓P        Pb    14 10 23.6 -0.1
ATPI                                AML   AML
     comp=E,264µm,0.4s
ATPI                                AML   AML
     comp=N,246µm,0.4s
ATPI                                AML   AML
     comp=N,247µm,0.4s
ATPI                                AML   AML
     comp=E,264µm,0.4s
PIEI Pieia              0.91 327 ⇑P        Pb    14 10 24.2 +0.3
PIEI                                S     Sn    14 10 38.0 -0.1
PIEI                                AML   AML
     comp=E,400µm,0.6s
PIEI                                AML   AML
     comp=N,272µm,1.5s
PIEI                                AML   AML
     comp=N,266µm,0.2s
PIEI                                AML   AML
     comp=E,362µm,0.2s
MPAG Monte Paganucc     0.92 339 ⇓P        Pb    14 10 24.1  0.0
MPAG                                S     Sn    14 10 40.0 +1.6
MPAG                                AML   AML
     comp=N,466µm,1.2s
MPAG                                AML   AML
     comp=E,518µm,0.4s
MPAG                                AML   AML
     comp=E,1124µm,0.8s
MPAG                                AML   AML
     comp=E,518µm,0.4s
MPAG                                AML   AML
     comp=N,1377µm,0.7s
MPAG                                AML   AML
     comp=N,357µm,0.3s
SACS San Casciano d     0.96 275 ⇓P        Pn    14 10 26.4 +0.8
SACS                                AML   AML
     comp=E,262µm,0.6s
SACS                                AML   AML
     comp=N,282µm,1.0s
SACS                                AML   AML
     comp=N,282µm,1.0s
SACS                                AML   AML
     comp=N,271µm,0.8s
SACS                                AML   AML
     comp=E,257µm,0.6s
SACS                                AML   AML
     comp=E,262µm,0.6s
FSSB Fossombrone        0.97 341 ⇑P        Pb    14 10 25.1 +0.1
FSSB                                S     Sn    14 10 41.0 +1.4
FSSB                                AML   AML
     comp=N,1955µm,0.3s
FSSB                                AML   AML
     comp=E,1080µm,0.2s
FSSB                                AML   AML
     comp=E,1081µm,0.2s
FSSB                                AML   AML
     comp=N,1958µm,0.3s
BADI Badiali            1.02 317 ⇑P        Pn    14 10 26.2 -0.2
BADI                                AML   AML
     comp=E,53µm,0.4s
BADI                                AML   AML
     comp=N,266µm,0.5s
CAFI Castiglion Fio     1.07 302 ⇓P        Pn    14 10 27.3 +0.2
CAFI                                S     Sn    14 10 44.0 +2.0
CAFI                                AML   AML
     comp=N,192µm,1.0s
CAFI                                AML   AML
     comp=E,194µm,0.6s
CAFI                                AML   AML
     comp=E,193µm,0.6s
CAFI                                AML   AML
     comp=E,192µm,0.6s
CAFI                                AML   AML
     comp=N,155µm,0.8s
POFI Posta Fibreno      1.12 160 ⇑P        Pn    14 10 30.4 +2.6
PAOL Paolisi            2.02 149 S         Sb    14 11 09.0 +1.1
VBKN Vesuvio Bunker     2.15 154 S         Sg    14 11 14.0 -1.0
GSCL Gusciola           2.47 311 P         Pb    14 10 50.0 -0.6
OPPE Oppeano            2.93 331 S         Sb    14 11 36.0 +1.9
```

*NEIC **31** 14:10:56.0±1.6, 20°.31N±0°.09×145°.4E±0°.1, h127km±5km, mb4.4/24, Error ellipse: s-maj=15.4km s-min=12.8km az=95.0*
*IDC **31** 14:10:57.3±3.1, 20°.27N×145°.55E, h149km±30km, mb3.3/10, mbtmp3.8/12, MS3.0/2, Error ellipse: s-maj=28.5km s-min=15.3km az=86.0*
ISC 31 14:10:57.7±0.6, 20°.37N±0°.06×145°.3E±0°.1, h150km, n49, σ1§59/46, mb3.9/19, Mariana Islands

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Code Station Name       Δ°   AZ°  Phase ID          Time      Res
                                  Op    ISC       h m s     ISC
GUMO Guam               6.76 183  P     Pn        14 12 32.0 -2.6
     201nm,1.2s,baz=320,slow=8.5,SNR=2.1
GUMO                              S     Sn        14 13 50.5  0.0
     67nm,0.8s,baz=31,slow=5.9,SNR=1.4
GUMO Guam               6.76 183  Pn    Pn        14 12 31.6 -3.0
JCJ  Chichijima         7.26 338  P     Pn        14 12 37.2 -4.0
     34nm,0.4s,baz=102,slow=14,SNR=5.6
JCJ                               S     Sn        14 13 57.0 -5.4
     33nm,0.4s,baz=107,slow=19,SNR=1.8
JCJ  Chichijima         7.26 338  Pn    Pn        14 12 40.5 -0.7
JGF  Kuroka             16.68 337 P     Pn        14 14 43.2 +0.4
JMN  Monobe             16.70 325 P     Pn        14 14 43.2 +0.2
JMN                               IAmb  IAmb      14 15 18.8
     comp=Z,48nm,1.3s
MJAR Matsushiro Arr     17.25 341 P     Pn        14 14 50.4 +0.9
     comp=Z,1.4nm,0.7s,baz=122,slow=16,SNR=1.7
MAJO Matsushiro         17.25 341 P     Pn        14 14 49.5 -0.1
MJB9 Matsu-Tunnel       17.25 341 P     Pn        14 14 49.5 -0.1
JSU  Suzuyama           17.30 313 Pn    Pn        14 14 51.8 +1.6
JMM  Marumori           17.86 348 P     P         14 14 55.1 -0.2
JMM                               IAmb  IAmb      14 15 37.1
     comp=Z,37nm,1.4s
JHS  Saijyo             18.08 326 P     Pn        14 14 59.1 -0.3
JHS                               IAmb  IAmb      14 15 05.2
     comp=Z,18nm,1.1s
H11S3 WAKE ISLAND Hy 20.30  92    T     T         14 36 28.6
     baz=275,slow=74,SNR=4.6
H11S1 WAKE ISLAND Hy 20.31  92    T     T         14 36 32.8
     baz=275,slow=74,SNR=2.6
H11S2 WAKE ISLAND Hy 20.32  92    T     T         14 36 27.5
     baz=275,slow=74,SNR=3.8
KSRS Korea Array        22.73 322 P     P         14 15 49.0 +2.1
     comp=Z,1.2nm,0.6s,baz=156,slow=8.8,SNR=4.4
     comp=Z,1.2nm,0.6s
TPUB Ta-pu              23.03 282 P     P         14 15 49.5 -0.5
DAV  Davao City (W)     23.20 238 LR    LR        14 26 14.0
     comp=Z,16nm,18.4s,baz=4.5,slow=39
TOLI2 Tolitoli          30.63 234 P     P         14 16 59.1 +1.0
TOLI2                             IAmb  IAmb      14 17 40.3
     comp=Z,7.5nm,0.9s
CTA  Charters Tower     40.23 179 LR    LR        14 34 20.0
     comp=Z,34nm,18.1s,baz=82,slow=35
WB0  Warramunga Arr     41.29 196 P     P         14 18 27.6 -0.9
WB0                               IAmb  IAmb      14 18 47.5
     comp=Z,8.2nm,1.5s
WB2  Warramunga Arr     41.47 196 P     P         14 18 29.0 -1.0
WRA  Warramunga Arr     41.47 196 P     P         14 18 29.4 -0.6
     comp=Z,0.9nm,0.5s,baz=14,slow=8.7,SNR=11
     comp=Z,0.9nm,0.5s
SONM Songino Array      41.58 320 P     P         14 18 32.0 +1.1
     comp=Z,0.3nm,0.4s,baz=128,slow=7.8,SNR=3.2
     comp=Z,0.3nm,0.4s
AS31 Alice Springs      45.15 195 P     P         14 18 58.5 -1.0
ASAR Alice Springs      45.15 195 P     P         14 18 58.3 -1.2
     comp=Z,0.3nm,0.4s,baz=13,slow=6.6,SNR=30
     comp=Z,0.3nm,0.4s
ASAR Alice Springs      45.15 195 P     P         14 18 58.4 -1.1
MKAR Makanchi Array     57.01 313 P     P         14 20 30.7 +2.9
     comp=Z,0.3nm,0.5s,baz=92,slow=9.2,SNR=4.1
     comp=Z,0.3nm,0.5s
CAST Castle Rocks       59.81  28 P     P         14 20 47.8 +0.9
CAST                              IAmb  IAmb      14 20 53.5
     comp=Z,7.8nm,1.5s
BPAW Bear Paw Mtn.      60.46  27 P     P         14 20 52.4 +1.0
BPAW                              IAmb  IAmb      14 21 34.3
     comp=Z,5.9nm,1.3s
I23K Minto, Yukon-K     61.39  26 P     P         14 20 58.6 +1.1
I23K                              IAmb  IAmb      14 21 09.1
     comp=Z,4.9nm,1.5s
BOOM Boomskoye usch     61.44 308 P     P         14 21 00.9 +2.3
MDM  Murphy Dome        61.82  26 P     P         14 21 01.9 +1.4
MDM                               IAmb  IAmb      14 21 14.1
     comp=Z,3.7nm,1.2s
H24K Noodor Dome        62.15  25 P     P         14 21 04.1 +1.4
H24K                              IAmb  IAmb      14 21 29.0
     comp=Z,6.5nm,1.5s
TOLK Toolik Lake Re     62.20  22 P     P         14 21 04.4 +1.4
ILAR Eielson Array      62.34  27 P     P         14 21 02.5 -1.5
     comp=Z,0.4nm,0.6s,baz=248,slow=5.3,SNR=5.7
     comp=Z,0.4nm,0.6s
J25K Salcha River,      62.95  27 P     P         14 21 07.2 -0.9
J25K                              IAmb  IAmb      14 21 19.8
     comp=Z,4.5nm,1.4s
J26L Joseph Creek       63.71  27 P     P         14 21 13.3 +0.2
J26L                              IAmb  IAmb      14 21 14.1
     comp=Z,3.0nm,1.1s
BMAR Burnt Mountain     63.76  24 P     P         14 21 13.4  0.0
YAH  Yahtse             64.11  32 P     P         14 21 16.3 +0.3
BARN Barnard Glacie     64.21  31 P     P         14 21 16.9 +0.4
BCAR Beaver Creek A     64.32  29 P     P         14 21 18.1 +1.0
CMWZ Cape Campbell      67.38 157 P     P         14 21 37.3 +0.6
ABKAR Akbulak array     71.83 317 P     P         14 22 05.0 +0.9
NVAR Mina Array Bea     82.44  52 P     P         14 23 03.9  0.0
     comp=Z,0.4nm,0.6s,baz=271,slow=7.2,SNR=4.2
     comp=Z,0.4nm,0.6s
FINES FINESS Array B    85.19 335 P     P         14 23 17.2 +0.2
     comp=Z,1.4nm,0.7s,baz=64,slow=4.4,SNR=8.1
     comp=Z,1.4nm,0.7s
FINES FINESS Array B    85.19 335 P     P         14 23 17.1 +0.1
PDAR Pinedale Array     86.96  45 P     P         14 23 25.9 -0.5
     comp=Z,0.2nm,0.3s,baz=242,slow=1.9,SNR=5.6
     comp=Z,0.2nm,0.3s
NOA  NORSAR Array B     90.86 340 P     P         14 23 45.6 +1.5
     comp=Z,0.2nm,0.5s,baz=24,slow=8.8,SNR=2.1
     comp=Z,0.2nm,0.5s
```

ROM 31 14:11:01.9±0.1, 42°.693N±0°.004×13°.177E±0°.005, h14km, ML2.7/24, 14C-7D, Error ellipse: s-maj=0.4km s-min=0.2km az=90.0, Central Italy

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Code Station Name       Δ°   AZ°  Phase ID          Time      Res
                                  Op    ISC       h m s     ISC
T1204 Amatrice, Fraz    0.10  99 P     Pg        14 11 05.5 +0.3
T1204                             S     Sg        14 11 07.7 +0.2
T1204                             AML   AML
     comp=E,6460µm,1.0s
T1204                             AML   AML
     comp=E,6450µm,1.0s
T1204                             AML   AML
     comp=N,3880µm,0.3s
T1204                             AML   AML
     comp=E,6455µm,1.3s
T1204                             AML   AML
     comp=N,3885µm,0.3s
T1204                             AML   AML
     comp=E,6475µm,1.3s
T1204                             AML   AML
     comp=E,5541µm,0.1s
T1204                             AML   AML
     comp=N,3068µm,0.2s
SMA1 SAN MARTINO        0.13 118  P     Pb        14 11 06.0 -0.4
SMA1                              S     Sg        14 11 08.5 +0.5
SMA1                              AML   AML
     comp=E,10540µm,0.2s
SMA1                              AML   AML
     comp=E,10530µm,0.2s
SMA1                              AML   AML
     comp=N,6100µm,0.2s
SMA1                              AML   AML
     comp=E,10545µm,0.2s
SMA1                              AML   AML
     comp=E,10543µm,0.2s
SMA1                              AML   AML
     comp=N,6099µm,0.2s
LNSS Leonessa           0.14 228 ⇑P     Pg        14 11 05.8 +0.2
LNSS                              S     Sg        14 11 08.2 +0.2
LNSS                              AML   AML
     comp=N,10160µm,0.3s
LNSS                              AML   AML
     comp=E,4445µm,0.2s
LNSS                              AML   AML
     comp=N,9466µm,0.1s
LNSS                              AML   AML
     comp=E,4444µm,0.2s
T1245 Castelsantange    0.16   3 ⇑P     Pg        14 11 04.6 -1.4
T1217 Poggiodomo (PG    0.18 276 ⇑P     Pg        14 11 06.4 +0.2
T1217                             AML   AML
     comp=E,1885µm,0.7s
T1217                             AML   AML
     comp=E,1855µm,0.7s
T1217                             AML   AML
     comp=N,3990µm,0.2s
T1217                             AML   AML
     comp=N,4005µm,0.2s
T1217                             AML   AML
     comp=E,1850µm,0.7s
T1217                             AML   AML
     comp=E,1880µm,0.7s
T1217                             AML   AML
     comp=E,1849µm,0.6s
T1217                             AML   AML
     comp=E,1880µm,0.6s
T1217                             AML   AML
     comp=N,3989µm,0.2s
T1217                             AML   AML
     comp=E,1744µm,0.2s
T1217                             AML   AML
     comp=N,4004µm,0.2s
T1217                             AML   AML
     comp=E,1712µm,0.2s
RM33 Pellescritta (     0.19 171  P     Pg        14 11 06.5 +0.3
RM33                              S     Sg        14 11 09.9 +0.6
RM33                              AML   AML
     comp=E,3375µm,1.4s
RM33                              AML   AML
     comp=N,2480µm,0.9s
RM33                              AML   AML
     comp=E,3380µm,1.4s
RM33                              AML   AML
     comp=E,3460µm,1.4s
RM33                              AML   AML
     comp=N,2475µm,0.9s
RM33                              AML   AML
     comp=N,2500µm,0.9s
RM33                              AML   AML
     comp=E,1700µm,0.1s
RM33                              AML   AML
     comp=N,2120µm,0.2s
RM33                              AML   AML
     comp=N,2118µm,0.2s
RM33                              AML   AML
     comp=E,1682µm,0.1s
T1243 Rocca Santa Ma    0.20  89 ⇑P     Pg        14 11 06.8 +0.2
T1243                             S     Sg        14 11 10.3 +0.6
T1216 Preci, Frazion    0.23 330  P     Pg        14 11 07.2 +0.3
T1216                             S     Sb        14 11 11.2 -0.8
T1216                             AML   AML
     comp=N,12800µm,0.4s
T1216                             AML   AML
     comp=E,11850µm,0.4s
T1216                             AML   AML
     comp=N,12850µm,0.4s
T1216                             AML   AML
     comp=E,11800µm,0.4s
T1216                             AML   AML
     comp=E,1155µm,0.2s
T1216                             AML   AML
     comp=N,1658µm,0.1s
CAMP Campotosto         0.23 132  P     Pg        14 11 07.2 +0.2
CAMP                              S     Sg        14 11 11.2 +0.7
CAMP                              AML   AML
     comp=E,882µm,0.2s
CAMP                              AML   AML
     comp=N,818µm,0.4s
CAMP                              AML   AML
     comp=E,1305µm,0.5s
CAMP                              AML   AML
     comp=N,1047µm,0.6s
CAMP                              AML   AML
     comp=N,473µm,0.3s
CAMP                              AML   AML
     comp=E,457µm,0.3s
MMO1 Montemonaco        0.23  28 P     Pg        14 11 07.4 +0.3
MMO1                              S     Sb        14 11 11.5 -0.7
T1241 Roccafluvione,    0.25  49 ⇑P     Pg        14 11 07.6 +0.3
T1241                             S     Sb        14 11 11.9 -0.7
T1241                             AML   AML
     comp=E,2180µm,1.0s
T1241                             AML   AML
     comp=N,866µm,0.3s
T1241                             AML   AML
     comp=N,5695µm,1.3s
T1241                             AML   AML
     comp=E,8790µm,0.4s
T1241                             AML   AML
     comp=N,715µm,0.4s
T1241                             AML   AML
     comp=E,2059µm,0.3s
T1241                             AML   AML
     comp=E,2064µm,0.2s
T1241                             AML   AML
     comp=N,791µm,0.4s
T1215 Vallo di Nera,    0.25 296 ⇑P     Pg        14 11 07.5 +0.2
T1215                             AML   AML
     comp=E,1880µm,0.3s
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T1215				AML	AML	
	comp=N,1780μm,0.3s					
T1215				AML	AML	
	comp=E,1860μm,0.3s					
T1215				AML	AML	
	comp=N,1770μm,0.3s					
T1215				AML	AML	
	comp=E,1854μm,0.3s					
T1215				AML	AML	
	comp=N,1775μm,0.3s					
T1215				AML	AML	
	comp=N,802μm,0.2s					
T1215				AML	AML	
	comp=N,772μm,0.2s					
T1215				AML	AML	
	comp=E,493μm,0.1s					
T1215				AML	AML	
	comp=E,435μm,0.1s					
T1247	**Pizzolo (AQ)**	**0.27**	**160**	P	Pb	14 11 08.4 -0.2
T1247				S	Sb	14 11 12.6 -0.5
T1247				AML	AML	
	comp=E,2030μm,0.5s					
T1247				AML	AML	
	comp=N,1670μm,1.4s					
T1247				AML	AML	
	comp=E,1162μm,0.3s					
T1247				AML	AML	
	comp=N,1182μm,0.2s					
T1211	**Morro Reatino**	**0.29**	**236**	⇑P	Pg	14 11 08.1 +0.1
T1211				AML	AML	
	comp=N,2025μm,0.2s					
T1211				AML	AML	
	comp=E,1625μm,0.9s					
T1211				AML	AML	
	comp=N,2005μm,0.2s					
T1211				AML	AML	
	comp=N,2260μm,1.5s					
T1211				AML	AML	
	comp=E,1635μm,0.9s					
T1211				AML	AML	
	comp=N,2240μm,0.3s					
T1211				AML	AML	
	comp=E,1685μm,0.9s					
T1211				AML	AML	
	comp=E,1630μm,0.9s					
T1211				AML	AML	
	comp=N,2244μm,0.3s					
T1211				AML	AML	
	comp=N,2260μm,1.5s					
T1211				AML	AML	
	comp=E,1324μm,0.1s					
T1211				AML	AML	
	comp=N,2005μm,0.2s					
T1211				AML	AML	
	comp=E,1345μm,0.1s					
T1211				AML	AML	
	comp=N,2024μm,0.2s					
AM05	**Amandola Campo**	**0.31**	**24**	P	Pb	14 11 08.9 -0.4
AM05				AML	AML	
	comp=E,1087μm,1.0s					
AM05				AML	AML	
	comp=N,1310μm,0.8s					
AM05				AML	AML	
	comp=N,1305μm,0.8s					
AM05				AML	AML	
	comp=N,268μm,0.5s					
AM05				AML	AML	
	comp=E,5030μm,1.6s					
AM05				AML	AML	
	comp=E,1088μm,1.0s					
AM05				AML	AML	
	comp=N,527μm,0.1s					
T1256	**Bolognola (MC)**	**0.32**	**7**	⇓P	Pg	14 11 08.9 +0.4
T1256				AML	AML	
	comp=E,3770μm,1.1s					
T1256				AML	AML	
	comp=N,4150μm,0.7s					
T1256				AML	AML	
	comp=E,3730μm,1.1s					
T1256				AML	AML	
	comp=N,3930μm,0.7s					
TERO	**Teramo**	**0.32**	**102**	⇑P	Pg	14 11 08.7 +0.1
TERO				AML	AML	
	comp=E,1260μm,0.2s					
TERO				AML	AML	
	comp=N,1290μm,0.6s					
TERO				AML	AML	
	comp=E,1395μm,0.2s					
TERO				AML	AML	
	comp=N,1375μm,0.6s					
TERO				AML	AML	
	comp=E,1510μm,1.5s					
TERO				AML	AML	
	comp=E,1590μm,1.5s					
TERO				AML	AML	
	comp=N,1900μm,0.1s					
TERO				AML	AML	
	comp=N,1710μm,0.1s					
TERO				AML	AML	
	comp=E,1190μm,0.1s					
TERO				AML	AML	
	comp=N,1092μm,0.1s					
TERO				AML	AML	
	comp=N,1231μm,0.1s					
TERO				AML	AML	
	comp=E,1263μm,0.2s					
ARRO	**Arrone**	**0.32**	**250**	⇑P	Pg	14 11 08.8 +0.2
ARRO				AML	AML	
	comp=E,897μm,1.3s					
ARRO				AML	AML	
	comp=N,886μm,0.4s					
ARRO				AML	AML	
	comp=E,898μm,1.3s					
ARRO				AML	AML	
	comp=N,884μm,0.4s					
ARRO				AML	AML	
	comp=E,725μm,0.2s					
ARRO				AML	AML	
	comp=N,795μm,0.2s					
FDMO	**Fiordimonte**	**0.35**	**349**	⇓P	Pg	14 11 09.4 +0.4
FDMO				AML	AML	
	comp=N,2635μm,1.4s					
FDMO				AML	AML	
	comp=E,2535μm,0.3s					
FDMO				AML	AML	
	comp=N,445μm,0.4s					
FDMO				AML	AML	
	comp=E,378μm,0.2s					
GIGS	**Gran Sasso**	**0.38**	**130**	⇑P	Pg	14 11 09.7 +0.1
GIGS				AML	AML	
	comp=N,152μm,1.0s					
GIGS				AML	AML	
	comp=N,152μm,1.0s					
GIGS				AML	AML	
	comp=E,188μm,1.3s					
GIGS				AML	AML	
	comp=E,118μm,0.3s					
GIGS				AML	AML	
	comp=N,95μm,0.2s					
GUMA	**Gualdo di Mace**	**0.39**	**17**	⇓P	Pb	14 11 10.5 -0.2
GUMA				AML	AML	
	comp=N,15150μm,0.5s					
GUMA				AML	AML	
	comp=E,17900μm,0.4s					
GUMA				AML	AML	
	comp=N,11045μm,0.5s					
GUMA				AML	AML	
	comp=E,11750μm,0.4s					
GUMA				AML	AML	
	comp=N,2075μm,0.2s					
GUMA				AML	AML	
	comp=N,2027μm,0.2s					
GUMA				AML	AML	
	comp=E,2757μm,0.3s					
GUMA				AML	AML	
	comp=E,1855μm,0.2s					
FIAM	**Fiamignano**	**0.43**	**186**	⇑P	Pg	14 11 10.5 0.0
FIAM				AML	AML	
	comp=E,626μm,0.6s					
FIAM				AML	AML	
	comp=N,632μm,0.9s					
FIAM				AML	AML	
	comp=E,741μm,0.7s					
FIAM				AML	AML	
	comp=N,632μm,0.9s					
FIAM				AML	AML	
	comp=N,350μm,0.4s					
FIAM				AML	AML	
	comp=E,575μm,0.4s					
OFFI	**Offida**	**0.45**	**57**	⇑P	Pb	14 11 12.0 +0.3
OFFI				AML	AML	
	comp=N,2615μm,1.0s					
OFFI				AML	AML	
	comp=E,2830μm,0.6s					
OFFI				AML	AML	
	comp=N,3005μm,1.2s					
OFFI				AML	AML	
	comp=E,1042μm,0.4s					
OFFI				AML	AML	
	comp=N,1226μm,0.4s					
CESX	**Cesi**	**0.45**	**260**	⇑P	Pg	14 11 10.7 -0.1
CESX				AML	AML	
	comp=E,707μm,0.9s					
CESX				AML	AML	
	comp=N,594μm,0.4s					
CESX				AML	AML	
	comp=E,748μm,1.3s					
CESX				AML	AML	
	comp=N,691μm,0.4s					
CESX				AML	AML	
	comp=E,388μm,0.2s					
CESX				AML	AML	
	comp=N,437μm,0.3s					
ASSB	**Assisi San Ben**	**0.52**	**313**	⇓P	Pb	14 11 12.7 -0.2
ASSB				S	Sb	14 11 21.0 +0.7
ASSB				AML	AML	
	comp=E,1265μm,0.3s					
ASSB				AML	AML	
	comp=N,1240μm,0.4s					
ASSB				AML	AML	
	comp=N,301μm,0.2s					
ASSB				AML	AML	
	comp=E,248μm,0.2s					
TRTR	**Tortoreto Alta**	**0.56**	**78**	⇓P	Pb	14 11 14.2 +0.7
T0110	**Collepietro**	**0.65**	**136**	⇓P	Pg	14 11 14.2 -0.3
T0110				AML	AML	
	comp=N,780μm,0.5s					
T0110				AML	AML	
	comp=E,810μm,0.5s					
T0110				AML	AML	
	comp=N,243μm,0.3s					
T0110				AML	AML	
	comp=E,320μm,0.4s					
SRES	**S.Oreste - Sor**	**0.67**	**227**	S	Sn	14 11 27.0 -0.4
MURB	**Monte Urbino**	**0.74**	**320**	S	Sn	14 11 29.0 -0.4
MGAB	**Montegabbione**	**0.81**	**286**	⇓P	Pn	14 11 20.1 +1.0
VIVA	**Pratoni del Vi**	**0.99**	**198**	P	Pb	14 11 20.1 -0.8
VIVA				AML	AML	
	comp=E,1305μm,0.1s					
VIVA				AML	AML	
	comp=N,885μm,1.3s					
LATB	**Latina**	**1.21**	**188**	P	Pg	14 11 26.8 +1.6
VITU	**Vitulano (BN)**	**1.86**	**144**	⇑P	Pb	14 11 35.2 -0.5
PAOL	**Paolisi**	**1.96**	**148**	P	Pn	14 11 32.1 -2.7

IDC 31 14:13:04.5±1.3, 15°.18S×177°.48W, h0km, mb3.9/4, mbtmp3.8/6, ML4.2/1, MS3.6/29, Error ellipse: s-maj=74.5km s-min=21.8km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.98**	**239**	Pn	Pn	14 14 22.7	+2.0
	0.3nm,0.3s,baz=15,slow=23,SNR=1.5						
MSVF				LR	LR	14 15 56.6	
	comp=Z,181nm,18.2s,baz=53,slow=34						
	7.8nm,1.2s						
AFI	**Afiamalu**	**5.67**	**78**	Pn	Pn	14 14 29.8	-0.2
	7.7nm,0.5s,baz=307,slow=5.1						
AFI				LR	LR	14 16 17.9	
	comp=Z,92nm,21.6s,baz=340,slow=34						
DZM	**Mont Dzumac**	**16.70**	**243**	*e*LR	LR	14 21 21.7	
	comp=Z,168nm,22.5s						
DZM	**Mont Dzumac**	**16.70**	**243**	LR	LR	14 22 22.1	
	comp=Z,155nm,19.9s,baz=37,slow=33						
RAR	**Rarotonga**	**17.86**	**112**	LR	LR	14 21 57.7	
	comp=Z,292nm,18.8s,baz=279,slow=30						
URZ	**Urewera**	**23.48**	**191**	LR	LR	14 25 50.9	
	comp=Z,168nm,18.5s,baz=130,slow=33						
PPT	**Papeete**	**26.87**	**99**	LR	LR	14 26 38.5	
	comp=Z,101nm,20.3s,baz=304,slow=30						
PPT2	**Papeete2**	**26.87**	**99**	*e*LR	LR	14 25 24.0	
	comp=Z,204nm,23.8s						
PPT2				*e*LR	LR	14 25 24.1	
	comp=Z,169nm,25.8s						
TBI	**Tubuai**	**27.63**	**111**	*e*LR	LR	14 25 46.0	
	comp=Z,5μm,24.5s						
TBI				*e*LR	LR	14 25 46.2	
	comp=Z,1μm,27.2s						
TBI	**Tubuai**	**27.63**	**111**	*e*T	T	14 47 18.6	
	4.3nm,0.3s						
PMG	**Port Moresby**	**34.99**	**275**	LR	LR	14 32 18.1	
	comp=Z,74nm,20.5s,baz=51,slow=33						
STKA	**Stephens Creek**	**40.76**	**239**	P	P	14 20 47.4	-0.1
	6.3nm,1.1s,baz=72,slow=6.4,SNR=3.8						
	6.3nm,1.1s						
WRA	**Warramunga Arr**	**46.06**	**257**	LR	LR	14 38 56.0	
	comp=Z,76nm,20.8s,baz=102,slow=34						
ASAR	**Alice Springs**	**46.44**	**252**	P	P	14 21 32.4	-1.0
	1.0nm,0.6s,baz=86,slow=8.3,SNR=23						
ASAR				LR	LR	14 39 48.9	
	comp=Z,82nm,18.1s,baz=129,slow=35						
	1.0nm,0.6s						
GUMO	**Guam**	**46.95**	**306**	LR	LR	14 39 12.7	
	comp=Z,39nm,19.7s,baz=116,slow=33						
SIJI	**Sorong**	**52.54**	**281**	LR	LR	14 43 39.1	
	comp=Z,16nm,20.4s,baz=156,slow=35						
JCJ	**Chichijima**	**57.44**	**317**	LR	LR	14 44 22.9	
	comp=Z,53nm,18.6s,baz=104,slow=33						
DAV	**Davao City (W)**	**60.60**	**287**	LR	LR	14 48 05.2	
	comp=Z,22nm,19.6s,baz=73,slow=35						
JHJ	**Hachijo jima 2**	**63.02**	**320**	LR	LR	14 46 19.8	
	comp=Z,17nm,21.4s,baz=144,slow=32						
MJAR	**Matsushiro Arr**	**66.29**	**322**	LR	LR	14 47 22.9	
	comp=Z,23nm,19.6s,baz=126,slow=31						
KSRS	**Korea Array**	**73.29**	**317**	LR	LR	14 51 31.9	
	comp=Z,15nm,21.4s,baz=80,slow=32						
PFO	**Pinyon Flats O**	**75.70**	**49**	LR	LR	14 50 37.1	
	comp=Z,63nm,19.3s,baz=215,slow=30						
YBH	**Yreka Blue Hor**	**75.86**	**39**	LR	LR	14 49 44.0	
	comp=Z,67nm,20.8s,baz=284,slow=29						
KLR	**Kul'dur**	**78.24**	**329**	LR	LR	14 53 32.7	
	comp=Z,35nm,21.6s,baz=110,slow=31						
BBB	**Bella Bella**	**79.51**	**28**	LR	LR	14 53 06.3	
	comp=Z,45nm,19.2s,baz=244,slow=30						
ELK	**Elko**	**80.07**	**43**	LR	LR	14 51 53.3	
	comp=Z,39nm,20.2s,baz=254,slow=29						
NEW	**Newport**	**82.79**	**36**	LR	LR	14 54 56.6	
	comp=Z,37nm,19.3s,baz=256,slow=30						
DLBC	**Dease Lake**	**82.99**	**23**	LR	LR	14 58 36.9	
	comp=Z,105nm,18.4s,baz=250,slow=33						
ILAR	**Eielson Array**	**83.05**	**13**	P	P	14 25 30.8	-0.6
	0.5nm,0.8s,baz=227,slow=6.2,SNR=5.2						
ILAR				LR	LR	14 57 20.7	
	comp=Z,53nm,20.3s,baz=213,slow=32						
	0.5nm,0.8s						
ANMO	**Albuquerque**	**83.71**	**51**	LR	LR	14 54 45.6	
	comp=Z,53nm,19.9s,baz=266,slow=30						
TXAR	**Lajitas Array**	**83.79**	**58**	P	P	14 25 36.4	+0.2
	0.3nm,0.8s,baz=237,slow=4.1,SNR=2.6						
TXAR				LR	LR	14 56 35.3	
	comp=Z,43nm,18.4s,baz=260,slow=31						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**88.82**	**289**	LR	LR	15 02 29.0	
	comp=Z,15nm,20.5s,baz=315,slow=33						
YKA	**Yellowknife Ar**	**91.50**	**24**	LR	LR	15 01 33.3	
	comp=Z,64nm,18.6s,baz=294,slow=32						
ATAH	**Atahualpa**	**96.85**	**90**	LR	LR	15 00 17.3	
	comp=Z,47nm,21.3s,baz=317,slow=29						
GERES	**GERESS Array B**	**145.19**	**347**	PKPbc	PKPdf	14 32 44.5	+0.2
	0.8nm,0.8s,baz=23,slow=3.2,SNR=4.5						

*NEIC **31** 14:18:46.8±1.2, 7°.13S±0°.09×119°.8E±0°.1, h510km±7km, mb4.4/50, Error ellipse: s-maj=15.0km s-min=12.5km az=67.0*

*DJA **31** 14:18:47.4±0.5, 7°.5S±4°.4×12°.0E±°, h512km±8km, M4.2/22, mB4.7/11, mb4.4/14, MLv4.7/22, Mw(mB)3.9/11*

*IDC **31** 14:18:47.0±0.6, 7°.11S×119°.87E, h516km±5km, mb3.7/15, mbtmp4.6/19, Error ellipse: s-maj=21.3km s-min=8.2km az=74.0*

ISC 31 14:18:45.7±0.4, 7°.16S±0°.05×119°.84E±0°.06, h500km, n184, σ19 80/180, mb4.3/37, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.20**	**33**	P	P	**14 19 50.8**	**+3.2**
BKSI	**Bulukumba**	**1.85**	**9**	P	P	**14 19 53.2**	**+3.1**
KAPI	**Kappang**	**2.14**	**358**	P	P	**14 19 55.2**	**+3.7**
	40nm,0.3s,baz=131,slow=3.5,SNR=60						
KAPI				S	S	**14 20 48.8**	**+3.9**
	21nm,0.8s,baz=28,slow=22,SNR=30						
KAPI	**Kappang**	**2.14**	**358**	P	P	**14 19 55.5**	**+3.9**
KAPI	**Kappang**	**2.14**	**358**	P	P	**14 19 55.5**	**+3.9**
KAPI	**Kappang**	**2.14**	**358**	P	P	**14 19 55.8**	**+4.2**
PLAI	**Plampang**	**2.63**	**231**	P	P	**14 19 55.8**	**+1.5**
PLAI	**Plampang**	**2.63**	**231**	P	P	**14 19 56.3**	**+2.0**
BNSI	**Bone**	**2.76**	**6**	P	P	**14 19 59.0**	**+3.9**
MMRI	**Maumere**	**2.79**	**122**	P	P	**14 19 57.1**	**+1.8**
MMRI	**Maumere**	**2.79**	**122**	P	P	**14 19 57.3**	**+2.0**
MMRI	**Maumere**	**2.79**	**122**	P	P	**14 19 57.7**	**+2.4**
SPSI	**Sidrap Palu**	**3.18**	**359**	P	P	**14 20 01.3**	**+3.3**
TWSI	**Taliwang, Sumb**	**3.32**	**242**	P	P	**14 20 00.2**	**+1.3**
KKSI	**Kolaka, Sulawe**	**3.48**	**31**	P	P	**14 20 03.9**	**+3.8**
PMSI	**Majene**	**3.75**	**346**	P	P	**14 20 05.8**	**+3.5**
KLNI	**Mataram**	**3.92**	**251**	P	P	**14 20 04.7**	**+1.2**
SRBI	**Singaraja**	**4.68**	**258**	P	P	**14 20 12.1**	**+2.3**
BATI	**Baumata**	**4.84**	**129**	P	P	**14 20 12.4**	**+1.1**
	126nm,0.3s,baz=283,slow=0.9,SNR=45						
BATI				S	S	**14 21 19.6**	**-1.6**
	284nm,0.4s,baz=31,slow=16,SNR=17						
BATI	**Baumata**	**4.84**	**129**	P	P	**14 20 13.8**	**+2.5**
IGBI	**Denpasar**	**4.93**	**250**	P	P	**14 20 15.0**	**+2.9**
SOEI	**Soe**	**5.08**	**121**	P	P	**14 20 15.7**	**+2.2**
SOEI	**Soe**	**5.08**	**121**	P	P	**14 20 15.8**	**+2.2**
	1.4nm2μm120nm,0.7s						
SOEI	**Soe**	**5.08**	**121**	P	P	**14 20 16.1**	**+2.5**
JAGI	**Jajag, Banyuwa**	**5.78**	**257**	P	P	**14 20 19.7**	**-0.3**
JAGI	**Jajag, Banyuwa**	**5.78**	**257**	P	P	**14 20 19.9**	**-0.1**
KMMI	**Kalianget**	**5.83**	**271**	P	P	**14 20 23.1**	**+2.7**
	0.4nm116nm,0.8s						
BBKI	**Banjar Baru**	**6.19**	**306**	P	P	**14 20 27.1**	**+3.2**
	0.8nm145nm,0.7s						
APSI	**Ampana**	**6.47**	**16**	P	P	**14 20 29.7**	**+3.1**
	0.6nm2μm133nm,0.8s						
BKB	**Balikpapan**	**6.56**	**333**	P	P	14 20 33.1	+5.6
BKB	**Balikpapan**	**6.56**	**333**	P	P	14 20 33.1	+5.6
	1.9nm5μm496nm,0.7s						
BKB	**Balikpapan**	**6.56**	**333**	P	P	14 20 33.5	+6.0
LUWI	**Luwuk**	**6.75**	**26**	P	P	**14 20 32.5**	**+3.1**
LUWI	**Luwuk**	**6.75**	**26**	P	P	**14 20 32.6**	**+3.1**
	0.3nm6μm71nm,0.8s						
LUWI	**Luwuk**	**6.75**	**26**	P	P	**14 20 32.9**	**+3.5**
MPSI	**Mapaga**	**7.45**	**0**	P	P	**14 20 39.9**	**+3.4**
	0.1nm564nm43nm,1.2s						
MRSI	**Marisa**	**7.87**	**16**	P	P	**14 20 43.3**	**+2.4**
	0.4nm884nm110nm,0.8s						
MTKI	**Muara Teweh, K**	**7.90**	**321**	P	P	**14 20 43.3**	**+2.1**
	0.5nm5μm118nm,0.7s						
SANI	**Sanana**	**7.96**	**51**	P	P	**14 20 44.4**	**+2.7**
	0.1nm26nm,0.9s						
TOLI2	**Tolitoli**	**8.27**	**7**	P	P	**14 20 46.7**	**+1.7**
TOLI2	**Tolitoli**	**8.27**	**7**	P	P	**14 20 46.9**	**+1.9**
GTOI	**Gorontalo**	**8.37**	**22**	P	P	**14 20 49.5**	**+3.5**
	0.1nm308nm23nm,0.6s						
AAI	**Ambon**	**9.01**	**68**	P	P	**14 20 55.8**	**+3.1**
	922nm57nm,0.8s						
UGM	**Wanagama**	**9.27**	**265**	P	P	**14 20 56.4**	**+0.9**
UGM	**Wanagama**	**9.27**	**265**	P	P	**14 20 56.9**	**+1.5**
LBMI	**Labuha**	**10.02**	**50**	P	P	**14 21 06.9**	**+3.5**
	819nm72nm,1.1s						
TNTI	**Ternate**	**10.89**	**44**	P	P	**14 21 14.0**	**+1.4**
BBJI	**Bungbulang**	**12.10**	**268**	P	P	**14 21 26.8**	**+1.4**
	20nm,0.6s						
LEM	**Lembang**	**12.14**	**271**	P	P	**14 21 24.2**	**-1.8**
	22nm,0.6s,baz=17,slow=14,SNR=6.9						
KNRA	**Kununurra**	**12.16**	**135**	P	P	**14 21 27.5**	**+1.5**
KNRA	**Kununurra**	**12.16**	**135**	P	P	**14 21 27.5**	**+1.5**
SBUM	**Sibu**	**12.21**	**321**	P	P	**14 21 28.7**	**+2.2**
MTN	**Manton Dam**	**12.47**	**118**	P	P	**14 21 30.5**	**+1.2**
MTN	**Manton Dam**	**12.47**	**118**	P	P	**14 21 30.8**	**+1.5**
SIJI	**Sorong**	**13.00**	**62**	P	P	**14 21 34.8**	**-0.2**
	16nm,0.7s,baz=291,slow=6.3,SNR=8.1						
SIJI	**Sorong**	**13.00**	**62**	P	P	**14 21 37.0**	**+2.1**
FAKI	**Fak Fak**	**13.06**	**72**	P	P	**14 21 34.9**	**-0.6**
FAKI	**Fak Fak**	**13.06**	**72**	P	P	**14 21 35.0**	**-0.6**
KDU	**Kakadu**	**13.60**	**115**	P	P	**14 21 41.7**	**+0.5**
KKM	**Kota Kinabalu**	**13.61**	**345**	P	P	**14 21 42.1**	**+0.6**
KKM	**Kota Kinabalu**	**13.61**	**345**	P	P	**14 21 42.4**	**+0.9**
MBWA	**Marble Bar**	**13.92**	**180**	P	P	**14 21 45.4**	**+0.9**
MBWA	**Marble Bar**	**13.92**	**180**	P	P	**14 21 45.6**	**+1.1**
PSA00	**Pilbara Seismi**	**14.33**	**180**	P	P	**14 21 49.6**	**+0.7**
PSA00	**Pilbara Seismi**	**14.33**	**180**	P	P	**14 21 48.9**	**0.0**
PSA00	**Pilbara Seismi**	**14.33**	**180**	P	P	**14 21 49.8**	**+1.0**
GIRL	**Giralia**	**16.31**	**199**	P	P	**14 22 10.5**	**+0.9**
WB0	**Warramunga Arr**	**18.88**	**133**	P	P	**14 22 35.0**	**+0.8**
WRA	**Warramunga Arr**	**18.95**	**134**	P	P	**14 22 34.8**	**-0.1**
	22nm,0.5s,baz=309,slow=11,SNR=159						
WRA				S	S	**14 25 33.6**	**-8.0**
	0.2nm,0.4s,baz=321,slow=37,SNR=1.4						
WRA	**Warramunga Arr**	**18.95**	**134**	P	P	**14 22 35.2**	**+0.3**
WRAB	**Tennant Creek**	**18.96**	**133**	P	P	**14 22 36.1**	**+1.2**
WB2	**Warramunga Arr**	**18.96**	**133**	P	P	**14 22 35.8**	**+0.8**
WB1	**Warramunga Ar.**	**18.97**	**134**	P	P	**14 22 36.2**	**+1.2**
WR0	**Warramunga Arr**	**19.11**	**133**	P	P	**14 22 36.9**	**+0.6**
MEEK	**Meekatharra**	**19.40**	**183**	P	P	**14 22 39.5**	**+0.6**
WRKA	**Warakurna**	**19.53**	**156**	P	P	**14 22 41.4**	**+1.3**
AS31	**Alice Springs**	**21.25**	**142**	P	P	**14 22 56.3**	**+0.5**
ASAR	**Alice Springs**	**21.25**	**142**	P	P	**14 22 56.4**	**+0.5**
	17nm,0.3s,baz=320,slow=8.5,SNR=971						
ASAR				S	S	**14 26 13.8**	**-4.7**
	0.7nm,0.6s,baz=312,slow=9.9,SNR=4.8						
	17nm,0.3s						
ASAR	**Alice Springs**	**21.25**	**142**	P	P	**14 22 56.5**	**+0.7**
AS01	**Alice Springs**	**21.28**	**142**	P	P	**14 22 57.0**	**+0.9**
MORW	**Morawa**	**22.08**	**189**	P	P	**14 23 03.5**	**+0.3**
MORW				IAmb	IAmb	14 23 24.8	
	comp=Z,27nm,1.2s						
MORW	**Morawa**	**22.08**	**189**	P	P	**14 23 03.6**	**+0.4**
KULM	**Kulim**	**22.80**	**302**	P	P	**14 23 08.5**	**-1.3**
KULM				IAmb	IAmb	14 23 09.4	
	comp=Z,18nm,1.4s						
QIS	**Mount Isa**	**23.32**	**127**	P	P	**14 23 15.2**	**+0.8**
BLDU	**Ballidu**	**23.52**	**187**	P	P	**14 23 16.0**	**0.0**
GSI	**Gunungsitoli**	**23.75**	**290**	P	P	**14 23 17.7**	**-0.7**
GSI				IAmb	IAmb	14 23 25.7	
	comp=Z,20nm,1.2s						
COEN	**Coen**	**23.90**	**108**	P	P	**14 23 20.4**	**+0.8**
COEN				IAmb	IAmb	14 23 39.8	
	comp=Z,13nm,1.1s						
COEN	**Coen**	**23.90**	**108**	P	P	**14 23 20.5**	**+0.9**
KLBR	**Kellerberrin**	**24.38**	**184**	P	P	**14 23 23.9**	**+0.2**
FORT	**Forrest**	**24.73**	**163**	P	P	**14 23 27.4**	**+0.6**
FORT				IAmb	IAmb	14 23 51.8	
	comp=Z,39nm,1.2s						
FORT	**Forrest**	**24.73**	**163**	P	P	**14 23 27.5**	**+0.8**
OOD	**Oodnadatta**	**25.43**	**146**	P	P	**14 23 33.9**	**+0.9**
NWAO	**Narrogin (SRO)**	**25.75**	**185**	P	P	**14 23 36.1**	**+0.3**
	comp=Z,8.0nm,0.6s,baz=267,slow=5.1,SNR=10						
	comp=Z,8.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**25.75**	**185**	P	P	**14 23 36.1**	**+0.3**
NWAO				IAmb	IAmb	14 23 50.1	
	comp=Z,27nm,1.2s						
NWAO	**Narrogin (SRO)**	**25.75**	**185**	P	P	**14 23 36.5**	**+0.7**
MTSU	**Mount Surprise**	**26.22**	**117**	P	P	**14 23 41.4**	**+1.3**
MULG	**Mulgathing**	**26.59**	**152**	P	P	**14 23 44.0**	**+0.7**
INKA	**Innaminka**	**28.48**	**138**	P	P	**14 24 01.5**	**+1.6**
LCRK	**Leigh Creek**	**28.88**	**146**	P	P	**14 24 04.3**	**+1.0**
BBOO	**Buckleboo**	**29.64**	**152**	P	P	**14 24 10.3**	**+0.5**
BBOO				IAmb	IAmb	14 24 11.2	
	comp=Z,14nm,0.6s						
BBOO	**Buckleboo**	**29.64**	**152**	P	P	**14 24 10.4**	**+0.5**
QLP	**Quilpie**	**30.19**	**133**	P	P	**14 24 16.8**	**+2.0**
HTT	**Hallett**	**31.56**	**149**	P	P	**14 24 27.9**	**+1.4**
STKA	**Stephens Creek**	**31.88**	**143**	P	P	**14 24 30.1**	**+0.8**
	comp=Z,9.4nm,0.3s,baz=320,slow=8.7,SNR=93						
	comp=Z,9.4nm,0.3s						
STKA	**Stephens Creek**	**31.88**	**143**	P	P	**14 24 30.3**	**+1.0**
STKA	**Stephens Creek**	**31.88**	**143**	P	P	**14 24 30.6**	**+1.4**
CMSA	**Cobar Meteorol**	**34.21**	**139**	P	P	**14 24 50.9**	**+1.9**
ARPS	**Mount Arapiles**	**35.65**	**149**	P	P	**14 25 02.3**	**+1.3**
TOO	**Toolangi**	**38.19**	**146**	P	P	**14 25 24.0**	**+2.1**
TOO				IAmb	IAmb	14 25 34.1	
	comp=Z,14nm,1.2s						
TOO	**Toolangi**	**38.19**	**146**	P	P	**14 25 24.2**	**+2.2**
CAN	**Canberra**	**38.75**	**140**	P	P	**14 25 28.2**	**+1.6**
CAN				IAmb	IAmb

comp=Z,15nm,1.1s
CAN Canberra 38.75 140 P P 14 25 28.5 +1.9
HNR Honiara 39.74 96 P P 14 25 35.0 +0.2
JCJ Chichijima 40.35 32 P P 14 25 39.0 -0.5
JTU Tsushima 42.44 12 P P 14 25 55.6 -0.2
JTU Tsushima 42.44 12 P P 14 25 56.1 +0.2
KSRS Korea Array 45.02 9 P P 14 26 15.9 0.0
comp=Z,2.5nm,0.6s,baz=192,slow=8.1,SNR=10
comp=Z,2.5nm,0.6s
KS19 Wonju Array Si 45.06 9 P P 14 26 15.9 -0.4
KS19 IAmb IAmb 14 26 36.7
comp=Z,14nm,1.1s
JGF Kuroka 45.62 20 P P 14 26 20.5 -0.2
JGF IAmb IAmb 14 26 27.2
comp=Z,12nm,1.3s
TAPN Taplejung 46.30 319 *eP* **P 14 26 26.1 -0.3**
RAMN Ramite 46.76 318 *eP* **P 14 26 29.6 -0.2**
comp=Z,5.8nm,0.5s
MAJO Matsushiro 46.77 20 P P 14 26 28.1 -1.2
MAJO IAmb IAmb 14 26 32.2
comp=Z,16nm,1.4s
MJAR Matsushiro Arr 46.77 20 P P 14 26 28.0 -1.4
comp=Z,2.4nm,0.6s,baz=186,slow=10,SNR=7.1
comp=Z,2.4nm,0.6s
MJB9 Matsu-Tunnel 46.77 20 P P 14 26 28.0 -1.4
MJB9 IAmb IAmb 14 26 32.2
comp=Z,16nm,1.4s
JIRN Jiri 47.51 318 *eP* **P 14 26 35.0 -0.6**
comp=Z,4.9nm,0.5s
GUN Gumba 47.88 318 *eP* **P 14 26 37.3 -1.0**
comp=Z,8.5nm,0.6s
PKI Pulchoki 47.97 317 *eP* **P 14 26 38.2 -0.8**
comp=Z,4.6nm,0.4s
PKIN Phulchoki 47.98 317 *eP* **P 14 26 38.1 -0.9**
comp=Z,6.6nm,0.4s
JSD Sado 48.13 20 P P 14 26 39.0 -0.6
JSD Sado 48.13 20 P P 14 26 39.2 -0.4
GKN Gorkha 48.77 317 *eP* **P 14 26 42.7 -2.1**
JMM Marumori 48.88 22 P P 14 26 45.0 -0.2
JMM IAmb IAmb 14 26 57.7
comp=Z,34nm,1.4s
JTM Tenmabayashi 51.56 21 P P 14 27 04.4 -0.3
MDJ Mudanjiang 52.28 9 P P 14 27 09.9 -0.1
MDJ IAmb IAmb 14 27 10.6
comp=Z,7.0nm,0.8s
USA0B Ussuriysk Arra 52.29 11 P P 14 27 09.8 -0.2
USA0B IAmb IAmb 14 27 23.0
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 52.29 11 P P 14 27 09.7 -0.3
comp=Z,5.9nm,0.6s,baz=192,slow=6.9,SNR=13
comp=Z,5.9nm,0.6s
JEW Eniwo 53.51 20 P P 14 27 17.9 -0.9
ULN Ulaanbaatar 55.94 350 P P 14 27 36.2 +0.2
SONM Songino Array 56.03 349 P P 14 27 36.3 -0.3
comp=Z,3.4nm,0.4s,baz=168,slow=8.2,SNR=23
comp=Z,3.4nm,0.4s
SONM Songino Array 56.03 349 P P 14 27 36.9 +0.3
RPZ Rata Peaks 57.59 138 P P 14 27 48.2 +0.9
comp=Z,7.1nm,0.6s,baz=97,slow=13,SNR=2.1
comp=Z,7.1nm,0.6s
RPZ Rata Peaks 57.59 138 P P 14 27 48.0 +0.8
RPZ IAmb IAmb 14 28 14.9
comp=Z,53nm,1.4s
CASY Casey 59.38 184 P P 14 27 58.9 +0.1
CASY IAmb IAmb 14 28 19.4
comp=Z,8.5nm,1.0s
BKZ Black Stump Fm 59.87 131 P P 14 28 02.7 -0.1
BKZ IAmb IAmb 14 28 18.7
comp=Z,21nm,1.4s
NIL Nilore 59.96 316 P P 14 28 02.2 -1.3
NIL IAmb IAmb 14 28 02.9
comp=Z,6.2nm,0.5s
KSH Kashi 61.65 322 P P 14 28 14.8 +0.2
MK31 Makanchi Array 63.22 332 P P 14 28 24.3 -0.2
MKAR Makanchi Array 63.22 332 P P 14 28 24.5 0.0
comp=Z,3.1nm,0.5s,baz=147,slow=7.8,SNR=46
comp=Z,3.1nm,0.5s
MKAR Makanchi Array 63.22 332 P P 14 28 24.2 -0.3
MAKZ Makanchi 63.38 332 P P 14 28 24.9 -0.6
MAKZ IAmb IAmb 14 28 46.3
comp=Z,12nm,1.4s
BOOM Boomskoye usch 63.54 325 P P 14 28 26.7 -0.2
AAK Ala-Archa 64.47 324 P P 14 28 32.2 -0.5
GAR Garm 64.89 319 P P 14 28 35.0 -0.5
GAR IAmb IAmb 14 28 35.9
comp=Z,8.3nm,1.2s
BTK Batken 65.16 320 P P 14 28 36.9 -0.2
KKAR Karatay Array 67.09 323 P P 14 28 48.0 -1.0
ZAA0 Zalesovo Array 67.64 338 P P 14 28 50.5 -1.5
ZAA0 IAmb IAmb 14 28 52.0
comp=Z,6.1nm,0.6s
ZALV Zalesovo Beam 67.64 338 P P 14 28 51.3 -0.8
comp=Z,7.0nm,0.5s,baz=138,slow=4.8,SNR=33
comp=Z,7.0nm,0.5s
ZALV Zalesovo Beam 67.64 338 P P 14 28 50.7 -1.4
KURK Kurchatov 67.73 333 P P 14 28 52.3 -0.4
KURK IAmb IAmb 14 29 03.2
comp=Z,7.2nm,1.5s
PEA0B Petropavlovsk- 68.07 24 P P 14 28 55.7 +1.0
PETK Petropavlovsk- 68.07 24 P P 14 28 54.7 0.0
comp=Z,3.5nm,0.6s,baz=220,slow=3.1,SNR=14
comp=Z,3.5nm,0.6s
PETK Petropavlovsk- 68.07 24 P P 14 28 55.5 +0.8
BRVK Borovoye 73.16 331 P P 14 29 24.4 -0.4
VNDA Vanda 73.66 171 P P 14 29 28.1 +0.7
comp=Z,0.9nm,0.5s,baz=318,slow=6.5,SNR=18
comp=Z,0.9nm,0.5s
VNDA Vanda 73.66 171 P P 14 29 28.0 +0.7
ABKAR Abkulak array 76.55 324 P P 14 29 43.0 -1.0
ABKAR Abkulak array 76.55 324 P P 14 29 42.8 -1.2
TIXI Tiksi 78.88 3 P P 14 29 54.5 -1.6
comp=Z,1.0nm,0.3s,baz=270,slow=23,SNR=2.0
comp=Z,1.0nm,0.3s
TIXI Tiksi 78.88 3 P P 14 29 54.6 -1.4
BILL Bilibino 81.81 16 P P 14 30 09.7 -1.8
BILL IAmb IAmb 14 30 10.5
comp=Z,5.0nm,0.5s
QSPA South Pole Qui 82.82 180 P P 14 30 17.0 +0.1
KBZ Khabaz 85.57 315 P P 14 30 30.3 -0.4
comp=Z,3.4nm,0.9s,baz=164,slow=3.2,SNR=4.4
comp=Z,3.4nm,0.9s
ILAR Eielson Array 97.83 26 P Pdif 14 31 25.5 -1.2
comp=Z,0.1nm,0.4s,baz=251,slow=5.0,SNR=1.3
comp=Z,0.1nm,0.4s
TORD Torodi Ar. Bea 118.94 281 PKP PKPdf 14 36 37.4 -0.7
comp=Z,0.2nm,0.5s,baz=107,slow=3.0,SNR=4.7
NVAR Mina Array Bea 119.21 50 PKP PKPdf 14 36 38.0 -0.3
comp=Z,0.4nm,0.6s,baz=346,slow=3.1,SNR=4.1
TXAR Lajitas Array 133.54 56 PKP PKPdf 14 37 06.9 +1.2
comp=Z,0.1nm,0.3s,baz=323,slow=5.7,SNR=2.1
CLTN Cedars of Leba 142.56 36 PKPdf 14 37 19.5 -2.4
U49A Red Boiling Sp 142.58 35 PKPdf 14 37 18.9 -3.0
T50A Nancy 142.74 34 PKPdf 14 37 19.3 -2.9
X48A Hartselle 143.24 39 PKPab 14 37 20.4 -0.4
Q54A Coxs Mills 143.24 27 PKPab 14 37 21.2 +0.5
W50A Signal Mountai 143.77 36 PKPab 14 37 21.1 -1.8
TZTN Tazewell 143.79 33 PKPab 14 37 23.0 +0.1
V53A Saluda 144.84 33 PKPbc PKPdf 14 37 26.1 +0.2

IDC 31 14:27:18.1±1.6, 28°.10S×61°.82E, h0km, mb3.6/4, mbtmp3.6/5, ML3.9/1, MS3.2/2, Error ellipse: s-maj=74.4km s-min=28.5km az=21.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.43**	**302**	Pn	Pn	14 31 09.7	-0.6
OPO	baz=118,slow=14,SNR=1.7			Sn	Sn	14 33 59.8	-14
	baz=38,slow=18,SNR=1.5 1.3nm,0.4s						
H08S1	**Diego Garcia H**	**22.70**	**28**	T	T	14 57 15.3	
	baz=204,slow=76,SNR=4.3						
H08S2	**Diego Garcia H**	**22.71**	**28**	T	T	14 57 15.3	
	baz=204,slow=76,SNR=5.1						
H08S3	**Diego Garcia H**	**22.72**	**28**	T	T	14 57 16.8	
	baz=204,slow=76,SNR=6.1						
MBAR	**Mbarara**	**40.41**	**307**	LR	LR	14 49 53.3	
	comp=Z,25nm,20.4s,baz=126,slow=34						
H01W2	**Cape Leeuwin H**	**44.70**	**112**	T	T	15 23 09.2	
	baz=261,slow=74,SNR=16						
H01W3	**Cape Leeuwin H**	**44.70**	**112**	T	T	15 23 10.0	
	baz=261,slow=74,SNR=15						
H01W1	**Cape Leeuwin H**	**44.72**	**112**	T	T	15 23 11.2	
	baz=261,slow=74,SNR=16						
CMAR	**Chiang Mai Arr**	**58.59**	**42**	P	P	14 37 16.8	-0.1
	0.3nm,0.4s,baz=236,slow=6.4,SNR=1.9 0.3nm,0.4s						
ASAR	**Alice Springs**	**64.14**	**104**	P	P	14 37 54.2	-0.4
	0.6nm,0.8s,baz=244,slow=5.8,SNR=9.6 0.6nm,0.8s						
WRA	**Warramunga Arr**	**65.89**	**101**	P	P	14 38 06.8	+0.7
	0.4nm,0.7s,baz=247,slow=5.5,SNR=2.2 0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.17**	**297**	P	P	14 38 39.3	+0.2
	0.6nm,0.8s,baz=132,slow=4.1,SNR=3.3 0.6nm,0.8s						
KBZ	**Khabaz**	**73.56**	**346**	LR	LR	15 10 02.7	
	comp=Z,22nm,20.9s,baz=191,slow=35						

NEIC ***31*** *14:34:48.4±1.4, 16°.99S±0°.09×174°.17W±0°.09, h168km±7km, mb4.5/67, Error ellipse: s-maj=13.5km s-min=11.6km az=139.0*
IDC ***31*** *14:34:50.4±2.1, 17°.11S×174°.42W, h200km±18km, mb3.8/12, mbtmp4.3/14, Error ellipse: s-maj=18.1km s-min=10.2km az=130.0*
ISC 31 14:34:45.8±0.4, 17°.04S±0°.07×174°.16W±0°.08, h150km, n140, σ1s37/133, mb4.5/48, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.87**	**37**	P	**Pn**	**14 35 45.2**	**+0.6**
	471nm,0.5s,baz=196,slow=2.3,SNR=204						
AFI				S	**Sn**	**14 36 28.1**	**-2.1**
	636nm,0.3s,baz=193,slow=22,SNR=15						
AFI	**Afiamalu**	**3.87**	**37**	Pn	**Pn**	**14 35 45.4**	**+0.9**
NIUE	**Niue**	**4.51**	**117**	Pn	**Pn**	**14 35 55.1**	**+2.3**
MSVF	**Nonsavu**	**7.47**	**264**	P	**Pn**	**14 36 35.5**	**+3.3**
	54nm,0.8s,baz=93,slow=12,SNR=55						
MSVF	**Nonsavu**	**7.47**	**264**		**Pn**	**14 36 36.8**	**+4.5**
RAO	**Raoul Island**	**12.63**	**195**	P	**P**	**14 37 47.9**	**+2.2**
GLKZ	**Green Lake**	**12.64**	**195**	P	Pn	14 37 35.4	-5.0
MARNC	**Mare, Loyalty**	**17.38**	**252**	Pn	**P**	**14 38 40.4**	**+2.1**
DZM	**Mont Dzumac**	**18.94**	**252**	P	**P**	**14 38 53.8**	**-1.7**
	4.2nm,0.8s,baz=343,slow=22,SNR=1.0						
DZM	**Mont Dzumac**	**18.94**	**252**	P	**P**	**14 38 56.8**	**+1.2**
WCZ	**Waipu Caves**	**21.41**	**206**	P	**P**	**14 39 21.3**	**-0.6**
MXZ	**Matakaoa Point**	**21.49**	**197**	P	**P**	**14 39 24.1**	**+1.4**
MXZ	**Matakaoa Point**	**21.49**	**197**	P	**P**	**14 39 24.2**	**+1.6**
KUZ	**Kuaotunu**	**21.57**	**203**	P	**P**	**14 39 22.4**	**-1.1**
WMGZ	**Waiomatatini S**	**21.70**	**196**	P	**P**	**14 39 23.6**	**-1.3**
HAZ	**Te Kaha**	**21.82**	**197**	P	**P**	**14 39 25.7**	**-0.3**
HAZ				S	S	14 43 08.7	-8.5
WIAZ	**Waiheke Island**	**21.83**	**204**	P	**P**	**14 39 25.4**	**-0.8**
PKGZ	**Pakihiroa**	**21.86**	**197**	P	**P**	**14 39 28.2**	**+1.6**
MBAZ	**Motutapu North**	**21.90**	**204**	P	**P**	**14 39 27.2**	**+0.2**
PUZ	**Puketiti**	**21.98**	**196**	P	**P**	**14 39 28.4**	**+0.6**
RUGZ	**Raukumara Rang**	**22.04**	**197**	P	**P**	**14 39 29.5**	**+1.0**
RUGZ				S	**S**	**14 43 19.4**	**-1.8**
TWGZ	**Tauwhareparae**	**22.16**	**197**	P	**P**	**14 39 30.3**	**+0.7**
TWGZ				S	**S**	**14 43 20.7**	**-2.2**
OPRZ	**Ohinepanea**	**22.27**	**200**	P	**P**	**14 39 30.6**	**0.0**
CNGZ	**Carnagh Statio**	**22.38**	**196**	P	**P**	**14 39 33.0**	**+1.3**
MWZ	**Matawai**	**22.43**	**197**	P	**P**	**14 39 31.6**	**-0.6**
URZ	**Urewera**	**22.48**	**198**	P	**P**	**14 39 29.8**	**-2.8**
	12nm,0.5s,baz=348,slow=2.6,SNR=24						
URZ				S	**S**	**14 43 23.4**	**-4.8**
	9.0nm,1.0s,baz=295,slow=13,SNR=2.5 12nm,0.5s						
KARZ	**Kaharoa**	**22.53**	**200**	P	**P**	**14 39 35.1**	**+1.9**
OMRZ	**Omania**	**22.57**	**200**	P	**P**	**14 39 35.0**	**+1.4**
RAGZ	**Rawiri**	**22.61**	**197**	P	**P**	**14 39 33.0**	**-1.0**
RIGZ	**Rimuhau**	**22.71**	**197**	P	**P**	**14 39 35.2**	**+0.4**
RIGZ				S	**S**	**14 43 28.8**	**-3.1**
RTZ	**Ruatahuna**	**22.85**	**198**	P	**P**	**14 39 37.1**	**+0.9**
HRRZ	**Handcock Road**	**22.86**	**200**	P	**P**	**14 39 38.6**	**+2.4**
RAHZ	**Arahi**	**23.10**	**198**	P	**P**	**14 39 38.4**	**0.0**
MTHZ	**Maungataniwha**	**23.11**	**198**	P	**P**	**14 39 39.3**	**+0.7**
NMHZ	**Naumai**	**23.34**	**198**	P	**P**	**14 39 43.1**	**+2.4**
HIZ	**Hauiti**	**23.45**	**202**	P	**P**	**14 39 42.0**	**+0.3**
BKZ	**Black Stump Fm**	**23.50**	**198**	P	**P**	**14 39 41.0**	**-1.2**
BFZ	**Birch Farm**	**24.97**	**197**	P	**P**	**14 39 54.4**	**-1.0**
BFZ				IAmb	IAmb	14 40 04.5	
	comp=Z,31nm,1.1s						
QRZ	**Quartz Range**	**26.34**	**203**	P	**P**	**14 40 07.6**	**-0.1**
QRZ				IAmb	IAmb	14 40 11.2	
	comp=Z,20nm,0.9s						
TUWZ	**Tuamarina**	**26.37**	**200**	P	**P**	**14 40 08.3**	**+0.3**
WHZ	**Wether Hill Ro**	**32.40**	**204**	P	**P**	**14 41 02.0**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**40.01**	**331**	T	T	15 23 49.1	
	baz=146,slow=75,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**40.03**	**331**	T	T	15 23 45.9	
	baz=146,slow=75,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**40.03**	**331**	T	T	15 23 47.3	
	baz=146,slow=75,SNR=5.4						
STKA	**Stephens Creek**	**42.59**	**241**	P	P	14 42 24.0	-3.2
	comp=Z,2.0nm,0.8s,baz=95,slow=7.7,SNR=5.0 comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**42.59**	**241**	P	**P**	**14 42 26.7**	**-0.5**
WB0	**Warramunga Arr**	**48.74**	**258**	P	P	14 43 13.4	-2.3
WB2	**Warramunga Arr**	**48.76**	**258**	P	P	14 43 13.4	-2.5
WRA	**Warramunga Arr**	**48.77**	**258**	P	P	14 43 13.3	-2.6
	comp=Z,0.9nm,0.4s,baz=94,slow=7.1,SNR=25						
WRA				PcP	**PcP**	**14 44 35.1**	**-3.5**
	comp=Z,0.6nm,0.7s,baz=96,slow=5.6,SNR=2.7 comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**48.77**	**258**	P	P	14 43 13.6	-2.3
AS31	**Alice Springs**	**48.92**	**253**	P	**P**	**14 43 15.0**	**-2.0**
ASAR	**Alice Springs**	**48.92**	**253**	P	P	14 43 14.9	-2.2
	comp=Z,8.7nm,0.5s,baz=88,slow=8.8,SNR=425						
ASAR				PcP	**PcP**	**14 44 36.1**	**-3.0**
	comp=Z,0.6nm,0.6s,baz=67,slow=7.9,SNR=5.0						
ASAR				S	S	14 50 01.9	-7.8
	comp=Z,0.5nm,0.8s,baz=88,slow=16,SNR=4.7 comp=Z,8.7nm,0.5s						
ASAR	**Alice Springs**	**48.92**	**253**	P	P	14 43 14.6	-2.5
KNRA	**Kununurra**	**54.61**	**263**	P	**P**	**14 43 57.8**	**-1.4**
KNRA				IAmb	IAmb	14 43 58.9	
	comp=Z,22nm,1.3s						
VNDA	**Vanda**	**61.68**	**186**	P	**P**	**14 44 47.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=6.8,slow=7.3,SNR=6.7 comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**61.68**	**186**	P	**P**	**14 44 48.1**	**+0.7**
QSPA	**South Pole Qui**	**73.01**	**180**	P	**P**	**14 45 59.2**	**+0.2**
QSPA				IAmb	IAmb	14 46 00.3	
	comp=Z,5.2nm,0.8s						
KMRM	**Mail Ridge**	**73.80**	**38**	P	**P**	**14 46 04.2**	**+0.2**
PEA0B	**Petropavlovsk-**	**73.97**	**343**	P	**P**	**14 46 04.5**	**0.0**
PETK	**Petropavlovsk-**	**73.97**	**343**	P	**P**	**14 46 03.4**	**-1.1**
	comp=Z,8.9nm,0.9s,baz=108,slow=8.7,SNR=15 comp=Z,8.9nm,0.9s						
PETK	**Petropavlovsk-**	**73.97**	**343**	P	**P**	**14 46 04.1**	**-0.4**
YBH	**Yreka Blue Hor**	**75.34**	**37**	P	**P**	**14 46 14.4**	**+1.6**
YBH				IAmb	IAmb	14 46 15.8	
	comp=Z,11nm,1.1s						
HUMO	**Hull Mountain**	**75.76**	**36**	P	**P**	**14 46 15.8**	**+0.7**
HUMO				IAmb	IAmb	14 46 17.7	
	comp=Z,11nm,1.2s						
NVAR	**Mina Array Bea**	**76.03**	**42**	P	**P**	**14 46 17.2**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=227,slow=9.8,SNR=10 comp=Z,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**76.03**	**42**	P	**P**	**14 46 17.9**	**+0.9**
GMN	**Gold Mountain**	**76.07**	**43**	P	**P**	**14 46 18.4**	**+1.2**
MOD	**Modoc Plateau**	**76.86**	**38**	P	**P**	**14 46 22.4**	**+0.9**
N18K	**Kilae Creek**	**78.84**	**9**	P	**P**	**14 46 31.9**	**+0.1**
N18K				IAmb	IAmb	14 46 43.0	
	comp=Z,20nm,1.4s						
L19K	**White Mountain**	**80.43**	**9**	P	**P**	**14 46 40.9**	**+0.5**
L19K				IAmb	IAmb	14 46 45.9	
	comp=Z,14nm,1.4s						
SUA	**Susitna One**	**80.44**	**11**	P	**P**	**14 46 41.0**	**+0.4**
KNK	**Knik Glacier**	**80.84**	**12**	P	**P**	**14 46 43.2**	**+0.6**
PMR	**Palmer**	**80.87**	**12**	P	**P**	**14 46 43.0**	**+0.4**
GHO	**Glory Hole Cre**	**81.08**	**12**	P	**P**	**14 46 44.0**	**+0.1**
GHO				IAmb	IAmb	14 46 45.3	
	comp=Z,11nm,0.8s						
DIV	**Divide**	**81.16**	**14**	P	**P**	**14 46 44.9**	**+0.6**
WAX	**Waxell Ridge**	**81.25**	**15**	P	**P**	**14 46 45.0**	**+0.2**
BMRM	**Bremner River**	**81.28**	**14**	P	**P**	**14 46 45.2**	**+0.3**
KLU	**Klutina**	**81.45**	**13**	P	**P**	**14 46 46.0**	**+0.2**
KLU				IAmb	IAmb	14 47 04.7	
	comp=Z,15nm,1.4s						
SCM	**Sheep Creek Mo**	**81.45**	**13**	P	**P**	**14 46 46.3**	**+0.5**
SCM				IAmb	IAmb	14 46 46.9	
	comp=Z,11nm,0.6s						
VRDI	**Verde Repeater**	**81.78**	**14**	P	**P**	**14 46 48.0**	**+0.3**
VRDI				IAmb	IAmb	14 46 50.4	
	comp=Z,9.1nm,1.1s						
N25K	**Chitina, Valde**	**81.84**	**14**	P	**P**	**14 46 48.4**	**+0.5**
N25K				IAmb	IAmb	14 46 49.2	
	comp=Z,9.4nm,0.6s						
GLB	**Gilahina Butte**	**81.88**	**14**	P	**P**	**14 46 48.6**	**+0.5**
P29M	**Windy Craggy**	**81.94**	**18**	P	**P**	**14 46 49.3**	**+0.9**
P29M				IAmb	IAmb	14 46 50.4	
	comp=Z,5.8nm,0.8s						
M24K	**Tolsona, Glenn**	**81.94**	**13**	P	**P**	**14 46 49.4**	**+1.0**
BARN	**Barnard Glacie**	**82.07**	**15**	P	**P**	**14 46 48.4**	**-0.9**
BARN				IAmb	IAmb	14 47 30.6	
	comp=Z,6.7nm,1.0s						
TXAR	**Lajitas Array**	**82.13**	**56**	P	**P**	**14 46 51.0**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=232,slow=6.1,SNR=5.2 comp=Z,0.9nm,0.8s						
TRF	**Thorofare Moun**	**82.36**	**11**	P	**P**	**14 46 50.4**	**-0.3**
TRF				IAmb	IAmb	14 46 52.1	
	comp=Z,7.6nm,0.8s						
J20K	**Nowinta River**	**82.43**	**9**	P	**P**	**14 46 51.2**	**+0.5**
MCK	**McKinley**	**82.87**	**11**	P	**P**	**14 46 53.4**	**+0.2**
MCK				IAmb	IAmb	14 46 54.5	
	comp=Z,11nm,0.8s						
M26K	**Nabesna, AK**	**82.91**	**14**	P	**P**	**14 46 53.6**	**+0.2**
M27K	**Edge Creek, AK**	**83.14**	**15**	P	**P**	**14 46 55.8**	**+1.1**
M27K				IAmb	IAmb	14 47 37.4	
	comp=Z,10nm,1.4s						
S22A	**4UR Ranch, Cre**	**83.42**	**47**	P	**P**	**14 46 58.1**	**+1.2**
S22A				IAmb	IAmb	14 46 59.4	
	comp=Z,5.3nm,0.8s						
BCAR	**Beaver Creek A**	**83.77**	**14**	P	**P**	**14 46 58.3**	**+0.5**
HDA	**Harding Lake**	**83.85**	**12**	P	**P**	**14 46 58.2**	**+0.1**
HDA				IAmb	IAmb	14 46 59.1	
	comp=Z,9.5nm,0.7s						
CCB	**Clear Creek Bu**	**83.91**	**11**	P	**P**	**14 46 58.5**	**+0.1**
CCB				IAmb	IAmb	14 46 59.2	
	comp=Z,7.0nm,0.6s						
SEY	**Seymchan**	**83.91**	**345**	P	**P**	**14 46 57.2**	**-1.2**
	comp=Z,3.8nm,0.8s,baz=152,slow=5.0,SNR=10 comp=Z,3.8nm,0.8s						
BW06	**Boulder Array**	**83.97**	**42**	P	**P**	**14 47 00.2**	**+0.7**
PDAR	**Pinedale Array**	**83.97**	**42**	P	**P**	**14 46 59.4**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=219,slow=1.9,SNR=10 comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**83.97**	**42**	P	**P**	**14 47 00.3**	**+0.8**
H21K	**Melozitna Rive**	**84.02**	**9**	P	**P**	**14 46 59.7**	**+0.7**
H21K				IAmb	IAmb	14 47 00.7	
	comp=Z,11nm,1.4s						
SCRK	**Sand Creek**	**84.07**	**13**	P	**P**	**14 46 59.7**	**+0.4**
SCRK				IAmb	IAmb	14 47 00.3	
	comp=Z,3.9nm,0.7s						
I23K	**Minto, Yukon-K**	**84.09**	**10**	P	**P**	**14 46 59.5**	**+0.2**
I23K				IAmb	IAmb	14 47 01.0	
	comp=Z,11nm,1.2s						
TCOL	**CIGO, UAF Yank**	**84.10**	**11**	P	**P**	**14 46 59.0**	**-0.3**
COLA	**College**	**84.11**	**11**	P	**P**	**14 46 59.0**	**-0.3**
MDM	**Murphy Dome**	**84.11**	**11**	P	**P**	**14 46 59.3**	**-0.2**
MDM				IAmb	IAmb	14 47 00.3	
	comp=Z,14nm,1.3s						
IL31		**84.19**	**11**	P	**P**	**14 46 58.9**	**-0.8**
IL31				IAmb	IAmb	14 47 00.5	
	comp=Z,9.5nm,1.2s						
ILAR	**Eielson Array**	**84.19**	**11**	P	**P**	**14 46 58.9**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=226,slow=5.6,SNR=33 comp=Z,2.1nm,0.6s						
ILAR	**Eielson Array**	**84.19**	**11**	P	**P**	**14 46 59.3**	**-0.5**
IMAR	**Indian Mountai**	**84.19**	**8**	P	**P**	**14 47 00.3**	**+0.5**
J25K	**Salcha River,**	**84.34**	**12**	P	**P**	**14 47 00.8**	**+0.1**
J25K				IAmb	IAmb	14 47 01.9	
	comp=Z,7.2nm,0.7s						
POKR	**Poker Plat Res**	**84.40**	**11**	P	**P**	**14 47 00.9**	**0.0**
POKR				IAmb	IAmb	14 47 02.0	
	comp=Z,14nm,1.1s						
K27K	**Chicken**	**84.53**	**14**	P	**P**	**14 47 02.1**	**+0.5**
K27K				IAmb	IAmb	14 47 03.3	
	comp=Z,7.9nm,1.2s						
J26L	**Joseph Creek**	**84.62**	**13**	P	**P**	**14 47 03.2**	**+1.1**
J26L				IAmb	IAmb	14 47 04.1	
	comp=Z,6.0nm,0.7s						
M30M	**Minto, Yukon**	**84.62**	**16**	P	**P**	**14 47 02.4**	**+0.4**
H23K	**Yukon River**	**84.68**	**10**	P	**P**	**14 47 02.1**	**-0.2**
H23K				IAmb	IAmb	14 47 40.0	
	comp=Z,12nm,1.4s						
H03S2	**Juan Fernandez**	**84.91**	**124**	T	T	16 20 35.5	
	baz=249,slow=75,SNR=14						
H03S1	**Juan Fernandez**	**84.92**	**124**	T	T	16 20 38.1	
	baz=249,slow=75,SNR=14						
H03S3	**Juan Fernandez**	**84.92**	**124**	T	T	16 20 36.8	
	baz=249,slow=75,SNR=12						
PRP	**Porcupine Dome**	**85.12**	**12**	P	**P**	**14 47 05.1**	**+0.4**
PRP				IAmb	IAmb	14 47 05.9	
	comp=Z,10nm,1.0s						
DAWY	**Dawson**	**85.19**	**15**	P	**P**	**14 47 05.2**	**+0.3**
DAWY				IAmb	IAmb	14 47 06.2	
	comp=Z,5.5nm,0.7s						
FARO	**Faro, Yukon**	**85.31**	**18**	P	**P**	**14 47 05.8**	**+0.2**
EGAK	**Eagle**	**85.38**	**14**	P	**P**	**14 47 06.2**	**+0.5**
EGAK				IAmb	IAmb	14 47 07.3	
	comp=Z,6.3nm,0.8s						
I26K	**Coal Creek Min**	**85.41**	**13**	P	**P**	**14 47 06.5**	**+0.6**
I26K				IAmb	IAmb	14 47 08.0	
	comp=Z,15nm,1.4s						
MAW	**Mawson**	**86.01**	**199**	P	**P**	**14 47 08.3**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=132,slow=5.5,SNR=4.6 comp=Z,1.6nm,0.5s						
MAW	**Mawson**	**86.01**	**199**	P	**P**	**14 47 08.9**	**-0.1**
FYU	**Fort Yukon**	**86.11**	**11**	P	**P**	**14 47 10.3**	**+1.0**
BMAR	**Burnt Mountain**	**87.00**	**11**	P	**P**	**14 47 14.2**	**+0.5**
TOLK	**Toolik Lake Re**	**87.27**	**9**	P	**P**	**14 47 15.5**	**+0.5**
VNA3	**Neumayer Olymp**	**91.29**	**175**	P	**P**	**14 47 33.5**	**-0.4**
VNA2	**Neumayer--Watz**	**91.78**	**176**	P	**P**	**14 47 35.3**	**-0.9**
	baz=186,slow=5.0						
VNA1	**Neumayer--Stat**	**91.98**	**175**	P	**P**	**14 47 36.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**92.43**	**288**	P	**P**	**14 47 41.0**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=115,slow=2.4,SNR=5.2						
FINES	**FINES Array B**	**133.37**	**347**	PKP	**PKPdf**	**14 53 40.0**	**-3.7**

	comp=E,74800µm,0.4s					
T1245				AML	AML	
	comp=N,94650µm,0.3s					
T1245				AML	AML	
T1245				AML	AML	
	comp=E,85850µm,0.4s					
T1245				AML	AML	
T1215	**Vallo di Nera,**	**0.16**	**243**	⇑P	Pg	14 52 22.5 -1.7
T1215				AML	AML	
	comp=N,5135µm,0.5s					
T1215				AML	AML	
	comp=E,7285µm,0.6s					
T1215				AML	AML	
	comp=N,4765µm,0.5s					
T1215				AML	AML	
	comp=E,6945µm,0.6s					
T1215				AML	AML	
	comp=N,5140µm,0.5s					
T1215				AML	AML	
	comp=E,7280µm,0.6s					
T1215				AML	AML	
	comp=N,4770µm,0.5s					
T1215				AML	AML	
	comp=E,7280µm,0.6s					
T1215				AML	AML	
	comp=N,4770µm,0.5s					
T1215				AML	AML	
	comp=N,5135µm,0.5s					
T1215				AML	AML	
	comp=E,6945µm,0.6s					
T1215				AML	AML	
	comp=N,3096µm,0.1s					
T1215				AML	AML	
	comp=E,4324µm,0.2s					
T1215				AML	AML	
	comp=E,4451µm,0.2s					
T1215				AML	AML	
	comp=N,3082µm,0.1s					
T1217	**Poggiodomo (PG**	**0.19**	**210**	P	Pg	14 52 24.8 +0.1
T1217				S	Sg	14 52 28.8 +1.3
T1217				AML	AML	
	comp=E,16250µm,0.3s					
T1217				AML	AML	
	comp=N,12250µm,0.2s					
T1217				AML	AML	
	comp=E,15850µm,0.3s					
T1217				AML	AML	
	comp=E,16200µm,0.3s					
T1217				AML	AML	
	comp=E,16200µm,0.3s					
T1217				AML	AML	
	comp=N,12250µm,0.2s					
T1217				AML	AML	
	comp=N,12400µm,1.6s					
T1217				AML	AML	
	comp=E,16244µm,0.3s					
T1217				AML	AML	
	comp=N,11923µm,0.2s					
T1217				AML	AML	
	comp=N,12247µm,0.2s					
T1217				AML	AML	
	comp=E,15817µm,0.3s					
MMO1	**Montemonaco**	**0.20**	**83**	P	Pg	14 52 25.3 +0.4
MMO1				S	Sg	14 52 28.7 +1.0
AM05	**Amandola Campo**	**0.24**	**64**	⇑P	Pg	14 52 25.9 +0.4
AM05				AML	AML	
	comp=E,1014µm,0.8s					
AM05				AML	AML	
	comp=N,1224µm,1.3s					
AM05				AML	AML	
	comp=E,4220µm,0.9s					
AM05				AML	AML	
	comp=N,256µm,0.7s					
AM05				AML	AML	
	comp=E,4360µm,0.1s					
AM05				AML	AML	
	comp=E,17100µm,0.2s					
AM05				AML	AML	
	comp=N,3605µm,0.2s					
AM05				AML	AML	
	comp=N,972µm,0.1s					
AM05				AML	AML	
	comp=E,894µm,0.2s					
LNSS	**Leonessa**	**0.27**	**183**	P	Pb	14 52 27.1 -0.6
LNSS				S	Sb	14 52 31.3 -1.2
LNSS				AML	AML	
	comp=N,37400µm,0.4s					
LNSS				AML	AML	
	comp=E,11850µm,0.2s					
LNSS				AML	AML	
	comp=N,32029µm,0.1s					
LNSS				AML	AML	
	comp=E,11848µm,0.1s					
T1241	**Roccafluvione,**	**0.27**	**94**	⇓P	Pg	14 52 26.7 +0.5
T1241				AML	AML	
	comp=E,5310µm,0.6s					
T1241				AML	AML	
	comp=N,6035µm,1.4s					
T1241				AML	AML	
	comp=E,5310µm,0.5s					
T1241				AML	AML	
	comp=E,5315µm,0.5s					
T1241				AML	AML	
	comp=E,5095µm,0.8s					
T1241				AML	AML	
	comp=N,6040µm,1.4s					
T1241				AML	AML	
	comp=E,5062µm,0.6s					
T1241				AML	AML	
	comp=E,5313µm,0.6s					
T1241				AML	AML	
	comp=N,5558µm,0.4s					
T1241				AML	AML	
	comp=N,5740µm,0.4s					
T1204	**Amatrice, Fraz**	**0.27**	**136**	P	Pg	14 52 26.9 +0.7
T1204				S	Sb	14 52 31.3 -1.2
T1204				AML	AML	
	comp=E,11385µm,0.2s					
T1204				AML	AML	
	comp=N,6995µm,0.5s					
T1204				AML	AML	
	comp=E,11415µm,0.2s					
T1204				AML	AML	
	comp=N,6595µm,0.3s					
T1204				AML	AML	
	comp=E,11395µm,0.2s					
GUMA	**Gualdo di Mace**	**0.28**	**47**	⇑P	Pg	14 52 27.0 +0.7
GUMA				AML	AML	
	comp=E,4965µm,0.6s					
GUMA				AML	AML	
	comp=N,7250µm,0.6s					
GUMA				AML	AML	
	comp=E,7630µm,0.6s					
GUMA				AML	AML	
	comp=N,6550µm,0.6s					
GUMA				AML	AML	
	comp=E,26450µm,0.8s					
GUMA				AML	AML	
	comp=N,34450µm,1.3s					
GUMA				AML	AML	
	comp=N,38050µm,0.5s					
GUMA				AML	AML	
	comp=E,30900µm,0.3s					
GUMA				AML	AML	
	comp=N,6545µm,0.6s					
GUMA				AML	AML	
	comp=E,4145µm,0.4s					
SMA1	**SAN MARTINO**	**0.32**	**140**	P	Pg	14 52 27.7 +0.6
SMA1				S	Sb	14 52 32.9 -0.8
SMA1				AML	AML	
	comp=E,7055µm,0.4s					
SMA1				AML	AML	
	comp=N,6235µm,0.3s					
SMA1				AML	AML	
	comp=N,6237µm,0.3s					
SMA1				AML	AML	
	comp=E,7055µm,0.4s					
T1243	**Rocca Santa Ma**	**0.34**	**122**	⇓P	Pg	14 52 26.1 -1.3
ASSB	**Assisi San Ben**	**0.34**	**300**	⇑P	Pg	14 52 27.3 -0.1
ASSB				AML	AML	
	comp=E,1615µm,1.2s					
ASSB				AML	AML	
	comp=N,1600µm,1.0s					
ASSB				AML	AML	
	comp=N,7675µm,0.2s					
ASSB				AML	AML	
	comp=E,3775µm,0.2s					
ASSB				AML	AML	
	comp=E,1499µm,0.3s					
ASSB				AML	AML	
	comp=N,1297µm,0.1s					
ARRO	**Arrone**	**0.37**	**216**	P	Pg	14 52 25.3 -2.6
ARRO				AML	AML	
	comp=E,3375µm,0.2s					
ARRO				AML	AML	
	comp=N,2750µm,0.8s					
ARRO				AML	AML	
	comp=E,3375µm,0.2s					
ARRO				AML	AML	
	comp=N,2594µm,0.2s					
T1211	**Morro Reatino**	**0.37**	**204**	⇓P	Pg	14 52 26.0 -2.1
T1211				S	Sb	14 52 35.0 -0.3
T1211				AML	AML	
	comp=E,4465µm,1.0s					
T1211				AML	AML	
	comp=N,6275µm,0.4s					
T1211				AML	AML	
	comp=N,6210µm,0.4s					
T1211				AML	AML	
	comp=N,6275µm,0.3s					
T1211				AML	AML	
	comp=E,4820µm,1.0s					
T1211				AML	AML	
	comp=N,6215µm,0.3s					
T1211				AML	AML	
	comp=E,4034µm,0.1s					
T1211				AML	AML	
	comp=N,6212µm,0.3s					
T1211				AML	AML	
	comp=N,6276µm,0.3s					
T1211				AML	AML	
	comp=E,3953µm,0.1s					
RM33	**Pellescritta (**	**0.38**	**163**	P	Pg	14 52 28.7 +0.5
RM33				S	Sb	14 52 34.9 -0.7
RM33				AML	AML	
	comp=E,3725µm,0.9s					
RM33				AML	AML	
	comp=N,3285µm,0.3s					
RM33				AML	AML	
	comp=N,3370µm,0.3s					
RM33				AML	AML	
	comp=E,3720µm,0.9s					
RM33				AML	AML	
	comp=N,3286µm,0.3s					
RM33				AML	AML	
	comp=E,3411µm,0.3s					
RM33				AML	AML	
	comp=E,3484µm,0.3s					
RM33				AML	AML	
	comp=N,3369µm,0.3s					
SNTG	**Esanatoglia**	**0.39**	**347**	⇑P	Pg	14 52 27.9 -0.4
SNTG				AML	AML	
	comp=E,802µm,0.8s					
SNTG				AML	AML	
	comp=N,679µm,0.5s					
SNTG				AML	AML	
	comp=E,820µm,0.8s					
SNTG				AML	AML	
	comp=N,721µm,0.6s					
SNTG				AML	AML	
	comp=E,1480µm,0.1s					
SNTG				AML	AML	
	comp=N,1670µm,0.3s					
SNTG				AML	AML	
	comp=E,1575µm,0.4s					
SNTG				AML	AML	
	comp=N,1745µm,0.3s					
SNTG				AML	AML	
	comp=E,781µm,0.7s					
SNTG				AML	AML	
	comp=E,727µm,0.6s					
SNTG				AML	AML	
	comp=N,721µm,0.6s					
SNTG				AML	AML	
	comp=N,679µm,0.6s					
CAMP	**Campotosto**	**0.42**	**143**	⇓P	Pg	14 52 29.4 +0.4
CAMP				AML	AML	
	comp=E,2515µm,0.2s					
CAMP				AML	AML	
	comp=N,1440µm,1.3s					
CAMP				AML	AML	
	comp=N,1415µm,0.2s					
CAMP				AML	AML	
	comp=E,2512µm,0.2s					
ATCC	**AVT- Casa Cast**	**0.44**	**315**	⇓P	Pg	14 52 29.2 -0.1
ATCC				AML	AML	
	comp=E,1675µm,0.7s					
ATCC				AML	AML	
	comp=N,1305µm,0.5s					
ATCC				AML	AML	
	comp=E,4675µm,0.2s					
ATCC				AML	AML	
	comp=N,3325µm,0.2s					
ATCC				AML	AML	
	comp=E,1677µm,0.7s					
ATCC				AML	AML	
	comp=N,1306µm,0.5s					
CESX	**Cesi**	**0.44**	**233**	P	Pg	14 52 27.3 -2.0
CESX				S	Sb	14 52 38.0 +0.8
CESX				AML	AML	
	comp=N,1830µm,0.6s					
CESX				AML	AML	
	comp=E,1520µm,0.5s					
CESX				AML	AML	
	comp=N,1706µm,0.4s					
CESX				AML	AML	
	comp=E,1520µm,0.5s					
EL6	**Elcito**	**0.46**	**4**	⇑P	Pg	14 52 29.5 -0.1
EL6				AML	AML	
	comp=E,1230µm,1.4s					
EL6				AML	AML	
	comp=N,1580µm,0.8s					
EL6				AML	AML	
	comp=N,4320µm,0.8s					
EL6				AML	AML	
	comp=E,3795µm,1.3s					
EL6				AML	AML	
	comp=E,1151µm,0.3s					
EL6				AML	AML	
	comp=N,1348µm,0.3s					
OFFI	**Offida**	**0.46**	**82**	⇑P	Pb	14 52 30.8 -0.1
OFFI				AML	AML	
	comp=N,3250µm,0.7s					
OFFI				AML	AML	
	comp=E,2885µm,0.6s					
OFFI				AML	AML	
	comp=E,2887µm,0.6s					
OFFI				AML	AML	
	comp=N,3247µm,0.7s					
T1247	**Pizzolo (AQ)**	**0.47**	**158**	⇓P	Pb	14 52 31.5 +0.5
T1247				AML	AML	
	comp=E,2395µm,1.2s					
T1247				AML	AML	
	comp=N,4115µm,0.5s					
T1247				AML	AML	
	comp=E,2287µm,0.2s					
T1247				AML	AML	
	comp=N,3205µm,0.2s					
TERO	**Teramo**	**0.47**	**122**	P	Pg	14 52 28.3 -1.5
TERO				AML	AML	
	comp=E,2625µm,0.6s					
TERO				AML	AML	
	comp=N,3335µm,0.5s					
TERO				AML	AML	
	comp=N,3490µm,0.5s					
TERO				AML	AML	
	comp=E,2630µm,0.6s					
TERO				AML	AML	
	comp=E,2795µm,0.6s					
TERO				AML	AML	
	comp=N,3340µm,0.5s					
TERO				AML	AML	
	comp=N,3073µm,0.4s					
TERO				AML	AML	
	comp=N,2442µm,0.3s					
TERO				AML	AML	
	comp=E,2425µm,0.3s					
TERO				AML	AML	
	comp=E,2601µm,0.3s					
MURB	**Monte Urbino**	**0.55**	**315**	P	Pg	14 52 31.7 +0.3
MURB				AML	AML	
	comp=E,1470µm,0.8s					
MURB				AML	AML	
	comp=N,1855µm,1.5s					
MURB				AML	AML	
	comp=E,1665µm,0.8s					
MURB				AML	AML	
	comp=N,1895µm,1.5s					
MURB				AML	AML	
	comp=E,5345µm,0.4s					
MURB				AML	AML	
	comp=E,4895µm,0.3s					
MURB				AML	AML	
	comp=N,5675µm,0.3s					
MURB				AML	AML	
	comp=N,4880µm,0.3s					
MURB				AML	AML	
	comp=E,1242µm,0.2s					
MURB				AML	AML	
	comp=N,1725µm,0.3s					
MURB				AML	AML	
	comp=E,1368µm,0.3s					
MURB				AML	AML	
	comp=N,1826µm,0.3s					
GIGS	**Gran Sasso**	**0.57**	**138**	⇑P	Pg	14 52 31.7 0.0
GIGS				AML	AML	
	comp=N,386µm,0.2s					
GIGS				AML	AML	
	comp=E,522µm,0.6s					
GIGS				AML	AML	
	comp=N,386µm,0.2s					
AQU	**L'Aquila**	**0.58**	**154**	⇑P	Pb	14 52 33.7 +0.8
AQU				S	Sb	14 52 42.0 +0.8
AQU				AML	AML	
	comp=E,942µm,0.7s					
AQU				AML	AML	
	comp=E,942µm,0.7s					
AQU				AML	AML	
	comp=N,945µm,1.2s					
AQU				AML	AML	
	comp=E,829µm,0.7s					
AQU				AML	AML	
	comp=N,912µm,1.2s					
AQU				AML	AML	
	comp=N,917µm,0.2s					
AQU				AML	AML	
	comp=N,877µm,0.2s					
AQU				AML	AML	
	comp=E,829µm,0.7s					
AQU				AML	AML	
	comp=E,942µm,0.7s					
ATFO	**Monte Foce - G**	**0.61**	**324**	⇑P	Pb	14 52 33.2 -0.3
ATFO				AML	AML	
	comp=E,578µm,0.8s					
ATFO				AML	AML	
	comp=N,454µm,0.6s					
ATFO				AML	AML	
	comp=N,718µm,1.0s					
ATFO				AML	AML	
	comp=E,873µm,0.3s					
ATFO				AML	AML	
	comp=N,454µm,0.6s					
ATFO				AML	AML	
	comp=E,578µm,0.8s					
FIAM	**Fiamignano**	**0.61**	**176**	⇓P	Pg	14 52 32.6 +0.2
FIAM				S	Sb	14 52 42.0 -0.1
FIAM				AML	AML	
	comp=E,1200µm,0.7s					
FIAM				AML	AML	
	comp=N,1105µm,0.7s					
FIAM				AML	AML	
	comp=E,1203µm,0.7s					
FIAM				AML	AML	
	comp=N,1105µm,0.7s					
ARVD	**Arcevia**	**0.63**	**352**	⇓P	Pg	14 52 33.2 +0.4
ARVD				AML	AML	
	comp=E,406µm,0.6s					
ARVD				AML	AML	
	comp=N,329µm,0.7s					
ARVD				AML	AML	
	comp=E,974µm,0.4s					
ARVD				AML	AML	
	comp=N,731µm,0.3s					
ARVD				AML	AML	
	comp=E,405µm,0.6s					
ARVD				AML	AML	
	comp=N,257µm,0.5s					
TRTR	**Tortoreto Alta**	**0.63**	**96**	⇓P	Pb	14 52 34.2 +0.5
ATVO	**AVT- Monte Val**	**0.70**	**317**	P	Pb	14 52 34.8 -0.2
ATVO				AML	AML	
	comp=E,334µm,0.7s					
ATVO				AML	AML	
	comp=N,412µm,1.2s					
ATVO				AML	AML	
	comp=E,718µm,0.5s					
ATVO				AML	AML	
	comp=N,632µm,0.5s					
ATVO				AML	AML	
	comp=N,412µm,1.2s					
ATVO				AML	AML	
	comp=E,334µm,0.7s					
MGAB	**Montegabbione**	**0.70**	**273**	⇓P	Pb	14 52 34.8 -0.2
MGAB				AML	AML	
	comp=E,763µm,0.9s					
MGAB				AML	AML	
	comp=E,708µm,1.0s					
MGAB				AML	AML	
	comp=E,1162µm,0.4s					
MGAB				AML	AML	
	comp=N,1675µm,0.9s					
MGAB				AML	AML	
	comp=E,1275µm,1.2s					
MGAB				AML	AML	
	comp=N,1660µm,0.9s					
MGAB				AML	AML	
	comp=E,682µm,0.6s					
MGAB				AML	AML	
	comp=E,667µm,0.5s					
MGAB				AML	AML	
	comp=N,1660µm,0.9s					
MGAB				AML	AML	
	comp=N,1673µm,0.9s					
FAGN	**Fagnano**	**0.72**	**147**	⇓P	Pb	14 52 35.1 -0.2
FAGN				AML	AML	
	comp=N,1975µm,1.6s					
FAGN				AML	AML	
	comp=E,2700µm,0.4s					
FAGN				AML	AML	
	comp=E,2697µm,0.4s					
FAGN				AML	AML	
	comp=N,1962µm,0.5s					
MPAG	**Monte Paganucc**	**0.79**	**344**	⇑P	Pb	14 52 36.5 0.0
MPAG				AML	AML	
	comp=E,588µm,0.2s					
MPAG				AML	AML	
	comp=N,483µm,0.7s					
MPAG				AML	AML	
	comp=N,280µm,0.4s					
MPAG				AML	AML	
	comp=E,231µm,0.9s					
MPAG				AML	AML	
	comp=N,1728µm,1.2s					
MPAG				AML	AML	
	comp=E,1482µm,1.2s					
APEC	**Apecchio**	**0.83**	**326**	S	Sn	14 52 51.0 +0.3
T0110	**Collepietro**	**0.84**	**140**	⇑P	Pg	14 52 36.8 0.0
T0110				AML	AML	
	comp=N,1995µm,0.4s					
T0110				AML	AML	
	comp=E,1575µm,0.4s					
T0110				AML	AML	
	comp=N,1996µm,0.4s					
T0110				AML	AML	
	comp=E,1573µm,0.4s					
MTCE	**Montecelio**	**0.88**	**196**	⇓P	Pg	14 52 37.4 -0.3
MTCE				AML	AML	
	comp=E,686µm,0.6s					
MTCE				AML	AML	
	comp=N,638µm,0.5s					
MTCE				AML	AML	
	comp=N,637µm,0.5s					
MTCE				AML	AML	
	comp=E,685µm,0.6s					
CERT	**Cerreto**	**0.93**	**184**	⇑P	Pg	14 52 38.6 +0.2
CERT				AML	AML	
	comp=E,1835µm,0.3s					
CERT				AML	AML	
	comp=N,1190µm,0.4s					
CERT				AML	AML	
	comp=N,1192µm,0.4s					
CERT				AML	AML	
	comp=E,1835µm,0.3s					
CPGN	**Carpegna, Ital**	**1.07**	**330**	P	Pn	14 52 42.2 +0.3

LPEL	Lama dei Pelig	1.17 135	S	Sn	14 52 60.0	+0.8
LAV9	Lanuvio	1.23 193	⇓P	Pn	14 52 41.3	-2.6
LAV9			AML	AML		
	comp=E,1585μm,1.6s					
LAV9			AML	AML		
	comp=N,1855μm,0.4s					
LAV9			AML	AML		
	comp=N,1976μm,0.6s					
LAV9			AML	AML		
	comp=N,1853μm,0.4s					
LAV9			AML	AML		
	comp=E,1517μm,0.3s					
LAV9			AML	AML		
	comp=E,1908μm,0.5s					
MRB1	Monte Rocchett	2.25 140	S	Sg	14 53 33.0	-0.1
NDIM	Novi di Modena	2.55 323	⇓P	Pg	14 53 07.9	-1.5

ROM 31 14:53:01.8±0.1, 42°.761N±0°.003×13°.081E±0°.004, h10km, ML2.2/5, 4C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=196.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1217	Poggiodomo (PG	0.12	246	⇑P	Pg	14 53 05.3	+0.5
T1217				S	Sg	14 53 07.6	+0.7
T1217				AML	AML		
	comp=E,1095μm,0.5s						
T1217				AML	AML		
	comp=E,1047μm,0.0s						
T1217				AML	AML		
	comp=N,1620μm,0.5s						
T1217				AML	AML		
	comp=N,1744μm,0.5s						
T1217				AML	AML		
	comp=N,1027μm,0.1s						
T1217				AML	AML		
	comp=E,766μm,0.1s						
T1217				AML	AML		
	comp=N,1011μm,0.1s						
T1217				AML	AML		
	comp=E,787μm,0.1s						
T1245	Castelsantange	0.12	39	P	Pg	14 53 05.2	+0.3
T1245				S	Sg	14 53 07.7	+0.6
T1245				AML	AML		
	comp=E,9325μm,0.6s						
T1245				AML	AML		
	comp=N,24950μm,0.6s						
T1245				AML	AML		
	comp=E,8340μm,0.6s						
T1245				AML	AML		
	comp=N,25050μm,0.6s						
T1245				AML	AML		
	comp=E,9320μm,0.6s						
T1245				AML	AML		
	comp=E,8345μm,0.6s						
T1245				AML	AML		
	comp=E,4931μm,0.1s						
T1245				AML	AML		
	comp=N,6518μm,0.6s						
T1245				AML	AML		
	comp=N,6365μm,0.2s						
T1245				AML	AML		
	comp=E,4768μm,0.2s						
T1245				AML	AML		
	comp=N,6858μm,0.2s						
T1245				AML	AML		
	comp=N,6789μm,1.2s						
T1245				AML	AML		
	comp=E,3919μm,0.1s						
T1245				AML	AML		
	comp=N,6518μm,1.4s						
T1216	Preci, Frazion	0.14	341	P	Pg	14 53 05.5	+0.5
T1216				S	Sg	14 53 07.9	+0.7
T1216				AML	AML		
	comp=E,18700μm,0.4s						
T1216				AML	AML		
	comp=N,16190μm,0.3s						
T1216				AML	AML		
	comp=N,16250μm,0.3s						
T1216				AML	AML		
	comp=E,18700μm,0.4s						
T1216				AML	AML		
	comp=N,16200μm,0.3s						
T1216				AML	AML		
	comp=E,2494μm,0.2s						
T1216				AML	AML		
	comp=N,3092μm,0.2s						
T1216				AML	AML		
	comp=N,3356μm,0.5s						
LNSS	Leonessa	0.16	191	P	Pg	14 53 05.9	+0.5
LNSS				S	Sg	14 53 08.8	+0.9
LNSS				AML	AML		
	comp=E,687μm,0.1s						
LNSS				AML	AML		
	comp=N,2036μm,0.1s						
T1215	Vallo di Nera,	0.16	285	⇑P	Pg	14 53 05.9	+0.6
T1215				S	Sg	14 53 08.7	+0.8
T1215				AML	AML		
	comp=E,1745μm,0.4s						
T1215				AML	AML		
	comp=N,2015μm,0.5s						
T1215				AML	AML		
	comp=E,1880μm,0.3s						
T1215				AML	AML		
	comp=N,1980μm,0.5s						
T1215				AML	AML		
	comp=E,1878μm,0.3s						
T1215				AML	AML		
	comp=N,1975μm,0.5s						
T1215				AML	AML		
	comp=N,1207μm,0.3s						
T1215				AML	AML		
	comp=N,983μm,0.0s						
T1215				AML	AML		
	comp=E,1209μm,0.0s						
T1215				AML	AML		
	comp=E,1161μm,0.2s						
T1215				AML	AML		
	comp=N,1207μm,1.7s						
T1215				AML	AML		
	comp=N,978μm,0.1s						
T1215				AML	AML		
	comp=N,1025μm,0.1s						
T1215				AML	AML		
	comp=E,1204μm,0.3s						
T1204	Amatrice, Fraz	0.19	116	P	Pg	14 53 06.7	+0.8
T1204				S	Sg	14 53 10.2	+1.4
T1204				AML	AML		
	comp=E,1440μm,0.1s						
T1204				AML	AML		
	comp=N,931μm,0.1s						
FEMA	Monte Fema	0.20	354	P	Pg	14 53 06.7	+0.6
FEMA				S	Sg	14 53 10.3	+1.2
MMO1	Montemonaco	0.23	52	P	Pb	14 53 07.7	-0.4
MMO1				S	Sg	14 53 11.0	+1.2
SMA1	SAN MARTINO	0.23	125	⇓P	Pb	14 53 07.4	-0.7
SMA1				S	Sg	14 53 11.5	+1.7
SMA1				AML	AML		
	comp=N,889μm,0.1s						
SMA1				AML	AML		
	comp=E,1315μm,0.2s						
T1256	Bolognola (MC)	0.27	23	⇓P	Pn	14 53 12.8	+0.8
T1256				AML	AML		
	comp=E,51100μm,0.2s						
T1256				AML	AML		
	comp=E,50950μm,1.1s						
T1256				AML	AML		
	comp=N,36950μm,0.3s						
T1256				AML	AML		
	comp=N,35200μm,0.3s						
RM33	Pellescritta (	0.27	159	⇑P	Pg	14 53 07.8	+0.5
RM33				AML	AML		
	comp=E,669μm,0.1s						
RM33				AML	AML		
	comp=E,680μm,0.1s						
RM33				AML	AML		
	comp=N,1349μm,0.2s						
RM33				AML	AML		
	comp=N,1306μm,0.2s						
T1241	Roccafluvione,	0.28	70	P	Pg	14 53 08.1	+0.7
T1241				S	Sb	14 53 12.7	-0.9
T1241				AML	AML		
	comp=E,4245μm,0.8s						
T1241				AML	AML		
	comp=N,3020μm,0.7s						
T1241				AML	AML		
	comp=N,3195μm,0.7s						
T1241				AML	AML		
	comp=E,4245μm,0.8s						
T1241				AML	AML		
	comp=N,3020μm,0.7s						
T1241				AML	AML		
	comp=E,4500μm,0.4s						
T1241				AML	AML		
	comp=E,236μm,1.0s						
T1241				AML	AML		
	comp=E,946μm,0.0s						
T1241				AML	AML		
	comp=N,546μm,2.3s						
T1241				AML	AML		
	comp=N,492μm,0.2s						
T1241				AML	AML		
	comp=N,546μm,1.7s						
T1241				AML	AML		
	comp=N,492μm,1.8s						
FDMO	Fiordimonte	0.28	1	AML	AML		
	comp=E,21850μm,0.7s						
FDMO				AML	AML		
	comp=N,23100μm,0.2s						
FDMO				AML	AML		
	comp=N,388μm,0.1s						
FDMO				AML	AML		
	comp=E,369μm,0.0s						
T1243	Rocca Santa Ma	0.28	103	P	Pg	14 53 07.6	+0.1
T1243				S	Sg	14 53 12.3	+1.1
T1211	Morro Reatino	0.28	216	⇑P	Pn	14 53 12.7	+0.7
T1211				AML	AML		
	comp=E,374μm,0.1s						
T1211				AML	AML		
	comp=E,430μm,0.2s						
T1211				AML	AML		
	comp=N,569μm,0.8s						
ARRO	Arrone	0.29	232	P	Pg	14 53 07.8	+0.1
ARRO				S	Sb	14 53 13.5	-0.5
ARRO				AML	AML		
	comp=N,231μm,1.5s						
ARRO				AML	AML		
	comp=E,250μm,2.1s						
ARRO				AML	AML		
	comp=N,231μm,0.5s						
ARRO				AML	AML		
	comp=E,250μm,1.9s						
ARRO				AML	AML		
	comp=N,195μm,0.3s						
ARRO				AML	AML		
	comp=E,247μm,0.4s						
T1247	Pizzolo (AQ)	0.36	153	⇓P	Pg	14 53 09.4	+0.5
T1247				AML	AML		
	comp=N,726μm,0.3s						
T1247				AML	AML		
	comp=E,819μm,0.4s						
TERO	Teramo	0.41	109	P	Pg	14 53 10.2	+0.3
TERO				S	Sb	14 53 16.4	-1.1
ASSB	Assisi San Ben	0.42	312	P	Pg	14 53 10.6	+0.6
ASSB				S	Sb	14 53 17.0	-0.7
ASSB				AML	AML		
	comp=E,3775μm,0.2s						
ASSB				AML	AML		
	comp=N,7675μm,0.2s						
ASSB				AML	AML		
	comp=N,462μm,0.2s						
ASSB				AML	AML		
	comp=E,378μm,0.9s						
ASSB				AML	AML		
	comp=E,3772μm,0.2s						
ASSB				AML	AML		
	comp=N,7677μm,0.2s						
SNTG	Esanatoglia	0.51	348	⇓P	Pb	14 53 12.2	-0.5
SNTG				S	Sn	14 53 25.0	+1.1
SNTG				AML	AML		
	comp=E,1575μm,0.4s						
SNTG				AML	AML		
	comp=N,1745μm,0.3s						
SNTG				AML	AML		
	comp=E,1480μm,0.1s						
SNTG				AML	AML		
	comp=N,1670μm,0.3s						

PRU 31 14:53:16.9±0.0, 43°.03N×12°.06E, h10km, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHC	Kasperske Hory	6.19	9	eSN	Sn	14 55 57.0	-2.2

*IDC **31** 14:55:23.0±1.9, 29°.69N×141°.02E, h60km±19km, mb3.4/6, mbtmp3.7/9, Error ellipse: s-maj=34.3km s-min=13.3km az=76.0*
*JMA **31** 14:55:23.1±0.2, 30°N±1°×14°2E±°, h54km, MV3.8/19, NEAR TORISHIMA IS*
ISC 31 14:55:21.7±0.7, 29°.73N±0°.06×141°.3E±0°.1, h46km, n20, σ2s45/24, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.75	163	eP	Pn	14 56 06.4	+3.1
CBIJ				S	Sn	14 56 38.3	+3.1
JCJ	Chichijima	2.75	163	P	Pn	14 56 05.6	+2.3
	27nm,0.3s,baz=357,slow=21,SNR=14						
JCJ				S	Sn	14 56 35.4	+0.1
	115nm,0.3s,baz=281,slow=22,SNR=11						
JHH2	Haha-jima-NKT2	3.19	165	eS	Sn	14 56 48.7	+2.6
JHCJ	Hachijojimakas	3.56	340	eS	Sn	14 56 57.9	+2.6
JHJ	Hachijo jima 2	3.61	340	P	Pn	14 56 15.3	+0.3
	130nm,0.8s,baz=237,slow=22,SNR=2.1						
JHJ				S	Sn	14 56 56.8	+0.3
	56nm,0.4s,baz=72,slow=19,SNR=1.9						
BSO1	Boso 1	4.91	357	eP	Pn	14 56 35.5	+3.0
BSO3	Boso 3	5.10	353	eP	Pn	14 56 37.1	+1.9
JIE	Ise	6.05	321	S	Sn	14 57 57.8	+1.2
JHU	Hanno	6.33	345	eP	Pn	14 56 56.4	+4.0
JRY	Ryogami san	6.58	343	eP	Pn	14 56 59.6	+3.7
JHO	Hitachi	6.88	355	eP	Pn	14 57 01.2	+1.2
MJAR	Matsushiro Arr	7.26	340	P	Pn	14 57 07.1	+1.9
	0.5nm,0.5s,baz=38,slow=8.1,SNR=1.9						
JFK	Kawauchi	7.62	358	S	Sn	14 58 29.8	-5.4
CMAR	Chiang Mai Arr	40.04	264	P	P	15 02 50.8	-1.8
	0.5nm,0.4s,baz=59,slow=6.0,SNR=6.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	48.21	308	PcP	PcP	15 05 24.0	-0.4
	0.5nm,0.8s,baz=107,slow=1.5,SNR=2.2						
WRA	Warramunga Arr	49.84	189	P	P	15 04 08.7	-1.6
	0.3nm,0.3s,baz=6.3,slow=7.7,SNR=6.1						
WRA				PcP	PcP	15 05 30.8	+0.3
	0.4nm,0.6s,baz=0.9,slow=3.9,SNR=2.4						
	0.3nm,0.3s						
ASAR	Alice Springs	53.56	188	P	P	15 04 36.7	-1.4
	0.2nm,0.6s,baz=360,slow=4.8,SNR=8.5						
	0.2nm,0.6s						
FINES	FINESS Array B	75.24	333	P	P	15 06 58.6	-0.7
	1.1nm,0.4s,baz=63,slow=4.5,SNR=13						
	1.1nm,0.4s						
NVAR	Mina Array Bea	79.52	52	P	P	15 07 24.8	+0.7
	0.2nm,0.5s,baz=288,slow=6.2,SNR=1.9						
	0.2nm,0.5s						
BRTR	Keskin Array B	83.64	312	P	P	15 07 44.8	-0.9
	1.2nm,0.8s,baz=0.0,slow=4.3,SNR=4.3						
	1.2nm,0.8s						

*CNRM **31** 15:01:55.6, 35°.51N×3°.76W, h16km, ml2.5*
*MDD **31** 15:01:55.3±0.3, 35°.48N×3°.80W, h0km, mb_Lg2.4/17, Error ellipse: s-maj=2.8km s-min=2.2km az=1.0*
*SFS **31** 15:01:55.0, 35°.40N×3°.70W, h13km, ML2.5, ALBORAN SUR*
*INMG **31** 15:01:56.8±1.4, 35°.45N×3°.78W, h14km±9km, ML2.1, Error ellipse: s-maj=6.8km s-min=4.0km az=153.0*
ISC 31 15:01:56.0±1.1, 35°.47N±0°.02×3°.79W±0°.02, h19km±3km, n40, σ1s13/72, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	Palemas	0.28	205	P	Pg	15 02 02.2	-0.2
PALE				S	Sg	15 02 06.9	+0.2
PVLZ	Peæn de	0.51	234	P	Pg	15 02 06.1	-0.3
PVLZ				S	Sb	15 02 14.1	+0.7
GOG	Mont Gurugu	0.70	111	P	Pb	15 02 09.3	-0.3
GOG				S	Sb	15 02 18.7	0.0
EMEL	Melilla	0.70	104	Pg	Pb	15 02 09.6	0.0
EMEL				Sg	Sb	15 02 18.5	-0.3
WMELI	Melilla	0.70	103	P	Pb	15 02 09.5	-0.1
WMELI				S	Sb	15 02 18.5	-0.4
EALB	Alboran	0.77	53	Pg	Pb	15 02 11.0	+0.2
EALB				Sg	Sb	15 02 21.3	+0.4
CHAS	Isla Isabel II	1.15	104	P	Pb	15 02 15.9	-1.4
CHAS				S	Sb	15 02 31.5	-0.3
TAF	Taforalt	1.31	120	P	Pn	15 02 19.1	-0.2
TAF				S	Sg	15 02 37.7	-0.7
CHEFC	Chefchaouen	1.32	254	P	Pb	15 02 20.4	+0.2
CHEFC				S	Sg	15 02 40.7	+1.9
EMIJ	Mijas	1.35	324	Pg	Pn	15 02 19.8	0.0
EMIJ				Sg	Sn	15 02 37.1	-0.1
EMIJ				i Vmb_Lg		15 02 42.9	
CEU	Ceuta	1.36	289	P	Pn	15 02 17.9	-2.0
CEU				S	Sn	15 02 33.3	-4.1
ECEU	Ceuta	1.36	289	Sg	Sn	15 02 34.7	-2.8
ECEU				i Vmb_Lg		15 02 37.0	
EMAL	Malaga-Limoner	1.39	338	P	Pn	15 02 20.2	-0.1
EMAL				S	Sg	15 02 40.0	-0.9
ELGU	Los Guajares,	1.40	5	Pg	Pn	15 02 20.0	-0.6
ELGU				Sg	Sn	15 02 38.9	+0.3
ELGU				i Vmb_Lg		15 02 42.3	
JBK	JBK	1.52	138	P	Pn	15 02 21.8	-0.5
JBK				S	Sb	15 02 42.8	+0.2
EBER	Berja	1.60	27	Pn	Pn	15 02 23.6	+0.1
EBER				Sn	Sn	15 02 44.1	+0.5
EBER				i Vmb_Lg		15 02 47.5	
EGOR	Sierra Gorda,	1.65	351	Pn	Pn	15 02 24.8	+0.6
EGOR				Sn	Sb	15 02 46.2	-0.3
EGOR				i Vmb_Lg		15 02 50.3	
EQUE	Quentar	1.75	9	Pn	Pb	15 02 26.6	-1.0
EQUE				Sn	Sn	15 02 48.3	+1.0
EQUE				i Vmb_Lg		15 02 52.9	
LIJA	Lijar	1.94	318	P	Pg	15 02 32.6	-0.7
ENIJ	Níjar	1.97	40	Sn	Sn	15 02 51.5	-1.1
ENIJ				i Vmb_Lg		15 02 51.6	
IFR	Ifrane	2.24	210	P	Pn	15 02 31.1	-1.2
IFR				S	Sn	15 02 59.3	-0.2
EQES	Quesada	2.40	14	Pn	Pn	15 02 35.6	+1.2
EQES				Sn	Sn	15 03 05.1	+1.8
EQES				i Vmb_Lg		15 03 08.5	
MD31	MD31	2.72	197	P	Pn	15 02 39.7	+0.9
MD31				S	Sn	15 03 11.9	+0.7
MDT	Midelt	2.74	195	P	Pn	15 02 41.1	+2.1
MDT				S	Sn	15 03 12.9	+1.3
EADA	Adamuz	2.76	347	Pn	Pn	15 02 41.1	+1.8
EADA				Sn	Sn	15 03 12.6	+0.5
EADA				i Vmb_Lg		15 03 24.6	
ECAB	El Cabril	2.91	334	Sn	Sn	15 03 17.1	+1.4
ECAB				i Vmb_Lg		15 03 28.1	
EZAR	Zarzadilla de	2.93	34	Sn	Sn	15 03 15.6	-0.8
EZAR				i Vmb_Lg		15 03 22.7	
EMUR	La Murta	3.13	40	Sn	Sn	15 03 19.8	-1.4
EMUR				i Vmb_Lg		15 03 22.0	
EMIN	Mina Concepcio	3.26	315	Pn	Pn	15 02 46.9	+0.8
EMIN				Sn	Sn	15 03 23.1	-1.2
EMIN				i Vmb_Lg		15 03 30.0	
EGRO	El Granado	3.62	306	Pn	Pn	15 02 51.2	+0.2
EGRO				Sn	Sn	15 03 32.0	-1.1
EGRO				i Vmb_Lg		15 03 33.9	
ETOB	Tobarra	3.64	29	Pn	Pn	15 02 53.5	+2.1
ETOB				Sn	Sn	15 03 33.3	-0.5
ETOB				i Vmb_Lg		15 03 39.3	
PVAQ	Vaqueiros	3.71	302	ePn	Pn	15 02 52.9	+0.7
PVAQ				eSn	Sn	15 03 35.5	+0.1
PVAQ				A	A	15 03 39.9	
	4.6nm,0.6s						
PVAQ	Vaqueiros	3.71	302	P	Pn	15 02 52.6	+0.3
PVAQ				S	Sn	15 03 34.5	-0.8
PBAR	Barrancos	3.75	317	ePn	Pn	15 02 54.1	+1.3
PBAR				eSn	Sn	15 03 36.8	+0.3
PBAR				A	A	15 03 40.8	
	2.1nm,0.4s						
PCVE	Castro Verde	4.04	303	ePn	Pn	15 02 59.1	+2.2
PCVE				eSn	Sn	15 03 43.9	+0.2
PCVE				A	A	15 03 54.1	
	2.9nm,0.1s						
PAB	San Pablo	4.09	354	Pn	Pn	15 02 59.1	+1.5
PAB				Sn	Sn	15 03 44.6	-0.4
PAB				i Vmb_Lg		15 04 10.9	
EVO	Evora	4.55	313	P	Pn	15 03 04.5	+0.6
EVO	Evora	4.55	313	ePn	Pn	15 03 04.4	+0.6
PNCL	Nicolau / Gran	4.62	306	ePn	Pn	15 03 05.6	+0.7
PNCL				eSn	Sn	15 03 57.6	-0.4
PNCL				A	A	15 04 04.4	
	2.5nm,0.3s						
PMTG	Montargil	5.04	317	ePn	Pn	15 03 12.5	+2.0
PMTG				eSn	Sn	15 04 08.8	+0.6
PMTG				A	A	15 04 10.8	
	1.2nm,0.3s						

*PRU **31** 15:08:10.2±0.0, 43°.04N×14°.03E, h10km*
ROM 31 15:08:04.5±0.2, 42°.752N±0°.006×13°.145E±0°.007, h16km±1km, ML3.2/68, 43C-35D, Error ellipse: s-maj=0.6km s-min=0.4km az=218.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.11	17	⇓P	Pg	15 08 07.7	-0.4
T1245				S	Sg	15 08 08.9	-1.6
T1245				AML	AML		
	comp=N,73450μm,0.4s						
T1245				AML	AML		
	comp=N,69000μm,0.3s						
T1245				AML	AML		
	comp=E,45400μm,0.2s						
T1245				AML	AML		
	comp=N,73500μm,0.4s						
T1245				AML	AML		
	comp=E,48100μm,0.2s						
T1204	Amatrice, Fraz	0.15	121	⇑P	Pb	15 08 08.9	-0.1
T1204				S	Sb	15 08 11.8	-0.3
T1204				AML	AML		
	comp=E,32350μm,0.4s						
T1204				AML	AML		
	comp=N,17150μm,0.5s						
T1217	Poggiodomo (PG	0.16	256	⇑P	Pb	15 08 09.1	-0.1
T1217				S	Sb	15 08 12.0	-0.4
T1217				AML	AML		
	comp=N,29250μm,0.8s						
T1217				AML	AML		
	comp=N,29050μm,0.8s						
T1217				AML	AML		
	comp=E,21550μm,0.1s						
T1217				AML	AML		
	comp=N,29250μm,0.8s						
T1217				AML	AML		
	comp=E,21350μm,0.1s						
T1217				AML	AML		
	comp=N,29050μm,0.8s						
T1217				AML	AML		
	comp=E,21600μm,0.1s						
T1217				AML	AML		
	comp=E,21300μm,0.1s						
LNSS	Leonessa	0.17	207	⇑P	Pb	15 08 09.1	-0.2
LNSS				S	Sg	15 08 11.9	+0.2
LNSS				AML	AML		
	comp=E,33200μm,0.4s						
LNSS				AML	AML		
	comp=N,60850μm,0.4s						
T1216	Preci, Frazion	0.17	326	⇓P	Pb	15 08 09.4	+0.1
T1216				S	Sb	15 08 12.5	0.0
T1216				AML	AML		
	comp=E,33850μm,0.3s						
T1216				AML	AML		
	comp=N,33600μm,0.7s						
T1216				AML	AML		
	comp=E,33800μm,0.3s						
T1216				AML	AML		
	comp=N,33600μm,0.7s						
SMA1	SAN MARTINO	0.19	131	⇑P	Pb	15 08 09.4	-0.2
SMA1				S	Sb	15 08 12.9	-0.2
SMA1				AML	AML		
	comp=E,28600μm,0.3s						
SMA1				AML	AML		
	comp=N,33750μm,0.3s						
MMO1	Montemonaco	0.20	42	P	Pg	15 08 08.4	-0.9
MMO1				S	Sb	15 08 13.6	+0.1
T1215	Vallo di Nera,	0.21	284	⇑P	Pb	15 08 10.0	0.0
T1215				AML	AML		
	comp=E,8015μm,0.2s						
T1215				AML	AML		
	comp=E,8010μm,0.2s						

T1215				AML	AML	
	comp=E,8010μm,0.2s					
T1215				AML	AML	
	comp=E,8005μm,0.2s					
T1215				AML	AML	
	comp=E,8020μm,0.2s					
T1215				AML	AML	
	comp=N,7870μm,0.3s					
T1215				AML	AML	
	comp=N,8400μm,0.3s					
FEMA	**Monte Fema**	**0.22**	**342**	⇑P	Pg	15 08 09.9 +0.3
FEMA				AML	AML	
	comp=N,18150μm,0.5s					
FEMA				AML	AML	
	comp=E,24400μm,0.2s					
FEMA				AML	AML	
	comp=N,18100μm,0.5s					
FEMA				AML	AML	
	comp=E,24350μm,0.2s					
FEMA				AML	AML	
	comp=N,18150μm,0.5s					
T1243	**Rocca Santa Ma**	**0.23**	**104**	⇑P	Pb	15 08 10.2 -0.2
T1241	**Roccafluvione,**	**0.23**	**64**	⇓P	Pg	15 08 09.7 -0.1
T1241				AML	AML	
	comp=N,13700μm,0.7s					
T1241				AML	AML	
	comp=E,15150μm,0.2s					
T1241				AML	AML	
	comp=N,13650μm,0.6s					
T1241				AML	AML	
	comp=E,15400μm,0.2s					
T1241				AML	AML	
	comp=N,14300μm,0.5s					
T1241				AML	AML	
	comp=N,13700μm,0.6s					
RM33	**Pellescritta (**	**0.25**	**168**	⇓P	Pg	15 08 10.3 +0.3
RM33				S	Sg	15 08 14.3 +0.5
RM33				AML	AML	
	comp=E,17250μm,0.3s					
RM33				AML	AML	
	comp=N,13250μm,0.2s					
RM33				AML	AML	
	comp=E,16850μm,0.3s					
RM33				AML	AML	
	comp=N,13450μm,0.4s					
RM33				AML	AML	
	comp=N,13500μm,0.4s					
RM33				AML	AML	
	comp=E,17300μm,0.3s					
T1256	**Bolognola (MC)**	**0.26**	**13**	⇓P	Pg	15 08 09.4 -0.9
T1256				AML	AML	
	comp=E,14400μm,0.9s					
T1256				AML	AML	
	comp=N,14100μm,0.3s					
T1256				AML	AML	
	comp=N,14100μm,0.3s					
T1256				AML	AML	
	comp=E,14650μm,0.8s					
T1256				AML	AML	
	comp=E,14360μm,0.8s					
T1256				AML	AML	
	comp=N,13100μm,0.3s					
AM05	**Amandola Campo**	**0.27**	**34**	⇑P	Pg	15 08 09.7 -0.8
AM05				AML	AML	
	comp=N,3410μm,0.4s					
AM05				AML	AML	
	comp=E,13150μm,0.2s					
AM05				AML	AML	
	comp=N,732μm,1.3s					
AM05				AML	AML	
	comp=E,3275μm,0.3s					
AM05				AML	AML	
	comp=N,3405μm,0.4s					
AM05				AML	AML	
	comp=E,13200μm,0.2s					
AM05				AML	AML	
	comp=N,731μm,1.3s					
FDMO	**Fiordimonte**	**0.29**	**352**	⇑P	Pg	15 08 09.3 -1.4
FDMO				AML	AML	
	comp=N,12600μm,1.0s					
FDMO				AML	AML	
	comp=E,8675μm,1.1s					
CAMP	**Campotosto**	**0.29**	**138**	⇑P	Pg	15 08 11.1 +0.3
CAMP				S	Sg	15 08 15.6 +0.5
CAMP				AML	AML	
	comp=N,5465μm,0.3s					
CAMP				AML	AML	
	comp=E,5030μm,1.2s					
T1211	**Morro Reatino**	**0.31**	**224**	⇑P	Pb	15 08 11.4 -0.3
T1211				S	Sb	15 08 17.0 +0.5
T1211				AML	AML	
	comp=E,10480μm,1.2s					
T1211				AML	AML	
	comp=E,10690μm,1.2s					
T1211				AML	AML	
	comp=N,12400μm,1.2s					
T1211				AML	AML	
	comp=E,10665μm,1.2s					
T1211				AML	AML	
	comp=N,12450μm,1.2s					
T1211				AML	AML	
	comp=E,10505μm,1.2s					
T1211				AML	AML	
	comp=N,12350μm,1.2s					
ARRO	**Arrone**	**0.33**	**238**	⇑P	Pb	15 08 11.8 -0.2
T1247	**Pizzolo (AQ)**	**0.33**	**160**	P	Pg	15 08 11.6 +0.2
T1247				S	Sb	15 08 17.1 -0.1
T1247				AML	AML	
	comp=E,8970μm,0.3s					
T1247				AML	AML	
	comp=E,8975μm,0.3s					
T1247				AML	AML	
	comp=N,10070μm,1.6s					
GUMA	**Gualdo di Mace**	**0.34**	**24**	P	Pg	15 08 11.2 -0.4
GUMA				AML	AML	
	comp=N,25950μm,0.6s					
GUMA				AML	AML	
	comp=E,20250μm,0.4s					
GUMA				AML	AML	
	comp=E,23350μm,0.3s					
GUMA				AML	AML	
	comp=N,25950μm,0.6s					
TERO	**Teramo**	**0.36**	**111**	⇑P	Pg	15 08 12.3 +0.3
TERO				AML	AML	
	comp=E,5225μm,1.3s					
TERO				AML	AML	
	comp=N,6225μm,0.5s					
TERO				AML	AML	
	comp=E,5645μm,1.2s					
TERO				AML	AML	
	comp=E,5230μm,1.3s					
TERO				AML	AML	
	comp=N,6600μm,0.5s					
SEF1	**Sefro**	**0.42**	**340**	⇓P	Pb	15 08 14.0 +0.3
SEF1				AML	AML	
	comp=E,10240μm,0.7s					
SEF1				AML	AML	
	comp=N,7645μm,0.8s					
SEF1				AML	AML	
	comp=E,10255μm,0.7s					
SEF1				AML	AML	
	comp=N,7650μm,0.8s					
GIGS	**Gran Sasso**	**0.43**	**134**	⇑P	Pg	15 08 13.3 0.0
GIGS				AML	AML	
	comp=E,1300μm,1.1s					
GIGS				AML	AML	
	comp=N,764μm,1.2s					
GIGS				AML	AML	
	comp=N,764μm,1.2s					
GIGS				AML	AML	
	comp=E,1295μm,1.1s					
OFFI	**Offida**	**0.44**	**65**	⇓P	Pb	15 08 14.1 +0.2
OFFI				AML	AML	
	comp=E,10985μm,0.3s					
OFFI				AML	AML	
	comp=N,12575μm,0.6s					
CESX	**Cesi**	**0.44**	**251**	P	Pg	15 08 13.6 +0.3
CESX				AML	AML	
	comp=E,3200μm,0.4s					
CESX				AML	AML	
	comp=N,4050μm,0.4s					
AQU	**L'Aquila**	**0.44**	**154**	⇑P	Pb	15 08 14.0 0.0
AQU				AML	AML	
	comp=E,2490μm,0.3s					
AQU				AML	AML	
	comp=E,2560μm,0.3s					
AQU				AML	AML	
	comp=E,2495μm,0.3s					
AQU				AML	AML	
	comp=N,2360μm,0.4s					
AQU				AML	AML	
	comp=N,2310μm,0.3s					
ASSB	**Assisi San Ben**	**0.46**	**309**	⇑P	Pb	15 08 14.4 +0.1
ASSB				AML	AML	
	comp=N,5520μm,0.4s					
ASSB				AML	AML	
	comp=E,4685μm,0.4s					
FIAM	**Fiamignano**	**0.48**	**182**	⇓P	Pg	15 08 14.3 +0.1
FIAM				AML	AML	
	comp=N,2790μm,0.7s					
FIAM				AML	AML	
	comp=E,2650μm,0.3s					
GAG1	**Gagliole**	**0.49**	**353**	⇑P	Pb	15 08 15.6 +0.8
GAG1				AML	AML	
	comp=E,8540μm,0.3s					
GAG1				AML	AML	
	comp=N,8180μm,0.5s					
GAG1				AML	AML	
	comp=N,8185μm,0.5s					
SNTG	**Esanatoglia**	**0.53**	**344**	⇓P	Pg	15 08 14.8 -0.1
SNTG				AML	AML	
	comp=E,2120μm,0.5s					
SNTG				AML	AML	
	comp=N,1765μm,1.2s					
SNTG				AML	AML	
	comp=N,1720μm,1.0s					
SNTG				AML	AML	
	comp=N,1760μm,1.2s					
SNTG				AML	AML	
	comp=E,2030μm,0.5s					
TRTR	**Tortoreto Alta**	**0.57**	**84**	⇑P	Pn	15 08 17.4 -0.6
TRTR				AML	AML	
	comp=N,5020μm,0.5s					
TRTR				AML	AML	
	comp=E,5175μm,0.5s					
ATCC	**AVT- Casa Cast**	**0.57**	**320**	⇑P	Pb	15 08 16.5 +0.3
ATCC				AML	AML	
	comp=E,3505μm,0.8s					
ATCC				AML	AML	
	comp=N,3710μm,0.7s					
EL6	**Elcito**	**0.58**	**357**	⇑P	Pg	15 08 15.6 -0.4
EL6				AML	AML	
	comp=E,3825μm,0.4s					
EL6				AML	AML	
	comp=N,3860μm,1.2s					
FAGN	**Fagnano**	**0.58**	**146**	⇑P	Pg	15 08 15.7 -0.3
FAGN				AML	AML	
	comp=N,3995μm,0.7s					
FAGN				AML	AML	
	comp=E,6085μm,0.7s					
FOSV	**Fossato di Vic**	**0.61**	**333**	⇓P	Pb	15 08 16.8 -0.1
FOSV				AML	AML	
	comp=E,1890μm,1.1s					
FOSV				AML	AML	
	comp=N,2020μm,0.4s					
MURB	**Monte Urbino**	**0.68**	**319**	⇑P	Pb	15 08 18.6 +0.5
MURB				AML	AML	
	comp=N,5410μm,0.3s					
MURB				AML	AML	
	comp=E,5705μm,1.0s					
MURB				AML	AML	
	comp=N,5500μm,0.3s					
MURB				AML	AML	
	comp=N,5415μm,0.3s					
MURB				AML	AML	
	comp=E,5325μm,1.0s					
SRES	**S.Oreste - Sor**	**0.70**	**223**	⇓P	Pb	15 08 18.6 +0.3
SRES				S	Sn	15 08 30.0 -0.2
SRES				AML	AML	
	comp=N,935μm,0.4s					
SRES				AML	AML	
	comp=E,894μm,0.6s					
T0110	**Collepietro**	**0.70**	**138**	⇑P	Pg	15 08 18.1 -0.2
T0110				AML	AML	
	comp=E,3240μm,0.3s					
T0110				AML	AML	
	comp=N,3360μm,0.7s					
ATTE	**AVT- Monte Tez**	**0.73**	**308**	⇑P	Pb	15 08 19.3 +0.3
ATTE				AML	AML	
	comp=E,1076μm,0.4s					
ATTE				AML	AML	
	comp=N,872μm,0.5s					
ATTE				AML	AML	
	comp=N,872μm,0.5s					
SSFR	**Montelago di S**	**0.73**	**339**	⇑P	Pg	15 08 18.8 0.0
SSFR				AML	AML	
	comp=E,2780μm,0.3s					
SSFR				AML	AML	
	comp=E,2400μm,0.3s					
SSFR				AML	AML	
	comp=N,1650μm,0.3s					
SSFR				AML	AML	
	comp=N,1790μm,0.3s					
ATFO	**Monte Foce - G**	**0.74**	**326**	⇑P	Pb	15 08 19.4 +0.2
ATFO				AML	AML	
	comp=N,1405μm,1.5s					
ATFO				AML	AML	
	comp=E,1205μm,1.4s					
PTQR	**Pietraquaria**	**0.75**	**165**	⇓P	Pg	15 08 19.1 -0.1
PTQR				AML	AML	
	comp=E,474μm,0.5s					
PTQR				AML	AML	
	comp=N,504μm,0.4s					
ARVD	**Arcevia**	**0.76**	**349**	⇑P	Pb	15 08 19.4 0.0
ARVD				AML	AML	
	comp=N,590μm,0.7s					
ARVD				AML	AML	
	comp=E,819μm,1.5s					
MGAB	**Montegabbione**	**0.78**	**282**	⇑P	Pb	15 08 20.1 +0.4
MGAB				AML	AML	
	comp=E,2135μm,1.3s					
MGAB				AML	AML	
	comp=N,2025μm,0.3s					
MGAB				AML	AML	
	comp=N,2175μm,0.9s					
MGAB				AML	AML	
	comp=E,2385μm,1.3s					
MTCE	**Montecelio**	**0.79**	**202**	⇑P	Pg	15 08 19.4 -0.4
MTCE				AML	AML	
	comp=E,808μm,0.5s					
MTCE				AML	AML	
	comp=N,679μm,0.6s					
CERT	**Cerreto**	**0.81**	**189**	⇑P	Pb	15 08 19.7 -0.5
CERT				AML	AML	
	comp=N,806μm,0.5s					
CERT				AML	AML	
	comp=E,1010μm,0.7s					
FRON	**Frontone**	**0.82**	**338**	⇑P	Pb	15 08 20.4 -0.1
FRON				AML	AML	
	comp=E,746μm,1.2s					
FRON				AML	AML	
	comp=N,1074μm,0.5s					
ATVO	**AVT- Monte Val**	**0.83**	**320**	⇑P	Pg	15 08 21.0 +0.3
ATVO				AML	AML	
	comp=E,1178μm,0.6s					
ATVO				AML	AML	
	comp=N,919μm,0.5s					
AOI	**Ancona**	**0.86**	**23**	P	Pn	15 08 23.1 +1.0
AOI				AML	AML	
	comp=E,1070μm,0.3s					
AOI				AML	AML	
	comp=N,1200μm,0.5s					
ATMI	**Monte Miggiano**	**0.87**	**312**	⇑P	Pn	15 08 23.0 +0.9
ATMI				S	Sn	15 08 37.0 +2.5
ATMI				AML	AML	
	comp=N,3415μm,1.0s					
ATMI				AML	AML	
	comp=E,2830μm,0.8s					
ATPI	**Pietralunga -**	**0.89**	**322**	⇓P	Pg	15 08 22.0 +0.3
ATPI				AML	AML	
	comp=E,968μm,0.5s					
ATPI				AML	AML	
	comp=N,719μm,0.6s					
PIEI	**Pieia**	**0.90**	**331**	⇓P	Pb	15 08 21.9 0.0
PIEI				S	Sn	15 08 38.0 +2.6
PIEI				AML	AML	
	comp=N,506μm,0.3s					
PIEI				AML	AML	
	comp=E,718μm,1.6s					
SACS	**San Casciano d**	**0.91**	**277**	⇑P	Pn	15 08 22.6 -0.2
SACS				AML	AML	
	comp=E,708μm,0.5s					
SACS				AML	AML	
	comp=N,956μm,0.7s					
SACS				AML	AML	
	comp=E,673μm,0.5s					
SACS				AML	AML	
	comp=N,948μm,0.7s					
SACS				AML	AML	
	comp=N,948μm,0.7s					
SACS				AML	AML	
	comp=E,672μm,0.5s					
MPAG	**Monte Paganucc**	**0.92**	**342**	⇓P	Pg	15 08 22.3 -0.1
MPAG				AML	AML	
	comp=E,932μm,0.8s					
MPAG				AML	AML	
	comp=N,743μm,0.4s					
MPAG				AML	AML	
	comp=E,931μm,0.8s					
MPAG				AML	AML	
	comp=N,744μm,0.4s					
VVLD	**Villa Vallelon**	**0.95**	**158**	⇓P	Pn	15 08 24.6 +1.3
VVLD				AML	AML	
	comp=E,592μm,0.6s					
VVLD				AML	AML	
	comp=N,638μm,0.7s					
NARO	**Abbazia di Nar**	**0.95**	**335**	P	Pb	15 08 22.6 -0.1
NARO				AML	AML	
	comp=N,394μm,0.8s					
NARO				AML	AML	
	comp=E,421μm,0.6s					
FSSB	**Fossombrone**	**0.98**	**344**	P	Pb	15 08 23.1 0.0
FSSB				AML	AML	
	comp=E,2860μm,0.4s					
FSSB				AML	AML	
	comp=N,2910μm,0.4s					
RMP	**Rome, Mte Porz**	**1.00**	**199**	⇓P	Pn	15 08 24.5 +0.6
RMP				AML	AML	
	comp=E,707μm,0.4s					
RMP				AML	AML	
	comp=N,1011μm,0.6s					
LATE	**Laterza**	**1.00**	**263**	⇓P	Pn	15 08 24.4 +0.5
LATE				S	Sn	15 08 40.0 +2.3
BADI	**Badiali**	**1.00**	**319**	P	Pn	15 08 24.4 +0.3
CAFI	**Castiglion Fio**	**1.04**	**304**	⇑P	Pg	15 08 24.9 +0.3
CAFI				AML	AML	
	comp=N,732μm,0.8s					
CAFI				AML	AML	
	comp=N,774μm,0.8s					
CAFI				AML	AML	
	comp=E,697μm,0.5s					
CAFI				AML	AML	
	comp=E,700μm,0.5s					
LPEL	**Lama dei Pelig**	**1.04**	**132**	⇑P	Pn	15 08 24.4 -0.2
LPEL				AML	AML	
	comp=N,954μm,0.9s					
LPEL				AML	AML	
	comp=E,1140μm,0.9s					
MCIV	**Monte Civitell**	**1.08**	**272**	P	Pg	15 08 26.4 +1.0
MCIV				AML	AML	
	comp=E,382μm,0.8s					
MCIV				AML	AML	
	comp=N,749μm,0.3s					
TOLF	**Tolfa**	**1.09**	**231**	⇓P	Pn	15 08 25.3 +0.1
TOLF				AML	AML	
	comp=N,456μm,1.5s					
TOLF				AML	AML	
	comp=E,600μm,0.5s					
SF04	**Casetta**	**1.10**	**275**	⇑P	Pg	15 08 26.9 +1.2
SSP9	**Sansepolcro**	**1.11**	**318**	⇓P	Pg	15 08 28.2 +2.3
GIUL	**Giuliano Di Ro**	**1.20**	**176**	⇓P	Pg	15 08 28.6 +1.0
GIUL				AML	AML	
	comp=E,394μm,0.6s					
GIUL				AML	AML	
	comp=N,404μm,0.5s					
CRE	**Caprese Michel**	**1.23**	**315**	⇓P	Pg	15 08 28.8 +0.5
CRE				AML	AML	
	comp=N,629μm,0.4s					
CRE				AML	AML	
	comp=E,381μm,0.4s					
CERA	**Filignano**	**1.32**	**150**	⇓P	Pg	15 08 32.2 +2.2
MIDA	**Miranda**	**1.38**	**143**	⇑P	Pb	15 08 30.0 0.0
MIDA				AML	AML	
	comp=E,458μm,1.0s					
MIDA				AML	AML	
	comp=N,350μm,1.5s					
TRIV	**Trivento**	**1.44**	**133**	⇓P	Pg	15 08 33.5 +1.4
MAON	**Monte Argentar**	**1.52**	**258**	⇓P	Pb	15 08 32.4 +0.1
MAON				AML	AML	
	comp=E,122μm,1.4s					
MAON				AML	AML	
	comp=N,100μm,1.5s					
RUFI	**Rufina**	**1.61**	**313**	⇓P	Pg	15 08 34.8 -0.8
CASP	**Castiglione de**	**1.68**	**272**	⇓P	Pb	15 08 34.5 -0.5
CASP				AML	AML	
	comp=N,53μm,0.8s					
CASP				AML	AML	
	comp=E,60μm,1.6s					
TRIF	**Trifonti**	**1.69**	**283**	⇓P	Pb	15 08 35.5 +0.3
TRIF				AML	AML	
	comp=N,106μm,0.5s					
TRIF				AML	AML	
	comp=E,103μm,1.6s					
LMD	**Lutirano**	**1.69**	**322**	⇑P	Pg	15 08 38.9 +2.0
MTCR	**Monte La Croce**	**2.02**	**310**	P	Pb	15 08 40.7 -0.2
PAOL	**Paolisi**	**2.02**	**148**	⇓P	Pg	15 08 43.1 -0.1
BRJN	**Brijuni**	**2.20**	**11**	⇓P	Pb	15 08 42.3 -1.5
VLC	**Villacollemand**	**2.45**	**306**	⇑P	Pb	15 08 46.6 -1.6
VLC				AML	AML	
	comp=E,56μm,1.4s					
VLC				AML	AML	
	comp=E,54μm,0.8s					
VLC				AML	AML	
	comp=N,62μm,1.4s					
VLC				AML	AML	
	comp=N,40μm,0.8s					
HVAR	**Hvar**	**2.46**	**79**	⇑P	Pn	15 08 46.1 +2.1
MCRV	**Calabrutti - M**	**2.48**	**142**	S	Sn	15 09 16.0 +1.5
PZUN	**Potenza**	**2.90**	**136**	⇓P	Pn	15 08 52.2 +2.3
CMPR	**Campora**	**2.92**	**146**	⇓P	Pg	15 09 01.1 +0.6
PGF	**Pioggiola**	**3.06**	**268**	⇓P	Pb	15 08 55.7 -3.0
CGRP	**Cima Grappa**	**3.27**	**343**	⇓P	Pn	15 08 58.7 +3.4
LUSI	**Trento, Gardas**	**3.57**	**335**	⇑P	Pb	15 09 03.8 -3.6
DGI	**Dorgali Grotta**	**3.60**	**229**	P	Pn	15 09 00.6 +0.9
ZONE	**Zone**	**3.71**	**325**	P	Pn	15 09 02.9 +1.6
ZONE				AML	AML	
	comp=E,48μm,0.7s					
ZONE				AML	AML	
	comp=N,64μm,0.4s					
ZONE				AML	AML	
	comp=E,48μm,0.7s					
SALB	**San Lorenzo Be**	**3.75**	**139**	P	Pn	15 09 00.7 -1.2
SALB				S	Sn	15 09 42.0 -3.7
QLNO	**Quiliano**	**3.83**	**296**	⇑P	Pn	15 09 05.4 +2.6
MYKA	**Terra Mystica**	**3.89**	**5**	*e*Pn	Pn	15 09 06.7 +2.9
	comp=E,1.2nm,0.2s					
KOSI	**Kohlern**	**3.92**	**342**	⇓P	Pn	15 09 08.7 +4.5
ABTA	**Abfaltersbach**	**4.02**	**354**	*e*Pn	Pn	15 09 08.3 +2.8
	comp=E,1.3nm,0.2s					
SPS2	**Spezzano della**	**4.21**	**144**	P	Pn	15 09 09.8 +1.6
SPS2				AML	AML	
	comp=N,33μm,0.3s					
SPS2				AML	AML	
	comp=E,50μm,1.1s					
KBA	**Koelnbreinsper**	**4.33**	**2**	*e*Pn	Pn	15 09 13.0 +3.1
	comp=E,1.0nm,0.2s					
WTTA	**Wattenberg**	**4.64**	**347**	*e*Pn	Pn	15 09 19.0 +4.9
	comp=E,1.1nm,0.2s					
ARSA	**Arzberg**	**4.80**	**20**	*i* Pn	Pn	15 09 19.6 +3.3
	comp=E,0.7nm,0.2s					
RETA	**Reutte**	**5.03**	**341**	*e*Pn	Pn	15 09 21.9 +2.6
	comp=E,0.9nm,0.2s					
DAVA	**Damuels**	**5.09**	**334**	*e*Pn	Pn	15 09 25.3 +5.0
	comp=E,0.7nm,0.2s					
DIVS	**Divibare**	**5.17**	**73**	P	Pn	15 09 23.0 +1.7
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn	Pn	15 09 28.9 +2.8
	comp=E,0.9nm,0.3s					
KHC	**Kasperske Hory**	**6.39**	**3**	*e*SN	Sn	15 10 46.2 -4.4

MAN 31 15:20:43.3, 10°.08N×126°.28E, h15km, mb4.6, ML3.4, MS3.3, 6C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.83**	**250**	⇑*i*P	Pb	15 20 58.2	-1.3
SCPH				*i* S	Sg	15 21 09.6	-0.9
MSLP	**Maasin**	**1.40**	**273**	⇓*i*P	Pn	15 21 07.4	-1.0
MSLP				*i* S	Sb	15 21 27.4	+0.4
BIPH	**Bislig**	**1.88**	**178**	⇑*i*P	Pn	15 21 14.5	-0.4

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BIPH                                  i S          Sn     15 21 38.4  0.0
TABP  Talibon, Bohol        1.92 271 ⇓iP           Pn     15 21 14.9 -0.5
TABP                                  i S          Sn     15 21 37.7 -1.7
GHBP  Garcia Hernand        1.98 257 ⇓iP           Pn     15 21 17.1 +0.8
GHBP                                  i S          Sn     15 21 40.8 -0.2
CGP   Cagayan de Oro        2.25 224 ⇑iP           Pn     15 21 20.4 +0.4
CGP                                   i S          Sn     15 21 47.1 -0.4
CDOP  Cateel, Davao         2.28 176 ⇑iP           Pg     15 21 27.7 +0.6
CDOP                                  i S          Sn     15 21 49.7 +1.4
LLP   Lapu-Lapu             2.29 276 ⇑eP           Pn     15 21 21.3 +0.7
LLP                                   i S          Sn     15 21 50.4 +1.8
TBP   Tagbilaran            2.42 261  eP           Pn     15 21 22.6 +0.3
TBP                                   i S          Sn     15 21 51.0 -0.7
KCP   Kidapawan             3.27 201 ⇓eP           Pn     15 21 32.7 -1.4
KCP                                   i S          Sn     15 22 14.5 +1.7
CTBH  Cotabato--PC H        3.48 216 ⇑eP           Pn     15 21 38.4 +1.5
CNOP  Candoni, Negro        3.60 266 ⇓eP           Pn     15 21 39.9 +1.3
CNOP                                  eS           Sn     15 22 05.9  -15
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GCG ***31*** *15:22:10.9±1.0, 12°.69N×90°.56W, h28km±106km, MD4.2*
IDC ***31*** *15:22:10.4±0.8, 13°.26N×90°.05W, h0km, mb3.8/12,*
mbtmp3.9/15, ML3.3/3, MS3.5/13, Error ellipse:
s-maj=32.2km s-min=13.4km az=49.0
INET ***31*** *15:22:11.6±0.7, 12°.88N×90°.63W, h11km±6km, MW3.8*
SNET ***31*** *15:22:12.8±1.3, 12°.88N×90°.45W, h9km±15km, ML4.2*
NEIC ***31*** *15:22:12.1±2.0, 13°.03N±0°.07×90°.51W±0°.06, h10km±1km,*
mb4.5/32, Md4.5(SNET), Error ellipse: s-maj=12.8km
s-min=8.4km az=209.0
UCR ***31*** *15:22:13.0±1.4, 12°.88N×90°.44W, h10km±21km, ML4.1,*
mb4.5(NEIC)

ISC 31 15:22:11.7±1.6, 12°.91N±0°.04×90°.48W±0°.04, h16km±7km, n122, σ1$75/129, mb4.3/22, MS3.5/12, 4C, Off coast of central America

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Code  Station Name          Δ°   AZ°  Phase ID                Time      Res
                                      Op      ISC          h  m  s    ISC
CEVE  Cerro Verde           1.23  42 ⇑iP                   Pb     15 22 35.6 +0.8
CEVE                                  eS                   Sn     15 22 53.2 +2.3
CEVE                                      IAML                    15 22 55.9
      comp=Z,18µm,0.5s
CEVE  Cerro Verde           1.23  42 ⇑iP                   Pb     15 22 35.6 +0.8
CEVE                                  eS                   Sn     15 22 53.2 +2.3
CEVE                                      IAML                    15 22 55.9
      comp=Z,18µm,0.5s
SBLS  San Blas              1.24  42 ⇑iP                   Pn     15 22 35.7 +1.0
SBLS  San Blas              1.24  42 ⇑iP                   Pn     15 22 35.7 +1.0
RTR   El Retiro             1.27  40  iP                   Pn     15 22 36.1 +1.2
RTR   El Retiro             1.27  40  iP                   Pn     15 22 36.1 +1.2
SLOZ  Alcaldia de Sa        1.30  31  eP                   Pn     15 22 35.3 +0.1
BOQS  Boqueron              1.42  55  eP                   Pn     15 22 38.7 +1.6
BOQS  Boqueron              1.42  55  eP                   Pn     15 22 38.7 +1.6
SNET  Serv Nac Est T        1.44  58                       Pn     15 22 37.6 +0.4
PCG   Pacaya                1.47 355  eP                   Pn     15 22 39.0 +1.2
PCG                                   eS                   Sn     15 22 59.8 +2.9
FUG   Fuego 3               1.56 347  eP                   Pn     15 22 40.1 +1.1
SJTE  Alcalda de S          1.59  64  eP                   Pn     15 22 40.8 +1.4
SJTE                                  eS                   Sg     15 23 03.5 +0.4
SJTE  Alcalda de S          1.59  64  eP                   Pn     15 22 40.8 +1.4
SJTE                                  eS                   Sg     15 23 03.5 +0.4
NBG   Las Nubes             1.67   4  eP                   Pn     15 22 43.2 +2.7
NBG                                   eS                   Sn     15 23 05.5 +3.7
COEG  Centro de Oper        1.71  66  eP                   Pn     15 22 42.4 +1.5
COEG  Centro de Oper        1.71  66  eP                   Pn     15 22 42.4 +1.5
MTO3  Montecristo           1.83  36  Pn                   Pn     15 22 44.1 +1.3
ALJI  Alcalda de J          1.90  77  eP                   Pn     15 22 44.7 +1.2
ALJI                                  eS                   Sn     15 23 08.7 +1.5
ALJI  Alcalda de J          1.90  77  eP                   Pn     15 22 44.7 +1.2
ALJI                                  eS                   Sn     15 23 08.7 +1.5
ESQI  Esquipulas            1.97  34                       Pn     15 22 46.1 +1.5
ESQI  Esquipulas            1.97  34  eP                   Pn     15 22 47.6 +3.0
COEB  Comit de Eme          1.98  73  eP                   Pn     15 22 46.0 +1.3
COEB  Comit de Eme          1.98  73  eP                   Pn     15 22 46.0 +1.3
RTAL  Retalhuleu            1.99 324                       Pn     15 22 45.0 +0.3
PQSS  Presa 15 de Se        2.00  69  iP                   Pn     15 22 46.3 +1.5
PQSS                                  eS                   Sn     15 23 11.8 +2.3
PQSS                                      IAML                    15 23 18.7
      comp=Z,510nm,0.3s
PQSS  Presa 15 de Se        2.00  69  iP                   Pn     15 22 46.3 +1.5
PQSS                                  eS                   Sn     15 23 11.8 +2.3
PQSS                                      IAML                    15 23 18.7
      comp=Z,510nm,0.3s
STG3  Santiaguito 3,        2.08 329  eP                   Pn     15 22 47.1 +1.0
STG3                                  eS                   Sn     15 23 14.7 +3.0
MRL   Marmol                2.29  20  eP                   Pn     15 22 52.1 +3.1
MRL                                   eS                   Sb     15 23 22.0 +1.1
HUEH  Huehuetenango         2.59 338                       Pn     15 22 52.3 -0.8
CNCH  Conchagua             2.60  82  eP                   Pn     15 22 54.5 +1.2
CNCH  Conchagua             2.60  82  eP                   Pn     15 22 54.5 +1.2
TGUH  Tegucigalpa,Un        3.32  70                       Pn     15 23 03.9 +0.8
CRIN  San Cristobal         3.35  93  Pn                   Pn     15 23 05.1 +1.6
CRIN  San Cristobal         3.35  93  eP                   Pn     15 23 05.2 +1.6
CCIG  Comitan               3.71 335                       Pn     15 23 07.6 -1.0
CNGN  Cerro Negro           3.71  96                       Pn     15 23 08.2 -0.2
CNGN  Cerro Negro           3.71  96  eP                   Pn     15 23 08.4  0.0
COPN  Copaltepe             3.87 100  eP                   Pn     15 23 11.4 +0.9
MOMN  Momotombo             3.88  97  eP                   Pn     15 23 11.5 +0.8
PETF  Flores                4.02   8  Pn                   Pn     15 23 13.7 +1.0
MATN  Matagalpa             4.44  89                       Pn     15 23 18.7 +0.2
MATN  Matagalpa             4.44  89  eP                   Pn     15 23 19.3 +0.8
BOAB  BOACO BROADBAN        4.72  95                       Pn     15 23 22.6 +0.4
BOAB  BOACO BROADBAN        4.72  95  eP                   Pn     15 23 22.7 +0.4
ORTG  Ortega, Santa         5.53 117                       Pn     15 23 36.3 +2.7
DUNO  Dulce Nombre,         5.64 119                       Pn     15 23 37.9 +2.9
CMIG  Matias Romero         5.95 315  Pn                   Pn     15 23 40.4 +1.3
      comp=Z,1.2nm,0.3s,baz=133,slow=11,SNR=14
CMIG                                  Sn                   Sn     15 24 50.1 +3.1
      comp=Z,3.8nm,0.3s,baz=70,slow=21,SNR=1.7
      comp=Z,4.2nm,0.4s
JTS   Las Juntas de         6.01 115  Pn                   Pn     15 23 40.3 +0.3
      comp=Z,12nm,0.3s,baz=177,slow=22,SNR=23
JTS                                   Sn                   Sn     15 24 46.1 -2.5
      comp=Z,4.2nm,0.3s,baz=9.1,slow=21,SNR=1.4
JTS   Las Juntas de         6.01 115                       Pn     15 23 43.3 +3.3
ESPN  Las Esperanzas        6.08  96                       Pn     15 23 42.6 +1.7
JACO  JACO, Garabito        6.56 119                       Pn     15 23 51.4 +3.8
RIMA  Rio Macho             7.20 115                       Pn     15 23 59.9 +3.3
PEZE  Perez Zeledon,        7.54 117                       Pn     15 24 03.9 +2.7
TEIG  Tepich                7.57  16  Pn                   Pn     15 24 03.0 +1.6
SRBA  San Rafael, Bu        7.89 117                       Pn     15 24 09.3 +3.4
CDITO Canoas                8.63 119                       Pn     15 24 18.6 +2.6
BRU2  Volcan                8.68 117                       Pn     15 24 19.7 +2.9
TLIG  Tlapa                 9.07 302                       Pn     15 24 23.4 +1.3
CBOC  Ciudad Bolivar       15.89 115  eP                   P      15 26 01.1 +2.4
GUY2C Guyana, Caldas       16.76 116  eP                   P      15 26 11.6 +3.0
ORTC  Ortega, Tolima       17.51 119  eP                   P      15 26 19.3 +2.7
ROSC  El Rosal             17.86 115  P                    Pn     15 26 17.3 -2.8
      comp=Z,1.2nm,0.3s,baz=62,slow=22,SNR=2.0
      comp=Z,4.7nm,0.4s
PRAC  Prado                17.92 119  eP                   P      15 26 23.1 +2.1
SDV   Santo Domingo        19.89 100  P                    P      15 26 41.3 -1.5
      comp=Z,0.9nm,0.3s,baz=16,slow=8.8,SNR=3.6
SDV                                   LR                   LR     15 36 07.5
      comp=Z,66nm,18.6s,baz=265,slow=43
      comp=Z,2.6nm,0.3s
TX31  Lajitas Ar. Si       20.42 325  P                    P      15 26 48.2 -0.2
TX31                                  IAmb                 IAmb   15 27 09.7
      comp=Z,15nm,0.8s
TX32  Lajitas Array        20.42 325  P                    P      15 26 48.4  0.0
TXAR  Lajitas Array        20.42 325  P                    P      15 26 48.4  0.0
      comp=Z,2.1nm,0.7s,baz=150,slow=11,SNR=26
TXAR                                  PcP                  PcP    15 31 03.2 +2.5
      comp=Z,0.3nm,0.7s,baz=156,slow=3.7,SNR=3.6
      comp=Z,2.1nm,0.7s
LPIG  La Paz               21.82 303  LR                   LR     15 34 19.6
      comp=Z,64nm,18.8s,baz=124,slow=33
X37A  Clayton              22.03 349  P                    P      15 27 06.2 +0.6
X37A                                  IAmb                 IAmb   15 27 19.2
      comp=Z,11nm,0.8s
BAUV  El Baul              22.38  98  P                    P      15 27 10.2 +0.7
BAUV                                  IAmb                 IAmb   15 27 17.2
      comp=Z,15nm,1.1s
WVT   Waverly              23.24   5  P                    P      15 27 18.6 +0.3
ATAH  Atahualpa            23.26 148  P                    P      15 27 20.7 +1.6
      comp=Z,1.5nm,0.4s,baz=1.6,slow=20,SNR=1.6
ATAH                                  LR                   LR     15 33 31.0
      comp=Z,60nm,22.0s,baz=347,slow=29
      comp=Z,1.5nm,0.4s
TKL   Tuckaleechee C       23.44  14  P                    P      15 27 16.9 -3.4
      comp=Z,1.9nm,0.5s,baz=158,slow=11,SNR=1.9
TKL                                   LR                   LR     15 37 27.2
      comp=Z,205nm,18.4s,baz=194,slow=40
      comp=Z,1.9nm,0.5s
TKL   Tuckaleechee C       23.44  14  P                    P      15 27 19.5 -0.8
TKL                                   IAmb                 IAmb   15 27 52.4
      comp=Z,9.0nm,0.9s
MSTX  Muleshoe             23.76 334  P                    P      15 27 22.1 -1.5
U49A  Red Boiling Sp       23.88   9  P                    P      15 27 24.3 -0.3
U49A                                  IAmb                 IAmb   15 27 37.0
      comp=Z,9.8nm,0.9s
OK046 Pawnee Station       24.09 347  P                    P      15 27 25.9 -0.6
OK046                                 IAmb                 IAmb   15 27 28.3
      comp=Z,19nm,1.2s
T47A  Sharon Grove         24.16   7  P                    P      15 27 25.8 -1.5
T47A                                  IAmb                 IAmb   15 27 38.5
      comp=Z,20nm,0.8s
T50A  Nancy                24.53  11  P                    P      15 27 30.3 -0.3
121A  Cookes Peak, D       25.15 324  P                    P      15 27 36.1 -0.4
WCI   Wyandotte Cave       25.48   8  P                    P      15 27 37.9 -1.3
BNM   Barren Site          25.74 328  P                    P      15 27 41.0 -0.9
SBM   South Baldy          25.89 327  P                    P      15 27 43.0 -0.5
ANMO  Albuquerque          26.28 329  P                    P      15 27 47.3 +0.6
      comp=Z,0.8nm,0.4s,baz=170,slow=13,SNR=2.2
      comp=Z,0.8nm,0.4s
P48A  Milroy               26.82   9  P                    P      15 27 48.9 -2.4
NNA   Nana                 28.20 151  LR                   LR     15 37 45.0
      comp=Z,32nm,18.8s,baz=294,slow=33
ECSD  EROS Data Cent       31.16 351  P                    P      15 28 29.3 -0.6
CCUT  Cedar City           31.93 324  P                    P      15 28 36.0 -0.9
CCUT                                  IAmb                 IAmb   15 28 53.0
      comp=Z,4.2nm,1.0s
SADO  Sadowa               33.19  15  LR                   LR     15 43 09.9
      comp=Z,128nm,19.9s,baz=196,slow=38
PDAR  Pinedale Array       34.02 335  P                    P      15 28 56.0 +0.7
      comp=Z,0.4nm,0.6s,baz=171,slow=21,SNR=2.6
      comp=Z,0.4nm,0.6s
LONY  Lake Ozonia          34.40  20  P                    P      15 28 57.4 -0.8
LONY                                  IAmb                 IAmb   15 29 04.4
      comp=Z,12nm,1.2s
ELK   Elko                 35.20 326  P                    P      15 29 04.4 -1.1
NV11  Mina Array Sit       35.35 321  P                    P      15 29 06.6 -0.1
NV11                                  IAmb                 IAmb   15 29 13.6
      comp=Z,4.2nm,0.8s
NVAR  Mina Array Bea       35.44 321  P                    P      15 29 08.5 +1.0
      comp=Z,0.9nm,0.6s,baz=132,slow=7.9,SNR=28
NVAR                                  PcP                  PcP    15 31 39.8 +2.6
      comp=Z,0.7nm,0.6s,baz=121,slow=3.6,SNR=2.5
NVAR                                  LR                   LR     15 46 02.1
      comp=Z,85nm,18.3s,baz=122,slow=40
      comp=Z,0.9nm,0.6s
NVAR  Mina Array Bea       35.44 321  P                    P      15 29 08.0 +0.5
BMN   Battle Mountai       36.09 324  P                    P      15 29 11.3 -1.7
BMN                                   IAmb                 IAmb   15 29 18.7
      comp=Z,3.2nm,0.7s
LPAZ  La Paz               36.47 142  P                    P      15 29 16.5 -0.5
      comp=Z,0.4nm,0.3s,baz=306,slow=6.5,SNR=2.0
      comp=Z,0.4nm,0.3s
MCMT  McKenzie Canyo       37.09 333  P                    P      15 29 20.8 -0.8
PB16  IPOC Station P       37.31 146  P                    P      15 29 26.1 +2.0
GO01  Chusmiza             38.57 147  P                    P      15 29 35.8 +1.2
YBH   Yreka Blue Hor       40.13 322  LR                   LR     15 49 27.4
      comp=Z,62nm,18.5s,baz=158,slow=41
SIV   San Ignacio          40.88 134  P                    P      15 29 54.2 +0.9
      comp=Z,2.7nm,0.6s,baz=298,slow=7.5,SNR=12
      comp=Z,2.7nm,0.6s
NEW   Newport              41.62 333  LR                   LR     15 52 07.9
      comp=Z,34nm,19.6s,baz=136,slow=43
D05A  Enumclaw             43.17 329  P                    P      15 30 11.3 -0.4
SCHQ  Schefferville        45.74  19  P                    P      15 30 30.2 -1.9
      comp=Z,3.5nm,0.5s,baz=244,slow=6.0,SNR=9.3
SCHQ                                  LR                   LR     15 49 46.3
      comp=Z,79nm,18.2s,baz=309,slow=37
      comp=Z,3.5nm,0.5s
SCHQ  Schefferville        45.74  19  P                    P      15 30 30.2 -1.9
SCHQ                                  IAmb                 IAmb   15 31 12.7
      comp=Z,5.3nm,0.9s
FRB   Frobisher Bay        53.05  12  LR                   LR     15 55 01.3
      comp=Z,102nm,18.4s,baz=206,slow=37
RCBR  Riachuelo            57.33 106  LR                   LR     15 58 27.9
      comp=Z,29nm,18.5s,baz=95,slow=38
SFJD  Kangerlussuaq        60.11  17  LR                   LR     15 58 05.2
      comp=Z,58nm,19.5s,baz=214,slow=36
RES   Resolute Bay         61.81 359  P                    P      15 32 27.8 -1.6
ILAR  Eielson Array        64.42 337  P                    P      15 32 46.0 -0.9
      comp=Z,0.6nm,0.9s,baz=168,slow=5.4,SNR=6.3
      comp=Z,0.6nm,0.9s
ILAR  Eielson Array        64.42 337  P                    P      15 32 46.2 -0.7
TRF   Thorofare Moun       65.25 335  P                    P      15 32 52.0 -0.5
TRF                                   IAmb                 IAmb   15 32 52.7
      comp=Z,6.3nm,1.0s
CHIR  Chirikof Islan       65.50 326  P                    P      15 32 54.0 -0.1
EUNU  Eureka               67.18   1  P                    P      15 33 03.5 -1.1
EUNU                                  IAmb                 IAmb   15 33 42.9
      comp=Z,5.6nm,1.2s
ESDC  Sonseca Array        79.23  52  P                    P      15 34 14.0 -2.5
      comp=Z,0.6nm,0.7s,baz=286,slow=5.0,SNR=5.2
      comp=Z,0.6nm,0.7s
TORD  Torodi Ar. Bea       89.19  77  P                    P      15 35 06.1 -1.4
      comp=Z,0.3nm,0.5s,baz=287,slow=6.0,SNR=2.9
      comp=Z,0.3nm,0.5s
WRA   Warramunga Arr      136.55 255  PKhKP                PKPpre 15 41 31.2
      comp=Z,0.5nm,1.0s,baz=87,slow=2.9,SNR=1.8
WRA                                   PKP                  PKPdf  15 41 36.5 +2.6
      comp=Z,0.3nm,0.7s,baz=87,slow=2.1,SNR=1.5
ASAR  Alice Springs       136.68 249  PKhKP                PKPpre 15 41 30.4
      comp=Z,0.4nm,0.9s,baz=116,slow=3.3,SNR=2.2
PZH   PanZhiHua           139.06 343  PKP                  PKPdf  15 41 39.0 +0.4
CMAR  Chiang Mai Arr      147.47 343  PKPbc                PKPdf  15 41 57.0 +3.6
      comp=Z,1.9nm,0.8s,baz=327,slow=2.8,SNR=5.8
```

PRU ***31*** *15:29:38.6±0.0, 42°.52N×14°.06E, h10km*

ROM 31 15:29:41.2±0.3, 42°.754N±0°.010×13°.18E±0°.02, h11km±2km, ML2.9/35, 14C-13D, Error ellipse: s-maj=1.8km s-min=0.5km az=101.0, Central Italy

```
Code  Station Name          Δ°   AZ°  Phase ID                Time      Res
                                      Op      ISC          h  m  s    ISC
T1245 Castelsantange        0.10   4  P                    Pg     15 29 42.8 -1.3
T1245                                 S                    Sg     15 29 48.1 +1.9
T1245                                     AML                     AML
      comp=E,87550µm,0.2s
T1245                                     AML                     AML
T1245                                     AML                     AML
      comp=E,97850µm,0.2s
T1245                                     AML                     AML
T1245                                     AML                     AML
      comp=E,87600µm,0.2s
MMO1  Montemonaco           0.18  37  P                    Pg     15 29 44.7 -0.6
MMO1                                  S                    Sg     15 29 50.0 +2.0
LNSS  Leonessa              0.18 214  P                    Pb     15 29 46.4 -0.3
LNSS                                  S                    Sg     15 29 49.6 +1.6
LNSS                                      AML                     AML
      comp=E,8870µm,0.4s
LNSS                                      AML                     AML
      comp=N,23550µm,0.4s
T1217 Poggiodomo (PG        0.19 257 ⇓P                    Pg     15 29 44.9 -0.4
T1217                                     AML                     AML
      comp=E,9325µm,0.3s
T1217                                     AML                     AML
      comp=N,10550µm,0.2s
T1217                                     AML                     AML
      comp=E,8985µm,0.3s
T1217                                     AML                     AML
      comp=N,10650µm,0.2s
T1217                                     AML                     AML
      comp=E,9330µm,0.3s
T1217                                     AML                     AML
      comp=N,10550µm,0.2s
T1217                                     AML                     AML
      comp=E,8985µm,0.3s
T1217                                     AML                     AML
      comp=N,10650µm,0.2s
T1217                                     AML                     AML
      comp=E,8980µm,0.3s
T1217                                     AML                     AML
      comp=N,10530µm,0.2s
T1217                                     AML                     AML
      comp=N,10600µm,0.2s
T1243 Rocca Santa Ma        0.21 106  P                    Pb     15 29 47.1  0.0
T1243                                 S                    Sg     15 29 49.8 +1.1
T1241 Roccafluvione,        0.21  61  P                    Pb     15 29 47.1 -0.1
T1241                                 S                    Sg     15 29 50.6 +1.9
T1241                                     AML                     AML
      comp=E,9660µm,1.1s
T1241                                     AML                     AML
      comp=N,8955µm,1.6s
T1241                                     AML                     AML
      comp=N,9055µm,1.6s
T1241                                     AML                     AML
      comp=E,9685µm,1.1s
T1241                                     AML                     AML
      comp=N,8935µm,1.6s
T1241                                     AML                     AML
      comp=E,9520µm,0.3s
T1241                                     AML                     AML
      comp=N,9010µm,1.6s
T1241                                     AML                     AML
      comp=E,9665µm,1.1s
T1241                                     AML                     AML
      comp=N,8975µm,1.6s
FEMA  Monte Fema            0.23 335  S                    Sg     15 29 49.0 -0.4
T1215 Vallo di Nera,        0.23 282  S                    Sg     15 29 48.0 -1.4
RM33  Pellescritta (        0.25 174 ⇓P                    Pb     15 29 47.2 -0.5
RM33                                  S                    Sg     15 29 51.1 +1.3
RM33                                      AML                     AML
      comp=E,5215µm,0.6s
RM33                                      AML                     AML
      comp=E,5300µm,0.6s
RM33                                      AML                     AML
      comp=N,6945µm,0.7s
RM33                                      AML                     AML
      comp=N,6865µm,0.7s
T1256 Bolognola (MC)        0.25   8  P                    Pg     15 29 45.6 -1.0
T1256                                 S                    Sb     15 29 52.6 +0.1
T1256                                     AML                     AML
      comp=E,5860µm,0.4s
T1256                                     AML                     AML
      comp=N,4715µm,0.6s
T1256                                     AML                     AML
      comp=E,5940µm,0.7s
T1256                                     AML                     AML
      comp=N,4430µm,0.6s
T1256                                     AML                     AML
      comp=E,5935µm,0.7s
T1256                                     AML                     AML
      comp=N,4435µm,0.6s
AM05  Amandola Campo        0.26  30  P                    Pg     15 29 46.6 +0.1
AM05                                  S                    Sb     15 29 52.7 +0.3
AM05                                      AML                     AML
      comp=E,2265µm,0.1s
AM05                                      AML                     AML
      comp=N,2400µm,0.2s
AM05                                      AML                     AML
      comp=N,549µm,0.6s
AM05                                      AML                     AML
      comp=E,8255µm,0.9s
CAMP  Campotosto            0.28 142  P                    Pb     15 29 47.7 -0.6
CAMP                                  S                    Sg     15 29 51.6 +0.9
CAMP                                      AML                     AML
      comp=N,1980µm,0.2s
CAMP                                      AML                     AML
      comp=E,3065µm,0.5s
FDMO  Fiordimonte           0.29 347 ⇓P                    Pg     15 29 44.1 -3.1
FDMO                                      AML                     AML
      comp=E,3275µm,0.2s
FDMO                                      AML                     AML
      comp=N,3355µm,1.3s
FDMO                                      AML                     AML
      comp=E,4560µm,0.2s
FDMO                                      AML                     AML
      comp=N,3540µm,1.1s
T1247 Pizzolo (AQ)          0.33 164 ⇑P                    Pb     15 29 48.5 -0.5
T1247                                 S                    Sb     15 29 53.5 -0.8
T1247                                     AML                     AML
      comp=E,6510µm,1.1s
T1247                                     AML                     AML
      comp=N,8400µm,0.4s
T1247                                     AML                     AML
      comp=E,6505µm,1.1s
T1211 Morro Reatino         0.33 227 ⇓P                    Pb     15 29 48.7 -0.4
T1211                                 S                    Sb     15 29 54.0 -0.4
T1211                                     AML                     AML
      comp=E,6700µm,1.4s
T1211                                     AML                     AML
      comp=N,8695µm,0.2s
T1211                                     AML                     AML
      comp=E,6455µm,0.2s
T1211                                     AML                     AML
      comp=E,6705µm,1.4s
T1211                                     AML                     AML
      comp=N,8845µm,0.2s
T1211                                     AML                     AML
      comp=N,8715µm,0.2s
GUMA  Gualdo di Mace        0.33  20 ⇑P                    Pg     15 29 45.1 -2.8
GUMA                                      AML                     AML
      comp=N,18550µm,0.3s
GUMA                                      AML                     AML
      comp=N,18500µm,0.3s
GUMA                                      AML                     AML
      comp=E,15000µm,0.4s
GUMA                                      AML                     AML
      comp=N,17540µm,0.3s
GUMA                                      AML                     AML
      comp=E,12650µm,0.5s
TERO  Teramo                0.34 113  P                    Pg     15 29 46.9 -1.1
TERO                                      AML                     AML
      comp=E,3465µm,0.6s
TERO                                      AML                     AML
      comp=N,4860µm,0.4s
TERO                                      AML                     AML
      comp=E,3750µm,0.8s
TERO                                      AML                     AML
      comp=N,5150µm,0.4s
ARRO  Arrone                0.35 240 ⇓P                    Pg     15 29 47.8 -0.4
ARRO                                      AML                     AML
      comp=N,2365µm,0.7s
ARRO                                      AML                     AML
      comp=E,2280µm,0.8s
ARRO                                      AML                     AML
      comp=N,2360µm,0.7s
OFFI  Offida                0.41  64 ⇑P                    Pg     15 29 48.5 -0.8
OFFI                                      AML                     AML
      comp=N,10000µm,0.5s
OFFI                                      AML                     AML
      comp=E,8490µm,0.5s
GIGS  Gran Sasso            0.42 136  P                    Pg     15 29 48.5 -1.0
GIGS                                      AML                     AML
      comp=E,598µm,1.4s
GIGS                                      AML                     AML
      comp=N,426µm,0.3s
GIGS                                      AML                     AML
      comp=N,426µm,0.3s
AQU   L'Aquila              0.43 158 ⇑P                    Pb     15 29 50.3 -0.6
AQU                                       AML                     AML
      comp=E,1322µm,0.5s
AQU                                       AML                     AML
      comp=N,1650µm,0.2s
AQU                                       AML                     AML
      comp=N,1645µm,0.2s
AQU                                       AML                     AML
      comp=N,1655µm,0.2s
AQU                                       AML                     AML
      comp=E,1328µm,0.5s
AQU                                       AML                     AML
      comp=E,1321µm,0.5s
MNTP  Montappone            0.44  29  S                    Sg     15 29 52.0 -3.7
CESX  Cesi                  0.47 252 ⇑P                    Pb     15 29 51.2 -0.3
CESX                                      AML                     AML
      comp=E,2195µm,0.4s
CESX                                      AML                     AML
      comp=N,2115µm,1.2s
ASSB  Assisi San Ben        0.48 307 ⇓P                    Pg     15 29 48.7 -1.9
ASSB                                      AML                     AML
      comp=E,1675µm,1.0s
ASSB                                      AML                     AML
      comp=N,2405µm,0.5s
FIAM  Fiamignano            0.49 185 ⇑P                    Pg     15 29 50.4 -0.4
FIAM                                      AML                     AML
      comp=E,1146µm,0.2s
FIAM                                      AML                     AML
      comp=E,1146µm,0.2s
FIAM                                      AML                     AML
      comp=N,1675µm,0.7s
SNTG  Esanatoglia           0.53 341 ⇓P                    Pg     15 29 48.5 -3.0
SNTG                                      AML                     AML
      comp=E,854µm,0.1s
SNTG                                      AML                     AML
      comp=N,746µm,0.1s
SNTG                                      AML                     AML
      comp=N,878µm,0.1s
SNTG                                      AML                     AML
      comp=E,812µm,0.1s
SNTG                                      AML                     AML
```

	comp=N,746µm,0.1s						
SNTG				AML	AML		
	comp=E,852µm,0.1s						
FAGN	**Fagnano**	**0.57**	**148**	⇓P	Pg	15 29 52.7	+0.3
FAGN				AML	AML		
	comp=E,2135µm,0.4s						
FAGN				AML	AML		
	comp=N,1855µm,1.5s						
EL6	**Elcito**	**0.58**	**354**	⇑P	Pg	15 29 49.2	-3.3
EL6				AML	AML		
	comp=E,2255µm,0.3s						
EL6				AML	AML		
	comp=N,2455µm,0.2s						
EL6				AML	AML		
	comp=E,2260µm,0.3s						
EL6				AML	AML		
	comp=N,2452µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.58**	**318**	⇑P	Pg	15 29 50.2	-2.4
ATCC				AML	AML		
	comp=E,1515µm,1.3s						
ATCC				AML	AML		
	comp=E,1520µm,1.3s						
ATCC				AML	AML		
	comp=N,1290µm,0.7s						
VCEL	**Villa Celiera**	**0.61**	**126**	⇓P	Pb	15 29 53.8	-0.1
VCEL				AML	AML		
	comp=N,1400µm,0.5s						
VCEL				AML	AML		
	comp=E,1215µm,0.6s						
SRES	**S.Oreste - Sor**	**0.72**	**224**	P	Pg	15 29 53.5	-1.5
SRES				S	Sn	15 30 08.0	-0.3
SRES				AML	AML		
	comp=E,540µm,1.6s						
SRES				AML	AML		
	comp=N,488µm,0.5s						
SRES				AML	AML		
	comp=E,540µm,1.6s						
PTQR	**Pietraquaria**	**0.75**	**167**	P	Pg	15 29 56.0	+0.3
PTQR				AML	AML		
	comp=E,252µm,1.6s						
PTQR				AML	AML		
	comp=N,318µm,0.4s						
ATFO	**Monte Foce - G**	**0.76**	**324**	P	Pg	15 29 53.1	-2.7
ATFO				AML	AML		
	comp=E,622µm,1.3s						
ATFO				AML	AML		
	comp=N,574µm,0.2s						
ARVD	**Arcevia**	**0.76**	**347**	P	Pg	15 29 52.5	-3.4
ARVD				AML	AML		
	comp=N,334µm,0.8s						
ARVD				AML	AML		
	comp=E,445µm,1.2s						
MTCE	**Montecelio**	**0.80**	**204**	⇑P	Pg	15 29 56.6	-0.1
MTCE				AML	AML		
	comp=E,596µm,0.4s						
MTCE				AML	AML		
	comp=N,476µm,0.3s						
MGAB	**Montegabbione**	**0.80**	**282**	⇑P	Pn	15 29 57.9	-0.6
CERT	**Cerreto**	**0.82**	**190**	⇓P	Pg	15 29 56.8	-0.2
CERT				AML	AML		
	comp=E,1076µm,0.4s						
CERT				AML	AML		
	comp=N,494µm,0.3s						
ATVO	**AVT- Monte Val**	**0.84**	**318**	⇓P	Pg	15 29 54.7	-2.8
ATVO				AML	AML		
	comp=N,340µm,0.7s						
ATVO				AML	AML		
	comp=E,416µm,0.3s						
PIEI	**Pieia**	**0.91**	**329**	P	Pg	15 29 56.0	-2.9
PIEI				AML	AML		
	comp=E,472µm,0.4s						
PIEI				AML	AML		
	comp=N,362µm,0.3s						
SACS	**San Casciano d**	**0.94**	**276**	⇑P	Pn	15 30 00.5	+0.1
APEC	**Apecchio**	**0.98**	**326**	S	Sg	15 30 12.0	-0.8
FSSB	**Fossombrone**	**0.98**	**343**	⇓P	Pg	15 29 57.5	-2.7
FSSB				AML	AML		
	comp=E,1240µm,0.4s						
FSSB				AML	AML		
	comp=N,1635µm,0.3s						
FSSB				AML	AML		
	comp=E,1245µm,0.4s						
TOLF	**Tolfa**	**1.11**	**232**	⇓P	Pn	15 30 03.6	+0.9
TOLF				S	Sn	15 30 20.0	+1.9
TOLF				AML	AML		
	comp=N,284µm,1.0s						
TOLF				AML	AML		
	comp=E,200µm,1.3s						
GIUL	**Giuliano Di Ro**	**1.20**	**177**	⇑P	Pg	15 30 04.7	+0.5
GIUL				AML	AML		
	comp=N,198µm,0.5s						
GIUL				AML	AML		
	comp=E,168µm,0.6s						
MODR	**Mondragone**	**1.69**	**162**	P	Pn	15 30 11.0	+0.3
CASP	**Castiglione de**	**1.70**	**272**	⇑P	Pb	15 30 12.1	-0.5
TRIF	**Trifonti**	**1.71**	**283**	⇑P	Pb	15 30 12.7	0.0
TRIF				AML	AML		
	comp=N,52µm,0.6s						
TRIF				AML	AML		
	comp=E,55µm,0.2s						
OBKA	**Obir**	**3.88**	**14**	*e*Pn	Pn	15 30 38.7	-2.2
	comp=E,1.5nm,0.2s						
ABTA	**Abfaltersbach**	**4.02**	**353**	*e*Pn	Pn	15 30 45.6	+2.8
	comp=E,5.6nm,0.2s						
KBA	**Koelnbreinsper**	**4.33**	**2**	*e*Pn	Pn	15 30 48.5	+1.4
	comp=E,1.2nm,0.3s						
CONA	**Conrad Observa**	**5.51**	**19**	*e*Pn	Pn	15 31 04.5	+1.2
	comp=E,0.4nm,0.2s						
KHC	**Kasperske Hory**	**6.38**	**2**	*e*SN	Sn	15 32 28.8	+0.7

*ROM **31** 15:55:27.8±0.0, 42°.900N±0°.002×13°.145E±0°.004, h8km, ML3.4/38, Error ellipse: s-maj=0.2km s-min=0.2km az=76.0*
*IDC **31** 15:55:29.2±1.3, 43°.09N×13°.10E, h0km, mb3.5/3, mbtmp3.6/7, ML3.2/4, Error ellipse: s-maj=38.2km s-min=14.7km az=96.0*
*PRU **31** 15:55:32.7±0.0, 43°.04N×13°.16E, h10km*
ISC 31 15:55:28.8±0.7, 42°.89N±0°.01×13°.17E±0°.02, h8km±4km, n117, σ1§12/133, mb3.5/3, 37C-13D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**158**	⇑P	**Pg**	**15 55 30.1**	**-0.5**
T1245				S	**Sg**	**15 55 31.7**	**-0.2**
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1216	**Preci, Frazion**	**0.11**	**269**	⇑P	**Pg**	**15 55 30.7**	**-0.6**
T1216				S	**Sg**	**15 55 32.6**	**-0.5**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
FEMA	**Monte Fema**	**0.11**	**309**	⇑P	**Pg**	**15 55 30.6**	**-0.8**
FEMA				S	**Sg**	**15 55 32.5**	**-0.8**
FEMA				AML	AML		
	comp=E,85100µm,0.6s						
FEMA				AML	AML		
	comp=N,63150µm,0.5s						
FEMA				AML	AML		
	comp=E,85050µm,0.6s						
FEMA				AML	AML		
	comp=N,63100µm,0.4s						
FEMA				AML	AML		
	comp=E,85000µm,0.6s						
FEMA				AML	AML		
	comp=N,63150µm,0.4s						
MMO1	**Montemonaco**	**0.12**	**87**	⇑P	**Pg**	**15 55 31.3**	**-0.2**
MMO1				S	**Sg**	**15 55 33.9**	**+0.5**
T1256	**Bolognola (MC)**	**0.12**	**21**	⇑P	**Pg**	**15 55 30.9**	**-0.7**
T1256				S	**Sg**	**15 55 33.2**	**-0.4**
T1256				AML	AML		
	comp=N,29150µm,0.6s						
T1256				AML	AML		
	comp=E,42650µm,1.0s						
T1256				AML	AML		
	comp=E,42500µm,1.0s						
T1256				AML	AML		
	comp=N,29150µm,0.6s						
T1256				AML	AML		
	comp=N,27350µm,0.6s						
T1256				AML	AML		
	comp=E,42450µm,1.0s						
FDMO	**Fiordimonte**	**0.16**	**338**	⇑P	**Pg**	**15 55 31.3**	**-0.8**
FDMO				S	**Sg**	**15 55 33.9**	**-0.5**
FDMO				AML	AML		
	comp=E,18200µm,0.3s						
FDMO				AML	AML		
	comp=N,23850µm,0.3s						
AM05	**Amandola Campo**	**0.16**	**58**	⇑P	**Pg**	**15 55 32.0**	**-0.1**
AM05				S	**Sg**	**15 55 35.0**	**+0.6**
AM05				AML	AML		
	comp=E,8550µm,0.3s						
AM05				AML	AML		
	comp=N,7760µm,1.1s						
AM05				AML	AML		
	comp=N,2140µm,0.3s						
AM05				AML	AML		
	comp=E,39500µm,0.3s						
AM05				AML	AML		
	comp=E,39550µm,0.3s						
AM05				AML	AML		
	comp=E,8545µm,0.3s						
AM05				AML	AML		
	comp=N,7755µm,1.1s						
AM05				AML	AML		
	comp=N,2145µm,0.3s						
T1241	**Roccafluvione,**	**0.20**	**101**	⇑P	**Pb**	**15 55 32.8**	**0.0**
T1241				S	**Sg**	**15 55 36.6**	**+1.0**
T1241				AML	AML		
	comp=N,19450µm,0.9s						
T1241				AML	AML		
	comp=N,18900µm,0.8s						
T1241				AML	AML		
	comp=E,21350µm,0.6s						
T1241				AML	AML		
	comp=N,18850µm,0.8s						
T1241				AML	AML		
	comp=E,20750µm,0.5s						
CSP1	**Cessapalombo**	**0.20**	**8**	⇑P	**Pg**	**15 55 32.3**	**-0.6**
CSP1				S	**Sg**	**15 55 35.8**	**0.0**
CSP1				AML	AML		
	comp=E,35350µm,0.6s						
CSP1				AML	AML		
	comp=N,27750µm,0.3s						
GUMA	**Gualdo di Mace**	**0.21**	**36**	⇑P	**Pg**	**15 55 33.0**	**-0.1**
GUMA				S	**Sg**	**15 55 37.0**	**+1.1**
GUMA				AML	AML		
	comp=E,53800µm,0.4s						
GUMA				AML	AML		
	comp=N,58450µm,1.2s						
GUMA				AML	AML		
	comp=E,71550µm,0.4s						
GUMA				AML	AML		
	comp=N,65050µm,0.3s						
GUMA				AML	AML		
	comp=E,53750µm,0.4s						
GUMA				AML	AML		
	comp=N,58400µm,1.2s						
T1215	**Vallo di Nera,**	**0.24**	**248**	⇑P	**Pg**	**15 55 33.1**	**-0.4**
T1215				S	**Sg**	**15 55 37.1**	**+0.4**
T1215				AML	AML		
	comp=E,8215µm,0.4s						
T1215				AML	AML		
	comp=N,7345µm,0.3s						
T1215				AML	AML		
	comp=E,8475µm,0.4s						
T1215				AML	AML		
	comp=N,7455µm,0.3s						
T1215				AML	AML		
	comp=E,8220µm,0.4s						
T1215				AML	AML		
	comp=N,7460µm,0.3s						
T1215				AML	AML		
	comp=E,8505µm,0.4s						
T1204	**Amatrice, Fraz**	**0.24**	**153**	⇑P	**Pb**	**15 55 33.8**	**+0.1**
T1204				S	**Sg**	**15 55 38.5**	**+1.6**
T1204				AML	AML		
	comp=E,26900µm,0.2s						
T1204				AML	AML		
	comp=N,14350µm,0.3s						
T1217	**Poggiodomo (PG**	**0.25**	**224**	⇑P	**Pg**	**15 55 33.5**	**-0.3**
T1217				S	**Sg**	**15 55 38.0**	**+0.8**
T1217				AML	AML		
	comp=E,9280µm,0.9s						
T1217				AML	AML		
	comp=E,9030µm,0.9s						
T1217				AML	AML		
	comp=E,9290µm,0.9s						
T1217				AML	AML		
	comp=N,13000µm,0.5s						
T1217				AML	AML		
	comp=E,9035µm,0.9s						
T1217				AML	AML		
	comp=N,13050µm,0.4s						
T1243	**Rocca Santa Ma**	**0.28**	**133**	P	**Pb**	**15 55 34.4**	**-1.9**
T1243				S	**Sg**	**15 55 39.5**	**+1.3**
SMA1	**SAN MARTINO**	**0.29**	**155**	⇓P	**Pb**	**15 55 34.4**	**-1.9**
SMA1				S	**Sb**	**15 55 39.7**	**-1.6**
SMA1				AML	AML		
	comp=E,13900µm,0.6s						
SMA1				AML	AML		
	comp=E,13850µm,0.6s						
SMA1				AML	AML		
	comp=N,15100µm,0.5s						
MDAR	**Monte D'Aria**	**0.30**	**356**	P	**Pg**	**15 55 34.0**	**-0.8**
MDAR				S	**Sg**	**15 55 39.0**	**+0.2**
MDAR				AML	AML		
	comp=E,9005µm,1.4s						
MDAR				AML	AML		
	comp=N,22250µm,0.5s						
MDAR				AML	AML		
	comp=E,9030µm,1.4s						
SEF1	**Sefro**	**0.30**	**328**	P	**Pg**	**15 55 34.0**	**-0.8**
SEF1				AML	AML		
	comp=E,15100µm,0.3s						
SEF1				AML	AML		
	comp=N,13550µm,0.7s						
SEF1				AML	AML		
	comp=E,15100µm,0.3s						
SEF1				AML	AML		
	comp=N,13550µm,0.7s						
LNSS	**Leonessa**	**0.30**	**198**	⇑P	**Pg**	**15 55 34.5**	**-0.3**
LNSS				S	**Sb**	**15 55 40.1**	**-1.6**
LNSS				AML	AML		
	comp=E,7025µm,0.3s						
LNSS				AML	AML		
	comp=N,17750µm,0.5s						
MNTP	**Montappone**	**0.33**	**42**	⇓P	**Pb**	**15 55 35.6**	**-1.3**
MNTP				AML	AML		
	comp=E,20500µm,0.6s						
MNTP				AML	AML		
	comp=E,20550µm,0.6s						
MNTP				AML	AML		
	comp=N,10550µm,1.1s						
GAG1	**Gagliole**	**0.35**	**348**	P	**Pg**	**15 55 35.1**	**-0.7**
GAG1				S	**Sg**	**15 55 40.9**	**+0.5**
GAG1				AML	AML		
	comp=E,19500µm,0.8s						
GAG1				AML	AML		
	comp=E,19550µm,0.8s						
GAG1				AML	AML		
	comp=N,24700µm,0.3s						
OFFI	**Offida**	**0.38**	**83**	⇓P	**Pb**	**15 55 37.0**	**-0.8**
OFFI				S	**Sb**	**15 55 45.0**	**+1.1**
OFFI				AML	AML		
	comp=E,22450µm,0.6s						
OFFI				AML	AML		
	comp=N,16900µm,0.5s						
RM33	**Pellescritta (**	**0.39**	**175**	⇑P	**Pg**	**15 55 36.1**	**-0.3**
RM33				S	**Sb**	**15 55 42.7**	**-1.4**
RM33				AML	AML		
	comp=N,6020µm,0.4s						
RM33				AML	AML		
	comp=E,6300µm,1.2s						
RM33				AML	AML		
	comp=N,6015µm,0.4s						
CAMP	**Campotosto**	**0.40**	**153**	⇓P	**Pg**	**15 55 36.2**	**-0.4**
CAMP				S	**Sb**	**15 55 42.9**	**-1.6**
CAMP				AML	AML		
	comp=E,11300µm,0.2s						
CAMP				AML	AML		
	comp=N,4905µm,0.2s						
SNTG	**Esanatoglia**	**0.40**	**335**	⇑P	**Pg**	**15 55 35.6**	**-0.9**
SNTG				S	**Sg**	**15 55 42.1**	**+0.2**
SNTG				AML	AML		
	comp=N,3620µm,1.4s						
SNTG				AML	AML		
	comp=E,4975µm,0.7s						
SNTG				AML	AML		
	comp=N,3890µm,0.6s						
SNTG				AML	AML		
	comp=N,3615µm,1.4s						
SNTG				AML	AML		
	comp=E,4920µm,0.7s						
ASSB	**Assisi San Ben**	**0.40**	**292**	⇑P	**Pg**	**15 55 35.7**	**-0.9**
ASSB				S	**Sg**	**15 55 41.9**	**0.0**
ASSB				AML	AML		
	comp=E,8100µm,0.4s						
ASSB				AML	AML		
	comp=N,8360µm,0.2s						
TERO	**Teramo**	**0.42**	**130**	P	**Pb**	**15 55 36.7**	**-1.8**
TERO				S	**Sb**	**15 55 43.8**	**-1.2**
TERO				AML	AML		
	comp=N,6585µm,0.6s						
TERO				AML	AML		
	comp=E,6790µm,0.3s						
T1211	**Morro Reatino**	**0.43**	**213**	P	**Pg**	**15 55 36.6**	**-0.6**
T1211				S	**Sb**	**15 55 44.0**	**-1.3**
ARRO	**Arrone**	**0.43**	**224**	⇑P	**Pg**	**15 55 36.6**	**-0.5**
ARRO				AML	AML		
	comp=N,3565µm,0.2s						
ARRO				AML	AML		
	comp=E,4660µm,0.8s						
ARRO				AML	AML		
	comp=N,3570µm,0.2s						
EL6	**Elcito**	**0.44**	**354**	⇑P	**Pg**	**15 55 36.5**	**-0.9**
EL6				S	**Sg**	**15 55 43.7**	**+0.5**
EL6				AML	AML		
	comp=N,26750µm,0.2s						
EL6				AML	AML		
	comp=E,21850µm,0.2s						
T1247	**Pizzolo (AQ)**	**0.46**	**168**	⇑P	**Pg**	**15 55 37.5**	**-0.3**
T1247				S	**Sb**	**15 55 45.2**	**-1.0**
T1247				AML	AML		
	comp=N,7735µm,0.4s						
T1247				AML	AML		
	comp=E,6965µm,0.4s						
T1247				AML	AML		
	comp=N,7740µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.48**	**307**	⇑P	**Pg**	**15 55 37.3**	**-0.9**
ATCC				S	**Sg**	**15 55 45.1**	**+0.5**
ATCC				AML	AML		
	comp=E,5655µm,0.4s						
ATCC				AML	AML		
	comp=N,6255µm,0.9s						
ATCC				AML	AML		
	comp=N,6260µm,0.9s						
FOSV	**Fossato di Vic**	**0.50**	**324**	⇑P	**Pg**	**15 55 37.6**	**-0.8**
FOSV				S	**Sg**	**15 55 45.5**	**+0.4**
FOSV				AML	AML		
	comp=E,6205µm,0.4s						
FOSV				AML	AML		
	comp=E,6200µm,0.4s						
FOSV				AML	AML		
	comp=N,4450µm,0.2s						
CESX	**Cesi**	**0.52**	**237**	⇑P	**Pg**	**15 55 37.9**	**-0.9**
CESX				S	**Sg**	**15 55 46.2**	**+0.7**
CESX				AML	AML		
	comp=N,5725µm,0.8s						
CESX				AML	AML		
	comp=E,4050µm,0.5s						
GIGS	**Gran Sasso**	**0.53**	**146**	P	**Pb**	**15 55 38.5**	**-1.9**
GIGS				S	**Sb**	**15 55 47.0**	**-1.3**
GIGS				AML	AML		
	comp=E,1210µm,1.0s						
GIGS				AML	AML		
	comp=N,1460µm,0.3s						
TRTR	**Tortoreto Alta**	**0.56**	**99**	⇑P	**Pn**	**15 55 40.5**	**-2.4**
TRTR				AML	AML		
	comp=E,9105µm,1.4s						
TRTR				AML	AML		
	comp=N,12800µm,0.4s						
MMUR	**Monte Murano**	**0.56**	**347**	P	**Pg**	**15 55 38.9**	**-0.8**
MMUR				S	**Sg**	**15 55 47.8**	**+0.7**
MMUR				AML	AML		
	comp=E,6715µm,0.5s						
MMUR				AML	AML		
	comp=E,6710µm,0.5s						
MMUR				AML	AML		
	comp=N,5735µm,1.6s						
MURB	**Monte Urbino**	**0.60**	**308**	⇑P	**Pg**	**15 55 39.6**	**-0.8**
MURB				S	**Sg**	**15 55 49.1**	**+0.9**
MURB				AML	AML		
	comp=E,6480µm,0.3s						
MURB				AML	AML		
	comp=N,6480µm,1.5s						
MURB				AML	AML		
	comp=E,7600µm,1.5s						
MURB				AML	AML		
	comp=N,6480µm,1.5s						
MURB				AML	AML		
	comp=N,6865µm,0.3s						
SSFR	**Montelago di S**	**0.61**	**333**	⇓P	**Pg**	**15 55 40.1**	**-0.6**
FIAM	**Fiamignano**	**0.62**	**183**	⇑P	**Pg**	**15 55 40.0**	**-0.8**
FIAM				S	**Sb**	**15 55 49.9**	**-1.1**
FIAM				AML	AML		
	comp=N,1840µm,0.4s						
FIAM				AML	AML		
	comp=E,2335µm,0.9s						
FIAM				AML	AML		
	comp=N,1845µm,0.4s						
ARVD	**Arcevia**	**0.63**	**345**	⇑P	**Pg**	**15 55 39.8**	**-1.1**
ARVD				S	**Sg**	**15 55 50.0**	**+0.9**
ARVD				AML	AML		
	comp=E,2375µm,0.1s						
ARVD				AML	AML		
	comp=N,1535µm,0.7s						
ATFO	**Monte Foce - G**	**0.64**	**318**	⇓P	**Pg**	**15 55 40.2**	**-1.1**
ATFO				S	**Sg**	**15 55 50.0**	**+0.3**
ATFO				AML	AML		
	comp=N,1830µm,1.2s						
ATFO				AML	AML		
	comp=E,2030µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.67**	**297**	P	**Pg**	**15 55 40.5**	**-1.2**
ATTE				AML	AML		
	comp=N,1365µm,0.4s						
ATTE				AML	AML		
	comp=E,1435µm,1.1s						
FAGN	**Fagnano**	**0.70**	**154**	P	**Pb**	**15 55 42.0**	**-1.3**
FAGN				AML	AML		
	comp=N,3715µm,0.4s						
FAGN				AML	AML		
	comp=E,4905µm,0.3s						
VCEL	**Villa Celiera**	**0.70**	**135**	AML	AML		
	comp=N,3590µm,0.4s						
VCEL				AML	AML		
	comp=E,3455µm,1.3s						
FRON	**Frontone**	**0.70**	**333**	⇓P	**Pg**	**15 55 41.1**	**-1.2**
FRON				S	**Sg**	**15 55 51.9**	**+0.4**
FRON				AML	AML		
	comp=E,1635µm,1.2s						
FRON				AML	AML		
	comp=N,3330µm,0.9s						
AOI	**Ancona**	**0.73**	**26**	AML	AML		
	comp=E,1755µm,0.6s						
AOI				AML	AML		
	comp=N,1960µm,0.9s						
ATVO	**AVT- Monte Val**	**0.74**	**312**	⇑P	**Pg**	**15 55 41.7**	**-1.3**
ATVO				S	**Sg**	**15 55 53.1**	**+0.4**
MGAB	**Montegabbione**	**0.78**	**272**	AML	AML		
	comp=E,2340µm,0.9s						
MGAB				AML	AML		
	comp=N,10130µm,0.5s						
MGAB				AML	AML		
	comp=N,10125µm,0.5s						
ATPI	**Pietralunga -**	**0.79**	**315**	AML	AML		
	comp=E,1380µm,0.6s						
ATPI				AML	AML		
	comp=N,978µm,0.4s						
PIEI	**Pieia**	**0.79**	**324**	AML	AML		
	comp=N,966µm,0.9s						
PIEI				AML	AML		
	comp=E,1275µm,0.9s						
ATMI	**Monte Miggiano**	**0.79**	**304**	AML	AML		
	comp=E,2985µm,1.1s						
ATMI				AML	AML		
	comp=N,3910µm,0.7s						
T0110	**Collepietro**	**0.80**	**146**	AML	AML		
	comp=E,3455µm,0.3s						
T0110				AML	AML		
	comp=N,3260µm,0.3s						
SRES	**S.Oreste - Sor**	**0.82**	**217**	AML	AML		
	comp=N,2160µm,0.5s						
SRES				AML	AML		
	comp=E,2320µm,1.0s						

FSSB Fossombrone 0.85 340 AML AML
comp=E,3940μm,0.3s
FSSB AML AML
comp=N,4195μm,1.3s
BADI Badiali 0.92 313 AML AML
comp=E,72μm,1.1s
BADI AML AML
comp=E,71μm,1.1s
BADI AML AML
comp=N,844μm,0.5s
BADI AML AML
comp=N,842μm,0.5s
MTCE Montecelio 0.93 200 AML AML
comp=E,1195μm,0.8s
MTCE AML AML
comp=N,984μm,0.8s
SACS San Casciano d 0.93 268 AML AML
comp=N,1530μm,0.5s
SACS AML AML
comp=E,1535μm,0.9s
SACS AML AML
comp=N,1480μm,0.5s
SACS AML AML
comp=E,1520μm,0.9s
CERT Cerreto 0.95 188 AML AML
comp=E,1645μm,0.5s
CERT AML AML
comp=N,1310μm,0.4s
CAFI Castiglion Fio 0.98 297 AML AML
comp=N,638μm,1.2s
CAFI AML AML
comp=E,735μm,0.5s
CAFI AML AML
comp=E,752μm,0.5s
CAFI AML AML
comp=N,692μm,1.2s
MCIV Monte Civitell 1.10 265 AML AML
comp=E,620μm,0.7s
MCIV AML AML
comp=N,636μm,0.8s
LPEL Lama dei Pelig 1.13 138 AML AML
comp=N,861μm,0.8s
LPEL AML AML
comp=E,1065μm,0.5s
CRE Caprese Michel 1.15 310 AML AML
comp=N,503μm,1.2s
CRE AML AML
comp=E,474μm,1.2s
TOLF Tolfa 1.20 227 AML AML
comp=E,729μm,0.5s
TOLF AML AML
comp=N,690μm,1.1s
ARCI Arcidosso 1.25 269 AML AML
comp=N,282μm,1.1s
ARCI AML AML
comp=E,178μm,1.1s
CERA Filignano 1.44 154 ⇓P **Pg 15 55 56.6 +0.2**
FRES Fresagrandinar 1.44 129 ⇓P **Pg 15 55 56.7 +0.2**
CSNT Castellina Chi 1.49 294 AML AML
comp=N,190μm,1.1s
CSNT AML AML
comp=E,215μm,0.5s
MAON Monte Argentar 1.57 254 AML AML
comp=E,157μm,1.3s
MAON AML AML
comp=N,109μm,0.6s
TRIF Trifonti 1.68 278 AML AML
comp=E,179μm,0.8s
TRIF AML AML
comp=N,162μm,0.7s
CASP Castiglione de 1.70 267 AML AML
comp=E,95μm,0.8s
CASP AML AML
comp=N,86μm,1.1s
IMOL Imola, Italy 1.79 325 AML AML
comp=E,684μm,0.8s
IMOL AML AML
comp=N,662μm,0.8s
BRJN Brijuni 2.06 12 ⇑P **Pb 15 56 04.8 -1.6**
SGTA Sant Agata di 2.40 136 ⇑P **Pb 15 56 12.1 -0.1**
SGTA S **Sg 15 56 47.0 +1.1**
NDIM Novi di Modena 2.58 321 S **Sb 15 56 48.0 +0.8**
SBPO S.Benedetto Po 2.70 324 ⇑P **Pb 15 56 18.7 +1.4**
SABO M.te Sabotino 3.10 6 ⇑P **Pn 15 56 16.8 -1.3**
SABO AML AML
comp=E,1140μm,0.5s
SABO AML AML
comp=E,272μm,0.6s
SABO AML AML
comp=N,275μm,0.6s
SABO AML AML
comp=N,1082μm,0.6s
ROVR Rover Verones 3.14 332 ⇑P **Pn 15 56 19.9 +1.2**
SALO Salr 3.32 326 ⇓P **Pn 15 56 22.2 +1.1**
SIRI Monte Sirino - 3.38 142 ⇓P **Pb 15 56 28.2 -0.9**
STAL STALIGIAL 3.38 355 ⇓P **Pn 15 56 21.8 -0.1**
STAL AML AML
comp=E,174μm,0.6s
STAL AML AML
comp=N,144μm,0.6s
STAL AML AML
comp=E,174μm,0.6s
LUSI Trento, Gardas 3.46 333 ⇓P **Pn 15 56 24.8 +1.9**
PTCC Patocco-Chiusa 3.52 2 ⇑P **Pn 15 56 23.0 -0.8**
PTCC AML AML
comp=E,84μm,0.5s
PTCC AML AML
comp=N,87μm,0.4s
ACOM Acomizza, Ital 3.66 4 ⇑P **Pn 15 56 26.3 +0.4**
ZOU Zoufplan 3.67 358 ⇑P **Pn 15 56 25.7 -0.2**
ZOU AML AML
comp=N,94μm,1.0s
ZOU AML AML
comp=E,116μm,1.0s
MABI Malga Bissina 3.69 330 P **Pn 15 56 27.3 +1.0**
EUCT Pavia 3.71 310 S **Sg 15 57 29.0 +1.0**
OBKA Obir 3.75 15 *i* Pn **Pn 15 56 27.0 0.0**
comp=E,0.6nm,0.2s
MYKA Terra Mystica 3.75 5 *e*Pn **Pn 15 56 27.0 -0.1**
comp=E,8.9nm,0.4s,SNR=4.9
KOSI Kohlern 3.79 341 ⇑P **Pn 15 56 28.4 +0.7**
SALB San Lorenzo Be 3.85 141 P **Pn 15 56 27.4 -0.9**
SALB AML AML
comp=E,88μm,1.6s
SALB AML AML
comp=N,59μm,0.3s
ABTA Abfaltersbach 3.88 353 *e*Pn **Pn 15 56 29.2 +0.4**
comp=N,24nm,0.5s
BRES Bressanone 3.94 345 P **Pn 15 56 29.8 0.0**
TDS Terranova Siba 4.02 142 S **Sb 15 57 29.0 +0.5**
KBA Koelnbreinsper 4.19 2 *e*Pn **Pn 15 56 33.3 +0.2**
comp=N,11nm,0.5s,SNR=7.2
FETA Feichten 4.48 338 *e*Pn **Pn 15 56 38.1 +1.0**
comp=N,3.1nm,0.4s,SNR=4.6
WTTA Wattenberg 4.50 347 *e*Pn **Pn 15 56 37.9 +0.5**
comp=N,6.0nm,0.6s
DAVOX Davos/Dischmat 4.54 330 Pn **Pn 15 56 38.6 +0.7**
comp=N,1.5nm,0.3s,baz=145,slow=16,SNR=11
DAVOX Sn **Sn 15 57 31.5 +0.5**
comp=N,1.0nm,0.3s,baz=142,slow=18,SNR=7.2
comp=N,4.1nm,0.4s
SQTA Sankt Quirin 4.54 343 *e*Pn **Pn 15 56 39.7 +1.7**
comp=N,8.0nm,0.3s
WATA Walderalm 4.58 346 *e*Pn **Pn 15 56 40.2 +1.7**
comp=N,2.4nm,0.2s
ARSA Arzberg 4.67 20 *e*Pn **Pn 15 56 39.9 +0.3**
MOTA Moosalm 4.69 343 *e*Pn **Pn 15 56 41.6 +1.7**
comp=N,4.0nm,0.4s
BIOA Bad Ischl, Aus 4.81 4 *e*Pn **Pn 15 56 42.0 +0.5**
comp=N,8.8nm,0.3s,SNR=4.2
RETA Reutte 4.90 341 *e*Pn **Pn 15 56 44.1 +1.3**
comp=N,1.7nm,0.3s
DAVA Damuels 4.97 333 *e*Pn **Pn 15 56 44.8 +0.9**
comp=N,1.6nm,0.2s
MOA Molln 5.02 8 *e*Pn **Pn 15 56 44.1 -0.3**
comp=N,1.0nm,0.2s,SNR=5.1
RONA Rosalia, Austr 5.29 24 *e*Pn **Pn 15 56 47.6 -0.5**
comp=N,0.8nm,0.2s
CONA Conrad Observa 5.38 20 *e*Pn **Pn 15 56 49.3 -0.1**
comp=N,0.9nm,0.2s
GERES GERESS Array B 5.96 3 Pn **Pn 15 56 56.1 -1.3**
comp=N,0.7nm,0.3s,baz=182,slow=7.8,SNR=8.4
GERES Sn **Sn 15 58 02.3 -3.7**
comp=N,2.5nm,0.3s,baz=180,slow=26,SNR=10.0
comp=N,0.9nm,0.3s
CKRC Cesky Krumlov 5.98 7 *e*SN **Sn 15 58 04.2 -2.1**
KHC Kasperske Hory 6.25 2 *e*SN **Sn 15 58 09.1 -3.7**

KEST Kesra 7.74 204 Pn Pn 15 57 26.0 +4.2
comp=N,0.2nm,0.3s,baz=11,slow=5.2,SNR=2.7
comp=N,2.4nm,0.7s
BRG Berggiesshubel 8.00 4 *e*(P) Pb 15 57 41.1 -6.5
BRG Amp 15 57 44.3
comp=Z,1.5nm,0.6s
BRG *ex* x 15 58 49.7
BRG *ex* x 15 59 58.4
BRG Amp 16 00 15.8
comp=Z,6.2nm,1.2s
CLL Collm 8.42 359 *e*(Pn) **Pn 15 57 34.0 +3.0**
CLL *ex* x 15 58 59.0
CLL *e*Sg **Sg 15 59 59.0 +0.2**
HFS Hagfors 17.27 1 P **Pn 15 59 28.4 -1.7**
comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=1.9
comp=Z,4.8nm,1.2s
TORD Torodi Ar. Bea 31.26 202 P **P 16 01 51.0 +2.0**
comp=Z,0.4nm,0.5s,baz=23,slow=9.9,SNR=3.2
comp=Z,0.4nm,0.5s
MKAR Makanchi Array 47.72 60 P **P 16 04 07.0 +1.1**
comp=Z,0.2nm,0.5s,baz=292,slow=7.3,SNR=1.4
comp=Z,0.2nm,0.5s
SONM Songino Array 61.75 50 P **P 16 05 49.8 +2.1**
comp=Z,1.1nm,1.1s,baz=308,slow=7.7,SNR=3.9
comp=Z,1.1nm,1.1s

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*NEIC **31** 15:57:42.8±2.7, 26°.55S±0°.10×174°.8W±0°.1, h10km±5km, mb4.8/21, Error ellipse: s-maj=17.2km s-min=11.5km az=125.0*
*IDC **31** 15:57:43.1±0.8, 26°.74S×175°.16W, h0km, mb4.3/10, mbtmp4.4/13, ML5.5/2, MS3.5/7, Error ellipse: s-maj=29.6km s-min=16.9km az=145.0*
ISC 31 15:57:47.9±0.6, **26°.99S**±0°.06×**175°.09W**±0°.09, **h35**km, **n99**, σ3°.**27**/104, **mb4.7**/19, **MS3.8**/7, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.36**	**227**	Pn	**Pn**	**15 58 38.9**	**+1.0**
	213nm,0.3s,baz=267,slow=22,SNR=3.0						
RAO				Sn	**Sn**	**15 59 23.6**	**+7.0**
	198nm,0.3s,baz=272,slow=23,SNR=2.3						
RAO				LR	LR	15 59 59.8	
	comp=Z,722nm,21.0s,baz=50,slow=39						
	388nm,0.3s						
RAO	**Raoul Island**	**3.36**	**227**	Pn	**Pn**	**15 58 41.4**	**+3.5**
GLKZ	**Green Lake**	**3.37**	**227**	P	**Pn**	**15 58 40.1**	**+2.0**
GLKZ				S	**Sn**	**15 59 22.1**	**+5.3**
NIUE	**Niue**	**9.20**	**32**	Pn	Pn	15 59 46.0	-12
MSVF	**Nonsavu**	**11.19**	**324**	Pn	**Pn**	**16 00 21.4**	**-4.1**
	2.1nm,0.3s,baz=285,slow=22,SNR=16						
MSVF				LR	LR	16 03 58.8	
	comp=Z,217nm,20.4s,baz=169,slow=34						
	14nm,0.8s						
WMGZ	**Waiomatatini S**	**12.10**	**205**	P	**Pn**	**16 00 36.1**	**-1.7**
WMGZ				S	**Sn**	**16 02 49.7**	**-1.8**
PKGZ	**Pakihiroa**	**12.29**	**206**	P	**Pn**	**16 00 37.5**	**-3.0**
PKGZ				S	**Sn**	**16 02 52.7**	**-3.6**
HAZ	**Te Kaha**	**12.30**	**208**	P	**Pn**	**16 00 36.5**	**-4.0**
HAZ	**Te Kaha**	**12.30**	**208**	P	Pn	16 00 36.0	-4.5
HAZ				S	**Sn**	**16 02 56.9**	**+0.6**
PUZ	**Puketiti**	**12.38**	**205**	S	**Sn**	**16 02 58.3**	**-0.1**
RUGZ	**Raukumara Rang**	**12.52**	**207**	P	**Pn**	**16 00 41.7**	**-2.0**
RUGZ	**Raukumara Rang**	**12.52**	**207**	P	**Pn**	**16 00 40.4**	**-3.3**
RUGZ				S	**Sn**	**16 03 01.2**	**-0.7**
MWZ	**Matawai**	**12.90**	**207**	P	**Pn**	**16 00 46.5**	**-2.2**
URZ	**Urewera**	**13.01**	**208**	Pn	**Pn**	**16 00 46.1**	**-4.0**
	0.4nm,0.3s,baz=293,slow=14,SNR=1.4						
URZ				Sn	**Sn**	**16 03 10.3**	**-3.3**
	2.1nm,0.3s,baz=120,slow=19,SNR=9.1						
URZ	**Urewera**	**13.01**	**208**	P	**Pn**	**16 00 47.2**	**-3.0**
RIGZ	**Rimuhau**	**13.13**	**205**	P	**Pn**	**16 00 51.6**	**-0.3**
AFI	**Afiamalu**	**13.38**	**14**	Pn	Pn	16 00 43.1	-12
	2.0nm,0.3s,baz=174,slow=20,SNR=2.1						
AFI				Sn	Sn	16 02 57.1	-26
	9.4nm,0.3s,baz=116,slow=20,SNR=7.0						
AFI	**Afiamalu**	**13.38**	**14**	Pn	Pn	16 00 45.1	-10
MTHZ	**Maungataniwha**	**13.62**	**208**	P	**Pn**	**16 00 57.5**	**-1.1**
WHTZ	**Whakaora**	**13.85**	**211**	P	**Pn**	**16 01 06.1**	**+4.4**
BKZ	**Black Stump Fm**	**14.03**	**208**	P	**Pn**	**16 00 60.0**	**-4.2**
MCHZ	**McNeill Hill**	**14.18**	**207**	P	**Pn**	**16 01 05.7**	**-0.5**
HIZ	**Hauiti**	**14.25**	**214**	Pn	**Pn**	**16 01 10.0**	**+2.8**
ETVZ	**East Tongariro**	**14.35**	**210**	P	**P**	**16 01 15.2**	**+0.1**
KAHZ	**Kahuranaki**	**14.41**	**206**	P	**Pn**	**16 01 08.5**	**-0.9**
SNVZ	**South Ngauruho**	**14.42**	**210**	P	**P**	**16 01 16.1**	**+0.1**
BHHZ	**Black Hill Sta**	**14.48**	**208**	P	**P**	**16 01 17.5**	**+0.9**
BHHZ				S	**Sn**	**16 03 45.9**	**-3.8**
WPHZ	**Waipukurau**	**14.81**	**206**	P	**Pn**	**16 01 14.8**	**0.0**
WPHZ				S	**Sn**	**16 03 52.9**	**-4.9**
TSZ	**Takapari Road**	**15.00**	**207**	P	**Pn**	**16 01 15.2**	**-2.2**
TSZ	**Takapari Road**	**15.00**	**207**	P	**Pn**	**16 01 12.7**	**-4.6**
TSZ				S	**Sn**	**16 03 54.9**	**-7.5**
RAR	**Rarotonga**	**15.12**	**71**	Pn	Pn	16 01 09.8	-9.1
	6.3nm,0.3s,baz=259,slow=7.5,SNR=91						
RAR				Sn	Sn	16 03 38.7	-27
	1.0nm,0.3s,baz=111,slow=17,SNR=1.3						
RAR				LR	LR	16 06 11.9	
	comp=Z,103nm,20.6s,baz=288,slow=34						
RAR	**Rarotonga**	**15.12**	**71**	Pn	Pn	16 01 10.2	-8.7
BFZ	**Birch Farm**	**15.42**	**206**	P	**Pn**	**16 01 20.9**	**-1.9**
BFZ				S	**Sn**	**16 04 05.7**	**-6.7**
TIWZ	**Tintock**	**15.64**	**206**	P	**P**	**16 01 28.6**	**-0.8**
TIWZ				S	**Sn**	**16 04 12.4**	**-5.5**
MRZ	**Mangatainoka R**	**15.67**	**207**	P	**Pn**	**16 01 21.2**	**-4.8**
MRZ				S	**Sn**	**16 04 10.1**	**-8.3**
OGWZ	**Otaki Gorge**	**15.97**	**208**	P	**Pn**	**16 01 28.5**	**-1.3**
OGWZ				S	**Sn**	**16 04 16.8**	**-8.9**
TRWZ	**Traveller**	**16.25**	**206**	P	**P**	**16 01 40.1**	**+3.9**
TRWZ				S	**Sn**	**16 04 24.4**	**-8.2**
MARNC	**Mare, Loyalty**	**16.34**	**286**	P	**P**	**16 01 37.4**	**+0.1**
MSWZ	**Moikau Station**	**16.44**	**206**	P	**P**	**16 01 40.3**	**+2.0**
MSWZ				S	**Sn**	**16 04 28.0**	**-9.1**
DUWZ	**D'Urville Isla**	**16.50**	**211**	P	**Pn**	**16 01 36.8**	**+0.2**
DUWZ				S	**Sn**	**16 04 34.1**	**-4.6**
PLWZ	**Palliser**	**16.57**	**206**	Pn	**P**	**16 01 39.8**	**+0.1**
PLWZ	**Palliser**	**16.57**	**206**	P	**P**	**16 01 40.5**	**+0.8**
PLWZ				S	Sn	16 04 29.7	-11
TUWZ	**Tuamarina**	**17.00**	**209**	P	**Pn**	**16 01 41.4**	**-1.4**
TUWZ				S	**Sn**	**16 04 43.0**	**-7.7**
NNZ	**Nelson**	**17.08**	**211**	P	**Pn**	**16 01 42.8**	**-1.0**
NNZ				S	**Sn**	**16 04 46.5**	**-6.1**
QRZ	**Quartz Range**	**17.18**	**213**	P	**Pn**	**16 01 44.0**	**-1.1**
DZM	**Mont Dzumac**	**17.50**	**282**	*e*LR	LR	16 05 21.5	
	comp=Z,557nm,26.7s						
DZM	**Mont Dzumac**	**17.50**	**282**	P	**Pn**	**16 01 49.2**	**-0.2**
	15nm,0.9s,baz=79,slow=17,SNR=9.2						
DZM				LR	LR	16 07 11.1	
	comp=Z,230nm,21.6s,baz=180,slow=33						
DZM	**Mont Dzumac**	**17.50**	**282**	P	**P**	**16 01 51.2**	**+0.9**
THZ	**Tophouse**	**17.73**	**211**	P	**Pn**	**16 01 50.1**	**-1.8**
THZ				S	**Sn**	**16 04 59.2**	**-9.2**
KHZ	**Kahutara**	**17.98**	**208**		**Pn**	**16 01 51.0**	**-4.0**
KHZ				IAmb	IAmb	16 02 03.1	
	comp=Z,25nm,0.8s						
LTZ	**Lake Taylor**	**18.82**	**210**	P	**P**	**16 02 03.0**	**-1.5**
KOUNC	**Koumac, New Ca**	**19.93**	**284**	P	**P**	**16 02 16.3**	**-0.5**
KOUNC				IAmb	IAmb	16 02 20.6	
	comp=Z,35nm,1.1s						
RPZ	**Rata Peaks**	**20.10**	**210**	P	Pn	16 02 20.3	-0.3
	comp=Z,10nm,0.7s,baz=344,slow=4.7,SNR=6.4						
RPZ				S	S	16 05 49.8	-13
	comp=Z,6.6nm,0.8s,baz=190,slow=22,SNR=1.4						
	comp=Z,10nm,0.7s						
TBI	**Tubuai**	**23.46**	**87**	*e*LR	LR	16 08 33.9	
	comp=Z,1μm,25.0s						
TBI				*e*LR	LR	16 08 34.0	
	comp=Z,4μm,24.0s						
TBI	**Tubuai**	**23.46**	**87**	*e*T	T	16 26 40.4	
	comp=Z,14nm,0.3s						
PPT2	**Papeete2**	**25.35**	**74**	*e*LR	LR	16 09 13.3	
	comp=Z,358nm,24.2s						
PPT2				*e*LR	LR	16 09 13.5	
	comp=Z,316nm,24.8s						
PPT2	**Papeete2**	**25.35**	**74**	*e*T	T	16 28 55.1	
	comp=Z,6.1nm,0.3s						
PPT	**Papeete**	**25.36**	**74**	LR	LR	16 10 18.0	
	comp=Z,124nm,19.4s,baz=299,slow=30						
HNR	**Honiara**	**29.35**	**302**	P	**P**	**16 03 46.8**	**-0.8**
	comp=Z,178nm,0.6s,baz=215,slow=1.1,SNR=4.1						
HNR				LR	LR	16 13 26.3	
	comp=Z,1μm,20.5s,baz=218,slow=32						
EIDS	**Eidsvold**	**30.35**	**265**	P	**P**	**16 03 57.6**	**+1.1**
EIDS				IAmb	IAmb	16 03 58.6	
	comp=Z,17nm,0.9s						

CTA Charters Tower 36.00 273 LR LR 16 17 12.6
comp=Z,106nm,21.7s,baz=102,slow=33
CTAO Charters Tower 36.00 273 P **P 16 04 46.1 +0.4**
CTAO IAmb IAmb 16 04 47.5
comp=Z,13nm,0.8s
RKT Rikitea 36.44 93 *e*T T 16 43 00.8
comp=Z,6.0nm,0.4s
TAOE Nuku Hiva Isla 37.64 68 *e*LR LR 16 14 49.1
comp=Z,201nm,26.5s
STKA Stephens Creek 37.85 252 P **P 16 05 02.3 +0.8**
comp=Z,10.0nm,1.2s,baz=103,slow=12,SNR=6.5
STKA LR LR 16 18 03.0
comp=Z,145nm,21.4s,baz=95,slow=32
comp=Z,10.0nm,1.2s
STKA Stephens Creek 37.85 252 P **P 16 05 02.7 +1.2**
COEN Coen 41.01 280 P **P 16 05 28.6 +0.7**
COEN IAmb IAmb 16 06 38.8
comp=Z,27nm,1.6s
BBOO Buckleboo 42.45 250 P **P 16 05 39.9 +0.4**
AS31 Alice Springs 45.97 262 P **P 16 06 07.3 -0.7**
ASAR Alice Springs 45.98 262 P **P 16 06 07.3 -0.6**
comp=Z,5.0nm,0.9s,baz=90,slow=6.9,SNR=39
ASAR PcP **PcP 16 07 46.3 +1.9**
comp=Z,1.0nm,1.0s,baz=111,slow=5.1,SNR=2.2
comp=Z,5.0nm,0.9s
ASAR Alice Springs 45.98 262 P **P 16 06 07.1 -0.9**
WB2 Warramunga Arr 46.66 267 P **P 16 06 11.9 -1.4**
WB2 IAmb IAmb 16 06 17.4
comp=Z,7.5nm,0.7s
WRAB Tennant Creek 46.66 267 P **P 16 06 11.9 -1.4**
WRAB IAmb IAmb 16 06 17.3
comp=Z,8.1nm,0.8s
WRA Warramunga Arr 46.67 267 P **P 16 06 12.0 -1.4**
comp=Z,4.7nm,0.8s,baz=103,slow=8.6,SNR=28
WRA PcP **PcP 16 07 48.4 +1.6**
comp=Z,0.9nm,0.8s,baz=104,slow=4.1,SNR=3.2
comp=Z,4.7nm,0.8s
WRA Warramunga Arr 46.67 267 P **P 16 06 11.8 -1.7**
FORT Forrest 49.47 251 P **P 16 06 34.6 -0.3**
FORT IAmb IAmb 16 07 55.6
comp=Z,19nm,0.9s
KNRA Kununurra 53.13 270 P **P 16 07 03.2 +0.7**
FAKI Fak Fak 55.72 286 P **P 16 07 21.1 -0.2**
FAKI IAmb IAmb 16 08 37.6
comp=Z,13nm,1.2s
NWAO Narrogin (SRO) 58.04 246 P **P 16 07 37.8 +0.2**
PSA00 Pilbara Seismi 58.99 260 P **P 16 07 43.2 -1.2**
PSA00 IAmb IAmb 16 08 25.2
comp=Z,8.2nm,1.4s
MBWA Marble Bar 59.23 260 P **P 16 07 46.0 -0.1**
MORW Morawa 60.01 251 P **P 16 07 51.7 +0.4**
QSPA South Pole Qui 63.11 180 P **P 16 08 16.5 +4.8**
QSPA IAmb IAmb 16 08 28.0
comp=Z,12nm,1.2s
H03S2 Juan Fernandez 80.18 123 T T 17 38 13.3
baz=243,slow=74,SNR=11
H03S1 Juan Fernandez 80.19 123 T T 17 38 12.7
baz=243,slow=74,SNR=12
H03S3 Juan Fernandez 80.20 123 T T 17 38 16.0
baz=243,slow=74,SNR=14
KSRS Korea Array 83.48 318 P **P 16 10 11.3 -0.7**
comp=Z,1.4nm,0.9s,baz=124,slow=6.0,SNR=2.5
comp=Z,1.4nm,0.9s
NVAR Mina Array Bea 84.01 41 P **P 16 10 14.7 -0.2**
comp=Z,1.8nm,0.8s,baz=224,slow=8.7,SNR=13
comp=Z,1.8nm,0.8s
USRK Ussuriysk Ar. 85.80 325 P **P 16 10 23.4 0.0**
comp=Z,4.1nm,1.0s,baz=35,slow=5.8,SNR=5.3
comp=Z,4.1nm,1.0s
TXAR Lajitas Array 88.39 56 P **P 16 10 37.0 +0.5**
comp=Z,1.3nm,0.9s,baz=209,slow=7.2,SNR=9.7
comp=Z,1.3nm,0.9s
PDAR Pinedale Array 91.91 42 P **P 16 10 53.5 +0.6**
comp=Z,0.2nm,0.6s,baz=250,slow=5.4,SNR=1.7
comp=Z,0.2nm,0.6s
ILAR Eielson Array 94.07 12 P **P 16 11 00.8 -1.1**
comp=Z,1.1nm,0.9s,baz=218,slow=5.0,SNR=5.9
comp=Z,1.1nm,0.9s
MKAR Makanchi Array 117.52 311 PKP **PKPdf 16 16 29.7 -0.2**
comp=Z,1.1nm,0.8s,baz=104,slow=5.1,SNR=3.7
FINES FINESS Array B 142.73 343 PKP **PKPdf 16 17 16.5 -0.3**
comp=Z,3.7nm,1.0s,baz=66,slow=4.6,SNR=5.2
NB2 NORSAR Subarra145.69 355 PKP **PKPdf 16 17 22.0 -0.1**
comp=Z,1.4nm,0.6s,baz=7.6,slow=3.6
NOA NORSAR Array B145.69 355 PKPbc **PKPdf 16 17 21.8 -0.3**
comp=Z,4.6nm,0.9s,baz=6.7,slow=2.3,SNR=8.5
AKASG Malin Array Be 149.94 328 PKPbc **PKPbc 16 17 34.5 +0.3**
comp=Z,3.4nm,0.6s,baz=40,slow=3.7,SNR=18
AKASG PKPab **PKPab 16 17 39.4 -0.5**
comp=Z,3.8nm,0.6s,baz=40,slow=4.4,SNR=6.2
BRTR Keskin Array B 152.98 305 PKPbc **PKPbc 16 17 41.3 -0.5**
comp=Z,2.0nm,0.9s,baz=80,slow=1.4,SNR=4.6
BRTR PKPab **pPKPbc 16 17 51.5 +0.2**
comp=Z,1.1nm,0.7s,baz=32,slow=4.8,SNR=2.9
CLL Collm 154.95 348 *e*PKPbc **PKiKP 16 17 47.0 +1.5**

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*BJI **31** 16:02:38.6±0.0, 20°.53N×61°.44E, h10km, mb5.0/75, mB5.2/53, Ms5.7/83, Ms7 5.4/79*
*IDC **31** 16:02:41.0±0.4, 20°.74N×61°.62E, h0km, mb4.7/33, mbtmp4.7/35, ML4.5/2, MS5.0/76, Error ellipse: s-maj=10.4km s-min=8.7km az=30.0*
*GCMT **31** 16:02:41.5±0.1, 20°.72N±0°.01×61°.56E±0°.01, h12km, MW5.5/158, Moment Tensor Solution. s127,c211; s158,c305; Duration: 1s4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.14±.02; $M_{\theta\theta}$1.52±.03; $M_{\phi\phi}$-1.66±.03; $M_{r\theta}$0.63±.07; $M_{\theta\phi}$1.34±.02; M_{rr}0.99±.07; Best double couple: $M_0$2.39200×10^{17} NP1:ϕ_s24.00000°, δ86.00000°, λ151.00000°. NP2:ϕ_s116.00000°, δ61.00000°, λ5.00000°. Principal axes: T 2.4140, Plg23.0000°, Azm336.0000°; N -0.0410, Plg60.0000°, Azm197.0000°; P -2.3710, Plg17.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **31** 16:02:41.5±1.1, 20°.75N×61°.66E, h13km, mb5.4/90, MS4.9/14 Error ellipse: s-maj=5.3km s-min=3.2km az=95.8*
*NEIC **31** 16:02:43.5±1.5, 20°.88N±0°.08×61°.70E±0°.08, h10km±1km, mb5.4/170, Mwb5.5/42, Mww5.4, Error ellipse: s-maj=13.6km s-min=11.8km az=219.0*
*NEIC **31** 16:02:43.5, 20°.89N×61°.66E, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.22; $M_{\theta\theta}$1.39; $M_{\phi\phi}$-1.60; $M_{r\theta}$0.22; $M_{\theta\phi}$1.73; $M_{\phi r}$0.29; Fault plane solution: $M_0$2.32000×10^{17} NP1:ϕ_s20.10000°, δ86.21000°, λ170.74000°. NP2:ϕ_s110.72000°, δ80.76000°, λ3.84000°. Principal axes: T 2.2280, Plg9.0000°, Azm335.0000°; N 0.1764, Plg80.0000°, Azm178.0000°; P -2.4044, Plg4.0000°, Azm66.0000°;*
*DSN **31** 16:02:45.2±1.2, 20°.83N×61°.35E, h10km, mb5.9/4, ML5.2/11 Error ellipse: s-maj=17.9km s-min=10.7km az=2.0*
*OMAN **31** 16:02:46.2±0.0, 20°.94N×61°.38E, h10km, mb6.8/16, ml5.6/10, ms5.5/2, Mwp5.6/14, Error ellipse: s-maj=1.1km s-min=0.9km az=30.0*
*NEIC **31** 16:02:48, 20°.80N×61°.54E, h12km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.03; $M_{\theta\theta}$1.03; $M_{\phi\phi}$-1.00; $M_{r\theta}$0.10; $M_{\theta\phi}$1.02; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.45000×10^{17} NP1:ϕ_s22.00000°, δ86.00000°, λ179.00000°. NP2:ϕ_s112.00000°, δ89.00000°, λ4.00000°. Principal axes: T 1.4615, Plg3.0000°, Azm338.0000°; N -0.0297, Plg86.0000°, Azm119.0000°; P -1.4318, Plg2.0000°, Azm247.0000°;*
ISC 31 16:02:43.6±0.4, **20°.81N**±0°.03×**61°.68E**±0°.03, **h12**km±2km, **h12**km:**pP-P**, **n865**, σ1°.**90**/973, **mb5.3**/261, **MS5.1**/126, **50C-39D**, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	**3.09**	**306**	P	**Pn**	**16 03 31.6**	**-0.7**
	SNR=1063						
WBK				P	**Pn**	**16 03 31.6**	**-0.7**
	SNR=1063						
WBK				S	**Sn**	**16 04 06.5**	**-2.8**
WBK				S	**Sn**	**16 04 06.5**	**-2.8**
MHTO	**MHTO**	**3.47**	**274**	P	**Pn**	**16 03 36.9**	**-0.6**
	SNR=176						
MHTO				P	**Pn**	**16 03 36.9**	**-0.6**
	SNR=176						
MHTO				S	**Sn**	**16 04 15.8**	**-2.8**
MHTO				S	**Sn**	**16 04 15.8**	**-2.8**

JMDO	**Jabal Madar**	**3.67**	**296**	P	**Pn**	**16 03 40.6**	**+0.3**
	SNR=70						
JMDO				P	**Pn**	**16 03 40.6**	**+0.3**
	SNR=70						
JMDO				S	**Sn**	**16 04 22.2**	**-1.4**
JMDO				S	**Sn**	**16 04 22.2**	**-1.4**
WSAR	**Wadi Sarin**	**3.72**	**311**	Pn	**Pn**	**16 03 39.2**	**-1.7**
	150nm,0.3s,baz=138,slow=11,SNR=487						
WSAR				Sn	**Sn**	**16 04 18.9**	**-5.9**
	313nm,0.3s,baz=121,slow=17,SNR=9.9						
WSAR				LR	LR	16 05 06.0	
	comp=Z,17µm,18.2s,baz=110,slow=39						
	810nm,0.5s						
WSAR	**Wadi Sarin**	**3.72**	**311**	P	**Pn**	**16 03 39.9**	**-1.1**
WSAR				S	**Sn**	**16 04 21.1**	**-3.7**
DQM	**DQM**	**3.98**	**258**	P	**Pn**	**16 03 44.1**	**-0.4**
	SNR=63						
DQM				P	**Pn**	**16 03 44.1**	**-0.4**
	SNR=63						
DQM				S	**Sn**	**16 04 27.7**	**-3.4**
DQM				S	**Sn**	**16 04 27.7**	**-3.4**
SMDO	**Samad**	**4.04**	**304**	P	**Pn**	**16 03 44.9**	**-0.6**
	SNR=95						
SMDO				P	**Pn**	**16 03 44.9**	**-0.6**
	SNR=95						
BIDO	**Bidbid**	**4.26**	**310**	P	**Pn**	**16 03 47.6**	**-0.8**
	SNR=211						
NGCH	**Negor - Chabah**	**4.56**	**354**	P	**Pn**	**16 03 50.7**	**-1.7**
	SNR=39						
NGCH				S	**Sn**	**16 04 41.0**	**-4.4**
BSY	**Bisya**	**4.58**	**296**	P	**Pn**	**16 03 53.6**	**+0.7**
	SNR=24						
BSY				S	**Sn**	**16 04 40.5**	**-5.6**
HOQ	**Hoqain**	**4.90**	**305**	P	**Pn**	**16 03 57.0**	**-0.2**
	SNR=168						
HOQ				P	**Pn**	**16 03 57.0**	**-0.2**
	SNR=168						
ARQ	**Araqi**	**5.40**	**299**	P	**Pn**	**16 04 04.1**	**0.0**
	SNR=124						
JASK	**Jask - Hormozg**	**6.13**	**326**	P	**Pn**	**16 04 13.5**	**-0.6**
	SNR=124						
JASK				S	**Sn**	**16 05 20.4**	**-3.9**
UMZA	**Um Al Zommool**	**6.34**	**289**	P	**Pn**	**16 04 16.9**	**-0.1**
UMZA				P	**Pn**	**16 04 16.9**	**-0.1**
UMZA				S	**Sn**	**16 05 26.1**	**-3.3**
UMZA				S	**Sn**	**16 05 26.1**	**-3.3**
ALNE	**Al Ain**	**6.36**	**302**	P	**Pn**	**16 04 17.5**	**+0.2**
	SNR=14						
ALNE	**Al Ain**	**6.36**	**302**	*i* P	**Pn**	**16 04 16.6**	**-0.7**
	SNR=31						
ASHO	**Ashiyiah**	**6.46**	**308**	P	**Pn**	**16 04 20.0**	**+1.3**
	SNR=31						
ASHO	**Ashiyiah**	**6.46**	**308**	*i* P	**Pn**	**16 04 18.3**	**-0.4**
	SNR=67						
HATD	**Hatta, Dubai**	**6.49**	**309**	*i* P	**Pn**	**16 04 17.9**	**-1.2**
	SNR=31						
MSFE	**Esma-Masafi**	**6.81**	**313**	*i* P	**Pn**	**16 04 23.4**	**0.0**
	SNR=48						
MASF	**Masafi**	**6.81**	**313**	P	**Pn**	**16 04 24.4**	**+0.9**
	SNR=9.6						
MASF				P	**Pn**	**16 04 24.4**	**+0.9**
	SNR=9.6						
MASF				S	**Sn**	**16 05 38.3**	**-2.8**
MASF				S	**Sn**	**16 05 38.3**	**-2.8**
FAQ	**Al Faqa, Dubai**	**6.85**	**306**	*i* P	**Pn**	**16 04 22.2**	**-1.7**
	SNR=43						
NAZ	**Nazwa, Dubai**	**6.93**	**308**	*i* P	**Pn**	**16 04 25.0**	**-0.1**
	SNR=52						
ASUD	**Al Ashush, Dub**	**6.98**	**304**	*i* P	**Pn**	**16 04 24.1**	**-1.6**
	SNR=52						
DMTO	**DMTO**	**7.06**	**245**	P	**Pn**	**16 04 26.7**	**-0.1**
DMTO				P	**Pn**	**16 04 26.7**	**-0.1**
DMTO				S	**Sn**	**16 05 46.8**	**-0.3**
DMTO				S	**Sn**	**16 05 46.8**	**-0.3**
BANOM	**Banah**	**7.09**	**317**	P	**Pn**	**16 04 25.5**	**-1.8**
	SNR=54						
BANOM	**Banah**	**7.09**	**317**	*i* P	**Pn**	**16 04 24.6**	**-2.7**
	SNR=53						
AJN	**Ajban**	**7.22**	**302**	*i* P	**Pn**	**16 04 27.3**	**-1.7**
	SNR=14						
UMQ	**Umm Al-Quwin**	**7.26**	**311**	P	**Pn**	**16 04 33.0**	**+3.5**
UMQ				P	**Pn**	**16 04 33.0**	**+3.5**
UMQ				S	**Sn**	**16 05 47.8**	**-4.1**
UMQ				S	**Sn**	**16 05 47.8**	**-4.1**
SHME	**Shamm**	**7.28**	**317**	P	**Pn**	**16 04 29.7**	**-0.2**
	SNR=27						
SHME				S	**Sn**	**16 05 46.5**	**-6.1**
SHME	**Shamm**	**7.28**	**317**	*i* P	**Pn**	**16 04 27.8**	**-2.1**
	SNR=64						
DOK	**Doka**	**7.43**	**254**	P	**Pn**	**16 04 32.6**	**+0.6**
	SNR=45						
DOK				P	**Pn**	**16 04 32.6**	**+0.6**
	SNR=45						
DOK				P	**Pn**	**16 04 32.6**	**+0.6**
	SNR=45						
DOK				S	**Sn**	**16 05 54.2**	**-2.1**
DOK				S	**Sn**	**16 05 54.2**	**-2.1**
DOK				S	**Sn**	**16 05 54.2**	**-2.1**
RBK	**Rabkut**	**7.79**	**246**	P	**Pn**	**16 04 37.1**	**+0.2**
	SNR=11						
RBK				P	**Pn**	**16 04 37.1**	**+0.2**
	SNR=11						
RBK				S	**Sn**	**16 05 60.0**	**-5.2**
RBK				S	**Sn**	**16 05 60.0**	**-5.2**
MZWR	**Madinat Zayed**	**7.79**	**294**	P	**Pn**	**16 04 36.3**	**-0.6**
MZWR				S	**Sn**	**16 06 01.3**	**-3.9**
WHFO	**Wadi Hawf**	**8.00**	**250**	P	**Pn**	**16 04 40.1**	**+0.3**
	SNR=222						
WHFO				P	**Pn**	**16 04 40.1**	**+0.3**
	SNR=222						
WHFO				S	**Sn**	**16 06 07.2**	**-3.1**
WHFO				S	**Sn**	**16 06 07.2**	**-3.1**
ABTO	**Aybut**	**8.63**	**248**	P	**Pn**	**16 04 48.4**	**-0.1**
	SNR=49						
ABTO				P	**Pn**	**16 04 48.4**	**-0.1**
	SNR=49						
ABTO				S	**Sn**	**16 06 21.8**	**-4.1**
ABTO				S	**Sn**	**16 06 21.8**	**-4.1**
JASL	**Jaisalmer**	**10.41**	**52**	*e*P	**Pn**	**16 05 09.2**	**-3.6**
SMRA	**Abu-Samra**	**10.75**	**293**	P	**Pn**	**16 05 17.8**	**+0.3**
SMRA				S	**Sn**	**16 07 12.5**	**-5.3**
SAKB	**Bahrain**	**11.45**	**299**	P	**Pn**	**16 05 28.2**	**+1.2**
POO	**Poona**	**11.69**	**99**	*e*P	**Pn**	**16 05 29.6**	**-0.8**
POO				IAmb	IAmb	16 05 32.9	
	comp=Z,19nm,0.6s						
KAD	**Karad**	**12.33**	**104**	*e*P	**Pn**	**16 05 35.1**	**-4.0**
GOA	**Goa**	**12.70**	**113**	*i* x	x	16 08 57.6	
AJM	**Ajmer**	**13.15**	**62**	*e*P	Pn	16 05 45.0	-5.4
AJM				*i* S	**Sn**	**16 08 09.0**	**-7.8**
HRA	**Herat**	**13.54**	**2**	Pn	**Pn**	**16 05 52.0**	**-3.8**
AKL	**Akola**	**14.35**	**88**	*e*P	**Pn**	**16 06 02.3**	**-4.5**
BHPL	**Bhopal**	**14.80**	**78**	*e*P	**Pn**	**16 06 08.8**	**-4.2**
BHPL				IAmb	IAmb	16 06 20.6	
	comp=Z,101nm,0.5s						
BHPL				*i* x	x	16 10 14.6	
BHPL				IAMs_20	IAMs_20	16 12 08.4	
	comp=Z,14µm,16.2s						
SARP	**Sargodha**	**14.81**	**39**	P	**Pn**	**16 06 09.6**	**-3.3**
THW	**Thamme Wali**	**14.93**	**35**	P	**Pn**	**16 06 11.3**	**-3.3**
KBL	**Kabul**	**15.15**	**24**	Pn	**Pn**	**16 06 16.1**	**-1.6**
KBL	**Kabul**	**15.15**	**24**	P	**Pn**	**16 06 16.1**	**-1.6**
KBL				pmax	pmax		
	comp=Z,126nm,1.4s						
RAYN	**Ar Rayn**	**15.22**	**283**	Pn	**Pn**	**16 06 13.7**	**-4.9**
RAYN	**Ar Rayn**	**15.22**	**283**	P	**Pn**	**16 06 13.7**	**-4.9**
RAYN				pmax	pmax		
	comp=Z,376nm,0.9s						
RAYN	**Ar Rayn**	**15.22**	**283**	*i* P	**Pn**	**16 06 13.9**	**-4.7**
	SNR=239						
CEP	**Cherat**	**15.82**	**33**	P	**Pn**	**16 06 24.5**	**-1.9**
NDI	**New Delhi**	**16.14**	**58**	*e*P	**Pn**	**16 06 27.0**	**-3.4**
NDI				*e*S	**S**	**16 09 37.0**	**-5.8**
JHNI	**Jhansi**	**16.19**	**70**	*e*P	**Pn**	**16 06 27.3**	**-3.8**
NGP	**Nagpur**	**16.23**	**86**	*e*P	**Pn**	**16 06 32.1**	**+0.4**
HYBB	**Hyderabad (bro**	**16.30**	**99**	*e*P	**P**	**16 06 34.7**	**-0.8**
HYBB				IVmB_BB		16 06 35.2	
	comp=Z,447nm,2.3s						
HYBB				*e*S	**S**	**16 09 46.1**	**-0.1**
HYBB				IVMs_BB	IVMs_BB	16 15 30.4	
	comp=Z,3µm,15.4s						
HYB	**Hyderabad**	**16.30**	**99**	*e*P	**Pn**	**16 06 29.8**	**-2.8**
HYB				IAmb	IAmb	16 06 37.4	
	comp=Z,55nm,0.8s						
HYB				*i* x	x	16 10 59.1	
NIL	**Nilore**	**16.40**	**36**	Pn	**Pn**	**16 06 30.8**	**-3.0**
NIL	**Nilore**	**16.40**	**36**	P	**Pn**	**16 06 30.8**	**-3.0**
NIL				pmax	pmax		
	comp=Z,141nm,1.0s						
CHCP	**Chirah Chowk**	**16.42**	**36**	P	**Pn**	**16 06 30.8**	**-3.2**
MNCY	**Minicoy**	**16.61**	**137**	*e*P	**P**	**16 06 38.2**	**-0.7**
MNCY				IAmb	IAmb	16 06 40.9	
	comp=Z,142nm,0.6s						
MNCY				*i* x	x	16 11 03.1	
MNCI	**Minicoy**	**16.61**	**137**	Pn	**Pn**	**16 06 36.1**	**-0.4**
MNCI				IAmb	IAmb	16 06 41.1	
	comp=Z,274nm,1.0s						
JMU	**Jammu**	**16.72**	**42**	*e*P	**Pn**	**16 06 33.8**	**-4.0**
BHK	**Bhakra**	**16.92**	**48**	*e*P	**Pn**	**16 06 36.2**	**-4.1**
THN	**Thein Dam**	**17.06**	**44**	*e*P	**Pn**	**16 06 40.7**	**-1.3**
THN				*e*P	**sP**	**16 06 46.5**	**-0.8**
THN				*e*S	**Sn**	**16 09 51.0**	**-0.7**
JBP	**Jabalpur**	**17.14**	**79**	‖ *e*P	**Pn**	**16 06 38.4**	**-4.8**
JBP				*e*S	**Sn**	**16 09 56.9**	**+3.1**
SMLA	**Simla**	**17.29**	**50**	*e*P	**Pn**	**16 06 42.5**	**-2.5**
SMLA				IAmb	IAmb	16 06 45.1	
	comp=Z,468nm,1.5s						
GEYT	**Alibeck**	**17.34**	**351**	P	**Pn**	**16 06 45.0**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=152,slow=6.7,SNR=26						
GEYT				LR	LR	16 14 33.6	
	comp=Z,6µm,20.0s,baz=178,slow=41						
	comp=Z,20nm,1.3s						
GEYT	**Alibeck**	**17.34**	**351**		**Pn**	**16 06 45.0**	**-0.6**
GEYT	**Alibeck**	**17.34**	**351**	P	**Pn**	**16 06 45.0**	**-0.6**
GYA0	**ALIBECK ARRAY**	**17.34**	**351**	P	**Pn**	**16 06 45.2**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**17.34**	**351**		**Pn**	**16 06 45.2**	**-0.4**
PCHI	**Peechi**	**17.42**	**124**	*e*P	**Pn**	**16 06 44.9**	**-1.7**
PCHI				*e*S	**Sn**	**16 10 00.5**	**-0.1**
DDI	**Dehra Dun**	**17.54**	**54**	*e*P	**Pn**	**16 06 44.9**	**-3.3**
DDI				IAmb	IAmb	16 06 51.4	
	comp=Z,480nm,1.0s						
SALM	**Salem**	**18.28**	**117**	*e*P	**P**	**16 06 58.2**	**+0.9**
KOD	**Kodaikanal**	**18.48**	**122**	*e*P	**Pn**	**16 07 01.1**	**+1.1**
VJD	**Vijayawada**	**18.48**	**100**	*e*P	**P**	**16 06 59.3**	**-0.2**
LGTI	**Lohaghat**	**18.87**	**59**	*e*P	**P**	**16 07 00.3**	**-3.6**
PTH	**Pithoragarh**	**18.89**	**59**	*e*P	**P**	**16 07 02.6**	**-1.6**
CHGR	**Chuyangaron**	**18.93**	**18**	P	**P**	**16 07 04.2**	**-0.3**
CHGR	**Chuyangaron**	**18.93**	**18**	P	**P**	**16 07 04.2**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,774nm,1.6s						
ALBI	**Allahabad**	**19.06**	**73**	*e*P	**P**	**16 07 02.0**	**-3.9**
BLSP	**Bilaspur**	**19.09**	**82**	*e*P	**P**	**16 07 02.2**	**-4.1**
TRD	**Trivandrum**	**19.16**	**127**	IAmb	IAmb	16 07 18.9	
	comp=Z,45nm,0.5s						
TRD				*i* x	x	16 14 15.4	
TRD				IAMs_20	IAMs_20	16 15 54.6	
	comp=Z,11µm,14.4s						
MDRS	**Chennai**	**19.35**	**110**	*i* x	x	16 13 00.5	
BRCI	**Bahraich**	**19.36**	**66**	*e*P	**P**	**16 07 07.5**	**-1.7**
GAR	**Garm**	**19.60**	**20**	P	**P**	**16 07 11.8**	**0.0**
GAR				IAmb	IAmb	16 07 17.1	
	comp=Z,301nm,1.1s						
ATD	**Arta Tunnel**	**20.28**	**246**	P	**P**	**16 07 19.3**	**-0.1**
	comp=Z,9.0nm,0.7s,baz=78,slow=20,SNR=2.0						
ATD				S	**S**	**16 11 06.7**	**-0.2**
	comp=Z,4.4nm,0.3s,baz=75,slow=24,SNR=1.1						
ATD				LR	LR	16 14 34.5	
	comp=Z,1µm,18.4s,baz=64,slow=35						
	comp=Z,9.0nm,0.7s						
RAGD	**RAYAGADA**	**20.52**	**91**	*e*P	Pn	16 07 23.4	-0.8
JHSG	**JHARSUGUGA**	**20.61**	**83**	*e*P	**P**	**16 07 22.6**	**-0.3**
BTK	**Batken**	**20.72**	**20**	P	**P**	**16 07 24.3**	**+0.3**
BTK				IAmb	IAmb	16 07 28.6	
	comp=Z,246nm,1.2s						
BTK	**Batken**	**20.72**	**20**	P	**P**	**16 07 24.3**	**+0.3**
BTK				pmax	pmax		
	comp=Z,246nm,1.3s						
VLK	**Valmikinagar**	**21.26**	**68**	*i* P	**P**	**16 07 30.6**	**+0.7**
DANN	**Dangsing**	**21.42**	**65**	*e*P	**P**	**16 07 31.5**	**-0.4**
	comp=Z,362nm,1.2s						
TAS	**Tashkent**	**21.45**	**16**	P	**P**	**16 07 31.4**	**-0.4**
TAS	**Tashkent**	**21.45**	**16**	P	**P**	**16 07 31.4**	**-0.4**
TAS				pmax	pmax		
	comp=Z,2µm,1.8s						
GKN	**Gorkha**	**22.08**	**67**	*e*P	**P**	**16 07 38.3**	**-0.6**
	comp=Z,2µm,1.3s						
KSH	**Kashi**	**22.32**	**30**	P	**P**	**16 07 37.0**	**-4.3**
KSH				sP	pP	16 07 42.8	-0.9
KSH				S	S	16 11 35.5	-11
KSH				pmax	pmax		
	comp=Z,35nm,1.2s						
KSH				pmax	pmax		
	comp=Z,500nm,3.3s						
KSH				LR	LR		
	comp=Z,13µm,18.2s						
KSH				LR	LR		
	comp=Z,9µm,16.1s						
KSH				LR	LR		
	comp=Z,13µm,17.2s						
DMN	**Daman**	**22.40**	**68**	*e*P	**P**	**16 07 41.9**	**-0.5**
	comp=Z,3µm,1.8s						
IUG	**Iuzhnay**	**22.41**	**16**	*e*P	**P**	**16 07 42.7**	**+0.5**
IUG				*e*S	**S**	**16 11 49.0**	**+0.6**
IUG	**Iuzhnay**	**22.41**	**16**	*e*P	**P**	**16 07 42.8**	**+0.5**
	baz=17						
IUG				*e*S	**S**	**16 11 49.0**	**+0.6**
	baz=17						
KKN	**Kakani**	**22.59**	**67**	*e*P	**P**	**16 07 43.2**	**-1.2**
BOK	**Bokaro**	**22.59**	**78**	*e*P	**P**	**16 07 44.3**	**+0.1**
BOK				IAmb	IAmb	16 07 46.1	
	comp=Z,263nm,1.1s						
BWNR	**Bhubaneshwar**	**22.60**	**87**	*e*P	**P**	**16 07 43.0**	**-1.3**
PKIN	**Phulchoki**	**22.64**	**68**	*e*P	**P**	**16 07 44.2**	**-0.8**
	comp=Z,1µm,1.8s						
PKI	**Pulchoki**	**22.65**	**68**	*e*P	**P**	**16 07 44.5**	**-0.7**
	comp=Z,736nm,1.4s						
PALK	**Pallekele**	**22.80**	**123**	P	**P**	**16 07 46.8**	**+0.3**
	comp=Z,11nm,1.2s,baz=50,slow=12,SNR=2.2						
PALK				S	**S**	**16 11 57.2**	**+1.4**
	comp=Z,2.1nm,0.5s,baz=154,slow=24,SNR=1.0						
PALK				LR	LR	16 15 50.0	
	comp=Z,8µm,18.0s,baz=53,slow=35						
	comp=Z,11nm,1.2s						
PALK	**Pallekele**	**22.80**	**123**	P	**P**	**16 07 47.1**	**+0.6**
PALK	**Pallekele**	**22.80**	**123**	P	**P**	**16 07 52.6**	**+6.0**
PALK	**Pallekele**	**22.80**	**123**	P	P	16 07 57.2	+11
KAAM	**Kaadhehdhoo**	**23.02**	**150**	P	**P**	**16 07 49.0**	**+0.2**
KAAM	**Kaadhehdhoo**	**23.02**	**150**	P	**P**	**16 07 52.9**	**+4.2**
	comp=Z,373nm,0.9s						
GUN	**Gumba**	**23.13**	**67**	*e*P	**P**	**16 07 50.2**	**0.0**
	comp=Z,1µm,1.1s						
DESE	**Dese**	**23.25**	**249**	*e*P	**P**	**16 07 54.9**	**+3.4**
JIRN	**Jiri**	**23.35**	**68**	*e*P	**P**	**16 07 52.1**	**-0.3**
	comp=Z,429nm,1.1s						
KK31	**Karatay Array**	**23.43**	**16**	P	**P**	**16 07 51.6**	**-1.1**
KK31				IAmb	IAmb	16 08 14.8	
	comp=Z,125nm,1.2s						
KK31	**Karatay Array**	**23.43**	**16**	P	**P**	**16 07 51.6**	**-1.1**
KK31				pmax	pmax		
	comp=Z,125nm,1.3s						
KKAR	**Karatay Array**	**23.43**	**16**	P	**P**	**16 07 52.5**	**-0.2**
KKAR				IAmb	IAmb	16 08 14.8	
	comp=Z,125nm,1.2s						
KKAR	**Karatay Array**	**23.43**	**16**	P	**P**	**16 07 52.1**	**-0.6**
KKAR	**Karatay Array**	**23.43**	**16**	P	**P**	**16 07 52.5**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,125nm,1.3s						
DZA	**Taraz**	**23.46**	**18**	*e*P	**P**	**16 07 53.5**	**+0.4**
DZA	**Taraz**	**23.46**	**18**	*e*P	**P**	**16 07 53.5**	**+0.4**
	baz=18						
AML	**Almayashu**	**23.55**	**23**	P	**P**	**16 07 54.7**	**+0.3**
	SNR=20						
ARLS	**Aral**	**23.55**	**24**	P	**P**	**16 07 55.1**	**+1.0**
ARLS				pmax	pmax		
	comp=Z,114nm,1.6s						
RAMN	**Ramite**	**23.58**	**70**	*e*P	**P**	**16 07 54.3**	**-0.3**
	comp=Z,630nm,1.6s						
GEVA	**Gevas**	**23.73**	**321**	P	**P**	**16 07 55.8**	**0.0**
GEVA				IAmb	IAmb	16 08 15.9	
	comp=Z,123nm,1.1s						
AKT	**Akhty**	**23.75**	**333**	‖ *i*P	**P**	**16 07 57.1**	**+1.1**
AKT				*e*		16 08 25.1	
AKT				*e*S	**S**	**16 12 15.4**	**+4.1**
AKT				*e*SS	**SnSn**	**16 12 54.3**	**+4.8**
AKT				pmax	pmax		
	comp=Z,355nm,1.3s						
NRN	**Naryn**	**23.88**	**27**	P	**P**	**16 07 56.4**	**-1.0**
NRN				IAmb	IAmb	16 08 16.3	
	comp=Z,104nm,1.4s						
NRN	**Naryn**	**23.88**	**27**	P	**P**	**16 07 56.4**	**-1.0**
NRN				pmax	pmax		
	comp=Z,104nm,1.4s						
ANKE	**Ethiopia-Afar**	**23.89**	**245**	*e*P	**P**	**16 07 57.2**	**-0.6**
UCH	**Uchtor**	**23.94**	**24**	P	**P**	**16 07 59.3**	**+1.1**
	SNR=17						
EKS2	**Erkin-Say**	**24.05**	**22**	P	**P**	**16 08 00.4**	**+1.6**
	SNR=47						
GNI	**Garni**	**24.10**	**327**	P	**P**	**16 07 58.9**	**-0.4**
	comp=Z,83nm,0.9s,baz=192,slow=2.0,SNR=42						
GNI				S	**S**	**16 12 19.1**	**+2.1**
	comp=Z,6.2nm,0.8s,baz=308,slow=16,SNR=1.3						
GNI				LR	LR	16 19 18.9	
	comp=Z,4µm,22.0s,baz=142,slow=41						
	comp=Z,83nm,0.9s						
GNI	**Garni**	**24.10**	**327**	P	**P**	**16 07 59.1**	**-0.3**
GNI	**Garni**	**24.10**	**327**	P	**P**	**16 08 00.2**	**+0.8**
ODAN	**Odare**	**24.26**	**71**	*e*P	**P**	**16 08 02.1**	**+1.0**
AAK	**Ala-Archa**	**24.29**	**23**	P	**P**	**16 08 03.1**	**+2.0**
	SNR=36						
AAK	**Ala-Archa**	**24.29**	**23**	P	**P**	**16 08 01.9**	**+0.8**
	comp=Z,18nm,0.9s,baz=203,slow=8.8,SNR=50						
AAK				S	**S**	**16 12 21.6**	**+1.7**
	comp=Z,2.8nm,1.0s,baz=226,slow=18,SNR=1.2						
AAK				LR	LR	16 19 21.3	
	comp=Z,5µm,21.1s,baz=215,slow=41						
	comp=Z,18nm,0.9s						
AAK	**Ala-Archa**	**24.29**	**23**	P	**P**	**16 08 01.5**	**+0.4**
AAK	**Ala-Archa**	**24.29**	**23**	P	**P**	**16 08 03.0**	**+2.0**
AAK				P	**P**	**16 08 03.0**	**+2.0**
AAK	**Ala-Archa**	**24.29**	**23**	*i* P	**P**	**16 08 02.4**	**+1.4**
	SNR=21						
KBK	**Karagaybulak**	**24.48**	**24**	P	**P**	**16 08 05.4**	**+2.6**
	SNR=20						
GURO	**Guroymak-BITLI**	**24.49**	**321**	P	**P**	**16 08 01.9**	**-1.0**
MARD	**Mardin**	**24.49**	**317**	P	**P**	**16 08 02.2**	**-0.8**
ULHL	**Ulahol**	**24.65**	**27**	P	**P**	**16 08 06.2**	**+1.7**
	SNR=35						
CHMS	**Chumysh**	**24.69**	**23**	P	**P**	**16 08 06.5**	**+1.9**
	SNR=7.5						
CHMS	**Chumysh**	**24.69**	**23**	*i* P	**P**	**16 08 05.8**	**+1.2**
CHMS				pmax	pmax		
	comp=Z,46nm,1.1s						
BOOM	**Boomskoye usch**	**24.73**	**26**	P	**P**	**16 08 04.8**	**-0.3**
BOOM				IAmb	IAmb	16 08 22.4	
	comp=Z,124nm,1.2s						
BOOM	**Boomskoye usch**	**24.73**	**26**	P	**P**	**16 08 04.8**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,124nm,1.2s						
USP	**Ospenovka**	**24.83**	**23**	P	**P**	**16 08 07.7**	**+1.8**
	SNR=34						
ASF	**Jabal al Asfar**	**24.84**	**302**	P	**P**	**16 08 07.0**	**+0.9**
	comp=Z,21nm,1.0s,baz=142,slow=3.8,SNR=13						
ASF				S	**S**	**16 12 27.3**	**-1.6**
	comp=Z,4.8nm,0.8s,baz=64,slow=22,SNR=1.1						
	comp=Z,21nm,1.0s						
TKM2	**Tokmak 2**	**24.95**	**25**	P	**P**	**16 08 09.8**	**+2.7**
	SNR=12						
TKM2	**Tokmak 2**	**24.95**	**25**	*i* P	**P**	**16 08 07.6**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,44nm,1.1s						
AAE	**Adis Abeba**	**25.00**	**245**	*e*P	**P**	**16 08 11.2**	**+3.2**
SGDS	**Sogindy**	**25.04**	**23**	*e*P	**P**	**16 08 08.5**	**+0.8**
SGDS				*e*S	**S**	**16 12 35.0**	**+3.2**
SGDS				pmax	pmax		
	comp=Z,106nm,2.5s						
SGDS	**Sogindy**	**25.04**	**23**	*e*P	**P**	**16 08 08.6**	**+0.8**
	comp=Z,106nm,2.5s,baz=23						
SGDS				*e*S	**S**	**16 12 35.1**	**+3.2**
	baz=23						
MAK	**Makhachkala**	**25.08**	**335**	*e*P	**P**	**16 08 08.1**	**+0.1**
MAK				*e*		16 08 38.6	
MAK				*e*S	**S**	**16 12 34.4**	**+2.1**
MAK				*e*SS	**SnSn**	**16 13 22.5**	**+0.7**
MAK				pmax	pmax		
	comp=Z,502nm,1.3s						
FURI	**Furi**	**25.14**	**245**	*e*P	**P**	**16 08 06.5**	**-2.7**
KARS	**Kars**	**25.32**	**325**	P	**P**	**16 08 09.2**	**-1.1**
KARS	**Kars**	**25.32**	**325**	P	**P**	**16 08 09.3**	**-1.1**
KARS				pmax	pmax		
	comp=Z,956nm,1.3s						
EIL	**Elat**	**25.69**	**295**	P	**P**	**16 08 15.5**	**+1.8**
	comp=Z,43nm,0.9s,baz=56,slow=4.5,SNR=16						
EIL				S	**S**	**16 12 48.5**	**+6.3**
	comp=Z,4.9nm,0.7s,baz=30,slow=19,SNR=0.9						
EIL				LR	LR	16 19 27.0	
	comp=Z,6µm,19.3s,baz=110,slow=39						
AAA	**Alma-Ata**	**25.72**	**26**	*e*P	**P**	**16 08 15.0**	**+1.0**
AAA	**Alma-Ata**	**25.72**	**26**	*e*P	**P**	**16 08 15.0**	**+1.0**
	baz=27						
MDOK	**Medeo**	**25.74**	**27**	*e*P	**P**	**16 08 14.7**	**+0.5**
MDOK				*e*S	**S**	**16 12 45.7**	**+2.6**
MDOK	**Medeo**	**25.74**	**27**	*e*P	**P**	**16 08 14.7**	**+0.5**
	baz=27						
MDOK				*e*S	**S**	**16 12 45.8**	**+2.6**
	baz=27						
GROC	**Groznyy**	**25.99**	**333**	*e*P	**P**	**16 08 18.4**	**+2.1**
GROC				*e*		16 08 53.9	
GROC				*e*S	**S**	**16 12 50.4**	**+3.7**
MSEY	**Mahe Island**	**26.04**	**194**	P	**P**	**16 08 17.4**	**+0.4**
MSEY	**Mahe Island**	**26.04**	**194**	P	**P**	**16 08 17.4**	**+0.4**
MSEY				pmax	pmax		
	comp=Z,54nm,1.1s						
KUU	**Kurty**	**26.06**	**25**	*e*P	**P**	**16 08 17.7**	**+0.8**
KUU				*e*S	**S**	**16 12 50.4**	**+2.5**
KUU				pmax	pmax		
	comp=Z,25nm,0.8s				

comp=Z,22nm,1.6s
KBZ Khabaz 27.70 330 P **P 16 08 30.1 -1.6**
comp=Z,5.0nm,0.7s,baz=136,slow=7.9,SNR=15
KBZ S **S 16 13 16.1 +2.3**
comp=Z,4.5nm,1.1s,baz=175,slow=11,SNR=1.9
KBZ LR LR 16 21 46.0
comp=Z,2μm,20.8s,baz=138,slow=41
comp=Z,5.0nm,0.7s
KBZ Khabaz 27.70 330 *ce*P **P 16 08 33.3 +1.6**
KBZ pmax pmax
comp=Z,61nm,1.9s
TDK Taldyqorghan 27.81 26 *e*P **P 16 08 32.6 -0.1**
TDK *e*S **S 16 13 14.3 -1.1**
TDK Taldyqorghan 27.81 26 *e*P **P 16 08 32.7 0.0**
baz=26
TDK *e*S **S 16 13 14.4 -1.1**
baz=26
SHA1 Shidzhatmaz 27.82 330 *i* P **P 16 08 34.7 +1.6**
BRDH Bariadhala 27.88 81 LR LR 16 20 02.4
comp=Z,4μm,21.7s,baz=278,slow=37
KIV Kislovodsk 27.97 330 ⇑P **P 16 08 35.7 +1.4**
KIV Kislovodsk 27.97 330 P **P 16 08 33.1 -1.2**
KIV IAmb IAmb 16 08 54.5
comp=Z,106nm,1.3s
KIV Kislovodsk 27.97 330 *e*P **P 16 08 35.5 +1.2**
KIV *e*S **S 16 13 20.9 +2.6**
KIV pmax pmax
comp=Z,41nm,1.1s
KIV MLR MLR
comp=Z,966nm,15.0s
KIV Kislovodsk 27.97 330 *i* P **P 16 08 34.5 +0.2**
SNR=10
SHL Shillong 28.14 75 P **P 16 08 34.8 -1.2**
SHL IAmb IAmb 16 09 21.9
comp=Z,96nm,1.4s
SHL Shillong 28.14 75 P **P 16 08 34.8 -1.2**
SHL pmax pmax
comp=Z,96nm,1.4s
AB31 Akbulak array 28.42 358 *i* P **P 16 08 38.3 +0.3**
ABKAR Akbulak array 28.42 358 P **P 16 08 38.0 -0.1**
ABKAR Akbulak array 28.42 358 P **P 16 08 37.4 -0.6**
ABKAR IAmb IAmb 16 08 59.2
comp=Z,39nm,1.1s
BNN Bunyan 28.58 315 P **P 16 08 38.6 -1.2**
OTUK Ortayu 28.69 15 P **P 16 08 40.3 -0.2**
SOC Sochi 29.18 326 *e*P **P 16 08 43.5 -1.3**
SOC *e* 16 09 36.2
SOC *e*S **S 16 13 37.1 +0.1**
SOC *e*SS **SnSn 16 15 01.8 +0.2**
SOC *e*SSS SSS 16 15 22.9
SOC MLR MLR
comp=Z,2μm,17.0s
AKTO Aktyubinsk 29.71 355 P **P 16 08 48.6 -0.9**
BRZS Berezniki 30.39 14 *e*P **P 16 08 54.5 -1.1**
BRZS pmax pmax
comp=Z,11nm,1.4s
BRZS Berezniki 30.39 14 *e*P **P 16 08 54.6 -1.1**
comp=Z,11nm,1.4s,baz=14
BR131 Keskin Array S 30.50 314 P **P 16 08 56.0 -0.8**
BR131 IAmb IAmb 16 09 11.3
comp=Z,59nm,1.1s
BR131 Keskin Array S 30.50 314 P **P 16 08 56.0 -0.8**
BR131 pmax pmax
comp=Z,59nm,1.1s
BRTR Keskin Array B 30.50 314 P **P 16 08 57.2 +0.4**
comp=Z,5.1nm,0.9s,baz=133,slow=10,SNR=19
BRTR PcP **PcP 16 11 55.0 -0.9**
comp=Z,3.4nm,1.0s,baz=148,slow=4.5,SNR=1.6
BRTR LR LR 16 23 17.0
comp=Z,4μm,19.3s,baz=132,slow=40
comp=Z,5.1nm,0.9s
BRTR Keskin Array B 30.50 314 P **P 16 08 56.2 -0.6**
MAKZ Makanchi 30.76 28 P **P 16 08 58.7 -0.1**
MAKZ IAmb IAmb 16 09 17.3
comp=Z,49nm,1.1s
MAKZ Makanchi 30.76 28 P **P 16 08 58.7 -0.1**
MAKZ pmax pmax
comp=Z,49nm,1.1s
MK31 Makanchi Array 30.88 28 P **P 16 09 00.1 +0.1**
MK31 Makanchi Array 30.88 28 P **P 16 09 00.1 +0.1**
MK31 pmax pmax
comp=Z,21nm,1.0s
MKAR Makanchi Array 30.88 28 P **P 16 09 00.3 +0.4**
comp=Z,16nm,0.6s,baz=212,slow=9.1,SNR=91
MKAR PcP **PcP 16 11 56.8 +0.2**
comp=Z,2.1nm,0.7s,baz=214,slow=1.8,SNR=2.8
MKAR LR LR 16 24 45.1
comp=Z,5μm,18.5s,baz=224,slow=43
comp=Z,16nm,0.6s
MKAR Makanchi Array 30.88 28 P **P 16 08 59.7 -0.3**
MKAR Makanchi Array 30.88 28 *i* P **P 16 09 01.0 +1.0**
MKAR pmax pmax
comp=Z,16nm,0.6s
LODK Lodwar 30.90 240 P **P 16 09 01.2 +0.7**
LODK IAmb IAmb 16 09 05.0
comp=Z,96nm,1.4s
LODK Lodwar 30.90 240 *e*P P 16 09 07.0 +6.5
ANTO Ankara 31.14 314 ⇑P P 16 09 08.5 +6.2
ANTO Ankara 31.14 314 P **P 16 09 01.9 -0.4**
ANTO IAmb IAmb 16 09 12.8
comp=Z,51nm,1.1s
ANTO Ankara 31.14 314 P **P 16 09 01.9 -0.4**
ANTO pmax pmax
comp=Z,51nm,1.1s
ANN Anapa 31.20 326 *e*P **P 16 08 59.3 -3.5**
ANN *e*S **S 16 14 09.0 +0.3**
ANN pmax pmax
comp=Z,82nm,0.9s
WMQ Urumqi 31.55 37 *e*P **P 16 09 07.0 +1.1**
WMQ pP pwP 16 09 11.5 -1.1
WMQ PP **PP 16 10 12.8 -4.3**
WMQ S **S 16 14 19.0 +4.7**
WMQ pmax pmax
comp=Z,22nm,1.3s
WMQ pmax pmax
comp=Z,100nm,6.1s
WMQ LR LR
comp=Z,9μm,18.9s
WMQ LR LR
comp=Z,6μm,17.9s
WMQ LR LR
comp=Z,4μm,20.9s
MND Mandalay 32.05 81 P **P 16 09 10.8 +0.3**
KMBO Kilima Mbogo 32.35 231 LR LR 16 22 21.5
comp=Z,98nm,18.1s,baz=42,slow=37
KMBO Kilima Mbogo 32.35 231 P **P 16 09 13.6 +0.2**
KMBO IAmb IAmb 16 09 16.0
comp=Z,62nm,1.4s
KMBO Kilima Mbogo 32.35 231 *e*P **P 16 09 13.0 -0.4**
KMBO IAmb IAmb 16 09 15.6
comp=Z,198nm,1.4s
KMBO Kilima Mbogo 32.35 231 P **P 16 09 13.6 +0.2**
KMBO pmax pmax
comp=Z,62nm,1.4s
KMBO Kilima Mbogo 32.35 231 *e*P P 16 09 18.6 +5.2
KMBO Kilima Mbogo 32.35 231 *i* P **P 16 09 13.8 +0.3**
SNR=25
MDUB Mudurnu 32.50 314 P **P 16 09 13.2 -1.1**
ZSN Zaisan 32.54 30 *e*P **P 16 09 12.6 -1.9**
ZSN *e*S **S 16 14 29.2 -0.4**
ZSN Zaisan 32.54 30 *e*P **P 16 09 12.7 -1.9**
baz=30
ZSN *e*S **S 16 14 29.3 -0.4**
baz=30
KURBB Kurchatov Arra 32.59 20 LR LR 16 25 01.8
comp=Z,3μm,18.1s,baz=218,slow=41
KURBB Kurchatov Arra 32.59 20 P **P 16 09 14.6 -0.3**
KIBK Kibwezi 32.64 228 P **P 16 09 14.4 -1.4**
KIBK IAmb IAmb 16 09 17.9
comp=Z,56nm,1.2s
GOMU GeErMu 32.72 55 P **P 16 09 17.0 +0.3**
GOMU pP sP 16 09 21.3 +1.1
GOMU sP pwP 16 09 23.0 -0.3
GOMU S **S 16 14 26.5 -6.9**
GOMU pmax pmax
comp=Z,15nm,1.2s
GOMU pmax pmax
comp=Z,96nm,3.8s
GOMU LR LR
comp=Z,6μm,18.1s
GOMU LR LR
comp=Z,3μm,18.6s
GOMU LR LR
comp=Z,4μm,19.2s
BVA0 Borovoye Array 32.86 10 P **P 16 09 17.7 +0.5**

BVAR Borovoye Array 32.86 10 LR LR 16 25 38.4
comp=Z,4μm,18.2s,baz=198,slow=42
BRVK Borovoye 32.87 10 P **P 16 09 16.7 -0.6**
BRVK IAmb IAmb 16 09 20.9
comp=Z,57nm,1.6s
BRVK Borovoye 32.87 10 *ce*P **P 16 09 18.3 +1.0**
BRVK pmax pmax
comp=Z,34nm,1.4s
BELG Belogornoye 33.36 344 P **P 16 09 21.3 -0.2**
comp=Z,32nm,0.8s,baz=344,slow=6.9,SNR=15
BELG LR LR 16 27 06.8
comp=Z,2μm,18.0s,baz=135,slow=44
comp=Z,32nm,0.8s
BELG Belogornoye 33.36 344 ⇓*i* P **P 16 09 22.3 +0.8**
BELG pmax pmax
comp=Z,26nm,1.2s
VRH Novokhopyorsk 34.13 338 *e*P **P 16 09 27.2 -1.1**
VRH pmax pmax
comp=Z,40nm,0.9s
VRH MLR MLR
comp=Z,2μm,19.0s
CHTO Chiang Mai 35.07 87 P **P 16 09 36.1 -0.8**
CHTO Chiang Mai 35.07 87 P **P 16 09 36.1 -0.8**
VSR Storozhevoye 35.10 335 *e*P **P 16 09 35.8 -0.9**
VSR pmax pmax
comp=Z,100nm,1.7s
VSR MLR MLR
comp=Z,2μm,27.0s
CM31 Chiang Mai Arr 35.13 87 P **P 16 09 36.2 -1.2**
CMAR Chiang Mai Arr 35.13 87 P **P 16 09 37.2 -0.2**
comp=Z,4.5nm,0.8s,baz=278,slow=9.7,SNR=38
CMAR PcP **PcP 16 12 09.3 +0.4**
comp=Z,1.7nm,0.7s,baz=271,slow=4.8,SNR=2.7
CMAR LR LR 16 25 47.2
comp=Z,2μm,19.5s,baz=280,slow=39
comp=Z,4.5nm,0.8s
CMAR Chiang Mai Arr 35.13 87 P **P 16 09 36.4 -0.9**
CMAR Chiang Mai Arr 35.13 87 *i* P **P 16 09 37.5 +0.1**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
IDI Anoyia 35.31 302 LR LR 16 28 40.1
comp=Z,2μm,20.0s,baz=87,slow=44
DGZ Jazzator, Alta 35.34 29 *i* P **P 16 09 39.6 +0.6**
DGZ pmax pmax
comp=Z,37nm,1.4s
VORR Voronezh 35.44 336 *e*P **P 16 09 43.3 +3.7**
VORR pmax pmax
comp=Z,100nm,0.5s
ARU Arti 35.65 357 LR LR 16 27 39.9
comp=Z,3μm,18.2s,baz=166,slow=42
ARU Arti 35.65 357 P **P 16 09 41.0 -0.3**
ARU Arti 35.65 357 *ce*P **P 16 09 42.5 +1.2**
ARU pmax pmax
comp=Z,42nm,1.2s
SVE Sverdlovsk 35.98 359 *e*P **P 16 09 44.6 +0.4**
SVE *e*S **S 16 15 29.5 +7.0**
SVE pmax pmax
comp=Z,48nm,1.6s
SVE MLR MLR
comp=Z,3μm,19.0s
JURR Jurilovca 36.09 319 ⇑P **P 16 09 40.9 -4.4**
TIRR Tirgusor 36.23 318 ⇑P P 16 09 53.7 +7.3
TIRR Tirgusor 36.23 318 P **P 16 09 45.1 -1.3**
TIRR Tirgusor 36.23 318 P **P 16 09 45.1 -1.3**
TIRR pmax pmax
comp=Z,422nm,1.9s
LPSR Galich'ya Gora 36.28 337 *e*P **P 16 09 45.2 -1.6**
LPSR pmax pmax
comp=Z,50nm,1.1s
LPSR MLR MLR
comp=Z,760nm,21.0s
PHRA Phrae 36.33 87 P **P 16 09 46.9 -0.8**
TPGR Topolog 36.42 319 ⇑P **P 16 09 48.0 -0.2**
ICOR Ion Corvin 36.44 317 ⇑P **P 16 09 48.0 -0.3**
HARR Harsova 36.64 318 ⇓P **P 16 09 51.2 +1.2**
RDO Rodhopi 36.67 312 P **P 16 09 49.7 -0.6**
CFR Carcaliu 36.76 319 ⇑P **P 16 09 51.7 +0.8**
MBAR Mbarara 36.99 239 LR LR 16 24 02.4
comp=Z,1μm,20.9s,baz=50,slow=35
MBAR Mbarara 36.99 239 P **P 16 09 53.5 0.0**
MBAR Mbarara 36.99 239 P **P 16 09 53.5 0.0**
MBAR pmax pmax
comp=Z,32nm,1.4s
MBAR Mbarara 36.99 239 *e*P **P 16 09 58.2 +4.7**
RAZG Razgrad 37.02 316 ⇓P **P 16 09 53.1 -0.2**
PZH PanZhiHua 37.03 73 P **P 16 09 52.5 -1.2**
PZH sP **pwP 16 10 03.5 +2.8**
PZH PP **PnPn 16 11 22.3 +4.0**
PZH S **S 16 15 39.3 -0.2**
PZH pmax pmax
comp=Z,10.0nm,1.7s
PZH pmax pmax
comp=Z,80nm,6.1s
PZH LR LR
comp=Z,3μm,16.1s
PZH LR LR
comp=Z,2μm,16.3s
PZH LR LR
comp=Z,2μm,16.3s
SCTR Scanteiesti 37.09 320 ⇓P **P 16 09 58.5 +4.6**
MILM Milestii Mici 37.27 322 ⇓P **P 16 09 55.9 +0.6**
RZN Rozhen 37.45 312 P **P 16 09 56.4 -0.7**
GTA Gaotai 37.50 52 ⇓P **P 16 09 57.8 +0.2**
GTA pP sP 16 10 01.5 +0.4
GTA sP pwP 16 10 03.5 -0.7
GTA PP **PnPn 16 11 24.5 +0.6**
GTA S **S 16 15 46.5 +0.1**
GTA sS ScP 16 16 01.0 -2.1
GTA SS **SnSn 16 18 19.0 -5.0**
GTA pmax pmax
comp=Z,22nm,1.6s
GTA pmax pmax
comp=Z,210nm,5.6s
GTA LR LR
comp=Z,8μm,19.3s
GTA LR LR
comp=Z,5μm,20.0s
GTA LR LR
comp=Z,6μm,20.7s
ZAA0 Zalesovo Array 37.50 22 P **P 16 09 56.4 -0.7**
ZALV Zalesovo Beam 37.50 22 P **P 16 09 56.8 -0.4**
comp=Z,17nm,0.7s,baz=218,slow=9.0,SNR=56
ZALV PcP **PcP 16 12 14.6 -0.7**
comp=Z,3.7nm,0.6s,baz=214,slow=3.1,SNR=2.8
ZALV LR LR 16 27 25.3
comp=Z,3μm,20.4s,baz=217,slow=40
comp=Z,17nm,0.7s
ZALV Zalesovo Beam 37.50 22 P **P 16 09 56.4 -0.8**
ZALV Zalesovo Beam 37.50 22 *i* P **P 16 09 57.4 +0.2**
ZALV pmax pmax
comp=Z,17nm,0.7s
MLSI Meulaboh, Aceh 37.54 111 P P 16 10 09.6 +12
PVL Pavlikeni 37.64 315 P **P 16 10 00.1 +1.6**
GHRR 37.64 320 ⇑P **P 16 09 59.7 +1.2**
PANC Panciu 37.71 320 ⇓P **P 16 09 57.9 -1.1**
ISR Istrita 37.71 318 ⇑P P 16 10 06.1 +6.9
VASR Vaslui 37.72 321 ⇑P **P 16 09 60.0 +0.9**
KMI Kunming 37.95 76 ⇑P **P 16 10 02.0 +0.3**
KMI pP sP 16 10 05.3 +0.1
KMI sP pwP 16 10 06.8 -1.9
KMI PP **PP 16 11 27.5 -0.8**
KMI S **S 16 15 54.5 +0.7**
KMI SS **SnSn 16 18 31.5 -3.9**
KMI pmax pmax
comp=Z,250nm,6.7s
KMI LR LR
comp=Z,2μm,19.5s
KMI LR LR
comp=Z,4μm,17.5s
KMI LR LR
comp=Z,4μm,18.8s
VRI Vrincioaia 37.96 319 ⇓P **P 16 10 02.5 +1.3**
VRI Vrincioaia 37.96 319 P **P 16 10 03.4 +2.2**
PLOR Plostina 38.00 319 ⇓P **P 16 10 02.7 +1.1**
NEHR Nehoiu 38.01 319 ⇑P **P 16 10 03.5 +1.9**
ITM Ithomi 38.09 304 P **P 16 10 02.4 -0.1**
ITM IAmb IAmb 16 10 19.1
comp=Z,96nm,1.3s
MMB Musomiste 38.10 312 P **P 16 10 05.2 +2.7**
MLR Muntele Rosu 38.26 318 ⇑P **P 16 10 05.7 +1.9**
MLR Muntele Rosu 38.26 318 LR LR 16 28 21.8
comp=Z,2μm,20.2s,baz=110,slow=40
MLR Muntele Rosu 38.26 318 P **P 16 10 03.9 0.0**
MLR IAmb IAmb 16 10 30.5
comp=Z,117nm,1.2s

MLR Muntele Rosu 38.26 318 P **P 16 10 03.9 0.0**
MLR pmax pmax
comp=Z,117nm,1.2s
COVR Voineasa-Covas 38.27 319 ⇑P **P 16 10 05.2 +1.4**
TESR Tescani 38.33 320 ⇑P **P 16 10 04.9 +0.6**
SURA Surathani 38.34 102 P **P 16 10 05.4 +0.6**
OZUR 38.64 319 ⇑P **P 16 10 07.4 +0.4**
KKB Krupnik 38.65 312 P P 16 10 12.7 +5.6
KIRV Kirov 38.77 350 P **P 16 10 08.1 +0.3**
comp=Z,10nm,0.8s,baz=135,slow=11,SNR=9.7
KIRV LR LR 16 29 07.0
comp=Z,2μm,18.0s,baz=152,slow=41
comp=Z,10nm,0.8s
KIRV Kirov 38.77 350 *ce*P **P 16 10 08.6 +0.8**
VOIR 38.79 318 ⇑P **P 16 10 09.0 +0.6**
VTS Vitosha 38.82 313 ⇑P **P 16 10 09.3 +0.6**
VTS Vitosha 38.82 313 P **P 16 10 07.4 -1.2**
VTS Vitosha 38.82 313 P **P 16 10 07.4 -1.2**
VTS pmax pmax
comp=Z,35nm,1.3s
VTS Vitosha 38.82 313 P **P 16 10 08.3 -0.3**
DOPR Dopca 38.83 319 ⇑P **P 16 10 08.6 +0.1**
OBN Obninsk 39.13 337 ⇓P **P 16 10 10.1 -0.6**
OBN Obninsk 39.13 337 P **P 16 10 10.4 -0.4**
comp=Z,5.7nm,0.4s,baz=121,slow=7.1,SNR=18
OBN LR LR 16 30 29.1
comp=Z,196nm,18.8s,baz=127,slow=43
comp=Z,5.7nm,0.4s
OBN Obninsk 39.13 337 P **P 16 10 10.2 -0.6**
OBN IAmb IAmb 16 10 30.5
comp=Z,175nm,1.3s
OBN Obninsk 39.13 337 *c i*P **P 16 10 11.3 +0.5**
OBN *e**PP **sP 16 10 15.2 +0.6**
OBN *e**SP **pwP 16 10 18.0 +0.7**
OBN *i* 16 11 40.6
OBN *e*PPP PPP 16 12 05.1
OBN *i* S **S 16 16 11.1 +0.9**
OBN *i* *SS **sS 16 16 17.9 +3.3**
OBN *e*SS **SnSn 16 18 56.3 -6.2**
OBN pmax pmax
comp=Z,205nm,1.6s
NONG Nongkai 39.13 87 P **P 16 10 11.5 +0.2**
AKASG Malin Array Be 39.23 327 P **P 16 10 10.6 -1.2**
comp=Z,5.5nm,0.7s,baz=125,slow=7.8,SNR=36
AKASG PcP **PcP 16 12 20.5 -0.3**
comp=Z,1.4nm,0.7s,baz=109,slow=5.3,SNR=2.6
AKASG LR LR 16 29 22.2
comp=Z,1μm,21.5s,baz=142,slow=41
comp=Z,5.5nm,0.7s
AKASG Malin Array Be 39.23 327 P **P 16 10 10.3 -1.5**
AKASG Malin Array Be 39.23 327 P **P 16 10 10.3 -1.5**
AKASG pmax pmax
comp=Z,32nm,2.0s
AKBB Malin Array Si 39.23 327 P **P 16 10 10.9 -0.9**
AKBB IAmb IAmb 16 10 29.3
comp=Z,155nm,1.9s
AKBB Malin Array Si 39.23 327 P **P 16 10 10.9 -0.9**
AKBB pmax pmax
comp=Z,155nm,1.9s
MOS Moscow 39.25 339 *e*P **P 16 10 10.6 -1.2**
MOS *e* 16 11 41.2
MOS *e*S **S 16 16 11.6 -0.5**
MOS pmax pmax
comp=Z,96nm,1.3s
FNA Florina 39.50 309 P **P 16 10 13.0 -1.3**
FNA Florina 39.50 309 P **P 16 10 13.0 -1.3**
FNA pmax pmax
comp=Z,19nm,0.7s
BLKB Belogradchik 39.58 314 ⇑P **P 16 10 15.0 +0.2**
SRE Strehaia 39.64 316 ⇑P P 16 10 20.6 +5.3
BURAR Bucovina Array 39.72 321 ⇑P **P 16 10 16.7 +0.6**
BURAR Bucovina Array 39.72 321 P **P 16 10 15.6 -0.5**
BUR08 Bucovina Ar. S 39.75 321 P **P 16 10 15.7 -0.6**
LZH Lanzhou 39.76 58 *e*P **P 16 10 17.5 +0.9**
LZH pP pwP 16 10 24.5 +0.8
LZH sP sP 16 10 26.5 +6.4
LZH PP **PnPn 16 11 52.5 +1.4**
LZH S **S 16 16 22.5 +1.9**
LZH pmax pmax
comp=Z,42nm,1.3s
LZH pmax pmax
comp=Z,120nm,4.1s
LZH LR LR
comp=Z,5μm,13.7s
LZH LR LR
comp=Z,4μm,14.8s
LZH LR LR
comp=Z,6μm,15.5s
KBN Korca 39.88 309 P **P 16 10 16.2 -1.2**
KBN Korca 39.88 309 P **P 16 10 16.2 -1.2**
KBN pmax pmax
comp=Z,66nm,1.3s
ARCR ARCALIA 39.98 320 ⇑P **P 16 10 22.0 +3.9**
GSI Gunungsitoli 40.04 114 P **P 16 10 19.2 +0.3**
GSI Gunungsitoli 40.04 114 P **P 16 10 23.0 +4.1**
GSI Gunungsitoli 40.04 114 P **P 16 10 21.3 +2.4**
DJES Djerdap 40.09 316 ⇓P **P 16 10 19.1 +0.1**
BOVS Bovan 40.23 314 ⇑P **P 16 10 19.4 -0.8**
HERR Herculane 40.24 316 ⇓P **P 16 10 19.7 -0.5**
CJR Cluj-Napoca 40.27 319 ⇑P **P 16 10 22.5 +1.9**
DEV Deva 40.34 317 ⇑P P 16 10 27.0 +5.9
KEK Kerkira 40.35 307 P **P 16 10 20.6 -0.7**
KEK IAmb IAmb 16 11 46.0
comp=Z,55nm,1.1s
PSI Prapat 40.45 111 P **P 16 10 22.5 0.0**
PSI pmax pmax
comp=Z,44nm,1.0s
PSI Prapat 40.45 111 P **P 16 10 24.0 +1.5**
comp=Z,47nm,1.1s
PSI Prapat 40.45 111 P **P 16 10 23.7 +1.2**
RPSI Rantau Prapat 40.50 111 P **P 16 10 22.5 -0.3**
MDVR Moldovita 40.66 315 ⇓P **P 16 10 23.8 0.0**
BMR Baia Mare 40.77 320 ⇓P **P 16 10 23.0 -1.7**
KULM Kulim 40.83 107 P **P 16 10 25.4 -0.2**
KULM IAmb IAmb 16 10 37.5
comp=Z,125nm,1.4s
KULM Kulim 40.83 107 P **P 16 10 27.3 +1.8**
comp=Z,918nmcomp=Z,67nm,1.5s
DRGR 40.85 319 ⇓P **P 16 10 27.7 +2.3**
BZS Buzias 41.05 317 ⇓P **P 16 10 27.5 +0.6**
SIRR Siria 41.29 317 ⇑P **P 16 10 29.9 +1.0**
GYA Guiyang 41.44 73 ⇑P **P 16 10 32.3 +1.7**
GYA S **S 16 16 44.8 -1.1**
GYA sS sS 16 16 57.3 +7.3
GYA pmax pmax
comp=Z,12nm,1.7s
GYA LR LR
comp=Z,2μm,19.2s
GYA LR LR
comp=Z,3μm,17.3s
GYA LR LR
comp=Z,4μm,18.7s
LVV L'vov 41.51 323 *e*P **P 16 10 31.6 +0.9**
IPM Ipoh 41.52 108 P **P 16 10 29.7 -1.5**
IPM Ipoh 41.52 108 P **P 16 10 32.3 +1.0**
comp=Z,487nmcomp=Z,29nm,0.8s
IPM Ipoh 41.52 108 P **P 16 10 31.9 +0.6**
TRPA Tarpa 41.55 320 ⇑P **P 16 10 30.0 -1.0**
TRPA Tarpa 41.55 320 P **P 16 10 31.4 +0.3**
DIVS Divibare 41.56 314 P **P 16 10 28.4 -2.9**
UBPT Khong Chiam 41.91 90 P **P 16 10 33.9 -0.5**
UZH Uzhgorod 41.93 321 ⇓*i* P **P 16 10 34.4 +0.3**
UZH *i* 16 10 41.5
UZH *i* S **S 16 16 54.0 +1.7**
UZH *e*SS **SS 16 19 53.0 -5.9**
MNSI Mandailing Nat 42.01 113 P **P 16 10 39.4 +4.2**
FRGS Fruska Gora 42.05 315 ⇓P **P 16 10 35.5 +0.2**
KOLS Kolonicke sedl 42.08 321 *e*P **P 16 10 36.4 +1.0**
KOLS pmax pmax
comp=Z,83nm,1.0s
RER Riviere de l'E 42.11 188 P **P 16 10 35.7 -0.2**
RER IAmb IAmb 16 10 50.9
comp=Z,76nm,1.1s
MNK Minsk 42.24 331 *i* P **P 16 10 36.1 -0.4**
MNK *i* 16 12 14.5
MNK *i* PPP PPP 16 12 45.5
MNK *i* S **S 16 16 56.6 -0.1**
MNK *i* SS **SS 16 20 05.9 +1.1**
MNK *i* SSS SSS 16 20 43.5
MNK pmax pmax
comp=E,9.0nm,1.5s
MNK pmax pmax
comp=Z,60nm,1.0s

MNK pmax pmax
comp=N,77nm,1.5s
MNK Minsk 42.24 331 *i* P **P 16 10 36.2 -0.4**
comp=E,9.0nm,1.5s
MNK *i* P **P 16 10 36.2 -0.4**
comp=N,77nm,1.5s
MNK *i* P **P 16 10 36.2 -0.4**
comp=Z,60nm,1.0s,baz=128
MNK *i* PP **PP 16 12 14.6 +0.2**
MNK *i* PPP PPP 16 12 45.6
MNK *i* S **S 16 16 56.6 -0.1**
MNK *i* SS **SS 16 20 05.9 +1.1**
MNK *i* SSS SSS 16 20 43.6
MNK *i* LQ LQ 16 25 09.4
MNK *i* LR LR 16 28 22.6
PRGR Permogore 42.30 349 *e*P **P 16 10 36.2 -0.7**
PRGR pmax pmax
comp=Z,61nm,1.6s
ABAH Abaujker 42.41 320 P **P 16 10 37.9 -0.1**
CRVS Cervenica-Dubn 42.54 321 *e*P **P 16 10 39.6 +0.4**
CRVS pmax pmax
comp=Z,108nm,1.5s
KLMR Klimovskoe 42.94 344 *e*P **P 16 10 41.6 -0.5**
KLMR *e* 16 12 26.2
KLMR S **S 16 17 05.9 -0.8**
KLMR pmax pmax
comp=Z,99nm,1.1s
KLMR MLR MLR
comp=Z,2μm,17.0s
KLMR Klimovskoe 42.94 344 *e*P **P 16 10 41.7 -0.4**
KLMR *e*P **P 16 10 41.7 -0.4**
KLMR *e*P **P 16 10 41.7 -0.4**
KLMR AMP 16 10 52.3
comp=Z,99nm,1.1s
KLMR *e*PP **PP 16 12 26.2 +4.5**
KLMR S **S 16 17 06.0 -0.8**
KLMR S **S 16 17 06.0 -0.8**
KLMR LQ LQ 16 26 25.8
KLMR LQ LQ 16 26 25.8
KLMR LR LR 16 28 00.7
KLMR AMP 16 33 20.5
comp=Z,2μm,17.1s
NACGM **Naroch 42.99 331** *e*P **P 16 10 42.8 +0.1**
PSZ Piszkesteto 43.06 319 ⇓P **P 16 10 41.9 -1.6**
PSZ Piszkesteto 43.06 319 P **P 16 10 43.0 -0.5**
PSZ IAmb IAmb 16 11 10.3
comp=Z,97nm,2.0s
PSZ Piszkesteto 43.06 319 P **P 16 10 43.0 -0.5**
PSZ pmax pmax
comp=Z,97nm,2.0s
PSZ Piszkesteto 43.06 319 P **P 16 10 43.2 -0.3**
MORH Mrgy, Hungar 43.20 316 ⇑P **P 16 10 44.4 -0.1**
MORH Mrgy, Hungar 43.20 316 P **P 16 10 44.4 -0.1**
MOY Mondy 43.36 35 *e*P **P 16 10 47.2 +1.3**
MOY pmax pmax
comp=Z,47nm,1.4s
KOVH Kovagotottos 43.51 316 P **P 16 10 46.4 -0.6**
IIGN Ignalina 43.52 331 *e*P **P 16 10 47.7 +0.8**
XAN Xi'an 43.60 62 P **P 16 10 47.5 -0.5**
XAN PP **PcP 16 12 33.8 -1.7**
XAN S **S 16 17 15.8 -1.6**
XAN pmax pmax
comp=Z,39nm,1.5s
XAN pmax pmax
comp=Z,280nm,3.5s
XAN LR LR
comp=Z,5μm,16.6s
XAN LR LR
comp=Z,3μm,18.0s
XAN LR LR
comp=Z,5μm,15.3s
ISAL Salakas 43.70 331 *e*P **P 16 10 48.9 +0.5**
ENH Enshi 43.89 68 P **P 16 10 48.5 -1.9**
ENH Enshi 43.89 68 P **P 16 10 52.0 +1.7**
VYHS Vyhne 43.95 319 *e*P **P 16 10 50.2 -0.3**
VYHS pmax pmax
comp=Z,53nm,1.9s
SRO Srobarova 44.00 318 *e*P **P 16 10 51.8 +0.9**
ZAK Zakamensk 44.02 38 *e*P **P 16 10 51.4 +0.2**
ZAK pmax pmax
comp=Z,19nm,1.3s
VAE Valguarnera 44.02 303 LR LR 16 32 14.3
comp=Z,716nm,19.6s,baz=104,slow=40
OJC Ojcow 44.10 322 *e*P **P 16 10 49.4 -2.3**
OJC Ojcow 44.10 322 P **P 16 10 49.1 -2.6**
OJC IAmb IAmb 16 10 57.9
comp=Z,59nm,1.1s
OJC Ojcow 44.10 322 P **P 16 10 49.1 -2.6**
OJC pmax pmax
comp=Z,59nm,1.1s
MPLH Magyarpolny 44.25 317 P **P 16 10 53.0 0.0**
SDSI Sungai Dareh 44.48 114 P **P 16 10 56.9 +1.7**
PABE Paberze 44.64 330 P **P 16 10 54.9 -1.0**
PABE Paberze 44.64 330 *e*P **P 16 10 56.0 +0.1**
JAVC Velka Javorina 44.80 319 *e*P **P 16 10 58.0 +0.6**
SMOL Smolenice 44.81 319 *e*P **P 16 10 57.3 -0.2**
SMOL pmax pmax
comp=Z,10.0nm,1.2s
KOGS Kog 44.84 316 *i* P **P 16 10 57.7 +0.1**
KOGS *e*S **S 16 17 34.7 -0.3**
MODS Modra-Piesok 44.86 319 *e*P **P 16 10 57.2 -0.6**
MODS pmax pmax
comp=Z,101nm,1.9s
SONM Songino Array 44.86 42 P **P 16 10 59.3 +1.4**
comp=Z,14nm,0.8s,baz=243,slow=7.5,SNR=106
SONM LR LR 16 33 36.3
comp=Z,6μm,19.6s,baz=251,slow=41
comp=Z,14nm,0.8s
SONM Songino Array 44.86 42 P **P 16 10 58.0 0.0**
SONM IAmb IAmb 16 11 09.9
comp=Z,60nm,1.5s
SONM Songino Array 44.86 42 P **P 16 10 58.0 0.0**
SONM pmax pmax
comp=Z,61nm,1.5s
VOI Vohitsoka 44.87 200 P **P 16 10 58.0 -0.3**
VOI IAmb IAmb 16 11 00.2
comp=Z,53nm,1.2s
VOI Vohitsoka 44.87 200 *e*P **P 16 10 57.2 -1.0**
VOI Vohitsoka 44.87 200 P **P 16 10 59.4 +1.2**
ZST Bratislava 44.90 318 *e*P **P 16 10 58.1 0.0**
MAUC Maruska 44.90 320 AMS AMS 16 33 20.0
comp=Z,2μm,18.3s
OKC Ostrava-Krasne 44.90 321 *e*S **S 16 17 36.5 +0.7**
OKC AMS AMS 16 35 40.0
comp=Z,1μm,18.6s
VSVD Vaisvydziai 44.94 331 *e*P **P 16 10 59.3 +1.1**
SOP Sopron 45.06 317 P **P 16 10 58.9 -0.4**
QIZ Qiongzhong 45.19 83 P **P 16 11 01.3 +0.5**
QIZ S **S 16 17 45.5 +4.7**
QIZ LR LR
comp=Z,2μm,22.3s
QIZ LR LR
comp=Z,2μm,23.9s
QIZ LR LR
comp=Z,2μm,20.7s
RONA Rosalia, Austr 45.23 317 *e*P **P 16 11 00.5 -0.3**
comp=Z,12nm,1.0s,SNR=7.5
MORC Moravsky Berou 45.24 321 ⇑P **P 16 11 00.3 -0.5**
MORC Moravsky Berou 45.24 321 P **P 16 10 59.5 -1.3**
MORC IAmb IAmb 16 11 18.8
comp=Z,61nm,1.5s
MORC Moravsky Berou 45.24 321 P **P 16 10 59.6 -1.3**
MORC pmax pmax
comp=Z,61nm,1.5s
MORC Moravsky Berou 45.24 321 *e*P **P 16 11 00.3 -0.5**
MYKOM **Kota Tinggi 45.25 109** P **P 16 11 00.7 -0.6**
MYKOM IAmb IAmb 16 11 12.8
comp=Z,48nm,1.1s
MYKOM **Kota Tinggi 45.25 109** P **P 16 11 02.8 +1.5**
comp=Z,520nmcomp=Z,41nm,1.4s
ULN Ulaanbaatar 45.28 42 P **P 16 11 00.1 -1.3**
ULN Ulaanbaatar 45.28 42 *c*e**P P 16 11 02.0 +0.6**
ULN pmax pmax
comp=Z,36nm,1.7s
ULN Ulaanbaatar 45.28 42 P **P 16 11 02.4 +1.0**
comp=Z,75nm,1.0s
VSU Vasula 45.29 335 *e*P **P 16 11 01.4 +0.4**
VSU Vasula 45.29 335 *i* P **P 16 11 01.4 +0.4**
VSU pmax pmax
comp=Z,172nm,1.0s
BTDF Bukit Timah Da 45.38 110 P **P 16 11 04.0 +1.6**
IRK Irkutsk 45.41 36 *e*P **P 16 11 03.6 +1.4**
IRK *e* 16 12 52.3
IRK pmax pmax
comp=Z,82nm,1.8s
ARSA Arzberg 45.57 317 *e*P **P 16 11 03.5 0.0**
comp=Z,11nm,1.1s,SNR=5.8
CONA Conrad Observa 45.58 318 *e*P **P 16 11 03.1 -0.6**
comp=Z,24nm,1.5s,SNR=6.5
VRAC Vranov 45.62 320 ⇓P **P 16 11 04.1 +0.2**
VRAC Vranov 45.62 320 LR LR 16 33 47.5
comp=Z,1μm,19.7s,baz=116,slow=41
VRAC Vranov 45.62 320 *e*P **P 16 11 03.6 -0.3**
KRUC Moravsky 45.65 319 *e*P **P 16 11 04.1 0.0**
SOKA Soboth 45.70 316 *e*P **P 16 11 04.3 -0.4**
comp=Z,10.0nm,1.3s
VNDS Vrh nad Dolski 45.75 315 *i* P **P 16 11 05.1 +0.2**
KRLC Kraliky 45.80 321 *e*P **P 16 11 05.0 -0.3**
KRLC *e*S **S 16 17 51.6 +2.6**
KRLC MLR MLR
comp=Z,1μm,21.5s
KRLC Kraliky 45.80 321 *e*P **P 16 11 05.0 -0.3**
KRLC *e*S **S 16 17 51.6 +2.6**
KRLC AMS AMS 16 31 30.0
comp=Z,1μm,21.5s
VALR Valaam 45.84 340 *i* P **P 16 11 06.0 +0.7**
VALR pmax pmax
comp=Z,96nm,0.9s
LJU Ljubljana 45.85 315 *i* P **P 16 11 06.0 +0.3**
LJU *e*S **S 16 17 50.0 +0.4**
LJU *e*SS SS 16 21 25.2 +11
PBUR Paburge 45.89 330 *e*P **P 16 11 06.2 +0.5**
KLNR Kaliningrad 45.97 328 *i* P **P 16 11 08.3 +1.9**
KLNR pmax pmax
comp=Z,178nm,1.0s
OBKA Obir 45.97 315 *e*P **P 16 11 07.5 +0.7**
comp=Z,18nm,1.4s
DPC Dobruska-Polom 46.18 321 *e*P **P 16 11 08.2 -0.1**
DPC *e*S **S 16 18 02.8 +8.4**
DPC MLR MLR
comp=Z,1μm,25.4s
DPC Dobruska-Polom 46.18 321 *e*P **P 16 11 08.2 -0.1**
DPC *e*S **S 16 18 02.8 +8.4**
DPC AMS AMS 16 32 00.0
comp=Z,1μm,25.4s
TPRI Tanjung Pinang 46.26 110 P P 16 11 19.1 +10
TREC Trest 46.29 319 *e*S **S 16 17 55.5 -0.5**
TREC AMS AMS 16 37 00.0
comp=Z,1μm,18.3s
OSTC Ostas 46.33 321 *e*P **P 16 11 09.7 +0.3**
OSTC *e*S **S 16 18 02.3 +5.9**
OSTC AMS AMS 16 34 10.0
comp=Z,1μm,17.5s
KSP Ksiaz 46.39 321 *e*P **P 16 11 09.9 0.0**
UPC Upice 46.43 321 *e*S **S 16 18 01.6 +3.8**
UPC AMS AMS 16 32 10.0
comp=Z,1μm,22.0s
CHVC Chvalec 46.43 321 *e*P **P 16 11 10.3 0.0**
CHVC AMS AMS 16 34 20.0
comp=Z,1μm,17.6s
LYN LuoYang 46.57 62 ⇑*i*P **P 16 11 12.8 +1.3**
LYN S **S 16 18 03.0 +2.8**
LYN pmax pmax
comp=Z,20nm,0.9s
LYN pmax pmax
comp=Z,150nm,15.2s
LYN LR LR
comp=Z,3μm,15.6s
LYN LR LR
comp=Z,3μm,16.2s
MOA Molln 46.57 317 *e*P **P 16 11 11.0 -0.4**
comp=Z,5,7nm,0.7s
HHC Hu-ho-hao-te 46.58 53 *e*P **P 16 11 13.3 +1.6**
HHC pP pwP 16 11 18.0 -0.4
HHC S **S 16 18 02.8 +2.3**
HHC SS **ScS 16 21 17.0 +10**
HHC pmax pmax
comp=Z,81nm,1.0s
HHC pmax pmax
comp=Z,470nm,4.9s
HHC LR LR
comp=Z,7μm,16.1s
HHC LR LR
comp=Z,9μm,16.2s
HHC LR LR
comp=Z,13μm,16.2s
PRED Cave del Predi 46.60 315 P **P 16 11 10.7 -1.0**
MTSE Matsula 46.63 334 *e*P **P 16 11 11.9 +0.4**
CKRC Cesky Krumlov 46.86 318 *e*P **P 16 11 13.6 0.0**
CKRC *e*S **S 16 18 02.5 -1.6**
CKRC AMS AMS 16 33 50.0
comp=Z,900nm,18.6s
GKP Gorka Klasztor 46.88 325 *e*P **P 16 11 10.7 -2.9**
LATE Laterza 46.90 309 P **P 16 11 12.1 -1.9**
LATE IAmb IAmb 16 11 30.0
comp=Z,62nm,1.2s
BIOA Bad Ischl, Aus 46.92 317 *e*P **P 16 11 13.9 -0.2**
comp=Z,10.0nm,0.7s,SNR=6.9
KBA Koelnbreinsper 46.93 316 *e*P **P 16 11 13.8 -0.6**
comp=Z,4.9nm,0.8s
CNSH ChangSha 46.94 70 ⇓P **P 16 11 13.8 -0.7**
CNSH S **S 16 18 05.0 -0.7**
CNSH pmax pmax
comp=Z,47nm,1.1s
CNSH LR LR
comp=Z,2μm,15.0s
CNSH LR LR
comp=Z,1μm,12.7s
CNSH LR LR
comp=Z,2μm,15.2s
GOPC GO Pecny, Ondr 46.94 320 *e*S **S 16 18 05.4 +0.2**
GOPC AMS AMS 16 31 50.0
comp=Z,1μm,20.5s
CLUD Cludinico 47.06 315 P **P 16 11 13.9 -1.3**
CLUD IAmb IAmb 16 13 02.8
comp=Z,30nm,1.0s
PRU Pruhonice 47.12 320 *e*S **S 16 18 07.0 -0.6**
PRU AMS AMS 16 32 00.0
comp=Z,1μm,25.4s
STAL STALIGIAL 47.12 314 P **P 16 11 14.6 -1.1**
STAL IAmb IAmb 16 11 41.7
comp=Z,37nm,1.1s
GEC2 GERESS Array S 47.24 318 P **P 16 11 15.0 -1.8**
GERES GERESS Array B 47.24 318 P **P 16 11 15.3 -1.4**
comp=Z,2.0nm,0.9s,baz=114,slow=8.9,SNR=16
GERES LR LR 16 36 05.8
comp=Z,690nm,19.2s,baz=126,slow=42
comp=Z,2.0nm,0.9s
GERES GERESS Array B 47.24 318 P **P 16 11 14.9 -1.8**
PVCC Panska Ves 47.29 320 *e*S **S 16 18 15.7 +5.6**
PVCC AMS AMS 16 35 10.0
comp=Z,900nm,19.2s
MEF Metsahovi 47.34 336 *e*P **P 16 11 19.8 +2.7**
ABTA Abfaltersbach 47.38 315 *e*P **P 16 11 16.9 -0.9**
comp=Z,16nm,1.1s,SNR=10
KHC Kasperske Hory 47.41 318 P **P 16 11 15.7 -2.3**
KHC IAmb IAmb 16 11 32.9
comp=Z,34nm,1.1s
KHC Kasperske Hory 47.41 318 *e*P **P 16 11 17.7 -0.3**
KHC *e*S **S 16 18 07.9 -4.1**
KHC MLR MLR
comp=Z,1μm,19.8s
KHC Kasperske Hory 47.41 318 *e*P **P 16 11 17.7 -0.3**
KHC *e*S **S 16 18 07.9 -4.1**
KHC AMS AMS 16 34 10.0
comp=Z,1μm,19.8s
FIA1 FINESS Array S 47.53 338 P **P 16 11 18.3 -0.2**
FINES FINESS Array B 47.53 338 P **P 16 11 18.5 -0.1**
comp=Z,11nm,0.7s,baz=134,slow=9.3,SNR=35
FINES PcP **PcP 16 12 48.3 -0.2**
comp=Z,3.7nm,0.7s,baz=142,slow=9.5,SNR=1.2
FINES LR LR 16 35 47.2
comp=Z,2μm,18.6s,baz=148,slow=42
comp=Z,11nm,0.7s
FINES FINESS Array B 47.53 338 *i* P **P 16 11 18.7 +0.1**
FINES pmax pmax
comp=Z,11nm,0.6s
CASP Castiglione de 47.61 309 P **P 16 11 18.1 -1.4**
CASP IAmb IAmb 16 11 36.5
comp=Z,32nm,1.5s
CTI Castel Tesino 47.78 314 P **P 16 11 19.5 -1.4**
CTI IAmb IAmb 16 11 36.6
comp=Z,40nm,1.4s
CTI Castel Tesino 47.78 314 P **P 16 11 19.5 -1.4**
CTI pmax pmax
comp=Z,40nm,1.4s
BRG Berggiesshubel 47.79 321 *e*P **P 16 11 20.6 -0.2**
BRG Amp 16 11 35.0
comp=Z,16nm,1.1s
BRG Berggiesshubel 47.79 321 S **S 16 18 20.0 +2.8**
BRG Amp 16 39 20.0
comp=N,0.9nm,18.8s
BRG Amp 16 39 22.0
comp=Z,1.3nm,17.8s
BRG Amp 16 39 27.0
comp=E,1.4nm,17.8s
BRG Berggiesshubel 47.79 321 *e*P **P 16 11 20.5 -0.2**
BRG S **S 16 18 20.0 +2.8**
BRG pmax pmax
comp=Z,16nm,1.1s
BRG smax smax
comp=N,949nm,18.8s
BRG MLR MLR
comp=Z,1μm,17.8s
BRG MLR MLR
comp=E,1μm,17.8s
KEST Kesra 47.90 300 P **P 16 11 19.6 -2.4**
comp=E,9.0nm,1.0s,baz=58,slow=9.5,SNR=9.1
comp=E,9.0nm,1.0s
KEST Kesra 47.90 300 P **P 16 11 21.3 -0.7**
KEST IAmb IAmb 16 11 33.2
comp=Z,30nm,0.9s
WHN Wuhan 48.09 67 ⇑P **P 16 11 24.0 +0.6**
WHN S **S 16 18 21.5 -0.5**
WHN pmax pmax
comp=Z,470nm,2.2s
WHN LR LR
comp=Z,5μm,14.3s
WHN LR LR
comp=Z,2μm,13.2s
WHN LR LR
comp=Z,6μm,15.9s
WHN LR LR
comp=Z,6μm,15.9s
WTTA Wattenberg 48.10 315 *e*P **P 16 11 22.4 -1.1**
comp=Z,8.0nm,0.6s,SNR=7.5
WATA Walderalm 48.16 316 *e*P **P 16 11 22.5 -1.4**
comp=Z,21nm,1.2s
SQTA Sankt Quirin 48.37 315 *e*P **P 16 11 24.1 -1.4**
comp=Z,6.6nm,0.5s
SALO Salr 48.44 313 P **P 16 11 24.7 -1.3**
NKC Novy Kostel 48.47 319 *e*S **S 16 18 26.9 0.0**
NKC AMS AMS 16 34 20.0
comp=Z,1μm,15.7s
RUE Ruedersdorf 48.47 323 *e*P **P 16 11 26.6 +0.6**
MOTA Moosalm 48.47 315 *e*P **P 16 11 24.7 -1.6**
comp=Z,34nm,1.2s,SNR=5.9
CLL Collm 48.49 321 P **P 16 11 25.3 -1.0**
CLL IAmb IAmb 16 11 41.8
comp=Z,54nm,1.1s
CLL Collm 48.49 321 *i* P **P 16 11 26.0 -0.2**
CLL *e*S **S 16 18 24.0 -3.2**
CLL pmax pmax
comp=Z,39nm,1.1s
CLL Collm 48.49 321 *i* P **P 16 11 26.0 -0.2**
comp=Z,39nm,1.1s
CLL *e*x x 16 11 33.0
CLL *e*x x 16 11 37.0
comp=Z,49nm,1.1s
CLL *e*PP **PP 16 13 22.0 +3.1**
CLL *e*PPP PPP 16 14 06.0
CLL *e*PPPP 16 14 22.0
CLL *e*S **S 16 18 24.0 -3.2**
CLL *e*x x 16 19 42.0
CLL *e*SS **SS 16 22 00.0 +3.1**
CLL *e*SSS SSS 16 23 02.0
CLL Lmax 16 37 00.0
HNS HongShan 48.58 58 ⇓P **P 16 11 27.8 +0.7**
HNS PP **PP 16 13 24.5 +4.6**
HNS S **S 16 18 31.8 +3.1**
HNS pmax pmax
comp=Z,36nm,1.0s
HNS LR LR
comp=Z,6μm,21.9s
HNS LR LR
comp=Z,2μm,20.7s
HNS LR LR
comp=Z,5μm,17.7s
FETA Feichten 48.64 315 *e*P **P 16 11 25.8 -1.8**
comp=Z,13nm,1.1s
LSZ Lusaka 48.66 225 LR LR 16 31 39.7
comp=Z,2μm,20.9s,baz=58,slow=36
RETA Reutte 48.73 316 *e*P **P 16 11 26.8 -1.5**
comp=Z,4.1nm,0.6s
FUORN **Ofenpass-Fuorn 48.85 314** P **P 16 11 28.1 -1.2**
FUORN IAmb IAmb 16 11 57.7
comp=Z,65nm,1.8s
RAF Rauma 48.86 335 *e*P **P 16 11 28.7 -0.1**
LWLI Liwa 48.87 117 P P 16 11 40.3 +11
BSD Bornholm Skovb 48.91 326 *e*P **P 16 11 29.8 +0.5**
BSD Bornholm Skovb 48.91 326 *i* P **P 16 11 27.6 -1.8**
BSD IAmb IAmb 16 11 36.4
comp=Z,44nm,0.8s
GRA1 Grafenberg Arr 49.05 318 P **P 16 11 29.6 -1.0**
GRA1 IAmb IAmb 16 11 47.7
comp=Z,99nm,1.6s
GRF Grafenberg Arr 49.05 318 P **P 16 11 29.6 -1.0**
GRF pmax pmax
comp=Z,99nm,1.6s
GRFO Grafenberg 49.05 318 P **P 16 11 29.5 -1.1**
GRFO IAmb IAmb 16 11 45.7
comp=Z,46nm,1.2s
GRFO Grafenberg 49.05 318 P **P 16 11 29.5 -1.1**
GRFO pmax pmax
comp=Z,46nm,1.2s
DAVOX **Davos/Dischmat 49.14 314** LR LR 16 36 33.5
comp=Z,1μm,19.9s,baz=103,slow=41
PPBI Pangkal Pinang 49.15 112 P **P 16 11 32.4 +0.6**
DAVA Damuels 49.26 315 *e*P **P 16 11 31.1 -1.3**
comp=Z,9.2nm,0.7s,SNR=7.4
CMAH Djebel Manchou 49.50 301 P **P 16 11 37.0 +2.7**
BJT Baijiatuau 49.95 55 P **P 16 11 37.4 -0.2**
BJT IAmb IAmb 16 11 48.1
comp=Z,24nm,0.8s
BJT Baijiatuau 49.95 55 P **P 16 11 37.4 -0.2**
BJT pmax pmax
comp=Z,24nm,0.8s
BJT Baijiatuau 49.95 55 P **P 16 11 39.0 +1.5**
BJI Beijing 49.96 55 P **P 16 11 38.3 +0.7**
BJI S **S 16 18 51.0 +3.0**
BJI pmax pmax
comp=Z,28nm,1.4s
BJI LR LR
comp=Z,2μm,17.8s
BJI LR LR
comp=Z,5μm,19.2s
BJI LR LR
comp=Z,7μm,16.7s
DEL Delary 50.02 328 *e*P **P 16 11 38.1 +0.3**
DEL Delary 50.02 328 *i* P **P 16 11 37.5 -0.3**
APA Apatity 50.04 346 ⇓*i*P **P 16 11 39.5 +1.7**
APA *i* S **S 16 18 48.0 -0.3**
APA *i* SS **SS 16 22 22.0 +0.9**
APA pmax pmax
comp=Z,17nm,1.2s
XLT XiLinHaoTe 50.38 50 ⇑*i*P **P 16 11 42.5 +1.6**
XLT pP pwP 16 11 46.0 -1.7
XLT sP sP 16 11 49.5 +5.0
XLT S **S 16 18 56.8 +2.7**
XLT sS sS 16 19 02.3 +3.8
XLT SS **SS 16 22 22.0 -5.7**
XLT pmax pmax
comp=Z,28nm,1.5s
XLT LR LR
comp=Z,290nm,14.7s
XLT LR LR
comp=Z,3μm,19.4s
XLT LR LR
comp=Z,4μm,18.1s
COP Copenhagen 50.44 326 *i* P **P 16 11 40.3 -0.6**
TIA Tai'an 50.45 60 ⇓P **P 16 11 41.5 +0.1**
TIA S **S 16 18 56.8 +1.8**
TIA pmax pmax
comp=Z,49nm,0.9s
TIA pmax pmax
comp=Z,230nm,5.9s
TIA LR LR
comp=Z,2μm,15.9s
TIA LR LR
comp=Z,2μm,18.6s
TIA LR LR
comp=Z,2μm,19.1s
BFO Black Forest 50.53 316 P **P 16 11 40.8 -1.1**
BFO Black Forest 50.53 316 P **P 16 11 40.8 -1.1**

BFO pmax pmax
comp=Z,9.0nm,1.0s
CIT Chita 50.61 39 *e*P **P 16 11 43.3 +0.8**
CIT *e* 16 12 58.0
CIT *e* 16 19 01.5
CIT pmax pmax
comp=Z,90nm,1.9s
DFRA Djebel Bou Aff 50.74 301 P **P 16 11 46.3 +2.6**
SENIN Lac Senin/Sane 50.79 313 P **P 16 11 42.9 -1.3**
SENIN IAmb IAmb 16 11 59.4
comp=Z,80nm,1.9s
LPL La Plagne 51.03 312 *e*P **P 16 11 44.0 -1.9**
LPL pmax pmax
comp=Z,11nm,0.7s
NRIK Noril'sk 51.03 11 P **P 16 11 45.0 -0.3**
comp=Z,10nm,0.9s,baz=218,slow=6.9,SNR=14
NRIK LR LR 16 36 49.7
comp=Z,2μm,20.5s,baz=206,slow=40
comp=Z,10nm,0.9s
NRIK Noril'sk 51.03 11 P **P 16 11 44.6 -0.7**
NRIK Noril'sk 51.03 11*ce*P **P 16 11 45.3 0.0**
NRIK pmax pmax
comp=Z,28nm,1.3s
BORU Boraas 51.06 329 *i* P **P 16 11 46.4 +0.7**
ECH Echery 51.26 316 P **P 16 11 45.8 -1.6**
ECH Echery 51.26 316 P **P 16 11 45.8 -1.6**
ECH pmax pmax
comp=Z,23nm,1.2s
ONAU Onsala 51.38 328 *i* P **P 16 11 47.2 -0.9**
HFS Hagfors 51.74 332 LR LR 16 39 08.6
comp=Z,1μm,19.6s,baz=131,slow=42
NJ2 Nanjing 51.90 65 ⇓P **P 16 11 52.5 +0.2**
NJ2 sP **pwP 16 11 59.3 -0.1**
NJ2 S **S 16 19 17.0 +1.9**
NJ2 sS sS 16 19 27.0 +7.7
NJ2 pmax pmax
comp=Z,39nm,0.9s
NJ2 pmax pmax
comp=Z,230nm,4.8s
NJ2 LR LR
comp=Z,3μm,14.7s
NJ2 LR LR
comp=Z,3μm,15.9s
NJ2 LR LR
comp=Z,3μm,15.3s
TAM Tamanrasset 51.91 283 P **P 16 11 51.7 -1.1**
TAM Tamanrasset 51.91 283 P **P 16 11 51.7 -1.1**
TAM pmax pmax
comp=Z,34nm,1.3s
CBJI Citeko 51.96 116 P P 16 11 57.9 +4.9
MAHO Mahon 52.17 305 P **P 16 11 53.9 -0.4**
MAHO S **S 16 19 15.7 -3.0**
WLF Walferdange 52.23 317 P **P 16 11 53.4 -1.1**
WLF Walferdange 52.23 317 P **P 16 11 53.4 -1.1**
WLF pmax pmax
comp=Z,14nm,0.9s
WLF Walferdange 52.23 317 *d*P **P 16 11 54.0 -0.5**
STRU Stroemstad 52.41 330 *i* P **P 16 11 55.9 +0.2**
MUD Monsted U'grnd 52.42 326 *i* P **P 16 11 56.0 +0.2**
MUD IAmb IAmb 16 12 04.3
comp=Z,22nm,0.6s
BTNL Ternell 52.45 318 *d*P **P 16 11 57.1 +0.9**
SBUM Sibu 52.48 103 P **P 16 11 56.0 -1.0**
SBUM Sibu 52.48 103 P **P 16 11 57.5 +0.6**
comp=Z,16nm,1.7s
SSB Saint Sauveur 52.52 312 P **P 16 11 55.5 -1.3**
SSB Saint Sauveur 52.52 312 P **P 16 11 55.5 -1.3**
SSB pmax pmax
comp=Z,23nm,1.1s
MEM Membach 52.53 318 *d*P **P 16 11 56.8 +0.1**
MEM *dx* x 16 12 07.5
BOD Bodaibo 52.82 32 *e*P **P 16 11 58.4 -0.4**
BOD pmax pmax
comp=Z,30nm,1.4s
MUSN Musina, Limpop 52.90 218 *e*P **P 16 11 59.1 -0.7**
MUSN IAmb IAmb 16 12 19.0
comp=Z,24nm,1.0s
RCHB Rochefort 52.91 318 *d*P **P 16 11 58.4 -1.2**
BCLA Clavier 52.92 318 *d*P **P 16 11 59.3 -0.4**
BCLA *dx* x 16 12 16.2
NC602 NORSAR Array S 52.97 332 P **P 16 11 58.5 -1.3**
NC602 NORSAR Array S 52.97 332 *e*P **P 16 11 59.2 -0.7**
MOPA Mopani 53.02 215 *e*P **P 16 12 00.4 -0.2**
MOPA IAmb IAmb 16 12 05.4
comp=Z,2.5nm,0.8s
NC405 NORSAR Array S 53.06 332 P **P 16 11 59.2 -1.3**
KEV Kevo 53.21 346 P **P 16 12 00.7 -0.7**
KEV IAmb IAmb 16 12 12.7
comp=Z,44nm,1.0s
KEV Kevo 53.21 346 P **P 16 12 00.7 -0.7**
KEV pmax pmax
comp=Z,44nm,1.0s
NB201 NORSAR Array S 53.22 332 P **P 16 12 00.6 -1.1**
BMRD Maredsous 53.23 318 *d*P **P 16 12 02.1 +0.1**
BMRD *dx* x 16 12 11.9
NB2 NORSAR Subarra 53.25 332 P **P 16 12 01.0 -0.9**
comp=Z,158nm,2.5s,baz=110,slow=7.9
NB2 NORSAR Subarra 53.25 332 P **P 16 12 01.0 -0.9**
baz=110,slow=7.9
NOA NORSAR Array B 53.25 332 P **P 16 12 00.5 -1.4**
comp=Z,1.6nm,0.7s,baz=121,slow=6.9,SNR=7.7
NOA LR LR 16 40 14.1
comp=Z,806nm,18.3s,baz=110,slow=42
comp=Z,1.6nm,0.7s
NC303 NORSAR Array S 53.26 332 P **P 16 12 01.2 -0.8**
NC303 IAmb IAmb 16 12 11.4
comp=Z,99nm,1.7s
DOU Dourbes 53.30 318 *d*P **P 16 12 01.4 -1.0**
KONO Kongsberg 53.40 330 *i* P **P 16 12 05.4 +2.4**
KONO pmax pmax
comp=Z,30nm,1.2s
ARA0 ARCESS Array S 53.40 345 *e*P **P 16 12 03.0 +0.1**
ARA0 IAmb IAmb 16 12 04.4
comp=Z,46nm,1.4s
ARCES ARCESS Array B 53.40 345 P **P 16 12 01.7 -1.2**
comp=Z,6.1nm,0.7s,baz=141,slow=7.8,SNR=19
ARCES LR LR 16 36 50.3
comp=Z,1μm,21.1s,baz=130,slow=38
comp=Z,6.1nm,0.7s
ARCES ARCESS Array B 53.40 345 P **P 16 12 01.8 -1.1**
ARCES IAmb IAmb 16 12 15.3
comp=Z,121nm,1.8s
ARCES ARCESS Array B 53.40 345 P **P 16 12 01.8 -1.1**
ARCES pmax pmax
comp=Z,121nm,1.8s
HOMB Homborsund 53.40 328 *e*P **P 16 12 03.1 +0.1**
HOMB Homborsund 53.40 328 *i* P **P 16 12 02.1 -0.9**
NBO00 NORSAR Array S 53.44 332 P **P 16 12 02.3 -1.0**
NBO00 IAmb IAmb 16 12 15.3
comp=Z,44nm,1.1s
NC204 NORSAR Array S 53.55 332 P **P 16 12 02.7 -1.5**
KTK1 Kautokeino 53.60 344 *e*P **P 16 12 04.7 +0.3**
KTK1 IAmb IAmb 16 12 13.3
comp=Z,39nm,0.9s
HIA Hailar 53.77 44 P **P 16 12 06.0 0.0**
HIA IAmb IAmb 16 12 08.4
comp=Z,66nm,1.5s
HIA Hailar 53.77 44 P **P 16 12 06.0 0.0**
HIA pmax pmax
comp=Z,65nm,1.5s
HIA Hailar 53.77 44 P **P 16 12 07.7 +1.7**
SSE Sheshan 53.94 66 P **P 16 12 06.0 -1.4**
SSE S **S 16 19 41.0 -2.0**
SSE pmax pmax
comp=Z,10.0nm,0.6s
SSE pmax pmax
comp=Z,250nm,3.9s
SSE LR LR
comp=Z,570nm,21.2s
SSE LR LR
comp=Z,1μm,18.3s
CAF Calviac 54.22 311 *e*P **P 16 12 08.5 -0.8**
CAF pmax pmax
comp=Z,21nm,1.2s
SKAR Skarslia 54.40 331 *e*P **P 16 12 11.5 +1.1**
MOR8 Moi Rana 54.50 339 *e*P **P 16 12 10.8 -0.2**
NSS Namsos 54.55 336 *e*P **P 16 12 11.6 +0.3**
NSS IAmb IAmb 16 12 18.8
comp=Z,104nm,1.5s
DOMB Dombas 54.61 333 *e*P **P 16 12 11.9 +0.1**
DOMB IAmb IAmb 16 12 23.7
comp=Z,83nm,1.3s
HAMF Hammerfest 54.63 345 *e*P **P 16 12 12.1 +0.3**
JETT Jettan, Norway 54.71 344 *e*P **P 16 12 13.7 +1.2**
FAUS Fauske 54.88 340 *e*P **P 16 12 14.2 +0.5**

FAUS IAmb IAmb 16 12 22.6
comp=Z,84nm,1.1s
KONS Konsvik 55.12 339 *e*P **P 16 12 15.3 -0.1**
KONS IAmb IAmb 16 12 23.8
comp=Z,71nm,0.8s
LFF La Frestale 55.15 311 *e*P **P 16 12 15.3 -0.7**
LFF pmax pmax
comp=Z,65nm,1.4s
TRO Tromso 55.16 343 *e*P **P 16 12 15.8 +0.2**
TRO IAmb IAmb 16 12 25.5
comp=Z,69nm,1.2s
STEI Steigen 55.21 341 *e*P **P 16 12 16.1 +0.1**
STEI IAmb IAmb 16 12 24.6
comp=Z,42nm,0.8s
LEPH Lephalale, Lim 55.31 218 *e*P **P 16 12 15.9 -1.5**
CRLN Carolina, Mapu 55.75 215 *e*P **P 16 12 18.2 -2.5**
CRLN IAmb IAmb 16 12 28.4
comp=Z,47nm,1.6s
POGA Pongola 55.97 212 P **P 16 12 20.3 -1.8**
MTKI Muara Teweh, K 56.34 106 P P 16 12 35.0 +10
SLR Silverton 56.49 217 *e*P **P 16 12 29.3 +3.3**
SLR IAmb IAmb 16 12 48.7
comp=Z,359nm,3.0s
CN2 Changchun 57.12 51 *e*P **P 16 12 30.0 -0.1**
CN2 *e*S **S 16 20 22.0 -3.1**
CN2 SS **SS 16 24 11.5 -2.3**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,8μm,18.0s
CN2 LR LR
comp=Z,3μm,18.0s
CN2 LR LR
comp=Z,3μm,20.0s
BBKI Banjar Baru 57.41 109 P P 16 12 41.7 +9.1
LBTB Lobatse 57.48 219 LR LR 16 35 29.7
comp=Z,2μm,19.7s,baz=42,slow=34
LBTB Lobatse 57.48 219 P **P 16 12 32.7 -0.3**
LBTB Lobatse 57.48 219 P **P 16 12 32.7 -0.3**
LBTB pmax pmax
comp=Z,102nm,1.3s
TOA0 Torodi Ar. Sit 57.60 273 P **P 16 12 32.8 -1.2**
TORD Torodi Ar. Bea 57.60 273 P **P 16 12 33.6 -0.4**
comp=Z,51nm,1.0s,baz=74,slow=5.5,SNR=83
TORD LR LR 16 38 31.4
comp=Z,3μm,19.3s,baz=66,slow=37
comp=Z,51nm,1.0s
TORD Torodi Ar. Bea 57.60 273 P **P 16 12 33.0 -1.0**
TORD IAmb IAmb 16 12 51.2
comp=Z,66nm,1.1s
INCN Inchon 58.06 58 P **P 16 12 36.0 -0.8**
INCN IAmb IAmb 16 12 39.4
comp=Z,52nm,1.1s
INCN Inchon 58.06 58 P **P 16 12 36.1 -0.8**
INCN pmax pmax
comp=Z,52nm,1.1s
ESBB Sonseca Array 58.51 304 P **P 16 12 38.3 -1.8**
ESDC Sonseca Array 58.51 304 P **P 16 12 39.0 -1.1**
comp=Z,14nm,1.0s,baz=80,slow=6.4,SNR=48
ESDC LR LR 16 40 20.7
comp=Z,573nm,18.2s,baz=90,slow=39
comp=Z,14nm,1.0s
ESDC Sonseca Array 58.51 304 P **P 16 12 39.1 -0.9**
BNX BinXian 58.57 48 ⇑P **P 16 12 40.8 +0.5**
BNX pP **sP 16 12 43.5 -0.4**
BNX sP **pwP 16 12 45.0 -2.5**
BNX PP **PP 16 14 52.8 +3.0**
BNX S **S 16 20 48.0 +3.8**
BNX sS **sS 16 20 55.0 +6.4**
BNX pmax pmax
comp=Z,30nm,0.9s
BNX pmax pmax
comp=Z,200nm,5.0s
BNX LR LR
comp=Z,3μm,14.8s
BNX LR LR
comp=Z,2μm,14.1s
BNX LR LR
comp=Z,2μm,14.8s
TSUM Tsumeb 58.70 230 LR LR 16 37 34.4
comp=Z,2μm,21.5s,baz=46,slow=36
TSUM Tsumeb 58.70 230 P **P 16 12 42.0 +0.4**
TSUM IAmb IAmb 16 12 50.5
comp=Z,33nm,1.1s
TSUM Tsumeb 58.70 230 *e*P **P 16 12 42.6 +1.0**
TSUM IAmb IAmb 16 12 50.2
comp=Z,30nm,1.0s
TJN Taejon 58.71 59*ce*P **P 16 12 40.7 -0.7**
TJN Taejon 58.71 59 P **P 16 12 42.5 +1.1**
SNKL Senekal, Frees 58.77 215 *e*P **P 16 12 41.9 -0.2**
SNKL IAmb IAmb 16 12 49.7
comp=Z,95nm,1.4s
PAB San Pablo 58.81 304 P **P 16 12 41.5 -0.7**
PAB San Pablo 58.81 304 P **P 16 12 41.5 -0.7**
PAB pmax pmax
comp=Z,220nm,1.8s
EKA Eskdalemuir Ar 58.86 323 LR LR 16 42 16.6
comp=Z,737nm,18.9s,baz=96,slow=40
KS19 Wonju Array Si 59.04 58 P **P 16 12 42.5 -1.3**
KSAR Wonju Array Be 59.06 58 P **P 16 12 42.3 -1.5**
KSAR Wonju Array Be 59.06 58 P **P 16 12 42.3 -1.5**
ZEA Zeya 59.08 39 *e*P **P 16 12 45.3 +1.6**
ZEA *e*S **S 16 20 56.4 +6.0**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA smax smax
comp=E,200nm,14.0s
ZEA MLR MLR
comp=N,1μm,15.0s
ZEA MLR MLR
comp=Z,2μm,18.0s
KSRS Korea Array 59.09 58 P **P 16 12 43.2 -0.8**
comp=Z,20nm,0.9s,baz=268,slow=6.5,SNR=35
KSRS LR LR 16 39 31.8
comp=Z,1μm,20.1s,baz=265,slow=37
comp=Z,20nm,0.9s
SWZ Schweizer 59.28 218 *e*P **P 16 12 44.8 -0.7**
SWZ IAmb IAmb 16 12 53.2
comp=Z,82nm,1.5s
MDT Midelt 59.51 297 LR LR 16 43 05.3
comp=Z,1μm,18.1s,baz=102,slow=41
SRBI Singaraja 59.92 113 P P 16 13 04.8 +15
MPSI Mapaga 60.35 102 P **P 16 12 53.3 +0.3**
BOSA Boshof 60.42 217 P **P 16 12 50.8 -2.5**
comp=Z,25nm,1.1s,baz=38,slow=7.4,SNR=13
BOSA LR LR 16 36 39.5
comp=Z,2μm,20.3s,baz=50,slow=34
comp=Z,25nm,1.1s
BOSA Boshof 60.42 217 P **P 16 12 51.8 -1.5**
BOSA IAmb IAmb 16 13 01.2
comp=Z,63nm,1.5s
BOSA Boshof 60.42 217 *e*P **P 16 12 53.2 -0.1**
BOSA IAmb IAmb 16 13 00.8
comp=Z,63nm,1.5s
BOSA Boshof 60.42 217 P **P 16 12 51.8 -1.5**
BOSA pmax pmax
comp=Z,63nm,1.5s
PBRG Braganca 60.54 307 *e*P **P 16 12 54.0 0.0**
comp=Z,58nm,1.4s
PBRG *e*S **S 16 21 12.7 +2.9**
JOW Kunigami 60.62 70 LR LR 16 41 37.5
comp=Z,2μm,19.8s,baz=292,slow=38
MVO Moncorvo 60.78 306 *e*P **P 16 12 55.9 +0.2**
comp=Z,44nm,1.8s
MVO *e*S **S 16 21 15.3 +2.3**
MVO Moncorvo 60.78 306 *e*LR LR 16 37 37.1
comp=Z,1μm,20.0s
KLNI Mataram 60.84 113 P P 16 13 03.8 +7.4
TOLI2 Tolitoli 60.85 101 P **P 16 12 54.3 -2.1**
TOLI2 IAmb IAmb 16 13 05.8
comp=Z,33nm,1.1s
TOLI2 Tolitoli 60.85 101 P **P 16 12 55.9 -0.6**
PBAR Barrancos 60.99 303 *e*P **P 16 12 57.3 +0.2**
comp=Z,92nm,1.5s
PBAR *e*S **S 16 21 11.5 -4.0**
PMSI Majene 61.06 106 P P 16 13 07.1 +9.2
PMRV Marv??o 61.17 304 *e*P **P 16 12 57.9 -0.4**
comp=Z,101nm,1.6s
PMRV Marv??o 61.17 304 *e*LR LR 16 37 55.9
comp=Z,1μm,18.0s
PCBR Castelo Branco 61.20 305 *e*P **P 16 12 59.0 +0.5**
comp=Z,95nm,1.8s
MTE Manteigas 61.22 305 *e*P **P 16 12 59.0 +0.3**
comp=Z,93nm,1.7s

MTE *e*S **S 16 21 19.0 +0.4**
MTE Manteigas 61.22 305 P **P 16 12 58.0 -0.7**
MTE IAmb IAmb 16 13 09.1
comp=Z,67nm,1.4s
SPB2 Spitsbergen Ar 61.23 350 P **P 16 12 57.5 -0.5**
SPITS Spitsbergen Ar 61.23 350 LR LR 16 43 53.8
comp=Z,2μm,19.0s,baz=90,slow=40
SPITS Spitsbergen Ar 61.23 350 P **P 16 12 57.6 -0.5**
SPITS pmax pmax
comp=Z,62nm,1.4s
PVRL Vila Real 61.30 306 *e*P **P 16 12 59.9 +0.7**
comp=Z,83nm,1.4s
POLO Lamas de Olo 61.35 307 *e*P **P 16 12 59.7 +0.1**
comp=Z,34nm,1.6s
POLO *e*S **S 16 21 22.9 +2.7**
PESTR Estremoz 61.36 304 *e*P **P 16 12 59.8 +0.2**
comp=Z,49nm,1.5s
PESTR *e*S **S 16 21 21.3 +1.0**
PESTR Estremoz 61.36 304 P **P 16 12 59.1 -0.5**
PVIS Viseu 61.47 306 *e*P **P 16 13 00.9 +0.6**
comp=Z,84nm,1.3s
PCAB Cabril 61.51 307 *e*P **P 16 13 02.7 +2.1**
comp=Z,82nm,1.4s
YAK Yakutsk 61.54 30 LR LR 16 42 21.5
comp=Z,1μm,18.6s,baz=270,slow=39
YAK Yakutsk 61.54 30 P **P 16 12 59.9 -0.4**
YAK Yakutsk 61.54 30*ce*P **P 16 12 59.8 -0.5**
YAK pmax pmax
comp=Z,56nm,1.3s
PVAQ Vaqueiros 61.59 302 *e*P **P 16 13 00.9 -0.2**
comp=Z,40nm,1.3s
PVAQ *e*S **S 16 21 23.9 +0.7**
PVAQ Vaqueiros 61.59 302 *e*LR LR 16 38 54.6
comp=Z,1μm,22.0s
KLR Kul'dur 61.60 44 LR LR 16 44 29.6
comp=Z,3μm,18.4s,baz=268,slow=41
KLR Kul'dur 61.60 44*ce*P **P 16 13 00.9 -0.1**
KLR pmax pmax
comp=Z,38nm,1.5s
PBEJ Beja 61.65 303 *e*P **P 16 13 02.1 +0.5**
comp=Z,47nm,1.3s
PGAV Gavieira, Arco 61.67 307 *e*P **P 16 13 04.8 +3.0**
comp=Z,87nm,1.6s
PGAV *e*S **S 16 21 25.2 +0.9**
PGAV Gavieira, Arco 61.67 307 *e*LR LR 16 39 38.0
comp=Z,992nm,20.0s
EVO Evora 61.72 303 *e*P **P 16 13 02.2 +0.2**
comp=Z,97nm,1.7s
PCVE Castro Verde 61.82 302 *e*P **P 16 13 02.8 +0.1**
comp=Z,57nm,2.0s
PCVE *e*S **S 16 21 28.4 +2.3**
HVD Gariep Dam 61.82 215 *e*P **P 16 13 01.2 -1.7**
HVD IAmb IAmb 16 13 05.0
comp=Z,70nm,1.4s
USA0B Ussuriysk Arra 61.83 50 P **P 16 13 01.3 -1.4**
USA0B IAmb IAmb 16 13 47.0
comp=Z,48nm,1.9s
USA0B Ussuriysk Arra 61.83 50 P **P 16 13 01.3 -1.4**
USA0B pmax pmax
comp=Z,48nm,1.9s
USRK Ussuriysk Ar. 61.83 50 P **P 16 13 02.1 -0.6**
comp=Z,6.0nm,0.8s,baz=260,slow=6.7,SNR=14
USRK LR LR 16 40 55.7
comp=Z,1μm,19.8s,baz=252,slow=37
comp=Z,6.0nm,0.8s
USRK Ussuriysk Ar. 61.83 50 P **P 16 13 01.9 -0.8**
PMTG Montargil 61.84 304 *e*P **P 16 13 04.5 +1.7**
comp=Z,62nm,1.7s
PMTG *e*S **S 16 21 28.6 +2.3**
PCAS Casmilo, Conde 61.97 305 *e*P **P 16 13 04.9 +1.2**
comp=Z,76nm,1.7s
PCAS *e*S **S 16 21 31.8 +3.8**
SPSI Sidrap Palu 62.03 106 P P 16 13 13.7 +9.3
PNCL Nicolau / Gran 62.16 303 *e*P **P 16 13 05.8 +0.8**
comp=Z,56nm,1.8s
PNCL *e*S **S 16 21 32.4 +2.0**
MRSI Marisa 62.16 101 P **P 16 13 04.4 -0.9**
PSBE So Bento 62.24 305 *e*S **S 16 21 34.0 +2.5**
MORF Marmelete 62.34 302 *e*S **S 16 21 34.5 +1.7**
KBS Kingsbay 62.40 350 P **P 16 13 05.0 -0.9**
KBS IAmb IAmb 16 13 08.4
comp=Z,29nm,1.1s
KBS Kingsbay 62.40 350 P **P 16 13 05.0 -0.9**
KBS pmax pmax
comp=Z,29nm,1.1s
APSI Ampana 62.45 102 P **P 16 13 07.1 -0.2**
KAPI Kappang 62.47 108 P **P 16 13 06.2 -1.2**
KAPI Kappang 62.47 108 *i* P **P 16 13 06.9 -0.4**
KAPI pmax pmax
comp=Z,39nm,1.5s
KAPI Kappang 62.47 108 P **P 16 13 07.0 -0.4**
comp=Z,938nmcomp=Z,75nm,1.5s
KAPI Kappang 62.47 108 P **P 16 13 07.1 -0.3**
comp=Z,83nm,1.5s
PFVI Vila Bisbo 62.49 302 *e*S **S 16 21 36.0 +1.3**
BNSI Bone 62.52 107 P **P 16 13 10.6 +2.9**
PMAFR Mafra 62.67 304 *e*S **S 16 21 40.4 +3.6**
BKSI Bulukumba 62.94 108 P **P 16 13 10.9 +0.4**
KEIM Keimoes 62.98 220 *e*P **P 16 13 10.2 -0.3**
KEIM IAmb IAmb 16 13 18.6
comp=Z,68nm,1.4s
DAV Davao City (W) 63.15 93 LR LR 16 41 38.8
comp=Z,733nm,20.6s,baz=292,slow=37
TIXI Tiksi 63.27 19 LR LR 16 46 18.3
comp=Z,3μm,18.2s,baz=270,slow=41
TIXI Tiksi 63.27 19 P **P 16 13 10.5 -1.3**
TIXI IAmb IAmb 16 13 20.0
comp=Z,32nm,1.4s
TIXI Tiksi 63.27 19*ce*P **P 16 13 11.1 -0.7**
TIXI pmax pmax
comp=Z,14nm,1.5s
AUGR Augrabies 63.28 221 *e*P **P 16 13 11.1 -1.5**
AUGR IAmb IAmb 16 13 15.6
comp=Z,56nm,1.4s
JHS Saijyo 63.51 60 P **P 16 13 12.5 -1.6**
JHS IAmb IAmb 16 13 14.7
comp=Z,73nm,1.7s
BFON Badsfontein, M 63.72 216 *e*P **P 16 13 15.2 -0.2**
BFON IAmb IAmb 16 13 18.8
comp=Z,45nm,1.0s
KKSI Kolaka, Sulawe 63.81 106 P **P 16 13 17.0 +0.7**
JMIC Jan Mayen 64.05 340 LR LR 16 44 50.8
comp=Z,1μm,18.1s,baz=90,slow=40
GRNR Gornyy 64.59 43 ⇓*i*P **P 16 13 20.9 0.0**
GRNR pmax pmax
comp=Z,5.0nm,1.2s
GRNR MLR MLR
comp=N,1μm,14.0s
GRNR MLR MLR
comp=Z,2μm,17.0s
GRAN Grantham 64.94 216 *e*P **P 16 13 22.5 -0.9**
GRAN IAmb IAmb 16 13 42.6
comp=Z,17nm,1.0s
FRAZ Fraserburg 65.09 217 *e*P **P 16 13 21.8 -2.7**
FRAZ IAmb IAmb 16 13 32.6
comp=Z,55nm,1.2s
BBSI Bau Bau 65.20 107 P P 16 13 34.3 +8.9
CVNA Calvinia 65.71 219 *e*P **P 16 13 25.7 -2.7**
CVNA IAmb IAmb 16 14 05.6
comp=Z,176nm,2.2s
KIC Kosan Boka 65.74 268⇑*e*P **P 16 13 29.2 +0.3**
comp=Z,8.3nm,0.4s
SUR Sutherland 65.77 217 LR LR 16 39 58.9
comp=Z,1μm,20.0s,baz=48,slow=34
SUR Sutherland 65.77 217 P **P 16 13 28.7 -0.2**
TIC Toumodi 65.90 268⇑*e*P **P 16 13 30.3 +0.3**
comp=Z,11nm,0.3s
LIC Lamto 66.05 268⇓*e*P **P 16 13 30.8 -0.1**
comp=Z,35nm,0.5s
MMRI Maumere 66.30 110 P **P 16 13 30.1 -2.3**
MMRI Maumere 66.30 110 P **P 16 13 32.7 +0.3**
MMRI Maumere 66.30 110 P **P 16 13 33.9 +1.5**
comp=Z,70nm,1.5s
INU Inuyama 66.61 60 P **P 16 13 31.3 -2.9**
INU Inuyama 66.61 60 P **P 16 13 34.0 -0.2**
SANI Sanana 66.88 102 P **P 16 13 35.9 -0.3**
SANI Sanana 66.88 102 P **P 16 13 34.8 -1.4**
GAMI Galela, Maluku 67.05 97 P **P 16 13 37.3 0.0**
TNTI Ternate 67.06 98 P **P 16 13 35.6 -1.8**
TNTI Ternate 67.06 98 P **P 16 13 37.4 +0.1**
TNTI Ternate 67.06 98 P **P 16 13 36.9 -0.4**
MAJO Matsushiro 67.37 58 P **P 16 13 39.2 +0.2**
MJAR Matsushiro Arr 67.37 58 LR LR 16 46 44.2
comp=Z,698nm,19.2s,baz=274,slow=39
DAG Danmarks Havn 67.68 346 *i* P **P 16 13 38.4 -1.8**

DAG IAmb IAmb 16 13 42.9
comp=Z,8.0nm,1.0s
LBMI Labuha 67.72 100 P **P 16 13 42.8 +1.3**
NOR Nord 67.85 351 *i* P **P 16 13 40.3 -0.9**
NOR IAmb IAmb 16 13 44.0
comp=Z,2.1nm,0.8s
BATI Baumata 68.26 111 LR LR 16 44 24.3
comp=Z,2μm,20.3s,baz=324,slow=37
BATI Baumata 68.26 111 P P 16 13 54.5 +10
NLAI Namlea 68.37 102 P P 16 13 54.3 +8.7
BORG Borgarnes 68.42 333 LR LR 16 48 54.4
comp=Z,562nm,18.2s,baz=105,slow=40
SOEI Soe 68.59 110 P **P 16 13 45.4 -1.7**
SOEI Soe 68.59 110 P **P 16 13 49.1 +2.0**
SOEI Soe 68.59 110 P **P 16 13 48.7 +1.6**
JTM Tenmabayashi 68.87 53 P **P 16 13 47.5 -0.8**
JTM Tenmabayashi 68.87 53 P **P 16 13 48.6 +0.3**
JYT Yasato 69.00 58 P **P 16 13 47.1 -2.1**
JYT IAmb IAmb 16 13 57.8
comp=Z,58nm,1.3s
JYT Yasato 69.00 58 P **P 16 13 48.3 -0.9**
JHJ Hachijo jima 2 69.28 61 LR LR 16 45 46.6
comp=Z,2μm,20.5s,baz=288,slow=37
AAI Ambon 69.55 102 P **P 16 13 56.3 +3.4**
KRAI Karang Ratu 69.58 102 P **P 16 13 52.9 -0.3**
PMOZ Porto Moniz, M 69.97 298 *e*LR LR 16 41 19.7
PSA00 Pilbara Seismi 70.72 123 P **P 16 13 58.3 -1.7**
PSA00 Pilbara Seismi 70.72 123 P **P 16 13 57.9 -2.0**
PSA00 IAmb IAmb 16 14 01.8
comp=Z,34nm,1.3s
SIJI Sorong 71.28 98 LR LR 16 47 32.1
comp=Z,256nm,19.9s,baz=262,slow=38
SIJI Sorong 71.28 98 P **P 16 14 03.4 -0.2**
BNDI Bandanaira 71.44 102 P P 16 14 14.2 +10
BNDI Bandanaira 71.44 102 P **P 16 14 05.6 +1.1**
MA2 Magadan 71.85 32 LR LR 16 49 22.9
comp=Z,2μm,19.4s,baz=280,slow=39
SEY Seymchan 72.02 29 LR LR 16 50 49.3
comp=Z,3μm,18.9s,baz=308,slow=40
SEY Seymchan 72.02 29 *ce*P **P 16 14 07.1 0.0**
SEY pmax pmax
comp=Z,13nm,1.0s
JCJ Chichijima 72.69 67 LR LR 16 49 24.8
comp=Z,867nm,19.9s,baz=288,slow=38
FAKI Fak Fak 72.97 100 P **P 16 14 12.7 -1.0**
FAKI Fak Fak 72.97 100 P **P 16 14 14.8 +1.1**
FAKI Fak Fak 72.97 100 P **P 16 14 14.3 +0.6**
SUMG Summit 73.31 342 *i* P **P 16 14 12.3 -2.9**
BBTS Babate 74.11 280 LR LR 16 47 57.1
comp=Z,2μm,18.1s,baz=64,slow=37
H01W3 Cape Leeuwin H 74.48 137 T T 17 35 42.9
baz=310,slow=75,SNR=120
H01W2 Cape Leeuwin H 74.49 137 T T 17 35 39.1
baz=310,slow=75,SNR=150
H01W1 Cape Leeuwin H 74.50 137 T T 17 35 44.2
baz=310,slow=75,SNR=119
NEEM North Greenlan 74.61 348 *i* P **P 16 14 21.7 -0.9**
ICESG Greenland Ices 74.71 339 *i* P **P 16 14 23.0 -0.4**
ICESG IAmb IAmb 16 14 26.5
comp=Z,8.8nm,0.9s
KNRA Kununurra 75.17 113 P **P 16 14 25.8 -0.6**
KNRA Kununurra 75.17 113 P **P 16 14 27.3 +0.9**
NWAO Narrogin (SRO) 75.29 134 LR LR 16 44 46.2
comp=Z,395nm,18.6s,baz=172,slow=34
NWAO Narrogin (SRO) 75.29 134 P **P 16 14 26.9 +0.2**
NWAO IAmb IAmb 16 15 55.9
comp=Z,72nm,1.6s
NWAO Narrogin (SRO) 75.29 134 P **P 16 14 27.0 +0.2**
NWAO pmax pmax
comp=Z,72nm,1.6s
BILL Bilibino 76.20 22⇓ *e*P **P 16 14 31.2 -0.3**
BILL *e**PP **sP 16 14 34.8 -0.4**
BILL *e* 16 14 40.3
BILL *e* 16 14 46.7
BILL 16 17 19.0
BILL *e*S **S 16 24 20.6 +5.3**
BILL PS **PnS 16 25 00.0 +7.7**
BILL SS **SS 16 29 17.0 +8.9**
BILL pmax pmax
comp=Z,8.0nm,1.1s
KDU Kakadu 77.10 109 P **P 16 14 36.8 -0.7**
PETK Petropavlovsk- 77.14 38 P **P 16 14 36.3 -0.8**
comp=Z,6.6nm,0.9s,baz=327,slow=11,SNR=3.1
PETK LR LR 16 52 56.6
comp=Z,2μm,18.2s,baz=285,slow=39
comp=Z,6.6nm,0.9s
PETK Petropavlovsk- 77.14 38 P **P 16 14 36.7 -0.4**
EUNU Eureka 77.90 355 P **P 16 14 40.5 -0.4**
GUMO Guam 79.03 80 LR LR 16 51 59.9
comp=Z,293nm,19.4s,baz=295,slow=37
WRKA Warakurna 79.16 122 P **P 16 14 49.0 +0.2**
SFJD Kangerlussuaq 79.33 338 LR LR 16 53 18.9
comp=Z,848nm,19.0s,baz=66,slow=38
WB0 Warramunga Arr 81.78 115 P **P 16 15 01.2 -1.7**
FORT Forrest 81.79 127 P **P 16 15 03.2 +0.4**
WRA Warramunga Arr 81.81 115 P **P 16 15 01.9 -1.2**
comp=Z,12nm,1.1s,baz=307,slow=4.5,SNR=30
comp=Z,12nm,1.1s
WRA Warramunga Arr 81.81 115 P **P 16 15 02.0 -1.1**
WRA Warramunga Arr 81.81 115 P **P 16 15 02.0 -1.1**
WRAB Tennant Creek 81.81 115 P **P 16 15 01.8 -1.3**
WRAB pmax pmax
comp=Z,22nm,0.9s
WRAB Tennant Creek 81.81 115 P **P 16 15 02.9 -0.2**
WB2 Warramunga Arr 81.82 115 P **P 16 15 02.1 -1.0**
WB2 IAmb IAmb 16 15 11.1
comp=Z,20nm,0.9s
WB1 Warramunga Ar. 81.82 115 P **P 16 15 03.0 -0.1**
WR0 Warramunga Arr 81.98 115 P **P 16 15 02.3 -1.7**
WR0 IAmb IAmb 16 15 17.5
comp=Z,30nm,1.4s
AS31 Alice Springs 83.06 118 P **P 16 15 08.2 -1.4**
ASAR Alice Springs 83.06 118 P **P 16 15 07.7 -1.9**
comp=Z,6.9nm,0.7s,baz=298,slow=5.4,SNR=87
ASAR LR LR 16 53 11.2
comp=Z,813nm,18.4s,baz=298,slow=36
comp=Z,6.9nm,0.7s
ASAR Alice Springs 83.06 118 P **P 16 15 08.2 -1.3**
ASAR Alice Springs 83.06 118 P **P 16 15 08.3 -1.3**
AS01 Alice Springs 83.10 118 P **P 16 15 09.6 -0.2**
RES Resolute Bay 83.55 354 LR LR 16 59 08.9
comp=Z,793nm,18.6s,baz=19,slow=40
OOD Oodnadatta 86.30 121 P **P 16 15 25.6 -0.2**
SHEM Shemya Is, Ala 86.37 34 LR LR 16 59 46.0
comp=Z,2μm,18.3s,baz=292,slow=40
QIS Mount Isa 86.56 113 P **P 16 15 26.8 -0.5**
COEN Coen 87.16 106 P **P 16 15 29.5 -0.8**
COEN IAmb IAmb 16 15 48.0
comp=Z,60nm,1.7s
FRB Frobisher Bay 87.27 340 LR LR 16 58 09.5
comp=Z,642nm,20.3s,baz=39,slow=38
A36M Sachs Harbour 87.33 2 P **P 16 15 29.9 -0.2**
A36M IAmb IAmb 16 15 43.6
comp=Z,32nm,1.0s
TOLK Toolik Lake Re 87.96 11 P **P 16 15 33.5 +0.2**
MAW Mawson 88.15 180 P **P 16 15 32.8 -1.0**
comp=Z,2.6nm,1.0s,baz=308,slow=5.7,SNR=2.3
MAW LR LR 16 45 53.8
comp=Z,1μm,21.9s,baz=351,slow=29
comp=Z,2.6nm,1.0s
PMG Port Moresby 89.12 100 LR LR 16 59 33.6
comp=Z,197nm,19.5s,baz=292,slow=38
IMAR Indian Mountai 89.42 14 P **P 16 15 39.6 -0.5**
LCRK Leigh Creek 89.43 123 P **P 16 15 41.6 +0.9**
MTSU Mount Surprise 89.73 109 P **P 16 15 43.0 +0.6**
BMAR Burnt Mountain 89.89 10 P **P 16 15 42.6 +0.2**
H21K Melozitna River 89.90 14 P **P 16 15 42.2 -0.2**
WHYH Whyalla 90.01 125 P **P 16 15 44.8 +1.5**
INKA Innaminka 90.36 120 P **P 16 15 45.5 +0.4**
H23K Yukon River 90.44 12 P **P 16 15 45.1 +0.2**
H23K IAmb IAmb 16 15 55.1
comp=Z,30nm,1.4s
INK Inuvik 90.45 6 LR LR 17 02 22.3
comp=Z,369nm,20.2s,baz=336,slow=40
J20K Nowinta River 90.85 15 P **P 16 15 47.2 +0.4**
J20K IAmb IAmb 16 15 57.2
comp=Z,30nm,1.3s
MLY Manley 90.89 13 P **P 16 15 47.4 +0.3**
I23K Minto, Yukon-K 91.07 13 P **P 16 15 48.3 +0.5**
I23K IAmb IAmb 16 16 00.1
comp=Z,30nm,1.4s
MDM Murphy Dome 91.47 12 P **P 16 15 49.3 -0.4**
MDM IAmb IAmb 16 15 58.9
comp=Z,24nm,1.2s

GHSS Government Hou 91.56 127 P **P 16 15 51.2 +0.6**
BPAW Bear Paw Mtn. 91.64 14 P **P 16 15 50.9 +0.3**
BPAW IAmb IAmb 16 15 59.2
comp=Z,42nm,1.4s
ILAR Eielson Array 91.90 12 P **P 16 15 50.4 -1.3**
comp=Z,0.7nm,0.9s,baz=332,slow=3.9,SNR=4.7
ILAR PP **PP 16 19 25.9 -4.2**
comp=Z,0.3nm,0.7s,baz=116,slow=9.5,SNR=2.3
ILAR PKKPbc **PKKPdf 16 33 08.1 +1.2**
comp=Z,0.6nm,0.9s,baz=230,slow=7.0,SNR=3.0
ILAR LR LR 17 05 48.0
comp=Z,636nm,18.3s,baz=306,slow=41
comp=Z,0.7nm,0.9s
CAST Castle Rocks 91.98 14 P **P 16 15 51.9 -0.3**
CTA Charters Tower 92.15 111 LR LR 16 59 49.8
comp=Z,552nm,19.7s,baz=290,slow=37
STKA Stephens Creek 92.65 123 P **P 16 15 55.0 -0.7**
comp=Z,2.7nm,0.8s,baz=321,slow=6.5,SNR=2.5
STKA LR LR 16 56 14.9
comp=Z,1μm,19.5s,baz=284,slow=35
comp=Z,2.7nm,0.8s
QLP Quilpie 92.79 117 P **P 16 15 57.4 +1.0**
SCHQ Schefferville 92.81 333 LR LR 17 00 16.2
comp=Z,139nm,19.5s,baz=59,slow=37
DAWY Dawson 93.83 9 P **P 16 16 00.2 -0.4**
DAWY IAmb IAmb 16 16 12.5
comp=Z,16nm,1.2s
BCAR Beaver Creek A 94.38 10 P **P 16 16 03.5 +0.3**
M31M Drury Creek, Y 96.29 8 P **P 16 16 11.7 -0.2**
M31M IAmb IAmb 16 16 22.9
comp=Z,10nm,1.2s
RMQ Roma 96.54 116 P **P 16 16 13.7 0.0**
KDAK Kodiak Island 96.66 18 LR LR 17 07 42.8
comp=Z,1μm,18.1s,baz=334,slow=40
N31M Braeburn, Yuko 96.80 8 P **P 16 16 13.7 -0.6**
N31M IAmb IAmb 16 16 15.7
comp=Z,9.8nm,0.9s
YKA Yellowknife Ar 96.93 358 P **P 16 16 14.6 -0.1**
comp=Z,5.0nm,0.9s,baz=356,slow=5.5,SNR=3.8
YKA LR LR 17 05 01.6
comp=Z,1μm,19.9s,baz=356,slow=39
comp=Z,5.0nm,0.9s
P33M Teslin, Yukon 98.41 7 P **P 16 16 20.9 -0.7**
P33M IAmb IAmb 16 16 24.4
comp=Z,7.1nm,0.9s
DZM Mont Dzumac 110.68 107 *e*LR LR 16 53 58.3
comp=Z,741nm,23.2s
PDAR Pinedale Array 116.23 353 PKP **PKiKP 16 21 27.0 -0.5**
comp=Z,1.0nm,0.7s,baz=8.5,slow=3.0,SNR=6.5
HWUT Hardware Ranch 117.59 354 **PKPdf 16 21 29.4 -0.8**
NV11 Mina Array Sit 121.08 360 **PKPdf 16 21 36.5 -0.4**
NVAR Mina Array Bea 121.08 360 PKP **PKiKP 16 21 37.9 +0.8**
comp=Z,2.8nm,0.8s,baz=295,slow=0.8,SNR=15
NVAR Mina Array Bea 121.08 360 **PKPdf 16 21 36.8 -0.2**
GMN Gold Mountain 122.20 359 **PKPdf 16 21 38.9 -0.3**
CPUP Villa Florida 124.26 252 PKP **PKPdf 16 21 41.8 -1.1**
comp=Z,1.9nm,0.7s,baz=87,slow=0.8,SNR=4.5
SGCB S̆ćo Gabriel d 125.86 286 *e*P **PKiKP 16 21 47.2 +0.4**
TX31 Lajitas Ar. Si 128.19 344 **PKPdf 16 21 50.3 -0.4**
TX32 Lajitas Array 128.19 344 **PKPdf 16 21 50.2 -0.5**
TXAR Lajitas Array 128.19 344 PKP **PKPdf 16 21 50.3 -0.3**
comp=Z,2.6nm,0.9s,baz=162,slow=0.8,SNR=14
TXAR Lajitas Array 128.19 344 PKPdf **PKPdf 16 21 50.0 -0.7**
ETMB Extrema 128.76 274 *e*P **PKPdf 16 21 50.9 -1.0**
LPAZ La Paz 132.35 267 PKP **PKPdf 16 21 57.7 -1.7**
comp=Z,2.5nm,1.0s,baz=49,slow=4.6,SNR=9.1
LPAZ La Paz 132.35 267 PKPdf **PKPdf 16 21 58.1 -1.3**
LPAZ La Paz 132.35 267 PKIKP **PKPdf 16 21 58.1 -1.3**
LPAZ La Paz 132.35 267 *e*P **PKPdf 16 21 59.1 -0.3**
PLCA Paso Flores 135.02 233 PKP **PKiKP 16 22 04.0 -0.5**
comp=Z,2.6nm,0.8s,baz=112,slow=4.1,SNR=2.3
PPT2 Papeete2 150.34 89 *e*LR LR 17 12 21.7
comp=Z,469nm,22.0s
TBI Tubuai 151.06 101 *e*LR LR 17 12 41.9
comp=Z,3μm,39.2s
TAOE Nuku Hiva Isla 155.83 64 *e*LR LR 17 14 52.4
comp=Z,737nm,23.9s

*KRNET **31** 16:16:04.0±0.1, 41°.07N×72°.52E, h16km, mb3.3*
*NNC **31** 16:16:06.5±1.1, 41°.18N×72°.53E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=10.2km s-min=4.3km az=178.0
*SOME **31** 16:16:06.7, 41°.25N×72°.55E, h5km*
ISC 31 16:16:02.8±0.9,**41°.07N**±0°.03×**72°.58E**±0°.02,**h10**km,**n46,**
σ1§31/72,21C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.57**	**164**	⇑*iP*	**Pb**	**16 16 15.2**	**+0.3**
OHH	baz=60			⇑*iS*	**Sb**	**16 16 23.3**	**+0.2**
TRKS	**Terek-Say**	**1.18**	**293**	⇓*iP*	**Pb**	**16 16 24.6**	**-0.8**
TRKS	baz=92			⇓*iS*	**Sb**	**16 16 39.4**	**-1.4**
AML	**Almayashu**	**1.35**	**38**	P	**Pg**	**16 16 30.2**	**+1.5**
ARLS	SNR=23 **Aral**	**1.53**	**58**	⇑*iP*	**Pg**	**16 16 33.0**	**+0.9**
ARLS	baz=59			⇑*iS*	**Sg**	**16 16 54.1**	**+2.1**
BTK	**Batken**	**1.68**	**234**	⇑*iP*	**Pb**	**16 16 34.5**	**+0.6**
BTK	baz=33			⇑*iS*	**Sg**	**16 16 56.6**	**-0.3**
MRKS	**Merke**	**1.74**	**16**	*e*P	**Pg**	**16 16 37.9**	**+1.7**
MRKS	20nm,0.5s			*e*S	**Sg**	**16 17 00.6**	**+1.9**
MRKS	139nm,0.4s **Merke**	**1.74**	**16**	P	**Pg**	**16 16 37.9**	**+1.7**
MRKS	20nm,0.5s			S	**Sg**	**16 17 00.6**	**+1.9**
EKS2	139nm,0.4s **Erkin-Say**	**1.82**	**29**	P	**Pg**	**16 16 39.8**	**+2.0**
EKS2	SNR=12 **Erkin-Say**	**1.82**	**29**	⇑*iP*	**Pg**	**16 16 37.9**	**+0.1**
EKS2	baz=30			⇑*iS*	**Sg**	**16 17 02.5**	**+1.1**
UCH	**Uchtor**	**1.85**	**51**	P	**Pg**	**16 16 40.1**	**+1.7**
UCH	SNR=30 **Uchtor**	**1.85**	**51**	⇑*iP*	**Pg**	**16 16 38.8**	**+0.4**
UCH	baz=52			⇑*iS*	**Sg**	**16 17 04.1**	**+1.7**
DZA	**Taraz**	**2.04**	**333**	*e*P	**Pg**	**16 16 42.4**	**+0.4**
DZA	65nm,0.1s			*e*S	**Sg**	**16 17 08.2**	**-0.3**
DZA	172nm,0.2s **Taraz**	**2.04**	**333**	Pg	**Pg**	**16 16 42.4**	**+0.4**
DZA	65nm,0.1s			Lg	Lg	16 17 08.3	
AAK	172nm,0.2s **Ala-Archa**	**2.12**	**42**	P	**Pg**	**16 16 44.0**	**+0.5**
AAK	SNR=18 **Ala-Archa**	**2.12**	**42**	⇑*iP*	**Pb**	**16 16 42.3**	**+0.9**
AAK	baz=43			⇑*iS*	**Sg**	**16 17 10.2**	**-0.7**
IUG	baz=43 **Iuzhnay**	**2.19**	**300**	*e*P	**Pb**	**16 16 44.3**	**+1.6**
IUG	768nm,0.2s			*e*S	**Sb**	**16 17 11.7**	**+1.8**
IUG	370nm,0.2s **Iuzhnay**	**2.19**	**300**	Pg	**Pb**	**16 16 44.3**	**+1.6**
IUG	768nm,0.2s			Lg	Lg	16 17 11.7	
KBK	370nm,0.2s **Karagaybulak**	**2.37**	**47**	P	**Pg**	**16 16 48.1**	**-0.2**
KBK	SNR=8.0 **Karagaybulak**	**2.37**	**47**	⇑*iP*	**Pb**	**16 16 45.9**	**+0.1**
KBK	baz=48			⇑*iS*	**Sb**	**16 17 16.4**	**+1.2**
CHMS	**Chumysh**	**2.51**	**39**	P	**Pb**	**16 16 49.5**	**+1.4**
CHMS	SNR=5.4 **Chumysh**	**2.51**	**39**	⇑*eP*	**Pb**	**16 16 47.7**	**-0.4**
CHMS	baz=40			⇑*iS*	**Sb**	**16 17 19.5**	**+0.4**
KK31	**Karatay Array**	**2.55**	**323**	⇑Pn	**Pb**	**16 16 47.3**	**-1.4**
KK31	0.4nm,0.2s,baz=133,slow=13,SNR=36			⇓Pg	**Pg**	**16 16 51.3**	**-0.3**
KK31	6.3nm,0.5s,baz=122,slow=14,SNR=11			⇑Lg	Lg	16 17 23.4	
KKAR	12nm,0.3s,baz=241,slow=57,SNR=16 **Karatay Array**	**2.55**	**323**	⇓*eP*	**Pb**	**16 16 47.4**	**-1.2**
KKAR	baz=24			⇓*iS*	**Sb**	**16 17 19.0**	**-1.1**
USP	baz=24 **Ospenovka**	**2.62**	**32**	P	**Pb**	**16 16 50.6**	**+0.7**
USP	SNR=9.3 **Ospenovka**	**2.62**	**32**	⇑*eP*	**Pb**	**16 16 49.1**	**-0.7**
USP	baz=33			⇑*iS*	**Sb**	**16 17 21.8**	**-0.2**
SGDS	baz=33 **Sogindy**	**2.82**	**32**	*e*P	**Pb**	**16 16 54.8**	**+1.5**
SGDS	4.2nm,0.6s			*e*S	**Sb**	**16 17 29.9**	**+1.9**
SGDS	76nm,0.9s **Sogindy**	**2.82**	**32**	Pg	**Pb**	**16 16 55.0**	**+1.6**
SGDS	4.2nm,0.6s			Lg	Lg	16 17 29.9	
BOOM	76nm,0.9s **Boomskoye usch**	**2.88**	**59**	⇓*iP*	**Pb**	**16 16 53.1**	**-1.4**
BOOM	baz=60			⇓*iS*	**Sb**	**16 17 29.0**	**-0.9**
TKM2	baz=60 **Tokmak 2**	**2.91**	**50**	⇑Pn	**Pb**	**16 16 54.2**	**-0.7**
TKM2	7.8nm,0.6s			⇓Lg	Lg	16 17 37.4	
KST	26nm,0.8s **Kastek**	**3.20**	**51**	*e*P	**Pg**	**16 17 03.8**	**-0.3**
KST	4.4nm,0.5s			*e*S	**Sg**	**16 17 44.9**	**-0.6**
KST	38nm,0.6s **Kastek**	**3.20**	**51**	Pg	**Pg**	**16 17 03.8**	**-0.3**
KST	4.4nm,0.5s			Lg	Lg	16 17 44.9	
MTBS	38nm,0.6s **Maitube**	**3.52**	**53**	*e*P	**Pg**	**16 17 10.7**	**+0.3**
MTBS	3.7nm,0.5s			*e*S	**Sg**	**16 17 56.4**	**+0.4**
MTBS	8.9nm,0.3s **Maitube**	**3.52**	**53**	Pg	**Pg**	**16 17 10.7**	**+0.3**
MTBS	3.7nm,0.5s			Lg	Lg	16 17 56.4	
TNSS	8.9nm,0.3s **Tian-Shan**	**3.80**	**57**	*e*P	**Pg**	**16 17 15.9**	**+0.3**
TNSS	3.5nm,0.6s			*e*S	**Sg**	**16 18 05.5**	**+0.8**
TNSS	4.9nm,0.5s **Tian-Shan**	**3.80**	**57**	Pg	**Pg**	**16 17 15.9**	**+0.3**
TNSS	3.5nm,0.6s			Lg	Lg	16 18 05.5	
MDOK	4.9nm,0.5s **Medeo**	**3.92**	**56**	Pn	**Pb**	**16 17 08.1**	**-4.1**
MDOK	6.6nm,0.8s			Lg	Lg	16 18 09.7	
KUU	15nm,0.9s **Kurty**	**3.96**	**43**	*e*P	**Pg**	**16 17 17.2**	**-1.5**
KUU	1.4nm,0.1s			*e*S	**Sg**	**16 18 07.7**	**-2.2**
KUU	8.7nm,0.7s **Kurty**	**3.96**	**43**	Pg	**Pg**	**16 17 17.2**	**-1.5**
KUU	1.4nm,0.1s			Lg	Lg	16 18 07.7	
BTLS	8.7nm,0.7s **Baital**	**4.11**	**15**	*e*P	**Pg**	**16 17 19.9**	**-1.6**
BTLS	2.1nm,0.4s			*e*S	**Sg**	**16 18 12.4**	**-2.4**
BTLS	13nm,0.5s **Baital**	**4.11**	**15**	Pg	**Pg**	**16 17 19.9**	**-1.6**
BTLS	2.1nm,0.4s			Lg	Lg	16 18 12.4	
CHKK	13nm,0.5s **Chushkaly**	**4.28**	**48**	*e*P	**Pg**	**16 17 24.1**	**-0.8**
CHKK	0.8nm,0.1s			*e*S	**Sg**	**16 18 19.5**	**-0.9**
CHKK	7.6nm,0.5s **Chushkaly**	**4.28**	**48**	Pg	**Pg**	**16 17 24.1**	**-0.8**
CHKK	0.8nm,0.1s			Lg	Lg	16 18 19.5	
SATY	7.6nm,0.5s **Saty**	**4.77**	**63**	*e*P	**Pg**	**16 17 34.5**	**+0.4**
SATY	4.1nm,0.9s			*e*S	**Sg**	**16 18 38.2**	**+2.4**
SATY	4.1nm,0.8s **Saty**	**4.77**	**63**	Pg	**Pg**	**16 17 34.6**	**+0.4**
SATY	4.1nm,0.9s			Lg	Lg	16 18 38.2	
UZB	4.1nm,0.8s **Uzynbulak**	**5.22**	**64**	*e*P	**Pg**	**16 17 41.4**	**-1.4**
UZB	2.5nm,1.2s			*e*S	**Sg**	**16 18 49.0**	**-1.4**
UZB	5.6nm,0.8s **Uzynbulak**	**5.22**	**64**	Pg	**Pg**	**16 17 41.4**	**-1.4**
UZB	2.5nm,1.2s			Lg	Lg	16 18 49.0	
	5.6nm,0.8s						

*NEIC **31** 16:22:35.2±1.3, 12°.96S±0°.06×169°.3E±0°.1, h627km±6km,*
mb4.5/73, Error ellipse: s-maj=17.0km s-min=8.7km
az=83.0
*NOU **31** 16:22:35.8, 12°.89S×169°.22E, h644km, mb4.5/23, Santa*
Cruz Islands Region
*IDC **31** 16:22:37.0±1.2, 12°.97S×169°.12E, h659km±17km,*
mb3.5/16, mbtmp4.5/19, Error ellipse: s-maj=11.8km
s-min=10.8km az=139.0
ISC 31 16:22:35.1±0.4,**12°.88S**±0°.06×**169°.15E**±0°.07,**h625**km,
n175,σ1§**40**/178,**mb4.4**/48,**Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**8.06**	**193**	P	**P**	**16 24 35.9**	**+0.1**
MARNC	**Mare, Loyalty**	**8.62**	**187**	P	**P**	**16 24 41.5**	**+0.5**
MARNC	**Mare, Loyalty**	**8.62**	**187**	P	**P**	**16 24 42.2**	**+1.2**
KOUNC	**Koumac, New Ca**	**8.94**	**211**	P	**P**	**16 24 44.0**	**-0.1**
DZM	**Mont Dzumac**	**9.50**	**195**	P	**P**	**16 24 51.8**	**+2.3**
	5.4nm,0.4s,baz=72,slow=18,SNR=19						
DZM	**Mont Dzumac**	**9.50**	**195**	P	**P**	**16 24 51.0**	**+1.4**
DZM	**Mont Dzumac**	**9.50**	**195**	P	**P**	**16 24 51.9**	**+2.3**
NOUC	**Port Laguerre**	**9.56**	**196**	P	**P**	**16 24 52.3**	**+2.2**
HNR	**Honiara**	**9.65**	**290**	P	**P**	**16 24 51.9**	**+0.8**
	158nm,0.3s,baz=191,slow=5.2,SNR=5.3						
HNR				S	**S**	**16 26 45.3**	**+2.7**
	225nm,0.5s,baz=124,slow=20,SNR=2.3						
HNR	**Honiara**	**9.65**	**290**	P	**P**	**16 24 52.1**	**+1.0**
HNR	**Honiara**	**9.65**	**290**	P	**P**	**16 24 52.7**	**+1.6**
MSVF	**Nonsavu**	**9.85**	**120**	P	**P**	**16 24 53.9**	**+0.9**
	16nm,0.7s,baz=278,slow=12,SNR=19						
MSVF	**Nonsavu**	**9.85**	**120**	P	**P**	**16 24 54.0**	**+1.0**
MSVF	**Nonsavu**	**9.85**	**120**	P	**P**	**16 24 54.4**	**+1.4**
RABL	**Rabaul**	**18.87**	**296**	P	**P**	**16 26 20.2**	**+2.5**
RABL				IAmb	IAmb	16 26 33.7	
	comp=Z,30nm,1.1s						
PMG	**Port Moresby**	**21.84**	**277**	P	**P**	**16 26 45.0**	**+0.7**
PMG				IAmb	IAmb	16 27 25.4	
	comp=Z,17nm,1.0s						
TV1H	**Townsville Har**	**22.38**	**251**	P	**P**	**16 26 50.4**	**+1.4**
CTA	**Charters Tower**	**23.07**	**249**	P	**P**	**16 26 55.4**	**+0.2**
	comp=Z,5.1nm,0.6s,baz=79,slow=11,SNR=13						
	comp=Z,5.1nm,0.6s						
CTAO	**Charters Tower**	**23.07**	**249**	P	**P**	**16 26 56.1**	**+0.9**
CTAO				IAmb	IAmb	16 26 57.0	
	comp=Z,5.5nm,0.6s						
ARMA	**Armidale**	**23.81**	**220**	P	**P**	**16 27 02.2**	**+0.5**
ARMA				IAmb	IAmb	16 27 24.6	
	comp=Z,26nm,1.5s						
MKAZ	**Moumakai**	**24.72**	**168**	P	**P**	**16 27 10.9**	**+1.5**
COEN	**Coen**	**25.28**	**265**	P	**P**	**16 27 16.0**	**+1.3**
COEN				IAmb	IAmb	16 27 16.9	
	comp=Z,9.4nm,0.8s						
COEN	**Coen**	**25.28**	**265**	P	**P**	**16 27 16.3**	**+1.6**
TOZ	**Tahuroa Road**	**25.39**	**168**	P	**P**	**16 27 16.4**	**+1.1**
MXZ	**Matakaoa Point**	**25.91**	**163**	P	**P**	**16 27 18.5**	**-1.4**
MXZ	**Matakaoa Point**	**25.91**	**163**	P	**P**	**16 27 18.8**	**-1.1**
MXZ	**Matakaoa Point**	**25.91**	**163**	P	**P**	**16 27 18.9**	**-0.9**
HAZ	**Te Kaha**	**25.95**	**164**	P	**P**	**16 27 19.7**	**-0.5**
TLZ	**Tolley Road**	**25.98**	**168**	P	**P**	**16 27 21.9**	**+1.4**
HIZ	**Hauiti**	**26.03**	**170**	P	**P**	**16 27 22.6**	**+1.7**
HIZ	**Hauiti**	**26.03**	**170**	P	**P**	**16 27 22.6**	**+1.7**
RUGZ	**Raukumara Rang**	**26.11**	**165**	P	**P**	**16 27 20.6**	**-1.2**
PKGZ	**Pakihiroa**	**26.15**	**164**	P	**P**	**16 27 21.3**	**-0.8**
WMGZ	**Waiomatatini S**	**26.18**	**163**	P	**P**	**16 27 21.3**	**-0.9**
HRRZ	**Handcock Road**	**26.19**	**167**	P	**P**	**16 27 27.6**	**+5.3**
URZ	**Urewera**	**26.25**	**166**	P	**P**	**16 27 22.1**	**-0.7**
	comp=Z,6.7nm,0.3s,baz=22,slow=2.0,SNR=20						
	comp=Z,6.7nm,0.3s						
URZ	**Urewera**	**26.25**	**166**		**P**	**16 27 22.2**	**-0.7**
URZ				IAmb	IAmb	16 27 33.1	
	comp=Z,9.6nm,0.6s						

URZ	Urewera	26.25 166	P	P	16 27 22.6	-0.3
URZ	Urewera	26.25 166	P	P	16 27 22.6	-0.3
WPRZ	Whakapapatarin	26.29 168	P	P	16 27 19.8	-3.5
ALRZ	Allen Road	26.37 167	P	P	16 27 20.5	-3.4
PUZ	Puketiti	26.37 164	P	P	16 27 22.5	-1.4
MUGZ	Murupara	26.38 166	P	P	16 27 24.2	+0.2
TWGZ	Tauwhareparae	26.39 164	P	P	16 27 23.6	-0.6
MWZ	Matawai	26.43 165	P	P	16 27 23.6	-0.8
RATZ	Rangitukua	26.54 168	P	P	16 27 27.4	+2.0
RTZ	Ruatahuna	26.56 166	P	P	16 27 24.9	-0.7
TKGZ	Te Karaka	26.61 165	P	P	16 27 25.0	-0.9
KATZ	Kakaramea	26.63 169	P	P	16 27 28.0	+1.7
MRHZ	Matea Rd	26.64 167	P	P	16 27 26.5	+0.1
KHEZ	Kahui Hut	26.66 172	P	P	16 27 28.7	+2.2
TWVZ	Taurewa	26.68 169	P	P	16 27 27.9	+1.2
KRVZ	Karewarewa	26.74 169	P	P	16 27 28.7	+1.5
WTVZ	West Tongariro	26.75 169	P	P	16 27 28.8	+1.4
NNVZ	North Ngauruho	26.77 169	P	P	16 27 29.0	+1.4
TMVZ	Te Maari	26.77 169	P	P	16 27 28.9	+1.3
ETVZ	East Tongariro	26.79 169	P	P	16 27 29.0	+1.3
SNGZ	Shannon Statio	26.80 166	P	P	16 27 27.0	-0.7
OTVZ	Oturere	26.81 169	P	P	16 27 30.0	+2.1
SNVZ	South Ngauruho	26.82 169	P	P	16 27 29.5	+1.4
RAHZ	Arahi	26.87 166	P	P	16 27 27.7	-0.6
LREZ	Lake Rotokare	26.88 171	P	P	16 27 30.9	+2.5
WNVZ	Wahianoa	26.95 169	P	P	16 27 30.7	+1.5
BKZ	Black Stump Fm	26.98 167		P	16 27 28.6	-0.6
BKZ	Black Stump Fm	26.98 167	P	P	16 27 28.8	-0.5
BKZ	Black Stump Fm	26.98 167	P	P	16 27 28.6	-0.6
NMHZ	Naumai	26.98 167	P	P	16 27 29.5	+0.2
ARHZ	Aropaoanui	27.18 167	P	P	16 27 30.4	-0.5
KWHZ	Kaweka Forest	27.21 168	P	P	16 27 30.9	-0.4
WAZ	Wanganui	27.26 170	P	P	16 27 33.3	+1.6
MCHZ	McNeill Hill	27.29 167	P	P	16 27 31.5	-0.4
MHGZ	Mahia Peninsul	27.29 165	P	P	16 27 30.9	-1.1
QRZ	Quartz Range	28.00 175	P	P	16 27 39.6	+1.6
BFZ	Birch Farm	28.39 169	P	P	16 27 40.0	-1.4
BFZ	Birch Farm	28.39 169	P	P	16 27 40.1	-1.4
CMSA	Cobar Meteorol	28.46 225	P	P	16 27 42.4	+0.2
SNZO	South Karori	28.74 171	P	P	16 27 43.6	-0.8
TUWZ	Tuamarina	28.75 172	P	P	16 27 44.0	-0.5
MSWZ	Moikau Station	28.92 170	P	P	16 27 44.9	-1.2
PLWZ	Palliser	29.07 171	P	P	16 27 46.2	-1.2
QIS	Mount Isa	29.27 251	P	P	16 27 50.2	+0.8
KHZ	Kahutara	29.67 173	P	P	16 27 51.6	-0.8
FOZ	Fox Glacier	30.55 179	P	P	16 27 60.0	+0.1
RPZ	Rata Peaks	30.77 177	P	P	16 28 01.4	-0.5
	comp=Z,9.1nm,0.7s,baz=14,slow=7.5,SNR=6.7					
	comp=Z,9.1nm,0.7s					
RPZ	Rata Peaks	30.77 177	P	P	16 28 01.3	-0.5
STKA	Stephens Creek	31.57 229	P	P	16 28 10.1	+1.3
	comp=Z,1.9nm,0.3s,baz=52,slow=8.7,SNR=22					
	comp=Z,1.9nm,0.3s					
ODZ	Otahua Downs	32.08 178	P	P	16 28 12.7	-0.2
TOO	Toolangi	32.41 216	P	P	16 28 16.7	+0.8
TOO			IAmb	IAmb	16 28 45.3	
	comp=Z,28nm,1.4s					
WHZ	Wether Hill Ro	32.92 182	P	P	16 28 19.3	-0.6
WR0	Warramunga Arr	33.88 253	P	P	16 28 28.1	-0.3
WB0	Warramunga Arr	34.00 254	P	P	16 28 29.1	-0.3
WB2	Warramunga Arr	34.06 253	P	P	16 28 29.6	-0.3
WRAB	Tennant Creek	34.06 253	P	P	16 28 29.6	-0.3
WRA	Warramunga Arr	34.07 253	P	P	16 28 29.8	-0.2
	comp=Z,22nm,0.3s,baz=84,slow=8.6,SNR=627					
WRA			S	S	16 33 09.3	-4.2
	comp=Z,1.7nm,0.8s,baz=83,slow=14,SNR=8.0					
	comp=Z,22nm,0.3s					
AS31	Alice Springs	35.05 247	P	P	16 28 38.0	-0.1
ASAR	Alice Springs	35.05 247	P	P	16 28 38.2	+0.1
	comp=Z,23nm,0.4s,baz=76,slow=9.7,SNR=1280					
ASAR			PcP	PcP	16 30 49.4	-2.3
	comp=Z,0.4nm,0.7s,baz=76,slow=3.9,SNR=2.0					
ASAR			S	S	16 33 25.6	-2.5
	comp=Z,2.1nm,0.8s,baz=72,slow=16,SNR=11					
	comp=Z,23nm,0.4s					
ASAR	Alice Springs	35.05 247	P	P	16 28 38.0	-0.1
TAU	Tasmania Unive	35.38 208	P	P	16 28 41.2	+0.8
BBOO	Buckleboo	36.15 231	P	P	16 28 47.7	+0.7
BBOO			IAmb	IAmb	16 29 12.7	
	comp=Z,38nm,1.5s					
MTN	Manton Dam	37.04 266	P	P	16 28 54.9	+0.5
KNRA	Kununurra	39.20 261	P	P	16 29 11.8	0.0
FORT	Forrest	41.81 238	P	P	16 29 32.6	+0.3
FORT			IAmb	IAmb	16 29 33.4	
	comp=Z,14nm,0.6s					
SOEI	Soe	44.08 269	P	P	16 29 51.1	+0.9
SOEI			IAmb	IAmb	16 29 51.9	
	comp=Z,12nm,0.5s					
MMRI	Maumere	46.23 270	P	P	16 30 06.7	+0.3
MMRI			IAmb	IAmb	16 30 08.0	
	comp=Z,19nm,0.7s					
PSA00	Pilbara Seismi	47.71 253	P	P	16 30 17.4	0.0
PSA00			IAmb	IAmb	16 30 18.1	
	comp=Z,5.6nm,0.5s					
MBWA	Marble Bar	47.81 253	P	P	16 30 18.3	+0.1
MBWA			IAmb	IAmb	16 30 19.2	
	comp=Z,9.7nm,0.7s					
TOLI2	Tolitoli	49.95 283	P	P	16 30 33.8	-0.1
TOLI2			IAmb	IAmb	16 30 35.8	
	comp=Z,6.7nm,0.7s					
NWAO	Narrogin (SRO)	51.26 238	P	P	16 30 42.8	-0.4
NWAO			IAmb	IAmb	16 30 49.4	
	comp=Z,51nm,1.4s					
MORW	Morawa	51.72 243	P	P	16 30 46.7	+0.2
MORW			IAmb	IAmb	16 31 15.6	
	comp=Z,32nm,1.4s					
JAGI	Jajag, Banyuwa	54.14 269	P	P	16 31 02.4	-1.5
JAGI			IAmb	IAmb	16 31 41.9	
	comp=Z,24nm,1.0s					
KKM	Kota Kinabalu	55.85 286	P	P	16 31 15.6	-0.2
KKM			IAmb	IAmb	16 31 49.9	
	comp=Z,30nm,1.1s					
MJAR	Matsushiro Arr	57.16 330	P	P	16 31 24.0	-0.2
	comp=Z,1.4nm,0.5s,baz=163,slow=8.0,SNR=7.6					
	comp=Z,1.4nm,0.5s					
MAJO	Matsushiro	57.16 330	P	P	16 31 24.5	+0.3
JSU	Suzuyama	57.66 321	P	P	16 31 28.2	+0.4
JSU			IAmb	IAmb	16 31 46.9	
	comp=Z,90nm,1.5s					
UGM	Wanagama	57.77 269	P	P	16 31 28.5	-0.3
JSD	Sado	58.34 332	P	P	16 31 32.8	+0.7
JSD			IAmb	IAmb	16 31 36.7	
	comp=Z,88nm,1.5s					
JHS	Saijyo	58.60 326	P	P	16 31 34.6	+0.6
VNDA	Vanda	64.75 182	P	P	16 32 12.6	-0.4
	comp=Z,1.1nm,0.6s,baz=359,slow=6.0,SNR=23					
	comp=Z,1.1nm,0.6s					
VNDA	Vanda	64.75 182	P	P	16 32 13.3	+0.2
SBA	Scott Base	64.98 181	P	P	16 32 15.7	+1.2
ADK	Adak	65.66 10	P	P	16 32 21.7	+2.7
USA0B	Ussuriysk Arra	66.10 332	P	P	16 32 22.6	+0.7
USA0B			IAmb	IAmb	16 33 04.8	
	comp=Z,13nm,1.3s					
USRK	Ussuriysk Ar.	66.10 332	P	P	16 32 22.5	+0.6
	comp=Z,0.7nm,0.4s,baz=90,slow=10,SNR=6.1					
	comp=Z,0.7nm,0.4s					
USRK	Ussuriysk Ar.	66.10 332	P	P	16 32 22.8	+0.9
PEA0B	Petropavlovsk-	66.45 352	P	P	16 32 24.6	+0.7
PETK	Petropavlovsk-	66.45 352	P	P	16 32 23.6	-0.4
	comp=Z,4.1nm,0.8s,baz=150,slow=6.3,SNR=7.9					
	comp=Z,4.1nm,0.8s					
PETK	Petropavlovsk-	66.45 352	P	P	16 32 24.2	+0.3
IPM	Ipoh	69.81 280	P	P	16 32 44.9	-0.2
IPM			IAmb	IAmb	16 33 15.1	
	comp=Z,31nm,1.5s					
GSI	Gunungsitoli	72.35 276	P	P	16 33 00.1	+0.2
GSI			IAmb	IAmb	16 33 01.0	
	comp=Z,22nm,0.9s					
CMAR	Chiang Mai Arr	75.89 293	P	P	16 33 20.8	+1.2
	comp=Z,5.3nm,0.9s,baz=123,slow=4.1,SNR=27					
	comp=Z,5.3nm,0.9s					
CMAR	Chiang Mai Arr	75.89 293	P	P	16 33 19.6	0.0
CHTO	Chiang Mai	76.00 293	P	P	16 33 20.2	0.0
QSPA	South Pole Qui	77.14 180	P	P	16 33 25.4	-0.3
LZH	Lanzhou	78.45 311	eP	P	16 33 29.3	-4.0
LZH			pP	PcP	16 33 35.8	-3.9
CNPM	China Poot	78.91 19	P	P	16 33 35.6	+0.6
L19K	White Mountain	79.95 16	P	P	16 33 40.8	+0.5
L19K			IAmb	IAmb	16 34 12.5	
	comp=Z,18nm,1.4s					
M20K	Styx River	80.19 17	P	P	16 33 41.2	-0.5
SUA	Susitna One	80.57 18	P	P	16 33 43.9	+0.2
SUA			IAmb	IAmb	16 34 09.9	
	comp=Z,31nm,1.4s					
RC01	Rabbit Creek A	80.59 19	P	P	16 33 43.6	-0.1
RC01			IAmb	IAmb	16 33 44.7	
	comp=Z,30nm,1.2s					
YAK	Yakutsk	80.82 342	P	P	16 33 44.9	+0.1
YAK			IAmb	IAmb	16 33 46.0	
	comp=Z,7.1nm,0.5s					
K20K	Telida	81.12 16	P	P	16 33 46.9	+0.5
CAST	Castle Rocks	81.71 17	P	P	16 33 48.5	-0.9
CAST			IAmb	IAmb	16 33 49.1	
	comp=Z,9.3nm,0.8s					
J20K	Nowinta River	81.76 15	P	P	16 33 50.0	+0.4
SCM	Sheep Creek Mo	81.92 19	P	P	16 33 50.5	-0.1
SCM			IAmb	IAmb	16 34 33.7	
	comp=Z,33nm,1.4s					
SONM	Songino Array	82.12 323	P	P	16 33 51.5	-0.5
	comp=Z,1.3nm,0.6s,baz=133,slow=5.5,SNR=7.9					
	comp=Z,1.3nm,0.6s					
SONM	Songino Array	82.12 323	P	P	16 33 51.5	-0.5
KLU	Klutina	82.13 20	P	P	16 33 51.4	-0.2
KLU			IAmb	IAmb	16 34 34.0	
	comp=Z,23nm,1.5s					
KTH	Kantishna Hill	82.14 17	P	P	16 33 50.8	-0.9
BMRM	Bremner River	82.21 21	P	P	16 33 51.7	-0.3
BMRM			IAmb	IAmb	16 34 34.4	
	comp=Z,9.2nm,1.0s					
RND	Reindeer	82.62 18	P	P	16 33 53.7	-0.4
GLB	Gilahina Butte	82.81 21	P	P	16 33 54.5	-0.6
GLB			IAmb	IAmb	16 34 38.7	
	comp=Z,12nm,1.2s					
I21K	Tanana	83.13 15	P	P	16 33 56.2	-0.2
I21K			IAmb	IAmb	16 33 57.4	
	comp=Z,9.1nm,1.1s					
H21K	Melozitna Rive	83.30 15	P	P	16 33 57.3	0.0
H21K			IAmb	IAmb	16 34 19.8	
	comp=Z,12nm,1.4s					
BARN	Barnard Glacie	83.31 22	P	P	16 33 57.4	-0.3
BARN			IAmb	IAmb	16 34 17.2	
	comp=Z,12nm,1.3s					
IMAR	Indian Mountai	83.33 14	P	P	16 33 57.3	-0.1
BEKR	Beckworth	83.73 47	P	P	16 33 58.7	-1.6
CCB	Clear Creek Bu	83.86 17	P	P	16 33 59.1	-0.9
HDA	Harding Lake	83.94 18	P	P	16 34 00.1	-0.4
HDA			IAmb	IAmb	16 34 03.1	
	comp=Z,6.1nm,1.0s					
MDM	Murphy Dome	83.97 17	P	P	16 33 59.0	-1.6
IL31		84.22 17	P	P	16 34 00.3	-1.4
ILAR	Eielson Array	84.22 17	P	P	16 34 00.1	-1.8
	comp=Z,1.8nm,0.7s,baz=234,slow=5.2,SNR=24					
	comp=Z,1.8nm,0.7s					
SCRK	Sand Creek	84.53 19	P	P	16 34 03.1	-0.4
DSP	Deep Springs	84.56 50	P	P	16 34 05.2	+1.1
NVAR	Mina Array Bea	84.69 49	P	P	16 34 03.2	-1.8
	comp=Z,0.4nm,0.8s,baz=253,slow=9.2,SNR=2.3					
	comp=Z,0.4nm,0.8s					
BMAR	Burnt Mountain	86.80 16	P	P	16 34 14.2	0.0
ZALV	Zalesovo Beam	96.99 324	P	P	16 34 59.6	-1.4
	comp=Z,0.7nm,0.6s,baz=132,slow=4.2,SNR=3.8					
	comp=Z,0.7nm,0.6s					
MKAR	Makanchi Array	97.13 316	P	Pdif	16 35 01.7	-0.2
	comp=Z,1.0nm,0.5s,baz=80,slow=6.4,SNR=18					
	comp=Z,1.0nm,0.5s					
ARCES	ARCESS Array B	118.92 346	PKP	PKPdf	16 40 11.9	-1.4
	comp=Z,0.8nm,0.3s,baz=56,slow=2.1,SNR=25					
ARCES			PP	PP	16 41 42.5	-1.3
	comp=Z,4.6nm,1.1s,baz=355,slow=5.2,SNR=1.6					
FINES	FINESS Array B	124.67 339	PKP	PKPdf	16 40 23.7	-0.8
	comp=Z,1.6nm,1.0s,baz=42,slow=2.3,SNR=1.5					
NOA	NORSAR Array B	129.30 346	PP	PP	16 42 57.5	+5.5
	comp=Z,1.3nm,0.8s,baz=31,slow=3.0,SNR=4.8					
AKASG	Malin Array Be	130.20 328	SKPbc	SKPbc	16 42 55.8	-5.6
	comp=Z,0.3nm,0.3s,baz=60,slow=0.8,SNR=2.4					
GERES	GERESS Array B	138.78 335	SKPbc	SKPbc	16 43 26.6	-2.2
	comp=Z,0.6nm,0.6s,baz=41,slow=4.3,SNR=4.8					
SENIN	Lae Senin/Sane	143.27 339		PKPab	16 40 57.8	-0.5
ESDC	Sonseca Array	152.63 348	PKPab	PKPab	16 41 35.1	-1.2
	comp=Z,0.6nm,0.7s,baz=8.3,slow=3.9,SNR=5.3					
TORD	Torodi Ar. Bea	167.77 273	PKPab	PKPab	16 42 42.2	-1.2
	comp=Z,0.5nm,0.7s,baz=112,slow=1.6,SNR=3.6					

*DJA **31** 16:25:56.2±6.5, 8°N±52°×12°7E±2°0, h68km±22km, M4.7/6, mB4.9/5, mb4.5/6, MLv5.0/5, Mw(mB)4.2/5*
*NEIC **31** 16:26:03.8±1.3, 5°96N±0°10×128°0E±0°1, h38km±10km, mb4.7/14, Error ellipse: s-maj=18.7km s-min=13.5km az=73.0*
*MAN **31** 16:26:16.1, 6°09N×126°96E, h86km, mb4.7, ML3.6, MS3.5*
*IDC **31** 16:26:19.5±8.8, 6°27N×127°07E, h131km±80km, mb3.6/8, mbtmp4.0/8, Error ellipse: s-maj=101.8km s-min=18.6km az=68.0*

ISC 31 16:26:15.2±0.7, 6°06N±0°05×126°96E±0°08, h100km, n51, σ19°66/54, mb4.4/14, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.70 306		Pn	Pn	16 26 45.6	+1.6
DAV	Davao City (W)	1.70 306		P	Sn	16 27 06.6	+0.7
CDOP	Cateel, Davao	1.79 343		‖iP	Pn	16 26 45.7	+0.6
CDOP				*i* S	Sn	16 27 06.2	-1.6
GSPH	General Santos	2.00 271		‖iP	Pn	16 26 46.2	-1.7
GSPH				*e*S	Sn	16 27 10.0	-2.9
KCP	Kidapawan	2.08 297		‖iP	Pn	16 26 49.4	+0.4
KCP				*i* S	Sn	16 27 13.6	-1.1
BIPH	Bislig	2.19 344		‖*e*P	Pn	16 26 50.9	+0.6
BIPH				*e*S	Sn	16 27 15.4	-1.7
BUKP	Musuan	2.61 314		‖iP	Pn	16 27 07.4	+12
BUKP				*i* S	Sn	16 27 38.2	+11
SGSI	Sangihe	2.76 211		P	Pn	16 26 59.6	+1.8
CTBH	Cotabato--PC H	2.93 293		‖*e*P	Pn	16 27 02.3	+2.3
CTBH				*i* S	Sn	16 27 36.4	+1.7
CGP	Cagayan de Oro	3.27 317		‖*e*P	Pn	16 27 06.3	+1.6
CGP				*e*S	Sn	16 27 43.4	+0.6
SCPH	Surigao	3.97 339		*e*P	Pn	16 27 15.8	+1.7
SCPH				*i* S	Sn	16 27 59.5	-0.2
GAMI	Galela, Maluku	4.28 169		P	Pn	16 27 18.8	+0.6
	0.5nm1μm74nm,0.8s						
TNTI	Ternate	5.27 176		P	Pn	16 27 32.6	+1.0
	0.2nm513nm14nm,0.5s						
LBMI	Labuha	6.68 175		P	Pn	16 27 52.6	+1.8
	30nm,1.0s						
MRSI	Marisa	7.48 222		P	Pn	16 28 01.8	+0.2
	0.3nm846nm94nm,0.7s						
TOLI2	Tolitoli	7.89 232			Pn	16 28 07.1	-0.1
LUWI	Luwuk	8.20 211			Pn	16 28 05.8	-5.7
LUWI	Luwuk	8.20 211		P	Pn	16 28 08.9	-2.6
MYLDM	Lahad Datu	8.47 264		Pn	Pn	16 28 16.7	+1.6
APSI	Ampana	8.72 218		P	Pn	16 28 20.2	+1.6
	664nm28nm,1.1s						
SBUM	Sibu	15.13 257			P	16 29 48.6	+2.1
SBUM	Sibu	15.13 257		P	P	16 29 49.8	+3.3
BATI	Baumata	16.49 192		P	Pn	16 29 56.0	-4.7
TPUB	Ta-pu	18.19 341		P	P	16 30 16.7	-3.6
TPUB				IAmb	IAmb	16 30 54.6	
	comp=Z,74nm,1.3s						
WRA	Warramunga Arr	26.84 164		P	P	16 31 50.7	+4.2
	comp=Z,0.2nm,0.4s,baz=344,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	30.31 167		P	P	16 32 19.1	+1.8
	comp=Z,0.1nm,0.3s,baz=347,slow=8.2,SNR=2.1						
ASAR				PcP	PcP	16 35 16.3	+0.7
	comp=Z,0.3nm,0.7s,baz=351,slow=2.7,SNR=1.7						
	comp=Z,0.1nm,0.3s						
USA0B	Ussuriysk Arra	38.24 6		P	P	16 33 18.5	-7.0
USA0B				IAmb	IAmb	16 33 23.5	
	comp=Z,16nm,1.3s						
USRK	Ussuriysk Ar.	38.24 6		P	P	16 33 19.1	-6.4
GTA	Gaotai	41.25 328		*e*P	P	16 33 51.3	+0.6
SONM	Songino Array	45.18 341		P	P	16 34 22.1	-0.1
	comp=Z,0.4nm,0.4s,baz=160,slow=8.4,SNR=3.3						
	comp=Z,0.4nm,0.4s						
CAN	Canberra	46.10 155		P	P	16 34 19.6	-10
MK31	Makanchi Array	55.80 324		P	P	16 35 42.0	0.0
MKAR	Makanchi Array	55.80 324		P	P	16 35 42.4	+0.4
	comp=Z,1.4nm,0.3s,baz=113,slow=7.4,SNR=30						
	comp=Z,1.4nm,0.3s						
MKAR	Makanchi Array	55.80 324		P	P	16 35 42.0	0.0
MAKZ	Makanchi	55.99 324		P	P	16 35 43.3	-0.1
MAKZ				IAmb	IAmb	16 35 57.2	
	comp=Z,8.6nm,1.2s						
NIL	Nilore	56.71 306		P	P	16 35 48.8	0.0
NIL				IAmb	IAmb	16 35 49.7	
	comp=Z,11nm,1.1s						
ZAA0	Zalesovo Array	58.64 332		P	P	16 36 00.8	-1.0
ZAA0				IAmb	IAmb	16 36 02.0	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	58.64 332		P	P	16 36 01.2	-0.5
	comp=Z,1.3nm,0.4s,baz=129,slow=7.0,SNR=6.5						
	comp=Z,1.3nm,0.4s						
ZALV	Zalesovo Beam	58.64 332		P	P	16 36 00.6	-1.2
KURK	Kurchatov	59.92 327		P	P	16 36 10.8	+0.1
GAR	Garm	60.54 312		P	P	16 36 14.9	-0.4
KK31	Karatay Array	61.71 316		P	P	16 36 22.7	-0.4
KKAR	Karatay Array	61.71 316		P	P	16 36 22.7	-0.3
BRVK	Borovoye	65.58 326		P	P	16 36 48.1	-0.1
BRVK				IAmb	IAmb	16 36 49.2	
	comp=Z,6.4nm,1.1s						
GEYT	Alibeck	69.63 308		P	P	16 37 14.7	+0.5
	comp=Z,1.9nm,0.7s,baz=106,slow=4.8,SNR=4.3						
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	70.51 320		P	P	16 37 18.7	-0.5
ARU	Arti	73.11 327		P	P	16 37 33.6	-0.9
ARU				IAmb	IAmb	16 37 34.6	
	comp=Z,5.5nm,0.5s						
ARCES	ARCESS Array B	88.35 340		P	P	16 38 54.4	-1.1
	comp=Z,1.9nm,0.8s,baz=79,slow=6.3,SNR=6.1						
	comp=Z,1.9nm,0.8s						
ARCES	ARCESS Array B	88.35 340		P	P	16 38 53.5	-1.9
ARCES				IAmb	IAmb	16 39 28.2	
	comp=Z,6.6nm,1.1s						
FINES	FINESS Array B	89.90 332		P	P	16 39 04.3	+1.5
	comp=Z,1.3nm,0.6s,baz=36,slow=5.0,SNR=8.2						
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	122.39 290		PKP	PKPdf	16 44 59.3	-0.5
	comp=Z,0.6nm,0.7s,baz=115,slow=1.8,SNR=4.0						

*IDC **31** 16:33:52.1±5.8, 56°51N×158°99E, h140km±40km, mb3.1/5, mbtmp3.4/6, Error ellipse: s-maj=111.7km s-min=21.3km az=130.0*
*KRSC **31** 16:33:55.1±0.5, 55°53N×161°03E, h153km±4km, ML3.9*

ISC 31 16:33:56.7±0.8, 55°54N±0°04×161°03E±0°05, h150km±6km, n40, σ0°80/61, mb3.1/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZGR	Bezymyannyi-Gr	0.44 335		P	Pn	16 34 18.1	+0.3
BZGR				S	Sn	16 34 34.3	+0.4
BZMR	Bezymyannaya	0.50 322		P	Pn	16 34 18.2	+0.1
BZMR				S	Sn	16 34 34.7	+0.2
TUMD	Tumrok D	0.50 227		P	Pn	16 34 17.6	-0.4
TUMD				S	Sn	16 34 33.5	-0.6
KMNR	Kamenistaya	0.50 296		P	Pn	16 34 18.3	+0.3
KMNR				S	Sn	16 34 35.3	+1.0
BZWR	Bezymyannyi-We	0.52 325		P	Pn	16 34 18.3	+0.1
BZWR				S	Sn	16 34 35.5	+0.8
KIRR	Kirishev	0.56 317		P	Pn	16 34 18.2	-0.3
KIRR				S	Sn	16 34 34.6	-0.5
TUMR	Tumrok	0.57 243		P	Pn	16 34 18.7	+0.3
TUMR				S	Sn	16 34 35.5	+0.5
CIRR	Tsirk	0.59 345		S	Sn	16 34 35.7	+0.3
KPT	Kopyto	0.62 313		P	Pn	16 34 18.6	-0.1
KPT				S	Sn	16 34 35.6	+0.1
KRSR	Krestovskiy	0.72 339		P	Pn	16 34 19.2	-0.2
KOZ	Kozyrevsk	0.83 309		P	Pn	16 34 19.7	-0.3
KOZ				S	Sn	16 34 37.6	-0.3
BDR	Baidarnaya	1.03 5		P	Pn	16 34 22.0	+0.3
BDR				S	Sn	16 34 41.5	+0.6
MKZ	Mys Kozlova	1.07 158		P	Pn	16 34 21.5	-0.4
MKZ				S	Sn	16 34 40.9	-0.3
SMKR	Semkarok	1.07 13		P	Pn	16 34 22.2	+0.2
SMKR				S	Sn	16 34 41.8	+0.3
SRDR	Sredinnyy	1.07 317		P	Pn	16 34 21.5	-0.5
SRDR				S	Sn	16 34 40.5	-1.0
SRKR	Sorokina	1.11 4		P	Pn	16 34 22.2	-0.2
SRKR				S	Sn	16 34 41.9	-0.3
KBG	Krutoberegovo	1.18 52		P	Pn	16 34 22.7	-0.2
KBG				S	Sn	16 34 43.0	0.0
KBTR	Krutoberegovo	1.21 56		P	Pn	16 34 23.0	-0.2
KBTR				S	Sn	16 34 43.5	0.0
ESO	Esso	1.37 287		P	Pn	16 34 24.5	-0.3
SPN	Mys Shipunski	2.52 194		P	Pn	16 34 37.8	-0.2
GNL	Ganaly	2.58 225		P	Pn	16 34 38.6	-0.2
KRX	Arik	2.59 213		P	Pn	16 34 39.0	0.0
SMAR	Somma	2.63 211		P	Pn	16 34 39.3	-0.3
AVH	Avacha	2.65 211		P	Pn	16 34 39.8	+0.2
KOK	Koryaka	2.66 213		P	Pn	16 34 40.2	+0.5
BKI	Bering	2.84 95		P	Pn	16 34 42.1	+0.2
BKI				S	Sn	16 35 16.6	-0.2
DALK	Dalny	2.85 209		P	Pn	16 34 42.0	0.0
DALK				S	Sn	16 35 16.6	-0.5
PET	Petropavlovsk	2.88 210		P	Pn	16 34 42.4	-0.1
PET				S	Sn	16 35 17.5	-0.4
PETK	Petropavlovsk-	3.12 220		P	Pn	16 34 44.4	-1.2
	5.2nm,0.8s,baz=75,slow=12,SNR=46						
PETK				S	Sn	16 35 27.7	+4.4
	3.4nm,0.6s,baz=15,slow=12,SNR=2.2						
KRMR	Karymshinskiy	3.21 213		P	Pn	16 34 46.4	-0.2
RUS	Russkaya	3.45 207		P	Pn	16 34 49.2	-0.5
GRL	Gorelyy	3.47 211		P	Pn	16 34 50.2	+0.1
APC	Apacha	3.47 222		P	Pn	16 34 50.3	+0.3
MTVR	Mutnovka	3.50 210		P	Pn	16 34 50.3	-0.2
MTVR				S	Sn	16 35 31.0

RM33	**Pellescritta (**	**0.34 173**	P	Pg	16 43 13.4	+0.5
RM33			S	Sb	16 43 18.8	-1.0
MDAR	**Monte D'Aria**	**0.35 358**	S	Sg	16 43 15.0	-2.7
CAMP	**Campotosto**	**0.36 149**	P	Pg	16 43 13.6	+0.3
CAMP			S	Sb	16 43 19.4	-1.0
MNTP	**Montappone**	**0.37 38**	S	Sg	16 43 14.0	-4.4
T1211	**Morro Reatino**	**0.38 216**	S	Sg	16 43 15.0	-3.8
ARRO	**Arrone**	**0.39 227**	S	Sg	16 43 15.0	-4.0
GAG1	**Gagliole**	**0.40 350**	S	Sg	16 43 16.0	-3.2
OFFI	**Offida**	**0.40 77**	S	Sg	16 43 15.0	-4.2
TERO	**Teramo**	**0.40 124**	P	Pg	16 43 14.3	+0.3
TERO			S	Sb	16 43 20.6	-0.8
ASSB	**Assisi San Ben**	**0.41 298**	S	Sg	16 43 16.0	-3.8
T1247	**Pizzolo (AQ)**	**0.42 166**	P	Pg	16 43 14.7	+0.4
T1247			S	Sb	16 43 21.4	-0.5
GIGS	**Gran Sasso**	**0.50 142**	P	Pg	16 43 15.9	+0.1
GIGS			S	Sb	16 43 23.5	-0.8
MYKA	**Terra Mystica**	**3.80 5**	*e*Pn	Pn	16 44 07.1	+2.5
	comp=E,3.4nm,0.4s					
KBA	**Koelnbreinsper**	**4.23 2**	*e*Pn	Pn	16 44 13.4	+2.7
	comp=E,5.2nm,0.7s					
FETA	**Feichten**	**4.52 338**	*e*Pn	Pn	16 44 16.8	+2.3
	comp=E,0.7nm,0.4s					
WTTA	**Wattenberg**	**4.55 347**	*e*Pn	Pn	16 44 18.4	+3.4
	comp=E,2.8nm,0.5s					
ARSA	**Arzberg**	**4.71 20**	*e*Pn	Pn	16 44 18.2	+1.0
	comp=E,0.9nm,0.3s					
MOA	**Molln**	**5.06 8**	*e*Pn	Pn	16 44 25.6	+3.7
	comp=E,0.3nm,0.1s					
CONA	**Conrad Observa**	**5.43 20**	*e*Pn	Pn	16 44 28.3	+1.2
	comp=E,0.3nm,0.2s					
KHC	**Kasperske Hory**	**6.29 3**	*e*PN	Pn	16 44 36.6	-2.3
KHC			*e*SN	Sn	16 45 50.6	-0.2

IDC 31 16:51:46.7±6.8, 6°.95S×129°.72E, h95km±90km, mb3.3/1, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=170.6km s-min=26.9km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.23**	**14**	P	Pn	16 53 15.8	-0.4
	0.6nm,0.3s,baz=181,slow=21,SNR=1.7						
SIJI				S	Sn	16 54 20.0	-6.1
	1.5nm,0.3s,baz=217,slow=22,SNR=1.5 1.8nm,0.3s						
WRA	**Warramunga Arr**	**13.67**	**161**	P	Pn	16 54 54.8	-1.9
	0.1nm,0.3s,baz=341,slow=12,SNR=1.8						
WRA				S	Sn	16 57 16.2	-11
	0.3nm,0.5s,baz=339,slow=21,SNR=5.9 0.2nm,0.6s						
ASAR	**Alice Springs**	**17.10**	**167**	P	P	16 55 40.8	+0.5
	baz=356,slow=9.4,SNR=6.4						
ASAR				S	Sn	16 58 40.6	-9.5
	0.2nm,0.7s,baz=317,slow=16,SNR=1.7 0.3nm,0.8s						
MKAR	**Makanchi Array**	**68.03**	**327**	P	P	17 02 36.4	+0.3
	0.6nm,0.9s,baz=114,slow=10,SNR=1.8 0.6nm,0.9s						

*ISK **31** 17:12:10.5, 35°.79N×27°.60E, h16km, ML3.1/16*
*THE **31** 17:12:10.9, 35°.80N×27°.59E, h3km±2km, ML3.0/3, Error ellipse: s-maj=3.5km s-min=0.8km az=132.0*
*ATH **31** 17:12:10.3, 35°.76N×27°.60E, h26km±1km, ML3.1/3, Error ellipse: s-maj=3.0km s-min=0.9km az=141.0*
*DDA **31** 17:12:10.6±0.0, 35°.77N×27°.70E, h12km, ML2.7*

ISC 31 17:12:10.6±1.0, 35°.79N±0°.03×27°.61E±0°.03, h14km±9km, n50, σ0°63/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.43**	**237**	PG	**Pb**	**17 12 19.6**	**-0.5**
KARP				SG	**Sb**	**17 12 26.1**	**-0.4**
KARP	**Karpathos**	**0.43**	**237**	P	**Pg**	**17 12 19.3**	**+0.1**
KARP				S	**Sg**	**17 12 25.6**	**+0.5**
	7μm,0.1s						
KARP	**Karpathos**	**0.43**	**237**	P	**Pg**	**17 12 19.3**	**+0.1**
KARP				S	**Sg**	**17 12 25.7**	**+0.5**
KARP				AML	AML	17 12 26.9	
	comp=N,11879μm,0.1s						
KARP				AML	AML	17 12 26.9	
	comp=E,17283μm,0.2s						
ARG	**Arkhangelos**	**0.60**	**44**	PG	**Pb**	**17 12 22.9**	**-0.1**
ARG				SG	**Sb**	**17 12 31.5**	**+0.3**
ARG	**Arkhangelos**	**0.60**	**44**	P	**Pb**	**17 12 22.8**	**-0.1**
ARG				S	**Sb**	**17 12 31.6**	**+0.3**
	comp=E,1μm,0.4s						
ARG	**Arkhangelos**	**0.60**	**44**	P	**Pb**	**17 12 22.8**	**-0.1**
ARG				S	**Sb**	**17 12 31.9**	**+0.6**
ARG				AML	AML	17 12 33.2	
	comp=N,2360μm,0.4s						
ARG				AML	AML	17 12 33.7	
	comp=E,3262μm,0.4s						
NIS1	**Nisyros Isl.**	**0.89**	**337**	PG	**Pg**	**17 12 27.9**	**+0.1**
NIS1				SG	**Sn**	**17 12 40.5**	**-0.9**
NIS1	**Nisyros Isl.**	**0.89**	**337**	P	**Pn**	**17 12 28.3**	**-0.4**
NIS1	**Nisyros Isl.**	**0.89**	**337**	P	**Pn**	**17 12 28.1**	**-0.6**
DAT	**Datca**	**0.94**	**358**	PG	**Pn**	**17 12 29.2**	**-0.4**
DAT				SG	**Sn**	**17 12 42.9**	**-0.1**
KOSK	**Kos Island**	**1.09**	**332**	PN	**Pb**	**17 12 30.6**	**-0.7**
TURN	**Turunc**	**1.11**	**27**	PN	**Pn**	**17 12 31.8**	**0.0**
TURN	**Turunc**	**1.11**	**27**	P	**Pn**	**17 12 31.6**	**-0.2**
TURN				S	**Sn**	**17 12 46.6**	**-0.4**
TURN				*i* AML	AML	17 12 53.0	
	comp=E,238nm,0.4s						
TURN				*i* AML	AML	17 12 55.0	
	comp=E,170nm,0.5s						
TURN	**Turunc**	**1.11**	**27**	P	**Pn**	**17 12 31.6**	**-0.2**
TURN				S	**Sn**	**17 12 46.6**	**-0.4**
TURN				*i* AML	AML	17 12 53.0	
	comp=E,238nm,0.4s						
TURN				*i* AML	AML	17 12 55.0	
	comp=E,170nm,0.5s						
BDRM	**Kayabasi**	**1.28**	**354**	P	**Pb**	**17 12 34.8**	**+0.2**
BDRM	**Kayabasi**	**1.28**	**354**	P	**Pb**	**17 12 34.8**	**+0.2**
BODT	**Bodrum**	**1.30**	**349**	PN	**Pn**	**17 12 34.3**	**-0.1**
BODT	**Bodrum**	**1.30**	**349**	P	**Pn**	**17 12 33.8**	**-0.6**
BODT				S	**Sn**	**17 12 51.4**	**-0.2**
ZKR	**Zakros**	**1.32**	**240**	P	**Pb**	**17 12 34.8**	**-0.3**
ZKR				S	**Sg**	**17 12 52.7**	**-0.4**
	comp=E,402nm,0.3s						
ZKR	**Zakros**	**1.32**	**240**	P	**Pb**	**17 12 34.9**	**-0.3**
ZKR				S	**Sg**	**17 12 52.9**	**-0.2**
ZKR				AML	AML	17 12 55.7	
	comp=E,1134μm,0.3s						
ZKR				AML	AML	17 12 56.7	
	comp=N,468μm,0.4s						
DALY	**Dalyan (Mula)**	**1.33**	**39**	PN	**Pb**	**17 12 35.5**	**+0.1**
STIA	**Sitia Lasithi**	**1.37**	**245**	P	**Pb**	**17 12 35.9**	**-0.1**
YER	**Yerkesik**	**1.45**	**22**	PN	**Pb**	**17 12 36.9**	**-0.6**
FETY	**Fethiye**	**1.46**	**54**	PN	**Pb**	**17 12 37.1**	**-0.6**
MULA	**Mugla, Merkez-**	**1.58**	**21**	P	**Pb**	**17 12 40.0**	**+0.4**
MULA	**Mugla, Merkez-**	**1.58**	**21**	P	**Pb**	**17 12 40.0**	**+0.4**
KSL	**Kastellorizon**	**1.64**	**77**	P	**Pb**	**17 12 39.9**	**-0.8**
AKAS	**Kas**	**1.68**	**74**	PN	**Pn**	**17 12 39.7**	**0.0**
AKAS	**Kas**	**1.68**	**74**	P	**Pn**	**17 12 38.6**	**-1.1**
AKAS				S	**Sb**	**17 13 03.3**	**+0.8**
AKAS	**Kas**	**1.68**	**74**	P	**Pn**	**17 12 38.6**	**-1.1**
AKAS				S	**Sb**	**17 13 03.3**	**+0.8**
CAME	**Cameli-Denizli**	**1.79**	**49**	PN	**Pn**	**17 12 42.1**	**+0.8**
THR6	**Thira Island,**	**1.88**	**288**	P	**Pn**	**17 12 42.8**	**+0.4**
AYDN	**Tasoluk**	**1.89**	**7**	P	**Pn**	**17 12 43.3**	**+0.8**
AYDN	**Tasoluk**	**1.89**	**7**	P	**Pn**	**17 12 43.3**	**+0.8**
THR3	**Thira Island,**	**1.89**	**290**	P	**Pn**	**17 12 42.8**	**+0.3**
CAEL	**Denizli, Camel**	**1.92**	**45**	P	**Pb**	**17 12 46.4**	**+0.9**
CAEL	**Denizli, Camel**	**1.92**	**45**	P	**Pb**	**17 12 46.4**	**+0.9**
GCAM	**G?zelcaml?**	**1.94**	**351**	PN	**Pn**	**17 12 43.4**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.98**	**32**	P	**Pb**	**17 12 47.2**	**+0.8**
TAVA				S	**Sg**	**17 13 12.9**	**-1.3**
TAVA				*i* AML	AML	17 13 18.0	
	comp=N,73nm,0.3s						
TAVA				*i* AML	AML	17 13 23.0	
	comp=N,58nm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.98**	**32**	P	**Pb**	**17 12 47.2**	**+0.8**
TAVA				S	**Sg**	**17 13 12.9**	**-1.3**
TAVA				*i* AML	AML	17 13 18.0	
	comp=N,73nm,0.3s						
TAVA				*i* AML	AML	17 13 23.0	
	comp=N,58nm,0.4s						
SMG	**Samos**	**2.02**	**342**	P	**Pn**	**17 12 44.9**	**+0.7**
ELL	**Elmali**	**2.09**	**62**	PN	**Pn**	**17 12 46.1**	**+0.7**
GOLH	**Golhisar**	**2.14**	**47**	P	**Pb**	**17 12 48.2**	**-1.0**
GOLH	**Golhisar**	**2.14**	**47**	P	**Pb**	**17 12 48.2**	**-1.0**
APMY	**Acipayam-Deniz**	**2.17**	**38**	PN	**Pn**	**17 12 47.3**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.17**	**6**	PN	**Pn**	**17 12 46.8**	**+0.3**
IDI	**Anoyia**	**2.27**	**258**	P	**Pn**	**17 12 48.1**	**+0.3**
IDI				S	**Sn**	**17 13 15.6**	**-0.1**
IDI	**Anoyia**	**2.27**	**258**	P	**Pn**	**17 12 48.0**	**+0.2**
IDI				S	**Sn**	**17 13 16.3**	**+0.6**
KORT	**Korkueli**	**2.52**	**60**	PN	**Pn**	**17 12 52.6**	**+1.3**
BASM	**Basmaki-Afyon**	**2.89**	**42**	PN	**Pn**	**17 12 57.4**	**+1.0**

*ANF **31** 17:17:06.5±0.2, 33°.19N×115°.57W, h11km±3km, ML3.1/16, Error ellipse: s-maj=2.5km s-min=1.6km az=129.0*
*NEIC **31** 17:17:06.5±1.7, 33°.18N±0°.02×115°.57W±0°.02, h19km±1km, Error ellipse: s-maj=2.6km s-min=2.4km az=77.0*
*PAS **31** 17:17:07.1±3.1, 33°.185N±0°.010×115°.57W±0°.01, h3km±4km, ML3.1/98, ML2.9/52(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=55.0*

ISC 31 17:17:06.5±0.9, 33°.18N±0°.01×115°.57W±0°.02, h19km±2km, n117, σ0°79/148, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.14**	**185**		**Pg**	**17 17 10.7**	**0.0**
WEMD					**Sg**	**17 17 14.0**	**+0.5**
ERRC	**Elmore Ranch**	**0.22**	**254**		**Pg**	**17 17 12.5**	**+0.7**
ERRC					**Sg**	**17 17 16.9**	**+1.5**
SWSC	**Sam W. Stewart**	**0.30**	**220**	P	**Pb**	**17 17 13.4**	**+0.1**
	baz=39,SNR=456						
SWSC				S	**Sg**	**17 17 17.4**	**-0.3**
	baz=39						
SUP	**Superstition M**	**0.31**	**224**		**Pb**	**17 17 13.5**	**+0.1**
COK2	**Cook Ranch 2**	**0.35**	**203**		**Pb**	**17 17 14.9**	**+0.7**
SALN	**Salton City**	**0.36**	**286**		**Pb**	**17 17 14.7**	**+0.2**
SALN					**Sb**	**17 17 21.2**	**+1.4**
WESC	**Westside Schoo**	**0.44**	**198**		**Pb**	**17 17 16.3**	**+0.7**
CRR	**Carrizo Plain**	**0.45**	**229**		**Pb**	**17 17 15.9**	**+0.2**
CRR					**Sn**	**17 17 24.0**	**-1.4**
BC3	**Big Chuckawall**	**0.48**	**11**		**Pb**	**17 17 16.5**	**0.0**
BC3					**Sg**	**17 17 23.2**	**+0.1**
BC3	**Big Chuckawall**	**0.48**	**11**	P	**Pb**	**17 17 16.5**	**0.0**
	baz=191,SNR=412						
BC3				S	**Sg**	**17 17 23.1**	**+0.1**
	baz=191						
COA	**Coachella**	**0.49**	**130**		**Pb**	**17 17 17.0**	**+0.5**
COA					**Sn**	**17 17 25.1**	**-1.3**
RUN	**Ruthven**	**0.54**	**112**		**Pg**	**17 17 17.4**	**+0.2**
RUN					**Sg**	**17 17 25.0**	**+0.5**
HAY	**Hayfield**	**0.54**	**350**		**Pg**	**17 17 17.4**	**+0.1**
HAY					**Sg**	**17 17 25.3**	**+0.8**
SGL	**Mount Signal**	**0.54**	**194**		**Pg**	**17 17 17.5**	**+0.1**
UABX	**UABC, Campus M**	**0.56**	**169**	Pg	**Pg**	**17 17 18.1**	**+0.5**
UABX				IAML		17 17 27.9	
	comp=E,967nm,0.5s						
CTW	**Cottonwood Mou**	**0.56**	**333**		**Pg**	**17 17 17.9**	**+0.2**
CTW					**Sg**	**17 17 26.1**	**+0.8**
SLH	**Sleepy Hollow**	**0.58**	**272**		**Pg**	**17 17 18.3**	**+0.3**
SLH					**Sn**	**17 17 27.9**	**-0.7**
CTCC	**Cactus City**	**0.59**	**323**		**Pg**	**17 17 18.5**	**+0.1**
CTCC					**Sg**	**17 17 27.4**	**+1.1**
YUH	**Yuha Desert**	**0.61**	**210**		**Sg**	**17 17 27.5**	**+0.8**
YUH	**Yuha Desert**	**0.61**	**210**	Pg	**Pb**	**17 17 18.2**	**-0.2**
YUH	**Yuha Desert**	**0.61**	**210**	IAML		17 17 28.0	
	comp=N,298nm,0.4s						
YUH				IAML		17 17 30.4	
	comp=E,226nm,0.2s						
GLA	**Glamis**	**0.63**	**101**		**Pb**	**17 17 19.0**	**+0.1**
GLA					**Sb**	**17 17 27.5**	**+0.1**
GLA	**Glamis**	**0.63**	**101**	IAML		17 17 30.4	
	comp=N,1μm,0.7s						
GLA	**Glamis**	**0.63**	**101**	P	**Pg**	**17 17 19.1**	**+0.1**
	baz=282,SNR=110						
GLA				S	**Sb**	**17 17 27.4**	**0.0**
	baz=282						
EMSC	**East Mesa**	**0.66**	**132**		**Pg**	**17 17 20.0**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**0.70**	**221**		**Pg**	**17 17 20.3**	**0.0**
IKP					**Sg**	**17 17 30.5**	**+0.9**
IKP	**In-Ko-Pah, Jac**	**0.70**	**221**	P	**Pg**	**17 17 20.3**	**0.0**
	baz=40,SNR=77						
IKP				S	**Sg**	**17 17 30.3**	**+0.8**
	baz=40						
BORC	**Borrego Spring**	**0.72**	**277**		**Pg**	**17 17 20.5**	**-0.1**
BORC					**Sg**	**17 17 30.7**	**+0.5**
RMX	**La Rumorosa**	**0.72**	**217**		**Sn**	**17 17 31.5**	**-0.8**
RMX	**La Rumorosa**	**0.72**	**217**		**Pg**	**17 17 20.9**	**+0.2**
RMX	**La Rumorosa**	**0.72**	**217**	IAML		17 17 32.0	
	comp=E,289nm,0.7s						
RMX				IAML		17 17 32.2	
	comp=N,271nm,0.5s						
MONP2	**Monument Peak**	**0.77**	**249**		**Pb**	**17 17 21.5**	**0.0**
MONP2					**Sg**	**17 17 32.5**	**+0.5**
MONP2	**Monument Peak**	**0.77**	**249**	P	**Pb**	**17 17 21.5**	**0.0**
	baz=68,SNR=83						
MONP2				S	**Sg**	**17 17 32.5**	**+0.5**
	baz=68						
CPBX	**Cerro Prieto**	**0.79**	**164**	Pg	**Pb**	**17 17 20.7**	**-0.9**
XPFO	**Pion Flat**	**0.86**	**300**		**Pb**	**17 17 22.9**	**0.0**
XPFO					**Sg**	**17 17 35.2**	**+0.5**
PFO	**Pinyon Flats O**	**0.86**	**300**		**Pb**	**17 17 22.9**	**0.0**
PFO					**Sg**	**17 17 34.9**	**+0.1**
PFO	**Pinyon Flats O**	**0.86**	**300**		**Pb**	**17 17 22.3**	**-0.7**
PFO				IAML		17 17 36.7	
	comp=N,452nm,0.8s						
PFO				IAML		17 17 37.1	
	comp=N,278nm,0.5s						
PFO	**Pinyon Flats O**	**0.86**	**300**	P	**Pb**	**17 17 22.9**	**0.0**
	baz=120,SNR=62						
PFO				S	**Sg**	**17 17 34.9**	**+0.1**
	baz=120						
BELC	**Belle Mtn. Jos**	**0.90**	**336**		**Pb**	**17 17 23.6**	**0.0**
BELC					**Sg**	**17 17 36.3**	**+0.4**
BELC	**Belle Mtn. Jos**	**0.90**	**336**	P	**Pb**	**17 17 23.5**	**0.0**
	baz=156,SNR=79						
BELC				S	**Sg**	**17 17 36.3**	**+0.4**
	baz=156						
MATG	**Mataguay Scout**	**0.91**	**272**		**Pb**	**17 17 23.5**	**-0.1**
MATG					**Sg**	**17 17 36.2**	**0.0**
FRD	**Ford Ranch, An**	**0.92**	**290**		**Pb**	**17 17 24.0**	**+0.1**
FRD	**Ford Ranch, An**	**0.92**	**290**		**Pb**	**17 17 24.0**	**+0.1**
FRD					**Sg**	**17 17 36.9**	**+0.2**
SNDA	**J Saunders Pla**	**0.95**	**293**		**Pb**	**17 17 24.6**	**+0.1**
DNR	**Dunn Ranch,Anz**	**0.97**	**294**		**Pb**	**17 17 24.9**	**+0.2**
BZNA	**Buzz No.'s Pla**	**0.97**	**289**		**Pb**	**17 17 24.8**	**0.0**
TPC	**Twentynine Pal**	**1.01**	**337**		**Pb**	**17 17 25.3**	**-0.1**
EW2	**E Wide Canyon**	**1.03**	**317**		**Pb**	**17 17 25.4**	**-0.4**
IRM	**Iron Mountain**	**1.04**	**20**		**Pg**	**17 17 26.4**	**-0.2**
IRM	**Iron Mountain**	**1.04**	**20**	P	**Pb**	**17 17 25.9**	**+0.1**
	baz=200,SNR=395						
IRM				S	**Sg**	**17 17 41.6**	**+1.3**
	baz=200						
BLYC	**Blythe**	**1.04**	**57**		**Sg**	**17 17 41.9**	**+1.4**
BLYC	**Blythe**	**1.04**	**57**	Pg	**Pb**	**17 17 25.3**	**-0.6**
CRY	**Cary Ranch**	**1.05**	**292**		**Pb**	**17 17 25.9**	**-0.2**
BAR	**Barrett**	**1.05**	**242**		**Sn**	**17 17 40.0**	**-0.5**
BAR	**Barrett**	**1.05**	**242**		**Pb**	**17 17 25.6**	**-0.6**
BAR	**Barrett**	**1.05**	**242**	IAML		17 17 41.2	
	comp=E,207nm,0.5s						
BAR				IAML		17 17 41.7	
	comp=N,181nm,0.5s						
TKX	**Tecate**	**1.07**	**236**		**Pb**	**17 17 26.2**	**-0.1**
TKX				IAML		17 17 41.4	
	comp=E,260nm,0.3s						
TKX				IAML		17 17 43.1	
	comp=N,334nm,0.2s						
PLM	**Palomar**	**1.10**	**280**		**Pb**	**17 17 26.7**	**-0.3**
BLAC	**Blackrock camp**	**1.12**	**323**		**Pn**	**17 17 27.1**	**-0.2**
DPP	**Dos Picos Cty**	**1.17**	**262**		**Pn**	**17 17 27.5**	**-0.3**
DPP					**Sn**	**17 17 43.1**	**-0.2**
ESJX	**Sierra Juarez**	**1.21**	**195**		**Pn**	**17 17 28.2**	**-0.4**
POB	**Polly Butte**	**1.24**	**294**		**Pn**	**17 17 28.8**	**-0.1**
CBX	**Cerro Bola**	**1.26**	**227**		**Pn**	**17 17 29.2**	**-0.1**
CBX				IAML		17 18 00.1	
	comp=N,154nm,0.9s						
CBX				IAML		17 18 04.7	
	comp=E,203nm,0.8s						
DGR	**Domenigoni Val**	**1.29**	**292**		**Pn**	**17 17 29.3**	**-0.3**
BACC	**Bachelor Mtn.**	**1.31**	**290**		**Pn**	**17 17 29.4**	**-0.3**
109C	**Camp Elliot, M**	**1.32**	**258**		**Pn**	**17 17 29.5**	**-0.4**
109C				IAML		17 17 49.5	
	comp=E,270nm,0.4s						
109C				IAML		17 17 50.1	
	comp=N,224nm,0.2s						
109C	**Camp Elliot, M**	**1.32**	**258**	P	**Pn**	**17 17 29.8**	**-0.1**
	baz=77,SNR=17						
109C				S	**Sb**	**17 17 47.9**	**+0.6**
	baz=77						
CPE	**Camp Elliot**	**1.32**	**258**		**Pn**	**17 17 29.9**	**0.0**
GORC	**Green Oak Ranc**	**1.39**	**269**		**Pn**	**17 17 30.9**	**-0.1**
GORC					**Sb**	**17 17 49.0**	**-0.3**
TJX	**Tijuana**	**1.42**	**242**		**Pb**	**17 17 31.8**	**-0.5**
MURC	**Murrieta**	**1.43**	**288**	P	**Pn**	**17 17 31.8**	**+0.4**
	baz=106						
MURC				S	**Sg**	**17 17 53.4**	**+0.8**
	baz=106						
DANC	**Danby, Needles**	**1.46**	**6**		**Pg**	**17 17 34.9**	**+0.1**
BBRC	**Big Bear Solar**	**1.56**	**314**	S	**Sg**	**17 17 57.2**	**+0.1**
	baz=133						
113A	**Mohawk Valley,**	**1.57**	**105**	Pn	**Pn**	**17 17 33.8**	**+0.5**
113A				IAML		17 18 03.0	
	comp=N,140nm,0.6s						
113A				IAML		17 18 03.1	
	comp=E,124nm,0.6s						
CCX	**Cicese**	**1.60**	**216**		**Pb**	**17 17 35.8**	**+0.3**
GMRC	**Granite Mounta**	**1.60**	**357**		**Pg**	**17 17 37.5**	**+0.1**
GMRC	**Granite Mounta**	**1.60**	**357**	Pg	**Pg**	**17 17 37.1**	**-0.3**
	baz=177						
GMRC				S	**Sg**	**17 17 58.2**	**-0.1**
	baz=177						
ELS	**Elsinore Mount**	**1.62**	**287**		**Pn**	**17 17 33.6**	**-0.6**
PDMCI	**Parker Dam,Lak**	**1.63**	**46**	Pg	**Pg**	**17 17 37.5**	**-0.5**
	baz=227						
HEC	**Hector,Ludlow**	**1.77**	**339**	Pg	**Pg**	**17 17 40.3**	**-0.2**
	baz=159						
HEC				Sb	**Sg**	**17 18 04.4**	**+1.0**
	baz=159						
NEE2	**Needles Airpor**	**1.77**	**26**		**Pg**	**17 17 40.4**	**-0.1**
NEE2	**Needles Airpor**	**1.77**	**26**	Pg	**Pg**	**17 17 40.4**	**-0.1**
	baz=207						
SFX	**San Felipe**	**2.22**	**164**		**Pb**	**17 17 45.0**	**-1.0**
Y14A	**Wickenburg**	**2.27**	**70**		**Pb**	**17 17 44.3**	**+1.2**
TUQ	**Turquoise Moun**	**2.27**	**353**	Pg	**Pg**	**17 17 49.8**	**-0.3**
	baz=172						
GSC	**Goldstone, Bar**	**2.35**	**334**		**Pn**	**17 17 44.4**	**+0.2**
GSC				IAML		17 18 31.6	
	comp=N,62nm,0.8s						
GSC				IAML		17 18 33.8	
	comp=E,93nm,0.9s						
W13A	**Hualapai Mount**	**2.37**	**36**		**Pn**	**17 17 44.2**	**-0.4**
PASC	**Pasadena Art C**	**2.40**	**295**		**Pn**	**17 17 45.5**	**+0.7**
PASC				IAML		17 18 27.1	
	comp=N,49nm,0.8s						
PIX	**Pinacate**	**2.41**	**132**	Pn	**Pn**	**17 17 43.9**	**-0.9**
V12A	**Nelson**	**2.61**	**13**		**Pb**	**17 17 54.4**	**+1.6**
214A	**Organ Pipe Nat**	**2.63**	**117**	Pn	**Pn**	**17 17 48.2**	**+0.3**
214A				IAML		17 18 39.6	
	comp=N,89nm,0.7s						
214A				IAML		17 18 43.2	
	comp=E,88nm,0.6s						
CCAC	**Calif City Air**	**2.83**	**315**		**Pn**	**17 17 50.3**	**-0.4**
CCAC				IAML		17 18 46.0	
	comp=E,57nm,1.3s						
CCAC				IAML		17 19 01.6	
	comp=N,72nm,1.2s						
QSM	**Queen of Sheba**	**2.98**	**339**		**Pn**	**17 17 55.5**	**+2.7**
GWY	**Greenwater Val**	**3.13**	**343**		**Pn**	**17 17 56.5**	**+1.5**
SHPR	**Sheep Range**	**3.34**	**6**		**Pn**	**17 17 59.7**	**+1.9**
ISA	**Isabella, Lake**	**3.45**	**317**		**Pn**	**17 18 00.8**	**+1.5**
BCW	**Bitter Crk WRg**	**3.64**	**300**		**Pn**	**17 18 04.2**	**+2.2**
TPNV	**Topopah Spring**	**3.80**	**352**		**Pg**	**17 18 19.2**	**-0.2**
TPNV				IAML		17 19 11.7	
	comp=N,32nm,0.7s						
TPNV				IAML		17 19 19.3	
	comp=N,19nm,0.7s						
TUC	**Tucson**	**4.12**	**101**		**Pn**	**17 18 10.6**	**+2.1**
TUC				IAML		17 19 27.0	
	comp=N,10nm,1.4s						
TUC				IAML		17 19 29.3	
	comp=N,16nm,0.7s						
WUAZ	**Wupatki**	**4.18**	**55**	Pn	**Pn**	**17 18 10.8**	**+1.4**
U15A	**North Rim**	**4.22**	**39**		**Pn**	**17 18 11.0**	**+1.0**
PRN	**Pahroc Range**	**4.24**	**6**	Pn	**Pn**	**17 18 10.2**	**0.0**
PRN					**Pg**	**17 18 26.3**	**-1.4**
LCMT	**Little Creek M**	**4.27**	**26**		**Pn**	**17 18 09.8**	**-0.8**
GMN	**Gold Mountain**	**4.34**	**342**		**Pb**	**17 18 21.9**	**-0.4**
LCH	**Last Change Ra**	**4.39**	**338**		**Pn**	**17 18 13.1**	**+0.9**
KNB	**Kanab**	**4.44**	**30**		**Pn**	**17 18 15.1**	**+2.1**
CCUT	**Cedar City**	**4.72**	**22**		**Pn**	**17 18 16.5**	**-0.4**
MZP	**Montezuma Peak**	**4.75**	**342**		**Pg**	**17 18 36.1**	**-1.4**
SZCU	**Shurtz Canyon**	**4.85**	**24**		**Pn**	**17 18 19.4**	**+0.8**
X18A	**Snowflake**	**4.86**	**72**		**Pn**	**17 18 19.2**	**+0.4**
PKCU	**Pink Cliffs**	**5.02**	**31**		**Pn**	**17 18 20.4**	**-0.7**
R11A	**Troy Canyon, C**	**5.16**	**360**		**Pg**	**17 18 43.1**	**-2.2**
PSUT	**Pine Spring**	**5.52**	**14**	Pn	**Pn**	**17 18 29.6**	**+1.8**
MTPU	**Mount Pierson**	**5.58**	**29**	Pg	**Pb**	**17 18 41.3**	**-2.2**
39A	**Douglas**	**5.62**

IKP					Sn	17 26 48.0	-0.8
IKP	**In-Ko-Pah, Jac**	**0.66 223**	P		**Pb**	**17 26 38.0**	**-0.2**
	baz=40,SNR=51						
IKP			S		**Sb**	**17 26 47.6**	**+0.6**
	baz=40						
RMX	**La Rumorosa**	**0.68 219**			**Sn**	**17 26 48.7**	**-0.7**
RMX	**La Rumorosa**	**0.68 219**			**Pb**	**17 26 38.8**	**+0.3**
RMX	**La Rumorosa**	**0.68 219**	IAML			17 26 49.8	
	comp=E,333nm,0.7s						
RMX			IAML			17 26 49.9	
	comp=N,294nm,0.4s						
BORC	**Borrego Spring**	**0.72 281**			**Pb**	**17 26 38.0**	**-1.0**
BORC					**Sn**	**17 26 49.1**	**-1.0**
CPBX	**Cerro Prieto**	**0.75 162**			**Pb**	**17 26 39.8**	**+0.2**
MONP2	**Monument Peak**	**0.75 251**			**Pb**	**17 26 39.3**	**-0.5**
MONP2					**Sn**	**17 26 50.2**	**-1.0**
MONP2	**Monument Peak**	**0.75 251**	P		**Pb**	**17 26 39.2**	**-0.5**
	baz=68,SNR=74						
MONP2			S		**Sb**	**17 26 49.8**	**+0.1**
	baz=68						
XPFO	**Pion Flat**	**0.88 303**			**Pb**	**17 26 40.6**	**-1.2**
XPFO					**Sn**	**17 26 53.1**	**-1.1**
PFO	**Pinyon Flats O**	**0.88 303**			**Pb**	**17 26 40.7**	**-1.2**
PFO			IAML			17 26 54.5	
	comp=N,330nm,0.8s						
PFO	**Pinyon Flats O**	**0.88 303**			**Pb**	**17 26 40.6**	**-1.2**
PFO					**Sn**	**17 26 52.7**	**-1.6**
PFO	**Pinyon Flats O**	**0.88 303**	P		**Pb**	**17 26 40.6**	**-1.2**
	baz=120,SNR=72						
PFO			S		**Sb**	**17 26 52.5**	**-0.7**
	baz=120						
MATG	**Mataguay Scout**	**0.90 274**			**Pb**	**17 26 41.3**	**-1.0**
MATG					**Sn**	**17 26 54.0**	**-0.8**
GUVIX	**Guadalupe Vict**	**0.93 153**			**Pb**	**17 26 42.4**	**-0.2**
BELC	**Belle Mtn. Jos**	**0.93 338**			**Pb**	**17 26 41.4**	**-1.5**
BELC					**Sn**	**17 26 54.1**	**-1.5**
BELC	**Belle Mtn. Jos**	**0.93 338**	P		**Pb**	**17 26 41.3**	**-1.5**
	baz=156,SNR=53						
BELC			S		**Sn**	**17 26 53.9**	**-1.7**
	baz=156						
FRD	**Ford Ranch, An**	**0.93 293**			**Pb**	**17 26 41.8**	**-1.0**
FRD	**Ford Ranch, An**	**0.93 293**			**Pb**	**17 26 41.7**	**-1.0**
SNDA	**J Saunders Pla**	**0.96 296**			**Pb**	**17 26 42.4**	**-0.9**
BZNA	**Buzz No.'s Pla**	**0.98 291**			**Pb**	**17 26 42.5**	**-1.1**
DNR	**Dunn Ranch,Anz**	**0.98 296**			**Pn**	**17 26 42.8**	**-0.8**
BAR	**Barrett**	**1.03 244**			**Pb**	**17 26 43.5**	**-0.9**
BAR	**Barrett**	**1.03 244**			**Sn**	**17 26 57.7**	**-0.1**
BAR	**Barrett**	**1.03 244**	IAML			17 26 58.2	
	comp=N,202nm,0.3s						
BAR			IAML			17 26 59.0	
	comp=E,234nm,0.5s						
TKX	**Tecate**	**1.04 237**			**Pn**	**17 26 44.6**	**+0.4**
TKX			IAML			17 26 58.1	
	comp=N,484nm,0.2s						
TKX			IAML			17 26 58.3	
	comp=E,317nm,0.2s						
TPC	**Twentynine Pal**	**1.04 338**			**Pb**	**17 26 43.1**	**-1.6**
EW2	**E Wide Canyon**	**1.06 319**			**Pb**	**17 26 43.2**	**-1.7**
BLYC	**Blythe**	**1.07 55**			**Sn**	**17 26 59.1**	**+0.3**
BLYC	**Blythe**	**1.07 55**			**Pn**	**17 26 44.4**	**-0.3**
BLYC	**Blythe**	**1.07 55**	IAML			17 26 59.5	
	comp=N,969nm,0.7s						
BLYC			IAML			17 26 60.0	
	comp=E,1μm,0.7s						
IRM	**Iron Mountain**	**1.08 19**			**Pn**	**17 26 44.2**	**-0.7**
IRM	**Iron Mountain**	**1.08 19**	P		**Pn**	**17 26 44.2**	**-0.7**
	baz=200,SNR=338						
EML	**El Monte Cty P**	**1.10 257**			**Pn**	**17 26 44.4**	**-0.6**
EML					**Sn**	**17 26 59.1**	**-0.3**
PLM	**Palomar**	**1.10 282**			**Pb**	**17 26 44.4**	**-1.2**
BLAC	**Blackrock camp**	**1.15 324**			**Pn**	**17 26 44.5**	**-1.4**
DPP	**Dos Picos Cty**	**1.16 264**			**Pn**	**17 26 45.2**	**-0.6**
ESJX	**Sierra Juarez**	**1.17 196**			**Pn**	**17 26 46.4**	**+0.2**
CBX	**Cerro Bola**	**1.23 229**			**Pb**	**17 26 47.2**	**-0.7**
CBX			IAML			17 27 05.9	
	comp=N,150nm,0.4s						
CBX			IAML			17 27 22.5	
	comp=E,205nm,0.8s						
POB	**Polly Butte**	**1.25 296**			**Pn**	**17 26 46.3**	**-1.0**
DGR	**Domenigoni Val**	**1.30 294**			**Pn**	**17 26 46.9**	**-1.0**
109C	**Camp Elliot, M**	**1.31 260**			**Pn**	**17 26 47.7**	**-0.3**
109C			IAML			17 27 06.8	
	comp=N,188nm,0.5s						
109C			IAML			17 27 07.2	
	comp=E,246nm,0.4s						
109C	**Camp Elliot, M**	**1.31 260**	P		**Pn**	**17 26 47.5**	**-0.5**
	baz=77,SNR=18						
109C			S		**Sb**	**17 27 05.9**	**+0.5**
	baz=77						
CPE	**Camp Elliot**	**1.31 260**			**Pn**	**17 26 47.7**	**-0.3**
BACC	**Bachelor Mtn.**	**1.31 292**			**Pn**	**17 26 47.2**	**-0.9**
GORC	**Green Oak Ranc**	**1.39 271**			**Pn**	**17 26 48.6**	**-0.5**
GORC					**Sb**	**17 27 06.7**	**-1.0**
TJX	**Tijuana**	**1.39 244**	Pn		**Pb**	**17 26 49.8**	**-0.7**
MURC	**Murrieta**	**1.43 289**	P		**Pn**	**17 26 49.4**	**-0.3**
	baz=107,SNR=36						
MURC			S		**Sb**	**17 27 11.2**	**+2.1**
	baz=107						
DANC	**Danby, Needles**	**1.51 6**			**Pb**	**17 26 53.3**	**+0.8**
113A	**Mohawk Valley,**	**1.56 103**			**Pb**	**17 26 52.1**	**-1.3**
CCX	**Cicese**	**1.56 216**			**Pb**	**17 26 52.5**	**-0.9**
BBRC	**Big Bear Solar**	**1.59 315**	S		**Sb**	**17 27 14.8**	**+1.1**
	baz=133						
ELS	**Elsinore Mount**	**1.63 289**			**Pn**	**17 26 51.8**	**-0.6**
GMRC	**Granite Mounta**	**1.65 358**			**Pb**	**17 26 55.6**	**+0.7**
GMRC	**Granite Mounta**	**1.65 358**	P		**Pn**	**17 26 52.4**	**-0.3**
	baz=177						
GMRC			S		**Sb**	**17 27 16.0**	**+0.6**
	baz=177						
PDMCI	**Parker Dam,Lak**	**1.67 45**	Pb		**Pb**	**17 26 55.2**	**0.0**
	baz=227						
PDMCI			S		**Sb**	**17 27 16.8**	**+1.0**
	baz=227						
HEC	**Hector,Ludlow**	**1.80 340**	Pg		**Pb**	**17 26 58.7**	**+1.1**
	baz=159						
HEC			Sb		**Sb**	**17 27 22.2**	**+2.4**
	baz=159						
NEE2	**Needles Airpor**	**1.81 26**			**Pb**	**17 26 58.2**	**+0.5**
NEE2	**Needles Airpor**	**1.81 26**	P		**Pn**	**17 26 55.3**	**+0.4**
	baz=207						
BFSC	**Mount Baldy Ra**	**2.06 303**	P		**Pn**	**17 26 58.4**	**+0.1**
	baz=121						
Y14A	**Wickenburg**	**2.29 69**			**Pb**	**17 27 05.8**	**0.0**
TUQ	**Turquoise Moun**	**2.31 353**	Pg		**Pb**	**17 27 07.7**	**+1.4**
	baz=172						
PIX	**Pinacate**	**2.38 131**			**Pn**	**17 27 01.9**	**-0.8**
GSC	**Goldstone, Bar**	**2.39 335**			**Pb**	**17 27 08.3**	**+0.7**
GSC			IAML			17 27 49.4	
	comp=N,47nm,0.8s						
GSC			IAML			17 27 51.5	
	comp=E,76nm,0.8s						
GSC	**Goldstone, Bar**	**2.39 335**	Pg		**Pb**	**17 27 09.3**	**+1.7**
	baz=154						
CIS	**Catalina Islan**	**2.39 277**	Pg		**Pb**	**17 27 10.1**	**+2.5**
	baz=94						
W13A	**Hualapai Mount**	**2.41 35**	Pn		**Pn**	**17 27 04.2**	**+0.9**
W13A					**Pb**	**17 27 08.4**	**+0.4**
PASC	**Pasadena Art C**	**2.41 296**	Pn		**Pn**	**17 27 04.6**	**+1.5**
214A	**Organ Pipe Nat**	**2.61 116**	Pn		**Pn**	**17 27 05.8**	**-0.1**
214A					**Pb**	**17 27 11.2**	**-0.2**
214A			IAML			17 27 54.4	
	comp=E,87nm,0.4s						
214A			IAML			17 27 58.4	
	comp=N,69nm,0.5s						
214A	**Organ Pipe Nat**	**2.61 116**	P		**Pn**	**17 27 05.6**	**-0.4**
	baz=299						
V12A	**Nelson**	**2.65 13**	Pg		**Pb**	**17 27 13.3**	**+1.3**
EDW2	**Edwards Air Fo**	**2.66 312**	Pg		**Pb**	**17 27 14.1**	**+1.9**
	baz=130						
SHOC	**Shoshone, Teco**	**2.82 348**	Pg		**Pb**	**17 27 17.0**	**+2.2**
	baz=168						
CCAC	**Calif City Air**	**2.85 315**			**Pn**	**17 27 10.0**	**+0.8**
CCAC			IAML			17 28 09.6	
	comp=E,45nm,1.5s						
CCAC			IAML			17 28 19.4	
	comp=N,63nm,1.4s						
QSM	**Queen of Sheba**	**3.02 340**			**Pn**	**17 27 11.5**	**0.0**
GWY	**Greenwater Val**	**3.17 344**			**Pb**	**17 27 22.9**	**+1.9**
SHPR	**Sheep Range**	**3.38 6**			**Pb**	**17 27 25.9**	**+1.4**
ISA	**Isabella, Lake**	**3.48 317**	Pg		**Pb**	**17 27 28.8**	**+2.6**
WASM	**Alta Sierra Ca**	**3.58 317**			**Pn**	**17 27 18.8**	**-0.6**
BCW	**Bitter Crk WRg**	**3.66 301**			**Pn**	**17 27 21.6**	**+1.2**
TPNV	**Topopah Spring**	**3.84 352**			Pb	17 27 37.0	+4.6
TPNV			IAML			17 28 21.0	
	comp=N,15nm,4.9s						
TPNV			IAML			17 28 29.4	
	comp=N,25nm,0.7s						
TPNV	**Topopah Spring**	**3.84 352**	Pg		Pb	17 27 37.3	+4.9
	baz=171						
TUC	**Tucson**	**4.12 100**	Pn		**Pn**	**17 27 28.7**	**+2.0**
TUC	**Tucson**	**4.12 100**	IAML			17 28 45.8	
	comp=N,9.6nm,0.9s						
TUC			IAML			17 28 47.1	
	comp=N,14nm,0.8s						
GRAC	**Grapevine Rang**	**4.12 340**	Pn		**Pn**	**17 27 27.5**	**+0.8**
WUAZ	**Wupatki**	**4.21 54**	Pn		**Pn**	**17 27 26.4**	**-1.6**
U15A	**North Rim**	**4.25 39**			**Pn**	**17 27 29.6**	**+0.9**
PRN	**Pahroc Range**	**4.28 6**	Pn		**Pn**	**17 27 28.8**	**-0.2**
PRN					Pb	17 27 44.7	+4.9
LCMT	**Little Creek M**	**4.31 26**			**Pn**	**17 27 30.2**	**+0.8**
GMN	**Gold Mountain**	**4.38 342**			**Pn**	**17 27 30.8**	**+0.4**
LCH	**Last Change Ra**	**4.42 338**			**Pn**	**17 27 31.1**	**+0.2**
KNB	**Kanab**	**4.48 29**			**Pn**	**17 27 33.0**	**+1.2**
S11A	**Rachel**	**4.50 358**	Pn		**Pn**	**17 27 31.1**	**-0.9**
DSP	**Deep Springs**	**4.66 336**	Pn		**Pn**	**17 27 34.1**	**+0.1**
CCUT	**Cedar City**	**4.76 22**			**Pn**	**17 27 36.5**	**+0.9**
MZP	**Montezuma Peak**	**4.79 343**			Pb	17 27 52.5	+4.0
X18A	**Snowflake**	**4.88 72**			**Pn**	**17 27 37.3**	**0.0**
SZCU	**Shurtz Canyon**	**4.89 24**			**Pn**	**17 27 38.8**	**+1.4**
TPH	**Tonopah**	**5.11 345**			Pb	17 27 58.6	+4.7
R11A	**Troy Canyon, C**	**5.20 360**			Pb	17 28 01.8	+6.3
PSUT	**Pine Spring**	**5.56 14**	Pg		Pb	17 28 06.1	+4.4
MTPU	**Mount Pierson**	**5.62 28**			**Pn**	**17 27 50.1**	**+2.6**
MVU	**Marysvale**	**6.01 26**	Pn		**Pn**	**17 27 53.3**	**+0.4**

*IDC **31** 17:32:24.5±1.5, 52°.06S×140°.71E, h0km, mb3.8/4, mbtmp3.9/4, MS3.9/20, Error ellipse: s-maj=122.2km s-min=24.6km az=84.0*
*NEIC **31** 17:32:26.7±1.0, 52°.11S±0°.06×140°.6E±0°.4, h10km±1km, mb4.4/11, Error ellipse: s-maj=46.3km s-min=10.1km az=268.0*

ISC 31 17:32:26.1±0.8, 52°.1S±0°.1×140°.5E±0°.2, h10km, n44, σ0°.84/17, mb4.2/9, MS3.8/20, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**18.68**	**80**	P	**P**	**17 36 43.8**	**-0.4**
DCZ				IAmb	IAmb	17 37 16.9	
	comp=Z,64nm,1.5s						
STKA	**Stephens Creek**	**20.21**	**3**	P	**P**	**17 37 01.3**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=183,slow=19,SNR=2.0						
STKA				LR	LR	17 43 16.2	
	comp=Z,198nm,19.8s,baz=292,slow=32						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	**20.21**	**3**	P	**P**	**17 37 00.9**	**-0.1**
RPZ	**Rata Peaks**	**21.97**	**80**	LR	LR	17 44 18.6	
	comp=Z,295nm,19.3s,baz=232,slow=33						
H01W1	**Cape Leeuwin H**	**25.51**	**302**	T	T	18 03 49.9	
	baz=140,slow=75,SNR=123						
H01W2	**Cape Leeuwin H**	**25.52**	**302**	T	T	18 03 50.4	
	baz=140,slow=75,SNR=137						
H01W3	**Cape Leeuwin H**	**25.53**	**302**	T	T	18 03 51.2	
	baz=140,slow=75,SNR=164						
NWAO	**Narrogin (SRO)**	**25.54**	**309**	LR	LR	17 45 24.0	
	comp=Z,308nm,20.9s,baz=278,slow=30						
VNDA	**Vanda**	**26.73**	**170**	P	**P**	**17 38 05.0**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=317,slow=6.7,SNR=2.5						
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**26.73**	**170**	P	**P**	**17 38 05.7**	**+0.6**
SBA	**Scott Base**	**27.58**	**168**	P	**P**	**17 38 14.6**	**+1.8**
SBA				IAmb	IAmb	17 38 30.5	
	comp=Z,6.9nm,1.4s						
ASAR	**Alice Springs**	**28.83**	**347**	P	**P**	**17 38 22.9**	**-1.6**
	comp=Z,1.5nm,0.9s,baz=163,slow=9.7,SNR=6.9						
	comp=Z,1.5nm,0.9s						
AS31	**Alice Springs**	**28.83**	**347**	P	**P**	**17 38 25.5**	**+1.0**
AS31				IAmb	IAmb	17 38 32.2	
	comp=Z,3.2nm,1.5s						
CTA	**Charters Tower**	**32.25**	**10**	LR	LR	17 51 59.2	
	comp=Z,138nm,18.1s,baz=183,slow=36						
WR0	**Warramunga Arr**	**32.41**	**349**	P	**P**	**17 38 56.4**	**+0.4**
WR0				IAmb	IAmb	17 39 02.9	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**32.45**	**349**	P	**P**	**17 38 56.7**	**+0.3**
WRA	**Warramunga Arr**	**32.45**	**349**	P	**P**	**17 38 56.9**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=172,slow=7.9,SNR=21						
WRA				LR	LR	17 51 38.4	
	comp=Z,84nm,18.3s,baz=141,slow=36						
	comp=Z,5.0nm,0.9s						
WRAB	**Tennant Creek**	**32.46**	**349**	P	**P**	**17 38 56.7**	**+0.3**
WB0	**Warramunga Arr**	**32.62**	**349**	P	**P**	**17 38 58.5**	**+0.6**
WB0				IAmb	IAmb	17 39 05.6	
	comp=Z,14nm,1.1s						
DZM	**Mont Dzumac**	**36.02**	**44**	LR	LR	17 51 25.2	
	comp=Z,264nm,19.3s,baz=212,slow=32						
QSPA	**South Pole Qui**	**38.02**	**180**	P	**P**	**17 39 43.2**	**-1.0**
QSPA				IAmb	IAmb	17 40 03.3	
	comp=Z,5.4nm,1.3s						
MAW	**Mawson**	**38.98**	**217**	LR	LR	17 53 44.3	
	comp=Z,304nm,20.5s,baz=79,slow=33						
PMG	**Port Moresby**	**42.90**	**10**	LR	LR	17 57 55.0	
	comp=Z,110nm,18.0s,baz=122,slow=36						
BATI	**Baumata**	**43.97**	**336**	LR	LR	17 59 16.4	
	comp=Z,221nm,18.3s,baz=184,slow=37						
KAPI	**Kappang**	**49.99**	**333**	LR	LR	18 01 42.9	
	comp=Z,77nm,19.5s,baz=173,slow=35						
BELA	**Belgrano 2**	**50.27**	**181**	P	**P**	**17 41 22.1**	**+0.3**
BELA				IAmb	IAmb	17 41 27.2	
	comp=Z,5.9nm,1.3s						
LEM	**Lembang**	**52.61**	**317**	LR	LR	18 01 33.2	
	comp=Z,81nm,19.9s,baz=150,slow=33						
SNAA	**Sanae**	**53.85**	**194**	LR	LR	18 04 22.8	
	comp=Z,171nm,18.2s,baz=194,slow=36						
PSI	**Prapat**	**65.01**	**313**	LR	LR	18 06 47.0	
	comp=Z,76nm,21.6s,baz=122,slow=32						
H08S2	**Diego Garcia H**	**70.57**	**283**	T	T	19 00 01.7	
	baz=142,slow=75,SNR=5.4						
H08S1	**Diego Carcia H**	**70.58**	**283**	T	T	18 59 57.5	
	baz=142						
H08S3	**Diego Garcia H**	**70.59**	**283**	T	T	18 59 59.1	
	baz=142,slow=75,SNR=8.3						
OPO	**Ambohidratompo**	**77.59**	**256**	LR	LR	18 10 40.5	
	comp=Z,48nm,21.9s,baz=20,slow=30						
PALK	**Pallekele**	**77.96**	**299**	LR	LR	18 15 20.4	
	comp=Z,66nm,18.4s,baz=253,slow=33						
CMAR	**Chiang Mai Arr**	**79.03**	**320**	LR	LR	18 18 41.6	
	comp=Z,40nm,19.8s,baz=170,slow=35						
BOSA	**Boshof**	**81.76**	**233**	LR	LR	18 13 42.4	
	comp=Z,101nm,21.8s,baz=199,slow=30						
LBTB	**Lobatse**	**84.56**	**236**	LR	LR	18 15 13.6	
	comp=Z,52nm,21.4s,baz=210,slow=30						
H03S1	**Juan Fernandez**	**87.72**	**148**	T	T	19 23 31.6	
	baz=201,slow=74,SNR=2.7						
H03S2	**Juan Fernandez**	**87.72**	**148**	T	T	19 23 30.3	
	baz=201,slow=74,SNR=3.5						
H03S3	**Juan Fernandez**	**87.74**	**148**	T	T	19 23 34.5	
	baz=201,slow=74,SNR=4.2						
LSZ	**Lusaka**	**91.17**	**243**	LR	LR	18 20 36.4	
	comp=Z,88nm,18.3s,baz=214,slow=32						
TSUM	**Tsumeb**	**93.43**	**233**	LR	LR	18 22 37.2	
	comp=Z,50nm,19.3s,baz=150,slow=32						
GERES	**GERESS Array B**	**146.63**	**286**	PKPbc	**PKPab**	**17 52 08.1**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=107,slow=5.2,SNR=1.9						
ESDC	**Sonseca Array**	**152.64**	**257**	PKPbc	**PKPbc**	**17 52 21.8**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=73,slow=6.0,SNR=2.2						

IDC 31 17:45:32.5±2.3, 10°.09S×121°.12E, h0km, mb3.3/1, mbtmp3.0/4, ML3.0/3, Error ellipse: s-maj=74.3km s-min=29.2km az=38.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.51**	**93**	Pn	Pn	17 46 14.7	+0.1
	5.7nm,0.3s,baz=270,slow=5.1,SNR=10						
BATI				Sn	Sn	17 46 39.2	-6.8
	3.7nm,0.3s,baz=260,slow=18,SNR=4.1						
	15nm,0.4s						
WRA	**Warramunga Arr**	**16.09**	**129**	Pn	Pn	17 49 18.6	-1.6
	0.1nm,0.3s,baz=303,slow=15,SNR=7.1						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**18.20**	**139**	P	P	17 49 48.1	+0.9
	baz=316,slow=12,SNR=1.6						
	0.1nm,0.8s						
MKAR	**Makanchi Array**	**66.38**	**332**	P	P	17 56 23.2	-0.1
	0.2nm,0.7s,baz=124,slow=6.1,SNR=1.5						
	0.2nm,0.7s						

*PRU **31** 17:46:41.6±0.0, 43°.66N×12°.56E, h10km*
ROM 31 17:46:25.4±0.1, 43°.017N±0°.003×13°.080E±0°.004, h9km, ML2.7/47, 26C-20D, Error ellipse: s-maj=0.3km s-min=0.2km az=284.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**15**	P	Pg	17 46 27.1	-0.1
FDMO				S	Sg	17 46 27.9	-0.5
FDMO				AML	AML		
FDMO				AML	AML		
	comp=N,55500μm,0.2s						
FEMA	**Monte Fema**	**0.06**	**202**	⇑P	Pg	17 46 27.7	+0.1
FEMA				S	Sg	17 46 29.5	+0.4
FEMA				AML	AML		
	comp=E,40450μm,1.3s						
FEMA				AML	AML		
	comp=N,33650μm,0.2s						
FEMA				AML	AML		
	comp=N,33600μm,0.2s						
FEMA				AML	AML		
	comp=N,33600μm,0.2s						
T1256	**Bolognola (MC)**	**0.11**	**96**	P	Pg	17 46 28.5	+0.3
T1256				S	Sg	17 46 30.6	+0.5
T1256				AML	AML		
	comp=E,11485μm,0.2s						
T1256				AML	AML		
	comp=N,11300μm,0.2s						
T1256				AML	AML		
	comp=E,11940μm,0.3s						
T1256				AML	AML		
	comp=N,10430μm,0.2s						
T1256				AML	AML		
	comp=E,11485μm,0.3s						
T1256				AML	AML		
	comp=N,10480μm,0.2s						
T1256				AML	AML		
	comp=N,11280μm,0.2s						
T1256				AML	AML		
	comp=N,10475μm,0.2s						
T1256				AML	AML		
	comp=E,11450μm,0.3s						
T1256				AML	AML		
	comp=E,11945μm,0.3s						
CSP1	**Cessapalombo**	**0.12**	**51**	⇑P	Pg	17 46 28.7	+0.4
CSP1				S	Sg	17 46 30.8	+0.5
CSP1				AML	AML		
	comp=N,15150μm,0.3s						
CSP1				AML	AML		
	comp=E,15300μm,1.1s						
T1216	**Preci, Frazion**	**0.13**	**200**	⇑P	Pg	17 46 29.1	+0.6
T1216				S	Sg	17 46 31.8	+1.1
T1216				AML	AML		
	comp=E,13800μm,0.2s						
T1216				AML	AML		
	comp=N,13450μm,1.2s						
T1216				AML	AML		
	comp=E,13750μm,0.2s						
T1216				AML	AML		
	comp=N,13450μm,1.2s						
SEF1	**Sefro**	**0.16**	**323**	P	Pg	17 46 29.6	+0.7
SEF1				S	Sg	17 46 32.6	+1.2
SEF1				AML	AML		
	comp=N,20150μm,0.3s						
SEF1				AML	AML		
	comp=E,17800μm,0.2s						
T1245	**Castelsantange**	**0.18**	**154**	⇑P	Pg	17 46 29.9	+0.6
T1245				S	Sg	17 46 33.4	+1.4
T1245				AML	AML		
	comp=N,9695μm,0.4s						
T1245				AML	AML		
	comp=E,5430μm,0.2s						
T1245				AML	AML		
	comp=N,9330μm,0.4s						
T1245				AML	AML		
	comp=E,5665μm,0.2s						
T1245				AML	AML		
	comp=N,9680μm,0.4s						
T1245				AML	AML		
	comp=E,5425μm,0.2s						
MDAR	**Monte D'Aria**	**0.18**	**15**	⇓P	Pg	17 46 29.9	+0.5
MDAR				S	Sg	17 46 33.1	+1.1
GUMA	**Gualdo di Mace**	**0.19**	**76**	⇑P	Pg	17 46 30.3	+0.9
GUMA				S	Sg	17 46 34.1	+1.8
GUMA				AML	AML		
	comp=N,16650μm,0.3s						
GUMA				AML	AML		
	comp=E,18750μm,0.2s						
GUMA				AML	AML		
	comp=N,16600μm,0.3s						
GUMA				AML	AML		
	comp=N,21250μm,0.2s						
GUMA				AML	AML		
	comp=E,21100μm,0.2s						
FIU1	**Fiuminata**	**0.20**	**328**	P	Pg	17 46 30.3	+0.7
FIU1				S	Sg	17 46 34.0	+1.4
FIU1				AML	AML		
	comp=E,3275μm,1.2s						
FIU1				AML	AML		
	comp=N,3130μm,1.1s						
AM05	**Amandola Campo**	**0.20**	**101**	P	Pg	17 46 30.3	+0.7
AM05				S	Sg	17 46 33.9	+1.3
AM05				AML	AML		
	comp=E,1975μm,0.1s						
AM05				AML	AML		
	comp=N,3520μm,0.4s						
AM05				AML	AML		
	comp=N,867μm,0.4s						
AM05				AML	AML		
	comp=E,11050μm,1.1s						
MMO1	**Montemonaco**	**0.22**	**123**	⇓P	Pg	17 46 30.4	+0.5
MMO1				S	Sg	17 46 34.1	+1.2
GAG1	**Gagliole**	**0.22**	**358**	P	Pg	17 46 30.8	+0.8
SSM1	**San Severino M**	**0.22**	**19**	P	Pg	17 46 30.9	+0.9
SNTG	**Esanatoglia**	**0.26**	**337**	⇓P	Pg	17 46 31.4	+0.7
SNTG				AML	AML		
	comp=E,3965μm,0.2s						
SNTG				AML	AML		
	comp=N,3065μm,0.2s						
SNTG				AML	AML		
	comp=N,3455μm,0.2s						
SNTG				AML	AML		
	comp=E,4020μm,0.2s						
T1215	**Vallo di Nera,**	**0.27**	**216**	⇑P	Pg	17 46 31.5	+0.7
T1215				S	Sb	17 46 35.9	-1.1
T1215				AML	AML		
	comp=E,2120μm,0.3s						
T1215				AML	AML		
	comp=N,3170μm,0.2s						
T1215				AML	AML		
	comp=E,2305μm,0.3s						
T1215				AML	AML		
	comp=N,3055μm,0.2s						
T1241	**Roccafluvione,**	**0.30**	**122**	⇑P	Pg	17 46 32.1	+0.6
T1241				S	Sb	17 46 37.3	-0.9
T1241				AML

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T1217                          AML   AML
     comp=N,2120µm,1.4s
T1217                          AML   AML
     comp=N,2115µm,0.4s
T1217                          AML   AML
     comp=E,2329µm,0.4s
T1217                          AML   AML
     comp=N,2184µm,1.4s
T1217                          AML   AML
     comp=E,2435µm,0.4s
ATCC AVT- Casa Cast     0.36 298 ⇓P    Pg    17 46 33.3 +0.7
FOSV Fossato di Vic     0.36 320 ⇓P    Pg    17 46 33.2 +0.6
FOSV                           AML   AML
     comp=N,2340µm,0.3s
FOSV                           AML   AML
     comp=E,2050µm,0.2s
LNSS Leonessa           0.41 184 ⇑P    Pg    17 46 34.0 +0.4
LNSS                           AML   AML
     comp=E,981µm,0.2s
LNSS                           AML   AML
     comp=N,2150µm,0.1s
LNSS                           AML   AML
     comp=E,980µm,0.2s
T1243 Rocca Santa Ma    0.42 140 P     Pg    17 46 34.0 +0.4
MMUR Monte Murano       0.43 352 S     Sb    17 46 43.0 +1.2
SMA1 SAN MARTINO        0.43 154 P     Pg    17 46 34.3 +0.5
SMA1                           AML   AML
     comp=E,840µm,0.4s
SMA1                           AML   AML
     comp=N,652µm,0.3s
SMA1                           AML   AML
     comp=N,652µm,0.3s
OFFI Offida             0.45 100 ⇑P    Pb    17 46 35.6 +0.1
OFFI                           AML   AML
     comp=E,884µm,0.4s
OFFI                           AML   AML
     comp=N,906µm,0.7s
SSFR Montelago di S     0.47 333 ⇓P    Pg    17 46 35.2 +0.6
SSFR                           S     Sb    17 46 44.0 +1.0
SSFR                           AML   AML
     comp=N,2715µm,0.2s
SSFR                           AML   AML
     comp=E,2775µm,0.2s
SSFR                           AML   AML
     comp=N,3555µm,0.2s
SSFR                           AML   AML
     comp=E,2915µm,0.2s
MURB Monte Urbino       0.47 301 ⇓P    Pb    17 46 35.4 -0.6
MURB                           AML   AML
     comp=E,3295µm,0.4s
MURB                           AML   AML
     comp=N,3665µm,0.2s
MURB                           AML   AML
     comp=E,3675µm,0.2s
MURB                           AML   AML
     comp=N,3395µm,0.2s
ARVD Arcevia            0.49 348 ⇑P    Pg    17 46 35.4 +0.4
ARVD                           S     Sb    17 46 44.0 +0.4
ARVD                           AML   AML
     comp=E,1335µm,0.6s
ARVD                           AML   AML
     comp=N,611µm,0.2s
ARRO Arrone             0.49 208 ⇑P    Pg    17 46 35.5 +0.5
ARRO                           AML   AML
     comp=E,932µm,0.2s
ARRO                           AML   AML
     comp=N,926µm,0.2s
ARRO                           AML   AML
     comp=E,934µm,0.2s
ARRO                           AML   AML
     comp=N,928µm,0.2s
ATFO Monte Foce - G     0.51 313 ⇓P    Pg    17 46 35.9 +0.5
ATFO                           S     Sb    17 46 45.0 +0.8
ATFO                           AML   AML
     comp=E,634µm,0.6s
ATFO                           AML   AML
     comp=N,467µm,0.7s
ATFO                           AML   AML
     comp=E,633µm,0.6s
T1211 Morro Reatino     0.51 199 ⇑P    Pg    17 46 35.8 +0.4
T1211                          S     Sb    17 46 45.0 +0.8
T1211                          AML   AML
     comp=E,978µm,0.1s
T1211                          AML   AML
     comp=N,1515µm,1.4s
T1211                          AML   AML
     comp=N,1520µm,1.4s
T1211                          AML   AML
     comp=E,976µm,0.1s
RM33 Pellescritta (     0.52 169 ⇓P    Pg    17 46 35.8 +0.3
RM33                           S     Sb    17 46 45.0 +0.7
RM33                           AML   AML
     comp=N,448µm,1.1s
RM33                           AML   AML
     comp=E,492µm,1.1s
RM33                           AML   AML
     comp=N,448µm,1.1s
CAMP Campotosto         0.54 153 P     Pg    17 46 36.0 +0.1
CAMP                           AML   AML
     comp=E,316µm,0.4s
CAMP                           AML   AML
     comp=N,244µm,0.6s
CAMP                           AML   AML
     comp=E,315µm,0.4s
CAMP                           AML   AML
     comp=N,244µm,0.6s
CESX Cesi               0.55 222 ⇑P    Pg    17 46 36.3 +0.3
CESX                           S     Sb    17 46 45.0 -0.2
CESX                           AML   AML
     comp=E,1735µm,0.3s
CESX                           AML   AML
     comp=N,1725µm,0.5s
TERO Teramo             0.55 135 P     Pg    17 46 36.4 +0.2
TERO                           AML   AML
     comp=N,533µm,0.5s
TERO                           AML   AML
     comp=E,523µm,0.8s
TERO                           AML   AML
     comp=N,534µm,0.5s
ATTE AVT- Monte Tez     0.56 289 ⇑P    Pb    17 46 37.1 -0.3
ATTE                           AML   AML
     comp=E,239µm,0.4s
ATTE                           AML   AML
     comp=N,216µm,0.6s
ATTE                           AML   AML
     comp=N,215µm,0.6s
FRON Frontone           0.56 333 ⇑P    Pg    17 46 36.7 +0.4
FRON                           AML   AML
     comp=E,716µm,0.8s
FRON                           AML   AML
     comp=N,999µm,0.5s
FRON                           AML   AML
     comp=E,717µm,0.8s
FRON                           AML   AML
     comp=N,1000µm,0.5s
T1247 Pizzolo (AQ)      0.60 164 ⇑P    Pg    17 46 37.0  0.0
T1247                          AML   AML
     comp=E,496µm,0.9s
T1247                          AML   AML
     comp=N,546µm,0.5s
T1247                          AML   AML
     comp=E,496µm,0.9s
ATVO AVT- Monte Val     0.61 307 ⇓P    Pg    17 46 37.6 +0.3
ATVO                           S     Sb    17 46 48.0 +0.9
ATVO                           AML   AML
     comp=E,329µm,0.3s
ATVO                           AML   AML
     comp=N,284µm,0.7s
ATVO                           AML   AML
     comp=E,330µm,0.3s
PIEI Pieia              0.65 323 ⇓P    Pg    17 46 38.3 +0.2
PIEI                           S     Sb    17 46 49.0 +0.7
PIEI                           AML   AML
     comp=E,534µm,0.1s
PIEI                           AML   AML
     comp=N,315µm,0.4s
AOI  Ancona             0.66  35 ⇑P    Pb    17 46 38.6 -0.4
AOI                            AML   AML
     comp=N,298µm,0.4s
AOI                            AML   AML
     comp=E,375µm,0.2s
MPAG Monte Paganucc     0.66 339 P     Pb    17 46 38.6 -0.5
MPAG                           S     Sn    17 46 50.0 -1.4
MPAG                           AML   AML
     comp=E,496µm,0.7s
MPAG                           AML   AML
     comp=E,497µm,0.7s
MPAG                           AML   AML
     comp=N,464µm,0.5s
ATPI Pietralunga -      0.66 311 ⇓P    Pg    17 46 38.5 +0.3
ATPI                           S     Sn    17 46 50.0 -1.5
ATPI                           AML   AML
     comp=E,262µm,0.6s
ATPI                           AML   AML
     comp=N,242µm,1.6s
ATPI                           AML   AML
     comp=N,242µm,1.6s
ATPI                           AML   AML
     comp=E,261µm,0.6s
GIGS Gran Sasso         0.67 147 ⇑P    Pg    17 46 38.6 +0.2
GIGS                           S     Sb    17 46 50.0 +1.2
GIGS                           AML   AML
     comp=E,106µm,1.2s
GIGS                           AML   AML
     comp=N,88µm,0.7s
FSSB Fossombrone        0.71 342 ⇓P    Pg    17 46 39.4 +0.3
FSSB                           S     Sn    17 46 52.0 -0.7
FSSB                           AML   AML
     comp=E,1900µm,0.4s
FSSB                           AML   AML
     comp=N,2495µm,0.3s
MGAB Montegabbione      0.72 262 ⇓P    Pb    17 46 39.9 -0.2
MGAB                           AML   AML
     comp=E,373µm,0.5s
MGAB                           AML   AML
     comp=N,741µm,1.3s
MGAB                           AML   AML
     comp=E,500µm,0.5s
MGAB                           AML   AML
     comp=N,716µm,1.3s
APEC Apecchio           0.72 319 S     Sn    17 46 53.0 -0.1
FIAM Fiamignano         0.75 178 ⇑P    Pg    17 46 39.5 -0.3
FIAM                           S     Sb    17 46 52.0 +1.0
FIAM                           AML   AML
     comp=E,226µm,0.7s
FIAM                           AML   AML
     comp=N,161µm,0.4s
FIAM                           AML   AML
     comp=E,225µm,0.7s
FIAM                           AML   AML
     comp=N,162µm,0.4s
BADI Badiali            0.78 309 ⇑P    Pb    17 46 40.9 -0.3
PE3  Peglio             0.80 328 ⇑P    Pg    17 46 40.8  0.0
PE3                            AML   AML
     comp=E,21µm,0.1s
PE3                            AML   AML
     comp=N,34µm,0.5s
FAGN Fagnano            0.84 153 ⇑P    Pb    17 46 42.2 +0.1
FAGN                           AML   AML
     comp=N,320µm,1.6s
FAGN                           AML   AML
     comp=E,442µm,0.6s
CAFI Castiglion Fio     0.87 291 ⇑P    Pb    17 46 42.6 -0.1
CAFI                           AML   AML
     comp=E,144µm,0.6s
CAFI                           AML   AML
     comp=N,140µm,0.5s
CAFI                           AML   AML
     comp=N,140µm,0.5s
CAFI                           AML   AML
     comp=E,144µm,0.6s
SACS San Casciano d     0.88 259 ⇓P    Pb    17 46 43.3 +0.5
SACS                           AML   AML
     comp=E,150µm,0.3s
SACS                           AML   AML
     comp=N,200µm,0.8s
T0110 Collepietro       0.94 147 ⇓P    Pg    17 46 43.0 -0.5
T0110                          AML   AML
     comp=E,280µm,1.2s
T0110                          AML   AML
     comp=N,341µm,0.4s
CRE  Caprese Michel     1.02 307 ⇓P    Pn    17 46 46.4 +0.4
CERT Cerreto            1.07 184 ⇑P    Pg    17 46 45.9 -0.1
CERT                           AML   AML
     comp=E,161µm,0.5s
CERT                           AML   AML
     comp=N,140µm,0.5s
VVLD Villa Vallelon     1.21 161 ⇓P    Pb    17 46 46.7 -1.9
VVLD                           AML   AML
     comp=E,93µm,0.8s
VVLD                           AML   AML
     comp=N,95µm,0.5s
VIVA Pratoni del Vi     1.29 190 S     Sn    17 47 09.0 +2.1
BRSN Barisano           1.46 330 S     Sn    17 47 10.0 -1.1
PTRJ Pietraroja         1.97 146 S     Sg    17 47 30.0 +1.2
KHC  Kasperske Hory     6.12   3 ePN   Pb    17 48 04.3 -7.9
KHC                             eSN   Sn    17 49 05.5 -0.7
```

PRU ***31*** *17:58:18.5±0.0, 42°.40N×13°.86E, h10km*
ROM 31 17:58:19.7±0.2, 42°.738N±0°.005×13°.149E±0°.010,
h19km±1km, ML3.1/59, 21C-26D, Error ellipse:
s-maj=0.8km s-min=0.2km az=269.0, Central Italy

```
Code Station Name       Δ°   AZ°   Phase ID          Time          Res
                                   Op    ISC         h m s         ISC
T1245 Castelsantange    0.12  14   P     Pg          17 58 23.7    -0.3
T1245                              AML   AML
     comp=N,93850µm,0.3s
T1245                              AML   AML
     comp=E,71750µm,0.2s
T1245                              AML   AML
     comp=N,93900µm,0.3s
T1245                              AML   AML
     comp=N,84750µm,0.3s
T1245                              AML   AML
     comp=N,93800µm,0.3s
T1245                              AML   AML
     comp=E,75750µm,0.8s
T1204 Amatrice, Fraz    0.14 117   ⇓P    Pg          17 58 23.8    -0.3
T1204                              S     Sg          17 58 27.6    +0.5
T1204                              AML   AML
     comp=N,22250µm,1.5s
T1204                              AML   AML
     comp=E,27600µm,1.3s
T1204                              AML   AML
     comp=N,22200µm,1.5s
T1204                              AML   AML
     comp=E,27550µm,1.3s
T1204                              AML   AML
     comp=E,27650µm,1.3s
LNSS Leonessa           0.16 211   ⇓P    Pg          17 58 24.5    +0.2
LNSS                               S     Sg          17 58 27.6    +0.3
LNSS                               AML   AML
     comp=N,13150µm,1.3s
LNSS                               AML   AML
     comp=E,6490µm,1.0s
T1217 Poggiodomo (PG    0.16 261   P     Pg          17 58 24.6    +0.3
T1217                              AML   AML
     comp=E,11850µm,1.5s
T1217                              AML   AML
     comp=N,8365µm,0.8s
T1217                              AML   AML
     comp=E,11450µm,1.5s
T1217                              AML   AML
     comp=N,8580µm,0.8s
T1217                              AML   AML
     comp=N,8360µm,0.8s
T1217                              AML   AML
     comp=E,11900µm,1.5s
T1217                              AML   AML
     comp=N,8575µm,0.8s
T1217                              AML   AML
     comp=N,8355µm,0.8s
SMA1 SAN MARTINO        0.17 128   ⇓P    Pg          17 58 24.5    0.0
SMA1                               S     Sg          17 58 28.1    +0.4
SMA1                               AML   AML
     comp=E,51900µm,0.5s
SMA1                               AML   AML
     comp=N,39800µm,0.5s
SMA1                               AML   AML
     comp=N,39850µm,0.5s
T1216 Preci, Frazion    0.18 328   P     Pg          17 58 25.0    +0.5
T1216                              AML   AML
     comp=E,18650µm,0.5s
T1216                              AML   AML
     comp=N,39600µm,0.5s
T1216                              AML   AML
     comp=E,18650µm,0.4s
T1216                              AML   AML
     comp=E,18600µm,0.4s
T1216                              AML   AML
     comp=N,39600µm,0.5s
T1215 Vallo di Nera,    0.22 287   ⇑P    Pg          17 58 25.8    +0.8
T1215                              AML   AML
     comp=N,3915µm,1.4s
T1215                              AML   AML
     comp=E,4245µm,1.4s
T1215                              AML   AML
     comp=N,3960µm,1.5s
T1215                              AML   AML
     comp=E,4100µm,1.3s
T1215                              AML   AML
     comp=N,3915µm,1.4s
T1215                              AML   AML
     comp=E,4250µm,1.4s
T1215                              AML   AML
     comp=N,3995µm,1.5s
T1215                              AML   AML
     comp=N,3965µm,1.5s
T1215                              AML   AML
     comp=E,4095µm,1.3s
T1243 Rocca Santa Ma    0.23 101   ⇑P    Pg          17 58 25.3    +0.2
RM33 Pellescritta (     0.23 168   P     Pg          17 58 25.4    +0.1
RM33                               S     Sg          17 58 29.6    +0.4
RM33                               AML   AML
     comp=E,5440µm,0.4s
RM33                               AML   AML
     comp=E,5200µm,0.4s
RM33                               AML   AML
     comp=N,6530µm,0.2s
RM33                               AML   AML
     comp=E,5440µm,0.4s
RM33                               AML   AML
     comp=N,6775µm,0.2s
RM33                               AML   AML
     comp=N,6535µm,0.2s
RM33                               AML   AML
     comp=N,6775µm,0.3s
T1241 Roccafluvione,    0.24  60   ⇑P    Pg          17 58 25.7    +0.4
T1241                              AML   AML
     comp=E,15600µm,0.8s
T1241                              AML   AML
     comp=N,21950µm,0.7s
T1241                              AML   AML
     comp=N,22050µm,0.7s
T1241                              AML   AML
     comp=E,15650µm,0.8s
T1241                              AML   AML
     comp=N,22000µm,0.7s
T1241                              AML   AML
     comp=E,15800µm,1.4s
T1256 Bolognola (MC)    0.27  12   ⇑P    Pb          17 58 26.6    +0.5
T1256                              AML   AML
     comp=E,8415µm,0.6s
T1256                              AML   AML
     comp=N,7760µm,0.6s
T1256                              AML   AML
     comp=E,8420µm,0.6s
T1256                              AML   AML
     comp=N,7325µm,0.9s
T1256                              AML   AML
     comp=N,7765µm,0.6s
T1256                              AML   AML
     comp=E,8435µm,0.6s
T1256                              AML   AML
     comp=N,7765µm,0.6s
T1256                              AML   AML
     comp=N,7320µm,0.9s
CAMP Campotosto         0.28 136   ⇓P    Pb          17 58 26.2    +0.1
CAMP                               AML   AML
     comp=E,4615µm,0.6s
CAMP                               AML   AML
     comp=N,5075µm,0.6s
AM05 Amandola Campo     0.28  32   ⇓P    Pb          17 58 26.9    +0.8
AM05                               AML   AML
     comp=E,1520µm,0.2s
AM05                               AML   AML
     comp=N,1705µm,1.3s
AM05                               AML   AML
     comp=E,6810µm,0.4s
AM05                               AML   AML
     comp=N,380µm,0.1s
AM05                               AML   AML
     comp=E,1525µm,0.2s
T1211 Morro Reatino     0.30 227   ⇑P    Pb          17 58 27.4    +0.9
T1211                              AML   AML
     comp=E,3690µm,0.9s
T1211                              AML   AML
     comp=E,3940µm,0.9s
T1211                              AML   AML
     comp=N,6620µm,0.8s
T1211                              AML   AML
     comp=E,3690µm,0.8s
T1211                              AML   AML
     comp=N,6595µm,0.6s
T1211                              AML   AML
     comp=N,6625µm,0.8s
FDMO Fiordimonte        0.30 351   ⇑P    Pb          17 58 27.1    +0.6
FDMO                               AML   AML
     comp=E,4300µm,0.6s
FDMO                               AML   AML
     comp=N,4500µm,0.3s
T1247 Pizzolo (AQ)      0.32 160   P     Pb          17 58 26.8    0.0
T1247                              AML   AML
     comp=N,9005µm,0.6s
T1247                              AML   AML
     comp=E,6885µm,0.8s
T1247                              AML   AML
     comp=N,9010µm,0.6s
ARRO Arrone             0.32 241   ⇓P    Pb          17 58 27.6    +0.6
ARRO                               AML   AML
     comp=N,2720µm,1.6s
ARRO                               AML   AML
     comp=E,3110µm,1.5s
ARRO                               AML   AML
     comp=N,2715µm,1.6s
GUMA Gualdo di Mace     0.35  23   ⇑P    Pb          17 58 28.3    +0.8
GUMA                               AML   AML
     comp=E,20850µm,0.5s
GUMA                               AML   AML
     comp=N,22250µm,0.6s
GUMA                               AML   AML
     comp=E,20800µm,0.5s
GUMA                               AML   AML
     comp=N,24250µm,0.4s
GUMA                               AML   AML
     comp=E,24800µm,0.3s
TERO Teramo             0.35 109   ⇓P    Pb          17 58 27.4    -0.1
TERO                               AML   AML
     comp=E,5185µm,0.5s
TERO                               AML   AML
     comp=N,6390µm,0.6s
TERO                               AML   AML
     comp=N,6600µm,0.6s
TERO                               AML   AML
     comp=E,5190µm,0.5s
TERO                               AML   AML
     comp=E,5335µm,0.5s
TERO                               AML   AML
     comp=N,6385µm,0.6s
CSP1 Cessapalombo       0.36   7   ⇑P    Pb          17 58 28.1    +0.5
CSP1                               AML   AML
     comp=E,5610µm,1.4s
CSP1                               AML   AML
     comp=N,8775µm,0.4s
GIGS Gran Sasso         0.42 133   ⇓P    Pg          17 58 28.5    0.0
GIGS                               AML   AML
     comp=E,1600µm,0.5s
GIGS                               AML   AML
     comp=N,1044µm,0.6s
CESX Cesi               0.44 253   ⇑P    Pn          17 58 30.1    -0.9
CESX                               AML   AML
     comp=E,2410µm,1.3s
CESX                               AML   AML
     comp=N,2065µm,1.5s
OFFI Offida             0.44  63   ⇑P    Pn          17 58 30.2    -0.9
OFFI                               AML   AML
     comp=E,6715µm,1.3s
OFFI                               AML   AML
     comp=N,7915µm,0.6s
FIAM Fiamignano         0.47 183   ⇓P    Pb          17 58 29.6    +0.2
FIAM                               AML   AML
     comp=E,1680µm,0.8s
FIAM                               AML   AML
     comp=N,1355µm,0.3s
ASSB Assisi San Ben     0.47 310   ⇑P    Pb          17 58 30.3    +0.9
ASSB                               S     Sn          17 58 39.0    -0.4
ASSB                               AML   AML
     comp=E,2275µm,0.9s
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ASSB				AML	AML	
	comp=N,2340μm,1.0s					
SNTG	**Esanatoglia**	**0.54 344**	⇓P	Pg	17 58 31.4	+0.9
SNTG			S	Sn	17 58 41.0	0.0
SNTG			AML	AML		
	comp=E,928μm,0.2s					
SNTG			AML	AML		
	comp=N,1020μm,0.8s					
SNTG			AML	AML		
	comp=E,962μm,1.3s					
SNTG			AML	AML		
	comp=E,930μm,0.2s					
SNTG			AML	AML		
	comp=N,1117μm,0.4s					
SNTG			AML	AML		
	comp=N,1019μm,0.8s					
TRTR	**Tortoreto Alta**	**0.57 83**	⇑P	Pn	17 58 32.8	0.0
TRTR			AML	AML		
	comp=E,6865μm,1.1s					
TRTR			AML	AML		
	comp=N,5600μm,1.2s					
FAGN	**Fagnano**	**0.57 146**	⇓P	Pb	17 58 31.1	0.0
FAGN			AML	AML		
	comp=N,4095μm,0.4s					
FAGN			AML	AML		
	comp=E,5100μm,0.7s					
ATCC	**AVT- Casa Cast**	**0.58 320**	P	Pg	17 58 32.2	+0.8
ATCC			AML	AML		
	comp=N,2755μm,1.1s					
ATCC			AML	AML		
	comp=E,2835μm,1.0s					
ATCC			AML	AML		
	comp=N,2750μm,1.1s					
VCEL	**Villa Celiera**	**0.62 124**	⇓P	Pg	17 58 32.5	+0.5
VCEL			AML	AML		
	comp=N,2755μm,0.8s					
VCEL			AML	AML		
	comp=E,3890μm,0.8s					
VCEL			AML	AML		
	comp=N,2750μm,0.8s					
FOSV	**Fossato di Vic**	**0.62 333**	⇓P	Pg	17 58 32.8	+0.7
FOSV			AML	AML		
	comp=N,1380μm,1.5s					
FOSV			AML	AML		
	comp=E,1585μm,0.7s					
FOSV			AML	AML		
	comp=N,1375μm,1.5s					
T0110	**Collepietro**	**0.69 137**	⇓P	Pg	17 58 33.4	0.0
T0110			AML	AML		
	comp=E,2300μm,0.6s					
T0110			AML	AML		
	comp=N,2350μm,0.7s					
T0110			AML	AML		
	comp=E,2305μm,0.6s					
MURB	**Monte Urbino**	**0.70 319**	P	Pn	17 58 34.3	-0.4
MURB			S	Sn	17 58 47.0	+2.0
MURB			AML	AML		
	comp=N,3510μm,1.0s					
MURB			AML	AML		
	comp=N,3465μm,1.1s					
MURB			AML	AML		
	comp=N,3515μm,1.0s					
MURB			AML	AML		
	comp=E,2965μm,1.4s					
MURB			AML	AML		
	comp=N,3470μm,1.1s					
MURB			AML	AML		
	comp=E,2785μm,1.2s					
PP3	**Marolino**	**0.72 28**	⇓P	Pn	17 58 36.6	+1.7
PP3			AML	AML		
	comp=E,7935μm,0.5s					
PP3			AML	AML		
	comp=N,4855μm,0.6s					
PP3			AML	AML		
	comp=E,8035μm,0.5s					
PP3			AML	AML		
	comp=N,4330μm,0.5s					
ATTE	**AVT- Monte Tez**	**0.74 308**	⇓P	Pn	17 58 38.1	+2.8
ATTE			AML	AML		
	comp=N,824μm,0.6s					
ATTE			AML	AML		
	comp=E,896μm,1.2s					
SSFR	**Montelago di S**	**0.75 339**	⇓P	Pn	17 58 35.3	0.0
SSFR			AML	AML		
	comp=E,2095μm,0.2s					
SSFR			AML	AML		
	comp=E,2145μm,0.2s					
SSFR			AML	AML		
	comp=N,1285μm,1.5s					
SSFR			AML	AML		
	comp=N,1625μm,0.3s					
ATFO	**Monte Foce - G**	**0.76 326**	⇑P	Pn	17 58 35.6	+0.1
ATFO			S	Sn	17 58 49.0	+2.5
ATFO			AML	AML		
	comp=N,1135μm,1.1s					
ATFO			AML	AML		
	comp=N,1140μm,1.1s					
ATFO			AML	AML		
	comp=E,1115μm,1.3s					
ARVD	**Arcevia**	**0.77 349**	⇑P	Pb	17 58 34.4	-0.2
ARVD			S	Sn	17 58 49.0	+2.2
ARVD			AML	AML		
	comp=E,831μm,0.9s					
ARVD			AML	AML		
	comp=N,708μm,0.9s					
MGAB	**Montegabbione**	**0.78 283**	⇓P	Pn	17 58 37.0	+1.2
MGAB			AML	AML		
	comp=E,3685μm,1.2s					
MGAB			AML	AML		
	comp=N,2065μm,1.5s					
MGAB			AML	AML		
	comp=E,3950μm,1.2s					
MGAB			AML	AML		
	comp=N,2040μm,1.0s					
CERT	**Cerreto**	**0.80 189**	⇓P	Pn	17 58 36.4	+0.4
CERT			AML	AML		
	comp=E,888μm,0.9s					
CERT			AML	AML		
	comp=N,607μm,0.6s					
FRON	**Frontone**	**0.84 338**	⇓P	Pn	17 58 36.7	+0.1
FRON			AML	AML		
	comp=E,710μm,0.8s					
FRON			AML	AML		
	comp=N,836μm,0.7s					
ATVO	**AVT- Monte Val**	**0.84 320**	⇓P	Pn	17 58 36.9	+0.3
ATVO			AML	AML		
	comp=E,874μm,0.8s					
ATVO			AML	AML		
	comp=N,642μm,0.8s					
ATVO			AML	AML		
	comp=E,873μm,0.8s					
ATMI	**Monte Miggiano**	**0.88 313**	⇑P	Pn	17 58 39.2	+2.1
ATMI			AML	AML		
	comp=E,1525μm,0.8s					
ATMI			AML	AML		
	comp=N,1825μm,1.2s					
ATPI	**Pietralunga -**	**0.90 323**	⇑P	Pn	17 58 38.0	+0.6
ATPI			AML	AML		
	comp=E,820μm,0.7s					
ATPI			AML	AML		
	comp=N,728μm,1.4s					
ATPI			AML	AML		
	comp=E,820μm,0.7s					
PIEI	**Pieia**	**0.92 331**	⇑P	Pn	17 58 38.1	+0.4
PIEI			S	Sn	17 58 54.0	+3.7
PIEI			AML	AML		
	comp=E,557μm,0.4s					
PIEI			AML	AML		
	comp=N,536μm,1.2s					
SACS	**San Casciano d**	**0.92 277**	⇑P	Pn	17 58 39.2	+1.5
SACS			AML	AML		
	comp=N,786μm,1.0s					
SACS			AML	AML		
	comp=E,1156μm,1.4s					
SACS			AML	AML		
	comp=N,805μm,1.1s					
SACS			AML	AML		
	comp=E,1178μm,1.5s					
MPAG	**Monte Paganucc**	**0.94 342**	⇑P	Pg	17 58 38.5	+0.5
MPAG			S	Sn	17 58 55.0	+4.1
MPAG			AML	AML		
	comp=E,866μm,0.8s					
MPAG			AML	AML		
	comp=N,902μm,0.7s					
VVLD	**Villa Vallelon**	**0.94 158**	⇓P	Pn	17 58 38.4	+0.5
VVLD			AML	AML		
	comp=E,802μm,1.0s					
VVLD			AML	AML		
	comp=N,724μm,1.2s					
FSSB	**Fossombrone**	**0.99 344**	P	Pg	17 58 39.5	+0.5
LPEL	**Lama dei Pelig**	**1.03 132**	⇓P	Pn	17 58 39.2	0.0
LPEL			AML	AML		
	comp=N,551μm,0.8s					
LPEL			AML	AML		
	comp=E,746μm,0.9s					
CAFI	**Castiglion Fio**	**1.05 305**	⇓P	Pg	17 58 41.6	+1.5
CAFI			AML	AML		
	comp=E,497μm,0.7s					
CAFI			AML	AML		
	comp=N,441μm,1.5s					
PE3	**Peglio**	**1.07 334**	P	Pg	17 58 41.4	+0.9
TOLF	**Tolfa**	**1.08 232**	⇑P	Pg	17 58 42.3	+1.6
TOLF			AML	AML		
	comp=E,352μm,1.2s					
TOLF			AML	AML		
	comp=N,280μm,1.6s					
POFI	**Posta Fibreno**	**1.10 158**	P	Pg	17 58 42.6	+1.5
POFI			AML	AML		
	comp=E,616μm,0.9s					
POFI			AML	AML		
	comp=N,383μm,1.0s					
GIUL	**Giuliano Di Ro**	**1.18 176**	⇑P	Pg	17 58 44.4	+1.8
GIUL			AML	AML		
	comp=N,448μm,0.6s					
GIUL			AML	AML		
	comp=E,252μm,1.0s					
ARCI	**Arcidosso**	**1.24 276**	P	Pg	17 58 46.1	+2.5
ARCI			AML	AML		
	comp=E,165μm,1.2s					
ARCI			AML	AML		
	comp=N,192μm,1.4s					
CRE	**Caprese Michel**	**1.24 316**	P	Pg	17 58 45.7	+1.9
CRE			AML	AML		
	comp=N,380μm,1.2s					
CRE			AML	AML		
	comp=E,325μm,1.6s					
LATB	**Latina**	**1.25 186**	P	Pb	17 58 43.2	+0.5
LATB			AML	AML		
	comp=E,152μm,0.8s					
LATB			AML	AML		
	comp=N,120μm,1.1s					
VAGA	**Valle Agricola**	**1.55 148**	⇓P	Pb	17 58 48.2	+0.4
VAGA			AML	AML		
	comp=N,268μm,1.1s					
VAGA			AML	AML		
	comp=E,178μm,1.4s					
BRSN	**Barisano**	**1.73 334**	P	Pg	17 58 52.6	-0.4
BRSN			S	Sg	17 59 15.0	-0.5
BRSN			AML	AML		
	comp=E,841μm,1.3s					
BRSN			AML	AML		
	comp=N,895μm,1.5s					
MELA	**Melanico ??? S**	**1.79 124**	P	Pb	17 58 52.7	+0.7
MELA			AML	AML		
	comp=N,708μm,0.8s					
MELA			AML	AML		
	comp=E,658μm,1.5s					
MELA			AML	AML		
	comp=N,708μm,0.7s					
MELA			AML	AML		
	comp=E,590μm,1.6s					
IMOL	**Imola, Italy**	**1.92 328**	S	Sb	17 59 18.0	+0.4
SABO	**M.te Sabotino**	**3.26 6**	⇓P	Pn	17 59 12.3	+2.5
SABO			AML	AML		
	comp=N,577μm,1.6s					
SABO			AML	AML		
	comp=N,146μm,0.8s					
SABO			AML	AML		
	comp=E,438μm,1.0s					
SABO			AML	AML		
	comp=E,108μm,1.2s					
RNCA	**Ronca, Sant'Ol**	**3.51 301**	S	Sg	18 00 11.0	-1.3
OBKA	**Obir**	**3.90 14**	*e*Pn	Pn	17 59 21.6	+2.9
	comp=E,1.0nm,0.3s					
MYKA	**Terra Mystica**	**3.91 5**	*e*Pn	Pn	17 59 19.7	+0.9
	comp=E,3.1nm,0.4s					
ABTA	**Abfaltersbach**	**4.03 354**	*e*Pn	Pn	17 59 24.7	+4.2
	comp=E,1.4nm,0.5s,SNR=35					
KBA	**Koelnbreinsper**	**4.34 2**	*e*Pn	Pn	17 59 28.6	+3.8
	comp=E,3.0nm,0.3s,SNR=6.4					
FETA	**Feichten**	**4.62 339**	*e*Pn	Pn	17 59 33.6	+5.0
	comp=E,2.3nm,0.6s					
WTTA	**Wattenberg**	**4.65 347**	*e*Pn	Pn	17 59 34.4	+5.3
	comp=E,2.4nm,0.5s					
SQTA	**Sankt Quirin**	**4.69 344**	*i* Pn	Pn	17 59 34.5	+5.0
	comp=E,9.0nm,0.5s,SNR=7.4					
WATA	**Walderalm**	**4.73 347**	*e*Pn	Pn	17 59 34.9	+4.7
	comp=E,3.5nm,0.6s					
ARSA	**Arzberg**	**4.82 20**	*e*Pn	Pn	17 59 34.6	+3.4
	comp=E,1.3nm,0.3s					
MOTA	**Moosalm**	**4.83 343**	*e*Pn	Pn	17 59 37.1	+5.6
	comp=E,5.4nm,0.6s,SNR=7.6					
DAVA	**Damuels**	**5.10 334**	*e*Pn	Pn	17 59 41.5	+6.2
	comp=E,5.0nm,0.5s,SNR=5.1					
MOA	**Molln**	**5.17 8**	*e*Pn	Pn	17 59 40.2	+4.1
	comp=E,3.3nm,0.6s					
CONA	**Conrad Observa**	**5.53 19**	*i* Pn	Pn	17 59 44.4	+3.3
	comp=E,1.8nm,0.4s					
CKRC	**Cesky Krumlov**	**6.14 7**	*e*SN	Sn	18 01 04.0	+5.0
KHC	**Kasperske Hory**	**6.40 3**	*e*PN	Pn	17 59 56.5	+3.5
KHC			*e*SN	Sn	18 01 08.9	+3.4

MAN 31 18:02:48.6, 9.81N×123.92E, h7km, mb4.5, ML3.3, MS3.1, 6C-8D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.13**	**205**	⇑*i*P	Pg	18 02 51.9	+0.4
TBP				*i* S	Sg	18 02 54.5	+1.2
GHBP	**Garcia Hernand**	**0.43**	**114**	⇓*i*P	Pg	18 02 57.7	+0.6
GHBP				*i* S	Sb	18 03 07.2	+1.8
TABP	**Talibon, Bohol**	**0.49**	**56**	⇑*i*P	Pg	18 02 58.6	+0.4
TABP				*i* S	Sb	18 03 06.1	-0.9
LLP	**Lapu-Lapu**	**0.51**	**5**	⇑*i*P	Pg	18 02 58.7	+0.3
LLP				*e*S	Sb	18 03 06.5	-0.9
LSIP	**Lazi, Siquijor**	**0.73**	**203**	⇑*i*P	Pg	18 03 02.6	-0.1
LSIP				*i* S	Sb	18 03 13.5	-0.5
SNPH	**Sibulan**	**0.82**	**235**	⇓*i*P	Pg	18 03 04.7	+0.3
SNPH				*i* S	Sb	18 03 16.6	+0.1
MSLP	**Maasin**	**0.98**	**71**	⇑*i*P	Pb	18 03 07.9	0.0
MSLP				*i* S	Sn	18 03 23.4	+0.4
CNOP	**Candoni, Negro**	**1.26**	**271**	⇓*i*P	Pn	18 03 12.5	-0.2
CNOP				*i* S	Sn	18 03 29.9	0.0
GUIM	**Jordan**	**1.54**	**302**	⇓*e*P	Pn	18 03 16.0	-0.5
GUIM				*e*S	Sg	18 03 37.8	-0.4
CGP	**Cagayan de Oro**	**1.55**	**150**	⇑*e*P	Pn	18 03 03.5	-13
CGP				*e*S	Sn	18 03 34.0	-3.1
PAGZ	**Pagadian**	**2.02**	**195**	⇓*e*P	Pn	18 03 23.3	+0.2
PAGZ				*e*S	Sn	18 03 49.4	+0.8
GLSP	**General Luna,**	**2.18**	**90**	⇓*e*P	Pn	18 03 15.0	-10
GLSP				*e*S	Sg	18 03 59.6	+1.0
BUKP	**Musuan**	**2.23**	**149**	⇓*e*P	Pb	18 03 28.0	-1.3
BUKP				*e*S	Sb	18 03 56.1	-1.0
KCP	**Kidapawan**	**3.02**	**157**	⇓*e*P	Pb	18 03 43.6	+0.9

VIE 31 18:12:31.2±1.0, 42.82N×13.65E, h10km, mb2.5/2, ml2.2/3, Error ellipse: s-maj=22.7km s-min=7.3km az=95.0 140 km NE of Rome, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**4.01**	**349**	*e*Pn	Pn	18 13 32.6	-0.2
	3.1nm,0.3s						
FETA	**Feichten**	**4.68**	**335**	*e*Pn	Pn	18 13 43.6	+1.4
	0.3nm,0.2s						
CONA	**Conrad Observa**	**5.34**	**16**	*e*Pn	Pn	18 13 52.3	+1.2
	0.4nm,0.3s						

ROM 31 18:13:30.3±0.0, 42.899N±0.001×13.163E±0.001, h9km, ML2.6/30, 16C-10D, Error ellipse: s-maj=0.1km s-min=0.1km az=221.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.05**	**157**	P	Pg	18 13 32.4	0.0
T1245				S	Sg	18 13 33.9	+0.1
T1245				AML	AML		
	comp=E,83900μm,0.2s						
T1245				AML	AML		
	comp=E,94550μm,0.2s						
T1245				AML	AML		
	comp=E,77300μm,0.6s						
T1245				AML	AML		
	comp=N,82650μm,0.3s						
T1245				AML	AML		
	comp=N,77350μm,0.6s						
T1245				AML	AML		
	comp=E,83850μm,0.2s						
T1245				AML	AML		
	comp=E,94500μm,0.2s						
T1245				AML	AML		
	comp=N,77016μm,0.1s						
T1245				AML	AML		
	comp=N,69082μm,0.1s						
T1245				AML	AML		
	comp=E,83874μm,0.2s						
T1245				AML	AML		
	comp=E,94610μm,0.2s						
FEMA	**Monte Fema**	**0.10**	**307**	P	Pg	18 13 33.3	+0.3
FEMA				S	Sg	18 13 35.5	+0.6
FEMA				AML	AML		
	comp=E,15750μm,0.2s						
FEMA				AML	AML		
	comp=N,9715μm,0.5s						
FEMA				AML	AML		
	comp=N,9730μm,0.5s						
FEMA				AML	AML		
	comp=N,8978μm,0.3s						
FEMA				AML	AML		
	comp=E,15760μm,0.2s						
T1216	**Preci, Frazion**	**0.11**	**265**	P	Pg	18 13 33.4	+0.4
T1216				S	Sg	18 13 35.5	+0.7
T1216				AML	AML		
	comp=N,11800μm,0.5s						
T1216				AML	AML		
	comp=E,12550μm,0.3s						
T1216				AML	AML		
	comp=N,11850μm,0.5s						
T1216				AML	AML		
	comp=E,12551μm,0.3s						
T1216				AML	AML		
	comp=N,9096μm,0.3s						
T1256	**Bolognola (MC)**	**0.12**	**23**	⇑P	Pg	18 13 33.4	+0.2
T1256				S	Sg	18 13 35.8	+0.5
T1256				AML	AML		
	comp=E,8120μm,0.9s						
T1256				AML	AML		
	comp=E,7960μm,0.8s						
T1256				AML	AML		
	comp=E,8120μm,0.8s						
T1256				AML	AML		
	comp=N,8660μm,0.2s						
T1256				AML	AML		
	comp=N,7985μm,0.2s						
T1256				AML	AML		
	comp=E,7660μm,0.4s						
T1256				AML	AML		
	comp=N,8658μm,0.2s						
T1256				AML	AML		
	comp=N,7985μm,0.2s						
T1256				AML	AML		
	comp=E,7540μm,0.4s						
MMO1	**Montemonaco**	**0.12**	**90**	P	Pg	18 13 33.6	+0.4
MMO1				S	Sg	18 13 35.8	+0.6
FDMO	**Fiordimonte**	**0.15**	**338**	P	Pg	18 13 34.1	+0.5
FDMO				S	Sg	18 13 36.7	+0.8
FDMO				AML	AML		
	comp=E,3590μm,0.3s						
FDMO				AML	AML		
	comp=N,3495μm,0.8s						
FDMO				AML	AML		
	comp=N,3195μm,0.2s						
FDMO				AML	AML		
	comp=E,3591μm,0.3s						
AM05	**Amandola Campo**	**0.16**	**61**	⇑P	Pg	18 13 34.5	+0.7
AM05				S	Sg	18 13 37.3	+1.1
AM05				AML	AML		
	comp=E,7240μm,0.8s						
AM05				AML	AML		
	comp=N,542μm,0.1s						
AM05				AML	AML		
	comp=E,1630μm,0.3s						
AM05				AML	AML		
	comp=N,1925μm,1.2s						
AM05				AML	AML		
	comp=N,542μm,0.1s						
AM05				AML	AML		
	comp=E,1629μm,0.3s						
AM05				AML	AML		
	comp=E,7018μm,0.1s						
AM05				AML	AML		
	comp=N,1884μm,0.2s						
AM05				AML	AML		
	comp=N,543μm,0.1s						
CSP1	**Cessapalombo**	**0.20**	**9**	P	Pg	18 13 34.9	+0.5
CSP1				S	Sg	18 13 38.5	+1.2
CSP1				AML	AML		
	comp=E,7205μm,0.2s						
CSP1				AML	AML		
	comp=N,7270μm,0.5s						
CSP1				AML	AML		
	comp=N,7265μm,0.5s						
CSP1				AML	AML		
	comp=E,7210μm,0.2s						
T1241	**Roccafluvione,**	**0.20**	**102**	P	Pg	18 13 35.3	+0.8
T1241				AML	AML		
	comp=E,1570μm,0.7s						
T1241				AML	AML		
	comp=N,2355μm,0.7s						
T1241				AML	AML		
	comp=N,1987μm,0.4s						
T1241				AML	AML		
	comp=E,1591μm,2.9s						
T1215	**Vallo di Nera,**	**0.24**	**246**	⇑P	Pg	18 13 35.9	+0.7
T1215				AML	AML		
	comp=E,1125μm,0.5s						
T1215				AML	AML		
	comp=N,1175μm,0.3s						
T1215				AML	AML		
	comp=E,707μm,0.3s						
T1215				AML	AML		
	comp=E,732μm,0.3s						
T1215				AML	AML		
	comp=N,1010μm,0.3s						
T1215				AML	AML		
	comp=N,978μm,0.3s						
T1204	**Amatrice, Fraz**	**0.25**	**153**	P	Pg	18 13 36.2	+0.7
T1204				AML	AML		
	comp=E,1987μm,0.2s						
T1204				AML	AML		
	comp=N,1650μm,1.1s						
T1204				AML	AML		
	comp=E,1988μm,0.2s						
T1204				AML	AML		
	comp=N,1646μm,1.1s						
T1204				AML	AML		
	comp=E,1989μm,0.2s						
T1204				AML	AML		
	comp=N,1338μm,0.4s						
T1217	**Poggiodomo (PG**	**0.25**	**222**	⇑P	Pg	18 13 36.2	+0.7
T1217				AML	AML		
	comp=E,909μm,2.5s						
T1217				AML	AML		
	comp=N,1019μm,3.6s						
T1217				AML	AML		
	comp=E,922μm,0.4s						
T1217				AML	AML		
	comp=N,1097μm,3.6s						
T1243	**Rocca Santa Ma**	**0.29**	**134**	P	Pg	18 13 36.9	+0.6
T1243				S	Sb	18 13 41.9	-0.9
LNSS	**Leonessa**	**0.31**	**197**	P	Pg	18 13 37.2	+0.6
LNSS				AML	AML		
	comp=E,876μm,1.1s						
LNSS				AML	AML		
	comp=E,876μm,1.1s						
LNSS				AML	AML		
	comp=N,2195μm,0.4s						
LNSS				AML	AML		
	comp=E,778μm,0.2s						
LNSS				AML	AML		
	comp=N,2197μm,0.4s						
MNTP	**Montappone**	**0.33**	**43**	⇑P	Pb	18 13 38.1	-0.3
MNTP				AML	AML		
	comp=E,3545μm,0.7s						
MNTP				AML	AML		
	comp=N,2695μm,1.5s						
MNTP				AML	AML		

comp=N,2518μm,0.2s
MNTP AML AML
comp=E,3376μm,0.2s
OFFI Offida 0.39 85 ⇓P Pb 18 13 39.6 +0.3
OFFI AML AML
comp=N,1175μm,0.8s
OFFI AML AML
comp=E,918μm,0.6s
OFFI AML AML
comp=E,1008μm,2.8s
OFFI AML AML
comp=N,874μm,5.0s
CAMP Campotosto 0.41 153 ⇑P Pg 18 13 38.7 +0.4
CAMP AML AML
comp=N,748μm,0.3s
CAMP AML AML
comp=E,865μm,0.4s
CAMP AML AML
comp=E,865μm,0.4s
CAMP AML AML
comp=N,748μm,0.3s
TERO Teramo 0.43 130 ⇑P Pg 18 13 39.2 +0.5
TERO AML AML
comp=E,830μm,0.4s
TERO AML AML
comp=N,987μm,0.4s
TERO AML AML
comp=N,793μm,0.2s
TERO AML AML
comp=N,816μm,0.4s
TERO AML AML
comp=E,795μm,0.4s
TERO AML AML
comp=E,830μm,0.4s
EL6 Elcito 0.43 354 S Sb 18 13 47.0 +0.1
T1247 Pizzolo (AQ) 0.47 168 ⇓P Pg 18 13 40.0 +0.5
T1247 AML AML
comp=E,890μm,0.4s
T1247 AML AML
comp=N,956μm,1.2s
T1247 AML AML
comp=N,954μm,1.2s
T1247 AML AML
comp=E,890μm,0.4s
T1247 AML AML
comp=N,881μm,0.5s
T1247 AML AML
comp=E,890μm,0.4s
ATCC AVT- Casa Cast 0.48 307 ⇑P Pg 18 13 40.1 +0.5
ATCC AML AML
comp=E,754μm,0.5s
ATCC AML AML
comp=N,772μm,1.6s
ATCC AML AML
comp=E,751μm,0.2s
ATCC AML AML
comp=N,729μm,0.3s
FOSV Fossato di Vic 0.49 323 ⇑P Pg 18 13 39.0 -0.9
CESX Cesi 0.52 236 ⇑P Pg 18 13 40.7 +0.3
CESX AML AML
comp=N,650μm,0.4s
CESX AML AML
comp=E,600μm,1.3s
CESX AML AML
comp=N,649μm,0.4s
CESX AML AML
comp=E,593μm,0.4s
GIGS Gran Sasso 0.54 146 ⇑P Pg 18 13 41.0 +0.1
GIGS S Sb 18 13 51.0 +1.1
GIGS AML AML
comp=N,131μm,0.3s
GIGS AML AML
comp=E,1792μm,0.5s
GIGS AML AML
comp=E,163μm,0.5s
GIGS AML AML
comp=N,131μm,0.3s
MURB Monte Urbino 0.59 308 ⇓P Pg 18 13 42.2 +0.4
MURB S Sb 18 13 53.0 +1.5
MURB AML AML
comp=E,1180μm,0.3s
MURB AML AML
comp=N,812μm,0.9s
MURB AML AML
comp=N,806μm,0.3s
MURB AML AML
comp=E,1182μm,0.3s
MURB AML AML
comp=E,1125μm,3.8s
MURB AML AML
comp=N,869μm,0.3s
SSFR Montelago di S 0.60 333 ⇓P Pg 18 13 42.6 +0.5
SSFR AML AML
comp=E,990μm,1.1s
SSFR AML AML
comp=N,1230μm,1.5s
SSFR AML AML
comp=N,1140μm,0.2s
SSFR AML AML
comp=E,854μm,1.5s
SSFR AML AML
comp=E,848μm,0.2s
SSFR AML AML
comp=N,1140μm,0.2s
SSFR AML AML
comp=E,945μm,0.2s
SSFR AML AML
comp=N,1049μm,0.1s
ARVD Arcevia 0.62 345 ⇑P Pg 18 13 41.7 -0.6
ARVD S Sb 18 13 53.0 +0.8
ARVD AML AML
comp=N,335μm,0.2s
ARVD AML AML
comp=E,576μm,0.8s
ARVD AML AML
comp=E,510μm,0.3s
ARVD AML AML
comp=N,335μm,0.2s
FIAM Fiamignano 0.63 183 ⇓P Pg 18 13 41.2 -1.3
FIAM S Sb 18 13 53.0 +0.4
ATFO Monte Foce - G 0.64 317 ⇓P Pg 18 13 42.9 +0.2
ATFO AML AML
comp=E,309μm,1.0s
ATFO AML AML
comp=N,394μm,0.7s
ATFO AML AML
comp=E,268μm,0.6s
ATFO AML AML
comp=N,379μm,0.5s
FRON Frontone 0.70 333 ⇓P Pg 18 13 44.0 +0.2
FRON AML AML
comp=N,573μm,0.4s
FRON AML AML
comp=E,384μm,0.7s
FRON AML AML
comp=N,536μm,0.2s
FRON AML AML
comp=E,347μm,0.3s
FAGN Fagnano 0.70 154 ⇑P Pb 18 13 44.8 0.0
FAGN AML AML
comp=N,610μm,1.6s
FAGN AML AML
comp=E,958μm,0.3s
FAGN AML AML
comp=N,549μm,0.2s
FAGN AML AML
comp=E,960μm,0.3s
ATVO AVT- Monte Val 0.73 311 ⇑P Pg 18 13 44.2 -0.3
ATVO AML AML
comp=E,200μm,1.4s
ATVO AML AML
comp=N,176μm,0.4s
ATPI Pietralunga - 0.78 315 ⇑P Pg 18 13 45.6 +0.1
ATPI AML AML
comp=E,200μm,0.6s
ATPI AML AML
comp=N,161μm,0.3s
ATPI AML AML
comp=E,199μm,0.6s
ATPI AML AML
comp=N,160μm,0.3s
ATPI AML AML
comp=E,177μm,9.1s
ATPI AML AML
comp=N,161μm,0.3s
PIEI Pieia 0.79 324 ⇓P Pg 18 13 45.3 -0.2
PIEI AML AML
comp=N,186μm,0.3s
PIEI AML AML
comp=E,203μm,0.7s
PIEI AML AML
comp=E,177μm,0.1s
PIEI AML AML
comp=N,186μm,0.3s
MPAG Monte Paganucc 0.79 338 P Pg 18 13 45.8 +0.3
MPAG S Sn 18 13 60.0 +0.3
MPAG AML AML
comp=N,276μm,0.9s
MPAG AML AML
comp=N,276μm,0.9s
MPAG AML AML
comp=E,434μm,0.2s
MPAG AML AML
comp=N,256μm,0.5s
MPAG AML AML
comp=E,434μm,0.2s
T0110 Collepietro 0.81 146 ⇓P Pg 18 13 45.8 -0.2
T0110 AML AML
comp=E,401μm,0.8s
T0110 AML AML
comp=N,344μm,0.4s
T0110 AML AML
comp=E,402μm,0.8s
T0110 AML AML
comp=E,368μm,0.3s
T0110 AML AML
comp=N,344μm,0.4s
FSSB Fossombrone 0.84 341 ⇑P Pg 18 13 46.7 +0.2
FSSB S Sn 18 14 01.0 +0.1
FSSB AML AML
comp=E,1450μm,0.4s
FSSB AML AML
comp=N,1260μm,0.4s
FSSB AML AML
comp=N,1259μm,0.4s
FSSB AML AML
comp=E,1450μm,0.4s
VVLD Villa Vallelon 1.08 162 P Pg 18 13 50.1 -1.1
VVLD AML AML
comp=E,110μm,1.5s
VVLD AML AML
comp=N,129μm,0.6s
SF01 Poggio Pratacc 1.18 266 P Pb 18 13 52.2 -0.8
LAV9 Lanuvio 1.27 196 ⇓P Pn 18 13 54.1 -0.1
CSNT Castellina Chi 1.48 293 P Pg 18 14 00.3 +1.5
ABTA Abfaltersbach 3.88 353 *e*Pn Pn 18 14 32.0 +1.8
comp=N,4.6nm,0.4s
WTTA Wattenberg 4.50 347 *e*Pn Pn 18 14 39.7 +0.9
comp=N,1.0nm,0.3s
CONA Conrad Observa 5.38 20 *e*Pn Pn 18 14 51.6 +0.9
comp=N,0.9nm,0.4s

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*IDC **31** 18:15:01.8±2.8, 30°.36S×177°.68W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=66.3km s-min=27.5km az=119.0*
*NEIC **31** 18:15:06.4±1.4, 30°.24S±0°.04×177°.5W±0°.2, h35km±15km, mb4.4/10, Error ellipse: s-maj=28.2km s-min=4.4km az=82.0*
ISC 31 18:15:06.4±1.3, **30°.23S**±0°.08×**177°.6W**±0°.2, **h35**km, **n20**, σ1$**27**/22, **mb4.3**/9, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.01**	**345**	Pn		**Pn**	**18 15 24.8**	**+0.7**
	203nm,0.3s,baz=100,slow=12,SNR=9.9							
RAO				Sn		**Sn**	**18 15 36.1**	**-1.0**
	389nm,0.3s,baz=77,slow=23,SNR=7.9							
RAO	**Raoul Island**	**1.01**	**345**			**Pn**	**18 15 24.5**	**+0.4**
RAO				Sn		**Sn**	**18 15 37.8**	**+0.7**
OUZ	**Omahuta**	**8.92**	**234**	Pn		**Pn**	**18 17 15.5**	**+2.7**
BKZ	**Black Stump Fm**	**10.15**	**207**	Pn		**Pn**	**18 17 29.7**	**+0.1**
CTAO	**Charters Tower**	**34.10**	**279**	P		**P**	**18 21 47.6**	**-0.4**
CTAO				IAmb		IAmb	18 21 51.0	
	comp=Z,9.9nm,1.3s							
STKA	**Stephens Creek**	**34.84**	**257**	P		**P**	**18 21 54.2**	**0.0**
	comp=Z,2.5nm,0.8s,baz=103,slow=9.8,SNR=3.4							
	comp=Z,2.5nm,0.8s							
STKA	**Stephens Creek**	**34.84**	**257**	P		**P**	**18 21 53.1**	**-1.1**
STKA				IAmb		IAmb	18 22 16.4	
	comp=Z,2.6nm,1.4s							
AS31	**Alice Springs**	**43.45**	**267**	P		**P**	**18 23 05.6**	**-0.8**
ASAR	**Alice Springs**	**43.45**	**267**	P		**P**	**18 23 06.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=107,slow=7.1,SNR=3.2							
	comp=Z,0.2nm,0.3s							
ASAR	**Alice Springs**	**43.45**	**267**	P		**P**	**18 23 07.2**	**+0.9**
WB2	**Warramunga Arr**	**44.42**	**272**	P		**P**	**18 23 14.4**	**+0.3**
WB2				IAmb		IAmb	18 23 16.3	
	comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	**44.42**	**272**	P		**P**	**18 23 15.1**	**+1.0**
WRAB				IAmb		IAmb	18 23 25.5	
	comp=Z,4.6nm,0.5s							
WRA	**Warramunga Arr**	**44.43**	**272**	P		**P**	**18 23 14.0**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=110,slow=8.2,SNR=15							
	comp=Z,0.6nm,0.3s							
WRA	**Warramunga Arr**	**44.43**	**272**	P		**P**	**18 23 13.7**	**-0.4**
WB0	**Warramunga Arr**	**44.45**	**272**	P		**P**	**18 23 14.4**	**0.0**
WB0				IAmb		IAmb	18 23 53.6	
	comp=Z,5.6nm,1.2s							
MTN	**Manton Dam**	**50.29**	**279**	P		**P**	**18 23 57.7**	**-2.1**
MMRI	**Maumere**	**59.96**	**278**	P		**P**	**18 25 06.5**	**-3.1**
SNAA	**Sanae**	**78.31**	**178**	P		**P**	**18 27 02.9**	**+0.4**
SNAA				IAmb		IAmb	18 27 09.2	
	comp=Z,4.0nm,1.3s							
PETK	**Petropavlovsk-**	**85.73**	**345**	P		**P**	**18 27 43.2**	**+1.8**
	comp=Z,4.6nm,0.9s,baz=133,slow=6.3,SNR=2.5							
	comp=Z,4.6nm,0.9s							
FINES	**FINESS Array B**	**145.10**	**340**	PKPbc		**PKPdf**	**18 34 39.2**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=42,slow=4.3,SNR=14							

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*GUC **31** 18:15:11.5±0.8, 21°.44S×67°.62W, h202km±8km, ML3.5*
*SCB **31** 18:15:14.5±1.3, 21°.38S×67°.52W, h159km±3km, ML3.3/2, MW3.3, Error ellipse: s-maj=5.2km s-min=4.1km az=0.0*
ISC 31 18:15:10.0±1.9, **21°.42S**±0°.05×**67°.49W**±0°.05, **h189**km±16km, **n29**, σ1$**39**/45, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.67**	**257**	*e*P		**Pn**	**18 15 46.0**	**+1.4**
PB09				*e*S		**Sn**	**18 16 12.5**	**+1.2**
PB09				IAML			18 16 14.6	
	comp=N,107nm,0.3s							
MOCB	**Mochara**	**1.74**	**85**	P		**Pn**	**18 15 46.1**	**+0.6**
MOCB				S		**Sn**	**18 16 09.5**	**-3.5**
MOCB				IAML			18 16 13.8	
	comp=N,76nm,0.3s							
LVC	**Limon Verde**	**1.77**	**228**	*e*P		**Pn**	**18 15 46.7**	**+0.9**
LVC				*e*S		**Sn**	**18 16 13.8**	**+0.2**
LVC	**Limon Verde**	**1.77**	**228**	P		**Pn**	**18 15 46.6**	**+0.9**
PB01	**IPOC Station P**	**1.90**	**281**	*e*P		**Pn**	**18 15 47.3**	**+0.5**
PB01				*e*S		**Sn**	**18 16 15.4**	**+0.1**
PB01				IAML			18 16 16.8	
	comp=E,160nm,0.2s							
YJA	**Yavi**	**1.99**	**113**	P		**Pn**	**18 15 49.2**	**+1.1**
PB08	**IPOC Station P**	**2.01**	**309**	*i* P		**Pn**	**18 15 49.5**	**+1.2**
PB08				*e*S		**Sn**	**18 16 18.5**	**+0.6**
PB08				IAML			18 16 20.4	
	comp=E,107nm,0.2s							
PB03	**IPOC Station P**	**2.19**	**253**	*i* P		**Pn**	**18 15 50.7**	**+0.7**
PB03				*e*S		**Sn**	**18 16 20.1**	**-0.9**
PB03				IAML			18 16 21.0	
	comp=N,296nm,0.5s							
PB02	**IPOC Station P**	**2.24**	**272**	*e*P		**Pn**	**18 15 50.9**	**+0.5**
PB02				*e*S		**Sn**	**18 16 20.8**	**-1.1**
PB02	**IPOC Station P**	**2.24**	**272**	P		**Pn**	**18 15 51.3**	**+0.8**
PB02				S		**Sn**	**18 16 17.0**	**-4.9**
PB02				IAML			18 16 22.5	
	comp=N,335nm,0.4s							
PB07	**IPOC Station P**	**2.25**	**262**	*e*P		**Pn**	**18 15 51.3**	**+0.6**
PB07				*e*S		**Sn**	**18 16 21.0**	**-1.2**
PB07				IAML			18 16 23.3	
	comp=E,225nm,0.3s							
PB06	**IPOC Station P**	**2.32**	**236**	*e*P		**Pn**	**18 15 51.8**	**+0.4**
PB06				*e*S		**Sn**	**18 16 23.3**	**-0.2**
PB06				IAML			18 16 24.7	
	comp=E,217nm,0.2s							
PB06	**IPOC Station P**	**2.32**	**236**	P		**Pn**	**18 15 52.3**	**+1.0**
GO01	**Chusmiza**	**2.36**	**317**	*e*P		**Pn**	**18 15 53.3**	**+1.1**
GO01				*e*S		**Sn**	**18 16 26.0**	**+1.0**
GO01				IAML			18 16 29.7	
	comp=N,283nm,0.1s							
GO01	**Chusmiza**	**2.36**	**317**	P		**Pn**	**18 15 52.6**	**+0.4**
PATCX	**Punta Patache**	**2.55**	**283**	*e*P		**Pn**	**18 15 54.5**	**+0.5**
PATCX				*e*S		**Sn**	**18 16 26.4**	**-1.8**
PATCX				IAML			18 16 29.6	
	comp=E,243nm,0.3s							
PB15	**IPOC Station P**	**2.56**	**225**	*e*P		**Pn**	**18 15 55.2**	**+1.2**
PB15				*e*S		**Sn**	**18 16 28.6**	**+0.1**
PB15	**IPOC Station P**	**2.56**	**225**	P		**Pn**	**18 15 56.3**	**+2.2**
PB04	**IPOC Station P**	**2.63**	**249**	*e*P		**Pn**	**18 15 55.5**	**+0.5**
PB04				*e*S		**Sn**	**18 16 28.3**	**-1.6**
PB04				IAML			18 16 32.5	
	comp=N,156nm,0.1s							
PB04	**IPOC Station P**	**2.63**	**249**	P		**Pn**	**18 15 55.7**	**+0.8**
TA01	**Diego Aracena**	**2.65**	**288**	*e*P		**Pn**	**18 15 54.7**	**-0.3**
TA01				*e*S		**Sn**	**18 16 28.2**	**-1.9**
TA01	**Diego Aracena**	**2.65**	**288**	P		**Pn**	**18 15 55.7**	**+0.7**
PB10	**IPOC Station P**	**3.52**	**233**	*e*P		**Pn**	**18 16 05.5**	**+0.1**
PB16	**IPOC Station P**	**3.61**	**328**	*e*P		**Pn**	**18 16 08.2**	**+1.1**
PB16				*e*S		**Sn**	**18 16 51.9**	**+0.2**
PB12	**IPOC Station P**	**3.86**	**316**	*e*P		**Pn**	**18 16 08.3**	**-1.5**
GO02	**Mina Guanaco**	**4.20**	**207**	P		**Pn**	**18 16 14.7**	**+0.5**
BBOE	**La Paz, Chanca**	**4.61**	**354**	P		**Pn**	**18 16 20.2**	**+0.5**
BBOD	**La Paz, Gloria**	**4.87**	**347**	P		**Pn**	**18 16 24.5**	**+1.4**
LPAZ	**La Paz**	**5.14**	**353**	P		**Pn**	**18 16 28.0**	**+1.4**

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*PRU **31** 18:16:30.2±0.0, 42°.71N×13°.63E, h10km*
VIE 31 18:16:28.7±1.0, **42°.79N**×**13°.52E**, **h10**km, **mb2.7**/4, **ml2.6**/6, **Error ellipse: s-maj=16.4km s-min=9.6km az=99.0 131 km NE of Rome, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**3.08**	**87**	*e*Pg		Pg	18 17 27.5	-0.2
OBKA	**Obir**	**3.79**	**11**	*e*Pn		Pn	18 17 27.8	+0.5
	0.4nm,0.3s							
ABTA	**Abfaltersbach**	**4.02**	**350**	*e*Pn		Pn	18 17 30.8	+0.4
	3.8nm,0.3s							
KBA	**Koelnbreinsper**	**4.29**	**358**	*e*Pn		Pn	18 17 34.5	+0.3
	1.4nm,0.3s							
WTTA	**Wattenberg**	**4.67**	**344**	*e*Pn		Pn	18 17 39.7	+0.3
	0.5nm,0.3s							
FETA	**Feichten**	**4.67**	**336**	*e*Pn		Pn	18 17 39.5	+0.1
	1.0nm,0.4s							
SQTA	**Sankt Quirin**	**4.72**	**341**	*e*Pn		Pn	18 17 39.9	-0.2
	0.8nm,0.2s							
KHC	**Kasperske Hory**	**6.34**	**0**	*e*PN		Pn	18 18 04.2	+1.9
KHC				*e*SN		Sn	18 19 13.4	-1.3

ROM 31 18:32:30.0±0.1, **42°.585N**±0°.004×**13°.260E**±0°.004, **h13**km, **Md1.1**/6, **3C-1D**, **Error ellipse: s-maj=0.4km s-min=0.1km az=15.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.07**	**50**	P		Pg	18 32 33.2	+0.4
SMA1				S		Sg	18 32 35.1	+0.3
SMA1				END				
RM33	**Pellescritta (**	**0.08**	**204**	P		Pg	18 32 33.2	+0.3
RM33				S		Sg	18 32 35.0	+0.2
RM33				AML		AML		
	comp=E,718μm,0.3s							
RM33				AML		AML		
	comp=N,428μm,0.1s							
RM33				AML		AML		
	comp=E,2130μm,0.3s							
RM33				AML		AML		
	comp=N,3220μm,0.3s							
RM33				AML		AML		
	comp=E,2215μm,0.3s							
RM33				AML		AML		
	comp=N,3245μm,0.3s							
RM33				AML		AML		
	comp=E,620μm,0.1s							
RM33				AML		AML		
	comp=E,614μm,0.1s							
RM33				AML		AML		
	comp=N,427μm,0.1s							
RM33				AML		AML		
	comp=N,414μm,0.1s							
T1204	**Amatrice, Fraz**	**0.10**	**25**	⇑P		Pg	18 32 33.4	+0.3
T1204				S		Sg	18 32 35.5	+0.1
T1204				AML		AML		
	comp=E,5340μm,1.1s							
T1204				AML		AML		
	comp=N,3415μm,1.0s							
T1204				AML		AML		
	comp=N,231μm,0.1s							
T1204				AML		AML		
	comp=E,362μm,0.1s							
T1204				END				
CAMP	**Campotosto**	**0.12**	**114**	P		Pb	18 32 33.8	-0.4
CAMP				S		Sg	18 32 36.1	+0.5
CAMP				AML		AML		
	comp=E,1055μm,0.5s							
CAMP				AML		AML		
	comp=N,934μm,0.6s							
CAMP				AML		AML		
	comp=E,36μm,0.3s							
CAMP				AML		AML		
	comp=N,49μm,0.5s							
CAMP				END				
LNSS	**Leonessa**	**0.16**	**276**	P		Pg	18 32 34.1	+0.2
LNSS				S		Sg	18 32 37.1	+0.5
LNSS				END				
T1243	**Rocca Santa Ma**	**0.18**	**51**	P		Pg	18 32 34.5	+0.4
T1243				S		Sg	18 32 37.7	+0.7
T1243				END				
TERO	**Teramo**	**0.26**	**81**	⇑P		Pg	18 32 35.8	+0.4
TERO				S		Sg	18 32 39.8	+0.7
TERO				AML		AML		
	comp=E,870μm,1.4s							
TERO				AML		AML		
	comp=N,1054μm,0.4s							
TERO				AML		AML		
	comp=E,918μm,0.4s							
TERO				AML		AML		
	comp=N,1100μm,0.5s							
TERO				AML		AML		
	comp=E,86μm,0.1s							
TERO				AML		AML		
	comp=E,236μm,1.9s							
TERO				AML		AML		
	comp=N,93μm,0.1s							
TERO				AML		AML		
	comp=N,154μm,0.9s							
TERO				END				
GIGS	**Gran Sasso**	**0.27**	**120**	P		Pg	18 32 35.9	+0.4
GIGS				S		Sg	18 32 40.1	+0.8
GIGS				AML		AML		
	comp=E,509μm,0.2s							
GIGS				AML		AML		
	comp=N,183μm,1.1s							
GIGS				AML		AML		
	comp=E,24μm,0.1s							
GIGS				AML		AML		
	comp=N,13μm,0.1s							
GIGS				END				
T1217	**Poggiodomo (PG**	**0.27**	**298**	AML		AML		
	comp=N,2785μm,0.2s							
T1217				AML		AML		
	comp=E,2515μm,0.5s							
T1217				AML		AML		
	comp=E,2418μm,0.6s							
T1217				AML		AML		
	comp=N,2716μm,0.3s							
T1245	**Castelsantange**	**0.28**	**349**	AML		AML		
	comp=N,48550μm,0.3s							
T1245				AML		AML		
	comp=E,18100μm,0.3s							
T1245				AML		AML		
	comp=E,23200μm,1.2s							
T1245				AML		AML		
	comp=N,45900μm,0.3s							
T1241	**Roccafluvione,**	**0.30**	**25**	P		Pg	18 32 36.6	+0.4
T1241				AML		AML		
	comp=E,209μm,1.3s							
T1241				AML		AML		
	comp=N,350μm,0.5s							
T1241				AML		AML		
	comp=E,2325μm,0.3s							
T1241				AML		AML		
	comp=N,1920μm,0.4s							
T1241				AML		AML		
	comp=E,2305μm,0.3s							

T1241				AML	AML	
	comp=N,1870μm,0.4s					
AM05	**Amandola Campo**	**0.40**	**10**	P	Pg	18 32 34.5 -3.5
AM05				S	Sg	18 32 44.0 +0.7
AM05				AML	AML	
	comp=E,807μm,0.1s					
AM05				AML	AML	
	comp=N,606μm,0.1s					
AM05				AML	AML	
	comp=E,3210μm,0.1s					
AM05				AML	AML	
	comp=N,212μm,0.1s					
AM05				AML	AML	
	comp=N,92μm,4.5s					
AM05				AML	AML	
	comp=N,21μm,3.1s					
AM05				AML	AML	
	comp=E,46μm,0.9s					
AM05				AML	AML	
	comp=E,191μm,0.1s					
T1256	**Bolognola (MC)**	**0.42**	**357**	⇑P	Pg	18 32 36.9 -1.5
T1256				S	Sb	18 32 46.0 +0.2
T1256				AML	AML	
	comp=E,1330μm,0.8s					
T1256				AML	AML	
	comp=N,1825μm,0.3s					
T1256				AML	AML	
	comp=E,1825μm,1.3s					
T1256				AML	AML	
	comp=N,2145μm,0.4s					
T1256				AML	AML	
	comp=E,302μm,0.6s					
T1256				AML	AML	
	comp=E,277μm,0.1s					
T1256				AML	AML	
	comp=N,267μm,0.1s					
T1256				AML	AML	
	comp=N,309μm,0.1s					
FDMO	**Fiordimonte**	**0.47**	**344**	S	Sg	18 32 46.0 +0.5
OFFI	**Offida**	**0.47**	**42**	S	Sn	18 32 49.0 -1.7
EL6	**Elcito**	**0.75**	**351**	P	Pn	18 32 45.8 -0.6
EL6				S	Sn	18 32 57.0 -0.8
VIVA	**Pratoni del Vi**	**0.91**	**204**	P	Pg	18 32 46.4 -1.2
ROM9	**Roma**	**0.94**	**216**	⇓P	Pg	18 32 45.0 -3.0
PAOL	**Paolisi**	**1.83**	**147**	P	Pb	18 33 02.6 -0.8

ROM 31 18:33:01.4±0.2, 43°.041N±0°.009×13°.073E±0°.009, h8km, ML2.6/17, 6C-6D, Error ellipse: s-maj=1.1km s-min=0.5km az=335.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**114**	P	Pg	18 33 02.9	0.0
FDMO				S	Sg	18 33 03.5	-0.5
FDMO				AML	AML		
	comp=N,9855μm,0.1s						
FDMO				AML	AML		
	comp=E,16950μm,0.1s						
FEMA	**Monte Fema**	**0.08**	**192**	P	Pg	18 33 04.0	+0.4
FEMA				S	Sg	18 33 05.8	+0.5
FEMA				AML	AML		
	comp=N,2845μm,0.5s						
FEMA				AML	AML		
	comp=E,4245μm,1.5s						
FEMA				AML	AML		
	comp=N,2850μm,0.5s						
FEMA				AML	AML		
	comp=E,4245μm,0.5s						
FEMA				AML	AML		
	comp=N,2850μm,1.5s						
T1256	**Bolognola (MC)**	**0.12**	**107**	P	Pg	18 33 04.6	+0.5
T1256				S	Sg	18 33 06.6	+0.5
T1256				AML	AML		
	comp=E,1330μm,0.8s						
T1256				AML	AML		
	comp=N,1825μm,0.3s						
T1256				AML	AML		
	comp=E,1830μm,1.3s						
T1256				AML	AML		
	comp=N,2140μm,0.4s						
T1256				AML	AML		
	comp=E,1825μm,1.3s						
T1256				AML	AML		
	comp=N,2145μm,0.4s						
T1256				AML	AML		
	comp=E,1329μm,0.8s						
T1256				AML	AML		
	comp=N,1904μm,0.3s						
T1256				AML	AML		
	comp=N,1828μm,0.3s						
T1216	**Preci, Frazion**	**0.16**	**195**	P	Pg	18 33 05.3	+0.6
T1216				S	Sg	18 33 08.3	+1.4
T1216				AML	AML		
	comp=E,6120μm,0.4s						
T1216				AML	AML		
	comp=N,5700μm,0.3s						
T1216				AML	AML		
	comp=N,5705μm,0.3s						
T1216				AML	AML		
	comp=E,6125μm,0.4s						
T1216				AML	AML		
	comp=E,6125μm,1.6s						
GUMA	**Gualdo di Mace**	**0.19**	**84**	⇑P	Pg	18 33 06.4	+1.0
GUMA				S	Sg	18 33 10.0	+1.9
GUMA				AML	AML		
	comp=E,2970μm,0.3s						
GUMA				AML	AML		
	comp=N,3340μm,0.5s						
GUMA				AML	AML		
	comp=N,3510μm,0.3s						
GUMA				AML	AML		
	comp=E,2975μm,0.4s						
GUMA				AML	AML		
	comp=E,3925μm,0.2s						
T1245	**Castelsantange**	**0.20**	**155**	⇑P	Pg	18 33 06.3	+0.8
T1245				S	Sg	18 33 16.0	+7.6
T1245				AML	AML		
	comp=E,23200μm,1.2s						
T1245				AML	AML		
	comp=N,48550μm,0.3s						
T1245				AML	AML		
	comp=N,45900μm,0.3s						
T1245				AML	AML		
	comp=E,18100μm,0.3s						
T1245				AML	AML		
	comp=N,48550μm,0.3s						
AM05	**Amandola Campo**	**0.21**	**107**	P	Pg	18 33 06.5	+0.8
AM05				S	Sg	18 33 10.1	+1.4
AM05				AML	AML		
	comp=E,808μm,0.1s						
AM05				AML	AML		
	comp=N,212μm,0.1s						
AM05				AML	AML		
	comp=E,3210μm,0.1s						
AM05				AML	AML		
	comp=E,807μm,0.1s						
AM05				AML	AML		
	comp=N,212μm,0.1s						
AM05				AML	AML		
	comp=N,606μm,0.1s						
MMO1	**Montemonaco**	**0.23**	**127**	P	Pg	18 33 06.7	+0.6
MMO1				S	Sg	18 33 10.5	+1.2
T1215	**Vallo di Nera,**	**0.28**	**212**	⇑P	Pg	18 33 07.7	+0.7
T1215				AML	AML		
	comp=E,1505μm,0.4s						
T1215				AML	AML		
	comp=N,1365μm,0.9s						
T1215				AML	AML		
	comp=N,1370μm,0.9s						
T1215				AML	AML		
	comp=E,1505μm,0.4s						
T1215				AML	AML		
	comp=E,235μm,2.5s						
T1215				AML	AML		
	comp=N,343μm,0.4s						
T1215				AML	AML		
	comp=N,1370μm,1.1s						
ASSB	**Assisi San Ben**	**0.30**	**270**	S	Sg	18 33 09.0	-2.5
T1241	**Roccafluvione,**	**0.32**	**125**	P	Pg	18 33 08.4	+0.6
T1241				S	Sb	18 33 13.5	-1.2
T1241				AML	AML		
	comp=E,2320μm,0.3s						
T1241				AML	AML		
	comp=N,1920μm,0.3s						
T1241				AML	AML		
	comp=N,1865μm,0.4s						
T1241				AML	AML		
	comp=E,2325μm,0.3s						
T1241				AML	AML		
	comp=N,1920μm,0.4s						
T1241				AML	AML		
	comp=E,2305μm,0.3s						
T1241				AML	AML		
	comp=N,1870μm,0.4s						
T1241				AML	AML		
	comp=N,768μm,0.7s						
T1241				AML	AML		
	comp=N,386μm,0.1s						
T1241				AML	AML		
	comp=E,254μm,0.9s						
T1241				AML	AML		
	comp=N,768μm,1.3s						
T1241				AML	AML		
	comp=E,252μm,0.5s						
T1217	**Poggiodomo (PG**	**0.34**	**198**	⇓P	Pg	18 33 08.9	+0.8
T1217				S	Sb	18 33 14.7	-0.7
T1217				AML	AML		
	comp=E,2510μm,0.6s						
T1217				AML	AML		
	comp=E,2422μm,0.6s						
T1217				AML	AML		
	comp=E,2515μm,0.5s						
T1217				AML	AML		
	comp=N,2716μm,0.3s						
T1217				AML	AML		
	comp=N,2715μm,0.3s						
T1217				AML	AML		
	comp=N,2785μm,0.3s						
T1217				AML	AML		
	comp=E,2418μm,0.6s						
T1217				AML	AML		
	comp=N,2785μm,1.7s						
T1217				AML	AML		
	comp=N,2715μm,1.7s						
ATCC	**AVT- Casa Cast**	**0.35**	**295**	S	Sg	18 33 10.0	-2.9
T1204	**Amatrice, Fraz**	**0.41**	**154**	⇓P	Pg	18 33 09.9	+0.6
T1204				S	Sb	18 33 17.2	-0.1
T1204				AML	AML		
	comp=N,3420μm,1.0s						
T1204				AML	AML		
	comp=E,5340μm,1.1s						
T1204				AML	AML		
	comp=N,3415μm,1.0s						
T1204				AML	AML		
	comp=E,5350μm,1.1s						
T1204				AML	AML		
	comp=N,431μm,1.0s						
T1204				AML	AML		
	comp=E,626μm,0.6s						
LNSS	**Leonessa**	**0.44**	**183**	S	Sb	18 33 18.0	-0.2
T1243	**Rocca Santa Ma**	**0.44**	**141**	⇓P	Pg	18 33 10.4	+0.4
T1243				S	Sb	18 33 18.0	-0.2
SMA1	**SAN MARTINO**	**0.45**	**155**	⇓P	Pg	18 33 10.6	+0.4
SMA1				S	Sb	18 33 17.6	-1.0
SMA1				AML	AML		
	comp=E,4085μm,0.5s						
SMA1				AML	AML		
	comp=N,4190μm,0.9s						
SMA1				AML	AML		
	comp=E,4090μm,0.5s						
MURB	**Monte Urbino**	**0.46**	**299**	S	Sg	18 33 12.0	-4.3
OFFI	**Offida**	**0.46**	**103**	⇑P	Pb	18 33 11.1	-0.6
OFFI				AML	AML		
	comp=E,1096μm,0.6s						
OFFI				AML	AML		
	comp=N,1540μm,0.6s						
ARRO	**Arrone**	**0.51**	**206**	⇓P	Pg	18 33 11.9	+0.6
ARRO				S	Sb	18 33 21.0	+0.8
ARRO				AML	AML		
	comp=N,626μm,0.5s						
ARRO				AML	AML		
	comp=E,722μm,0.2s						
ARRO				AML	AML		
	comp=N,626μm,0.5s						
ARRO				AML	AML		
	comp=E,137μm,1.1s						
ARRO				AML	AML		
	comp=N,140μm,0.2s						
T1211	**Morro Reatino**	**0.53**	**198**	S	Sb	18 33 22.0	+1.2
RM33	**Pellescritta (**	**0.54**	**169**	S	Sg	18 33 20.0	+1.0
CAMP	**Campotosto**	**0.56**	**154**	⇑P	Pg	18 33 12.3	0.0
CAMP				AML	AML		
	comp=E,1055μm,0.5s						
CAMP				AML	AML		
	comp=N,934μm,0.6s						
CAMP				AML	AML		
	comp=E,1060μm,0.5s						
TERO	**Teramo**	**0.57**	**137**	⇑P	Pg	18 33 12.6	+0.1
TERO				AML	AML		
	comp=E,870μm,1.4s						
TERO				AML	AML		
	comp=N,1051μm,0.4s						
TERO				AML	AML		
	comp=E,918μm,0.4s						
TERO				AML	AML		
	comp=E,917μm,0.4s						
TERO				AML	AML		
	comp=N,1100μm,0.5s						
GIGS	**Gran Sasso**	**0.69**	**148**	⇓P	Pg	18 33 14.8	0.0
GIGS				AML	AML		
	comp=E,509μm,0.2s						
GIGS				AML	AML		
	comp=N,183μm,1.1s						
GIGS				AML	AML		
	comp=E,508μm,0.2s						
GIGS				AML	AML		
	comp=N,182μm,1.1s						

ROM 31 18:33:25.4±0.1, 42°.791N±0°.004×13°.154E±0°.005, h9km, ML2.5/16, 9C-8D, Error ellipse: s-maj=0.4km s-min=0.4km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**21**	P	Pg	18 33 27.9	+0.2
T1245				S	Sg	18 33 29.2	0.0
T1245				AML	AML		
	comp=N,48550μm,0.3s						
T1245				AML	AML		
	comp=E,23200μm,1.2s						
T1245				AML	AML		
	comp=E,18100μm,0.3s						
T1245				AML	AML		
	comp=E,23200μm,0.8s						
T1245				AML	AML		
	comp=N,45900μm,0.3s						
T1204	**Amatrice, Fraz**	**0.17**	**134**	⇑P	Pg	18 33 29.7	+0.7
T1204				S	Sg	18 33 32.7	+1.2
T1204				AML	AML		
	comp=E,5345μm,1.1s						
T1204				AML	AML		
	comp=N,3420μm,1.0s						
T1204				AML	AML		
	comp=E,5340μm,1.1s						
T1204				AML	AML		
	comp=N,3415μm,1.0s						
T1204				AML	AML		
	comp=E,5350μm,1.1s						
MMO1	**Montemonaco**	**0.17**	**49**	P	Pg	18 33 29.5	+0.5
MMO1				S	Sg	18 33 32.5	+1.0
T1217	**Poggiodomo (PG**	**0.18**	**244**	P	Pg	18 33 29.9	+0.7
T1217				S	Sg	18 33 32.9	+1.0
T1217				AML	AML		
	comp=E,2425μm,0.6s						
T1217				AML	AML		
	comp=N,2720μm,0.3s						
T1217				AML	AML		
	comp=E,2510μm,0.6s						
T1217				AML	AML		
	comp=N,2785μm,0.3s						
T1217				AML	AML		
	comp=E,2422μm,0.6s						
T1217				AML	AML		
	comp=E,2515μm,0.5s						
T1217				AML	AML		
	comp=E,2418μm,0.6s						
T1217				AML	AML		
	comp=N,2716μm,0.3s						
T1217				AML	AML		
	comp=N,2715μm,0.3s						
T1217				AML	AML		
	comp=N,2785μm,1.7s						
T1217				AML	AML		
	comp=N,2715μm,1.7s						
SMA1	**SAN MARTINO**	**0.21**	**140**	⇓P	Pg	18 33 30.9	+1.1
SMA1				S	Sg	18 33 33.8	+1.2
SMA1				AML	AML		
	comp=E,4090μm,0.5s						
SMA1				AML	AML		
	comp=E,4085μm,0.5s						
SMA1				AML	AML		
	comp=N,4190μm,0.9s						
SMA1				AML	AML		
	comp=E,4090μm,1.5s						
T1215	**Vallo di Nera,**	**0.21**	**273**	⇓P	Pg	18 33 30.5	+0.8
T1215				S	Sg	18 33 33.8	+1.1
T1215				AML	AML		
	comp=E,1500μm,0.4s						
T1215				AML	AML		
	comp=N,1365μm,0.9s						
T1215				AML	AML		
	comp=E,1565μm,0.4s						
T1215				AML	AML		
	comp=N,1360μm,0.9s						
T1215				AML	AML		
	comp=E,1505μm,0.4s						
T1215				AML	AML		
	comp=N,1365μm,0.9s						
T1215				AML	AML		
	comp=E,1505μm,0.4s						
T1215				AML	AML		
	comp=N,1370μm,0.9s						
T1215				AML	AML		
	comp=N,1370μm,1.1s						
T1211	**Morro Reatino**	**0.34**	**221**	P	Pg	18 33 32.7	+0.6
T1211				S	Sb	18 33 39.0	-0.3
ARRO	**Arrone**	**0.36**	**234**	P	Pg	18 33 33.0	+0.6
ARRO				AML	AML		
	comp=N,626μm,0.5s						
ARRO				AML	AML		
	comp=N,626μm,0.5s						
ARRO				AML	AML		
	comp=E,722μm,0.2s						
TERO	**Teramo**	**0.37**	**117**	⇓P	Pg	18 33 33.1	+0.4
TERO				S	Sg	18 33 38.8	+1.2
TERO				AML	AML		
	comp=E,870μm,1.4s						
TERO				AML	AML		
	comp=N,1051μm,0.4s						
TERO				AML	AML		
	comp=N,1054μm,0.4s						
TERO				AML	AML		
	comp=E,918μm,0.4s						
TERO				AML	AML		
	comp=E,866μm,1.4s						
TERO				AML	AML		
	comp=N,1100μm,0.5s						
TERO				AML	AML		
	comp=E,866μm,0.6s						
TERO				AML	AML		
	comp=N,1052μm,0.4s						
TERO				AML	AML		
	comp=E,917μm,0.4s						
ASSB	**Assisi San Ben**	**0.44**	**305**	P	Pg	18 33 34.4	+0.4
ASSB				S	Sb	18 33 41.3	-0.9
SNTG	**Esanatoglia**	**0.49**	**341**	AML	AML		
	comp=N,338μm,0.6s						
SNTG				AML	AML		
	comp=E,354μm,1.0s						
FIAM	**Fiamignano**	**0.52**	**183**	P	Pg	18 33 36.0	+0.4
FIAM				S	Sb	18 33 44.0	-0.6
EL6	**Elcito**	**0.54**	**356**	⇓P	Pg	18 33 33.5	-2.4
EL6				S	Sb	18 33 46.0	+0.9
EL6				AML	AML		
	comp=N,900μm,0.2s						
EL6				AML	AML		
	comp=N,902μm,0.2s						
EL6				AML	AML		
	comp=E,812μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.55**	**316**	P	Pg	18 33 36.1	+0.1
ATCC				S	Sb	18 33 45.1	-0.1
FOSV	**Fossato di Vic**	**0.58**	**330**	P	Pb	18 33 37.6	-0.2
FOSV				S	Sb	18 33 46.1	-0.1
FOSV				AML	AML		
	comp=E,342μm,0.2s						
FOSV				AML	AML		
	comp=E,342μm,0.2s						
FOSV				AML	AML		
	comp=N,361μm,0.3s						
FOSV				AML	AML		
	comp=E,268μm,4.0s						
VCEL	**Villa Celiera**	**0.64**	**128**	⇑P	Pg	18 33 35.9	-2.0
VCEL				S	Sb	18 33 49.0	+0.9
VCEL				AML	AML		
	comp=E,784μm,0.4s						
VCEL				AML	AML		
	comp=N,877μm,0.4s						
VCEL				AML	AML		
	comp=N,876μm,0.4s						
MURB	**Monte Urbino**	**0.66**	**316**	⇓P	Pg	18 33 38.1	0.0
MURB				AML	AML		
	comp=E,709μm,0.3s						
MURB				AML	AML		
	comp=N,776μm,1.4s						
MURB				AML	AML		
	comp=N,776μm,0.6s						
PP3	**Marolino**	**0.68**	**29**	S	Sb	18 33 49.0	+0.1
ATTE	**AVT- Monte Tez**	**0.71**	**305**	⇑P	Pn	18 33 42.1	+0.3
ATTE				AML	AML		
	comp=N,128μm,0.4s						
ATTE				AML	AML		
	comp=E,172μm,0.4s						
ATTE				AML	AML		
	comp=N,128μm,0.4s						
ARVD	**Arcevia**	**0.72**	**348**	⇑P	Pg	18 33 39.4	0.0
T0110	**Collepietro**	**0.73**	**140**	S	Sn	18 33 52.0	-1.3
MGAB	**Montegabbione**	**0.78**	**279**	⇑P	Pn	18 33 43.2	+0.6
MGAB				AML	AML		
	comp=E,295μm,0.4s						
MGAB				AML	AML		
	comp=E,293μm,0.4s						
MGAB				AML	AML		
	comp=N,351μm,0.5s						
MGAB				AML	AML		
	comp=N,386μm,0.5s						
MGAB				AML	AML		
	comp=N,351μm,1.5s						
MGAB				AML	AML		
	comp=N,386μm,1.5s						
FRON	**Frontone**	**0.79**	**337**	⇓P	Pb	18 33 41.7	+0.3
FRON				AML	AML		
	comp=E,166μm,0.2s						
FRON				AML	AML		
	comp=N,202μm,0.4s						
ATVO	**AVT- Monte Val**	**0.81**	**317**	⇓P	Pg	18 33 40.8	-0.2
ATVO				AML	AML		
	comp=N,123μm,0.4s						
ATVO				AML	AML		
	comp=E,172μm,1.0s						
ATVO				AML	AML		
	comp=E,172μm,1.0s						
PIEI	**Pieia**	**0.87**	**329**	S	Sn	18 33 57.0	+0.2
MPAG	**Monte Paganucc**	**0.89**	**341**	⇑P	Pn	18 33 43.6	-0.5
MPAG				S	Sn	18 33 57.0	-0.2
MPAG				AML	AML		
	comp=E,239μm,0.3s						
MPAG				AML	AML		
	comp=N,122μm,0.6s						
SACS	**San Casciano d**	**0.92**	**274**	⇓P	Pn	18 33 44.4	-0.2
SACS				AML	AML		
	comp=E,100μm,1.6s						
SACS				AML	AML		
	comp=N,131μm,0.8s						
SACS				AML	AML		
	comp=E,100μm,1.6s						
SACS				AML	AML		
	comp=N,131μm,1.2s						
SACS				AML	AML		
	comp=E,100μm,0.4s						
CAFI	**Castiglion Fio**	**1.02**	**302**	⇑P	Pn	18 33 46.1	+0.1
CAFI				AML	AML		
	comp=N,78μm,1.2s						
CAFI				AML	AML		
	comp=E,67μm,1.2s						
CAFI				AML	AML		
	comp=N,78μm,1.2s						
CAFI				AML	AML		
	comp=E,67μm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAFI				AML	AML		
	comp=N,78μm,0.8s						
LIK	**San Giovanni I**	**1.32**	**167**	⇑P	Pn	18 33 50.1	+0.1
APRC	**Apricena**	**2.05**	**119**	S	Sn	18 34 27.0	+1.1
FIU	**Minerbio Fiu**	**2.21**	**327**	P	Pg	18 34 08.1	+0.4
NDIM	**Novi di Modena**	**2.66**	**323**	⇑P	Pg	18 34 16.5	+0.2
ABTA	**Abfaltersbach**	**3.98**	**354**	*e*Pn	Pn	18 34 29.5	+2.7
	comp=N,0.9nm,0.3s						

IDC 31 18:48:13.6±2.4, 17°.34S×179°.06W, h554km±17km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=94.9km s-min=24.7km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.78**	**261**	P	P	18 49 27.9	+0.1
	33nm,0.6s,baz=108,slow=6.4,SNR=28						
STKA	**Stephens Creek**	**38.36**	**240**	P	P	18 54 48.0	+0.2
	1.5nm,0.5s,baz=101,slow=9.8,SNR=8.9						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**44.13**	**259**	P	P	18 55 32.9	-0.8
	0.5nm,0.7s,baz=95,slow=7.7,SNR=13						
WRA				PcP	PcP	18 57 06.3	-0.2
	0.4nm,1.0s,baz=98,slow=3.4,SNR=2.2						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**44.35**	**254**	P	P	18 55 35.3	0.0
	3.6nm,0.6s,baz=88,slow=8.1,SNR=58						
ASAR				PcP	PcP	18 57 07.3	0.0
	0.2nm,0.5s,baz=108,slow=3.9,SNR=1.8						
	3.6nm,0.6s						
PDAR	**Pinedale Array**	**87.37**	**44**	P	P	19 00 02.2	-0.3
	0.2nm,0.5s,baz=236,slow=4.2,SNR=2.2						
	0.2nm,0.5s						
GERES	**GERESS Array B**	**146.90**	**344**	PKPbc	PKPbc	19 06 53.5	-0.7
	0.3nm,0.5s,baz=30,slow=3.7,SNR=5.1						

KRSC 31 18:50:18.8±0.3, 55°.51N×162°.90E, h51km±10km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.70**	**356**	*e*P	Pn	18 50 33.4	+0.8
KBTR				*e*S	Sn	18 50 44.0	+1.5
KBG	**Krutoberegovo**	**0.75**	**352**	*e*P	Pn	18 50 34.0	+0.8
KBG				*e*S	Sn	18 50 45.1	+1.4
MKZ	**Mys Kozlova**	**1.17**	**216**	*e*P	Pn	18 50 39.6	+0.8
MKZ				*e*S	Sn	18 50 54.7	+1.0
ZLN	**Zelenaya**	**1.29**	**294**	*e*S	Sn	18 50 58.2	+1.5
BZGR	**Bezymyannyi-Gr**	**1.32**	**290**	P	Pn	18 50 42.0	+1.1
SMKR	**Semkarok**	**1.34**	**324**	*e*P	Pn	18 50 42.4	+1.2
SMKR				S	Sn	18 50 59.7	+1.8
BDR	**Baidarnaya**	**1.42**	**319**	*e*P	Pn	18 50 43.5	+1.2
BDR				S	Sn	18 51 01.6	+1.7
BZMR	**Bezymyannaya**	**1.43**	**288**	P	Pn	18 50 43.9	+1.4
BZWR	**Bezymyannyi-We**	**1.44**	**289**	P	Pn	18 50 44.2	+1.6
BZWR				S	Sn	18 51 02.6	+2.2
TUMD	**Tumrok D**	**1.46**	**259**	P	Pn	18 50 44.5	+1.7
TUMD				S	Sn	18 51 03.1	+2.3
KRSR	**Krestovskiy**	**1.50**	**299**	P	Pn	18 50 44.7	+1.4
KLY	**Klyuchi**	**1.50**	**303**	P	Pn	18 50 43.1	-0.2
KLY				S	Sn	18 51 01.1	-0.6
SRKR	**Sorokina**	**1.50**	**320**	P	Pn	18 50 44.8	+1.4
SRKR				S	Sn	18 51 04.0	+2.1
KIRR	**Kirishev**	**1.52**	**288**	P	Pn	18 50 45.1	+1.5
KIRR				S	Sn	18 51 04.6	+2.3
KMNR	**Kamenistaya**	**1.53**	**280**	P	Pn	18 50 46.1	+2.3
KMNR				S	Sn	18 51 06.0	+3.4
KPT	**Kopyto**	**1.58**	**288**	P	Pn	18 50 46.3	+1.8
KPT				S	Sn	18 51 06.3	+2.4
TUMR	**Tumrok**	**1.59**	**263**	P	Pn	18 50 46.8	+2.2
TUMR				S	Sn	18 51 07.3	+3.3
BKI	**Bering**	**1.78**	**99**	*e*P	Pn	18 50 49.6	+2.5
BKI				*e*S	Sn	18 51 11.5	+3.0
KOZ	**Kozyrevsk**	**1.80**	**289**	P	Pn	18 50 49.6	+2.3
SRDR	**Sredinnyy**	**1.97**	**296**	P	Pn	18 50 51.7	+2.0
SRDR				S	Sn	18 51 16.1	+2.9
ESO	**Esso**	**2.41**	**282**	P	Pn	18 50 58.5	+2.7
KII	**Karymskiy**	**2.49**	**235**	P	Pn	18 50 59.6	+2.7
KII				S	Sn	18 51 29.0	+3.0
SDLR	**Sedlovina**	**3.25**	**228**	P	Pn	18 51 10.3	+3.0
KRER	**Koryakskii**	**3.28**	**229**	P	Pn	18 51 11.2	+3.3
KRX	**Arik**	**3.29**	**231**	P	Pn	18 51 11.6	+3.7
SMAR	**Somma**	**3.29**	**228**	P	Pn	18 51 11.5	+3.5
AVH	**Avacha**	**3.32**	**229**	*e*P	Pn	18 51 11.0	+2.8
GNL	**Ganaly**	**3.41**	**240**	P	Pn	18 51 12.6	+3.1
KRMR	**Karymshinskiy**	**3.88**	**228**	P	Pn	18 51 19.6	+3.7
KRMR				S	Sn	18 52 04.9	+4.7
GRL	**Gorelyy**	**4.11**	**226**	P	Pn	18 51 22.9	+3.8
MTVR	**Mutnovka**	**4.12**	**224**	P	Pn	18 51 22.6	+3.3

PRU ***31*** *18:56:53.3±0.0, 43°.28N×13°.72E, h10km*
ROM 31 18:56:46.1±0.1, 43°.037N±0°.002×13°.100E±0°.004, h7km, ML3.0/19, 16C-6D, Error ellipse: s-maj=0.3km s-min=0.2km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.01**	**268**	P	Pg	18 56 47.2	-0.2
FDMO				S	Sg	18 56 47.8	-0.5
FDMO				AML	AML		
	comp=E,97900μm,0.7s						
FDMO				AML	AML		
FDMO				AML	AML		
FDMO				AML	AML		
	comp=E,73835μm,0.1s						
FEMA	**Monte Fema**	**0.08**	**206**	⇑P	Pg	18 56 48.8	+0.6
FEMA				S	Sg	18 56 50.6	+0.9
FEMA				AML	AML		
	comp=E,32700μm,0.8s						
FEMA				AML	AML		
	comp=N,27750μm,1.0s						
FEMA				AML	AML		
	comp=E,32650μm,0.8s						
FEMA				AML	AML		
	comp=N,27750μm,0.9s						
FEMA				AML	AML		
	comp=E,26885μm,0.3s						
FEMA				AML	AML		
	comp=N,24151μm,0.4s						
T1256	**Bolognola (MC)**	**0.10**	**108**	⇑P	Pg	18 56 48.9	+0.4
T1256				S	Sg	18 56 50.7	+0.6
T1256				AML	AML		
	comp=E,25700μm,0.7s						
T1256				AML	AML		
	comp=N,21800μm,0.3s						
T1256				AML	AML		
	comp=E,25050μm,0.9s						
T1256				AML	AML		
	comp=N,21800μm,0.3s						
T1256				AML	AML		
	comp=N,21250μm,0.3s						
T1256				AML	AML		
	comp=N,21750μm,0.3s						
T1256				AML	AML		
	comp=E,25700μm,0.7s						
T1256				AML	AML		
	comp=E,25100μm,0.9s						
T1256				AML	AML		
	comp=N,17308μm,0.4s						
T1256				AML	AML		
	comp=N,17738μm,0.4s						
T1256				AML	AML		
	comp=E,22159μm,0.5s						
T1256				AML	AML		
	comp=E,22376μm,0.4s						
SEF1	**Sefro**	**0.16**	**315**	P	Pg	18 56 49.9	+0.5
SEF1				S	Sg	18 56 52.9	+1.3
T1216	**Preci, Frazion**	**0.16**	**202**	⇑P	Pg	18 56 50.1	+0.7
T1216				S	Sg	18 56 53.2	+1.6
T1216				AML	AML		
	comp=E,14550μm,0.7s						
T1216				AML	AML		
	comp=N,12265μm,1.1s						
T1216				AML	AML		
	comp=E,14540μm,0.7s						
T1216				AML	AML		
	comp=N,12240μm,1.1s						
T1216				AML	AML		
	comp=E,14550μm,0.7s						
T1216				AML	AML		
	comp=N,12285μm,1.1s						
T1216				AML	AML		
	comp=E,14570μm,0.7s						
T1216				AML	AML		
	comp=E,14338μm,0.3s						
T1216				AML	AML		
	comp=N,10999μm,0.4s						
MDAR	**Monte D'Aria**	**0.16**	**11**	P	Pg	18 56 49.9	+0.5
MDAR				S	Sg	18 56 52.6	+0.9
PIO1	**Pioraco**	**0.17**	**329**	P	Pg	18 56 50.2	+0.7
PIO1				S	Sg	18 56 53.0	+1.2
T1245	**Castelsantange**	**0.19**	**160**	P	Pg	18 56 50.8	+0.8
T1245				S	Sg	18 56 54.3	+1.6
T1245				AML	AML		
	comp=E,10510μm,1.0s						
T1245				AML	AML		
	comp=N,11010μm,0.6s						
T1245				AML	AML		
	comp=E,8980μm,1.0s						
T1245				AML	AML		
	comp=E,10485μm,1.0s						
T1245				AML	AML		
	comp=N,11020μm,0.6s						
T1245				AML	AML		
	comp=E,10470μm,1.0s						
T1245				AML	AML		
	comp=N,11010μm,0.6s						
T1245				AML	AML		
	comp=N,10630μm,0.7s						
T1245				AML	AML		
	comp=N,11040μm,0.6s						
T1245				AML	AML		
	comp=E,10505μm,1.0s						
T1245				AML	AML		
	comp=E,9198μm,0.2s						
T1245				AML	AML		
	comp=E,8772μm,0.2s						
T1245				AML	AML		
	comp=N,10111μm,0.3s						
T1245				AML	AML		
	comp=N,9923μm,0.3s						
AM05	**Amandola Campo**	**0.20**	**108**	⇑P	Pg	18 56 50.8	+0.8
AM05				S	Sg	18 56 54.3	+1.6
AM05				AML	AML		
	comp=E,10335μm,0.2s						
AM05				AML	AML		
	comp=N,732μm,0.1s						
AM05				AML	AML		
	comp=N,3055μm,0.7s						
AM05				AML	AML		
	comp=E,10330μm,0.2s						
AM05				AML	AML		
	comp=E,2755μm,0.4s						
AM05				AML	AML		
	comp=E,10310μm,0.2s						
AM05				AML	AML		
	comp=N,732μm,0.1s						
AM05				AML	AML		
	comp=N,3050μm,0.7s						
AM05				AML	AML		
	comp=E,10334μm,0.2s						
AM05				AML	AML		
	comp=E,2688μm,0.2s						
AM05				AML	AML		
	comp=N,732μm,0.1s						
AM05				AML	AML		
	comp=N,2249μm,0.3s						
FIU1	**Fiuminata**	**0.20**	**321**	P	Pg	18 56 50.7	+0.7
FIU1				S	Sg	18 56 54.1	+1.4
SSM1	**San Severino M**	**0.20**	**16**	P	Pg	18 56 51.1	+1.0
SSM1				S	Sg	18 56 54.2	+1.3
MMO1	**Montemonaco**	**0.22**	**129**	⇓P	Pg	18 56 51.1	+0.7
MMO1				S	Sg	18 56 54.8	+1.4
SNTG	**Esanatoglia**	**0.25**	**332**	P	Pg	18 56 51.6	+0.6
SNTG				S	Sg	18 56 56.0	+1.7
MNTP	**Montappone**	**0.29**	**69**	P	Pb	18 56 53.0	-0.7
MNTP				S	Sb	18 56 59.0	+0.3
T1215	**Vallo di Nera,**	**0.29**	**216**	⇑P	Pg	18 56 52.5	+0.7
T1215				S	Sb	18 56 57.7	-1.0
T1215				AML	AML		
	comp=E,2800μm,1.3s						
T1215				AML	AML		
	comp=N,3495μm,0.6s						
T1215				AML	AML		
	comp=E,2850μm,0.7s						
T1215				AML	AML		
	comp=N,3395μm,0.6s						
T1215				AML	AML		
	comp=E,4065μm,0.1s						
T1215				AML	AML		
	comp=E,3650μm,0.1s						
T1215				AML	AML		
	comp=N,6480μm,0.1s						
T1215				AML	AML		
	comp=N,6980μm,0.1s						
T1215				AML	AML		
	comp=N,2516μm,0.4s						
T1215				AML	AML		
	comp=E,2302μm,0.6s						
T1215				AML	AML		
	comp=E,2313μm,0.6s						
T1215				AML	AML		
	comp=N,2568μm,0.2s						
EL6	**Elcito**	**0.29**	**0**	P	Pg	18 56 52.4	+0.5
EL6				S	Sb	18 56 57.5	-1.4
T1241	**Roccafluvione,**	**0.30**	**126**	⇑P	Pg	18 56 52.8	+0.7
T1241				S	Sb	18 56 58.0	-1.1
T1241				AML	AML		
	comp=N,2850μm,0.6s						
T1241				AML	AML		
	comp=E,3115μm,1.2s						
T1241				AML	AML		
	comp=N,2855μm,0.6s						
T1241				AML	AML		
	comp=E,2371μm,0.5s						
T1241				AML	AML		
	comp=N,2390μm,0.3s						
ASSB	**Assisi San Ben**	**0.32**	**271**	P	Pg	18 56 53.1	+0.6
ASSB				S	Sb	18 56 58.7	-1.0
CING	**Cingoli**	**0.35**	**12**	P	Pg	18 56 53.4	+0.5
CING				S	Sb	18 56 59.2	-1.2
T1217	**Poggiodomo (PG**	**0.35**	**201**	⇓P	Pg	18 56 53.6	+0.7
T1217				S	Sb	18 56 59.5	-1.0
T1217				AML	AML		
	comp=E,2640μm,0.8s						
T1217				AML	AML		
	comp=E,2620μm,0.8s						
T1217				AML	AML		
	comp=N,3745μm,0.6s						
T1217				AML	AML		
	comp=E,2645μm,0.8s						
T1217				AML	AML		
	comp=E,2626μm,0.8s						
T1217				AML	AML		
	comp=N,3830μm,0.6s						
T1217				AML	AML		
	comp=E,2617μm,0.8s						
T1217				AML	AML		
	comp=N,3748μm,0.6s						
T1217				AML	AML		
	comp=E,2543μm,0.3s						
T1217				AML	AML		
	comp=E,2536μm,0.3s						
T1217				AML	AML		
	comp=N,3829μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.37**	**294**	P	Pg	18 56 54.0	+0.7
ATCC				S	Sb	18 57 00.4	-0.6
T1204	**Amatrice, Fraz**	**0.39**	**156**	⇓P	Pg	18 56 54.3	+0.5
T1204				S	Sb	18 57 01.0	-0.8
T1204				AML	AML		
	comp=E,3330μm,1.0s						
T1204				AML	AML		
	comp=N,2440μm,1.2s						
T1204				AML	AML		
	comp=N,2435μm,1.2s						
T1204				AML	AML		
	comp=E,2412μm,0.2s						
T1204				AML	AML		
	comp=N,1772μm,0.5s						
MMUR	**Monte Murano**	**0.41**	**350**	P	Pg	18 56 54.8	+0.6
MMUR				S	Sb	18 57 01.6	-0.7
T1243	**Rocca Santa Ma**	**0.43**	**143**	⇑P	Pg	18 56 54.8	+0.4
T1243				S	Sb	18 57 01.7	-1.0
LNSS	**Leonessa**	**0.44**	**186**	⇓P	Pg	18 56 55.2	+0.6
LNSS				S	Sb	18 57 02.5	-0.5
LNSS				AML	AML		
	comp=E,988μm,0.5s						
LNSS				AML	AML		
	comp=N,2480μm,0.7s						
LNSS				AML	AML		
	comp=E,989μm,0.5s						
LNSS				AML	AML		
	comp=N,2189μm,0.4s						
LNSS				AML	AML		
	comp=E,813μm,0.3s						
SMA1	**SAN MARTINO**	**0.44**	**157**	⇑P	Pg	18 56 55.0	+0.4
SMA1				S	Sb	18 57 02.2	-0.9
SMA1				AML	AML		
	comp=E,2325μm,0.6s						
SMA1				AML	AML		
	comp=N,2790μm,0.7s						
SMA1				AML	AML		
	comp=E,2330μm,0.6s						
SMA1				AML	AML		
	comp=N,2791μm,0.7s						
SMA1				AML	AML		
	comp=E,2326μm,0.6s						
OFFI	**Offida**	**0.44**	**103**	⇑P	Pb	18 56 56.2	0.0
OFFI				AML	AML		
	comp=E,4235μm,0.6s						
OFFI				AML	AML		
	comp=N,4460μm,0.6s						
OFFI				AML	AML		
	comp=E,4235μm,1.4s						
OFFI				AML	AML		
	comp=N,4459μm,0.6s						
OFFI				AML	AML		
	comp=N,4460μm,1.4s						
OFFI				AML	AML		
	comp=E,4044μm,0.5s						
SSFR	**Montelago di S**	**0.46**	**330**	P	Pg	18 56 55.6	+0.5
SSFR				S	Sb	18 57 03.3	-0.4
ARVD	**Arcevia**	**0.47**	**346**	P	Pg	18 56 55.9	+0.6
ARVD				S	Sb	18 57 03.6	-0.5
MURB	**Monte Urbino**	**0.48**	**298**	P	Pb	18 56 56.2	-0.7
MURB				S	Sb	18 57 04.0	-0.2
PP3	**Marolino**	**0.51**	**47**	P	Pb	18 56 57.3	0.0
PP3				S	Sn	18 57 07.1	-1.6
PP3				AML	AML		
	comp=E,4600μm,0.3s						
PP3				AML	AML		
	comp=E,4270μm,1.0s						
PP3				AML	AML		
	comp=E,4600μm,0.3s						
PP3				AML	AML		
	comp=N,6785μm,0.3s						
PP3				AML	AML		
	comp=N,6786μm,0.3s						
PP3				AML	AML		
	comp=N,7150μm,0.3s						
PP3				AML	AML		
	comp=N,7150μm,0.3s						
PP3				AML	AML		
	comp=E,4153μm,0.8s						
ATFO	**Monte Foce - G**	**0.51**	**311**	P	Pg	18 56 56.4	+0.5
ATFO				S	Sb	18 57 05.0	0.0
ARRO	**Arrone**	**0.52**	**208**	P	Pg	18 56 56.7	+0.5
ARRO				S	Sb	18 57 05.2	-0.1
ARRO				AML	AML		
	comp=E,1805μm,0.2s						
ARRO				AML	AML		
	comp=E,1800μm,0.2s						
ARRO				AML	AML		
	comp=N,1555μm,0.5s						
ARRO				AML	AML		
	comp=E,1803μm,0.2s						
ARRO				AML	AML		
	comp=N,1460μm,0.2s						
RM33	**Pellescritta (**	**0.53**	**171**	⇑P	Pg	18 56 53.0	-3.5
RM33				AML	AML		
	comp=N,816μm,1.0s						
RM33				AML	AML		
	comp=E,1115μm,0.6s						
RM33				AML	AML		
	comp=N,760μm,1.0s						
RM33				AML	AML		
	comp=E,1090μm,0.6s						
RM33				AML	AML		
	comp=E,950μm,0.7s						
RM33				AML	AML		
	comp=N,642μm,0.5s						
RM33				AML	AML		
	comp=N,625μm,0.2s						
RM33				AML	AML		
	comp=E,1114μm,0.6s						
T1211	**Morro Reatino**	**0.54**	**200**	⇑P	Pg	18 56 56.9	+0.5
T1211				S	Sb	18 57 06.3	+0.5
T1211				AML	AML		
	comp=E,1825μm,0.8s						
T1211				AML	AML		
	comp=E,1870μm,0.8s						
T1211				AML	AML		
	comp=N,1930μm,1.5s						
T1211				AML	AML		
	comp=N,2000μm,1.5s						
T1211				AML	AML		
	comp=N,1937μm,1.5s						
T1211				AML	AML		
	comp=N,1857μm,0.6s						
T1211				AML	AML		
	comp=E,1058μm,0.2s						
T1211				AML	AML		
	comp=E,1869μm,0.8s						
T1211				AML	AML		
	comp=E,1820μm,0.8s						
T1211				AML	AML		
	comp=E,1058μm,0.3s						
T1211				AML	AML		
	comp=N,1846μm,0.6s						
CAMP	**Campotosto**	**0.55**	**155**	⇑P	Pg	18 56 56.9	+0.1
CAMP				S	Sb	18 57 05.6	-0.6
CAMP				AML	AML		
	comp=E,937μm,0.9s						
CAMP				AML	AML		
	comp=N,892μm,0.6s						
CAMP				AML	AML		
	comp=E,937μm,1.1s						
CAMP				AML	AML		
	comp=N,677μm,0.3s						
CAMP				AML	AML		
	comp=E,932μm,0.8s						
TERO	**Teramo**	**0.56**	**138**	⇑P	Pg	18 56 57.0	+0.2
TERO				S	Sb	18 57 06.1	-0.3
TERO				AML	AML		
	comp=N,1260μm,0.6s						
TERO				AML	AML		
	comp=E,1167μm,0.5s						
TERO				AML	AML		
	comp=E,1655μm,0.5s						
TERO				AML	AML		
	comp=E,1213μm,0.5s						
TERO				AML	AML		
	comp=N,1260μm,1.4s						
TERO				AML	AML		
	comp=N,1120μm,0.3s						
TERO				AML	AML		
	comp=N,1175μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.57**	**287**	P	Pg	18 56 57.4	+0.3
ATTE				S	Sb	18 57 07.1	+0.2
CESX	**Cesi**	**0.57**	**222**	⇑P	Pg	18 56 57.4	+0.3
CESX				S	Sb	18 57 06.6	-0.3
CESX				AML	AML		
	comp=N,2450μm,0.5s						
CESX				AML	AML		
	comp=E,2380μm,0.8s						
CESX				AML	AML		
	comp=E,2383μm,0.8s						
CESX				AML	AML		
	comp=N,2451μm,0.5s						
ATVO	**AVT- Monte Val**	**0.61**	**304**	P	Pg	18 56 58.3	+0.4
ATVO				S	Sb	18 57 08.0	0.0
AOI	**Ancona**	**0.63**	**35**	P	Pg	18 56 58.8	+0.5
AOI				S	Sb	18 57 09.3	+0.7
PIEI	**Pieia**	**0.65**	**321**	P	Pg	18 56 58.8	+0.3
PIEI				S	Sb	18 57 09.2	+0.2
GIGS	**Gran Sasso**	**0.68**	**149**	AML	AML		
	comp=N,258μm,0.5s						
GIGS				AML	AML		
	comp=E,348μm,0.6s						
MGAB	**Montegabbione**	**0.73**	**261**	AML	AML		
	comp=N,2240μm,0.4s						
MGAB				AML	AML		
	comp=E,1475μm,0.4s						
MGAB				AML	AML		
	comp=E,1615μm,0.4s						

MGAB				AML	AML		
	comp=N,2225μm,0.4s						
MGAB				AML	AML		
	comp=E,1615μm,1.6s						
MGAB				AML	AML		
	comp=E,1475μm,1.6s						
FIAM	**Fiamignano**	**0.77 179**		AML	AML		
	comp=E,764μm,0.7s						
FIAM				AML	AML		
	comp=N,512μm,0.9s						
VCEL	**Villa Celiera**	**0.84 139**		AML	AML		
	comp=E,1355μm,0.6s						
VCEL				AML	AML		
	comp=N,1066μm,1.0s						
VCEL				AML	AML		
	comp=N,1066μm,1.0s						
VCEL				AML	AML		
	comp=E,1355μm,1.4s						
FAGN	**Fagnano**	**0.85 155**		AML	AML		
	comp=N,788μm,1.5s						
FAGN				AML	AML		
	comp=E,1350μm,0.6s						
FAGN				AML	AML		
	comp=E,1355μm,0.6s						
FAGN				AML	AML		
	comp=N,788μm,0.5s						
T0110	**Collepietro**	**0.95 148**		AML	AML		
	comp=N,784μm,0.5s						
T0110				AML	AML		
	comp=E,938μm,0.5s						
T0110				AML	AML		
	comp=N,784μm,1.5s						
INTR	**Introdacqua**	**1.19 150**		AML	AML		
	comp=N,810μm,0.7s						
INTR				AML	AML		
	comp=E,268μm,0.5s						
INTR				AML	AML		
	comp=E,268μm,1.5s						
VIVA	**Pratoni del Vi**	**1.31 191**		AML	AML		
	comp=N,682μm,0.9s						
VIVA				AML	AML		
	comp=E,854μm,0.6s						
LRP	**Arpino**	**1.44 165**		S	Sg	18 57 32.0	-0.2
MAON	**Monte Argentar**	**1.57 248**		P	Pn	18 57 14.7	+0.3
IMOL	**Imola, Italy**	**1.65 324**		S	Sn	18 57 26.0	-11
PTRJ	**Pietraroja**	**1.98 147**		P	Pn	18 57 13.7	-6.4
PIGN	**Pignataro Magg**	**2.00 156**		S	Sg	18 57 51.0	+0.5
APRC	**Apricena**	**2.22 124**		S	Sn	18 57 47.0	-4.0
SABO	**M.te Sabotino**	**2.96**	**7**	⇓P	Pn	18 57 34.4	+0.8
CORF	**Corte**	**3.00 257**		P	Pn	18 57 36.9	+2.8
PZUN	**Potenza**	**3.13 139**		⇑P	Pb	18 57 39.2	-2.9
GORR	**Gorreto**	**3.17 301**		S	Sn	18 58 09.0	-5.5
CTI	**Castel Tesino**	**3.18 342**		S	Sn	18 58 06.0	-9.0
CTI				S	Sb	18 58 15.0	-7.1
RNCA	**Ronca, Sant'Ol**	**3.33 297**		S	Sn	18 58 08.0	-10
PTCC	**Patocco-Chiusa**	**3.37**	**3**	S	Sn	18 58 20.0	+0.4
ACOM	**Acomizza, Ital**	**3.52**	**5**	⇑P	Pn	18 57 42.7	+1.3
SARZ	**Sarezzano**	**3.54 303**		P	Pn	18 57 44.7	+3.3
SARZ				S	Sn	18 58 19.0	-4.5
MYKA	**Terra Mystica**	**3.61**	**6**	*e*Pn	Pn	18 57 44.0	+1.4
	comp=E,5.2nm,0.4s						
OBKA	**Obir**	**3.62**	**16**	*e*Pn	Pn	18 57 43.8	+1.1
	comp=E,1.7nm,0.3s						
ABTA	**Abfaltersbach**	**3.73 354**		*e*Pn	Pn	18 57 45.7	+1.5
	comp=E,13nm,0.4s,SNR=11						
KBA	**Koelnbreinsper**	**4.04**	**2**	*e*Pn	Pn	18 57 48.9	+0.3
	comp=E,2.5nm,0.3s						
ROSI	**Rosskopf**	**4.07 343**		⇓P	Pn	18 57 51.7	+2.8
WTTA	**Wattenberg**	**4.35 347**		*e*Pn	Pn	18 57 54.7	+1.9
	comp=E,1.6nm,0.3s						
SQTA	**Sankt Quirin**	**4.39 343**		*e*Pn	Pn	18 57 55.0	+1.7
	comp=E,4.3nm,0.3s,SNR=4.2						
WATA	**Walderalm**	**4.43 346**		*e*Pn	Pn	18 57 55.2	+1.4
	comp=E,4.9nm,0.3s,SNR=5.1						
MOTA	**Moosalm**	**4.53 343**		*e*Pn	Pn	18 57 55.6	+0.3
	comp=E,4.1nm,0.6s						
ARSA	**Arzberg**	**4.55**	**21**	*e*S	Sn	18 58 47.9	-0.6
	SNR=4.8						
BIOA	**Bad Ischl, Aus**	**4.67**	**4**	*e*Pn	Pn	18 57 58.4	+1.4
	comp=E,2.0nm,0.3s						
RETA	**Reutte**	**4.75 340**		*e*Pn	Pn	18 58 01.4	+3.2
	comp=E,1.7nm,0.3s						
DAVA	**Damuels**	**4.82 333**		*e*Pn	Pn	18 58 00.9	+1.7
	comp=E,4.4nm,0.5s						
CONA	**Conrad Observa**	**5.26**	**21**	*e*Pn	Pn	18 58 05.9	+0.7
	comp=E,1.1nm,0.3s						
CKRC	**Cesky Krumlov**	**5.84**	**8**	*e*SN	Sn	18 59 15.9	-4.5
KHC	**Kasperske Hory**	**6.11**	**3**	*e*PN	Pn	18 58 19.5	+2.8
KHC				*e*SN	Sn	18 59 24.1	-2.7

IDC ***31*** *19:02:44.6±0.6,35°.40N×141°.02E,h0km,mb4.0/21, mbtmp4.0/27,ML3.0/5,MS3.4/22,Error ellipse: s-maj=17.2km s-min=13.1km az=97.0*

MOS ***31*** *19:02:46.1±1.2,35°.40N×141°.08E,h27km,mb4.6/14,Error ellipse: s-maj=12.9km s-min=7.4km az=113.5*

NEIC ***31*** *19:02:47.6±2.7,35°.47N±0°.05×141°.2E±0°.1,h27km±6km, mb4.5/12,Error ellipse: s-maj=12.4km s-min=7.5km az=86.0*

JMA ***31*** *19:02:48.4±0.2,35°.5N±0°.5×14°1E±°,h32km±1km, MD4.2/32,MW4.3/32,NEAR CHOSHI CITY*

JMA Felt I J1 at NEAR CHOSHI CITY .

NIED ***31*** *19:02:48.4,35°.49N×141°.06E,h32km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.23; Mθθ-2.05; Mφφ1.82; Mrθ-1.16; Mθφ-1.78; Mφr0.58; Fault plane solution: M0=2.94000×10^15^ NP1:φ=24.00000°, δ=64.00000°, λ=4.00000°. NP2:φ=293.00000°, δ=87.00000°, λ=154.00000°.*

ISC 31 19:02:48.8±0.5,35°.41N±0°.04×141°.08E±0°.05,h33km,n142, σ1§47/109,mb4.2/35,MS3.4/18,5C-7D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.34 328**		⇓*i*P	**Pb**	**19 02 55.4**	**-1.7**
CHOJ				*e*S	**Sn**	**19 03 00.1**	**-3.0**
CHOJ	**Chosi**	**0.34 328**		A	A	19 02 55.4	
	comp=E,36nm,2.3s,comp=E,42nm,3.5s						
JSMT	**Sammumatsuo**	**0.57 295**		⇓P	**Pb**	**19 02 59.3**	**-1.1**
JSMT	**Sammumatsuo**	**0.57 295**		A	A	19 02 59.3	
	comp=E,29nm,0.7s,comp=E,58nm,1.9s						
KTR	**Katsuura**	**0.68 248**		P	**Pn**	**19 03 01.7**	**-0.3**
KTR				*e*S	**Sn**	**19 03 11.2**	**-0.2**
JIHU	**Itakohorinouch**	**0.72 321**		⇓P	**Pb**	**19 03 01.4**	**-1.5**
JIHU	**Itakohorinouch**	**0.72 321**		A	A	19 03 01.4	
	comp=E,39nm,1.1s,comp=E,42nm,2.9s						
JCN	**Nagara**	**0.72 271**		*e*P	**Pb**	**19 03 02.5**	**-0.4**
JCN	**Nagara**	**0.72 271**		A	A	19 03 02.5	
	comp=E,25nm,0.7s,comp=E,21nm,4.0s						
BSO4	**Boso 4**	**0.74 236**		P	**Pn**	**19 03 02.9**	**+0.1**
BSO1	**Boso 1**	**0.76 186**		⇓P	**Pn**	**19 03 03.0**	**+0.3**
JKUC	**kamogawauchiur**	**0.76 251**		A	A	19 03 02.9	
	comp=E,18nm,3.4s,comp=E,16nm,1.1s						
BSO3	**Boso 3**	**0.77 218**		P	**Pn**	**19 03 03.3**	**+0.3**
JHYU	**Hitachinakayam**	**1.01 337**		A	A	19 03 05.2	
	comp=E,7.0nm,1.2s,comp=E,8.0nm,0.4s						
TATJ	**Tateyama 2**	**1.04 249**		A	A	19 03 07.2	
	comp=E,19nm,0.8s,comp=E,15nm,2.9s						
JYT	**Yasato**	**1.09 319**			**Pn**	**19 03 06.0**	**-1.8**
JYT	**Yasato**	**1.09 319**		P	**Pn**	**19 03 06.3**	**-1.5**
JYT	**Yasato**	**1.09 319**		⇓P	**Pn**	**19 03 06.2**	**-1.5**
JYT	**Yasato**	**1.09 319**		A	A	19 03 06.2	
	comp=E,12nm,0.4s,comp=E,11nm,0.4s						
TOK	**Tokyo**	**1.11 285**		A	A	19 03 07.5	
	comp=E,25nm,1.4s,comp=E,24nm,1.4s						
JYO	**Yokosk**	**1.17 261**		A	A	19 03 09.0	
	comp=E,13nm,3.6s,comp=E,13nm,3.3s						
JIM2	**Oshima 3**	**1.52 243**		A	A	19 03 14.5	
	comp=E,7.0nm,0.3s,comp=E,7.0nm,0.3s						
JHU	**Hanno**	**1.53 287**		A	A	19 03 13.8	
	comp=E,4.0nm,2.2s,comp=E,4.0nm,1.5s						
JOD2	**Odawara 2**	**1.64 266**		A	A	19 03 15.8	
	comp=E,5.0nm,1.5s,comp=E,6.0nm,5.2s						
JSB	**Shiboa**	**1.82 329**		A	A	19 03 17.4	
	comp=E,5.0nm,3.0s,comp=E,6.0nm,3.1s						
JMM	**Marumori**	**2.46 355**			**Pn**	**19 03 25.2**	**-1.5**
JMM	**Marumori**	**2.46 355**		P	**Pn**	**19 03 26.1**	**-0.5**
JHJ2	**Mitsune**	**2.52 205**			**Pn**	**19 03 27.2**	**-0.2**
JHJ2	**Mitsune**	**2.52 205**		P	**Pn**	**19 03 29.2**	**+1.8**
JHJ	**Hachijo jima 2**	**2.52 206**		Pn	**Pn**	**19 03 27.1**	**-0.4**
	25nm,0.3s,baz=336,slow=21,SNR=16						
JHJ				Sn	**Sn**	**19 03 54.9**	**-2.2**
	94nm,0.3s,baz=136,slow=23,SNR=8.1						
	161nm,0.2s						
MJAR	**Matsushiro Arr**	**2.59 297**		Pn	**Pn**	**19 03 28.6**	**+0.2**
	2.7nm,0.3s,baz=92,slow=8.9,SNR=104						
MJAR				LR	LR	19 04 39.1	
	comp=Z,208nm,18.8s,baz=128,slow=45						
	16nm,0.3s						
MAJO	**Matsushiro**	**2.59 297**		Pn	**Pn**	**19 03 29.4**	**+1.0**
MAJO	**Matsushiro**	**2.59 297**		P	**Pn**	**19 03 29.4**	**+1.0**
MAJO	**Matsushiro**	**2.59 297**		P	**Pn**	**19 03 29.7**	**+1.3**
MJB9	**Matsu-Tunnel**	**2.59 297**			**Pb**	**19 03 31.8**	**-2.8**
JGF	**Kuroka**	**3.04 275**			**Pn**	**19 03 35.8**	**+1.1**
JGF	**Kuroka**	**3.04 275**		P	**Pn**	**19 03 37.1**	**+2.4**
INU	**Inuyama**	**3.32 270**		Pn	**Pn**	**19 03 39.8**	**+1.4**
INU	**Inuyama**	**3.32 270**		P	**Pn**	**19 03 40.7**	**+2.3**
JSD	**Sado**	**3.47 320**		Pn	**Pn**	**19 03 40.4**	**0.0**
JSD	**Sado**	**3.47 320**		P	**Pn**	**19 03 41.3**	**+0.9**
JTM	**Tenmabayashi**	**5.37 360**		Pn	**Pn**	**19 04 05.5**	**-1.1**
JTM	**Tenmabayashi**	**5.37 360**		P	**Pn**	**19 04 07.0**	**+0.4**
JMN	**Monobe**	**6.17 256**		Pn	**Pn**	**19 04 16.3**	**-1.4**
JHS	**Saijyo**	**6.53 269**		Pn	Pn	19 04 27.0	+4.4
ERM	**Erimo**	**6.79**	**13**	Pn	**Pn**	**19 04 25.2**	**-0.9**
ERM	**Erimo**	**6.79**	**13**	*i* P	**Pn**	**19 04 24.4**	**-1.7**
ERM	**Erimo**	**6.79**	**13**	P	**Pn**	**19 04 24.4**	**-1.7**
JEM	**Erimo**	**6.79**	**13**	P	**Pn**	**19 04 24.6**	**-1.5**
JEW	**Eniwo**	**7.43**	**2**	Pn	**Pn**	**19 04 33.0**	**-1.8**
JEW	**Eniwo**	**7.43**	**2**	P	**Pn**	**19 04 34.1**	**-0.7**
JCJ	**Chichijima**	**8.34 173**		Pn	**Pn**	**19 04 46.4**	**-1.0**
	46nm,0.4s,baz=344,slow=21,SNR=13						
JCJ				Sn	**Sn**	**19 06 14.6**	**-5.9**
	4.7nm,0.3s,baz=300,slow=22,SNR=1.4						
JCJ				LR	LR	19 08 19.0	
	comp=Z,173nm,20.5s,baz=318,slow=40						
JCJ	**Chichijima**	**8.34 173**		Pn	**Pn**	**19 04 48.6**	**+1.2**
JCJ	**Chichijima**	**8.34 173**		P	**Pn**	**19 04 47.1**	**-0.3**
KSRS	**Korea Array**	**10.80 285**		Pn	**Pn**	**19 05 20.9**	**-0.1**
	0.2nm,0.3s,baz=94,slow=14,SNR=1.9						
	1.7nm,0.9s						
USRK	**Ussuriysk Ar.**	**11.22 324**		Pn	**Pn**	**19 05 27.6**	**+0.9**
	0.1nm,0.3s,baz=123,slow=10,SNR=3.3						
	4.3nm,0.9s						
YSS	**Yuzh-Sakhalins**	**11.60**	**6**	Pn	**Pn**	**19 05 29.9**	**-2.0**
JOW	**Kunigami**	**13.90 236**		LR	LR	19 11 18.8	
	comp=Z,112nm,19.3s,baz=51,slow=37						
KLR	**Kul'dur**	**15.42 336**		Pn	**Pn**	**19 06 23.4**	**-0.4**
	0.2nm,0.3s,baz=169,slow=10,SNR=2.3						
KLR				LR	LR	19 12 13.5	
	comp=Z,158nm,20.6s,baz=138,slow=37						
	0.9nm,0.5s						
PETK	**Petropavlovsk-**	**21.23**	**28**	P	**P**	**19 07 32.9**	**+1.1**
	6.2nm,0.9s,baz=214,slow=10,SNR=4.1						
PETK				LR	LR	19 15 43.1	
	comp=Z,70nm,21.7s,baz=226,slow=37						
	6.2nm,0.9s						
MA2	**Magadan**	**25.00**	**12**	P	**P**	**19 08 10.3**	**+1.0**
	19nm,0.8s,baz=201,slow=5.9,SNR=5.3						
MA2				LR	LR	19 18 44.4	
	comp=Z,59nm,19.4s,baz=179,slow=38						
	19nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**27.59 118**		T	T	19 37 40.4	
	baz=310,slow=75,SNR=156						
H11N1	**WAKE ISLAND Hy**	**27.60 118**		T	T	19 37 44.5	
	baz=310,slow=75,SNR=130						
YAK	**Yakutsk**	**27.60 348**		P	**P**	**19 08 32.5**	**-0.2**
	5.2nm,0.5s,baz=120,slow=2.3,SNR=4.1						
YAK				LR	LR	19 19 18.9	
	comp=Z,75nm,21.1s,baz=254,slow=36						
	5.2nm,0.5s						
YAK	**Yakutsk**	**27.60 348**	*ce*	P	**P**	**19 08 31.7**	**-1.0**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**27.61 118**		T	T	19 37 47.8	
	baz=310,slow=75,SNR=148						
ULN	**Ulaanbaatar**	**28.08 307**	*ce*	P	**P**	**19 08 40.0**	**+2.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
H11S1	**WAKE ISLAND Hy**	**28.24 120**		T	T	19 38 27.1	
	baz=312,slow=75,SNR=1039						
H11S3	**WAKE ISLAND Hy**	**28.24 120**		T	T	19 38 24.5	
	baz=312,slow=75,SNR=958						
H11S2	**WAKE ISLAND Hy**	**28.26 120**		T	T	19 38 24.6	
	baz=312,slow=75,SNR=779						
SEY	**Seymchan**	**28.43**	**11**	P	**P**	**19 08 41.6**	**+1.5**
	comp=Z,6.3nm,0.9s,baz=205,slow=11,SNR=7.6						
	comp=Z,6.3nm,0.9s						
SEY	**Seymchan**	**28.43**	**11**	*i* P	**P**	**19 08 40.7**	**+0.6**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	**Songino Array**	**28.50 307**		P	**P**	**19 08 41.6**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=104,slow=9.7,SNR=4.8						
	comp=Z,0.7nm,0.6s						
DAV	**Davao City (W)**	**31.59 210**		LR	LR	19 19 54.5	
	comp=Z,34nm,21.9s,baz=311,slow=33						
TIXI	**Tiksi**	**36.87 354**		LR	LR	19 26 09.1	
	comp=Z,85nm,18.9s,baz=264,slow=38						
TIXI	**Tiksi**	**36.87 354**	*ce*	P	**P**	**19 09 53.4**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SIJI	**Sorong**	**37.24 196**		LR	LR	19 23 38.1	
	comp=Z,50nm,19.6s,baz=76,slow=34						
CMAR	**Chiang Mai Arr**	**40.84 257**		P	**P**	**19 10 27.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=44,slow=8.8,SNR=1.9						
CMAR				LR	LR	19 28 22.6	
	comp=Z,48nm,18.9s,baz=75,slow=38						
	comp=Z,0.3nm,0.4s						
DGZ	**Jazzator, Alta**	**41.14 307**		*i* P	**P**	**19 10 30.5**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZAA0	**Zalesovo Array**	**42.83 314**		P	**P**	**19 10 42.9**	**-0.4**
ZALV	**Zalesovo Beam**	**42.83 314**		P	**P**	**19 10 43.6**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=105,slow=8.0,SNR=8.6						
	comp=Z,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**42.83 314**		P	**P**	**19 10 43.2**	**-0.2**
BRDH	**Bariadhala**	**44.62 267**		LR	LR	19 32 47.2	
	comp=Z,118nm,19.1s,baz=92,slow=40						
NRIK	**Noril'sk**	**44.63 336**		*i* P	**P**	**19 10 57.1**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MK31	**Makanchi Array**	**44.77 303**		*i* P	P	19 11 05.8	+6.7
MKAR	**Makanchi Array**	**44.77 303**		P	**P**	**19 10 59.8**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=87,slow=9.1,SNR=10						
MKAR				LR	LR	19 30 20.0	
	comp=Z,48nm,20.1s,baz=88,slow=37						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.77 303**	*ce*	P	P	19 11 06.8	+7.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TAPN	**Taplejung**	**45.80 275**	*e* P	**P**	**P**	**19 11 10.0**	**+2.1**
KURK	**Kurchatov**	**46.74 309**		P	**P**	**19 11 13.2**	**-1.3**
KURK				IAmb	IAmb	19 11 27.7	
	comp=Z,5.2nm,0.7s						
KURK	**Kurchatov**	**46.74 309**		P	**P**	**19 11 13.2**	**-1.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAMN	**Ramite**	**46.87 275**	*e* P	**P**	**P**	**19 11 15.9**	**-0.3**
	comp=Z,7.7nm,0.5s						
JIRN	**Jiri**	**46.91 277**	*e* P	**P**	**P**	**19 11 17.4**	**+0.7**
	comp=Z,15nm,0.8s						
GUN	**Gumba**	**47.07 277**	*e* P	**P**	**P**	**19 11 19.0**	**+1.1**
PKI	**Pulchoki**	**47.58 277**	*e* P	**P**	**P**	**19 11 21.4**	**-0.5**
	comp=Z,2.4nm,0.6s						
PKIN	**Phulchoki**	**47.59 277**	*e* P	**P**	**P**	**19 11 21.8**	**-0.1**
GKN	**Gorkha**	**48.04 278**	*e* P	**P**	**P**	**19 11 25.9**	**+0.7**
	comp=Z,19nm,1.0s						
DANN	**Dangsing**	**48.61 279**	*e* P	**P**	**P**	**19 11 30.6**	**+0.9**
	comp=Z,23nm,0.8s						
ILAR	**Eielson Array**	**51.01**	**32**	P	**P**	**19 11 48.5**	**+1.4**
	comp=Z,2.0nm,0.7s,baz=270,slow=6.4,SNR=18						
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**51.04 299**		*i* P	P	19 11 55.4	+7.5
AAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BRVK	**Borovoye**	**51.53 313**		*i* P	P	19 11 55.1	+3.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.6s						
KK31	**Karatay Array**	**53.72 301**		P	**P**	**19 12 05.3**	**-2.3**
KK31				IAmb	IAmb	19 12 21.2	
	comp=Z,3.4nm,1.1s						
KK31	**Karatay Array**	**53.72 301**		P	**P**	**19 12 05.3**	**-2.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	**Karatay Array**	**53.72 301**		P	**P**	**19 12 07.8**	**+0.2**
KKAR	**Karatay Array**	**53.72 301**		P	**P**	**19 12 05.0**	**-2.5**
KKAR				IAmb	IAmb	19 12 21.2	
	comp=Z,3.4nm,1.1s						
KKAR	**Karatay Array**	**53.72 301**		P	**P**	**19 12 07.8**	**+0.2**
WB0	**Warramunga Arr**	**55.24 188**		P	**P**	**19 12 18.1**	**-0.6**
WRAB	**Tennant Creek**	**55.41 188**		P	**P**	**19 12 20.5**	**+0.6**
WRAB	**Tennant Creek**	**55.41 188**		P	**P**	**19 12 20.5**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**55.41 174**		LR	LR	19 37 45.6	
	comp=Z,18nm,18.3s,baz=85,slow=38						
WB2	**Warramunga Arr**	**55.41 188**		P	**P**	**19 12 18.2**	**-1.8**
WB2				IAmb	IAmb	19 12 30.3	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**55.42 188**		P	**P**	**19 12 20.5**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=6.0,slow=7.9,SNR=25						
WRA				LR	LR	19 35 54.2	
	comp=Z,24nm,19.6s,baz=77,slow=36						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**55.42 188**		P	**P**	**19 12 19.8**	**-0.2**
WRA	**Warramunga Arr**	**55.42 188**		P	**P**	**19 12 19.8**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**55.95**	**27**	P	**P**	**19 12 23.7**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=293,slow=10.0,SNR=4.1						
	comp=Z,1.3nm,0.6s						
CHGR	**Chuyangaron**	**56.13 296**		P	**P**	**19 12 23.5**	**-1.7**
CHGR	**Chuyangaron**	**56.13 296**		P	**P**	**19 12 23.5**	**-1.7**
CHGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**57.41 319**		P	**P**	**19 12 31.7**	**-2.1**
ARU				IAmb	IAmb	19 12 39.2	
	comp=Z,4.5nm,0.8s						
ARU	**Arti**	**57.41 319**	*d i* P		**P**	**19 12 34.5**	**+0.7**
ARU				S	**S**	**19 20 31.4**	**+3.2**
ARU				SS	**SS**	**19 24 18.5**	**+1.0**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**58.79 311**		P	**P**	**19 12 40.0**	**-3.6**
ABKAR	**Akbulak array**	**58.79 311**		P	**P**	**19 12 40.7**	**-2.9**
ABKAR				IAmb	IAmb	19 12 47.8	
	comp=Z,4.7nm,1.3s						
AS31	**Alice Springs**	**59.14 188**		P	**P**	**19 12 45.0**	**-1.3**
ASAR	**Alice Springs**	**59.14 188**		P	**P**	**19 12 47.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=12,slow=8.8,SNR=14						
ASAR				LR	LR	19 38 44.1	
	comp=Z,22nm,18.3s,baz=141,slow=36						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**59.14 188**		P	**P**	**19 12 45.0**	**-1.3**
ASAR	**Alice Springs**	**59.14 188**		P	**P**	**19 12 47.0**	**+0.7**
PALK	**Pallekele**	**61.77 258**		LR	LR	19 41 19.2	
	comp=Z,29nm,21.8s,baz=127,slow=38						
YKA	**Yellowknife Ar**	**65.35**	**30**	LR	LR	19 44 05.0	
	comp=Z,20nm,18.4s,baz=340,slow=38						
ARCES	**ARCESS Array B**	**65.42 340**		P	**P**	**19 13 27.8**	**0.0**
	comp=Z,1.7nm,0.8s,baz=46,slow=8.7,SNR=5.4						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**70.13 332**		P	**P**	**19 13 57.8**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=63,slow=5.7,SNR=15						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	**75.42 322**		P	**P**	**19 14 28.9**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=46,slow=6.4,SNR=2.8						
AKASG				LR	LR	19 51 01.5	
	comp=Z,55nm,18.6s,baz=0.5,slow=38						
	comp=Z,0.5nm,0.4s						
HFS	**Hagfors**	**75.46 336**		LR	LR	19 49 37.7	
	comp=Z,64nm,18.9s,baz=48,slow=37						
NB2	**NORSAR Subarra**	**75.58 337**		P	**P**	**19 14 30.4**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.58 337**		P	**P**	**19 14 30.5**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=40,slow=5.8,SNR=6.8						
NOA				LR	LR	19 50 37.0	
	comp=Z,48nm,20.4s,baz=355,slow=38						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**76.18**	**53**	P	**P**	**19 14 36.3**	**+2.3**
	comp=Z,0.7nm,0.8s,baz=288,slow=6.2,SNR=4.4						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**79.00**	**45**	P	**P**	**19 14 51.1**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=289,slow=2.8,SNR=2.6						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**79.73 312**		P	**P**	**19 14 55.2**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=72,slow=6.2,SNR=3.2						
	comp=Z,1.3nm,0.8s						
BRTR	**Keskin Array B**	**79.73 312**	*ce*	P	P	19 15 00.8	+7.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PFO	**Pinyon Flats O**	**80.17**	**56**	LR	LR	19 43 14.7	
	comp=Z,55nm,20.4s,baz=197,slow=30						
GERES	**GERESS Array B**	**83.95 328**		P	**P**	**19 15 16.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=38,slow=3.7,SNR=4.3						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**91.33**	**52**	P	**P**	**19 15 52.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=319,slow=4.0,SNR=2.0						
	comp=Z,0.1nm,0.3s						
H03N2	**Juan Fernandez**	**147.09**	**98**	T	T	22 07 02.6	
	baz=290						
**H03N3

LNSS	**Leonessa**	**0.27 223**	P	Pb	19 04 20.8	-0.6
LNSS			S	Sb	19 04 25.0	-1.1
LNSS			AML	AML		
	comp=E,1320μm,1.3s					
LNSS			AML	AML		
	comp=N,4510μm,0.1s					
FDMO	**Fiordimonte**	**0.28 328**	AML	AML		
	comp=N,4535μm,0.3s					
FDMO			AML	AML		
	comp=E,3295μm,0.7s					
T1217	**Poggiodomo (PG**	**0.28 251**	P	Pg	19 04 19.1	-0.9
T1217			AML	AML		
	comp=E,1370μm,0.5s					
T1217			AML	AML		
	comp=N,1210μm,0.4s					
T1217			AML	AML		
	comp=E,1392μm,0.5s					
T1217			AML	AML		
	comp=N,1100μm,0.4s					
CAMP	**Campotosto**	**0.28 162**	⇓P	Pg	19 04 20.6	+0.6
CAMP			S	Sb	19 04 25.2	-1.2
CAMP			AML	AML		
	comp=E,1305μm,0.2s					
CAMP			AML	AML		
	comp=N,450μm,0.6s					
TERO	**Teramo**	**0.29 128**	P	Pg	19 04 20.8	+0.6
TERO			S	Sb	19 04 25.6	-1.0
TERO			AML	AML		
	comp=E,2395μm,1.6s					
TERO			AML	AML		
	comp=N,2365μm,0.3s					
RM33	**Pellescritta (**	**0.30 191**	P	Pg	19 04 21.1	+0.7
RM33			AML	AML		
	comp=E,864μm,0.6s					
RM33			AML	AML		
	comp=N,1150μm,1.0s					
RM33			AML	AML		
	comp=E,846μm,0.2s					
RM33			AML	AML		
	comp=N,1160μm,1.0s					
T1247	**Pizzolo (AQ)**	**0.36 179**	S	Sb	19 04 29.0	+0.3
GIGS	**Gran Sasso**	**0.41 150**	⇑P	Pg	19 04 23.0	+0.6
GIGS			AML	AML		
	comp=E,374μm,1.0s					
GIGS			AML	AML		
	comp=N,231μm,1.6s					
T1211	**Morro Reatino**	**0.42 230**	⇑P	Pb	19 04 24.8	+0.9
T1211			AML	AML		
	comp=E,1595μm,0.4s					
T1211			AML	AML		
	comp=N,2030μm,1.2s					
ARRO	**Arrone**	**0.45 240**	⇓P	Pb	19 04 23.9	-0.4
ARRO			AML	AML		
	comp=E,904μm,1.1s					
ARRO			AML	AML		
	comp=N,920μm,0.8s					
SNTG	**Esanatoglia**	**0.52 331**	P	Pg	19 04 24.6	+0.2
SNTG			AML	AML		
	comp=E,410μm,0.8s					
SNTG			AML	AML		
	comp=N,440μm,0.3s					
SNTG			AML	AML		
	comp=E,344μm,0.5s					
SNTG			AML	AML		
	comp=N,433μm,0.1s					
FAGN	**Fagnano**	**0.58 158**	S	Sb	19 04 36.0	+1.1
SRES	**S.Oreste - Sor**	**0.81 226**	S	Sn	19 04 46.0	+2.1
LATB	**Latina**	**1.33 191**	S	Sg	19 04 58.0	+0.9

ROM 31 19:04:36.1±0.0, 42°.846N±0°.003×13°.183E±0°.004, h11km, ML2.5/36, 15C-12D, Error ellipse: s-maj=0.3km s-min=0.2km az=50.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.01**	**20**	P	Pg	19 04 38.8	+0.6
T1245				S	Sg	19 04 40.5	+0.8
MMO1	**Montemonaco**	**0.12**	**63**	P	Pg	19 04 39.6	+0.5
MMO1				S	Sg	19 04 42.1	+0.8
T1216	**Preci, Frazion**	**0.13**	**290**	P	Pg	19 04 39.7	+0.4
T1216				S	Sg	19 04 42.3	+0.8
T1216				AML	AML		
	comp=N,6925μm,0.2s						
T1216				AML	AML		
	comp=E,5575μm,0.3s						
T1216				AML	AML		
	comp=N,6930μm,0.2s						
T1216				AML	AML		
	comp=E,5575μm,0.2s						
FEMA	**Monte Fema**	**0.15**	**320**	P	Pg	19 04 40.0	+0.3
FEMA				S	Sg	19 04 43.0	+0.7
FEMA				AML	AML		
	comp=E,8550μm,0.2s						
FEMA				AML	AML		
	comp=N,7400μm,0.4s						
FEMA				AML	AML		
	comp=E,8550μm,0.2s						
FEMA				AML	AML		
	comp=N,7400μm,0.4s						
FEMA				AML	AML		
	comp=N,7400μm,1.6s						
T1256	**Bolognola (MC)**	**0.16**	**11**	P	Pg	19 04 40.2	+0.3
T1256				S	Sg	19 04 43.2	+0.7
T1256				AML	AML		
	comp=N,3170μm,0.2s						
T1256				AML	AML		
	comp=N,3165μm,0.2s						
T1256				AML	AML		
	comp=E,2465μm,0.2s						
T1256				AML	AML		
	comp=N,3165μm,0.2s						
T1256				AML	AML		
	comp=E,2370μm,0.3s						
AM05	**Amandola Campo**	**0.18**	**44**	P	Pg	19 04 40.6	+0.6
AM05				S	Sg	19 04 43.9	+1.1
AM05				AML	AML		
	comp=N,2090μm,0.6s						
AM05				AML	AML		
	comp=E,9020μm,0.4s						
AM05				AML	AML		
	comp=N,830μm,0.1s						
AM05				AML	AML		
	comp=E,9005μm,0.4s						
AM05				AML	AML		
	comp=E,2185μm,0.4s						
AM05				AML	AML		
	comp=N,2085μm,0.6s						
AM05				AML	AML		
	comp=N,831μm,0.1s						
T1241	**Roccafluvione,**	**0.18**	**87**	P	Pg	19 04 40.6	+0.4
T1241				S	Sg	19 04 44.0	+1.2
T1241				AML	AML		
	comp=E,1750μm,1.6s						
T1241				AML	AML		
	comp=E,1815μm,1.6s						
T1241				AML	AML		
	comp=N,2125μm,1.5s						
T1241				AML	AML		
	comp=E,1750μm,1.6s						
T1241				AML	AML		
	comp=N,2255μm,1.5s						
T1241				AML	AML		
	comp=E,1810μm,1.6s						
T1241				AML	AML		
	comp=E,1815μm,0.4s						
T1241				AML	AML		
	comp=N,2120μm,1.5s						
T1201	**Domo (RI)**	**0.20**	**165**	P	Pg	19 04 41.0	+0.7
T1201				S	Sg	19 04 45.3	+2.0
T1204	**Amatrice, Fraz**	**0.20**	**150**	P	Pg	19 04 40.9	+0.5
T1204				AML	AML		
	comp=E,2865μm,0.7s						
T1204				AML	AML		
	comp=N,1800μm,1.4s						
T1204				AML	AML		
	comp=E,5830μm,1.0s						
T1204				AML	AML		
	comp=N,3225μm,0.2s						
T1204				AML	AML		
	comp=E,5830μm,1.0s						
FDMO	**Fiordimonte**	**0.20**	**340**	P	Pg	19 04 40.4	-0.1
FDMO				S	Sg	19 04 44.4	+0.9
FDMO				AML	AML		
	comp=E,3300μm,0.7s						
FDMO				AML	AML		
	comp=N,4535μm,0.3s						
FDMO				AML	AML		
	comp=E,3295μm,0.7s						
T1217	**Poggiodomo (PG**	**0.23**	**234**	P	Pg	19 04 41.4	+0.4
T1217				S	Sg	19 04 45.6	+1.4
T1217				AML	AML		
	comp=E,3205μm,0.2s						
T1217				AML	AML		
	comp=E,3095μm,0.2s						
T1217				AML	AML		
	comp=N,5490μm,0.2s						
T1217				AML	AML		
	comp=E,3095μm,1.8s						
T1217				AML	AML		
	comp=E,3205μm,1.8s						
T1217				AML	AML		
	comp=N,5460μm,0.2s						
T1215	**Vallo di Nera,**	**0.24**	**259**	P	Pg	19 04 41.4	+0.3
T1215				AML	AML		
	comp=E,914μm,1.2s						
T1215				AML	AML		
	comp=N,1028μm,0.6s						
T1215				AML	AML		
	comp=E,1031μm,0.1s						
T1215				AML	AML		
	comp=N,1127μm,0.2s						
T1215				AML	AML		
	comp=E,961μm,0.1s						
T1215				AML	AML		
	comp=N,1050μm,0.2s						
SMA1	**SAN MARTINO**	**0.24**	**152**	P	Pg	19 04 41.5	+0.3
SMA1				S	Sg	19 04 46.0	+1.4
SMA1				AML	AML		
	comp=E,1375μm,0.4s						
SMA1				AML	AML		
	comp=N,1485μm,0.3s						
SMA1				AML	AML		
	comp=N,7550μm,0.3s						
SMA1				AML	AML		
	comp=E,6235μm,1.6s						
GUMA	**Gualdo di Mace**	**0.24**	**27**	P	Pg	19 04 41.8	+0.6
GUMA				S	Sg	19 04 46.3	+1.7
GUMA				AML	AML		
	comp=N,7395μm,0.5s						
GUMA				AML	AML		
	comp=E,9070μm,0.3s						
GUMA				AML	AML		
	comp=N,5560μm,0.4s						
GUMA				AML	AML		
	comp=N,7400μm,0.5s						
GUMA				AML	AML		
	comp=E,6535μm,0.9s						
GUMA				AML	AML		
	comp=E,6535μm,1.1s						
T1243	**Rocca Santa Ma**	**0.25**	**127**	P	Pg	19 04 41.6	+0.3
T1243				S	Sg	19 04 45.6	+0.9
LNSS	**Leonessa**	**0.27**	**203**	P	Pg	19 04 41.9	+0.3
LNSS				S	Sb	19 04 46.8	-0.8
LNSS				AML	AML		
	comp=E,1320μm,1.3s						
LNSS				AML	AML		
	comp=N,4510μm,0.1s						
LNSS				AML	AML		
	comp=N,12400μm,0.3s						
LNSS				AML	AML		
	comp=E,5695μm,0.2s						
RM33	**Pellescritta (**	**0.34**	**176**	P	Pg	19 04 43.3	+0.3
RM33				S	Sb	19 04 49.2	-0.5
RM33				AML	AML		
	comp=E,864μm,0.6s						
RM33				AML	AML		
	comp=N,1150μm,1.0s						
RM33				AML	AML		
	comp=E,846μm,0.2s						
RM33				AML	AML		
	comp=N,1160μm,1.0s						
RM33				AML	AML		
	comp=N,2890μm,0.9s						
RM33				AML	AML		
	comp=E,2165μm,0.1s						
RM33				AML	AML		
	comp=N,2920μm,0.9s						
RM33				AML	AML		
	comp=E,2170μm,0.1s						
SEF1	**Sefro**	**0.35**	**330**	P	Pg	19 04 43.3	+0.2
SEF1				S	Sb	19 04 49.1	-0.8
MDAR	**Monte D'Aria**	**0.35**	**355**	P	Pg	19 04 43.2	0.0
MDAR				S	Sb	19 04 49.1	-0.9
CAMP	**Campotosto**	**0.35**	**152**	P	Pg	19 04 43.3	+0.1
CAMP				S	Sb	19 04 49.0	-1.1
CAMP				AML	AML		
	comp=N,450μm,0.6s						
CAMP				AML	AML		
	comp=N,680μm,0.4s						
CAMP				AML	AML		
	comp=E,1305μm,0.2s						
MNTP	**Montappone**	**0.36**	**36**	P	Pb	19 04 44.2	-0.3
MNTP				AML	AML		
	comp=N,1395μm,1.5s						
MNTP				AML	AML		
	comp=E,1610μm,0.8s						
MNTP				AML	AML		
	comp=N,1400μm,1.5s						
MNTP				AML	AML		
	comp=N,1400μm,0.5s						
OFFI	**Offida**	**0.38**	**76**	P	Pb	19 04 44.7	-0.2
OFFI				AML	AML		
	comp=E,769μm,0.3s						
OFFI				AML	AML		
	comp=N,656μm,0.5s						
OFFI				AML	AML		
	comp=N,819μm,0.7s						
OFFI				AML	AML		
	comp=E,1300μm,0.7s						
OFFI				AML	AML		
	comp=E,1300μm,1.3s						
TERO	**Teramo**	**0.38**	**126**	P	Pg	19 04 43.9	+0.2
TERO				S	Sb	19 04 50.0	-0.9
TERO				AML	AML		
	comp=E,2395μm,1.6s						
TERO				AML	AML		
	comp=N,2365μm,0.3s						
TERO				AML	AML		
	comp=E,2395μm,0.4s						
T1211	**Morro Reatino**	**0.40**	**218**	P	Pg	19 04 44.0	0.0
T1211				S	Sb	19 04 50.5	-0.9
T1211				AML	AML		
	comp=E,1595μm,0.4s						
T1211				AML	AML		
	comp=N,2030μm,1.2s						
T1211				AML	AML		
	comp=E,1790μm,0.4s						
T1211				AML	AML		
	comp=N,2025μm,1.2s						
T1211				AML	AML		
	comp=E,1790μm,1.6s						
T1211				AML	AML		
	comp=N,2025μm,0.8s						
GAG1	**Gagliole**	**0.40**	**348**	P	Pg	19 04 44.3	+0.2
ARRO	**Arrone**	**0.41**	**229**	P	Pg	19 04 44.4	+0.2
ARRO				S	Sb	19 04 51.0	-0.6
ARRO				AML	AML		
	comp=N,918μm,0.8s						
ARRO				AML	AML		
	comp=E,904μm,1.1s						
ARRO				AML	AML		
	comp=N,920μm,0.8s						
T1247	**Pizzolo (AQ)**	**0.41**	**168**	P	Pg	19 04 44.4	+0.1
T1247				S	Sb	19 04 51.3	-0.5
T1247				AML	AML		
	comp=E,930μm,0.7s						
T1247				AML	AML		
	comp=N,1210μm,0.6s						
T1247				AML	AML		
	comp=E,1004μm,1.5s						
T1247				AML	AML		
	comp=N,1270μm,0.8s						
T1247				AML	AML		
	comp=E,1004μm,0.5s						
ASSB	**Assisi San Ben**	**0.43**	**297**	P	Pg	19 04 44.5	-0.1
ASSB				S	Sb	19 04 51.5	-0.9
ASSB				AML	AML		
	comp=N,1100μm,1.5s						
ASSB				AML	AML		
	comp=N,1100μm,0.5s						
ASSB				AML	AML		
	comp=E,1155μm,0.8s						
SNTG	**Esanatoglia**	**0.45**	**337**	P	Pg	19 04 44.9	0.0
SNTG				S	Sb	19 04 52.0	-0.8
SNTG				AML	AML		
	comp=E,410μm,0.8s						
SNTG				AML	AML		
	comp=N,440μm,0.3s						
SNTG				AML	AML		
	comp=N,433μm,0.1s						
SNTG				AML	AML		
	comp=E,344μm,0.5s						
EL6	**Elcito**	**0.49**	**353**	⇑P	Pg	19 04 45.7	0.0
EL6				S	Sb	19 04 54.0	0.0
GIGS	**Gran Sasso**	**0.49**	**144**	P	Pg	19 04 45.5	-0.2
GIGS				S	Sg	19 04 52.9	+0.7
GIGS				AML	AML		
	comp=N,231μm,1.6s						
GIGS				AML	AML		
	comp=E,374μm,1.0s						
GIGS				AML	AML		
	comp=N,231μm,0.4s						
CESX	**Cesi**	**0.50**	**242**	⇑P	Pg	19 04 45.9	-0.1
CESX				AML	AML		
	comp=E,610μm,0.2s						
CESX				AML	AML		
	comp=E,610μm,1.8s						
CESX				AML	AML		
	comp=N,598μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.52**	**311**	⇑P	Pg	19 04 46.5	+0.1
ATCC				AML	AML		
	comp=E,734μm,1.1s						
ATCC				AML	AML		
	comp=E,734μm,1.1s						
ATCC				AML	AML		
	comp=N,566μm,0.3s						
ATCC				AML	AML		
	comp=N,566μm,1.7s						
TRTR	**Tortoreto Alta**	**0.54**	**94**	⇓P	Pb	19 04 47.9	+0.2
FOSV	**Fossato di Vic**	**0.55**	**326**	⇑P	Pg	19 04 47.1	+0.4
FOSV				AML	AML		
	comp=E,382μm,0.4s						
FOSV				AML	AML		
	comp=N,950μm,0.4s						
FOSV				AML	AML		
	comp=E,382μm,0.4s						
FOSV				AML	AML		
	comp=N,946μm,0.4s						
FIAM	**Fiamignano**	**0.58**	**185**	⇓P	Pg	19 04 47.2	-0.2
FIAM				S	Sb	19 04 57.0	+0.3
FIAM				AML	AML		
	comp=E,327μm,0.6s						
FIAM				AML	AML		
	comp=N,234μm,1.4s						
FIAM				AML	AML		
	comp=N,337μm,0.7s						
FIAM				AML	AML		
	comp=E,530μm,0.5s						
FIAM				AML	AML		
	comp=E,530μm,1.5s						
MURB	**Monte Urbino**	**0.64**	**311**	⇓P	Pg	19 04 48.9	+0.3
MURB				AML	AML		
	comp=E,1280μm,1.4s						
MURB				AML	AML		
	comp=E,1280μm,0.6s						
MURB				AML	AML		
	comp=N,1098μm,0.9s						
FAGN	**Fagnano**	**0.65**	**153**	⇓P	Pg	19 04 49.1	+0.3
FAGN				S	Sb	19 04 60.0	+1.3
FAGN				AML	AML		
	comp=E,526μm,0.4s						
FAGN				AML	AML		
	comp=E,525μm,0.4s						
FAGN				AML	AML		
	comp=N,549μm,0.4s						
FAGN				AML	AML		
	comp=E,525μm,1.6s						
SSFR	**Montelago di S**	**0.66**	**334**	⇑P	Pg	19 04 49.1	+0.1
SSFR				AML	AML		
	comp=E,906μm,0.2s						
SSFR				AML	AML		
	comp=N,808μm,0.2s						
SSFR				AML	AML		
	comp=E,906μm,0.2s						
SSFR				AML	AML		
	comp=N,732μm,0.2s						
VCEL	**Villa Celiera**	**0.66**	**133**	⇓P	Pg	19 04 49.0	-0.1
VCEL				AML	AML		
	comp=N,770μm,0.2s						
VCEL				AML	AML		
	comp=N,771μm,0.2s						
VCEL				AML	AML		
	comp=E,960μm,1.0s						
ARVD	**Arcevia**	**0.68**	**345**	S	Sb	19 04 60.0	+0.6
ATTE	**AVT- Monte Tez**	**0.70**	**300**	⇓P	Pn	19 04 52.4	+0.3
FRON	**Frontone**	**0.75**	**334**	⇓P	Pg	19 04 50.5	-0.2
FRON				AML	AML		
	comp=E,174μm,0.8s						
FRON				AML	AML		
	comp=N,313μm,0.3s						
FRON				AML	AML		
	comp=E,174μm,1.2s						
T0110	**Collepietro**	**0.76**	**144**	⇓P	Pg	19 04 50.4	-0.5
T0110				AML	AML		
	comp=E,540μm,0.5s						
T0110				AML	AML		
	comp=N,502μm,0.5s						
AOI	**Ancona**	**0.77**	**23**	⇓P	Pg	19 04 51.2	+0.2
AOI				AML	AML		
	comp=N,221μm,0.4s						
AOI				AML	AML		
	comp=E,280μm,0.3s						
AOI				AML	AML		
	comp=N,222μm,0.4s						
ATVO	**AVT- Monte Val**	**0.78**	**314**	⇓P	Pg	19 04 51.1	-0.2
ATVO				AML	AML		
	comp=E,226μm,0.7s						
ATVO				AML	AML		
	comp=N,220μm,0.5s						
ATVO				AML	AML		
	comp=N,220μm,1.5s						
MGAB	**Montegabbione**	**0.79**	**275**	⇓P	Pg	19 04 51.3	-0.1
MGAB				AML	AML		
	comp=E,338μm,0.3s						
MGAB				AML	AML		
	comp=N,326μm,0.8s						
MGAB				AML	AML		
	comp=E,338μm,1.7s						
ATPI	**Pietralunga -**	**0.83**	**317**	⇑P	Pb	19 04 52.4	-0.2
ATPI				AML	AML		
	comp=E,176μm,0.5s						
ATPI				AML	AML		
	comp=N,160μm,0.4s						
ATPI				AML	AML		
	comp=E,175μm,0.5s						
ATPI				AML	AML		
	comp=E,175μm,1.5s						
PIEI	**Pieia**	**0.84**	**326**	⇑P	Pg	19 04 52.0	-0.3
PIEI				S	Sn	19 05 06.0	-0.3
PIEI				AML	AML		
	comp=E,162μm,1.0s						
PIEI				AML	AML		
	comp=N,182μm,1.6s						
PIEI				AML	AML		
	comp=E,162μm,1.0s						
PTQR	**Pietraquaria**	**0.84**	**169**	⇑P	Pg	19 04 51.5	-0.9
PTQR				AML	AML		
	comp=E,52μm,0.4s						
PTQR				AML	AML		
	comp=N,49μm,0.8s						
PTQR				AML	AML		
	comp=N,57μm,0.3s						
PTQR				AML	AML		
	comp=E,54μm,1.0s						
MPAG	**Monte Paganucc**	**0.84**	**339**	⇑P	Pg	19 04 52.1	-0.3
MPAG				S	Sn	19 05 06.0	-0.5
MPAG				AML	AML		
	comp=N,127μm,0.4s						
MPAG				AML	AML		
	comp=E,186μm,0.9s						
MPAG				AML	AML		
	comp=N,127μm,0.4s						
MPAG				AML	AML		
	comp=E,186μm,1.1s						
MPAG				AML	AML		
	comp=N,127μm,1.6s						
FSSB	**Fossombrone**	**0.90**	**341**	⇑P	Pg	19 04 53.1	-0.3
FSSB				AML	AML		
	comp=E,490μm,0.3s						

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FSSB                                    AML     AML
      comp=N,584µm,0.3s
FSSB                                    AML     AML
      comp=E,490µm,1.7s
CERT  Cerreto          0.91 189 ⇑P              Pg      19 04 52.9  -0.8
CERT                                    AML     AML
      comp=E,172µm,0.8s
CERT                                    AML     AML
      comp=N,146µm,1.4s
CERT                                    AML     AML
      comp=E,272µm,0.3s
CERT                                    AML     AML
      comp=N,146µm,0.6s
SACS  San Casciano d   0.94 271 ⇓P              Pn      19 04 55.2  -0.2
SACS                                    AML     AML
      comp=N,76µm,0.9s
SACS                                    AML     AML
      comp=E,61µm,1.3s
SACS                                    AML     AML
      comp=N,76µm,1.1s
SACS                                    AML     AML
      comp=E,61µm,0.7s
PE3   Peglio           0.99 330 ⇑P              Pb      19 04 55.5 +0.2
CAFI  Castiglion Fio   1.01 299 ⇑P              Pb      19 04 55.8  0.0
CAFI                                    S       Sn      19 05 11.0 +0.3
CAFI                                    AML     AML
      comp=E,159µm,0.6s
CAFI                                    AML     AML
      comp=N,158µm,0.7s
CAFI                                    AML     AML
      comp=E,160µm,0.6s
CAFI                                    AML     AML
      comp=E,160µm,1.4s
CAFI                                    AML     AML
      comp=N,158µm,1.3s
LPEL  Lama dei Pelig   1.09 137 ⇑P              Pb      19 04 56.3  -0.7
LPEL                                    AML     AML
      comp=E,120µm,1.5s
LPEL                                    AML     AML
      comp=N,120µm,1.4s
LPEL                                    AML     AML
      comp=N,120µm,0.6s
LPEL                                    AML     AML
      comp=E,120µm,0.5s
MCIV  Monte Civitell   1.11 267 ⇑P              Pn      19 04 57.8 +0.1
MCIV                                    AML     AML
      comp=E,44µm,0.3s
MCIV                                    AML     AML
      comp=N,43µm,0.2s
SF04  Casetta          1.12 270 P               Pn      19 04 58.4 +0.5
CPGN  Carpegna, Ital   1.14 327 P               Pn      19 04 58.6 +0.4
TOLF  Tolfa            1.17 229 P               Pb      19 04 56.6  -1.8
TOLF                                    AML     AML
      comp=E,70µm,1.3s
TOLF                                    AML     AML
      comp=N,94µm,0.5s
TOLF                                    AML     AML
      comp=E,70µm,0.7s
POFI  Posta Fibreno    1.19 161 P               Pg      19 05 00.0 +0.9
CASP  Castiglione de   1.71 269 P               Pn      19 05 05.5  -0.4
CASP                                    AML     AML
      comp=N,12µm,1.6s
CASP                                    AML     AML
      comp=E,10µm,1.6s
CASP                                    AML     AML
      comp=E,10µm,0.4s
CASP                                    AML     AML
      comp=N,12µm,0.4s
```

*IDC **31** 19:28:08.8±2.0, 62.°89N×150.°52W, h96km±23km, mb3.4/4, mbtmp3.9/7, MS2.5/1, Error ellipse: s-maj=25.0km s-min=17.3km az=100.0*

*AEIC **31** 19:28:10±0.6, 62.°86N±0.°04×150.°5W±0.°1, h100km±7km, ML3.3, ML3.5/170(NEIC), Error ellipse: s-maj=6.7km s-min=6.4km az=78.0*

*NEIC **31** 19:28:10.3±0.8, 62.°87N±0.°04×150.°53W±0.°10, h102km±7km, Error ellipse: s-maj=6.7km s-min=5.3km az=122.0*

ISC 31 19:28:09.7±0.9, 62.°85N±0.°04×150.°52W±0.°05, h119km, n118, σ0°75/120, mb3.7/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CUT	**Chulitna**	**0.46**	**166**		**Pn**	**19 28 26.3**	**-1.0**
TRF	**Thorofare Moun**	**0.61**	**10**		**Pn**	**19 28 27.5**	**-1.0**
KTH	**Kantishna Hill**	**0.73**	**346**		**Pn**	**19 28 28.2**	**-1.0**
PPLA	**Purkeypile**	**0.77**	**274**		**Pn**	**19 28 29.1**	**-0.6**
CAST	**Castle Rocks**	**0.91**	**309**		**Pn**	**19 28 29.8**	**-1.0**
RND	**Reindeer**	**0.94**	**53**		**Pn**	**19 28 30.3**	**-0.9**
RND				IAML		19 28 46.5	
	comp=N,724nm,0.6s						
SKT	**Skwentna**	**0.99**	**209**		**Pn**	**19 28 31.0**	**-0.6**
SKT				IAML		19 28 47.0	
	comp=N,1µm,0.3s						
SKT				IAML		19 28 48.2	
	comp=E,1µm,0.5s						
M22K	**Willow**	**1.12**	**170**		**Pn**	**19 28 32.6**	**-0.1**
MCK	**McKinley**	**1.14**	**38**		**Pn**	**19 28 32.2**	**-0.8**
BPAW	**Bear Paw Mtn.**	**1.27**	**351**		**Pn**	**19 28 33.7**	**-0.8**
GHO	**Glory Hole Cre**	**1.31**	**145**		**Pn**	**19 28 35.1**	**+0.1**
GHO				IAML		19 28 55.3	
	comp=N,989nm,0.4s						
GHO				IAML		19 28 56.4	
	comp=E,998nm,0.7s						
SUA	**Susitna One**	**1.40**	**185**		**Pn**	**19 28 36.3**	**+0.3**
SUA				IAML		19 28 56.6	
	comp=N,602nm,0.7s						
SUA				IAML		19 28 58.9	
	comp=E,698nm,0.4s						
BWN	**Browne**	**1.41**	**19**		**Pn**	**19 28 35.6**	**-0.4**
BWN				IAML		19 28 56.2	
	comp=N,418nm,1.1s						
PMR	**Palmer**	**1.42**	**152**		**Pn**	**19 28 35.7**	**-0.4**
PMR				IAML		19 29 01.0	
	comp=E,463nm,0.5s						
PMR				IAML		19 29 01.6	
	comp=N,455nm,0.3s						
DHY	**Denali Highway**	**1.45**	**80**		**Pn**	**19 28 36.1**	**-0.5**
SML	**Sawmill**	**1.46**	**135**		**Pn**	**19 28 36.5**	**-0.2**
SML				IAML		19 28 57.8	
	comp=E,604nm,0.6s						
SML				IAML		19 28 58.0	
	comp=N,589nm,0.6s						
M20K	**Styx River**	**1.56**	**233**		**Pn**	**19 28 37.7**	**-0.1**
M20K				IAML		19 28 59.7	
	comp=N,414nm,0.4s						
M20K				IAML		19 28 59.9	
	comp=E,517nm,0.3s						
K20K	**Telida**	**1.69**	**289**		**Pn**	**19 28 39.3**	**-0.1**
K20K				IAML		19 29 01.0	
	comp=E,602nm,0.8s						
K20K				IAML		19 29 01.4	
	comp=N,226nm,0.9s						
KNK	**Knik Glacier**	**1.74**	**145**		**Pn**	**19 28 39.8**	**-0.1**
KNK				IAML		19 29 03.8	
	comp=E,900nm,0.5s						
KNK				IAML		19 29 10.7	
	comp=N,506nm,0.5s						
SCM	**Sheep Creek Mo**	**1.80**	**123**		**Pn**	**19 28 40.4**	**-0.4**
SCM				IAML		19 29 06.2	
	comp=N,547nm,0.6s						
RC01	**Rabbit Creek A**	**1.81**	**168**	Pn	**Pn**	**19 28 40.6**	**-0.1**
RC01				IAML		19 29 06.9	
	comp=E,730nm,0.5s						
SPU	**Mount Spurr**	**1.82**	**204**		**Pn**	**19 28 41.0**	**0.0**
NEA2	**Nenana**	**1.86**	**20**		**Pn**	**19 28 40.6**	**-0.8**
WRH	**Wood River Hil**	**1.95**	**33**		**Pn**	**19 28 42.0**	**-0.5**
M19K	**Big River Lodg**	**2.04**	**244**		**Pn**	**19 28 43.5**	**-0.2**
J20K	**Nowinta River**	**2.10**	**311**	Pn	**Pn**	**19 28 44.4**	**0.0**
J20K				IAML		19 29 10.6	
	comp=N,187nm,0.9s						
J20K				IAML		19 29 11.1	
	comp=E,281nm,0.8s						
L19K	**White Mountain**	**2.12**	**253**	Pn	**Pn**	**19 28 44.7**	**+0.1**
M24K	**Tolsona, Glenn**	**2.15**	**108**	Pn	**Pn**	**19 28 45.5**	**+0.5**
CCB	**Clear Creek Bu**	**2.17**	**33**		**Pn**	**19 28 44.8**	**-0.4**
MLY	**Manley**	**2.19**	**358**		**Pn**	**19 28 45.3**	**-0.2**
HDA	**Harding Lake**	**2.23**	**44**		**Pn**	**19 28 45.7**	**-0.3**
HDA				IAML		19 29 11.8	
	comp=E,243nm,0.8s						
HDA				IAML		19 29 17.5	
	comp=N,215nm,0.6s						
PWL	**Port Wells**	**2.25**	**152**		**Pn**	**19 28 46.2**	**0.0**
PWL				IAML		19 29 14.1	
	comp=E,417nm,0.3s						
PWL				IAML		19 29 27.1	
	comp=N,489nm,0.5s						
PAX	**Paxson**	**2.31**	**85**		**Pn**	**19 28 47.7**	**+0.6**
MDM	**Murphy Dome**	**2.35**	**24**		**Pn**	**19 28 47.2**	**-0.3**
TCOL	**CIGO, UAF Yank**	**2.35**	**29**		**Pn**	**19 28 47.2**	**-0.2**
TCOL				IAML		19 29 20.3	
	comp=E,227nm,0.6s						
TCOL				IAML		19 29 22.5	
	comp=N,333nm,0.5s						
COLA	**College**	**2.35**	**29**		**Pn**	**19 28 47.2**	**-0.2**
COLA				IAML		19 29 22.4	
	comp=N,387nm,0.5s						
COLA				IAML		19 29 51.3	
	comp=N,250nm,0.5s						
I23K	**Minto, Yukon-K**	**2.36**	**12**		**Pn**	**19 28 47.2**	**-0.4**
O22K	**Cooper Landing**	**2.41**	**171**		**Pn**	**19 28 48.7**	**+0.5**
I21K	**Tanana**	**2.43**	**345**		**Pn**	**19 28 48.4**	**0.0**
I21K				IAML		19 29 17.9	
	comp=E,132nm,0.9s						
IL31		**2.51**	**38**		**Pn**	**19 28 49.2**	**-0.2**
ILAR	**Eielson Array**	**2.51**	**38**	P	**Pn**	**19 28 49.0**	**-0.5**
	comp=E,88nm,0.4s,baz=221,slow=14,SNR=1409						
ILAR				S	**Sn**	**19 29 17.6**	**-2.6**
	comp=E,28nm,0.7s,baz=220,slow=22,SNR=9.9						
ILAR				LR	LR	19 29 19.4	
	comp=E,86nm,18.4s,baz=164,slow=28						
ILAR	**Eielson Array**	**2.51**	**38**		**Pn**	**19 28 49.2**	**-0.3**
TTA	**Tatalina**	**2.52**	**274**	Pn	**Pn**	**19 28 49.9**	**+0.1**
TTA				IAML		19 29 20.4	
	comp=N,95nm,0.7s						
TTA				IAML		19 29 21.3	
	comp=E,112nm,0.7s						
KLU	**Klutina**	**2.55**	**120**		**Pn**	**19 28 49.6**	**-0.5**
KLU				IAML		19 29 31.4	
	comp=E,260nm,0.5s						
GLI	**Glacier Island**	**2.56**	**139**		**Pn**	**19 28 49.8**	**-0.3**
GLI				IAML		19 29 22.8	
	comp=N,329nm,0.7s						
GLI				IAML		19 29 23.1	
	comp=E,379nm,0.3s						
RSO	**Redoubt South**	**2.62**	**205**		**Pn**	**19 28 52.1**	**+0.9**
POKR	**Poker Plat Res**	**2.65**	**29**		**Pn**	**19 28 51.4**	**0.0**
RIDG	**Independent Ri**	**2.71**	**68**		**Pn**	**19 28 53.0**	**+0.8**
RIDG				IAML		19 29 27.7	
	comp=E,234nm,0.8s						
RIDG				IAML		19 29 31.5	
	comp=N,208nm,0.9s						
N19K	**Bonanza Creek**	**2.78**	**224**	Pn	**Pn**	**19 28 53.8**	**+0.7**
N19K				IAML		19 29 47.9	
	comp=N,75nm,0.9s						
N19K				IAML		19 29 49.7	
	comp=E,99nm,0.7s						
SEW	**Seward**	**2.80**	**169**	Pn	**Pn**	**19 28 53.9**	**+0.6**
DIV	**Divide**	**2.83**	**126**		**Pn**	**19 28 52.9**	**-0.8**
FID	**Port Fidalgo**	**2.85**	**136**		**Pn**	**19 28 53.4**	**-0.5**
FID				IAML		19 29 27.9	
	comp=N,233nm,0.5s						
J25K	**Salcha River,**	**2.89**	**50**	Pn	**Pn**	**19 28 54.4**	**-0.2**
J25K				IAML		19 29 27.7	
	comp=N,144nm,0.7s						
J25K				IAML		19 29 29.1	
	comp=E,101nm,0.5s						
SVW2	**Sparrevohn**	**2.97**	**236**		**Pn**	**19 28 56.1**	**+0.6**
SVW2				IAML		19 29 32.4	
	comp=N,72nm,0.6s						
H21K	**Melozitna Rive**	**2.99**	**341**		**Pn**	**19 28 55.6**	**-0.1**
H21K				IAML		19 29 29.9	
	comp=E,63nm,1.1s						
H23K	**Yukon River**	**3.02**	**8**		**Pn**	**19 28 56.2**	**0.0**
DOT	**Dot Lake**	**3.03**	**72**		**Pn**	**19 28 56.4**	**+0.1**
N25K	**Chitina, Valde**	**3.04**	**112**	Pn	**Pn**	**19 28 56.3**	**-0.2**
N25K				IAML		19 29 34.6	
	comp=E,159nm,0.5s						
N25K				IAML		19 29 34.6	
	comp=N,164nm,0.4s						
BRLK	**Bradley Lake**	**3.10**	**183**	Pn	**Pn**	**19 28 58.5**	**+1.1**
BRLK				IAML		19 29 40.2	
	comp=E,140nm,0.5s						
BRLK				IAML		19 29 46.1	
	comp=N,140nm,0.5s						
MENT	**Mentasta**	**3.11**	**85**		**Pn**	**19 28 58.0**	**+0.6**
SCRK	**Sand Creek**	**3.15**	**66**	Pn	**Pn**	**19 28 58.1**	**+0.2**
SCRK				IAML		19 29 36.3	
	comp=N,102nm,1.1s						
SCRK				IAML		19 29 51.8	
	comp=E,64nm,0.8s						
H24K	**Noodor Dome**	**3.21**	**20**	Pn	**Pn**	**19 28 58.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.24**	**133**	Pn	**Pn**	**19 28 59.2**	**+0.2**
HOM	**Homer**	**3.25**	**190**	Pn	**Pn**	**19 29 00.8**	**+1.6**
L26K	**Log Cabin Wild**	**3.28**	**84**		**Pn**	**19 29 00.4**	**+0.8**
CNPM	**China Poot**	**3.35**	**186**		**Pn**	**19 29 01.6**	**+0.9**
CNPM				IAML		19 29 43.7	
	comp=N,183nm,0.6s						
N18K	**Kilae Creek**	**3.36**	**232**	Pn	**Pn**	**19 29 01.1**	**+0.5**
N18K				IAML		19 30 20.1	
	comp=N,51nm,2.6s						
BMRM	**Bremner River**	**3.37**	**121**		**Pn**	**19 29 00.3**	**-0.6**
IMAR	**Indian Mountai**	**3.44**	**337**	Pn	**Pn**	**19 29 01.8**	**+0.1**
GLB	**Gilahina Butte**	**3.45**	**111**		**Pn**	**19 29 01.8**	**-0.1**
GLB				IAML		19 29 42.6	
	comp=E,145nm,0.4s						
GLB				IAML		19 29 42.7	
	comp=N,148nm,0.8s						
PRP	**Porcupine Dome**	**3.46**	**37**		**Pn**	**19 29 02.1**	**+0.1**
PRP				IAML		19 29 59.4	
	comp=N,49nm,0.6s						
M26K	**Nabesna, AK**	**3.50**	**94**		**Pn**	**19 29 02.9**	**+0.3**
M26K				IAML		19 29 59.0	
	comp=E,107nm,0.5s						
M26K				IAML		19 30 01.9	
	comp=N,137nm,0.9s						
J26L	**Joseph Creek**	**3.51**	**59**		**Pn**	**19 29 03.2**	**+0.5**
J26L				IAML		19 29 46.9	
	comp=N,109nm,0.5s						
J26L				IAML		19 29 49.3	
	comp=E,114nm,0.6s						
VRDI	**Verde Repeater**	**3.70**	**113**		**Pn**	**19 29 05.2**	**-0.1**
VRDI				IAML		19 29 47.0	
	comp=N,98nm,0.8s						
VRDI				IAML		19 29 49.6	
	comp=E,90nm,0.8s						
O18K	**Koktuh Hills**	**3.76**	**219**		**Pn**	**19 29 06.6**	**+0.6**
O18K				IAML		19 29 55.0	
	comp=E,47nm,4.0s						
O18K				IAML		19 30 30.4	
	comp=N,64nm,3.8s						
MCARA	**McCarthy VSAT**	**3.81**	**109**		**Pn**	**19 29 06.8**	**+0.1**
HMT	**Hamilton**	**3.91**	**127**	Pn	**Pn**	**19 29 07.8**	**-0.2**
K27K	**Chicken**	**3.97**	**69**		**Pn**	**19 29 08.8**	**+0.1**
K27K				IAML		19 29 57.9	
	comp=E,59nm,0.6s						
K27K				IAML		19 30 02.0	
	comp=N,46nm,0.8s						
L27K	**Beaver Creek,**	**3.97**	**83**		**Pn**	**19 29 08.7**	**-0.1**
L27K				IAML		19 30 15.1	
	comp=N,37nm,0.6s						
Q23K	**Middleton Isla**	**3.98**	**148**		**Pn**	**19 29 10.4**	**+1.5**
MID	**Middleton Isla**	**3.99**	**148**	Pn	**Pn**	**19 29 10.3**	**+1.4**
BCAR	**Beaver Creek A**	**3.99**	**83**		**Pn**	**19 29 09.1**	**0.0**
M27K	**Edge Creek, AK**	**4.02**	**93**		**Pn**	**19 29 10.7**	**+1.1**
M27K				IAML		19 30 17.8	
	comp=N,100nm,0.9s						
M27K				IAML		19 30 23.0	
	comp=E,52nm,0.8s						
I26K	**Coal Creek Min**	**4.06**	**49**		**Pn**	**19 29 10.2**	**+0.3**
I26K				IAML		19 30 06.3	
	comp=N,64nm,0.7s						
I26K				IAML		19 30 12.9	
	comp=E,57nm,0.8s						
BERG	**Berg Lake**	**4.08**	**124**		**Pn**	**19 29 10.3**	**0.0**
P18K	**Big Mountain,**	**4.16**	**215**	Pn	**Pn**	**19 29 11.1**	**-0.1**
P18K				IAML		19 30 31.6	
	comp=N,40nm,4.9s						
P18K				IAML		19 30 48.4	
	comp=E,46nm,3.4s						
Q19K	**Cape Douglas,**	**4.22**	**203**		**Pn**	**19 29 13.0**	**+0.8**
FYU	**Fort Yukon**	**4.36**	**29**		**Pn**	**19 29 14.4**	**+0.4**
FYU				IAML		19 30 15.6	
	comp=N,83nm,4.2s						
FYU				IAML		19 31 17.6	
	comp=E,77nm,4.5s						
WAX	**Waxell Ridge**	**4.38**	**120**		**Pn**	**19 29 14.4**	**+0.1**
ISLE	**Juniper Island**	**4.50**	**116**	Pn	**Pn**	**19 29 15.5**	**-0.4**
SNH	**Sunshine Point**	**4.55**	**123**	Pn	**Pn**	**19 29 16.8**	**+0.2**
BARN	**Barnard Glacie**	**4.55**	**109**		**Pn**	**19 29 17.0**	**+0.3**
BARN				IAML		19 30 13.7	
	comp=N,47nm,0.8s						
BARN				IAML		19 30 30.7	
	comp=E,59nm,0.7s						
EGAK	**Eagle**	**4.58**	**61**		**Pn**	**19 29 17.1**	**+0.3**
EGAK				IAML		19 30 33.5	
	comp=E,49nm,0.9s						
EGAK				IAML		19 30 38.3	
	comp=E,60nm,0.8s						
YAH	**Yahtse**	**4.87**	**117**	Pn	**Pn**	**19 29 20.8**	**-0.3**
YAH				IAML		19 30 38.8	
	comp=E,51nm,0.8s						
MESA	**MESA**	**4.90**	**119**	Pn	**Pn**	**19 29 21.4**	**+0.1**
TABL	**Table Mountain**	**5.08**	**114**	Pn	**Pn**	**19 29 23.5**	**-0.4**
TABL				IAML		19 30 45.7	
	comp=E,41nm,2.9s						
TABL				IAML		19 31 06.3	
	comp=N,41nm,3.2s						
DAWY	**Dawson**	**5.14**	**71**	Pn	**Pn**	**19 29 24.5**	**+0.1**
DAWY				IAML		19 30 52.5	
	comp=N,28nm,0.7s						
DAWY				IAML		19 30 53.6	
	comp=E,29nm,0.8s						
KDAK	**Kodiak Island**	**5.19**	**192**	P	**Pn**	**19 29 24.8**	**-0.3**
	comp=E,25nm,0.3s,baz=20,slow=12,SNR=101						
KDAK				S	**Sn**	**19 30 19.8**	**-3.9**
	comp=E,19nm,0.4s,baz=310,slow=23,SNR=14						
KDAK	**Kodiak Island**	**5.19**	**192**	Pn	**Pn**	**19 29 24.8**	**-0.3**
BMAR	**Burnt Mountain**	**5.23**	**26**	Pn	**Pn**	**19 29 26.0**	**+0.3**
PCA	**Pinnacle**	**5.64**	**115**	Pn	**Pn**	**19 29 31.5**	**+0.3**
J29M	**Klondike Camp**	**5.71**	**68**		**Pn**	**19 29 31.7**	**-0.5**
OHAK	**Old Harbor**	**5.81**	**195**	Pn	**Pn**	**19 29 32.8**	**-0.7**
I29M	**Ogilvie Camp,**	**5.91**	**59**		**Pn**	**19 29 35.5**	**+0.7**
M30M	**Minto, Yukon**	**6.32**	**86**	Pn	**Pn**	**19 29 39.9**	**-0.5**
HYT	**Haines Junctio**	**6.49**	**102**	Pn	**Pn**	**19 29 43.0**	**+0.3**
SII	**Sitkinak Islan**	**6.58**	**198**	Pn	**Pn**	**19 29 43.9**	**+0.1**
EPYK	**Eagle Plains**	**6.90**	**53**		**Pn**	**19 29 48.5**	**+0.4**
P29M	**Windy Craggy**	**6.96**	**112**	Pn	**Pn**	**19 29 49.4**	**+0.5**
BESE	**Bessie Mountai**	**8.78**	**112**	Pn	**Pn**	**19 30 13.5**	**-0.1**
P33M	**Teslin, Yukon**	**8.85**	**99**	Pn	**Pn**	**19 30 15.3**	**+0.7**
INK	**Inuvik**	**8.89**	**45**	P	**Pn**	**19 30 15.5**	**+0.6**
	comp=E,8.9nm,1.0s,baz=236,slow=13,SNR=10.0						
INK	**Inuvik**	**8.89**	**45**	Pn	**Pn**	**19 30 16.1**	**+1.2**
C36M	**Paulatuk**	**12.45**	**47**	Pn	**Pn**	**19 31 00.3**	**-2.1**
SONM	**Songino Array**	**54.08**	**306**	P	**P**	**19 37 24.1**	**+2.4**
	comp=E,0.7nm,0.7s,baz=35,slow=6.1,SNR=4.6						
	comp=E,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**55.77**	**324**	P	**P**	**19 37 34.3**	**+0.7**
	comp=E,0.5nm,0.4s,baz=34,slow=8.7,SNR=3.7						
	comp=E,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**60.43**	**326**	P	**P**	**19 38 06.8**	**+0.7**
	comp=E,0.2nm,0.2s,baz=25,slow=7.1,SNR=2.0						
	comp=E,0.2nm,0.2s						
MKAR	**Makanchi Array**	**62.93**	**322**	P	**P**	**19 38 23.5**	**+0.5**
	comp=E,0.3nm,0.5s,baz=16,slow=7.7,SNR=1.6						
	comp=E,0.3nm,0.5s						

*IDC **31** 19:35:09.5±0.6, 55.°29S×27.°98W, h0km, mb4.4/9, mbtmp4.4/10, ML4.6/1, MS3.4/16, Error ellipse: s-maj=23.8km s-min=17.6km az=76.0*

*NEIC **31** 19:35:11.0±1.2, 55.°31S±0.°07×28.°2W±0.°2, h10km±1km, mb4.5/19, Error ellipse: s-maj=25.4km s-min=3.2km az=62.0*

ISC 31 19:35:13.0±0.6, 55.°27S±0.°09×28.°2W±0.°1, h26km, n49, σ0°88/38, mb4.5/12, MS3.4/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**4.91**	**278**		**Pn**	**19 36 24.5**	**-0.5**
VNA1	**Neumayer--Stat**	**17.73**	**158**	P	**P**	**19 39 18.3**	**-0.1**
VNA3	**Neumayer Olymp**	**17.92**	**160**	P	**Pn**	**19 39 20.0**	**-0.1**
VNA2	**Neumayer--Watz**	**18.13**	**158**	P	**P**	**19 39 22.7**	**0.0**
	baz=316,slow=13						
SNAA	**Sanae**	**19.69**	**156**	P	**P**	**19 39 39.2**	**-0.7**
SNAA	**Sanae**	**19.69**	**156**	P	**P**	**19 39 39.2**	**-0.7**
	1.6nm,0.3s,baz=304,slow=9.4,SNR=104						
SNAA				LR	LR	19 45 57.1	
	comp=Z,47nm,19.0s,baz=18,slow=33						
	6.1nm,0.5s						
SNAA	**Sanae**	**19.69**	**156**	P	**P**	**19 39 38.4**	**-1.5**
PMSA	**Palmer Station**	**20.00**	**227**	P	**P**	**19 39 43.8**	**+0.6**
	21nm,0.9s,baz=24,slow=10,SNR=3.6						
PMSA				LR	LR	19 45 29.8	
	comp=Z,91nm,19.9s,baz=80,slow=31						
	21nm,0.9s						
TROLL	**Troll, Antarti**	**21.20**	**154**	P	**P**	**19 39 58.8**	**+2.4**
BELA	**Belgrano 2**	**22.82**	**184**	P	**P**	**19 40 13.8**	**+0.3**
PLCA	**Paso Flores**	**31.31**	**280**	LR	LR	19 53 21.5	
	comp=Z,51nm,18.1s,baz=158,slow=35						
QSPA	**South Pole Qui**	**34.98**	**180**	P	**P**	**19 42 03.4**	**+0.5**
	4.7nm,0.6s,baz=191,slow=3.2,SNR=20						
	4.7nm,0.6s						
QSPA	**South Pole Qui**	**34.98**	**180**	P	**P**	**19 42 03.2**	**+0.4**
QSPA				IAmb	IAmb	19 42 04.3	
	comp=Z,5.1nm,0.8s						
CPUP	**Villa Florida**	**35.87**	**312**	P	**P**	**19 42 11.1**	**+0.5**
	comp=Z,4.8nm,1.0s,baz=151,slow=7.4,SNR=5.9						
	comp=Z,4.8nm,1.0s						
CPUP	**Villa Florida**	**35.87**	**312**	P	**P**	**19 42 11.4**	**+0.8**
CPUP				IAmb	IAmb	19 42 13.0	
	comp=Z,9.1nm,1.2s						
CO03	**El Pedregal**	**38.63**	**291**	P	**P**	**19 42 32.8**	**-1.3**
CO03				IAmb	IAmb	19 42 39.0	
	comp=Z,20nm,1.4s						
CO01	**Juntas del Tor**	**38.99**	**293**	P	**P**	**19 42 35.6**	**-1.7**
AC05	**El Transito**	**39.99**	**294**		**P**	**19 42 45.8**	**+0.3**
AQDB	**Aquidauana**	**40.44**	**318**	P	**P**	**19 42 49.5**	**+0.4**
AQDB				IAmb	IAmb	19 42 50.5	
	comp=Z,12nm,1.2s						
SUR	**Sutherland**	**40.99**	**77**	LR	LR	19 57 05.9	
	comp=Z,47nm,18.3s,baz=205,slow=32						
AC02	**Maricunga**	**41.02**	**297**	P	**P**	**19 42 54.8**	**+0.3**
AC02				IAmb	IAmb	19 42 57.8	
	comp=Z,13nm,1.4s						
MAW	**Mawson**	**41.12**	**144**	P	**P**	**19 42 54.0**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=270,slow=4.0,SNR=2.8						
MAW				LR	LR	19 59 23.3	
	comp=Z,25nm,18.1s,baz=232,slow=35						
	comp=Z,1.7nm,0.7s						
LVC	**Limon Verde**	**44.42**	**301**	LR	LR	20 00 59.9	
	comp=Z,20nm,20.9s,baz=289,slow=35						
PB03	**IPOC Station P**	**45.31**	**300**	P	**P**	**19 43 28.7**	**0.0**
PB03				IAmb	IAmb	19 43 30.6	
	comp=Z,7.8nm,1.2s						
PB01	**IPOC Station P**	**46.02**	**301**	P	**P**	**19 43 34.4**	**0.0**
BOSA	**Boshof**	**46.34**	**77**	P	**P**	**19 43 36.6**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=210,slow=7.1,SNR=5.7						
BOSA				LR	LR	20 00 03.8	
	comp=Z,46nm,19.9s,baz=196,slow=32						
	comp=Z,3.1nm,0.9s						
SBA	**Scott Base**	**46.82**	**184**	P	**P**	**19 43 38.9**	**-1.0**
VNDA	**Vanda**	**47.33**	**183**	P	**P**	**19 43 44.6**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=182,slow=7.1,SNR=31						
	comp=Z,3.3nm,0.8s						
VNDA	**Vanda**	**47.33**	**183**	P	**P**	**19 43 44.4**	**+0.7**
VNDA				IAmb	IAmb	19 43 45.8	
	comp=Z,3.7nm,0.8s						
LBTB	**Lobatse**	**49.33**	**75**	LR	LR	20 02 48.3	
	comp=Z,28nm,18.2s,baz=206,slow=34						
LPAZ	**La Paz**	**49.46**	**306**	P	**P**	**19 44 03.5**	**+1.8**
	comp=Z,3.1nm,0.6s,baz=154,slow=4.5,SNR=8.6						
	comp=Z,3.1nm,0.6s						
LPAZ	**La Paz**	**49.46**	**306**	P	**P**	**19 44 01.1**	**-0.6**
LPAZ				IAmb	IAmb	19 44 04.3	
	comp=Z,7.5nm,1.2s						
TSUM	**Tsumeb**	**49.80**	**62**	LR	LR	20 01 51.2	
	comp=Z,18nm,18.0s,baz=185,slow=32						
LSZ	**Lusaka**	**58.63**	**70**	LR	LR

SDV	**Santo Domingo**	**73.06 316**	P	**P**	**19 46 41.2**	**+0.3**
SDV			IAmb	IAmb	19 46 44.9	
	comp=Z,4.0nm,0.7s					
RPZ	**Rata Peaks**	**80.05 194**	LR	LR	20 17 18.2	
	comp=Z,23nm,21.4s,baz=140,slow=32					
ATD	**Arta Tunnel**	**88.88 68**	LR	LR	20 26 46.7	
	comp=Z,28nm,18.1s,baz=80,slow=35					
KEST	**Kesra**	**96.17 30**	LR	LR	20 26 20.0	
	comp=Z,38nm,19.6s,baz=237,slow=32					
ASAR	**Alice Springs**	**99.91 163**	P	**Pdif**	**19 48 54.0**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=182,slow=3.6,SNR=6.6					
	comp=Z,0.6nm,0.8s					
FINES	**FINESS Array B**	**123.95 28**	PKP	**PKPdf**	**19 54 06.9**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=238,slow=2.6,SNR=4.7					
CMAR	**Chiang Mai Arr**	**125.87 111**	PKP	**PKPdf**	**19 54 11.2**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=230,slow=4.2,SNR=5.8					
BVAR	**Borovoye Array**	**134.83 57**	PKP	**PKPdf**	**19 54 27.7**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=226,slow=6.0,SNR=4.9					
ILAR	**Eielson Array**	**149.17 313**	PKPbc	**PKiKP**	**19 54 58.5**	**-0.2**
	comp=Z,11nm,0.8s,baz=127,slow=2.0,SNR=71					
SONM	**Songino Array**	**151.24 86**	PKPbc	**PKiKP**	**19 55 03.5**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=217,slow=2.6,SNR=16					

PRU ***31*** *19:47:01.6±0.0,43.°11N×13.°88E,h10km*
ROM 31 19:46:54.2±0.1,42.°929N±0.°004×13.°205E±0.°004,
h9km,ML2.7/16,5C-3D,Error ellipse: s-maj=0.3km
s-min=0.3km az=114.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**190**		P	Pg	19 46 56.6	+0.2
T1245					S	Sg	19 46 58.4	+0.4
T1245					AML	AML		
	comp=N,61100µm,1.0s							
T1245					AML	AML		
	comp=E,45850µm,1.2s							
T1245					AML	AML		
	comp=E,42950µm,1.2s							
T1245					AML	AML		
	comp=N,61850µm,0.3s							
T1245					AML	AML		
	comp=E,45900µm,1.2s							
T1256	**Bolognola (MC)**	**0.08**	**11**		P	Pg	19 46 56.6	+0.1
T1256					S	Sg	19 46 57.9	-0.4
T1256					AML	AML		
	comp=N,12095µm,0.6s							
T1256					AML	AML		
	comp=E,8575µm,0.4s							
T1256					AML	AML		
	comp=E,8020µm,0.6s							
T1256					AML	AML		
	comp=N,11210µm,0.6s							
T1256					AML	AML		
	comp=E,8015µm,0.6s							
T1256					AML	AML		
	comp=N,12100µm,0.6s							
T1256					AML	AML		
	comp=E,8570µm,0.4s							
MMO1	**Montemonaco**	**0.09**	**108**		P	Pg	19 46 56.8	+0.2
MMO1					S	Sg	19 46 58.6	+0.2
AM05	**Amandola Campo**	**0.12**	**66**		P	Pg	19 46 57.4	+0.4
AM05					AML	AML		
	comp=N,2220µm,1.2s							
AM05					AML	AML		
	comp=E,7305µm,0.2s							
AM05					AML	AML		
	comp=E,1550µm,0.7s							
AM05					AML	AML		
	comp=E,7300µm,0.2s							
AM05					AML	AML		
	comp=N,908µm,0.1s							
FEMA	**Monte Fema**	**0.12**	**286**		P	Pg	19 46 57.4	+0.4
FEMA					S	Sg	19 46 59.9	+0.8
FEMA					AML	AML		
	comp=E,7125µm,0.2s							
FEMA					AML	AML		
	comp=N,6335µm,1.1s							
FEMA					AML	AML		
	comp=N,6330µm,1.1s							
FEMA					AML	AML		
	comp=E,7125µm,0.2s							
FEMA					AML	AML		
	comp=E,7130µm,0.2s							
FDMO	**Fiordimonte**	**0.14**	**321**		P	Pg	19 46 57.9	+0.6
FDMO					AML	AML		
	comp=E,3275µm,0.8s							
FDMO					AML	AML		
	comp=N,2980µm,1.4s							
T1216	**Preci, Frazion**	**0.14**	**255**		P	Pg	19 46 57.9	+0.5
T1216					S	Sg	19 47 00.8	+1.3
T1216					AML	AML		
	comp=E,9415µm,0.3s							
T1216					AML	AML		
	comp=E,9385µm,0.3s							
T1216					AML	AML		
	comp=N,5115µm,1.5s							
T1216					AML	AML		
	comp=E,9395µm,0.3s							
T1216					AML	AML		
	comp=E,9375µm,0.3s							
CSP1	**Cessapalombo**	**0.16**	**360**		P	Pg	19 46 58.3	+0.6
GUMA	**Gualdo di Mace**	**0.16**	**35**		P	Pg	19 46 58.5	+0.7
GUMA					S	Sg	19 47 01.8	+1.6
T1241	**Roccafluvione,**	**0.18**	**113**		P	Pg	19 46 58.3	+0.3
T1241					S	Sg	19 47 01.8	+1.2
T1241					AML	AML		
	comp=E,6860µm,0.5s							
T1241					AML	AML		
	comp=N,5860µm,0.9s							
T1241					AML	AML		
	comp=N,5935µm,0.8s							
T1241					AML	AML		
	comp=N,5940µm,0.8s							
T1241					AML	AML		
	comp=E,6720µm,0.6s							
T1204	**Amatrice, Fraz**	**0.27**	**162**		P	Pg	19 47 00.2	+0.6
T1204					S	Sb	19 47 04.9	-1.1
T1204					AML	AML		
	comp=N,2310µm,0.9s							
T1204					AML	AML		
	comp=E,4275µm,0.2s							
T1204					AML	AML		
	comp=N,2308µm,0.9s							
T1204					AML	AML		
	comp=N,2312µm,0.9s							
T1204					AML	AML		
	comp=E,4270µm,0.2s							
T1201	**Domo (RI)**	**0.27**	**173**		P	Pb	19 47 00.6	-0.8
T1201					S	Sb	19 47 05.8	-0.4
T1215	**Vallo di Nera,**	**0.28**	**243**		P	Pg	19 47 00.3	+0.6
T1215					S	Sb	19 47 05.2	-1.0
T1215					AML	AML		
	comp=E,1690µm,0.4s							
T1215					AML	AML		
	comp=N,1105µm,1.4s							
T1215					AML	AML		
	comp=E,1685µm,0.4s							
T1215					AML	AML		
	comp=N,1104µm,1.4s							
MNTP	**Montappone**	**0.28**	**43**		P	Pb	19 47 01.1	-0.5
MNTP					AML	AML		
	comp=N,1885µm,0.6s							
MNTP					AML	AML		
	comp=E,2920µm,0.7s							
MNTP					AML	AML		
	comp=N,1890µm,0.5s							
MNTP					AML	AML		
	comp=E,2925µm,0.7s							
MNTP					AML	AML		
	comp=N,1885µm,0.5s							
T1243	**Rocca Santa Ma**	**0.29**	**142**		P	Pg	19 47 00.8	+0.7
T1217	**Poggiodomo (PG**	**0.30**	**223**		P	Pg	19 47 00.7	+0.5
T1217					S	Sb	19 47 06.0	-0.8
T1217					AML	AML		
	comp=E,1570µm,0.7s							
T1217					AML	AML		
	comp=N,2210µm,0.3s							
T1217					AML	AML		
	comp=E,1565µm,0.7s							
T1217					AML	AML		
	comp=N,2215µm,0.3s							
SMA1	**SAN MARTINO**	**0.31**	**162**		P	Pg	19 47 00.9	+0.4
SMA1					S	Sb	19 47 06.2	-1.2
SMA1					AML	AML		
	comp=E,2125µm,0.6s							
SMA1					AML	AML		
	comp=N,2090µm,0.5s							
LNSS	**Leonessa**	**0.35**	**201**	⇓P		Pb	19 47 01.9	-0.8
LNSS					AML	AML		
	comp=E,4760µm,0.2s							
LNSS					AML	AML		
	comp=N,5015µm,0.4s							
OFFI	**Offida**	**0.35**	**89**		P	Pb	19 47 02.5	-0.1
OFFI					AML	AML		
	comp=N,3130µm,0.5s							
OFFI					AML	AML		
	comp=E,2330µm,0.8s							
EL6	**Elcito**	**0.41**	**349**		S	Sb	19 47 11.0	+0.9
ASSB	**Assisi San Ben**	**0.42**	**286**		P	Pg	19 47 02.7	+0.3
ASSB					S	Sb	19 47 09.8	-0.5
ASSB					AML	AML		
	comp=N,796µm,1.1s							
ASSB					AML	AML		
	comp=E,772µm,0.7s							
RM33	**Pellescritta (**	**0.42**	**179**		P	Pg	19 47 02.8	+0.4
RM33					S	Sb	19 47 10.1	-0.3
RM33					AML	AML		
	comp=E,1155µm,0.2s							
RM33					AML	AML		
	comp=N,1630µm,0.3s							
RM33					AML	AML		
	comp=E,1160µm,0.2s							
RM33					AML	AML		
	comp=N,1630µm,0.3s							
RM33					AML	AML		
	comp=E,1140µm,0.2s							
RM33					AML	AML		
	comp=N,1605µm,0.3s							
TERO	**Teramo**	**0.42**	**136**	⇑P		Pg	19 47 03.1	+0.6
TERO					AML	AML		
	comp=N,1890µm,0.5s							
TERO					AML	AML		
	comp=E,1465µm,0.8s							
TERO					AML	AML		
	comp=N,1820µm,0.5s							
TERO					AML	AML		
	comp=E,1410µm,0.6s							
ARRO	**Arrone**	**0.48**	**223**	⇓P		Pb	19 47 04.3	-0.4
ARRO					AML	AML		
	comp=E,698µm,0.3s							
ARRO					AML	AML		
	comp=N,637µm,0.2s							
ATCC	**AVT- Casa Cast**	**0.49**	**302**	⇓P		Pg	19 47 04.3	+0.6
ATCC					S	Sb	19 47 13.0	+0.7
ATCC					AML	AML		
	comp=N,848µm,0.5s							
ATCC					AML	AML		
	comp=E,841µm,1.0s							
ATCC					AML	AML		
	comp=N,846µm,0.5s							
ATCC					AML	AML		
	comp=N,849µm,0.5s							
ATCC					AML	AML		
	comp=E,842µm,1.0s							
T1247	**Pizzolo (AQ)**	**0.49**	**172**		S	Sb	19 47 13.0	+0.6
TRTR	**Tortoreto Alta**	**0.54**	**103**		P	Pb	19 47 06.2	+0.5
TRTR					AML	AML		
	comp=E,3530µm,0.4s							
TRTR					AML	AML		
	comp=N,3335µm,0.4s							
GIGS	**Gran Sasso**	**0.55**	**151**	⇑P		Pg	19 47 05.0	+0.2
GIGS					S	Sb	19 47 14.0	-0.1
GIGS					AML	AML		
	comp=E,374µm,0.2s							
GIGS					AML	AML		
	comp=N,439µm,0.4s							
GIGS					AML	AML		
	comp=E,374µm,0.2s							
GIGS					AML	AML		
	comp=N,440µm,0.4s							
CESX	**Cesi**	**0.56**	**236**	⇑P		Pg	19 47 05.2	+0.1
CESX					AML	AML		
	comp=E,724µm,0.7s							
CESX					AML	AML		
	comp=N,698µm,0.7s							
ARVD	**Arcevia**	**0.60**	**341**		S	Sb	19 47 17.0	+1.4
AOI	**Ancona**	**0.69**	**25**		S	Sn	19 47 21.0	0.0
FRON	**Frontone**	**0.69**	**329**		S	Sb	19 47 19.0	+1.0
ATVO	**AVT- Monte Val**	**0.74**	**308**		P	Pg	19 47 08.3	-0.2
ATMI	**Monte Miggiano**	**0.80**	**301**	⇑P		Pn	19 47 12.3	+0.6
MGAB	**Montegabbione**	**0.80**	**269**	⇑P		Pb	19 47 10.9	+0.5
MGAB					AML	AML		
	comp=E,385µm,0.4s							
MGAB					AML	AML		
	comp=N,784µm,0.4s							
MGAB					AML	AML		
	comp=N,770µm,0.4s							
MGAB					AML	AML		
	comp=E,348µm,0.4s							
APEC	**Apecchio**	**0.85**	**318**		S	Sn	19 47 24.0	-1.1
SAMA	**S.Maria delle**	**1.23**	**202**		S	Sn	19 47 37.0	+2.6
ABTA	**Abfaltersbach**	**3.85**	**353**	*e*Pn		Pn	19 47 55.0	+1.3
	comp=E,1.3nm,0.3s							
FETA	**Feichten**	**4.45**	**338**	*e*Pn		Pn	19 48 05.9	+3.8
	comp=E,0.5nm,0.3s							
RETA	**Reutte**	**4.87**	**340**	*i* Pn		Pn	19 48 11.7	+3.9
	comp=E,1.3nm,0.3s							
KHC	**Kasperske Hory**	**6.21**	**2**	*e*SN		Sn	19 49 35.9	-1.3

PRU ***31*** *20:09:17.5±0.0,42.°90N×13.°51E,h0km*
ROM 31 20:09:06.2±0.0,42.°707N±0.°002×13.°155E±0.°002,
h12km,ML2.4/16,7C-7D,Error ellipse: s-maj=0.2km
s-min=0.2km az=213.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.12**	**105**	⇓P		Pg	20 09 09.9	+0.4
T1204					S	Sg	20 09 12.3	+0.5
T1204					AML	AML		
	comp=E,1958µm,0.2s							
T1204					AML	AML		
	comp=E,1962µm,0.2s							
T1204					AML	AML		
	comp=N,1285µm,0.5s							
T1204					AML	AML		
	comp=N,1282µm,0.5s							
LNSS	**Leonessa**	**0.13**	**219**	⇑P		Pg	20 09 10.1	+0.5
LNSS					S	Sg	20 09 12.8	+0.8
LNSS					AML	AML		
	comp=E,1940µm,0.2s							
LNSS					AML	AML		
	comp=N,3670µm,0.4s							
LNSS					AML	AML		
	comp=E,1945µm,0.2s							
LNSS					AML	AML		
	comp=N,3670µm,1.6s							
SMA1	**SAN MARTINO**	**0.15**	**120**	⇓P		Pg	20 09 10.4	+0.6
SMA1					S	Sg	20 09 13.3	+0.8
SMA1					AML	AML		
	comp=E,3685µm,0.2s							
SMA1					AML	AML		
	comp=E,3680µm,0.2s							
SMA1					AML	AML		
	comp=N,2325µm,0.6s							
SMA1					AML	AML		
	comp=N,2320µm,0.6s							
SMA1					AML	AML		
	comp=N,2320µm,1.4s							
T1217	**Poggiodomo (PG**	**0.17**	**272**	⇑P		Pg	20 09 10.5	+0.5
T1217					S	Sg	20 09 13.5	+0.8
T1217					AML	AML		
	comp=E,1455µm,0.2s							
T1217					AML	AML		
	comp=N,1900µm,0.5s							
T1217					AML	AML		
	comp=E,1452µm,0.2s							
T1217					AML	AML		
	comp=E,1505µm,0.2s							
T1217					AML	AML		
	comp=N,1900µm,0.2s							
T1217					AML	AML		
	comp=N,1900µm,0.5s							
RM33	**Pellescritta (**	**0.20**	**168**	⇑P		Pg	20 09 11.1	+0.4
RM33					S	Sg	20 09 14.6	+0.9
RM33					AML	AML		
	comp=E,714µm,0.7s							
RM33					AML	AML		
	comp=N,662µm,0.9s							
RM33					AML	AML		
	comp=E,681µm,0.7s							
RM33					AML	AML		
	comp=N,648µm,0.9s							
RM33					AML	AML		
	comp=N,648µm,0.9s							
RM33					AML	AML		
	comp=N,662µm,0.9s							
RM33					AML	AML		
	comp=E,681µm,1.3s							
RM33					AML	AML		
	comp=N,648µm,1.1s							
RM33					AML	AML		
	comp=N,662µm,1.1s							
RM33					AML	AML		
	comp=E,714µm,1.3s							
T1216	**Preci, Frazion**	**0.21**	**331**	⇓P		Pb	20 09 11.6	-0.4
T1216					S	Sg	20 09 14.9	+1.0
T1216					AML	AML		
	comp=N,6415µm,0.6s							
T1216					AML	AML		
	comp=E,7880µm,1.2s							
T1216					AML	AML		
	comp=N,6420µm,0.6s							
T1216					AML	AML		
	comp=E,7890µm,1.2s							
T1243	**Rocca Santa Ma**	**0.22**	**93**	⇑P		Pg	20 09 11.2	+0.3
MMO1	**Montemonaco**	**0.23**	**33**	⇓P		Pg	20 09 11.6	+0.5
MMO1					S	Sg	20 09 15.5	+1.1
T1215	**Vallo di Nera,**	**0.23**	**294**	⇑P		Pg	20 09 11.5	+0.4
T1215					S	Sg	20 09 15.4	+0.9
T1215					AML	AML		
	comp=E,846µm,1.1s							
T1215					AML	AML		
	comp=N,1032µm,1.0s							
T1215					AML	AML		
	comp=E,844µm,1.1s							
T1215					AML	AML		
	comp=N,1033µm,1.0s							
T1241	**Roccafluvione,**	**0.25**	**54**	⇓P		Pg	20 09 11.9	+0.4
T1241					S	Sg	20 09 16.0	+0.9
T1241					AML	AML		
	comp=N,1130µm,0.5s							
T1241					AML	AML		
	comp=E,1330µm,1.2s							
T1241					AML	AML		
	comp=N,1130µm,0.5s							
CAMP	**Campotosto**	**0.25**	**132**	⇓P		Pg	20 09 11.9	+0.3
CAMP					S	Sg	20 09 16.0	+0.9
CAMP					AML	AML		
	comp=E,799µm,0.3s							
CAMP					AML	AML		
	comp=E,800µm,0.3s							
CAMP					AML	AML		
	comp=N,370µm,0.2s							
T1211	**Morro Reatino**	**0.28**	**232**	⇑P		Pg	20 09 12.3	+0.3
T1211					S	Sb	20 09 17.0	-1.0
T1211					AML	AML		
	comp=N,1355µm,0.6s							
T1211					AML	AML		
	comp=E,866µm,0.3s							
T1211					AML	AML		
	comp=N,1355µm,0.5s							
T1211					AML	AML		
	comp=E,862µm,0.3s							
T1247	**Pizzolo (AQ)**	**0.29**	**158**	⇓P		Pg	20 09 12.7	+0.6
T1247					S	Sb	20 09 17.2	-0.9
T1247					AML	AML		
	comp=E,769µm,0.3s							
T1247					AML	AML		
	comp=N,690µm,0.1s							
T1247					AML	AML		
	comp=N,690µm,1.9s							
T1256	**Bolognola (MC)**	**0.30**	**10**		AML	AML		
	comp=E,4905µm,1.5s							
T1256					AML	AML		
	comp=N,6200µm,0.2s							
T1256					AML	AML		
	comp=N,6205µm,0.2s							
T1256					AML	AML		
	comp=E,4755µm,1.5s							
T1256					AML	AML		
	comp=E,4760µm,1.5s							
T1256					AML	AML		
	comp=N,6160µm,0.2s							
AM05	**Amandola Campo**	**0.31**	**28**		AML	AML		
	comp=E,1410µm,0.5s							
AM05					AML	AML		
	comp=N,1440µm,0.2s							
AM05					AML	AML		
	comp=E,5430µm,1.1s							
AM05					AML	AML		
	comp=N,422µm,0.7s							
AM05					AML	AML		
	comp=E,5425µm,1.1s							
ARRO	**Arrone**	**0.32**	**246**	⇑P		Pg	20 09 12.9	+0.4
ARRO					AML	AML		
	comp=E,904µm,0.2s							
ARRO					AML	AML		
	comp=N,450µm,0.6s							
ARRO					AML	AML		
	comp=E,904µm,0.2s							
FDMO	**Fiordimonte**	**0.33**	**351**		AML	AML		
	comp=E,95750µm,0.1s							
FDMO					AML	AML		
	comp=N,74150µm,0.4s							
TERO	**Teramo**	**0.34**	**104**		AML	AML		
	comp=N,662µm,1.4s							
TERO					AML	AML		
	comp=E,920µm,0.6s							
TERO					AML	AML		
	comp=N,661µm,0.6s							
TERO					AML	AML		
	comp=N,662µm,0.6s							
GUMA	**Gualdo di Mace**	**0.38**	**20**		AML	AML		
	comp=N,15200µm,0.5s							
GUMA					AML	AML		
	comp=E,20000µm,0.3s							
GUMA					AML	AML		
	comp=E,20000µm,1.7s							
GUMA					AML	AML		
	comp=N,15400µm,0.3s							
GUMA					AML	AML		
	comp=E,15800µm,0.7s							
GIGS	**Gran Sasso**	**0.40**	**130**		AML	AML		
	comp=N,113µm,0.4s							
GIGS					AML	AML		
	comp=E,142µm,0.2s							
FIAM	**Fiamignano**	**0.44**	**184**		AML	AML		
	comp=E,246µm,0.4s							
FIAM					AML	AML		
	comp=N,238µm,0.6s							
FIAM					AML	AML		
	comp=N,238µm,0.6s							
OFFI	**Offida**	**0.45**	**60**		AML	AML		
	comp=E,1170µm,0.6s							
OFFI					AML	AML		
	comp=N,1500µm,0.4s							
FAGN	**Fagnano**	**0.54**	**144**		AML	AML		
	comp=N,483µm,0.7s							
FAGN					AML	AML		
	comp=E,536µm,0.5s							
FAGN					AML	AML		
	comp=N,484µm,0.7s							
FAGN					AML	AML		
	comp=N,484µm,1.3s							
TRTR	**Tortoreto Alta**	**0.57**	**80**		AML	AML		
	comp=E,1715µm,0.5s							
TRTR					AML	AML		
	comp=N,1325µm,0.6s							
VCEL	**Villa Celiera**	**0.59**	**121**		AML	AML		
	comp=N,447µm,0.5s							
VCEL					AML	AML		
	comp=N,446µm,0.5s							
VCEL					AML	AML		
	comp=E,446µm,0.8s							
FOSV	**Fossato di Vic**	**0.66**	**334**		AML	AML		
	comp=N,3610µm,0.3s							
FOSV					AML	AML		
	comp=E,1380µm,0.3s							
T0110	**Collepietro**	**0.67**	**136**		AML	AML		
	comp=N,463µm,0.4s							
T0110					AML	AML		
	comp=N,462µm,0.4s							
T0110					AML	AML		
	comp=E,398µm,0.7s							
SRES	**S.Oreste - Sor**	**0.67**	**226**		AML	AML		
	comp=E,155µm,0.4s							
SRES					AML	AML		
	comp=N,170µm,0.5s							
SRES					AML	AML		

	comp=E,155μm,1.6s					
SRES				AML	AML	
	comp=N,170μm,1.5s					
PP3	**Marolino**	**0.75**	**26**	AML	AML	
	comp=E,1910μm,0.9s					
PP3				AML	AML	
	comp=E,1790μm,0.9s					
PP3				AML	AML	
	comp=N,1730μm,0.3s					
PP3				AML	AML	
	comp=E,1790μm,1.1s					
PP3				AML	AML	
	comp=N,1620μm,0.3s					
PP3				AML	AML	
	comp=E,1910μm,1.1s					
MGAB	**Montegabbione**	**0.80**	**285**	AML	AML	
	comp=N,495μm,0.4s					
MGAB				AML	AML	
	comp=E,373μm,0.3s					
MGAB				AML	AML	
	comp=N,508μm,0.4s					
MGAB				AML	AML	
	comp=E,399μm,0.3s					
SACS	**San Casciano d**	**0.93**	**279**	AML	AML	
	comp=E,168μm,1.4s					
SACS				AML	AML	
	comp=N,180μm,0.4s					
OBKA	**Obir**	**3.93**	**14**	*e*Pn	Pb	20 10 16.9 +1.4
	comp=N,0.2nm,0.1s					
ABTA	**Abfaltersbach**	**4.07**	**354**	*i* Pn	Pb	20 10 19.0 +1.2
	comp=N,3.1nm,0.4s					
FETA	**Feichten**	**4.64**	**339**	*e*Pn	Pb	20 10 29.3 +1.6
	comp=N,0.6nm,0.3s					
SQTA	**Sankt Quirin**	**4.72**	**344**	*e*Pn	Pb	20 10 29.7 +0.7
	comp=N,0.9nm,0.3s					
CONA	**Conrad Observa**	**5.56**	**19**	*e*Pn	Pb	20 10 39.4 -3.8
	comp=N,0.5nm,0.3s					
KHC	**Kasperske Hory**	**6.43**	**2**	*e*SN	Sn	20 11 59.0 +4.9

ROM 31 20:09:19.6±0.1, 43°.057N±0°.004×13°.084E±0°.005, h7km, ML2.7/8, 7C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=39.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.02**	**172**	P	Pg	20 09 20.8	-0.2
FDMO				S	Sg	20 09 21.6	-0.4
FEMA	**Monte Fema**	**0.10**	**195**	⇑P	Pg	20 09 22.5	+0.6
FEMA				AML	AML		
	comp=N,13600μm,0.4s						
FEMA				AML	AML		
	comp=E,18850μm,0.6s						
FEMA				AML	AML		
	comp=N,13600μm,0.4s						
FEMA				AML	AML		
	comp=N,13635μm,0.4s						
FEMA				AML	AML		
	comp=E,18800μm,0.6s						
T1256	**Bolognola (MC)**	**0.12**	**116**	P	Pg	20 09 22.6	+0.3
T1256				S	Sg	20 09 24.6	+0.5
T1256				AML	AML		
	comp=E,4905μm,1.5s						
T1256				AML	AML		
	comp=E,4755μm,1.5s						
T1256				AML	AML		
	comp=E,4760μm,1.5s						
T1256				AML	AML		
	comp=N,6200μm,0.2s						
T1256				AML	AML		
	comp=N,6160μm,0.2s						
SEF1	**Sefro**	**0.13**	**312**	P	Pg	20 09 23.2	+0.7
SEF1				S	Sg	20 09 25.8	+1.3
PIO1	**Pioraco**	**0.14**	**329**	P	Pg	20 09 22.9	+0.3
MDAR	**Monte D'Aria**	**0.14**	**18**	P	Pg	20 09 23.0	+0.4
FIU1	**Fiuminata**	**0.17**	**320**	P	Pg	20 09 23.7	+0.6
FIU1				S	Sg	20 09 26.8	+1.2
T1216	**Preci, Frazion**	**0.17**	**196**	⇑P	Pg	20 09 23.8	+0.7
T1216				S	Sg	20 09 27.1	+1.6
T1216				AML	AML		
	comp=E,7875μm,1.2s						
T1216				AML	AML		
	comp=N,6410μm,0.6s						
T1216				AML	AML		
	comp=E,7880μm,1.2s						
T1216				AML	AML		
	comp=N,6420μm,0.6s						
T1216				AML	AML		
	comp=E,7890μm,1.2s						
T1216				AML	AML		
	comp=E,7890μm,0.8s						
T1216				AML	AML		
	comp=N,6415μm,0.6s						
GUMA	**Gualdo di Mace**	**0.18**	**88**	P	Pg	20 09 24.0	+0.7
GUMA				S	Sg	20 09 27.5	+1.6
AM05	**Amandola Campo**	**0.21**	**112**	⇑P	Pg	20 09 24.6	+0.7
AM05				S	Sg	20 09 28.2	+1.5
AM05				AML	AML		
	comp=N,422μm,0.7s						
AM05				AML	AML		
	comp=E,1410μm,0.5s						
AM05				AML	AML		
	comp=N,1440μm,0.2s						
AM05				AML	AML		
	comp=E,5430μm,1.1s						
AM05				AML	AML		
	comp=N,422μm,0.7s						
AM05				AML	AML		
	comp=E,5425μm,1.1s						
T1245	**Castelsantange**	**0.21**	**159**	⇑P	Pg	20 09 24.9	+1.0
T1245				S	Sg	20 09 28.5	+1.6
T1245				AML	AML		
	comp=E,5500μm,0.7s						
T1245				AML	AML		
	comp=N,7590μm,0.4s						
T1245				AML	AML		
	comp=E,5500μm,0.6s						
T1245				AML	AML		
	comp=N,7500μm,0.3s						
T1245				AML	AML		
	comp=N,7590μm,1.6s						
T1245				AML	AML		
	comp=N,7500μm,1.7s						
T1245				AML	AML		
	comp=E,5675μm,0.7s						
MMO1	**Montemonaco**	**0.24**	**131**	⇑P	Pg	20 09 25.0	+0.6
MMO1				S	Sg	20 09 28.8	+1.2
T1215	**Vallo di Nera,**	**0.30**	**212**	⇑P	Pg	20 09 26.2	+0.7
T1215				S	Sb	20 09 31.3	-1.1
T1215				AML	AML		
	comp=E,842μm,1.1s						
T1215				AML	AML		
	comp=N,1032μm,1.0s						
T1215				AML	AML		
	comp=E,844μm,1.1s						
T1215				AML	AML		
	comp=N,1032μm,1.0s						
T1215				AML	AML		
	comp=E,846μm,1.1s						
T1215				AML	AML		
	comp=N,1032μm,1.0s						
T1215				AML	AML		
	comp=E,842μm,1.1s						
T1215				AML	AML		
	comp=N,1027μm,1.0s						
T1215				AML	AML		
	comp=E,844μm,1.1s						
T1215				AML	AML		
	comp=N,1033μm,1.0s						
T1241	**Roccafluvione,**	**0.33**	**128**	⇓P	Pg	20 09 26.4	+0.5
T1241				AML	AML		
	comp=N,1130μm,0.5s						
T1241				AML	AML		
	comp=N,1130μm,0.5s						
T1241				AML	AML		
	comp=E,1330μm,1.2s						
T1217	**Poggiodomo (PG**	**0.36**	**198**	⇑P	Pg	20 09 27.3	+0.6
T1217				S	Sb	20 09 33.3	-0.9
T1217				AML	AML		
	comp=E,1500μm,0.2s						
T1217				AML	AML		
	comp=N,1895μm,0.2s						
T1217				AML	AML		
	comp=E,1453μm,0.2s						
T1217				AML	AML		
	comp=N,1900μm,0.5s						
T1217				AML	AML		
	comp=E,1456μm,0.2s						
T1217				AML	AML		
	comp=N,1900μm,0.5s						
T1204	**Amatrice, Fraz**	**0.42**	**156**	P	Pg	20 09 28.1	+0.4
T1204				S	Sb	20 09 35.0	-0.9
T1243	**Rocca Santa Ma**	**0.45**	**143**	P	Pg	20 09 28.9	+0.6
ARVD	**Arcevia**	**0.45**	**347**	S	Sg	20 09 29.0	-5.3
LNSS	**Leonessa**	**0.46**	**184**	P	Pb	20 09 29.2	-0.7
LNSS				S	Sb	20 09 37.0	+0.1
OFFI	**Offida**	**0.46**	**105**	⇓P	Pb	20 09 30.3	+0.3
OFFI				AML	AML		
	comp=E,1170μm,0.6s						
OFFI				AML	AML		
	comp=N,1500μm,0.4s						
ARRO	**Arrone**	**0.53**	**206**	S	Sb	20 09 40.0	+1.0
RM33	**Pellescritta (**	**0.56**	**170**	S	Sb	20 09 40.0	+0.2
CAMP	**Campotosto**	**0.57**	**155**	⇓P	Pg	20 09 30.6	0.0
TERO	**Teramo**	**0.58**	**138**	P	Pg	20 09 31.1	+0.4
TERO				S	Sb	20 09 41.0	+0.6
CESX	**Cesi**	**0.58**	**220**	P	Pg	20 09 30.9	+0.1
CESX				S	Sb	20 09 40.0	-0.4

*IDC **31** 20:14:33.6±1.3, 15°.79N×119°.91E, h0km, mb3.6/5, mbtmp3.7/5, MS3.2/2, Error ellipse: s-maj=59.5km s-min=23.1km az=61.0*
*MAN **31** 20:14:37.1, 15°.45N×118°.95E, h23km, mb4.5, ML3.4, MS3.2*
ISC 31 20:14:40.1±0.9, 15°.38N±0°.07×119°.04E±0°.09, h35km, n12, σ2°.26/14, mb3.6/4, 1C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**1.75**	**64**	⇓*e*P	**Pn**	**20 15 07.3**	**-0.7**
SMPP				*e*S	**Sn**	**20 15 30.2**	**+1.2**
MACP	**Maragondon, Ca**	**1.96**	**124**	⇓*e*P	**Pn**	**20 15 11.3**	**+0.4**
MACP				*e*S	**Sn**	**20 15 37.0**	**+2.7**
LUBP	**Lubang**	**2.01**	**144**	⇓*e*P	**Pn**	**20 15 11.2**	**-0.3**
LUBP				*e*S	**Sn**	**20 15 35.1**	**-0.3**
TGY	**Tagaytay City**	**2.23**	**125**	⇓*e*P	**Pn**	**20 15 12.2**	**-2.4**
BALP	**Baler**	**2.47**	**81**	⇓*e*P	**Pn**	**20 15 18.9**	**+1.2**
BALP				*e*S	Sn	20 15 22.7	-24
LQP	**Lukban**	**2.72**	**117**	⇑*e*P	**Pn**	**20 15 22.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**19.47**	**282**	P	**Pn**	**20 19 10.8**	**+5.4**
	1.0nm,0.7s,baz=99,slow=7.4,SNR=6.3						
CMAR				LR	LR	20 26 26.1	
	comp=Z,14nm,18.9s,baz=100,slow=35						
	1.0nm,0.7s						
SONM	**Songino Array**	**34.01**	**345**	P	**P**	**20 21 18.7**	**-2.0**
	0.4nm,0.6s,baz=171,slow=10,SNR=3.0						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**38.19**	**156**	P	**P**	**20 21 55.5**	**-1.1**
	0.8nm,0.7s,baz=337,slow=9.4,SNR=8.0						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**41.44**	**159**	P	**P**	**20 22 23.2**	**-0.3**
	0.3nm,0.3s,baz=334,slow=7.6,SNR=2.7						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**78.04**	**331**	P	**P**	**20 26 33.0**	**-1.9**
	1.9nm,1.0s,baz=99,slow=8.6,SNR=1.5						
	1.9nm,1.0s						
GERES	**GERESS Array B**	**88.32**	**320**	LR	LR	21 07 16.3	
	comp=Z,55nm,19.2s,baz=52,slow=36						

ROM 31 20:28:36.6±0.0, 42°.686N±0°.002×13°.202E±0°.001, h12km, ML2.2/16, 10C, Error ellipse: s-maj=0.2km s-min=0.0km az=185.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1204	**Amatrice, Fraz**	**0.09**	**97**	P	Pg	20 28 39.9	+0.4
T1204				S	Sg	20 28 41.8	+0.3
T1204				AML	AML		
	comp=E,2440μm,0.8s						
T1204				AML	AML		
	comp=N,1352μm,0.4s						
T1204				AML	AML		
	comp=E,2433μm,0.8s						
LNSS	**Leonessa**	**0.15**	**235**	⇑P	Pg	20 28 40.7	+0.5
LNSS				S	Sg	20 28 43.5	+0.7
LNSS				AML	AML		
	comp=N,2895μm,0.3s						
LNSS				AML	AML		
	comp=E,1012μm,0.3s						
RM33	**Pellescritta (**	**0.18**	**177**	⇑P	Pg	20 28 41.2	+0.5
RM33				S	Sg	20 28 44.3	+0.8
RM33				AML	AML		
	comp=E,818μm,0.3s						
RM33				AML	AML		
	comp=N,732μm,1.0s						
RM33				AML	AML		
	comp=E,794μm,0.3s						
RM33				AML	AML		
	comp=N,746μm,1.0s						
RM33				AML	AML		
	comp=N,732μm,1.0s						
RM33				AML	AML		
	comp=N,746μm,1.0s						
T1243	**Rocca Santa Ma**	**0.18**	**87**	⇑P	Pg	20 28 41.2	+0.5
T1243				S	Sg	20 28 44.6	+1.0
T1217	**Poggiodomo (PG**	**0.20**	**277**	⇑P	Pg	20 28 41.5	+0.4
T1217				S	Sg	20 28 44.9	+0.7
T1217				AML	AML		
	comp=E,966μm,0.3s						
T1217				AML	AML		
	comp=N,1300μm,0.9s						
T1217				AML	AML		
	comp=E,914μm,0.3s						
T1217				AML	AML		
	comp=N,1346μm,0.9s						
T1217				AML	AML		
	comp=E,965μm,0.3s						
T1217				AML	AML		
	comp=E,934μm,0.8s						
T1217				AML	AML		
	comp=N,1605μm,0.6s						
T1217				AML	AML		
	comp=N,1600μm,0.5s						
CAMP	**Campotosto**	**0.21**	**135**	⇑P	Pg	20 28 41.8	+0.5
CAMP				S	Sg	20 28 45.4	+0.9
CAMP				AML	AML		
	comp=N,260μm,1.4s						
CAMP				AML	AML		
	comp=E,260μm,0.8s						
T1216	**Preci, Frazion**	**0.24**	**327**	AML	AML		
	comp=N,20100μm,0.3s						
T1216				AML	AML		
	comp=E,15150μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.26**	**164**	⇑P	Pg	20 28 42.5	+0.5
T1247				AML	AML		
	comp=E,290μm,1.2s						
T1247				AML	AML		
	comp=N,323μm,0.2s						
T1247				AML	AML		
	comp=E,528μm,1.5s						
T1247				AML	AML		
	comp=N,428μm,1.6s						
T1215	**Vallo di Nera,**	**0.27**	**295**	⇑P	Pg	20 28 42.6	+0.4
T1215				S	Sg	20 28 47.0	+0.9
T1215				AML	AML		
	comp=N,1084μm,1.3s						
T1215				AML	AML		
	comp=E,1004μm,1.2s						
T1215				AML	AML		
	comp=N,1125μm,0.5s						
T1215				AML	AML		
	comp=E,1080μm,0.4s						
T1211	**Morro Reatino**	**0.30**	**239**	P	Pg	20 28 43.0	+0.3
T1211				S	Sb	20 28 48.1	-0.8
T1211				AML	AML		
	comp=E,473μm,1.4s						
T1211				AML	AML		
	comp=N,612μm,0.3s						
T1211				AML	AML		
	comp=N,785μm,1.1s						
T1211				AML	AML		
	comp=E,473μm,1.4s						
TERO	**Teramo**	**0.30**	**102**	⇑P	Pg	20 28 43.1	+0.3
TERO				S	Sg	20 28 47.8	+0.8
TERO				AML	AML		
	comp=E,416μm,0.6s						
TERO				AML	AML		
	comp=E,432μm,0.6s						
TERO				AML	AML		
	comp=N,651μm,0.3s						
TERO				AML	AML		
	comp=N,620μm,0.3s						
AM05	**Amandola Campo**	**0.31**	**21**	AML	AML		
	comp=N,828μm,0.1s						
AM05				AML	AML		
	comp=E,730μm,0.1s						
AM05				AML	AML		
	comp=E,3355μm,0.1s						
AM05				AML	AML		
	comp=N,240μm,0.8s						
T1256	**Bolognola (MC)**	**0.32**	**3**	AML	AML		
	comp=N,652μm,0.2s						
T1256				AML	AML		
	comp=E,824μm,0.4s						
T1256				AML	AML		
	comp=E,4705μm,0.4s						
T1256				AML	AML		
	comp=N,5365μm,0.4s						
T1256				AML	AML		
	comp=N,5100μm,0.4s						
T1256				AML	AML		
	comp=E,4635μm,0.4s						
ARRO	**Arrone**	**0.34**	**252**	⇑P	Pg	20 28 43.8	+0.3
ARRO				AML	AML		
	comp=N,426μm,0.4s						
ARRO				AML	AML		
	comp=E,520μm,0.7s						
GIGS	**Gran Sasso**	**0.36**	**131**	P	Pg	20 28 44.0	+0.2
GIGS				S	Sg	20 28 49.6	+0.9
GIGS				AML	AML		
	comp=N,76μm,0.5s						
GIGS				AML	AML		
	comp=E,110μm,0.2s						
GUMA	**Gualdo di Mace**	**0.39**	**15**	AML	AML		
	comp=N,8505μm,0.5s						
GUMA				AML	AML		
	comp=E,7720μm,0.3s						
GUMA				AML	AML		
	comp=N,11800μm,0.2s						
GUMA				AML	AML		
	comp=E,10225μm,0.4s						
FIAM	**Fiamignano**	**0.42**	**189**	⇑P	Pg	20 28 45.2	+0.2
FIAM				S	Sb	20 28 51.6	-0.9
FIAM				AML	AML		
	comp=E,286μm,0.6s						
FIAM				AML	AML		
	comp=N,177μm,1.1s						
OFFI	**Offida**	**0.43**	**55**	AML	AML		
	comp=E,1690μm,1.1s						
OFFI				AML	AML		
	comp=N,1745μm,0.7s						
CESX	**Cesi**	**0.47**	**261**	AML	AML		
	comp=N,574μm,0.3s						
CESX				AML	AML		
	comp=E,928μm,1.2s						
VCEL	**Villa Celiera**	**0.55**	**121**	AML	AML		
	comp=E,373μm,0.6s						
VCEL				AML	AML		
	comp=N,402μm,0.7s						
T0110	**Collepietro**	**0.63**	**137**	AML	AML		
	comp=E,314μm,1.5s						
T0110				AML	AML		
	comp=N,343μm,1.3s						
SRES	**S.Oreste - Sor**	**0.68**	**229**	AML	AML		
	comp=E,174μm,1.3s						
SRES				AML	AML		
	comp=N,158μm,0.5s						
ARVD	**Arcevia**	**0.83**	**347**	AML	AML		
	comp=N,407μm,1.0s						
ARVD				AML	AML		
	comp=E,712μm,0.2s						
MGAB	**Montegabbione**	**0.83**	**286**	AML	AML		
	comp=E,434μm,0.4s						
MGAB				AML	AML		
	comp=N,459μm,0.8s						
MGAB				AML	AML		
	comp=N,424μm,1.1s						
MGAB				AML	AML		
	comp=E,479μm,0.3s						

VIE 31 20:29:13.3±1.0, 43°.02N×13°.26E, h10km, mb2.6/1, ml2.3/2, Error ellipse: s-maj=19.4km s-min=7.0km az=103.0 118 km SSE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**3.76**	**352**	*e*Pn	Pn	20 30 11.8	+0.3
	1.2nm,0.4s						
SQTA	**Sankt Quirin**	**4.44**	**342**	*i* Pn	Pn	20 30 22.0	+1.1
	0.3nm,0.1s						

*IDC **31** 20:35:04.6±1.2, 39°.58S×174°.39E, h193km±28km, mb2.8/2, mbtmp3.6/4, Error ellipse: s-maj=63.2km s-min=18.7km az=134.0*
*WEL **31** 20:35:06.3±0.7, 40°.S±4°.×17°.4E±°., h198km±5km, M3.7/70, ML2.9/9, MLv3.7/70, Error ellipse: s-maj=0.0km s-min=0.0km az=125.9*
ISC 31 20:35:04.6±1.0, 39°.57S±0°.04×174°.22E±0°.05, h217km±6km, n140, σ0°.99/153, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.18**	**52**	P	**Pn**	**20 35 33.3**	**+0.4**
LREZ				S	**S**	**20 35 53.9**	**-1.0**
PREZ	**Palmer Road**	**0.23**	**349**	P	**Pn**	**20 35 33.2**	**+0.2**
NMEZ	**Namu Road**	**0.31**	**301**	P	**Pn**	**20 35 33.4**	**+0.4**
NMEZ				S	**S**	**20 35 53.5**	**-1.7**
NEZ	**North Egmont**	**0.32**	**343**	P	**Pn**	**20 35 33.6**	**+0.4**
NEZ				S	**S**	**20 35 54.0**	**-1.6**
KHEZ	**Kahui Hut**	**0.32**	**331**	P	**Pn**	**20 35 33.5**	**+0.2**
KHEZ				S	**S**	**20 35 54.4**	**-1.1**
DREZ	**Durham Road**	**0.38**	**358**	P	**Pn**	**20 35 33.4**	**+0.1**
DREZ				S	**S**	**20 35 54.5**	**-1.2**
NBEZ	**Newall Road No**	**0.41**	**318**	P	**Pn**	**20 35 33.7**	**+0.3**
PKE	**Pukeiti**	**0.42**	**335**	P	**Pn**	**20 35 33.5**	**+0.1**
PKE				S	**S**	**20 35 55.2**	**-0.7**
MHEZ	**Mangahewa**	**0.50**	**10**	P	**Pn**	**20 35 33.7**	**0.0**
VRZ	**Vera Road**	**0.61**	**43**	P	**Pn**	**20 35 33.6**	**-0.4**
VRZ				S	**S**	**20 35 54.9**	**-2.1**
WAZ	**Wanganui**	**0.62**	**107**	P	**Pn**	**20 35 35.0**	**+1.0**
WAZ				S	**S**	**20 35 56.4**	**-0.6**
PKVZ	**Pokaka**	**0.92**	**72**	P	**Pn**	**20 35 35.6**	**-0.1**
PKVZ				S	**S**	**20 35 58.0**	**-1.8**
MTVZ	**Mangateitei**	**0.99**	**79**	P	**Pn**	**20 35 36.5**	**+0.4**
MTVZ				S	**S**	**20 35 58.9**	**-1.6**
OHWZ	**Ohakea**	**1.06**	**127**	P	**Pn**	**20 35 37.8**	**+1.5**
TRVZ	**Turoa**	**1.07**	**76**	P	**Pn**	**20 35 37.1**	**+0.4**
TRVZ				S	**S**	**20 35 60.0**	**-1.7**
TWVZ	**Taurewa**	**1.07**	**63**	P	**Pn**	**20 35 36.4**	**-0.2**
FWVZ	**Far West T-bar**	**1.08**	**73**	P	**Pn**	**20 35 37.0**	**+0.1**
WNVZ	**Wahianoa**	**1.10**	**78**	P	**Pn**	**20 35 37.3**	**+0.4**
WHVZ	**Whangaehu Hut**	**1.10**	**75**	P	**Pn**	**20 35 37.5**	**+0.5**
NGZ	**Ngauruhoe**	**1.15**	**70**	P	**Pn**	**20 35 37.3**	**+0.1**
TUVZ	**Tukino**	**1.16**	**75**	P	**Pn**	**20 35 37.8**	**+0.5**
WTVZ	**West Tongariro**	**1.16**	**67**	P	**Pn**	**20 35 37.3**	**0.0**
HIZ	**Hauiti**	**1.17**	**25**	P	**Pn**	**20 35 36.8**	**-0.4**
SNVZ	**South Ngauruho**	**1.17**	**71**	P	**Pn**	**20 35 37.7**	**+0.2**
NNVZ	**North Ngauruho**	**1.17**	**68**	P	**Pn**	**20 35 37.5**	**+0.1**
OTVZ	**Oturere**	**1.20**	**70**	P	**Pn**	**20 35 37.8**	**+0.2**
MOVZ	**Moawhango**	**1.20**	**83**	P	**Pn**	**20 35 37.6**	**+0.1**
KRVZ	**Karewarewa**	**1.20**	**67**	P	**Pn**	**20 35 37.7**	**+0.1**
NTVZ	**North Tongarir**	**1.23**	**68**	P	**Pn**	**20 35 38.0**	**+0.2**
ETVZ	**East Tongariro**	**1.24**	**70**	P	**Pn**	**20 35 38.3**	**+0.4**
TMVZ	**Te Maari**	**1.24**	**69**	P	**Pn**	**20 35 38.2**	**+0.4**
DUWZ	**D'Urville Isla**	**1.25**	**190**	P	**Pn**	**20 35 38.4**	**+0.6**
KATZ	**Kakaramea**	**1.29**	**63**	P	**Pn**	**20 35 38.5**	**+0.2**
KIW	**Kapiti Island**	**1.39**	**158**	P	**Pn**	**20 35 39.4**	**+0.6**
RATZ	**Rangitukua**	**1.40**	**60**	P	**Pn**	**20 35 39.1**	**+0.1**
RITZ	**Rihia Road**	**1.41**	**66**	P	**Pn**	**20 35 39.4**	**+0.4**
TSZ	**Takapari Road**	**1.43**	**110**	P	**Pn**	**20 35 39.9**	**+0.7**
BHHZ	**Black Hill Sta**	**1.43**	**87**	P	**Pn**	**20 35 39.2**	**0.0**
OGWZ	**Otaki Gorge**	**1.44**	**150**	P	**Pn**	**20 35 40.1**	**+0.9**
POWZ	**Post Office Ro**	**1.45**	**125**	P	**Pn**	**20 35 40.0**	**+0.7**
WATZ	**Wairara**	**1.46**	**54**	P	**Pn**	**20 35 39.9**	**+0.4**
MRZ	**Mangatainoka R**	**1.51**	**137**	P	**Pn**	**20 35 40.4**	**+0.6**
PNHZ	**Pukenui**	**1.57**	**103**	P	**Pn**	**20 35 41.0**	**+0.7**
HATZ	**Hinemaiaia**	**1.61**	**66**	P	**Pn**	**20 35 40.5**	**-0.2**
TLZ	**Tolley Road**	**1.61**	**40**	P	**Pn**	**20 35 40.3**	**-0.5**
WHTZ	**Whakaora**	**1.63**	**57**	P	**Pn**	**20 35 41.6**	**+0.7**
TCW	**Tory Channel**	**1.64**	**178**	P	**Pn**	**20 35 41.9**	**+1.1**
HOWZ	**Holdsworth Sta**	**1.66**	**143**	P	**Pn**	**20 35 41.5**	**+0.5**
CAW	**Cannon Point**	**1.67**	**157**	P	**Pn**	**20 35 41.8**	**+0.7**
DVHZ	**Dannevirke**	**1.67**	**116**	P	**Pn**	**20 35 41.8**	**+0.7**

PRWZ	Pori Road	1.67	127	P	Pn	20 35 42.0	+0.9
KWHZ	Kaweka Forest	1.71	86	P	Pn	20 35 42.5	+0.8
TKNZ	Takaka Hill	1.75	213	P	Pn	20 35 42.2	+0.3
TIWZ	Tintock	1.76	134	P	Pn	20 35 42.7	+0.7
WEL	Wellington	1.76	166	P	Pn	20 35 42.7	+0.7
NNZ	Nelson	1.76	201	P	Pn	20 35 42.6	+0.7
WPHZ	Waipukurau	1.78	107	P	Pn	20 35 43.2	+1.0
QRZ	Quartz Range	1.80	225	P	Pn	20 35 42.3	0.0
BKZ	Black Stump Fm	1.81	78	P	Pn	20 35 42.7	+0.1
WPRZ	Whakapapatarin	1.84	56	P	Pn	20 35 42.9	0.0
MRHZ	Matea Rd	1.86	67	P	Pn	20 35 42.7	-0.4
MTW	Mount Morrison	1.86	149	P	Pn	20 35 43.4	+0.4
TUWZ	Tuamarina	1.87	186	P	Pn	20 35 43.7	+0.8
BFZ	Birch Farm	1.91	126	P	Pn	20 35 44.0	+0.6
GRRZ	Galatos Road	1.92	51	P	Pn	20 35 43.8	+0.2
MCHZ	McNeill Hill	1.92	87	P	Pn	20 35 44.8	+1.2
ALRZ	Allen Road	1.94	59	P	Pn	20 35 43.6	-0.2
ANWZ	Angora Road	1.95	118	P	Pn	20 35 44.8	+1.1
PRHZ	Porangahau	1.99	111	P	Pn	20 35 45.1	+1.0
TMWZ	Te Maipa	2.00	141	P	Pn	20 35 44.9	+0.6
HRRZ	Handcock Road	2.00	54	P	Pn	20 35 44.5	+0.1
MSWZ	Moikau Station	2.00	157	P	Pn	20 35 44.7	+0.3
HSRZ	Hossack Road	2.02	52	P	Pn	20 35 44.7	+0.2
CPWZ	Castlepoint	2.02	132	P	Pn	20 35 45.7	+1.2
PAWZ	Paruwai Farm	2.03	153	P	Pn	20 35 45.0	+0.4
KAHZ	Kahuranaki	2.06	97	P	Pn	20 35 46.1	+1.1
NMHZ	Naumai	2.06	78	P	Pn	20 35 46.2	+1.1
PXZ	Pawanui	2.09	103	P	Pn	20 35 46.2	+1.0
MRNZ	Matariki Terra	2.14	211	P	Pn	20 35 46.0	+0.4
TRWZ	Traveller	2.14	149	P	Pn	20 35 46.2	+0.5
PLWZ	Palliser	2.15	159	P	Pn	20 35 46.0	+0.2
BSWZ	Blackbirch Sta	2.16	187	P	Pn	20 35 46.6	+0.8
MTHZ	Maungataniwha	2.16	71	P	Pn	20 35 46.0	0.0
CMWZ	Cape Campbell	2.17	180	P	Pn	20 35 47.1	+1.1
ARHZ	Aropaoanui	2.18	83	P	Pn	20 35 47.0	+0.9
CKHZ	Cape Kidnapper	2.21	93	P	Pn	20 35 47.6	+1.2
OMRZ	Omania	2.23	50	P	Pn	20 35 46.7	0.0
TARZ	Mount Tarawera	2.23	54	P	Pn	20 35 46.7	0.0
MUGZ	Murupara	2.27	62	P	Pn	20 35 46.5	-0.6
RAHZ	Arahi	2.32	75	P	Pn	20 35 48.1	+0.5
RTZ	Ruatahuna	2.35	67	P	Pn	20 35 47.5	-0.5
WHHZ	Waihua	2.39	79	P	Pn	20 35 49.0	+0.7
THZ	Tophouse	2.40	204	P	Pn	20 35 49.3	+0.8
AWAZ	Awhitu Peninsu	2.53	8	P	Pn	20 35 50.5	+0.7
SNGZ	Shannon Statio	2.55	73	P	Pn	20 35 50.3	+0.2
MKAZ	Moumakai	2.57	17	P	Pn	20 35 50.8	+0.5
URZ	Urewera	2.61	61	P	Pn	20 35 49.9	-0.8
	146nm,0.3s,baz=336,slow=3.5,SNR=412						
URZ				S	S	20 36 21.8	-4.7
	113nm,0.3s,baz=244,slow=23,SNR=24						
URZ	Urewera	2.61	61	P	Pn	20 35 49.7	-1.0
WTAZ	Waiatarua	2.65	6	P	Pn	20 35 50.6	-0.6
RAGZ	Rawiri	2.71	68	P	Pn	20 35 51.8	-0.2
KNZ	Kokohu	2.74	80	P	Pn	20 35 52.4	+0.3
MYRZ	Mayor Island	2.79	35	P	Pn	20 35 53.3	+0.6
DSZ	Denniston Nort	2.84	219	P	Pn	20 35 53.3	+0.1
MBAZ	Motutapu North	2.85	11	P	Pn	20 35 53.9	+0.5
MWZ	Matawai	2.86	65	P	Pn	20 35 53.0	-0.6
WIAZ	Waiheke Island	2.87	15	P	Pn	20 35 54.4	+0.8
KHZ	Kahutara	2.89	190	P	Pn	20 35 54.2	+0.5
RIGZ	Rimuhau	2.89	74	P	Pn	20 35 54.0	+0.2
MHGZ	Mahia Peninsul	2.89	83	P	Pn	20 35 54.4	+0.6
TKGZ	Te Karaka	3.05	69	P	Pn	20 35 55.7	+0.1
KUZ	Kuaotunu	3.06	23	P	Pn	20 35 56.2	+0.3
RUGZ	Raukumara Rang	3.15	60	P	Pn	20 35 55.4	-1.5
TWGZ	Tauwhareparae	3.25	66	P	Pn	20 35 57.9	-0.1
CNGZ	Carnagh Statio	3.29	72	P	Pn	20 35 58.8	+0.3
HAZ	Te Kaha	3.33	58	P	Pn	20 35 57.4	-1.5
PKGZ	Pakihiroa	3.46	62	P	Pn	20 35 59.8	-0.6
PUZ	Puketiti	3.49	66	P	Pn	20 36 00.3	-0.6
GVZ	Greta Valley S	3.51	194	P	Pn	20 36 01.0	+0.1
LTZ	Lake Taylor	3.53	204	P	Pn	20 36 01.6	+0.4
WMGZ	Waiomatatini S	3.72	63	P	Pn	20 36 02.7	-0.9
INZ	Inchbonnie	3.78	213	P	Pn	20 36 04.2	0.0
MXZ	Matakaoa Point	3.78	59	P	Pn	20 36 03.6	-0.7
AMCZ	Amberley	3.79	198	P	Pn	20 36 04.5	+0.2
OXZ	Oxford	4.09	203	P	Pn	20 36 07.6	-0.4
OKCZ	Okains Bay	4.24	191	P	Pn	20 36 09.6	-0.2
MQZ	McQueen's Vall	4.29	195	P	Pn	20 36 09.4	-1.1
WVZ	Waitaha Valley	4.37	216	P	Pn	20 36 10.7	-0.7
AKCZ	Akaroa Harbour	4.41	192	P	Pn	20 36 11.9	+0.1
RACZ	Rakaia	4.43	200	P	Pn	20 36 11.7	-0.5
WACZ	Wakanui South	4.71	201	P	Pn	20 36 15.4	-0.2
GCSZ	Gaunt Creek Bo	4.75	217	P	Pn	20 36 15.4	-0.7
RPZ	Rata Peaks	4.77	209	P	Pn	20 36 16.1	-0.2
	13nm,0.4s,baz=216,slow=2.3,SNR=36						
RPZ				S	S	20 37 07.8	-5.2
	17nm,0.3s,baz=336,slow=23,SNR=34						
RPZ	Rata Peaks	4.77	209	P	Pn	20 36 15.9	-0.5
ARCZ	Arundel	4.93	206	P	Pn	20 36 17.7	-0.7
FOZ	Fox Glacier	5.15	218	P	Pn	20 36 19.8	-1.3
TMZ	Timaru	5.37	205	P	Pn	20 36 23.9	-0.1
LBZ	Lake Benmore	5.67	211	P	Pn	20 36 26.8	-1.0
ASAR	Alice Springs	37.47	283	P	P	20 40 00.8	+3.4
	0.3nm,0.5s,baz=122,slow=6.7,SNR=6.3						
	0.3nm,0.5s						
WRA	Warramunga Arr	39.36	288	P	P	20 42 16.1	+3.0
	0.1nm,0.3s,baz=127,slow=8.0,SNR=4.9						
	0.1nm,0.3s						
ARCES	ARCESS Array B	145.72	341	PKPbc	PKiKP	20 54 18.8	-1.3
	4.8nm,1.0s,baz=46,slow=2.6,SNR=2.6						

*PRU **31** 20:50:46.5±0.0, 42°.78N×13°.89E, h10km*
VIE 31 20:50:50.0±1.1, 43°.04N×13°.45E, h10km, mb2.8/18, ml2.9/18, Error ellipse: s-maj=12.1km s-min=7.3km az=151.0 126 km SE of San Marino, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	Obir	3.56	12	*i* Pn	Pn	20 51 45.8	+0.4
	0.9nm,0.5s						
MYKA	Terra Mystica	3.60	2	*e*Pn	Pn	20 51 44.9	-1.0
	3.3nm,0.4s						
ABTA	Abfaltersbach	3.77	350	*i* Pn	Pn	20 51 47.8	-0.6
	11nm,0.4s,SNR=12						
SOKA	Soboth	3.81	17	*e*Pn	Pn	20 51 49.8	+1.0
	0.3nm,0.2s						
KBA	Koelnbreinsper	4.04	359	*e*Pn	Pn	20 51 51.3	-0.8
	4.6nm,0.6s						
WTTA	Wattenberg	4.42	344	*i* Pn	Pn	20 51 57.6	+0.3
	1.7nm,0.3s						
FETA	Feichten	4.43	335	*e*Pn	Pn	20 51 57.4	-0.1
	2.6nm,0.4s,SNR=9.6						
SQTA	Sankt Quirin	4.48	340	*e*Pn	Pn	20 51 58.8	+0.8
	5.2nm,0.4s,SNR=5.3						
WATA	Walderalm	4.50	344	*e*Pn	Pn	20 51 59.4	+1.1
	7.1nm,0.6s						
MOTA	Moosalm	4.62	340	*e*Pn	Pn	20 52 00.2	+0.2
	4.3nm,0.5s,SNR=5.2						
BIOA	Bad Ischl, Aus	4.66	2	*e*Pn	Pn	20 52 01.4	+1.0
	2.9nm,0.3s						
RETA	Reutte	4.84	338	*i* Pn	Pn	20 52 03.0	0.0
	2.3nm,0.4s,SNR=6.0						
MOA	Molln	4.85	7	*e*Pn	Pn	20 52 03.7	+0.7
	1.0nm,0.5s						
DAVA	Damuels	4.95	331	*e*Pn	Pn	20 52 05.3	+0.8
	3.1nm,0.6s						
CONA	Conrad Observa	5.18	18	*e*Pn	Pn	20 52 07.9	+0.2
	0.3nm,0.2s						
CKRC	Cesky Krumlov	5.82	6	*e*SN	Sn	20 53 22.1	-1.0
KHC	Kasperske Hory	6.10	1	*e*PN	Pn	20 52 19.4	-0.8
KHC				*e*SN	Sn	20 53 29.5	-0.5

ROM 31 20:51:37.2±0.1, 42°.892N±0°.003×13°.202E±0°.003, h8km, ML2.8/15, 14C-8D, Error ellipse: s-maj=0.3km s-min=0.1km az=199.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	Castelsantange	0.04	196	⇑P	Pg	20 51 39.0	0.0
T1245				S	Sg	20 51 40.1	-0.1
T1245				AML	AML		
	comp=E,37450μm,0.3s						
T1245				AML	AML		
	comp=N,69000μm,0.3s						
T1245				AML	AML		
	comp=E,35700μm,0.5s						
T1245				AML	AML		
	comp=N,64750μm,0.3s						
MMO1	Montemonaco	0.09	86	P	Pg	20 51 39.8	+0.2
MMO1				S	Sg	20 51 41.6	+0.4
T1256	Bolognola (MC)	0.12	9	P	Pg	20 51 38.4	-1.6
T1256				AML	AML		
	comp=E,8265μm,1.3s						
T1256				AML	AML		
	comp=N,9090μm,0.4s						
T1256				AML	AML		
	comp=E,8565μm,1.3s						
T1256				AML	AML		
	comp=N,8700μm,0.3s						
FEMA	Monte Fema	0.13	302	P	Pg	20 51 40.5	+0.3
FEMA				S	Sg	20 51 43.0	+0.7
FEMA				AML	AML		
	comp=E,10900μm,0.1s						
FEMA				AML	AML		
	comp=N,7005μm,0.3s						
FEMA				AML	AML		
	comp=E,10950μm,0.1s						
FEMA				AML	AML		
	comp=N,7010μm,0.3s						
T1216	Preci, Frazion	0.14	269	P	Pg	20 51 40.6	+0.5
T1216				S	Sg	20 51 43.2	+1.0
T1216				AML	AML		
	comp=N,12700μm,0.2s						
T1216				AML	AML		
	comp=E,24650μm,0.3s						
T1216				AML	AML		
	comp=N,12700μm,0.2s						
AM05	Amandola Campo	0.14	52	⇑P	Pg	20 51 40.8	+0.6
AM05				S	Sg	20 51 43.4	+1.0
AM05				AML	AML		
	comp=E,1785μm,0.6s						
AM05				AML	AML		
	comp=E,7450μm,0.8s						
AM05				AML	AML		
	comp=N,654μm,0.1s						
AM05				AML	AML		
	comp=N,3150μm,0.2s						
AM05				AML	AML		
	comp=E,7445μm,0.8s						
FDMO	Fiordimonte	0.17	330	P	Pg	20 51 41.1	+0.4
FDMO				AML	AML		
	comp=E,2455μm,0.6s						
FDMO				AML	AML		
	comp=N,4815μm,1.5s						
FDMO				AML	AML		
	comp=E,2650μm,0.1s						
FDMO				AML	AML		
	comp=E,2645μm,0.1s						
FDMO				AML	AML		
	comp=N,4810μm,1.5s						
T1241	Roccafluvione,	0.17	102	⇑P	Pg	20 51 41.4	+0.6
T1241				S	Sg	20 51 44.5	+1.3
T1241				AML	AML		
	comp=E,4335μm,0.3s						
T1241				AML	AML		
	comp=N,3695μm,1.1s						
T1241				AML	AML		
	comp=E,4150μm,0.8s						
T1241				AML	AML		
	comp=N,4095μm,1.1s						
T1241				AML	AML		
	comp=E,4335μm,0.3s						
T1241				AML	AML		
	comp=N,4090μm,1.1s						
T1241				AML	AML		
	comp=E,4145μm,0.8s						
T1241				AML	AML		
	comp=E,4330μm,0.3s						
T1241				AML	AML		
	comp=N,3700μm,1.1s						
GUMA	Gualdo di Mace	0.20	30	⇑P	Pg	20 51 42.0	+0.8
GUMA				AML	AML		
	comp=E,8380μm,0.2s						
GUMA				AML	AML		
	comp=N,9340μm,0.3s						
GUMA				AML	AML		
	comp=N,8450μm,0.4s						
GUMA				AML	AML		
	comp=N,9340μm,0.3s						
GUMA				AML	AML		
	comp=E,12350μm,0.7s						
GUMA				AML	AML		
	comp=E,8380μm,0.3s						
T1204	Amatrice, Fraz	0.23	159	P	Pg	20 51 42.6	+0.7
T1204				S	Sg	20 51 47.0	+1.9
T1204				AML	AML		
	comp=E,2920μm,1.5s						
T1204				AML	AML		
	comp=N,1675μm,0.3s						
T1215	Vallo di Nera,	0.26	250	⇓P	Pg	20 51 43.1	+0.7
T1215				AML	AML		
	comp=E,1780μm,0.2s						
T1215				AML	AML		
	comp=N,1255μm,0.3s						
T1215				AML	AML		
	comp=N,1248μm,0.3s						
T1215				AML	AML		
	comp=N,1255μm,0.3s						
T1215				AML	AML		
	comp=E,1790μm,0.2s						
T1215				AML	AML		
	comp=N,1248μm,0.3s						
T1243	Rocca Santa Ma	0.27	137	P	Pg	20 51 43.1	+0.6
T1243				S	Sb	20 51 47.8	-1.3
T1217	Poggiodomo (PG	0.27	228	⇑P	Pg	20 51 43.3	+0.7
T1217				AML	AML		
	comp=E,1830μm,1.6s						
T1217				AML	AML		
	comp=N,2435μm,0.3s						
T1217				AML	AML		
	comp=E,1835μm,1.5s						
T1217				AML	AML		
	comp=N,2430μm,0.3s						
SMA1	SAN MARTINO	0.28	159	P	Pg	20 51 43.3	+0.5
SMA1				S	Sb	20 51 48.3	-1.2
LNSS	Leonessa	0.31	202	P	Pg	20 51 44.3	+0.8
LNSS				S	Sb	20 51 49.8	-0.7
LNSS				AML	AML		
	comp=E,2255μm,0.2s						
LNSS				AML	AML		
	comp=N,4390μm,0.3s						
MNTP	Montappone	0.31	39	⇓P	Pb	20 51 44.7	-0.4
OFFI	Offida	0.36	83	⇑P	Pb	20 51 45.8	0.0
RM33	Pellescritta (	0.38	179	⇓P	Pg	20 51 45.3	+0.6
CAMP	Campotosto	0.39	157	⇓P	Pg	20 51 45.2	+0.4
TERO	Teramo	0.40	132	⇑P	Pg	20 51 45.5	+0.4
TERO				AML	AML		
	comp=N,3725μm,0.4s						
TERO				AML	AML		
	comp=N,3560μm,0.4s						
TERO				AML	AML		
	comp=E,1995μm,0.4s						
TERO				AML	AML		
	comp=E,1915μm,0.3s						
SNTG	Esanatoglia	0.41	332	⇑P	Pg	20 51 45.5	+0.2
SNTG				AML	AML		
	comp=E,912μm,1.2s						
SNTG				AML	AML		
	comp=N,880μm,1.5s						
ASSB	Assisi San Ben	0.43	291	⇑P	Pg	20 51 45.8	+0.2
ASSB				AML	AML		
	comp=E,1735μm,0.3s						
ASSB				AML	AML		
	comp=N,1375μm,0.4s						
T1211	Morro Reatino	0.44	216	⇓P	Pg	20 51 46.1	+0.3
T1211				AML	AML		
	comp=E,952μm,0.4s						
T1211				AML	AML		
	comp=N,2405μm,0.3s						
T1211				AML	AML		
	comp=E,954μm,0.4s						
T1211				AML	AML		
	comp=N,2410μm,0.3s						
EL6	Elcito	0.44	350	⇑P	Pg	20 51 46.4	+0.5
T1247	Pizzolo (AQ)	0.46	171	⇓P	Pb	20 51 47.3	-0.2
ATCC	AVT- Casa Cast	0.51	306	P	Pg	20 51 47.4	+0.4
FOSV	Fossato di Vic	0.52	321	⇑P	Pg	20 51 47.4	+0.2
FOSV				S	Sb	20 51 57.0	+0.7
FOSV				AML	AML		
	comp=N,1585μm,0.3s						
FOSV				AML	AML		
	comp=E,792μm,0.4s						
GIGS	Gran Sasso	0.52	148	⇓P	Pg	20 51 47.7	+0.5
CESX	Cesi	0.54	239	S	Sb	20 51 56.0	-0.8
MURB	Monte Urbino	0.62	307	S	Sb	20 51 60.0	+0.7
SSFR	Montelago di S	0.62	331	P	Pg	20 51 49.7	+0.4
SSFR				AML	AML		
	comp=N,1515μm,0.2s						
SSFR				AML	AML		
	comp=N,1465μm,0.2s						
SSFR				AML	AML		
	comp=E,1280μm,1.1s						
SSFR				AML	AML		
	comp=E,1230μm,1.1s						
ARVD	Arcevia	0.64	343	⇑P	Pb	20 51 50.1	-0.5
ARVD				S	Sb	20 52 01.0	+1.3
ATFO	Monte Foce - G	0.66	316	⇓P	Pg	20 51 50.3	+0.3
VCEL	Villa Celiera	0.69	136	S	Sn	20 52 03.0	-1.3
FRON	Frontone	0.72	331	S	Sb	20 52 03.0	+1.0
AOI	Ancona	0.72	24	S	Sn	20 52 05.0	0.0
ATVO	AVT- Monte Val	0.76	310	S	Sb	20 52 04.0	+0.7
MGAB	Montegabbione	0.80	272	⇑P	Pn	20 51 55.4	+0.5
MPAG	Monte Paganucc	0.80	336	S	Sn	20 52 07.0	-0.2
PIEI	Pieia	0.81	323	S	Sn	20 52 07.0	-0.2
FSSB	Fossombrone	0.86	339	S	Sn	20 52 09.0	+0.6
APEC	Apecchio	0.88	320	S	Sn	20 52 09.0	+0.1
SACS	San Casciano d	0.95	268	⇑P	Pn	20 51 57.6	+0.7

OMAN 31 20:53:43.1±0.6, 20°.96N×61°.42E, h10km, mb5.2/2, ml3.3/10, Error ellipse: s-maj=12.0km s-min=4.0km az=269.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	Wadi Bani Khal	2.81	306	P	Pn	20 54 27.7	-0.5
WBK				S	Sn	20 55 02.3	+0.2
MHTO	MHTO	3.23	271	P	Pn	20 54 32.9	-1.0
	SNR=20						
JMDO	Jabal Madar	3.39	295	P	Pn	20 54 36.7	+0.5
	SNR=9.1						
JMDO				S	Sn	20 55 18.6	+2.1
WSAR	Wadi Sarin	3.44	312	P	Pn	20 54 37.0	+0.1
WSAR				S	Sn	20 55 17.0	-0.7
SMDO	Samad	3.76	304	P	Pn	20 54 42.0	+0.6
	SNR=7.9						
DQM	DQM	3.78	255	P	Pn	20 54 40.0	-1.5
	SNR=12						
BIDO	Bidbid	3.98	311	P	Pn	20 54 44.3	+0.1
	SNR=6.5						
BIDO				S	Sn	20 55 30.9	-0.1
BSY	Bisya	4.31	295	P	Pn	20 54 49.3	+0.6
NGCH	Negor - Chabah	4.39	357	P	Pn	20 54 50.1	+0.2
HOQ	Hoqain	4.62	305	P	Pn	20 54 54.0	+1.0
	SNR=6.8						
ARQ	Araqi	5.12	298	P	Pn	20 55 00.5	+0.5
	SNR=7.8						
UMZA	Um Al Zommool	6.07	288	P	Pn	20 55 13.1	+0.1
UMZA				S	Sn	20 56 22.7	+0.1
WHFO	Wadi Hawf	7.82	249	P	Pn	20 55 37.0	-0.1
	SNR=12						

*IDC **31** 21:04:51.8±0.7, 29°.86S×71°.81W, h0km, mb4.2/10, mbtmp4.2/15, ML4.1/5, MS3.8/19, Error ellipse: s-maj=23.4km s-min=19.2km az=92.0*
*SJA **31** 21:04:51.4±1.6, 29°.85S×72°.02W, h0km±13km, ML4.4, MW4.6*
*NEIC **31** 21:04:52.9, 29°.85S×72°.12W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.60; $M_{\theta\theta}$1.03; $M_{\phi\phi}$-6.63; $M_{r\theta}$0.99; $M_{\theta\phi}$-0.13; $M_{\phi r}$-1.86; Fault plane solution: $M_0$6.53000×10^{15} NP1:ϕ_s170.16000°, δ54.39000°, λ76.31000°. NP2:ϕ_s12.87000°, δ37.82000°, λ108.29000°. Principal axes: T 6.0774, Plg76.0000°, Azm36.0000°; N 0.8264, Plg11.0000°, Azm178.0000°; P -6.9038, Plg8.0000°, Azm270.0000°;*
*NEIC **31** 21:04:52.2±1.6, 29°.85S±0°.04×72°.15W±0°.05, h8km±4km, mb4.8/25, Mwr4.5/62, ML4.2(GUC) Error ellipse: s-maj=6.1km s-min=4.7km az=55.0*
*GUC **31** 21:04:54.4±0.8, 29°.87S×72°.05W, h30km±6km, ML4.2*
*VAO **31** 21:05:14.0±1.8, 28°.98S×71°.03W, h102km±10km, mb4.3*
ISC 31 21:04:52.1±1.1, 29°.85S±0°.02×72°.06W±0°.04, h7km±6km, n162, σ1§27/167, mb4.6/18, MS3.9/15, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	La Serena	0.72	96		Pn	21 05 07.8	-0.9
CO05				Sg	Sb	21 05 17.1	+0.1
CO05	La Serena	0.72	96	⇓*i*P	Pn	21 05 07.8	-0.9
CO05				*e*S	Sb	21 05 17.4	+0.4
CO05				IAML		21 05 22.0	
	comp=E,15μm,0.5s						
CO06	Fray Jorge	0.90	156	Pg	Pb	21 05 10.1	0.0
CO06				Sg	Sb	21 05 21.8	-0.6
CO06	Fray Jorge	0.90	156	*e*P	Pb	21 05 10.2	0.0
CO06				*e*S	Sb	21 05 22.7	+0.4
CO06				IAML		21 05 24.1	
	comp=N,6μm,0.2s						
GO04	Tololo Observa	1.14	107	Pn	Pn	21 05 15.0	+0.3
GO04				Sg	Sn	21 05 31.1	+0.2
GO04	Tololo Observa	1.14	107	*i* P	Pn	21 05 14.7	-0.1
GO04				*e*S	Sn	21 05 30.9	+0.1
LCO	Las Campanas	1.45	55	Pn	Pg	21 05 19.7	-0.2
LCO	Las Campanas	1.45	55	*e*P	Pg	21 05 19.6	-0.2
LCO				*e*S	Sg	21 05 40.1	+1.4
LCO	Las Campanas	1.45	55	*i* P	Pg	21 05 19.8	-0.2
LCO				*e*S	Sg	21 05 41.0	+2.2
LCO				IAML		21 05 48.5	
	comp=Z,31μm,0.8s						
CO03	El Pedregal	1.54	130	Pn	Pb	21 05 20.7	-0.4
CO03	El Pedregal	1.54	130	*e*P	Pb	21 05 20.9	-0.2
CO03				*e*S	Sg	21 05 40.9	-0.8
CO03				IAML		21 05 46.3	
	comp=E,3μm,0.3s						
CO03	El Pedregal	1.54	130	*i* P	Pb	21 05 20.9	-0.2
CO03				*e*S	Sg	21 05 43.2	+1.5
CO03				IAML		21 05 57.1	
	comp=Z,2μm,0.6s						
CO02	Combarbal	1.63	146	Pn	Pb	21 05 22.0	-0.7
CO02	Combarbal	1.63	146	⇑*i*P	Pb	21 05 22.2	-0.5
CO02				*e*S	Sb	21 05 42.7	-0.8
CO02				IAML		21 05 55.6	
	comp=E,9μm,0.3s						
CO02	Combarbal	1.63	146	*i* P	Pb	21 05 22.4	-0.2
CO02				*e*S	Sg	21 05 47.0	+2.4
CO02				IAML		21 05 51.6	
	comp=Z,5μm,1.4s						
CO01	Juntas del Tor	1.71	95	Pn	Pb	21 05 23.8	-0.3
CO01	Juntas del Tor	1.71	95	⇑*e*P	Pg	21 05 24.1	-0.8
CO01				*e*S	Sg	21 05 46.4	-0.8
CO01				IAML		21 05 49.0	
	comp=N,2μm,0.5s						
CO01	Juntas del Tor	1.71	95	*i* P	Pg	21 05 24.3	-0.7
CO01				*e*S	Sg	21 05 47.3	+0.1
CO01				IAML		21 05 49.0	
	comp=Z,2μm,0.5s						
AC04	Llanos de Chal	1.85	28	Pn	Pn	21 05 23.9	-0.4
AC04	Llanos de Chal	1.85	28	⇑*i*P	Pn	21 05 24.0	-0.4
AC04				*e*S	Sn	21 05 46.9	-1.2
AC04	Llanos de Chal	1.85	28	*i* P	Pn	21 05 24.1	-0.2
AC04				*e*S	Sg	21 05 55.4	+3.8
AC04				IAML		21 06 06.1	
	comp=Z,2μm,0.8s						
AC05	El Transito	1.86	58	Pn	Pb	21 05 25.7	-0.8
AC05	El Transito	1.86	58	*e*P	Pb	21 05 25.8	-0.8
AC05				*e*S	Sg	21 05 51.6	-0.2
AC05				IAML		21 06 06.1	
	comp=N,3μm,0.4s						
AC05	El Transito	1.86	58	*i* P	Pb	21 05 25.8	-0.8
A

ROCH El Roble 3.24 164 *i* P **Pn 21 05 43.9 +0.2**
ROCH IAML 21 06 48.5
comp=N,1μm,0.5s
ROC1 El Roble 3.24 164 Pn **Pn 21 05 43.6 -0.1**
ZON Zonda 3.37 121 Pn **Pn 21 05 47.1 +1.9**
PEL Peldehue 3.49 161 *e*P **Pn 21 05 47.7 +0.8**
PEL IAML 21 06 49.6
comp=N,623nm,0.4s
MT02 Curacav 3.49 167 Pn **Pn 21 05 46.6 -0.3**
MT02 Curacav 3.49 167 *e*P **Pn 21 05 47.0 +0.1**
MT05 Renca 3.71 163 Pn **Pn 21 05 50.5 +0.6**
MT05 Renca 3.71 163 *e*P **Pn 21 05 50.9 +0.9**
FCH Farellones 3.78 157 *e*P **Pn 21 05 52.6 +1.4**
VA05 Santo Domingo 3.82 174 Pn **Pn 21 05 50.7 -0.7**
VA05 Santo Domingo 3.82 174 *e*P **Pn 21 05 51.1 -0.2**
MT03 Universidad Ad 3.87 160 Pn **Pn 21 05 53.0 +0.9**
MT03 Universidad Ad 3.87 160 *e*P **Pn 21 05 53.1 +1.0**
AC01 Pan de Azucar 3.91 20 *e*P **Pn 21 05 51.1 -1.6**
AC02 Maricunga 3.96 41 Pn **Pn 21 05 55.0 +1.3**
AC02 Maricunga 3.96 41 *e*P **Pn 21 05 55.5 +1.7**
MT09 Talagante 4.02 167 Pn **Pn 21 05 54.7 +0.4**
MT09 Talagante 4.02 167 *e*P **Pn 21 05 54.7 +0.4**
MT01 Popeta 4.06 170 Pn **Pn 21 05 54.1 -0.6**
MT01 Popeta 4.06 170 *e*P **Pn 21 05 54.3 -0.5**
LMEL Las Melosas 4.29 159 **Pn 21 05 58.8 +0.8**
LMEL Las Melosas 4.29 159 *e*P **Pn 21 05 59.2 +1.2**
BO01 Tunca 4.61 170 Pn **Pn 21 06 01.8 -0.4**
BO01 Tunca 4.61 170 *e*P **Pn 21 06 01.8 -0.4**
BO03 Pichilemu 4.63 179 *e*P **Pn 21 06 00.8 -1.8**
BO02 Sierra Bellavi 5.05 168 Pn **Pn 21 06 08.3 0.0**
BO02 Sierra Bellavi 5.05 168 *e*P **Pn 21 06 09.0 +0.6**
GO05 Huala 5.15 179 Pn **Pn 21 06 07.9 -1.8**
GO02 Mina Guanaco 5.16 26 Pn **Pn 21 06 09.2 -0.8**
GO02 Mina Guanaco 5.16 26 *e*P **Pn 21 06 09.4 -0.7**
H03N1 Juan Fernandez 6.85 237 Pn **Pn 21 06 30.5 -2.3**
baz=113,slow=18
H03N1 Sn Sn 21 07 40.1 -11
baz=208
H03N1 T T 21 14 00.0
baz=65,slow=72,SNR=335
H03N2 Juan Fernandez 6.87 237 Pn **Pn 21 06 30.8 -2.2**
baz=113,slow=18
H03N2 Sn Sn 21 07 40.9 -10
baz=208
H03N2 T T 21 14 03.8
baz=65,slow=72,SNR=291
H03N3 Juan Fernandez 6.87 237 Pn **Pn 21 06 30.6 -2.5**
baz=113,slow=18
H03N3 Sn Sn 21 07 38.8 -13
baz=208
H03N3 T T 21 14 01.7
baz=65,slow=72,SNR=296
VA04 Juan Fernndez 6.89 235 Pn **Pn 21 06 30.9 -2.7**
PB15 IPOC Station P 7.01 20 Pn **Pn 21 06 34.1 -1.3**
H03S3 Juan Fernandez 7.05 234 Pn **Pn 21 06 32.6 -2.9**
baz=126,slow=76
H03S3 Sn Sn 21 07 44.0 -12
baz=294,slow=78
H03S1 Juan Fernandez 7.05 234 Pn **Pn 21 06 32.7 -2.9**
baz=126,slow=76
H03S1 Sn Sn 21 07 44.5 -11
baz=294,slow=78
H03S2 Juan Fernandez 7.07 234 Pn **Pn 21 06 32.8 -3.0**
baz=126,slow=76
H03S2 Sn Sn 21 07 46.0 -10
baz=294,slow=78
LVC Limon Verde 7.74 22 Pn **Pn 21 06 43.7 -2.0**
comp=N,1.2nm,0.3s,baz=176,slow=4.2,SNR=12
LVC Sn **Sn 21 08 10.1 -3.8**
comp=N,1.6nm,0.3s,baz=213,slow=4.5,SNR=5.5
LVC Lg Lg 21 08 38.7
comp=N,2.7nm,0.3s,baz=17,slow=14,SNR=3.4
comp=N,6.0nm,0.4s
LVC Limon Verde 7.74 22 Pn **Pn 21 06 43.8 -1.8**
LVC Limon Verde 7.74 22 *e*P **Pn 21 06 43.8 -1.8**
PB09 IPOC Station P 8.41 18 Pn **Pn 21 06 53.5 -1.2**
LR04 Corral 10.07 186 Pn **Pn 21 07 16.3 -0.9**
GO01 Chusmiza 10.46 15 **Pn 21 07 23.1 0.0**
PLCA Paso Flores 10.93 174 Pn **Pn 21 07 28.5 -0.5**
comp=N,0.4nm,0.3s,baz=338,slow=11,SNR=14
PLCA Lg Lg 21 10 35.2
baz=332,slow=23,SNR=2.0
PLCA LR LR 21 12 16.6
comp=N,363nm,20.5s,baz=350,slow=41
comp=N,4.9nm,0.7s
PB16 IPOC Station P 11.70 12 Pn **Pn 21 07 39.2 -0.8**
TRQA Tornquist 11.70 137 Pn **Pn 21 07 39.2 -0.4**
ITQB Itaqui 13.41 93 *e*P **P 21 08 12.4 -0.1**
CPUP Villa Florida 13.47 78 Pn **Pn 21 08 00.5 -3.2**
comp=N,0.2nm,0.3s,baz=130,slow=5.9,SNR=3.8
CPUP Lg Lg 21 11 38.1
baz=205,slow=12
CPUP LR LR 21 13 38.5
comp=N,456nm,20.4s,baz=260,slow=40
comp=N,0.9nm,0.2s
CPUP Villa Florida 13.47 78 Pn **Pn 21 08 03.0 -0.7**
LPAZ La Paz 13.97 16 Pn **Pn 21 08 12.3 +1.1**
comp=N,0.5nm,0.3s,baz=192,slow=8.3,SNR=11
LPAZ LR LR 21 14 50.7
comp=N,245nm,18.4s,baz=149,slow=43
comp=N,3.6nm,0.6s
LPAZ La Paz 13.97 16 Pn **Pn 21 08 12.0 +0.8**
LPAZ La Paz 13.97 16 *e*P **Pn 21 08 15.0 +3.8**
BBRB Robore, Bolivi 16.04 47 *e*P **P 21 08 40.8 -1.0**
SIV San Ignacio 17.09 39 Pn **Pn 21 08 49.7 -2.0**
comp=N,0.1nm,0.3s,baz=222,slow=11,SNR=42
SIV LR LR 21 16 05.4
comp=N,367nm,20.1s,baz=260,slow=40
comp=N,7.6nm,0.8s
AQDB Aquidauana 17.49 62 *e*P **P 21 08 58.6 +0.8**
PTGB Pitanga 18.49 79 *e*P **Pn 21 09 10.6 +1.6**
PTLB Pontes e Lacer 18.62 42 *e*P **Pn 21 09 11.1 +0.5**
VILB Vilhena 20.09 36 *e*P Pn 21 09 27.1 -1.1
PCMB Pacaembu 20.43 71 *e*P Pn 21 09 31.0 -1.2
SALV Santo Antonio 20.46 51 *e*P **P 21 09 31.0 +0.6**
ETMB Extrema 20.67 17 *e*P Pn 21 09 34.0 -1.0
FRTB Fartura 21.12 77 *e*P **P 21 09 38.1 +0.5**
CZSB Cruzeiro do Su 22.01 358 *e*P **P 21 09 53.4 +6.2**
ITRB Iturama 22.11 68 *e*P **P 21 09 48.1 -0.2**
ARAG Araguaiana, MT 23.33 57 *e*P **P 21 10 02.1 +1.0**
VAO Valinhos 23.46 79 *e*P **P 21 10 01.9 -0.5**
CLDB Colider 24.21 42 *e*P **P 21 10 09.4 -0.3**
BDFB Brasilia 26.23 63 P **P 21 10 26.3 -1.7**
comp=N,8.2nm,0.9s,baz=236,slow=11,SNR=7.5
comp=N,8.2nm,0.9s
BDFB Brasilia 26.23 63 P **P 21 10 27.7 -0.3**
BDFB IAmb IAmb 21 10 29.4
comp=Z,31nm,1.5s
BDFB Brasilia 26.23 63 *e*P **P 21 10 28.1 +0.1**
SNDB Serra Nova Dou 26.24 52 *e*P **P 21 10 28.1 +0.1**
MCRA Macar, Loja 26.42 342 P **P 21 10 28.5 -1.2**
NPGB Novo Progresso 27.59 38 *e*P **P 21 10 39.3 -0.9**
JANB Januaria 29.47 66 *e*P **P 21 10 56.9 -0.1**
ITTB Itaituba 29.68 34 *e*P **P 21 10 58.5 -0.3**
SMTB Santa Maria do 31.00 53 *e*P **P 21 11 11.2 +0.7**
RPN Rapa Nui 32.78 265 LR LR 21 20 32.9
comp=Z,144nm,19.4s,baz=360,slow=28
PMSA Palmer Station 35.30 174 LR LR 21 26 02.0
comp=Z,125nm,21.6s,baz=114,slow=36
SDV Santo Domingo 38.53 2 *e*P P 21 12 20.9 +5.2
BAUV El Baul 38.76 6 P **P 21 12 17.7 +0.3**
BAUV IAmb IAmb 21 12 19.0
comp=Z,26nm,1.0s
MDP Montagnes des 39.43 31 LR LR 21 30 41.3
comp=Z,142nm,19.5s,baz=202,slow=39
RCBR Riachuelo 41.60 62 LR LR 21 32 19.7
comp=Z,124nm,19.1s,baz=342,slow=40
MLPR Magueyes Islan 47.78 6 P **P 21 13 30.1 -0.1**
CRPR Cabo Rojo, PR 47.81 6 P **P 21 13 29.5 -1.0**
CELP Cerrillos 47.94 7 P **P 21 13 31.3 -0.1**
TEIG Tepich 52.18 341 P **P 21 14 02.7 -0.9**
TEIG IAmb IAmb 21 14 09.0
comp=Z,13nm,0.7s
VNA3 Neumayer Olymp 53.22 159 P **P 21 14 08.3 -2.4**
VNA1 Neumayer--Stat 53.51 158 P **P 21 14 14.1 +1.3**
VNA2 Neumayer--Watz 53.85 158 P **P 21 14 16.1 +0.6**
baz=285,slow=8.0
SNAA Sanae 55.44 159 P **P 21 14 27.5 +0.5**
SNAA Sanae 55.44 159 P **P 21 14 27.3 +0.3**
TROLL Troll, Antarti 57.15 159 P **P 21 14 39.8 +0.5**
TXAR Lajitas Array 66.13 330 P **P 21 15 41.8 +1.5**
comp=Z,0.7nm,0.7s,baz=151,slow=7.8,SNR=5.7
TXAR LR LR 21 39 56.9
comp=Z,33nm,18.4s,baz=140,slow=32
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 66.13 330 P **P 21 15 40.4 +0.1**
TX31 Lajitas Ar. Si 66.13 330 P **P 21 15 40.7 +0.4**
TX31 IAmb IAmb 21 15 43.1
comp=Z,10nm,1.2s
VNDA Vanda 68.16 191 P **P 21 15 52.9 +0.4**
comp=Z,0.6nm,1.1s,baz=257,slow=4.8,SNR=2.2
comp=Z,0.6nm,1.1s
BBTS Babate 69.43 58 LR LR 21 46 51.5
comp=Z,65nm,18.0s,baz=242,slow=36
R40A Maddies Statio 70.37 343 P **P 21 16 06.8 +0.2**
R40A IAmb IAmb 21 16 33.5
comp=Z,4.7nm,0.8s
N49A Columbus Grove 71.30 350 P **P 21 16 13.4 +1.2**
SUR Sutherland 76.87 120 LR LR 21 47 03.5
comp=Z,48nm,18.4s,baz=190,slow=33
MAW Mawson 77.16 164 P **P 21 16 46.7 +0.6**
comp=Z,2.5nm,0.9s,baz=153,slow=3.3,SNR=2.9
MAW LR LR 21 49 50.9
comp=Z,90nm,20.9s,baz=236,slow=35
comp=Z,2.5nm,0.9s
MSU Marysvale 77.64 329 P **P 21 16 49.3 -0.1**
HWUT Hardware Ranch 79.91 331 P **P 21 17 02.7 +0.9**
HWUT IAmb IAmb 21 17 12.5
comp=Z,4.5nm,0.8s
PDAR Pinedale Array 80.06 333 P **P 21 17 04.0 +1.4**
comp=Z,1.1nm,0.6s,baz=122,slow=7.3,SNR=6.4
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 80.06 333 P **P 21 17 03.0 +0.4**
TSUM Tsumeb 80.39 107 LR LR 21 49 25.8
comp=Z,102nm,18.7s,baz=149,slow=33
NVAR Mina Array Bea 80.48 325 P **P 21 17 06.7 +1.7**
comp=Z,0.9nm,0.8s,baz=167,slow=6.1,SNR=5.2
comp=Z,0.9nm,0.8s
HVU Hansel Valley 80.57 330 P **P 21 17 05.7 +0.4**
BOSA Boshof 82.03 118 P **P 21 17 14.0 +0.4**
comp=Z,3.1nm,0.8s,baz=314,slow=7.1,SNR=3.7
BOSA LR LR 21 52 04.4
comp=Z,54nm,18.1s,baz=196,slow=35
comp=Z,3.1nm,0.8s
BOSA Boshof 82.03 118 P **P 21 17 13.3 -0.3**
BOSA IAmb IAmb 21 17 26.2
comp=Z,9.3nm,1.0s
ULM Lac du Bonnet 82.50 345 P **P 21 17 16.0 +0.9**
comp=Z,5.1nm,0.8s,baz=172,slow=8.6,SNR=3.6
comp=Z,5.1nm,0.8s
HLID Hailey 82.72 330 P **P 21 17 16.6 -0.1**
TOA0 Torodi Ar. Sit 82.83 70 P **P 21 17 17.2 -0.5**
TOA0 IAmb IAmb 21 17 19.0
comp=Z,7.8nm,1.1s
TORD Torodi Ar. Bea 82.83 70 P **P 21 17 18.0 +0.4**
comp=Z,4.8nm,1.0s,baz=243,slow=6.0,SNR=18
TORD LR LR 21 53 01.3
comp=Z,43nm,18.1s,baz=216,slow=35
comp=Z,4.8nm,1.0s
TORD Torodi Ar. Bea 82.83 70 P **P 21 17 17.6 -0.1**
TORD IAmb IAmb 21 17 19.6
comp=Z,6.5nm,1.1s
LBTB Lobatse 84.08 115 LR LR 21 50 54.4
comp=Z,56nm,18.1s,baz=207,slow=33
LBTB Lobatse 84.08 115 P **P 21 17 23.7 -0.5**
LBTB IAmb IAmb 21 17 36.1
comp=Z,8.9nm,1.1s
PLID Pearl Lake 84.63 330 P **P 21 17 25.9 -0.6**
PLID IAmb IAmb 21 17 32.4
comp=Z,3.1nm,0.8s
MDT Midelt 89.23 51 LR LR 21 57 18.4
comp=Z,34nm,19.5s,baz=228,slow=35
AFI Afiamalu 91.38 253 LR LR 21 51 27.2
comp=Z,53nm,18.4s,baz=9.5,slow=30
ESDC Sonseca Array 93.71 46 P **P 21 18 10.0 +0.4**
comp=Z,0.3nm,0.7s,baz=251,slow=3.9,SNR=2.8
ESDC LR LR 22 00 39.1
comp=Z,38nm,18.0s,baz=246,slow=36
comp=Z,0.3nm,0.7s
WRA Warramunga Arr 124.35 210 PKP **PKPdf 21 23 52.1 -0.5**
comp=Z,0.6nm,0.7s,baz=158,slow=1.5,SNR=7.2
H11S2 WAKE ISLAND Hyl 25.71 272 T T 23 42 52.3
baz=114,slow=74,SNR=9.9
H11S1 WAKE ISLAND Hyl 25.72 272 T T 23 42 50.2
baz=114,slow=74,SNR=9.3
H11S3 WAKE ISLAND Hyl 25.72 272 T T 23 42 53.3
baz=114,slow=74,SNR=8.4
ZALV Zalesovo Beam 150.66 28 PKP **PKPdf 21 24 40.3 +1.2**
comp=Z,15nm,0.8s,baz=340,slow=3.9,SNR=4.1
ZALV PKPbc **pPKPbc 21 24 45.9 +0.2**
comp=Z,13nm,0.8s,baz=295,slow=3.4,SNR=54
KSH Kashi 152.12 61 PKPbc **PKiKP 21 24 50.5 +1.6**
MJAR Matsushiro Arr 153.87 293 PKPab **PKPab 21 25 06.6 +1.0**
comp=Z,1.5nm,0.6s,baz=100,slow=2.7,SNR=4.3
MKAR Makanchi Array 153.88 43 PKPbc **PKiKP 21 24 52.9 +0.7**
comp=Z,1.2nm,0.8s,baz=328,slow=4.3,SNR=5.2
MKAR PKPab **PKPab 21 25 03.5 -1.8**
comp=Z,1.8nm,0.8s,baz=305,slow=4.3,SNR=5.1
SONM Songino Array 162.00 3 PKPab **PKPab 21 25 40.4 +0.1**
comp=Z,0.8nm,0.9s,baz=339,slow=3.2,SNR=2.8

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*IDC **31** 21:05:37.5±1.1,26°.89N×143°.78E, h0km, mb3.7/6, mbtmp3.8/8, ML3.5/2, Error ellipse: s-maj=35.5km s-min=18.1km az=56.0*
*NEIC **31** 21:05:40.5±1.3,26°.9N±0°.1×143°.7E±0°.1, h18km±7km, mb4.5/13, Error ellipse: s-maj=18.6km s-min=13.1km az=171.0*
*JMA **31** 21:05:41.0±0.1,27°N±2°×14°3E±°, h147km, NEAR CHICHIJIMA ISLAND*
ISC 31 21:05:42.9±0.8, 27°.01N±0°.09×143°.71E±0°.08, h35km, n38, σ1§19/39, mb4.3/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.36**	**274**	P	**Pn**	**21 06 04.7**	**-0.7**
CBIJ				*e*S	**Sn**	**21 06 22.8**	**+0.5**
JCJ	**Chichijima**	**1.36**	**274**	Pn	**Pn**	**21 06 04.3**	**-1.2**
	16nm,0.3s,baz=279,slow=22,SNR=12						
JCJ				Sn	**Sn**	**21 06 21.2**	**-1.1**
	32nm,0.3s,baz=298,slow=22,SNR=8.7						
JCJ	**Chichijima**	**1.36**	**274**	Pn	**Pn**	**21 06 04.6**	**-0.9**
JCJ				Sn	**Sn**	**21 06 22.8**	**+0.5**
BSO3	**Boso 3**	**8.24**	**341**	*e*P	**Pn**	**21 07 40.8**	**+1.1**
JHU	**Hanno**	**9.59**	**338**	P	**Pn**	**21 07 57.6**	**-0.9**
JHU				*e*S	**Sn**	**21 09 41.1**	**-3.9**
JRY	**Ryogami san**	**9.87**	**337**	*e*P	**Pn**	**21 08 00.8**	**-1.6**
MJAR	**Matsushiro Arr**	**10.59**	**335**	Pn	**Pn**	**21 08 10.9**	**-1.3**
	0.3nm,0.3s,baz=165,slow=12,SNR=13						
	1.6nm,0.4s						
MAJO	**Matsushiro**	**10.59**	**335**	Pn	**Pn**	**21 08 11.5**	**-0.7**
MJB9	**Matsu-Tunnel**	**10.60**	**335**	Pn	**Pn**	**21 08 13.8**	**+1.5**
KSRS	**Korea Array**	**16.91**	**312**	P	**Pn**	**21 09 38.0**	**+1.2**
	0.2nm,0.3s,baz=120,slow=10,SNR=3.1						
	1.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**22.46**	**104**	T	T	21 33 33.7	
	baz=291						
H11N1	**WAKE ISLAND Hy**	**22.46**	**104**	T	T	21 33 34.1	
	baz=291						
H11N3	**WAKE ISLAND Hy**	**22.48**	**104**	T	T	21 33 35.9	
	baz=291						
KLR	**Kul'dur**	**24.04**	**341**	P	**P**	**21 10 55.3**	**+0.7**
	1.8nm,0.5s,baz=123,slow=4.1,SNR=5.4						
	1.8nm,0.5s						
SONM	**Songino Array**	**35.72**	**316**	P	**P**	**21 12 39.7**	**+1.4**
	0.5nm,0.5s,baz=113,slow=7.5,SNR=4.9						
	0.5nm,0.5s						
SONM	**Songino Array**	**35.72**	**316**	P	**P**	**21 12 40.1**	**+1.8**
WB0	**Warramunga Arr**	**47.37**	**192**	P	**P**	**21 14 12.1**	**-1.7**
WB0				IAmb	IAmb	21 14 45.5	
	comp=Z,9.7nm,1.4s						
WB2	**Warramunga Arr**	**47.55**	**192**	P	**P**	**21 14 13.4**	**-1.7**
WRA	**Warramunga Arr**	**47.55**	**192**	P	**P**	**21 14 13.8**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=15,slow=8.3,SNR=7.2						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**47.55**	**192**	P	**P**	**21 14 14.4**	**-0.7**
ZALV	**Zalesovo Beam**	**50.44**	**319**	P	**P**	**21 14 38.1**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=92,slow=7.6,SNR=2.0						
	comp=Z,0.4nm,0.5s						
MK31	**Makanchi Array**	**51.58**	**310**	P	**P**	**21 14 46.0**	**+0.3**
MKAR	**Makanchi Array**	**51.58**	**310**	P	**P**	**21 14 46.5**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=88,slow=8.8,SNR=6.5						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**51.58**	**310**	P	**P**	**21 14 46.1**	**+0.5**
K20K	**Telida**	**53.80**	**30**	P	**P**	**21 15 03.0**	**+1.2**
K20K				IAmb	IAmb	21 15 05.7	
	comp=Z,3.3nm,1.0s						
J20K	**Nowinta River**	**53.94**	**29**	P	**P**	**21 15 03.3**	**+0.5**
IMAR	**Indian Mountai**	**54.51**	**26**	P	**P**	**21 15 06.7**	**-0.3**
CAST	**Castle Rocks**	**54.69**	**30**	P	**P**	**21 15 08.7**	**+0.5**
CAST				IAmb	IAmb	21 15 09.3	
	comp=Z,8.0nm,1.3s						
MSVF	**Nonsavu**	**55.58**	**139**	P	**P**	**21 15 14.2**	**-1.1**
	comp=Z,11nm,0.6s,baz=142,slow=20,SNR=11						
MDM	**Murphy Dome**	**56.59**	**28**	P	**P**	**21 15 22.1**	**+0.2**
MDM				IAmb	IAmb	21 15 45.0	
	comp=Z,4.0nm,1.2s						
KLU	**Klutina**	**57.31**	**32**	P	**P**	**21 15 27.4**	**+0.3**
SCRK	**Sand Creek**	**58.33**	**30**	P	**P**	**21 15 34.2**	**-0.1**
SCRK				IAmb	IAmb	21 15 49.5	
	comp=Z,4.2nm,1.3s						
J26L	**Joseph Creek**	**58.54**	**29**	P	**P**	**21 15 35.5**	**-0.2**
J26L				IAmb	IAmb	21 16 00.1	
	comp=Z,7.7nm,1.4s						
BCAR	**Beaver Creek A**	**59.29**	**31**	P	**P**	**21 15 41.8**	**+0.8**
KK31	**Karatay Array**	**60.23**	**306**	P	**P**	**21 15 48.4**	**+0.7**
KK31				IAmb	IAmb	21 15 49.5	
	comp=Z,2.6nm,0.7s						
KKAR	**Karatay Array**	**60.23**	**306**	P	**P**	**21 15 48.4**	**+0.7**
ABKAR	**Akbulak array**	**66.12**	**315**	P	**P**	**21 16 27.3**	**+0.7**
FINES	**FINESS Array B**	**78.62**	**334**	P	**P**	**21 17 41.1**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=104,slow=6.1,SNR=5.1						
	comp=Z,0.9nm,0.7s						

IDC 31 21:09:20.1±3.5, 19°.32N×146°.30E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/3, Error ellipse: s-maj=153.6km s-min=27.7km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**24.90**	**218**	P	**P**	**21 23 38.4**	
	comp=Z,31nm,18.6s,baz=202,slow=34						
WRA	**Warramunga Arr**	**40.74**	**197**	P	P	21 17 02.9	-0.1
	1.9nm,0.5s,baz=16,slow=9.1,SNR=21						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**44.40**	**196**	P	P	21 17 32.5	-0.2
	0.6nm,0.4s,baz=13,slow=6.5,SNR=8.4						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**58.45**	**314**	P	P	21 19 19.0	+1.1
	0.2nm,0.5s,baz=98,slow=8.9,SNR=1.4						
	0.2nm,0.5s						
RPZ	**Rata Peaks**	**66.71**	**161**	LR	LR	21 46 12.9	
	comp=Z,34nm,20.3s,baz=274,slow=33						
FINES	**FINESS Array B**	**86.56**	**335**	P	P	21 22 04.1	-1.0
	0.2nm,0.3s,baz=53,slow=5.6,SNR=4.7						
	0.2nm,0.3s						
EIL	**Elat**	**97.89**	**305**	LR	LR	22 14 38.5	
	comp=Z,32nm,18.3s,baz=286,slow=40						

IDC 31 21:11:52.5±7.6, 3°.04S×101°.50E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=382.1km s-min=26.4km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**29.23**	**260**	T	T	21 47 31.1	
	baz=82,slow=74						
H08S3	**Diego Garcia H**	**29.23**	**260**	T	T	21 47 27.8	
	baz=82,slow=74						
H08S1	**Diego Carcia H**	**29.25**	**260**	T	T	21 47 37.2	
	baz=82						
WRA	**Warramunga Arr**	**36.18**	**120**	P	P	21 18 56.1	-1.2
	0.2nm,0.5s,baz=293,slow=8.1,SNR=1.6						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**37.44**	**126**	P	P	21 19 08.8	+0.9
	0.2nm,0.4s,baz=301,slow=8.0,SNR=1.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.44**	**343**	P	P	21 21 07.2	+0.2
	0.6nm,0.6s,baz=149,slow=7.6,SNR=4.1						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**58.47**	**349**	P	P	21 21 49.8	-0.4
	0.7nm,0.4s,baz=155,slow=4.8,SNR=3.3						
	0.7nm,0.4s						

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*PRU **31** 21:17:16.7±0.0, 43°.00N×14°.10E, h10km*
ROM 31 21:17:13.1±0.1, 42°.903N±0°.003×13°.147E±0°.004, h9km, ML2.8/52, 34C-18D, Error ellipse: s-maj=0.3km s-min=0.3km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**147**	⇓P	Pg	21 17 15.5	+0.3
T1245				S	Sg	21 17 17.0	+0.3
T1245				AML	AML		
	comp=E,71500μm,0.2s						
T1245				AML	AML		
	comp=N,61150μm,1.2s						
T1245				AML	AML		
	comp=E,71450μm,0.2s						
T1245				AML	AML		
	comp=N,61150μm,1.2s						
T1245				AML	AML		
	comp=N,61150μm,1.2s						
T1245				AML	AML		
	comp=E,67500μm,0.3s						
T1245				AML	AML		
	comp=E,71450μm,0.2s						
T1245				AML	AML		
	comp=N,60200μm,0.1s						
T1245				AML	AML		
	comp=N,61150μm,1.2s						
FEMA	**Monte Fema**	**0.09**	**310**	⇓P	Pg	21 17 16.0	+0.4
FEMA				S	Sg	21 17 17.6	+0.3
FEMA				AML	AML		
	comp=E,24950μm,0.2s						
FEMA				AML	AML		
	comp=E,25000μm,0.2s						
FEMA				AML	AML		
	comp=E,24950μm,0.2s						
FEMA				AML	AML		
	comp=N,21150μm,0.4s						
T1256	**Bolognola (MC)**	**0.12**	**30**	P	Pg	21 17 16.2	+0.2
T1256				S	Sg	21 17 18.5	+0.4
MMO1	**Montemonaco**	**0.13**	**92**	⇑P	Pg	21 17 16.6	+0.4
MMO1				S	Sg	21 17 18.9	+0.7
FDMO	**Fiordimonte**	**0.14**	**342**	P	Pg	21 17 16.4	+0.2
FDMO				AML	AML		
	comp=E,6435μm,0.8s						
FDMO				AML	AML		
	comp=N,6415μm,0.6s						
AM05	**Amandola Campo**	**0.17**	**64**	P	Pg	21 17 17.4	+0.6
AM05				S	Sg	21 17 20.3	+1.1
AM05				AML	AML		
	comp=N,4435μm,0.2s						
AM05				AML	AML		
	comp=E,20400μm,0.2s						
AM05				AML	AML		
	comp=N,886μm,0.1s						
AM05				AML	AML		
	comp=N,888μm,1.5s						
AM05				AML	AML		
	comp=E,4315μm,0.2s						
AM05				AML	AML		
	comp=N,4440μm,0.2s						
GUMA	**Gualdo di Mace**	**0.21**	**41**	⇑P	Pg	21 17 18.3	+0.8
GUMA				S	Sg	21 17 22.2	+1.8
GUMA				AML	AML		
	comp=E,28100μm,0.9s						
GUMA				AML	AML		
	comp=E,29100μm,0.3s						
GUMA				AML	AML		
	comp=E,28100μm,0.9s						
GUMA				AML	AML		
	comp=N,22500μm,1.1s						
GUMA				AML	AML		
	comp=N,33100μm,0.3s						
T1241	**Roccafluvione,**	**0.21**	**103**	⇑P	Pg	21 17 18.2	+0.7
T1241				S	Sg	21 17 21.8	+1.3
T1241				AML	AML		
	comp=N,5655μm,1.0s						
T1241				AML	AML		
	comp=E,6435μm,1.4s						
T1241				AML	AML		
	comp=N,5995μm,1.0s						
T1241				AML	AML		
	comp=E,6660μm,1.4s						
T1241				AML	AML		
	comp=N,6000μm,1.0s						
T1215	**Vallo di Nera,**	**0.23**	**244**	⇑P	Pg	21 17 18.6	+0.8
T1215				S	Sg	21 17 22.4	+1.5
T1215				AML	AML		
	comp=N,2230μm,0.6s						
T1215				AML	AML		
	comp=E,2275μm,0.6s						

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T1215                                AML   AML
     comp=N,2115µm,0.6s
T1215                                AML   AML
     comp=N,2225µm,0.6s
T1215                                AML   AML
     comp=E,2205µm,0.3s
T1215                                AML   AML
     comp=E,2275µm,0.6s
T1217 Poggiodomo (PG      0.25 220 ⇑P    Pg    21 17 19.0 +0.8
T1217                                S     Sg    21 17 23.3 +1.8
T1217                                AML   AML
     comp=E,3180µm,0.5s
T1217                                AML   AML
     comp=N,4960µm,1.5s
T1217                                AML   AML
     comp=E,3295µm,0.5s
T1217                                AML   AML
     comp=N,4785µm,1.5s
T1217                                AML   AML
     comp=E,3185µm,0.5s
T1217                                AML   AML
     comp=N,4950µm,1.5s
T1217                                AML   AML
     comp=N,4950µm,1.5s
T1217                                AML   AML
     comp=E,3295µm,0.5s
T1217                                AML   AML
     comp=E,3180µm,0.5s
T1217                                AML   AML
     comp=N,4780µm,1.5s
T1204 Amatrice, Fraz      0.26 151 ⇓P    Pg    21 17 19.2 +0.8
T1204                                S     Sb    21 17 23.7 -1.0
T1204                                AML   AML
     comp=E,5960µm,0.4s
T1204                                AML   AML
     comp=E,5965µm,0.4s
T1204                                AML   AML
     comp=N,4420µm,1.2s
SEF1  Sefro               0.28 329   P     Pg    21 17 19.3 +0.4
SEF1                                 S     Sb    21 17 24.3 -1.1
SEF1                                 AML   AML
     comp=E,7030µm,0.3s
SEF1                                 AML   AML
     comp=N,5125µm,0.8s
T1243 Rocca Santa Ma      0.30 133   P     Pg    21 17 19.9 +0.7
T1243                                S     Sg    21 17 24.5 +1.2
SMA1  SAN MARTINO         0.31 153 ⇑P    Pg    21 17 20.0 +0.7
SMA1                                 S     Sb    21 17 25.0 -1.0
SMA1                                 AML   AML
     comp=E,3675µm,1.2s
SMA1                                 AML   AML
     comp=N,3880µm,1.0s
LNSS  Leonessa            0.31 195 ⇓P    Pg    21 17 20.1 +0.7
LNSS                                 S     Sb    21 17 25.4 -0.7
LNSS                                 AML   AML
     comp=E,3245µm,0.2s
LNSS                                 AML   AML
     comp=N,7100µm,0.7s
MNTP  Montappone          0.33  45   P     Pb    21 17 20.8 -0.5
MNTP                                 S     Sb    21 17 27.1 +0.4
MNTP                                 AML   AML
     comp=E,6180µm,0.7s
MNTP                                 AML   AML
     comp=N,3860µm,0.5s
GAG1  Gagliole            0.34 350 ⇑P    Pg    21 17 20.6 +0.7
GAG1                                 AML   AML
     comp=E,5705µm,0.8s
GAG1                                 AML   AML
     comp=N,5210µm,0.8s
GAG1                                 AML   AML
     comp=E,5710µm,0.8s
SNTG  Esanatoglia         0.38 337 ⇑P    Pg    21 17 21.0 +0.3
SNTG                                 AML   AML
     comp=E,1310µm,0.2s
SNTG                                 AML   AML
     comp=N,1180µm,1.5s
SNTG                                 AML   AML
     comp=N,1179µm,1.5s
SNTG                                 AML   AML
     comp=E,1315µm,0.2s
SNTG                                 AML   AML
     comp=N,1180µm,1.5s
SNTG                                 AML   AML
     comp=N,1290µm,0.2s
SNTG                                 AML   AML
     comp=E,1305µm,0.2s
ASSB  Assisi San Ben      0.38 291 ⇑P    Pg    21 17 21.1 +0.4
ASSB                                 S     Sb    21 17 27.4 -0.9
ASSB                                 AML   AML
     comp=E,1560µm,0.4s
ASSB                                 AML   AML
     comp=N,1775µm,0.9s
OFFI  Offida              0.40  85 ⇑P    Pb    21 17 22.3  0.0
OFFI                                 AML   AML
     comp=E,5515µm,0.6s
OFFI                                 AML   AML
     comp=N,5135µm,0.4s
RM33  Pellescritta (      0.40 173 ⇑P    Pg    21 17 21.4 +0.5
RM33                                 S     Sb    21 17 28.1 -0.6
RM33                                 AML   AML
     comp=E,3045µm,0.3s
RM33                                 AML   AML
     comp=N,2370µm,0.8s
RM33                                 AML   AML
     comp=N,2425µm,0.8s
RM33                                 AML   AML
     comp=N,2365µm,0.8s
RM33                                 AML   AML
     comp=E,3025µm,0.3s
RM33                                 AML   AML
     comp=N,2420µm,0.8s
RM33                                 AML   AML
     comp=E,3040µm,0.3s
CAMP  Campotosto          0.41 152 ⇓P    Pg    21 17 21.7 +0.4
CAMP                                 S     Sb    21 17 28.4 -0.8
CAMP                                 AML   AML
     comp=E,3700µm,0.3s
CAMP                                 AML   AML
     comp=N,1945µm,0.2s
EL6   Elcito              0.43 356 ⇑P    Pg    21 17 21.8 +0.3
EL6                                  AML   AML
     comp=E,2915µm,1.5s
EL6                                  AML   AML
     comp=N,3090µm,0.3s
EL6                                  AML   AML
     comp=E,2920µm,1.5s
ARRO  Arrone              0.43 221 ⇑P    Pg    21 17 22.1 +0.6
ARRO                                 AML   AML
     comp=N,1590µm,0.8s
ARRO                                 AML   AML
     comp=E,2320µm,0.8s
ARRO                                 AML   AML
     comp=N,1585µm,0.8s
T1211 Morro Reatino       0.43 210 ⇑P    Pg    21 17 19.8 -1.7
T1211                                S     Sb    21 17 29.2 -0.4
TERO  Teramo              0.44 130 ⇓P    Pg    21 17 22.0 +0.3
TERO                                 AML   AML
     comp=E,2145µm,1.0s
TERO                                 AML   AML
     comp=N,2160µm,0.5s
TERO                                 AML   AML
     comp=N,2300µm,0.5s
TERO                                 AML   AML
     comp=E,2325µm,1.0s
TERO                                 AML   AML
     comp=N,2155µm,0.5s
TERO                                 AML   AML
     comp=E,2140µm,1.0s
ATCC  AVT- Casa Cast      0.47 307 ⇑P    Pg    21 17 22.7 +0.5
ATCC                                 AML   AML
     comp=N,1580µm,0.5s
ATCC                                 AML   AML
     comp=E,1610µm,0.6s
T1247 Pizzolo (AQ)        0.47 166 ⇑P    Pg    21 17 22.9 +0.5
T1247                                S     Sb    21 17 32.0 +1.1
T1247                                AML   AML
     comp=E,2540µm,0.6s
T1247                                AML   AML
     comp=N,3690µm,0.5s
FOSV  Fossato di Vic      0.48 324 ⇑P    Pg    21 17 22.9 +0.3
FOSV                                 S     Sb    21 17 31.0 -0.1
FOSV                                 AML   AML
     comp=E,1021µm,0.4s
FOSV                                 AML   AML
     comp=N,1200µm,0.3s
FOSV                                 AML   AML
     comp=E,1020µm,0.4s
FOSV                                 AML   AML
     comp=N,1205µm,0.3s
CESX  Cesi                0.51 235 ⇑P    Pg    21 17 23.4 +0.4
CESX                                 S     Sb    21 17 32.0 +0.2
CESX                                 AML   AML
     comp=N,1300µm,0.3s
CESX                                 AML   AML
     comp=E,1230µm,1.0s
MMUR  Monte Murano        0.55 349   S     Sb    21 17 34.0 +0.9
GIGS  Gran Sasso          0.55 145 ⇑P    Pg    21 17 23.8  0.0
GIGS                                 S     Sb    21 17 33.0 -0.1
GIGS                                 AML   AML
     comp=E,570µm,1.3s
GIGS                                 AML   AML
     comp=N,455µm,0.4s
GIGS                                 AML   AML
     comp=N,454µm,0.4s
TRTR  Tortoreto Alta      0.57  99 ⇓P    Pb    21 17 25.9 +0.6
TRTR                                 AML   AML
     comp=N,3120µm,0.3s
TRTR                                 AML   AML
     comp=E,3440µm,0.4s
AQU  L'Aquila             0.58 161 ⇓P    Pb    21 17 25.2 -0.3
AQU                                  AML   AML
     comp=E,1034µm,0.8s
AQU                                  AML   AML
     comp=N,1390µm,0.3s
AQU                                  AML   AML
     comp=N,1515µm,0.3s
AQU                                  AML   AML
     comp=E,1047µm,0.8s
AQU                                  AML   AML
     comp=E,1032µm,0.8s
MURB  Monte Urbino        0.58 308 ⇑P    Pg    21 17 24.8 +0.4
MURB                                 S     Sn    21 17 36.0 -1.4
MURB                                 AML   AML
     comp=E,1725µm,1.0s
MURB                                 AML   AML
     comp=N,1425µm,0.4s
MURB                                 AML   AML
     comp=E,1650µm,1.0s
MURB                                 AML   AML
     comp=N,1370µm,1.5s
PP3   Marolino            0.58  35 ⇑P    Pb    21 17 25.5  0.0
PP3                                  AML   AML
     comp=E,2010µm,0.4s
PP3                                  AML   AML
     comp=N,3535µm,0.3s
PP3                                  AML   AML
     comp=E,2145µm,0.8s
PP3                                  AML   AML
     comp=N,3570µm,0.3s
PP3                                  AML   AML
     comp=N,3530µm,0.3s
PP3                                  AML   AML
     comp=E,2010µm,0.4s
PP3                                  AML   AML
     comp=N,3575µm,0.3s
SSFR  Montelago di S      0.60 334 ⇓P    Pb    21 17 25.4 -0.4
SSFR                                 AML   AML
     comp=E,1300µm,1.5s
SSFR                                 AML   AML
     comp=N,1410µm,0.2s
SSFR                                 AML   AML
     comp=N,1280µm,0.2s
SSFR                                 AML   AML
     comp=E,1520µm,1.5s
ARVD  Arcevia             0.61 346 ⇓P    Pg    21 17 25.2 +0.2
ARVD                                 S     Sb    21 17 36.0 +1.1
ARVD                                 AML   AML
     comp=N,378µm,0.6s
ARVD                                 AML   AML
     comp=E,516µm,0.3s
ATFO  Monte Foce - G      0.63 318 ⇓P    Pg    21 17 25.6 +0.3
ATFO                                 AML   AML
     comp=E,625µm,0.8s
ATFO                                 AML   AML
     comp=N,412µm,0.7s
ATFO                                 AML   AML
     comp=N,412µm,0.7s
FIAM  Fiamignano          0.64 182 ⇑P    Pg    21 17 25.5 +0.1
FIAM                                 AML   AML
     comp=E,829µm,0.8s
FIAM                                 AML   AML
     comp=N,758µm,0.3s
FIAM                                 AML   AML
     comp=N,758µm,0.3s
ATTE  AVT- Monte Tez      0.65 297 ⇓P    Pb    21 17 26.9 +0.1
ATTE                                 S     Sb    21 17 37.0 +1.0
ATTE                                 AML   AML
     comp=N,344µm,0.4s
ATTE                                 AML   AML
     comp=E,410µm,0.4s
FRON  Frontone            0.69 334 ⇓P    Pg    21 17 26.4  0.0
FRON                                 AML   AML
     comp=N,744µm,0.5s
FRON                                 AML   AML
     comp=E,418µm,0.4s
FAGN  Fagnano             0.71 153 ⇑P    Pb    21 17 27.5 -0.3
FAGN                                 AML   AML
     comp=E,2360µm,0.3s
FAGN                                 AML   AML
     comp=N,1445µm,0.4s
VCEL  Villa Celiera       0.72 135 ⇑P    Pb    21 17 27.5 -0.4
VCEL                                 AML   AML
     comp=E,1090µm,0.3s
VCEL                                 AML   AML
     comp=N,1305µm,0.5s
VCEL                                 AML   AML
     comp=N,1307µm,0.5s
VCEL                                 AML   AML
     comp=E,1091µm,0.3s
ATVO  AVT- Monte Val      0.72 312 ⇓P    Pg    21 17 27.2 +0.1
ATVO                                 AML   AML
     comp=E,300µm,0.6s
ATVO                                 AML   AML
     comp=E,300µm,0.6s
ATVO                                 AML   AML
     comp=N,315µm,0.4s
AOI  Ancona               0.73  27 ⇓P    Pb    21 17 27.8 -0.3
AOI                                  AML   AML
     comp=E,736µm,1.4s
AOI                                  AML   AML
     comp=N,698µm,0.5s
MGAB  Montegabbione       0.76 271 ⇑P    Pg    21 17 28.0 +0.2
MGAB                                 AML   AML
     comp=N,2020µm,0.5s
MGAB                                 AML   AML
     comp=N,2040µm,0.5s
MGAB                                 AML   AML
     comp=E,765µm,0.5s
MGAB                                 AML   AML
     comp=E,677µm,0.5s
ATPI  Pietralunga -       0.77 315 ⇓P    Pg    21 17 28.2 +0.1
ATPI                                 AML   AML
     comp=E,295µm,1.3s
ATPI                                 AML   AML
     comp=N,279µm,1.2s
ATPI                                 AML   AML
     comp=E,296µm,1.3s
ATPI                                 AML   AML
     comp=N,278µm,1.2s
ATMI  Monte Miggiano      0.77 304 ⇑P    Pn    21 17 31.3 +1.0
PIEI  Pieia               0.78 325 ⇑P    Pb    21 17 28.6 -0.2
PIEI                                 AML   AML
     comp=E,304µm,0.4s
PIEI                                 AML   AML
     comp=N,242µm,1.0s
PIEI                                 AML   AML
     comp=N,242µm,1.0s
MPAG  Monte Paganucc      0.78 339 ⇓P    Pg    21 17 28.4 +0.2
MPAG                                 S     Sn    21 17 42.0 -0.3
MPAG                                 AML   AML
     comp=E,326µm,1.5s
MPAG                                 AML   AML
     comp=N,375µm,0.5s
SRES  S.Oreste - Sor      0.81 215 ⇑P    Pn    21 17 31.1 +0.3
T0110 Collepietro         0.82 145 ⇑P    Pg    21 17 28.8 -0.2
T0110                                AML   AML
     comp=E,969µm,0.4s
T0110                                AML   AML
     comp=N,1022µm,0.4s
FSSB  Fossombrone         0.83 341 ⇑P    Pg    21 17 29.3 +0.1
FSSB                                 AML   AML
     comp=E,1070µm,0.4s
FSSB                                 AML   AML
     comp=E,1070µm,0.4s
FSSB                                 AML   AML
     comp=N,1202µm,1.2s
BADI  Badiali             0.90 313 ⇑P    Pb    21 17 31.0 +0.1
SACS  San Casciano d      0.91 267 ⇑P    Pb    21 17 31.5 +0.3
SACS                                 AML   AML
     comp=N,348µm,1.1s
SACS                                 AML   AML
     comp=E,275µm,0.9s
PE3   Peglio              0.92 329   P     Pg    21 17 29.2 -1.8
MTCE  Montecelio          0.93 199 ⇑P    Pn    21 17 32.6 +0.1
MTCE                                 AML   AML
     comp=N,244µm,1.3s
MTCE                                 AML   AML
     comp=E,314µm,0.4s
CERT  Cerreto             0.96 187 ⇓P    Pg    21 17 31.4 -0.3
CERT                                 AML   AML
     comp=N,441µm,0.4s
CERT                                 AML   AML
     comp=E,642µm,0.6s
LPEL  Lama dei Pelig      1.15 138   S     Sn    21 17 53.0 +1.6
MA9   Marino              1.19 198   S     Sn    21 17 53.0 +0.7
TOLF  Tolfa               1.19 226 ⇑P    Pb    21 17 35.5 -0.4
TOLF                                 AML   AML
     comp=N,198µm,0.5s
TOLF                                 AML   AML
     comp=E,192µm,0.7s
LAV9  Lanuvio             1.27 195   S     Sn    21 17 56.0 +1.7
GIUL  Giuliano Di Ro      1.35 177   P     Pn    21 17 38.3 +0.1
GIUL                                 AML   AML
     comp=E,175µm,0.9s
GIUL                                 AML   AML
     comp=N,127µm,0.6s
APRC  Apricena            2.11 122   P     Pn    21 17 50.1 +1.3
APRC                                 S     Sg    21 18 24.0 +2.9
VENL  Venezia Lido        2.57 348   S     Sn    21 18 25.0 -1.4
MYKA  Terra Mystica       3.74   5   ePn   Pn    21 18 13.8 +2.7
     comp=N,2.6nm,0.3s
ABTA  Abfaltersbach       3.87 354   ePn   Pn    21 18 15.0 +2.1
     comp=N,11nm,0.5s
KBA   Koelnbreinsper      4.18   2   ePn   Pn    21 18 20.0 +2.8
     comp=N,3.8nm,0.5s
FETA  Feichten            4.46 338   ePn   Pn    21 18 20.5 -0.7
     comp=N,0.5nm,0.4s
BIOA  Bad Ischl, Aus      4.80   4   ePn   Pn    21 18 27.6 +1.9
     comp=N,3.5nm,0.5s
MOA   Molln               5.01   9   ePn   Pn    21 18 29.6 +1.1
     comp=N,0.7nm,0.2s
CONA  Conrad Observa      5.38  20   ePn   Pn    21 18 34.4 +0.8
     comp=N,0.5nm,0.4s
CKRC  Cesky Krumlov       5.97   7   eSN   Sn    21 19 47.1 -3.2
KHC   Kasperske Hory      6.24   3   ePN   Pn    21 18 46.7 +1.3
KHC                                  eSN   Sn    21 19 54.7 -2.1
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ROM 31 21:34:55.5±0.1, 42°.693N±0'.003×13°.273E±0'.006,
h10km, ML2.5/36, 19C-16D, Error ellipse: s-maj=0.4km
s-min=0.3km az=90.0, Central Italy

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Code  Station Name        Δ°   AZ°   Phase ID      Time      Res
                                     Op    ISC     h m s     ISC
T1204 Amatrice, Fraz      0.04 118   P     Pg    21 34 57.7 +0.1
T1204                                S     Sg    21 34 58.6 -0.5
T1204                                AML   AML
     comp=N,9500µm,1.0s
T1204                                AML   AML
     comp=N,9515µm,1.0s
T1204                                AML   AML
     comp=E,16600µm,0.4s
T1204                                AML   AML
     comp=N,9530µm,1.0s
T1204                                AML   AML
     comp=E,16650µm,0.4s
T1243 Rocca Santa Ma      0.13  88 ⇓P    Pg    21 34 59.2 +0.6
T1243                                S     Sg    21 35 01.6 +0.8
T1245 Castelsantange      0.17 339   P     Pg    21 34 60.0 +0.6
T1245                                S     Sg    21 35 03.0 +0.9
T1245                                AML   AML
     comp=E,7510µm,0.5s
T1245                                AML   AML
     comp=N,8260µm,0.9s
T1245                                AML   AML
     comp=N,7810µm,0.8s
T1245                                AML   AML
     comp=N,8255µm,0.9s
T1245                                AML   AML
     comp=E,7240µm,1.3s
T1245                                AML   AML
     comp=E,7515µm,0.5s
CAMP  Campotosto          0.19 147 ⇑P    Pg    21 35 00.2 +0.7
CAMP                                 S     Sg    21 35 03.4 +1.1
CAMP                                 AML   AML
     comp=N,1235µm,0.2s
CAMP                                 AML   AML
     comp=E,1199µm,0.7s
RM33  Pellescritta (      0.19 193 ⇑P    Pg    21 35 00.3 +0.7
RM33                                 AML   AML
     comp=N,1655µm,0.9s
RM33                                 AML   AML
     comp=N,1625µm,0.9s
RM33                                 AML   AML
     comp=E,2060µm,1.4s
RM33                                 AML   AML
     comp=N,1655µm,0.9s
RM33                                 AML   AML
     comp=N,1650µm,0.9s
RM33                                 AML   AML
     comp=E,1975µm,1.4s
RM33                                 AML   AML
     comp=E,1980µm,1.4s
RM33                                 AML   AML
     comp=E,2060µm,1.4s
LNSS  Leonessa            0.19 243 ⇑P    Pg    21 35 00.4 +0.7
LNSS                                 S     Sg    21 35 03.7 +1.2
LNSS                                 AML   AML
     comp=E,2900µm,0.3s
LNSS                                 AML   AML
     comp=N,5250µm,0.1s
T1241 Roccafluvione,      0.20  35 ⇓P    Pg    21 35 00.4 +0.7
T1241                                S     Sg    21 35 03.9 +1.2
T1241                                AML   AML
     comp=E,3320µm,0.2s
T1241                                AML   AML
     comp=N,2000µm,0.2s
T1241                                AML   AML
     comp=E,3325µm,0.2s
MMO1  Montemonaco         0.21  11   P     Pg    21 35 00.7 +0.7
MMO1                                 S     Sg    21 35 04.2 +1.3
T1247 Pizzolo (AQ)        0.25 176   P     Pg    21 35 01.0 +0.3
T1247                                S     Sb    21 35 05.6 -1.0
T1217 Poggiodomo (PG      0.25 274   P     Pg    21 35 01.1 +0.5
T1217                                S     Sg    21 35 05.4 +1.2
T1217                                AML   AML
     comp=N,1675µm,0.3s
T1217                                AML   AML
     comp=E,1430µm,1.0s
T1217                                AML   AML
     comp=N,1625µm,0.3s
T1217                                AML   AML
     comp=E,1400µm,1.0s
T1217                                AML   AML
     comp=N,1676µm,0.3s
T1217                                AML   AML
     comp=N,1674µm,0.3s
TERO  Teramo              0.25 106 ⇓P    Pg    21 35 01.3 +0.6
TERO                                 AML   AML
     comp=E,1950µm,0.6s
TERO                                 AML   AML
     comp=N,2395µm,0.5s
TERO                                 AML   AML
     comp=E,2145µm,0.6s
TERO                                 AML   AML
     comp=E,2140µm,0.6s
TERO                                 AML   AML
     comp=E,1955µm,0.6s
TERO                                 AML   AML
     comp=N,2400µm,0.5s
TERO                                 AML   AML
     comp=N,2490µm,0.5s
T1216 Preci, Frazion      0.27 317 ⇑P    Pg    21 35 01.6 +0.5
T1216                                AML   AML
     comp=E,8715µm,1.6s
T1216                                AML   AML
     comp=N,10600µm,1.5s
T1216                                AML   AML
     comp=E,8700µm,1.6s
T1216                                AML   AML
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comp=N,10600μm,1.5s
T1216 AML AML
comp=N,10580μm,1.5s
T1216 AML AML
comp=E,8665μm,1.6s
T1216 AML AML
comp=N,10550μm,1.5s
AM05 Amandola Campo 0.29 12 P Pb 21 35 02.5 -0.3
AM05 AML AML
comp=N,1030μm,0.2s
AM05 AML AML
comp=E,574μm,0.1s
AM05 AML AML
comp=E,2930μm,0.2s
AM05 AML AML
comp=N,218μm,0.1s
AM05 AML AML
comp=N,1025μm,0.2s
T1256 Bolognola (MC) 0.32 354 ⇑P Pg 21 35 02.1 +0.2
T1256 AML AML
comp=E,2165μm,0.2s
T1256 AML AML
comp=N,3390μm,0.5s
T1256 AML AML
comp=N,3200μm,0.6s
T1256 AML AML
comp=E,2170μm,0.2s
T1256 AML AML
comp=N,3195μm,0.6s
T1256 AML AML
comp=E,2275μm,0.2s
T1215 Vallo di Nera, 0.32 290 ⇑P Pg 21 35 02.4 +0.5
T1215 S Sg 21 35 07.2 +1.1
T1215 AML AML
comp=E,1880μm,0.5s
T1215 AML AML
comp=N,1515μm,0.3s
T1215 AML AML
comp=E,1985μm,0.5s
T1215 AML AML
comp=N,1422μm,0.3s
T1215 AML AML
comp=E,1880μm,0.4s
T1215 AML AML
comp=N,1510μm,0.3s
T1215 AML AML
comp=E,1985μm,0.4s
T1215 AML AML
comp=N,1424μm,0.3s
T1215 AML AML
comp=N,1515μm,0.3s
T1215 AML AML
comp=N,1423μm,0.3s
GIGS Gran Sasso 0.33 138 P Pb 21 35 02.8 -0.7
GIGS AML AML
comp=N,257μm,0.5s
GIGS AML AML
comp=E,196μm,1.0s
T1211 Morro Reatino 0.35 243 P Pb 21 35 03.4 -0.4
T1211 S Sb 21 35 09.0 -0.4
AQU L'Aquila 0.35 164 ⇑P Pb 21 35 04.3 +0.4
AQU AML AML
comp=N,683μm,0.4s
AQU AML AML
comp=E,707μm,0.4s
AQU AML AML
comp=N,686μm,0.4s
AQU AML AML
comp=N,684μm,0.4s
AQU AML AML
comp=E,722μm,0.3s
GUMA Gualdo di Mace 0.37 7 ⇓P Pb 21 35 04.1 -0.1
GUMA AML AML
comp=E,2710μm,0.5s
GUMA AML AML
comp=N,3015μm,0.3s
GUMA AML AML
comp=N,2755μm,0.4s
GUMA AML AML
comp=E,2715μm,0.5s
GUMA AML AML
comp=E,3070μm,1.1s
GUMA AML AML
comp=N,3010μm,0.3s
OFFI Offida 0.39 51 ⇑P Pb 21 35 04.8 +0.3
OFFI AML AML
comp=N,938μm,0.6s
OFFI AML AML
comp=E,944μm,0.3s
ARRO Arrone 0.39 253 ⇓P Pg 21 35 03.8 +0.6
ARRO AML AML
comp=N,458μm,1.0s
ARRO AML AML
comp=E,387μm,0.4s
ARRO AML AML
comp=N,458μm,1.0s
FIAM Fiamignano 0.44 195 S Sb 21 35 12.0 -0.1
TRTR Tortoreto Alta 0.49 76 ⇓P Pb 21 35 06.9 +0.7
VCEL Villa Celiera 0.51 125 ⇑P Pb 21 35 06.6 -0.1
VCEL S Sb 21 35 16.0 +1.7
VCEL AML AML
comp=E,909μm,0.5s
VCEL AML AML
comp=N,674μm,1.2s
VCEL AML AML
comp=E,910μm,0.5s
CESX Cesi 0.52 261 P Pg 21 35 05.8 +0.2
CESX S Sg 21 35 12.7 +0.3
ASSB Assisi San Ben 0.57 308 ⇓P Pg 21 35 06.8 +0.2
ASSB S Sb 21 35 15.5 -0.4
ASSB AML AML
comp=N,1238μm,1.1s
ASSB AML AML
comp=E,2265μm,0.2s
T0110 Collepietro 0.60 141 ⇓P Pg 21 35 07.6 +0.5
T0110 AML AML
comp=N,694μm,1.4s
T0110 AML AML
comp=E,555μm,0.5s
SNTG Esanatoglia 0.61 337 ⇑P Pg 21 35 07.7 +0.3
SNTG AML AML
comp=N,632μm,0.6s
SNTG AML AML
comp=E,852μm,0.5s
SNTG AML AML
comp=N,632μm,0.5s
SNTG AML AML
comp=N,712μm,0.6s
SNTG AML AML
comp=E,880μm,0.5s
SNTG AML AML
comp=E,851μm,0.5s
EL6 Elcito 0.65 349 ⇑P Pg 21 35 08.5 +0.4
EL6 AML AML
comp=E,2040μm,1.4s
EL6 AML AML
comp=N,2290μm,0.2s
EL6 AML AML
comp=E,2050μm,1.4s
EL6 AML AML
comp=N,2288μm,0.2s
ATCC AVT- Casa Cast 0.68 317 ⇑P Pg 21 35 08.8 +0.2
ATCC S Sg 21 35 18.0 +0.5
FOSV Fossato di Vic 0.71 328 ⇑P Pg 21 35 09.4 +0.1
FOSV S Sg 21 35 18.0 -0.5
FOSV AML AML
comp=E,468μm,1.0s
FOSV AML AML
comp=N,451μm,0.3s
FOSV AML AML
comp=N,450μm,0.3s
SRES S.Oreste - Sor 0.72 231 ⇓P Pb 21 35 10.5 +0.3
SRES AML AML
comp=E,124μm,0.8s
SRES AML AML
comp=N,134μm,0.5s
PP3 Marolino 0.73 20 ⇑P Pn 21 35 11.3 -0.6
PP3 AML AML
comp=E,514μm,1.6s
PP3 AML AML
comp=N,492μm,0.4s
PP3 AML AML
comp=E,514μm,1.6s
CERT Cerreto 0.77 196 ⇓P Pg 21 35 10.2 -0.2
CERT AML AML
comp=N,188μm,0.4s
CERT AML AML
comp=E,198μm,0.5s
MTCE Montecelio 0.78 211 P Pb 21 35 11.6 +0.5
MTCE AML AML
comp=E,103μm,0.6s
MTCE AML AML
comp=N,77μm,0.5s
MURB Monte Urbino 0.79 316 ⇑P Pg 21 35 11.0 +0.2
MURB AML AML
comp=E,996μm,0.3s
MURB AML AML
comp=N,660μm,0.3s
MURB AML AML
comp=E,1008μm,0.3s
MURB AML AML
comp=N,673μm,0.9s
MURB AML AML
comp=E,1008μm,0.3s
SSFR Montelago di S 0.83 334 ⇑P Pb 21 35 11.9 -0.1
SSFR AML AML
comp=N,777μm,0.7s
SSFR AML AML
comp=N,669μm,0.3s
SSFR AML AML
comp=E,660μm,0.1s
SSFR AML AML
comp=E,668μm,0.2s
ARVD Arcevia 0.84 343 ⇑P Pg 21 35 11.9 +0.2
ARVD S Sg 21 35 22.0 -0.7
ARVD AML AML
comp=E,325μm,0.6s
ARVD AML AML
comp=N,260μm,0.2s
ATTE AVT- Monte Tez 0.84 307 ⇓P Pn 21 35 14.3 +0.8
ATFO Monte Foce - G 0.85 323 ⇓P Pg 21 35 12.0 +0.1
ATFO AML AML
comp=E,220μm,0.3s
ATFO AML AML
comp=N,246μm,0.3s
ATFO AML AML
comp=N,246μm,0.3s
FRON Frontone 0.92 334 ⇓P Pg 21 35 13.0 -0.1
FRON AML AML
comp=E,198μm,0.2s
FRON AML AML
comp=N,218μm,0.3s
ATVO AVT- Monte Val 0.94 318 ⇓P Pg 21 35 13.3 -0.2
ATVO AML AML
comp=E,140μm,0.4s
ATVO AML AML
comp=N,116μm,0.5s
PIEI Pieia 1.00 328 ⇑P Pb 21 35 14.9 -0.1
PIEI AML AML
comp=E,143μm,0.3s
PIEI AML AML
comp=N,91μm,1.5s
PIEI AML AML
comp=N,91μm,1.5s
MPAG Monte Paganucc 1.01 338 P Pg 21 35 14.5 -0.4
FSSB Fossombrone 1.06 340 ⇓P Pb 21 35 16.2 +0.2
FSSB AML AML
comp=N,665μm,0.3s
FSSB AML AML
comp=E,457μm,0.4s
GIUL Giuliano Di Ro 1.13 181 P Pn 21 35 18.7 +1.3
GIUL AML AML
comp=E,46μm,0.6s
GIUL AML AML
comp=N,55μm,0.5s
CAFI Castiglion Fio 1.15 304 ⇑P Pn 21 35 18.0 +0.3
CAFI AML AML
comp=N,96μm,0.8s
CAFI AML AML
comp=E,124μm,0.7s
PE3 Peglio 1.15 331 ⇓P Pb 21 35 15.1 -2.5
LIK San Giovanni I 1.21 170 S Sn 21 35 37.0 +2.2
PAOL Paolisi 1.92 149 P Pb 21 35 29.9 -0.8
APRC Apricena 1.93 118 P Pg 21 35 34.7 +2.2

ROM 31 21:35:23.6±0.1, 42°.895N±0°.003×13°.007E±0°.005, h10km, ML2.6/8, 13C-7D, Error ellipse: s-maj=0.4km s-min=0.2km az=308.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.01**	**117**	P	Pg	21 35 25.8	+0.3
T1216				S	Sg	21 35 27.1	+0.3
T1216				AML	AML		
	comp=E,8705μm,1.6s						
T1216				AML	AML		
	comp=N,10600μm,1.5s						
T1216				AML	AML		
	comp=E,8695μm,1.6s						
T1216				AML	AML		
	comp=N,10600μm,1.5s						
T1216				AML	AML		
	comp=E,8690μm,1.6s						
T1216				AML	AML		
	comp=N,10580μm,1.5s						
T1216				AML	AML		
	comp=N,10550μm,1.5s						
FEMA	**Monte Fema**	**0.07**	**25**	⇓P	Pg	21 35 26.5	+0.4
FEMA				S	Sg	21 35 28.3	+0.4
FEMA				AML	AML		
	comp=E,38550μm,0.6s						
FEMA				AML	AML		
	comp=N,32400μm,0.1s						
FEMA				AML	AML		
	comp=N,32350μm,0.1s						
FEMA				AML	AML		
	comp=E,38550μm,0.5s						
FEMA				AML	AML		
	comp=N,32400μm,0.1s						
T1215	**Vallo di Nera,**	**0.14**	**228**	P	Pg	21 35 27.4	+0.5
T1215				S	Sg	21 35 30.0	+0.9
T1245	**Castelsantange**	**0.14**	**106**	P	Pg	21 35 27.3	+0.4
T1245				S	Sg	21 35 30.2	+0.9
T1245				AML	AML		
	comp=E,6720μm,0.3s						
T1245				AML	AML		
	comp=N,6775μm,1.6s						
T1245				AML	AML		
	comp=E,5625μm,0.3s						
T1245				AML	AML		
	comp=N,7050μm,1.6s						
T1245				AML	AML		
	comp=N,6780μm,1.6s						
FDMO	**Fiordimonte**	**0.15**	**23**	⇑P	Pg	21 35 27.6	+0.5
FDMO				S	Sg	21 35 30.3	+0.8
FDMO				AML	AML		
	comp=E,15750μm,0.1s						
FDMO				AML	AML		
	comp=N,9040μm,0.2s						
T1217	**Poggiodomo (PG**	**0.19**	**197**	P	Pg	21 35 28.3	+0.5
T1217				S	Sg	21 35 31.7	+1.1
T1256	**Bolognola (MC)**	**0.20**	**55**	⇑P	Pg	21 35 28.3	+0.4
T1256				S	Sg	21 35 31.8	+1.0
MMO1	**Montemonaco**	**0.23**	**89**	⇑P	Pg	21 35 28.9	+0.4
SEF1	**Sefro**	**0.26**	**350**	⇓P	Pg	21 35 29.4	+0.5
AM05	**Amandola Campo**	**0.27**	**72**	⇑P	Pg	21 35 29.6	+0.5
GUMA	**Gualdo di Mace**	**0.29**	**55**	⇑P	Pg	21 35 30.2	+0.7
LNSS	**Leonessa**	**0.29**	**175**	⇓P	Pg	21 35 30.2	+0.6
LNSS				S	Sb	21 35 35.0	-1.0
ASSB	**Assisi San Ben**	**0.29**	**300**	⇑P	Pg	21 35 29.8	+0.2
ASSB				AML	AML		
	comp=E,2265μm,0.2s						
ASSB				AML	AML		
	comp=N,1238μm,1.1s						
T1241	**Roccafluvione,**	**0.31**	**97**	⇑P	Pg	21 35 30.3	+0.3
T1204	**Amatrice, Fraz**	**0.32**	**134**	P	Pb	21 35 30.8	-0.6
T1204				S	Sb	21 35 35.6	-1.1
GAG1	**Gagliole**	**0.35**	**7**	P	Pg	21 35 31.2	+0.7
SMA1	**SAN MARTINO**	**0.36**	**137**	⇑P	Pb	21 35 32.9	+0.7
ARRO	**Arrone**	**0.36**	**209**	⇓P	Pg	21 35 31.3	+0.5
SNTG	**Esanatoglia**	**0.36**	**352**	⇑P	Pg	21 35 31.2	+0.3
SNTG				AML	AML		
	comp=E,852μm,0.5s						
SNTG				AML	AML		
	comp=N,632μm,0.6s						
SNTG				AML	AML		
	comp=N,712μm,0.6s						
SNTG				AML	AML		
	comp=E,851μm,0.5s						
SNTG				AML	AML		
	comp=E,880μm,0.5s						
SNTG				AML	AML		
	comp=N,632μm,0.5s						
T1211	**Morro Reatino**	**0.38**	**197**	⇓P	Pg	21 35 31.7	+0.5
T1243	**Rocca Santa Ma**	**0.38**	**121**	P	Pg	21 35 31.4	+0.2
ATCC	**AVT- Casa Cast**	**0.40**	**317**	⇓P	Pg	21 35 31.9	+0.5
CESX	**Cesi**	**0.42**	**228**	⇑P	Pg	21 35 32.2	+0.2
CESX				AML	AML		
	comp=E,342μm,0.3s						
CESX				AML	AML		
	comp=N,391μm,0.4s						
FOSV	**Fossato di Vic**	**0.44**	**336**	⇓P	Pb	21 35 33.9	+0.4
EL6	**Elcito**	**0.44**	**9**	⇑P	Pg	21 35 32.5	+0.2
EL6				AML	AML		
	comp=E,2040μm,1.4s						
EL6				AML	AML		
	comp=N,2290μm,0.2s						
TERO	**Teramo**	**0.52**	**122**	⇑P	Pg	21 35 34.0	+0.2
ARVD	**Arcevia**	**0.60**	**355**	⇑P	Pg	21 35 35.4	0.0
ARVD				S	Sb	21 35 46.0	+1.1
ARVD				AML	AML		
	comp=E,325μm,0.6s						
ARVD				AML	AML		
	comp=N,260μm,0.2s						
PIEI	**Pieia**	**0.73**	**332**	S	Sn	21 35 50.0	-1.3
MPAG	**Monte Paganucc**	**0.76**	**346**	S	Sn	21 35 51.0	-1.0
FSSB	**Fossombrone**	**0.81**	**348**	S	Sn	21 35 53.0	-0.4

*IDC **31** 21:35:54.7±15.0, 36°.11N×70°.67E, h233km±187km, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=106.9km s-min=54.5km az=100.0*
*NNC **31** 21:35:58.5±5.7, 36°.77N×70°.42E, h164km±103km, mb3.1, mpv4.0, Error ellipse: s-maj=80.7km s-min=32.4km az=42.0*

ISC 31 21:35:56.0±1.0, 36°.60N±0°.10×70°.3E±0°.1, h204km, n20, σ1§09/21, mb3.5/3, 2C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.13**	**25**	P	**Pn**	**21 37 25.1**	**-0.2**
	SNR=102						
KK31	**Karatay Array**	**6.50**	**2**	P	**Pn**	**21 37 29.6**	**-0.1**
	1.4nm,0.2s,baz=201,slow=19,SNR=44						
KK31				⇑S	**S**	**21 38 41.6**	**-2.3**
	1.1nm,0.3s,baz=192,slow=15,SNR=3.9						
UCH	**Uchtor**	**6.52**	**29**	P	**Pn**	**21 37 30.1**	**-0.2**
	SNR=44						
EKS2	**Erkin-Say**	**6.64**	**23**	P	**Pn**	**21 37 31.8**	**+0.3**
	SNR=16						
AAK	**Ala-Archa**	**6.86**	**27**	P	**Pn**	**21 37 34.6**	**+0.1**
	SNR=12						
KBK	**Karagaybulak**	**7.05**	**29**	P	**Pn**	**21 37 37.1**	**+0.2**
	SNR=5.2						
TKM2	**Tokmak 2**	**7.54**	**31**	P	**Pn**	**21 37 43.5**	**+0.2**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.54**	**31**	⇓P	**Pn**	**21 37 42.9**	**-0.4**
	12nm,0.5s						
MKAR	**Makanchi Array**	**13.57**	**38**	P	**Pn**	**21 39 00.6**	**+0.3**
	1.0nm,0.9s,baz=209,slow=12,SNR=2.9						
AB31	**Akbulak array**	**14.72**	**332**	⇑P	**P**	**21 39 17.4**	**+2.2**
	0.5nm,0.3s,baz=146,slow=12,SNR=46						
GKN	**Gorkha**	**14.86**	**121**	*e*P	**P**	**21 39 17.7**	**+0.5**
	4.9nm,0.4s						
DMN	**Daman**	**15.43**	**121**	*e*P	**P**	**21 39 23.9**	**+0.3**
	4.4nm,0.6s						
PKIN	**Phulchoki**	**15.65**	**121**	*e*P	**P**	**21 39 26.1**	**0.0**
	3.1nm,0.3s						
PKI	**Pulchoki**	**15.66**	**121**	*e*P	**Pn**	**21 39 26.7**	**+0.3**
	5.7nm,0.5s						
JIRN	**Jiri**	**16.15**	**119**	*e*P	**P**	**21 39 32.2**	**+0.5**
	7.7nm,0.5s						
RAMN	**Ramite**	**16.88**	**120**	*e*P	**P**	**21 39 37.5**	**-2.0**
	6.8nm,0.7s						
ZALV	**Zalesovo Beam**	**20.08**	**26**	P	**P**	**21 40 13.6**	**-0.1**
	0.8nm,0.3s,baz=228,slow=12,SNR=4.4						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**37.07**	**326**	P	**P**	**21 42 46.7**	**+0.6**
	0.9nm,0.7s,baz=111,slow=10,SNR=4.9						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**40.83**	**338**	P	**P**	**21 43 18.2**	**+1.0**
	2.1nm,0.9s,baz=105,slow=6.9,SNR=5.3						
	2.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.12**	**268**	P	**P**	**21 46 13.1**	**-2.1**
	0.2nm,0.4s,baz=56,slow=5.6,SNR=4.4						
	0.2nm,0.4s						

ROM 31 21:39:41.7±0.1, 42°.831N±0°.005×13°.208E±0°.006, h6km, ML2.4/32, 15C-16D, Error ellipse: s-maj=0.5km s-min=0.3km az=33.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.03**	**330**	P	Pg	21 39 43.6	+0.4
T1245				S	Sg	21 39 43.6	-0.6
MMO1	**Montemonaco**	**0.11**	**52**	⇓P	Pg	21 39 44.3	+0.1
MMO1				S	Sg	21 39 46.3	+0.4
T1216	**Preci, Frazion**	**0.15**	**293**	⇑P	Pg	21 39 45.5	+0.7
T1216				S	Sg	21 39 48.3	+1.3
T1216				AML	AML		
	comp=E,3445μm,0.3s						
T1216				AML	AML		
	comp=N,3525μm,0.4s						
T1216				AML	AML		
	comp=E,3445μm,0.3s						
T1216				AML	AML		
	comp=N,3520μm,0.3s						
T1241	**Roccafluvione,**	**0.17**	**81**	⇑P	Pg	21 39 44.8	-0.4
T1241				S	Sg	21 39 48.6	+1.2
T1241				AML	AML		
	comp=E,3275μm,0.2s						
T1241				AML	AML		
	comp=N,1375μm,1.4s						
T1241				AML	AML		
	comp=E,3315μm,0.2s						
T1241				AML	AML		
	comp=N,1415μm,1.1s						
T1241				AML	AML		
	comp=E,3280μm,0.2s						
T1241				AML	AML		
	comp=N,1420μm,0.3s						
T1241				AML	AML		
	comp=E,3320μm,0.2s						
T1241				AML	AML		
	comp=N,1420μm,1.1s						
T1241				AML	AML		
	comp=N,1420μm,0.3s						
T1204	**Amatrice, Fraz**	**0.17**	**153**	⇑P	Pg	21 39 46.0	+0.7
T1204				AML	AML		
	comp=E,3552μm,0.4s						
T1204				AML	AML		
	comp=N,2320μm,0.2s						
T1204				AML	AML		
	comp=E,3544μm,0.4s						
T1204				AML	AML		
	comp=N,2315μm,0.2s						
T1256	**Bolognola (MC)**	**0.18**	**4**	⇓P	Pg	21 39 45.8	+0.5
T1256				S	Sg	21 39 48.6	+0.8
T1256				AML	AML		
	comp=E,1210μm,0.5s						
T1256				AML	AML		
	comp=N,1125μm,0.6s						
T1256				AML	AML		
	comp=E,1215μm,0.5s						
T1256				AML	AML		
	comp=N,1132μm,1.5s						
T1256				AML	AML		
	comp=E,1330μm,0.7s						
T1256				AML	AML		
	comp=E,1355μm,0.7s						
T1256				AML	AML		
	comp=E,1335μm,0.7s						
T1256				AML	AML		
	comp=N,1835μm,0.4s						
T1256				AML	AML		
	comp=E,1350μm,0.7s						
T1256				AML	AML		
	comp=N,1985μm,0.4s						
AM05	**Amandola Campo**	**0.18**	**36**	⇓P	Pg	21 39 46.0	+0.7
AM05				S	Sg	21 39 49.0	+1.1
AM05				AML	AML		
	comp=N,1325μm,0.2s						
AM05				AML	AML		
	comp=E,3190μm,0.1s						
AM05				AML	AML		
	comp=N,341μm,0.1s						
AM05				AML	AML		

	comp=E,1060μm,0.4s					
AM05				AML	AML	
	comp=E,3195μm,0.1s					
AM05				AML	AML	
	comp=N,1320μm,0.2s					
T1243	**Rocca Santa Ma**	**0.22 127**		P	Pg	21 39 46.6 +0.5
T1243				S	Sg	21 39 50.8 +1.7
FDMO	**Fiordimonte**	**0.22 337**		P	Pg	21 39 46.7 +0.6
FDMO				S	Sg	21 39 50.5 +1.3
FDMO				AML	AML	
	comp=N,2400μm,0.2s					
FDMO				AML	AML	
	comp=E,1385μm,0.2s					
GUMA	**Gualdo di Mace**	**0.25 22**	⇑	P	Pg	21 39 47.5 +0.8
GUMA				S	Sg	21 39 52.0 +2.0
GUMA				AML	AML	
	comp=N,3320μm,0.5s					
GUMA				AML	AML	
	comp=E,2415μm,0.4s					
GUMA				AML	AML	
	comp=E,3390μm,0.3s					
GUMA				AML	AML	
	comp=N,3170μm,0.5s					
T1215	**Vallo di Nera,**	**0.25 263**	⇓	P	Pg	21 39 47.0 +0.3
T1215				S	Sg	21 39 51.6 +1.6
T1215				AML	AML	
	comp=E,1495μm,0.4s					
T1215				AML	AML	
	comp=E,1555μm,0.4s					
T1215				AML	AML	
	comp=E,1495μm,0.4s					
T1215				AML	AML	
	comp=N,2185μm,0.3s					
T1215				AML	AML	
	comp=N,2160μm,0.3s					
LNSS	**Leonessa**	**0.26 208**		S	Sb	21 39 53.0 -0.6
RM33	**Pellescritta (**	**0.32 179**	⇑	P	Pg	21 39 48.1 +0.1
RM33				AML	AML	
	comp=E,2010μm,1.4s					
RM33				AML	AML	
	comp=N,1501μm,0.2s					
RM33				AML	AML	
	comp=N,1455μm,0.3s					
RM33				AML	AML	
	comp=N,1500μm,0.2s					
RM33				AML	AML	
	comp=E,1965μm,0.3s					
RM33				AML	AML	
	comp=E,2010μm,1.4s					
CAMP	**Campotosto**	**0.33 153**	⇓	P	Pg	21 39 48.7 +0.5
CAMP				AML	AML	
	comp=E,579μm,0.5s					
CAMP				AML	AML	
	comp=N,558μm,0.2s					
CAMP				AML	AML	
	comp=N,558μm,0.2s					
CAMP				AML	AML	
	comp=E,578μm,0.5s					
TERO	**Teramo**	**0.36 125**	⇑	P	Pg	21 39 49.1 +0.4
TERO				AML	AML	
	comp=N,1010μm,0.6s					
TERO				AML	AML	
	comp=N,1086μm,0.6s					
TERO				AML	AML	
	comp=E,686μm,0.1s					
TERO				AML	AML	
	comp=N,1010μm,0.6s					
TERO				AML	AML	
	comp=E,760μm,0.1s					
TERO				AML	AML	
	comp=N,1087μm,0.6s					
OFFI	**Offida**	**0.37 73**	⇑	P	Pb	21 39 50.3 -0.3
OFFI				AML	AML	
	comp=E,744μm,0.3s					
OFFI				AML	AML	
	comp=E,745μm,0.7s					
OFFI				AML	AML	
	comp=N,902μm,0.6s					
T1247	**Pizzolo (AQ)**	**0.40 170**	⇑	P	Pb	21 39 50.8 -0.3
T1247				AML	AML	
	comp=E,1375μm,0.1s					
T1247				AML	AML	
	comp=E,1370μm,0.1s					
T1247				AML	AML	
	comp=N,1460μm,0.6s					
T1211	**Morro Reatino**	**0.40 221**		S	Sb	21 39 57.0 -0.5
ARRO	**Arrone**	**0.41 232**	⇓	P	Pg	21 39 50.2 +0.5
ARRO				AML	AML	
	comp=E,1235μm,0.3s					
ARRO				AML	AML	
	comp=N,1255μm,0.2s					
ASSB	**Assisi San Ben**	**0.46 298**	⇓	P	Pg	21 39 50.8 +0.3
ASSB				AML	AML	
	comp=N,790μm,1.5s					
ASSB				AML	AML	
	comp=E,692μm,1.2s					
GIGS	**Gran Sasso**	**0.47 145**		P	Pg	21 39 51.2 +0.5
GIGS				AML	AML	
	comp=E,182μm,0.3s					
GIGS				AML	AML	
	comp=N,178μm,0.4s					
SNTG	**Esanatoglia**	**0.47 335**		P	Pg	21 39 51.1 +0.4
SNTG				S	Sb	21 39 58.7 -0.8
SNTG				AML	AML	
	comp=N,244μm,0.9s					
SNTG				AML	AML	
	comp=E,232μm,0.1s					
EL6	**Elcito**	**0.50 351**	⇑	P	Pg	21 39 52.0 +0.5
EL6				S	Sb	21 40 01.0 +0.3
ATCC	**AVT- Casa Cast**	**0.55 311**	⇓	P	Pg	21 39 52.6 +0.4
ATCC				AML	AML	
	comp=E,404μm,0.5s					
ATCC				AML	AML	
	comp=E,403μm,0.5s					
ATCC				AML	AML	
	comp=N,401μm,0.6s					
FIAM	**Fiamignano**	**0.57 187**	⇑	P	Pg	21 39 52.9 +0.2
FIAM				S	Sb	21 40 03.0 +0.6
FIAM				AML	AML	
	comp=N,370μm,0.7s					
FIAM				AML	AML	
	comp=E,313μm,0.8s					
FOSV	**Fossato di Vic**	**0.57 325**	⇓	P	Pg	21 39 52.9 +0.3
FOSV				S	Sb	21 40 01.8 -0.6
FOSV				AML	AML	
	comp=E,224μm,0.8s					
FOSV				AML	AML	
	comp=N,247μm,0.4s					
FOSV				AML	AML	
	comp=E,224μm,0.8s					
FOSV				AML	AML	
	comp=N,246μm,0.4s					
PP3	**Marolino**	**0.62 28**		S	Sn	21 40 06.0 -1.2
MURB	**Monte Urbino**	**0.66 311**		P	Pg	21 39 54.7 +0.2
MURB				AML	AML	
	comp=E,619μm,1.1s					
MURB				AML	AML	
	comp=N,1092μm,0.3s					
MURB				AML	AML	
	comp=E,636μm,1.1s					
MURB				AML	AML	
	comp=N,1050μm,0.3s					
MURB				AML	AML	
	comp=N,1045μm,0.3s					
SSFR	**Montelago di S**	**0.68 333**	⇑	P	Pb	21 39 55.5 -0.5
SSFR				AML	AML	
	comp=E,389μm,1.2s					
SSFR				AML	AML	
	comp=N,345μm,0.2s					
ARVD	**Arcevia**	**0.69 344**	⇑	P	Pg	21 39 55.5 +0.4
ARVD				S	Sn	21 40 08.0 -1.2
ARVD				AML	AML	
	comp=N,94μm,0.5s					
ARVD				AML	AML	
	comp=E,136μm,0.5s					
ARVD				AML	AML	
	comp=N,94μm,0.5s					
ATFO	**Monte Foce - G**	**0.71 319**	⇓	P	Pg	21 39 55.5 +0.1
ATFO				AML	AML	
	comp=E,178μm,0.7s					
ATFO				AML	AML	
	comp=N,179μm,0.4s					
ATFO				AML	AML	
	comp=E,177μm,0.7s					
ATFO				AML	AML	
	comp=N,178μm,0.4s					
T0110	**Collepietro**	**0.74 145**	⇑	P	Pg	21 39 55.7 -0.2
T0110				AML	AML	
	comp=E,397μm,0.7s					
T0110				AML	AML	
	comp=N,314μm,1.1s					
SRES	**S.Oreste - Sor**	**0.79 221**		S	Sn	21 40 11.0 -0.4
ATVO	**AVT- Monte Val**	**0.81 313**	⇓	P	Pg	21 39 57.0 -0.1
ATVO				S	Sn	21 40 11.0 -0.9
ATVO				AML	AML	
	comp=E,172μm,0.4s					
ATVO				AML	AML	
	comp=N,112μm,0.4s					
ATVO				AML	AML	
	comp=N,112μm,0.4s					
ATVO				AML	AML	
	comp=E,172μm,0.4s					
MGAB	**Montegabbione**	**0.81 276**	⇓	P	Pb	21 39 57.8 -0.4
MGAB				AML	AML	
	comp=E,587μm,0.6s					
MGAB				AML	AML	
	comp=N,530μm,0.4s					
MGAB				AML	AML	
	comp=E,527μm,0.6s					
MGAB				AML	AML	
	comp=N,580μm,0.4s					
MGAB				AML	AML	
	comp=N,530μm,0.4s					
ATPI	**Pietralunga -**	**0.85 317**	⇓	P	Pg	21 39 58.4 +0.3
ATPI				AML	AML	
	comp=E,104μm,1.1s					
ATPI				AML	AML	
	comp=N,138μm,0.5s					
ATPI				AML	AML	
	comp=E,104μm,1.1s					
ATPI				AML	AML	
	comp=N,138μm,0.5s					
PIEI	**Pieia**	**0.86 325**	⇑	P	Pg	21 39 58.3 +0.1
PIEI				AML	AML	
	comp=E,90μm,0.4s					
PIEI				AML	AML	
	comp=N,60μm,0.3s					
PIEI				AML	AML	
	comp=E,109μm,1.4s					
PIEI				AML	AML	
	comp=N,62μm,0.5s					
MPAG	**Monte Paganucc**	**0.86 338**	⇓	P	Pg	21 39 58.7 +0.4
MPAG				S	Sn	21 40 13.0 -0.4
MPAG				AML	AML	
	comp=E,98μm,1.4s					
MPAG				AML	AML	
	comp=N,122μm,1.0s					
MPAG				AML	AML	
	comp=N,122μm,1.0s					
MPAG				AML	AML	
	comp=E,97μm,1.4s					
FSSB	**Fossombrone**	**0.92 340**	⇑	P	Pb	21 40 00.3 +0.3
FSSB				AML	AML	
	comp=N,432μm,0.4s					
FSSB				AML	AML	
	comp=E,257μm,0.4s					
PE3	**Peglio**	**1.01 329**	⇓	P	Pn	21 40 03.0 +0.6
CAFI	**Castiglion Fio**	**1.04 299**	⇓	P	Pb	21 40 02.1 0.0
CAFI				AML	AML	
	comp=E,109μm,0.6s					
CAFI				AML	AML	
	comp=N,121μm,0.5s					
VIVA	**Pratoni del Vi**	**1.13 197**		P	Pn	21 40 05.0 +0.9
FIU	**Minerbio Fiu**	**2.19 326**		S	Sn	21 40 45.0 -1.1

ROM 31 21:40:13.2±0.1, 42°.763N±0°.003×13°.058E±0°.004, h10km, ML2.5/20, 13C-8D, Error ellipse: s-maj=0.3km s-min=0.3km az=334.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1217	**Poggiodomo (PG**	**0.11**	**242**	⇑ P	Pg	21 40 16.4	+0.4
T1217				S	Sg	21 40 18.6	+0.7
T1217				AML	AML		
	comp=E,4655μm,1.3s						
T1217				AML	AML		
	comp=N,4605μm,0.2s						
T1217				AML	AML		
	comp=E,4455μm,0.3s						
T1217				AML	AML		
	comp=N,4725μm,0.2s						
T1217				AML	AML		
	comp=E,4655μm,1.2s						
T1217				AML	AML		
	comp=E,4450μm,0.3s						
T1217				AML	AML		
	comp=N,4725μm,0.2s						
T1217				AML	AML		
	comp=N,4600μm,0.2s						
T1217				AML	AML		
	comp=E,4455μm,0.3s						
T1216	**Preci, Frazion**	**0.13**	**347**	AML	AML		
	comp=N,2835μm,0.5s						
T1216				AML	AML		
	comp=E,2390μm,0.6s						
T1216				AML	AML		
	comp=N,2818μm,0.5s						
T1216				AML	AML		
	comp=E,2385μm,0.6s						
T1245	**Castelsantange**	**0.13**	**45**	P	Pg	21 40 16.8	+0.4
T1245				S	Sg	21 40 19.4	+0.6
T1245				AML	AML		
	comp=N,9000μm,0.4s						
T1245				AML	AML		
	comp=N,9005μm,0.4s						
T1245				AML	AML		
	comp=E,6210μm,1.1s						
T1245				AML	AML		
	comp=E,6360μm,1.1s						
T1245				AML	AML		
	comp=N,8500μm,0.4s						
T1215	**Vallo di Nera,**	**0.14**	**286**	⇑ P	Pg	21 40 17.0	+0.5
T1215				S	Sg	21 40 19.6	+0.7
T1215				AML	AML		
	comp=E,1495μm,0.4s						
T1215				AML	AML		
	comp=E,1550μm,0.4s						
T1215				AML	AML		
	comp=N,2185μm,0.3s						
T1215				AML	AML		
	comp=N,2160μm,0.3s						
T1215				AML	AML		
	comp=N,2160μm,0.3s						
T1215				AML	AML		
	comp=E,1554μm,0.5s						
T1215				AML	AML		
	comp=E,1495μm,0.4s						
LNSS	**Leonessa**	**0.16**	**185**	⇓ P	Pg	21 40 17.4	+0.6
LNSS				S	Sg	21 40 20.2	+0.9
LNSS				AML	AML		
	comp=N,12400μm,0.7s						
LNSS				AML	AML		
	comp=E,5750μm,0.8s						
T1204	**Amatrice, Fraz**	**0.21**	**114**	⇓ P	Pg	21 40 18.3	+0.7
T1204				S	Sg	21 40 22.1	+1.4
T1204				AML	AML		
	comp=E,3552μm,0.4s						
T1204				AML	AML		
	comp=N,2320μm,0.2s						
T1204				AML	AML		
	comp=E,3544μm,0.4s						
T1204				AML	AML		
	comp=N,2315μm,0.2s						
SMA1	**SAN MARTINO**	**0.24**	**123**	⇓ P	Pb	21 40 19.0	-0.7
SMA1				S	Sg	21 40 23.4	+1.8
SMA1				AML	AML		
	comp=N,3080μm,0.4s						
SMA1				AML	AML		
	comp=N,3085μm,0.4s						
SMA1				AML	AML		
	comp=E,3215μm,0.5s						
T1211	**Morro Reatino**	**0.27**	**213**	⇑ P	Pg	21 40 19.3	+0.5
T1211				S	Sg	21 40 23.7	+1.2
T1211				AML	AML		
	comp=N,3110μm,0.8s						
T1211				AML	AML		
	comp=N,3110μm,0.8s						
T1211				AML	AML		
	comp=E,3385μm,0.4s						
T1211				AML	AML		
	comp=N,3110μm,0.8s						
T1211				AML	AML		
	comp=N,3115μm,0.8s						
T1211				AML	AML		
	comp=E,3420μm,0.3s						
RM33	**Pellescritta (**	**0.28**	**155**	⇓ P	Pg	21 40 19.2	+0.4
RM33				S	Sg	21 40 23.8	+1.2
RM33				AML	AML		
	comp=E,2010μm,1.4s						
RM33				AML	AML		
	comp=E,2010μm,1.4s						
RM33				AML	AML		
	comp=N,1501μm,0.2s						
RM33				AML	AML		
	comp=E,1965μm,0.3s						
RM33				AML	AML		
	comp=N,1500μm,0.2s						
RM33				AML	AML		
	comp=N,1455μm,0.3s						
ARRO	**Arrone**	**0.28**	**230**	⇑ P	Pg	21 40 19.4	+0.5
ARRO				AML	AML		
	comp=N,1255μm,0.2s						
ARRO				AML	AML		
	comp=E,1235μm,0.3s						
T1241	**Roccafluvione,**	**0.29**	**71**	⇑ P	Pg	21 40 19.5	+0.4
T1241				S	Sb	21 40 24.5	-0.9
T1241				AML	AML		
	comp=E,2060μm,0.8s						
T1241				AML	AML		
	comp=N,1420μm,0.3s						
T1241				AML	AML		
	comp=E,2055μm,0.8s						
T1241				AML	AML		
	comp=N,1415μm,0.3s						
T1243	**Rocca Santa Ma**	**0.29**	**103**	⇓ P	Pg	21 40 19.6	+0.4
T1243				S	Sg	21 40 24.2	+1.0
AM05	**Amandola Campo**	**0.30**	**45**	⇓ P	Pg	21 40 19.9	+0.6
AM05				AML	AML		
	comp=E,446μm,0.4s						
AM05				AML	AML		
	comp=N,572μm,0.1s						
AM05				AML	AML		
	comp=E,1965μm,0.1s						
AM05				AML	AML		
	comp=N,156μm,0.1s						
AM05				AML	AML		
	comp=N,572μm,0.1s						
AM05				AML	AML		
	comp=E,446μm,0.4s						
CAMP	**Campotosto**	**0.34**	**131**	⇓ P	Pg	21 40 20.4	+0.4
CAMP				S	Sg	21 40 25.8	+1.2
CAMP				AML	AML		
	comp=E,579μm,0.5s						
CAMP				AML	AML		
	comp=N,558μm,0.2s						
CAMP				AML	AML		
	comp=E,578μm,0.5s						
CAMP				AML	AML		
	comp=N,558μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.37**	**151**	⇑ P	Pg	21 40 20.9	+0.4
T1247				AML	AML		
	comp=E,1375μm,0.1s						
T1247				AML	AML		
	comp=N,1460μm,0.6s						
T1247				AML	AML		
	comp=E,1370μm,0.1s						
CESX	**Cesi**	**0.38**	**247**	⇑ P	Pg	21 40 20.9	+0.2
CESX				AML	AML		
	comp=E,602μm,1.5s						
CESX				AML	AML		
	comp=N,614μm,0.6s						
ASSB	**Assisi San Ben**	**0.41**	**314**	⇑ P	Pg	21 40 21.7	+0.5
ASSB				S	Sb	21 40 27.9	-0.9
ASSB				AML	AML		
	comp=E,692μm,1.2s						
ASSB				AML	AML		
	comp=N,790μm,1.5s						
TERO	**Teramo**	**0.43**	**109**	⇓ P	Pg	21 40 21.8	+0.2
TERO				S	Sb	21 40 28.3	-1.0
TERO				AML	AML		
	comp=N,1086μm,0.6s						
TERO				AML	AML		
	comp=E,760μm,0.1s						
TERO				AML	AML		
	comp=N,1087μm,0.6s						
AQU	**L'Aquila**	**0.48**	**148**	⇑ P	Pb	21 40 23.7	-0.1
AQU				AML	AML		
	comp=E,358μm,1.6s						
AQU				AML	AML		
	comp=N,346μm,0.6s						
AQU				AML	AML		
	comp=E,358μm,1.6s						
AQU				AML	AML		
	comp=N,346μm,0.6s						
AQU				AML	AML		
	comp=N,326μm,0.6s						
AQU				AML	AML		
	comp=E,339μm,1.6s						
GIGS	**Gran Sasso**	**0.49**	**129**	P	Pg	21 40 22.8	+0.1
GIGS				S	Sg	21 40 30.0	+0.8
GIGS				AML	AML		
	comp=E,182μm,0.3s						
GIGS				AML	AML		
	comp=N,178μm,0.4s						
OFFI	**Offida**	**0.49**	**69**	⇑ P	Pb	21 40 23.9	-0.1
FIAM	**Fiamignano**	**0.50**	**175**	⇑ P	Pg	21 40 23.1	+0.3
FIAM				S	Sb	21 40 30.7	-0.6
FIAM				AML	AML		
	comp=E,313μm,0.8s						
FIAM				AML	AML		
	comp=N,370μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.52**	**324**	P	Pg	21 40 23.8	+0.4
SRES	**S.Oreste - Sor**	**0.66**	**218**	⇑ P	Pb	21 40 26.4	-0.4
SRES				S	Sb	21 40 36.3	+0.2
SRES				AML	AML		
	comp=E,182μm,0.3s						
SRES				AML	AML		
	comp=N,202μm,0.4s						
VCEL	**Villa Celiera**	**0.69**	**122**	P	Pb	21 40 27.1	-0.1
VCEL				S	Sn	21 40 38.3	-1.4
VCEL				AML	AML		
	comp=E,724μm,1.5s						
VCEL				AML	AML		
	comp=N,550μm,0.5s						
MGAB	**Montegabbione**	**0.71**	**282**	P	Pn	21 40 29.4	+0.1
MGAB				AML	AML		
	comp=N,580μm,0.4s						
MGAB				AML	AML		
	comp=N,530μm,0.4s						
MGAB				AML	AML		
	comp=E,527μm,0.6s						
MGAB				AML	AML		
	comp=N,530μm,0.4s						
MGAB				AML	AML		
	comp=E,587μm,0.6s						
T0110	**Collepietro**	**0.76**	**135**	⇑ P	Pg	21 40 27.9	+0.2
T0110				AML	AML		
	comp=E,397μm,0.7s						
T0110				AML	AML		
	comp=N,314μm,1.1s						
TOLF	**Tolfa**	**1.05**	**229**	AML	AML		
	comp=E,92μm,1.4s						
TOLF				AML	AML		
	comp=N,88μm,0.5s						

ROM 31 21:47:48.1±0.0, 42°.919N±0°.002×13°.149E±0°.003, h10km, ML2.5/32, 20C-9D, Error ellipse: s-maj=0.2km s-min=0.2km az=34.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.07**	**155**	⇓ P	Pg	21 47 50.8	+0.3
T1245				S	Sg	21 47 52.4	+0.3
T1245				AML	AML		
	comp=E,13800μm,0.3s						
T1245				AML	AML		
	comp=N,10850μm,0.7s						
T1245				AML	AML		
	comp=E,11900μm,0.3s						
T1245				AML	AML		
	comp=N,11750μm,0.7s						
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1245				AML	AML		
	comp=N,18600μm,0.2s						
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1245				AML	AML		
	comp=N,18650μm,0.2s						

T1245				AML	AML	
	comp=E,14950μm,0.2s					
FEMA	**Monte Fema**	**0.08**	**301**	⇑P	Pg	21 47 51.0 +0.3
FEMA				S	Sg	21 47 52.6 +0.2
FEMA				AML	AML	
	comp=E,6860μm,0.3s					
FEMA				AML	AML	
	comp=N,5210μm,0.7s					
FEMA				AML	AML	
	comp=N,5215μm,0.7s					
FEMA				AML	AML	
	comp=E,6865μm,0.3s					
T1216	**Preci, Frazion**	**0.10**	**253**	⇑P	Pg	21 47 51.2 +0.5
T1216				S	Sg	21 47 53.2 +0.7
T1216				AML	AML	
	comp=E,6690μm,1.4s					
T1216				AML	AML	
	comp=N,10120μm,0.4s					
T1216				AML	AML	
	comp=E,6675μm,1.3s					
T1216				AML	AML	
	comp=N,10115μm,0.3s					
T1216				AML	AML	
	comp=E,6680μm,1.3s					
T1216				AML	AML	
	comp=N,10140μm,0.3s					
T1216				AML	AML	
	comp=E,6670μm,1.3s					
T1216				AML	AML	
	comp=N,10135μm,0.4s					
T1256	**Bolognola (MC)**	**0.10**	**33**	P	Pg	21 47 51.2 +0.3
T1256				S	Sg	21 47 53.0 +0.2
T1256				AML	AML	
	comp=N,1570μm,0.7s					
T1256				AML	AML	
	comp=E,2925μm,0.2s					
T1256				AML	AML	
	comp=N,1505μm,1.2s					
T1256				AML	AML	
	comp=E,2925μm,0.2s					
T1256				AML	AML	
	comp=N,1805μm,0.2s					
T1256				AML	AML	
	comp=N,1650μm,0.2s					
FDMO	**Fiordimonte**	**0.12**	**339**	⇓P	Pg	21 47 51.5 +0.4
FDMO				S	Sg	21 47 53.7 +0.5
FDMO				AML	AML	
	comp=E,1845μm,0.2s					
FDMO				AML	AML	
	comp=N,2655μm,0.3s					
FDMO				AML	AML	
	comp=E,6875μm,0.2s					
FDMO				AML	AML	
	comp=N,11830μm,0.4s					
FDMO				AML	AML	
	comp=E,6880μm,0.2s					
MMO1	**Montemonaco**	**0.13**	**99**	⇑P	Pg	21 47 51.7 +0.4
MMO1				S	Sg	21 47 54.1 +0.7
AM05	**Amandola Campo**	**0.16**	**69**	⇑P	Pg	21 47 52.2 +0.6
AM05				S	Sg	21 47 55.1 +1.0
AM05				AML	AML	
	comp=E,2495μm,0.1s					
AM05				AML	AML	
	comp=E,677μm,0.1s					
AM05				AML	AML	
	comp=N,180μm,0.1s					
AM05				AML	AML	
	comp=N,468μm,1.6s					
GUMA	**Gualdo di Mace**	**0.20**	**44**	⇑P	Pg	21 47 53.1 +0.8
GUMA				S	Sg	21 47 56.8 +1.6
GUMA				AML	AML	
	comp=E,2795μm,0.7s					
GUMA				AML	AML	
	comp=E,2795μm,0.7s					
GUMA				AML	AML	
	comp=E,3090μm,0.2s					
GUMA				AML	AML	
	comp=N,2190μm,0.6s					
GUMA				AML	AML	
	comp=N,2435μm,0.2s					
T1215	**Vallo di Nera,**	**0.24**	**240**	P	Pg	21 47 53.7 +0.7
T1215				S	Sg	21 47 57.7 +1.4
T1215				AML	AML	
	comp=E,3275μm,1.1s					
T1215				AML	AML	
	comp=N,3650μm,0.4s					
T1215				AML	AML	
	comp=E,3315μm,1.1s					
T1215				AML	AML	
	comp=N,3595μm,0.4s					
T1215				AML	AML	
	comp=N,3645μm,0.4s					
T1215				AML	AML	
	comp=E,3305μm,1.1s					
T1215				AML	AML	
	comp=N,3645μm,0.4s					
T1217	**Poggiodomo (PG**	**0.26**	**218**	P	Pg	21 47 54.2 +0.7
T1217				S	Sb	21 47 58.7 -0.9
T1217				AML	AML	
	comp=E,3965μm,0.2s					
T1217				AML	AML	
	comp=N,4620μm,0.3s					
T1217				AML	AML	
	comp=E,3965μm,0.3s					
T1217				AML	AML	
	comp=N,4435μm,0.3s					
T1217				AML	AML	
	comp=N,4620μm,0.4s					
T1217				AML	AML	
	comp=N,4440μm,0.4s					
T1217				AML	AML	
	comp=E,3960μm,0.2s					
T1204	**Amatrice, Fraz**	**0.27**	**153**	P	Pg	21 47 54.4 +0.7
T1204				AML	AML	
	comp=E,4195μm,0.2s					
T1204				AML	AML	
	comp=N,2850μm,0.7s					
T1204				AML	AML	
	comp=E,4200μm,0.2s					
T1204				AML	AML	
	comp=N,2838μm,0.7s					
T1243	**Rocca Santa Ma**	**0.31**	**135**	⇑P	Pg	21 47 54.8 +0.4
T1243				S	Sb	21 48 00.1 -1.0
SMA1	**SAN MARTINO**	**0.32**	**154**	P	Pg	21 47 55.2 +0.7
SMA1				S	Sb	21 48 00.4 -0.9
SMA1				AML	AML	
	comp=E,2855μm,0.5s					
SMA1				AML	AML	
	comp=N,2980μm,0.3s					
LNSS	**Leonessa**	**0.33**	**194**	S	Sb	21 48 01.0 -0.5
SNTG	**Esanatoglia**	**0.37**	**336**	⇓P	Pg	21 47 55.9 +0.5
SNTG				S	Sb	21 48 01.6 -1.1
SNTG				AML	AML	
	comp=E,353μm,0.7s					
SNTG				AML	AML	
	comp=N,399μm,0.6s					
ASSB	**Assisi San Ben**	**0.38**	**289**	⇑P	Pg	21 47 56.0 +0.4
ASSB				S	Sb	21 48 02.2 -0.8
ASSB				AML	AML	
	comp=E,1130μm,1.3s					
ASSB				AML	AML	
	comp=N,1009μm,0.6s					
ASSB				AML	AML	
	comp=N,1082μm,0.1s					
OFFI	**Offida**	**0.40**	**88**	⇑P	Pb	21 47 57.2 0.0
OFFI				AML	AML	
	comp=E,1075μm,0.8s					
OFFI				AML	AML	
	comp=N,1188μm,0.7s					
EL6	**Elcito**	**0.41**	**355**	⇑P	Pg	21 47 56.7 +0.5
RM33	**Pellescritta (**	**0.41**	**173**	⇑P	Pg	21 47 56.7 +0.4
RM33				AML	AML	
	comp=E,1001μm,0.1s					
RM33				AML	AML	
	comp=N,1190μm,0.7s					
RM33				AML	AML	
	comp=E,985μm,1.4s					
RM33				AML	AML	
	comp=N,1195μm,0.2s					
RM33				AML	AML	
	comp=E,1002μm,0.1s					
RM33				AML	AML	
	comp=E,982μm,1.4s					
RM33				AML	AML	
	comp=N,1200μm,0.2s					
RM33				AML	AML	
	comp=E,1000μm,0.1s					
RM33				AML	AML	
	comp=N,1195μm,0.7s					
RM33				AML	AML	
	comp=E,984μm,1.4s					
CAMP	**Campotosto**	**0.43**	**153**	⇓P	Pg	21 47 57.1 +0.5
CAMP				AML	AML	
	comp=E,418μm,1.1s					
CAMP				AML	AML	
	comp=N,499μm,0.5s					
ARRO	**Arrone**	**0.44**	**220**	⇑P	Pg	21 47 57.3 +0.5
ARRO				AML	AML	
	comp=N,1390μm,0.3s					
ARRO				AML	AML	
	comp=E,1400μm,0.2s					
ARRO				AML	AML	
	comp=N,1385μm,0.3s					
TERO	**Teramo**	**0.45**	**131**	⇓P	Pg	21 47 57.2 +0.3
TERO				AML	AML	
	comp=E,784μm,0.7s					
TERO				AML	AML	
	comp=N,804μm,0.3s					
TERO				AML	AML	
	comp=N,806μm,0.3s					
TERO				AML	AML	
	comp=N,939μm,0.3s					
TERO				AML	AML	
	comp=E,784μm,0.7s					
TERO				AML	AML	
	comp=E,847μm,0.7s					
ATCC	**AVT- Casa Cast**	**0.46**	**306**	⇑P	Pg	21 47 57.5 +0.4
ATCC				S	Sb	21 48 05.0 -0.3
ATCC				AML	AML	
	comp=E,551μm,0.4s					
ATCC				AML	AML	
	comp=N,486μm,1.1s					
ATCC				AML	AML	
	comp=E,552μm,0.4s					
ATCC				AML	AML	
	comp=N,488μm,0.3s					
FOSV	**Fossato di Vic**	**0.47**	**323**	⇑P	Pg	21 47 57.6 +0.3
FOSV				S	Sb	21 48 05.3 -0.3
FOSV				AML	AML	
	comp=N,872μm,0.3s					
FOSV				AML	AML	
	comp=N,870μm,0.3s					
FOSV				AML	AML	
	comp=E,323μm,0.2s					
CESX	**Cesi**	**0.52**	**234**	⇓P	Pg	21 47 58.5 +0.3
CESX				S	Sb	21 48 07.0 0.0
CESX				AML	AML	
	comp=N,647μm,0.4s					
CESX				AML	AML	
	comp=E,628μm,0.5s					
GIGS	**Gran Sasso**	**0.56**	**146**	⇓P	Pg	21 47 59.2 +0.2
GIGS				S	Sb	21 48 09.0 +0.7
GIGS				AML	AML	
	comp=E,117μm,0.2s					
GIGS				AML	AML	
	comp=N,90μm,0.7s					
GIGS				AML	AML	
	comp=E,116μm,0.2s					
GIGS				AML	AML	
	comp=N,103μm,0.5s					
MURB	**Monte Urbino**	**0.57**	**307**	P	Pg	21 47 59.6 +0.4
MURB				S	Sb	21 48 10.0 +1.4
MURB				AML	AML	
	comp=E,898μm,0.3s					
MURB				AML	AML	
	comp=N,886μm,1.6s					
MURB				AML	AML	
	comp=E,1062μm,0.3s					
MURB				AML	AML	
	comp=N,948μm,1.6s					
SSFR	**Montelago di S**	**0.58**	**333**	⇑P	Pb	21 47 60.0 -0.5
SSFR				AML	AML	
	comp=E,630μm,0.2s					
SSFR				AML	AML	
	comp=N,572μm,0.7s					
SSFR				AML	AML	
	comp=N,512μm,0.2s					
SSFR				AML	AML	
	comp=E,595μm,1.1s					
ARVD	**Arcevia**	**0.60**	**345**	S	Sb	21 48 10.0 +0.7
ATFO	**Monte Foce - G**	**0.61**	**317**	⇑P	Pg	21 48 00.2 +0.2
ATFO				AML	AML	
	comp=E,237μm,0.5s					
ATFO				AML	AML	
	comp=N,193μm,0.3s					
ATFO				AML	AML	
	comp=N,247μm,0.3s					
ATFO				AML	AML	
	comp=E,236μm,0.5s					
FRON	**Frontone**	**0.67**	**333**	P	Pg	21 48 01.2 +0.1
FRON				AML	AML	
	comp=N,214μm,0.7s					
FRON				AML	AML	
	comp=E,144μm,1.1s					
ATVO	**AVT- Monte Val**	**0.71**	**311**	⇑P	Pg	21 48 01.9 0.0
ATVO				S	Sb	21 48 14.0 +1.4
ATVO				AML	AML	
	comp=E,153μm,0.5s					
ATVO				AML	AML	
	comp=N,124μm,0.5s					
MGAB	**Montegabbione**	**0.76**	**270**	⇑P	Pb	21 48 03.2 -0.3
MGAB				AML	AML	
	comp=E,476μm,0.5s					
MGAB				AML	AML	
	comp=N,449μm,1.2s					
MGAB				AML	AML	
	comp=E,489μm,1.4s					
MGAB				AML	AML	
	comp=N,440μm,0.8s					
MGAB				AML	AML	
	comp=N,448μm,1.2s					
MGAB				AML	AML	
	comp=E,476μm,0.5s					
ATPI	**Pietralunga -**	**0.76**	**314**	⇓P	Pg	21 48 02.9 +0.1
ATPI				AML	AML	
	comp=E,138μm,1.2s					
ATPI				AML	AML	
	comp=N,132μm,0.5s					
ATPI				AML	AML	
	comp=E,138μm,1.2s					
ATPI				AML	AML	
	comp=N,132μm,0.5s					
PIEI	**Pieia**	**0.76**	**324**	⇓P	Pg	21 48 02.9 +0.1
PIEI				S	Sb	21 48 15.0 +1.0
PIEI				AML	AML	
	comp=N,94μm,0.5s					
PIEI				AML	AML	
	comp=E,152μm,0.3s					
MPAG	**Monte Paganucc**	**0.76**	**338**	⇑P	Pg	21 48 03.2 +0.3
MPAG				S	Sn	21 48 16.0 -0.8
MPAG				AML	AML	
	comp=E,137μm,1.5s					
MPAG				AML	AML	
	comp=N,182μm,0.7s					
MPAG				AML	AML	
	comp=E,137μm,1.5s					
FSSB	**Fossombrone**	**0.82**	**341**	S	Sn	21 48 18.0 0.0
SRES	**S.Oreste - Sor**	**0.83**	**215**	S	Sb	21 48 17.0 +1.1
T0110	**Collepietro**	**0.83**	**146**	S	Sn	21 48 18.0 -0.5
SACS	**San Casciano d**	**0.91**	**266**	⇑P	Pn	21 48 07.4 +0.3
SACS				S	Sn	21 48 20.0 -0.4
MTCE	**Montecelio**	**0.94**	**199**	S	Sb	21 48 19.0 -0.2
CAFI	**Castiglion Fio**	**0.96**	**296**	⇑P	Pg	21 48 06.5 0.0
CAFI				S	Sn	21 48 23.0 +1.6
CAFI				AML	AML	
	comp=E,150μm,0.3s					
CAFI				AML	AML	
	comp=N,169μm,1.2s					
CERT	**Cerreto**	**0.98**	**187**	S	Sb	21 48 20.0 -0.2
VIVA	**Pratoni del Vi**	**1.20**	**194**	S	Sb	21 48 26.0 -0.6

ROM 31 21:48:30.1±0.1, 42°.802N±0°.003×13°.121E±0°.004, h9km, ML2.6/2, 5C-9D, Error ellipse: s-maj=0.3km s-min=0.0km az=88.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1245	**Castelsantange**	**0.07**	**42**	⇓P	Pg	21 48 32.8	+0.5
T1245				S	Sg	21 48 34.6	+0.5
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1245				AML	AML		
	comp=N,18600μm,0.2s						
T1245				AML	AML		
	comp=E,15000μm,0.2s						
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1245				AML	AML		
	comp=N,18650μm,0.2s						
T1245				AML	AML		
	comp=E,14950μm,0.2s						
T1216	**Preci, Frazion**	**0.12**	**320**	⇓P	Pg	21 48 33.4	+0.5
T1216				S	Sg	21 48 35.6	+0.8
T1217	**Poggiodomo (PG**	**0.17**	**237**	⇓P	Pg	21 48 34.3	+0.6
T1217				S	Sg	21 48 37.3	+1.2
FEMA	**Monte Fema**	**0.17**	**342**	⇓P	Pg	21 48 34.3	+0.6
FEMA				S	Sg	21 48 37.3	+1.0
MMO1	**Montemonaco**	**0.18**	**57**	⇑P	Pg	21 48 34.4	+0.5
MMO1				S	Sg	21 48 37.6	+1.1
T1215	**Vallo di Nera,**	**0.19**	**270**	⇑P	Pg	21 48 34.5	+0.5
T1215				S	Sg	21 48 37.7	+1.0
T1204	**Amatrice, Fraz**	**0.19**	**131**	⇑P	Pg	21 48 34.7	+0.6
T1204				S	Sg	21 48 38.1	+1.2
T1204				AML	AML		
	comp=E,4195μm,0.2s						
T1204				AML	AML		
	comp=N,2850μm,0.7s						
T1204				AML	AML		
	comp=N,2838μm,0.7s						
T1204				AML	AML		
	comp=E,4200μm,0.2s						
LNSS	**Leonessa**	**0.21**	**197**	⇑P	Pg	21 48 34.9	+0.6
LNSS				S	Sg	21 48 38.3	+1.0
T1256	**Bolognola (MC)**	**0.22**	**21**	P	Pg	21 48 35.1	+0.5
T1256				S	Sg	21 48 39.0	+1.3
T1256				AML	AML		
	comp=E,1940μm,0.3s						
T1256				AML	AML		
	comp=N,1805μm,0.2s						
T1256				AML	AML		
	comp=E,2025μm,0.3s						
T1256				AML	AML		
	comp=N,1650μm,0.2s						
SMA1	**SAN MARTINO**	**0.23**	**137**	⇑P	Pg	21 48 35.6	+0.8
SMA1				S	Sg	21 48 39.5	+1.4
T1241	**Roccafluvione,**	**0.23**	**76**	⇓P	Pg	21 48 35.4	+0.6
T1241				S	Sg	21 48 39.4	+1.3
FDMO	**Fiordimonte**	**0.24**	**354**	P	Pg	21 48 35.4	+0.6
FDMO				AML	AML		
	comp=E,6880μm,0.2s						
FDMO				AML	AML		
	comp=N,11830μm,0.4s						
AM05	**Amandola Campo**	**0.24**	**44**	P	Pg	21 48 35.6	+0.6
T1243	**Rocca Santa Ma**	**0.26**	**113**	⇓P	Pg	21 48 35.8	+0.4
RM33	**Pellescritta (**	**0.30**	**167**	P	Pb	21 48 37.6	-0.1
RM33				S	Sg	21 48 41.4	+1.3
GUMA	**Gualdo di Mace**	**0.30**	**31**	⇓P	Pb	21 48 36.9	-0.8
GUMA				S	Sb	21 48 42.0	-0.8
T1211	**Morro Reatino**	**0.33**	**216**	S	Sb	21 48 43.0	-0.7
ARRO	**Arrone**	**0.34**	**230**	⇓P	Pg	21 48 37.3	+0.5
T1247	**Pizzolo (AQ)**	**0.38**	**160**	S	Sb	21 48 45.0	-0.1
MDAR	**Monte D'Aria**	**0.39**	**2**	P	Pg	21 48 38.3	+0.6
TERO	**Teramo**	**0.40**	**117**	P	Pg	21 48 38.0	+0.1
ASSB	**Assisi San Ben**	**0.42**	**305**	S	Sb	21 48 45.0	-1.1
GAG1	**Gagliole**	**0.44**	**355**	P	Pg	21 48 38.8	+0.2
GAG1				S	Sb	21 48 46.3	-0.3
GIGS	**Gran Sasso**	**0.48**	**137**	⇓P	Pg	21 48 39.5	+0.1
EL6	**Elcito**	**0.53**	**358**	S	Sb	21 48 50.0	+0.7
ARVD	**Arcevia**	**0.71**	**349**	S	Sn	21 48 56.0	-1.3
LAV9	**Lanuvio**	**1.17**	**196**	S	Sn	21 49 09.0	+0.4

*PRU **31** 22:24:52.6±0.0, 42°.75N×13°.27E, h0km*
*LDG **31** 22:24:52.5±0.1, 42°.80N×13°.07E, h10km, Md3.5/1, Ml2.9/27, Error ellipse: s-maj=2.1km s-min=1.3km az=44.0*
*IDC **31** 22:24:53.0±1.4, 42°.87N×13°.17E, h0km, mb3.2/3, mbtmp3.2/5, ML3.3/2, Error ellipse: s-maj=47.5km s-min=14.2km az=97.0*
*ROM **31** 22:24:53.2±0.0, 42°.806N±0°.003×13°.048E±0°.004, h11km, ML3.3/65, Error ellipse: s-maj=0.3km s-min=0.2km az=296.0*
*STR **31** 22:24:56.9±1.9, 43°.N±8°.×1°.3E±1°.6, h10km, MLv3.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=108.2, preliminary*

ISC 31 22:24:53.9±0.7, 42°.80N±0°.02×13°.04E±0°.02, h13km±4km, n171, σ1°.98/212, 43C-19D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1216	**Preci, Frazion**	**0.09**	**348**	P	**Pg**	**22 24 56.2**	**-0.6**
T1216				S	**Sg**	**22 24 58.0**	**-1.0**
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1216				AML	AML		
T1245	**Castelsantange**	**0.12**	**63**	⇑P	**Pg**	**22 24 56.7**	**-0.6**
T1245				S	**Sg**	**22 24 58.8**	**-0.9**
T1245				AML	AML		
	comp=E,87600μm,0.3s						
T1245				AML	AML		
	comp=N,78100μm,1.6s						
T1245				AML	AML		
	comp=N,81150μm,0.3s						
T1245				AML	AML		
	comp=N,78150μm,1.6s						
T1245				AML	AML		
	comp=E,77350μm,0.3s						
T1245				AML	AML		
	comp=E,87650μm,0.3s						
T1245				AML	AML		
	comp=N,78100μm,1.6s						
T1217	**Poggiodomo (PG**	**0.12**	**222**	⇑P	**Pg**	**22 24 56.9**	**-0.4**
T1217				S	**Sg**	**22 24 59.5**	**-0.2**
T1217				AML	AML		
	comp=N,15200μm,0.1s						
T1217				AML	AML		
	comp=E,14150μm,0.6s						
T1217				AML	AML		
	comp=N,14800μm,0.1s						
T1217				AML	AML		
	comp=E,14250μm,0.8s						
T1217				AML	AML		
	comp=N,15200μm,0.2s						
T1217				AML	AML		
	comp=E,14100μm,0.5s						
T1217				AML	AML		
	comp=N,14850μm,0.2s						
T1217				AML	AML		
	comp=E,14250μm,0.9s						
T1217				AML	AML		
	comp=N,14850μm,0.1s						
T1217				AML	AML		
	comp=E,14150μm,0.5s						
T1215	**Vallo di Nera,**	**0.13**	**270**	⇑P	**Pg**	**22 24 56.9**	**-0.4**
T1215				S	**Sg**	**22 24 59.4**	**-0.4**
T1215				AML	AML		
	comp=E,22750μm,0.5s						
T1215				AML	AML		
	comp=N,35050μm,0.4s						
T1215				AML	AML		
	comp=E,23400μm,0.5s						
T1215				AML	AML		
	comp=E,22750μm,0.5s						
T1215				AML	AML		
	comp=N,35050μm,0.4s						
T1215				AML	AML		
	comp=N,34500μm,0.4s						
T1215				AML	AML		
	comp=E,23350μm,0.5s						
T1215				AML	AML		
	comp=N,34500μm,0.4s						
FEMA	**Monte Fema**	**0.16**	**2**	⇑P	**Pg**	**22 24 57.4**	**-0.5**
FEMA				S	**Sg**	**22 25 00.1**	**-0.5**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
LNSS	**Leonessa**	**0.20**	**181**	⇑P	**Pg**	**22 24 58.1**	**-0.3**
LNSS				S	**Sg**	**22 25 01.6**	**+0.1**
LNSS				AML	AML		
	comp=E,7840μm,1.1s						
LNSS				AML	AML		
	comp=N,22000μm,0.5s						
T1201	**Domo (RI)**	**0.21**	**134**	P	**Pg**	**22 24 58.5**	**-0.1**
MMO1	**Montemonaco**	**0.23**	**65**	⇑P	**Pg**	**22 24 58.4**	**-0.5**
MMO1				S	**Sg**	**22 25 02.0**	**-0.3**

FDMO	**Fiordimonte**	**0.23**	**8**	⇑P	**Pg**	**22 24 58.6**	**-0.4**
FDMO				S	**Sg**	**22 25 02.5**	**+0.1**
FDMO				AML	AML		
	comp=E,43850μm,0.2s						
FDMO				AML	AML		
	comp=N,74100μm,0.3s						
T1204	**Amatrice, Fraz**	**0.24**	**122**	⇓P	**Pg**	**22 24 58.8**	**-0.2**
T1204				S	**Sg**	**22 25 03.0**	**+0.4**
T1204				AML	AML		
	comp=E,6600μm,0.8s						
T1204				AML	AML		
	comp=N,4875μm,0.7s						
T1204				AML	AML		
	comp=E,6610μm,0.8s						
T1204				AML	AML		
	comp=N,4850μm,0.7s						
T1204				AML	AML		
	comp=N,4880μm,0.7s						
T1204				AML	AML		
	comp=E,6605μm,0.8s						
T1256	**Bolognola (MC)**	**0.24**	**33**	P	**Pg**	**22 24 58.7**	**-0.5**
T1256				S	**Sg**	**22 25 02.7**	**-0.1**
T1256				AML	AML		
	comp=E,31500μm,1.0s						
T1256				AML	AML		
	comp=N,18800μm,0.6s						
T1256				AML	AML		
	comp=E,32000μm,1.0s						
T1256				AML	AML		
	comp=N,20000μm,0.5s						
SMA1	**SAN MARTINO**	**0.28**	**129**	P	**Pg**	**22 24 59.3**	**-0.3**
SMA1				AML	AML		
	comp=E,8310μm,0.6s						
SMA1				AML	AML		
	comp=N,6575μm,0.4s						
SMA1				AML	AML		
	comp=E,8315μm,0.6s						
SMA1				AML	AML		
	comp=N,6580μm,0.4s						
AM05	**Amandola Campo**	**0.29**	**52**	⇑P	**Pg**	**22 24 59.6**	**-0.3**
AM05				S	**Sg**	**22 25 04.3**	**+0.4**
AM05				AML	AML		
	comp=N,3805μm,1.3s						
AM05				AML	AML		
	comp=N,1000μm,0.9s						
AM05				AML	AML		
	comp=N,3810μm,1.3s						
AM05				AML	AML		
	comp=E,16750μm,0.8s						
AM05				AML	AML		
	comp=N,1001μm,0.9s						
AM05				AML	AML		
	comp=E,4035μm,0.8s						
T1241	**Roccafluvione,**	**0.29**	**79**	P	**Pg**	**22 24 59.5**	**-0.4**
T1241				S	**Sg**	**22 25 04.1**	**+0.1**
T1241				AML	AML		
	comp=E,6935μm,0.6s						
T1241				AML	AML		
	comp=N,9825μm,0.5s						
T1241				AML	AML		
	comp=E,6900μm,1.1s						
T1241				AML	AML		
	comp=N,9510μm,0.5s						
T1241				AML	AML		
	comp=E,6930μm,0.6s						
T1241				AML	AML		
	comp=N,9800μm,0.5s						
T1241				AML	AML		
	comp=N,9815μm,0.5s						
ARRO	**Arrone**	**0.30**	**223**	⇑P	**Pg**	**22 24 60.0**	**-0.1**
ARRO				AML	AML		
	comp=E,3895μm,0.8s						
ARRO				AML	AML		
	comp=N,3980μm,1.0s						
ARRO				AML	AML		
	comp=E,3890μm,0.8s						
T1211	**Morro Reatino**	**0.30**	**207**	P	**Pg**	**22 24 59.9**	**-0.3**
T1211				S	**Sg**	**22 25 04.9**	**+0.5**
T1211				AML	AML		
	comp=E,5175μm,0.3s						
T1211				AML	AML		
	comp=N,9705μm,0.9s						
T1211				AML	AML		
	comp=E,5085μm,0.3s						
T1211				AML	AML		
	comp=N,9575μm,0.9s						
T1211				AML	AML		
	comp=E,5170μm,0.3s						
T1211				AML	AML		
	comp=N,9585μm,0.9s						
T1211				AML	AML		
	comp=E,5080μm,0.3s						
T1211				AML	AML		
	comp=N,9665μm,0.9s						
T1243	**Rocca Santa Ma**	**0.32**	**110**	⇑P	**Pg**	**22 24 59.9**	**-0.5**
RM33	**Pellescritta (**	**0.32**	**157**	P	**Pg**	**22 25 00.0**	**-0.4**
RM33				S	**Sg**	**22 25 06.0**	**+1.1**
RM33				AML	AML		
	comp=E,3760μm,1.1s						
RM33				AML	AML		
	comp=N,3775μm,0.3s						
RM33				AML	AML		
	comp=E,3700μm,1.1s						
RM33				AML	AML		
	comp=N,3745μm,0.3s						
RM33				AML	AML		
	comp=E,3765μm,1.1s						
GUMA	**Gualdo di Mace**	**0.34**	**39**	⇑P	**Pg**	**22 25 00.6**	**-0.1**
GUMA				S	**Sb**	**22 25 06.4**	**-0.6**
GUMA				AML	AML		
	comp=N,34500μm,0.5s						
GUMA				AML	AML		
	comp=E,38750μm,0.4s						
GUMA				AML	AML		
	comp=N,34550μm,0.5s						
GUMA				AML	AML		
	comp=N,32900μm,0.4s						
GUMA				AML	AML		
	comp=E,41750μm,0.4s						
SEF1	**Sefro**	**0.35**	**348**	P	**Pg**	**22 25 00.5**	**-0.5**
SEF1				AML	AML		
	comp=E,49550μm,0.2s						
SEF1				AML	AML		
	comp=E,49500μm,0.2s						
SEF1				AML	AML		
	comp=N,40450μm,0.2s						
ASSB	**Assisi San Ben**	**0.37**	**310**	⇓P	**Pg**	**22 25 01.0**	**-0.4**
ASSB				S	**Sg**	**22 25 06.7**	**+0.3**
ASSB				AML	AML		
	comp=N,13750μm,0.2s						
ASSB				AML	AML		
	comp=E,13950μm,1.2s						
PIO1	**Pioraco**	**0.38**	**353**	P	**Pg**	**22 24 59.2**	**-2.3**
PIO1				AML	AML		
	comp=E,8675μm,0.4s						
PIO1				AML	AML		
	comp=N,10490μm,0.9s						
CAMP	**Campotosto**	**0.38**	**135**	P	**Pg**	**22 25 00.9**	**-0.7**
CAMP				AML	AML		
	comp=E,1180μm,1.1s						
CAMP				AML	AML		
	comp=E,1175μm,1.1s						
CAMP				AML	AML		
	comp=N,1590μm,0.5s						
CESX	**Cesi**	**0.39**	**241**	⇑P	**Pg**	**22 25 01.3**	**-0.4**
CESX				AML	AML		
	comp=E,6085μm,0.4s						
CESX				AML	AML		
	comp=N,5630μm,0.9s						
FIU1	**Fiuminata**	**0.39**	**348**	⇑P	**Pg**	**22 25 01.5**	**-0.3**
FIU1				AML	AML		
	comp=N,20750μm,0.2s						
FIU1				AML	AML		
	comp=E,20400μm,0.3s						
MDAR	**Monte D'Aria**	**0.40**	**11**	⇑P	**Pg**	**22 25 01.4**	**-0.4**
MDAR				AML	AML		
	comp=N,15950μm,0.3s						
MDAR				AML	AML		
	comp=E,12350μm,0.5s						
T1247	**Pizzolo (AQ)**	**0.41**	**152**	⇑P	**Pg**	**22 25 01.6**	**-0.4**
T1247				AML	AML		
	comp=N,3400μm,0.3s						
T1247				AML	AML		
	comp=E,3865μm,0.5s						
GAG1	**Gagliole**	**0.43**	**2**	⇑P	**Pg**	**22 25 02.5**	**-0.1**
SSM1	**San Severino M**	**0.44**	**13**	⇑P	**Pg**	**22 25 02.4**	**-0.1**
TERO	**Teramo**	**0.45**	**113**	P	**Pg**	**22 25 02.1**	**-0.6**
TERO				AML	AML		
	comp=E,2000μm,0.5s						
TERO				AML	AML		
	comp=E,2130μm,0.5s						
TERO				AML	AML		
	comp=E,1995μm,0.5s						
TERO				AML	AML		
	comp=N,2255μm,0.5s						
TERO				AML	AML		
	comp=N,2370μm,0.5s						
TERO				AML	AML		
	comp=N,2250μm,0.5s						
MNTP	**Montappone**	**0.46**	**43**	P	**Pg**	**22 25 03.0**	**+0.1**
MNTP				AML	AML		
	comp=E,9150μm,0.3s						
MNTP				AML	AML		
	comp=N,8875μm,0.4s						
MNTP				AML	AML		
	comp=E,9140μm,0.3s						
MNTP				AML	AML		
	comp=N,8870μm,0.4s						
SNTG	**Esanatoglia**	**0.46**	**351**	⇑P	**Pg**	**22 25 02.5**	**-0.4**
SNTG				AML	AML		
	comp=E,9855μm,0.8s						
SNTG				AML	AML		
	comp=N,8285μm,1.0s						
SNTG				AML	AML		
	comp=N,9565μm,1.0s						
SNTG				AML	AML		
	comp=E,9485μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.48**	**322**	⇓P	**Pg**	**22 25 03.0**	**-0.4**
ATCC				AML	AML		
	comp=E,11725μm,0.7s						
ATCC				AML	AML		
	comp=N,10240μm,0.3s						
ATCC				AML	AML		
	comp=N,10275μm,0.3s						
ATCC				AML	AML		
	comp=E,11715μm,0.7s						
OFFI	**Offida**	**0.49**	**74**	⇑P	**Pg**	**22 25 03.8**	**+0.3**
OFFI				AML	AML		
	comp=E,4995μm,0.5s						
OFFI				AML	AML		
	comp=N,6790μm,0.4s						
AQU	**L'Aquila**	**0.52**	**149**	P	**Pg**	**22 25 04.3**	**+0.2**
AQU				AML	AML		
	comp=N,1380μm,0.6s						
AQU				AML	AML		
	comp=N,1480μm,0.8s						
AQU				AML	AML		
	comp=E,1820μm,1.0s						
AQU				AML	AML		
	comp=E,1910μm,1.0s						
GIGS	**Gran Sasso**	**0.52**	**132**	P	**Pg**	**22 25 03.2**	**-0.9**
GIGS				AML	AML		
	comp=N,512μm,0.5s						
GIGS				AML	AML		
	comp=E,556μm,0.8s						
EL6	**Elcito**	**0.53**	**5**	⇑P	**Pg**	**22 25 03.7**	**-0.6**
EL6				S	**Sb**	**22 25 13.0**	**+0.4**
EL6				AML	AML		
	comp=E,16200μm,0.1s						
EL6				AML	AML		
	comp=N,11650μm,1.0s						
EL6				AML	AML		
	comp=N,11600μm,1.0s						
EL6				AML	AML		
	comp=E,16150μm,0.1s						
EL6				AML	AML		
	comp=N,11625μm,1.0s						
FOSV	**Fossato di Vic**	**0.53**	**337**	⇑P	**Pg**	**22 25 03.8**	**-0.6**
FOSV				S	**Sb**	**22 25 13.0**	**+0.3**
FOSV				AML	AML		
	comp=E,4685μm,0.4s						
FOSV				AML	AML		
	comp=N,5135μm,0.5s						
FOSV				AML	AML		
	comp=N,5140μm,0.5s						
FOSV				AML	AML		
	comp=E,4690μm,0.4s						
FIAM	**Fiamignano**	**0.54**	**174**	⇑P	**Pg**	**22 25 03.7**	**-0.8**
FIAM				AML	AML		
	comp=E,2075μm,0.9s						
FIAM				AML	AML		
	comp=N,1960μm,0.7s						
MURB	**Monte Urbino**	**0.60**	**321**	P	**Pg**	**22 25 04.8**	**-0.8**
MURB				S	**Sb**	**22 25 15.0**	**+0.4**
MURB				AML	AML		
	comp=E,14300μm,0.2s						
MURB				AML	AML		
	comp=N,13950μm,0.3s						
MURB				AML	AML		
	comp=E,15600μm,0.2s						
MURB				AML	AML		
	comp=N,14550μm,0.3s						
MURB				AML	AML		
	comp=E,14250μm,0.2s						
MURB				AML	AML		
	comp=N,13950μm,0.3s						
MMUR	**Monte Murano**	**0.64**	**357**	⇓P	**Pb**	**22 25 06.8**	**-0.1**
MMUR				AML	AML		
	comp=E,11410μm,0.4s						
MMUR				AML	AML		
	comp=N,7335μm,1.0s						
MMUR				AML	AML		
	comp=E,11405μm,0.5s						
MMUR				AML	AML		
	comp=N,7335μm,1.0s						
TRTR	**Tortoreto Alta**	**0.64**	**89**	P	**Pb**	**22 25 06.9**	**0.0**
TRTR				AML	AML		
	comp=E,7190μm,0.5s						
TRTR				AML	AML		
	comp=N,7070μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.64**	**308**	⇓P	**Pg**	**22 25 05.8**	**-0.6**
ATTE				AML	AML		
	comp=N,1445μm,0.5s						
ATTE				AML	AML		
	comp=E,1545μm,0.3s						
ATFO	**Monte Foce - G**	**0.66**	**329**	⇑P	**Pg**	**22 25 06.2**	**-0.6**
ATFO				S	**Sb**	**22 25 17.0**	**+0.6**
ATFO				AML	AML		
	comp=N,3715μm,0.2s						
ATFO				AML	AML		
	comp=E,3630μm,0.6s						
SSFR	**Montelago di S**	**0.66**	**343**	⇓P	**Pg**	**22 25 06.2**	**-0.5**
SSFR				S	**Sb**	**22 25 18.0**	**+1.6**
SSFR				AML	AML		
	comp=E,8720μm,0.2s						
SSFR				AML	AML		
	comp=N,9940μm,0.2s						
SSFR				AML	AML		
	comp=E,7560μm,0.2s						
SSFR				AML	AML		
	comp=N,9745μm,0.2s						
FAGN	**Fagnano**	**0.67**	**143**	⇓P	**Pg**	**22 25 06.0**	**-0.9**
FAGN				AML	AML		
	comp=E,2585μm,0.7s						
FAGN				AML	AML		
	comp=N,2035μm,0.4s						
SRES	**S.Oreste - Sor**	**0.69**	**215**	⇑P	**Pg**	**22 25 06.6**	**-0.7**
SRES				AML	AML		
	comp=N,1365μm,0.4s						
SRES				AML	AML		
	comp=E,1197μm,0.7s						
MGAB	**Montegabbione**	**0.69**	**279**	⇑P	**Pg**	**22 25 06.9**	**-0.4**
MGAB				AML	AML		
	comp=N,3845μm,0.5s						
MGAB				AML	AML		
	comp=E,2905μm,1.3s						
MGAB				AML	AML		
	comp=N,3845μm,0.5s						
MGAB				AML	AML		
	comp=E,2935μm,0.3s						
ARVD	**Arcevia**	**0.70**	**354**	⇑P	**Pg**	**22 25 06.6**	**-0.8**
ARVD				S	**Sb**	**22 25 18.0**	**+0.5**
ARVD				AML	AML		
	comp=E,3590μm,0.9s						
ARVD				AML	AML		
	comp=N,2840μm,0.3s						
PP3	**Marolino**	**0.71**	**36**	⇑P	**Pg**	**22 25 07.8**	**+0.1**
PP3				AML	AML		
	comp=E,5380μm,0.6s						
PP3				AML	AML		
	comp=N,6250μm,1.2s						
PP3				AML	AML		
	comp=E,5605μm,0.7s						
PP3				AML	AML		
	comp=N,6250μm,1.2s						
PP3				AML	AML		
	comp=E,5600μm,0.7s						
PP3				AML	AML		
	comp=N,6255μm,1.2s						
PP3				AML	AML		
	comp=E,5385μm,0.6s						
PP3				AML	AML		
	comp=N,6000μm,0.8s						
VCEL	**Villa Celiera**	**0.72**	**124**	⇑P	**Pg**	**22 25 07.3**	**-0.4**
VCEL				AML	AML		
	comp=E,2165μm,0.7s						
VCEL				AML	AML		
	comp=N,1790μm,0.6s						
ATVO	**AVT- Monte Val**	**0.74**	**321**	⇓P	**Pg**	**22 25 07.5**	**-0.8**
ATVO				AML	AML		
	comp=N,2030μm,0.5s						
ATVO				AML	AML		
	comp=E,2045μm,0.3s						
FRON	**Frontone**	**0.75**	**342**	⇑P	**Pg**	**22 25 07.7**	**-0.8**
FRON				AML	AML		
	comp=N,3070μm,0.6s						
FRON				AML	AML		
	comp=E,2170μm,0.3s						
ATMI	**Monte Miggiano**	**0.78**	**313**	⇑P	**Pg**	**22 25 09.3**	**+0.3**
ATMI				AML	AML		
	comp=E,5395μm,0.7s						
ATMI				AML	AML		
	comp=N,4775μm,0.3s						
T0110	**Collepietro**	**0.79**	**136**	⇓P	**Pg**	**22 25 08.2**	**-1.0**
T0110				AML	AML		
	comp=E,2520μm,0.8s						
T0110				AML	AML		
	comp=N,2000μm,0.4s						
ATPI	**Pietralunga -**	**0.80**	**324**	⇑P	**Pg**	**22 25 08.7**	**-0.7**
ATPI				S	**Sb**	**22 25 22.0**	**+1.6**
ATPI				AML	AML		
	comp=E,1630μm,0.6s						
ATPI				AML	AML		
	comp=N,1700μm,0.3s						
ATPI				AML	AML		
	comp=N,1695μm,0.3s						
ATPI				AML	AML		
	comp=E,1625μm,0.6s						
MTCE	**Montecelio**	**0.81**	**196**	⇓P	**Pg**	**22 25 08.8**	**-0.8**
MTCE				AML	AML		
	comp=N,1320μm,1.0s						
MTCE				AML	AML		
	comp=E,1770μm,1.1s						
PIEI	**Pieia**	**0.82**	**333**	⇑P	**Pg**	**22 25 08.8**	**-1.0**
PIEI				S	**Sb**	**22 25 22.0**	**+1.0**
PIEI				AML	AML		
	comp=E,2555μm,1.1s						
PIEI				AML	AML		
	comp=N,1890μm,0.4s						
SACS	**San Casciano d**	**0.83**	**274**	⇑P	**Pg**	**22 25 09.6**	**-0.5**
SACS				AML	AML		
	comp=E,850μm,0.5s						
SACS				AML	AML		
	comp=E,816μm,0.6s						
SACS				AML	AML		
	comp=N,1046μm,1.1s						
SACS				AML	AML		
	comp=N,1095μm,1.1s						
AOI	**Ancona**	**0.85**	**28**	P	**Pg**	**22 25 10.1**	**-0.3**
AOI				AML	AML		
	comp=E,1495μm,1.1s						
AOI				AML	AML		
	comp=N,2265μm,0.3s						
MPAG	**Monte Paganucc**	**0.85**	**346**	⇑P	**Pg**	**22 25 09.3**	**-1.0**
MPAG				S	**Sb**	**22 25 24.0**	**+2.1**
MPAG				AML	AML		
	comp=N,1810μm,0.4s						
MPAG				AML	AML		
	comp=E,1875μm,0.5s						
MPAG				AML	AML		
	comp=E,1845μm,0.9s						
MPAG				AML	AML		
	comp=N,2260μm,0.6s						
MPAG				AML	AML		
	comp=N,1815μm,0.4s						
CERT	**Cerreto**	**0.85**	**183**	P	**Pg**	**22 25 08.9**	**-1.5**
CERT				AML	AML		
	comp=E,1640μm,0.6s						
CERT				AML	AML		
	comp=N,1094μm,0.7s						
APEC	**Apecchio**	**0.88**	**329**	⇑P	**Pb**	**22 25 11.9**	**+0.9**
APEC				S	**Sn**	**22 25 26.0**	**+1.3**
FSSB	**Fossombrone**	**0.91**	**348**	⇑P	**Pg**	**22 25 10.4**	**-1.0**
FSSB				S	**Sb**	**22 25 25.0**	**+1.5**
FSSB				AML	AML		
	comp=N,8805μm,0.3s						
FSSB				AML	AML		
	comp=E,5700μm,1.5s						
BADI	**Badiali**	**0.92**	**321**	⇑P	**Pg**	**22 25 10.8**	**-0.8**
BADI				S	**Sb**	**22 25 26.0**	**+2.3**
CAFI	**Castiglion Fio**	**0.95**	**304**	⇓P	**Pg**	**22 25 11.7**	**-0.5**
CAFI				AML	AML		
	comp=N,656μm,0.3s						
CAFI				AML	AML		
	comp=E,910μm,0.4s						
PE3	**Peglio**	**0.98**	**336**	⇑P	**Pg**	**22 25 12.2**	**-0.5**
PE3				AML	AML		
	comp=E,23μm,0.6s						
PE3				AML	AML		
	comp=E,23μm,0.6s						
PE3				AML	AML		
	comp=N,32μm,0.5s						
MCIV	**Monte Civitell**	**1.01**	**269**	⇓P	**Pg**	**22 25 13.9**	**+0.6**
MCIV				AML	AML		
	comp=E,450μm,0.7s						
MCIV				AML	AML		
	comp=N,380μm,0.8s						
TOLF	**Tolfa**	**1.07**	**227**	⇑P	**Pg**	**22 25 13.4**	**-1.1**
TOLF				AML	AML		
	comp=E,870μm,0.6s						
TOLF				AML	AML		
	comp=N,720μm,0.5s						
SF01	**Poggio Pratacc**	**1.09**	**271**	⇓P	**Pg**	**22 25 14.7**	**-0.1**
SF01				AML	AML		
	comp=E,638μm,1.0s						
SF01				AML	AML		
	comp=N,638μm,1.0s						
CPGN	**Carpegna, Ital**	**1.13**	**332**	⇓P	**Pb**	**22 25 16.1**	**+0.8**
CPGN				AML	AML		
	comp=E,1278μm,0.6s						
CPGN				AML	AML		
	comp=N,1169μm,0.8s						
CPGN				AML	AML		
	comp=N,1475μm,0.6s						
CPGN				AML	AML		
	comp=E,1480μm,0.8s						
CRE	**Caprese Michel**	**1.14**	**316**	⇑P	**Pg**	**22 25 15.3**	**-0.6**
CRE				AML	AML		
	comp=E,396μm,0.4s						
CRE				AML	AML		
	comp=N,754μm,0.3s						
ARCI	**Arcidosso**	**1.16**	**273**	⇑P	**Pg**	**22 25 16.5**	**+0.4**
POFI	**Posta Fibreno**	**1.19**	**155**	⇓P	**Pn**	**22 25 18.0**	**+1.7**
GIUL	**Giuliano Di Ro**	**1.25**	**173**	⇑P	**Pg**	**22 25 18.3**	**+0.3**
RUFI	**Rufina**	**1.52**	**313**	⇓P	**Pn**	**22 25 22.4**	**+1.6**
CASP	**Castiglione de**	**1.60**	**270**	⇓P	**Pn**	**22 25 21.8**	**-0.1**
CASP				AML	AML		
	comp=E,69μm,0.8s						
CASP				AML	AML		
	comp=N,90μm,0.8s						
LMD	**Lutirano**	**1.60**	**323**	⇑P	**Pb**	**22 25 24.3**	**+1.0**
PTRJ	**Pietraroja**	**1.81**	**142**	S	**Sg**	**22 25 53.0**	**+0.8**
MTCR	**Monte La Croce**	**1.93**	**310**	⇓P	**Pn**	**22 25 26.9**	**+0.5**
BRJN	**Brijuni**	**2.16**	**13**	⇓P	**Pn**	**22 25 29.9**	**+0.4**
CARD	**Cardoso**	**2.23**	**304**	P	**Pb**	**22 25 35.0**	**+1.0**
MORSI	**Morsiglia**	**2.71**	**274**	P	**Pn**	**22 25 38.0**	**+1.0**
SMPL	**Sampolo**	**2.87**	**257**	P	**Pn**	**22 25 41.0**	**+1.7**
PGF	**Pioggiola**	**2.99**	**266**	*e*P	**Pn**	**22 25 41.7**	**+0.6**
PGF				*e*Sn	**Sn**	**22 26 12.7**	**-4.1**
	comp=N,15nm,0.8s						
PGF	**Pioggiola**	**2.99**	**266**	P	**Pn**	**22 25 41.9**	**+0.8**
CEY	**Cerknica**	**3.10**	**18**	*e*Pn	**Pn**	**22 25 42.4**	**0.0**
SRKY	**Kupres RS**	**3.26**	**66**	*e*Pn	**Pn**	**22 25 45.4**	**+0.7**
AJAC	**Base Areonaval**	**3.29**	**256**	P	**Pn**	**22 25 46.8**	**+1.8**
MGRS	**Mrkonjic Grad**	**3.35**	**60**	*e*Pn	**Pn**	**22 25 47.6**	**+1.7**
STON	**Ston**	**3.42**	**87**	*e*Pn	**Pn**	**22 25 45.7**	**-1.2**
A051A	**Mrakovica**	**3.56**	**50**	*e*Pn	**Pn**	**22 25 49.6**	**+0.8**
BLY	**Banja Luka**	**3.57**	**56**	*e*Pn	**Pb**	**22 25 55.0**	**-1.9**
MYKA	**Terra Mystica**	**3.85**	**6**	*e*Pn	**Pn**	**22 25 53.7**	**+0.9**
	comp=N,12nm,0.5s,SNR=6.1						

OBKA	**Obir**	**3.86**	**16**	*e*Pn	**Pn**	**22 25 53.6**	**+0.7**
OBKA	**Obir**	**3.86**	**16**	*i* Pn	**Pn**	**22 25 53.5**	**+0.5**
	comp=N,1.7nm,0.2s						
TREB	**Trebinje**	**3.91**	**89**	*e*Pn	**Pn**	**22 25 56.3**	**+2.8**
ABTA	**Abfaltersbach**	**3.96**	**355**	*i* Pn	**Pn**	**22 25 55.8**	**+1.4**
	comp=N,17nm,0.5s,SNR=13						
SOKA	**Soboth**	**4.12**	**19**	*i* Pn	**Pn**	**22 25 57.3**	**+0.7**
	comp=N,1.4nm,0.3s						
SBF	**Sospel**	**4.23**	**286**	*e*P	**Pn**	**22 25 59.4**	**+1.4**
SBF				*e*Sn	**Sn**	**22 26 42.1**	**-5.1**
	comp=N,9.3nm,0.5s						
KBA	**Koelnbreinsper**	**4.28**	**3**	*i* Pn	**Pn**	**22 26 00.5**	**+1.7**
	comp=N,5.7nm,0.3s,SNR=9.1						
HAPS	**Han Pijesak,BI**	**4.49**	**71**	*e*Pn	**Pn**	**22 26 03.8**	**+2.2**
FETA	**Feichten**	**4.53**	**340**	*e*Pn	**Pn**	**22 26 04.7**	**+2.5**
	comp=N,3.8nm,0.4s						
CALF	**Calern**	**4.57**	**284**	P	**Pn**	**22 26 03.8**	**+1.1**
WTTA	**Wattenberg**	**4.57**	**348**	*i* Pn	**Pn**	**22 26 05.4**	**+2.6**
	comp=N,2.0nm,0.3s						
DRME	**Dracevica, Mon**	**4.58**	**96**	*e*Pn	**Pn**	**22 26 04.4**	**+1.6**
SQTA	**Sankt Quirin**	**4.61**	**344**	*i* Pn	**Pn**	**22 26 05.6**	**+2.4**
	comp=N,9.9nm,0.3s,SNR=8.3						
WATA	**Walderalm**	**4.65**	**348**	*i* Pn	**Pn**	**22 26 06.9**	**+3.0**
	comp=N,6.8nm,0.4s,SNR=7.8						
RUDO	**Rudo**	**4.70**	**78**	*e*Pn	**Pn**	**22 26 04.1**	**-0.3**
MOTA	**Moosalm**	**4.75**	**344**	*i* Pn	**Pn**	**22 26 07.9**	**+2.8**
	comp=N,4.5nm,0.4s,SNR=5.7						
BBLS	**Lazići**	**4.76**	**75**	*e*Pn	**Pn**	**22 26 06.6**	**+1.3**
ARSA	**Arzberg**	**4.78**	**21**	*i* Pn	**Pn**	**22 26 05.9**	**+0.4**
	comp=N,4.6nm,0.5s,SNR=6.3						
LMR	**La Mourre**	**4.82**	**279**	*e*P	**Pn**	**22 26 06.5**	**+0.5**
LMR				*e*Sn	**Sn**	**22 26 56.1**	**-5.5**
	comp=N,1.7nm,0.4s						
SURF	**Saint Ours**	**4.82**	**292**	P	**Pn**	**22 26 09.3**	**+3.0**
JAUF	**Jausiers**	**4.85**	**292**	P	**Pn**	**22 26 10.7**	**+4.1**
BIOA	**Bad Ischl, Aus**	**4.91**	**5**	*i* Pn	**Pn**	**22 26 08.8**	**+1.5**
	comp=N,12nm,0.4s,SNR=14						
MBDF	**Montbardon**	**4.93**	**295**	*e*P	**Pn**	**22 26 10.6**	**+2.8**
MBDF				*e*Sn	**Sn**	**22 26 59.0**	**-5.7**
	comp=N,3.4nm,0.5s						
TRIGF	**Trigance**	**4.94**	**283**	P	**Pn**	**22 26 09.5**	**+1.8**
RETA	**Reutte**	**4.95**	**342**	*i* Pn	**Pn**	**22 26 10.9**	**+2.9**
	comp=N,6.5nm,0.3s						
CREF	**Crivoux**	**4.97**	**293**	P	Pn	22 26 12.8	+4.5
FLAF	**Flassans-sur-I**	**5.00**	**279**	P	**Pn**	**22 26 10.0**	**+1.4**
DAVA	**Damuels**	**5.01**	**335**	*i* Pn	**Pn**	**22 26 12.0**	**+3.2**
	comp=N,8.0nm,0.5s,SNR=8.1						
MOA	**Molln**	**5.12**	**9**	*i* Pn	**Pn**	**22 26 11.2**	**+1.0**
	comp=N,2.5nm,0.3s						
DIX	**Grande Dixence**	**5.20**	**311**	P	**Pn**	**22 26 13.8**	**+2.3**
LPG	**La Plagne**	**5.27**	**303**	*e*P	**Pn**	**22 26 15.7**	**+3.2**
LPG				*e*Sn	**Sn**	**22 27 07.3**	**-5.9**
	comp=N,3.9nm,0.6s						
LPL	**La Plagne**	**5.29**	**303**	*e*P	**Pn**	**22 26 14.8**	**+2.1**
LPL				*e*Sn	**Sn**	**22 27 07.6**	**-6.0**
	comp=N,4.1nm,0.5s						
RONA	**Rosalia, Austr**	**5.41**	**24**	*i* Pn	**Pn**	**22 26 14.6**	**+0.4**
	comp=N,2.3nm,0.4s						
RSL	**Roselend**	**5.44**	**304**	P	**Pn**	**22 26 17.7**	**+3.0**
CONA	**Conrad Observa**	**5.50**	**20**	*i* Pn	**Pn**	**22 26 15.8**	**+0.3**
	comp=N,5.1nm,0.4s,SNR=6.1						
SMRF	**Simiane la Rot**	**5.57**	**285**	*e*P	**Pn**	**22 26 18.0**	**+1.6**
SMRF				*e*Sn	**Sn**	**22 27 14.0**	**-6.2**
	comp=N,0.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**5.59**	**295**	*e*P	**Pn**	**22 26 18.7**	**+1.9**
ORIF				*e*Sn	**Sn**	**22 27 14.8**	**-6.1**
	comp=N,6.2nm,0.8s						
SULZ	**Cheisacher**	**5.87**	**325**	P	**Pn**	**22 26 22.9**	**+2.4**
TORNY	**Torny/Romont**	**5.87**	**315**	P	**Pn**	**22 26 23.8**	**+3.3**
BALST	**Balsthal**	**5.91**	**322**	P	**Pn**	**22 26 23.2**	**+2.2**
SLE	**Schleitheim**	**5.91**	**329**	P	**Pn**	**22 26 22.7**	**+1.6**
GERES	**GERESS Array B**	**6.06**	**4**	Pn	**Pn**	**22 26 23.3**	**+0.1**
	comp=N,0.6nm,0.3s,baz=172,slow=13,SNR=21						
GERES				Sn	**Sn**	**22 27 31.8**	**-0.6**
	comp=N,1.7nm,0.3s,baz=180,slow=22,SNR=7.9						
GERES				Lg	Lg	22 28 03.7	
	baz=188,slow=34						
	comp=N,0.9nm,0.3s						
CKRC	**Cesky Krumlov**	**6.08**	**8**	*e*PN	**Pn**	**22 26 22.6**	**-0.8**
CKRC				*e*SN	**Sn**	**22 27 32.2**	**-0.6**
BOURR	**Bourrignon**	**6.16**	**320**	P	**Pn**	**22 26 26.8**	**+2.2**
FELD	**Feldberg im Sc**	**6.19**	**327**	P	**Pn**	**22 26 26.7**	**+1.6**
BRANT	**Les Verrieres**	**6.24**	**314**	P	**Pn**	**22 26 28.7**	**+3.1**
BRANT	**Les Verrieres**	**6.24**	**314**	S	**Sn**	**22 27 38.1**	**+1.4**
CABF	**La Chapelle**	**6.25**	**310**	*e*P	**Pn**	**22 26 28.3**	**+2.5**
CABF				*e*Sn	**Sn**	**22 27 30.5**	**-6.6**
	comp=N,3.8nm,0.6s						
KIZ	**Kirchzarten**	**6.29**	**327**	P	**Pn**	**22 26 27.9**	**+1.6**
KHC	**Kasperske Hory**	**6.34**	**3**	*e*PN	**Pn**	**22 26 26.4**	**-0.6**
KHC				*e*SN	**Sn**	**22 27 38.3**	**-0.9**
CHMF	**Charmoille**	**6.34**	**317**	P	**Pn**	**22 26 29.5**	**+2.4**
VIVF	**Saint-Julien-l**	**6.39**	**292**	*e*P	**Pn**	**22 26 29.8**	**+2.1**
VIVF				*e*Sn	Sn	22 27 33.6	-6.9
	comp=N,0.9nm,0.4s						
VOGT	**Vogtsburg - To**	**6.49**	**326**	P	**Pn**	**22 26 30.9**	**+1.9**
BOUC	**Bouclans**	**6.55**	**315**	P	**Pn**	**22 26 32.1**	**+2.3**
BOUC				S	**Sn**	**22 27 42.8**	**-1.5**
HINF	**Hinteralfeld**	**6.64**	**321**	*e*P	**Pn**	**22 26 33.3**	**+2.1**
HINF				*e*Sn	**Sn**	**22 27 39.7**	**-7.0**
	comp=N,9.2nm,0.6s						
KRUC	**Moravsky**	**6.68**	**19**	*e*PN	**Pn**	**22 26 31.9**	**+0.3**
LASF	**Ste Croix**	**6.81**	**284**	*e*P	**Pn**	**22 26 35.0**	**+1.6**
LASF				*e*Sn	Sn	22 27 43.7	-7.0
	comp=N,2.0nm,0.7s						
ECH	**Echery**	**6.81**	**325**	P	**Pn**	**22 26 34.7**	**+1.3**
CDF	**Champ du Feu**	**6.91**	**326**	*e*P	**Pn**	**22 26 36.2**	**+1.3**
CDF				*e*Sn	**Sn**	**22 27 46.2**	**-7.2**
	comp=N,6.7nm,0.5s						
HAU	**Haudompre**	**7.02**	**320**	*e*P	**Pn**	**22 26 38.2**	**+1.9**
HAU				*e*Sn	Sn	22 27 48.7	-7.2
	comp=N,7.3nm,0.3s						
PRU	**Pruhonice**	**7.26**	**8**	*e*SN	**Sn**	**22 27 59.6**	**-2.2**
NKC	**Novy Kostel**	**7.44**	**357**	*e*SN	**Sn**	**22 28 04.3**	**-2.0**
SMF	**Signal de Mont**	**7.59**	**304**	*e*P	**Pn**	**22 26 46.7**	**+2.5**
SMF				*e*Sn	Sn	22 28 02.6	-7.5
	comp=N,2.9nm,0.6s						
KEST	**Kesra**	**7.62**	**203**	Pn	**Pn**	**22 26 48.8**	**+4.2**
	comp=N,0.2nm,0.3s,baz=271,slow=23,SNR=1.5						
	comp=N,1.6nm,0.8s						
PAGF	**Fort de Pagny**	**7.70**	**321**	*e*P	**Pn**	**22 26 48.1**	**+2.5**
PAGF				*e*Sn	Sn	22 28 04.9	-7.7
	comp=N,2.3nm,0.3s						
SFTF	**Sexfontaines**	**7.79**	**317**	*e*P	**Pn**	**22 26 49.6**	**+2.7**
SFTF				*e*Sn	Sn	22 28 07.3	-7.6
	comp=N,2.1nm,0.3s						
LOR	**Lormes**	**7.89**	**308**	*e*P	**Pn**	**22 26 50.4**	**+2.2**
	baz=124						
LOR				*e*Sn	Sn	22 28 09.6	-7.7
	comp=N,2.0nm,0.4s						
AVF	**Avril sur Loir**	**7.96**	**303**	*e*P	**Pn**	**22 26 51.9**	**+2.7**
AVF				*e*Sn	Sn	22 28 11.3	-7.7
	comp=N,1.4nm,0.6s						
MEZF	**Maizieres J'vi**	**7.99**	**318**	*e*P	**Pn**	**22 26 52.2**	**+2.7**
MEZF				*e*Sn	Sn	22 28 11.7	-7.9
	comp=N,3.8nm,0.6s						
SSF	**Saint Saulge**	**7.99**	**305**	*e*P	**Pn**	**22 26 52.0**	**+2.4**
SSF				*e*Sn	Sn	22 28 11.9	-7.9
	comp=N,1.0nm,0.4s						
SAVF	**Savonnieres en**	**8.03**	**319**	*e*P	**Pn**	**22 26 52.6**	**+2.5**
SAVF				*e*Sn	Sn	22 28 12.7	-8.0
	comp=N,1.6nm,0.4s						
BGF	**Bois d'Agland**	**8.18**	**301**	*e*P	**Pn**	**22 26 54.5**	**+2.4**
BGF				*e*Sn	Sn	22 28 16.4	-8.0
	comp=N,2.1nm,0.4s						
CAF	**Calviac**	**8.21**	**289**	*e*P	**Pn**	**22 26 54.7**	**+2.0**
CAF				*e*Sn	Sn	22 28 17.3	-8.0
	comp=N,0.4nm,0.3s						
CLL	**Collm**	**8.51**	**360**	*ex*	x	22 28 29.0	
CLL				*e*Sg	Sg	22 29 15.0	-12
FINES	**FINESS Array B**	**20.24**	**18**	P	**P**	**22 29 29.0**	**+0.6**
	comp=N,1.1nm,0.9s,baz=210,slow=11,SNR=3.8						
	comp=N,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.14**	**202**	P	**P**	**22 31 13.3**	**+1.1**
	comp=N,0.1nm,0.4s,baz=3.8,slow=8.7,SNR=1.5						
	comp=N,0.1nm,0.4s						
MKAR	**Makanchi Array**	**47.85**	**60**	P	**P**	**22 33 31.3**	**+0.2**
	comp=N,0.3nm,0.7s,baz=288,slow=5.9,SNR=1.7						
	comp=N,0.3nm,0.7s						

IDC 31 22:26:53.0±2.1, 11°.65N×127°.04E, h0km, mb3.5/3, mbtmp3.5/3, MS2.2/1, Error ellipse: s-maj=177.4km s-min=24.7km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.62**	**162**	P	P	22 31 55.0	-0.6
	0.6nm,0.3s,baz=340,slow=11,SNR=21						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**26.04**	**166**	P	P	22 32 28.8	+0.6
	0.3nm,0.6s,baz=350,slow=8.6,SNR=4.4						
	0.3nm,0.6s						
KSRS	**Korea Array**	**35.64**	**1**	LR	LR	22 48 11.9	
	comp=Z,4.3nm,21.4s,baz=15,slow=36						
MKAR	**Makanchi Array**	**59.43**	**326**	P	P	22 36 57.5	-0.1
	0.4nm,0.5s,baz=114,slow=7.8,SNR=9.0						
	0.4nm,0.5s						

ROM 31 22:44:35.6±0.1, 42°.801N±0°.004×13°.211E±0°.005, h8km, ML2.5/29, 12C-10D, Error ellipse: s-maj=0.4km s-min=0.2km az=10.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.06**	**343**	P	Pg	22 44 37.1	-0.5
T1245				AML	AML		
	comp=E,47750μm,0.6s						
T1245				AML	AML		
	comp=N,29400μm,0.2s						
T1245				AML	AML		
	comp=N,28400μm,0.2s						
T1245				AML	AML		
	comp=E,47800μm,0.6s						
T1245				AML	AML		
	comp=N,29550μm,0.8s						
T1245				AML	AML		
	comp=N,29700μm,0.8s						
T1245				AML	AML		
	comp=E,47900μm,0.6s						
MMO1	**Montemonaco**	**0.13**	**41**	P	Pg	22 44 39.1	+0.6
MMO1				S	Sg	22 44 41.7	+1.1
T1204	**Amatrice, Fraz**	**0.15**	**148**	⇓P	Pg	22 44 39.5	+0.7
T1204				S	Sg	22 44 42.2	+1.2
T1204				AML	AML		
	comp=N,2655μm,0.6s						
T1204				AML	AML		
	comp=E,2745μm,0.7s						
T1216	**Preci, Frazion**	**0.17**	**302**	P	Pg	22 44 39.7	+0.6
T1216				S	Sg	22 44 42.8	+1.3
T1216				AML	AML		
	comp=E,4580μm,0.3s						
T1216				AML	AML		
	comp=N,4865μm,0.3s						
T1216				AML	AML		
	comp=N,20450μm,0.5s						
T1216				AML	AML		
	comp=E,15650μm,0.3s						
T1241	**Roccafluvione,**	**0.17**	**71**	P	Pg	22 44 39.7	+0.5
T1241				S	Sg	22 44 42.6	+1.0
T1241				AML	AML		
	comp=E,444μm,0.3s						
T1241				AML	AML		
	comp=N,241μm,0.6s						
SMA1	**SAN MARTINO**	**0.19**	**152**	⇓P	Pg	22 44 40.1	+0.6
SMA1				AML	AML		
	comp=E,364μm,0.2s						
SMA1				AML	AML		
	comp=N,374μm,1.0s						
T1243	**Rocca Santa Ma**	**0.20**	**121**	P	Pg	22 44 40.2	+0.5
T1243				S	Sg	22 44 43.5	+0.9
AM05	**Amandola Campo**	**0.20**	**30**	⇑P	Pg	22 44 40.5	+0.7
AM05				S	Sg	22 44 44.0	+1.4
AM05				AML	AML		
	comp=E,604μm,0.1s						
AM05				AML	AML		
	comp=N,864μm,0.3s						
AM05				AML	AML		
	comp=E,3280μm,0.1s						
AM05				AML	AML		
	comp=N,264μm,0.2s						
AM05				AML	AML		
	comp=E,1125μm,0.1s						
AM05				AML	AML		
	comp=E,5175μm,0.1s						
AM05				AML	AML		
	comp=N,524μm,0.6s						
AM05				AML	AML		
	comp=N,1805μm,0.1s						
T1256	**Bolognola (MC)**	**0.20**	**3**	⇓P	Pg	22 44 40.4	+0.5
T1256				S	Sg	22 44 43.9	+1.1
T1256				AML	AML		
	comp=E,389μm,0.7s						
T1256				AML	AML		
	comp=N,302μm,1.6s						
T1256				AML	AML		
	comp=E,968μm,0.5s						
T1256				AML	AML		
	comp=N,1090μm,0.5s						
T1256				AML	AML		
	comp=E,936μm,0.5s						
T1256				AML	AML		
	comp=N,1025μm,0.2s						
T1256				AML	AML		
	comp=E,2535μm,0.4s						
T1256				AML	AML		
	comp=N,2010μm,0.4s						
T1256				AML	AML		
	comp=N,2005μm,0.4s						
T1256				AML	AML		
	comp=E,2490μm,0.4s						
T1217	**Poggiodomo (PG**	**0.23**	**247**	P	Pg	22 44 40.8	+0.6
T1217				S	Sg	22 44 44.8	+1.6
T1217				AML	AML		
	comp=E,326μm,0.7s						
T1217				AML	AML		
	comp=N,460μm,0.8s						
T1217				AML	AML		
	comp=E,4400μm,0.8s						
T1217				AML	AML		
	comp=N,6720μm,0.7s						
T1217				AML	AML		
	comp=E,4265μm,0.8s						
T1217				AML	AML		
	comp=N,6500μm,0.2s						
LNSS	**Leonessa**	**0.23**	**213**	⇑P	Pg	22 44 41.1	+0.8
LNSS				AML	AML		
	comp=E,262μm,0.8s						
LNSS				AML	AML		
	comp=N,695μm,0.1s						
LNSS				AML	AML		
	comp=E,1196μm,1.6s						
LNSS				AML	AML		
	comp=N,4980μm,0.1s						
FDMO	**Fiordimonte**	**0.25**	**339**	⇓P	Pg	22 44 41.1	+0.5
FDMO				AML	AML		
	comp=E,1185μm,0.7s						
FDMO				AML	AML		
	comp=E,1650μm,0.2s						
FDMO				AML	AML		
	comp=N,2270μm,0.3s						
FDMO				AML	AML		
	comp=E,5760μm,0.2s						
FDMO				AML	AML		
	comp=N,3885μm,0.3s						
T1215	**Vallo di Nera,**	**0.25**	**270**	⇑P	Pg	22 44 41.2	+0.6
T1215				AML	AML		
	comp=E,780μm,0.7s						
T1215				AML	AML		
	comp=N,734μm,0.1s						
T1215				AML	AML		
	comp=E,5355μm,0.5s						
T1215				AML	AML		
	comp=N,3980μm,0.3s						
T1215				AML	AML		
	comp=N,4000μm,1.1s						
T1215				AML	AML		
	comp=E,5080μm,0.6s						
RM33	**Pellescritta (**	**0.29**	**180**	P	Pg	22 44 41.5	+0.1
RM33				AML	AML		
	comp=E,268μm,0.1s						
RM33				AML	AML		
	comp=N,204μm,1.0s						
RM33				AML	AML		
	comp=N,706μm,0.7s						
RM33				AML	AML		
	comp=E,788μm,0.8s						
CAMP	**Campotosto**	**0.30**	**151**	⇓P	Pg	22 44 41.8	+0.2
CAMP				AML	AML		
	comp=E,264μm,0.3s						
CAMP				AML	AML		
	comp=N,151μm,0.7s						
CAMP				AML	AML		
	comp=N,297μm,0.6s						
CAMP				AML	AML		
	comp=E,324μm,0.2s						
TERO	**Teramo**	**0.34**	**121**	P	Pg	22 44 42.3	0.0
TERO				AML	AML		
	comp=E,429μm,1.1s						
TERO				AML	AML		
	comp=N,631μm,0.2s						
TERO				AML	AML		
	comp=E,502μm,1.1s						
TERO				AML	AML		
	comp=N,710μm,0.2s						
TERO				AML	AML		
	comp=N,768μm,0.2s						
TERO				AML	AML		
	comp=E,736μm,0.6s						
TERO				AML	AML		
	comp=E,628μm,0.6s						
TERO				AML	AML		
	comp=N,694μm,0.2s						
T1247	**Pizzolo (AQ)**	**0.36**	**170**	⇓P	Pg	22 44 43.0	+0.3
T1247				AML	AML		
	comp=E,170μm,0.1s						
T1247				AML	AML		
	comp=N,198μm,0.4s						
T1247				AML	AML		
	comp=E,648μm,0.4s						
T1247				AML	AML		
	comp=N,825μm,0.3s						
OFFI	**Offida**	**0.37**	**69**	⇑P	Pb	22 44 44.0	-0.4
OFFI				AML	AML		
	comp=E,290μm,1.3s						
OFFI				AML	AML		
	comp=N,356μm,1.4s						
OFFI				AML	AML		
	comp=E,1074μm,0.6s						
OFFI				AML	AML		
	comp=N,1335μm,0.4s						
T1211	**Morro Reatino**	**0.38**	**225**	⇑P	Pg	22 44 43.5	+0.6
T1211				AML	AML		
	comp=E,1415μm,0.1s						
T1211				AML	AML		
	comp=E,1448μm,0.1s						
T1211				AML	AML		
	comp=N,2305μm,0.2s						
T1211				AML	AML		
	comp=N,2290μm,0.2s						
ARRO	**Arrone**	**0.40**	**236**	⇑P	Pg	22 44 43.6	+0.3
ARRO				AML	AML		
	comp=E,266μm,0.2s						
ARRO				AML	AML		
	comp=N,324μm,0.6s						
ARRO				AML	AML		
	comp=N,766μm,0.1s						
ARRO				AML	AML		
	comp=E,1061μm,0.2s						
GIGS	**Gran Sasso**	**0.44**	**143**	P	Pg	22 44 44.0	-0.2
GIGS				AML	AML		
	comp=E,52μm,0.4s						
GIGS				AML	AML		
	comp=N,38μm,1.5s						
GIGS				AML	AML		
	comp=N,100μm,1.1s						
GIGS				AML	AML		
	comp=E,124μm,0.8s						
ASSB	**Assisi San Ben**	**0.47**	**301**	⇓P	Pg	22 44 45.1	+0.3
ASSB				S	Sb	22 44 52.6	-0.7
ASSB				AML	AML		
	comp=E,283μm,1.3s						
ASSB				AML	AML		
	comp=N,249μm,1.1s						
ASSB				AML	AML		
	comp=N,1315μm,0.2s						
ASSB				AML	AML		
	comp=E,1310μm,0.7s						
SNTG	**Esanatoglia**	**0.49**	**336**	⇑P	Pg	22 44 45.3	+0.1
SNTG				AML	AML		
	comp=E,206μm,0.1s						
SNTG				AML	AML		
	comp=N,186μm,0.5s						
SNTG				AML	AML		
	comp=E,463μm,0.6s						
SNTG				AML	AML		
	comp=N,461μm,1.3s						
SNTG				AML	AML		
	comp=E,454μm,0.6s						
SNTG				AML	AML		
	comp=N,493μm,0.1s						
EL6	**Elcito**	**0.53**	**351**	P	Pg	22 44 46.0	+0.1
FIAM	**Fiamignano**	**0.54**	**187**	⇑P	Pg	22 44 46.0	0.0
FIAM				S	Sb	22 44 55.0	-0.2
FIAM				AML	AML		
	comp=E,60μm,1.4s						
FIAM				AML	AML		
	comp=N,56μm,1.1s						
FIAM				AML	AML		
	comp=N,286μm,1.3s						
FIAM				AML	AML		
	comp=E,350μm,0.9s						
ATCC	**AVT- Casa Cast**	**0.57**	**313**	⇓P	Pg	22 44 47.0	+0.5
ATCC				S	Sb	22 44 55.9	-0.2
ATCC				AML	AML		
	comp=E,200μm,1.0s						
ATCC				AML	AML		
	comp=N,182μm,1.3s						
ATCC				AML	AML		
	comp=E,791μm,0.2s						
ATCC				AML	AML		
	comp=N,756μm,0.6s						
FAGN	**Fagnano**	**0.60**	**153**	⇓P	Pg	22 44 47.6	+0.4
FAGN				S	Sb	22 44 57.0	0.0
FAGN				AML	AML		
	comp=E,122μm,0.3s						
FAGN				AML	AML		
	comp=N,100μm,0.6s						
FAGN				AML	AML		
	comp=N,264μm,0.2s						
FAGN				AML	AML		
	comp=E,396μm,0.7s						
VCEL	**Villa Celiera**	**0.62**	**131**	⇑P	Pg	22 44 47.6	+0.1
VCEL				AML	AML		
	comp=N,311μm,0.3s						
VCEL				AML	AML		
	comp=E,316μm,0.4s						
SSFR	**Montelago di S**	**0.71**	**334**	⇓P	Pg	22 44 49.4	+0.2
SSFR				AML	AML		
	comp=E,776μm,1.1s						
SSFR				AML	AML		
	comp=N,628μm,0.7s						
SSFR				AML	AML		
	comp=N,840μm,0.3s						
SSFR				AML	AML		
	comp=E,601μm,0.2s						
T0110	**Collepietro**	**0.71**	**144**	⇑P	Pg	22 44 49.1	-0.2
T0110				AML	AML		
	comp=E,272μm,0.5s						
T0110				AML	AML		
	comp=N,328μm,0.5s						
ARVD	**Arcevia**	**0.72**	**344**	⇑P	Pg	22 44 49.4	-0.1
ARVD				AML	AML		
	comp=E,109μm,0.2s						
ARVD				AML	AML		
	comp=N,75μm,1.5s						
ARVD				AML	AML		
	comp=N,182μm,0.1s						
ARVD				AML	AML		
	comp=E,200μm,1.3s						
FRON	**Frontone**	**0.80**	**334**	P	Pg	22 44 50.7	-0.2
FRON				AML	AML		
	comp=E,148μm,1.1s						
FRON				AML	AML		
	comp=N,165μm,0.7s						
PIEI	**Pieia**	**0.89**	**326**	P	Pg	22 44 52.5	-0.1
PIEI				AML	AML		
	comp=E,65μm,0.9s						
PIEI				AML	AML		
	comp=N,42μm,0.2s						
PIEI				AML	AML		
	comp=E,130μm,0.1s						
PIEI				AML	AML		
	comp=N,109μm,0.9s						
FSSB	**Fossombrone**	**0.95**	**341**	⇑P	Pg	22 44 53.4	-0.3
FSSB				AML	AML		
	comp=E,466μm,0.5s						
FSSB				AML	AML		

comp=N,480μm,0.4s

ROM 31 22:45:26.5±0.0, 42°.846N±0°.002×13°.038E±0°.003, h11km, ML2.5/40, 12C-4D, Error ellipse: s-maj=0.2km s-min=0.2km az=312.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1216	**Preci, Frazion**	**0.05**	**343**	P	Pg	22 45 29.0	+0.4
T1216				S	Sg	22 45 30.5	+0.3
T1216				AML	AML		
	comp=E,15700μm,0.3s						
T1216				AML	AML		
	comp=N,20450μm,0.6s						
T1216				AML	AML		
	comp=E,15650μm,0.3s						
T1216				AML	AML		
	comp=N,20450μm,0.5s						
T1245	**Castelsantange**	**0.11**	**84**	⇑P	Pg	22 45 29.9	+0.5
T1245				S	Sg	22 45 32.2	+0.6
FEMA	**Monte Fema**	**0.12**	**4**	⇓P	Pg	22 45 30.0	+0.5
FEMA				S	Sg	22 45 32.3	+0.6
FEMA				AML	AML		
	comp=E,13050μm,0.4s						
FEMA				AML	AML		
	comp=N,9220μm,0.4s						
FEMA				AML	AML		
	comp=E,13050μm,0.5s						
FEMA				AML	AML		
	comp=N,9215μm,0.4s						
FEMA				AML	AML		
	comp=N,9225μm,0.4s						
T1215	**Vallo di Nera,**	**0.13**	**251**	⇑P	Pg	22 45 30.2	+0.5
T1215				S	Sg	22 45 32.6	+0.7
T1215				AML	AML		
	comp=E,5080μm,0.5s						
T1215				AML	AML		
	comp=E,5355μm,0.5s						
T1215				AML	AML		
	comp=E,5075μm,0.6s						
T1215				AML	AML		
	comp=N,4000μm,1.2s						
T1215				AML	AML		
	comp=N,3980μm,0.3s						
T1215				AML	AML		
	comp=E,5080μm,0.6s						
T1215				AML	AML		
	comp=N,4005μm,1.2s						
T1215				AML	AML		
	comp=E,5355μm,0.5s						
T1217	**Poggiodomo (PG**	**0.15**	**210**	P	Pg	22 45 30.6	+0.6
T1217				S	Sg	22 45 33.5	+0.9
T1217				AML	AML		
	comp=E,4260μm,0.8s						
T1217				AML	AML		
	comp=E,4395μm,0.8s						
T1217				AML	AML		
	comp=N,6500μm,0.2s						
T1217				AML	AML		
	comp=N,6720μm,0.8s						
T1217				AML	AML		
	comp=N,6725μm,0.7s						
T1217				AML	AML		
	comp=E,4400μm,0.8s						
T1217				AML	AML		
	comp=E,4275μm,0.8s						
FDMO	**Fiordimonte**	**0.19**	**11**	⇑P	Pg	22 45 31.2	+0.5
FDMO				S	Sg	22 45 34.6	+1.0
FDMO				AML	AML		
	comp=E,5760μm,0.2s						
FDMO				AML	AML		
	comp=N,3885μm,0.3s						
T1256	**Bolognola (MC)**	**0.21**	**41**	P	Pg	22 45 31.5	+0.4
T1256				S	Sg	22 45 35.3	+1.1
T1256				AML	AML		
	comp=E,2530μm,0.4s						
T1256				AML	AML		
	comp=N,2010μm,0.4s						
T1256				AML	AML		
	comp=E,2490μm,0.4s						
T1256				AML	AML		
	comp=E,2535μm,0.4s						
T1256				AML	AML		
	comp=N,2005μm,0.4s						
MMO1	**Montemonaco**	**0.22**	**76**	⇑P	Pg	22 45 31.6	+0.5
MMO1				S	Sg	22 45 35.3	+1.0
AM05	**Amandola Campo**	**0.27**	**60**	⇑P	Pg	22 45 32.5	+0.6
AM05				S	Sb	22 45 36.9	-1.1
AM05				AML	AML		
	comp=N,524μm,0.6s						
AM05				AML	AML		
	comp=E,1125μm,0.1s						
AM05				AML	AML		
	comp=E,5175μm,0.1s						
AM05				AML	AML		
	comp=N,1805μm,0.1s						
T1204	**Amatrice, Fraz**	**0.27**	**129**	⇑P	Pg	22 45 32.6	+0.6
T1204				S	Sb	22 45 37.3	-0.8
T1204				AML	AML		
	comp=N,2660μm,0.6s						
T1204				AML	AML		
	comp=N,2655μm,0.6s						
T1204				AML	AML		
	comp=E,2745μm,0.7s						
T1241	**Roccafluvione,**	**0.29**	**88**	P	Pg	22 45 32.8	+0.4
T1241				S	Sb	22 45 37.5	-1.1
T1241				AML	AML		
	comp=N,3315μm,0.7s						
T1241				AML	AML		
	comp=E,2705μm,0.9s						
T1241				AML	AML		
	comp=N,3310μm,0.7s						
GUMA	**Gualdo di Mace**	**0.31**	**45**	⇑P	Pb	22 45 33.4	-0.7
GUMA				S	Sb	22 45 38.8	-0.4
GUMA				AML	AML		
	comp=N,3200μm,0.4s						
GUMA				AML	AML		
	comp=E,2495μm,0.3s						
SEF1	**Sefro**	**0.31**	**348**	⇑P	Pg	22 45 33.3	+0.6
SEF1				S	Sb	22 45 38.2	-1.0
ARRO	**Arrone**	**0.33**	**217**	⇑P	Pg	22 45 33.6	+0.5
ARRO				S	Sb	22 45 38.9	-0.9
ARRO				AML	AML		
	comp=E,1062μm,0.2s						
ARRO				AML	AML		
	comp=E,1061μm,0.2s						
ARRO				AML	AML		
	comp=N,766μm,0.1s						
T1243	**Rocca Santa Ma**	**0.34**	**116**	⇓P	Pg	22 45 33.6	+0.3
T1243				S	Sb	22 45 39.0	-1.1
ASSB	**Assisi San Ben**	**0.34**	**305**	P	Pg	22 45 33.6	+0.2
ASSB				S	Sg	22 45 39.0	+1.1
ASSB				AML	AML		
	comp=N,1315μm,0.2s						
ASSB				AML	AML		
	comp=E,1310μm,0.7s						
T1211	**Morro Reatino**	**0.34**	**203**	P	Pg	22 45 31.7	-1.6
RM33	**Pellescritta (**	**0.36**	**159**	⇑P	Pg	22 45 34.2	+0.5
RM33				S	Sb	22 45 39.9	-0.8
RM33				AML	AML		
	comp=E,804μm,0.8s						
RM33				AML	AML		
	comp=E,789μm,0.8s						
RM33				AML	AML		
	comp=E,803μm,0.8s						
RM33				AML	AML		
	comp=N,662μm,0.7s						
RM33				AML	AML		
	comp=E,788μm,0.8s						
RM33				AML	AML		
	comp=E,806μm,0.8s						
RM33				AML	AML		
	comp=N,662μm,0.7s						
RM33				AML	AML		
	comp=N,706μm,0.7s						
GAG1	**Gagliole**	**0.39**	**3**	⇓P	Pb	22 45 35.0	-0.5
CESX	**Cesi**	**0.41**	**235**	⇑P	Pg	22 45 34.8	+0.2
CESX				S	Sb	22 45 41.3	-0.9
CESX				AML	AML		
	comp=N,902μm,0.3s						
CESX				AML	AML		
	comp=E,630μm,1.3s						
MNTP	**Montappone**	**0.43**	**47**	AML	AML		
	comp=N,1445μm,0.3s						
MNTP				AML	AML		
	comp=E,1520μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.45**	**319**	P	Pg	22 45 35.6	+0.3
ATCC				S	Sb	22 45 42.8	-0.4
ATCC				AML	AML		
	comp=E,791μm,0.2s						
ATCC				AML	AML		
	comp=N,756μm,0.6s						
TERO	**Teramo**	**0.47**	**118**	⇑P	Pg	22 45 35.9	+0.1
TERO				AML	AML		
	comp=E,736μm,0.6s						
TERO				AML	AML		
	comp=E,736μm,0.6s						
TERO				AML	AML		
	comp=N,768μm,0.2s						
OFFI	**Offida**	**0.48**	**79**	AML	AML		
	comp=N,1335μm,0.4s						
OFFI				AML	AML		
	comp=E,1074μm,0.6s						
OFFI				AML	AML		
	comp=N,1330μm,0.4s						
OFFI				AML	AML		
	comp=E,1074μm,0.6s						
FOSV	**Fossato di Vic**	**0.49**	**336**	⇓P	Pg	22 45 35.2	-0.9
FOSV				AML	AML		
	comp=E,222μm,0.2s						
FOSV				AML	AML		
	comp=N,304μm,0.5s						
MURB	**Monte Urbino**	**0.56**	**318**	AML	AML		
	comp=N,1840μm,0.3s						
MURB				AML	AML		
	comp=E,1440μm,0.6s						
MURB				AML	AML		
	comp=N,1930μm,0.4s						
MURB				AML	AML		
	comp=E,1520μm,0.6s						
MURB				AML	AML		
	comp=N,1925μm,0.4s						
FIAM	**Fiamignano**	**0.58**	**174**	AML	AML		
	comp=E,350μm,0.9s						
FIAM				AML	AML		
	comp=N,285μm,1.3s						
FIAM				AML	AML		
	comp=N,286μm,1.3s						
ATTE	**AVT- Monte Tez**	**0.61**	**305**	AML	AML		
	comp=N,240μm,0.7s						
ATTE				AML	AML		
	comp=E,282μm,0.3s						
SSFR	**Montelago di S**	**0.62**	**342**	AML	AML		
	comp=E,776μm,1.1s						
SSFR				AML	AML		
	comp=N,840μm,0.3s						
SSFR				AML	AML		
	comp=N,628μm,0.7s						
SSFR				AML	AML		
	comp=E,601μm,0.2s						
ATFO	**Monte Foce - G**	**0.62**	**327**	AML	AML		
	comp=N,340μm,0.4s						
ATFO				AML	AML		
	comp=E,229μm,1.3s						
TRTR	**Tortoreto Alta**	**0.65**	**93**	AML	AML		
	comp=N,1165μm,1.1s						
TRTR				AML	AML		
	comp=E,962μm,1.3s						
ARVD	**Arcevia**	**0.66**	**354**	AML	AML		
	comp=E,200μm,1.3s						
ARVD				AML	AML		
	comp=N,182μm,0.1s						
MGAB	**Montegabbione**	**0.68**	**276**	AML	AML		
	comp=E,421μm,1.0s						
MGAB				AML	AML		
	comp=N,576μm,0.5s						
MGAB				AML	AML		
	comp=N,664μm,0.5s						
MGAB				AML	AML		
	comp=E,486μm,0.3s						
FAGN	**Fagnano**	**0.71**	**145**	AML	AML		
	comp=E,396μm,0.7s						
FAGN				AML	AML		
	comp=N,264μm,0.2s						
ATVO	**AVT- Monte Val**	**0.71**	**319**	AML	AML		
	comp=E,166μm,1.3s						
ATVO				AML	AML		
	comp=E,166μm,1.3s						
ATVO				AML	AML		
	comp=N,161μm,0.4s						
ATVO				AML	AML		
	comp=N,162μm,0.4s						
SRES	**S.Oreste - Sor**	**0.72**	**213**	AML	AML		
	comp=E,168μm,1.0s						
SRES				AML	AML		
	comp=N,206μm,0.5s						
VCEL	**Villa Celiera**	**0.74**	**127**	AML	AML		
	comp=N,311μm,0.3s						
VCEL				AML	AML		
	comp=E,316μm,0.4s						
ATMI	**Monte Miggiano**	**0.75**	**311**	AML	AML		
	comp=N,549μm,0.8s						
ATMI				AML	AML		
	comp=E,578μm,0.8s						
ATPI	**Pietralunga -**	**0.76**	**323**	AML	AML		
	comp=E,119μm,0.5s						
ATPI				AML	AML		
	comp=N,117μm,1.5s						
ATPI				AML	AML		
	comp=E,119μm,0.5s						
ATPI				AML	AML		
	comp=N,117μm,1.5s						
T0110	**Collepietro**	**0.83**	**138**	AML	AML		
	comp=E,272μm,0.5s						
T0110				AML	AML		
	comp=N,334μm,0.5s						
SACS	**San Casciano d**	**0.83**	**271**	AML	AML		
	comp=N,150μm,0.8s						
SACS				AML	AML		
	comp=E,137μm,0.5s						
SACS				AML	AML		
	comp=N,149μm,0.8s						
FSSB	**Fossombrone**	**0.87**	**347**	AML	AML		
	comp=E,466μm,0.5s						
FSSB				AML	AML		
	comp=N,480μm,0.4s						
CERT	**Cerreto**	**0.90**	**183**	AML	AML		
	comp=E,231μm,0.5s						
CERT				AML	AML		
	comp=N,122μm,1.1s						
CERT				AML	AML		
	comp=N,122μm,1.1s						
CAFI	**Castiglion Fio**	**0.92**	**302**	AML	AML		
	comp=E,220μm,0.6s						
CAFI				AML	AML		
	comp=N,127μm,0.8s						
INTR	**Introdacqua**	**1.05**	**142**	AML	AML		
	comp=N,141μm,1.4s						
INTR				AML	AML		
	comp=E,73μm,1.4s						
TOLF	**Tolfa**	**1.09**	**225**	AML	AML		
	comp=N,93μm,0.5s						
TOLF				AML	AML		
	comp=E,72μm,0.5s						
ABTA	**Abfaltersbach**	**3.92**	**355**	*e*Pn	Pn	22 46 28.7	+2.0
	comp=E,0.5nm,0.2s						

OMAN 31 22:50:51.4±0.6, 20°.82N×61°.13E, h10km, mb4.9/1, ml3.2/8, Error ellipse: s-maj=15.6km s-min=11.1km az=249.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	**2.68**	**312**	P	Pn	22 51 33.3	-1.4
WBK				S	Sn	22 52 07.8	+0.5
	SNR=9.3						
MHTO	**MHTO**	**2.96**	**274**	P	Pn	22 51 37.8	-0.6
	SNR=27						
JMDO	**Jabal Madar**	**3.21**	**299**	P	Pn	22 51 42.6	+0.7
	SNR=34						
WSAR	**Wadi Sarin**	**3.34**	**317**	P	Pn	22 51 42.3	-1.4
WSAR				S	Sn	22 52 22.2	-1.3
DQM	**DQM**	**3.48**	**256**	P	Pn	22 51 45.3	-0.4
	SNR=87						
SMDO	**Samad**	**3.62**	**308**	P	Pn	22 51 48.2	+0.5
SMDO				S	Sn	22 52 31.6	+1.0
BIDO	**Bidbid**	**3.87**	**315**	P	Pn	22 51 50.9	0.0
BIDO				S	Sn	22 52 36.3	-0.1
BSY	**Bisya**	**4.12**	**298**	P	Pn	22 51 55.2	+0.7
BSY				S	Sn	22 52 43.9	+1.1
UMZA	**Um Al Zommool**	**5.86**	**290**	P	Pn	22 52 18.6	+0.3
UMZA				S	Sn	22 53 27.1	+1.6

PRU 31 22:53:31.4±0.0, 42°.89N×13°.94E, h10km
ROM 31 22:53:30.7±0.0, 42°.887N±0°.002×13°.162E±0°.003, h9km, ML2.6/27, 28C-25D, Error ellipse: s-maj=0.2km s-min=0.1km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1245	**Castelsantange**	**0.04**	**148**	⇓P	Pg	22 53 32.6	0.0
T1245				S	Sg	22 53 33.5	-0.5
T1245				AML	AML		
	comp=E,91050μm,0.7s						
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
T1245				AML	AML		
	comp=E,80400μm,1.2s						
T1245				AML	AML		
	comp=E,91100μm,0.7s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,91000μm,0.7s						
T1216	**Preci, Frazion**	**0.10**	**272**	P	Pg	22 53 33.9	+0.6
T1216				S	Sg	22 53 35.9	+0.7
T1216				AML	AML		
	comp=E,41400μm,0.3s						
T1216				AML	AML		
	comp=N,47750μm,0.3s						
T1216				AML	AML		
	comp=E,41450μm,0.3s						
T1216				AML	AML		
	comp=N,47700μm,0.3s						
FEMA	**Monte Fema**	**0.11**	**312**	⇓P	Pg	22 53 34.0	+0.5
FEMA				S	Sg	22 53 36.0	+0.5
FEMA				AML	AML		
	comp=E,15150μm,0.3s						
FEMA				AML	AML		
	comp=N,18850μm,0.3s						
MMO1	**Montemonaco**	**0.12**	**84**	⇑P	Pg	22 53 34.0	+0.4
MMO1				S	Sg	22 53 36.1	+0.5
T1256	**Bolognola (MC)**	**0.13**	**21**	⇑P	Pg	22 53 34.1	+0.3
T1256				S	Sg	22 53 36.5	+0.5
T1256				AML	AML		
	comp=E,11905μm,1.1s						
T1256				AML	AML		
	comp=N,9770μm,0.5s						
T1256				AML	AML		
	comp=N,9760μm,0.5s						
T1256				AML	AML		
	comp=E,11845μm,1.1s						
T1256				AML	AML		
	comp=N,9480μm,0.5s						
T1256				AML	AML		
	comp=N,9785μm,0.5s						
T1256				AML	AML		
	comp=N,9475μm,0.5s						
T1256				AML	AML		
	comp=E,11840μm,1.1s						
T1256				AML	AML		
	comp=E,11935μm,1.1s						
FDMO	**Fiordimonte**	**0.16**	**340**	⇓P	Pg	22 53 34.7	+0.5
FDMO				S	Sg	22 53 37.4	+0.8
FDMO				AML	AML		
	comp=E,7430μm,0.7s						
FDMO				AML	AML		
	comp=E,7435μm,0.7s						
FDMO				AML	AML		
	comp=N,8535μm,1.1s						
AM05	**Amandola Campo**	**0.17**	**57**	⇑P	Pg	22 53 35.0	+0.7
AM05				S	Sg	22 53 38.0	+1.3
AM05				AML	AML		
	comp=E,2380μm,0.8s						
AM05				AML	AML		
	comp=N,460μm,1.4s						
AM05				AML	AML		
	comp=E,2375μm,0.8s						
AM05				AML	AML		
	comp=N,2500μm,0.2s						
AM05				AML	AML		
	comp=E,11550μm,0.8s						
AM05				AML	AML		
	comp=N,460μm,1.4s						
T1241	**Roccafluvione,**	**0.20**	**99**	⇑P	Pg	22 53 35.5	+0.7
T1241				S	Sg	22 53 38.9	+1.2
T1241				AML	AML		
	comp=E,8830μm,0.4s						
T1241				AML	AML		
	comp=N,9750μm,0.9s						
T1241				AML	AML		
	comp=E,8825μm,0.3s						
T1241				AML	AML		
	comp=N,9400μm,0.9s						
T1241				AML	AML		
	comp=E,8825μm,0.4s						
T1241				AML	AML		
	comp=N,9755μm,0.9s						
T1241				AML	AML		
	comp=E,8820μm,0.3s						
GUMA	**Gualdo di Mace**	**0.22**	**36**	⇑P	Pg	22 53 36.1	+1.0
GUMA				S	Sg	22 53 40.1	+1.9
GUMA				AML	AML		
	comp=E,17800μm,0.4s						
GUMA				AML	AML		
	comp=N,17600μm,1.2s						
GUMA				AML	AML		
	comp=E,17850μm,0.4s						
GUMA				AML	AML		
	comp=E,22350μm,0.4s						
GUMA				AML	AML		
	comp=N,17550μm,1.2s						
GUMA				AML	AML		
	comp=N,21900μm,0.6s						
T1215	**Vallo di Nera,**	**0.23**	**249**	P	Pg	22 53 36.2	+0.7
T1215				S	Sg	22 53 40.1	+1.5
T1215				AML	AML		
	comp=E,2840μm,0.4s						
T1215				AML	AML		
	comp=N,4020μm,0.2s						
T1215				AML	AML		
	comp=E,2955μm,0.4s						
T1215				AML	AML		
	comp=N,3930μm,0.2s						
T1215				AML	AML		
	comp=E,2958μm,0.4s						
T1215				AML	AML		
	comp=N,4015μm,0.2s						
T1215				AML	AML		
	comp=N,3935μm,0.2s						
T1215				AML	AML		
	comp=E,2840μm,0.5s						
T1201	**Domo (RI)**	**0.24**	**164**	P	Pg	22 53 36.6	+1.0
T1201				S	Sg	22 53 41.0	+2.2
T1204	**Amatrice, Fraz**	**0.24**	**152**	P	Pg	22 53 36.3	+0.7
T1204				S	Sg	22 53 40.4	+1.5
T1217	**Poggiodomo (PG**	**0.24**	**224**	P	Pg	22 53 36.4	+0.8
T1217				S	Sg	22 53 40.6	+1.6
T1217				AML	AML		
	comp=E,2645μm,0.6s						
T1217				AML	AML		
	comp=N,3610μm,0.4s						
T1217				AML	AML		
	comp=E,2545μm,0.6s						
T1217				AML	AML		
	comp=N,3675μm,0.5s						
T1243	**Rocca Santa Ma**	**0.28**	**132**	⇑P	Pg	22 53 37.0	+0.6
SMA1	**SAN MARTINO**	**0.29**	**153**	P	Pg	22 53 37.0	+0.6
SMA1				S	Sb	22 53 41.8	-1.1
LNSS	**Leonessa**	**0.30**	**198**	⇓P	Pg	22 53 37.3	+0.7
LNSS				AML	AML		
	comp=E,1415μm,1.1s						
LNSS				AML	AML		
	comp=E,1410μm,1.1s						
LNSS				AML	AML		
	comp=N,5495μm,0.4s						
SEF1	**Sefro**	**0.30**	**329**	P	Pg	22 53 37.3	+0.6
SEF1				S	Sb	22 53 42.5	-1.0
SEF1				AML	AML		
	comp=N,5735μm,0.2s						
SEF1				AML	AML		
	comp=N,5730μm,0.2s						
SEF1				AML	AML		
	comp=E,6275μm,0.4s						
MDAR	**Monte D'Aria**	**0.31**	**357**	P	Pg	22 53 37.5	+0.6
MDAR				S	Sb	22 53 42.5	-1.0
MDAR				AML	AML		
	comp=E,3515μm,0.5s						

MDAR				AML	AML	
	comp=N,6250μm,0.4s					
PIO1	**Pioraco**	**0.32 336**		P	Pg	22 53 37.5 +0.5
PIO1				S	Sb	22 53 42.9 -0.9
MNTP	**Montappone**	**0.34 42**		P	Pb	22 53 38.6 -0.3
MNTP				AML	AML	
	comp=N,2755μm,1.6s					
MNTP				AML	AML	
	comp=E,3815μm,1.5s					
MNTP				AML	AML	
	comp=N,2750μm,1.6s					
SSM1	**San Severino M**	**0.34 2**		P	Pg	22 53 38.2 +0.7
FIU1	**Fiuminata**	**0.35 331**		P	Pg	22 53 38.1 +0.5
FIU1				S	Sb	22 53 43.9 -0.7
GAG1	**Gagliole**	**0.36 349**		P	Pb	22 53 38.6 -0.6
GAG1				AML	AML	
	comp=E,8280μm,1.0s					
GAG1				AML	AML	
	comp=N,7370μm,0.2s					
GAG1				AML	AML	
	comp=E,8290μm,1.0s					
GAG1				AML	AML	
	comp=N,7375μm,0.2s					
RM33	**Pellescritta (**	**0.38 174**		P	Pg	22 53 38.7 +0.5
RM33				AML	AML	
	comp=E,2390μm,1.0s					
RM33				AML	AML	
	comp=N,1490μm,0.9s					
RM33				AML	AML	
	comp=N,1585μm,1.5s					
RM33				AML	AML	
	comp=E,2390μm,1.0s					
RM33				AML	AML	
	comp=N,1490μm,0.9s					
RM33				AML	AML	
	comp=E,2395μm,1.0s					
RM33				AML	AML	
	comp=E,2405μm,1.0s					
RM33				AML	AML	
	comp=N,1590μm,1.5s					
RM33				AML	AML	
	comp=N,1495μm,0.9s					
OFFI	**Offida**	**0.39 83**	⇑	P	Pb	22 53 39.7 0.0
OFFI				AML	AML	
	comp=E,2765μm,0.6s					
OFFI				AML	AML	
	comp=N,3340μm,0.8s					
T1246	**Crognaleto (TE**	**0.39 141**		P	Pg	22 53 38.7 +0.4
T1246				S	Sb	22 53 44.9 -1.0
CAMP	**Campotosto**	**0.40 153**		P	Pg	22 53 38.8 +0.3
CAMP				S	Sb	22 53 45.1 -1.0
ASSB	**Assisi San Ben**	**0.40 293**	⇓	P	Pg	22 53 39.1 +0.5
ASSB				AML	AML	
	comp=E,3200μm,1.1s					
ASSB				AML	AML	
	comp=N,2885μm,0.2s					
SNTG	**Esanatoglia**	**0.40 336**	⇑	P	Pg	22 53 39.2 +0.6
SNTG				AML	AML	
	comp=N,1565μm,0.7s					
SNTG				AML	AML	
	comp=N,1845μm,0.7s					
SNTG				AML	AML	
	comp=N,1570μm,0.7s					
SNTG				AML	AML	
	comp=E,1620μm,0.6s					
SNTG				AML	AML	
	comp=E,1570μm,0.8s					
T1211	**Morro Reatino**	**0.42 213**		P	Pg	22 53 39.4 +0.5
T1211				S	Sb	22 53 46.3 -0.5
ARRO	**Arrone**	**0.42 224**	⇑	P	Pg	22 53 39.5 +0.6
ARRO				AML	AML	
	comp=N,802μm,0.2s					
ARRO				AML	AML	
	comp=E,1235μm,0.2s					
ARRO				AML	AML	
	comp=N,802μm,0.2s					
EL6	**Elcito**	**0.45 354**		S	Sb	22 53 48.0 +0.5
T1247	**Pizzolo (AQ)**	**0.46 167**	⇑	P	Pb	22 53 40.9 0.0
T1247				AML	AML	
	comp=N,2240μm,0.3s					
T1247				AML	AML	
	comp=E,1990μm,0.6s					
T1247				AML	AML	
	comp=N,2245μm,0.3s					
ATCC	**AVT- Casa Cast**	**0.48 308**	⇓	P	Pg	22 53 40.7 +0.6
ATCC				AML	AML	
	comp=N,1515μm,0.4s					
ATCC				AML	AML	
	comp=E,1880μm,0.7s					
ATCC				AML	AML	
	comp=N,1520μm,0.4s					
FOSV	**Fossato di Vic**	**0.50 324**	⇓	P	Pg	22 53 40.9 +0.4
FOSV				S	Sb	22 53 49.0 -0.1
FOSV				AML	AML	
	comp=E,1200μm,0.3s					
FOSV				AML	AML	
	comp=N,2275μm,0.4s					
FOSV				AML	AML	
	comp=E,1205μm,0.3s					
CESX	**Cesi**	**0.51 237**	⇑	P	Pg	22 53 40.9 +0.3
CESX				AML	AML	
	comp=N,1900μm,0.7s					
CESX				AML	AML	
	comp=E,1700μm,0.5s					
GIGS	**Gran Sasso**	**0.53 145**	⇑	P	Pg	22 53 41.1 +0.2
GIGS				AML	AML	
	comp=N,305μm,0.5s					
GIGS				AML	AML	
	comp=E,318μm,0.2s					
TRTR	**Tortoreto Alta**	**0.56 98**	⇑	P	Pn	22 53 44.1 -0.7
MMUR	**Monte Murano**	**0.57 348**	⇑	P	Pb	22 53 42.3 -0.5
MMUR				S	Sb	22 53 52.0 +0.9
MMUR				AML	AML	
	comp=N,2300μm,0.3s					
MMUR				AML	AML	
	comp=E,2640μm,0.1s					
PP3	**Marolino**	**0.59 34**	⇑	P	Pb	22 53 43.4 +0.3
PP3				AML	AML	
	comp=E,2180μm,0.4s					
PP3				AML	AML	
	comp=N,2060μm,0.7s					
PP3				AML	AML	
	comp=E,2295μm,1.0s					
PP3				AML	AML	
	comp=N,2065μm,0.7s					
PP3				AML	AML	
	comp=N,2015μm,1.0s					
PP3				AML	AML	
	comp=E,2300μm,1.0s					
MURB	**Monte Urbino**	**0.60 309**		P	Pg	22 53 41.1 -1.2
MURB				S	Sn	22 53 54.0 -1.3
SSFR	**Montelago di S**	**0.62 333**	⇓	P	Pg	22 53 42.9 +0.2
SSFR				S	Sb	22 53 54.0 +1.6
SSFR				AML	AML	
	comp=E,1935μm,0.2s					
SSFR				AML	AML	
	comp=E,1615μm,1.1s					
SSFR				AML	AML	
	comp=N,1935μm,0.8s					
SSFR				AML	AML	
	comp=N,2190μm,0.4s					
FIAM	**Fiamignano**	**0.62 183**	⇓	P	Pg	22 53 41.5 -1.1
FIAM				S	Sb	22 53 53.0 +0.5
ARVD	**Arcevia**	**0.63 345**	⇑	P	Pg	22 53 43.3 +0.3
ARVD				S	Sb	22 53 54.0 +1.1
ARVD				AML	AML	
	comp=N,907μm,0.5s					
ARVD				AML	AML	
	comp=E,834μm,0.5s					
ATFO	**Monte Foce - G**	**0.65 318**	⇓	P	Pg	22 53 43.5 +0.3
ATFO				AML	AML	
	comp=E,764μm,0.6s					
ATFO				AML	AML	
	comp=N,472μm,0.7s					
ATFO				AML	AML	
	comp=N,473μm,0.7s					
ATTE	**AVT- Monte Tez**	**0.67 298**	⇓	P	Pg	22 53 43.8 +0.2
ATTE				AML	AML	
	comp=E,491μm,0.3s					
ATTE				AML	AML	
	comp=N,389μm,0.4s					
FAGN	**Fagnano**	**0.69 153**	⇓	P	Pg	22 53 44.3 +0.2
FAGN				AML	AML	
	comp=N,1465μm,1.6s					
FAGN				AML	AML	
	comp=E,2075μm,0.3s					
VCEL	**Villa Celiera**	**0.70 134**	⇓	P	Pg	22 53 44.5 +0.3
VCEL				AML	AML	
	comp=N,994μm,0.4s					
VCEL				AML	AML	
	comp=N,994μm,0.4s					
VCEL				AML	AML	
	comp=E,908μm,0.3s					
FRON	**Frontone**	**0.71 333**	⇓	P	Pg	22 53 44.4 +0.1
FRON				AML	AML	
	comp=E,604μm,0.9s					
FRON				AML	AML	
	comp=N,1023μm,0.5s					
AOI	**Ancona**	**0.74 26**	⇑	P	Pb	22 53 45.7 0.0
AOI				S	Sn	22 53 59.0 +0.4
AOI				AML	AML	
	comp=N,526μm,0.7s					
AOI				AML	AML	
	comp=E,537μm,0.5s					
AOI				AML	AML	
	comp=N,525μm,0.7s					
ATVO	**AVT- Monte Val**	**0.74 312**	⇓	P	Pg	22 53 45.1 +0.1
ATVO				AML	AML	
	comp=E,369μm,0.4s					
ATVO				AML	AML	
	comp=N,360μm,0.5s					
ATVO				AML	AML	
	comp=E,368μm,0.4s					
MGAB	**Montegabbione**	**0.77 272**	⇑	P	Pb	22 53 46.0 -0.3
MGAB				AML	AML	
	comp=E,1160μm,0.4s					
MGAB				AML	AML	
	comp=N,3100μm,0.5s					
MGAB				AML	AML	
	comp=E,1060μm,0.6s					
MGAB				AML	AML	
	comp=N,3390μm,0.5s					
ATPI	**Pietralunga -**	**0.79 316**	⇓	P	Pg	22 53 46.0 +0.1
ATPI				AML	AML	
	comp=N,239μm,1.2s					
ATPI				AML	AML	
	comp=N,240μm,1.2s					
ATPI				AML	AML	
	comp=E,342μm,1.0s					
ATMI	**Monte Miggiano**	**0.79 305**	⇑	P	Pb	22 53 46.6 0.0
ATMI				AML	AML	
	comp=E,918μm,1.5s					
ATMI				AML	AML	
	comp=N,1046μm,1.5s					
ATMI				AML	AML	
	comp=E,918μm,1.5s					
PIEI	**Pieia**	**0.80 325**	⇓	P	Pg	22 53 45.8 -0.2
PIEI				S	Sn	22 53 60.0 -0.1
PIEI				AML	AML	
	comp=E,382μm,0.3s					
PIEI				AML	AML	
	comp=N,262μm,0.9s					
MPAG	**Monte Paganucc**	**0.80 339**	⇓	P	Pg	22 53 46.1 +0.1
MPAG				S	Sn	22 53 60.0 -0.2
MPAG				AML	AML	
	comp=E,679μm,0.4s					
MPAG				AML	AML	
	comp=N,486μm,0.8s					
MPAG				AML	AML	
	comp=N,486μm,0.8s					
MPAG				AML	AML	
	comp=E,680μm,0.4s					
T0110	**Collepietro**	**0.80 145**	⇑	P	Pg	22 53 45.9 -0.2
T0110				AML	AML	
	comp=E,1245μm,0.3s					
T0110				AML	AML	
	comp=N,1130μm,0.3s					
SRES	**S.Oreste - Sor**	**0.81 217**	⇓	P	Pg	22 53 46.5 +0.3
SRES				AML	AML	
	comp=E,318μm,0.8s					
SRES				AML	AML	
	comp=N,323μm,0.5s					
NARO	**Abbazia di Nar**	**0.84 330**	⇓	P	Pg	22 53 46.6 -0.2
NARO				S	Sn	22 54 01.0 -0.1
NARO				AML	AML	
	comp=N,262μm,0.6s					
NARO				AML	AML	
	comp=E,338μm,0.9s					
NARO				AML	AML	
	comp=N,261μm,0.6s					
FSSB	**Fossombrone**	**0.85 341**	⇓	P	Pg	22 53 47.3 +0.2
FSSB				S	Sn	22 54 02.0 +0.5
FSSB				AML	AML	
	comp=N,1695μm,0.3s					
FSSB				AML	AML	
	comp=E,1210μm,0.4s					
APEC	**Apecchio**	**0.86 321**	⇑	P	Pb	22 53 47.9 +0.1
BADI	**Badiali**	**0.92 313**	⇑	P	Pg	22 53 48.5 +0.2
SACS	**San Casciano d**	**0.92 268**	⇓	P	Pb	22 53 48.9 0.0
SACS				AML	AML	
	comp=E,350μm,0.8s					
SACS				AML	AML	
	comp=N,620μm,0.5s					
SACS				AML	AML	
	comp=E,332μm,1.5s					
SACS				AML	AML	
	comp=N,610μm,0.5s					
PE3	**Peglio**	**0.94 329**	⇑	P	Pg	22 53 49.0 +0.2
PE3				AML	AML	
	comp=E,7μm,0.9s					
PE3				AML	AML	
	comp=N,10μm,0.5s					
PE3				AML	AML	
	comp=E,7μm,0.9s					
PE3				AML	AML	
	comp=N,10μm,0.5s					
CERT	**Cerreto**	**0.95 188**	⇑	P	Pb	22 53 49.4 +0.1
CERT				AML	AML	
	comp=E,479μm,1.0s					
CERT				AML	AML	
	comp=N,446μm,0.5s					
CAFI	**Castiglion Fio**	**0.98 297**	⇓	P	Pg	22 53 49.5 0.0
CAFI				S	Sn	22 54 06.0 +1.3
CAFI				AML	AML	
	comp=E,247μm,0.7s					
CAFI				AML	AML	
	comp=N,280μm,0.9s					
SSP9	**Sansepolcro**	**1.02 313**	⇑	P	Pb	22 53 50.8 +0.3
CPGN	**Carpegna, Ital**	**1.10 326**		P	Pn	22 53 52.5 +0.1
SF04	**Casetta**	**1.10 268**	⇑	P	Pn	22 53 53.6 +1.3
RMP	**Rome, Mte Porz**	**1.13 198**		S	Sg	22 54 07.0 0.0
TOLF	**Tolfa**	**1.19 227**	⇓	P	Pb	22 53 53.1 -0.2
TOLF				AML	AML	
	comp=N,153μm,1.5s					
TOLF				AML	AML	
	comp=E,176μm,0.8s					
ASQU	**Asqua**	**1.35 313**	⇓	P	Pg	22 53 56.5 -0.2
ASQU				AML	AML	
	comp=E,95μm,0.8s					
ASQU				AML	AML	
	comp=N,93μm,0.6s					
SFI	**Santa Sofia**	**1.40 317**	⇑	P	Pg	22 53 58.8 +1.3
PAOL	**Paolisi**	**2.13 150**	⇑	P	Pb	22 54 09.6 +0.2
PAOL				S	Sg	22 54 39.0 -0.1
OBKA	**Obir**	**3.75 15**	*e*	Pn	Pn	22 54 27.3 -1.5
	comp=N,0.2nm,0.3s					
MYKA	**Terra Mystica**	**3.76 5**	*e*	Pn	Pn	22 54 30.5 +1.7
	comp=N,1.5nm,0.3s					
ABTA	**Abfaltersbach**	**3.89 353**	*e*	Pn	Pn	22 54 32.6 +2.0
	comp=N,2.9nm,0.4s,SNR=9.4					
SOKA	**Soboth**	**4.02 19**	*e*	Pn	Pn	22 54 35.5 +3.1
	comp=N,0.2nm,0.2s					
KBA	**Koelnbreinsper**	**4.19 2**	*e*	Pn	Pn	22 54 36.1 +1.2
	comp=N,2.1nm,0.4s					
FETA	**Feichten**	**4.48 338**	*e*	Pn	Pn	22 54 42.1 +3.3
	comp=N,1.1nm,0.3s,SNR=5.1					
WTTA	**Wattenberg**	**4.51 347**	*i*	Pn	Pn	22 54 42.4 +3.1
	comp=N,1.2nm,0.2s					
SQTA	**Sankt Quirin**	**4.55 343**	*e*	Pn	Pn	22 54 42.3 +2.6
	comp=N,2.3nm,0.3s,SNR=5.0					
WATA	**Walderalm**	**4.59 346**	*e*	Pn	Pn	22 54 43.5 +3.2
	comp=N,2.5nm,0.5s,SNR=5.7					
ARSA	**Arzberg**	**4.67 20**	*e*	Pn	Pn	22 54 38.4 -3.0
	comp=N,0.3nm,0.3s					
MOTA	**Moosalm**	**4.69 343**	*e*	Pn	Pn	22 54 44.6 +2.9
	comp=N,1.6nm,0.4s					
BIOA	**Bad Ischl, Aus**	**4.82 4**	*e*	Pn	Pn	22 54 45.1 +1.8
	comp=N,2.7nm,0.3s					
RETA	**Reutte**	**4.90 341**	*e*	Pn	Pn	22 54 47.4 +2.8
	comp=N,1.7nm,0.4s,SNR=4.5					
DAVA	**Damuels**	**4.97 333**	*e*	Pn	Pn	22 54 50.1 +4.5
	comp=N,2.9nm,0.6s					
CONA	**Conrad Observa**	**5.39 20**	*i*	Pn	Pn	22 54 52.4 +1.2
	comp=N,0.2nm,0.2s					
KHC	**Kasperske Hory**	**6.25 3**	*e*	PN	Pn	22 55 02.6 -0.5
KHC			*e*	SN	Sn	22 56 12.1 -2.5

IDC ***31*** *22:54:48.3±4.3, 24°.63N×92°.45E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=303.1km s-min=28.0km az=61.0*
NDI ***31*** *22:55:03.5±2.3, 26°.27N×95°.06E, h70km±16km, ML3.4*
ISC 31 22:55:02.5±1.8, 26°.23N±0°.06×95°.1E±0°.2, h83km±18km, n11, σ1§18/14, mb3.5/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOKO	**MOKOCHONG**	**0.51**	**281**	*e*P	Pn	22 55 15.7	-1.0
MOKO				*e*S	**Sn**	**22 55 26.0**	**-1.3**
MOKO				IAML		22 55 29.2	
	comp=E,1μm,0.4s						
MOKO				IAML		22 55 29.2	
	comp=N,1μm,0.1s						
JORH	**JORHAT**	**0.90**	**305**	*e*P	**Pn**	**22 55 21.6**	**+1.1**
JORH				*e*P	**Sn**	**22 55 33.6**	**-0.3**
KOHI	**KOHIMA**	**1.00**	**240**	*e*P	**Pn**	**22 55 22.4**	**+0.5**
KOHI				*e*S	**Sn**	**22 55 36.5**	**+0.2**
ITAN	**ITANAGAR**	**1.51**	**307**	*e*P	**Pn**	**22 55 28.7**	**+0.6**
ITAN				*e*S	**Sn**	**22 55 47.0**	**-0.4**
ITAN				IAML		22 55 48.2	
	comp=E,414nm,0.0s						
ITAN				IAML		22 55 48.6	
	comp=N,485nm,0.2s						
ZIRO	**ZIRO**	**1.69**	**320**	*e*P	**Pn**	**22 55 30.8**	**+0.2**
ZIRO				*e*S	**Sn**	**22 55 49.4**	**-2.4**
TEZP	**TEZPUR**	**2.07**	**281**	*e*P	Pn	22 55 35.0	-0.4
TEZP				*e*S	Sn	22 55 57.6	-3.0
SAIH	**SAIHA**	**4.18**	**207**	*e*P	**Pn**	**22 56 04.6**	**+0.6**
SAIH				*e*S	**Sn**	**22 56 50.1**	**-1.6**
GTK	**Tadong**	**5.88**	**282**	*e*P	Pn	22 56 27.8	+0.6
GTK				*e*S	Sn	22 57 30.5	-2.9
MKAR	**Makanchi Array**	**22.89**	**337**	P	**P**	**23 00 00.3**	**+1.1**
	comp=N,0.5nm,0.5s,baz=148,slow=10,SNR=8.0						
	comp=N,0.5nm,0.5s						
WRA	**Warramunga Arr**	**59.66**	**136**	P	**P**	**23 04 58.0**	**-0.3**
	comp=N,0.2nm,0.5s,baz=322,slow=7.5,SNR=12						
	comp=N,0.2nm,0.5s						
ASAR	**Alice Springs**	**62.22**	**139**	P	**P**	**23 05 15.4**	**-0.3**
	comp=N,0.2nm,0.3s,baz=316,slow=6.3,SNR=2.5						
	comp=N,0.2nm,0.3s						

SKO ***31*** *23:14:59.4, 41°.59N×20°.47E, h15km*
TIR ***31*** *23:15:00.2, 41°.56N×20°.47E, h4km, Md3.1*
BEO ***31*** *23:15:01.7±0.3, 41°.52N×20°.49E, h0km, ML2.1/9*
ISC 31 23:15:00.6±1.0, 41°.56N±0°.02×20°.44E±0°.03, h5km±9km, n22, σ0§81/39, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.12**	**1**	P	**Pg**	**23 15 03.0**	**-0.2**
	baz=352						
PHP				S	**Sg**	**23 15 05.4**	**+0.5**
	baz=352						
TIR	**Tirane**	**0.48**	**244**	*e*Pg	**Pg**	**23 15 09.8**	**-0.1**
TIR				*e*Sg	**Sb**	**23 15 18.5**	**-0.4**
TIR	**Tirane**	**0.48**	**244**	*i* Pg	**Pg**	**23 15 09.9**	**0.0**
TIR				*i* Sg	**Sb**	**23 15 18.5**	**-0.4**
TIR	**Tirane**	**0.48**	**244**	P	**Pg**	**23 15 10.2**	**+0.3**
	baz=246						
TIR				S	**Sb**	**23 15 18.9**	**0.0**
	baz=246						
OHR	**Ohrid**	**0.53**	**149**	*e*Pg	**Pg**	**23 15 10.0**	**-0.8**
OHR				*e*Sg	**Sg**	**23 15 17.7**	**+0.1**
OHR	**Ohrid**	**0.53**	**149**	*i* Pg	**Pg**	**23 15 10.2**	**-0.6**
OHR				*i* Sg	**Sg**	**23 15 18.5**	**+0.8**
OHR				*e*Lg	Lg	23 15 18.6	
	comp=E,109nm,0.5s						
OHR				*e*Lg	Lg	23 15 19.3	
	comp=N,126nm,0.6s						
BCI	**Bajram Curri**	**0.85**	**341**	P	**Pg**	**23 15 17.0**	**0.0**
	baz=340						
BCI				S	**Sn**	**23 15 31.5**	**-0.6**
	baz=340						
SKO	**Skopje**	**0.85**	**61**	*e*Pg	**Pg**	**23 15 16.0**	**-1.0**
SKO				*e*Sg	**Sg**	**23 15 28.2**	**+0.1**
KBN	**Korca**	**0.97**	**164**	P	**Pg**	**23 15 19.2**	**-0.2**
	baz=165						
KBN				S	**Sb**	**23 15 33.8**	**+0.6**
	baz=165						
ULC	**Ulcinj**	**0.98**	**295**	*i* Pg	**Pg**	**23 15 18.6**	**-0.8**
PDG	**Podgorica**	**1.24**	**315**	*e*Pg	**Pb**	**23 15 23.3**	**-1.2**
PDG				*e*Sg	**Sn**	**23 15 42.6**	**+1.1**
PDG	**Podgorica**	**1.24**	**315**	*i* Pn	**Pb**	**23 15 23.2**	**-1.2**
STIP	**Stip**	**1.32**	**84**	*i* Pn	**Pg**	**23 15 27.2**	**+1.3**
LSK	**Leskovik**	**1.42**	**175**	P	**Pg**	**23 15 28.0**	**+0.2**
	baz=175						
LSK				S	**Sg**	**23 15 48.3**	**+2.2**
	baz=175						
BARS	**Barje**	**1.62**	**39**	*e*Pg	**Pg**	**23 15 31.3**	**-0.4**
BARS				*e*Sg	**Sg**	**23 15 53.1**	**+0.5**
VAY	**Valandovo**	**1.62**	**98**	*e*Pg	**Pn**	**23 15 29.5**	**-0.3**
VAY				*e*Sg	**Sg**	**23 15 52.0**	**-0.7**
SRN	**Sarande**	**1.71**	**191**	P	**Pg**	**23 15 32.9**	**-0.6**
	baz=193						
SRN				S	**Sg**	**23 15 56.2**	**+0.5**
	baz=193						
SELS	**Selova**	**1.73**	**17**	*e*Sn	**Pn**	**23 15 32.3**	**+0.9**
SELS	**Selova**	**1.73**	**17**	*e*Pn	**Sg**	**23 15 57.0**	**+0.7**
SJES	**Sjenica**	**1.73**	**349**	*e*Pn	**Pb**	**23 15 32.7**	**-0.3**
SJES				*e*Sn	**Sg**	**23 15 58.2**	**+1.9**
TREB	**Trebinje**	**1.93**	**307**	*e*Pn	**Pb**	**23 15 35.8**	**-0.5**
TREB				*e*Sn	**Sg**	**23 16 02.6**	**-0.2**
BBLS	**Lazići**	**2.42**	**342**	*e*Pn	**Pb**	**23 15 43.9**	**-0.8**
BBLS				*e*Sn	**Sb**	**23 16 15.2**	**+0.3**

IDC ***31*** *23:24:06.6±4.8, 29°.74N×138°.12E, h391km±97km, mb2.8/2, mbtmp3.7/4, Error ellipse: s-maj=86.5km s-min=38.1km az=46.0*
JMA ***31*** *23:24:09.5±0.2, 30°.N±1°.×13°.9E±°., h456km, MV3.3/12, NEAR TORISHIMA IS*
ISC 31 23:24:08.0±0.9, 29°.9N±0°.1×138°.6E±0°.2, h443km, n6, σ1§15/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.26**	**131**	P	**P**	**23 25 25.6**	**+0.5**
CBIJ				S	**S**	**23 26 26.4**	**-1.5**
JRY	**Ryogami san**	**6.07**	**3**	P	**P**	**23 25 43.1**	**+0.4**
MJAR	**Matsushiro Arr**	**6.60**	**358**	P	**P**	**23 25 47.5**	**-0.8**
	1.7nm,0.3s,baz=174,slow=12,SNR=4.9						
USRK	**Ussuriysk Arr**	**15.16**	**342**	P	**P**	**23 27 21.4**	**+0.5**
	1.8nm,0.5s,baz=145,slow=9.7,SNR=6.1						
CMAR	**Chiang Mai Arr**	**37.73**	**262**	P	**P**	**23 30 43.6**	**-0.9**
	0.7nm,0.3s,baz=74,slow=6.8,SNR=1.9						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**49.75**	**185**	P	**P**	**23 32 19.5**	**+1.1**
	0.1nm,0.4s,baz=1.0,slow=7.9,SNR=5.4						
	0.1nm,0.4s						

IDC ***31*** *23:36:32.7±1.5, 5°.12N×125°.01E, h0km, mb3.3/3, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=58.3km s-min=20.9km az=86.0*
MAN ***31*** *23:36:40.3, 5°.56N×126°.57E, h45km, mb4.6, ML3.5, MS3.4*
ISC 31 23:36:40.3±1.7, 5°.58N±0°.10×126°.7E±0°.1, h78km±17km, n14, σ1§95/21, mb2.9/3, 2C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.08**	**299**	⇓ *e*P	**Pn**	**23 36 59.3**	**-0.9**
DDMP				*e*S	**Sn**	**23 37 15.5**	**+0.5**
MATI	**Mati**	**1.42**	**344**	⇓ *e*P	**Pn**	**23 37 04.9**	**+0.4**
MATI				*e*S	**Sn**	**23 37 23.6**	**+0.9**
GSPH	**General Santos**	**1.77**	**287**	*e*P	**Pn**	**23 37 05.7**	**-3.5**
DAV	**Davao City (W)**	**1.83**	**324**	Pn	**Pn**	**23 37 09.5**	**-0.5**
	38nm,0.3s,baz=12,slow=4.7,SNR=1.4						
DAV				Sn	**Sn**	**23 37 34.2**	**+1.9**
	28nm,0.3s,baz=53,slow=21,SNR=1.7						
	103nm,0.4s						
KCP	**Kidapawan**	**2.11**	**312**	⇑ *e*P	**Pn**	**23 37 12.9**	**-0.8**
KCP				*i* S	**Sn**	**23 37 37.8**	**-1.4**
CDOP	**Cateel, Davao**	**2.20**	**354**	⇓ *i*P	**Pn**	**23 37 14.7**	**-0.2**
CDOP				*i* S	**Sn**	**23 37 38.6**	**-2.7**

SKMP	**Bagumbayan, Su**	**2.30 294**	⇓*e*P	**Pn**	**23 37 18.6 +2.4**
SKMP			*e*S	**Sn**	**23 37 45.6 +1.9**
BIPH	**Bislig**	**2.60 354**	⇓*e*P	Pn	23 37 14.6 -5.8
BIPH			*e*S	**Sn**	**23 37 51.7 +0.7**
BUKP	**Musuan**	**2.78 325**	⇓*e*P	**Pn**	**23 37 23.5 +0.8**
BUKP			*e*S	**Sn**	**23 37 58.8 +3.4**
BUKP	**Musuan**	**2.78 325**	⇓*e*P	Pn	23 37 33.2 +10
BUKP			*e*S	**Sn**	**23 37 56.1 +0.8**
CGP	**Cagayan de Oro**	**3.46 326**	⇑*e*P	**Pn**	**23 37 32.3 +0.4**
CGP			*e*S	Sn	23 37 52.5 -19
WRA	**Warramunga Arr**	**26.46 164**	P	**P**	**23 42 12.6 +2.3**
	0.2nm,0.5s,baz=342,slow=10,SNR=7.1 0.2nm,0.5s				
ASAR	**Alice Springs**	**29.91 167**	P	**P**	**23 42 42.3 +1.2**
	0.1nm,0.5s,baz=348,slow=8.5,SNR=1.6 0.1nm,0.5s				
MKAR	**Makanchi Array**	**56.01 325**	P	**P**	**23 46 08.4 -2.6**
	0.7nm,0.8s,baz=130,slow=5.8,SNR=3.2 0.7nm,0.8s				

*IDC **31** 23:55:53.0±1.4, 43.°03N×13.°56E, h0km, mb3.5/2, mbtmp3.3/6, ML3.1/4, MS2.3/2, Error ellipse: s-maj=33.6km s-min=14.6km az=96.0*

*ROM **31** 23:55:53.9±0.0, 42.°946N±0.°002×13.°199E±0.°004, h7km, ML3.2/61, Error ellipse: s-maj=0.2km s-min=0.2km az=67.0*

*PRU **31** 23:55:55.0±0.0, 42.°93N×13.°66E, h10km*

ISC 31 23:55:54.2±0.7, 42.°96N±0.°02×13.°22E±0.°02, h9km±4km, n109, σ1°39/128, 28C-13D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1256	**Bolognola (MC)**	**0.05**	**6**	⇑P	**Pg**	**23 55 55.6**	**-0.6**
T1256				S	**Sg**	**23 55 56.7**	**-1.0**
T1256				AML	AML		
T1256				AML	AML		
	comp=N,76400µm,1.6s						
T1256				AML	AML		
T1256				AML	AML		
T1256				AML	AML		
	comp=N,76450µm,1.6s						
T1256				AML	AML		
	comp=N,68250µm,1.6s						
T1256				AML	AML		
T1256				AML	AML		
	comp=N,76400µm,1.6s						
MMO1	**Montemonaco**	**0.10**	**126**	P	**Pg**	**23 55 56.7**	**0.0**
MMO1				S	**Sg**	**23 55 58.6**	**+0.1**
AM05	**Amandola Campo**	**0.10**	**78**	⇑P	**Pg**	**23 55 56.9**	**+0.2**
AM05				S	**Sg**	**23 55 59.2**	**+0.7**
AM05				AML	AML		
	comp=E,10165µm,0.7s						
AM05				AML	AML		
	comp=N,10800µm,1.1s						
AM05				AML	AML		
	comp=E,42250µm,0.8s						
AM05				AML	AML		
	comp=N,1575µm,0.1s						
AM05				AML	AML		
	comp=E,10190µm,0.7s						
AM05				AML	AML		
	comp=N,10750µm,1.1s						
AM05				AML	AML		
	comp=N,1570µm,0.1s						
AM05				AML	AML		
	comp=E,42300µm,0.8s						
AM05				AML	AML		
	comp=E,10175µm,0.7s						
T1245	**Castelsantange**	**0.10**	**193**	⇑P	**Pg**	**23 55 56.5**	**-0.3**
T1245				S	**Sg**	**23 55 58.4**	**-0.3**
T1245				AML	AML		
T1245				AML	AML		
	comp=E,75400µm,0.4s						
T1245				AML	AML		
T1245				AML	AML		
	comp=E,77950µm,0.4s						
T1245				AML	AML		
FEMA	**Monte Fema**	**0.12**	**273**	⇑P	**Pg**	**23 55 57.0**	**-0.2**
FEMA				S	**Sg**	**23 55 59.3**	**0.0**
FEMA				AML	AML		
	comp=E,60650µm,0.9s						
FEMA				AML	AML		
	comp=N,52950µm,0.4s						
FEMA				AML	AML		
	comp=E,60700µm,0.9s						
FDMO	**Fiordimonte**	**0.12**	**310**	⇓P	**Pg**	**23 55 56.8**	**-0.3**
FDMO				S	**Sg**	**23 55 58.8**	**-0.3**
FDMO				AML	AML		
	comp=N,12700µm,1.5s						
FDMO				AML	AML		
	comp=E,17350µm,0.8s						
GUMA	**Gualdo di Mace**	**0.14**	**39**	⇑P	**Pg**	**23 55 57.8**	**+0.5**
GUMA				S	**Sg**	**23 56 00.8**	**+1.4**
GUMA				AML	AML		
	comp=E,70800µm,0.9s						
GUMA				AML	AML		
	comp=E,68250µm,0.6s						
GUMA				AML	AML		
	comp=N,47750µm,1.5s						
GUMA				AML	AML		
	comp=N,51400µm,0.4s						
T1216	**Preci, Frazion**	**0.16**	**246**	⇑P	**Pg**	**23 55 57.5**	**-0.2**
T1216				S	**Sg**	**23 56 00.3**	**+0.3**
T1216				AML	AML		
	comp=E,43450µm,0.4s						
T1216				AML	AML		
	comp=N,28650µm,1.5s						
T1216				AML	AML		
	comp=N,28750µm,1.5s						
T1216				AML	AML		
	comp=N,28750µm,1.5s						
T1216				AML	AML		
	comp=E,43400µm,0.4s						
T1216				AML	AML		
	comp=N,28650µm,1.5s						
T1241	**Roccafluvione,**	**0.18**	**123**	⇑P	**Pg**	**23 55 58.4**	**+0.3**
T1241				S	**Sg**	**23 56 01.9**	**+1.2**
T1241				AML	AML		
	comp=E,20120µm,0.6s						
T1241				AML	AML		
	comp=N,16750µm,0.8s						
T1241				AML	AML		
	comp=N,16850µm,0.8s						
T1241				AML	AML		
	comp=E,19850µm,0.6s						
T1241				AML	AML		
	comp=N,16900µm,0.8s						
MDAR	**Monte D'Aria**	**0.24**	**347**	⇑P	**Pg**	**23 55 59.7**	**+0.6**
MDAR				S	**Sg**	**23 56 03.6**	**+1.2**
MDAR				AML	AML		
	comp=E,8035µm,0.6s						
MDAR				AML	AML		
	comp=E,8010µm,0.6s						
MDAR				AML	AML		
	comp=N,8970µm,1.3s						
MNTP	**Montappone**	**0.26**	**45**	⇑P	**Pb**	**23 56 00.5**	**-0.5**
SSM1	**San Severino M**	**0.27**	**354**	P	**Pg**	**23 56 00.2**	**+0.6**
SEF1	**Sefro**	**0.28**	**314**	⇓P	**Pg**	**23 55 59.9**	**+0.1**
SEF1				S	**Sg**	**23 56 04.6**	**+1.2**
SEF1				AML	AML		
	comp=N,10450µm,1.0s						
SEF1				AML	AML		
	comp=N,10455µm,1.0s						
SEF1				AML	AML		
	comp=E,13350µm,0.8s						
T1204	**Amatrice, Fraz**	**0.29**	**166**	⇓P	**Pg**	**23 55 60.0**	**-0.1**
T1204				S	**Sb**	**23 56 05.2**	**-1.4**
T1204				AML	AML		
	comp=E,8870µm,1.4s						
T1204				AML	AML		
	comp=N,5450µm,0.9s						
T1204				AML	AML		
	comp=E,8900µm,1.4s						
T1204				AML	AML		
	comp=N,5440µm,0.9s						
T1204				AML	AML		
	comp=E,8880µm,1.4s						
T1204				AML	AML		
	comp=N,5420µm,0.9s						
T1204				AML	AML		
	comp=E,8850µm,1.4s						
T1204				AML	AML		
	comp=N,5470µm,0.9s						
T1215	**Vallo di Nera,**	**0.30**	**239**	⇑P	**Pg**	**23 56 00.2**	**0.0**
T1215				S	**Sg**	**23 56 05.0**	**+0.8**
T1215				AML	AML		
	comp=E,5250µm,0.4s						
T1215				AML	AML		
	comp=E,5355µm,0.4s						
T1215				AML	AML		
	comp=N,4145µm,1.6s						
T1215				AML	AML		
	comp=N,4330µm,1.6s						
T1215				AML	AML		
	comp=N,4140µm,1.6s						
T1215				AML	AML		
	comp=E,5255µm,0.4s						
T1215				AML	AML		
	comp=E,5350µm,0.4s						
T1215				AML	AML		
	comp=N,4150µm,1.6s						
GAG1	**Gagliole**	**0.30**	**338**	⇓P	**Pg**	**23 56 00.6**	**+0.4**
GAG1				S	**Sg**	**23 56 05.8**	**+1.6**
GAG1				AML	AML		
	comp=E,14000µm,1.3s						
GAG1				AML	AML		
	comp=N,18860µm,0.4s						
GAG1				AML	AML		
	comp=N,18880µm,0.4s						
T1243	**Rocca Santa Ma**	**0.31**	**147**	P	**Pg**	**23 56 00.6**	**+0.2**
T1243				S	**Sb**	**23 56 05.8**	**-1.4**
T1217	**Poggiodomo (PG**	**0.32**	**221**	⇑P	**Pg**	**23 56 00.7**	**+0.1**
T1217				S	**Sg**	**23 56 05.7**	**+0.8**
T1217				AML	AML		
	comp=E,6295µm,0.7s						
T1217				AML	AML		
	comp=N,6280µm,1.4s						
T1217				AML	AML		
	comp=N,6160µm,1.2s						
T1217				AML	AML		
	comp=E,6035µm,0.6s						
T1217				AML	AML		
	comp=E,6300µm,0.7s						
T1217				AML	AML		
	comp=E,6040µm,0.6s						
T1217				AML	AML		
	comp=N,6275µm,1.4s						
T1217				AML	AML		
	comp=N,6155µm,1.2s						
SMA1	**SAN MARTINO**	**0.34**	**165**	⇑P	**Pg**	**23 56 01.0**	**+0.1**
SMA1				AML	AML		
	comp=E,9550µm,0.6s						
SMA1				AML	AML		
	comp=N,11440µm,1.0s						
SMA1				AML	AML		
	comp=E,9560µm,0.6s						
SMA1				AML	AML		
	comp=N,11450µm,1.0s						
OFFI	**Offida**	**0.34**	**93**	⇑P	**Pb**	**23 56 02.3**	**-0.1**
OFFI				S	**Sb**	**23 56 08.0**	**0.0**
OFFI				AML	AML		
	comp=E,11200µm,0.6s						
OFFI				AML	AML		
	comp=N,12150µm,0.6s						
LNSS	**Leonessa**	**0.38**	**200**	P	**Pg**	**23 56 02.0**	**+0.3**
LNSS				S	**Sb**	**23 56 07.9**	**-1.2**
LNSS				AML	AML		
	comp=E,3810µm,0.9s						
LNSS				AML	AML		
	comp=N,10285µm,0.3s						
LNSS				AML	AML		
	comp=E,3815µm,0.9s						
LNSS				AML	AML		
	comp=N,10235µm,0.3s						
EL6	**Elcito**	**0.38**	**347**	⇑P	**Pg**	**23 56 01.8**	**+0.1**
EL6				S	**Sg**	**23 56 08.5**	**+1.7**
EL6				AML	AML		
	comp=E,7200µm,0.8s						
EL6				AML	AML		
	comp=N,7655µm,1.0s						
EL6				AML	AML		
	comp=E,7210µm,0.8s						
EL6				AML	AML		
	comp=E,7215µm,0.8s						
EL6				AML	AML		
	comp=N,7650µm,1.0s						
TERO	**Teramo**	**0.44**	**140**	⇓P	**Pg**	**23 56 02.9**	**+0.1**
TERO				S	**Sb**	**23 56 09.9**	**-0.9**
TERO				AML	AML		
	comp=E,4155µm,0.6s						
TERO				AML	AML		
	comp=N,4390µm,0.4s						
TERO				AML	AML		
	comp=E,3985µm,0.6s						
TERO				AML	AML		
	comp=E,3980µm,0.6s						
TERO				AML	AML		
	comp=N,4270µm,0.4s						
CAMP	**Campotosto**	**0.44**	**162**	P	**Pg**	**23 56 02.6**	**-0.2**
CAMP				S	**Sb**	**23 56 09.9**	**-1.1**
CAMP				AML	AML		
	comp=N,3340µm,0.5s						
CAMP				AML	AML		
	comp=E,2695µm,1.3s						
RM33	**Pellescritta (**	**0.45**	**180**	⇓P	**Pg**	**23 56 03.0**	**+0.1**
RM33				S	**Sb**	**23 56 09.9**	**-1.1**
RM33				AML	AML		
	comp=E,4980µm,0.9s						
RM33				AML	AML		
	comp=E,4905µm,0.9s						
RM33				AML	AML		
	comp=N,3995µm,0.4s						
RM33				AML	AML		
	comp=N,3930µm,0.3s						
RM33				AML	AML		
	comp=N,3935µm,0.3s						
RM33				AML	AML		
	comp=N,4000µm,0.3s						
RM33				AML	AML		
	comp=E,4975µm,0.8s						
RM33				AML	AML		
	comp=E,4910µm,0.9s						
FOSV	**Fossato di Vic**	**0.48**	**315**	⇓P	**Pg**	**23 56 03.3**	**-0.2**
FOSV				S	**Sg**	**23 56 11.1**	**+1.3**
FOSV				AML	AML		
	comp=N,4865µm,0.3s						
FOSV				AML	AML		
	comp=E,2120µm,1.6s						
ATCC	**AVT- Casa Cast**	**0.48**	**298**	⇓P	**Pg**	**23 56 03.4**	**-0.1**
ATCC				S	**Sb**	**23 56 11.5**	**-0.6**
ATCC				AML	AML		
	comp=N,5375µm,0.7s						
ATCC				AML	AML		
	comp=E,7335µm,0.9s						
ATCC				AML	AML		
	comp=E,7340µm,0.9s						
T1211	**Morro Reatino**	**0.50**	**212**	⇑P	**Pb**	**23 56 04.9**	**-0.3**
T1211				S	**Sb**	**23 56 11.8**	**-0.8**
T1211				AML	AML		
	comp=E,2390µm,0.5s						
T1211				AML	AML		
	comp=N,5060µm,1.2s						
T1211				AML	AML		
	comp=E,2395µm,0.6s						
T1211				AML	AML		
	comp=N,5035µm,1.2s						
T1211				AML	AML		
	comp=E,2395µm,0.6s						
T1211				AML	AML		
	comp=N,5040µm,1.2s						
T1211				AML	AML		
	comp=N,5045µm,1.2s						
T1211				AML	AML		
	comp=E,2390µm,0.5s						
T1211				AML	AML		
	comp=E,2400µm,0.6s						
T1211				AML	AML		
	comp=N,5065µm,1.2s						
ARRO	**Arrone**	**0.50**	**222**	⇑P	**Pg**	**23 56 03.6**	**-0.3**
ARRO				AML	AML		
	comp=E,2720µm,1.4s						
ARRO				AML	AML		
	comp=N,2040µm,0.8s						
ARRO				AML	AML		
	comp=N,2045µm,0.8s						
PP3	**Marolino**	**0.51**	**34**	⇑P	**Pb**	**23 56 05.3**	**0.0**
PP3				AML	AML		
	comp=E,6700µm,0.8s						
PP3				AML	AML		
	comp=E,6345µm,0.9s						
PP3				AML	AML		
	comp=N,7170µm,0.6s						
PP3				AML	AML		
	comp=N,6870µm,0.5s						
PP3				AML	AML		
	comp=E,6695µm,0.8s						
T1247	**Pizzolo (AQ)**	**0.52**	**174**	⇑P	**Pg**	**23 56 04.1**	**-0.1**
T1247				S	**Sb**	**23 56 12.5**	**-0.6**
T1247				AML	AML		
	comp=N,3665µm,0.7s						
T1247				AML	AML		
	comp=E,4810µm,0.5s						
TRTR	**Tortoreto Alta**	**0.53**	**106**	⇑P	**Pb**	**23 56 06.1**	**+0.5**
TRTR				AML	AML		
	comp=E,9715µm,0.7s						
TRTR				AML	AML		
	comp=N,15000µm,0.4s						
GIGS	**Gran Sasso**	**0.57**	**153**	⇑P	**Pg**	**23 56 05.0**	**-0.2**
GIGS				S	**Sb**	**23 56 14.1**	**-0.4**
GIGS				AML	AML		
	comp=E,907µm,0.4s						
GIGS				AML	AML		
	comp=N,768µm,0.9s						
SSFR	**Montelago di S**	**0.58**	**326**	P	**Pg**	**23 56 05.2**	**-0.2**
SSFR				S	**Sg**	**23 56 14.6**	**+1.6**
SSFR				AML	AML		
	comp=E,3940µm,0.7s						
SSFR				AML	AML		
	comp=N,3455µm,0.3s						
SSFR				AML	AML		
	comp=E,4170µm,0.7s						
SSFR				AML	AML		
	comp=N,3370µm,0.2s						
ARVD	**Arcevia**	**0.58**	**340**	⇓P	**Pg**	**23 56 05.4**	**0.0**
ARVD				S	**Sb**	**23 56 14.9**	**+0.1**
ARVD				AML	AML		
	comp=N,1260µm,0.8s						
ARVD				AML	AML		
	comp=E,1655µm,0.3s						
CESX	**Cesi**	**0.58**	**234**	⇑P	**Pg**	**23 56 04.9**	**-0.5**
CESX				S	**Sb**	**23 56 14.1**	**-0.9**
CESX				AML	AML		
	comp=E,3425µm,1.2s						
CESX				AML	AML		
	comp=N,3760µm,0.4s						
MURB	**Monte Urbino**	**0.59**	**301**	⇓P	**Pg**	**23 56 05.5**	**-0.2**
MURB				S	**Sb**	**23 56 15.2**	**-0.1**
MURB				AML	AML		
	comp=E,6075µm,0.3s						
MURB				AML	AML		
	comp=E,6075µm,0.3s						
MURB				AML	AML		
	comp=N,5155µm,0.3s						
MURB				AML	AML		
	comp=E,6520µm,0.3s						
MURB				AML	AML		
	comp=N,5015µm,0.3s						
AQU	**L'Aquila**	**0.62**	**167**	⇑P	**Pg**	**23 56 05.8**	**-0.3**
AQU				S	**Sb**	**23 56 15.5**	**-0.4**
AQU				AML	AML		
	comp=E,2230µm,1.6s						
AQU				AML	AML		
	comp=E,2015µm,1.6s						
AQU				AML	AML		
	comp=N,2135µm,1.6s						
AQU				AML	AML		
	comp=N,1950µm,1.6s						
AQU				AML	AML		
	comp=E,2235µm,1.6s						
ATFO	**Monte Foce - G**	**0.63**	**311**	⇓P	**Pg**	**23 56 06.0**	**-0.3**
ATFO				S	**Sg**	**23 56 15.9**	**+1.3**
ATFO				AML	AML		
	comp=E,2235µm,0.8s						
ATFO				AML	AML		
	comp=N,1785µm,1.4s						
AOI	**Ancona**	**0.66**	**25**	P	**Pb**	**23 56 08.1**	**+0.3**
AOI				AML	AML		
	comp=E,1900µm,0.9s						
AOI				AML	AML		
	comp=N,1855µm,0.3s						
FRON	**Frontone**	**0.67**	**327**	⇑P	**Pg**	**23 56 06.7**	**-0.4**
FRON				S	**Sb**	**23 56 17.6**	**+0.3**
FRON				AML	AML		
	comp=N,2065µm,0.8s						
FRON				AML	AML		
	comp=E,1775µm,1.1s						
FRON				AML	AML		
	comp=N,2070µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.68**	**291**	⇑P	**Pg**	**23 56 07.0**	**-0.3**
ATTE				AML	AML		
	comp=N,1250µm,0.4s						
ATTE				AML	AML		
	comp=E,1365µm,0.9s						
FIAM	**Fiamignano**	**0.69**	**186**	⇑P	**Pg**	**23 56 07.3**	**-0.2**
FIAM				S	**Sb**	**23 56 17.7**	**-0.5**
FIAM				AML	AML		
	comp=N,1840µm,0.7s						
FIAM				AML	AML		
	comp=E,1685µm,0.7s						
FIAM				AML	AML		
	comp=N,1845µm,0.7s						
FIAM				AML	AML		
	comp=E,1690µm,0.7s						
VCEL	**Villa Celiera**	**0.72**	**141**	AML	AML		
	comp=N,2365µm,0.8s						
VCEL				AML	AML		
	comp=N,2360µm,0.8s						
VCEL				AML	AML		
	comp=E,2120µm,0.4s						
ATVO	**AVT- Monte Val**	**0.73**	**306**	⇓P	**Pg**	**23 56 07.7**	**-0.6**
ATVO				S	**Sb**	**23 56 19.3**	**+0.1**
ATVO				AML	AML		
	comp=E,998µm,0.5s						
ATVO				AML	AML		
	comp=E,997µm,0.5s						
ATVO				AML	AML		
	comp=N,920µm,0.8s						
FAGN	**Fagnano**	**0.74**	**159**	AML	AML		
	comp=E,3515µm,1.6s						
FAGN				AML	AML		
	comp=N,3160µm,0.4s						
MPAG	**Monte Paganucc**	**0.75**	**334**	AML	AML		
	comp=N,1515µm,0.6s						
MPAG				AML	AML		
	comp=E,1066µm,1.6s						
PIEI	**Pieia**	**0.77**	**319**	AML	AML		
	comp=N,920µm,0.9s						
PIEI				AML	AML		
	comp=E,944µm,0.4s						
PIEI				AML	AML		
	comp=N,920µm,0.9s						
PIEI				AML	AML		
	comp=E,944µm,0.4s						
ATPI	**Pietralunga -**	**0.78**	**310**	AML	AML		
	comp=N,1090µm,1.1s						
ATPI				AML	AML		
	comp=E,1275µm,0.5s						
FSSB	**Fossombrone**	**0.80**	**336**	AML	AML		
	comp=N,4970µm,0.4s						
FSSB				AML	AML		
	comp=E,3545µm,0.4s						
NARO	**Abbazia di Nar**	**0.80**	**325**	AML	AML		
	comp=N,610µm,0.6s						
NARO				AML	AML		
	comp=E,702µm,0.7s						
MGAB	**Montegabbione**	**0.81**	**267**	AML	AML		
	comp=E,2050µm,0.4s						
MGAB				AML	AML		
	comp=E,1900µm,0.5s						
MGAB				AML	AML		
	comp=N,3470µm,0.5s						
MGAB				AML	AML		
	comp=N,3465µm,0.5s						
MGAB				AML	AML		
	comp=N,3600µm,0.5s						
T0110	**Collepietro**	**0.84**	**150**	AML	AML		
	comp=E,2500µm,0.6s						
T0110				AML	AML		
	comp=N,2865µm,0.5s						
SRES	**S.Oreste - Sor**	**0.89**	**216**	AML	AML		
	comp=N,1375µm,1.6s						
SRES				AML	AML		
	comp=E,1187µm,0.6s						
PE3	**Peglio**	**0.91**	**325**	AML	AML		
	comp=E,9µm,1.4s						
PE3				AML	AML		
	comp=N,9µm,1.3s						
SACS	**San Casciano d**	**0.97**	**264**	AML	AML		

	comp=E,980µm,0.8s						
SACS				AML	AML		
	comp=N,1175µm,0.7s						
SACS				AML	AML		
	comp=N,1179µm,0.7s						
SACS				AML	AML		
	comp=E,976µm,0.8s						
CAFI	**Castiglion Fio**	**0.99**	**293**	AML	AML		
	comp=N,642µm,0.7s						
CAFI				AML	AML		
	comp=E,711µm,1.5s						
MTCE	**Montecelio**	**1.00**	**201**	AML	AML		
	comp=N,837µm,0.7s						
MTCE				AML	AML		
	comp=E,1245µm,0.6s						
CPGN	**Carpegna, Ital**	**1.07**	**322**	AML	AML		
	comp=N,1355µm,0.9s						
CPGN				AML	AML		
	comp=E,1550µm,0.5s						
CRE	**Caprese Michel**	**1.14**	**306**	AML	AML		
	comp=E,448µm,1.3s						
CRE				AML	AML		
	comp=N,472µm,0.6s						
MCIV	**Monte Civitell**	**1.15**	**262**	AML	AML		
	comp=E,495µm,0.6s						
MCIV				AML	AML		
	comp=N,572µm,0.7s						
BLLA	**Bellaria**	**1.30**	**336**	AML	AML		
	comp=N,1790µm,1.5s						
BLLA				AML	AML		
	comp=E,1660µm,1.3s						
CSNT	**Castellina Chi**	**1.50**	**291**	AML	AML		
	comp=E,226µm,1.4s						
CSNT				AML	AML		
	comp=N,242µm,0.9s						
MELA	**Melanico ??? S**	**1.89**	**131**	⇑P	**Pb**	**23 56 28.7**	**-0.1**
BRJN	**Brijuni**	**1.99**	**11**	⇑P	**Pn**	**23 56 29.1**	**+1.2**
PAOL	**Paolisi**	**2.17**	**152**	P	**Pn**	**23 56 30.4**	**-0.1**
PAOL				AML	AML		
	comp=N,109µm,1.6s						
PAOL				AML	AML		
	comp=E,94µm,1.5s						
CEY	**Cerknica**	**2.91**	**17**	*e*Pn	**Pn**	**23 56 41.0**	**+0.3**
SRKY	**Kupres RS**	**3.08**	**67**	*e*Pn	**Pn**	**23 56 46.5**	**+3.5**
ROVR	**Rover Verones**	**3.10**	**331**	⇓P	**Pn**	**23 56 46.0**	**+2.7**
MGRS	**Mrkonjic Grad**	**3.16**	**61**	*e*Pn	**Pn**	**23 56 47.6**	**+3.5**
CTI	**Castel Tesino**	**3.29**	**341**	P	**Pn**	**23 56 44.1**	**-1.8**
CTI				S	**Sn**	**23 57 26.0**	**+0.8**
CTI				AML	AML		
	comp=N,147µm,1.3s						
CTI				AML	AML		
	comp=E,120µm,0.6s						
STON	**Ston**	**3.29**	**90**	*e*Pn	**Pn**	**23 56 46.4**	**+0.5**
STAL	**STALIGIAL**	**3.32**	**354**	⇑P	**Pn**	**23 56 47.5**	**+1.1**
A051A	**Mrakovica**	**3.36**	**51**	*e*Pn	**Pn**	**23 56 50.6**	**+3.7**
BLY	**Banja Luka**	**3.38**	**57**	*e*Pn	**Pb**	**23 56 51.9**	**-2.3**
OBKA	**Obir**	**3.68**	**14**	*e*Pn	**Pn**	**23 56 53.5**	**+2.2**
OBKA	**Obir**	**3.68**	**14**	*e*Pn	**Pn**	**23 56 53.3**	**+2.1**
	comp=E,0.9nm,0.3s						
MYKA	**Terra Mystica**	**3.69**	**5**	*e*Pn	**Pn**	**23 56 51.6**	**+0.2**
	comp=E,3.2nm,0.4s						
TREB	**Trebinje**	**3.78**	**92**	*e*Pn	**Pn**	**23 56 53.4**	**+0.8**
ABTA	**Abfaltersbach**	**3.82**	**353**	*e*Pn	**Pn**	**23 56 54.8**	**+1.5**
	comp=E,9.8nm,0.5s,SNR=21						
SOKA	**Soboth**	**3.94**	**18**	*e*Pn	**Pn**	**23 56 55.4**	**+0.6**
	comp=E,0.3nm,0.2s						
KBA	**Koelnbreinsper**	**4.12**	**1**	*e*Pn	**Pn**	**23 56 59.2**	**+1.8**
	comp=E,2.7nm,0.3s						
HAPS	**Han Pijesak,Bl**	**4.32**	**73**	*e*Pn	**Pn**	**23 57 02.1**	**+2.0**
FETA	**Feichten**	**4.43**	**337**	*e*Pn	**Pn**	**23 57 03.6**	**+1.9**
	comp=E,4.7nm,0.7s,SNR=13						
WTTA	**Wattenberg**	**4.45**	**346**	*e*Pn	**Pn**	**23 57 03.7**	**+1.7**
	comp=E,7.9nm,0.7s,SNR=5.6						
DRME	**Dracevica, Mon**	**4.47**	**98**	*e*Pn	**Pn**	**23 57 04.0**	**+1.9**
SQTA	**Sankt Quirin**	**4.50**	**342**	*e*Pn	**Pn**	**23 57 04.6**	**+2.0**
	comp=E,14nm,0.5s,SNR=8.3						
DAVOX	**Davos/Dischmat**	**4.50**	**329**	Pn	**Pn**	**23 57 05.2**	**+2.6**
	comp=E,1.8nm,0.3s,baz=138,slow=12,SNR=30						
DAVOX				Sn	**Sn**	**23 57 56.8**	**+1.6**
	comp=E,0.5nm,0.3s,baz=271,slow=16,SNR=2.3						
DAVOX				LR	LR	23 58 34.0	
	comp=E,22nm,19.2s,baz=96,slow=35						
	comp=E,11nm,0.6s						
WATA	**Walderalm**	**4.53**	**346**	*e*Pn	**Pn**	**23 57 05.4**	**+2.3**
	comp=E,4.1nm,0.4s						
RUDO	**Rudo**	**4.54**	**80**	*e*Pn	**Pn**	**23 57 05.2**	**+2.2**
ARSA	**Arzberg**	**4.59**	**20**	*e*Pn	**Pn**	**23 57 04.7**	**+0.9**
	comp=E,1.1nm,0.3s						
BBLS	**Lazići**	**4.60**	**76**	*e*Pn	**Pn**	**23 57 07.6**	**+3.7**
MOTA	**Moosalm**	**4.64**	**342**	Pn	**Pn**	**23 57 06.3**	**+1.8**
	comp=E,7.4nm,0.7s,SNR=11						
BIOA	**Bad Ischl, Aus**	**4.74**	**3**	*e*Pn	**Pn**	**23 57 08.1**	**+2.3**
	comp=E,7.9nm,0.5s						
RETA	**Reutte**	**4.85**	**340**	*e*Pn	**Pn**	**23 57 09.4**	**+2.1**
	comp=E,2.0nm,0.3s,SNR=9.2						
DAVA	**Damuels**	**4.93**	**333**	*e*Pn	**Pn**	**23 57 10.6**	**+2.0**
	comp=E,4.4nm,0.6s,SNR=10						
MOA	**Molln**	**4.95**	**8**	*e*Pn	**Pn**	**23 57 10.1**	**+1.4**
	comp=E,0.8nm,0.3s						
DIVS	**Divibare**	**5.05**	**75**	*e*Pn	Pn	23 57 16.2	+6.0
CONA	**Conrad Observa**	**5.31**	**20**	*e*Pn	**Pn**	**23 57 13.4**	**-0.3**
	comp=E,0.5nm,0.3s						
GERES	**GERESS Array B**	**5.90**	**3**	Pn	**Pn**	**23 57 21.5**	**-0.3**
	comp=E,0.3nm,0.3s,baz=177,slow=12,SNR=11						
GERES				Sn	**Sn**	**23 58 27.2**	**-2.4**
	comp=E,1.6nm,0.3s,baz=187,slow=22,SNR=12						
	comp=E,0.5nm,0.4s						
CKRC	**Cesky Krumlov**	**5.91**	**7**	*e*SN	**Sn**	**23 58 27.2**	**-2.6**
KHC	**Kasperske Hory**	**6.18**	**2**	*e*PN	**Pn**	**23 57 25.2**	**-0.4**
KHC				*e*SN	**Sn**	**23 58 33.9**	**-2.5**
VRAC	**Vranov**	**6.77**	**19**	Pn	**Pn**	**23 57 32.5**	**-1.1**
	comp=E,0.2nm,0.3s,baz=332,slow=22,SNR=1.4						
VRAC				LR	LR	00 00 57.4	
	comp=E,41nm,19.7s,baz=16,slow=46						
	comp=E,0.5nm,0.4s						
NKC	**Novy Kostel**	**7.30**	**356**	*e*SN	**Sn**	**23 59 01.7**	**-2.1**
KEST	**Kesra**	**7.81**	**204**	Pn	**Pn**	**23 57 51.7**	**+3.7**
	baz=16,slow=18,SNR=2.1						
	comp=E,1.9nm,0.8s						
BRG	**Berggiesshubel**	**7.94**	**3**	*ex*	x	23 59 15.4	
BRG				*ex*	x	00 00 24.5	
BRG				Amp		00 00 35.2	
	comp=Z,8.9nm,1.3s						
CLL	**Collm**	**8.36**	**359**	*ex*	x	23 59 30.0	
CLL				*ex*	x	23 59 49.0	
CLL				*e*Sg	**Sg**	**00 00 18.0**	**-4.2**
	comp=Z,10.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.33**	**202**	P	**P**	**00 02 15.6**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=10,slow=9.8,SNR=2.5						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**47.66**	**60**	P	**P**	**00 04 28.6**	**-2.0**
	comp=Z,0.8nm,0.9s,baz=287,slow=7.6,SNR=2.1						
	comp=Z,0.8nm,0.9s						

ISC Computed Locations for October 2016

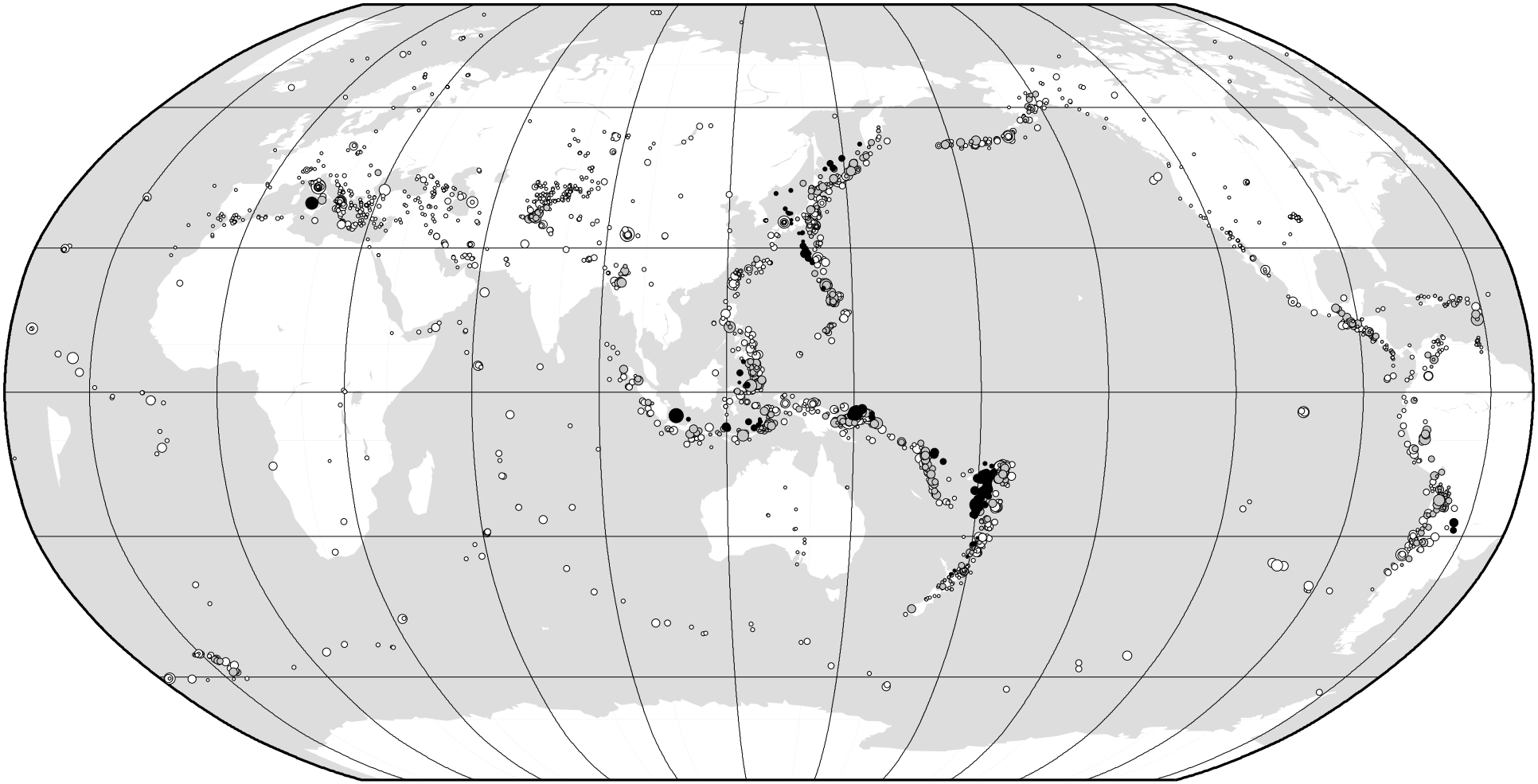

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

2944 Events